WIS

DEC 2014

PROJECT ID: 1009-43-62

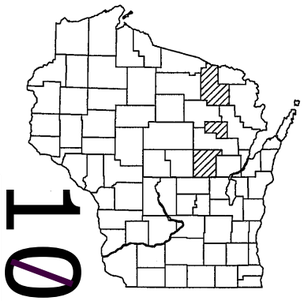
WITH: N/A

COUNTY: VARIOUS

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 = 124



10

N

DESIGN DESIGNATION

		STH 161	STH 47	STH 32
A.A.D.T.	2015	= 1,300	= 2,350	= 2,400
A.A.D.T.	2035	= 1,550	= 3,450	= 2,900
D.H.V.		= 245	= 445	= 447
D.D.		= 60/40	= 60/40	= 61/39
T.		= 6.4%	= 9.1%	= 8.7%
DESIGN SPEED		= 55 MPH	= 55 MPH	= 55 MPH
ESALS		= 197,100	= 635,100	= 554,800

CONVENTIONAL SYMBOLS

COUNTY LINE
CORPORATE LIMITS
PROPERTY LINE
LIMITED EASEMENT
EXISTING RIGHT OF WAY
PROPOSED OR NEW R/W LINE
FENCE
GUARD RAIL
SLOPE INTERCEPT
ORIGINAL GROUND
MARSH OR ROCK PROFILE (To be noted as such) — ROCK
WETLAND AREA
WOODED OR SHRUB AREA
STREAM OR WATER EDGE
BUSH
PINE TREE (SIZE)
TREE (SIZE)
TRAFFIC SIGNAL CONTROL CABINET
TRAFFIC SIGNAL
TRAFFIC SIGNAL MAST-ARM
TRAFFIC SIGNAL WITH LIGHT
EXISTING PULL BOX
BOLLARD

COMBUSTIBLE FLUIDS
UNDERGROUND UTILITIES
GAS — (SIZE) G
SANITARY SEWER — (SIZE) SAN
STORM SEWER — (SIZE) SS
WATER — (SIZE) W
ELECTRIC — E
TELEPHONE — T
FIBER OPTIC — FO
CABLE TELEVISION — TV
FORCE MAIN — FM
MANHOLE — MH
UTILITY PEDESTAL
FIBER OPTIC HAND HOLE — HH
POWER POLE
TELEPHONE POLE
RAILROAD
HYDRANT
LIGHT POLE
RAILROAD SIGNAL — X
SIGN
TRANSMISSION TOWER
VALVE — (TYPE)
CURB STOP — CS
EXISTING CULVERT — (SIZE, TYPE)
PROPOSED CULVERT (Box or Pipe)

CAUTION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

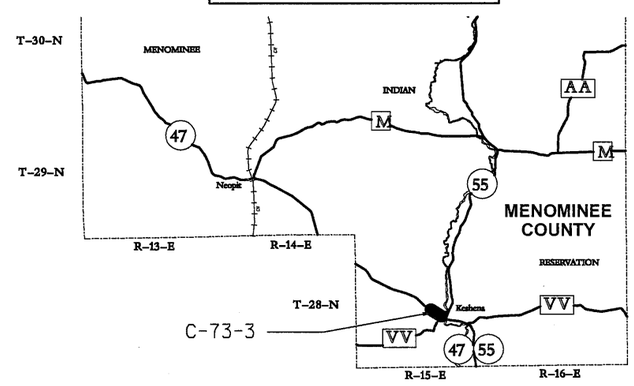
PLAN OF PROPOSED IMPROVEMENT

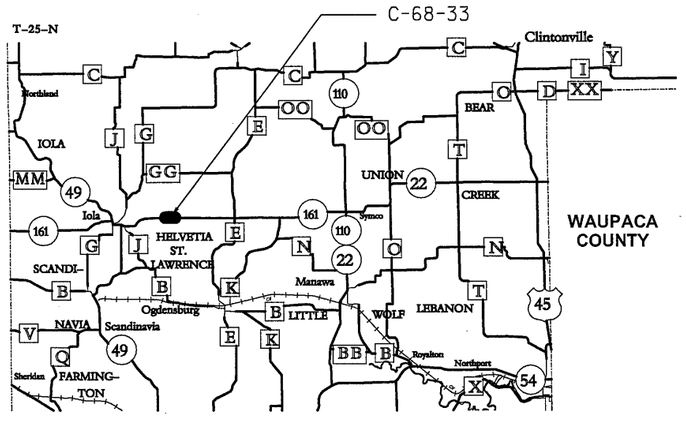
REGION WIDE CULVERT REPLACEMENT

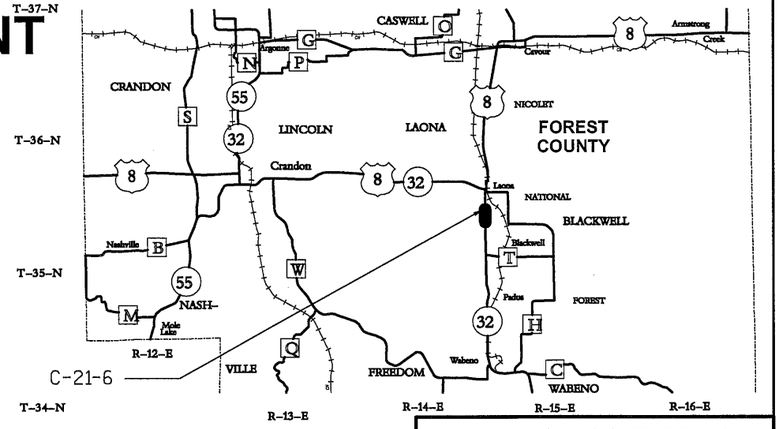
VARIOUS HIGHWAYS
NORTH CENTRAL REGION WIDE

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1009-43-62		

STATE PROJECT NUMBER
1009-43-62







TOTAL NET LENGTH OF CENTERLINE = 0.0 MI.

LAYOUT SCALE 0 NTS

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCORS COORDINATE SYSTEM, WCCS, NAD83(2007). THE COORDINATE ZONE IS REFERENCED TO THE COUNTY OF THE PROJECT ORIGIN.

VERTICAL DATUM FOR MENOMINEE COUNTY WAS A USGS STATION UE44A2-SC4335 (837.08 ELEV) NGVD29

VERTICAL DATUM FOR FOREST COUNTY WAS A NGS STATION B227-QM0552 (1604.90 ELEV) NAVD 88

VERTICAL DATUM FOR WAUPACA COUNTY WAS A NGS (WI-HMP) STATION HELVETIA S GPS--DJ4363 (960.61 ELEV) NAVD 88

ORIGINAL PLANS PREPARED BY

R.A. Smith National

Beyond Surveying and Engineering

16745 W. Bluemound Road, Brookfield WI 53005
262-781-1000 Fax 262-781-8466
www.rasmithnational.com

WISCONSIN
DOUGLAS M. SENSO
E-32746
KAUKAUNA
WI
PROFESSIONAL ENGINEER

7/30/14 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	R.A. SMITH NATIONAL
Designer	R.A. SMITH NATIONAL
Project Manager	JED PETERS
Regional Examiner	CHERYL SIMON
Regional Supervisor	ROBIN STAFFORD

APPROVED FOR THE DEPARTMENT

DATE: 7/30/2014 (Signature)

E

GENERAL NOTES

1 THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS IN THE AREA THAT ARE NOT SHOWN. THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK.

2 SEE SUBSURFACE EXPLORATION REPORTS FOR SOIL BORING INFORMATION. REPORTS ARE AVAILABLE FROM THE WISDOT NC REGION BY CONTACTING JED PETERS PROJECT MANAGER, PHONE (715) 365-5731.

3 HMA PAVEMENT TYPE E-3 SHALL BE CONSTRUCTED WITH THE FOLLOWING LAYERS AND GRADATIONS:

THICKNESS	LAYERS	NOM MAX SIZE GRADATION	ASPHALTIC MATERIAL
5-INCH	ONE 2" UPPER LAYER	12.5 mm	PG58-28
	ONE 3" LOWER LAYER	19.0 mm	PG58-28

4 WHEN THE QUANTITY OF ITEMS OF BASE OR SURFACE COURSE IS MEASURED FOR PAYMENT BY THE TON, THE THICKNESS OF THE COURSE SHOWN ON THE PLANS IS APPROXIMATE, AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

5 STATIONING, DISTANCES AND OFFSETS FOR SIGNS SHOWN ON THE PLANS ARE APPROXIMATE.

ORDER OF SECTION 2 SHEETS

Project Overview
Typical Sections
Construction Details
Erosion Control Plan
Permanent Signing/Pavement Marking
Traffic Control / Construction Staging Plan
Detour Plan

2

UTILITY CONTACTS

KENT SMITH
ALLIANT ENERGY - ELECTRICITY
708 N.E. 7TH STREET
MARION, WI 54950
(715) 754-4323
kentsmith@alliantenergy.com

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PO BOX 260
WAUSAUKEE, WI 54177
(715) 856-0051
rick.klussendorf@centurylink.com

MIKE GESKE
WISCONSIN PUBLIC SERVICE CORPORATION - ELECTRICITY
1505 STATE ROAD 32
WAUBENO, WI 54566
(715) 473-7809
mjgeske@wisconsinpublicservice.com

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TDS TELECOM - COMMUNICATION LINE
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10 COLLEGE AVE
APPLETON, WI 54911
(920) 882-4166
steve.jakubiec@tdstelecom.com

JAMES JASKOLSKI
FRONTIER COMMUNICATIONS OF WI LLC - COMMUNICATION LINE
26 WEST 12TH STREET
CLINTONVILLE, WI 54929
(715) 823-1227
james.jaskolski@ftr.com

DNR LIAISON (MENOMINEE COUNTY)

WIS DNR
2984 SHAWANO AVENUE
GREEN BAY, WI 54313-6727
JIM DOPERALSKI, JR.
(920) 662-5119
james.doperalski@wisconsin.gov

DNR LIAISON (WAUPACA COUNTY)

WIS DNR
427 EAST TOWER DRIVE, SUITE 100
WAUTOMA, WI 54982
BOBBI JO FISCHER
(920) 787-3015
bobbi.fischer@wisconsin.gov

DNR LIAISON (FOREST COUNTY)

WIS DNR
107 SUTLIFF AVENUE
RHINELANDER, WI 54501
JON SIMONSEN
(715) 365-8916
jonathan.simonsen@wisconsin.gov

DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com

TEMPORARY TRAFFIC SIGNAL TIMING

2

STH 32 SWANSON CREEK
FOREST COUNTY
STOP BAR SPACING = 700 FT

SEQUENCE 1 6:00 AM TO 8:00 PM

EAST BOUND	WEST BOUND	YELLOW (SEC)	ALL RED (SEC)	GREEN (SEC)		
RED	RED	---	22	---		
GREEN	RED	---	---	19		
YELLOW	RED	4	---	---		
RED	RED	---	22	---		
RED	GREEN	---	---	19		
RED	YELLOW	4	---	---		
	TOTAL	8	44	38	=	90(SEC)

SEQUENCE 2 8:00 PM TO 6:00 AM

EAST BOUND	WEST BOUND	YELLOW (SEC)	ALL RED (SEC)	GREEN (SEC)		
RED	RED	---	22	---		
GREEN	RED	---	---	14		
YELLOW	RED	4	---	---		
RED	RED	---	22	---		
RED	GREEN	---	---	14		
RED	YELLOW	4	---	---		
	TOTAL	8	44	28	=	80(SEC)

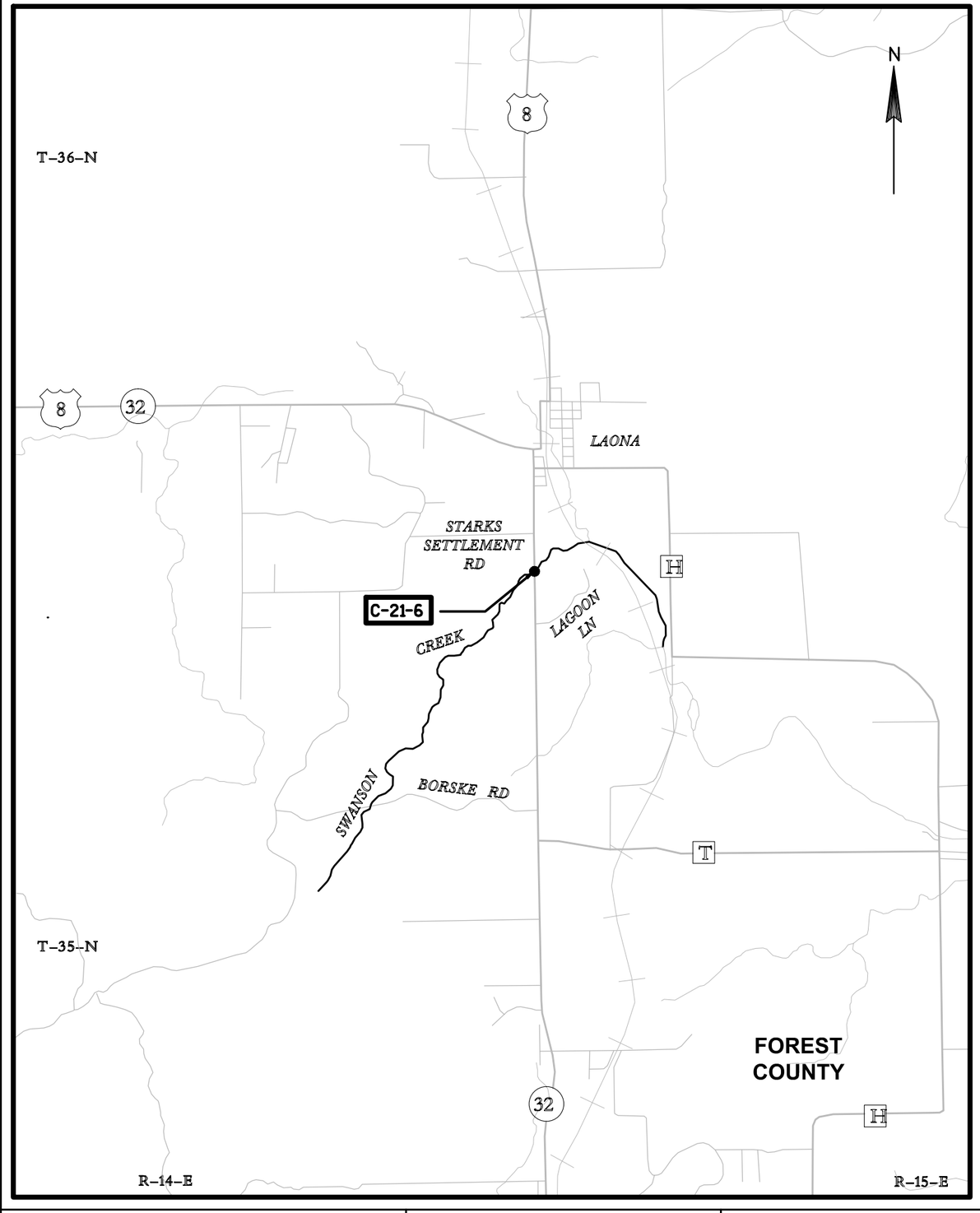
STH 47 CHICKNEY CREEK
MENOMINEE COUNTY
STOP BAR SPACING = 720 FT

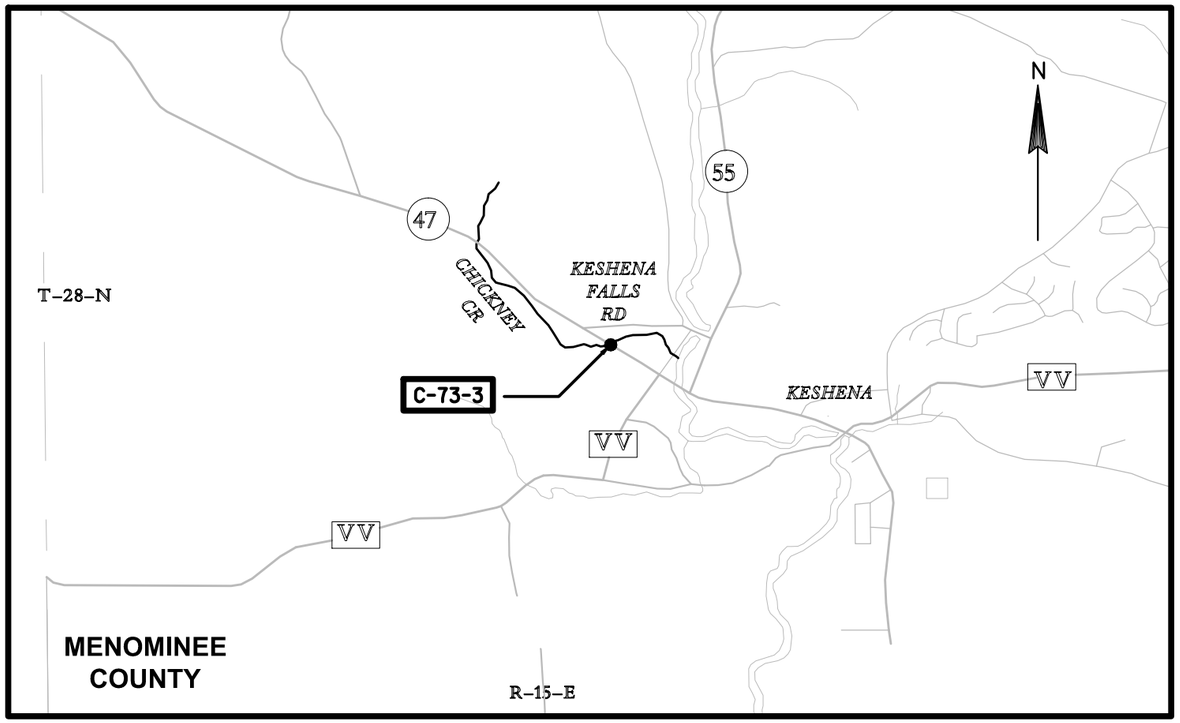
SEQUENCE 1 6:00 AM TO 8:00 PM

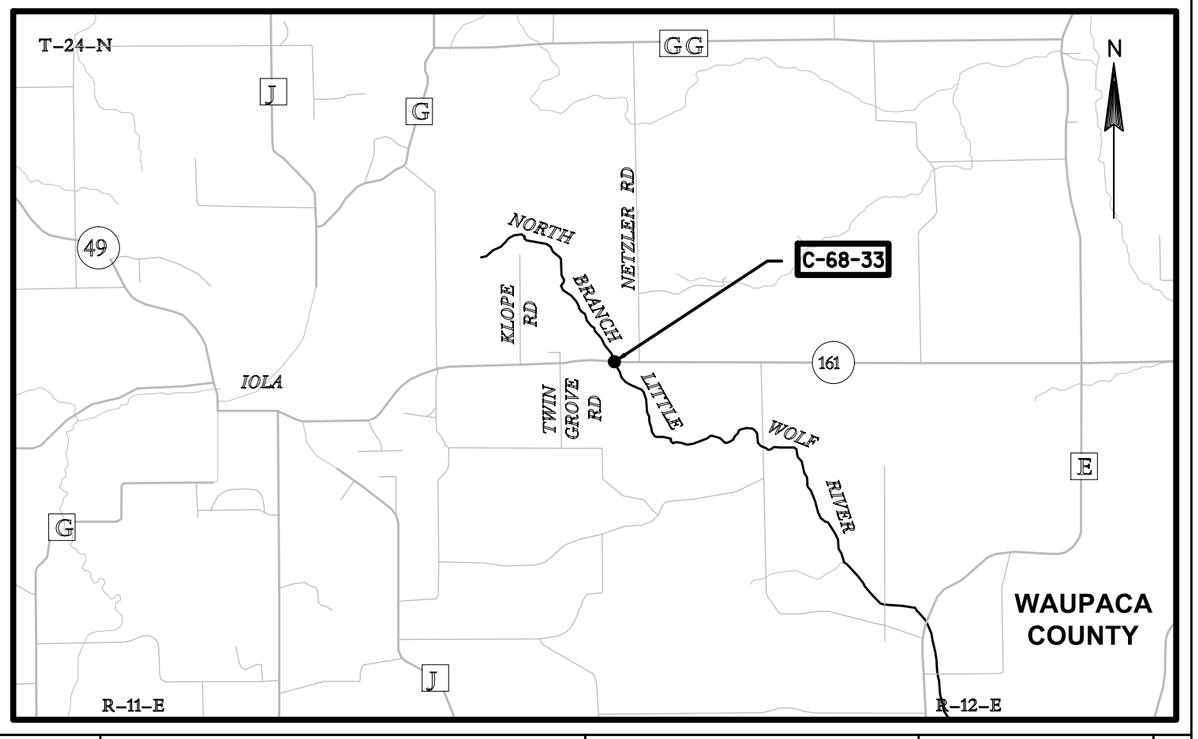
EAST BOUND	WEST BOUND	YELLOW (SEC)	ALL RED (SEC)	GREEN (SEC)		
RED	RED	---	22	---		
GREEN	RED	---	---	22		
YELLOW	RED	4	---	---		
RED	RED	---	22	---		
RED	GREEN	---	---	22		
RED	YELLOW	4	---	---		
	TOTAL	8	44	44	=	96(SEC)

SEQUENCE 2 8:00 PM TO 6:00 AM

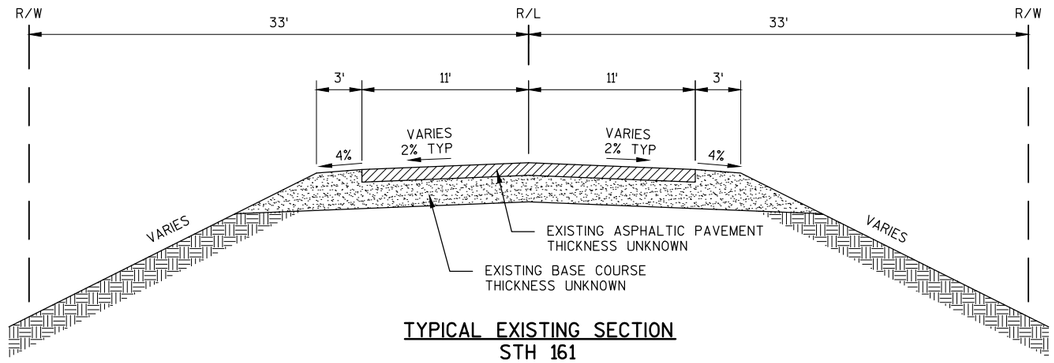
EAST BOUND	WEST BOUND	YELLOW (SEC)	ALL RED (SEC)	GREEN (SEC)		
RED	RED	---	22	---		
GREEN	RED	---	---	16		
YELLOW	RED	4	---	---		
RED	RED	---	22	---		
RED	GREEN	---	---	16		
RED	YELLOW	4	---	---		
	TOTAL	8	44	32	=	84(SEC)



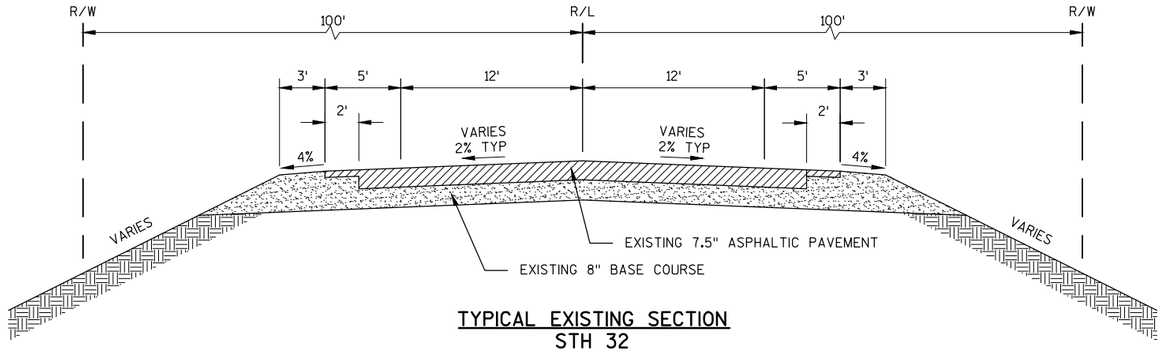




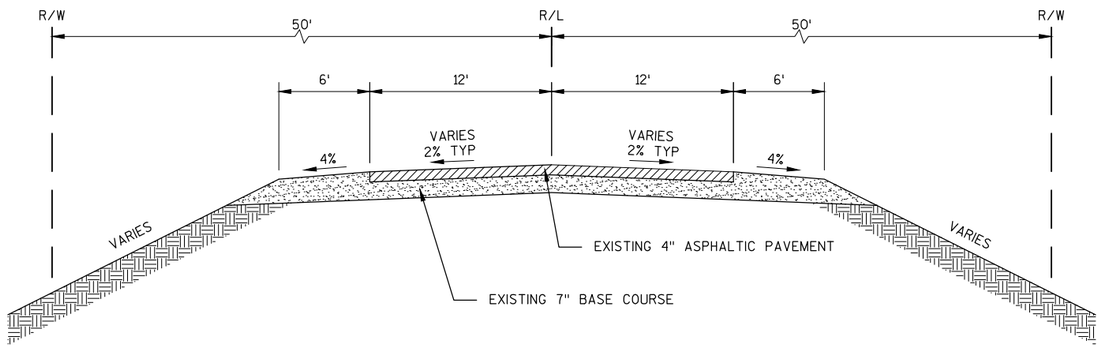
PROJECT NO: 1009-43-62	HWY: VARIOUS	COUNTY: VARIOUS	PROJECT OVERVIEW	SCALE, FEET 0 NTS	SHEET 4	E



TYPICAL EXISTING SECTION
STH 161
WAUPACA COUNTY
STA 163+50 - STA 164+07



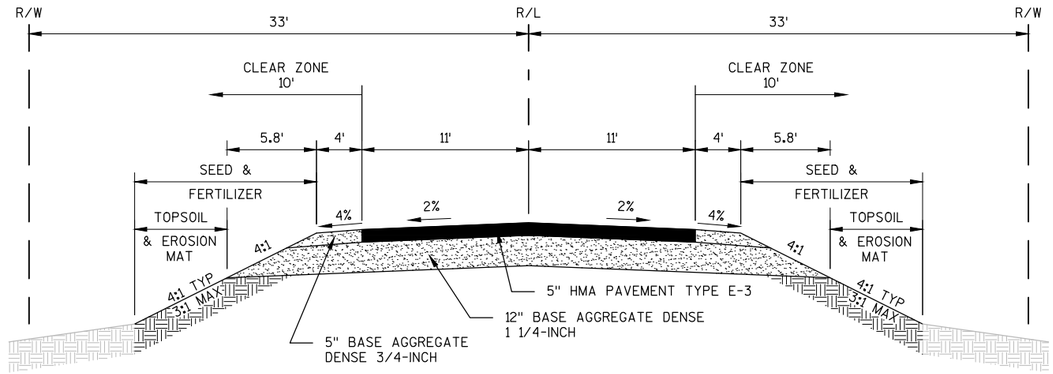
TYPICAL EXISTING SECTION
STH 32
FOREST COUNTY
STA 329+75 - STA 331+00



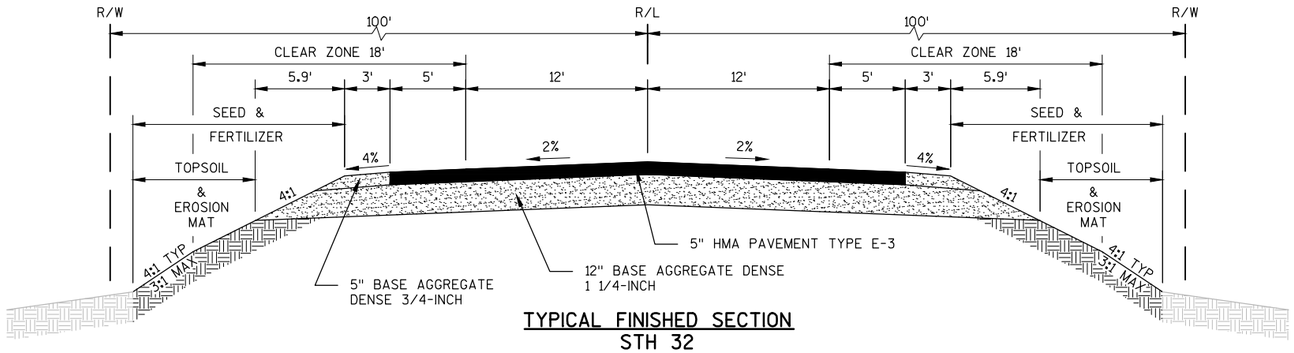
TYPICAL EXISTING SECTION
STH 47
MENOMINEE COUNTY
STA 474+12 - STA 475+63

PROJECT NO: 1009-43-62	HWY: VARIOUS	COUNTY: VARIOUS	TYPICAL SECTIONS	SHEET 5	E

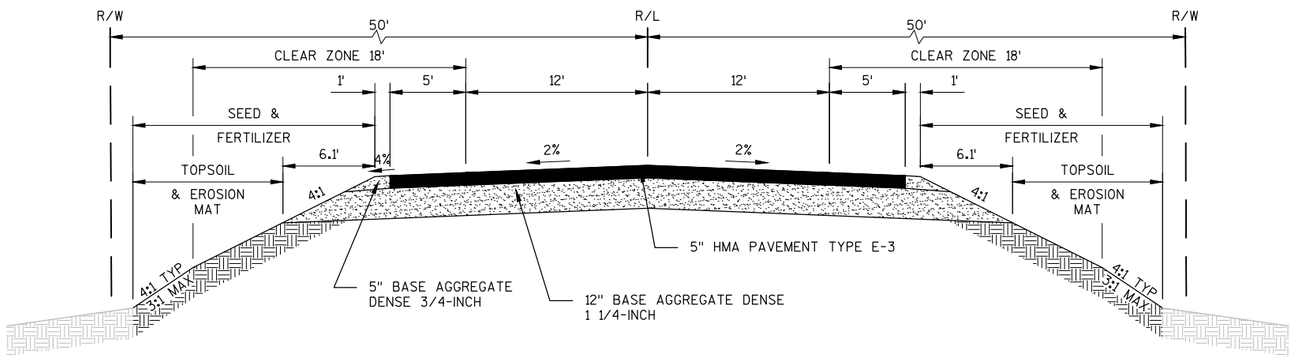
2



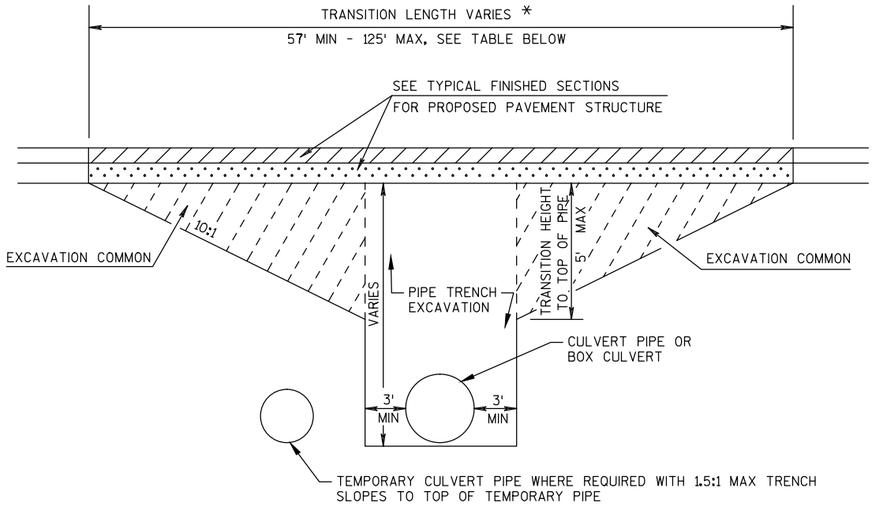
TYPICAL FINISHED SECTION
STH 161
WAUPACA COUNTY
STA 163+50 - STA 164+07



TYPICAL FINISHED SECTION
STH 32
FOREST COUNTY
STA 329+75 - STA 331+00



TYPICAL FINISHED SECTION
STH 47
MENOMINEE COUNTY
STA 474+12 - STA 475+63



CULVERT PIPE TRANSITION DETAIL

NOTES: MATERIAL REMOVED IN THE TRANSITION CUT AND PIPE TRENCH EXCAVATIONS TO BE REUSED AS BACKFILL UNLESS DETERMINED TO BE UNUSABLE BY THE ENGINEER IN WHICH CASE STRUCTURE BACKFILL WILL BE USED.

TRANSITION CUT WIDTH TO BE 2' BEYOND OUTSIDE EDGE OF PAVEMENT ON EACH SIDE OF CENTERLINE.

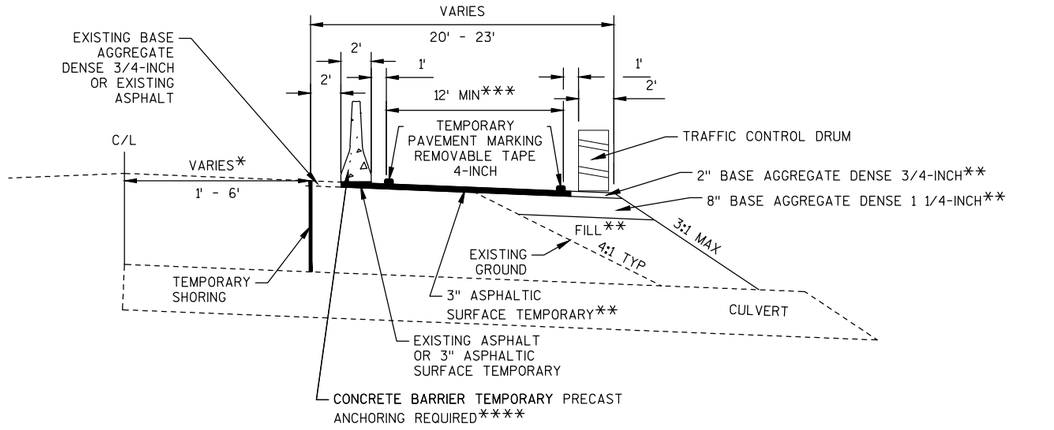
TRENCH EXCAVATION IS CONSIDERED INCIDENTAL TO INSTALLATION. TRANSITION CUT WILL BE PAID AS EXCAVATION COMMON.

RESTORE WITH TOPSOIL, TEMPORARY SEED, FERTILIZER AND EROSION MAT.

LAYOUT OF TRANSITION LIMIT IS CONSIDERED INCIDENTAL TO SAWING ASPHALT.

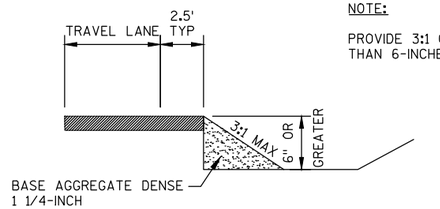
CULVERT NO	LOCATION	EXISTING SIZE	PROPOSED SIZE	ROAD CROWN TO TOP OF PIPE, FT	TRANSITION HEIGHT, FT	TRANSITION LENGTH, FT	TRANSITION WIDTH, FT
C-68-33	STH 161 WAUPACA CO	2-36"	43X68-INCH	2.7'	1.2'	57'	26'
C-21-6	STH 32 FOREST CO	2-48"	2-48X76-INCH	6.1'	4.7'	125'	38'
C-73-3	STH 47 MENOMINEE CO	2-60"	8' WIDE x 6' HIGH BOX CULVERT	6.2'	4.8'	112'	28'

*6' FOR STH 47 & 3' FOR STH 32
**INCIDENTAL TO LANE SHIFT BID ITEM
***12' FOR STH 47 & 15' FOR STH 32
****INCIDENTAL TO CONCRETE BARRIER TEMPORARY ITEM



LANE SHIFT DETAIL

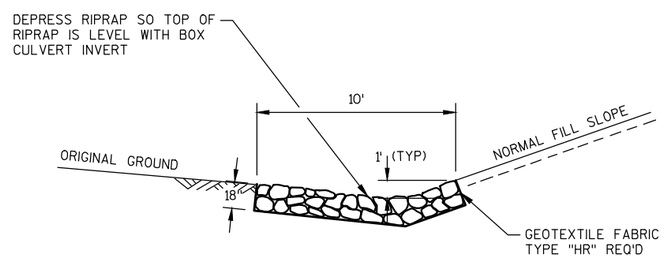
TO BE USED AT STH 32 & STH 47 CULVERT LOCATIONS. OPPOSITE SIDE OF ROADWAY IS MIRROR IMAGE.



NOTE:

PROVIDE 3:1 OR FLATTER SLOPE FOR ALL DROP OFFS GREATER THAN 6-INCHES, 8 FEET OR LESS FROM A TRAVEL LANE.

DROP OFFS DURING CONSTRUCTION



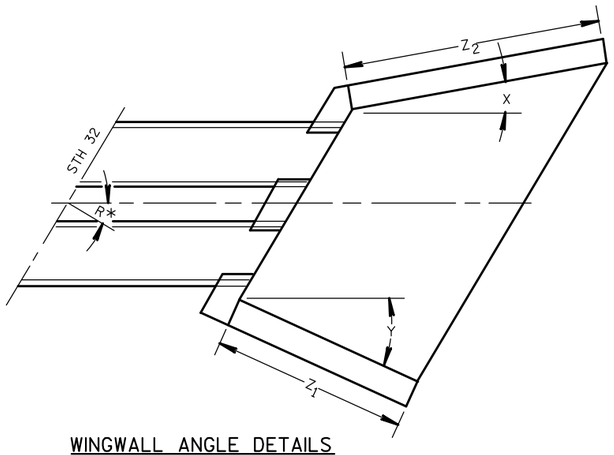
DETAIL FOR HEAVY RIPRAP IN DITCHES

CHICKNEY CREEK

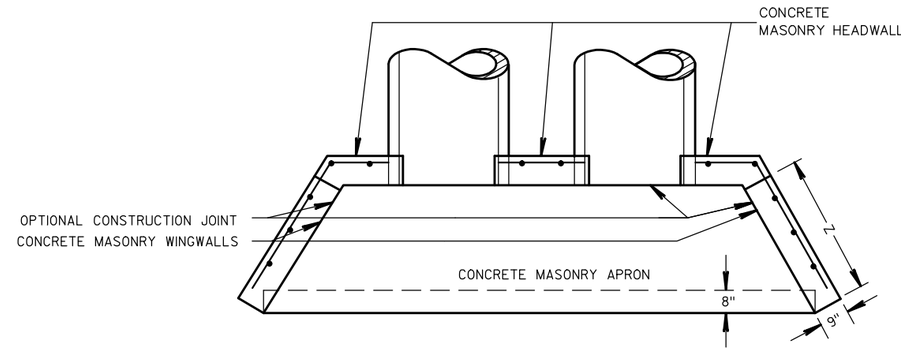
2

INLET					OUTLET				
R*	X	Y	Z_1	Z_2	R*	X	Y	Z_1	Z_2
4°	30°	30°	5'-5"	5'-0"	4°	30°	15°	5'-0"	5'-11"

*R = NUMBER OF DEGREES RIGHT HAND FORWARD

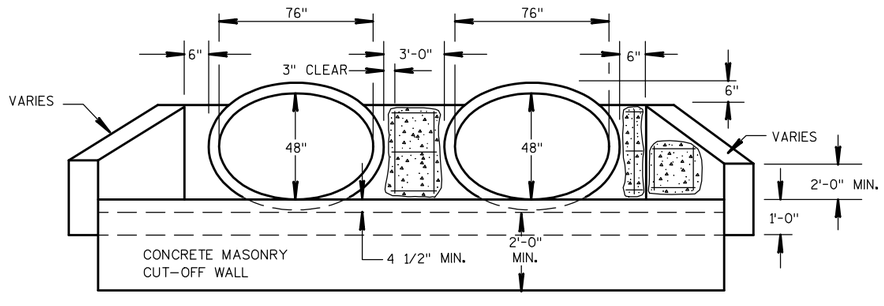


WINGWALL ANGLE DETAILS



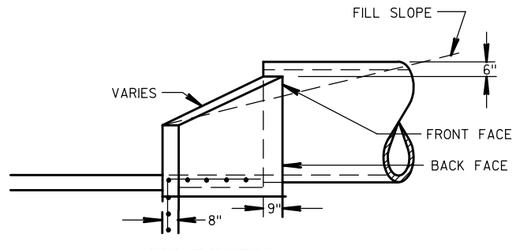
PLAN VIEW

CULVERT PIPE



END ELEVATION

CULVERT PIPE



SIDE ELEVATION

CULVERT PIPE

CONCRETE MASONRY ENDWALL DETAIL

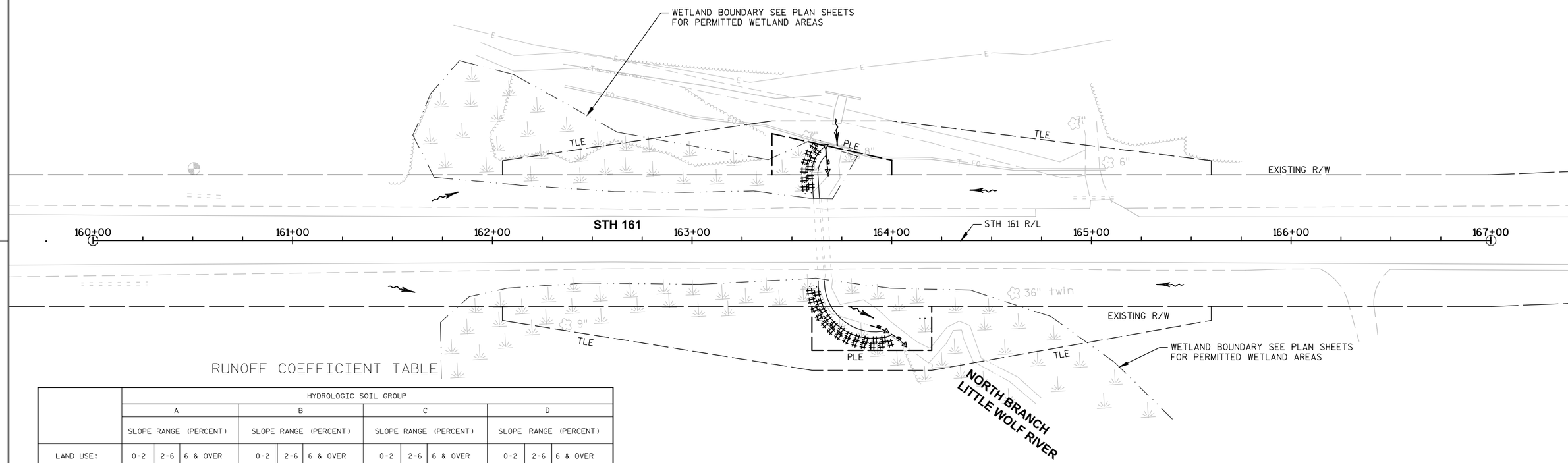
STH 32 AT SWANSON CREEK
C-35-18

2

LEGEND

- DIRECTION OF FLOW
- SILT FENCE
- TEMPORARY DITCH CHECK
- EROSION MAT URBAN CLASS I TYPE B
- TURBIDITY BARRIER

N



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 = 3.2 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 1.7 ACRES

EROSION CONTROL FOR WATER DIVERSION

SCALE, FT 0 25 50

PROJECT NO: 1009-43-62	HWY: STH 161	COUNTY: WAUPACA	EROSION CONTROL - NORTH BRANCH LITTLE WOLF RIVER	SHEET 9	E

2

2

LEGEND

DIRECTION OF FLOW

SILT FENCE

TEMPORARY DITCH CHECK

EROSION MAT URBAN CLASS I TYPE B

N

WETLAND BOUNDARY SEE PLAN SHEETS FOR PERMITTED WETLAND AREAS

TLE

PLE

8"

7"

6"

EXISTING R/W

160+00 161+00 162+00 **STH 161** 163+00 164+00 165+00 166+00 167+00

STH 161 R/L

36" twin

9"

EXISTING R/W

TLE

PLE

TLE

WETLAND BOUNDARY SEE PLAN SHEETS FOR PERMITTED WETLAND AREAS

RESTORE OLD STREAM BED TO ELEVATION APPROXIMATELY LEVEL WITH SURROUNDING GROUND AND PLANT WITH SEEDING MIXTURE NO. 60

NORTH BRANCH LITTLE WOLF RIVER

EROSION CONTROL FOR FINAL RESTORATION

SCALE, FT 0 25 50

PROJECT NO: 1009-43-62	HWY: STH 161	COUNTY: WAUPACA	EROSION CONTROL - NORTH BRANCH LITTLE WOLF RIVER	SHEET 10	E

2

N

LEGEND
- DIRECTION OF FLOW
- SILT FENCE
- TEMPORARY DITCH CHECK
- EROSION MAT URBAN CLASS I TYPE B
- TURBIDITY BARRIER

SWANSON CREEK

EXISTING R/W

WETLAND BOUNDARY SEE PLAN SHEETS
FOR PERMITTED WETLAND AREAS

SIGN

E

T

CABC
ASPH

STH 32

327+00 328+00 329+00 330+00 331+00 332+00 333+00 334+00

STH 32 R/L

18" CPP

ASPH
CABC

FO

EXISTING R/W

WETLAND BOUNDARY SEE PLAN SHEETS
FOR PERMITTED WETLAND AREAS

EROSION CONTROL FOR WATER DIVERSION

PROJECT NO:1009-43-62	HWY: STH 32	COUNTY:FOREST	EROSION CONTROL - SWANSON CREEK	SCALE, FT 0 25 50	SHEET 11	E

2

2

N

LEGEND

DIRECTION OF FLOW

SILT FENCE

TEMPORARY DITCH CHECK

EROSION MAT URBAN CLASS I TYPE B

SWANSON CREEK

EXISTING R/W

WETLAND BOUNDARY SEE PLAN SHEETS
FOR PERMITTED WETLAND AREAS

SLOPE INTERCEPT

SIGN

E

T

CABC
ASPH

STH 32

327+00 328+00 329+00 330+00 331+00 332+00 333+00 334+00

STH 32 R/L

ASPH
CABC

FO

SLOPE INTERCEPT

EXISTING R/W

WETLAND BOUNDARY SEE PLAN SHEETS
FOR PERMITTED WETLAND AREAS

EROSION CONTROL FOR TEMPORARY WIDENING STAGES

PROJECT NO:1009-43-62	HWY: STH 32	COUNTY:FOREST	EROSION CONTROL - SWANSON CREEK	SCALE, FT 0 25 50	SHEET 12	E

FILE NAME : K:\1102721.12\CADD\CIVIL3D\10094362\SHEETSPLAN\022004_EC.DWG PLOT DATE : 7/30/2014 12:06 PM PLOT BY : BECKENDORF, RANDY PLOT NAME :

2

2

N

LEGEND

DIRECTION OF FLOW

SILT FENCE

TEMPORARY DITCH CHECK

EROSION MAT URBAN CLASS I TYPE B

SWANSON CREEK

EXISTING R/W

WETLAND BOUNDARY SEE PLAN SHEETS
FOR PERMITTED WETLAND AREAS

SIGN

SIGN

CABC
ASPH

CABC
ASPH

STH 32

327+00 328+00 329+00 330+00 331+00 332+00 333+00 334+00

STH 32 R/L

ASPH
CABC

ASPH
CABC

FO

EXISTING R/W

WETLAND BOUNDARY SEE PLAN SHEETS
FOR PERMITTED WETLAND AREAS

EROSION CONTROL FOR FINAL RESTORATION

PROJECT NO:1009-43-62	HWY: STH 32	COUNTY:FOREST	EROSION CONTROL - SWANSON CREEK	SCALE, FT 0 25 50	SHEET 13	E

2

2

LEGEND

DIRECTION OF FLOW

SILT FENCE

TEMPORARY DITCH CHECK

EROSION MAT URBAN CLASS I TYPE B

TURBIDITY BARRIER

N

CHICKNEY CREEK

WETLAND BOUNDARY SEE PLAN SHEETS
FOR PERMITTED WETLAND AREAS

TLE

TLE

EXISTING R/W

472+00 473+00 STH 47 474+00 475+00 476+00 477+00 478+00 479+00

STH 47 R/L

EXISTING R/W

TLE

TLE

WETLAND BOUNDARY SEE PLAN SHEETS
FOR PERMITTED WETLAND AREAS

TEMPORARY WATER DIVERSION

EROSION CONTROL FOR WATER DIVERSION

PROJECT NO:1009-43-62	HWY: STH 47	COUNTY: MENOMINEE	EROSION CONTROL - CHICKNEY CREEK	SCALE, FT 0 25 50	SHEET 14	E

FILE NAME : K:\1102721.12\CADD\CIVIL3D\10094362\SHEETSPLAN\022006_EC.DWG PLOT DATE : 7/30/2014 4:14 PM PLOT BY : BECKENDORF, RANDY PLOT NAME :

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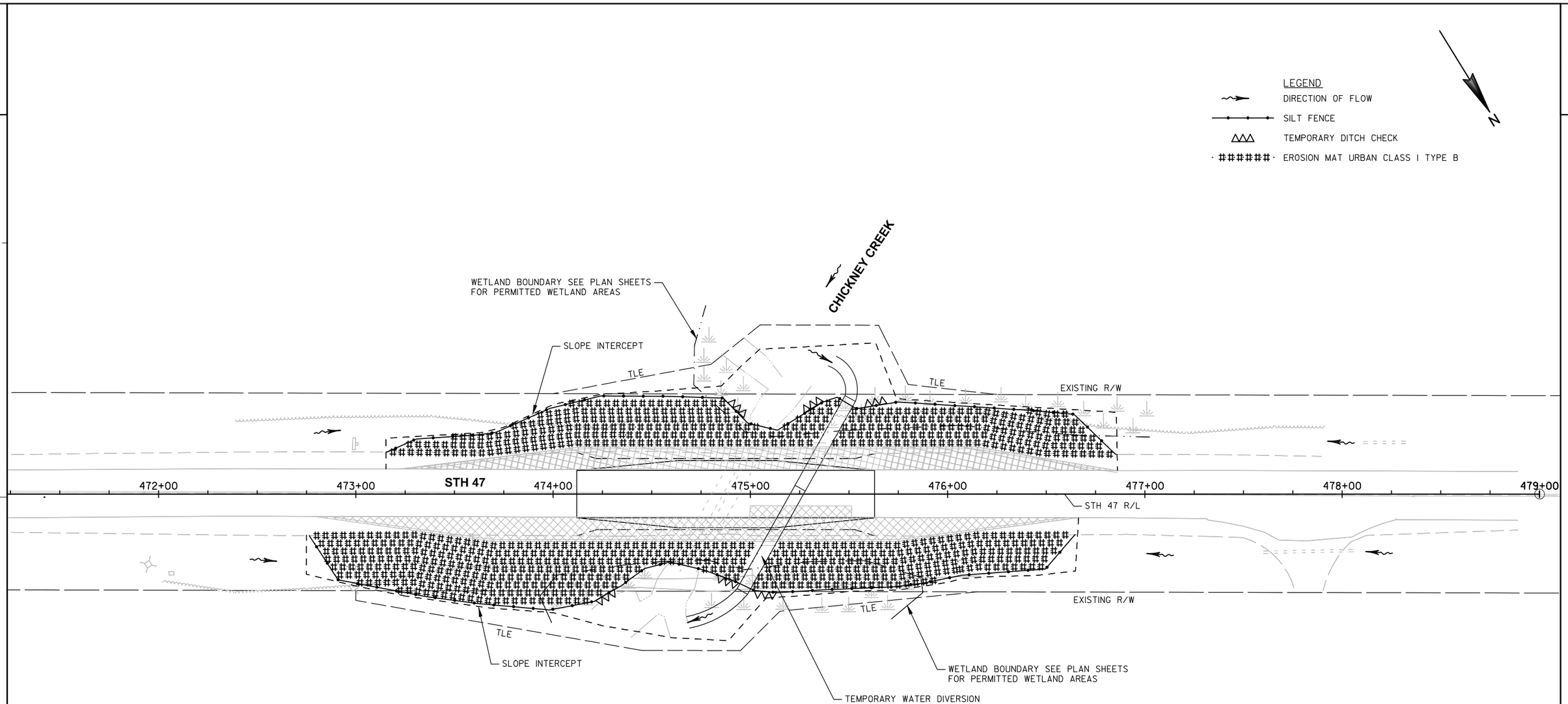


EROSION CONTROL FOR TEMPORARY WIDENING STAGES

PROJECT NO: 1009-43-62	HWY: STH 47	COUNTY: MENOMINEE	EROSION CONTROL - CHICKNEY CREEK	SCALE, FT 0 25 50	SHEET 15	E

2

LEGEND

DIRECTION OF FLOW

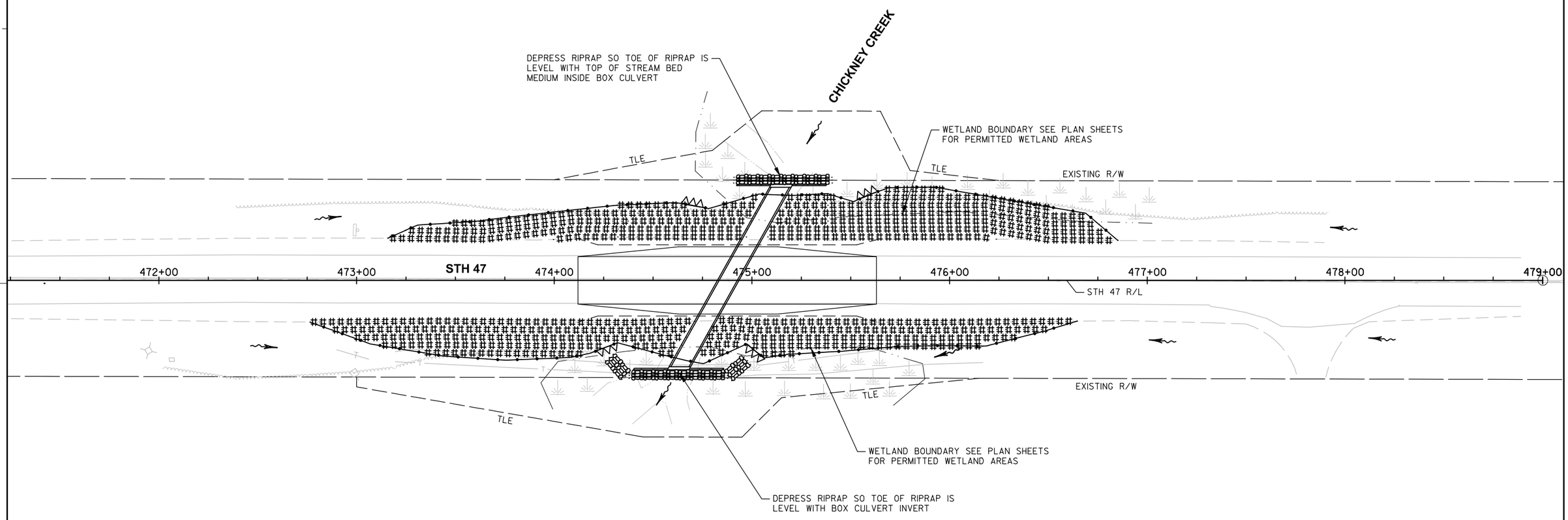
SILT FENCE

TEMPORARY DITCH CHECK

EROSION MAT URBAN CLASS I TYPE B

RIPRAP HEAVY

N



EROSION CONTROL FOR FINAL RESTORATION

PROJECT NO: 1009-43-62	HWY: STH 47	COUNTY: MENOMINEE	EROSION CONTROL - CHICKNEY CREEK	SCALE, FT 0 25 50	SHEET 16	E

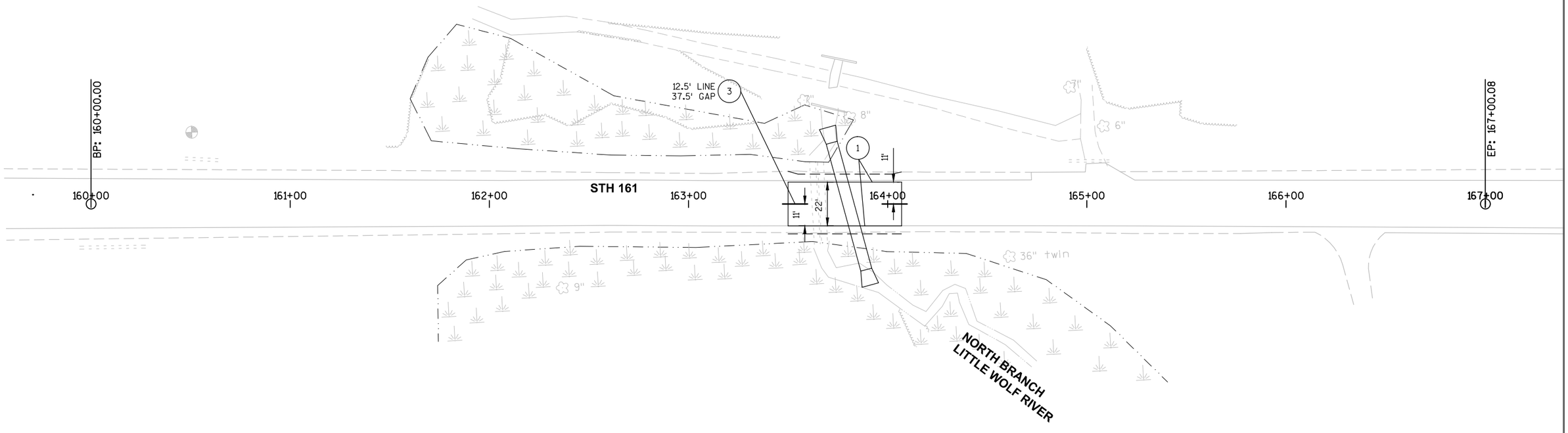
PAVEMENT MARKING LEGEND

1 EPOXY 4-INCH (WHITE)

2 SAME DAY EPOXY (YELLOW)

3 EPOXY 4-INCH (YELLOW)

N



PROJECT NO: 1009-43-62	HWY: STH 161	COUNTY: WAUPACA	PERMANENT SIGNING/PAVEMENT MARKING	SCALE, FT 0 25 50	SHEET 17	E

2

N

SIGNING LEGEND

PROPOSED SIGN MOUNTED ON WOOD POST(S)

X-XX SIGN NUMBER

XR-XX SIGN NUMBER, REMOVE

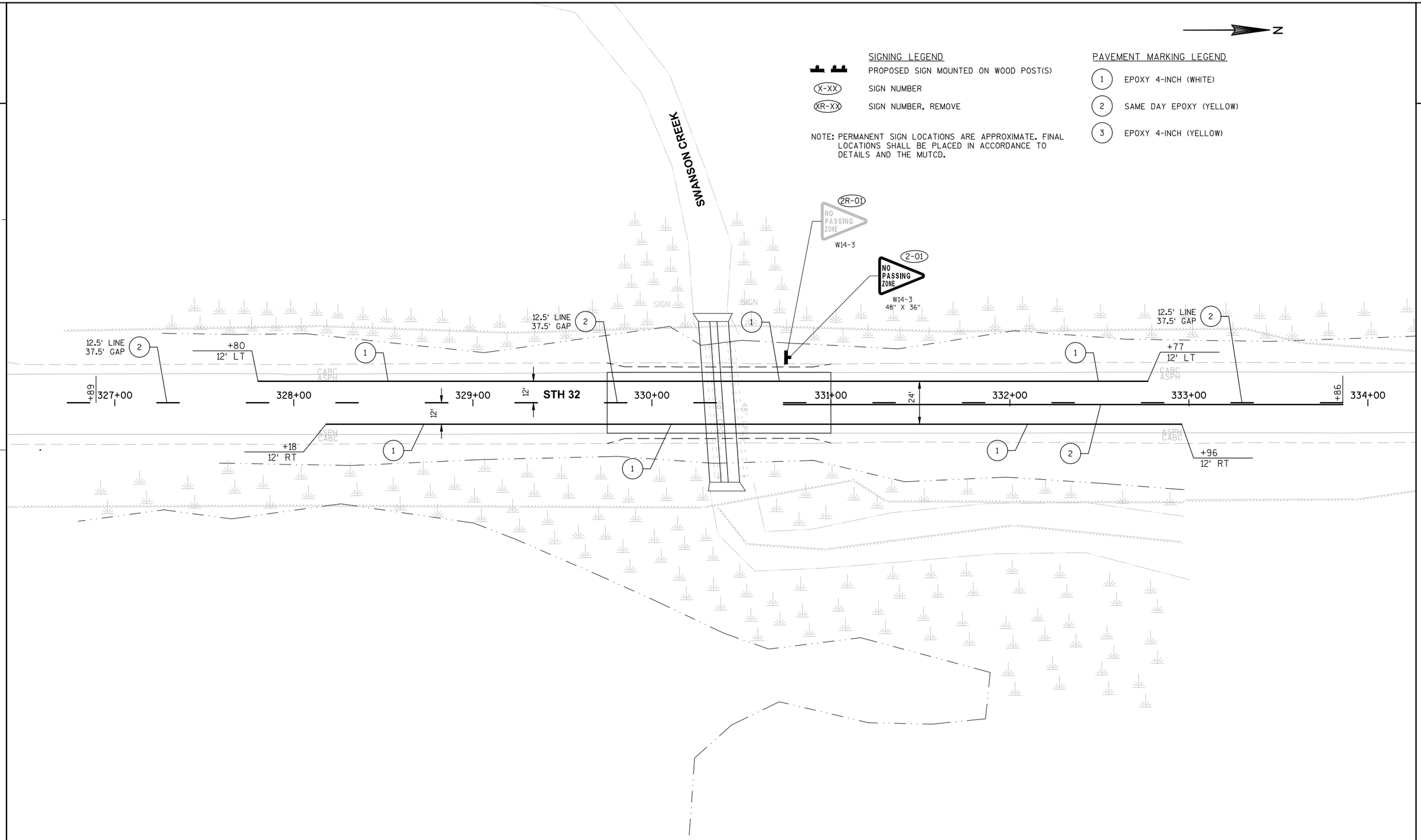
NOTE: PERMANENT SIGN LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE PLACED IN ACCORDANCE TO DETAILS AND THE MUTCD.

PAVEMENT MARKING LEGEND

1 EPOXY 4-INCH (WHITE)

2 SAME DAY EPOXY (YELLOW)

3 EPOXY 4-INCH (YELLOW)



PROJECT NO:1009-43-62	HWY: STH 32	COUNTY: FOREST	PERMANENT SIGNING/PAVMENT MARKING	SCALE, FT 0 25 50	SHEET 18	E

SIGNING LEGEND

PROPOSED SIGN MOUNTED ON WOOD POST(S)

X-XX SIGN NUMBER

XR-XX SIGN NUMBER, REMOVE

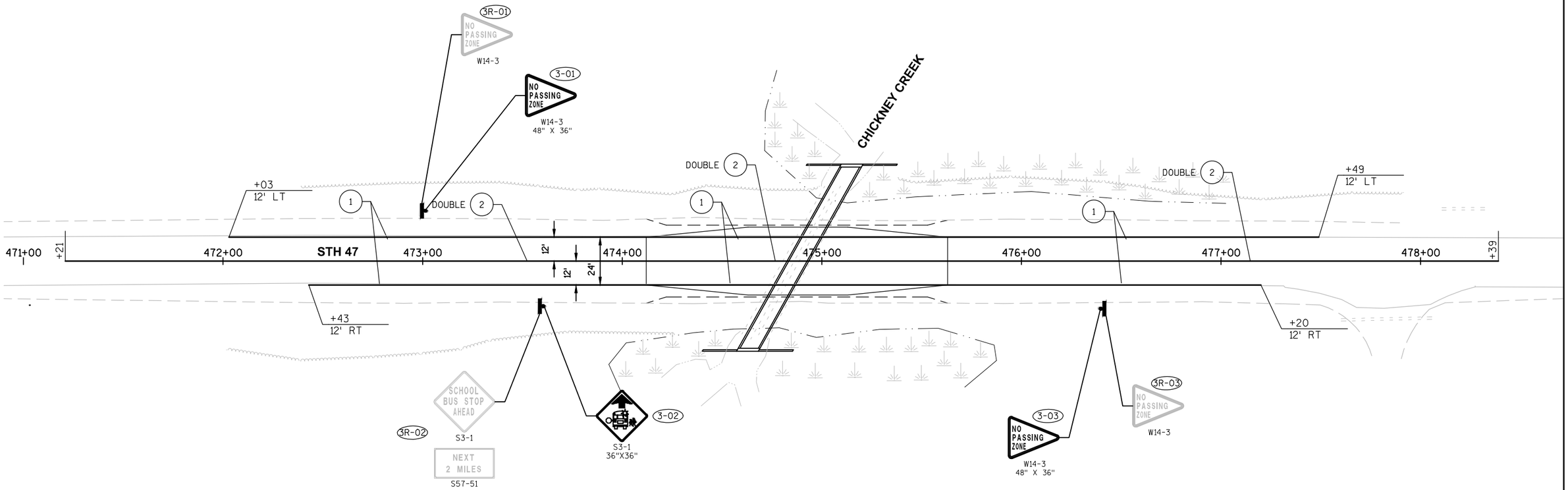
PAVEMENT MARKING LEGEND

1 EPOXY 4-INCH (WHITE)

2 SAME DAY EPOXY (YELLOW)

3 EPOXY 4-INCH (YELLOW)

NOTE: PERMANENT SIGN LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE PLACED IN ACCORDANCE TO DETAILS AND THE MUTCD.



PROJECT NO: 1009-43-62	HWY: STH 47	COUNTY: MENOMINEE	PERMANENT SIGNING/PAVEMENT MARKING	SCALE, FT 0 25 50	SHEET 19	E

LEGEND

POST MOUNTED TRAFFIC CONTROL SIGN

TRAFFIC FLOW

16"x16" ORANGE FLAGS
(INCIDENTAL TO TRAFFIC CONTROL SIGNS)

STH 32

W12-52

0.8 MILES AHEAD

W057-52
36" X 24"

INSTALL AT STH 32 AND USH 8 INTERSECTION

W12-52

2.9 MILES AHEAD

W057-52
36" X 24"

INSTALL AT STH 32 AND CTH T INTERSECTION

STH 47

W12-52

0.6 MILES AHEAD

W057-52
36" X 24"

INSTALL AT STH 47 AND STH 55 INTERSECTION

W12-52

5 MILES AHEAD

W057-52
36" X 24"

INSTALL AT STH 47 AND CTH G INTERSECTION

W12-52

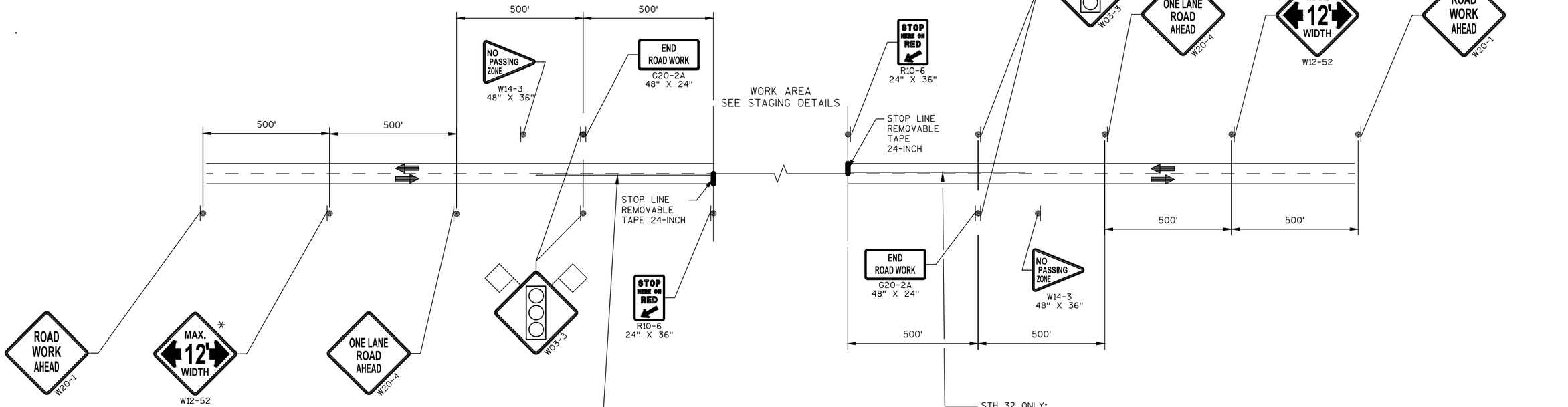
7 MILES AHEAD

W057-52
36" X 24"

INSTALL AT STH 32 AND STH 52 INTERSECTION

GENERAL NOTES FOR CONSTRUCTION STAGING AND TRAFFIC CONTROL

1. TRAFFIC CONTROL DRUMS IN TAPERS SHALL BE EQUIPPED WITH WARNING LIGHTS, TYPE "C", ONE WAY LIGHTS IN TAPERS ONLY, UNLESS OTHERWISE SHOWN.
2. SIGN LOCATIONS ARE APPROXIMATE. THE ACTUAL LOCATION AND SPACING MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER TO MEET FIELD CONDITIONS. SEE EXISTING AND PERMANENT SIGNING PLANS FOR MORE DETAIL.
3. SIGNS IN CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE COVERED. THE COVERING OF WOOD POST MOUNTED SIGNS IS INCLUDED UNDER ITEM 643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II. IN LIEU OF COVERING WOOD POST MOUNTED SIGNS, THE CONTRACTOR MAY CHOOSE TO REMOVE AND REINSTALL THEM.
4. "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS REFLECTIVE ORANGE.
5. ALL TRAFFIC CONTROL SIGNS SHALL BE 48"x48" UNLESS OTHERWISE NOTED IN THE PLANS.
6. A FLAGGER MAY BE REQUIRED WHERE CONSTRUCTION VEHICLES ENTER OR LEAVE "WORK/CLOSED" AREAS IF WARRANTED BY CONDITIONS AND/OR AS DIRECTED BY THE ENGINEER.
7. CONTRACTOR SHALL INSTALL PERMANENT SIGNS AND PERMANENT PAVEMENT MARKING WHEN APPROPRIATE DURING CONSTRUCTION STAGING AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER.
8. ADEQUATE TURNING PROVISIONS SHALL BE MAINTAINED FOR ALL VEHICLES, INCLUDING TRUCKS, AS DIRECTED BY THE ENGINEER.
9. ALL EXISTING CONFLICTING PAVEMENT MARKING SHALL BE REMOVED.
10. BARRICADE STRIPES ARE TO SLOPE DOWNWARD IN THE DIRECTION OF TRAFFIC FLOW.
11. CONTRACTOR TO ENSURE DRAINAGE AND AVOID ANY PONDING OR STANDING WATER DURING THE STAGED CONSTRUCTION.
12. TEMPORARY PAVEMENT MARKINGS SHALL BE TEMPORARY TAPE WHEN PLACED ON NEW OR EXISTING PAVEMENT SURFACES THAT ARE TO REMAIN IN PLACE FOLLOWING CONSTRUCTION.



STH 32 ONLY:
700' TEMPORARY PAVEMENT MARKING, 4-INCH, REMOVABLE TAPE YELLOW CENTERLINE (TYP). WHEN THE DISTANCE FROM THE PRECEDING NO-PASSING ZONE IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES AS INDICATED IN THE SPECIFICATIONS, THE TWO ZONES SHALL BE CONNECTED.

* 12' MAX FOR STH 47 & 15' MAX FOR STH 32

STH 32 ONLY:
700' TEMPORARY PAVEMENT MARKING, 4-INCH, REMOVABLE TAPE YELLOW CENTERLINE (TYP). WHEN THE DISTANCE FROM THE PRECEDING NO-PASSING ZONE IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES AS INDICATED IN THE STANDARD SPECIFICATIONS, THE TWO ZONES SHALL BE CONNECTED.

SCALE, FT 0 NTS

PROJECT NO:1009-43-62	HWY:STH 32 & STH 47	COUNTY:FOREST & MENOMINEE	STAGING PLAN - ADVANCED WARNING SIGN DETAILS	SHEET 20	E

2

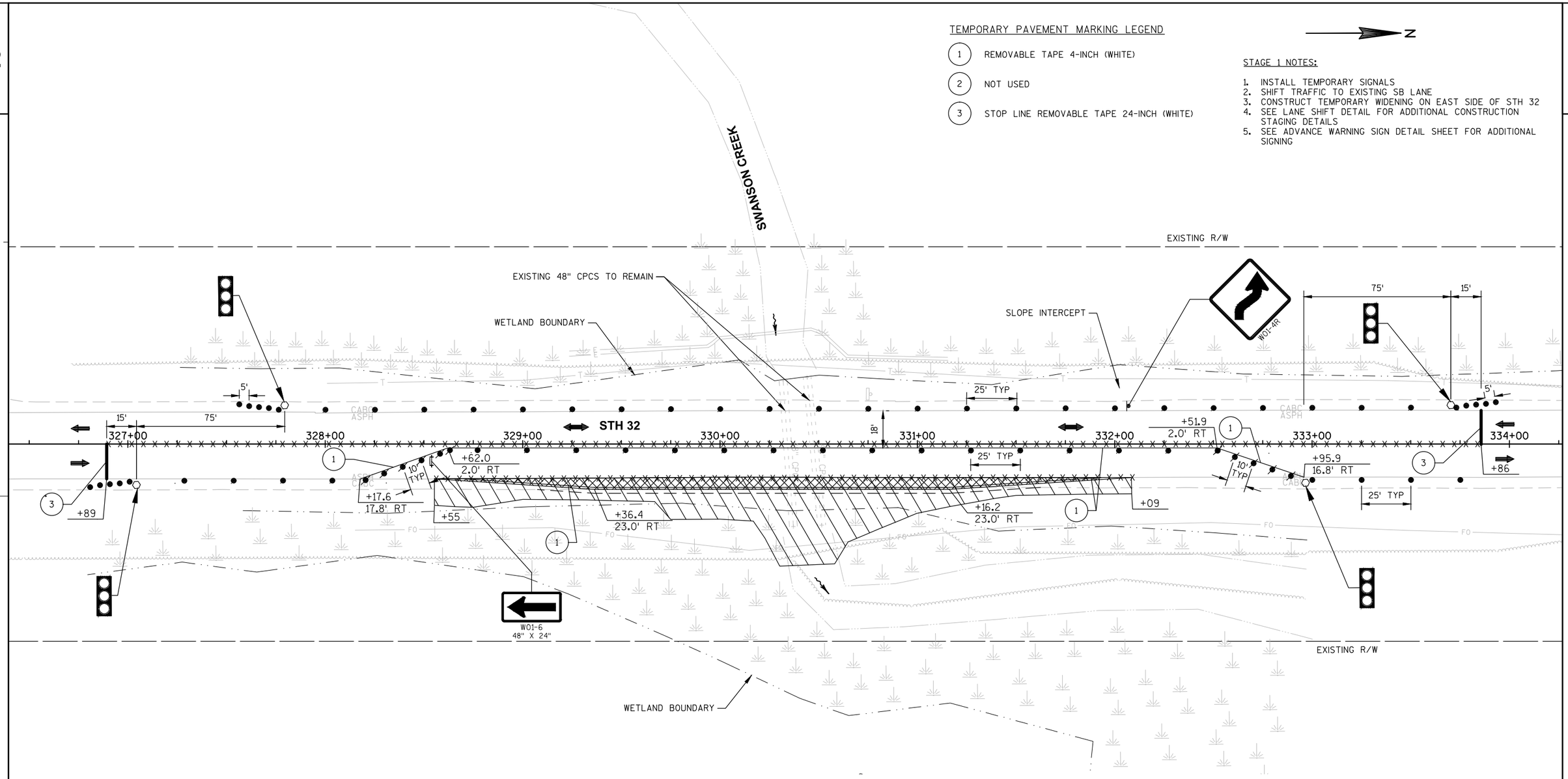
TEMPORARY PAVEMENT MARKING LEGEND

1. REMOVABLE TAPE 4-INCH (WHITE)
2. NOT USED
3. STOP LINE REMOVABLE TAPE 24-INCH (WHITE)

N

STAGE 1 NOTES:

1. INSTALL TEMPORARY SIGNALS
2. SHIFT TRAFFIC TO EXISTING SB LANE
3. CONSTRUCT TEMPORARY WIDENING ON EAST SIDE OF STH 32
4. SEE LANE SHIFT DETAIL FOR ADDITIONAL CONSTRUCTION STAGING DETAILS
5. SEE ADVANCE WARNING SIGN DETAIL SHEET FOR ADDITIONAL SIGNING



LEGEND

- POST MOUNTED TRAFFIC CONTROL SIGN
- TEMPORARY MOUNTED TRAFFIC CONTROL SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C WARNING LIGHT
- TYPE III BARRICADE (8' WIDE) WITH TWO TYPE A WARNING LIGHTS WITH/WITHOUT SIGN
- ASPHALTIC SURFACE TEMPORARY (INCIDENTAL TO LANE SHIFT BID ITEM)
- REMOVING PAVEMENT MARKING
- WORK ZONE
- TRAFFIC FLOW
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY TRAFFIC SIGNAL FOR BRIDGES
- 16"x16" ORANGE FLAGS (INCIDENTAL TO TRAFFIC CONTROL SIGNS)
- PROPOSED TEMPORARY SHOULDER

PROJECT NO:1009-43-62	HWY: STH 32	COUNTY: FOREST	STAGING PLAN - SWANSON CREEK STAGE 1	SCALE, FT 0 25 50	SHEET 21	E

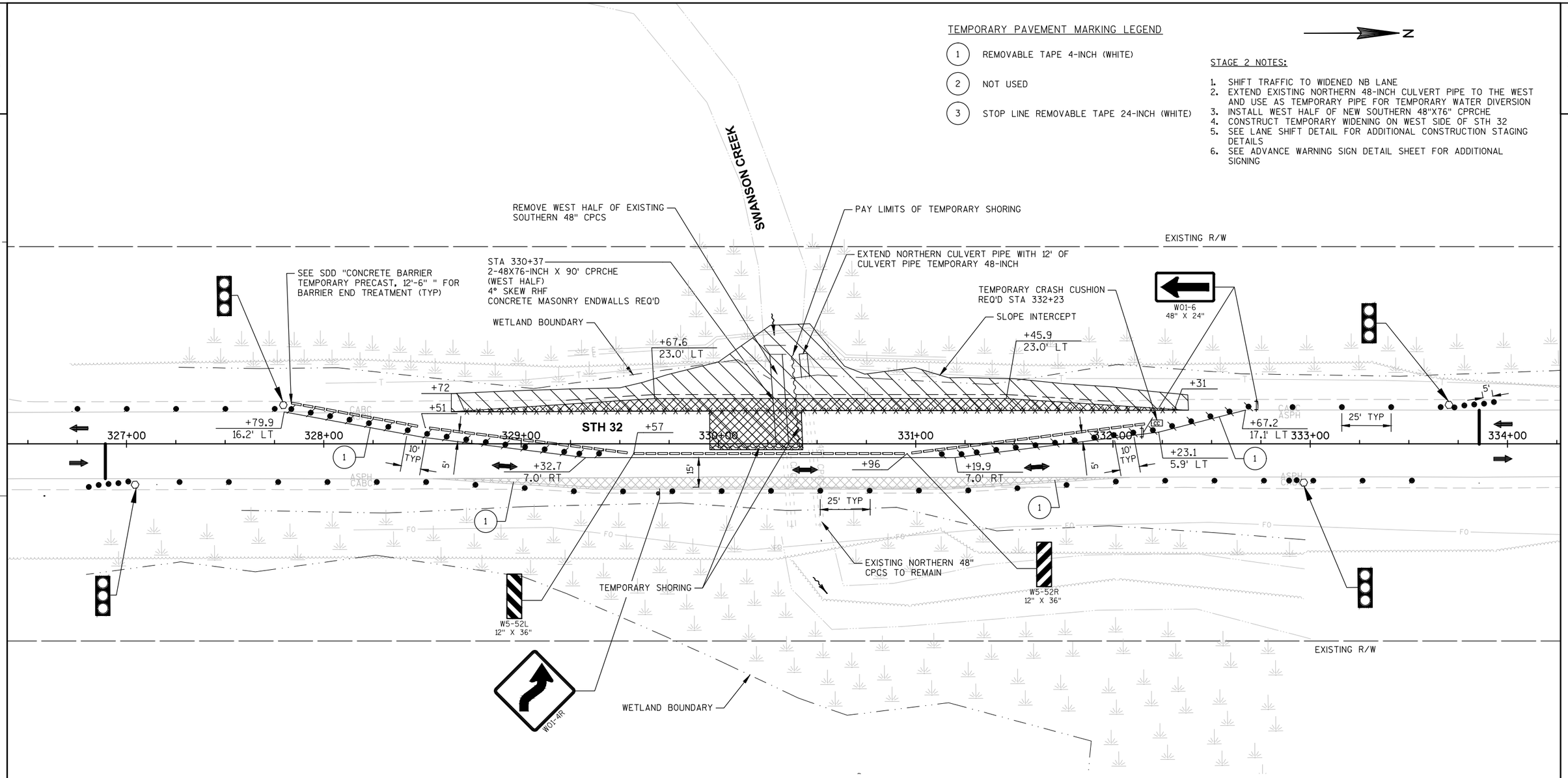
TEMPORARY PAVEMENT MARKING LEGEND

1. REMOVABLE TAPE 4-INCH (WHITE)
2. NOT USED
3. STOP LINE REMOVABLE TAPE 24-INCH (WHITE)

N

STAGE 2 NOTES:

1. SHIFT TRAFFIC TO WIDENED NB LANE
2. EXTEND EXISTING NORTHERN 48-INCH CULVERT PIPE TO THE WEST AND USE AS TEMPORARY PIPE FOR TEMPORARY WATER DIVERSION
3. INSTALL WEST HALF OF NEW SOUTHERN 48"X76" CPRCHE
4. CONSTRUCT TEMPORARY WIDENING ON WEST SIDE OF STH 32
5. SEE LANE SHIFT DETAIL FOR ADDITIONAL CONSTRUCTION STAGING DETAILS
6. SEE ADVANCE WARNING SIGN DETAIL SHEET FOR ADDITIONAL SIGNING



LEGEND

- POST MOUNTED TRAFFIC CONTROL SIGN
- TEMPORARY MOUNTED TRAFFIC CONTROL SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C WARNING LIGHT
- TYPE III BARRICADE (8' WIDE) WITH TWO TYPE A WARNING LIGHTS WITH/WITHOUT SIGN
- ASPHALTIC SURFACE TEMPORARY (INCIDENTAL TO LANE SHIFT BID ITEM)
- REMOVING PAVEMENT MARKING
- WORK ZONE
- TRAFFIC FLOW
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY TRAFFIC SIGNAL FOR BRIDGES
- 16"x16" ORANGE FLAGS (INCIDENTAL TO TRAFFIC CONTROL SIGNS)
- PROPOSED TEMPORARY SHOULDER
- CC TEMPORARY CRASH CUSHION

PROJECT NO:1009-43-62	HWY: STH 32	COUNTY:FOREST	STAGING PLAN - SWANSON CREEK STAGE 2	SCALE, FT 0 25 50	SHEET 22	E

TEMPORARY PAVEMENT MARKING LEGEND

1. REMOVABLE TAPE 4-INCH (WHITE)
2. NOT USED
3. STOP LINE REMOVABLE TAPE 24-INCH (WHITE)

N

STAGE 3 NOTES:

1. SHIFT TRAFFIC TO WIDENED SB LANE
2. INSTALL EAST HALF OF NEW SOUTHERN 48"X76" CPRCHE
3. DIVERT CHANNEL TO COMPLETED SOUTHERN 48"X76" CPRCHE
4. REMOVE EAST HALF OF EXISTING 48-INCH CULVERT PIPE
5. INSTALL EAST HALF OF NEW NORTHERN 48"X76" CPRCHE
6. REMOVE TEMPORARY WIDENING ON EAST SIDE OF STH 32 AND RESTORE FILL SLOPES TO FINAL CROSS SECTIONS
7. INSTALL BASE AGGREGATE AND HMA PAVEMENT TYPE E-3 FOR NORMAL NB TRAVEL LANE
8. SEE LANE SHIFT DETAIL FOR ADDITIONAL CONSTRUCTION STAGING DETAILS
9. SEE ADVANCE WARNING SIGN DETAIL SHEET FOR ADDITIONAL SIGNING

SWANSON CREEK

EXISTING R/W

W5-52L
12" X 36"

STA 330+34
2-48X76-INCH X 90' CPRCHE
4° SKEW RHF
CONCRETE MASONRY ENDWALLS
REQ'D

W5-52R
12" X 36"

TEMPORARY SHORING

W01-4R

SLOPE INTERCEPT

WETLAND BOUNDARY

+71.6
7.0' LT

+96

+18

+41.9
7.0' LT

+30.0
4.0' RT

+73.7
17.7' RT

+80.6
16.8' RT

25' TYP

20' TYP

10' TYP

5'

15'

STH 32

327+00 328+00 329+00 330+00 331+00 332+00 333+00 334+00

CABC
ASPH

FO

W01-6
48" X 24"

W01-6
48" X 24"

TEMPORARY CRASH CUSHION
REQ'D STA 328+63

PAY LIMITS OF
TEMPORARY SHORING

REMOVE EAST HALF OF
EXISTING 48" CPCS

SEE SDD "CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6" " FOR
BARRIER END TREATMENT (TYP)

EXISTING R/W

WETLAND BOUNDARY

LEGEND

- POST MOUNTED TRAFFIC CONTROL SIGN
- TEMPORARY MOUNTED TRAFFIC CONTROL SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C WARNING LIGHT
- TYPE III BARRICADE (8' WIDE) WITH TWO TYPE A WARNING LIGHTS WITH/WITHOUT SIGN
- ASPHALTIC SURFACE TEMPORARY (INCIDENTAL TO LANE SHIFT BID ITEM)
- REMOVING PAVEMENT MARKING
- WORK ZONE
- TRAFFIC FLOW
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY TRAFFIC SIGNAL FOR BRIDGES
- 16"x16" ORANGE FLAGS (INCIDENTAL TO TRAFFIC CONTROL SIGNS)
- PROPOSED TEMPORARY SHOULDER
- CC TEMPORARY CRASH CUSHION

PROJECT NO:1009-43-62	HWY: STH 32	COUNTY:FOREST	STAGING PLAN - SWANSON CREEK STAGE 3	SCALE, FT 0 25 50	SHEET 23	E

2

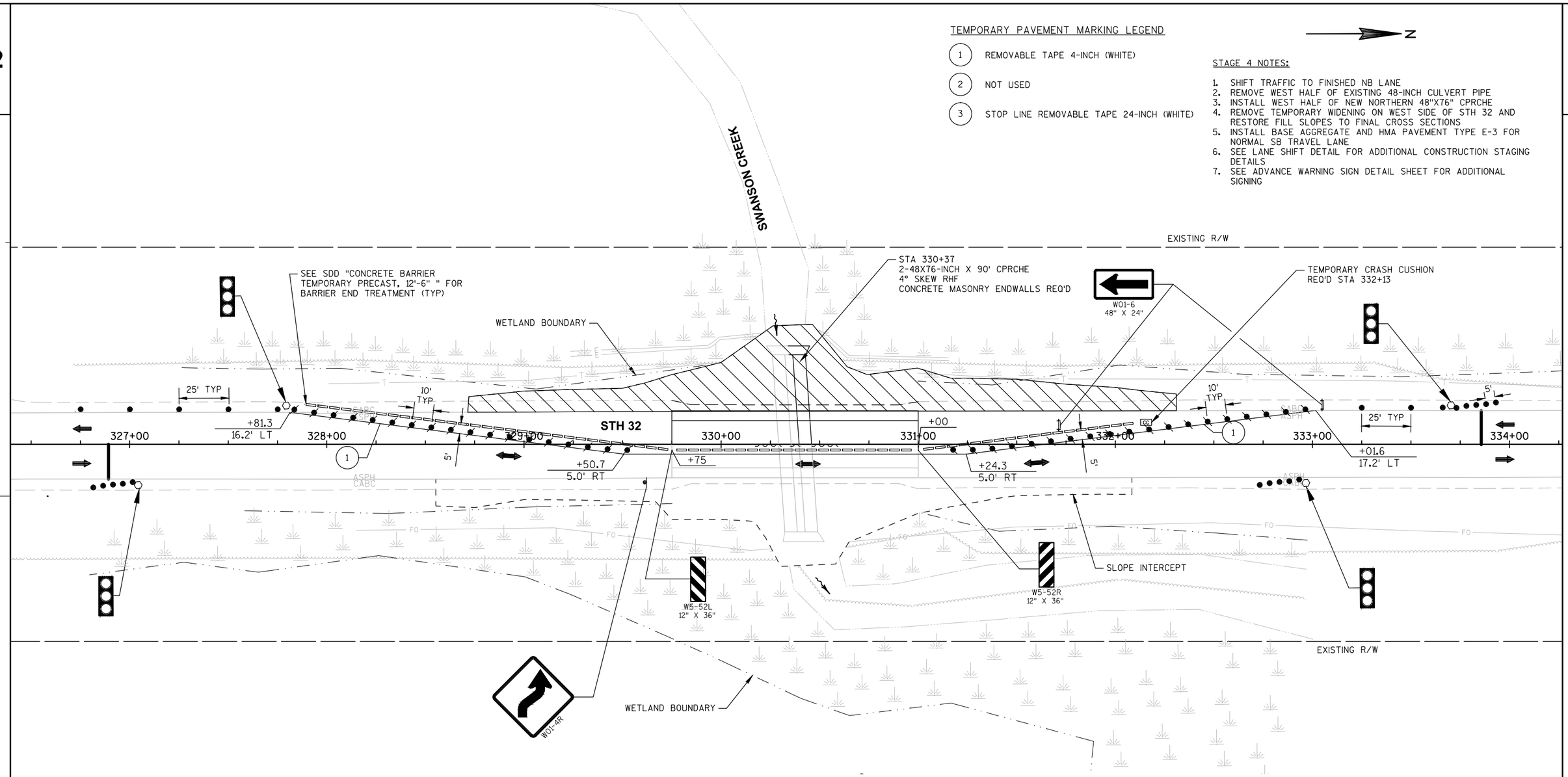
TEMPORARY PAVEMENT MARKING LEGEND

1. REMOVABLE TAPE 4-INCH (WHITE)
2. NOT USED
3. STOP LINE REMOVABLE TAPE 24-INCH (WHITE)

N

STAGE 4 NOTES:

1. SHIFT TRAFFIC TO FINISHED NB LANE
2. REMOVE WEST HALF OF EXISTING 48-INCH CULVERT PIPE
3. INSTALL WEST HALF OF NEW NORTHERN 48"X76" CPRCHE
4. REMOVE TEMPORARY WIDENING ON WEST SIDE OF STH 32 AND RESTORE FILL SLOPES TO FINAL CROSS SECTIONS
5. INSTALL BASE AGGREGATE AND HMA PAVEMENT TYPE E-3 FOR NORMAL SB TRAVEL LANE
6. SEE LANE SHIFT DETAIL FOR ADDITIONAL CONSTRUCTION STAGING DETAILS
7. SEE ADVANCE WARNING SIGN DETAIL SHEET FOR ADDITIONAL SIGNING



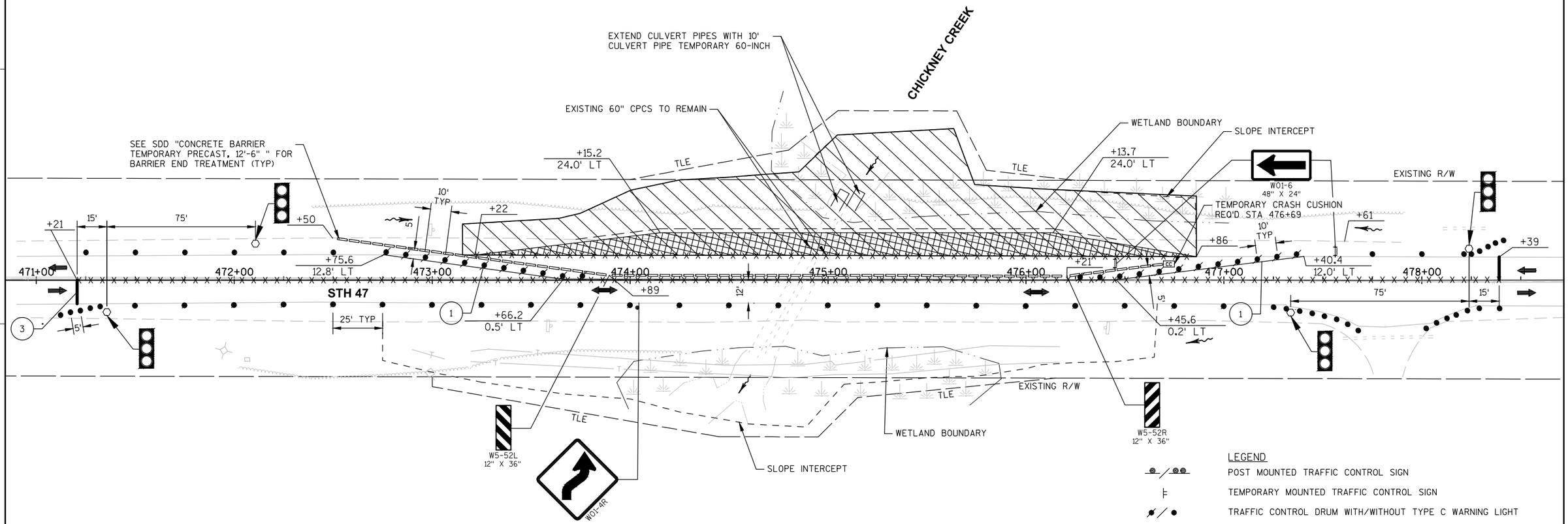
LEGEND

- POST MOUNTED TRAFFIC CONTROL SIGN
- TEMPORARY MOUNTED TRAFFIC CONTROL SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C WARNING LIGHT
- TYPE III BARRICADE (8' WIDE) WITH TWO TYPE A WARNING LIGHTS WITH/WITHOUT SIGN
- ASPHALTIC SURFACE TEMPORARY (INCIDENTAL TO LANE SHIFT BID ITEM)
- REMOVING PAVEMENT MARKING
- WORK ZONE
- TRAFFIC FLOW
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY TRAFFIC SIGNAL FOR BRIDGES
- 16"x16" ORANGE FLAGS (INCIDENTAL TO TRAFFIC CONTROL SIGNS)
- PROPOSED TEMPORARY SHOULDER
- CC TEMPORARY CRASH CUSHION

PROJECT NO:1009-43-62	HWY: STH 32	COUNTY:FOREST	STAGING PLAN - SWANSON CREEK STAGE 4	SCALE, FT 0 25 50	SHEET 24	E

STAGE 1 NOTES:

1. INSTALL TEMPORARY SIGNALS
2. SHIFT TRAFFIC TO EXISTING NB LANE
3. EXTEND EXISTING 60-INCH CULVERT PIPES TO THE SOUTHWEST
4. CONSTRUCT TEMPORARY WIDENING ON SOUTHWEST SIDE OF STH 47
5. SEE LANE SHIFT DETAIL FOR ADDITIONAL CONSTRUCTION STAGING DETAILS
6. SEE ADVANCE WARNING SIGN DETAIL SHEET FOR ADDITIONAL SIGNING



TEMPORARY PAVEMENT MARKING LEGEND

1. REMOVABLE TAPE 4-INCH (WHITE)
2. NOT USED
3. STOP LINE REMOVABLE TAPE 24-INCH (WHITE)

LEGEND

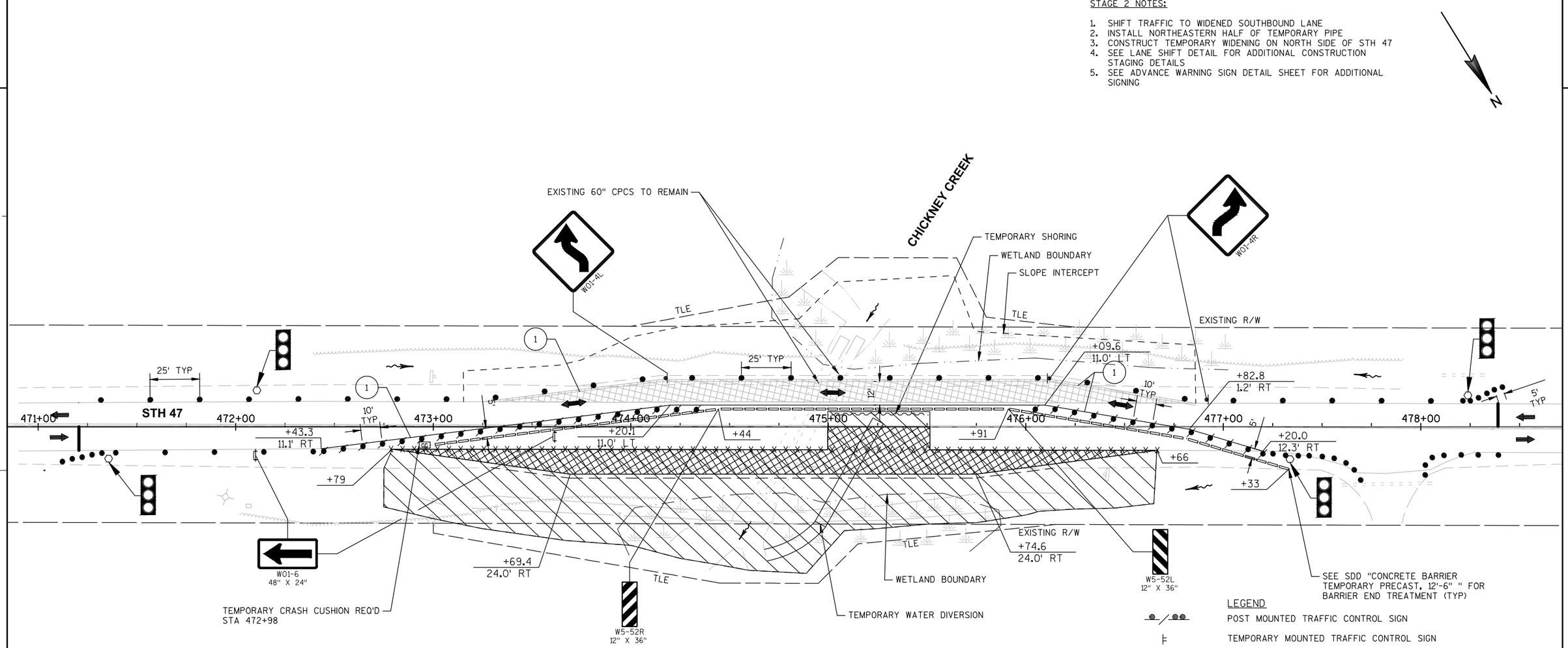
- POST MOUNTED TRAFFIC CONTROL SIGN
- TEMPORARY MOUNTED TRAFFIC CONTROL SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C WARNING LIGHT
- TYPE III BARRICADE (8' WIDE) WITH TWO TYPE A WARNING LIGHTS WITH/WITHOUT SIGN
- ASPHALTIC SURFACE TEMPORARY (INCIDENTAL TO LANE SHIFT BID ITEM)
- REMOVING PAVEMENT MARKING
- WORK ZONE
- TRAFFIC FLOW
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY TRAFFIC SIGNAL FOR BRIDGES
- 16"x16" ORANGE FLAGS (INCIDENTAL TO TRAFFIC CONTROL SIGNS)
- PROPOSED TEMPORARY SHOULDER
- CC TEMPORARY CRASH CUSHION

PROJECT NO: 1009-43-62	HWY: STH 47	COUNTY: MENOMINEE	STAGING PLAN - CHICKNEY CREEK STAGE 1	SCALE, FT 0 25 50	SHEET 25	E

2

STAGE 2 NOTES:

1. SHIFT TRAFFIC TO WIDENED SOUTHBOUND LANE
2. INSTALL NORTHEASTERN HALF OF TEMPORARY PIPE
3. CONSTRUCT TEMPORARY WIDENING ON NORTH SIDE OF STH 47
4. SEE LANE SHIFT DETAIL FOR ADDITIONAL CONSTRUCTION STAGING DETAILS
5. SEE ADVANCE WARNING SIGN DETAIL SHEET FOR ADDITIONAL SIGNING



TEMPORARY PAVEMENT MARKING LEGEND

1	REMOVABLE TAPE 4-INCH (WHITE)
2	NOT USED
3	STOP LINE REMOVABLE TAPE 24-INCH (WHITE)

LEGEND

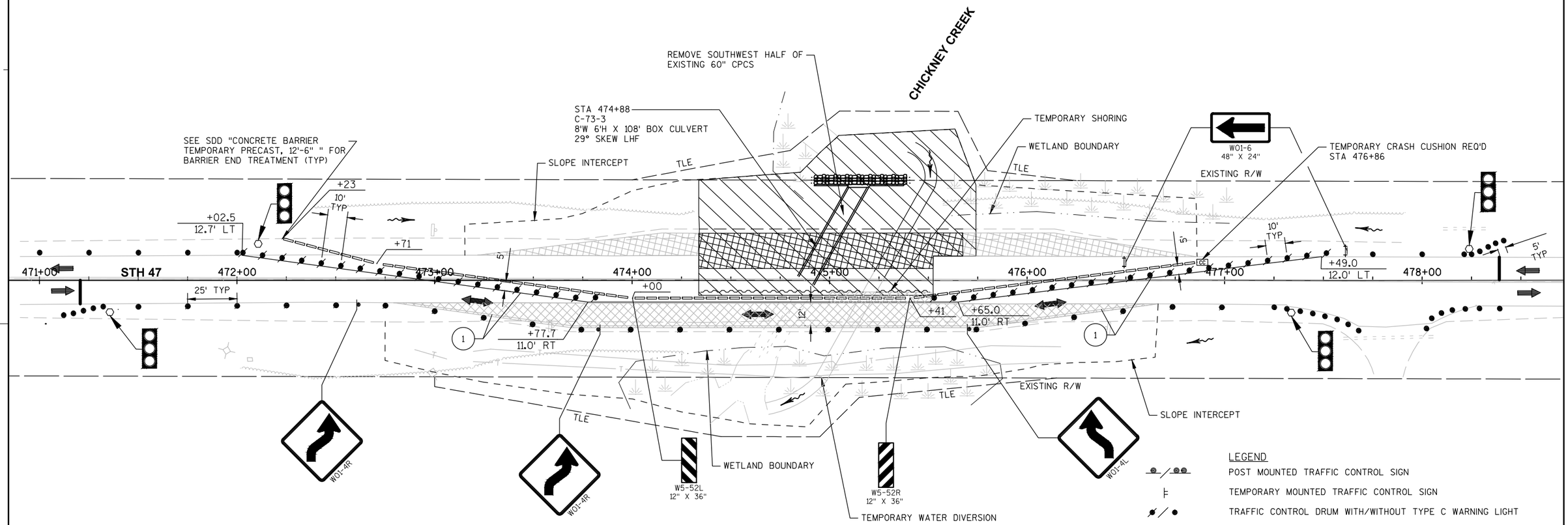
	POST MOUNTED TRAFFIC CONTROL SIGN
	TEMPORARY MOUNTED TRAFFIC CONTROL SIGN
	TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C WARNING LIGHT
	TYPE III BARRICADE (8' WIDE) WITH TWO TYPE A WARNING LIGHTS WITH/WITHOUT SIGN
	ASPHALTIC SURFACE TEMPORARY (INCIDENTAL TO LANE SHIFT BID ITEM)
	REMOVING PAVEMENT MARKING
	WORK ZONE
	TRAFFIC FLOW
	CONCRETE BARRIER TEMPORARY PRECAST
	TEMPORARY TRAFFIC SIGNAL FOR BRIDGES
	16"x16" ORANGE FLAGS (INCIDENTAL TO TRAFFIC CONTROL SIGNS)
	PROPOSED TEMPORARY SHOULDER
CC	TEMPORARY CRASH CUSHION

PROJECT NO:1009-43-62	HWY: STH 47	COUNTY: MENOMINEE	STAGING PLAN - CHICKNEY CREEK STAGE 2	SCALE, FT 0 25 50	SHEET 26	E

STAGE 3 NOTES:

1. SHIFT TRAFFIC TO WIDENED NB LANE
2. INSTALL SOUTHWESTERN HALF OF TEMPORARY PIPE
3. DIVERT CHANNEL TO TEMPORARY CULVERT PIPE
4. INSTALL SOUTHWESTERN HALF OF 8'W X 6'H BOX CULVERT
5. SEE LANE SHIFT DETAIL FOR ADDITIONAL CONSTRUCTION STAGING DETAILS
6. SEE ADVANCE WARNING SIGN DETAIL SHEET FOR ADDITIONAL SIGNING

N



TEMPORARY PAVEMENT MARKING LEGEND

1. REMOVABLE TAPE 4-INCH (WHITE)
2. NOT USED
3. STOP LINE REMOVABLE TAPE 24-INCH (WHITE)

LEGEND

- POST MOUNTED TRAFFIC CONTROL SIGN
- TEMPORARY MOUNTED TRAFFIC CONTROL SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C WARNING LIGHT
- TYPE III BARRICADE (8' WIDE) WITH TWO TYPE A WARNING LIGHTS WITH/WITHOUT SIGN
- ASPHALTIC SURFACE TEMPORARY (INCIDENTAL TO LANE SHIFT BID ITEM)
- REMOVING PAVEMENT MARKING
- WORK ZONE
- TRAFFIC FLOW
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY TRAFFIC SIGNAL FOR BRIDGES
- 16"x16" ORANGE FLAGS (INCIDENTAL TO TRAFFIC CONTROL SIGNS)
- PROPOSED TEMPORARY SHOULDER
- CC TEMPORARY CRASH CUSHION

PROJECT NO: 1009-43-62	HWY: STH 47	COUNTY: MENOMINEE	STAGING PLAN - CHICKNEY CREEK STAGE 3	SCALE, FT 0 25 50	SHEET 27	E

STAGE 4 NOTES:

1. SHIFT TRAFFIC TO WIDENED SB LANE
2. INSTALL NORTHEASTERN HALF OF 8'W X 6'H BOX CULVERT
3. DIVERT CHANNEL TO COMPLETED 8'W X 6'H BOX CULVERT
4. REMOVE SOUTHWESTERN HALF OF TEMPORARY CULVERT PIPE
5. REMOVE TEMPORARY WIDENING ON NORTHEAST SIDE OF STH 47 AND RESTORE FILL SLOPES TO FINAL CROSS SECTIONS
6. INSTALL BASE AGGREGATE AND HMA PAVEMENT TYPE E-3 FOR NORMAL NB TRAVEL LANE
7. SEE LANE SHIFT DETAIL FOR ADDITIONAL CONSTRUCTION STAGING DETAILS
8. SEE ADVANCE WARNING SIGN DETAIL SHEET FOR ADDITIONAL SIGNING

N

CHICKNEY CREEK

W01-4L

W01-4R

TEMPORARY SHORING

WETLAND BOUNDARY

TLE

EXISTING R/W

25' TYP

+20.1
11.0' LT

+44

+09.6
11.0' LT

+91

+82.8
1.2' RT

+20.0
12.3' RT

+43.3
11.1' RT

10' TYP

5' TYP

12'

5'

471+00 472+00 STH 47 473+00 474+00 475+00 476+00 477+00 478+00

+33

W01-6
48" X 24"

TEMPORARY CRASH CUSHION
REQ'D STA 472+98

W5-52R
12" X 36"

REMOVE NORTHEAST HALF OF
EXISTING 60" CPCS

STA 474+88
C-73-3
8'W 6'H X 108' BOX CULVERT
29° SKEW LHF

W5-52L
12" X 36"

TEMPORARY PAVEMENT MARKING LEGEND

1. REMOVABLE TAPE 4-INCH (WHITE)
2. NOT USED
3. STOP LINE REMOVABLE TAPE 24-INCH (WHITE)

LEGEND

- POST MOUNTED TRAFFIC CONTROL SIGN
- TEMPORARY MOUNTED TRAFFIC CONTROL SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C WARNING LIGHT
- TYPE III BARRICADE (8' WIDE) WITH TWO TYPE A WARNING LIGHTS WITH/WITHOUT SIGN
- ASPHALTIC SURFACE TEMPORARY (INCIDENTAL TO LANE SHIFT BID ITEM)
- REMOVING PAVEMENT MARKING
- WORK ZONE
- TRAFFIC FLOW
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY TRAFFIC SIGNAL FOR BRIDGES
- 16"x16" ORANGE FLAGS (INCIDENTAL TO TRAFFIC CONTROL SIGNS)
- PROPOSED TEMPORARY SHOULDER
- CC TEMPORARY CRASH CUSHION

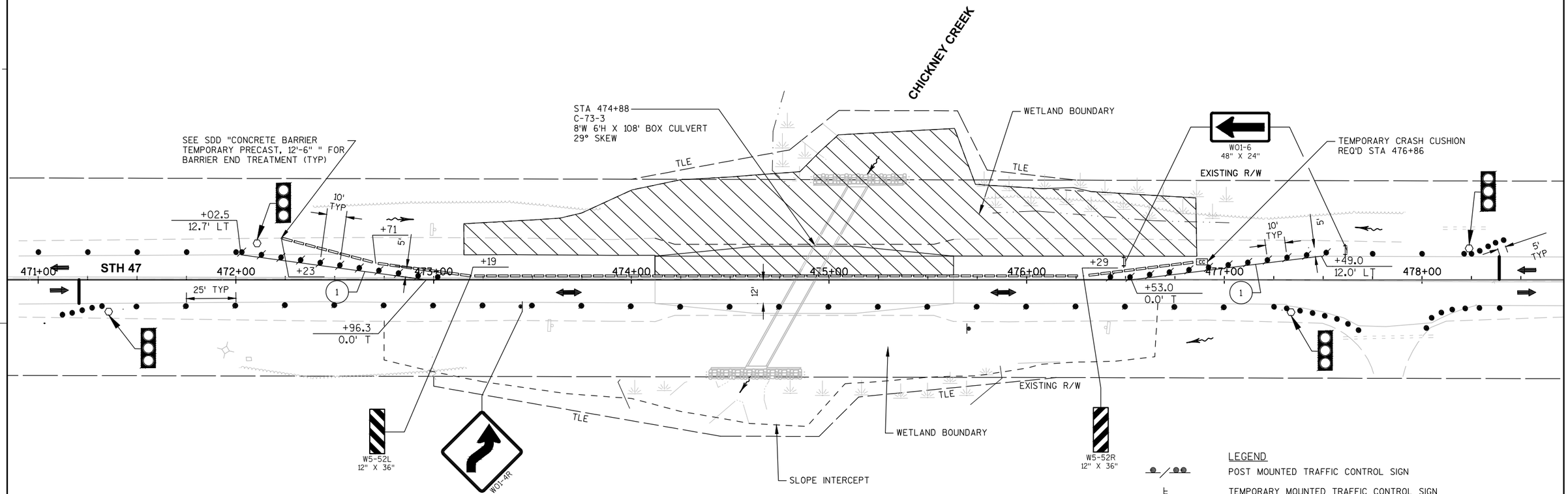
PROJECT NO: 1009-43-62	HWY: STH 47	COUNTY: MENOMINEE	STAGING PLAN - CHICKNEY CREEK STAGE 4	SCALE, FT 0 25 50	SHEET 28	E

2

STAGE 5 NOTES:

1. SHIFT TRAFFIC TO FINISHED NB LANE
2. REMOVE SOUTHWESTERN HALF OF TEMPORARY CULVERT PIPE
3. REMOVE TEMPORARY WIDENING ON SOUTHWEST SIDE OF STH 47 AND RESTORE FILL SLOPES TO FINAL CROSS SECTIONS
4. INSTALL BASE AGGREGATE AND HMA PAVEMENT TYPE E-3 FOR NORMAL SB TRAVEL LANE
5. SEE LANE SHIFT DETAIL FOR ADDITIONAL CONSTRUCTION STAGING DETAILS
6. SEE ADVANCE WARNING SIGN DETAIL SHEET FOR ADDITIONAL SIGNING

N



TEMPORARY PAVEMENT MARKING LEGEND

1. REMOVABLE TAPE 4-INCH (WHITE)
2. NOT USED
3. STOP LINE REMOVABLE TAPE 24-INCH (WHITE)

LEGEND

- POST MOUNTED TRAFFIC CONTROL SIGN
- TEMPORARY MOUNTED TRAFFIC CONTROL SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C WARNING LIGHT
- TYPE III BARRICADE (8' WIDE) WITH TWO TYPE A WARNING LIGHTS WITH/WITHOUT SIGN
- ASPHALTIC SURFACE TEMPORARY (INCIDENTAL TO LANE SHIFT BID ITEM)
- REMOVING PAVEMENT MARKING
- WORK ZONE
- TRAFFIC FLOW
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY TRAFFIC SIGNAL FOR BRIDGES
- 16"x16" ORANGE FLAGS (INCIDENTAL TO TRAFFIC CONTROL SIGNS)
- PROPOSED TEMPORARY SHOULDER
- CC TEMPORARY CRASH CUSHION

PROJECT NO:1009-43-62	HWY: STH 47	COUNTY: MENOMINEE	STAGING PLAN - CHICKNEY CREEK STAGE 5	SCALE, FT 0 25 50	SHEET 29	E

LEGEND

- COVER SIGN
- POST MOUNTED SIGN
- SIGN MOUNTED ON TYPE III BARRICADE
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- DETOUR ROUTE

NOTE: USE SIGN SIZE (4) ON USH 10, SIZE (2) ON ALL OTHER ROADWAYS.

ROAD CLOSED AHEAD W20-3 48"X48"
ROAD CLOSED 1000 FT W20-3 48"X48"
ROAD CLOSED 500 FT W20-3 48"X48"

CULVERT LOCATION / WORK ZONE
SEE SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES", DETAIL D.
10-TYPE III BARRICADES,
12-TYPE A WARNING LIGHTS,
2-R11-2 SIGNS

ROAD CLOSED 500 FT W20-3 48"X48"
ROAD CLOSED 1000 FT W20-3 48"X48"
ROAD CLOSED AHEAD W20-3 48"X48"

SEE DETAIL #1
SEE DETAIL #2
SEE DETAIL #3

ROAD CLOSED
3 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3
60" X 30"

PLACE PORTABLE CHANGEABLE MESSAGE BOARDS 1 WEEK PRIOR TO CLOSURE.
PLACE IN NW CORNER OF NETZLER RD INTERSECTION AND SE CORNER OF KEATINGS LAKE DR INTERSECTION

MESSAGE: HWY 161 CLOSED X/XX, PLAN ALT ROUTE

PLACE AT SOUTH CITY LIMITS

SEE DETAIL #4
SEE DETAIL #5

Iola
Nelsonville
Amherst Jct.
Amherst
Scandinavia
Ogdensburg
Manawa
Waupaca
N Branch Lit. Wolf

DETOUR M04-8 24" X 12"
WEST M03-4 24" X 12"
EAST M03-2 24" X 12"
161 M1-6 24" X 24"
M05-2R 21" X 21"
M06-1 21" X 21"
M06-2 21" X 21"
M05-2L 21" X 21"
M05-1L 21" X 21"
M05-1R 21" X 21"

USH 10 INTERCHANGE DETAIL

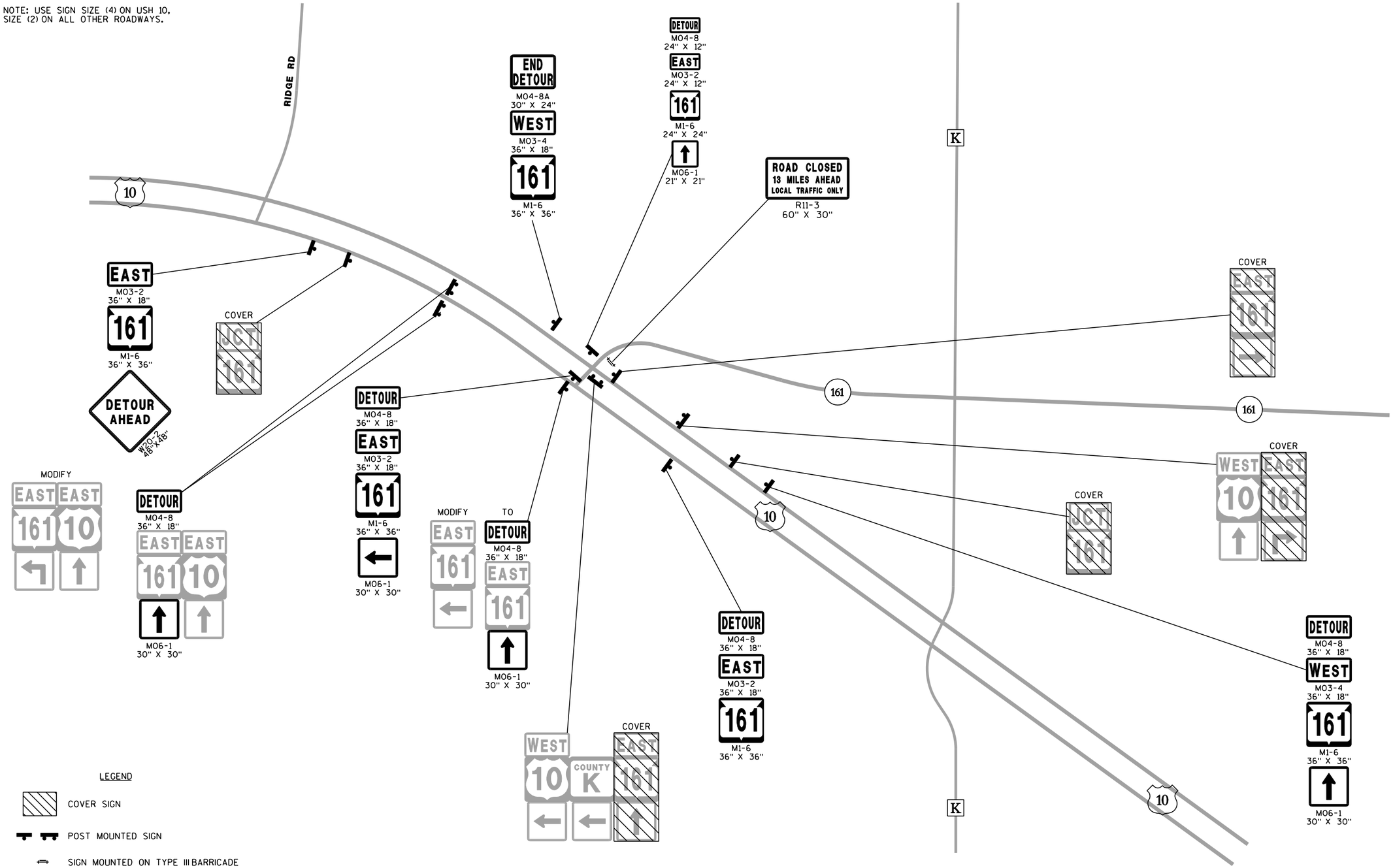
DETOUR M04-8 36" X 18"
WEST M03-4 36" X 18"
EAST M03-2 36" X 18"
161 M1-6 36" X 36"
CROSS STREET

USH 10 INTERCHANGES WITH CHURCHILL ST, STH 22 SOUTH / CTH K, STH 54 WEST / STH 49 NORTH CTH A / CTH B EAST, AND CTH B WEST

PROJECT NO: 1009-43-62	HWY: STH 161	COUNTY: WAUPACA	DETOUR PLAN	SCALE, FEET 0 NTS	SHEET 30	E

FILE NAME : K:\1102721.12\cadd\sheets\detour\027001_dt.dgn PLOT DATE : 7/30/2014 PLOT BY : rlb PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

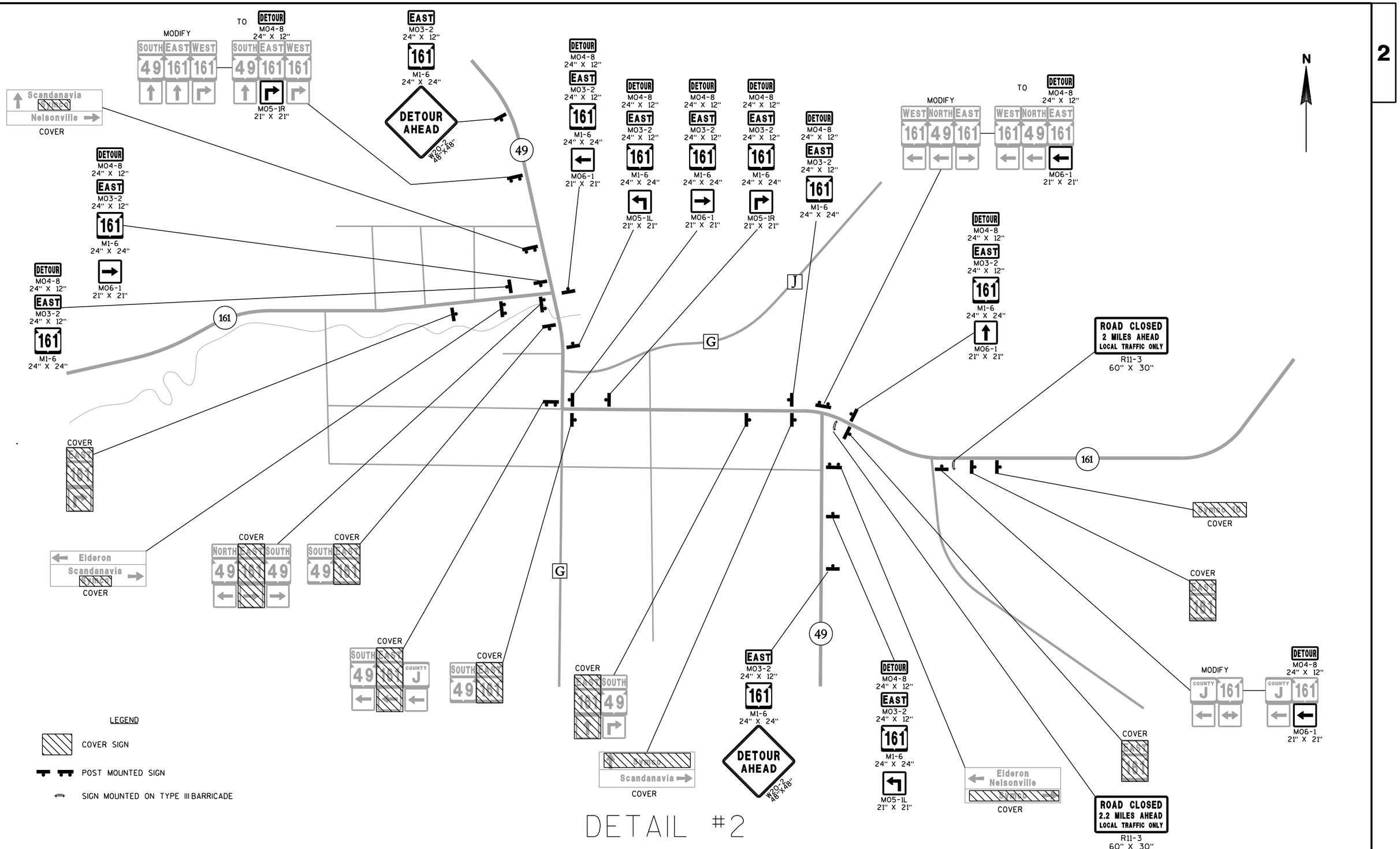
NOTE: USE SIGN SIZE (4) ON USH 10,
SIZE (2) ON ALL OTHER ROADWAYS.



DETAIL #1

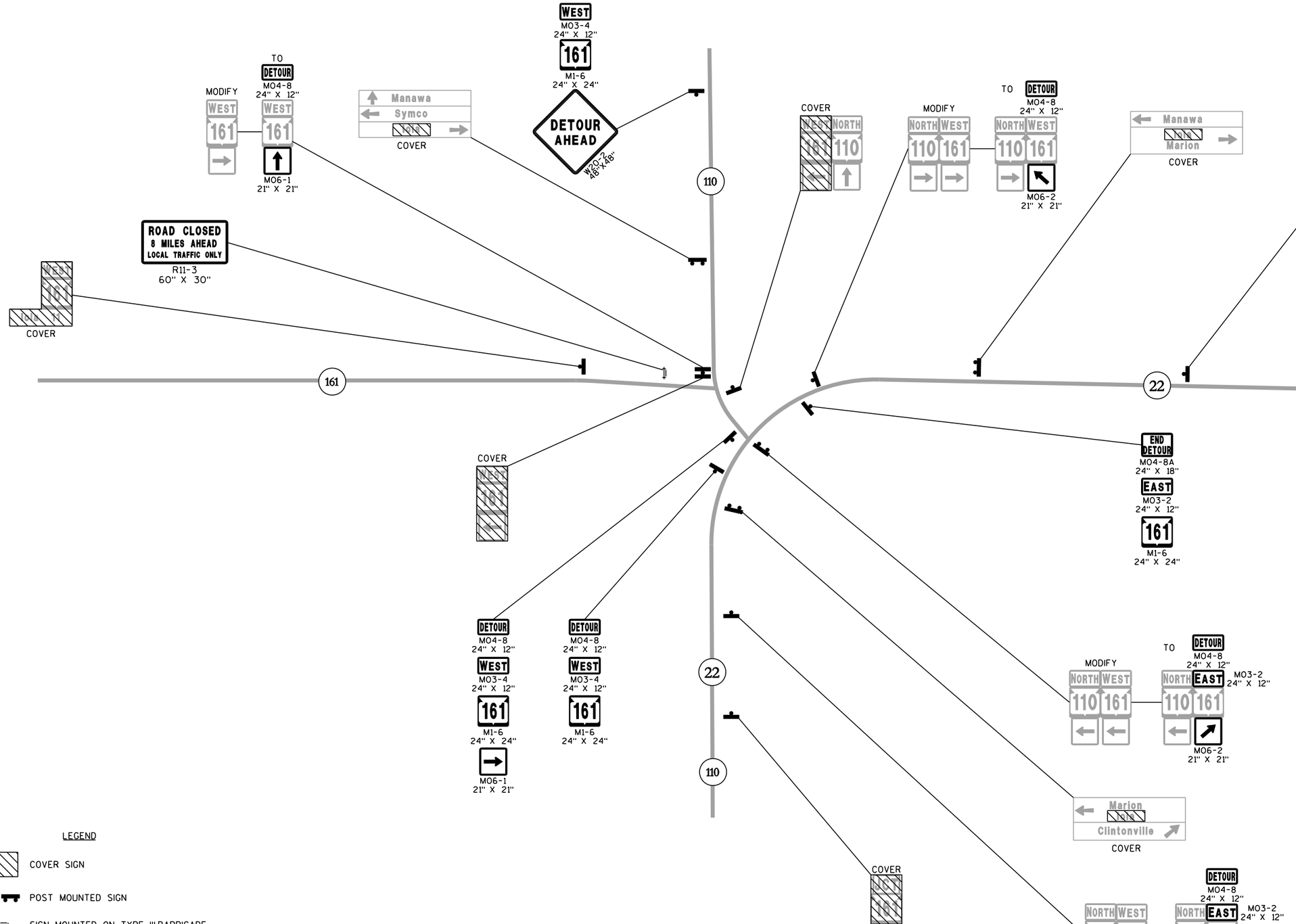
PROJECT NO: 1009-43-62	HWY: STH 161	COUNTY: WAUPACA	DETOUR PLAN	SCALE, FEET 0 NTS	SHEET 31	E

FILE NAME : K:\1102721.12\cadd\sheets\detour\027001_dt.dgn PLOT DATE : 7/30/2014 PLOT BY : rlb PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



DETAIL #2

PROJECT NO: 1009-43-62	HWY: STH 161	COUNTY: WAUPACA	DETOUR PLAN	SCALE, FEET 0 NTS	SHEET 32	E



LEGEND

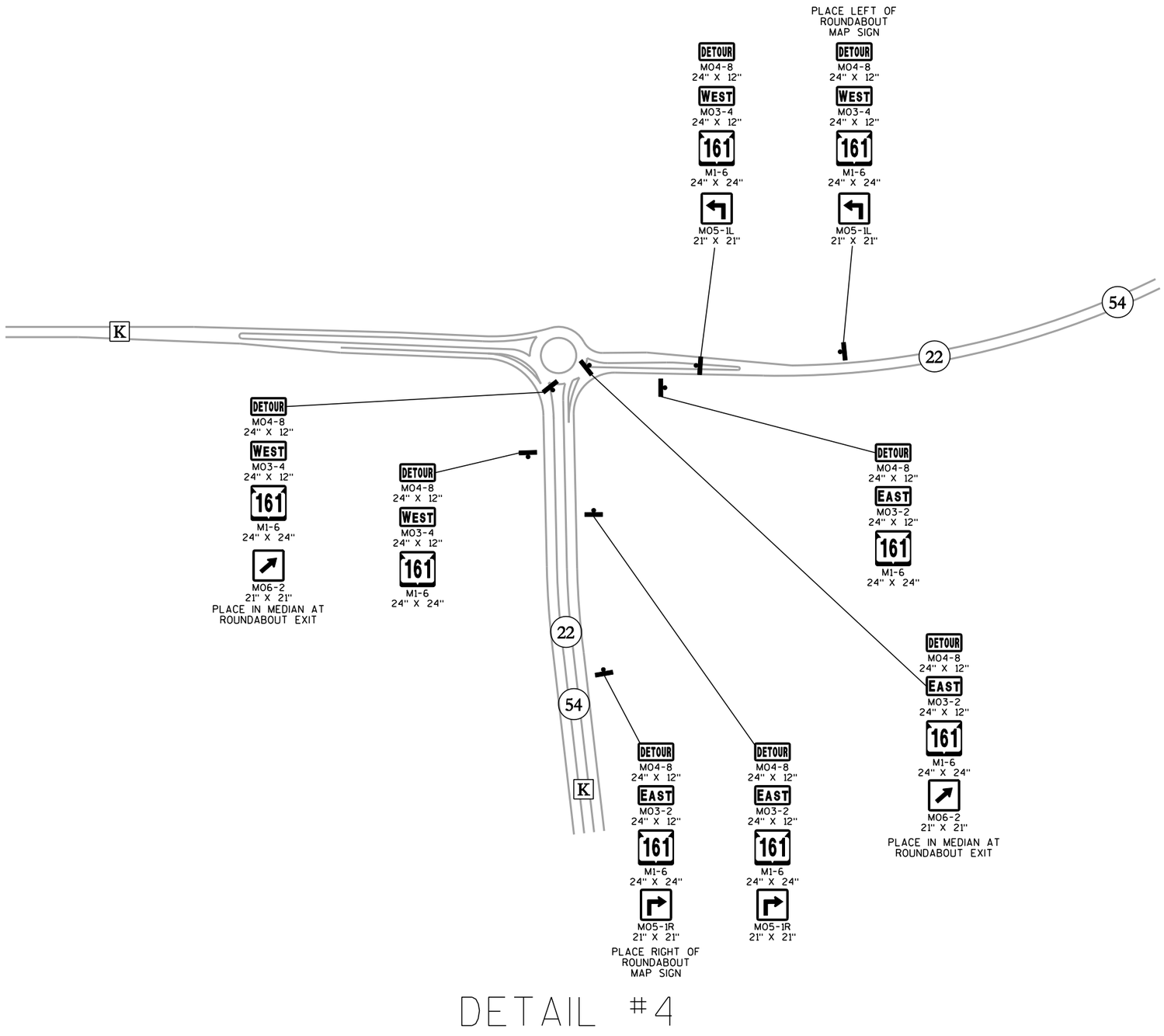
- COVER SIGN
- POST MOUNTED SIGN
- SIGN MOUNTED ON TYPE III BARRICADE

DETAIL #3

PROJECT NO: 1009-43-62	HWY: STH 161	COUNTY: WAUPACA	DETOUR PLAN	SCALE, FEET 0 NTS	SHEET 33	E

2

N



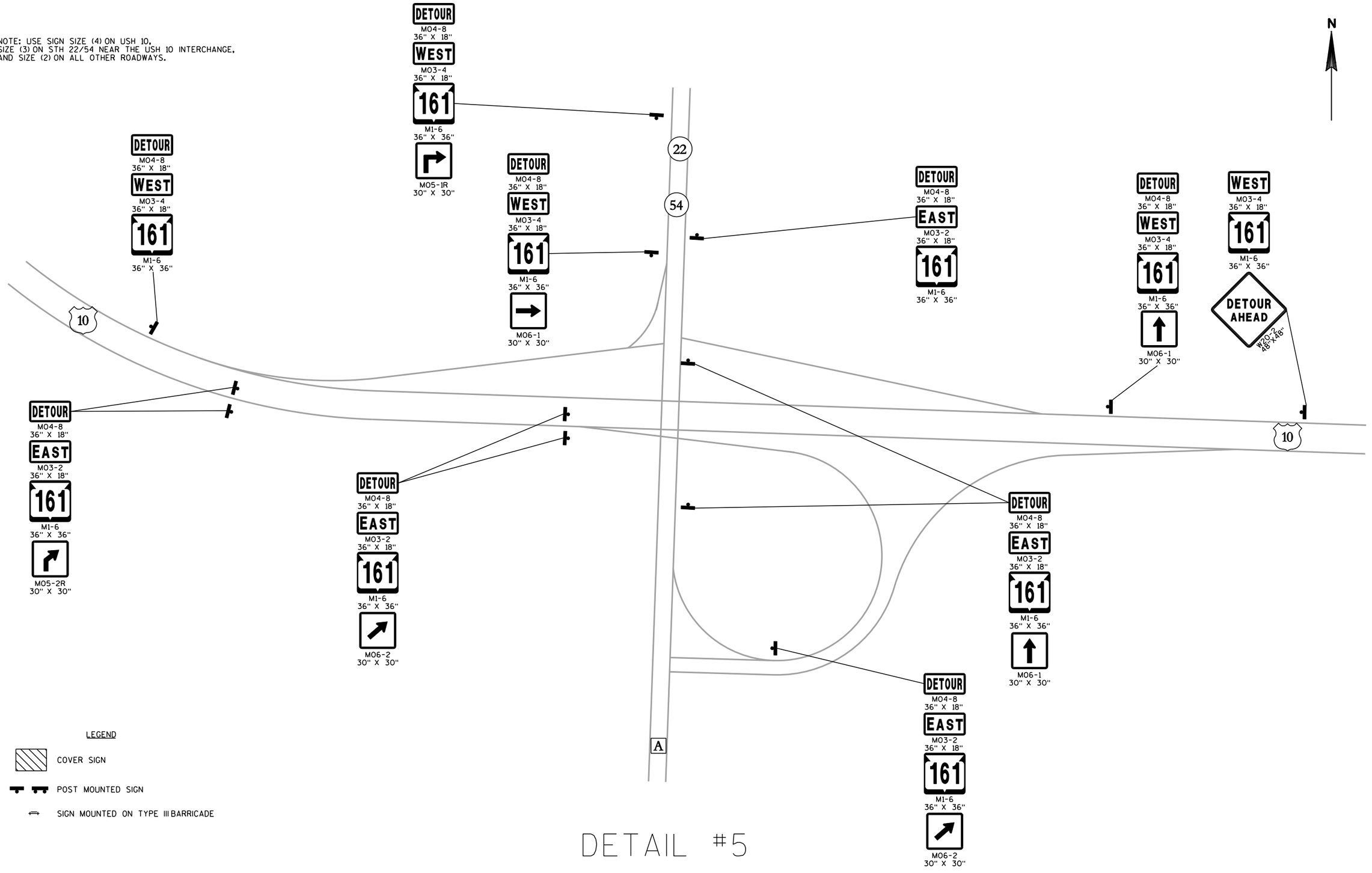
LEGEND

- COVER SIGN
- POST MOUNTED SIGN
- SIGN MOUNTED ON TYPE III BARRICADE

DETAIL #4

PROJECT NO: 1009-43-62	HWY: STH 161	COUNTY: WAUPACA	DETOUR PLAN	SCALE, FEET 0 NTS	SHEET 34	E

NOTE: USE SIGN SIZE (4) ON USH 10,
SIZE (3) ON STH 22/54 NEAR THE USH 10 INTERCHANGE,
AND SIZE (2) ON ALL OTHER ROADWAYS.



LEGEND

COVER SIGN

POST MOUNTED SIGN

SIGN MOUNTED ON TYPE III BARRICADE

DETAIL #5

PROJECT NO: 1009-43-62	HWY: STH 161	COUNTY: WAUPACA	DETOUR PLAN	SHEET 35	E

DATE 15OCT14 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	1009-43-62 QUANTITY
0010	201.0105	CLEARING	STA	7.000	7.000
0020	201.0120	CLEARING	ID	8.000	8.000
0030	201.0205	GRUBBING	STA	7.000	7.000
0040	201.0220	GRUBBING	ID	8.000	8.000
0050	203.0100	REMOVING SMALL PIPE CULVERTS	EACH	4.000	4.000
0060	203.0200	REMOVING OLD STRUCTURE (STATION) 01. STA 474+83	LS	1.000	1.000
0070	203.0200	REMOVING OLD STRUCTURE (STATION) 02. STA 474+92	LS	1.000	1.000
0080	205.0100	EXCAVATION COMMON	CY	1,387.000	1,387.000
0090	206.2000	EXCAVATION FOR STRUCTURES CULVERTS (STRUCTURE) 01. C-73-3	LS	1.000	1.000
0100	208.0100	BORROW	CY	675.000	675.000
0110	210.0100	BACKFILL STRUCTURE	CY	835.000	835.000
0120	213.0100	FINISHING ROADWAY (PROJECT) 01. ID 1009-43-62	EACH	1.000	1.000
0130	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	180.000	180.000
0140	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	1,530.000	1,530.000
0150	311.0115	BREAKER RUN	CY	32.000	32.000
0160	455.0105	ASPHALTIC MATERIAL PG58-28	TON	20.000	20.000
0170	455.0605	TACK COAT	GAL	34.000	34.000
0180	460.1103	HMA PAVEMENT TYPE E-3	TON	365.000	365.000
0190	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	240.000	240.000
0200	504.0100	CONCRETE MASONRY CULVERTS	CY	153.000	153.000
0210	504.0900	CONCRETE MASONRY ENDWALLS	CY	9.000	9.000
0220	505.0410	BAR STEEL REINFORCEMENT HS CULVERTS	LB	22,790.000	22,790.000
0230	511.1100	TEMPORARY SHORING	SF	4,550.000	4,550.000
0240	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	20.000	20.000
0250	523.0143	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 43X68-INCH	LF	66.000	66.000
0260	523.0148	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 48X76-INCH	LF	180.000	180.000
0270	523.0543	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 43X68-INCH	EACH	2.000	2.000
0280	603.8000	CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	LF	875.000	875.000
0290	603.8125	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	LF	3,375.000	3,375.000
0300	606.0300	RIPRAP HEAVY	CY	65.000	65.000
0310	614.0905	CRASH CUSHIONS TEMPORARY	EACH	8.000	8.000
0320	618.0100	MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 01. ID 1009-43-62	EACH	1.000	1.000
0330	619.1000	MOBILIZATION	EACH	1.000	1.000
0340	624.0100	WATER	MGAL	9.000	9.000
0350	625.0100	TOPSOIL	SY	4,800.000	4,800.000
0360	627.0200	MULCHING	SY	2,400.000	2,400.000
0370	628.1104	EROSION BALES	EACH	55.000	55.000
0380	628.1504	SILT FENCE	LF	4,270.000	4,270.000
0390	628.1520	SILT FENCE MAINTENANCE	LF	4,270.000	4,270.000
0400	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	8.000	8.000
0410	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	5.000	5.000
0420	628.2008	EROSION MAT URBAN CLASS I TYPE B	SY	7,010.000	7,010.000
0430	628.6005	TURBIDITY BARRIERS	SY	70.000	70.000

3

DATE 15OCT14 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	1009-43-62 QUANTITY
0440	628.7504	TEMPORARY DITCH CHECKS	LF	313.000	313.000
0450	628.7570	ROCK BAGS	EACH	110.000	110.000
0460	629.0210	FERTILIZER TYPE B	CWT	5.500	5.500
0470	630.0120	SEEDING MIXTURE NO. 20	LB	149.000	149.000
0480	630.0160	SEEDING MIXTURE NO. 60	LB	1.000	1.000
0490	630.0200	SEEDING TEMPORARY	LB	127.000	127.000
0500	630.0300	SEEDING BORROW PIT	LB	90.000	90.000
0510	633.5200	MARKERS CULVERT END	EACH	10.000	10.000
0520	634.0616	POSTS WOOD 4X6-INCH X 16-FT	EACH	4.000	4.000
0530	637.2230	SIGNS TYPE II REFLECTIVE F	SF	27.000	27.000
0540	638.2602	REMOVING SIGNS TYPE II	EACH	4.000	4.000
0550	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	4.000	4.000
0560	642.5001	FIELD OFFICE TYPE B 01. STH 32	EACH	1.000	1.000
0570	642.5001	FIELD OFFICE TYPE B 02. STH 47	EACH	1.000	1.000
0580	643.0100	TRAFFIC CONTROL (PROJECT) 01. ID 1009-43-62	EACH	1.000	1.000
0590	643.0300	TRAFFIC CONTROL DRUMS	DAY	10,680.000	10,680.000
0600	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	255.000	255.000
0610	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	510.000	510.000
0620	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	2,660.000	2,660.000
0630	643.0900	TRAFFIC CONTROL SIGNS	DAY	2,380.000	2,380.000
0640	643.0920	TRAFFIC CONTROL COVERING SIGNS TYPE II	EACH	25.000	25.000
0650	643.1050	TRAFFIC CONTROL SIGNS PCMS	DAY	14.000	14.000
0660	643.2000	TRAFFIC CONTROL DETOUR (PROJECT) 01. ID 1009-43-62	EACH	1.000	1.000
0670	643.3000	TRAFFIC CONTROL DETOUR SIGNS	DAY	1,205.000	1,205.000
0680	645.0105	GEOTEXTILE FABRIC TYPE C	SY	285.000	285.000
0690	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	37.000	37.000
0700	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	2,150.000	2,150.000
0710	646.0406	PAVEMENT MARKING SAME DAY EPOXY 4-INCH	LF	1,940.000	1,940.000
0720	646.0600	REMOVING PAVEMENT MARKINGS	LF	3,950.000	3,950.000
0730	649.0400	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	LF	6,040.000	6,040.000
0740	649.1400	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 24-INCH	LF	58.000	58.000
0750	650.6000	CONSTRUCTION STAKING PIPE CULVERTS	EACH	3.000	3.000
0760	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. ID 1009-43-62	LS	1.000	1.000
0770	650.9920	CONSTRUCTION STAKING SLOPE STAKES	LF	333.000	333.000
0780	661.0100	TEMPORARY TRAFFIC SIGNALS FOR BRIDGES (STRUCTURE) 01. C-21-6	LS	1.000	1.000
0790	661.0100	TEMPORARY TRAFFIC SIGNALS FOR BRIDGES (STRUCTURE) 02. C-73-3	LS	1.000	1.000
0800	690.0150	SAWING ASPHALT	LF	160.000	160.000
0810	SPV.0035	SPECIAL 01. STREAM BED MEDIUM	CY	42.000	42.000
0820	SPV.0060	SPECIAL 01. LANE SHIFT - SWANSON CREEK	EACH	2.000	2.000
0830	SPV.0060	SPECIAL 02. LANE SHIFT - CHICKNEY CREEK	EACH	2.000	2.000
0840	SPV.0105	SPECIAL 01. TEMPORARY WATER DIVERSION - NORTH BRANCH LITTLE WOLF RIVER	LS	1.000	1.000
0850	SPV.0105	SPECIAL 02. TEMPORARY WATER DIVERSION - SWANSON CREEK	LS	1.000	1.000
0860	SPV.0105	SPECIAL 03. TEMPORARY WATER DIVERSION - CHICKNEY CREEK	LS	1.000	1.000
0870	SPV.0120	SPECIAL 01. WATER FOR SEEDED AREAS	MGAL	138.000	138.000

3

3

CLEARING AND GRUBBING

LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
STH 32 SWANSON CREEK (CAT 0020)		
329+00 -330+00 LT	1	1
330+00 - 331+00 RT/LT	1	1
SUBTOTAL CAT 0020	2	2
STH 47 CHICKNEY CREEK (CAT 0030)		
472+00 - 473+00 RT	1	1
473+00 - 474+00 RT/LT	1	1
474+00 - 477+00 LT	3	3
SUBTOTAL CAT 0030	5	5
PROJECT TOTALS	7	7

CLEARING AND GRUBBING

LOCATION	201.0120 CLEARING ID	201.0220 GRUBBING ID
STH 161 NORTH BRANCH LITTLE WOLF RIVER (CAT 0010)		
163+81 LT	8	8
TOTALS	8	8

REMOVING SMALL PIPE CULVERTS

LOCATION	DESCRIPTION	203.0100 EACH
STH 161 NORTH BRANCH LITTLE WOLF RIVER (CAT 0010)		
163+64	42 LF, 36" CPCS	1
163+67	40 LF, 36" CPCS	1
SUBTOTAL CAT 0010		2
STH 32 SWANSON CREEK (CAT 0020)		
330+34	75 LF, 48" CPCS	1
330+47	76 LF, 48" CPCS	1
SUBTOTAL CAT 0020		2
PROJECT TOTAL		4

3

EARTHWORK SUMMARY

			A	B	C	D	E	F		
			Item # 205.0100	*	*	*	*	*	Item # 208.0100	
Division	From/To Station	Location	Excavation Common Cut (1) (CY)	Salvaged/ Unusable Pavement Material (1) (CY)	Available Material (2) (CY)	Unexpanded Fill (CY)	Expanded Fill (3) (CY) Factor 1.20	Mass Ordinate +/- (6) (CY)	Borrow (CY)	Comment:
STH 161 North Branch Little Wolf River	163+50 - 164+07	Roadway	103	20	83	125	149	-67	67	
		Culvert Pipe Transition	50	0	50	50	50	0	0	See Construction Detail
Subtotal CAT 0010			153	20	133	175	199	-67	67	
STH 32 Swanson Creek	329+75 - 331+00	Roadway	369	90	279	127	152	127	0	
		Culvert Pipe Transition	350	0	350	350	350	0	0	See Construction Detail
Subtotal CAT 0020			719	90	629	477	502	127	0	
STH 47 Chickney Creek	474+12 - 475+63	Roadway	265	50	215	686	823	-608	608	
		Culvert Pipe Transition	250	0	250	50	250	0	0	See Construction Detail
Subtotal CAT 0030			515	50	465	736	1,073	-608	608	
Project Totals (CY)			1,387	160	1,227	1,387	1,774	-547	674	
		Total Excavation Common	1,387	CY				Total Borrow	674	

1) Salvaged/Unsuable Pavement Material (B) is included in Cut. This assumes the existing pavement is salvaged or wasted by the contractor. The existing pavement structure is not shown in the cross sections.
2) Available Material (C) is Cut (A) minus Salvaged/Unusable Pavement Material (B).
3) Expanded Fill (E) = (Unexpanded Fill (D)) * Expanded Fill Factor.
4) The Mass Ordinate (F=C-E) + or - Qty calculated for the Division. Plus quantity indicates a waste volume of material within the Division. Minus indicates a borrow volume of material within the Division.

* NOT A BID ITEM. FOR INFORMATION ONLY.

3

BASE COURSE ITEMS

LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON
STH 161 NORTH BRANCH LITTLE WOLF RIVER (CAT 0010)	25	270
STH 32 SWANSON CREEK (CAT 0020)	70	600
STH 47 CHICKNEY CREEK (CAT 0030)	85	660
TOTALS	180	1,530

HMA PAVEMENT ITEMS

LOCATION	455.0105 ASPHALTIC MATERIAL PG58-28 TON	455.0605 TACK COAT GAL	460.1103 HMA PAVEMENT TYPE E-3 TON
STH 161 NORTH BRANCH LITTLE WOLF RIVER (CAT 0010)			
163+50 - 164+07	2	5	45
STH 32 SWANSON CREEK (CAT 0020)			
329+75 - 331+00	8	13	145
STH 47 CHICKNEY CREEK (CAT 0030)			
474+12 - 475+63	10	16	175
TOTALS	20	34	365

TEMPORARY SHORING

LOCATION	511.1100 SF
STH 161 NORTH BRANCH LITTLE WOLF RIVER	150
STH 32 SWANSON CREEK (CAT 0020)	2,300
STH 47 CHICKNEY CREEK (CAT 0030)	2,100
PROJECT TOTAL	4,550

3

CROSS CULVERTS

INLET STATION	INLET OFFSET	INLET ELEV	DISCH STATION	DISCH OFFSET	DISCH ELEV	SLOPE %	504.0900 CONCRETE MASONRY ENDWALLS CY	523.0143 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 43X68-INCH LF	523.0148 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 48X76-INCH LF	523.0543 APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 43X68-INCH EA	** 650.6000 CONST STAKING PIPE CULVERTS EACH	* JOINT TIES REQ'D EACH
STH 161 NORTH BRANCH LITTLE WOLF RIVER (CAT 0010)												
163+72	31' LT	909.30	163+89	33' RT	908.30	1.52%	---	66	---	2	1	12
SUBTOTALS CAT 0010							---	66	---	2	1	12
STH 32 SWANSON CREEK (CAT 0020)												
330+29	45' LT	1543.70	330+36	45' RT	1543.70	0.00%	4.4	---	90	---	1	12
330+40	46' LT	1543.70	330+46	44' RT	1543.70	0.00%	4.6	---	90	---	1	12
SUBTOTALS CAT 0020							9.0	---	180	---	2	24
PROJECT TOTALS							9.0	66	180	2	3	36

NOTE: JOINT TIES FOR CONCRETE PIPE SHALL BE PROVIDED AT ALL CONCETE APRON ENDWALL. APRON ENDWALLS SHALL BE TIED FOR THE LAST THREE JOINTS AT BOTH CULVERT ENDS. THE COST OF THESE TIES SHALL BE INCIDENTAL TO THE COST OF THE PIPE. STATIONS AND OFFSETS ARE TO THE END OF PIPE FOR CROSS CULVERS, AND TO THE CENTER OF THE PIPE FOR DRIVEWAYS.

*NON-BID ITEM (FOR INFORMATION ONLY).
** ADDITIONAL STAKING QUANTITIES SHOWN ELSEWHERE.

3

CONCRETE BARRIER TEMPORARY PRECAST

LOCATION	603.8000 CONCRETE BARRIER TEPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEPORARY PRECAST INSTALLED LF
STH 32 SWANSON CREEK (CAT 0020)		
STAGE 1	---	---
STAGE 2	425	425
STAGE 3	---	425
STAGE 4	---	425
SUBTOTALS CAT 0020	425	1,275
STH 47 CHICKNEY CREEK (CAT 0030)		
STAGE 1	450	400
STAGE 2	---	400
STAGE 3	---	450
STAGE 4	---	400
STAGE 5	---	450
SUBTOTALS CAT 0030	450	2,100
TOTALS	875	3,375

CRASH CUSHIONS TEMPORARY

LOCATION	614.0905 EACH	* BACK WIDTH	* OBJECT MARKING PATTERN	* CRASH TEST LEVEL	* TRAFFIC DIRECTION	* TRAFFIC LOCATION	* CRASH CUSHION SHIELDS
STH 32 SWANSON CREEK (CAT 0020)							
STAGE 2, STA 332+23, 10.5' LT	1	4	OM-3R	TL-3	BIDIRECTIONAL	LT**	TEMPORARY BARRIER END
STAGE 3, STA 328+63, 11.5' RT	1	4	OM-3R	TL-3	BIDIRECTIONAL	RT***	TEMPORARY BARRIER END
STAGE 4, STA 332+13, 11' LT	1	4	OM-3R	TL-3	BIDIRECTIONAL	LT**	TEMPORARY BARRIER END
SUBTOTAL CAT 0020	3						
STH 47 CHICKNEY CREEK (CAT 0030)							
STAGE 1, STA 476+69, 8' LT	1	4	OM-3R	TL-3	BIDIRECTIONAL	LT**	TEMPORARY BARRIER END
STAGE 2, STA 472+98, 9' RT	1	4	OM-3R	TL-3	BIDIRECTIONAL	RT***	TEMPORARY BARRIER END
STAGE 3, STA 476+86, 9' LT	1	4	OM-3R	TL-3	BIDIRECTIONAL	LT**	TEMPORARY BARRIER END
STAGE 4, STA 472+98, 9' RT	1	4	OM-3R	TL-3	BIDIRECTIONAL	RT***	TEMPORARY BARRIER END
STAGE 5, STA 476+86, 9' LT	1	4	OM-3R	TL-3	BIDIRECTIONAL	LT**	TEMPORARY BARRIER END
SUBTOTAL CAT 0030	5						
TOTAL	8						

*NON-BID ITEM (FOR INFORMATION ONLY)
**LT SIDE PER STATIONING; RT SIDE WHEN APPROACHING SOUTHBOUND
***RT SIDE PER STATIONING; RT SIDE WHEN APPROACHING NORTHBOUND

WATER

LOCATION	624.0100 MGAL
STH 161 NORTH BRANCH LITTLE WOLF RIVER (CAT 0010)	
BASE AGGREGATE PLACEMENT	1
UNDISTRIBUTED / DUST CONTROL	1
SUBTOTAL CAT 0010	2
STH 32 SWANSON CREEK (CAT 0020)	
BASE AGGREGATE PLACEMENT	2
UNDISTRIBUTED / DUST CONTROL	1
SUBTOTAL CAT 0020	3
STH 47 CHICKNEY CREEK (CAT 0030)	
BASE AGGREGATE PLACEMENT	2
UNDISTRIBUTED / DUST CONTROL	2
SUBTOTAL CAT 0030	4
PROJECT TOTAL	9

RESTORATION ITEMS

LOCATION	625.0100 TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0160 SEEDING MIXTURE NO. 60 LB	630.0200 SEEDING TEMPORARY LB	630.0300 SEEDING BORROW PIT LB	SPV.0120.01 WATER FOR SEEDED AREAS MGAL
STH 161 NORTH BRANCH LITTLE WOLF RIVER (CAT 0010)	620	310	0.6	17	1	---	---	16
UNDISTRIBUTED	70	35	0.2	5	---	---	30	4
SUBTOTALS CAT 0010	690	345	0.8	22	1	0	30	20
STH 32 SWANSON CREEK (CAT 0020)	1,070	535	1.1	29	---	29	---	27
UNDISTRIBUTED	110	55	0.3	8	---	8	30	7
SUBTOTALS CAT 0020	1,180	590	1.4	37	0	37	30	34
STH 47 CHICKNEY CREEK (CAT 0030)	2,660	1,330	2.6	72	---	72	---	67
UNDISTRIBUTED	270	135	0.7	18	---	18	30	17
SUBTOTALS CAT 0030	2,930	1,465	3.3	90	0	90	30	84
PROJECT TOTALS	4,800	2,400	5.5	148	1	127	90	138

EROSION CONTROL ITEMS

LOCATION	628.1104 EROSION BALES EACH	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EACH	628.1910 MOBILIZATIONS EMERGENCY EACH	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.6005 TURBIDITY BARRIERS SY	628.7504 TEMPORARY DITCH CHECKS LF	628.7570 ROCK BAGS EACH
STH 161 NORTH BRANCH LITTLE WOLF RIVER (CAT 0010)	---	330	330	2	---	620	---	45	---
WATER DIVERSION	---	---	---	---	---	60	20	---	---
UNDISTRIBUTED	15	90	90	---	1	170	---	12	30
SUBTOTALS CAT 0010	15	420	420	2	1	850	20	57	30
STH 32 SWANSON CREEK (CAT 0020)									
WATER DIVERSION	---	---	---	---	---	30	15	---	---
EAST SIDE WIDENING	---	370	370	1	---	370	---	23	---
WEST SIDE WIDENING	---	370	370	1	---	360	---	23	---
FINAL RESTORATION	---	720	720	1	---	830	---	45	---
UNDISTRIBUTED	15	370	370	---	2	400	---	23	30
SUBTOTALS CAT 0020	15	1,830	1,830	3	2	1,990	15	114	30
STH 47 CHICKNEY CREEK (CAT 0030)									
WATER DIVERSION	---	---	---	---	---	120	35	---	---
NORTH SIDE WIDENING	---	420	420	1	---	1,090	---	34	---
SOUTH SIDE WIDENING	---	400	400	1	---	830	---	34	---
FINAL RESTORATION	---	790	790	1	---	1,290	---	45	---
UNDISTRIBUTED	25	410	410	---	2	840	---	29	50
SUBTOTALS CAT 0030	25	2,020	2,020	3	2	4,170	35	142	50
PROJECT TOTALS	55	4,270	4,270	8	5	7,010	70	313	110

PERMANENT SIGNING

SIGN #	SIGN CODE	SIGN SIZE	SIGN SIZE (IN)	637.2230 SIGNS TYPE II REFLECTIVE F (SF)	634.0616 POSTS WOOD 4X6-INCH X 16 FT (EACH)	REMARKS
STH 32 (CAT 0020)						
2-01	W14-3	(2S)	48X36	6.00	1	NO PASSING ZONE
SUBTOTALS CAT 0020				6.00	1	
STH 47 (CAT 0030)						
3-01	W14-3	(2S)	48X36	6.00	1	NO PASSING ZONE
3-02	S3-1	(2S)	36X36	9.00	1	SCHOOL BUS STOP AHEAD
3-03	W14-3	(2S)	48X36	6.00	1	NO PASSING ZONE
SUBTOTALS CAT 0030				21.00	3	
PROJECT TOTALS				27.00	4	

REMOVING AND MOVING SIGNS

SIGN #	SIGN CODE	638.2602 REMOVING SIGNS TYPE II (EACH)	638.3000 REMOVING SMALL SIGN SUPPORTS (EACH)	REMARKS
STH 32 (CAT 0020)				
2R-01	W14-3	1	1	NO PASSING ZONE
SUBTOTALS CAT 0020		1	1	
STH 47 (CAT 0030)				
3R-01	W14-3	1	1	NO PASSING ZONE
3R-02	S3-1, S57-51	1	1	SCHOOL BUS STOP AHEAD, NEXT 2 MILE
3R-03	W14-3	1	1	NO PASSING ZONE
SUBTOTALS CAT 0030		3	3	
PROJECT TOTALS		4	4	

3

FIELD OFFICE TYPE B

LOCATION	642.5001 EACH
01. STH 32 (CAT 0020)	1
02. STH 47 (CAT 0030)*	1
TOTAL	2

*OPEN AND MAINTAIN THE FIELD OFFICE FOR STH 47 DURING CONSTRUCTION ON STH 161.

COVERING SIGNS TYPE II

LOCATION	* NUMBER OF CYCLES	* NUMBER OF SIGNS	643.0920 EACH
STH 161 DETOUR ROUTE (CAT 0010)	1	25	25
TOTAL			25

*NON-BID ITEM (FOR INFORMATION ONLY)

PAVEMENT MARKING

LOCATION	646.0106 EPOXY 4-INCH (WHITE) LF	646.0106 EPOXY 4-INCH (YELLOW) LF	646.0406 SAME DAY EPOXY 4-INCH (YELLOW) LF
STH 161 (CAT 0010)	115	25	---
TOTAL CAT 0010	140		
STH 32 (CAT 0020)	980	---	500
STH 47 (CAT 0030)	1,030	---	1,440
PROJECT TOTALS	2,150		1,940

3

TRAFFIC CONTROL ITEMS

LOCATION	* DAYS PER LOCATION	643.0300 DRUMS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.0715 WARNING LIGHTS TYPE C DAYS	643.0900 SIGNS DAYS
STH 161 NORTH BRANCH LITTLE WOLF RIVER (CAT 0010)	5	---	75	150	---	40
UNDISTRIBUTED		50	10	20	---	10
SUBTOTALS CAT 0010		50	85	170	0	50
STH 32 SWANSON CREEK (CAT 0020)	75	6,030	70	140	1,120	1,050
UNDISTRIBUTED		610	10	20	120	110
SUBTOTALS CAT 0020		6,640	80	160	1,240	1,160
STH 47 CHICKNEY CREEK (CAT 0030)	125	3,620	80	160	1,290	1,060
UNDISTRIBUTED		370	10	20	130	110
SUBTOTALS CAT 0030		3,990	90	180	1,420	1,170
PROJECT TOTALS	---	10,680	255	510	2,660	2,380

* NON-BID ITEM (FOR INFORMATION ONLY)

STH 161 DETOUR SIGNS

SIGN CODE	* NUMBER OF SIGNS	* ESTIMATED DURATION DAYS	643.1050 TRAFFIC CONTROL SIGNS PCMS DAYS	643.3000 TRAFFIC CONTROL DETOUR SIGNS DAYS
M1-6 (24" X 24")	42	5	---	210
M1-6 (36" X 36")	18	5	---	90
MO3-2 (24" X 12")	26	5	---	130
MO3-2 (36" X 18")	10	5	---	50
MO3-4 (24" X 12")	20	5	---	100
MO3-4 (36" X 18")	6	5	---	30
MO4-8 (24" X 12")	44	5	---	220
MO4-8 (36" X 18")	18	5	---	90
MO4-8A (24" X 18")	1	5	---	5
MO4-8A (30" X 24")	1	5	---	5
MO5-1L (21" X 21")	5	5	---	25
MO5-1R (21" X 21")	6	5	---	30
MO5-1R (21" X 21")	1	5	---	5
MO5-2L (30" X 30")	1	5	---	5
MO5-2R (21" X 21")	1	5	---	5
MO5-2R (30" X 30")	2	5	---	10
MO6-1 (21" X 21")	9	5	---	45
MO6-1 (30" X 30")	9	5	---	45
MO6-2 (21" X 21")	7	5	---	35
MO6-2 (30" X 30")	3	5	---	15
R11-3 (60" X 30")	5	5	---	25
W20-2 (48" X 48")	6	5	---	30
PCMS SIGN	2	7	14	---
TOTALS (CAT 0010)	243		14	1,205

3

REMOVING PAVEMENT MARKINGS

LOCATION	646.0600 LF
STH 32 SWANSON CREEK (CAT 0020)	
STAGE 1	1,000
STAGE 2	480
SUBTOTAL CAT 0020	1,480
STH 47 CHICKNEY CREEK (CAT 0030)	
STAGE 1	1,990
STAGE 2	480
SUBTOTAL CAT 0030	2,470
PROJECT TOTAL	3,950

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE

LOCATION	649.0400 4-INCH (WHITE) LF	* 649.0400 4-INCH (YELLOW) LF	649.1400 STOP LINE 24-INCH (WHITE) LF
STH 32 SWANSON CREEK (CAT 0020)			
STAGE 1	485	1,400	34
STAGE 2	485	---	---
STAGE 3	485	---	---
STAGE 4	485	---	---
SUBTOTALS CAT 0020	3,340		34
STH 47 CHICKNEY CREEK (CAT 0030)			
STAGE 1	550	---	24
STAGE 2	525	---	---
STAGE 3	550	---	---
STAGE 4	525	---	---
STAGE 5	550	---	---
SUBTOTALS CAT 0030	2,700		24
PROJECT TOTALS	6,040		58

* ASSUMED PLACED ONCE PRIOR TO STAGE 1 WORK

MARKERS CULVERT END

LOCATION	633.5200 EACH
STH 161 NORTH BRANCH LITTLE WOLF RIVER (CAT 0010)	2
STH 32 SWANSON CREEK (CAT 0020)	4
STH 47 CHICKNEY CREEK (CAT 0030)	4
PROJECT TOTAL	10

3

TEMPORARY TRAFFIC SIGNALS FOR BRIDGES

LOCATION	661.0100.01 LS	661.0100.02 LS
STH 32 SWANSON CREEK (CAT 0020)		
C-21-6	1	---
STH 47 CHICKNEY CREEK (CAT 0030)		
C-73-3	---	1

SAWING ASPHALT

LOCATION	690.0150 LF
STH 161 (CAT 0010)	
163+50	22
164+07	22
SUBTOTAL CAT 0010	44
STH 32 (CAT 0020)	
329+75	34
331+00	34
SUBTOTAL CAT 0020	68
STH 47 (CAT 0030)	
474+12	24
475+63	24
SUBTOTAL CAT 0030	48
PROJECT TOTAL	160

CONSTRUCTION STAKING SLOPE STAKES*

LOCATION	650.9920 LF
STH 161 (CAT 0010)	
163+50 - 164+07	57
STH 32 (CAT 0020)	
329+75 - 331+00	125
STH 47 (CAT 0030)	
474+12 - 475+63	151
PROJECT TOTAL	333

* ADDITIONAL STAKING ITEMS SHOWN ELSEWHERE

CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (ID 1009-43-62)*

LOCATION	650.9910 LS
STH 161 (CAT 0010)	0.3
STH 32 (CAT 0020)	0.3
STH 47 (CAT 0030)	0.4
TOTAL	1

*ADDITIONAL STAKING ITEMS SHOWN ELSEWHERE

LANE SHIFT

LOCATION	SPV.0060.01 SWANSON CREEK (CAT 0020) EACH	SPV.0060.02 CHICKNEY CREEK (CAT 0030) EACH	* BASE AGGREGATE DENSE 1 1/4-INCH TON	* ASPHALTIC SURFACE TEMPORARY TON
STH 32 LEFT SIDE WIDENING	1	---	150	35
STH 32 RIGHT SIDE WIDENING	1	---	140	35
STH 32 RE-PAVING TRENCHES	---	---	55	25
STH 47 LEFT SIDE WIDENING	---	1	245	65
STH 47 RIGHT SIDE WIDENING	---	1	295	75
STH 47 RE-PAVING TRENCHES	---	---	320	100
TOTAL	2	2		

*FOR INFORMATION PURPOSES ONLY. INCIDENTAL TO LANE SHIFT BID ITEM.

STREAM BED MEDIUM

LOCATION	SPV.0035.01 CY
STH 161 NORTH BRANCH LITTLE WOLF RIVER (CAT 0010)	10
STH 32 SWANSON CREEK (CAT 0020)	0
STH 47 CHICKNEY CREEK (CAT 0030)	32 *
PROJECT TOTAL	42

* QUANTITY SHOWN ON STRUCTURE PLANS

TEMPORARY WATER DIVERSION

LOCATION	SPV.0105.01 (CAT 0010) LS	SPV.0105.02 (CAT 0020) LS	SPV.0105.03 (CAT 0030) LS
STH 161 NORTH BRANCH LITTLE WOLF RIVER	1	---	---
STH 32 SWANSON CREEK	---	1	---
STH 47 CHICKNEY CREEK	---	---	1
TOTAL	1	1	1

DOT COMPOSITE ORIGINAL DOCUMENT LOCATED AT THE REGISTER OF DEEDS OFFICE

TRANSPORTATION PROJECT PLAT NO: 1009-43-22 - 4.01 AMENDMENT NO.1

AMENDS UTILITY NUMBER 100, BY ADDING FIBER OPTIC LINE FOR TRANSPORTATION PROJECT PLAT 1009-43-22 - 4.01 RECORDED AS DOC.819598 AND FILED IN CAB C/81B.

THAT PART OF THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 AND THE NORTHWEST 1/4 OF THE SOUTHWEST 1/4, SECTION 32, TOWNSHIP 24 NORTH, RANGE 12 EAST, TOWN OF HELVETIA, WAUPACA COUNTY, WISCONSIN.

RELOCATION ORDER STH 161, APPROXIMATELY 900 FEET WEST OF THE INTERSECTION OF STH 161 AND NETZLER ROAD.

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3), 84.09 AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION.

1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATE SYSTEM, WAUPACA COUNTY, NAD83 (2007) IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WSDOT NC REGION.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE: EXISTING HIGHWAY RIGHT-OF-WAY FOR STH 161 ESTABLISHED FROM PREVIOUS STATE PROJECT 4449 05/16/1934

FOR THE LATEST ACCESS/DRIVEWAY INFORMATION CONTACT THE PLANNING DEPARTMENT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN WISCONSIN RAPIDS.

R.A. Smith National
Beyond Surveying and Engineering
16745 W. Bluemound Road, Brookfield WI 53005
262-781-1000 Fax 262-781-8466
www.rasmithnational.com

I, GREGORY A. KUNZ, REGISTERED LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT, I HAVE SURVEYED AND MAPPED TRANSPORTATION PROJECT PLAT 1009-43-22 - 4.01 AMENDMENT NO. 1 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

WISCONSIN GREGORY A. KUNZ S-1346 WAUKESHA WI LAND SURVEYOR

Gregory A. Kunz 3/12/2014

GREGORY A. KUNZ — DATE
AGENT FOR R.A. SMITH NATIONAL
R.L.S. NUMBER 1346

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION

Brent L Stella 3-18-2014

SIGNATURE — DATE:

Brent L Stella
PRINTED NAME

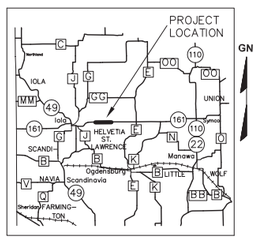
RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 1009-43-22 - 4.01
AMENDMENT NO.1

821573
Certified, Filed and or Recorded on March 24, 2014 10:00 AM
Waupaca County
RECEIVED FOR RECORD
MICHAEL MAZEMKE
REGISTER OF DEEDS
Pages: 1
Fee $25.00
FILED IN CAB C/81B
Michael Mazemke

A **TEMPORARY LIMITED EASEMENT** (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE. ALL TLE'S ARE TO EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN

A **PERMANENT LIMITED EASEMENT** (PLE) IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE. BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHT TO MAKE OR CONSTRUCT IMPROVEMENT ON SAID LANDS OR TO FLATTEN THE SLOPES, PROVIDING SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES.

DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO NEW REFERENCE LINES.



LOCATION MAP NOT TO SCALE

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	RECORDED AS	(100')
ACCESS RIGHTS	AR	REFERENCE LINE	R/L
ACRES	AC.	RELEASE OF RIGHTS	ROR
AND OTHERS	ET.AL.	REMAINING	REM.
BUILDING	BLD.	RIGHT-OF-WAY	R/W
CENTERLINE	C/L	SECTION	SEC.
CERTIFIED SURVEY MAP	CSM	STATION	STA.
CORNER	COR.	TEMPORARY LIMITED EASEMENT	TLE
DOCUMENT	DOC.	VOLUME	V.
EASEMENT	EASE.	**CURVE DATA**	
GARAGE	G.	LONG CHORD	LCH
HIGHWAY EASEMENT	H.E.	LONG CHORD BEARING	LCB
HOUSE	H.	RADIUS	R
LAND CONTRACT	LC	DEGREE OF CURVE	D
MONUMENT	MON.	CENTRAL ANGLE OR DELTA	DELTA
PAGE	P.	LENGTH OF CURVE	L
PERMANENT LIMITED EASEMENT	PLE	TANGENT	TAN
PROPERTY LINE	PL		

CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN	I.P (1" UNLESS NOTED)	PROPOSED R/W LINE	
R/W MONUMENT	○ ●(SET)	EXISTING H.E. LINE	
R/W STANDARD	△ ▲(SET)	PROPERTY LINE	
SIGN	ISIGN	LOT & TIE LINES	
SECTION CORNER MONUMENT		SLOPE INTERCEPTS	
SECTION CORNER SYMBOL		CORPORATE LIMITS	
FEE (HATCH VARIES)		RESTRICTED ACCESS (BY PREVIOUS ACQUISITION/CONTROL)	
TEMPORARY LIMITED EASEMENT		RESTRICTED ACCESS (BY ACQUISITION)	
PERMANENT LIMITED EASEMENT		NO ACCESS (BY STATUTORY AUTHORITY)	
R/W BOUNDARY POINT	RWB20	SECTION LINE	
PARCEL NUMBER	102	QUARTER LINE	
UTILITY PARCEL NUMBER	92	SIXTEENTH LINE	
SIGN NUMBER (OFF PREMISE)	21	EXISTING CENTERLINE	
BUILDING		PROPOSED REFERENCE LINE	
		PARALLEL OFFSET	

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND AND INTERESTS TO DOT.

PARCEL NUMBER	OWNER	INTEREST REQUIRED	AREAS ACRES REQUIRED NEW	EXISTING	TOTAL	TLE ACRES	PLE ACRES
2	KEVIN L. THULIEN	PLE, TLE	–	–	–	0.133	0.019
3	BRIAN J. THULIEN	PLE, TLE	–	–	–	0.146	0.030

UTILITY NUMBER	UTILITY OWNER	INTEREST REQUIRED
100	TDS – TELECOM	RELEASE OF RIGHTS
101	CENTRAL WIS. ELECTRIC CO-OP	RELEASE OF RIGHTS

R/W POINT NUMBERS AND COORDINATE TABLE

NUMBER	Y	X
500	397879.7517	538214.6622
501	397900.2869	538215.7676
502	397883.7177	538274.9625
503	397876.5267	538274.5755
504	397812.7721	538231.0858
505	397790.8039	538229.9033
506	397809.5471	538290.9991
507	397787.5789	538289.8166

CONVENTIONAL UTILITY SYMBOLS

			NON COMPENSABLE	COMPENSABLE
WATER	W	POWER POLE	○	●
GAS	G	TELEPHONE POLE	⌀	⌀
TELEPHONE	T	TELEPHONE PEDESTAL	⌑	⌑
OVERHEAD	OH	ELECTRIC TOWER	⊠	
TRANSMISSION LINES ELECTRIC	E			
CABLE TELEVISION	TV			
FIBER OPTIC	FO			
SANITARY SEWER	SAN			
STORM SEWER	SS			

DOT COMPOSITE ORIGINAL LOCATED AT THE REGISTER OF DEEDS OFFICE

TRANSPORTATION PROJECT PLAT NO: 1009-43-22 - 4.01

THAT PART OF THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 AND THE NORTHWEST 1/4 OF THE SOUTHWEST 1/4, SECTION 32, TOWNSHIP 24 NORTH, RANGE 12 EAST, TOWN OF HELVETIA, WAUPACA COUNTY, WISCONSIN.

RELOCATION ORDER STH 161, APPROXIMATELY 900 FEET WEST OF THE INTERSECTION OF STH 161 AND NETZLER ROAD.

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3), 84.09 AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION.

1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATE SYSTEM, WAUPACA COUNTY, NAD83 (2007) IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISDOT NC REGION.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE: EXISTING HIGHWAY RIGHT-OF-WAY FOR STH 161 ESTABLISHED FROM PREVIOUS STATE PROJECT 4449 05/16/1934

FOR THE LATEST ACCESS/DRIVEWAY INFORMATION CONTACT THE PLANNING DEPARTMENT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN WISCONSIN RAPIDS.

R.A. Smith National
Beyond Surveying and Engineering
16745 W. Bluemound Road, Brookfield WI 53005
262-781-1000 Fax 262-781-8466
www.rasmithnational.com

I, GREGORY A. KUNZ, REGISTERED LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT, I HAVE SURVEYED AND MAPPED TRANSPORTATION PROJECT PLAT 1009-43-22 – 4.01 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

WISCONSIN GREGORY A. KUNZ S-1346 WAUKESHA WI LAND SURVEYOR

Gregory A. Kunz 12/18/2013
GREGORY A. KUNZ — DATE
AGENT FOR R.A. SMITH NATIONAL
R.L.S. NUMBER 1346

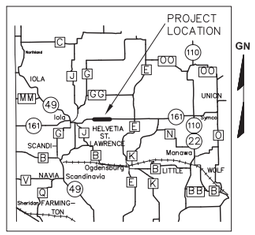
THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

Brent L Stella 12-18-13
SIGNATURE — DATE:
Brent l Stella
PRINTER NAME

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 1009-43-22 - 4.01
AMENDMENT NO:___

819598
Certified, Filed and or Recorded on December 23, 2013 10:30 AM
Waupaca County
RECEIVED FOR RECORD
MICHAEL MAZEMKE
REGISTER OF DEEDS
Pages 1
Fee $25.00
FILED IN CAB C/81B
Sandra M. Wisniewski, Deputy
WAUPACA COUNTY REGISTER OF DEEDS
MICHAEL MAZEMKE
811 HARDING STREET
WAUPACA, WI 54981

LOCATION MAP NOT TO SCALE



A **TEMPORARY LIMITED EASEMENT** (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE. ALL TLE'S ARE TO EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN

A **PERMANENT LIMITED EASEMENT** (PLE) IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE. BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHT TO MAKE OR CONSTRUCT IMPROVEMENT ON SAID LANDS OR TO FLATTEN THE SLOPES, PROVIDING SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES.

DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO NEW REFERENCE LINES.

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	RECORDED AS	(100')
ACCESS RIGHTS	AR	REFERENCE LINE	R/L
ACRES	AC.	RELEASE OF RIGHTS	ROR
AND OTHERS	ET.AL.	REMAINING	REM.
BUILDING	BLD.	RIGHT-OF-WAY	R/W
CENTERLINE	C/L	SECTION	SEC.
CERTIFIED SURVEY MAP	CSM	STATION	STA.
CORNER	COR.	TEMPORARY LIMITED EASEMENT	TLE
DOCUMENT	DOC.	VOLUME	V.
EASEMENT	EASE.		
GARAGE	G.		
HIGHWAY EASEMENT	H.E.		
HOUSE	H.		
LAND CONTRACT	LC		
MONUMENT	MON.		
PAGE	P.		
PERMANENT LIMITED EASEMENT	PLE		
PROPERTY LINE	PL		

CURVE DATA

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE OR DELTA	DELTA
LENGTH OF CURVE	L
TANGENT	TAN

CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN	LP (1" UNLESS NOTED)	PROPOSED R/W LINE	
		EXISTING H.E. LINE	
R/W MONUMENT	○ ●(SET)	PROPERTY LINE	
R/W STANDARD	△ ▲(SET)	LOT & TIE LINES	
SIGN	ISIGN	SLOPE INTERCEPTS	
SECTION CORNER MONUMENT		CORPORATE LIMITS	
SECTION CORNER SYMBOL		RESTRICTED ACCESS (BY PREVIOUS ACQUISITION/CONTROL)	
FEE (HATCH VARIES)		RESTRICTED ACCESS (BY ACQUISTION)	
TEMPORARY LIMITED EASEMENT		NO ACCESS (BY STATUTORY AUTHORITY)	
PERMANENT LIMITED EASEMENT		SECTION LINE	
R/W BOUNDARY POINT	RWB20	QUARTER LINE	
PARCEL NUMBER	102	SIXTEENTH LINE	
UTILITY PARCEL NUMBER	32	EXISTING CENTERLINE	
SIGN NUMBER (OFF PREMISE)	21-7	PROPOSED REFERENCE LINE	
BUILDING		PARALLEL OFFSET	

CONVENTIONAL UTILITY SYMBOLS

WATER	W		NON COMPENSABLE	COMPENSABLE
GAS	G			
TELEPHONE	T	POWER POLE	○	●
OVERHEAD TRANSMISSION LINES	OH	TELEPHONE POLE	⌀	⌀
ELECTRIC	E	TELEPHONE PEDESTAL	⌶	⌶
CABLE TELEVISION	TV	ELECTRIC TOWER	⊠	
FIBER OPTIC	FO			
SANITARY SEWER	SAN			
STORM SEWER	SS			

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND AND INTERESTS TO DOT.

PARCEL NUMBER	OWNER	INTEREST REQUIRED	AREAS ACRES REQUIRED NEW	EXISTING	TOTAL	TLE ACRES	PLE ACRES
2	KEVIN L. THULIEN	PLE, TLE	–	–	–	0.133	0.019
3	BRIAN J. THULIEN	PLE, TLE	–	–	–	0.146	0.030

UTILITY NUMBER	UTILITY OWNER	INTEREST REQUIRED
100	TDS – TELECOM	RELEASE OF RIGHTS
101	CENTRAL WIS. ELECTRIC CO-OP	RELEASE OF RIGHTS

R/W POINT NUMBERS AND COORDINATE TABLE

NUMBER	Y	X
500	397879.7517	538214.6622
501	397900.2869	538215.7676
502	397883.7177	538274.9625
503	397876.5267	538274.5755
504	397812.7721	538231.0858
505	397790.8039	538229.9033
506	397809.5471	538290.9991
507	397787.5789	538289.8166

FILE NAME: S:\5165225\PLAT\FP100.DWG
APPRAISAL PLAT DATE:

CONVENTIONAL UTILITY SYMBOLS

WATER	W
GAS	G
TELEPHONE	T
OVERHEAD TRANSMISSION LINES	OH
ELECTRIC	E
CABLE TELEVISION	TV
FIBER OPTIC	FO
SANITARY SEWER	SAN
STORM SEWER	SS

	NON COMPENSABLE	COMPENSABLE
POWER POLE	○	●
TELEPHONE POLE	⌀	⌀
TELEPHONE PEDESTAL	⌑	⌑
ELECTRIC TOWER	⊠	

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATE SYSTEM, MENOMINEE COUNTY ZONE, NAD83 (2007) IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISDOT NC REGION.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO "SURVEYS OF PUBLIC RECORD".

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE: EXISTING HIGHWAY EASEMENT RIGHT-OF-WAY FOR STH 47 ESTABLISHED FROM PREVIOUS FEDERAL PROJECT 386-D 06/01/1931, FOUND MONUMENTATION, AND FROM CSM'S V.2 P.183 AND V.2 P.184

DIMENSIONING FOR THE TLE IS MEASURED ALONG AND PERPENDICULAR TO NEW REFERENCE LINES.

A **TEMPORARY LIMITED EASEMENT** (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE. ALL TLE'S ARE TO EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN

GN

SCALE, FEET
0 20 40

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
1009-43-22	4.1	1
FEDERAL PROJECT NUMBER		

PLAT OF RIGHT-OF-WAY REQUIRED FOR

STH 47

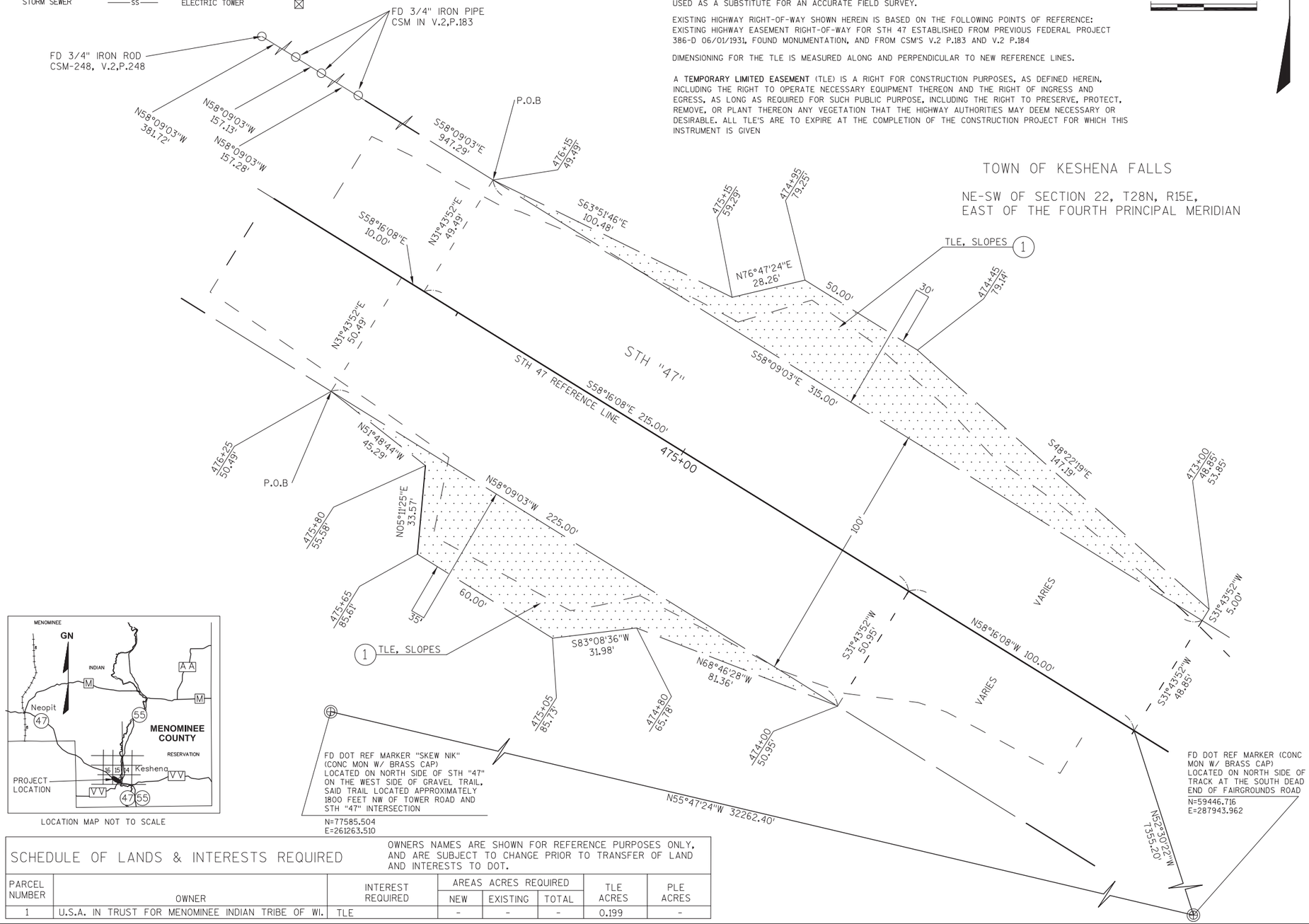
APPROX. 800' SE OF THE INTER. OF STH-47 & KESHENA FALLS RD (BIA ROUTE-9)

STH 47 MENOMINEE CO.

CONSTRUCTION NO. 1009-43-62

TOWN OF KESHENA FALLS

NE-SW OF SECTION 22, T28N, R15E, EAST OF THE FOURTH PRINCIPAL MERIDIAN



CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	RECORDED AS	(100')
ACCESS RIGHTS	AR	REFERENCE LINE	R/L
ACRES	AC.	RELEASE OF RIGHTS	ROR
AND OTHERS	ET.AL.	REMAINING	REM.
BUILDING	BLD.	RIGHT-OF-WAY	R/W
CENTERLINE	C/L	SECTION	SEC.
CERTIFIED SURVEY MAP	CSM	STATION	STA.
CORNER	COR.	TEMPORARY LIMITED EASEMENT	TLE
DOCUMENT	DOC.	VOLUME	V.
EASEMENT	EASE.	**CURVE DATA**	
GARAGE	G.	LONG CHORD	LCH
HIGHWAY EASEMENT	H.E.	LONG CHORD BEARING	LCB
HOUSE	H.	RADIUS	R
LAND CONTRACT	LC	DEGREE OF CURVE	D
MONUMENT	MON.	CENTRAL ANGLE OR DELTA	DELTA
PAGE	P.	LENGTH OF CURVE	L
PERMANENT LIMITED EASEMENT	PLE	TANGENT	TAN
PROPERTY LINE	PL		

CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN	LS (1" UNLESS NOTED)	PROPOSED R/W LINE
		EXISTING H.E. LINE
R/W MONUMENT	○ ●(SET)	PROPERTY LINE
R/W STANDARD	△ ▲(SET)	LOT & TIE LINES
SIGN	ISIGN	SLOPE INTERCEPTS
SECTION CORNER MONUMENT		CORPORATE LIMITS
SECTION CORNER SYMBOL		RESTRICTED ACCESS (BY PREVIOUS ACQUISITION/CONTROL)
FEE (HATCH VARIES)		RESTRICTED ACCESS (BY ACQUISITION)
TEMPORARY LIMITED EASEMENT		NO ACCESS (BY STATUTORY AUTHORITY)
PERMANENT LIMITED EASEMENT		SECTION LINE
R/W BOUNDARY POINT	RWB20	QUARTER LINE
PARCEL NUMBER	102	SIXTEENTH LINE
UTILITY PARCEL NUMBER	(92)	EXISTING CENTERLINE
SIGN NUMBER (OFF PREMISE)	21-1	PROPOSED REFERENCE LINE
BUILDING		PARALLEL OFFSET

LOCATION MAP NOT TO SCALE

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND AND INTERESTS TO DOT.

PARCEL NUMBER	OWNER	INTEREST REQUIRED	AREAS ACRES REQUIRED			TLE ACRES	PLE ACRES
			NEW	EXISTING	TOTAL		
1	U.S.A. IN TRUST FOR MENOMINEE INDIAN TRIBE OF WI.	TLE	-	-	-	0.199	-

ORIGINAL PLAT PREPARED BY:

R.A. Smith National

Beyond Surveying and Engineering

16745 W. Bluemound Road, Brookfield WI 53005
262-781-1000 Fax 262-781-8466
www.rasmithnational.com

WISCONSIN
GREGORY A. KUNZ
S-1346
WAUKESHA WI
LAND SURVEYOR

Gregory A. Kunz 12/03/2013

GREGORY A. KUNZ DATE
AGENT FOR R.A. SMITH NATIONAL
R.L.S. NUMBER 1346

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

REVISION DATE:

APPROVED FOR DISTRICT OFFICE:

Brad S. Dahlke 12-10-13

SIGNATURE DATE:

E

4.1

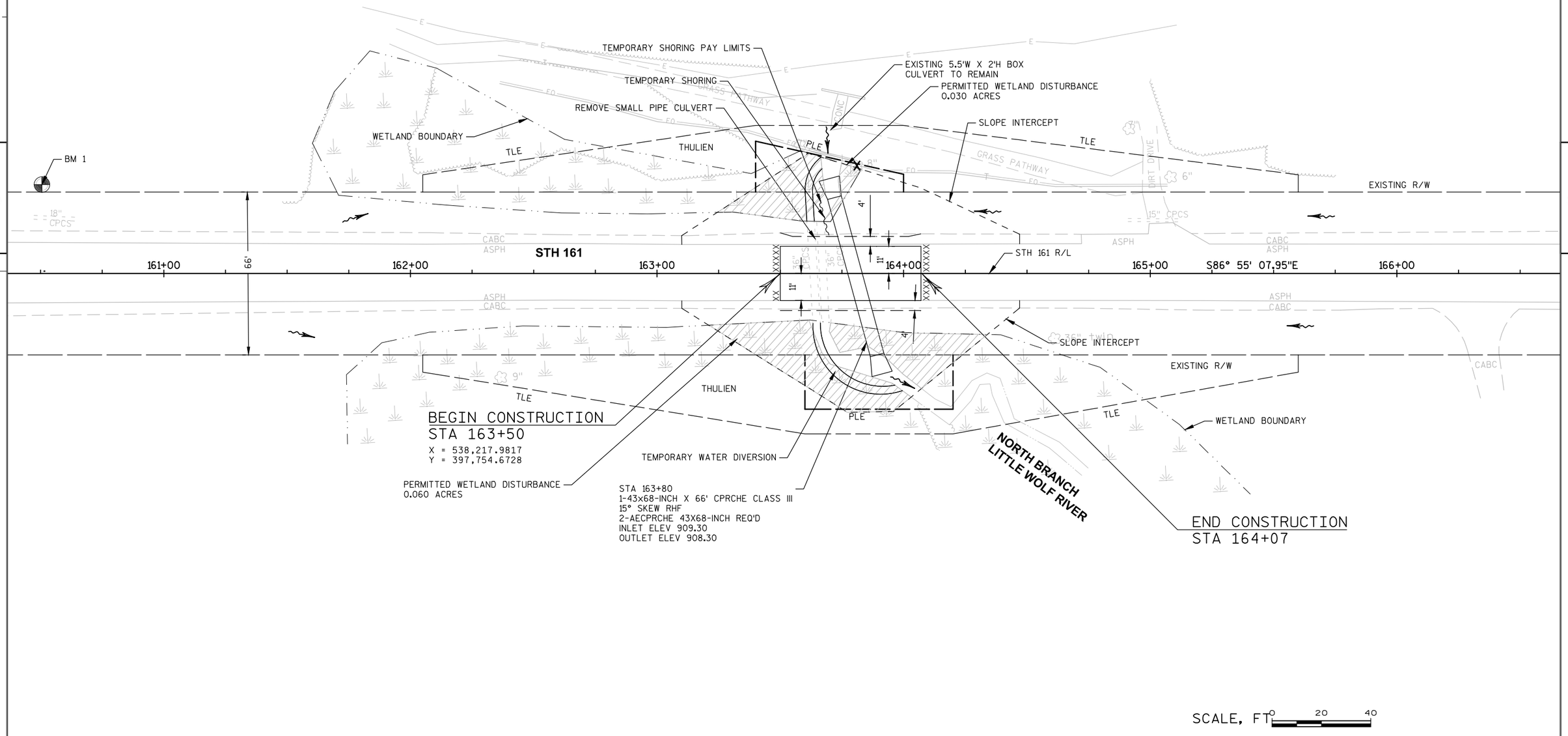
FILE NAME: S:\5165223\PLAT\STH47_FP100_Standard.DWG

BENCHMARKS

NO.	LOCATION	DESCRIPTION	ELEV
1	STA 160+51, 36' LT	SET MAG NAIL IN NORTH SIDE OF 10" BLACK CHERRY	919.54

LEGEND
XXXXXXX SAWCUT
DIRECTION OF FLOW

N



PROJECT NO:1009-43-62	HWY: STH 161	COUNTY: WAUPACA	PLAN SHEET - NORTH BRANCH LITTLE WOLF RIVER	SHEET 48	E

BENCHMARKS

NO.	LOCATION	DESCRIPTION	ELEV
2	STA 335+20, 48' RT	SET RR SPIKE IN WEST SIDE OF 16" ASPEN 2' ABOVE GROUND. MARKED BEARING TREE	1554.50

N

LEGEND

XXXXXXX SAWCUT

DIRECTION OF FLOW

NOTES

SLOPE INTERCEPTS SHOWN FOR TEMPORARY LANE SHIFT DURING CONSTRUCTION

ASSUME 1 EXISTING PIPE TO BE USED AS TEMPORARY PIPE FOR TEMPORARY WATER DIVERSION

KEVILUS ET AL

SWANSON CREEK

NEWTON

EXISTING R/W

EXTEND CULVERT PIPE WITH 12' OF CULVERT PIPE TEMPORARY 48-INCH

PERMITTED WETLAND DISTURBANCE
0.050 ACRES

WETLAND BOUNDARY

REMOVE SMALL PIPE CULVERTS

SLOPE INTERCEPT

5

5

STH 32

328+00 N0° 08' 11.50"E 329+00 330+00 331+00 200' 332+00 333+00

STH 32 R/L

5'
3'
12'
12'
3'
5'

SLOPE INTERCEPT

BEGIN CONSTRUCTION
STA 329+75
X = 894,216.2283
Y = 561,546.5252

END CONSTRUCTION
STA 331+00

BM 2

PERMITTED WETLAND DISTURBANCE
0.052 ACRES

WETLAND BOUNDARY

STA 330+37
C-21-6
2-48 X 76-INCH X 90' CPRCHE CLASS III
4° SKEW RHF
CONCRETE MASONRY ENDWALLS REQ'D
INLET ELEV 1543.70
OUTLET ELEV 1543.70

EXISTING R/W

TOWN OF LAONA

PROJECT NO:1009-43-62	HWY: STH 32	COUNTY:FOREST	PLAN SHEET - SWANSON CREEK	SCALE, FT 0 20 40	SHEET 49	E

BENCHMARKS

NO.	LOCATION	DESCRIPTION	ELEV
3	STA 476+40, 24' RT	SET MAG NAIL IN EAST SIDE OF NO PASSING SIGN	847.74

N

LEGEND

XXXXXXX SAWCUT

DIRECTION OF FLOW

NOTES

SLOPE INTERCEPTS SHOWN FOR TEMPORARY LANE SHIFT DURING CONSTRUCTION

MENOMINEE TRIBAL SUSTAINED YIELD FOREST LAND

PERMITTED WETLAND DISTURBANCE
0.113 ACRES

STA 474+88
C-73-3
8'W X 6'H x 108' BOX CULVERT
29° SKEW LHF

CHICKNEY CREEK

SLOPE INTERCEPT

TLE

EXISTING R/W

WETLAND BOUNDARY

5

5

CABC
ASPH

00 473+00 STH 47 474+00 475+00 476+00 100' 477+00 N58° 16' 07.95"W 478+00

STH 47 R/L

5' 1' 12' 12' 60° SPCS 60° CPCS

BM 3

15" CPCS

BEGIN CONSTRUCTION
STA 474+12
X = 282,012.9656
Y = 63,982.5724

END CONSTRUCTION
STA 475+63

SLOPE INTERCEPT

PERMITTED WETLAND DISTURBANCE
0.110 ACRES

TEMPORARY WATER DIVERSION

STA 474+83 AND STA 474+92
REMOVE OLD STRUCTURE

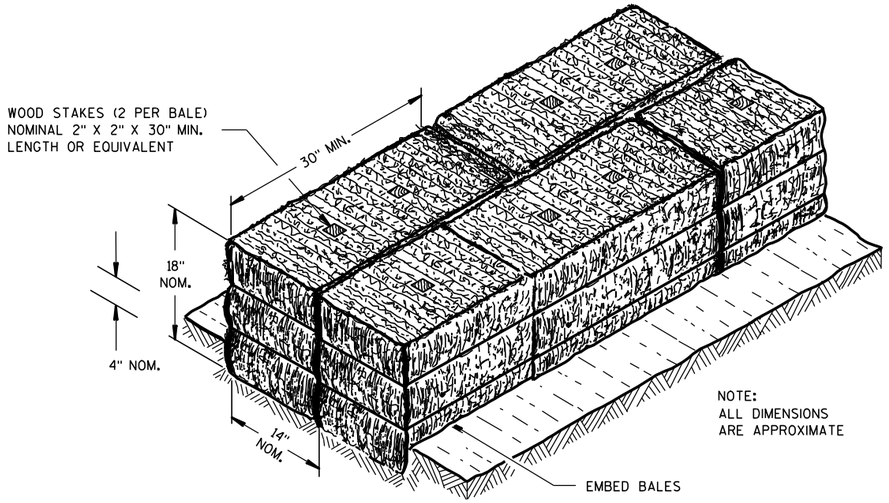
MENOMINEE TRIBAL SUSTAINED YIELD FOREST LAND

PROJECT NO: 1009-43-62	HWY: STH 47	COUNTY: MENOMINEE	PLAN SHEET - CHICKNEY CREEK	SCALE, FT 0 20 40	SHEET 50	E

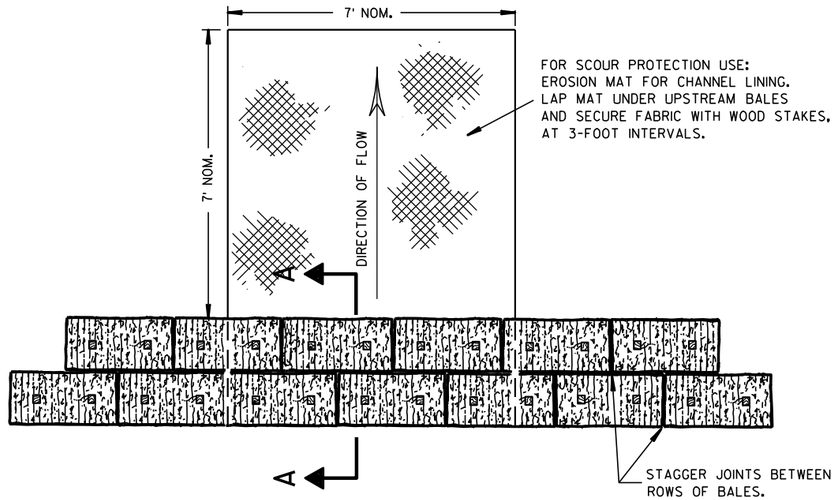
Standard Detail Drawing List

08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F10-01	CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH
09G02-03A	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-03B	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-03C	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
12A03-10	NAME PLATE (STRUCTURES)
14B07-14A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B08-01A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B29-01	SAFETY EDGE
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C03-02	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C04-02	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15D28-02	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D29-03	TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD
15D33-03	TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS

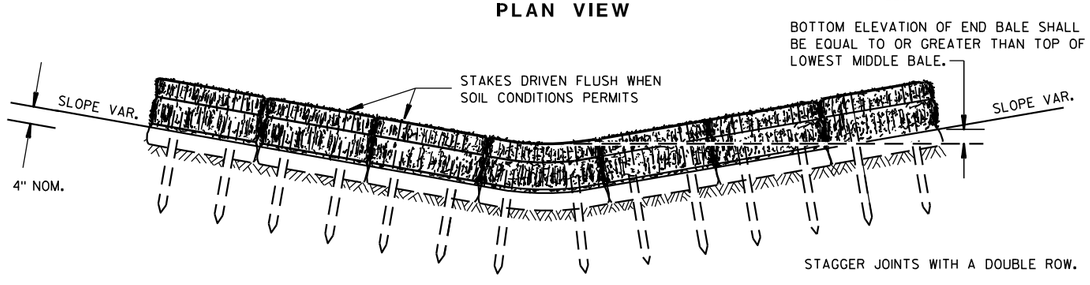
6



SECTION A-A



PLAN VIEW



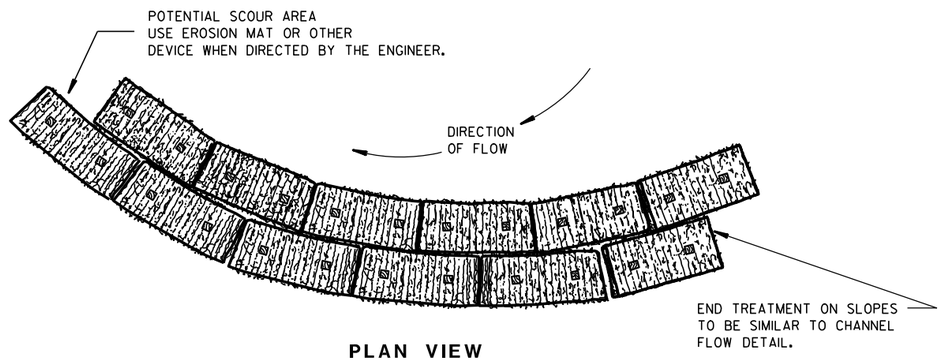
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

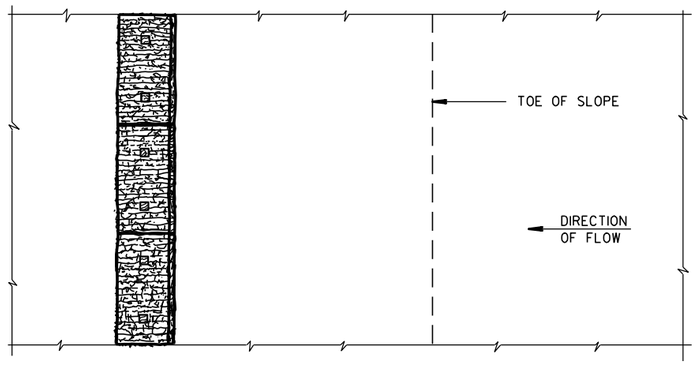
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

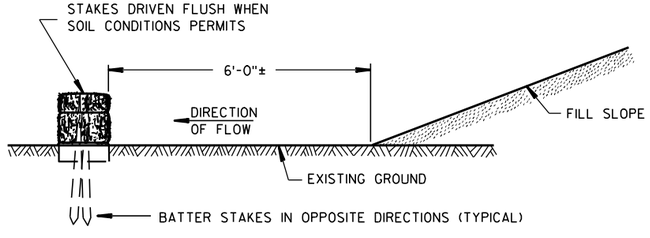


PLAN VIEW

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

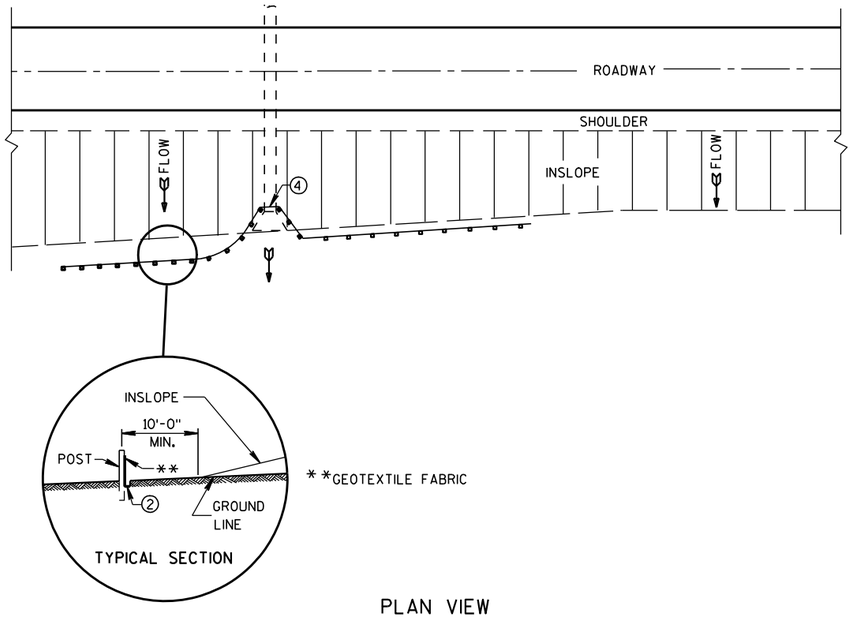
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02 — DATE

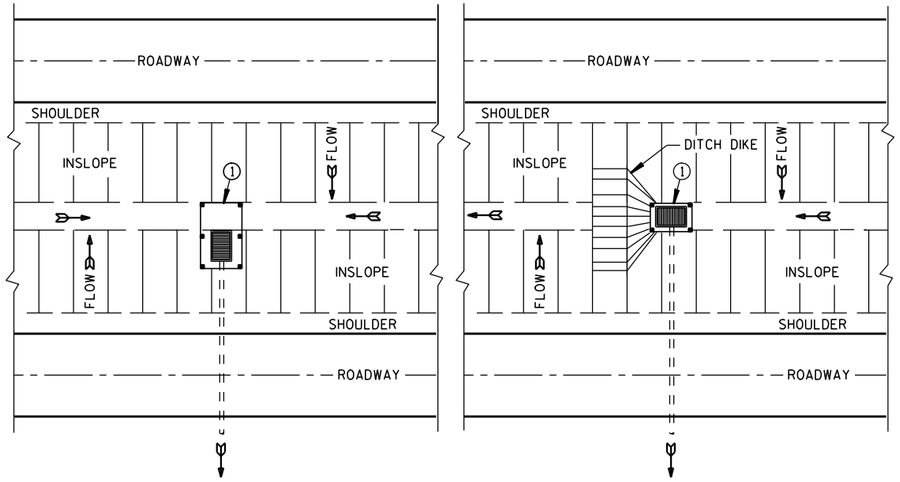
/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

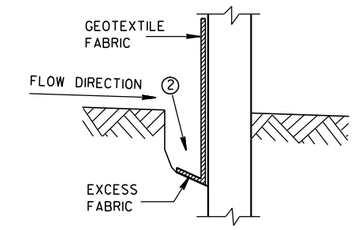
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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

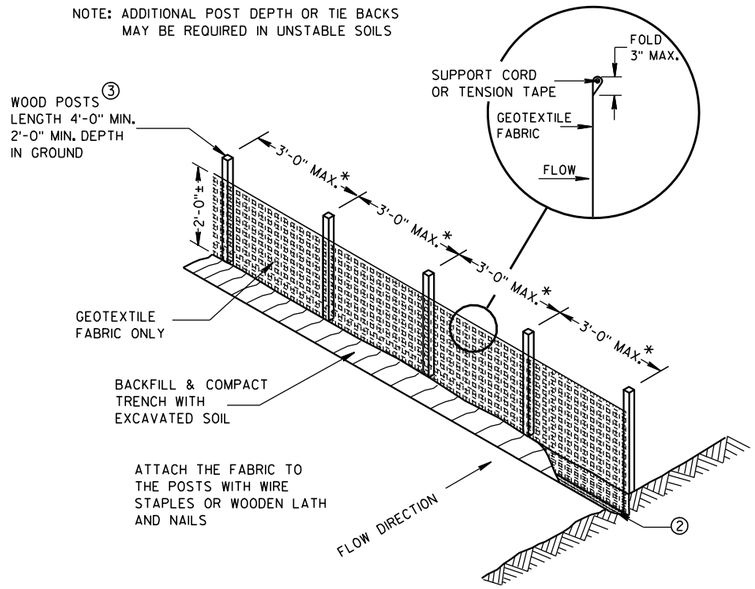
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

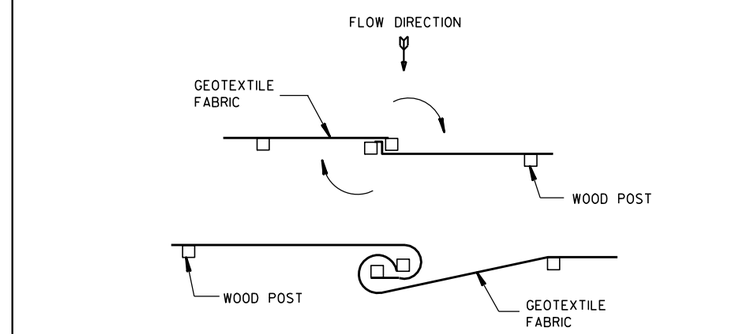
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



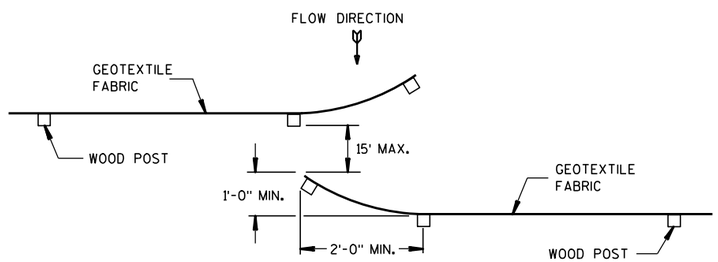
TRENCH DETAIL



SILT FENCE

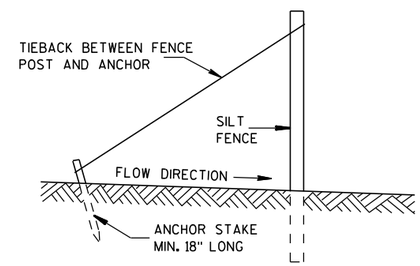


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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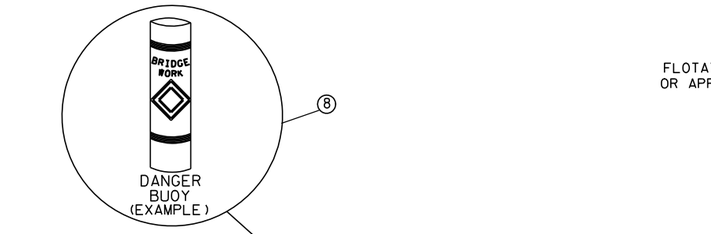
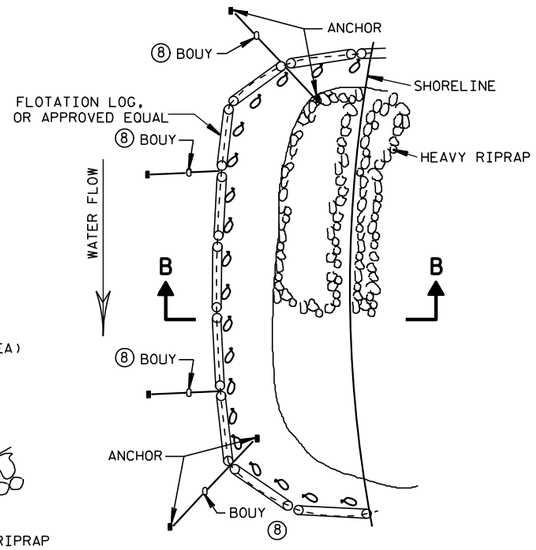
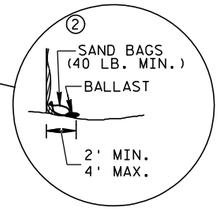
S.D.D. 8 E 9-6

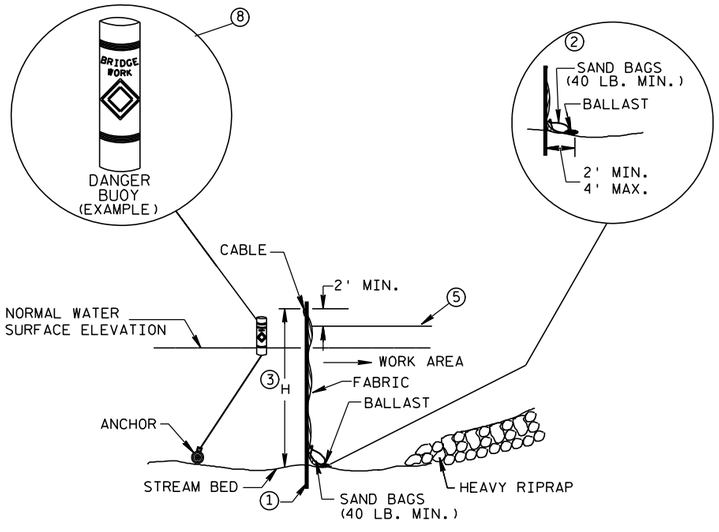




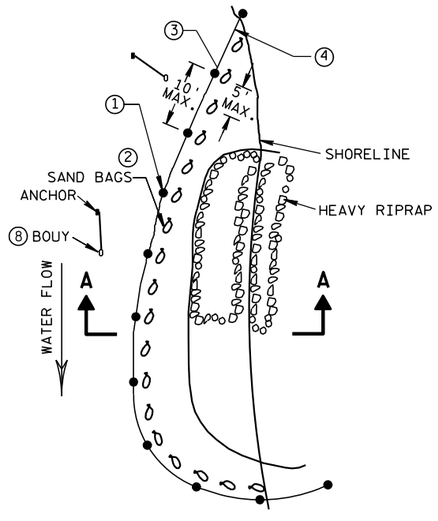
SECTION B-B

TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6





SECTION A-A



PLAN VIEW

TURBIDITY BARRIER STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

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

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

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

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

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

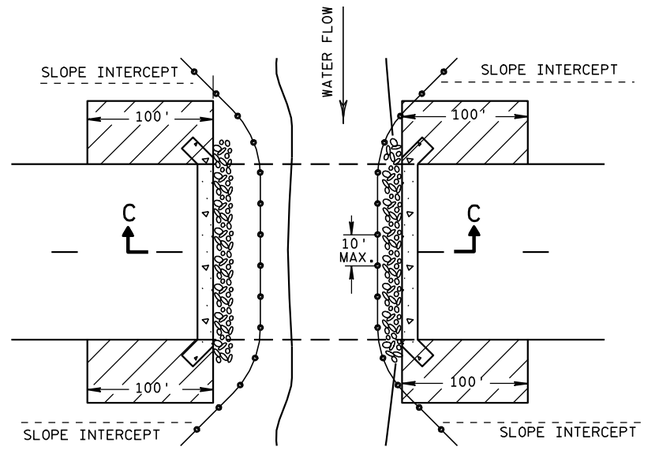
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MIMIMUM BARRIER HEIGHT SHALL BE 2'GREATER THAN EITHER THE 02 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WICHEVER IS GREATER.

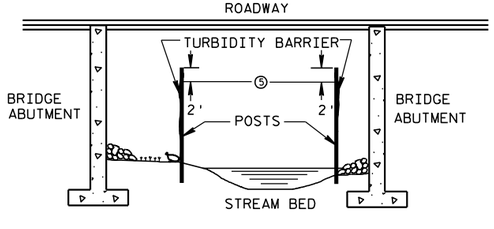
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

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

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



PLAN VIEW



SECTION C-C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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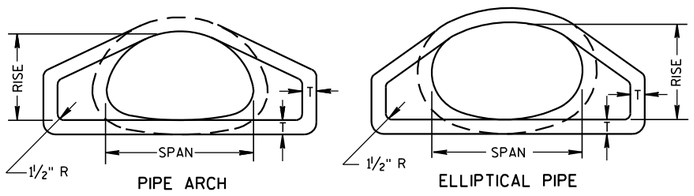
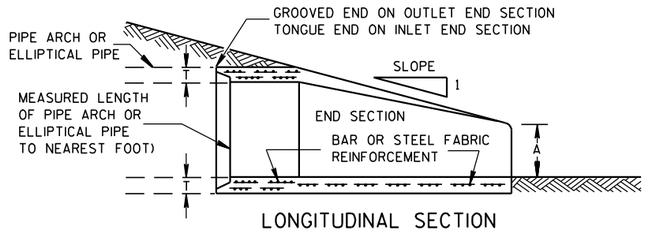
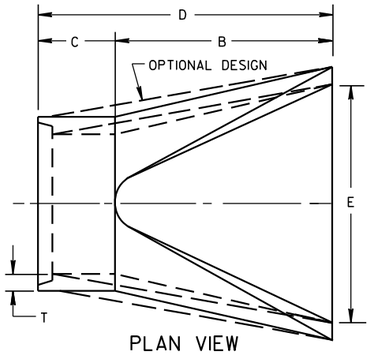
S.D.D. 8 E 11-2



END VIEW

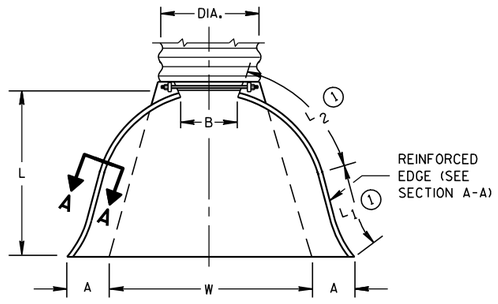


LONGITUDINAL SECTION

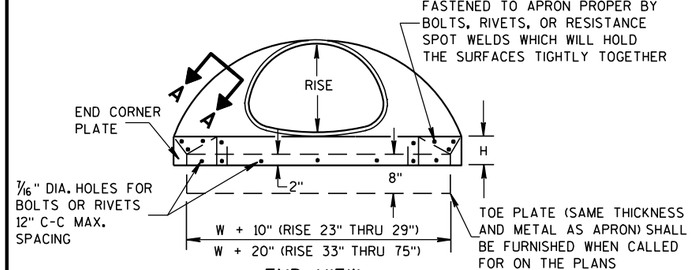


PLAN VIEW

CONCRETE ENDWALLS

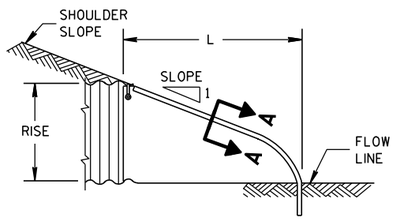


PLAN VIEW



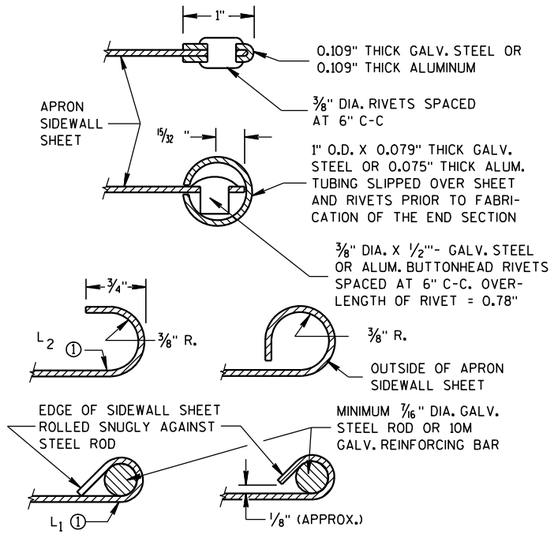
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER

END VIEW



SIDE ELEVATION

METAL ENDWALLS



SECTION A-A

2- 2/3" X 1/2" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
15	17	13	.064	.060	7	9	6	19	14	16	30	2½ to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19⅜	36	2½ to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21¾	42	2½ to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27½	48	2½ to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37⅝	60	2½ to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45⅜	75	2½ to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54¾	85	2½ to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2½ to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72¾	102	2¼ to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82¼	114	2¼ to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

3" X 1" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
48	53	41	.109	.105	18	26	12	63	24	72¾	90	2½ to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82¼	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1½ to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1½ to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1½ to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1½ to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1½ to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1½ to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL SEE GENERAL NOTES

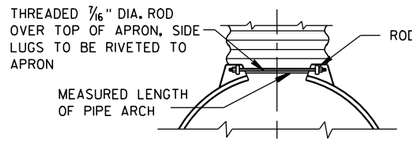
REINFORCED CONCRETE PIPE ARCH

EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	29	18	3	8½	39	33	72	48	3 to 1
30	36	22	3½	9½	50	46	96	60	3 to 1
36	44	27	4	11⅛	60	36	96	72	3 to 1
42	51	31	4½	15 13/16	60	36	96	78	3 to 1
48	58	36	5	21	60	36	96	84	3 to 1
54	65	40	5½	25½	60	36	96	90	3 to 1
60	73	45	6	31	60	36	96	96	3 to 1
72	88	54	7	31	60	39	99	120	2 to 1
84	102	62	8	28½	83	19	102	144	2 to 1

REINFORCED CONCRETE ELLIPTICAL PIPE

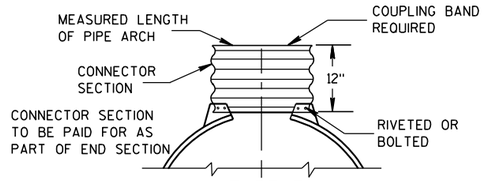
EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48	6½	30	60	36	96	96	2½ to 1

**NOMINAL SIZE



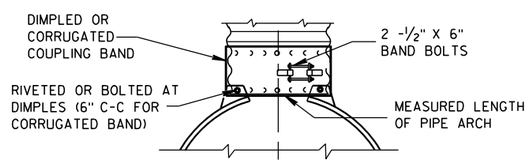
TYPE 2

FOR 17" X 13" THRU 112" X 75" PIPE ARCH



TYPE 3

FOR 64" X 43" THRU 112" X 75" PIPE ARCH



TYPE 5

ALTERNATE FOR:

ALL SIZES CORRUGATED PIPE ARCHES

NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL.

CONNECTION DETAILS

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

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH 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 ARCH 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 77" X 52" THROUGH 112" X 75" 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 ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/94 — DATE

/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

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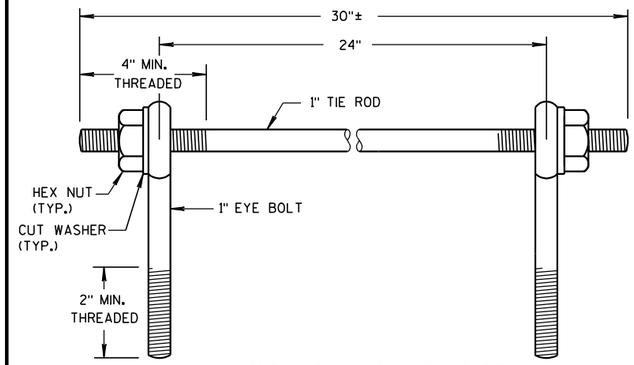
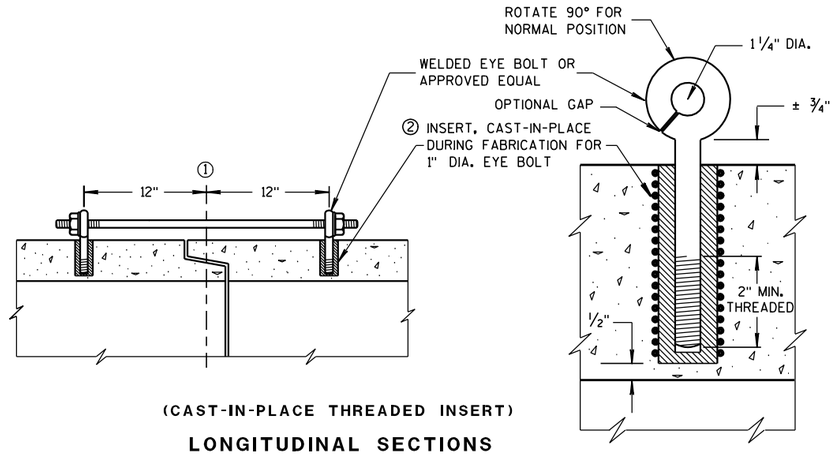
S.D.D. 8 F 2-1



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 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 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 ℄ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

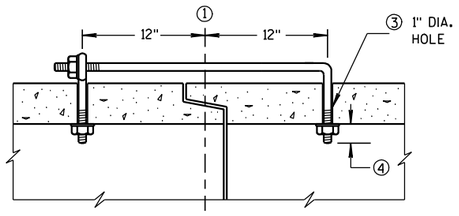
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ℄ OF TONGUE AND GROOVE.

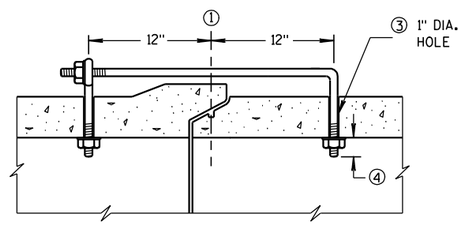
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



(TONGUE & GROOVE PIPE)

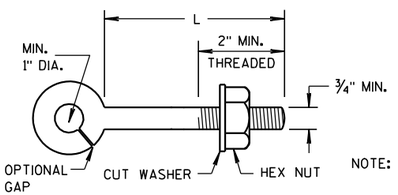


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

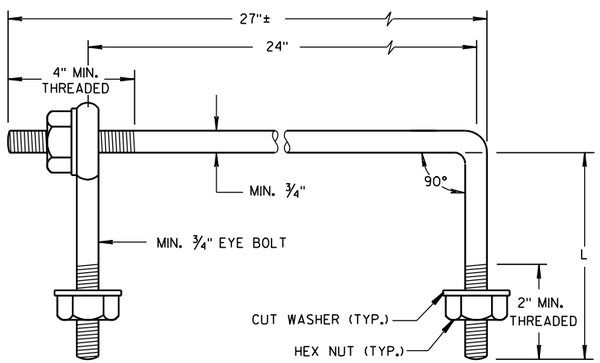
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

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



EYE BOLT AND TIE ROD

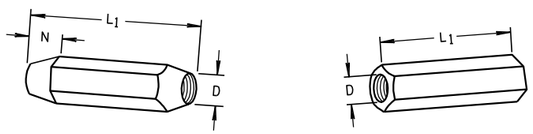
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

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

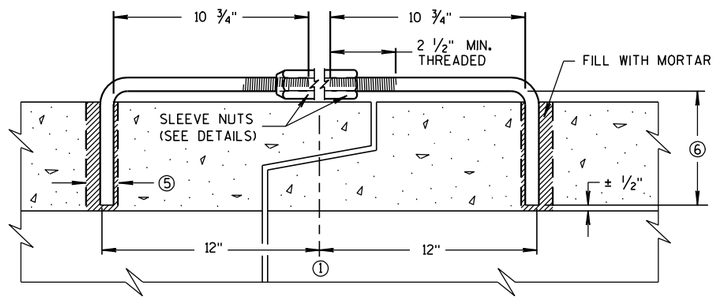
DIMENSIONS SHOWN ARE IN INCHES



TAPERED PLAIN

RIGHT AND LEFT THREADS

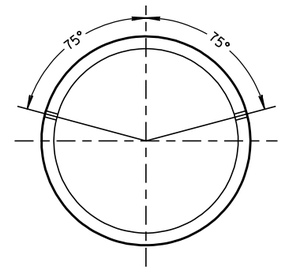
SLEEVE NUTS



LONGITUDINAL SECTION

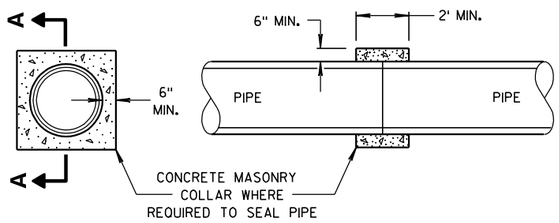
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

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
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

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S.D.D. 8 F 4-7

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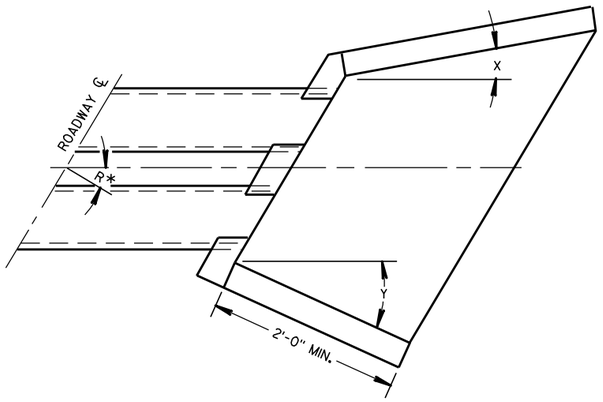
S.D.D. 8 F 4-7



WINGWALL ANGLE DETAILS

INLET			OUTLET		
R*	X	Y	R*	X	Y
0 - 7°	30°	30°	0 - 15°	15°	15°
8 - 22°	25°	"	16 - 45°	10°	"
23 - 37°	20°	"	46 - 75°	5°	"
38 - 52°	15°	"	OVER 75°	0°	"
53 - 67°	10°	"			
68 - 82°	5°	"			
OVER 82°	0°	"			

*R = NUMBER OF DEGREES RIGHT OR LEFT HAND FORWARD

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.

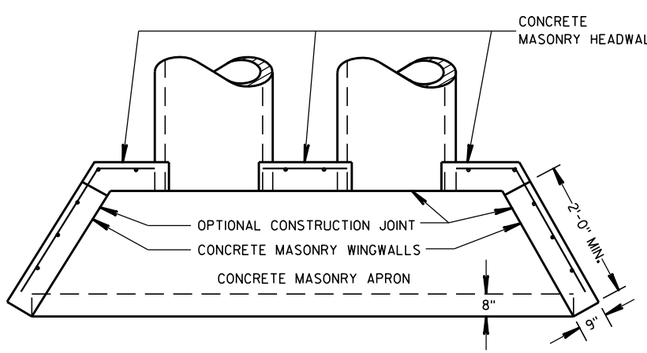
FILL SLOPES FLATTER THAN 2 ½:1 SHALL BE WARPED TO MEET THE TOP OF THE WINGWALLS.

ALL STEEL REINFORCEMENT AND WELDED STEEL WIRE FABRIC SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE NOTED.

(1) MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS SPACED 12" C-C IN BOTH DIRECTIONS.

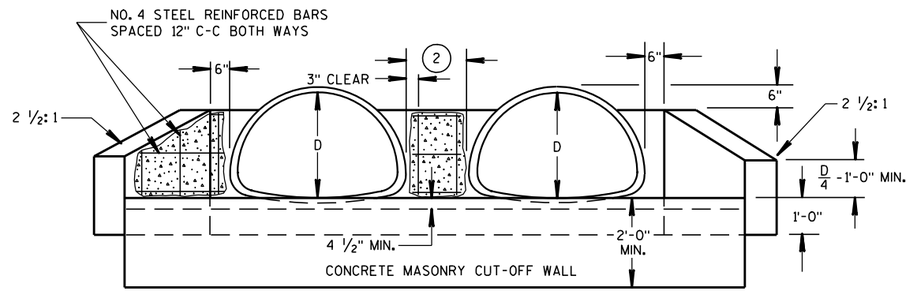
(2) THE SPACE BETWEEN PIPES SHALL BE AS FOLLOWS:

DIAMETER OR SPAN	SPACE
UP TO AND INCLUDING 48"	2'-0"
OVER 48" TO 72"	½ DIA. OR SPAN
OVER 72"	3'-0"



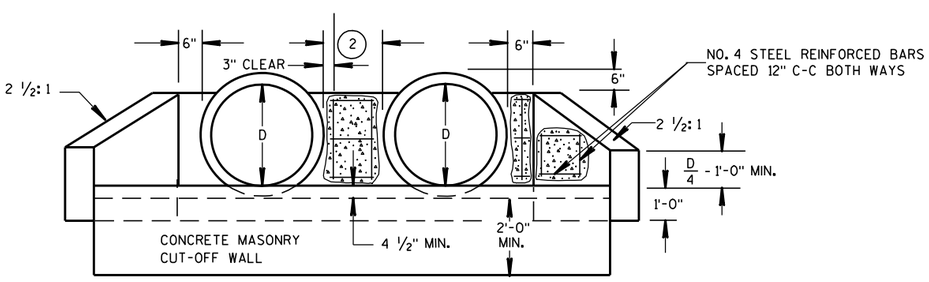
PLAN VIEW

CULVERT PIPE AND PIPE ARCH



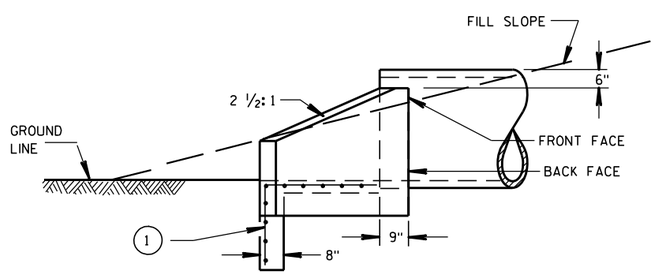
END ELEVATION

PIPE ARCH



END ELEVATION

CULVERT PIPE



SIDE ELEVATION

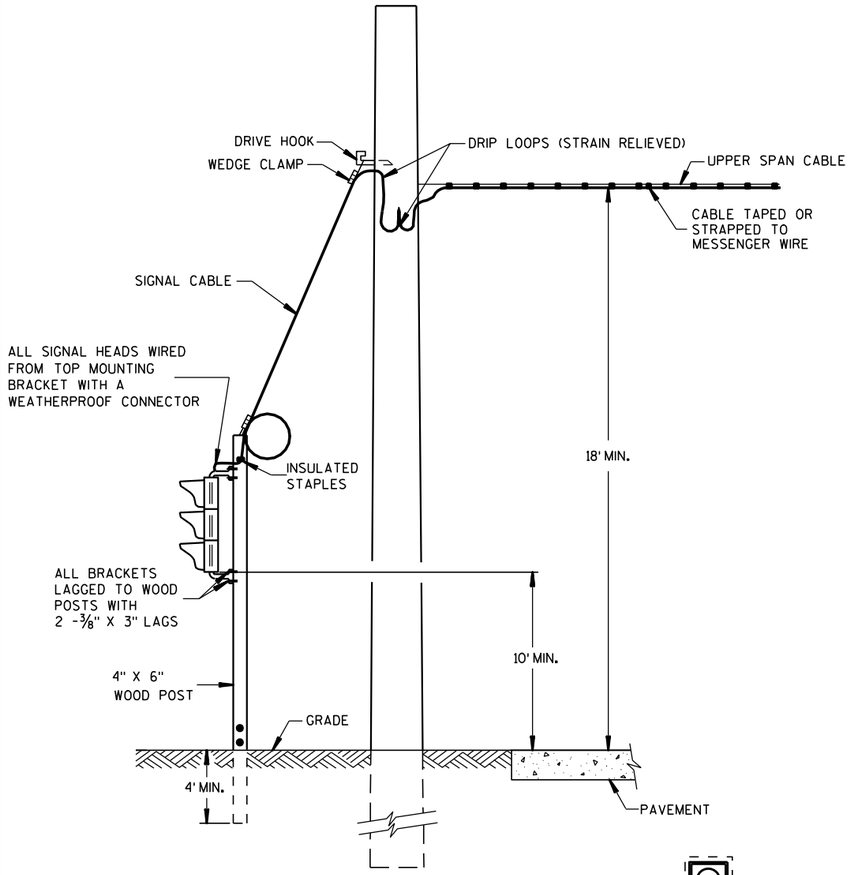
CULVERT PIPE AND PIPE ARCH

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

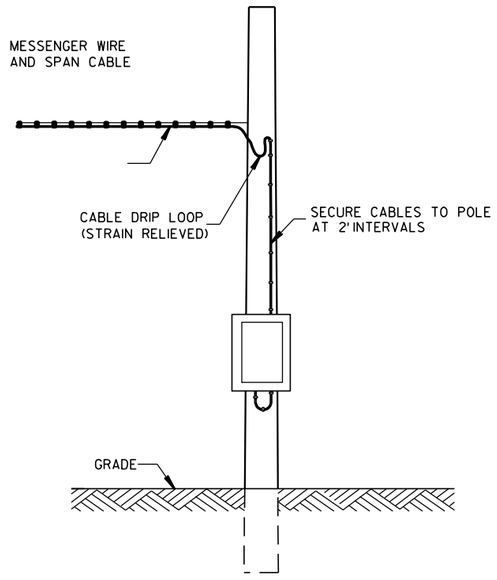
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/14/98 DATE
/S/ Rory L. Rhinehart
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 F 10-1



TYPICAL DROP TO TRAFFIC SIGNAL FACE



POLE MOUNT CABINET INSTALLATION

GENERAL NOTES

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

POLE MOUNTED TRAFFIC SIGNAL CONTROL CABINET MAYBE MOUNTED ON THE SERVICE POLE IF THE ELECTRICAL UTILITY ALLOWS THE INSTALLATION.

WHEN UTILITY PLOLES ARE USED TO SPAN THE TEMPORARY OVERHEAD CABLE, WRITTEN PERMISSION MUST BE OBTAINED FROM THE OWNER OF THE POLES AND GIVEN TO THE PROJECT MANAGER. ALL PERTINENT UTILITY AND CODE CLEARANCES SHALL BE MAINTAINED.

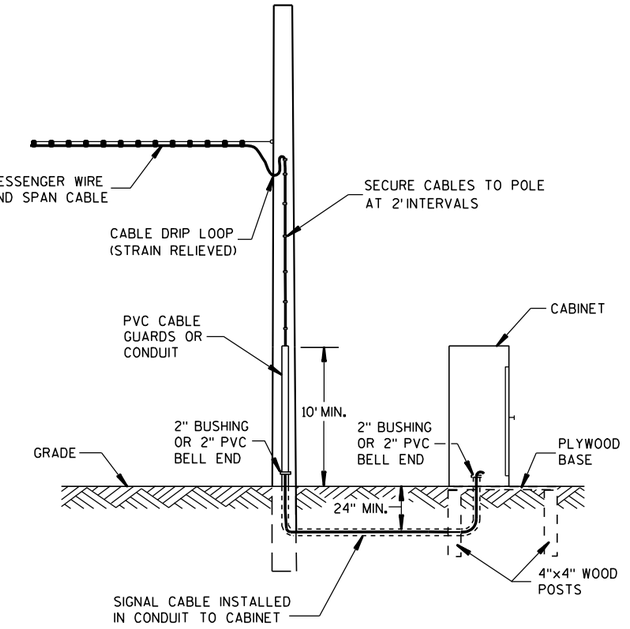
WOOD POLES (NONBREAKAWAY) SHALL BE NO CLOSER TO EDGE OF PAVEMENT THAN OFFSET DISTANCE CHART ALLOWS OR 4 FEET BEHIND PROTECTIVE BARRIER (BEAMGUARD, ETC.).

WOOD POSTS (BREAKAWAY) SHALL BE NO CLOSER THAN 2 FEET OUTSIDE OF SHOULDER.

VERTICAL CLEARANCE ETC. PER NEC.

TRAFFIC SIGNAL FACES SHALL BE TYPICALLY PLACED 12 FEET FROM EDGE OF PAVEMENT.

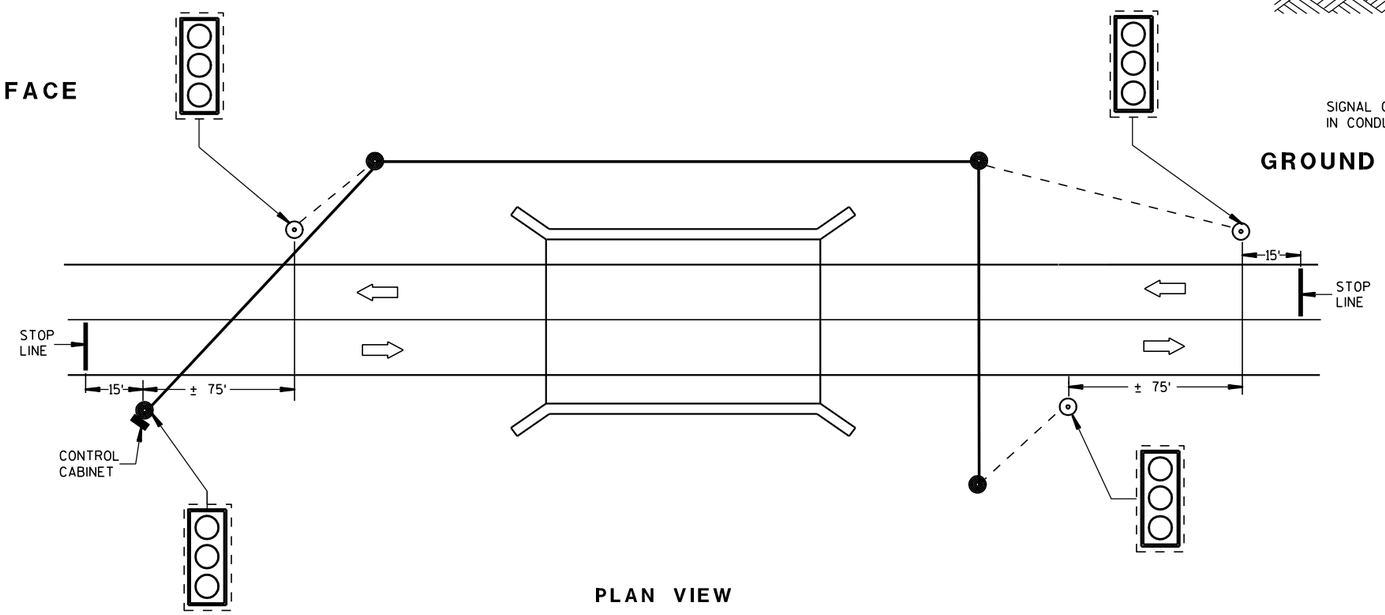
EACH TRAFFIC SIGNAL FACE SHALL HAVE A BACKPLATE.



GROUND MOUNT CABINET INSTALLATION

OFFSET DISTANCES FOR TEMPORARY NON-BREAKAWAY POLES	
SPEED LIMIT	OFFSET DISTANCE**
GREATER THAN 45 MPH	18 FT
45 MPH OR LESS	12 FT
45 MPH OR LESS W/ CURBS	2 FT

**NOTE: OFFSET MEASURED FROM OUTER EDGE OF OUTSIDE THRU LANE.



PLAN VIEW

TYPICAL BRIDGE TEMPORARY TRAFFIC SIGNAL LOCATION

LEGEND

- WOOD POLE (NONBREAKAWAY)
- WOOD POST (BREAKAWAY)
- SIGNAL CABLE
- SIGNAL CABLE W/MESSENGER
- LED TRAFFIC SIGNAL FACE WITH BACKPLATE (3-12")
- DIRECTION OF TRAFFIC

MINIMUM POLE LENGHTS	CLASS	MINIMUM BURIAL DEPTHS
25 FEET	V	5 FEET
30 FEET	V	6 FEET
35 FEET	IV	7 FEET
40 FEET	IV	8 FEET
45 FEET	IV	9 FEET

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/2/2011 DATE

/S/ Thomas J. Gosling STATE ELECTRICAL ENGI

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HWYS

FHWA

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S.D.D. 9 G 2-3a

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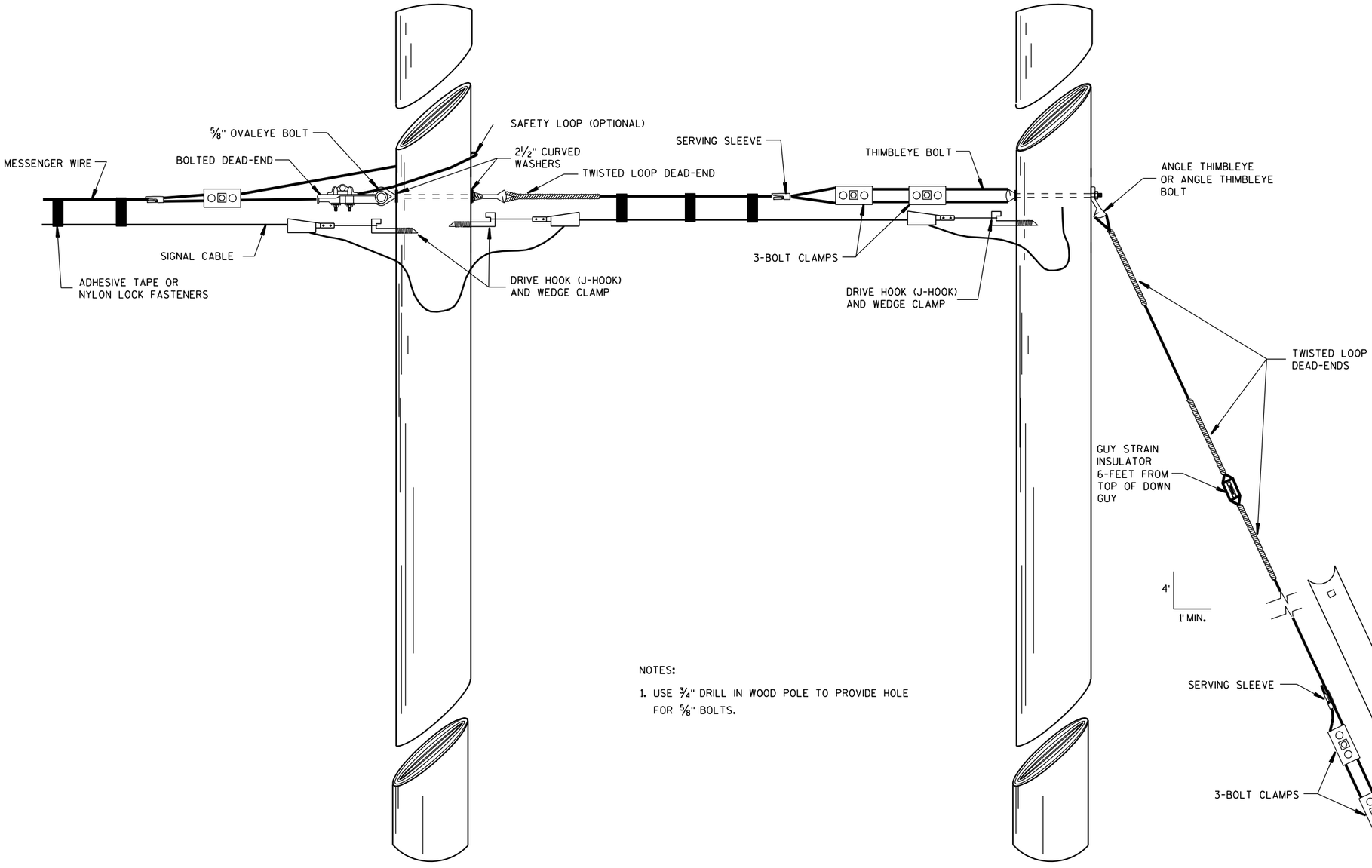
S.D.D. 9 G 2-3a



SPAN WIRE POLE

GUY POLE

NOTES:

1. USE 3/4" DRILL IN WOOD POLE TO PROVIDE HOLE FOR 5/8" BOLTS.

TYPICAL DEAD-ENDINGS OR GUYING

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/2/2011 DATE

/S/ Thomas J. G... STATE ELECTRICAL ENGI

HWYS

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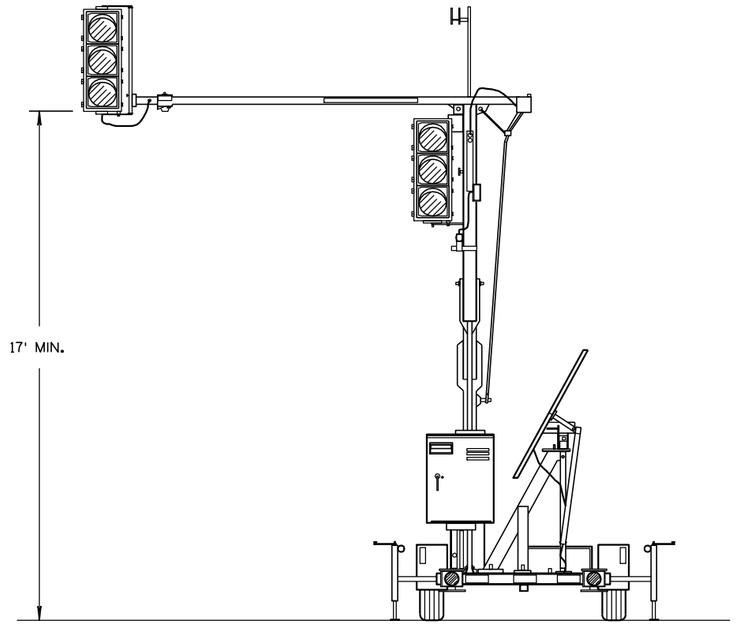
S.D.D. 9 G 2-3b

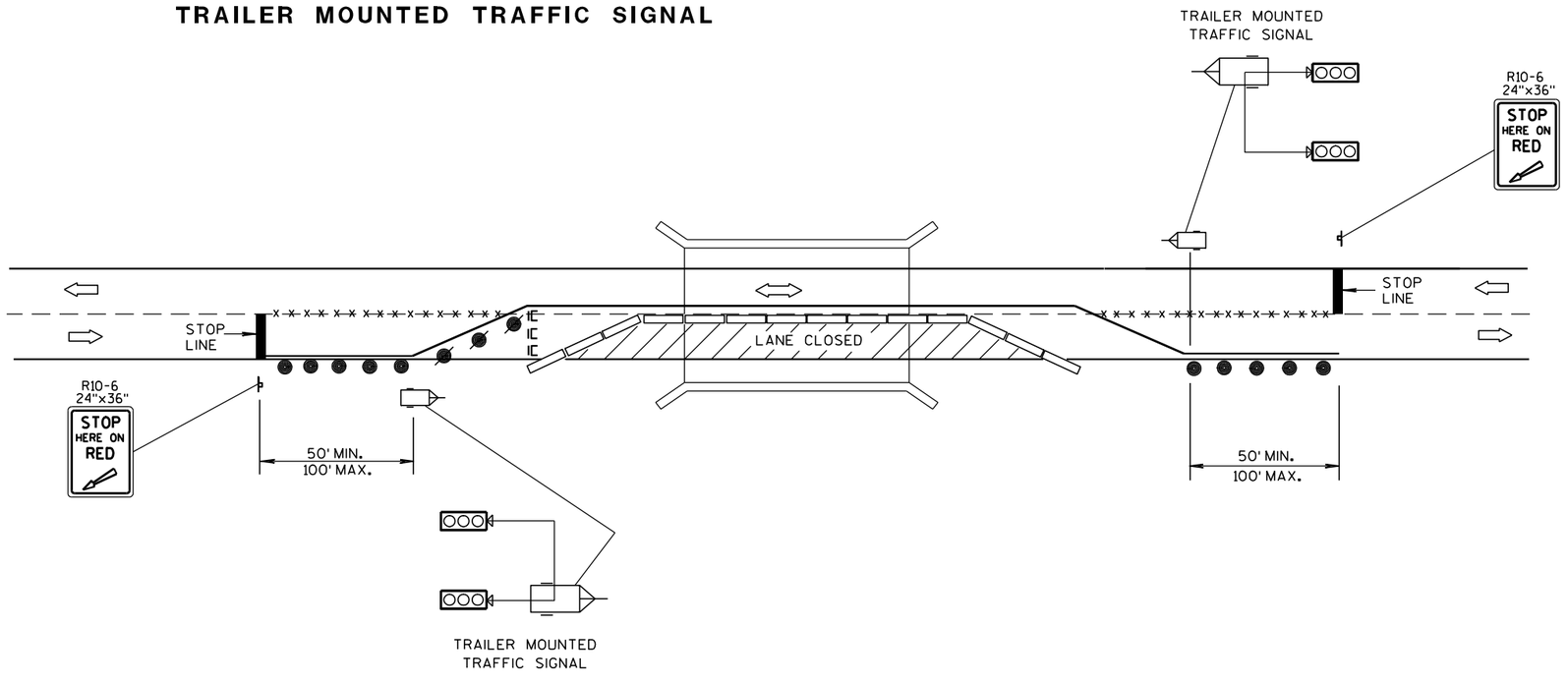


TRAILER MOUNTED TRAFFIC SIGNAL

GENERAL NOTES

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

SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15 D 33.



TYPICAL TRAILER MOUNTED TRAFFIC SIGNAL LOCATION

LEGEND

- POST MOUNTED SIGN
- REMOVING PAVEMENT MARKING
- TYPE III BARRICADE WITH SIGN
- DRUM WITH/WITHOUT WARNING LIGHT, TYPE C (STEADY-BURN)
- TEMPORARY PRECAST CONCRETE BARRIER
- TRAILER MOUNTED TRAFFIC SIGNAL
- DIRECTION OF TRAFFIC FLOW

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/2/2011 — DATE

/S/ Thomas J. Gosling — STATE ELECTRICAL ENGI

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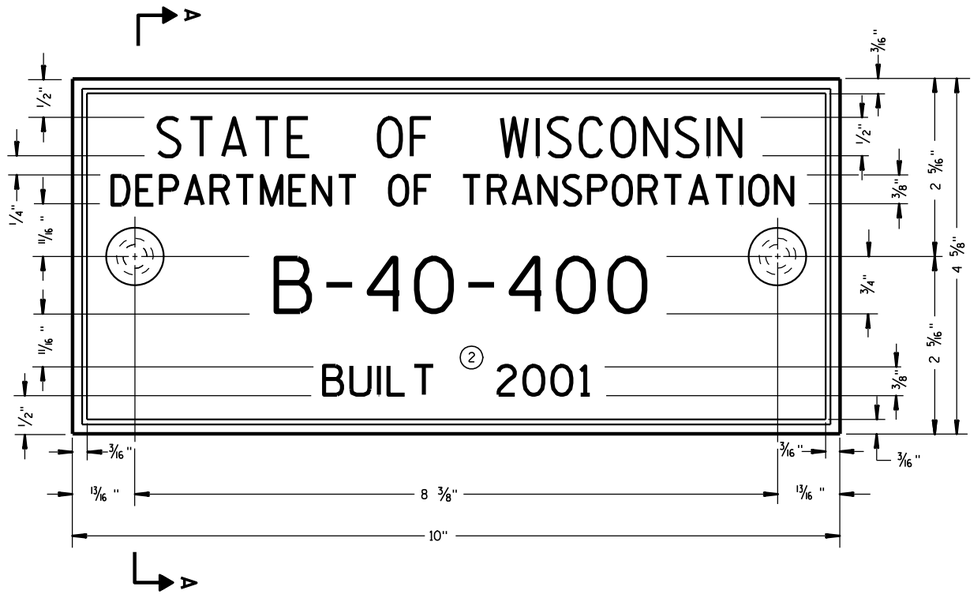
S.D.D. 9 G 2-3c



TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

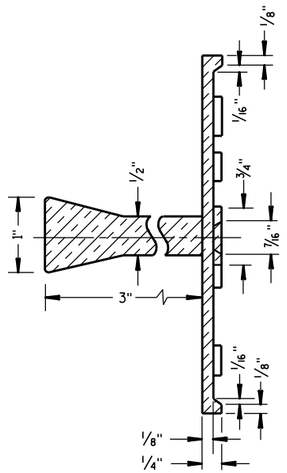
GENERAL NOTES

NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

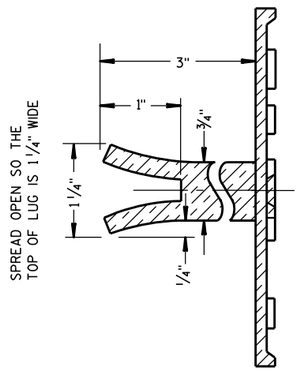
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(1) EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

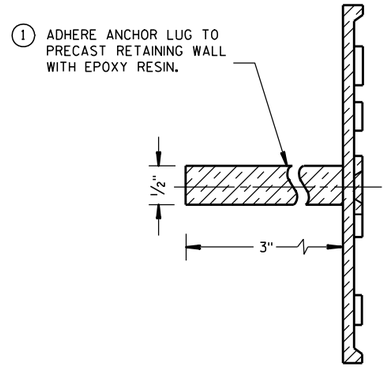
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER

FHWA

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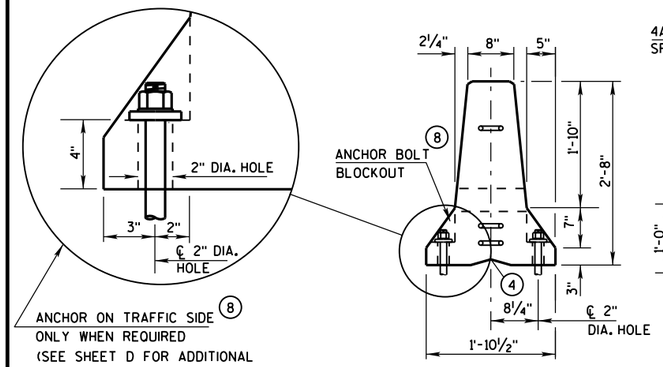
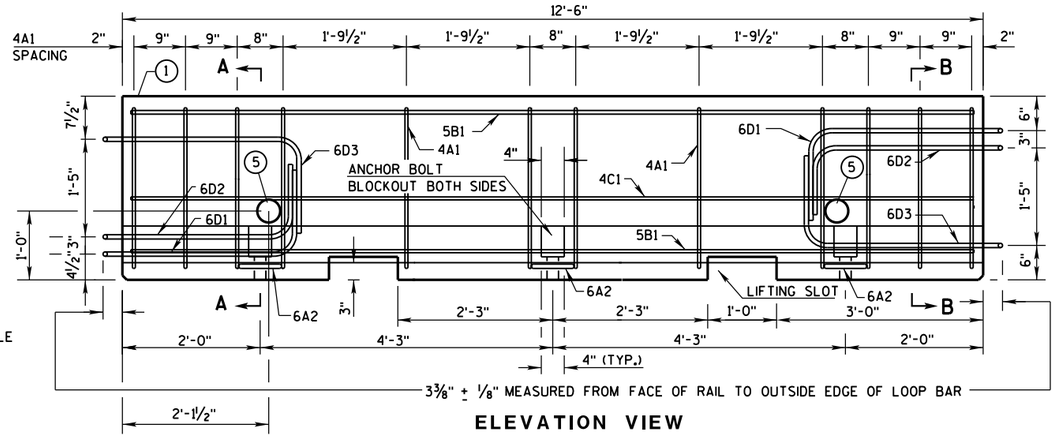
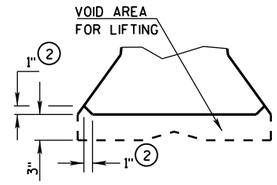
S.D.D. 12 A 3-10



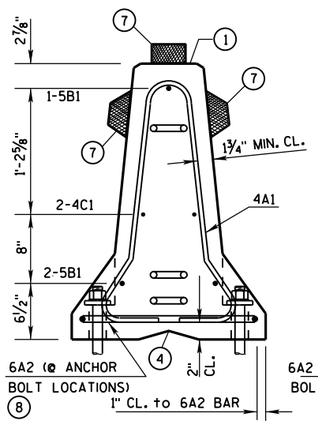
END VIEW



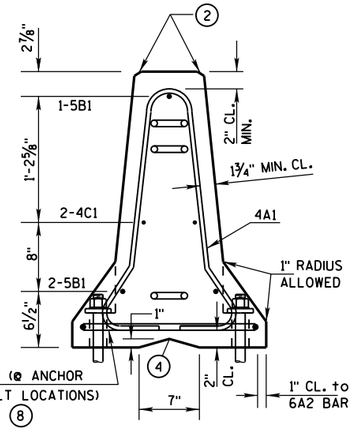
ELEVATION VIEW



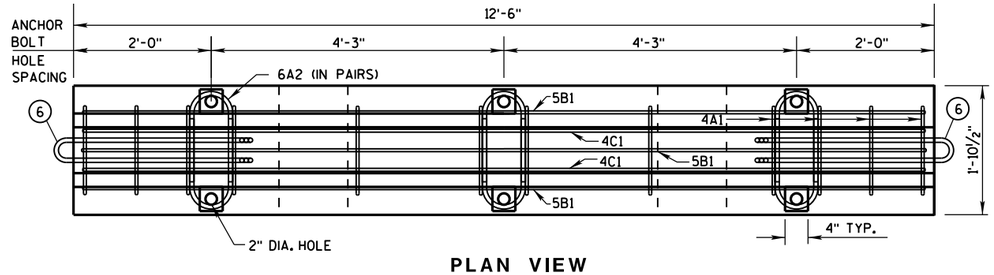
DETAIL "B"
LIFTING SLOT DETAIL



SECTION A-A
(STIRRUP PLACEMENT)



SECTION B-B
(STIRRUP PLACEMENT)



PLAN VIEW

DETAILS OF BARRIER SECTION

GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-14(a) THRU 14B7-14(h).

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRCAST, 12'-6" (CBTP12.5) WITH OTHER TEMPORARY CONCRETE BARRIERS.

USE ASTM A-615, GRADE 60, DEFORMED STEEL BARS FOR BARS 4A1, 6A2, 5B1 AND 4C1 IN THE BARRIER SECTION AND FOR 4V1, 4V2, 4V3, 4V4, 4V5, 4V6, 4F1, 4F2 AND 5F3 IN THE BARRIER TAPER SECTION.

LOOP BARS 6D1, 6D2 AND 6D3 SHALL BE ¾" SMOOTH STEEL BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSI, A TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH BUT A MINIMUM OF 80 KSI, A MINIMUM 14% ELONGATION IN 8 INCHES AND PASSING A 180 DEGREE BEND TEST USING A 3-½" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN ⅛" OF THE PLAN DIMENSION.

CONSTRUCT LIFTING SLOTS AS SPECIFIED ON THE PLANS TO FACILITATE THE DRAINAGE OF WATER AFTER INSTALLATION.

PLACE BARRIER ON A PAVED SURFACE. REMOVE ALL LOOSE DIRT AND SAND FROM THE ROADWAY SURFACE PRIOR TO PLACEMENT OF THE BARRIER.

INSTALL MECHANICAL OR EPOXY ANCHORS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE MANUFACTURER'S INFORMATION TO PROJECT ENGINEER.

(1) MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
- a. TYPE: WI CBTP
- b. MANUFACTURER
- c. DATE MANUFACTURED (MONTH AND YEAR)

(2) 1" CHAMFER TO PREVENT SPALLING.

(3) A ⅜" HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..

(4) "V" NOTCH IS OPTIONAL.

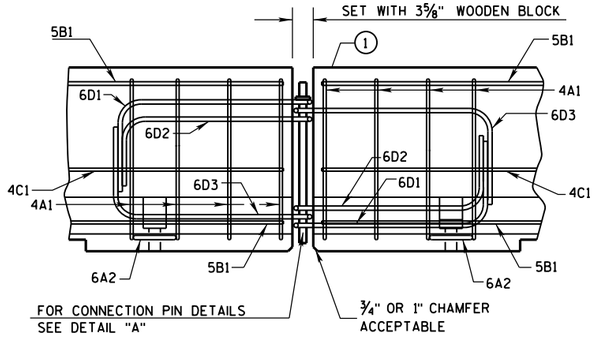
(5) THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).

(6) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

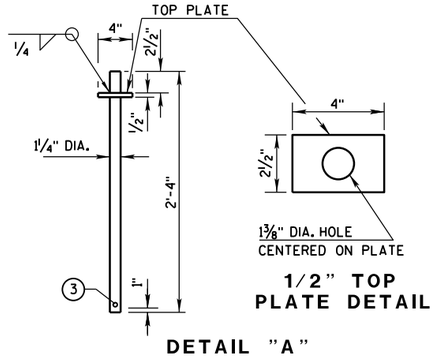
(7) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MAY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURES INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED TO THE LEFT OF TRAFFIC AND WHITE REFLECTORS WHEN BARRIER IS LOCATED TO THE RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART. PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO THE SIDE MOUNTED DELINEATORS ON ALL BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAN 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.

(8) SEE SHEET D FOR ANCHORING CRITERIA.

(9) 1" CHAMFER OPTIONAL.

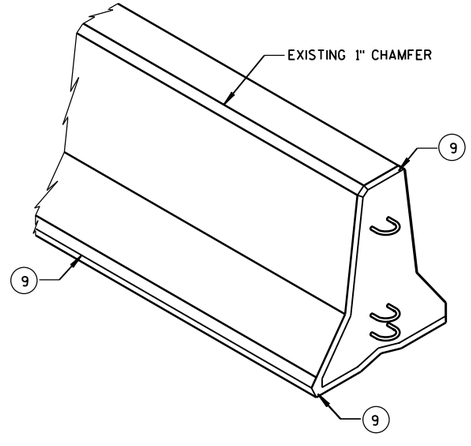


DETAILS OF BARRIER CONNECTION



1/2" TOP PLATE DETAIL

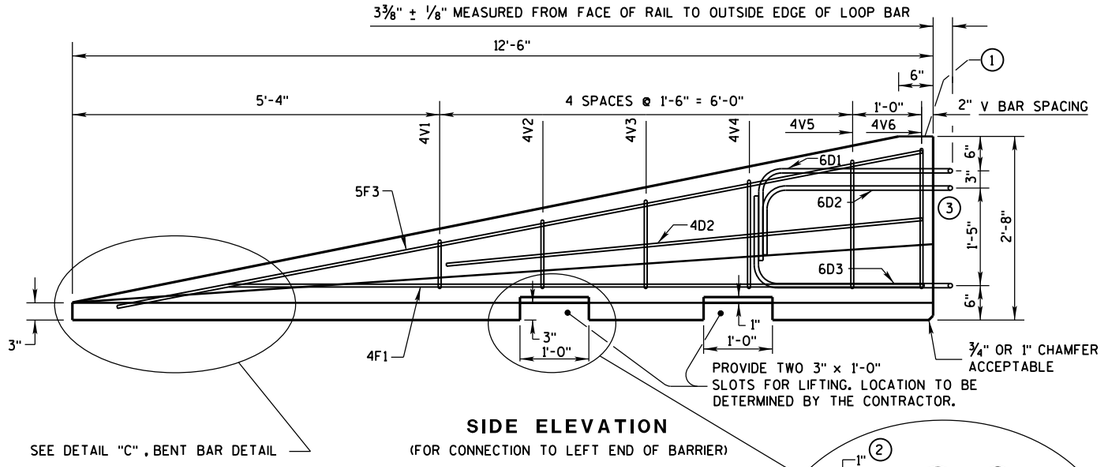
DETAIL "A"
CONNECTION PIN
(A36 STEEL (10.9 LB EACH))



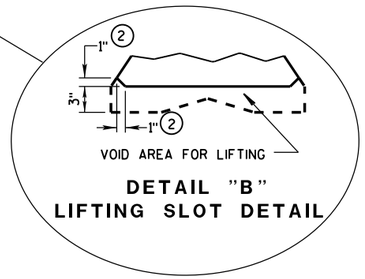
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

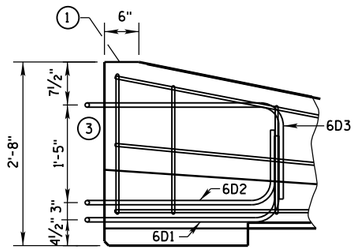
6
S.D.D. 14 B 7-14a



SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



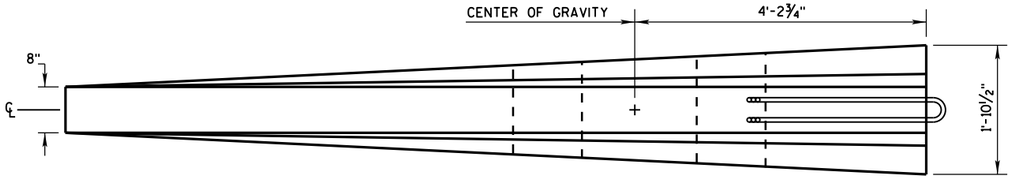
DETAIL "B"
LIFTING SLOT DETAIL



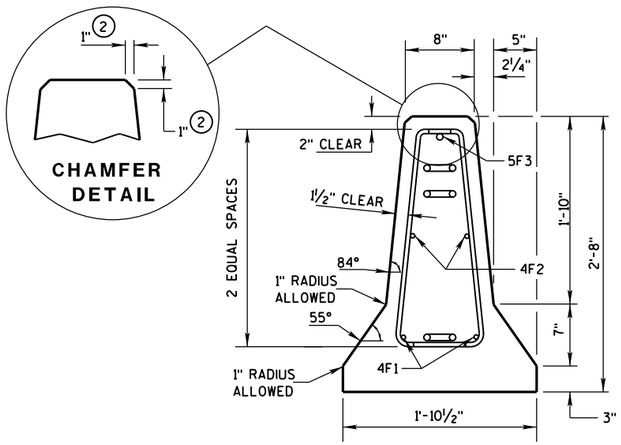
SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

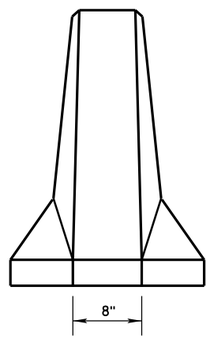
1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



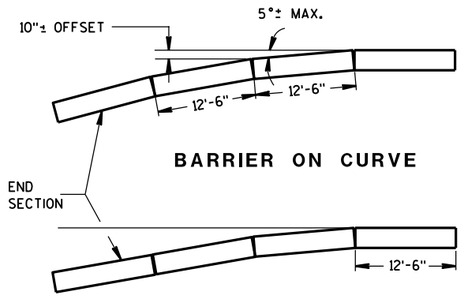
PLAN VIEW



END SECTION



FRONT ELEVATION



BARRIER ON CURVE

FLARE AT BARRIER END

POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
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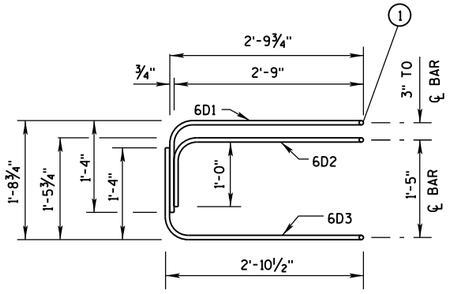
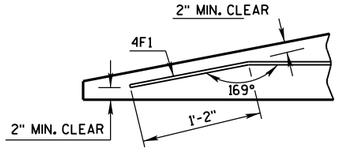
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

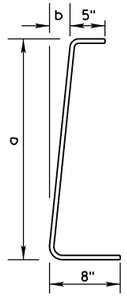
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



ELEVATION
LOOP BAR ASSEMBLY



DETAIL "C"
BENT BAR DETAIL



BAR	a	b
V1	10"	1"
V2	1'-1"	1¼"
V3	1'-5"	1⅝"
V4	1'-8"	1⅞"
V5	2'-0½"	2⅜"
V6	2'-3"	2¾"

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

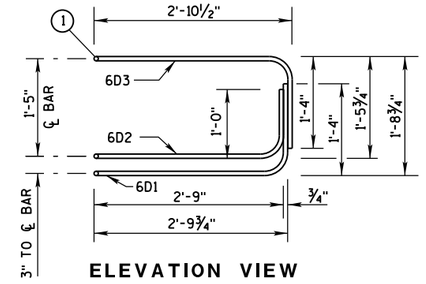
GENERAL NOTES

(1) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

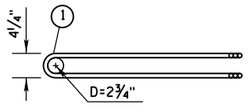
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

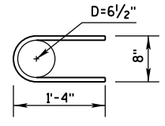
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



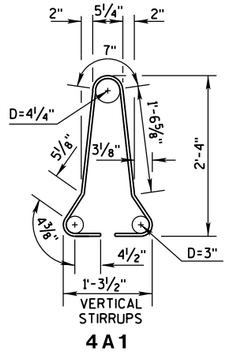
ELEVATION VIEW



PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



6A2



4A1

BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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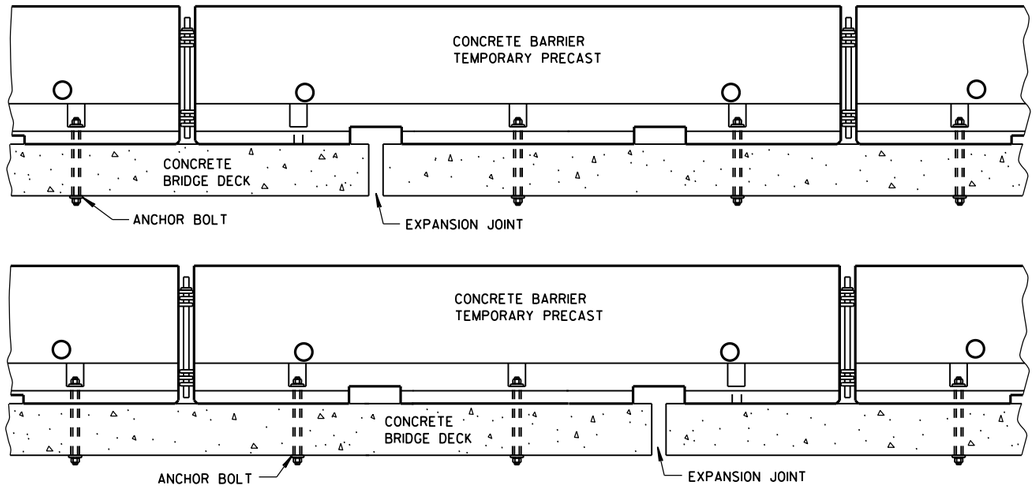
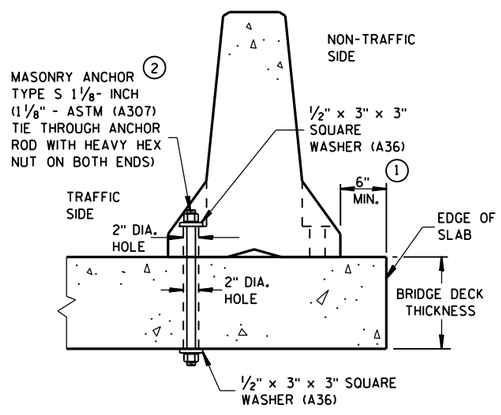
S.D.D. 14 B 7-14c



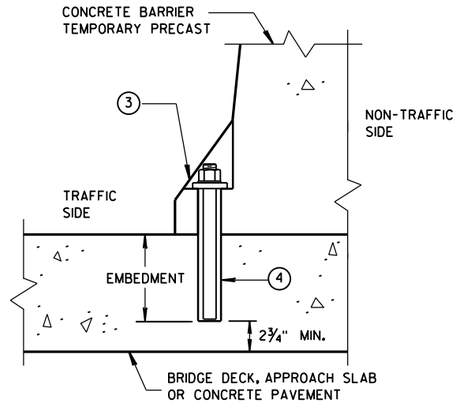
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.)



THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)



REMOVABLE ADHESIVE BONDED ANCHOR ② INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

GENERAL NOTES

① CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 45 MPH OR GREATER, OR

THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT. IS LESS THAN 2 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 40 MPH OR LESS.

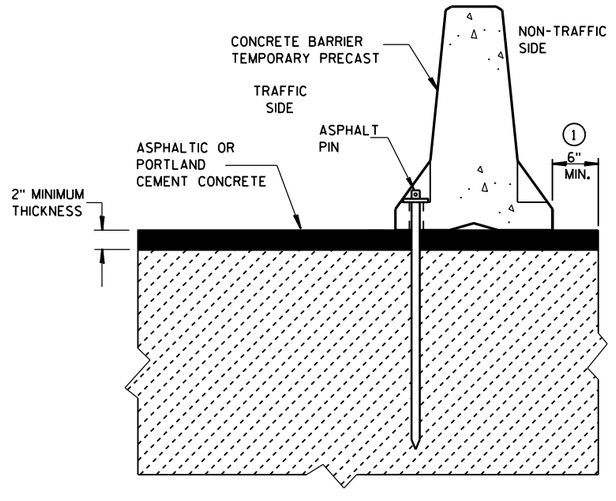
② ANCHORING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST.

WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED (EPOXY) ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1⅛-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE CAPACITY OF THE ANCHOR BOLT AND PROVIDE DOCUMENTATION TO CONFIRM THIS.

UPON REMOVAL OR RELOCATION OF THE BARRIER UNITS, REMOVE ALLANCHOR BOLTS AND COMPLETELY FILL IN THE REMAINING HOLES IN CONCRETE BRIDGE DECKS, CONCRETE APPROACH SLABS AND CONCRETE PAVEMENTS THAT ARE TO REMAIN, WITH A NON-SHRINK COMMERICAL GROUT OR EPOXY MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST.

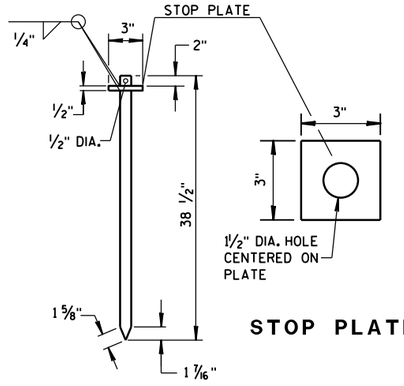
③ 1⅛" DIAMENTER A307 THREADED ROD, ½" X 3" X 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL, ASTM A563A HEAVY HEX NUT.

④ ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5¼" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.



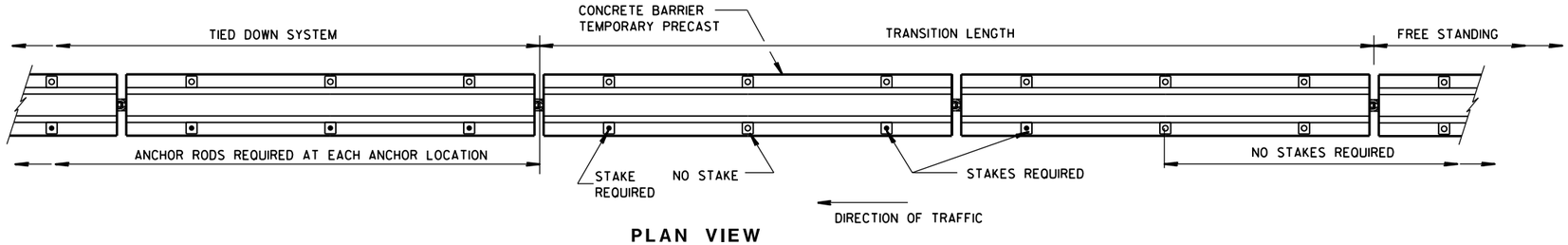
STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



STOP PLATE

ASPHALT PIN
(ASTM A36 STEEL)



PLAN VIEW

FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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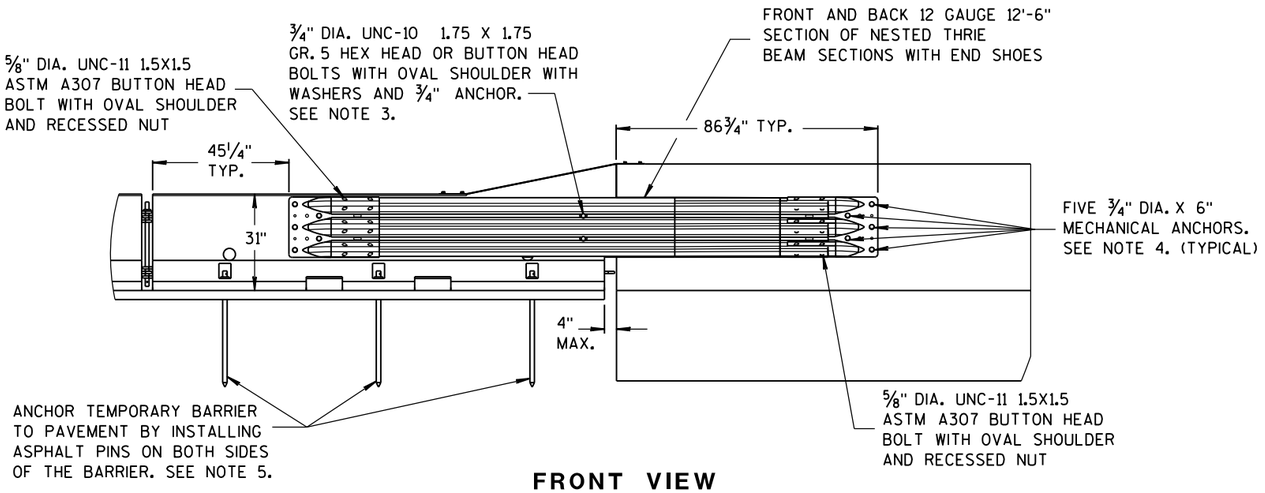
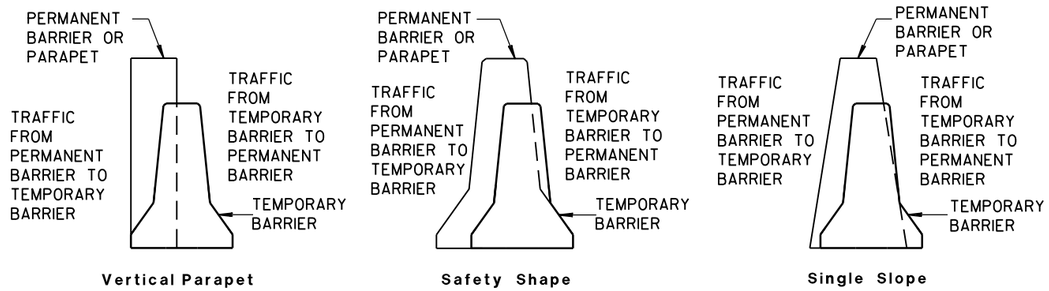


FRONT VIEW



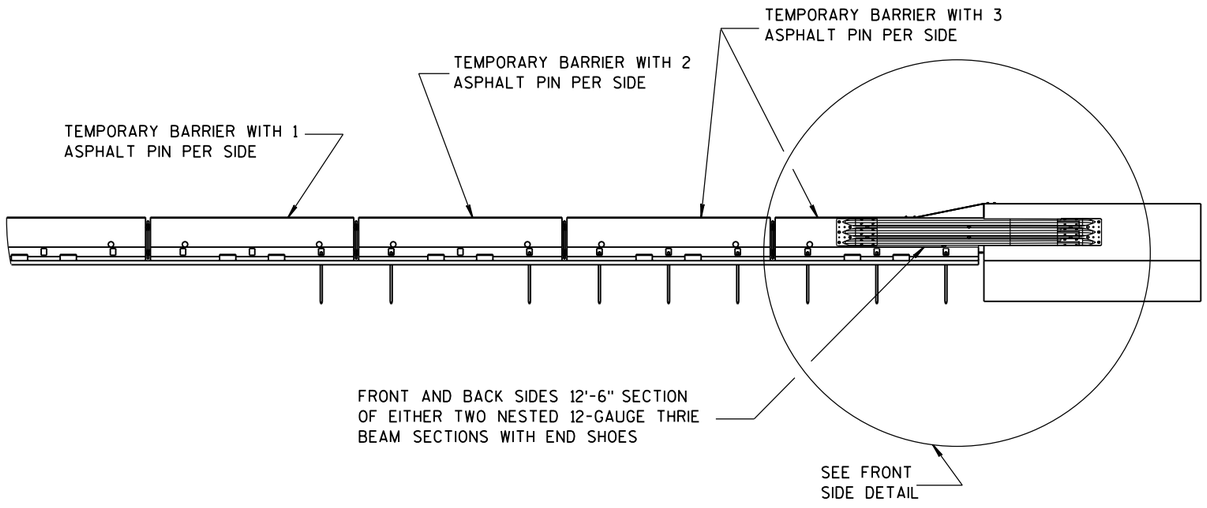
TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

NOTES

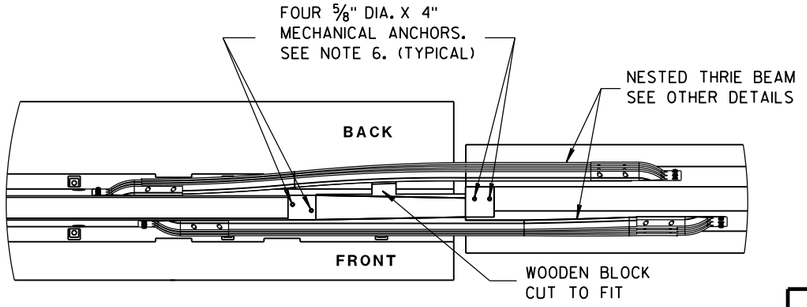
NESTED THRIE BEAM IS REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS.

1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.
4. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS.
5. MAY BE USED ON CONCRETE OR ASPHALT PAVEMENTS. ASPHALT OPTION SHOWN. FOR CONCRETE OPTION SEE OTHER DETAILS.
6. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.

BACK VIEW



FRONT VIEW



PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

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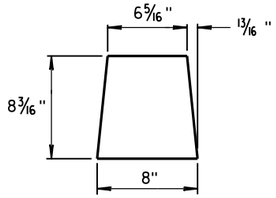
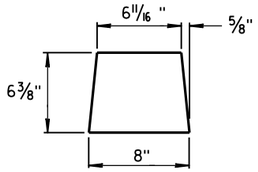
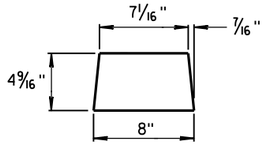
S.D.D. 14 B 7-14e



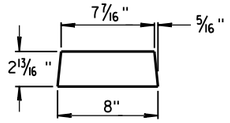
GUSSET 1



GUSSET 2

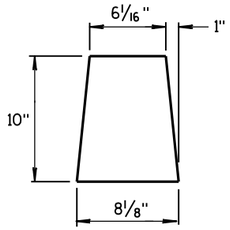


GUSSET 3

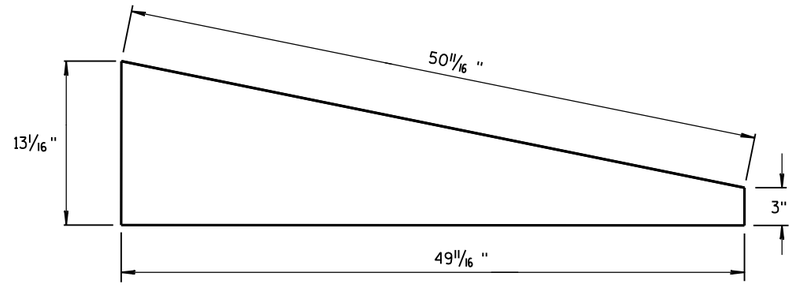


GUSSET 4

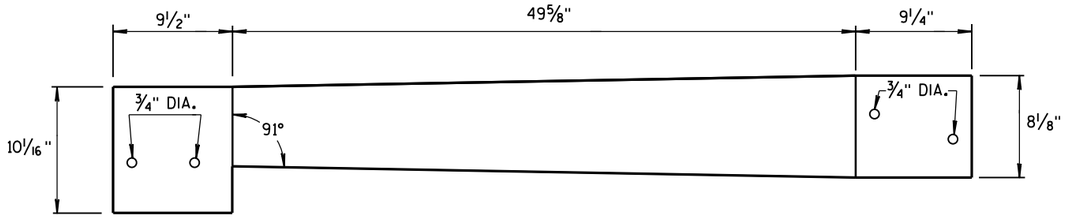
GUSSETS

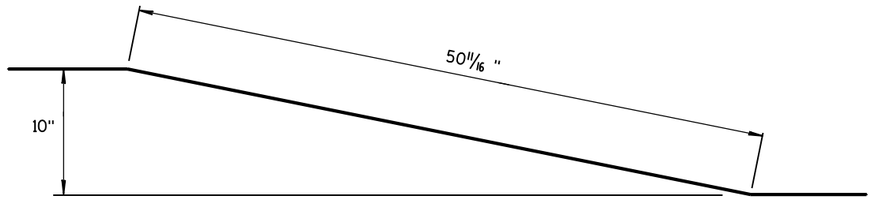


END PLATE



SIDE PLATE

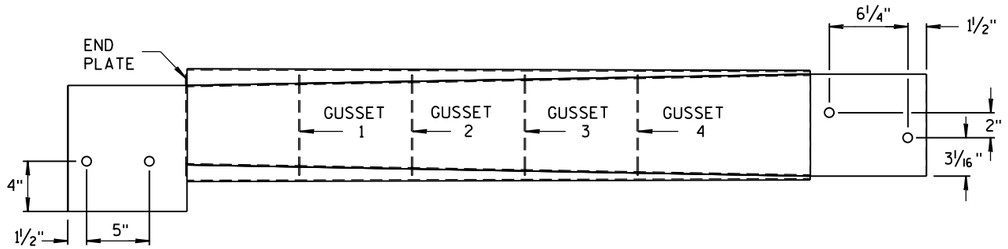


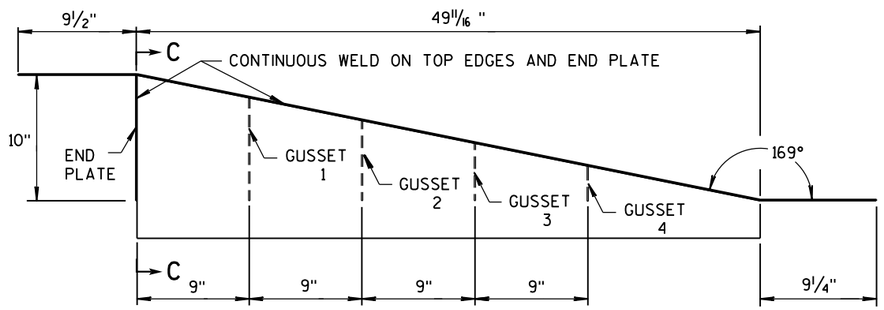


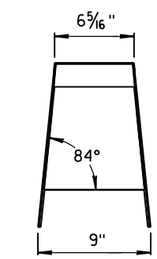
TOP PLATE

SIDE, TOP AND END PLATES FOR CAP FROM TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.







SECTION C-C

NOTES

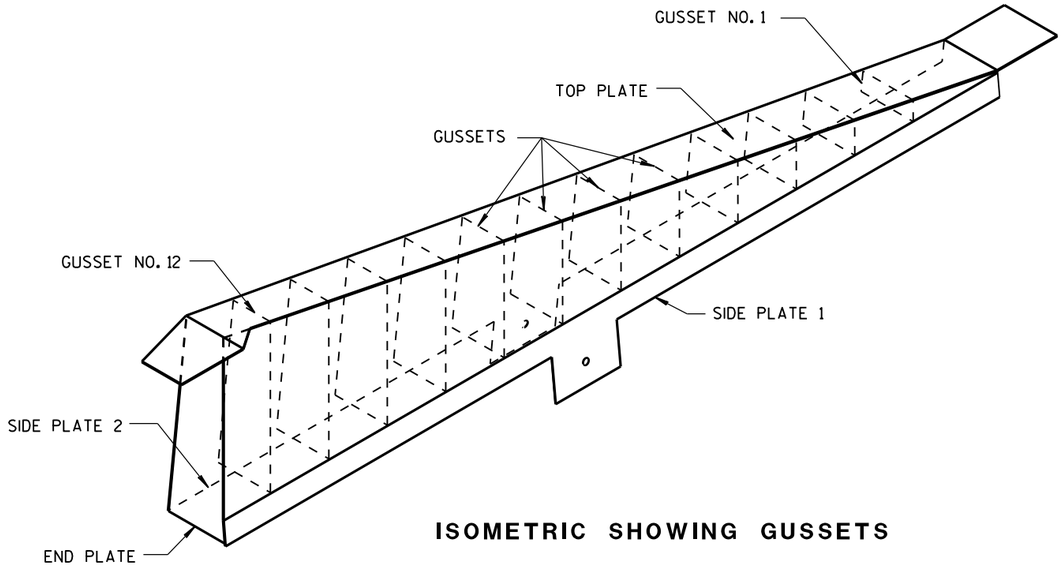
1. FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
2. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE, AND GUSSETS.

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

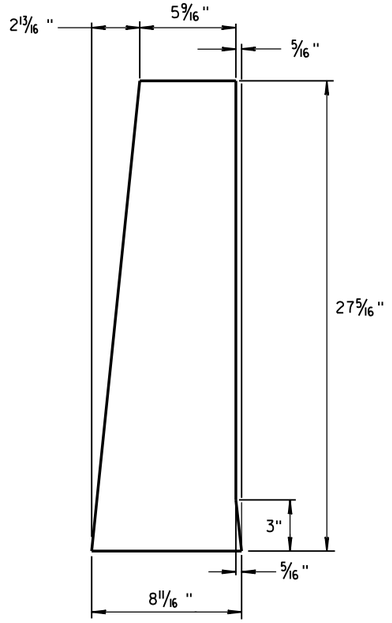
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 7-14f

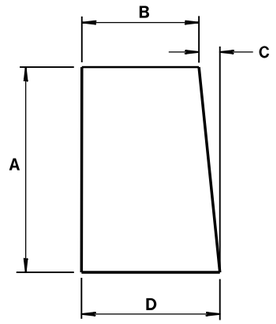


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



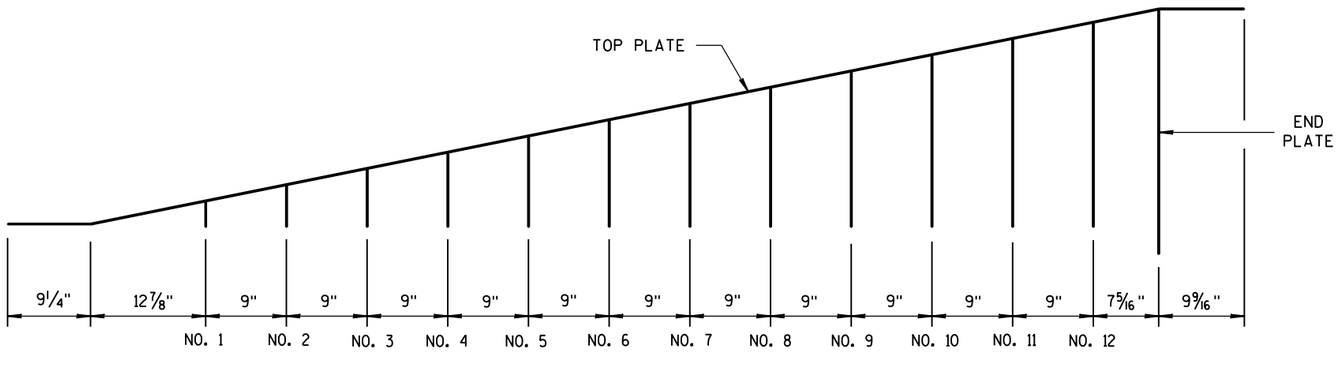
GUSSETS 1 - 12

ALL GUSSETS 1/8" STEEL PLATE

GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
1	2 7/8"	7 3/4"	1/4"	8
2	4 11/16 "	7 9/16 "	1/2"	8
3	6 1/2"	7 3/8"	11/16 "	8 1/16 "
4	8 5/16 "	7 3/16 "	7/8"	8 1/16 "
5	10 1/8"	7"	1 1/16 "	8 1/16 "
6	11 15/16 "	6 13/16 "	1 1/4"	8 1/16 "
7	13 3/4"	6 5/8"	1 7/16 "	8 1/16 "
8	15 9/16 "	6 7/16 "	1 9/16 "	8 1/16 "
9	17 3/8"	6 1/4"	1 13/16 "	8 1/16 "
10	19 3/16 "	6 1/16 "	1 15/16 "	8 1/16 "
11	21"	5 7/8"	2 3/16 "	8 1/16 "
12	22 13/16 "	5 11/16 "	2 5/16 "	8 1/16 "

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 STEEL AND GALVANIZED.

GUSSETS AND END PLATE ARE STITCH WELDED ON 3 SIDES. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE AND GUSSETS.



GUSSET LOCATION

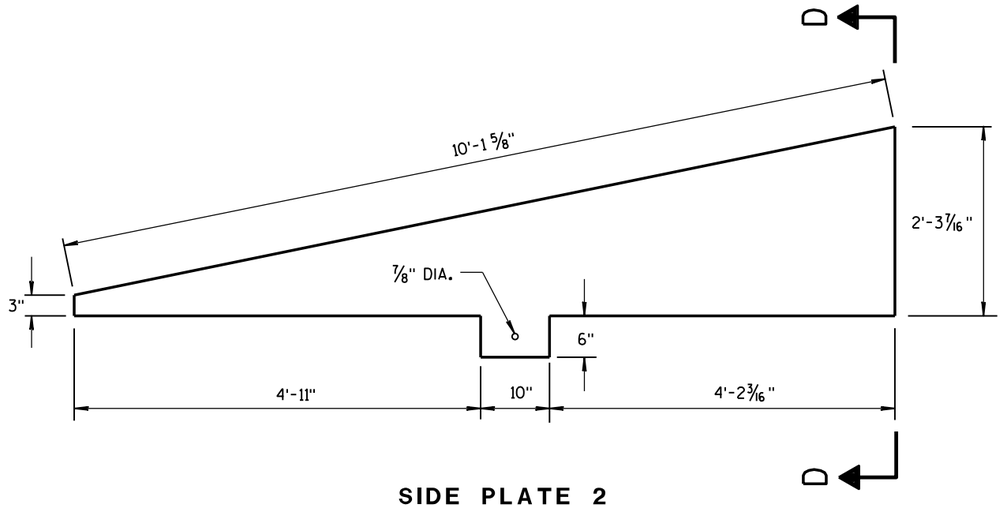
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

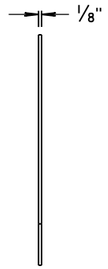
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

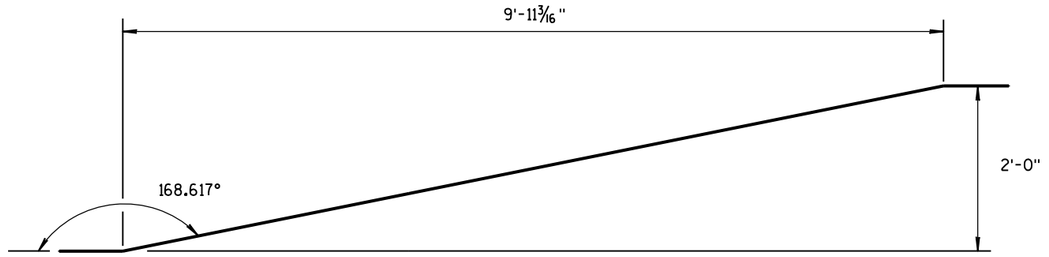
S.D.D. 14 B 7-14g



SIDE PLATE 2

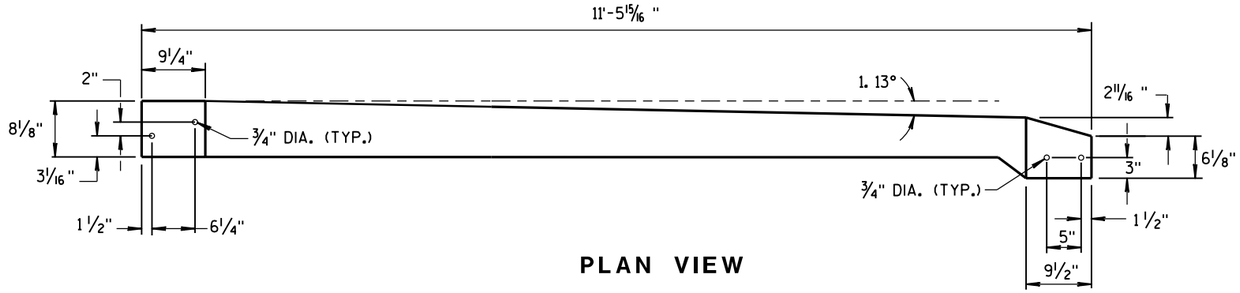


END VIEW



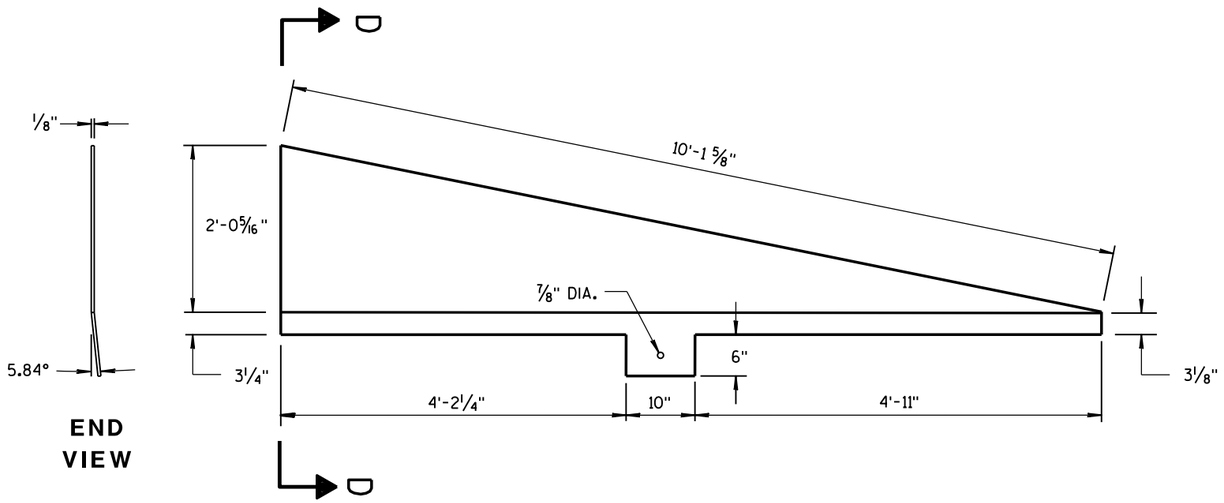
SIDE VIEW

TOP PLATE



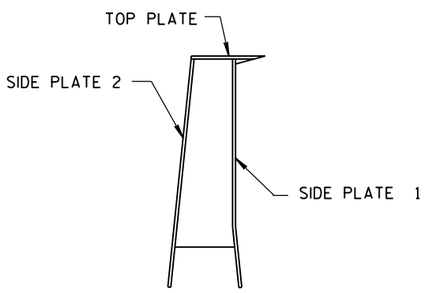
PLAN VIEW

TOP PLATE



END VIEW

SIDE PLATE 1



SECTION D-D

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

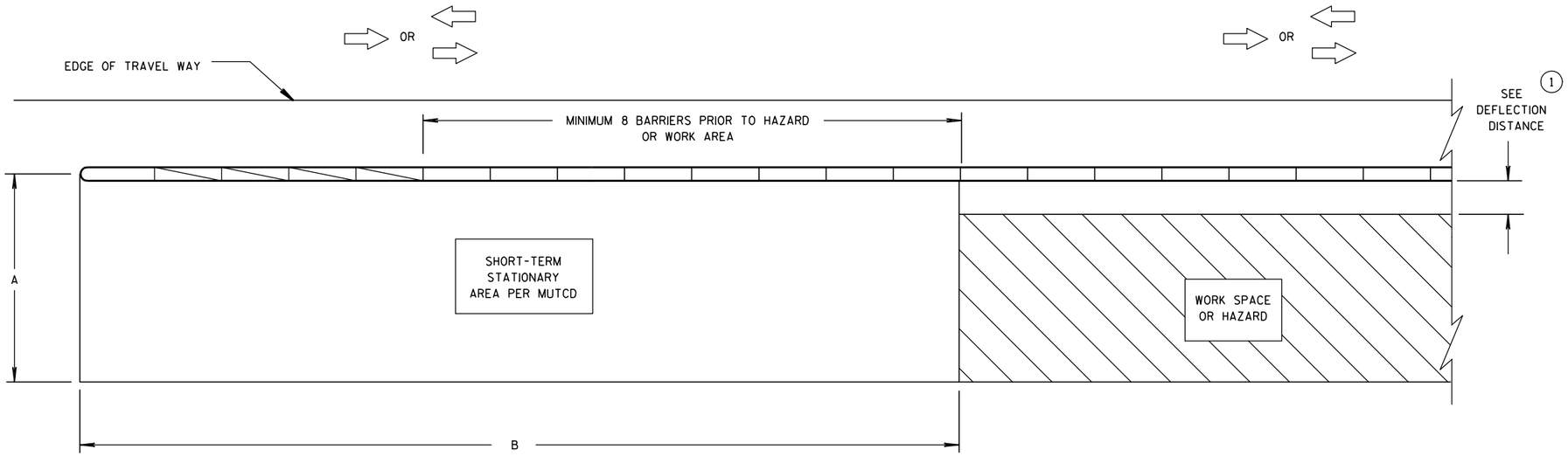
APPROVED
June 2014 — DATE
/S/ Jerry H. Zoda — ROADWAY STANDARD DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 14 B 7-14h

6

S.D.D. 14 B 7-14h



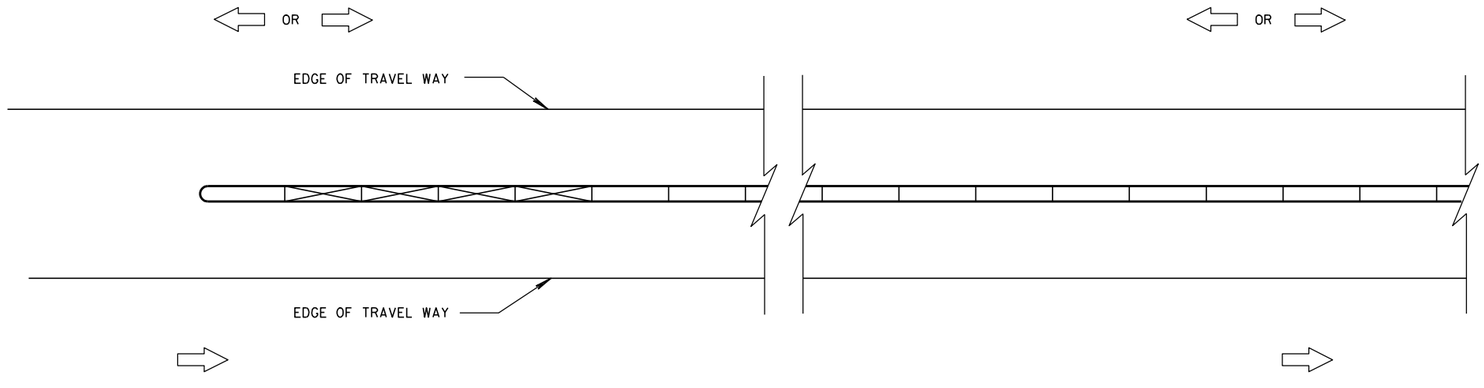
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

DIMENSION A TABLE (2)

FACILITY	POSTED SPEED MPH	DIMENSION A	
		MIN. FT	MAX. FT
FREEWAY/EXPRESSWAY	ALL	15	20
NON-FREEWAY/EXPRESSWAY	GREATER THAN OR EQUAL TO 45	10	15
NON-FREEWAY/EXPRESSWAY	LESS THAN 45	8	10
AADT LESS THAN 1,500	ALL	8	10

DIMENSION B TABLE (2)

POSTED SPEEDS MPH	DIMENSION B FT
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON BOTH SIDES OF BARRIER

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

DETAILS PROVIDE A GENERAL LAYOUT OF TEMPORARY CONCRETE BARRIER, CRASH CUSHIONS, SAND BARREL ARRAYS AND TIE DOWN TRANSITIONS. DETAILS PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

ADDITIONAL TEMPORARY BARRIER MAY BE REQUIRED TO PROTECT TRAVELING PUBLIC FROM HAZARDS, CONTRACTOR'S OPERATIONS OR TO CONTROL TRAFFIC.

TEMPORARY BARRIER MAY BE REQUIRED TO BE ANCHORED TO PAVEMENT OR BRIDGE DECK.

FOR DETAILS ON CRASH CUSHION OR SAND BARREL ARRAYS SEE OTHER SECTIONS OF THE PLAN AND MANUFACTURE'S DETAILS.

SLOPES LEADING TO TEMPORARY BARRIER, CRASH CUSHION OR SAND BARREL ARRAY ARE 10:1 OR LESS.

(1) FOR DEFLECTION INFORMATION SEE STANDARD DETAIL DRAWING 14B7.

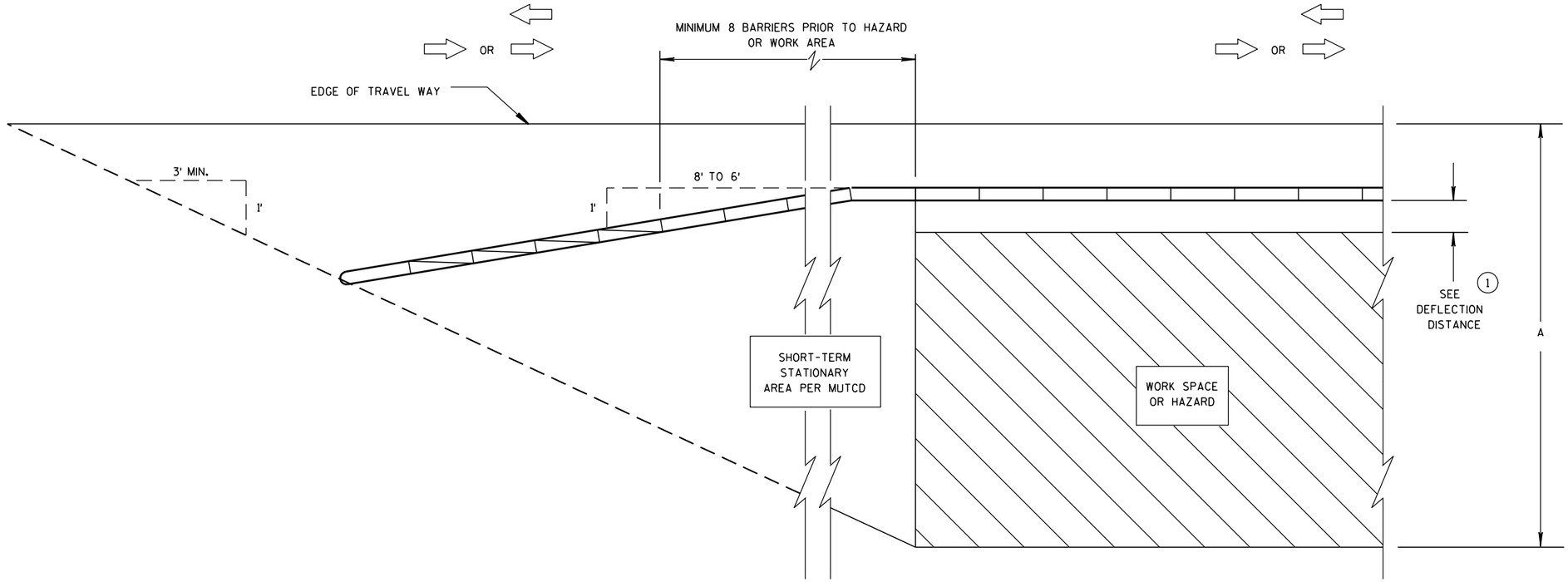
(2) VALUES PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

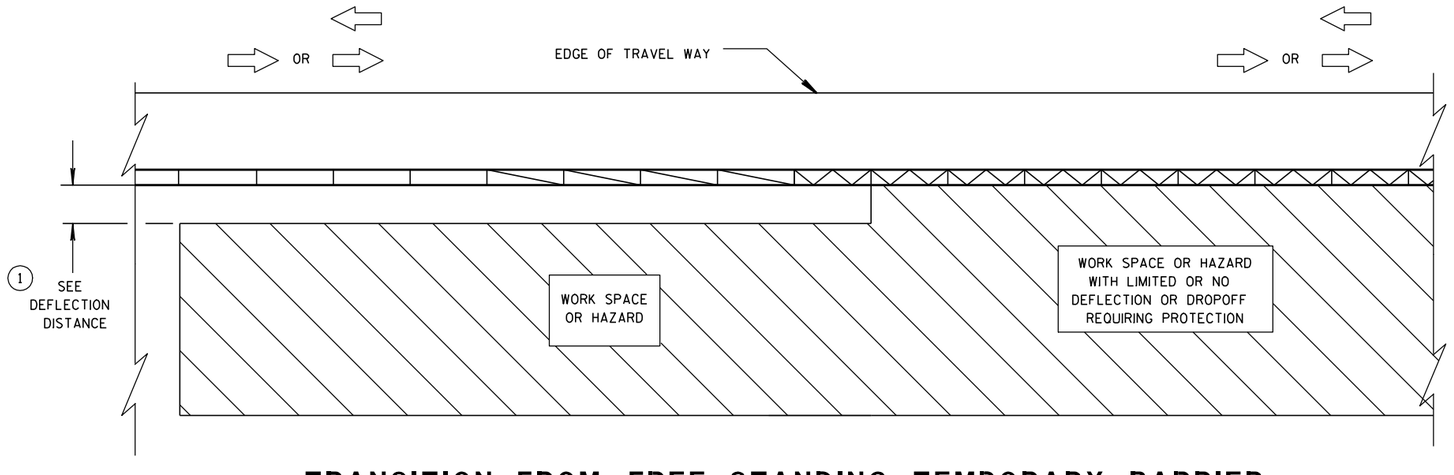
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 8-1a



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE - FLARED INSTALLATION



TRANSITION FROM FREE STANDING TEMPORARY BARRIER TO ANCHORED BARRIER

LEGEND

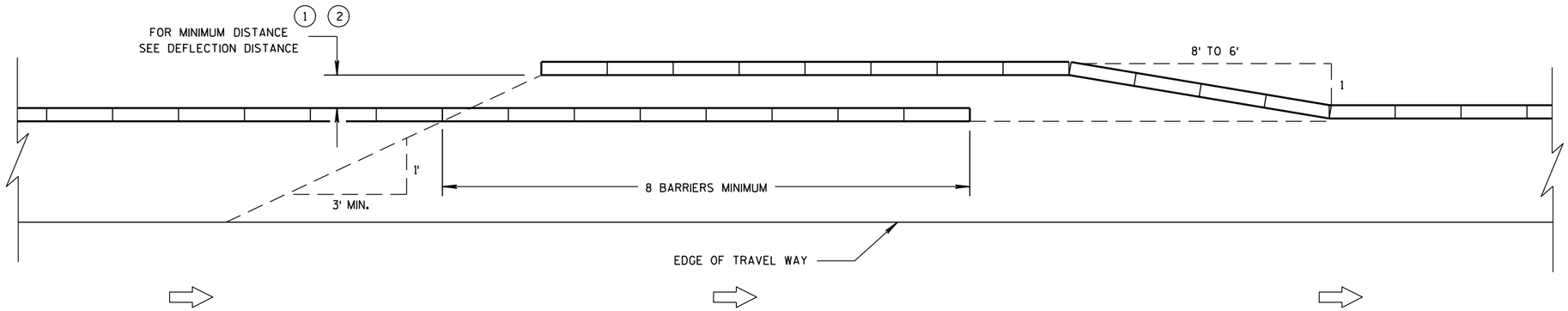
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

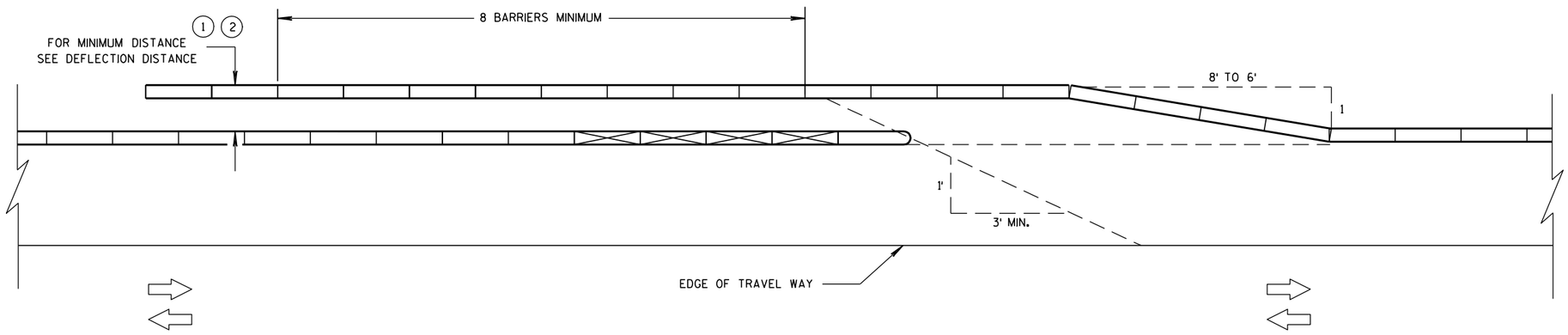
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

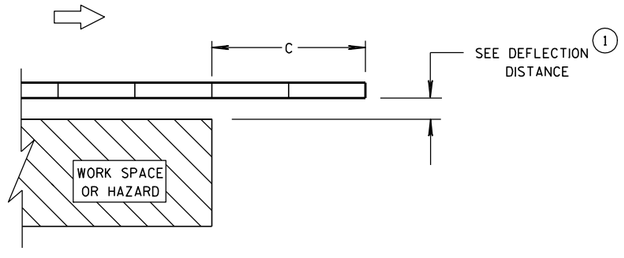
S.D.D. 14 B 8-1b



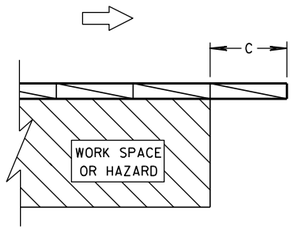
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

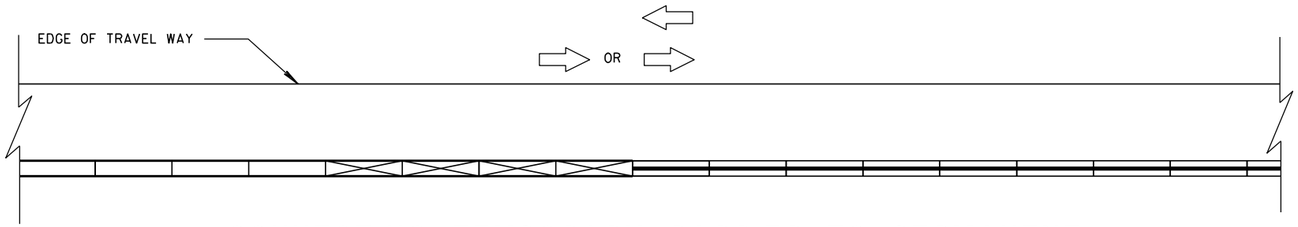
LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

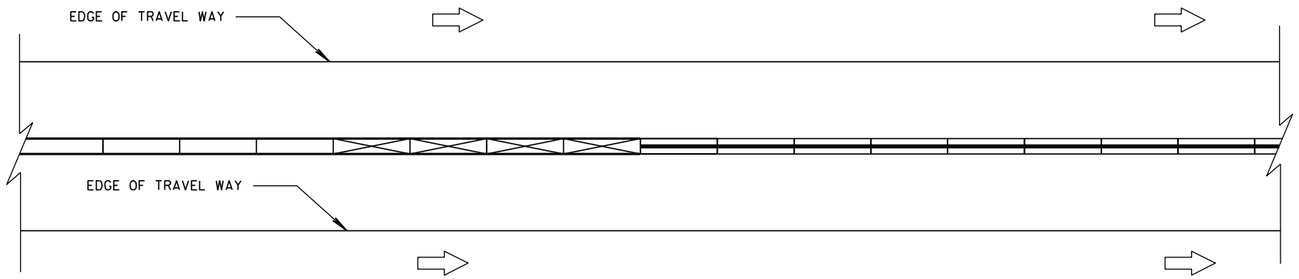
CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 8-1c



CONNECTING TEMPORARY BARRIER TO PERMANENT CONCRETE BARRIER-TRAFFIC ON ONE SIDE



CONNECTING TEMPORARY BARRIER TO PERMANENT CONCRETE BARRIER-TRAFFIC ON BOTH SIDES

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

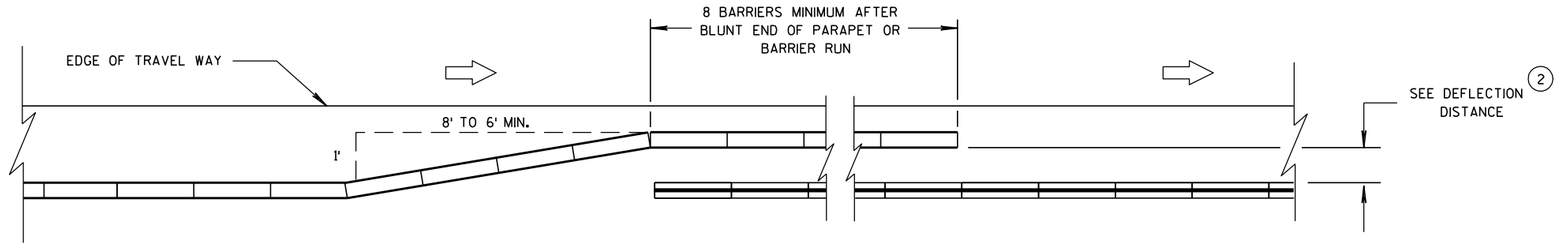
SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

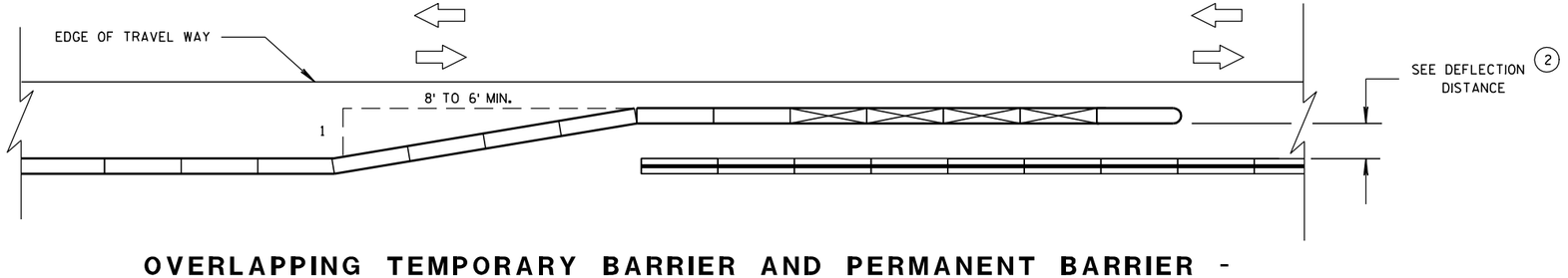
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER - ONE WAY TRAFFIC



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER - TWO WAY TRAFFIC

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

6
S.D.D. 14 B 8-1d

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

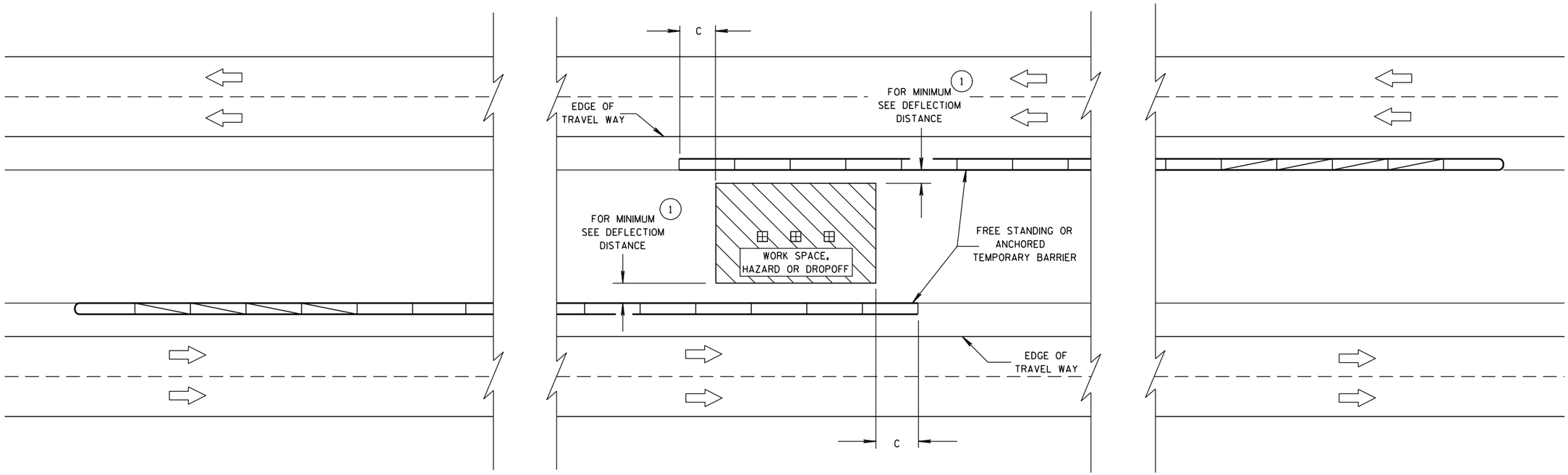
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE (2)

AVAILABLE DEFLECTION DISTANCE	MINIMUM LENGTH OF BARRIER BEYOND HAZARD FT
GREATER THAN 8'	12.5
LESS THAN OR EQUAL TO 8' BUT GREATER THAN 4'	50
LESS THAN OR EQUAL TO 4'	100



CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

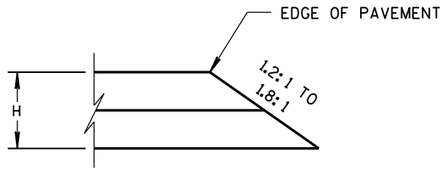
8/31/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINNER

74

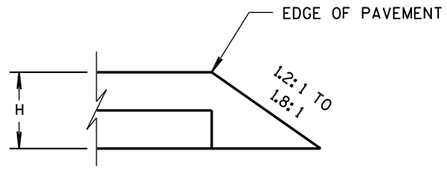
FHWA

6
S.D.D. 14 B 8-1e



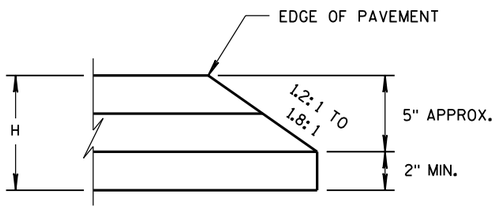
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



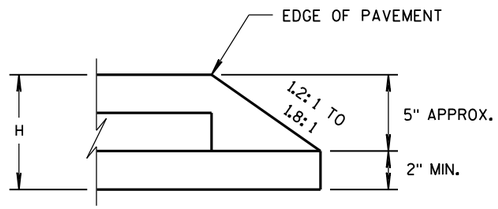
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

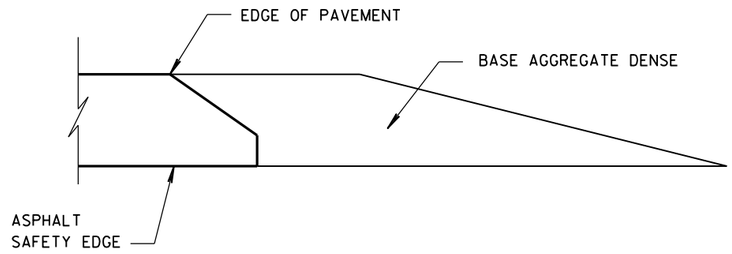
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

6

S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

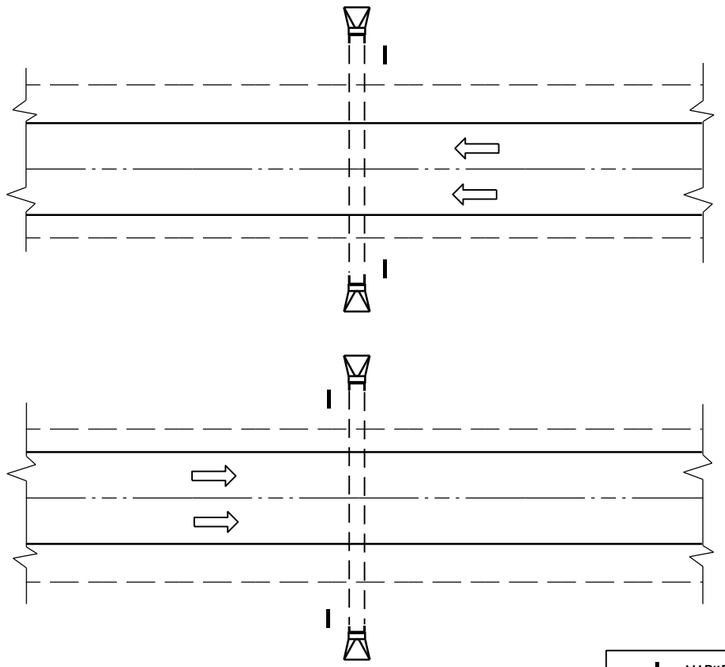
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/2012
DATE

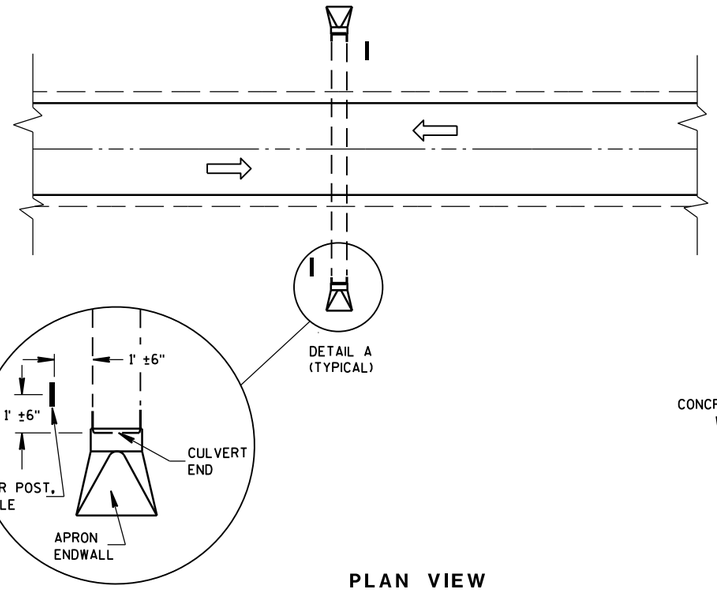
/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

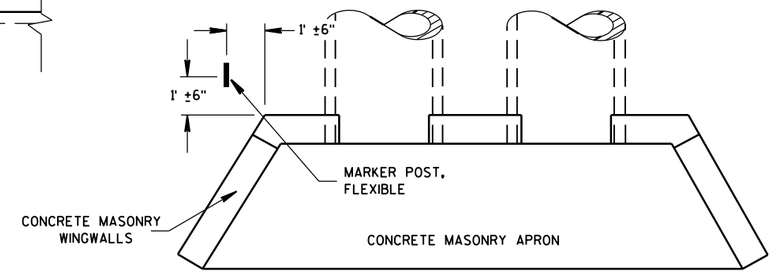
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

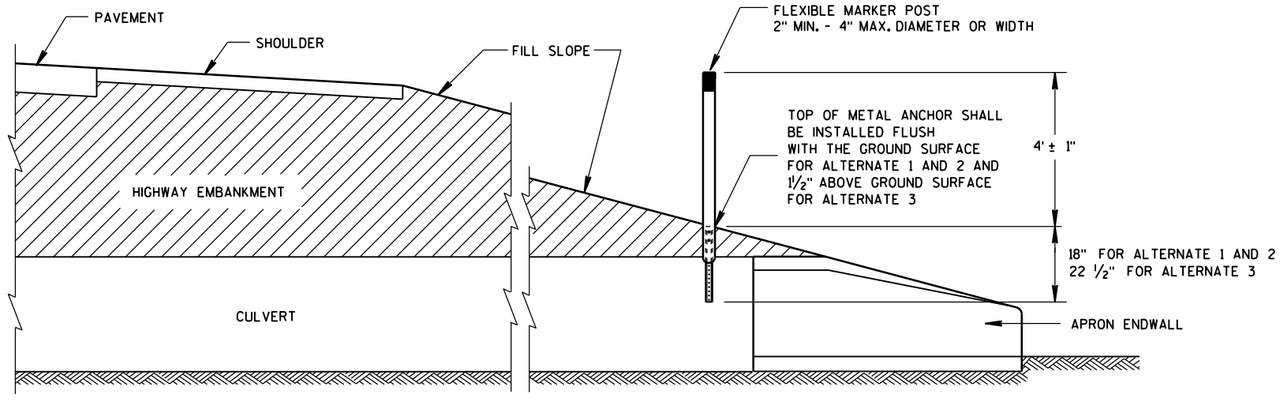
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

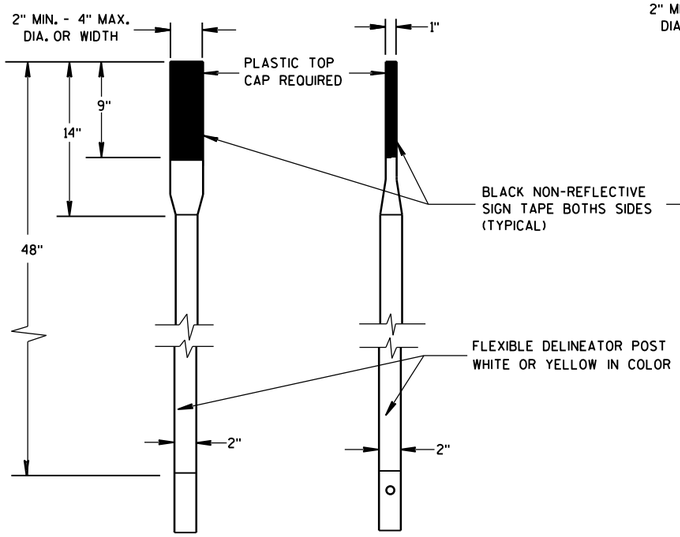
FLEXIBLE MARKER POST

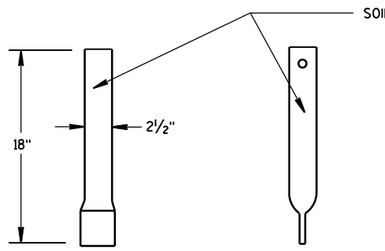
FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

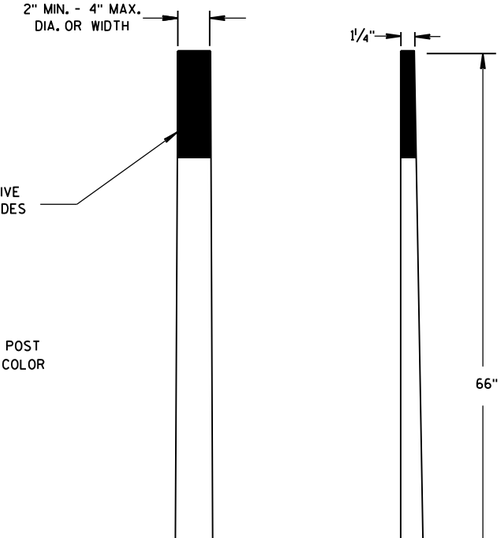
S.D.D. 15 A 3-2a





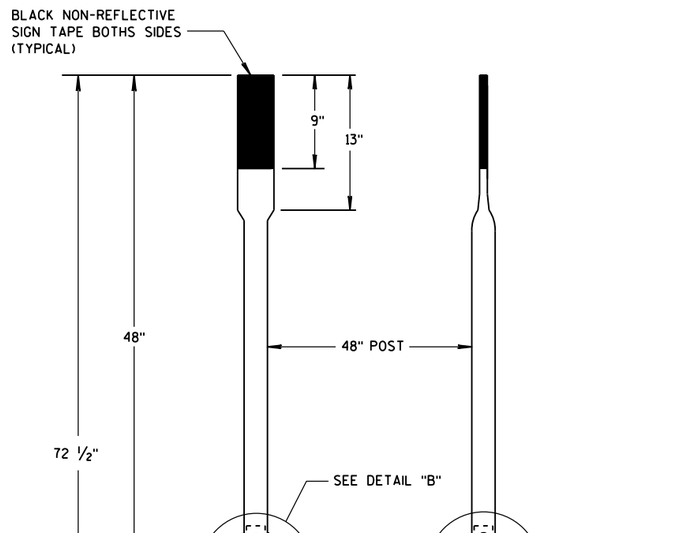
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

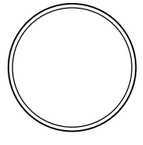
ALTERNATE 2



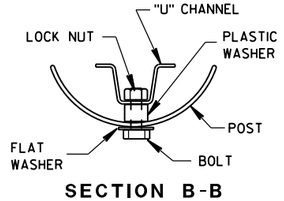
FRONT VIEW SIDE VIEW

ALTERNATE 3

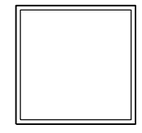
FLEXIBLE MARKER POSTS



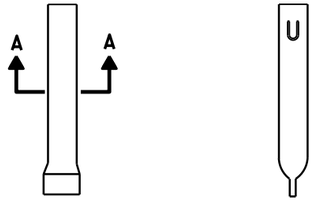
SECTION A-A



SECTION B-B

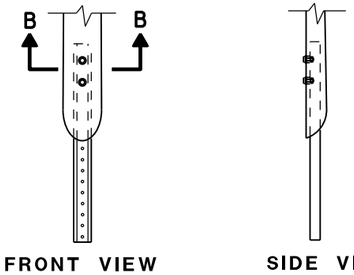


SECTION C-C



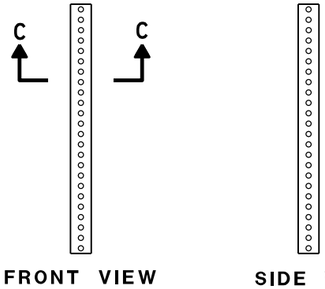
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

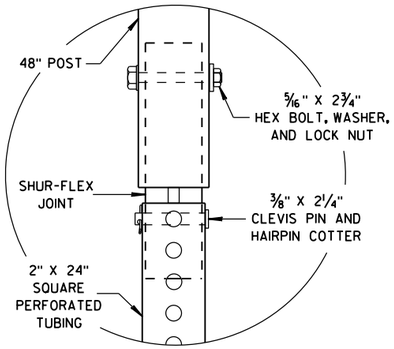
ALTERNATE 2



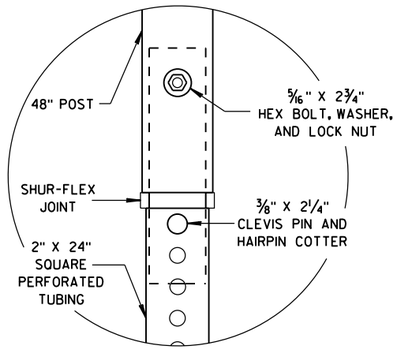
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
77
IGN
FHWA

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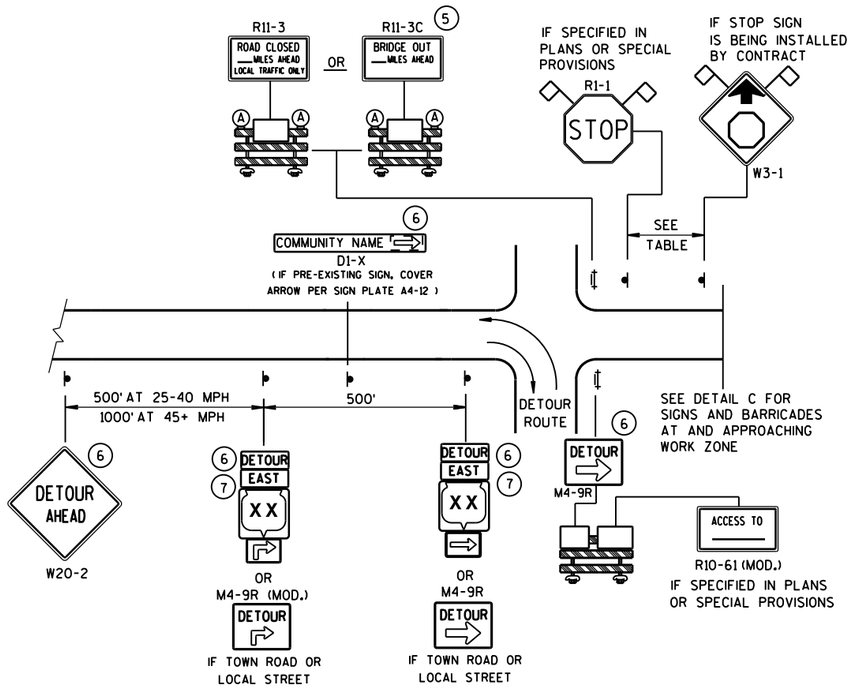
S.D.D. 15 A 3-2b

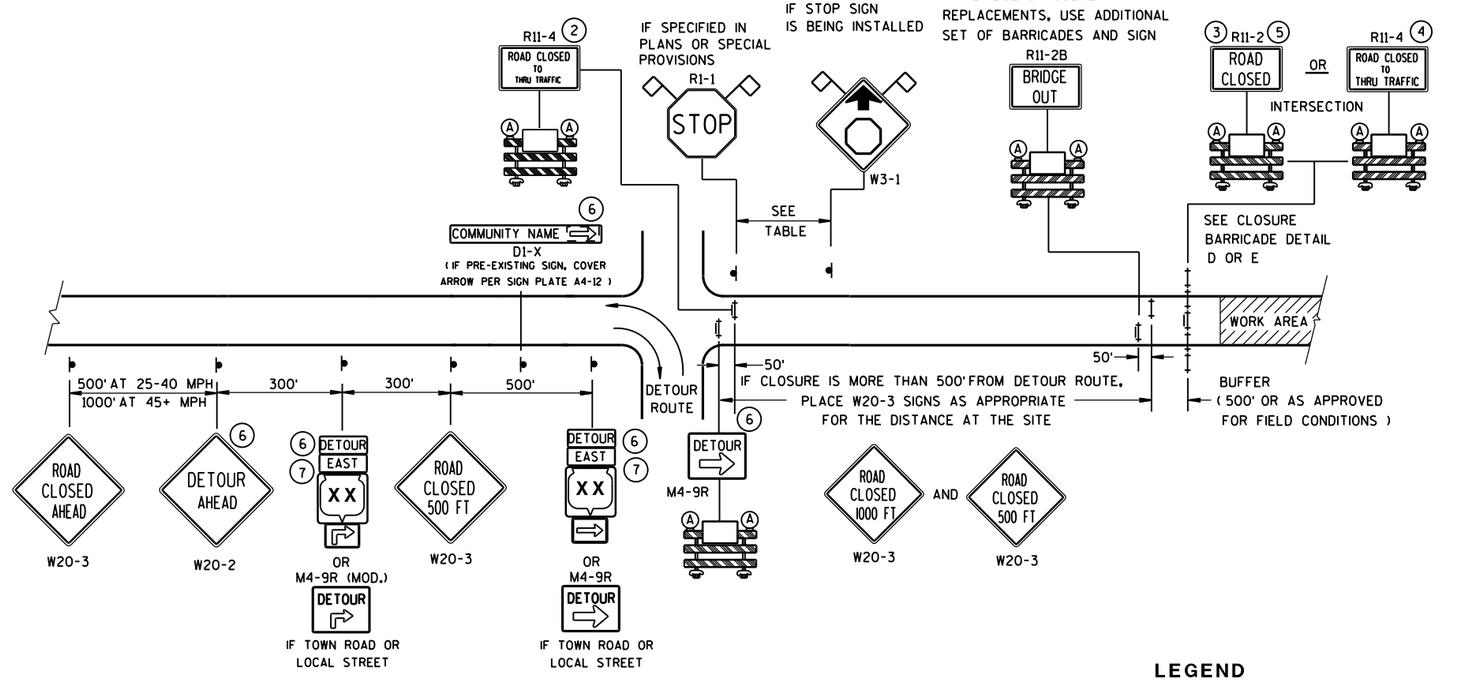
6

S.D.D. 15 A 3-2b



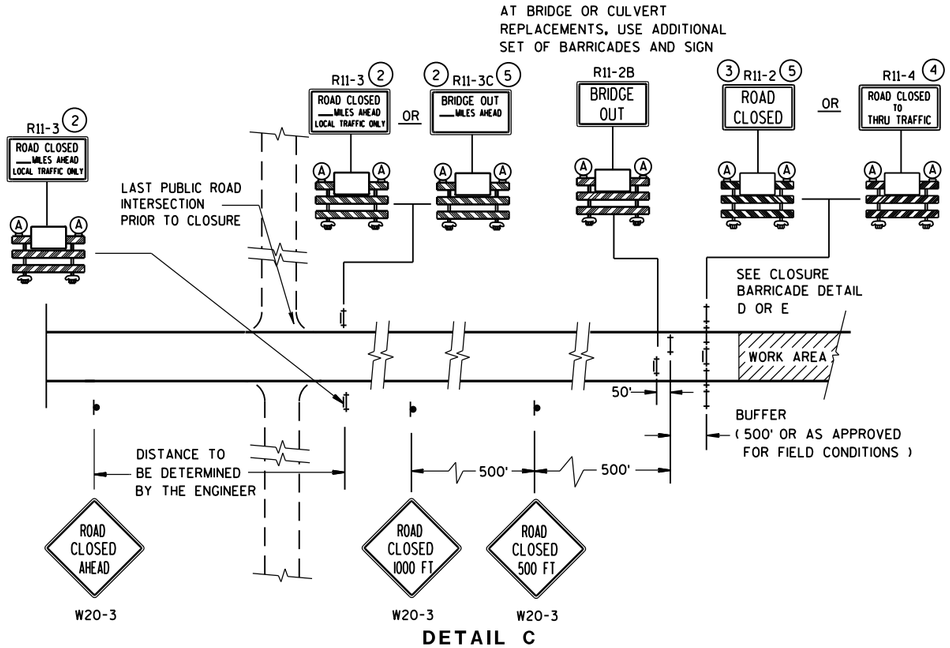
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

SEE SDD 15C2-SHEET "**b**" FOR GENERAL NOTES AND FOOTNOTES ① THROUGH ⑦

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

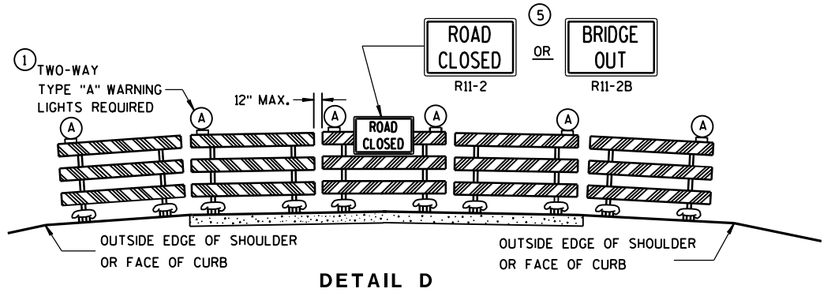
8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

6

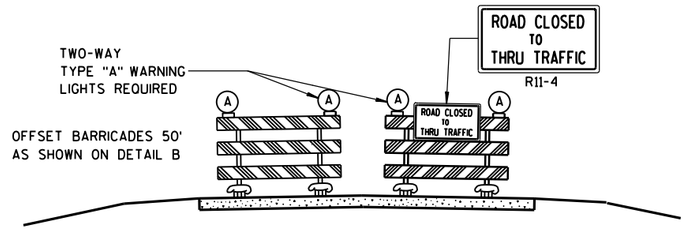
S.D.D. 15 C 2-5a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-SHEET "**a**" FOR LEGEND

GENERAL NOTES

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

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.

THE SPACING BETWEEN TRAFFIC CONTROL 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.

BARRICADES 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.

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, M4-9, R11-4 AND R10-61 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

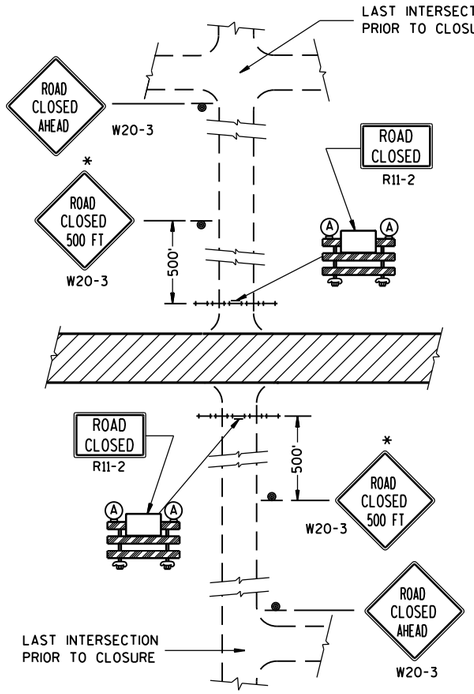
8/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

FHWA

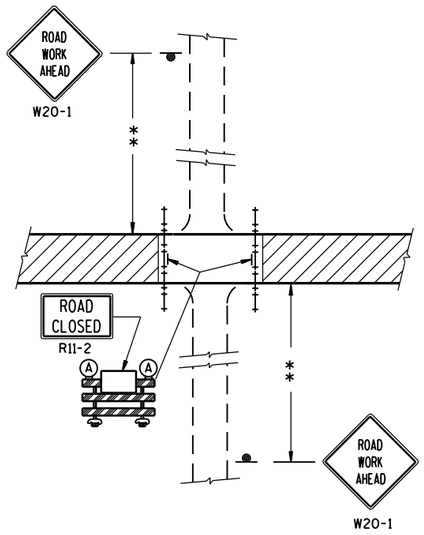
6

S.D.D. 15 C 2-5b



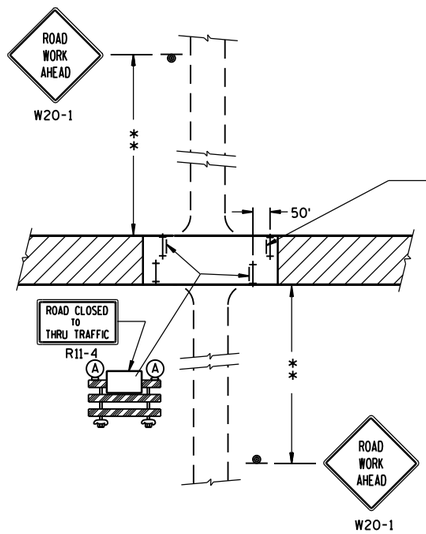
DETAIL 1

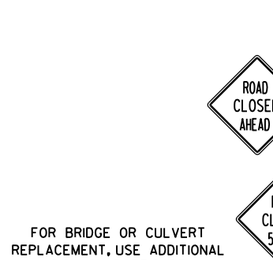
(NO ACCESS TO PROJECT)



DETAIL 2

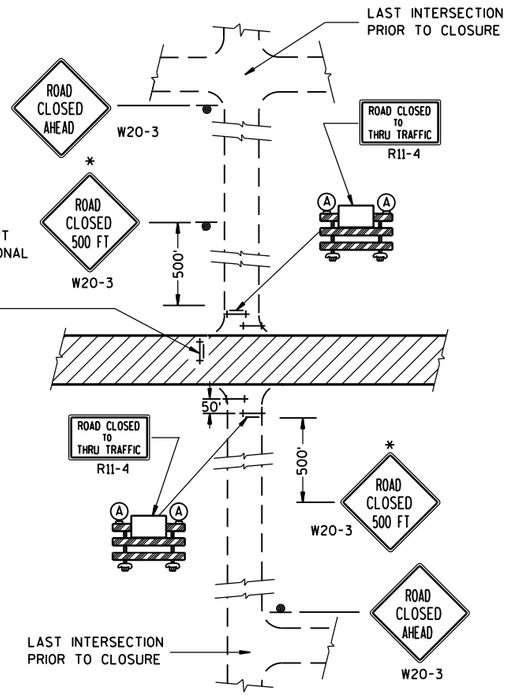
(PUBLIC CROSS-TRAFFIC MAINTAINED. NO ACCESS TO PROJECT).





DETAIL 3

(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS).



DETAIL 4

(CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

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.

THE SPACING BETWEEN TRAFFIC CONTROL 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.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

BARRICADES 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.

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3 AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

*OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FT. OR LESS FROM THE WORK ZONE.

**500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

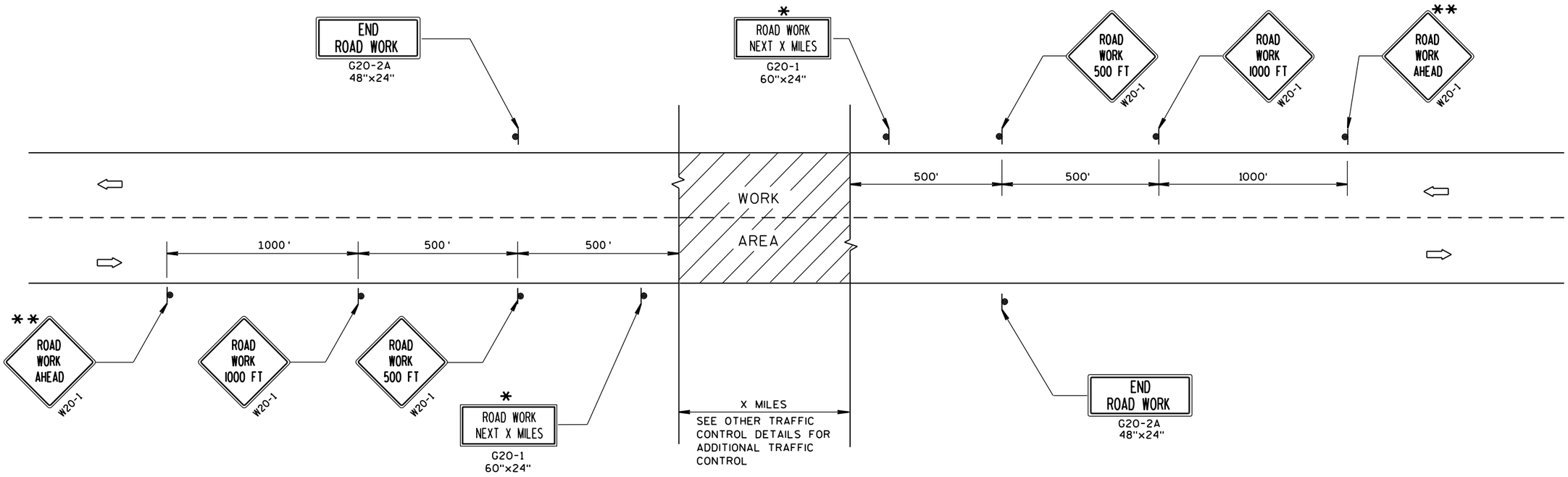
APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 C 3-2

6

S.D.D. 15 C 3-2



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

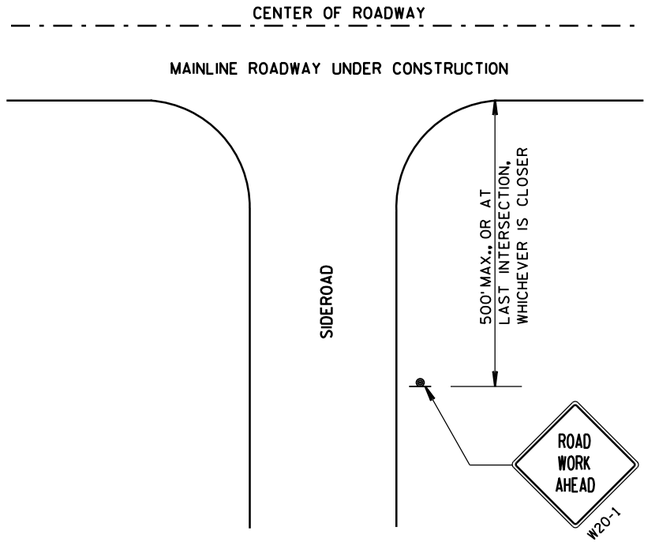
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

** PLACE ADDITIONAL W20-1 "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 — DATE

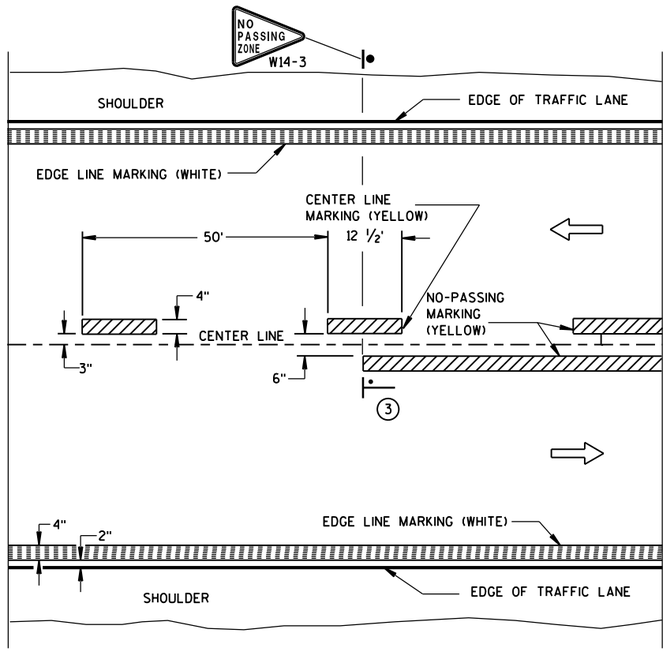
/S/ Travis Feltes — STATE TRAFFIC ENGINEER

SIGN

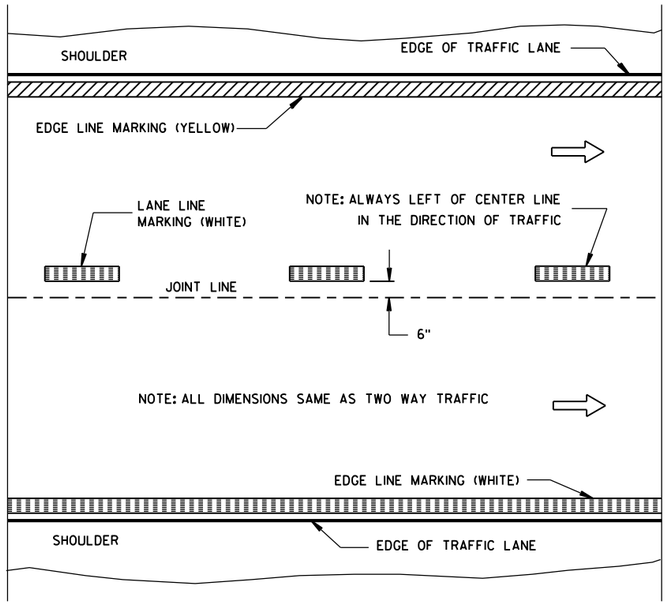
FHWA

6

S.D.D. 15 C 4-2

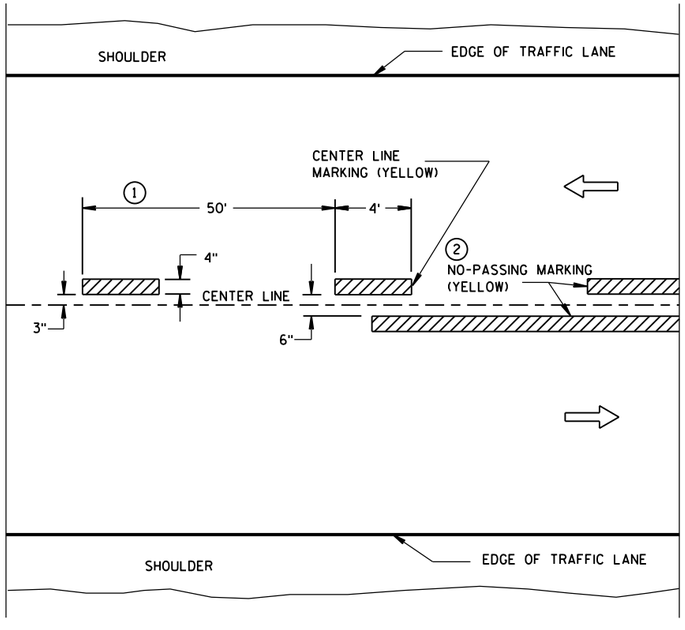


TWO WAY TRAFFIC

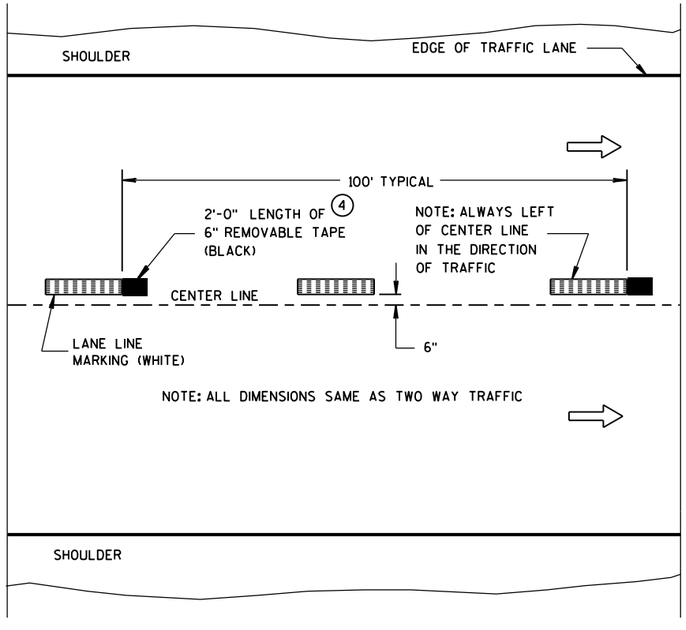


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

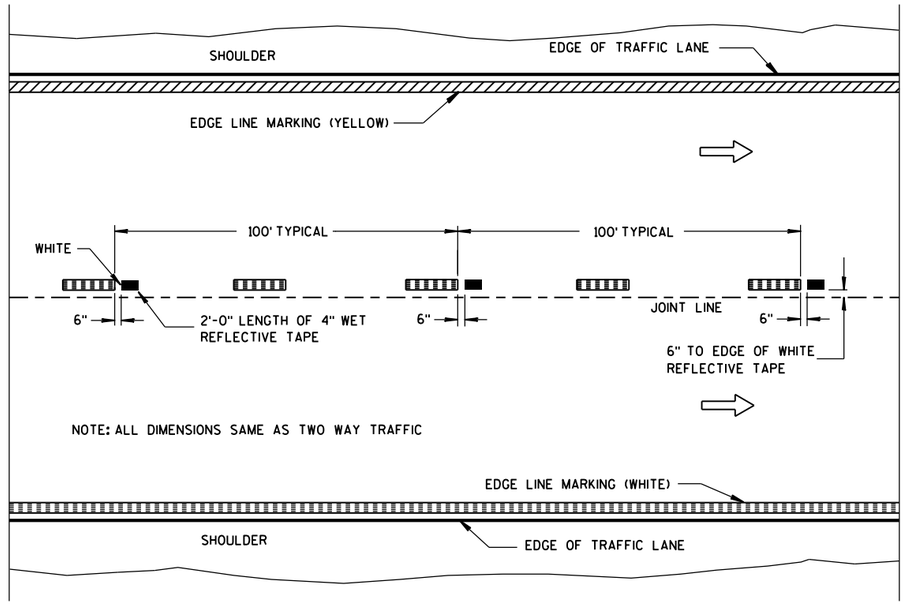
GENERAL NOTES

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

1. HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
2. NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
3. NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
4. CONCRETE ONLY.

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-13-2013
DATE

/S/ Travis Feltes
STATE TRAFFIC E

FHWA

6

S.D.D. 15 C 8-16a

6

S.D.D. 15 C 8-16a

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA

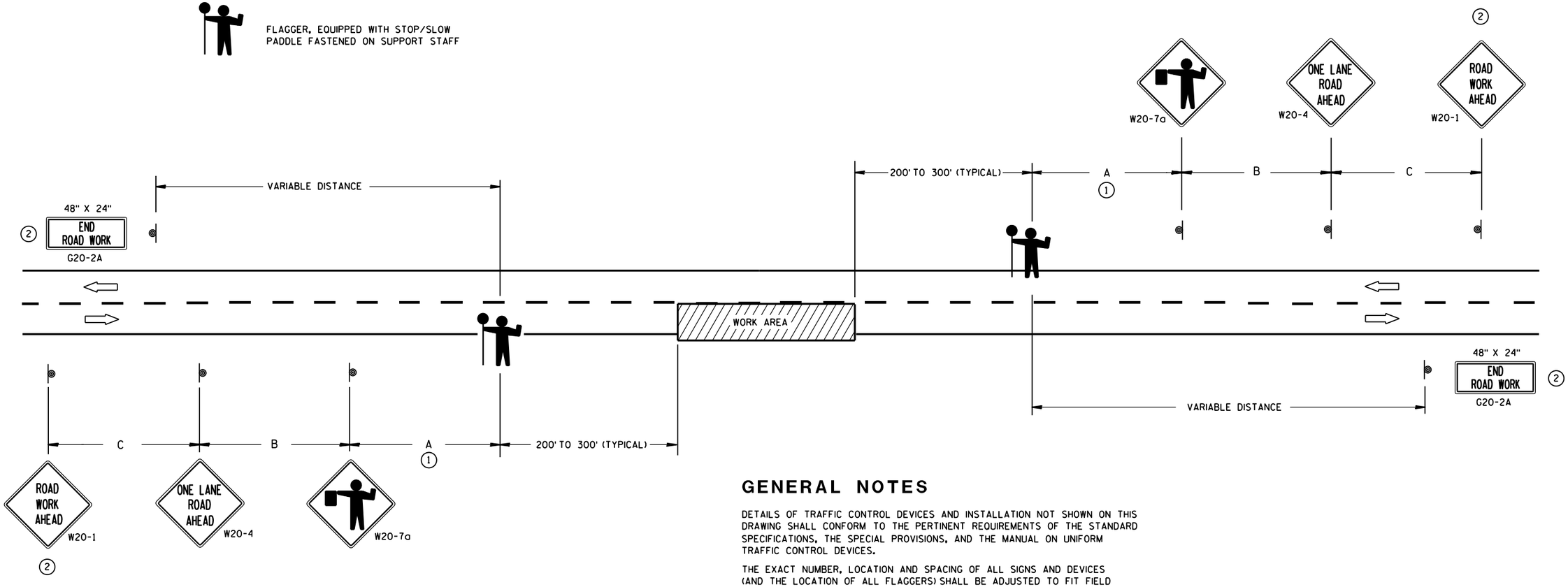
FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN SPACING TABLE

SPEED LIMIT	SIGN SPACING A,B,C
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'

W3-4

USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



(1) FOR A MOVING WORK OPERATION,
SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR 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.

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.

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

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
DESIGN
FHWA

6

S.D.D. 15 C 12-4

6

S.D.D. 15 C 12-4

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.

ALL SIGNS ARE 48" X 48" 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.

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.

W20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.

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

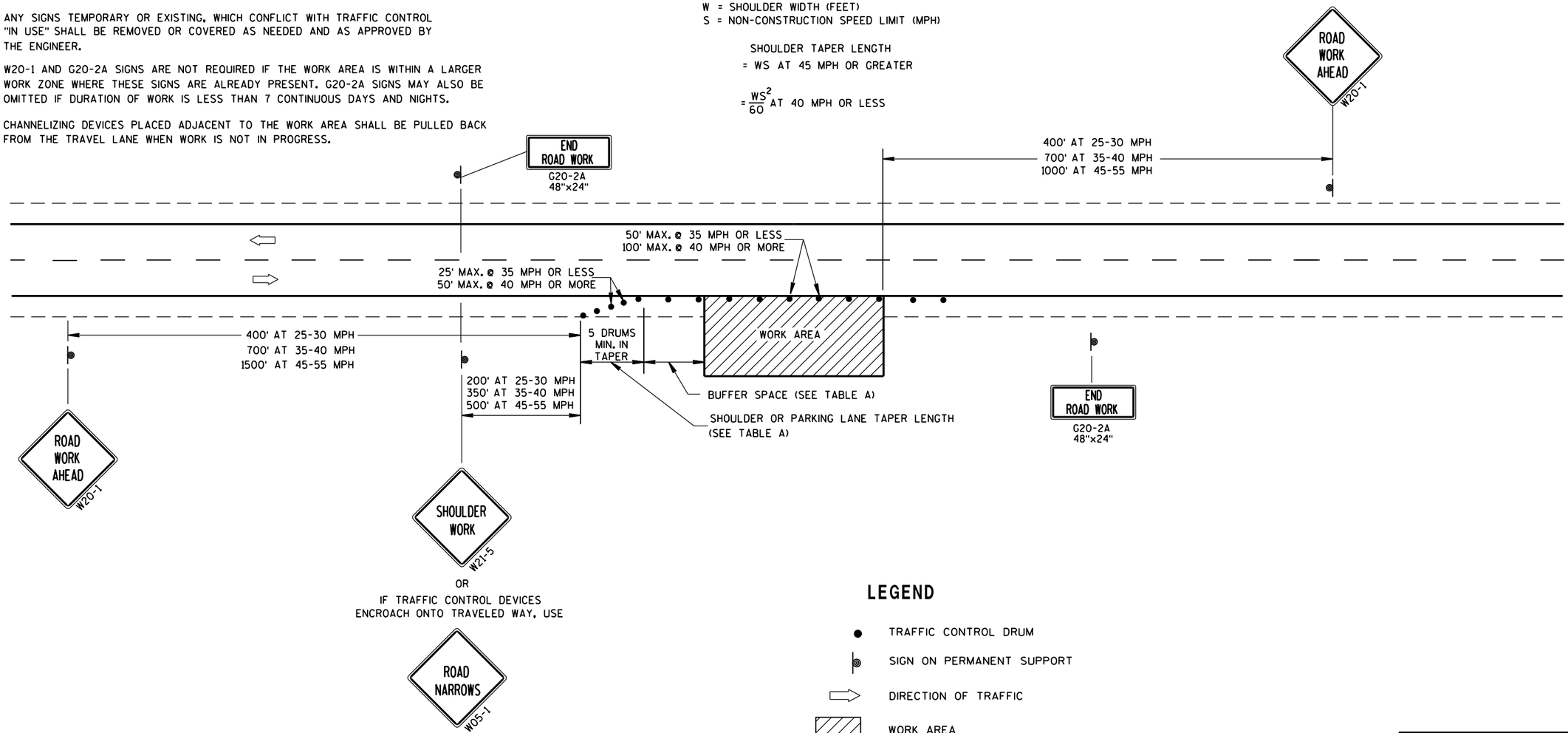
TABLE A

S \ W	SHOULDER TAPER LENGTH (FEET) 4	6	8	10	BUFFER SPACE (FEET)
30	20	30	40	50	85
35	30	45	55	70	120
40	40	55	75	90	170
45	60	90	120	150	220
50	70	100	135	170	280
55	75	110	150	185	335

W = SHOULDER WIDTH (FEET)
S = NON-CONSTRUCTION SPEED LIMIT (MPH)

SHOULDER TAPER LENGTH
= WS AT 45 MPH OR GREATER

$= \frac{WS^2}{60}$ AT 40 MPH OR LESS



LEGEND

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

TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

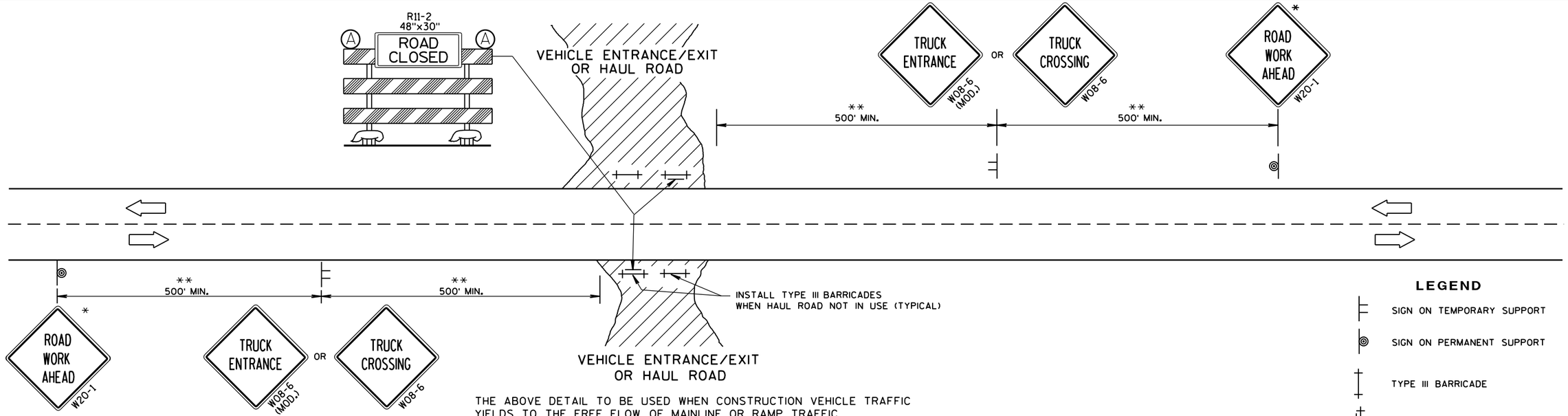
8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

6

S.D.D. 15 D 28-2



THE ABOVE DETAIL TO BE USED WHEN CONSTRUCTION VEHICLE TRAFFIC YIELDS TO THE FREE FLOW OF MAINLINE OR RAMP TRAFFIC

LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC

GENERAL NOTES

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

WHEN ACTIVITY REFLECTED BY THE SIGN IS NOT CURRENTLY TAKING PLACE, THE HIGHWAY SHALL BE RESTORED TO NORMAL CONDITION AND THE SIGNS SHALL BE REMOVED, COVERED OR TURNED AWAY FROM TRAFFIC.

WHEN A SIDE ROAD OR RAMP INTERSECTS WITHIN THE ADVANCE SIGNING AREA, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

* THESE SIGNS ARE TO BE USED ONLY WHEN VEHICLE ENTRANCE/EXIT CONDITIONS ARE SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA OR SIGNING OR AS DIRECTED BY THE ENGINEER.

** 500 FEET SHOWN IS FOR ROADWAYS WITH A NON-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350 FEET. FOR 25-30 MPH, USE 200 FEET. USE 1000 FEET/1500 FEET FOR EXPRESSWAY/FREEWAY.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

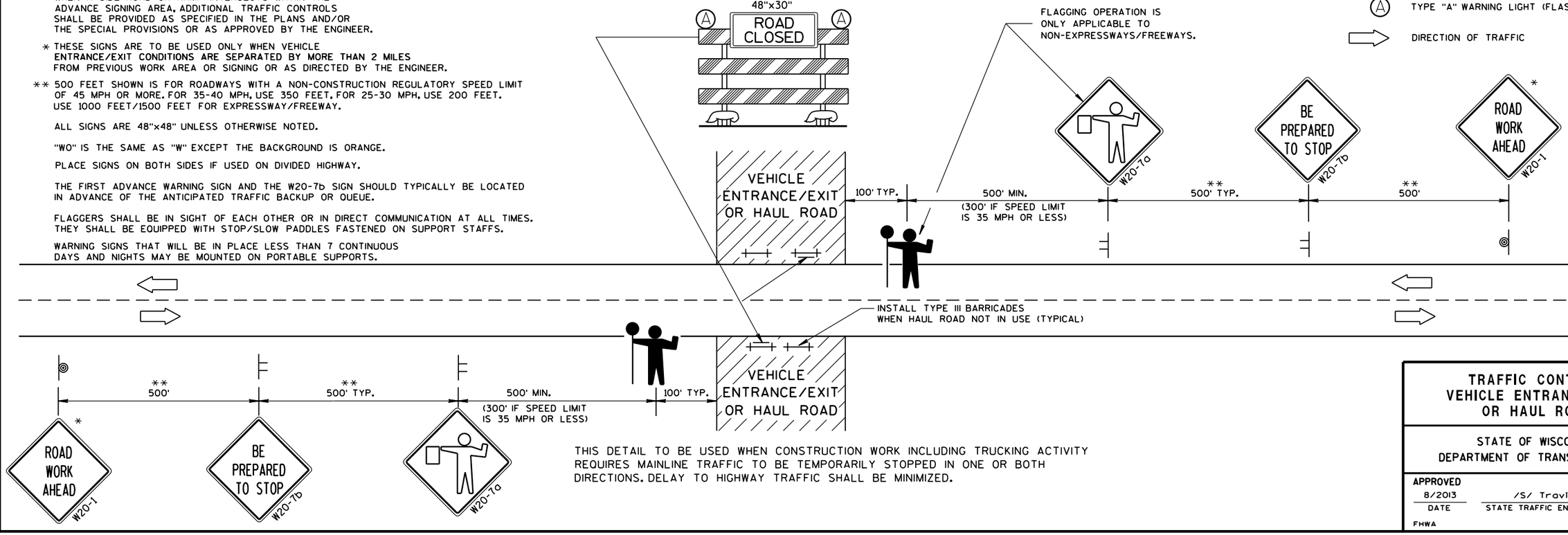
"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

PLACE SIGNS ON BOTH SIDES IF USED ON DIVIDED HIGHWAY.

THE FIRST ADVANCE WARNING SIGN AND THE W20-7b SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS.

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



THIS DETAIL TO BE USED WHEN CONSTRUCTION WORK INCLUDING TRUCKING ACTIVITY REQUIRES MAINLINE TRAFFIC TO BE TEMPORARILY STOPPED IN ONE OR BOTH DIRECTIONS. DELAY TO HIGHWAY TRAFFIC SHALL BE MINIMIZED.

TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013	/S/ Travis Feltes	
DATE	STATE TRAFFIC ENGINEER	IGN

FHWA

6

S.D.D. 15 D 29-3

LEGEND

- SIGN ON PERMANENT SUPPORT
- REMOVING PAVEMENT MARKING
- TYPE III BARRICADE WITH ATTACHED SIGN
- CONCRETE BARRIER TEMPORARY PRECAST
- FLAGS, 16" x 16" MIN., (ORANGE)
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- ASPHALTIC PAVEMENT WIDENING
- DIRECTION OF TRAFFIC
- 4" X 6" WOOD POST
- TEMPORARY SIGNAL WITH BACKPLATE AND 12-INCH LENSES ON BREAKAWAY POLE

W057-52
36"x24"

INSTALL ON EACH APPROACH AT THE CLOSEST INTERSECTION WITH A STATE OR COUNTY TRUNK HIGHWAY, OR AS DIRECTED BY THE ENGINEER. WIDTH ON SIGN TO BE APPROX. 1-FOOT LESS THAN AVAILABLE WIDTH. (OMIT IF AVAILABLE WIDTH IS MORE THAN 16 FEET.)

GENERAL NOTES

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

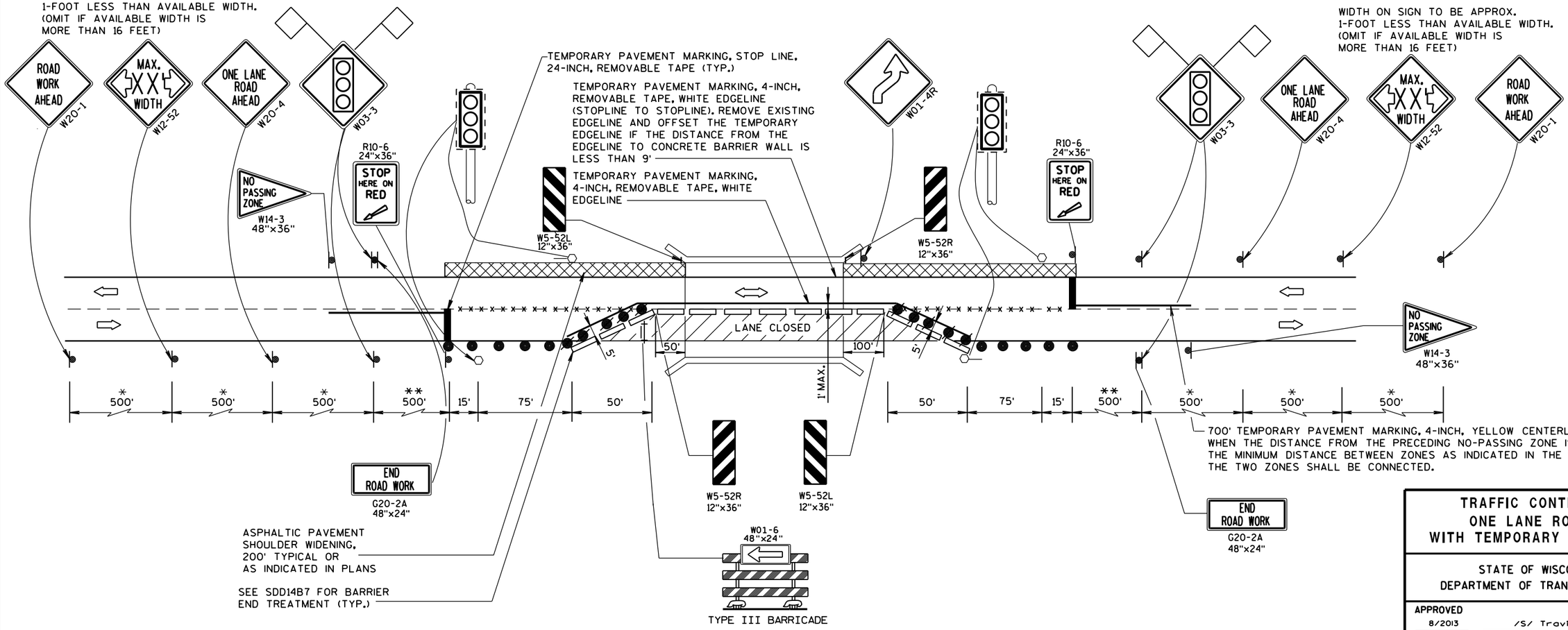
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

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.

PLACE TEMPORARY PAVEMENT MARKING EDGELINE AND CENTERLINE, AND REMOVE EXISTING PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS OR AS NOTED ON DETAIL.

* 500-FOOT SPACING SHOWN IS FOR ROADWAYS WITH A PRE-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350-FOOT TYPICAL SPACING. FOR 25-30 MPH, USE 200-FOOT TYPICAL SPACING.

** USE 300' SPACING IF PRE-CONSTRUCTION REGULATORY SPEED LIMIT IS 35 MPH OR LESS.



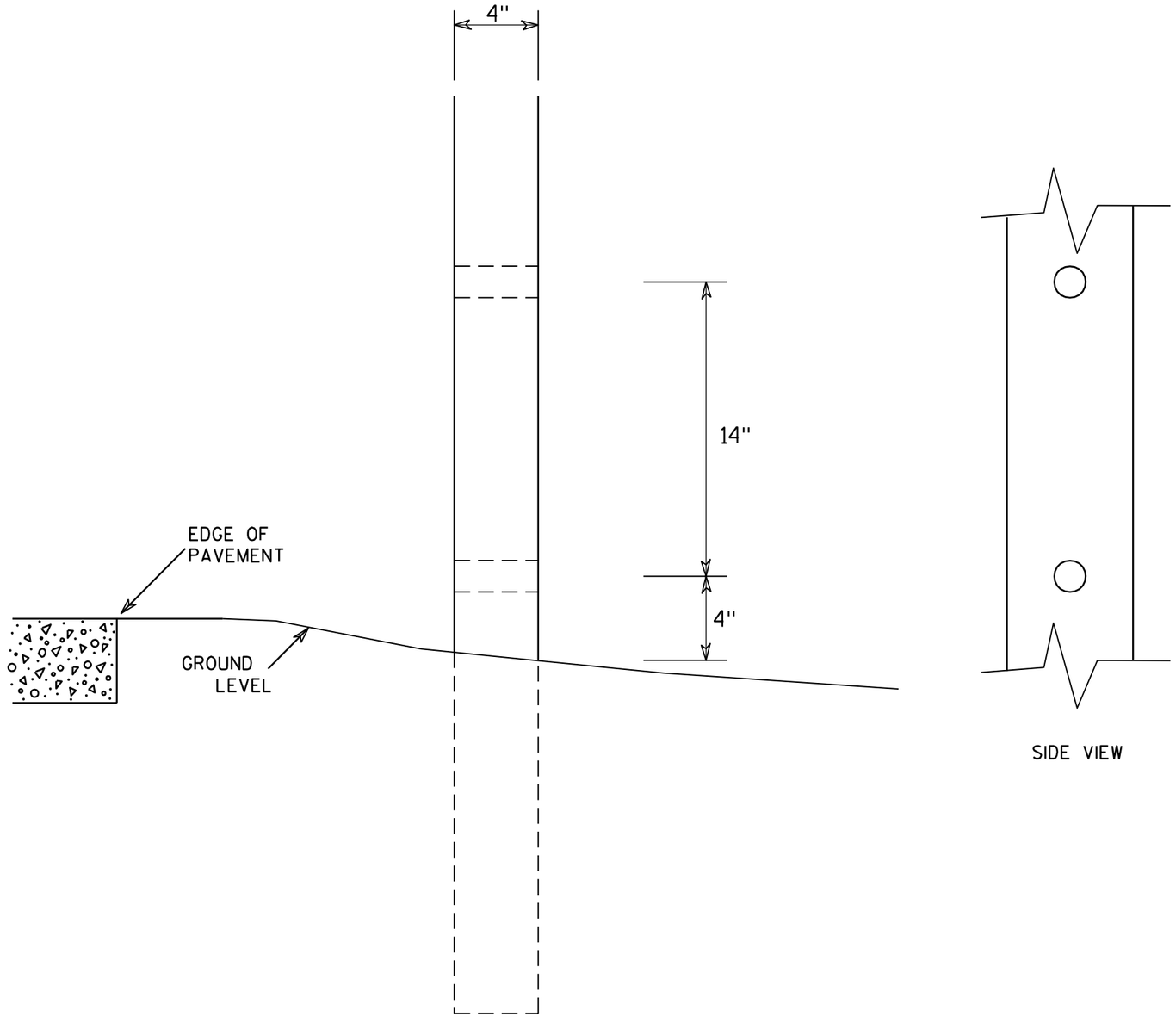
TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 DATE
/S/ Travis Feltes STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 D 33-3



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

7

4 X 6 WOOD POST MODIFICATIONS

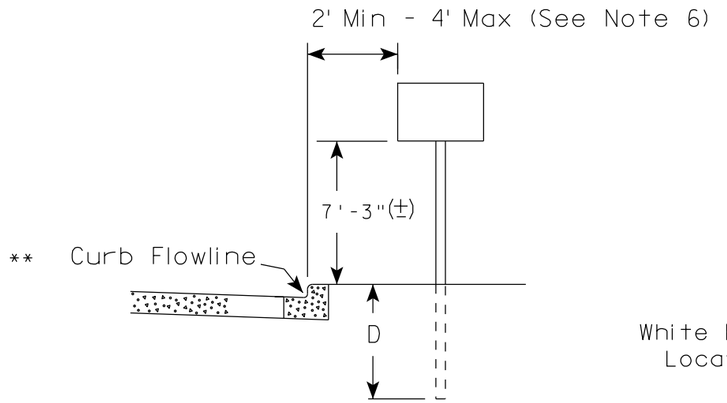
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

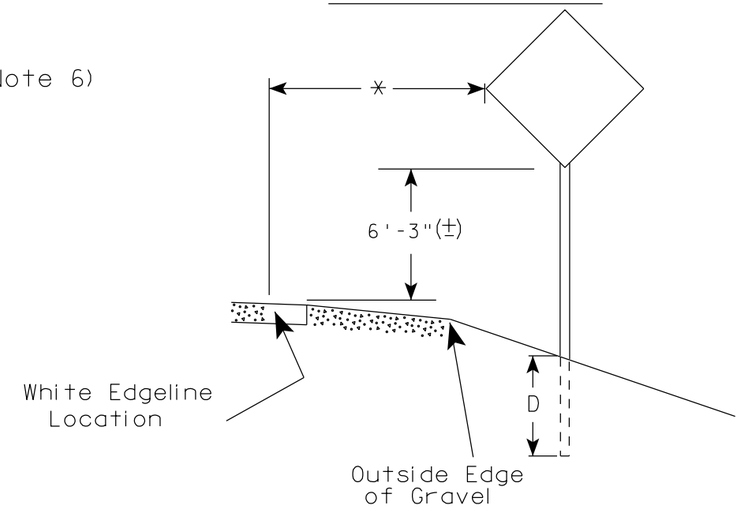
DATE 3/27/97 PLATE NO. A4-11.2

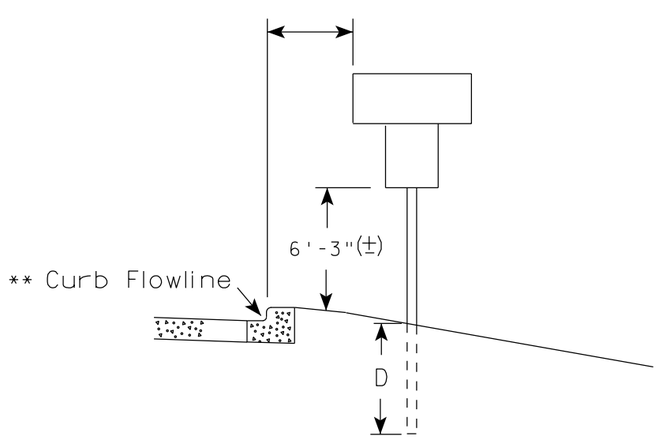
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 87	E

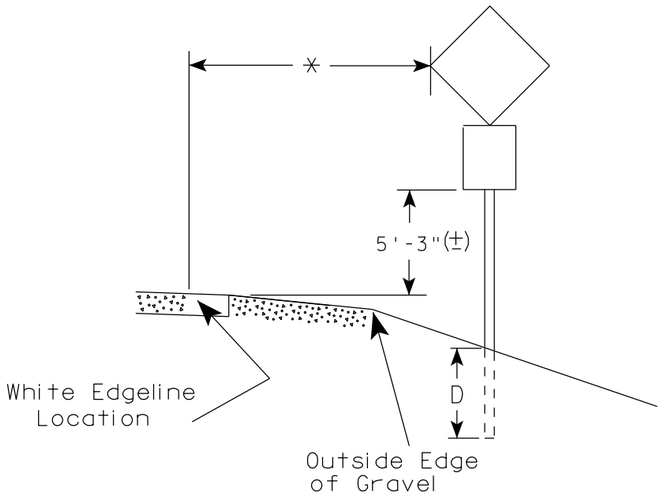
URBAN AREA



RURAL AREA (See Note 2)







** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

GENERAL NOTES

1. Signs wider than 4 feet, 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series) & End of Rod Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (+).

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq.Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

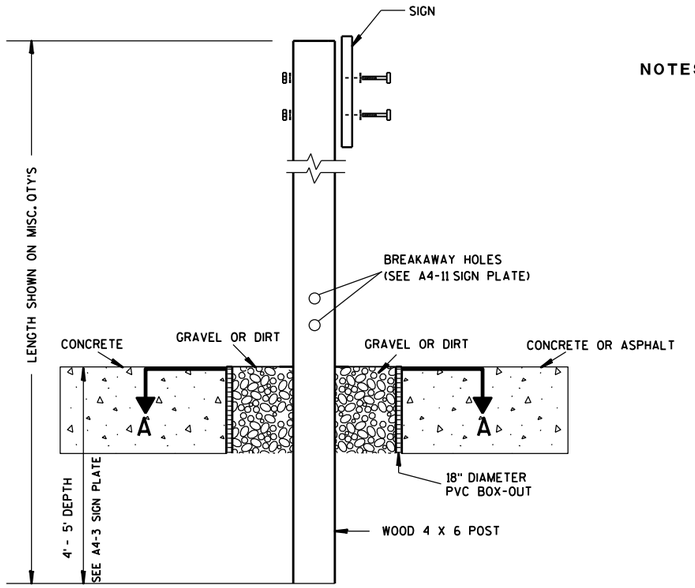
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/13 PLATE NO. A4-3.18

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

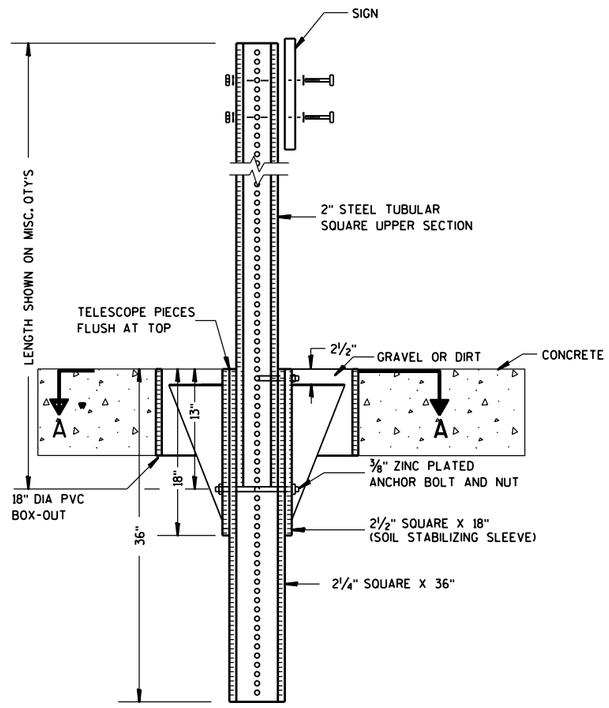
7



ELEVATION VIEW

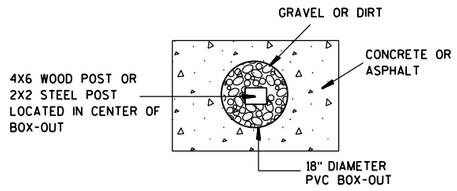
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

NOTES:
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

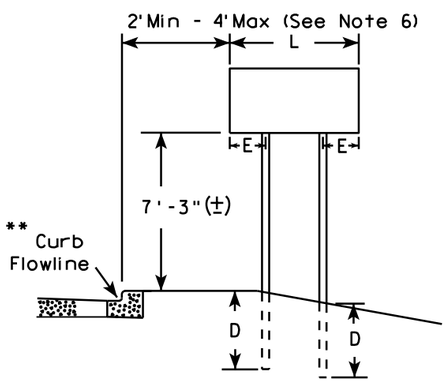
WISCONSIN DEPT OF TRANSPORTATION

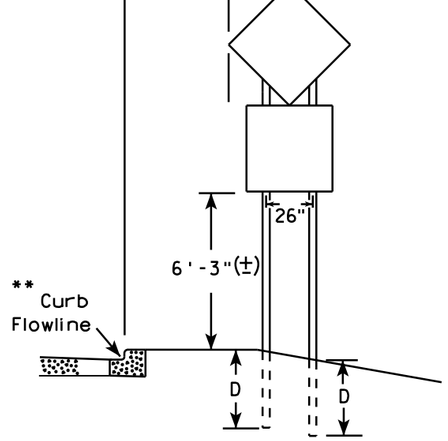
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

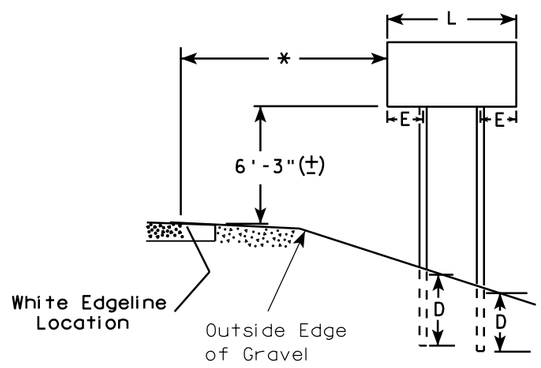
URBAN AREA

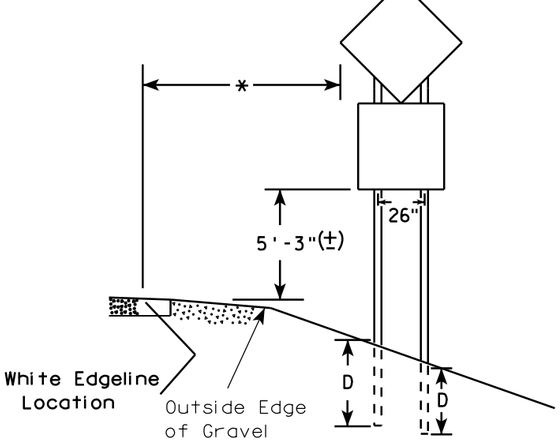




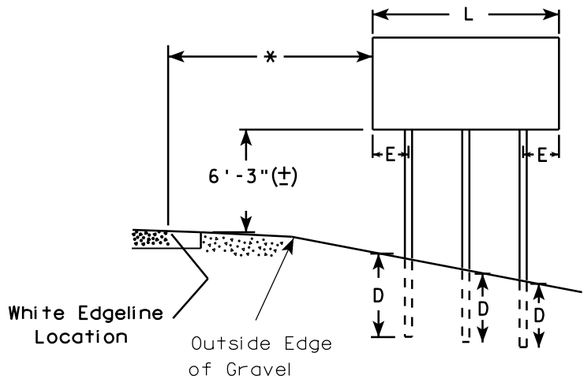
48" DIAMOND WARNING SIGN

RURAL AREA (See Note 3)





48" DIAMOND WARNING SIGN



GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series) & End of Road Markers (W5-56 & W5-56A) shall be mounted at a height of 4"-3" (±).

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

*** See A4-3 sign plate for signs 4' or less in width or less than 20 S.F. in area.

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 120"	L/5

***

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

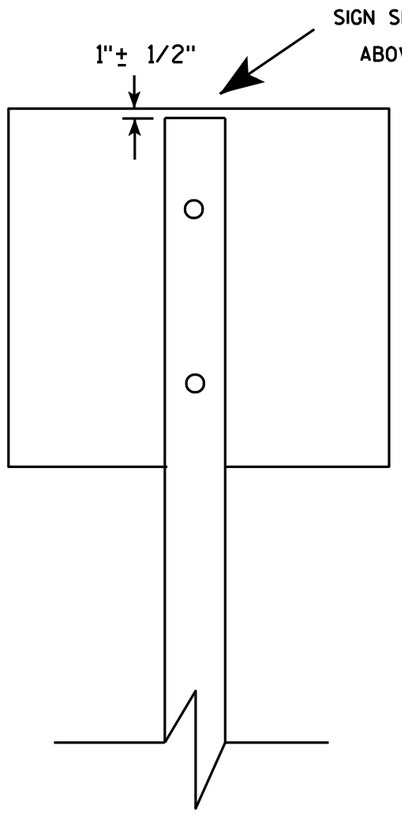
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

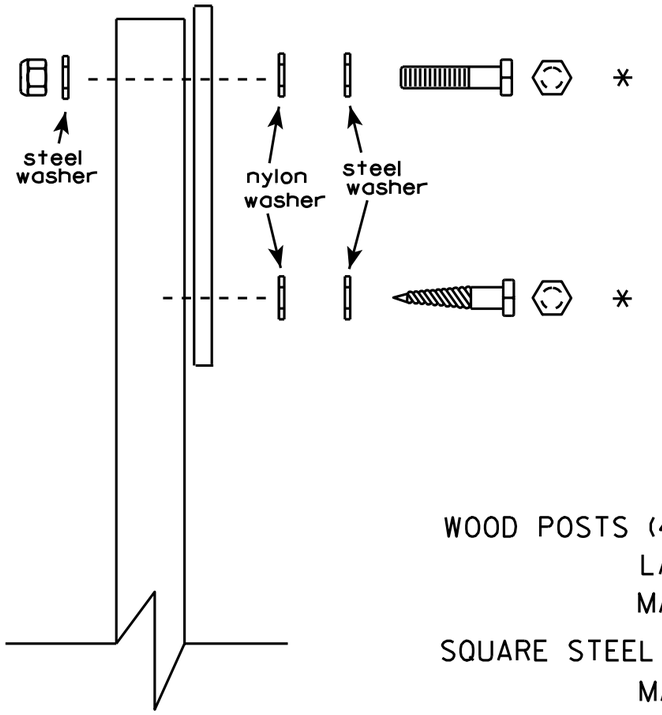
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/29/14 PLATE NO. A4-4 13

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E





Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

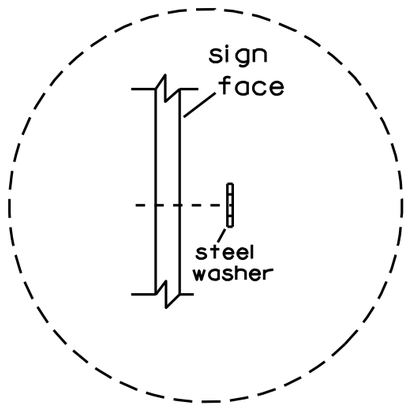
a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3"
MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts

SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts
RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON for all Type H signs.



Washer Placement when Sign Has Other Than Type H or Type F Face

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/23/10 PLATE NO. A4-8.7

7

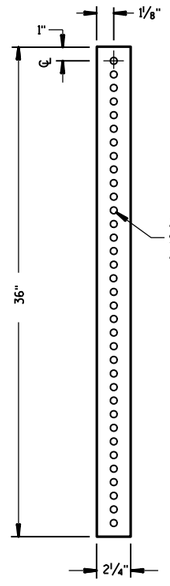
7

PROJECT NO:

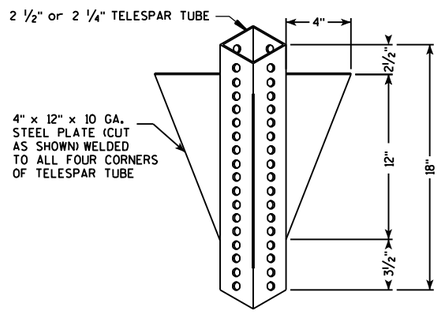
SHEET NO: 91 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

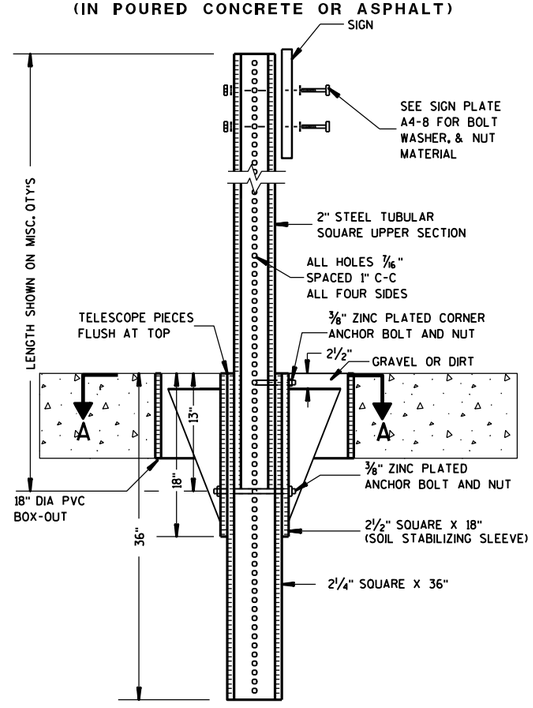
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



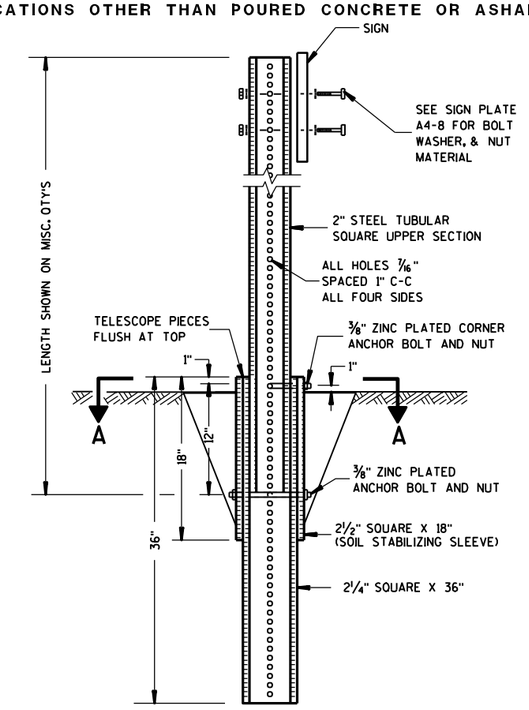
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

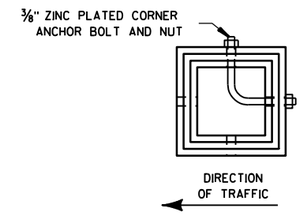


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASHALT)





SECTION A-A

Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

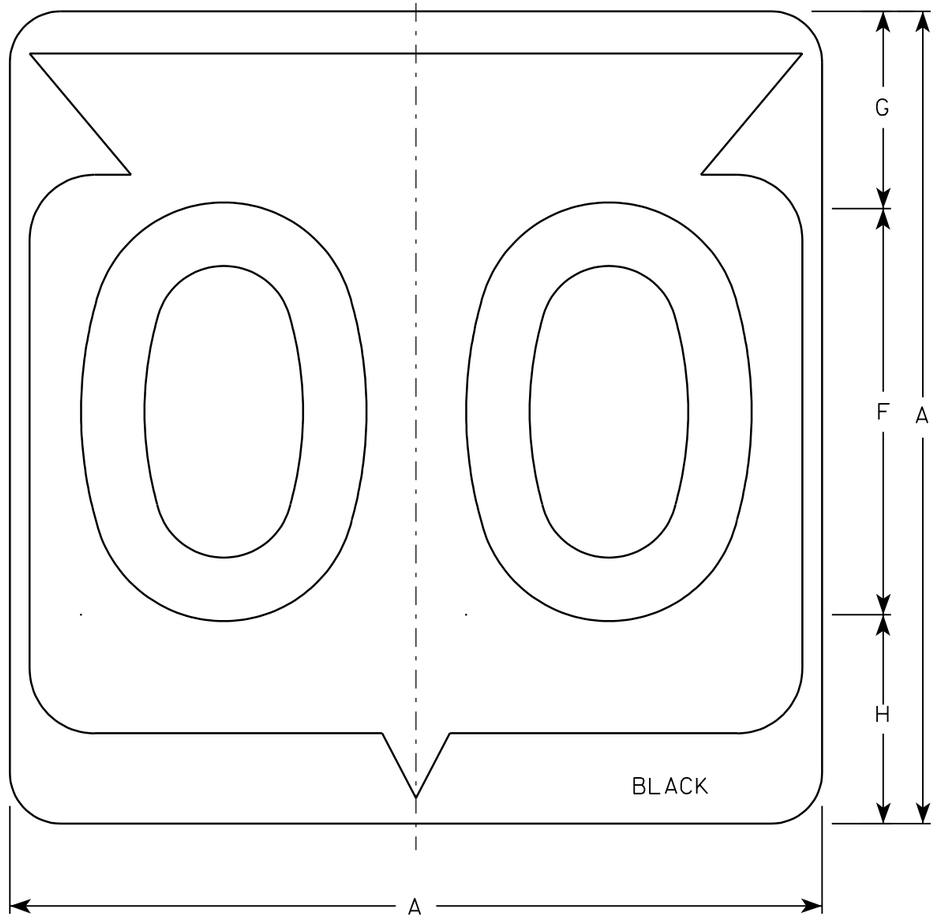
TUBULAR STEEL SIGN POST A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/30/12 PLATE NO. A4-9.7

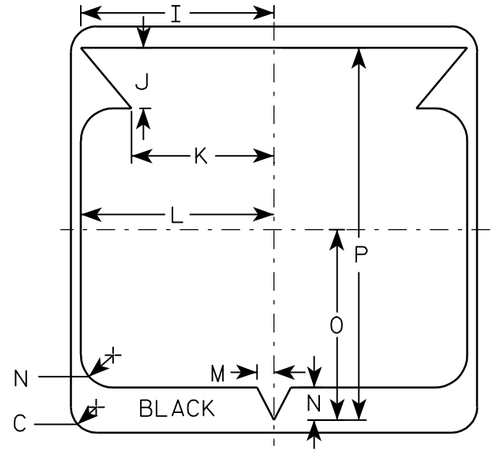
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 92	E



M1-6

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 6
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate Series numerals and adjust spacing as per plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective



Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0	.36
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81

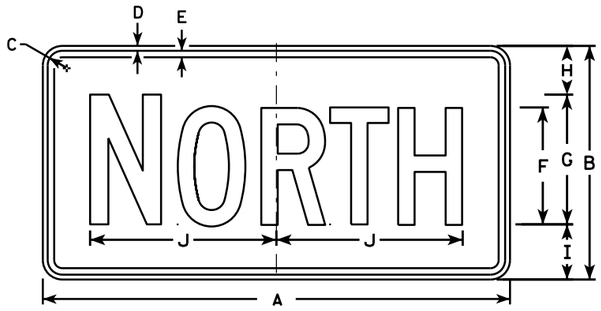
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

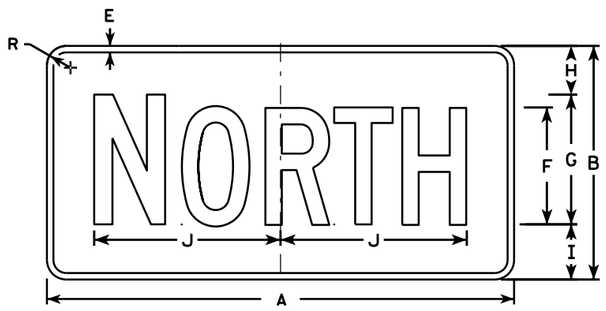
APPROVED Chester J Spang for State Traffic Engineer

DATE 3/20/02 PLATE NO. M1-6.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 93	E



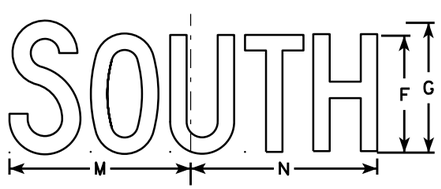
M3-1
MK3-1
MM3-1
MN3-1



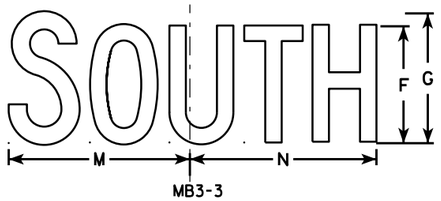
MB3-1

M3-2
MK3-2
MM3-2
MN3-2

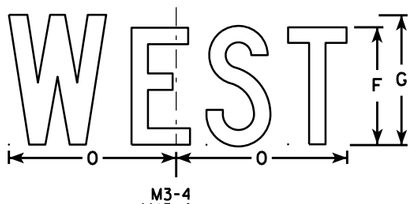
MB3-2



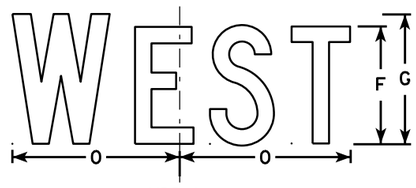
M3-3
MK3-3
MM3-3
MN3-3



MB3-3



M3-4
MK3-4
MM3-4
MN3-4



MB3-4

NOTES

1. All Signs Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White
   MK3-1 thru MK3-4 Background - Green
   Message - White
   MM3-1 thru MM3-4 Background - White
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White
6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

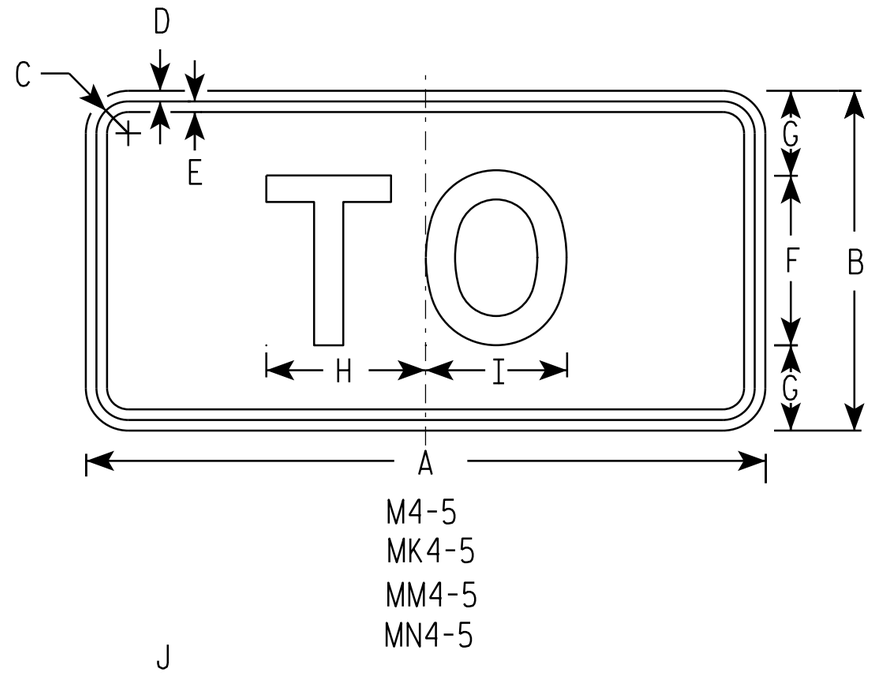
STANDARD SIGNS
M3-1 thur M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

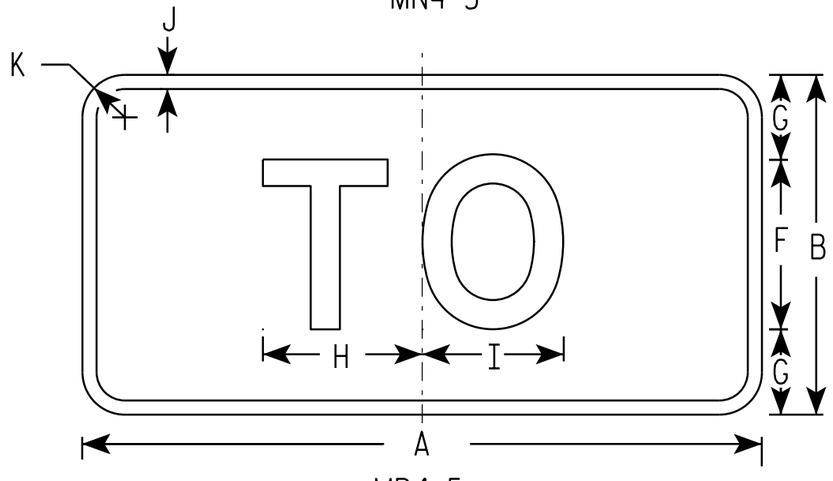
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 6/30/14 PLATE NO. M3-1.13

PROJECT NO: | HWY: | COUNTY: | | SHEET NO: E



M4-5
MK4-5
MM4-5
MN4-5



MB4-5

NOTES

1. Sign is Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-5 Background - White
   Message - Black

   MB4-5 Background - Blue
   Message - White

   MK4-5 Background - Green
   Message - White

   MM4-5 Background - White
   Message - Green

   MN4-5 Background - Brown
   Message - White

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	5 3/8	5 1/4	1/2	1 1/2																2.00
3	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
4	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
5	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5

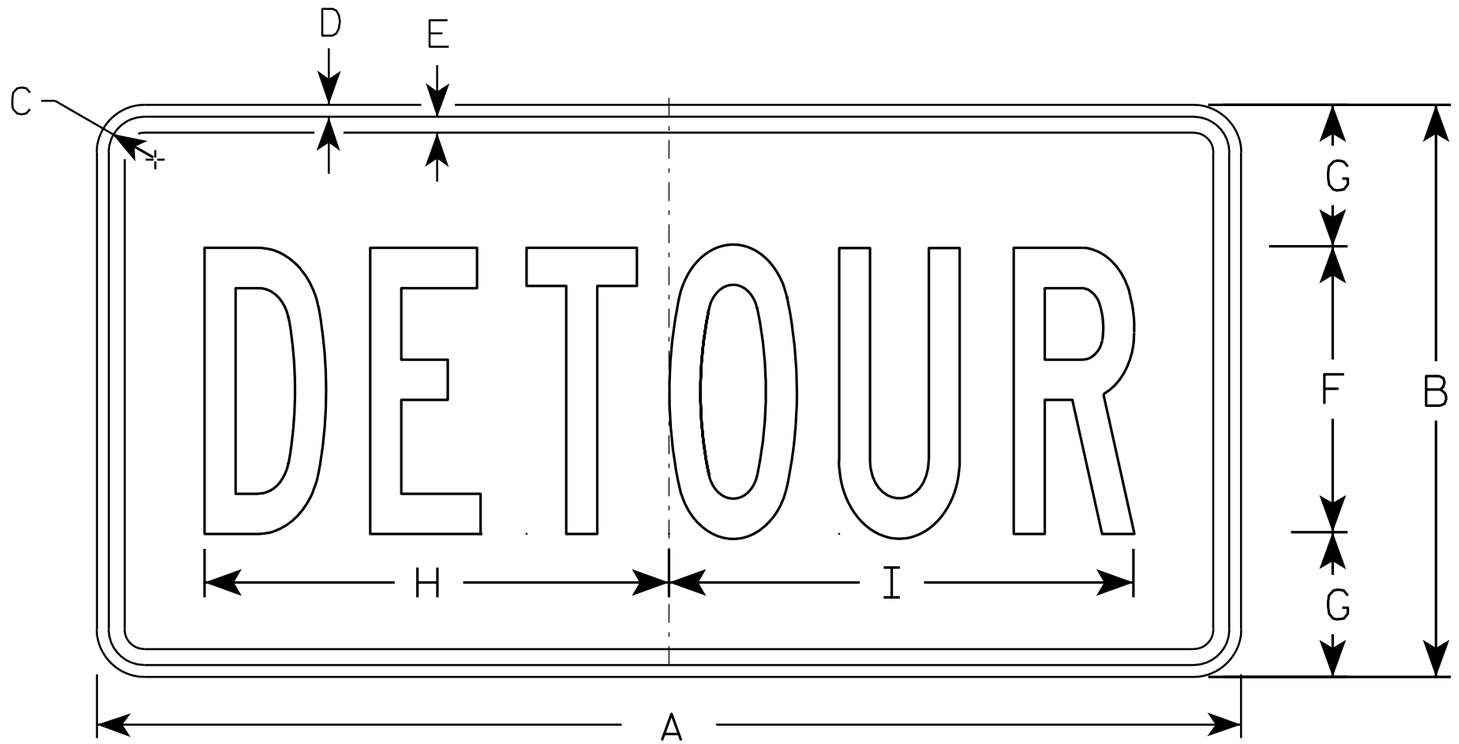
STANDARD SIGN
M4-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/30/14 PLATE M4-5.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E



M4-8

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

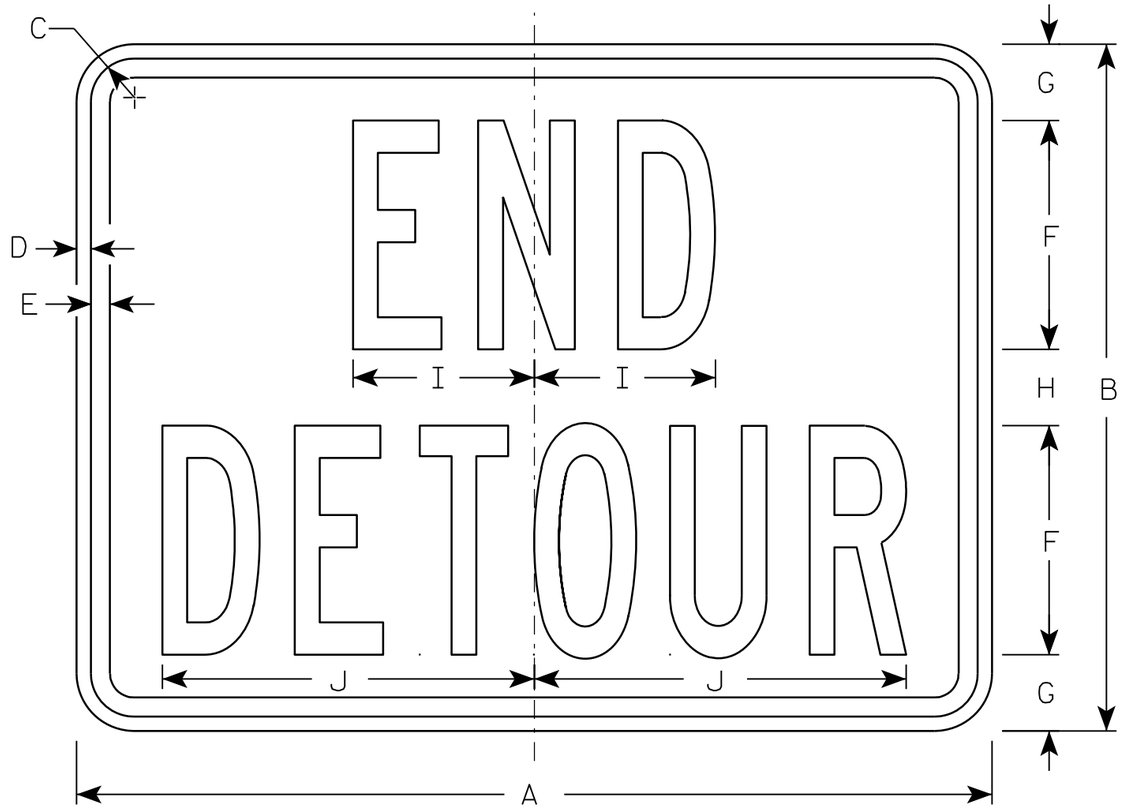
STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 96	E



M4-8A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	18	1 1/8	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/8	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4																											
5																											

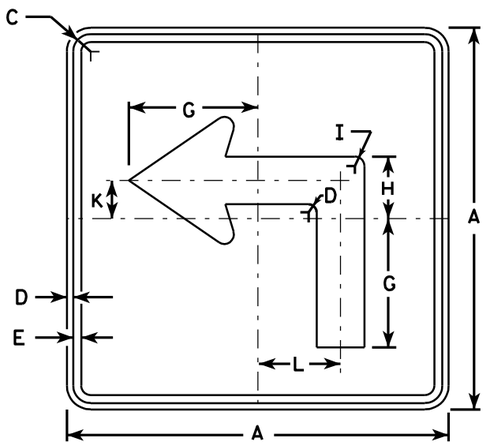
STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

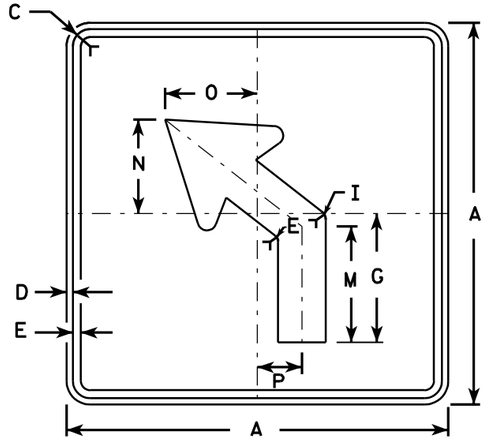
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-8A.2

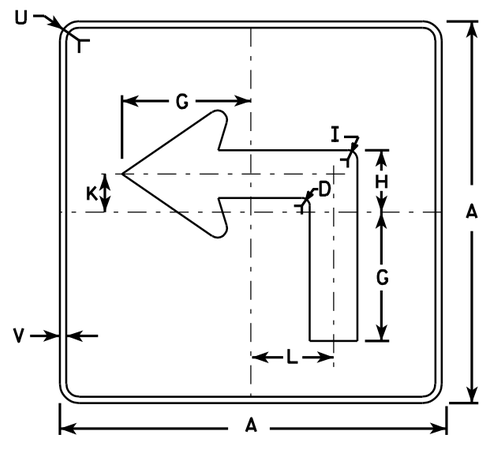
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 97	E



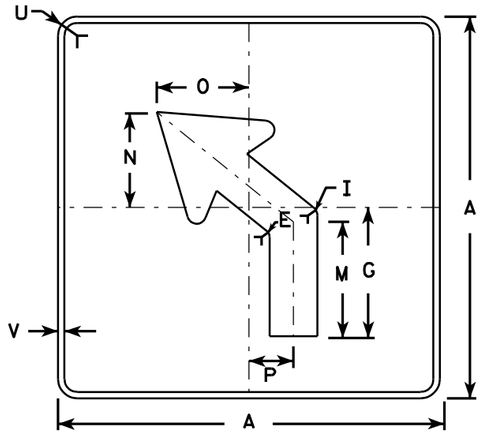
M5-1L
MK5-1L
MM5-1L
MO5-1L
MP5-1L
MR5-1L



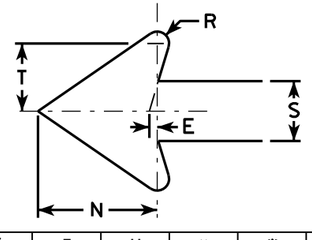
M5-2L
MK5-2L
MM5-2L
MO5-2L
MP5-2L
MR5-2L



MB5-1L
MG5-1L
MN5-1L



MB5-2L
MG5-2L
MN5-2L



NOTES

1. Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M5-1 and M5-2 Background - White - Type H Reflective
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White - Type H Reflective
   MG5-1 and MG5-2 Background - Green
   Message - White - Type H Reflective
   MK5-1 and MK5-2 Background - Green
   Message - White Type H Reflective
   MM5-1 and MM5-2 Background - White - Type H Reflective
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White - Type H Reflective
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White - Type H Reflective
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow - Type H Reflective
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 1/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 1/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 1/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

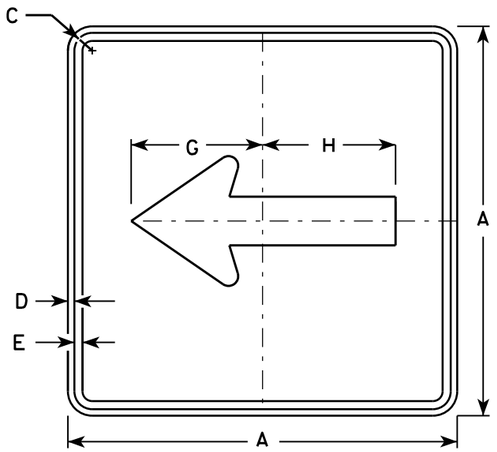
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

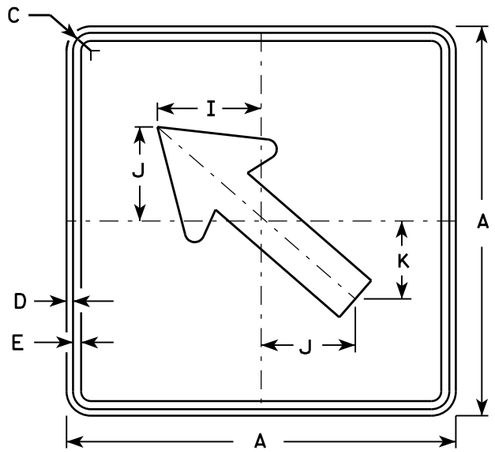
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/29/13 PLATE NO. M5-1.12

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 98 | E



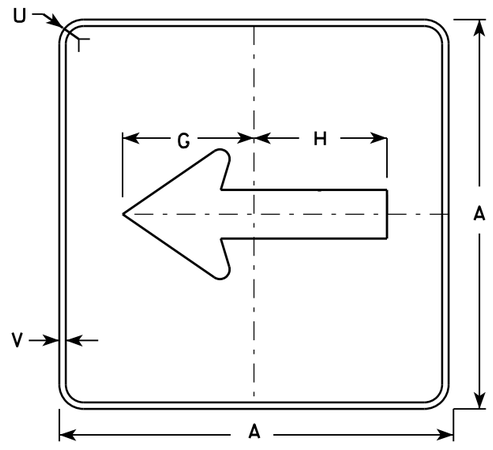
M6-1
MK6-1
MM6-1
MN6-1
MO6-1
MP6-1
MR6-1



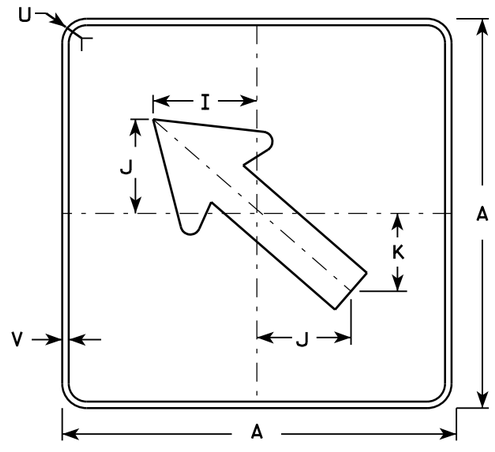
M6-2
MK6-2
MM6-2
MN6-2
MO6-2
MP6-2
MR6-2

NOTES

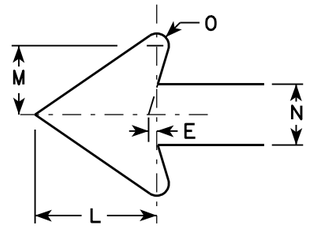
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MG6-1 and MG6-2 Background - Green
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow



MB6-1



MB6-2



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2						3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25

STANDARD SIGN M6-1 & M6-2 SERIES

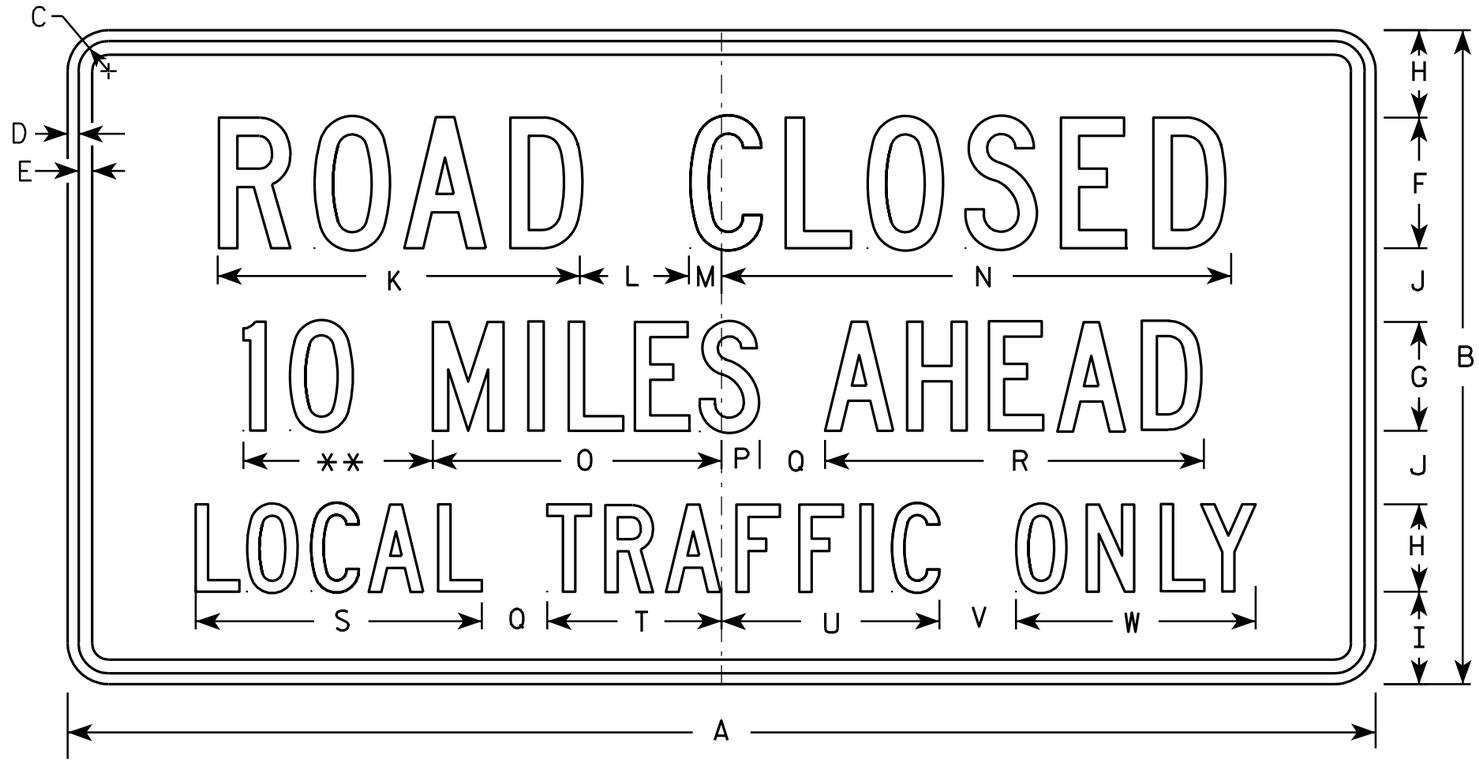
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/03/14 PLATE 99 M6-1.14

PROJECT NO: | HWY: | COUNTY: | | SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\M61.DGN PLOT DATE : 03-JUL-2014 14:28 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 11.675051:1.000000



R11-3

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

** See Note 5

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 3/8	1/2	5/8	4	3	2 1/2	2	2	11 1/8	3	1 1/8	15 1/4	8	1 1/2	2	10 3/4	8 3/8	4 3/4	6 1/2	2	6 3/4				4.5
2S	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11				12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11				12.5
3																											
4																											
5																											

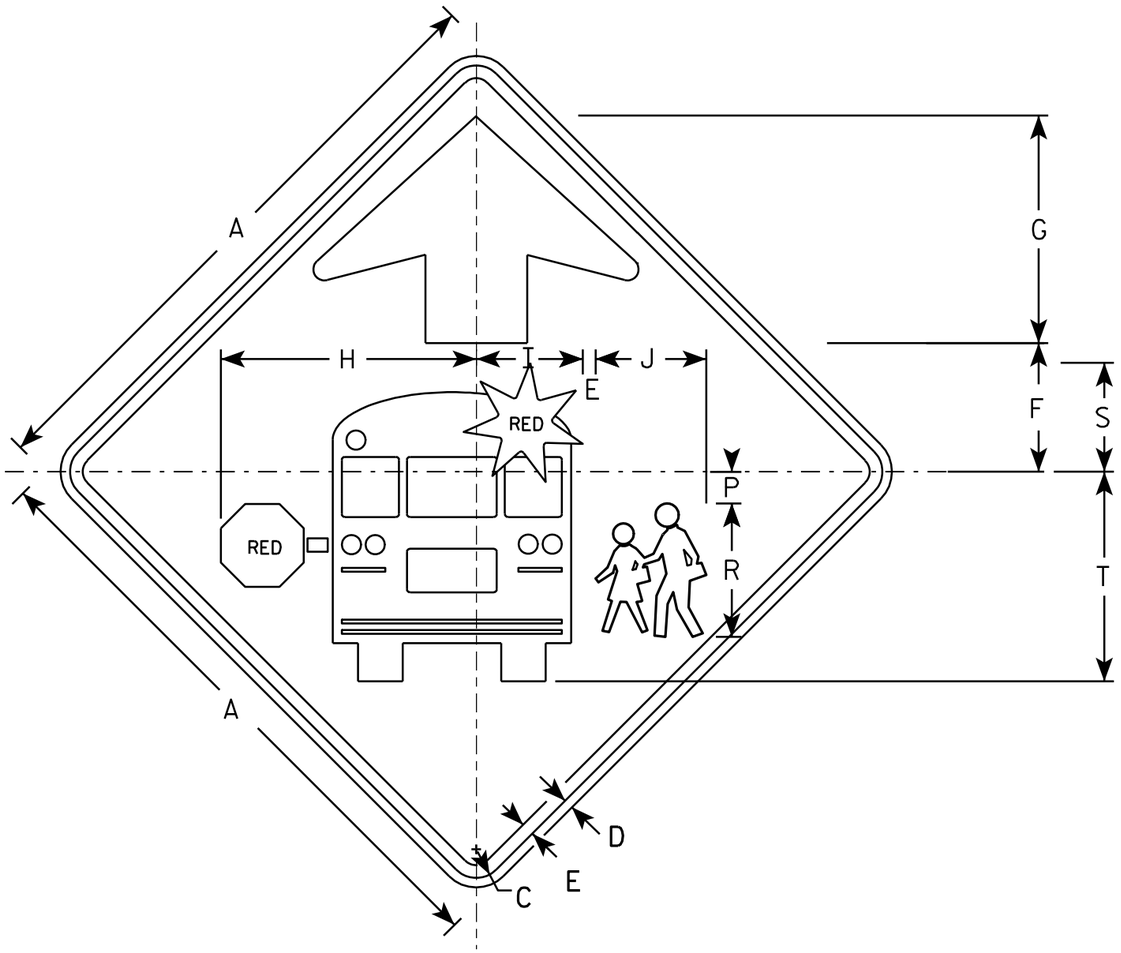
STANDARD SIGN
R11-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-3.6

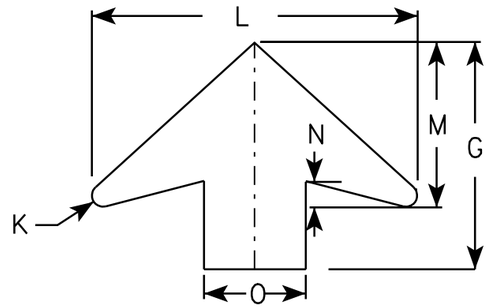
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 100 | E



S3-1

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - YELLOW-GREEN
   Message - BLACK except as noted
   Circles except PEDS- RED BACKGROUND
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	6 1/4	11 1/4	12 1/2	5 1/4	5 1/2	1/2	16	8	1 1/4	5	1 1/2		6 5/8	5 3/8	10 3/8							6.25
2	36		1 5/8	5/8	3/4	7 1/2	13 1/2	15 1/8	6 1/4	6 1/2	5/8	19 1/4	9 3/4	1 5/8	6	1 7/8		7 7/8	6 3/8	12 3/8							9.0
3	48		2 1/4	3/4	1	10	17 7/8	20 1/8	8 3/8	8 3/4	7/8	25 5/8	13	2	8	2 1/2		10 1/2	8 1/2	16 1/2							16.0
4	48		2 1/4	3/4	1	10	17 7/8	20 1/8	8 3/8	8 3/4	7/8	25 5/8	13	2	8	2 1/2		10 1/2	8 1/2	16 1/2							16.0
5																											

STANDARD SIGN
S3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

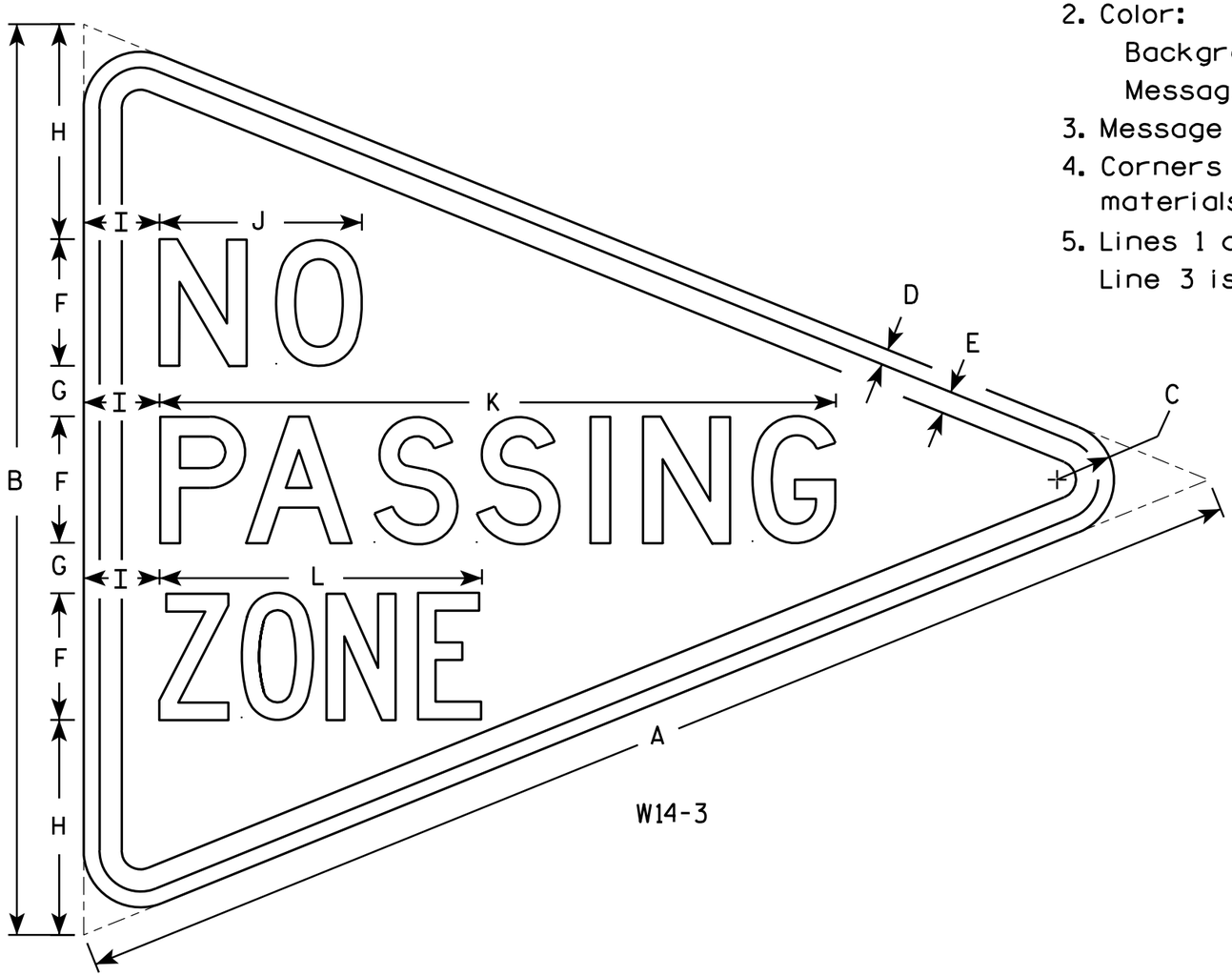
DATE 6/8/10 PLATE NO. S3-1.6

PROJECT NO:

SHEET NO: 101 E

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - See note 5
4. Corners and borders shall be rounded on all base materials for this sign.
5. Lines 1 and 2 are Series D.
   Line 3 is series C.



W14-3

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
2M	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
3	64	48	3	3/4	1 1/4	6	3	12	4	10 3/4	33 5/8	16 1/2															10.7
4																											
5																											

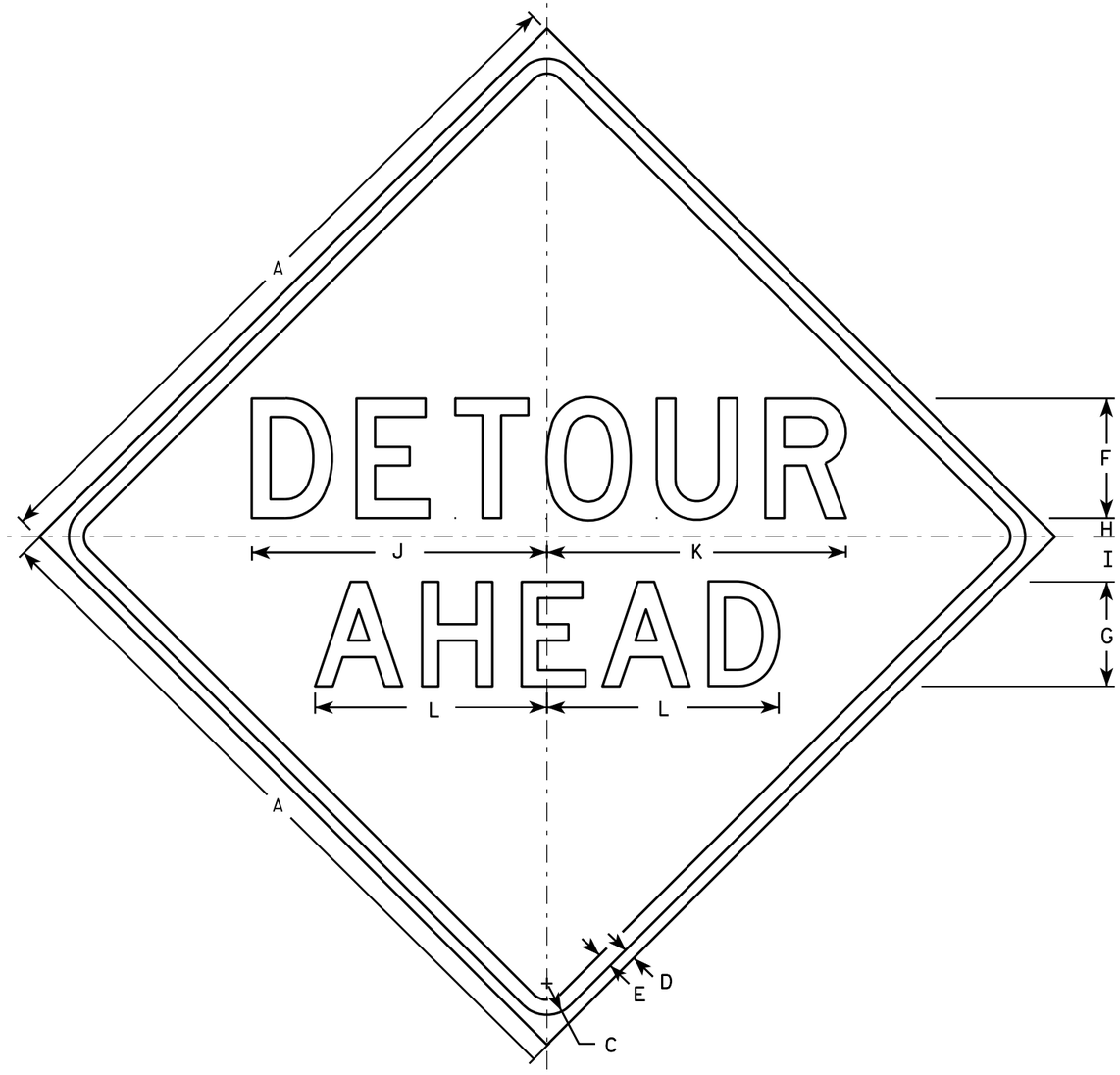
STANDARD SIGN
W14-3

WISCONSIN DEPT OF TRANSPORTATION

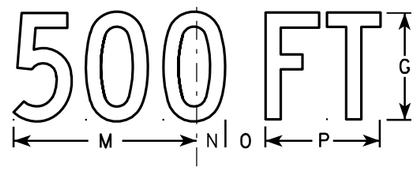
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W14-3.9

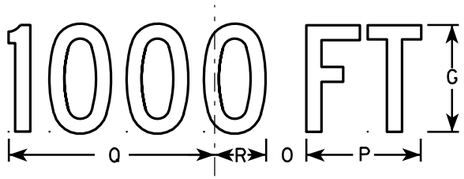
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 102	E



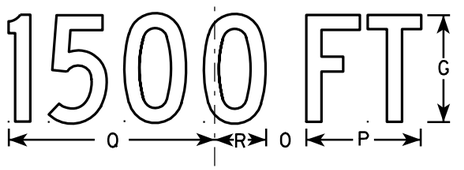
W20-2A



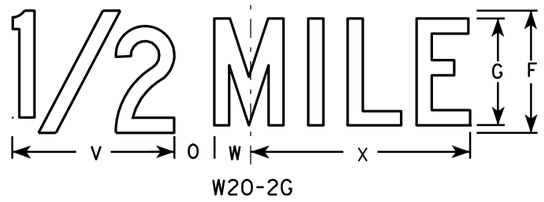
W20-2D



W20-2C



W20-2B



W20-2G

W20-2F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D.
   Line 2 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

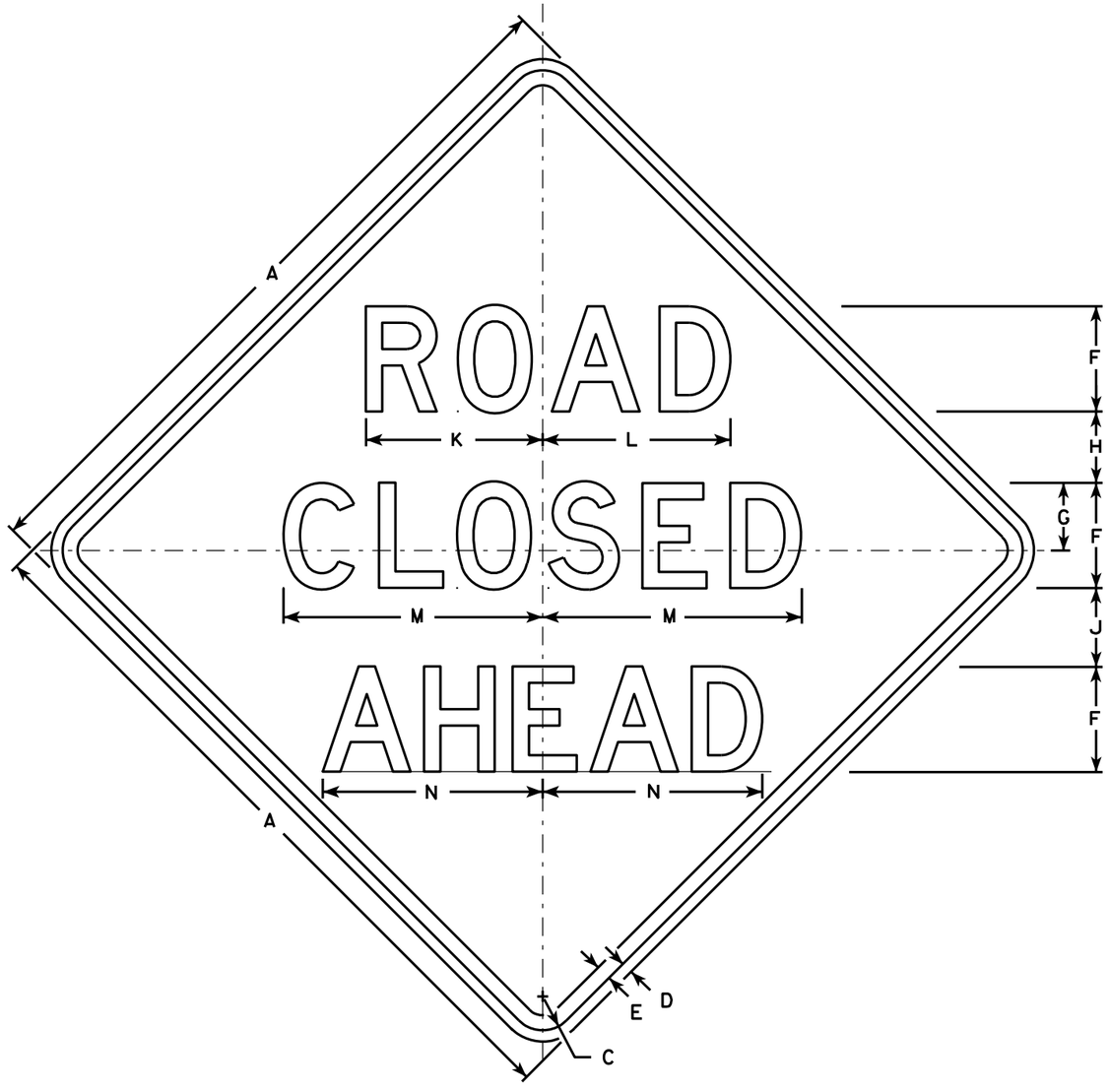
STANDARD SIGN
W20-2A,B,C,D,F & G

WISCONSIN DEPT OF TRANSPORTATION

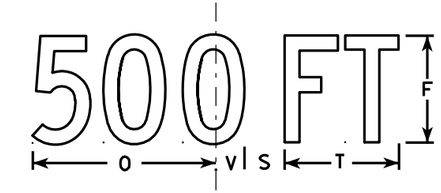
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-2.6

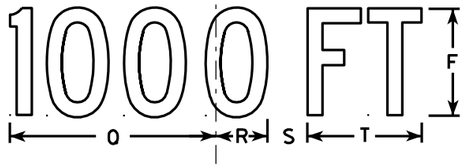
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 103	E



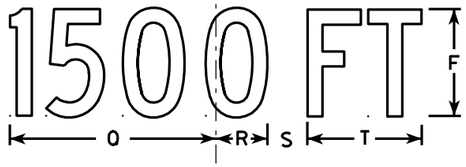
W20-3A



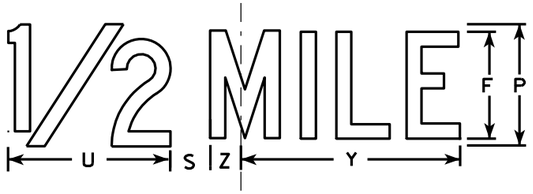
W20-3D



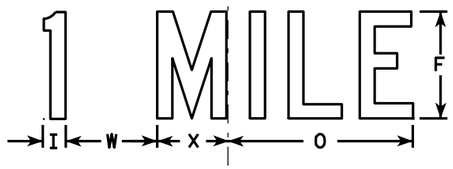
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

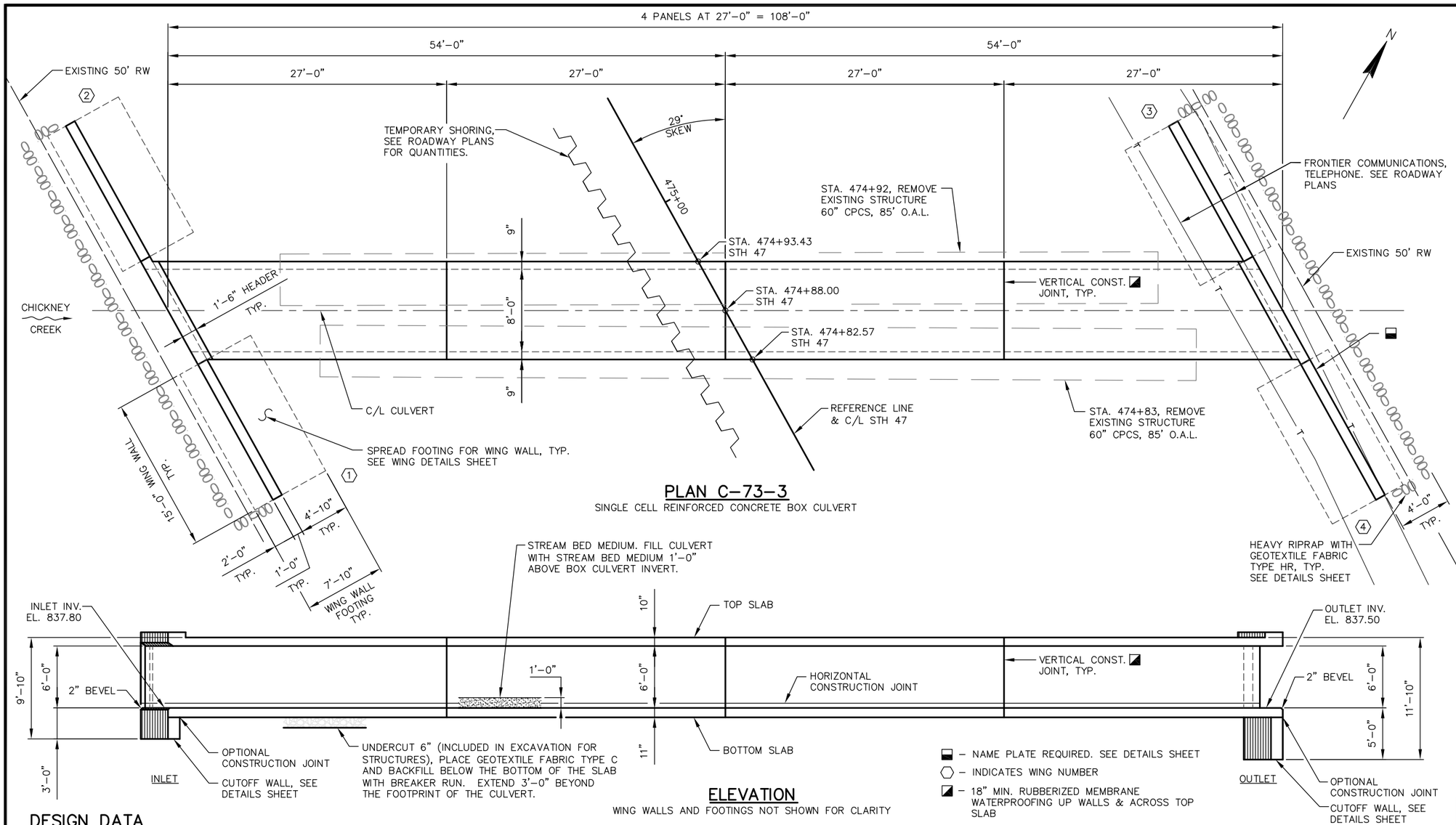
STANDARD SIGN
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 3/18/11 PLATE NO. W20-3.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 104 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W203.DGN PLOT DATE : 18-MAR-2011 12:08 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.931739:1.000000
WISDOT/CADDS SHEET 42



PLAN C–73–3

SINGLE CELL REINFORCED CONCRETE BOX CULVERT

ELEVATION

WING WALLS AND FOOTINGS NOT SHOWN FOR CLARITY

▬ – NAME PLATE REQUIRED. SEE DETAILS SHEET
⬡ – INDICATES WING NUMBER
◪ – 18" MIN. RUBBERIZED MEMBRANE WATERPROOFING UP WALLS & ACROSS TOP SLAB

DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HL–93
INVENTORY RATING FACTOR: RF = 1.05
OPERATING RATING FACTOR: RF = 1.35
WISCONSIN STANDARD PERMIT VEHICLE (WIS SPV): 255 KIPS

FOUNDATION DATA:
WING WALLS WITH SPREAD FOOTINGS TO BE SUPPORTED BY UNDERLYING SOILS WITH A REQUIRED ALLOWABLE BEARING RESISTANCE OF 3,000 PSF. VERIFY BEARING RESISTANCE WITH GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION OF SPREAD FOOTINGS.

EARTH LOAD:
STRUCTURE IS DESIGNED FOR 8.0 FT. OF FILL

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY	$f'c$ = 3,500 p.s.i.
HIGH–STRENGTH BAR STEEL REINFORCEMENT	fy = 60,000 p.s.i.

HYDRAULIC DATA:

Q_{100}	154 c.f.s.
Q_{100} (THRU STRUCTURE)	154 c.f.s.
DRAINAGE AREA	6.6 SQ. MI.
WATERWAY AREA @ Q_{100}	19.77 SQ. FT.
VELOCITY	7.79 f.p.s.
OVERTOPPING FREQUENCY	N/A
HIGH WATER$_{100}$ ELEVATION	842.86
Q_2	56 c.f.s.
Q_2 ELEVATION	840.97
SCOUR CODE	8

TRAFFIC VOLUME

STH 47
A.A.D.T. = 2350 (2015)
A.A.D.T. = 3450 (2035)
R.D.S = 55 M.P.H.

LIST OF DRAWINGS

1. GENERAL PLAN
2. WING DETAILS
3. BOX DETAILS
4. DETAILS
5. BILL OF BARS
6. SUBSURFACE EXPLORATION

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEVATION
1	476+40, 24' RT.	SET MAG NAIL IN EAST SIDE OF NO PASSING SIGN	847.74

TOTAL ESTIMATED QUANTITIES

BID ITEMS

203.0200.01	REMOVING OLD STRUCTURE STA. 474+83	1 LS
203.0200.02	REMOVING OLD STRUCTURE STA. 474+92	1 LS
206.2000	EXCAVATION FOR STRUCTURES CULVERTS C–73–3	1 LS
210.0100	BACKFILL STRUCTURE	835 CY
311.0115	BREAKER RUN	32 CY
504.0100	CONCRETE MASONRY CULVERTS	153 CY
505.0410	BAR STEEL REINFORCEMENT HS CULVERTS	22,790 LBS
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	20 SY
606.0300	RIPRAP HEAVY	65 CY
645.0105	GEOTEXTILE FABRIC TYPE C	285 SY
645.0120	GEOTEXTILE FABRIC TYPE HR	37 SY
SPV.0035.01	STREAM BED MEDIUM	32 CY

NON BID ITEMS

FILLER	3/4"

WISCONSIN
JEFFREY J. KOCH
E-28802
PLAIN, WISCONSIN
PROFESSIONAL ENGINEER

8/06/2014

STATE PROJECT NUMBER
1009–43–62

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES CULVERTS C–73–3" SHALL BE THE EXISTING GROUND LINE.

WITHIN THE LENGTH OF THE BOX ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL TO THE ELEVATION AND SECTION EXISTING PRIOR TO EXCAVATION WITHIN THE LENGTH OF THE CULVERT.

DEWATER BOX AND WINGWALL EXCAVATIONS ACCORDING TO EXCAVATION FOR STRUCTURES SPECIFICATION. COST OF DEWATERING WILL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES CULVERT BID ITEM.

THE ALTERNATE CUTOFF WALL MAY BE USED IN LIEU OF THE CAST–IN–PLACE CONCRETE CUTOFF WALLS. PAYMENT SHALL BE BASED ON CONCRETE CUTOFF WALLS.

THE CONTRACTOR MAY FURNISH A PRECAST CONCRETE BOX CULVERT IN LIEU OF THE CAST–IN–PLACE BOX CULVERT WITH THE ACCEPTANCE OF THE SHOP DRAWINGS BY THE STRUCTURES DESIGN SECTION. THE PRECAST CONCRETE BOX CULVERT SHALL CONFORM TO PRECAST DETAILS IN CHAPTER 36 STANDARDS OF THE CURRENT WISCONSIN DOT BRIDGE MANUAL. PAYMENT FOR THE PRECAST CULVERT SHALL BE BASED ON THE QUANTITIES AND PRICES BID FOR THE ITEMS LISTED IN THE "TOTAL ESTIMATED QUANTITIES".

STRUCTURE BACKFILL IS REQUIRED BEHIND ALL WINGWALLS.

IN LIEU OF USING BREAKER RUN FOR THE BOX CONSTRUCTION PLATFORM, THE CONTRACTOR MAY ELECT TO SUBSTITUTE #1 OR #2 CONCRETE COARSE AGGREGATE, SELECT CRUSHED MATERIAL OR OTHER GRANULAR MATERIAL AS APPROVED BY THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR BASE STABILITY WITH ANY SUBSTITUTED MATERIAL. THE REGION GEOTECHNICAL ENGINEER MAY BE CONTACTED TO DETERMINE IF "OTHER GRANULAR MATERIAL" IS ACCEPTABLE.

BRIDGE OFFICE CONTACT
BILL DREHER, P.E.
(608) 266–8489

CONSULTANT CONTACT
JEFFREY J. KOCH, P.E.
(608) 588–7866

NO.	DATE	REVISION	BY

WESTBROOK Associated Engineers, Inc.
619 EAST HOXIE STREET
P.O. BOX 429
SPRING GREEN, WI 53588
PHONE (608) 588–7866
FAX (608) 588–7954

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Drechsler KAR 08/18/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE C–73–3

STH 47 OVER CHICKNEY CREEK

COUNTY	TOWN/~~CITY/VILLAGE~~
MENOMINEE	MENOMINEE

DESIGN SPEC. AASHTO LRFD DESIGN SPEC.

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
AJM	AMD	NJB	AJM

GENERAL PLAN

SHEET 1 OF 6

105

8

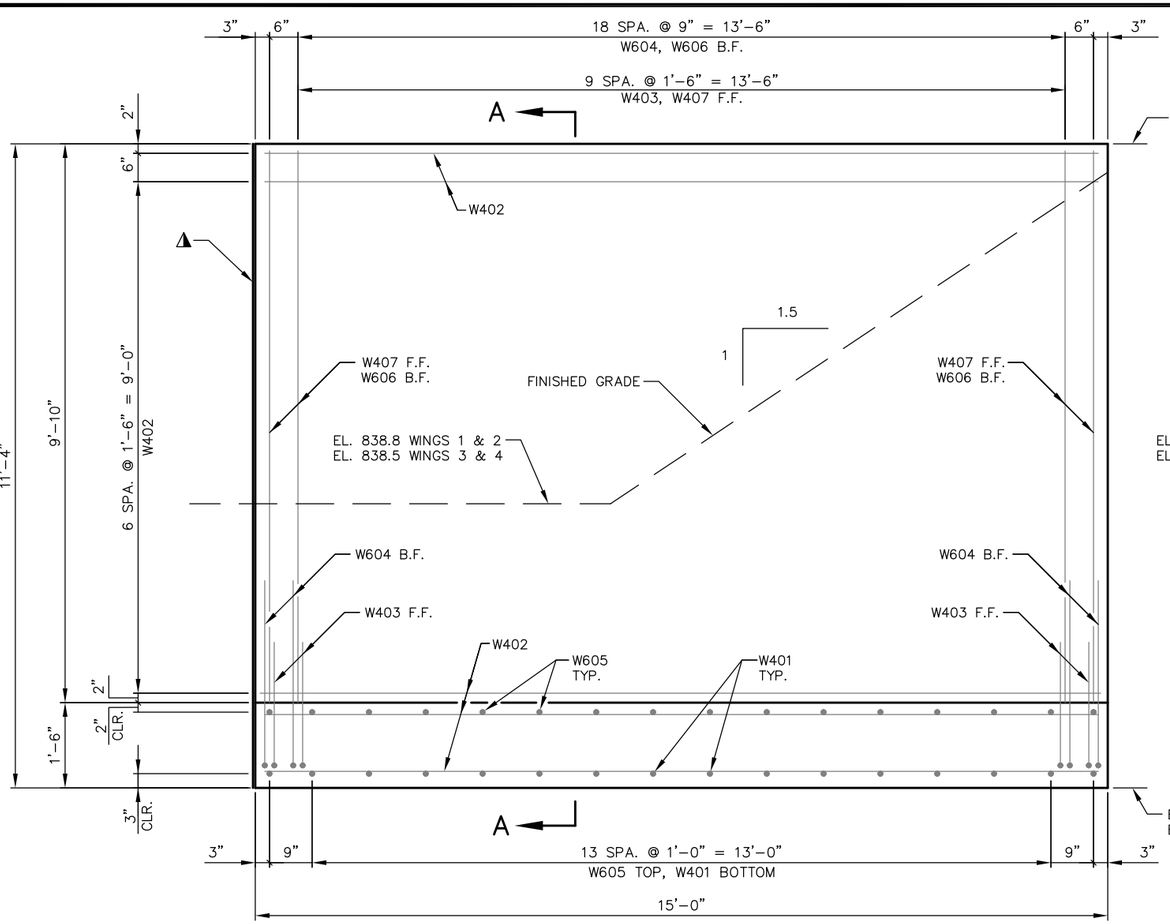
8

FILE: 01_fsht.dwg
PLOT SCALE:

I.D. 1009–43–62

PLOT DATE: Aug 06, 2014

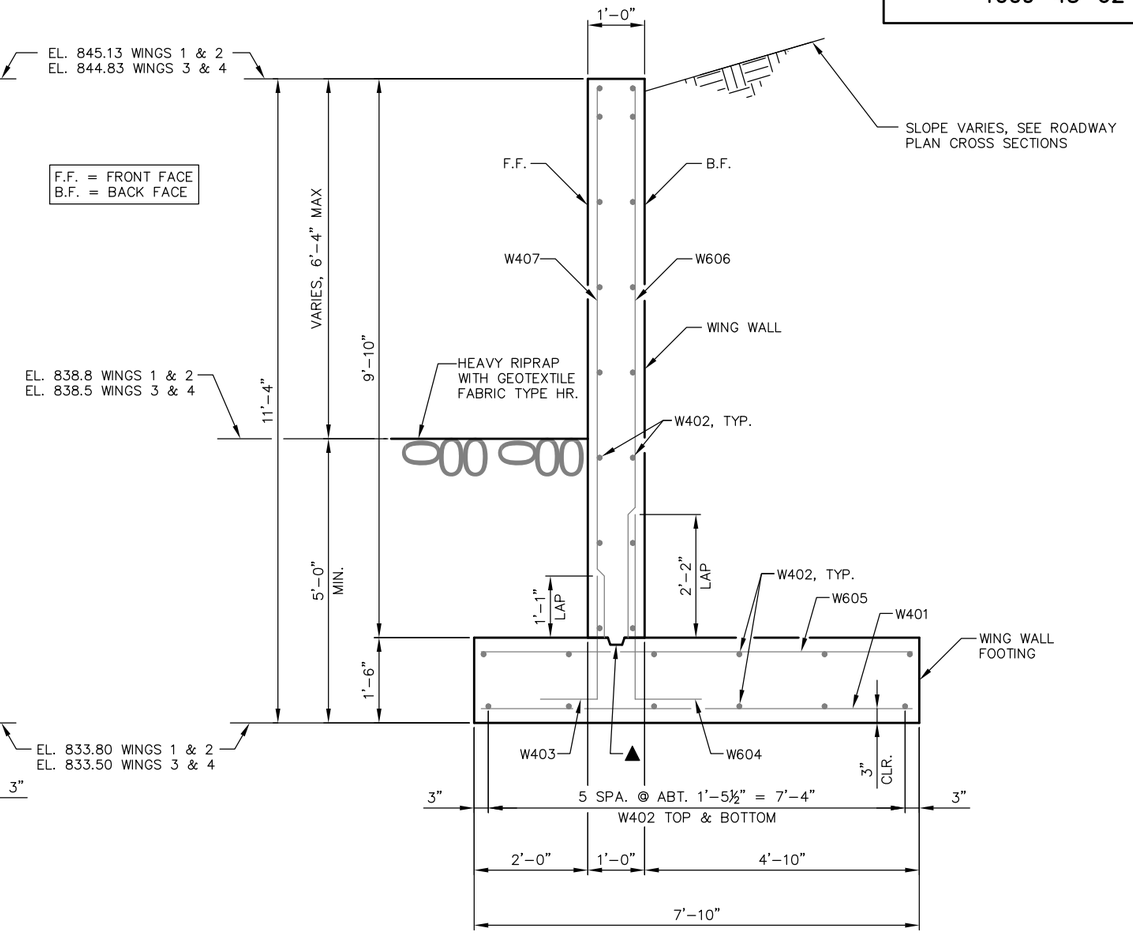
STATE PROJECT NUMBER
1009–43–62



WING WALL ELEVATION

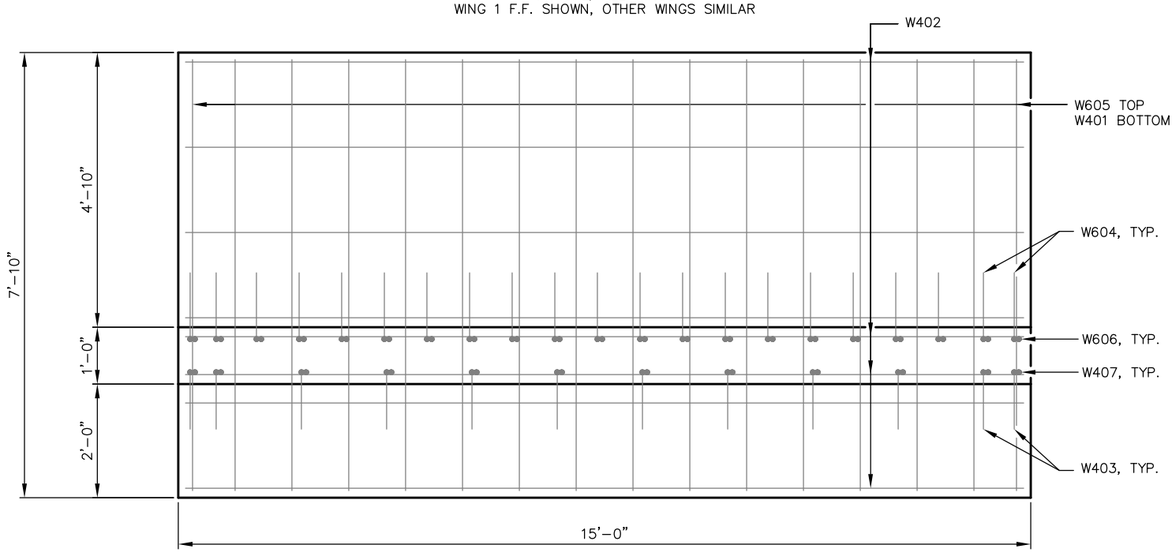
TYPICAL, ALL WINGS
WING 1 F.F. SHOWN, OTHER WINGS SIMILAR

F.F. = FRONT FACE
B.F. = BACK FACE



SECTION A–A

TYPICAL, ALL WINGS



WING WALL PLAN

TYPICAL, ALL WINGS

▲ KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2x6.

◭ ¾" JOINT FILLER, TYP. EXTEND FILLER FROM BOTTOM OF WING WALL FOOTING TO TOP OF THE WING WALL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE C–73–3

DRAWN BY NJB | PLANS CK'D AJM

WING DETAILS

SHEET 2 OF 6

106

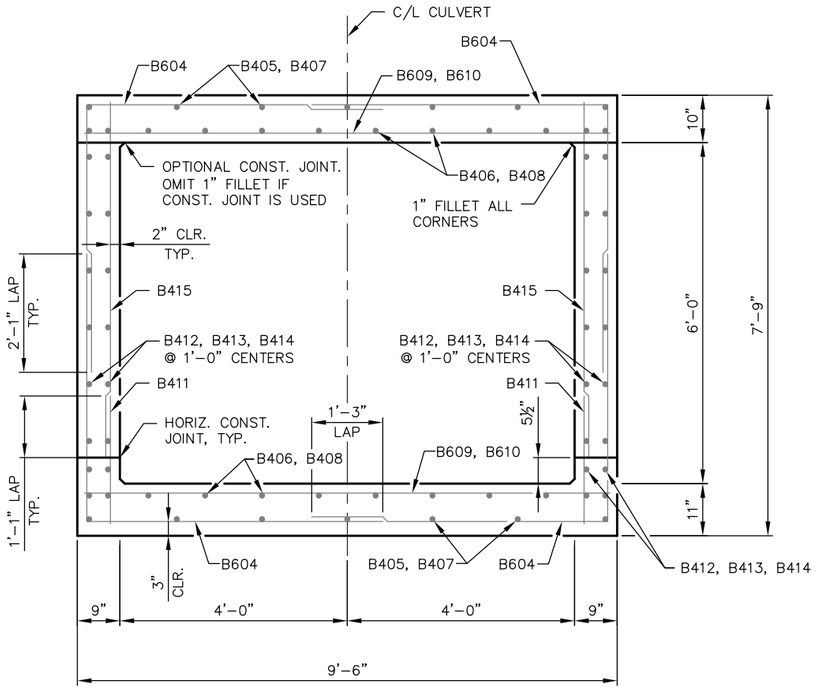
I.D. 1009–43–62 PLOT DATE: Aug 06, 2014

FILE: 02_wing.dwg
PLOT SCALE:

8

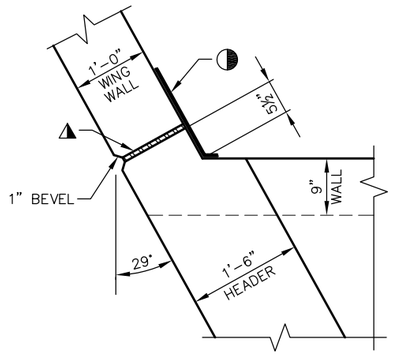
8

STATE PROJECT NUMBER
1009-43-62

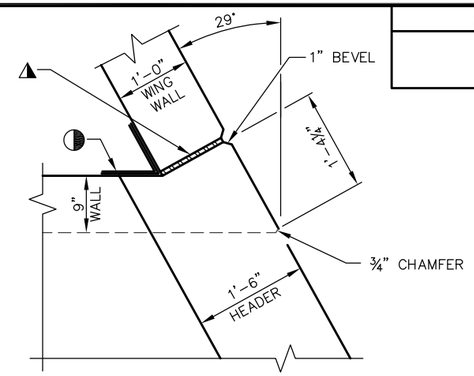


TYPICAL SECTION THRU BOX

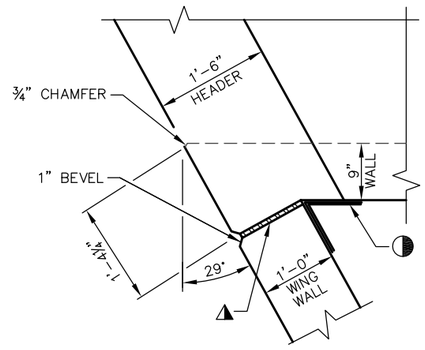
PERPENDICULAR TO CULVERT C/L



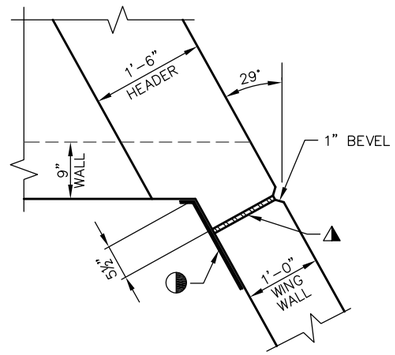
WING 2



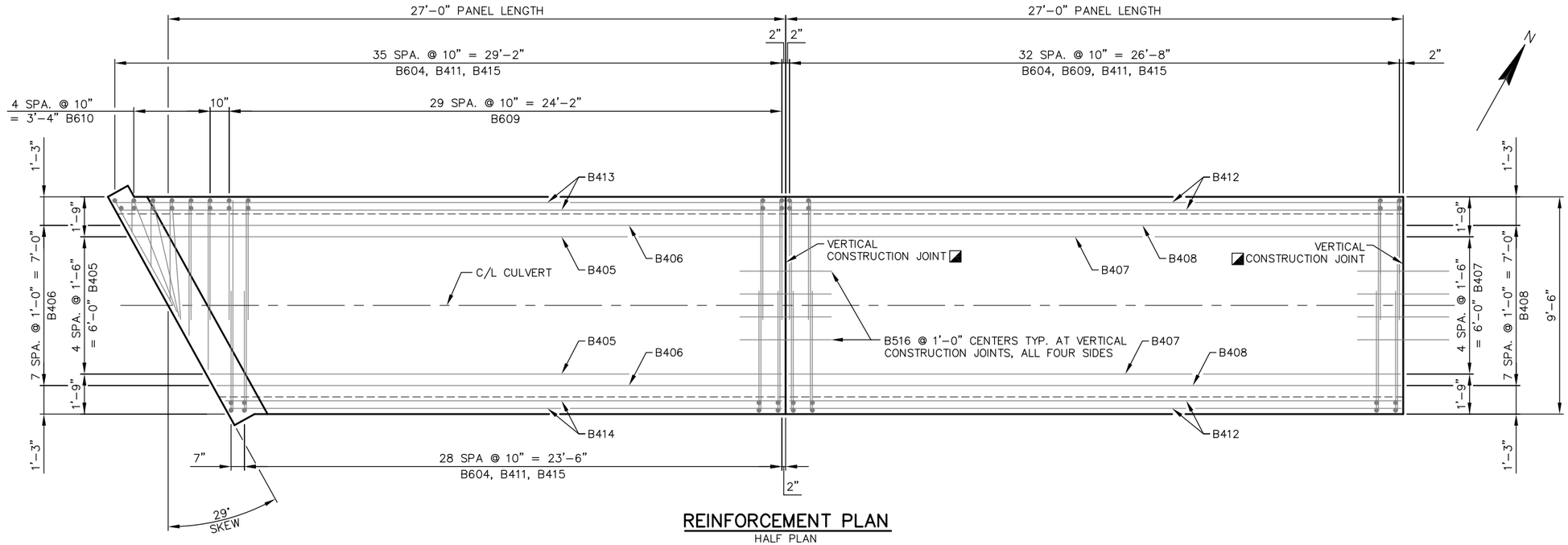
WING 3



WING 1



WING 4



REINFORCEMENT PLAN

HALF PLAN

(WEST HALF OF BOX SHOWN, EAST HALF SIMILAR)

REINFORCEMENT IN HEADER NOT SHOWN FOR CLARITY

NOTES:

- 18" MIN. RUBBERIZED MEMBRANE WATERPROOFING FROM TOP OF WING WALL FOOTING TO TOP OF THE WING WALL.
- ¾" JOINT FILLER, TYP. EXTEND FILLER FROM BOTTOM OF WING WALL FOOTING TO TOP OF THE WING WALL.
- 18" MIN. RUBBERIZED MEMBRANE WATERPROOFING UP WALLS & ACROSS TOP SLAB.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE C-73-3

DRAWN BY NJB | PLANS CK'D AJM

BOX DETAILS

SHEET 3 OF 6

107

I.D. 1009-43-62

PLOT DATE: Aug 06, 2014

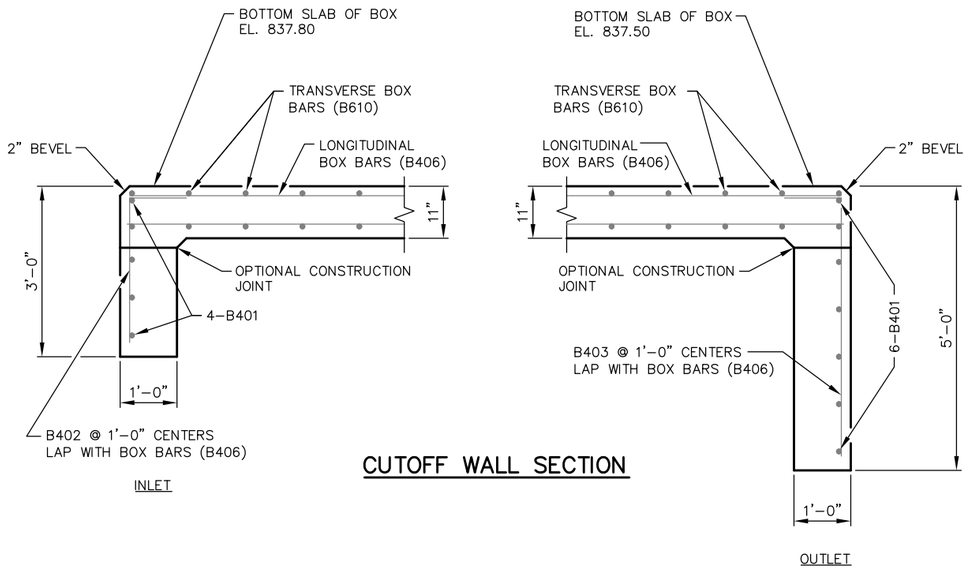
FILE: 03_box.dwg
PLOT SCALE: 1/4" = 1'-0"

8

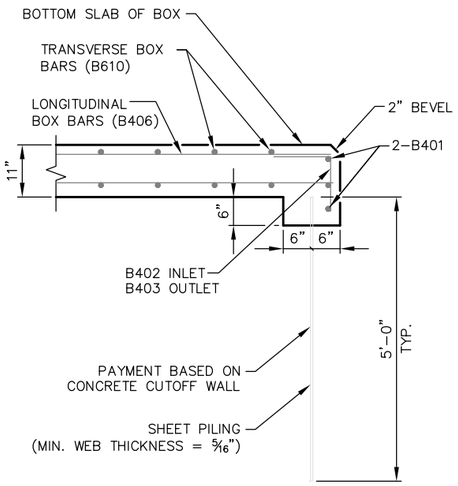
8

STATE PROJECT NUMBER

1009-43-62

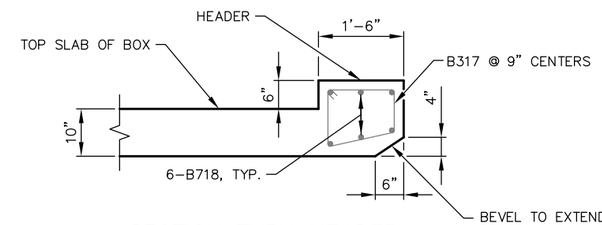


CUTOFF WALL SECTION



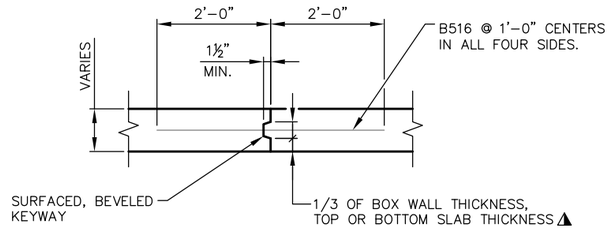
ALTERNATE CUTOFF WALL

THE ABOVE ALTERNATE MAY BE USED IN LIEU OF THE CAST-IN-PLACE CONCRETE CUTOFF WALLS



SECTION THRU HEADER

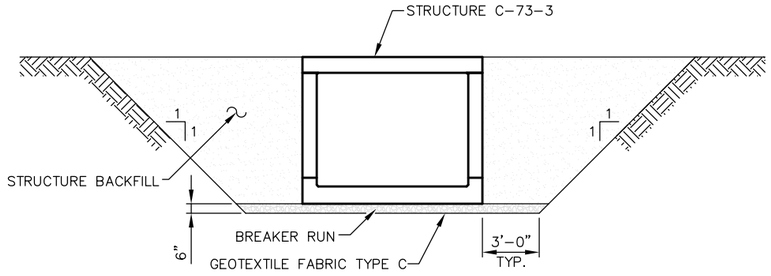
OUTLET SHOWN, INLET SIMILAR
BARS IN TOP SLAB NOT SHOWN FOR CLARITY



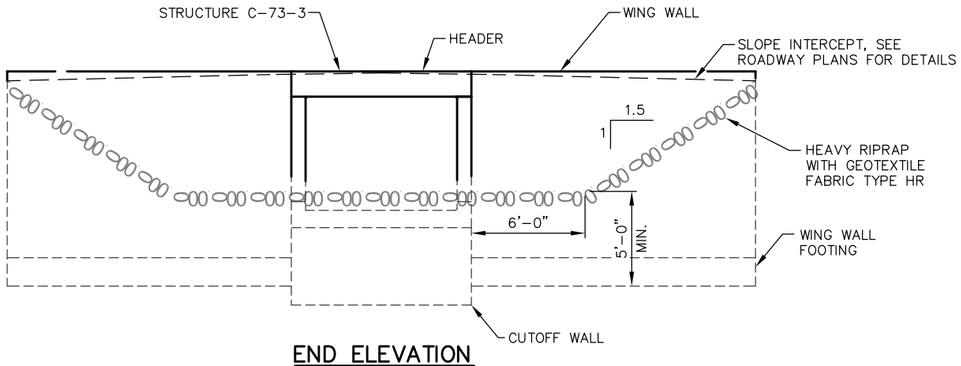
VERTICAL CONSTRUCTION JOINT

ALL WALLS AND TOP & BOTTOM SLAB OF BOX

▲ IN LIEU OF CONSTRUCTION JOINTS IN THE BOTTOM SLAB, THE CONTRACTOR MAY USE 2" DEEP SAW CUTS WITHIN 12 HOURS AFTER POURING.

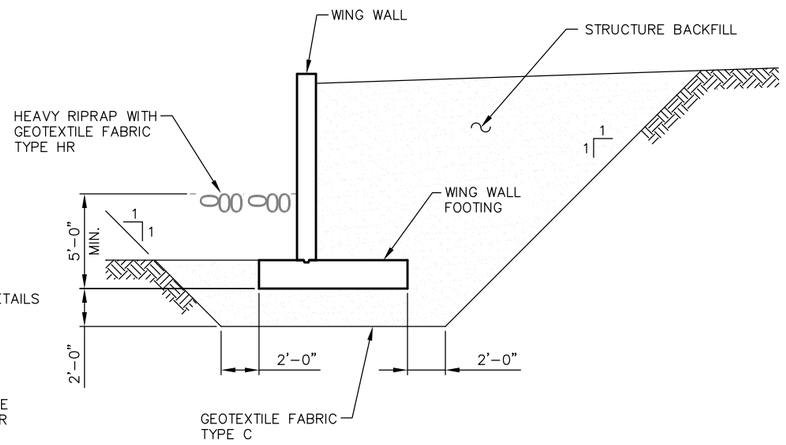


BOX BACKFILL DETAIL

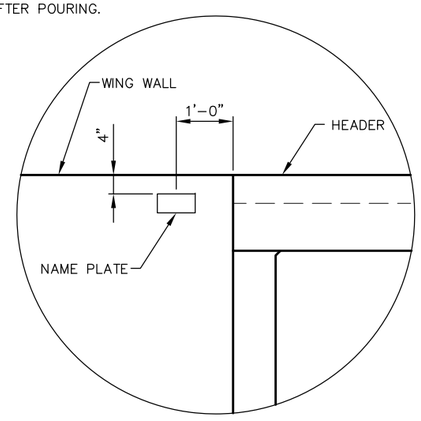


END ELEVATION

OUTLET SHOWN, INLET SIMILAR



WING BACKFILL DETAIL



NAME PLATE DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE C-73-3

DRAWN BY NJB | PLANS CK'D AJM

DETAILS

SHEET 4 OF 6

108

8

8

I.D. 1009-43-62

PLOT DATE: Aug 06, 2014

FILE: 04_det.dwg
PLOT SCALE:

STATE PROJECT NUMBER
1009–43–62

THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

ALL BAR BEND DIMENSIONS ARE OUT TO OUT OF BAR.

BILL OF BARS
BOX CULVERT

UNCOATED = 18,480 LBS.

MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH	BENT	BAR SERIES	LOCATION	
B401		10	10–11			CUTOFF WALLS	HORIZ.
B402		10	3–2	X		INLET CUTOFF WALL	VERT.
B403		10	5–2	X		OUTLET CUTOFF WALL	VERT.
B604		528	9–10	X		EXTERIOR BOX CORNERS	VERT.
✳ B405		20	26–6		X	TOP AND BOTTOM SLAB	LONGIT.
✳ B406		32	26–6		X	TOP AND BOTTOM SLAB	LONGIT.
B407		20	26–8			TOP AND BOTTOM SLAB	LONGIT.
B408		32	26–8			TOP AND BOTTOM SLAB	LONGIT.
B609		252	9–2			TOP AND BOTTOM SLAB	TRANS.
✳ B610		20	4–6		X	TOP AND BOTTOM SLAB	TRANS.
B411		264	2–3			WALL–DOWEL	VERT.
B412		80	26–8			WALLS	LONGIT.
B413		40	29–2			WALLS	LONGIT.
B414		40	24–0			WALLS	LONGIT.
B415		264	6–2			WALLS	VERT.
B516		108	4–0			DOWEL THRU JOINT	HORIZ.
B317		30	4–8	X		HEADER STIRRUP	VERT.
B718		12	10–11			HEADER	HORIZ.

✳ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

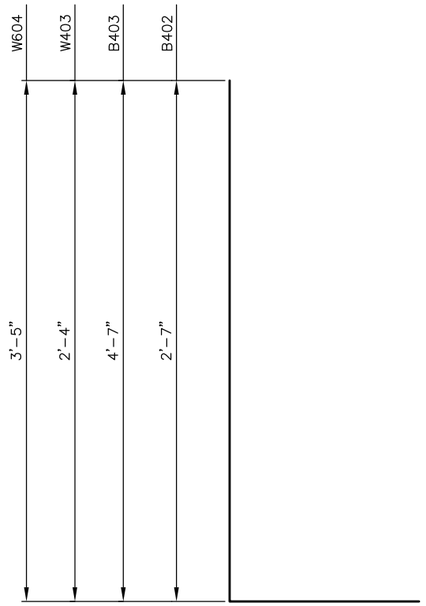
BILL OF BARS
WINGS

UNCOATED = 4,310 LBS.

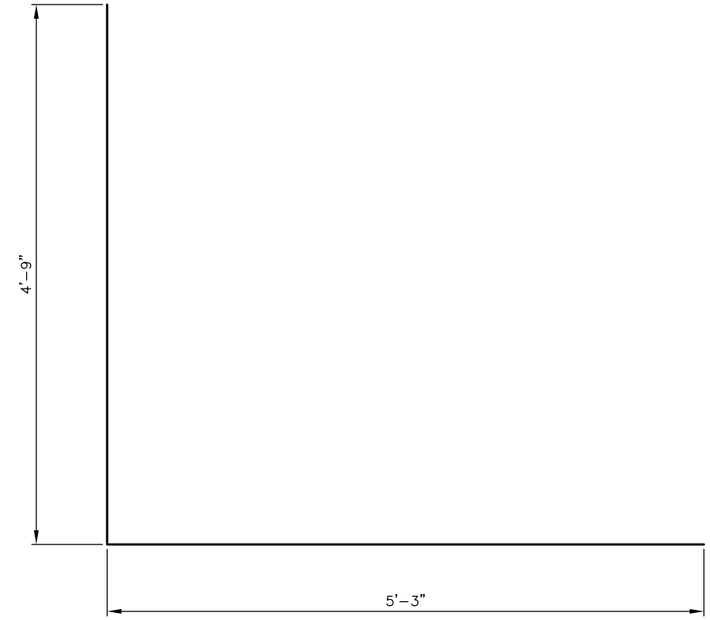
MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH	BENT	BAR SERIES	LOCATION	
W401		64	7–6			FOOTING	HORIZ.
W402		112	14–8			FOOTING & WALL	LONGIT.
W403		48	2–11	X		F.F. FOOTING	VERT.
W604		84	4–4	X		B.F. FOOTING	VERT.
W605		64	7–6			FOOTING	HORIZ.
W606		84	9–8			B.F. WALL	VERT.
W407		48	9–8			F.F. WALL	VERT.

BAR SERIES TABLE

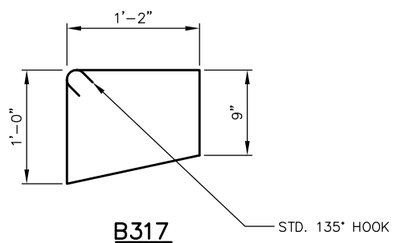
MARK	NUMBER	LENGTH
B405	4 SERIES OF 5	24–9 TO 28–3
B406	4 SERIES OF 8	24–9 TO 28–3
B610	4 SERIES OF 5	1–6 TO 7–6



B402, B403, W403, W604



B604



B317

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE C–73–3

DRAWN BY NJB | PLANS CK'D AJM

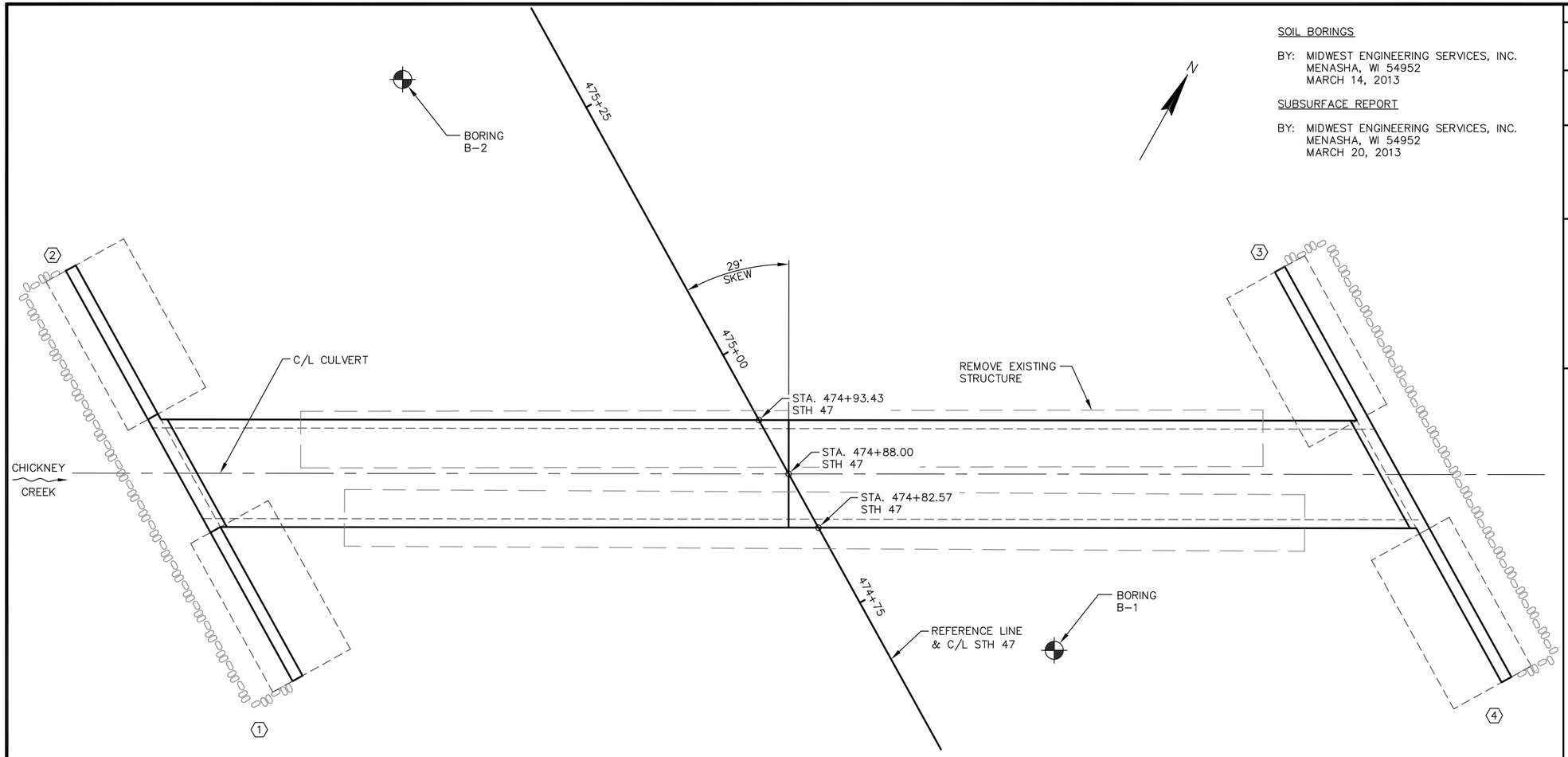
BILL OF BARS

SHEET 5 OF 6

109

FILE: 05_bar.dwg
PLOT SCALE:

I.D. 1009–43–62 PLOT DATE: Aug 06, 2014



SOIL BORINGS

BY: MIDWEST ENGINEERING SERVICES, INC.
MENASHA, WI 54952
MARCH 14, 2013

SUBSURFACE REPORT

BY: MIDWEST ENGINEERING SERVICES, INC.
MENASHA, WI 54952
MARCH 20, 2013

STATE PROJECT NUMBER

1009-43-62

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

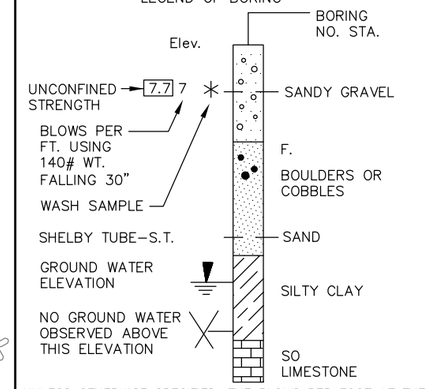
PROBING NO.
STA.
ELEVATION

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

7 AVERAGE BLOWS PER FOOT

REFUSAL 95/6

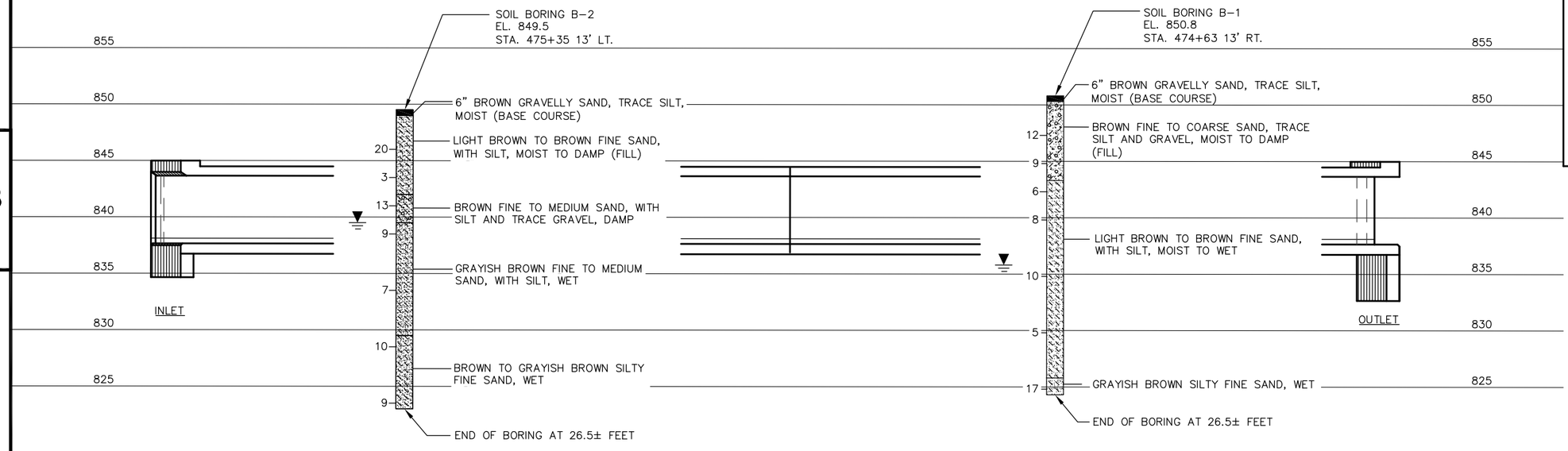
LEGEND OF BORING



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 THE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.



No.	Date	Revision	By

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE C-73-3

Drawn By NJB | Plans Checked AJM

SUBSURFACE EXPLORATION

SHEET 6 OF 6

110

I.D. 1009-43-62 PLOT DATE: Aug 06, 2014

FILE: 06_bor.dwg
PLOT SCALE: 1/8" = 1'-0"

8

8

STH 161 North Branch Little Wolf River								
		AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		
STATION	Distance	Cut	Fill	Cut Note 1	Fill	Cut Note 2	Expanded Fill 1.20 Note 3	Mass Ordinate Note 4
163+50		43.63	46.15					
163+72	22	47.05	77.63	37	50	37	61	-24
163+89	17	53.20	64.88	32	45	69	114	-46
164+00	11	50.62	34.52	21	20	90	139	-49
164+07	7	51.77	34.93	13	9	103	149	-47

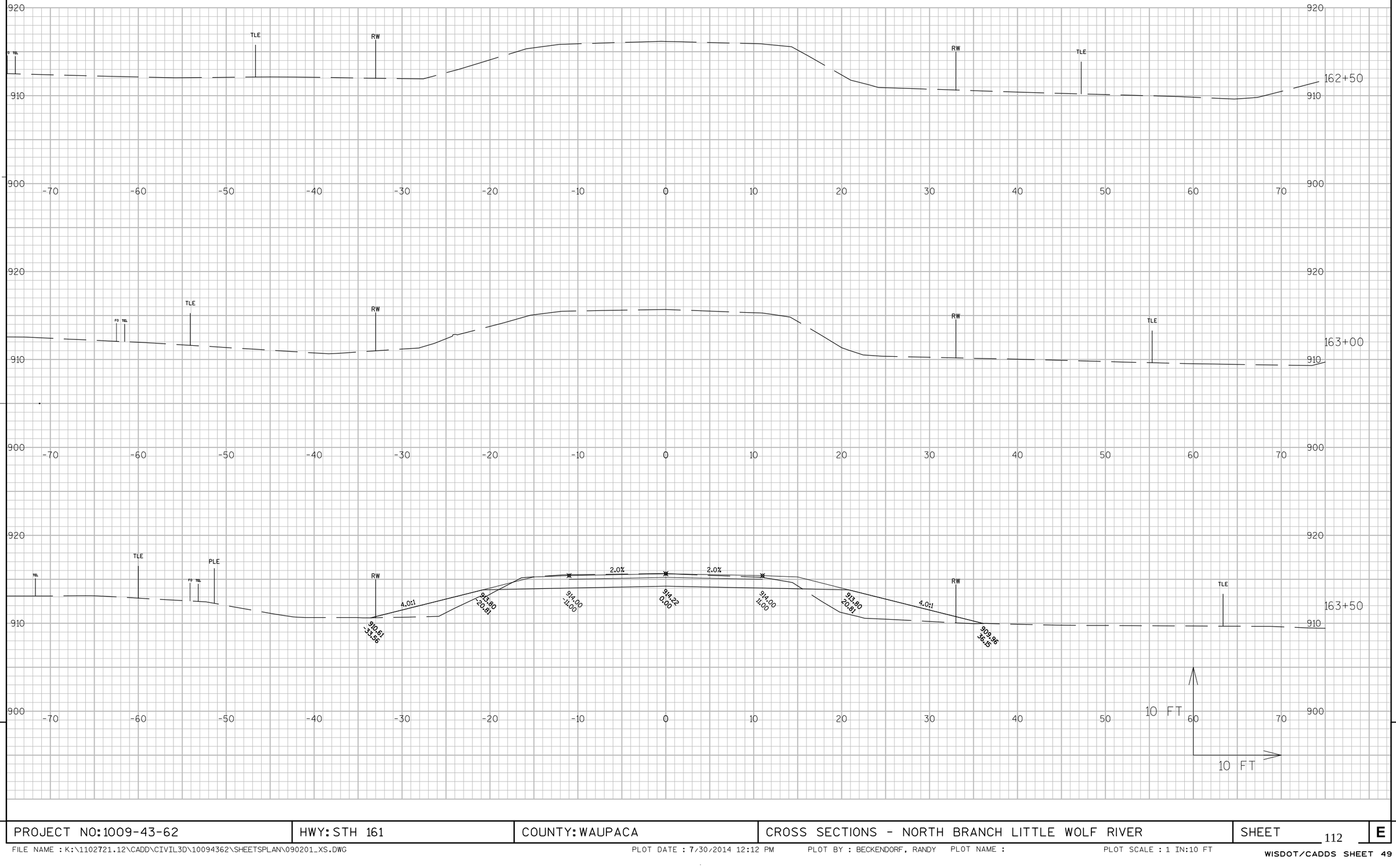
STH 47 Chickney Creek								
		AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		
STATION	Distance	Cut	Fill	Cut Note 1	Fill	Cut Note 2	Expanded Fill 1.20 Note 3	Mass Ordinate Note 4
474+12		11.50	91.79					
474+50	38	71.99	126.77	59	154	59	185	-126
474+60	10	19.18	147.52	17	51	76	246	-170
475+00	40	76.02	170.95	71	236	146	529	-382
475+14	14	27.47	178.59	27	91	173	637	-464
475+50	36	74.12	31.52	68	140	241	805	-565
475+63	13	26.37	28.56	24	14	265	823	-558

STH 32 Swanson Creek								
		AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		
STATION	Distance	Cut	Fill	Cut Note 1	Fill	Cut Note 2	Expanded Fill 1.20 Note 3	Mass Ordinate Note 4
329+75		75.49	0.03					
330+00	25	81.82	0.00	73	0	73	0	73
330+30	30	86.66	49.32	94	27	166	33	134
330+35	5	91.94	23.51	17	7	183	41	142
330+40	5	86.56	53.36	17	7	199	50	150
330+46	6	86.04	83.12	19	15	219	68	151
330+50	4	74.48	64.12	12	11	231	81	150
331+00	50	75.18	0.00	139	59	369	152	217

1) Cut Volume includes Salvaged/Unusable Pavement Material.
2) This assumes the existing pavement is salvaged or wasted by the contractor.
   The existing pavement structure is not shown in the cross sections.
3) Expanded Fill = Unexpanded Fill * Expanded Fill Factor.
4) Mass Ordinate = Cut - Expanded Fill. Mass Ordinate is a + or - Qty calculated for the Division
   Plus quantity indicates a waste volume of material within the Division.
   Minus indicates a shortage of material within the Division.

9

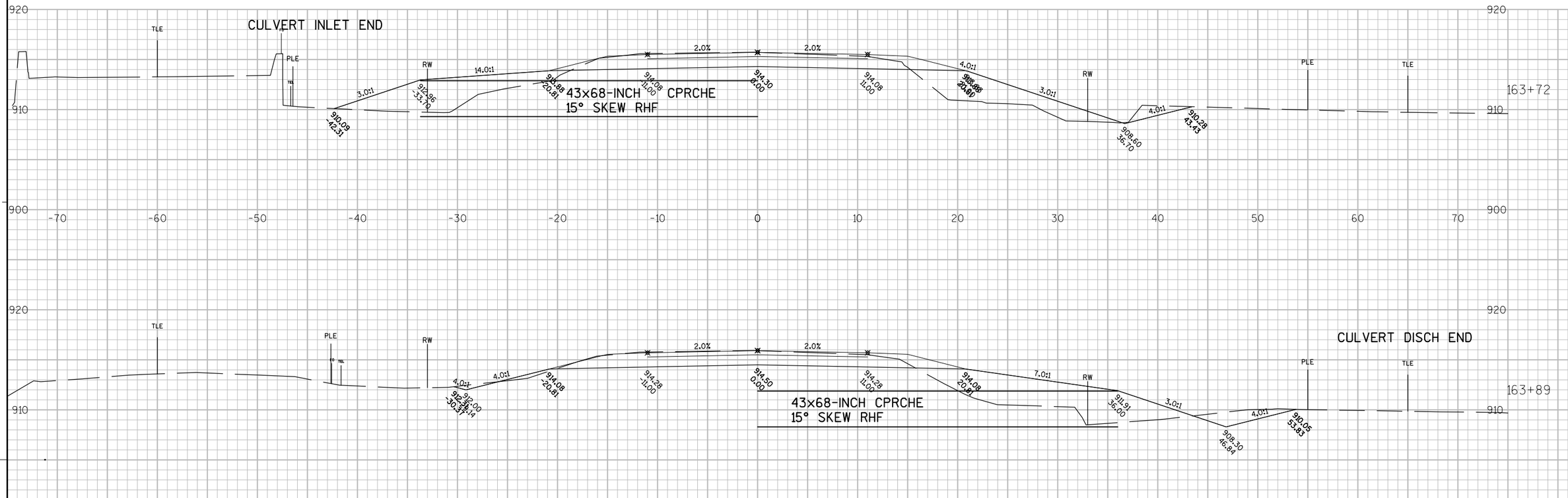
9



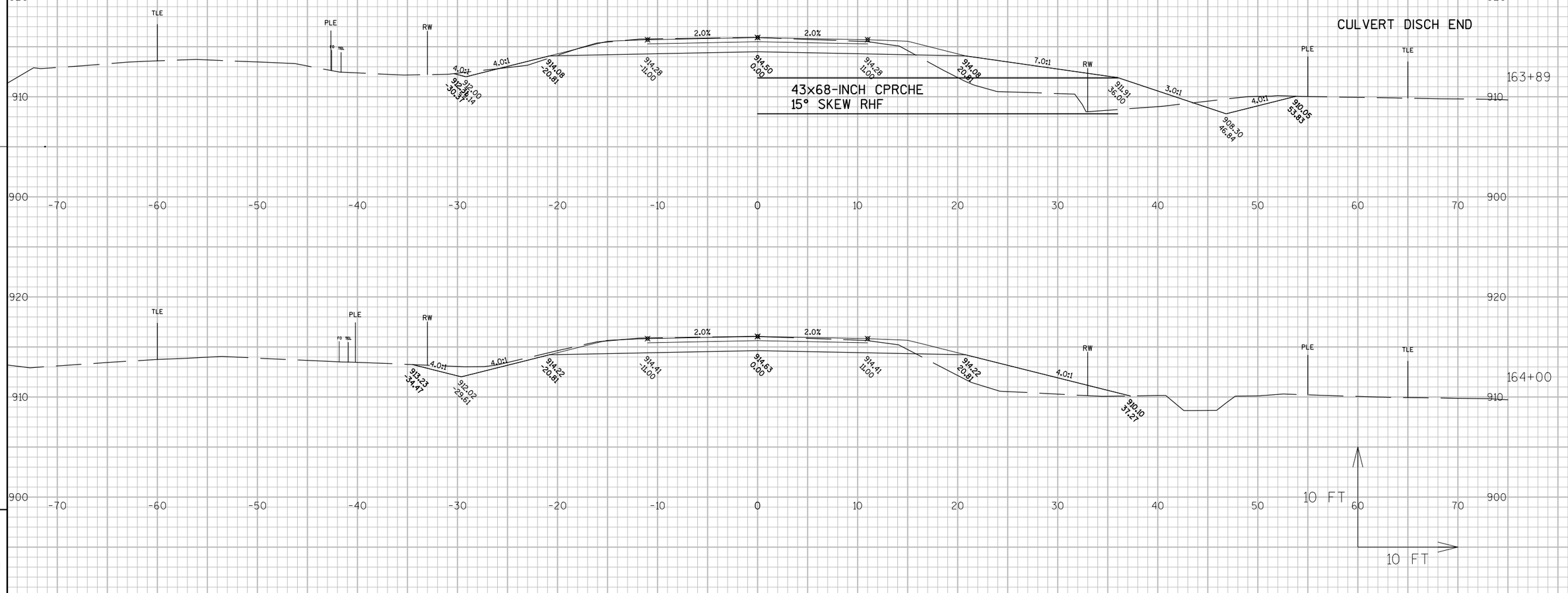
PROJECT NO:1009-43-62	HWY: STH 161	COUNTY: WAUPACA	CROSS SECTIONS - NORTH BRANCH LITTLE WOLF RIVER	SHEET 112	E

FILE NAME : K:\1102721.12\CADD\CIVIL3D\10094362\SHEETSPLAN\090201_XS.DWG PLOT DATE : 7/30/2014 12:12 PM PLOT BY : BECKENDORF, RANDY PLOT NAME : PLOT SCALE : 1 IN:10 FT

CULVERT INLET END



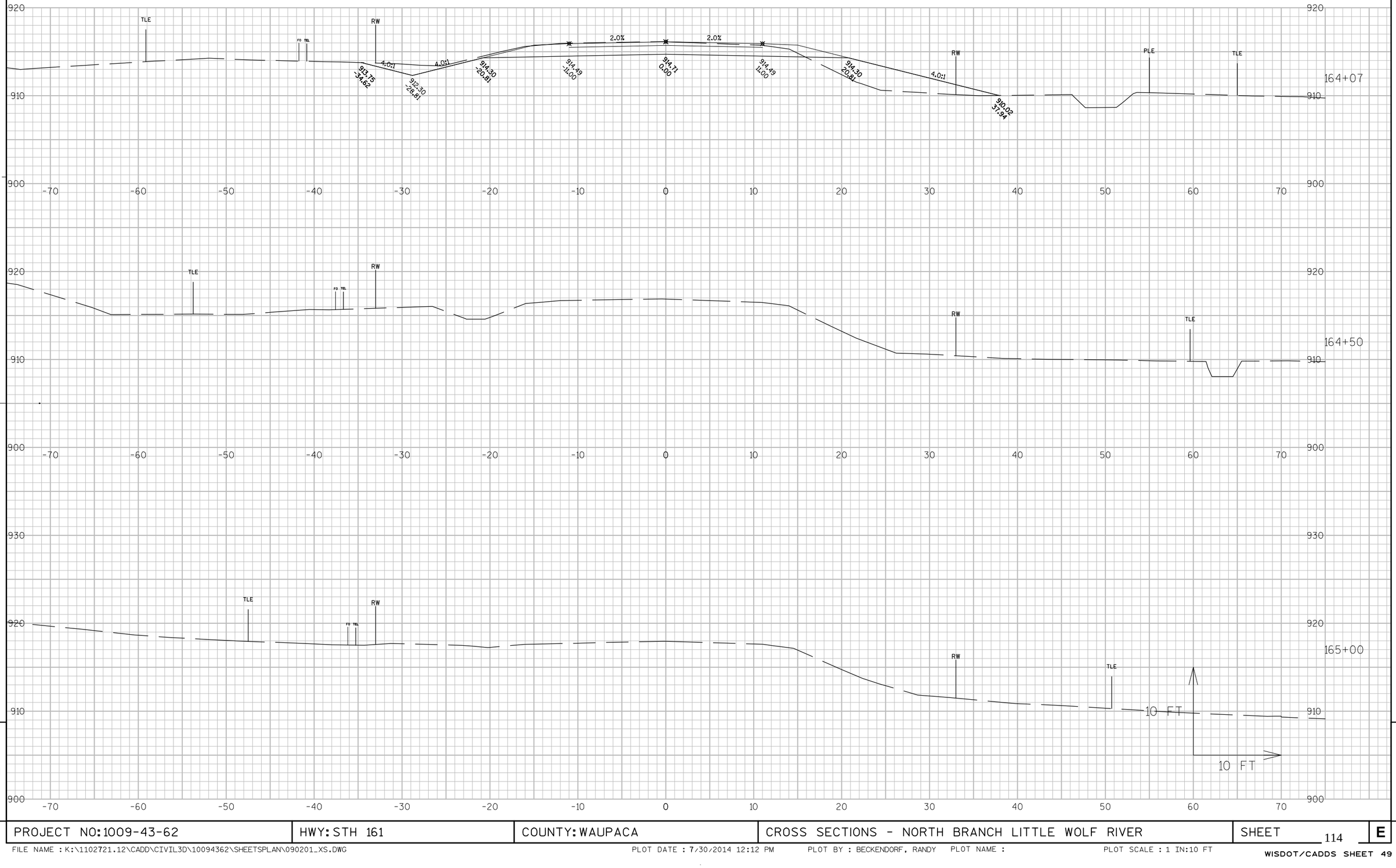
CULVERT DISCH END



PROJECT NO: 1009-43-62	HWY: STH 161	COUNTY: WAUPACA	CROSS SECTIONS - NORTH BRANCH LITTLE WOLF RIVER	SHEET 113	E

FILE NAME : K:\1102721.12\CADD\CIVIL3D\10094362\SHEETSPLAN\090201_XS.DWG PLOT DATE : 7/30/2014 12:12 PM PLOT BY : BECKENDORF, RANDY PLOT NAME : PLOT SCALE : 1 IN:10 FT

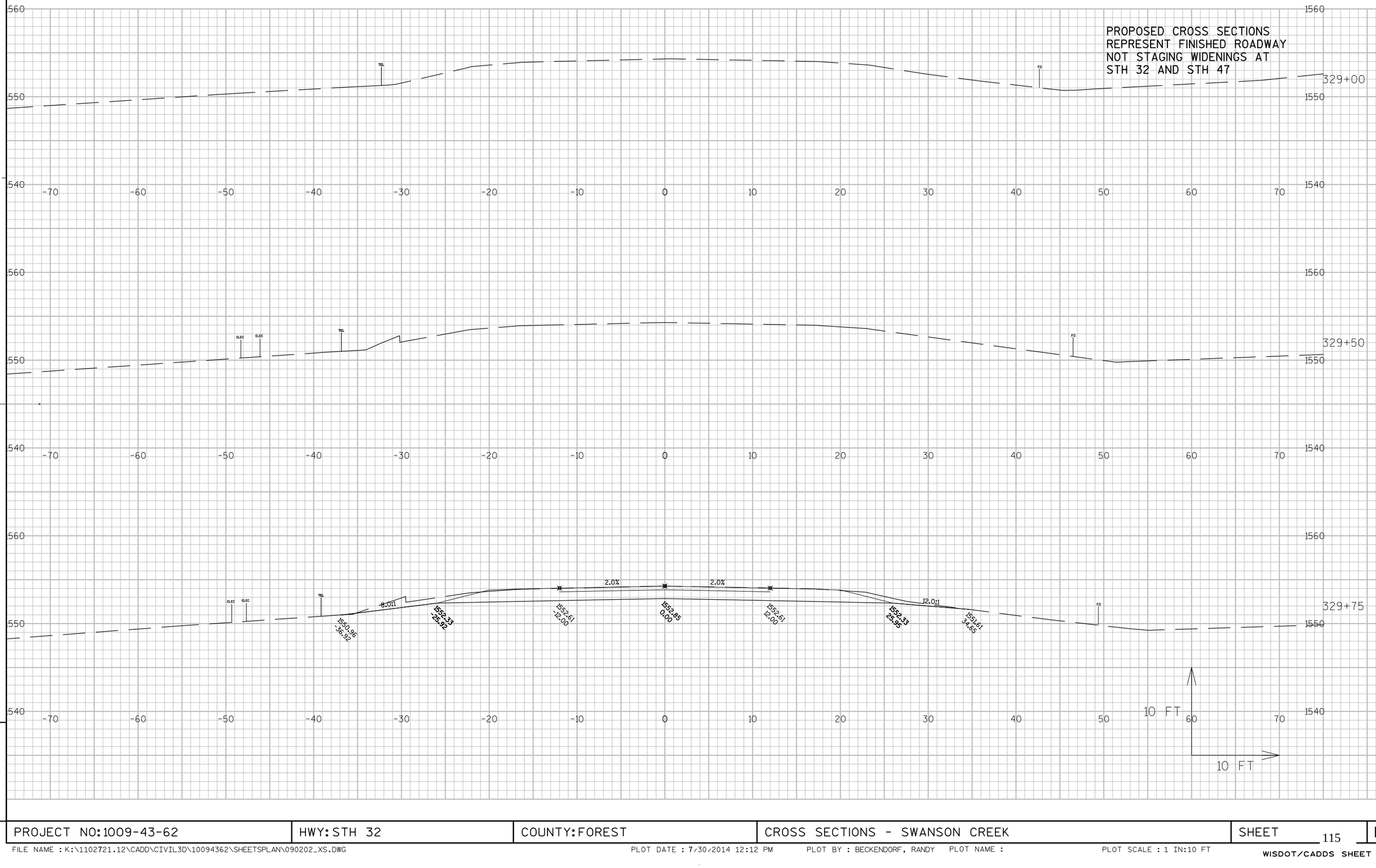
WISDOT/CADDS SHEET 49



9

PROJECT NO:1009-43-62	HWY: STH 161	COUNTY: WAUPACA	CROSS SECTIONS - NORTH BRANCH LITTLE WOLF RIVER	SHEET 114	E

PROPOSED CROSS SECTIONS
REPRESENT FINISHED ROADWAY
NOT STAGING WIDENINGS AT
STH 32 AND STH 47



PROJECT NO:1009-43-62	HWY: STH 32	COUNTY: FOREST	CROSS SECTIONS - SWANSON CREEK	SHEET 115	E

330+00

1560
1550
1540
-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

ELEC ELEC TEL 11.0:1 2.0% 2.0% 12.0:1 FO

1551.45 -35.39 | 1552.32 -25.91 | 1552.59 -12.00 | 1552.83 0.00 | 1552.59 12.00 | 1552.32 25.93 | 1551.22 39.11

330+30

CULVERT INLET END

4.0:1 4.0:1 0.0:1 3.0:1 0.0:1 4.0:1 2.0% 2.0% 6.0:1 TEL FO ELEC ELEC

1545.46 -53.87 | 1543.70 -56.81 | 1547.70 -44.81 | 1552.43 -25.90 | 1552.71 -12.00 | 1552.95 0.00 | 1552.71 12.00 | 1552.43 25.90 | 1551.55 31.19

48x76-INCH CPRCHE
4° SKEW RHF

330+35

CULVERT DISCH END

4.0:1 4.0:1 2.0% 2.0% 4.0:1 4.0:1 3.0:1 0.0:1 4.0:1 TEL FO ELEC ELEC

1551.57 -29.59 | 1552.45 -25.90 | 1552.72 -12.00 | 1552.96 0.00 | 1552.72 12.00 | 1552.45 25.89 | 1551.42 30.00 | 1547.70 44.98 | 1543.70 56.88 | 1546.67 68.78

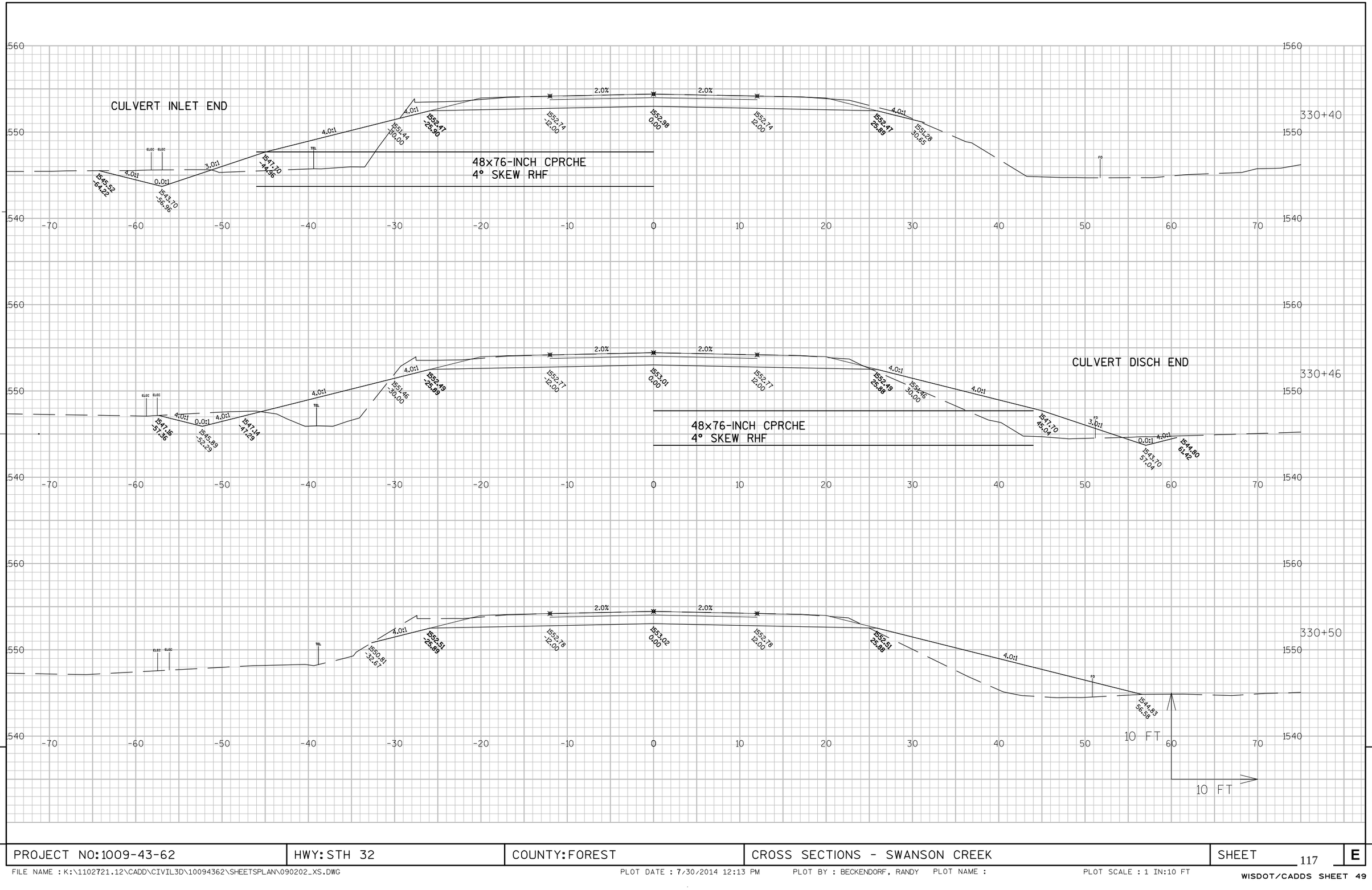
48x76-INCH CPRCHE
4° SKEW RHF

10 FT

10 FT

9 9

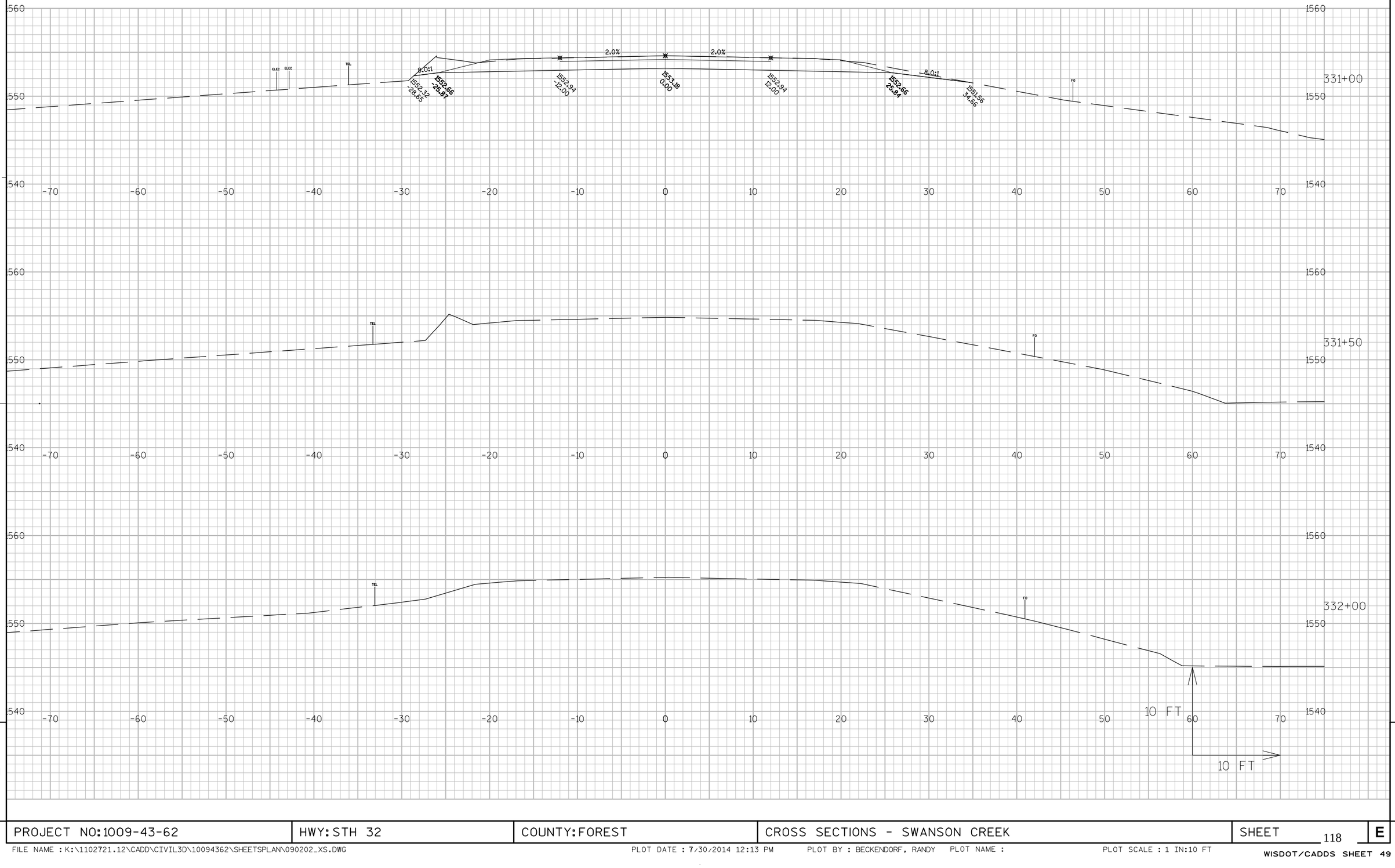
PROJECT NO:1009-43-62	HWY: STH 32	COUNTY:FOREST	CROSS SECTIONS - SWANSON CREEK	SHEET 116	E



PROJECT NO:1009-43-62	HWY: STH 32	COUNTY:FOREST	CROSS SECTIONS - SWANSON CREEK	SHEET 117	E

FILE NAME : K:\1102721.12\CADD\CIVIL3D\10094362\SHEETSPLAN\090202_XS.DWG PLOT DATE : 7/30/2014 12:13 PM PLOT BY : BECKENDORF, RANDY PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



PROJECT NO:1009-43-62	HWY: STH 32	COUNTY:FOREST	CROSS SECTIONS - SWANSON CREEK	SHEET 118 E

FILE NAME : K:\1102721.12\CADD\CIVIL3D\10094362\SHEETSPLAN\090202_XS.DWG PLOT DATE : 7/30/2014 12:13 PM PLOT BY : BECKENDORF, RANDY PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

473+50

474+00

474+12

RW TEL TEL RW TLE

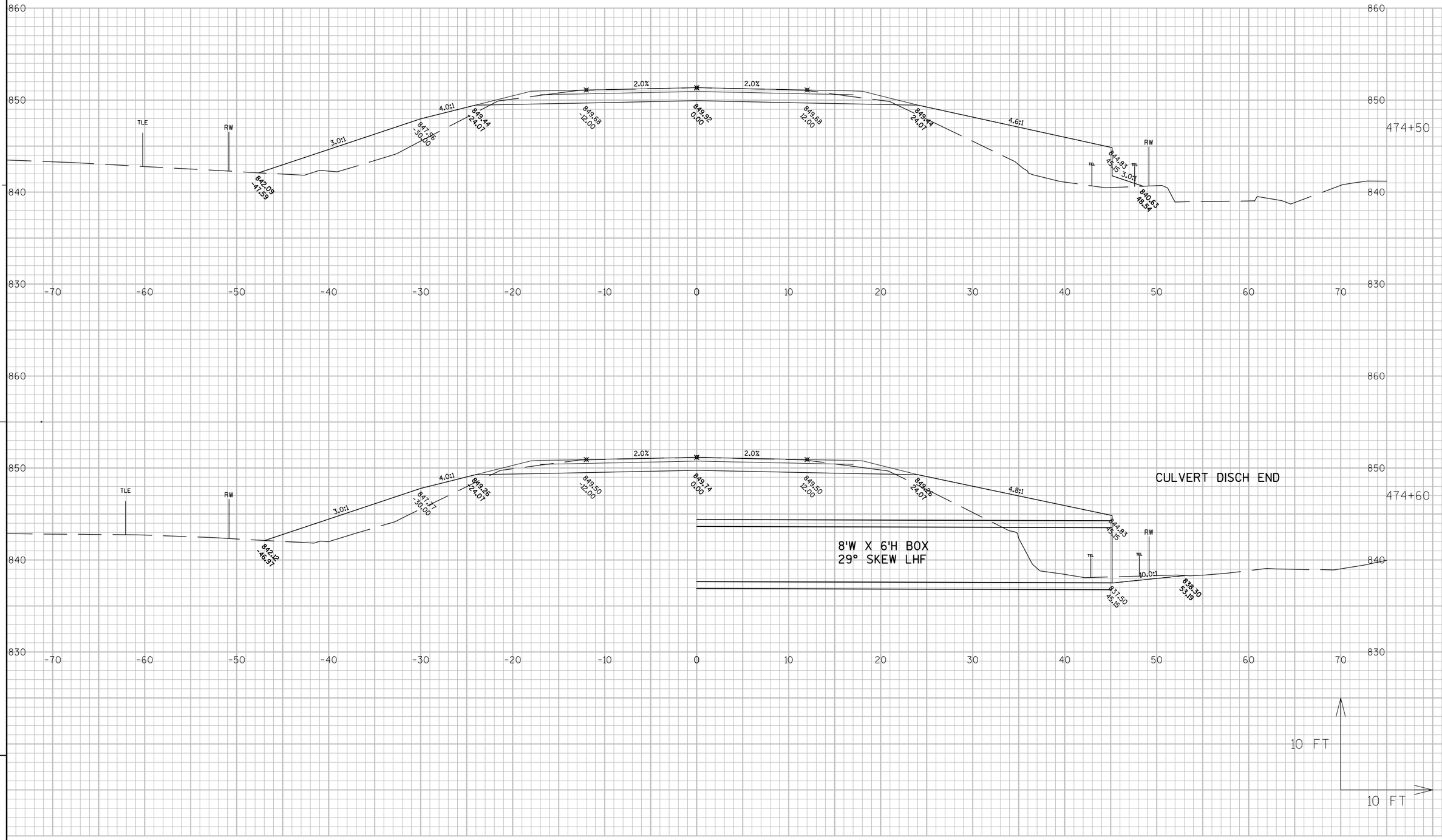
RW TEL TEL RW TLE

TLE RW 3.0:1 4.0:1 844.21 -43.31 848.94 -30.00 850.12 -24.07 2.0% 850.37 -12.00 850.61 0.00 850.37 12.00 2.0% 850.12 24.07 4.0:1 848.64 30.00 3.0:1 840.43 54.63 RW TEL TEL TLE 10 FT 10 FT

860 850 840 830 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

9 9

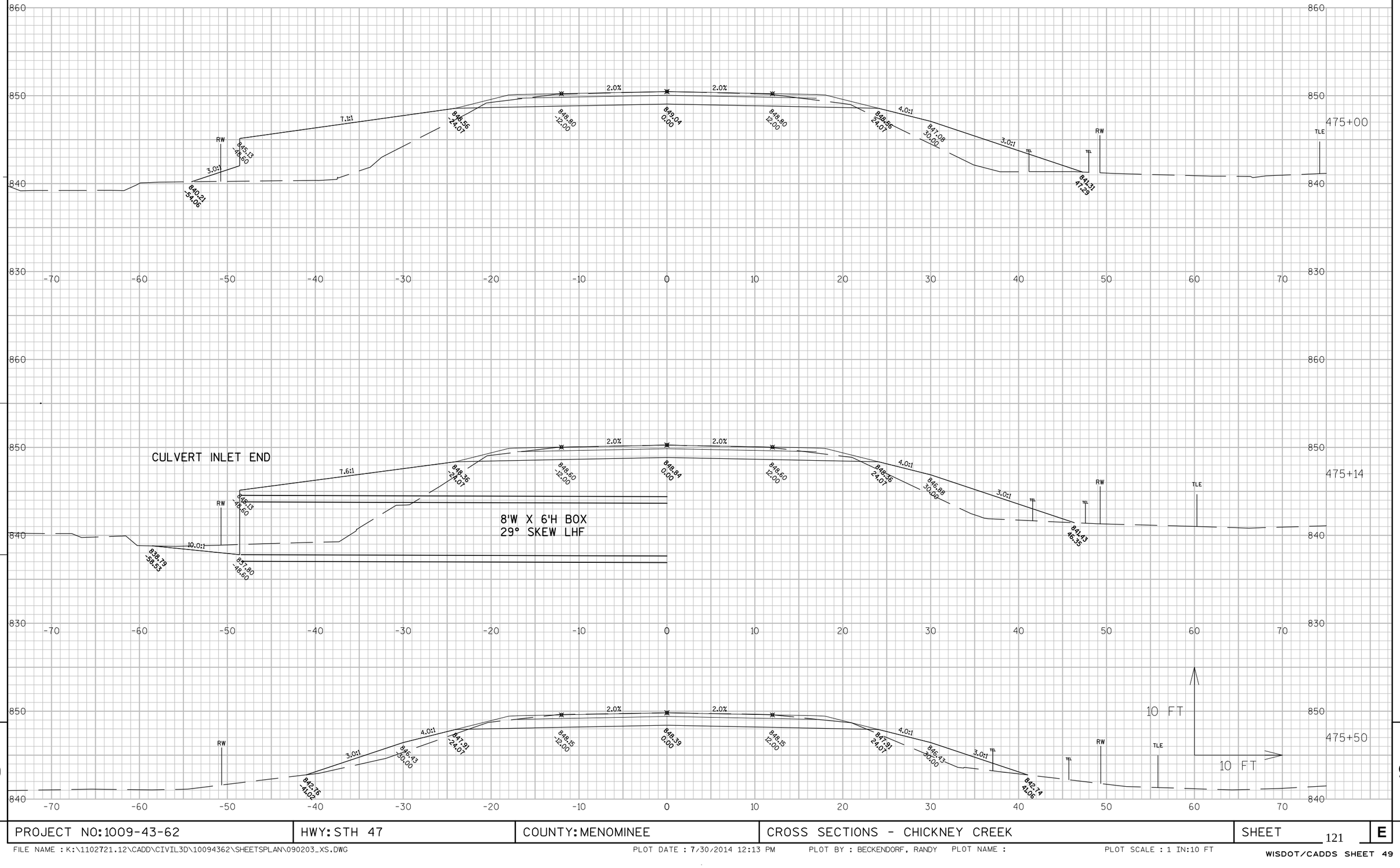
PROJECT NO: 1009-43-62	HWY: STH 47	COUNTY: MENOMINEE	CROSS SECTIONS - CHICKNEY CREEK	SHEET 119	E



PROJECT NO: 1009-43-62	HWY: STH 47	COUNTY: MENOMINEE	CROSS SECTIONS - CHICKNEY CREEK	SHEET 120	E

FILE NAME : K:\1102721.12\CADD\CIVIL3D\10094362\SHEETSPLAN\090203_XS.DWG PLOT DATE : 7/30/2014 12:13 PM PLOT BY : BECKENDORF, RANDY PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

PROJECT NO:1009-43-62	HWY: STH 47	COUNTY: MENOMINEE	CROSS SECTIONS - CHICKNEY CREEK	SHEET 121 E

475+63

476+00

476+50

10 FT

10 FT

PROJECT NO: 1009-43-62	HWY: STH 47	COUNTY: MENOMINEE	CROSS SECTIONS - CHICKNEY CREEK	SHEET 122	E

FILE NAME : K:\1102721.12\CADD\CIVIL3D\10094362\SHEETSPLAN\090203_XS.DWG PLOT DATE : 7/30/2014 12:13 PM PLOT BY : BECKENDORF, RANDY PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

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