WIS | DEC 2013

PROJECT ID: 1620-02-60, 1620-02-61
6140-01-61

COUNTY: WOOD

ORDER OF SHEETS

TOTAL SHEETS = 74

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1620-02-60	———	———
1620-02-61	———	———

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

BABCOCK - PITTSVILLE

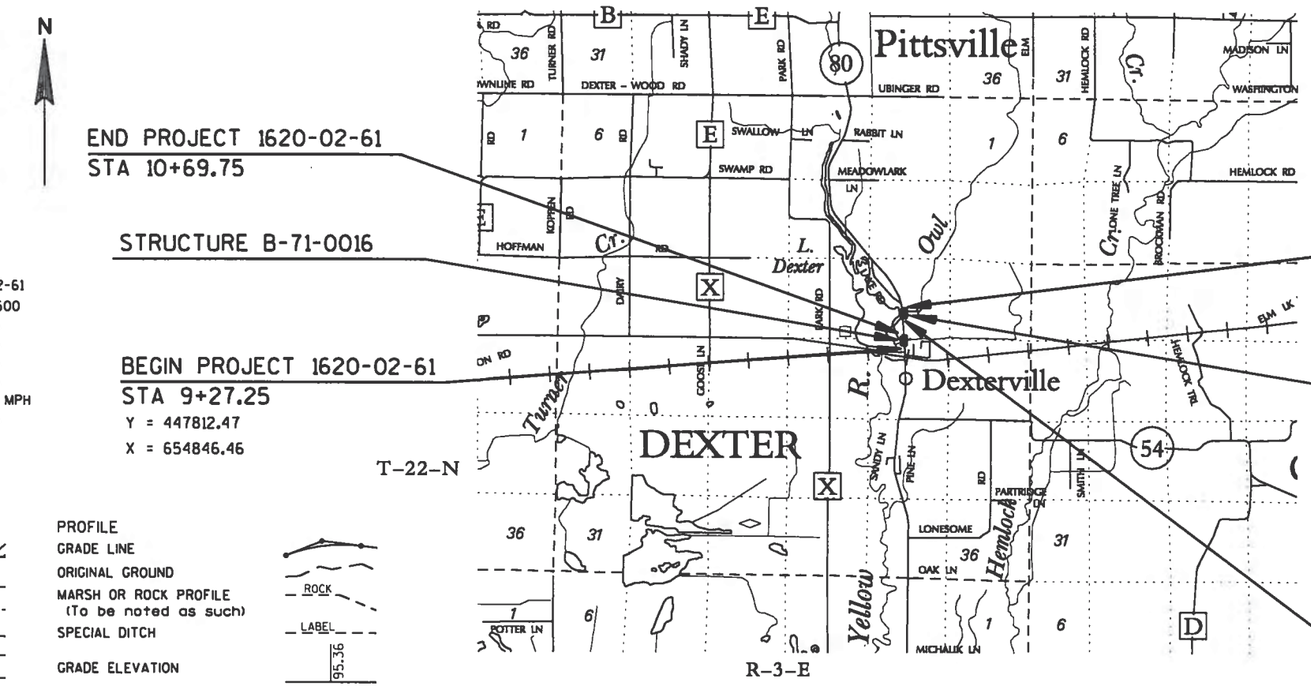
DEXTERVILLE DITCH BRIDGE B-71-0016 — STH 80 — WOOD COUNTY

OWL CREEK BRIDGE B-71-0017 — STH 80 — WOOD COUNTY

STATE PROJECT NUMBER 1620-02-61

STATE PROJECT NUMBER 1620-02-60

23



DESIGN DESIGNATION

	1620-02-60	1620-02-61
A.A.D.T. 2008	= 2,500	= 2,500
A.A.D.T.	= NA	= NA
D.H.V.	= NA	= NA
D.D.	= NA	= NA
T.	= NA	= NA
DESIGN SPEED	= 45 MPH	= 45 MPH
ESALS	= NA	= NA

CONVENTIONAL SYMBOLS

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

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

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

LAYOUT SCALE 0 — 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.027 MI. (1620-02-60)
TOTAL NET LENGTH OF CENTERLINE = 0.027 MI. (1620-02-61)

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS) WOOD COUNTY NAD 1983 (2007).
ELEVATION SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 NAVD 88 (2007).

ORIGINAL PLANS PREPARED BY
OMNNI ASSOCIATES

JUDITH ANN WILSON E-22940 NEENAH, WI — WISCONSIN PROFESSIONAL ENGINEER
7/31/13

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	OMNNI ASSOCIATES
Designer	OMNNI ASSOCIATES
Project Manager	KEVIN GARRIGAN, P.E.
Regional Examiner	CHERYL SIMON, P.E.
Regional Supervisor	MICHAEL KRETSCHMER, P.E.

APPROVED FOR THE DEPARTMENT
DATE: 07/31/2013 (Signature)

E

FILE NAME : F:\TR\JOBS\E1970A10\Sheets\Plan\BOX B-71-17\010101_TI.dgn | PLOT DATE : 7/31/2013 10:15:25 AM | PLOT BY : OMNNI - perryd | PLOT NAME : | PLOT SCALE : 10000.0000 sf / IN. | WISDOT/CADDS SHEET 10

GENERAL NOTES

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY FACILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

CONSIDER DIMENSIONS GIVEN FOR EXISTING FEATURES AS APPROXIMATE AND MEASURED IN THE FIELD FOR MATCHING PURPOSES.

FILL AS SHOWN ON THE PLANS PERTAINS TO EMBANKMENTS CONSTRUCTED FROM COMMON EXCAVATION. THE ALLOWANCE USED FOR EXPANDING THE FILLS TO COMPUTE THE VOLUME OF MATERIAL REQUIRED IS 30 PERCENT. ALL FILL VOLUMES SHOWN ARE THE ACTUAL VOLUMES.

WHEN THE QUANTITY OF THE ITEM OF BASE OR ASPHALT PAVEMENT IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

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

ALL DISTURBED AREAS, NOT OTHERWISE SURFACED ARE TO BE TOPSOILED, FERTILIZED, SEEDED AND COVERED WITH EROSION MAT.

CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY HIS OPERATION OUTSIDE THE NORMAL CONSTRUCTION LIMITS.

SEED MIXTURE NO. 30 SHALL BE USED ON ALL DISTURBED AREAS.

DISTANCES SHOWN ON THIS PLAN ARE GROUND DISTANCES.

USE 3" MINIMUM THICKNESS FOR ASPHALTIC SURFACE TEMPORARY.

CONTACTS

ELECTRIC

OAKDALE ELECTRIC COOPERATIVE
489 NORTH OAKWOOD STREET
P.O. BOX 128
OAKDALE, WI 54649
ATTN: SCOTT BROOKMAN
TELEPHONE: (608) 372-4131
EMAIL: sbrookma@oakdalerec.com

TELEPHONE

TDS TELECOM
SUITE 218A
10 COLLEGE AVENUE
APPLETON, WI 54911
ATTN: STEVE JAKUBIEC
TELEPHONE: (920) 882-4166
EMAIL: steve.jakubiec@tdstelecom.com

DNR LIAISON

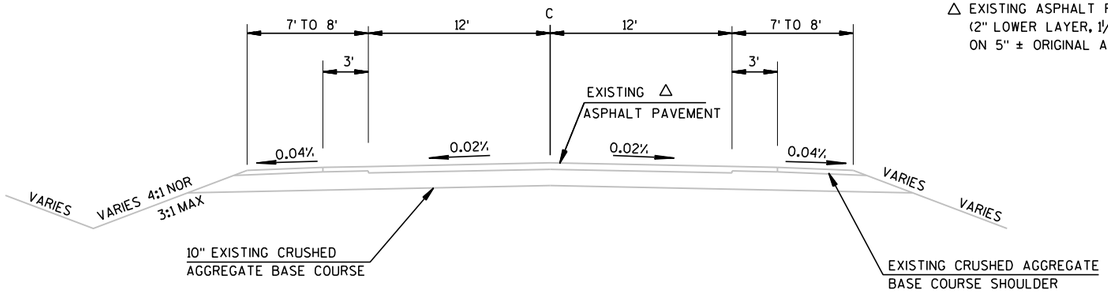
MARC HERSHFIELD
DEPARTMENT OF NATURAL RESOURCES
473 GRIFFITH AVENUE
WISCONSIN RAPIDS, WI 54494
TELEPHONE: 715-421-7867
EMAIL: marc.hershfield@wisconsin.gov

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

EROSION CONTROL NOTES

RUNOFF COEFFICIENTS FOR THIS PROJECT: EXISTING PAVEMENT 0.95, EXISTING SLOPES 0.30, NEW PAVEMENT 0.95, NEW SLOPES 0.30.

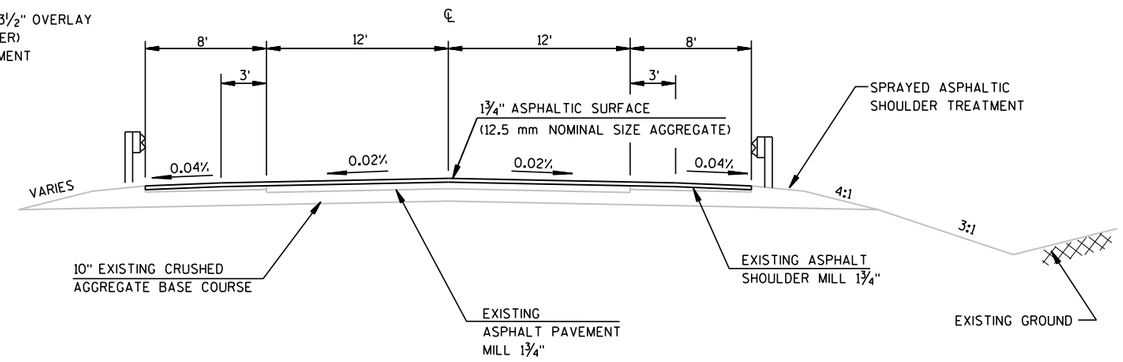
TOTAL PROJECT AREA = 3.35 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 1.17 ACRES.



△ EXISTING ASPHALT PAVEMENT IS 3½" OVERLAY
(2" LOWER LAYER, 1½" UPPER LAYER)
ON 5" ± ORIGINAL ASPHALT PAVEMENT

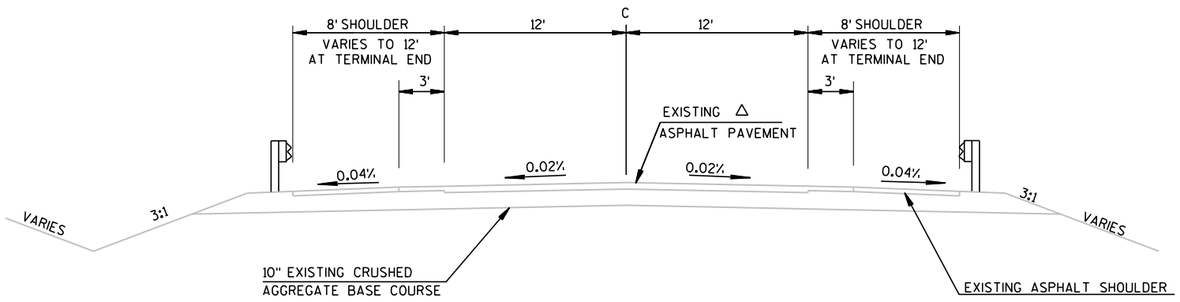
TYPICAL EXISTING SECTION

AT LOCATIONS WITH NO BEAM GUARD

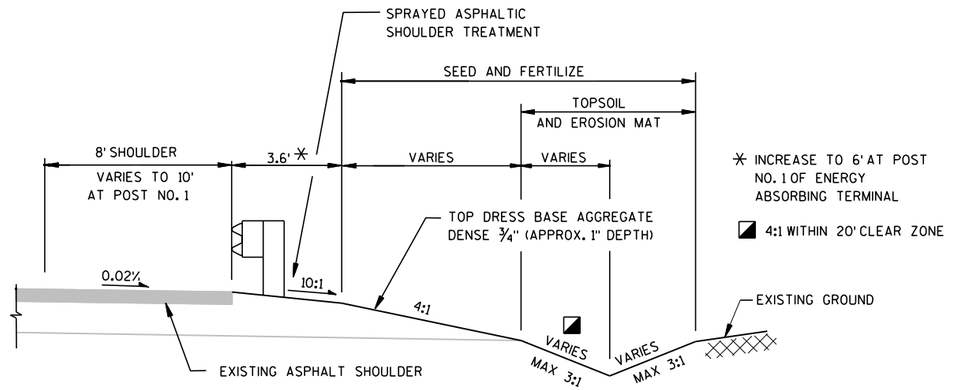


TYPICAL FINISHED SECTION

STA. 9+27.25 TO STA. 9+77.25
STA. 10+19.75 TO STA. 10+69.75
STA. 19+31 TO STA. 19+81
STA. 20+23 TO STA. 20+73



TYPICAL EXISTING SECTION AT BEAM GUARD

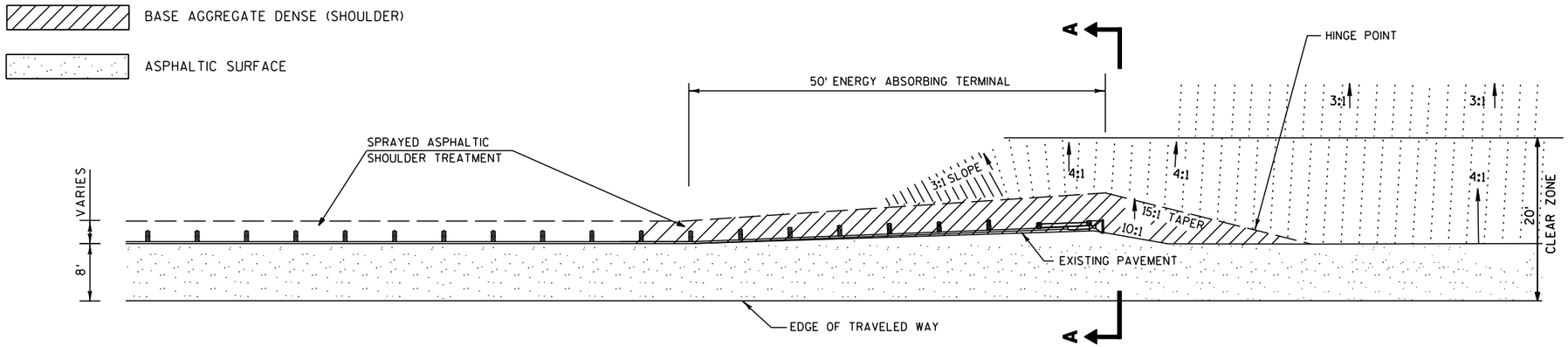


TYPICAL FINISHED SECTION AT ENERGY ABSORBING TERMINAL

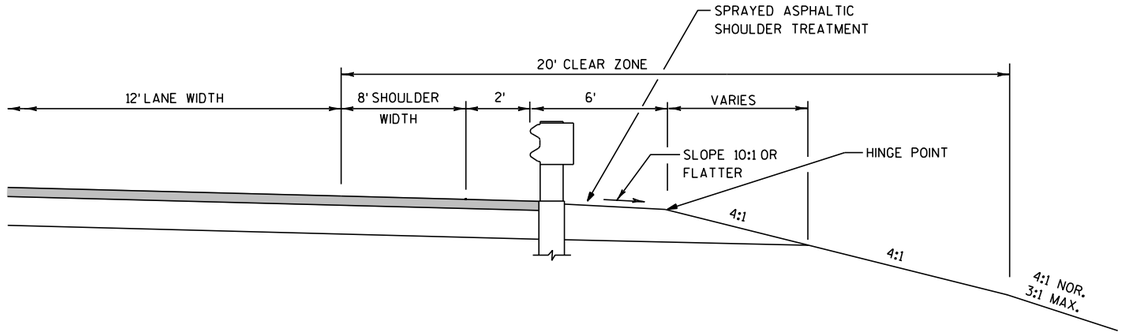
STA. 8+71 TO STA. 9+21 RIGHT & LEFT
STA. 10+50 TO STA. 11+00 RIGHT
STA. 50+39 TO STA. 50+89 RIGHT TOWNHALL ROAD
STA. 18+36.7 TO STA. 18+86.7 LEFT
STA. 18+75 TO STA. 19+25 RIGHT
STA. 20+90.3 TO STA. 22+40.3 RIGHT
STA. 22+68.4 TO STA. 23+81.4 LEFT

PROJECT NO: 1620-02-60/ 61	HWY: STH 80	COUNTY: WOOD	TYPICAL SECTIONS	SHEET 3	E

2



PLAN VIEW

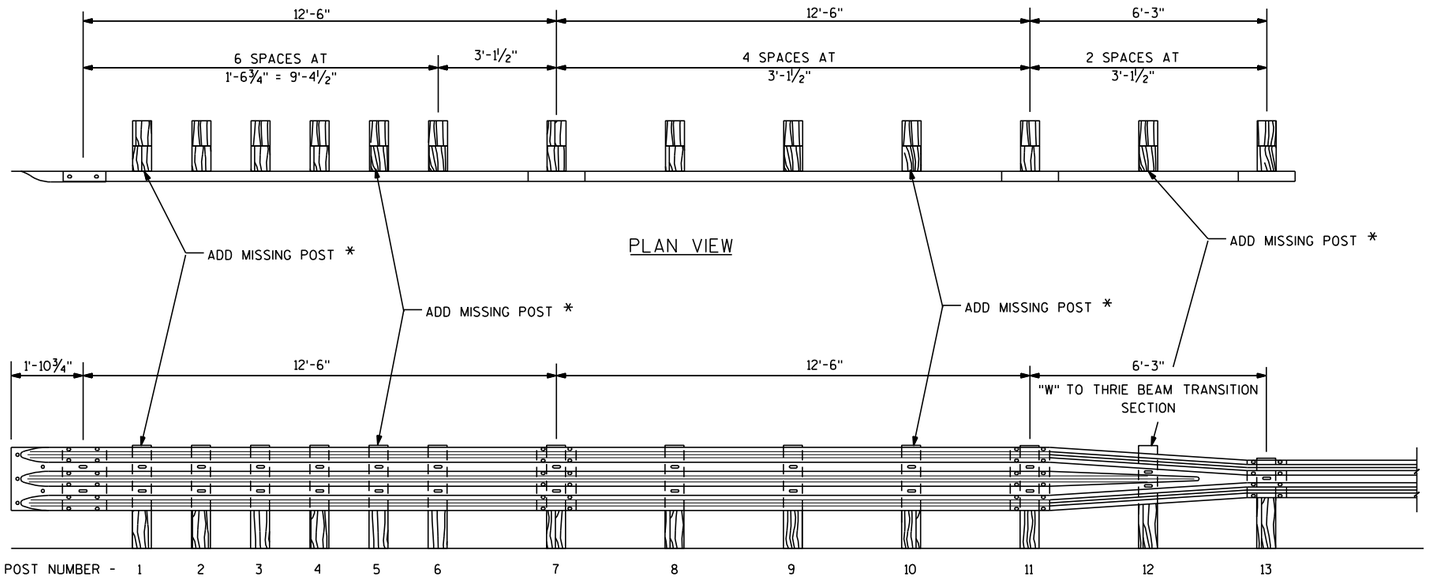


SECTION A-A

NOTE: SEE STANDARD DETAIL DRAWING 14B24
STEEL PLATE BEAM GUARD, ENERGY
ABSORBING TERMINAL, FOR MORE DETAILS.

PROJECT NO: 1620-02-60/61	HWY: STH 80	COUNTY: WOOD	CONSTRUCTION DETAILS - BEAM GUARD DETAILS	SHEET 4	E	2.3

2



PLAN VIEW

ELEVATION

* PAID FOR AS "REPLACING GUARDRAIL POSTS & BLOCKS"

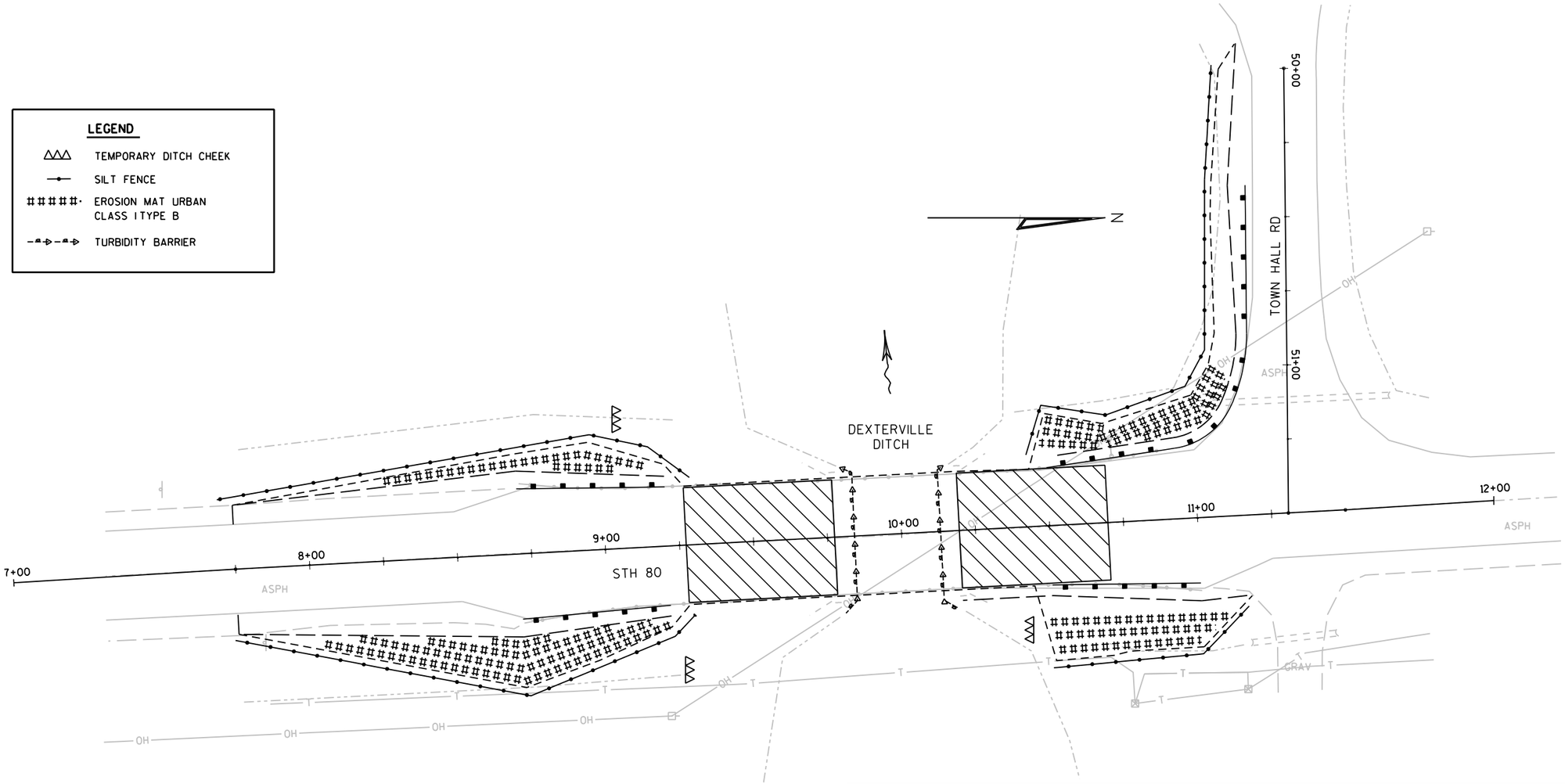
STEEL THRIE BEAM STRUCTURE APPROACH

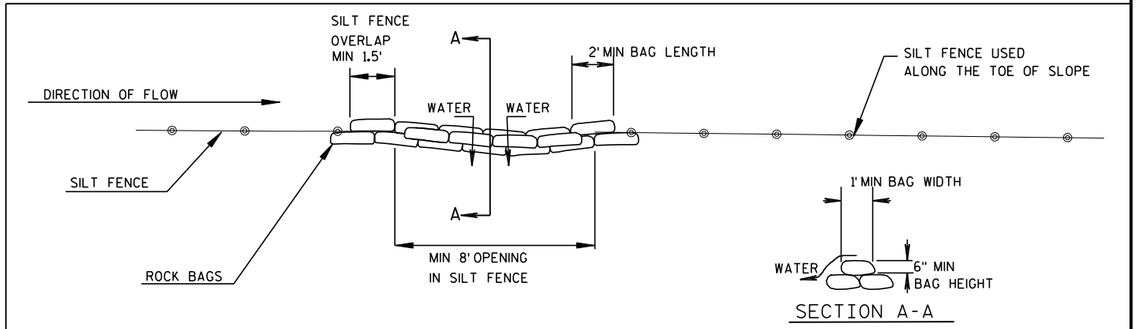
TYPICAL AT ALL FOUR CORNERS B-71-16 & B-71-17

2

LEGEND

- TEMPORARY DITCH CHEEK
- SILT FENCE
- EROSION MAT URBAN CLASS I TYPE B
- TURBIDITY BARRIER





TOP VIEW

ROCK BAGS USED FOR SILT FENCE RELIEF DETAIL

LOCATIONS TO BE DETERMINED BY THE ENGINNER

PROJECT NO: 1620-02-61	HWY: STH 80	COUNTY: WOOD	EROSION CONTROL	SHEET 6	E

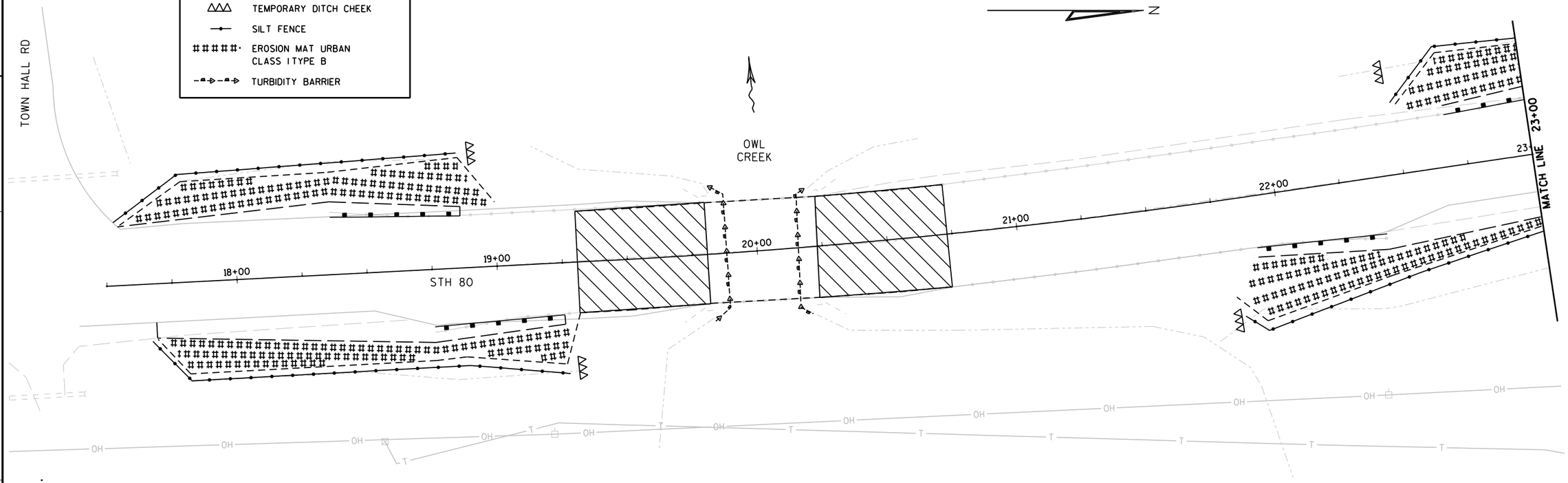
FILE NAME : F:\TR\JOBS\E1970A10\Sheets\Plan\BOX B-71-16\022001_EC.dgn PLOT DATE : 7/15/2013 10:48:21 AM PLOT BY : OMNNI- perryd PLOT NAME : PLOT SCALE : 40.0000 sf / IN.

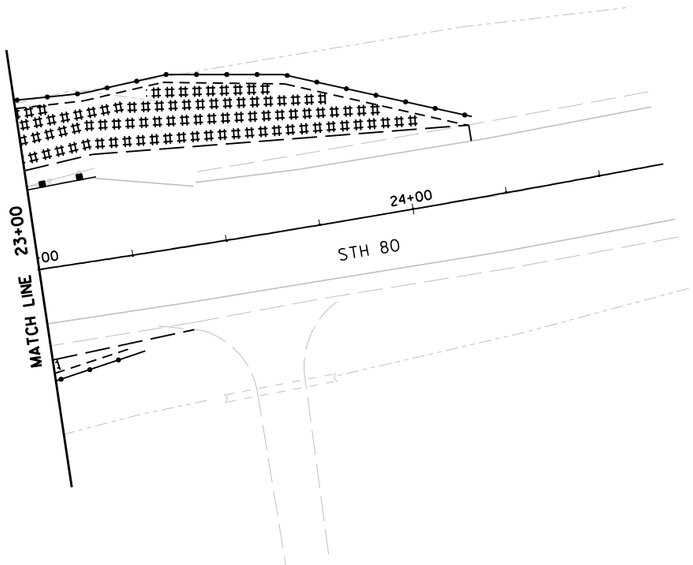
WISDOT/CADDS SHEET 42

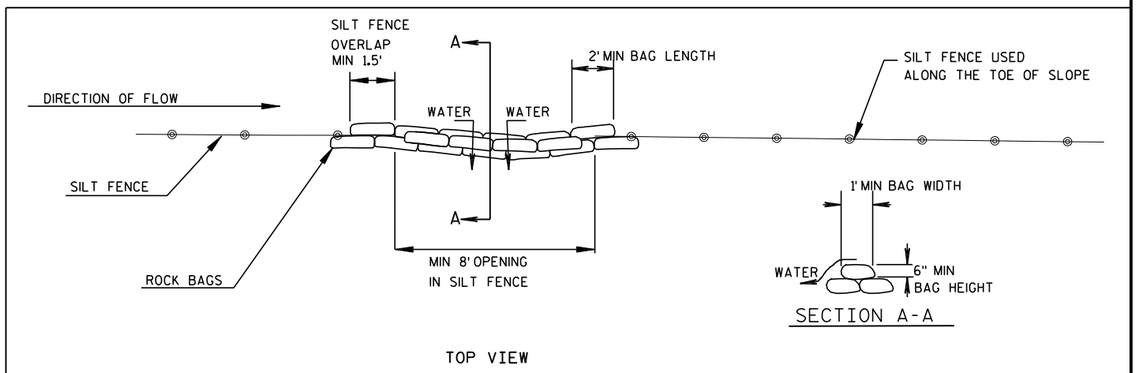
2

LEGEND

- TEMPORARY DITCH CHEEK
- SILT FENCE
- EROSION MAT URBAN CLASS I TYPE B
- TURBIDITY BARRIER







TOP VIEW

ROCK BAGS USED FOR SILT FENCE RELIEF DETAIL

LOCATIONS TO BE DETERMINED BY THE ENGINNER

PROJECT NO: 1620-02-60	HWY: STH 80	COUNTY: WOOD	EROSION CONTROL	SHEET 7	E

FILE NAME : F:\TR\JOBS\E1970A10\Sheets\Plan\BOX B-71-17\022001_ec.dgn PLOT DATE : 7/15/2013 7:40:19 AM PLOT BY : OMNNI - perryd PLOT NAME : PLOT SCALE : 40.0000 sf / IN.

WISDOT/CADDS SHEET 42

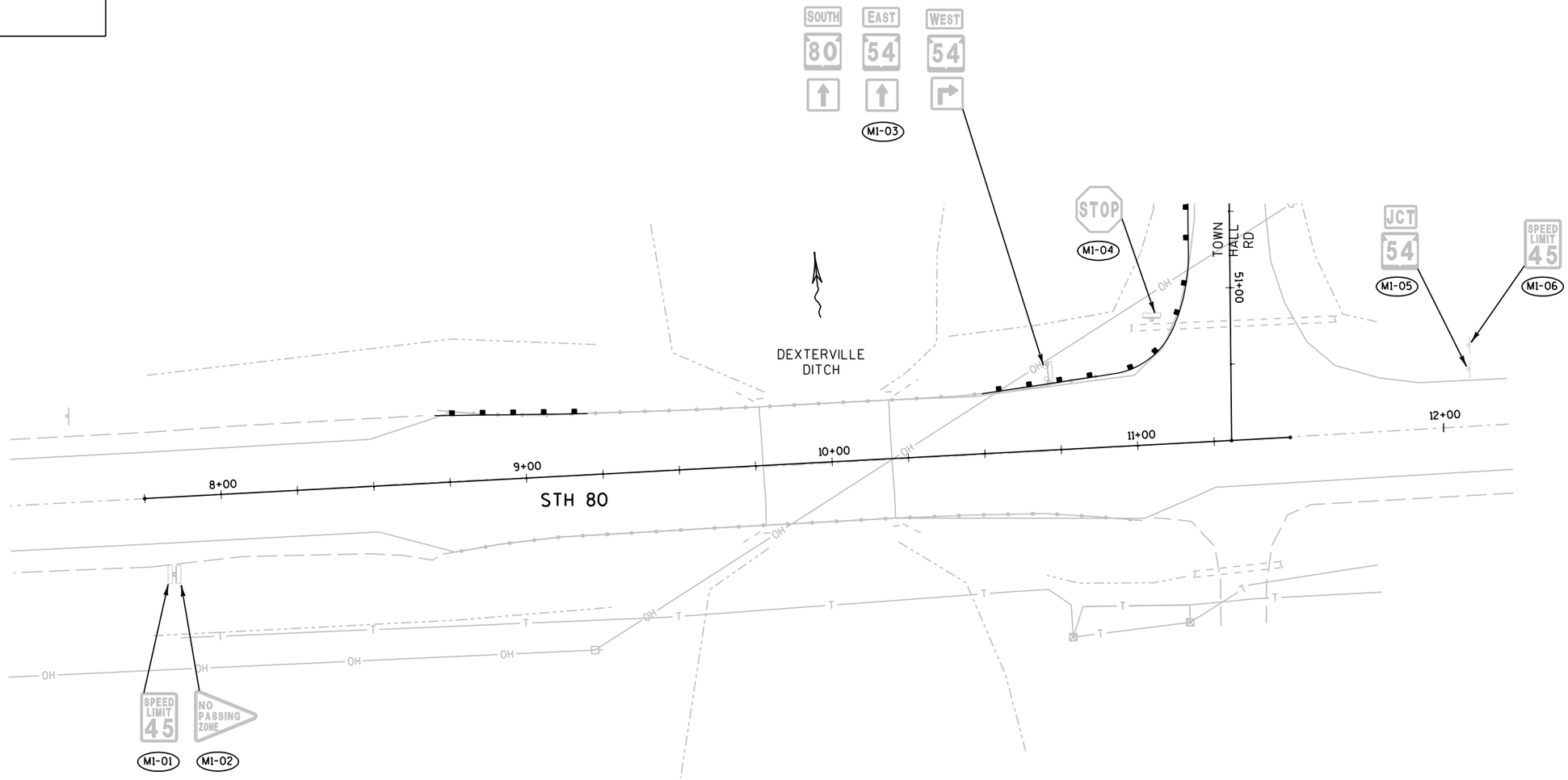
LEGEND

EXISTING SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON POST(S)

(X-XX) PROPOSED SIGN

(MX-XX) MOVE EXISTING SIGN

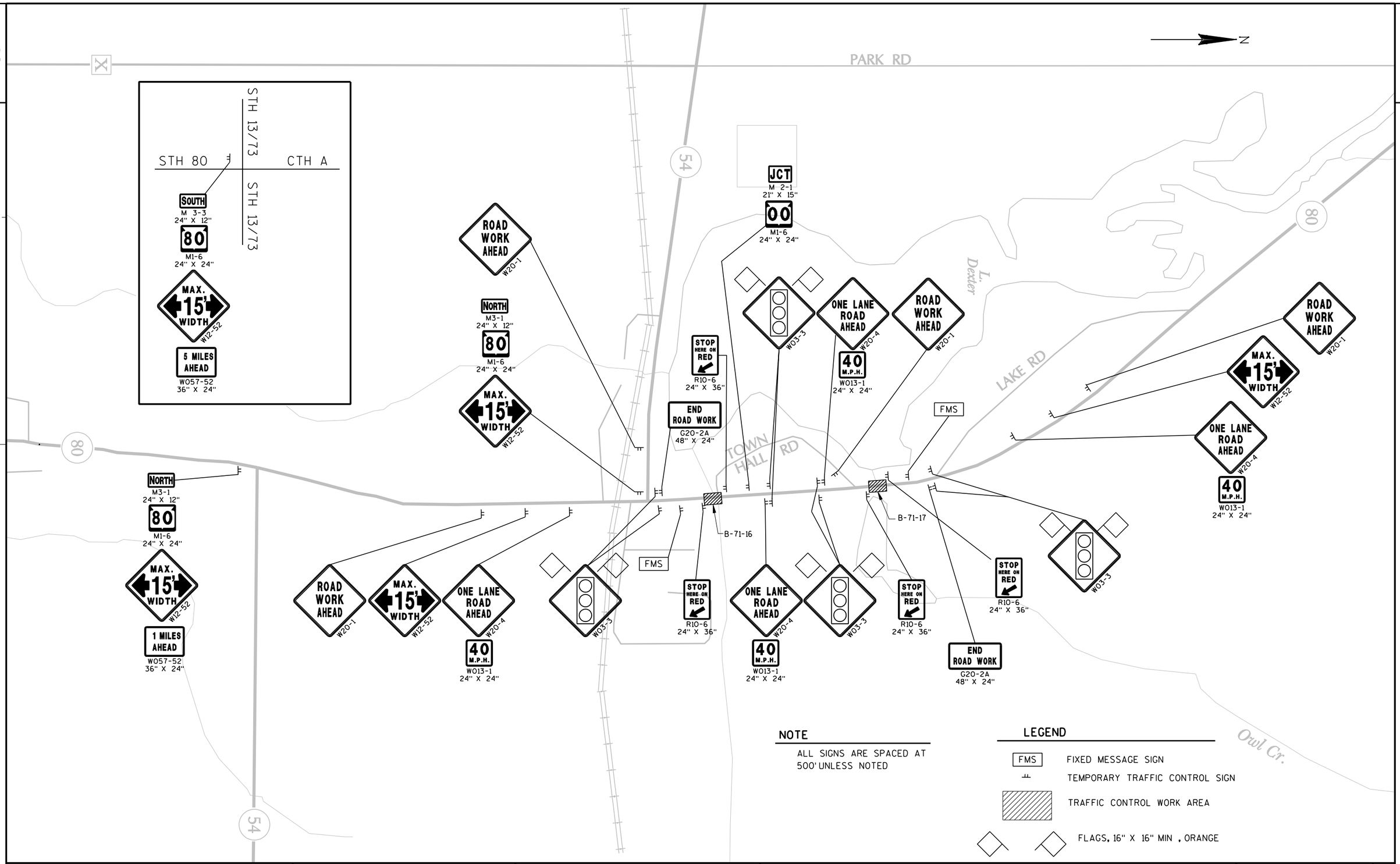


PROJECT NO: 1620-02-61	HWY: STH 80	COUNTY: WOOD	PERMANENT SIGNING	SHEET 8	E

FILE NAME : F:\TR\JOBS\E1970A10\Sheets\Plan\BOX B-71-16\023201_PS_B7116.dgn PLOT DATE : 7/18/2013 12:18:25 PM PLOT BY : OMNNI- perryd PLOT NAME : PLOT SCALE : 40.0000 sf / IN.

WISDOT/CADDS SHEET 42

2.7



NOTE

ALL SIGNS ARE SPACED AT 500' UNLESS NOTED

LEGEND

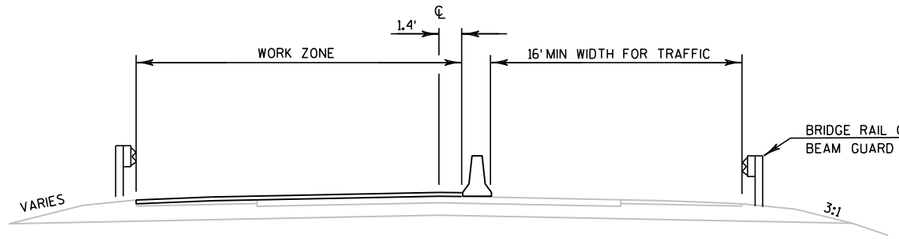
- FMS — FIXED MESSAGE SIGN
- TEMPORARY TRAFFIC CONTROL SIGN
- TRAFFIC CONTROL WORK AREA
- FLAGS, 16" X 16" MIN , ORANGE

PROJECT NO: 1620-02-60/61	HWY: STH 80	COUNTY: WOOD	TRAFFIC CONTROL - ADVANCED WARNING SIGNING	SHEET 9	E

2

LEGEND

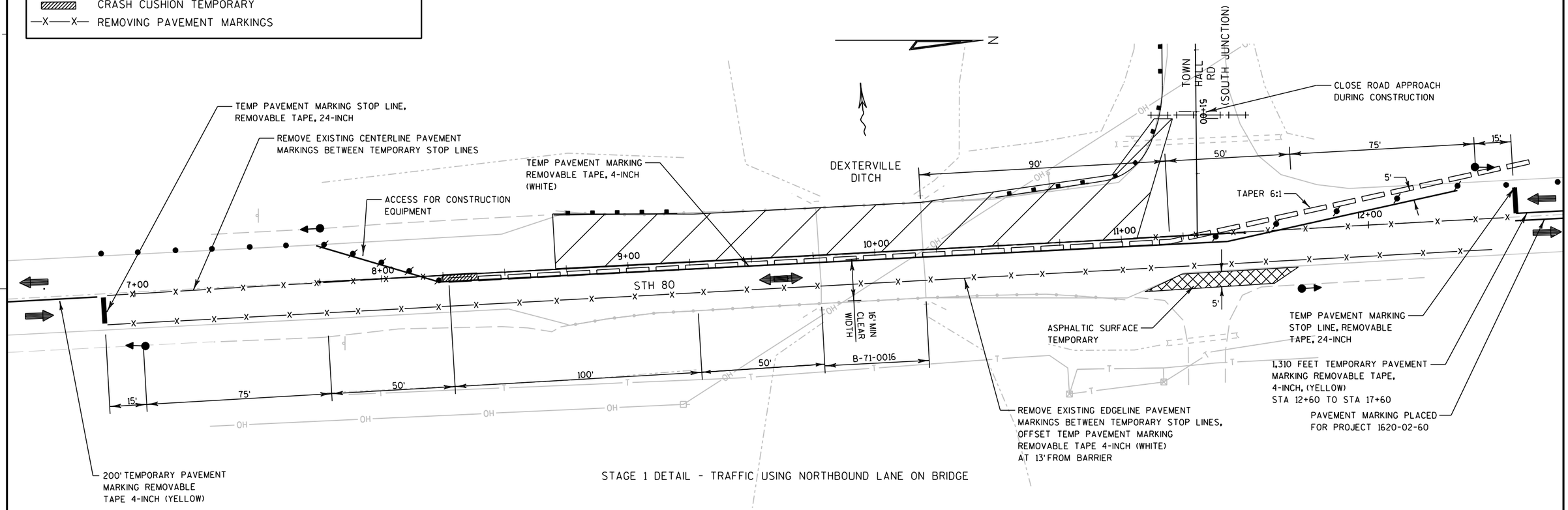
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- TEMPORARY PRECAST CONCRETE BARRIER
- TEMPORARY TRAFFIC SIGNAL
- DIRECTION OF TRAFFIC FLOW
- WORK AREA
- TYPE III BARRICADE WITH OR WITHOUT SIGN
- CRASH CUSHION TEMPORARY
- —X—X— REMOVING PAVEMENT MARKINGS



TYPICAL SECTION IN WORK ZONE

GENERAL NOTES

1. VERIFY EXISTING FIELD CONDITIONS.
2. THIS DETAIL SUPPLEMENTS S.D.D. "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNAL". FOLLOW S.D.D. EXCEPT AS SHOWN IN THIS DETAIL.
3. SEE ADDITIONAL STANDARD DETAIL DRAWINGS FOR OTHER TRAFFIC CONTROL REQUIREMENTS.



STAGE 1 DETAIL - TRAFFIC USING NORTHBOUND LANE ON BRIDGE

TEMPORARY TRAFFIC SIGNAL FOR ONE LANE BRIDGE - DEXTERVILLE DITCH - STH 80

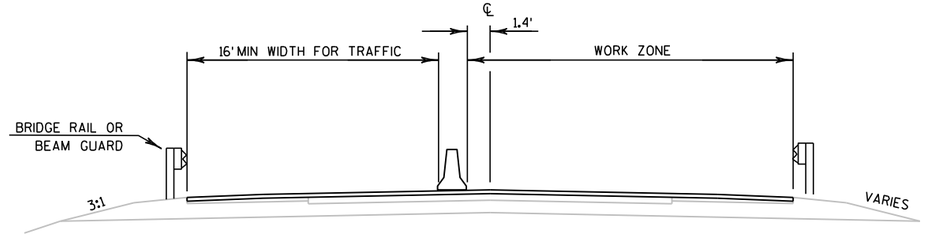
PROJECT NO: 1620-02-61	HWY: STH 80	COUNTY: WOOD	TRAFFIC CONTROL DETAIL - STAGE 1	SHEET 10	E

FILE NAME : F:\TR\JOBS\E1970A10\Sheets\Plan\BOX B-71-16\025001_TC_B7116.dgn PLOT DATE : 7/15/2013 9:00:12 AM PLOT BY : OMNNI- perryd PLOT NAME : PLOT SCALE : 40.0000 sf / IN.
WISDOT/CADDS SHEET 42

2

LEGEND

- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- TEMPORARY PRECAST CONCRETE BARRIER
- TEMPORARY TRAFFIC SIGNAL
- DIRECTION OF TRAFFIC FLOW
- WORK AREA
- TYPE III BARRICADE WITH OR WITHOUT SIGN
- CRASH CUSHION TEMPORARY
- —X—X— REMOVING PAVEMENT MARKINGS
- PLACED IN STAGE 1

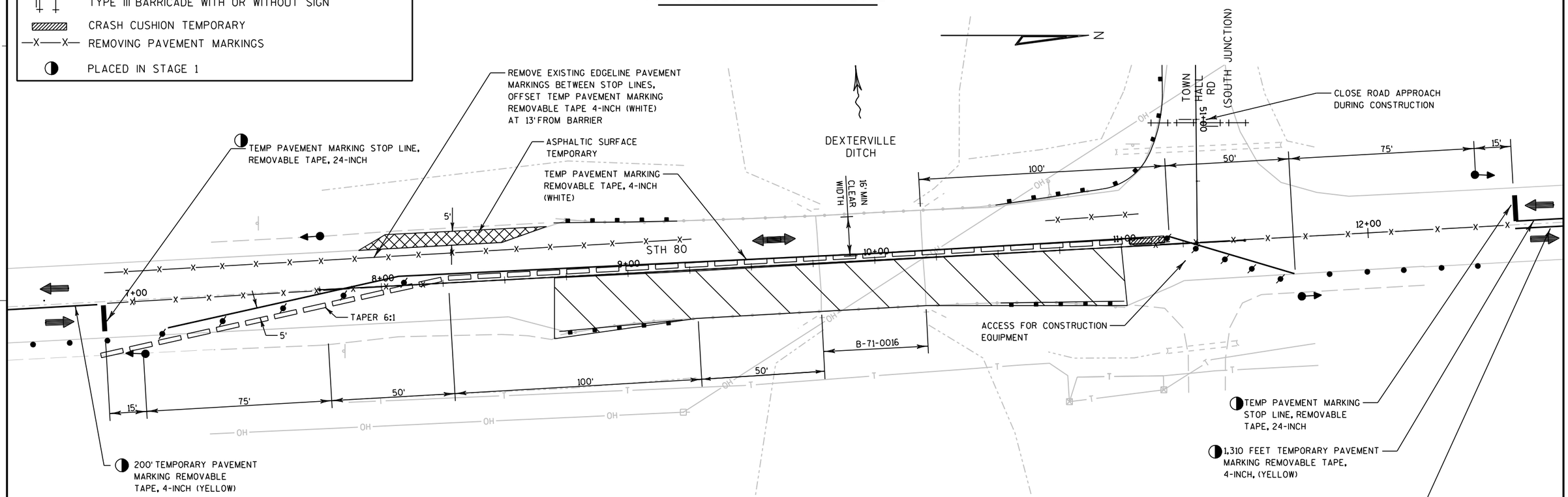


TYPICAL SECTION IN WORK ZONE

GENERAL NOTES

1. VERIFY EXISTING FIELD CONDITIONS.
2. THIS DETAIL SUPPLEMENTS S.D.D. "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNAL". FOLLOW S.D.D. EXCEPT AS SHOWN IN THIS DETAIL.
3. SEE ADDITIONAL STANDARD DETAIL DRAWINGS FOR OTHER TRAFFIC CONTROL REQUIREMENTS.

2



STAGE 2 DETAIL - TRAFFIC USING SOUTHBOUND LANE ON BRIDGE

TEMPORARY TRAFFIC SIGNAL FOR ONE LANE BRIDGE - DEXTERVILLE DITCH - STH 80

PROJECT NO: 1620-02-61	HWY: STH 80	COUNTY: WOOD	TRAFFIC CONTROL DETAIL - STAGE 2	SHEET 11	E	2.10

2

SEQUENCE OF OPERATIONS				
STRUCTURE: B-71-0016 STH 80				
PRE - TIMED CYCLE 1 = 94 seconds				
TIME: 6:00 AM - 6:00 PM				
INTERVAL	NB A1, A2	SB B1, B2	INTERVAL LENGTH (SEC)	% OF CYCLE
PHASE A	G	R	21	22.3%
CLEARANCE	Y	R	4	4.3%
CLEARANCE	R	R	22	23.4%
PHASE B	R	G	21	22.3%
CLEARANCE	R	Y	4	4.3%
CLEARANCE	R	R	22	23.4%
			94	100.0%

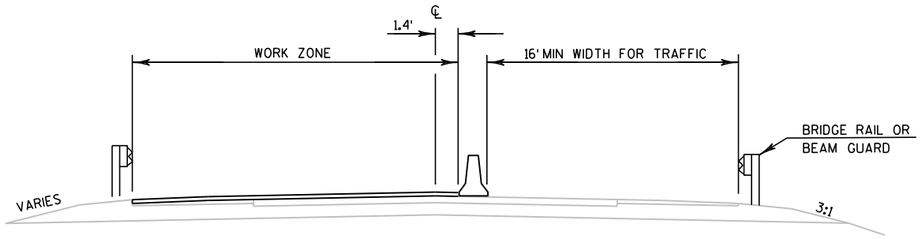
SEQUENCE OF OPERATIONS				
STRUCTURE: B-71-0016 STH 80				
PRE - TIMED CYCLE 2 = 72 seconds				
TIME: 6:00 PM - 6:00 AM				
INTERVAL	NB A1, A2	SB B1, B2	INTERVAL LENGTH (SEC)	% OF CYCLE
PHASE A	G	R	10	13.9%
CLEARANCE	Y	R	4	5.6%
CLEARANCE	R	R	22	30.6%
PHASE B	R	G	10	13.9%
CLEARANCE	R	Y	4	5.6%
CLEARANCE	R	R	22	30.6%
			72	100.0%

NOTE: G = GREEN
Y = YELLOW
R = RED

2

LEGEND

- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- TEMPORARY PRECAST CONCRETE BARRIER
- TEMPORARY TRAFFIC SIGNAL
- DIRECTION OF TRAFFIC FLOW
- WORK AREA
- CRASH CUSHION TEMPORARY
- —X—X— REMOVING PAVEMENT MARKINGS

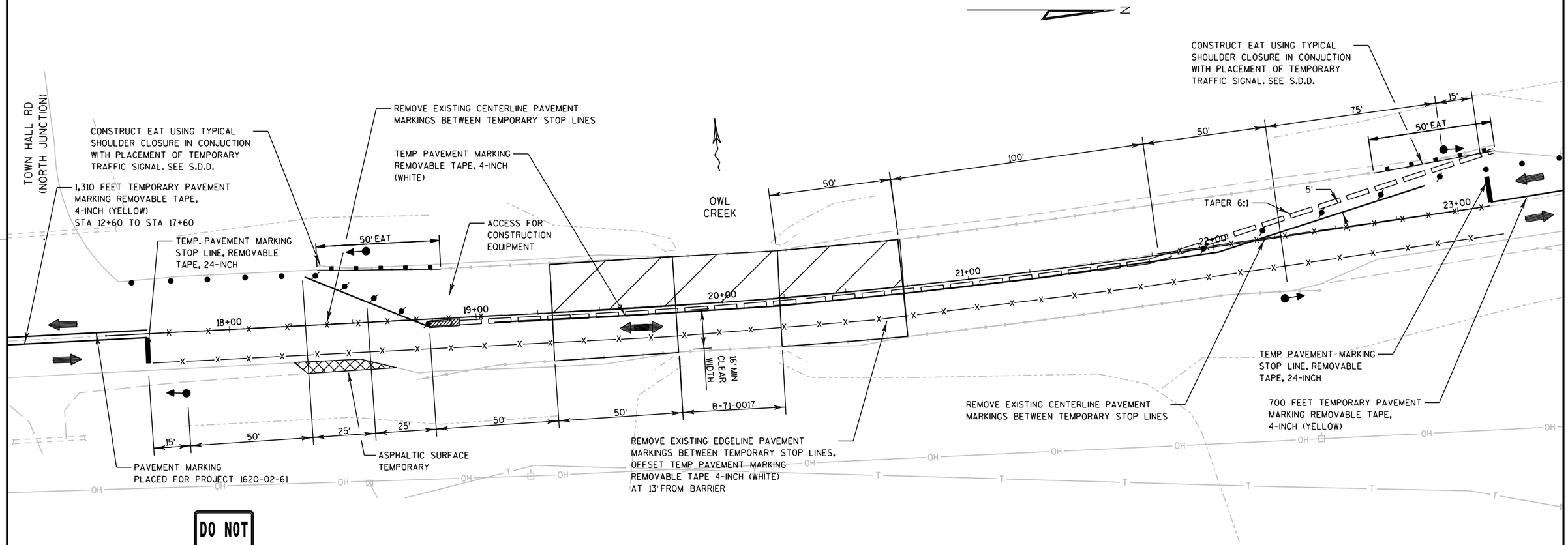


TYPICAL SECTION IN WORK ZONE

GENERAL NOTES

1. VERIFY EXISTING FIELD CONDITIONS.
2. THIS DETAIL SUPPLEMENTS S.D.D. "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNAL". FOLLOW S.D.D. EXCEPT AS SHOWN IN THIS DETAIL.
3. SEE ADDITIONAL STANDARD DETAIL DRAWINGS FOR OTHER TRAFFIC CONTROL REQUIREMENTS.

2



STAGE 1 DETAIL - TRAFFIC USING NORTHBOUND LANE ON BRIDGE

DO NOT BLOCK INTERSECTION

R10-7
24" X 30"

PLACE SIGN SOUTH OF STH 80 / TOWN HALL RD INTERSECTION

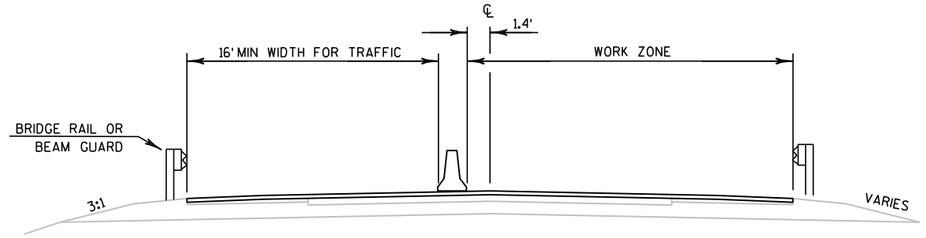
TEMPORARY TRAFFIC SIGNAL FOR ONE LANE BRIDGE - OWL CREEK - STH 80

PROJECT NO: 1620-02-60	HWY: STH 80	COUNTY: WOOD	TRAFFIC CONTROL DETAIL - STAGE 1	SHEET 13	E	2.12

2

LEGEND

- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- TEMPORARY PRECAST CONCRETE BARRIER
- TEMPORARY TRAFFIC SIGNAL
- DIRECTION OF TRAFFIC FLOW
- WORK AREA
- CRASH CUSHION TEMPORARY
- —X—X— REMOVING PAVEMENT MARKINGS
- PLACED IN STAGE 1

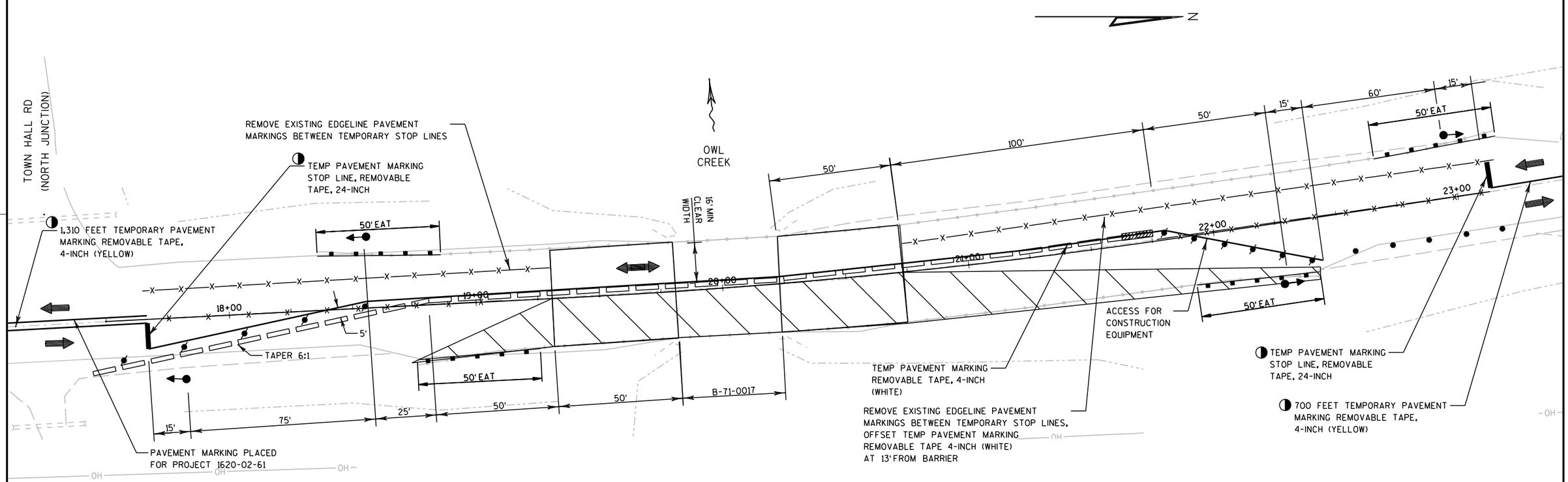


TYPICAL SECTION IN WORK ZONE

GENERAL NOTES

1. VERIFY EXISTING FIELD CONDITIONS.
2. THIS DETAIL SUPPLEMENTS S.D.D. "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNAL". FOLLOW S.D.D. EXCEPT AS SHOWN IN THIS DETAIL.
3. SEE ADDITIONAL STANDARD DETAIL DRAWINGS FOR OTHER TRAFFIC CONTROL REQUIREMENTS.

2



STAGE 2 DETAIL - TRAFFIC USING SOUTHBOUND LANE ON BRIDGE

R10-7
24" X 30"

PLACE SIGN SOUTH OF
STH 80 / TOWN HALL RD
INTERSECTION

TEMPORARY TRAFFIC SIGNAL FOR ONE LANE BRIDGE - OWL CREEK - STH 80

PROJECT NO: 1620-02-60	HWY: STH 80	COUNTY: WOOD	TRAFFIC CONTROL DETAIL - STAGE 2	SHEET 14	E	2.13

2

SEQUENCE OF OPERATIONS				
STRUCTURE: B - 71 - 0017 STH 80				
PRE - TIMED CYCLE 1 = 94 seconds				
TIME: 6:00 AM - 6:00 PM				
INTERVAL	EB A1, A2	WB B1, B2	INTERVAL LENGTH (SEC)	% OF CYCLE
PHASE A	G	R	21	22.3%
CLEARANCE	Y	R	4	4.3%
CLEARANCE	R	R	22	23.4%
PHASE B	R	G	21	22.3%
CLEARANCE	R	Y	4	4.3%
CLEARANCE	R	R	22	23.4%
			94	100.0%

SEQUENCE OF OPERATIONS				
STRUCTURE: B - 71 - 0017 STH 80				
PRE - TIMED CYCLE 1 = 72 seconds				
TIME: 6:00 PM - 6:00 AM				
INTERVAL	EB A1, A2	WB B1, B2	INTERVAL LENGTH (SEC)	% OF CYCLE
PHASE A	G	R	10	13.9%
CLEARANCE	Y	R	4	5.6%
CLEARANCE	R	R	22	30.6%
PHASE B	R	G	10	13.9%
CLEARANCE	R	Y	4	5.6%
CLEARANCE	R	R	22	30.6%
			72	100.0%

NOTE: G = GREEN
Y = YELLOW
R = RED

DATE 17OCT13 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	1620-02-60 QUANTITY	1620-02-61 QUANTITY
0010	204.0120	REMOVING ASPHALTIC SURFACE MILLING	SY	900.000	450.000	450.000
0020	213.0100	FINISHING ROADWAY (PROJECT) 01. 1620-02-60	EACH	1.000	1.000	
0030	213.0100	FINISHING ROADWAY (PROJECT) 02. 1620-02-61	EACH	1.000		1.000
0050	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	60.000	30.000	30.000
0060	455.0605	TACK COAT	GAL	24.000	12.000	12.000
0070	465.0105	ASPHALTIC SURFACE	TON	100.000	50.000	50.000
0080	465.0110	ASPHALTIC SURFACE PATCHING	TON	40.000	20.000	20.000
0090	465.0125	ASPHALTIC SURFACE TEMPORARY	TON	20.000	5.000	15.000
0110	502.0100	CONCRETE MASONRY BRIDGES	CY	85.000	45.000	40.000
0120	502.3200	PROTECTIVE SURFACE TREATMENT	SY	440.000	220.000	220.000
0130	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	4,660.000	2,490.000	2,170.000
0140	509.0301	PREPARATION DECKS TYPE 1	SY	60.000	30.000	30.000
0150	509.0302	PREPARATION DECKS TYPE 2	SY	20.000	10.000	10.000
0170	509.1500	CONCRETE SURFACE REPAIR	SF	40.000	20.000	20.000
0180	509.2000	FULL-DEPTH DECK REPAIR	SY	1.000	1.000	
0190	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	34.000	14.000	20.000
0200	509.9005.S	REMOVING CONCRETE MASONRY DECK OVERLAY (STRUCTURE) 01. B-71-0017	SY	184.000	184.000	
0210	509.9005.S	REMOVING CONCRETE MASONRY DECK OVERLAY (STRUCTURE) 02. B-71-0016	SY	184.000		184.000
0230	603.8000	CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	LF	870.000	420.000	450.000
0240	603.8125	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	LF	870.000	420.000	450.000
0250	606.0300	RIPRAP HEAVY	CY	570.000	310.000	260.000
0260	614.0010	BARRIER SYSTEM GRADING SHAPING FINISHING	EACH	8.000	4.000	4.000
0270	614.0305	STEEL PLATE BEAM GUARD CLASS A	LF	94.000		94.000
0280	614.0370	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL	EACH	8.000	4.000	4.000
0290	614.0905	CRASH CUSHIONS TEMPORARY	EACH	2.000	1.000	1.000
0300	614.0920	SALVAGED RAIL	LF	387.500	200.000	187.500
0310	614.0950	REPLACING GUARDRAIL POSTS AND BLOCKS	EACH	43.000	22.000	21.000
0320	614.0951	REPLACING GUARDRAIL RAIL AND HARDWARE	LF	75.000	50.000	25.000
0330	619.1000	MOBILIZATION	EACH	0.800	0.400	0.400
0340	628.1504	SILT FENCE	LF	1,650.000	850.000	800.000
0350	628.1520	SILT FENCE MAINTENANCE	LF	1,650.000	850.000	800.000
0360	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	6.000	3.000	3.000
0370	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	2.000	1.000	1.000
0380	628.2008	EROSION MAT URBAN CLASS I TYPE B	SY	2,320.000	1,300.000	1,020.000
0390	628.6005	TURBIDITY BARRIERS	SY	240.000	120.000	120.000
0400	628.7504	TEMPORARY DITCH CHECKS	LF	90.000	50.000	40.000
0410	628.7570	ROCK BAGS	EACH	200.000	100.000	100.000
0420	638.2102	MOVING SIGNS TYPE II	EACH	6.000		6.000
0430	638.4000	MOVING SMALL SIGN SUPPORTS	EACH	6.000		6.000
0440	642.5001	FIELD OFFICE TYPE B	EACH	1.000	0.500	0.500
0450	643.0100	TRAFFIC CONTROL (PROJECT) 01. 1620-02-60	EACH	1.000	1.000	
0460	643.0100	TRAFFIC CONTROL (PROJECT) 02. 1620-02-61	EACH	1.000		1.000
0480	643.0300	TRAFFIC CONTROL DRUMS	DAY	2,300.000	1,100.000	1,200.000
0490	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	400.000	100.000	300.000
0500	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	600.000	200.000	400.000
0510	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	1,000.000	500.000	500.000
0520	643.0900	TRAFFIC CONTROL SIGNS	DAY	3,300.000	1,400.000	1,900.000

3

DATE 17OCT13 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	1620-02-60 QUANTITY	1620-02-61 QUANTITY
0530	643.1000	TRAFFIC CONTROL SIGNS FIXED MESSAGE	SF	36.000	18.000	18.000
0540	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	3,100.000	1,700.000	1,400.000
0550	646.0600	REMOVING PAVEMENT MARKINGS	LF	2,700.000	1,380.000	1,320.000
0560	649.0400	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	LF	8,400.000	4,450.000	3,950.000
0570	649.1400	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 24-INCH	LF	80.000	40.000	40.000
0580	661.0100	TEMPORARY TRAFFIC SIGNALS FOR BRIDGES (STRUCTURE) 01. B-71-0017	LS	1.000	1.000	
0590	661.0100	TEMPORARY TRAFFIC SIGNALS FOR BRIDGES (STRUCTURE) 02. B-71-0016	LS	1.000		1.000
0610	690.0150	SAWING ASPHALT	LF	160.000	80.000	80.000
0620	715.0502	INCENTIVE STRENGTH CONCRETE STRUCTURES	DOL	510.000	270.000	240.000
0630	SPV.0025	SPECIAL 01. NON-SHRINK GROUT	CF	200.000	100.000	100.000
0640	SPV.0060	SPECIAL 01. EMBEDDED GALVANIC ANODES	EACH	62.000	31.000	31.000
0650	SPV.0165	SPECIAL 01. SPRAYED ASPHALTIC SHOULDER TREATMENT	SF	5,000.000	3,000.000	2,000.000

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

REMOVING ASPHALTIC SURFACE MILLING

PROJECT	STATION TO STATION	LOCATION	204.0120 SY
1620-02-61	9+27.25 - BRIDGE	STH 80	225
	BRIDGE - 10+69.75	STH 80	225
		SUBTOTAL 1620-02-61	**450**
1620-02-60	19+30.75 - BRIDGE	STH 80	225
	BRIDGE - 20+73.25	STH 80	225
		SUBTOTAL 1620-02-60	**450**
		TOTAL	**900**

BASE AGGREGATE DENSE

PROJECT	STATION TO STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON
1620-02-61	7+75 - 9+21, RT	STH 80	8
	7+75 - 9+21, LT	STH 80	7
	10+50 - 11+15, RT	STH 80	3
	10+53.6 - 11+30	STH 80	6
	UNDISTRIBUTED	STH 80	6
		SUBTOTAL 1620-02-61	**30**
1620-02-60	17+50 - 18+86.7, LT	STH 80	3
	17+69 - 19+25.0, RT	STH 80	8
	21+90.3 - 23+40, RT	STH 80	7
	22+68.4 - 24+18, LT	STH 80	6
	UNDISTRIBUTED	STH 80	6
		SUBTOTAL 1620-02-60	**30**
		TOTAL	**60**

CONCRETE BARRIER TEMPORARY PRECAST / CRASH CUSHIONS TEMPORARY

PROJECT	LOCATION	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF	614.0905 CRASH CUSHIONS TEMPORARY*** EACH
1620-02-61	STH 80	450	450	1
1620-02-60	STH 80	420	420	1
	TOTALS	**870**	**870**	**2**

*** CRASH CUSHION DESIGN PARAMETERS:
CRASH TEST CONDITION TL-3
OBJECT MARKING PATTERN OM-3L
WIDTH REQUIREMENTS L = 15', N = 6', F =2'

ASPHALTIC ITEMS

PROJECT	STATION TO STATION	LOCATION	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON	465.0110 ASPHALTIC SURFACE PATCHING TON	465.0125 ASPHALTIC SURFACE TEMPORARY TON	SPV.0165.01 SPRAYED ASPHALTIC SHOULDER TREATMENT SF
1620-02-61	8+00 - 8+50, LT	STH 80				7	
	8+71 - BRIDGE, LT & RT	STH 80					820
	9+27.25 - BRIDGE	STH 80	6	25			
	BRIDGE - 10+69.75	STH 80	6	25			
	BRIDGE - 11+50, LT & RT	STH 80					990
	11+25 - 11+50, RT	STH 80				5	
	UNDISTRIBUTED		-	-	20	3	190
		SUBTOTAL 1620-02-61	**12**	**50**	**20**	**15**	**2,000**
1620-02-60	18+25 - 18+50, RT	STH 80				3	
	18+37 - BRIDGE, LT & RT	STH 80					920
	19+30.75 - BRIDGE	STH 80	6	25			
	BRIDGE - 20+73.25	STH 80	6	25			
	BRIDGE - 23+18, LT & RT	STH 80					1,900
	22+75 - 23+00, RT	STH 80					
	UNDISTRIBUTED				20	2	180
		SUBTOTAL 1620-02-60	**12**	**50**	**20**	**5**	**3,000**
		TOTALS	**24**	**100**	**40**	**20**	**5,000**

SALVAGED RAIL

PROJECT	STATION TO STATION	LOCATION	614.0920 LF
1620-02-61	8+71 - 9+21, RT	STH 80	50
	8+71 - 9+21, LT	STH 80	50
	10+50 - 11+00, RT	STH 80	50
	10+53.6 - 10+91.1, LT	STH 80	37.5
		SUBTOTAL 1620-02-61	**187.5**
1620-02-60	18+36.7 - 18+86.7, LT	STH 80	50
	18+75.0 19+25.0, RT	STH 80	50
	21+90.3 - 22+40.3, RT	STH 80	50
	22+68.4 - 23+18.4, LT	STH 80	50
		SUBTOTAL 1620-02-60	**200**
		TOTAL	**387.5**

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

BARRIER SYSTEM GRADING SHAPING FINISHING

PROJECT	STATION TO STATION	LOCATION	614.0100 GRADING, SHAPING AND FINISHING BARRIER TERMINALS EACH	FOR INFORMATION ONLY				
				COMMON EXCAVATION CY	BORROW CY	TOPSOIL SY	SEED NO. 30 LBS	FERTILIZER TYPE B LBS
1620-02-61	8+71 - 9+21, RT	STH 80	1	3	2	240	4	15
	8+71 - 9+21, LT	STH 80	1	3	0	160	3.0	10
	10+50 - 11+00, RT	STH 80	1	1	40	160	3.0	10
	50+39 - 50+89***	TOWN HALL ROAD	1	3	30	260	5.0	16
		SUBTOTAL 1620-02-61	**4**	10	72	820	15	51
1620-02-60	18+36.7 - 18+86.7, LT	STH 80	1	2	20	260	5.0	16
	18+75.0 19+25.0, RT	STH 80	1	4	8	240	4	15
	21+90.3 - 22+40.3, RT	STH 80	1	3	30	260	5.0	16
	22+68.4 - 23+18.4, LT	STH 80	1	3	70	300	5.0	19
		SUBTOTAL 1620-02-60	**4**	12	128	1060	19	66
		TOTALS	**8**	**22**	**200**	**1880**	**34**	**117**

*** INCLUDES GRADING BEHIND BEAM GUARD STA 10+50 TO STA 11+00 LT

STEEL PLATE BEAM GUARD

PROJECT	STATION TO STATION	LOCATION	614.0305 STEEL PLATE BEAM GUARD CLASS A LF	614.0370 STEEL PLATE BEAM GUARD EAT EACH	614.0950 REPLACING GUARDRAIL POSTS & BLOCKS EACH	614.0951 REPLACING GUARDRAIL RAIL & HARDWARE LF
1620-02-61	8+71 - 9+21, RT	STH 80		1		
	8+71 - 9+21, LT	STH 80		1		
	9+50 - 9+80 RT & LT	STH 80			8	
	10+20 - 10+50 RT & LT	STH 80			8	
	10+50 - 11+00, RT	STH 80		1		
	10+53.6 - 11+03.6	STH 80	50*			
	50+39 - 50+89	TOWN HALL RD		1		
	50+89 - 51+25	TOWN HALL RD	43.75**			
	UNDISTRIBUTED	STH 80			5	25
	SUBTOTAL 1620-02-61		**94**	**4**	**21**	**25**
1620-02-60	18+36.7 - 18+86.7, LT	STH 80		1		---
	18+75.0 19+25.0, RT	STH 80		1		---
	19+50 - 19+80 RT & LT	STH 80			8	
	20+20 - 20+50 RT & LT	STH 80			8	
	21+77.8- 21+90.3, RT	STH 80			1	12.5
	21+90.3 - 22+40.3, RT	STH 80		1		
	22+68.4 - 23+18.4, LT	STH 80		1		
	UNDISTRIBUTED	STH 80			5	37.5
	SUBTOTAL 1620-02-60		**0**	**4**	**22**	**50**
	TOTALS		**94**	**8**	**43**	**75**

* SHOP BEND END 12.5', R = 25'

** SHOP BEND R = 59'

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

EROSION CONTROL ITEMS

PROJECT	STATION TO STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.7504 TEMPORARY DITCH CHECKS LF	628.7570 ROCK BAGS EACH
1620-02-61	7+75- 9+50, LT & RT	STH 80	350	350			400	10	
	10+20 - 11+00, RT	STH 80	80	80			160	10	
	10+20 - 11+00, LT	STH 80	80	80			80	10	
	50+20 - 51+20	TOWN HALL RD	100	100			180		
	UNDISTRIBUTED	STH 80	190	190	3	1	200	10	100
SUBTOTAL 1620-02-61			**800**	**800**	**3**	**1**	**1,020**	**40**	**100**
1620-02-60	17+50 - 19+20, LT	STH 80	160	160			260	10	
	17+50 - 19+50, RT	STH 80	200	200			240	10	
	21+50 - 23+20, RT	STH 80	160	160			260	10	
	22+30 - 24+20, LT	STH 80	160	160			300	10	
	UNDISTRIBUTED	STH 80	170	170	3	1	240	10	100
SUBTOTAL 1620-02-60			**850**	**850**	**3**	**1**	**1,300**	**50**	**100**
TOTAL			**1,650**	**1,650**	**6**	**2**	**2,320**	**90**	**200**

TURBIDITY BARRIER

PROJECT	STATION	LOCATION	628.6005 SY
1620-02-61	9+85	STH 80	60
	10+15	STH 80	60
SUBTOTAL 1620-02-61			**120**
1620-02-60	19+85	STH 80	60
	20+15	STH 80	60
SUBTOTAL 1620-02-60			**120**
TOTAL			**240**

HEIGHT = 10'

MOVING SIGNS TYPE II AND MOVING SMALL SIGN SUPPORTS

PROJECT	SIGN NO.	FROM STATION	TO STATION	LOCATION	DESCRIPTION	638.2102 MOVING SIGNS TYPE II EACH	638.4000 MOVING SMALL SIGN SUPPORTS EACH	REMARKS
1620-02-61	M1-01	7+84 , RT	7+84 , RT	STH 80	SPEED LIMIT 45 MPH	1	1	
	M1-02	7+84 , RT	7+84 , RT	STH 80	NO PASSING ZONE	1	---	LOCATED ON SAME POST AS M1-01
	M1-03	12+72 , LT	12+72 , LT	STH 80	S STH 80 E STH 54 W STH 54 J ASSEMBLY	1	2	
	M1-04	11+05 , LT	11+05 , LT	STH 80	STOP	1	1	
	M1-05	12+15 , LT	12+15 , LT	STH 80	JCT STH 54	1	1	
	M1-06	12+15 , LT	12+15 , LT	STH 80	SPEED LIMIT 45 MPH	1	1	
PROJECT TOTALS						**6**	**6**	

TRAFFIC CONTROL

PROJECT	LOCATION	SERVICE PERIOD DAYS	643.0300 DRUMS NO	643.0300 DRUMS DAYS	643.0420 BARRICADES TYPE III NO	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A NO	643.0705 WARNING LIGHTS TYPE A DAYS	643.0715 WARNING LIGHTS TYPE C NO	643.0715 WARNING LIGHTS TYPE C DAYS	643.0900 SIGNS NO	643.0900 SIGNS DAYS	661.0100 TEMPORARY TRAFFIC SIGNALS FOR BRIDGES LS	REMARKS
1620-02-61	WORK ON SHOULDER	2	10	20							5	10		INCLUDES SIGNAL INSTALLATION
	TEMPORARY SIGNAL: B 71-0016	50	20	1,000	6	300	8	400	10	500	35	1,750	1	
	UNDISTRIBUTED			180								140		
SUBTOTAL 1620-02-61				**1,200**		**300**		**400**		**500**		**1,900**	**1**	
1620-02-60	WORK ON SHOULDER	5	10	50							5	25		INCLUDES SIGNAL INSTALLATION
	TEMPORARY SIGNAL: B 71-0017	50	20	1,000	2	100	4	200	10	500	25	1,250	1	
	UNDISTRIBUTED			50								125		
SUBTOTAL 1620-02-60				**1,100**		**100**		**200**		**500**		**1,400**	**1**	
TOTALS				**2,300**		**400**		**600**		**1,000**		**3,300**		

TRAFFIC CONTROL SIGNS FIXED MESSAGE

PROJECT	LOCATION	SIZE (INCHES)	MESSAGE	643.1000 SF	COMMENTS
1620-02-61	STH 80	72 X 36	BRIDGE WORK BEGINS XX/XX/XXXX	18	PLACE ONE WEEK PRIOR TO BEGINNING CONSTRUCTION
			SUBTOTAL 1620-02-61	**18**	
1620-02-60	STH 80	72 X 36	BRIDGE WORK BEGINS XX/XX/XXX	18	PLACE ONE WEEK PRIOR TO BEGINNING CONSTRUCTION
			SUBTOTAL 1620-02-60	**18**	
			PROJECT TOTAL	**36**	

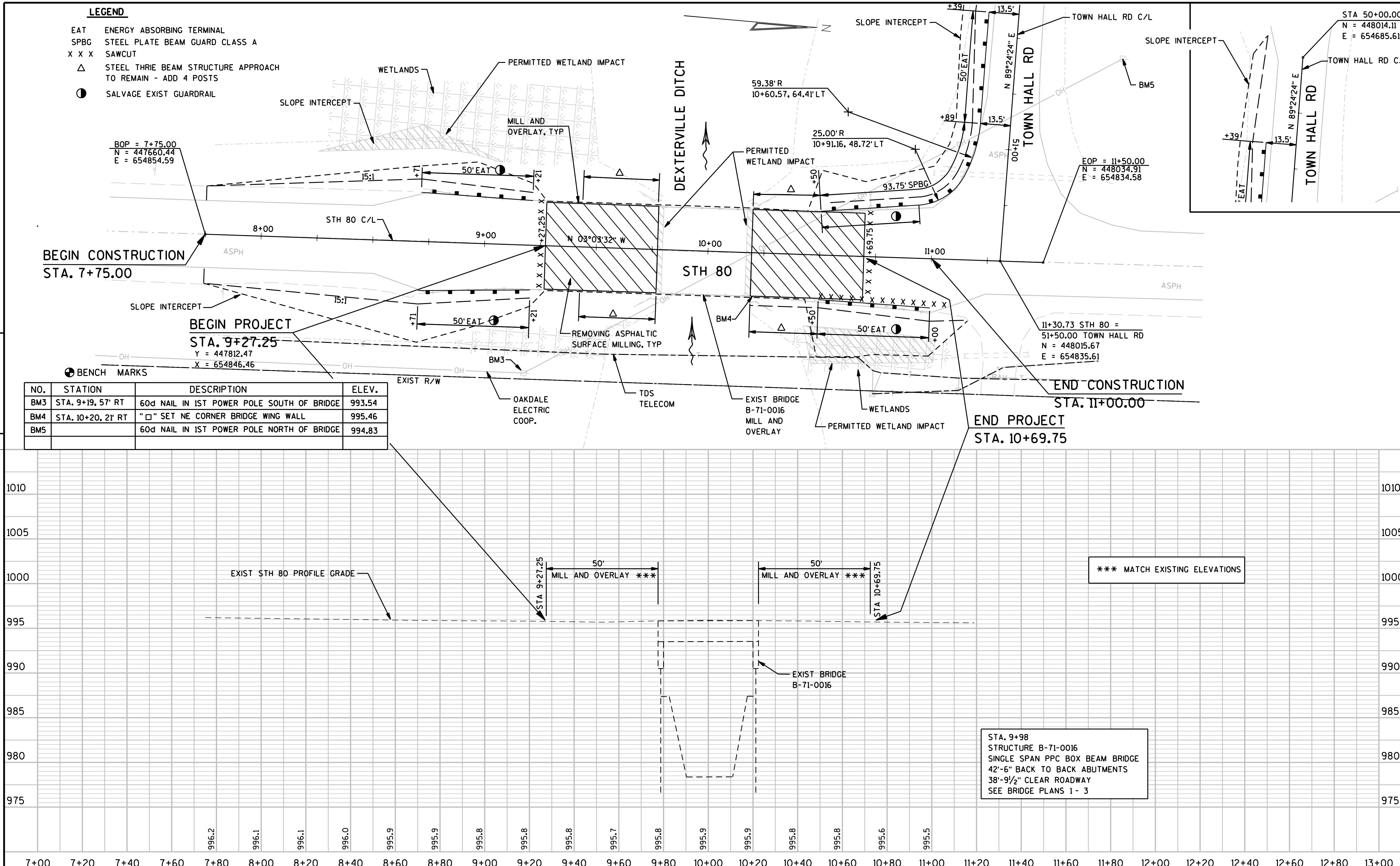
PAVEMENT MARKING

PROJECT		**** EPOXY 4-INCH (WHITE) LF	**** EPOXY 4-INCH (YELLOW) LF	646.0106 PAVEMENT MARKING EPOXY 4-INCH LF	646.0600 REMOVING PAVEMENT MARKINGS LF	**** TEMPORARY PAVT MARKING REMOVABLE TAPE 4-INCH (WHITE) LF	**** TEMPORARY PAVT MARKING REMOVABLE TAPE 4-INCH (YELLOW) LF	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH LF	649.1400 TEMPORARY PAVT MARKING STOP LINE REMOVABLE TAPE 24-INCH LF
1620-02-61	STH 80	1,120	140	1,260	1,260	2,060	1,510	3,570	30
	UNDISTRIBUTED	80	60	140	60	140	240	380	10
SUBTOTALS 1620-02-61				**1,400**	**1,320**			**3,950**	**40**
1620-02-60	STH 80	1,080	450	1,530	1,300	2,020	2,010	4,030	30
	UNDISTRIBUTED	120	50	170	80	80	340	420	10
SUBTOTALS 1620-02-60				**1,700**	**1,380**			**4,450**	**40**
PROJECT TOTALS				**3,100**	**2,700**			**8,400**	**80**

**** FOR INFORMATION ONLY.
ESTABLISH NO-PASSING ZONE BETWEEN STRUCTURES

SAWING ASPHALT

PROJECT	STATION	LOCATION	690.0150 LF
1620-02-61	9+27.25	STH 80	40
	10+69.75	STH 80	40
		SUBTOTAL 1620-02-61	**80**
1620-02-60	19+30.75	STH 80	40
	20+73.25	STH 80	40
		SUBTOTAL 1620-02-60	**80**
		TOTAL	**160**


LEGEND
EAT ENERGY ABSORBING TERMINAL
SPBG STEEL PLATE BEAM GUARD CLASS A
X X X SAWCUT
△ STEEL THRIE BEAM STRUCTURE APPROACH TO REMAIN - ADD 4 POSTS
SALVAGE EXIST GUARDRAIL
WETLANDS
PERMITTED WETLAND IMPACT
SLOPE INTERCEPT
MILL AND OVERLAY, TYP
DEXTERVILLE DITCH
59.38' R
10+60.57, 64.41' LT
25.00' R
10+91.16, 48.72' LT
PERMITTED WETLAND IMPACT
TOWN HALL RD C/L
N 89°24'24" E
TOWN HALL RD
50' EAT
13.5'
BM5
BOP = 7+75.00
N = 447660.44
E = 654854.59
15:1
93.75' SPBG
EOP = 11+50.00
N = 448034.91
E = 654834.58
STH 80 C/L
N 03°03'32" W
BEGIN CONSTRUCTION
STA. 7+75.00
STH 80
ASPH
SLOPE INTERCEPT
BEGIN PROJECT
STA. 9+27.25
Y = 447812.47
X = 654846.46
REMOVING ASPHALTIC SURFACE MILLING, TYP
BM3
BM4
11+30.73 STH 80 = 51+50.00 TOWN HALL RD
N = 448015.67
E = 654835.61
END CONSTRUCTION
STA. 11+00.00
EXIST R/W
OAKDALE ELECTRIC COOP.
TDS TELECOM
EXIST BRIDGE B-71-0016 MILL AND OVERLAY
WETLANDS
PERMITTED WETLAND IMPACT
END PROJECT
STA. 10+69.75
STA 50+00.00
N = 448014.11
E = 654685.61
EXIST STH 80 PROFILE GRADE
STA 9+27.25
50'
MILL AND OVERLAY ***
STA 10+69.75
*** MATCH EXISTING ELEVATIONS
EXIST BRIDGE B-71-0016
STA. 9+98
STRUCTURE B-71-0016
SINGLE SPAN PPC BOX BEAM BRIDGE
42'-6" BACK TO BACK ABUTMENTS
38'-9½" CLEAR ROADWAY
SEE BRIDGE PLANS 1 - 3
1010
1005
1000
995
990
985
980
975
996.2 996.1 996.1 996.0 995.9 995.9 995.8 995.8 995.8 995.7 995.8 995.9 995.9 995.8 995.8 995.6 995.5
7+00 7+20 7+40 7+60 7+80 8+00 8+20 8+40 8+60 8+80 9+00 9+20 9+40 9+60 9+80 10+00 10+20 10+40 10+60 10+80 11+00 11+20 11+40 11+60 11+80 12+00 12+20 12+40 12+60 12+80 13+00

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
BM3	STA. 9+19, 57' RT	60d NAIL IN 1ST POWER POLE SOUTH OF BRIDGE	993.54
BM4	STA. 10+20, 21' RT	"□" SET NE CORNER BRIDGE WING WALL	995.46
BM5		60d NAIL IN 1ST POWER POLE NORTH OF BRIDGE	994.83

5

5

PROJECT NO: 1620-02-61 | HWY: STH 80 | COUNTY: WOOD | PLAN AND PROFILE | SHEET 22 | E

5.1

FILE NAME : F:\TR\JOBS\E1970A10\Sheets\Plan\BOX B-71-16\050101_pp.dgn   PLOT DATE : 7/15/2013 9:49:57 AM   PLOT BY : OMNNI - perryd   PLOT NAME :   PLOT SCALE : 2.0000 ft / IN.   WISDOT/CADDS SHEET 40

LEGEND

EAT ENERGY ABSORBING TERMINAL
X X X SAWCUT
△ STEEL THRIE BEAM STRUCTURE APPROACH TO REMAIN- ADD 4 POSTS
◑ SALVAGE EXISTING GUARDRAIL

PIsta = 20+65.47
N = 449712.14
E = 654745.34
I = 05°28'50"L
D = 02°09'50"
CD = N 05°41'18" W
T = 126.74
R = 2647.85
L = 253.28

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
BM6	19+18.77, 65' RT	60d SET IN 1ST POWER POLE S. OF BRIDGE, EAST SIDE OF STH 80	992.17
BM7	22+31.84, 83' RT	60d SET IN 1ST POWER POLE N. OF BRIDGE, EAST SIDE OF STH 80	990.13

BOP = 17+50.00
N = 449397.09
E = 654761.57

LAKE DEXTER
EXISTING R/W
SLOPE INTERCEPT
15:1
+36.7
50' EAT
+86.7
PC = 19+38.73
PERMITTED WETLAND IMPACT
MILL AND OVERLAY, TYP
PT = 21+92.01
+68.4
50' EAT
+18.4
23+40
MATCH LINE
18+00
N 02°56'53" W
19+00
20+00
STH 80
21+00
STH 80 C/L
22+00
N 08°25'43" W
23+00
ASPH
X X X +31 X X X X
X X +73 X X X X
+69
15:1
+75
50' EAT
+25
REMOVING ASPHALTIC SURFACE MILLING, TYP
OWL CREEK
EXIST BRIDGE B-71-0017 MILL AND OVERLAY
12.5' REPLACING GUARDRAIL
+90.3
50' EAT
+40.3
15:1
SLOPE INTERCEPT
PERMITTED WETLAND IMPACT
WETLANDS
BM7
BEGIN CONSTRUCTION
STA. 17+69.00
EXISTING R/W
BEGIN PROJECT
STA. 19+30.75
Y = 449577.60
X = 654752.27
BM6
OAKDALE ELECTRIC COOP
TDS TELECOM
END PROJECT
STA. 20+73.25

1010
1005
1000
995
990
985
980
975

50' MILL AND OVERLAY ***
50' MILL AND OVERLAY ***
EXIST STH 80 PROFILE GRADE
EXIST BRIDGE B-71-0017

*** MATCH EXISTING ELEVATIONS

STA. 20+02
STRUCTURE B-71-0017
SINGLE SPAN PPC BOX BEAM BRIDGE
42'-6" BACK TO BACK ABUTMENTS
38'-9½" CLEAR ROADWAY
SEE BRIDGE PLANS 1 - 4

996.5 996.5 996.4 996.4 996.4 996.3 996.3 996.2 996.2 996.2 996.0 996.0 995.8 995.9 995.9 996.0 996.1 996.2 996.2 996.3 996.4 996.5 996.5 996.5 996.5 996.6 996.6 996.7 996.7

17+40 17+60 17+80 18+00 18+20 18+40 18+60 18+80 19+00 19+20 19+40 19+60 19+80 20+00 20+20 20+40 20+60 20+80 21+00 21+20 21+40 21+60 21+80 22+00 22+20 22+40 22+60 22+80 23+00 23+20 23+40

PROJECT NO: 1620-02-60	HWY: STH 80	COUNTY: WOOD	PLAN AND PROFILE	SHEET 23	E

5.2

PI Sta = 23+83.52
N = 450026.95
E = 654698.70
I = 02°21'26"L
D = 01°16'51"
CD = N 09°36'26" W
T = 92.03
R = 4473.00
L = 184.03

N

EXIST R/W

SLOPE INTERCEPT

23+40

15:1

+18

EOP = 25+00.52
N = 450141.91
E = 654676.80

STH 80 C/L

24+00

N 10°47'09" W

25+00

STH 80

MATCH LINE

PT = 24+75.52

END CONSTRUCTION
STA. 24+18.00

SCALES:
1" = 20' HOR
1" = 2' VER

OAKDALE ELECTRIC COOP

OH

EXISTING STH 80 PROFILE GRADE

1001
999
997
995
993
991
989
987

996.7 996.7 996.7 996.7

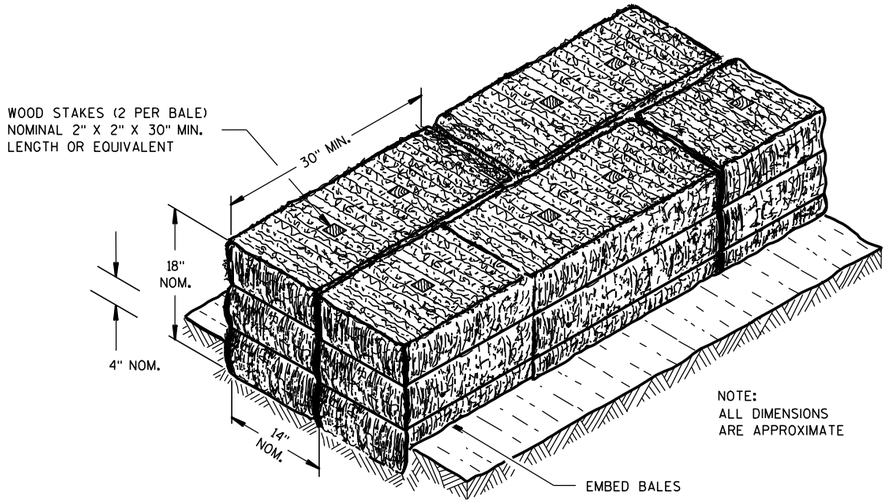
23+40 23+60 23+80 24+00 24+20 24+40 24+60 24+80 25+00 25+20 25+40 25+60 25+80 26+00

PROJECT NO: 1620-02-60	HWY: STH 80	COUNTY: WOOD	PLAN AND PROFILE	SHEET 24	E

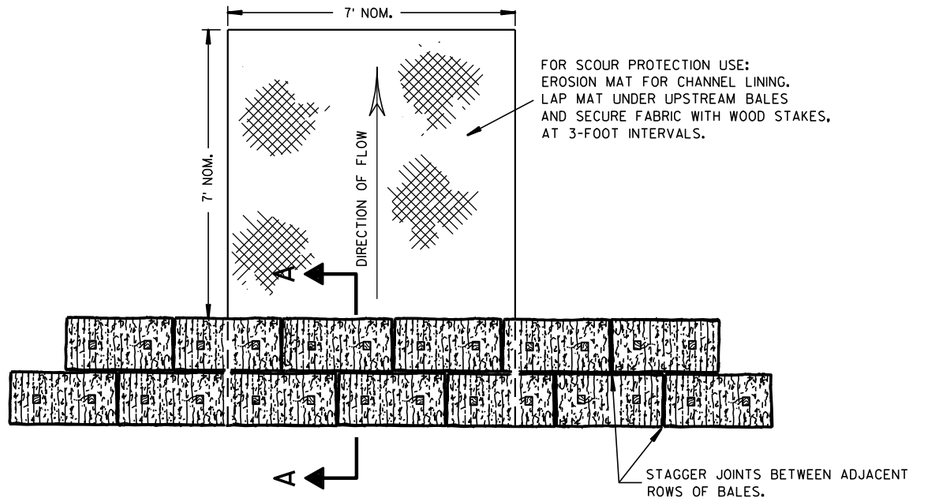
FILE NAME : F:\TR\JOBS\E1970A10\Sheets\Plan\BOX B-71-17\050102_pp.dgn PLOT DATE : 2/5/2013 10:00:59 AM PLOT BY : OMNNI - perryd PLOT NAME : PLOT SCALE : 2.0000 ft / IN.
WISDOT/CADDS SHEET 40

Standard Detail Drawing List

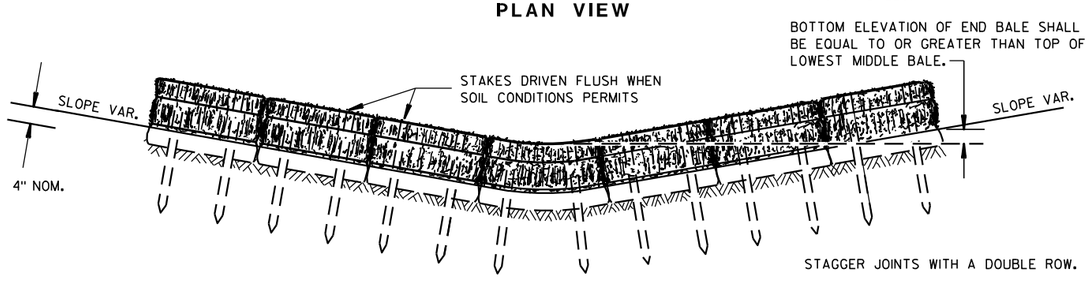
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
09G02-03A	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-03B	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-03C	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
14B07-13A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B15-07A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-07B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-07C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B20-11A	STEEL THRIE BEAM STRUCTURE APPROACH
14B24-07A	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-07B	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-07C	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
15C03-01	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C12-03	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C19-02A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15D28-01	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D33-02	TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS



SECTION A-A



PLAN VIEW



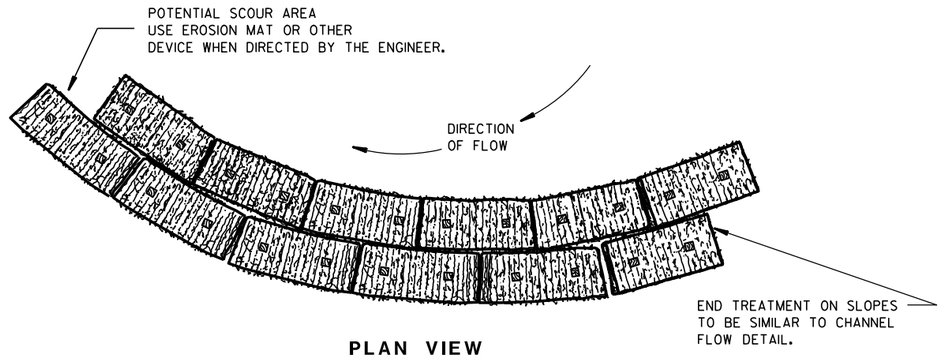
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

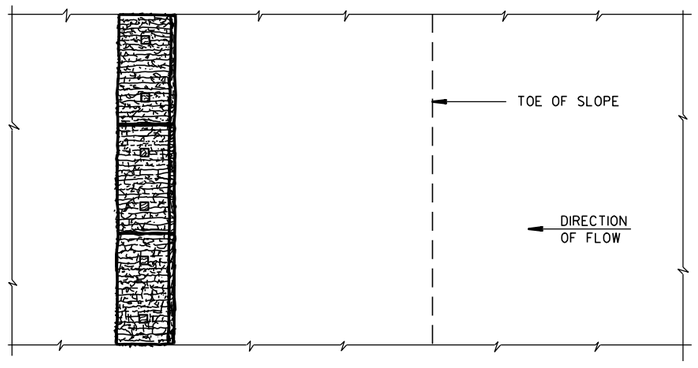
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

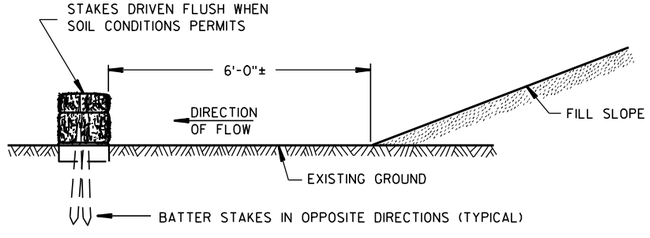


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

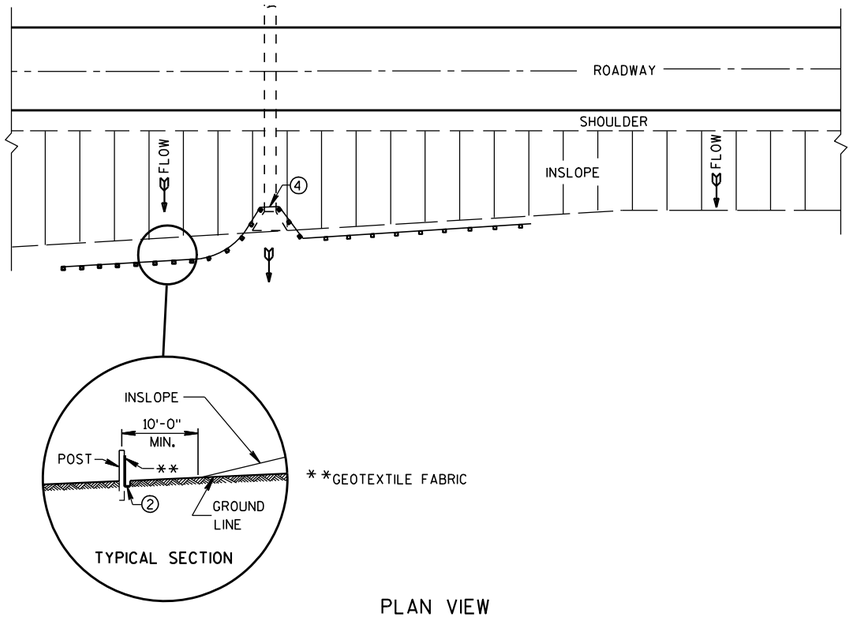
APPROVED

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

FHWA

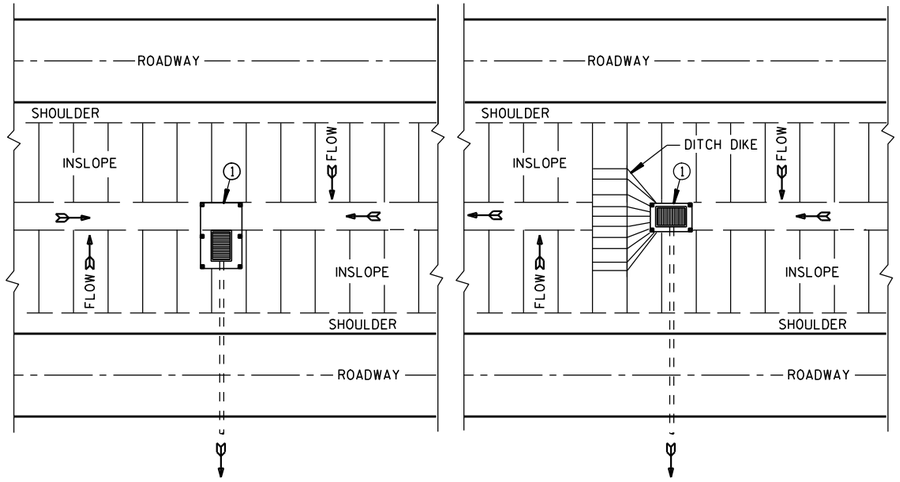
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



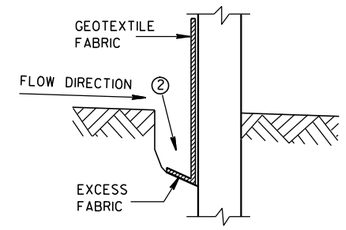
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

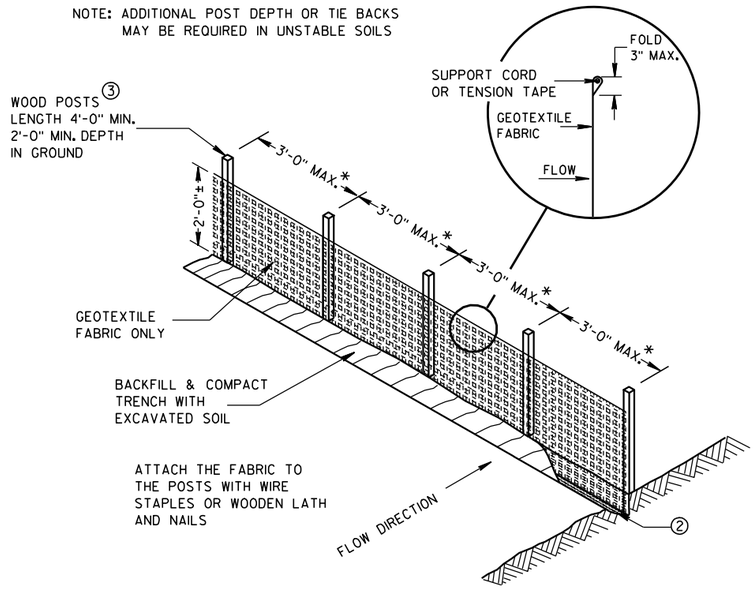
GENERAL NOTES

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

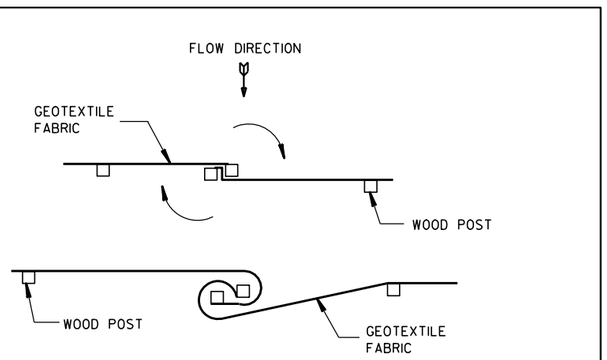
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL 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.



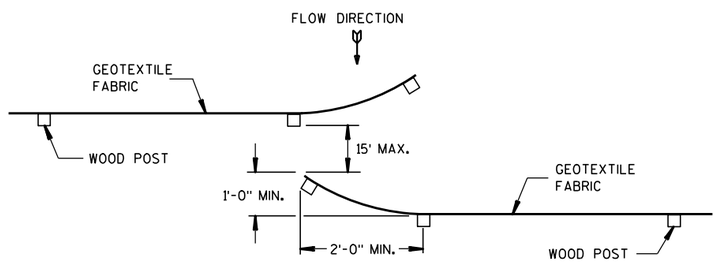
TRENCH DETAIL



SILT FENCE

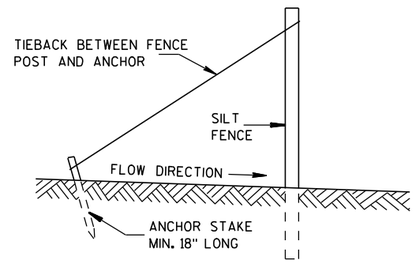


TWIST METHOD



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

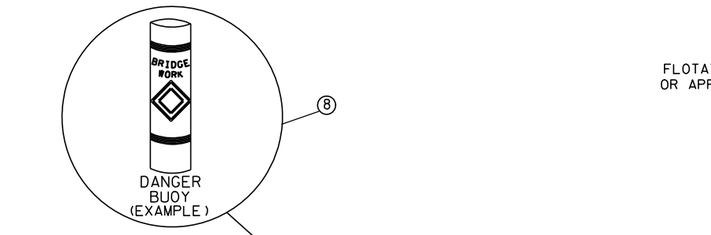
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

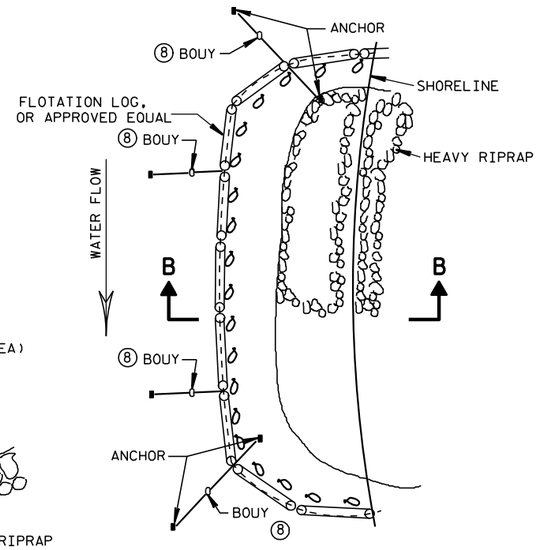
S.D.D. 8 E 9-6

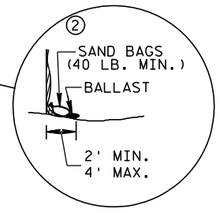
6

S.D.D. 8 E 9-6

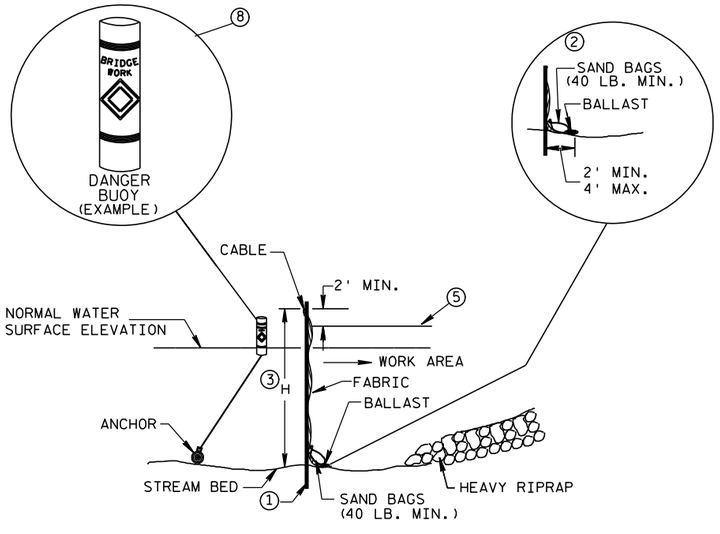


SECTION B-B

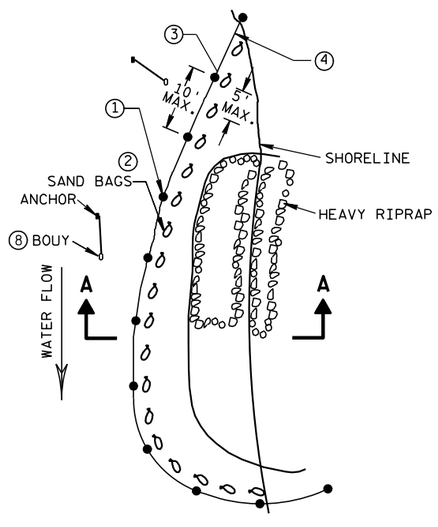




TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



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.

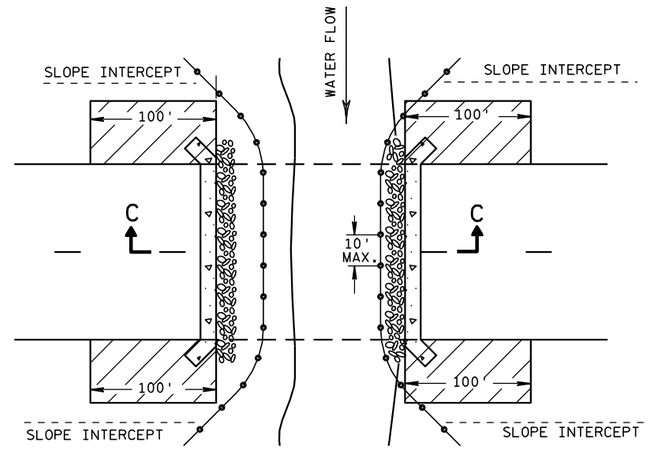
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

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

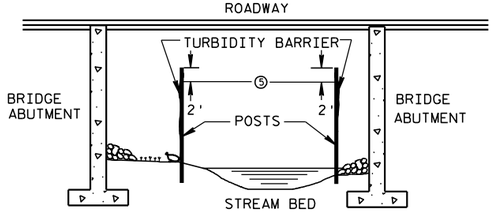
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

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

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



PLAN VIEW



SECTION C-C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

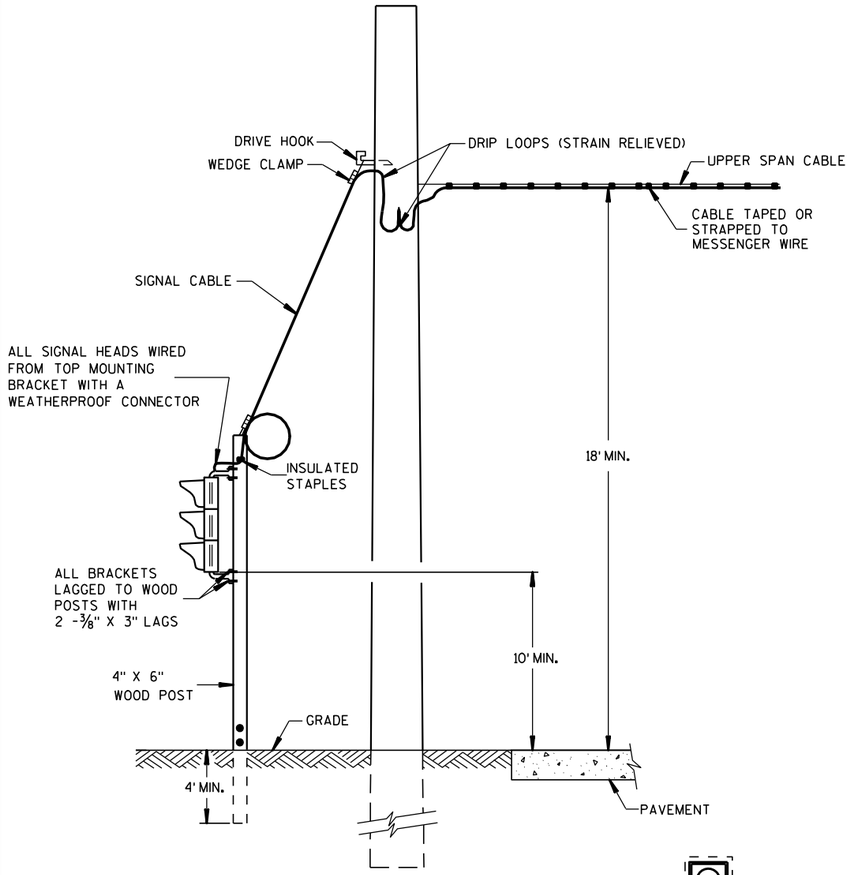
APPROVED
6/04/02 — DATE
/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

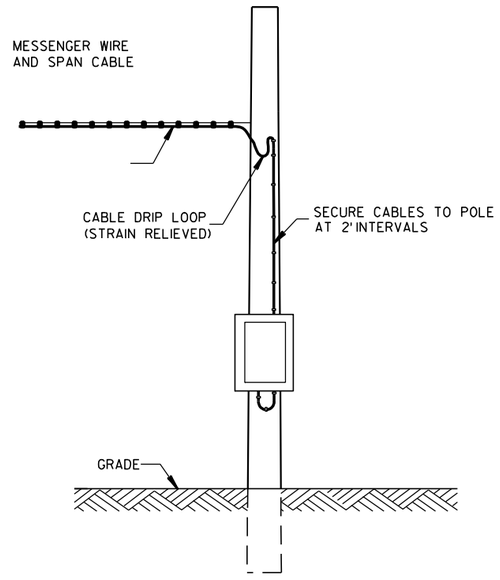
S.D.D. 8 E 11-2

6

S.D.D. 8 E 11-2



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.

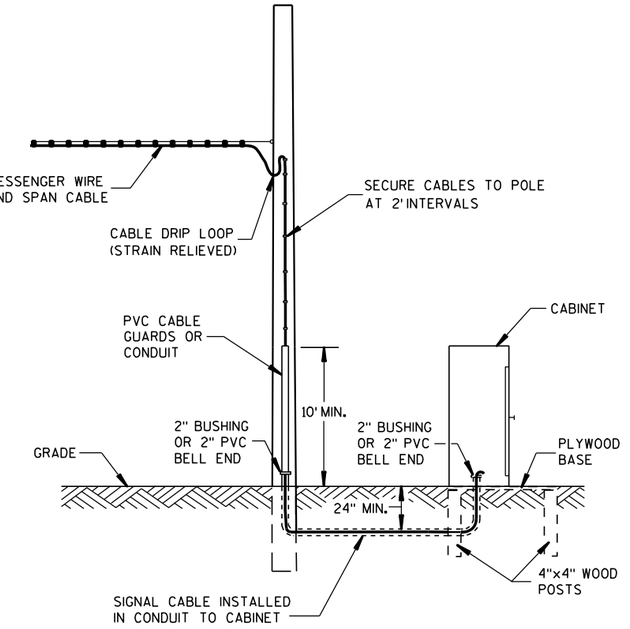
WOOD POLES (NONBREAKAWAY) SHALL BE NO CLOSER TO EDGE OF PAVEMENT THAN OFFSET DISTANCE CHART ALLOWS OR 4 FEET BEHIND PROTECTIVE BARRIER (BEAMGUARD, ETC.).

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.

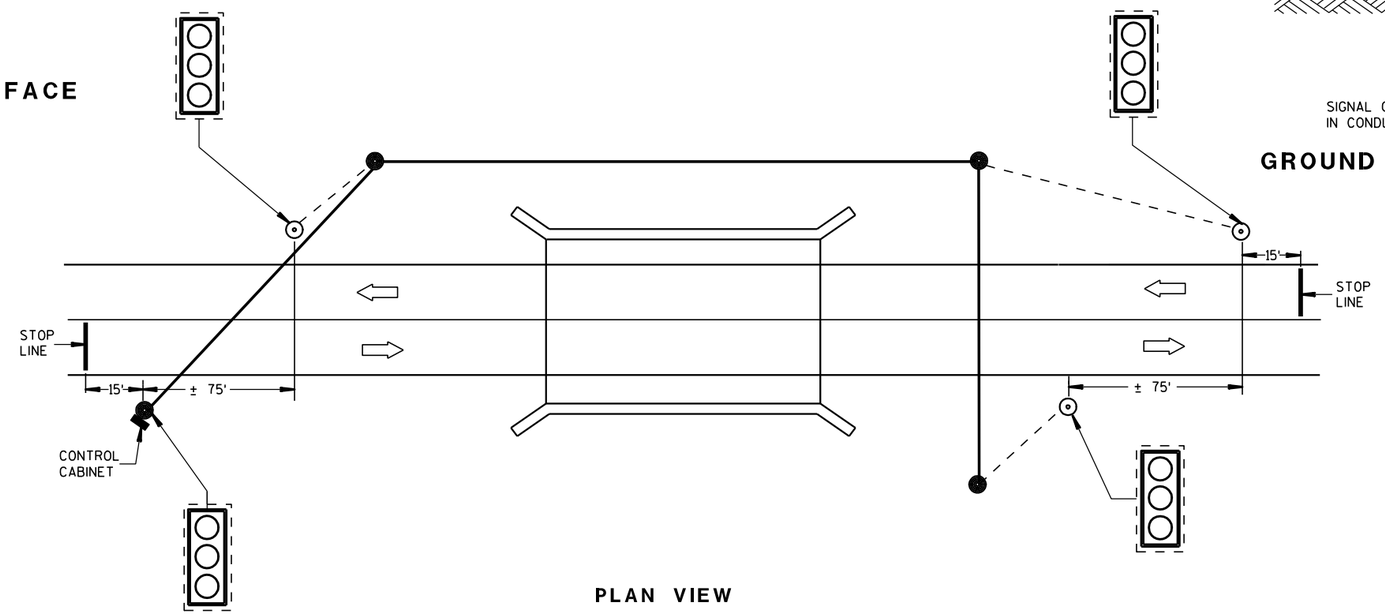
EACH TRAFFIC SIGNAL FACE SHALL HAVE A BACKPLATE.



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

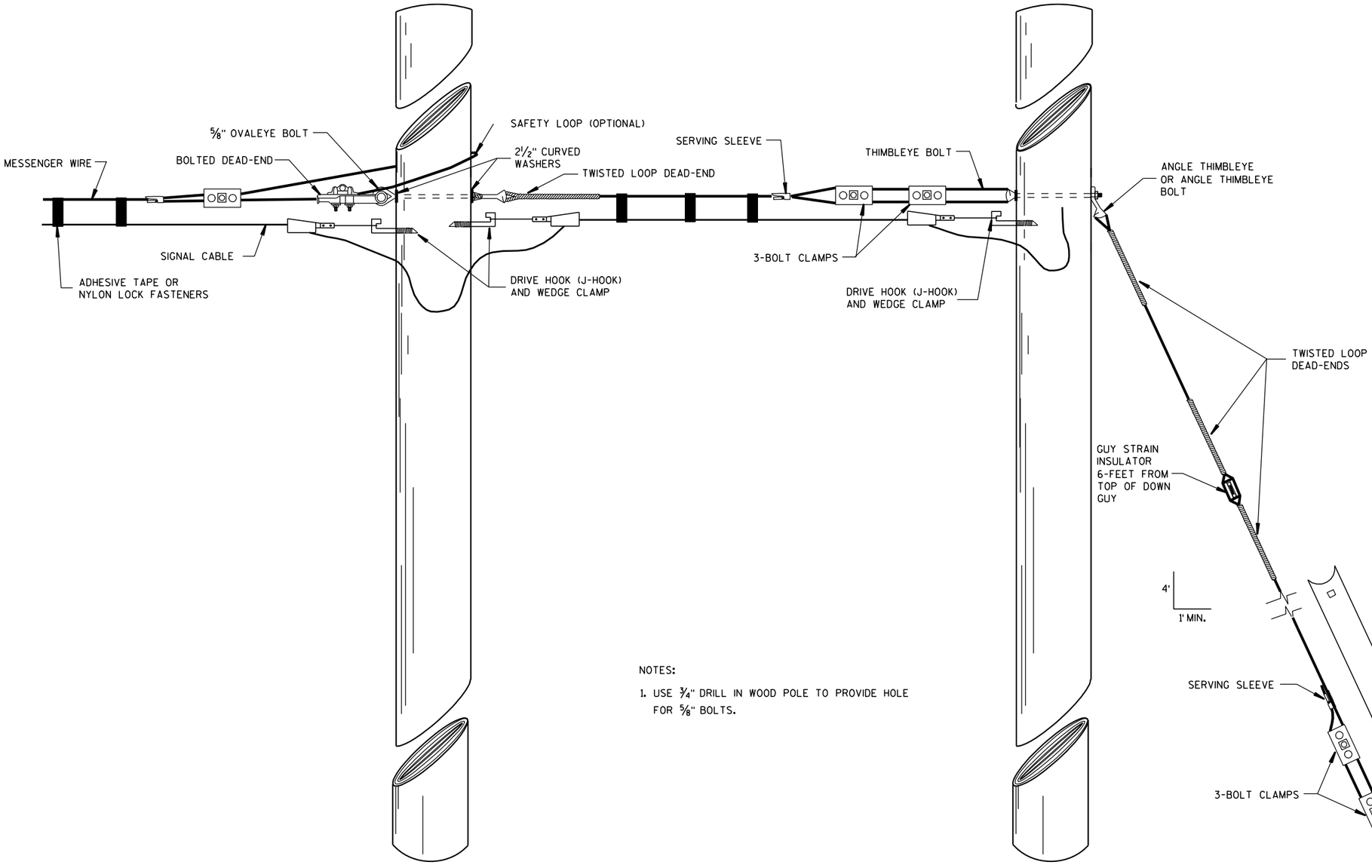
APPROVED
3/2/2011 DATE
/S/ Thomas J. Goerlinger STATE ELECTRICAL ENGI
FHWA

6

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

6

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

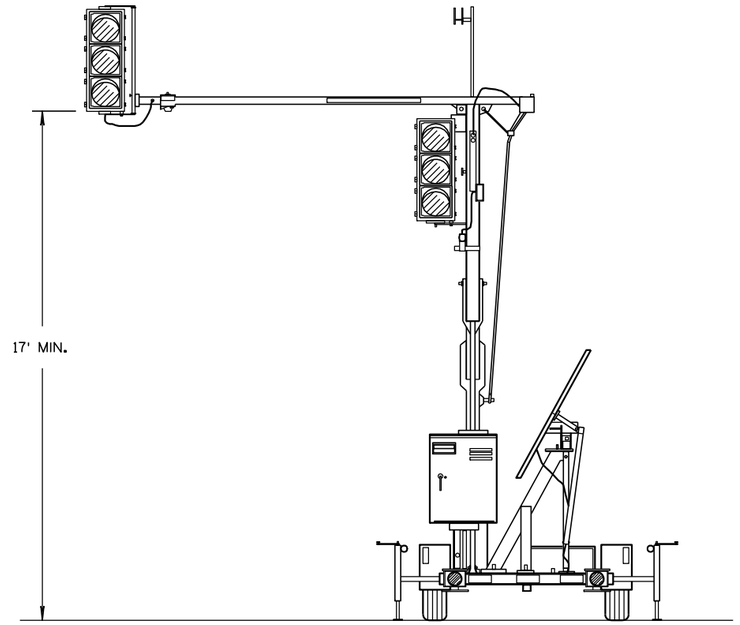
/S/ Thomas J. G... STATE ELECTRICAL ENGI

HWYS

FHWA

6

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

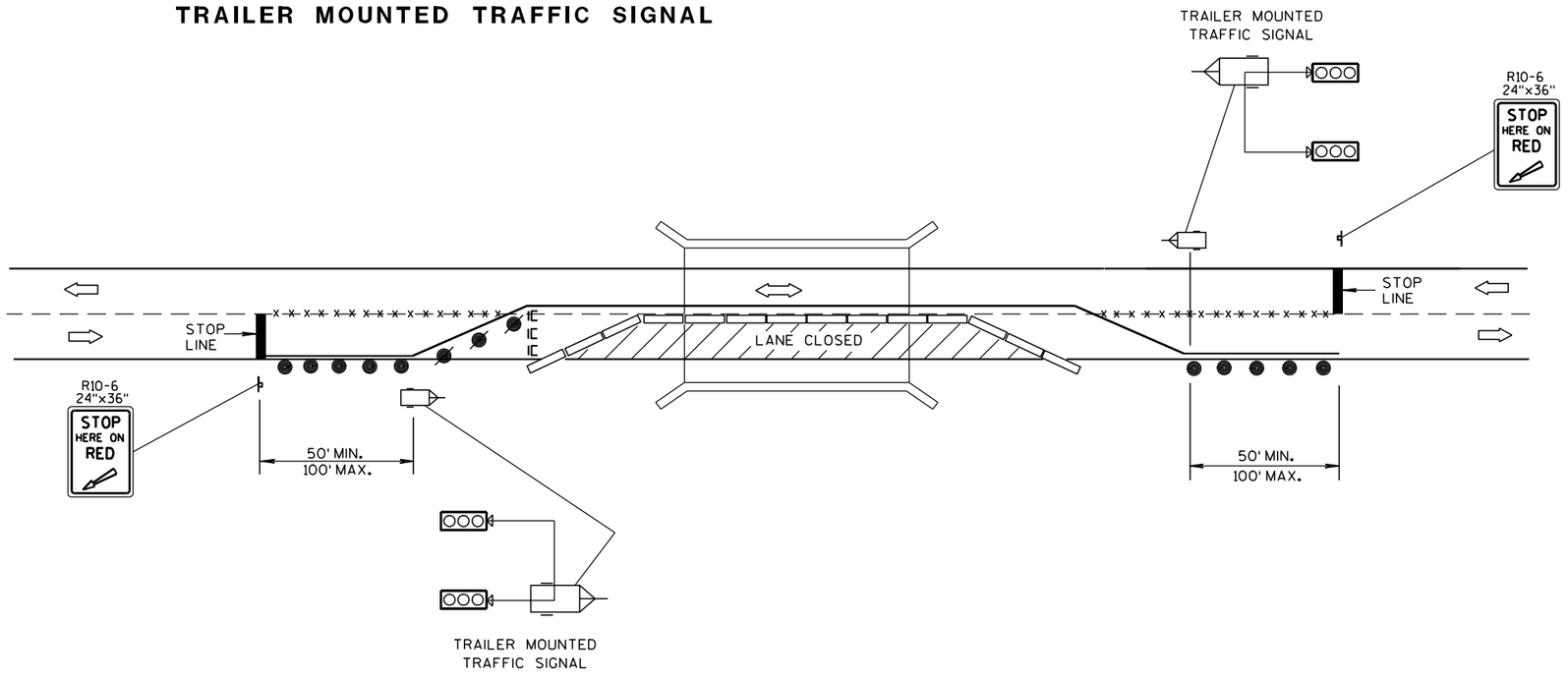


TRAILER MOUNTED TRAFFIC SIGNAL

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

FHWA

HWYS

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

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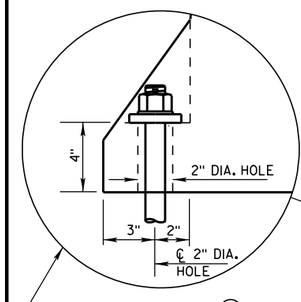
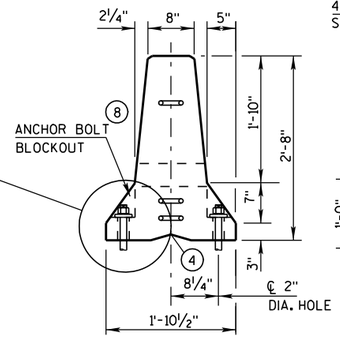
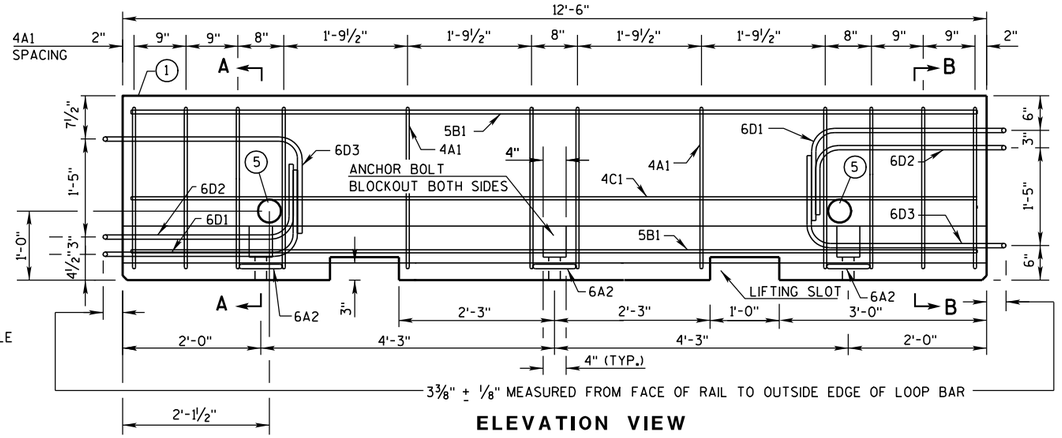
S.D.D. 9 G 2-3c

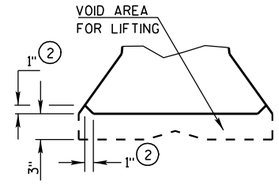




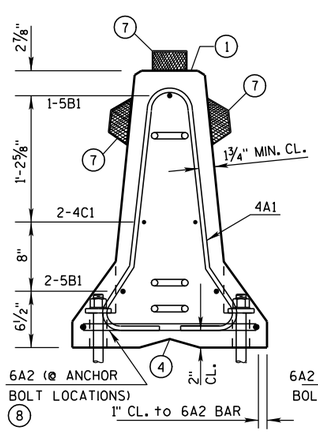
END VIEW



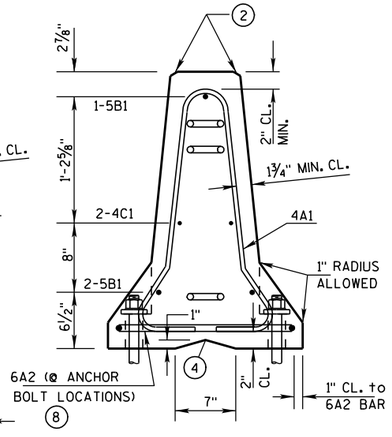
ELEVATION VIEW



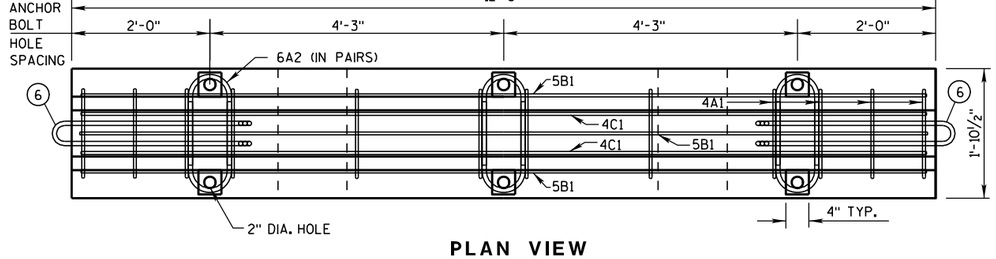
DETAIL "B"
LIFTING SLOT DETAIL



SECTION A-A
(STIRRUP PLACEMENT)

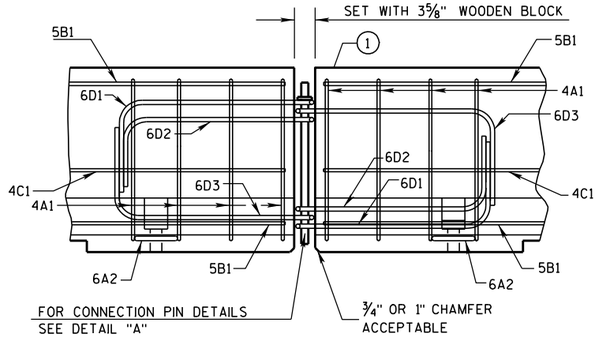


SECTION B-B
(STIRRUP PLACEMENT)

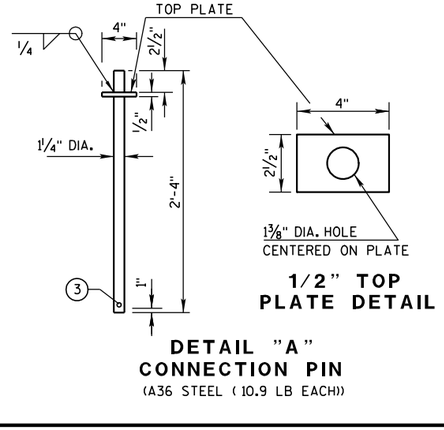


PLAN VIEW

DETAILS OF BARRIER SECTION

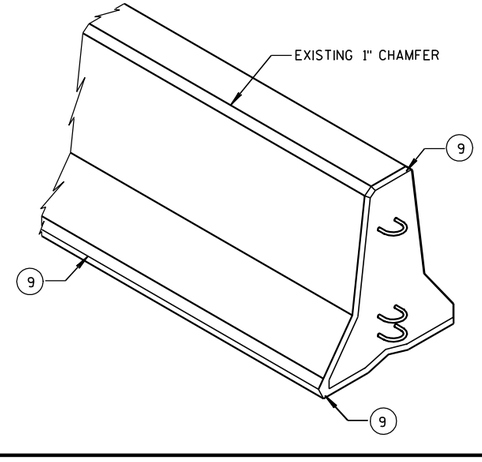


DETAILS OF BARRIER CONNECTION



1/2" TOP PLATE DETAIL

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



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-13(a) THRU 14B7-13(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: WICBTP
- 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.

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO.....T

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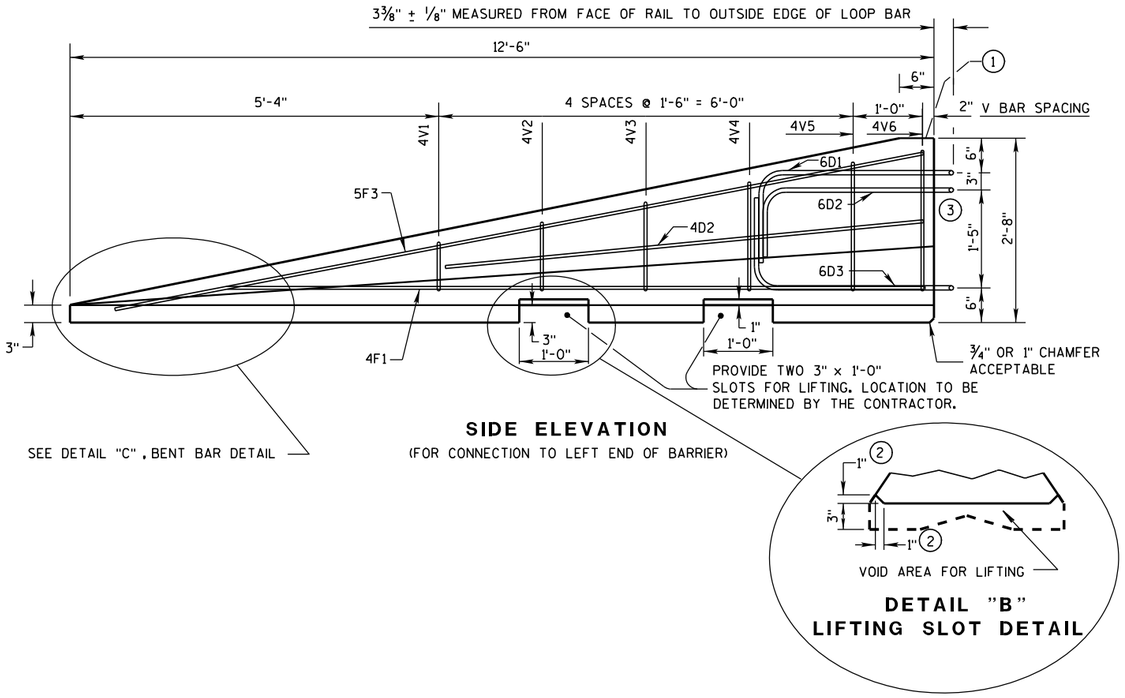
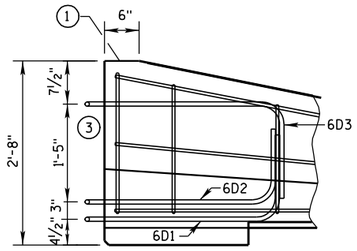
S.D.D. 14 B 7-13a



SIDE ELEVATION

(FOR CONNECTION TO LEFT END OF BARRIER)

DETAIL "B"
LIFTING SLOT DETAIL

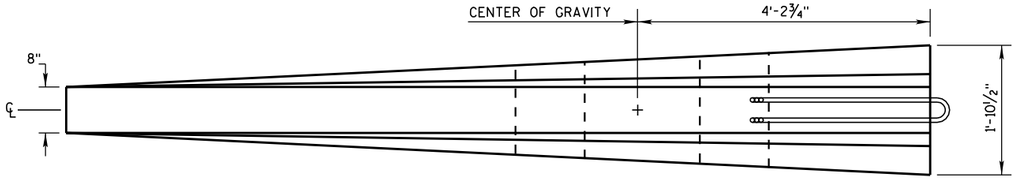


SIDE ELEVATION

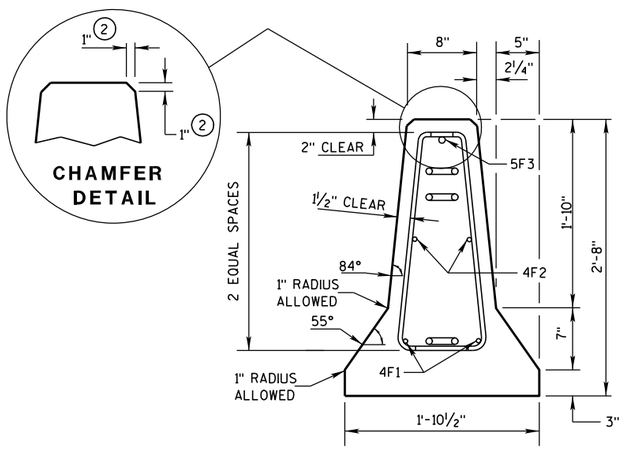
LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

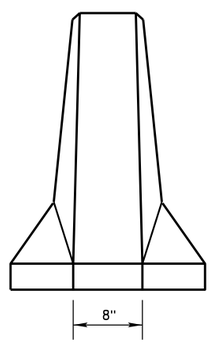
1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



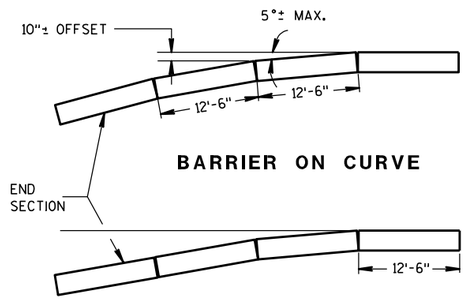
PLAN VIEW



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
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 7-13b

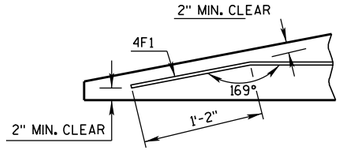
6

S.D.D. 14 B 7-13b

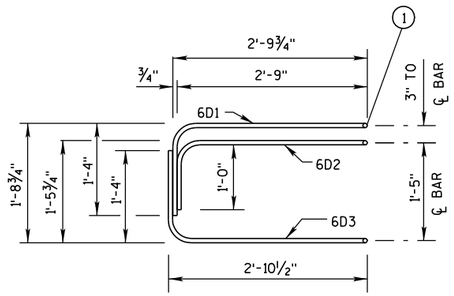
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

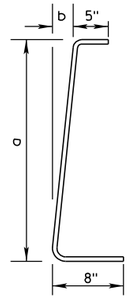
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



DETAIL "C"
BENT BAR DETAIL



ELEVATION
LOOP BAR ASSEMBLY



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

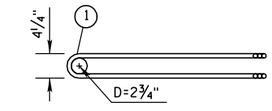
GENERAL NOTES

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

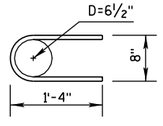
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

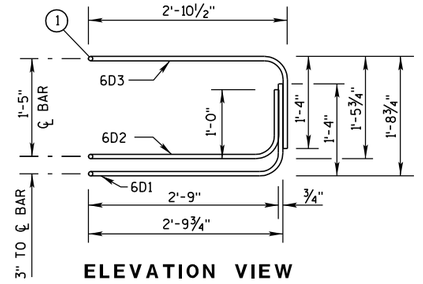
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



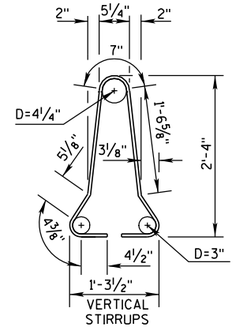
PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



6A2



ELEVATION VIEW



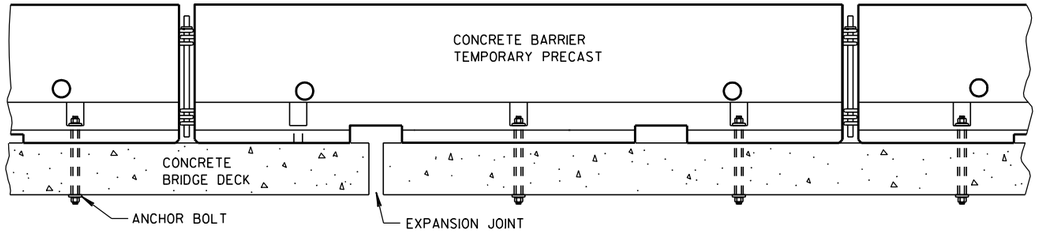
4A1

BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

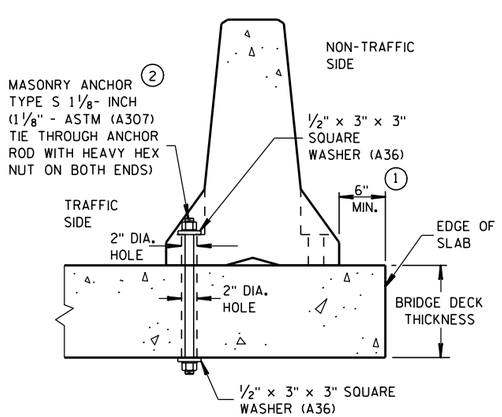
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 7-13c



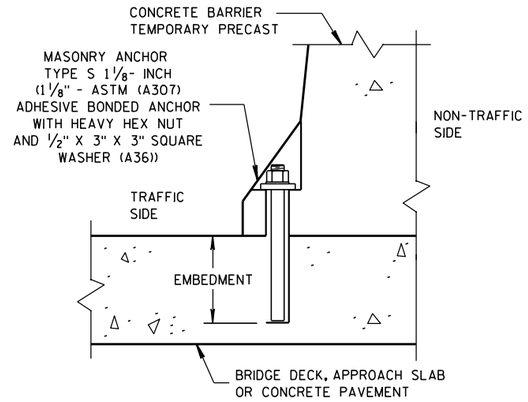
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(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 INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT ②

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

GENERAL NOTES

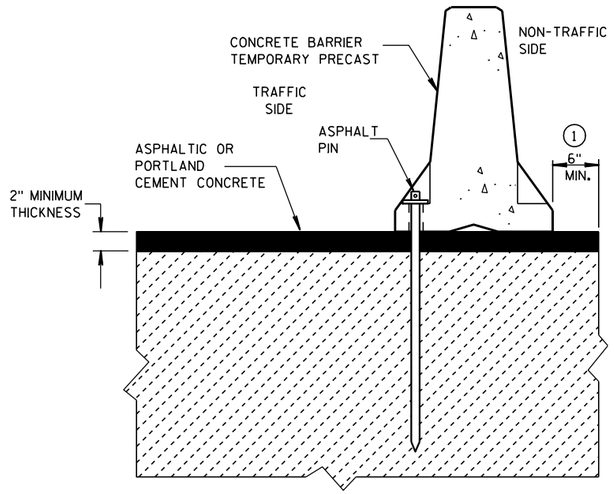
① CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED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

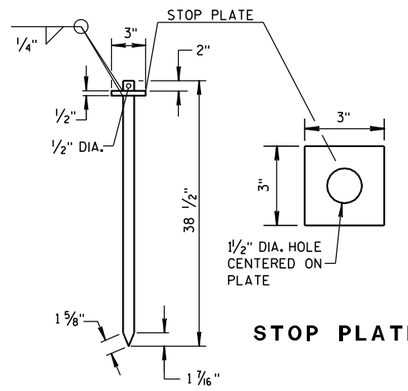
WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED (EPOXY) ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1⅛-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE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



STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

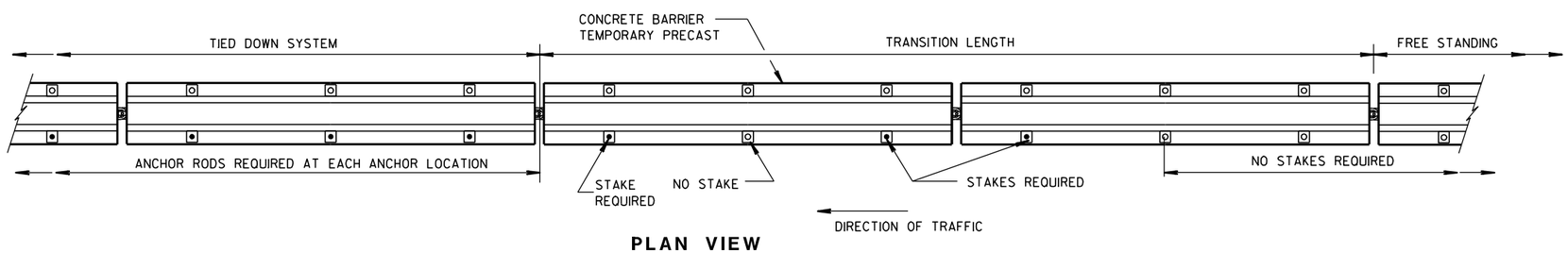
(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



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 TRANSPO...

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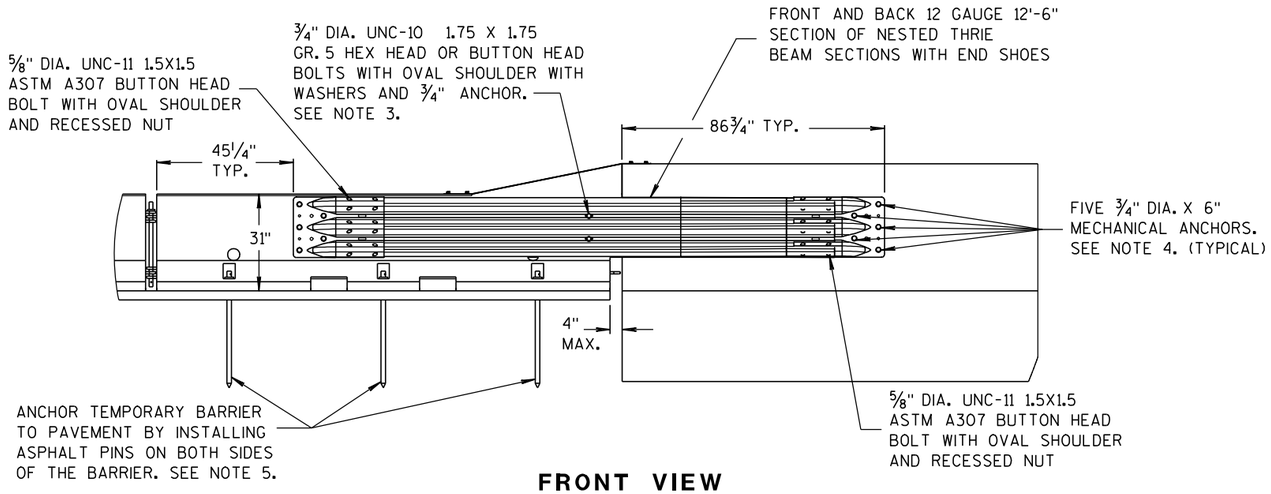
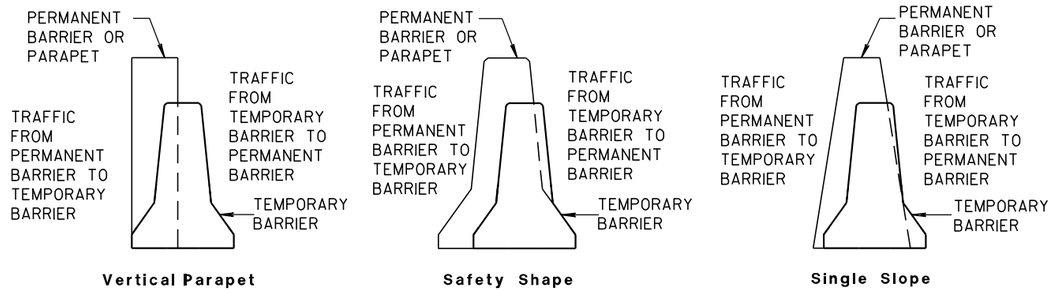
S.D.D. 14 B 7-13d



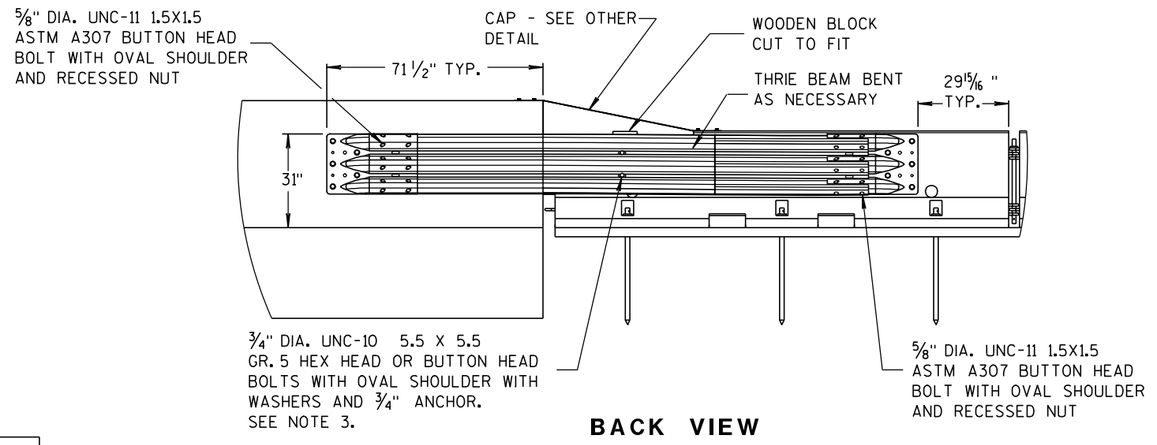
FRONT VIEW

NOTES

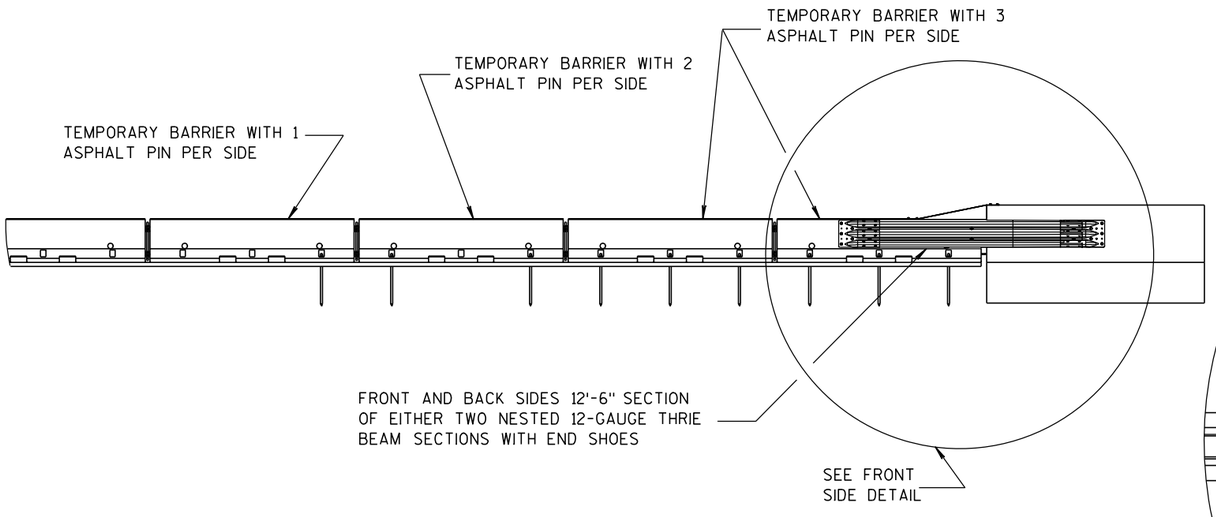
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15¼" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 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.



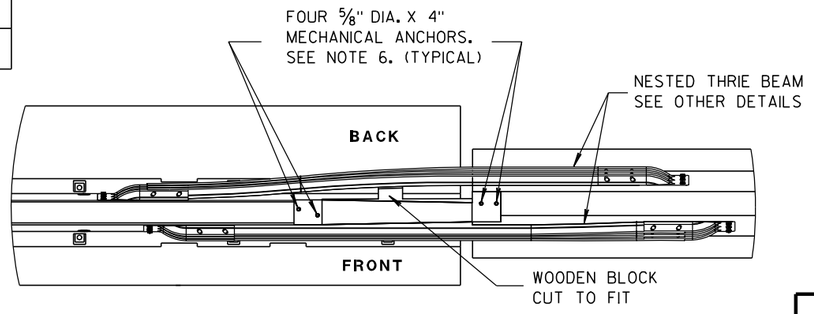
TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM



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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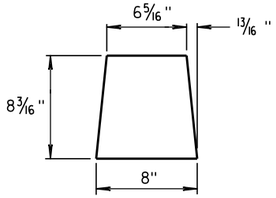
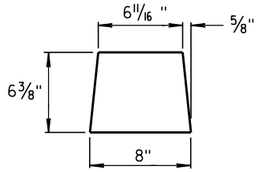
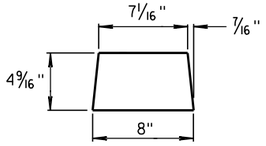
S.D.D. 14 B 7-13e



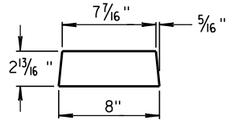
GUSSET 1



GUSSET 2

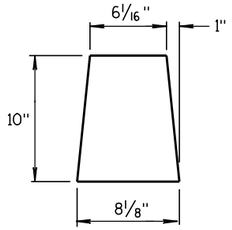


GUSSET 3

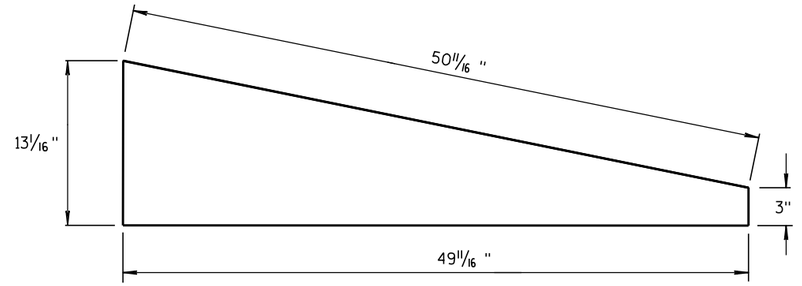


GUSSET 4

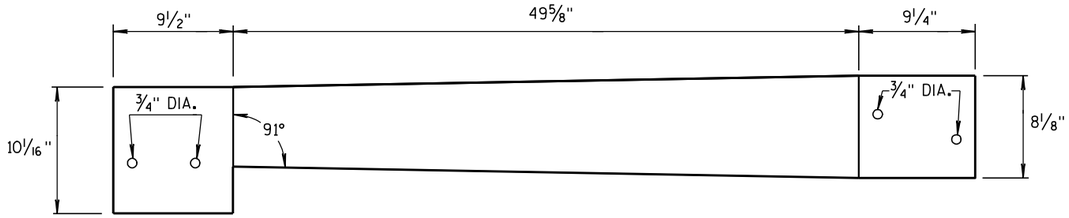
GUSSETS

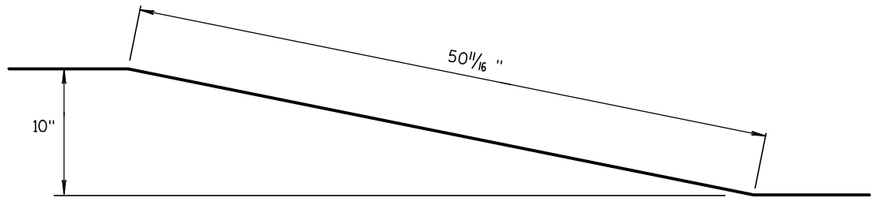


END PLATE

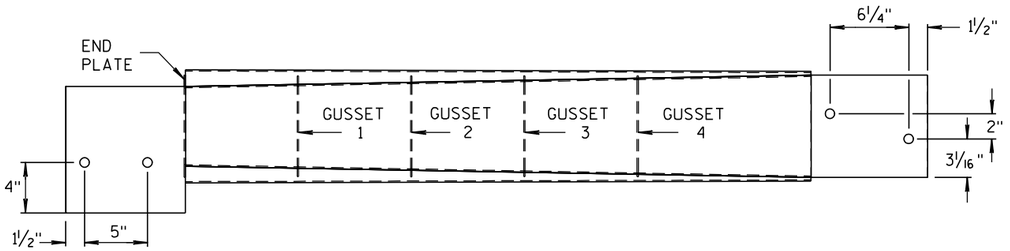


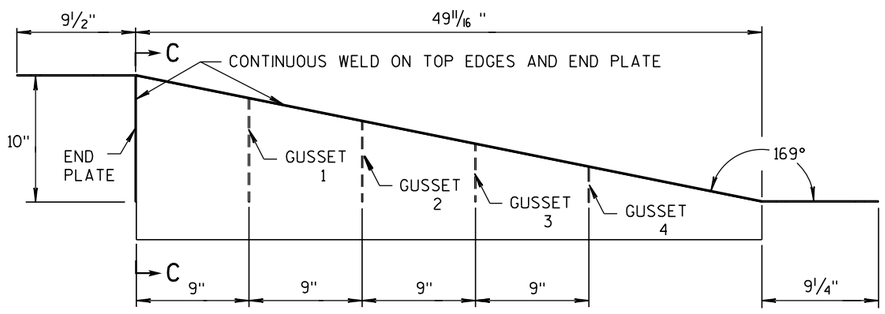
SIDE PLATE

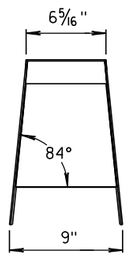




TOP PLATE







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.

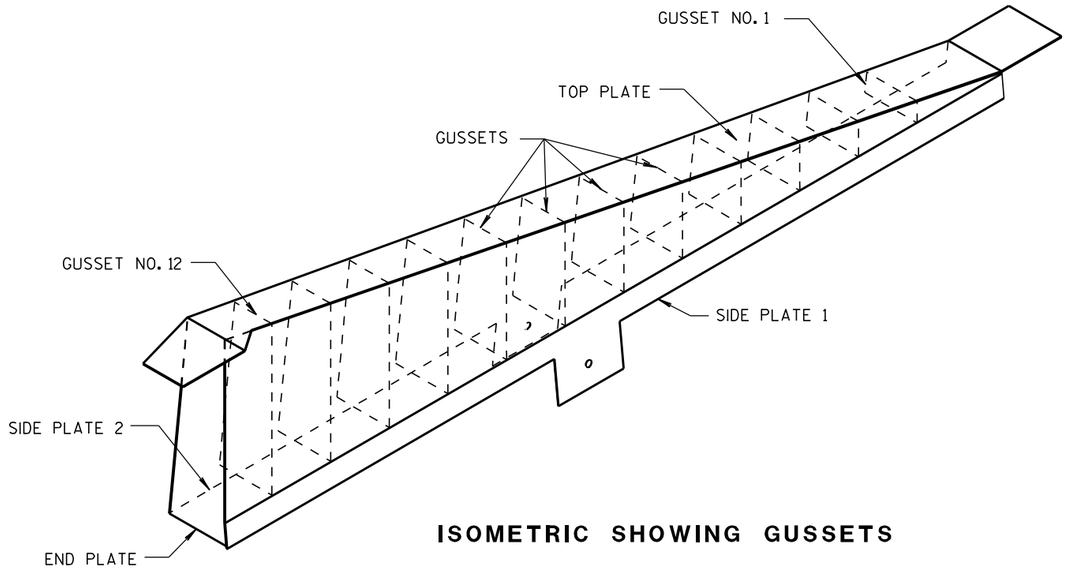
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

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

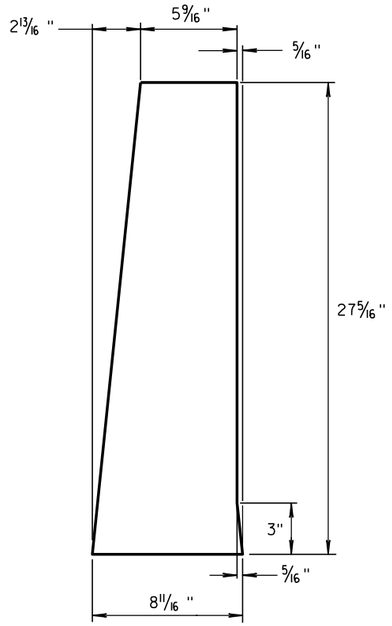
SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

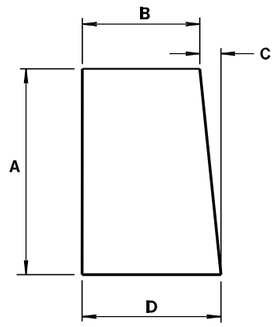


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



GUSSETS 1 - 12

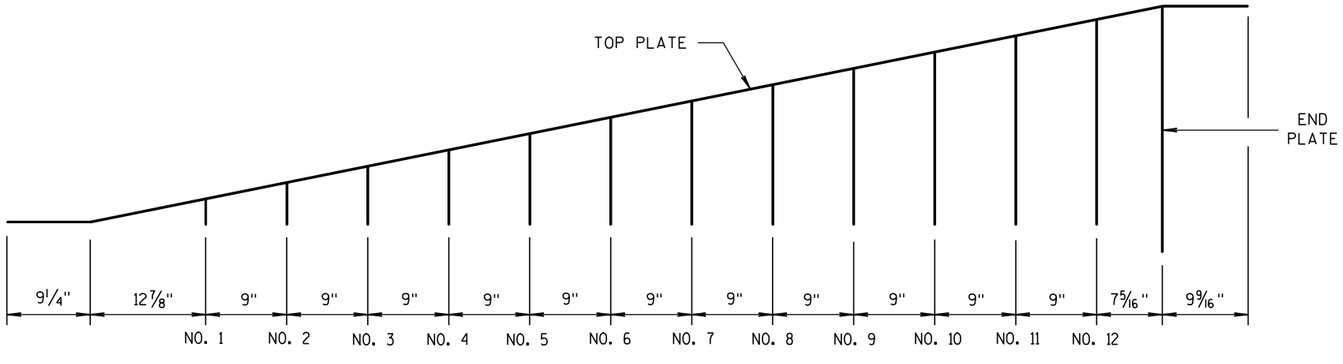
ALL GUSSETS 1/8" STEEL PLATE

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 TRANSPO...

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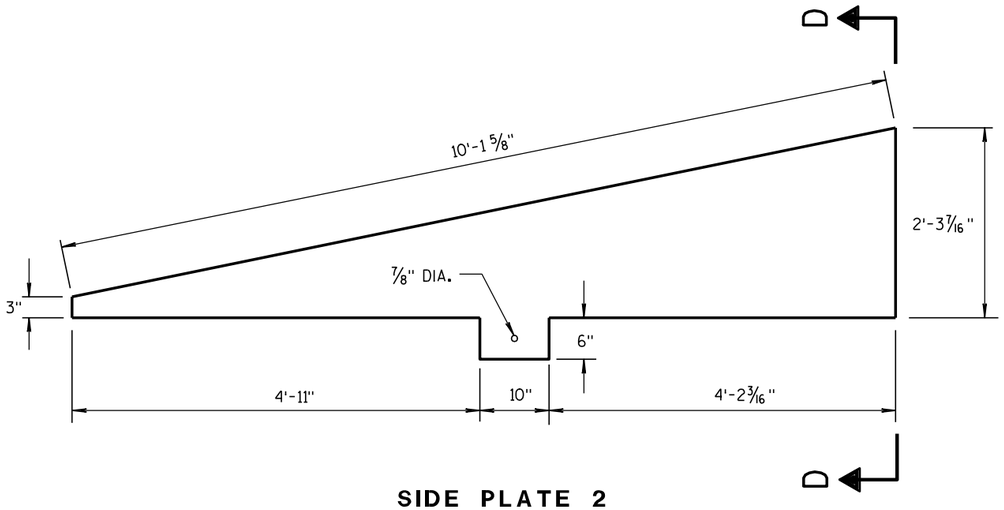
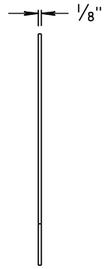
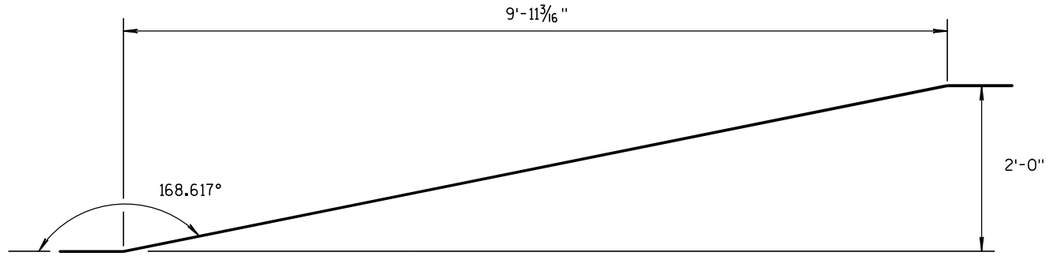
S.D.D. 14 B 7-13g



SIDE PLATE 2

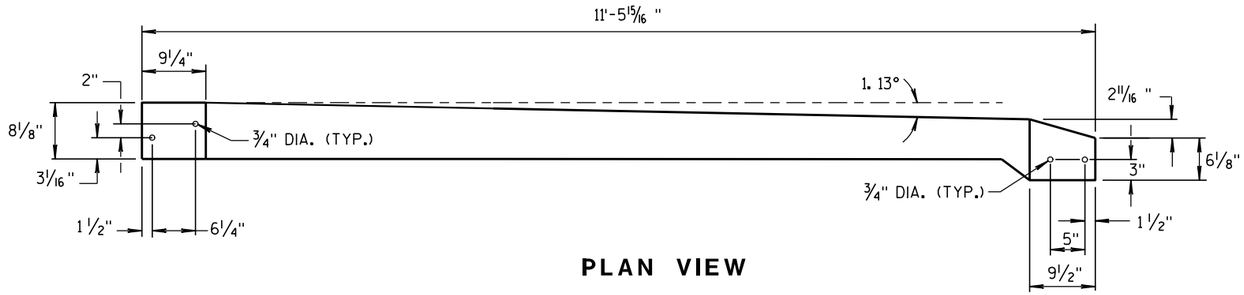


END VIEW



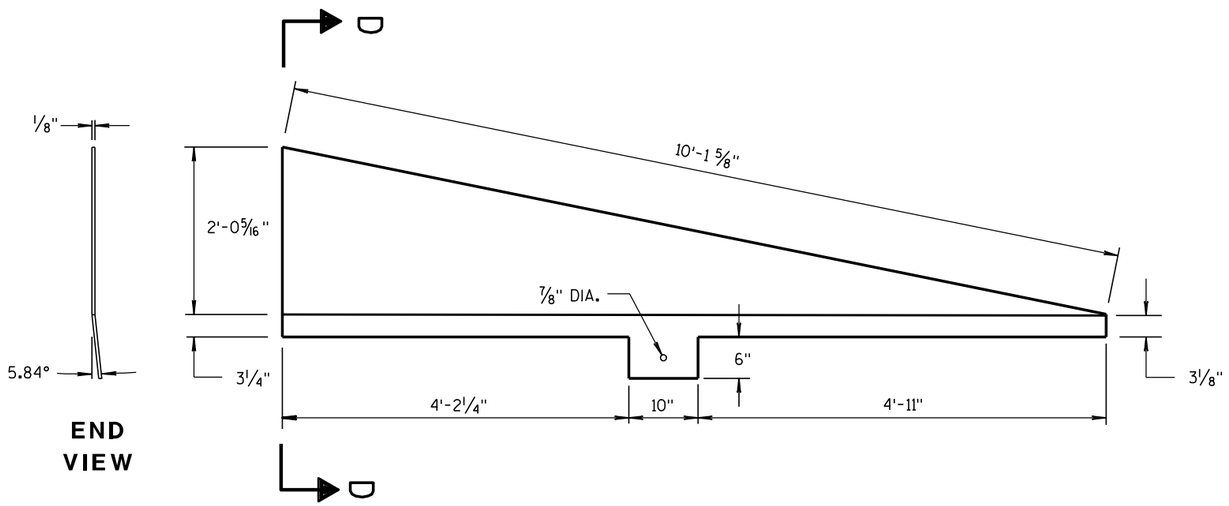
SIDE VIEW

TOP PLATE



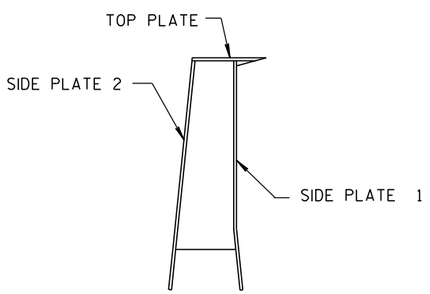
PLAN VIEW

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	
8/31/2012 DATE	/S/ Jerry H. ---- ROADWAY STANDARDS ENGINEER
FHWA	39 ENT

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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) W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. APPROVED PLASTIC BLOCKOUT DESIGNS MAY VARY FROM THIS TYPICAL DETAIL WHEN USED IN CONJUNCTION WITH STEEL POSTS.

DO NOT MIX STEEL POSTS AND WOOD POSTS IN A SINGLE INSTALLATION.

(2) USE STRUCTURAL STEEL POSTS CONFORMING TO ASTM A 36. GALVANIZED POSTS ACCORDING TO AASHTO M 111. EITHER SET THE POSTS IN DRILLED HOLES OR DRIVE TO GRADE. REMOVE MUSHROOMING CAUSED BY DRIVING AND REPAIR DAMAGED SPELTER COATING ON GALVANIZED POSTS.

(3) INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

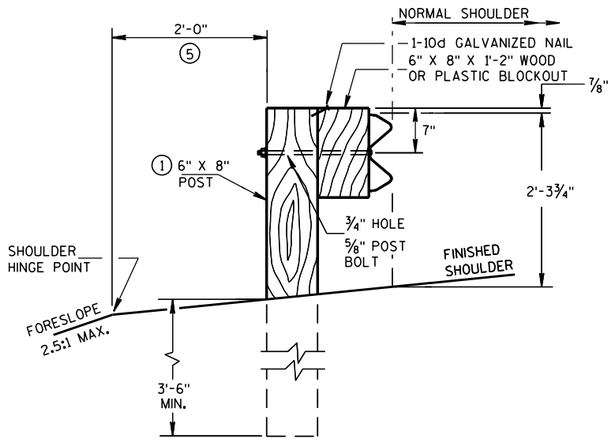
(4) USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.

(5) IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).

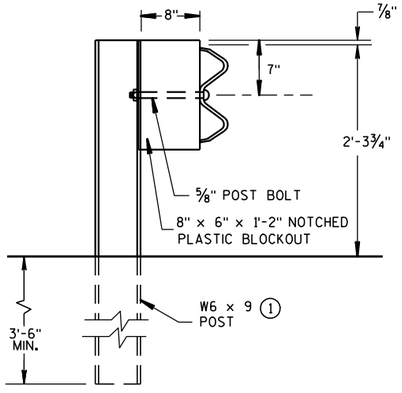
(6) IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2½ INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN YHE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATEY.

INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS.

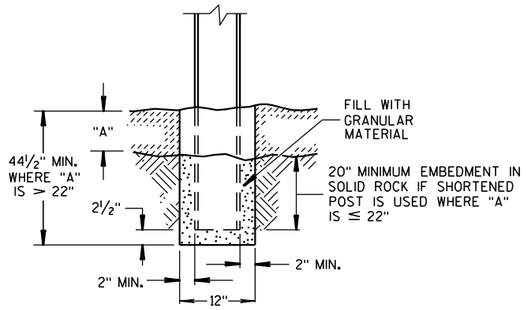
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



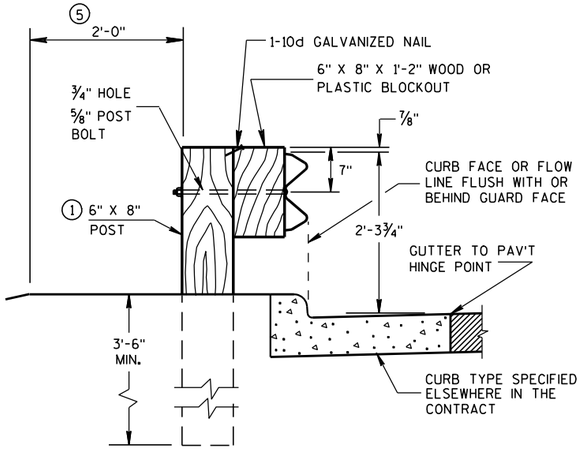
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



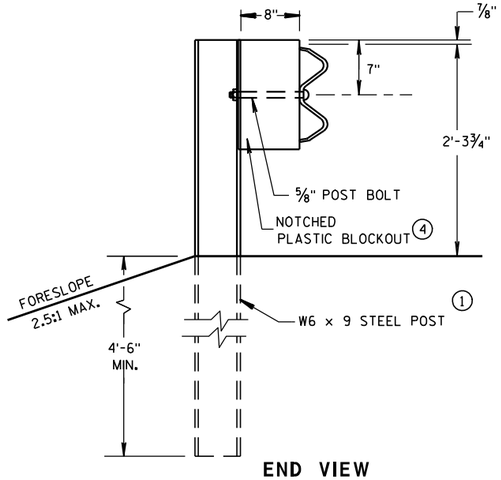
END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION



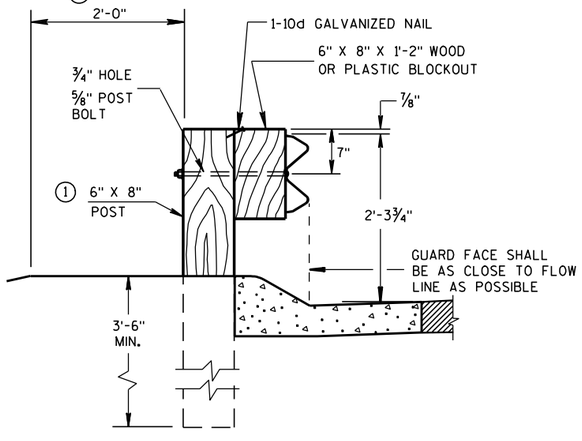
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (6)



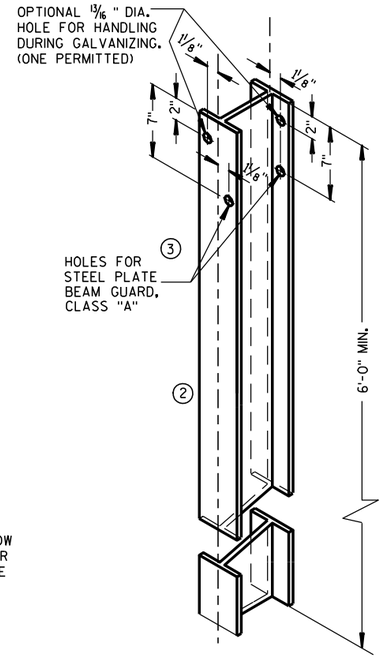
END VIEW
LOCATED ALONG A CURBED ROADWAY



END VIEW
LONGER POST AT HALF
POST SPACING W BEAM
(LHW)

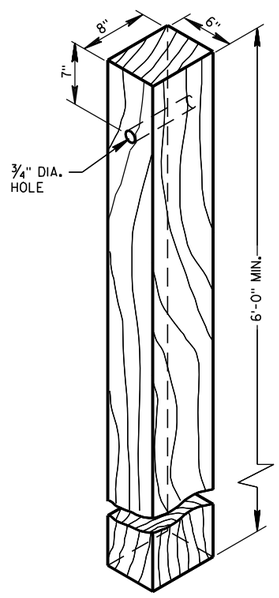


END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY

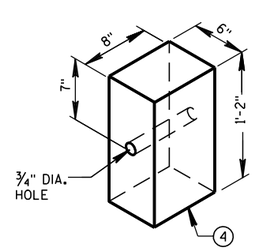


STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) (1)

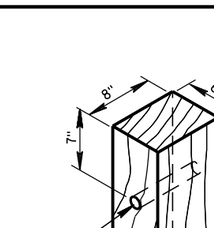
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



WOOD POST
(6"X8") NOMINAL

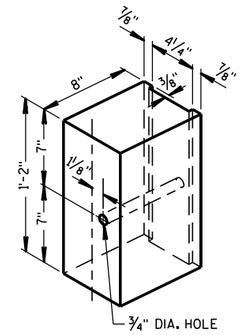


WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM

PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM



TYPICAL NOTCHED
PLASTIC BLOCKOUT (1)
FOR STEEL POSTS

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

STEEL PLATE BEAM GUARD,
CLASS "A"
INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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S.D.D. 14 B 15-7a

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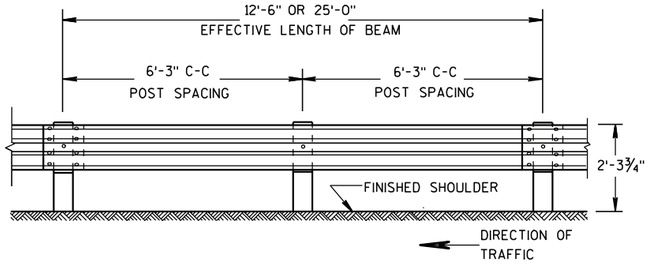
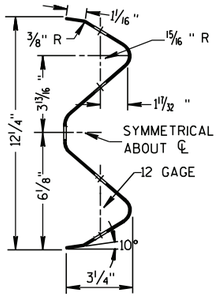
S.D.D. 14 B 15-7a

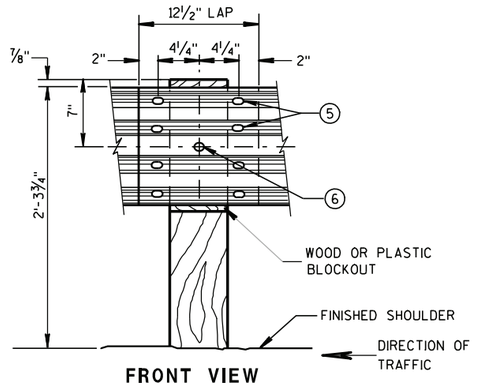


FRONT VIEW

POST SPACING STANDARD INSTALLATION



SECTION THRU W BEAM

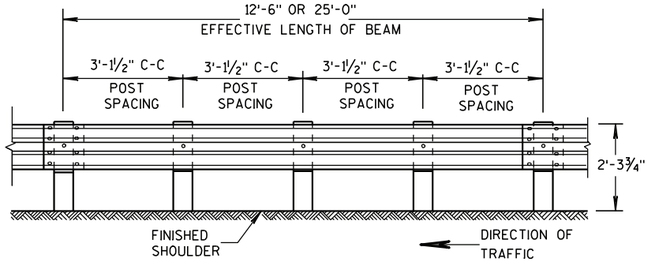


FRONT VIEW

BEAM SPLICE AT WOOD POST AND POST MOUNTING DETAIL

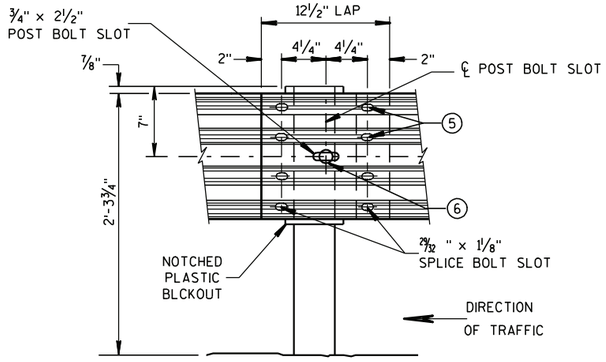
GENERAL NOTES

1. PROVIDE TYPE "H" SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH TYPE "H" YELLOW REFLECTIVE SHEETING.
2. DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
3. REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
4. PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.
5. 8 - 5/8" ϕ X 2 " BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.
6. 5/8" ϕ X 1'-6" BUTTON HEAD BOLT AND AND RECESS NUT WITH ROUND WASHER UNDER NUT.



FRONT VIEW

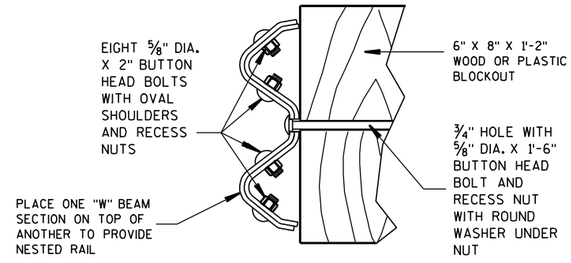
POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)



FRONT VIEW

BEAM SPLICE AT STEEL POST

TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD

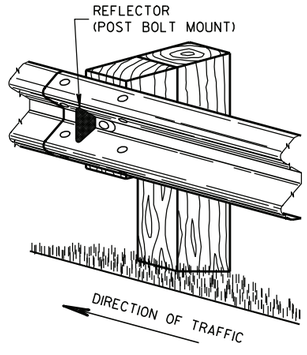


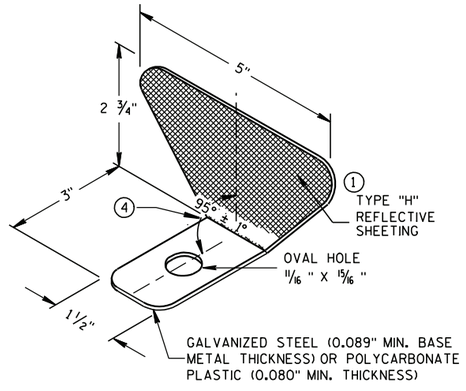
NESTED W BEAM (NW)

USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR CONSTRUCTING NESTED W BEAM (NW)

REFLECTOR SPACING (2)

	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1 (3)	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2	3
	> 200'	100' C-C	2 (4)	





ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION (1)

STEEL PLATE BEAM GUARD,
CLASS "A",
INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

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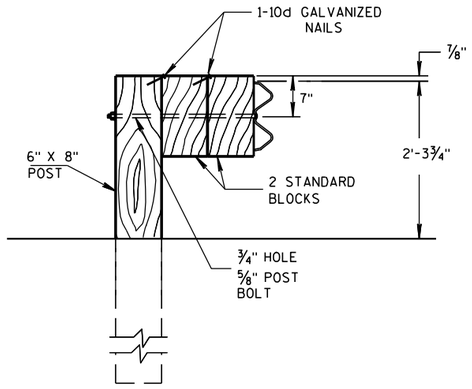
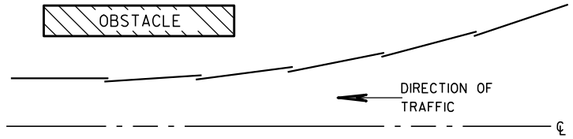
S.D.D. 14 B 15-7b

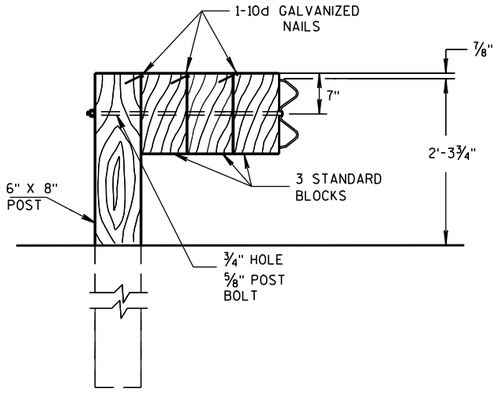


DETAIL FOR DOUBLE BLOCKS

THE NUMBER OF DOUBLE BLOCK POSTS WITHIN A BARRIER RUN IS UNLIMITED

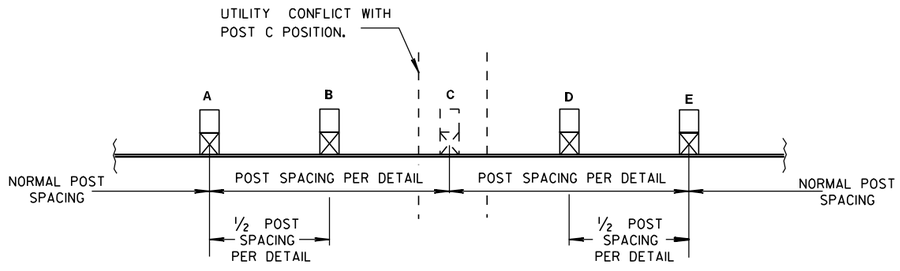


PLAN VIEW
BEAM LAPPING DETAIL



DETAIL FOR TRIPLE BLOCKS

TRIPLE BLOCK DETAIL IS LIMITED TO ONE LOCATION WITHIN A BEAM GUARD RUN.



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

NOTES: USE DOUBLE OR TRIPLE BLOCKS WHEN UNDERGROUND OBSTACLES PREVENT THE POST FROM BEING INSTALLED.

DO NOT USE EXTRA BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

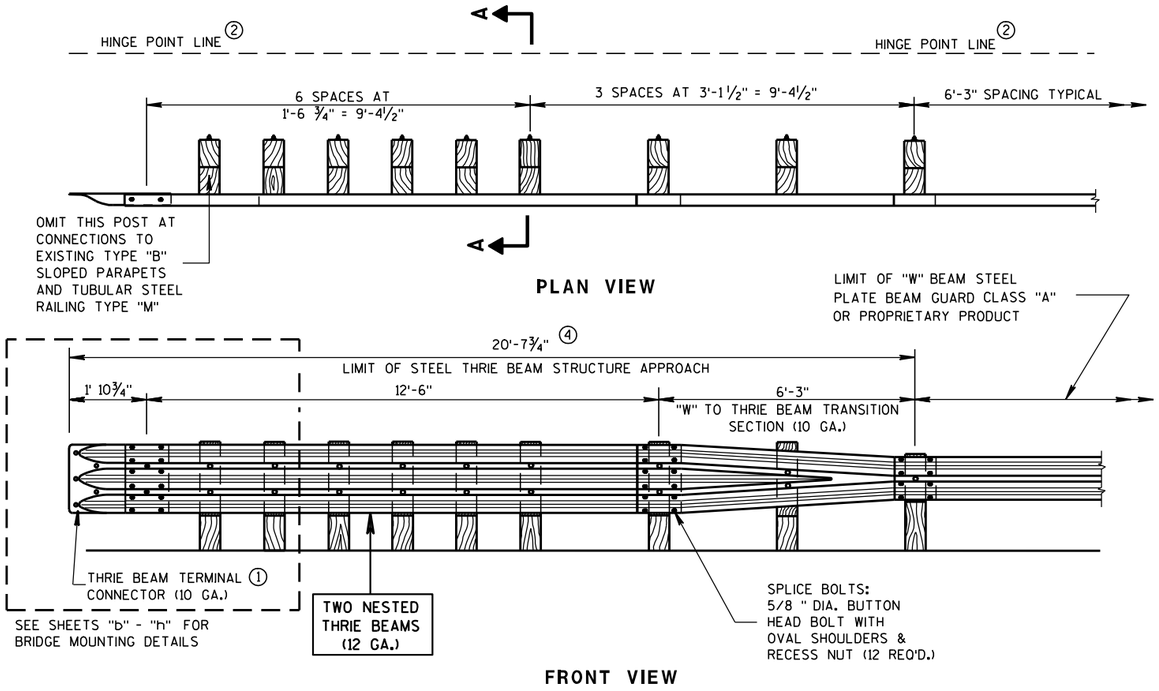
APPROVED

5/23/11	/S/ Jerry H. Zogg	
DATE	ROADWAY STANDARDS ENGINEER	ENT

FHWA

6

S.D.D. 14 B 15-7c



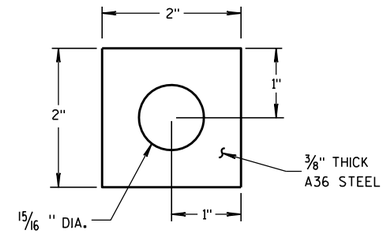


PLATE WASHER DETAIL

GENERAL NOTES

BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3".

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

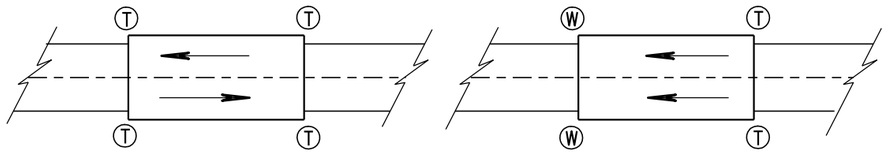
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2" , AND 12" DIAMETER AROUND POST. SEE 14B15 FOR MORE DETAILS.

① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

② MINIMUM EMBEDMENT SHALL BE 4'-0". WHERE EXISTING CONDITIONS DO NOT PERMIT THE APPROPRIATE EARTHWORK SHOWN ON THE PLAN TYPICAL SECTIONS OR DETAILS, THE ENGINEER MAY ALLOW THE REDUCTION OR ELIMINATION OF THE 2 FOOT DISTANCE TO THE HINGE POINT. OTHERWISE BUILD AS THE PLAN SHOWS OR AS THE ENGINEER DIRECTS. IF THE 2 FOOT DISTANCE TO THE HINGE POINT IS REDUCED OR ELIMINATED, INCREASE THE POST EMBEDMENT DEPTH TO 4'-6" OR MORE.

③ POST BOLTS ARE 5/8" DIAMETER ASTM A307 BUTTON HEAD BOLT. A POST BOLT REQUIRES A 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX AND A 5/8" DIAMETER F844 FLAT WASHER. LENGTH OF POST BOLT MAY VARY.

④ ALL WOOD POSTS MUST BE 6" X 8" AND AT LEAST 7'-0" LONG.



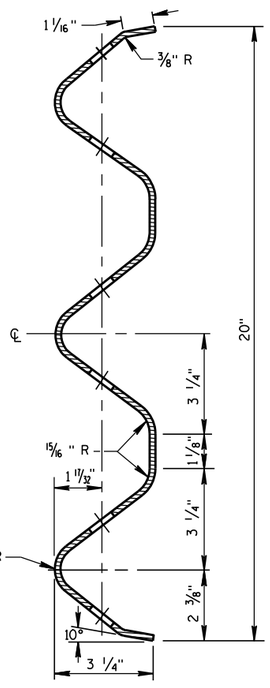
TWO WAY TRAFFIC

ONE WAY TRAFFIC

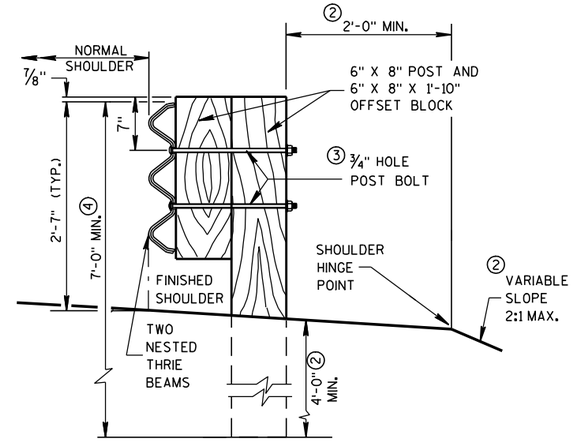
(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

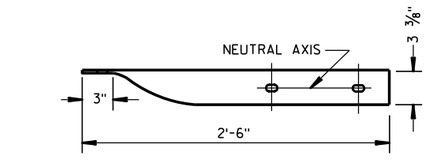
TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

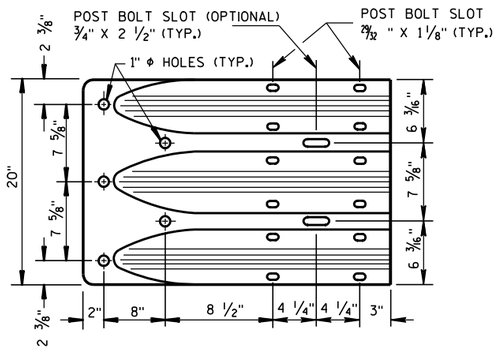


SECTION THRU THRIE BEAM RAIL ELEMENT

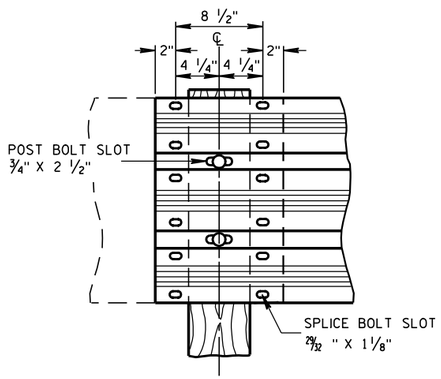


SECTION A-A





THRIE BEAM TERMINAL CONNECTOR



THRIE BEAM SPLICE

STEEL THRIE BEAM STRUCTURE APPROACH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/31/2012 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA

BILL OF MATERIALS

NOTE NO.	QTY.	DESCRIPTION
(1)	4	WOOD BREAKAWAY TERMINAL POST: 5½" X 7½" X 3'-9"
(2)	**	STEEL TUBE: OPTION 1 - QUANITY OF 4 TS 8" X 6" X 0.188", 4'-6" LONG OR OPTION 2 - QUANITY OF 2 TS 8" X 6" X 0.188", 6'-0" AND 2 TS 8" X 6" X 0.188", 4'-6" LONG
(3)	2	SOIL PLATE: 2'-0" X 1'-6" X ¼" **
(4)	4	WOOD BREAKAWAY CRT POST: 6" X 8" X 6'-0"
(5)	6	WOOD OFFSET BLOCKS: 6' X 8" X 1'-2"
(6)	1	PIPE SLEEVE: 2" X 5 ½" STANDARD PIPE
(7)	1	BEARING PLATE
(8)	1	BCT CABLE ASSEMBLY
(9)	1	CABLE ANCHOR BOX
(10)	1	STRUT & YOKE
(11)	1	STEEL PLATE BEAM, END PANEL 12 GA. 13'-6½" LONG FOR SKT-350, ET-2000 AND ET-2000 PLUS
(12)	3	STEEL PLATE BEAM: 12 GA. 13'-6½"
(13)	1	ET-2000/ET-2000 PLUS GUARDRAIL EXTRUDER OR SKT-350 IMPACT HEAD: AS FURNISHED BY MANUFACTURER
(14)	1	REFLECTIVE SHEETING TYPE H: 18" X 18"
(15)	1	E.A.T. MARKER POST

GENERAL NOTES

FOLLOW MANUFACTURE'S BOLTING RECOMMENDATIONS. IF NONE ARE AVAILABLE, INSTALL ⅝" ϕ X 1'-6" BUTTON HEAD BOLTS AT ALL POSTS EXCEPT FOR POST 1.

(A) THE SLOPE IN THE AREA BOUNDED BY THE EXTENDED VEHICLE RUNOUT PATH (EVRP), THE HINGE POINT LINE (HPL),AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.

(C) THE 13 SLOT FIRST RAIL PANEL MAY BE USED IN LIEU OF THE 3 SLOT RAIL PANEL ON SKT-350 ONLY.

(D) THE TOP OF THE STEEL TUBE ON POSTS 1 THROUGH 4 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

(E) THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST 5 THROUGH 8 SHALL BE ¾" ABOVE THE FINISHED GROUND LINE.

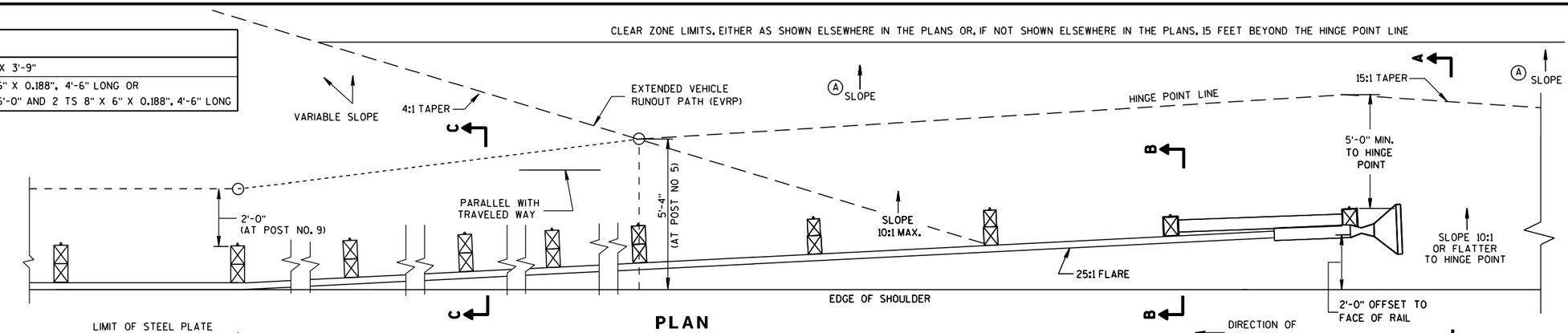
(F) SHEETING IS ATTACHED TO 0.040 ALUMINUM SHEET AND ATTACHED TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER OF E.A.T.

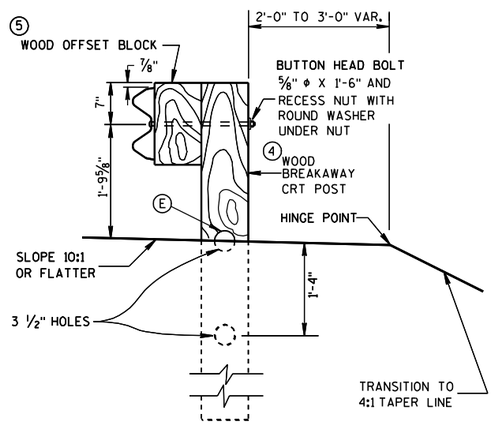
STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.

DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

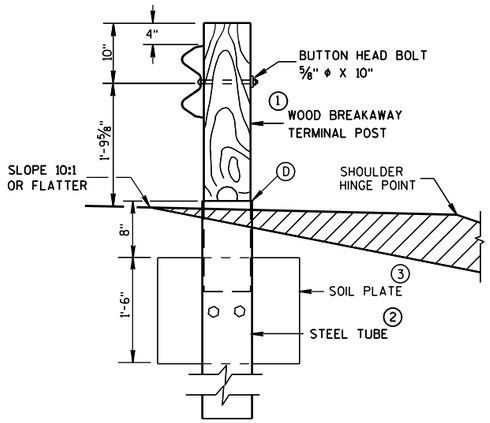
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

** SDD SHOWS 4 - 54 INCH STEEL TUBES WITH SOIL PLATES INSTALLED ON POST 1 AND POST 2. POST 3 AND 4 DO NOT NEED SOIL PLATES. AN ALTERNATIVE INSTALLATION WOULD CONSIST OF 2 - 72 INCH STEEL TUBES ON POST 1 AND POST 2 AND 54 INCH SOIL TUBES ON POSTS 3 AND 4. THE ALTERNATIVE INSTALLATION DOES NOT REQUIRE SOIL PLATES.

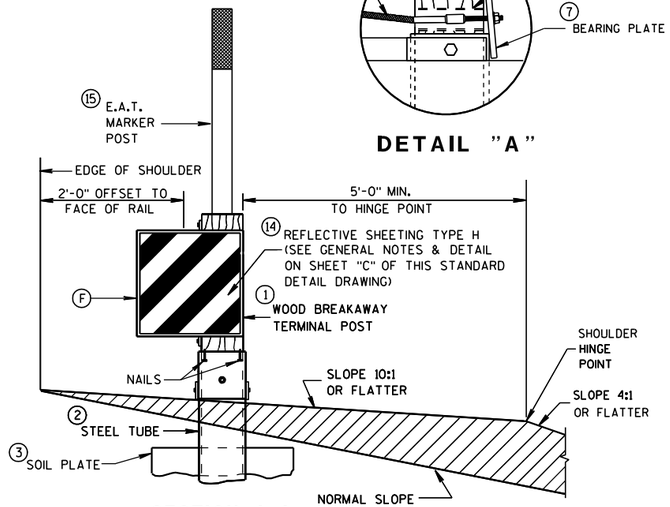




SECTION C-C
TYPICAL AT POST NOS. 6, 8

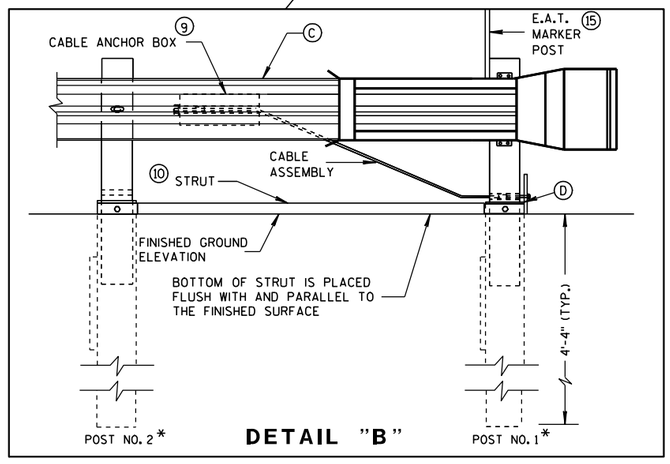


SECTION B-B
TYPICAL AT POST NO. 2*



DETAIL "A"

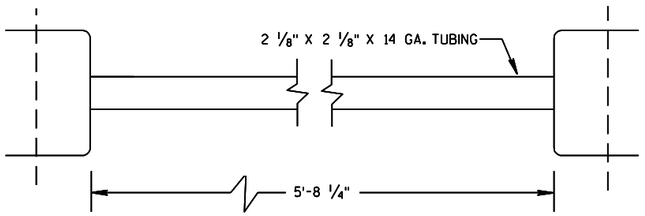
SECTION A-A
TYPICAL AT POST NO. 1*



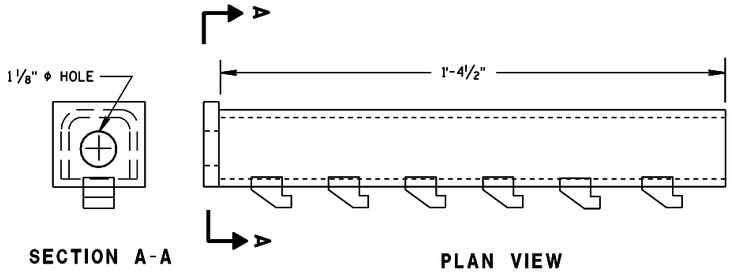
DETAIL "B"

STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL

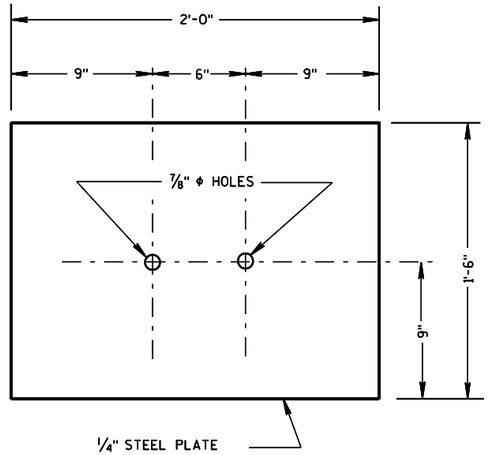
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



⑩ STRUT DETAIL (SKT-350)

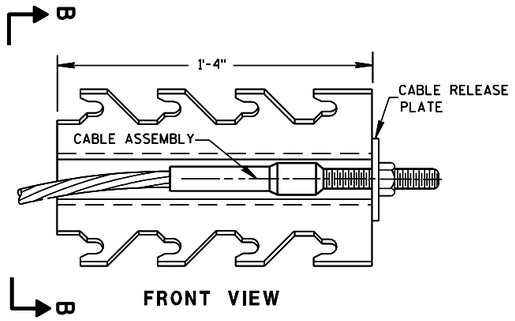


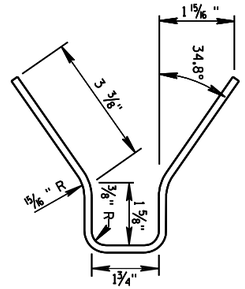
⑨ CABLE ANCHOR BOX (ET-2000/ET-2000 PLUS)



③ SOIL PLATE

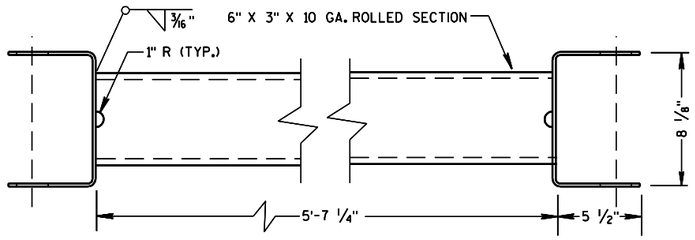
(SKT-350, ET-2000/ET-2000 PLUS)





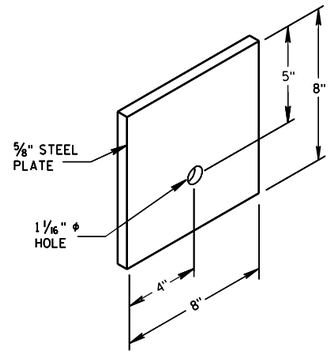
⑨ CABLE ANCHOR BOX (SKT-350)

(SKT-350)



⑩ STRUT DETAIL (ET-2000/ET-2000 PLUS)

(ET-2000/ET-2000 PLUS)



⑦ STEEL BEARING PLATE

(SKT-350, ET-2000/ET-2000 PLUS)

6

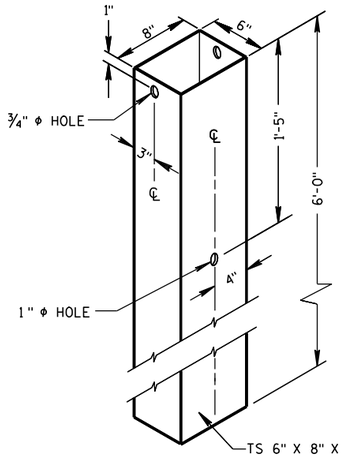
6

S.D.D. 14 B 24-7b

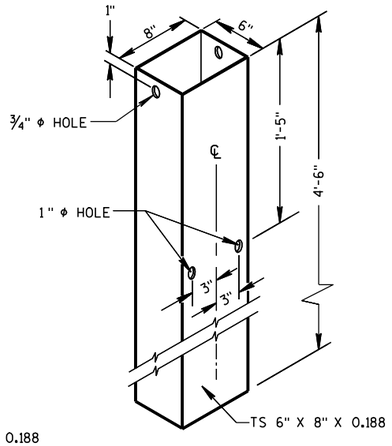
S.D.D. 14 B 24-7b

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

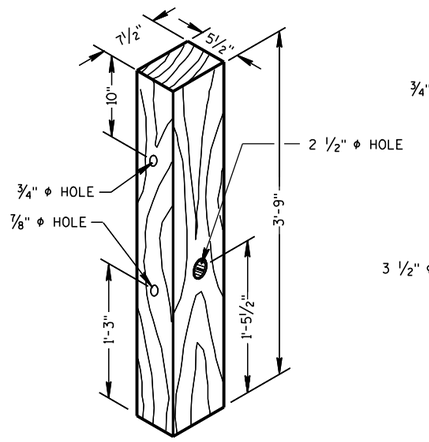
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



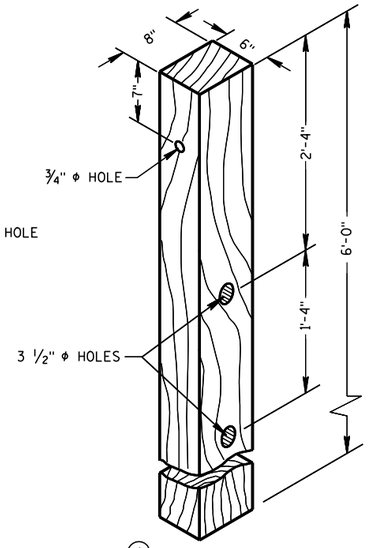
② 72" STEEL TUBE
(POSTS NO. 1-4



② 54" STEEL TUBE
(POSTS NO. 1-4



① TERMINAL POST
(POSTS NO. 1-4



④ CRT POST
(POSTS NO'S 5-8

WOOD BREAKAWAY POSTS

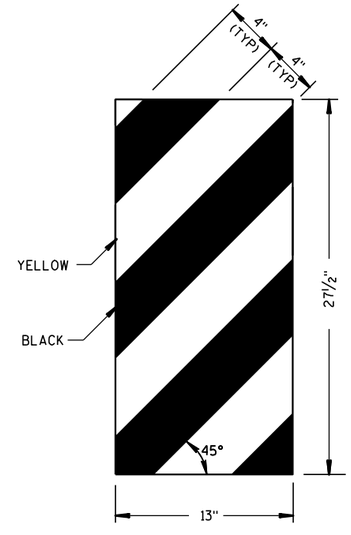
GENERAL NOTES

STEEL PLATE BEAM GUARD, ENERGY ABSORBING TERMINAL SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH, WHICH SHALL INCLUDE HARDWARE, STEEL PLATE BEAM GUARD, POSTS, REFLECTIVE SHEETING AND INSTALLATION AS SHOWN.

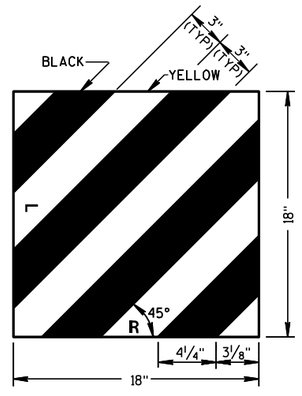
WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 ½" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH ADEQUATELY COMPACTED MATERIAL EXCAVATED FROM THE HOLE.

SEE APPROVED PRODUCTS LIST FOR ACCEPTABLE E. A. T. MARKER POST.

(G) ½" DIA. X 3" LAG BOLT WITH WASHER.

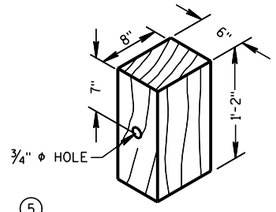


ET-2000 PLUS ONLY

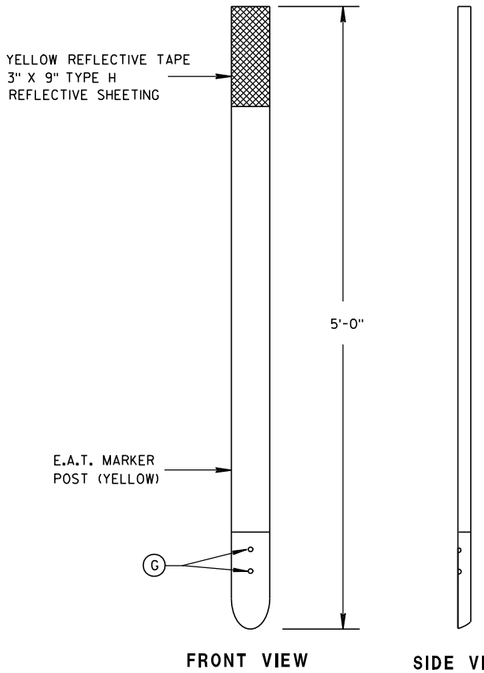


ET-2000 AND SKT-350

⑭ REFLECTIVE SHEETING DETAILS

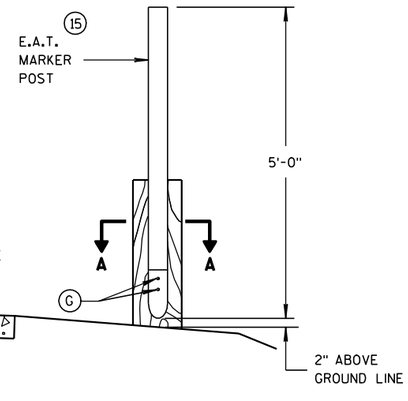


⑤ WOOD OFFSET BLOCK
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2

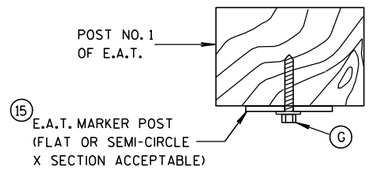


FRONT VIEW SIDE VIEW

⑮ E.A.T. MARKER POST



TYPICAL INSTALLATION OF E.A.T.
MARKER POST BACKSIDE OF POST NO. 1
(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

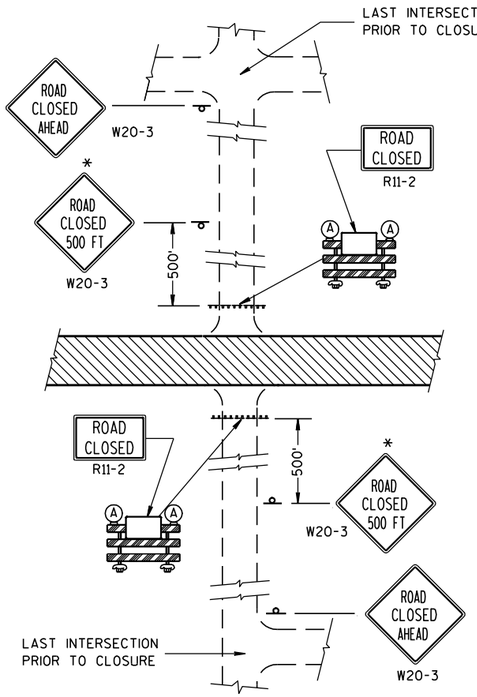
APPROVED
4-12-10 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 14 B 24-7c

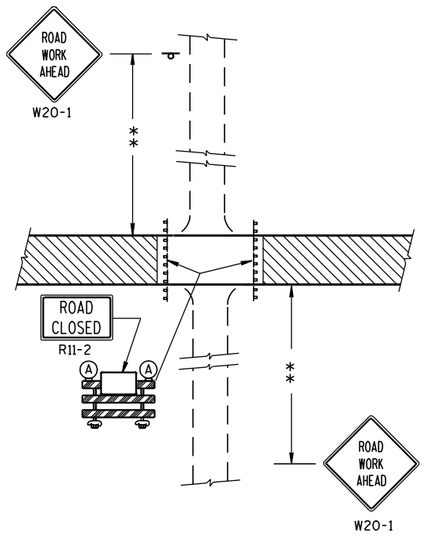
6

S.D.D. 14 B 24-7c



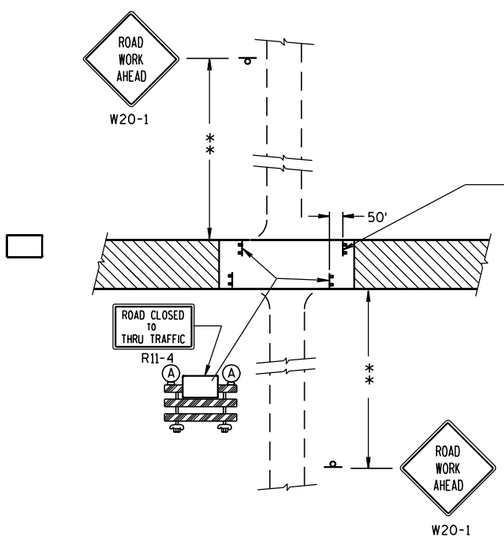
DETAIL 1

(NO ACCESS TO PROJECT)



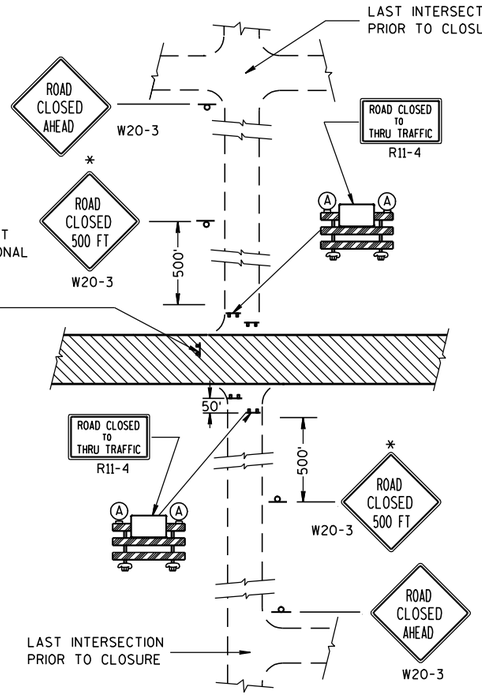
DETAIL 2

(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.

THE REFLECTIVE SHEETING USED ON R11-2, R11-3 AND R11-4 SIGNS SHALL COMPLY WITH SUBSECTION 637.2.2.2 OF THE STANDARD SPECIFICATIONS.

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

- POST MOUNTED WARNING SIGN
- TYPE III BARRICADES
- (A) TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

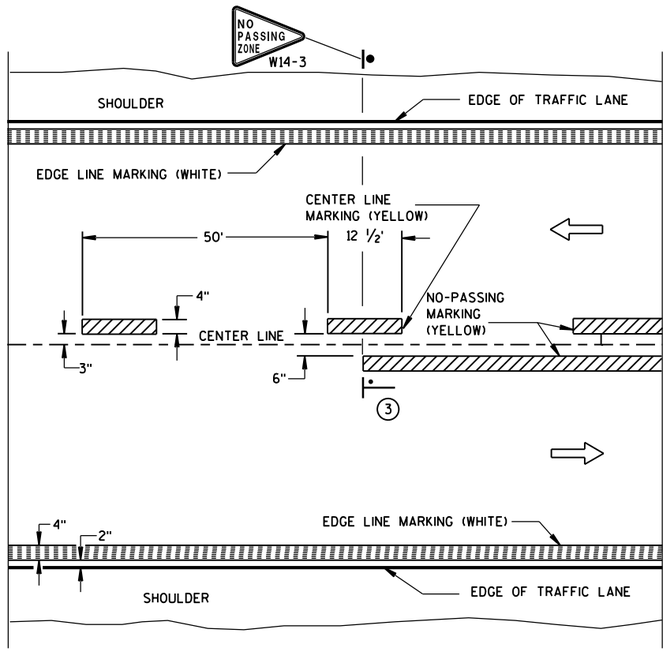
9-16-03 DATE

/S/ Thomas N. N[illegible] INEER
CHIEF SIGNS AND MAR

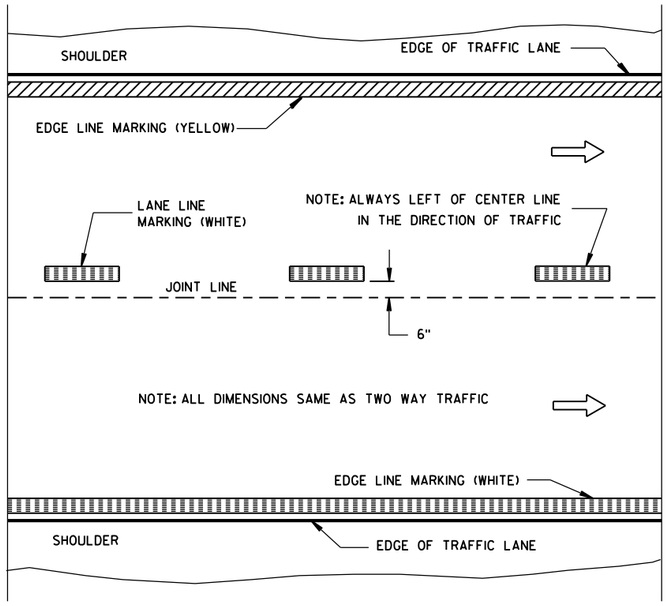
FHWA

6

S.D.D. 15 C 3-1

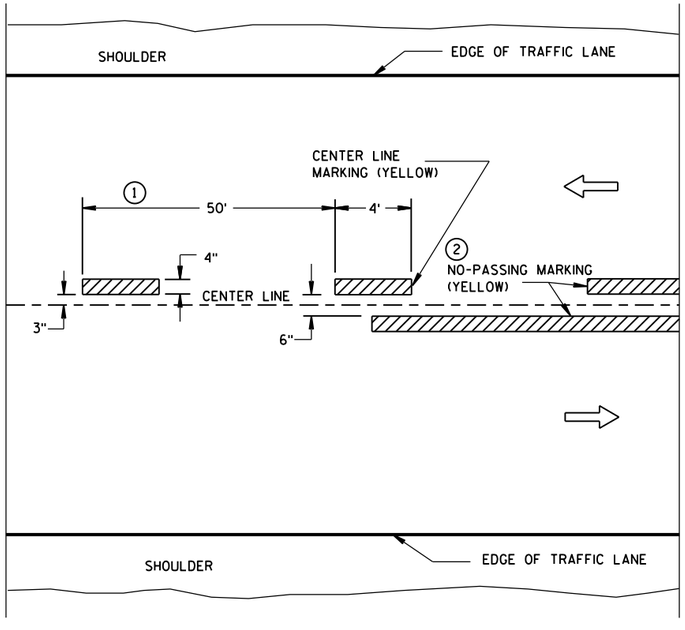


TWO WAY TRAFFIC

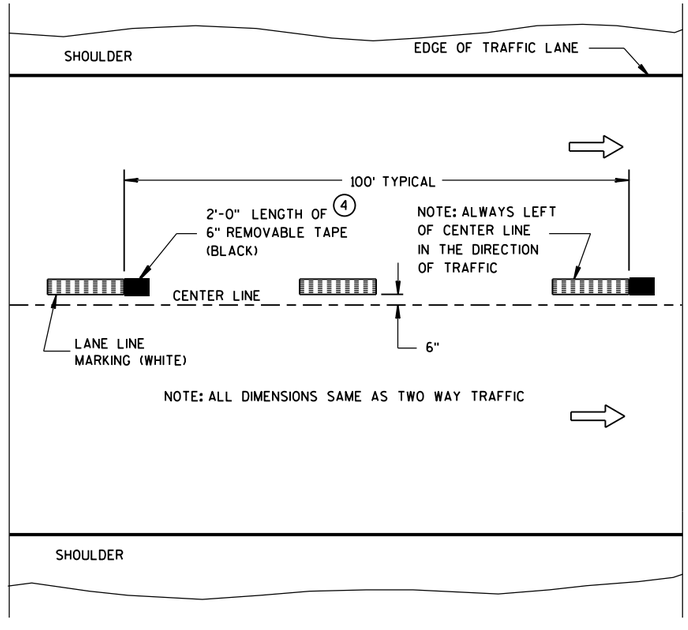


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

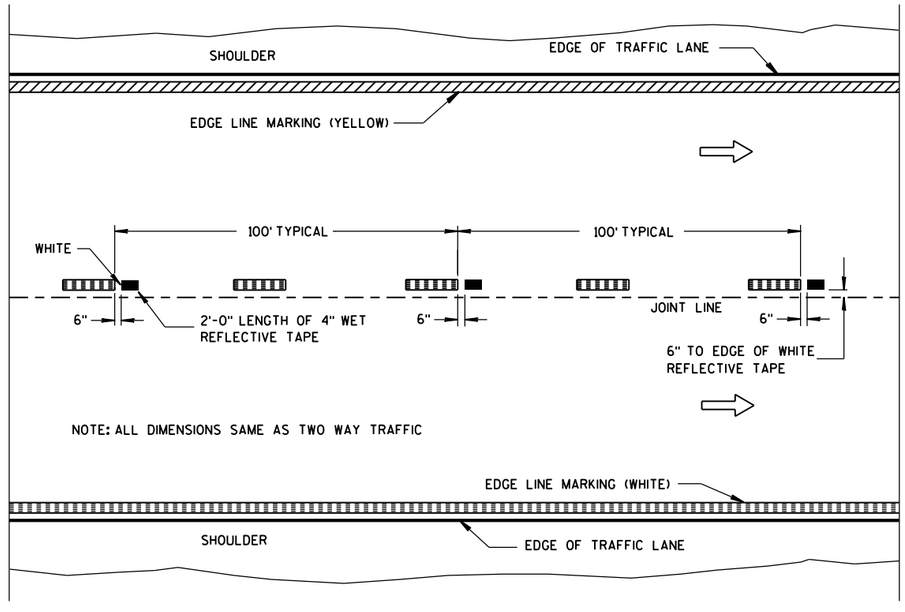
GENERAL NOTES

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

TWO-LANE ROADWAY

SYMBOLS

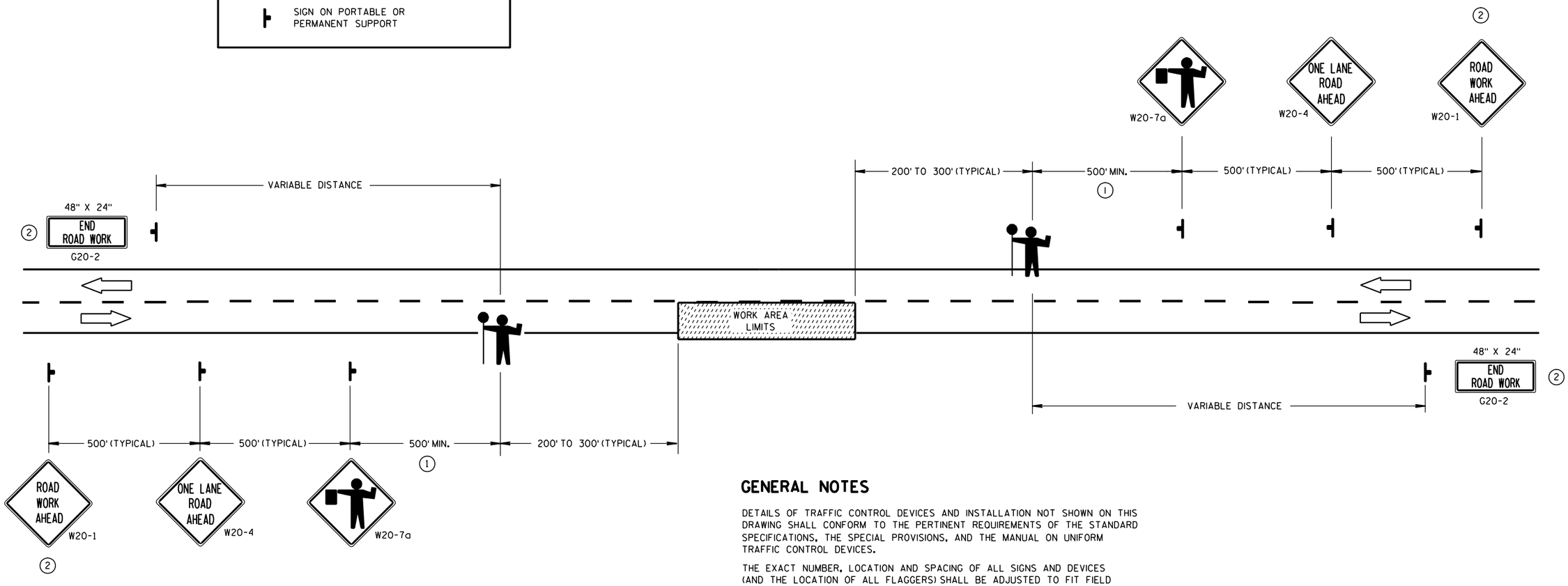
WORK AREA

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

SIGN ON PORTABLE OR PERMANENT SUPPORT

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, THE "FLAGGER AHEAD", THE "ROAD WORK AHEAD" AND THE ONE LANE ROAD AHEAD" SIGNS SHALL BE COVERED OR REMOVED AND THE HIGHWAY RESTORED TO NORMAL OPERATION.

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

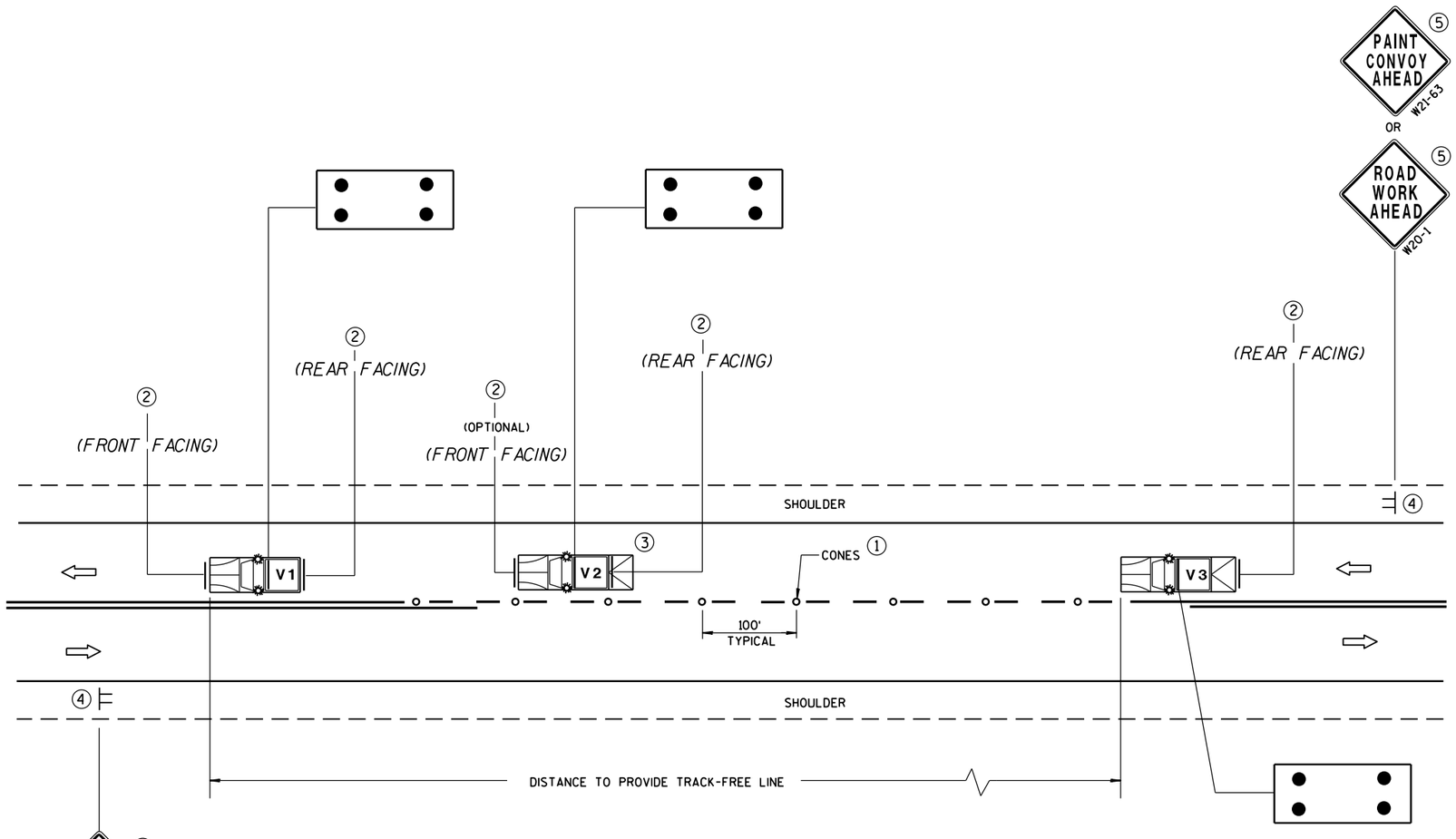
9/5/06 — DATE

/S/ Thomas N. Nathaam — STATE TRAFFIC ENGINEER

FHWA

6

S.D.D. 15 C 12-3



MOVING PAVEMENT MARKING OPERATIONS
TWO-LANE TWO-WAY ROADWAY

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE MARKING.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

(1) CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

(2) USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.

WET PAINT W21-64 OR WET PAINT W21-64

(3) OPTIONAL TRUCK-MOUNTED ATTENUATOR.

(4) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

(5) IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

LEGEND

V1	LEAD VEHICLE
V2	SHADOW VEHICLE
V3	TRAIL VEHICLE WITH TMA
TMA	TRUCK-MOUNTED ATTENUATOR
	SIGN ON TEMPORARY SUPPORT
	DIRECTION OF TRAFFIC
	CONES
	FLASHING ARROW PANEL (CAUTION)

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED 5/3/2013 DATE /S/ Travis Feltes STATE TRAFFIC E FHWA

6

S.D.D. 15 C 19-2a

6

S.D.D. 15 C 19-2a

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.

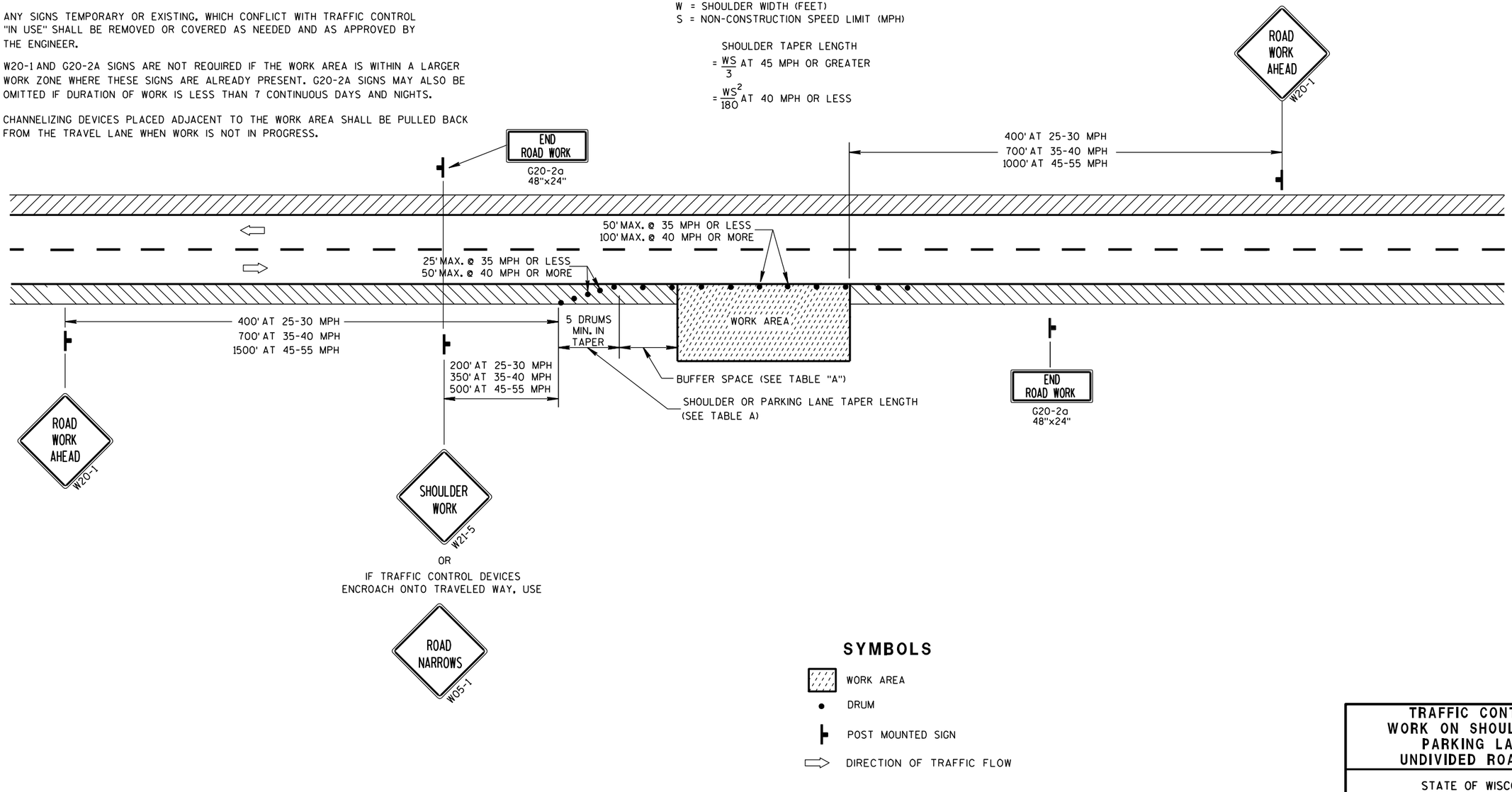
CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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
$= \frac{WS}{3}$ AT 45 MPH OR GREATER
$= \frac{WS^2}{180}$ AT 40 MPH OR LESS



SYMBOLS

- WORK AREA
- DRUM
- POST MOUNTED SIGN
- DIRECTION OF TRAFFIC FLOW

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

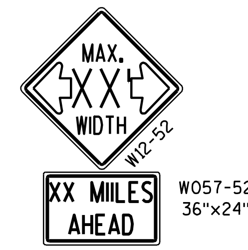
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/00 DATE
/S/ Chester J. [illegible]
CHIEF SIGNS AND MARK[illegible] ENGINEER
FHWA

6
S.D.D. 15 D 28-1

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
- FLAGS, 16"x16" MIN., ORANGE
- TEMPORARY SIGNAL WITH BACKPLATE AND 12-INCH LENSES ON BREAKAWAY POLE
- ASPHALTIC PAVEMENT WIDENING
- DIRECTION OF TRAFFIC FLOW
- 4" X 6" WOOD POST



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.

NON-OPERATIONAL EQUIPMENT OR MATERIAL SHALL BE LOCATED BEHIND THE PRECAST CONCRETE BARRIER.

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.

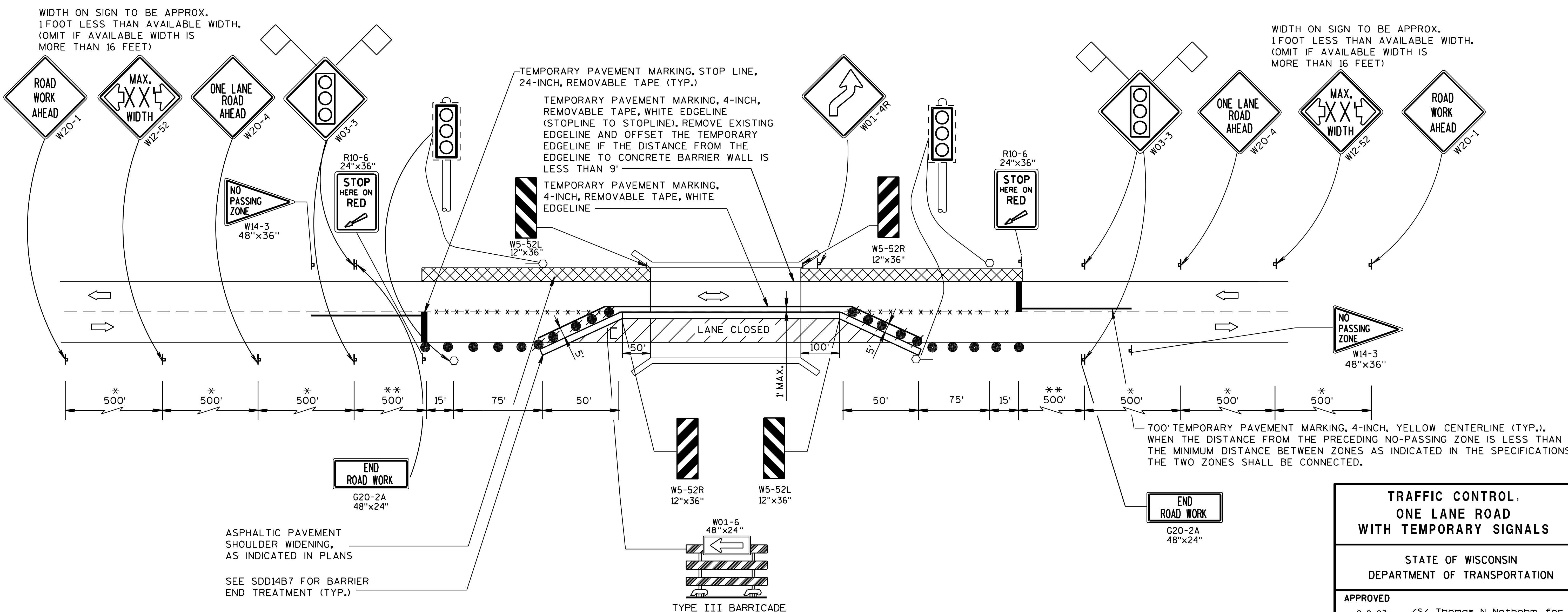
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

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 7 OR MORE CONTINUOUS DAYS AND NIGHTS OR AS NOTED ON DETAIL.

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

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



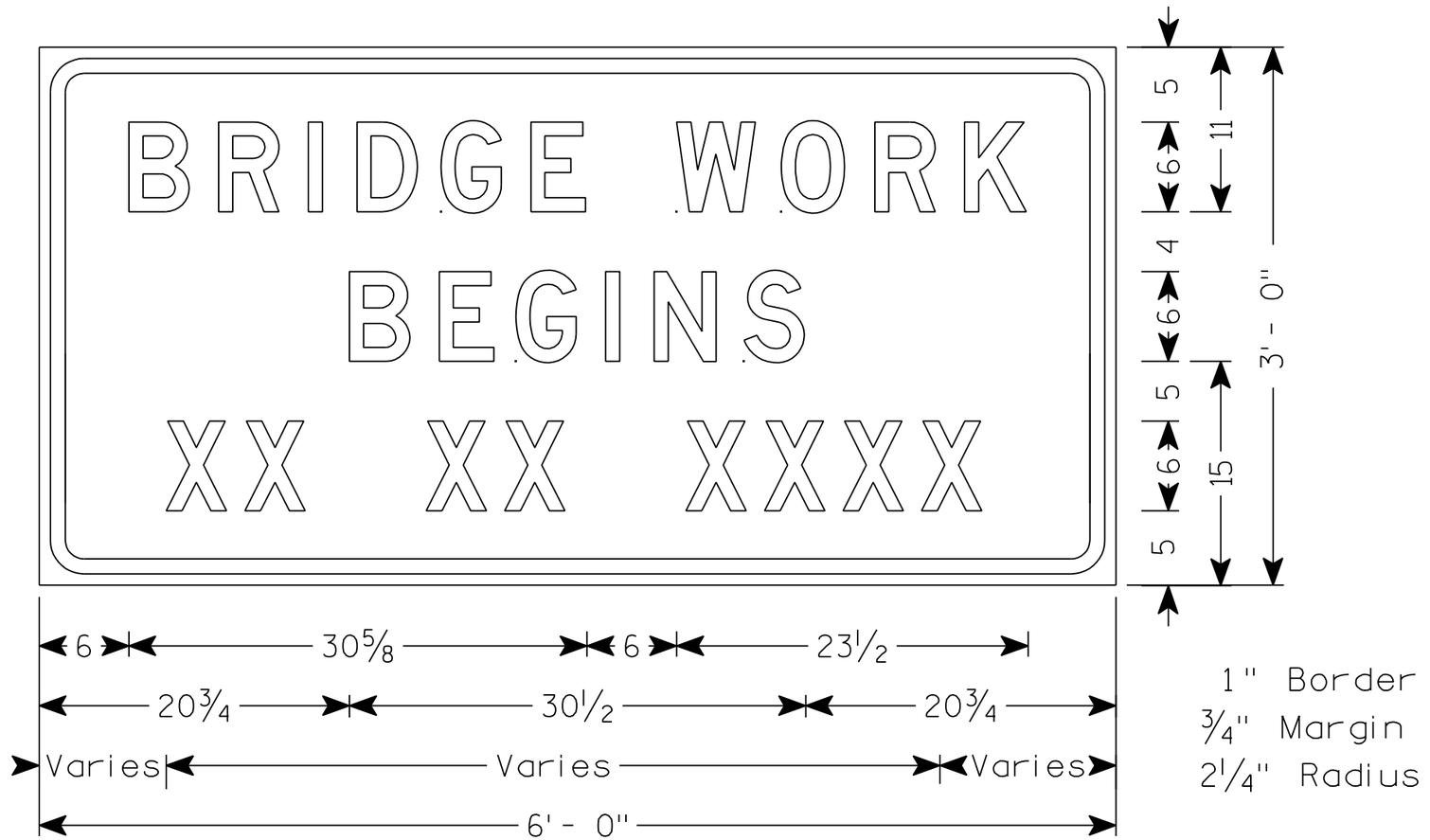
TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9-8-03 DATE
/S/ Thomas N. Notbohm for CHIEF SIGNS AND MARKINGS ENGINEER
FHWA

6

S.D.D. 15 D 33-2

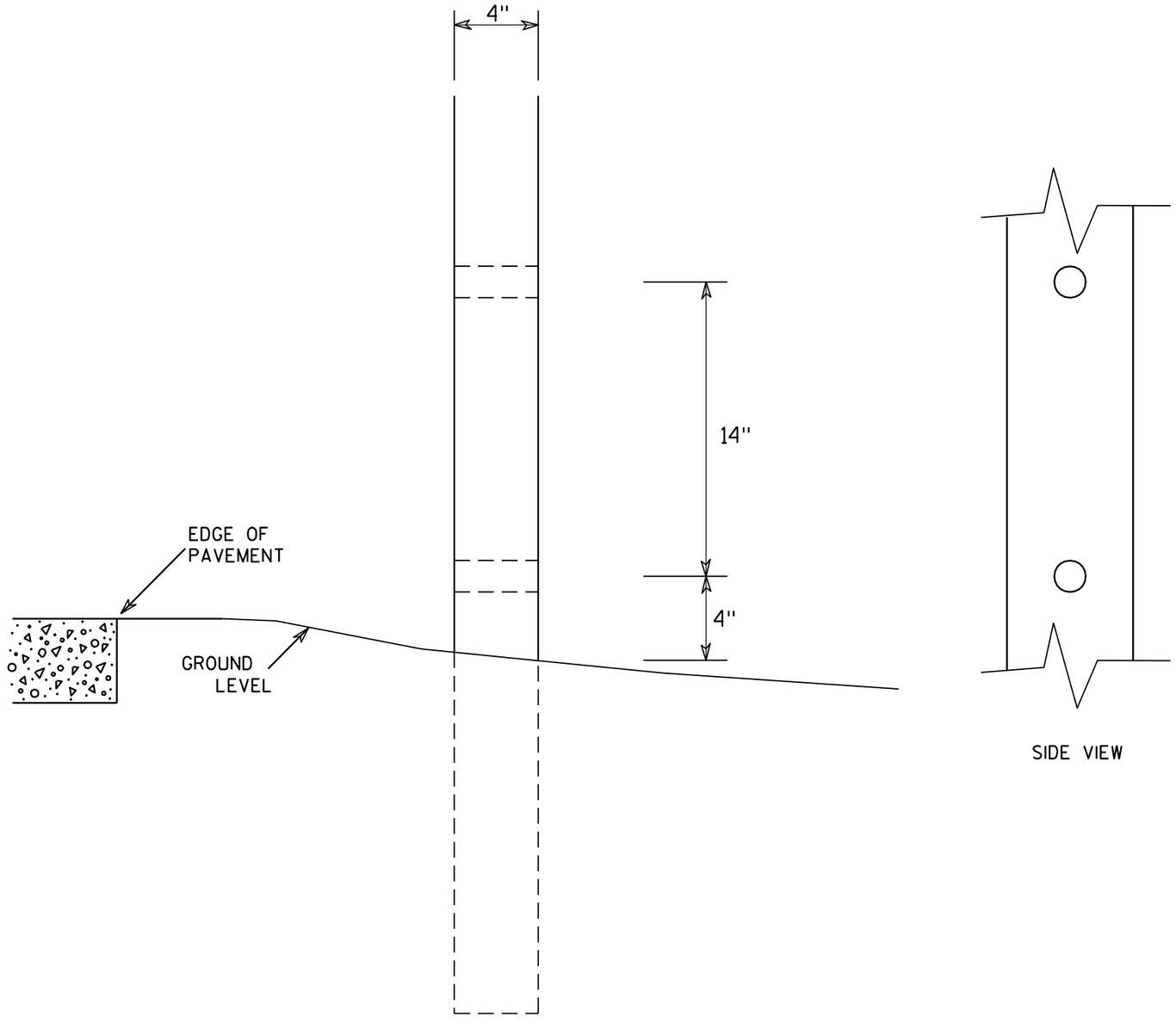


1" Border
3/4" Margin
2 1/4" Radius

7

7

PROJECT NO: 1620-02-60/61	HWY: STH 80	COUNTY: WOOD	TEMPORARY SIGNING - FIXED MESSAGE SIGN	SHEET NO: 53	E



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

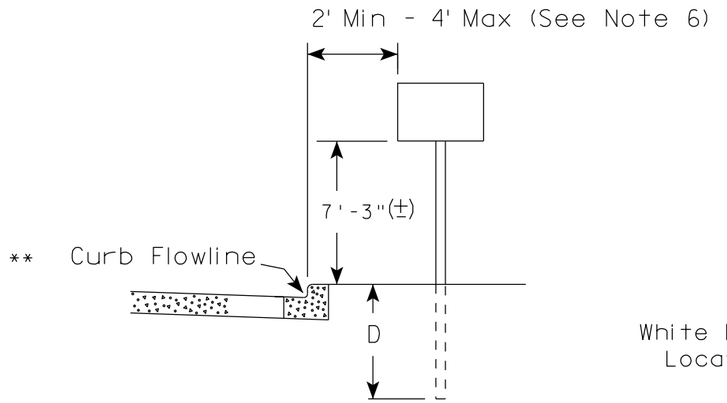
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

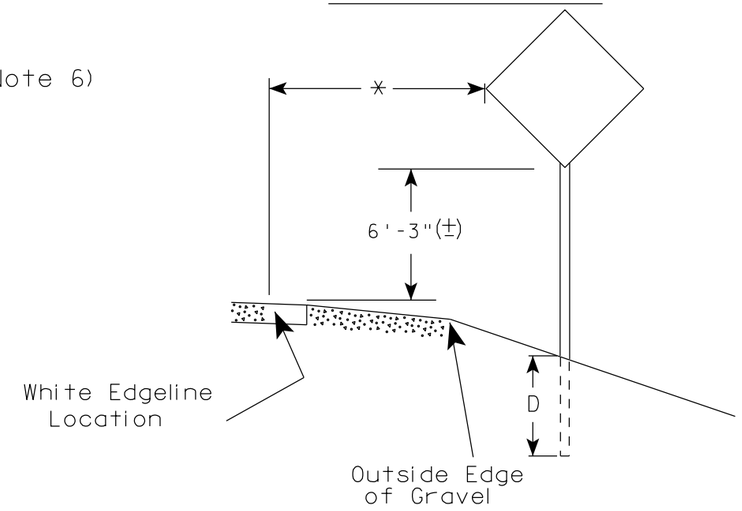
DATE 3/27/97 PLATE NO. A4-11.2

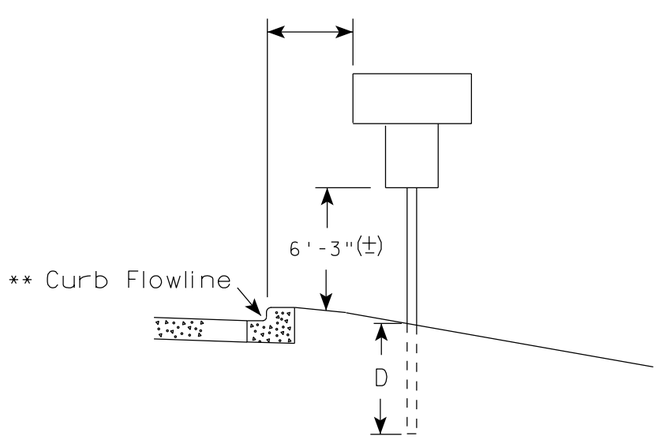
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 54	E

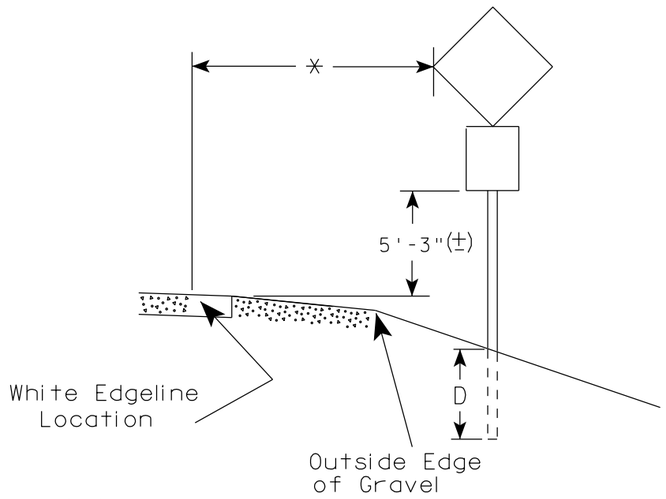
URBAN AREA



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

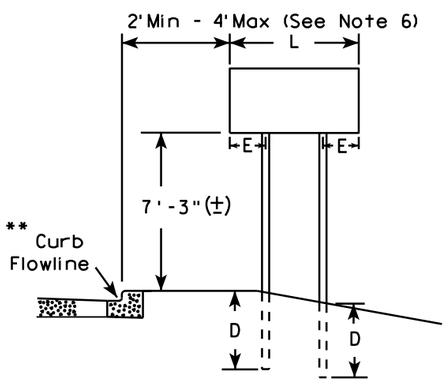
APPROVED Matthew R Rauch
for State Traffic Engineer

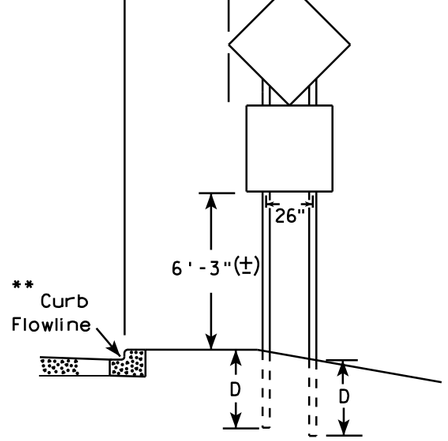
DATE 9/30/13 PLATE NO. A4-3.18

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A43.DGN PLOT DATE : 30-SEP-2013 13:25 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 99.237937:1.000000 WISDOT/CADDS SHEET 42

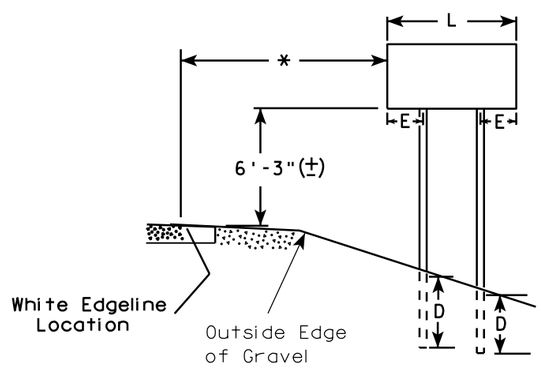
URBAN AREA

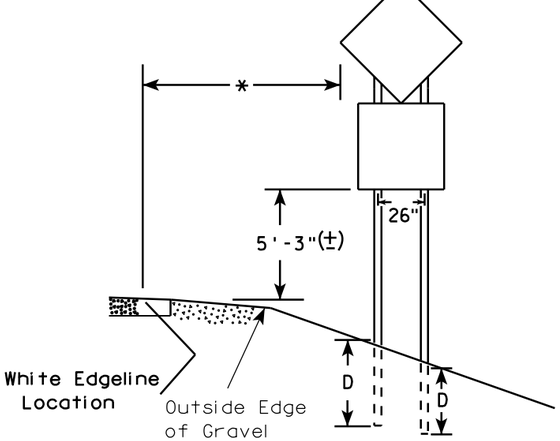




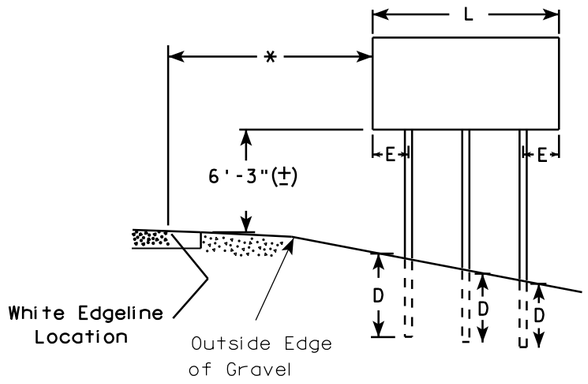
48" DIAMOND WARNING SIGN

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 20 S.F. or less 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'

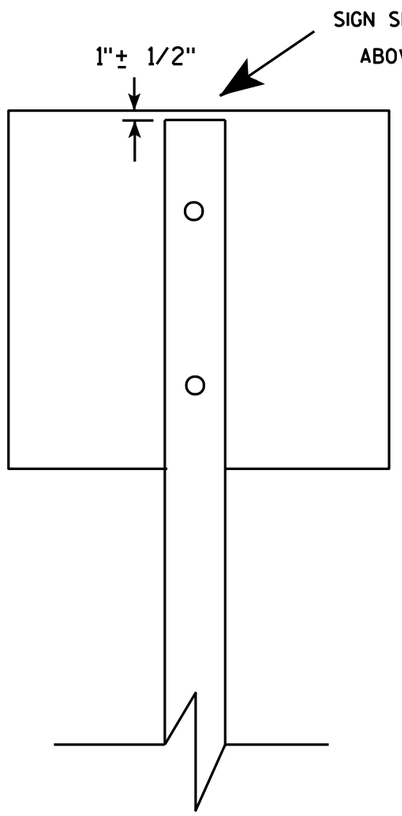
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

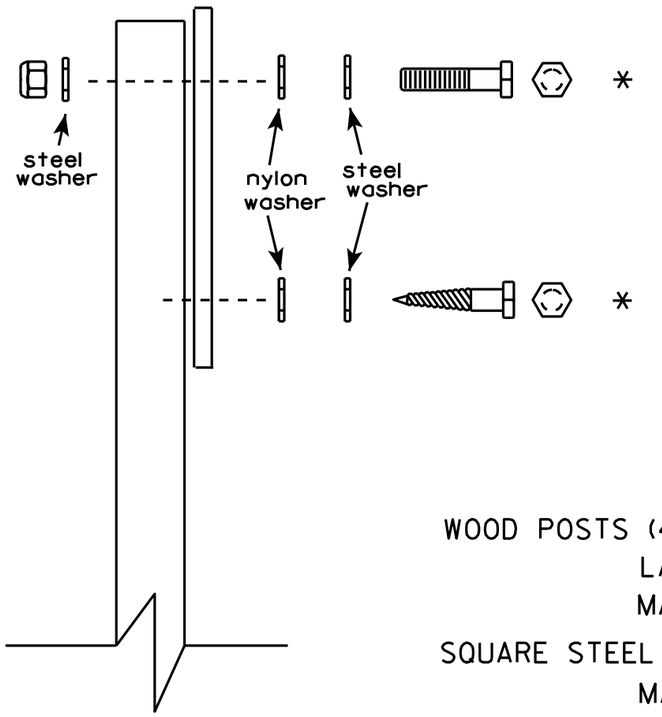
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/13 PLATE NO. A4-4 12

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E





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

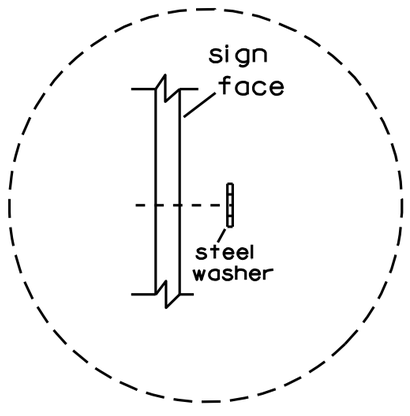
a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

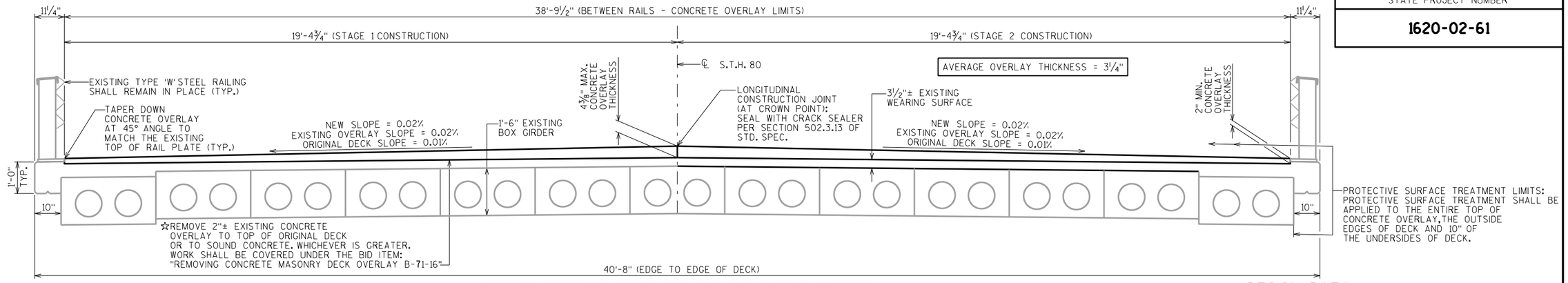
7

PROJECT NO:

SHEET NO: 57 E

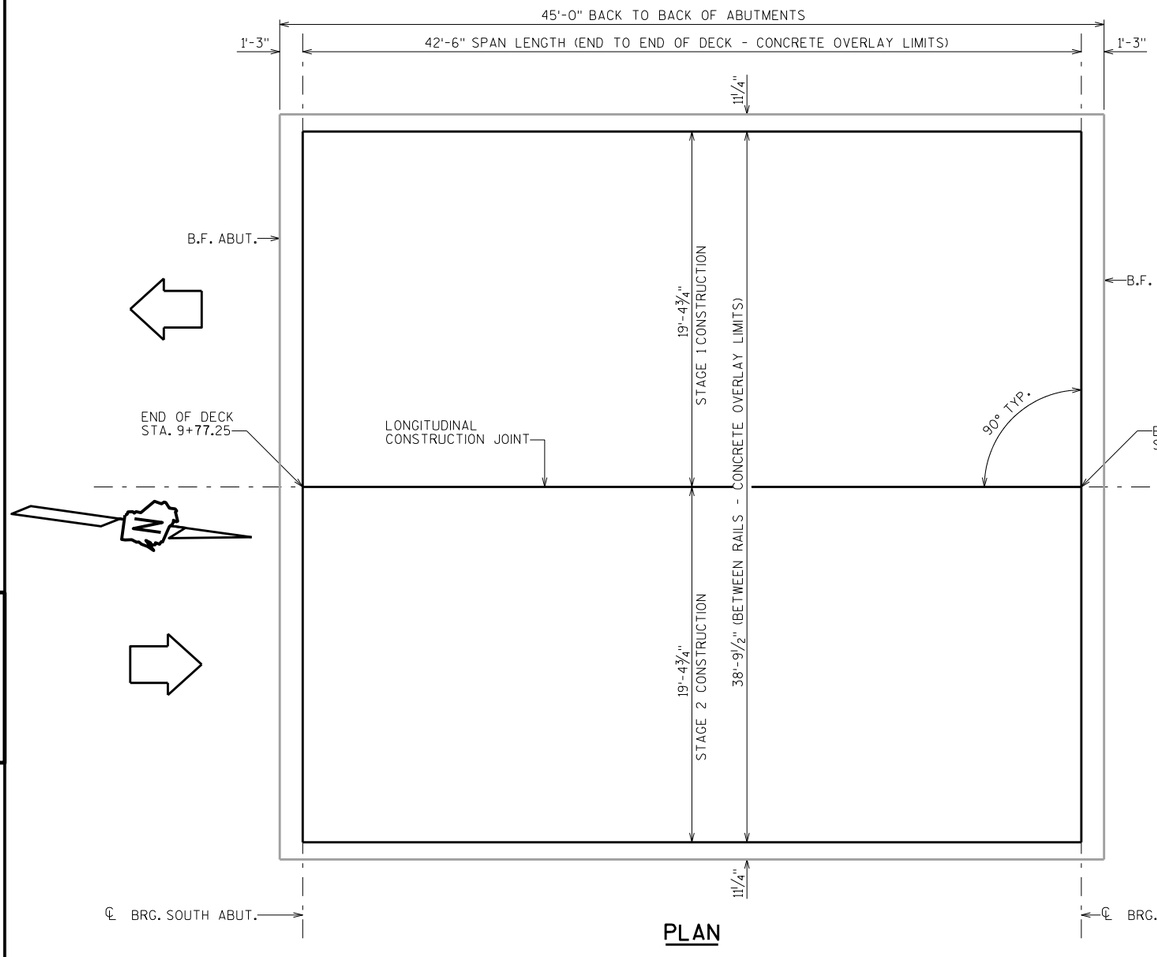
STATE PROJECT NUMBER

1620-02-61



CROSS SECTION THRU ROADWAY LOOKING NORTH

☆CHECK DECK IN 3 LOCATIONS BEFORE REMOVAL TO BE SURE THE REMOVAL IS NOT CATCHING THE TOP REINFORCING MAT OF STEEL.



PLAN

EXISTING BENCH MARK INFO

NUMBER	DESCRIPTION	STATION	OFFSET	ELEVATION
BM #4	"□" SET NE CORNER BRIDGE WING WALL	10+20	21' RT	995.46

DESIGN DATA

LIVE LOAD:

INVENTORY RATING: HS-16
OPERATIONAL RATING: HS-20
MAXIMUM STANDARD PERMIT VEHICLE LOAD: 160 KIPS

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY OVERLAY DECKS: f'c = 4,000 P.S.I.
CONCRETE MASONRY BRIDGES: f'c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60: fy = 60,000 P.S.I.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE EXISTING ORIGINAL STRUCTURE PLANS.

CONTACT THE BUREAU OF STRUCTURES BEFORE PLACEMENT OF OVERLAY IF THE AVERAGE THICKNESS OF THE NEW OVERLAY WILL EXCEED THE AVERAGE OVERLAY SHOWN ON THE PLANS BY MORE THAN ½".

ANY EXCAVATION NECESSARY TO COMPLETE THE OVERLAY AT THE ABUTMENTS IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

PREPARATION DECKS TYPE 1 & 2 AND CONCRETE SURFACE REPAIR AREAS SHALL BE DETERMINED BY THE FIELD ENGINEER.

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.

TOTAL ESTIMATED QUANTITIES

	BID ITEM NUMBERS	BID ITEMS	UNIT	TOTALS
◔	502.0100	CONCRETE MASONRY BRIDGES	CY	40
	502.3200	PROTECTIVE SURFACE TREATMENT	SY	220
	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	2170
	509.0301	PREPARATION DECKS TYPE 1	SY	30
	509.0302	PREPARATION DECKS TYPE 2	SY	10
☆	509.1500	CONCRETE SURFACE REPAIR	SF	20
#	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	20
	509.9005.S	REMOVING CONCRETE MASONRY DECK OVERLAY B-71-16	SY	184
	606.0300	RIPRAP HEAVY	CY	260
◹	SPV.0025	NON-SHRINK GROUT	CF	100
◭	SPV.0060	EMBEDDED GALVANIC NODES	EACH	31

BID ITEM ALSO INCLUDES CONCRETE FOR PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2.

☆CONCRETE SURFACE REPAIR REQUIRED MAINLY AT SUPERSTRUCTURE.

◔ CONCRETE FOR PILE ENCAPSULATIONS AT ABUTMENTS AND EXISTING ABUTMENT REPAIR AT CAP ENDS.

◭ 16 GALVANIC ANODES NEEDED AT ABUTMENTS, 8 EACH. 15 GALVANIC ANODES NEEDED AT SUPERSTRUCTURE. FIELD ENGINEER TO VERIFY QUANTITY AND LOCATION PRIOR TO ANODE INSTALLATION.

◹ THIS QUANTITY IS BASED ON A GROUT THICKNESS OF 6".

LIST OF DRAWINGS

1. CONCRETE OVERLAY
2. ABUTMENT DETAILS
3. CATHODIC PROTECTION

STRUCTURES DESIGN CONTACTS:
EMILY KNUDTSON (608) 266-5089
DAVID KIEKBUSCH (608) 266-5084

NO.	DATE	REVISION	BY

Plans Prepared By **WISDOT**
BUREAU OF STRUCTURES

ACCEPTED William C. Dreher DJK 11/1/12
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-71-16

S.T.H. 80 OVER DEXTERVILLE DITCH

COUNTY	TOWN
WOOD	DEXTER

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
EMK	AMB	JPH	WWR

CONCRETE OVERLAY

SHEET 1 OF 3

58

I.D. 1009-44-32

DATE: **OCT. 2012**

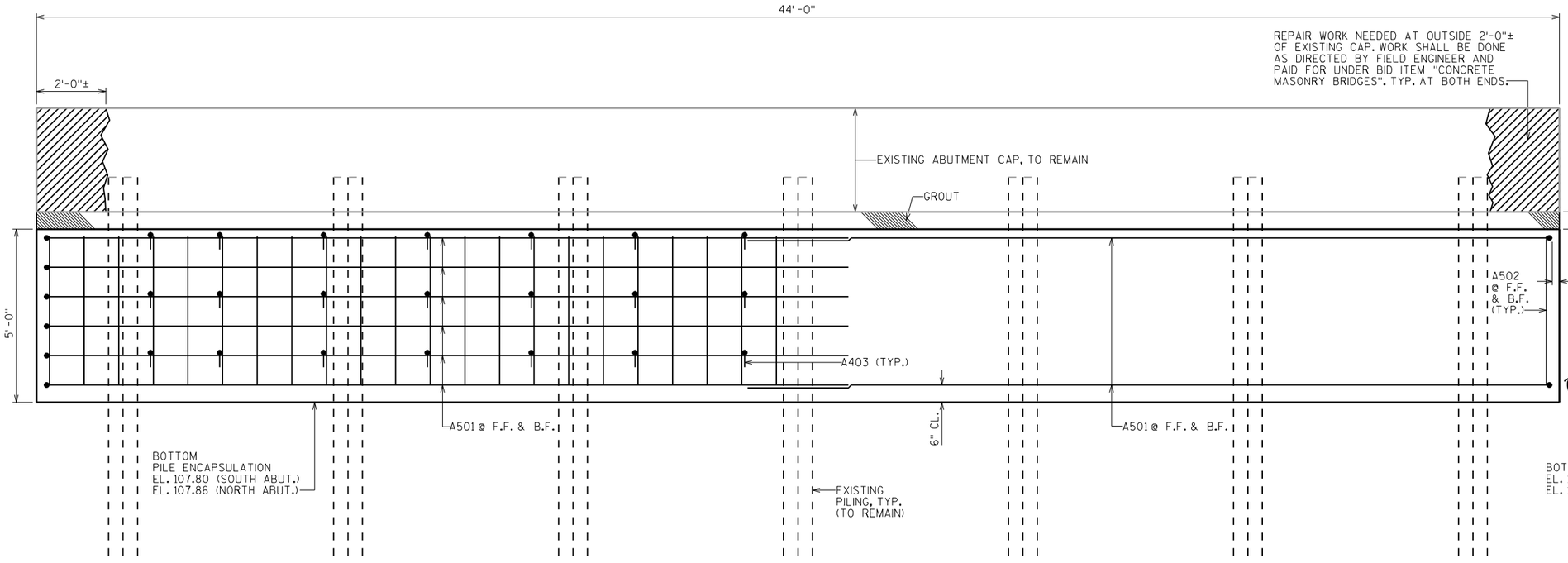
SCALE = 4

8

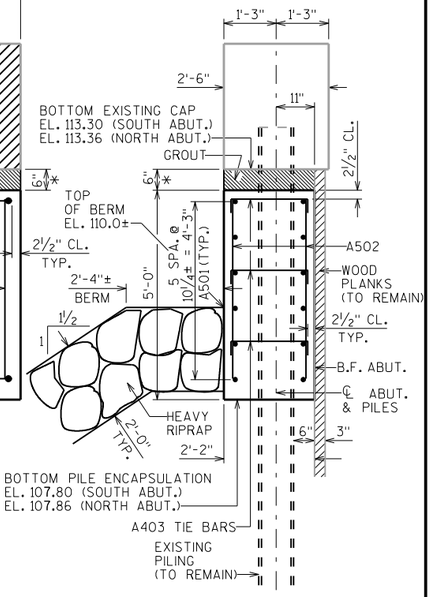
8

STATE PROJECT NUMBER

1620-02-61



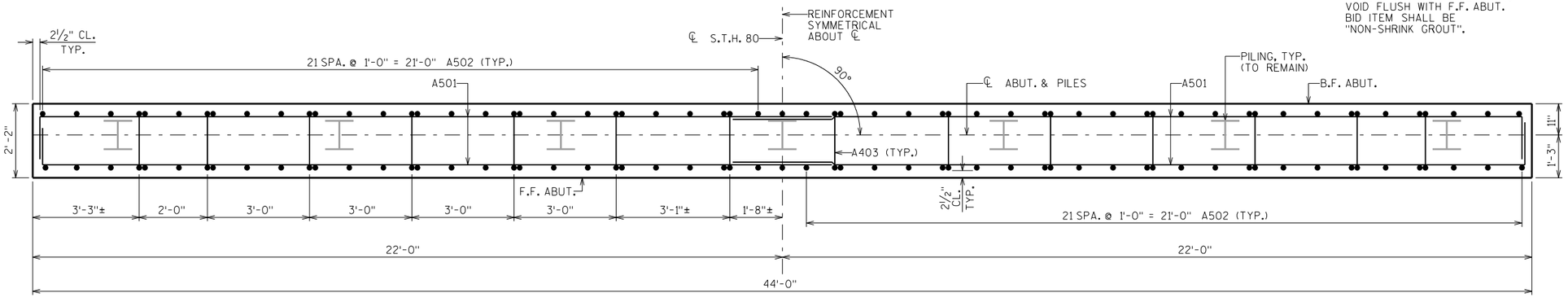
ELEVATION LOOKING NORTH



SECTION THRU CAP

*DIMENSION TO ALLOW FOR PROPER CONCRETE PLACEMENT. FIELD ENGINEER TO ADJUST AS NECESSARY. GROUT REMAINING VOID FLUSH WITH F.F. ABUT. BID ITEM SHALL BE "NON-SHRINK GROUT".

NOTE:
RIPRAP TO BE REMOVED AND REPLACED TO ORIGINAL BERM ELEVATION AFTER THE NEW ENCAPSULATION HAS BEEN CONSTRUCTED. WORK SHALL BE COVERED UNDER THE BID ITEM "RIPRAP HEAVY".

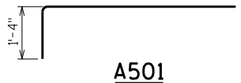


CONCRETE CAP PLAN

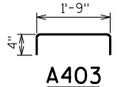
BILL OF BARS

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

BAR MARK	COAT	NO. REQ'D. SOUTH ABUT.	NO. REQ'D. NORTH ABUT.	LENGTH	BENT	LOCATION
A501	X	24	24	24-6	X	CAP-HORIZ.-F.F. & B.F.
A502	X	90	90	4-4		CAP-VERT.-F.F. & B.F.
A403	X	42	42	2-3	X	CAP-VERT.-TIE BARS



A501



A403

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-71-16

DRAWN BY JPH | PLANS CK'D. WWR

ABUTMENT DETAILS

SHEET 2

59

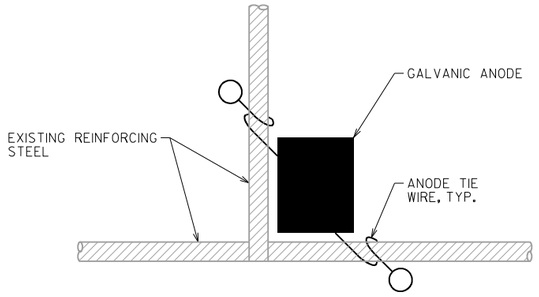
SCALE = 1.75

8

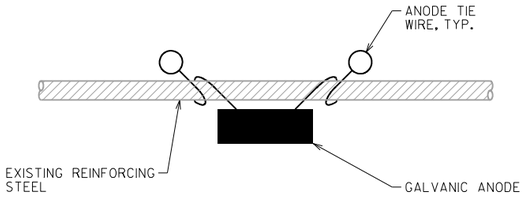
8

STATE PROJECT NUMBER

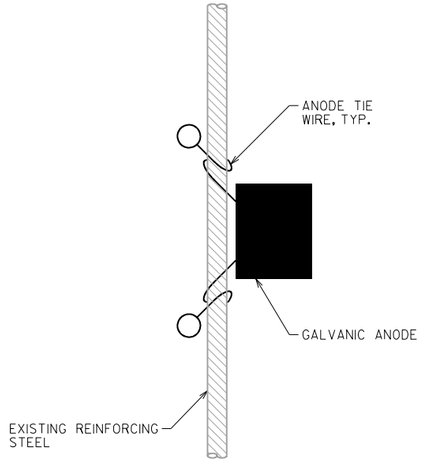
1620-02-61



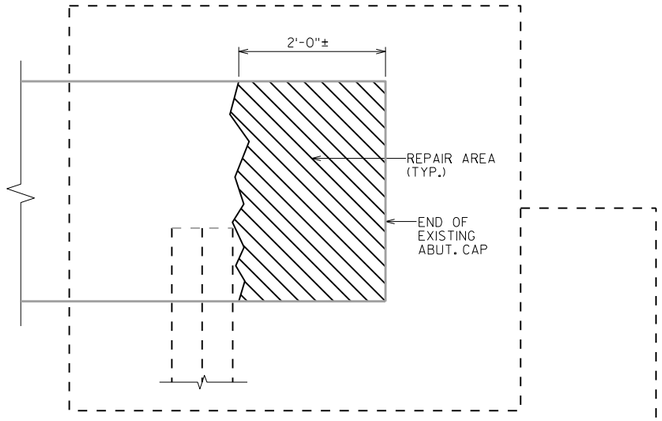
TYPICAL INSTALLATION AT BAR STEEL INTERSECTION



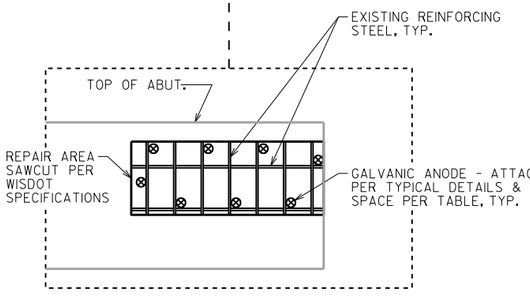
TYPICAL INSTALLATION BELOW BAR STEEL



TYPICAL INSTALLATION BESIDE BAR STEEL

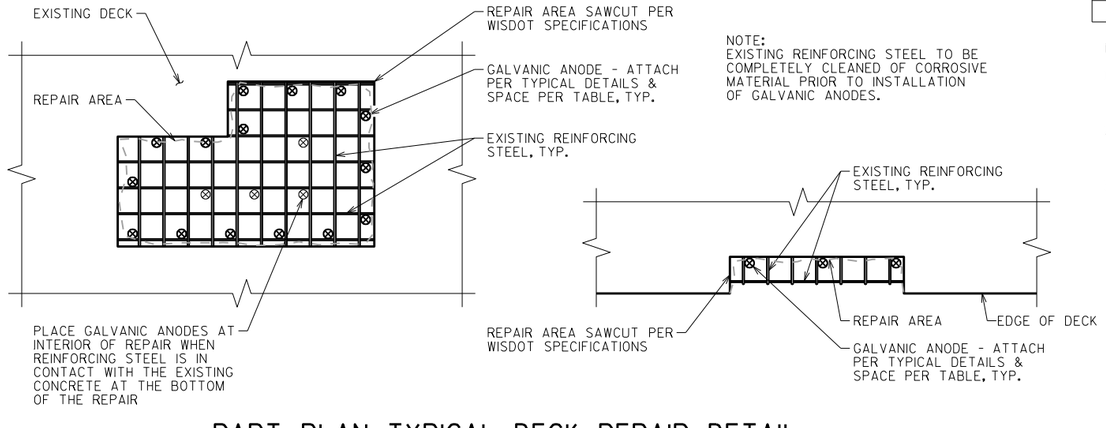


PART ELEV. AT ABUT. END



NOTE:
EXISTING REINFORCING STEEL TO BE COMPLETELY CLEANED OF CORROSIVE MATERIAL PRIOR TO INSTALLATION OF GALVANIC ANODES.

TYPICAL ABUTMENT REPAIR DETAIL



PART PLAN TYPICAL DECK REPAIR DETAIL

GENERAL NOTES

SEE SPECIAL PROVISION "EMBEDDED GALVANIC ANODES" FOR DESCRIPTION, MATERIALS, CONSTRUCTION, MEASUREMENT, AND PAYMENT INFORMATION.

LOCATIONS OF GALVANIC ANODES SHOULD BE WITHIN 6" OF THE EDGE OF THE REPAIR AREA.

AFTER PLACEMENT, GALVANIC ANODES SHOULD MAINTAIN A MINIMUM TOP COVER OF 1½" AND A MINIMUM BOTTOM COVER OF ¾".

MAXIMUM GALVANIC ANODE SPACING

STEEL DENSITY RATIO	MAXIMUM ANODE SPACING (INCHES)
≤ 0.30	24
0.31 → 0.50	20
0.51 → 0.60	18
0.61 → 0.80	16
0.81 → 0.90	15
0.91 → 1.00	14
1.01 → 1.20	12
≥ 1.20	*

NOTES:

1) *AT STEEL DENSITY RATIOS GREATER THAN 1.20, GC TO CONSULT THE ENGINEER TO DETERMINE MAXIMUM ANODE SPACING AND ANODE LAYOUT.

2) STEEL DENSITY RATIO IS THE RATIO OF STEEL REINFORCING BAR SURFACE AREA TO EXPOSED CONCRETE SURFACE AREA WITHIN THE REPAIR AREA.

3) TABLE IS BASED ON HIGH CORROSION RISK WITHIN THE SURFACE REPAIR AREA, A MINIMUM ZINC MASS OF 38 GRAMS, AND AN APPROXIMATE SERVICE LIFE OF 10-20 YEARS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-71-16

DRAWN BY JPH | PLANS CK'D. WWR

CATHODIC PROTECTION

SHEET 3

60

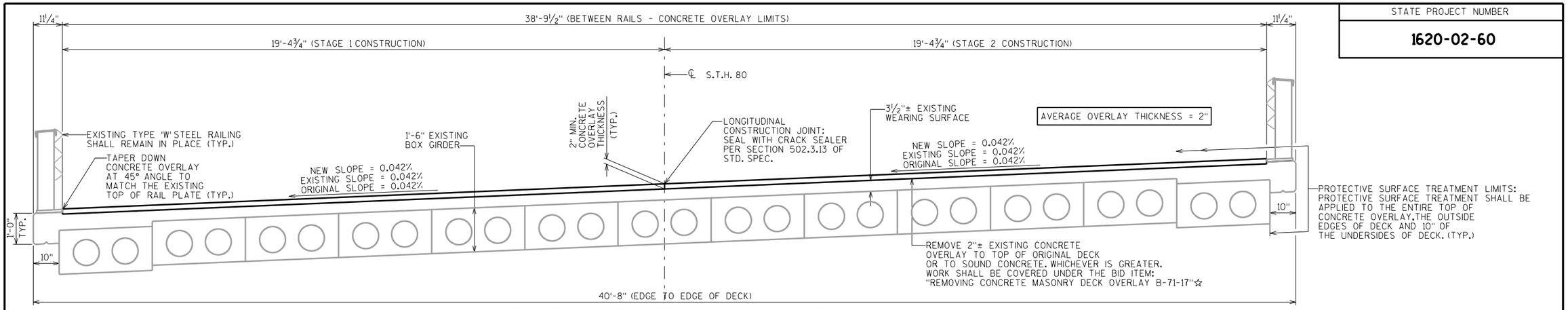
SCALE = 1.0

8

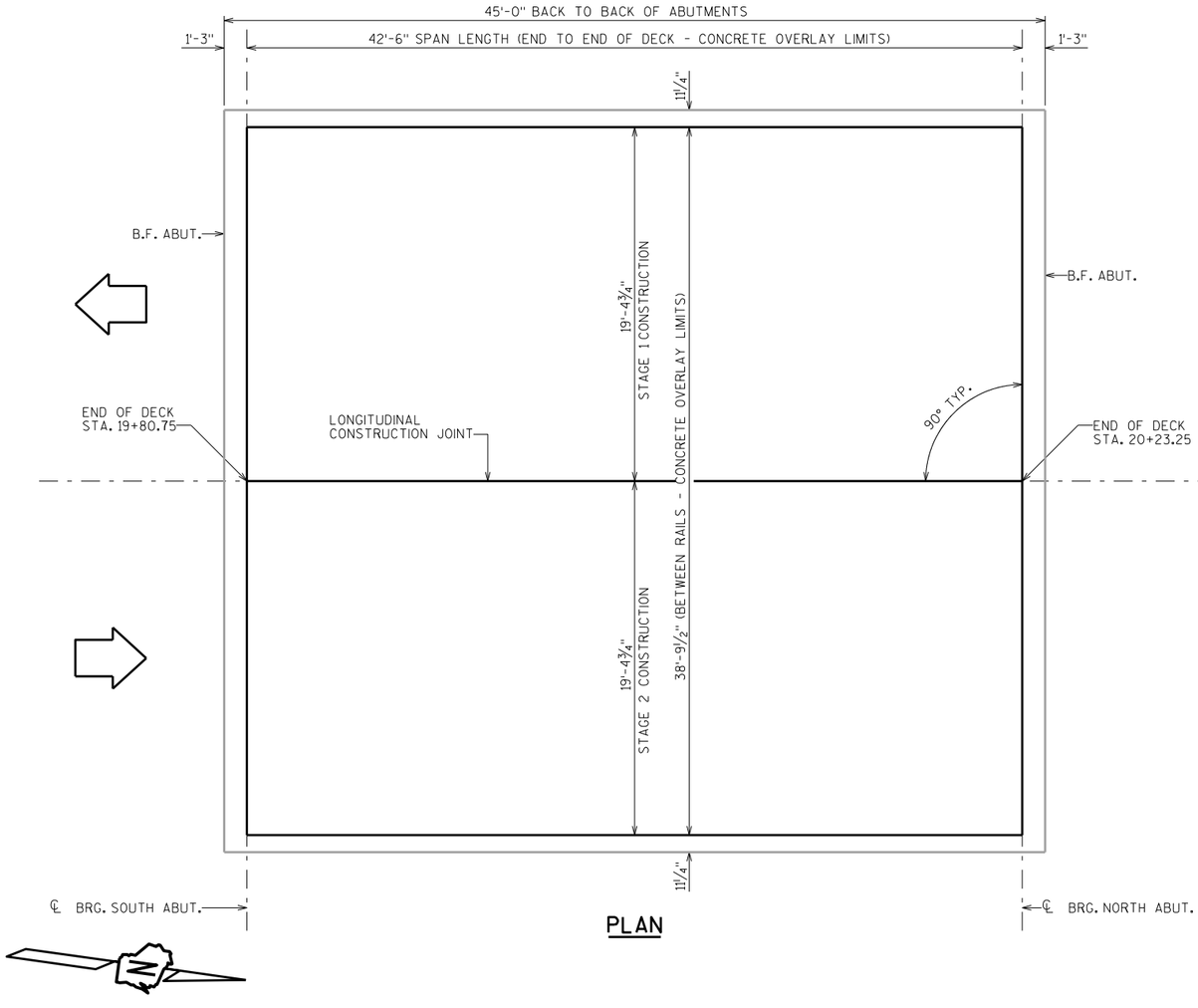
8

STATE PROJECT NUMBER

1620-02-60



CROSS SECTION THRU ROADWAY LOOKING NORTH



PLAN

☆CHECK DECK IN 3 LOCATIONS BEFORE REMOVAL TO BE SURE THE REMOVAL IS NOT CATCHING THE TOP REINFORCING MAT OF STEEL.

EXISTING BENCH MARK INFO

NUMBER	DESCRIPTION	STATION	OFFSET	ELEVATION
BM #6	60D SET IN 1ST POWER POLE S. OF BRIDGE, EAST SIDE OF S.T.H. 80	19+18.77	65' RT.	992.17

◪ FULL-DEPTH DECK REPAIR IS NEEDED AT THE NORTHWEST CORNER OF DECK AND WILL INCLUDE THE REPLACEMENT OF 4 RAILING ANCHORS.

TOTAL ESTIMATED QUANTITIES

	BID ITEM NUMBERS	BID ITEMS	UNIT	TOTALS
◔	502.0100	CONCRETE MASONRY BRIDGES	CY	45
	502.3200	PROTECTIVE SURFACE TREATMENT	SY	220
	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	2490
	509.0301	PREPARATION DECKS TYPE 1	SY	30
	509.0302	PREPARATION DECKS TYPE 2	SY	10
☆	509.1500	CONCRETE SURFACE REPAIR	SF	20
◪	509.2000	FULL-DEPTH DECK REPAIR	SY	1
#	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	14
	509.9005.S	REMOVING CONCRETE MASONRY DECK OVERLAY B-71-17	SY	184
	606.0300	RIPRAP HEAVY	CY	310
⚹	SPV.0025	NON-SHRINK GROUT	CF	100
◭	SPV.0060	EMBEDDED GALVANIC NODES	EACH	31

BID ITEM ALSO INCLUDES CONCRETE FOR PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2 AND FULL-DEPTH DECK REPAIR.

☆ 20 SF CONCRETE SURFACE REPAIR NEEDED AT SUPERSTRUCTURE. WORK SHALL INCLUDE THE REPLACEMENT OF RAILING ANCHORS AS NEEDED.

◔ CONCRETE FOR PILE ENCAPSULATIONS AT ABUTMENTS AND EXISTING ABUTMENT REPAIR AT CAP ENDS.

◭ 16 GALVANIC ANODES NEEDED AT ABUTMENTS, 8 EACH. 15 GALVANIC ANODES NEEDED AT SUPERSTRUCTURE. FIELD ENGINEER TO VERIFY QUANTITY AND LOCATION PRIOR TO ANODE INSTALLATION.

⚹ THIS QUANTITY IS BASED ON A GROUT THICKNESS OF 6".

LIST OF DRAWINGS

DESIGN DATA

LIVE LOAD:

INVENTORY RATING: HS-17
OPERATIONAL RATING: HS-20
MAXIMUM STANDARD PERMIT VEHICLE LOAD: 170 KIPS

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY OVERLAY DECKS: f'c = 4,000 P.S.I.
CONCRETE MASONRY BRIDGES: f'c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60: fy = 60,000 P.S.I.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE EXISTING ORIGINAL STRUCTURE PLANS.

CONTACT THE BUREAU OF STRUCTURES BEFORE PLACEMENT OF OVERLAY IF THE AVERAGE THICKNESS OF THE NEW OVERLAY WILL EXCEED THE AVERAGE OVERLAY SHOWN ON THE PLANS BY MORE THAN ½".

ANY EXCAVATION NECESSARY TO COMPLETE THE OVERLAY AT THE ABUTMENTS IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

PREPARATION DECKS TYPE 1 & 2, FULL-DEPTH DECK REPAIR AND CONCRETE SURFACE REPAIR AREAS SHALL BE DETERMINED BY THE FIELD ENGINEER.

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.

STRUCTURES DESIGN CONTACTS:
EMILY KNUDTSON (608) 266-5089
DAVID KIEKBUSCH (608) 266-5084

NO.	DATE	REVISION	BY

Plans Prepared By **WISDOT**
BUREAU OF STRUCTURES

ACCEPTED William C. Dreher 11/1/12
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-71-17

S.T.H. 80 OVER OWL CREEK

COUNTY	TOWN
WOOD	DEXTER
DESIGN SPEC.	
REHABILITATION	N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
EMK	AMB	JPH	WWR

CONCRETE OVERLAY

SHEET 1 OF 4

61

SCALE = 4

I.D. 1009-44-32

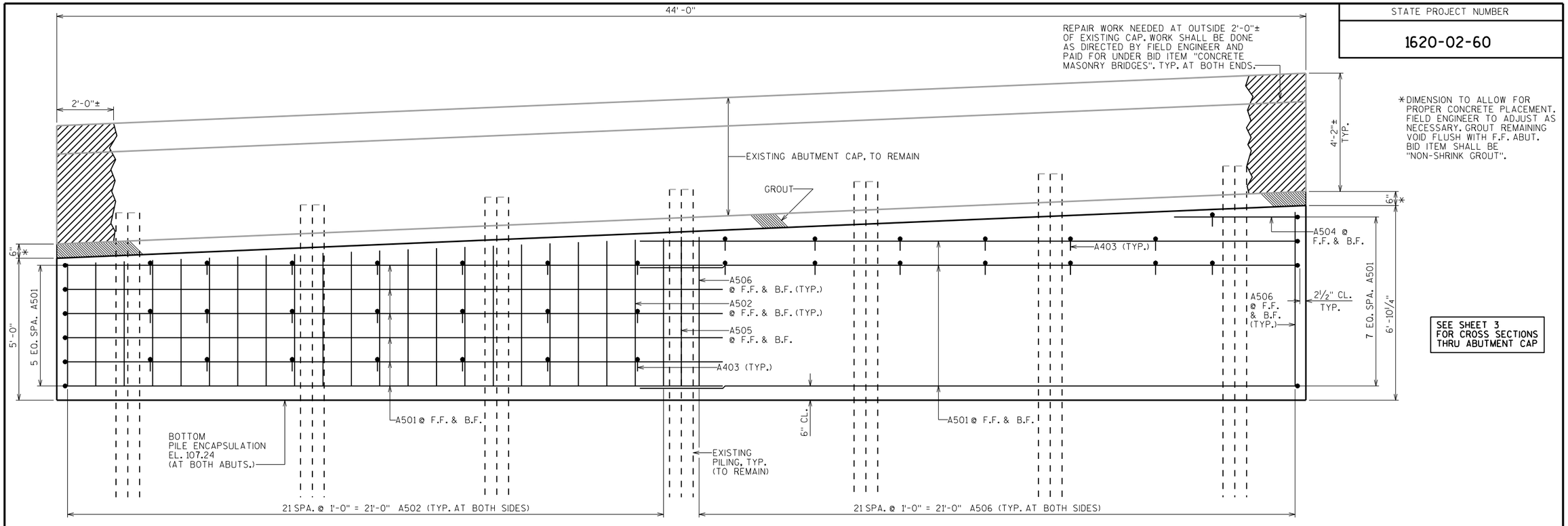
DATE: OCT. 2012

8

8

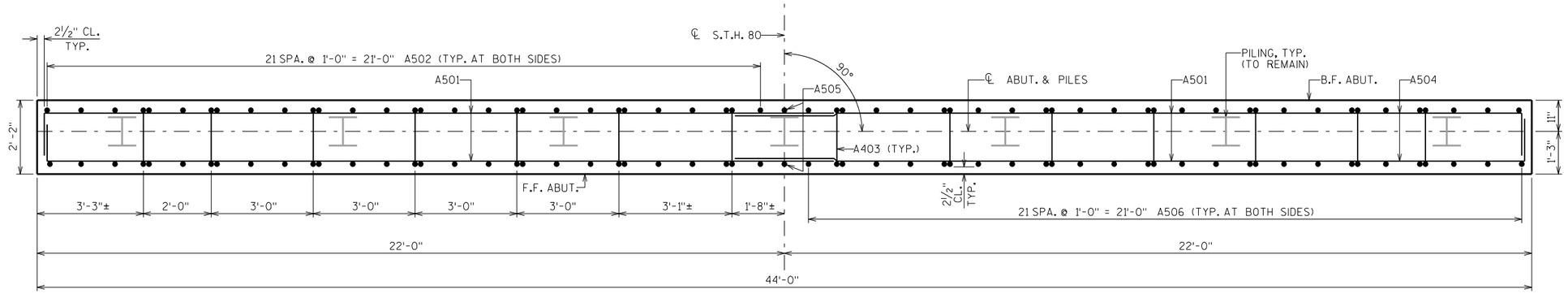
STATE PROJECT NUMBER

1620-02-60



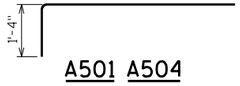
SEE SHEET 3 FOR CROSS SECTIONS THRU ABUTMENT CAP

ELEVATION LOOKING NORTH

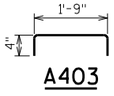


CONCRETE CAP PLAN

8



A501 A504



A403

BILL OF BARS

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

	BAR MARK	COAT	NO. REQ'D. SOUTH ABUT.	NO. REQ'D. NORTH ABUT.	LENGTH	BAR SERIES	BENT	LOCATION
	A501	X	26	26	24-6		X	CAP-HORIZ.-F.F. & B.F.
⚠	A502	X	44	44	4-9	X		CAP-VERT.-F.F. & B.F.-WEST END
	A403	X	49	49	2-3		X	CAP-VERT.-TIE BARS
	A504	X	2	2	6-3		X	CAP-HORIZ.-F.F. & B.F.-TOP-EAST END
	A505	X	2	2	5-3			CAP-VERT.-F.F. & B.F.-MIDDLE
⚠	A506	X	44	44	5-9	X		CAP-VERT.-F.F. & B.F.-EAST END

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

BAR SERIES TABLE

MARK	NO. REQD.	LENGTH
A502	4 SERIES OF 22 BARS	4'-4" TO 5'-2"
A506	4 SERIES OF 22 BARS	5'-3" TO 6'-2"

BUNDLE AND TAG EACH SERIES SEPARATELY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-71-17

DRAWN BY JPH | PLANS CK'D. WWR

ABUTMENT DETAILS

SHEET 2

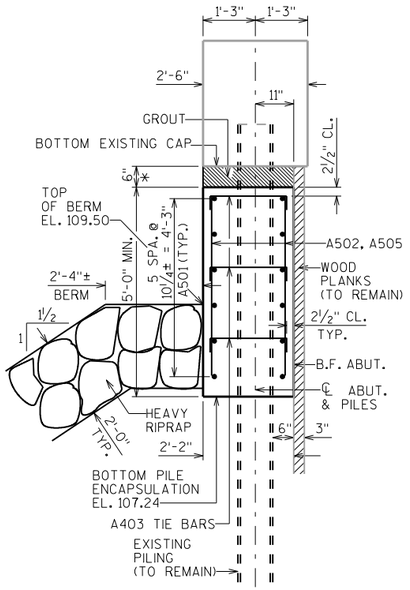
62

SCALE = 1.75

8

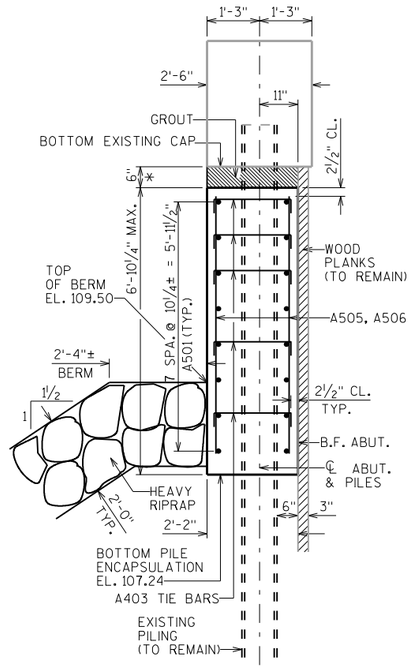
STATE PROJECT NUMBER

1620-02-60



SECTION THRU CAP @ WEST END

NOTE:
RIPRAP TO BE REMOVED AND REPLACED TO ORIGINAL BERM ELEVATION AFTER THE NEW ENCAPSULATION HAS BEEN CONSTRUCTED. WORK SHALL BE COVERED UNDER THE BID ITEM "RIPRAP HEAVY".



SECTION THRU CAP @ EAST END

NOTE:
RIPRAP TO BE REMOVED AND REPLACED TO ORIGINAL BERM ELEVATION AFTER THE NEW ENCAPSULATION HAS BEEN CONSTRUCTED. WORK SHALL BE COVERED UNDER THE BID ITEM "RIPRAP HEAVY".

*DIMENSION TO ALLOW FOR PROPER CONCRETE PLACEMENT. FIELD ENGINEER TO ADJUST AS NECESSARY. GROUT REMAINING VOID FLUSH WITH F.F. ABUT. BID ITEM SHALL BE "NON-SHRINK GROUT".

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-71-17

DRAWN BY JPH | PLANS CK'D. WWR

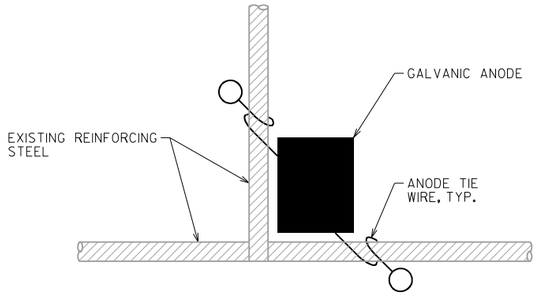
CROSS SECTIONS

SHEET 3

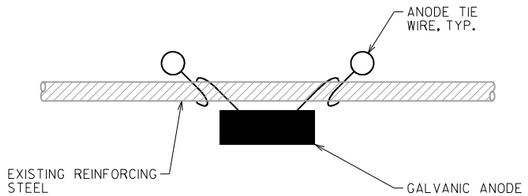
63

SCALE = 1.75

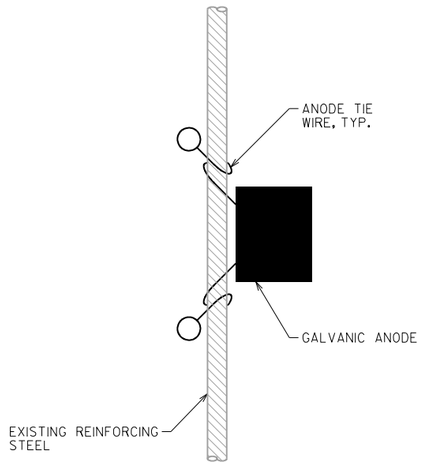
STATE PROJECT NUMBER
1620-02-60



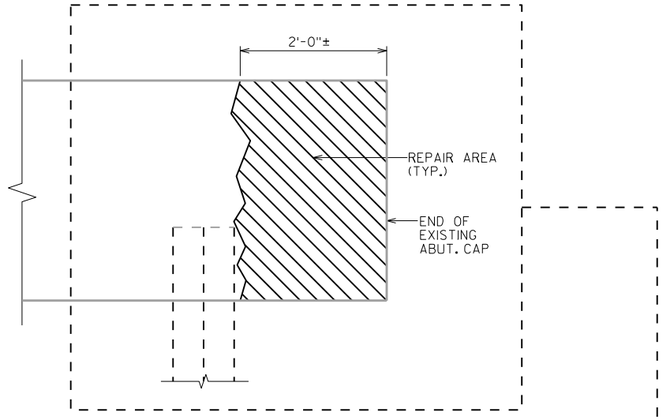
TYPICAL INSTALLATION AT BAR STEEL INTERSECTION



TYPICAL INSTALLATION BELOW BAR STEEL

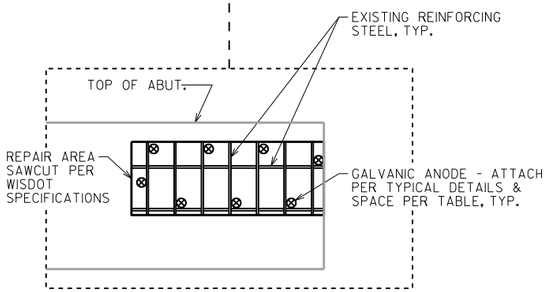


TYPICAL INSTALLATION BESIDE BAR STEEL

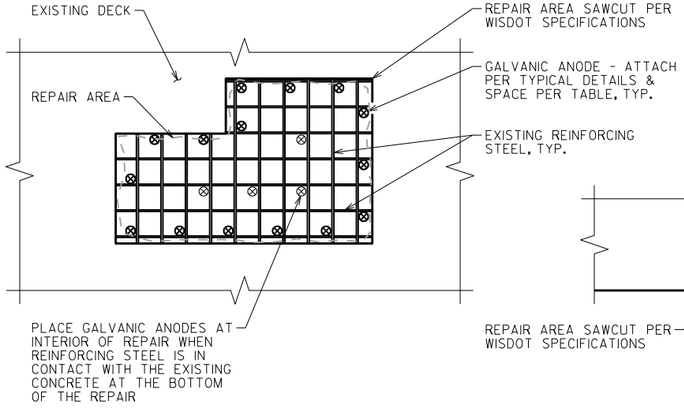


PART ELEV, AT ABUT. END

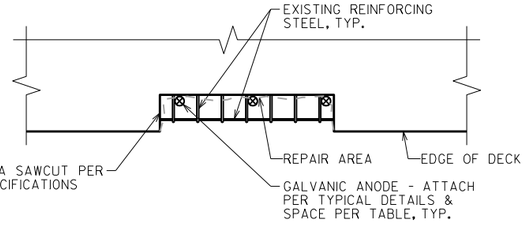
NOTE:
EXISTING REINFORCING STEEL TO BE COMPLETELY CLEANED OF CORROSIVE MATERIAL PRIOR TO INSTALLATION OF GALVANIC ANODES.



TYPICAL ABUTMENT REPAIR DETAIL



NOTE:
EXISTING REINFORCING STEEL TO BE COMPLETELY CLEANED OF CORROSIVE MATERIAL PRIOR TO INSTALLATION OF GALVANIC ANODES.



PART. PLAN TYPICAL DECK REPAIR DETAIL

GENERAL NOTES

SEE SPECIAL PROVISION "EMBEDDED GALVANIC ANODES" FOR DESCRIPTION, MATERIALS, CONSTRUCTION, MEASUREMENT, AND PAYMENT INFORMATION.

LOCATIONS OF GALVANIC ANODES SHOULD BE WITHIN 6" OF THE EDGE OF THE REPAIR AREA.

AFTER PLACEMENT, GALVANIC ANODES SHOULD MAINTAIN A MINIMUM TOP COVER OF 1½" AND A MINIMUM BOTTOM COVER OF ¾".

MAXIMUM GALVANIC ANODE SPACING

STEEL DENSITY RATIO	MAXIMUM ANODE SPACING (INCHES)
⩽ 0.30	24
0.31 → 0.50	20
0.51 → 0.60	18
0.61 → 0.80	16
0.81 → 0.90	15
0.91 → 1.00	14
1.01 → 1.20	12
⩾ 1.20	*

NOTES:

1) *AT STEEL DENSITY RATIOS GREATER THAN 1.20, GC TO CONSULT THE ENGINEER TO DETERMINE MAXIMUM ANODE SPACING AND ANODE LAYOUT.

2) STEEL DENSITY RATIO IS THE RATIO OF STEEL REINFORCING BAR SURFACE AREA TO EXPOSED CONCRETE SURFACE AREA WITHIN THE REPAIR AREA.

3) TABLE IS BASED ON HIGH CORROSION RISK WITHIN THE SURFACE REPAIR AREA, A MINIMUM ZINC MASS OF 38 GRAMS, AND AN APPROXIMATE SERVICE LIFE OF 10-20 YEARS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-71-17

DRAWN BY JPH | PLANS CK'D. WWR

CATHODIC PROTECTION

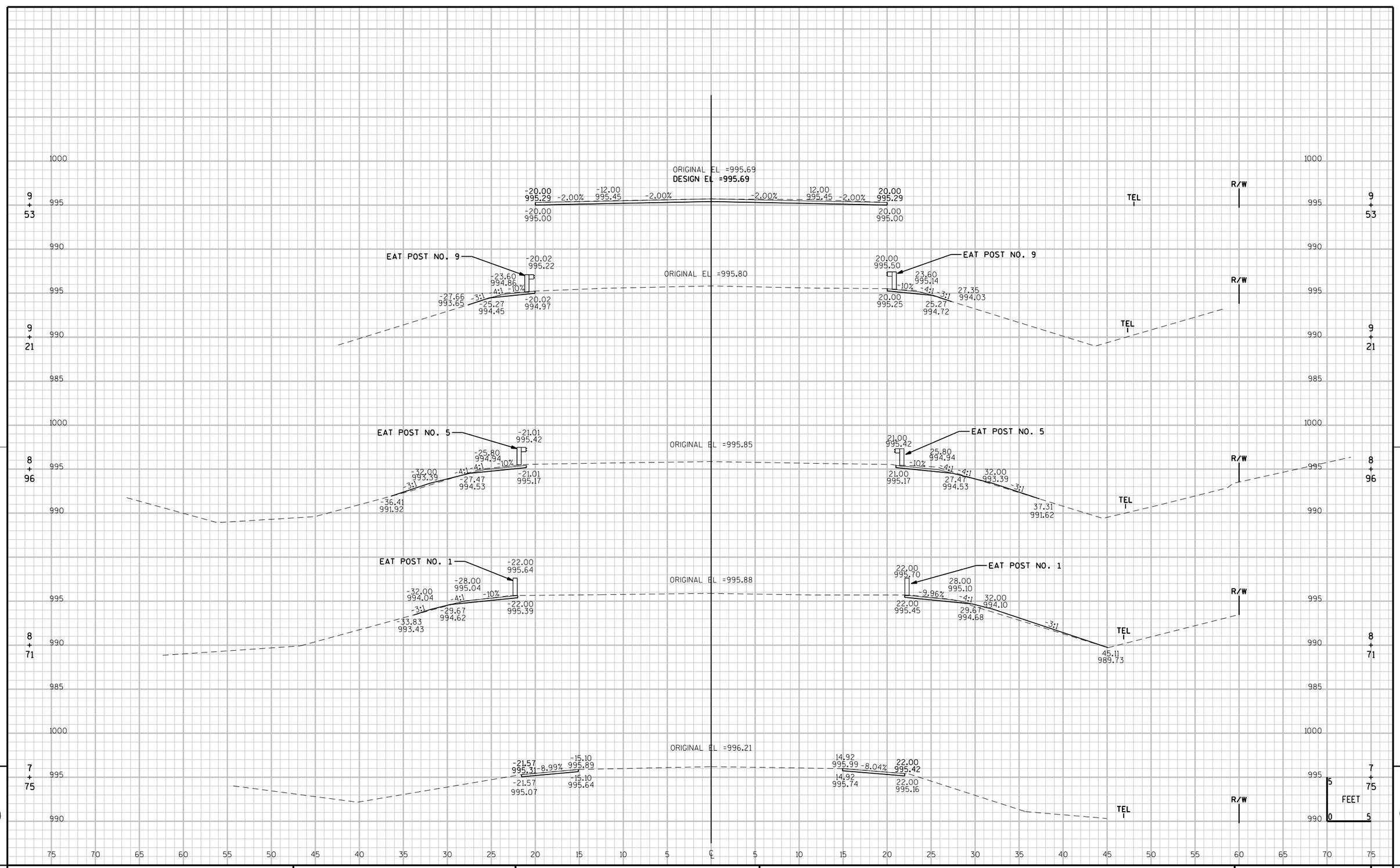
SHEET 4

64

8

8

SCALE = 1.0



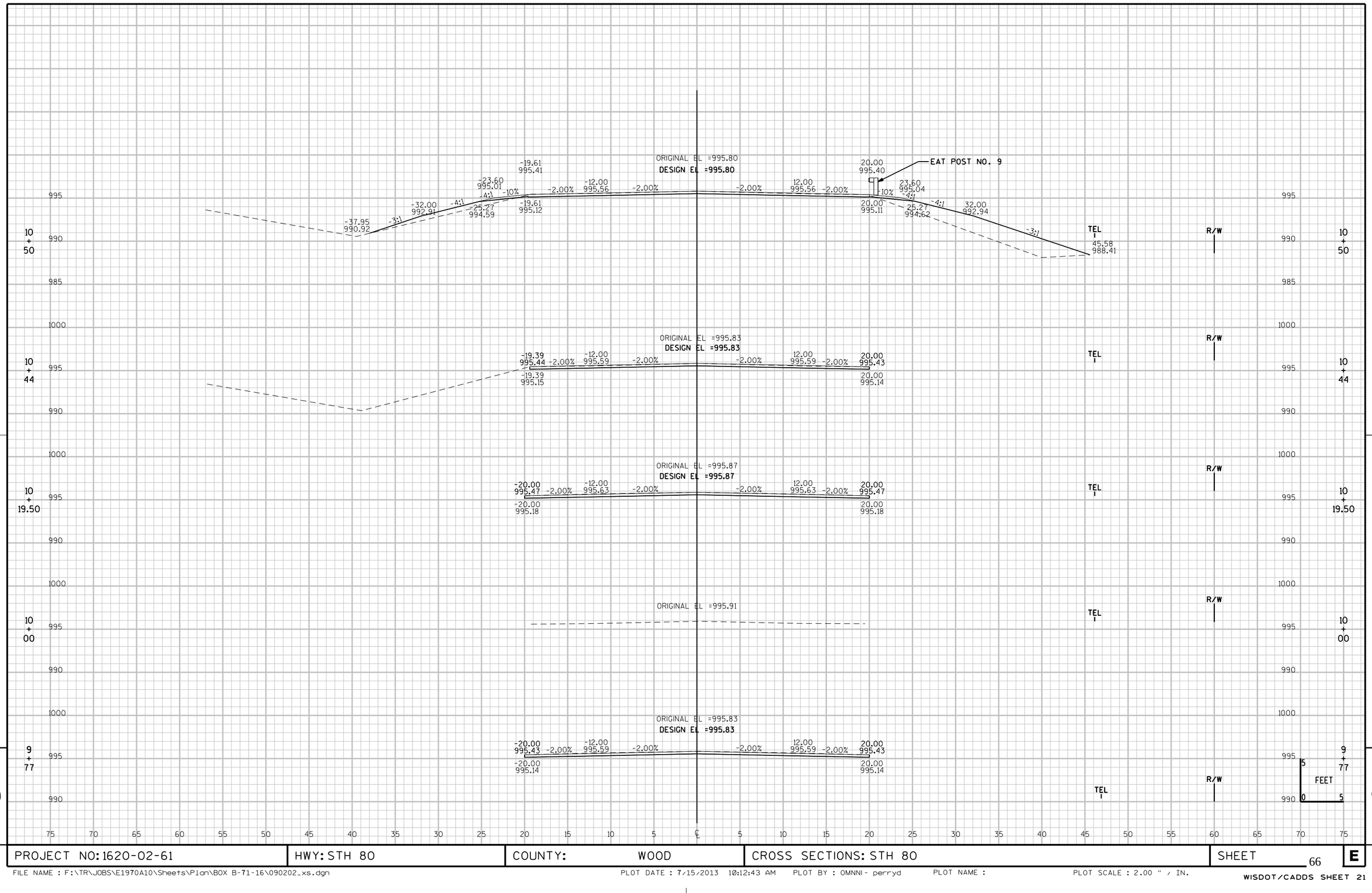
PROJECT NO: 1620-02-61	HWY: STH 80	COUNTY: WOOD	CROSS SECTIONS: STH 80	SHEET 65	E

FILE NAME : F:\TR\JOBS\E1970A10\Sheets\Plan\BOX B-71-16\090201_xs.dgn PLOT DATE : 7/15/2013 10:13:36 AM PLOT BY : OMNNI - perryd PLOT NAME : PLOT SCALE : 2.00 " / IN.

WISDOT/CADDS SHEET 21

9

9.1

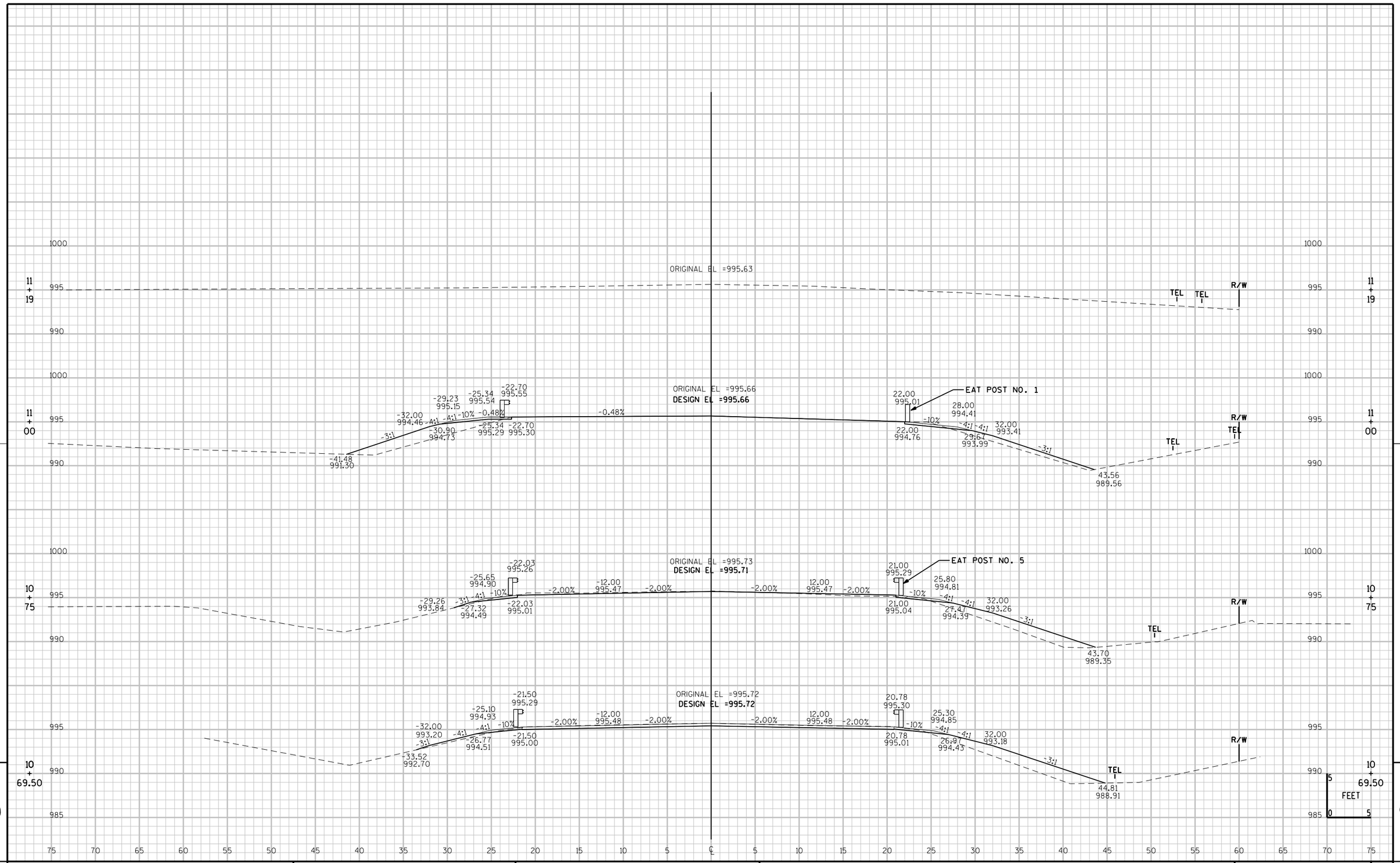


9

PROJECT NO: 1620-02-61	HWY: STH 80	COUNTY: WOOD	CROSS SECTIONS: STH 80	SHEET 66	E	9.2

FILE NAME : F:\TR\JOBS\E1970A10\Sheets\Plan\BOX B-71-16\090202_xs.dgn PLOT DATE : 7/15/2013 10:12:43 AM PLOT BY : OMNNI- perryd PLOT NAME : PLOT SCALE : 2.00 " / IN.

WISDOT/CADDS SHEET 21

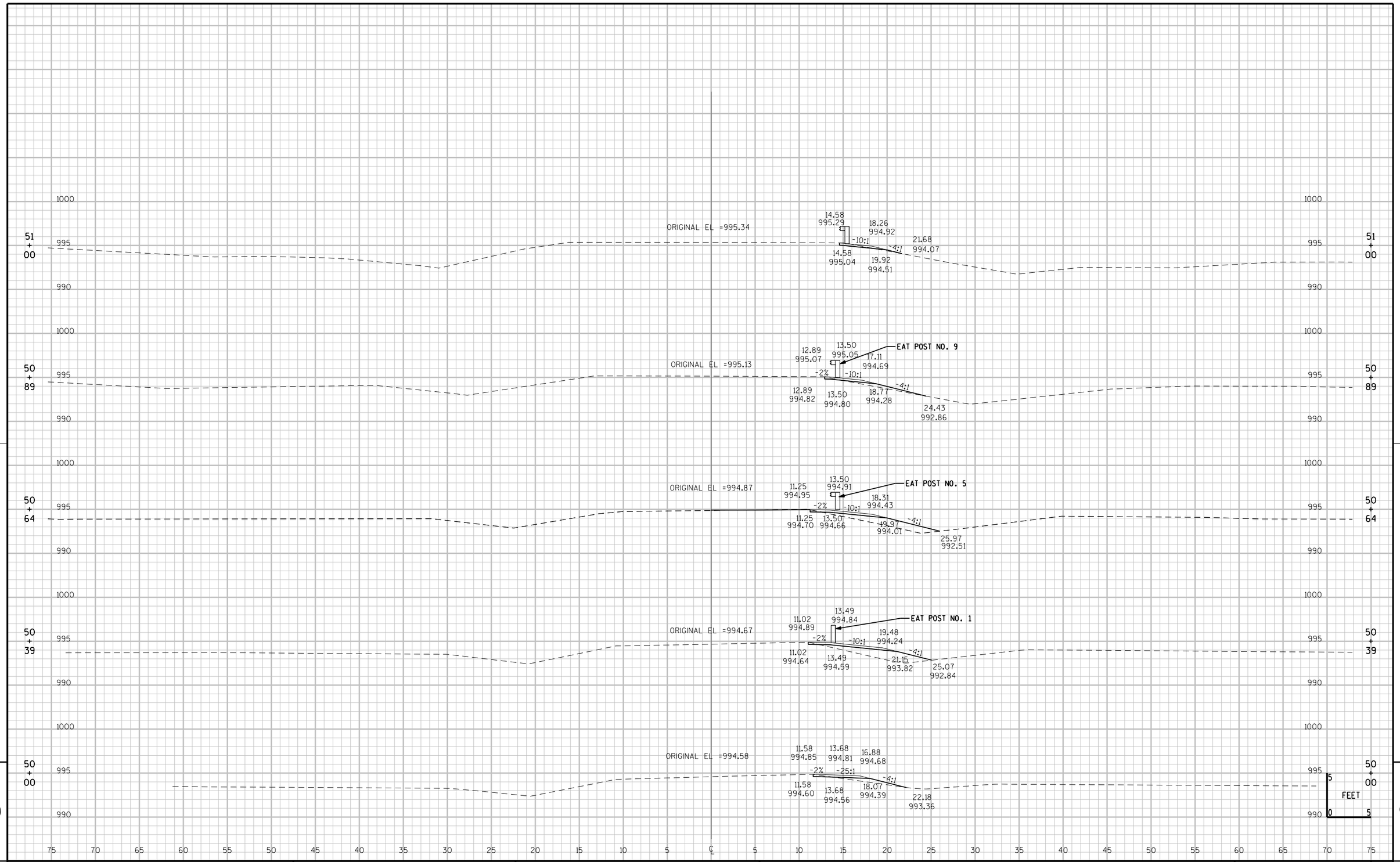


9

PROJECT NO: 1620-02-61	HWY: STH 80	COUNTY: WOOD	CROSS SECTIONS: STH 80	SHEET 67	E	9.3

FILE NAME : F:\TR\JOBS\E1970A10\Sheets\Plan\BOX B-71-16\090203_xs.dgn PLOT DATE : 7/15/2013 10:16:57 AM PLOT BY : OMNNI- perryd PLOT NAME : PLOT SCALE : 2.00 " / IN.

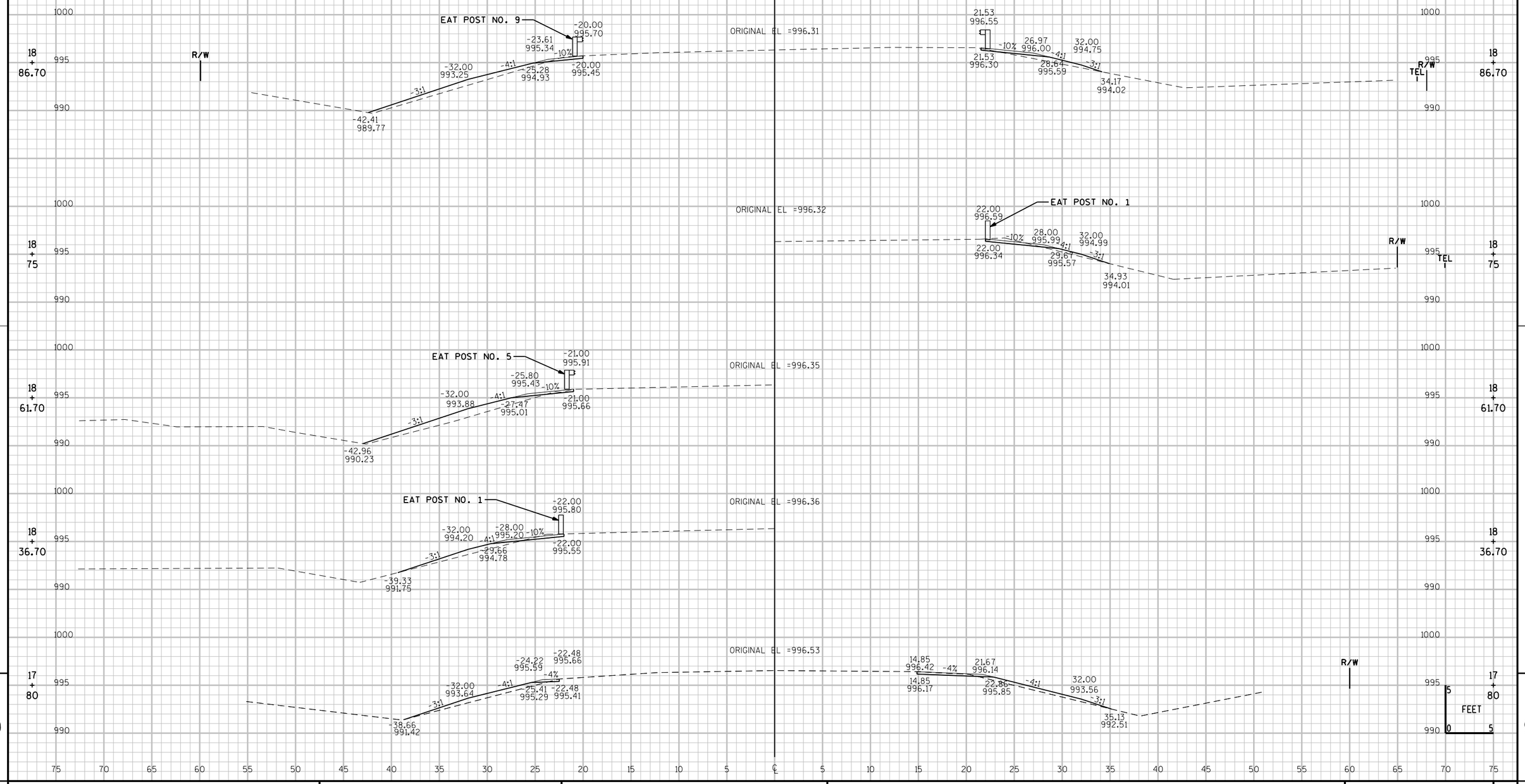
WISDOT/CADDS SHEET 21



9

9

PROJECT NO: 1620-02-61	HWY: STH 80	COUNTY: WOOD	CROSS SECTIONS: TOWN HALL ROAD	SHEET 68	E	9.4



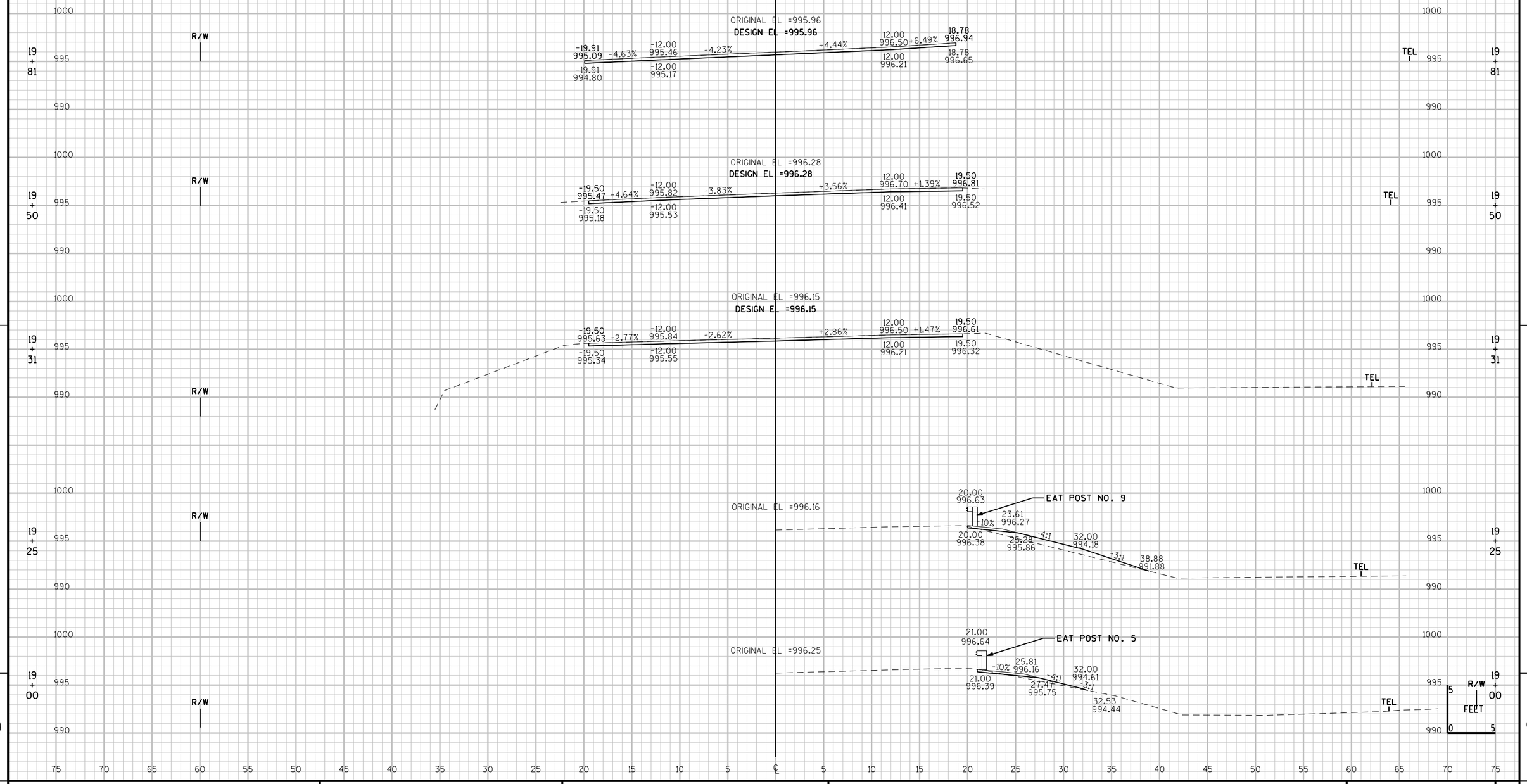
9

9

PROJECT NO: 1620-02-60	HWY: STH 80	COUNTY: WOOD	CROSS SECTIONS: STH 80	SHEET 69	E	9.5

FILE NAME : F:\TR\JOBS\E1970A10\Sheets\Plan\BOX B-71-17\090201_xs.dgn PLOT DATE : 7/15/2013 10:28:51 AM PLOT BY : OMNNI- perryd PLOT NAME : PLOT SCALE : 2.00 " / IN.

WISDOT/CADDS SHEET 21



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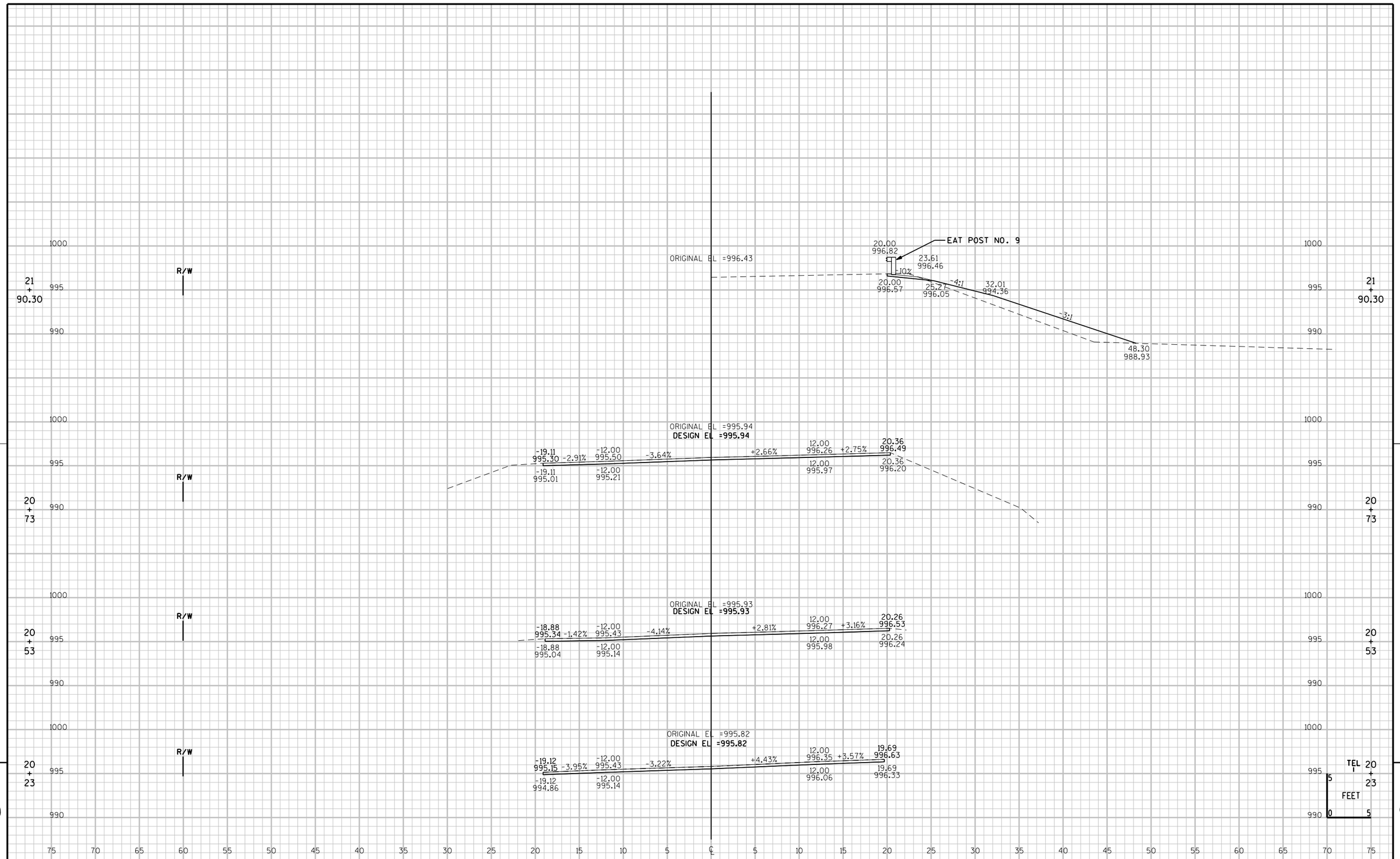
PROJECT NO: 1620-02-60	HWY: STH 80	COUNTY: WOOD	CROSS SECTIONS: STH 80	SHEET 70	E

FILE NAME : F:\TR\JOBS\E1970A10\Sheets\Plan\BOX B-71-17\090202_xs.dgn PLOT DATE : 7/15/2013 10:27:57 AM PLOT BY : OMNNI - perryd PLOT NAME : PLOT SCALE : 2.00 " / IN.

WISDOT/CADDS SHEET 21

9.6



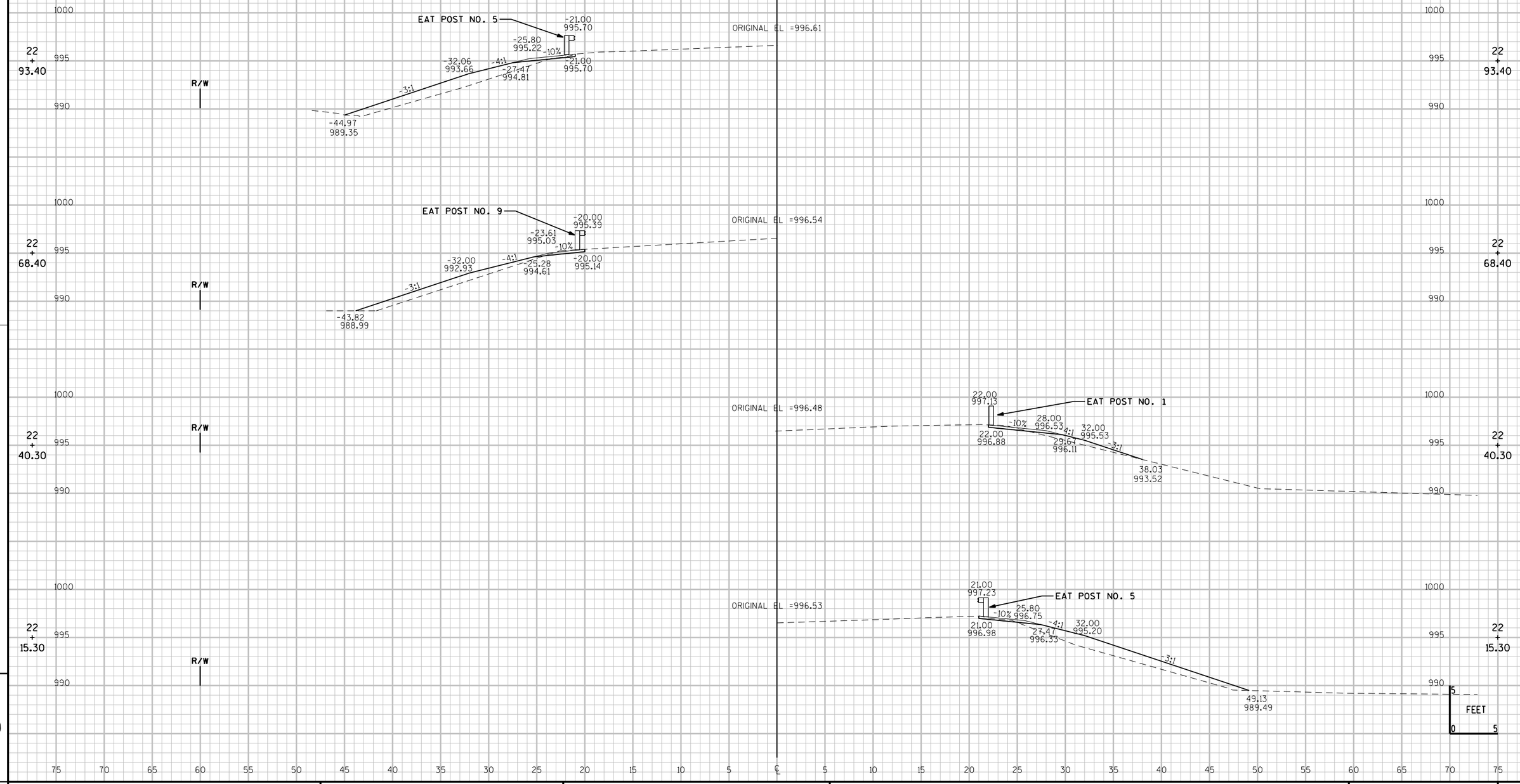
9

9

PROJECT NO: 1620-02-60	HWY: STH 80	COUNTY: WOOD	CROSS SECTIONS: STH 80	SHEET 71	E	9.7

FILE NAME : F:\TR\JOBS\E1970A10\Sheets\Plan\BOX B-71-17\090203_xs.dgn PLOT DATE : 7/15/2013 10:40:29 AM PLOT BY : OMNNI - perryd PLOT NAME : PLOT SCALE : 2.00 " / IN.

WISDOT/CADDS SHEET 21



9

9

PROJECT NO: 1620-02-60	HWY: STH 80	COUNTY: WOOD	CROSS SECTIONS: STH 80	SHEET 72	E	9.8

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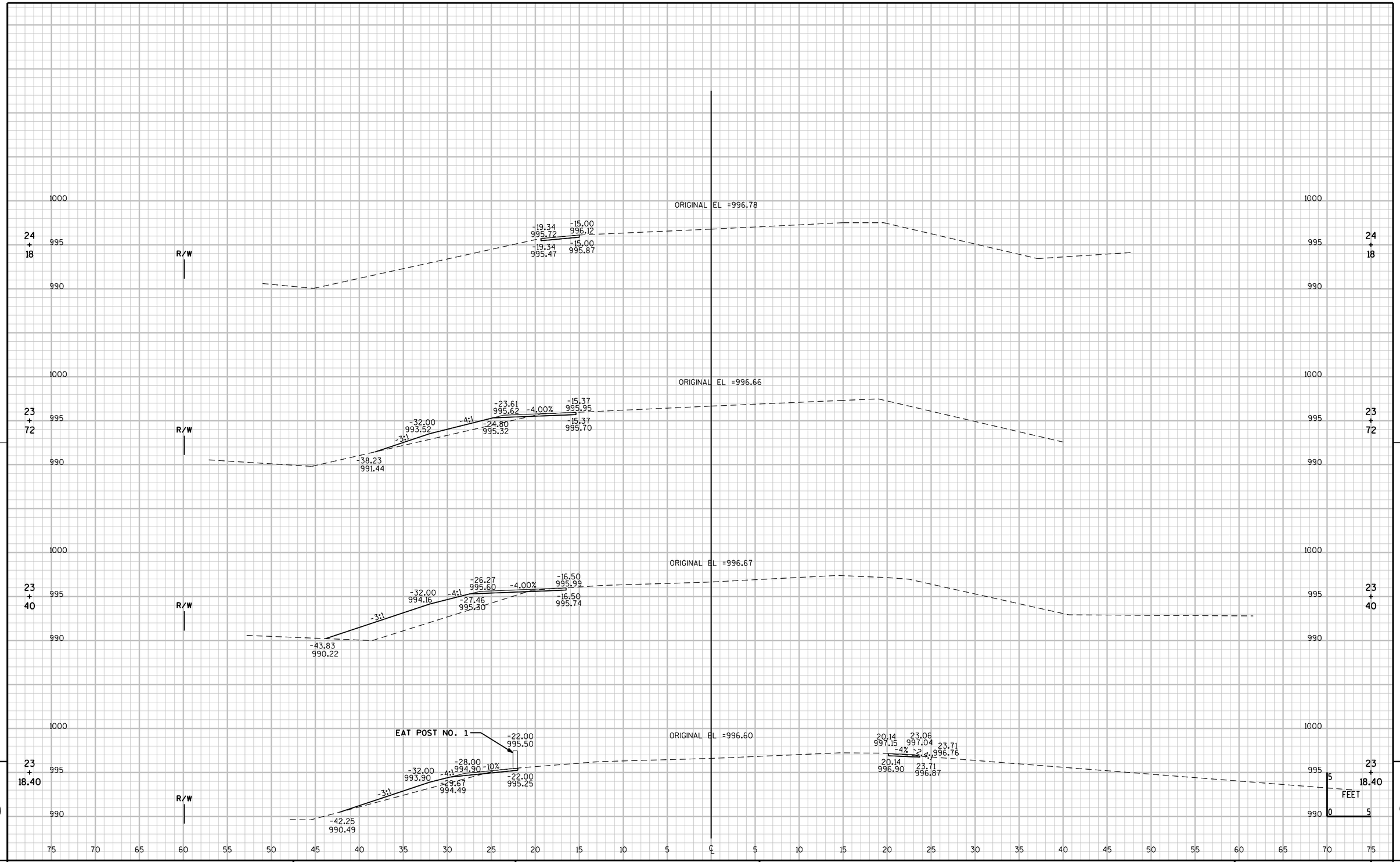
WISDOT/CADDS SHEET 21



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PROJECT NO: 1620-02-60	HWY: STH 80	COUNTY: WOOD	CROSS SECTIONS: STH 80	SHEET 73	E

9.9

FILE NAME : F:\TR\JOBS\E1970A10\Sheets\Plan\BOX B-71-17\090205_xs.dgn PLOT DATE : 7/15/2013 10:35:19 AM PLOT BY : OMNNI- perryd PLOT NAME : PLOT SCALE : 2.00 " / IN.

WISDOT/CADDS SHEET 21

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov

WIS DEC 2013

PROJECT ID: 6140-01-61
WITH: 1620-02-60, 1620-02-61

COUNTY: WOOD

ORDER OF SHEETS

TOTAL SHEETS = 34

23

N

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

ADAMS - WISCONSIN RAPIDS

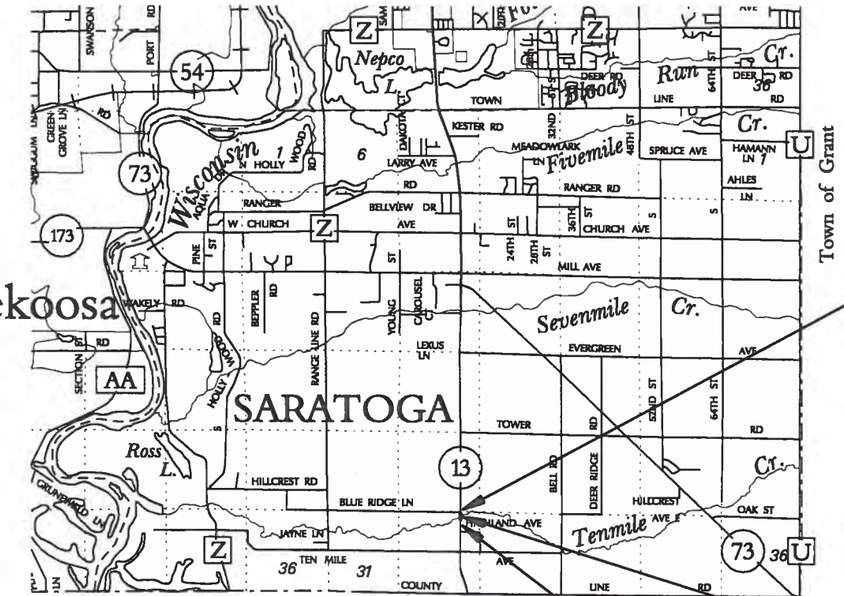
TEN MILE CREEK BRIDGE, B-71-0058

STH 13

WOOD COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
6140-01-61	———	———

STATE PROJECT NUMBER
6140-01-61



LAYOUT
SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.030 MI.

END PROJECT 6140-01-61
STA. 32+72.00

STRUCTURE B-71-0058

BEGIN PROJECT 6140-01-61
STA. 31+12.00
Y = 404963.67
X = 733598.14

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS) WOOD COUNTY NAD 1983 (2007).
ELEVATION SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 NAVD 88 (2007).

DESIGN DESIGNATION

A.A.D.T. 2008	=	4,900
A.A.D.T.	=	NA
O.H.V.	=	NA
D.D.	=	NA
T.	=	NA
DESIGN SPEED	=	50 MPH
ESALS	=	NA

CONVENTIONAL SYMBOLS

PLAN		PROFILE	
CORPORATE LIMITS		GRADE LINE	
PROPERTY LINE		ORIGINAL GROUND	
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)	ROCK
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH	LABEL
EXISTING RIGHT OF WAY		GRADE ELEVATION	95.36
PROPOSED OR NEW R/W LINE		CULVERT (Profile View)	
SLOPE INTERCEPT		UTILITIES	
REFERENCE LINE		ELECTRIC	E
EXISTING CULVERT		FIBER OPTIC	FO
PROPOSED CULVERT (Box or Pipe)		GAS	G
COMBUSTIBLE FLUIDS	CAUTION	SANITARY SEWER	SAN
		STORM SEWER	SS
MARSH AREA		TELEPHONE	T
		WATER	W
		UTILITY PEDESTAL	
WOODED OR SHRUB AREA		POWER POLE	
		TELEPHONE POLE	

ORIGINAL PLANS PREPARED BY
OMNNI ASSOCIATES

WISCONSIN
JUDITH ANN WILSON
E-22940
NEENAH, WI
PROFESSIONAL ENGINEER
7/31/13

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	OMNNI ASSOCIATES
Designer	OMNNI ASSOCIATES
Project Manager	KEVIN GARRIGAN, P.E.
Regional Examiner	CHERYL SIMON, P.E.
Regional Supervisor	MICHAEL KRETSCHMER, P.E.

APPROVED FOR THE DEPARTMENT
DATE: 07/31/2013
(Signature)

E

GENERAL NOTES

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY FACILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

CONSIDER DIMENSIONS GIVEN FOR EXISTING FEATURES AS APPROXIMATE AND MEASURED IN THE FIELD FOR MATCHING PURPOSES.

WHEN THE QUANTITY OF THE ITEM OF BASE OR ASPHALT PAVEMENT IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY HIS OPERATION OUTSIDE THE NORMAL CONSTRUCTION LIMITS.

DISTANCES SHOWN ON THIS PLAN ARE GROUND DISTANCES.

CONTACTS

ELECTRIC

ADAMS-COLUMBIA ELECTRIC COOPERATIVE
401 EAST LAKE STREET
P.O. BOX 70
FRIENDSHIP, WI 53934
ATTN: BOB FISH
TELEPHONE: (800) 831-8629 EXT 244
EMAIL: bfish@acecwi.com

ATC MANAGEMENT, INC.
2 FEN OAK CT
MADISON, WI 53218
ATTN: LORI KOLBOW
TELEPHONE: (608) 877-7158
EMAIL: lkolbow@atcllc.com

TELEPHONE

WCTC, CWCI, DATA WAVE, SOLARUS
440 EAST GRAND AVENUE
P.O. BOX 8045
WISCONSIN RAPIDS, WI 54494-8045
ATTN: DENNIS PIERCE
TELEPHONE: (715) 421-8172
EMAIL: pierce@solarus.net

GAS

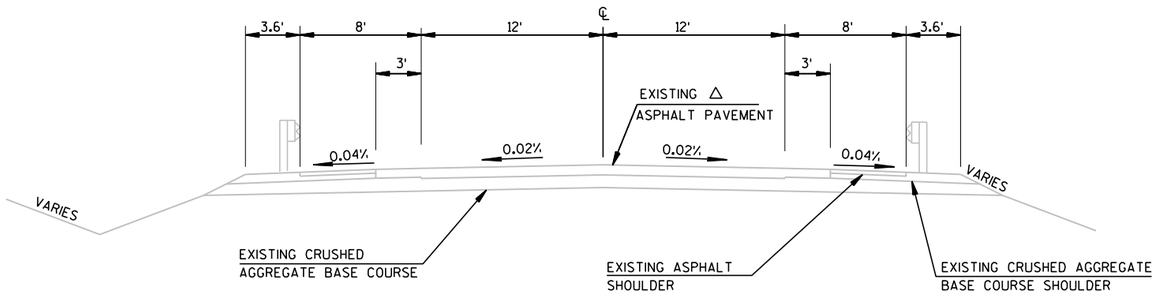
SEND ALL WE ENERGIES CORRESPONDENCE TO:
WE ENERGIES
333 W. EVERETT STREET, A299
MILWAUKEE, WI 53203
ATTN: DAN SANDE
TELEPHONE: (414) 221-4578
EMAIL: dan.sande@we-energies.com

WE ENERGIES CONSTRUCTION FIELD CONTACT
THOMAS KROSTAG
1921 8TH STREET SOUTH
WICONSIN RAPIDS, WI 54494
TELEPHONE: (715) 421-7268
EMAIL: thomas.krostag@we-energies.com

DNR LIAISON

MARC HERSHFIELD
DEPARTMENT OF NATURAL RESOURCES
473 GRIFFITH AVENUE
WISCONSIN RAPIDS, WI 54494
TELEPHONE: 715-421-7867
EMAIL: marc.hershfield@wisconsin.gov

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

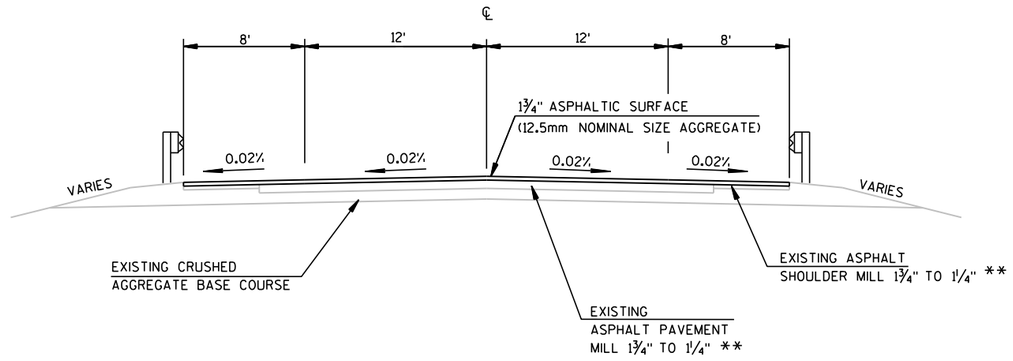


△ EXISTING ASPHALT PAVEMENT IS 5½" OVERLAY (3½" LOWER LAYER, 2" UPPER LAYER) ON 2½" ORIGINAL ASPHALT PAVEMENT

** MILLING DEPTH VARIES FROM 1¾" AT PROJECT BEGIN AND END TO 1¼" AT BRIDGE ABUTMENTS

TYPICAL EXISTING SECTION

STA. 31+12 TO STA. 31+62
STA. 32+22 TO STA. 32+72



TYPICAL FINISHED SECTION

STA. 31+12 TO STA. 31+62
STA. 32+22 TO STA. 32+72

2

LEGEND

POST MOUNTED SIGN

FLAGS; 16"X16" MIN, ORANGE

FMS FIXED MESSAGE SIGN

N

TEN MILE AVE

BLUE RIDGE LN

TEN MILE CREEK

HIGHLAND AVE

STH 13

STH 13

FMS

FMS

500' MAX

500'

500'

1000'

500' MAX

500'

500'

1000'

WORK ZONE

ROAD WORK AHEAD W20-1

ONE LANE ROAD AHEAD W20-4

W03-3

ROAD WORK AHEAD W20-1

ROAD WORK AHEAD W20-1

ONE LANE ROAD AHEAD W20-4

W03-3

2

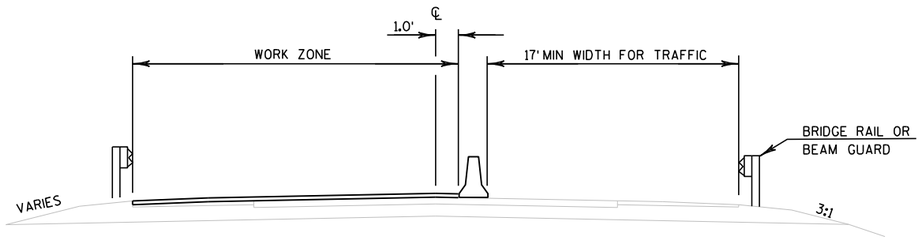
PROJECT NO: 6140-01-61	HWY: STH 13	COUNTY: WOOD	TRAFFIC CONTROL - ADVANCED WARNING SIGNING	SHEET 4	E

2.3

2

LEGEND

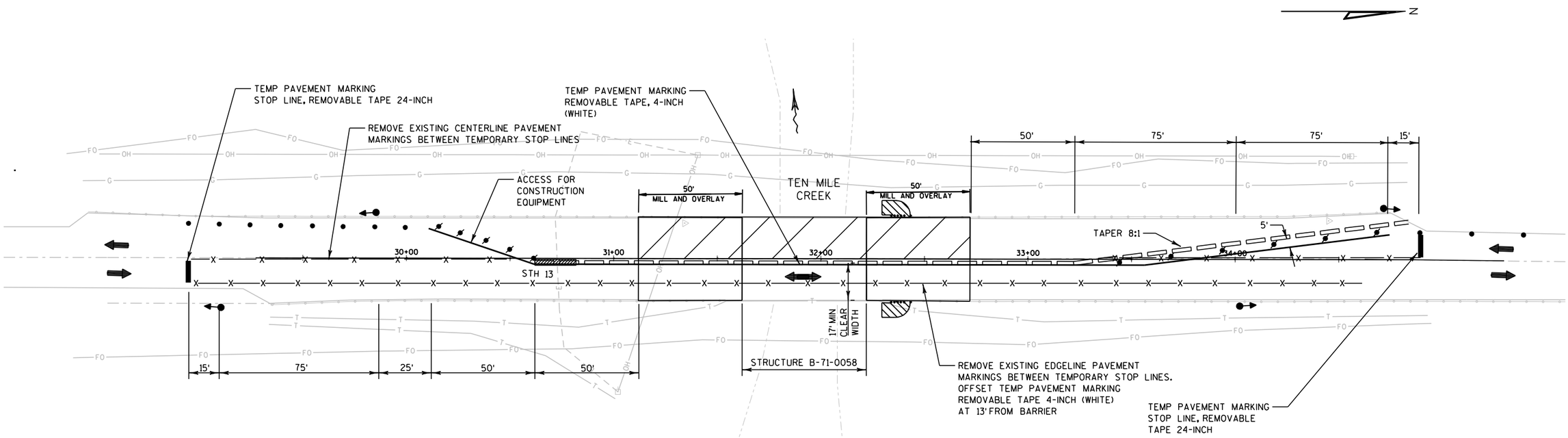
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- TEMPORARY PRECAST CONCRETE BARRIER
- TEMPORARY TRAFFIC SIGNAL
- DIRECTION OF TRAFFIC FLOW
- WORK AREA
- CRASH CUSHION TEMPORARY
- —X—X— REMOVING PAVEMENT MARKINGS
- ASPHALTIC FLUME



TYPICAL SECTION IN WORK ZONE

GENERAL NOTES

1. VERIFY EXISTING FIELD CONDITIONS.
2. THIS DETAIL SUPPLEMENTS S.D.D. "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNAL". FOLLOW S.D.D. EXCEPT AS SHOWN IN THIS DETAIL.
3. TEMPORARY ASPHALT WIDENING AND ASSOCIATED EDGELINE NOT NECESSARY FOR THIS LOCATION.
4. SEE ADDITIONAL STANDARD DETAIL DRAWINGS FOR OTHER TRAFFIC CONTROL REQUIREMENTS.



STAGE 1 DETAIL - TRAFFIC USING NORTHBOUND LANE ON BRIDGE

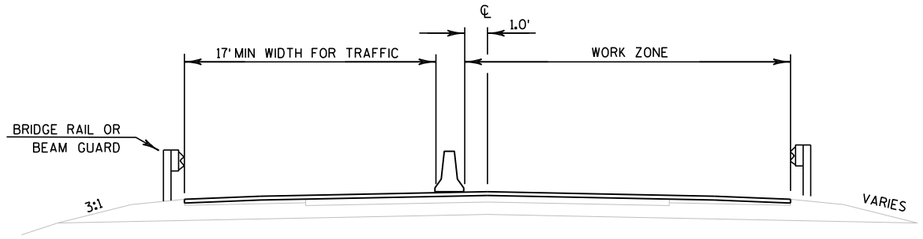
TEMPORARY TRAFFIC SIGNAL FOR ONE LANE BRIDGE - STH 13

PROJECT NO: 6140-01-61	HWY: STH 13	COUNTY: WOOD	TRAFFIC CONTROL DETAIL - STAGE 1	SHEET 5	E	2.4

2

LEGEND

- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- TEMPORARY PRECAST CONCRETE BARRIER
- TEMPORARY TRAFFIC SIGNAL
- DIRECTION OF TRAFFIC FLOW
- WORK AREA
- CRASH CUSHION TEMPORARY
- REMOVING PAVEMENT MARKINGS
- ASPHALTIC FLUME
- PLACED IN STAGE 1

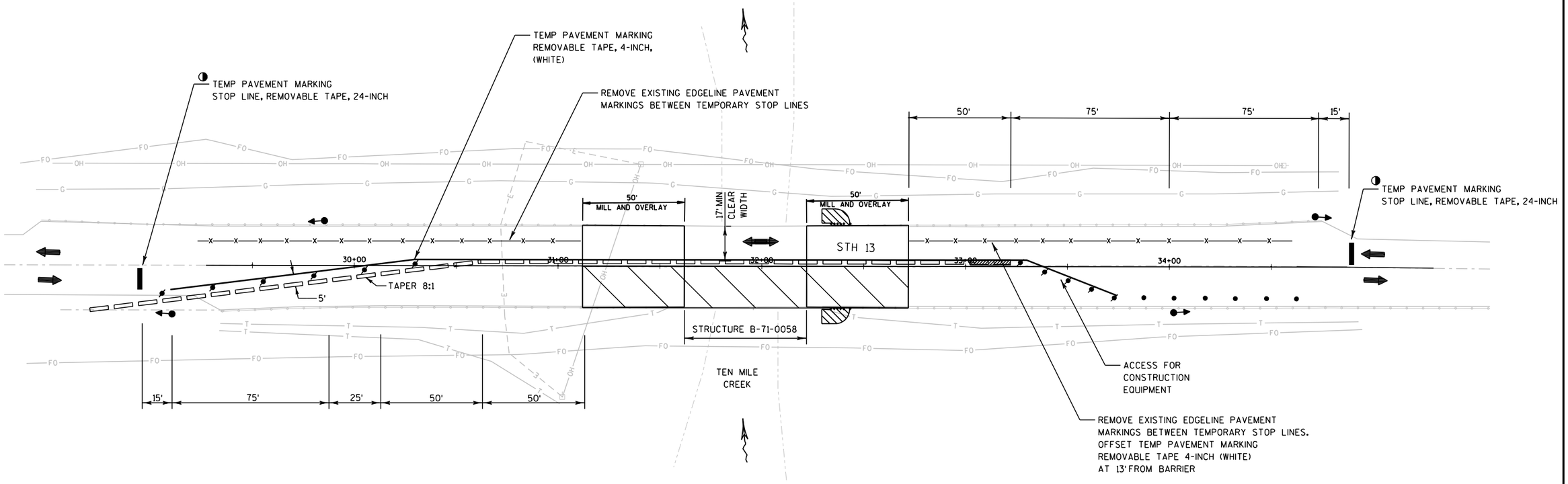


TYPICAL SECTION IN WORK ZONE

GENERAL NOTES

1. VERIFY EXISTING FIELD CONDITIONS.
2. THIS DETAIL SUPPLEMENTS S.D.D. "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNAL". FOLLOW S.D.D. EXCEPT AS SHOWN IN THIS DETAIL.
3. TEMPORARY ASPHALT WIDENING AND ASSOCIATED EDGELINE NOT NECESSARY FOR THIS LOCATION.
4. SEE ADDITIONAL STANDARD DETAIL DRAWINGS FOR OTHER TRAFFIC CONTROL REQUIREMENTS.

N



STAGE 2 DETAIL - TRAFFIC USING SOUTHBOUND LANE ON BRIDGE

TEMPORARY TRAFFIC SIGNAL FOR ONE LANE BRIDGE - STH 13

PROJECT NO: 6140-01-61	HWY: STH 13	COUNTY: WOOD	TRAFFIC CONTROL DETAIL - STAGE 2	SHEET 6	E	2.5

2

SEQUENCE OF OPERATIONS				
STRUCTURE: B-71-0058 STH 13				
PRE - TIMED CYCLE 1 = 100 seconds				
TIME: 6:00 AM - 6:00 PM				
INTERVAL	NB A1, A2	SB B1, B2	INTERVAL LENGTH (SEC)	% OF CYCLE
PHASE A	G	R	26	25.8%
CLEARANCE	Y	R	4	4.0%
CLEARANCE	R	R	20	20.2%
PHASE B	R	G	26	25.8%
CLEARANCE	R	Y	4	4.0%
CLEARANCE	R	R	20	20.2%
			100	100.0%

SEQUENCE OF OPERATIONS				
STRUCTURE: B-71-0058 STH 13				
PRE - TIMED CYCLE 2 = 75 seconds				
TIME: 6:00 PM - 6:00 AM				
INTERVAL	NB A1, A2	SB B1, B2	INTERVAL LENGTH (SEC)	% OF CYCLE
PHASE A	G	R	13	17.7%
CLEARANCE	Y	R	4	5.3%
CLEARANCE	R	R	20	26.9%
PHASE B	R	G	13	17.7%
CLEARANCE	R	Y	4	5.3%
CLEARANCE	R	R	20	26.9%
			75	100.0%

NOTE: G = GREEN
Y = YELLOW
R = RED

DATE 18OCT13 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	6140-01-61 QUANTITY
0010	204.0120	REMOVING ASPHALTIC SURFACE MILLING	SY	450.000	450.000
0040	213.0100	FINISHING ROADWAY (PROJECT) 03. 6140-01-61	EACH	1.000	1.000
0060	455.0605	TACK COAT	GAL	12.000	12.000
0070	465.0105	ASPHALTIC SURFACE	TON	50.000	50.000
0080	465.0110	ASPHALTIC SURFACE PATCHING	TON	10.000	10.000
0100	465.0315	ASPHALTIC FLUMES	SY	30.000	30.000
0120	502.3200	PROTECTIVE SURFACE TREATMENT	SY	340.000	340.000
0140	509.0301	PREPARATION DECKS TYPE 1	SY	25.000	25.000
0150	509.0302	PREPARATION DECKS TYPE 2	SY	12.000	12.000
0160	509.0500	CLEANING DECKS	SY	270.000	270.000
0170	509.1500	CONCRETE SURFACE REPAIR	SF	5.000	5.000
0180	509.2000	FULL-DEPTH DECK REPAIR	SY	1.000	1.000
0190	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	18.000	18.000
0220	509.9050.S	CLEANING PARAPETS 01. CLEANING PARAPETS	LF	168.000	168.000
0230	603.8000	CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	LF	340.000	340.000
0240	603.8125	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	LF	340.000	340.000
0290	614.0905	CRASH CUSHIONS TEMPORARY	EACH	1.000	1.000
0330	619.1000	MOBILIZATION	EACH	0.200	0.200
0340	628.1504	SILT FENCE	LF	100.000	100.000
0350	628.1520	SILT FENCE MAINTENANCE	LF	100.000	100.000
0360	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	3.000	3.000
0370	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	1.000	1.000
0380	628.2008	EROSION MAT URBAN CLASS I TYPE B	SY	30.000	30.000
0470	643.0100	TRAFFIC CONTROL (PROJECT) 03. 6140-01-61	EACH	1.000	1.000
0480	643.0300	TRAFFIC CONTROL DRUMS	DAY	1,000.000	1,000.000
0490	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	120.000	120.000
0500	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	120.000	120.000
0510	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	300.000	300.000
0520	643.0900	TRAFFIC CONTROL SIGNS	DAY	1,000.000	1,000.000
0530	643.1000	TRAFFIC CONTROL SIGNS FIXED MESSAGE	SF	36.000	36.000
0540	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	2,000.000	2,000.000
0550	646.0600	REMOVING PAVEMENT MARKINGS	LF	1,600.000	1,600.000
0560	649.0400	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	LF	1,800.000	1,800.000
0570	649.1400	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 24-INCH	LF	40.000	40.000
0600	661.0100	TEMPORARY TRAFFIC SIGNALS FOR BRIDGES (STRUCTURE) 03. B-71-0058	LS	1.000	1.000
0610	690.0150	SAWING ASPHALT	LF	80.000	80.000

3

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

REMOVING ASPHALTIC SURFACE MILLING

STATION TO STATION	LOCATION	204.0120 SY
31+12 - BRIDGE	STH 13	225
BRIDGE - 32+72	STH 13	225
	TOTAL	**450**

ASPHALTIC ITEMS

STATION TO STATION	LOCATION	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON	465.0110 ASPHALTIC SURFACE PATCHING TON	465.0315 ASPHALTIC FLUMES SY
31+12 - BRIDGE	STH 13	6	25		
BRIDGE - 32+72	STH 13	6	25		30
UNDISTRIBUTED	STH 13			10	0
	TOTALS	**12**	**50**	**10**	**30**

CONCRETE BARRIER TEMPORARY PRECAST

LOCATION	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF	614.0905 CRASH CUSHIONS TEMPORARY*** EACH	REMARKS
STH 13	340	340	1	B 71-0058
TOTALS	**340**	**340**	**1**	

*** CRASH CUSHION DESIGN PARAMETERS:
CRASH TEST CONDITION TL-3
OBJECT MARKING PATTERN OM-3L
WIDTH REQUIREMENTS L = 15', N = 6', F =2'

EROSION CONTROL ITEMS

STATION TO STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.2008 EROSION MAT URBAN CLASS I TYPE B SY
32+20, LT & RT	STH 13	40	40			20
UNDISTRIBUTED	STH 13	60	60	3	1	10
	TOTAL	**100**	**100**	**3**	**1**	**30**

TRAFFIC CONTROL

LOCATION	SERVICE PERIOD DAYS	643.0300 DRUMS NO	643.0300 DRUMS DAYS	643.0420 BARRICADES TYPE III NO	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A NO	643.0705 WARNING LIGHTS TYPE A DAYS	643.0715 WARNING LIGHTS TYPE C NO	643.0715 WARNING LIGHTS TYPE C DAYS	643.0900 SIGNS NO	643.0900 SIGNS DAYS	661.0100.03 TEMPORARY TRAFFIC SIGNALS FOR BRIDGES LS	REMARKS
INSTALL/REMOVAL FOR TEMPORARY SIGNAL	5	30	150		0		0		0	10	50		
TEMPORARY SIGNAL B-71-0058	30	25	750	4	120	4	120	10	300	30	900	1	
UNDISTRIBUTED			100								50		
	TOTALS		**1,000**		**120**		**120**		**300**		**1,000**	**1**	

TRAFFIC CONTROL SIGNS FIXED MESSAGE

LOCATION	SIZE (INCHES)	MESSAGE	643.1000 SF	COMMENTS
STH 13	72 X 36	BRIDGE WORK BEGINS XX/XX/XXXX	18	PLACE ONE WEEK PRIOR TO BEGINNING CONSTRUCTION
STH 13	72 X 36	BRIDGE WORK BEGINS XX/XX/XXXX	18	PLACE ONE WEEK PRIOR TO BEGINNING CONSTRUCTION
		TOTAL	**36**	

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

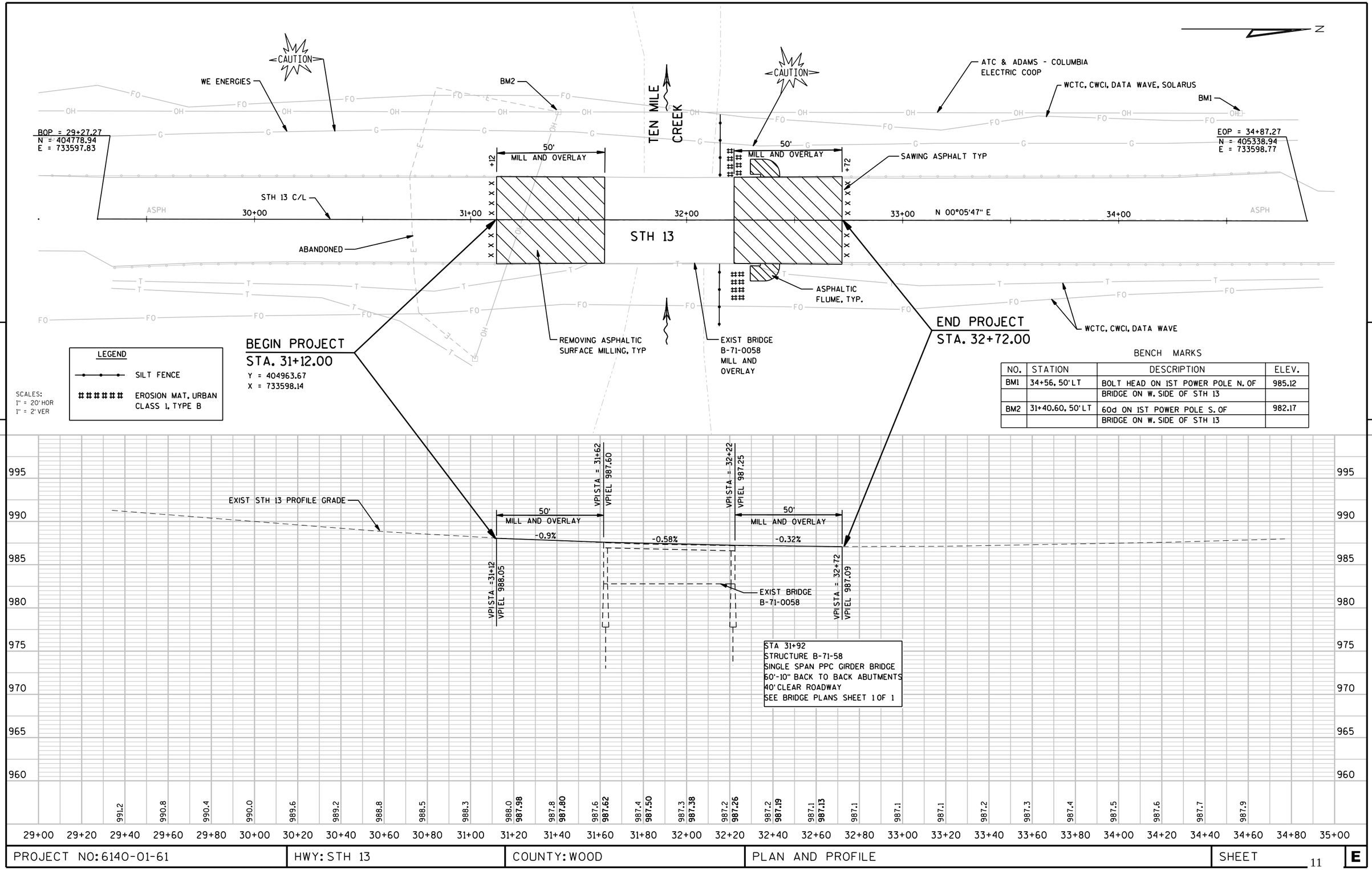
PAVEMENT MARKING

LOCATION	**** EPOXY 4-INCH (WHITE) LF	**** EPOXY 4-INCH (YELLOW) LF	646.0106 PAVEMENT MARKING EPOXY 4-INCH LF	646.0600 REMOVING PAVEMENT MARKINGS LF	**** TEMPORARY PAVT MARKING REMOVABLE TAPE 4-INCH (WHITE) LF	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH LF	649.1400 TEMPORARY PAVT MARKING STOP LINE REMOVABLE TAPE 24-INCH LF
STH 13	900	900	1,800	1,500	1,660	1,660	30
UNDISTRIBUTED	100	100	200	100	140	140	10
PROJECT TOTALS			**2,000**	**1,600**		**1,800**	**40**

**** FOR INFORMATION ONLY.

SAWING ASPHALT

STATION	LOCATION	690.0150 LF
31+12	STH 13	40
32+72	STH 13	40
	TOTAL	**80**



BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
BM1	34+56, 50' LT	BOLT HEAD ON 1ST POWER POLE N. OF	985.12
		BRIDGE ON W. SIDE OF STH 13	
BM2	31+40.60, 50' LT	60d ON 1ST POWER POLE S. OF	982.17
		BRIDGE ON W. SIDE OF STH 13	

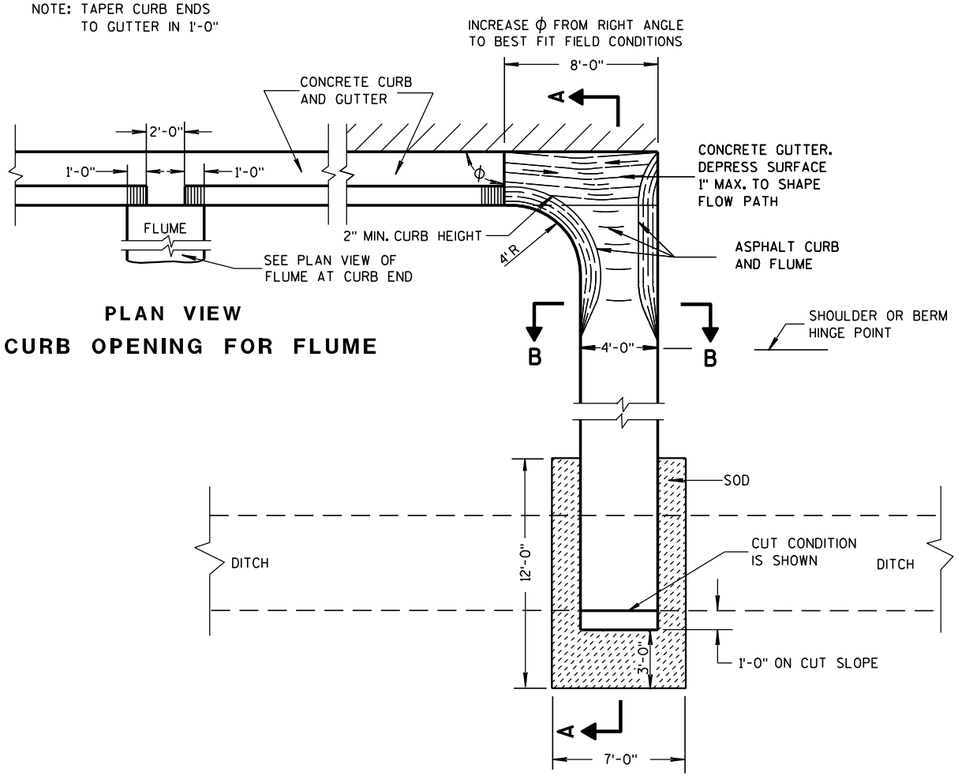
PROJECT NO: 6140-01-61	HWY: STH 13	COUNTY: WOOD	PLAN AND PROFILE	SHEET 11	E

FILE NAME : F:\TR\JOBS\E1970A10\Sheets\Plan\BOX B-71-58\050101_pp.dgn PLOT DATE : 7/15/2013 12:41:49 PM PLOT BY : OMNNI - perryd PLOT NAME : PLOT SCALE : 2.0000 ft / IN.
WISDOT/CADDS SHEET 40

Standard Detail Drawing List

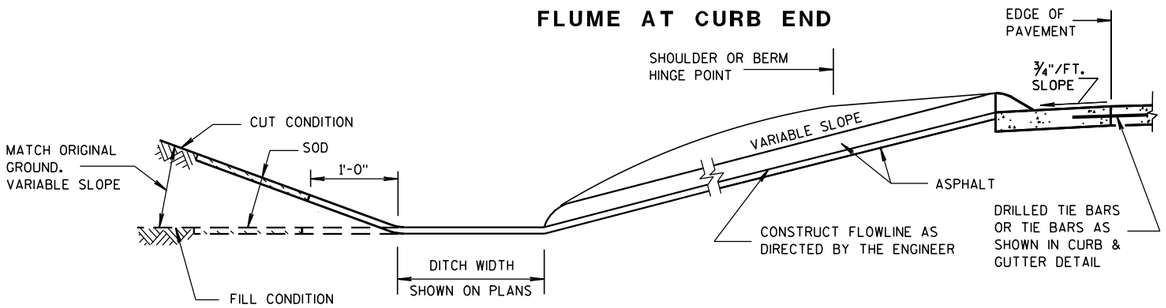
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E09-06	SILT FENCE
09G02-03A	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-03B	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-03C	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
14B07-13A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C12-03	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C19-02A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15D28-01	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D33-02	TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS

ASPHALTIC FLUME

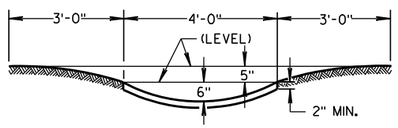


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

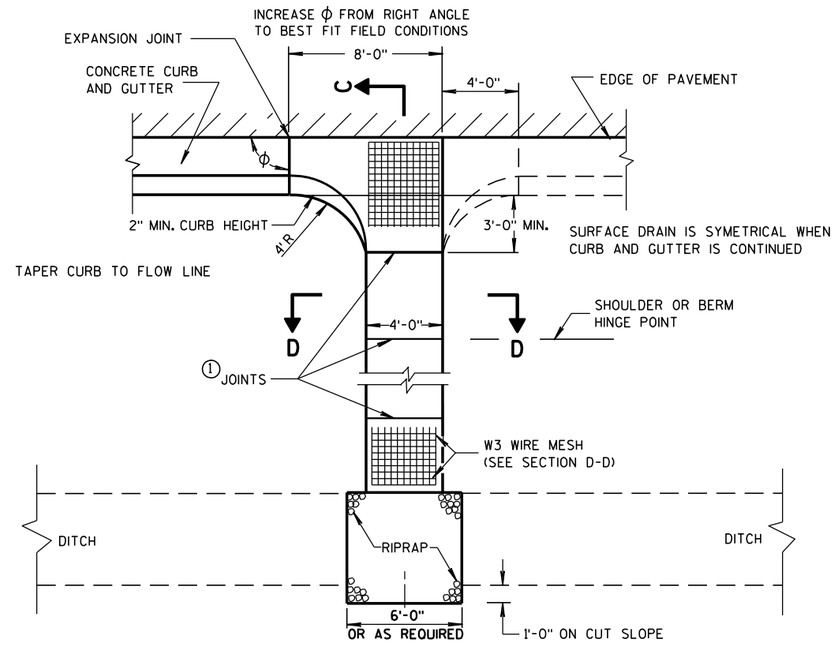
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE ⅛ TO ¼ INCH WIDE BY 1½ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

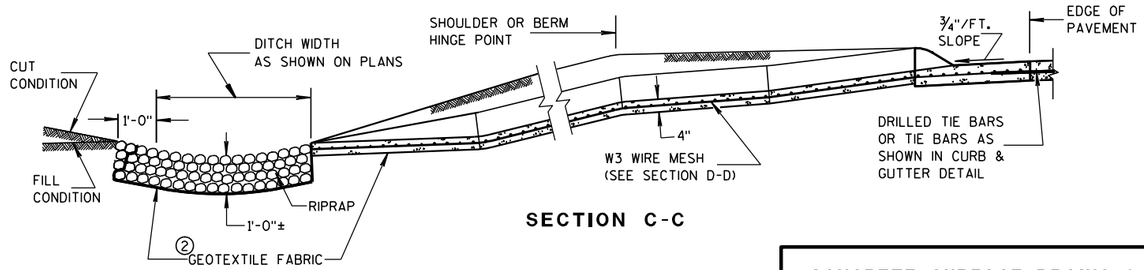
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

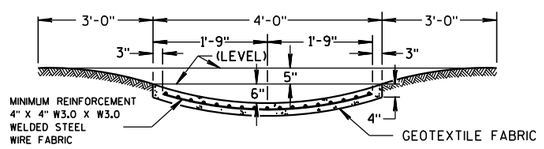
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9-4-08 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
MENT
FHWA

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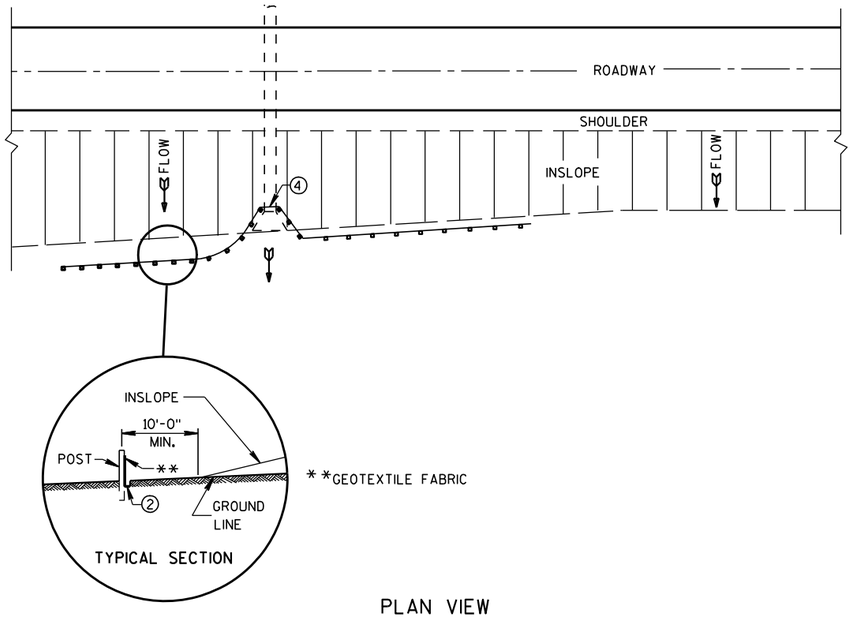
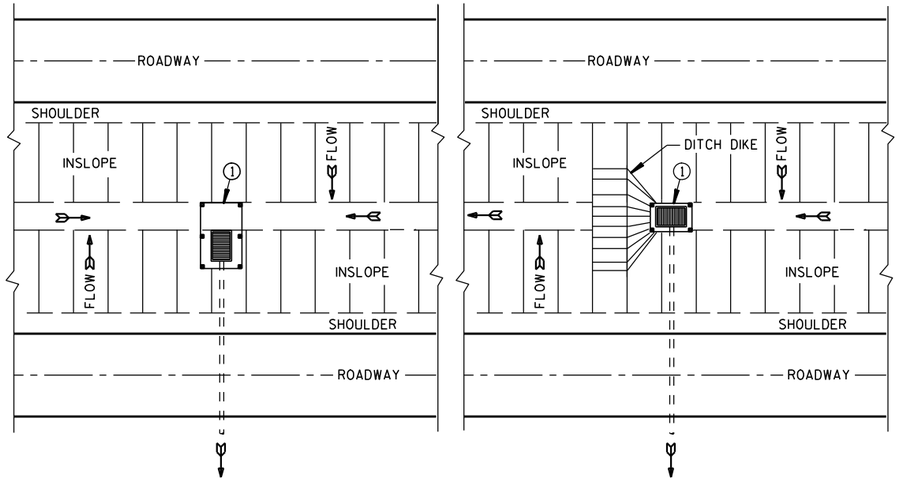


PLAN VIEW

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.

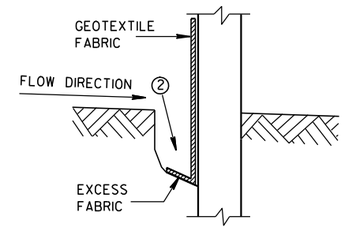
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

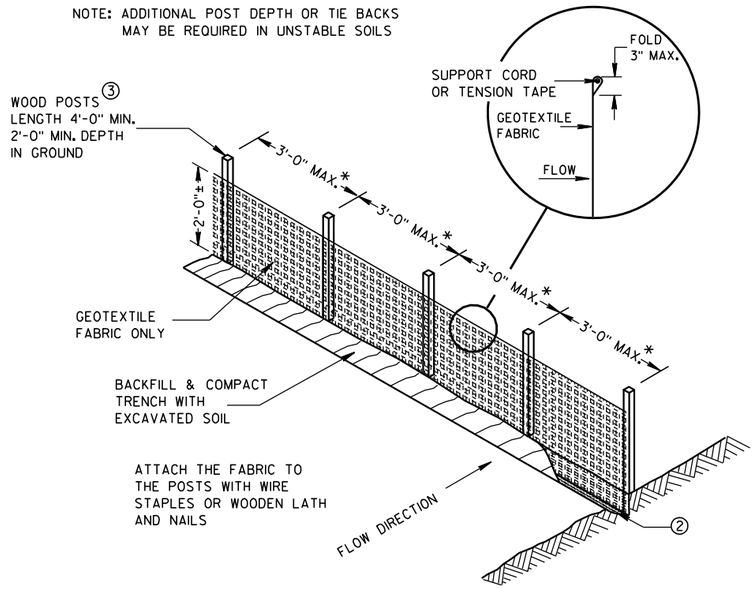
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

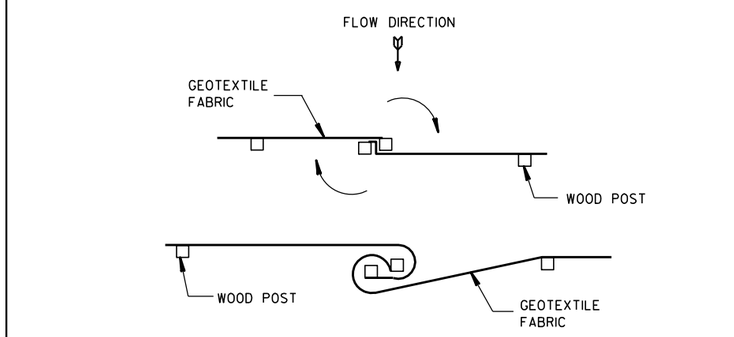
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



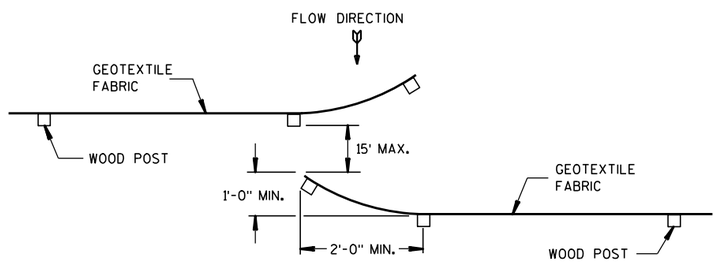
TRENCH DETAIL



SILT FENCE

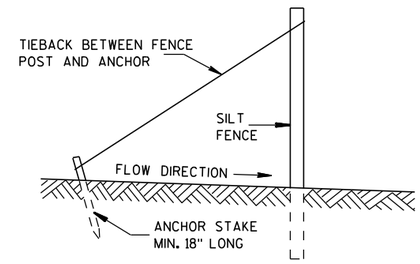


TWIST METHOD



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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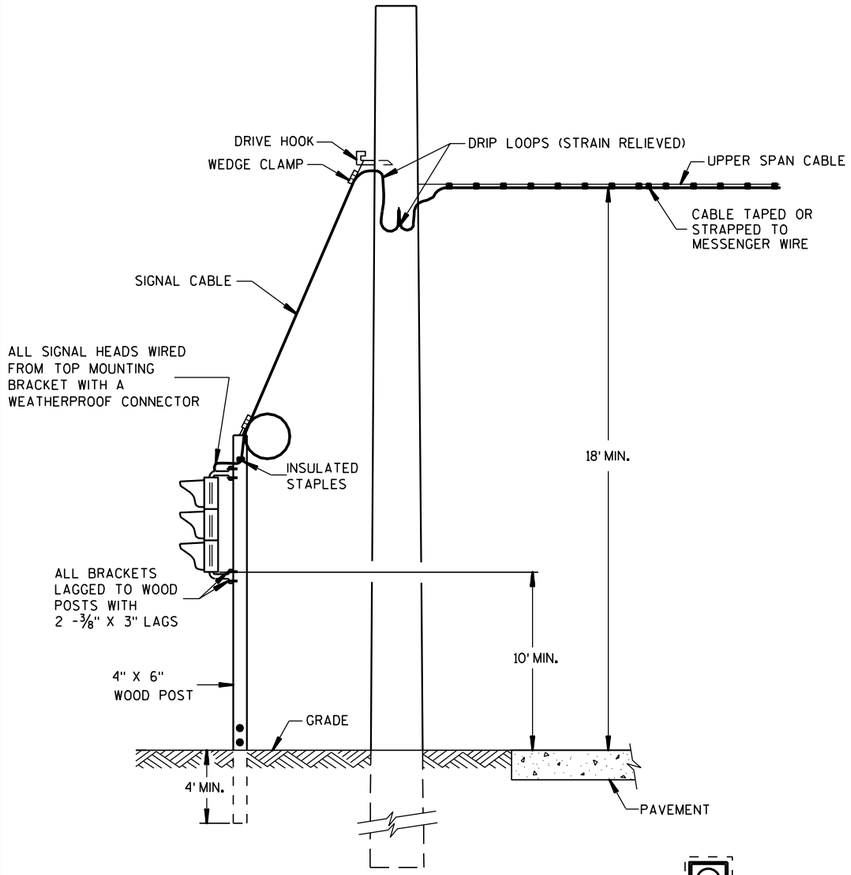
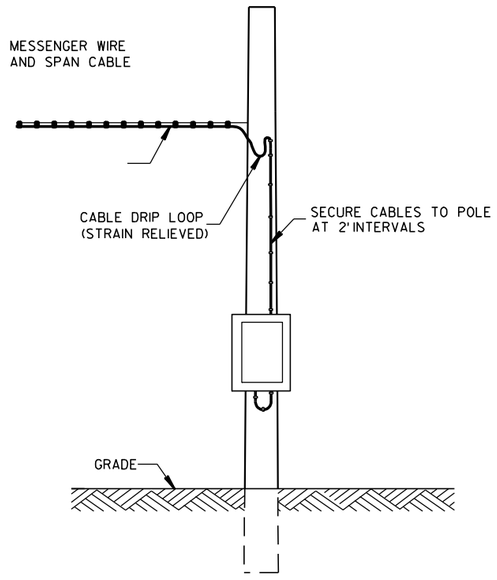
S.D.D. 8 E 9-6



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.

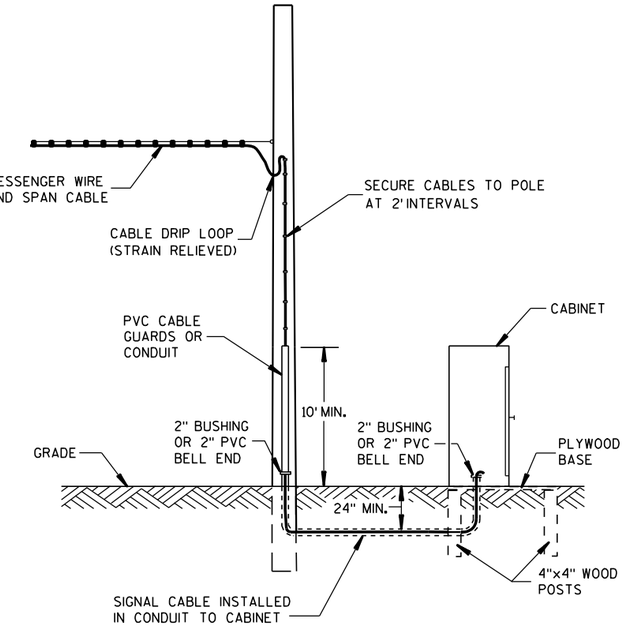
WOOD POLES (NONBREAKAWAY) SHALL BE NO CLOSER TO EDGE OF PAVEMENT THAN OFFSET DISTANCE CHART ALLOWS OR 4 FEET BEHIND PROTECTIVE BARRIER (BEAMGUARD, ETC.).

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.

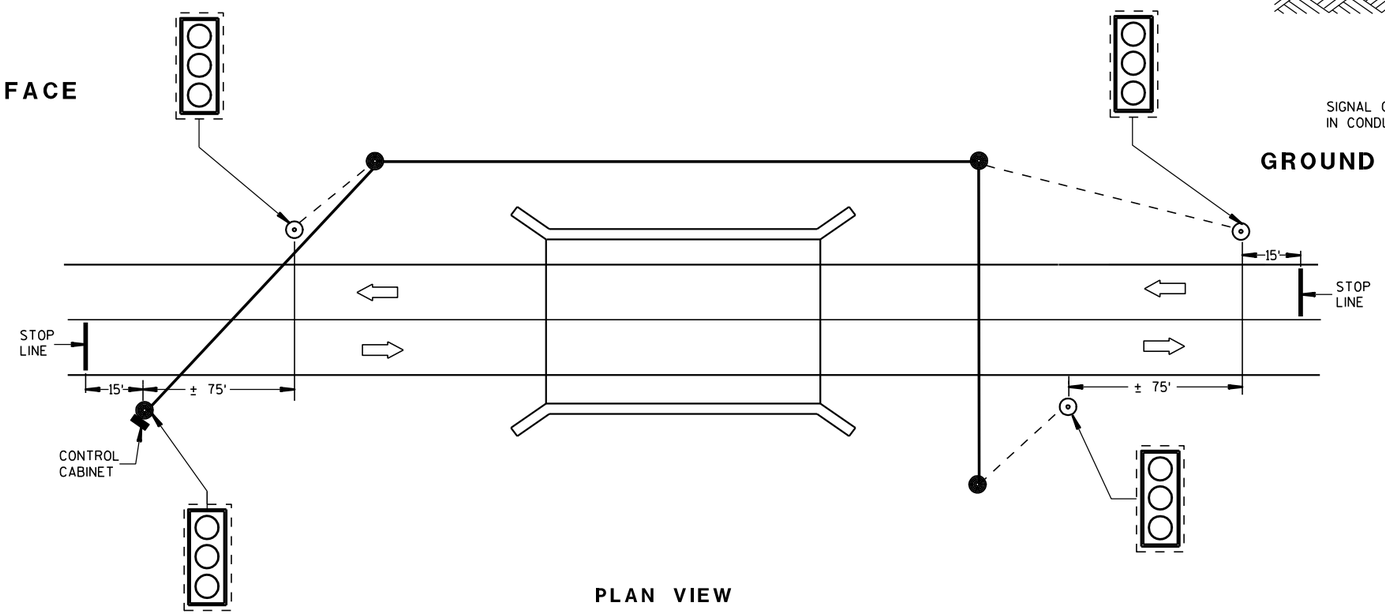
EACH TRAFFIC SIGNAL FACE SHALL HAVE A BACKPLATE.



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 — HWYS

FHWA

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

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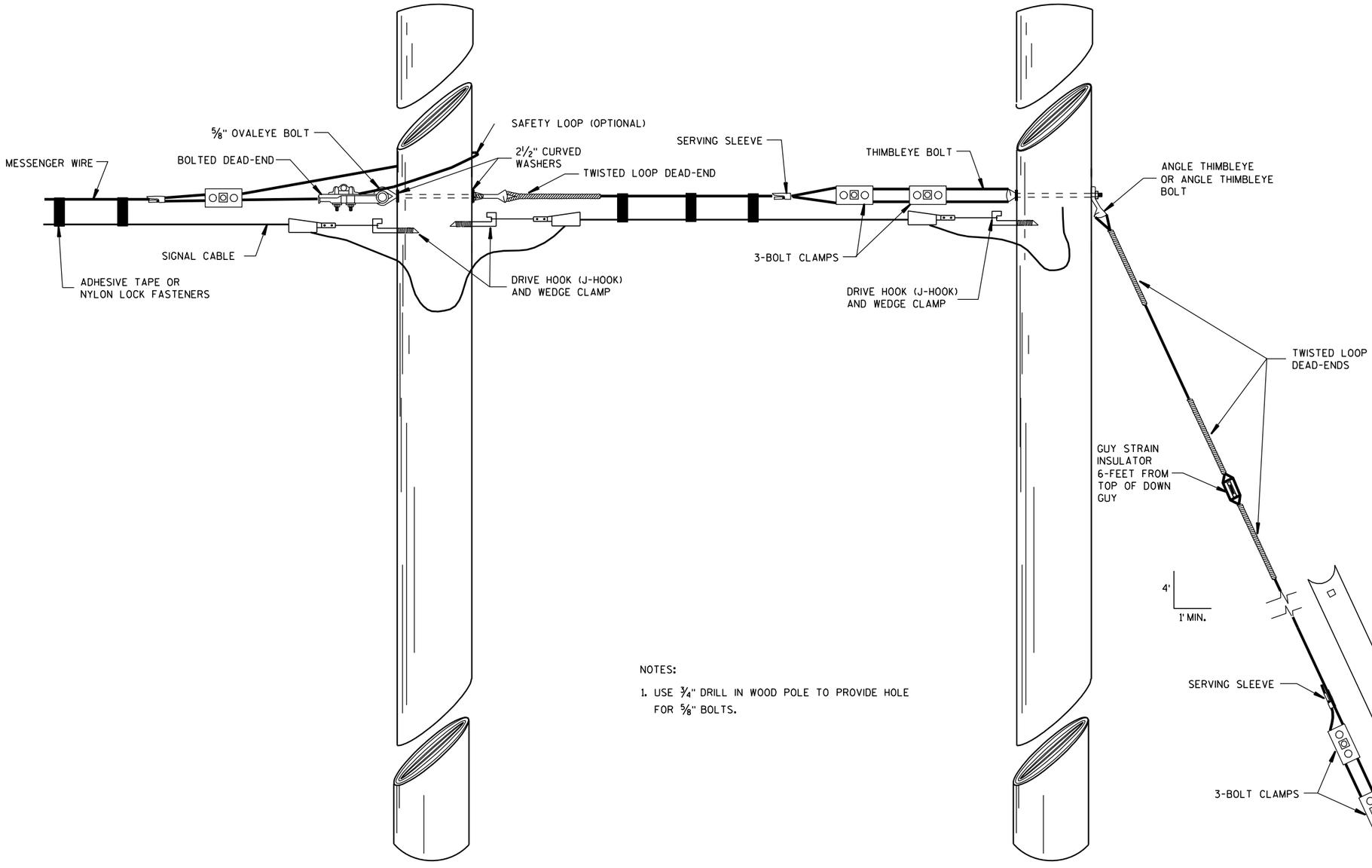
S.D.D. 9 G 2-3a



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[illegible] STATE ELECTRICAL ENGI

HWYS

FHWA

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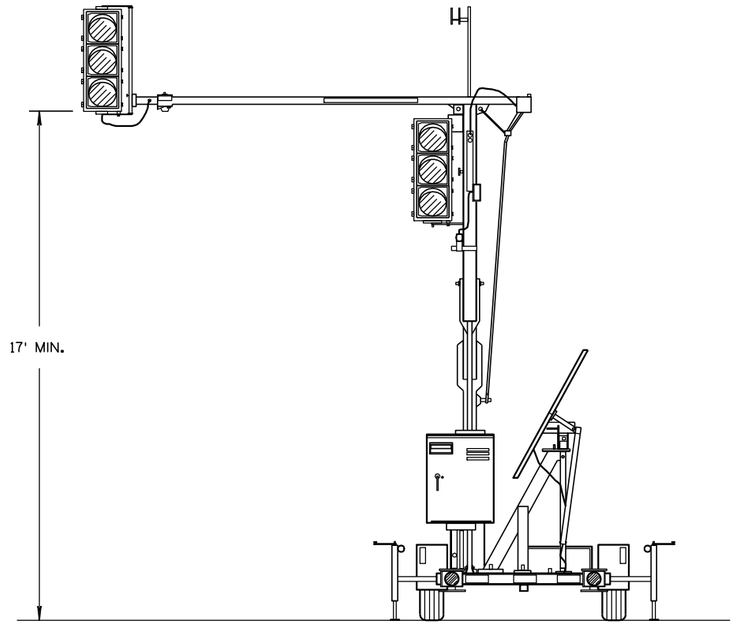
S.D.D. 9 G 2-3b

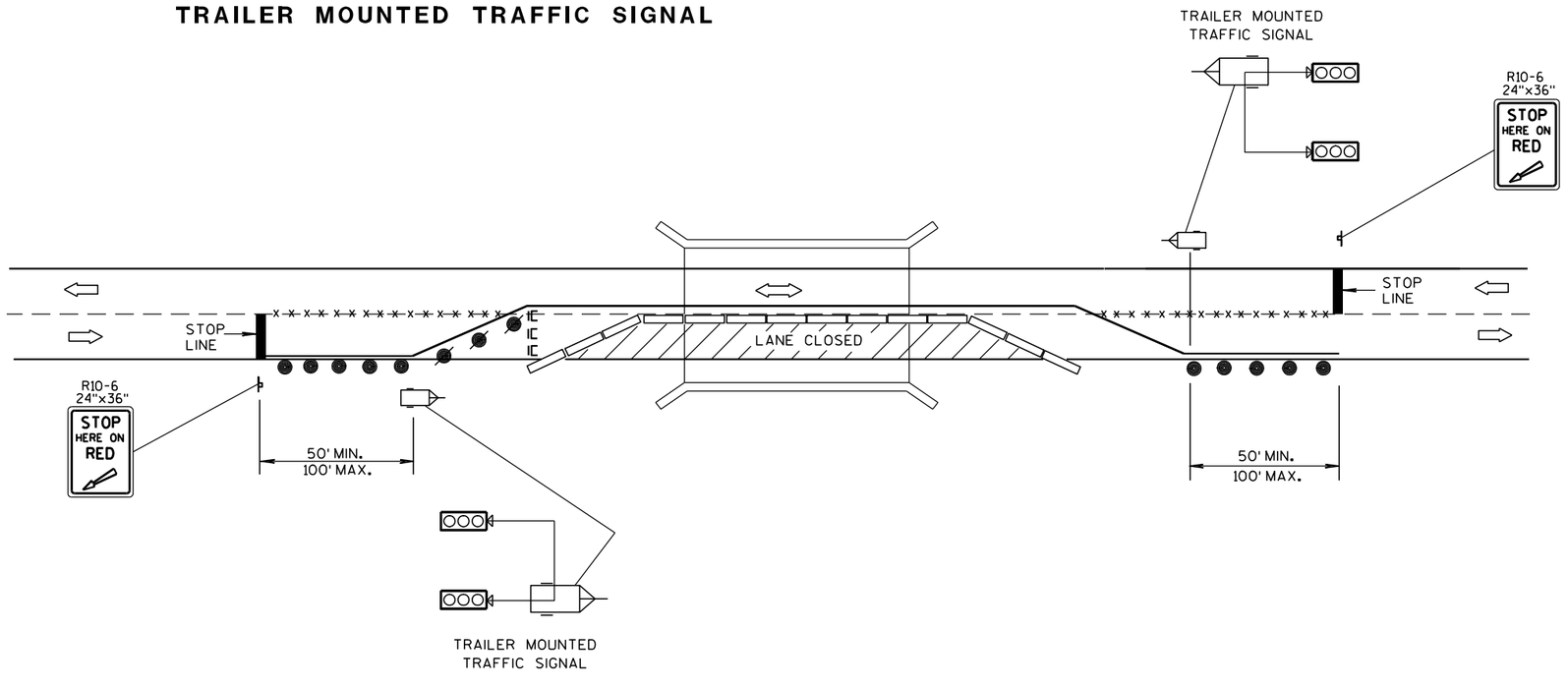


TRAILER MOUNTED TRAFFIC SIGNAL

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

17

HWYS

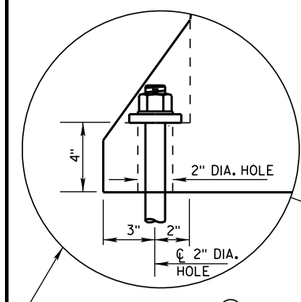
FHWA

6

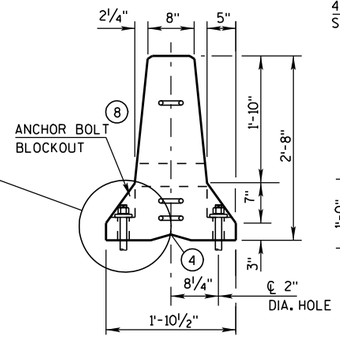
S.D.D. 9 G 2-3c

6

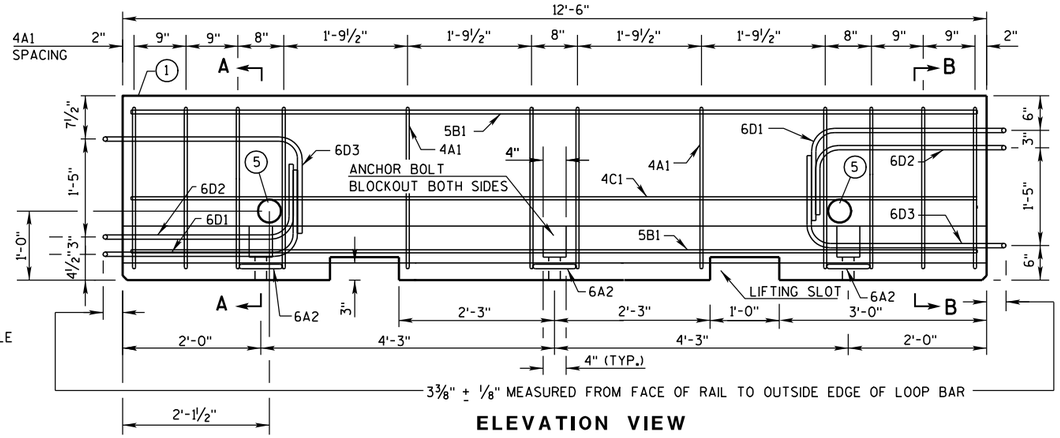
S.D.D. 9 G 2-3c



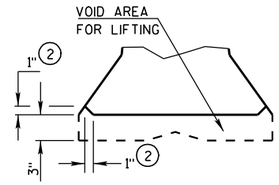
ANCHOR ON TRAFFIC SIDE (8) ONLY WHEN REQUIRED (SEE SHEET D FOR ADDITIONAL ANCHOR DETAIL)



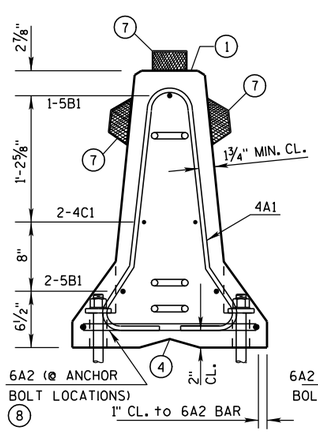
END VIEW



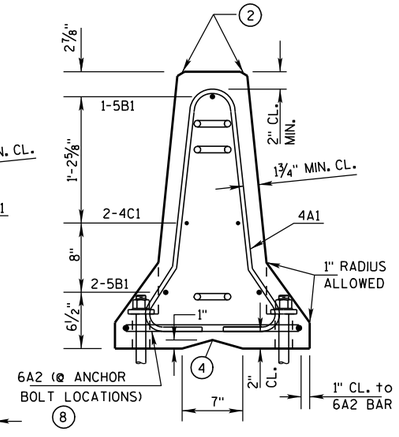
ELEVATION VIEW



DETAIL "B"
LIFTING SLOT DETAIL



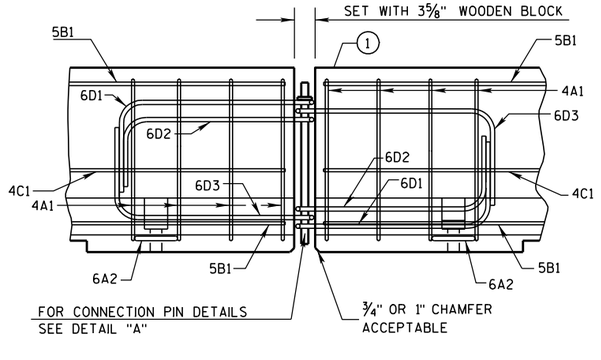
SECTION A-A
(STIRRUP PLACEMENT)



SECTION B-B
(STIRRUP PLACEMENT)

PLAN VIEW

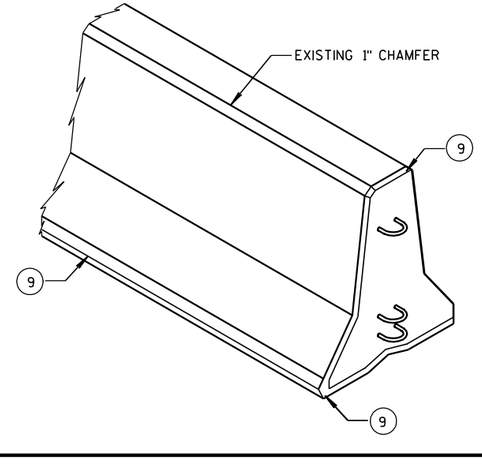
DETAILS OF BARRIER SECTION



DETAILS OF BARRIER CONNECTION

1/2" TOP PLATE DETAIL

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



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-13(a) THRU 14B7-13(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: WICBTP
- 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.

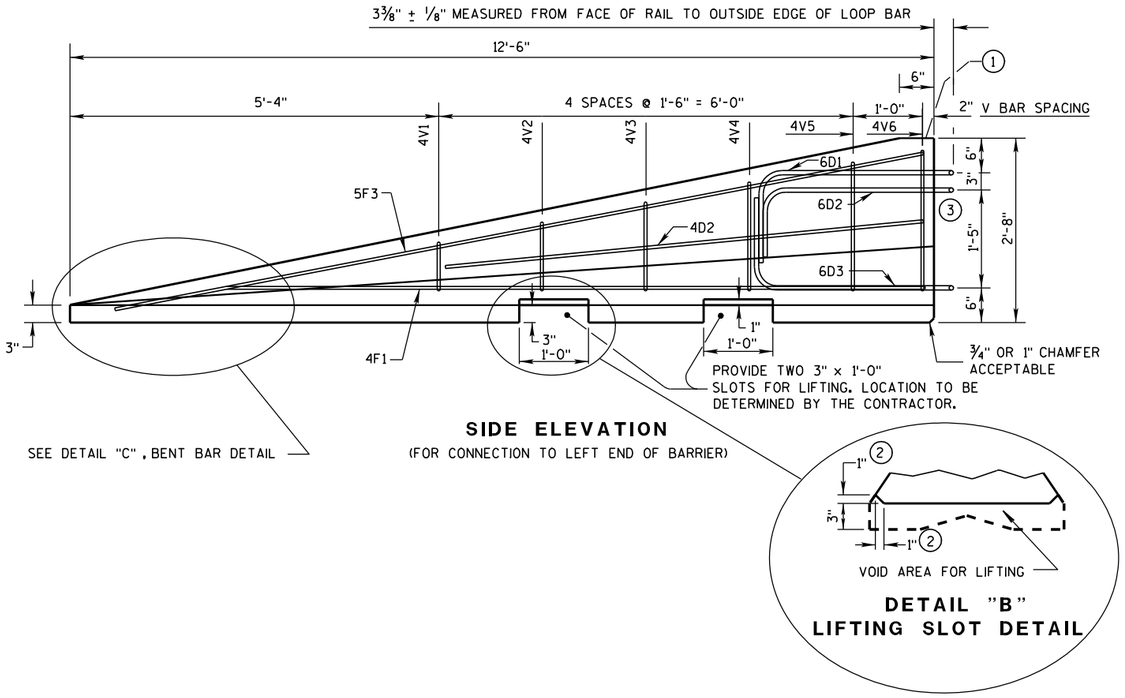
(9) 1" CHAMFER OPTIONAL.

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO.....

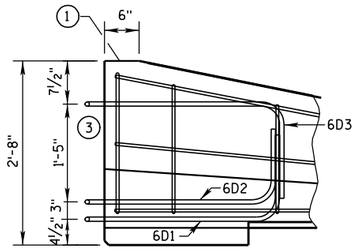
6

S.D.D. 14 B 7-13a



SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)

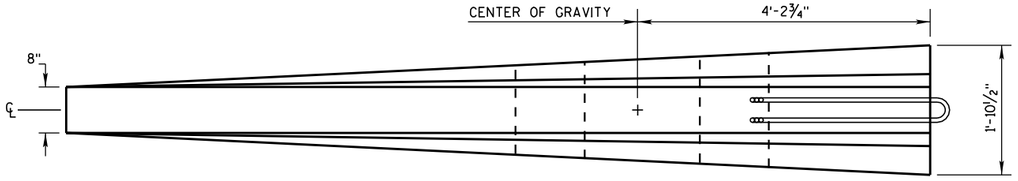
DETAIL "B"
LIFTING SLOT DETAIL



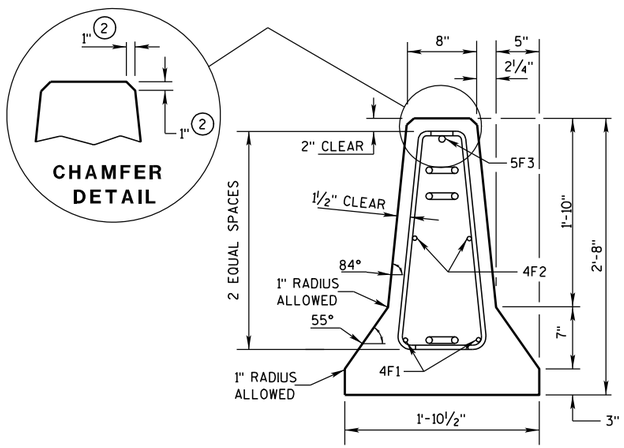
SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

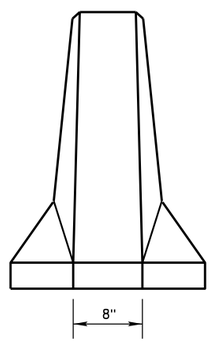
1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



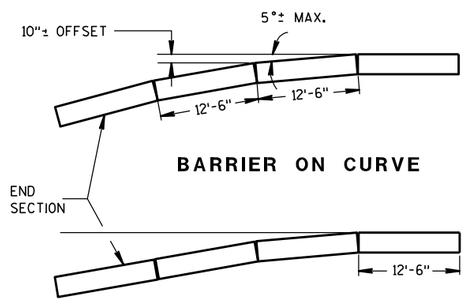
PLAN VIEW



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
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 7-13b

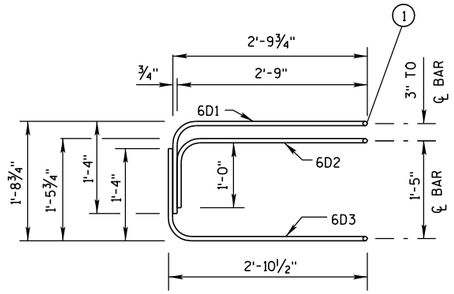
6

S.D.D. 14 B 7-13b

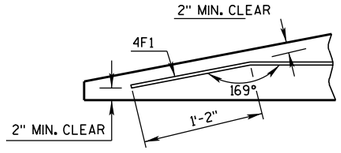
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

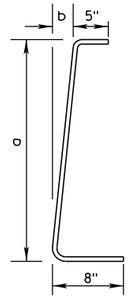
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



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

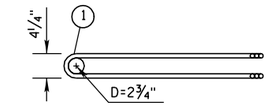
GENERAL NOTES

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

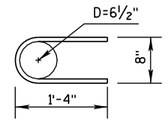
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

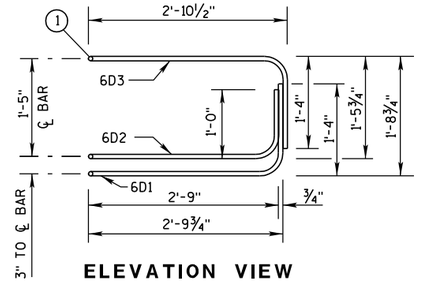
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



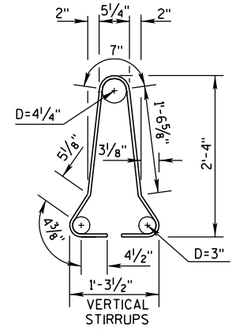
PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



6A2



ELEVATION VIEW



4A1

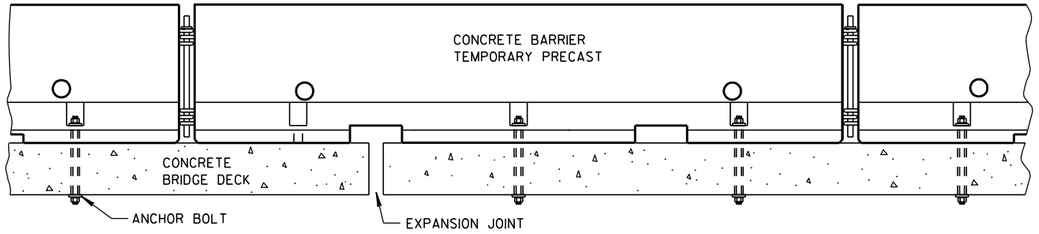
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

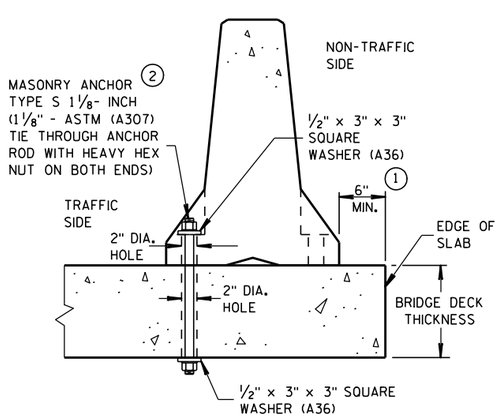
6

S.D.D. 14 B 7-13c



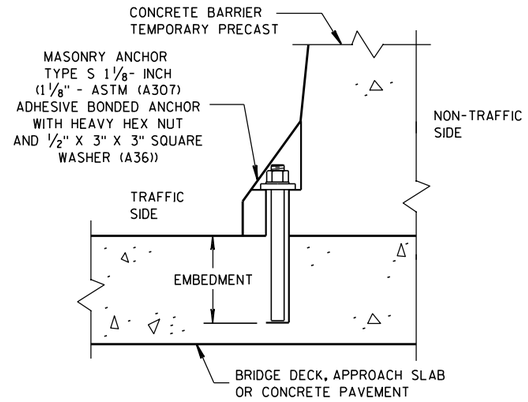
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(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 INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

2

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

GENERAL NOTES

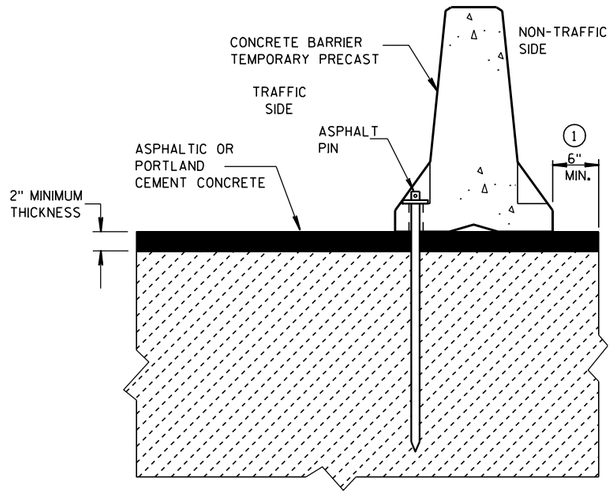
1. CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
   THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE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

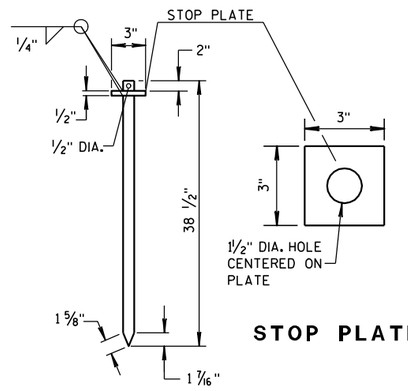
   WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED (EPOXY) ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1⅛-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE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



STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

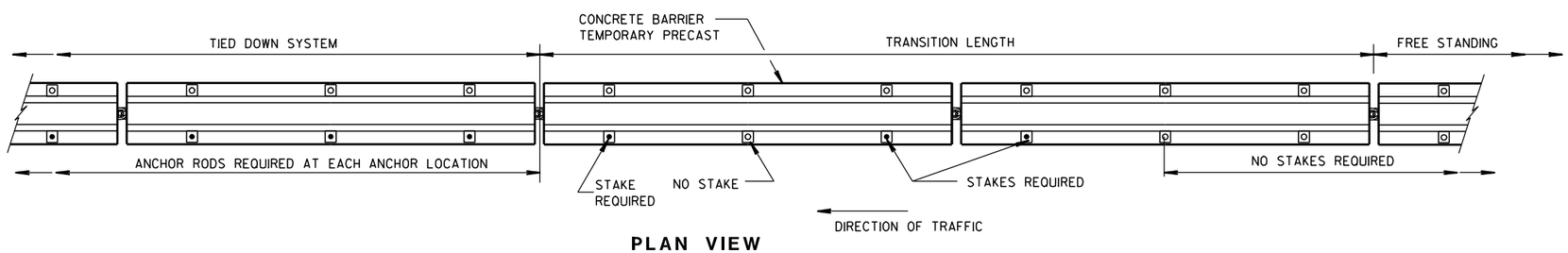
(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



STOP PLATE

ASPHALT PIN

(ASTM A36 STEEL)



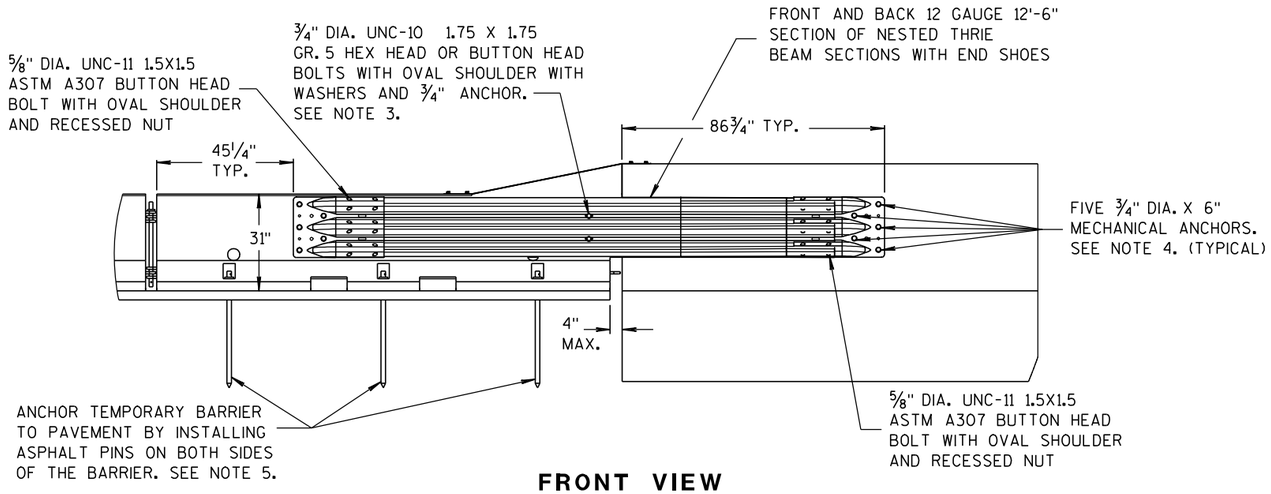
PLAN VIEW

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"

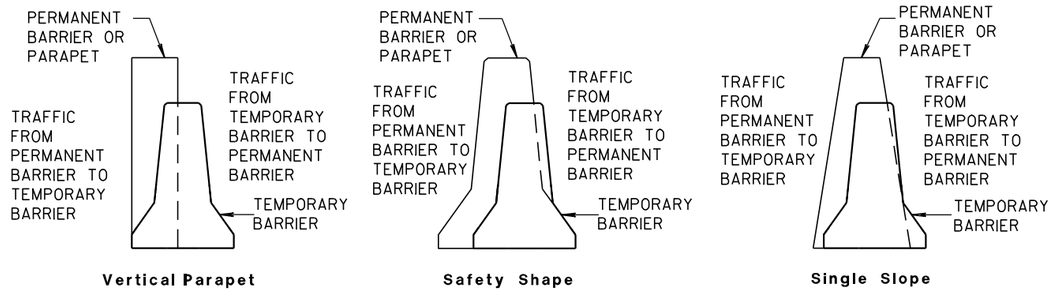
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...



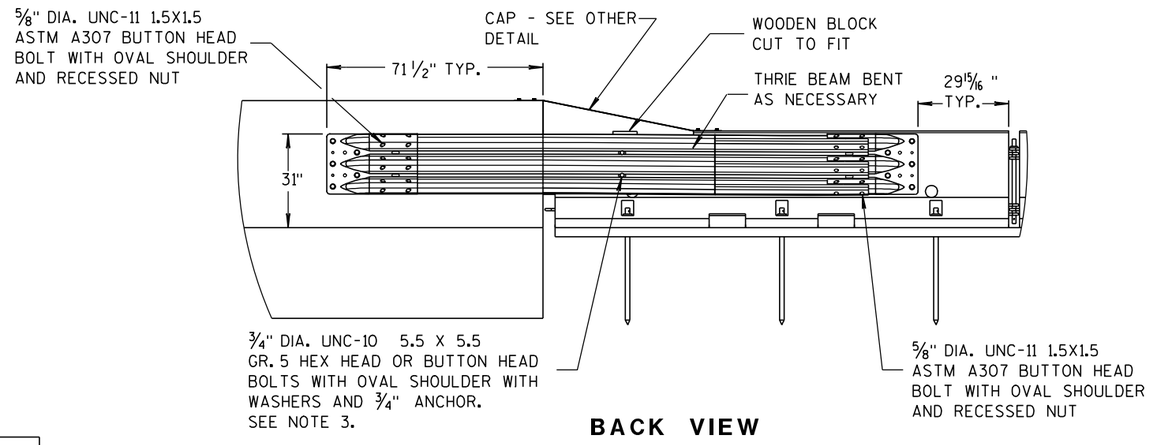
FRONT VIEW

NOTES

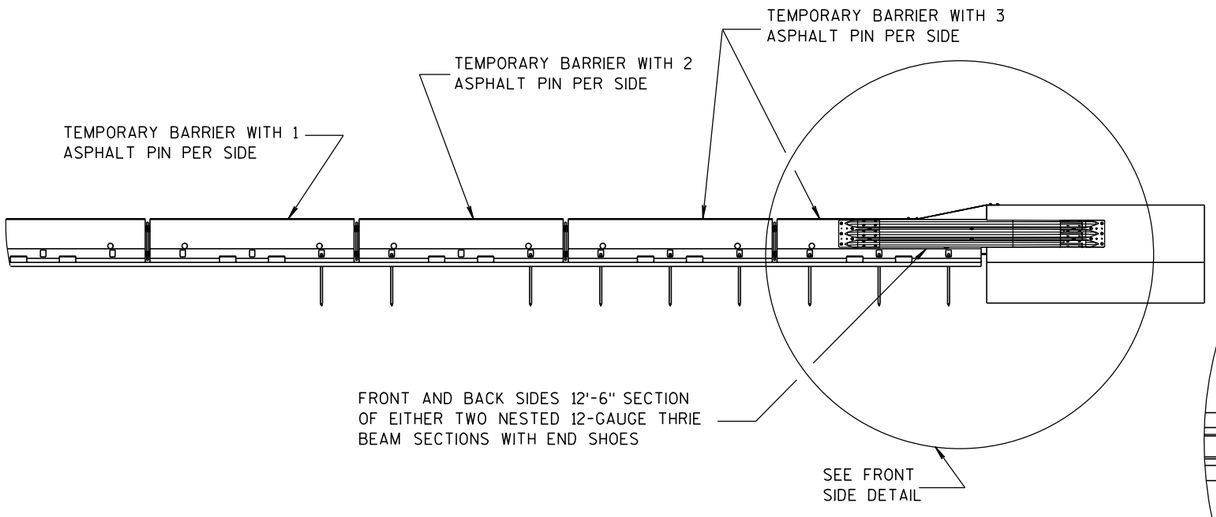
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15¼" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 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.



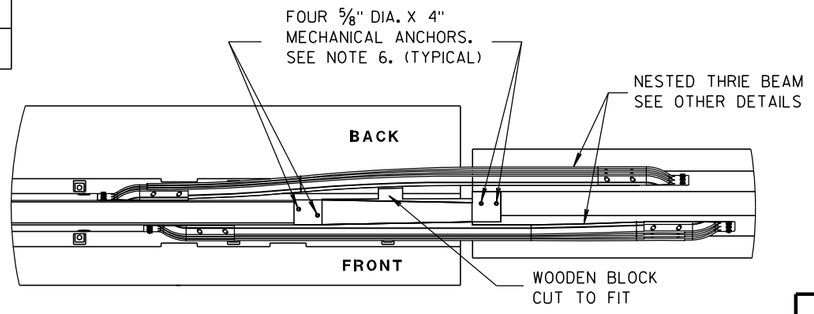
TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM



BACK VIEW



FRONT VIEW



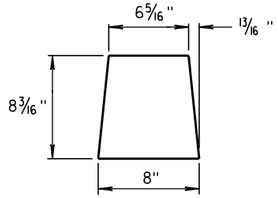
PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

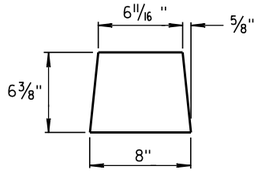
CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

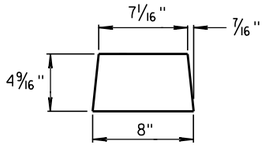
6
S.D.D. 14 B 7-13e



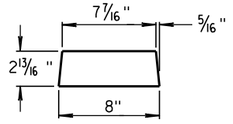
GUSSET 1



GUSSET 2

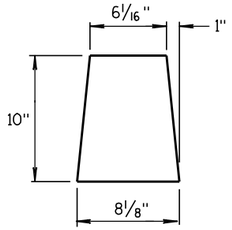


GUSSET 3

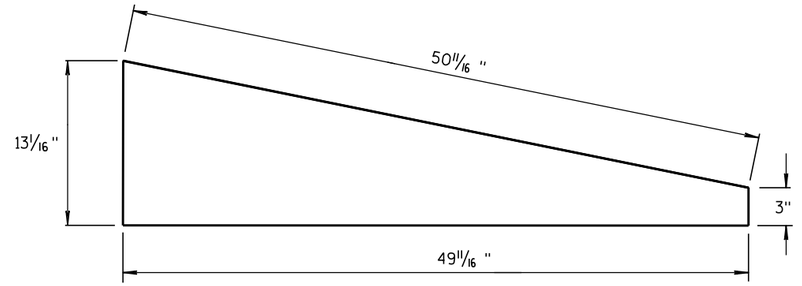


GUSSET 4

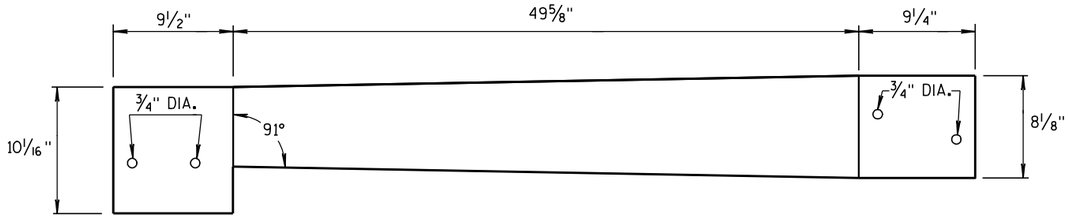
GUSSETS

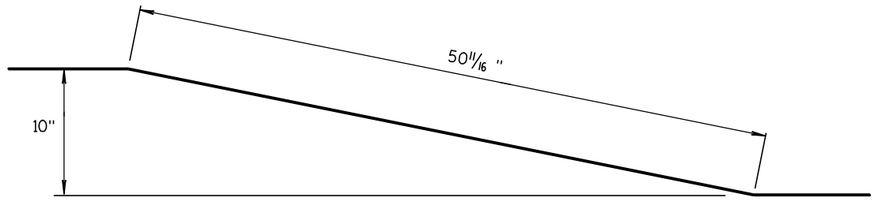


END PLATE

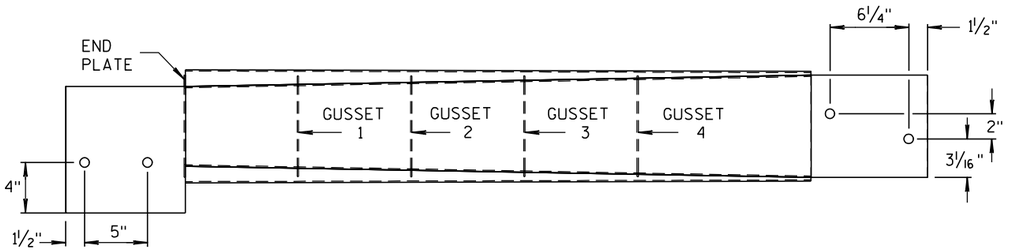


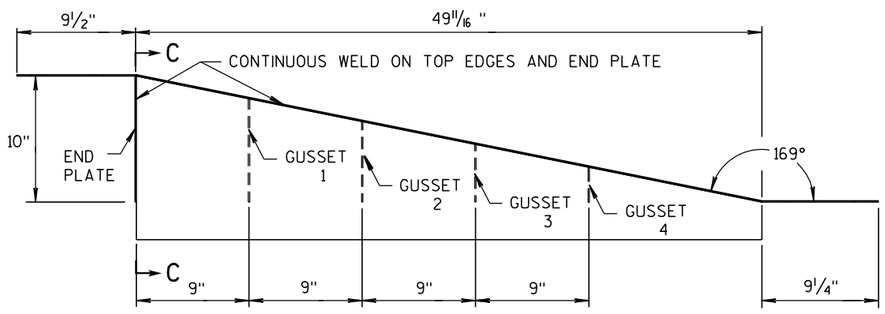
SIDE PLATE

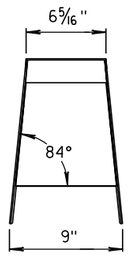




TOP PLATE







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

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.

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

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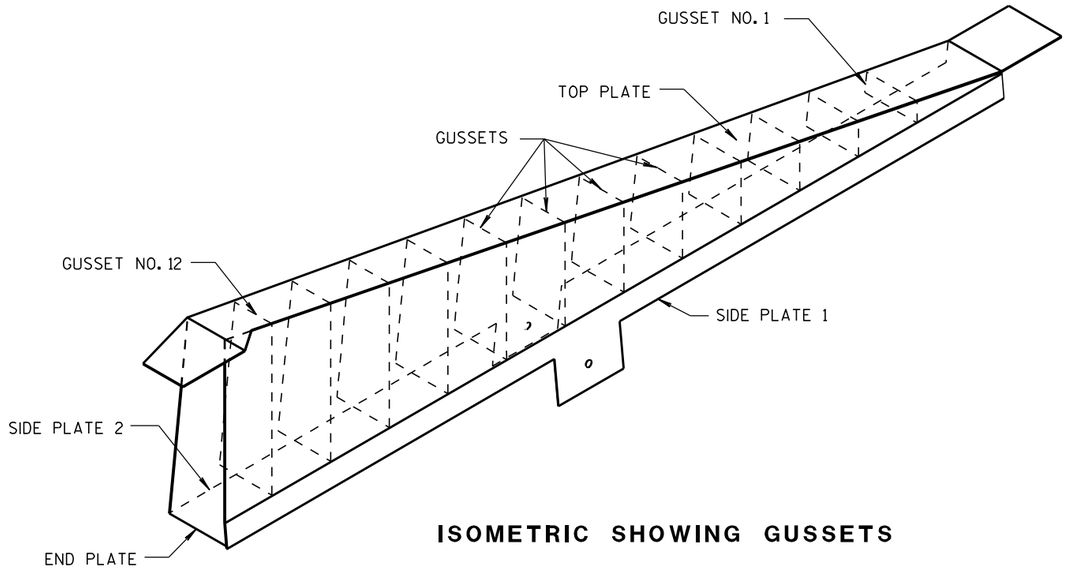
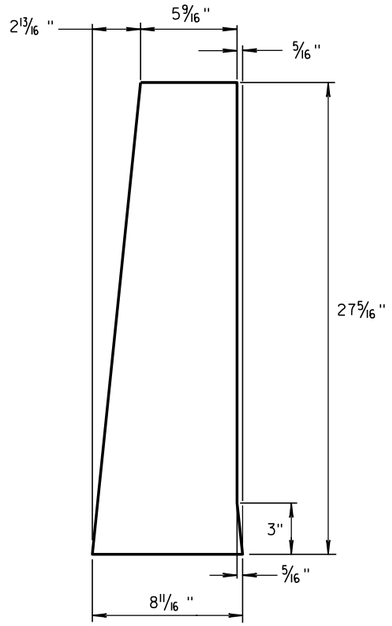
S.D.D. 14 B 7-13f

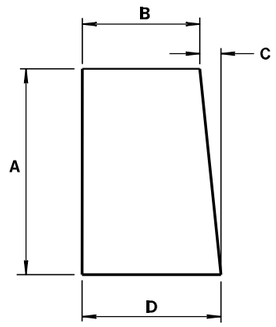


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



GUSSETS 1 - 12

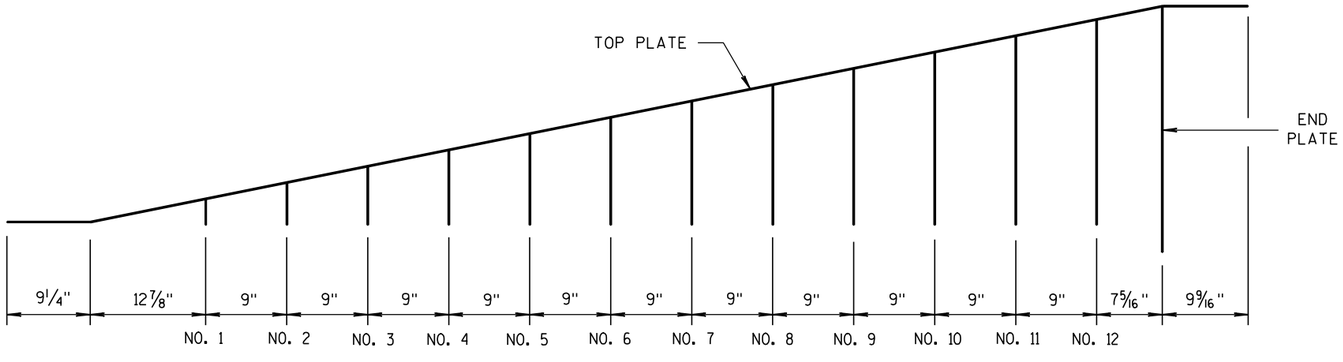
ALL GUSSETS 1/8" STEEL PLATE

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 TRANSPO[illegible]

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S.D.D. 14 B 7-13g

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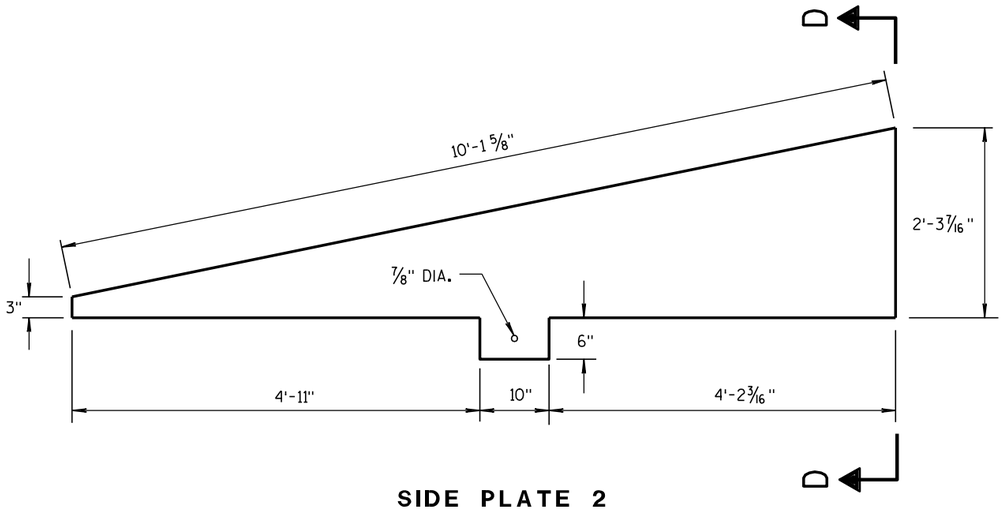
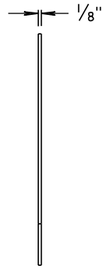
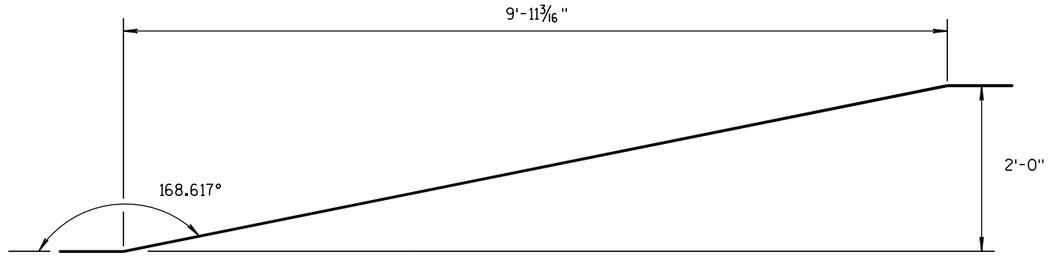
S.D.D. 14 B 7-13g



SIDE PLATE 2

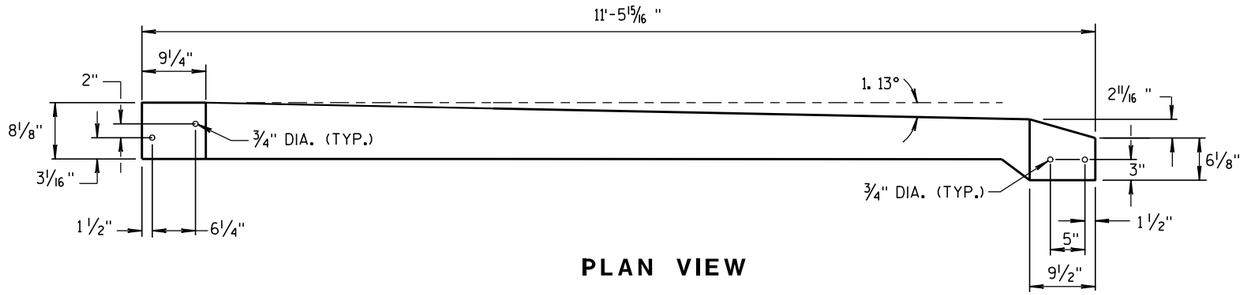


END VIEW



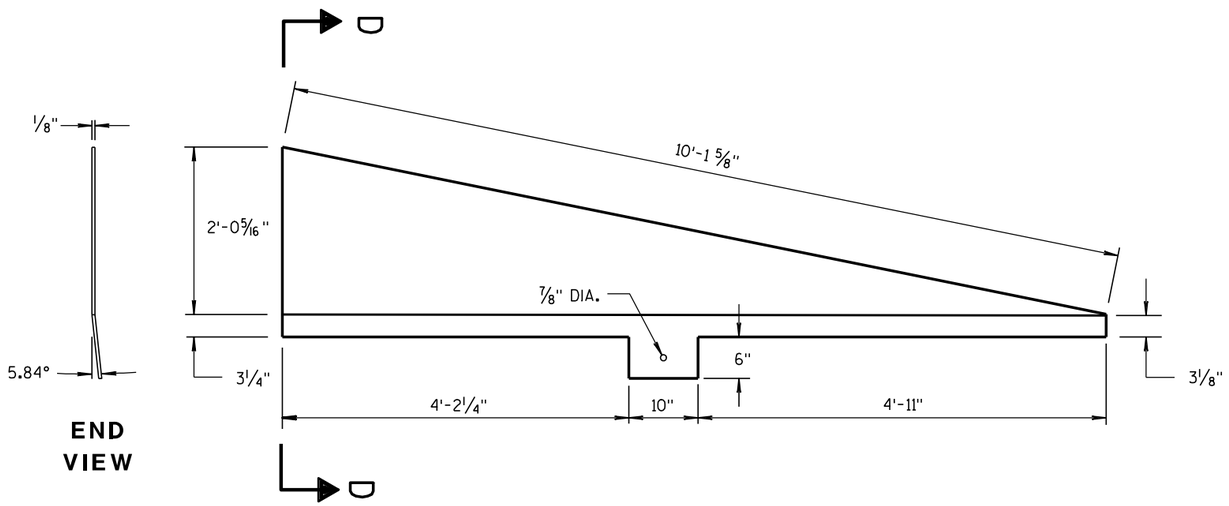
SIDE VIEW

TOP PLATE



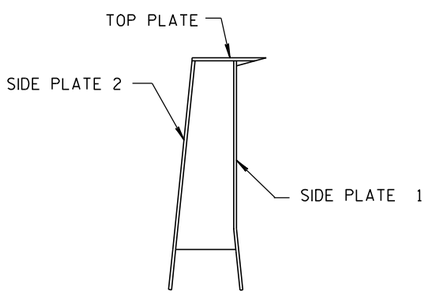
PLAN VIEW

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

8/31/2012 — DATE

/S/ Jerry H. [illegible] — ROADWAY STANDARDS ENGINEER

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FHWA

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S.D.D. 14 B 7-13h

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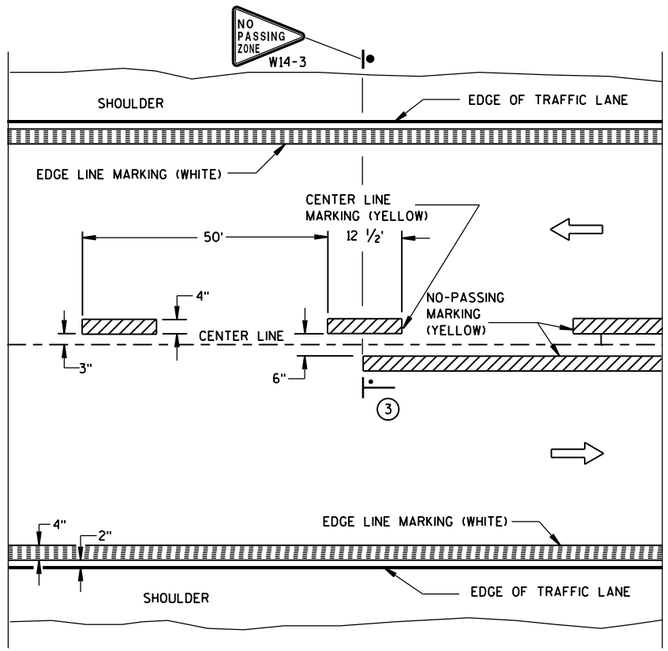
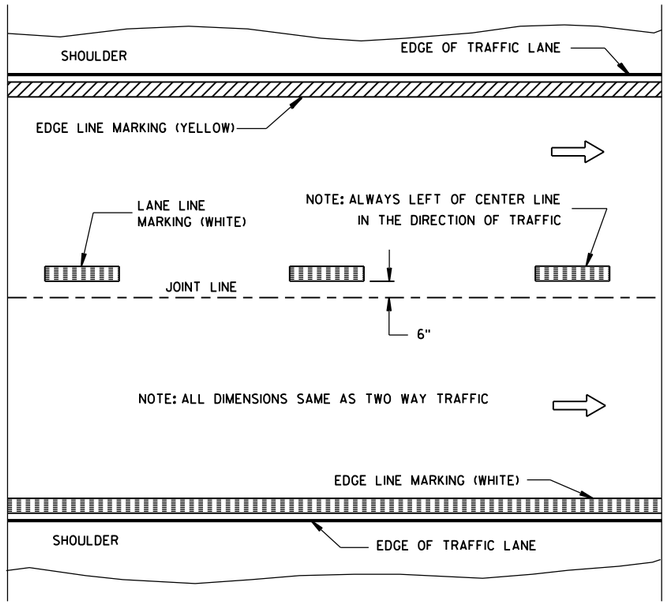
S.D.D. 14 B 7-13h

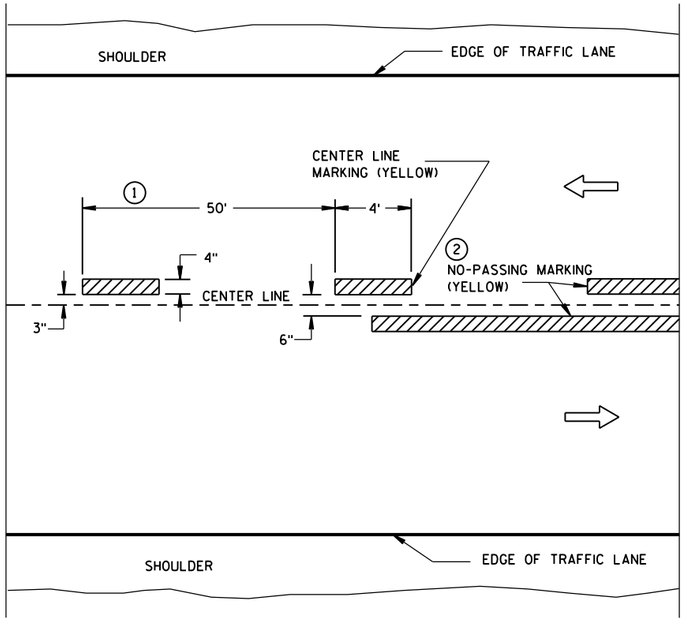


TWO WAY TRAFFIC

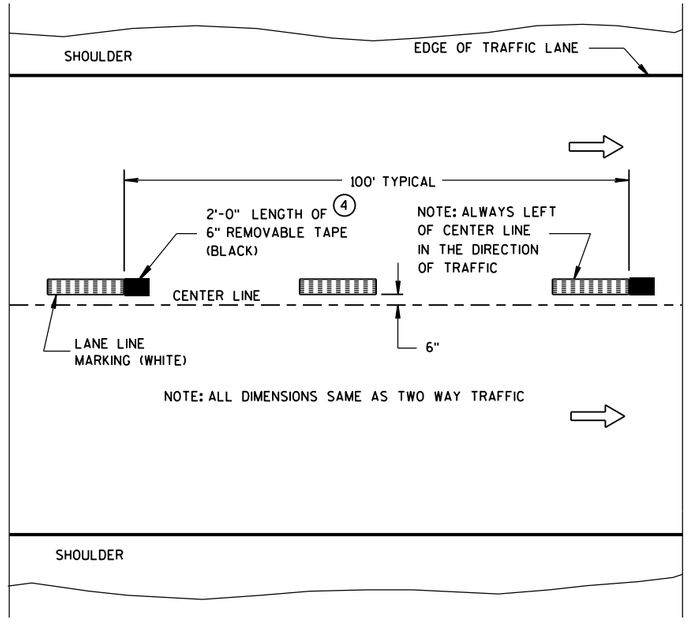


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

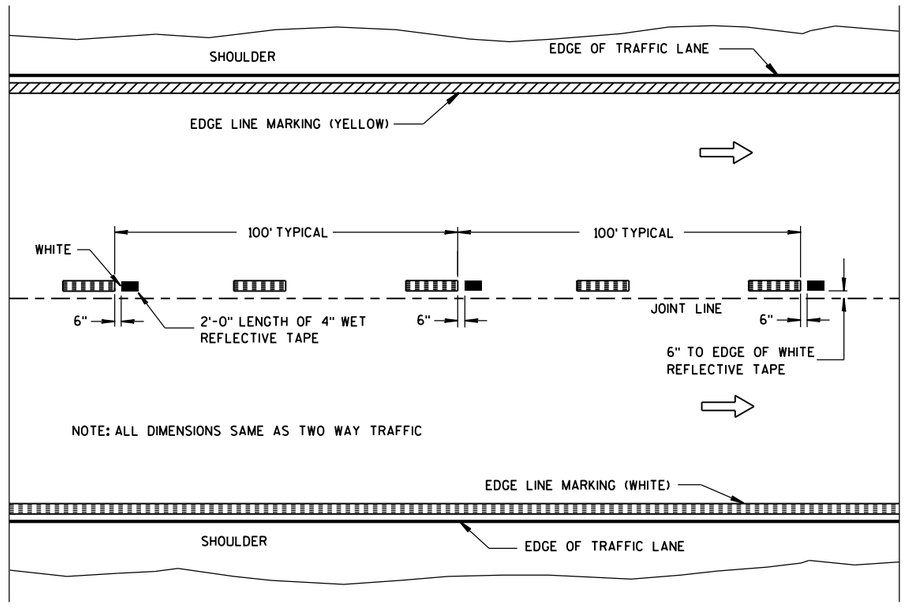
GENERAL NOTES

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

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

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

TWO-LANE ROADWAY

SYMBOLS

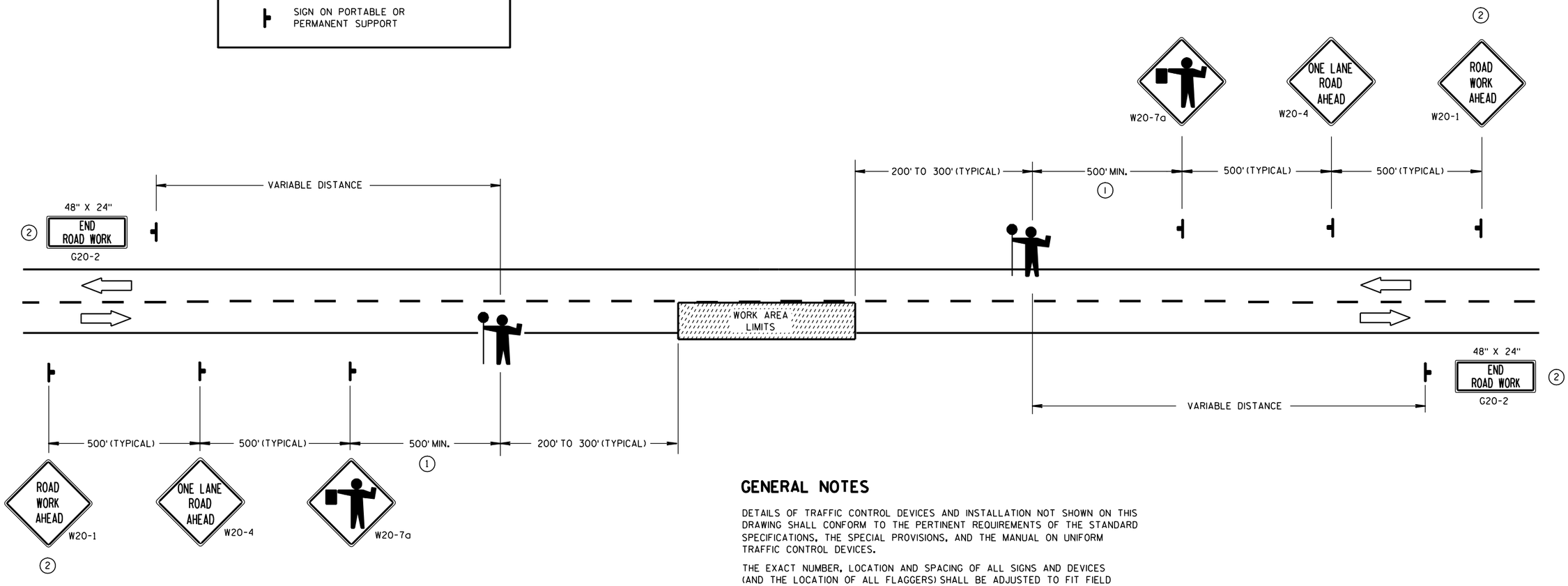
WORK AREA

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

SIGN ON PORTABLE OR PERMANENT SUPPORT

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, THE "FLAGGER AHEAD", THE "ROAD WORK AHEAD" AND THE ONE LANE ROAD AHEAD" SIGNS SHALL BE COVERED OR REMOVED AND THE HIGHWAY RESTORED TO NORMAL OPERATION.

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

9/5/06 — DATE

/S/ Thomas N. Nothohm — STATE TRAFFIC ENGINEER

FHWA

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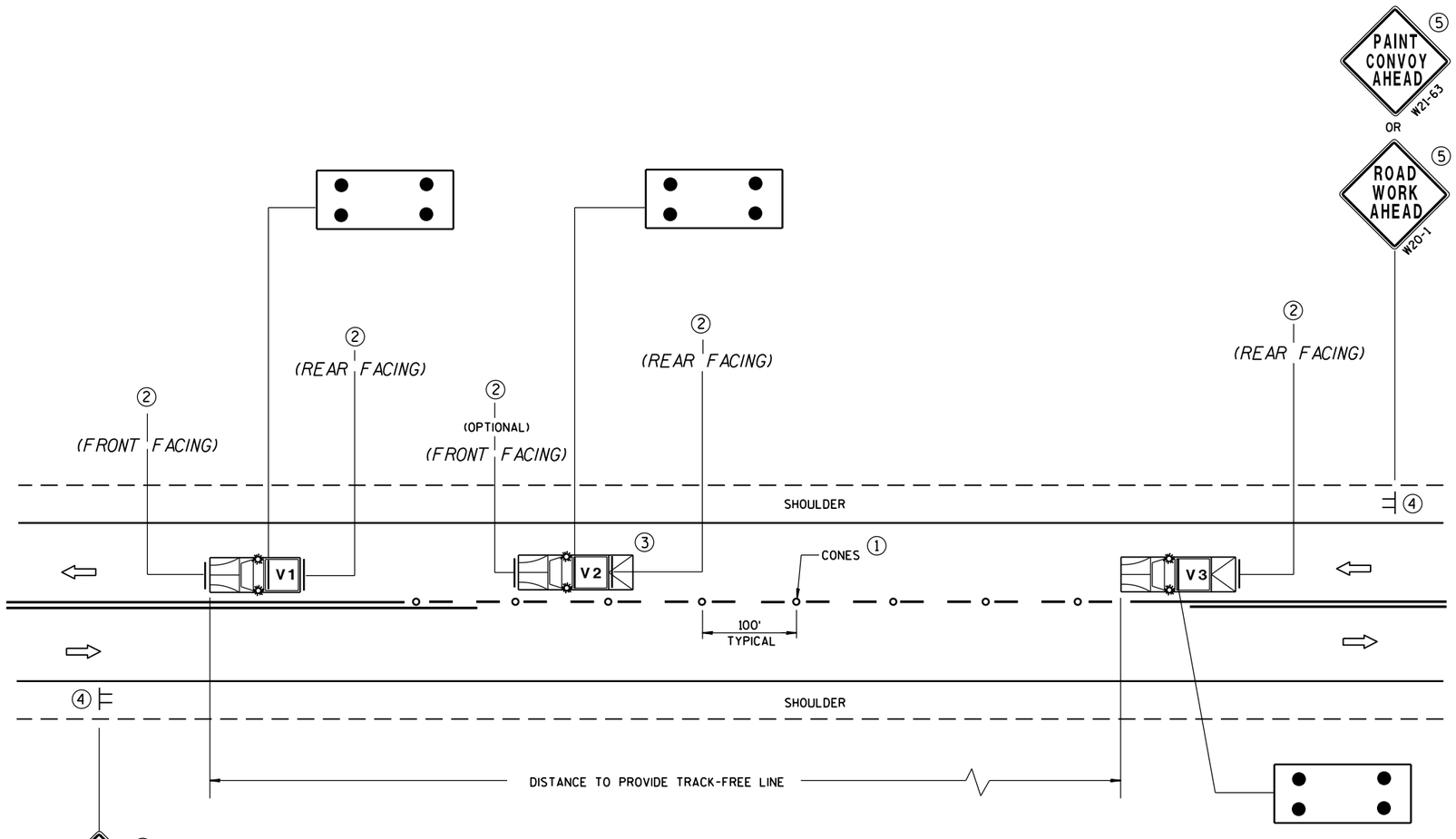

MOVING PAVEMENT MARKING OPERATIONS
TWO-LANE TWO-WAY ROADWAY

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE MARKING.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

(1) CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

(2) USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.

WET PAINT W21-64 OR WET PAINT W21-64

(3) OPTIONAL TRUCK-MOUNTED ATTENUATOR.

(4) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

(5) IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

LEGEND

- **V1** LEAD VEHICLE
- **V2** SHADOW VEHICLE
- **V3** TRAIL VEHICLE WITH TMA
- **TMA** TRUCK-MOUNTED ATTENUATOR
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- CONES
- FLASHING ARROW PANEL (CAUTION)

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 5/3/2013 DATE FHWA	/S/ Travis Feltes STATE TRAFFIC E

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S.D.D. 15 C 19-2a

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.

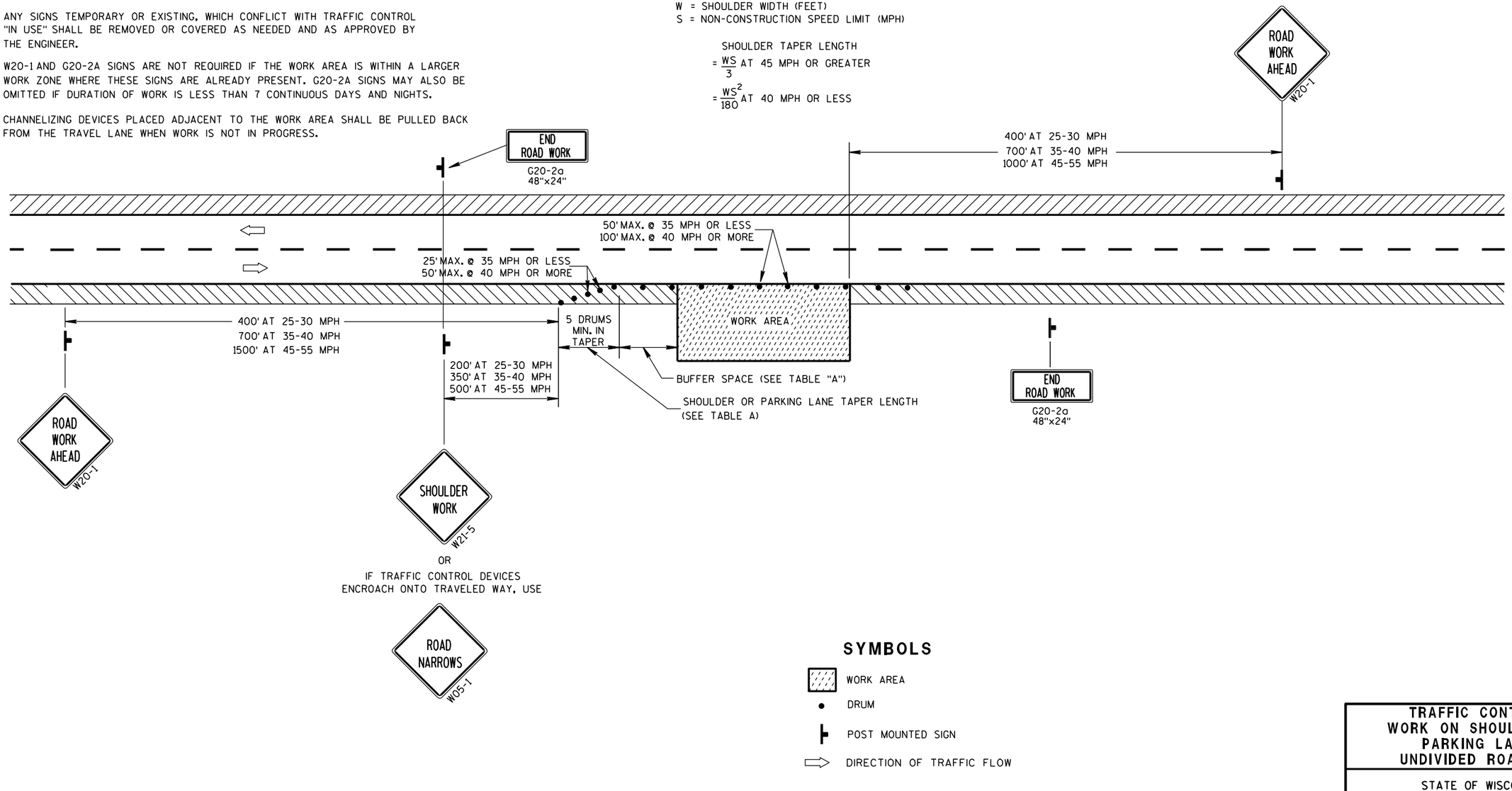
CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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
$= \frac{WS}{3}$ AT 45 MPH OR GREATER
$= \frac{WS^2}{180}$ AT 40 MPH OR LESS



SYMBOLS

- WORK AREA
- DRUM
- POST MOUNTED SIGN
- DIRECTION OF TRAFFIC FLOW

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/00 DATE
/S/ Chester J. [illegible] CHIEF SIGNS AND MARK[illegible]NNEER
FHWA

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S.D.D. 15 D 28-1

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
- FLAGS, 16"x16" MIN., ORANGE
- TEMPORARY SIGNAL WITH BACKPLATE AND 12-INCH LENSES ON BREAKAWAY POLE
- ASPHALTIC PAVEMENT WIDENING
- DIRECTION OF TRAFFIC FLOW
- 4" X 6" WOOD POST

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.

NON-OPERATIONAL EQUIPMENT OR MATERIAL SHALL BE LOCATED BEHIND THE PRECAST CONCRETE BARRIER.

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.

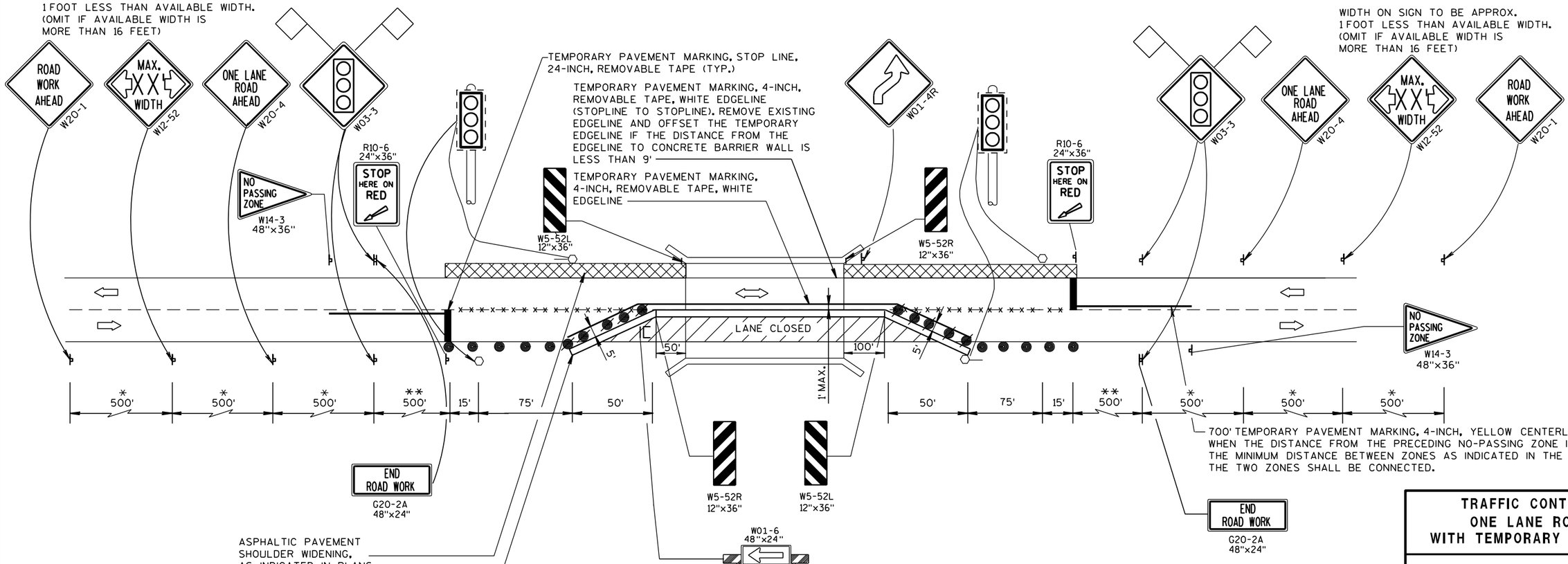
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

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 7 OR MORE CONTINUOUS DAYS AND NIGHTS OR AS NOTED ON DETAIL.

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

9-8-03 DATE

/S/ Thomas N. Nothohm for
CHIEF SIGNS AND MARI ... IEER

FHWA

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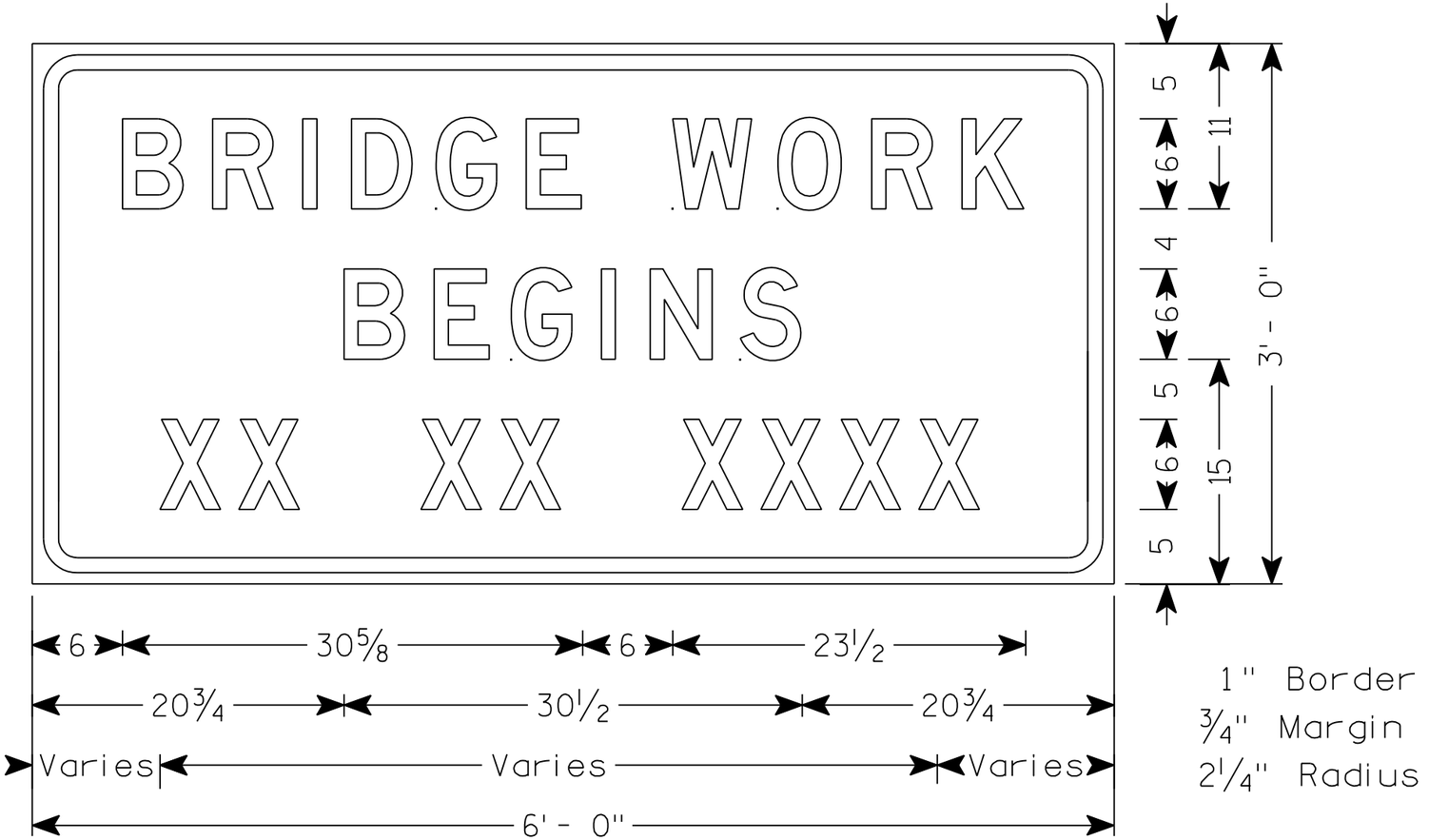
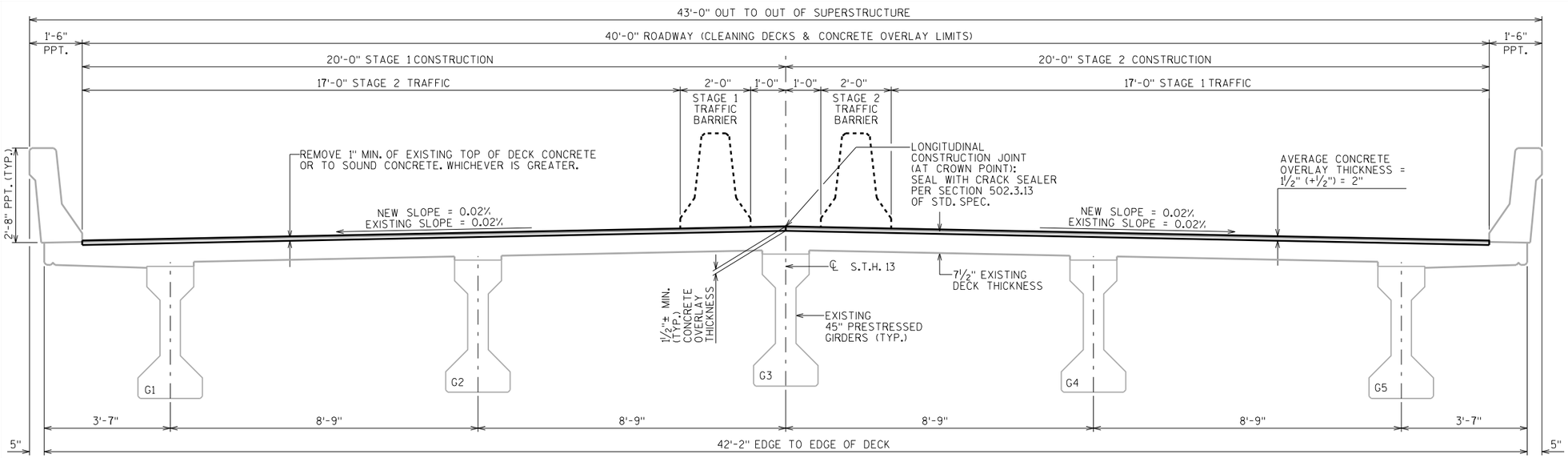
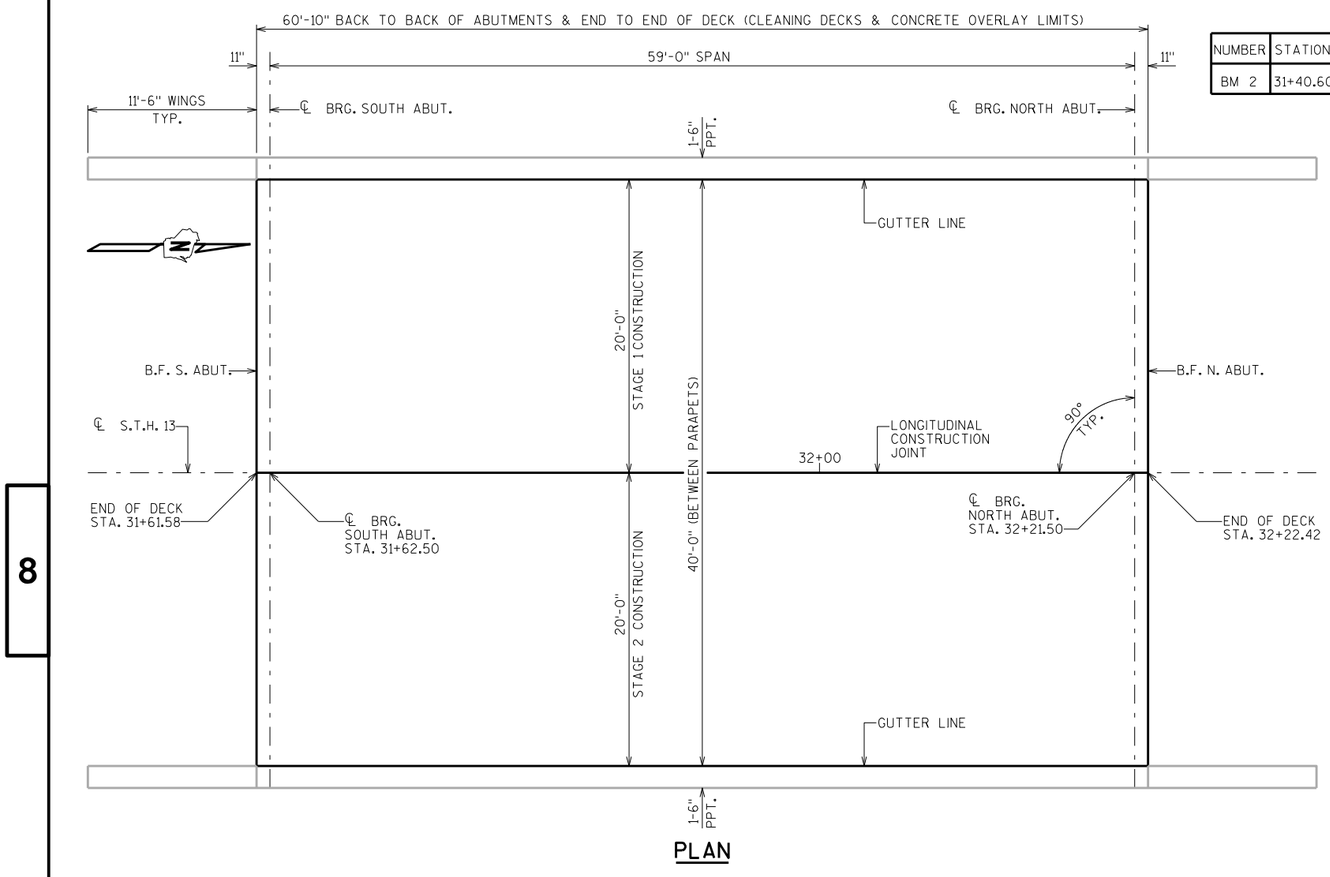

BRIDGE WORK
BEGINS
XX XX XXXX
5
6
11
4
6
5
6
15
5
3' - 0"
6
30 5/8
6
23 1/2
20 3/4
30 1/2
20 3/4
Varies
Varies
Varies
6' - 0"
1" Border
3/4" Margin
2 1/4" Radius

STATE PROJECT NUMBER

6140-01-61



CROSS SECTION THRU ROADWAY LOOKING NORTH



PLAN

BENCH MARK

NUMBER	STATION	OFFSET	DESCRIPTION	ELEVATION
BM 2	31+40.60	50' LEFT	60D ON 1ST POWER POLE, SOUTH OF BRIDGE ON WEST SIDE OF S.T.H. 13	982.17

DESIGN DATA

LIVE LOAD:

INVENTORY RATING: HS-23
OPERATIONAL RATING: HS-30
MAXIMUM STANDARD PERMIT VEHICLE LOAD: 240 KIPS

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY OVERLAY DECKS: f'c = 4,000 P.S.I.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBERS	BID ITEMS	UNIT	TOTALS
502.3200	PROTECTIVE SURFACE TREATMENT	SY	340
509.0301	PREPARATION DECKS TYPE 1	SY	25
509.0302	PREPARATION DECKS TYPE 2	SY	12
509.0500	CLEANING DECKS	SY	270
509.1500	CONCRETE SURFACE REPAIR	SF	5
509.2000	FULL-DEPTH DECK REPAIR	SY	1
# 509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	18
509.9050.S	CLEANING PARAPETS	LF	168

BID ITEM ALSO INCLUDES CONCRETE FOR PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2 & FULL-DEPTH DECK REPAIR.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE EXISTING ORIGINAL STRUCTURE PLANS.

A MINIMUM OF 1-INCH OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER THE BID ITEM "CLEANING DECKS".

CONTACT THE BUREAU OF STRUCTURES BEFORE PLACEMENT OF OVERLAY IF THE AVERAGE THICKNESS OF THE NEW OVERLAY WILL EXCEED THE AVERAGE OVERLAY SHOWN ON THE PLANS BY MORE THAN ½".

ANY EXCAVATION NECESSARY TO COMPLETE THE OVERLAY AT THE ABUTMENTS IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

PREPARATION DECKS TYPE 1 & 2, FULL-DEPTH DECK REPAIR, AND CONCRETE SURFACE REPAIR AREAS SHALL BE DETERMINED BY THE FIELD ENGINEER.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE NEW CONCRETE OVERLAY, THE ENTIRE FRONT FACES AND TOPS OF BOTH EXISTING WING & DECK PARAPETS.

THE ENTIRE EXISTING DECK AND WING PARAPETS SHALL BE CLEANED BEFORE THE PROTECTIVE SURFACE TREATMENT IS APPLIED. WORK SHALL BE UNDER THE BID ITEM "CLEANING PARAPETS".

STRUCTURES DESIGN CONTACTS:
MAY LIU (608) 266-5163
DAVID KIEKBUSCH (608) 266-5084

NO.	DATE	REVISION	BY

Plans Prepared By **WISDOT**
BUREAU OF STRUCTURES

ACCEPTED William C. Dreher 11/1/12
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-71-58

S.T.H. 13 OVER TEN MILE CREEK

COUNTY	TOWN
WOOD	SARATOGA

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	MWL	DESIGN CK'D.	AMB	DRAWN BY	JPH	PLANS CK'D.	DDS

CONCRETE OVERLAY

SHEET 1 OF 1

32

I.D. 1009-44-32

DATE: OCT. 2012

SCALE = 5

8

8

Notes

Wisconsin Department of Transportation

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