

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1009-44-61		
1510-02-65		

ORDER OF SHEETS

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

TOTAL SHEETS = 110

NOTE: TYPICAL ORDER OF SHEETS
IS NOT FOLLOWED. SEE INDEX
ON GENERAL NOTES SHEET.

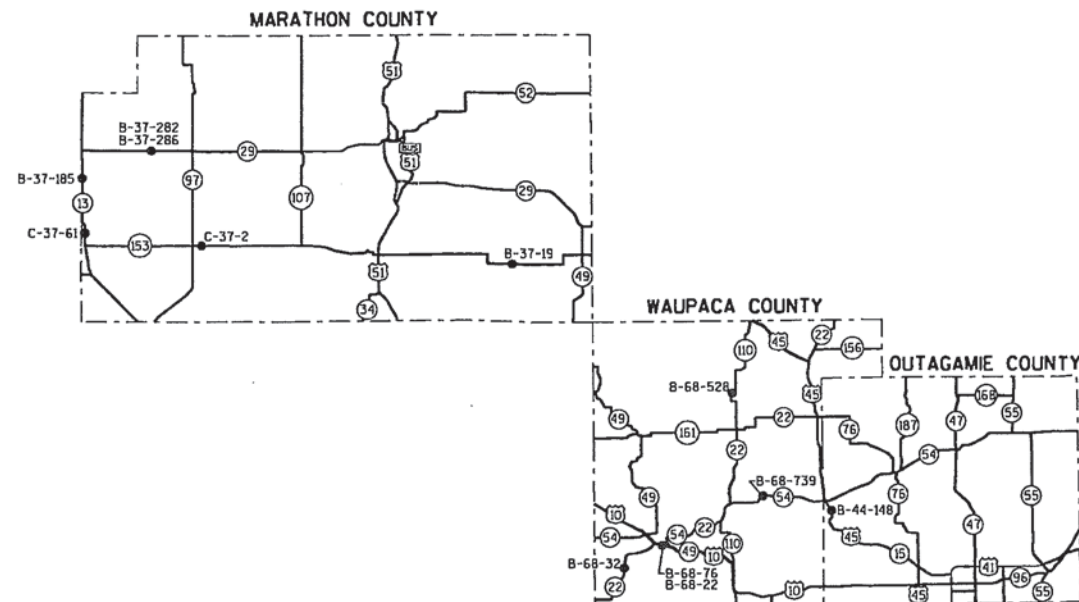
VARIOUS BRIDGE REHABILITATIONS MARATHON, OUTAGAMIE & WAUPACA CO. VARIOUS HIGHWAYS MARATHON COUNTY

STATE PROJECT NUMBER
1009-44-61B-37-19, B-37-185, B-37-282,
B-37-286, B-44-148, B-68-32,
B-68-528, B-68-739,
C-37-2, C-37-61

WAUPACA - APPLETON BRIDGE REHAB B68-0022 & 0076 USH 10 WAUPACA COUNTY

STATE PROJECT NUMBER
1510-02-65

B-68-22 & B-68-76



DESIGN DESIGNATION

A.A.D.T. (2015)	=
A.A.D.T. (2035)	=
D.H.V.	=
D.D.	=
T.	=
DESIGN SPEED	=
ESALS	=

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

GRADE LINE	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE (To be noted as such)	
SPECIAL DITCH	

GRADE ELEVATION

CULVERT (Profile View)

UTILITIES

ELECTRIC	
FIBER OPTIC	
GAS	
SANITARY SEWER	
STORM SEWER	
TELEPHONE	
WATER	
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	

LAYOUT
SCALE 0 10 MI.COORDINATES ON THIS PLAN ARE REFERENCED
TO THE WISCONSIN COUNTY COORDINATES
SYSTEM (WCCS), MARATHON, OUTAGAMIE, AND
WAUPACA COUNTIES.ELEVATIONS ON THE PLAN ARE REFERENCED TO
THE GEODETIC VERTICAL DATUM OF 1929 (NGVD29).ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54702

DATE: 7/26/2013

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	
Surveyor	N/A
Designer	AYRES ASSOCIATES INC
Project Manager	MARK STEIDL
Regional Examiner	CHERYL SIMON
Regional Supervisor	SHANNON RILEY
C.O. Examiner	

APPROVED FOR THE DEPARTMENT
DATE: 7/29/13 
(Signature)

E

UTILITIES

- SEND ALL ALLIANT ENERGY CORRESPONDENCE TO:

ALLIANT ENERGY
ATTN: JASON HOGAN
SUITE 1000
4902 N. BILTMORE LANE
MADISON, WI 53718
(608) 458-4871 DESK
(608) 395-7395 CELL
jasonhogan@alliantenergy.com
- * ALLIANT ENERGY FIELD CONTACT (ELECTRIC)
ATTN: DAVID BERTRAM
708 NE 7th STREET
MARION, WI 54950
(715) 754-4348
davebertram@alliantenergy.com
- * AT&T WISCONSIN
ATTN: CHUCK BARTELT
70 EAST DIVISION STREET
FOND DU LAC, WI 54935
(920) 929-1013
Cb1461@att.com
- * CENTURYLINK
ATTN: ROSS HARTWIG
144 N. PEARL ST.
BERLIN, WI 54923
(920) 361-8425
r.hartwig@centurylink.com
- * CHARTER COMMUNICATIONS (MARATHON COUNTY)
ATTN: SCOTT OLSON
853 MCINTOSH ST.
WAUSAU, WI 54403
(715) 301-4079
scott.olson@chartercom.com
- * CHARTER COMMUNICATIONS (WAUPACA COUNTY)
ATTN: RUDI RUDIGER
5024 HEFFRON ST.
STEVENS POINT, WI 54481
(715) 302-1550
rudi.rudiger@charter.com
- * CITY OF WAUPACA (WATER)
ATTN: JOHN EDLEBECK
111 S. MAIN ST.
WAUPACA, WI 54981
(715) 258-4420
jedlebec@cityofwaupaca.org
- * FRONTIER COMMUNICATIONS OF WI LLC
ATTN: JAMES JASKOLSKI
26 W 12th STREET
CLINTONVILLE, WI 54929
(715) 823-1227
james.jaskolski@ftr.com
- * VILLAGE OF STRATFORD (ELECTRIC)
ATTN: JERRY FRODL
212 SOUTH 3RD AVENUE
STRATFORD, WI 54484-0012
(715) 687-4118
stratfordpubworks@stratfordwi.com
- * MANAWA TELECOM INC.
ATTN: RANDY BROWN
131 SECOND ST.
P.O. BOX 130
MANAWA, WI 54949
(920) 596-1714
- SEND ALL We ENERGIES CORRESPONDENCE TO:

We ENERGIES
ATTN: DAN SANDE
333 W EVERETT ST, A299
MILWAUKEE, WI 53203
(414) 221-4578
dan.sande@we-energies.com
- * We ENERGIES FIELD CONTACT (ELECTRIC)
ATTN: CODY BECKMAN
800 S. LYNNDALE AVENUE
APPLETON, WI 54941
(920) 380-3422
Cody.Beckman@we-energies.com
- * We ENERGIES FIELD CONTACT (GAS)
ATTN: THOMAS KROSTAG
1921 8th STREET SOUTH
WISCONSIN RAPIDS, WI 54494
(715) 421-7268
thomas.krostag@we-energies.com
- * WISCONSIN PUBLIC SERVICE CORPORATION (ELECTRIC) (MARATHON COUNTY BRIDGES)
ATTN: CLAY VIRCKS
P.O. BOX 1166
WAUSAU, WI 54402
(715) 848-7317
chvircks@wisconsinpublicservice.com
- * WISCONSIN PUBLIC SERVICE CORPORATION (ELECTRIC) (WAUPACA COUNTY BRIDGES)
ATTN: STEVE HARVEY
2001 PLOVER ROAD
P.O. BOX 637
PLOVER, WI 54467-0637
(715) 345-7527
- * XCEL ENERGY (ELECTRIC)
ATTN: KIM ALGER
500 N 5th STREET
ABBOTSFORD, WI 54405
(715) 737-2678
kim.m.alger@xcelenergy.com

* MEMBER OF DIGGERS HOTLINE



Call 811 3 Work Days Before You Dig
or Toll Free (800) 242-8511
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

ENVIRONMENTAL COORDINATOR

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

- MARATHON COUNTY:
MARC HERSHFIELD
473 GRIFFITH DRIVE
WISCONSIN RAPIDS, WI 54494
715-421-7867
marc.hershfield@wisconsin.gov
- WAUPACA COUNTY:
BOBBY JO FISCHER
427 EAST TOWER DRIVE, SUITE 100
WAUTOMA, WI 54982
920-787-3015
bobbi.fischer@wisconsin.gov
- OUTAGAMIE COUNTY:
MATT SCHAEVE
2984 SHAWANO AVENUE
GREEN BAY, WI 54313
920-662-5472
matthew.schaeve@wisconsin.gov

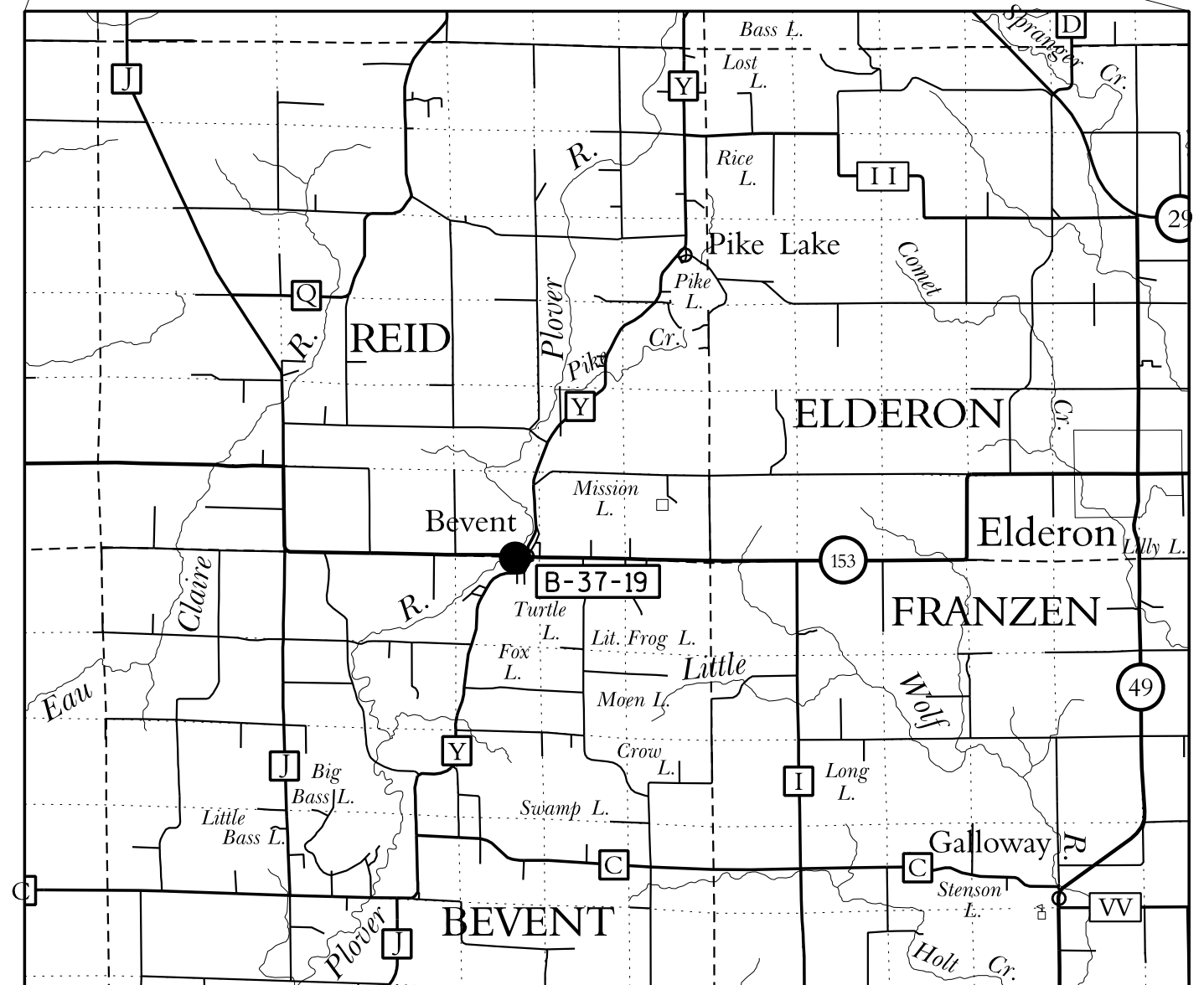
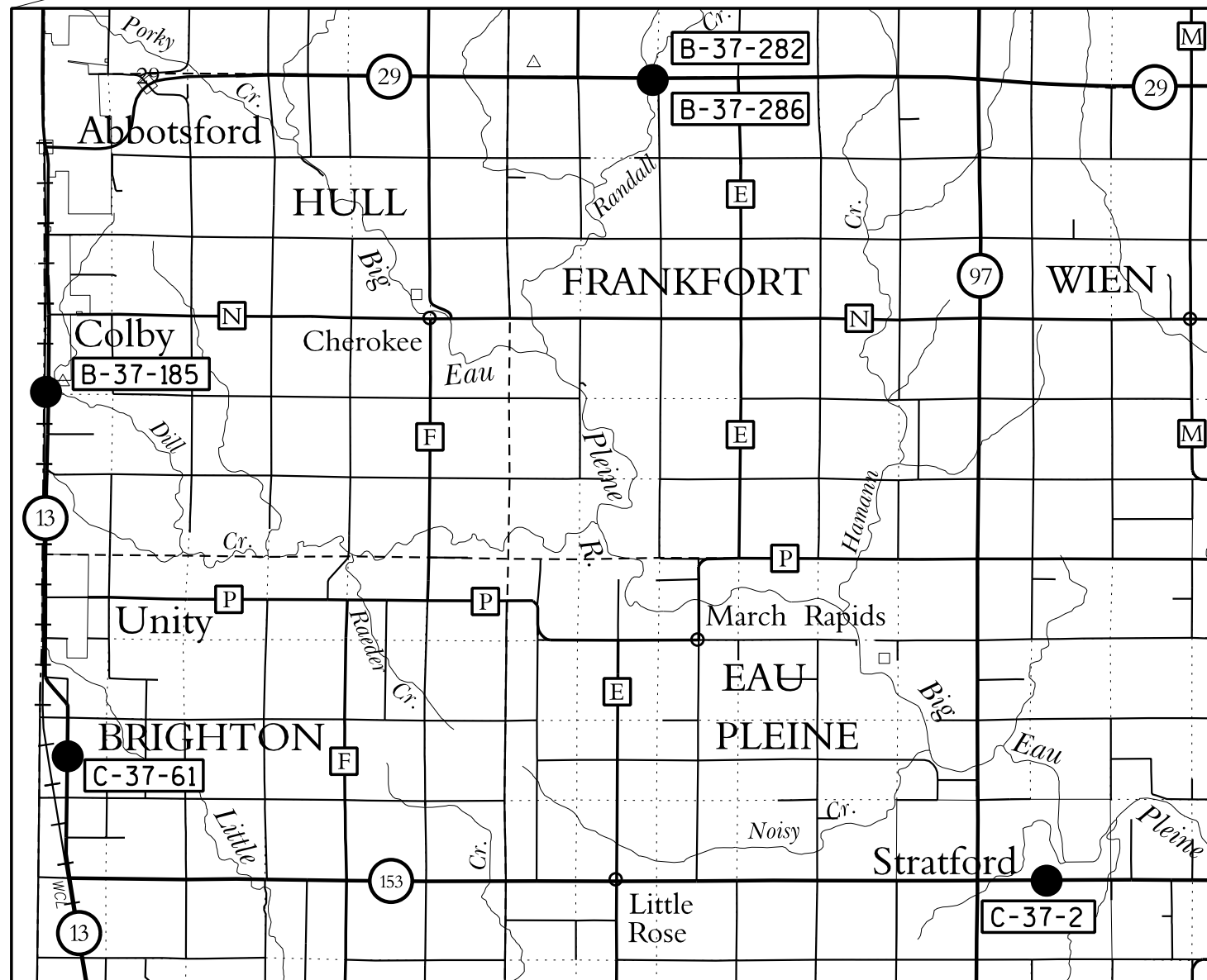
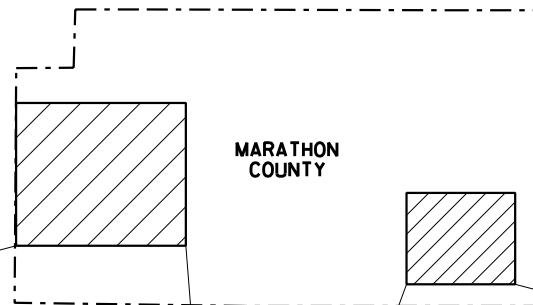
GENERAL NOTES

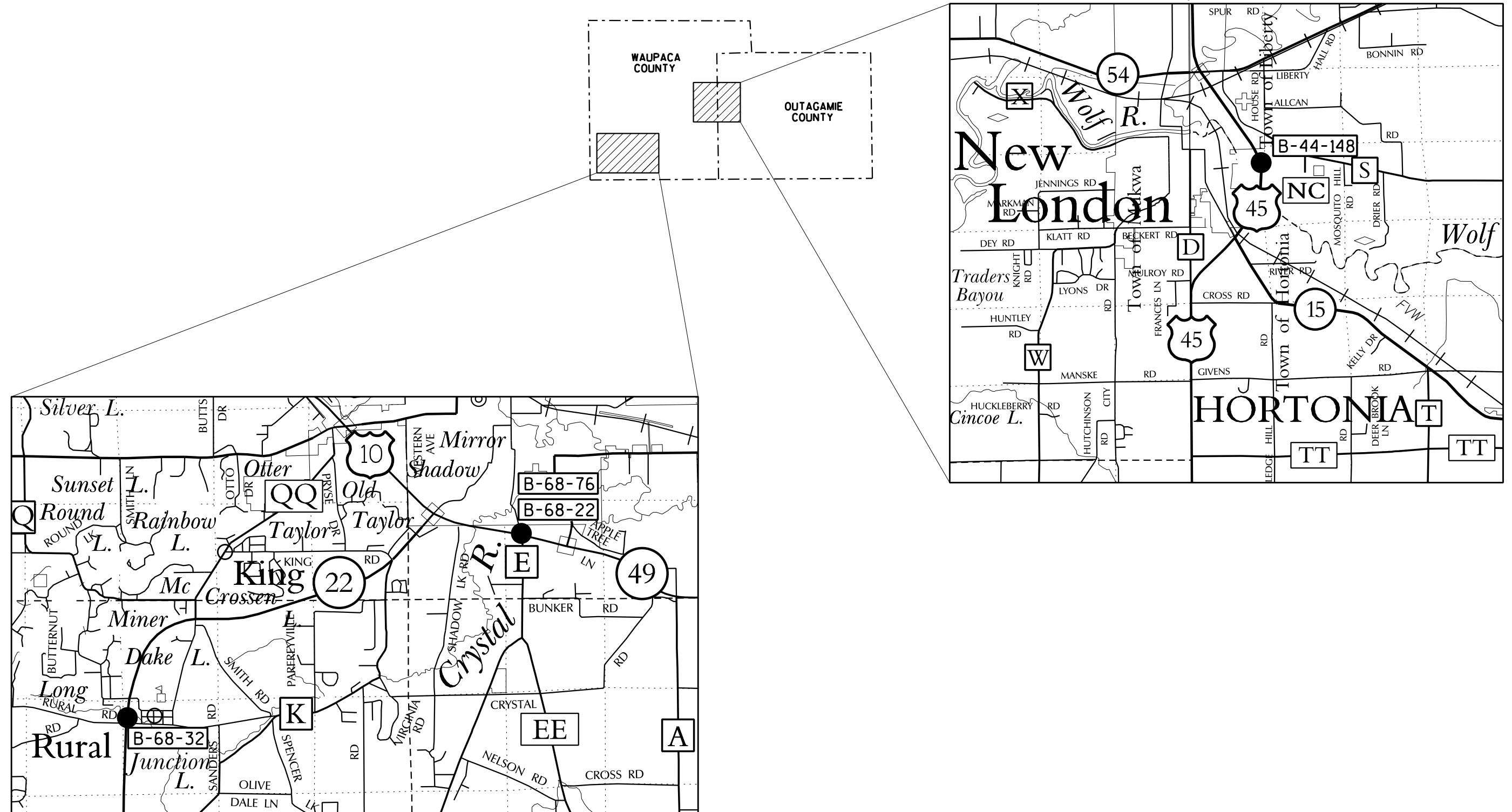
- NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS INDICATED FOR REMOVAL BY THE ENGINEER.
- DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, ARE TO BE FERTILIZED, SEEDED AND MULCHED AS DIRECTED BY THE ENGINEER.
- THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT THAT ARE NOT SHOWN.
- CONSIDER DIMENSIONS GIVEN FOR EXISTING FEATURES AS APPROXIMATE AND MEASURE FEATURES IN THE FIELD FOR MATCHING PURPOSES.

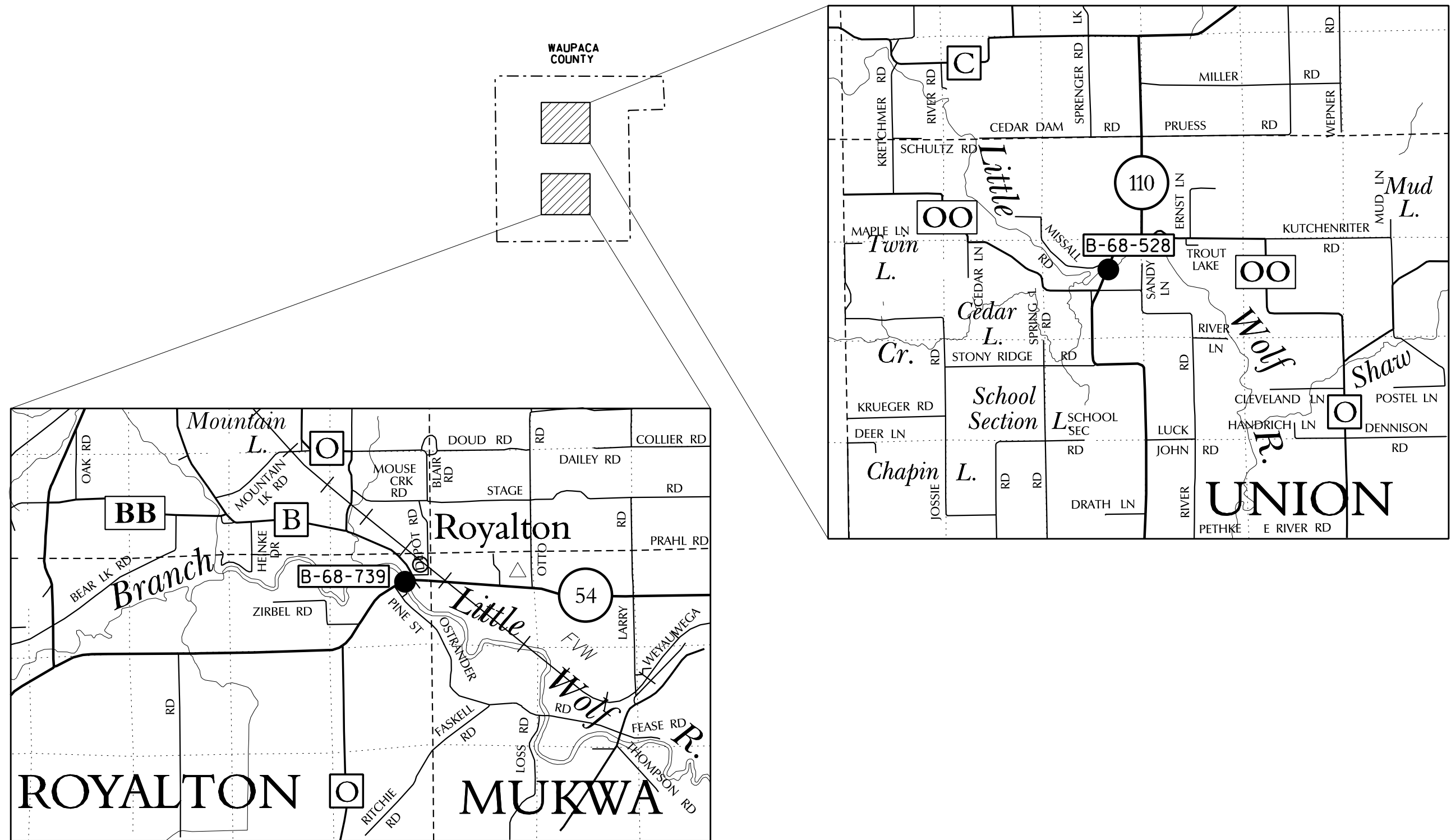
ORDER OF SHEETS

- SHEETS ORDERED BY BRIDGE/CULVERT SITE LOCATION.
- STRUCTURE PLANS LOCATED THROUGHOUT PLAN SET.

SECTION No. 1	TITLE
SECTION No. 2	GENERAL NOTES AND LOCATION MAPS
STRUCTURE B-37-19	
SECTION No. 2	TYPICAL SECTION AND DETAILS
SECTION No. 3	MISCELLANEOUS QUANTITIES
SECTION No. 8	STRUCTURE PLANS
STRUCTURE B-37-185	
SECTION No. 2	TYPICAL SECTION AND DETAILS
SECTION No. 8	STRUCTURE PLANS
STRUCTURE B-37-282/286	
SECTION No. 2	TYPICAL SECTION AND DETAILS
SECTION No. 3	MISCELLANEOUS QUANTITIES
SECTION No. 8	STRUCTURE PLANS
STRUCTURE B-44-148	
SECTION No. 2	TYPICAL SECTION AND DETAILS
SECTION No. 3	MISCELLANEOUS QUANTITIES
SECTION No. 8	STRUCTURE PLANS
STRUCTURE B-68-22/76	
SECTION No. 2	TYPICAL SECTION AND DETAILS
SECTION No. 3	MISCELLANEOUS QUANTITIES
SECTION No. 8	STRUCTURE PLANS
STRUCTURE B-68-32	
SECTION No. 2	TYPICAL SECTION AND DETAILS
SECTION No. 3	MISCELLANEOUS QUANTITIES
SECTION No. 8	STRUCTURE PLANS
STRUCTURE B-68-528	
SECTION No. 2	TYPICAL SECTION AND DETAILS
SECTION No. 3	MISCELLANEOUS QUANTITIES
SECTION No. 8	STRUCTURE PLANS
STRUCTURE B-68-739	
SECTION No. 2	TYPICAL SECTION AND DETAILS
SECTION No. 3	MISCELLANEOUS QUANTITIES
SECTION No. 8	STRUCTURE PLANS
STRUCTURE C-37-2	
SECTION No. 2	TYPICAL SECTION AND DETAILS
SECTION No. 3	MISCELLANEOUS QUANTITIES
SECTION No. 8	STRUCTURE PLANS
STRUCTURE C-37-61	
SECTION No. 2	TYPICAL SECTION AND DETAILS
SECTION No. 3	MISCELLANEOUS QUANTITIES
SECTION No. 8	STRUCTURE PLANS
SECTION No. 6	STANDARD DETAIL DRAWINGS









PROPOSED WORK: REPAIR FULL LENGTH OF DECK OVERHANG ON BOTH SIDES OF DECK. REPAINT ALL STRUCTURAL STEEL. RESEAL AGGREGATE SLOPE PAVING AND PLACE RIPRAP MEDIUM ON BOTH RIVERBANKS.

LEGEND

- POST WITH ATTACHED SIGN
- DRUM WITH WARNING LIGHT (TYPE C)
- DRUM
- *** REMOVING PAVEMENT MARKING
- TEMPORARY PRECAST CONCRETE BARRIER
- DIRECTION OF TRAFFIC
- WORK ZONE
- 4" x 6" WOOD POST (BREAKAWAY)
- TYPE III BARRICADE WITH SIGN
- FLAGS, 16"x16" MIN., ORANGE
- TEMPORARY SIGNAL WITH BACKPLATE AND 12-INCH LENSES ON BREAKAWAY POLE

GENERAL NOTES FOR SIGNS PCMS

THE FIELD ENGINEER WILL MAKE THE FINAL DETERMINATION TO THE PLACEMENT OF PCMS BOARDS BASED UPON EXISTING CONDITIONS AND STAGING.

CONSIDER GEOMETRICS WHEN LOCATING PCMS SO THE DRIVER HAS A CLEAR VIEW OF THE BOARD FOR A MINIMUM OF 1000 FEET IN FRONT OF THE PCMS.

PCMS SHOULD BE PLACED AS FAR AWAY FROM LIVE TRAFFIC LANES AS POSSIBLE WITHOUT HAMPERING VISIBILITY. IN ADVANCE OF HIGHWAY CONSTRUCTION PROJECTS, THE SIGNS SHOULD BE PLACED ON THE BACKSLOPE BEYOND THE DITCH. THE LOCATION SELECTED SHOULD BE AT OR SLIGHTLY ABOVE THE ELEVATION OF THE ROADWAY. FOR INTERMITTENT WORK SUCH AS FREEWAY LANE CLOSURE, OR WHERE SITE CONDITIONS DO NOT ALLOW OTHERWISE, THE SIGNS MAY BE PLACED ON THE SHOULDER. THE SITE SHOULD BE VISITED TO ASSURE VISIBILITY, SAFETY AND MAINTENANCE CONSIDERATIONS. A TAPER OF REFLECTORIZED DRUMS OR BARRICADES SHOULD BE PLACED AHEAD OF PCMS PLACED ON THE SHOULDER IF IT IS NOT SHIELDED BY A BARRIER.

PRIOR TO CONSTRUCTION	
PHASE 1 (2 SEC.)	PHASE 2 (2 SEC.)
BRIDGE WORK BEGINS	"DATE"
7 DAYS MINIMUM PRIOR TO BEGINNING WORK	

GENERAL NOTES FOR TRAFFIC CONTROL

SEE SDD "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS", "BARRICADES AND SIGNS FOR SIDEROAD CLOSURES", "BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION", AND "SPAN WIRE TEMPORARY TRAFFIC SIGNAL" FOR ADDITIONAL INFORMATION.

NAVIGATIONAL WARNING SIGNS ARE REQUIRED AND TO BE PERMITTED IN ACCORDANCE WITH STANDARD SPEC. SECTION 107.19.

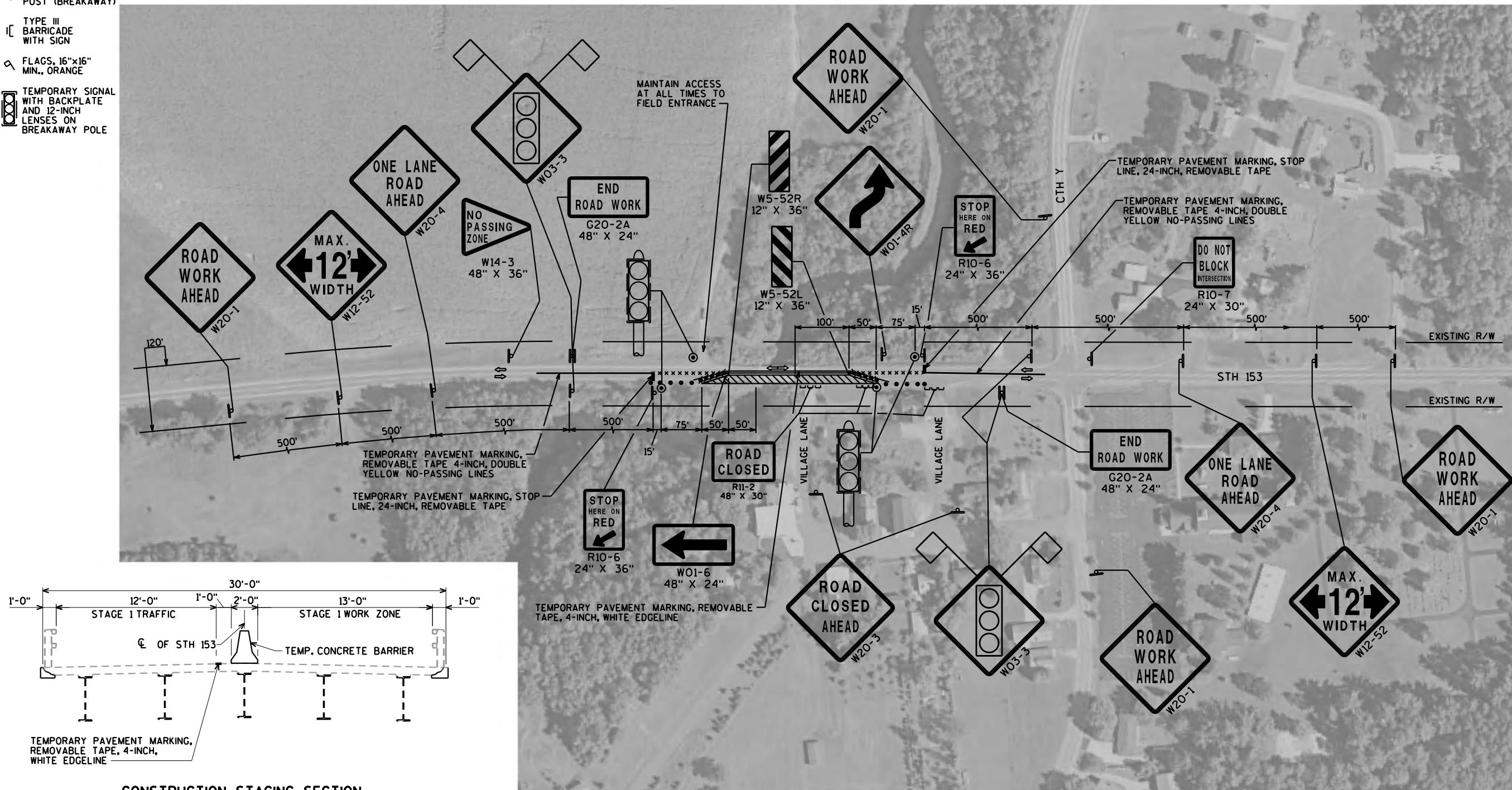
DIMENSIONS ARE BASED FROM THE ENDS OF DECK AT THE CENTERLINE OF STH 153.

TEMPORARY SIGNAL TIMING

INTERVAL	EB	WB	SECONDS
1	G	R	10
2	Y	R	4
3	R	R	15
4	R	G	10
5	R	Y	4
6	R	R	15
EMERG FLASH	FR	FR	--
CYCLE LENGTH =			58

EB = EASTBOUND
WB = WESTBOUND
R = RED
Y = YELLOW
G = GREEN
FR = FLASHING RED

NOTE: TIMINGS PROVIDED MAY NEED ADJUSTMENT IN FIELD BASED ON TRAFFIC. FLASH RED FOR EMERGENCY. BASED ON A STOP LINE TO STOP LINE DISTANCE OF 500 FEET.



CONSTRUCTION STAGING SECTION

(LOOKING EAST)

LEGEND

- POST WITH ATTACHED SIGN
- DRUM WITH WARNING LIGHT (TYPE C)
- DRUM
- *** REMOVING PAVEMENT MARKING
- TEMPORARY PRECAST CONCRETE BARRIER
- DIRECTION OF TRAFFIC
- WORK ZONE
- 4" x 6" WOOD POST (BREAKAWAY)
- TYPE III BARRICADE WITH SIGN
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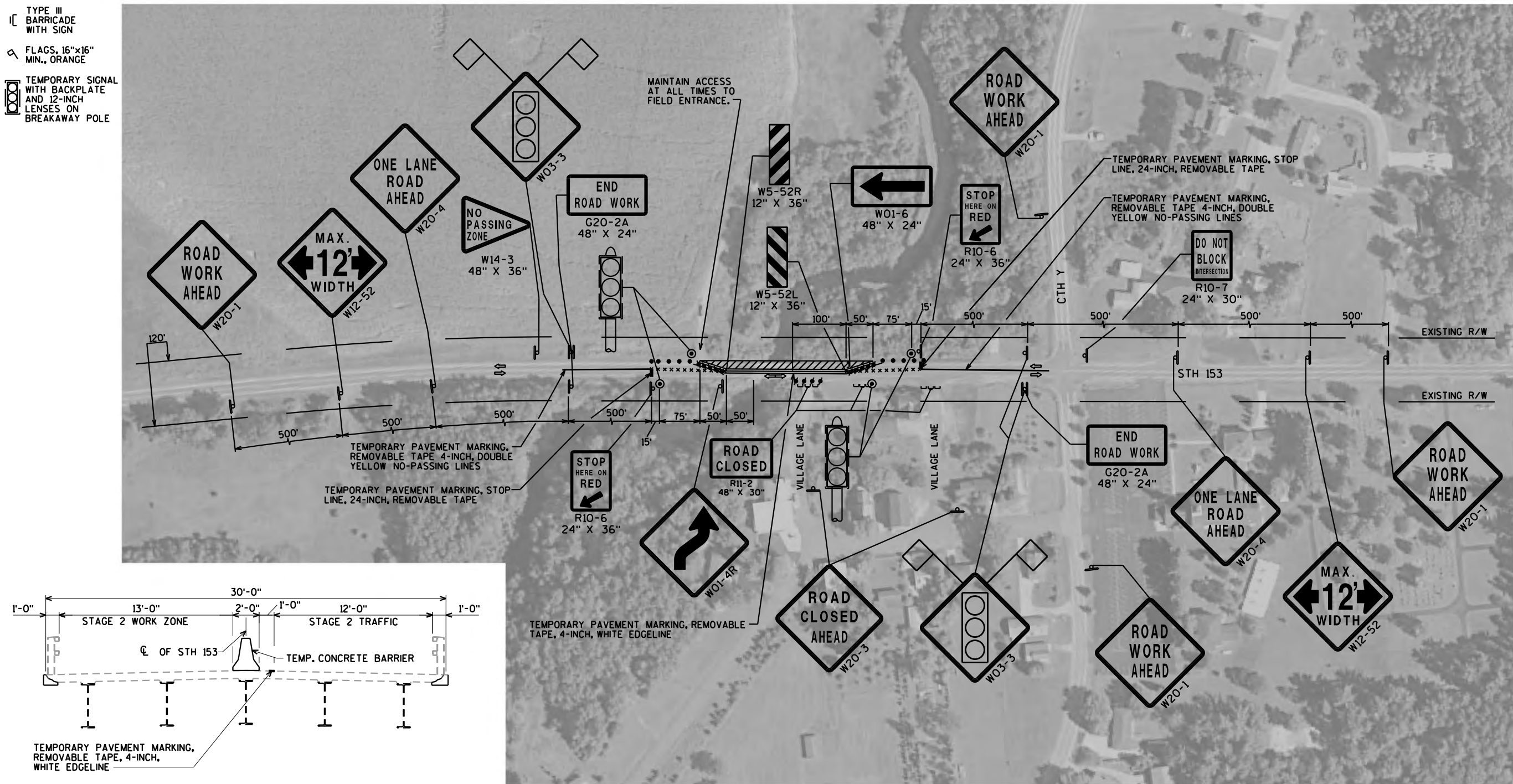
DIMENSIONS ARE BASED FROM THE ENDS OF DECK AT THE CENTERLINE OF STH 153.

TEMPORARY SIGNAL TIMING

INTERVAL	EB	WB	SECONDS
1	G	R	10
2	Y	R	4
3	R	R	15
4	R	G	10
5	R	Y	4
6	R	R	15
EMERG FLASH	FR	FR	--
CYCLE LENGTH =			58

EB = EASTBOUND
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Y = YELLOW
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NOTE: TIMINGS PROVIDED MAY NEED ADJUSTMENT IN FIELD BASED ON TRAFFIC. FLASH RED FOR EMERGENCY. BASED ON A STOP LINE TO STOP LINE DISTANCE OF 500 FEET.



CONSTRUCTION STAGING SECTION

(LOOKING EAST)

LEGEND
POST WITH ATTACHED SIGN



STH 153 WEST

CTH J NORTH

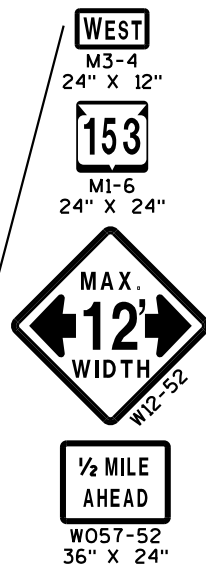
STH 153 EAST

CTH J SOUTH



STH 153 WEST

CTH Y NORTH



STH 153 EAST

CTH Y SOUTH

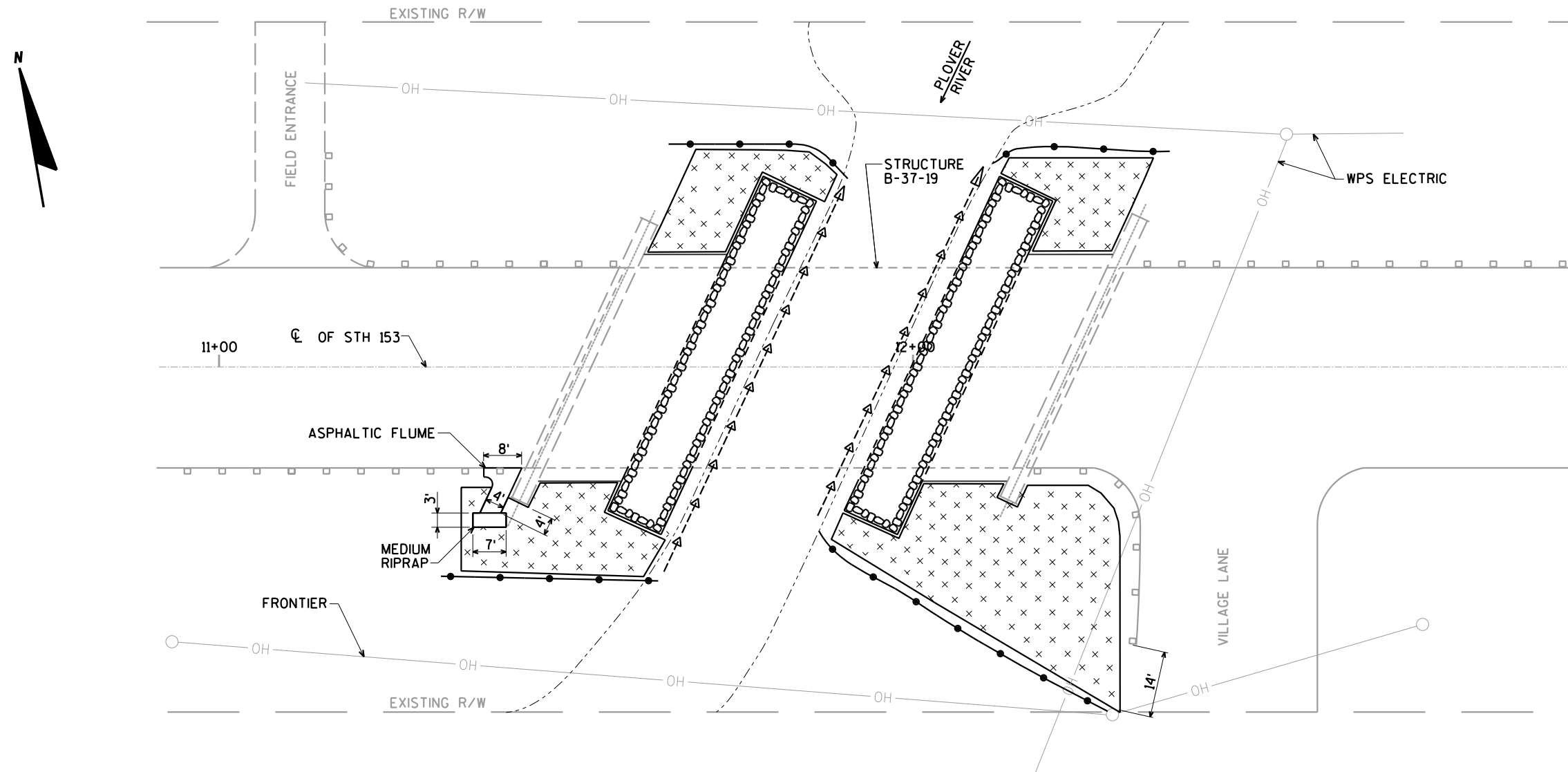


STH 153 WEST

CTH I SOUTH



STH 153 EAST

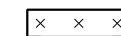


	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33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

TOTAL PROJECT AREA = 0.16 ACRES

TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.12 ACRES

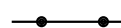
LEGEND



EROSION MAT CLASS II TYPE C
(TOPSOIL, FERTILIZER, SEED, AND MULCH)



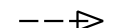
TEMPORARY DITCH CHECKS (UNDISTRIBUTED)



SILT FENCE



RIPRAP MEDIUM



TURBIDITY BARRIER

<u>204.0190 REMOVING SURFACE DRAINS</u>	
LOCATION	EACH
STH 153	1

<u>465.0315 ASPHALTIC FLUMES</u>	
LOCATION	SY
STH 153	6

<u>CONCRETE BARRIER TEMPORARY PRECAST</u>		
	603.8000 DELIVERED LF	603.8125 INSTALLED LF
STH 153	445	445

<u>606.0200 RIPRAP MEDIUM</u>	
LOCATION	CY
STH 153	2

<u>TOPSOIL, FERTILIZER, SEED, & MULCH</u>				
	625.0100 TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING NO. 20 LB
STH 153	390	390	0.4	15

<u>SILT FENCE & SILT FENCE MAINTENANCE</u>		
	628.1504 LF	628.1520 MAINTENANCE LF
STH 153	260	310

<u>MOBILIZATION EROSION CONTROL</u>		
	628.1905 MOBILIZATION EROSION CONTROL EACH	628.1910 MOBILIZATION EMERGENCY EROSION CONTROL EACH
STH 153	2	2

<u>628.2027 EROSION MAT CLASS II TYPE C</u>	
LOCATION	SY
STH 153	490

<u>628.6005 TURBIDITY BARRIERS</u>	
LOCATION	SY
STH 153	150

<u>628.7504 TEMPORARY DITCH CHECKS</u>	
LOCATION	LF
STH 153 (UNDISTRIBUTED)	50

<u>642.5001 FIELD OFFICE TYPE B</u>	
LOCATION	EACH
B-37-19	1

<u>643.1050 TRAFFIC CONTROL SIGNS PCMS</u>	
LOCATION	DAY
STH 153 WEST OF BRIDGE	7
STH 153 EAST OF BRIDGE	7
TOTAL	14

<u>TRAFFIC CONTROL DRUMS, BARRICADES, LIGHTS, AND SIGNS</u>									
	643.0300 DRUMS EACH	643.0420 BARRICADES TYPE III EACH	643.0705 WARNING LIGHTS TYPE A EACH	643.0715 WARNING LIGHTS TYPE C EACH	643.0900 SIGNS EACH	643.0300 DRUMS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.0715 WARNING LIGHTS TYPE C DAYS
STH 153	24	10	12	14	55	40	40	40	40
TOTAL						960	400	480	560

<u>646.0106 PAVEMENT MARKING EPOXY 4-INCH</u>		
LOCATION	DESCRIPTION	LF
STH 153	SOLID YELLOW & DASHED CENTERLINE	355

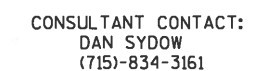
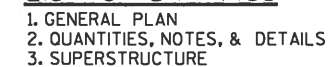
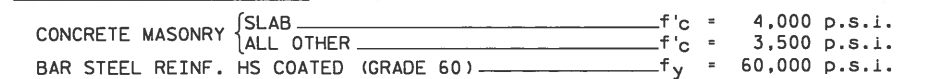
<u>646.0600 REMOVING PAVEMENT MARKINGS</u>		
LOCATION	DESCRIPTION	LF
STH 153	SOLID YELLOW & DASHED CENTERLINE	355

<u>649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH</u>		
LOCATION	DESCRIPTION	LF
STH 153	DOUBLE YELLOW CENTERLINE	2,800
STH 153	WHITE EDGE LINE	670
TOTAL		3,470

<u>649.1400 TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 24-INCH</u>	
LOCATION	LF
STH 153	30

<u>661.0100 TEMPORARY TRAFFIC SIGNALS FOR BRIDGES (B-37-19)</u>	
LOCATION	LS
STH 153	1

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0100 UNLESS
OTHERWISE NOTED.
ADDITIONAL QUANTITIES
SHOWN ELSEWHERE ON PLAN.



NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY AYRES ASSOCIATES 3433 Oakwood Hills Parkway Eau Claire, WI 54701 www.AyresAssociates.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED	<i>William C. Decker</i> KAR CHIEF STRUCTURES DESIGN ENGINEER		08/12/13 DATE
STRUCTURE B-37-19			
STH 153 OVER PLOVER RIVER MARATHON TOWN/CITY/VILLAGE BEVENT			
DESIGN SPEC. REHABILITATION (N/A)			
DESIGNED BY	DNS	DESIGN CK'D. KAZ	DRAWN BY KAZ PLANS CK'D. DNS
GENERAL PLAN			SHEET 1 OF 3

\$PRFNAME\$
U:\42-0853.00 - NC Region Bridge Repairs 2011\Existing Plans & Reports\B-37-19\Existing Structure.dgn

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	W. ABUT.	E. ABUT.	SUPER.	TOTAL
⊗ 203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STA. 11+86.50	LS	-----	-----	-----	1
502.0100	CONCRETE MASONRY BRIDGES	CY	-----	-----	3	3
502.5002	MASONRY ANCHOR TYPE L NO. 4 BARS	EACH	-----	-----	98	98
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	-----	-----	250	250
● 509.1500	CONCRETE SURFACE REPAIR	SF	8	4	-----	12
509.9020.S	EPOXY CRACK SEALING	LF	-----	-----	141	141
517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE STRUCTURE B-37-19	LS	-----	-----	-----	1
517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-37-19	LS	-----	-----	-----	1
517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH	-----	-----	1	1
604.9010.S	SLOPE PAVING REPAIR CRUSHED AGGREGATE	CY	8	-----	-----	8
604.9015.S	RESEAL CRUSHED AGGREGATE SLOPE PAVING	SY	65	65	-----	130
606.0200	RIPRAP MEDIUM	CY	30	30	-----	60
645.0120	GEOTEXTILE FABRIC TYPE HR	SY	70	70	-----	140
SPV.0060.01	EMBEDDED GALVANIC ANODES	EACH	-----	-----	96	96
SPV.0090.01	GALVANIZED METAL FLASHING	LF	-----	-----	-----	141

- UNDISTRIBUTED QUANTITY FOR REPAIRS AS DIRECTED BY THE ENGINEER, IF NECESSARY.
- ⊗ INCLUDES REMOVAL OF UNSOUND CONCRETE AND BLAST CLEANING AT DECK OVERHANGS

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS SHOWN OR NOTED OTHERWISE.
THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.
DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.
ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1" DEEP SAW CUT.
THE COLOR OF THE FINISH EPOXY TOP COAT FOR THE GIRDERS AND CONNECTING STRUCTURAL STEEL SHALL BE LIGHT GRAY (FEDERAL COLOR NO. 26293).

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-19			
DRAWN BY		KAZ	PLANS CK'D. DNS
QUANTITIES, NOTES, & DETAILS			SHEET 2 OF 3

ORIGINAL PLANS PREPARED BY

AYRES

ASSOCIATES

3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

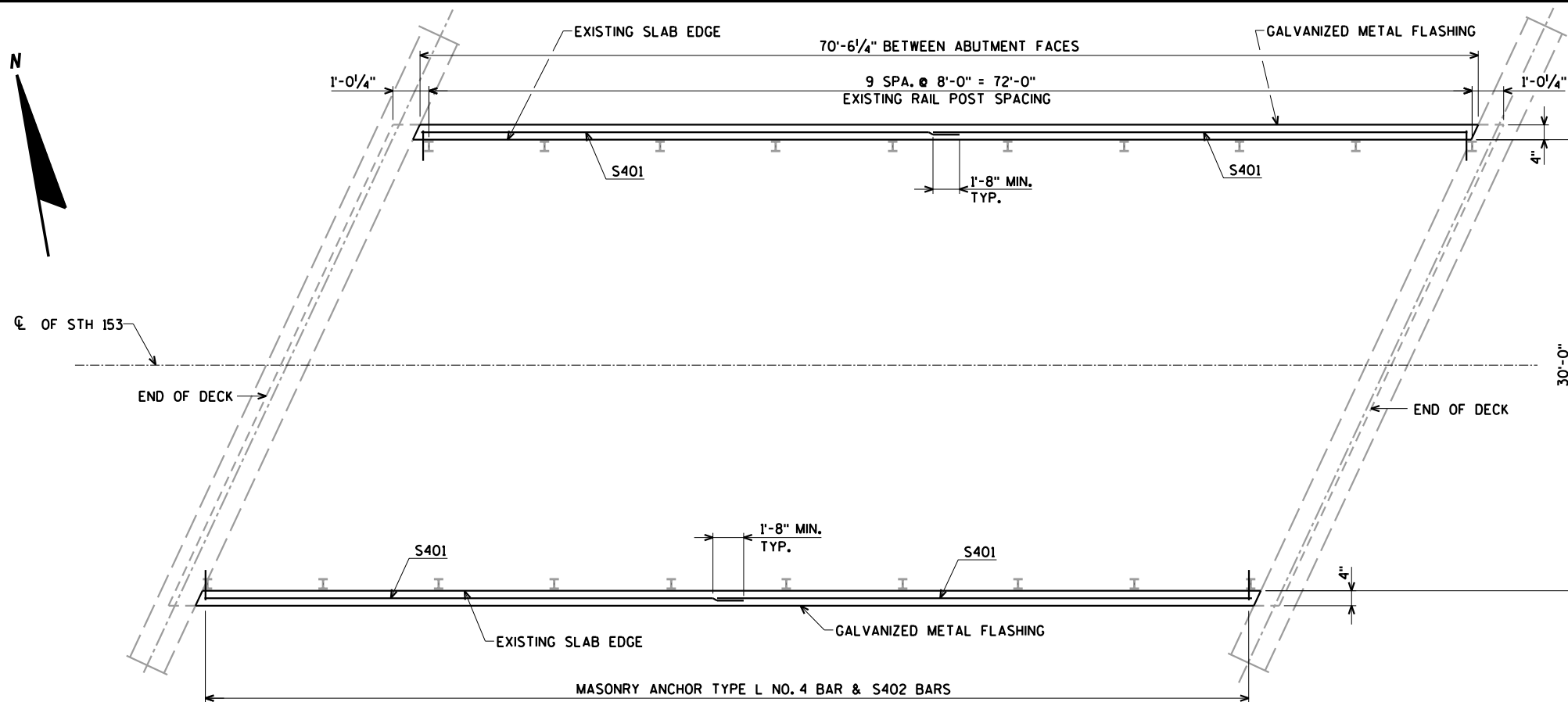
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STATE PROJECT NUMBER

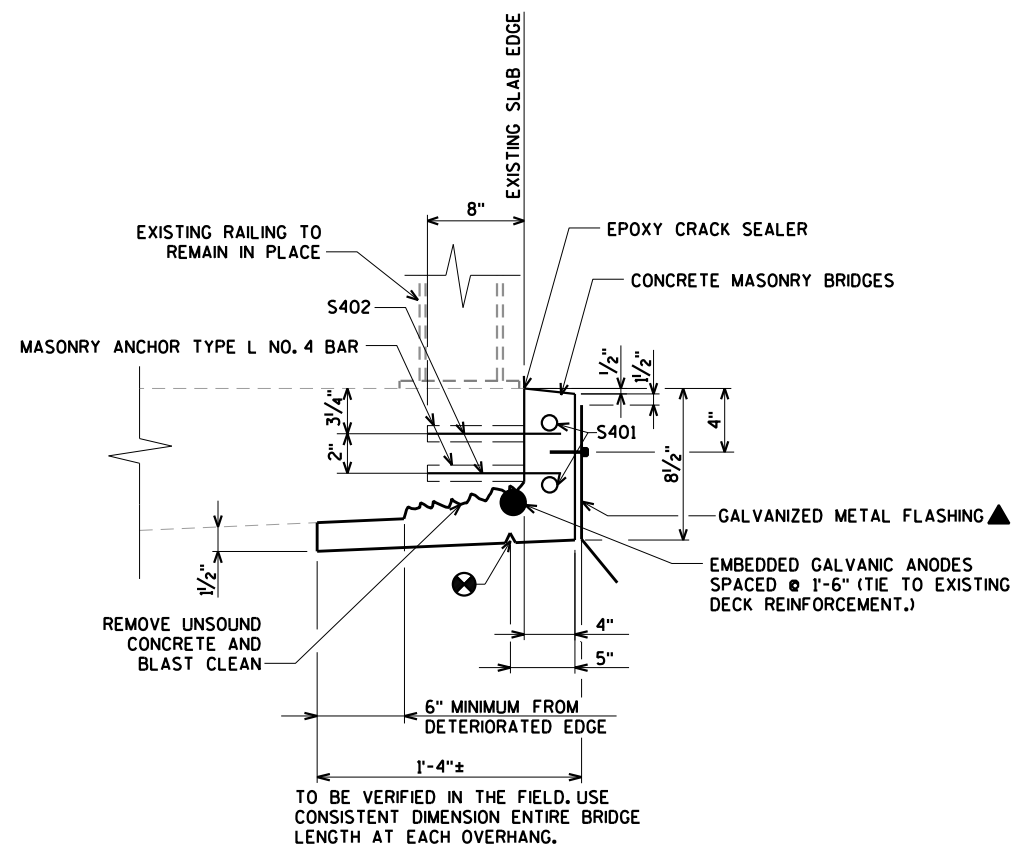
1009-44-61

BILL OF BARS

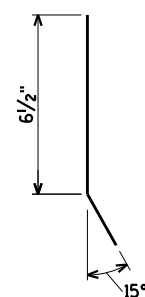
BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED	BAR SERIES	250# COATED
							LOCATION
S401	X	8	36'-0"				LONGITUDINAL
S402	X	98	0'-10"				DOWEL BARS



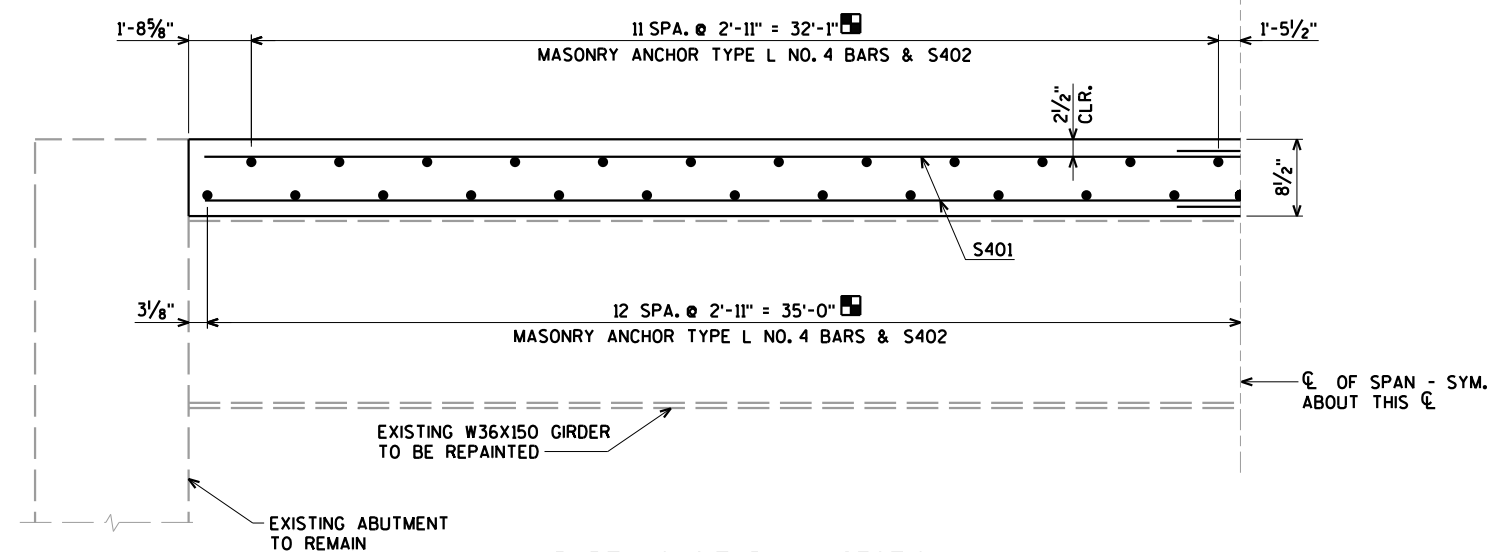
PLAN



DECK OVERHANG REPAIR DETAIL



GALVANIZED METAL FLASHING DETAIL



PART LONGITUDINAL SECTION

- ⊗ 3/4" V-GROOVE. EXTEND V-GROOVE TO 3" FROM FRONT FACE OF ABUTMENT.
- ▲ GALVANIZED METAL FLASHING (16 GAUGE, 8" WIDE). ANCHOR WITH 3/16" x 1" TAPCONS (OR EQUAL) @ 1'-4" O.C. SEAL TOP EDGE WITH SILICONE. ANCHORS AND SILICONE CONSIDERED INCIDENTAL TO "GALVANIZED METAL FLASHING".
- SHIFT SPACING AS NEEDED TO AVOID EXISTING RAILING ANCHORAGES

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-19			
DRAWN BY KAZ		PLANS CK'D. DNS	
SUPERSTRUCTURE		SHEET 3 OF 3	



PROPOSED WORK: PLACE RIPRAP HEAVY AT SCOUR HOLE LOCATED AT THE WEST END OF THE PIER.

TRAFFIC CONTROL: FOLLOW SDD, "TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS,)" PLACE DRUMS AS NEEDED.

PROJECT NO: 1009-44-61	HWY: STH 13	COUNTY: MARATHON	SITE OVERVIEW (B-37-185)	SHEET	E
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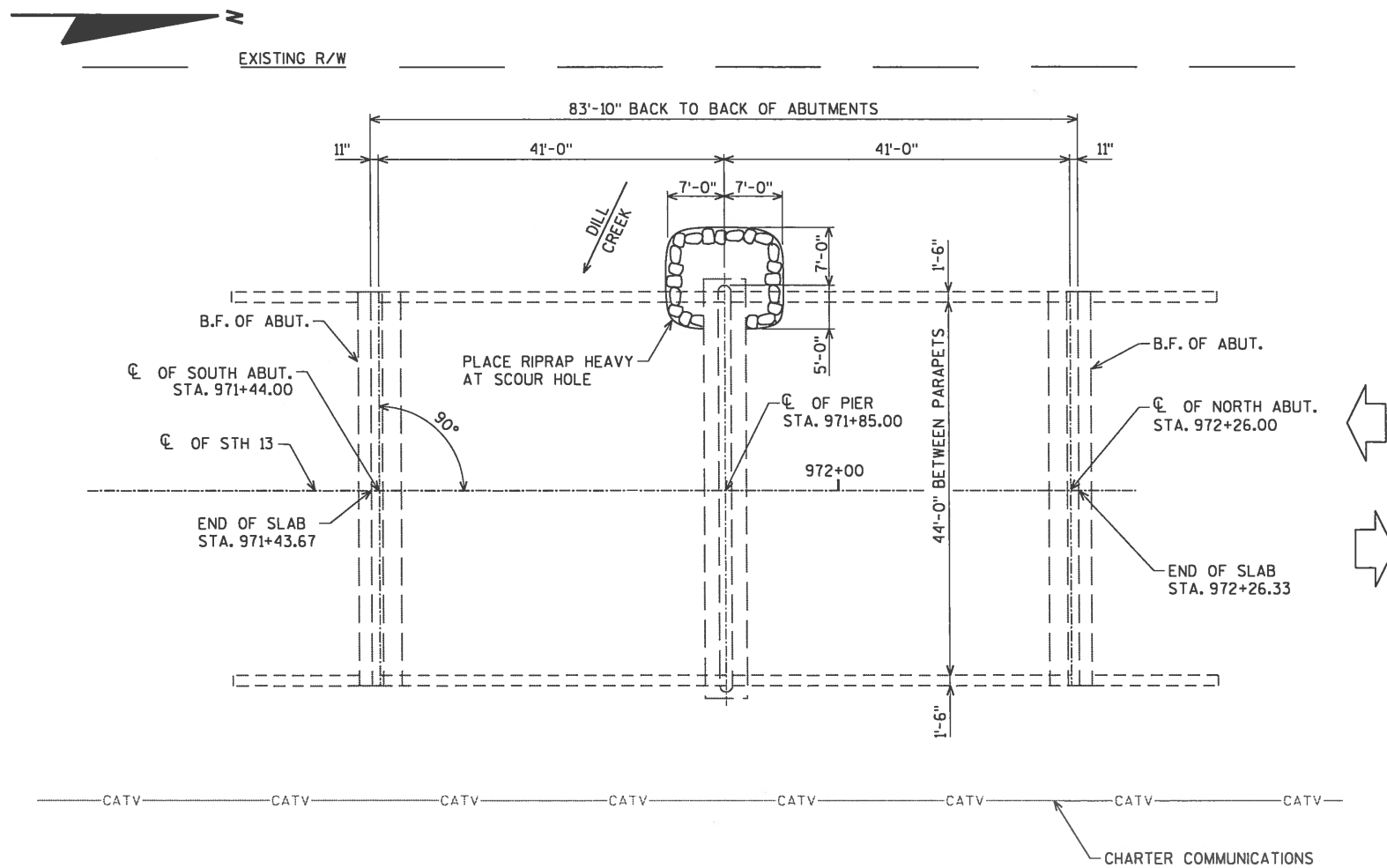
643.0300 TRAFFIC CONTROL DRUMS		
LOCATION	EACH	DAYS
STH 13 (UNDISTRIBUTED)	15	1
TOTAL		15

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0100 UNLESS
OTHERWISE NOTED.
ADDITIONAL QUANTITIES
SHOWN ELSEWHERE ON PLAN.

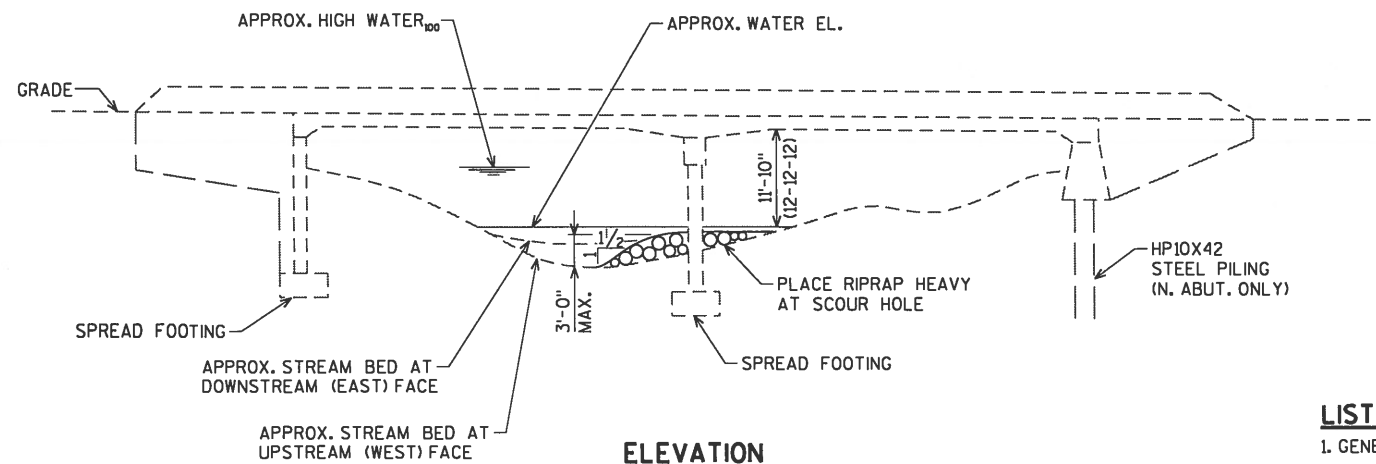
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DATE:
DATE:
DATE:
CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:

8



PLAN
EXISTING 2-SPAN CONCRETE HAUNCHED SLAB



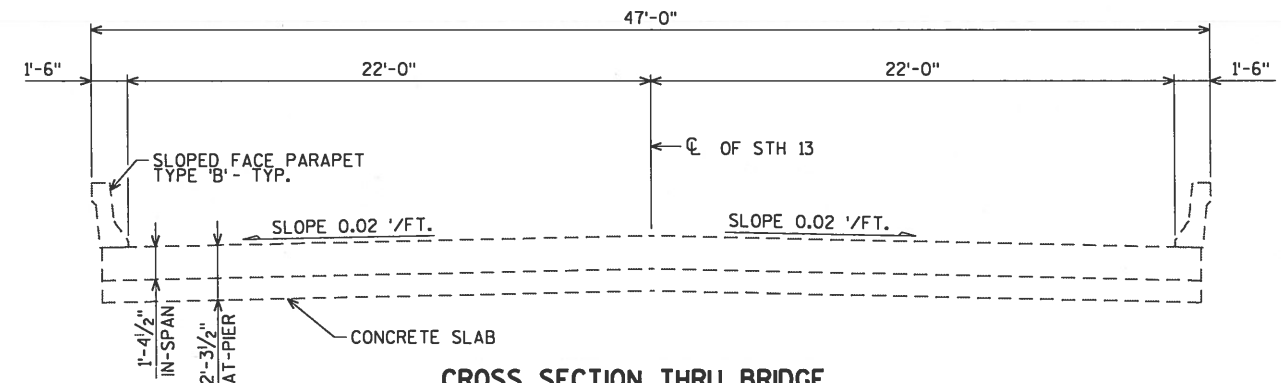
ELEVATION

LIST OF DRAWINGS
1. GENERAL PLAN

TOTAL ESTIMATED QUANTITIES			
BID ITEM NUMBER	BID ITEM	UNIT	QUANTITY
606.0300	RIPRAP HEAVY	CY	20

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.



CROSS SECTION THRU BRIDGE
(LOOKING NORTH)



BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489
CONSULTANT CONTACT:
DAN SYDOW
(715)-834-3161

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY AYRES ASSOCIATES 3433 Oakwood Hills Parkway Eau Claire, WI 54701 www.AyresAssociates.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED	<i>William C. Dreher</i>	KAR	08/12/13
CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-37-185			
STH 13 OVER DILL CREEK			
COUNTY	MARATHON	TOWN/CITY/VILLAGE	HULL
DESIGN SPEC. MAINTENANCE (N/A)			
DESIGNED BY	DNS	DESIGN CK'D. KAZ	DRAWN BY KAZ
GENERAL PLAN			PLANS CK'D. DNS
SHEET 1 OF 1			

8

GENERAL NOTES FOR SIGNS PCMS

THE FIELD ENGINEER WILL MAKE THE FINAL DETERMINATION TO THE PLACEMENT OF PCMS BOARDS BASED UPON EXISTING CONDITIONS AND STAGING.

CONSIDER GEOMETRICS WHEN LOCATING PCMS SO THE DRIVER HAS A CLEAR VIEW OF THE BOARD FOR A MINIMUM OF 1000 FEET IN FRONT OF THE PCMS.

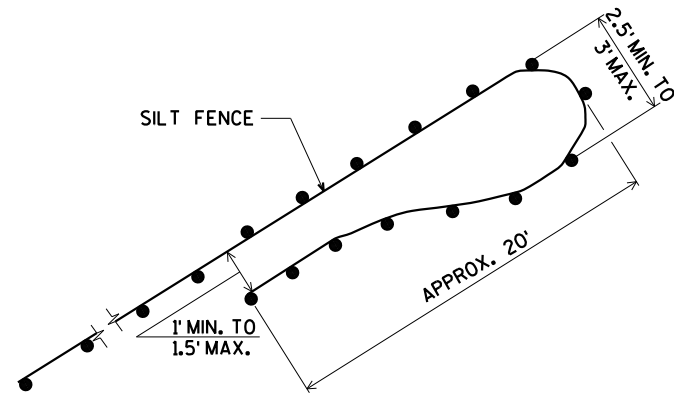
PCMS SHOULD BE PLACED AS FAR AWAY FROM LIVE TRAFFIC LANES AS POSSIBLE WITHOUT HAMPERING VISIBILITY. IN ADVANCE OF HIGHWAY CONSTRUCTION PROJECTS, THE SIGNS SHOULD BE PLACED ON THE BACKSLOPE BEYOND THE DITCH. THE LOCATION SELECTED SHOULD BE AT OR SLIGHTLY ABOVE THE ELEVATION OF THE ROADWAY. FOR INTERMITTENT WORK SUCH AS FREEWAY LANE CLOSURE, OR WHERE SITE CONDITIONS DO NOT ALLOW OTHERWISE, THE SIGNS MAY BE PLACED ON THE SHOULDER. THE SITE SHOULD BE VISITED TO ASSURE VISIBILITY, SAFETY AND MAINTENANCE CONSIDERATIONS. A TAPER OF REFLECTORIZED DRUMS OR BARRICADES SHOULD BE PLACED AHEAD OF PCMS PLACED ON THE SHOULDER IF IT IS NOT SHIELDED BY A BARRIER.

PRIOR TO CONSTRUCTION	
PHASE 1 (2 SEC.)	PHASE 2 (2 SEC.)
BRIDGE WORK BEGINS	"DATE"
7 DAYS MINIMUM PRIOR TO BEGINNING WORK	

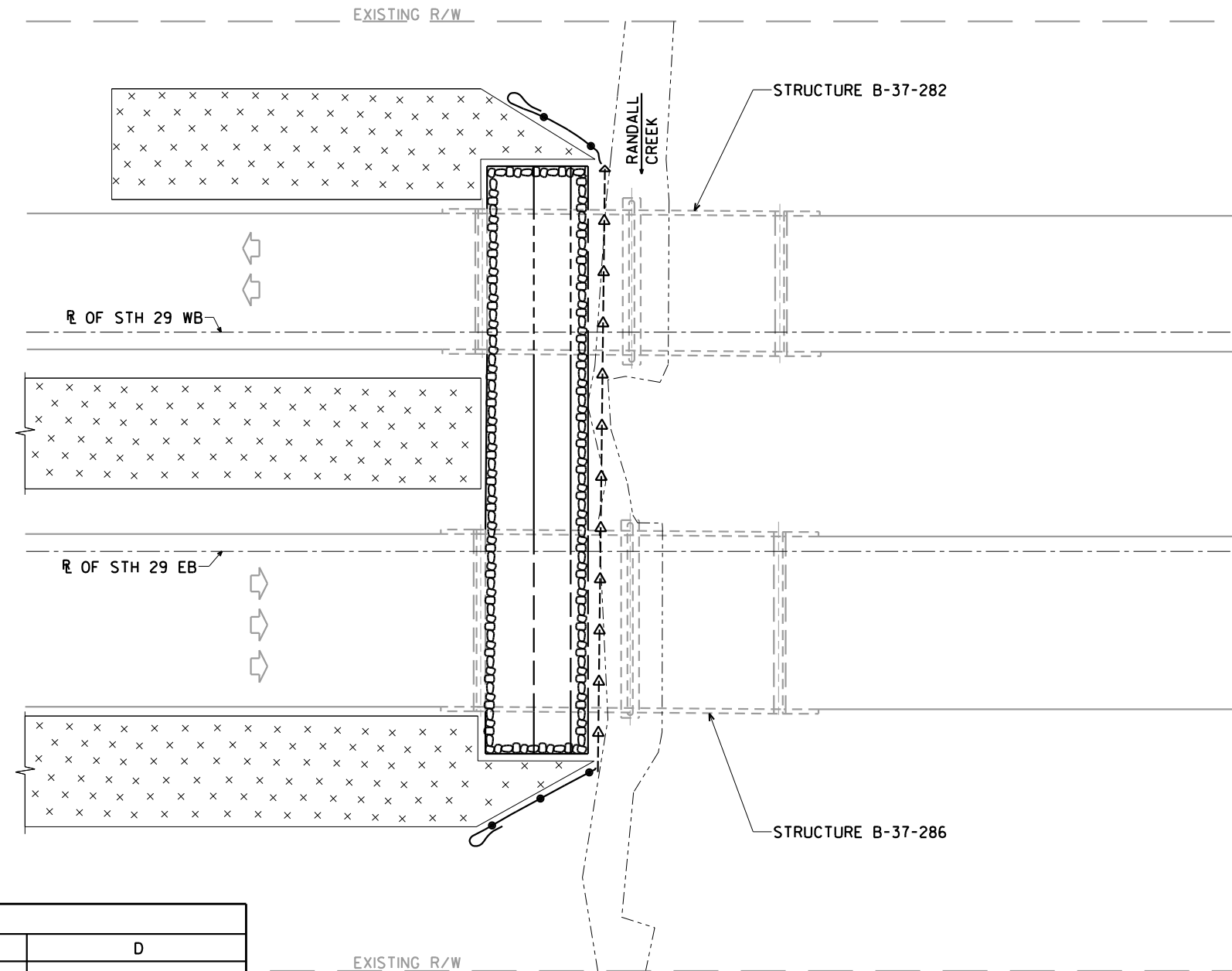


PROPOSED WORK: RE-GRADE RIPRAP HEAVY SLOPE ON WEST SIDE OF CREEK. FILL VOIDS WITH SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR.

TRAFFIC CONTROL: FOLLOW SDD, "TRAFFIC CONTROL, WORK ON SHOULDER ON DIVIDED ROADWAY" AND SDD, "TRAFFIC CONTROL, SINGLE LANE CLOSURE".

**TEMPORARY SMALL ANIMAL TURN-AROUND**

SILT FENCE POSTS FOR THE TURN-AROUND SHOULD BE ON THE OUTSIDE OF THE TURN-AROUND AND TRENCHED IN ACCORDING TO SILT FENCE REQUIREMENTS.



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

TOTAL PROJECT AREA = 0.33 ACRES

TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.11 ACRES

LEGEND

- TEMPORARY DITCH CHECKS (UNDISTRIBUTED)
- SILT FENCE
- RIPRAP HEAVY
- TURBIDITY BARRIER
- EROSION MAT CLASS II TYPE C (TOPSOIL, FERTILIZER, SEED, AND MULCH)

SILT FENCE & SILT FENCE MAINTENANCE

LOCATION	628.1504	628.1520
	LF	LF
STH 29	120	120

MOBILIZATION EROSION CONTROL

LOCATION	628.1905	628.1910
	MOBILIZATION EROSION CONTROL EACH	MOBILIZATION EMERGENCY EROSION CONTROL EACH
STH 29	1	1

628.2027 EROSION MAT CLASS II TYPE C

LOCATION	SY
STH 29	2,570

628.6005 TURBIDITY BARRIERS

LOCATION	SY
STH 29	150

628.7504 TEMPORARY DITCH CHECKS

LOCATION	LF
STH 29 (UNDISTRIBUTED)	50

TOPSOIL, FERTILIZER, SEED, & MULCH

LOCATION	625.0100	627.0200	629.0210	630.0120
	TOPSOIL SY	MULCHING SY	FERTILIZER TYPE B CWT	SEEDING NO. 20 LB
STH 29	2,055	2,055	1.4	60

TRAFFIC CONTROL LIGHTS, DRUMS, BARRICADES, ARROW BOARDS, AND SIGNS

CLOSURE TYPE	643.0300		643.0420		643.0715		643.0800		643.0900	
	DRUMS EACH	DAYS	BARRICADES TYPE III EACH	DAYS	LIGHTS TYPE C EACH	DAYS	ARROW BOARDS EACH	DAYS	SIGNS EACH	DAYS
STH 29 SHOULDER	16	5	-	-	-	-	1	5	8	5
STH 29 LANE	43	5	1	5	13	5	1	5	9	5
TOTAL	295		5		65		10		85	

643.1050 TRAFFIC CONTROL SIGNS PCMS

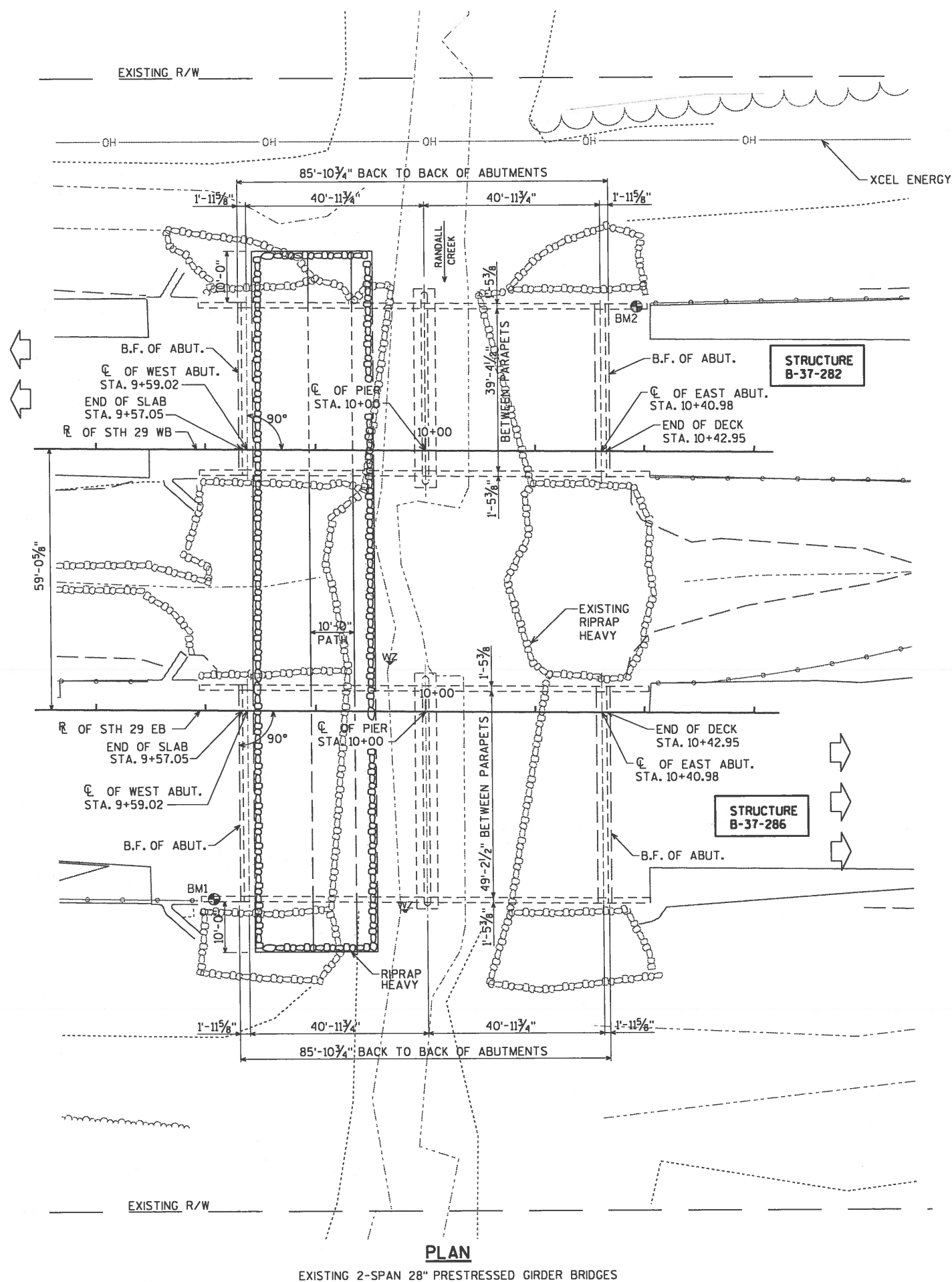
LOCATION	DAY
STH 29 WEST OF B-37-286	7
STH 29 EAST OF B-37-282	7
TOTAL	14

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0100 UNLESS
OTHERWISE NOTED.
ADDITIONAL QUANTITIES
SHOWN ELSEWHERE ON PLAN.

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CHECKED BY: DATE:
BACK CHECKED BY: DATE:
CORRECTED BY: DATE:

8



PLAN
EXISTING 2-SPAN 28" PRESTRESSED GIRDER BRIDGES

STATE PROJECT NUMBER

1009-44-61

LIST OF DRAWINGS

1. GENERAL PLAN
2. SECTIONS

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
DIMENSIONS SHOWN ARE BASED ON THE
ORIGINAL STRUCTURE PLANS.

NO.	STA.	BENCH MARKS	
		DESCRIPTION	ELEV.
1	9+53	DOT CAP, TOP OF PARAPET, SW WINGWALL, STRUCTURE B-37-286, 44' RT	1346.35
2	10+47	DOT CAP, TOP OF PARAPET, NE WINGWALL, STRUCTURE B-37-282, 34' LT	1347.28



BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489
CONSULTANT CONTACT:
DAN SYDOW
(715)-834-3161

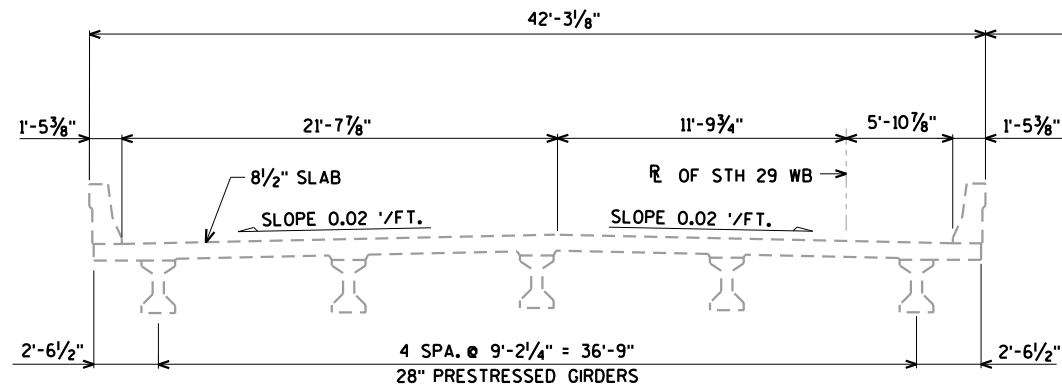
NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY AYRES ASSOCIATES 3433 Oakwood Hills Parkway Eau Claire, WI 54701 www.AyresAssociates.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED	<i>William C. Dreher</i>	KAR	08/12/13
CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-37-282/286			
STH 29 OVER RANDALL CREEK			
COUNTY	MARATHON	TOWN/CITY/VILLAGE	JOHNSON
DESIGN SPEC.	MAINTENANCE (N/A)		
DESIGNED BY	DNS	DESIGN CKD.	KAZ
DRAWN BY	KAZ	PLANS CKD.	DNS
GENERAL PLAN			SHEET 1 OF 2

8

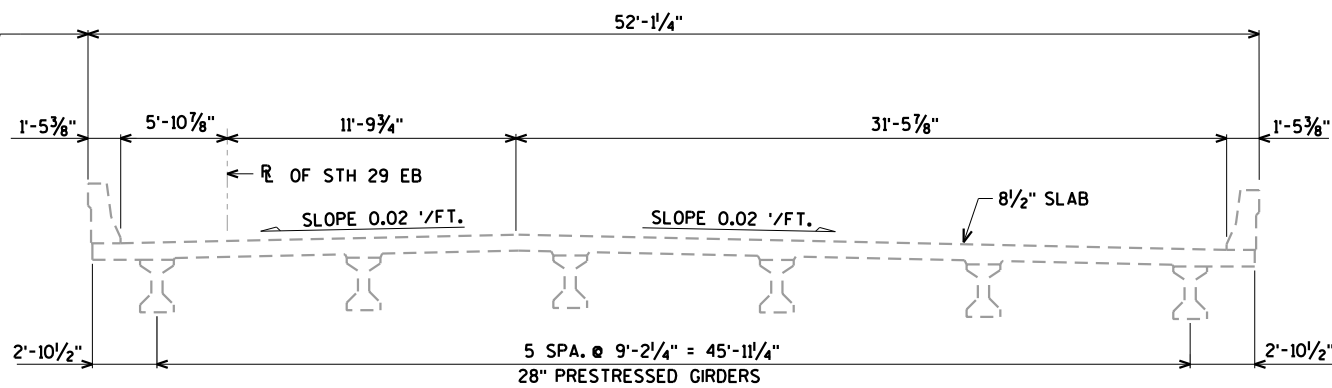
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STATE PROJECT NUMBER

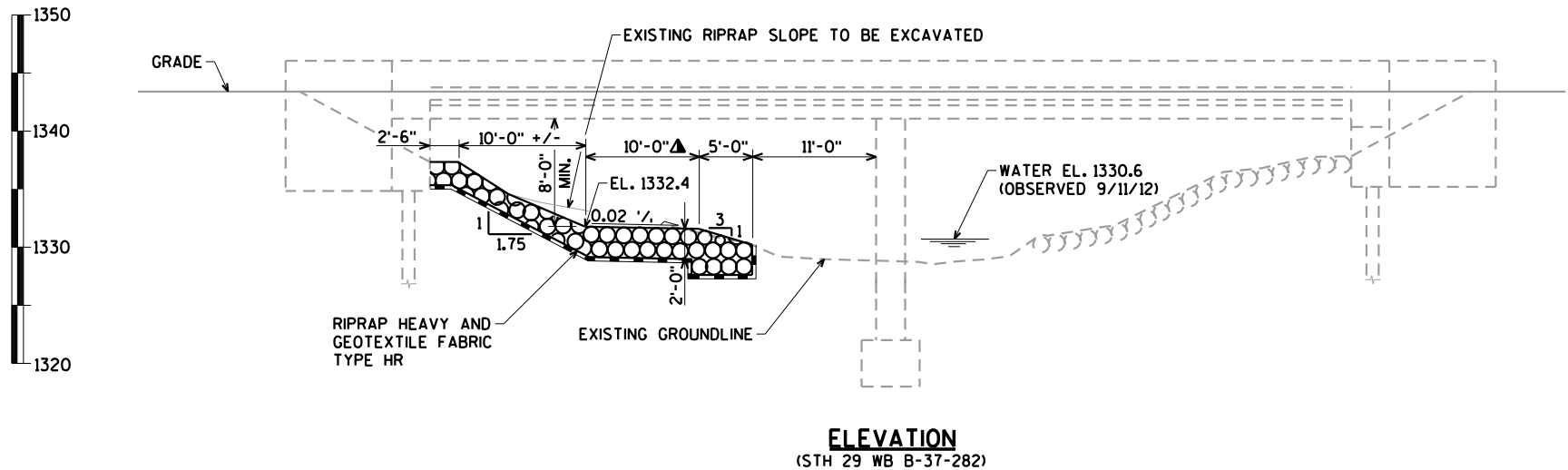
1009-44-61



CROSS SECTION THRU BRIDGE B-37-282
(LOOKING EAST)



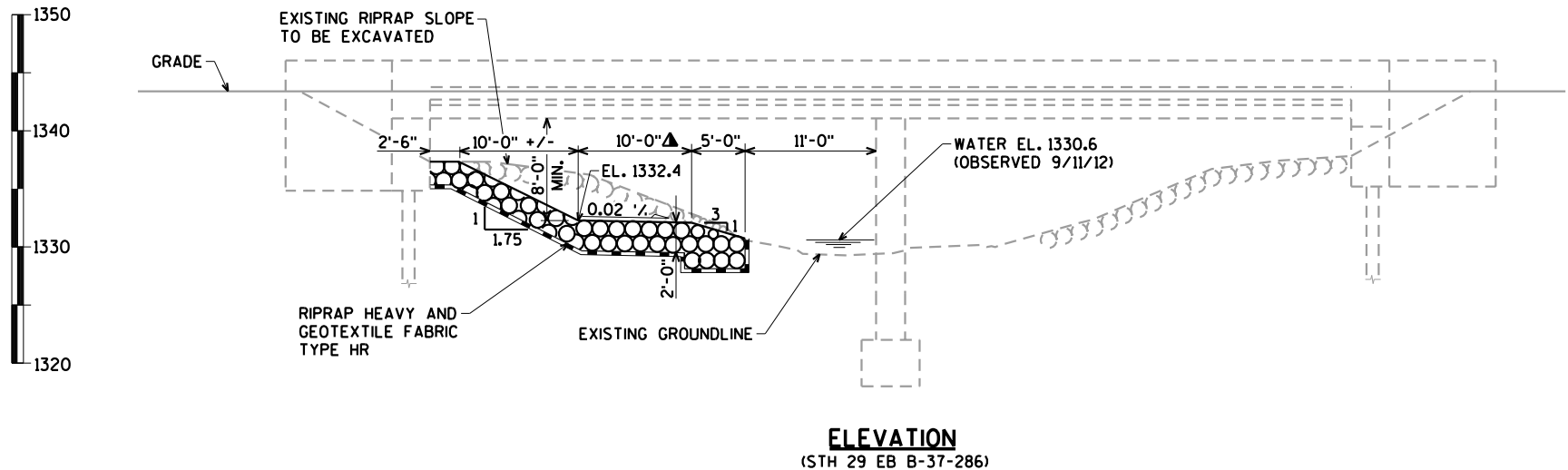
CROSS SECTION THRU BRIDGE B-37-286
(LOOKING EAST)



TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEM	UNIT	QUANTITY
205.0100	EXCAVATION COMMON	CY	575
606.0300	RIPRAP HEAVY	CY	350
645.0120	GEOTEXTILE FABRIC TYPE HR	SY	600
SPV.0195.01	SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR	TON	50

⊗ INCLUDES EXCAVATION OF EXISTING RIPRAP AND FILL UNDER AND ADJACENT TO EXISTING BRIDGES.



▲ FILL VOIDS WITH "SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR".

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-282/286			
DRAWN BY		KAZ	PLANS CK'D. DNS
SECTIONS			SHEET 2 OF 2

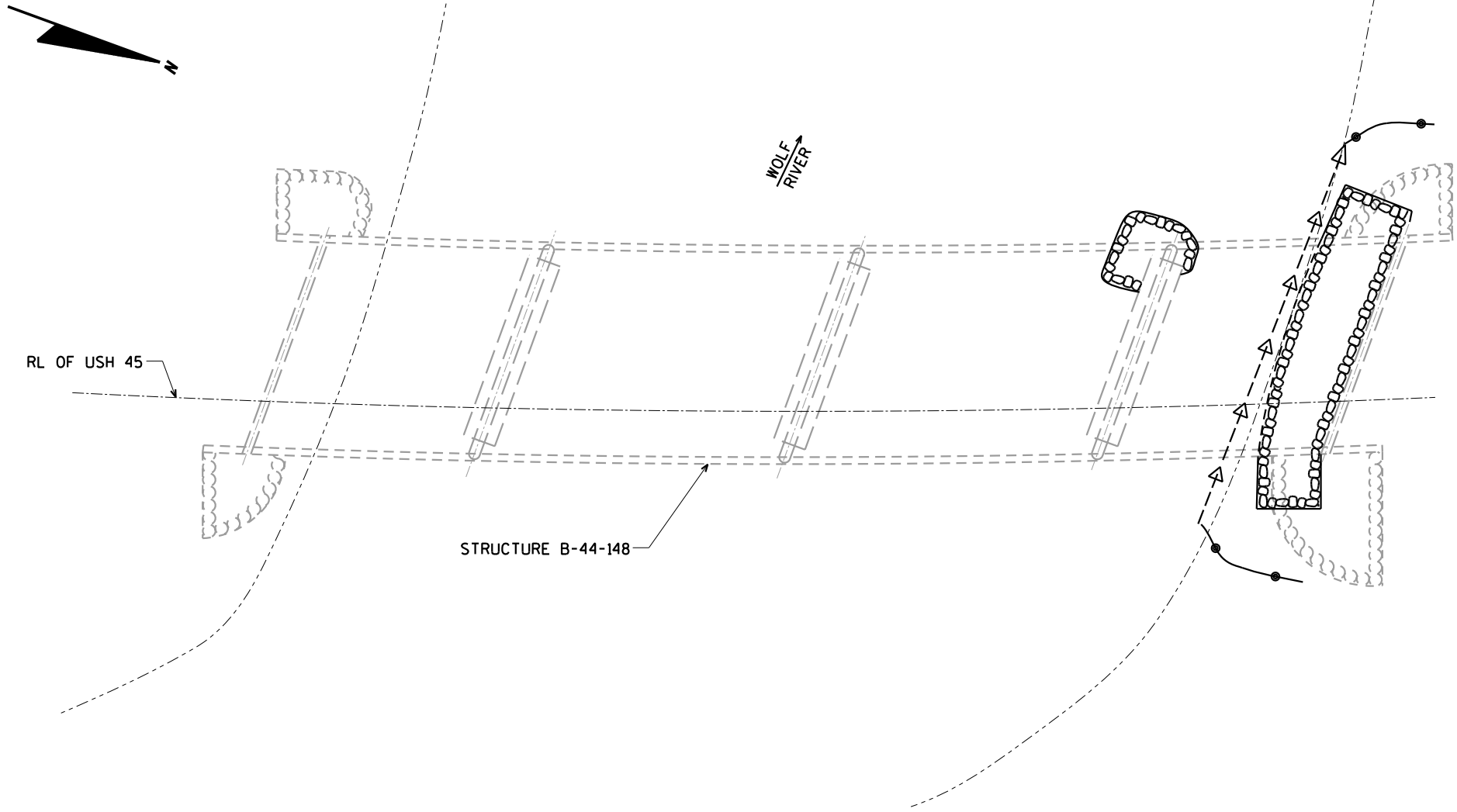


PROPOSED WORK: PLACE RIPRAP HEAVY AT SCOUR HOLE LOCATED AT WEST END OF PIER 3, AT NORTH ABUTMENT, PLACE 1' THICKNESS ADDITIONAL RIPRAP HEAVY OVER EXISTING RIPRAP AND ADD A NEW 4' WIDE BY 2' DEEP TOE WITH GEOTEXTILE FABRIC.

LOCATION: STRUCTURE B-44-148 IS LOCATED 1.25 MILES SOUTH OF STH 54.

TRAFFIC CONTROL: FOLLOW SDD, "TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS,)" PLACE DRUMS AS NEEDED.

NAVIGATIONAL WARNING SIGNS ARE REQUIRED AND TO BE PERMITTED IN ACCORDANCE WITH STANDARD SPEC. SECTION 107.19.



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

TOTAL PROJECT AREA = 0.40 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.03 ACRES

LEGEND

- TEMPORARY DITCH CHECKS (UNDISTRIBUTED)
- SILT FENCE
- RIPRAP HEAVY
- TURBIDITY BARRIER
- EROSION MAT CLASS II TYPE C (UNDISTRIBUTED)
(TOPSOIL, FERTILIZER, SEED, AND MULCH)

SILT FENCE & SILT FENCE MAINTENANCE		
	628.1504	628.1520
LOCATION	LF	MAINTENANCE LF
USH 45	70	70

MOBILIZATION EROSION CONTROL		
	628.1905	628.1910
	MOBILIZATION	MOBILIZATION
	EROSION CONTROL	EMERGENCY
LOCATION	EROSION CONTROL EACH	EROSION CONTROL EACH
USH 45	1	1

628.2027 EROSION MAT CLASS II TYPE C	
LOCATION	SY
USH 45 (UNDISTRIBUTED)	100

628.6005 TURBIDITY BARRIERS	
LOCATION	SY
USH 45	145

628.7504 TEMPORARY DITCH CHECKS	
LOCATION	LF
USH 45 (UNDISTRIBUTED)	50

643.0300 TRAFFIC CONTROL DRUMS		
LOCATION	EACH	DAYS
USH 45 (UNDISTRIBUTED)	15	7
TOTAL		105

TOPSOIL, FERTILIZER, SEED, & MULCH				
	625.0100	627.0200	629.0210	630.0120
	TOPSOIL	MULCHING	FERTILIZER	SEEDING
LOCATION	SY	SY	TYPE B CWT	NO. 20 LB
USH 45 (UNDISTRIBUTED)	100	100	0.1	3

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0100 UNLESS
OTHERWISE NOTED.
ADDITIONAL QUANTITIES
SHOWN ELSEWHERE ON PLAN.

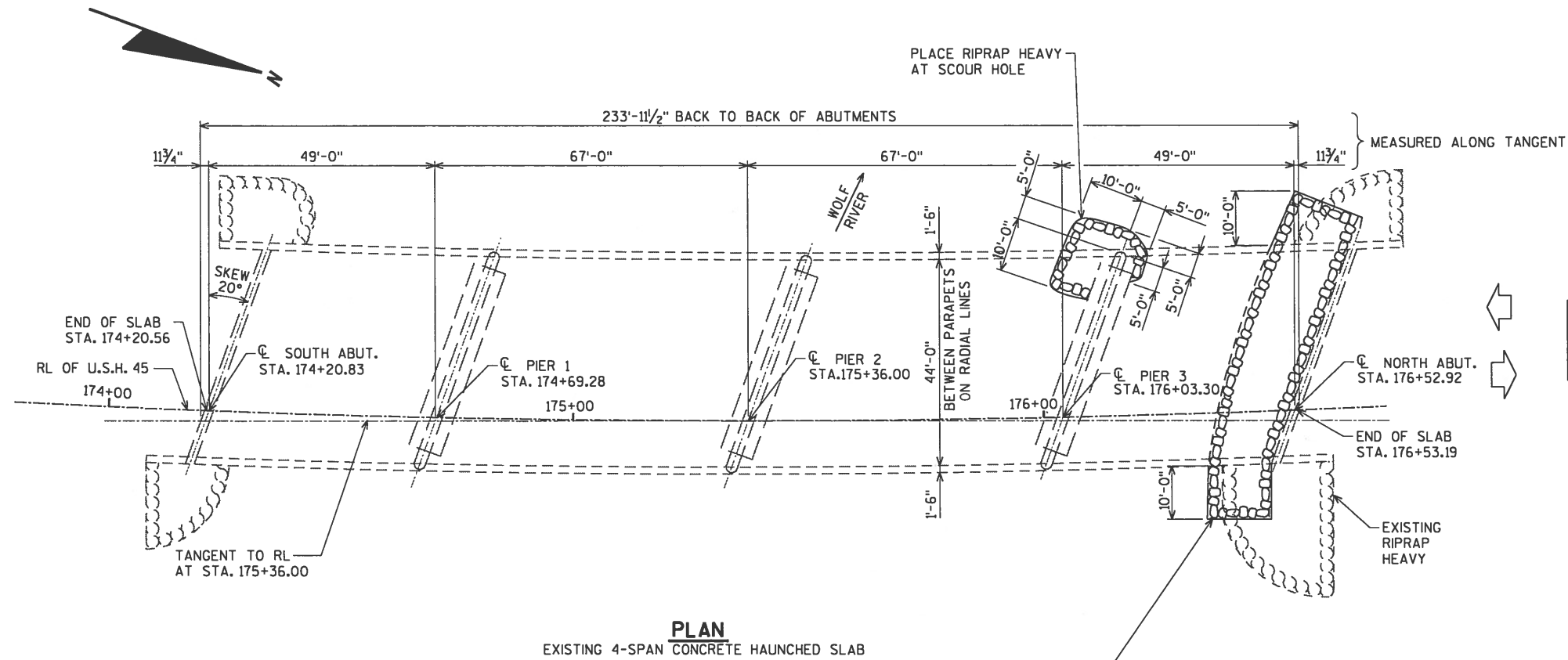
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STATE PROJECT NUMBER

1009-44-61

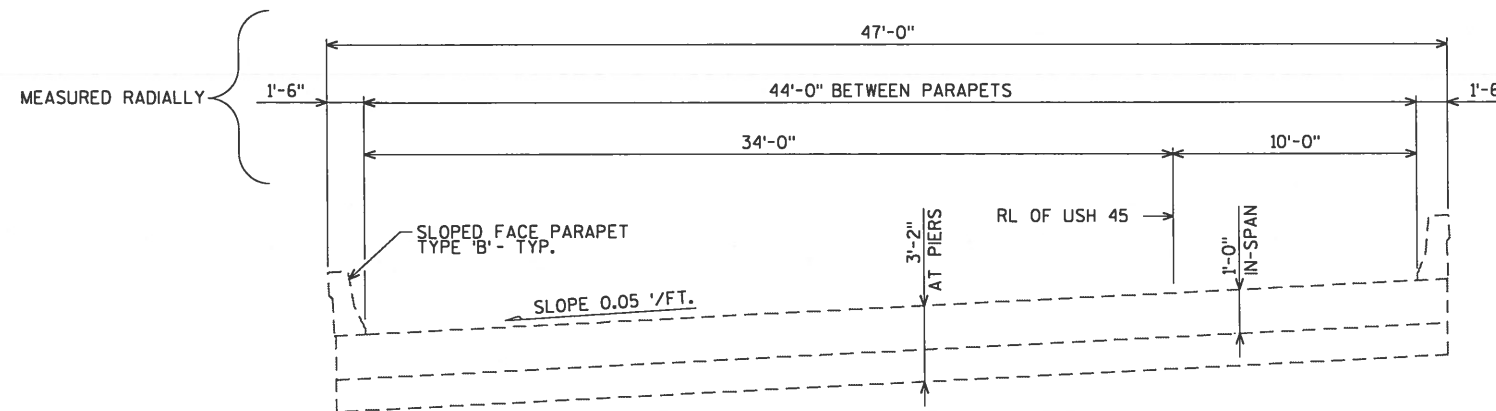


TOTAL ESTIMATED QUANTITIES

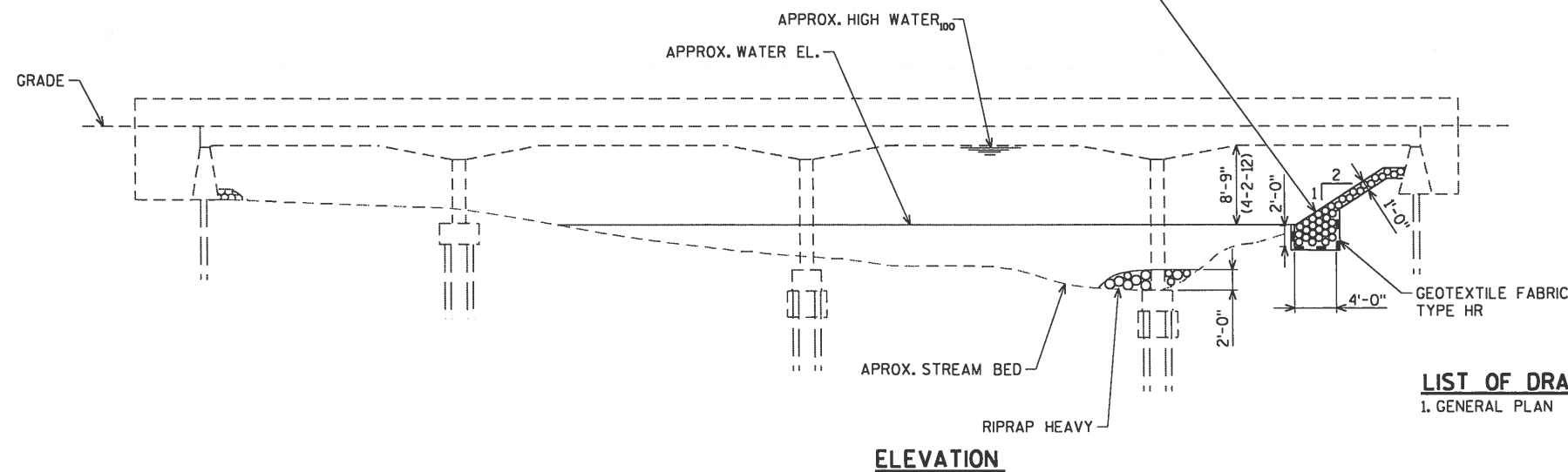
BID ITEM NUMBER	BID ITEM	UNIT	QUANTITY
606.0300	RIPRAP HEAVY	CY	65
645.0120	GEOTEXTILE FABRIC TYPE HR	SY	75

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
DIMENSIONS SHOWN ARE BASED ON THE
ORIGINAL STRUCTURE PLANS.



CROSS SECTION THRU BRIDGE LOOKING NORTH



LIST OF DRAWINGS

1. GENERAL PLAN

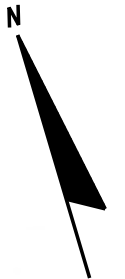


BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
DAN SYDOW
(715)-834-3161

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY AYRES ASSOCIATES 3433 Oakwood Hills Parkway Eau Claire, WI 54701 www.AyresAssociates.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED	<i>William C. Dreher</i>	KAR	08/12/13
CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-44-148			
USH 45 OVER WOLF RIVER			
COUNTY	OUTAGAMIE	TOWN/CITY/VILLAGE	HORTONIA
DESIGN SPEC. MAINTENANCE (N/A)			
DESIGNED BY	DNS	DESIGN CK'D. KAZ	DRAWN BY KAZ
GENERAL PLAN		SHEET 1 OF 1	

8



PROPOSED WORK: B-68-22: REPAIR CONCRETE SURFACE AT THE ENDS OF THE ABUTMENTS. REPLACE 8' OF PARAPET AND WINGWALL AT NORTHEAST QUADRANT.

B-68-76: REPAIR CONCRETE SURFACE AT THE ENDS OF ABUTMENTS. REPLACE WINGWALLS IN THE NORTHEAST AND SOUTHWEST QUADRANTS. REPLACE 8' OF PARAPET IN THE SOUTHWEST QUADRANT. PLACE A POLYMER OVERLAY ON THE ENTIRE CONCRETE DECK.

PROJECT NO: 1510-02-65

HWY: USH 10

COUNTY: WAUPACA

SITE OVERVIEW (B-68-22/76)

SHEET

E

LEGEND

- POST WITH ATTACHED SIGN
- DRUM WITH WARNING LIGHT (TYPE C)
- DRUM
- ARROW BOARD
- *** REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- WORK ZONE

GENERAL NOTES FOR SIGNS PCMS

THE FIELD ENGINEER WILL MAKE THE FINAL DETERMINATION TO THE PLACEMENT OF PCMS BOARDS BASED UPON EXISTING CONDITIONS AND STAGING.

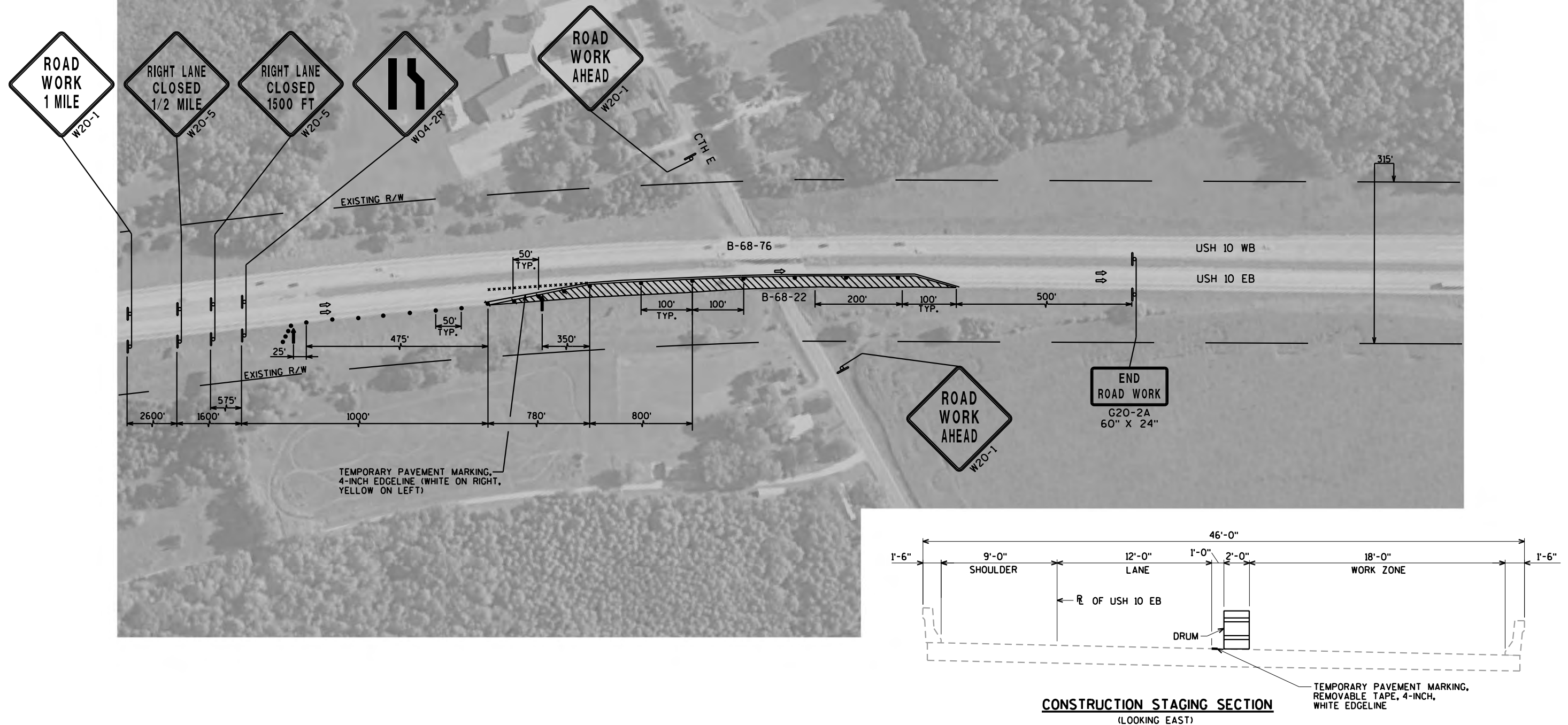
CONSIDER GEOMETRICS WHEN LOCATING PCMS SO THE DRIVER HAS A CLEAR VIEW OF THE BOARD FOR A MINIMUM OF 1000 FEET IN FRONT OF THE PCMS.

PCMS SHOULD BE PLACED AS FAR AWAY FROM LIVE TRAFFIC LANES AS POSSIBLE WITHOUT HAMPERING VISIBILITY. IN ADVANCE OF HIGHWAY CONSTRUCTION PROJECTS, THE SIGNS SHOULD BE PLACED ON THE BACKSLOPE BEYOND THE DITCH. THE LOCATION SELECTED SHOULD BE AT OR SLIGHTLY ABOVE THE ELEVATION OF THE ROADWAY. FOR INTERMITTENT WORK SUCH AS FREEWAY LANE CLOSURE, OR WHERE SITE CONDITIONS DO NOT ALLOW OTHERWISE, THE SIGNS MAY BE PLACED ON THE SHOULDER. THE SITE SHOULD BE VISITED TO ASSURE VISIBILITY, SAFETY AND MAINTENANCE CONSIDERATIONS. A TAPER OF REFLECTORIZED DRUMS OR BARRICADES SHOULD BE PLACED AHEAD OF PCMS PLACED ON THE SHOULDER IF IT IS NOT SHIELDED BY A BARRIER.

PRIOR TO CONSTRUCTION		DURING LANE CLOSURES	
PHASE 1 (2 SEC.)	PHASE 2 (2 SEC.)	PHASE 1 (2 SEC.)	PHASE 2 (2 SEC.)
BRIDGE WORK BEGINS	"DATE"	BRIDGE WORK AHEAD	LANE CLOSED
7 DAYS MINIMUM PRIOR TO BEGINNING WORK		APPLICABLE TO ANY STAGE WITH LANE CLOSURE	

SEE SDD "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 MPH" FOR ADDITIONAL INFORMATION.

DIMENSIONS ARE BASED FROM THE ENDS OF DECK AT THE CENTERLINE.

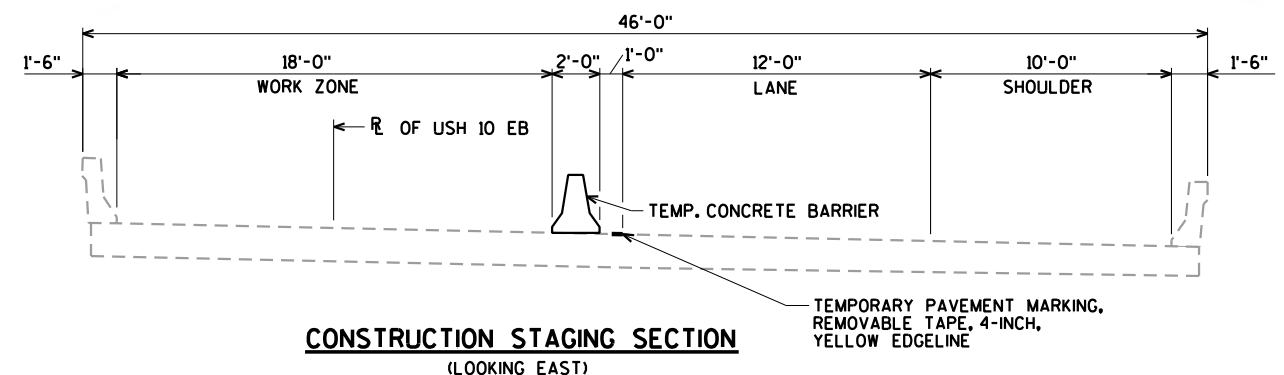
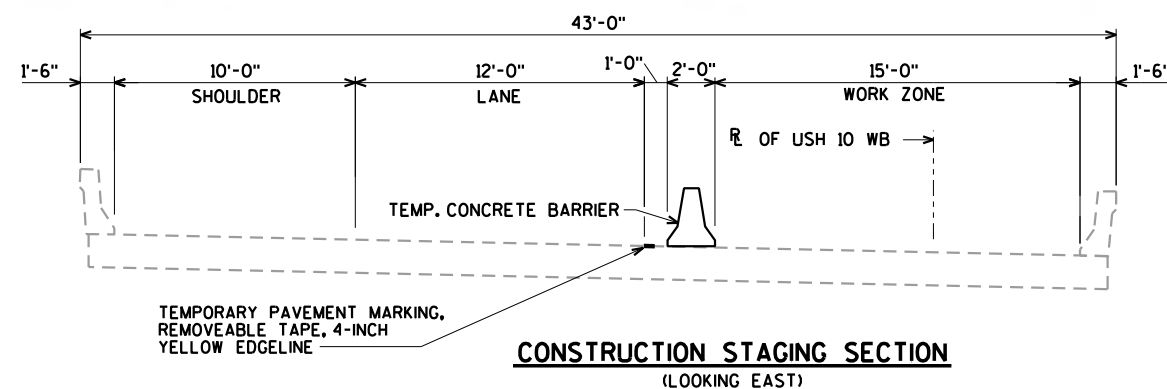
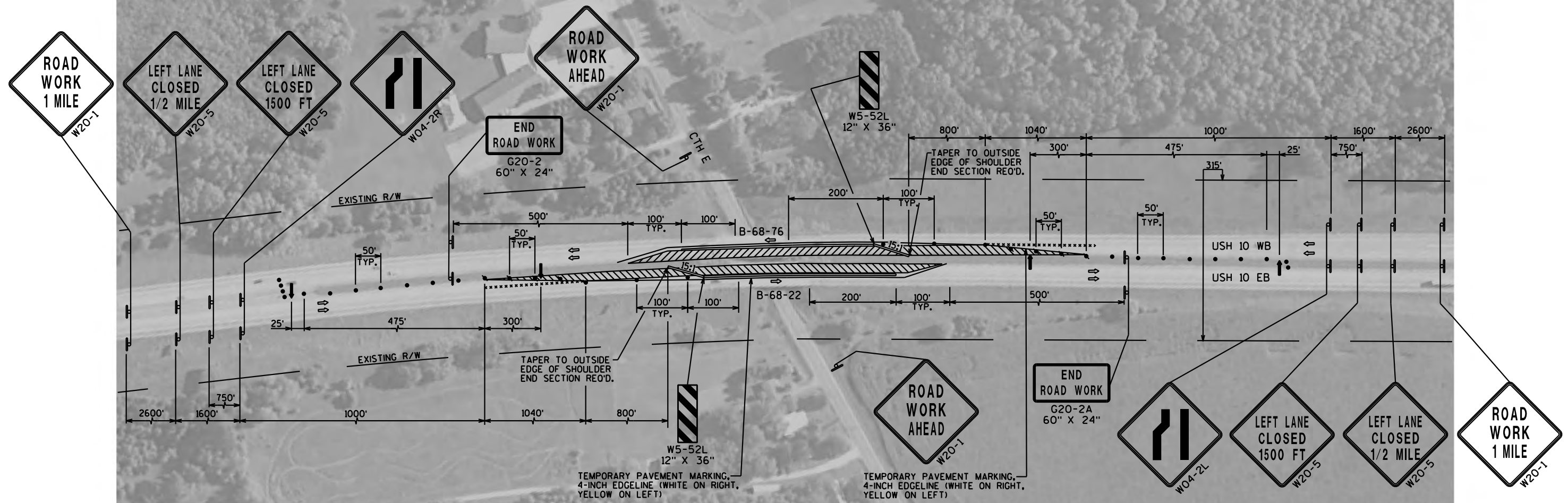


LEGEND

- POST WITH ATTACHED SIGN
- DRUM WITH WARNING LIGHT (TYPE C)
- DRUM
- ARROW BOARD
- *** REMOVING PAVEMENT MARKING
- TEMPORARY PRECAST CONCRETE BARRIER
- DIRECTION OF TRAFFIC
- WORK ZONE

SEE SDD "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 MPH WITH BARRIER" FOR ADDITIONAL INFORMATION.

DIMENSIONS ARE BASED FROM THE ENDS OF DECK AT THE CENTERLINE.

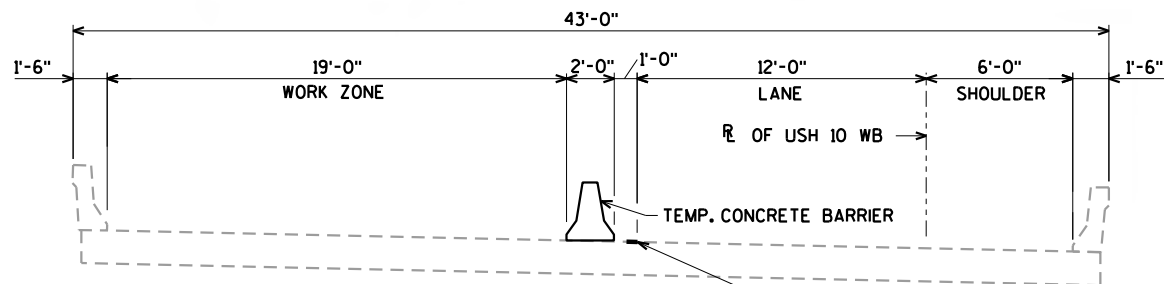
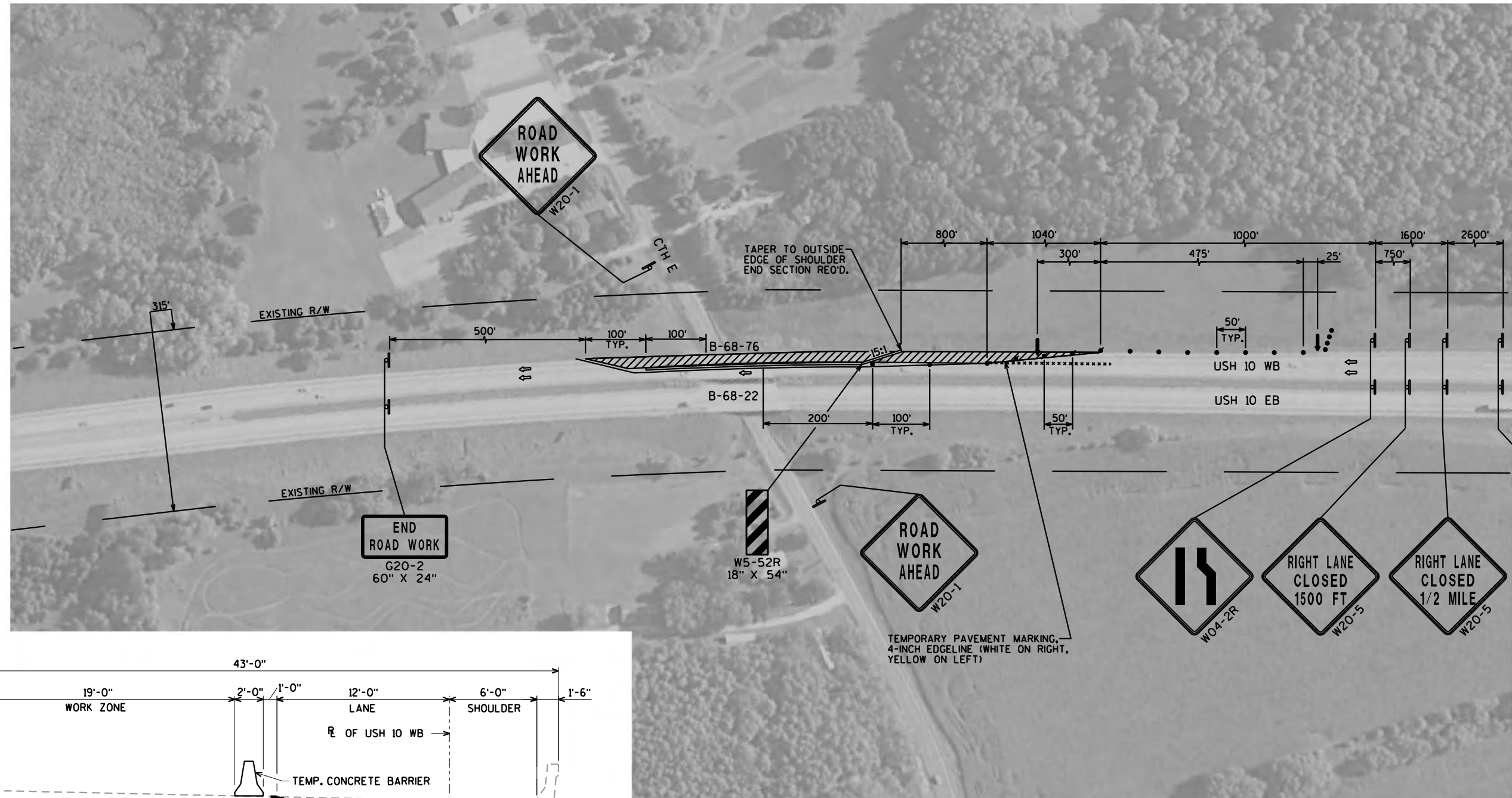
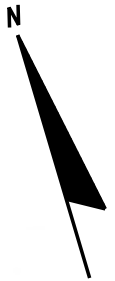


LEGEND

- POST WITH ATTACHED SIGN
- DRUM WITH WARNING LIGHT (TYPE C)
- DRUM
- ARROW BOARD
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SEE SDD "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 MPH WITH BARRIER" FOR ADDITIONAL INFORMATION.

DIMENSIONS ARE BASED FROM THE ENDS OF DECK AT THE CENTERLINE.



CONSTRUCTION STAGING SECTION
(LOOKING EAST)

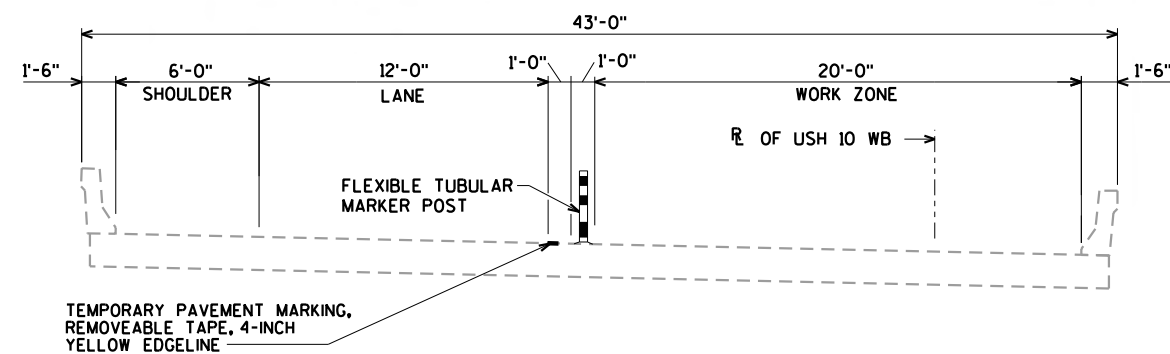
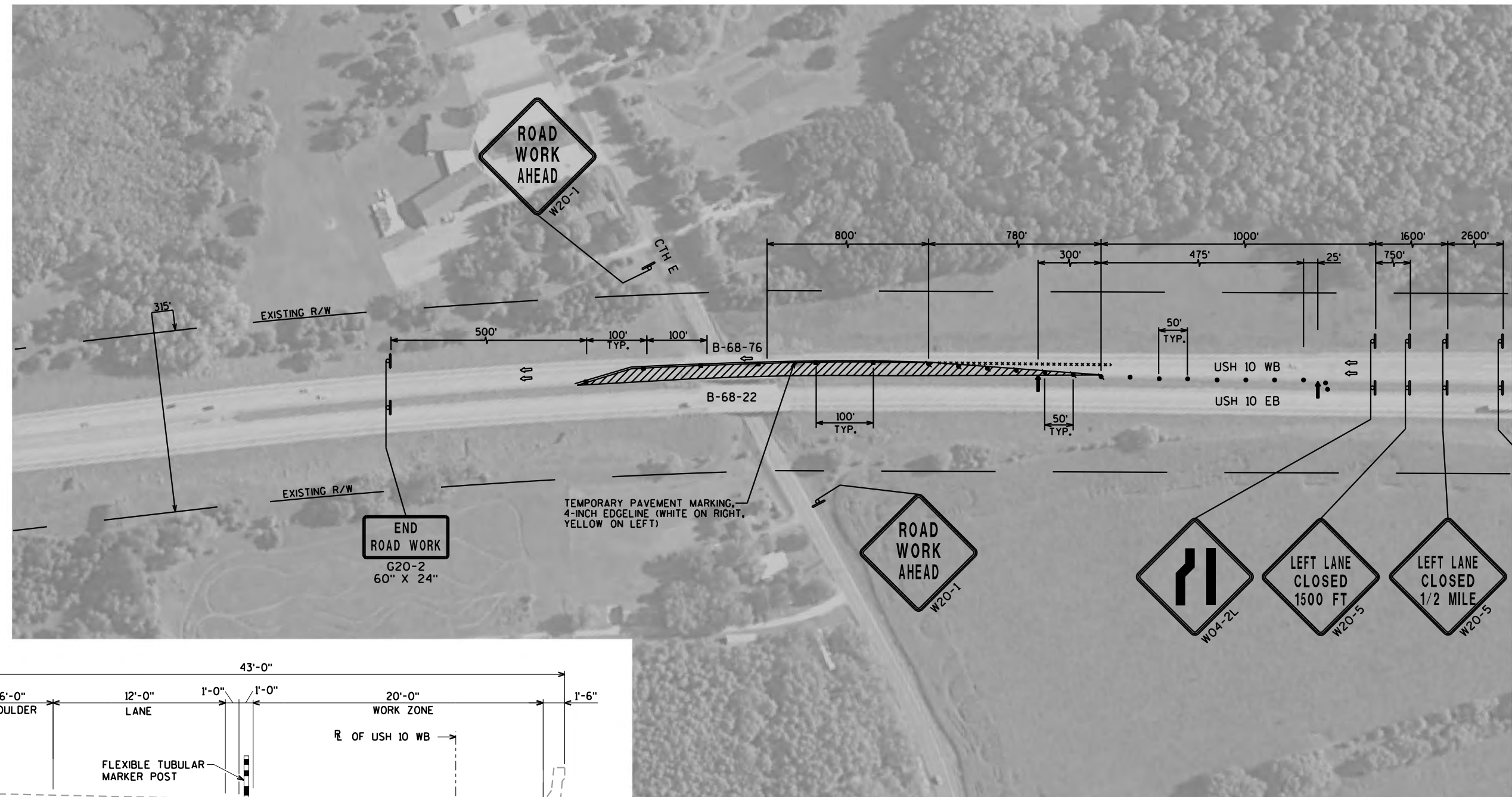
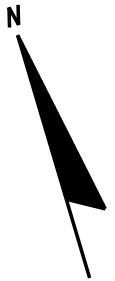
TEMPORARY PAVEMENT MARKING,
REMOVEABLE TAPE, 4-INCH
WHITE EDGELINE

LEGEND

- POST WITH ATTACHED SIGN
- DRUM WITH WARNING LIGHT (TYPE C)
- DRUM
- FLEXIBLE TUBULAR MARKER POST
- *** REMOVING PAVEMENT MARKING
- TEMPORARY PRECAST CONCRETE BARRIER
- DIRECTION OF TRAFFIC
- WORK ZONE
- ARROW BOARD

SEE SDD "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 MPH" FOR ADDITIONAL INFORMATION.

DIMENSIONS ARE BASED FROM THE ENDS OF DECK AT THE CENTERLINE.



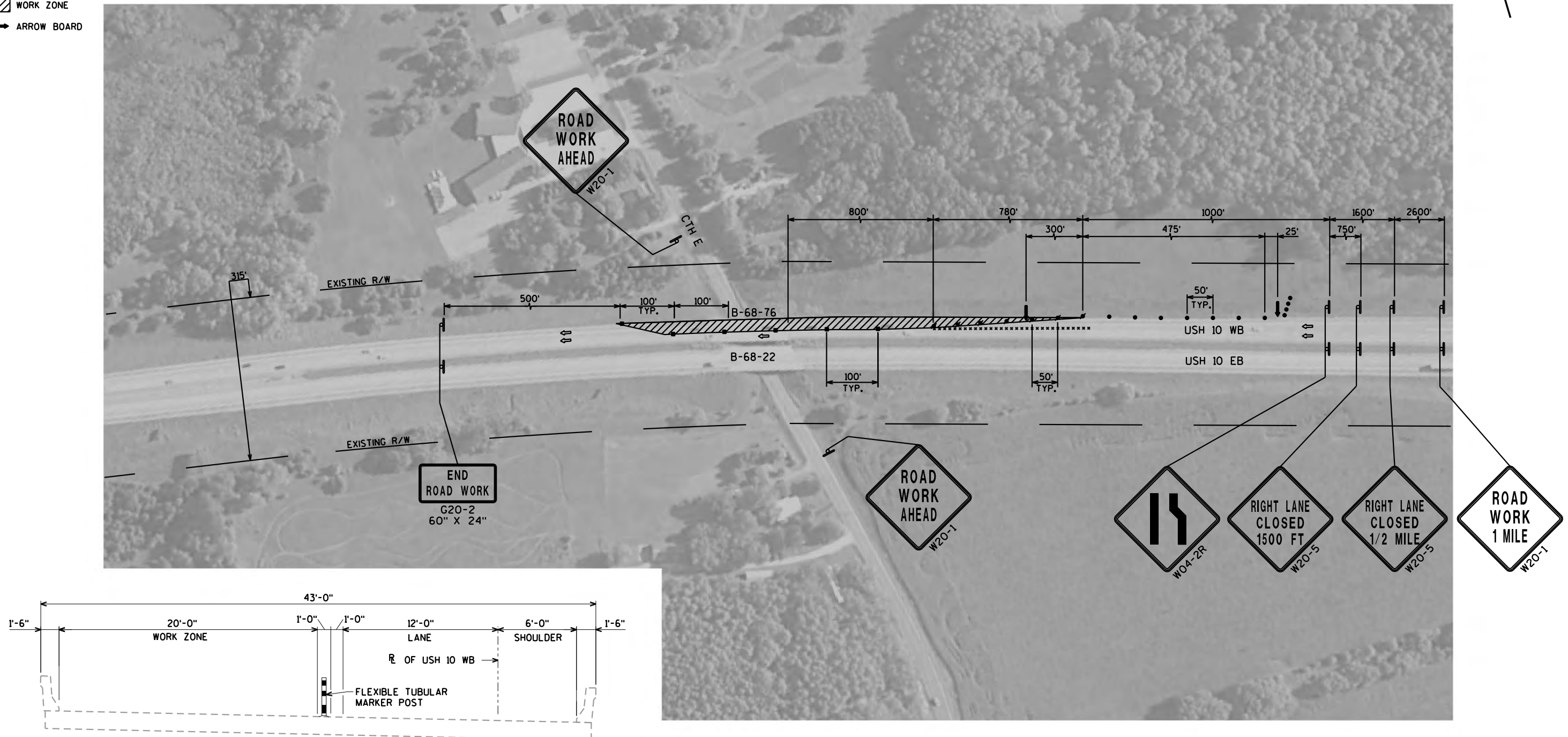
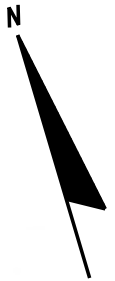
CONSTRUCTION STAGING SECTION
(LOOKING EAST)

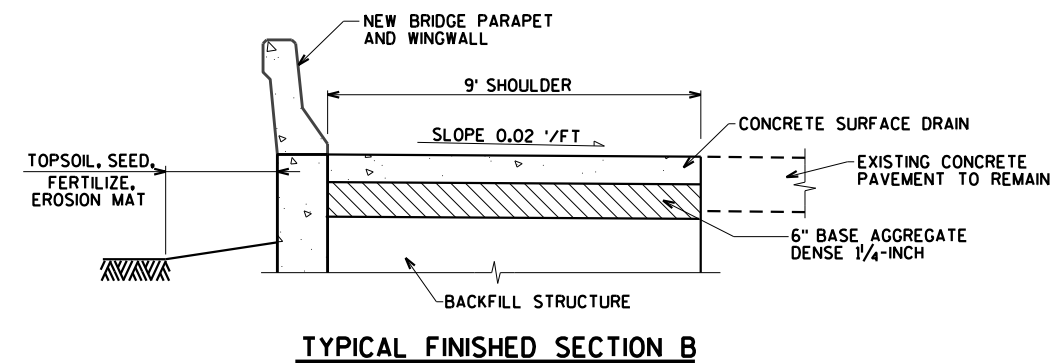
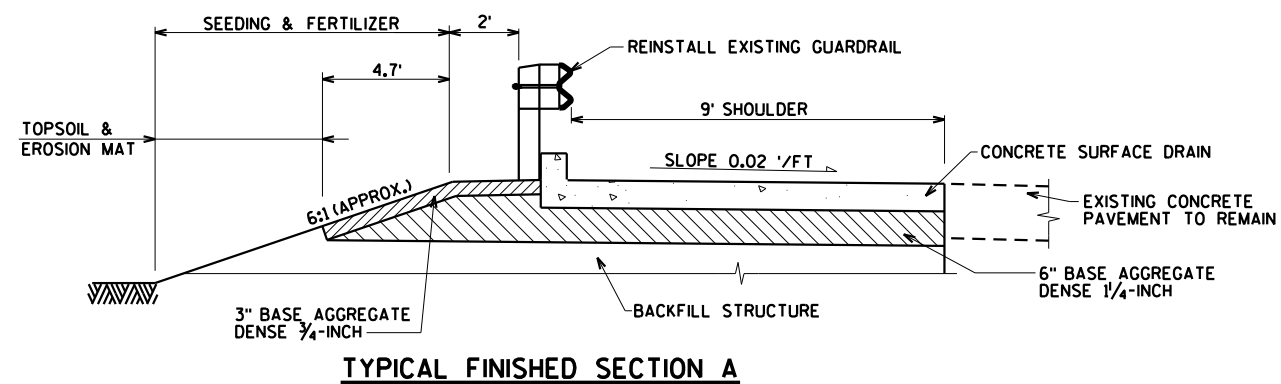
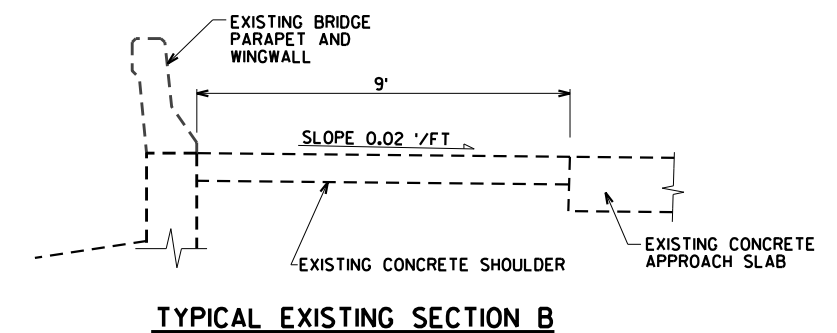
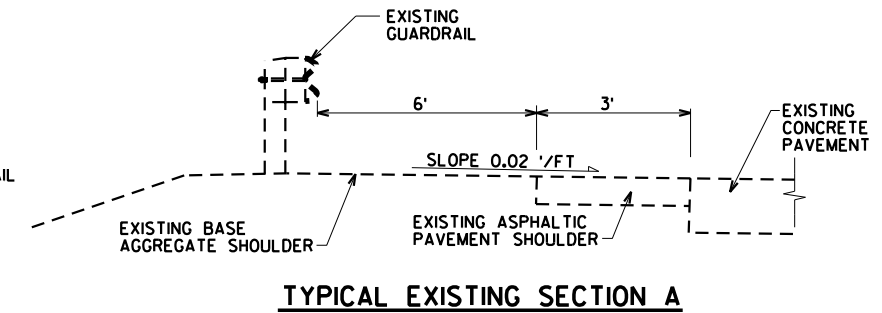
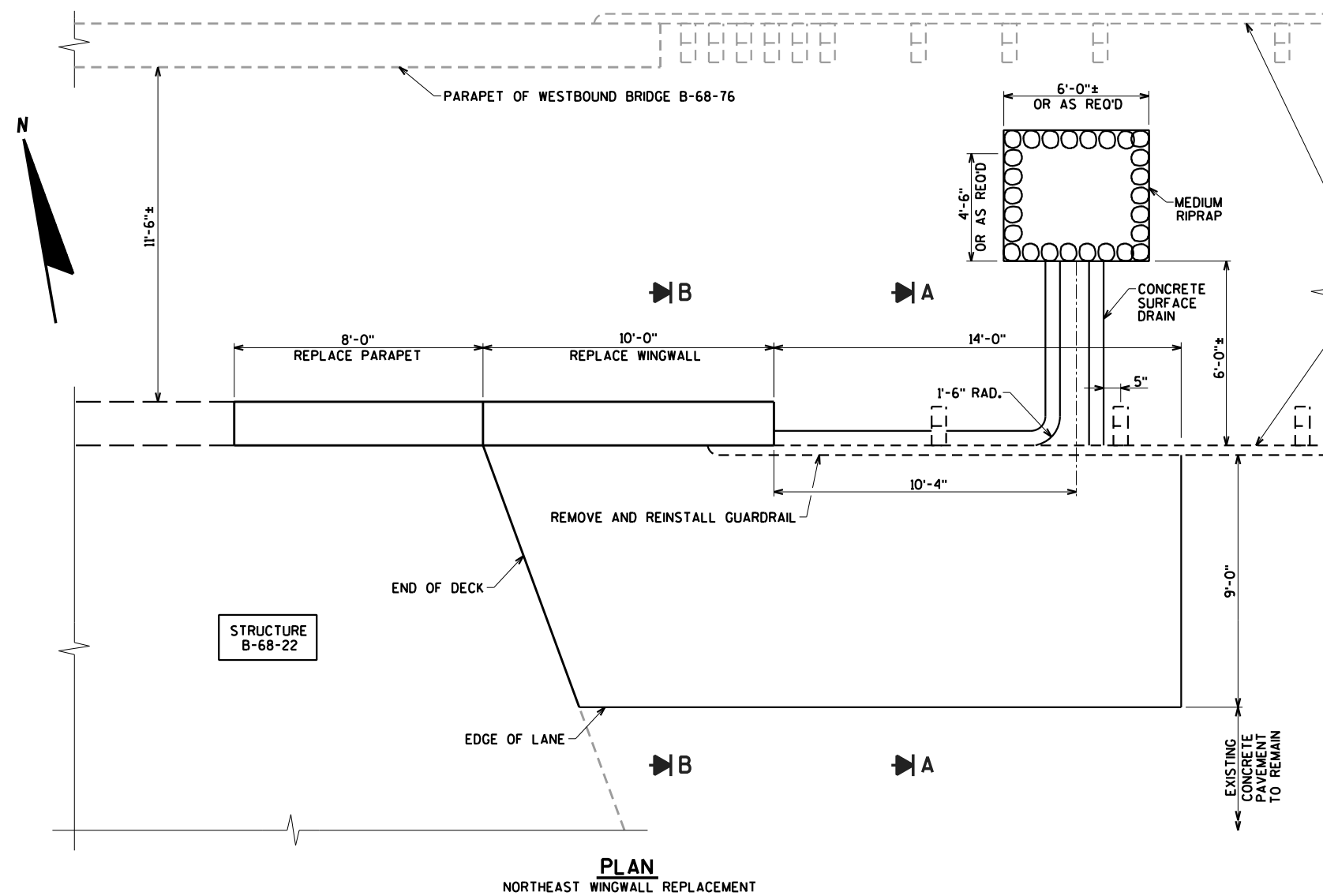
LEGEND

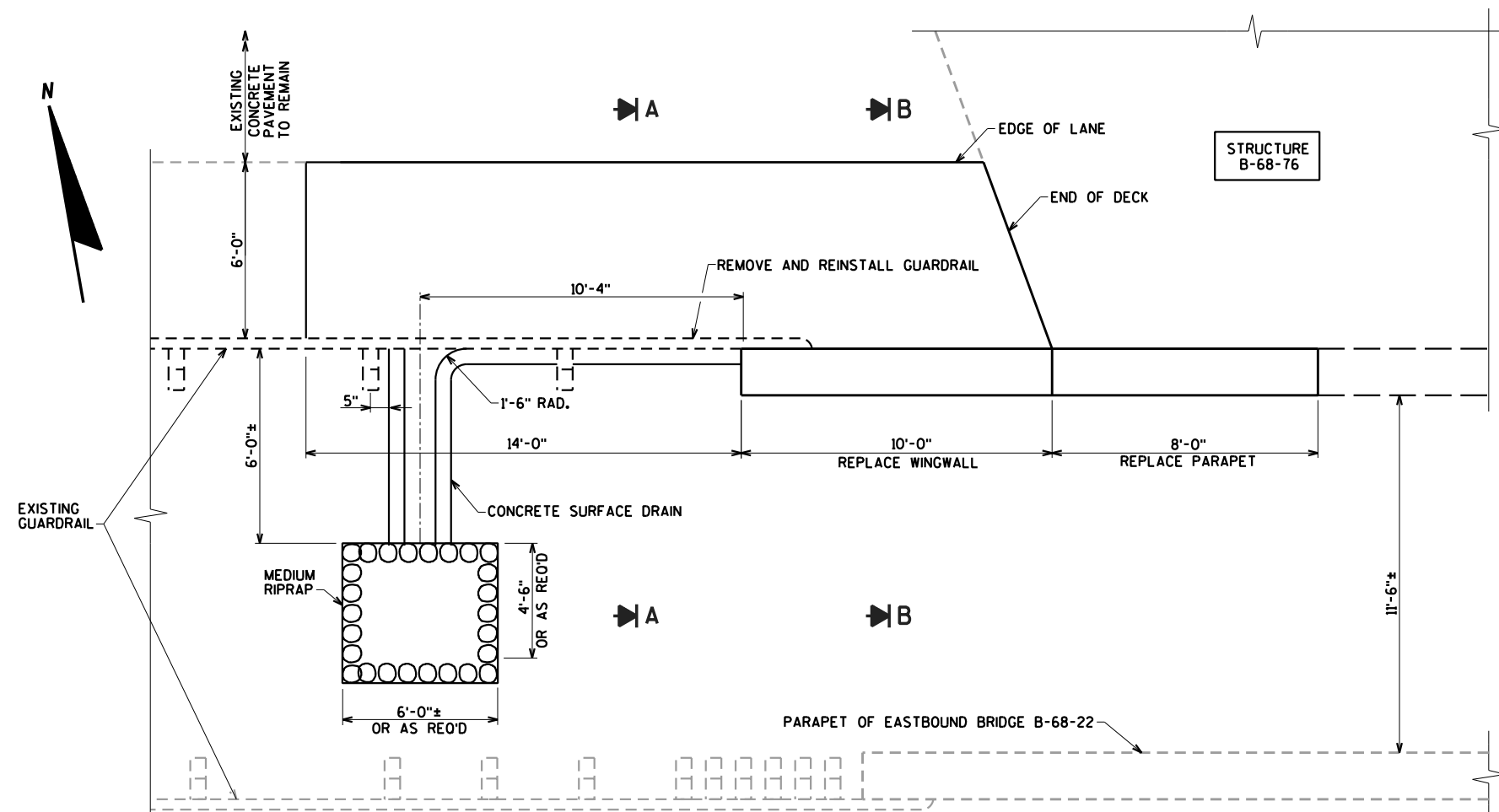
- POST WITH ATTACHED SIGN
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- TEMPORARY PRECAST CONCRETE BARRIER
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 - WORK ZONE
 - ARROW BOARD

SEE SDD "TRAFFIC CONTROL, LANE CLOSURE,
SPEEDS GREATER THAN 40 MPH" FOR
ADDITIONAL INFORMATION.

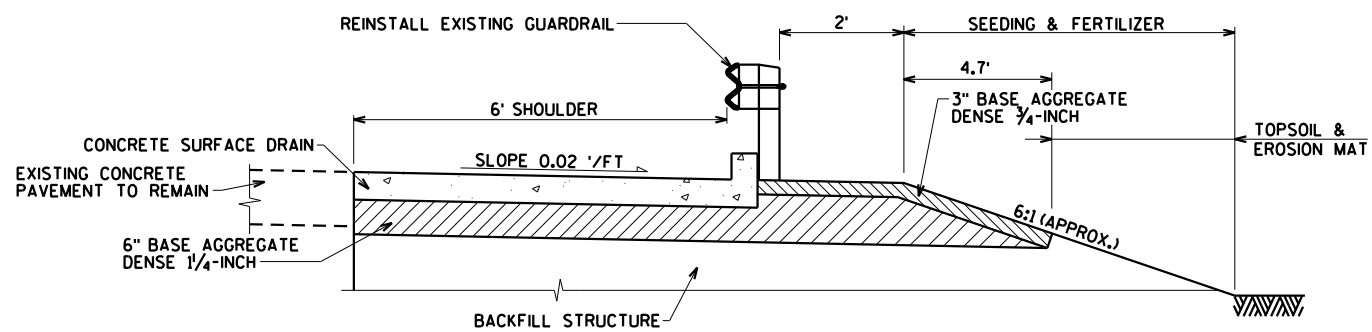
DIMENSIONS ARE BASED FROM THE
ENDS OF DECK AT THE CENTERLINE.



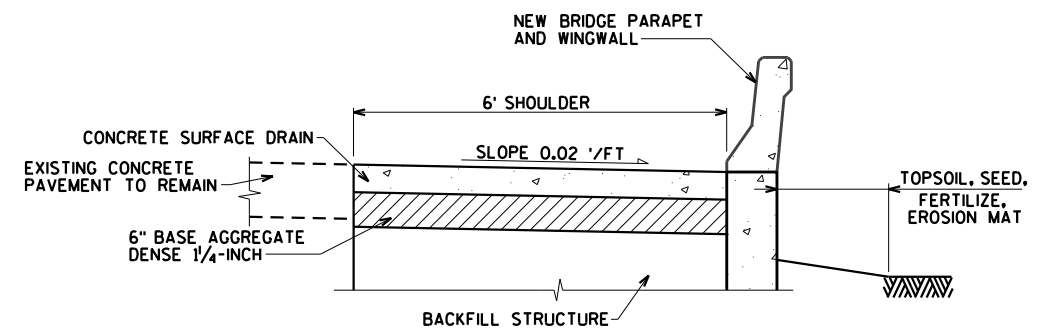




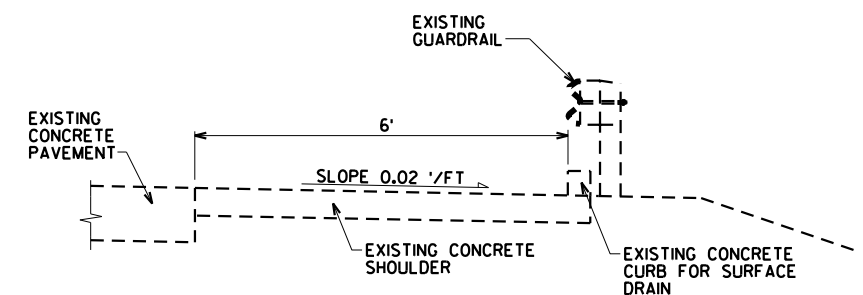
PLAN
SOUTHWEST WINGWALL REPLACEMENT



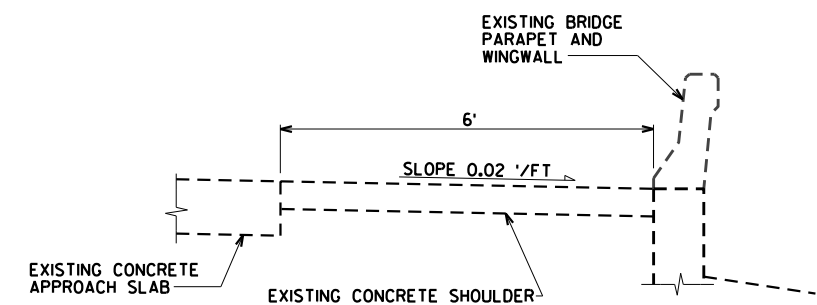
TYPICAL FINISHED SECTION A



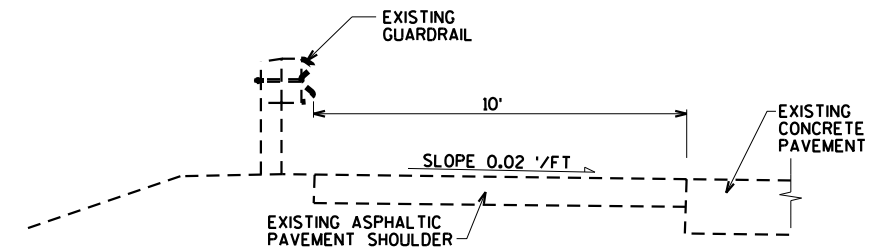
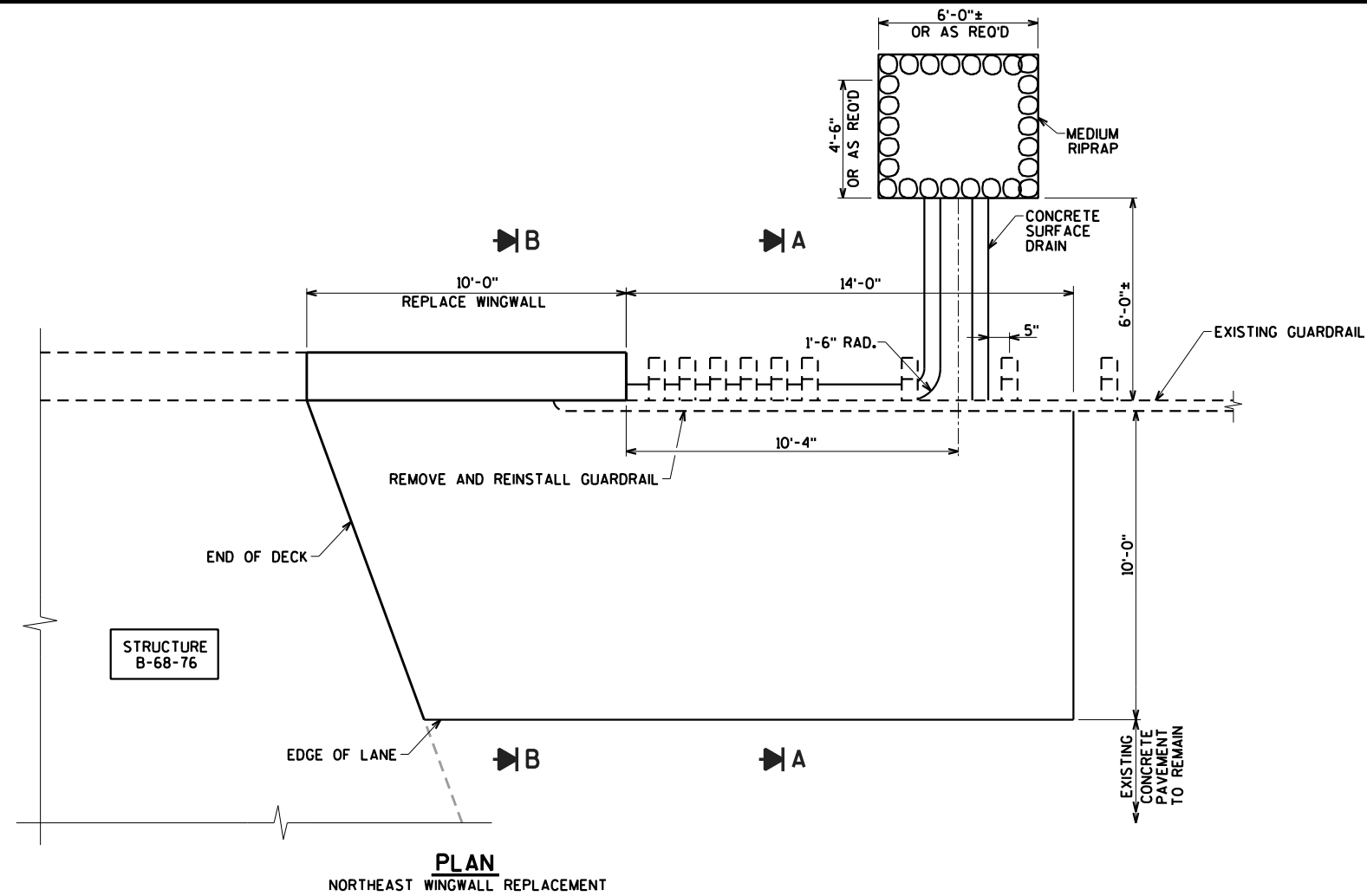
TYPICAL FINISHED SECTION B



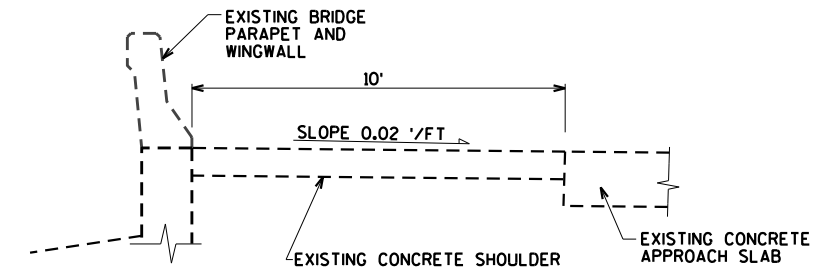
TYPICAL EXISTING SECTION A



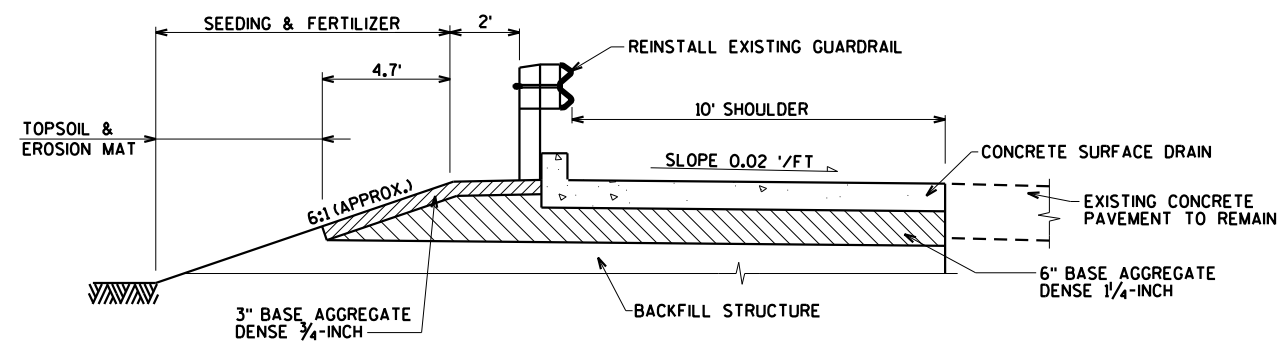
TYPICAL EXISTING SECTION B



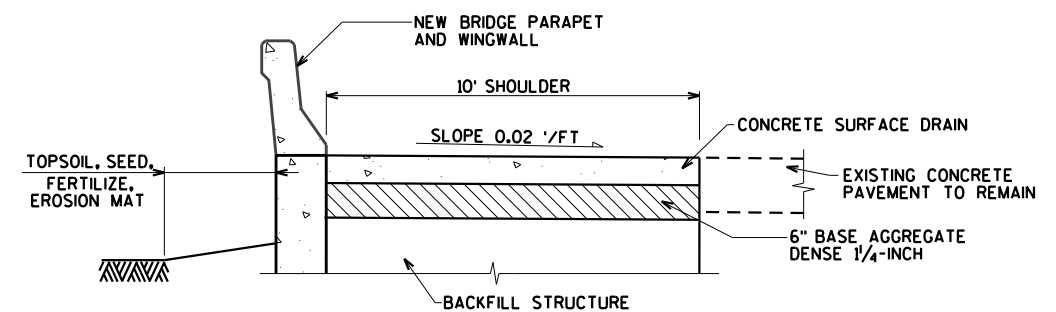
TYPICAL EXISTING SECTION A



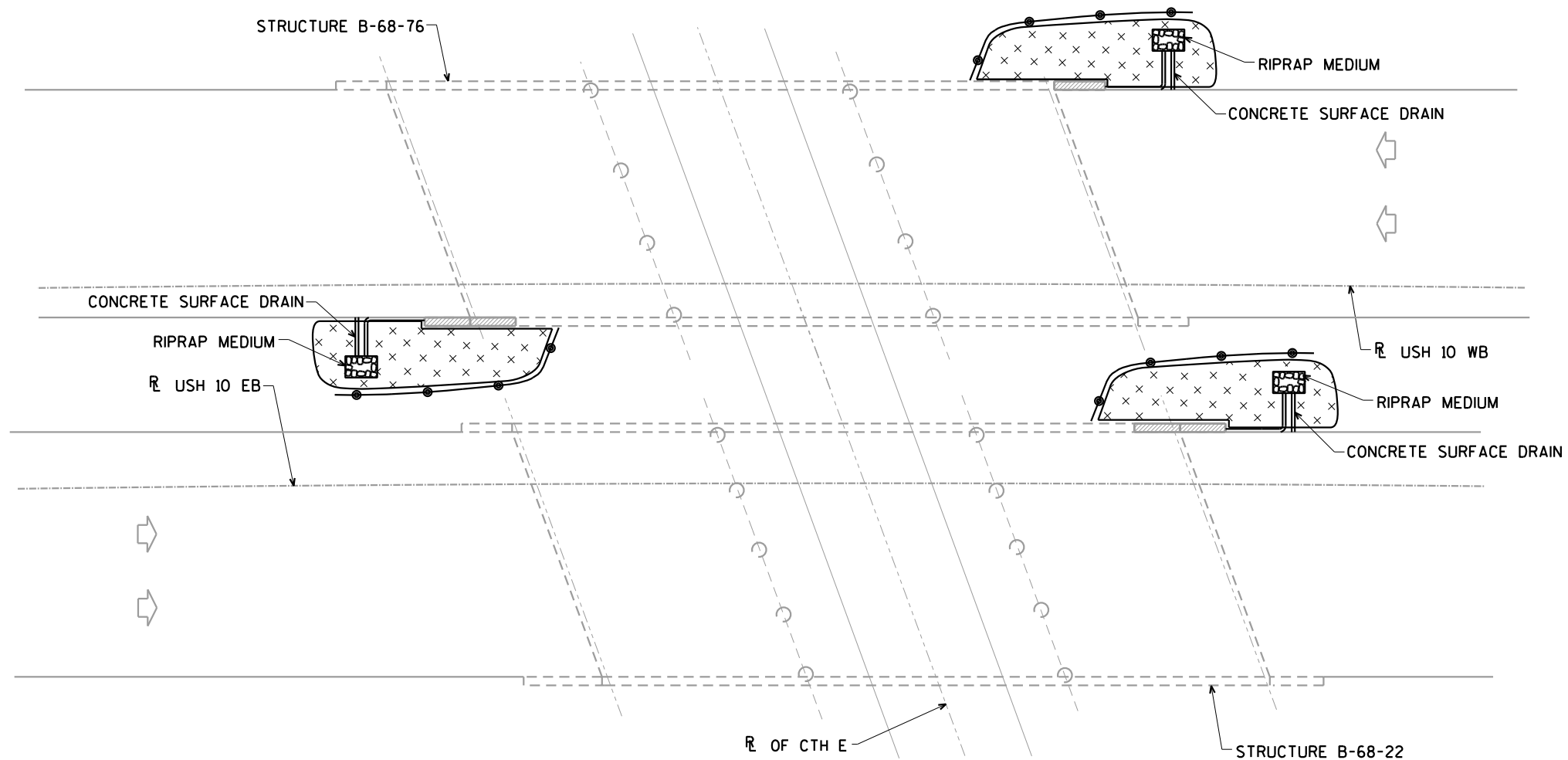
TYPICAL EXISTING SECTION B



TYPICAL FINISHED SECTION A



TYPICAL FINISHED SECTION B

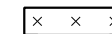


	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33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

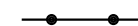
TOTAL PROJECT AREA = 0.41 ACRES

TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.23 ACRES

LEGEND

EROSION MAT CLASS II TYPE C
(TOPSOIL, FERTILIZER, SEED, AND MULCH)

TEMPORARY DITCH CHECKS (UNDISTRIBUTED)



SILT FENCE



RIPRAP MEDIUM

204.0100 REMOVING PAVEMENT

LOCATION	SY
B-68-22	8
B-68-76	24
TOTAL	32

204.0110 REMOVING ASPHALTIC SURFACE

LOCATION	SY
B-68-22	5
B-68-76	16
TOTAL	21

305.0110 BASE AGGREGATE DENSE 3/4-INCH

LOCATION	TON
B-68-22	2
B-68-76	2
TOTAL	4

305.0120 BASE AGGREGATE DENSE 1 1/4-INCH

LOCATION	TON
B-68-22	15
B-68-76	25
TOTAL	40

416.1015 CONCRETE SURFACE DRAINS HES

LOCATION	CY
B-68-22	6
B-68-76	10
TOTAL	16

CONCRETE BARRIER TEMPORARY PRECAST

LOCATION	603.8000 DELIVERED LF	603.8125 INSTALLED LF
B-68-22	690	690
B-68-76	930	1,350
TOTAL	1,620	2,040

606.0200 RIPRAP MEDIUM

LOCATION	CY
B-68-22	2
B-68-76	3
TOTAL	5

TOPSOIL, FERTILIZER, SEED, & MULCH

LOCATION	625.0100 TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING NO. 20 LB
B-68-22 (BOTH BRIDGES)	45	45	0.1	1.5
B-68-76	90	90		3.0
TOTAL	135	135	0.1	4.5

SILT FENCE & SILT FENCE MAINTENANCE

LOCATION	628.1504 LF	628.1520 MAINTENANCE LF
B-68-22	60	120
B-68-76	115	230
TOTAL	175	350

MOBILIZATION EROSION CONTROL

LOCATION	628.1905 MOBILIZATION EROSION CONTROL EACH	628.1910 MOBILIZATION EMERGENCY EROSION CONTROL EACH
USH 10	2	2

628.2027 EROSION MAT CLASS II TYPE C

LOCATION	SY
B-68-22	60
B-68-76	115
TOTAL	175

628.7504 TEMPORARY DITCH CHECKS

LOCATION	LF
USH 10 (UNDISTRIBUTED)	50

642.5001 FIELD OFFICE TYPE B

LOCATION	EACH
B-68-22/76	1

ALL ITEMS ON THIS SHEET
ARE CATEOGRY 0010 UNLESS
OTHERWISE NOTED.
ADDITIONAL QUANTITIES
SHOWN ELSEWHERE ON PLAN.

TRAFFIC CONTROL DRUMS, LIGHTS, ARROW BOARDS, AND SIGNS

LOCATION		643.0300 DRUMS		643.0715 WARNING LIGHTS TYPE C		643.0800 ARROW BOARDS		643.0900 SIGNS	
		EACH	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAYS
B-68-22	MEDIAN LANE	46	16	21	16	2	16	13	16
B-68-22	OUTSIDE LANE	43	4	16	4	2	4	12	4
SUBTOTAL		908		400		40		256	
B-68-76	MEDIAN LANE	46	11	21	11	2	11	13	11
B-68-76	OUTSIDE LANE	44	11	21	11	2	11	13	11
B-68-76	OVERLAY STAGE 1	28	4	16	4	2	4	12	4
B-68-76	OVERLAY STAGE 2	30	4	16	4	2	4	12	4
SUBTOTAL		1,582		590		60		382	
TOTAL		2,490		990		100		638	

TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS & BASES

LOCATION		643.0500 POSTS EACH	643.0600 BASES EACH
B-68-76	OVERLAY STAGE 1	11	11
B-68-76	OVERLAY STAGE 2	11	11
TOTAL		22	22

645.0120 GEOTEXTILE FABRIC TYPE HR

LOCATION	SY
B-68-22	8
B-68-76	15
TOTAL	23

643.1050 TRAFFIC CONTROL SIGNS PCMS

LOCATION	DAY
USH 10 WEST OF B-68-22	27
USH 10 EAST OF B-68-76	37
TOTAL	64

646.0106 PAVEMENT MARKING EPOXY 4-INCH

LOCATION	DESCRIPTION	LF
B-68-22	WHITE DASHED CENTERLINE	260
B-68-76	WHITE DASHED CENTERLINE	289.5
B-68-76	WHITE EDGELINE	118
B-68-76	YELLOW EDGELINE	118
B-68-76	SUBTOTAL	525.5
TOTAL		785.5

646.0600 REMOVING PAVEMENT MARKINGS

LOCATION	DESCRIPTION	LF
B-68-22	WHITE DASHED CENTERLINE	260
B-68-76	WHITE DASHED CENTERLINE	260
TOTAL		520

649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH

LOCATION	DESCRIPTION	LF
B-68-22	YELLOW EDGELINE	2,630
B-68-22	WHITE EDGELINE	2,370
B-68-22	SUBTOTAL	5,000
B-68-76	YELLOW EDGELINE	4,385
B-68-76	WHITE EDGELINE	4,385
B-68-76	SUBTOTAL	8,770
TOTAL		13,770

690.0150 SAWING ASPHALT

LOCATION	LF
B-68-22	3
B-68-76	10
TOTAL	13

SPV.0090.02 REMOVE AND REINSTALL GUARDRAIL

LOCATION	LF
B-68-22	25
B-68-76	50
TOTAL	75

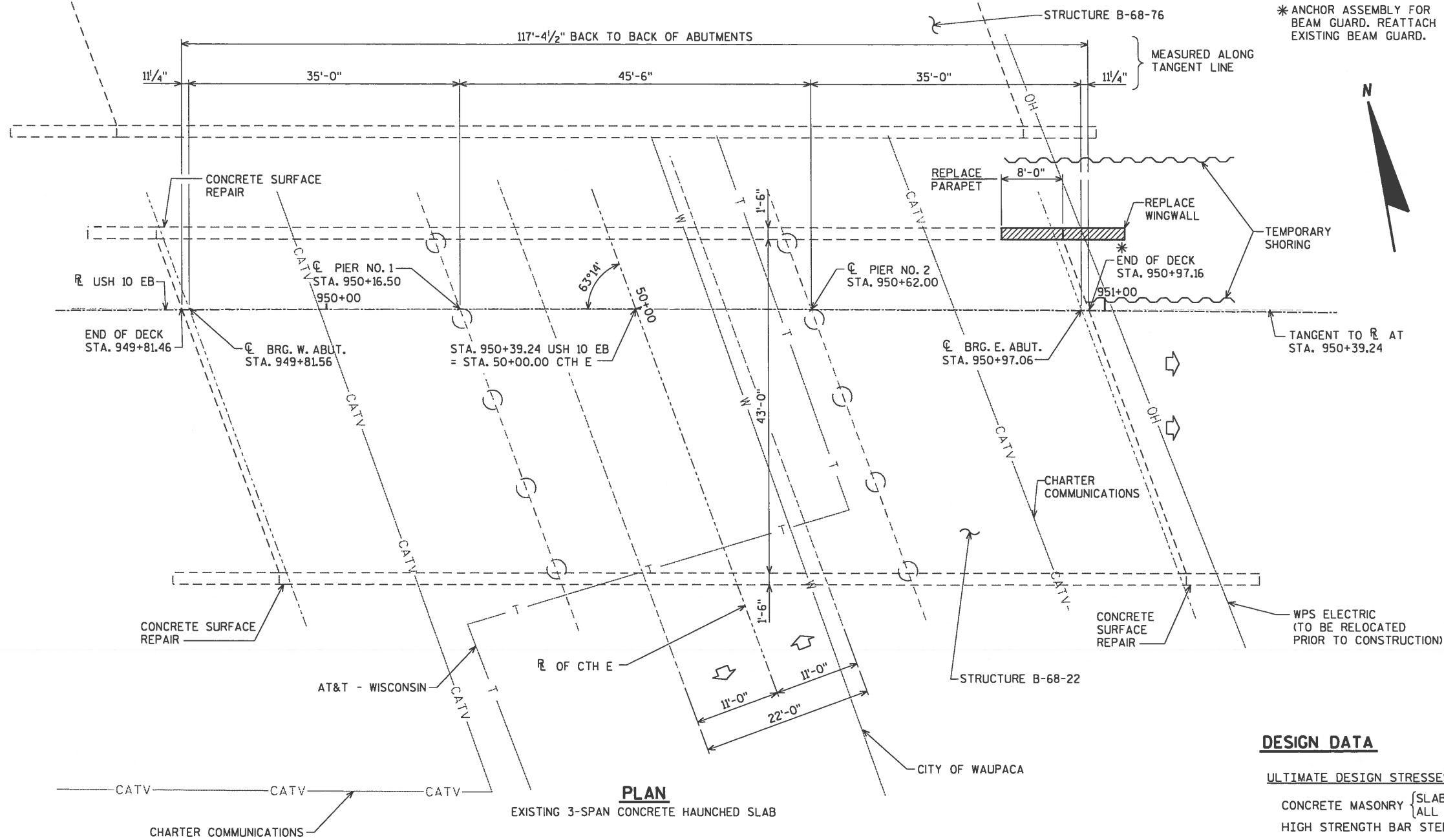
ALL ITEMS ON THIS SHEET
ARE CATEOGRY 0010 UNLESS
OTHERWISE NOTED.
ADDITIONAL QUANTITIES
SHOWN ELSEWHERE ON PLAN.

\$PRNAME\$
U:\42-0853.00 - NC Region Bridge Repairs 2011\Existing Plans & Reports\B-68-22\Existing Struc

DATE: _____
DATE: _____
DATE: _____

CHECKED BY: _____
BACK CHECKED BY: _____
CORRECTED BY: _____

8



LIST OF DRAWINGS

1. GENERAL PLAN
2. TYPICAL SECTION, QUANTITIES, AND NOTES
3. ABUTMENT WINGWALL
4. SLOPED FACE PARAPET "B"

DESIGN DATA

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY { SLAB $f'_c = 4,000$ p.s.i.
ALL OTHER $f'_c = 3,500$ p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60) $f_y = 60,000$ p.s.i.



BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
DAN SYDOW
(715)-834-3161

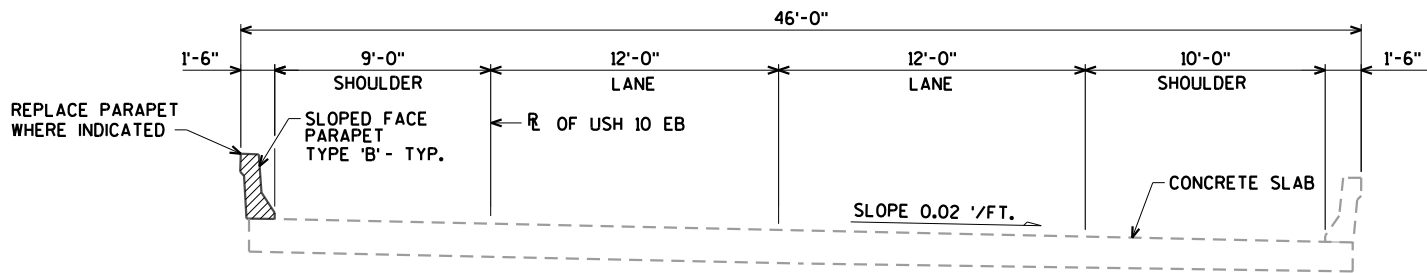
NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY AYRES ASSOCIATES 3433 Oakwood Hills Parkway Eau Claire, WI 54701 www.AyresAssociates.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED	William C. Dreher, KAR		08/13/13
CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-68-22			
USH 10 EB OVER CTH E			
COUNTY	WAUPACA	TOWN/CITY/VILLAGE	WAUPACA
DESIGN SPEC.	REHABILITATION	N/A	
DESIGNED BY	DNS	DESIGN CK'D.	KAZ
DRAWN BY	KAZ	PLANS CK'D.	DNS
GENERAL PLAN			SHEET 1 OF 4

8

\$PRNAME\$
U:\42-0853.00 - NC Region Bridge Repairs 2011\Existing Plans & Reports\B-68-22\Existing Structure_new.dgn

STATE PROJECT NUMBER

1510-02-65



CROSS SECTION THRU BRIDGE LOOKING EAST

GENERAL NOTES

- DRAWINGS SHALL NOT BE SCALED.
BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS SHOWN OR NOTED OTHERWISE.
THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.
THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMIT FOR EXCAVATION FOR STRUCTURES.
AT ABUTMENTS ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE.
PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED TO TOP AND INSIDE FACES OF NEW PARAPETS.
UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK.
DIMENSIONS SHOWN ARE BASED ON ORIGINAL STRUCTURE PLANS.
ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1" DEEP SAW CUT.
JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M 213.

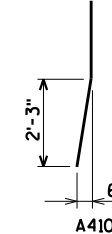
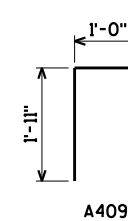
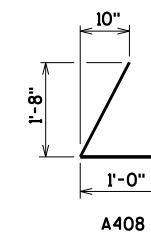
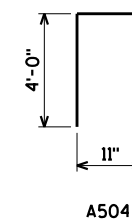
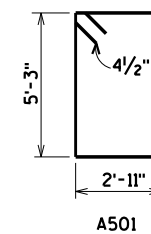
TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	QUANTITY
203.0200	REMOVING OLD STRUCTURE STATION 950+39.24	LS	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-68-22	LS	1
206.6000.S	TEMPORARY SHORING	SF	250
210.0100	BACKFILL STRUCTURE	CY	80
502.0100	CONCRETE MASONRY BRIDGES	CY	10
502.3200	PROTECTIVE SURFACE TREATMENT	SY	8
502.5002	MASONRY ANCHOR TYPE L NO. 4 BARS	EACH	8
502.5005	MASONRY ANCHOR TYPE L NO. 5 BARS	EACH	6
502.5010	MASONRY ANCHOR TYPE L NO. 6 BARS	EACH	8
502.6102	MASONRY ANCHOR TYPE S 1 1/2-INCH	EACH	6
502.6105	MASONRY ANCHOR TYPE S 5/8-INCH	EACH	11
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	960
509.1500	CONCRETE SURFACE REPAIR	SF	25
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	4
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	1
	NON-BID ITEMS		
	FILLER	SIZE	1/2"






- UNDISTRIBUTED QUANTITY FOR REPAIRS AT ENDS OF ABUTMENTS AS DIRECTED BY THE ENGINEER.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-68-22			
DRAWN BY KAZ		PLANS CK'D. DNS	
TYPICAL SECTION, QUANTITIES, AND NOTES			SHEET 2 OF 4

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

[illegible]

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

-  STRIKE OFF AS SHOWN AND LEAVE ROUGH
-  VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING
-  OPT. KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6".
-  18" RUBBERIZED MEMBRANE WATERPROOFING ON BACK FACE. NOT REQUIRED IF CONST. JT. IS NOT USED.
-  3/4" 'V' GROOVE ON F.F. OF WING WALL - NOT REQUIRED IF CONST. JT. IS NOT USED.

B.F. DENOTES BACK FACE.

F.F. DENOTES FRONT FACE.

E.F. DENOTES EACH FACE.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-68-22			
		DRAWN BY KAZ	PLANS CK'D. DN
ABUTMENT WINGWALL		SHEET 3 OF 4	



ORIGINAL PLANS PREPARED BY

AVRES
ASSOCIATES

**3433 Oakwood Hills Parkway
Eau Claire, WI 54701
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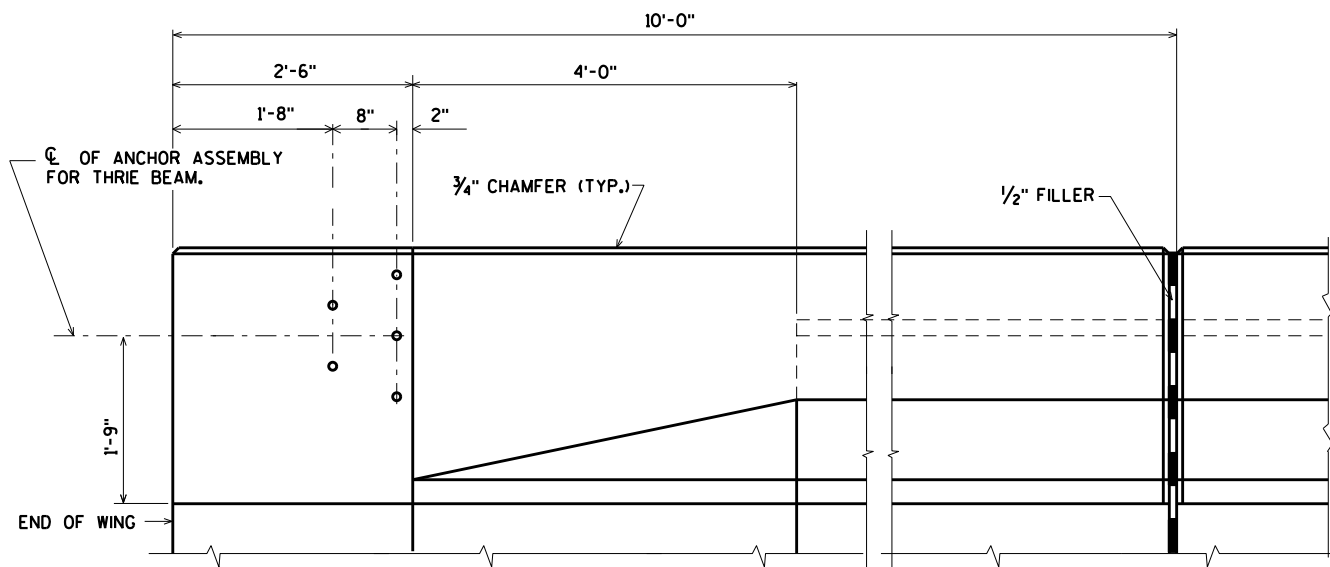
1510-02-65

WEIGHT INCLUDED IN ABUTMENT
WEIGHT SHOWN ON SHEET 3.

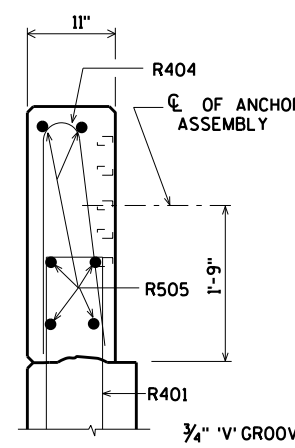
BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED	BAR SERIES	LOCATION
R401	X	15	4-9	X			WING STIRRUP
R402	X	5	3-1	X			WING VERT.
R403	X	5	4-7	X			WING STIRRUP
R404	X	15	4-9	X			WING STIRRUP
R505	X	6	6-2				WING HORIZ.
R406	X	5	4-10	X			WING STIRRUP
R507	X	4	5-3				WING HORIZ.
R508	X	1	7-3	X			WING HORIZ.
S501	X	11	3-1	X			SLAB PARAPET VERT.
S402	X	6	1-6				SLAB PARAPET VERT.
S403	X	11	4-10	X			PARAPET VERT.
S504	X	5	7-7				PARAPET HORIZ.

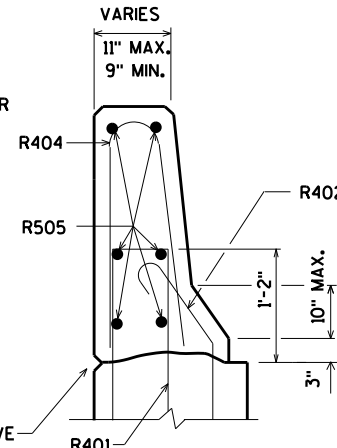
BENDING DIMENSIONS ARE OUT TO OUT OF BARS



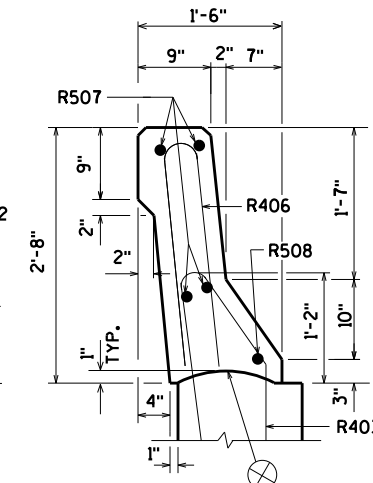
INSIDE ELEVATION



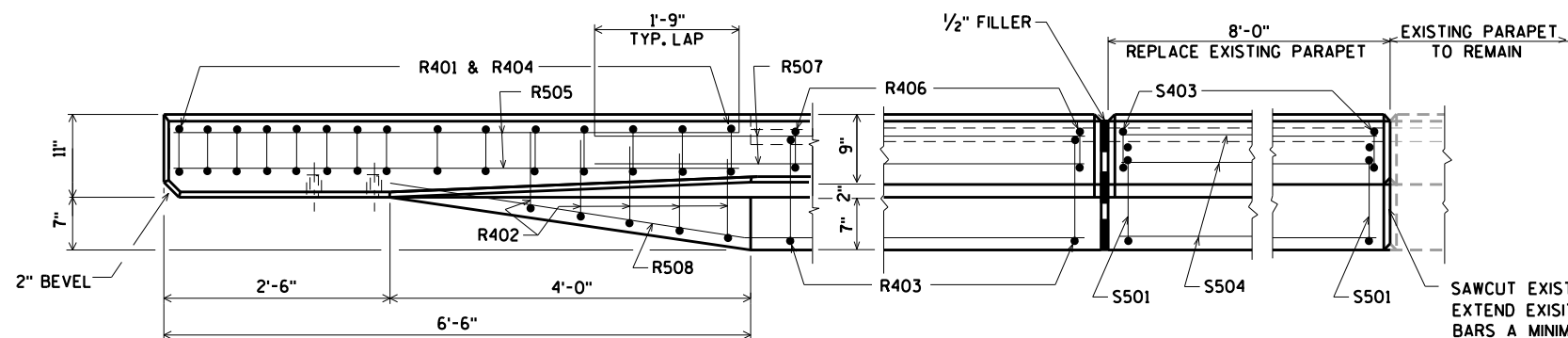
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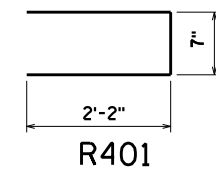
SECTION B



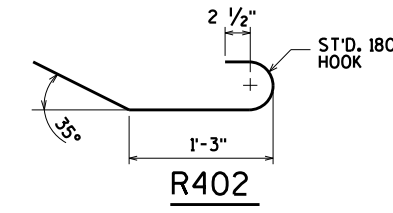
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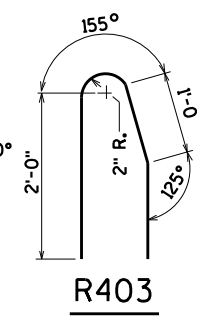
PLAN



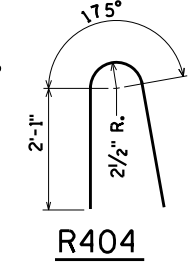
R401



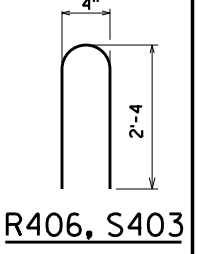
R402



R403

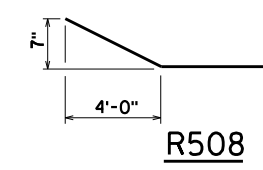


R404

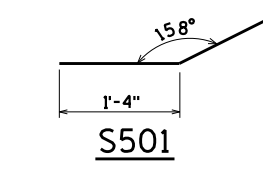


R406, S403

SAWCUT EXISTING PARAPET.
EXTEND EXISTING HORIZONTAL
BARS A MINIMUM OF 2'-11" INTO
NEW PARAPET.

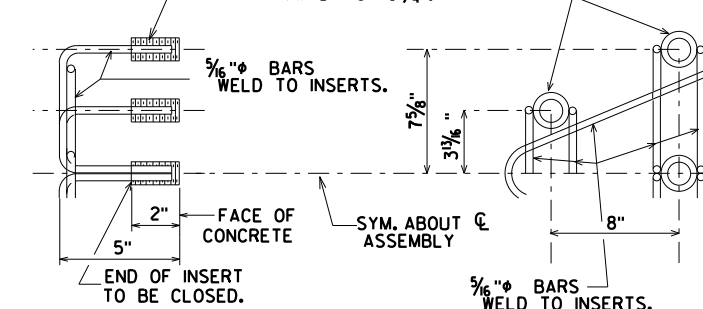


R508



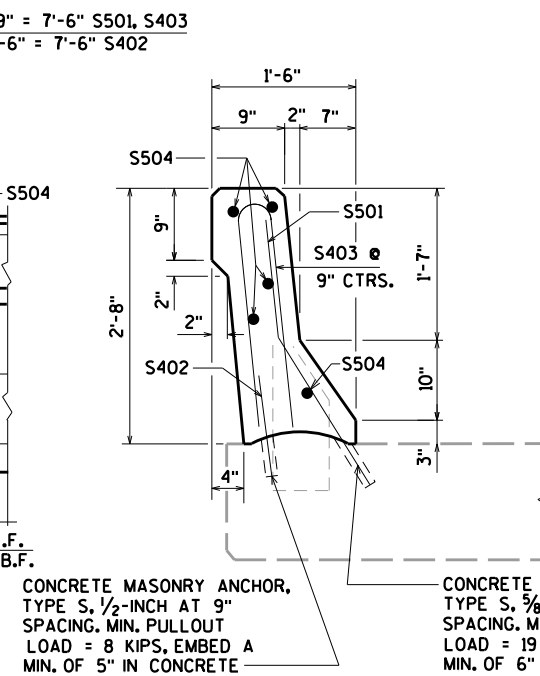
S501

THREADED INSERTS FOR 7/8"Ø X 2" LONG
GALVANIZED HEX. HEAD CAP SCREWS. CAP
SCREWS TO BE THREADED A MIN. OF 1 1/8"
AND SHALL BE SUPPLIED, INCLUDING WASHERS,
WITH ASSEMBLY. INSERTS TO BE THREADED
A MINIMUM OF 1 3/4".



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX. HEAD CAP SCREWS & WASHERS TO BE
GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

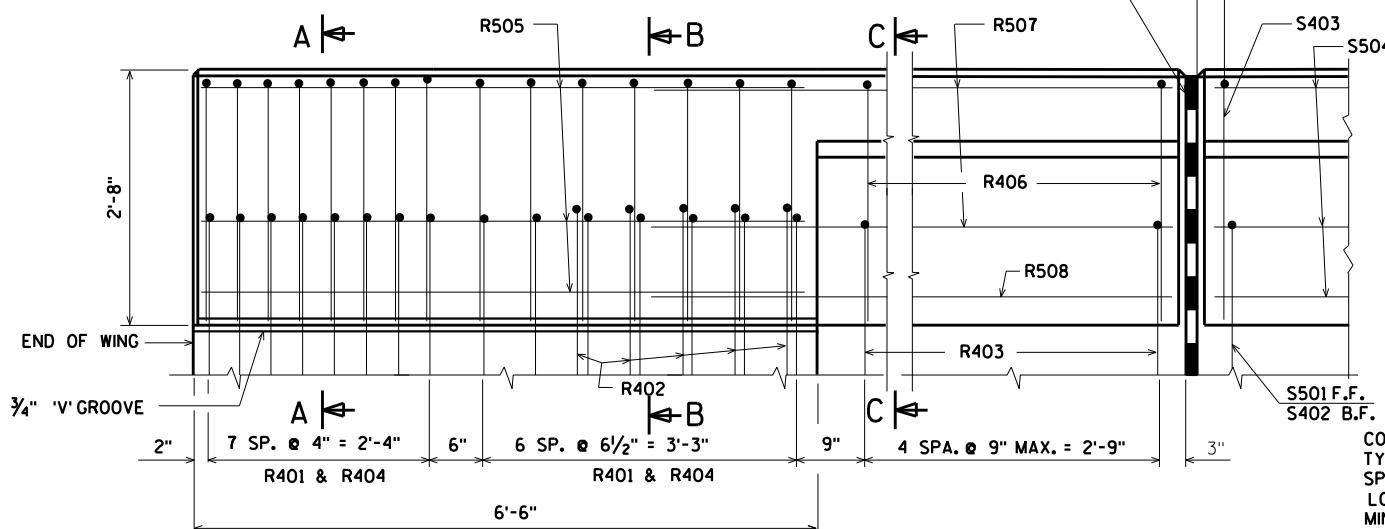


**SECTION THRU NEW PARAPET
ON SUPERSTRUCTURE**

CONCRETE MASONRY ANCHOR,
TYPE S, 1/2-INCH AT 9"
SPACING. MIN. PULLOUT
LOAD = 8 KIPS, EMBED A
MIN. OF 5" IN CONCRETE

CONCRETE MASONRY ANCHOR,
TYPE S, 5/8-INCH AT 9"
SPACING. MIN. PULLOUT
LOAD = 19 KIPS, EMBED A
MIN. OF 6" IN CONCRETE

CONST. JOINT - STRIKE OFF
AS SHOWN.



OUTSIDE ELEVATION

8

8

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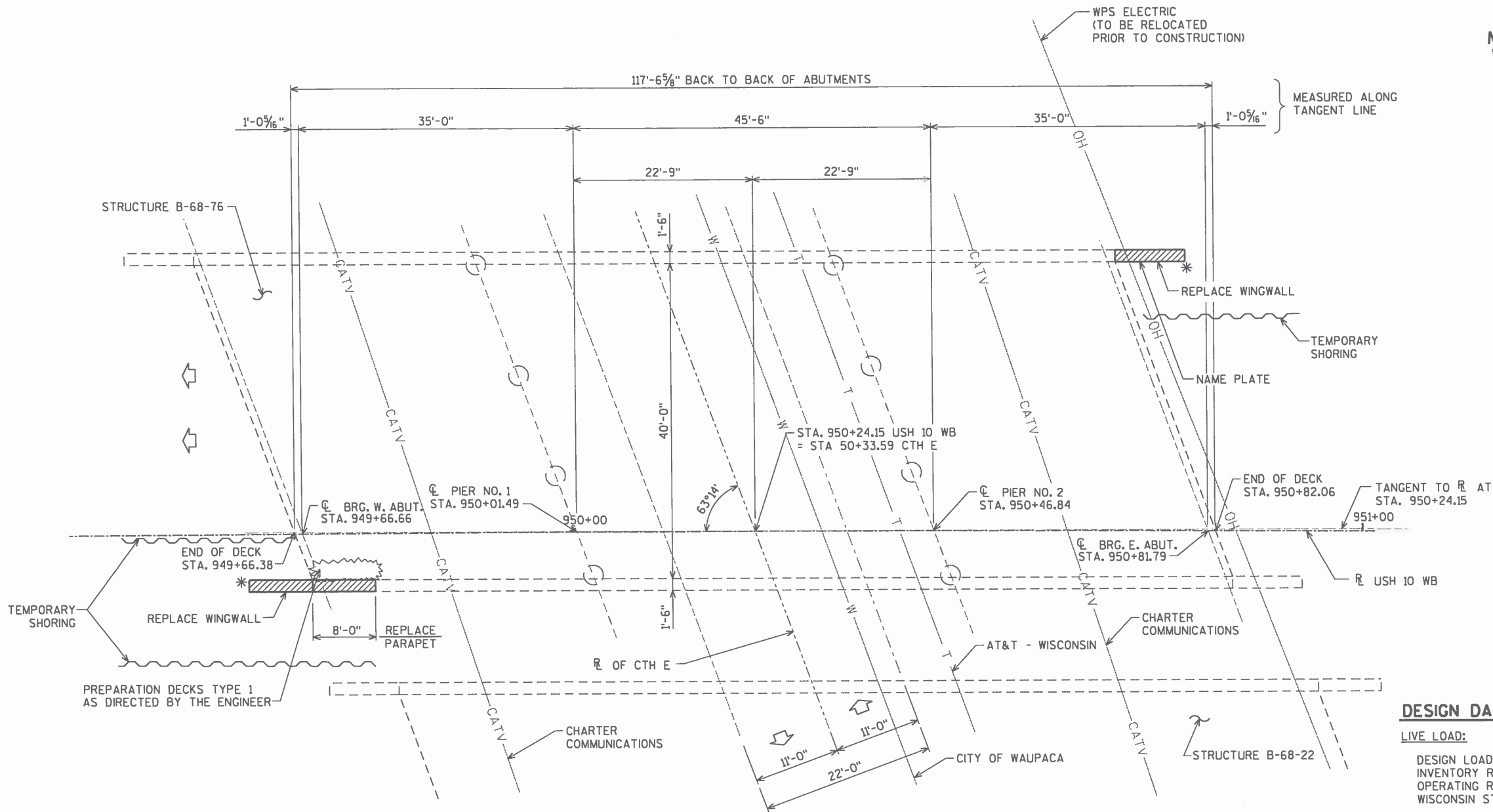
DATE:
DATE:
DATE:

CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:

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STATE PROJECT NUMBER

1510-02-65



PLAN

EXISTING 3-SPAN CONCRETE HAUNCHED SLAB

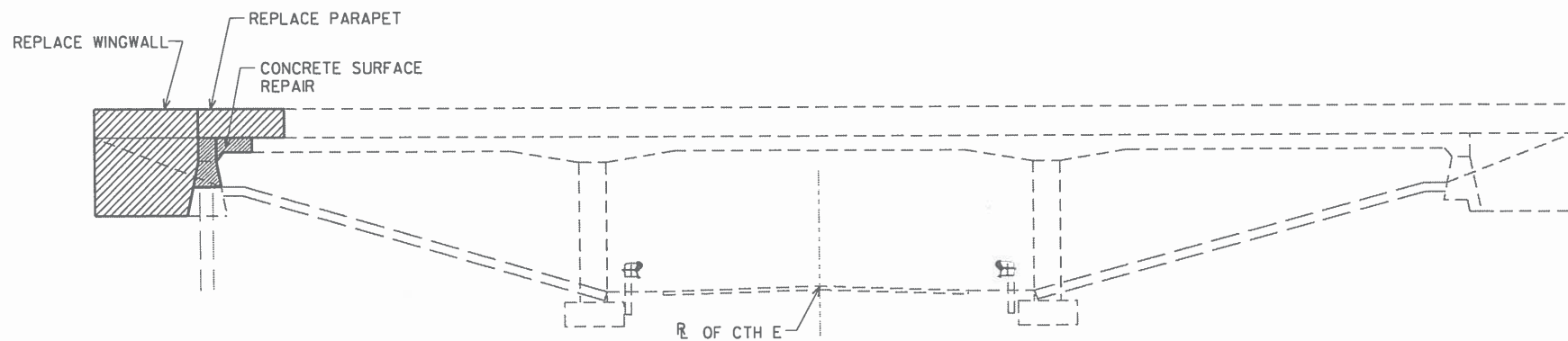
DESIGN DATA

LIVE LOAD:

DESIGN LOAD = HS-20
INVENTORY RATING = HS-25
OPERATING RATING = HS-42
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 210 KIPS

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY $f'_c = 4,000$ p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60) $f_y = 60,000$ p.s.i.



ELEVATION



BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
DAN SYDOW
(715)-834-3161

LIST OF DRAWINGS

1. GENERAL PLAN
2. TYPICAL SECTION, QUANTITIES, AND NOTES
3. NORTHEAST ABUTMENT WINGWALL
4. SOUTHWEST ABUTMENT WINGWALL
5. SLOPED FACE PARAPET "B"

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED *William C. Dreher* **9/9/13**
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-68-76

USH 10 WB OVER CTH E

COUNTY WAUPACA TOWN/CITY/VILLAGE WAUPACA

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY DNS DESIGN CKD. KAZ DRAWN BY KAZ PLANS CKD. DNS

GENERAL PLAN

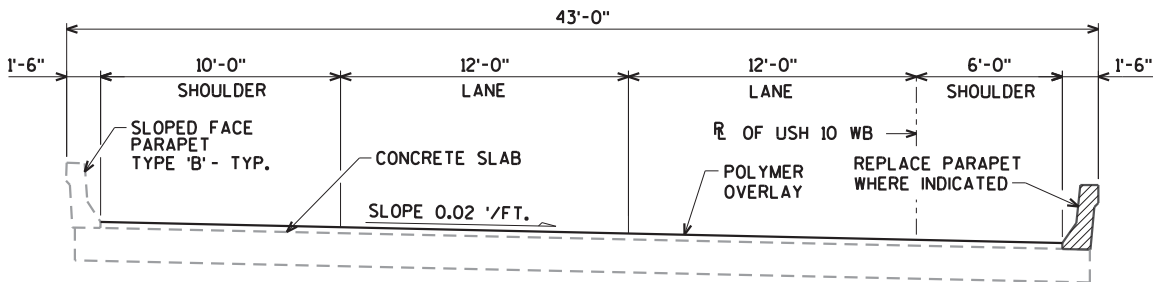
SHEET 1 OF 5

8

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STATE PROJECT NUMBER

1510-02-65



CROSS SECTION THRU BRIDGE LOOKING EAST

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS SHOWN OR NOTED OTHERWISE.
THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.
THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMIT FOR EXCAVATION FOR STRUCTURES.
AT ABUTMENTS ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE.
PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED TO TOP AND INSIDE FACES OF NEW PARAPETS.
UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK.
DIMENSIONS SHOWN ARE BASED ON ORIGINAL STRUCTURE PLANS.
ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1" DEEP SAW CUT.
JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M 213.
THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR OF 1996.
SEE ROADWAY PLANS FOR TEMPORARY BARRIER AND TRAFFIC CONTROL.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	QUANTITY
203.0200	REMOVING OLD STRUCTURE STATION 950+24.15	LS	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-68-76	LS	1
206.6000.S	TEMPORARY SHORING	SF	370
210.0100	BACKFILL STRUCTURE	CY	155
502.0100	CONCRETE MASONRY BRIDGES	CY	18
502.3200	PROTECTIVE SURFACE TREATMENT	SY	12
502.5002	MASONRY ANCHOR TYPE L NO. 4 BARS	EACH	14
502.5005	MASONRY ANCHOR TYPE L NO. 5 BARS	EACH	12
502.5010	MASONRY ANCHOR TYPE L NO. 6 BARS	EACH	16
502.6102	MASONRY ANCHOR TYPE S 1 1/2-INCH	EACH	6
502.6105	MASONRY ANCHOR TYPE S 5/8-INCH	EACH	11
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	1,830
509.0301	PREPARATION DECKS TYPE 1	SY	1
509.1500	CONCRETE SURFACE REPAIR	SF	10
509.5100.S	POLYMER OVERLAY	SY	520
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	7
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2
	NON-BID ITEMS		
	FILLER	SIZE	1/2"

UNDISTRIBUTED QUANTITY FOR REPAIRS AT ABUTMENTS AND SLAB EDGE AS DIRECTED BY THE ENGINEER.

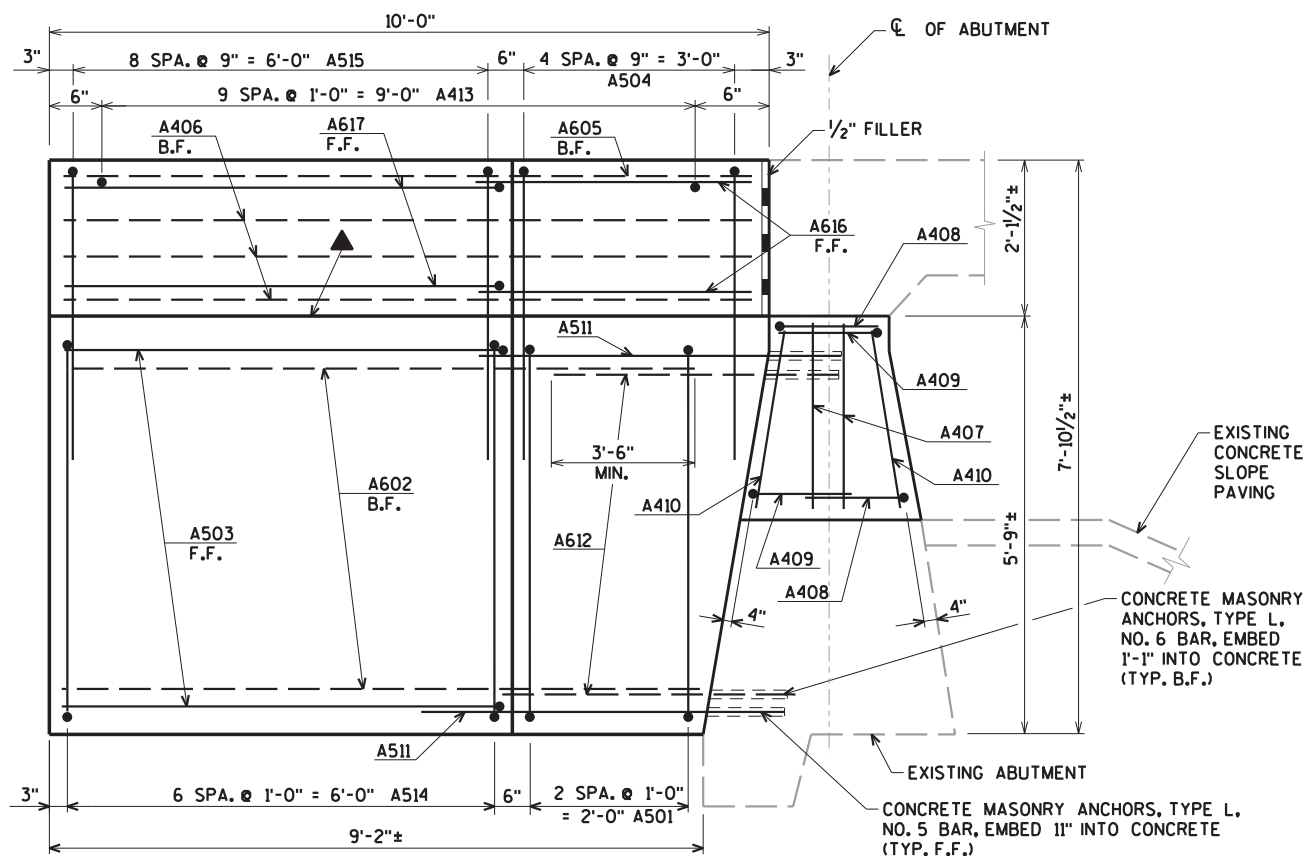
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-68-76			
DRAWN BY KAZ		PLANS CK'D. DNS	
TYPICAL SECTION, QUANTITIES, AND NOTES			SHEET 2 OF 5

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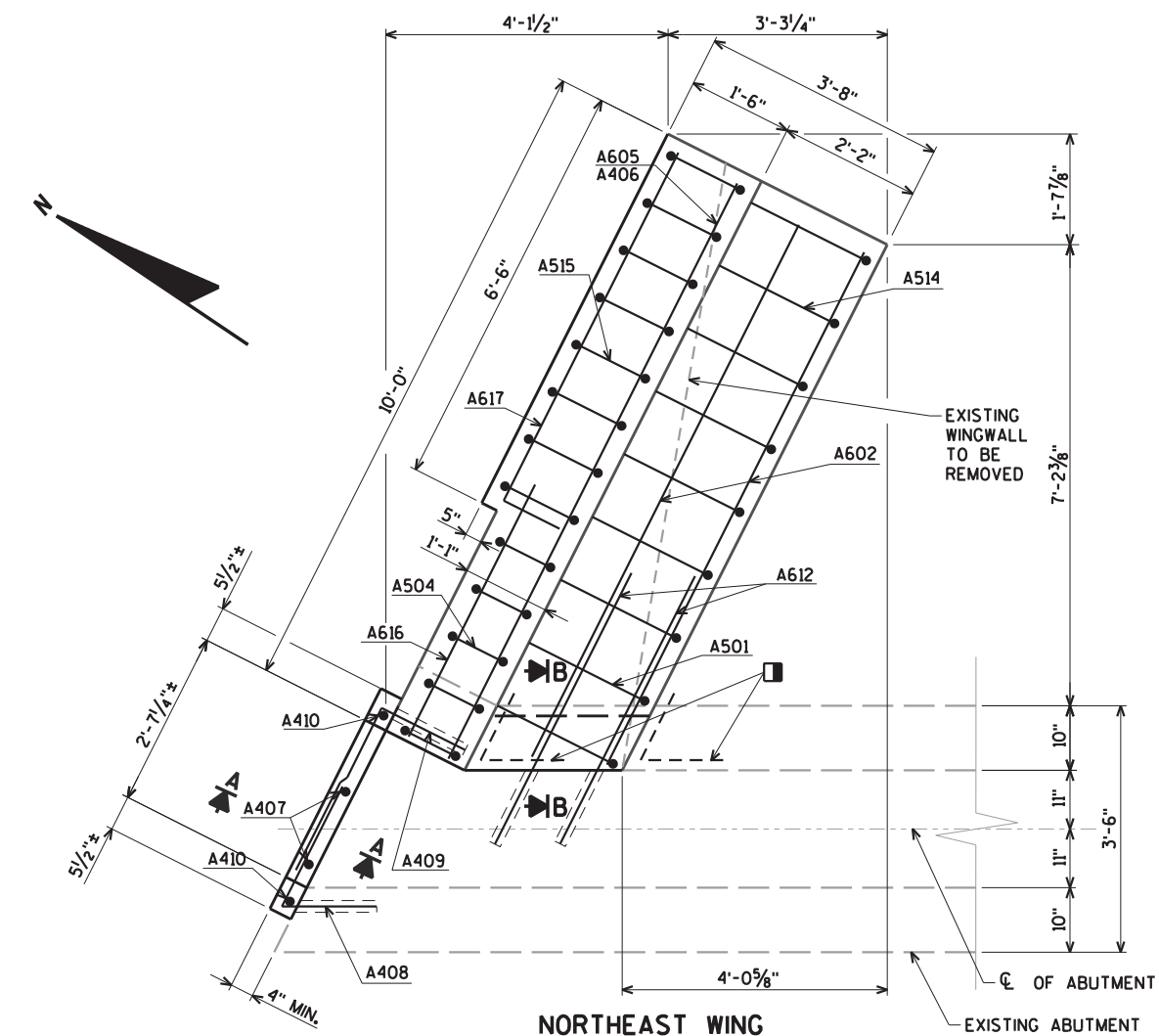
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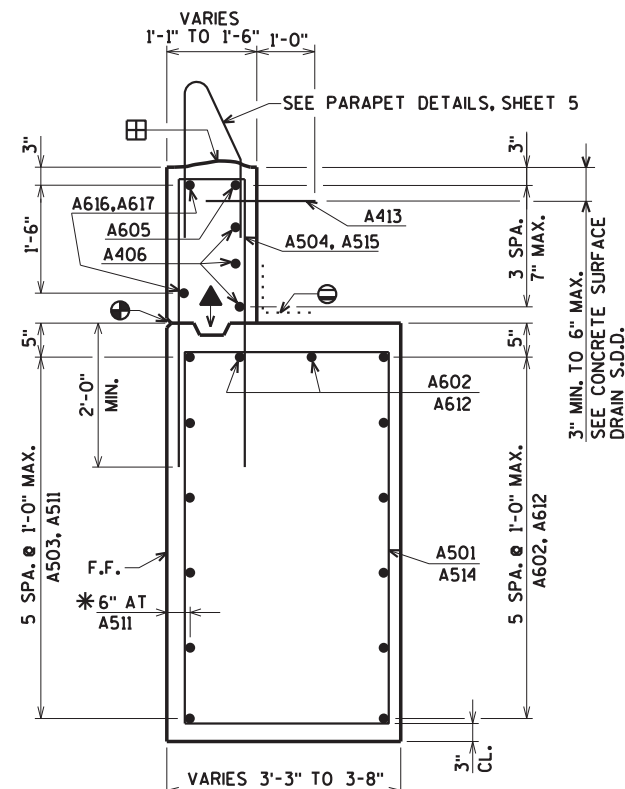
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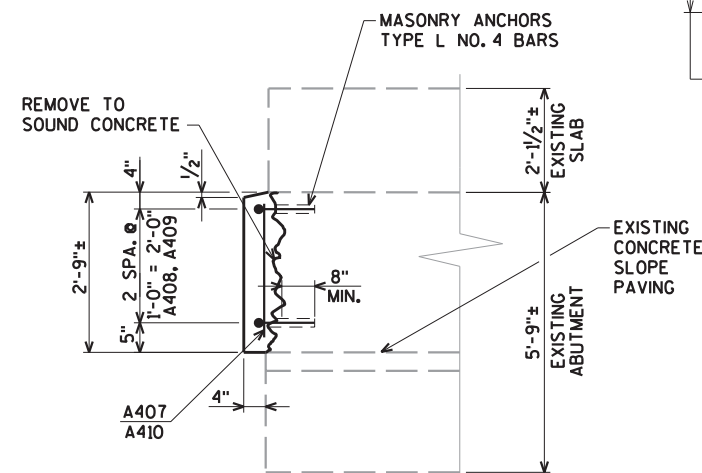
NORTHEAST WING WALL ELEVATION



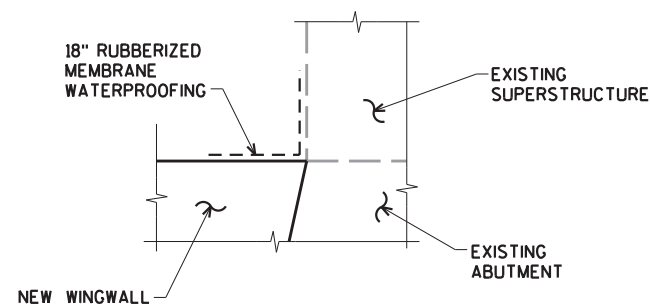
NORTHEAST WING



SECTION THRU WING



SECTION A

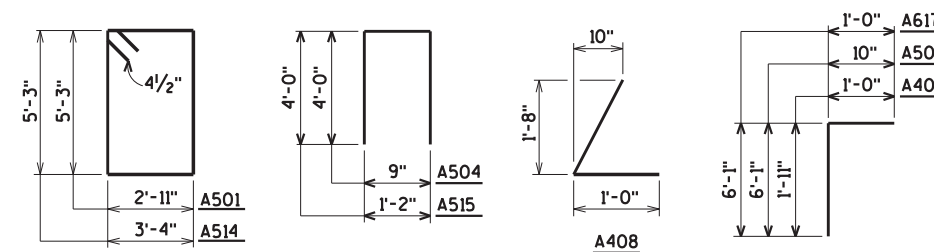


SECTION B

BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED	BAR SERIES	860* COATED
							LOCATION
A501	X	3	16-10	X			WING BOT. VERT.
A602	X	8	7-10				WING BOT. HORIZ. B.F.
A503	X	6	6-10	X			WING BOT. HORIZ. F.F.
A504	X	5	8-6	X			WING TOP VERT.
A605	X	1	9-7				WING TOP HORIZ. B.F.
A406	X	3	9-7				WING TOP HORIZ.
A407	X	2	2-3				ABUTMENT ENDS REPAIR VERT.
A408	X	3	2-9	X			ABUTMENT ENDS REPAIR HORIZ.
A409	X	3	2-10	X			ABUTMENT ENDS REPAIR HORIZ.
A410	X	2	2-4				ABUTMENT ENDS REPAIR VERT.
A511	X	6	4-11				WING BOT. HORIZ. DOWELS F.F.
A612	X	8	6-7				WING BOT. HORIZ. DOWELS B.F.
A413	X	10	2-0				DOWELS
A514	X	7	17-8	X			WING BOT. VERT.
A515	X	9	8-11	X			WING TOP VERT.
A616	X	2	4-0				WING TOP HORIZ. F.F.
A617	X	2	6-11	X			WING TOP HORIZ. F.F.

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



- * ANCHOR LOCATION SHALL BE ADJUSTED INWARD IF NECESSARY TO ACHIEVE A MINIMUM EDGE DISTANCE OF 4" WITHIN SOUND CONCRETE.
- ⊞ STRIKE OFF AS SHOWN AND LEAVE ROUGH
- VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING
- ▲ OPT. KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6".
- ⊖ 18" RUBBERIZED MEMBRANE WATERPROOFING ON BACK FACE, NOT REQUIRED IF CONST. JT. IS NOT USED.
- ⊙ 3/4" V-GROOVE ON F.F. OF WING WALL - NOT REQUIRED IF CONST. JT. IS NOT USED.

B.F. DENOTES BACK FACE.

F.F. DENOTES FRONT FACE.

E.F. DENOTES EACH FACE.

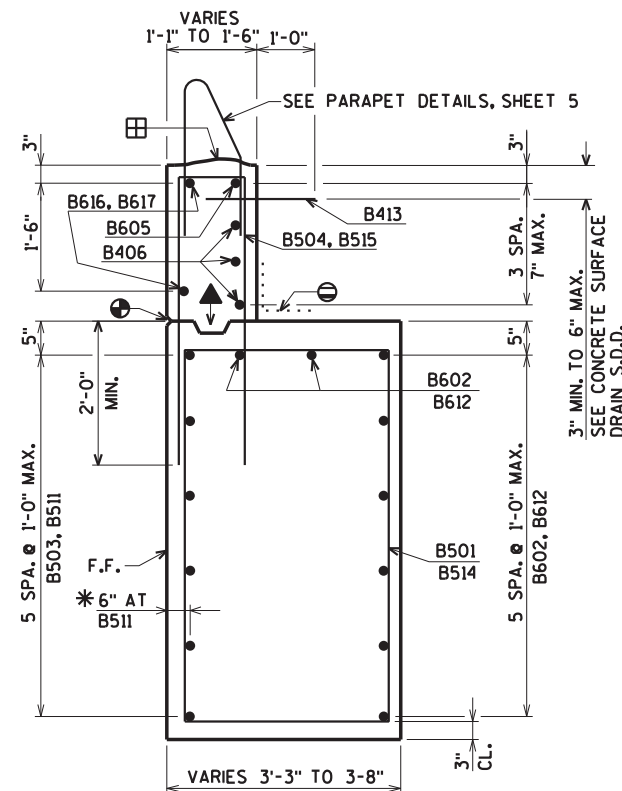
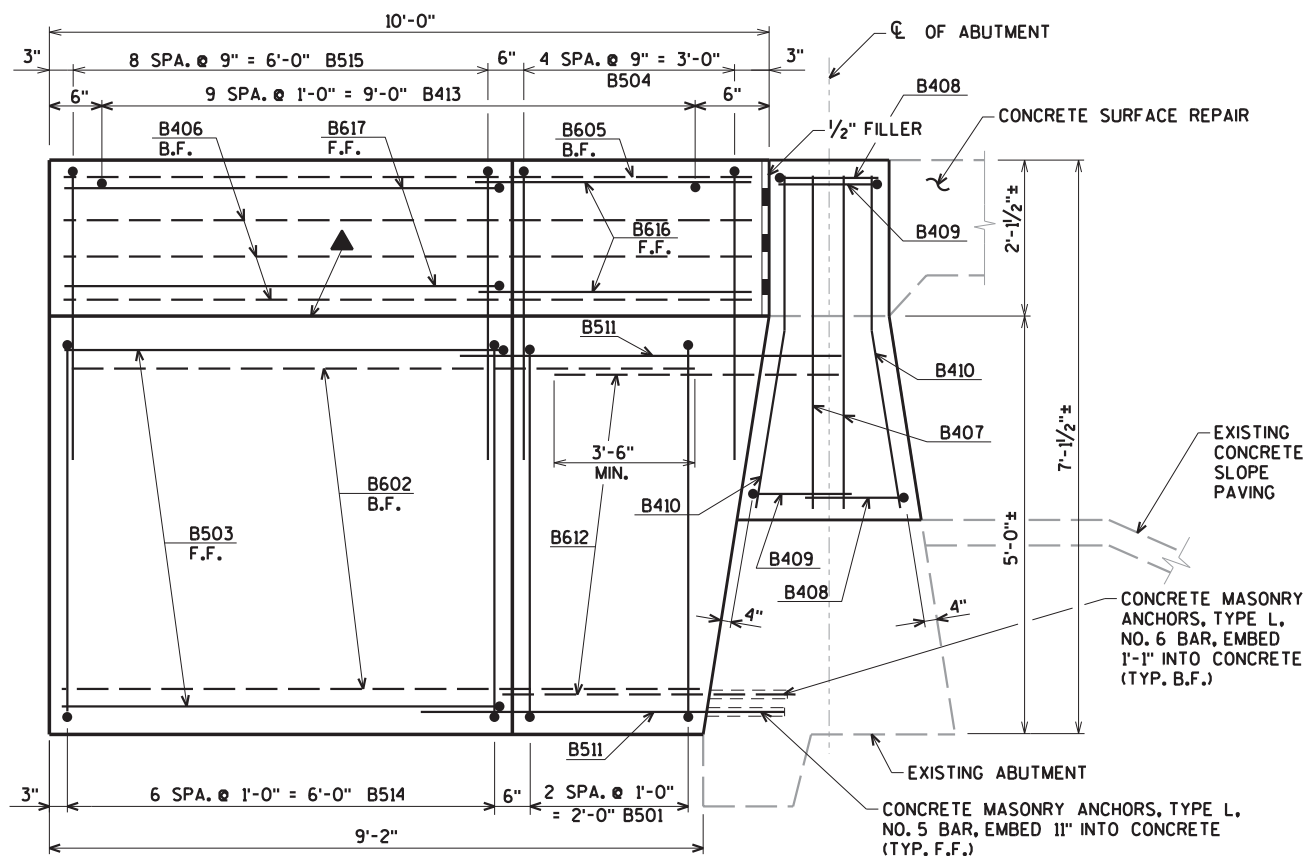
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-68-76			
DRAWN BY KAZ		PLANS CK'D. DNS	
NORTHEAST ABUTMENT WINGWALL		SHEET 3 OF 5	

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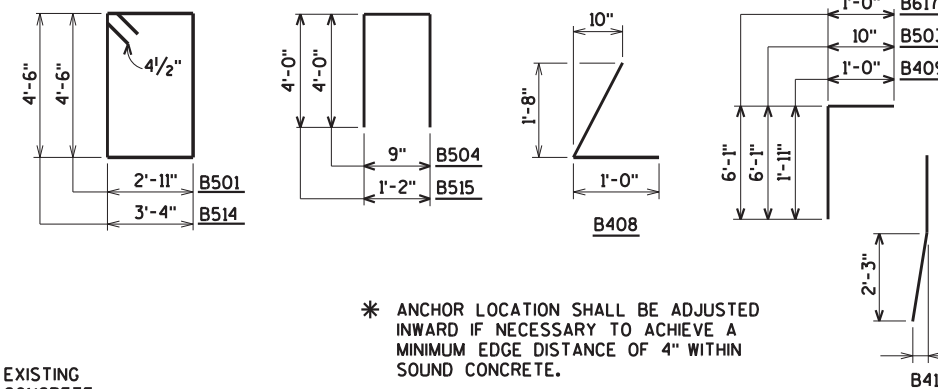
1510-02-65



BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED	BAR SERIES	970# COATED
							LOCATION
B501	X	3	15-4	X			WING BOT. VERT.
B602	X	8	7-10				WING BOT. HORIZ. B.F.
B503	X	6	6-10	X			WING BOT. HORIZ. F.F.
B504	X	5	8-6	X			WING TOP VERT.
B605	X	1	9-7				WING TOP HORIZ. B.F.
B406	X	3	9-7				WING TOP HORIZ.
B407	X	2	4-2				ABUTMENT ENDS REPAIR VERT.
B408	X	4	2-9	X			ABUTMENT ENDS REPAIR HORIZ.
B409	X	4	2-10	X			ABUTMENT ENDS REPAIR HORIZ.
B410	X	2	4-2	X			ABUTMENT ENDS REPAIR VERT.
B511	X	6	4-11				WING BOT. HORIZ. DOWELS F.F.
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B413	X	10	2-0				DOWELS
B514	X	7	16-2	X			WING BOT. VERT.
B515	X	9	8-11	X			WING TOP VERT.
B616	X	2	4-0				WING TOP HORIZ. F.F.
B617	X	2	6-11	X			WING TOP HORIZ. F.F.

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



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⊞ STRIKE OFF AS SHOWN AND LEAVE ROUGH

▣ VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING

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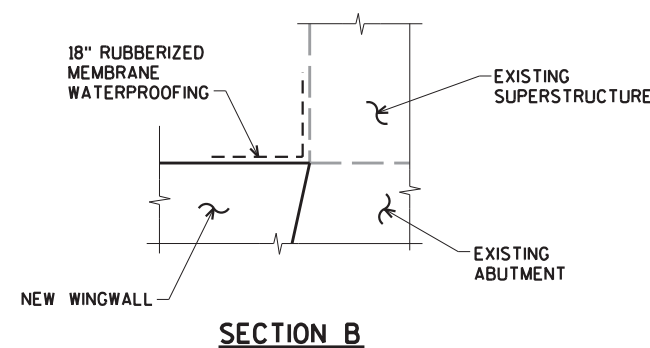
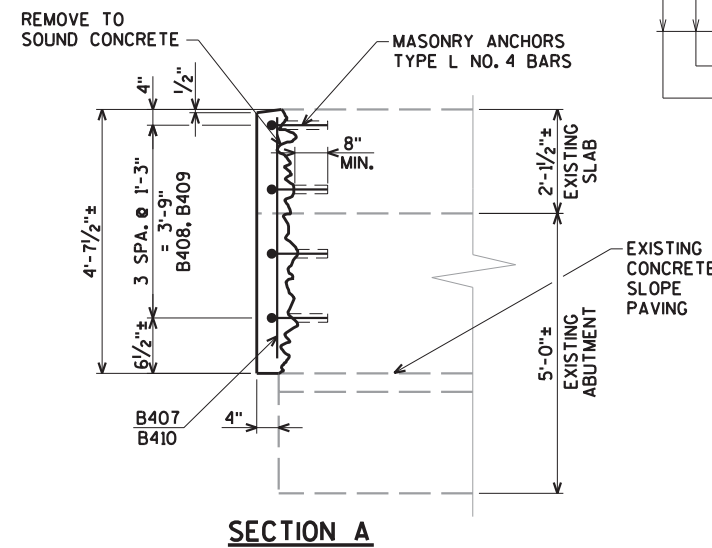
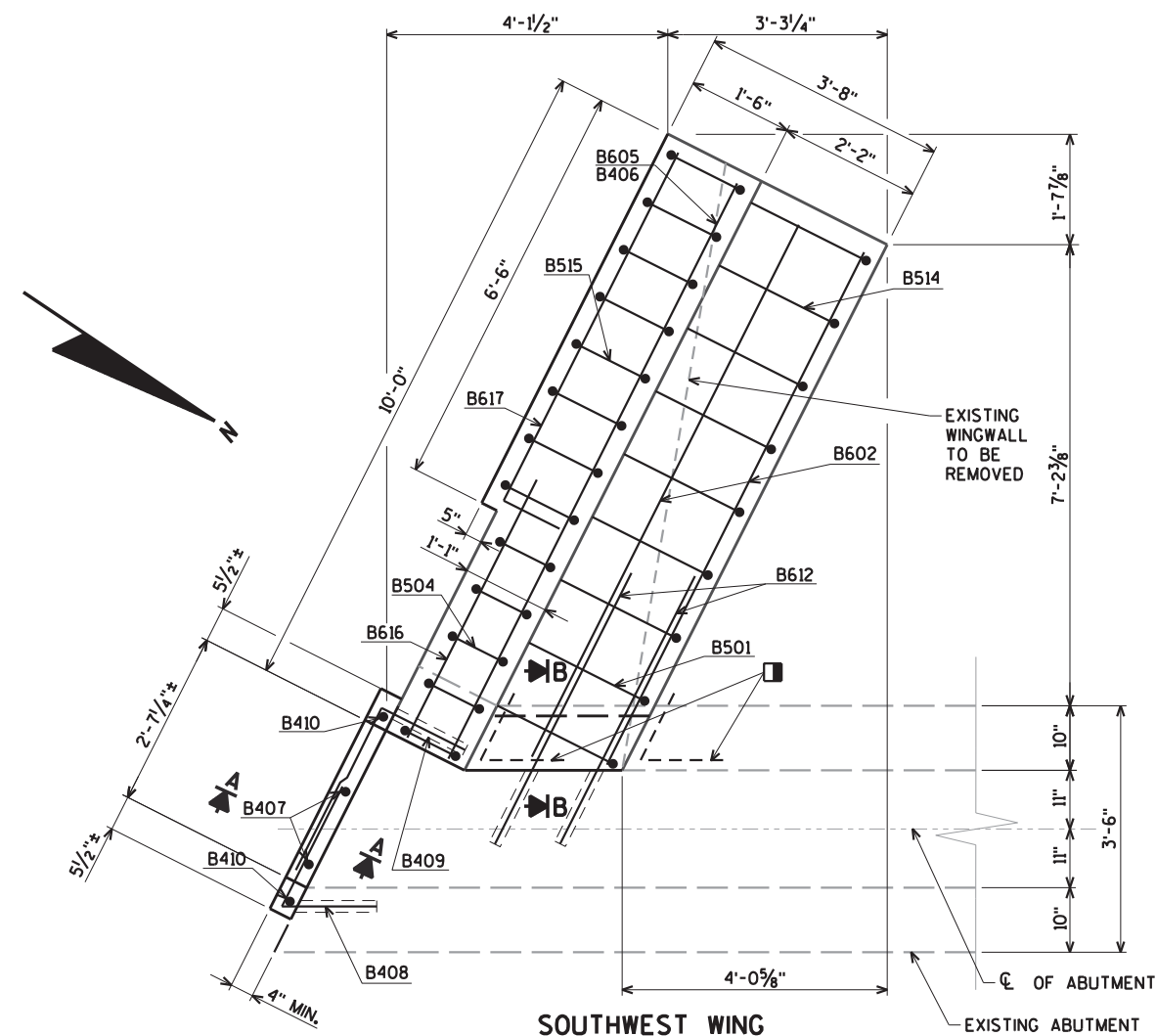
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⊕ 3/4" V-GROOVE ON F.F. OF WING WALL - NOT REQUIRED IF CONST. JT. IS NOT USED.

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SOUTHWEST ABUTMENT WINGWALL			SHEET 4 OF 5

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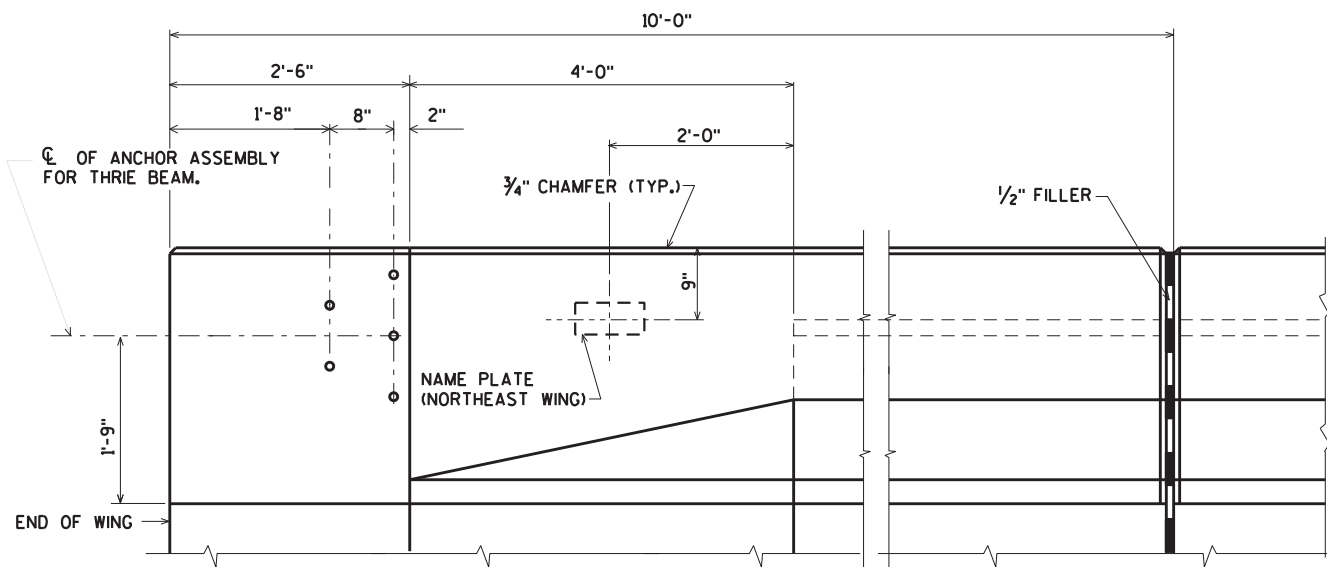
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WEIGHT INCLUDED IN ABUTMENT
WEIGHTS SHOWN ON SHEETS 3 & 4.

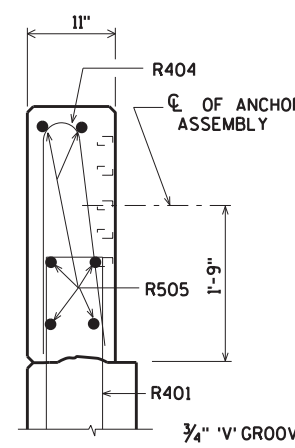
BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED	BAR SERIES	LOCATION
R401	X	30	4-9	X			WING STIRRUP
R402	X	10	3-1	X			WING VERT.
R403	X	10	4-7	X			WING STIRRUP
R404	X	30	4-9	X			WING STIRRUP
R505	X	12	6-2				WING HORIZ.
R406	X	10	4-10	X			WING STIRRUP
R507	X	8	5-3				WING HORIZ.
R508	X	2	7-3	X			WING HORIZ.
S501	X	11	3-1	X			SLAB PARAPET VERT.
S402	X	6	1-6				SLAB PARAPET VERT.
S403	X	11	4-10	X			PARAPET VERT.
S504	X	5	7-7				PARAPET HORIZ.

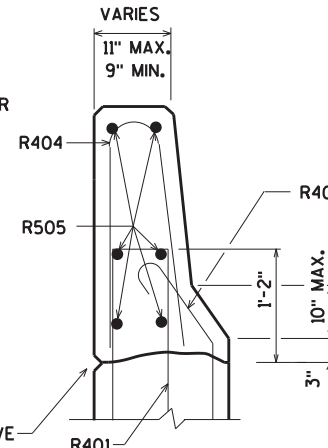
BENDING DIMENSIONS ARE OUT TO OUT OF BARS



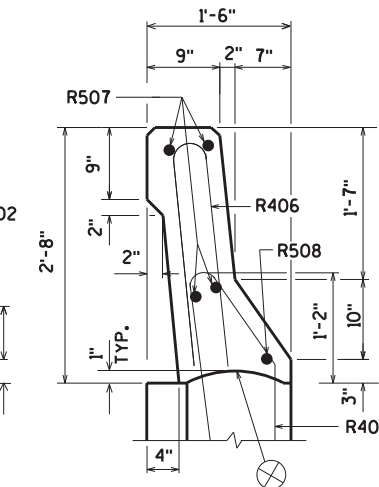
INSIDE ELEVATION



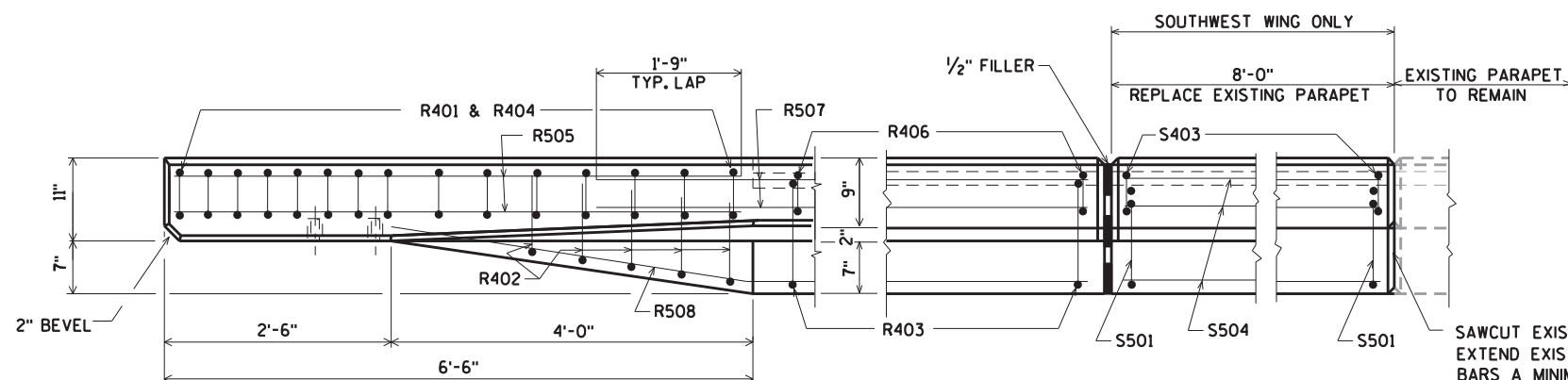
SECTION A



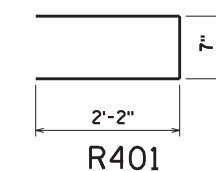
SECTION B



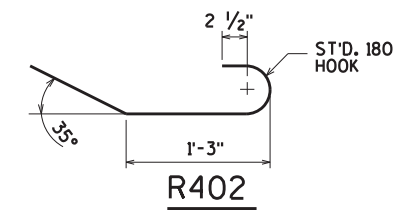
SECTION C



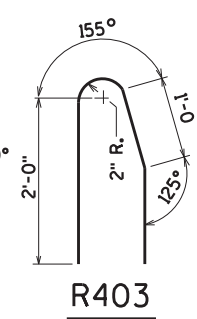
PLAN



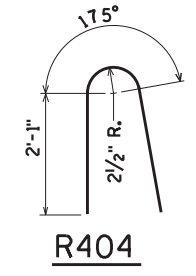
R401



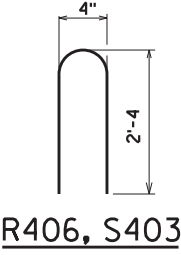
R402



R403

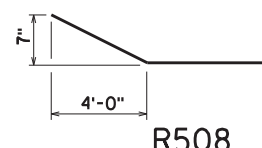


R404

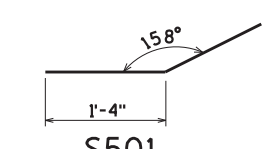


R406, S403

SAWCUT EXISTING PARAPET.
EXTEND EXISTING HORIZONTAL
BARS A MINIMUM OF 2'-11" INTO
NEW PARAPET.

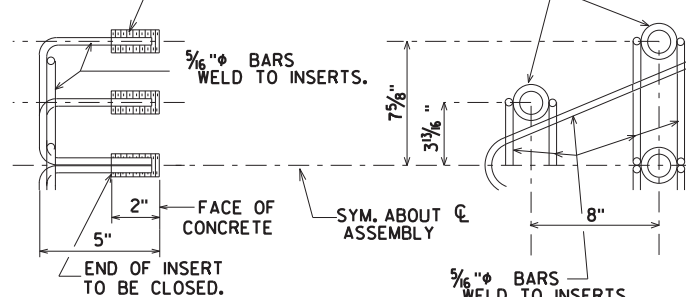


R508



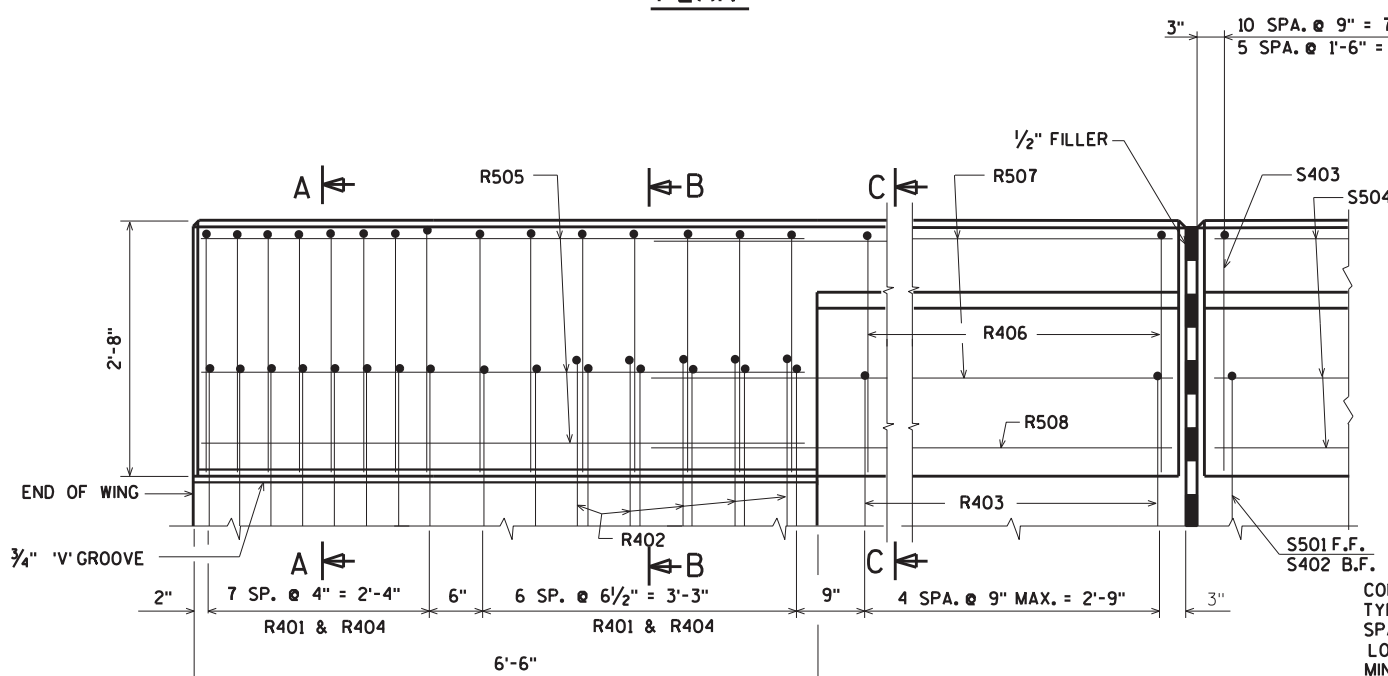
S501

THREADED INSERTS FOR 7/8"Ø X 2" LONG
GALVANIZED HEX. HEAD CAP SCREWS. CAP
SCREWS TO BE THREADED A MIN. OF 1 1/8"
AND SHALL BE SUPPLIED, INCLUDING WASHERS,
WITH ASSEMBLY. INSERTS TO BE THREADED
A MINIMUM OF 1 3/4".

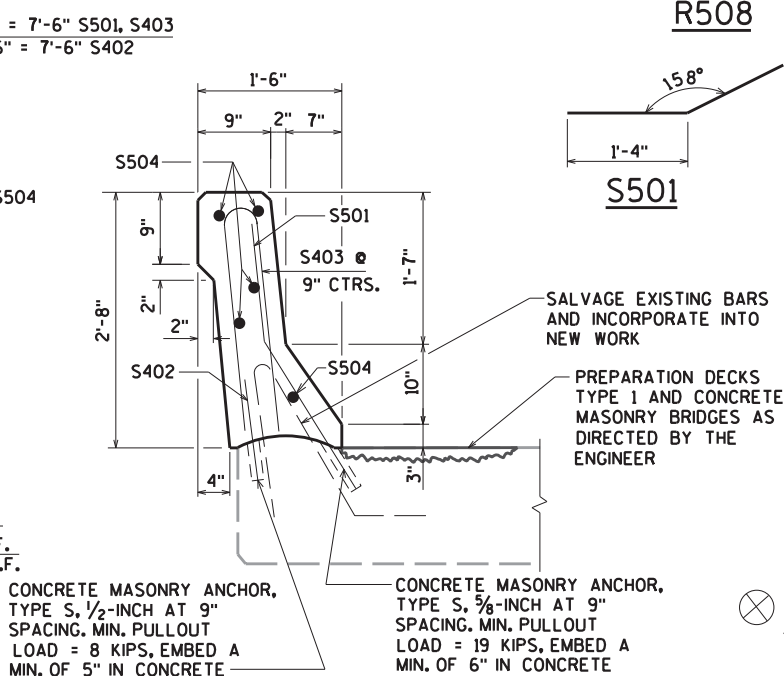


DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX. HEAD CAP SCREWS & WASHERS TO BE
GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.



OUTSIDE ELEVATION



**SECTION THRU NEW PARAPET
ON SUPERSTRUCTURE**

CONST. JOINT - STRIKE OFF
AS SHOWN.

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-68-76			
DRAWN BY KAZ		PLANS CK'D. DNS	
SLOPED FACE PARAPET "B"		SHEET 5 OF 5	



—x—x— FENCE SAFTY TO EXTEND FROM END OF GUARDRAIL TO RADIUS OF INTERSECTION WITH RURAL ROAD AS DIRECTED BY THE ENGINEER.



PROPOSED WORK: REPAIR FULL LENGTH OF DECK OVERHANG ON THE EAST SIDE OF THE DECK.

NOTE: NO GROUND DISTURBANCE ALLOWED WITHIN THE SOUTHWEST AND SOUTHEAST QUADRANTS OF STH 22 AND STRUCTURE B-68-32 DUE TO THE PRESENCE OF SENSITIVE RESOURCES.

LEGEND

- POST WITH ATTACHED SIGN
- DRUM WITH WARNING LIGHT (TYPE C)
- DRUM
- TEMPORARY PRECAST CONCRETE BARRIER
- DIRECTION OF TRAFFIC
- WORK ZONE
- ***** REMOVING PAVEMENT MARKING

GENERAL NOTES FOR SIGNS PCMS

THE FIELD ENGINEER WILL MAKE THE FINAL DETERMINATION TO THE PLACEMENT OF PCMS BOARDS BASED UPON EXISTING CONDITIONS AND STAGING.

CONSIDER GEOMETRICS WHEN LOCATING PCMS SO THE DRIVER HAS A CLEAR VIEW OF THE BOARD FOR A MINIMUM OF 1000 FEET IN FRONT OF THE PCMS.

PCMS SHOULD BE PLACED AS FAR AWAY FROM LIVE TRAFFIC LANES AS POSSIBLE WITHOUT HAMPERING VISIBILITY. IN ADVANCE OF HIGHWAY CONSTRUCTION PROJECTS, THE SIGNS SHOULD BE PLACED ON THE BACKSLOPE BEYOND THE DITCH. THE LOCATION SELECTED SHOULD BE AT OR SLIGHTLY ABOVE THE ELEVATION OF THE ROADWAY. FOR INTERMITTENT WORK SUCH AS FREEWAY LANE CLOSURE, OR WHERE SITE CONDITIONS DO NOT ALLOW OTHERWISE, THE SIGNS MAY BE PLACED ON THE SHOULDER. THE SITE SHOULD BE VISITED TO ASSURE VISIBILITY, SAFETY AND MAINTENANCE CONSIDERATIONS. A TAPER OF REFLECTORIZED DRUMS OR BARRICADES SHOULD BE PLACED AHEAD OF PCMS PLACED ON THE SHOULDER IF IT IS NOT SHIELDED BY A BARRIER.

PRIOR TO CONSTRUCTION	
PHASE 1 (2 SEC.)	PHASE 2 (2 SEC.)
BRIDGE WORK BEGINS	"DATE"
7 DAYS MINIMUM PRIOR TO BEGINNING WORK	

GENERAL NOTES FOR TRAFFIC CONTROL

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

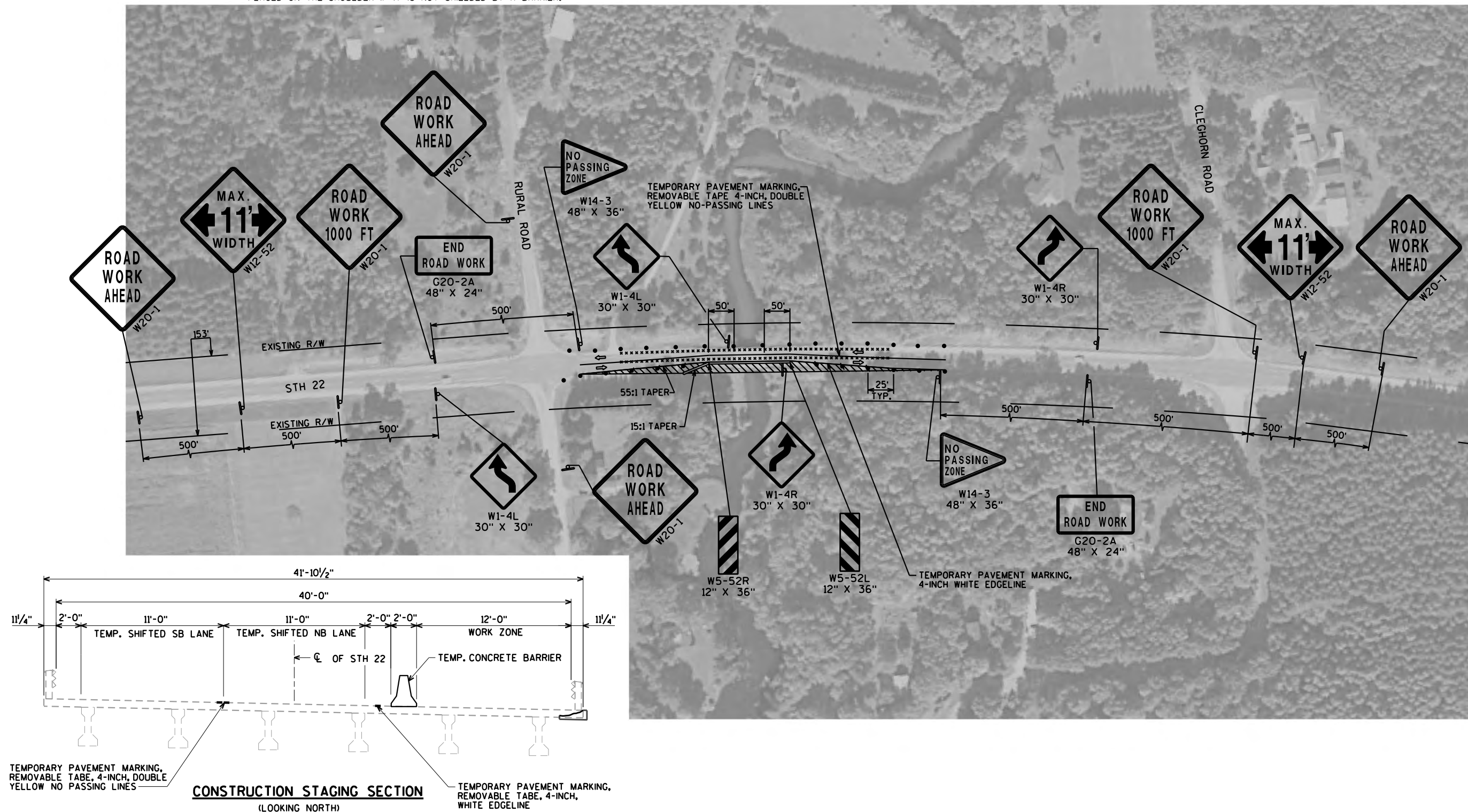
"WO" IS THE SAME AS "W" EXCEPT WTHE BACKGROUND IS ORANGE.

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

NO EQUIPMENT OR MATERIAL SHALL BE LOCATED WITHIN THE WORK ZONE OTHER THAN BEHIND THE PRECAST CONCRETE BARRIER.

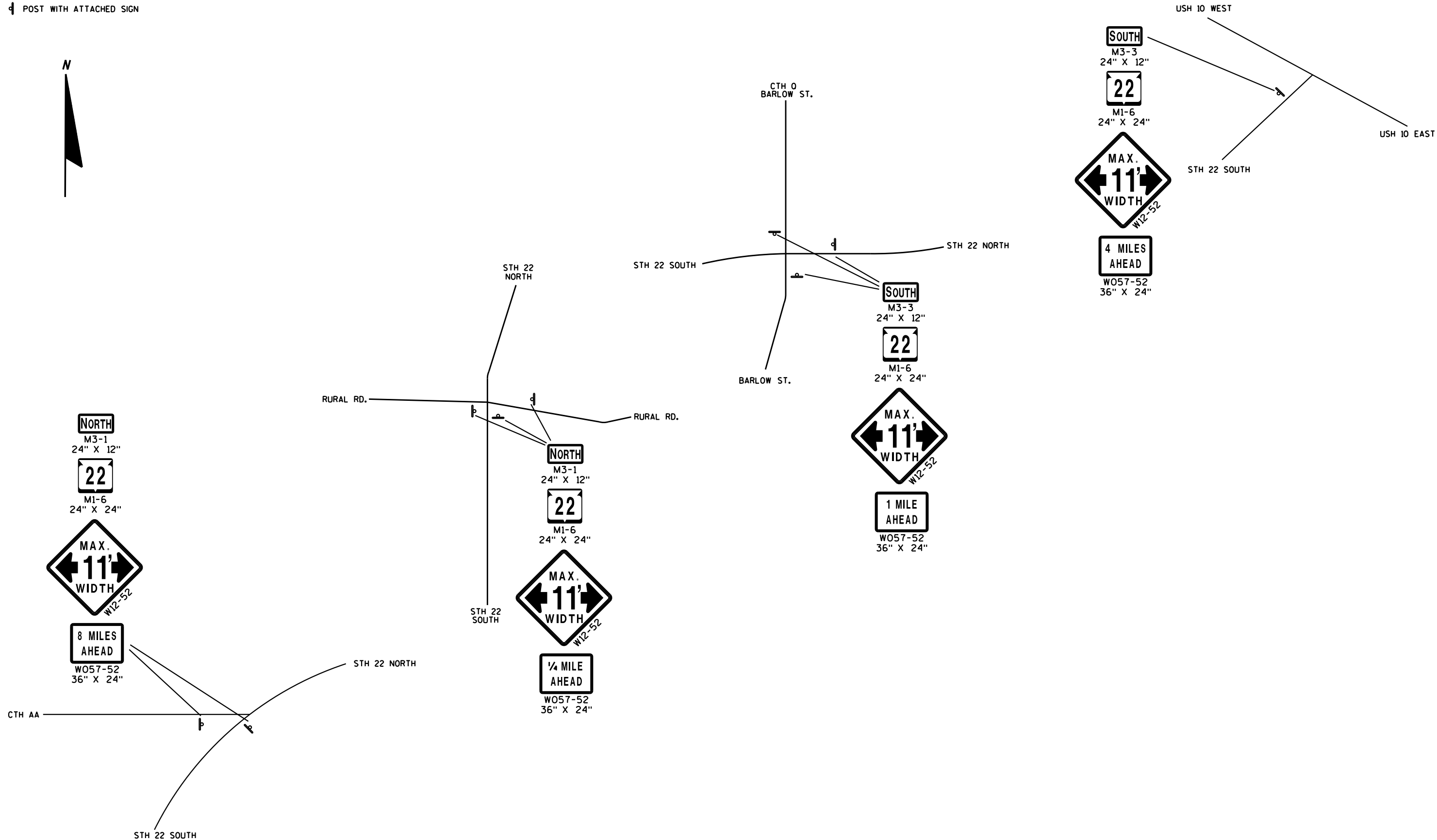
DIMENSIONS ARE BASED FROM THE ENDS OF DECK AT THE CENTERLINE OF STH 22.

NAVIGATIONAL WARNING SIGNS ARE REQUIRED AND TO BE PERMITTED IN ACCORDANCE WITH STANDARD SPEC. SECTION 107.19.



LEGEND

POST WITH ATTACHED SIGN



CONCRETE BARRIER TEMPORARY PRECAST

LOCATION	603.8000	603.8125
	DELIVERED	INSTALLED
	LF	LF
STH 22	337	337

616.0700.S FENCE SAFETY

LOCATION	LF
STH 22	435

TRAFFIC CONTROL DRUMS, BARRICADES, AND LIGHTS

LOCATION	643.0300		643.0715		643.0900	
	DRUMS		WARNING LIGHTS		SIGNS	
	EACH	DAYS	TYPE C	DAYS	EACH	DAYS
STH 22	133	15	62	15	54	15
TOTAL		1,995		930		810

643.1050 TRAFFIC CONTROL SIGNS PCMS

LOCATION	DAY
STH 22 SOUTH OF B-68-32	7
STH 22 NORTH OF B-68-32	7
TOTAL	14

646.0106 PAVEMENT MARKING EPOXY 4-INCH

LOCATION	DESCRIPTION	LF
STH 22	YELLOW DASHED CENTERLINE	415
STH 22	WHITE EDGELINE	1,657
TOTAL		2,072

646.0600 REMOVING PAVEMENT MARKINGS

LOCATION	DESCRIPTION	LF
STH 22	YELLOW DASHED CENTERLINE	415
STH 22	WHITE EDGELINE	1,657
TOTAL		2,072

649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH

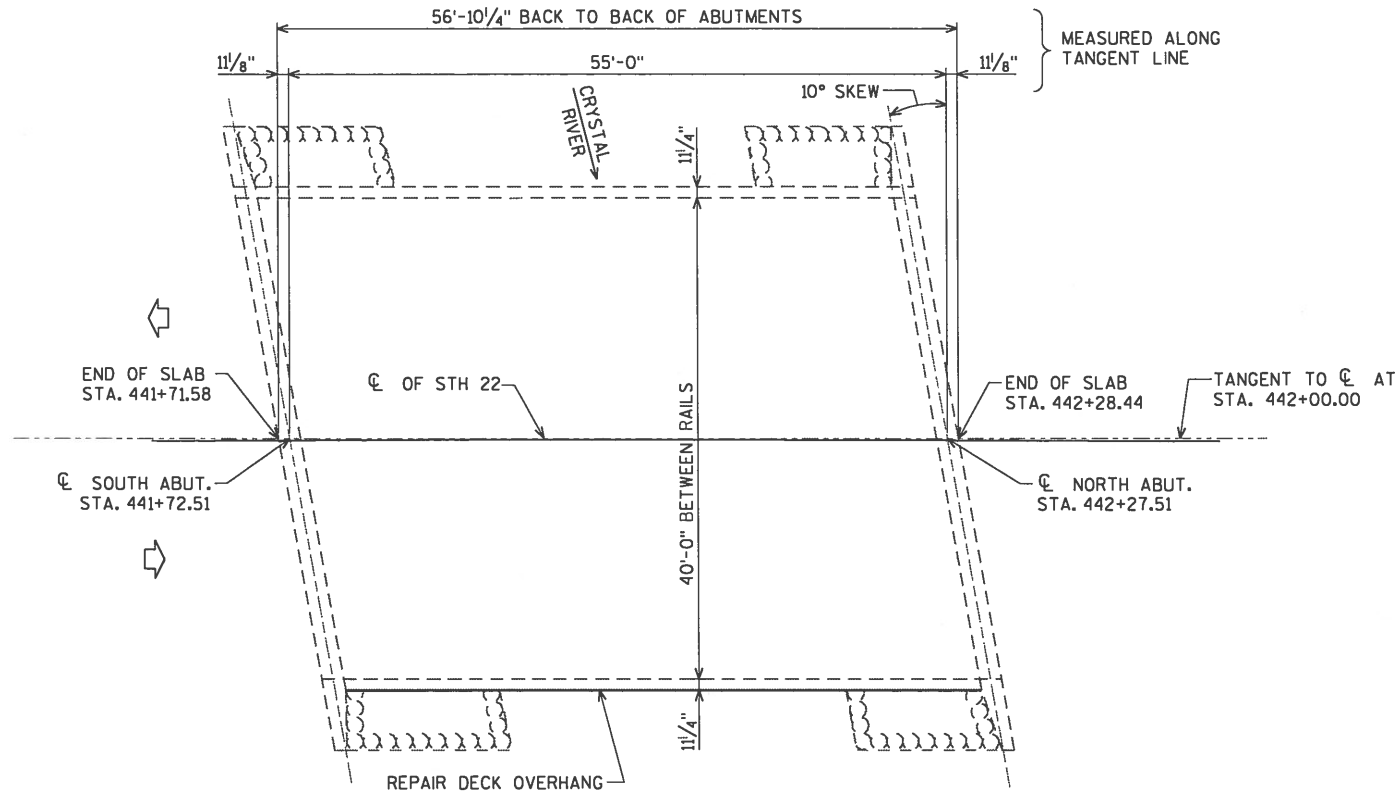
LOCATION	DESCRIPTION	LF
STH 22	YELLOW DASHED CENTERLINE	3,314
STH 22	WHITE EDGELINE	1,657
TOTAL		4,971

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0100 UNLESS
OTHERWISE NOTED.
ADDITIONAL QUANTITIES
SHOWN ELSEWHERE ON PLAN.

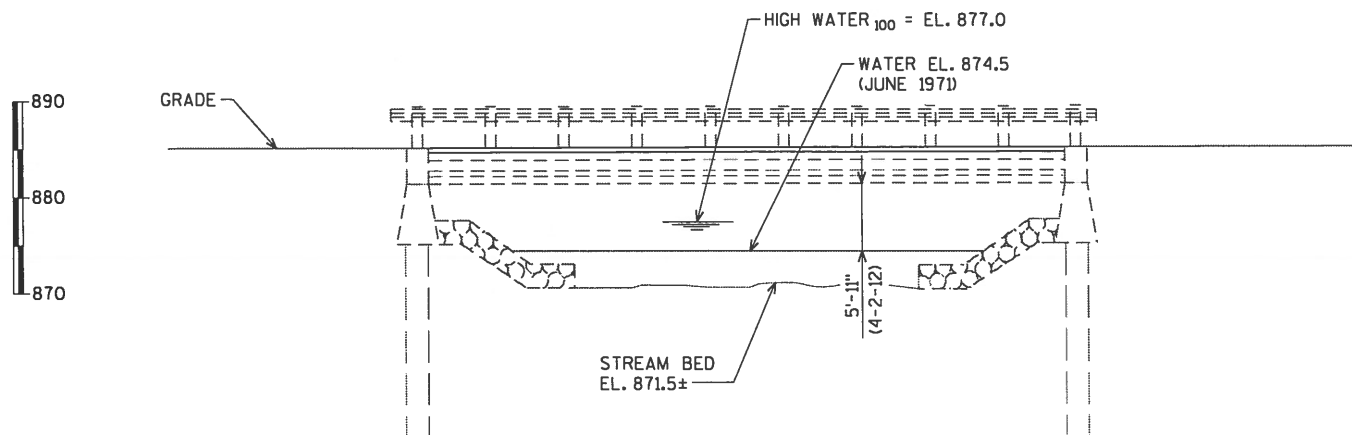
\$PRNAME\$
U:\42-0853.00 - NC Region Bridge Repairs 2011\Existing Plans & Reports\B-68-32\Existing Struc

DATE: _____
DATE: _____
DATE: _____
CHECKED BY: _____
BACK CHECKED BY: _____
CORRECTED BY: _____

8

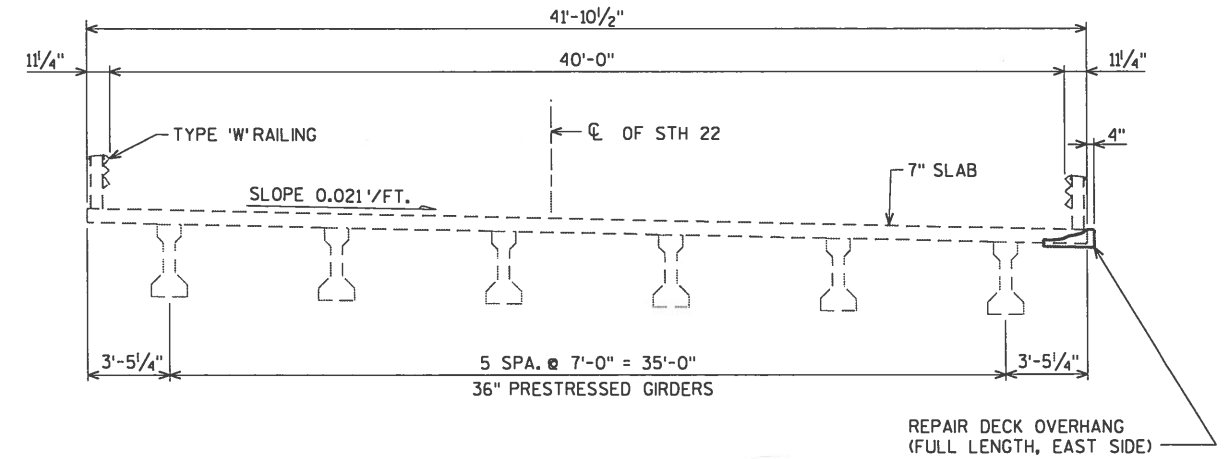


PLAN
EXISTING 1-SPAN 36" PRESTRESSED GIRDER BRIDGE



ELEVATION

- LIST OF DRAWINGS**
1. GENERAL PLAN
 2. QUANTITIES, NOTES, & TYPICAL DETAILS
 3. SUPERSTRUCTURE



CROSS SECTION THRU BRIDGE LOOKING NORTH

DESIGN DATA

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY { SLAB _____ f'_c = 4,000 p.s.i.
ALL OTHER _____ f'_c = 3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60) _____ f_y = 60,000 p.s.i.



BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
DAN SYDOW
(715)-834-3161

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY AYRES ASSOCIATES 3433 Oakwood Hills Parkway Eau Claire, WI 54701 www.AyresAssociates.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED	William C. Dreher, KAR		08/13/13
CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-68-32			
STH 22 OVER CRYSTAL RIVER			
COUNTY	WAUPACA	TOWN/CITY/VILLAGE	DAYTON
DESIGN SPEC.	REHABILITATION	N/A	
DESIGNED BY	DNS	DESIGN CK'D.	KAZ
DRAWN BY	KAZ	PLANS CK'D.	DNS
GENERAL PLAN			SHEET 1 OF 3

8

\$PRFNAME\$
U:\42-0853.00 - NC Region Bridge Repairs 2011\Existing Plans & Reports\B-68-32\Existing Structure_new.dgn

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	QUANTITY
⊗ 203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 442+00	LS	1
502.0100	CONCRETE MASONRY BRIDGES	CY	1
502.5002	MASONRY ANCHOR TYPE L NO. 4 BARS	EACH	35
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	40
509.9020.S	EPOXY CRACK SEALING	LF	53
SPV.0060.01	EMBEDDED GALVANIC ANODES	EACH	36
SPV.0090.01	GALVANIZED METAL FLASHING	LF	53

⊗ INCLUDES REMOVAL OF UNSOUND CONCRETE AND BLAST CLEANING AT DECK OVERHANG.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS SHOWN OR NOTED OTHERWISE.
THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.
DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.
ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1" DEEP SAW CUT.
NO GROUND DISTURBANCE ALLOWED IN THE SOUTHWEST QUADRANT.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-68-32			
DRAWN BY		KAZ	PLANS CK'D. DNS
QUANTITIES, NOTES, & TYPICAL DETAILS			SHEET 2 OF 3

ORIGINAL PLANS PREPARED BY

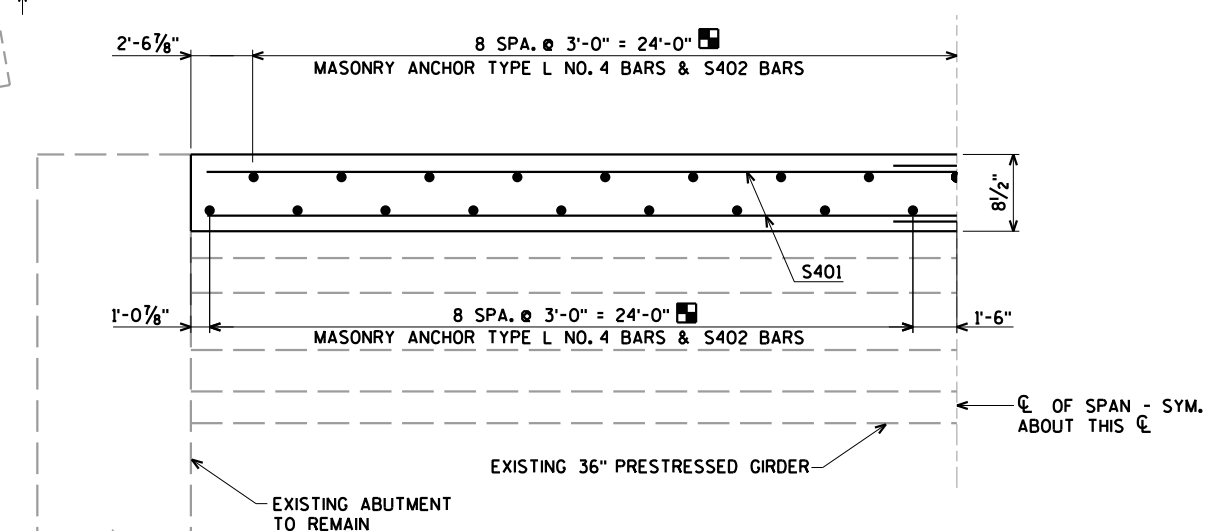
AYRES

ASSOCIATES

3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

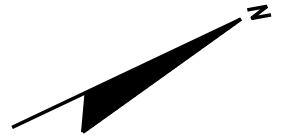
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GALVANIZED METAL FLASHING DETAIL



✖ $\frac{3}{4}$ " V-GROOVE. EXTEND V-GROOVE TO 3" FROM FRONT FACE OF ABUTMENT.
 ▲ GALVANIZED METAL FLASHING (16 GAUGE, 8" WIDE). ANCHOR WITH $\frac{3}{16}$ " x 1" TAPCONS (OR EQUAL) @ 1'-4" O.C. SEAL TOP EDGE WITH SILICONE. ANCHORS AND SILICONE CONSIDERED INCIDENTAL TO "GALVANIZED METAL FLASHING".
 ■ SHIFT SPACING AS NEEDED TO AVOID EXISTING RAILING ANCHORAGES

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-68-32			
DRAWN BY		KAZ	PLANS CK'D. DN
SUPERSTRUCTURE		SHEET 3 OF	



PROPOSED WORK: REPLACE PORTION OF DECK EDGE ON EAST SIDE. REMOVE AND REINSTALL RAILING AS NEEDED. ENCAPSULATE PIER CAP. PLACE A POLYMER OVERLAY ON THE ENTIRE CONCRETE DECK.

LEGEND

- POST WITH ATTACHED SIGN
- DRUM WITH WARNING LIGHT (TYPE C)
- DRUM
- *** REMOVING PAVEMENT MARKING
- ⇨ DIRECTION OF TRAFFIC
- WORK ZONE
- 4" x 6" WOOD POST (BREAKAWAY)
- TYPE III BARRICADE WITH SIGN
- FLAGS, 16"x16" MIN., ORANGE
- TEMPORARY SIGNAL WITH BACKPLATE AND 12-INCH LENSES ON BREAKAWAY POLE
- TEMPORARY PRECAST CONCRETE BARRIER

GENERAL NOTES FOR SIGNS PCMS

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PRIOR TO CONSTRUCTION	
PHASE 1 (2 SEC.)	PHASE 2 (2 SEC.)
BRIDGE WORK BEGINS	"DATE"
7 DAYS MINIMUM PRIOR TO BEGINNING WORK	

GENERAL NOTES FOR TRAFFIC CONTROL

SEE SDD "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS", "BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION", AND "SPAN WIRE TEMPORARY TRAFFIC SIGNAL" FOR ADDITIONAL INFORMATION.

DIMENSIONS ARE BASED FROM THE ENDS OF DECK AT THE CENTERLINE OF STH 110.

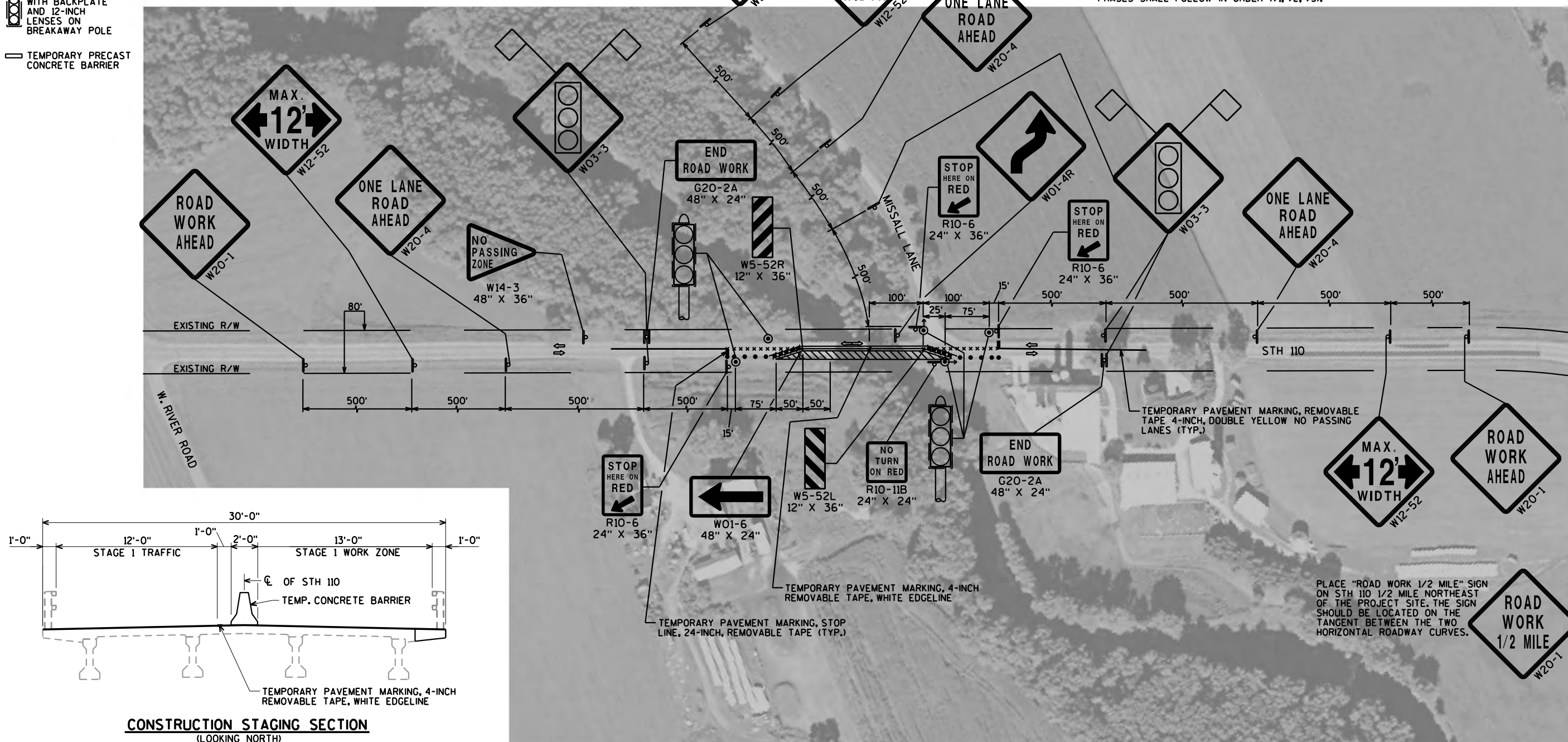
NAVIGATIONAL WARNING SIGNS ARE REQUIRED AND TO BE PERMITTED IN ACCORDANCE WITH STANDARD SPEC. SECTION 107.19.

TEMPORARY SIGNAL TIMING

INTERVAL	Φ1 STH 110 (SB) INDICATION	Φ2 MISSALL (EB) INDICATION	Φ3 STH 110 (NB) INDICATION	TIME (SECONDS)
1	G	R	R	12
2	Y	R	R	5
3	R	R	R	6
4	R	G	R	8
5	R	Y	R	5
6	R	R	R	14
7	R	R	G	12
8	R	R	Y	5
9	R	R	R	15
EMERG FLASH	FR	FR	FR	--
CYCLE LENGTH =				82

NB = NORTHBOUND
SB = SOUTHBOUND
EB = EASTBOUND
R = RED
Y = YELLOW
G = GREEN
FR = FLASHING RED

NOTE: TIMINGS PROVIDED MAY NEED ADJUSTMENT IN FIELD BASED ON TRAFFIC. FLASH RED FOR EMERGENCY. BASED ON A STOPLINE TO STOPLINE DISTANCE OF 500 FEET. EASTBOUND SIGNAL PHASE TRIGGERED BY TEMPORARY TRAFFIC SENSOR. PHASES SHALL NOT BE SKIPPED. PHASES SHALL FOLLOW IN ORDER (Φ1, Φ2, Φ3).



CONSTRUCTION STAGING SECTION
(LOOKING NORTH)

LEGEND

- POST WITH ATTACHED SIGN
- DRUM WITH WARNING LIGHT (TYPE C)
- DRUM
- *** REMOVING PAVEMENT MARKING
- ⇐ DIRECTION OF TRAFFIC
- WORK ZONE
- 4" x 6" WOOD POST (BREAKAWAY)
- TYPE III BARRICADE WITH SIGN
- FLAGS, 16"x16" MIN., ORANGE
- TEMPORARY SIGNAL WITH BACKPLATE AND 12-INCH LENSES ON BREAKAWAY POLE
- TEMPORARY PRECAST CONCRETE BARRIER

SEE SDD "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS", "BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION", AND "SPAN WIRE TEMPORARY TRAFFIC SIGNAL" FOR ADDITIONAL INFORMATION.

DIMENSIONS ARE BASED FROM THE ENDS OF DECK AT THE CENTERLINE OF STH 110.

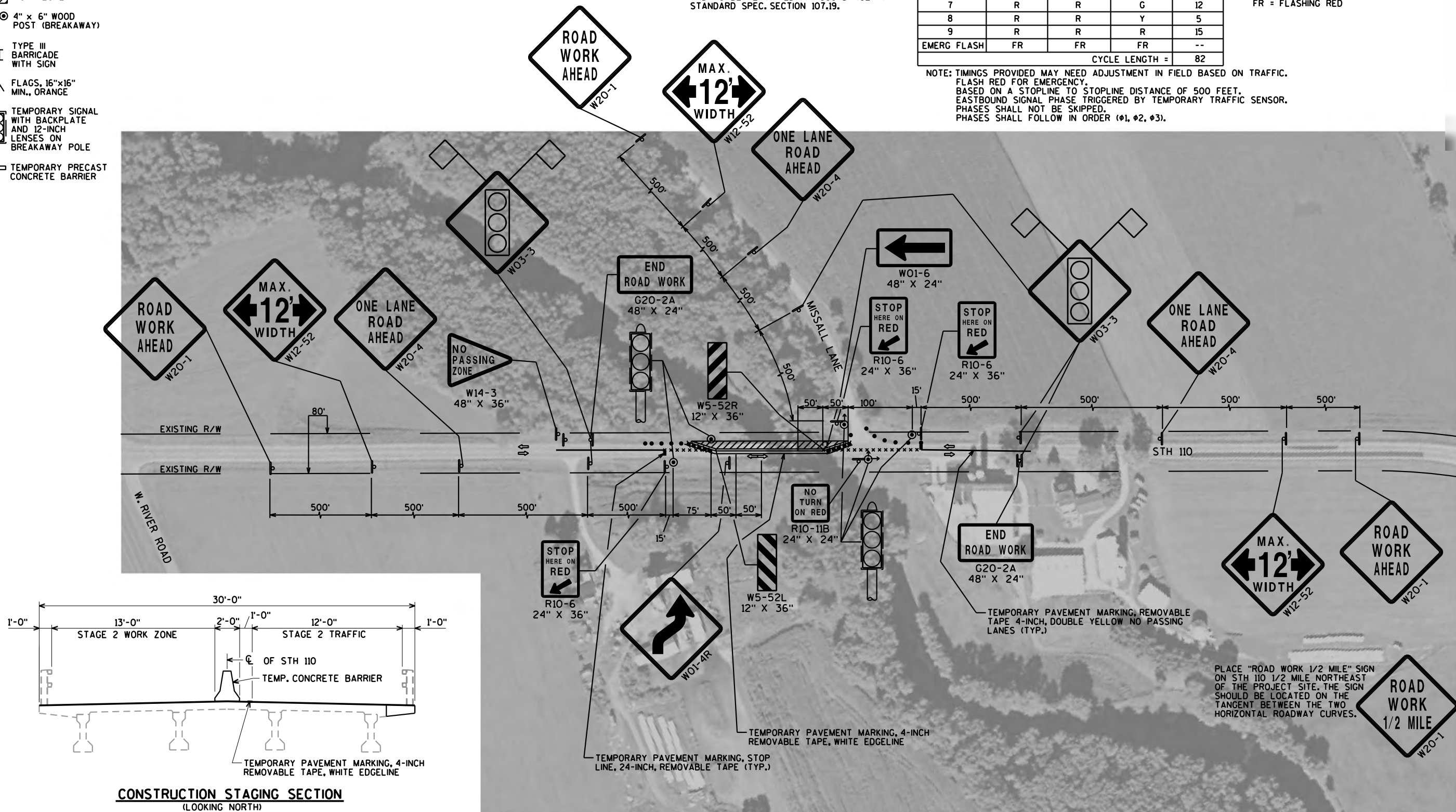
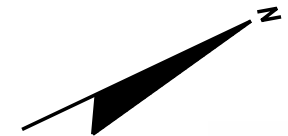
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TEMPORARY SIGNAL TIMING

INTERVAL	#1 STH 110 (SB) INDICATION	#2 MISSALL (EB) INDICATION	#3 STH 110 (NB) INDICATION	TIME (SECONDS)
1	G	R	R	12
2	Y	R	R	5
3	R	R	R	6
4	R	G	R	8
5	R	Y	R	5
6	R	R	R	14
7	R	R	G	12
8	R	R	Y	5
9	R	R	R	15
EMERG FLASH	FR	FR	FR	--
CYCLE LENGTH =				82

NOTE: TIMINGS PROVIDED MAY NEED ADJUSTMENT IN FIELD BASED ON TRAFFIC. FLASH RED FOR EMERGENCY. BASED ON A STOPLINE TO STOPLINE DISTANCE OF 500 FEET. EASTBOUND SIGNAL PHASE TRIGGERED BY TEMPORARY TRAFFIC SENSOR. PHASES SHALL NOT BE SKIPPED. PHASES SHALL FOLLOW IN ORDER (#1, #2, #3).

NB = NORTHBOUND
SB = SOUTHBOUND
EB = EASTBOUND
R = RED
Y = YELLOW
G = GREEN
FR = FLASHING RED



LEGEND

- POST WITH ATTACHED SIGN
- DRUM WITH WARNING LIGHT (TYPE C)
- DRUM
- FLEXIBLE TUBULAR MARKER POST
- *** REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- 4" x 6" WOOD POST (BREAKAWAY)
- TYPE III BARRICADE WITH SIGN
- FLAGS, 16"x16" MIN., ORANGE
- TEMPORARY SIGNAL WITH BACKPLATE AND 12-INCH LENSES ON BREAKAWAY POLE
- TEMPORARY PRECAST CONCRETE BARRIER
- WORK ZONE

SEE SDD "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS", "BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION", AND "SPAN WIRE TEMPORARY TRAFFIC SIGNAL" FOR ADDITIONAL INFORMATION.

DIMENSIONS ARE BASED FROM THE ENDS OF DECK AT THE CENTERLINE OF STH 110.

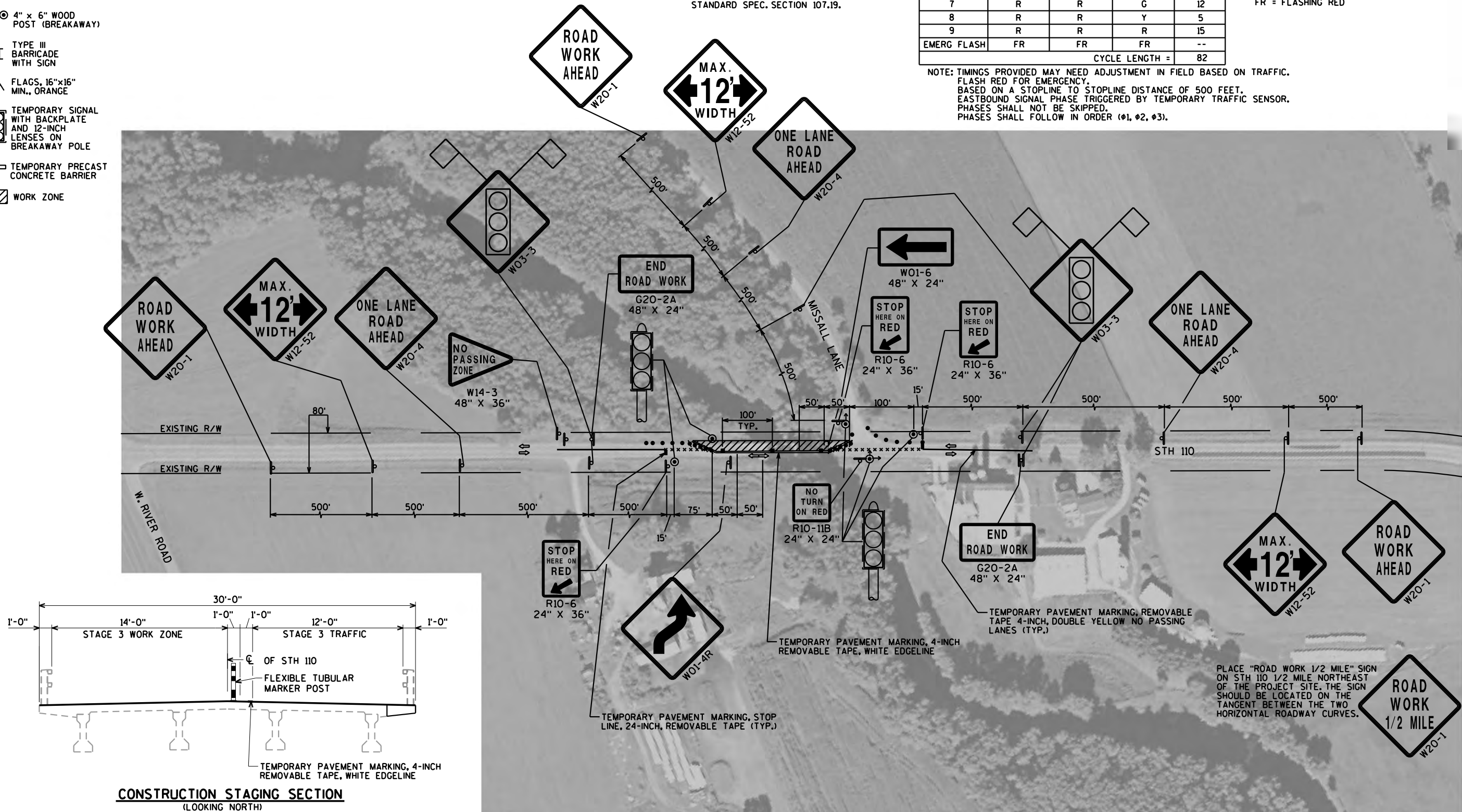
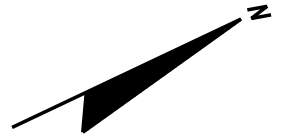
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TEMPORARY SIGNAL TIMING

INTERVAL	#1 STH 110 (SB) INDICATION	#2 MISSALL (EB) INDICATION	#3 STH 110 (NB) INDICATION	TIME (SECONDS)
1	G	R	R	12
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3	R	R	R	6
4	R	G	R	8
5	R	Y	R	5
6	R	R	R	14
7	R	R	G	12
8	R	R	Y	5
9	R	R	R	15
EMERG FLASH	FR	FR	FR	--
CYCLE LENGTH =				82

NOTE: TIMINGS PROVIDED MAY NEED ADJUSTMENT IN FIELD BASED ON TRAFFIC. FLASH RED FOR EMERGENCY. BASED ON A STOPLINE TO STOPLINE DISTANCE OF 500 FEET. EASTBOUND SIGNAL PHASE TRIGGERED BY TEMPORARY TRAFFIC SENSOR. PHASES SHALL NOT BE SKIPPED. PHASES SHALL FOLLOW IN ORDER (#1, #2, #3).

NB = NORTHBOUND
SB = SOUTHBOUND
EB = EASTBOUND
R = RED
Y = YELLOW
G = GREEN
FR = FLASHING RED



LEGEND

- POST WITH ATTACHED SIGN
- DRUM WITH WARNING LIGHT (TYPE C)
- DRUM
- *** REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- FLEXIBLE TUBULAR MARKER POST
- 4" x 6" WOOD POST (BREAKAWAY)
- TYPE III BARRICADE WITH SIGN
- FLAGS, 16"x16" MIN., ORANGE
- TEMPORARY SIGNAL WITH BACKPLATE AND 12-INCH LENSES ON BREAKAWAY POLE
- TEMPORARY PRECAST CONCRETE BARRIER
- WORK ZONE

SEE SDD "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS", "BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION", AND "SPAN WIRE TEMPORARY TRAFFIC SIGNAL" FOR ADDITIONAL INFORMATION.

DIMENSIONS ARE BASED FROM THE ENDS OF DECK AT THE CENTERLINE OF STH 110.

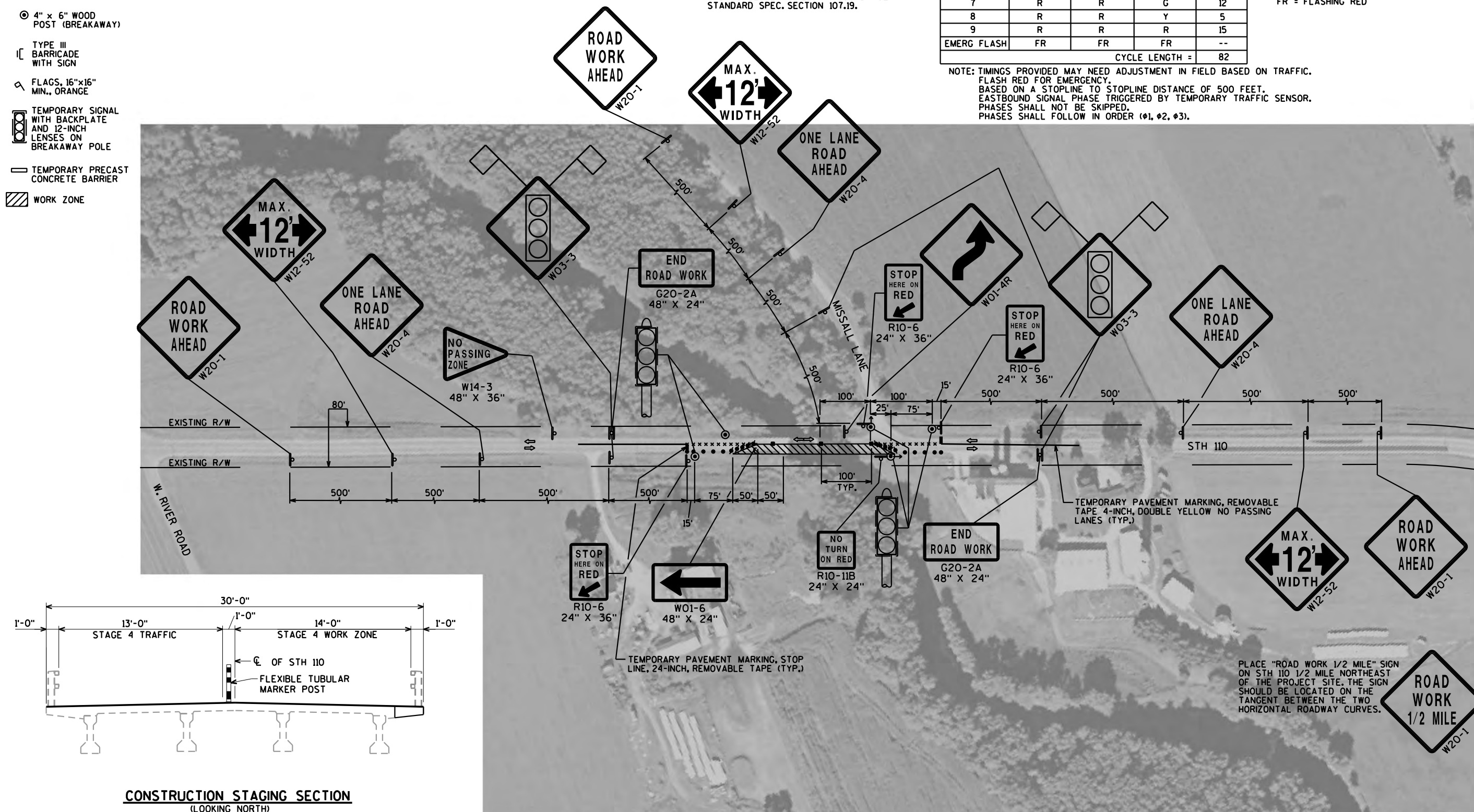
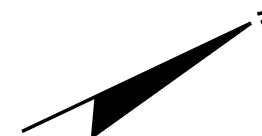
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TEMPORARY SIGNAL TIMING

INTERVAL	#1 STH 110 (SB) INDICATION	#2 MISSALL (EB) INDICATION	#3 STH 110 (NB) INDICATION	TIME (SECONDS)
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2	Y	R	R	5
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4	R	G	R	8
5	R	Y	R	5
6	R	R	R	14
7	R	R	G	12
8	R	R	Y	5
9	R	R	R	15
EMERG FLASH	FR	FR	FR	--
CYCLE LENGTH =				82

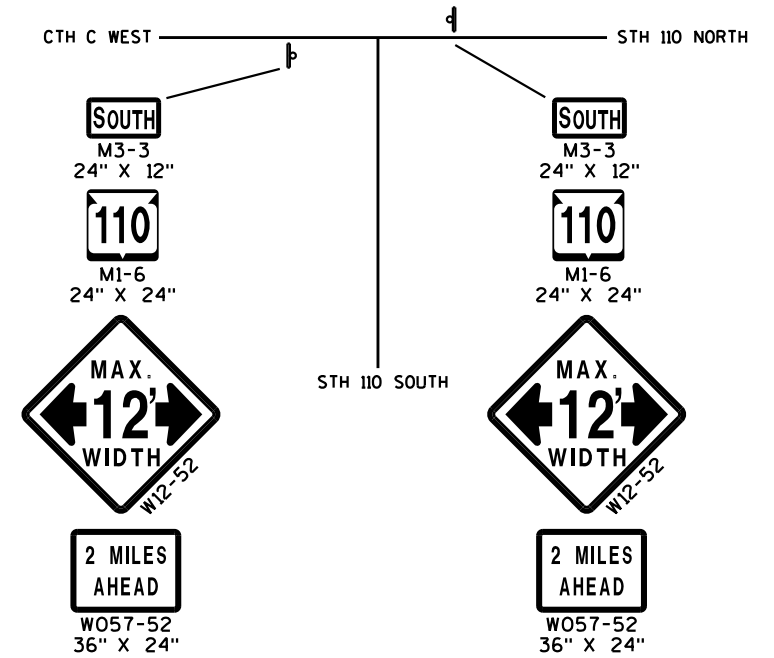
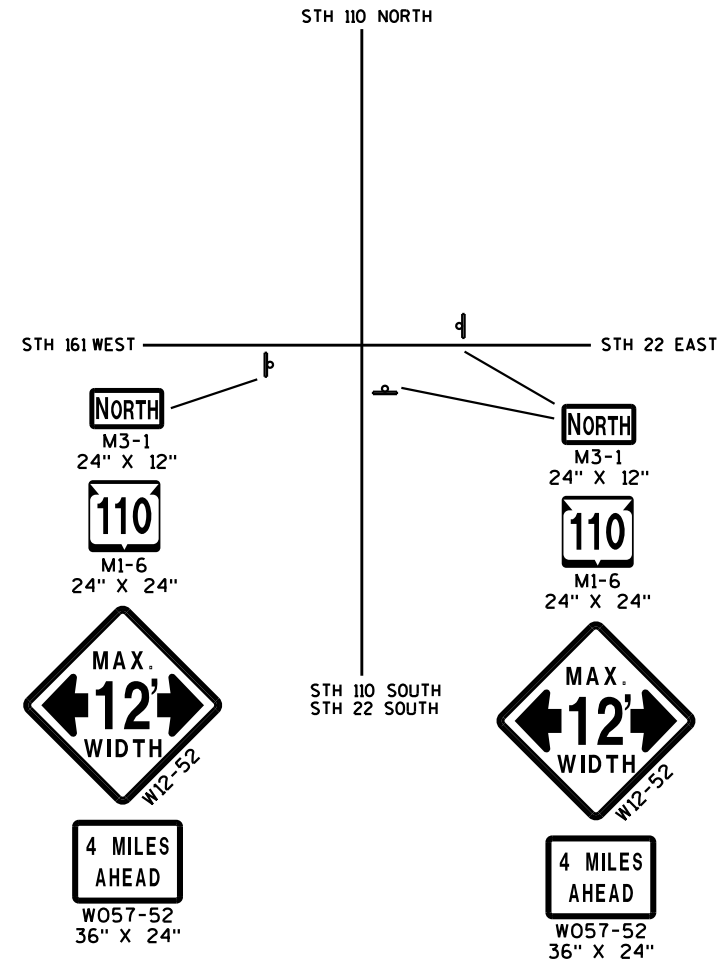
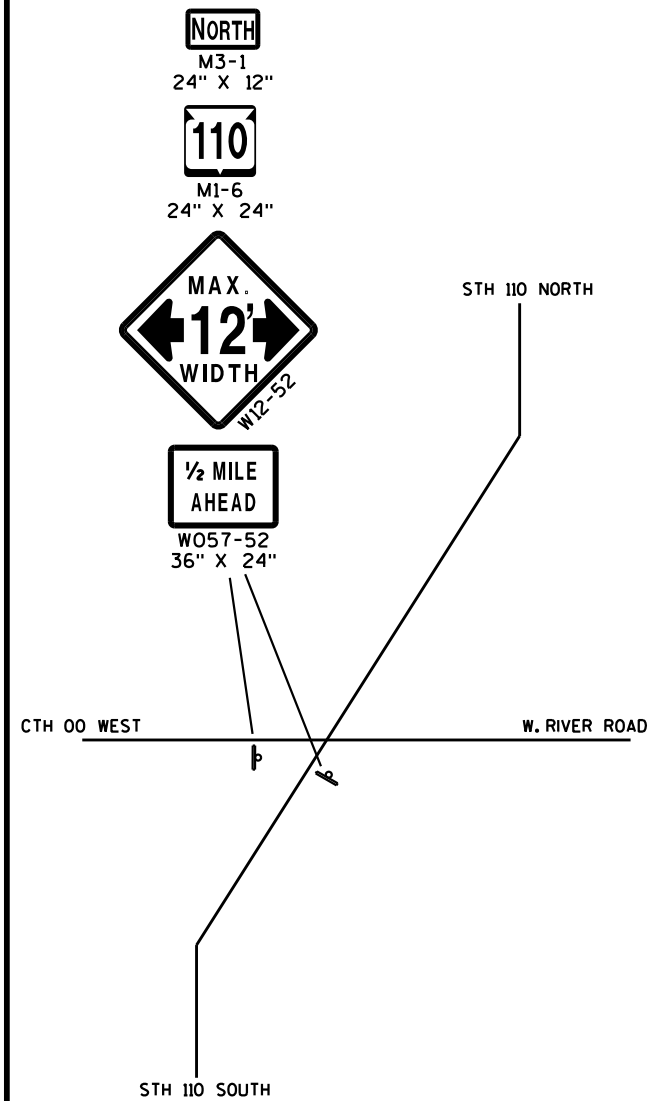
NOTE: TIMINGS PROVIDED MAY NEED ADJUSTMENT IN FIELD BASED ON TRAFFIC. FLASH RED FOR EMERGENCY. BASED ON A STOPLINE TO STOPLINE DISTANCE OF 500 FEET. EASTBOUND SIGNAL PHASE TRIGGERED BY TEMPORARY TRAFFIC SENSOR. PHASES SHALL NOT BE SKIPPED. PHASES SHALL FOLLOW IN ORDER (#1, #2, #3).

NB = NORTHBOUND
SB = SOUTHBOUND
EB = EASTBOUND
R = RED
Y = YELLOW
G = GREEN
FR = FLASHING RED



LEGEND

POST WITH ATTACHED SIGN



CONCRETE BARRIER TEMPORARY PRECAST

LOCATION	603.8000	603.8125
	DELIVERED	INSTALLED
LF		
STH 110	501	501

SILT FENCE & SILT FENCE MAINTENANCE

LOCATION	628.1504	628.1520
	LF	MAINTENANCE
LF		
STH 110 (UNDISTRIBUTED)	140	140

TOPSOIL, FERTILIZER, SEED, & MULCH

LOCATION	625.0100	627.0200	629.0210	630.0120
	TOPSOIL	MULCHING	FERTILIZER	SEEDING
SY				
CWT				
LB				
STH 110 (UNDISTRIBUTED)	312	312	0.2	9

628.2027 EROSION MAT CLASS II TYPE C

LOCATION	SY
STH 110 (UNDISTRIBUTED)	312

642.5001 FIELD OFFICE TYPE B

LOCATION	EACH
B-68-528	1

TRAFFIC CONTROL DRUMS, BARRICADES, LIGHTS, AND SIGNS

LOCATION		643.0300		643.0420		643.0715		643.0900	
		DRUMS		BARRICADES		WARNING LIGHTS		SIGNS	
		EACH	DAYS	TYPE III		TYPE C			
		EACH	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAYS
STH 110	STAGE 1	20	13.5	1	13.5	10	13.5	53	13.5
STH 110	STAGE 2	22	13.5	1	13.5	10	13.5	53	13.5
STH 110	STAGE 3	22	4	1	4	10	4	51	4
STH 110	STAGE 4	20	4	1	4	10	4	51	4
TOTAL		735		35		350		1,839	

TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER

POSTS & BASES

LOCATION		643.0500	643.0600
		POSTS	BASES
		EACH	EACH
STH 110	STAGE 3	3	3
STH 110	STAGE 4	3	3
TOTAL		6	6

643.1050 TRAFFIC CONTROL SIGNS PCMS

LOCATION	DAY
STH 110 SOUTH OF B-68-528	7
STH 110 NORTH OF B-68-528	7
TOTAL	14

646.0106 PAVEMENT MARKING EPOXY 4-INCH

LOCATION	DESCRIPTION	LF
STH 110	DOUBLE YELLOW CENTERLINE	610
BRIDGE DECK	DOUBLE YELLOW CENTERLINE	262
BRIDGE DECK	WHITE EDGELINE	262
TOTAL		1,134

646.0600 REMOVING PAVEMENT MARKINGS

LOCATION	DESCRIPTION	LF
STH 110	DOUBLE YELLOW CENTERLINE	610

649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH

LOCATION	DESCRIPTION	LF
STH 110	DOUBLE YELLOW CENTERLINE	2,800
STH 110	WHITE EDGELINE	391
TOTAL		3,191

649.1400 TEMPORARY PAVEMENT MARKING STOP LINE
REMOVABLE TAPE 24-INCH

LOCATION	LF
STH 110	30

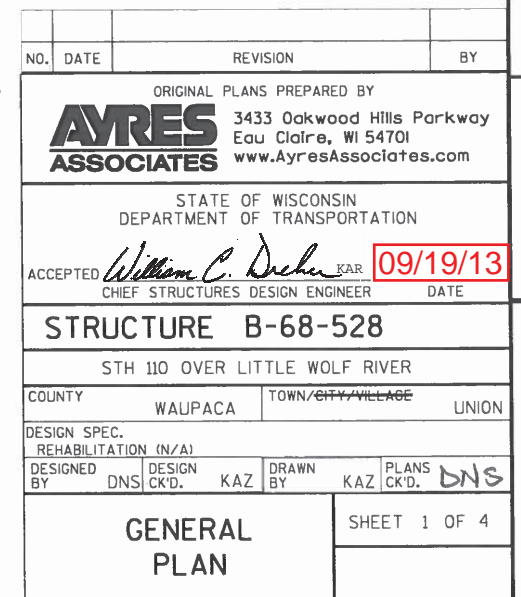
661.0100 TEMPORARY TRAFFIC SIGNALS FOR BRIDGES
(B-68-528)

LOCATION	LS
STH 110	1

SPV.0060.02 FURNISH AND INSTALL TEMPORARY
TRAFFIC SENSOR

LOCATION	EACH
STH 110	1

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0100 UNLESS
OTHERWISE NOTED.
ADDITIONAL QUANTITIES
SHOWN ELSEWHERE ON PLAN.



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STATE PROJECT NUMBER

1009-44-61

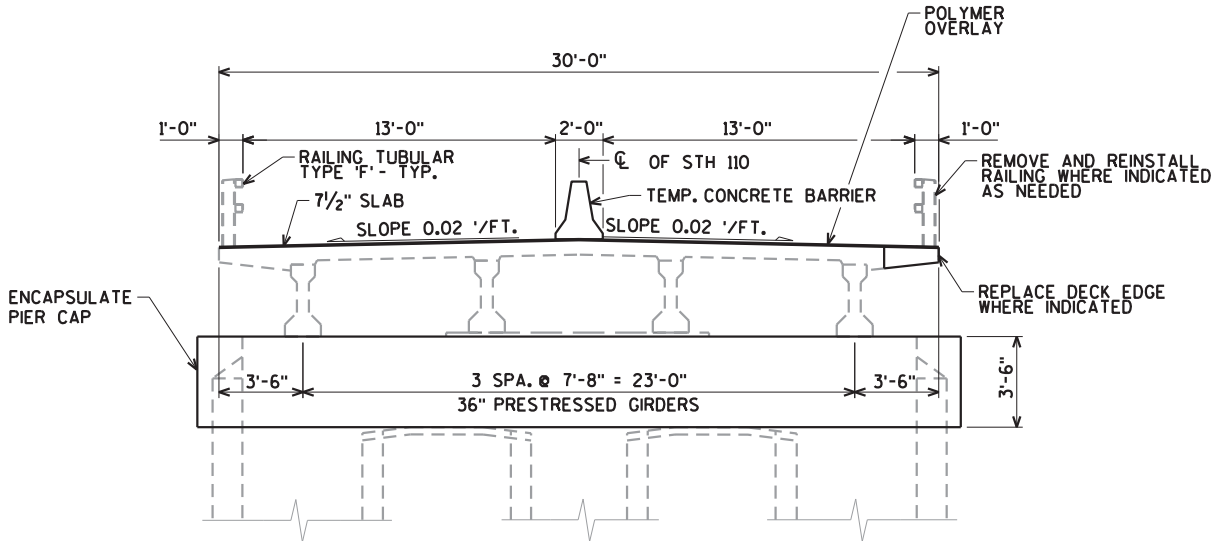
TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	QUANTITY
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 24+53	LS	1
502.0100	CONCRETE MASONRY BRIDGES	CY	8
502.5002	MASONRY ANCHOR TYPE L NO. 4 BARS	EACH	124
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	540
509.1500	CONCRETE SURFACE REPAIR	SF	10
509.5100.S	POLYMER OVERLAY	SY	435
SPV.0060.01	EMBEDDED GALVANIC ANODES	EACH	30

● UNDISTRIBUTED QUANTITY FOR REPAIRS AS DIRECTED BY THE ENGINEER, IF NECESSARY.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS SHOWN OR NOTED OTHERWISE.
THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.
DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.
ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1" DEEP SAW CUT.
REMOVE AND REINSTALL RAILING IS INCIDENTAL TO OTHER WORK TO BE PERFORMED.



CROSS SECTION THRU BRIDGE
(LOOKING NORTH)

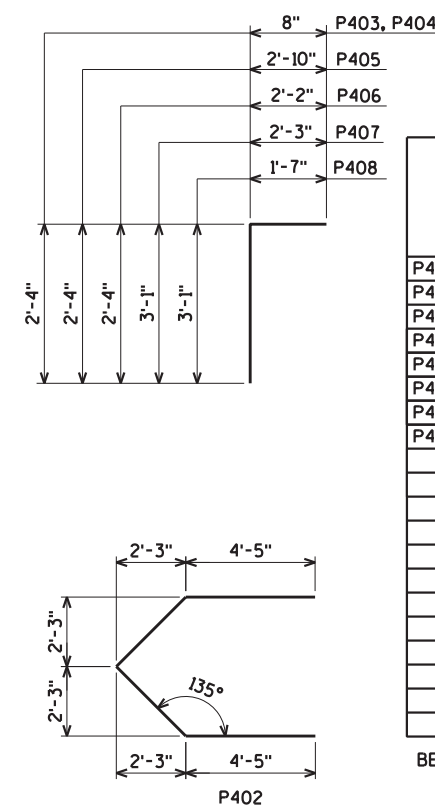
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-68-528			
DRAWN BY		KAZ	PLANS CK'D. DNS
QUANTITIES, NOTES, & TYPICAL DETAILS			SHEET 2 OF 4

ORIGINAL PLANS PREPARED BY

AYRES

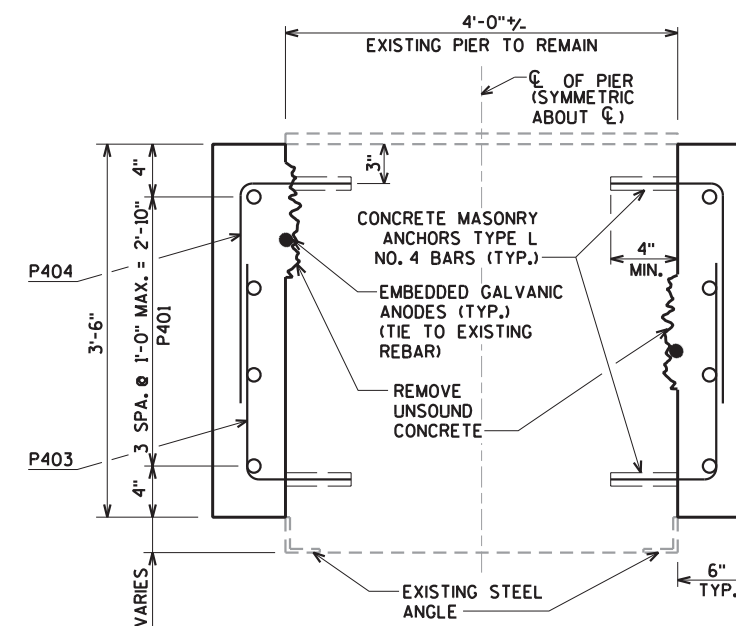
ASSOCIATES

3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

[illegible]

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

PLAN VIEW OF PIER

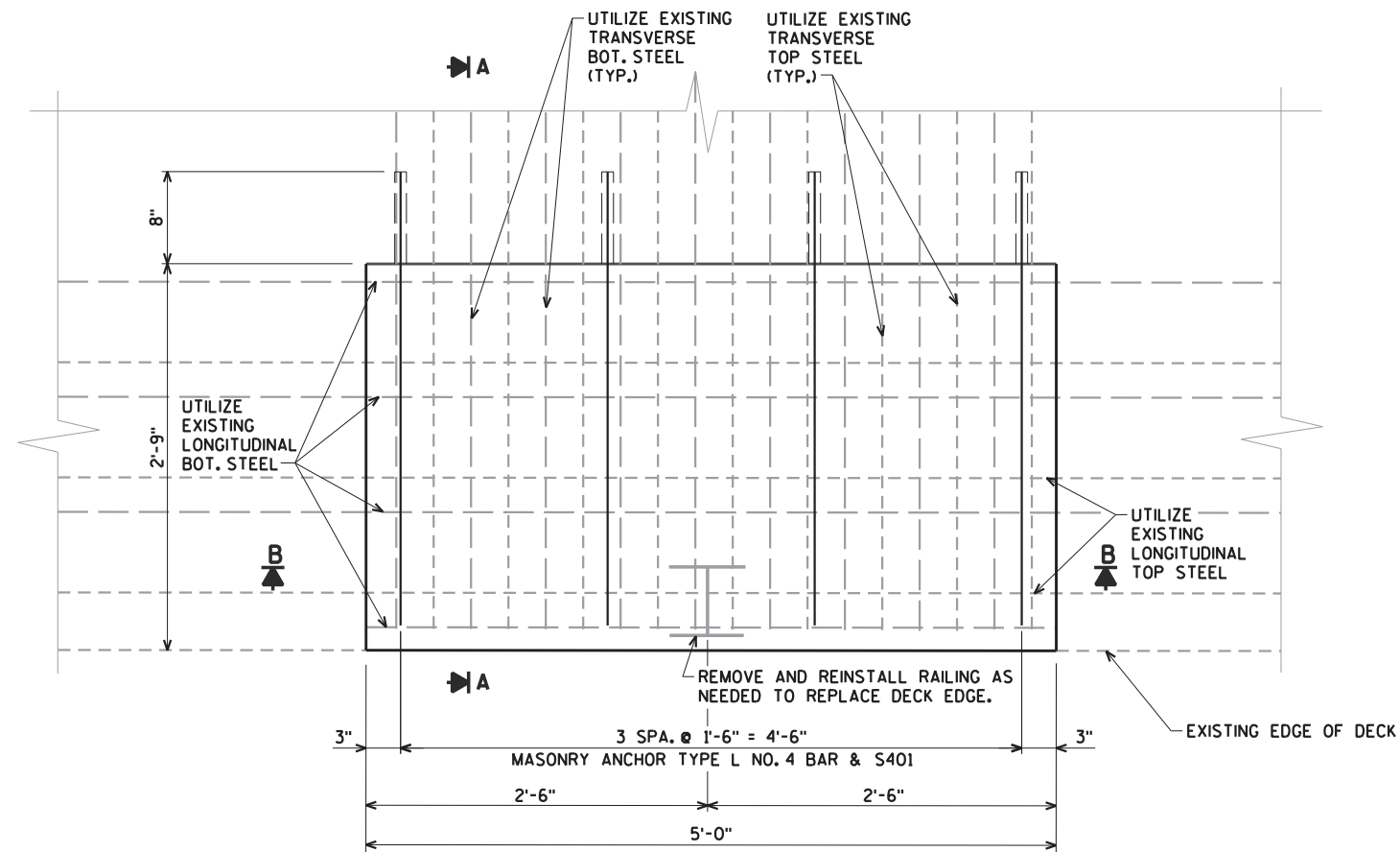


SECTION B-B

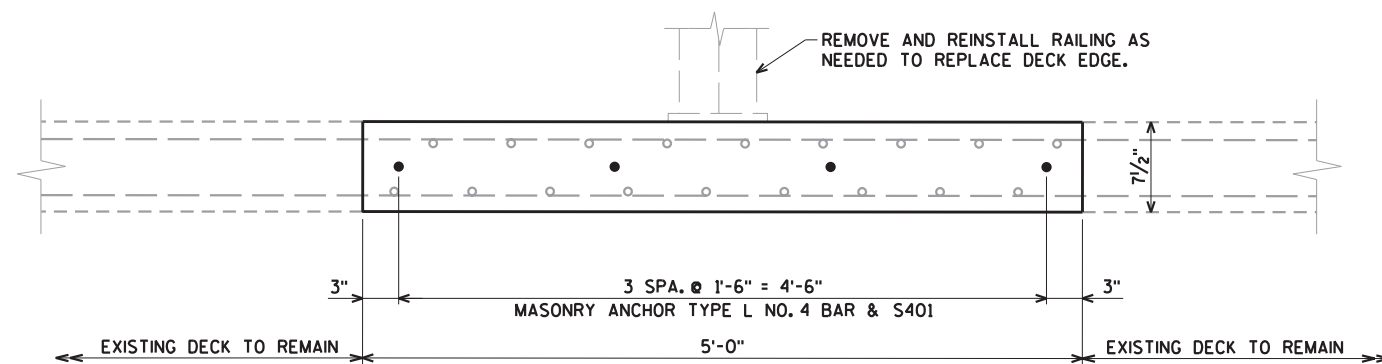
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-68-528			
DRAWN BY		KAZ	PLANS CK'D. DN
PIER			SHEET 3 OF 3

\$PRNAME\$
U:\42-0853.00 - NC Region Bridge Repairs 2011\Existing Plans & Reports\B-68-528\Existing Structure_new.dgn

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PLAN VIEW OF DECK EDGE REPLACEMENT



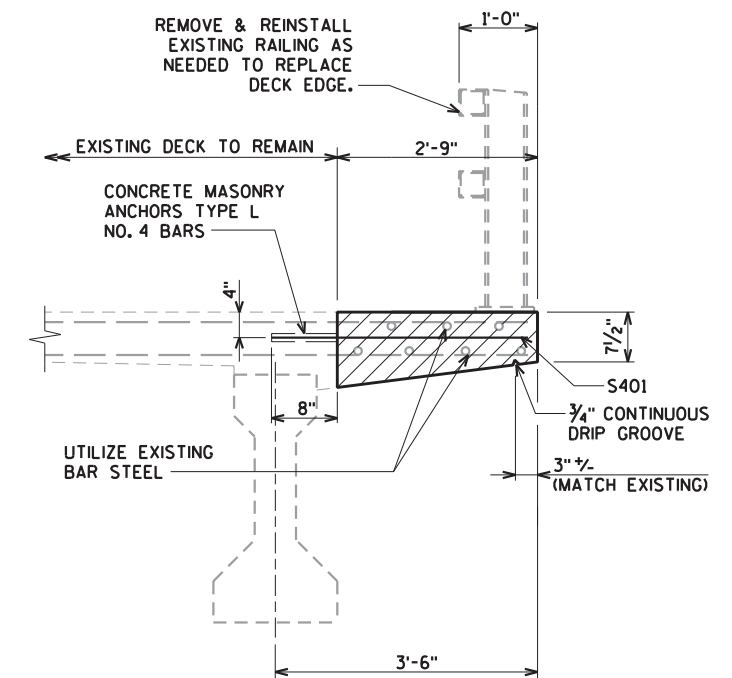
SECTION B-B

STATE PROJECT NUMBER

1009-44-61

BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED	BAR SERIES	10" COATED
							LOCATION
S401	X	4	3-2				TRANS. DOWELS



SECTION A-A

8

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-68-528			
DRAWN BY KAZ		PLANS CK'D. DNS	
SUPERSTRUCTURE			SHEET 4 OF 4

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com



PROPOSED WORK: REPAIR CONCRETE SURFACE AT VARIOUS LOCATIONS ON PIER AND EAST ABUTMENT, REPAINT ALL STRUCTURAL STEEL.

LEGEND

- POST WITH ATTACHED SIGN
- DRUM WITH WARNING LIGHT (TYPE C)
- DRUM
- REMOVING PAVEMENT MARKING
- TEMPORARY PRECAST CONCRETE BARRIER
- DIRECTION OF TRAFFIC
- WORK ZONE
- 4" x 6" WOOD POST (BREAKAWAY)
- TYPE III BARRICADE WITH SIGN
- FLAGS, 16"x16" MIN., ORANGE
- TEMPORARY SIGNAL WITH BACKPLATE AND 12-INCH LENSES ON BREAKAWAY POLE

GENERAL NOTES FOR SIGNS PCMS

THE FIELD ENGINEER WILL MAKE THE FINAL DETERMINATION TO THE PLACEMENT OF PCMS BOARDS BASED UPON EXISTING CONDITIONS AND STAGING.

CONSIDER GEOMETRICS WHEN LOCATING PCMS SO THE DRIVER HAS A CLEAR VIEW OF THE BOARD FOR A MINIMUM OF 1000 FEET IN FRONT OF THE PCMS.

PCMS SHOULD BE PLACED AS FAR AWAY FROM LIVE TRAFFIC LANES AS POSSIBLE WITHOUT HAMPERING VISIBILITY. IN ADVANCE OF HIGHWAY CONSTRUCTION PROJECTS, THE SIGNS SHOULD BE PLACED ON THE BACKSLOPE BEYOND THE DITCH. THE LOCATION SELECTED SHOULD BE AT OR SLIGHTLY ABOVE THE ELEVATION OF THE ROADWAY. FOR INTERMITTENT WORK SUCH AS FREEWAY LANE CLOSURE, OR WHERE SITE CONDITIONS DO NOT ALLOW OTHERWISE, THE SIGNS MAY BE PLACED ON THE SHOULDER. THE SITE SHOULD BE VISITED TO ASSURE VISIBILITY, SAFETY AND MAINTENANCE CONSIDERATIONS. A TAPER OF REFLECTORIZED DRUMS OR BARRICADES SHOULD BE PLACED AHEAD OF PCMS PLACED ON THE SHOULDER IF IT IS NOT SHIELDED BY A BARRIER.

PRIOR TO CONSTRUCTION	
PHASE 1 (2 SEC.)	PHASE 2 (2 SEC.)
BRIDGE WORK BEGINS	"DATE"
7 DAYS MINIMUM PRIOR TO BEGINNING WORK	

GENERAL NOTES FOR TRAFFIC CONTROL

SEE SDD "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS", "BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION", AND "SPAN WIRE TEMPORARY TRAFFIC SIGNAL" FOR ADDITIONAL INFORMATION.

DIMENSIONS ARE BASED FROM THE ENDS OF BRIDGE DECK AT THE STH 54 CENTERLINE.

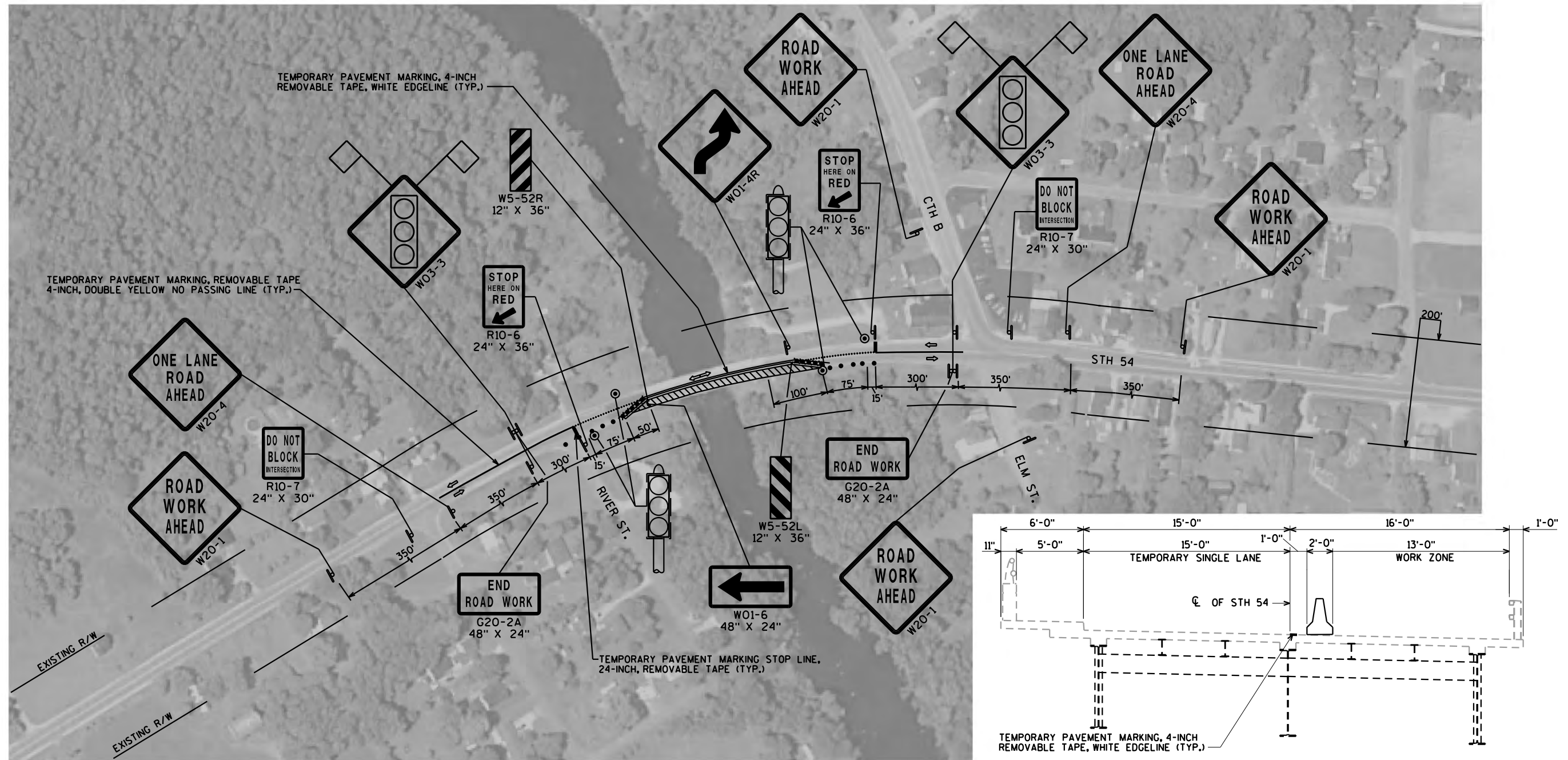
NAVIGATIONAL WARNING SIGNS ARE REQUIRED AND TO BE PERMITTED IN ACCORDANCE WITH STANDARD SPEC. SECTION 107.19.

TEMPORARY SIGNAL TIMING

BY TIME OF DAY		5AM-11PM		11PM-5AM	
INTERVAL	EB	WB	SECONDS	SECONDS	SECONDS
1	G	R	21	8	
2	Y	R	4	4	
3	R	R	17	17	
4	R	G	15	8	
5	R	Y	4	4	
6	R	R	17	17	
EMERG FLASH	FR	FR	--	--	
CYCLE LENGTH =			78	58	

EB = EASTBOUND
WB = WESTBOUND
R = RED
Y = YELLOW
G = GREEN
FR = FLASHING RED

NOTE: TIMINGS PROVIDED MAY NEED ADJUSTMENT IN FIELD BASED ON TRAFFIC. FLASH RED FOR EMERGENCY. BASED ON A STOP LINE TO STOP LINE DISTANCE OF 500 FEET.



CONCRETE BARRIER TEMPORARY PRECAST

LOCATION	603.8000	603.8125
	DELIVERED	INSTALLED
	LF	LF
STH 54	350	350

642.5001 FIELD OFFICE TYPE B

LOCATION	EACH
B-68-739	1

TRAFFIC CONTROL DRUMS, BARRICADES, LIGHTS, AND SIGNS

LOCATION	643.0300		643.0420		643.0715		643.0900	
	DRUMS		BARRICADES		WARNING LIGHTS		SIGNS	
	EACH	DAYS	TYPE III	DAYS	TYPE C	DAYS	EACH	DAYS
STH 54	20	45	1	45	10	45	20	45
TOTAL		900		45		450		900

643.1050 TRAFFIC CONTROL SIGNS PCMS

LOCATION	DAY
STH 54 WEST OF B-68-739	7
STH 54 EAST OF B-68-739	7
TOTAL	14

646.0106 PAVEMENT MARKING EPOXY 4-INCH

LOCATION	DESCRIPTION	LF
STH 54	DOUBLE YELLOW CENTERLINE	560

646.0600 REMOVING PAVEMENT MARKINGS

LOCATION	DESCRIPTION	LF
STH 54	DOUBLE YELLOW CENTERLINE	560

649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH

LOCATION	DESCRIPTION	LF
STH 54	DOUBLE YELLOW CENTERLINE	2,200

649.1400 TEMPORARY PAVEMENT MARKING STOP LINE
REMOVABLE TAPE 24-INCH

LOCATION	DESCRIPTION	LF
STH 54	DOUBLE YELLOW CENTERLINE	30

661.0100 TEMPORARY TRAFFIC SIGNALS FOR BRIDGES
(B-68-739)

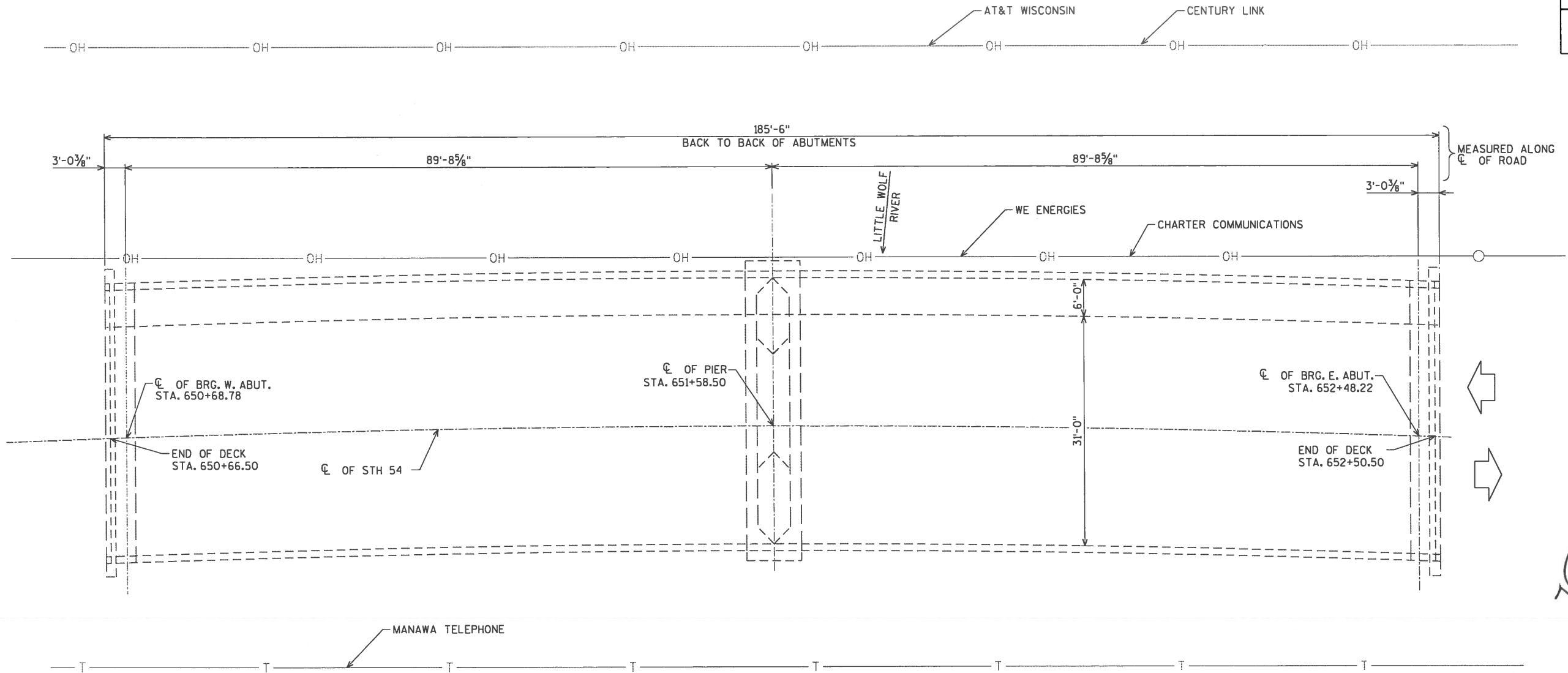
LOCATION	LS
STH 54	1

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0100 UNLESS
OTHERWISE NOTED.
ADDITIONAL QUANTITIES
SHOWN ELSEWHERE ON PLAN.

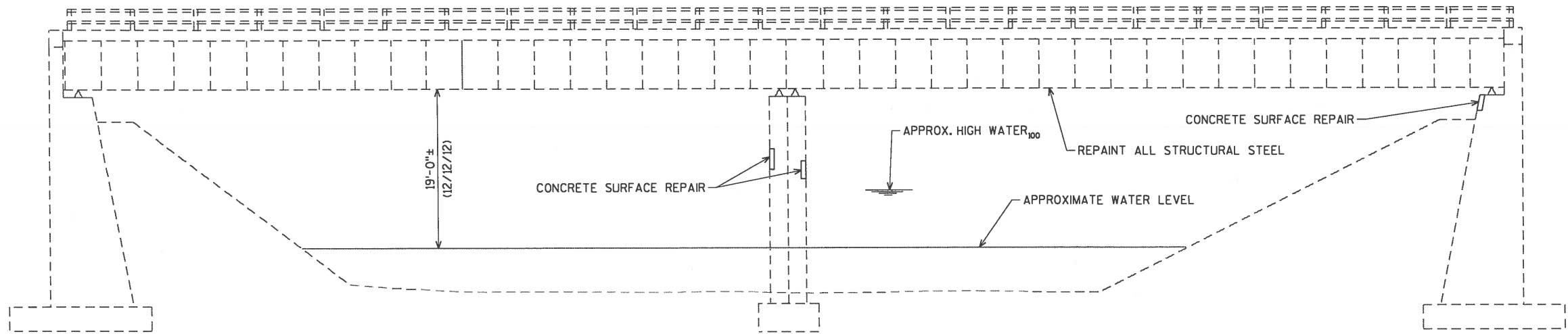
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DATE:
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BACK CHECKED BY:
CORRECTED BY:

8



PLAN
EXISTING 2-SPAN STEEL GIRDER



ELEVATION

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489
CONSULTANT CONTACT:
DAN SYDOW
(715)-834-3161

STATE PROJECT NUMBER

1009-44-61



LIST OF DRAWINGS
1. GENERAL PLAN
2. QUANTITIES, NOTES, & TYPICAL SECTIONS

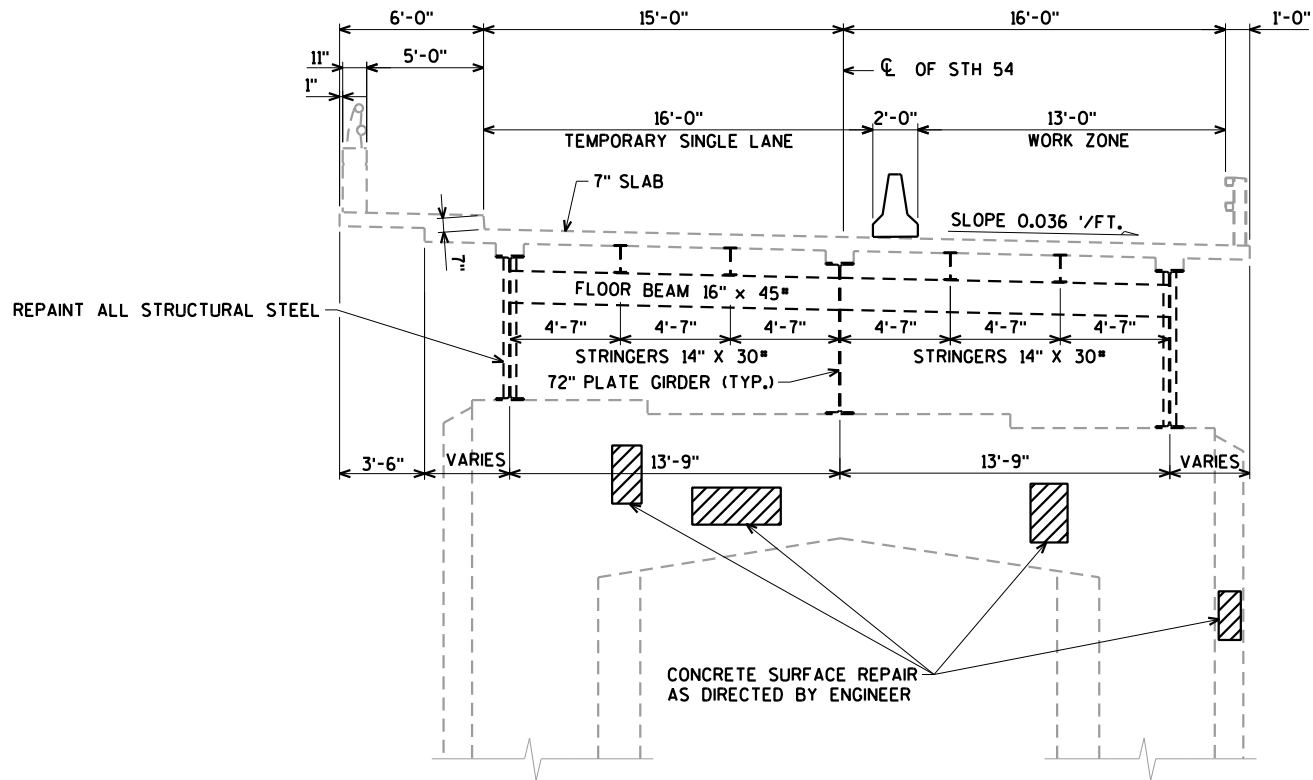
NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY AYRES ASSOCIATES 3433 Oakwood Hills Parkway Eau Claire, WI 54701 www.AyresAssociates.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED	<i>William C. Dreher</i>	KAR	08/19/13
CHIEF STRUCTURES DESIGN ENGINEER			
DATE			
STRUCTURE B-68-739			
STH 54 OVER LITTLE WOLF RIVER			
COUNTY	WAUPACA	TOWN/CITY/VILLAGE	ROYALTON
DESIGN SPEC.	REHABILITATION (N/A)		
DESIGNED BY	DNS	DESIGN CK'D.	KAZ
DRAWN BY	KAZ	PLANS CK'D.	DNS
GENERAL PLAN			SHEET 1 OF 2

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STATE PROJECT NUMBER

1009-44-61



CROSS SECTION THRU BRIDGE LOOKING EAST

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL
STRUCTURE PLANS.
ALL CONCRETE REMOVAL SHALL BE DEFINED BY A
1" DEEP SAW CUT.
THE COLOR OF THE FINISH EPOXY TOP COAT FOR
THE GIRDERS AND CONNECTING STRUCTURAL STEEL
SHALL BE LIGHT GRAY (FEDERAL COLOR NO. 26293).

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTAL
509.1500	CONCRETE SURFACE REPAIR	SF	35
517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE STRUCTURE B-68-739	LS	1
517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-68-739	LS	1
517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH	1

UNDISTRIBUTED QUANTITY FOR REPAIRS AS DIRECTED
BY THE ENGINEER.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-68-739			
DRAWN BY KAZ		PLANS CK'D. DNS	
QUANTITIES, NOTES, & TYPICAL SECTION			SHEET 2 OF 2

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com



PROPOSED WORK: PLACE RIPRAP AT NORTH (DOWNSTREAM) END OF CULVERT.

LOCATION: STRUCTURE C-37-2 IS LOCATED 0.9 MILES EAST OF STH 97.

TRAFFIC CONTROL: FOLLOW SDD, "TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY".

SILT FENCE & SILT FENCE MAINTENANCE

LOCATION	628.1504	628.1520
	LF	MAINTENANCE LF
STH 153 (UNDISTRIBUTED)	100	150

628.2027 EROSION MAT CLASS II TYPE C

LOCATION	SY
STH 153 (UNDISTRIBUTED)	100

TOPSOIL, FERTILIZER, SEED, & MULCH

LOCATION	625.0100	627.0200	629.0210	630.0120
	TOPSOIL	MULCHING	FERTILIZER	SEEDING
	SY	SY	TYPE B CWT	NO. 20 LB
STH 153 (UNDISTRIBUTED)	100	100	0.1	3

TRAFFIC CONTROL DRUMS AND SIGNS

LOCATION	643.0300	643.0900	
	DRUMS	SIGNS	
	EACH	DAYS	EACH DAYS
STH 153	12	5	5 5
TOTAL		60	25

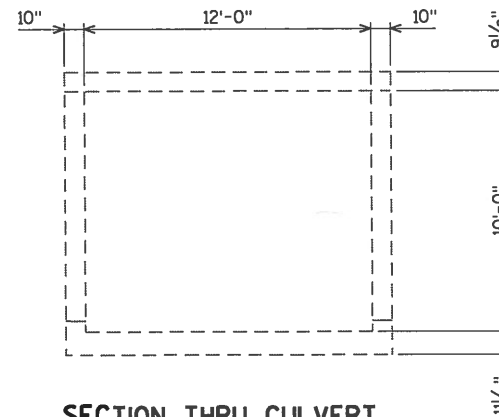
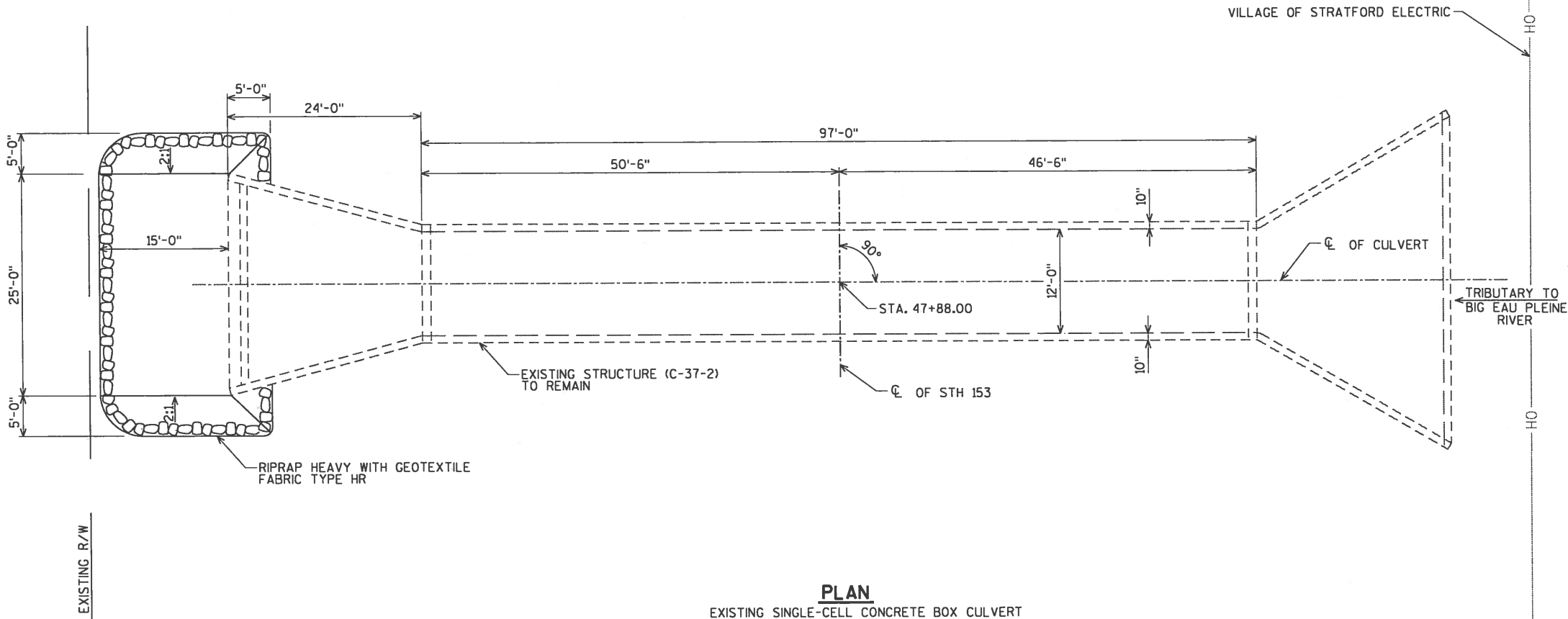
ALL ITEMS ON THIS SHEET
ARE CATEGORY 0100 UNLESS
OTHERWISE NOTED.
ADDITIONAL QUANTITIES
SHOWN ELSEWHERE ON PLAN.

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DATE:
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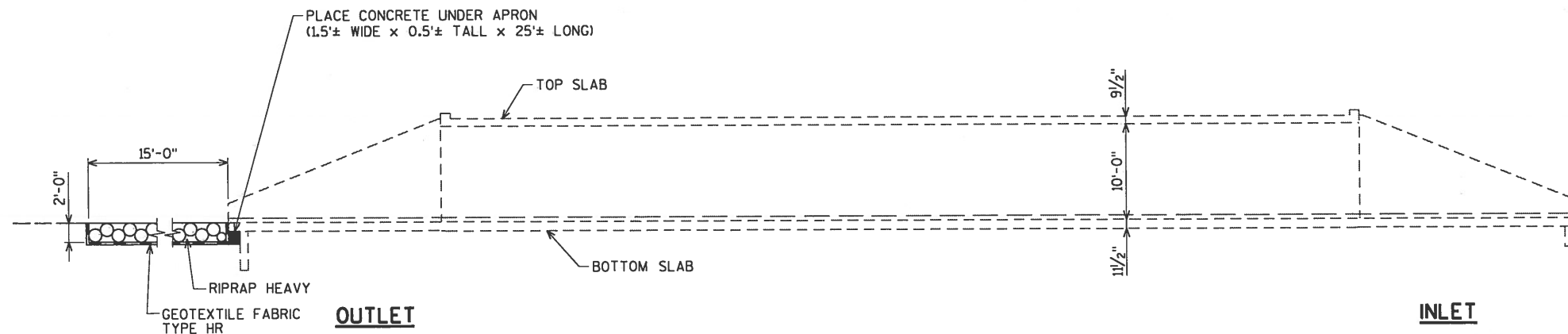


LIST OF DRAWINGS
1. GENERAL PLAN

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.



TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEM	UNIT	QUANTITY
504.0100	CONCRETE MASONRY CULVERTS	CY	1
606.0300	RIPRAP HEAVY	CY	45
645.0120	GEOTEXTILE FABRIC TYPE HR	SY	90



BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
DAN SYDOW
(715)-834-3161

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY AYRES ASSOCIATES 3433 Oakwood Hills Parkway Eau Claire, WI 54701 www.AyresAssociates.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED	William C. Dreher, KAR CHIEF STRUCTURES DESIGN ENGINEER		08/19/13 DATE
STRUCTURE C-37-02			
STH 153 OVER TRIBUTARY TO BIG EAU PLEINE RIVER			
COUNTY	MARATHON	TOWN/CITY/VILLAGE	CLEVELAND
DESIGN SPEC. MAINTENANCE (N/A)			
DESIGNED BY	DNS	DESIGN CK'D.	KAZ
DRAWN BY	KAZ	PLANS CK'D.	DNS
GENERAL PLAN			SHEET 1 OF 1

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PROPOSED WORK: PLACE RIPRAP AT EAST (DOWNSTREAM) END OF CULVERT.

LOCATION: STRUCTURE C-37-61 IS LOCATED 1.5 MILES NORTH OF STH 153.

TRAFFIC CONTROL: FOLLOW SDD, "TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY".

SILT FENCE & SILT FENCE MAINTENANCE

LOCATION	628.1504	628.1520
	LF	MAINTENANCE LF
STH 13 (UNDISTRIBUTED)	100	150

NOTE: PROVIDE TEMPORARY TURNAROUNDS. SEE DETAIL ON
EROSION CONTROL SHEET FOR STRUCTURES B-37-282/286.

628.2027 EROSION MAT CLASS II TYPE C

LOCATION	SY
STH 13 (UNDISTRIBUTED)	100

TOPSOIL, FERTILIZER, SEED, & MULCH

LOCATION	625.0100	627.0200	629.0210	630.0120
	TOPSOIL SY	MULCHING SY	FERTILIZER TYPE B CWT	SEEDING NO. 20 LB
STH 13 (UNDISTRIBUTED)	100	100	0.1	3

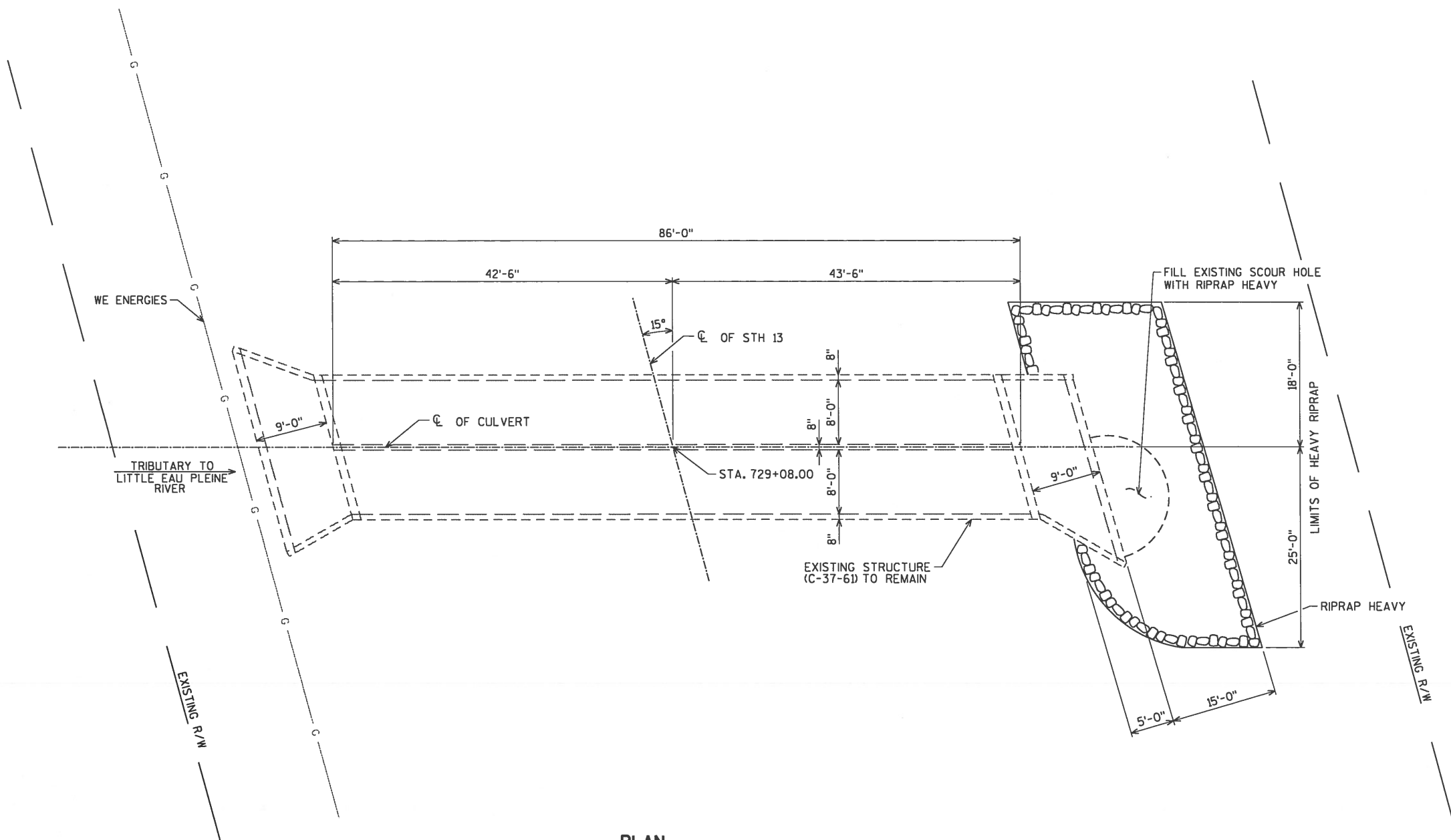
TRAFFIC CONTROL DRUMS AND SIGNS

LOCATION	643.0300	643.0900	
	DRUMS EACH	DAYS	SIGNS EACH
STH 13	12	5	5
TOTAL	60		25

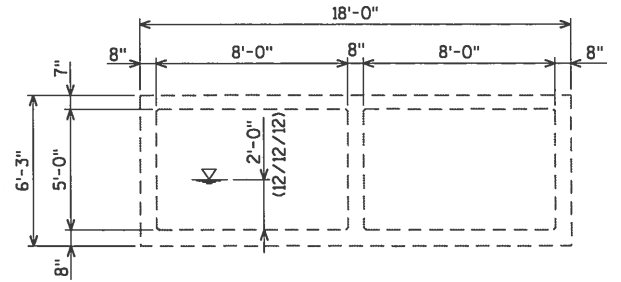
ALL ITEMS ON THIS SHEET
ARE CATEGORY 0100 UNLESS
OTHERWISE NOTED.
ADDITIONAL QUANTITIES
SHOWN ELSEWHERE ON PLAN.

DATE:
DATE:
DATE:
CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:

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PLAN
EXISTING 2-CELL CONCRETE BOX CULVERT

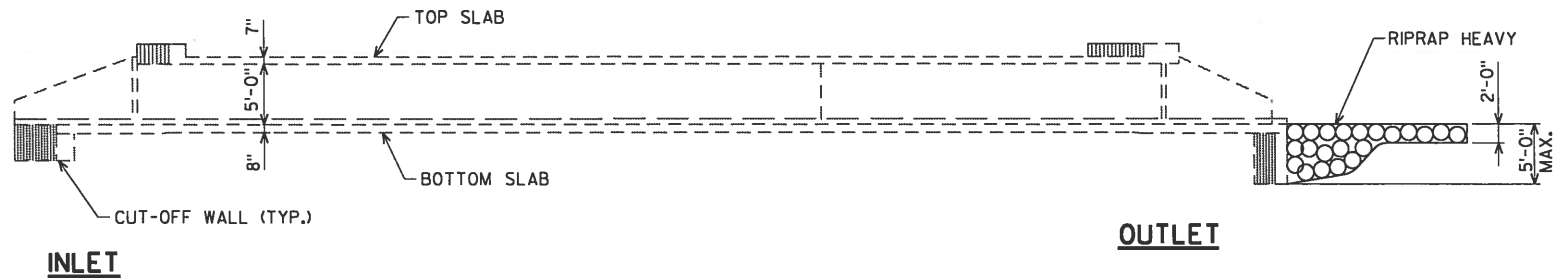


SECTION THRU CULVERT

GENERAL NOTES

DRAWINGS SHOULD NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.



ELEVATION
LOOKING NORTH

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEM	UNIT	QUANTITY
606.0300	RIPRAP HEAVY	CY	90



BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489
CONSULTANT CONTACT:
DAN SYDOW
(715)-834-3161

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY AYRES ASSOCIATES 3433 Oakwood Hills Parkway Eau Claire, WI 54701 www.AyresAssociates.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED	William C. Dreher, KAR CHIEF STRUCTURES DESIGN ENGINEER		08/19/13 DATE
STRUCTURE C-37-61			
STH 13 OVER TRIB. TO LITTLE EAU PLEINE RIVER			
COUNTY	MARATHON	TOWN/CITY/VILLAGE	BRIGHTON
DESIGN SPEC. MAINTENANCE (N/A)			
DESIGNED BY	DNS	DESIGN CK'D. KAZ	DRAWN BY KAZ PLANS CK'D. LNS
GENERAL PLAN			SHEET 1 OF 1

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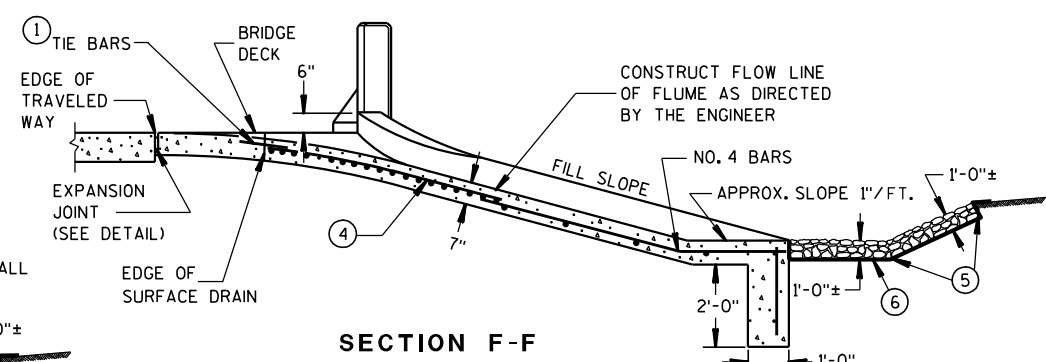
DATE 18OCT13		E S T I M A T E O F Q U A N T I T I E S				
LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1009-44-61 QUANTITY	1510-02-65 QUANTITY
0010	203. 0200	REMOVING OLD STRUCTURE (STATION) 01. STA. 950+39. 24	LS	1. 000		1. 000
0020	203. 0200	REMOVING OLD STRUCTURE (STATION) 02. STA. 950+24. 15	LS	1. 000		1. 000
0030	203. 0600. S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS (STATION) 01. STA. 11+86. 50	LS	1. 000	1. 000	
0040	203. 0600. S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS (STATION) 02. STA. 442+00	LS	1. 000	1. 000	
0050	203. 0600. S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS (STATION) 03. STA. 24+53	LS	1. 000	1. 000	
0060	204. 0100	REMOVING PAVEMENT	SY	32. 000		32. 000
0070	204. 0110	REMOVING ASPHALTIC SURFACE	SY	21. 000		21. 000
0080	204. 0190	REMOVING SURFACE DRAINS	EACH	1. 000	1. 000	
0090	205. 0100	EXCAVATION COMMON	CY	575. 000	575. 000	
0100	206. 1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 01. B-68-22	LS	1. 000		1. 000
0110	206. 1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 02. B-68-76	LS	1. 000		1. 000
0120	206. 6000. S	TEMPORARY SHORING	SF	620. 000		620. 000
0130	210. 0100	BACKFILL STRUCTURE	CY	235. 000		235. 000
0140	213. 0100	FINISHING ROADWAY (PROJECT) 01. 1009-44-61	EACH	1. 000	1. 000	
0150	213. 0100	FINISHING ROADWAY (PROJECT) 02. 1510-02-65	EACH	1. 000		1. 000
0160	305. 0110	BASE AGGREGATE DENSE 3/4-INCH	TON	4. 000		4. 000
0170	305. 0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	40. 000		40. 000
0180	416. 1015	CONCRETE SURFACE DRAINS HES	CY	16. 000		16. 000
0190	465. 0315	ASPHALTIC FLUMES	SY	6. 000	6. 000	
0200	502. 0100	CONCRETE MASONRY BRIDGES	CY	40. 000	12. 000	28. 000
0210	502. 3200	PROTECTIVE SURFACE TREATMENT	SY	20. 000		20. 000
0220	502. 5002	MASONRY ANCHORS TYPE L NO. 4 BARS	EACH	279. 000	257. 000	22. 000
0230	502. 5005	MASONRY ANCHORS TYPE L NO. 5 BARS	EACH	18. 000		18. 000
0240	502. 5010	MASONRY ANCHORS TYPE L NO. 6 BARS	EACH	24. 000		24. 000
0250	502. 6102	MASONRY ANCHORS TYPE S 1/2-INCH	EACH	12. 000		12. 000
0260	502. 6105	MASONRY ANCHORS TYPE S 5/8-INCH	EACH	22. 000		22. 000
0270	504. 0100	CONCRETE MASONRY CULVERTS	CY	1. 000	1. 000	
0280	505. 0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	3, 620. 000	830. 000	2, 790. 000
0290	509. 0301	PREPARATION DECKS TYPE 1	SY	1. 000		1. 000
0300	509. 1500	CONCRETE SURFACE REPAIR	SF	92. 000	57. 000	35. 000
0310	509. 5100. S	POLYMER OVERLAY	SY	955. 000	435. 000	520. 000
0320	509. 9020. S	EPOXY CRACK SEALING	LF	194. 000	194. 000	
0330	516. 0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	11. 000		11. 000
0340	517. 1800. S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 01. B-37-19	LS	1. 000	1. 000	
0350	517. 1800. S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 02. B-68-739	LS	1. 000	1. 000	
0360	517. 4500. S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 01. B-37-19	LS	1. 000	1. 000	
0370	517. 4500. S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 02. B-68-739	LS	1. 000	1. 000	
0380	517. 6001. S	PORTABLE DECONTAMINATION FACILITY	EACH	2. 000	2. 000	

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	1009-44-61 QUANTITY	1510-02-65 QUANTITY
0390	603.8000	CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	LF	3,253.000	1,633.000	1,620.000
0400	603.8125	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	LF	3,673.000	1,633.000	2,040.000
0410	604.9010.S	SLOPE PAVING REPAIR CRUSHED AGGREGATE	CY	8.000	8.000	
0420	604.9015.S	RESEAL CRUSHED AGGREGATE SLOPE PAVING	SY	130.000	130.000	
0430	606.0200	RI PRAP MEDIUM	CY	67.000	62.000	5.000
0440	606.0300	RI PRAP HEAVY	CY	570.000	570.000	
0450	614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	3.000		3.000
0460	616.0700.S	FENCE SAFETY	LF	435.000	435.000	
0470	619.1000	MOBILIZATION	EACH	1.000	0.800	0.200
0480	625.0100	TOPSOIL	SY	3,192.000	3,057.000	135.000
0490	627.0200	MULCHING	SY	3,192.000	3,057.000	135.000
0500	628.1504	SILT FENCE	LF	965.000	790.000	175.000
0510	628.1520	SILT FENCE MAINTENANCE	LF	1,290.000	940.000	350.000
0520	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	6.000	4.000	2.000
0530	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	6.000	4.000	2.000
0540	628.2027	EROSION MAT CLASS II TYPE C	SY	3,847.000	3,672.000	175.000
0550	628.6005	TURBIDITY BARRIERS	SY	445.000	445.000	
0560	628.7504	TEMPORARY DITCH CHECKS	LF	200.000	150.000	50.000
0570	629.0210	FERTILIZER TYPE B	CWT	2.400	2.300	0.100
0580	630.0120	SEEDING MIXTURE NO. 20	LB	97.500	93.000	4.500
0590	642.5001	FIELD OFFICE TYPE B 01. 1009-44-61 B-37-19	EACH	1.000	1.000	
0600	642.5001	FIELD OFFICE TYPE B 02. 1009-44-61 B-68-528	EACH	1.000	1.000	
0610	642.5001	FIELD OFFICE TYPE B 03. 1009-44-61 B-68-739	EACH	1.000	1.000	
0620	642.5001	FIELD OFFICE TYPE B 04. 1009-44-61	EACH	1.000	1.000	
0630	642.5001	FIELD OFFICE TYPE B 05. 1510-02-65 B-68-22/76	EACH	1.000		1.000
0640	643.0100	TRAFFIC CONTROL (PROJECT) 01. 1009-44-61	EACH	1.000	1.000	
0650	643.0100	TRAFFIC CONTROL (PROJECT) 02. 1510-02-65	EACH	1.000		1.000
0660	643.0300	TRAFFIC CONTROL DRUMS	DAY	7,615.000	5,125.000	2,490.000
0670	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	485.000	485.000	
0680	643.0500	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS	EACH	28.000	6.000	22.000
0690	643.0600	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES	EACH	28.000	6.000	22.000
0700	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	480.000	480.000	
0710	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	3,345.000	2,355.000	990.000
0720	643.0800	TRAFFIC CONTROL ARROW BOARDS	DAY	110.000	10.000	100.000
0730	643.0900	TRAFFIC CONTROL SIGNS	DAY	6,522.000	5,884.000	638.000
0740	643.1050	TRAFFIC CONTROL SIGNS PCMS	DAY	134.000	70.000	64.000
0750	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	928.000	905.000	23.000
0760	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	4,906.500	4,121.000	785.500
0770	646.0600	REMOVING PAVEMENT MARKINGS	LF	4,117.000	3,597.000	520.000
0780	649.0400	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	LF	27,602.000	13,832.000	13,770.000
0790	649.1400	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 24-INCH	LF	90.000	90.000	
0800	661.0100	TEMPORARY TRAFFIC SIGNALS FOR BRIDGES (STRUCTURE) 01. B-37-19	LS	1.000	1.000	

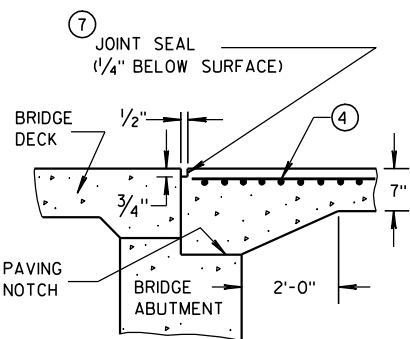
DATE 18OCT13		E S T I M A T E O F Q U A N T I T I E S				
LINE	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1009-44-61	1510-02-65
NUMBER					QUANTITY	QUANTITY
0810	661.0100	TEMPORARY TRAFFIC SIGNALS FOR BRIDGES (STRUCTURE) 02. B-68-528	LS	1.000	1.000	
0820	661.0100	TEMPORARY TRAFFIC SIGNALS FOR BRIDGES (STRUCTURE) 03. B-68-739	LS	1.000	1.000	
0830	690.0150	SAWING ASPHALT	LF	13.000		13.000
0840	715.0502	INCENTIVE STRENGTH CONCRETE STRUCTURES	DOL	240.000	78.000	162.000
0850	SPV.0060	SPECIAL 01. EMBEDDED GALVANIC ANODES	EACH	162.000	162.000	
0860	SPV.0060	SPECIAL 02. FURNISH AND INSTALL TEMPORARY TRAFFIC SENSOR	EACH	1.000	1.000	
0870	SPV.0090	SPECIAL 01. GALVANIZED METAL FLASHING	LF	194.000	194.000	
0880	SPV.0090	SPECIAL 02. REMOVE AND REINSTALL GUARDRAIL	LF	75.000		75.000
0890	SPV.0195	SPECIAL 01. SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR	TON	50.000	50.000	

Standard Detail Drawing List

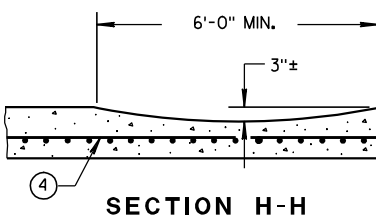
08D02-06	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
09G01-03G	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G02-03A	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-03B	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
12A03-10	NAME PLATE (STRUCTURES)
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"
14B20-11A	STEEL THRIE BEAM STRUCTURE APPROACH
14B20-11B	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS
15C03-01	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C11-05	FLEXIBLE TUBULAR MARKER POST, ANCHOR & BASES
15C12-03	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15D03-01	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M. P. H. WITH BARRIER
15D12-02	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M. P. H.
15D20-01	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D27-01	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D28-01	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D33-02	TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS



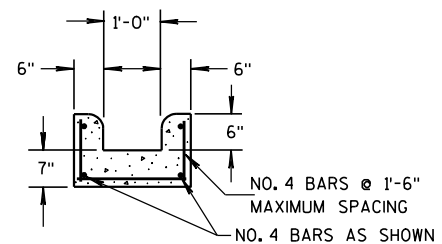
SECTION F-F



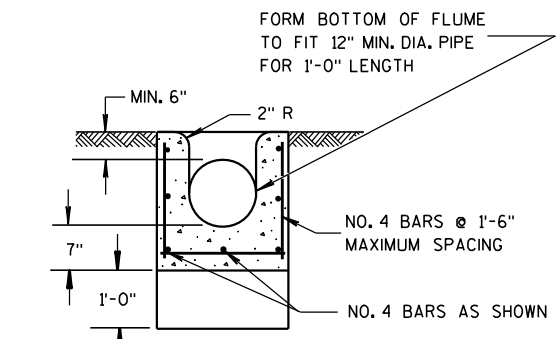
SECTION D-D



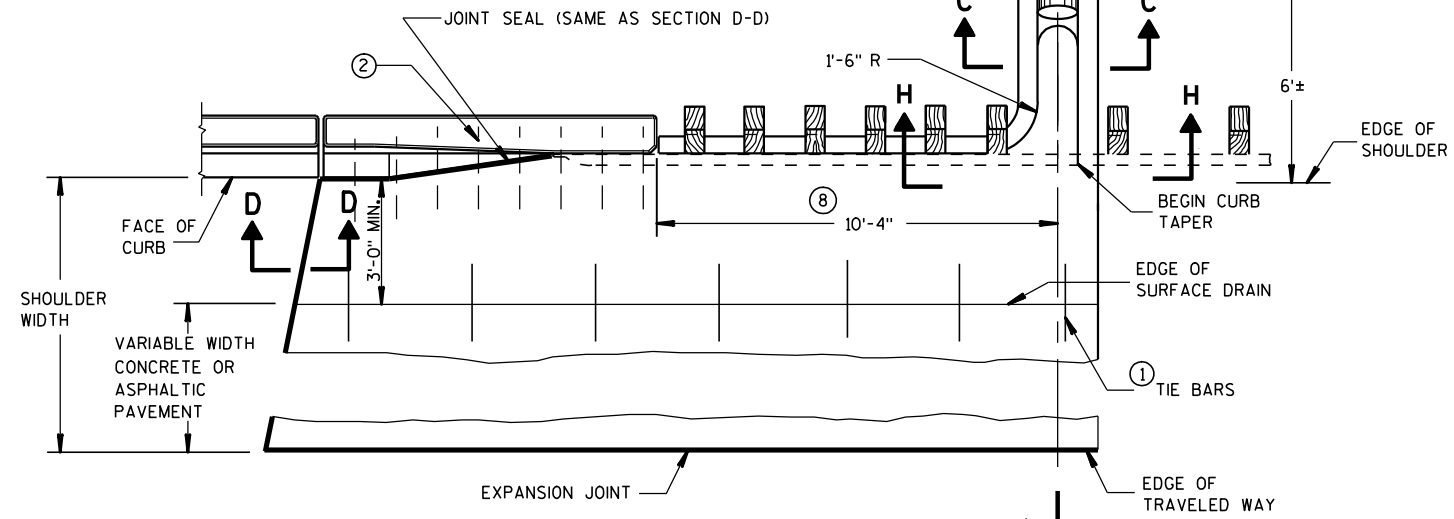
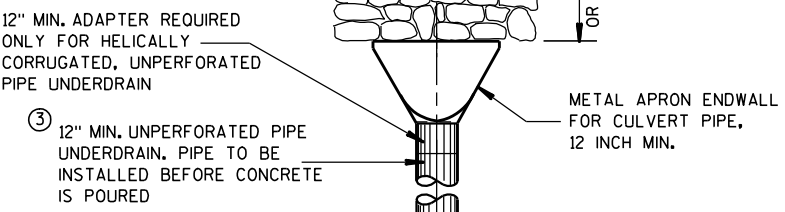
SECTION H-H



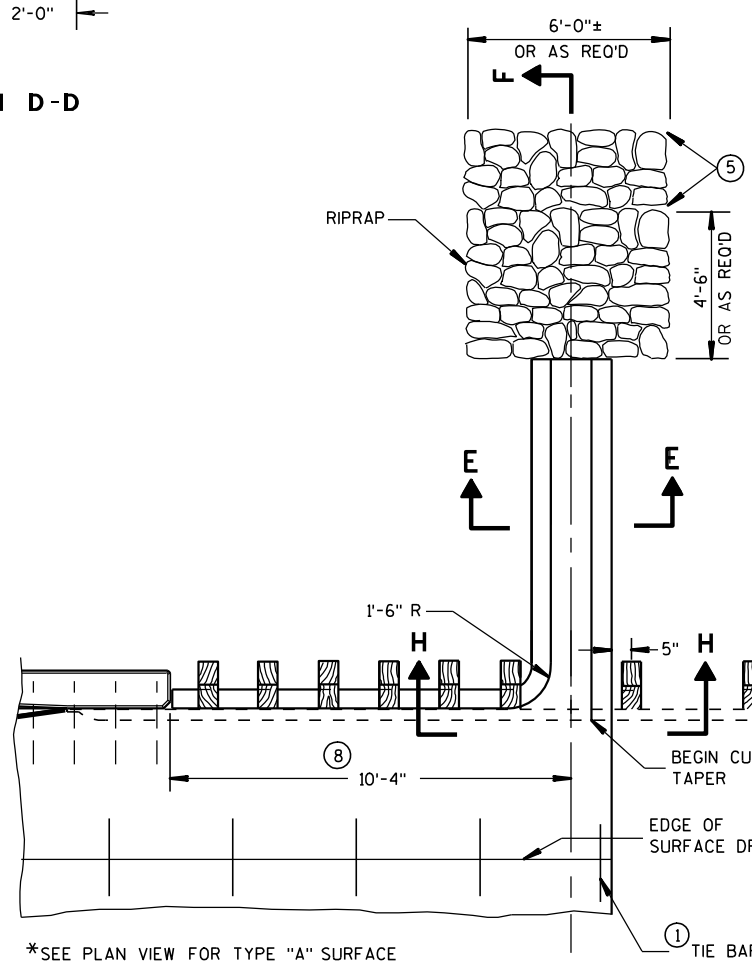
SECTION E-E



SECTION C-C



PLAN VIEW
SURFACE DRAIN WITH PIPE
TYPE "A"



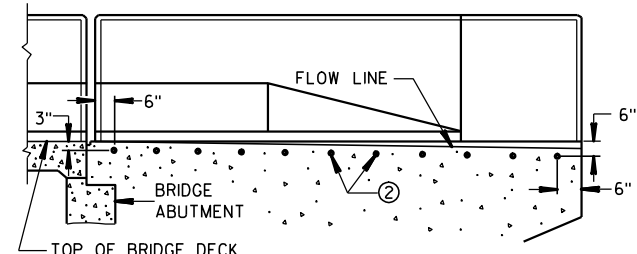
* PARTIAL PLAN VIEW
SURFACE DRAIN WITHOUT PIPE
TYPE "B"

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.

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

- ① NO. 4 X 2'-0" TIE BARS SPACED AT 3'-0" CENTERS TO BE USED ONLY WHEN ADJACENT TO P.C. CONCRETE.
- ② NO. 4 X 2'-0" TIE BARS SPACED AT 12" CENTERS TO BE PLACED BY BRIDGE CONTRACTOR, OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
- ③ PIPE UNDERDRAIN MAY BE ANY OF THE MATERIALS LISTED IN SECTION 612.2 OF THE STANDARD SPECIFICATIONS EXCEPT DRAIN TILE.
- ④ MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.
- ⑤ LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.
- ⑥ GEOTEXTILE FABRIC, TYPE 'R'
- ⑦ HOT POURED SEALANT UNLESS OTHERWISE SPECIFIED.
- ⑧ THIS DIMENSION MAY VARY DEPENDING ON THE SPACING OF POSTS FOR THE STEEL PLATE BEAM GUARD. THE TYPICAL LOCATION FOR THE SURFACE DRAIN IS WHERE THE POST SPACING WIDENS TO 3'-1½".



LOCATION OF TIE BARS IN WINGWALL

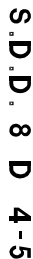
CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/4/08
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

6



PLAN VIEW
FLUME AT CURB END



6

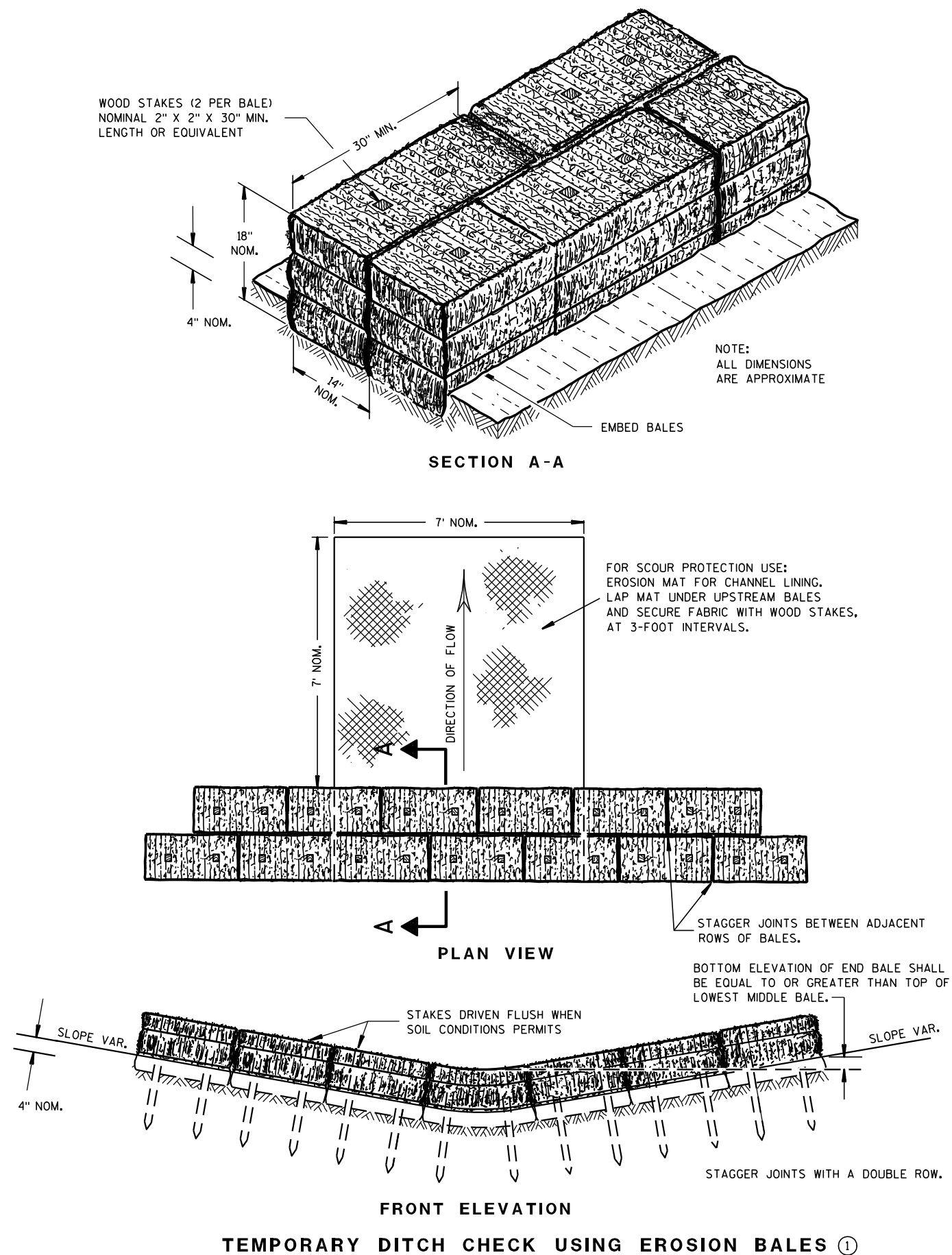
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

- ### ③ CONCRETE SURFACE DRAIN



/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

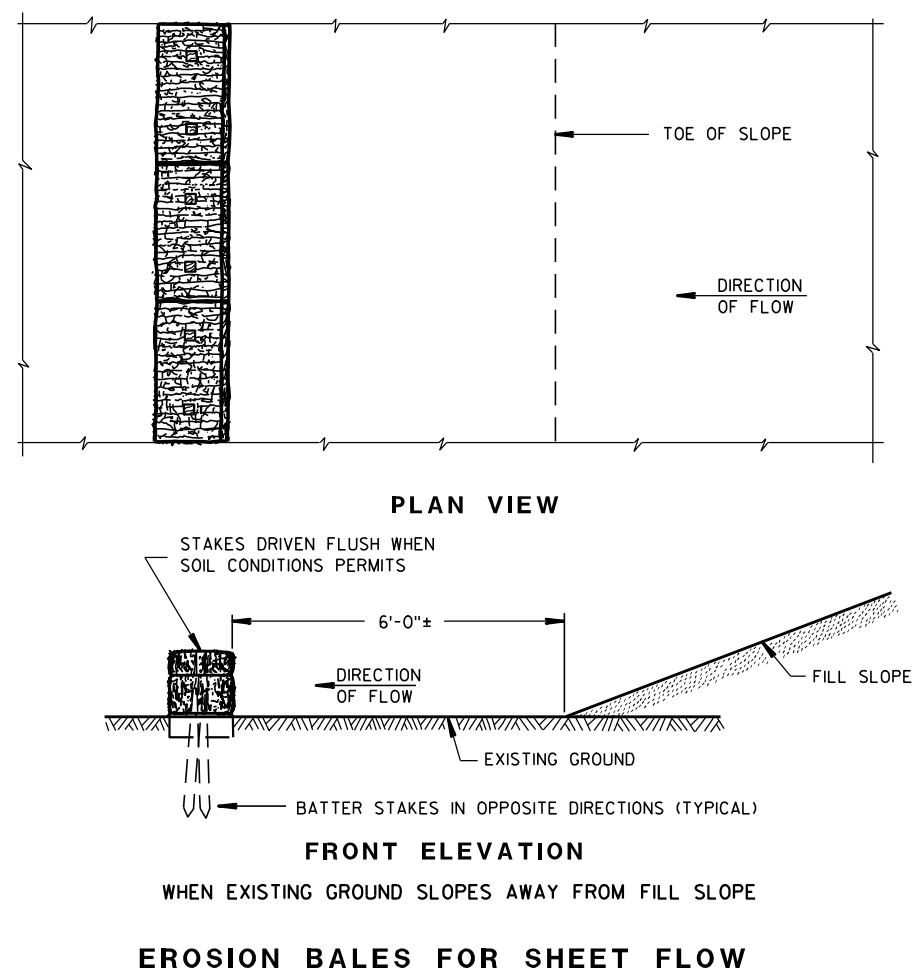
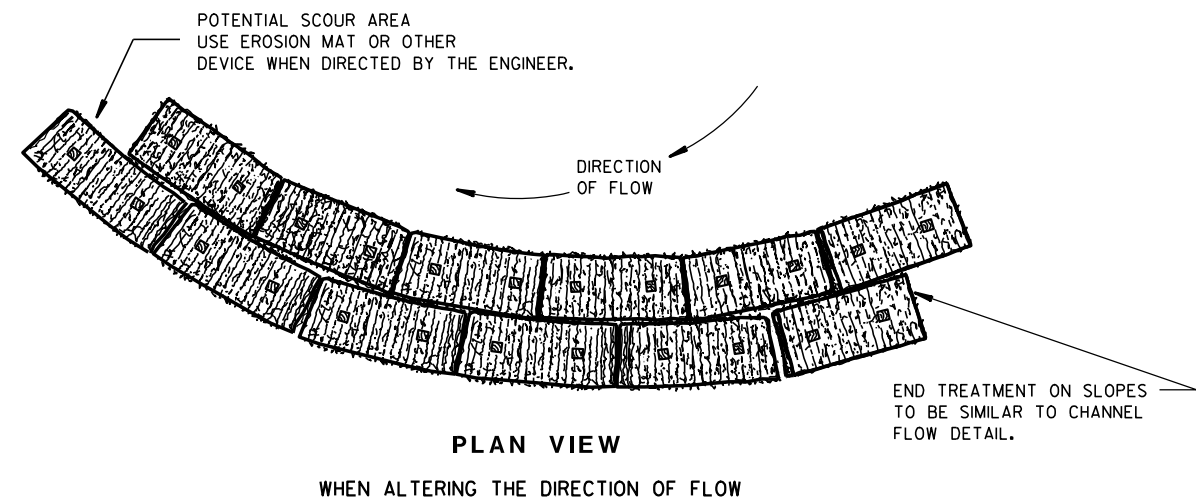
S.D.D. 8 D	4-5
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GENERAL NOTES

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 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.

TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02
DATE/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

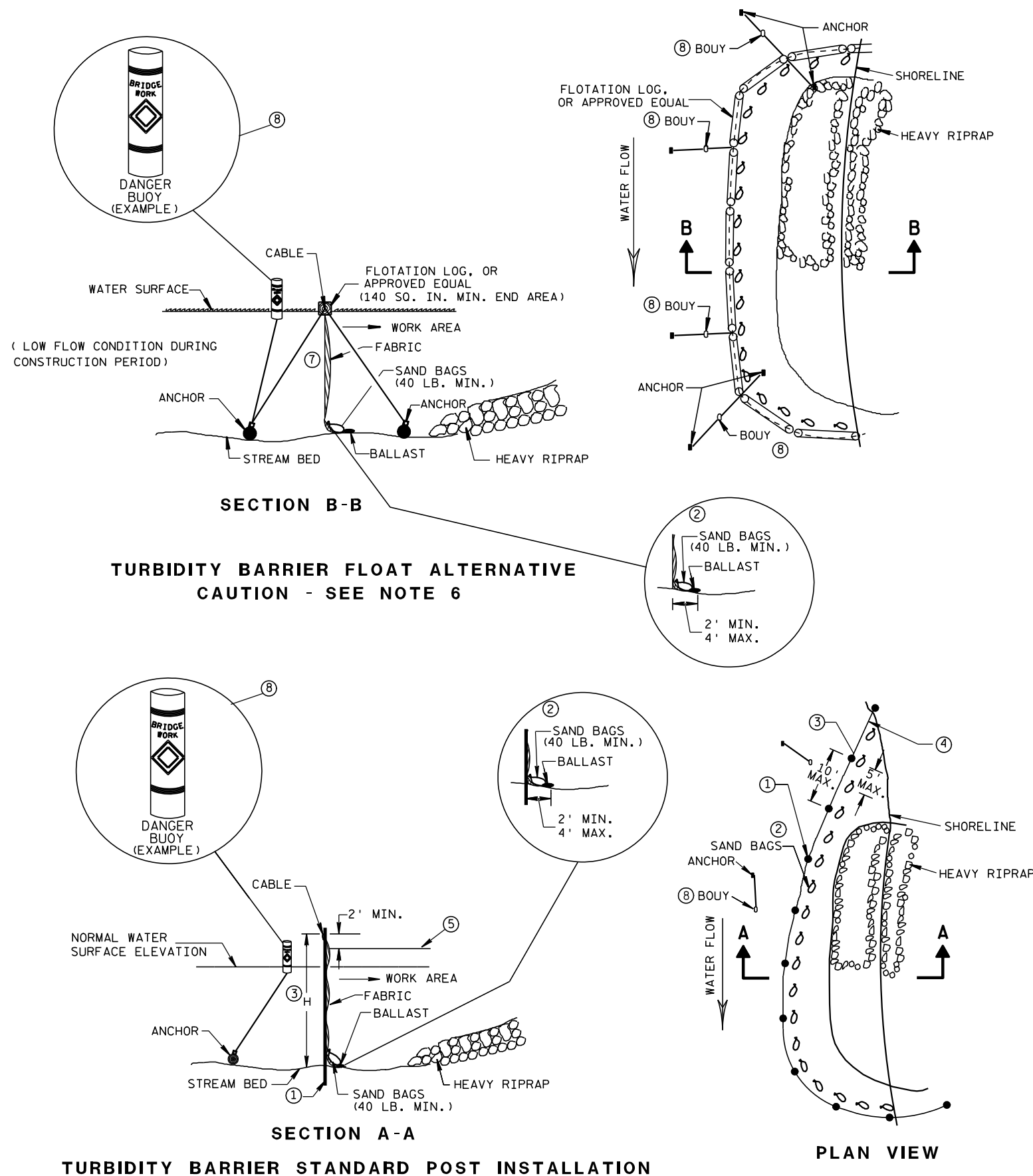
FHWA



- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1½" X 1½" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



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

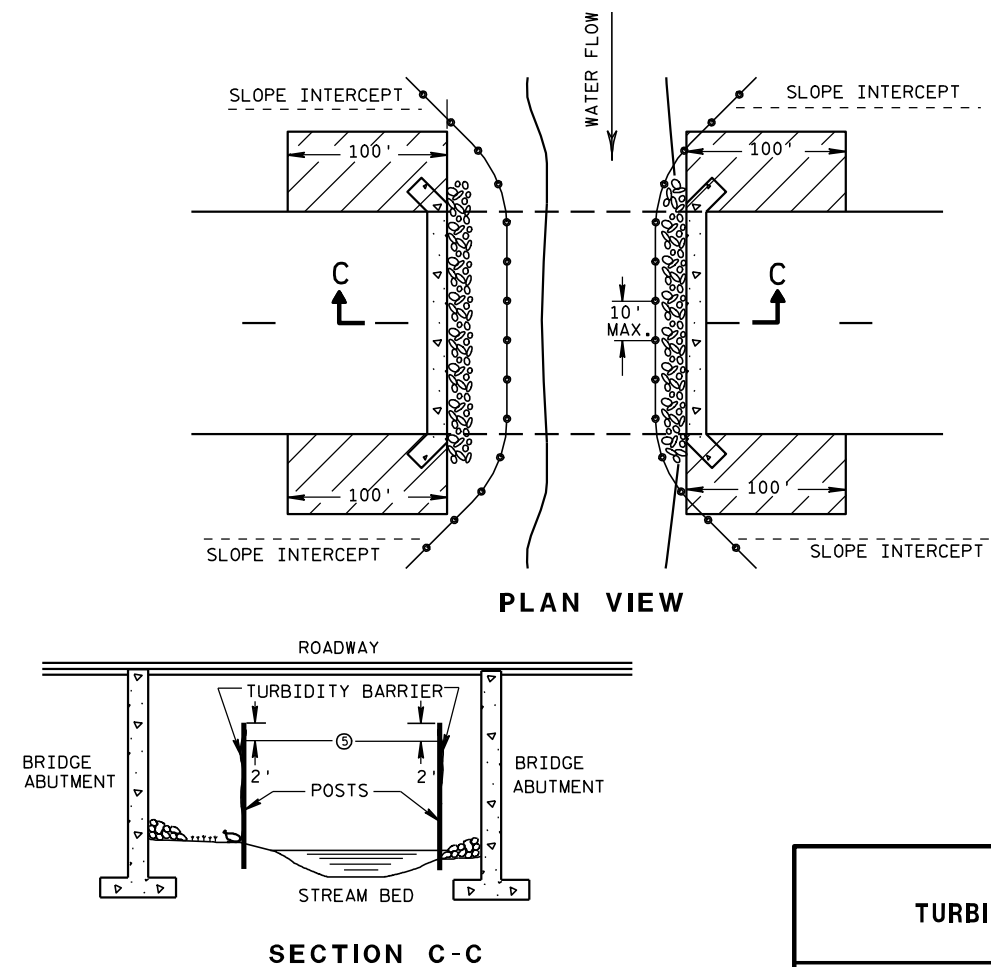


GENERAL NOTES

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. MINIMUM BARRIER HEIGHT SHALL BE 2' GREATER THAN EITHER THE 02 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WHICHEVER IS GREATER.
- ⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.
- ⑦ ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.
- ⑧ USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

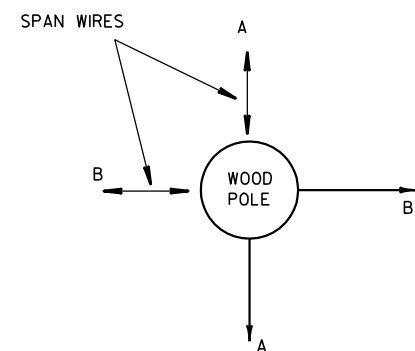
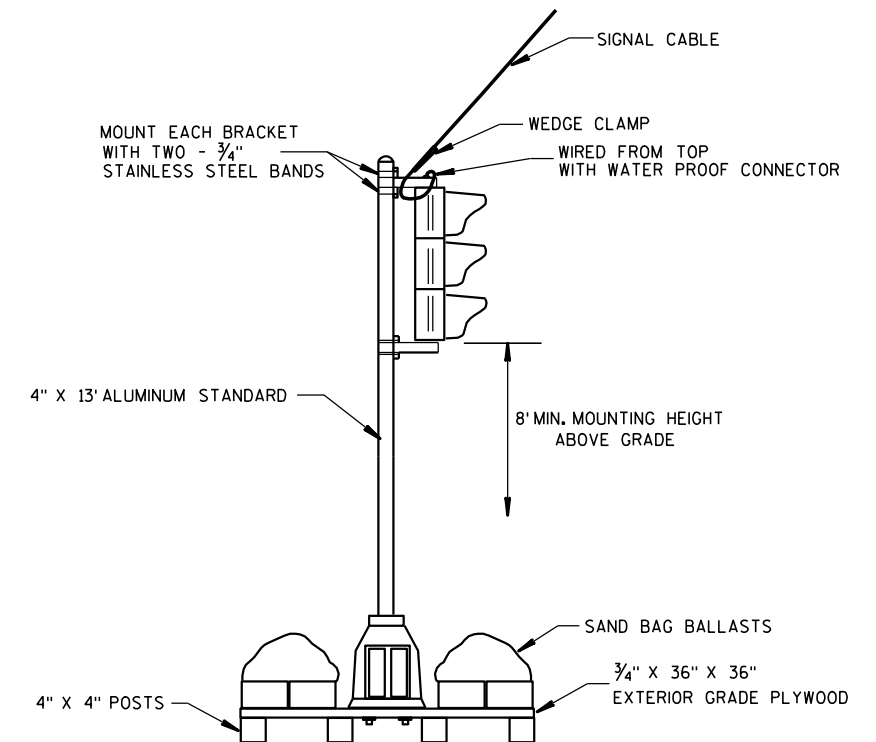
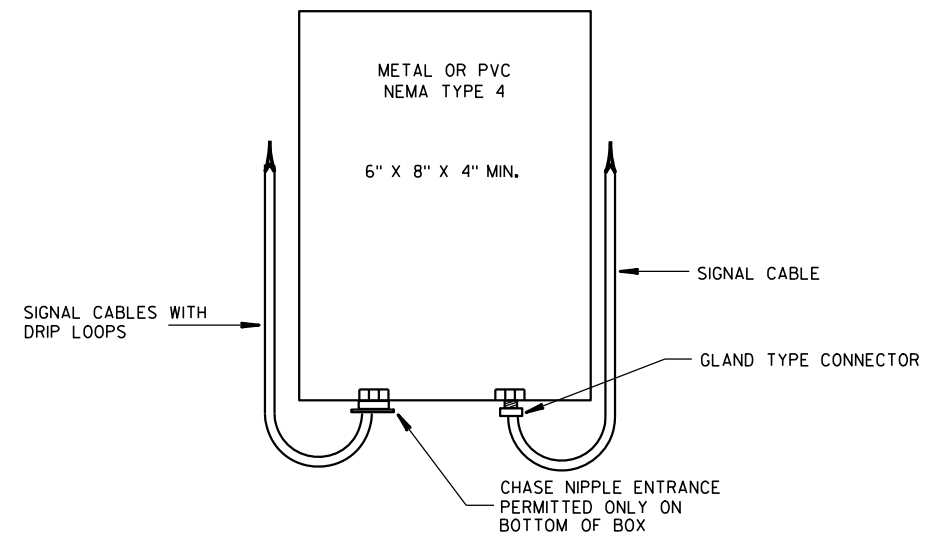
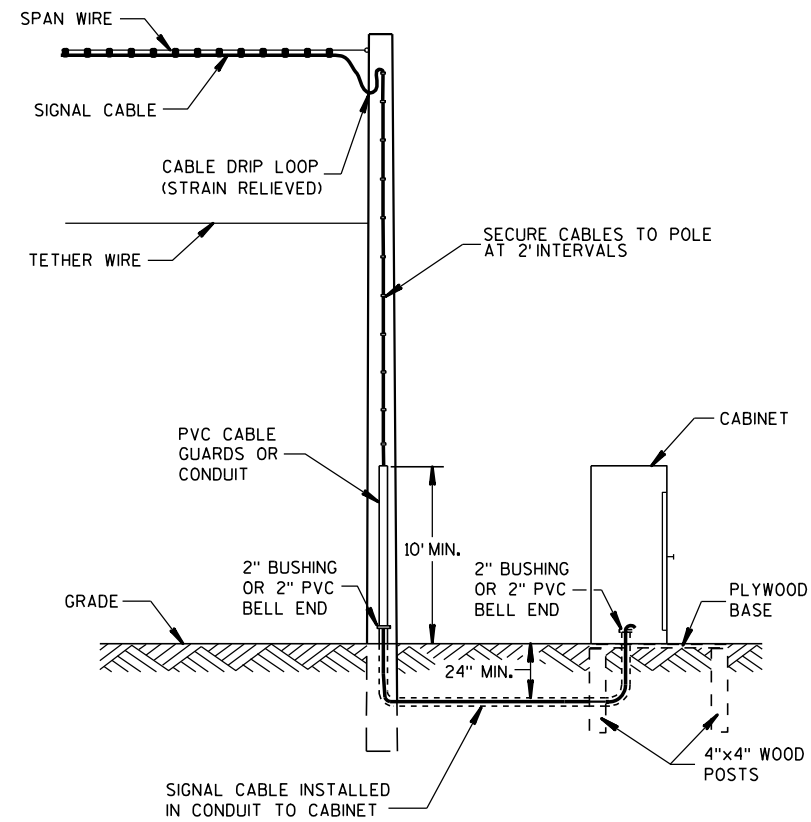
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02
DATE

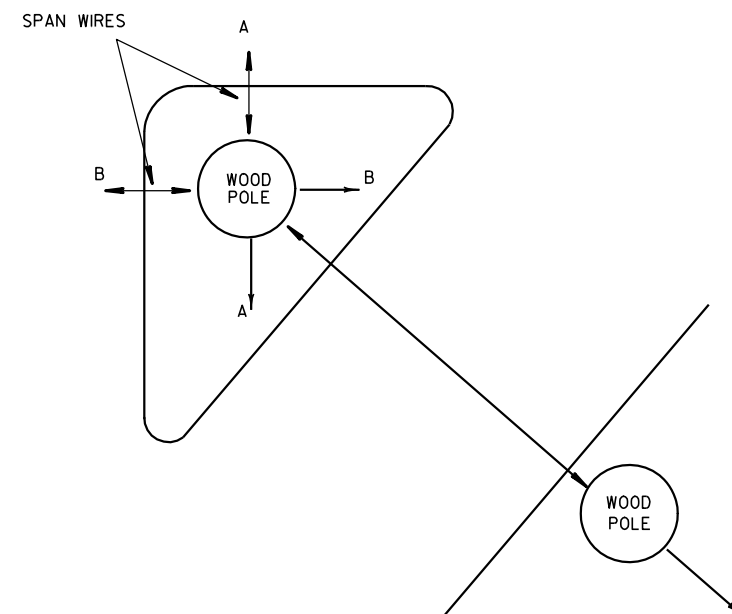
FWHA

/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

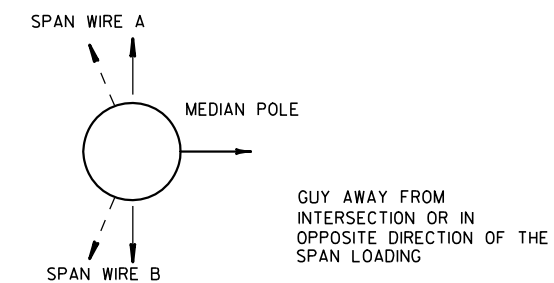


ALL DOWN OR SIDEWALK GUYS
SHALL BE INSTALLED IN THE
OPPOSITE DIRECTION OF THE
STRAIN OF THE SPAN WIRE

CORNER POLES



ISLAND POLES

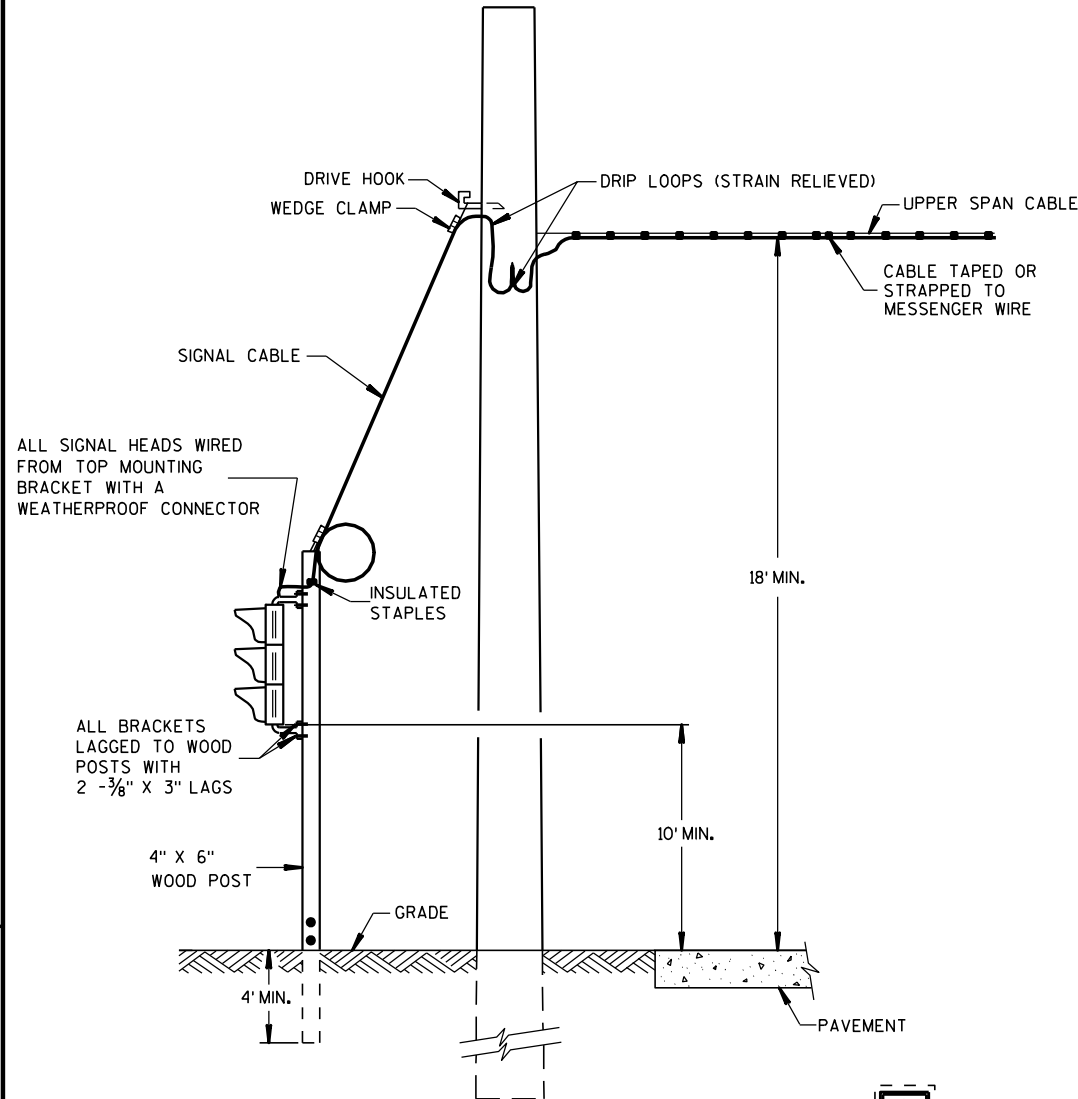


MEDIAN POLES

GUY AWAY FROM
INTERSECTION OR IN
OPPOSITE DIRECTION OF THE
SPAN LOADING

SPAN WIRE TEMPORARY TRAFFIC SIGNAL	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED <u>7-14-08</u> DATE	<u>/S/ Balu Ananthanarayanan</u> STATE ELECTRICAL ENGINEER FOR HWYS

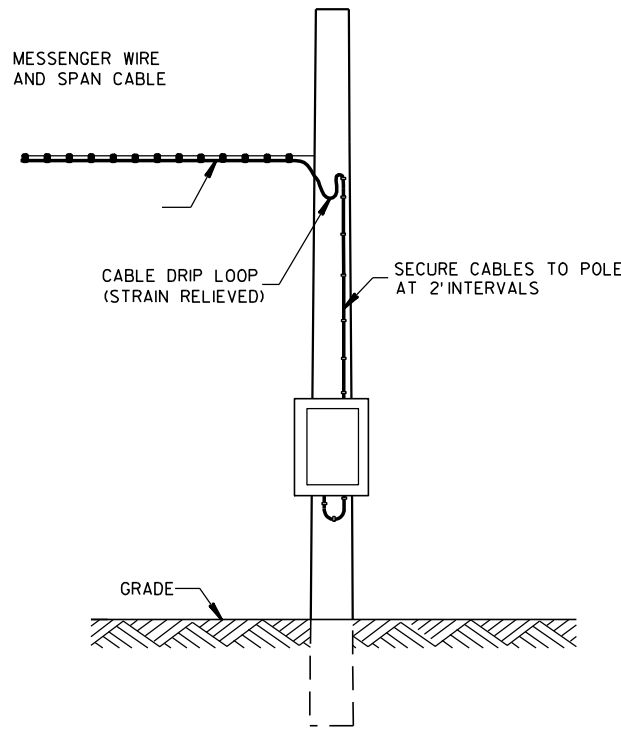
FHWA



TYPICAL DROP TO TRAFFIC SIGNAL FACE

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.	

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



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 PLOES 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.

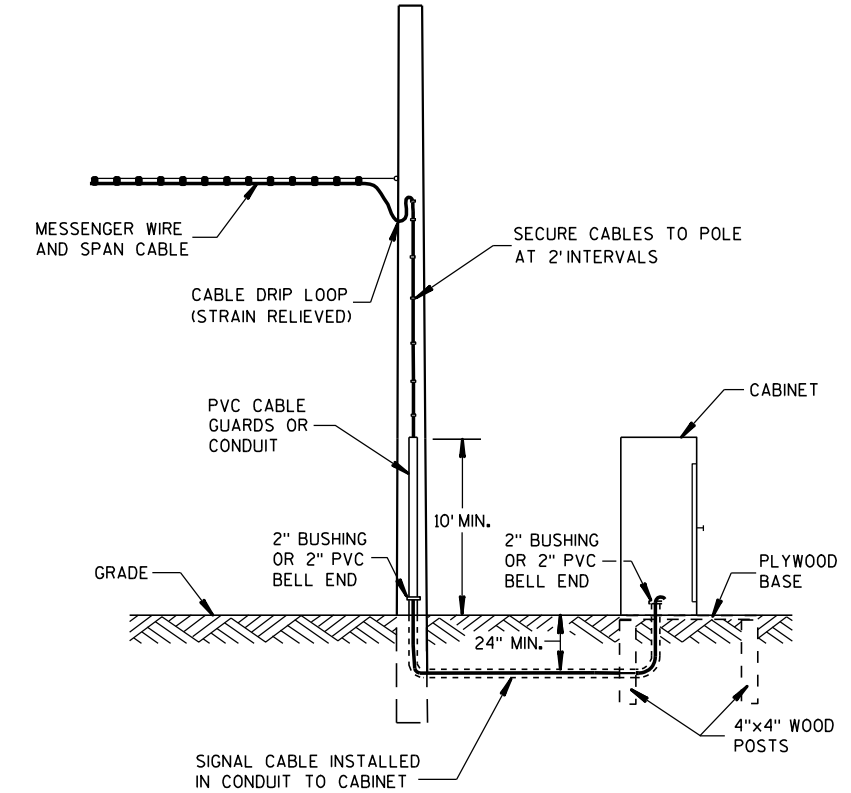
WOOD POLES (NONBREAKAWAY) SHALL BE NO CLOSER TO EDGE OF PAVEMENT THAN OFFSET DISTANCE CHART ALLOWS OR 4 FEET BEHIND PROTECTIVE BARRIER (BEAMGUARD, ETC.).

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

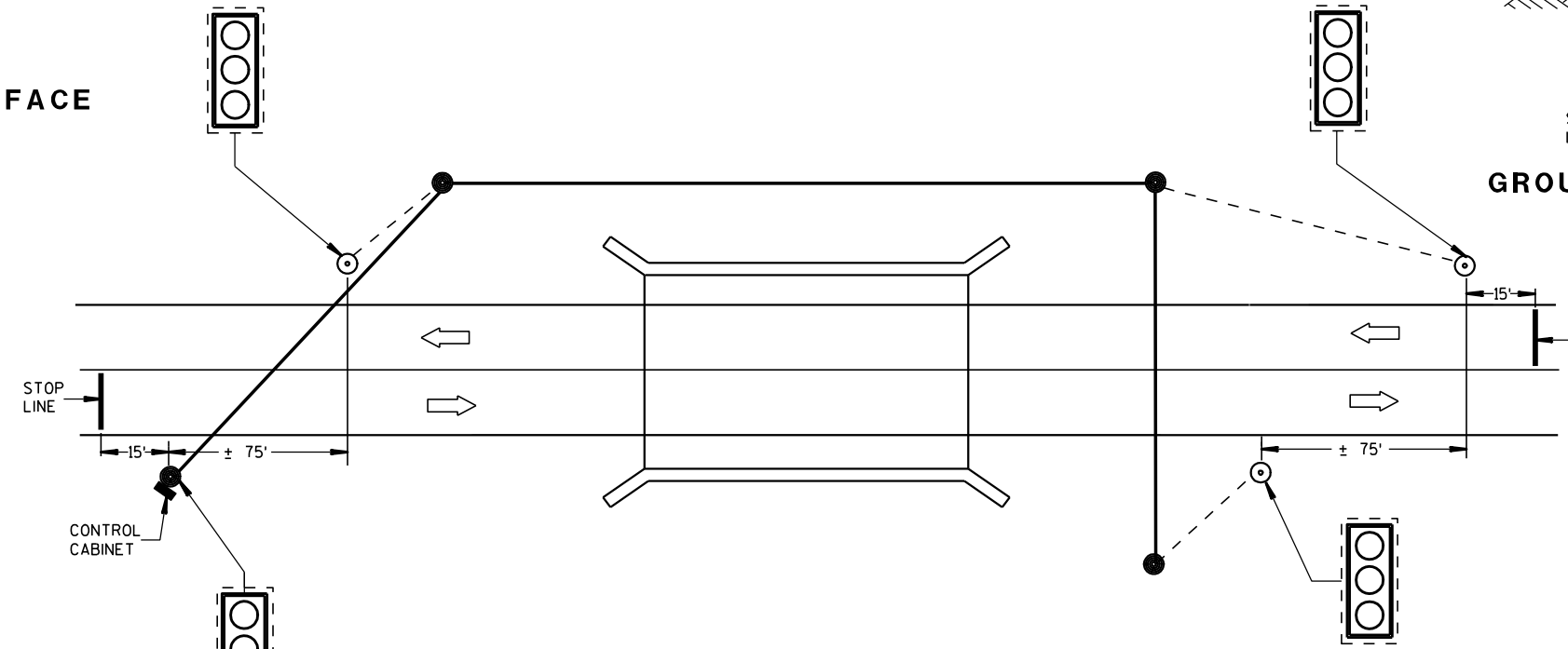
VERTICAL CLEARANCE ETC. PER NEC.

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



PLAN VIEW
TYPICAL BRIDGE TEMPORARY TRAFFIC SIGNAL LOCATION

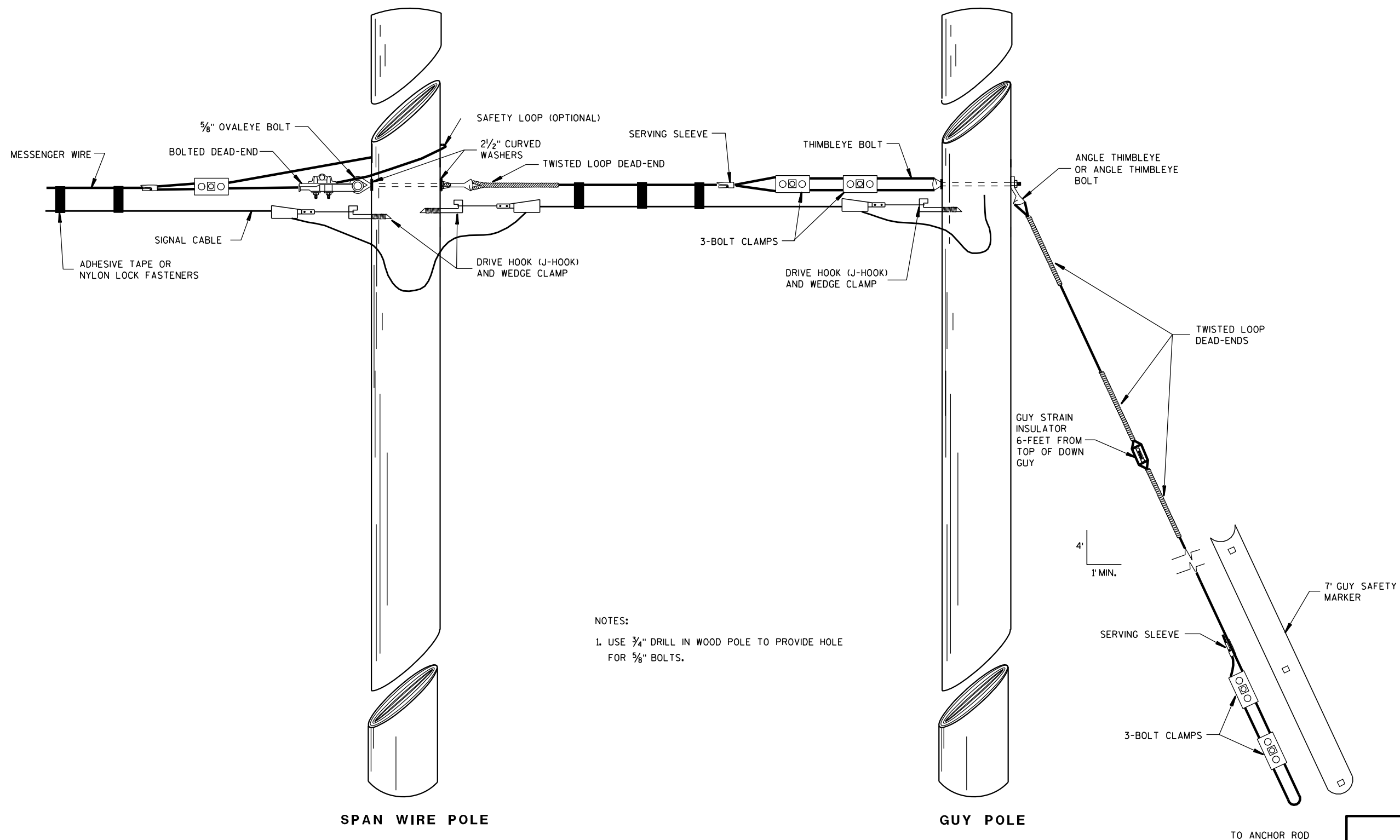
LEGEND

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

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/2/2011 DATE /S/ Thomas J. Goring STATE ELECTRICAL ENGINEER FOR HWYS
FHWA



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

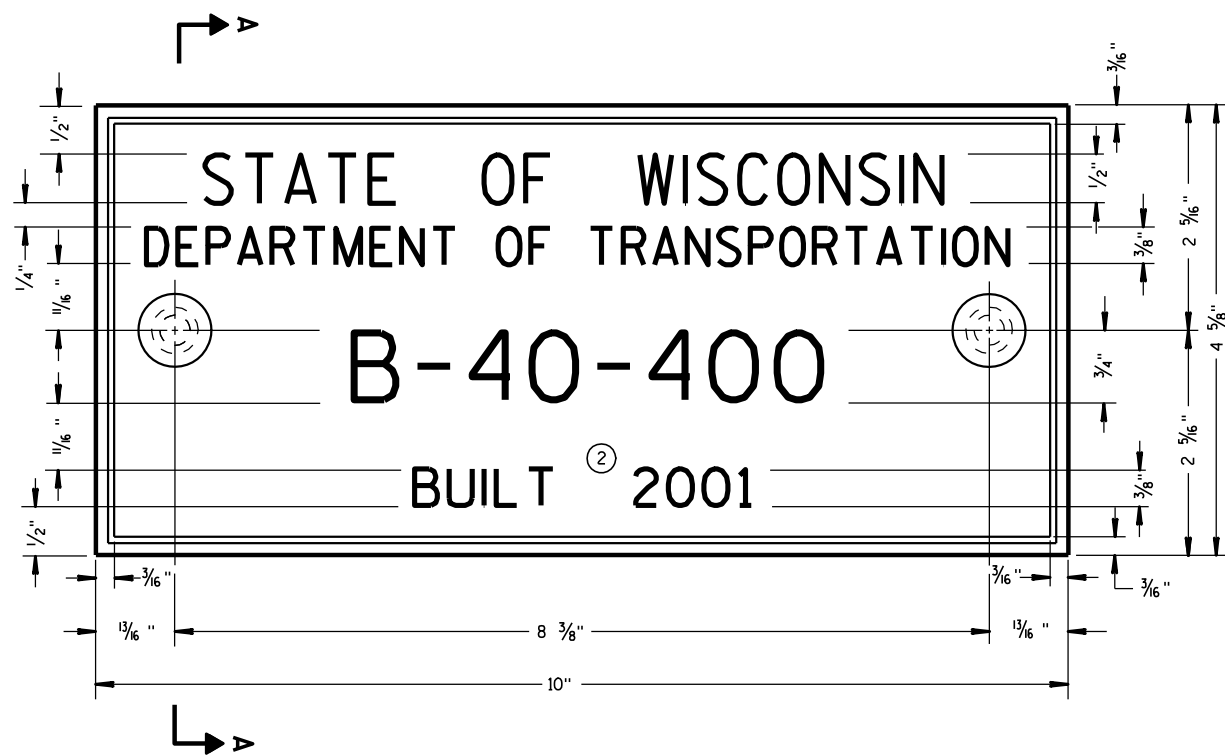
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

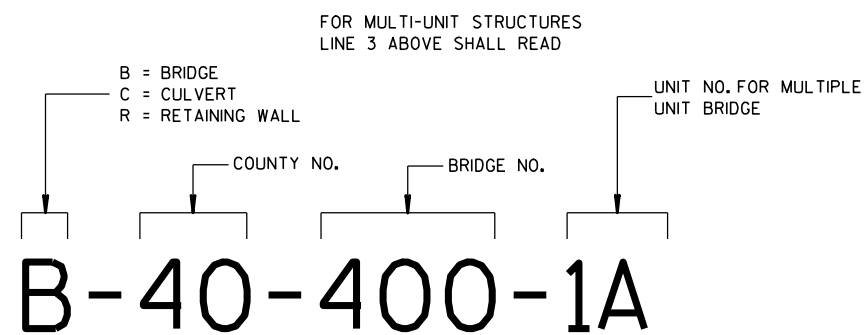
3/2/2011
DATE

/S/ Thomas J. Goring
STATE ELECTRICAL ENGINEER FOR HWYS

FHWA



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



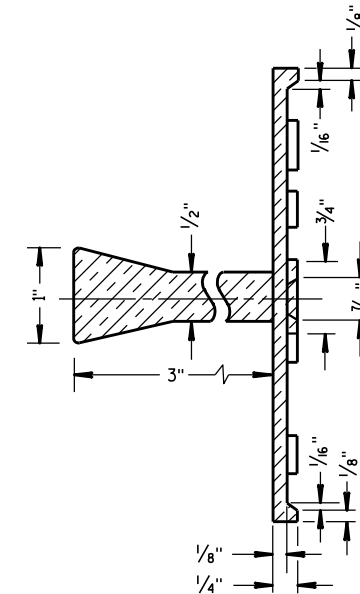
**NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES**

GENERAL NOTES

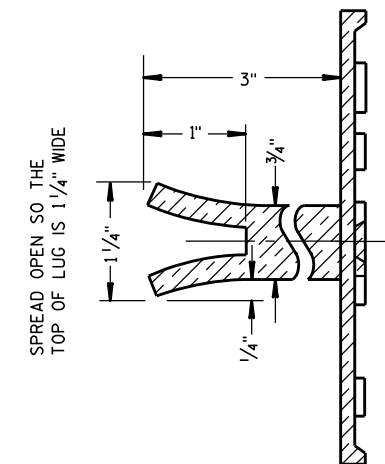
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

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

- ① EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- ② REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.

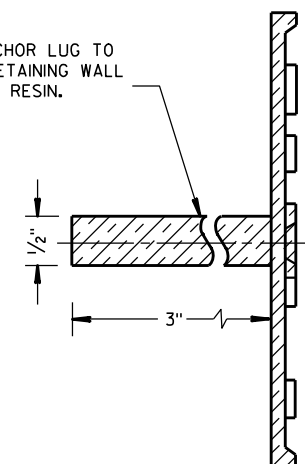


SECTION A-A



ALTERNATE LUG

- ① ADHERE ANCHOR LUG TO PRECAST RETAINING WALL WITH EPOXY RESIN.



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

**NAME PLATE
(STRUCTURES)**

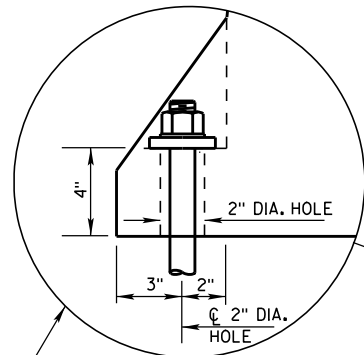
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

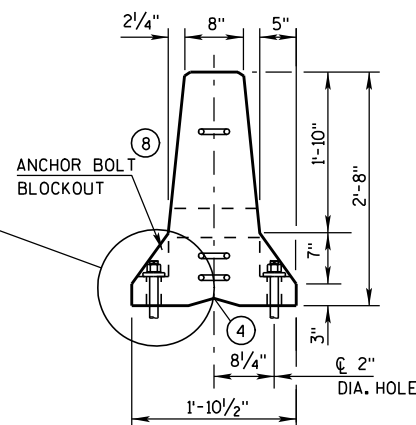
3/26/10
DATE

FHWA

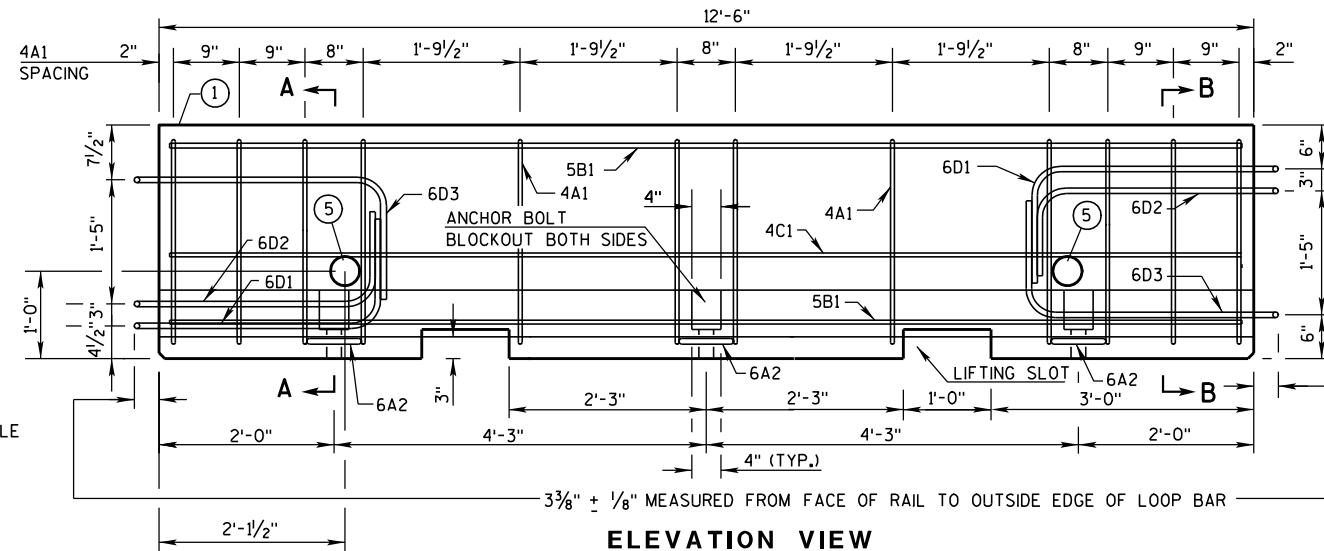
/S/ Scot Becker
CHIEF STRUCTURAL DEVELOPMENT ENGINEER



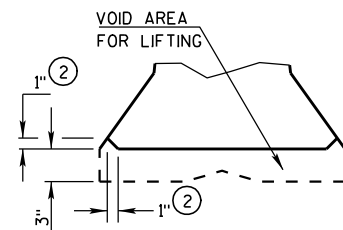
ANCHOR ON TRAFFIC SIDE
ONLY WHEN REQUIRED
(SEE SHEET D FOR ADDITIONAL
ANCHOR DETAIL)



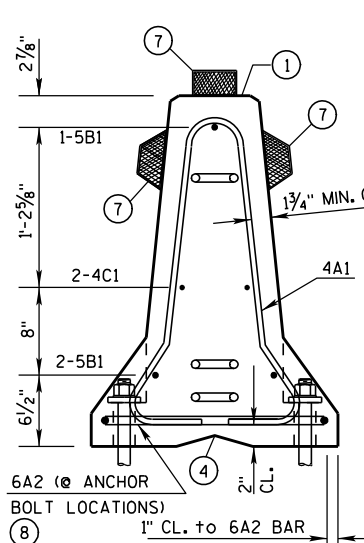
END VIEW



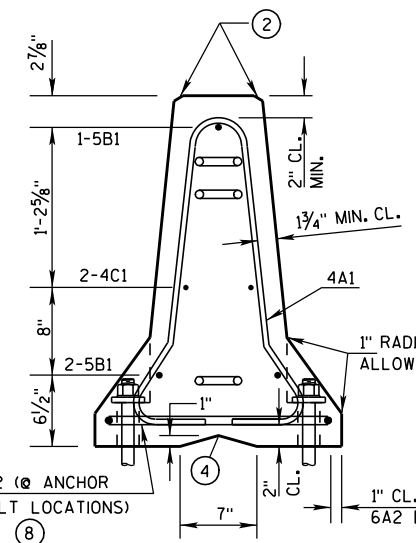
ELEVATION VIEW



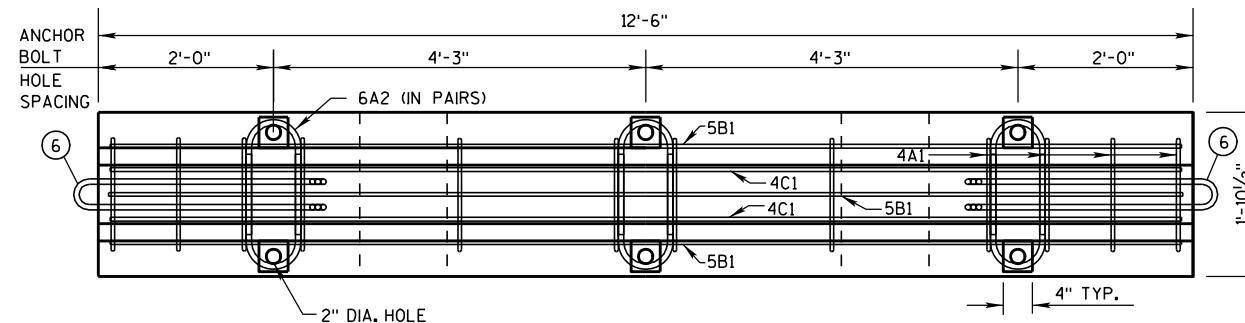
DETAIL "B"
LIFTING SLOT DETAIL



SECTION A-A
(STIRRUP PLACEMENT)

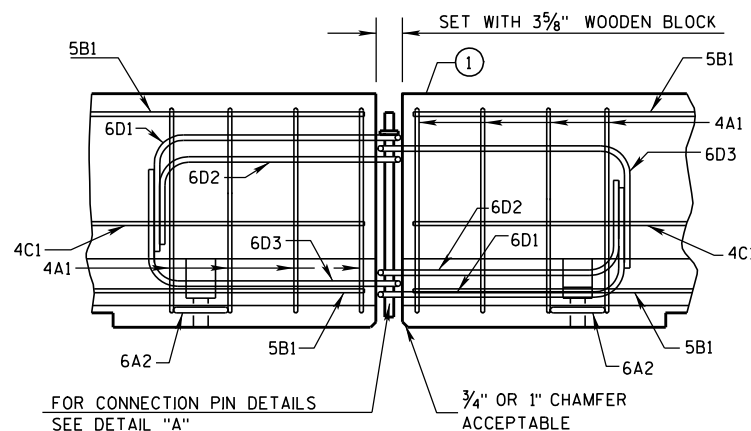


SECTION B-B
(STIRRUP PLACEMENT)

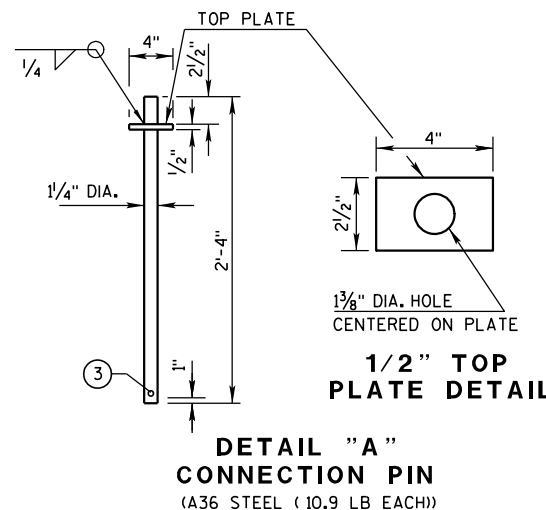


PLAN VIEW

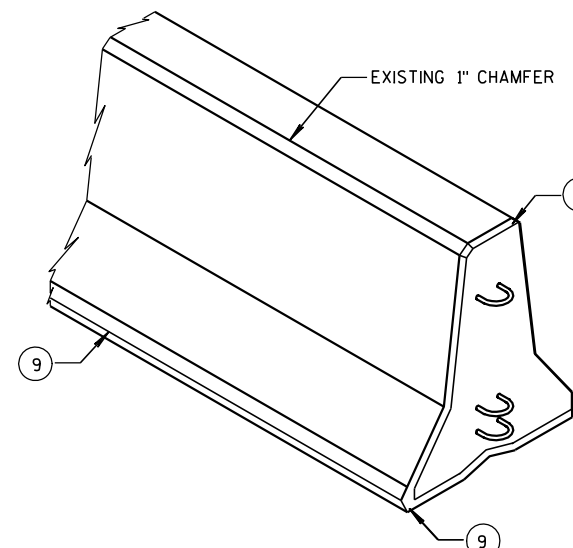
DETAILS OF BARRIER SECTION



DETAILS OF BARRIER CONNECTION



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



1/2" TOP
PLATE DETAIL

GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-13(g) THRU 14B7-13(h).

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRECAST, 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 3/4" 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 3-1/2" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN 1/8" OF THE PLAN DIMENSION.

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

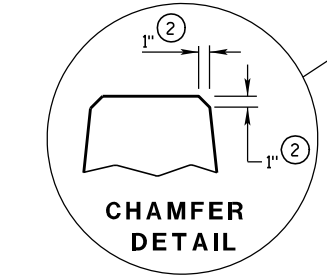
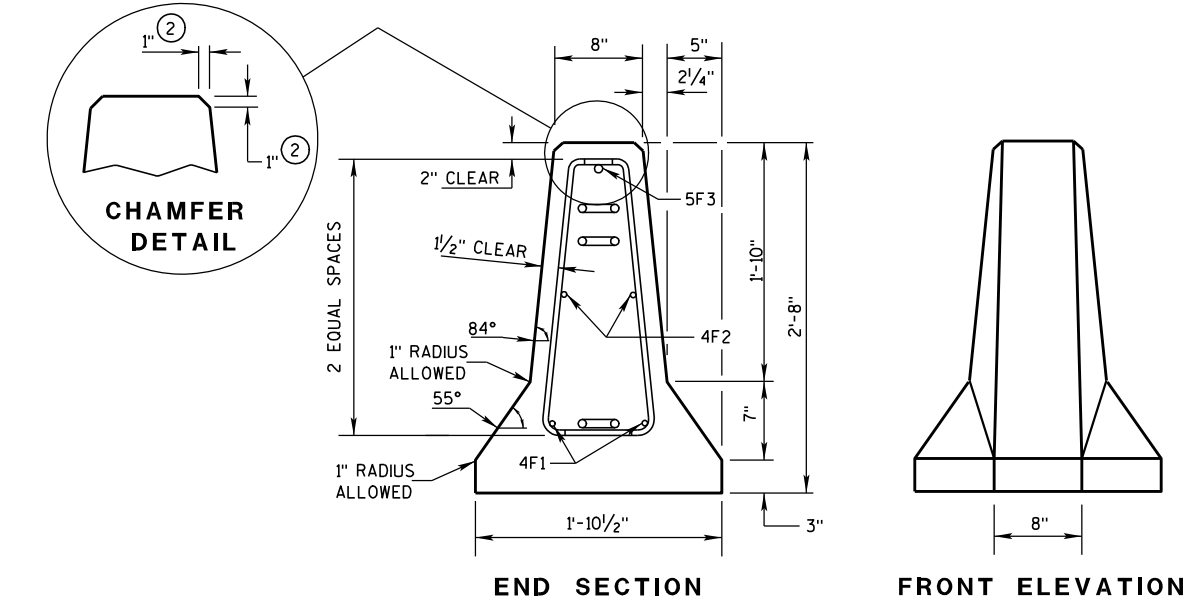
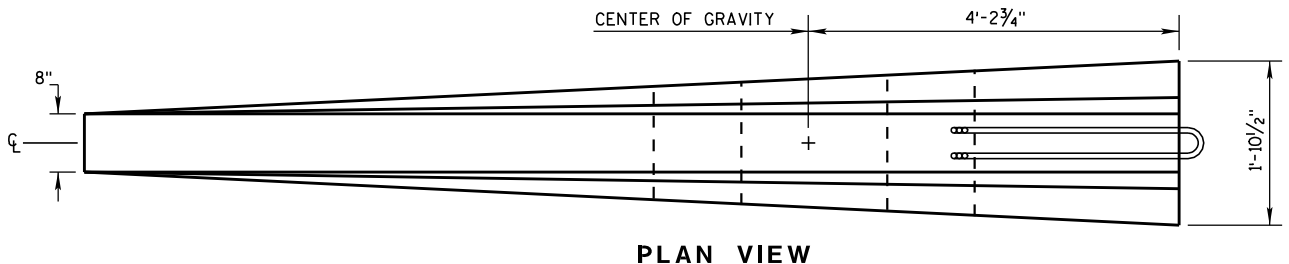
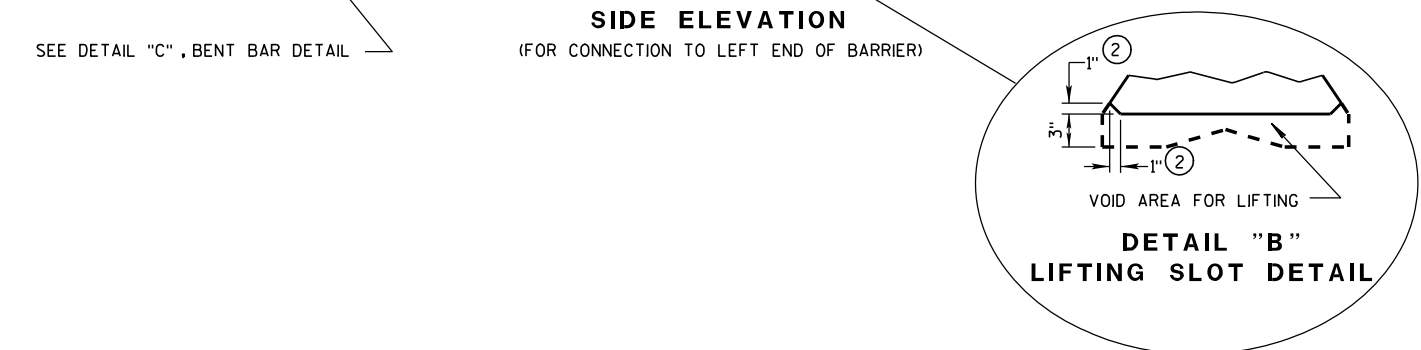
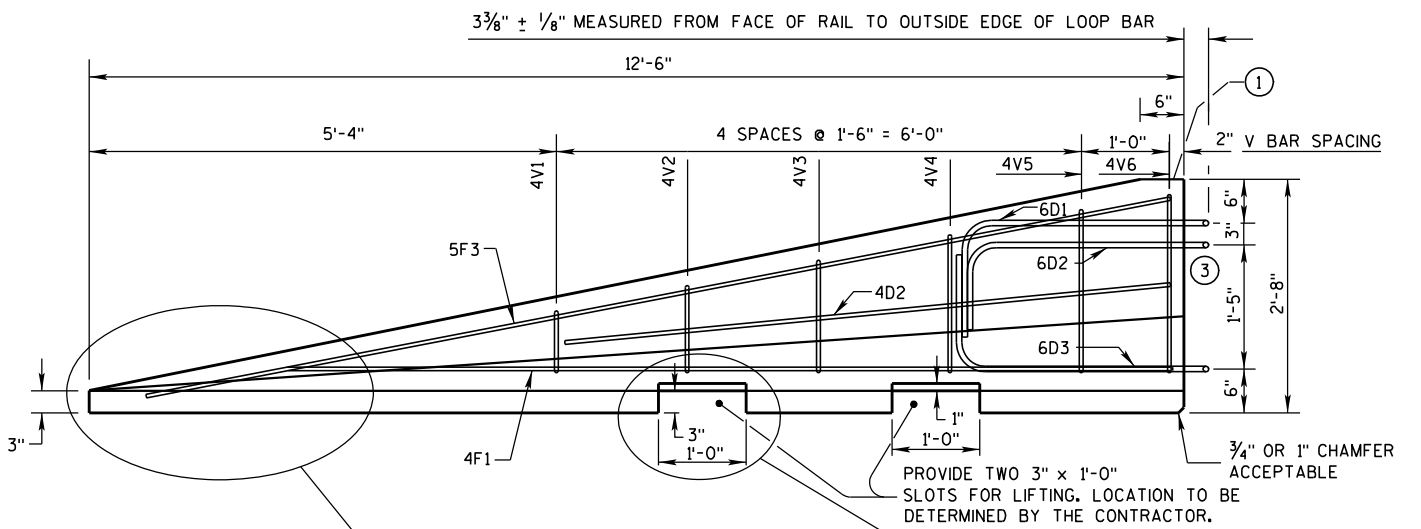
PLACE BARRIER ON A PAVED SURFACE. REMOVE ALL LOOSE DIRT AND SAND FROM THE ROADWAY SURFACE PRIOR TO PLACEMENT OF THE BARRIER.

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

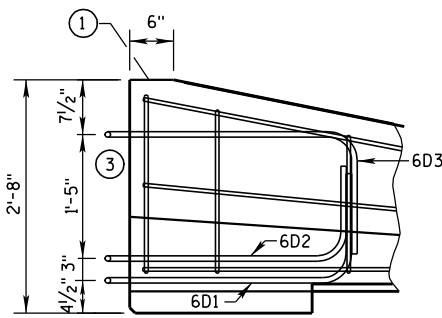
- MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
 - TYPE: WICBTP
 - MANUFACTURER
 - DATE MANUFACTURED (MONTH AND YEAR)
- 1" CHAMFER TO PREVENT SPALLING.
- A 3/8" HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..
- "V" NOTCH IS OPTIONAL.
- THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).
- NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.
- 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.
- SEE SHEET D FOR ANCHORING CRITERIA.
- 1" CHAMFER OPTIONAL.

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



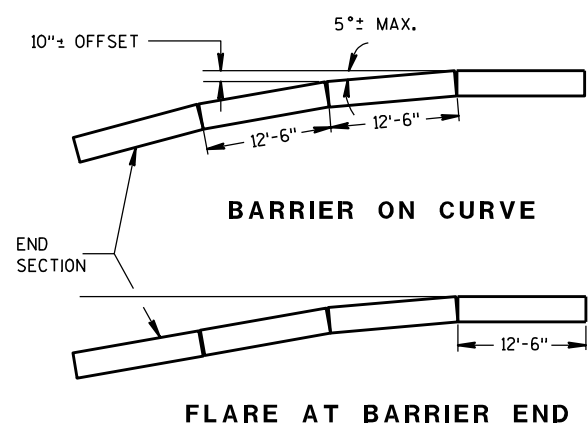
DETAILS OF BARRIER TAPER SECTION



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 W/CBTP
 - 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.



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

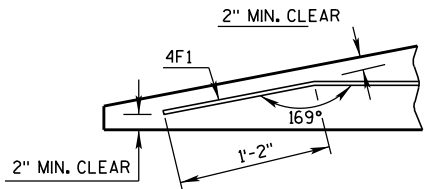
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

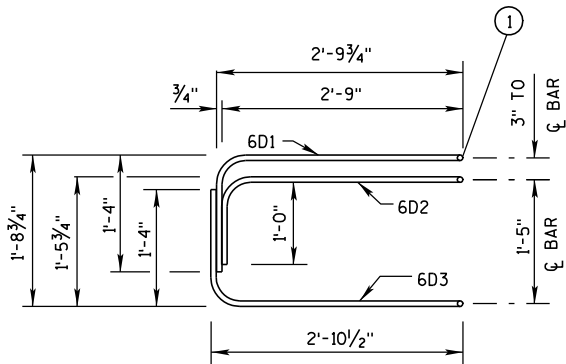
BARRIER TAPER SECTION
BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

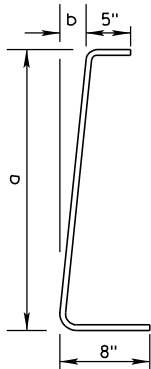
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



DETAIL "C"
BENT BAR DETAIL



ELEVATION
LOOP BAR ASSEMBLY



BAR	a	b
V1	10"	1"
V2	1'-1"	1 1/4"
V3	1'-5"	1 5/8"
V4	1'-8"	1 7/8"
V5	2'-0 1/2"	2 3/8"
V6	2'-3"	2 3/4"

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

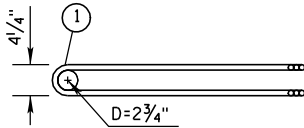
GENERAL NOTES

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

BARRIER SECTION
BILL OF MATERIALS

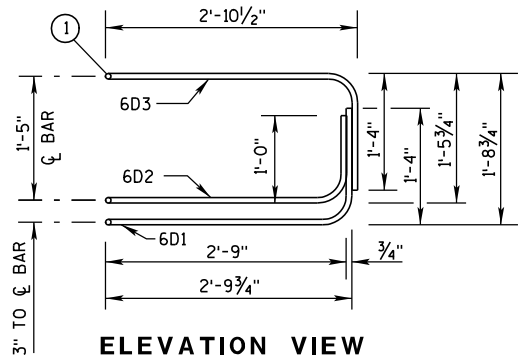
(PER 12'-6" BARRIER SECTION)

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"

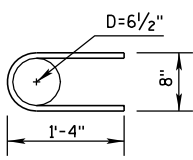


PLAN VIEW
LOOP BAR ASSEMBLY

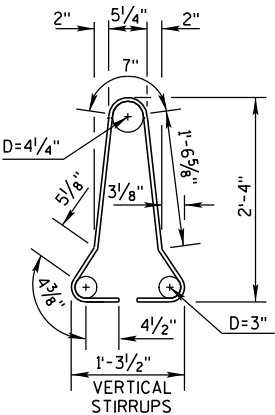
(MARKED END SHOWN, INVERT FOR OTHER END)



ELEVATION VIEW



6A2

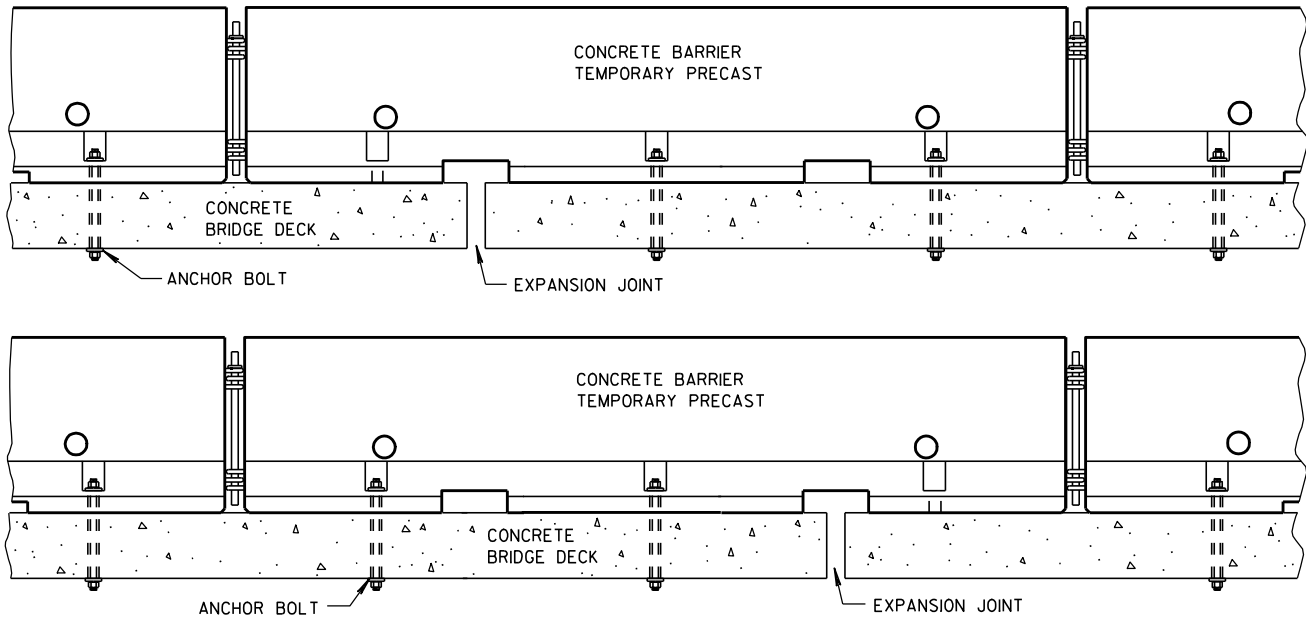


4A1

BARRIER SECTION

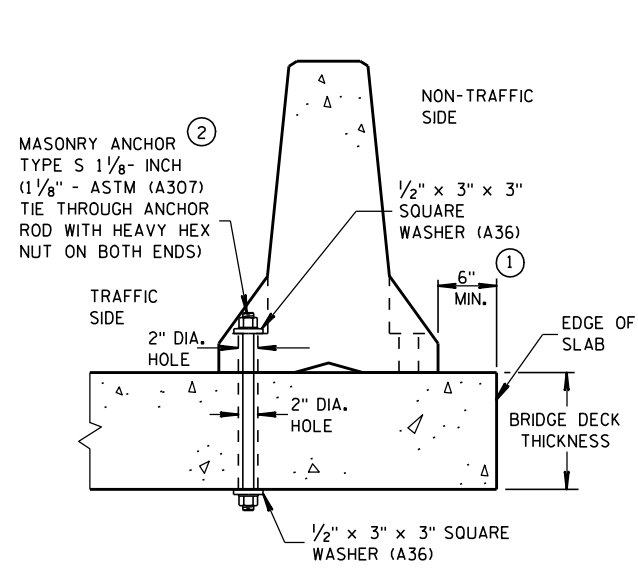
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



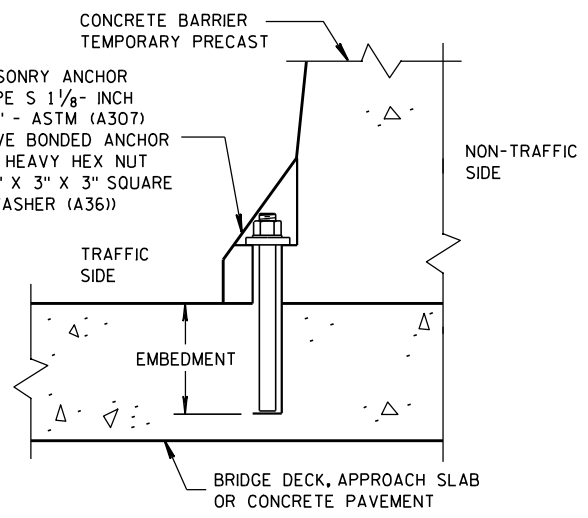
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(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.)



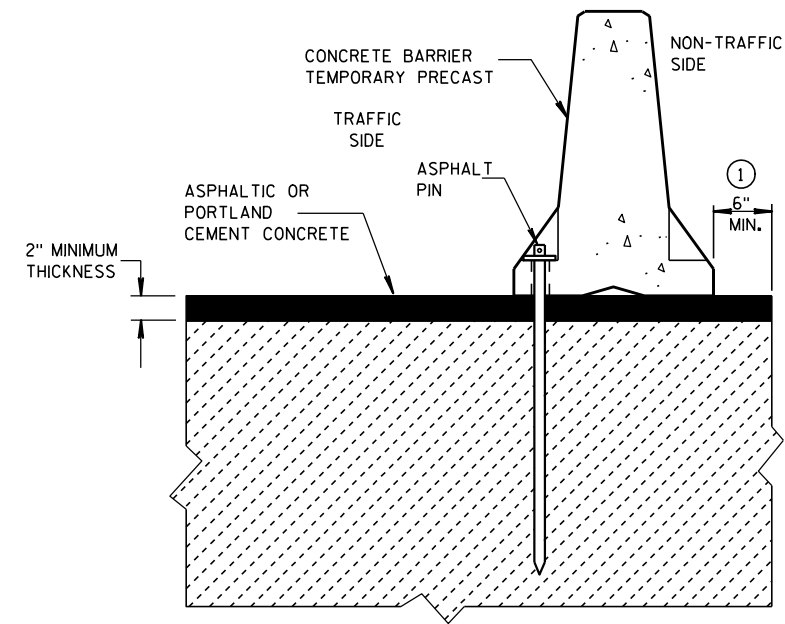
THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOT USE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)



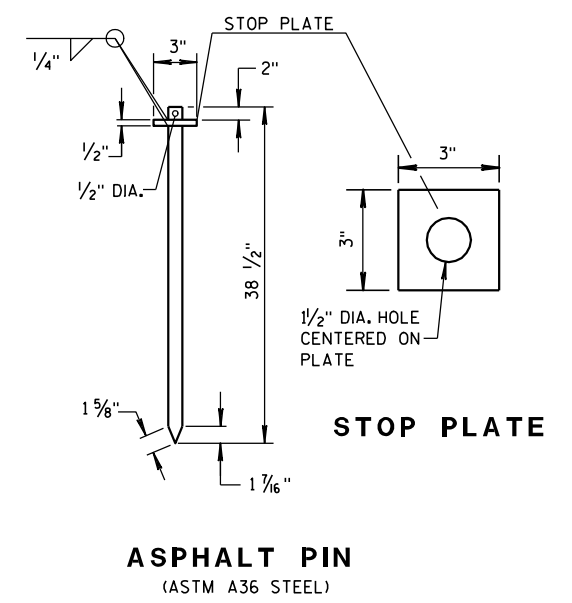
REMOVABLE ADHESIVE BONDED ANCHOR INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

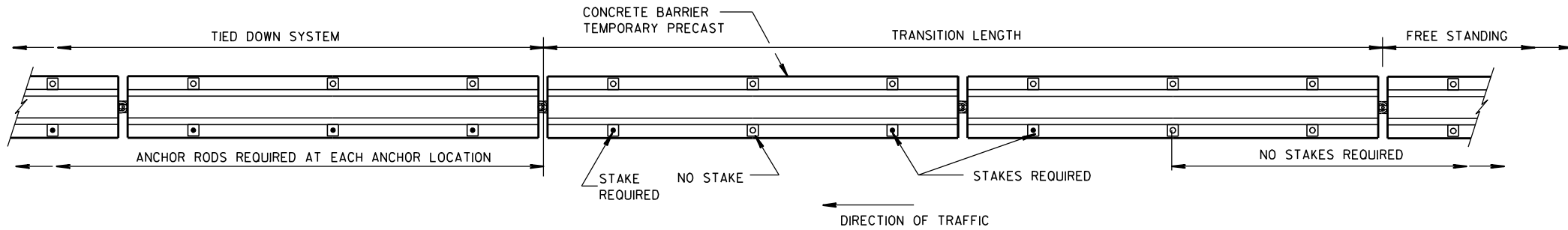


STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



ASPALT PIN (ASTM A36 STEEL)



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.)

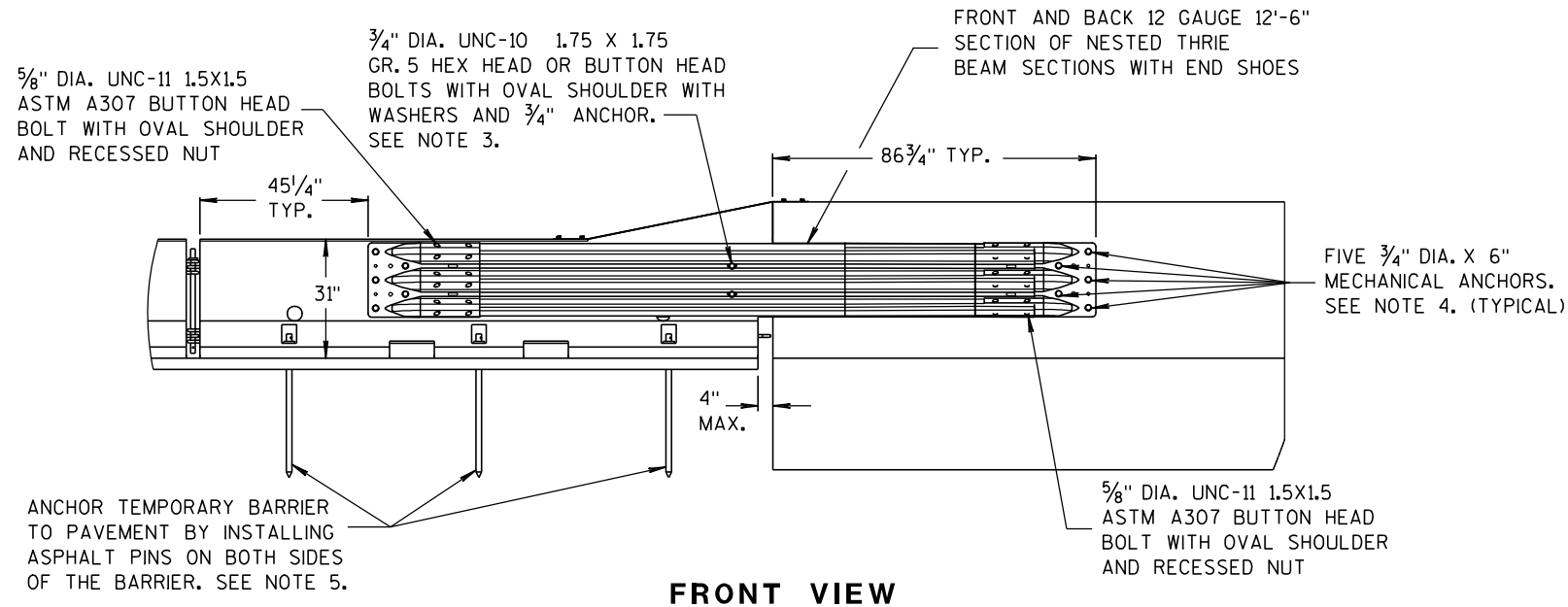
GENERAL NOTES

- 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.

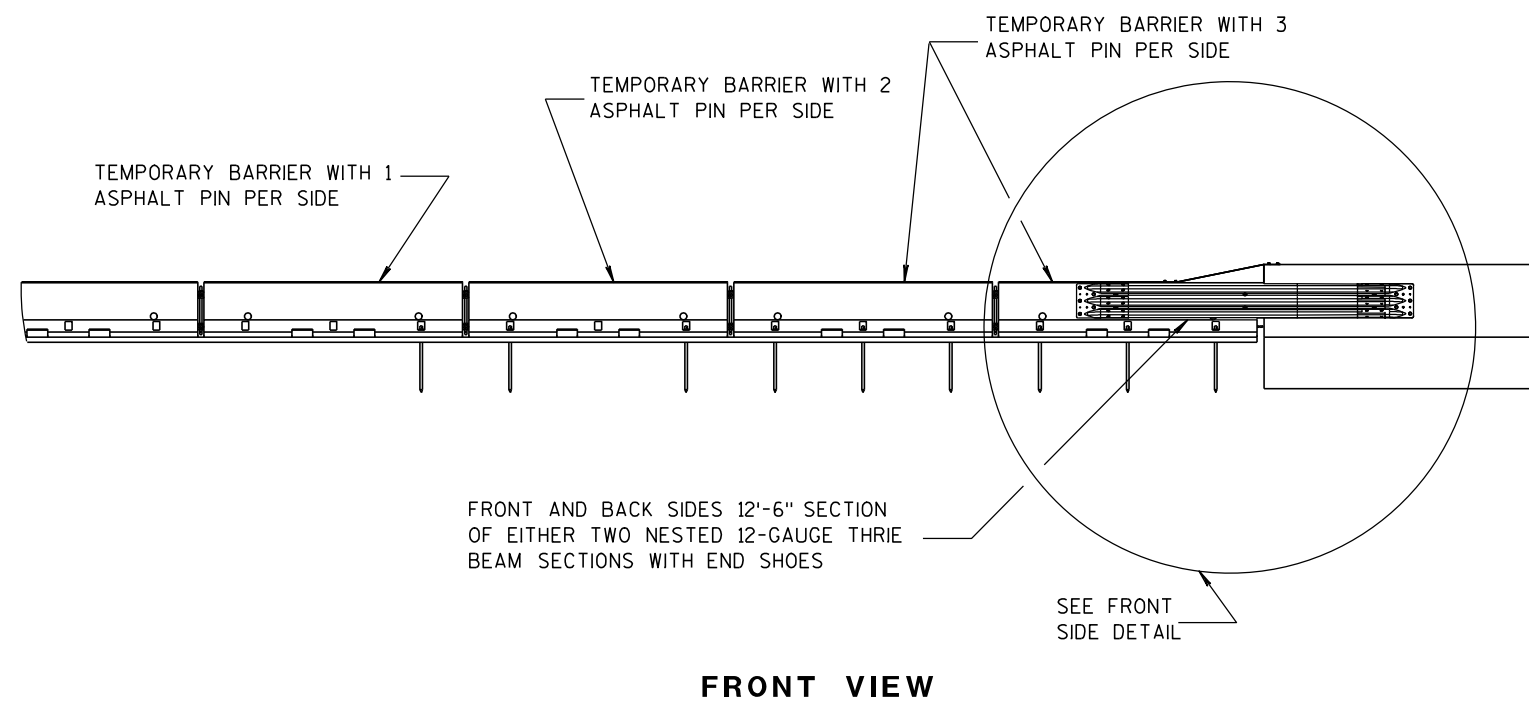
WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED (EPOXY) ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1 1/8-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE CAPACITY OF THE ANCHOR BOLT AND PROVIDE DOCUMENTATION TO CONFIRM THIS.

UPON REMOVAL OR RELOCATION OF THE BARRIER UNITS, REMOVE ALL ANCHOR 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 COMMERCIAL GROUT OR EPOXY MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST.

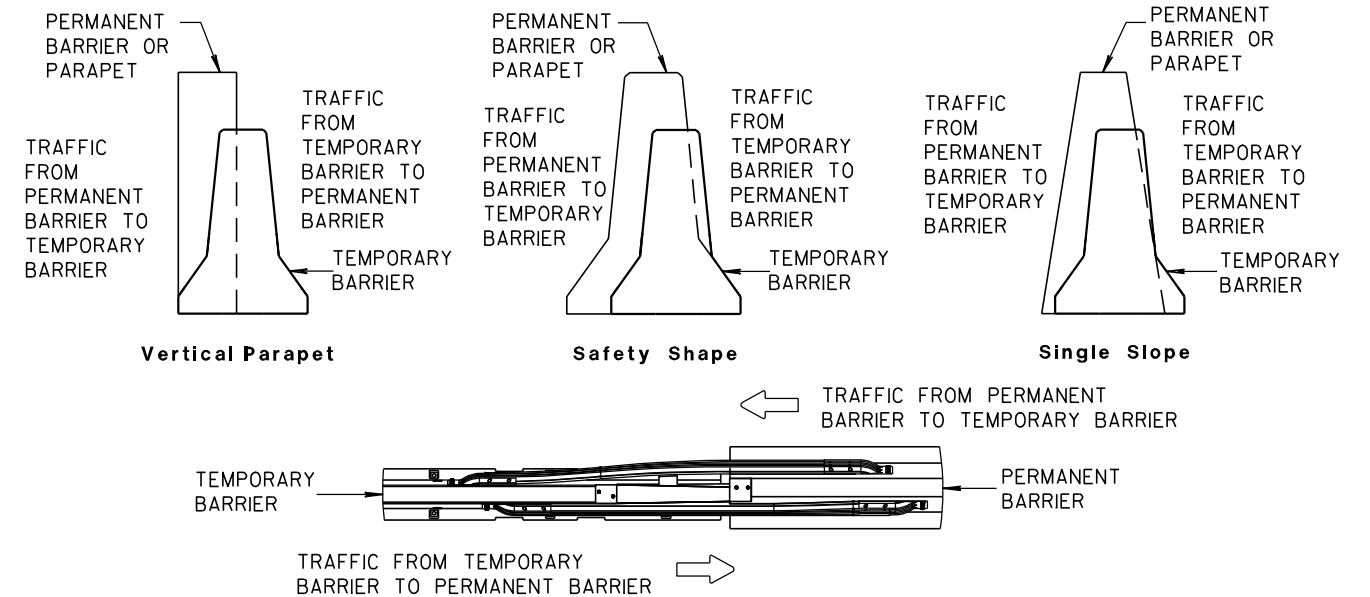


NOTES

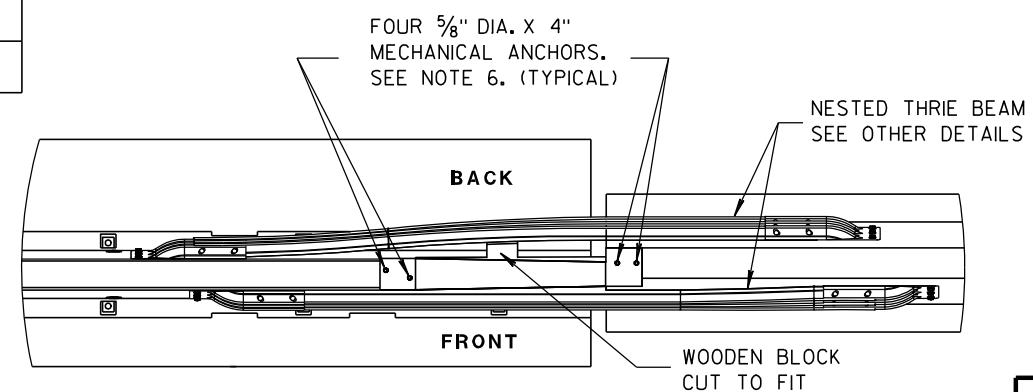
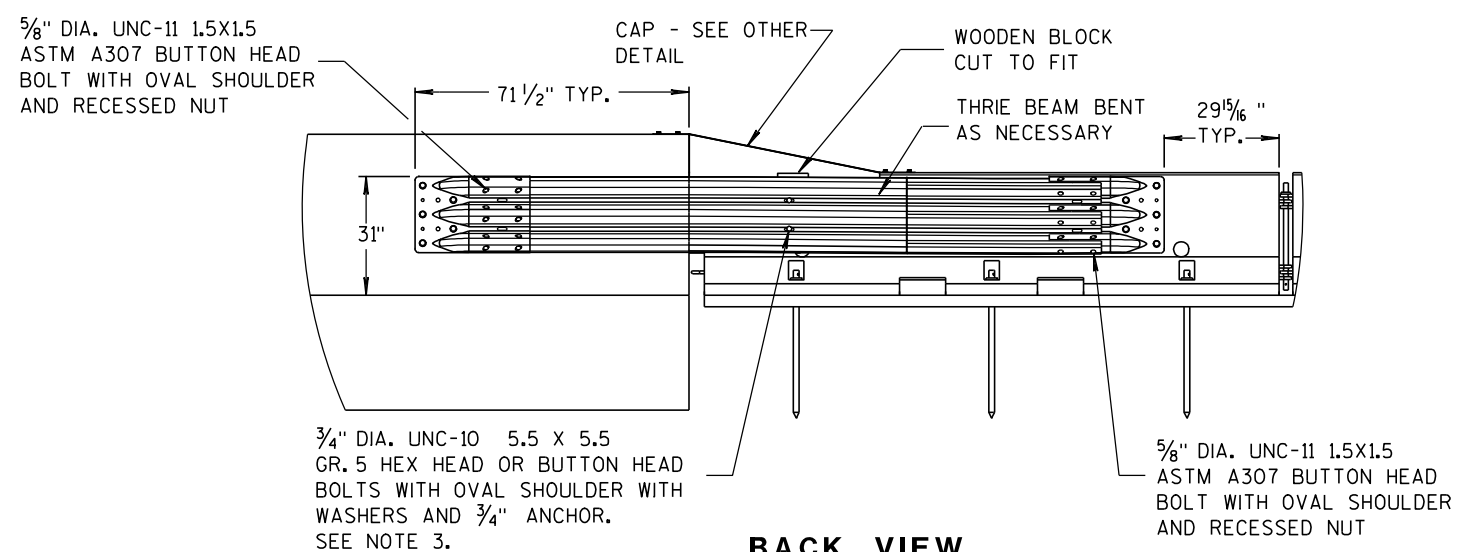
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48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



BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

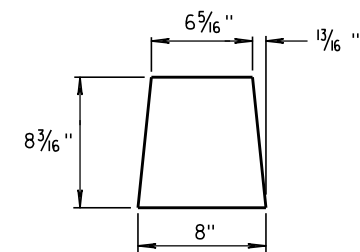


TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

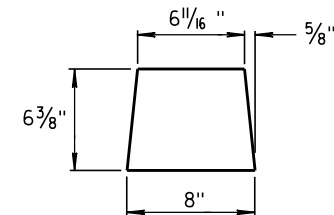


CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

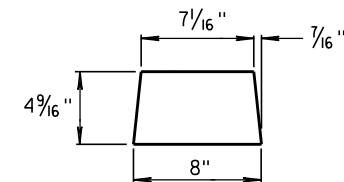
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



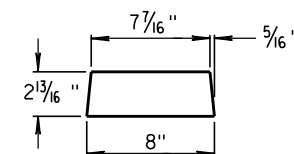
GUSSET 1



GUSSET 2

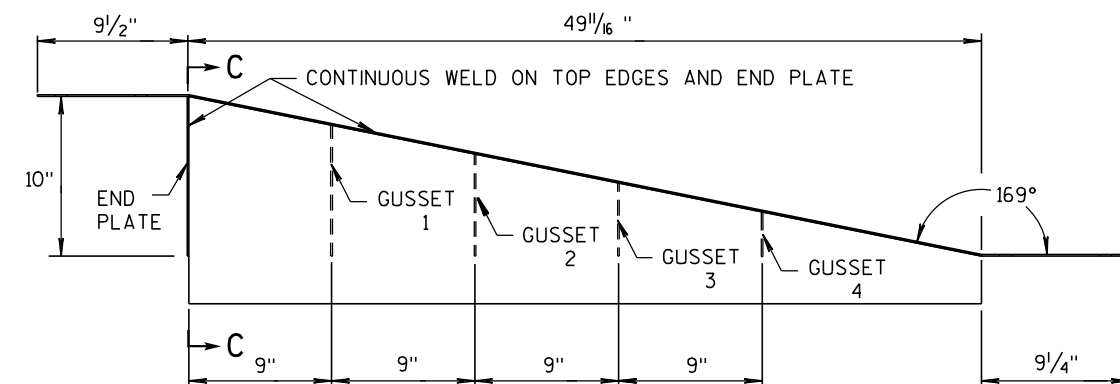
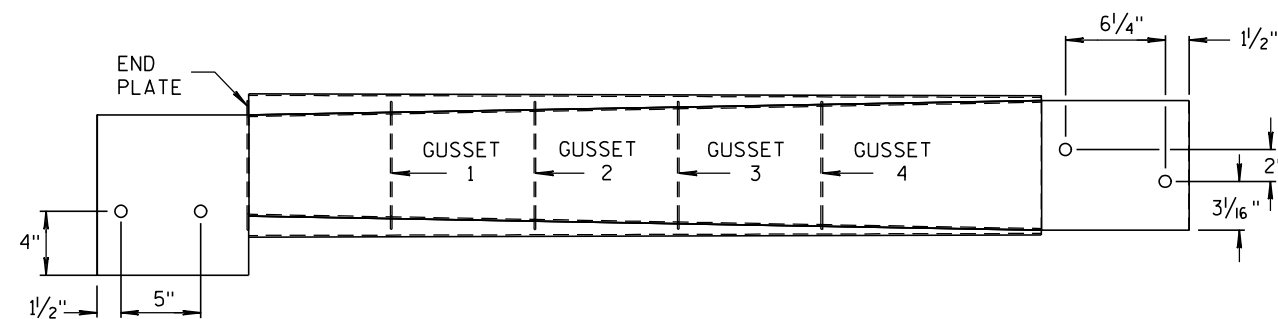


GUSSET 3



GUSSET 4

GUSSETS

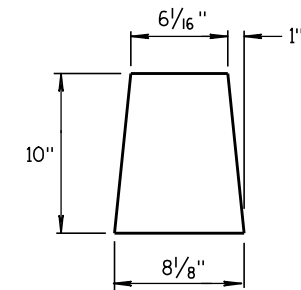


SECTION C-C

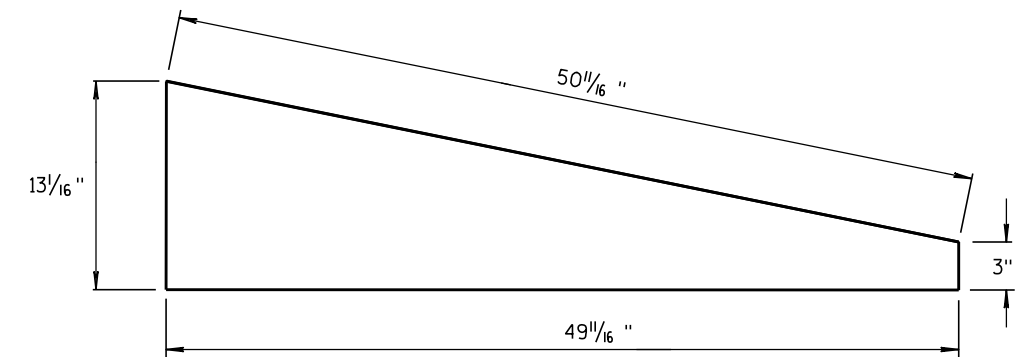
NOTES

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.

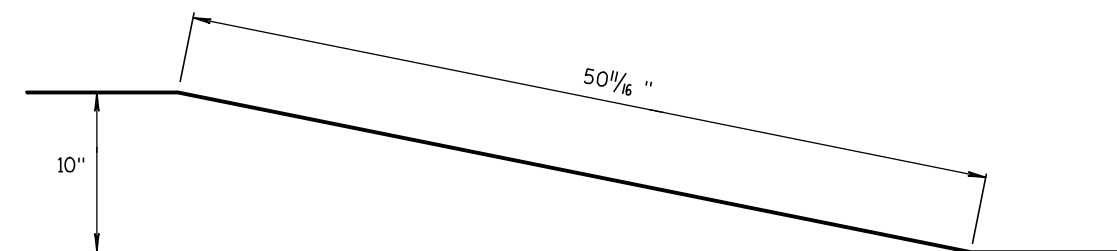
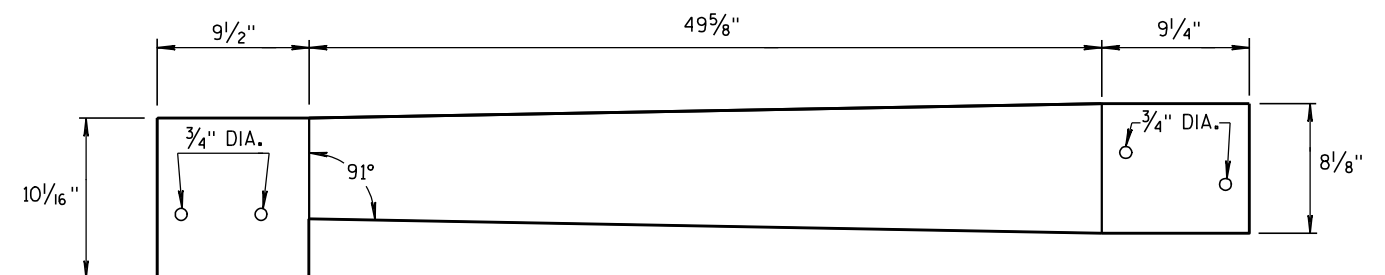
**CAP DETAILS FOR TEMPORARY CONCRETE
BARRIER TO 42" PERMANENT CONCRETE BARRIER**



END PLATE



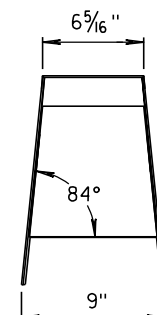
SIDE PLATE



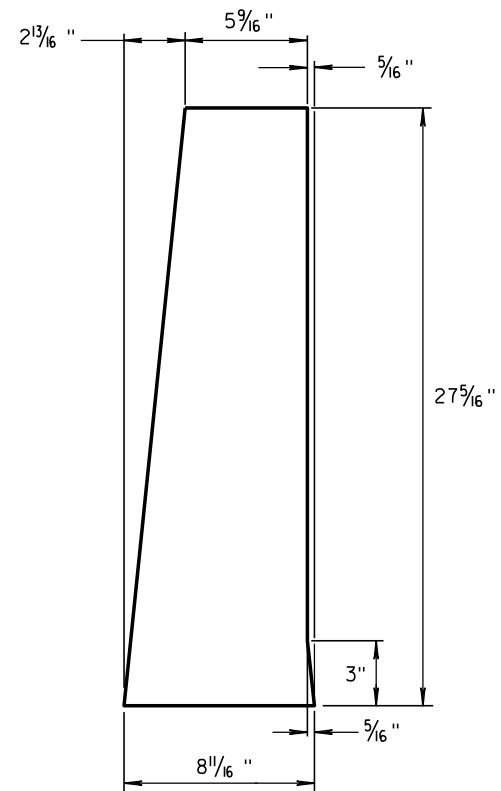
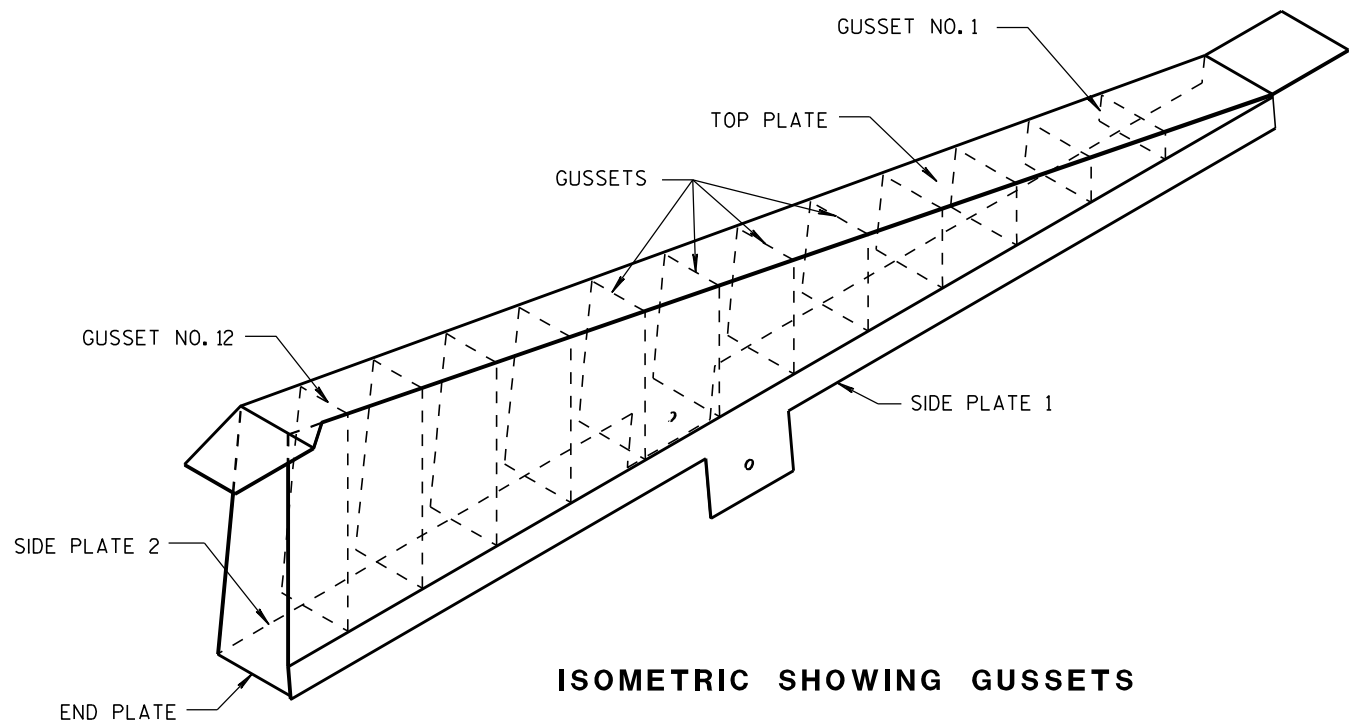
TOP PLATE

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

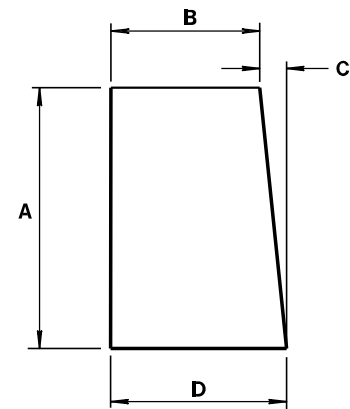
SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.



SECTION C-C



1/8" STEEL PLATE

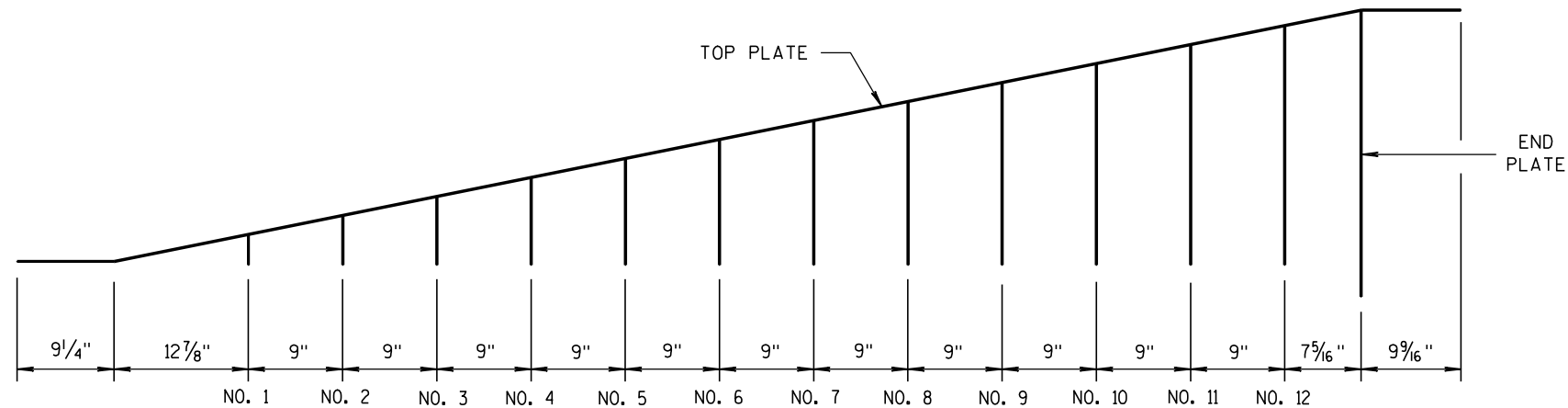


ALL GUSSETS 1/8" STEEL PLATE

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 5/16 "	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.

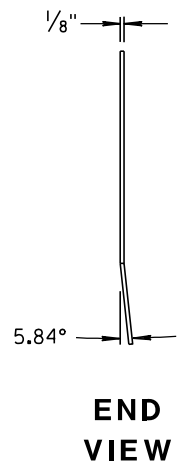
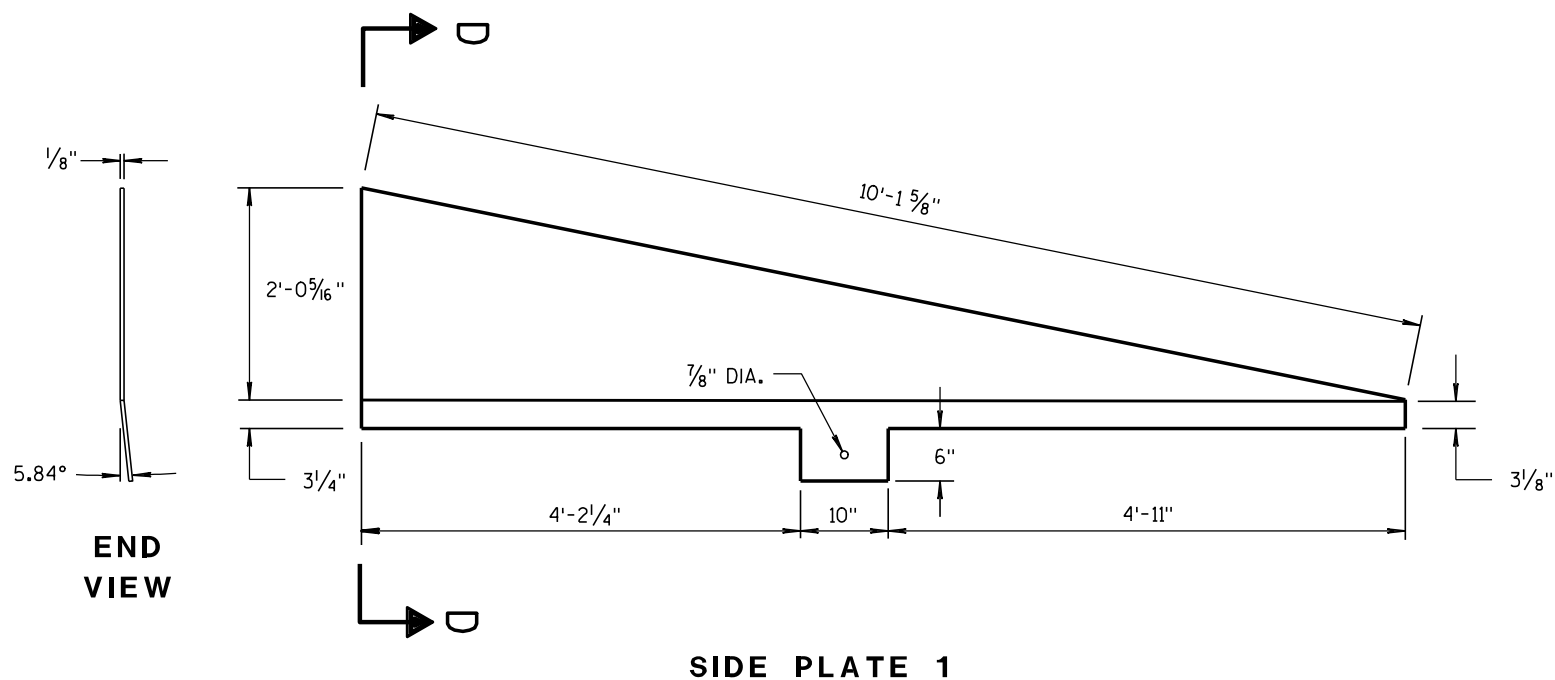
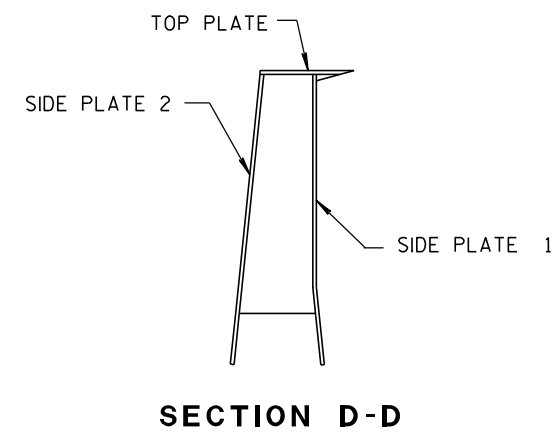
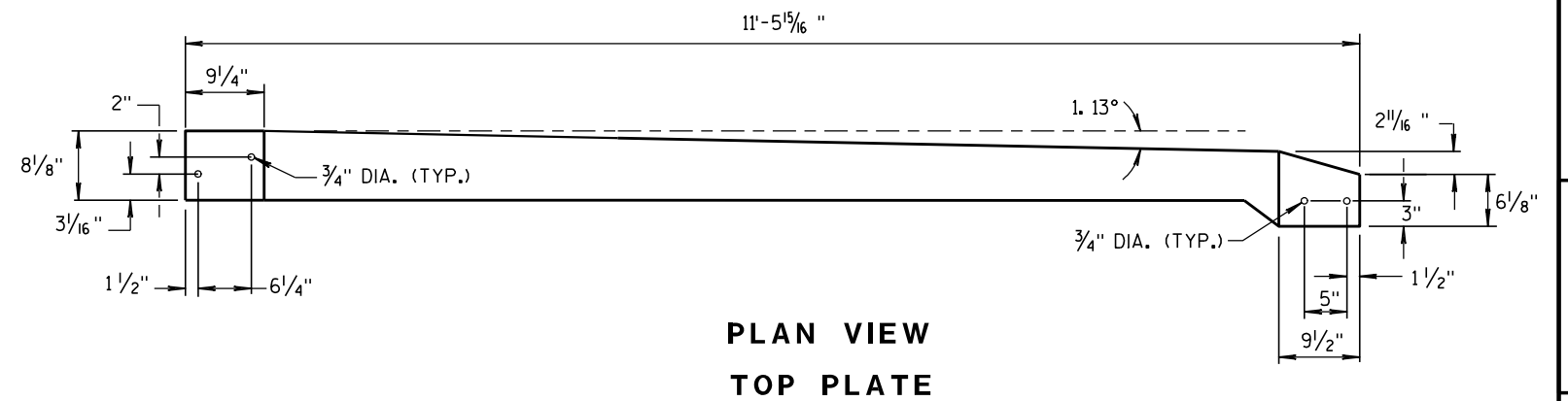
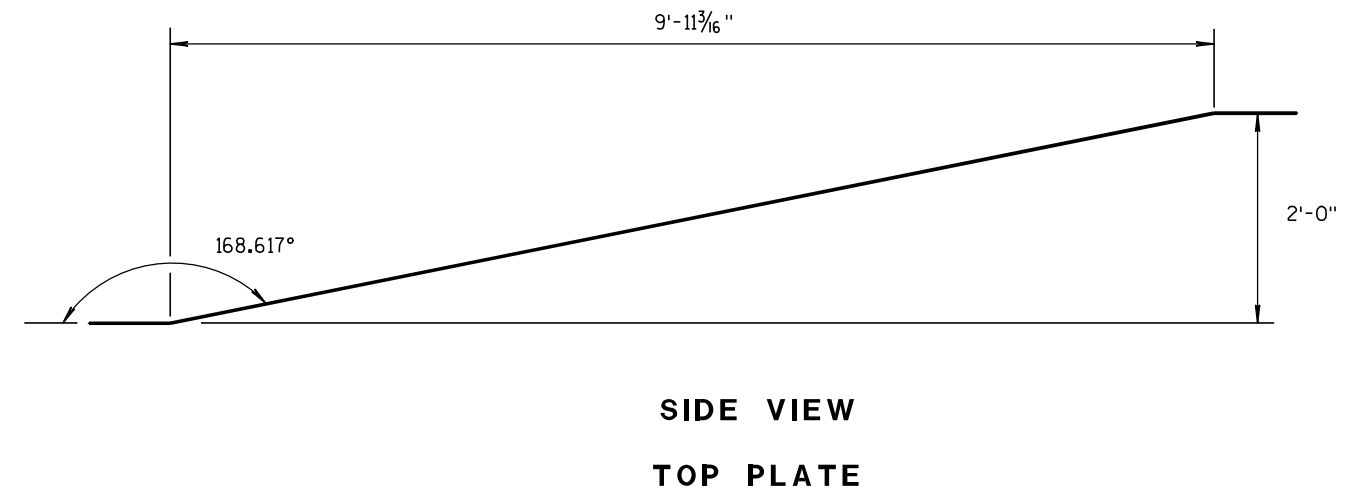
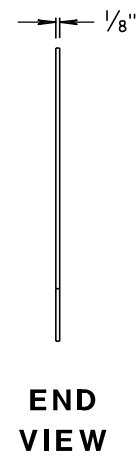
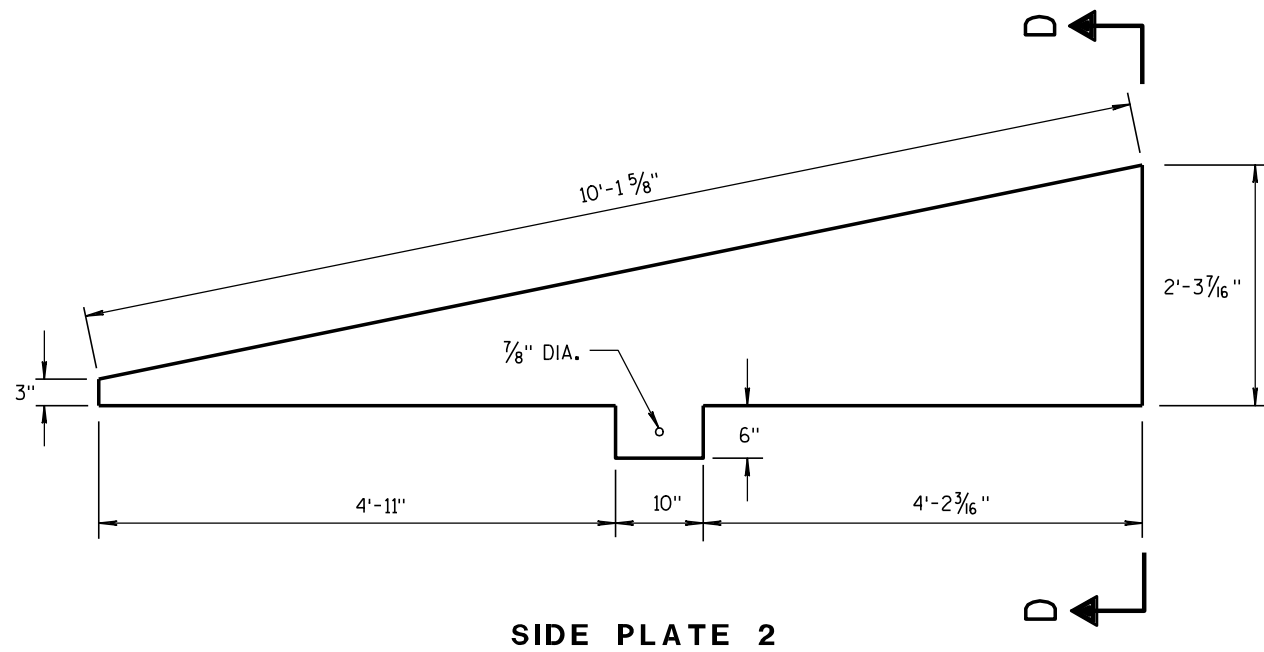
GUSSETS AND END PLATE ARE STITCH WELDED ON 3 SIDES. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE AND GUSSETS.



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

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**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

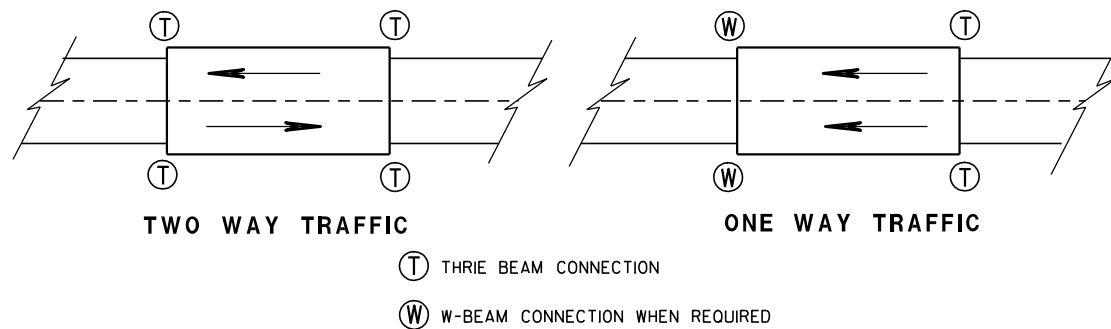
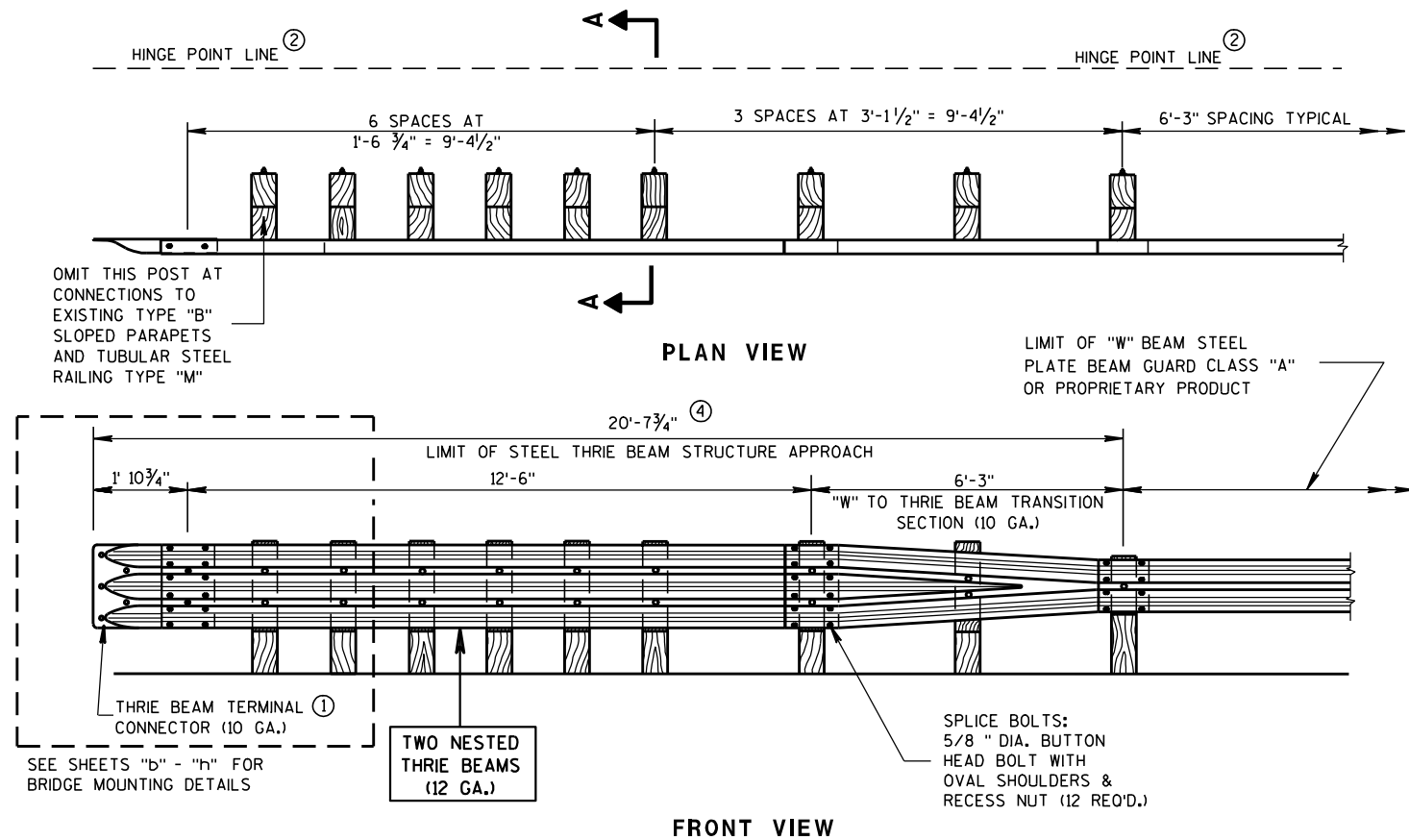
DATE

FHWA

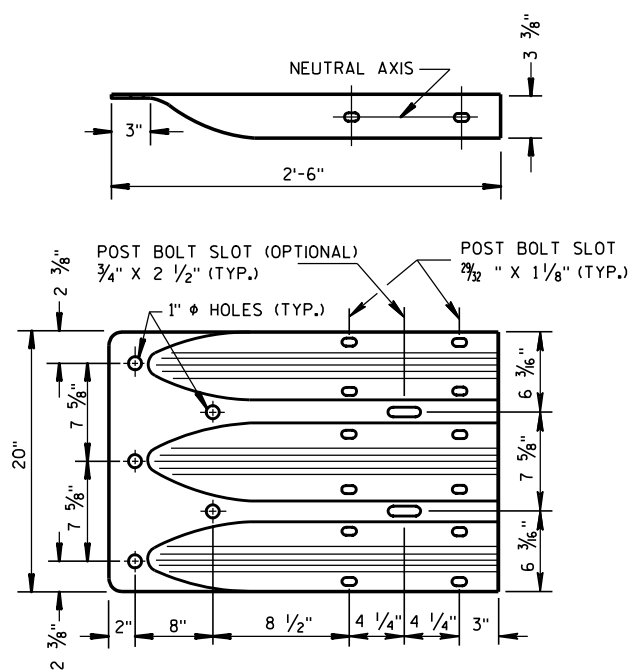
/S/ Jerry H. Zogg

ROADWAY STANDARD DEVELOPMENT

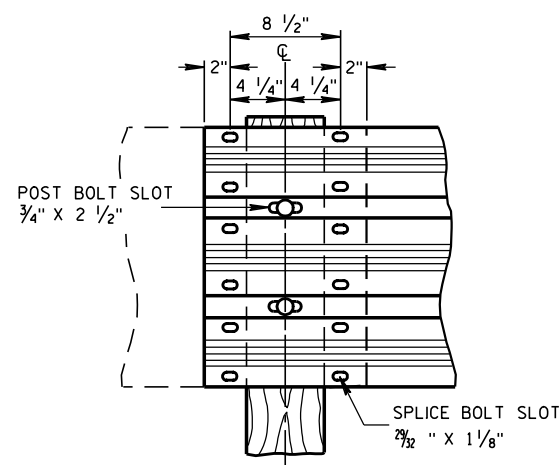
ENGINEER



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



THRIE BEAM TERMINAL CONNECTOR



THRIE BEAM SPLICE

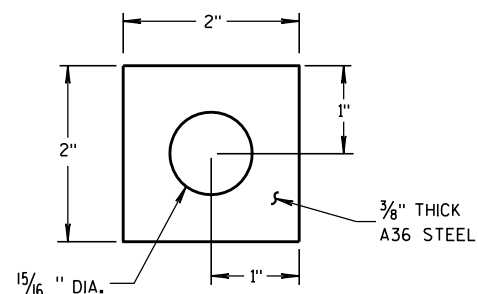
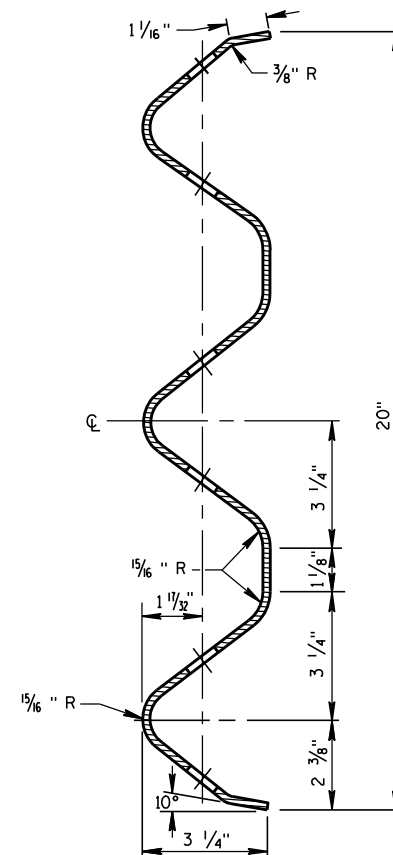


PLATE WASHER DETAIL



SECTION THRU THRIE BEAM RAIL ELEMENT

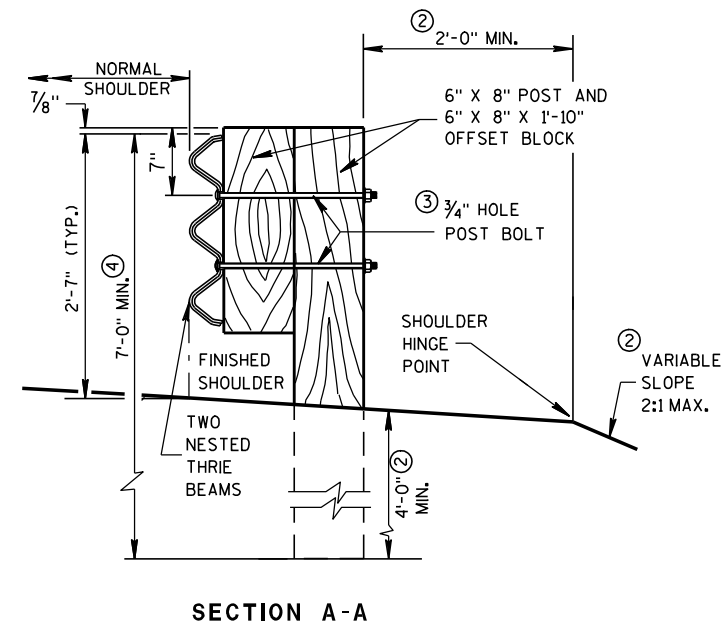
GENERAL NOTES

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.



STEEL THRIE BEAM STRUCTURE APPROACH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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8/31/2012

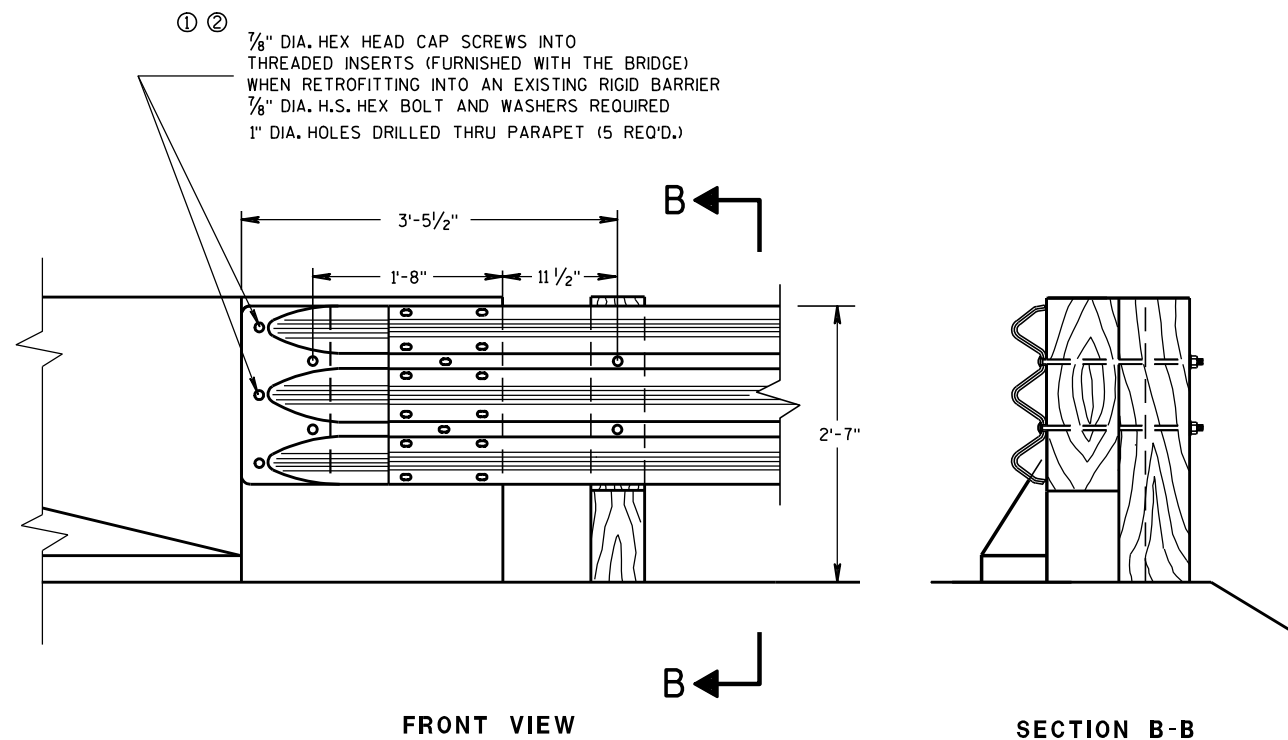
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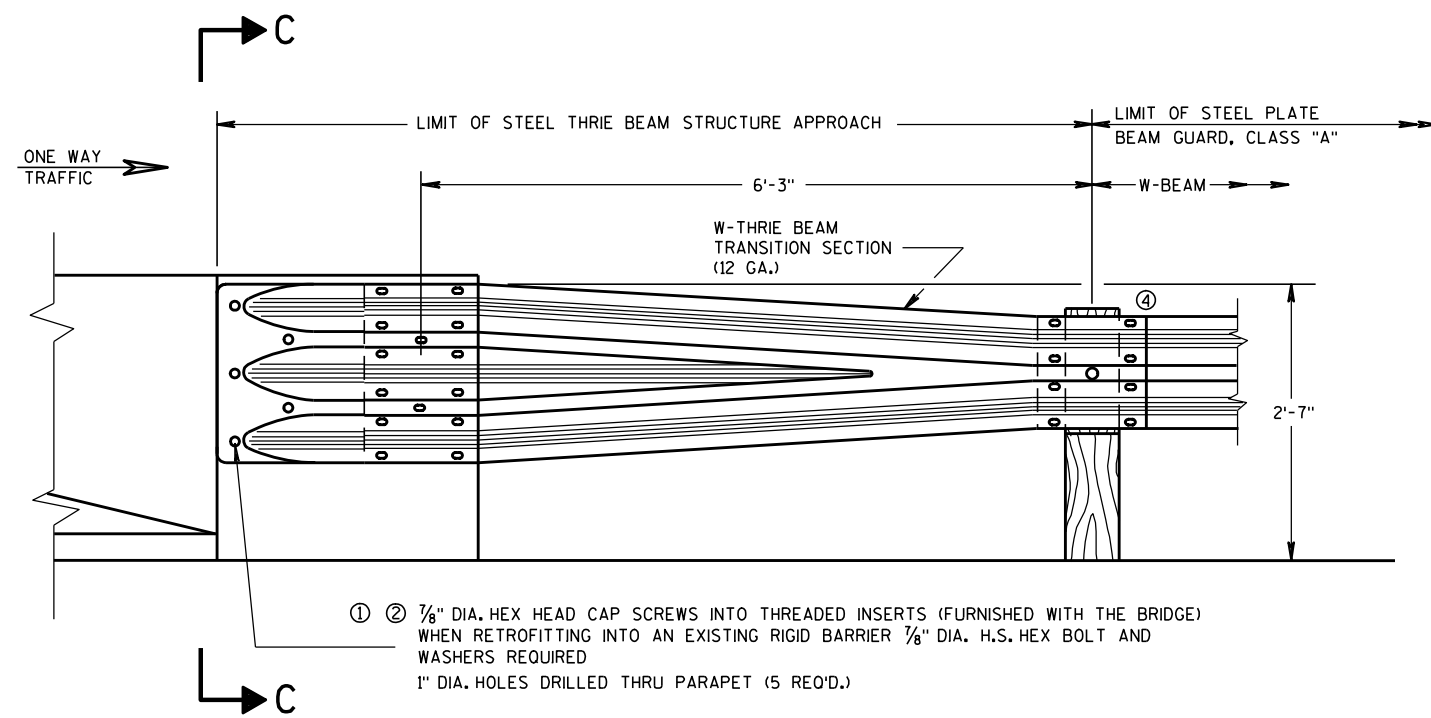
/s/ Jerry H. Zogg

ROADWAY STANDARDS DEVELOPMENT

ENGINEER



THRIE BEAM CONNECTION TO BRIDGE
PARAPET WITH SQUARE ENDS



W BEAM TRANSITION AND CONNECTION TO
BRIDGE PARAPETS WITH SQUARE ENDS
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

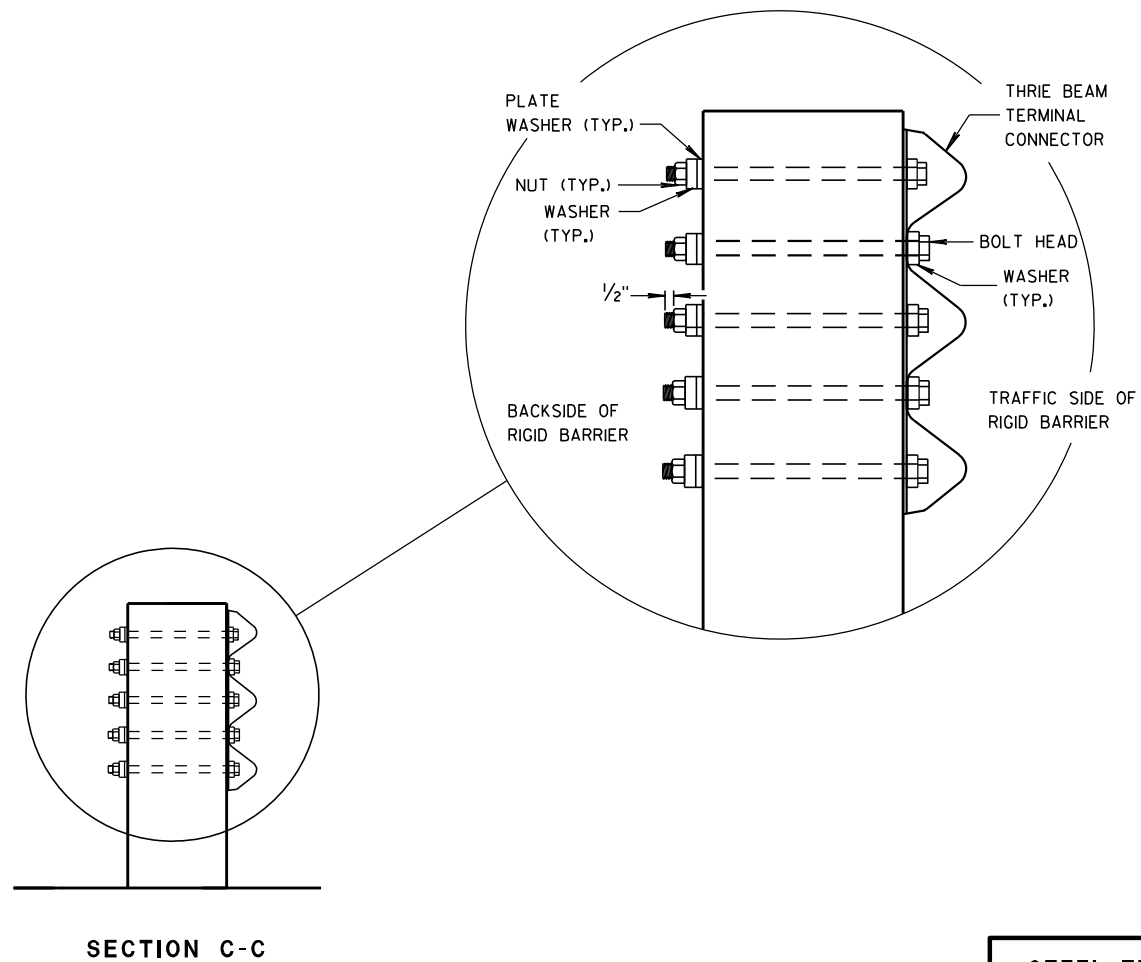
GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSITION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

- ① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- ③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".
- ④ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

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.



STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS

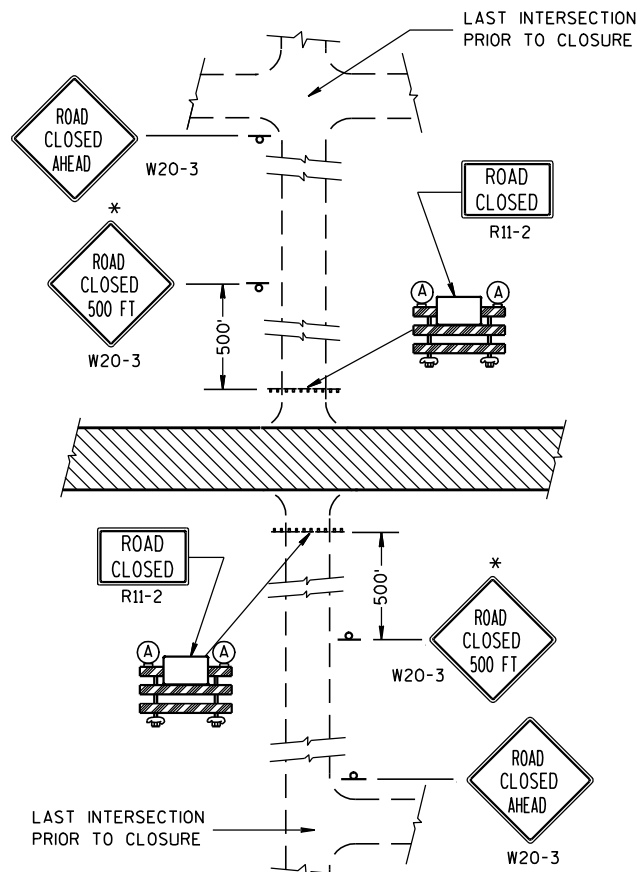
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

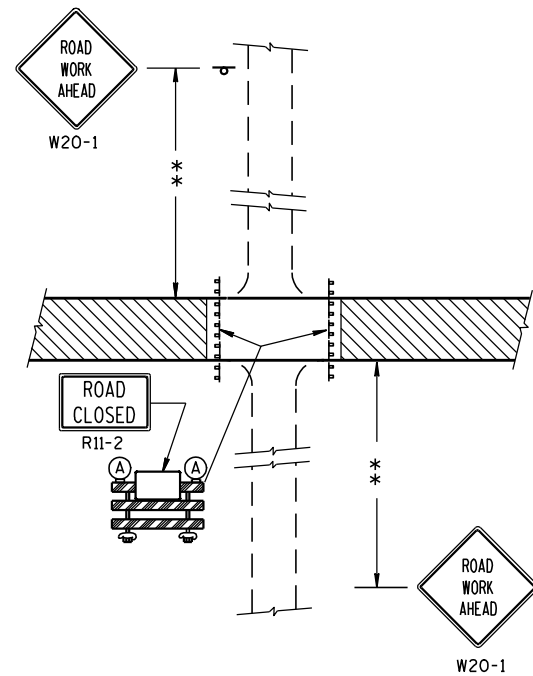
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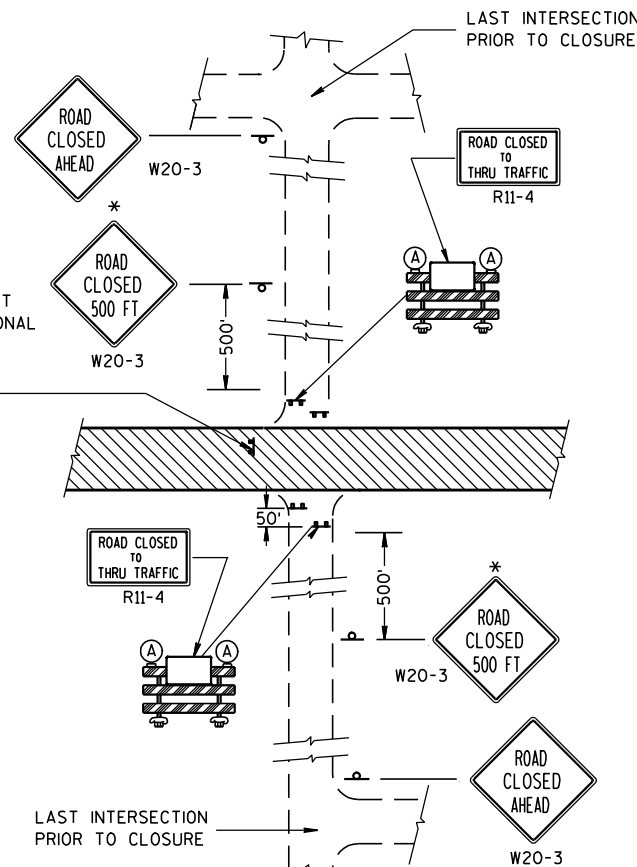
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



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

Ⓐ TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)

▨ WORK AREA

**BARRICADES AND SIGNS
FOR
SIDEROAD CLOSURES**

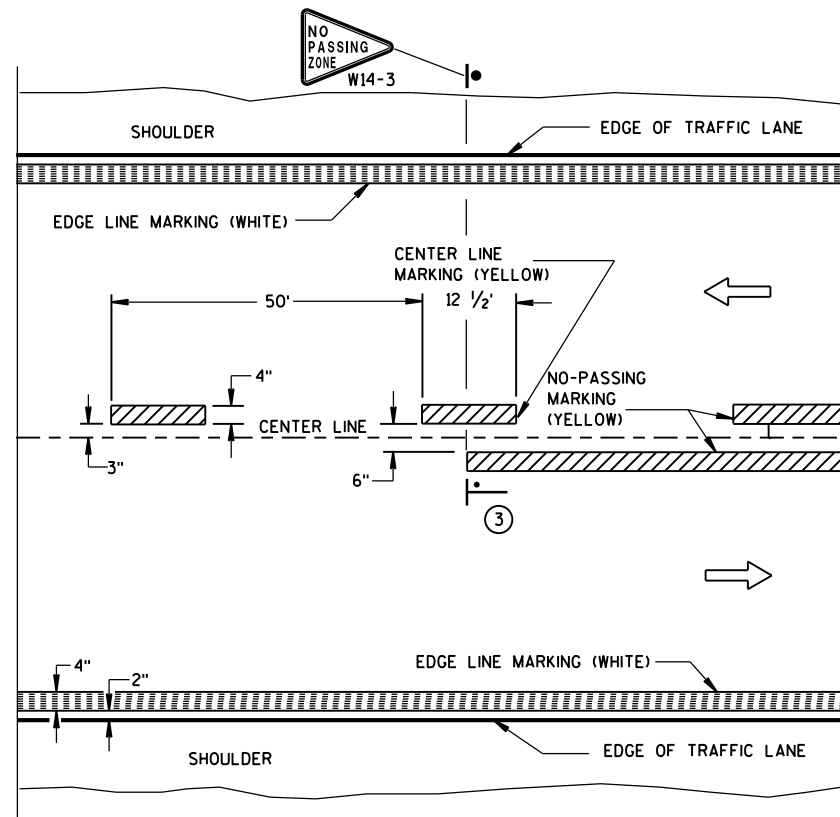
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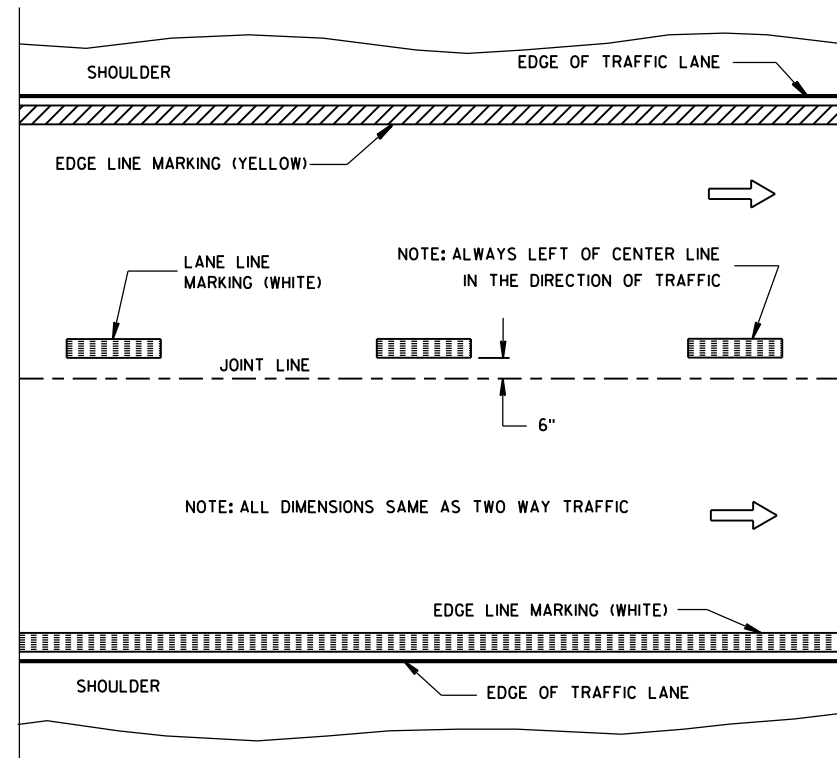
9-16-03
DATE

/S/ Thomas N. Notbohm
CHIEF SIGNS AND MARKING ENGINEER

FHWA

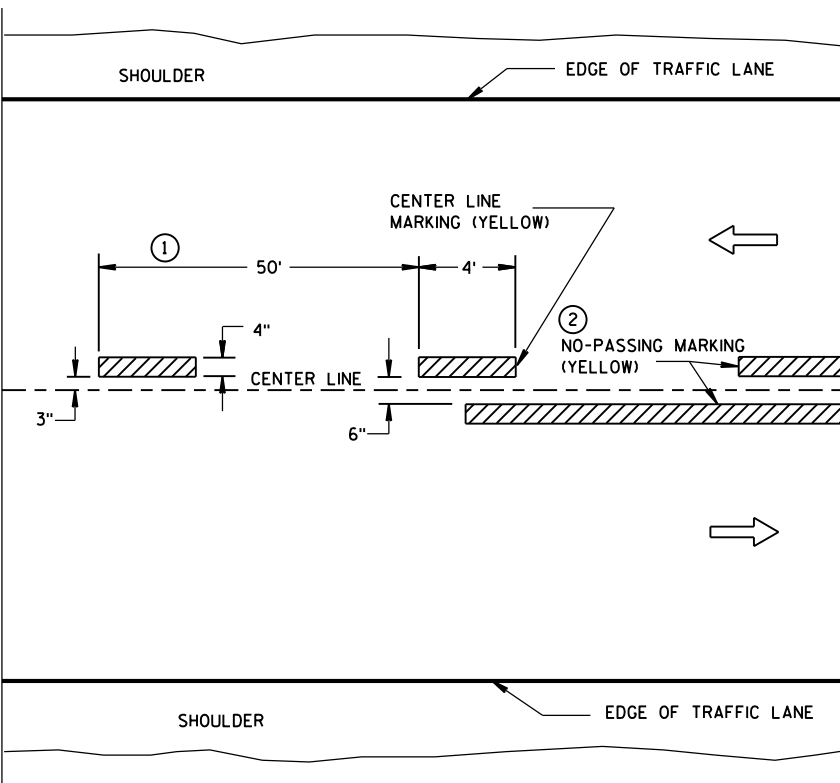


TWO WAY TRAFFIC

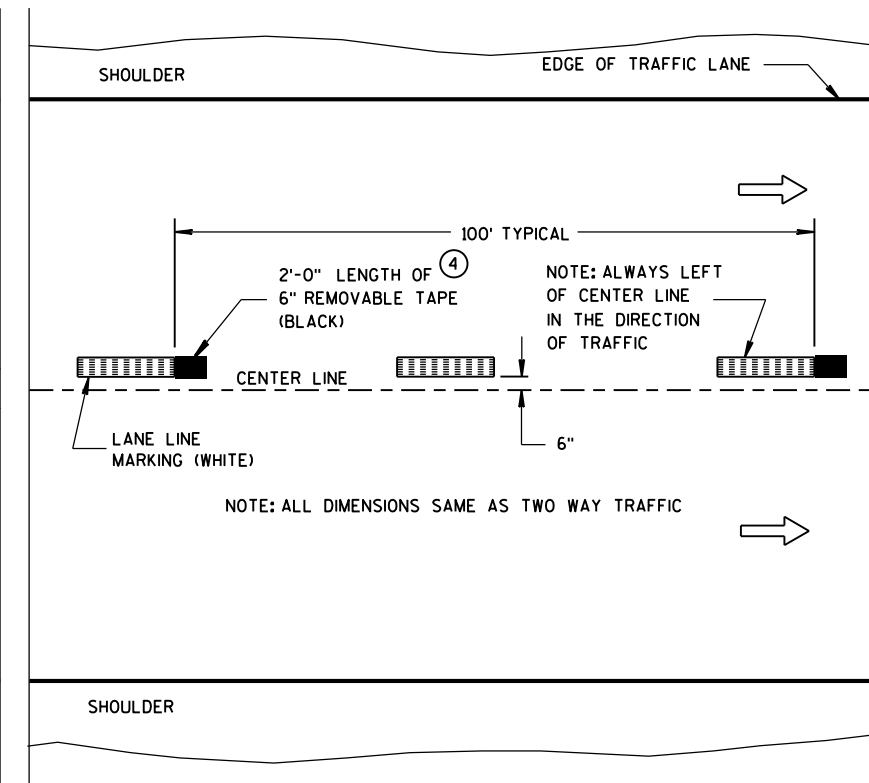


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

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

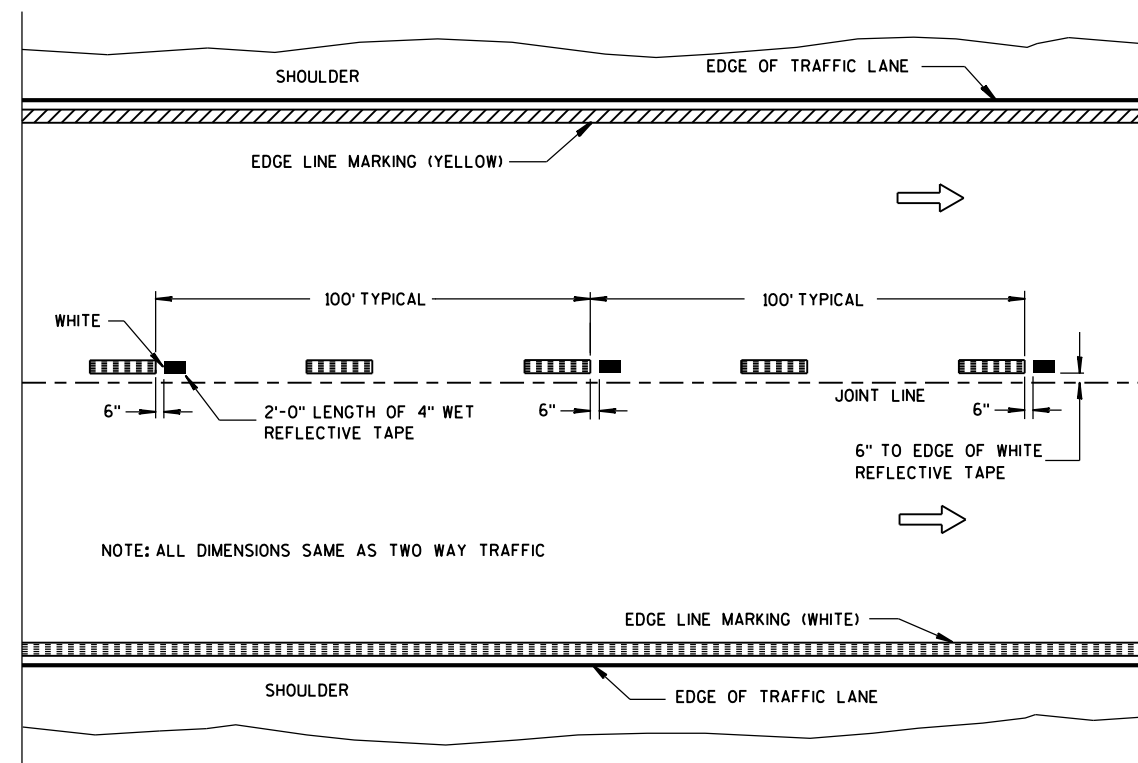
GENERAL NOTES

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
FHWA

/S/ Travis Feltes
STATE TRAFFIC ENGINEER




TWO-LANE ROADWAY


SYMBOLS



WORK AREA



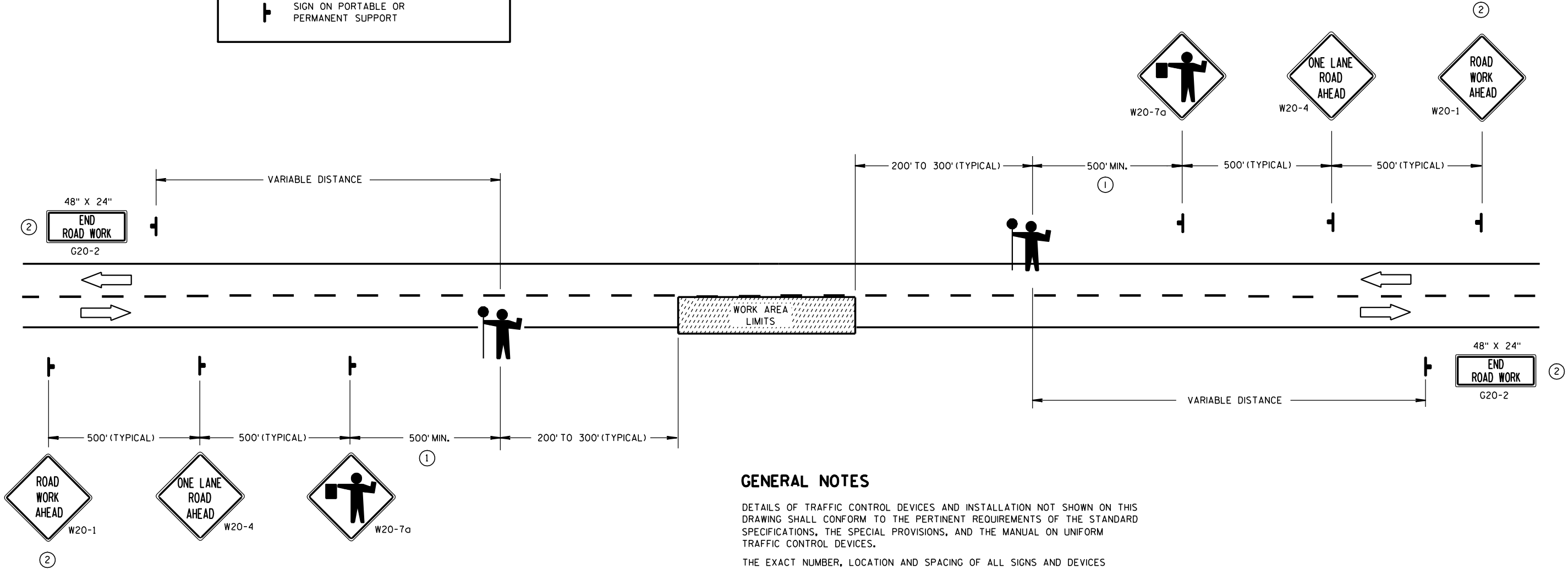
FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF



SIGN ON PORTABLE OR PERMANENT SUPPORT



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.



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.

- 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.

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

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9/5/06

DATE

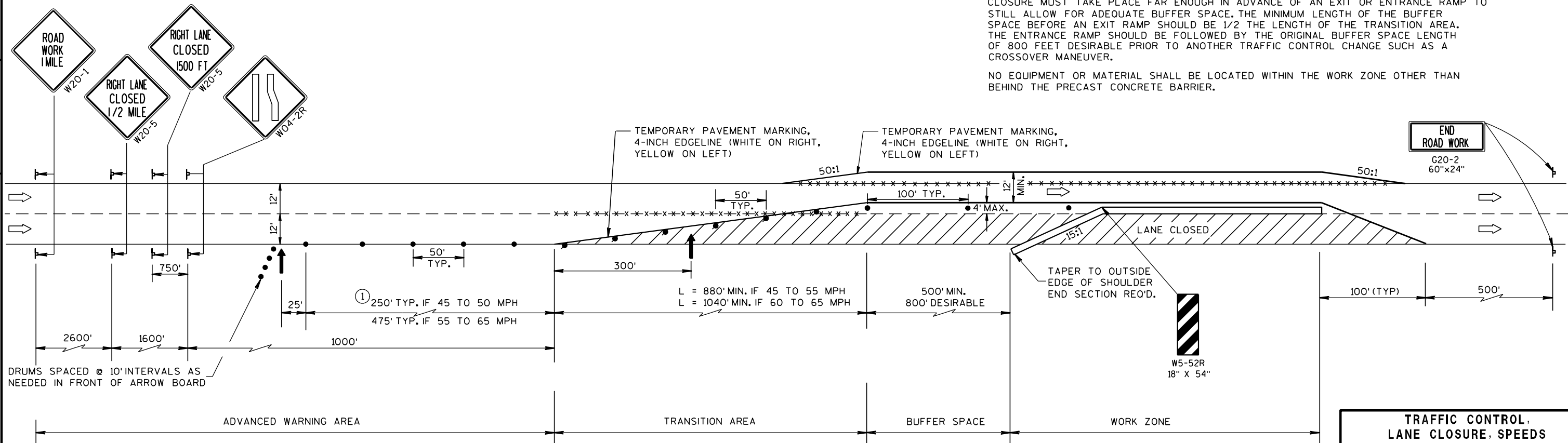
/S/ Thomas N. Notbohm

STATE TRAFFIC ENGINEER OF DESIGN

FHWA

LEGEND

- POST WITH ATTACHED SIGN
- DRUM WITH WARNING LIGHT (TYPE C)
- DRUM
- ARROW BOARD
- REMOVING PAVEMENT MARKING
- TEMPORARY PRECAST CONCRETE BARRIER
- DIRECTION OF TRAFFIC
- WORK ZONE



GENERAL NOTES :

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

① CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

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

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 7 CONTINUOUS DAYS AND NIGHTS.

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

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

NO EQUIPMENT OR MATERIAL SHALL BE LOCATED WITHIN THE WORK ZONE OTHER THAN BEHIND THE PRECAST CONCRETE BARRIER.

TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. WITH BARRIER	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 7-14-94 DATE	/S/ Chester J. Spang DIRECTOR, OFFICE OF TRAFFIC
FHWA	

LEGEND

- ⌚ POST WITH ATTACHED SIGN
- Ⓢ POST WITH ATTACHED SIGN IN DRUM
- ⚡ DRUM WITH WARNING LIGHT (TYPE C)
- DRUM
- ➡ ARROW BOARD
- ⌚ 8' TYPE III BARRICADE
- *-x-* REMOVING PAVEMENT MARKING
- ➡ DIRECTION OF TRAFFIC

GENERAL NOTES :

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

- ① CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

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

GENERAL NOTES CONTINUED:

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 7 CONTINUOUS DAYS AND NIGHTS.

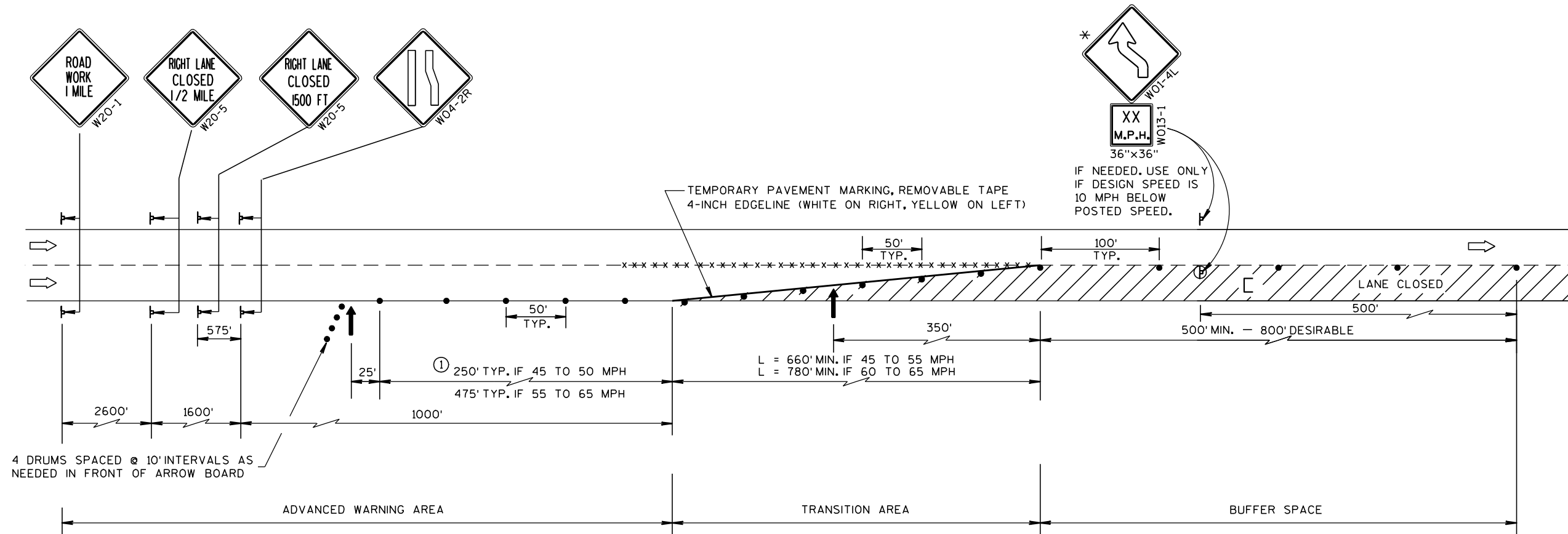
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

IF LANE CLOSURE IS MORE THAN 1 MILE, PLACE A TYPE III BARRICADE APPROXIMATELY EVERY 1/4 MILE ACROSS THE CLOSED LANE TO HELP ENFORCE THE DRUM LINE.

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

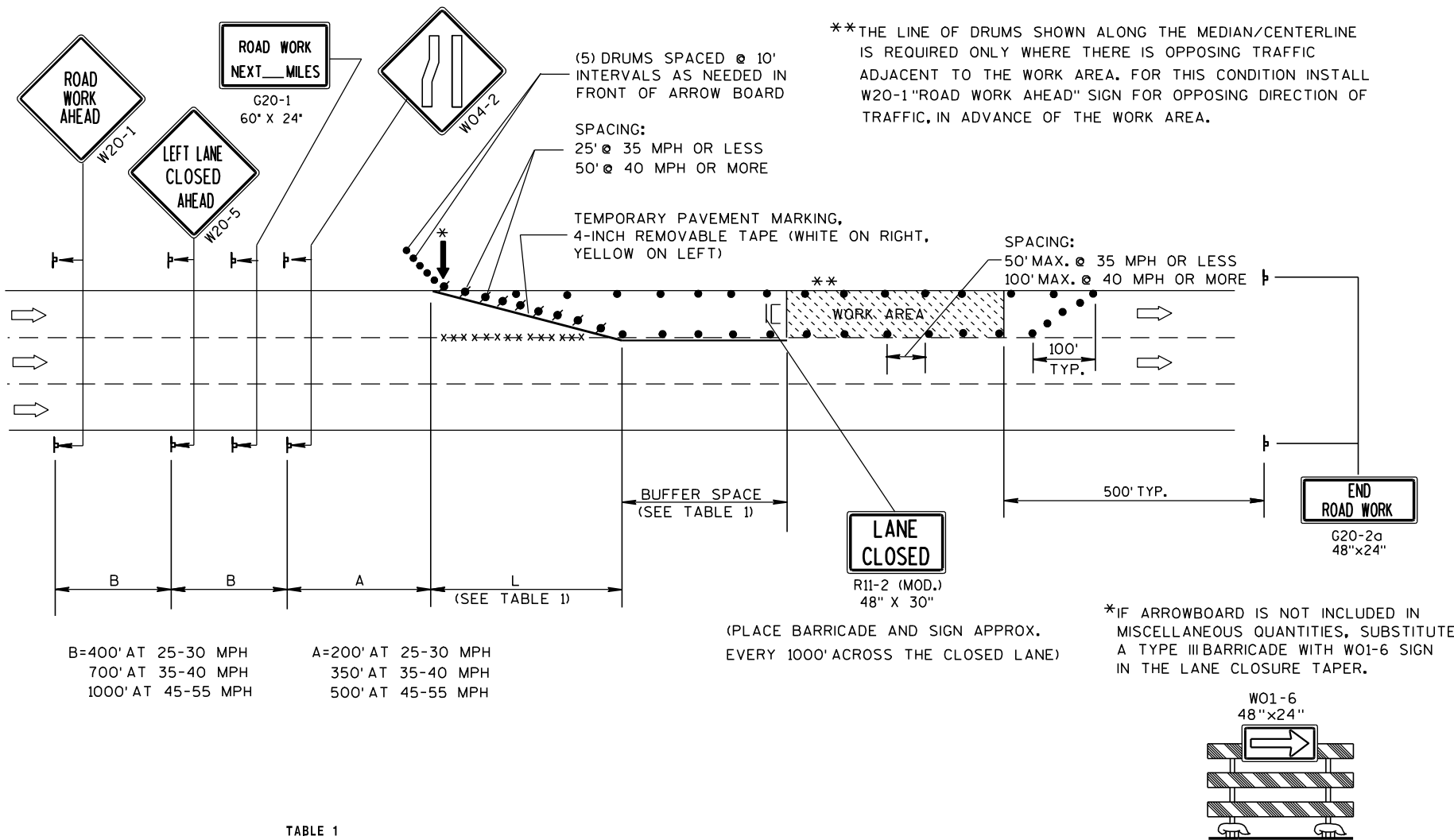
- * THE LEFT REVERSE CURVE SIGN (W01-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.



**TRAFFIC CONTROL,
LANE CLOSURE, SPEEDS
GREATER THAN 40 M.P.H.**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8-7-95
DATE /S/ Chester J. Spang
DIRECTOR, OFFICE OF TRAFFIC
FHWA



B=400' AT 25-30 MPH
700' AT 35-40 MPH
1000' AT 45-55 MPH

A=200' AT 25-30 MPH
350' AT 35-40 MPH
500' AT 45-55 MPH

TABLE 1
TAPER AND BUFFER SPACE
FOR 12' LANE WIDTH

S	L	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	540'	220'
50	600'	280'
55	660'	335'

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

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

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

LEGEND

- /● DRUM WITH/WITHOUT WARNING LIGHT, TYPE C (STEADY-BURN)
- ⌵ POST MOUNTED SIGN
- ↑ ARROW BOARD
- IC/C TYPE III BARRICADE (8' EQUIVALENT) AND WARNING LIGHTS, TYPE A (FLASHING) WITH/WITHOUT SIGN
- DIRECTION OF TRAFFIC FLOW
- xxxx REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)

GENERAL NOTES

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

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

THE SPACING BETWEEN 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.

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

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

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

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

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 7 OR MORE CONTINUOUS DAYS AND NIGHTS.

ON UNDIVIDED ROADWAYS, OMIT THE SIGNS SHOWN ON LEFT SIDE OF ROAD.

W20-1, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

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

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

PLACE THE ARROWBOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

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

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

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

TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 5/23/00 DATE	/S/ Chester J. Spang CHIEF SIGNS AND MARKING ENGINEER
FHWA	

SYMBOLS

- TRAFFIC CONTROL DRUM
- ┐ POST MOUNTED SIGN
- ➡ DIRECTION OF TRAFFIC FLOW
- ⓧ ARROW BOARD IN CAUTION MODE

GENERAL NOTES

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

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

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

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

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

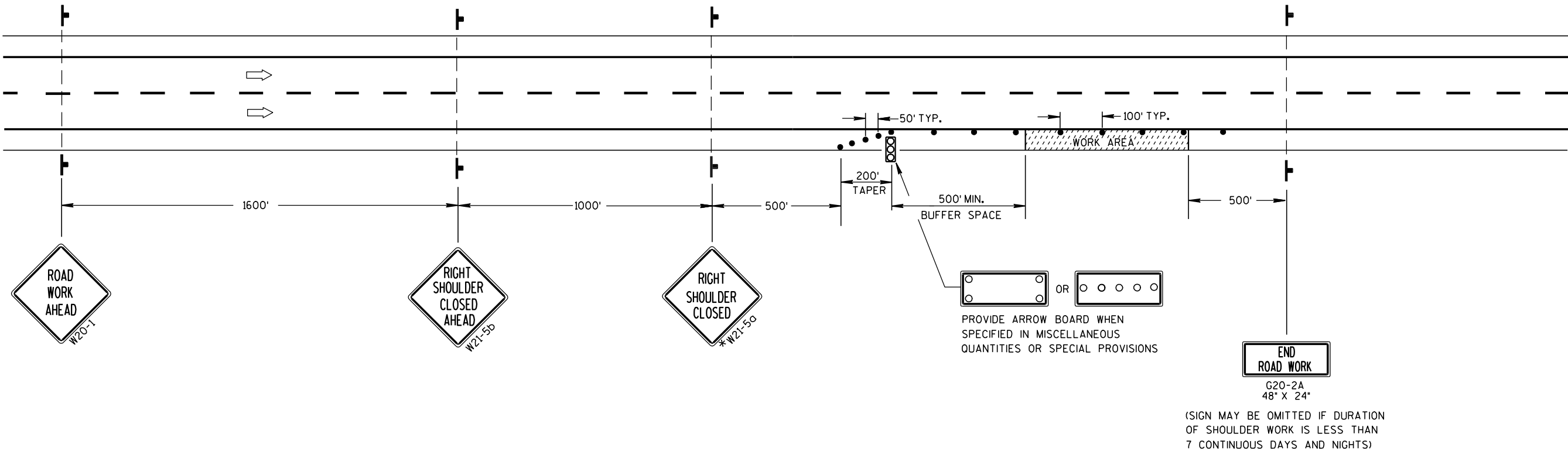
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

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

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



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/00 /S/ Chester J. Spang
DATE CHIEF SIGNS AND MARKING ENGINEER
FHWA

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.

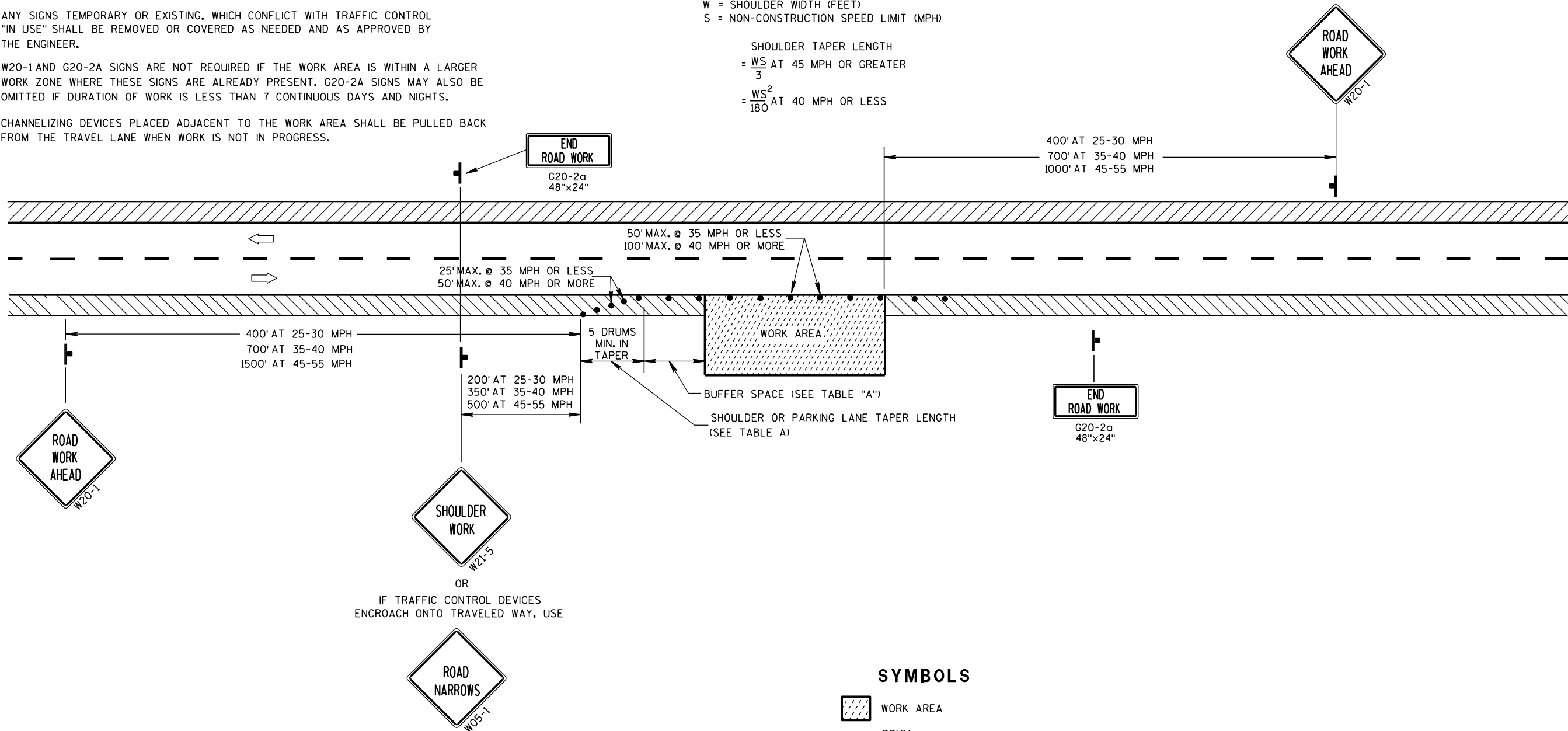
CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

TABLE A

S \ W		SHOULDER TAPER LENGTH (FEET)				BUFFER SPACE (FEET)
		4	6	8	10	
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. Spang CHIEF SIGNS AND MARKING ENGINEER
FHWA	

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

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.

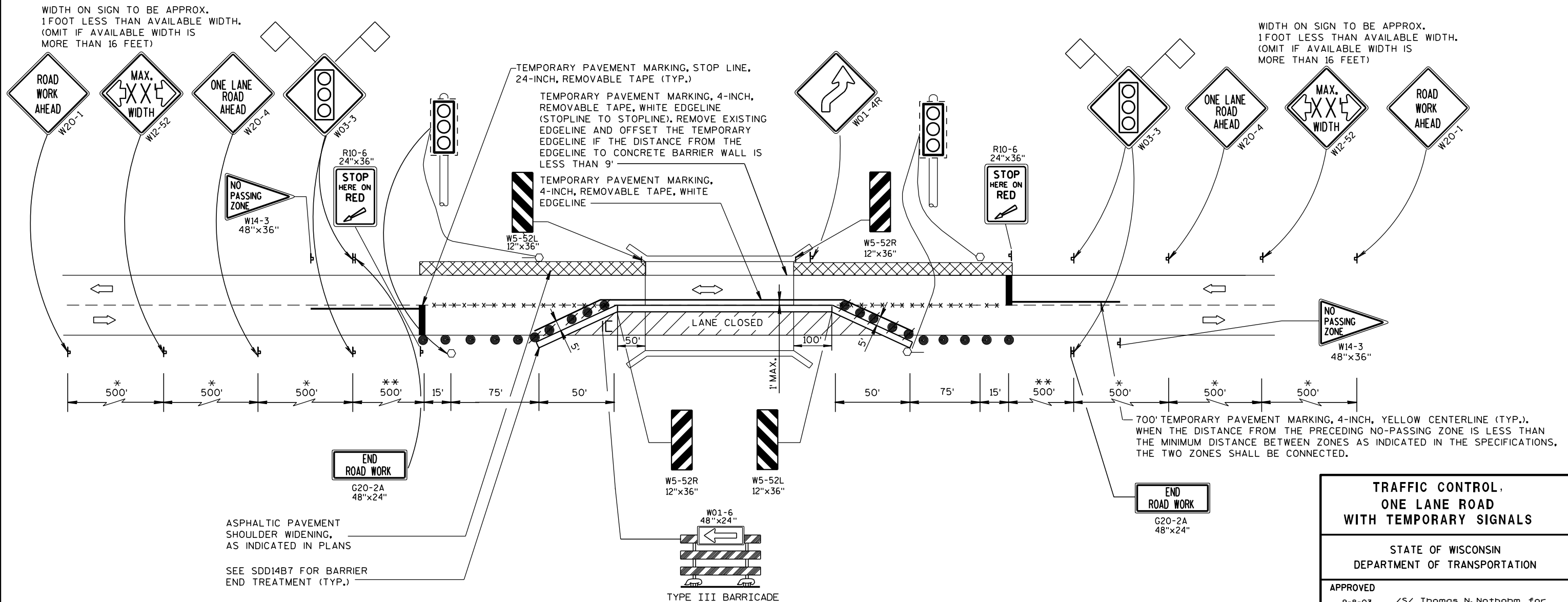
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

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.





Wisconsin Department of Transportation

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