

RHI
PROJECT ID: 1176-23-62
WITH: 1176-23-63, 1176-23-64

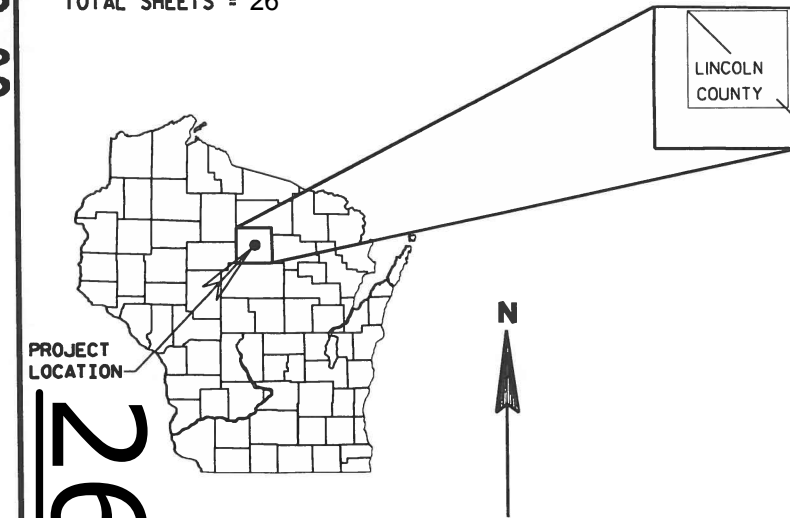
COUNTY: LINCOLN

APRIL 2017

ORDER OF SHEETS

Section No. 1	Title
Section No. 2	Typical Sections and Details
Section No. 3	Estimate of Quantities
Section No. 3	Miscellaneous Quantities
Section No. 4	Right of Way Plot
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	Gross Sections

TOTAL SHEETS = 26



DESIGN DESIGNATION

	B-35-70/71	B-35-120/133	B-35-123/124
A.D.T. (2017)	= 5,100	12,600	13,900
A.D.T. (2037)	= 6,000	15,600	16,900
D.H.V.	= 510	1,260	1,390
D.	= 60/40	60/40	60/40
T.	= 15.8%	15.8%	15.8%
DESIGN SPEED	= 60 MPH	70 MPH	70 MPH
ESALS	= N/A	N/A	N/A

CONVENTIONAL SYMBOLS
PLAN

CORPORATE LIMITS	
PROPERTY LINE	
LOT LINE	
LIMITED HIGHWAY EASEMENT	
EXISTING RIGHT OF WAY	
PROPOSED OR NEW R/W LINE	
SLOPE INTERCEPT	
REFERENCE LINE	
EXISTING CULVERT	
PROPOSED CULVERT (Box or Pipe)	
COMBUSTIBLE FLUIDS	
HIGH VOLTAGE	
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	
OVERHEAD	
ELECTRIC	
FIBER OPTIC	
GAS	
SANITARY SEWER	
STORM SEWER	
TELEPHONE	
WATER	
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	

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UTILITY CONTACTS

- * ATC MANAGEMENT, INC. (ELECTRIC)
ATTN: TONY MARCINIAK
W234 N2000 RIDGEVIEW PARKWAY COURT
WAUKESHA, WI 53188-1000
(262) 506-6814
tmarciniak@atcinc.com
- * WISCONSIN DOT RWIS PROGRAM (COMMUNICATIONS TOWER)
ATTN: MIKE ADAMS
RM 501
P.O. BOX 7986
MADISON, WI 53707-7986
(608) 266-5004
Michael.Adams@dot.wi.gov

* MEMBER OF DIGGERS HOTLINE



Dial  or (800)242-8511

www.DiggersHotline.com

GENERAL NOTES

NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS INDICATED FOR REMOVAL BY THE ENGINEER.

THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

JON SIMONSEN
107 SUTLIFF
RHINELANDER, WI 54501
715-365-8916
jonathan.simonsen@wisconsin.gov



PROPOSED WORK: ADD POLYMER OVERLAY TO BRIDGES B-35-70 AND B-35-71.
 TRAFFIC CONTROL: FOLLOW SDD, "TRAFFIC CONTROL, LANE CLOSURE" AND TRAFFIC CONTROL PLANS.

PROJECT NO: 1176-23-62

HWY: USH 51

COUNTY: LINCOLN

SITE OVERVIEW (B-35-70/71)

SHEET

E

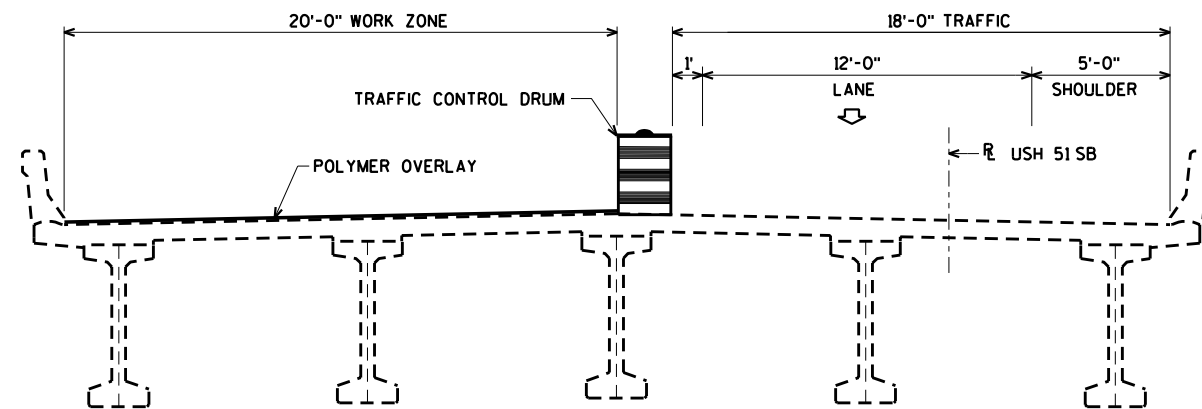
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PLOT BY : AYRES-EC

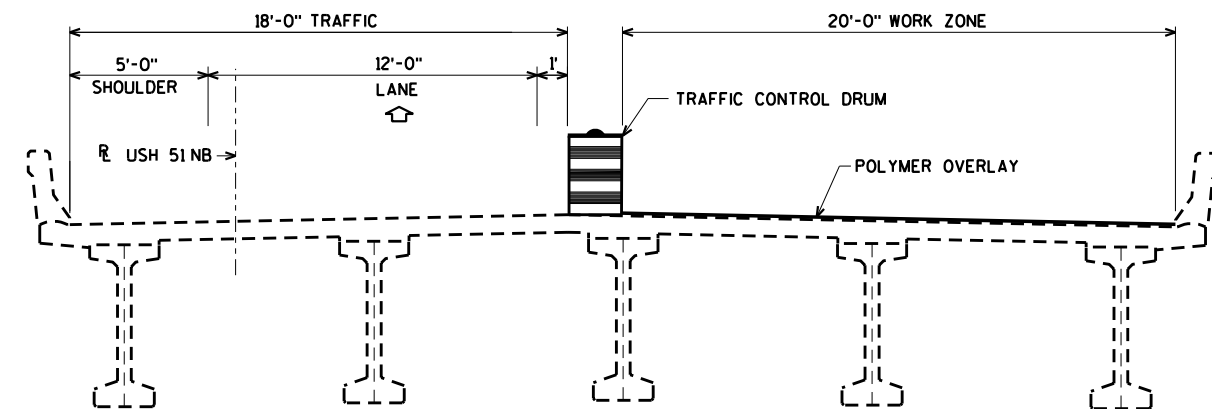
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PLOT SCALE : 1:200

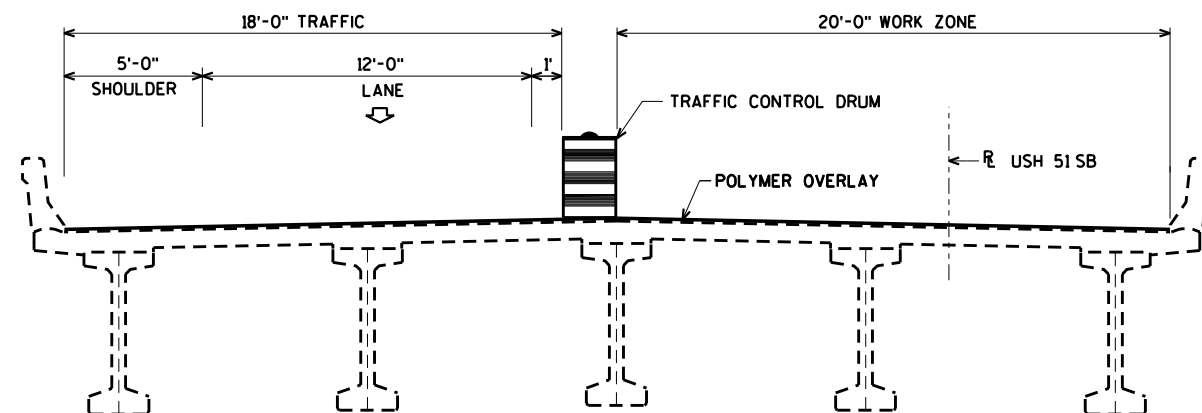
WISDOT/CADDs SHEET 42



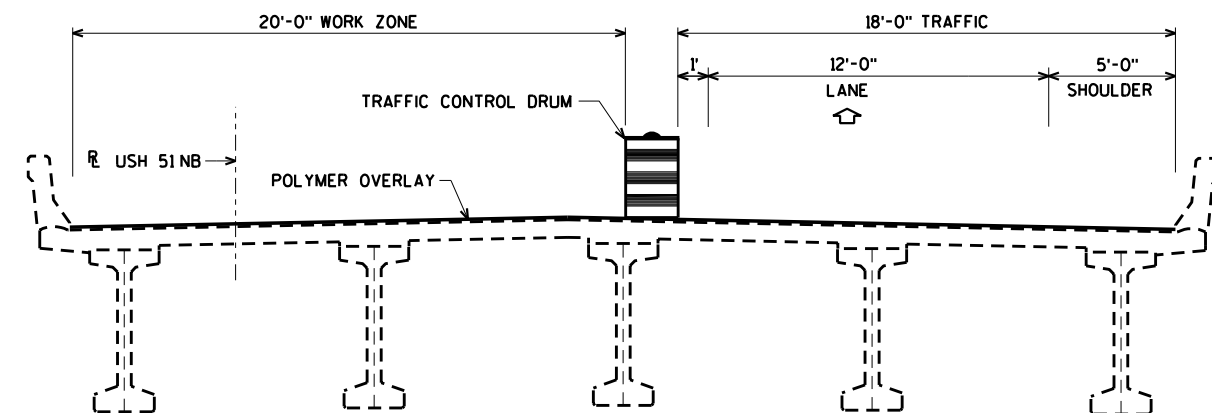
CONSTRUCTION STAGING SECTION 1: B-35-71
(LOOKING NORTH)



CONSTRUCTION STAGING SECTION 1: B-35-70
(LOOKING NORTH)

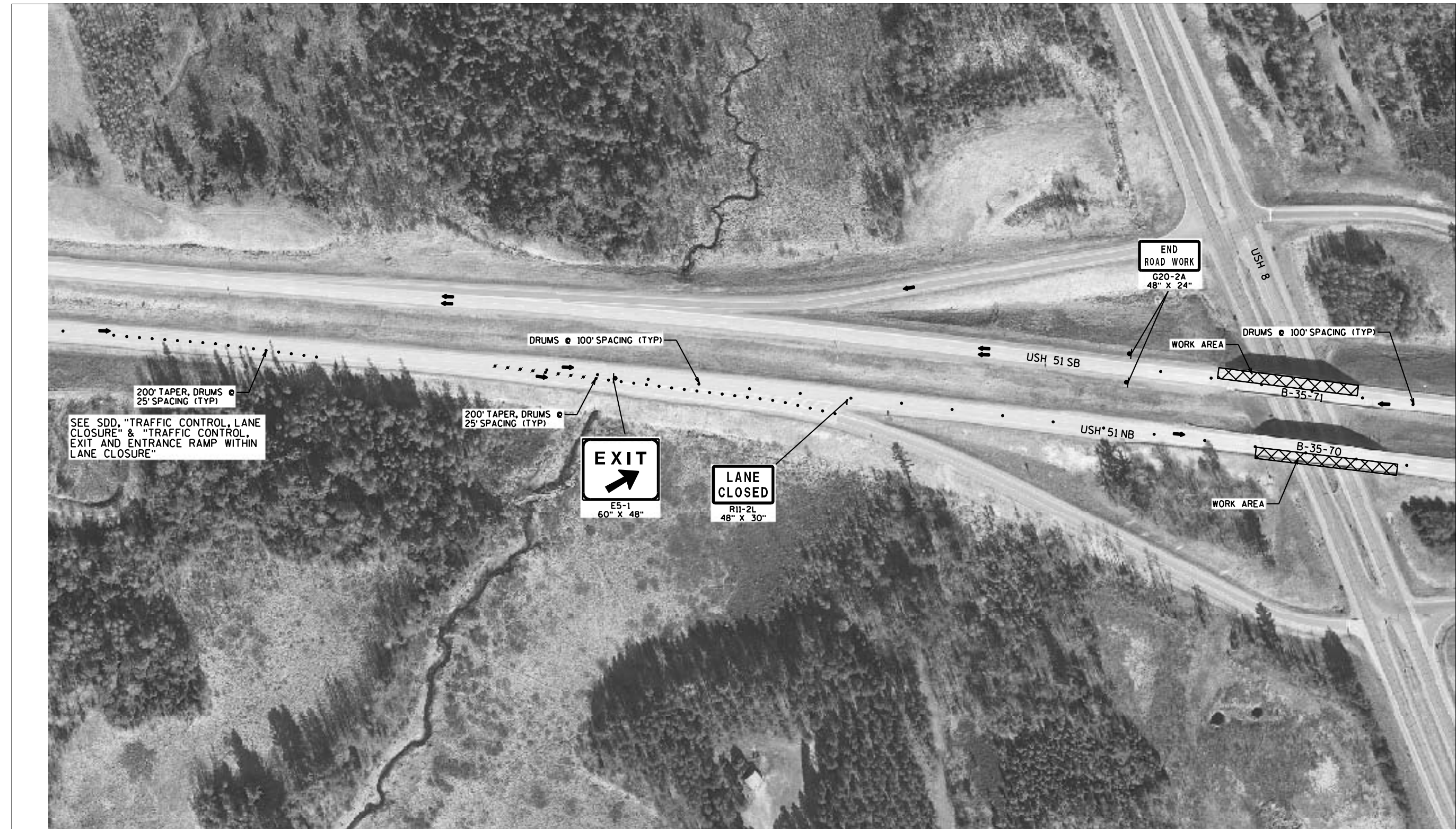


CONSTRUCTION STAGING SECTION 2: B-35-71
(LOOKING NORTH)



CONSTRUCTION STAGING SECTION 2: B-35-70
(LOOKING NORTH)

NOTE: MOVE TRAFFIC CONTROL DRUMS ONTO POLYMER OVERLAY AFTER SPECIFIED CURE TIME.



PROPOSED WORK: ADD POLYMER OVERLAY TO BRIDGES B-35-70 AND B-35-71 (OUTSIDE LANES).
 TRAFFIC CONTROL: CLOSE OUTSIDE LANE OF NB & SB USH 51.

LEGEND

→ TRAVEL LANE DIRECTION
 ●/● TRAFFIC CONTROL DRUMS
 WITH/WITHOUT TYPE C STEADY BURN LIGHT

▲ TRAFFIC CONTROL SIGN
 ▨ WORK AREA

PROJECT NO: 1176-23-62

HWY: USH 51

COUNTY: LINCOLN

TRAFFIC CONTROL - OUTSIDE LANE CLOSURE

SHEET

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FILE NAME : V:\Structures-EC\42-0967.00 - Lincoln County, USH 51 Rehab\42-0967.01 B-35-70,71,120,123,124,133\RDWY\026001.s1.dgn PLOT DATE : 11/29/2016

PLOT BY : AYRES-EC

PLOT NAME :

PLOT SCALE : 1:200

WISDOT/CADDs SHEET 42

**LEGEND**

- TRAVEL LANE DIRECTION
●/● TRAFFIC CONTROL DRUMS
WITH/WITHOUT TYPE C STEADY BURN LIGHT

- ▬ TRAFFIC CONTROL SIGN
▬ WORK AREA

PROJECT NO: 1176-23-62

HWY: USH 51

COUNTY: LINCOLN

TRAFFIC CONTROL - OUTSIDE LANE CLOSURE

SHEET

E

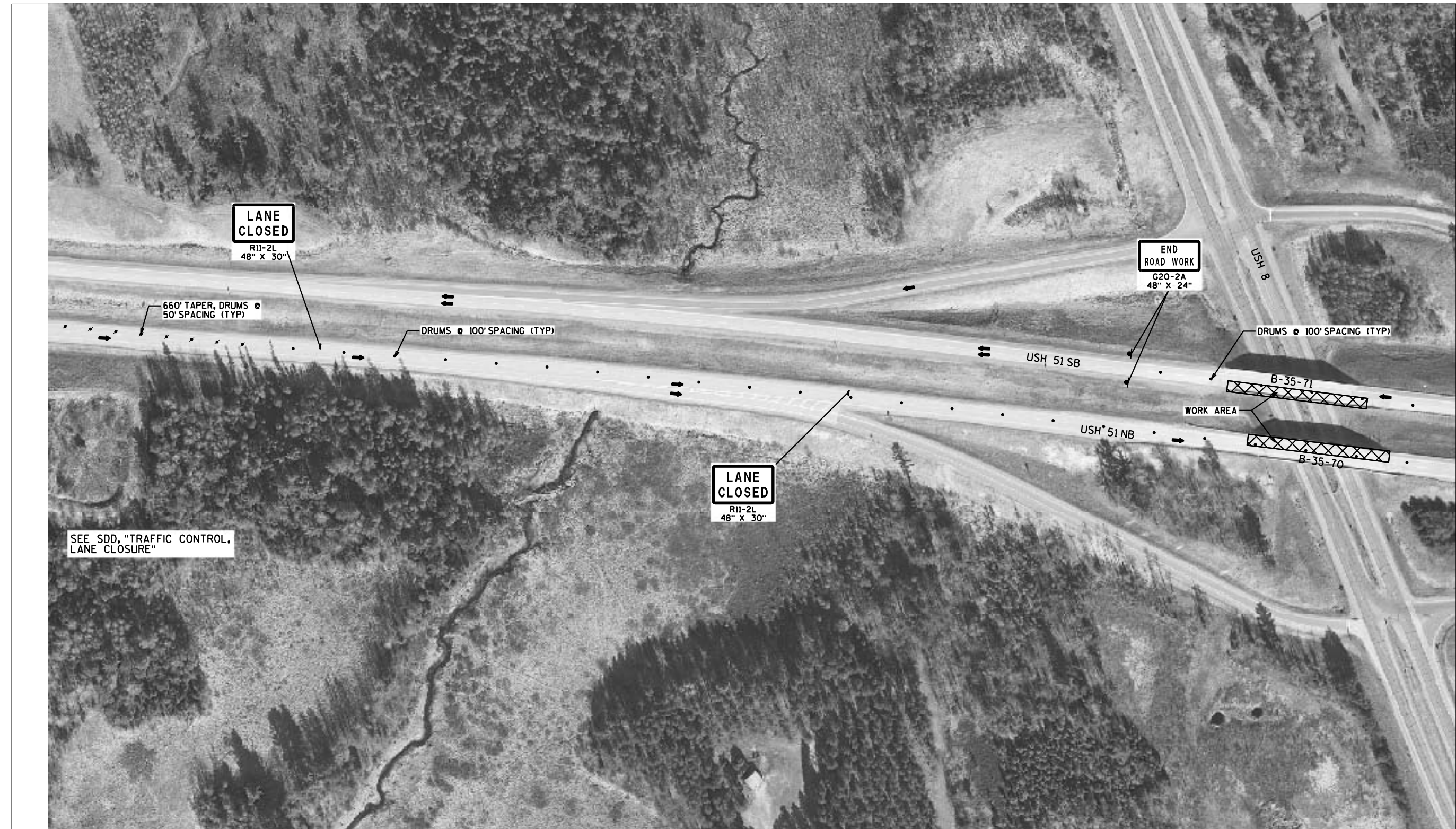
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PLOT BY : AYRES-EC

PLOT NAME :

PLOT SCALE : 1:200

WISDOT/CADDs SHEET 42



PROPOSED WORK: ADD POLYMER OVERLAY TO BRIDGES B-35-70 AND B-35-71 (INSIDE LANES).
 TRAFFIC CONTROL: CLOSE INSIDE LANE OF NB & SB USH 51.

LEGEND

→ TRAVEL LANE DIRECTION
 ●/● TRAFFIC CONTROL DRUMS
 WITH/WITHOUT TYPE C STEADY BURN LIGHT

▬ TRAFFIC CONTROL SIGN
 ▨ WORK AREA

PROJECT NO: 1176-23-62

HWY: USH 51

COUNTY: LINCOLN

TRAFFIC CONTROL - INSIDE LANE CLOSURE

SHEET

E

FILE NAME : V:\Structures-EC\42-0967.00 - Lincoln County, USH 51 Rehabs\42-0967.01 B-35-70,71,120,123,124,133\RDWY\026001_s2.dgn PLOT DATE : 11/29/2016

PLOT BY : AYRES-EC


PLOT NAME :

PLOT SCALE : 1:200

WISDOT/CADDs SHEET 42

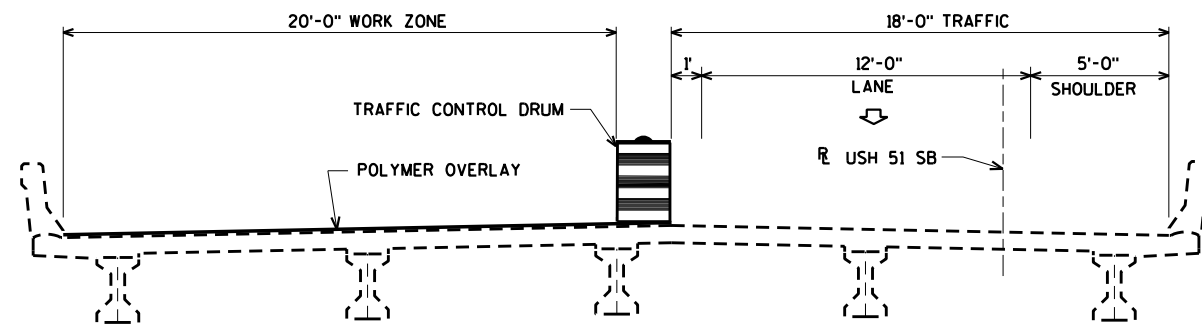


 **TRAFFIC CONTROL SIGN**

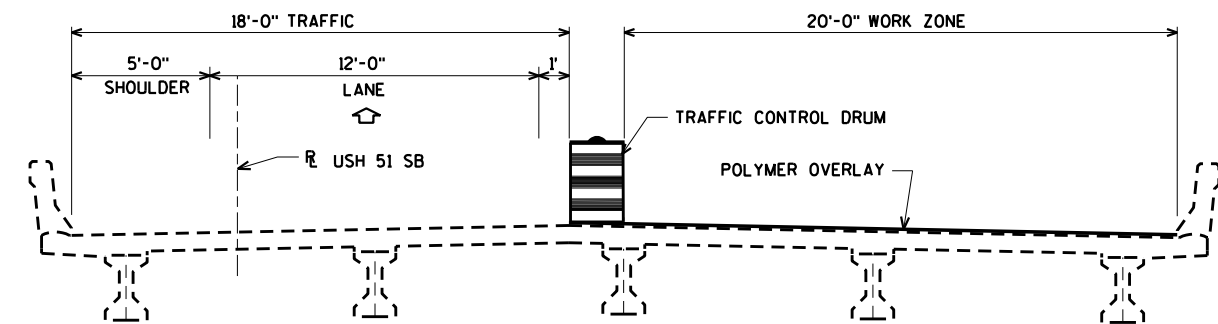
 **WORK AREA**



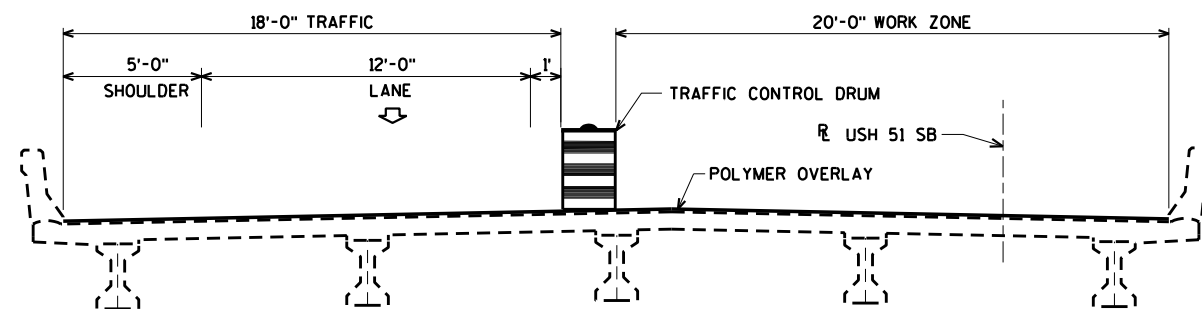
PROPOSED WORK: ADD POLYMER OVERLAY TO BRIDGES B-35-120 AND B-35-133.
TRAFFIC CONTROL: FOLLOW SDD, "TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION"



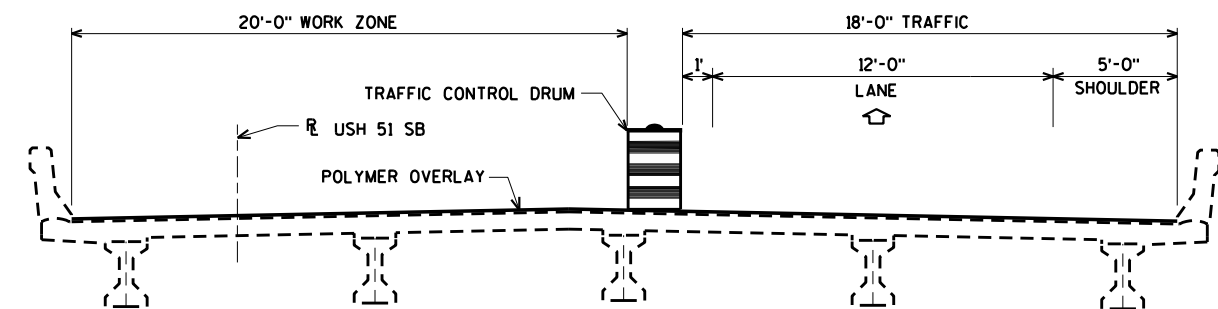
CONSTRUCTION STAGING SECTION 1: B-35-133
(LOOKING NORTH)



CONSTRUCTION STAGING SECTION 1: B-35-120
(LOOKING NORTH)



CONSTRUCTION STAGING SECTION 2: B-35-133
(LOOKING NORTH)



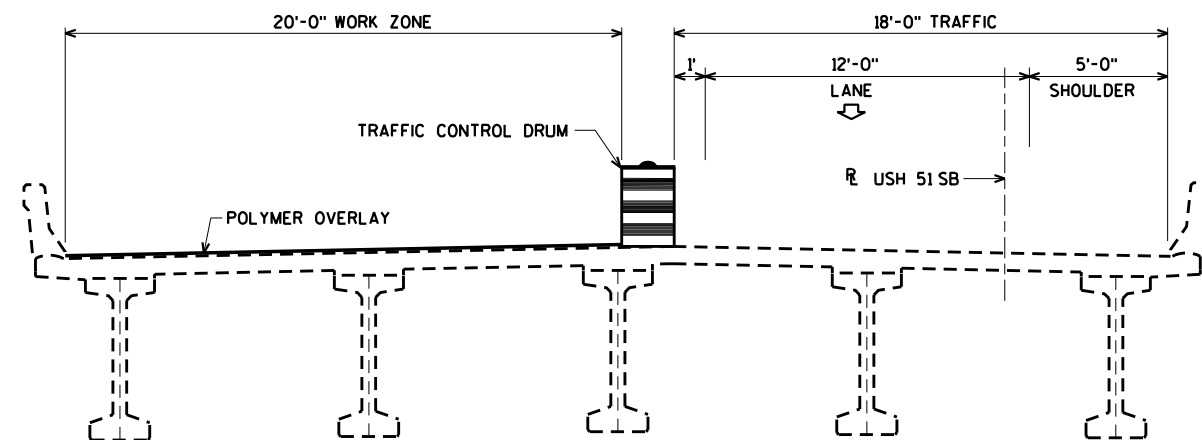
CONSTRUCTION STAGING SECTION 2: B-35-120
(LOOKING NORTH)

NOTE: MOVE TRAFFIC CONTROL DRUMS ONTO POLYMER OVERLAY AFTER SPECIFIED CURE TIME.

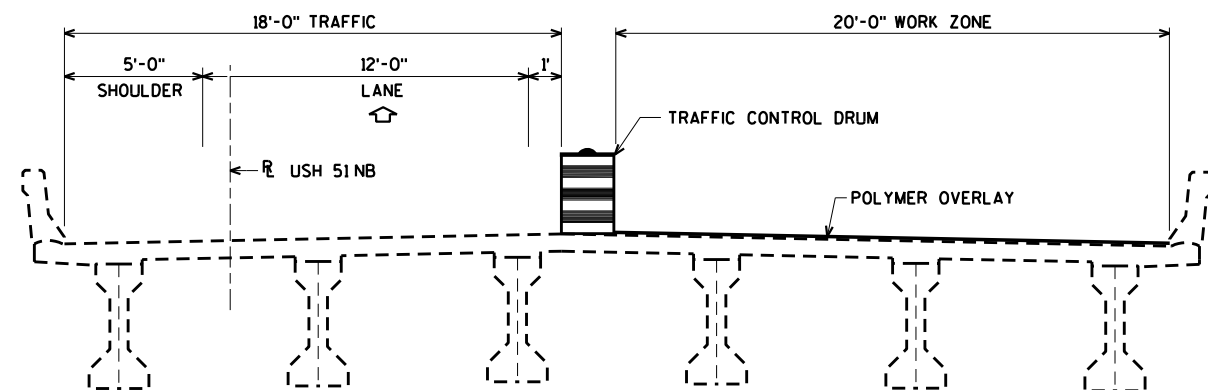


PROPOSED WORK: ADD POLYMER OVERLAY TO BRIDGES B-35-123 AND B-35-124.
TRAFFIC CONTROL: FOLLOW SDD, "TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION"

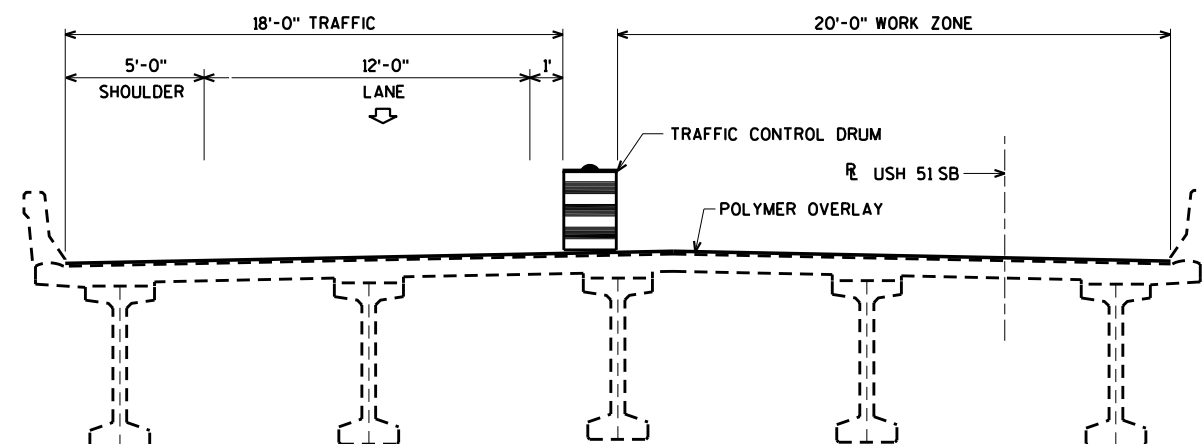
PROJECT NO: 1176-23-62	HWY: USH 51	COUNTY: LINCOLN	SITE OVERVIEW (B-35-123/124)	SHEET	E
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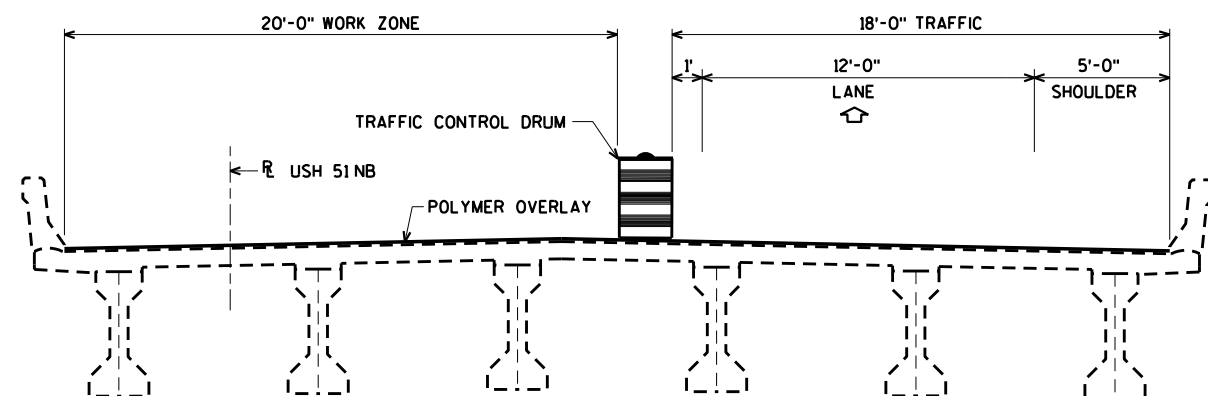
CONSTRUCTION STAGING SECTION 1: B-35-124
(LOOKING NORTH)



CONSTRUCTION STAGING SECTION 1: B-35-123
(LOOKING NORTH)



CONSTRUCTION STAGING SECTION 2: B-35-124
(LOOKING NORTH)



CONSTRUCTION STAGING SECTION 2: B-35-123
(LOOKING NORTH)

NOTE: MOVE TRAFFIC CONTROL DRUMS ONTO POLYMER OVERLAY AFTER SPECIFIED CURE TIME.

Estimate Of Quantities By Plan Sets

1176-23-62					
Line	Item	Item Description	Unit	Total	Qty
0150	502.3210	Pigmented Surface Sealer	SY	681.000	681.000
0160	509.0301	Preparation Decks Type 1	SY	92.000	92.000
0170	509.0302	Preparation Decks Type 2	SY	37.000	37.000
0220	509.5100.S	Polymer Overlay	SY	3,363.000	3,363.000
0230	509.9050.S	Cleaning Parapets	LF	1,773.000	1,773.000
0290	619.1000	Mobilization	EACH	0.250	0.250
0410	642.5001	Field Office Type B 01. 1176-23-62	EACH	1.000	1.000
0440	643.0100	Traffic Control (project) 01. 1176-23-62	EACH	1.000	1.000
0470	643.0300	Traffic Control Drums	DAY	7,975.000	7,975.000
0480	643.0420	Traffic Control Barricades Type III	DAY	200.000	200.000
0490	643.0705	Traffic Control Warning Lights Type A	DAY	400.000	400.000
0500	643.0715	Traffic Control Warning Lights Type C	DAY	2,325.000	2,325.000
0510	643.0800	Traffic Control Arrow Boards	DAY	300.000	300.000
0520	643.0900	Traffic Control Signs	DAY	2,425.000	2,425.000
0630	SPV.0035	Special 04. Concrete Masonry Deck Patching	CY	10.000	10.000
0650	SPV.0090	Special 02. Sawing Pavement Deck Preparation Areas	LF	1,040.000	1,040.000

TRAFFIC CONTROL	
PROJECT	643.0100 EACH
1176-23-62	1

TRAFFIC CONTROL SIGNS, LIGHTS, AND BARRICADES												
STAGE	643.0300		643.0420		643.0705		643.0715		643.0800		643.0900	
	DRUMS		BARRICADES		WARNING LIGHTS		LIGHTS		ARROW BOARDS		SIGNS	
	EACH	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAYS
B-35-70 (STAGE 1)	104	1040	2	20	4	40	23	230	2	20	17	170
B-35-70 (STAGE 2)	55	550	2	20	4	40	14	140	2	20	16	160
B-35-71 (STAGE 1)	100	1000	2	20	4	40	23	230	2	20	17	170
B-35-71 (STAGE 2)	59	590	2	20	4	40	14	140	2	20	16	160
B-35-120 (STAGE 1)	40	400	1	10	2	20	14	140	2	20	16	160
B-35-120 (STAGE 2)	40	400	1	10	2	20	14	140	2	20	16	160
B-35-133 (STAGE 1)	40	400	1	10	2	20	14	140	2	20	16	160
B-35-133 (STAGE 2)	40	400	1	10	2	20	14	140	2	20	16	160
B-35-123 (STAGE 1)	40	400	1	10	2	20	14	140	2	20	16	160
B-35-123 (STAGE 2)	40	400	1	10	2	20	14	140	2	20	16	160
B-35-124 (STAGE 1)	40	400	1	10	2	20	14	140	2	20	16	160
B-35-124 (STAGE 2)	40	400	1	10	2	20	14	140	2	20	16	160
UNDISTRIBUTED		1595		40		80		465		60		485
PROJECT TOTALS		7975		200		400		2325		300		2425

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

Standard Detail Drawing List

15D12-06A	TRAFFIC CONTROL, LANE CLOSURE
15D12-06B	TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
15D15-02	TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE

LEGEND

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

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

"W0" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

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

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

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

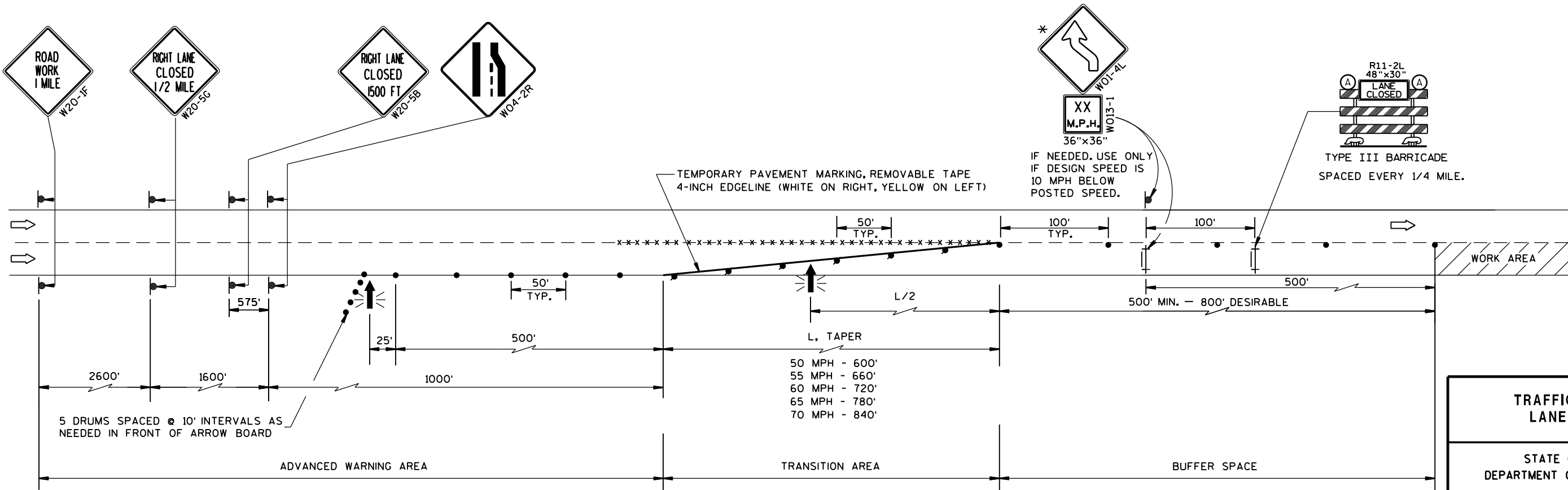
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

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

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

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

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



TRAFFIC CONTROL, LANE CLOSURE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March 2016 DATE	/S/ Peter Amakobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA	

LEGEND

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

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

"W0" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

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

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

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

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

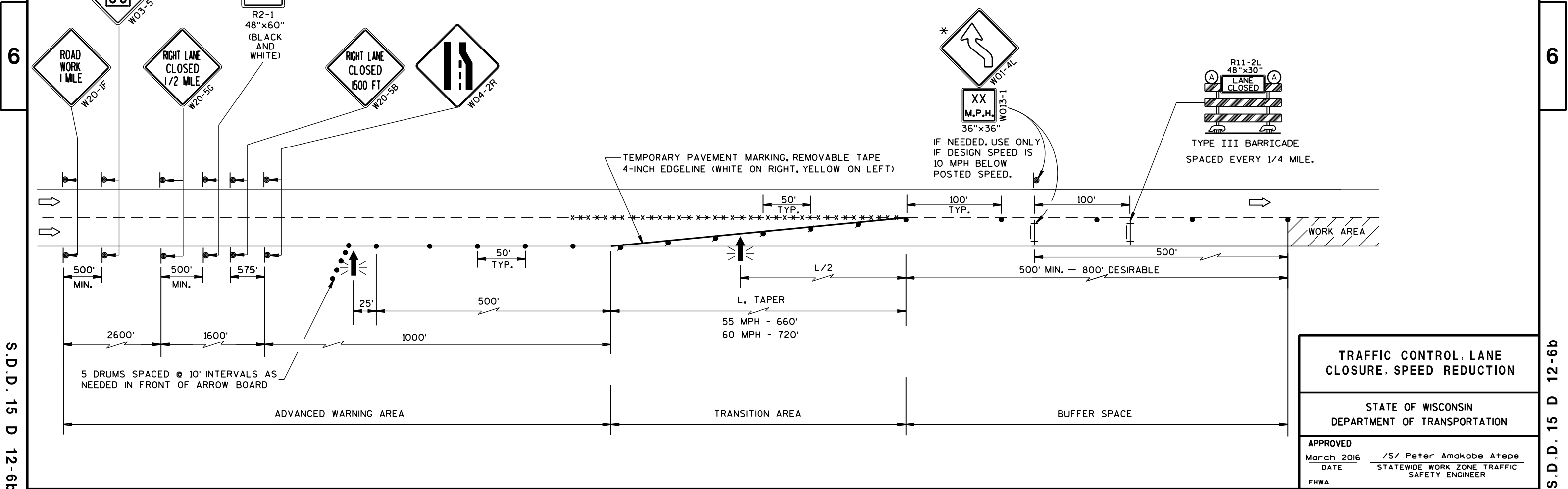
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

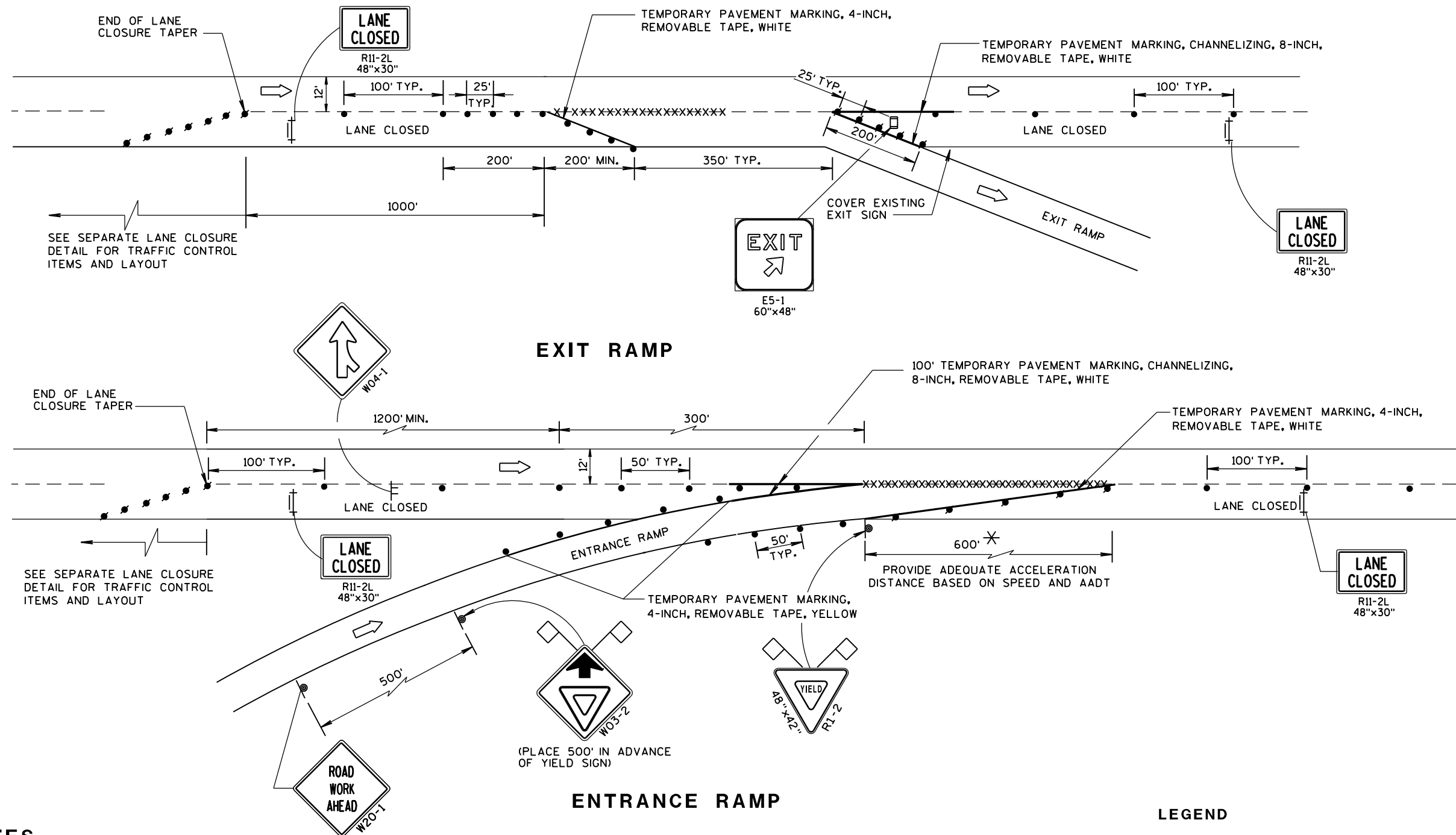
ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN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

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

** A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. THERE SHOULD BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 2 OR 3 MILES. INCLUDE A RESUME SPEED LIMIT SIGN 200 FEET MINIMUM (500 FEET DESIREABLE) BEYOND THE "END OF ROADWORK" SIGN.



TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March 2016 DATE	/S/ Peter Amakobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA	



GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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 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.

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

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.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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.

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

* LENGTH OF OPENING MAY BE REDUCED TO 150 FEET DURING STAGING OF WORK IN IMMEDIATE AREA OF RAMP TAPER.

LEGEND

- ⊙ SIGN ON PERMANENT SUPPORT
- ⊥ SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- XXXXX REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- ⊥ TYPE III BARRICADE WITH ATTACHED SIGN
- ⚑ FLAGS, 16" x 16" MIN., (ORANGE)
- ➡ DIRECTION OF TRAFFIC

TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED Sept. 2015 DATE	/S/ Peter Amokobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA	

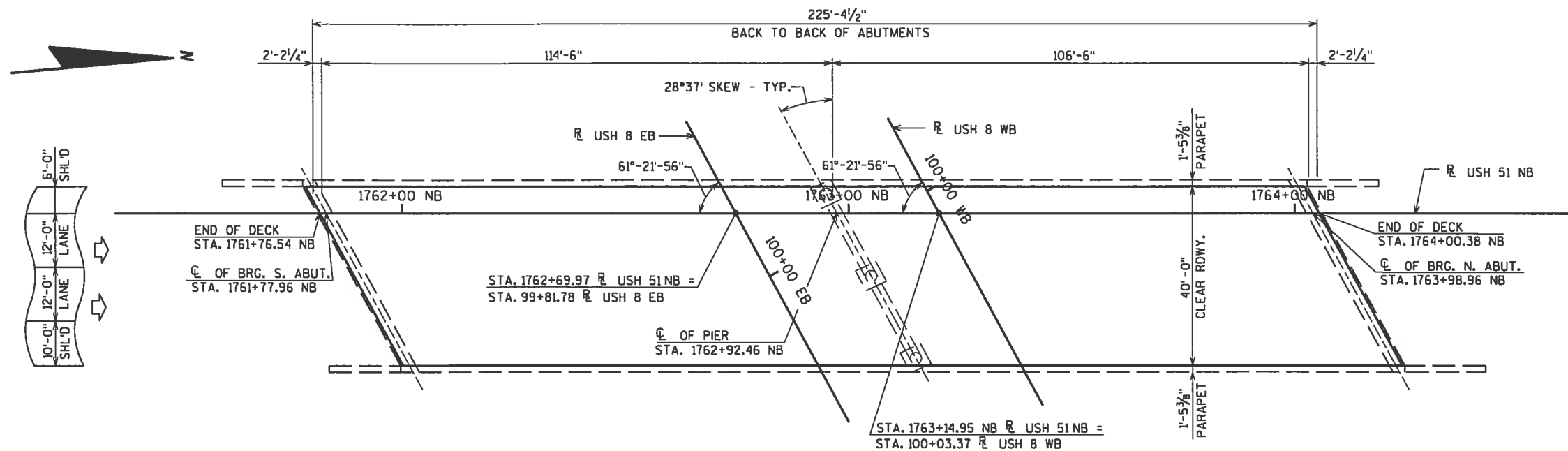
\$PRNAME\$
UJ:42-0967.00 - Lincoln County, USH 51 Rehabs42-0967.01 B-35-70,71,120,123,124,13348-35-704BRIDGE48

CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:

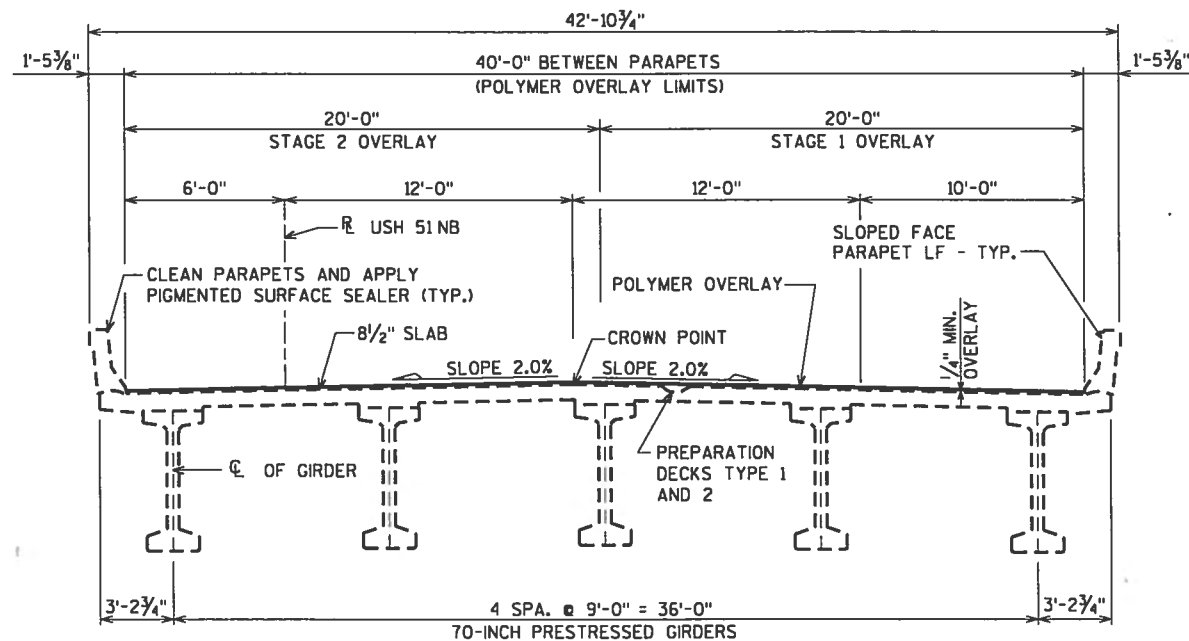
8

STATE PROJECT NUMBER

1176-23-62



PLAN
2-SPAN 70-INCH PRESTRESSED GIRDERS
POLYMER OVERLAY



TYPICAL SECTION THRU BRIDGE
(LOOKING NORTH)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS-20
INVENTORY RATING: HS-18
OPERATING RATING: HS-20
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 190 KIPS

TRAFFIC DATA:

A.D.T. = 5,100 (2017)
A.D.T. = 6,000 (2037)
R.D.S. = 60 M.P.H.

TOTAL ESTIMATED QUANTITIES

502.3210	PIGMENTED SURFACE SEALER	202	SY
509.0301	PREPARATION DECKS TYPE 1	30	SY
509.0302	PREPARATION DECKS TYPE 2	12	SY
509.5100.S	POLYMER OVERLAY	1,002	SY
509.9050.S	CLEANING PARAPETS	519	LF
SPV.0035.04	CONCRETE MASONRY DECK PATCHING	3	CY
SPV.0090.02	SAWING PAVEMENT DECK PREPARATION AREAS	340	LF

LIST OF DRAWINGS

1. GENERAL PLAN

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

DECK SURFACE PREPARATION IS INCLUDED IN THE BID ITEM "POLYMER OVERLAY".

SEE TRAFFIC CONTROL PLANS FOR STAGING.

CLEAN PARAPETS AND APPLY PIGMENTED SURFACE SEALER TO THE TOP AND INSIDE FACES OF PARAPETS.

PREPARATION DECKS SHALL BE AS DETERMINED BY THE ENGINEER IN THE FIELD.

PREPARATION DECKS TYPE 1 AND TYPE 2 SHALL BE FILLED WITH "CONCRETE MASONRY DECK PATCHING".

DEFINE LIMITS OF "PREPARATION DECKS TYPE 1" AND "PREPARATION DECKS TYPE 2" WITH A 1" DEEP SAWCUT BEFORE REMOVING THE DETERIORATED CONCRETE, THE SAWCUT SHALL BE PAID AS "SAWING PAVEMENT DECK PREPARATION AREAS".



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

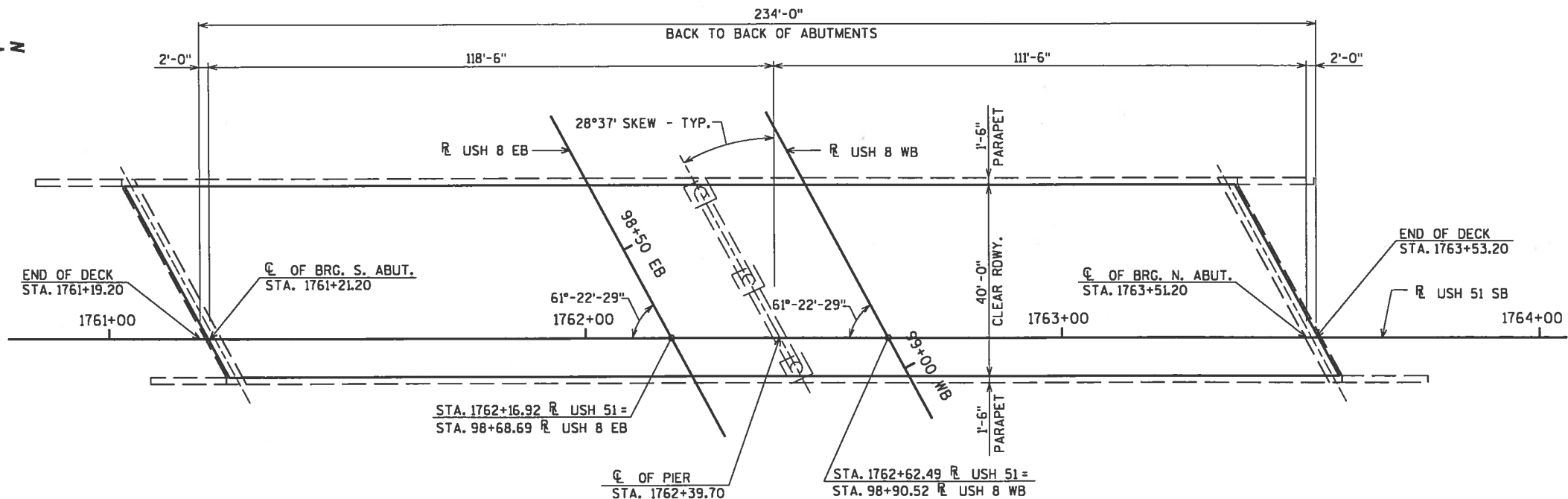
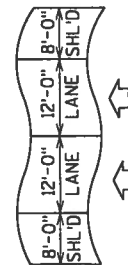
CONSULTANT CONTACT:
DAN SYDOW
(715)-834-3161

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> SOR 01/23/17 CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-35-70			
USH 51 NB OVER USH 8			
COUNTY	LINCOLN	TOWN/CITY/VILLAGE	BRADLEY/KING
DESIGN SPEC.	REHABILITATION	N/A	
DESIGNED BY	CK'D.	CJM	CLD
GENERAL PLAN			SHEET 1 OF 1

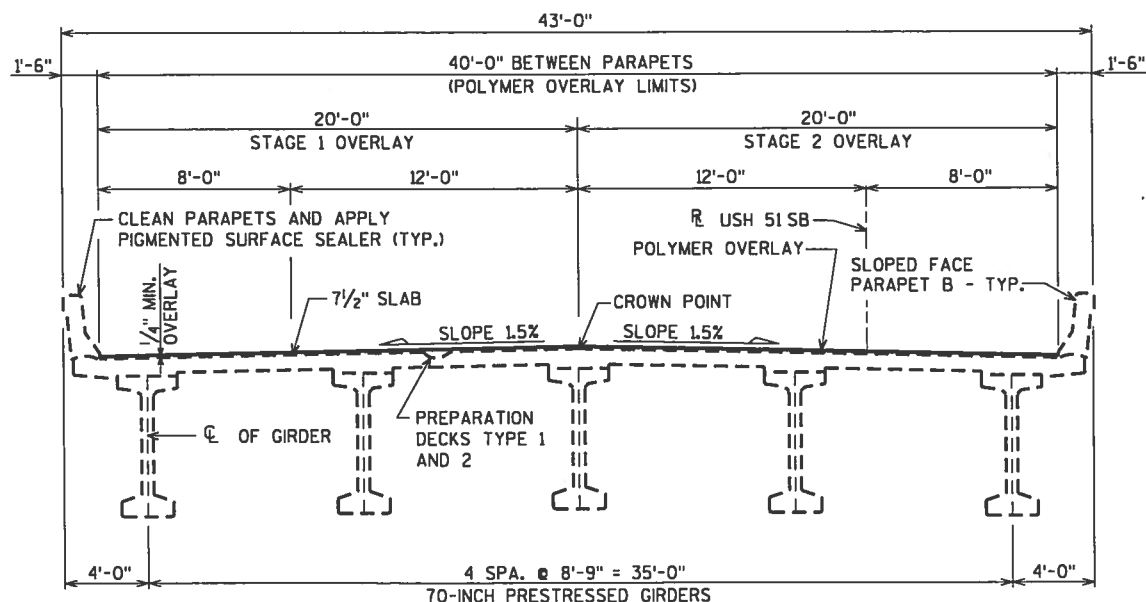
\$PRNAME\$
U:42-0967.00 - Lincoln County, USH 51 Rebars+42-0967.01 B-35-70,71,120,123,124,133+8-35-71+BRIDGE+8-

CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:

8



PLAN
2-SPAN 70-INCH PRESTRESSED GIRDERS
POLYMER OVERLAY



TYPICAL SECTION THRU BRIDGE
(LOOKING NORTH)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS-20
INVENTORY RATING: HS-24
OPERATING RATING: HS-30
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

TRAFFIC DATA:

A.D.T. = 5,100 (2017)
A.D.T. = 6,000 (2037)
R.D.S. = 60 M.P.H.

TOTAL ESTIMATED QUANTITIES

502.3210	PIGMENTED SURFACE SEALER	202	SY
509.0301	PREPARATION DECKS TYPE 1	21	SY
509.0302	PREPARATION DECKS TYPE 2	8	SY
509.5100.S	POLYMER OVERLAY	1,040	SY
509.9050.S	CLEANING PARAPETS	531	LF
SPV.0035.04	CONCRETE MASONRY DECK PATCHING	2	CY
SPV.0090.02	SAWING PAVEMENT DECK PREPARATION AREAS	230	LF

LIST OF DRAWINGS

1. GENERAL PLAN

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

DECK SURFACE PREPARATION IS INCLUDED IN THE BID ITEM "POLYMER OVERLAY".

SEE TRAFFIC CONTROL PLANS FOR STAGING.

CLEAN PARAPETS AND APPLY PIGMENTED SURFACE SEALER TO THE TOP AND INSIDE FACES OF PARAPETS.

PREPARATION DECKS SHALL BE AS DETERMINED BY THE ENGINEER IN THE FIELD.

PREPARATION DECKS TYPE 1 AND TYPE 2 SHALL BE FILLED WITH "CONCRETE MASONRY DECK PATCHING".

DEFINE LIMITS OF "PREPARATION DECKS TYPE 1" AND "PREPARATION DECKS TYPE 2" WITH A 1" DEEP SAWCUT BEFORE REMOVING THE DETERIORATED CONCRETE, THE SAWCUT SHALL BE PAID AS "SAWING PAVEMENT DECK PREPARATION AREAS".



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

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

STATE PROJECT NUMBER

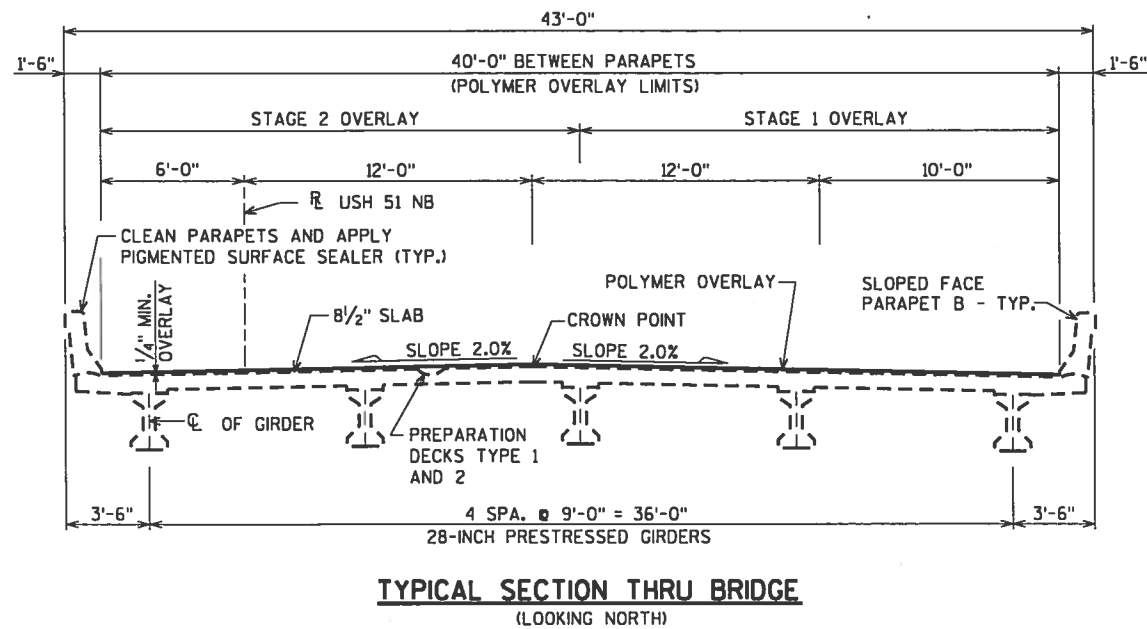
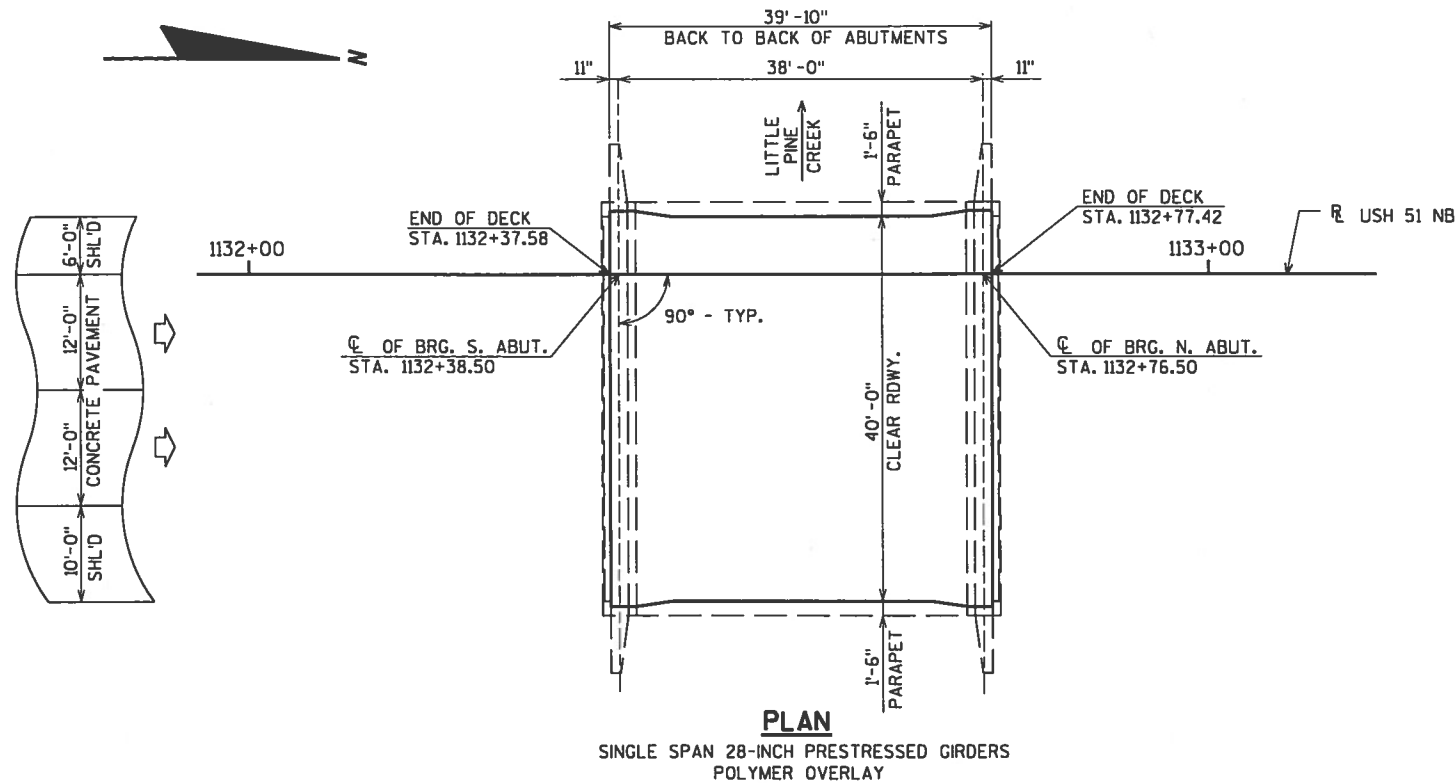
1176-23-62

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 SDR CHIEF STRUCTURES DESIGN ENGINEER		01/23/17 DATE
STRUCTURE B-35-71			
USH 51 SB OVER USH 8			
COUNTY	LINCOLN	TOWN/CITY/VILLAGE	KING
DESIGN SPEC.	REHABILITATION	N/A	
DESIGNED BY	CKJ	DESIGN CK'D.	AEB
DRAWN BY	CLS	PLANS CK'D.	BNS
GENERAL PLAN			SHEET 1 OF 1

\$PRNAME\$
U:\42-0967.00 - Lincoln County, USH 51 Rehbts\42-0967.01 B-35-70,71,120,123,124,133\B-35-120+BRIDGE.dwg

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

8



STATE PROJECT NUMBER

1176-23-62

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS-20
INVENTORY RATING: HS-20
OPERATING RATING: HS-30
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 240 KIPS

TRAFFIC DATA:

A.D.T. = 12,600 (2017)
A.D.T. = 15,600 (2037)
R.D.S. = 70 M.P.H.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

DECK SURFACE PREPARATION IS INCLUDED IN THE BID ITEM "POLYMER OVERLAY".

SEE TRAFFIC CONTROL PLANS FOR STAGING.

CLEAN PARAPETS AND APPLY PIGMENTED SURFACE SEALER TO THE TOP AND INSIDE FACES OF PARAPETS.

PREPARATION DECKS SHALL BE AS DETERMINED BY THE ENGINEER IN THE FIELD.

PREPARATION DECKS TYPE 1 AND TYPE 2 SHALL BE FILLED WITH "CONCRETE MASONRY DECK PATCHING".

DEFINE LIMITS OF "PREPARATION DECKS TYPE 1" AND "PREPARATION DECKS TYPE 2" WITH A 1" DEEP SAWCUT BEFORE REMOVING THE DETERIORATED CONCRETE, THE SAWCUT SHALL BE PAID AS "SAWING PAVEMENT DECK PREPARATION AREAS".

TOTAL ESTIMATED QUANTITIES

502.3210	PIGMENTED SURFACE SEALER	31	SY
509.0301	PREPARATION DECKS TYPE 1	12	SY
509.0302	PREPARATION DECKS TYPE 2	5	SY
509.5100.S	POLYMER OVERLAY	177	SY
509.9050.S	CLEANING PARAPETS	80	LF
SPV.0035.04	CONCRETE MASONRY DECK PATCHING	1	CY
SPV.0090.02	SAWING PAVEMENT DECK PREPARATION AREAS	140	LF

LIST OF DRAWINGS

1. GENERAL PLAN



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

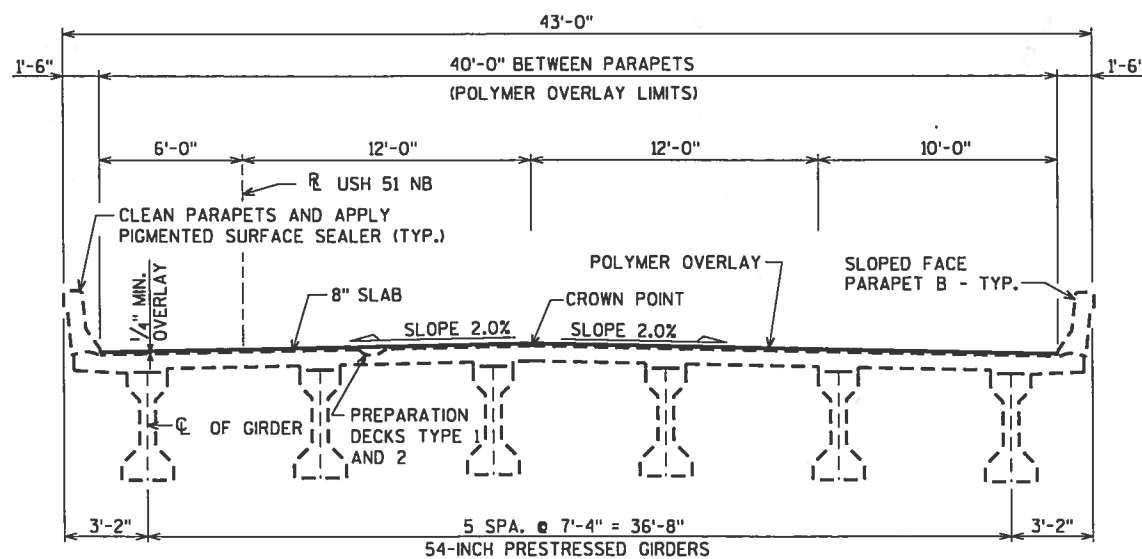
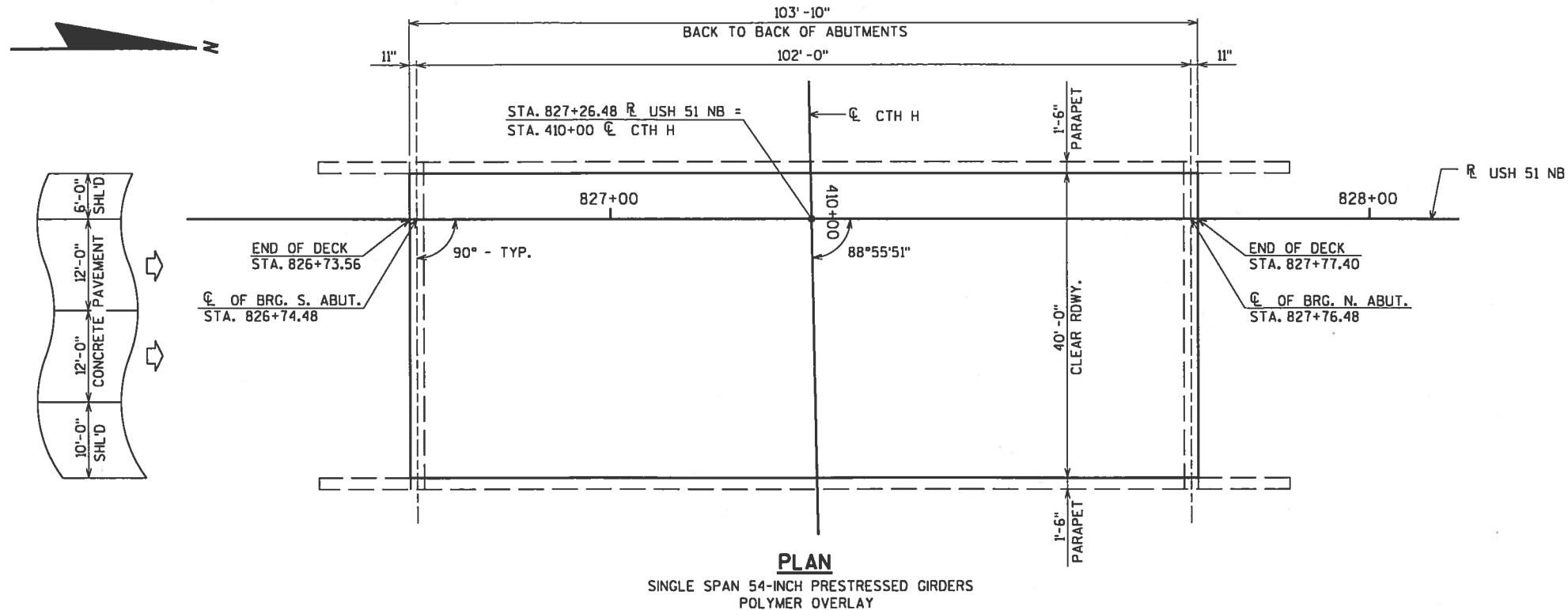
CONSULTANT CONTACT:
DAN SYDOW
(715)-834-3161

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> SR		01/23/17 DATE	
CHIEF STRUCTURES DESIGN ENGINEER			
STRUCTURE B-35-120			
USH 51 NB OVER LITTLE PINE CREEK			
COUNTY	LINCOLN	TOWN/CITY/VILLAGE	BIRCH
DESIGN SPEC. REHABILITATION N/A			
DESIGNED BY	CKJ	DESIGN CK'D.	CJM
DRAWN BY	CLS	PLANS CK'D.	DNS
GENERAL PLAN			SHEET 1 OF 1

\$PRNAME\$
U:42-0967.00 - Lincoln County, USH 51 Rehab+42-0967.01 B-35-70,71,120,123,124,133+8-35-123+BRIDGE+8

CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:

8



DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS-20
INVENTORY RATING: HS-24
OPERATING RATING: HS-27
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

TRAFFIC DATA:

A.D.T. = 13,900 (2017)
A.D.T. = 16,900 (2037)
R.D.S. = 70 M.P.H.

TOTAL ESTIMATED QUANTITIES

502.3210	PIGMENTED SURFACE SEALER	104	SY
509.0301	PREPARATION DECKS TYPE 1	14	SY
509.0302	PREPARATION DECKS TYPE 2	6	SY
509.5100.S	POLYMER OVERLAY	462	SY
509.9050.S	CLEANING PARAPETS	272	LF
SPV.0035.04	CONCRETE MASONRY DECK PATCHING	2	CY
SPV.0090.02	SAWING PAVEMENT DECK PREPARATION AREAS	160	LF

LIST OF DRAWINGS

1. GENERAL PLAN

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

DECK SURFACE PREPARATION IS INCLUDED IN THE BID ITEM "POLYMER OVERLAY".

SEE TRAFFIC CONTROL PLANS FOR STAGING.

CLEAN PARAPETS AND APPLY PIGMENTED SURFACE SEALER TO THE TOP AND INSIDE FACES OF PARAPETS.

PREPARATION DECKS SHALL BE AS DETERMINED BY THE ENGINEER IN THE FIELD.

PREPARATION DECKS TYPE 1 AND TYPE 2 SHALL BE FILLED WITH "CONCRETE MASONRY DECK PATCHING".

DEFINE LIMITS OF "PREPARATION DECKS TYPE 1" AND "PREPARATION DECKS TYPE 2" WITH A 1" DEEP SAWCUT BEFORE REMOVING THE DETERIORATED CONCRETE, THE SAWCUT SHALL BE PAID AS "SAWING PAVEMENT DECK PREPARATION AREAS".



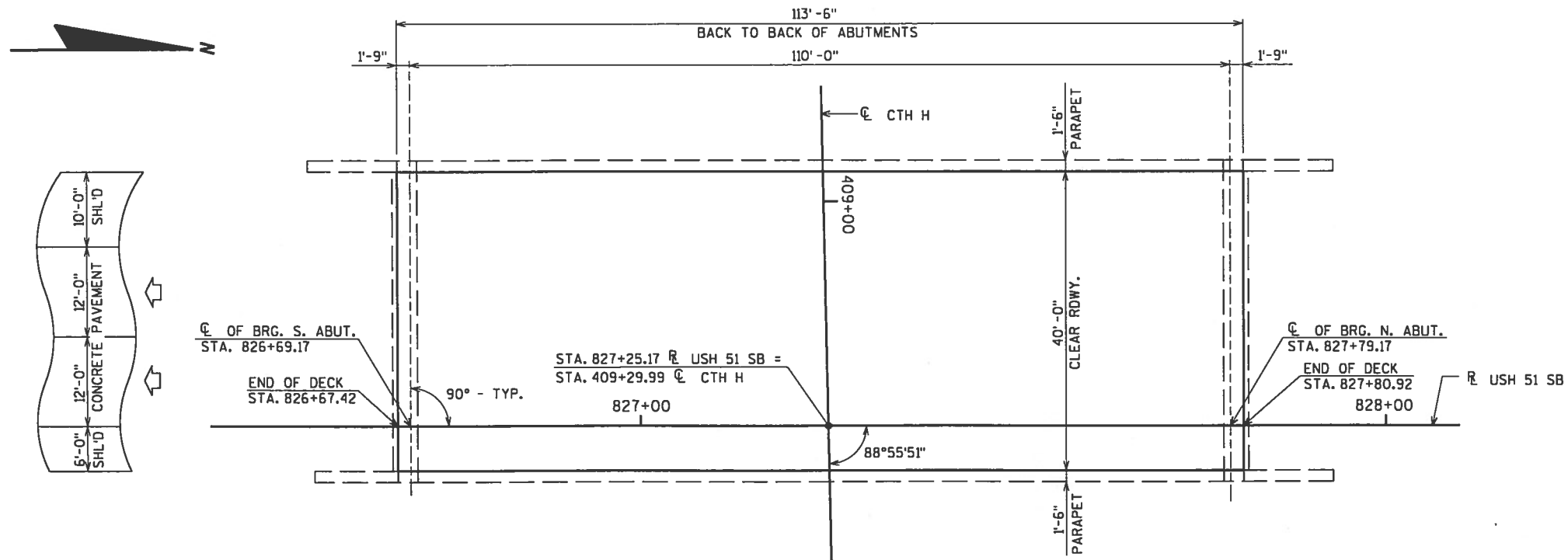
BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

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

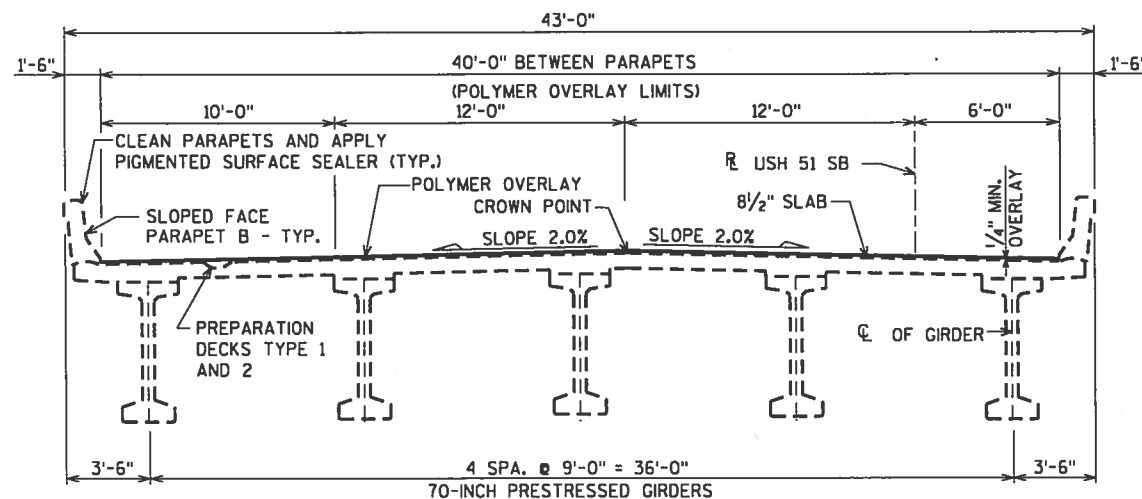
STATE PROJECT NUMBER

1176-23-62

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 CHIEF STRUCTURES DESIGN ENGINEER		01/23/17 DATE
STRUCTURE B-35-123			
USH 51 NB OVER CTH H			
COUNTY	LINCOLN	TOWN/CITY/VILLAGE	ROCK FALLS
DESIGN SPEC.	REHABILITATION	N/A	
DESIGNED BY	CKJ	DESIGN CK'D	CJM
DRAWN BY	CLS	PLANS CK'D	DNS
GENERAL PLAN			SHEET 1 OF 1



PLAN
SINGLE SPAN 70-INCH PRESTRESSED GIRDERS
POLYMER OVERLAY



TYPICAL SECTION THRU BRIDGE
(LOOKING NORTH)

DESIGN DATA

DESIGN LOADING: HS-20
INVENTORY RATING: HS-23
OPERATING RATING: HS-37
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

A.D.T. = 13,900 (2017)
A.D.T. = 16,900 (2037)
R.D.S. = 70 M.P.H.

TOTAL ESTIMATED QUANTITIES

502.3210	PIGMENTED SURFACE SEALER	111	SY
509.0301	PREPARATION DECKS TYPE 1	10	SY
509.0302	PREPARATION DECKS TYPE 2	4	SY
509.5100.S	POLYMER OVERLAY	505	SY
509.9050.S	CLEANING PARAPETS	291	LF
SPV.0035.04	CONCRETE MASONRY DECK PATCHING	1	CF
SPV.0090.02	SAWING PAVEMENT DECK PREPARATION AREAS	110	LF

LIST OF DRAWINGS

- ## 1. GENERAL PLAN

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

DECK SURFACE PREPARATION IS INCLUDED IN THE BID ITEM "POLYMER OVERLAY".

SEE TRAFFIC CONTROL PLANS FOR STAGING.

CLEAN PARAPETS AND APPLY PIGMENTED SURFACE SEALER TO THE TOP AND INSIDE FACES OF PARAPETS.

PREPARATION DECKS SHALL BE AS DETERMINED BY THE ENGINEER IN THE FIELD.


PREPARATION DECKS TYPE 1 AND TYPE 2 SHALL BE FILLED WITH "CONCRETE MASONRY DECK PATCHING".

DEFINE LIMITS OF "PREPARATION DECKS TYPE 1" AND "PREPARATION DECKS TYPE 2" WITH A 1" DEEP SAWCUT BEFORE REMOVING THE DETERIORATED CONCRETE, THE SAWCUT SHALL BE PAID AS "SAWING PAVEMENT DECK PREPARATION AREAS".



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

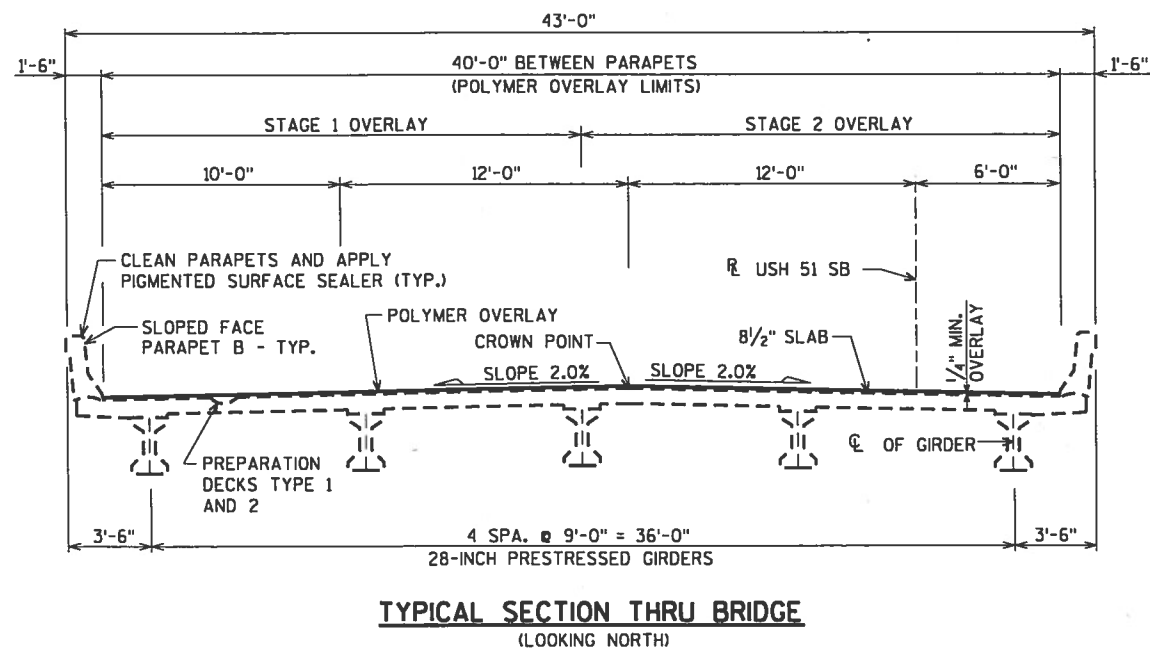
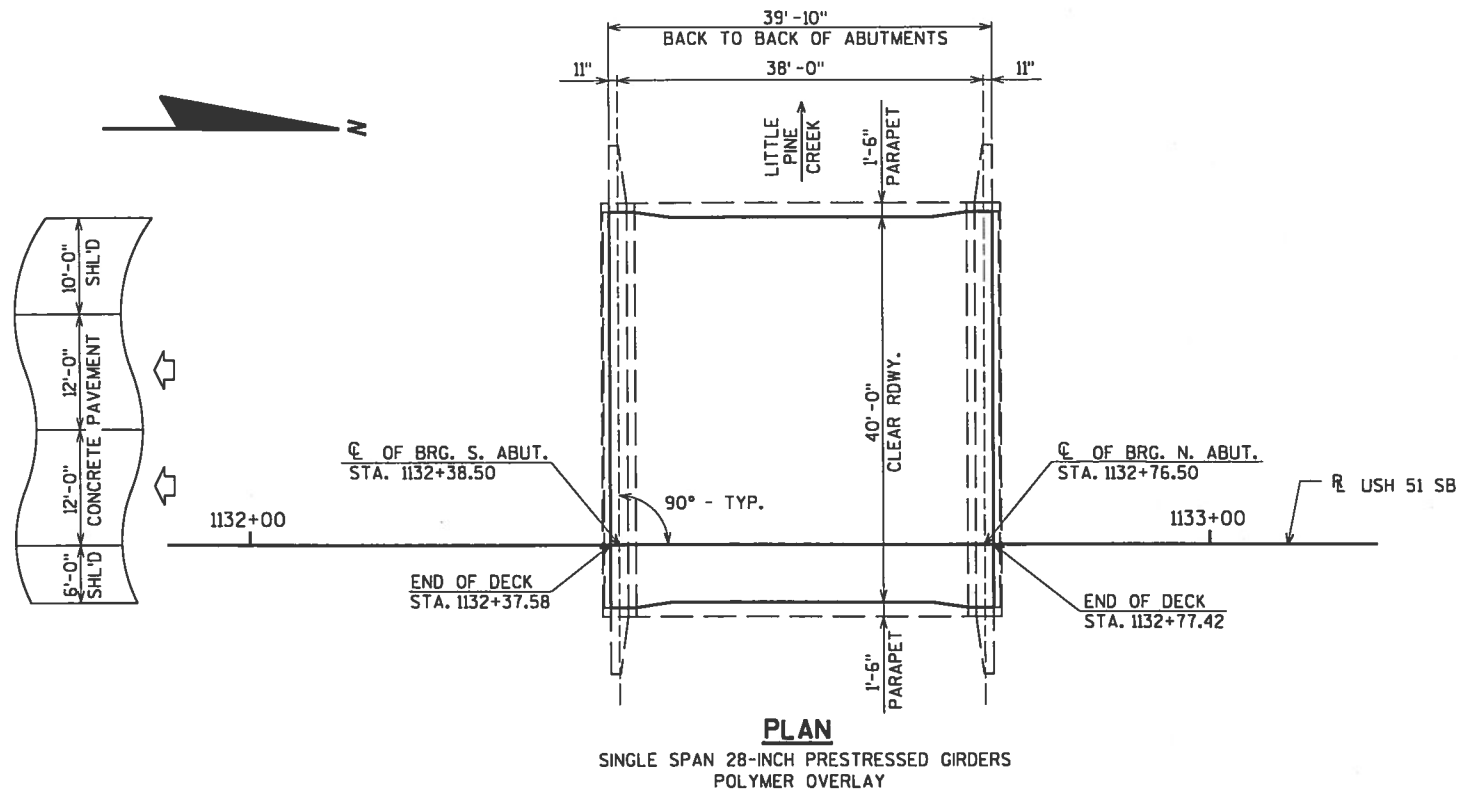
CONSULTANT CONTACT:
DAN SYDOW
(715)-834-3161

NO.	DATE	REVISION	BY
<p>ORIGINAL PLANS PREPARED BY</p> <p>AYRES ASSOCIATES 3433 Oakwood Hills Parkway Eau Claire, WI 54701 www.AyresAssociates.com</p>			
<p>STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION</p>			
ACCEPTED	 <p>SDR</p>		01/23/17
<p>CHIEF STRUCTURES DESIGN ENGINEER</p> <p>DATE</p>			
<p>STRUCTURE B-35-124</p>			
<p>USH 51 SB OVER¹ CTH H</p>			
COUNTY	LINCOLN	TOWN/CITY/VILLAGE	ROCK FALLS
DESIGN SPEC.	REHABILITATION	N/A	
DESIGNED BY	CKJ	DESIGN CK'D.	CJM
DRAWN BY	CLS	PLANS CK'D.	DNS
<p>GENERAL PLAN</p>		<p>SHEET 1 OF 1</p>	

\$PRNAME\$
U:\42-0967.00 - Lincoln County, USH 51 Rehabs\42-0967.01 B-35-70,71,120,123,124,133-B-35-133+BRIDGE#B

CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:

8



DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS-20
INVENTORY RATING: HS-20
OPERATING RATING: HS-30
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 240 KIPS

TRAFFIC DATA:

A.D.T. = 12,600 (2017)
A.D.T. = 15,600 (2037)
R.D.S. = 70 M.P.H.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

DECK SURFACE PREPARATION IS INCLUDED IN THE BID ITEM "POLYMER OVERLAY".

SEE TRAFFIC CONTROL PLANS FOR STAGING.

CLEAN PARAPETS AND APPLY PIGMENTED SURFACE SEALER TO THE TOP AND INSIDE FACES OF PARAPETS.

PREPARATION DECKS SHALL BE AS DETERMINED BY THE ENGINEER IN THE FIELD.

PREPARATION DECKS TYPE 1 AND TYPE 2 SHALL BE FILLED WITH "CONCRETE MASONRY DECK PATCHING".

DEFINE LIMITS OF "PREPARATION DECKS TYPE 1" AND "PREPARATION DECKS TYPE 2" WITH A 1" DEEP SAWCUT BEFORE REMOVING THE DETERIORATED CONCRETE, THE SAWCUT SHALL BE PAID AS "SAWING PAVEMENT DECK PREPARATION AREAS".

TOTAL ESTIMATED QUANTITIES

502.3210	PIGMENTED SURFACE SEALER	31	SY
509.0301	PREPARATION DECKS TYPE 1	5	SY
509.0302	PREPARATION DECKS TYPE 2	2	SY
509.5100.S	POLYMER OVERLAY	177	SY
509.9050.S	CLEANING PARAPETS	80	LF
SPV.0035.04	CONCRETE MASONRY DECK PATCHING	1	CY
SPV.0090.02	SAWING PAVEMENT DECK PREPARATION AREAS	60	LF

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>	DATE	01/23/17
CHIEF STRUCTURES DESIGN ENGINEER			
STRUCTURE 8-35-133			
USH 51 SB OVER LITTLE PINE CREEK			
COUNTY	LINCOLN	TOWN/CITY/VILLAGE	SKANAWAN
DESIGN SPEC. REHABILITATION N/A			
DESIGNED BY	CKJ	DESIGN CK'D.	CJM
DRAWN BY	CLS	PLANS CK'D.	DNS
GENERAL PLAN			SHEET 1 OF 1

Notes



Wisconsin Department of Transportation

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through innovation and exceptional service.

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

RHI
PROJECT ID: 1176-23-63
WITH: 1176-23-62, 1176-23-64
COUNTY: LINCOLN

APRIL 2017

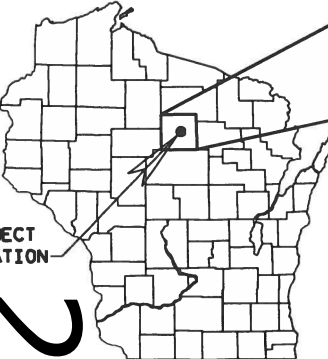
ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details (Includes Erosion Control Plans)
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.	4	Right of Way Plot
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	Gross Sections

TOTAL SHEETS = 38

PROJECT LOCATION

26



N

DESIGN DESIGNATION

	B-35-22/25	B-35-62/63
A.D.T. (2017)	= 12,500	10,700
A.D.T. (2037)	= 14,700	13,200
D.H.V.	= 1,250	1,070
D.	= 60/40	61/39
T.	= 24.1%	15.8%
DESIGN SPEED	= 70 MPH	70 MPH
ESALS	= N/A	N/A

CONVENTIONAL SYMBOLS

PLAN

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

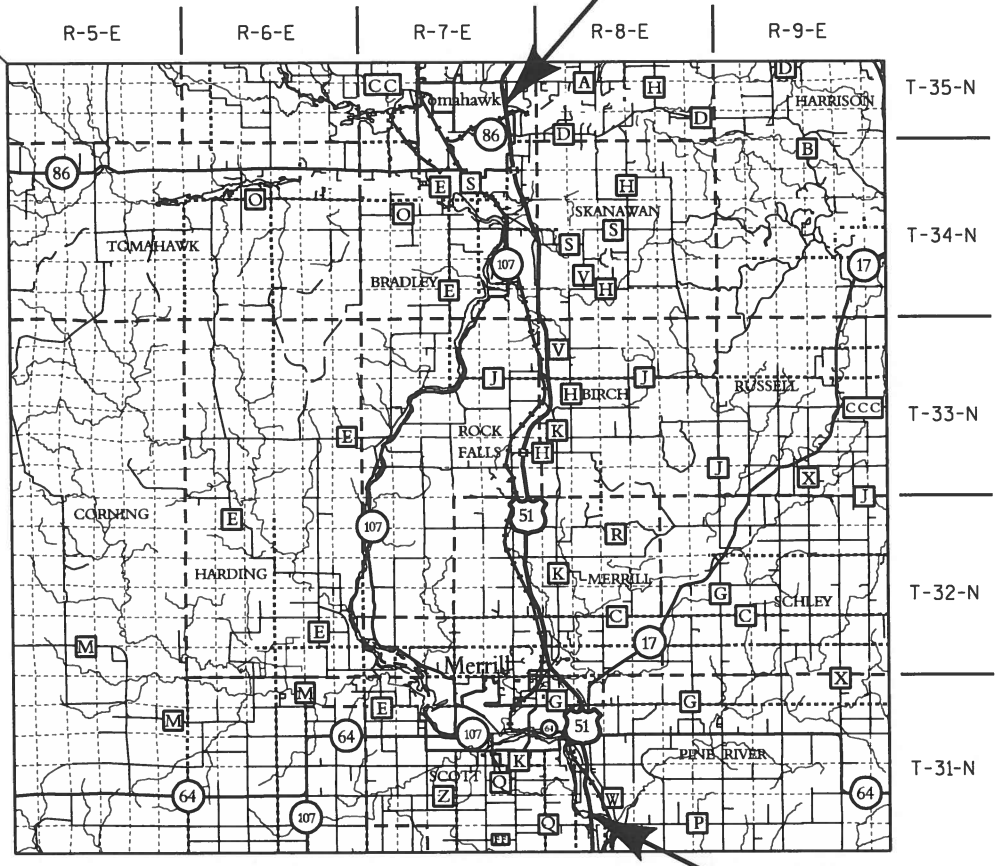
PROFILE

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT
WAUSAU - TOMAHAWK
B-35-0022, 0025, 0062, & 0063
USH 51
LINCOLN COUNTY

STATE PROJECT NUMBER
1176-23-63



LAYOUT
SCALE 0 5 MI.

STRUCTURE B-35-62
STRUCTURE B-35-63

STRUCTURE B-35-22
STRUCTURE B-35-25

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), LINCOLN COUNTY
ELEVATIONS ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1176-23-63		

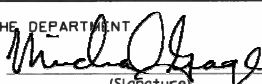
ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES 3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com



DATE: 12/1/2016

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor AYRES ASSOCIATES INC
Designer AYRES ASSOCIATES INC
Project Manager MIKE GRACE
Regional Examiner CHERYL SIMON
Regional Supervisor ROBIN STAFFORD

APPROVED FOR THE DEPARTMENT
DATE: 12/01/2016 
(Signature)

E

UTILITY CONTACTS

* WISCONSIN PUBLIC SERVICE CORPORATION (ELECTRIC)
ATTN: CLAYTON VIRCKS
P.O. BOX 1166
WAUSAU, WI 54402
(715) 848-7317
chvircks@wisconsinpublicservice.com

* WISCONSIN PUBLIC SERVICE CORPORATION (GAS)
ATTN: DAVID RETZLAFF
2850 SOUTH ASHLAND AVENUE
GREEN BAY, WI 54304
(920) 617-5106
dpretzlaff@wisconsinpublicservice.com

* MEMBER OF DIGGERS HOTLINE



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

GENERAL NOTES

NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS INDICATED FOR REMOVAL BY THE ENGINEER.

THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS.
THE CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS
HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT
ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.

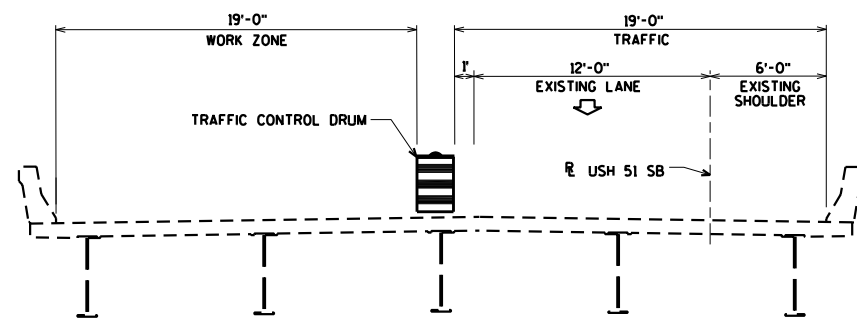
WISCONSIN DEPARTMENT OF NATURAL RESOURCES

JON SIMONSEN
107 SUTLIFF
RHINELANDER, WI 54501
715-365-8916
jonathan.simonsen@wisconsin.gov

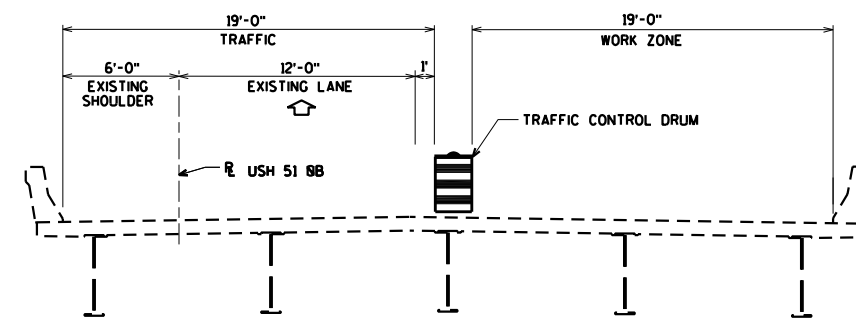


PROPOSED WORK: SCOUR REPAIR AT BRIDGE B-35-22 AND B-35-25 PIERS
TRAFFIC CONTROL: FOLLOW SDD, "TRAFFIC CONTROL, LANE CLOSURE".

PROJECT NO: 1176-23-63	HWY: USH 51	COUNTY: LINCOLN	SITE OVERVIEW (B-35-22/25)	SHEET	E
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STRUCTURE B-35-25
(LOOKING NORTH)



STRUCTURE B-35-22
(LOOKING NORTH)



PROPOSED WORK: SCOUR REPAIR AT BRIDGE PIERS
TRAFFIC CONTROL: CLOSE OUTSIDE LANE OF NB & SB USH 51.

LEGEND

→ TRAVEL LANE DIRECTION
●/● TRAFFIC CONTROL DRUMS
WITH/WITHOUT TYPE C STEADY BURN LIGHT

▬ TRAFFIC CONTROL SIGN
▨ WORK AREA

PROJECT NO: 1176-23-63

HWY: USH 51

COUNTY: LINCOLN

TRAFFIC CONTROL - OUTSIDE LANE CLOSURE (B-35-22/25)

SHEET

E

FILE NAME : V:\Structures-EC\42-0967.00 - Lincoln County, USH 51 Rehab\42-0967.02 B-35-22,25,62,63 (WI River)\RDWY\026021-s1.dgn PLOT DATE : 11/29/2016

PLOT BY : AYRES-EC

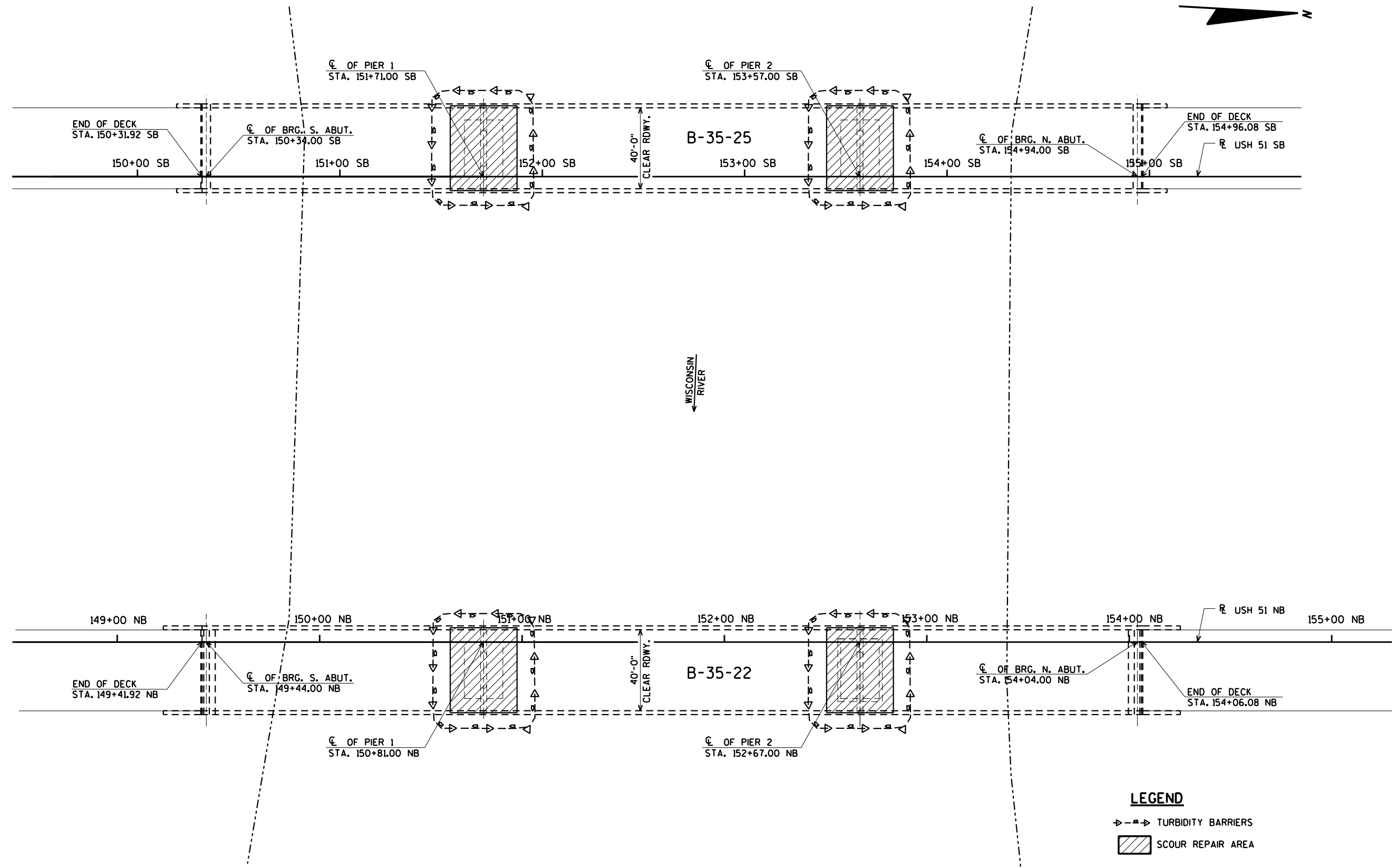
PLOT NAME :

PLOT SCALE : 1:200

WISDOT/CADDs SHEET 42



TRAFFIC CONTROL SIGN
WORK AREA





PROPOSED WORK: SCOUR REPAIR AT PIERS 2 & 3 AND NORTH ABUTMENT SLOPE.

TRAFFIC CONTROL: FOLLOW SDD, "TRAFFIC CONTROL, LANE CLOSURE" FOR USH 51; "TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)" AND "TRAFFIC CONTROL, WORK ON SHOULDER OF PARKING LANE, UNDIVIDED ROADWAY" FOR E. KINGS ROAD. TRAFFIC CONTROL FOR E. KINGS ROAD CONSIDERED INCIDENTAL TO TEMPORARY RIVER ACCESS ITEM.

PROJECT NO: 1176-23-63

HWY: USH 51

COUNTY: LINCOLN

SITE OVERVIEW (B-35-62/63)

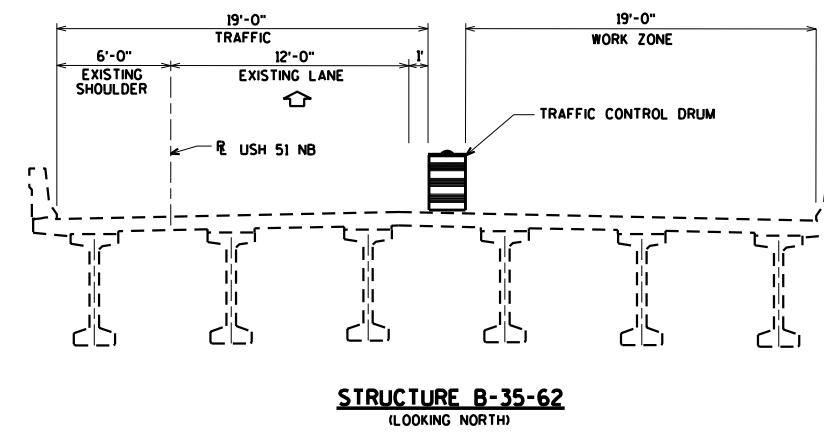
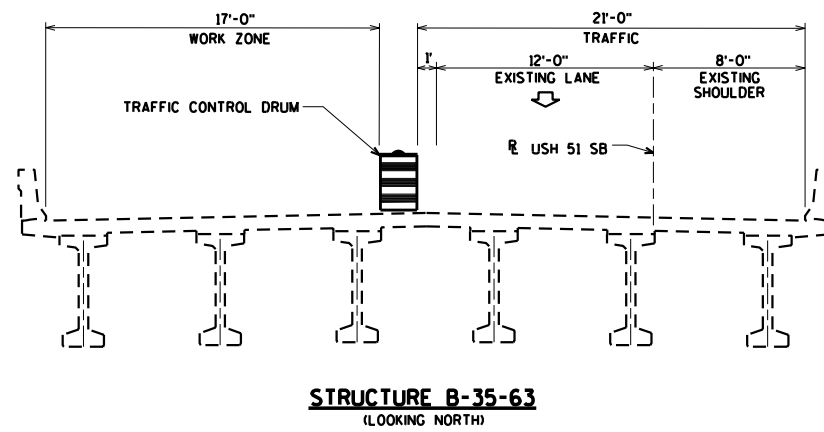
SHEET

E

FILE NAME : \$\$....designfile....\$\$

PLOT DATE : \$\$...plottingdate...\$\$ PLOT BY : \$\$...plotuser...\$\$

PLOT SCALE : \$\$....plotscale....\$\$ WISDOT/CADD SHEET 42





PROPOSED WORK: SCOUR REPAIR AT BRIDGE PIERS
TRAFFIC CONTROL: CLOSE OUTSIDE LANE OF NB & SB USH 51.

LEGEND

→ TRAVEL LANE DIRECTION
●/● TRAFFIC CONTROL DRUMS
WITH/WITHOUT TYPE C STEADY BURN LIGHT

▬ TRAFFIC CONTROL SIGN
▨ WORK AREA

PROJECT NO: 1176-23-63

HWY: USH 51

COUNTY: LINCOLN

TRAFFIC CONTROL - OUTSIDE LANE CLOSURE (B-35-62/63)

SHEET

E

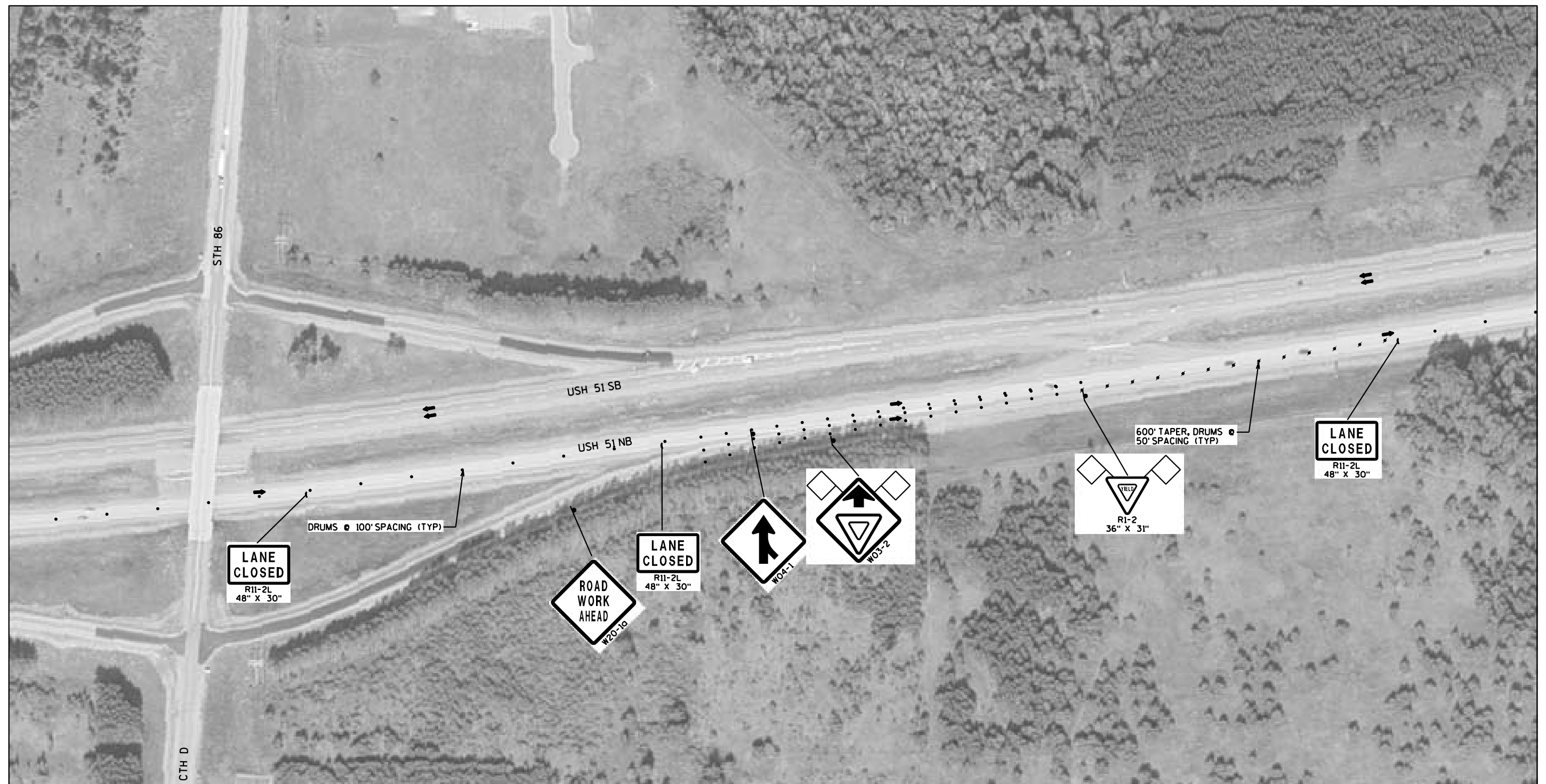
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PLOT BY : AYRES-EC

PLOT NAME :

PLOT SCALE : 1:200

WISDOT/CADDs SHEET 42



LEGEND

→ TRAVEL LANE DIRECTION
 ●/● TRAFFIC CONTROL DRUMS
 WITH/WITHOUT TYPE C STEADY BURN LIGHT

▬ TRAFFIC CONTROL SIGN
 ▬ WORK AREA

PROJECT NO: 1176-23-63

HWY: USH 51

COUNTY: LINCOLN

TRAFFIC CONTROL - OUTSIDE LANE CLOSURE (B-35-62/63)

SHEET

E

FILE NAME : V:\Structures-EC\42-0967.00 - Lincoln County, USH 51 Rehab\42-0967.02 B-35-22,25,62,63 (WI River)\RDWY\026012-s1.dgn PLOT DATE : 11/29/2016

PLOT BY : AYRES-EC

PLOT NAME :

PLOT SCALE : 1:200

WISDOT/CADDs SHEET 42

**LEGEND**

→ TRAVEL LANE DIRECTION
●/● TRAFFIC CONTROL DRUMS
WITH/WITHOUT TYPE C STEADY BURN LIGHT

▬ TRAFFIC CONTROL SIGN
▬ WORK AREA

PROJECT NO: 1176-23-63

HWY: USH 51

COUNTY: LINCOLN

TRAFFIC CONTROL - OUTSIDE LANE CLOSURE (B-35-62/63)

SHEET

E

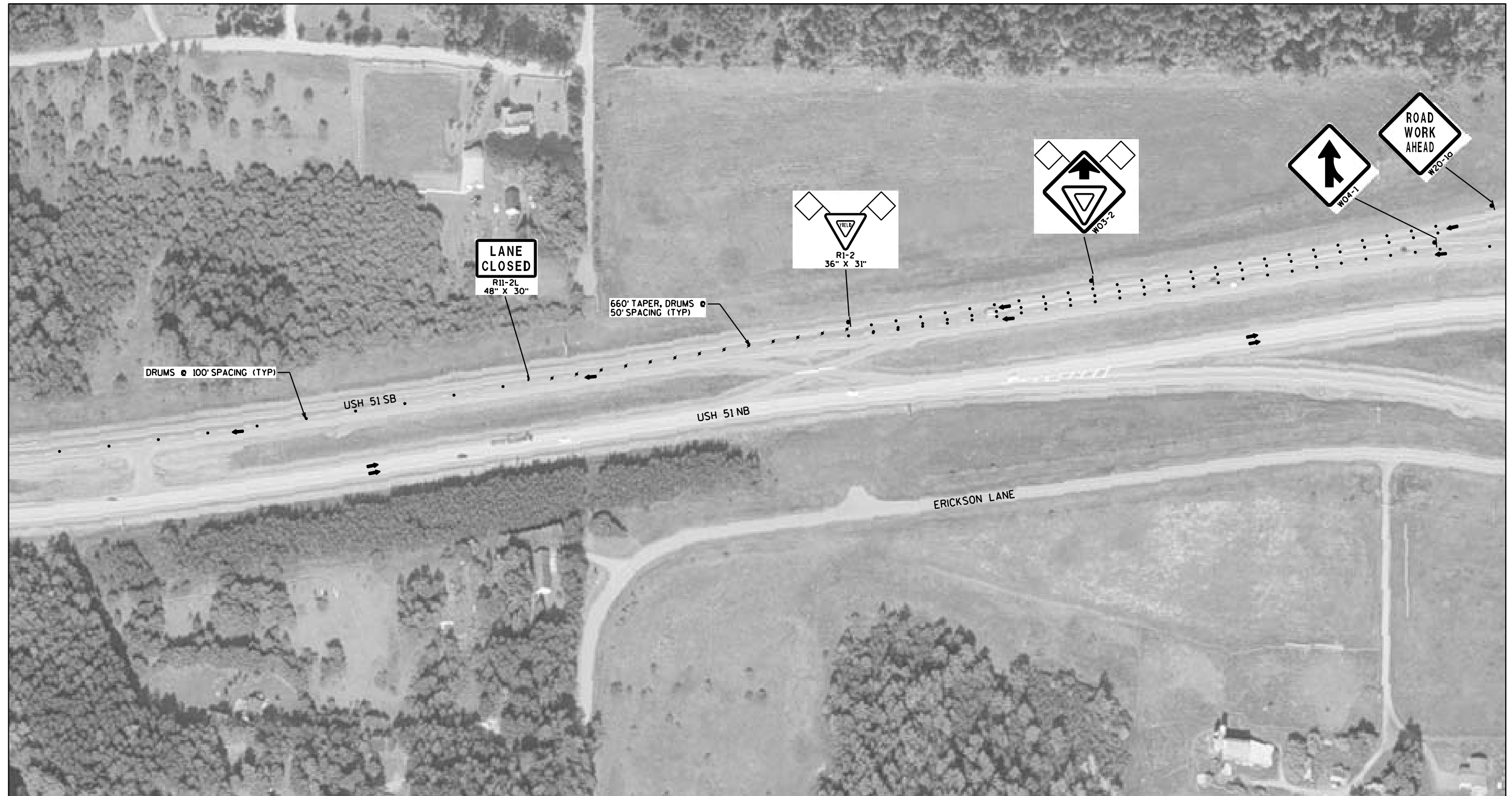
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PLOT BY : AYRES-EC

PLOT NAME :

PLOT SCALE : 1:200

WISDOT/CADDs SHEET 42

**LEGEND**

- TRAVEL LANE DIRECTION
●/● TRAFFIC CONTROL DRUMS
WITH/WITHOUT TYPE C STEADY BURN LIGHT

- ▬ TRAFFIC CONTROL SIGN
▨ WORK AREA

PROJECT NO: 1176-23-63

HWY: USH 51

COUNTY: LINCOLN

TRAFFIC CONTROL - OUTSIDE LANE CLOSURE (B-35-62/63)

SHEET

E

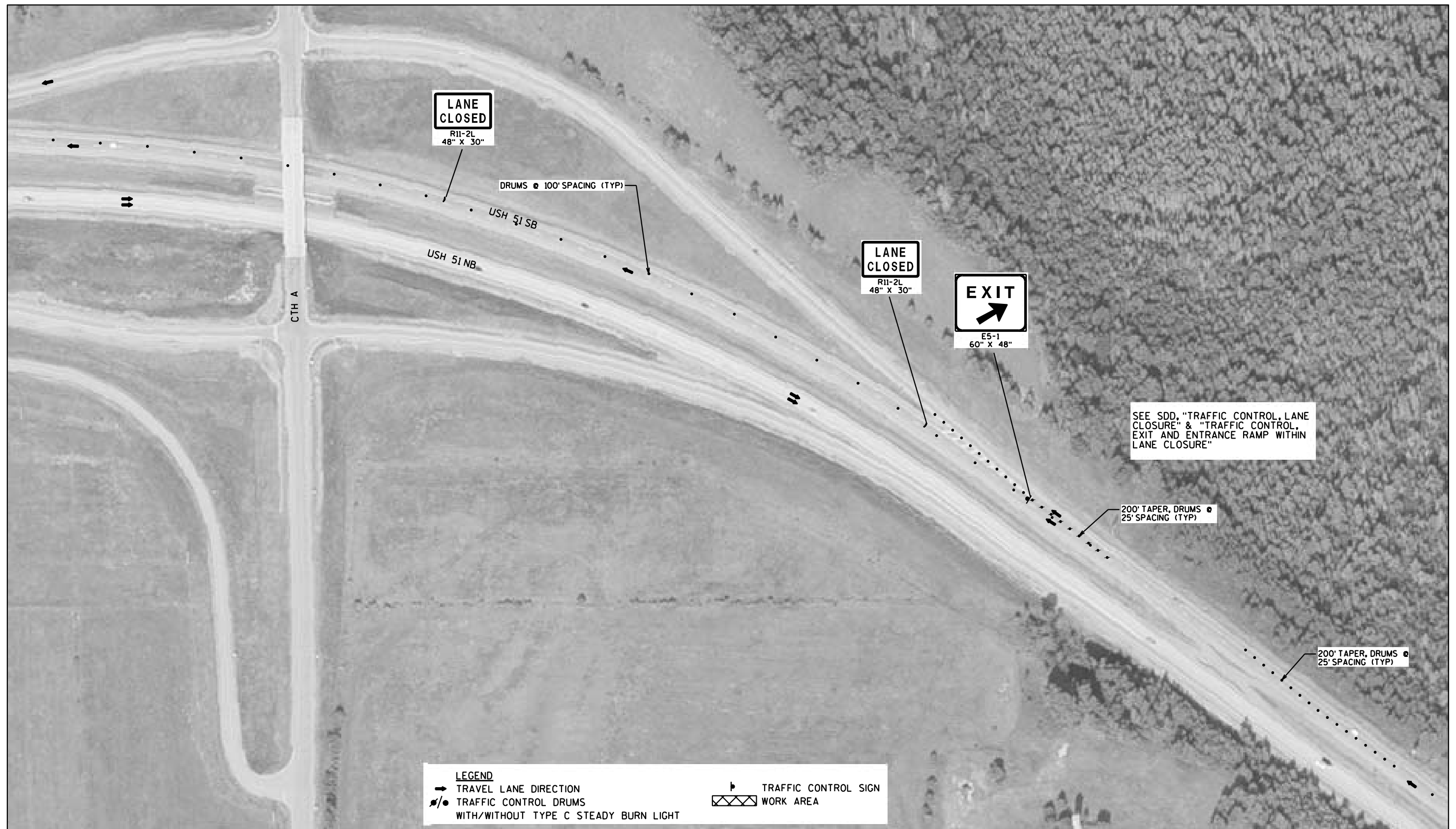
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PLOT BY : AYRES-EC

PLOT NAME :

PLOT SCALE : 1:200

WISDOT/CADDs SHEET 42



Estimate Of Quantities By Plan Sets

1176-23-63					
Line	Item	Item Description	Unit	Total	Qty
0260	606.0200	Riprap Medium	CY	175.000	175.000
0270	606.0300	Riprap Heavy	CY	420.000	420.000
0290	619.1000	Mobilization	EACH	0.440	0.440
0370	628.6005	Turbidity Barriers	SY	500.000	500.000
0420	642.5001	Field Office Type B 02. 1176-23-63	EACH	1.000	1.000
0450	643.0100	Traffic Control (project) 02. 1176-23-63	EACH	1.000	1.000
0470	643.0300	Traffic Control Drums	DAY	23,175.000	23,175.000
0480	643.0420	Traffic Control Barricades Type III	DAY	600.000	600.000
0490	643.0705	Traffic Control Warning Lights Type A	DAY	1,200.000	1,200.000
0500	643.0715	Traffic Control Warning Lights Type C	DAY	4,500.000	4,500.000
0510	643.0800	Traffic Control Arrow Boards	DAY	300.000	300.000
0520	643.0900	Traffic Control Signs	DAY	3,713.000	3,713.000
0530	645.0120	Geotextile Type HR	SY	300.000	300.000
0600	SPV.0035	Special 01. Scour Repair Grout Bags	CY	76.000	76.000
0610	SPV.0035	Special 02. Scour Repair Grout Mats 8-inch	CY	110.000	110.000
0620	SPV.0035	Special 03. Underwater Excavation for Structures	CY	48.000	48.000
0660	SPV.0105	Special 01. Temporary River Access	LS	1.000	1.000

TURBIDITY BARRIERS	
LOCATION	628.6005 SY
B-35-22	250
B-35-25	250
PROJECT TOTAL	500

FIELD OFFICE TYPE B	
PROJECT	642.5001 EACH
1176-23-63	1
PROJECT TOTAL	1

TRAFFIC CONTROL	
PROJECT	643.0100 EACH
1176-23-63	1

TRAFFIC CONTROL SIGNS, LIGHTS, AND BARRICADES													
STAGE	643.0300		643.0420		643.0705		643.0715		643.0800		643.0900		
	DRUMS		BARRICADES		WARNING LIGHTS				ARROW BOARDS		SIGNS		
	EACH	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAYS	
B-35-22	174	5220	4	120	8	240	36	1080	2	60	26	780	
B-35-25	44	1320	1	30	2	60	14	420	2	60	18	540	
B-35-62	195	5850	6	180	12	360	35	1050	2	60	28	840	
B-35-63	205	6150	5	150	10	300	35	1050	2	60	27	810	
UNDISTRIBUTED		4635		120		240		900		60		743	
PROJECT TOTALS		23175	600		1200		4500		300		3713		

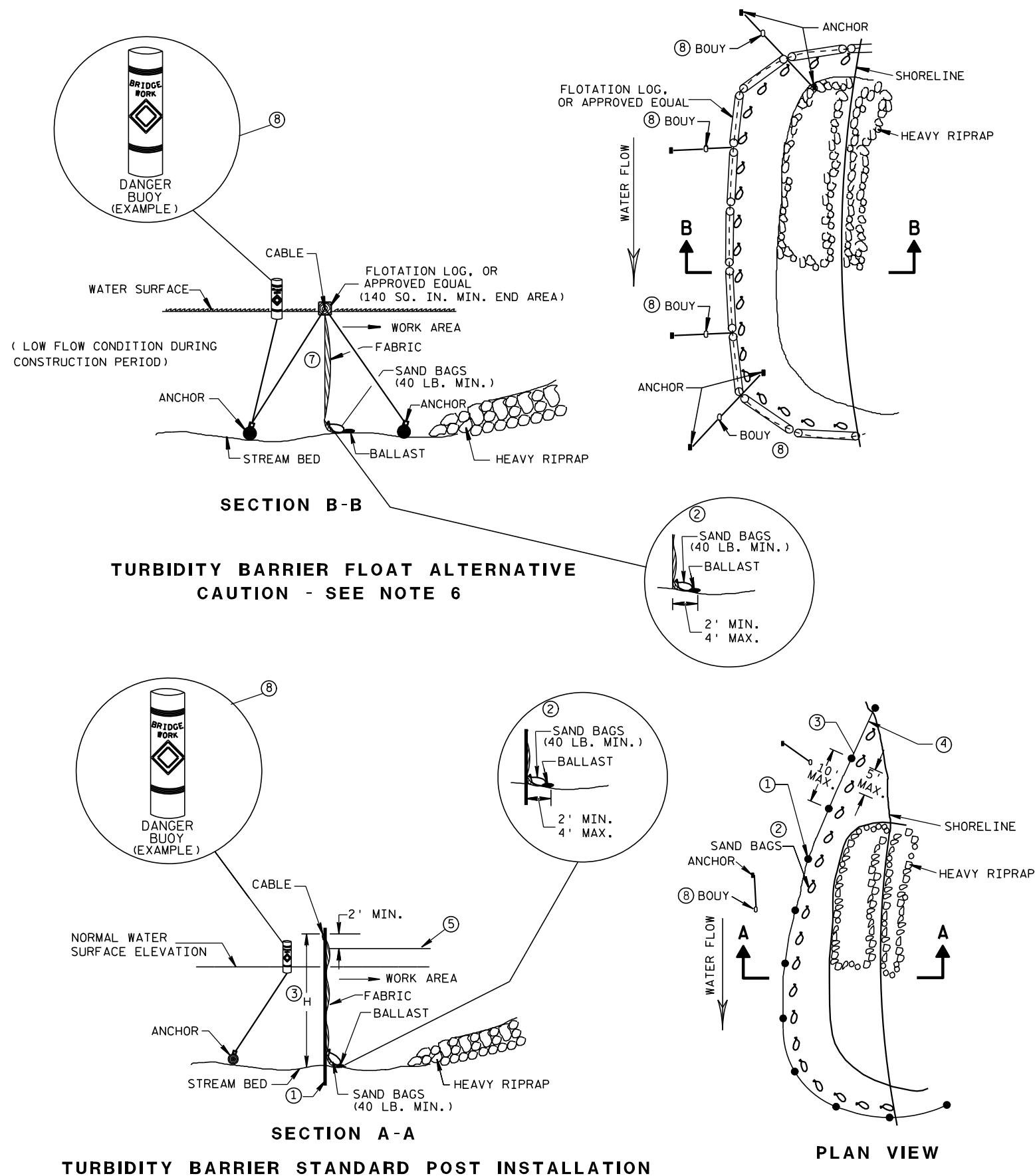
TEMPORARY RIVER ACCESS	
PROJECT	SPV.0105.01 LS
1176-23-63	1
PROJECT TOTAL	1

TEMPORARY RIVER ACCESS EROSION CONTROL ITEMS (FOR INFORMATION ONLY)		
BID	ITEM	UNIT
625.0100	TOPSOIL	300 SY
628.1504	SILT FENCE	150 LF
628.2027	EROSION MAT CLASS II TYPE C	300 SY
630.0120	SEEDING MIXTURE NO.20	5 LB

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

Standard Detail Drawing List

08E11-02	TURBIDITY BARRIER
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15D12-06A	TRAFFIC CONTROL, LANE CLOSURE
15D15-02	TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE
15D28-03	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

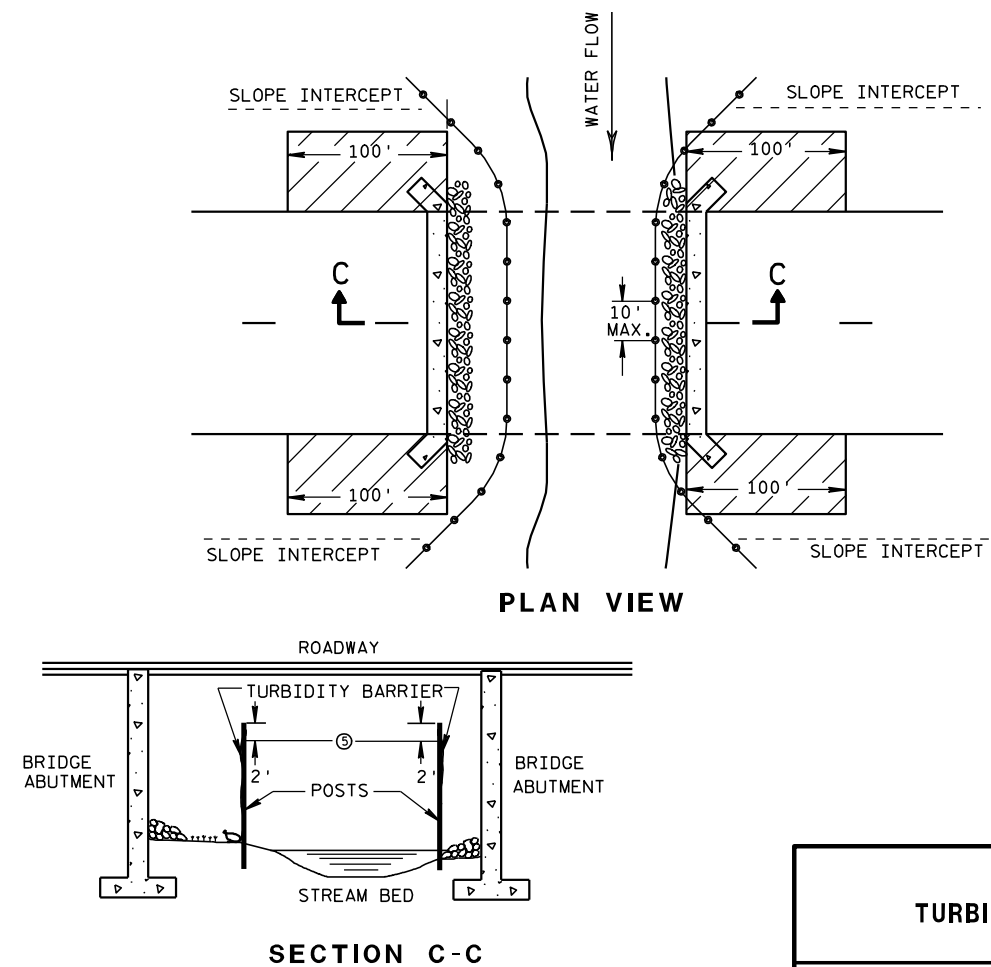


GENERAL NOTES

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

FHWA

/S/ Beth Canestra
 CHIEF ROADWAY DEVELOPMENT ENGINEER

LEGEND

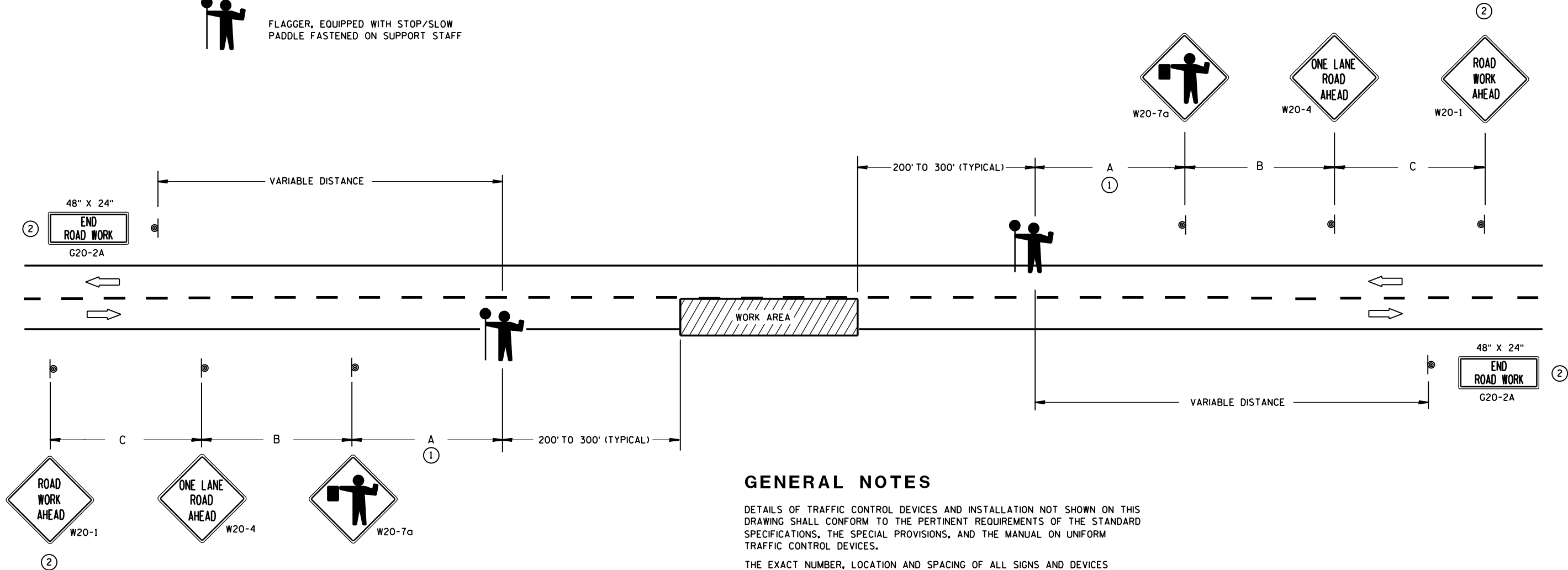
-  SIGN ON PORTABLE OR PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN SPACING TABLE

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



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



- ① FOR A MOVING WORK OPERATION, SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

GENERAL NOTES

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

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

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

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

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

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

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

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

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.


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

TYPE III BARRICADE WITH ATTACHED SIGN

© SIGN ON PERMENENT SUPPORT

TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT

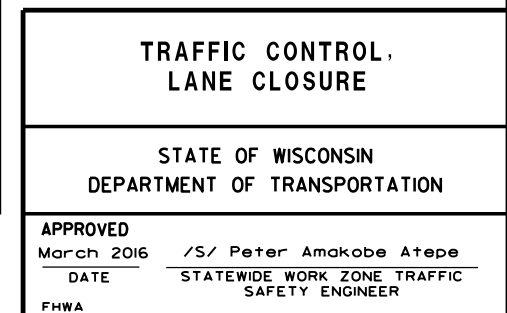
- TRAFFIC CONTROL DRUM

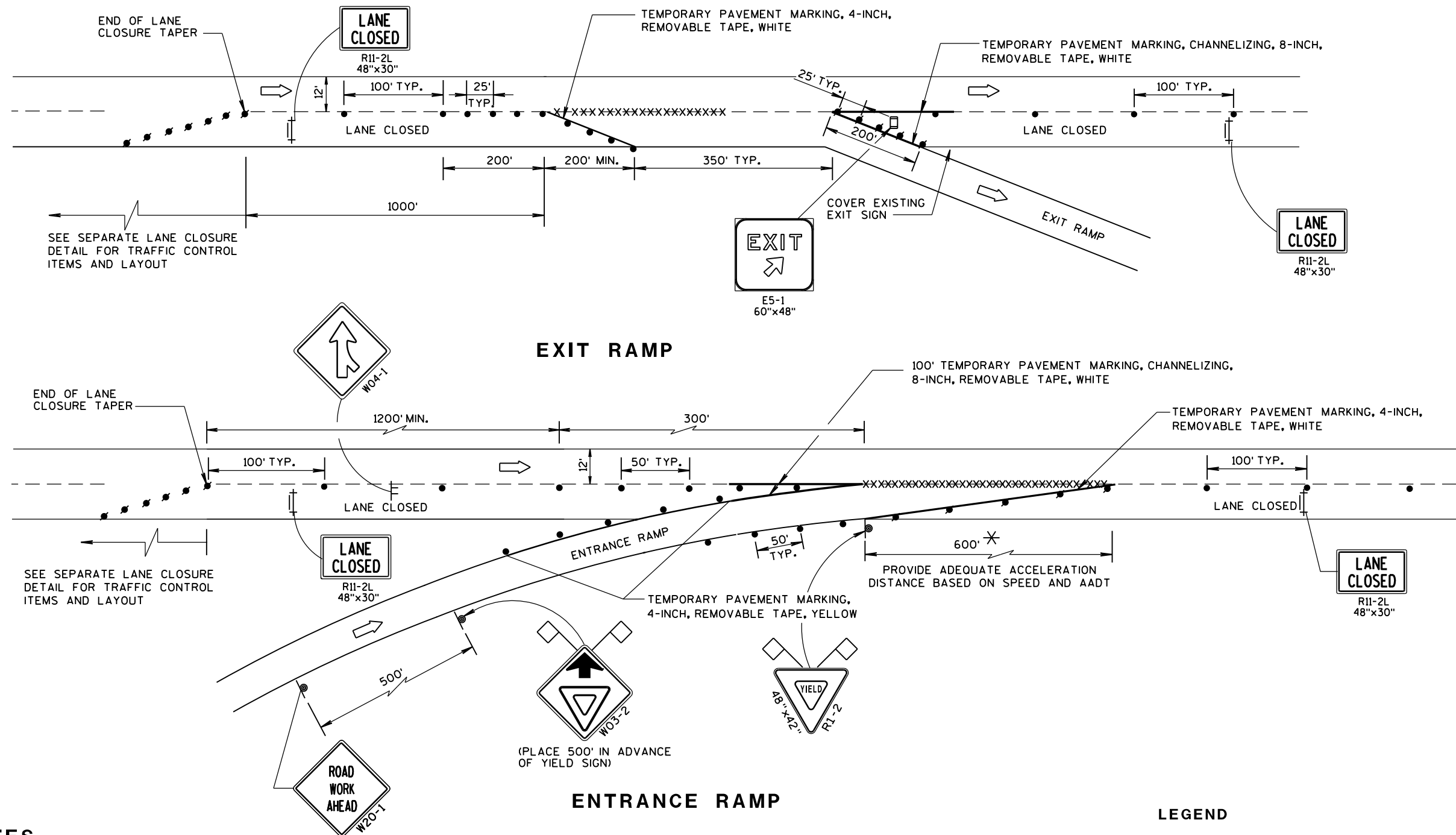
 FLASHING ARROW BOARD

Ⓐ TYPE "A" WARNING LIGHT (FLASHING)

~~X-X-X~~ REMOVING PAVEMENT MARKING

➡ DIRECTION OF TRAFFIC

 WORK AREA



GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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 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.

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

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.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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.

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

* LENGTH OF OPENING MAY BE REDUCED TO 150 FEET DURING STAGING OF WORK IN IMMEDIATE AREA OF RAMP TAPER.

LEGEND

	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
	REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
	TYPE III BARRICADE WITH ATTACHED SIGN
	FLAGS, 16" x 16" MIN., (ORANGE)
	DIRECTION OF TRAFFIC

TRAFFIC CONTROL,
EXIT AND ENTRANCE RAMP
WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2015
DATE

/S/ Peter Amokobe Atepe
STATEWIDE WORK ZONE TRAFFIC
SAFETY 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.

W20-1A 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

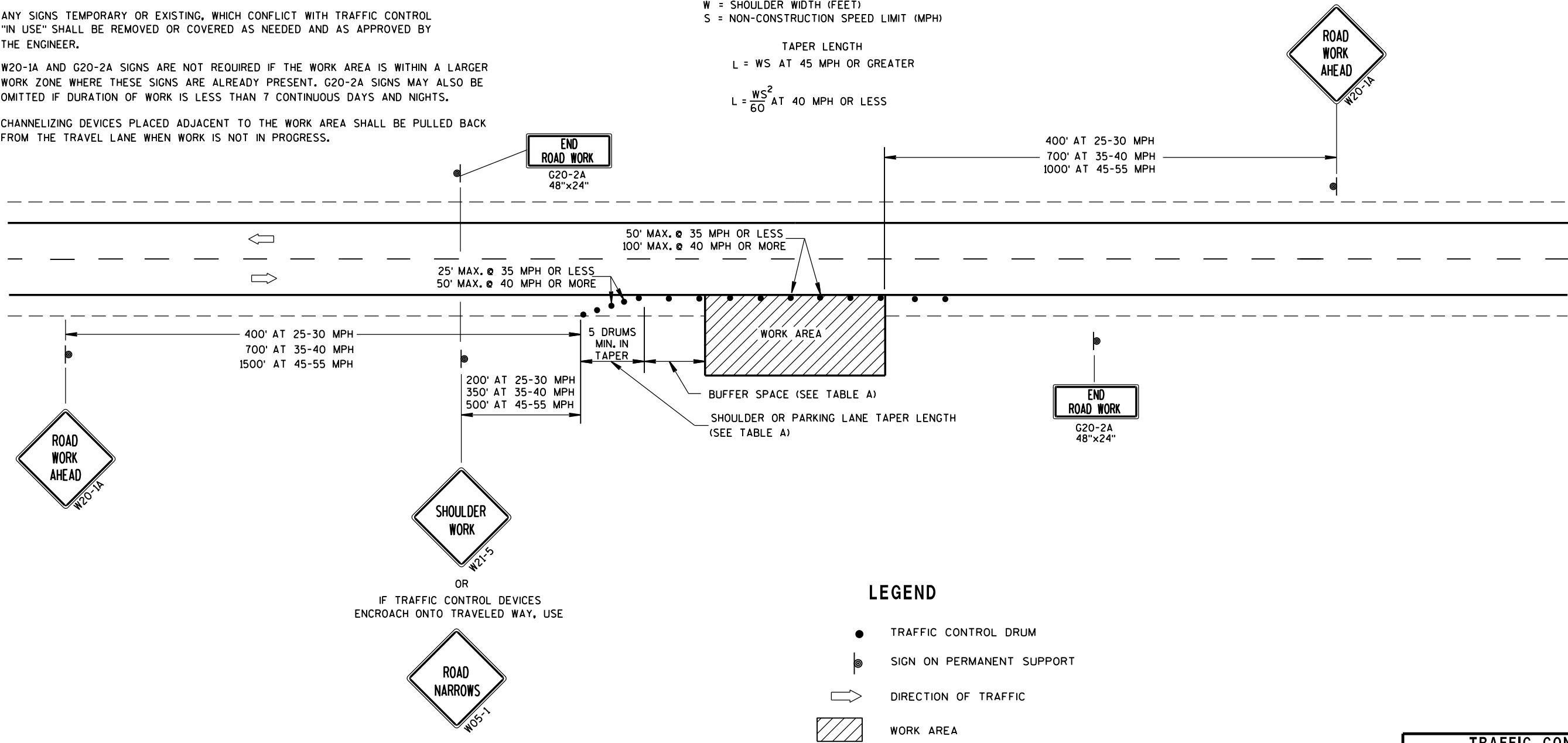
SHOULDER TAPER LENGTH (FEET)					BUFFER SPACE (FEET)
S \ W	4	6	8	10	
30	20	30	40	50	200
35	30	45	55	70	250
40	40	55	75	90	305
45	60	90	120	150	360
50	70	100	135	170	425
55	75	110	150	185	495

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

TAPER LENGTH
L = WS AT 45 MPH OR GREATER

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

SHOULDER TAPER LENGTH = $\frac{1}{3}L$



LEGEND

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

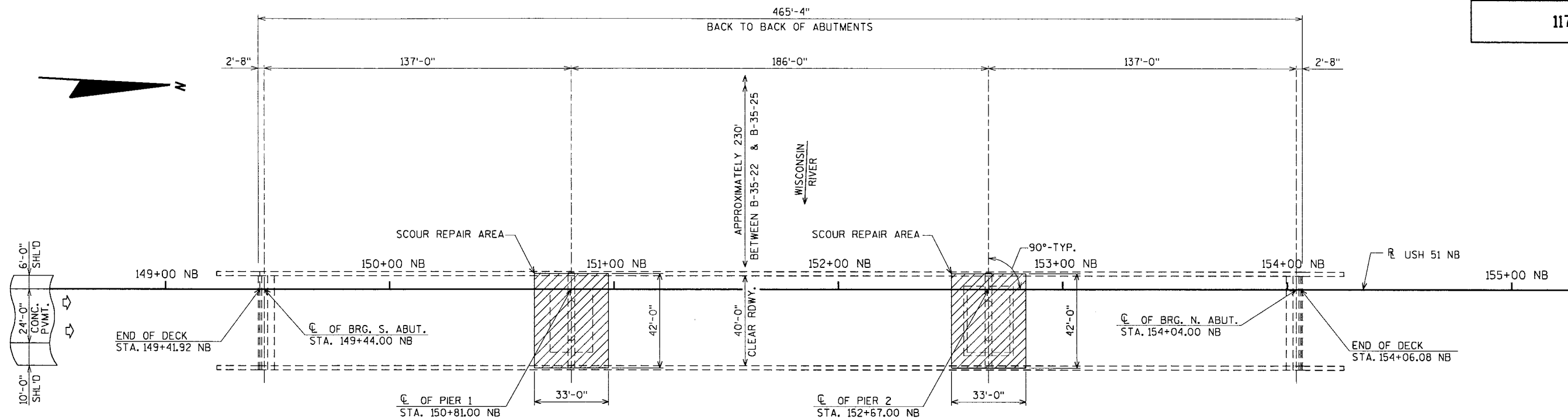
TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED July 14, 2015 DATE	/S/ Peter Amakobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA	

\$PRNAME\$
U:\42-0967.00 - Lincoln County, USH 51 Rehab\42-0967.02 B-35-22\25,62,63 (WI River)\B-35-22\B-35-

CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:

DATE:
DATE:
DATE:

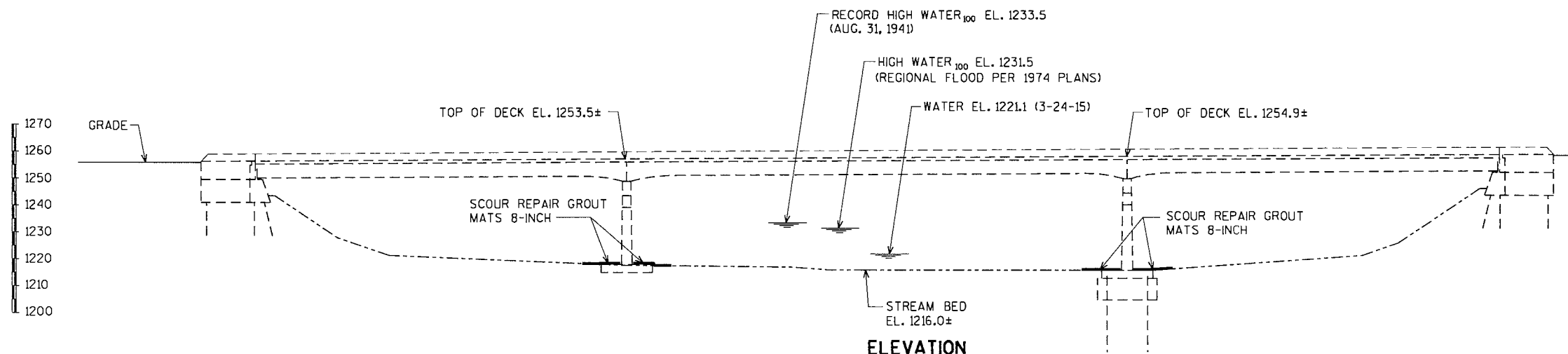
8



PLAN
3-SPAN HAUNCHED PLATE GIRDERS
SCOUR REPAIR

LIST OF DRAWINGS

1. GENERAL PLAN
2. PIER 1 SCOUR REPAIR
3. PIER 2 SCOUR REPAIR
4. HYDROSURVEY
5. INSPECTION AND SOUNDING PLAN



ELEVATION

DESIGN DATA

MATERIAL PROPERTIES:

CONCRETE MASONRY GROUT _____ f'c = 3,000 p.s.i.

TRAFFIC DATA:

A.D.T. = 12,500 (2017)
A.D.T. = 14,700 (2037)
R.D.S. = 70 M.P.H.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.
SEE TRAFFIC CONTROL PLANS FOR STAGING AND WORK ZONE

TOTAL ESTIMATED QUANTITIES

SPV.0035 SCOUR REPAIR GROUT BAGS _____ 38 CY
SPV.0035 SCOUR REPAIR GROUT MATS 8-INCH _____ 55 CY
SPV.0035 UNDERWATER EXCAVATION FOR STRUCTURES _____ 24 CY

SCOUR REPAIR NOTES

RIVER BOTTOM ELEVATION AND EXTENT OF SCOUR ARE FROM THE "UNDERWATER BRIDGE INSPECTION REPORT USH 51 NB OVER THE WISCONSIN RIVER, STRUCTURE B-35-22" DATED 9-21-2015 BY AYRES ASSOCIATES.

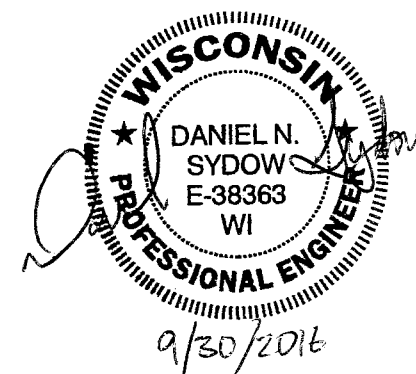
GROUT BAG SHALL BE 3'-0" WIDE x 4'-0" LONG x 1'-0" THICK.

BAGS AND MAT ARE TO BE PLACED SO THAT THERE IS NO GAP BETWEEN THE BAGS AND THE COLUMN.

ADJACENT MATS SHALL BE JOINED BY FIELD SEWING OR ZIPPERING BEFORE FILLING THE MATS WITH GROUT.

REMOVE MATERIAL THAT CONFLICTS WITH OR COULD DAMAGE GROUT MAT.

DIMENSIONS SHOWING LIMITS OF GROUT MAT ARE MEASURED ALONG FINISHED SURFACE OF MAT AFTER GROUTING.



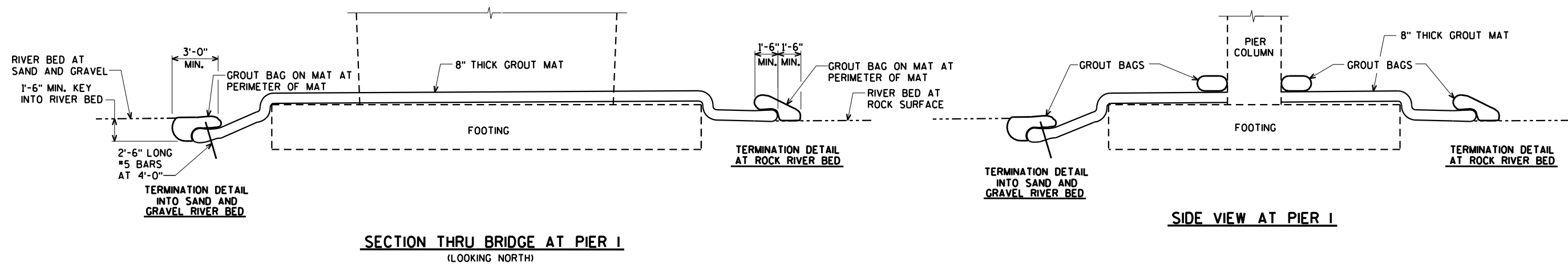
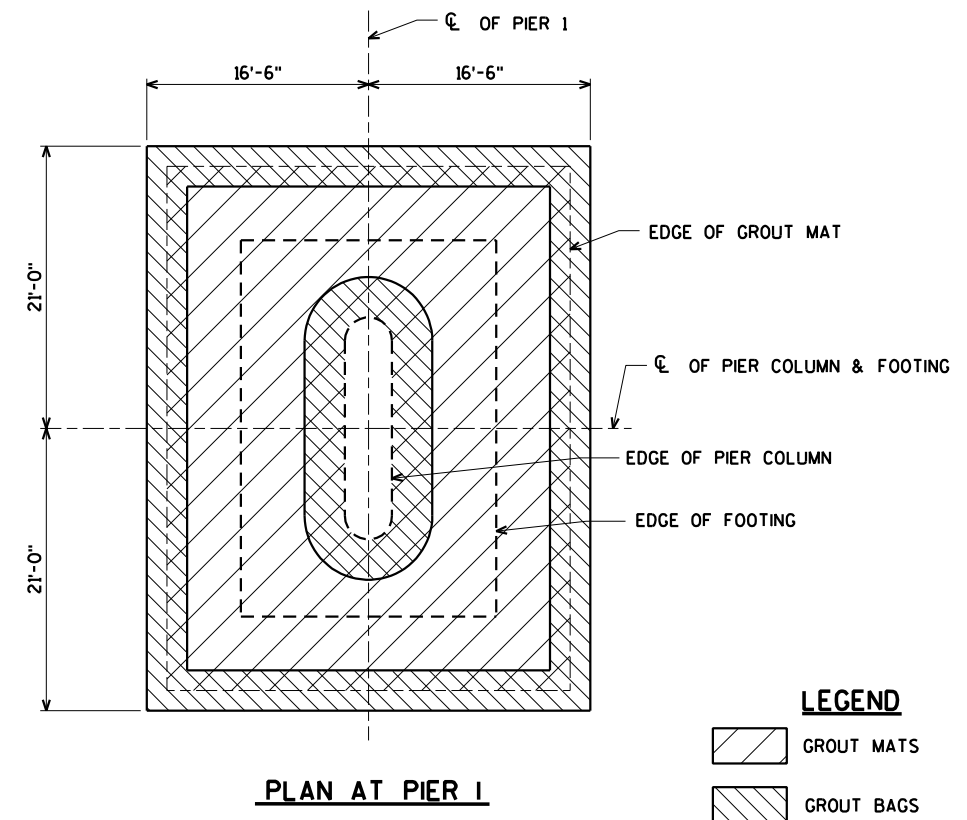
BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

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

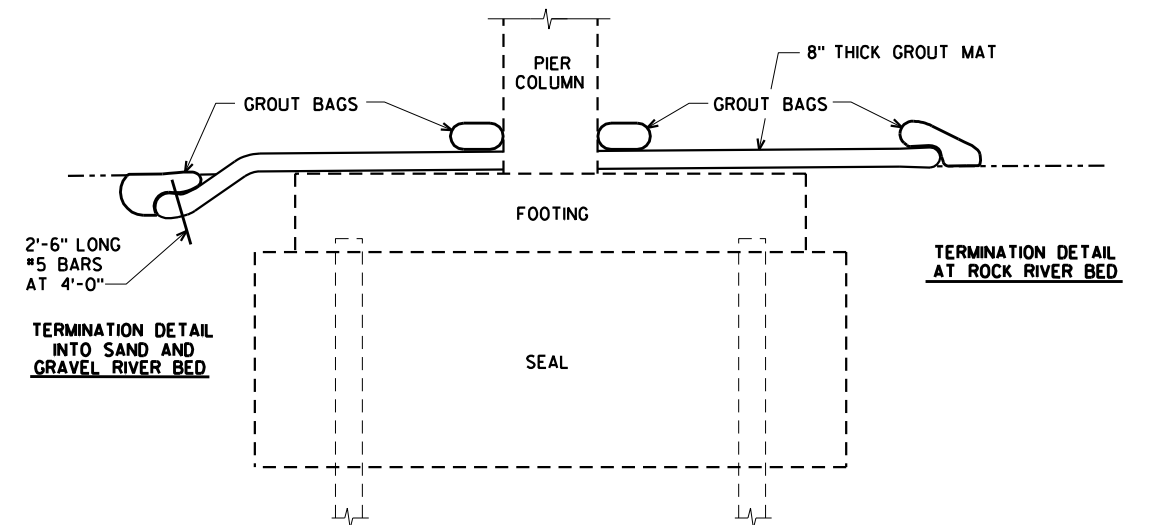
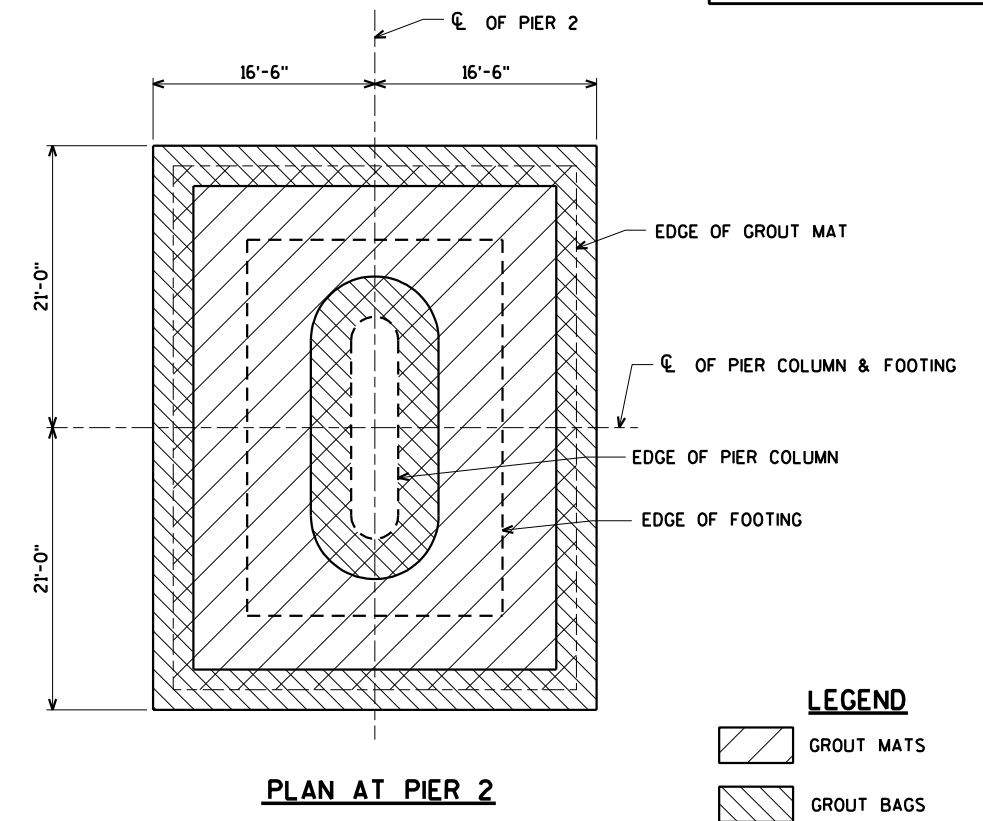
STATE PROJECT NUMBER

1176-23-63

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> SDR 11/29/16 CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-35-22			
USH 51 NB OVER WISCONSIN RIVER			
COUNTY	LINCOLN	TOWN/CITY/VILLAGE	SCOTT & PINE RIVER
DESIGN SPEC.	REHABILITATION	N/A	
DESIGNED BY	RDP	DESIGN CK'D.	DNS
DRAWN BY	CLS	PLANS CK'D.	DNS
GENERAL PLAN			SHEET 1 OF 5



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-35-22			
DRAWN BY		CLS	PLANS CK'D. DNS
PIER 1 SCOUR REPAIR		SHEET 2 OF 5	

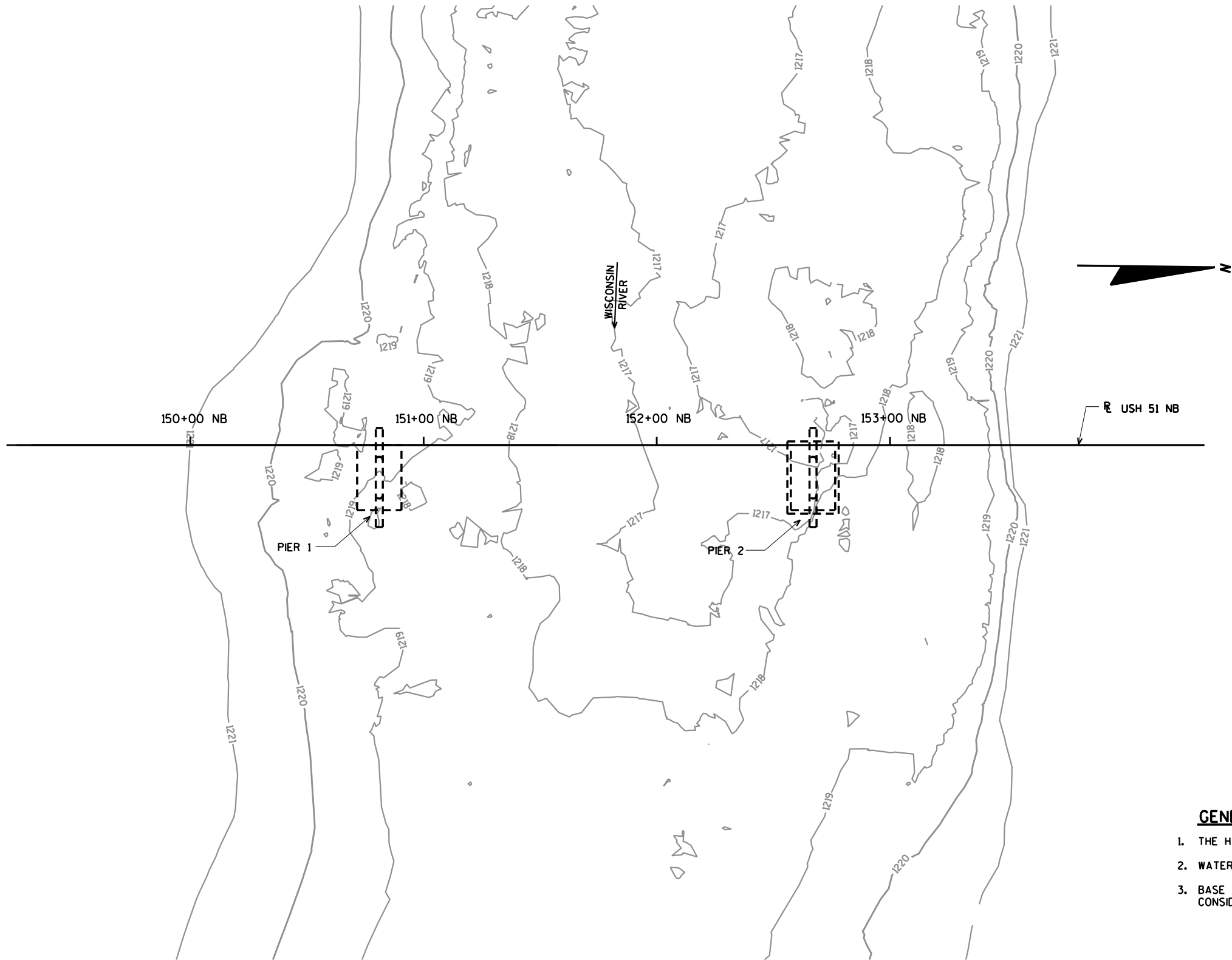


SIDE VIEW AT PIER 2

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-35-22			
DRAWN BY		CLS	PLANS CK'D. DNS
PIER 2 SCOUR REPAIR		SHEET 3 OF 5	

\$PRFNAME\$
U:\42-0967.00 - Lincoln County, USH 51 Rehabs\42-0967.02 B-35-22,25,62,63 (WI River)\B-35-22\B-35-22 hydro.dgn

8



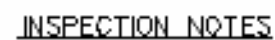
GENERAL NOTES

1. THE HYDROGRAPHIC SURVEY WAS COMPLETED ON MARCH 24, 2015.
2. WATER ELEVATION 1221.1.
3. BASE MAP INFORMATION SHOWN ON THIS DRAWING SHALL BE CONSIDERED APPROXIMATE.

8

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-35-22			
DRAWN BY		CLS	PLANS CK'D. DNS
HYDROSURVEY			SHEET 4 OF 5

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



1. REFERENCE ELEVATION MARKER: BOTTOM OF PIER 1 HAMMERHEAD (ELEVATIONS = 1235.2 FEET, FROM BRIDGE PLANS)
2. WATERLINE ELEVATION WAS 1222.4 FEET ON 9/20/2009.
3. WATERLINE ELEVATION WAS 1220.7 FEET ON 9/21/2015.
4. THE CONCRETE BELOW WATER IS IN GOOD CONDITION.

[] = WATER DEPTH AT TIME OF INSPECTION

②

1) = VERTICAL HEIGHT OF FOOTING EXPOSURE

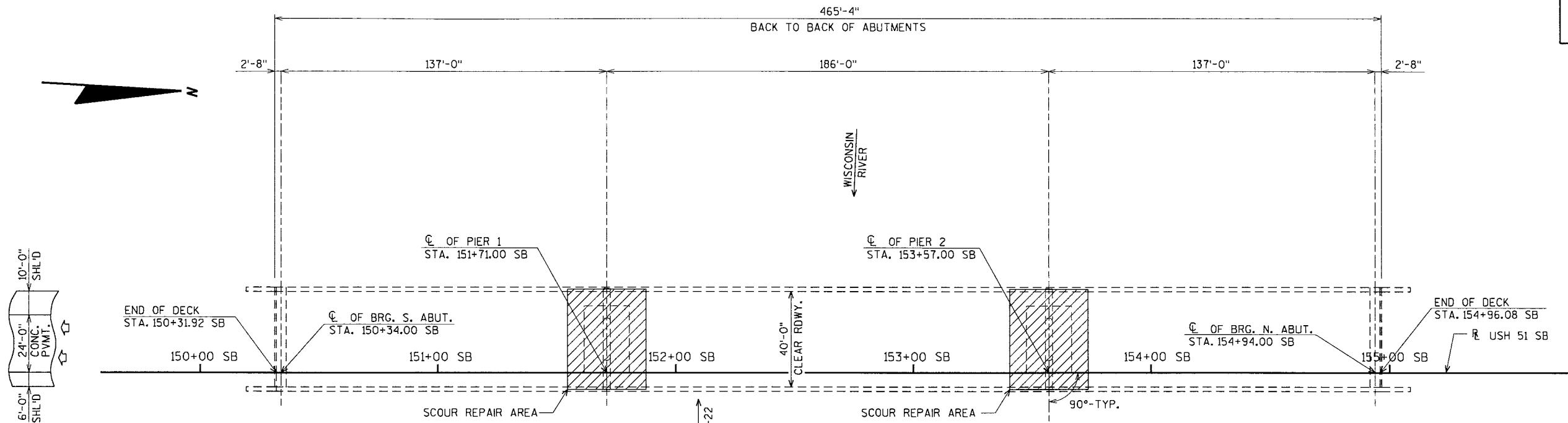
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-35-22			
DRAWN BY		CLS	PLANS DATE
INSPECTION AND SOUNDING PLAN		SHEET 5 OF 5	

\$PRENAME\$
U:\42-0967.00 - Lincoln County, USH 51 Rehab\42-0967.02 B-35-22,25,62,63 (W.River)\B-35-25-B-35-

CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:

DATE:
DATE:
DATE:

8

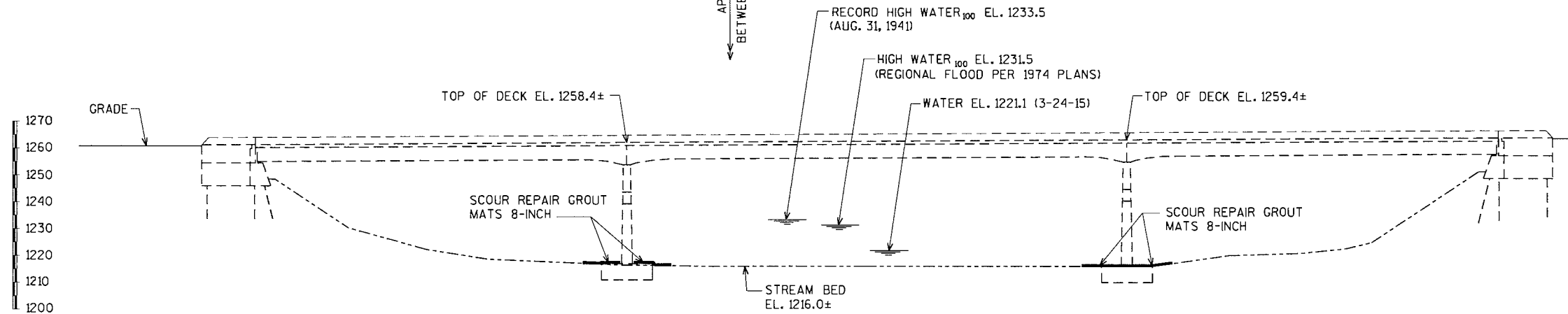


PLAN

3-SPAN HAUNCHED PLATE GIRDERS
SCOUR REPAIR

LIST OF DRAWINGS

1. GENERAL PLAN
2. PIER 1 SCOUR REPAIR
3. PIER 2 SCOUR REPAIR
4. HYDROSURVEY
5. INSPECTION AND SOUNDING PLAN



ELEVATION

DESIGN DATA

MATERIAL PROPERTIES:

CONCRETE MASONRY GROUT _____ f'c = 3,000 p.s.i.

TRAFFIC DATA:

A.D.T. = 12,500 (2017)
A.D.T. = 14,700 (2037)
R.D.S. = 70 M.P.H.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.
SEE TRAFFIC CONTROL PLANS FOR STAGING AND WORK ZONE

TOTAL ESTIMATED QUANTITIES

SPV.0035 SCOUR REPAIR GROUT BAGS _____ 38 CY
SPV.0035 SCOUR REPAIR GROUT MATS 8-INCH _____ 55 CY
SPV.0035 UNDERWATER EXCAVATION FOR STRUCTURES _____ 24 CY

SCOUR REPAIR NOTES

RIVER BOTTOM ELEVATION AND EXTENT OF SCOUR ARE FROM THE "UNDERWATER BRIDGE INSPECTION REPORT USH 51 NB OVER THE WISCONSIN RIVER, STRUCTURE B-35-25" DATED 9-21-2015 BY AYRES ASSOCIATES.

GROUT BAG SHALL BE 3'-0" WIDE x 4'-0" LONG x 1'-0" THICK.

BAGS AND MAT ARE TO BE PLACED SO THAT THERE IS NO GAP BETWEEN THE BAGS AND THE COLUMN.

ADJACENT MATS SHALL BE JOINED BY FIELD SEWING OR ZIPPERING BEFORE FILLING THE MATS WITH GROUT.

REMOVE MATERIAL THAT CONFLICTS WITH OR COULD DAMAGE GROUT MAT.

DIMENSIONS SHOWING LIMITS OF GROUT MAT ARE MEASURED ALONG FINISHED SURFACE OF MAT AFTER GROUTING.



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

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

STATE PROJECT NUMBER

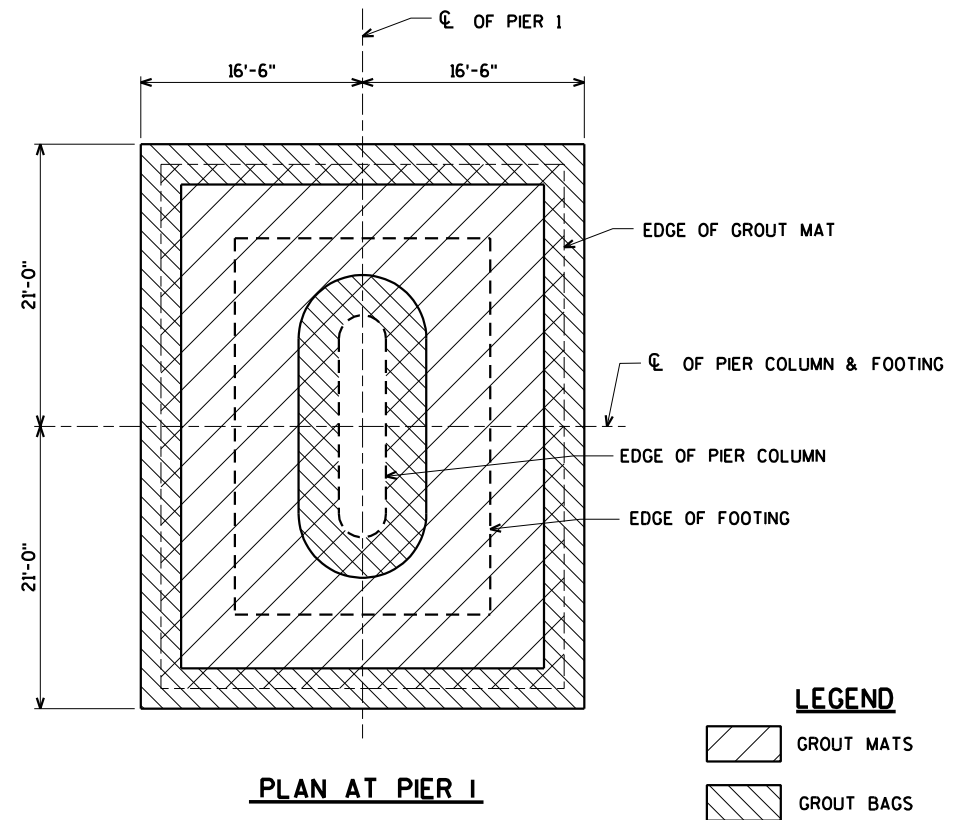
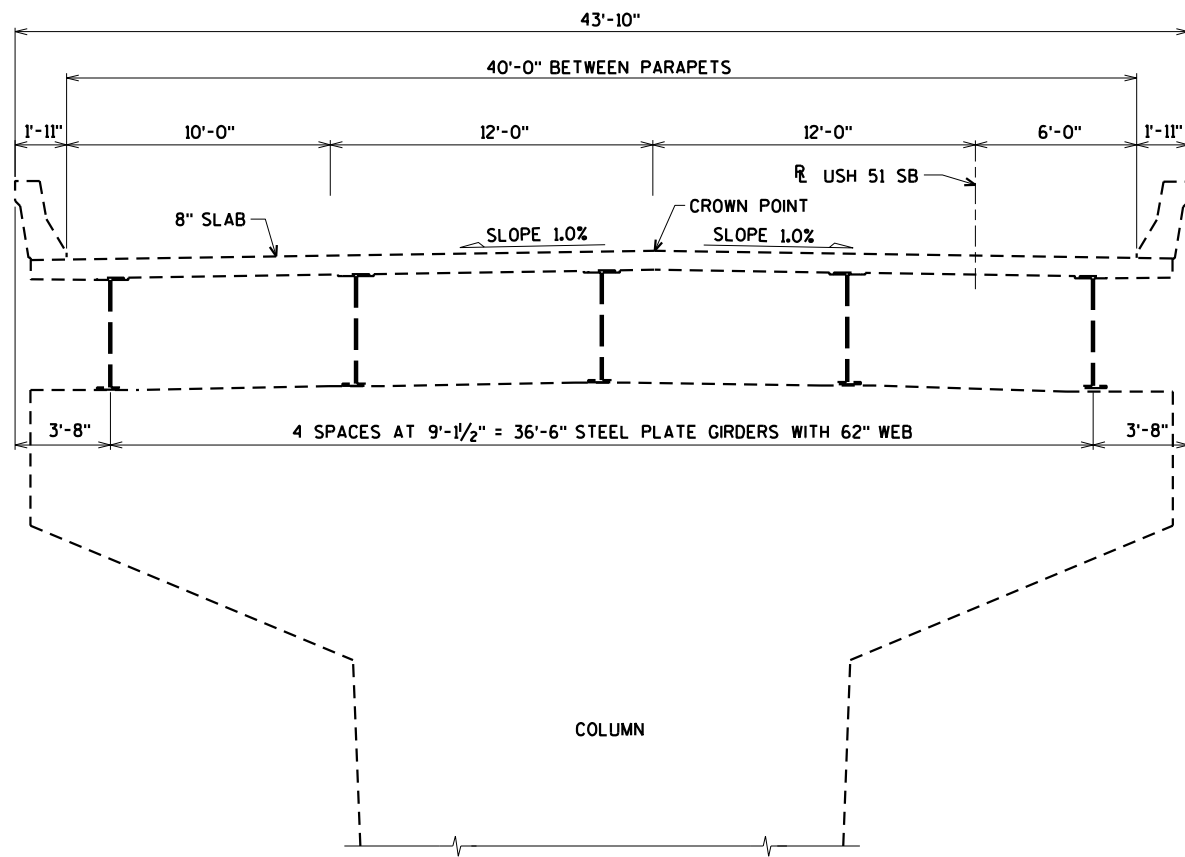
1176-23-63

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> SDR 11/29/16 CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-35-25			
USH 51 SB OVER WISCONSIN RIVER			
COUNTY	LINCOLN	TOWN/CITY/VILLAGE	SCOTT & PINE RIVER
DESIGN SPEC.	REHABILITATION	N/A	
DESIGNED BY	RDP	DESIGN CK'D.	DNS
DRAWN BY	CLS	PLANS CK'D.	DNS
GENERAL PLAN			SHEET 1 OF 5

\$PRNAME\$
U:\42-0967.00 - Lincoln County, USH 51 Rehab\42-0967.02 B-35-22,25,62,63 (WI River)\B-35-25\B-35-25 gp FINAL.dgn

STATE PROJECT NUMBER

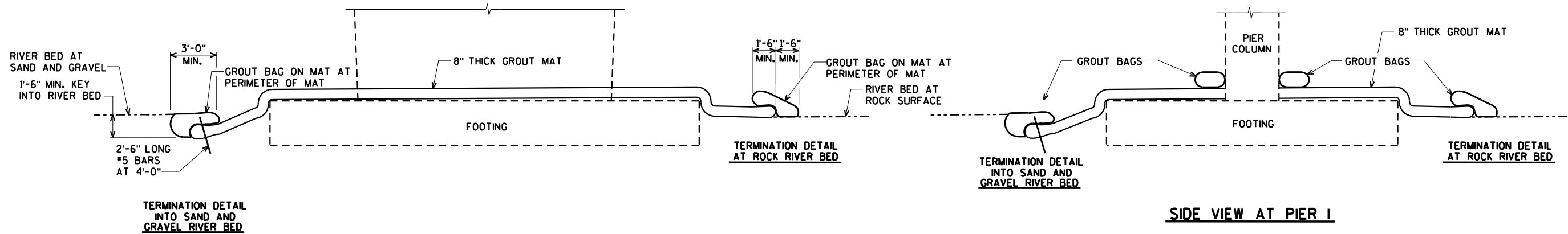
1176-23-63



PLAN AT PIER 1

LEGEND

- GROUT MATS
- GROUT BAGS



SECTION THRU BRIDGE AT PIER 1
(LOOKING NORTH)

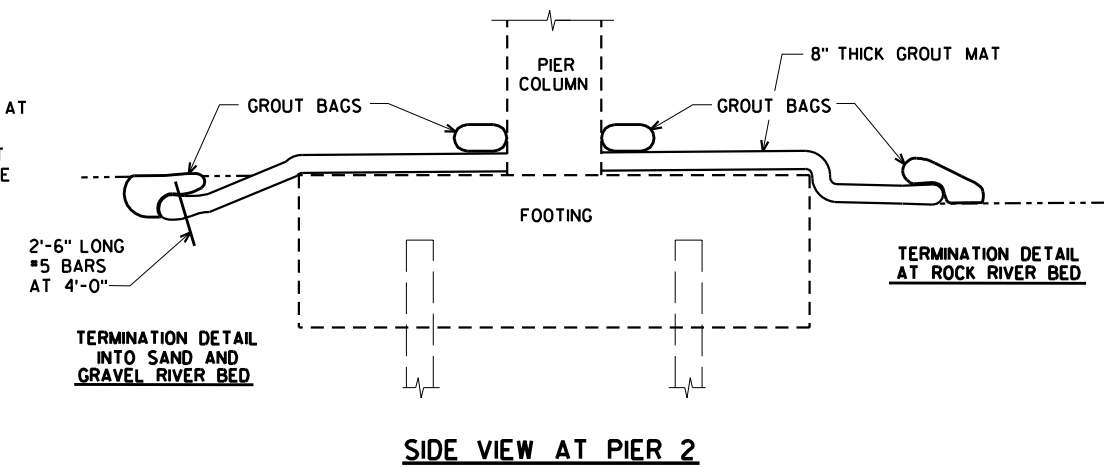
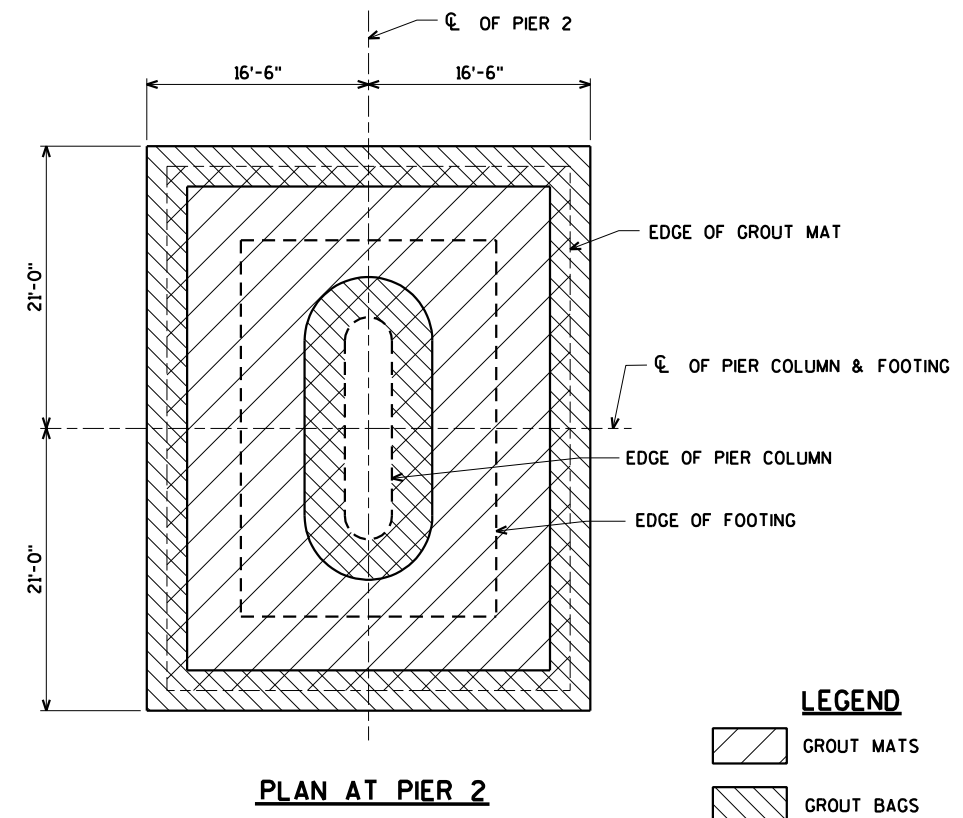
SIDE VIEW AT PIER 1

8

8

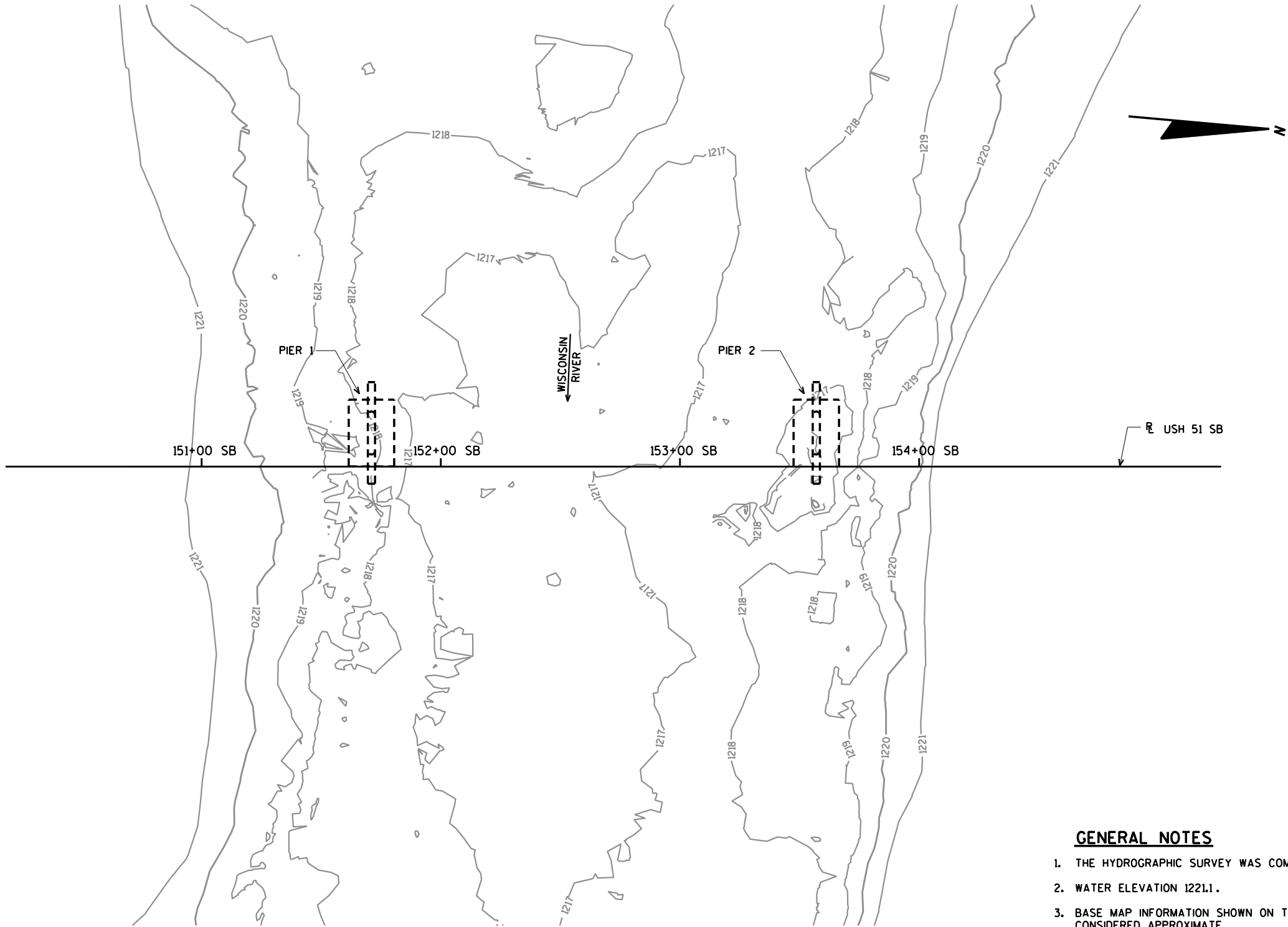
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-35-25			
DRAWN BY		CLS	PLANS CK'D. DNS
PIER 1 SCOUR REPAIR			SHEET 2 OF 5

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



\$PRNAME\$
U:\42-0967.00 - Lincoln County, USH 51 Rehab\42-0967.02 B-35-22,25,62,63 (WI River)\B-35-25\B-35-25 hydro.dgn

8



GENERAL NOTES

1. THE HYDROGRAPHIC SURVEY WAS COMPLETED ON MARCH 24, 2015.
2. WATER ELEVATION 1221.1.
3. BASE MAP INFORMATION SHOWN ON THIS DRAWING SHALL BE CONSIDERED APPROXIMATE.

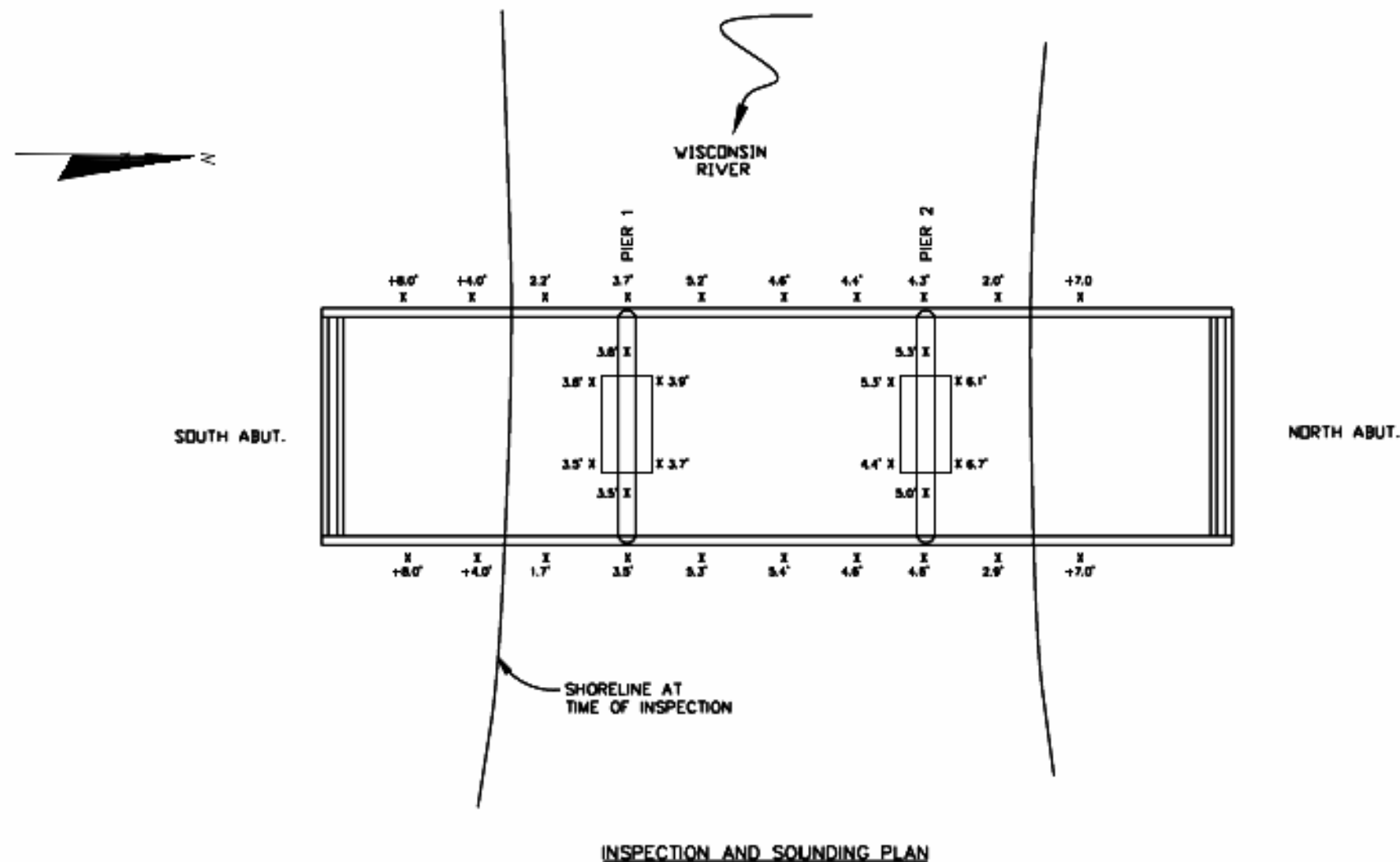
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NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-35-25			
DRAWN BY		CLS	PLANS CK'D. DNS
HYDROSURVEY			SHEET 4 OF 5

ORIGINAL PLANS PREPARED BY

AYRES
ASSOCIATES

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



INSPECTION NOTES

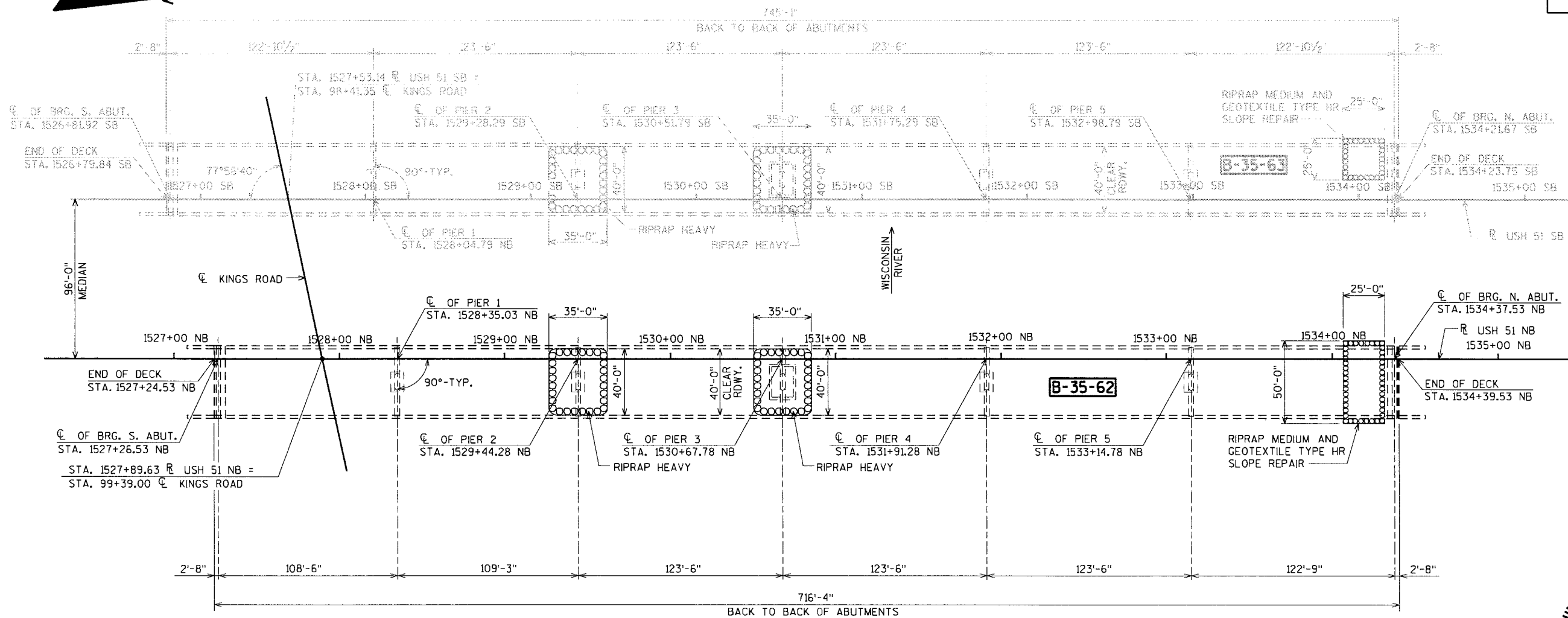
1. REFERENCE ELEVATION MARKER: CONSTRUCTION JOINT AT BOTTOM OF PIER 1 HAMMERHEAD CAP (ELEVATIONS = 1240.0 FEET, FROM BRIDGE PLANS)
2. WATERLINE ELEVATION WAS 1222.3 FEET ON 9/20/2010.
3. WATERLINE ELEVATION WAS 1220.7 FEET ON 9/21/2015.
4. THE CONCRETE BELOW WATER IS IN GOOD CONDITION.
5. PIER 1 HAS MINOR LOCAL SCOUR AT THE NORTHWEST CORNER. THE FOOTING IS EXPOSED AROUND THE ENTIRE PERIMETER WITH A MAXIMUM VERTICAL EXPOSURE OF 1.5 FEET AT THE NORTHWEST CORNER.
6. PIER 2 FOOTING IS EXPOSED ALONG THE NORTH SIDE.

LEGEND

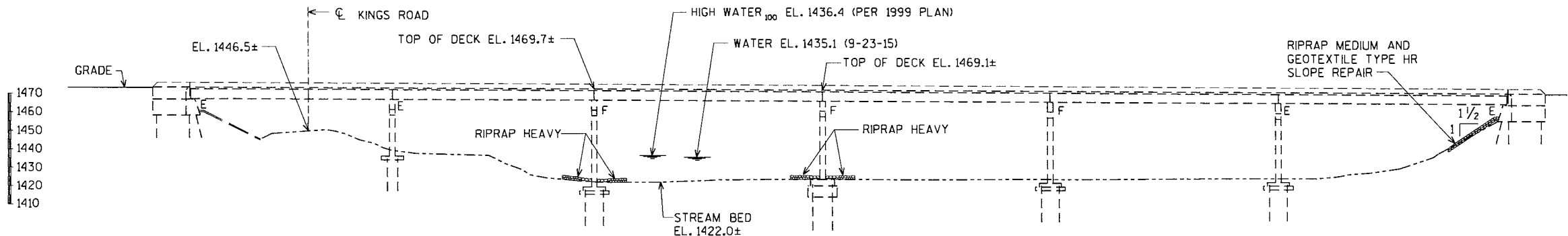
= WATER DEPTH AT TIME OF INSPECTION

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-35-25			
DRAWN BY		CLS	PLANS
INSPECTION AND SOUNDING PLAN		DATE	DWG
SHEET 5 OF 5			

ORIGINAL PLANS PREPARED BY
AVES ASSOCIATES
 5433 Oakwood Hill Parkway
 Eau Claire, WI 54601
 www.AvesAssociates.com



PLAN
6-SPAN 70-INCH PRESTRESSED GIRDERS
SCOUR REPAIR



ELEVATION

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

TRAFFIC DATA:

A.D.T. = 10,700 (2017)
A.D.T. = 13,200 (2037)
R.D.S. = 70 M.P.H.

TOTAL ESTIMATED QUANTITIES

606.0200 RIPRAP MEDIUM 115 CY
606.0300 RIPRAP HEAVY 210 CY
645.0120 GEOTEXTILE TYPE HR 200 SY

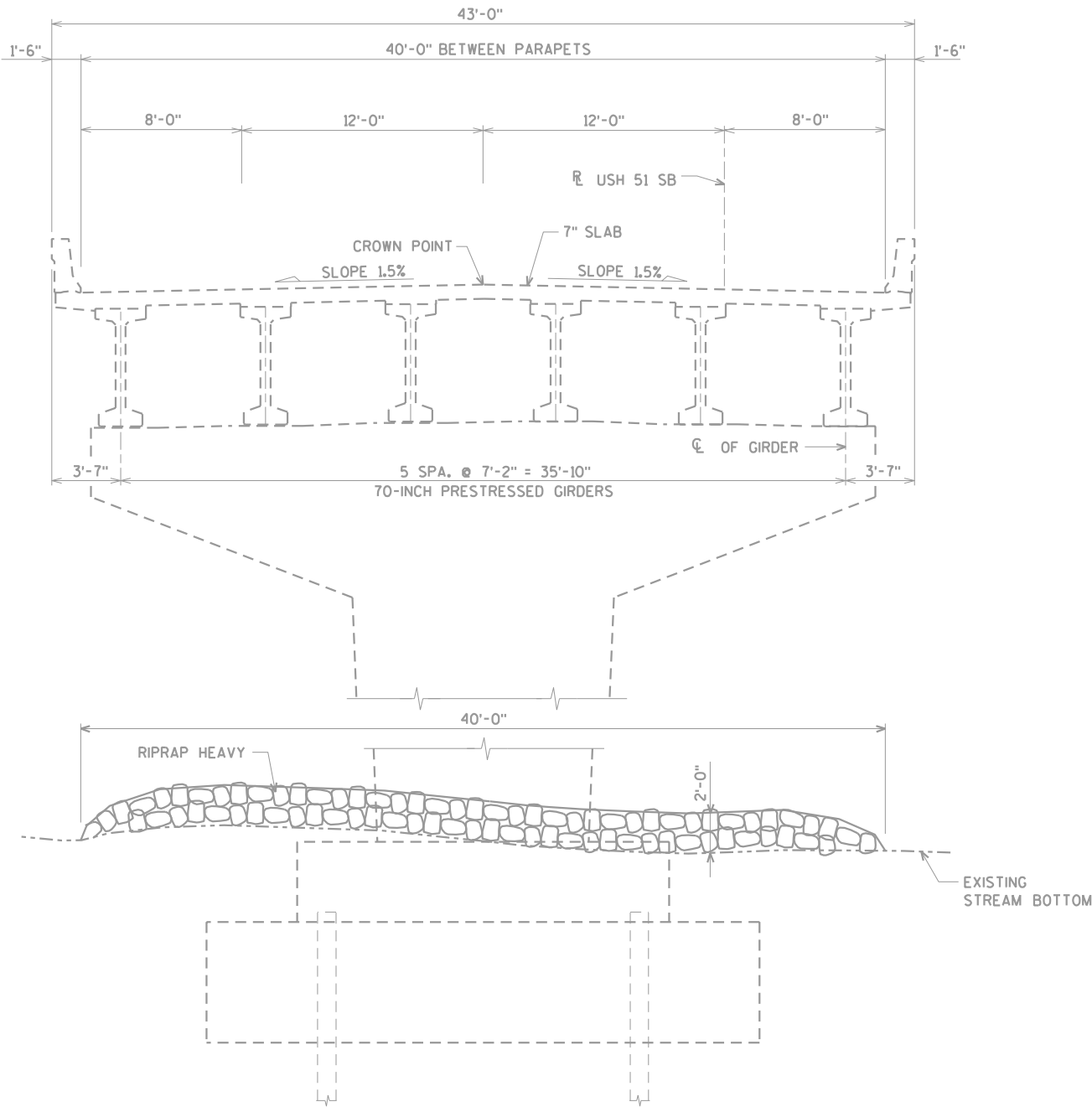
LIST OF DRAWINGS

1. GENERAL PLAN
2. TYPICAL SECTION AND NOTES

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



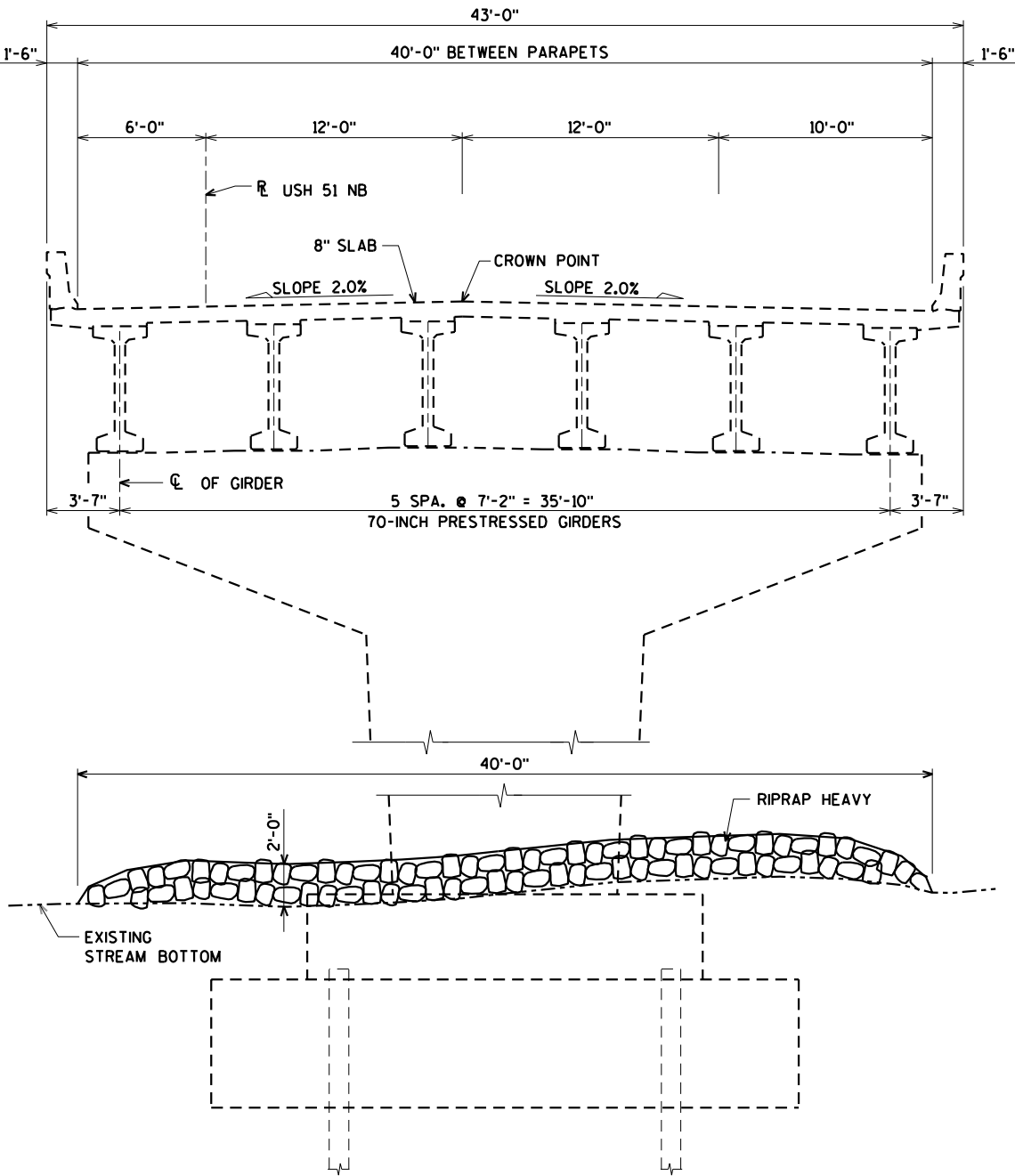
NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY			
AYRES ASSOCIATES 3433 Oakwood Hills Parkway Eau Claire, WI 54701 www.AyresAssociates.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED <i>William C. Dreher</i> SDR		01/23/17	DATE
CHIEF STRUCTURES DESIGN ENGINEER			
STRUCTURE B-35-62			
USH 51 NB OVER WISCONSIN RIVER & KINGS ROAD			
COUNTY	LINCOLN	TOWN/CITY/VILLAGE	TOMAHAWK
DESIGN SPEC. REHABILITATION N/A			
DESIGNED BY	DNS	DESIGN CK'D.	CJM
DRAWN BY	CLS	PLANS CK'D.	BNS
GENERAL PLAN			SHEET 1 OF 2



TYPICAL SECTION THRU BRIDGE B-35-63

(LOOKING NORTH)

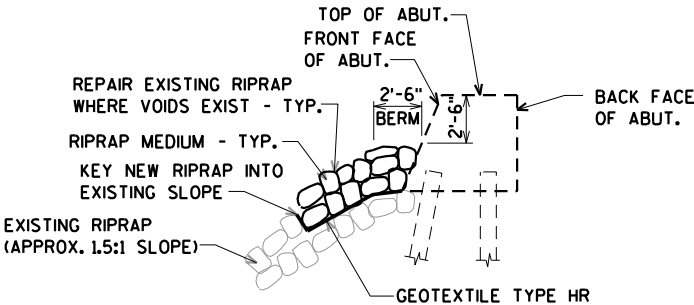
SEE TRAFFIC CONTROL PLANS FOR STAGING AND WORK ZONE



TYPICAL SECTION THRU BRIDGE B-35-62

(LOOKING NORTH)

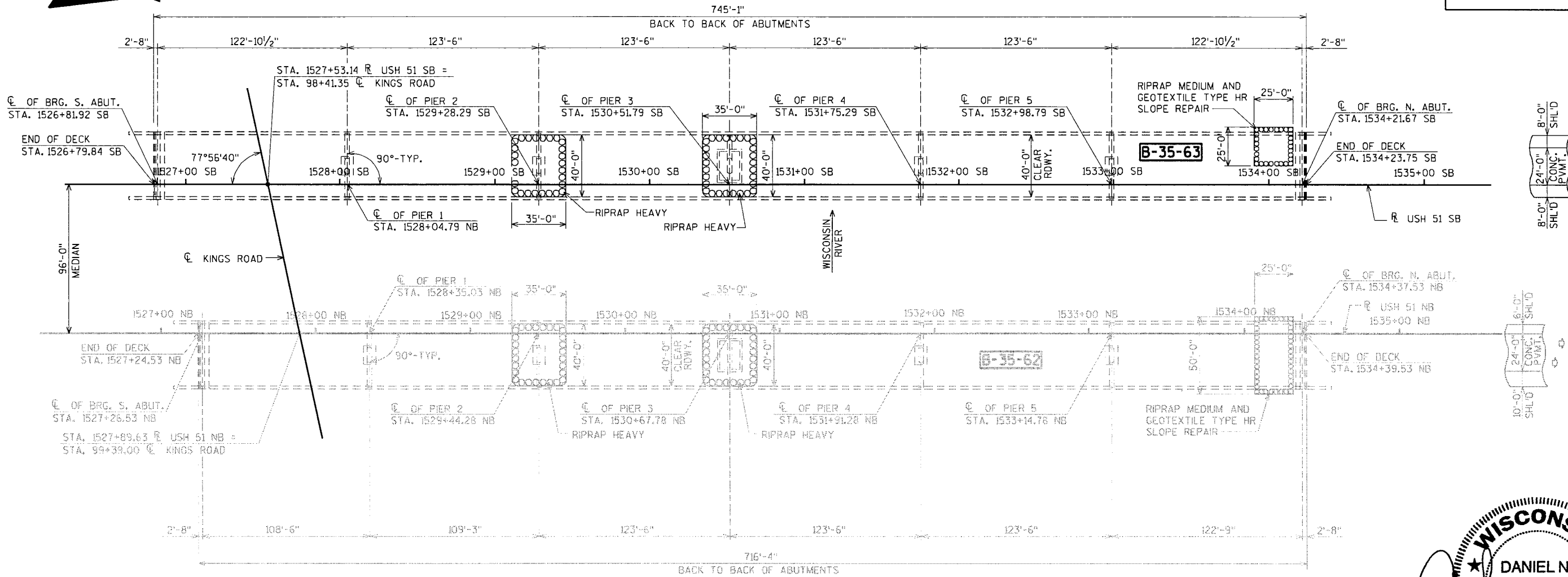
SEE TRAFFIC CONTROL PLANS FOR STAGING AND WORK ZONE



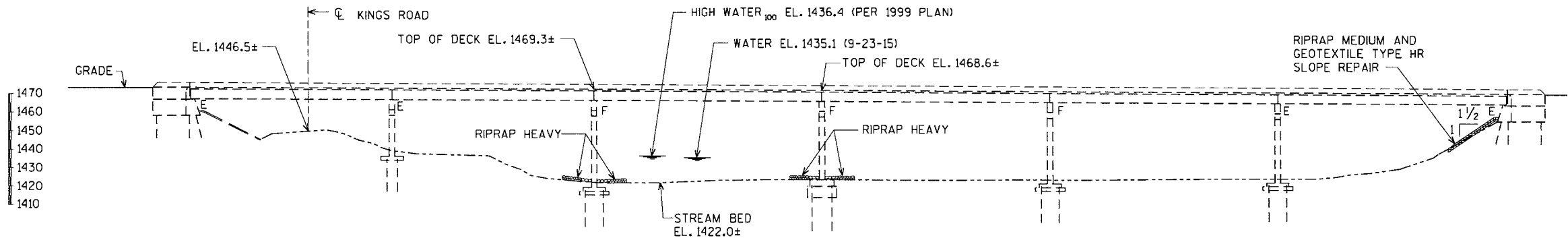
SLOPE REPAIR DETAIL

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-35-62			
DRAWN BY		CLS	PLANS CK'D. DNS
TYPICAL SECTION AND NOTES			SHEET 2 OF 2



PLAN
6-SPAN 70-INCH PRESTRESSED GIRDERS
SCOUR REPAIR



ELEVATION

GENERAL NOTES

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

TRAFFIC DATA:

A.D.T. = 10,700 (2017)
A.D.T. = 13,200 (2037)
R.D.S. = 70 M.P.H.

TOTAL ESTIMATED QUANTITIES

606.0200 RIPRAP MEDIUM _____ 60 CY
606.0300 RIPRAP HEAVY _____ 210 CY
645.0120 GEOTEXTILE TYPE HR _____ 100 SY

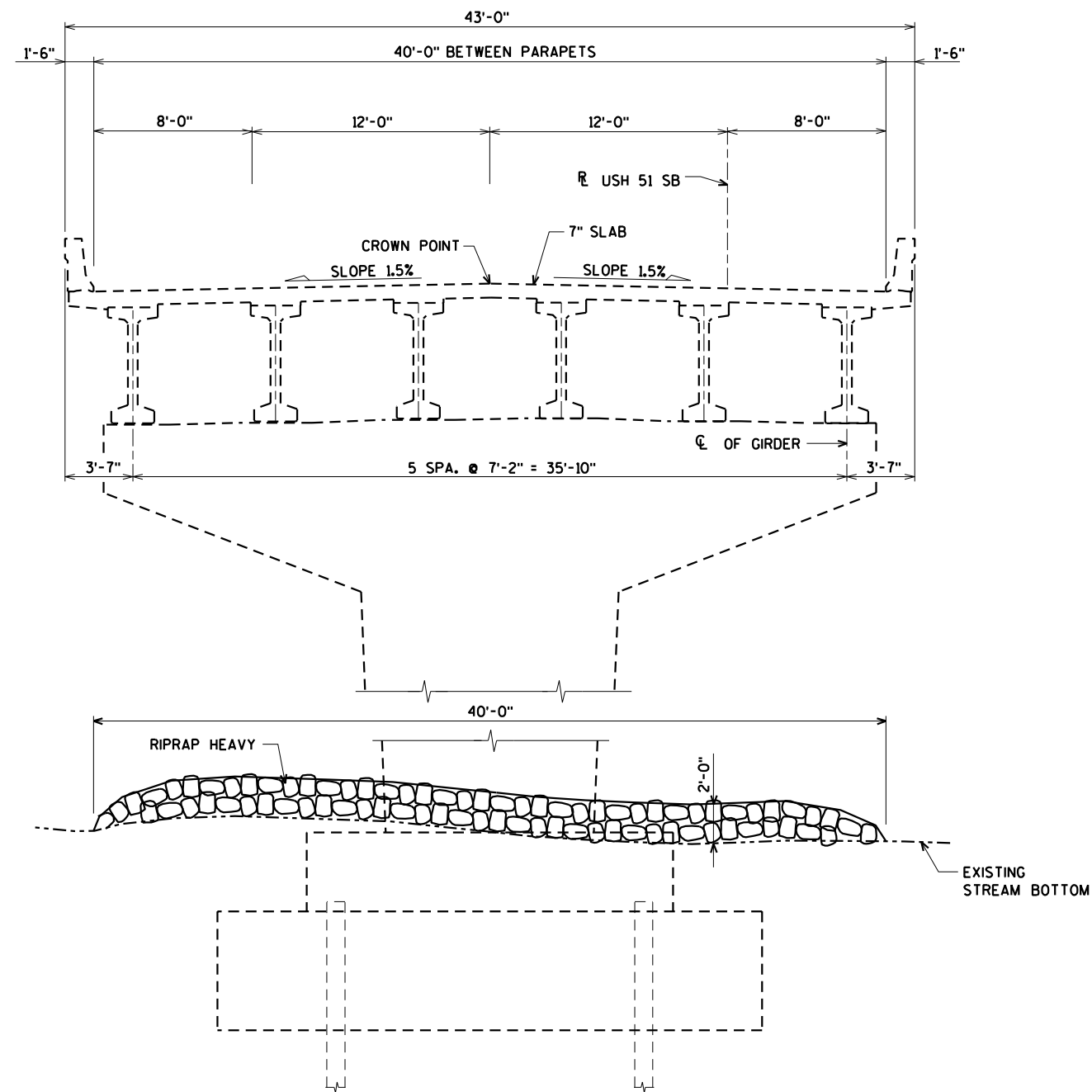
LIST OF DRAWINGS

1. GENERAL PLAN
2. TYPICAL SECTION AND NOTES

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

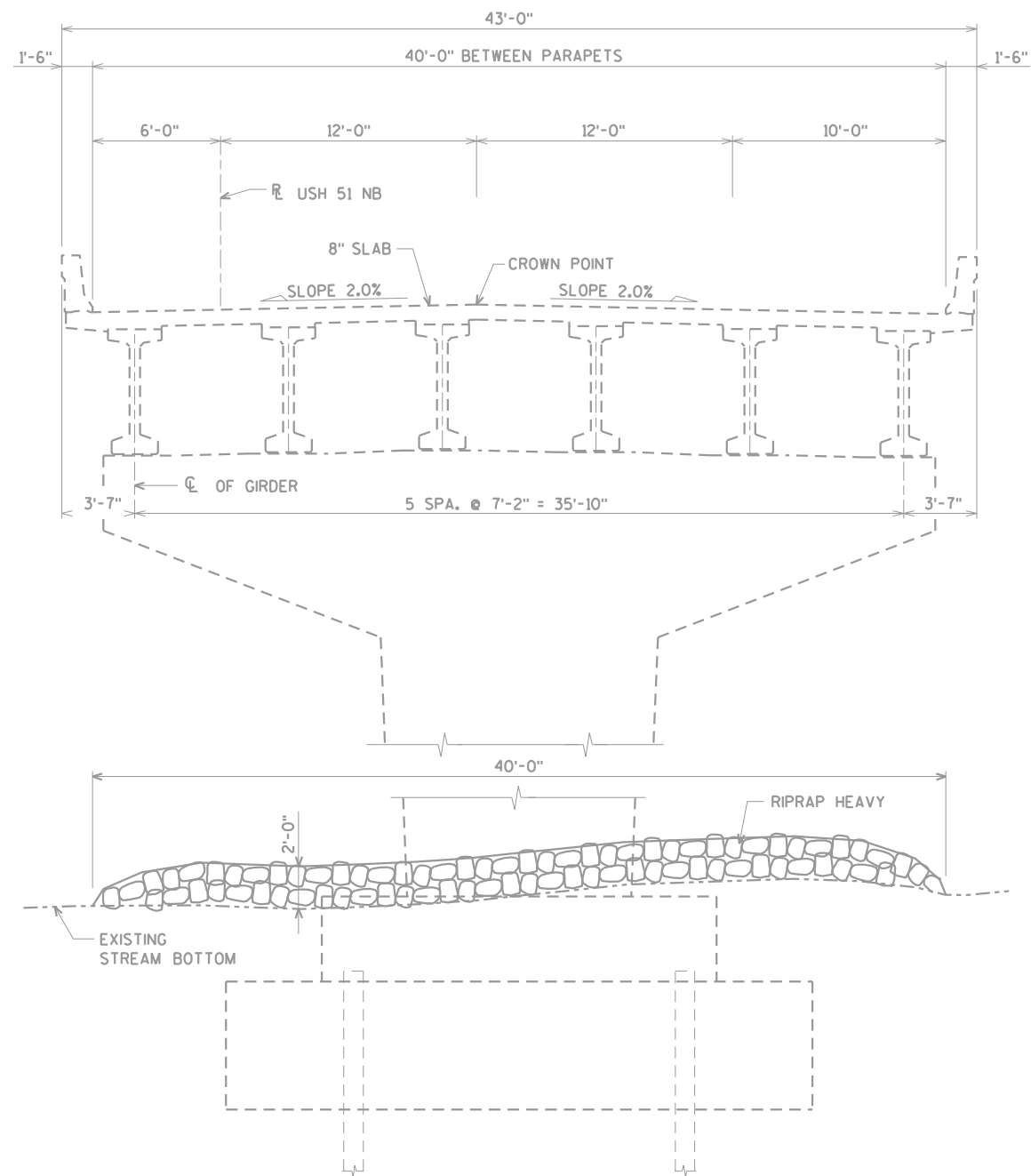


NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY AYRES ASSOCIATES 3433 Oakwood Hills Parkway Eau Claire, WI 54701 www.AyresAssociates.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION ACCEPTED <i>William C. Dreher</i> ^{SR} 01/23/17 CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-35-63			
USH 51 SB OVER WISCONSIN RIVER & KINGS ROAD			
COUNTY	LINCOLN	TOWN/CITY/VILLAGE	TOMAHAWK
DESIGN SPEC.	REHABILITATION	N/A	
DESIGNED BY	DNS	DESIGN CK'D.	CJM
DRAWN BY	CLS	PLANS CK'D.	DNS
GENERAL PLAN			SHEET 1 OF 2

**TYPICAL SECTION THRU BRIDGE B-35-63**

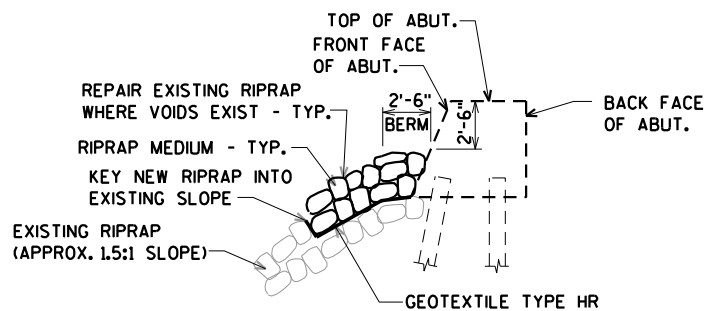
(LOOKING NORTH)

SEE TRAFFIC CONTROL PLANS FOR STAGING AND WORK ZONE

**TYPICAL SECTION THRU BRIDGE B-35-62**

(LOOKING NORTH)

SEE TRAFFIC CONTROL PLANS FOR STAGING AND WORK ZONE

**SLOPE REPAIR DETAIL**

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-35-63			
DRAWN BY	CLS	PLANS CK'D.	DNS
TYPICAL SECTION AND NOTES			SHEET 2 OF 2

Notes



Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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

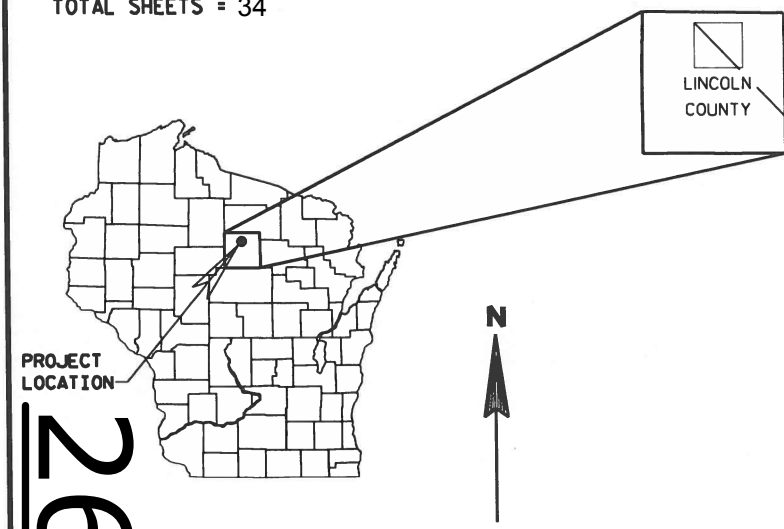
RHI
PROJECT ID: 1176-23-64
WITH: 1176-23-62, 1176-23-63

COUNTY: LINCOLN

APRIL 2017
ORDER OF SHEETS

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

TOTAL SHEETS = 34



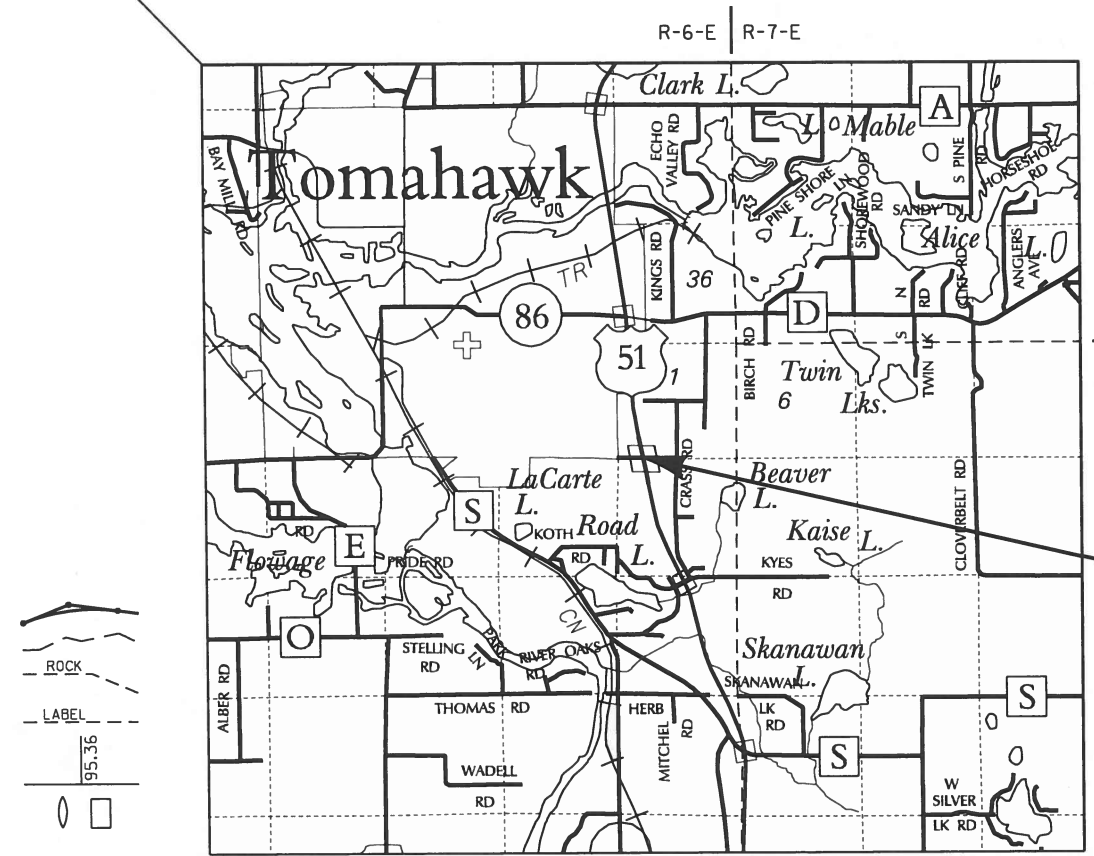
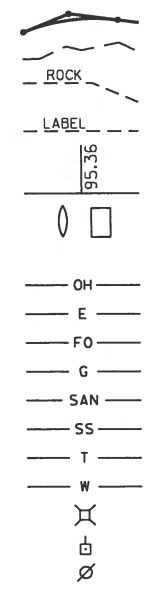
DESIGN DESIGNATION

A.D.T. (2017)	=	12,900
A.D.T. (2037)	=	15,700
D.H.V.	=	1,290
D.	=	61/39
T.	=	15.8%
DESIGN SPEED	=	70 MPH
ESALS	=	N/A

CONVENTIONAL SYMBOLS
PLAN

- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS
- HIGH VOLTAGE
- 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
- OVERHEAD
- ELECTRIC
- FIBER OPTIC
- GAS
- SANITARY SEWER
- STORM SEWER
- TELEPHONE
- WATER
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE



STRUCTURE B-35-56
STRUCTURE B-35-57

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), LINCOLN COUNTY
ELEVATIONS ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PLAN OF PROPOSED IMPROVEMENT
TOMAHAWK - MINOCQUA
KAPHAEM RD BRIDGES B-35-0056, 57
USH 51
LINCOLN COUNTY
STATE PROJECT NUMBER
1176-23-64

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1176-23-64		

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



DATE: 12/1/2016

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	
Surveyor	AYRES ASSOCIATES INC
Designer	AYRES ASSOCIATES INC
Project Manager	MIKE GRAGE
Regional Examiner	CHERYL SIMON
Regional Supervisor	ROBIN STAFFORD

APPROVED FOR THE DEPARTMENT
DATE: 12/01/2016 (Signature)

E

UTILITY CONTACTS

* WISCONSIN PUBLIC SERVICE CORPORATION (ELECTRIC)
ATTN: CLAYTON VIRCKS
P.O. BOX 1166
WAUSAU, WI 54402
(715) 848-7317
chvircks@wisconsinpublicservice.com

* WISCONSIN PUBLIC SERVICE CORPORATION (GAS)
ATTN: DAVID RETZLAFF
2850 SOUTH ASHLAND AVENUE
GREEN BAY, WI 54304
(920) 617-5106
dpretzlaff@wisconsinpublicservice.com

* MEMBER OF DIGGERS HOTLINE



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

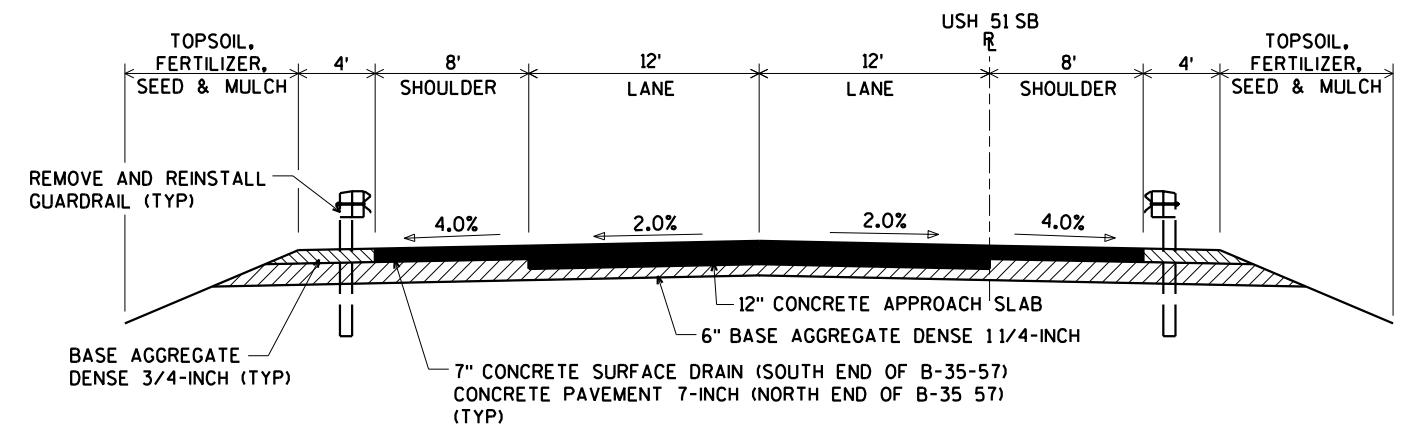
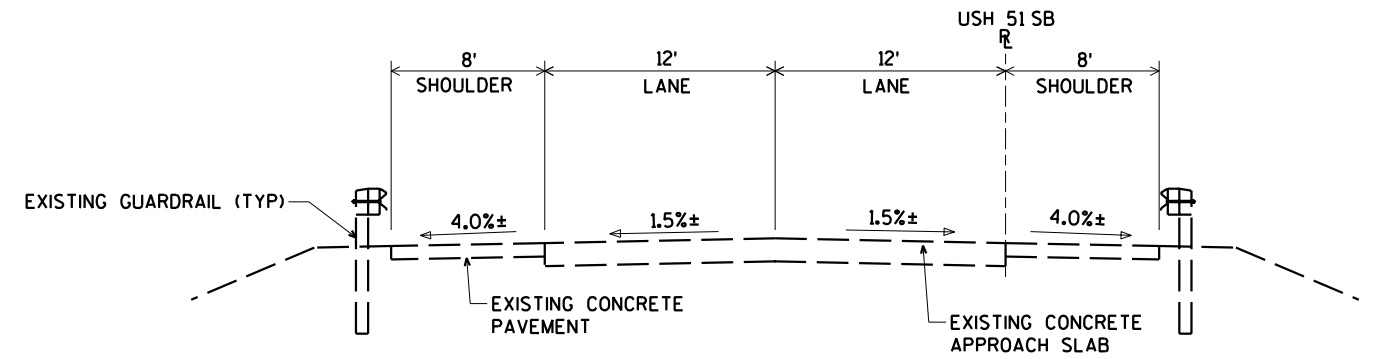
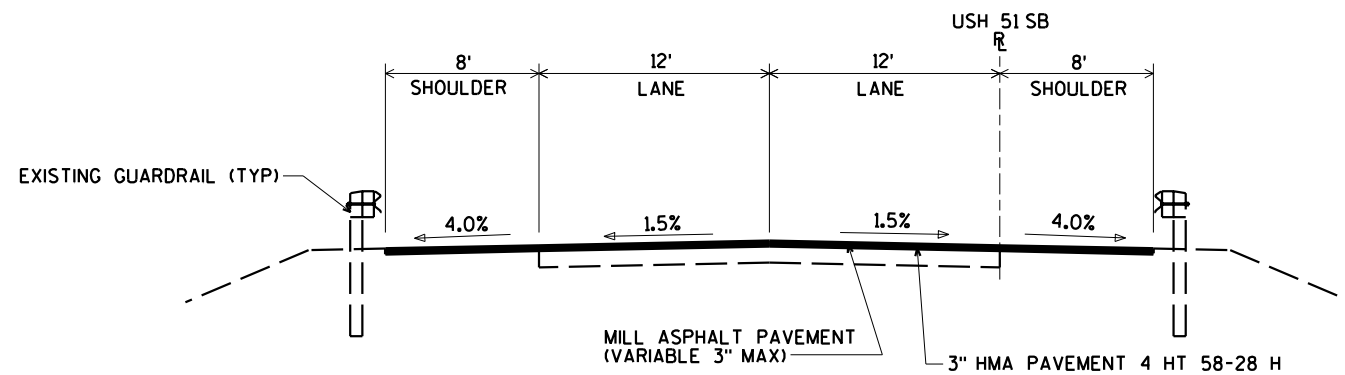
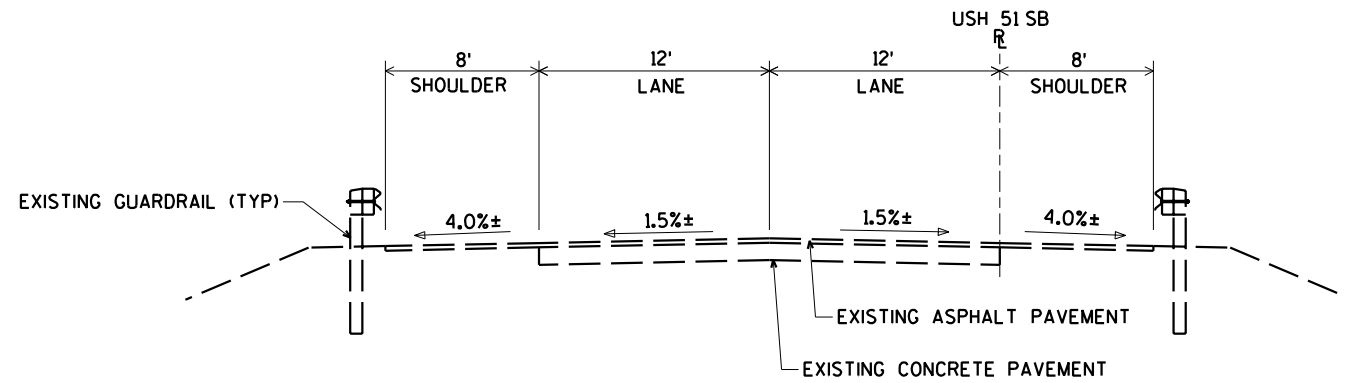
GENERAL NOTES

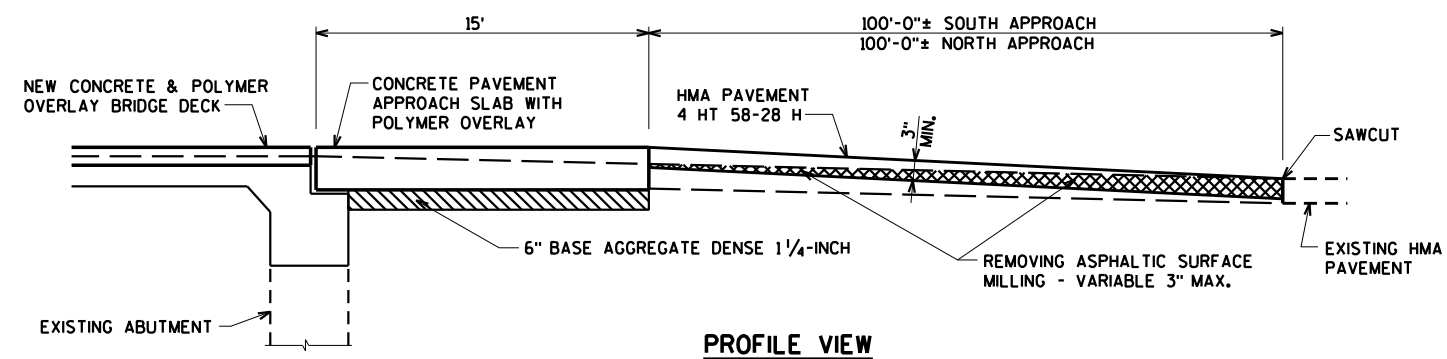
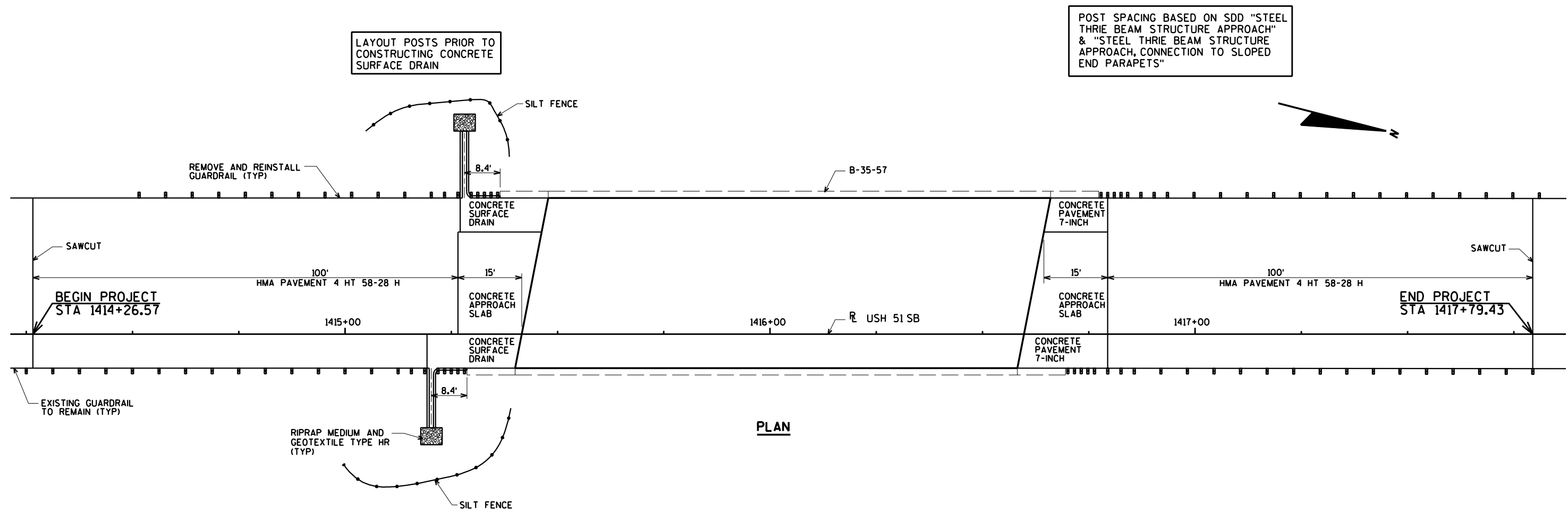
NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS INDICATED FOR REMOVAL BY THE ENGINEER.

THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

JON SIMONSEN
107 SUTLIFF
RHINELANDER, WI 54501
715-365-8916
jonathan.simonsen@wisconsin.gov





B-35-57 APPROACH DETAIL



PROPOSED WORK: PLACE CONCRETE OVERLAY TO CORRECT DIPS IN DECK AT B-35-57, PLACE POLYMER OVERLAY AT BOTH STRUCTURES.

TRAFFIC CONTROL: FOLLOW SDD, "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 MPH WITH BARRIER" FOR CONCRETE OVERLAY AND APPROACH WORK ON USH 51 SB - REDUCE SPEED TO 55 MPH

TRAFFIC CONTROL: FOLLOW SDD, "TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION" FOR POLYMER OVERLAY AT STRUCTURES B-35-56 AND B-35-57

PROJECT NO: 1176-23-64

HWY: USH 51

COUNTY: LINCOLN

SITE OVERVIEW (B-35-56/57)

SHEET

E

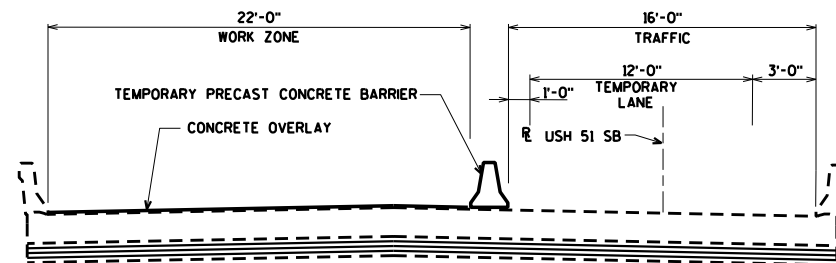
FILE NAME : V:\Structures-EC\42-0967.00 - Lincoln County, USH 51 Rehabs\42-0967.03 B-35-56 & 57 (Kaphaem Road)\RDWY\Marathon County\PA0710\TMaps9\28\AR01a.dgn

PLOT BY : AYRES-EC

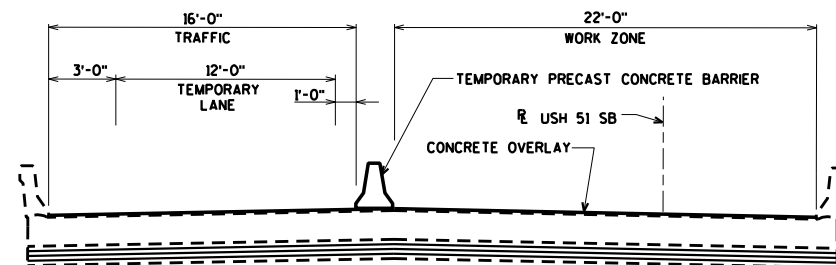
PLOT NAME :

PLOT SCALE : 1:200

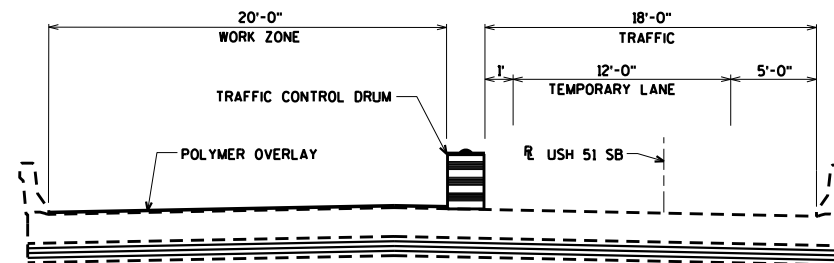
WISDOT/CADDs SHEET 42



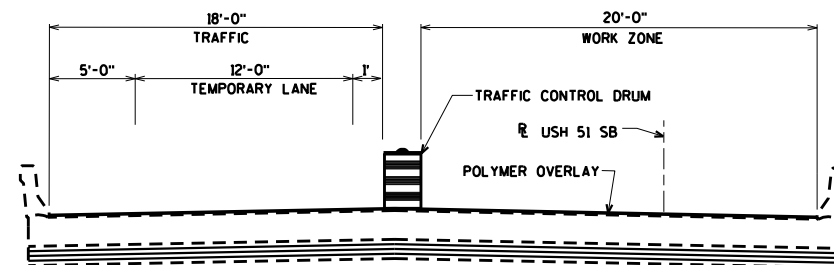
CONSTRUCTION STAGING (CONCRETE OVERLAY) DETAIL 1: B-35-57
(LOOKING NORTH)



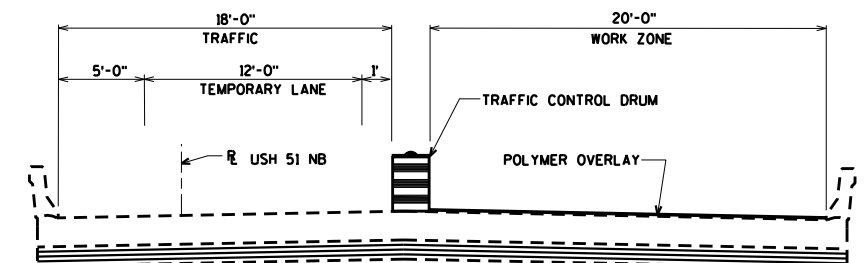
CONSTRUCTION STAGING (CONCRETE OVERLAY) DETAIL 2: B-35-57
(LOOKING NORTH)



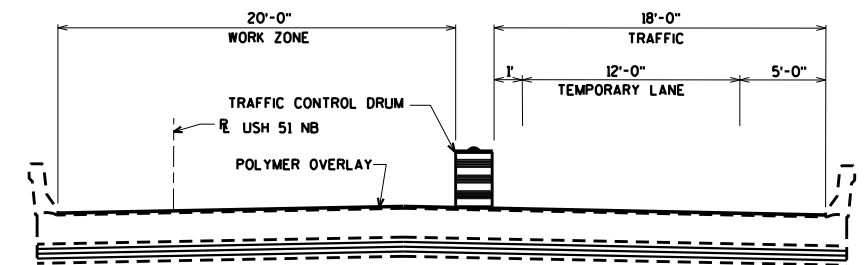
CONSTRUCTION STAGING (POLYMER OVERLAY) DETAIL 1: B-35-57
(LOOKING NORTH)



CONSTRUCTION STAGING (POLYMER OVERLAY) DETAIL 2: B-35-57
(LOOKING NORTH)



CONSTRUCTION STAGING SECTION 1: B-35-56
(LOOKING NORTH)



CONSTRUCTION STAGING DETAIL 2: B-35-56
(LOOKING NORTH)

Estimate Of Quantities By Plan Sets

1176-23-64

Line	Item	Item Description	Unit	Total	Qty
0010	204.0100	Removing Pavement	SY	104.000	104.000
0020	204.0120	Removing Asphaltic Surface Milling	SY	890.000	890.000
0030	204.0190	Removing Surface Drains	EACH	2.000	2.000
0040	213.0100	Finishing Roadway (project) 03. 1176-23-64	EACH	1.000	1.000
0050	305.0110	Base Aggregate Dense 3/4-Inch	TON	20.000	20.000
0060	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	100.000	100.000
0070	415.0070	Concrete Pavement 7-Inch	SY	30.800	30.800
0080	415.1410	Concrete Pavement Approach Slab HES	SY	104.000	104.000
0090	416.0610	Drilled Tie Bars	EACH	62.000	62.000
0100	416.0620	Drilled Dowel Bars	EACH	24.000	24.000
0110	416.1010	Concrete Surface Drains	CY	10.600	10.600
0120	455.0605	Tack Coat	GAL	62.000	62.000
0130	460.2000	Incentive Density HMA Pavement	DOL	100.000	100.000
0140	460.7424	HMA Pavement 4 HT 58-28 H	TON	150.000	150.000
0150	502.3210	Pigmented Surface Sealer	SY	206.000	206.000
0160	509.0301	Preparation Decks Type 1	SY	52.000	52.000
0170	509.0302	Preparation Decks Type 2	SY	22.000	22.000
0180	509.0500	Cleaning Decks	SY	525.000	525.000
0190	509.1500	Concrete Surface Repair	SF	20.000	20.000
0200	509.2000	Full-Depth Deck Repair	SY	1.000	1.000
0210	509.2500	Concrete Masonry Overlay Decks	CY	50.000	50.000
0220	509.5100.S	Polymer Overlay	SY	1,050.000	1,050.000
0230	509.9050.S	Cleaning Parapets	LF	542.000	542.000
0240	603.8000	Concrete Barrier Temporary Precast Delivered	LF	570.000	570.000
0250	603.8125	Concrete Barrier Temporary Precast Installed	LF	820.000	820.000
0260	606.0200	Riprap Medium	CY	5.000	5.000
0280	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1176-23-64	EACH	1.000	1.000
0290	619.1000	Mobilization	EACH	0.310	0.310
0300	624.0100	Water	MGAL	2.000	2.000
0310	625.0100	Topsoil	SY	100.000	100.000
0320	627.0200	Mulching	SY	200.000	200.000
0330	628.1504	Silt Fence	LF	100.000	100.000
0340	628.1520	Silt Fence Maintenance	LF	100.000	100.000
0350	628.1905	Mobilizations Erosion Control	EACH	1.000	1.000
0360	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000
0380	629.0210	Fertilizer Type B	CWT	0.100	0.100
0390	630.0120	Seeding Mixture No. 20	LB	5.000	5.000
0400	630.0200	Seeding Temporary	LB	3.000	3.000
0430	642.5001	Field Office Type B 03. 1176-23-64	EACH	1.000	1.000

Estimate Of Quantities By Plan Sets

1176-23-64					
Line	Item	Item Description	Unit	Total	Qty
0460	643.0100	Traffic Control (project) 03. 1176-23-64	EACH	1.000	1.000
0470	643.0300	Traffic Control Drums	DAY	6,000.000	6,000.000
0480	643.0420	Traffic Control Barricades Type III	DAY	45.000	45.000
0490	643.0705	Traffic Control Warning Lights Type A	DAY	90.000	90.000
0500	643.0715	Traffic Control Warning Lights Type C	DAY	2,400.000	2,400.000
0510	643.0800	Traffic Control Arrow Boards	DAY	270.000	270.000
0520	643.0900	Traffic Control Signs	DAY	2,100.000	2,100.000
0530	645.0120	Geotextile Type HR	SY	20.000	20.000
0540	646.0106	Pavement Marking Epoxy 4-Inch	LF	4,700.000	4,700.000
0550	646.0600	Removing Pavement Markings	LF	3,300.000	3,300.000
0560	649.0402	Temporary Pavement Marking Paint 4-Inch	LF	9,410.000	9,410.000
0570	690.0150	Sawing Asphalt	LF	80.000	80.000
0580	690.0250	Sawing Concrete	LF	78.000	78.000
0590	715.0415	Incentive Strength Concrete Pavement	DOL	500.000	500.000
0630	SPV.0035	Special 04. Concrete Masonry Deck Patching	CY	3.000	3.000
0640	SPV.0090	Special 01. Remove and Reinstall Guardrail	LF	380.000	380.000
0650	SPV.0090	Special 02. Sawing Pavement Deck Preparation Areas	LF	300.000	300.000

REMOVING PAVEMENT

LOCATION	204.0100 SY
APPROACH SLAB SOUTH OF B-35-57	52
APPROACH SLAB NORTH OF B-35-57	52
PROJECT TOTAL	104

REMOVING ASPHALTIC SURFACE MILLING

LOCATION	204.0120 SY
SOUTH OF B-35-57	445
NORTH OF B-35-57	445
PROJECT TOTAL	890

REMOVING SURFACE DRAINS

STATION	LOCATION	204.0190 EACH
1415+40	SB LANES RT	1
1415+40	SB LANES LT	1
PROJECT TOTAL		2

FINISHING ROADWAY

LOCATION	213.0100 EACH
1176-23-64	1
PROJECT TOTAL	1

BASE AGGREGATE DENSE

LOCATION	305.0110 3/4-INCH TON	305.0120 1 1/4-INCH TON
USH 51 SB SOUTH OF STRUCTURE B-35-57	10	50
USH 51 SB NORTH OF STRUCTURE B-35-56	10	50
PROJECT TOTALS	20	100

CONCRETE PAVEMENT 7-INCH

STATION TO STATION	LOCATION	415.0070 SY
B-35-57 APPROACHES	PAVED SHLD	12.6
B-35-57 APPROACHES	PAVED SHLD	18.2
PROJECT TOTAL		30.8

CONCRETE PAVEMENT APPROACH SLAB HES

STATION	LOCATION	415.1410 SY
1415+41	B-35-57 (SOUTH SIDE)	52
1416+60	B-35-57 (NORTH SIDE)	52
PROJECT TOTAL		104

DRILLED TIE BARS

LOCATION	STAGE	416.0610 EACH
WING WALL SB LANES	1	12
WING WALL SB LANES	1	12
WING WALL SB LANES	2	12
WING WALL SB LANES	2	12
APPROACH SLAB SB LANES	2	7
APPROACH SLAB SB LANES	2	7
PROJECT TOTAL		62

DRILLED DOWEL BARS

LOCATION	STAGE	416.0620 EACH
APPROACH SLAB SB LANES	1	6
APPROACH SLAB SB LANES	1	6
APPROACH SLAB SB LANES	2	6
APPROACH SLAB SB LANES	2	6
PROJECT TOTAL		24

CONCRETE SURFACE DRAINS

LOCATION	416.1010 CY
B-35-57 (SW QUAD)	5.4
B-35-57 (SE QUAD)	5.2
PROJECT TOTAL	10.6

HMA PAVEMENT 4 HT 58-28 H

LOCATION	455.0605 460.7424 TONS	TACK COAT GAL
SOUTH OF B-35-57	75	31
NORTH OF B-35-57	75	31
PROJECT TOTALS	150	62

CONCRETE BARRIER TEMPORARY PRECAST

LOCATION	STAGE	603.8000 DELIVERED LF	603.8125 INSTALLED LF
SOUTHBOUND USH 51	1	410	410
SOUTHBOUND USH 51	2	160	410
PROJECT TOTALS		570	820

RIPRRAP MEDIUM & GEOTEXTILE TYPE HR

LOCATION	STAGE	606.0200 CY	645.0120 GEOTEXTILE TYPE HR SY
SURFACE DRAIN OUTFALL	1	2.5	10
SURFACE DRAIN OUTFALL	2	2.5	10
PROJECT TOTALS		5	20

MAINTENANCE AND REPAIR OF HAUL ROADS

PROJECT	618.0100.01 EACH
1176-23-64	1
PROJECT TOTAL	1

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

TOPSOIL, MULCHING, FERTILIZER, SEEDING, & SEEDING TEMPORARY

LOCATION	625.0100	627.0200	629.0210	630.0120	630.0200
	TOPSOIL	MULCHING	FERTILIZER	SEEDING MIXTURE	SEEDING
	SY	SY	TYPE B	NO. 20	TEMPORARY
	CWT			LB	LB
UNDISTRIBUTED	100	200	0.1	5	3
PROJECT TOTALS	100	200	0.1	5	3

SILT FENCE

LOCATION	STAGE	628.1504	628.1520
		LF	LF
SURFACE DRAIN OUTFALL	1	50	50
SURFACE DRAIN OUTFALL	2	50	50
PROJECT TOTALS		100	100

MOBILIZATIONS EROSION CONTROL
AND EMERGENCY EROSION CONTROL

PROJECT	628.1905	628.1910
	EACH	EMERGENCY
		EACH
1176-23-64	1	1
PROJECT TOTALS	1	1

FIELD OFFICE TYPE B

PROJECT	642.5001
	EACH
1176-23-64	1
PROJECT TOTAL	1

TRAFFIC CONTROL SIGNS, LIGHTS, AND BARRICADES

STAGE	643.0300	643.0420	643.0705	643.0715	643.0800	643.0900
	DRUMS	BARRICADES	WARNING	LIGHTS	ARROW	SIGNS
	EACH	TYPE III	TYPE A	TYPE C	BOARDS	
	DAYS	EACH	DAYS	EACH	DAYS	EACH
STAGE 1 (SB)	48	1680	---	---	---	---
STAGE 2 (SB)	48	1680	---	---	---	---
STAGE 3 (NB/SB)	160	800	4	20	8	40
STAGE 4 (NB/SB)	160	800	4	20	8	40
UNDISTRIBUTED		1040		5		10
PROJECT TOTALS	6000	45	90	2400	270	2100

REMOVING PAVEMENT MARKINGS

LOCATION	STAGE	646.0600
		LF
USH 51 SB LANES	1	2200
USH 51 SB LANES	2	1100
PROJECT TOTAL		3300

TEMPORARY PAVEMENT MARKING PAINT 4-INCH

LOCATION	DESCRIPTION	STAGE	649.0402	
			WHITE	YELLOW
			LF	LF
USH 51 SB LANES	EDGE LINE RT	1	2400	---
USH 51 SB LANES	EDGE LINE LT	1	---	1910
USH 51 SB LANES	EDGE LINE RT	2	2400	---
USH 51 SB LANES	EDGE LINE LT	2	---	1910
USH 51 SB LANES	CENTERLINE	POST STAGE 2	90	---
USH 51 SB LANES	EDGE LINE LT	POST STAGE 2	---	350
USH 51 SB LANES	EDGE LINE RT	POST STAGE 2	350	---
SUBTOTALS			5240	4170
PROJECT TOTAL				9410

SAWING

STATION TO STATION	LOCATION	STAGE	690.0150	690.0250
			ASPHALT	CONCRETE
			LF	LF
1414+26.57	SB LANES	1	20	---
1417+79.43	SB LANES	1	20	---
1415+26.57 - 1415+41.57	SB LANES	1	---	15
1416+59.75 - 1416+79.43	SB LANES	1	---	15
1415+26.57	SB LANES	1	---	12
1416+79.43	SB LANES	1	---	12
1415+26.57	SB LANES	2	---	12
1416+79.43	SB LANES	2	---	12
1414+26.57	SB LANES	2	20	---
1417+79.43	SB LANES	2	20	---
PROJECT TOTALS			80	78

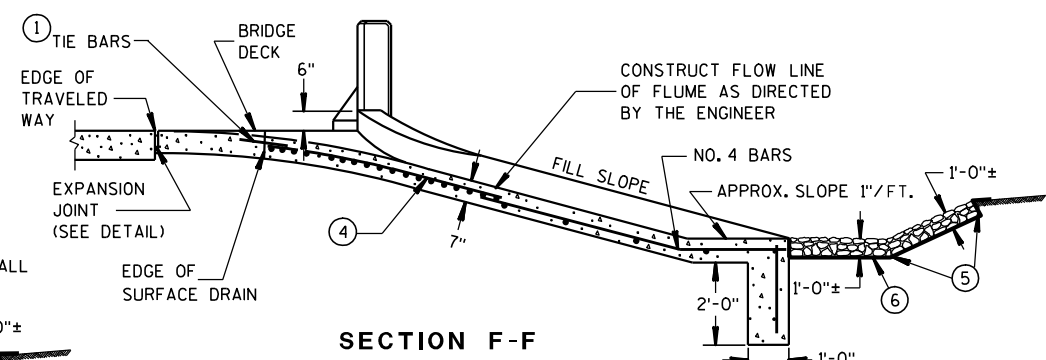
REMOVE AND REINSTALL GUARDRAIL

LOCATION	SPV.0090.01
	LF
NE QUADRANT B-35-57	100
NW QUADRANT B-35-57	100
SW QUADRANT B-35-57	80
SE QUADRANT B-35-57	100
PROJECT TOTAL	380

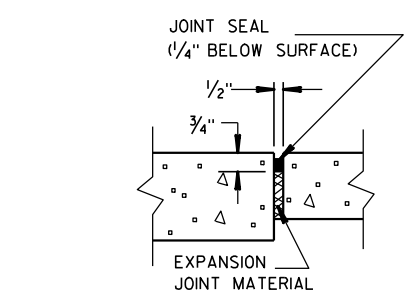
ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

Standard Detail Drawing List

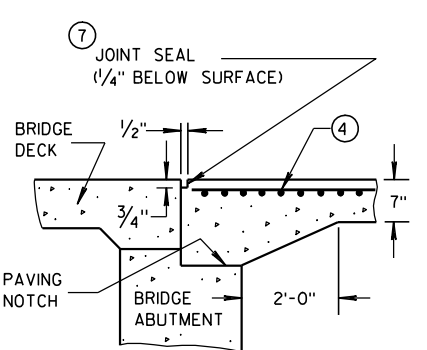
08D02-06	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08E09-06	SILT FENCE
13B02-08A	CONCRETE PAVEMENT APPROACH SLAB
14B07-14A	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-14B	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-14C	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-14D	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-14E	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-14F	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-14G	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-14H	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B15-09A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-09B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-09C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B20-11A	STEEL THRIE BEAM STRUCTURE APPROACH
14B20-11D	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SLOPED END PARAPETS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15D03-03	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M. P. H. WITH BARRIER
15D12-06B	TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION



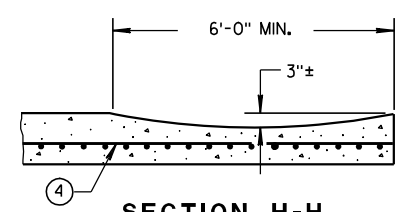
SECTION A-A



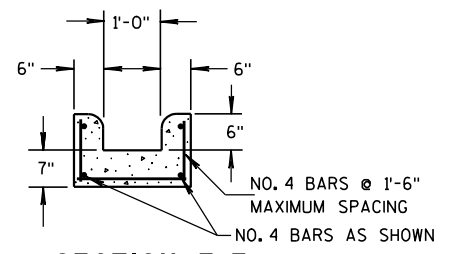
EXPANSION JOINT DETAIL



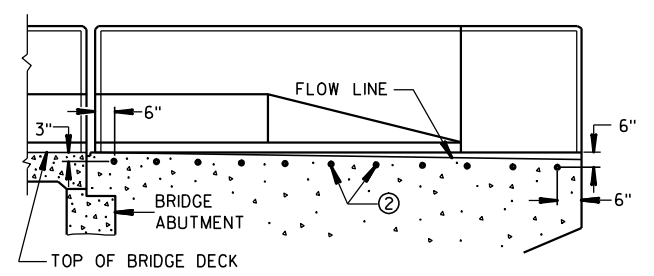
SECTION D-D



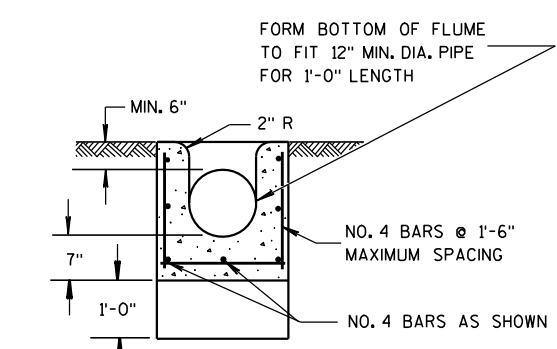
SECTION H-H



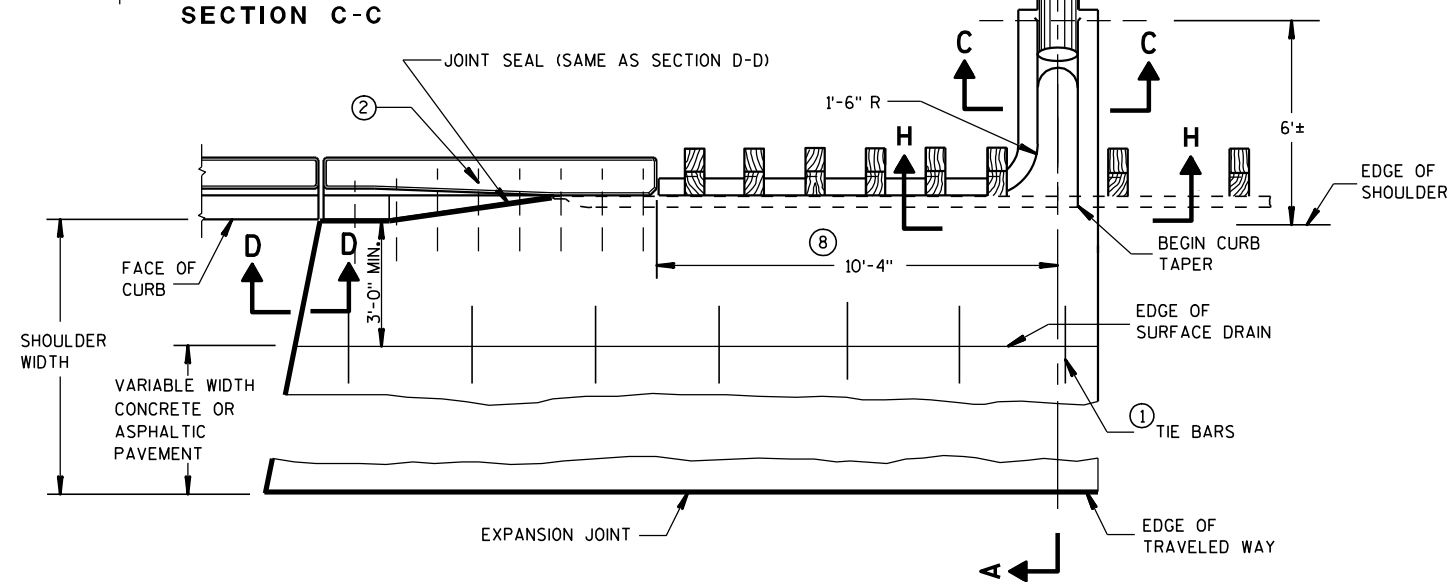
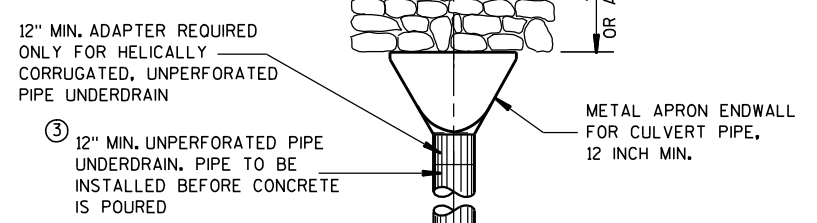
SECTION E-E



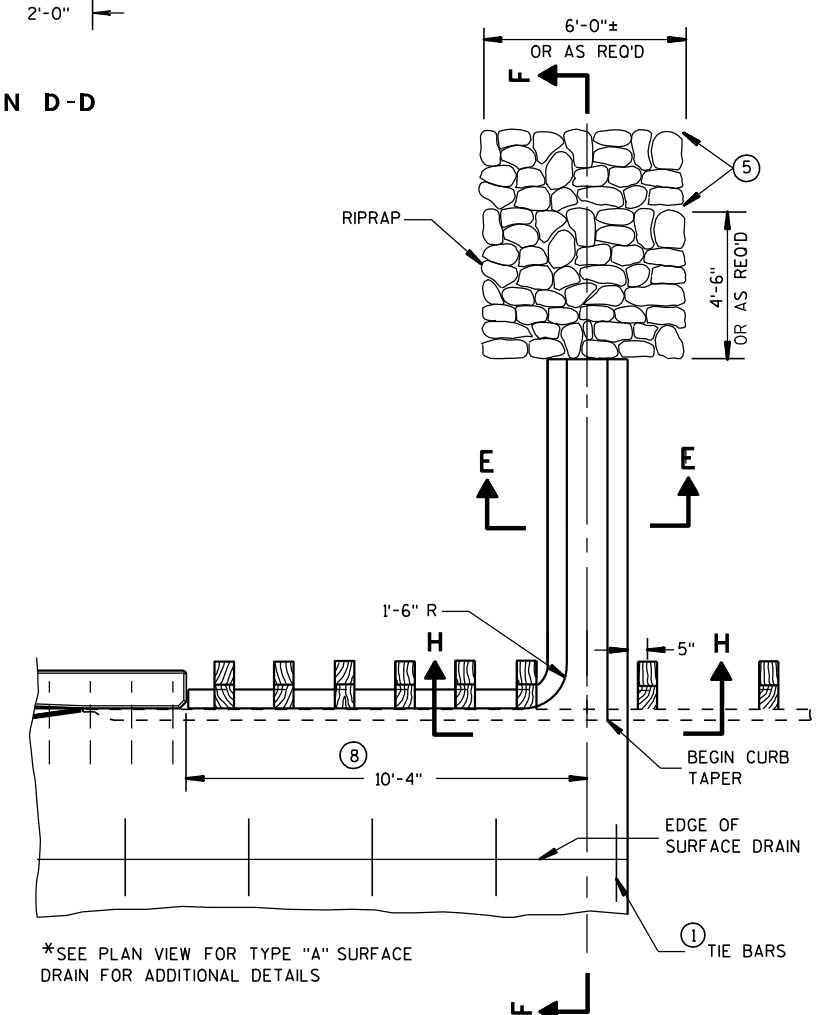
LOCATION OF TIE BARS IN WINGWALL



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.

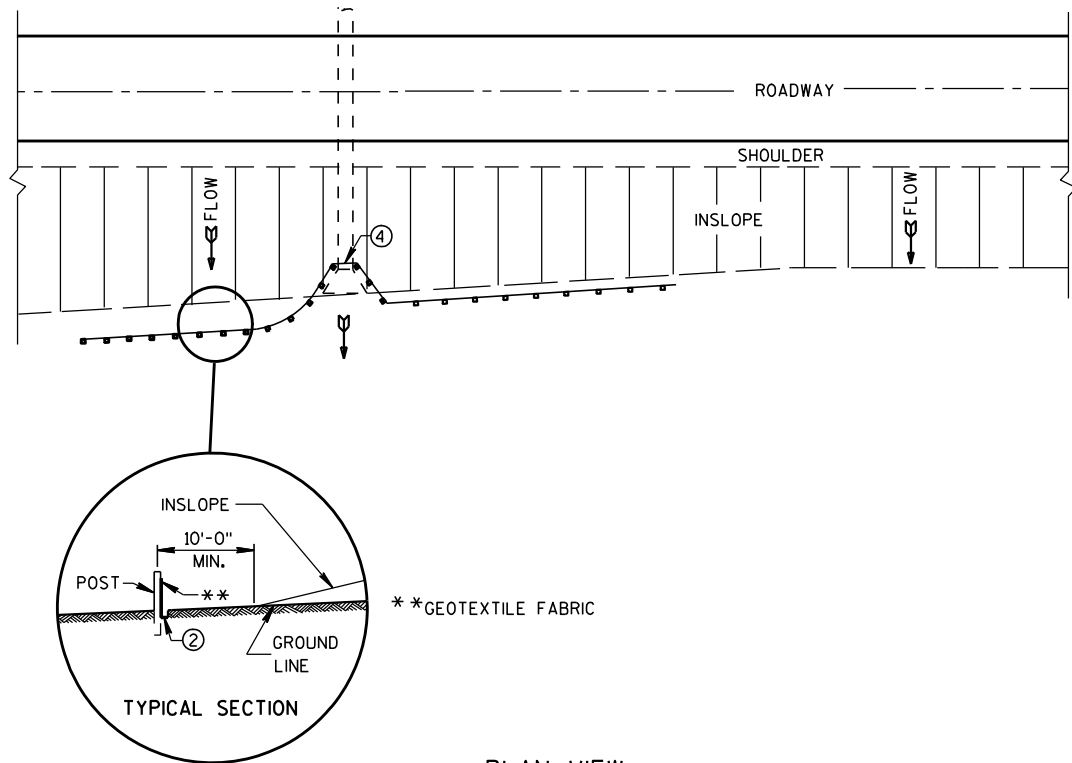
ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR
UNLESS OTHERWISE SHOWN OR NOTED.

- 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".

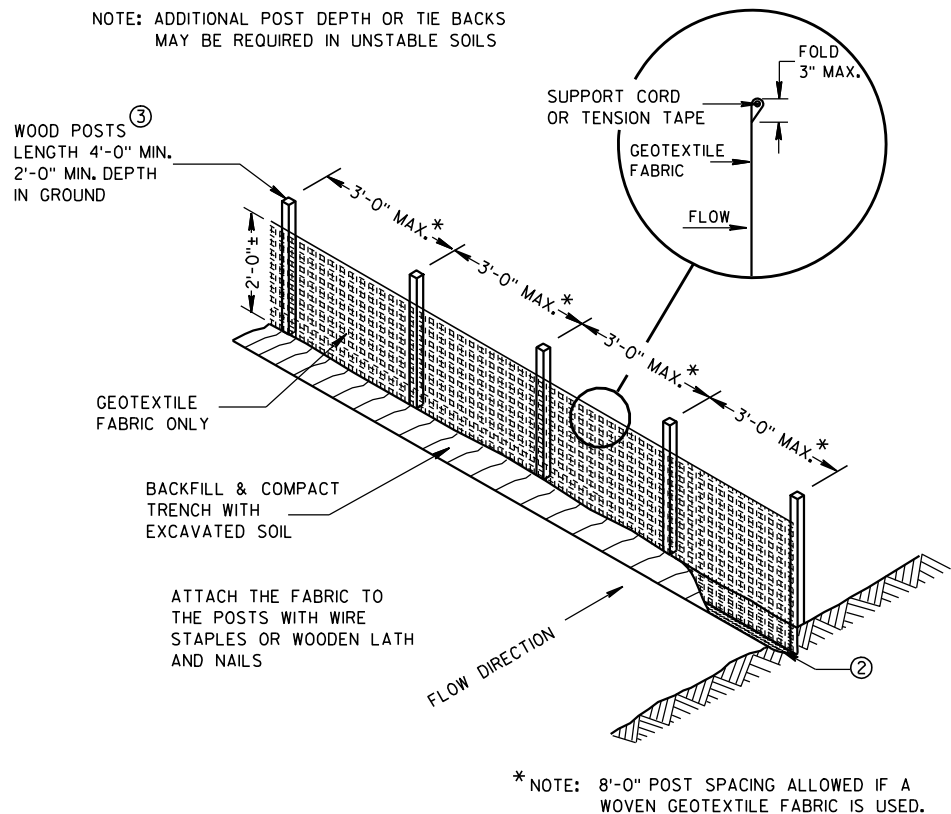
CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

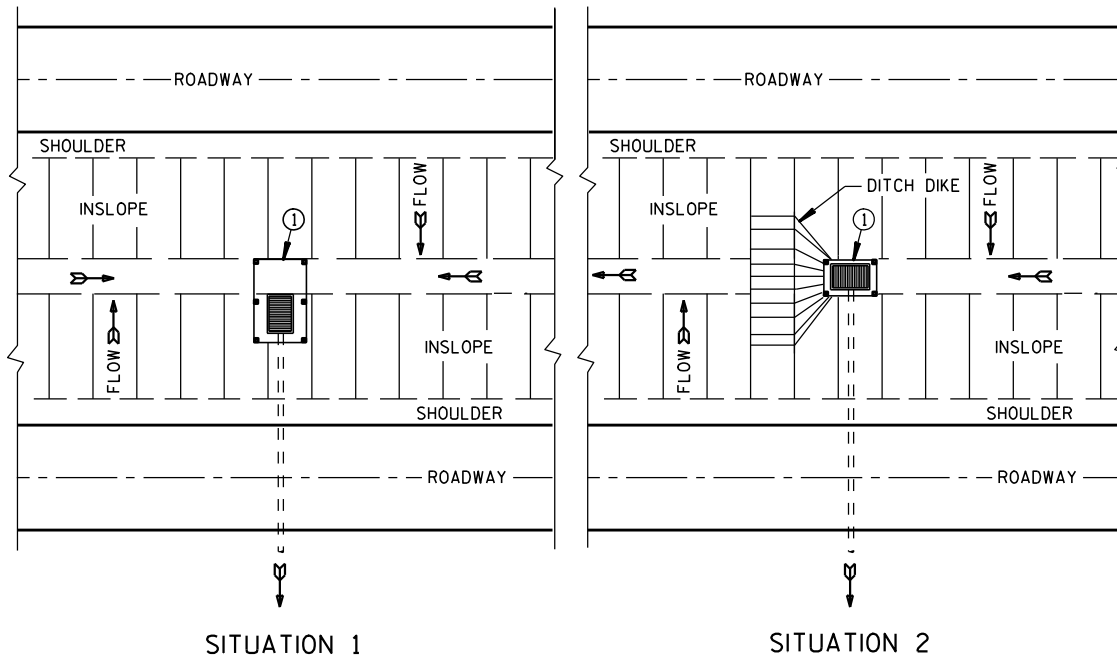
APPROVED	
9/4/08	/S/ Jerry H. Zogg
DATE	ROADWAY STANDARDS DEVELOPMENT
	ENGINEER
FHWA	



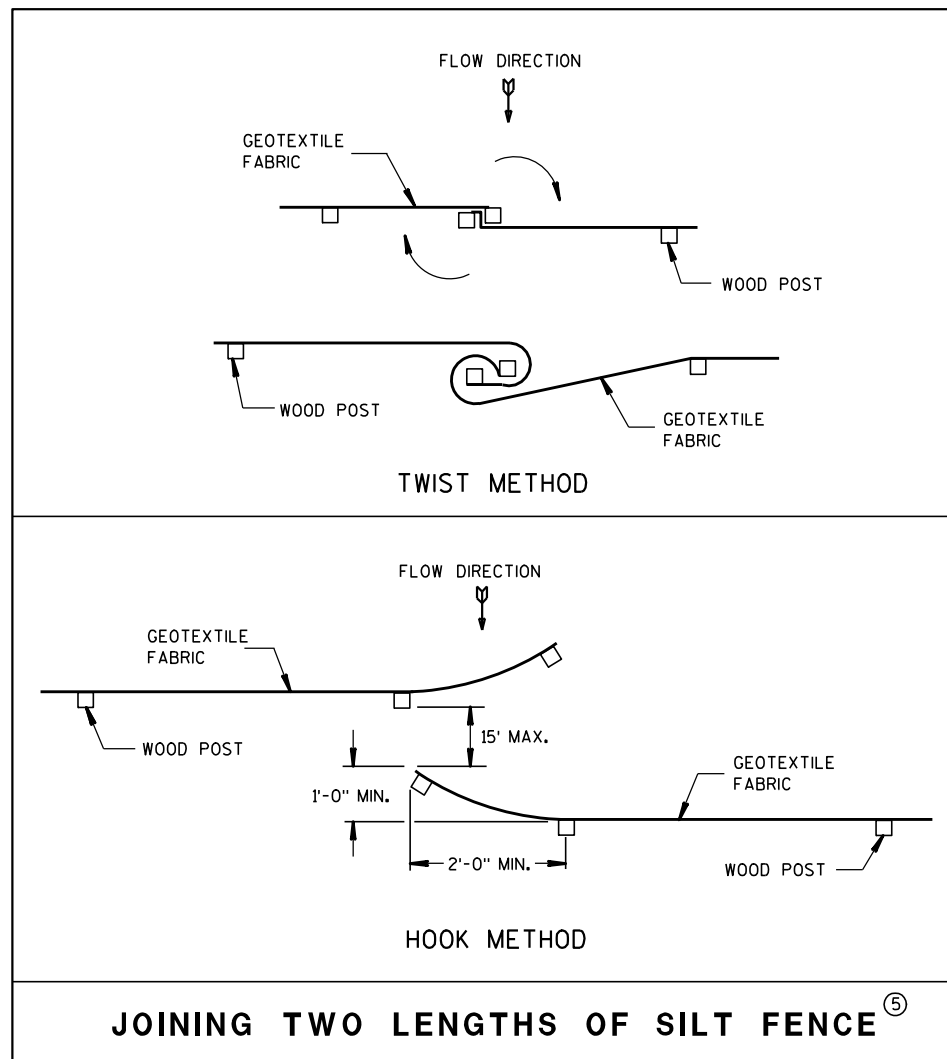
PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE



SILT FENCE



PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

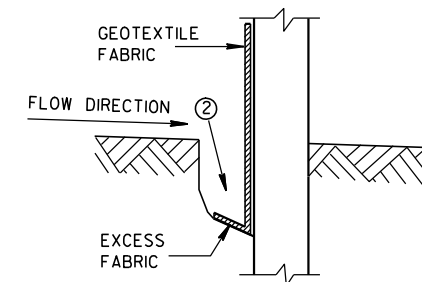


JOINING TWO LENGTHS OF SILT FENCE (5)

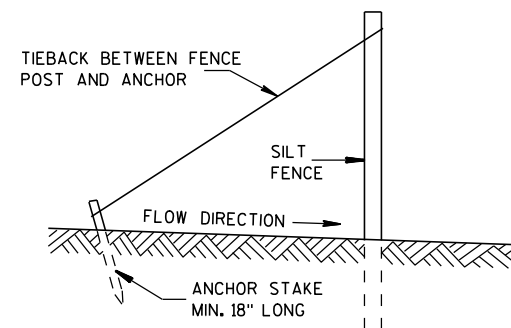
GENERAL NOTES

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

- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1 1/8" X 1 1/8" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.

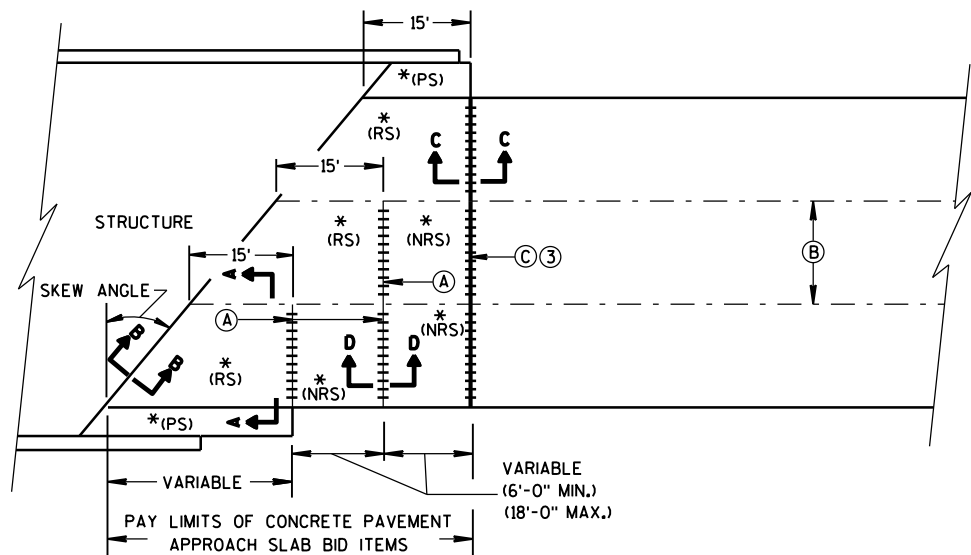


TRENCH DETAIL

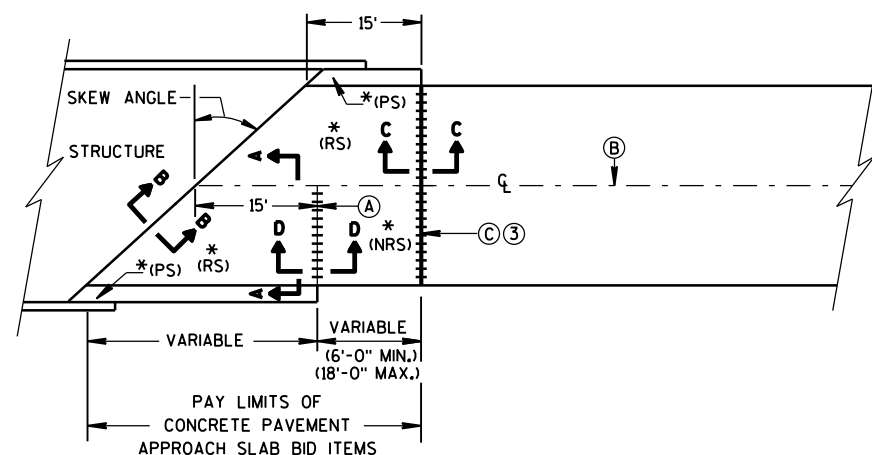


SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

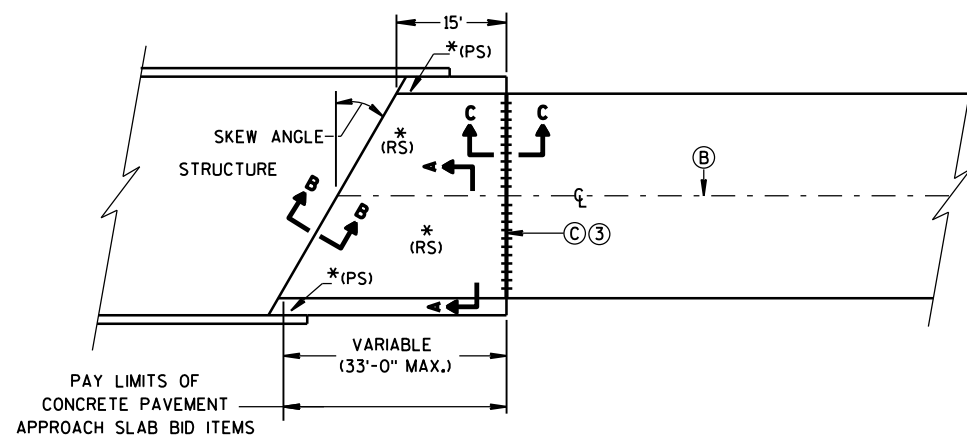
SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4-29-05 DATE	/S/ Beth Canestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	



**SKewed APPROACH
(PAVEMENT MORE THAN 2 LANES)**



**SKews > 20°
(PAVEMENT WIDTH ≤ 30')**

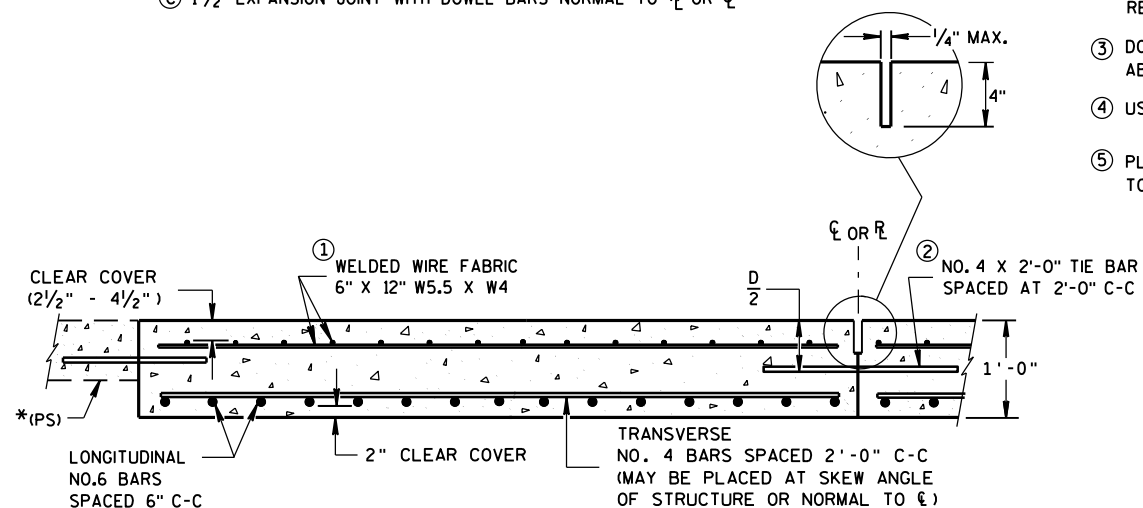


**SKews ≤ 20°
(PAVEMENT WIDTH ≤ 30')
APPROACH SLAB AND ADJACENT PAVEMENT**

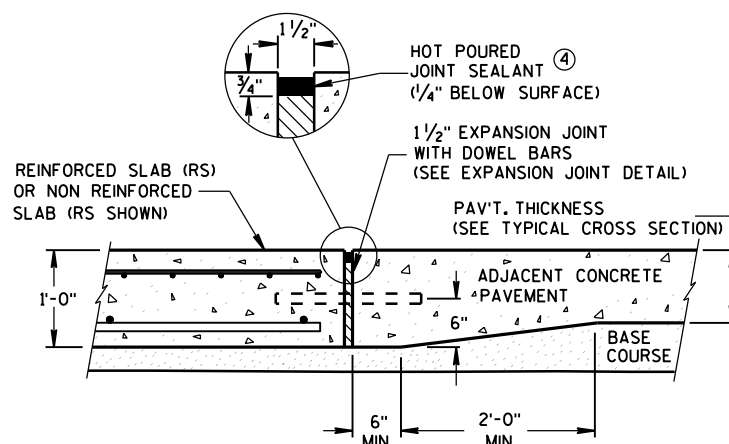
* (RS) = REINFORCED CONCRETE SLAB
* (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
(SEE DETAILS ELSEWHERE IN THE PLAN)
* (NRS) = NON-REINFORCED CONCRETE SLAB

*** STANDARD DOWEL BAR DIAMETER
(SEE SDD 13C11, & SDD 13C13)

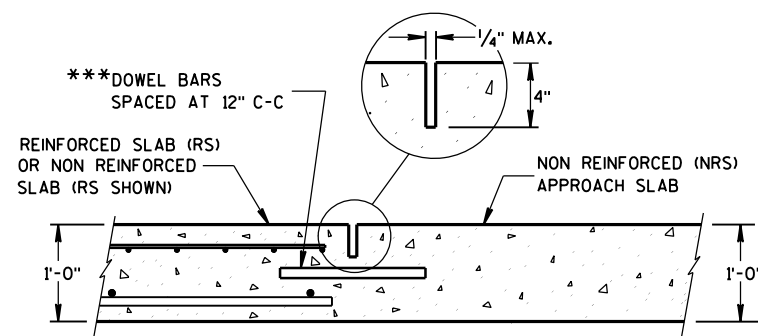
- (A) STANDARD CONTRACTION JOINT NORMAL TO ℓ OR ℓ_c
(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.
(C) 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℓ OR ℓ_c



**SECTION A-A
REINFORCEMENT POSITIONING DETAIL**



**SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT**



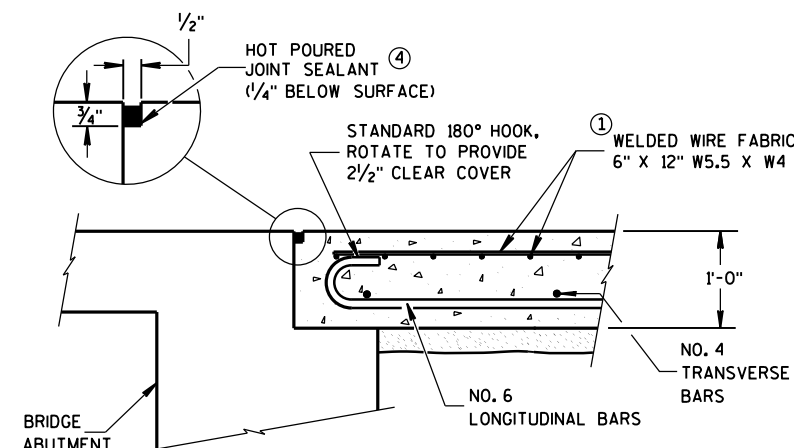
**SECTION D-D
CONTRACTION JOINT**

GENERAL NOTES

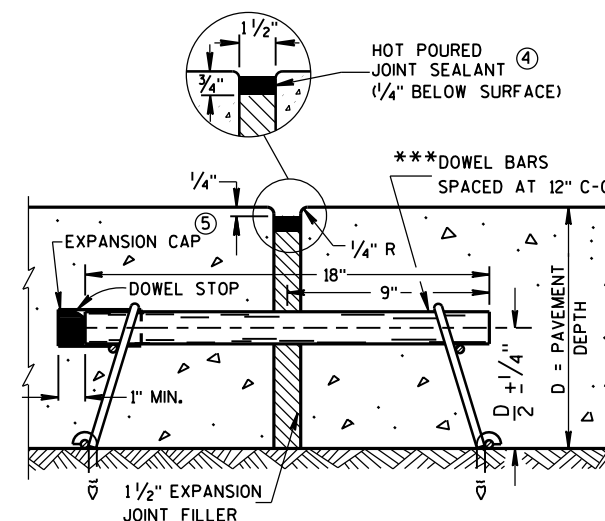
THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

- THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.
- THE CONTRACTOR MAY OMIT TIE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.
- DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.
- USE A JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM D6690.
- PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.



**SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT**

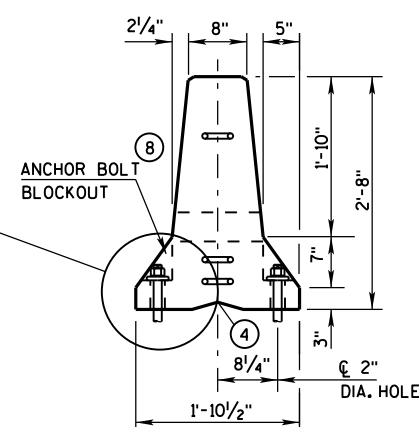
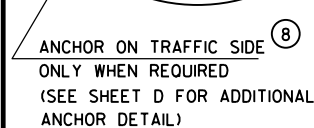


EXPANSION JOINT DETAIL

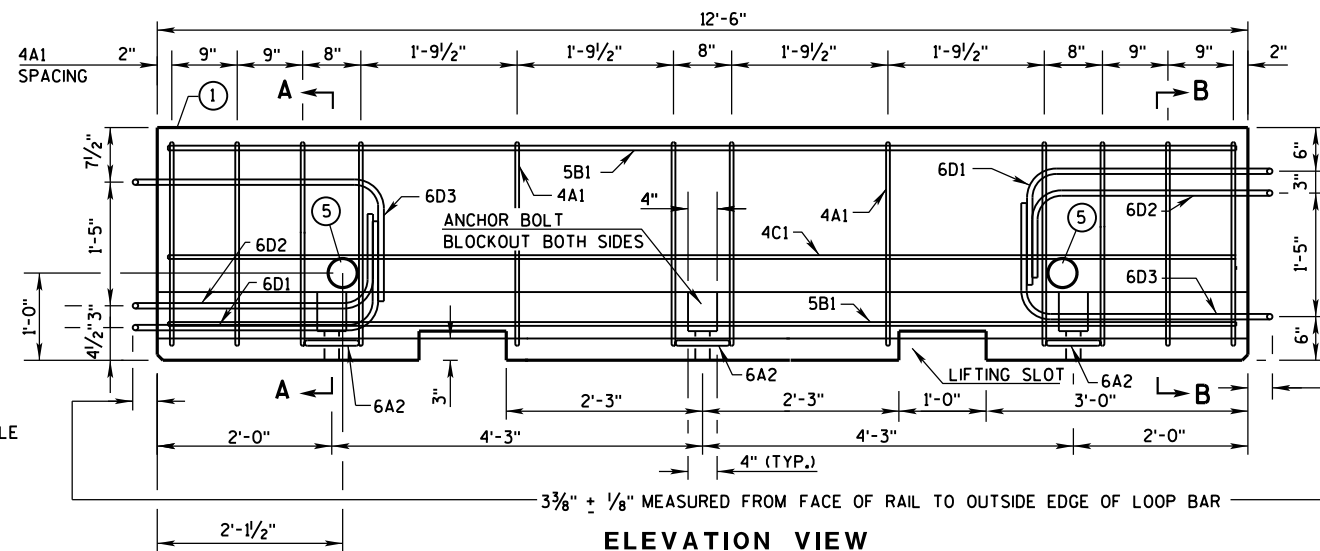
**CONCRETE PAVEMENT
APPROACH SLAB**

**STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION**

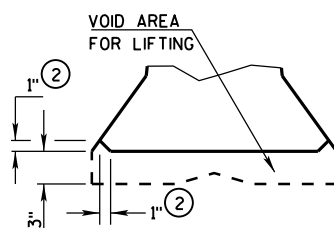
APPROVED
June, 2015 /S/ Peter Kemp, P.E.
DATE PAVEMENT SUPERVISOR
FHWA



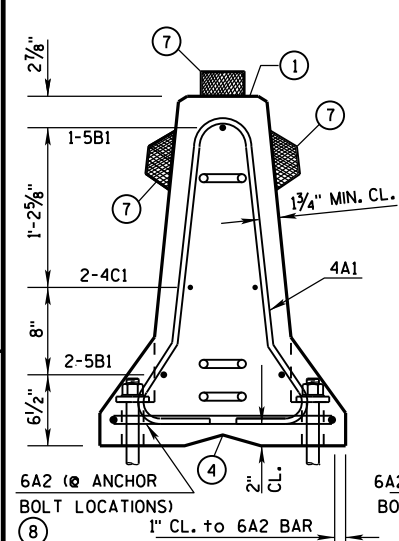
END VIEW



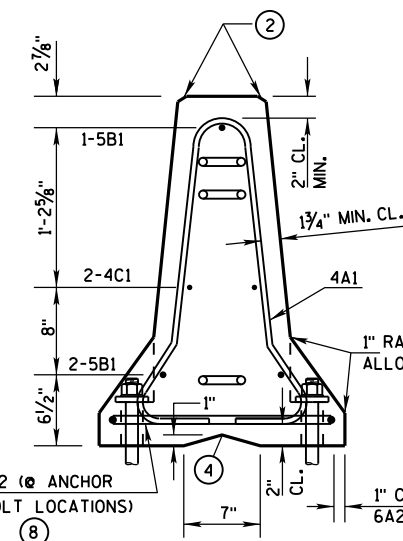
ELEVATION VIEW



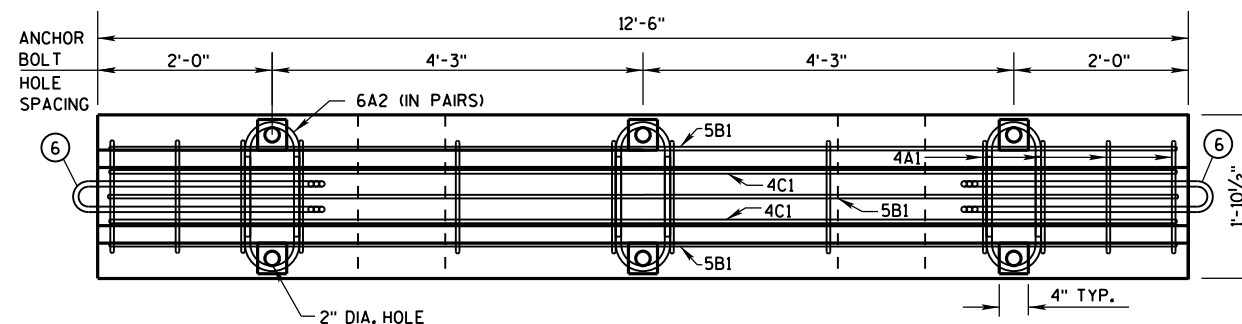
DETAIL "B"
LIFTING SLOT DETAIL



SECTION A-A
(STIRRUP PLACEMENT)

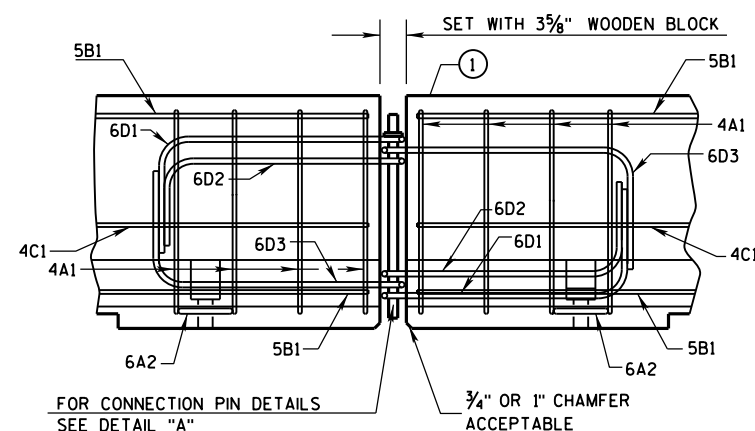


SECTION B-B
(STIRRUP PLACEMENT)

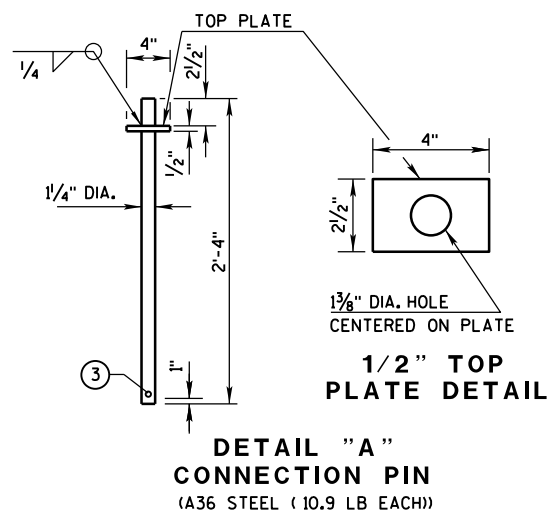


PLAN VIEW

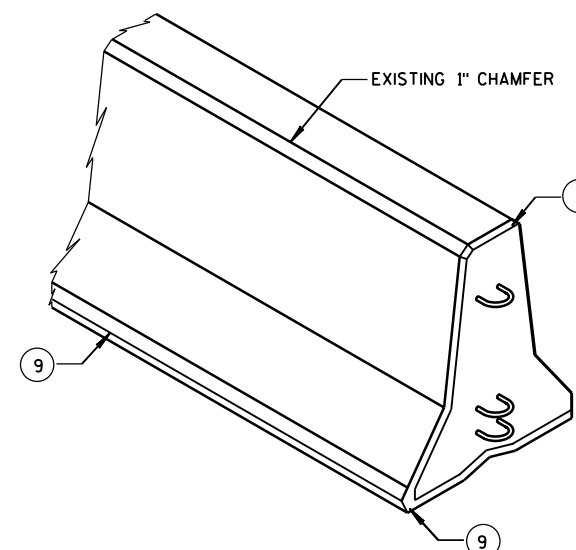
DETAILS OF BARRIER SECTION



DETAILS OF BARRIER CONNECTION



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



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-14(d) THRU 14B7-14(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 $\frac{3}{4}$ " 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- $\frac{1}{2}$ " PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN $\frac{1}{8}$ " OF THE PLAN DIMENSION.

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

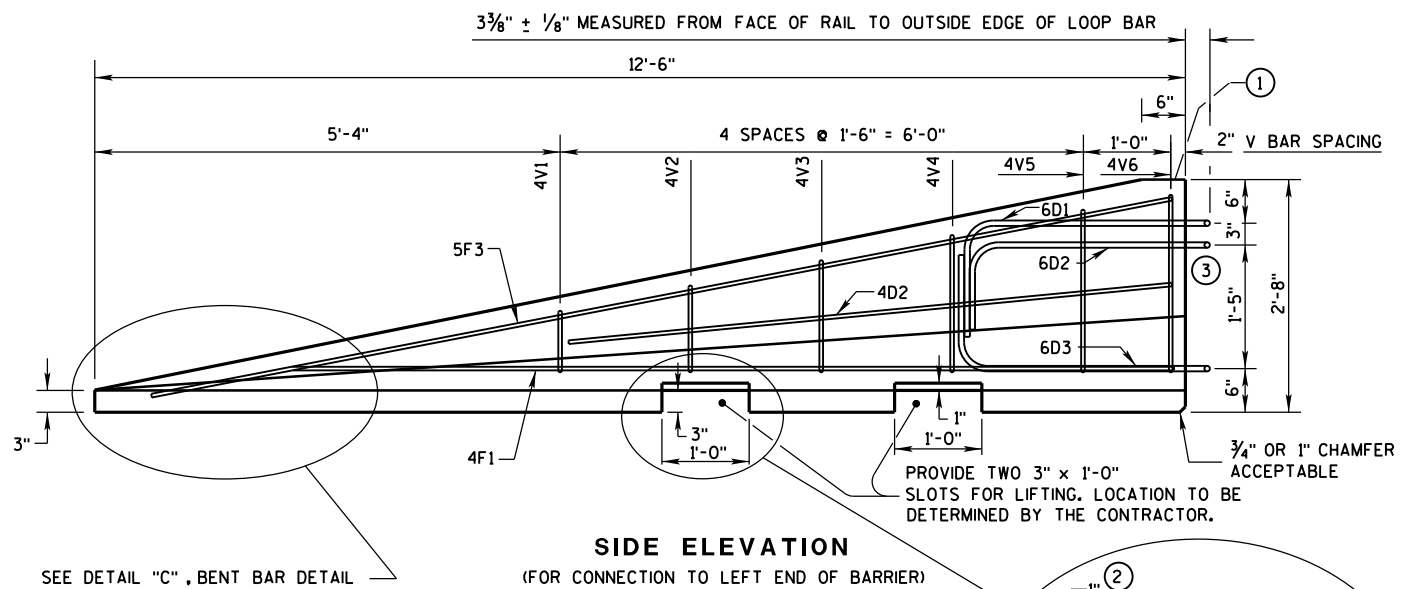
PLACE BARRIER ON A PAVED SURFACE. REMOVE ALL LOOSE DIRT AND SAND FROM THE ROADWAY SURFACE PRIOR TO PLACEMENT OF THE BARRIER.

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

- ① MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
 - a. TYPE: WICBTP
 - b. MANUFACTURER
 - c. DATE MANUFACTURED (MONTH AND YEAR)
- ② 1" CHAMFER TO PREVENT SPALLING.
- ③ A $\frac{3}{8}$ " HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..
- ④ "V" NOTCH IS OPTIONAL.
- ⑤ THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).
- ⑥ NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.
- ⑦ USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MAY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURES INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED TO THE LEFT OF TRAFFIC AND WHITE REFLECTORS WHEN BARRIER IS LOCATED TO THE RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART. PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO THE SIDE MOUNTED DELINEATORS ON ALL BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAN 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.
- ⑧ SEE SHEET D FOR ANCHORING CRITERIA.
- ⑨ 1" CHAMFER OPTIONAL.

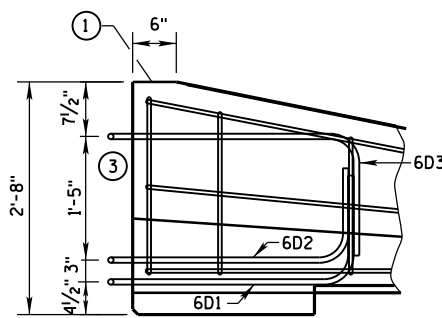
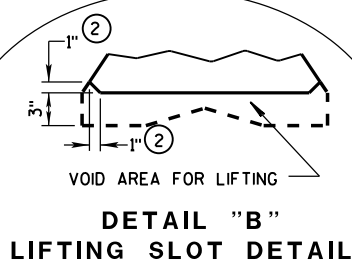
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



SIDE ELEVATION

(FOR CONNECTION TO LEFT END OF BARRIER)



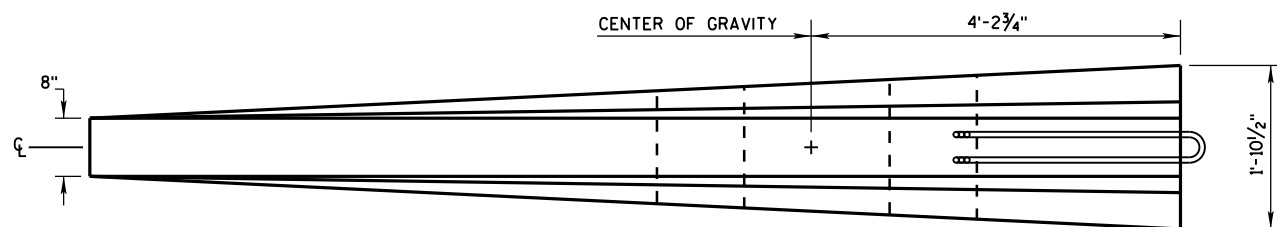
SIDE ELEVATION

LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.

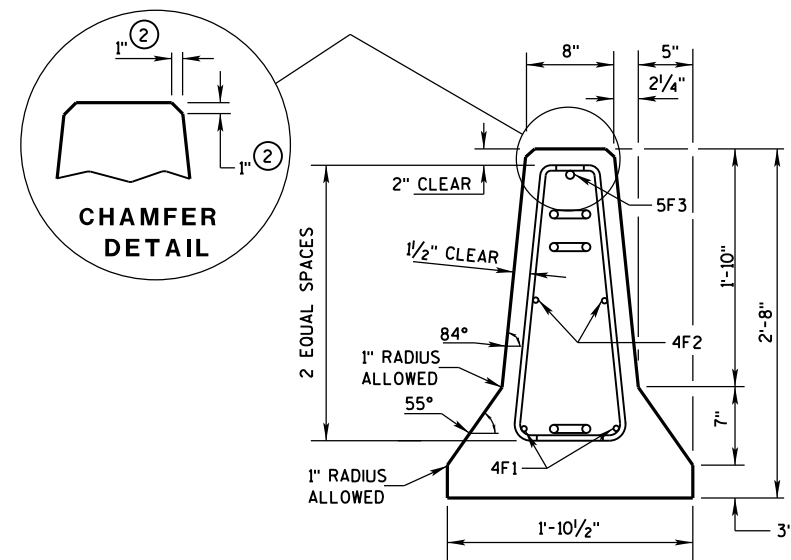
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

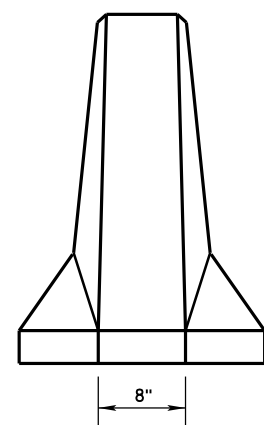
- ① MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
 - a. TYPE WICBTP
 - b. MANUFACTURER
 - c. DATE MANUFACTURED (MONTH AND YEAR)
- ② 1" CHAMFER TO PREVENT SPALLING.
- ③ NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



PLAN VIEW

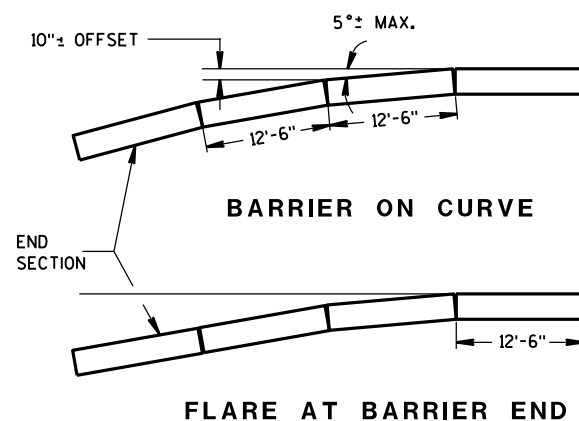


END SECTION



FRONT ELEVATION

DETAILS OF BARRIER TAPER SECTION



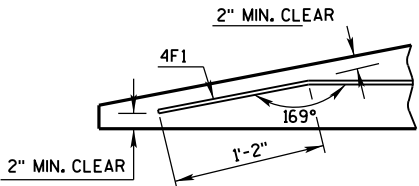
POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

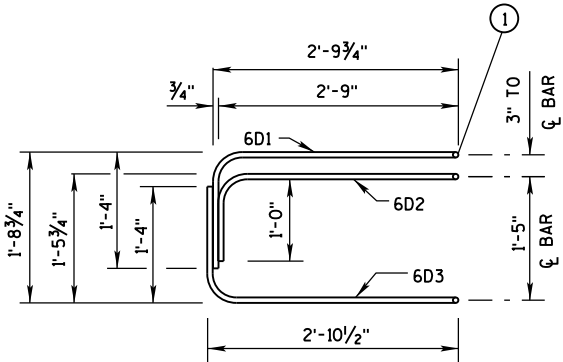
BARRIER TAPER SECTION
BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

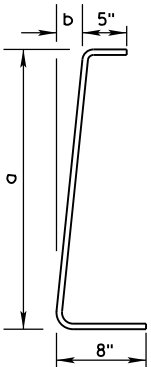
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



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

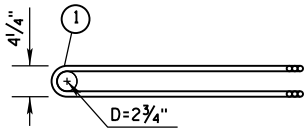
GENERAL NOTES

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

BARRIER SECTION
BILL OF MATERIALS

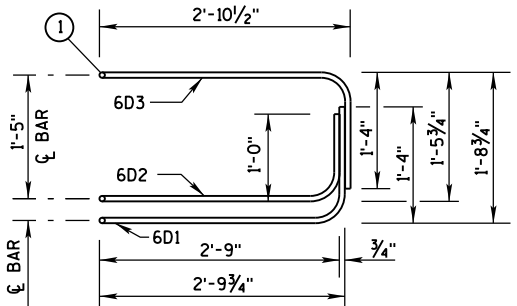
(PER 12'-6" BARRIER SECTION)

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"

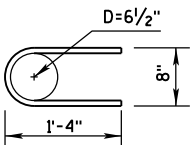


PLAN VIEW
LOOP BAR ASSEMBLY

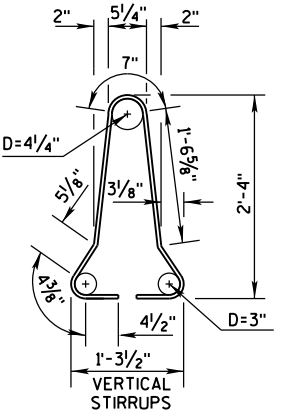
(MARKED END SHOWN, INVERT FOR OTHER END)



ELEVATION VIEW



6A2

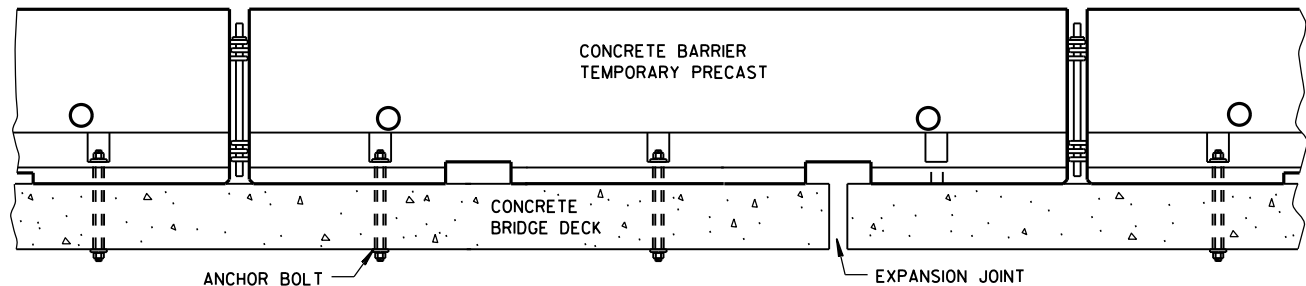
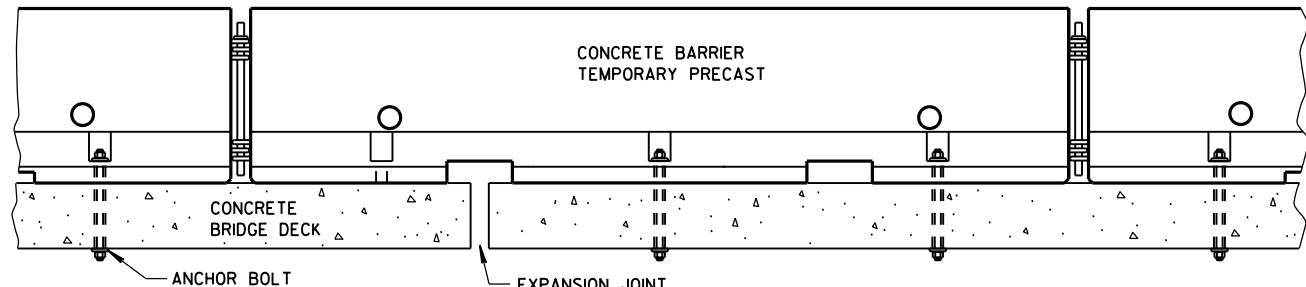


4A1

BARRIER SECTION

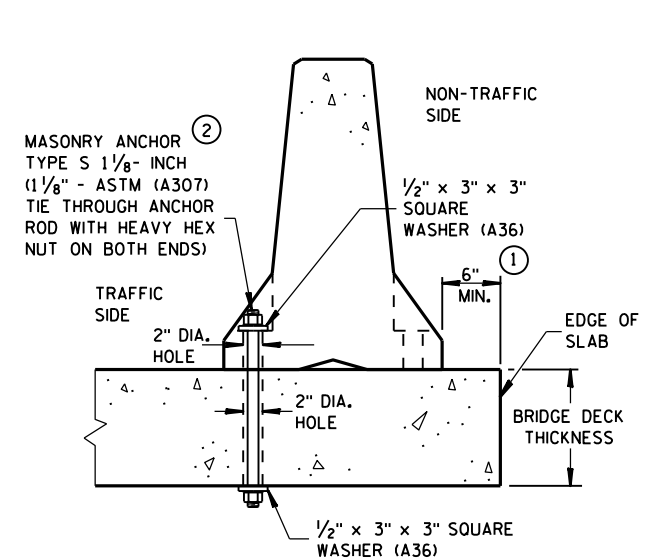
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



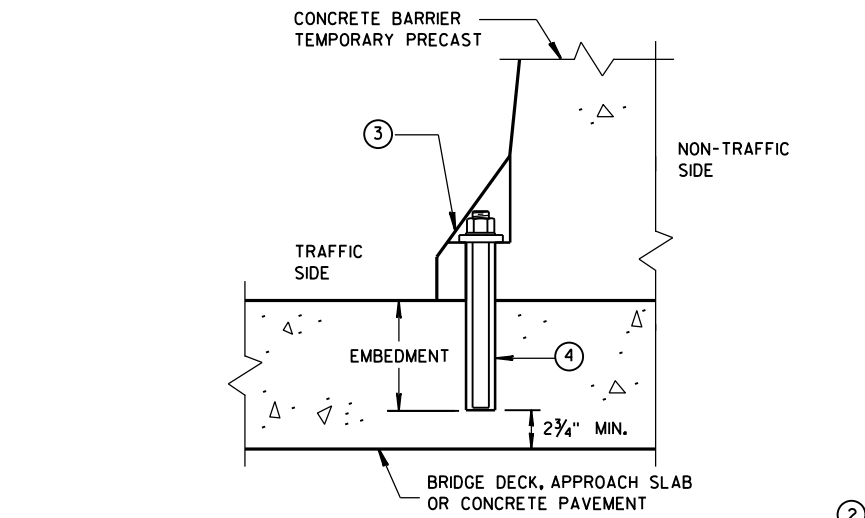
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(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.)



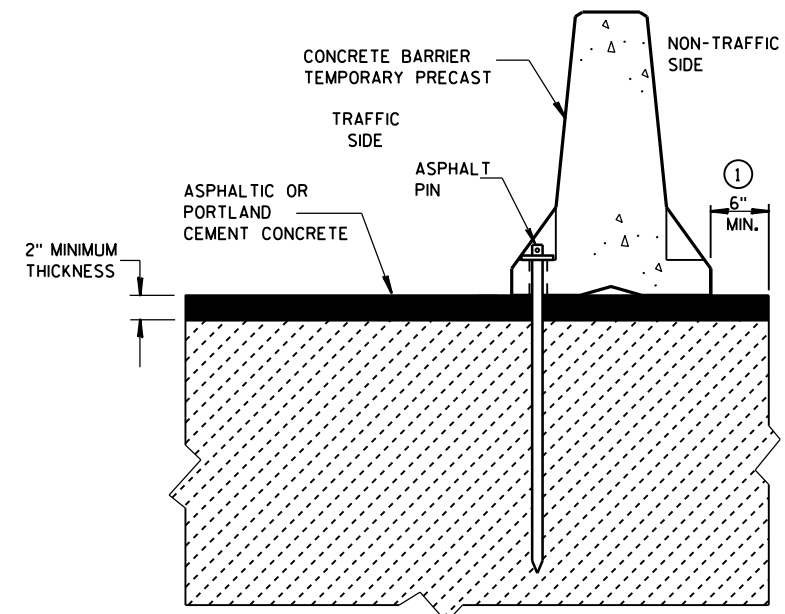
THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

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



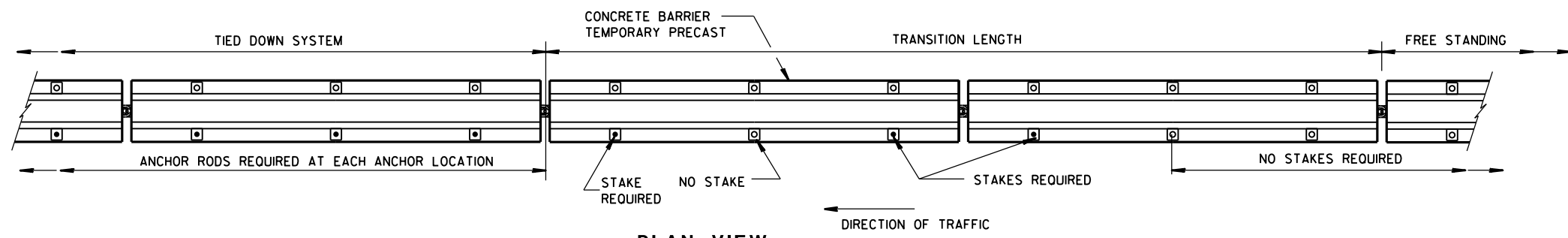
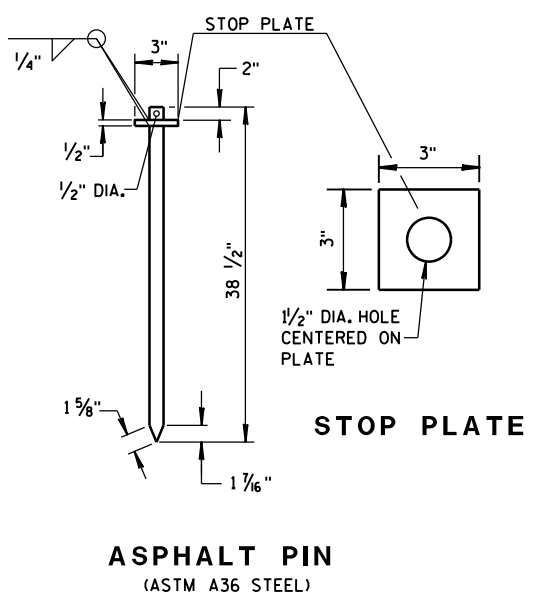
REMOVABLE ADHESIVE BONDED ANCHOR INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(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)



PLAN VIEW

FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

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

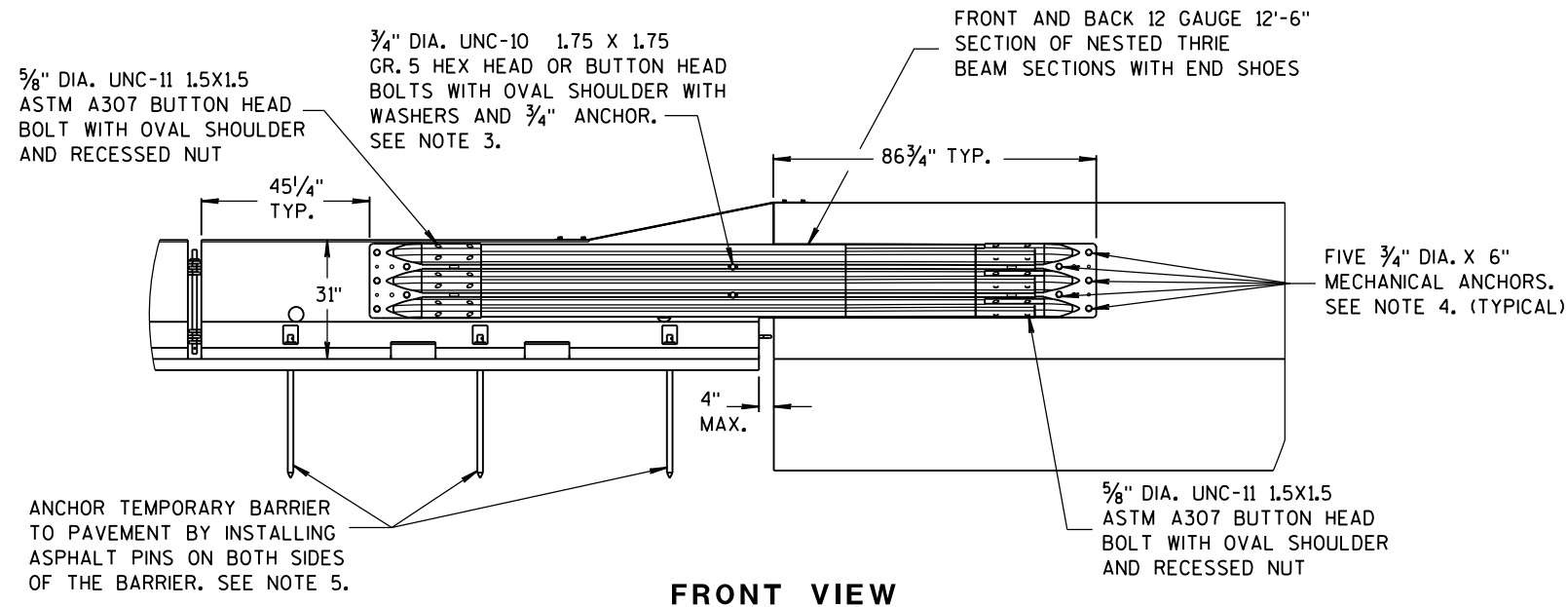
GENERAL NOTES

- 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

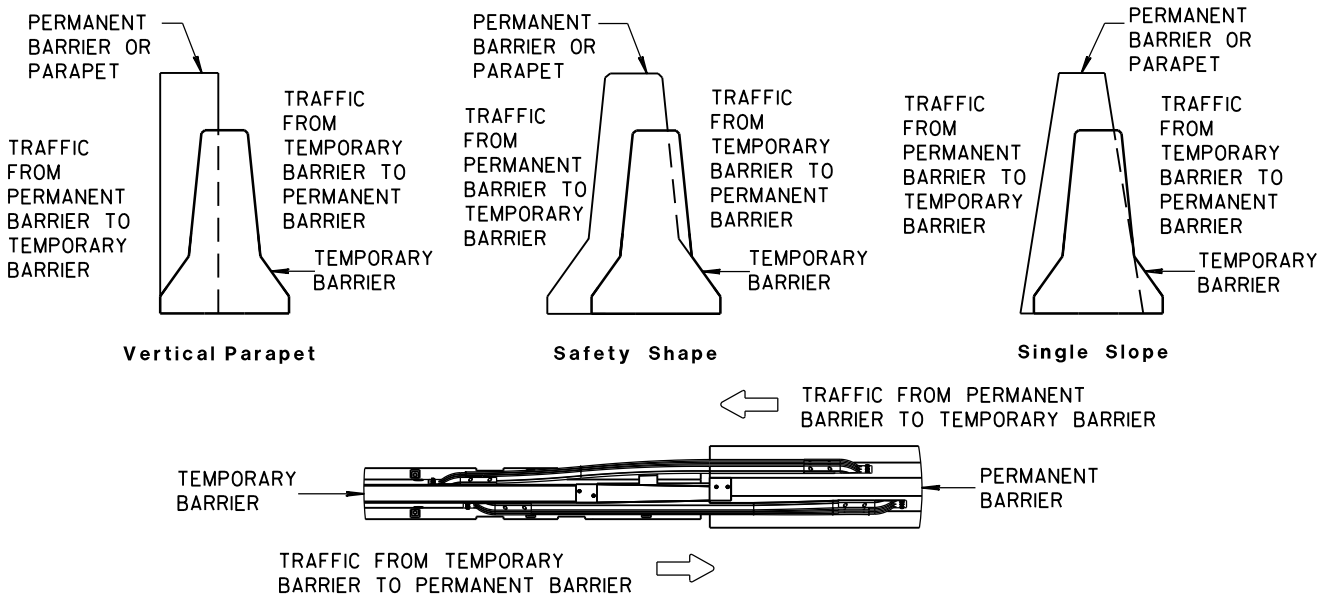
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 2 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 40 MPH OR LESS.
- ANCHORING IS INCIDENTAL TO CONCRETE BARRIER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

WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED 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 MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST.
- 1/8" DIAMETER A307 THREADED ROD, 1/2" X 3" X 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL, ASTM A563A HEAVY HEX NUT.
- ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5/4" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.



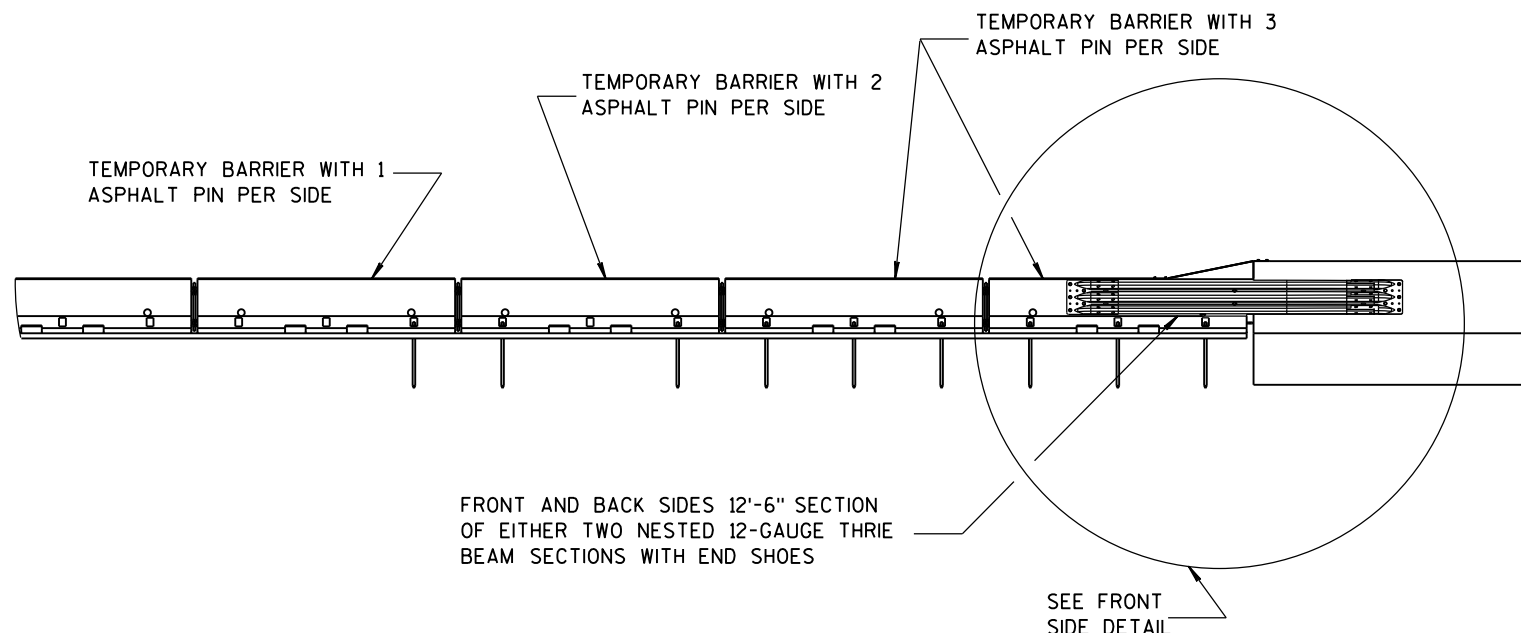
FRONT VIEW



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

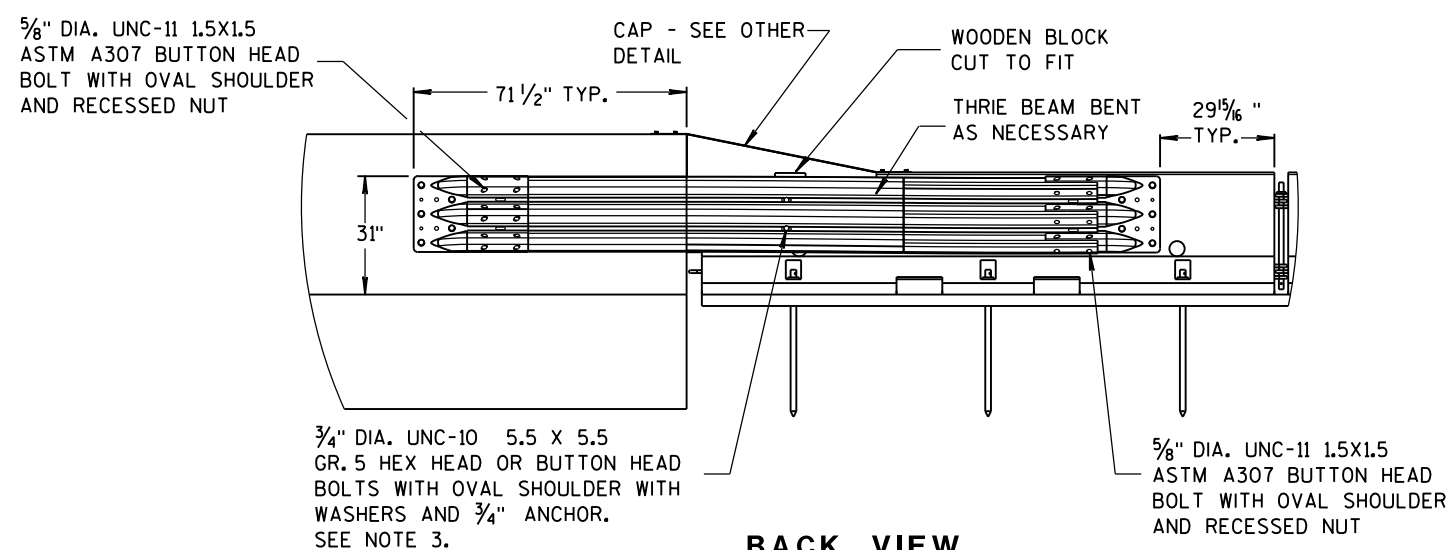
NOTES

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 ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.
4. MINIMUM MECHANICAL OR ADHESIVE 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 ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.

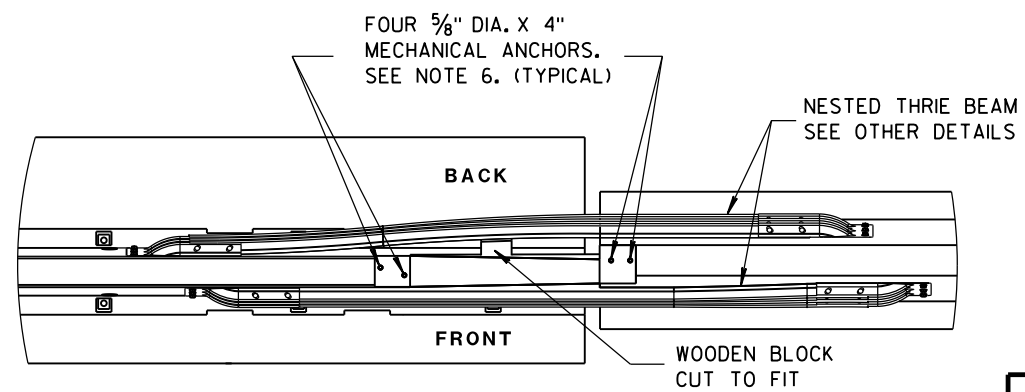


FRONT VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM



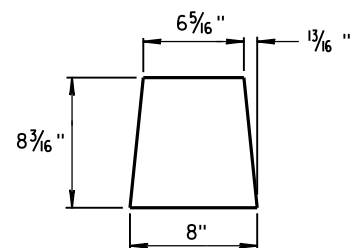
BACK VIEW



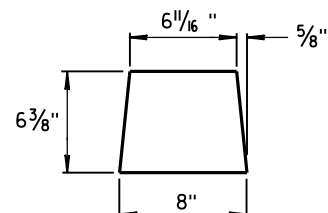
PLAN VIEW

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

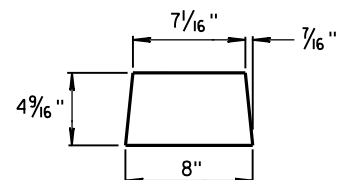
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



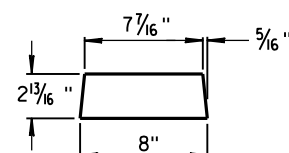
GUSSET 1



GUSSET 2

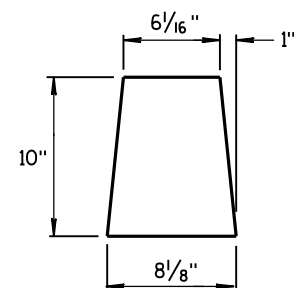


GUSSET 3

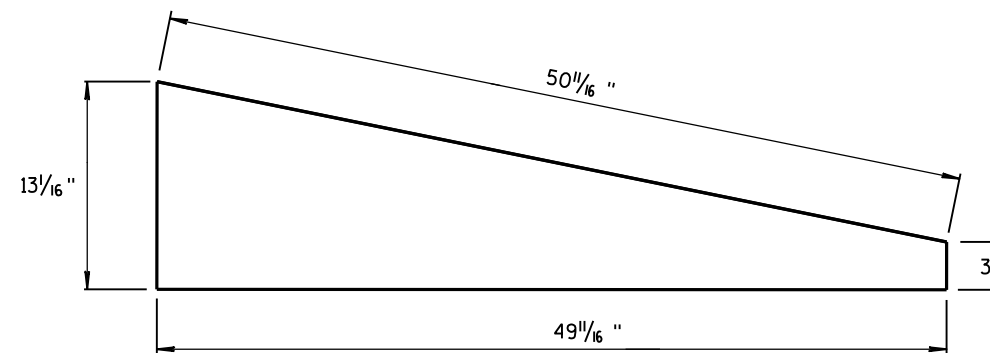


GUSSET 4

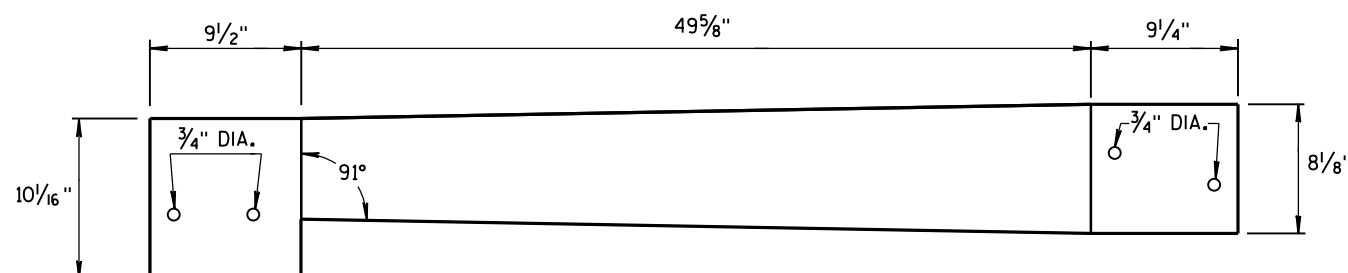
GUSSETS



END PLATE



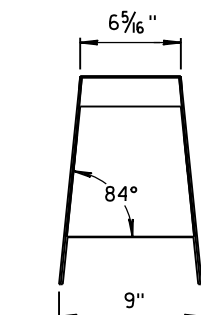
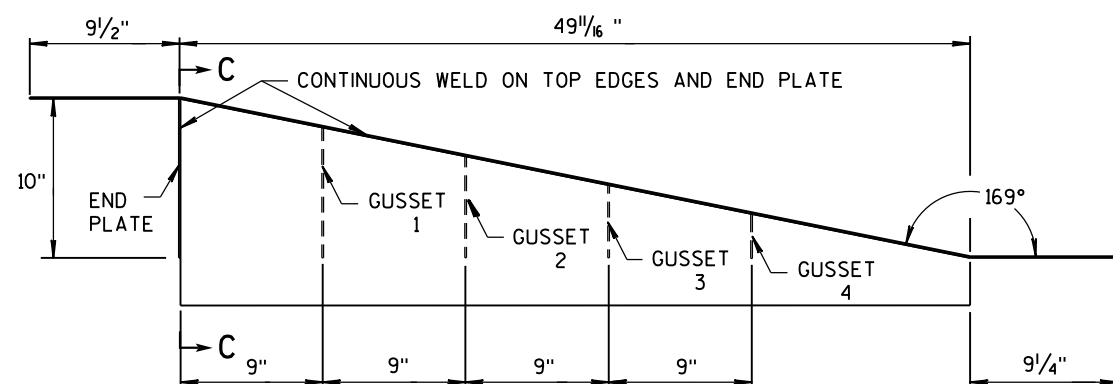
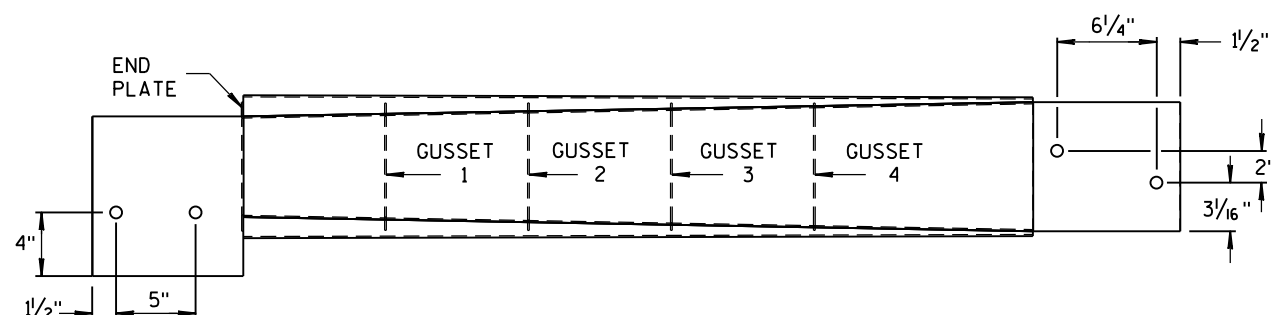
SIDE PLATE



TOP PLATE

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

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



SECTION C-C

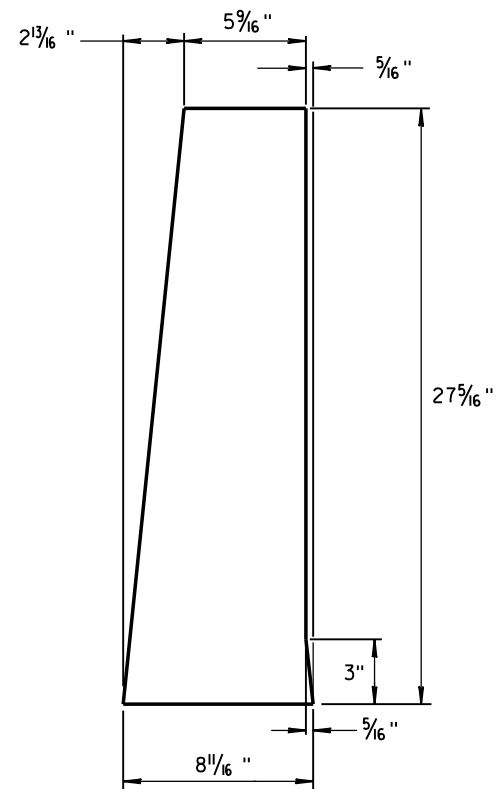
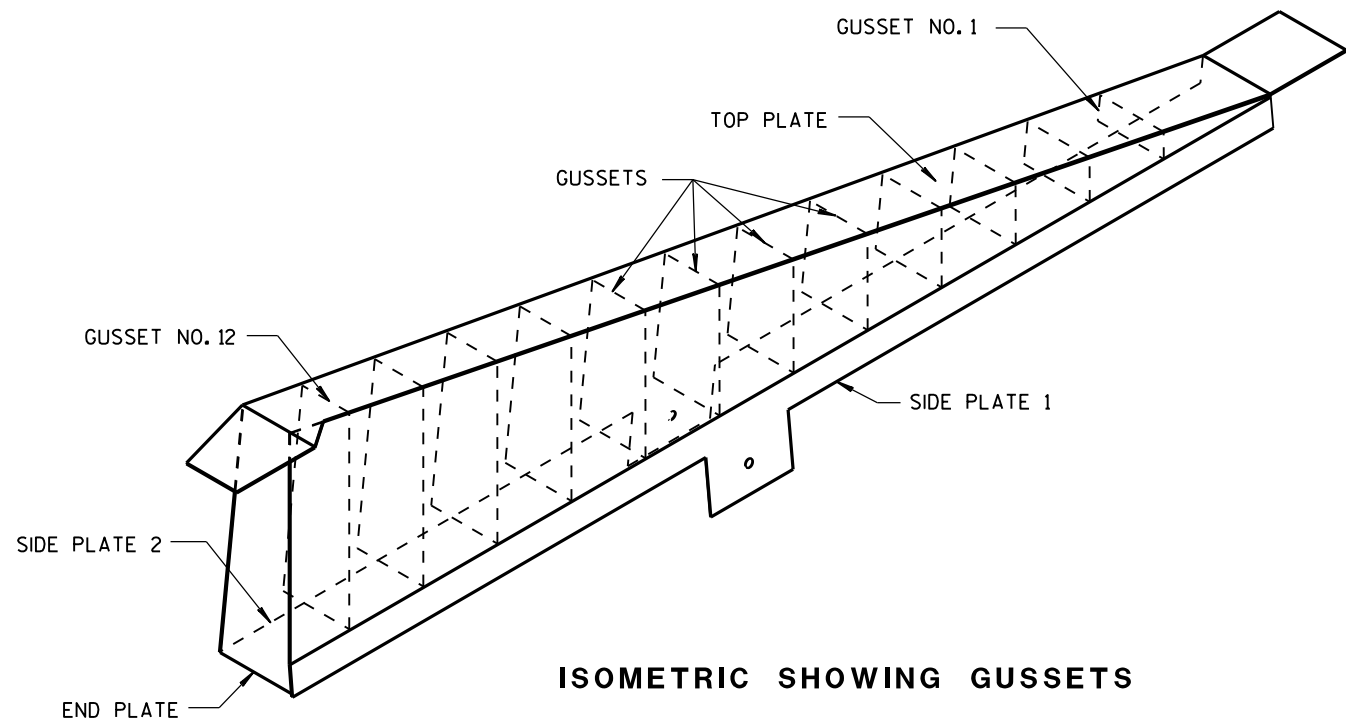
NOTES

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

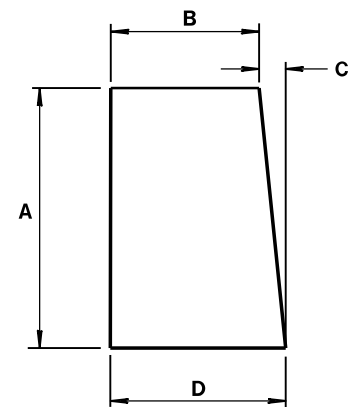
**CAP DETAILS FOR TEMPORARY CONCRETE
BARRIER TO 42" PERMANENT CONCRETE BARRIER**

**CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



END PLATE
1/8" STEEL PLATE

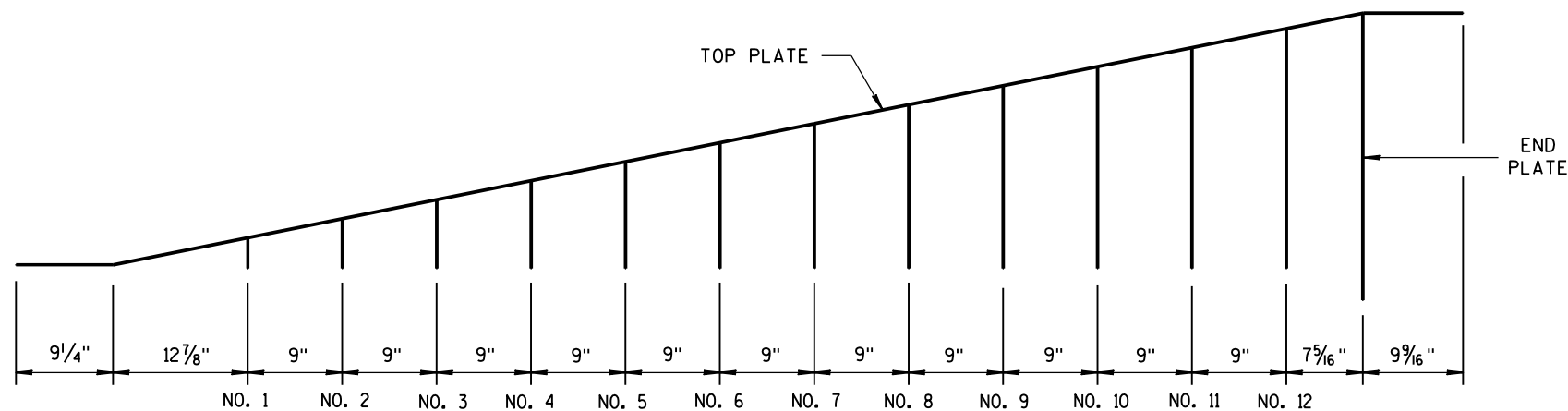


GUSSETS 1 - 12
ALL GUSSETS 1/8" STEEL PLATE

GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
1	2 7/8"	7 3/4"	1/4"	8
2	4 1/16 "	7 9/16 "	1/2"	8
3	6 1/2"	7 3/8"	1 1/16 "	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.

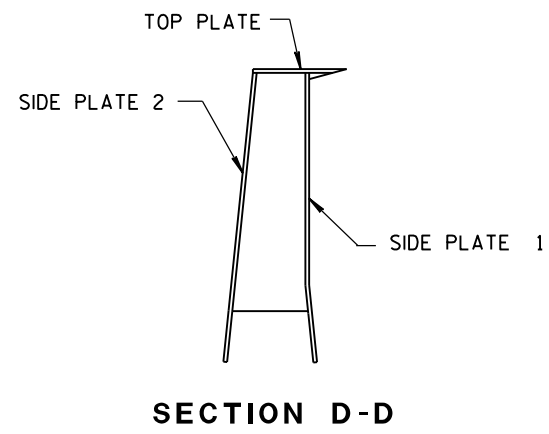
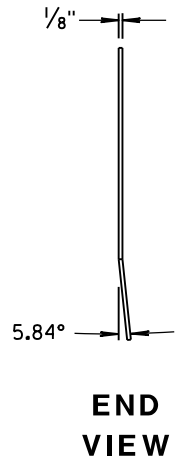
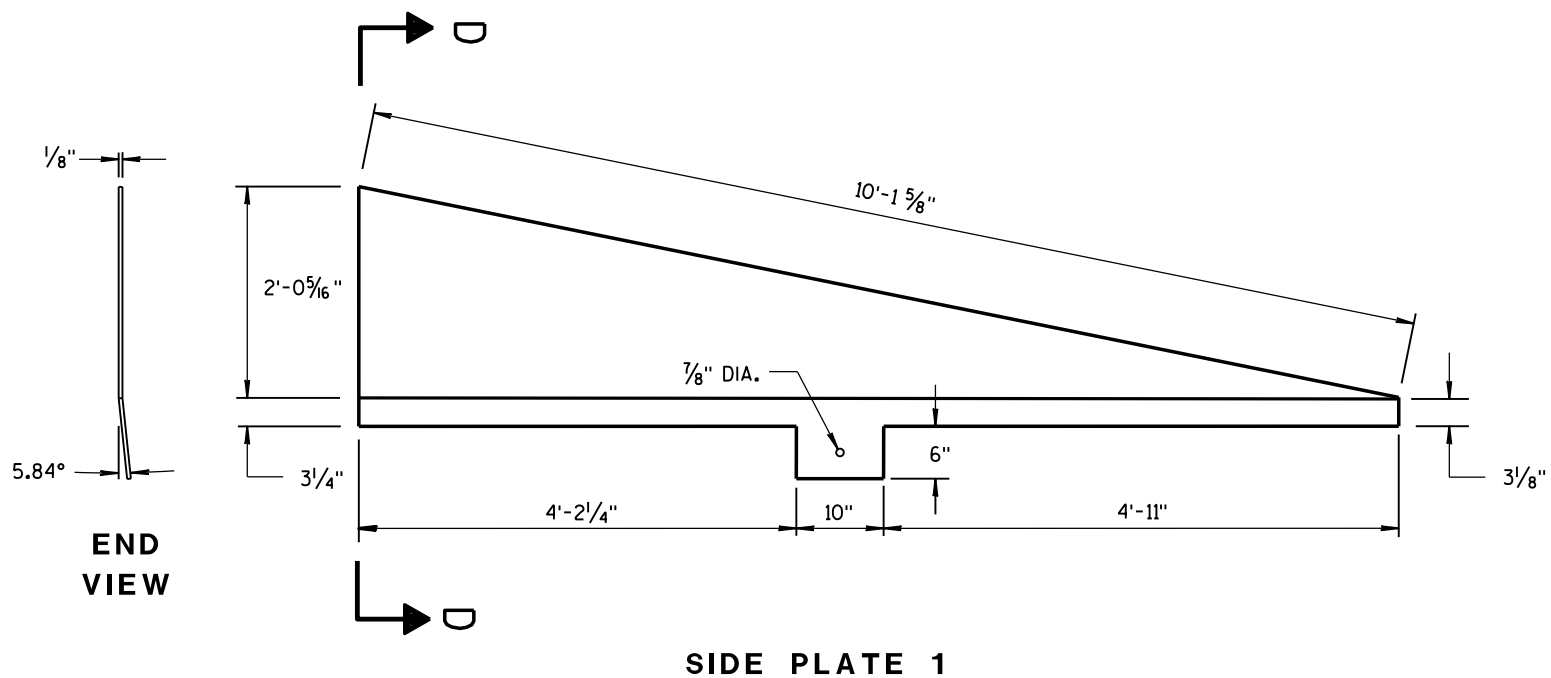
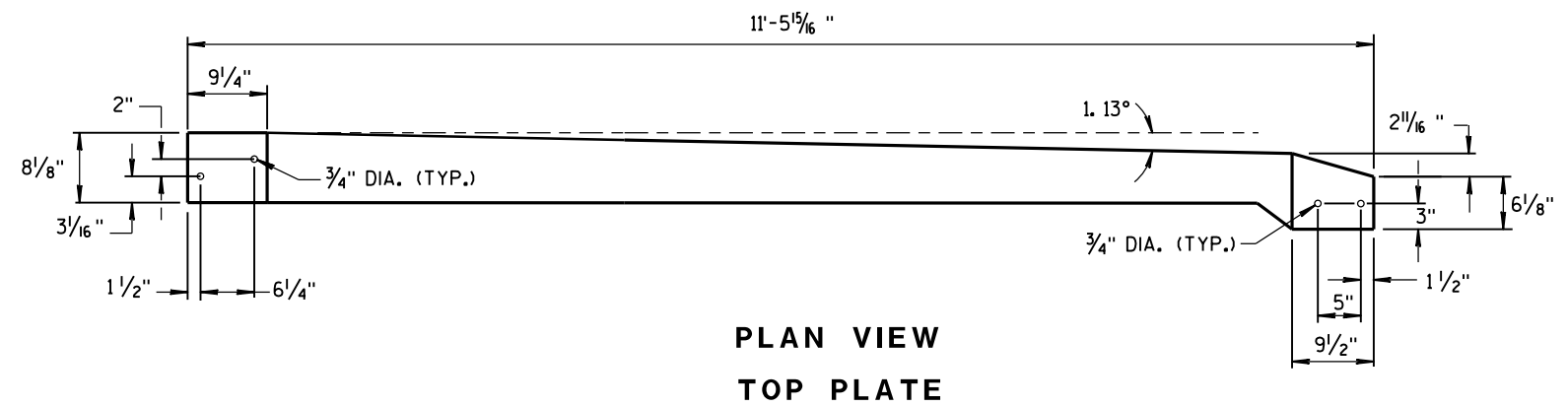
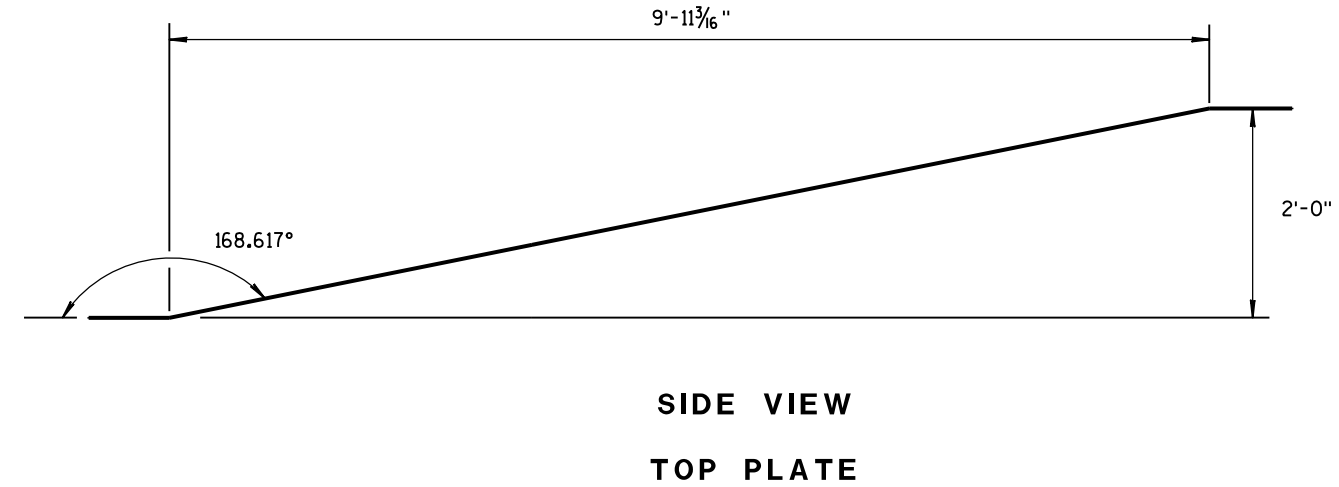
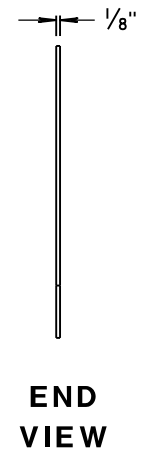
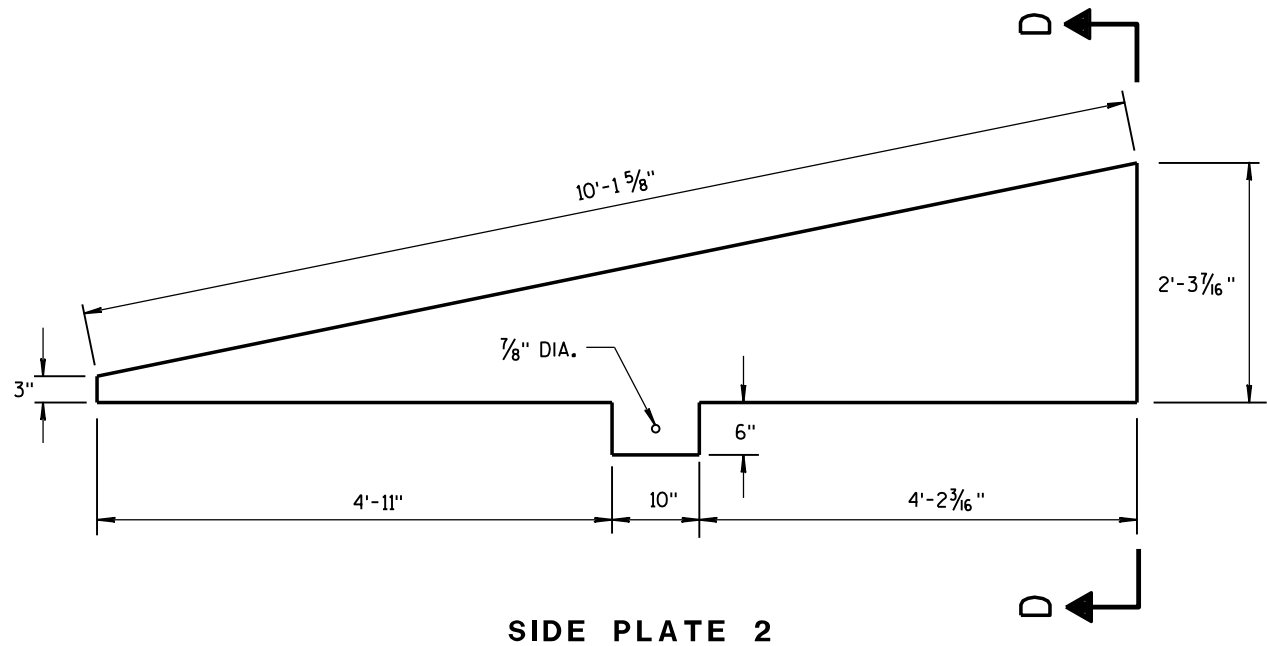
GUSSETS AND END PLATE ARE STITCH WELDED ON 3 SIDES. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE AND GUSSETS.



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 June 2014 DATE	/S/ Jerry H. Zogg ROADWAY STANDARD DEVELOPMENT ENGINEER
FHWA	

6

- S.D.D. 14 B 15-9a

S.D.D. 14 B 15-9a



S.D.D. 14 B 15-9a



S.D.D. 14 B 15-9a



S.D.D. 14 B 15-9a



S.D.D. 14 B 15-9a



S.D.D. 14 B 15-9a

S.D.D. 14 B 15-9a



S.D.D. 14 B 15-9a

S.D.D. 14 B 15-9a



S.D.D. 14 B 15-9a



S.D.D. 14 B 15-9a



S.D.D. 14 B 15-9a



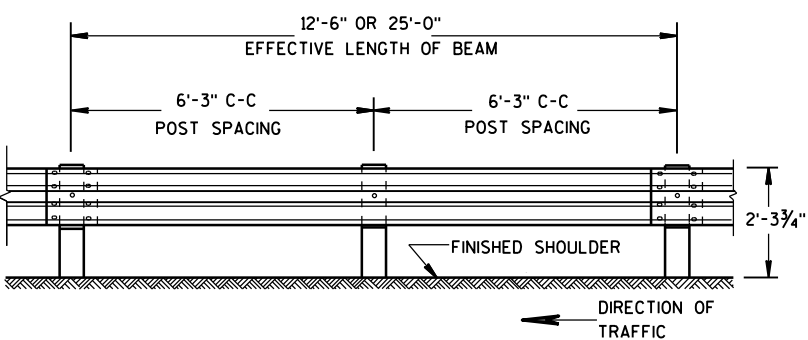
S.D.D. 14 B 15-9a



S.D.D. 14 B 15-9a

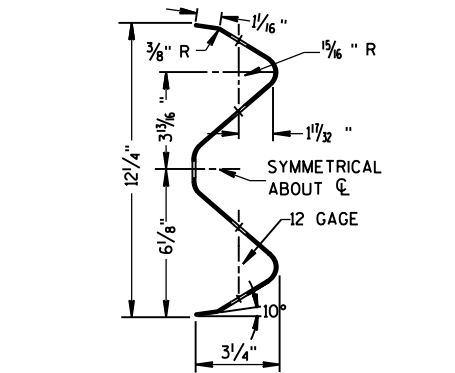
S.D.D. 14 B 15-9a

S.D.D. 14 B 15-9a

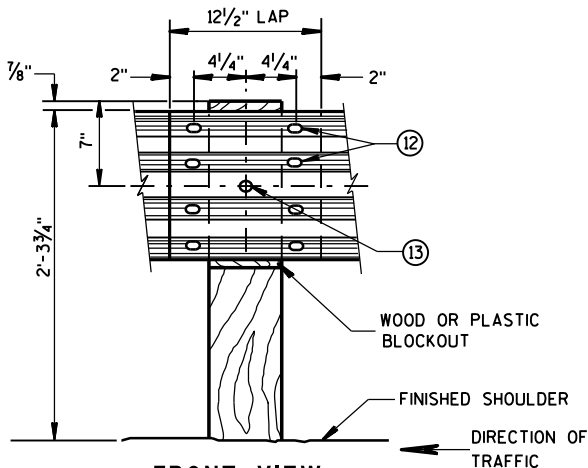


FRONT VIEW

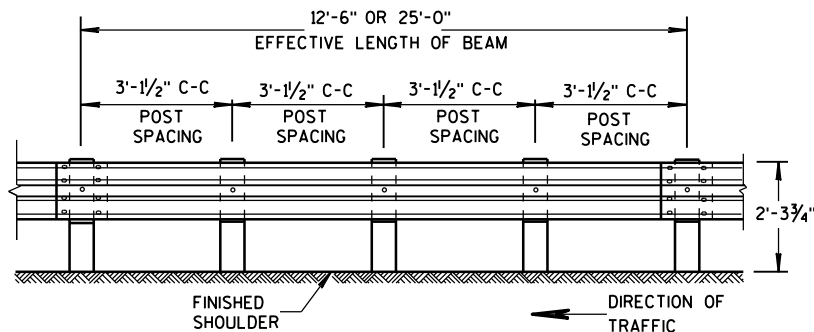
POST SPACING STANDARD INSTALLATION



SECTION THRU W BEAM

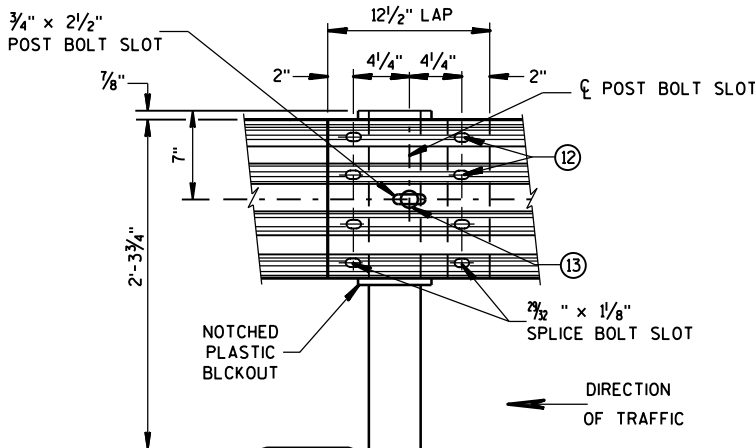


FRONT VIEW
BEAM SPLICE AT WOOD POST
AND POST MOUNTING DETAIL



FRONT VIEW

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

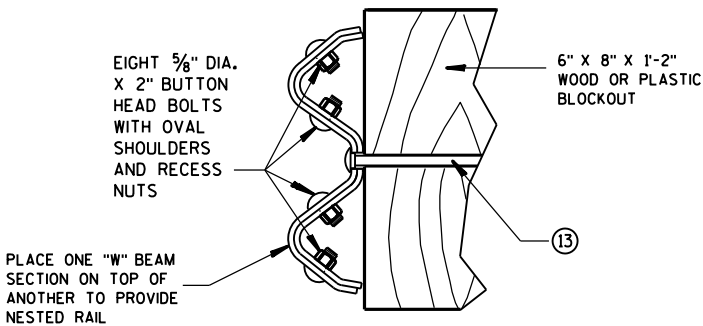


FRONT VIEW
BEAM SPLICE AT STEEL POST

TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD

GENERAL NOTES

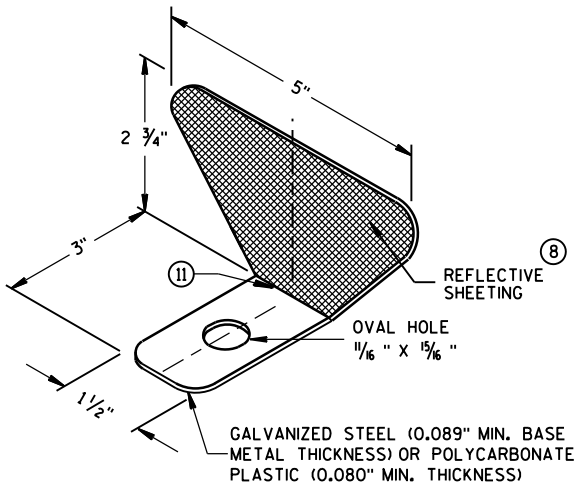
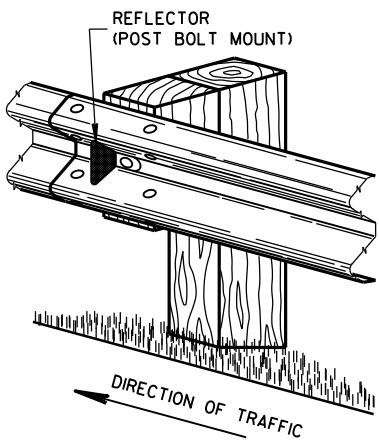
- ⑧ PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.
- ⑨ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
- ⑩ REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
- ⑪ PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.
- ⑫ 8 - 5/8" Ø X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.
- ⑬ 5/8" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH 5/8" DIA. F844 FLAT WASHER UNDER NUT.



NESTED W BEAM (NW)

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

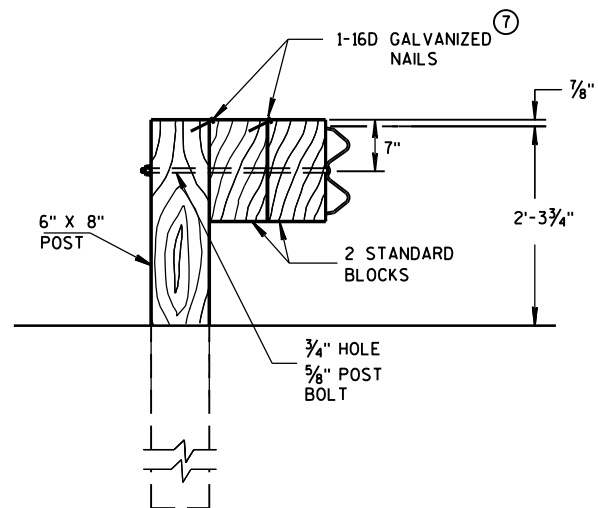
REFLECTOR SPACING ⑨				
	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	3
TWO WAY TRAFFIC	< 200'	25' C-C	1 ⑩	6
	> 200'	50' C-C	1 ⑩	6
TWO WAY TRAFFIC	< 200'	50' C-C	2 ⑪	3
	> 200'	100' C-C	2 ⑪	3



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

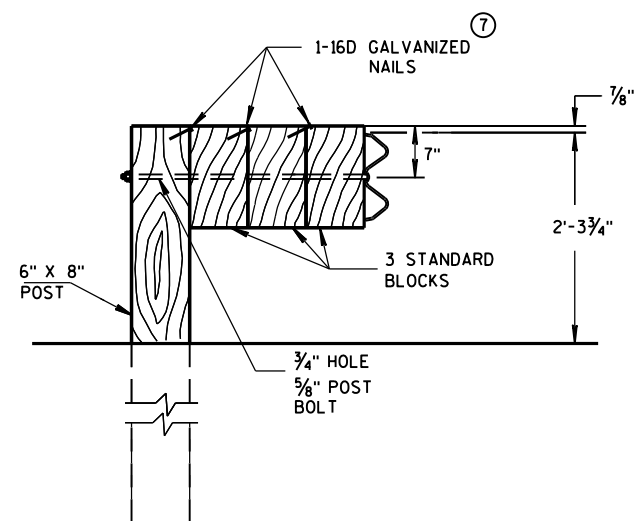
STEEL PLATE BEAM GUARD,
CLASS "A",
INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL FOR DOUBLE BLOCKS

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

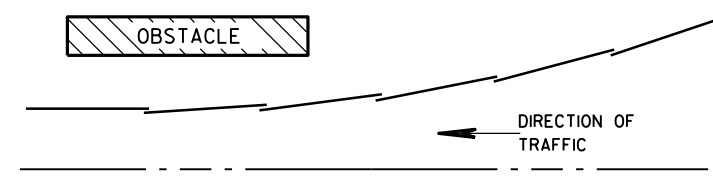


DETAIL FOR TRIPLE BLOCKS

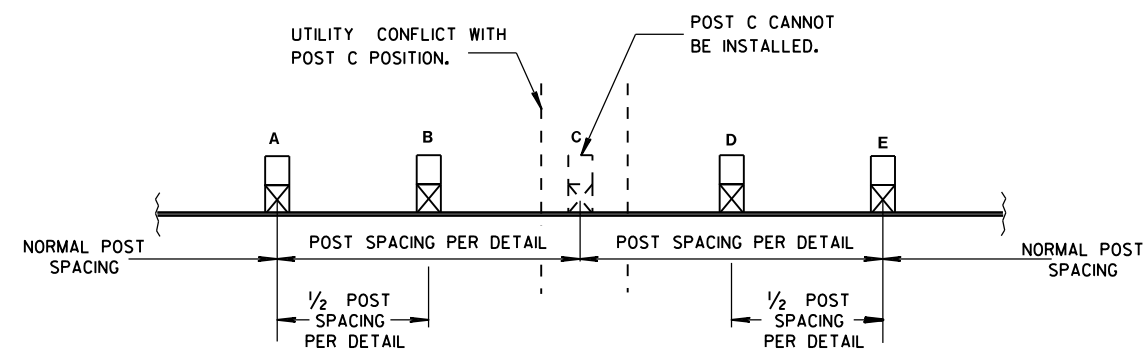
TRIPLE BLOCK DETAIL IS LIMITED TO ONE
LOCATION WITHIN A BEAM GUARD RUN.

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

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



PLAN VIEW BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

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

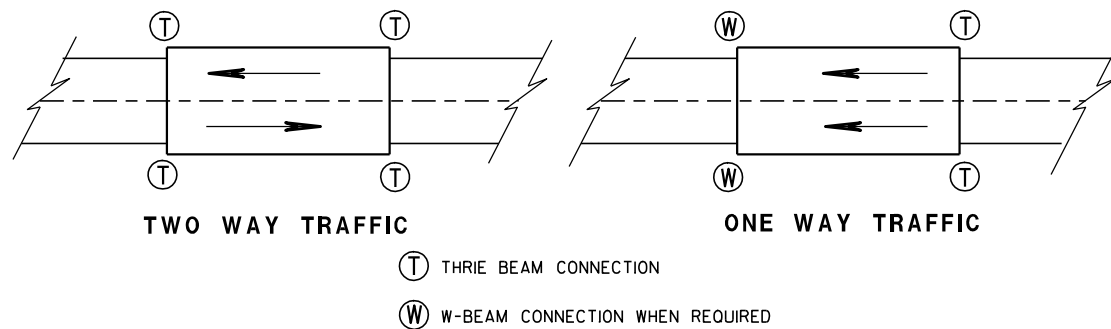
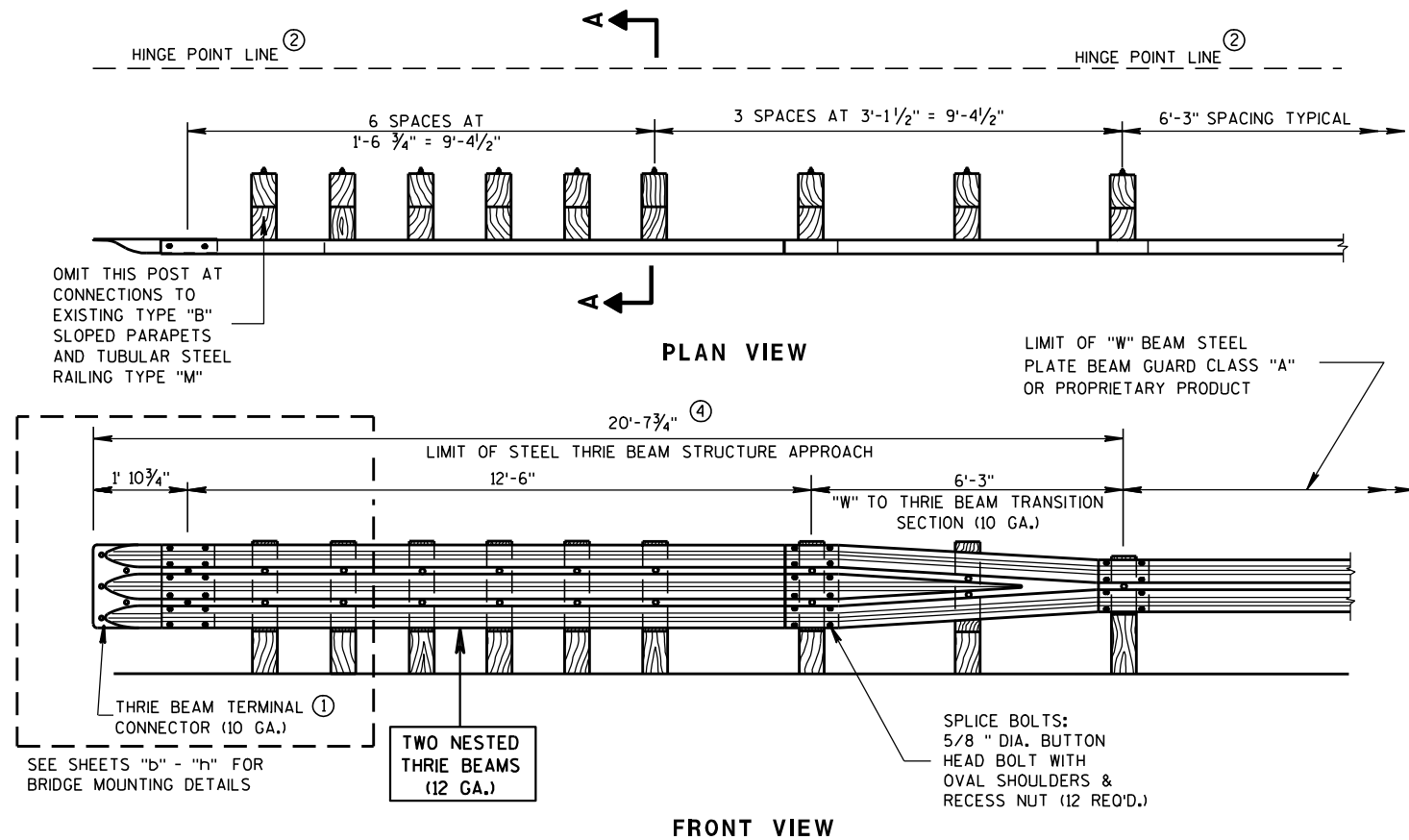
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

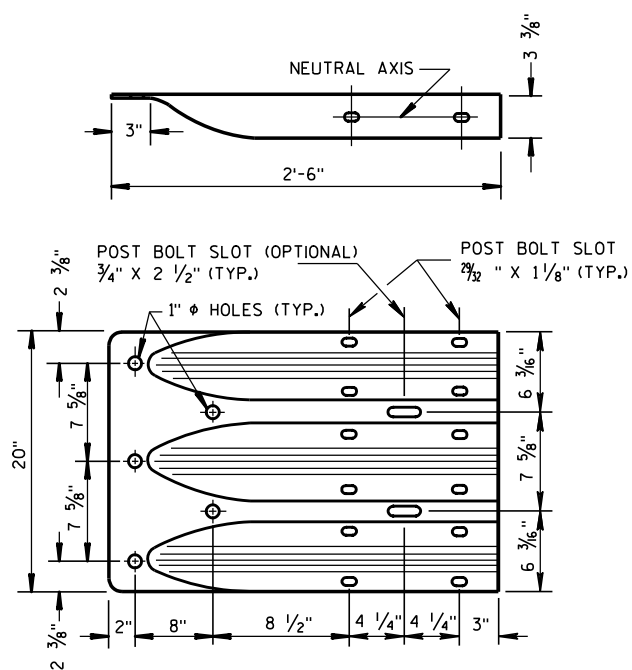
June 2016
DATE

FHWA

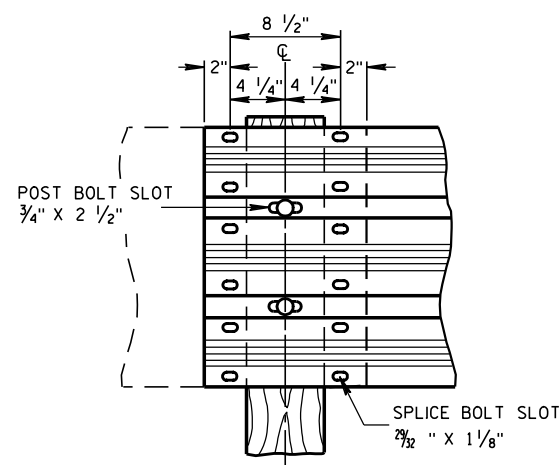
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



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



THRIE BEAM TERMINAL CONNECTOR



THRIE BEAM SPLICE

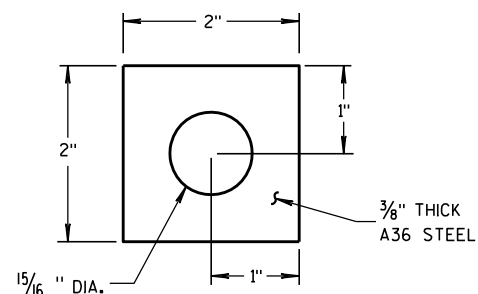
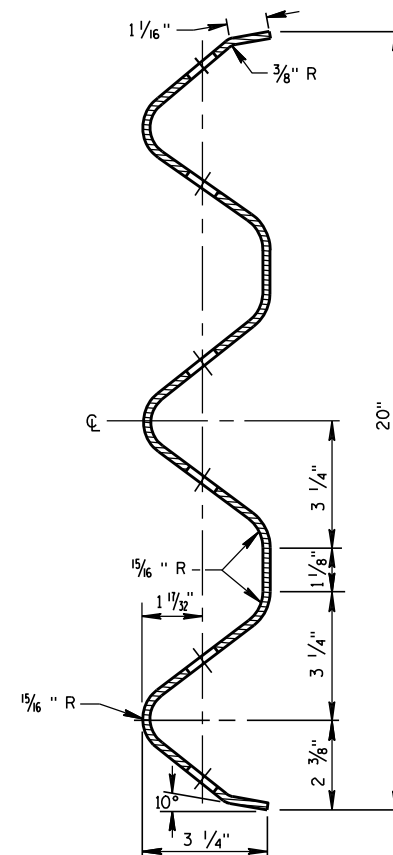


PLATE WASHER DETAIL



SECTION THRU THRIE BEAM RAIL ELEMENT

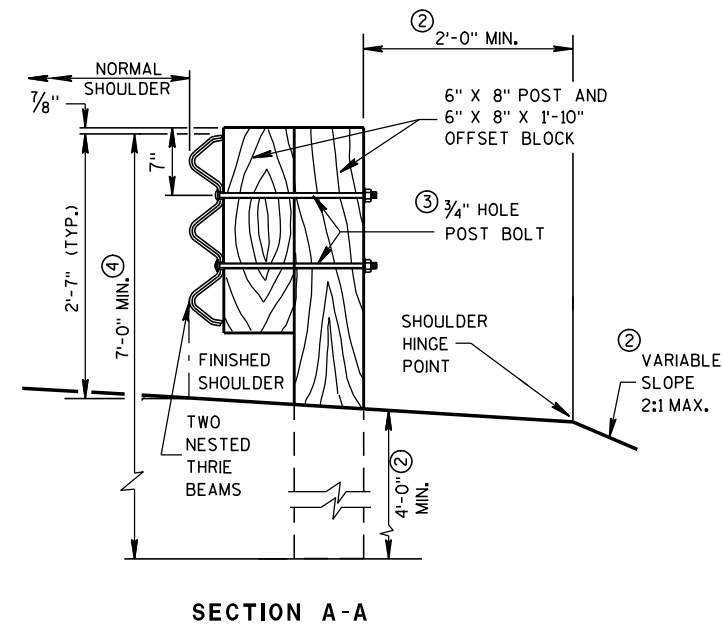
GENERAL NOTES

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

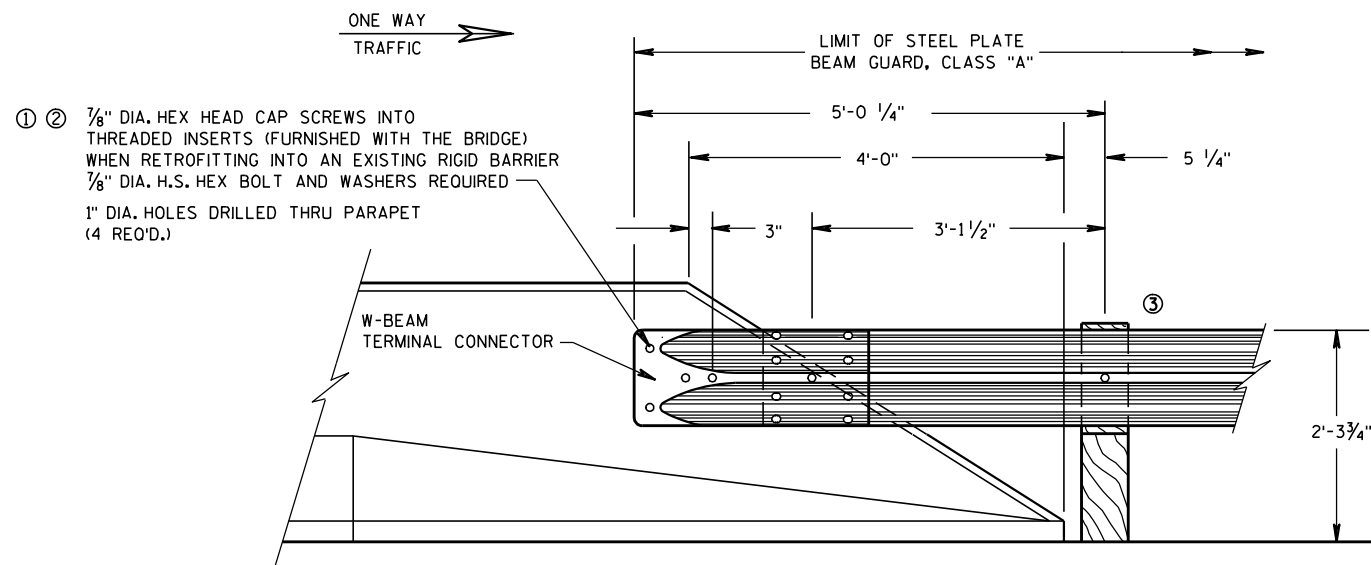
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

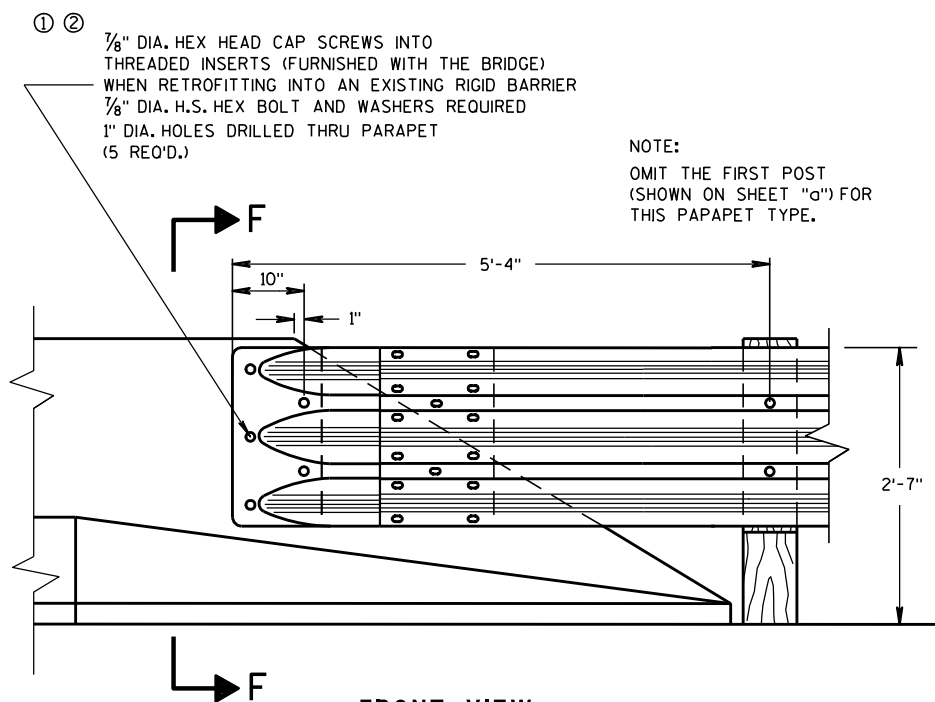
8/31/2012
DATE

FHWA

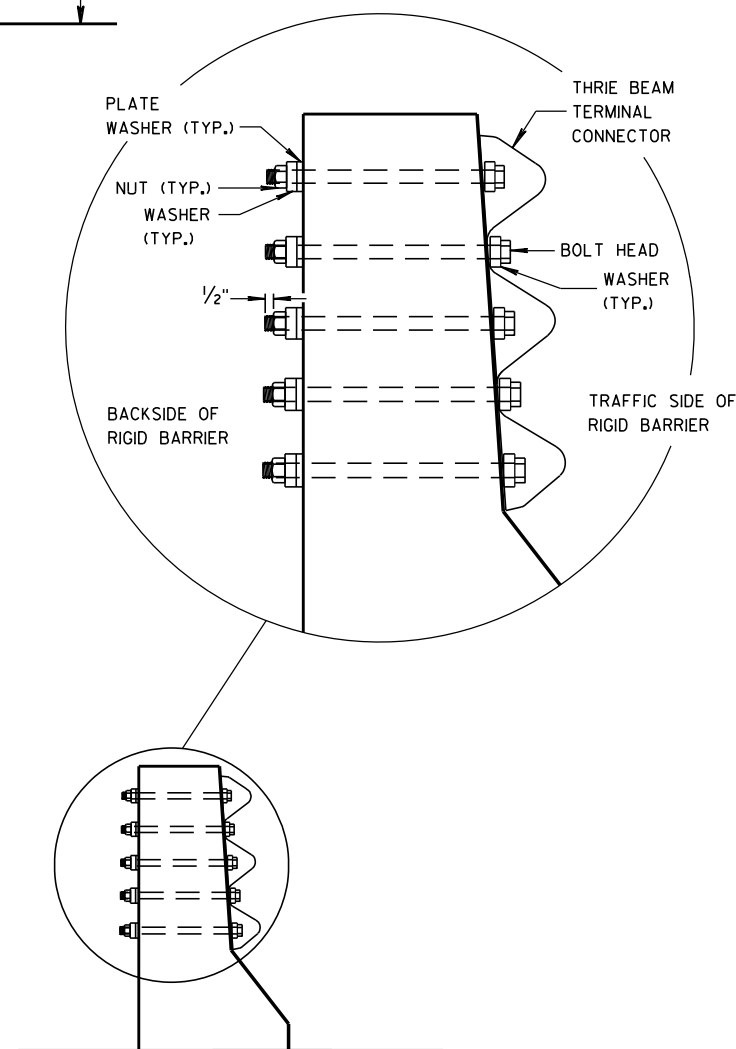
/s/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



FRONT VIEW
W BEAM CONNECTION TO
PARAPETS WITH SLOPED ENDS
(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)



FRONT VIEW
THRIE BEAM CONNECTION TO BRIDGE
PARAPETS WITH SLOPED ENDS



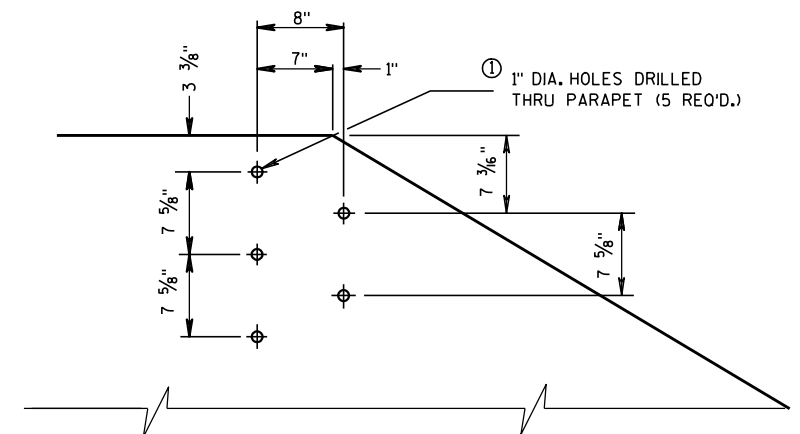
SECTION F-F

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 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.



DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION

STEEL THRIE BEAM STRUCTURE
APPROACH CONNECTION TO
SLOPED END PARAPETS

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

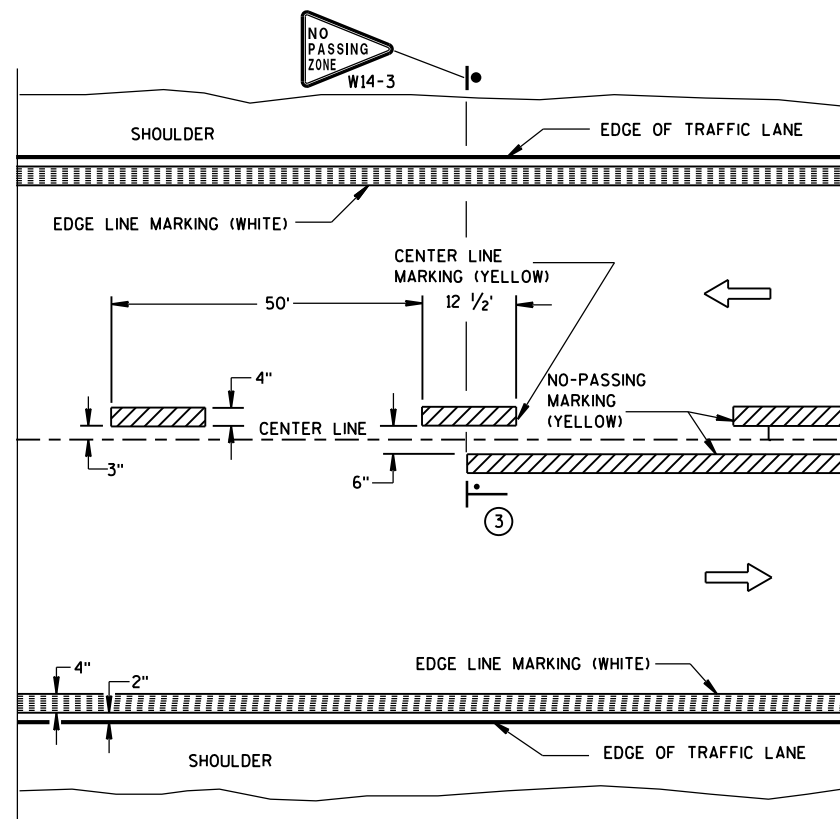
APPROVED

8/31/2012

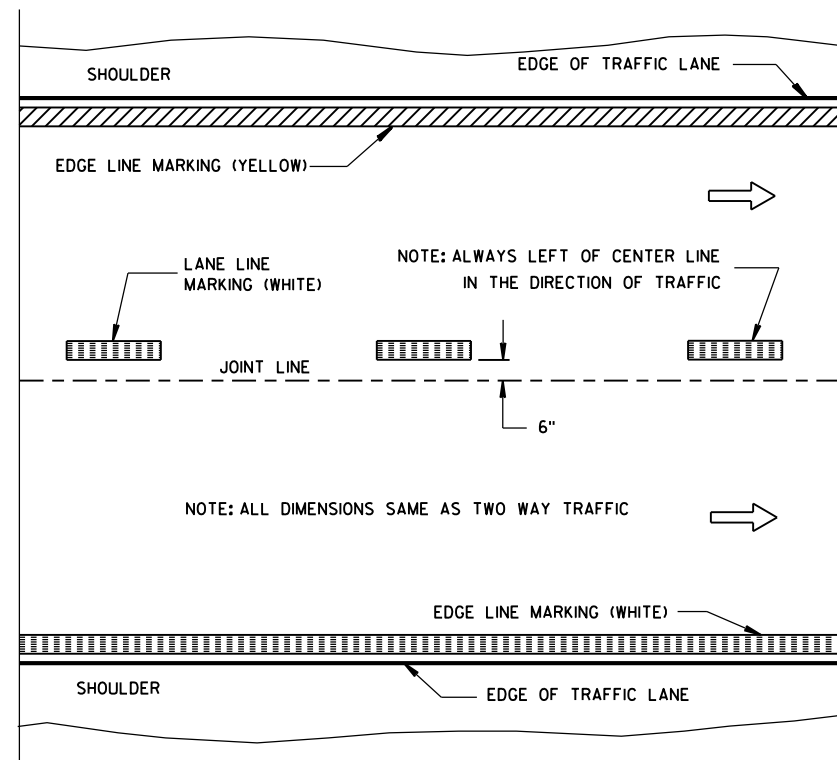
DATE

FHWA

/S/ Jerry H. Zogg
 ROADWAY STANDARDS DEVELOPMENT
 ENGINEER

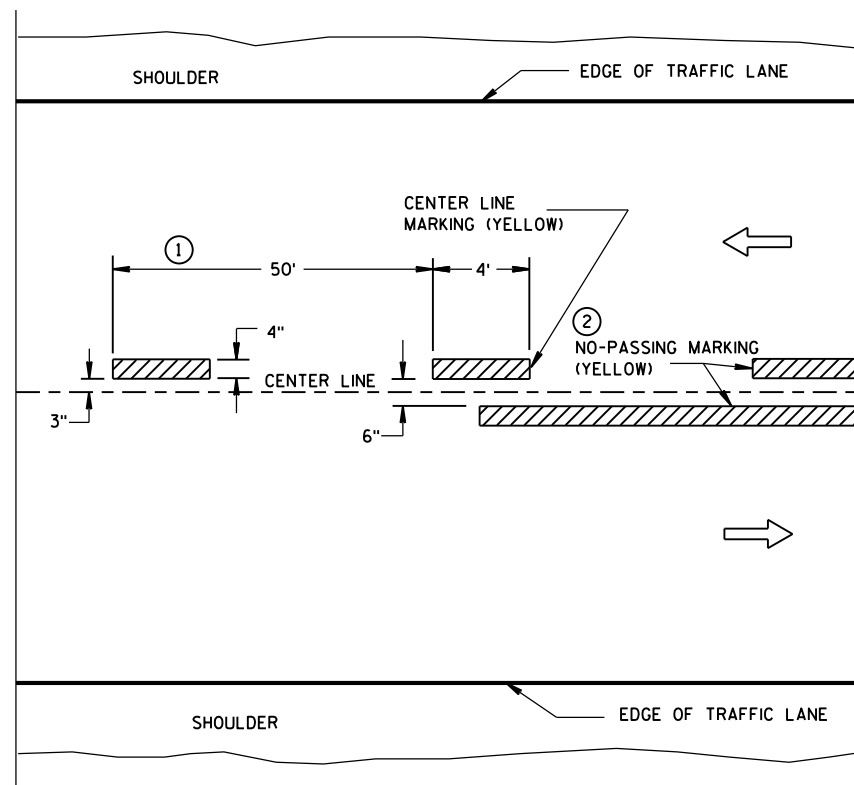


TWO WAY TRAFFIC

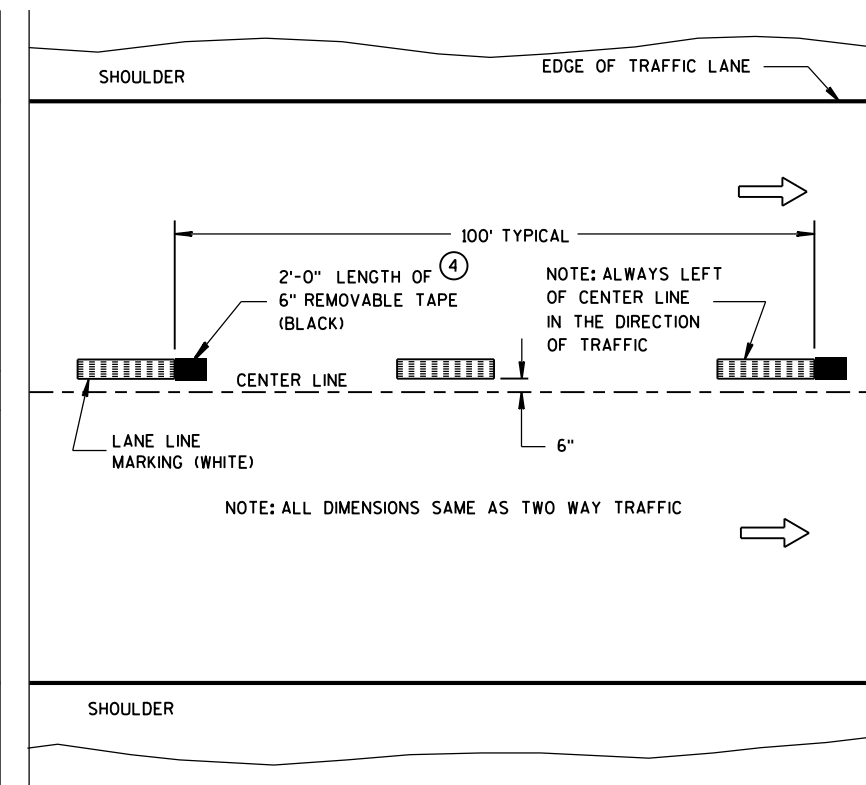


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

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

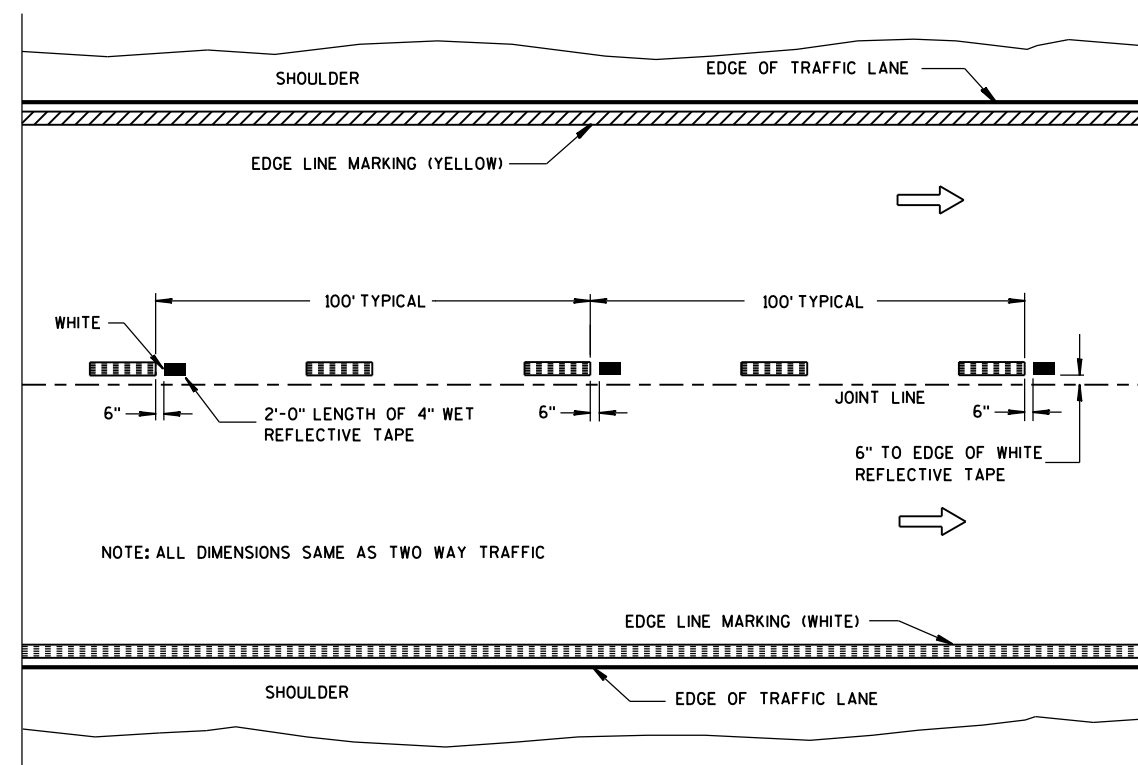
GENERAL NOTES

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

LEGEND

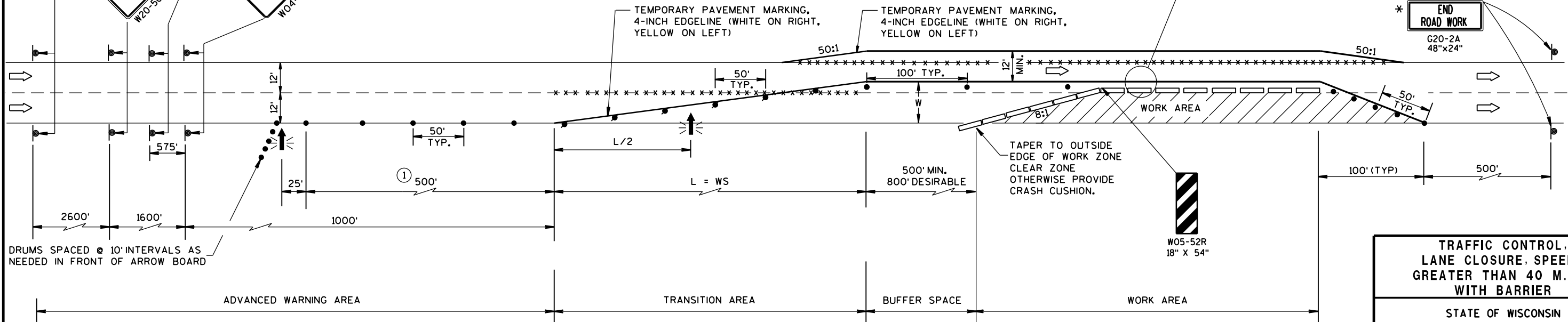
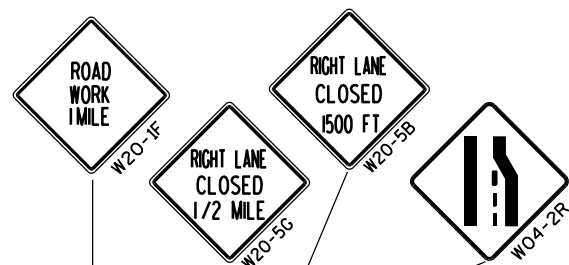
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- REMOVING PAVEMENT MARKING

CONCRETE BARRIER TEMPORARY PRECAST

DIRECTION OF TRAFFIC

WORK AREA

L. TAPER LENGTH (MPH)									
SPEED (MPH)	W. LATERAL OFFSET (FT)								
	10	11	12	13	14	15	16	17	18
45	450	495	540	585	630	675	720	765	810
50	500	550	600	650	700	750	800	850	900
55	550	605	660	715	770	825	880	935	990
60	600	660	720	780	840	900	960	1020	1080
65	650	715	780	845	910	975	1040	1105	1170
70	700	770	840	910	980	1050	1120	1190	1260



DRUMS SPACED @ 10' INTERVALS AS NEEDED IN FRONT OF ARROW BOARD

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.

"W0" 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 OR AS APPROVED BY THE ENGINEER.

- 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 DRUM TAPER.

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 4 OR MORE 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.



OR



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



OR



LOCATED 2600 FEET IN ADVANCE OF R2-1 SIGN AND 500 FEET BEYOND THE "ROAD WORK 1 MILE" SIGN.



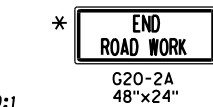
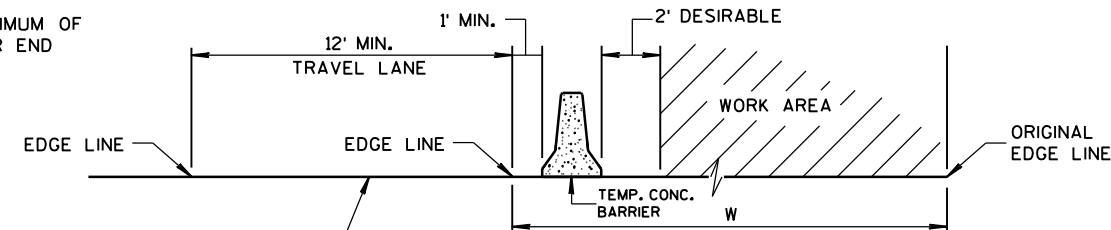
OR



R2-1 48"x60" (BLACK AND WHITE) LOCATED 500 FEET BEYOND W20-5G SIGN.

IF THE REGULATORY SPEED HAS BEEN REDUCED, A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. THERE SHOULD BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 2 OR 3 MILES.

* INCLUDE RESUME SPEED LIMIT SIGN A MINIMUM OF 200 FEET (500 FEET DESIRABLE) AFTER END ROAD WORK SIGNS.



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

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED March 2016 /S/ Peter Amakobe Atepe DATE STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER FHWA

LEGEND

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

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

"W0" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

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

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

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

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

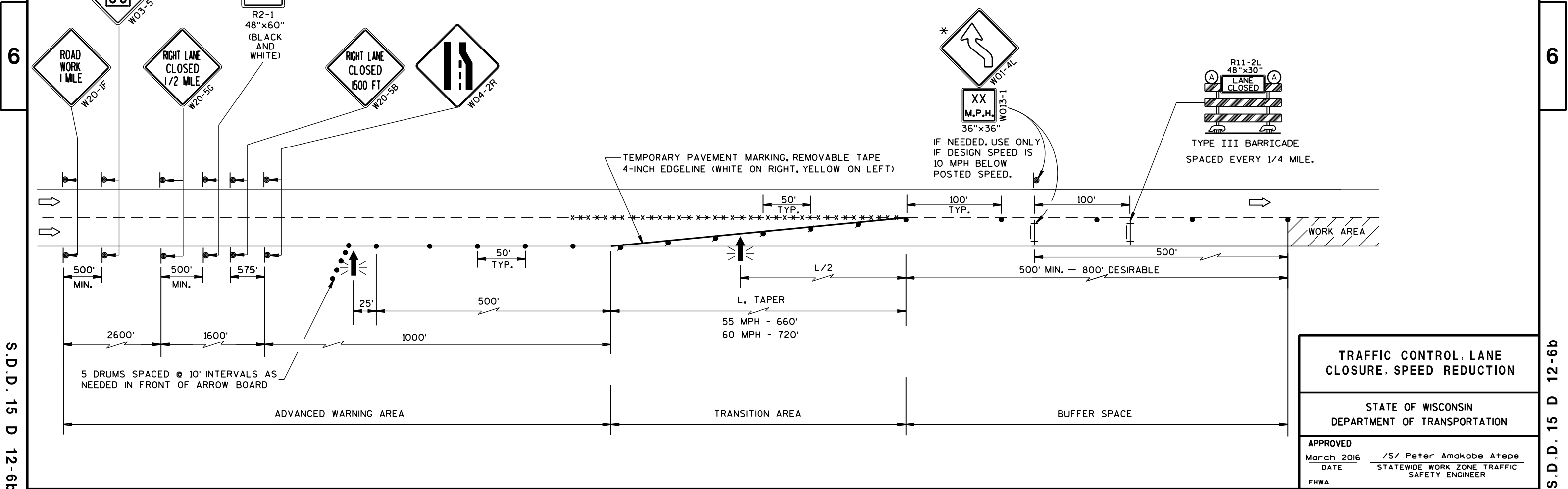
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

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

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

** A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. THERE SHOULD BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 2 OR 3 MILES. INCLUDE A RESUME SPEED LIMIT SIGN 200 FEET MINIMUM (500 FEET DESIREABLE) BEYOND THE "END OF ROADWORK" SIGN.

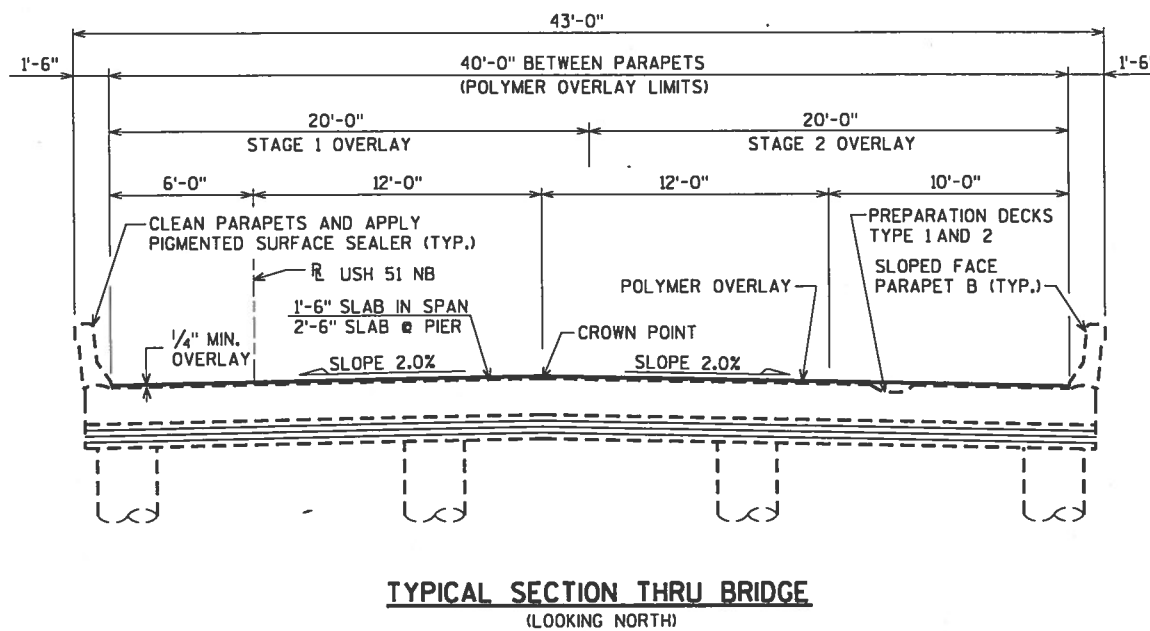
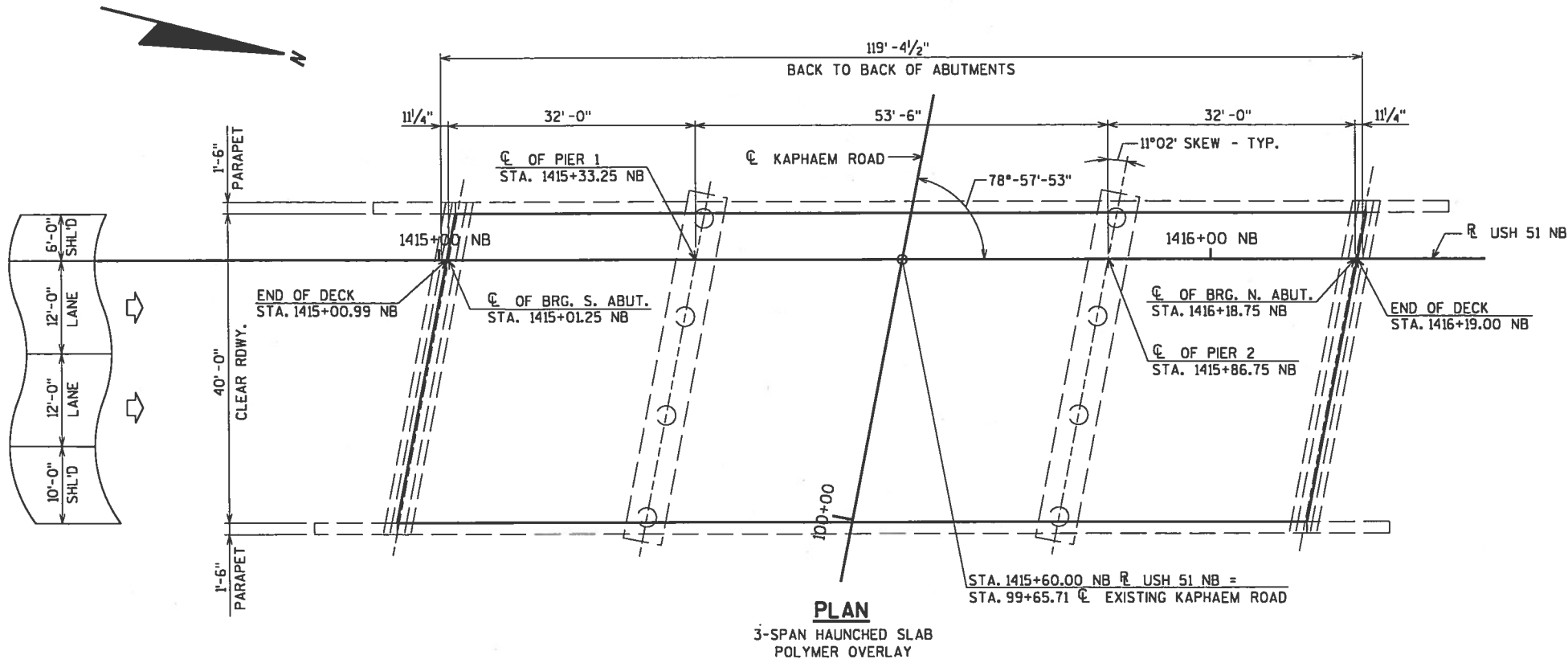


TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March 2016 DATE	/S/ Peter Amakobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA	

\$PRNAME\$
U:\42-0967.00 - Lincoln County, USH 51Rehabs\42-0967.03 B-35-56 & 57 (Kaphaem Road)\B-35-56.d

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

8



STATE PROJECT NUMBER

1176-23-64

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS-20
INVENTORY RATING: HS-22
OPERATING RATING: HS-37
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 220 KIPS

TRAFFIC DATA:

A.D.T. = 12,900 (2017)
A.D.T. = 15,700 (2037)
R.D.S. = 70 M.P.H.

TOTAL ESTIMATED QUANTITIES

502.3210	PIGMENTED SURFACE SEALER	103	SY
509.0301	PREPARATION DECKS TYPE 1	26	SY
509.0302	PREPARATION DECKS TYPE 2	11	SY
509.5100.S	POLYMER OVERLAY	525	SY
509.9050.S	CLEANING PARAPETS	271	LF
SPV.0035.04	CONCRETE MASONRY DECK PATCHING	3	CY
SPV.0090.02	SAWING PAVEMENT DECK PREPARATION AREAS	300	LF

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

DECK SURFACE PREPARATION IS INCLUDED IN THE BID ITEM "POLYMER OVERLAY".

SEE TRAFFIC CONTROL PLANS FOR STAGING.

CLEAN PARAPETS AND APPLY PIGMENTED SURFACE SEALER TO THE TOP AND INSIDE FACES OF PARAPETS.

PREPARATION DECKS SHALL BE AS DETERMINED BY THE ENGINEER IN THE FIELD.

PREPARATION DECKS TYPE 1 AND TYPE 2 SHALL BE FILLED WITH "CONCRETE MASONRY DECK PATCHING".

DEFINE LIMITS OF "PREPARATION DECKS TYPE 1" AND "PREPARATION DECKS TYPE 2" WITH A 1" DEEP SAWCUT BEFORE REMOVING THE DETERIORATED CONCRETE, THE SAWCUT SHALL BE PAID AS "SAWING PAVEMENT DECK PREPARATION AREAS".

LIST OF DRAWINGS

1. GENERAL PLAN



11/30/2016

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 SDR CHIEF STRUCTURES DESIGN ENGINEER		01/23/17 DATE
STRUCTURE B-35-56			
USH 51 NB OVER KAPHAEM ROAD			
COUNTY	LINCOLN	TOWN/CITY/VILLAGE	BRADLEY
DESIGN SPEC.	REHABILITATION	N/A	
DESIGNED BY	CK'D.	CJM	DRAWN BY CJM/CLS PLANS CK'D. DNS
GENERAL PLAN			SHEET 1 OF 1

8

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
DIMENSIONS SHOWN ARE BASED ON ORIGINAL STRUCTURE PLANS.
A MINIMUM OF 1-INCH OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER THE BID ITEM "CLEANING DECKS".
ANY EXCAVATION NECESSARY TO COMPLETE THE OVERLAY IS CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

REMOVAL LINES NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1" DEEP SAW CUT AT THE CONCRETE SURFACES.
PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, CONCRETE SURFACE REPAIR AND FULL DEPTH DECK REPAIR AREAS SHALL BE DETERMINED BY THE FIELD ENGINEER.

VARIABLE DEPTH CONCRETE OVERLAY IS REQUIRED TO CORRECT DIP IN EXISTING DECK SURFACE AT SPAN 2 AND MODIFY CROSS SLOPE. THE CONCRETE OVERLAY RAISES THE EXISTING DECK SURFACE A MAXIMUM OF 4" IN SPAN 2 AT CROWN POINT. EXPECTED AVERAGE OVERLAY THICKNESS IS 3/4". IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN 1/2", CONTACT THE STRUCTURES DESIGN SECTION.

PROFILE GRADE LINE SHOWN ON THIS SHEET INCLUDES THE VARIABLE DEPTH CONCRETE OVERLAY AND THE 1/4" POLYMER OVERLAY.

CLEAN PARAPETS AND APPLY PIGMENTED SURFACE SEALER TO THE TOP AND INSIDE FACE OF THE PARAPETS.

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS-20
INVENTORY RATING: HS-18
OPERATING RATING: HS-30
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 200 KIPS

MATERIAL PROPERTIES:

CONCRETE MASONRY OVERLAY DECKS $f'_c = 4,000$ p.s.i.

TRAFFIC DATA:

A.D.T. = 12,900 (2017)
A.D.T. = 15,700 (2037)
R.D.S. = 70 M.P.H.

LIST OF DRAWINGS

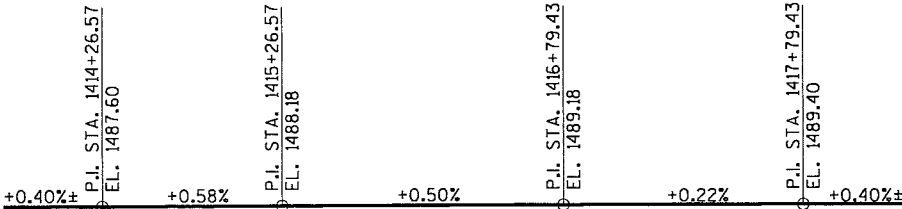
1. GENERAL PLAN

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	William C. Dreher CHIEF STRUCTURES DESIGN ENGINEER		SDR 01/23/17 DATE
STRUCTURE B-35-57			
USH 51 SB OVER KAPHAEM ROAD			
COUNTY	LINCOLN	TOWN/CITY/VILLAGE	BRADLEY
DESIGN SPEC.	REHABILITATION N/A		
DESIGNED BY	CJM	DESIGN CK'D.	CKJ
DRAWN BY	CJM/CLS	PLANS CK'D.	DNS
GENERAL PLAN			SHEET 1 OF 1

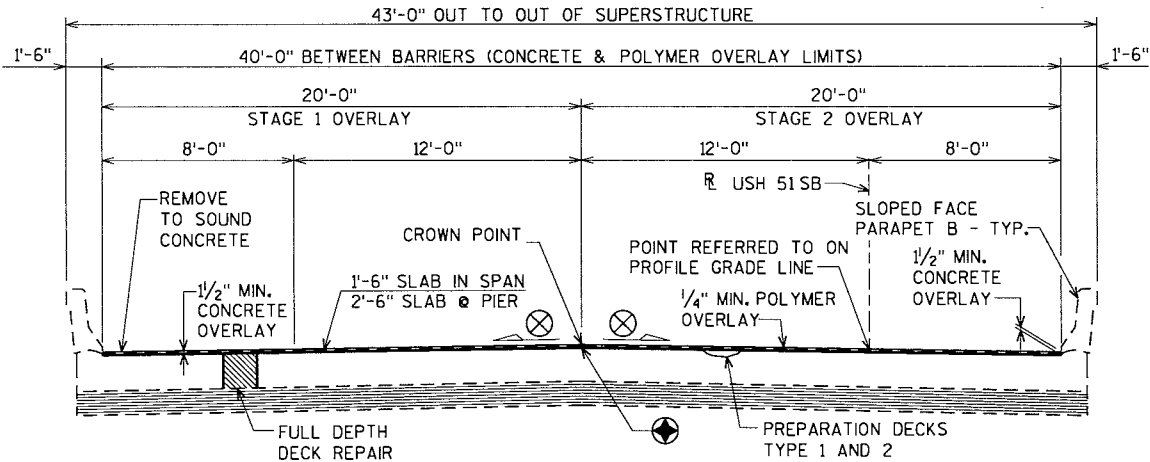
BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489
CONSULTANT CONTACT:
DAN SYDOW
(715)-834-3161

BENCH MARK:
BRASS DISK IN TOP OF PARAPET
STA. 1415+40, 10' RT.
EL. 1490.70

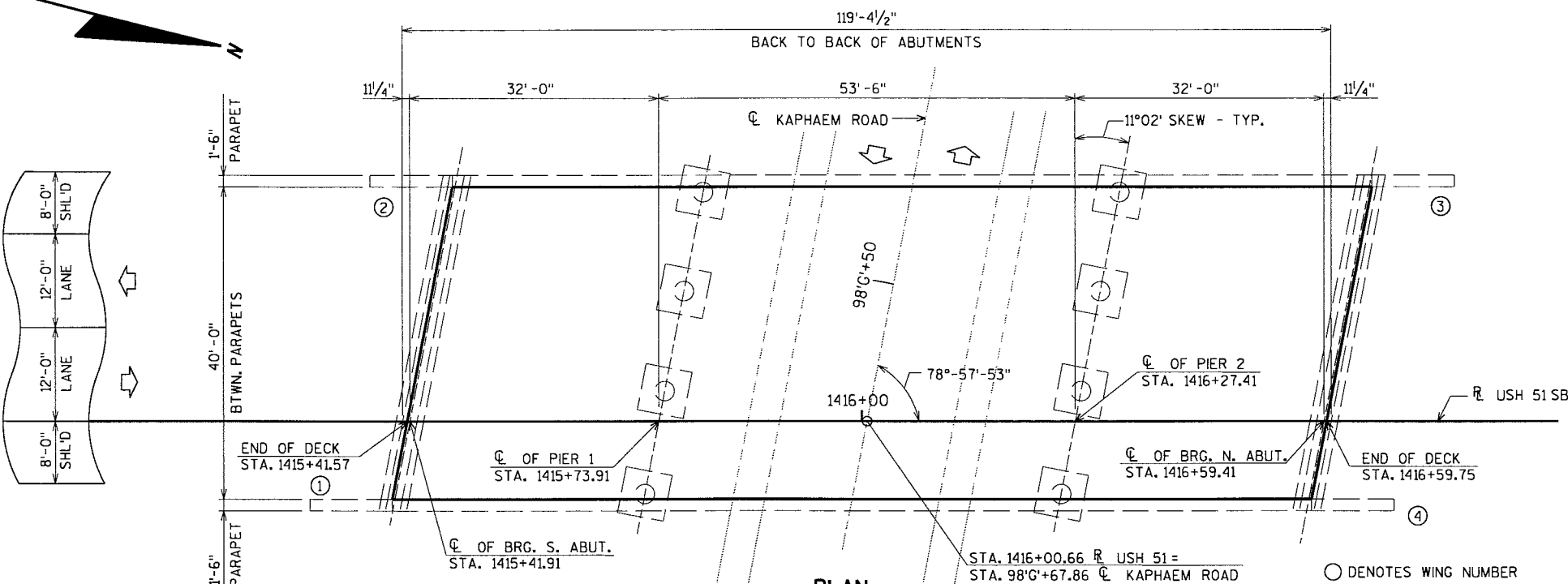
PROFILE GRADE LINE
(USH 51 SB)



CROSS SECTION THRU BRIDGE
(LOOKING NORTH)



PLAN
3-SPAN HAUNCHED SLAB
(CONCRETE AND POLYMER OVERLAY)



TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTAL
502.3210	PIGMENTED SURFACE SEALER	SY	103
509.0301	PREPARATION DECKS TYPE 1	SY	26
509.0302	PREPARATION DECKS TYPE 2	SY	11
509.0500	CLEANING DECKS	SY	525
509.1500	CONCRETE SURFACE REPAIR	SF	20
509.2000	FULL-DEPTH DECK REPAIR	SY	1
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	50
509.5100.S	POLYMER OVERLAY	SY	525
509.9050.S	CLEANING PARAPETS	LF	271

△ BID ITEM ALSO INCLUDES CONCRETE FOR:
"PREPARATION DECKS TYPE 1"
"PREPARATION DECKS TYPE 2"
"FULL-DEPTH DECK REPAIR"

Notes



Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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