

EAU

MARCH 2023

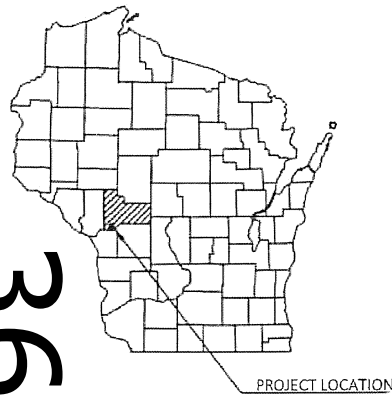
PROJECT ID: 7710-00-70  
WITH: N/A

COUNTY: JACKSON

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 Plat
Section No. 5	Plan and Profile
Section No. 6	Standard Detail Drawings
Section No. 7	Sign Details
Section No. 8	Structure Plans
Section No. 9	Computer Earthwork Data
Section No. 9	Cross Sections

TOTAL SHEETS = 24



DESIGN DESIGNATION

A.A.D.T. 2010	=	2,510
A.A.D.T. 2047	=	2,510
D.H.V.	=	N/A
D.D.	=	60 / 40
T.	=	11.5%
DESIGN SPEED	=	55 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	
MARSH A=EA	
WOODED OR SHRUB AREA	

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

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

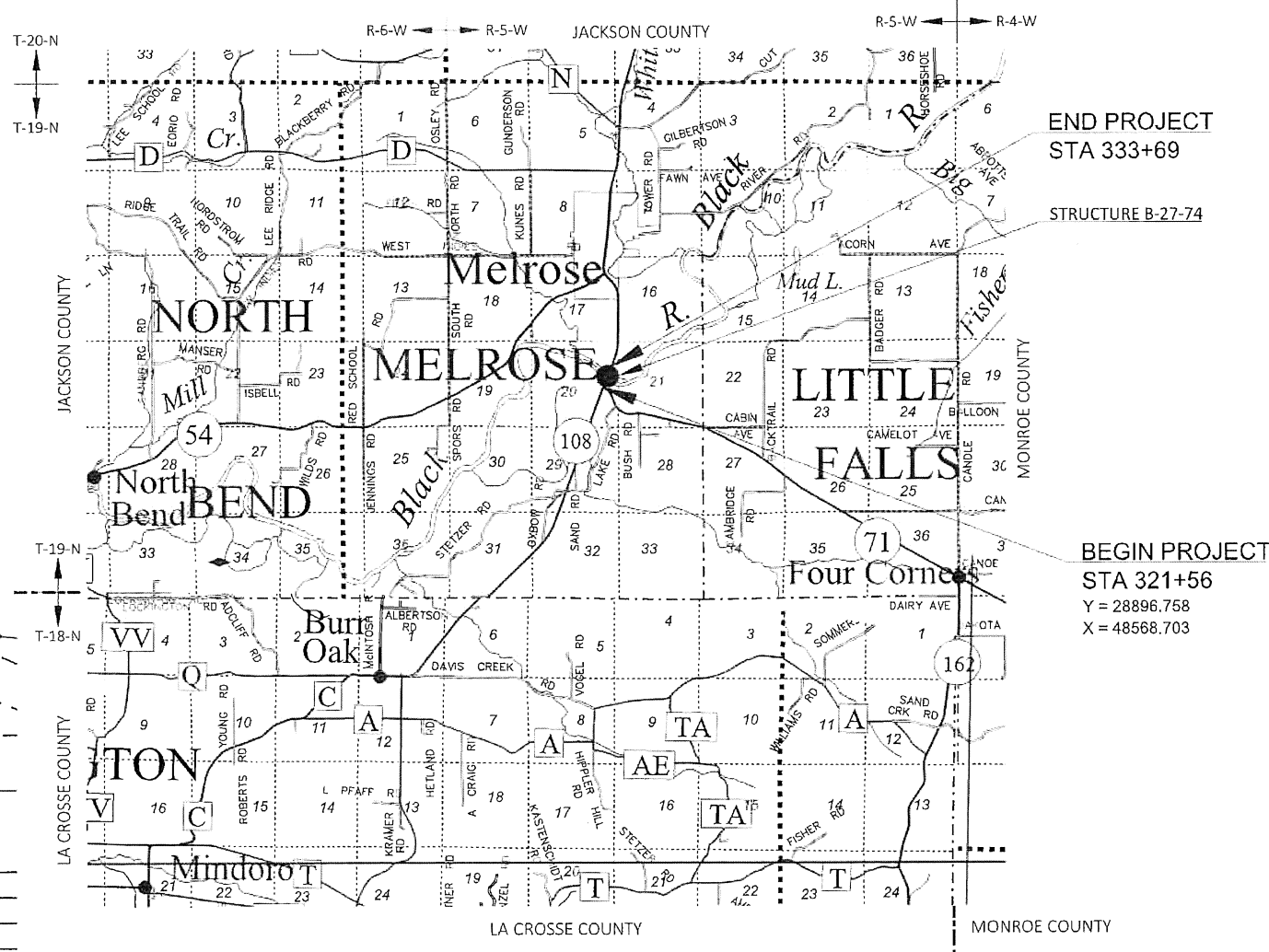
MELROSE - SPARTA

BLACK RIVER BRIDGE B-27-0074

STH 71

JACKSON COUNTY

STATE PROJECT NUMBER  
7710-00-70



HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), JACKSON COUNTY NAD83 (2007), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID

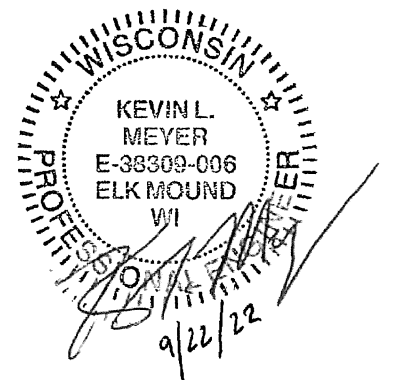
COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (2007). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7710-00-70		

ORIGINAL PLANS PREPARED BY



DATE: \_\_\_\_\_ (Professional Engineer Signature)



STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

PREPARED BY	
Surveyor	CORRE, INC.
Designer	CORRE, INC.
Project Manager	NATHAN ULLNESS
Regional Examiner	TOU YANG
Regional Supervisor	JAMES KOENIG

APPROVED FOR THE DEPARTMENT  
DATE: 9/27/22 *Nathan Ullness*  
(Signature)

E

GENERAL NOTES

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

RIGHT OF WAY LINES SHOWN ON THE CROSS SECTIONS ARE APPROXIMATE.

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

ORDER OF SECTION 2 SHEETS

- GENERAL NOTES
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- TRAFFIC CONTROL AND CONSTRUCTION STAGING

UTILITY CONTACTS

COMMUNICATIONS LINE

BRIGHTSPEED - COMMUNICATION LINE  
 BRIAN STELPLUGH  
 333 NORTH FRONT STREET  
 LA CROSSE, WI 54601  
 PHONE: (608) 615-4136  
 EMAIL: BRIAN.STELPLUGH@BRIGHTSPEED.COM

COMMUNICATIONS LINE

CHARTER COMMUNICATIONS - COMMUNICATION LINE  
 PERRY MCCLELLAN  
 1228 12TH AVENUE SOUTH  
 ONALASKA, WI 54650  
 PHONE: (608) 317-6213  
 EMAIL: PERRY.MCCLELLAN@CHARTER.COM

ELECTRICITY-TRANSMISSION

XCEL ENERGY - ELECTRICITY  
 JASON MCROBERTS  
 3215 COMMERCE STREET  
 LA CROSSE, WI 54603  
 PHONE: (715) 577-1132  
 EMAIL: JASON.L.MCROBERTS@XCELENERGY.COM



RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 2.59 ACRES  
 TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0 ACRES

DNR LIAISON

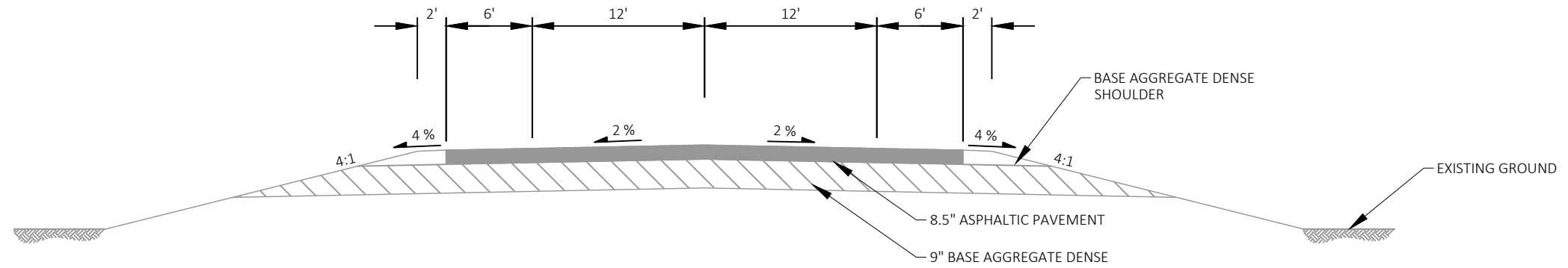
BLACK RIVER FALLS SERVICE CENTER  
 BRADLEY BETTHAUSER  
 910 STATE HIGHWAY 54  
 BLACK RIVER FALLS, WI 54615-5450  
 PHONE: (715) 421-7851  
 EMAIL: BRADLEY.BETTHAUSER@WISCONSIN.GOV

WisDOT CONTACT

NORTHWEST REGION  
 NATHAN ULNESS  
 EAU CLAIRE OFFICE  
 718 W. CLAIREMONT AVE.  
 EAU CLAIRE, WI 54701  
 PHONE: (715) 563-4631  
 EMAIL: NATHAN.ULNESS@DOT.WI.GOV

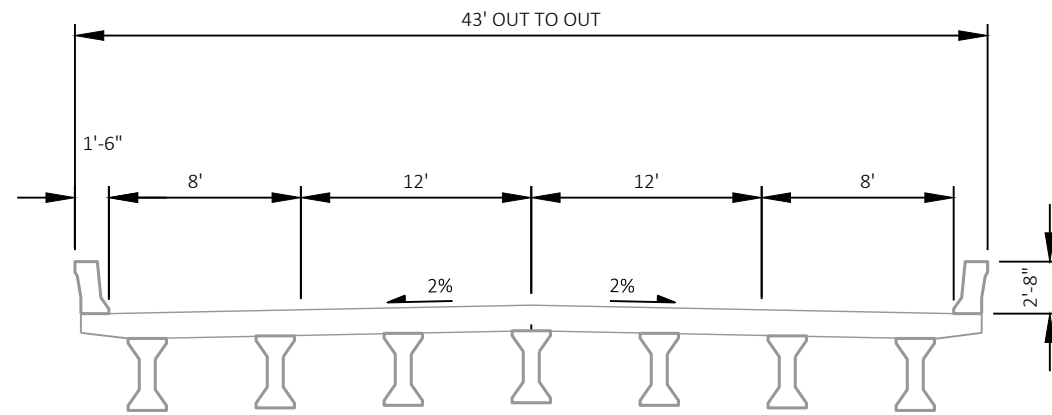
CONSULTANT CONTACT

CORRE, INC.  
 KEVIN MEYER, PE  
 1802 WARDEN STREET  
 EAU CLAIRE, WI 54703  
 PHONE: (608) 828-1011  
 EMAIL: KMEYER@CORREINC.COM



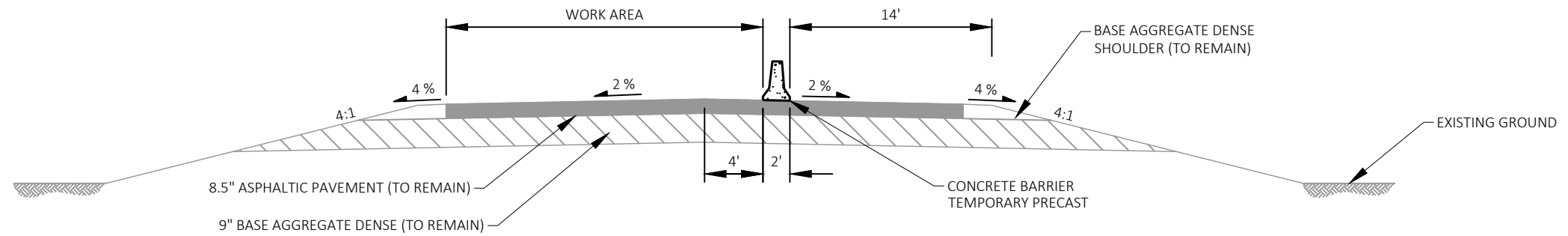
**EXISTING TYPICAL SECTION**

STA 321+56 - 324+51  
STA 331+22 - 333+69



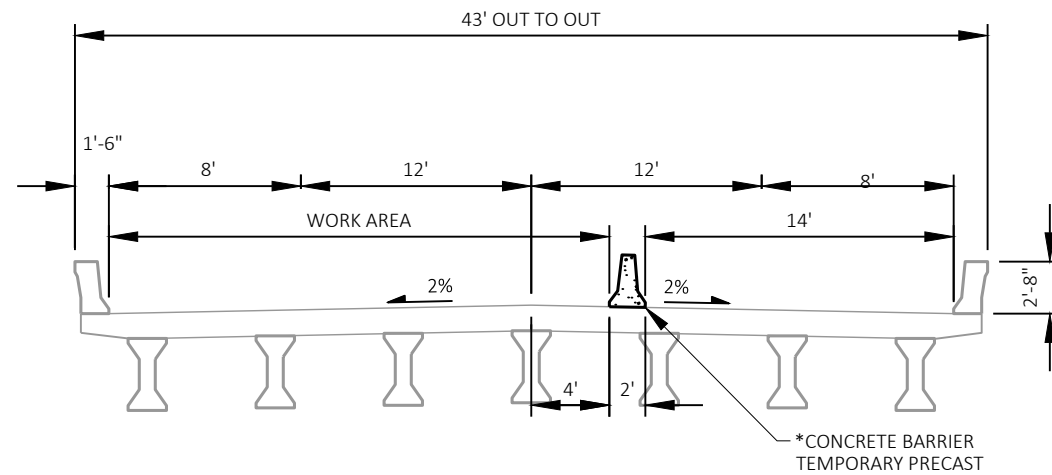
**EXISTING TYPICAL SECTION**

STA 324+51 - 331+22



**TYPICAL SECTION - STAGE 1**

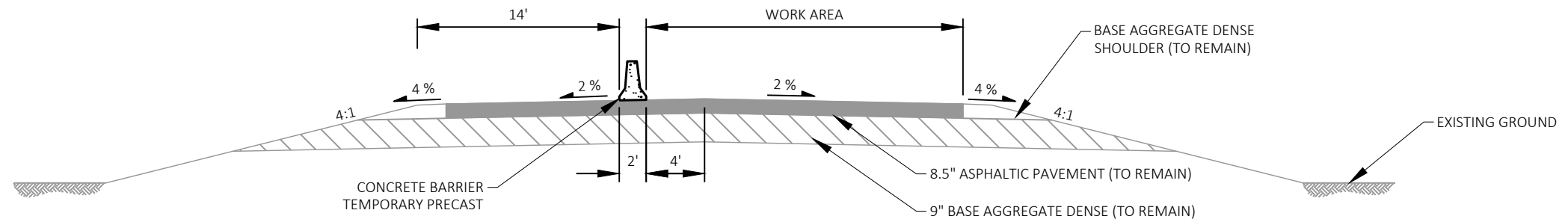
STA 321+56 - 324+51  
STA 331+22 - 333+69



**TYPICAL SECTION - STAGE 1**

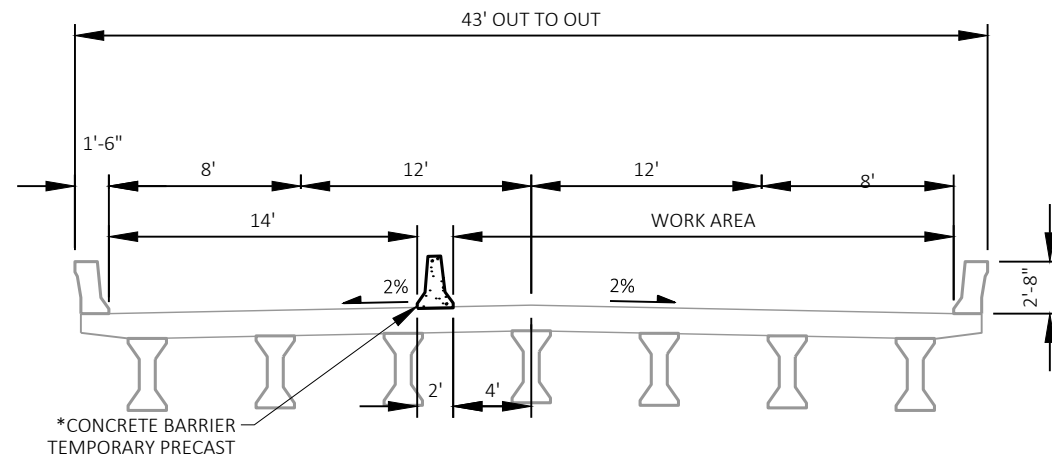
STA 324+51 - 331+22

\*TRAFFIC CONTROL DRUMS  
STA 325+89 - 329+90



**TYPICAL SECTION - STAGE 2**

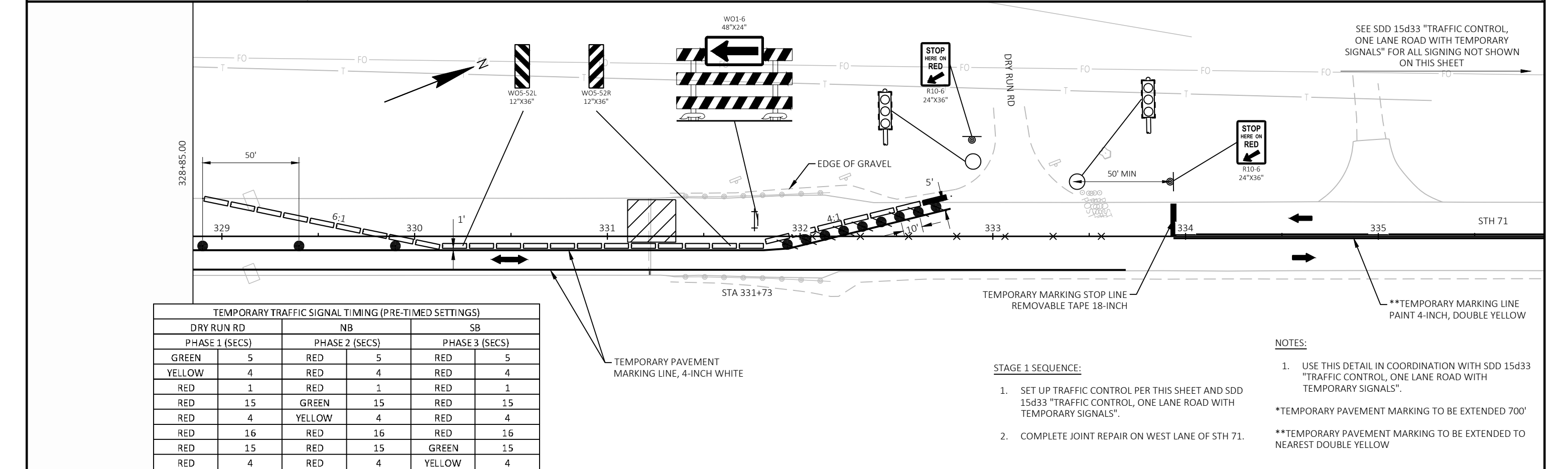
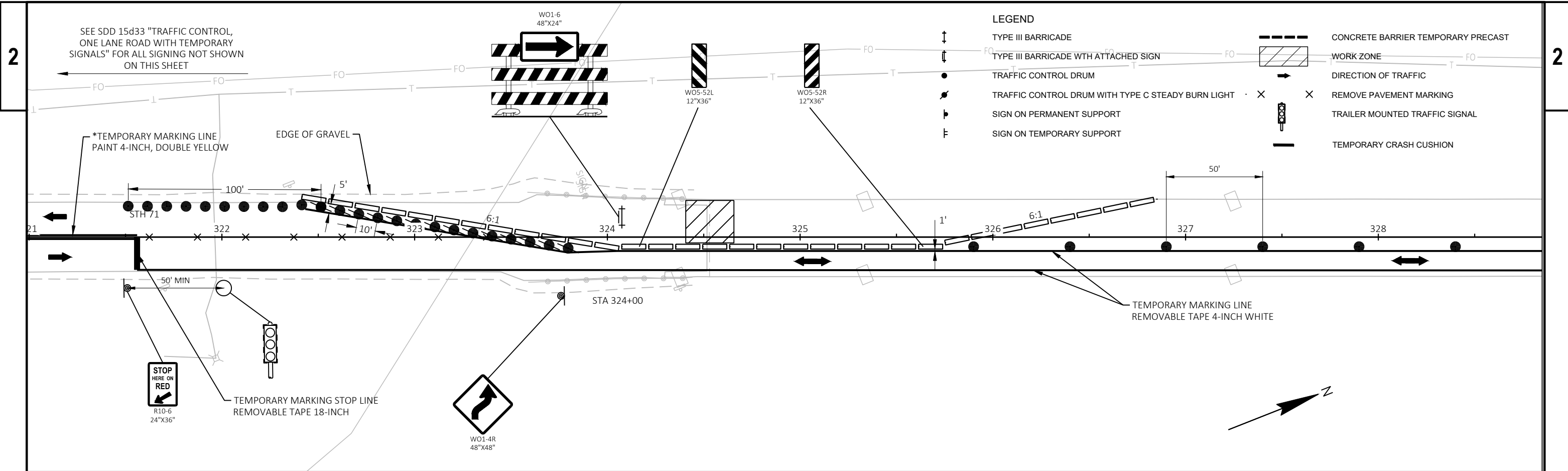
STA 321+56 - 324+51  
STA 331+22 - 333+69



**TYPICAL SECTION - STAGE 2**

STA 324+51 - 331+22

\*TRAFFIC CONTROL DRUMS  
STA 325+89 - 329+90



**TEMPORARY TRAFFIC SIGNAL TIMING (PRE-TIMED SETTINGS)**

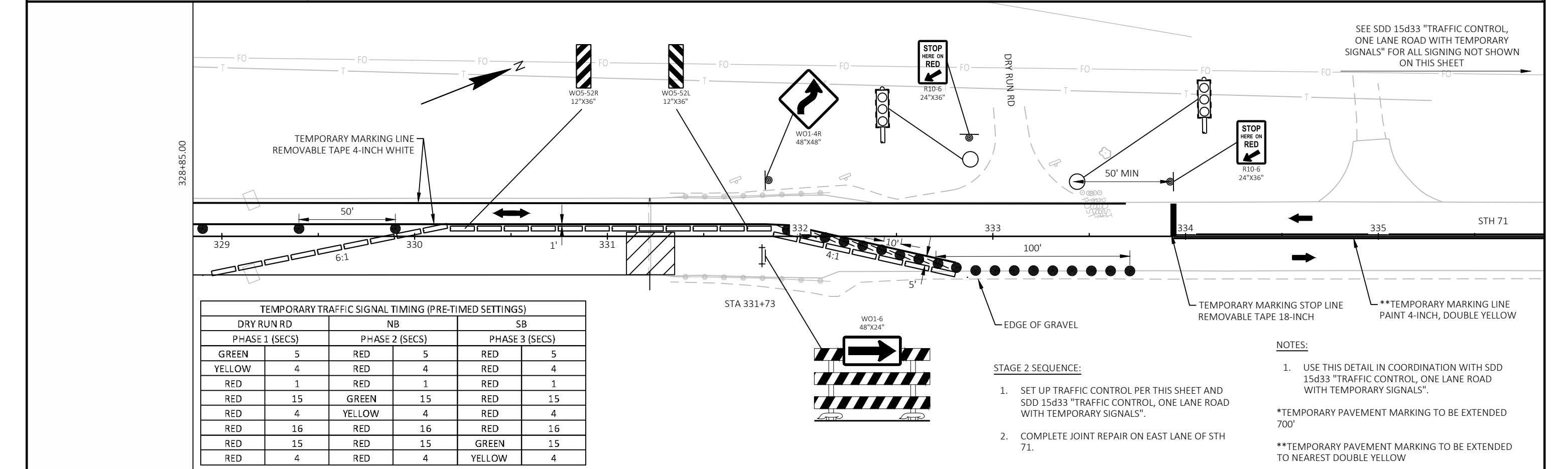
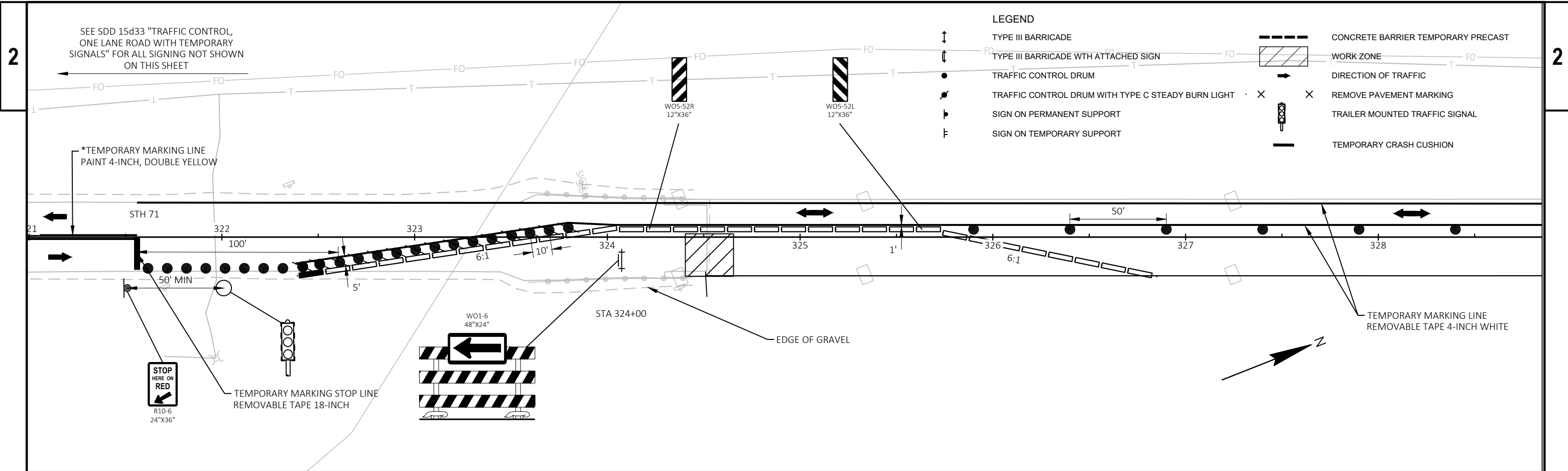
	DRY RUN RD		NB		SB	
	PHASE 1 (SECS)		PHASE 2 (SECS)		PHASE 3 (SECS)	
GREEN	5	RED	5	RED	5	5
YELLOW	4	RED	4	RED	4	4
RED	1	RED	1	RED	1	1
RED	15	GREEN	15	RED	15	15
RED	4	YELLOW	4	RED	4	4
RED	16	RED	16	RED	16	16
RED	15	RED	15	GREEN	15	15
RED	4	RED	4	YELLOW	4	4

**STAGE 1 SEQUENCE:**

- SET UP TRAFFIC CONTROL PER THIS SHEET AND SDD 15d33 "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS".
- COMPLETE JOINT REPAIR ON WEST LANE OF STH 71.

**NOTES:**

- USE THIS DETAIL IN COORDINATION WITH SDD 15d33 "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS".
- \*TEMPORARY PAVEMENT MARKING TO BE EXTENDED 700'
- \*\*TEMPORARY PAVEMENT MARKING TO BE EXTENDED TO NEAREST DOUBLE YELLOW



Estimate Of Quantities

7710-00-70

Line	Item	Item Description	Unit	Total	Qty
0002	209.0200.S	Backfill Controlled Low Strength	CY	40.000	40.000
0004	213.0100	Finishing Roadway (project) 01. 7110-00-70	EACH	1.000	1.000
0006	502.3101	Expansion Device	LF	80.000	80.000
0008	502.3200	Protective Surface Treatment	SY	35.000	35.000
0010	502.3210	Pigmented Surface Sealer	SY	6.000	6.000
0012	502.4205	Adhesive Anchors No. 5 Bar	EACH	88.000	88.000
0014	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	3,230.000	3,230.000
0016	505.0905	Bar Couplers No. 5	EACH	6.000	6.000
0018	505.0906	Bar Couplers No. 6	EACH	18.000	18.000
0020	509.1000	Joint Repair	SY	36.000	36.000
0022	509.2100.S	Concrete Masonry Deck Repair	CY	17.000	17.000
0024	603.8000	Concrete Barrier Temporary Precast Delivered	LF	842.000	842.000
0026	603.8125	Concrete Barrier Temporary Precast Installed	LF	1,684.000	1,684.000
0028	603.8500	Anchoring Concrete Barrier Temporary Precast	LF	748.000	748.000
0030	603.8505	Anchoring Concrete Barrier Temporary Precast on Bridge Decks	LF	936.000	936.000
0032	614.0905	Crash Cushions Temporary	EACH	2.000	2.000
0034	619.1000	Mobilization	EACH	1.000	1.000
0036	642.5001	Field Office Type B	EACH	1.000	1.000
0038	643.0300	Traffic Control Drums	DAY	1,232.000	1,232.000
0040	643.0420	Traffic Control Barricades Type III	DAY	56.000	56.000
0042	643.0715	Traffic Control Warning Lights Type C	DAY	658.000	658.000
0044	643.0900	Traffic Control Signs	DAY	560.000	560.000
0046	643.3105	Temporary Marking Line Paint 4-Inch	LF	3,116.000	3,116.000
0048	643.3150	Temporary Marking Line Removable Tape 4-Inch	LF	4,511.000	4,511.000
0050	643.3850	Temporary Marking Stop Line Removable Tape 18-Inch	LF	34.000	34.000
0052	643.5000	Traffic Control	EACH	1.000	1.000
0054	646.1020	Marking Line Epoxy 4-Inch	LF	5,152.000	5,152.000
0056	646.9000	Marking Removal Line 4-Inch	LF	3,204.000	3,204.000
0058	661.0101	Temporary Traffic Signals for Bridges (structure) 01. B-27-74	EACH	1.000	1.000
0060	SPV.0180	Special 01. Abutment Seat Cleaning and Sealing	SY	22.000	22.000



3

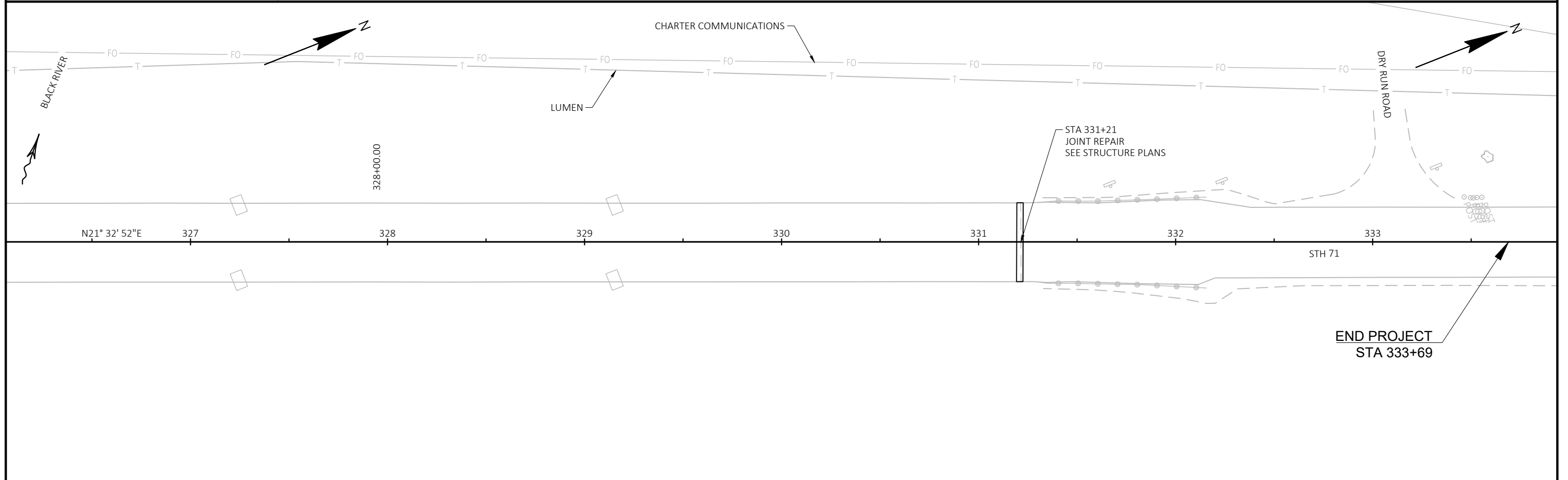
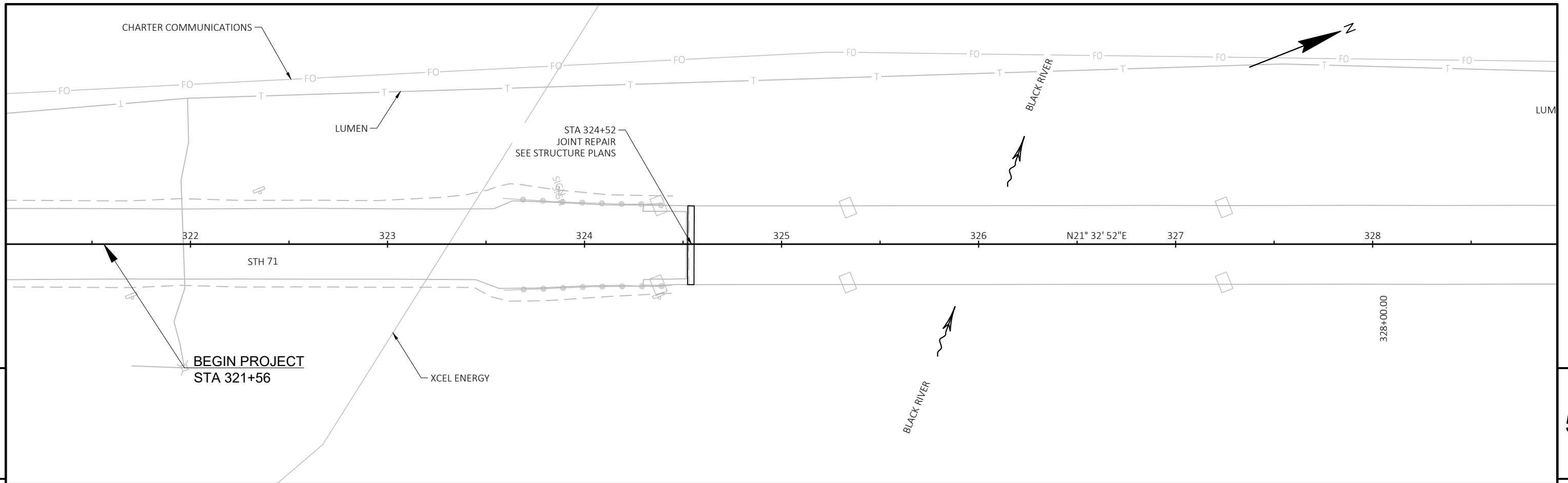
3

CATEGORY	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF	603.8500 ANCHORING CONCRETE BARRIER TEMPORARY PRECAST LF	603.8505 ANCHORING CONCRETE BARRIER TEMPORARY PRECAST ON BRIDGE DECKS LF	614.0905 CRASH CUSHIONS TEMPORARY EACH	BACK WIDTH FT	OBJECT MARKING PATTERN	CRASH TEST LEVEL	TRAFFIC DIRECTION	TRAFFIC LOCATION	CRASH CUSHION SHIELDS	REMARKS
0010	842	842	374	468	1	2	0M-3R (W5-58R)	TL-3	UNIDIRECTIONAL	L	TEMPORARY BARRIER	STAGE 1
0010	--	842	374	468	1	2	0M-3R (W5-58R)	TL-3	UNIDIRECTIONAL	L	TEMPORARY BARRIER	STAGE 2
	<u>842</u>	<u>1,684</u>	<u>748</u>	<u>936</u>	<u>2</u>							

CATEGORY	LOCATION	643.0300 TRAFFIC CONTROL DRUMS DAY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	643.0900 TRAFFIC CONTROL SIGNS DAY	REMARKS
0010	STAGE 1	588	28	322	280	14 DAYS
0010	STAGE 2	644	28	336	280	14 DAYS
		<u>1,232</u>	<u>56</u>	<u>658</u>	<u>560</u>	

661.0101  
TEMPORARY TRAFFIC SIGNALS FOR BRIDGES (STRUCTURE) (01. B-27-74) EACH  
1  
1

CATEGORY	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH LF	646.9000 MARKING REMOVAL LINE 4-INCH LF	643.3105 TEMPORARY MARKING LINE PAINT 4-INCH LF	643.3150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH LF	643.3850 TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH LF
0010	STAGE 1	--	3,204	3,116	2,252	34
0010	STAGE 2	5,152	--	--	2,259	--
TOTAL 0010		<u>5,152</u>	<u>3,204</u>	<u>3,116</u>	<u>4,511</u>	<u>34</u>



PROJECT NO: 7710-00-70	HWY: STH 71	COUNTY: JACKSON	PLAN	SHEET	<b>E</b>
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## Standard Detail Drawing List

15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M. P. H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C06-10	SIGNING & MARKING FOR TWO LANE BRIDGES
15C19-07A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15D33-07	TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS

**GENERAL NOTES**

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

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




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

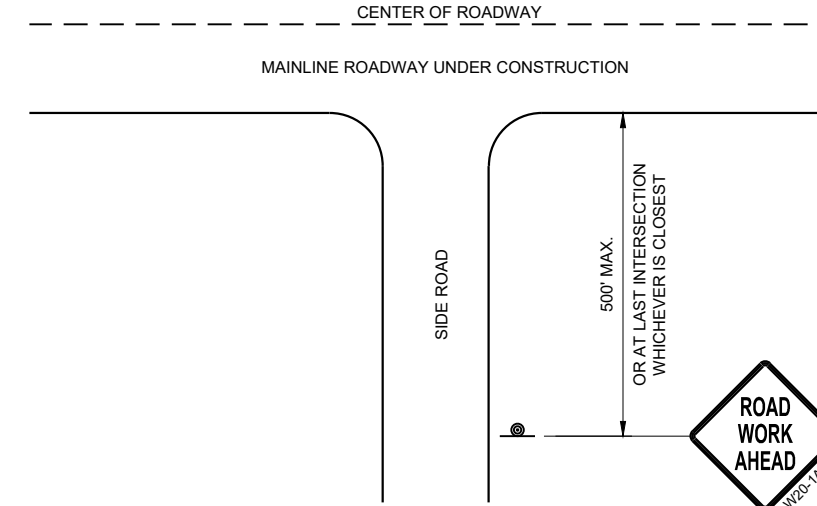
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

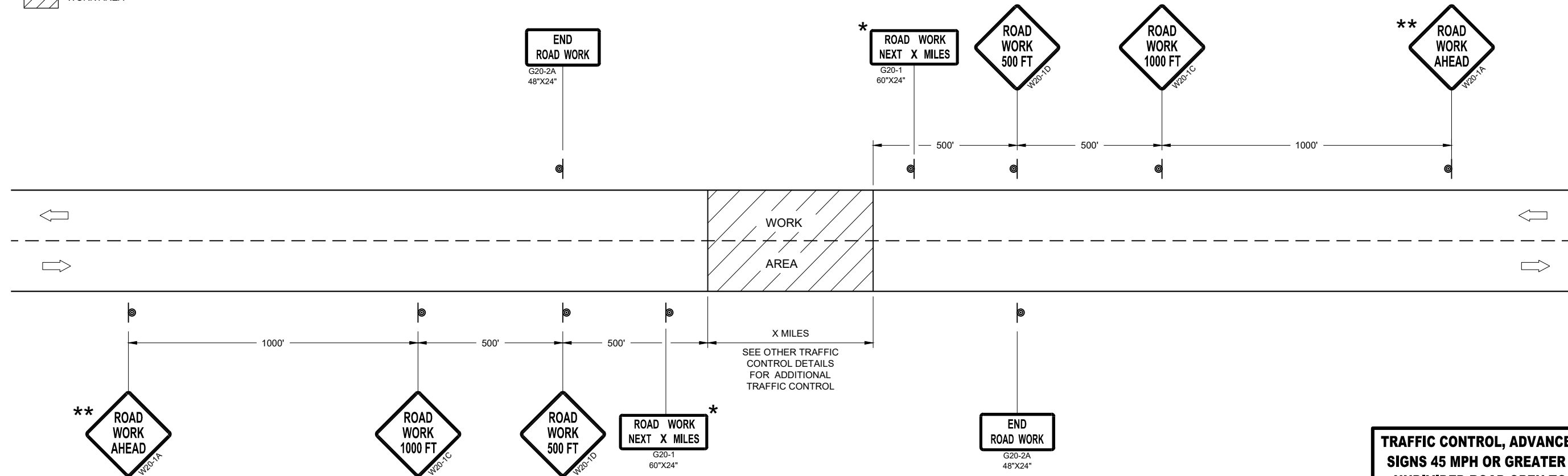
- \* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- \*\* PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

**LEGEND**

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



**TYPICAL SIDE ROAD APPROACH  
WARNING SIGN DETAIL**



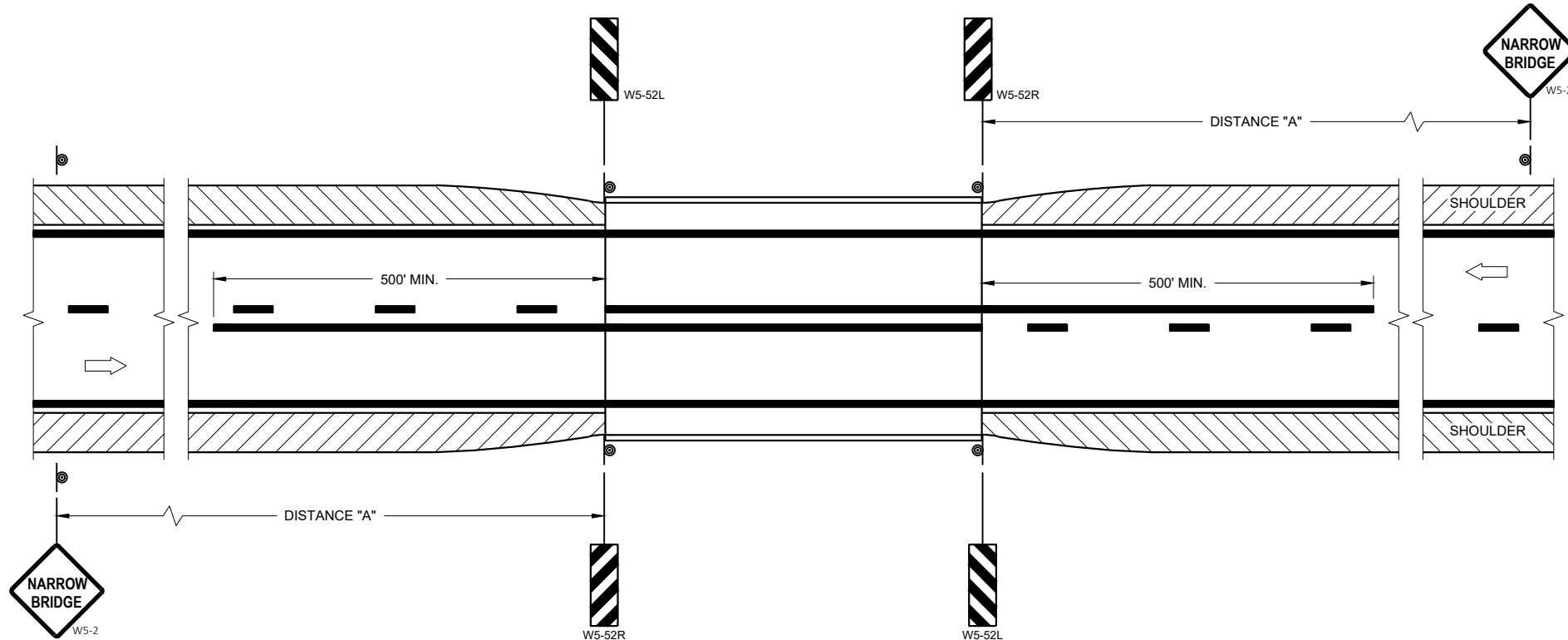
**TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER**

**TRAFFIC CONTROL, ADVANCE WARNING  
SIGNS 45 MPH OR GREATER TWO-WAY  
UNDIVIDED ROAD OPEN TO TRAFFIC**

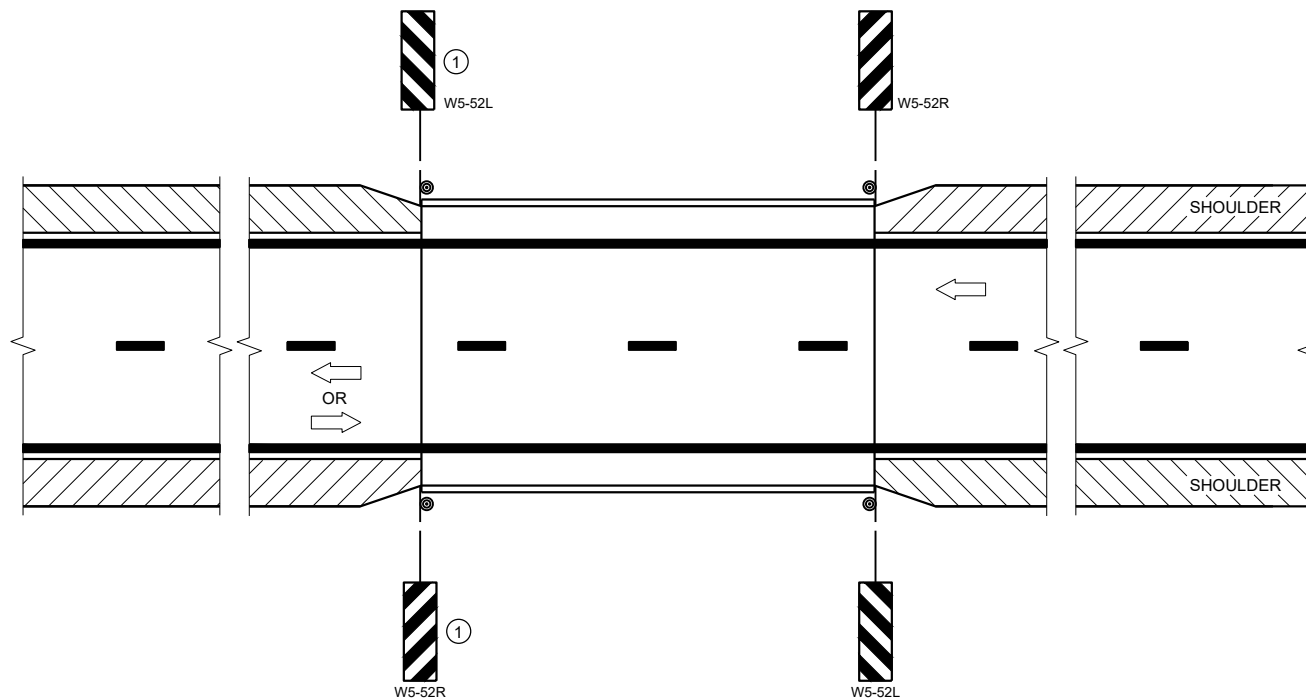
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE July 2018 /S/ Andrew Heidtke  
WORK ZONE ENGINEER

FHWA



**SITUATION 1**  
 WARRANTING CRITERIA:  
 BRIDGE WIDTH IS AT LEAST 16 FEET BUT LESS THAN 24 FEET.



**SITUATION 2**  
 WARRANTING CRITERIA:  
 1. BRIDGE WIDTH IS AT LEAST 24 FEET AND  
 2. BRIDGE SHOULDER WIDTH IS LESS THAN 6 FEET

**GENERAL NOTES**

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

LOCATE W5-52 SIGN POST(S) BEHIND GUARDRAIL WHEN PRESENT.

PLACE THE EDGE OF THE W5-52 SIGN IN LINE WITH FACE OF CURB OR PARAPET.

ON BRIDGE ONLY PROJECTS, PLACE 300 FEET OF EDGELINE.

OMIT EDGELINES ON ROADWAYS WITHOUT EXISTING EDGELINES.

① OMIT ON ONE-WAY TRAVELED WAYS.

**LEGEND**

⊙ SIGN ON PERMANENT SUPPORT

➡ DIRECTION OF TRAFFIC

**DISTANCE TABLE**





POSTED OR 85TH PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	700'

**SIGNING AND MARKING FOR TWO LANE BRIDGES**

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

APPROVED  
 May 2022 /S/ Jeannie Silver  
 DATE STATE SIGNING AND MARKING ENGINEER

**LEGEND**

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

**GENERAL NOTES**

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

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

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

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

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

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

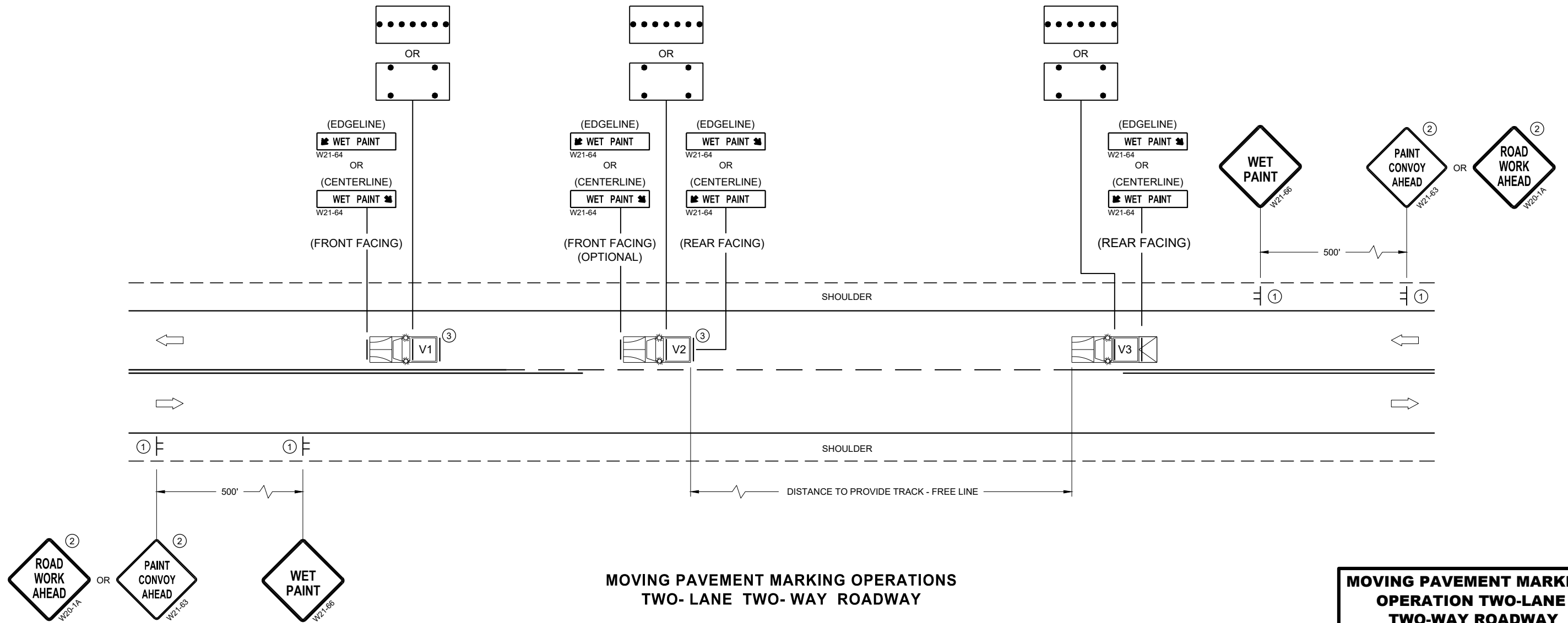
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL BE A MINIMUM OF 28" FOR WET PAVEMENT MARKING .

- ① SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.
- ② IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.
- ③ V1 AND V2 CAN BE SWITCHED SO THAT THE MARKER IS THE LEAD VEHICLE.

6

6



**MOVING PAVEMENT MARKING OPERATIONS  
TWO-LANE TWO-WAY ROADWAY**

SDD 15C19 - 07a

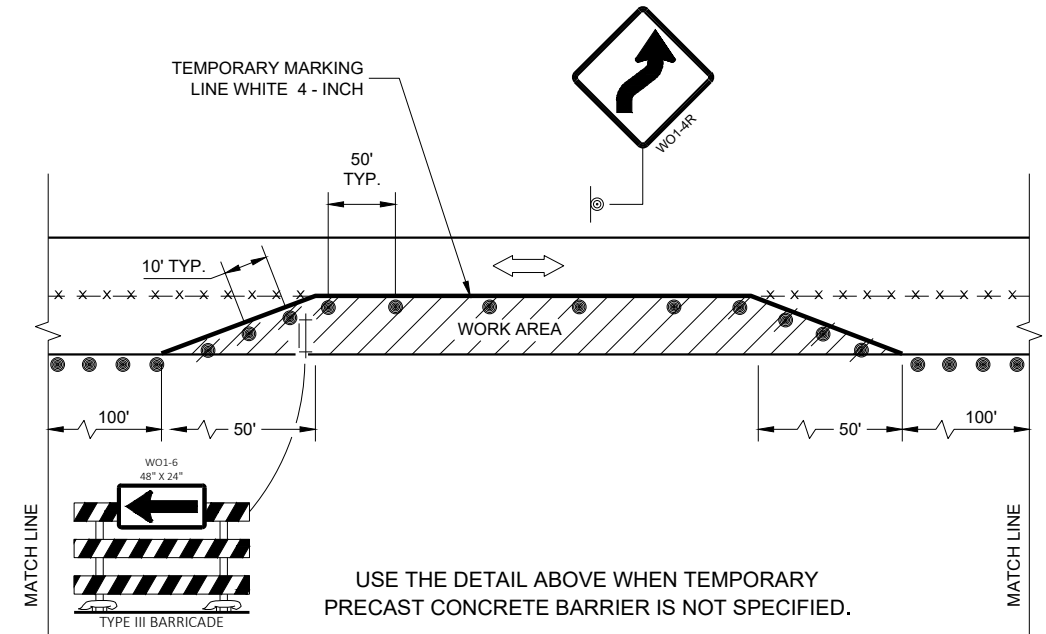
SDD 15C19 - 07a

<b>MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
<small>FHWA</small>	

**LEGEND**

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLAGS, 16" X 16" MIN. (ORANGE)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- ASPHALTIC PAVEMENT WIDENING
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY SIGNAL. SEE SDD 09G02 FOR EXACT PLACEMENT

WIDTH ON SIGN TO BE APPROX. 1-FOOT LESS THAN AVAILABLE WIDTH. (OMIT IF AVAILABLE WIDTH IS MORE THAN 16 FEET)



TEMPORARY PAVEMENT MARKING LINE, 4 INCH WHITE (STOPLINE TO STOPLINE). REMOVE EXISTING EDGELINE AND OFFSET THE TEMPORARY EDGELINE IF THE DISTANCE FROM THE EDGELINE TO CONCRETE BARRIER WALL IS LESS THAN 9 FEET.

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

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

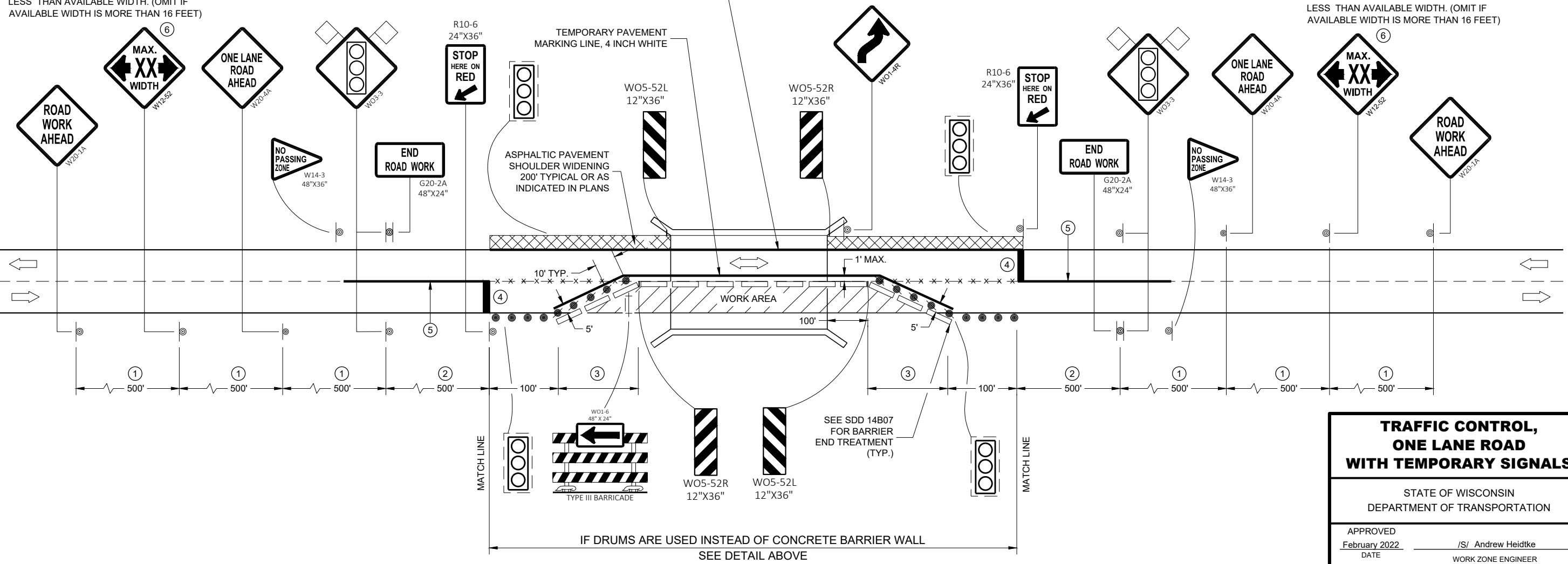
ALL SIGNS ARE 48" x 48" UNLESS OTHERWISE NOTED.

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

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

REMOVE PAVEMENT MARKING AND PLACE TEMPORARY PAVEMENT MARKING LINES IF THE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

- ① 500 FOOT SPACING SHOWN IS FOR ROADWAYS WITH A PRE-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35 - 40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25 - 30 MPH, USE 200 FOOT TYPICAL SPACING.
- ② USE 300 FOOT SPACING IF THE PRE - CONSTRUCTION REGULATORY SPEED IS 35 MPH OR LESS.
- ③ DIMENSION DETERMINED BY CBTP TAPER FROM EDGE LINE TO TANGENT SECTION OF THE ROAD.
- ④ TEMPORARY PAVEMENT MARKING LINE, 18 INCH WHITE STOP LINE.
- ⑤ 700 FOOT TEMPORARY PAVEMENT MARKING LINE, 4 INCH DOUBLE YELLOW . WHEN THE DISTANCE FOR THE PRECEDING NO - PASSING ZONE IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES AS INDICATED IN THE SPECIFICATIONS, THE TWO ZONES SHALL BE CONNECTED.
- ⑥ SEE SDD 15C02 - SHEET "F" FOR ADVANCED WIDTH RESTRICTION SIGNING.



**TRAFFIC CONTROL,  
ONE LANE ROAD  
WITH TEMPORARY SIGNALS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
February 2022 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

FHWA

**DESIGN DATA**

**LIVE LOAD:**  
 DESIGN LOADING \_\_\_\_\_ HS20  
 INVENTORY RATING \_\_\_\_\_ HS18 (FROM HSI)  
 OPERATING RATING \_\_\_\_\_ HS34 (FROM HSI)  
 WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) \_\_\_\_\_ 250 KIPS (FROM HSI)

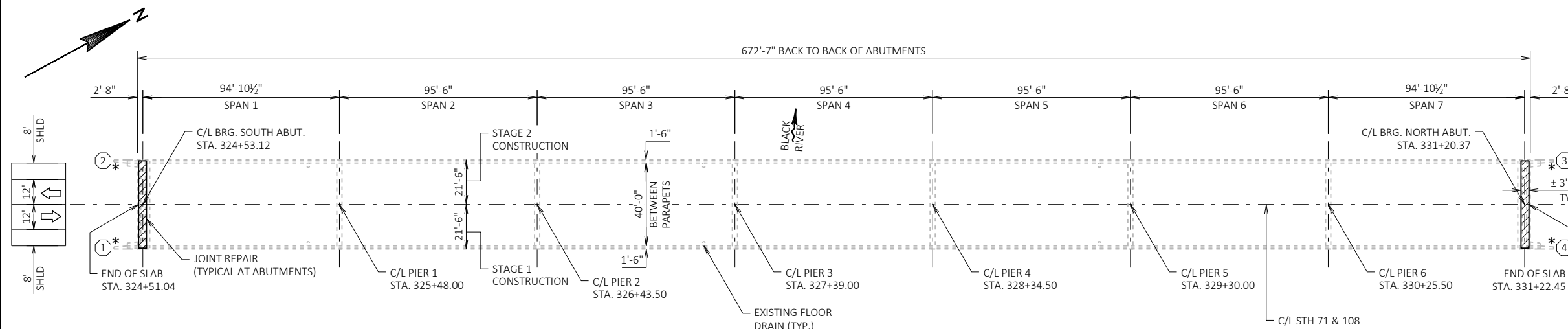
**MATERIAL PROPERTIES:**  
 CONCRETE MASONRY DECK REPAIR \_\_\_\_\_  $f'_c = 4,000$  PSI  
 HIGH STRENGTH BAR STEEL REINFORCEMENT \_\_\_\_\_  $f_y = 60,000$  PSI

**TRAFFIC DATA**

STH 71  
 ADT (2047) = 2,510  
 DESIGN SPEED = 55 MPH

**LEGEND**

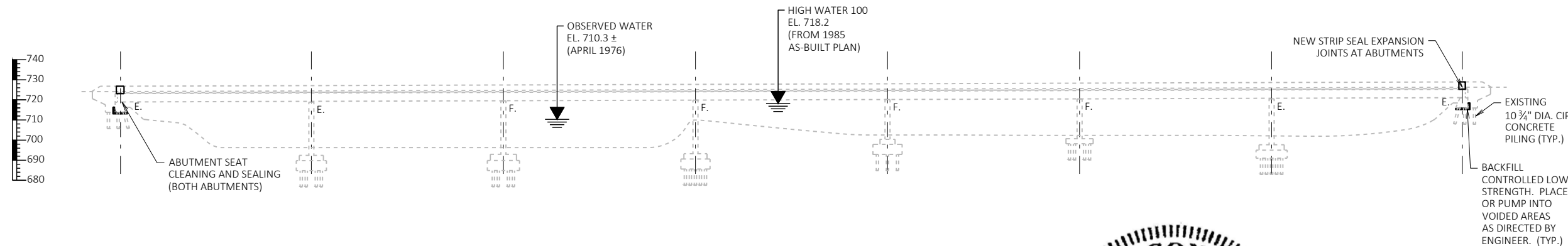
- DENOTES WING NUMBER
- \* EXISTING THRIE BEAM CONNECTION



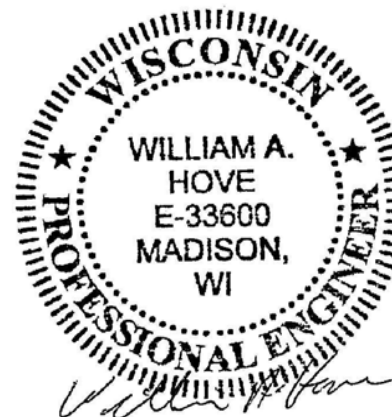
**PLAN**  
 (JOINT REPLACEMENT - 7 SPAN - 54" PRESTRESSED GIRDER BRIDGE)

**LIST OF DRAWINGS**

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. STAGING & COUPLER DETAILS
4. SOUTH ABUTMENT
5. NORTH ABUTMENT
6. REPLACEMENT JOINT DETAILS - 1
7. REPLACEMENT JOINT DETAILS - 2



**ELEVATION**  
 (LOOKING WEST)



9/1/2022

**BRIDGE OFFICE CONTACT**  
 AARON BONK, P.E.  
 TELEPHONE: (608) 261-0261

**CONSULTANT CONTACT**  
 BILL HOVE, P.E.  
 TELEPHONE: (262) 393-1260

NO.	DATE	REVISION	BY

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

ACCEPTED *[Signature]* SDR **11/14/22**  
 CHIEF STRUCTURES DESIGN ENGINEER DATE

**STRUCTURE B-27-74**

STH 71 & 108 OVER BLACK RIVER

COUNTY JACKSON TOWN/VILLAGE MELROSE

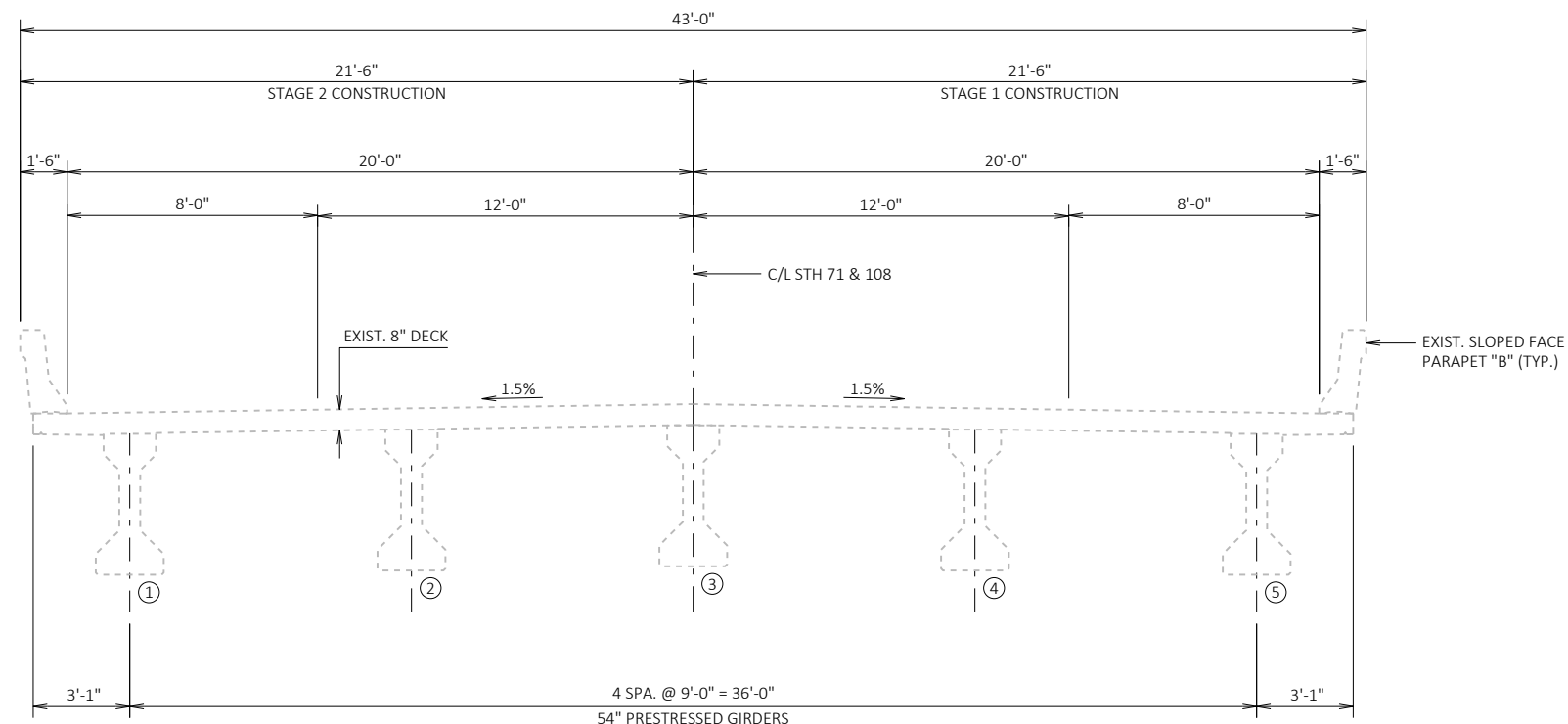
DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	ETP	DRAWN BY	PKF	PLANS CK'D.	BH
BH						

**GENERAL PLAN**

SHEET 1 OF 7





**CROSS SECTION THRU BRIDGE**  
(LOOKING NORTH)

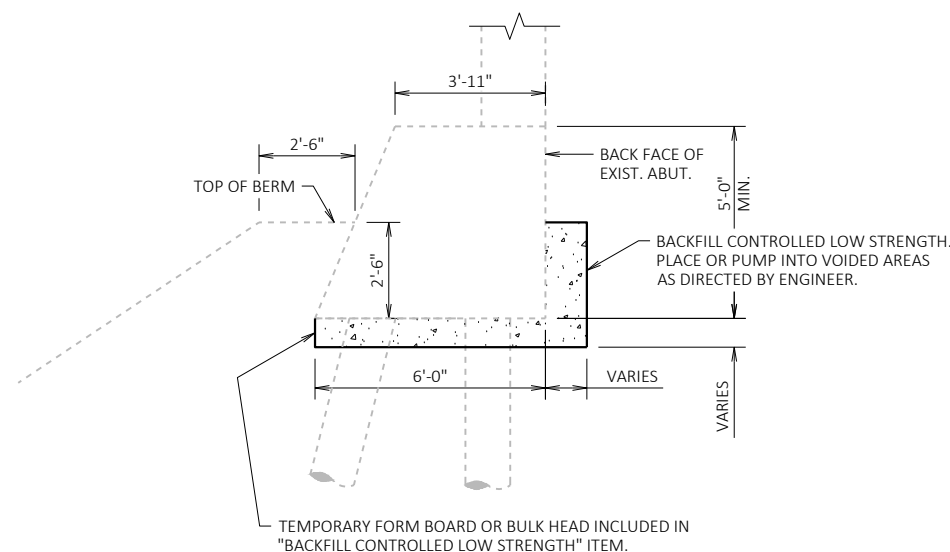
**GENERAL NOTES**

- THE PROPOSED WORK INCLUDES JOINT REPLACEMENT, UNDERMINING REPAIR, AND SEAT CLEANING AND SEALING, AT BOTH ABUTMENTS.
- DRAWINGS SHALL NOT BE SCALED.
- DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.
- ELEVATIONS ARE BASED ON THE INSPECTION REPORT OR EXISTING PLANS.
- BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
- THE FIRST DIGIT OF A THREE DIGIT AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY THE BAR SIZE.
- CLEAN, STRAIGHTEN, AND EXTEND EXISTING BAR STEEL REINFORCEMENT 24 BAR DIAMETERS INTO NEW CONSTRUCTION WHERE APPLICABLE.
- ANY EXCAVATION REQUIRED TO COMPLETE THE WORK IS INCIDENTAL TO OTHER BID ITEMS.
- ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1" DEEP SAW CUT.
- MATERIALS, EQUIPMENT, ETC. SHALL NOT BE STOCKPILED/STORED ON THE BRIDGE DECK WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE JOINT REPAIR LIMITS.
- PIGMENTED SURFACE SEALER SHALL BE APPLIED TO THE FRONT FACE AND TOP OF RECONSTRUCTED PARAPETS.
- JOINT REPAIR AREAS SHALL BE FILLED WITH "CONCRETE MASONRY DECK REPAIR".
- BACKFILL CONTROLLED LOW STRENGTH SHALL BE PLACED AS DIRECTED BY THE ENGINEER.
- SEE ROAD PLANS FOR ADDITIONAL CONSTRUCTION STAGING & TRAFFIC CONTROL DETAILS.

**TOTAL ESTIMATED QUANTITIES**

ITEM NUMBER	BID ITEMS	UNIT	SOUTH ABUT.	NORTH ABUT.	SUPER	TOTAL
209.0200.S	BACKFILL CONTROLLED LOW STRENGTH	CY	20	20	----	40
502.3101	EXPANSION DEVICE	LF	----	----	80	80
502.3200	PROTECTIVE SURFACE TREATMENT	SY	----	----	35	35
502.3210	PIGMENTED SURFACE SEALER	SY	----	----	6	6
502.4205	ADHESIVE ANCHORS No. 5 BAR	EACH	44	44	----	88
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	370	370	2,490	3,230
505.0905	BAR COUPLERS NO. 5	EACH	3	3	----	6
505.0906	BAR COUPLERS NO. 6	EACH	----	----	18	18
509.1000	JOINT REPAIR	SY	----	----	36	36
509.2100.S	CONCRETE MASONRY DECK REPAIR	CY	----	----	17	17
SPV.0180	ABUTMENT SEAT CLEANING AND SEALING	SY	11	11	----	22

ALL BID ITEMS ARE CATEGORY 0020

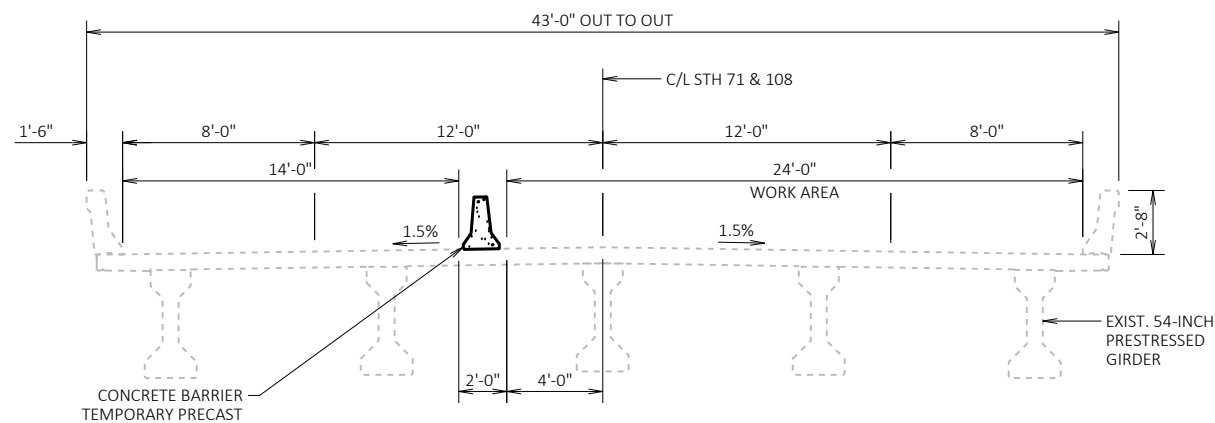


**CROSS SECTION THRU ABUTMENT UNDERMINING REPAIR**

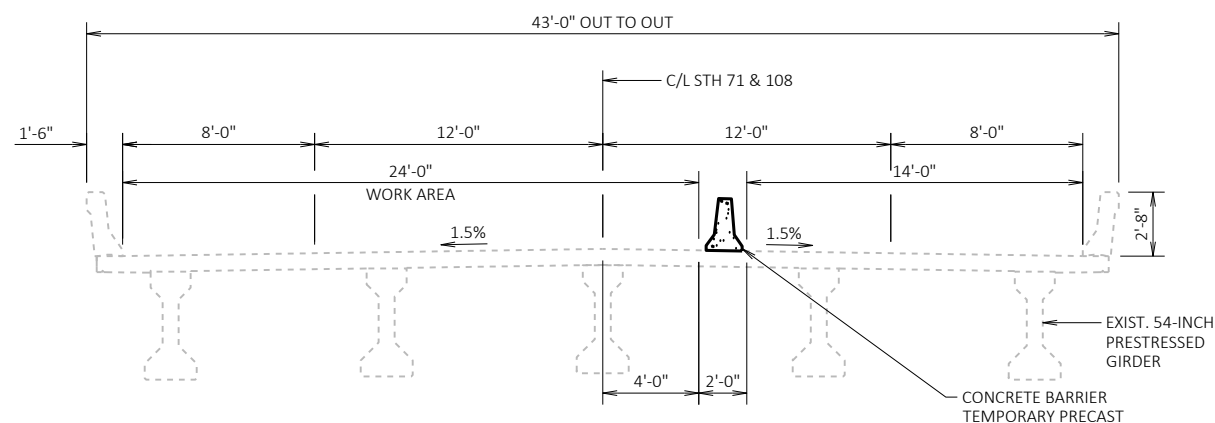
(TEMPORARY REMOVAL AND REPLACEMENT OF RIPRAP, REQUIRED TO COMPLETE UNDERMINING REPAIRS, IS INCIDENTAL TO "BACKFILL CONTROLLED LOW STRENGTH".)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-27-74			
DRAWN BY		PKF	PLANS CK'D. BH
CROSS SECTION & QUANTITIES			SHEET 2 OF 7

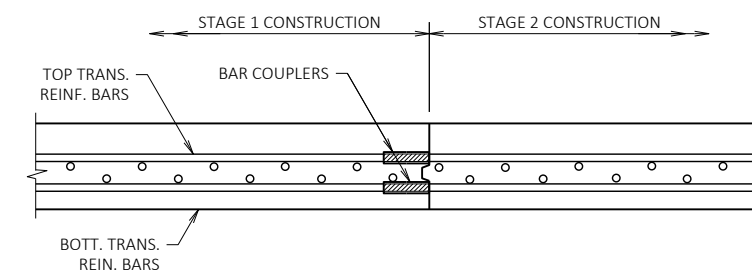




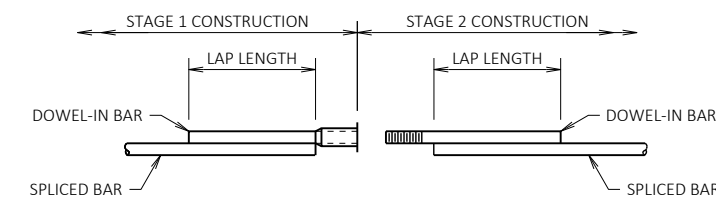
TYPICAL SECTION - STAGE 1



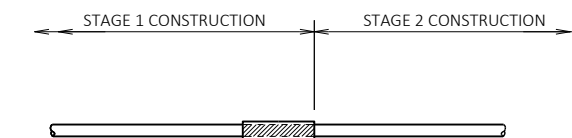
TYPICAL SECTION - STAGE 2



SECTION THRU DECK  
ONE-PIECE THREADED COUPLER SHOWN,  
OTHER LOCATIONS SIMILAR



DOWEL BAR COUPLER  
STAGE 2 DOWEL SCREWS INTO  
COUPLER PLACED IN STAGE 1



ONE PIECE THREADED COUPLER

BAR COUPLER ALTERNATIVES

NOTES

FOR DOWEL BAR COUPLERS, ALL DOWEL BARS SHALL BE LAPPED AND TIED TO THE REINFORCEMENT BARS.

8

8

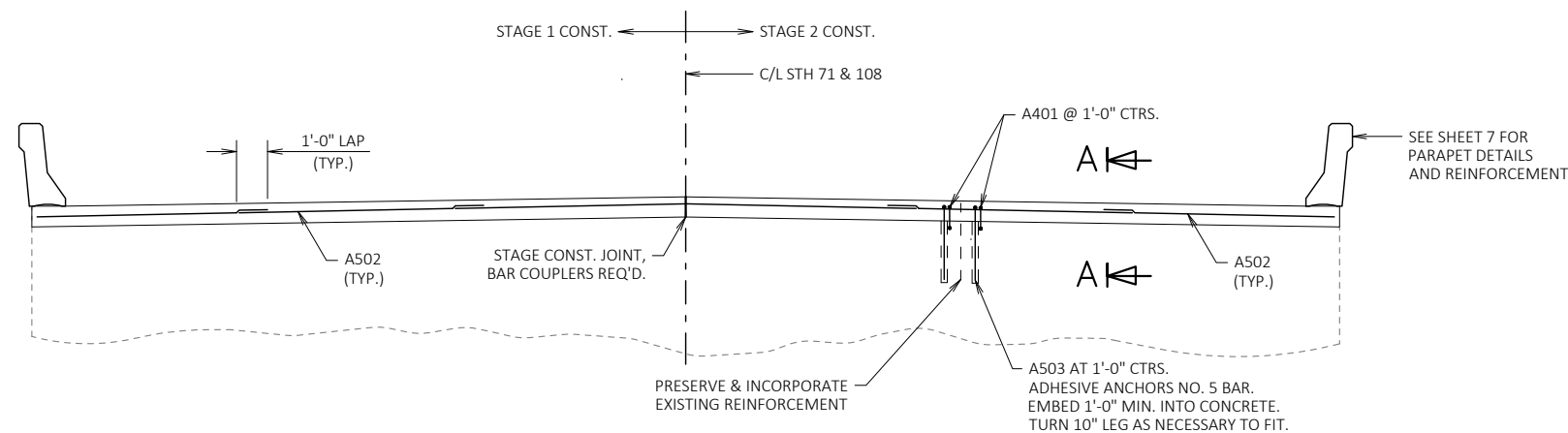
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-27-74			
DRAWN BY		PKF	PLANS CK'D. BH
STAGING & COUPLER DETAILS			SHEET 3 OF 7



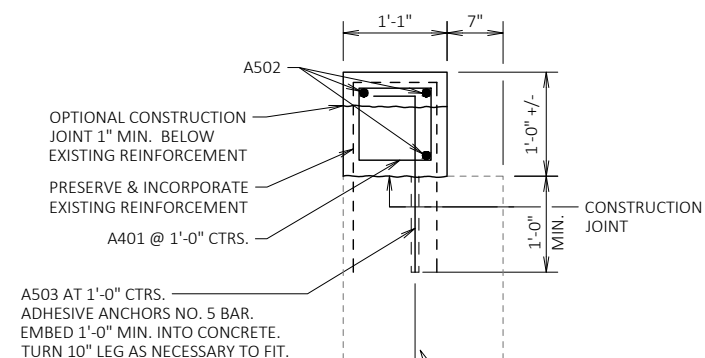
**BILL OF BARS**

BAR MARK	COAT	NO. REQ'D.		LENGTH	BENT	BAR SERIES	LOCATION
		STAGE 1	STAGE 2				
A401	X	22	22	3'-4"	X		PAVING BLOCK VERT.
A502	X	9	9	7'-10"			PAVING BLOCK HORIZ.
A503	X	22	22	2'-7"	X		PAVING BLOCK VERT.
TOTAL WEIGHT =							370 LBS.

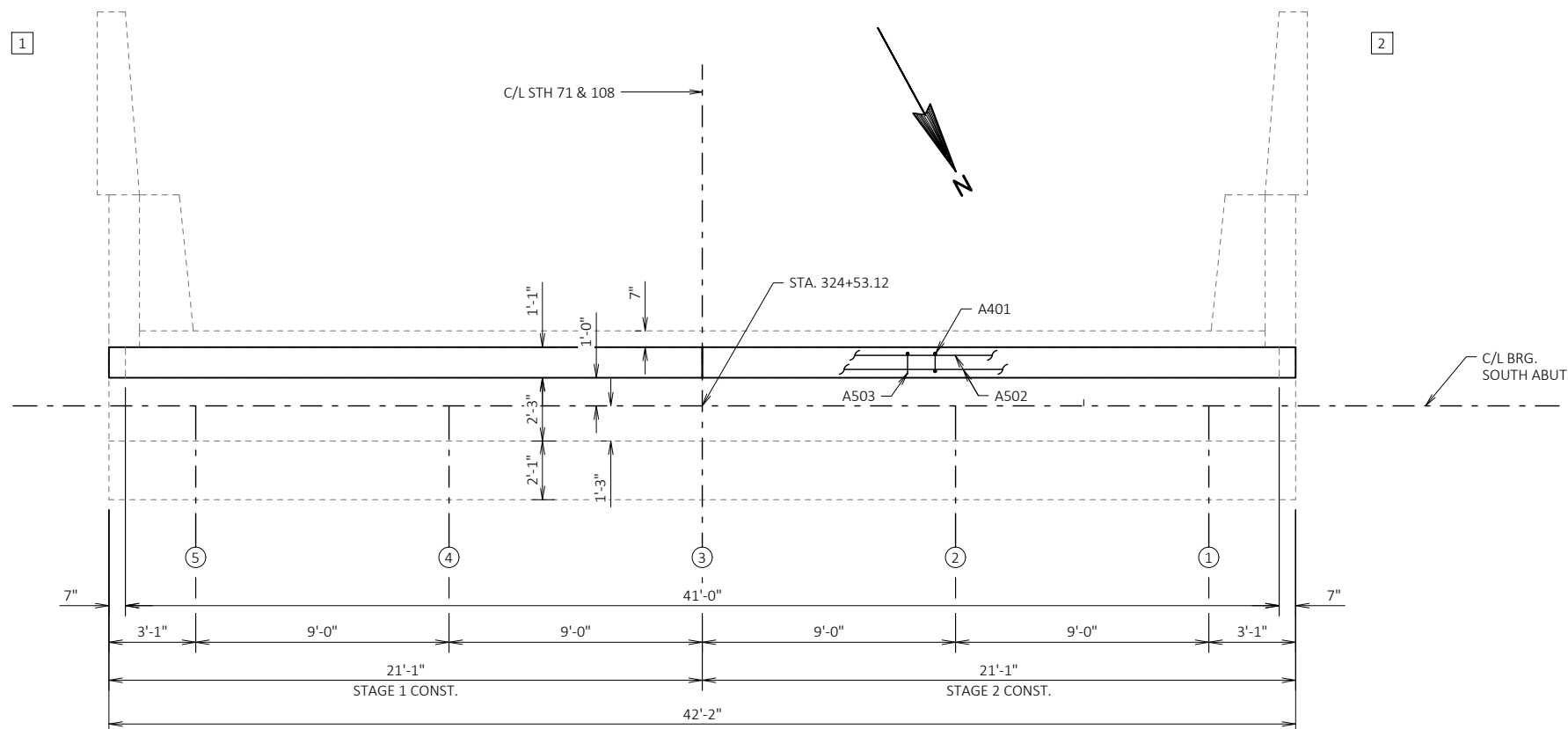
THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE. DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.



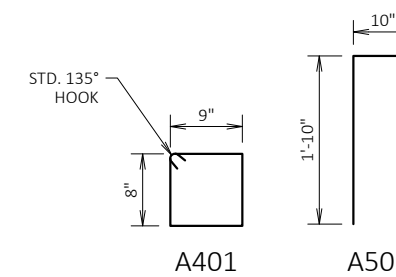
**ELEVATION**  
LOOKING SOUTH



**SECTION A-A**



**PLAN**



**A401**

**A503**

**LEGEND**

- X DENOTES WING NUMBER
- ⊗ DENOTES GIRDER NUMBER
- BAR COUPLERS REQUIRED AT STAGE CONSTRUCTION JOINT. BAR LENGTHS ARE COMPUTED TO C/L OF CONSTRUCTION JOINT AND SHALL BE MODIFIED BY THE BAR COUPLER MANUFACTURERS RECOMMENDATIONS. SEE SHEET 3 FOR COUPLER DETAILS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-27-74

DRAWN BY PKE PLANS CK'D. BH

SOUTH  
ABUTMENT

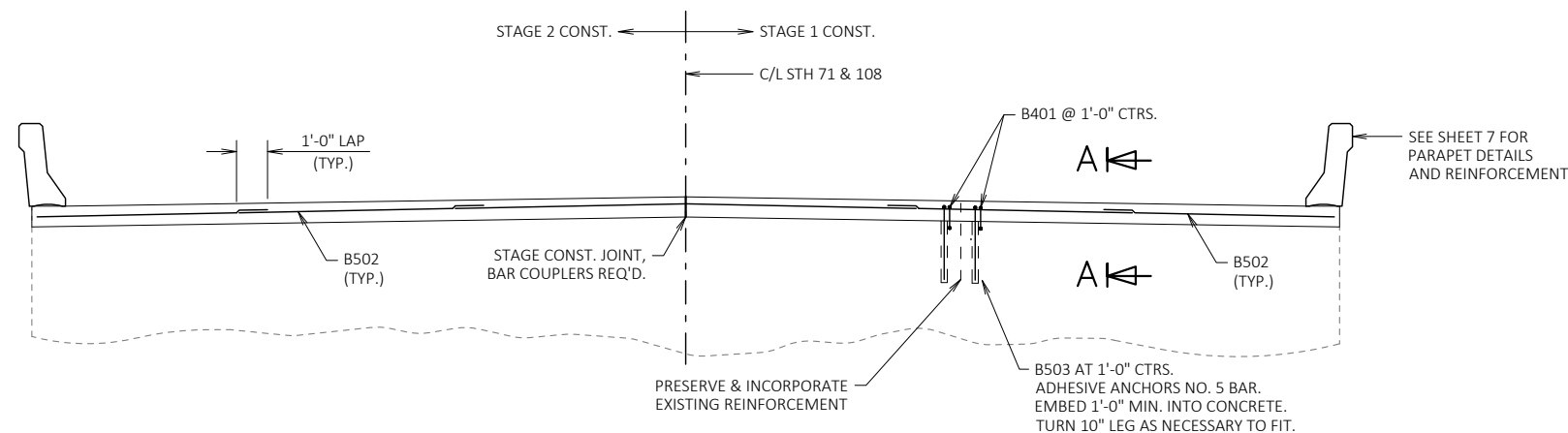
SHEET 4 OF 7



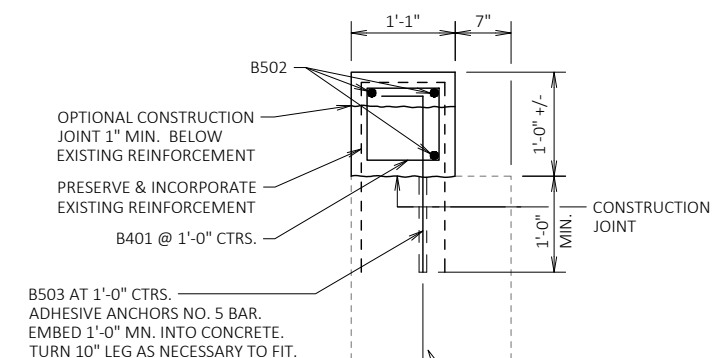
**BILL OF BARS**

BAR MARK	COAT	NO. REQ'D.		LENGTH	BENT	BAR SERIES	LOCATION
		STAGE 1	STAGE 2				
B401	X	22	22	3'-4"	X		PAVING BLOCK VERT.
B502	X	9	9	7'-10"			PAVING BLOCK HORIZ.
B503	X	22	22	2'-7"	X		PAVING BLOCK VERT.
TOTAL WEIGHT =							370 LBS.

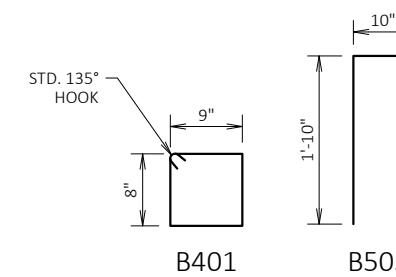
THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE.  
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.



**ELEVATION**  
LOOKING NORTH

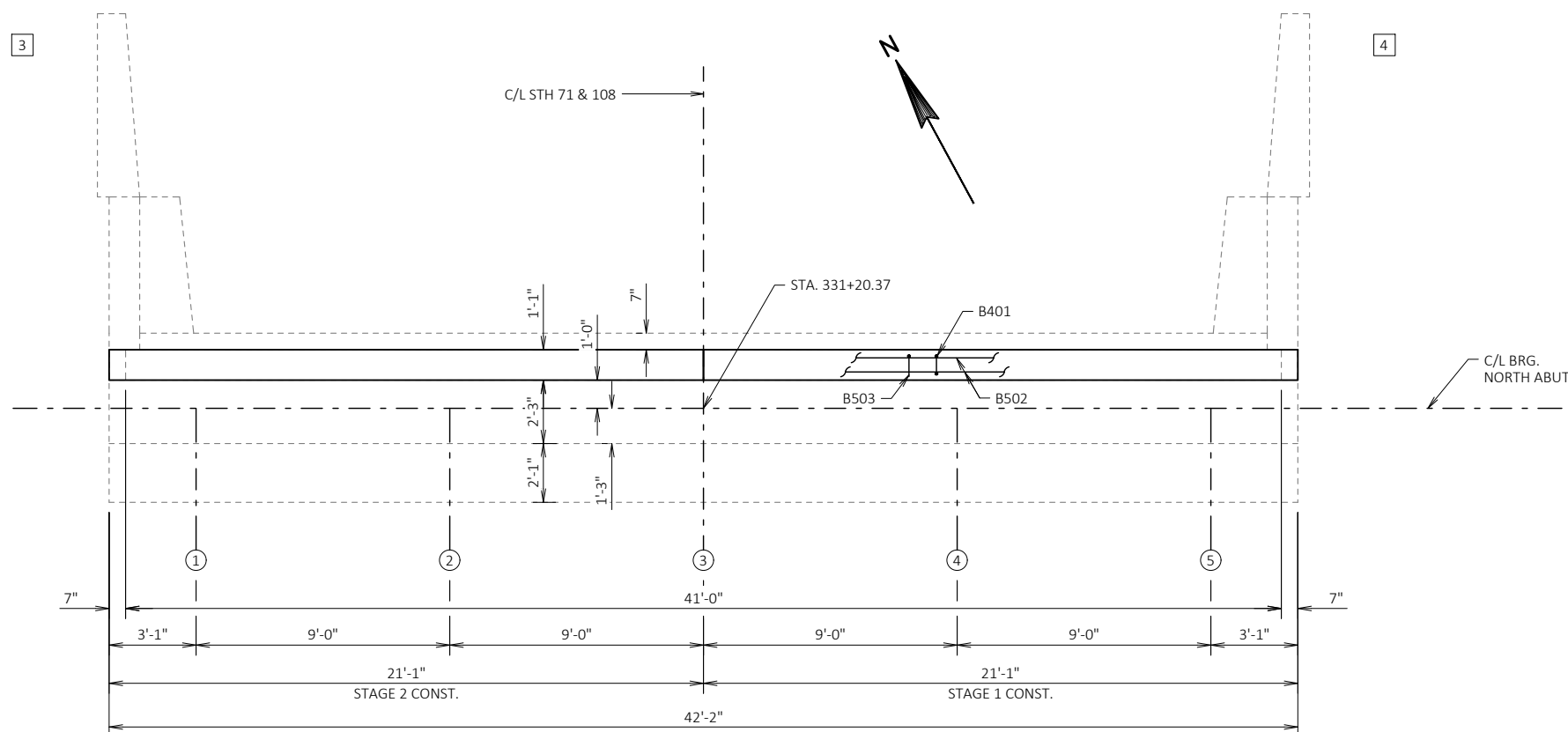


**SECTION A-A**



**B401**

**B503**



**PLAN**

**LEGEND**

- X DENOTES WING NUMBER
- ⊗ DENOTES GIRDER NUMBER
- BAR COUPLERS REQUIRED AT STAGE CONSTRUCTION JOINT. BAR LENGTHS ARE COMPUTED TO C/L OF CONSTRUCTION JOINT AND SHALL BE MODIFIED BY THE BAR COUPLER MANUFACTURERS RECOMMENDATIONS. SEE SHEET 3 FOR COUPLER DETAILS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

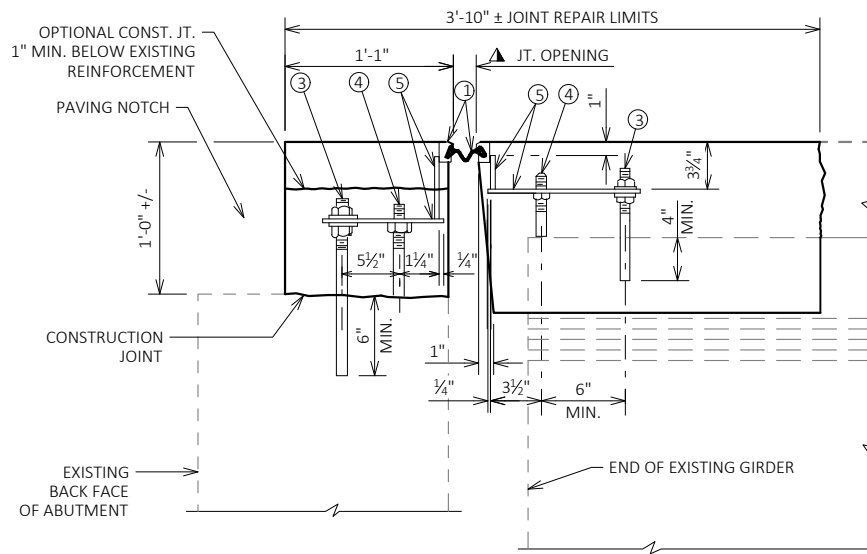
**STRUCTURE B-27-74**

DRAWN BY PKE PLANS CK'D. BH

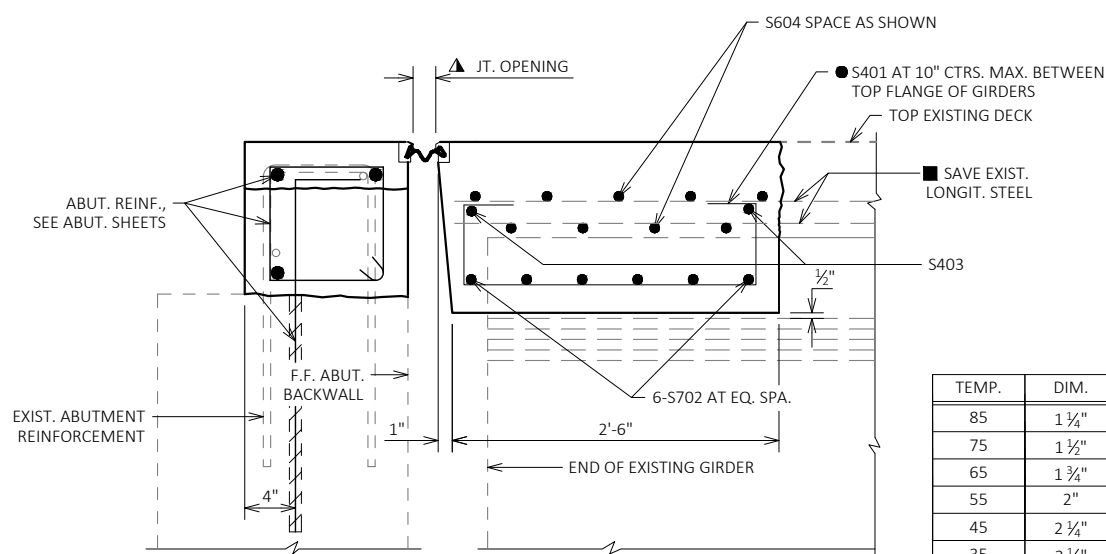
**NORTH  
ABUTMENT**

SHEET 5 OF 7





**SECTION THRU JOINT AT ABUTMENT**  
NORMAL TO C/L SUBSTRUCTURE  
(STRIP SEAL DETAILS)



**SECTION THRU JOINT AT ABUTMENT**  
NORMAL TO C/L SUBSTRUCTURE  
(REINFORCEMENT DETAILS)

TEMP.	DIM.
85	1 1/4"
75	1 1/2"
65	1 3/4"
55	2"
45	2 1/4"
35	2 1/2"
25	2 3/4"
15	3"
5	3 1/4"

TEMP. IS THE SHADED UNDERSIDE OF DECK TEMP. IN FAHRENHEIT DEGREES.

JOINT OPENING (IN.)

**TEMPERATURE TABLE**

**LEGEND**

- ① NEOPRENE STRIP SEAL (4-INCH) & STEEL EXTRUSIONS. SET JOINT OPENING PER TEMPERATURE TABLE, NORMAL TO JOINT.
- ② STUDS 5/8" Ø x 6 3/8" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS & BEND AS SHOWN AFTER WELDING.
- ②A 1/2" THICK ANCHOR PLATE WITH 5/8" Ø ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PL. TO #1 AT 1'-6" CTRS. BETWEEN GIRDERS.
- ③ 3/4" Ø THREADED ROD WITH 2 NUTS AND PLATE WASHERS. GROUT THREADED ROD INTO FIELD DRILLED HOLES ON C/L OF GIRDER. ON ABUTMENT SIDE, GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.
- ④ 3/4" Ø THREADED ROD WITH NUT. TACK WELD NUT TO #5.
- ⑤ FABRICATE SUPPORT FROM 3" x 1/2" BAR AS SHOWN OR EQUIVALENT. ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1 1/2" Ø HOLE FOR #3 & 1" Ø HOLE FOR #4.
- ⑥ GALVANIZED PLATE 3/8" x 10 1/2" x 2'-2" LONG WITH HOLES FOR #7. BEND AS SHOWN.
- ⑦ 3/4" Ø x 1 1/2" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/8" BELOW PLATE SURFACE.
- ⑧ 3/4" Ø x 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
- ⑨ 3/4" Ø x 2 1/4" GALVANIZED THREADED COUPLING.
- ⑩ 1" x 5" SLOTTED COUNTERSUNK HOLE FOR #7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.
- BARS PLACED PARALLEL TO GIRDERS. SPACING PERPENDICULAR TO C/L GIRDERS.
- SAVE AND INCORPORATE ENTIRE LENGTH OF LONGITUDINAL STEEL.
- A SMALL OPENING DUE TO A HIGH TEMPERATURE AT TIME OF CONSTRUCTION MAY REQUIRE NEOPRENE STRIP SEAL INSTALLATION INTO STEEL EXTRUSIONS PRIOR TO SETTING THE EXPANSION JOINT.

**NOTES**

HORIZONTAL DIMENSIONS ARE NORMAL TO JOINT UNLESS NOTED OTHERWISE.

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS. IF USED, ANCHOR PLATES SHALL BE PROVIDED 3" FROM EACH SIDE OF THE FIELD SPLICE, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

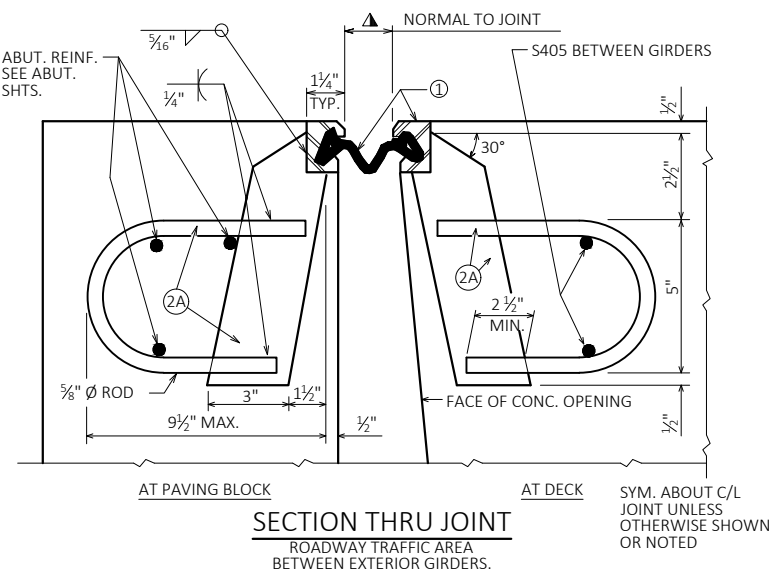
AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST & SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN & SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

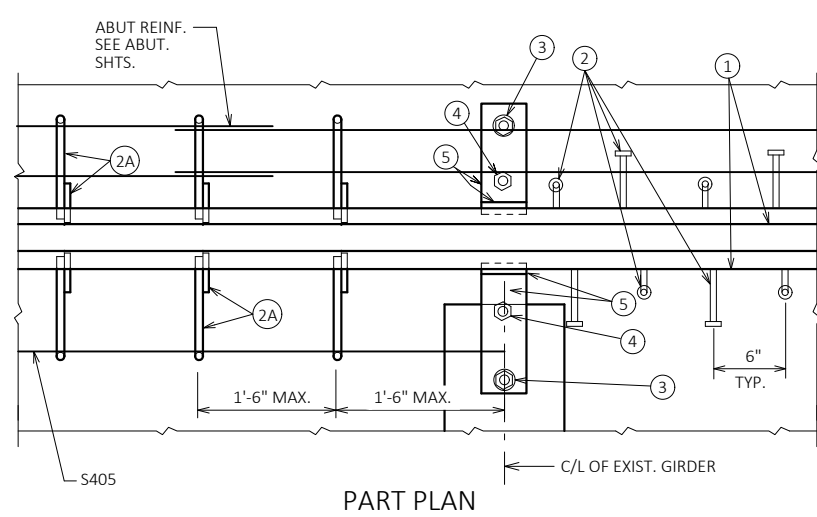
SANDBLAST PLATES, SUPPORTS, & EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS & EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

ANCHOR SYSTEM #8 & NO. #9 SHALL CONFORM TO ASTM A307 & SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C & D.

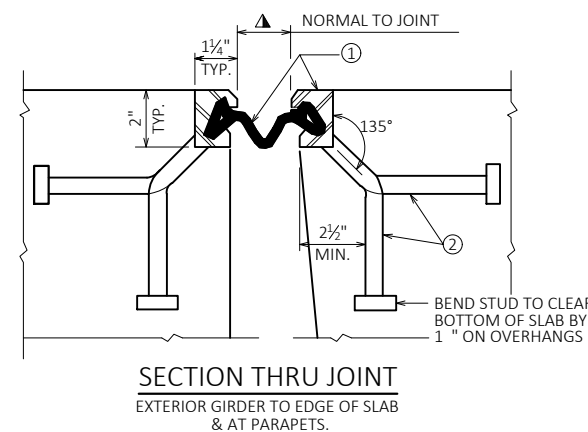
STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS & HARDWARE WILL BE PAID FOR AT THE LINEAL FOOT PRICE BID FOR "EXPANSION DEVICE B-27-74".



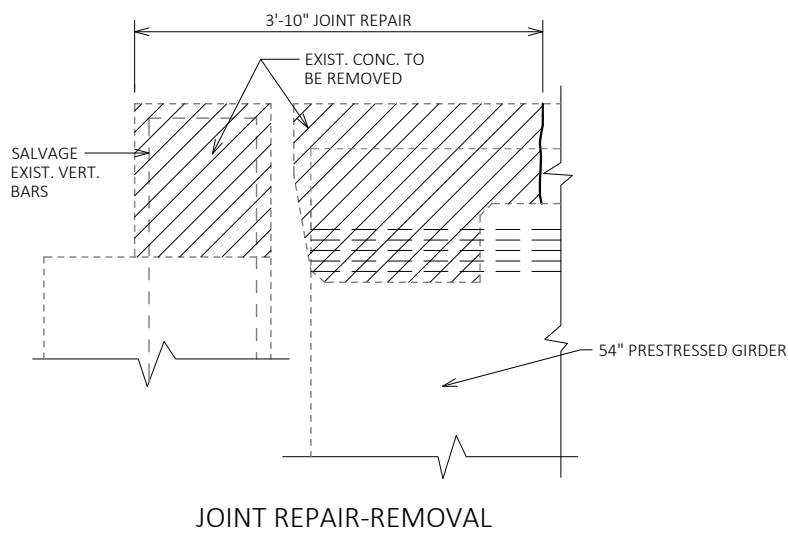
**SECTION THRU JOINT**  
ROADWAY TRAFFIC AREA  
BETWEEN EXTERIOR GIRDERS.



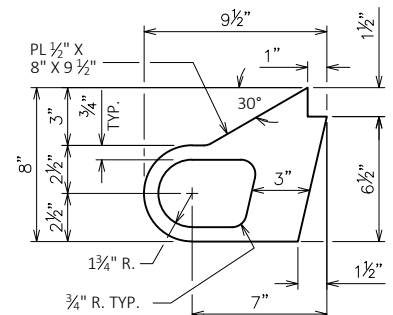
**PART PLAN**



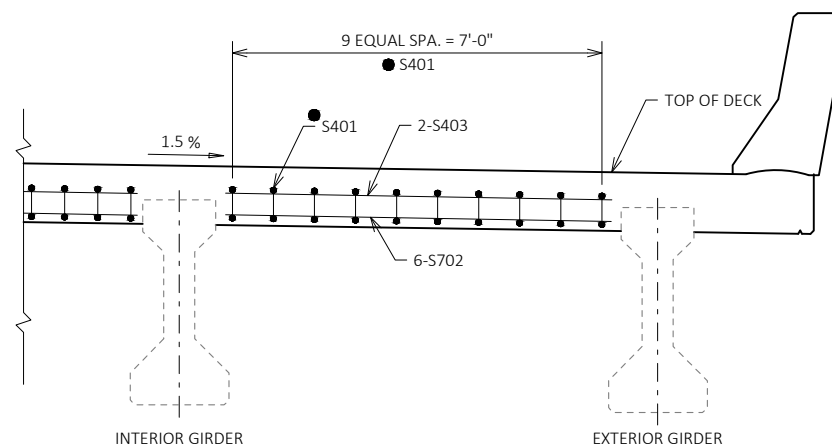
**SECTION THRU JOINT**  
EXTERIOR GIRDER TO EDGE OF SLAB  
& AT PARAPETS.



**JOINT REPAIR-REMOVAL**



**ALTERNATE STRIP SEAL ANCHOR**



**PART TRANSVERSE SECTION AT DIAPHRAGM**  
(DECK REINFORCEMENT NOT SHOWN FOR CLARITY)

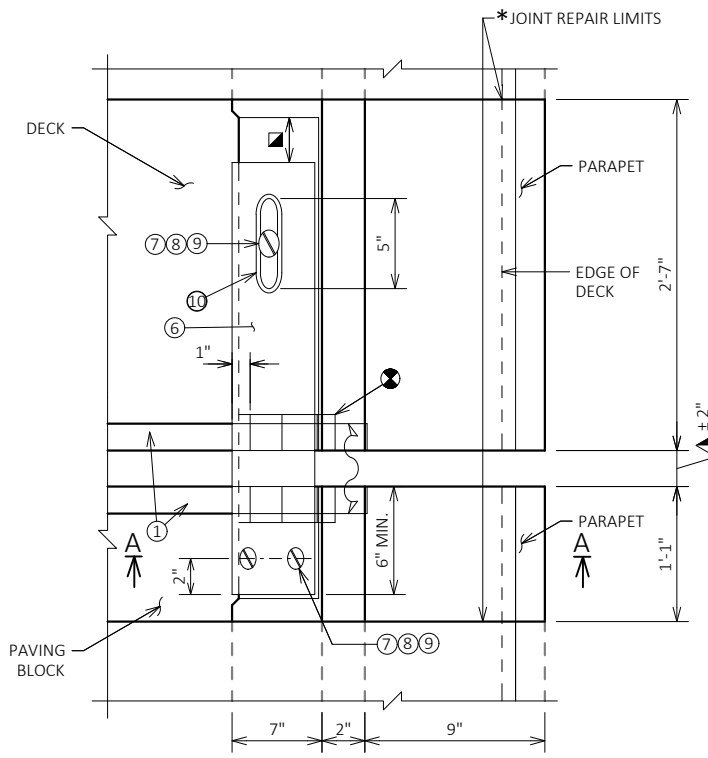
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
<b>STRUCTURE B-27-74</b>			
DRAWN BY		PKF	PLANS CK'D. BH
<b>REPLACEMENT JOINT DETAILS-1</b>			SHEET 6 OF 7



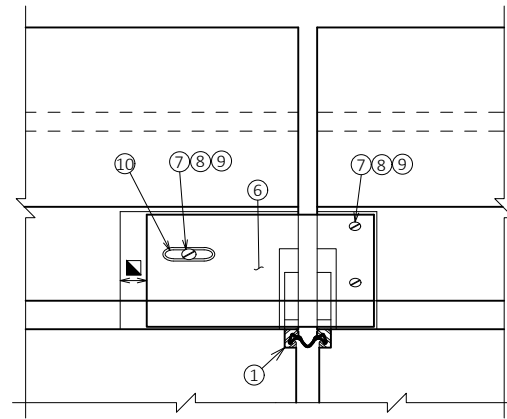
**BILL OF BARS**

BAR MARK	COAT	NO. REQ'D.		LENGTH	BENT	BAR SERIES	LOCATION
		STAGE 1	STAGE 2				
S401	X	40	40	4'-6"	X		SLAB - DIAPHRAGM VERT.
S702	X	24	24	7'-0"			SLAB - DIAPHRAGM HORIZ.
S403	X	8	8	7'-0"			SLAB - DIAPHRAGM HORIZ.
S604	X	18	18	20'-11"			SLAB HORIZ.
S405	X	8	8	9'-0"			SLAB - EXPANSION DEVICE, BTWN. GIRDERS HORIZ.
S406	X	10	10	4'-3"	X		PARAPET - SLAB VERT.
S407	X	4	4	4'-7"	X		PARAPET - WINGS VERT.
S408	X	14	14	4'-10"	X		PARAPET VERT.
S509	X	10	10	9"			PARAPET HORIZ.
S510	X	10	10	3'-5"	X		PARAPET HORIZ.
TOTAL WEIGHT =							2,490 LBS.

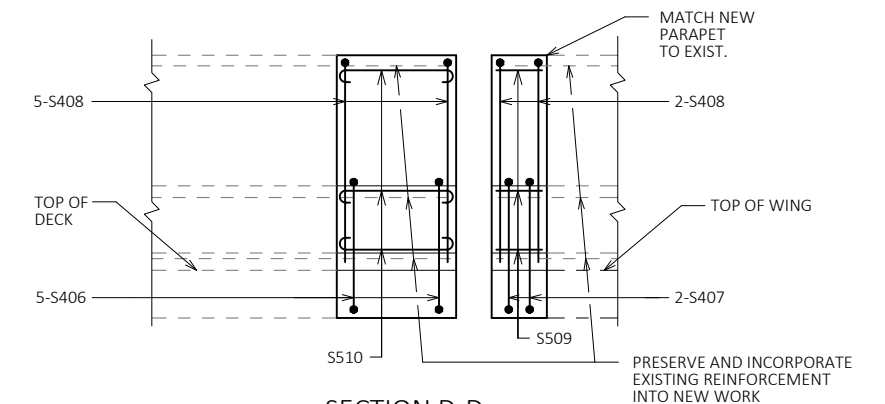
THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE  
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR



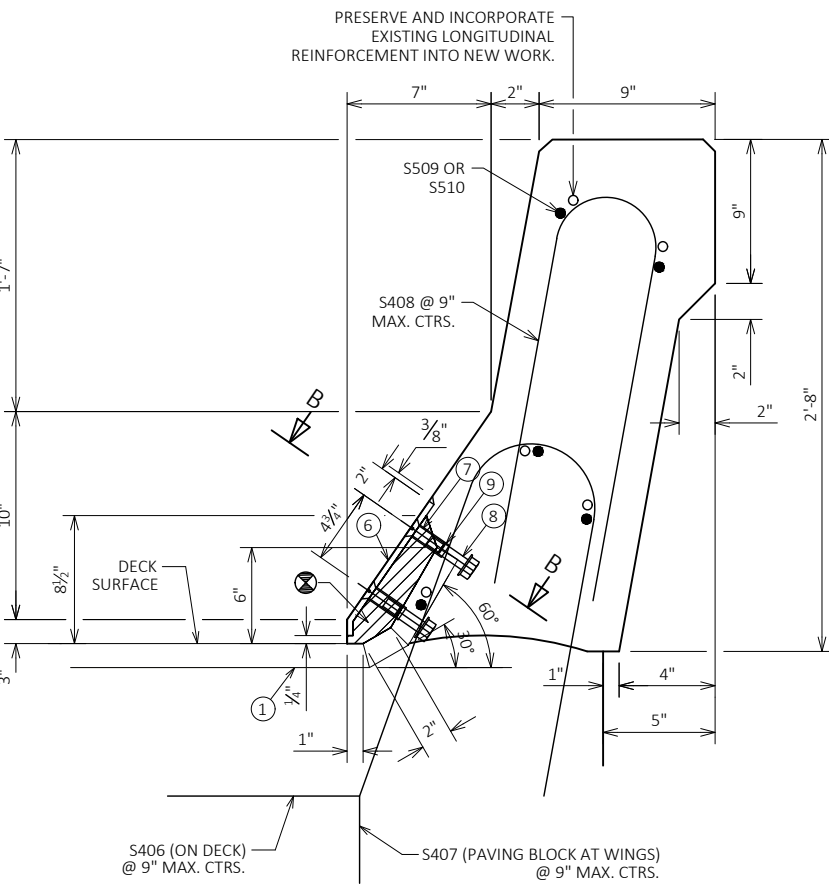
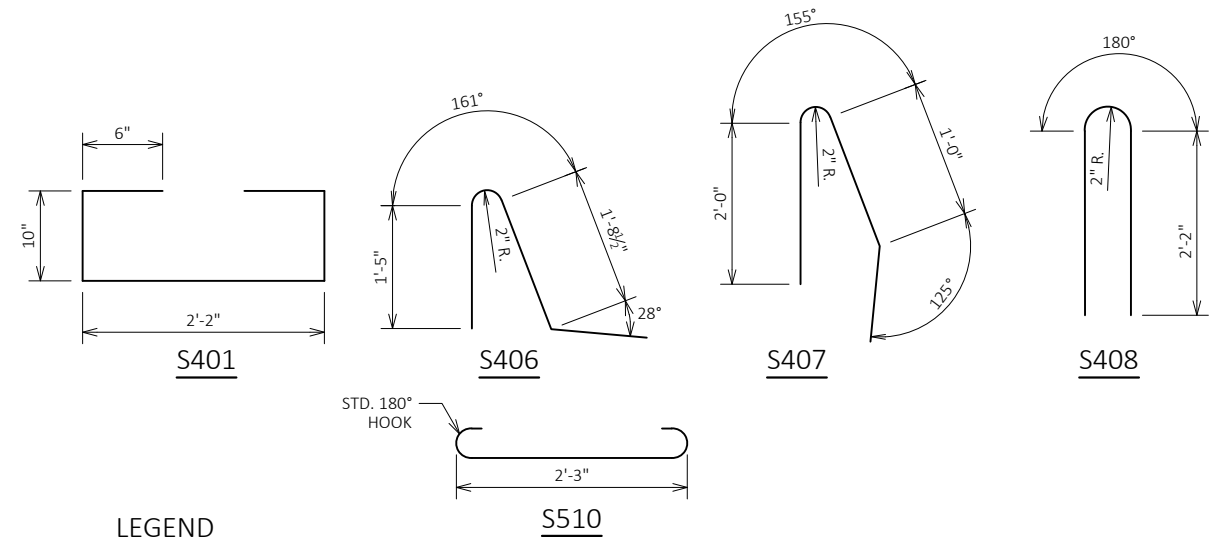
**PLAN**



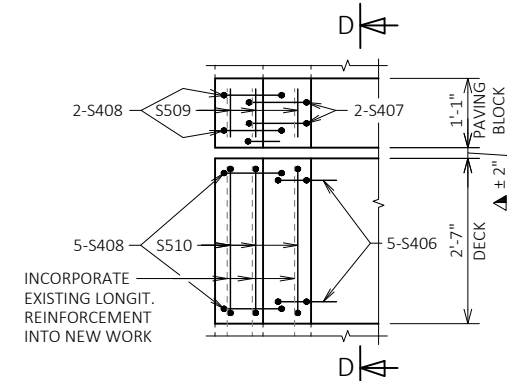
**VIEW OF PARAPET PLATES FROM ROADWAY**



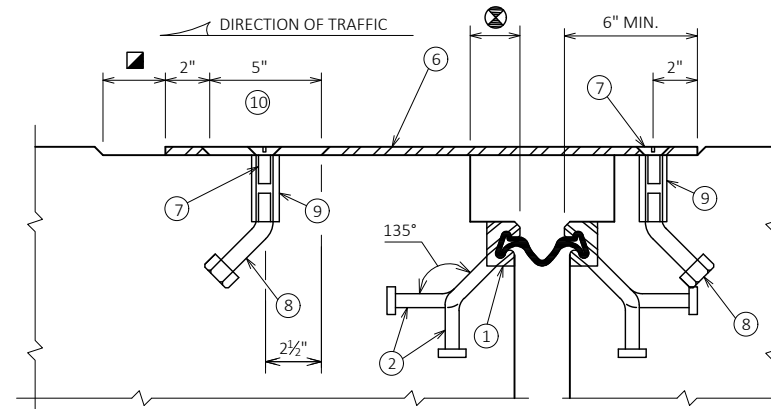
**SECTION D-D**



**SECTION A-A**



**REINFORCEMENT PLAN**



**SECTION B-B**

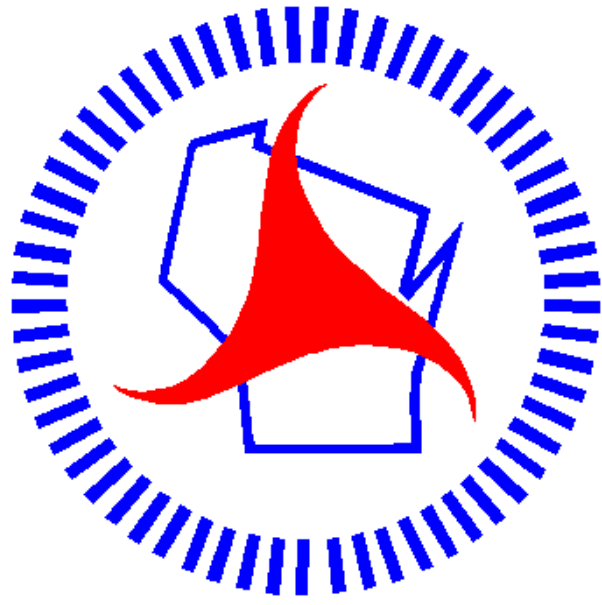
**LEGEND**

- (X) SEE SHEET 6 FOR DESCRIPTION
- ⊗ BLOCK OUT CONCRETE 2" EACH SIDE FOR JOINT OPENING.
- ▣ JOINT OPENING DIM. ALONG SKEW PLUS 1/2"
- BAR COUPLERS REQUIRED AT STAGE CONSTRUCTION JOINT. BAR LENGTHS ARE COMPUTED TO C/L OF CONSTRUCTION JOINT AND SHALL BE MODIFIED BY THE BAR COUPLER MANUFACTURERS RECOMMENDATIONS. SEE SHEET 3 FOR COUPLER DETAILS.
- \* JOINT REPAIR LIMITS. REBUILD TOP OF WING/ABUTMENT, DECK, AND PARAPET IN THIS AREA. ENSURE DECK SIDE OF JOINT IS FREE TO MOVE AND NOT CONNECTED TO ABUTMENT.
- ▲ SEE SHEET 6 FOR DESCRIPTION.



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
<b>STRUCTURE B-27-74</b>			
DRAWN BY PKF		PLANS CK'D. BH	
<b>REPLACEMENT JOINT DETAILS-2</b>			SHEET 7 OF 7

Notes



## ***Wisconsin Department of Transportation***

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