

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 = 24



DESIGN DESIGNATION

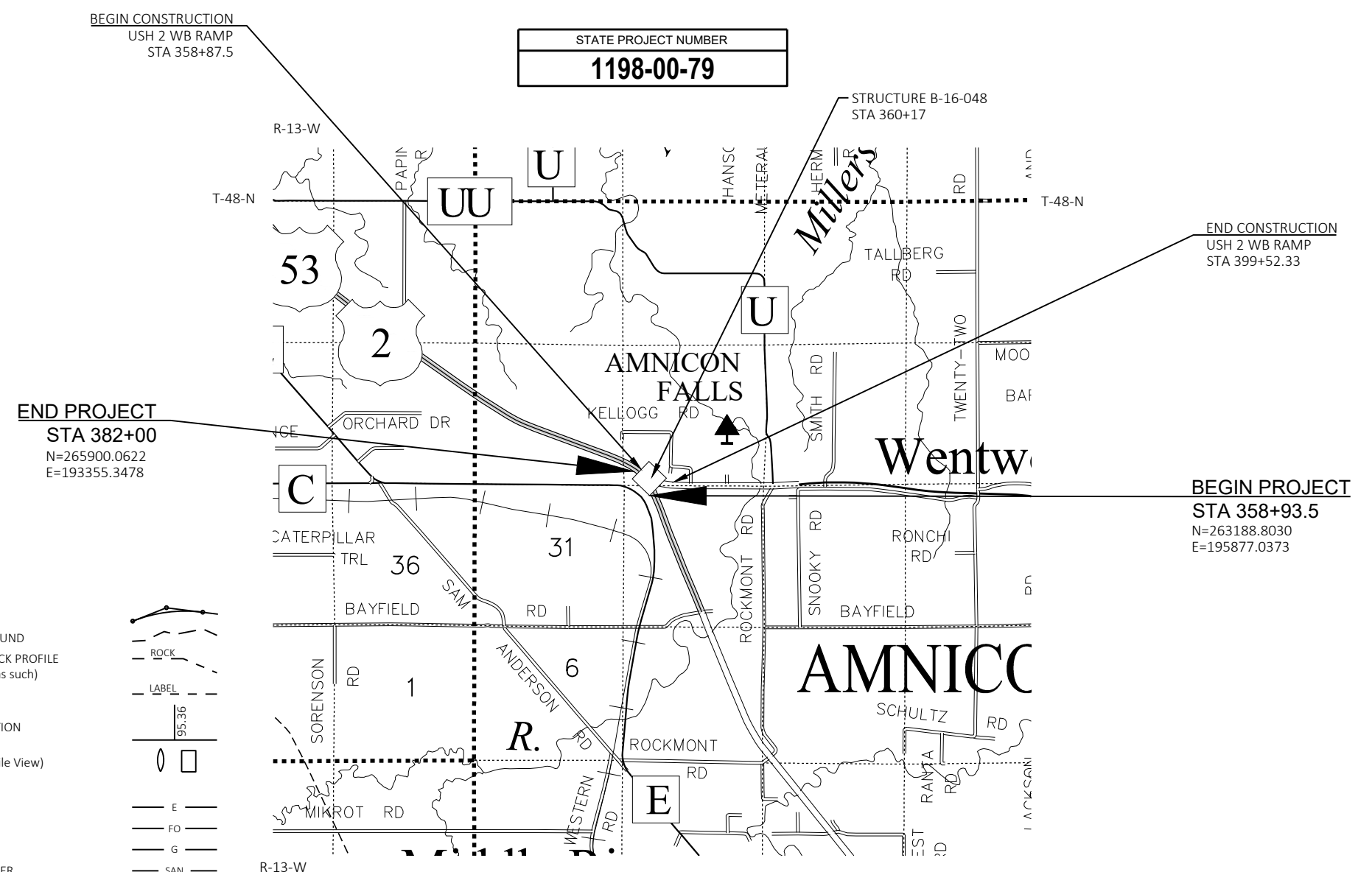
A.A.D.T.	2018	=	7200
A.A.D.T.	2038	=	7900
D.H.V.		=	995.4
D.D.		=	61/39
T.		=	13.4%
DESIGN SPEED		=	70
ESALS		=	3,508,070

CONVENTIONAL SYMBOLS

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

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION  
 PLAN OF PROPOSED IMPROVEMENT  
**SOLON SPRINGS - SUPERIOR**  
 USH 2 INTERCHANGE  
 USH 53  
 DOUGLAS COUNTY

STATE PROJECT NUMBER  
**1198-00-79**



LAYOUT  
 SCALE 0 1.0 MI  
 TOTAL NET LENGTH OF CENTERLINE = 0.438 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), DOUGLAS 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

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1198-00-79	WISC 2024037	1

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

PREPARED BY	TOM ARMSTRONG
Designer	MICHAEL PEARSON
Project Manager	PHIL KEPPERS
Regional Examiner	MITCH FINNEGAN
Regional Supervisor	JEFF OLSON

APPROVED FOR THE DEPARTMENT  
 DATE: 7/31/2023  
 Signature: Philip Keppers

PROJECT: 1198-00-79

UTILITIES: THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. COORDINATE 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.

WISDOT DESIGN CONTACT  
PHIL KEPPERS  
1701 N. 4TH ST.  
SUPERIOR, WI 54880  
715-395-3026

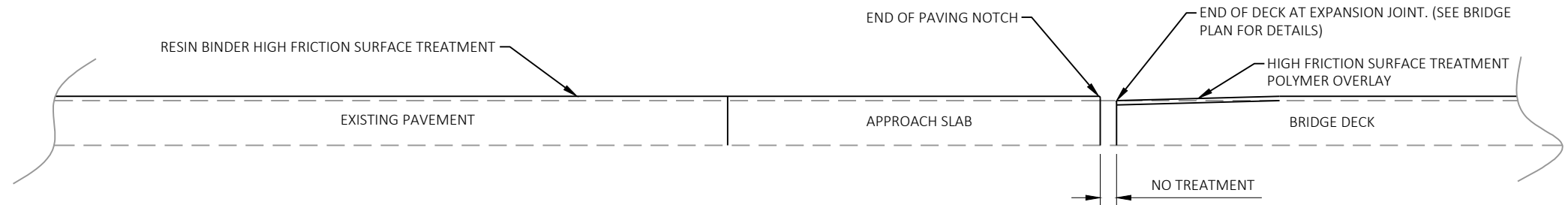
DESIGN CONTACT  
MICHAEL PEARSON  
1701 N. 4TH ST.  
SUPERIOR, WI 54880  
715-395-3024

WISDNR NORTHWEST REGION  
AMY CRONK  
810 W. MAPLE ST.  
SPOONER, WI 54801  
715-635-4229



Dial 811 or (800)242-8511

www.DiggersHotline.com



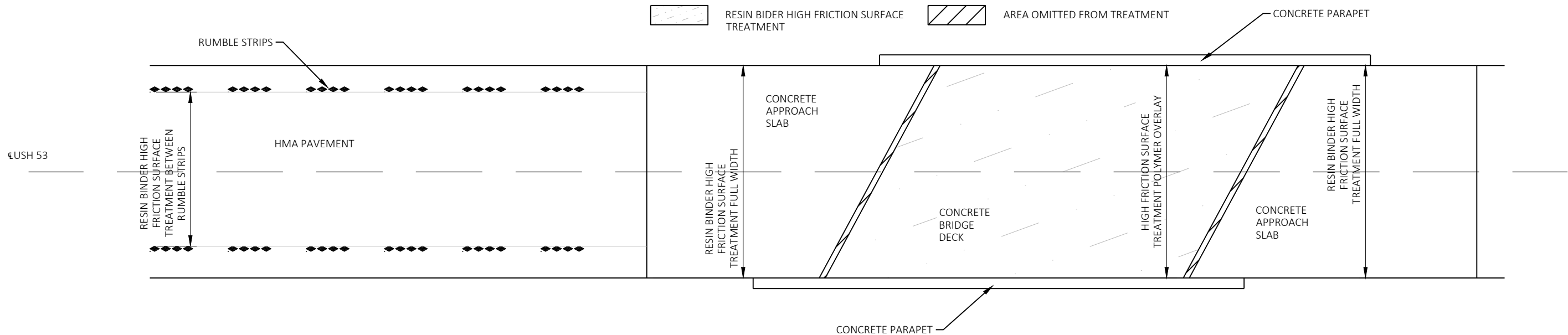
POLYMER OVERLAY TRANSITION ZONE DETAIL

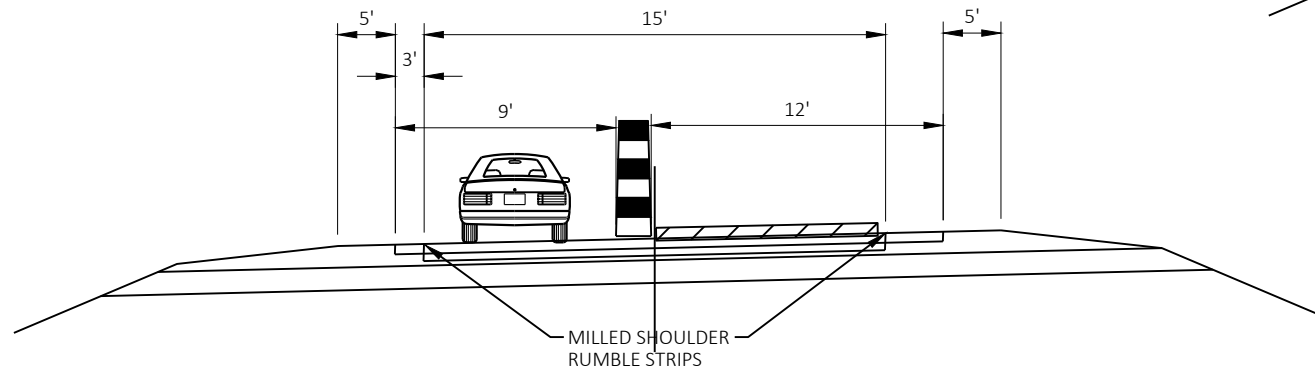
NOTE:  
RESIN BINDER HIGH FRICTION SURFACE TREATMENT TO BE PLACED BETWEEN EDGE LINES OR TO THE INSIDE EDGE OF RUMBLE STRIPS, WHICHEVER IS WIDER.

HIGH FRICTION SURFACE TREATMENT POLYMER OVERLAY TO BE APPLIED TO THE ENTIRE DECK EXCLUDING PARAPET. SEE BRIDGE PLANS FOR DETAILS.

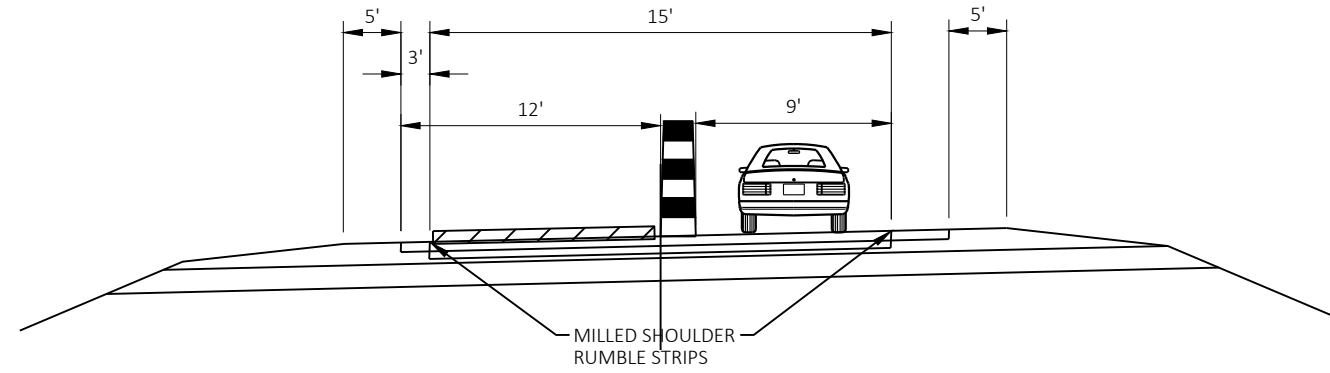
MASK OFF EXISTING STRUCTURE JOINT AS DIRECTED BY THE ENGINEER.

POLYMER OVERLAY APPLICATION AREA DETAIL

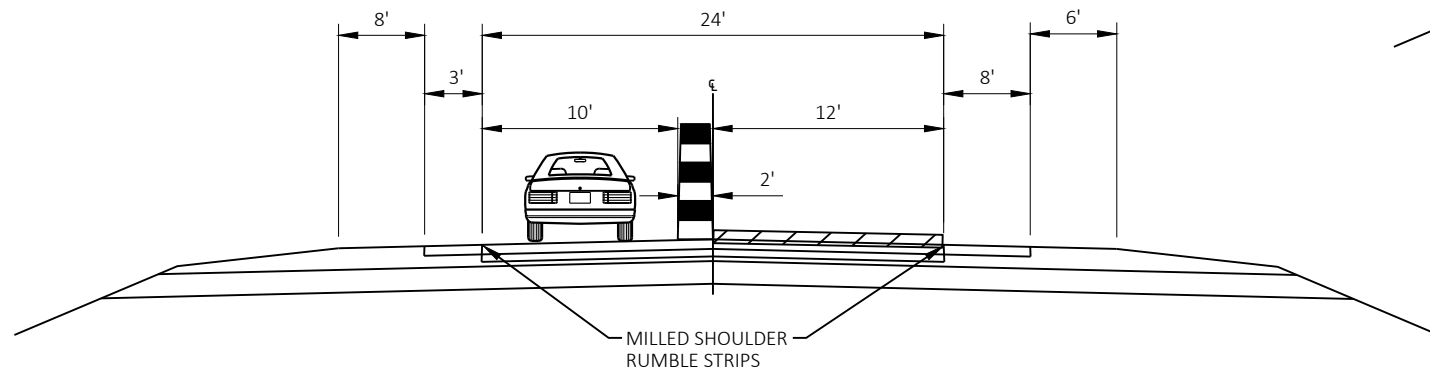




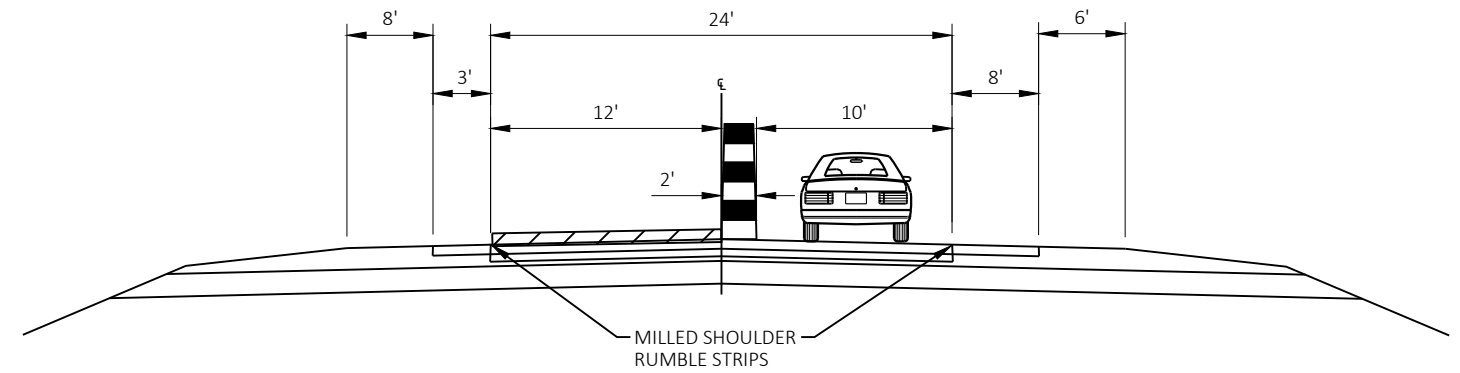
WB USH 2 TO NB USH 53 TRAFFIC CONTROL SECTION  
STAGE 1



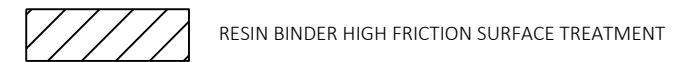
WB USH 2 TO NB USH 53 TRAFFIC CONTROL SECTION  
STAGE 2



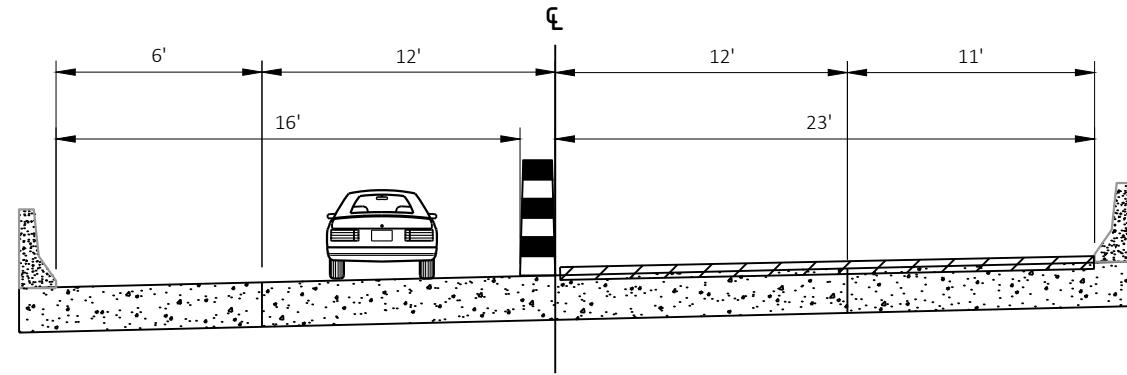
WB USH 2 TO NB USH 53 TRAFFIC CONTROL SECTION  
STAGE 1



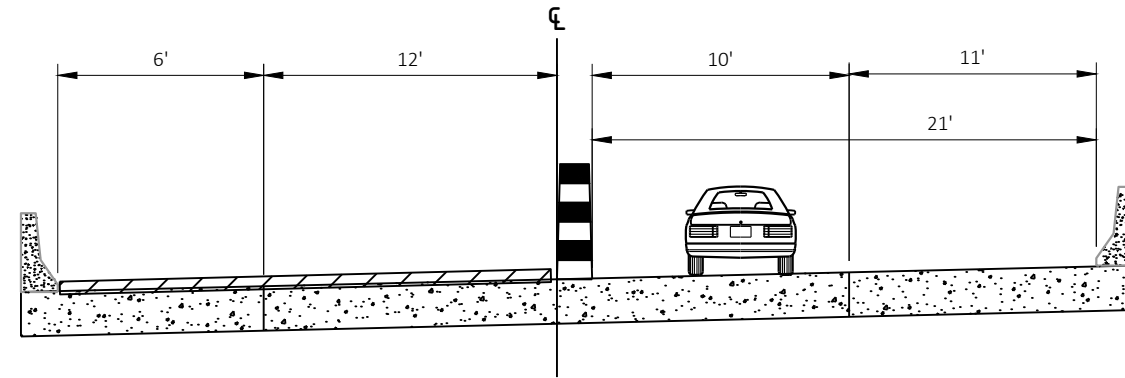
WB USH 2 TO NB USH 53 TRAFFIC CONTROL SECTION  
STAGE 2



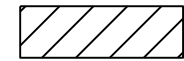
RESIN BINDER HIGH FRICTION SURFACE TREATMENT

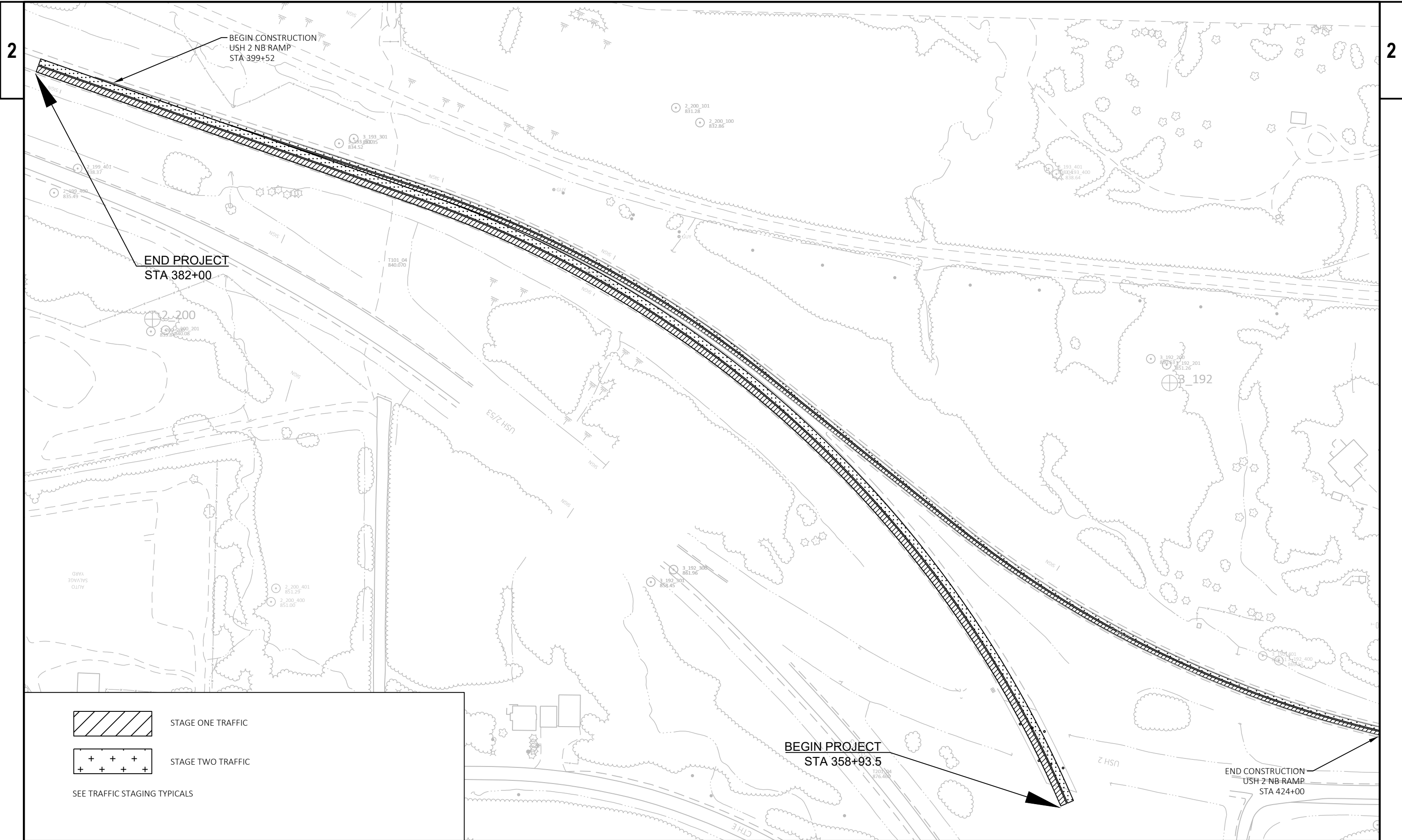


NB USH 53 BRIDGE DECK TRAFFIC CONTROL SECTION  
STAGE 1



NB USH 53 BRIDGE DECK TRAFFIC CONTROL SECTION  
STAGE 2

 HIGH FRICTION SURFACE TREATMENT POLYMER OVERLAY.  
BRIDGE DECK ONLY. SEE GENERAL NOTES.



PROJECT NO: 1198-00-79	HWY: USH 53	COUNTY: DOUGLAS	TRAFFIC CONTROL	SHEET	<b>E</b>
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FILE NAME : C:\CIVIL 3D PROJECTS\11980009\SHEETS\11980009\_TC.DWG  
LAYOUT NAME - TC TOP

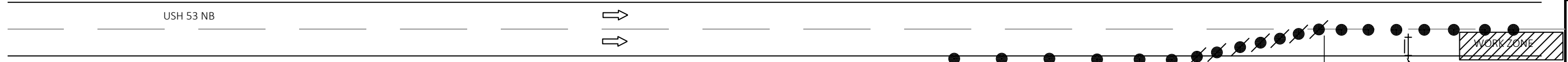
PLOT DATE : 7/20/2023 2:00 PM

PLOT BY : PEARSON, MICHAEL R

PLOT NAME :

PLOT SCALE : 150:1

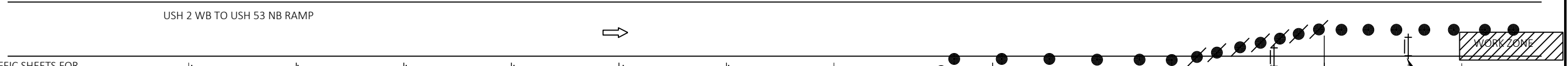
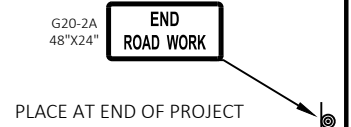
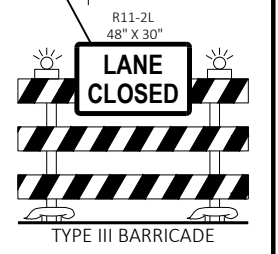
WISDOT/CADD SHEET 42



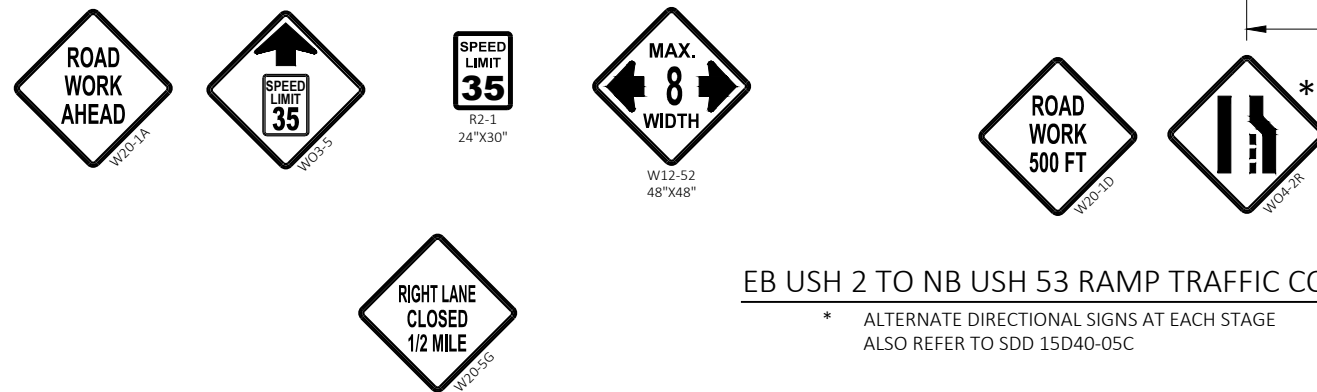
REFER TO SDD 15D12-11B FOR APPROACH SIGNS

NB USH 53 TRAFFIC CONTROL SIGNS

- LEGEND**
- TYPE III BARRICADE
  - TRAFFIC CONTROL DRUM
  - TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
  - SIGN ON PERMANENT SUPPORT
  - TYPE A WARNING LIGHT (FLASHING)
  - WORK AREA
  - DIRECTION OF TRAFFIC

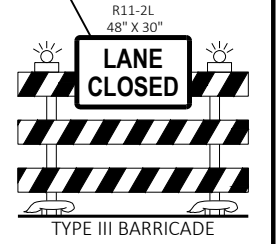
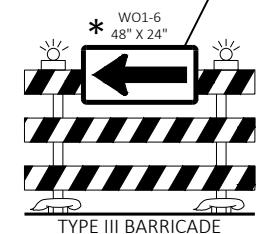


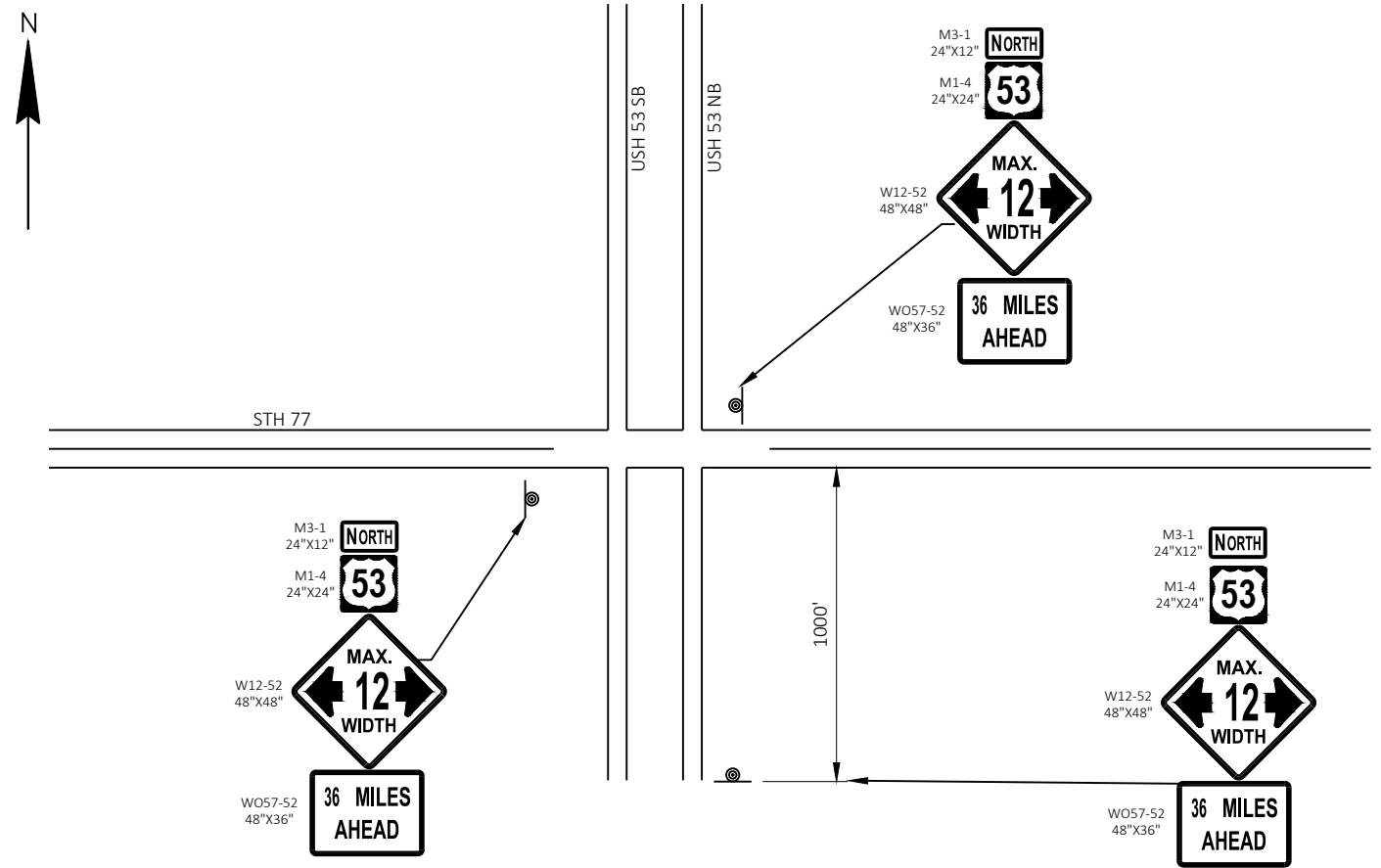
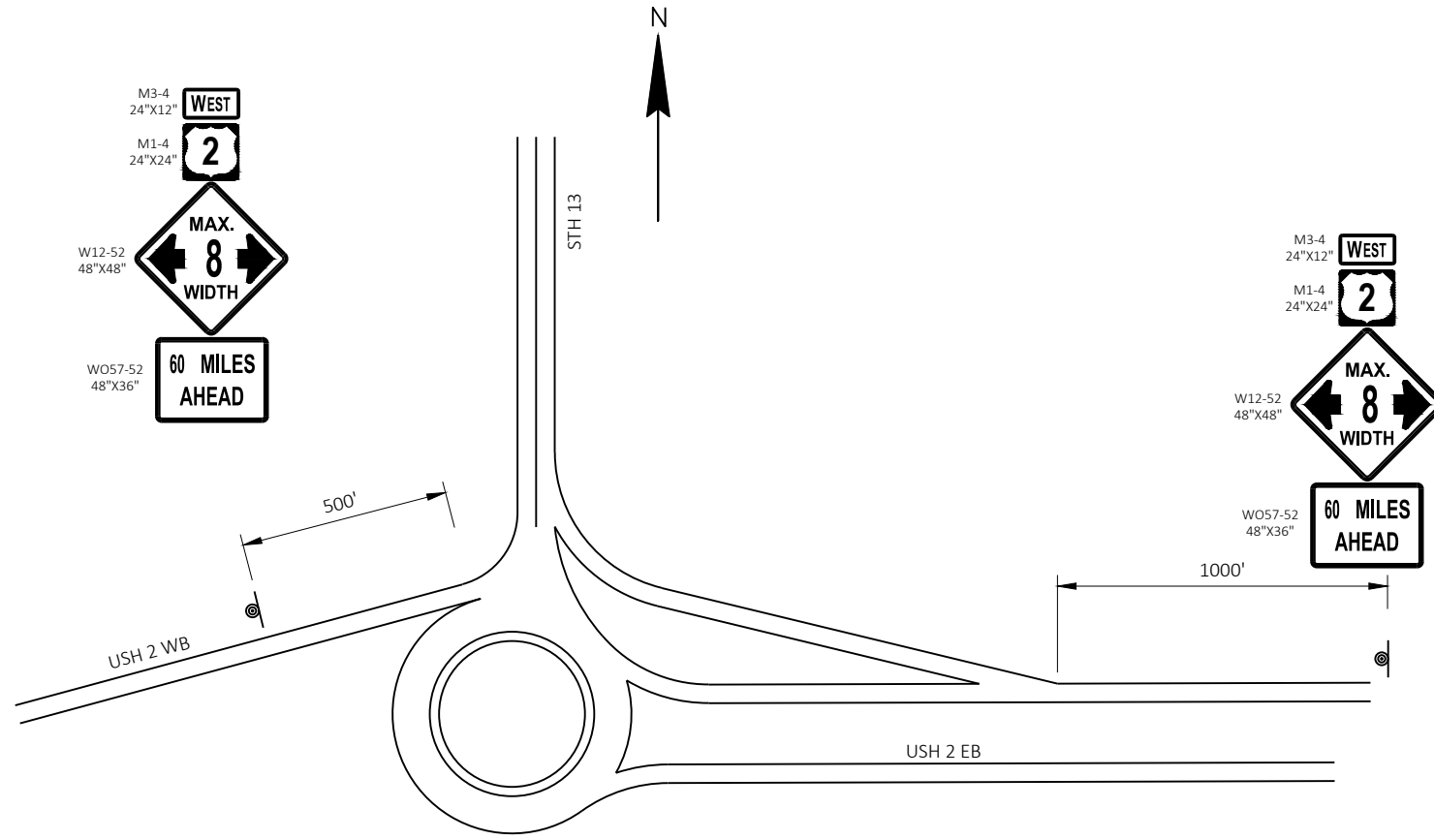
SEE OTHER TRAFFIC SHEETS FOR APPROACHING LANE RESTRICTIONS










EB USH 2 TO NB USH 53 RAMP TRAFFIC CONTROL SIGNS

\* ALTERNATE DIRECTIONAL SIGNS AT EACH STAGE  
ALSO REFER TO SDD 15D40-05C





LEGEND

-  TYPE III BARRICADE
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
-  SIGN ON PERMANENT SUPPORT
-  TYPE A WARNING LIGHT (FLASHING)
-  WORK AREA
-  DIRECTION OF TRAFFIC

RESTRICT TRAFFIC TO ONE LANE FROM CTH U TO USH 2 RAMP



Estimate Of Quantities

1198-00-79

Line	Item	Item Description	Unit	Total	Qty
0002	213.0100	Finishing Roadway (project) 01. 1198-00-79	EACH	1.000	1.000
0004	509.1500	Concrete Surface Repair	SF	2.000	2.000
0006	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1198-00-79	EACH	1.000	1.000
0008	619.1000	Mobilization	EACH	1.000	1.000
0010	643.0300	Traffic Control Drums	DAY	1,700.000	1,700.000
0012	643.0420	Traffic Control Barricades Type III	DAY	60.000	60.000
0014	643.0705	Traffic Control Warning Lights Type A	DAY	28.000	28.000
0016	643.0715	Traffic Control Warning Lights Type C	DAY	193.000	193.000
0018	643.0900	Traffic Control Signs	DAY	600.000	600.000
0020	643.3150	Temporary Marking Line Removable Tape 4-Inch	LF	6,281.000	6,281.000
0022	643.5000	Traffic Control	EACH	1.000	1.000
0024	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	8,024.000	8,024.000
0026	646.4040	Marking Line Grooved Wet Ref Epoxy 10-Inch	LF	1,014.000	1,014.000
0028	646.4720	Marking Line Same Day Epoxy 6-Inch	LF	578.000	578.000
0030	646.9000	Marking Removal Line 4-Inch	LF	4,961.000	4,961.000
0032	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	300.000	300.000
0034	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	300.000	300.000
0036	SPV.0180	Special 01. Resin Binder High Friction Surface Treatment	SY	9,291.000	9,291.000
0038	SPV.0180	Special 02. High Friction Surface Treatment Polymer Overlay	SY	714.000	714.000



CONCRETE SURFACE REPAIR						
509.1500						
CONCRETE SURFACE REPAIR						
CAT	STATION	TO	STATION	LOC	SF	REMARKS
0010	-				2	
TOTAL 0010					2	

MAINTENANCE AND REPAIR OF HAUL ROADS (1198-00-79)						
618.0100.01						
MAINTENANCE AND REPAIR OF HAUL ROADS (1198-00-79)						
CAT	STATION	TO	STATION	LOC	EACH	REMARKS
0010	-				1	
TOTAL 0010					1	

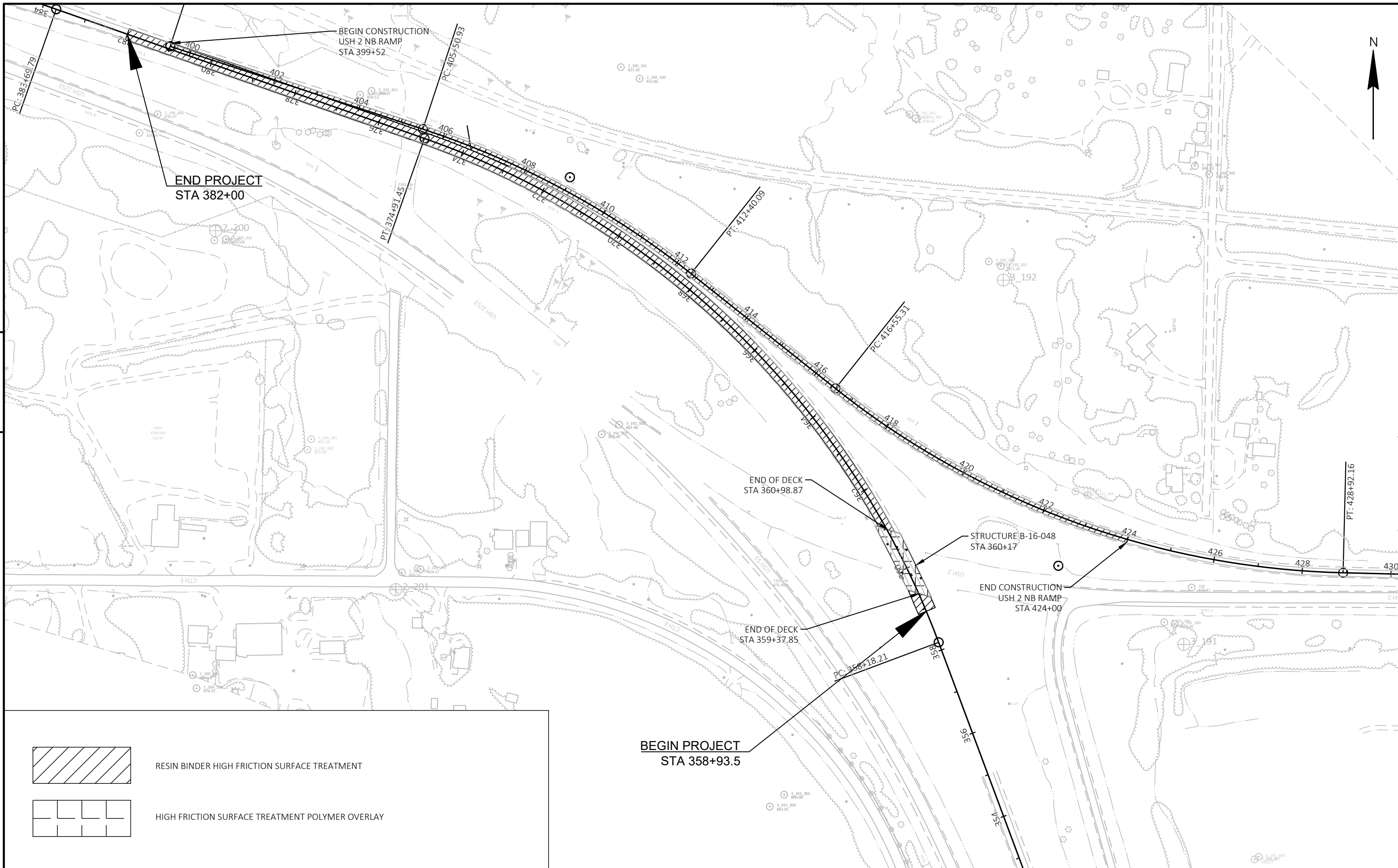
TRAFFIC CONTROL SUMMARY 1									
		643.0300	643.0420	643.0705	643.0715				
		TRAFFIC CONTROL DRUMS	TRAFFIC BARRICADES TYPE III	TRAFFIC CONTROL WARNING LIGHTS TYPE A	TRAFFIC CONTROL WARNING LIGHTS TYPE C				
CAT	STATION	TO	STATION	LOC	DAY	DAY	DAY	DAY	REMARKS
0010	358+87	-	382+00	RT&LT	710	30	14	98	
0010	399+52	-	426+00	RT&LT	990	30	14	95	
TOTAL 0010					1,700	60	28	193	

TRAFFIC CONTROL SUMMARY 2									
		643.0900	643.3150	643.5000	646.9000				
		TRAFFIC CONTROL SIGNS	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH LF	TRAFFIC CONTROL EACH	MARKING REMOVAL LINE 4-INCH LF				
CAT	STATION	TO	STATION	LOC	DAY	LF	EACH	LF	REMARKS
0010	358+87	-	382+00	RT&LT	300	2,973	1	2,313	
0010	399+52	-	426+00	RT&LT	300	3,308		2,648	
TOTAL 0010					600	6,281	1	4,961	

PAVEMENT MARKING SUMMARY										
		646.2040	646.4040	646.4720						
		MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH	MARKING LINE GROOVED WET REFLECTIVE EPOXY 10-INCH	MARKING LINE EPOXY SAME DAY 6-INCH						
		YELLOW LF	WHITE LF	WHITE/BLACK	WHITE LF	WHITE LF				
CAT	STATION	TO	STATION	LOC	LF	LF			REMARKS	
0010	358+87	-	382+00	LT NB	2,313				USH 53 NB	
0010	358+87	-	368+77	RT NB		990			USH 53 NB	
0010	368+77	-	373+84	RT NB				1,014	GORE	
0010	358+87	-	382+00	CL NB				578	USH 53 CL	
0010	414+36	-	424+00	RT WB	964				USH 2 WB	
0010	398+00	-	424+00	LT WB		2,600			USH 2 WB	
TOTAL 0010					3,277	3,590	1,157	1,014	578	
GRAND TOTAL 0010					8024		578			

RESIN BINDER HIGH FRICTION SURFACE TREATMENT						
SPV.0180.01						
SPECIAL (.01. RESIN BINDER HIGH FRICTION SURFACE TREATMENT)						
CAT	STATION	TO	STATION	LOC	SY	REMARKS
0010	358+88	-	359+38	LT&RT	225	S. APPRCH SLAB
0010	360+99	-	382+00	LT&RT	5,685	USH 53 NB W/SLAB
0010	399+52	-	426+00	LT&RT	3,606	USH 2 WB RAMP
TOTAL 0010					9,291	

HIGH FRICTION SURFACE TREATMENT POLYMER OVERLAY						
SPV.0180.02						
SPECIAL (.02 HIGH FRICTION SURFACE TREATMENT POLYMER OVERLAY)						
CAT	STATION	TO	STATION	LOC	SY	REMARKS
0010	358+87	-	361+46	LT&RT	714	DECK ONLY-DOUBLE LAYER
TOTAL 0010					714	



5

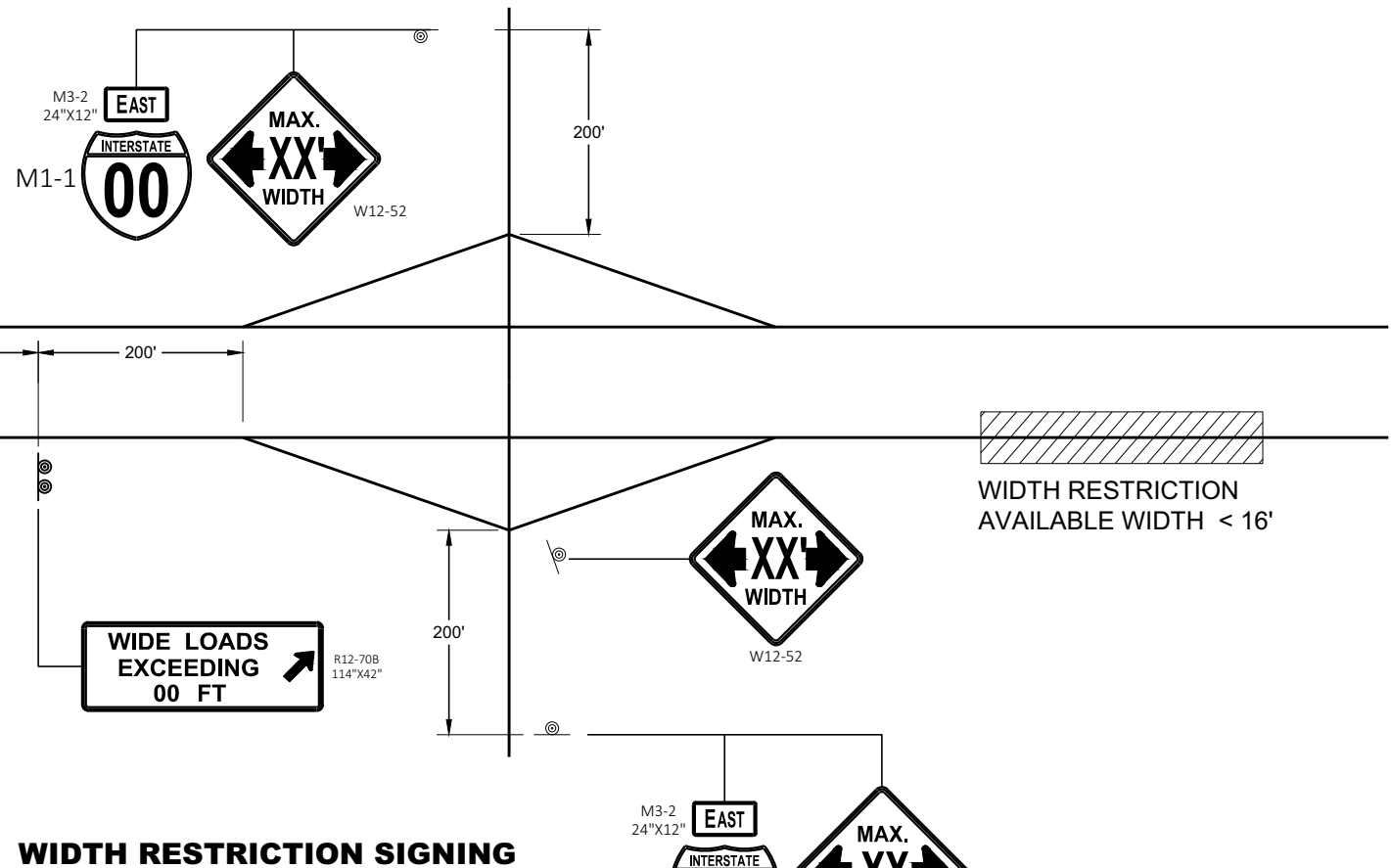
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PROJECT NO: 1198-00-79	HWY: USH 53	COUNTY: DOUGLAS	PLAN	SHEET	E
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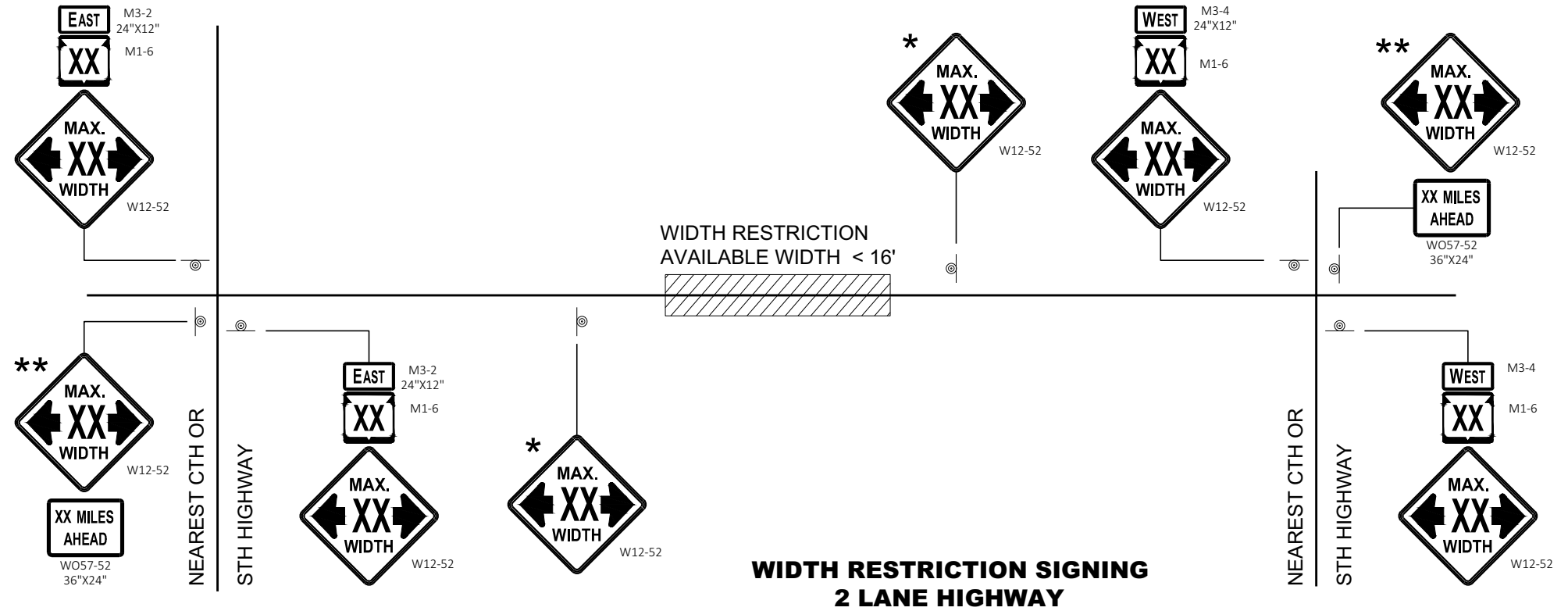
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## Standard Detail Drawing List

15C02-08F	ADVANCED WIDTH RESTRICTION SIGNING
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-22A	LONGITUDINAL MARKING (MAINLINE)
15C08-22B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-23B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C31-05C	PAVEMENT MARKING ENTRANCE RAMP AND PARALLEL ENTRANCE RAMP
15D12-11B	TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
15D40-05B	TRAFFIC CONTROL, FULL LANE SHIFT MULTILANE DIVIDED 50 MPH AND OVER
15D40-05C	TRAFFIC CONTROL, PARTIAL LANE SHIFT NON-FREEWAY/EXPRESSWAY OR MULTILANE DIVIDED 45 MPH AND UNDER



**WIDTH RESTRICTION SIGNING**



**WIDTH RESTRICTION SIGNING  
2 LANE HIGHWAY**

**LEGEND**

⊙ SIGN ON PERMANENT SUPPORT

**GENERAL NOTES**

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS 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 DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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.

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

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

WIDTH ON SIGN TO BE APPROXIMATELY ONE FOOT LESS THAN AVAILABLE WIDTH.

\* PLACE 500 FEET AFTER THE W20 - 1A AND 500 FEET BEFORE ADDITIONAL SIGNS FOR ROADWAYS WITH A PRE - CONSTRUCTION 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.

\*\* SIGN SHALL BE VISIBLE FROM ROADWAY.

\*\*\* ADDITIONAL SIGNS NEEDED IF THERE IS AN ON RAMP BETWEEN SIGNS.



WIDTH ON SIGN TO BE APPROX. 1 - FOOT LESS THAN AVAILABLE WIDTH

**ADVANCED WIDTH RESTRICTION SIGNING**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED	/S/ Andrew Heidtke
February 2020	DATE
	WORK ZONE ENGINEER

**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.

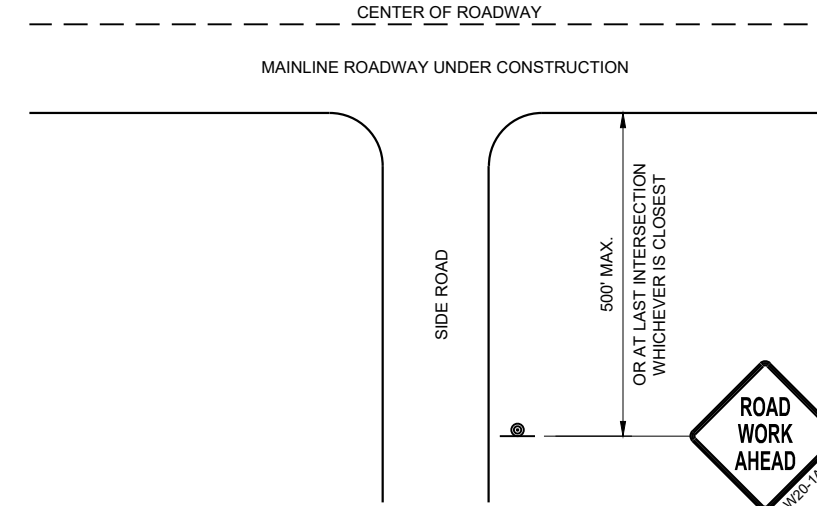
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.

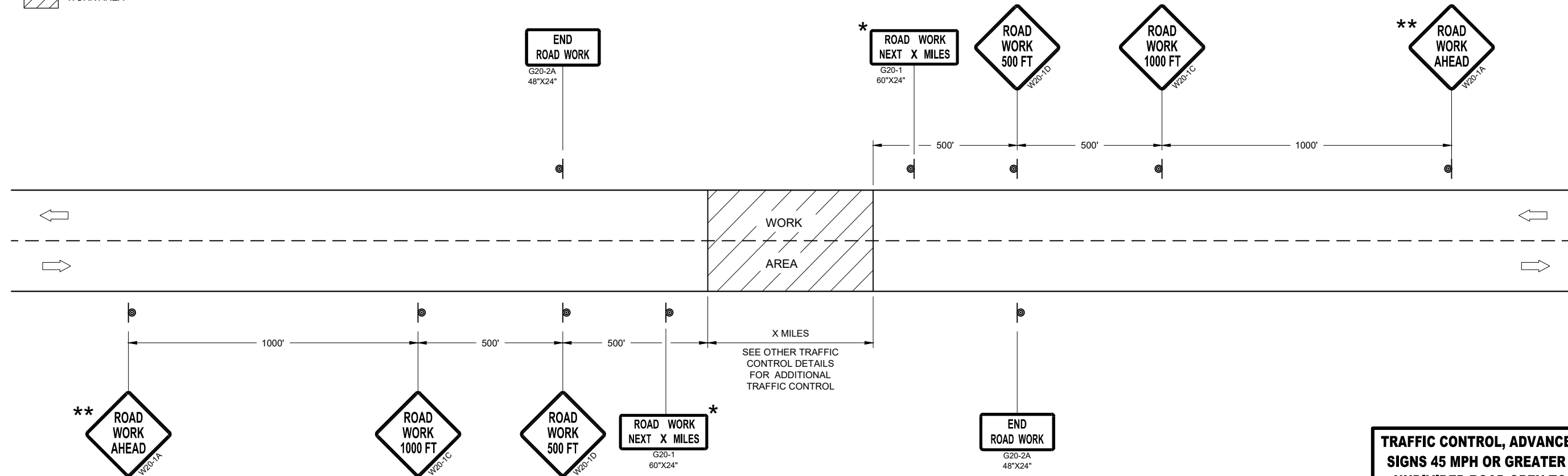
- \* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- \*\* PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

**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

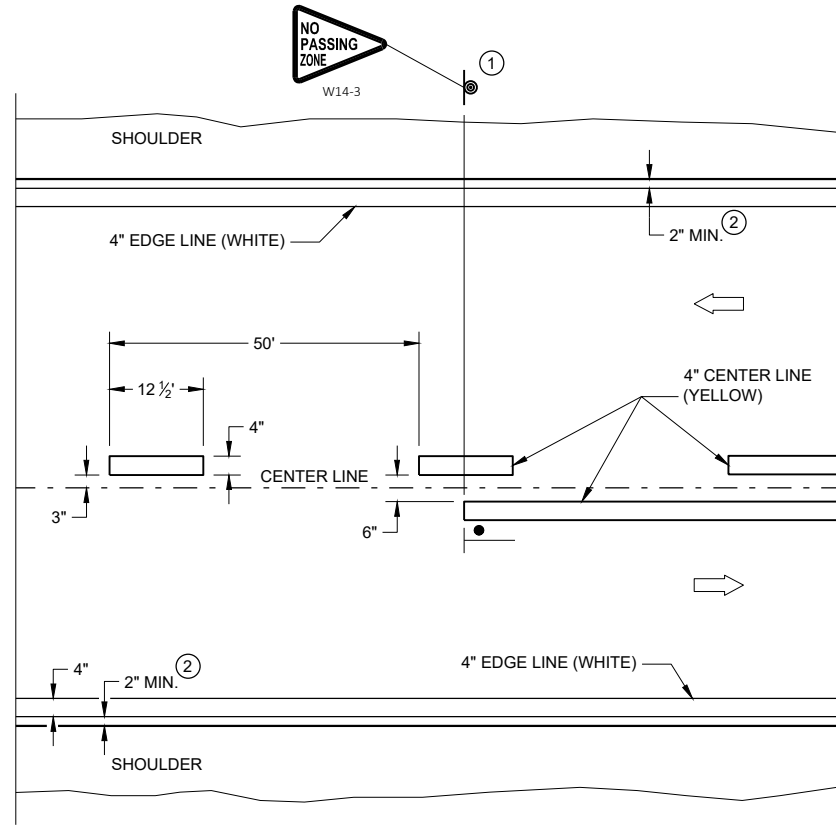
**GENERAL NOTES**

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

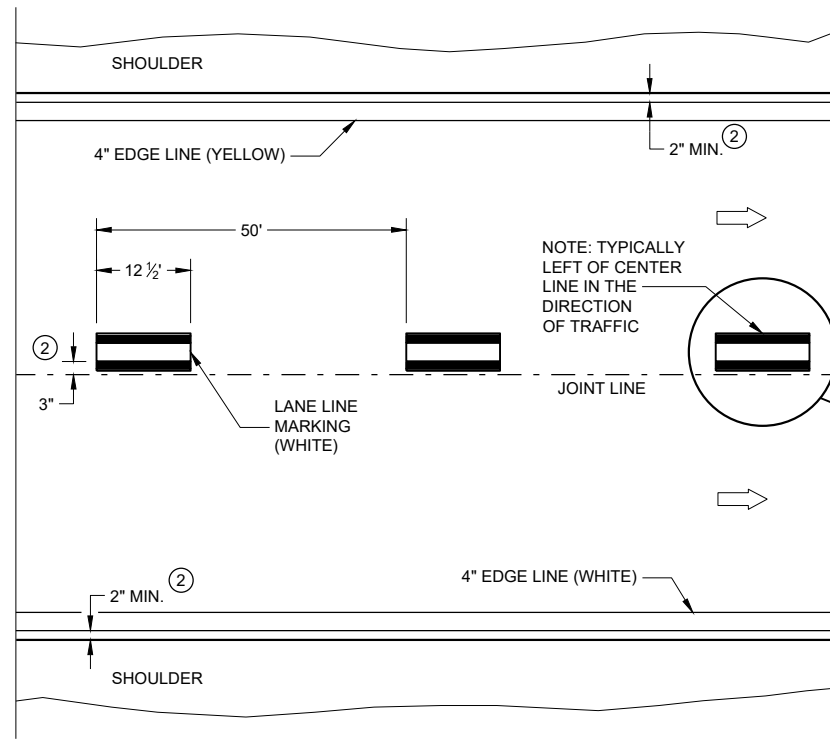
- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

**LEGEND**

-  "T" MARKING
-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC

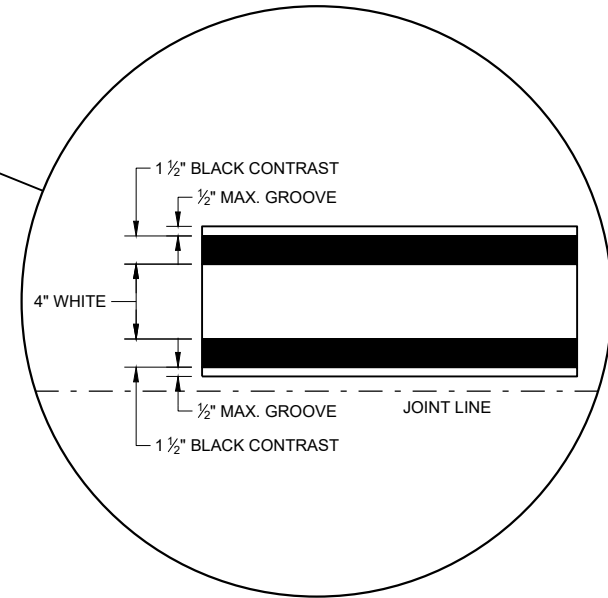


**TWO WAY TRAFFIC**



**ONE WAY TRAFFIC**

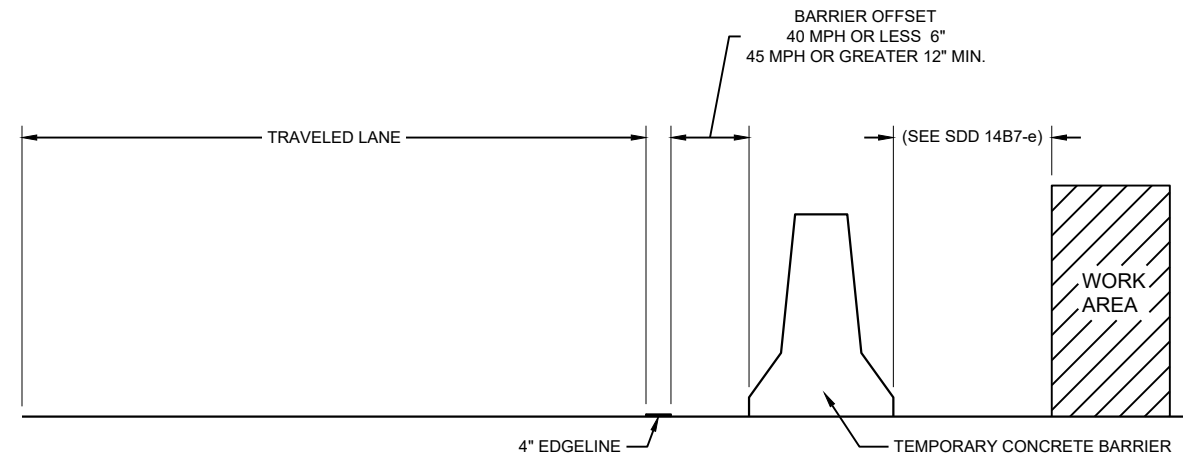
**PERMANENT PAVEMENT MARKING**



**PERMANENT LONGITUDINAL PAVEMENT MARKINGS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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



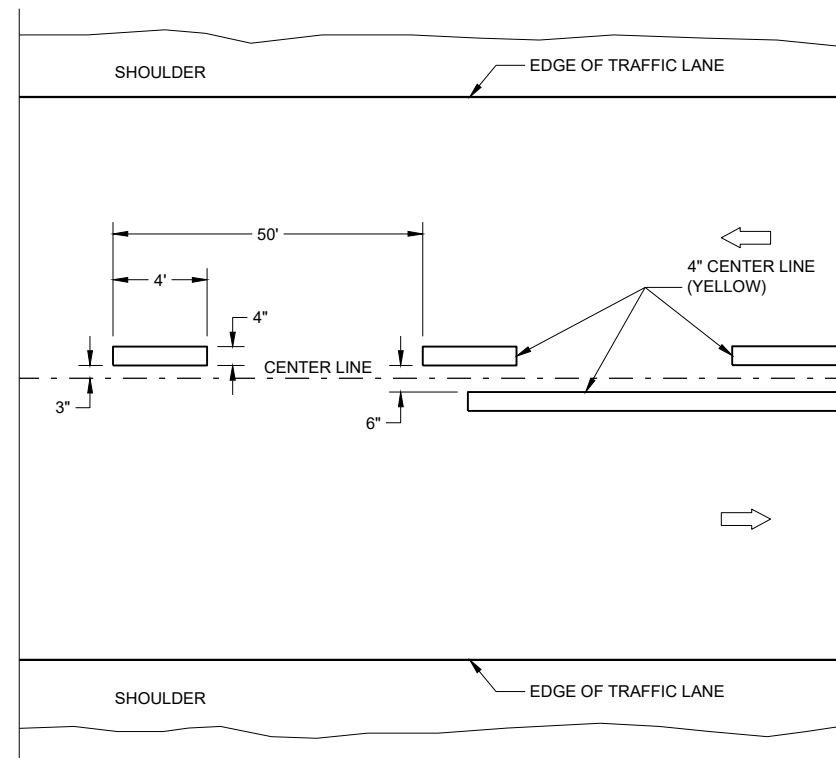
**TEMPORARY BARRIER OFFSET FROM EDGELINE**

**GENERAL NOTES**

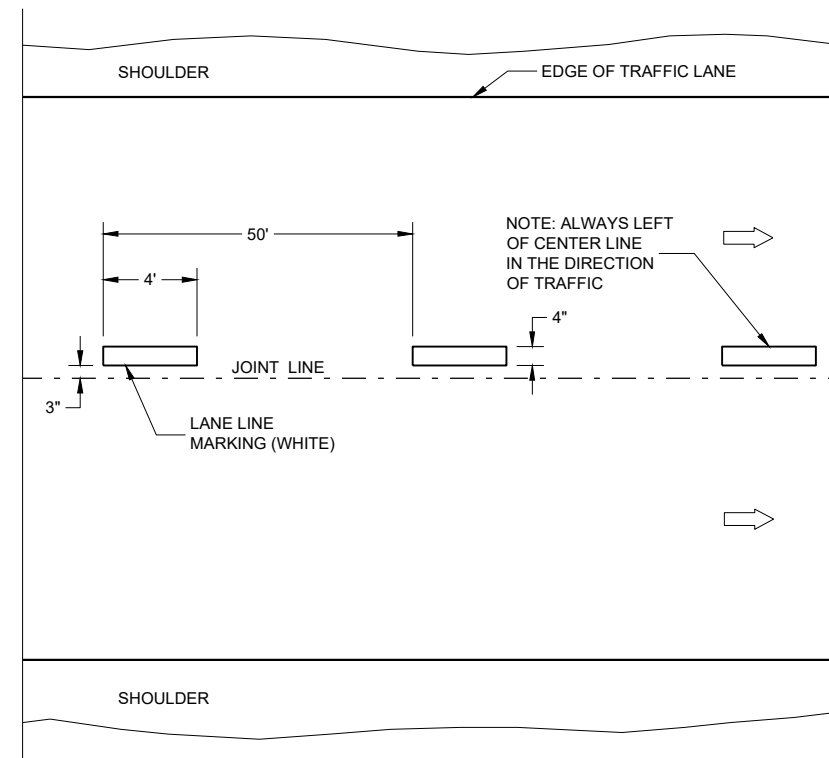
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

**LEGEND**

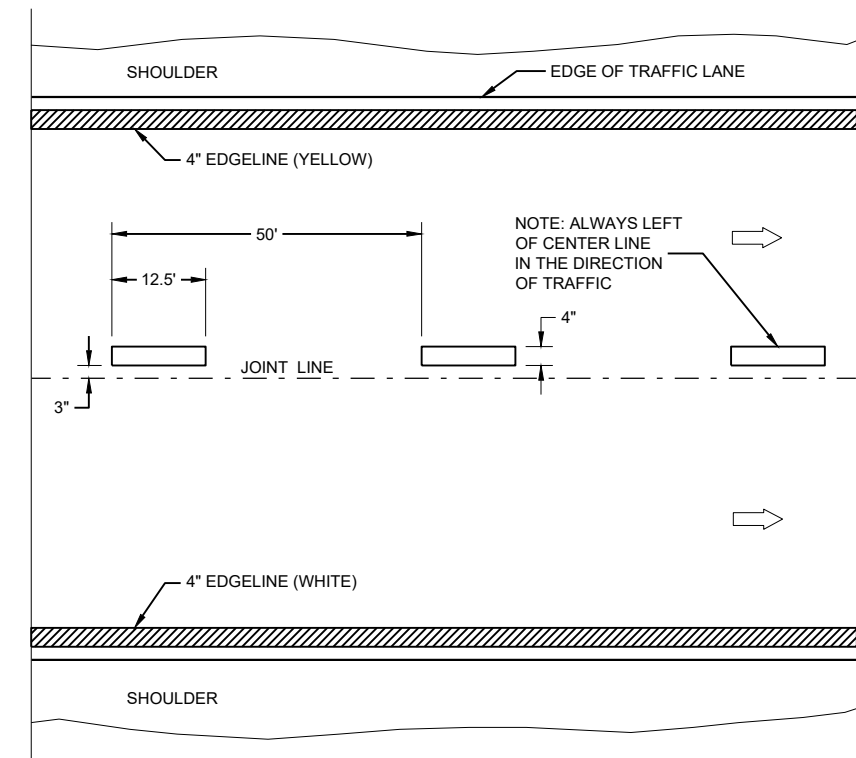
➡ DIRECTION OF TRAFFIC



**TWO WAY TRAFFIC**



**ONE WAY TRAFFIC**



**FREEWAYS AND EXPRESSWAYS**

**TEMPORARY PAVEMENT MARKING**

**TEMPORARY LONGITUDINAL PAVEMENT MARKING**

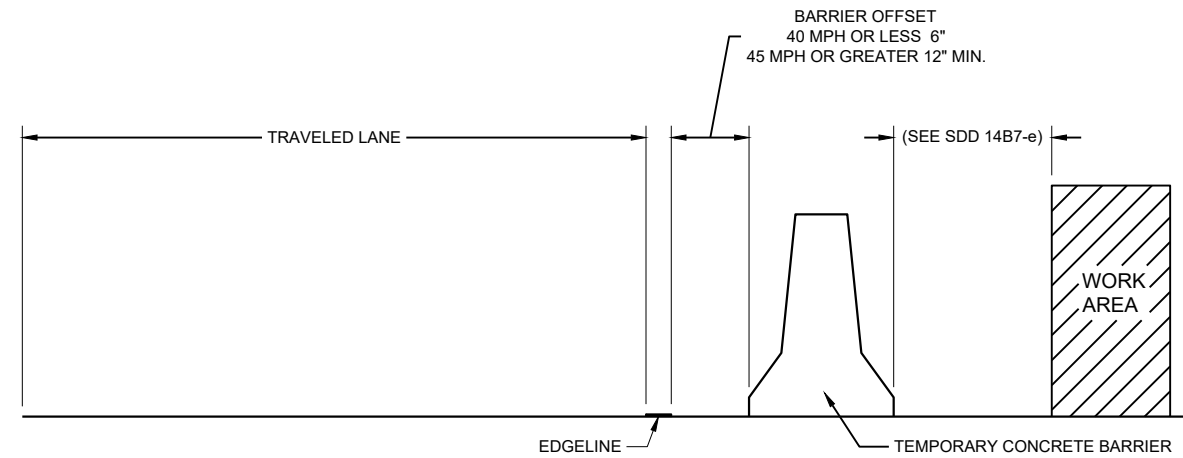
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

FHWA







**TEMPORARY BARRIER OFFSET FROM EDGE LINE**

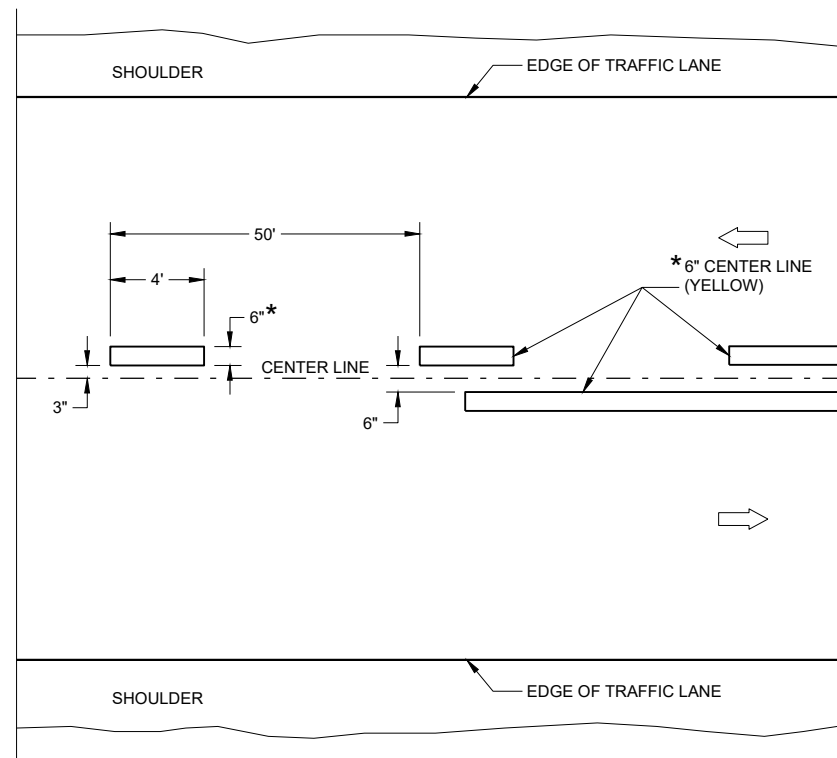
**GENERAL NOTES**

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

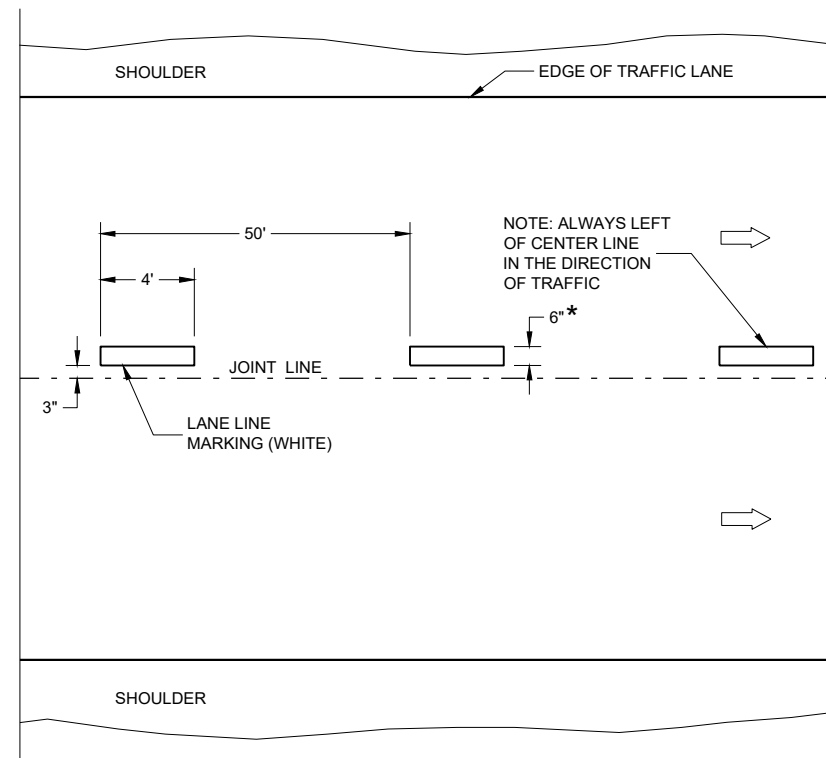
**LEGEND**

➡ DIRECTION OF TRAFFIC

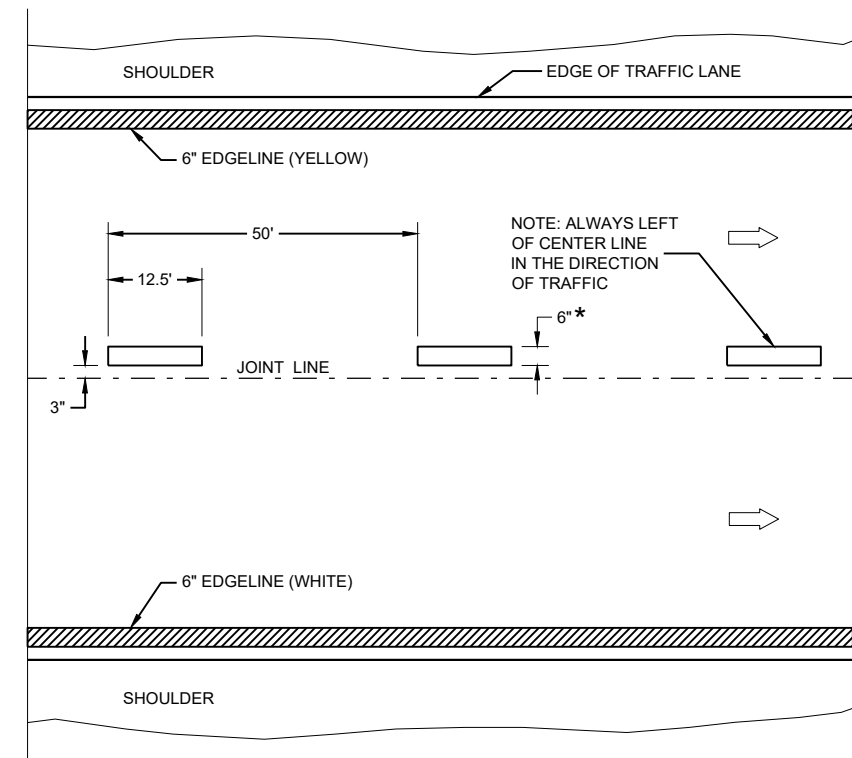
\* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



**TWO WAY TRAFFIC**



**ONE WAY TRAFFIC**



**FREEWAYS AND EXPRESSWAYS**

**TEMPORARY PAVEMENT MARKING**

**TEMPORARY LONGITUDINAL PAVEMENT MARKING**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023 /S/ Jeannie Silver  
DATE STATEWIDE SIGNING AND MARKING ENGINEER

FHWA

**GENERAL NOTES**

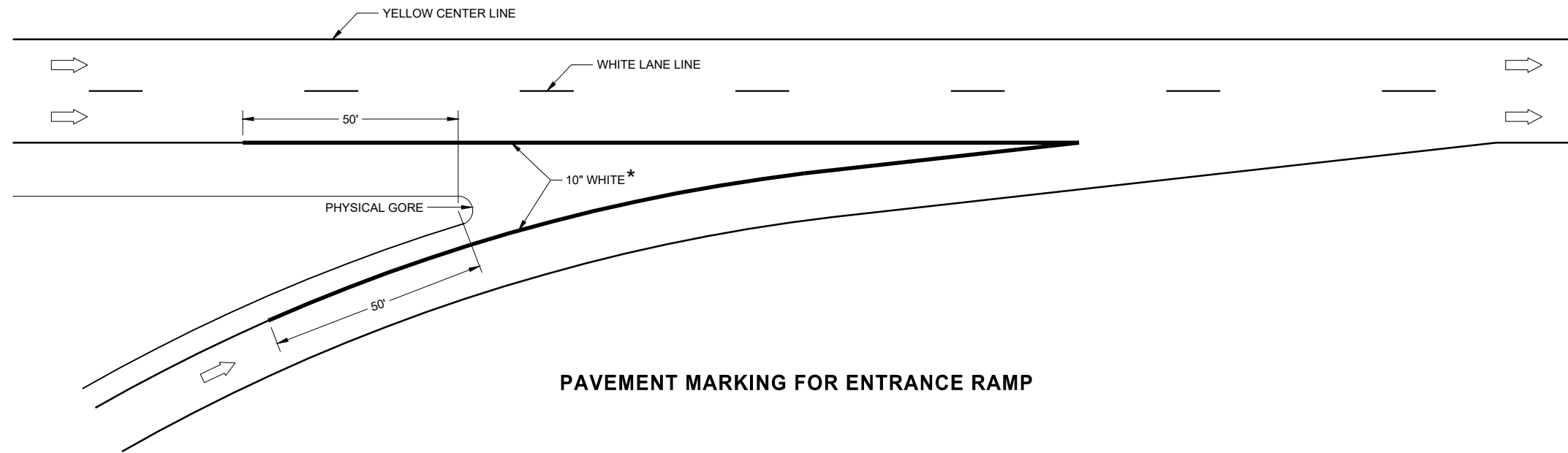
PLACE GROOVE 3 INCHES LEFT OF JOINT.

① ½ LENGTH OF FULL WIDTH ACCELERATION LANE.

**LEGEND**

➡ DIRECTION OF TRAVEL

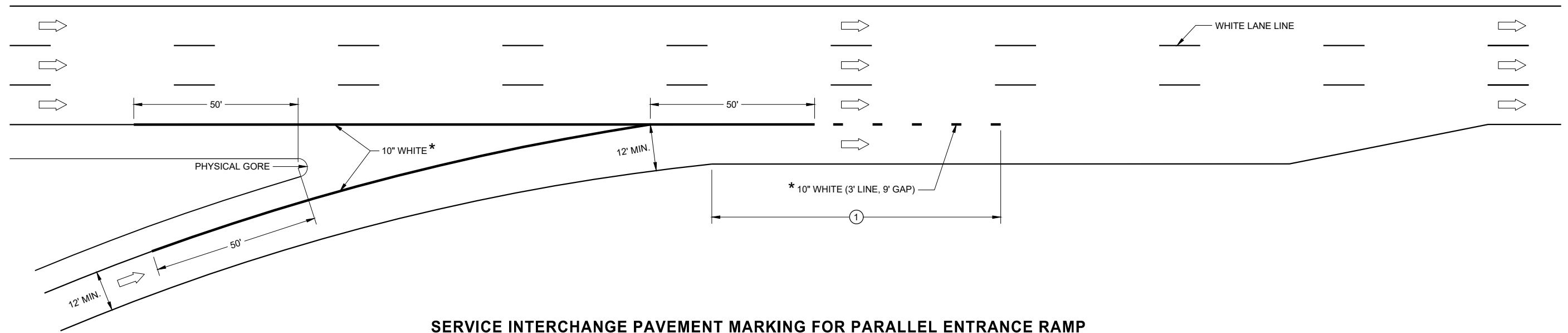
\* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



**PAVEMENT MARKING FOR ENTRANCE RAMP**

6

6



**SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL ENTRANCE RAMP**

SDD 15C31-05c

SDD 15C31-05c

**PAVEMENT MARKING,  
ENTRANCE RAMP AND  
PARALLEL ENTRANCE RAMP**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

## 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 DESIRABLE) CLEARANCE TO EXISTING SIGNS.

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

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

"WO" SIGNS ARE THE SAME AS "W" SIGNS 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 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 AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.










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

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

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 ONE HALF 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.

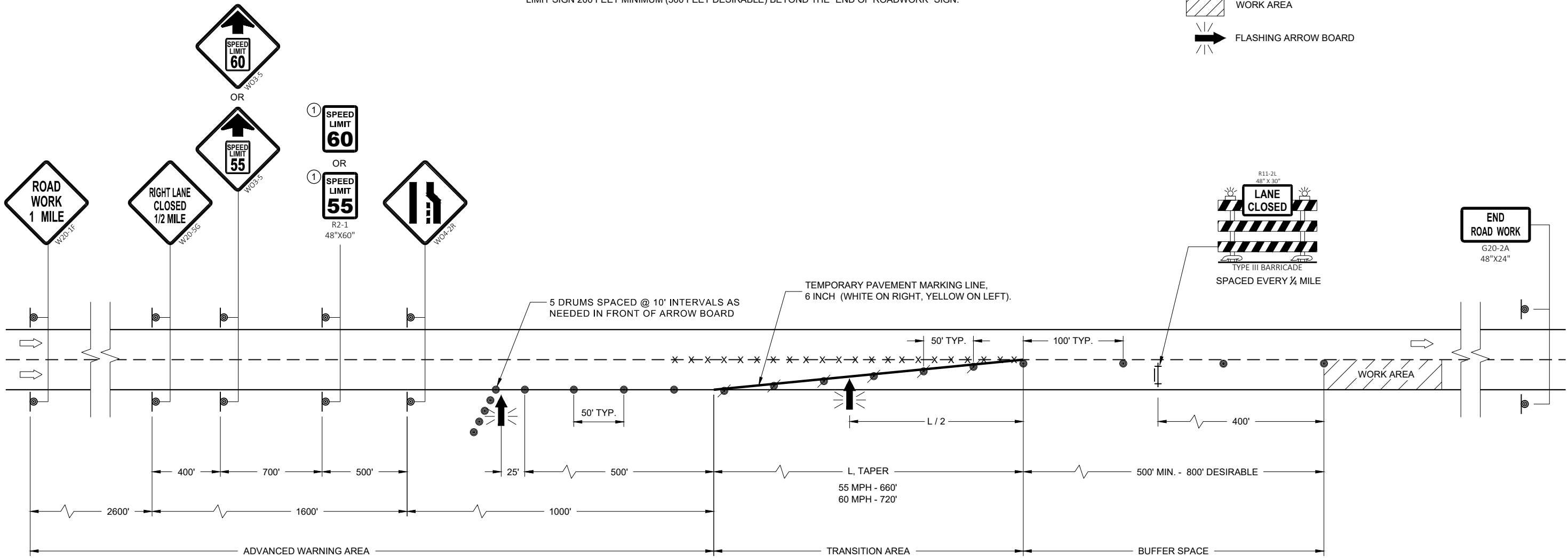
- ① A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. PLACE A SPEED LIMIT SIGN A MINIMUM OF EVERY 3 MILES. INCLUDE A RESUME SPEED LIMIT SIGN 200 FEET MINIMUM (500 FEET DESIRABLE) BEYOND THE "END OF ROADWORK" SIGN.

## LEGEND

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

6

SDD 15D12 - 11b












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SDD 15D12 - 11b

<b>TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

**LEGEND**

-  TYPE III BARRICADE WITH ATTACHED SIGN
-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE "A" WARNING LIGHT (FLASHING)
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
-  CONCRETE BARRIER TEMPORARY PRECAST

**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 DESIRABLE) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR LANE SHIFT RIGHT - REVERSE FOR SHIFTING LEFT.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS 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 AND PLACE TEMPORARY PAVEMENT MARKING LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

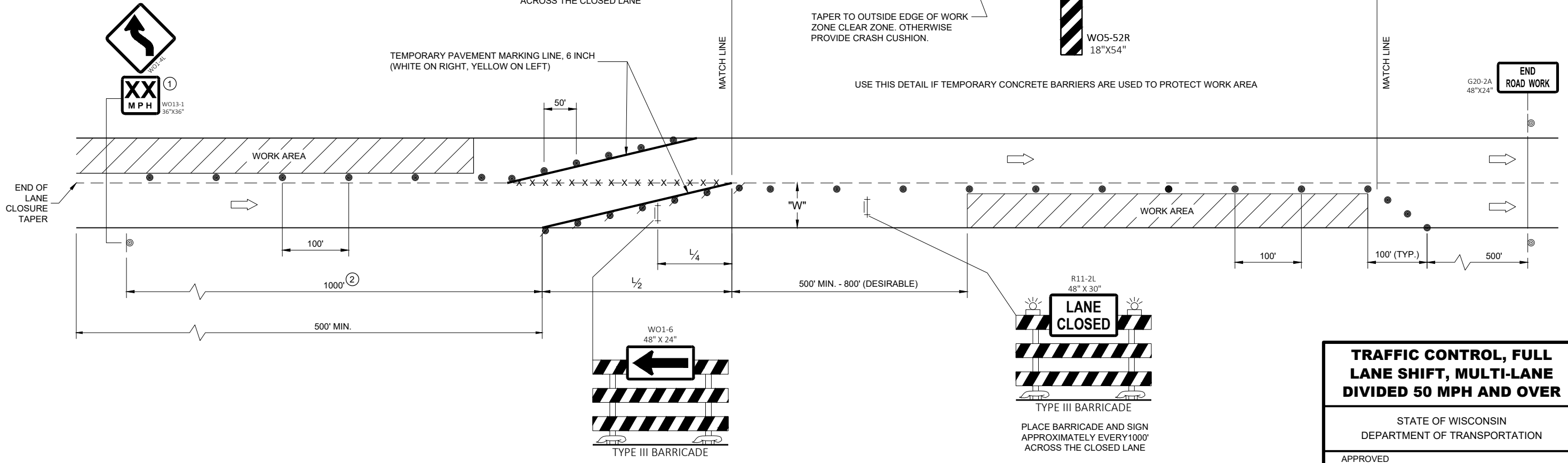
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE SHIFT OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE SHIFT 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.

- ① USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED.
- ② IF BEGINNING OF LANE SHIFT IS 1200' OF LESS FROM THE END OF THE LANE CLOSURE TAPER, PLACE THE WO1-4L SIGN 200 FEET AFTER THE END OF THE LANE CLOSURE TAPER.

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	SHIFTING TAPER 1/2				
	W, LATERAL OFFSET (FT)				
	10	11	12	13	14
50	250	275	300	325	350
55	275	303	330	358	385
60	300	330	360	390	420
65	325	358	390	423	455
70	350	385	420	455	490



**TRAFFIC CONTROL, FULL LANE SHIFT, MULTI-LANE DIVIDED 50 MPH AND OVER**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE: May 2023 /S/ Andrew Heidtke  
WORK ZONE ENGINEER

FHWA










6

6

SDD 15D40-05b

SDD 15D40-05b

**LEGEND**

-  TYPE III BARRICADE WITH ATTACHED SIGN
-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE "A" WARNING LIGHT (FLASHING)
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
-  CONCRETE BARRIER TEMPORARY PRECAST

**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.

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THIS LANE CLOSURE IS TYPICAL FOR LANE SHIFT LEFT - REVERSE FOR SHIFTING RIGHT.

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CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS 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 AND PLACE TEMPORARY PAVEMENT MARKING LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

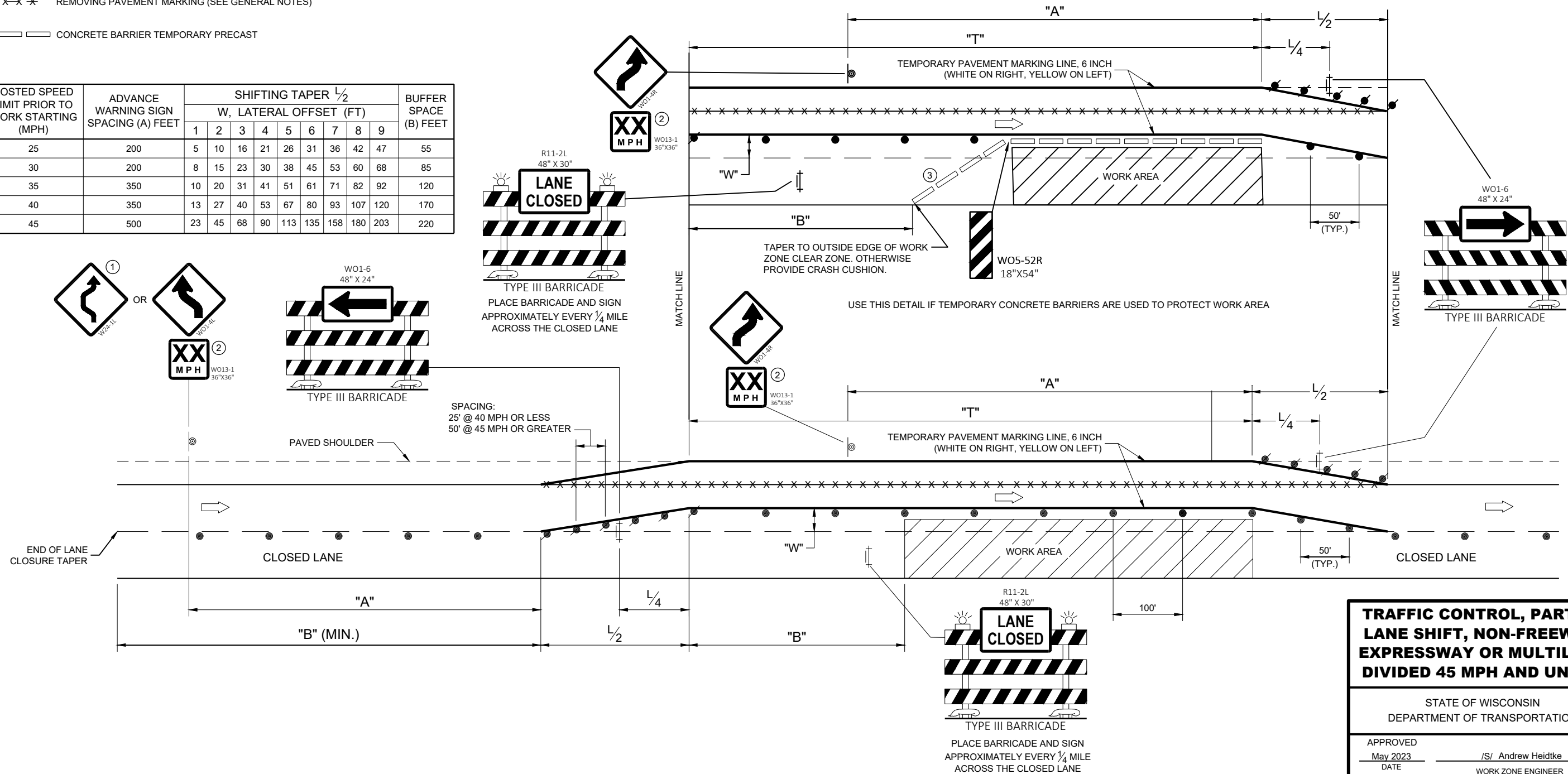
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE SHIFT OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE SHIFT 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.

- ① USE ONLY WHEN T < 600', OMIT WO1-4R.
- ② IF NEEDED, USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED.
- ③ BARRIER FLARE RATE: 6:1 @ 40 MPH OR LESS  
8:1 @ 45 MPH OR GREATER

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHIFTING TAPER 1/2 W, LATERAL OFFSET (FT)									BUFFER SPACE (B) FEET
		1	2	3	4	5	6	7	8	9	
25	200	5	10	16	21	26	31	36	42	47	55
30	200	8	15	23	30	38	45	53	60	68	85
35	350	10	20	31	41	51	61	71	82	92	120
40	350	13	27	40	53	67	80	93	107	120	170
45	500	23	45	68	90	113	135	158	180	203	220



**TRAFFIC CONTROL, PARTIAL LANE SHIFT, NON-FREEWAY/ EXPRESSWAY OR MULTILANE DIVIDED 45 MPH AND UNDER**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE: May 2023 /S/ Andrew Heidtke  
WORK ZONE ENGINEER

FHWA

SDD 15D40-05C

SDD 15D40-05C

**DESIGN DATA**

**LIVE LOAD:**

DESIGN LOADING: HS-20  
 INVENTORY RATING: HS-19  
 OPERATING RATING: HS-36  
 WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 215 (KIPS)

**TRAFFIC DATA**

**USH 53 NB:**

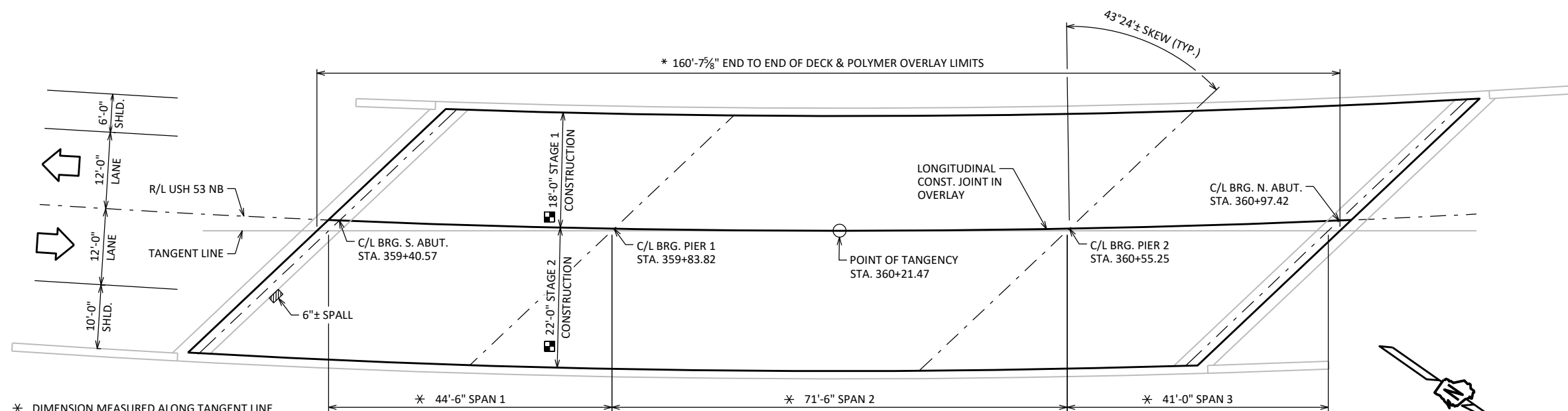
ADT = 7,520 (2019)  
 R.D.S. = 70 MPH

**USH 2 EB:**

ADT = 3,400 (2019)  
 R.D.S. = 60 MPH

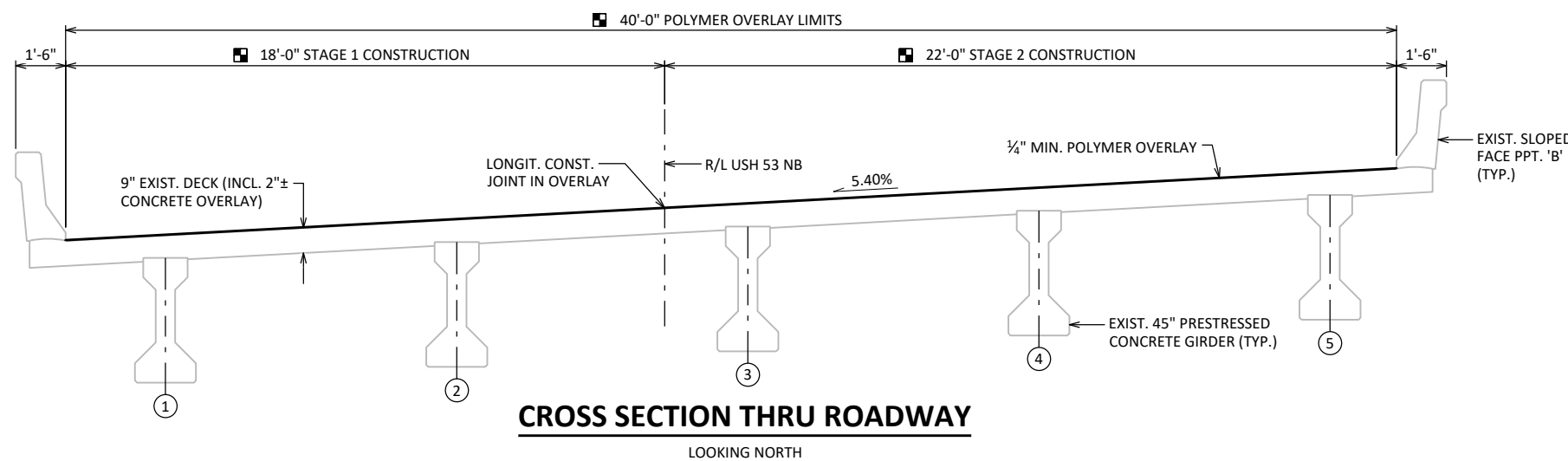
**LIST OF DRAWINGS:**

1 POLYMER OVERLAY

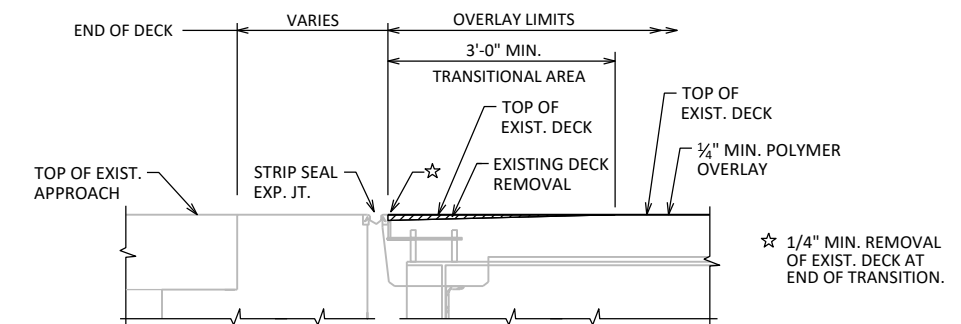


- \* DIMENSION MEASURED ALONG TANGENT LINE
- DIMENSION MEASURED RADIALLY
- # INDICATES GIRDER NUMBER

**PLAN**  
 POLYMER OVERLAY  
 3 SPAN - 45" PRESTRESSED CONCRETE GIRDERS



**CROSS SECTION THRU ROADWAY**  
 LOOKING NORTH



**SECTION THRU ABUTMENT  
 TRANSITIONAL AREA ON DECK  
 AT EXPANSION JOINT**  
 (REMOVAL AND OVERLAY THICKNESS NOT TO SCALE)  
 (TYP. BOTH ENDS OF DECK)

**STRUCTURE DESIGN CONTACTS:**  
 MICAH BROOKS 608-266-5080  
 KYLE BUSCH 608-267-0465

**TOTAL ESTIMATED QUANTITIES**

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
SPV.0180	HIGH FRICTION SURFACE TREATMENT POLYMER OVERLAY	SY	714

**GENERAL NOTES**

- DRAWINGS SHALL NOT BE SCALED.
- DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.
- SHOT BLASTING, DECK SURFACE PREPARATIONS, AND TRANSITIONAL AREAS ARE INCLUDED IN THE BID ITEM "HIGH FRICTION SURFACE TREATMENT POLYMER OVERLAY".
- SPALL AT SOUTH END OF BRIDGE TO BE FILLED WITH HFST POLYMER OVERLAY MATERIAL.
- SEE ROADWAY PLANS FOR TRAFFIC CONTROL DETAILS.

NO.	DATE	REVISION	BY
 <b>BUREAU OF STRUCTURES</b> ACCEPTED <i>[Signature]</i> KHB 7/24/23 CHIEF STRUCTURES DESIGN ENGINEER DATE			
<b>STRUCTURE B-16-48</b>			
USH 53 NB OVER USH 2 EB			
COUNTY	DOUGLAS	TOWN	AMNICON
DESIGN SPEC.	REHABILITATION N/A		
DESIGNED BY	MWB	DESIGNED CK'D	MJK
DRAWN BY	MWB	PLANS CK'D	MJK
<b>POLYMER OVERLAY</b>			SHEET 1 OF 1

8

8

SCALE = 20

# Notes



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

Dedicated people creating transportation solutions through innovation and exceptional service.

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