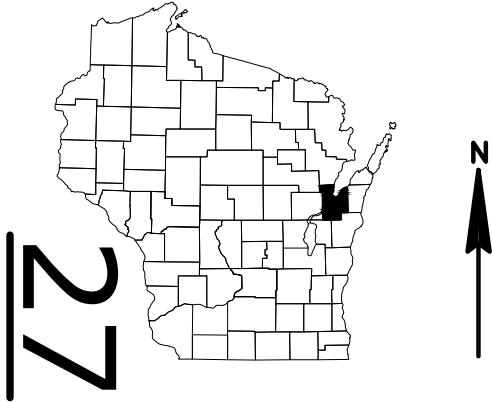


PROJECT ID: 1210-05-60  
WITH: N/A

COUNTY: BROWN

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	
<del>Section No. 4</del>	<del>Right of Way Plat</del>	
Section No. 5	Plan and Profile	
Section No. 6	Standard Detail Drawings	
<del>Section No. 7</del>	<del>Sign Plates</del>	
Section No. 8	Structure Plans	
<del>Section No. 9</del>	<del>Computer Earthwork Data</del>	
<del>Section No. 9</del>	<del>Cross Sections</del>	

TOTAL SHEETS = 36



STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

IH 41 - IH 43  
FOX RIVER BRIDGE  
STH 172  
BROWN COUNTY

STATE PROJECT NUMBER
1210-05-60

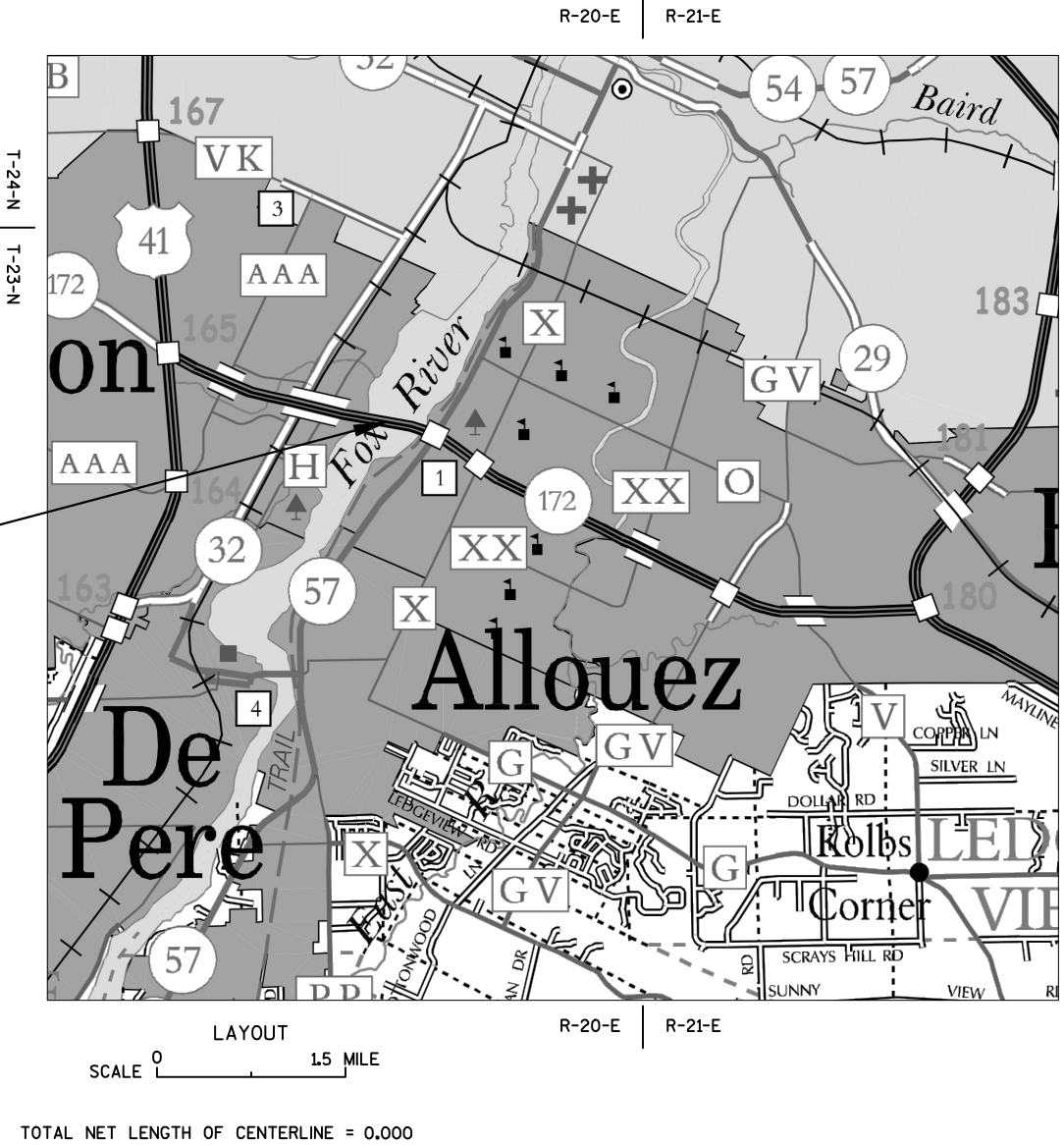
STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1210-05-60	WISC 2018156	1

CONVENTIONAL SYMBOLS

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

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

STRUCTURE B-5-149  
STH 172 OVER FOX RIVER & STH 57



STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
PREPARED BY	NER
Surveyor	NER
Designer	E DANKE & J KOSTER
Project Manager	E GWIDT
Regional Examiner	
Regional Supervisor	R WAGNER
APPROVED FOR THE DEPARTMENT	
DATE: 11/1/17	
	(Signature)

E

GENERAL NOTES

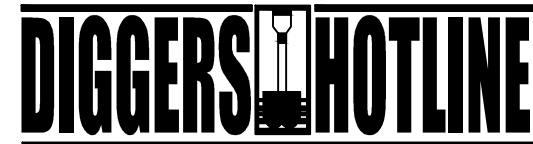
THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.


DNR LIAISON

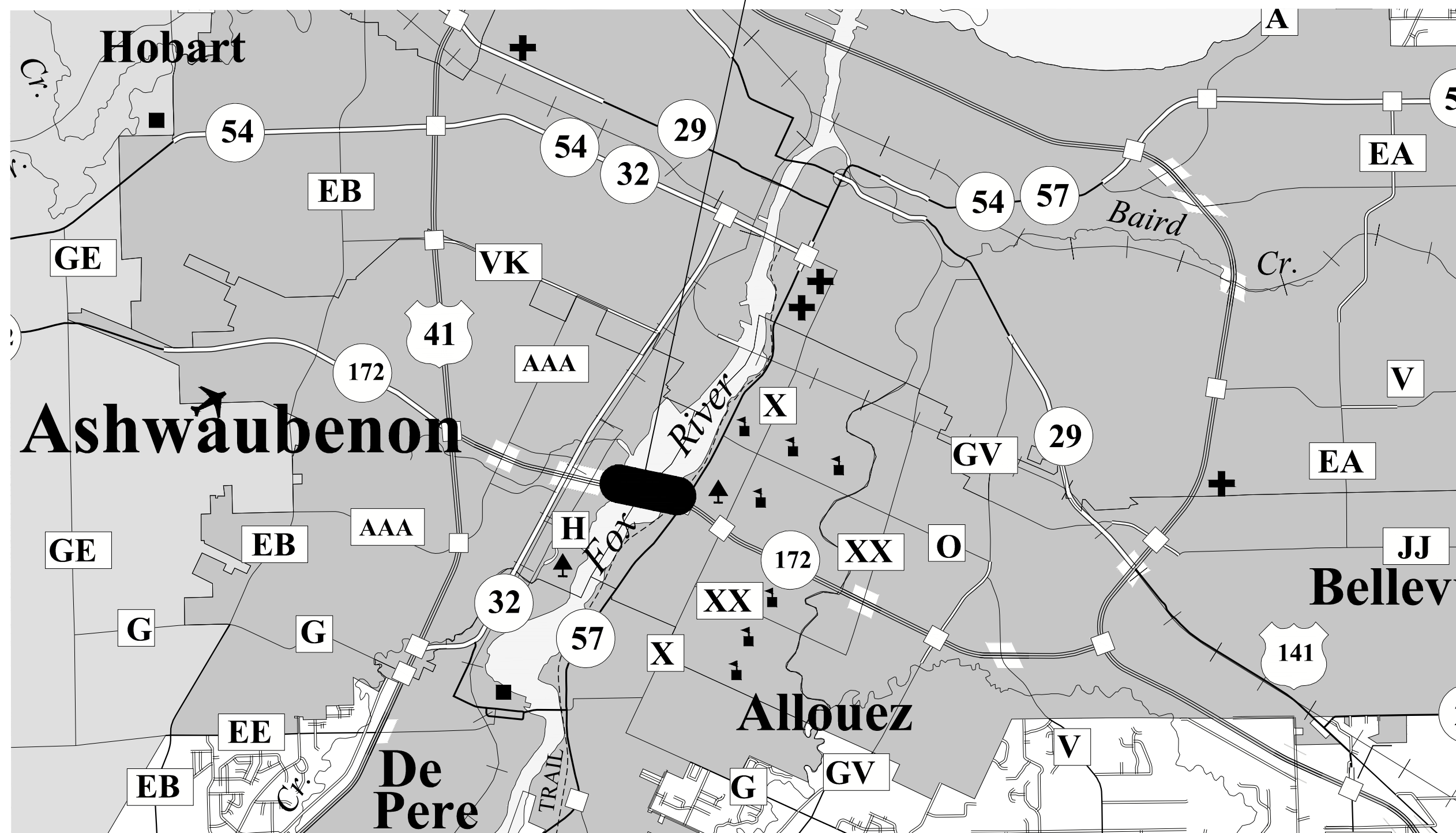
JIM DOPERALSKI  
WISCONSIN DEPARTMENT OF NATURAL RESOURCES  
2984 SHAWANO AVENUE  
GREEN BAY, WI 54313  
(920) 662-5119  
james.doperalski@wisconsin.gov

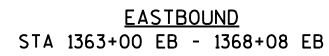
NE REGION SURVEY COORDINATOR

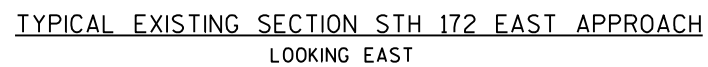
CORMAC MCINNIS,RLS  
944 VANDERPERREN WAY  
GREEN BAY, WI 54304  
(920) 492-5638  
cormac.mcinnis@dot.wi.gov

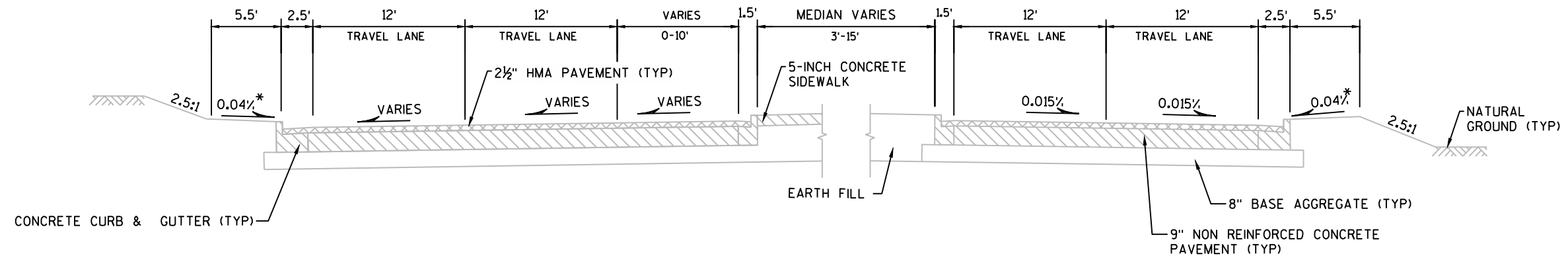


Dial  or (800)242-8511  
www.DiggersHotline.com







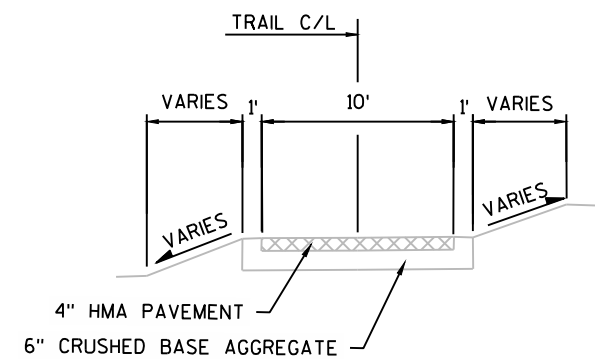


\* SLOPE PAVING & SIDEWALK AT STRUCTURE

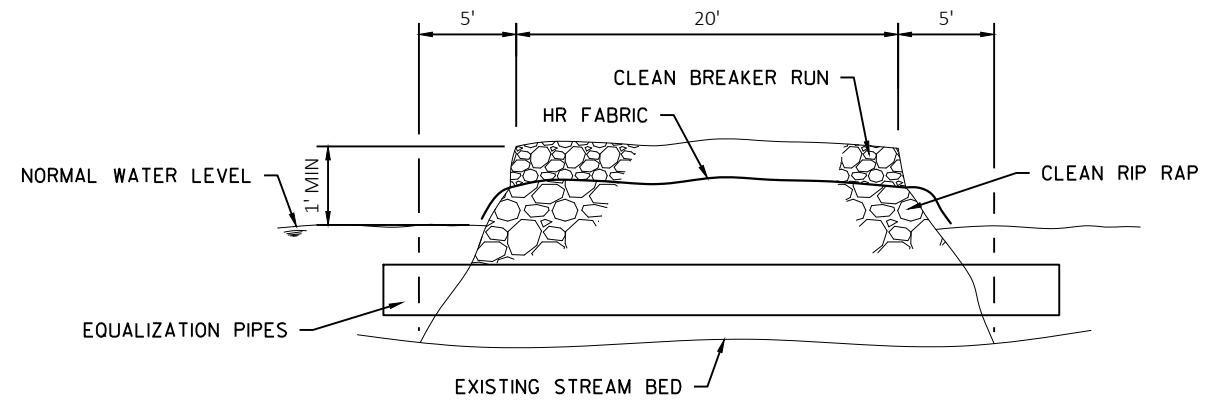
EXISTING CROSS SECTION FOR STH 57 (RIVERSIDE DR)  
(LOOKING NORTH)

NOTES

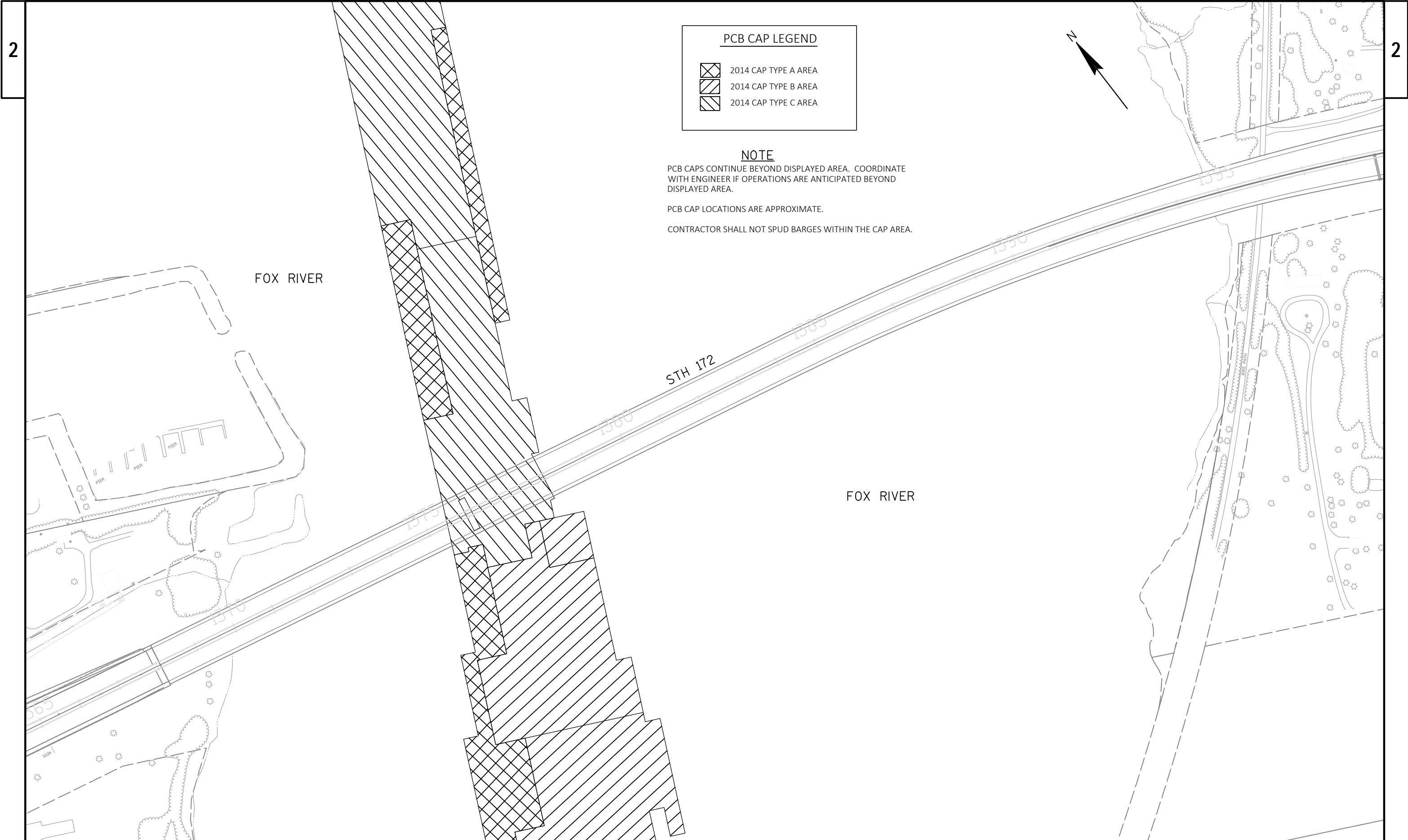
WOOD FENCE ON SHOULDER OF FOX RIVER TRAIL.  
LOCAL LIGHTING POLES ON SHOULDER OF ASHWAUBOMAY TRAIL.



EXISTING CROSS SECTION FOR FOX RIVER TRAIL & ASHWAUBOMAY TRAIL



CROSS SECTION THRU TEMPORARY CAUSEWAY



2

2

PCB CAP LEGEND

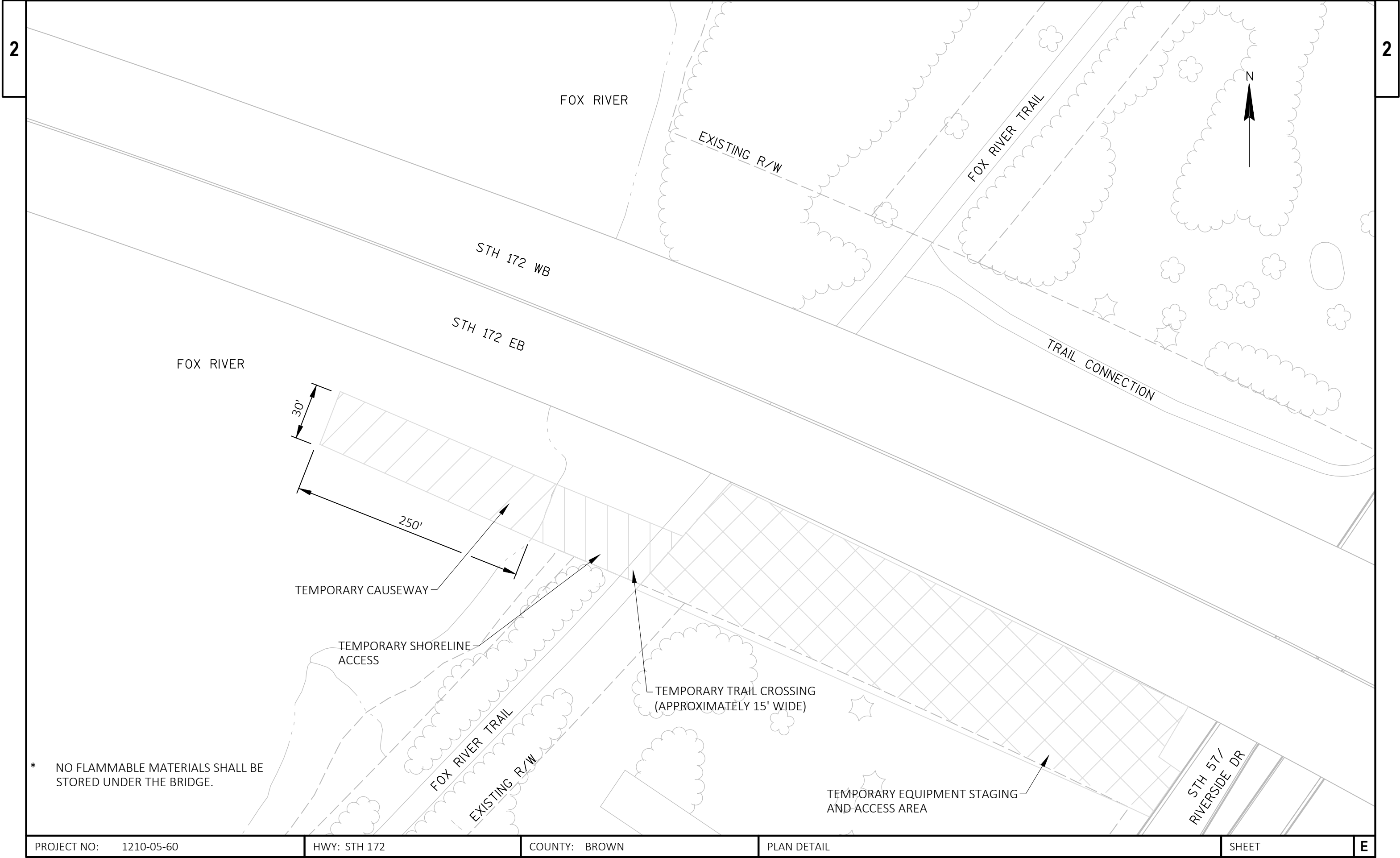
- 2014 CAP TYPE A AREA
- 2014 CAP TYPE B AREA
- 2014 CAP TYPE C AREA

NOTE

PCB CAPS CONTINUE BEYOND DISPLAYED AREA. COORDINATE WITH ENGINEER IF OPERATIONS ARE ANTICIPATED BEYOND DISPLAYED AREA.

PCB CAP LOCATIONS ARE APPROXIMATE.

CONTRACTOR SHALL NOT SPUD BARGES WITHIN THE CAP AREA.

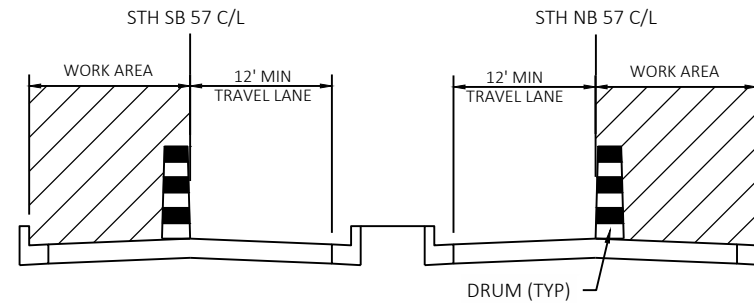


\* NO FLAMMABLE MATERIALS SHALL BE STORED UNDER THE BRIDGE.

PROJECT NO: 1210-05-60	HWY: STH 172	COUNTY: BROWN	PLAN DETAIL	SHEET	E
------------------------	--------------	---------------	-------------	-------	---

## LEGEND

- TRAFFIC CONTROL DRUM
- ⚡ TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- F SIGN ON TEMPORARY SUPPORT
- ⇄ TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- ⚡ FLASHING ARROW BOARD
- ▨ WORK AREA



TRAFFIC CONTROL TYPICAL SECTION DETAIL

STH 57

## 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.

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 OR AS APPROVED BY THE ENGINEER.

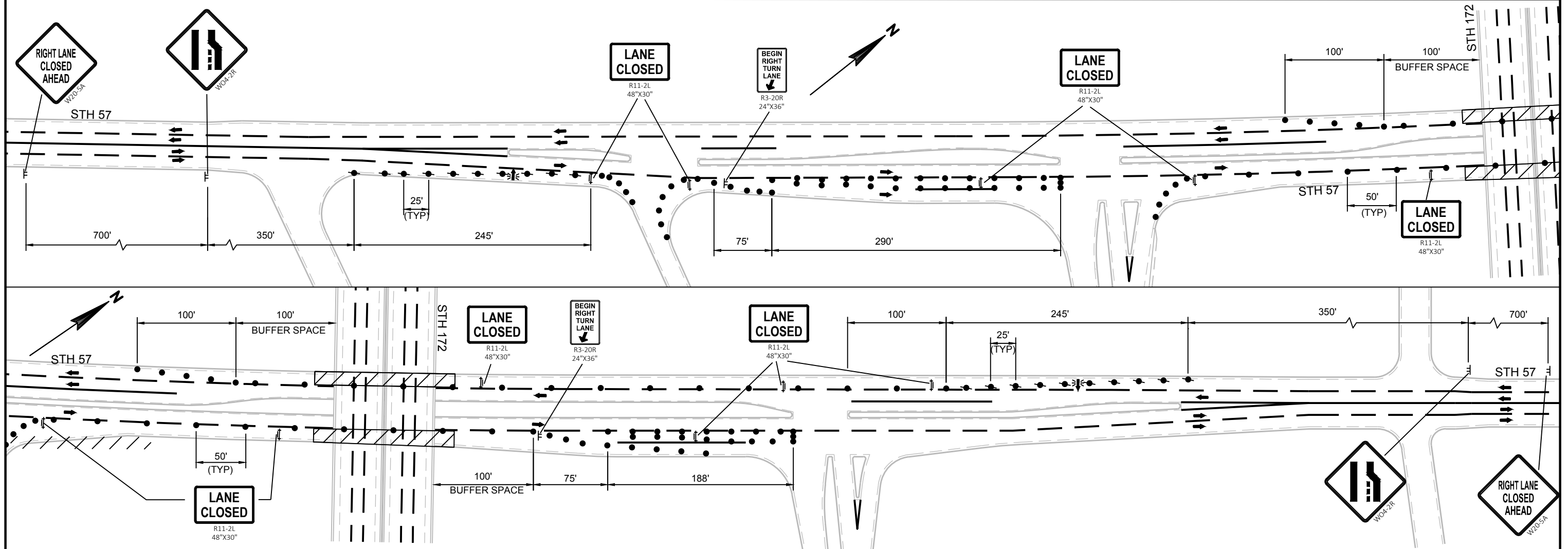
CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

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

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

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

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



PROJECT NO: 1210-05-60

HWY: STH 172

COUNTY: BROWN

TRAFFIC CONTROL DETAIL - OUTSIDE LANE CLOSURE

SHEET

E

FILE NAME : N:\PDS\C3D\12100560\SHETSPLAN\025001-TC.DWG  
LAYOUT NAME - 025001-tc

PLOT DATE : 10/30/2017 1:21 PM

PLOT BY : SMITH, JENNIFER B

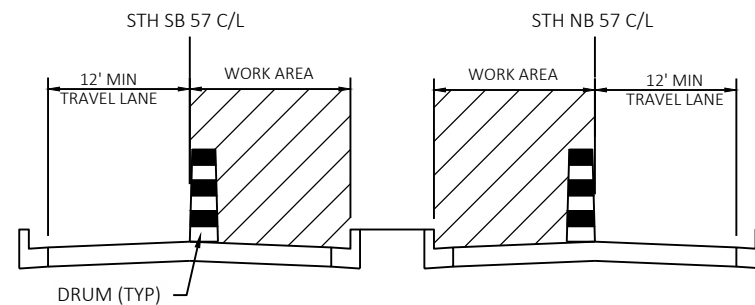
PLOT NAME :

PLOT SCALE : 1 IN:100 FT

WISDOT/CADDs SHEET 42

## LEGEND

- TRAFFIC CONTROL DRUM
- ⚡ TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- F SIGN ON TEMPORARY SUPPORT
- ⇄ TYPE III BARRICADE WITH ATTACHED SIGN
- ➡ DIRECTION OF TRAFFIC
- ⚡ FLASHING ARROW BOARD
- ▨ WORK AREA



TRAFFIC CONTROL TYPICAL SECTION DETAIL

STH 57

## 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.

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 OR AS APPROVED BY THE ENGINEER.

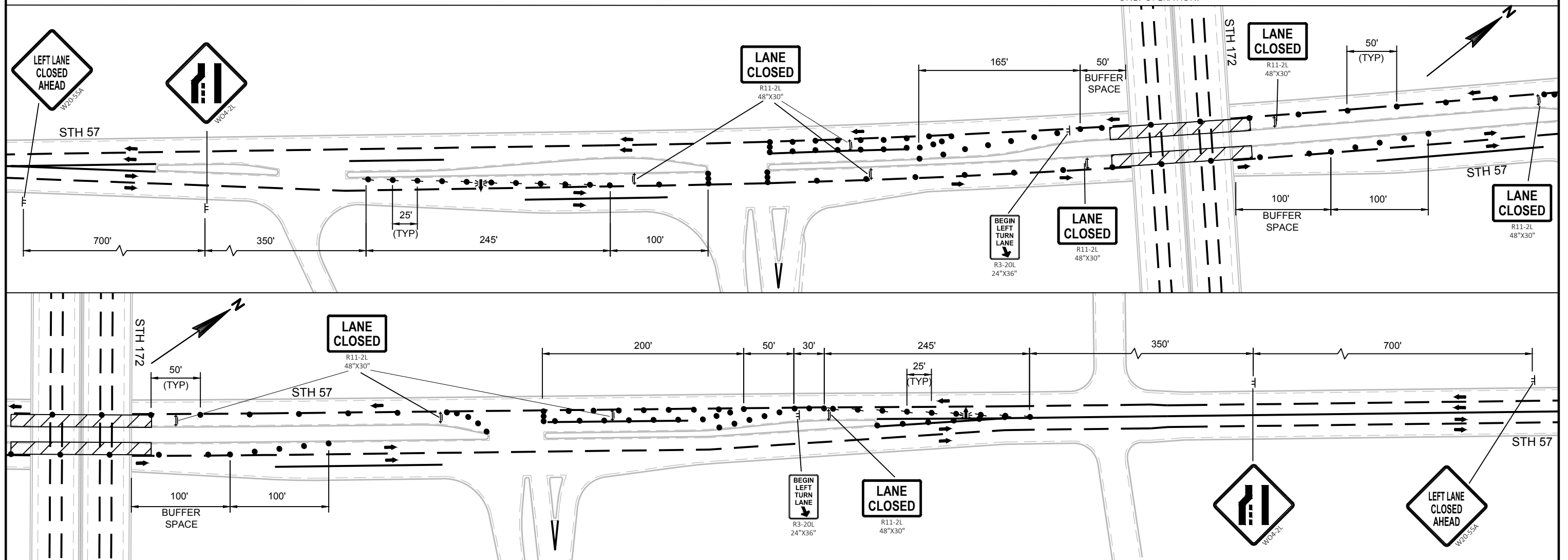
CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

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

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

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

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



PROJECT NO: 1210-05-60

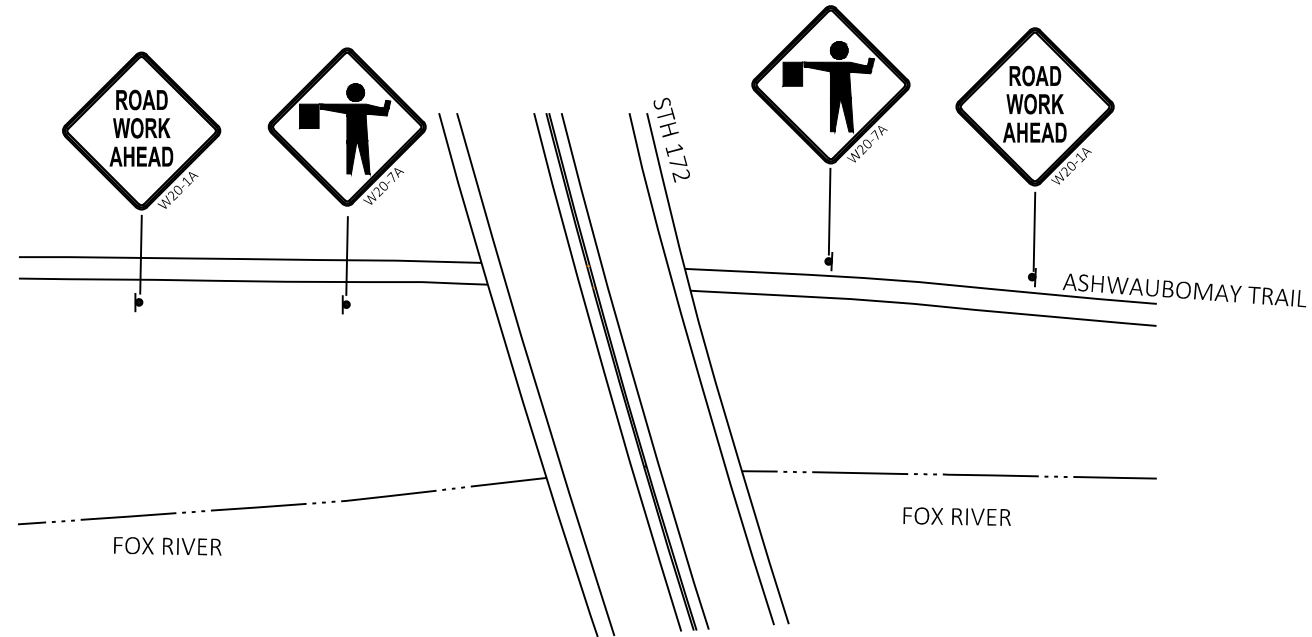
HWY: STH 172

COUNTY: BROWN

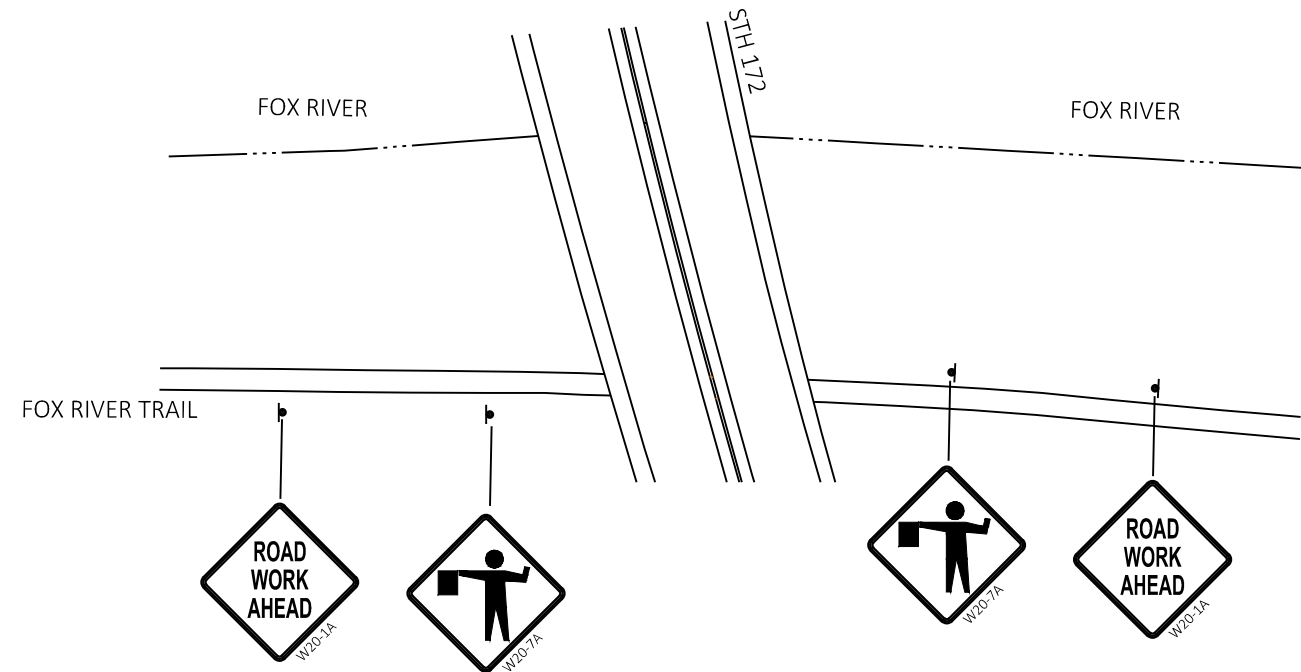
TRAFFIC CONTROL DETAIL - INSIDE LANE CLOSURE

SHEET

E



ASHWAUBOMAY TRAIL TRAFFIC CONTROL



FOX RIVER TRAIL TRAFFIC CONTROL

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGN 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 DESIRED MINIMUM OF 100 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

ALL SIGNS ARE 24"X24" UNLESS OTHERWISE NOTED.

Estimate Of Quantities

1210-05-60

Line	Item	Item Description	Unit	Total	Qty
0002	108.4300	RBC Progress Schedule	EACH	1.000	1.000
0004	517.1800.S	Structure Repainting Recycled Abrasive (structure) 01. B-05-0149	LS	1.000	1.000
0006	517.4500.S	Negative Pressure Containment and Collection of Waste Materials (structure) 01. B-05-0149	LS	1.000	1.000
0008	517.6001.S	Portable Decontamination Facility	EACH	1.000	1.000
0010	616.0700.S	Fence Safety	LF	750.000	750.000
0012	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1210-05-60	EACH	1.000	1.000
0014	619.1000	Mobilization	EACH	1.000	1.000
0016	628.1504	Silt Fence	LF	470.000	470.000
0018	628.1520	Silt Fence Maintenance	LF	470.000	470.000
0020	628.1905	Mobilizations Erosion Control	EACH	6.000	6.000
0022	628.1910	Mobilizations Emergency Erosion Control	EACH	6.000	6.000
0024	628.6005	Turbidity Barriers	SY	450.000	450.000
0026	642.5201	Field Office Type C	EACH	1.000	1.000
0028	643.0300	Traffic Control Drums	DAY	63,342.000	63,342.000
0030	643.0420	Traffic Control Barricades Type III	DAY	517.000	517.000
0032	643.0705	Traffic Control Warning Lights Type A	DAY	1,034.000	1,034.000
0034	643.0715	Traffic Control Warning Lights Type C	DAY	2,252.000	2,252.000
0036	643.0800	Traffic Control Arrow Boards	DAY	128.000	128.000
0038	643.0900	Traffic Control Signs	DAY	13,802.000	13,802.000
0040	643.1050	Traffic Control Signs PCMS	DAY	116.000	116.000
0042	643.5000	Traffic Control	EACH	1.000	1.000
0044	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	3,280.000	3,280.000
0046	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	2,400.000	2,400.000
0048	SPV.0105	Special 01. Temporary Equipment Staging and Access Area	LS	1.000	1.000
0050	SPV.0105	Special 02. Temporary Causeway for Structure B-05-0149	LS	1.000	1.000

TRAFFIC CONTROL SUMMARY																
LOCATION	APPROX. SERVICE DAYS	<u>643.0300</u> TRAFFIC DRUMS		<u>643.0420</u> BARRICADES TYPE III		<u>643.0705</u> WARNING LIGHTS TYPE A		<u>643.0715</u> WARNING LIGHTS TYPE C		<u>643.0800</u> ARROW BOARDS		<u>643.0900</u> TRAFFIC SIGNS		<u>643.1000</u> SIGNS PCMS		REMARKS
		NO. IN SERVICE	DAYS	NO. IN SERVICE	DAYS	NO. IN SERVICE	DAYS	NO. IN SERVICE	DAYS	NO. IN SERVICE	DAYS	NO. IN SERVICE	DAYS	NO. IN SERVICE	DAYS	
STH 172 WB / EB & STH 57 NB / SB	7		0		0		0		0		0		0	4	28	ADVANCED NOTICE (YEAR 1)
STH 172 WB / EB & STH 57 NB / SB	7		0		0		0		0		0		0	4	28	ADVANCED NOTICE (YEAR 2)
STH 57 NB	5	90	450	6	30	12	60	10	50	1	5	10	50	1	3	OUTSIDE LANE CLOSURE - SPAN 18 WORK
STH 57 SB	5	25	125	3	15	6	30	10	50	1	5	5	25	1	3	
STH 57 NB	5	34	170	3	15	6	30	10	50	1	5	5	25		0	INSIDE LANE CLOSURE - SPAN 18 WORK
STH 57 SB	5	85	425	5	25	10	50	10	50	1	5	9	45		0	
STH 172 WB	54	33	1782	3	162	6	324		0		0	3	162	1	54	LANE CLOSURE - MAINLINE - 3 DAYS PER SPAN
STH 172 EB	54	75	4050	3	162	6	324	14	756	2	108	11	594		0	
STH 172 WB	54	64	3456	2	108	4	216	24	1296		0	6	324		0	LANE CLOSURE - RAMPS - 3 DAYS PER SPAN
STH 172 EB	54		0		0		0		0		0		0		0	
STH 172 WB	339	76	25764		0		0		0		0	8	2712		0	SHOULDER CLOSURES - MAINLINE
STH 172 EB	339	76	25764		0		0		0		0	8	2712		0	
STH 57 NB	339		0		0		0		0		0	4	1356		0	WORK ZONEADVANCE SIGNS - MAINLINE
STH 57 SB	339		0		0		0		0		0	6	2034		0	
TO / FROMSTH 172 WB	339		0		0		0		0		0	3	1017		0	WORK ZONE ADVANCE SIGNS - RAMPS
TO / FROMSTH 172 EB	339		0		0		0		0		0	6	2034		0	
FOX RIVER TRAIL	339	4	1356		0		0		0		0	2	678		0	WORK ZONE ADVANCE SIGNS - TRAILS
ASHWAUBOMAY RIVER TRAIL	17		0		0		0		0		0	2	34		0	
TOTAL		63342		517		1034		2252		128		13802		116		

LOCATION	616.0700.S FENCE SAFETY LF	618.0100 MAINT./REPAIR HAUL ROADS EACH	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.6005 TURBIDITY BARRIER SY	SPV.0105.01 TEMP. EQUIPMENT STAGING/ACCESS LS	SPV.0105.02 TEMPORARY CAUSEWAY LS	REMARKS
STH 172 AT STH 57		1						
STH 172 AT STH 57			470	470		1		STAGING AREA
FOX RIVER - EAST BANK							1	
FOX RIVER - EAST BANK					450			REMOVAL OF CAUSEWAY - 10 FT BUFFER
FOX RIVER TRAIL	750							GUIDE PEDESTRIANS THRU CONSTRUCTION AREA
TOTAL	750	1	470	470	450	1	1	

<u>628.1905</u>		<u>628.1910</u>		REMARKS
MOBILIZATION		MOBILIZATION		
EROSION CONTROL (EC)		EC EMERGENCY		
LOCATION	EACH	EACH		
STH 172 AT STH 57	6	6		
TOTAL	6	6		

<u>642.5201</u>		
FIELD OFFICE		
TYPE C		
LOCATION	EACH	REMARKS
-	1	TWO CONSTRUCTION SEASONS
TOTAL	1	

<u>108.4300</u>		
RBC PROGRESS		
SCHEDULE		
LOCATION	EACH	REMARKS
-	1	
TOTAL	1	

Standard Detail Drawing List

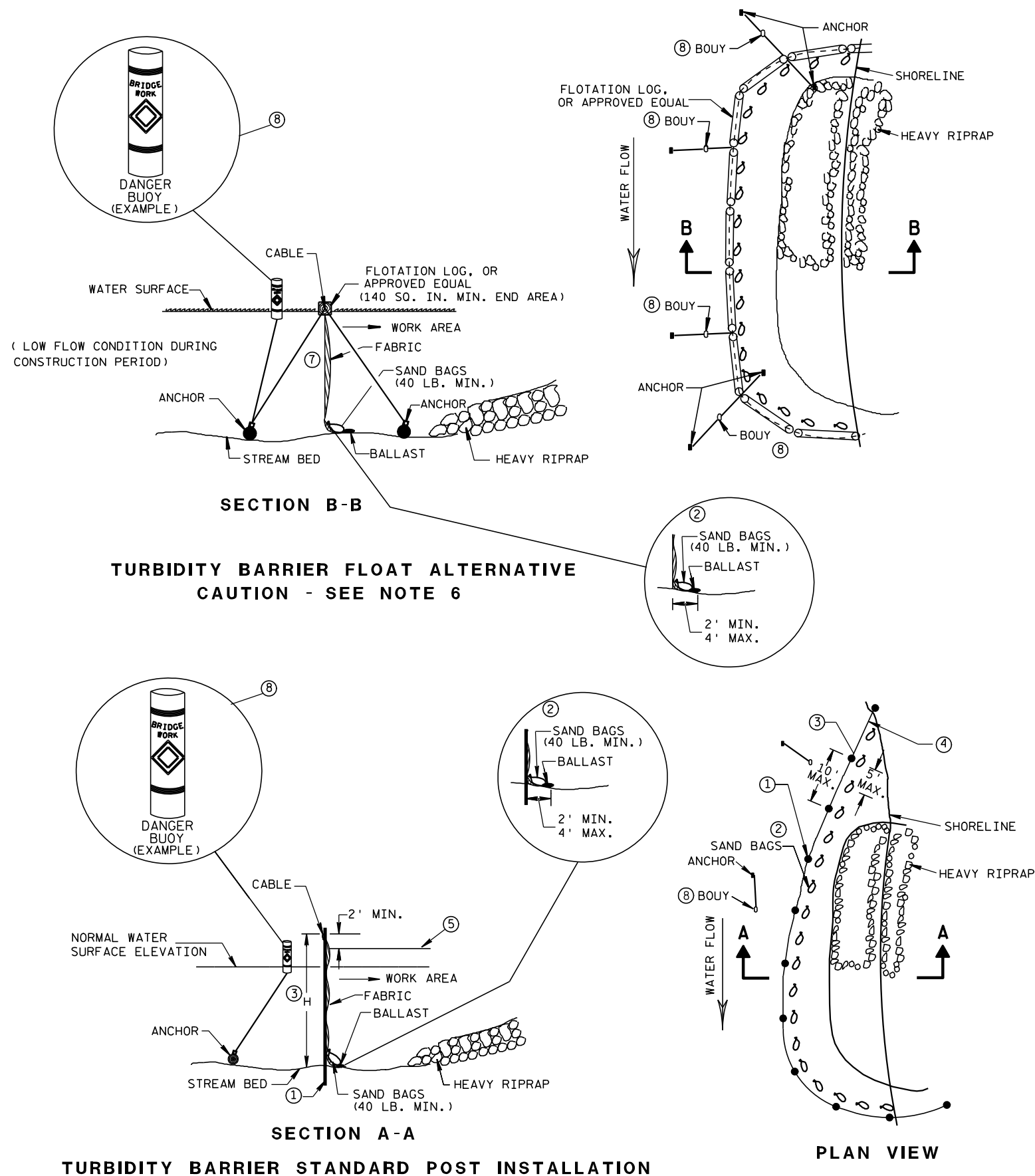
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-06	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15D12-06A	TRAFFIC CONTROL, LANE CLOSURE
15D15-03A	TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-03D	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-03E	TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE
15D21-04	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D29-05	TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS



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



<p style="text-align: center;"><b>SILT FENCE</b></p>	
<p style="text-align: center;"><b>STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION</b></p>	
<p><b>APPROVED</b></p> <p><u>4-29-05</u></p> <p><u>DATE</u></p>	<p><u>/S/ Beth Canestra</u></p> <p><b>CHIEF ROADWAY DEVELOPMENT ENGINEER</b></p>

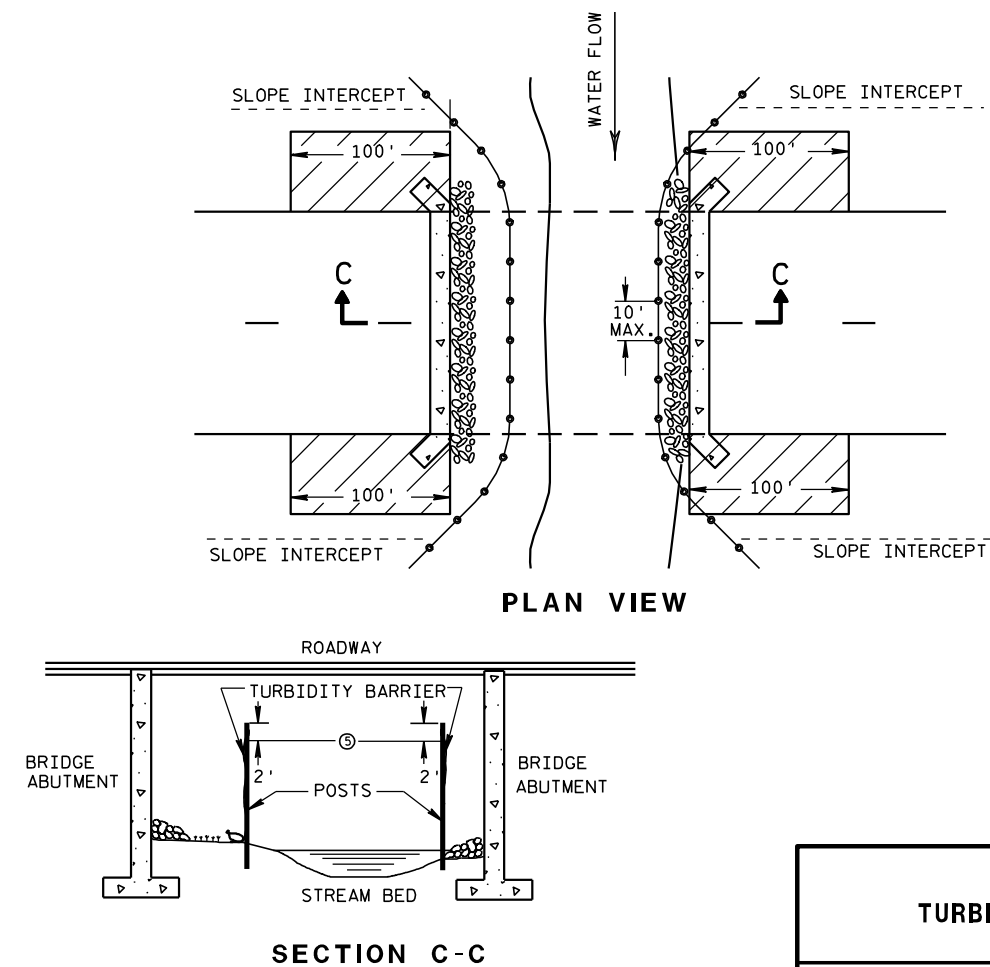


## GENERAL NOTES

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

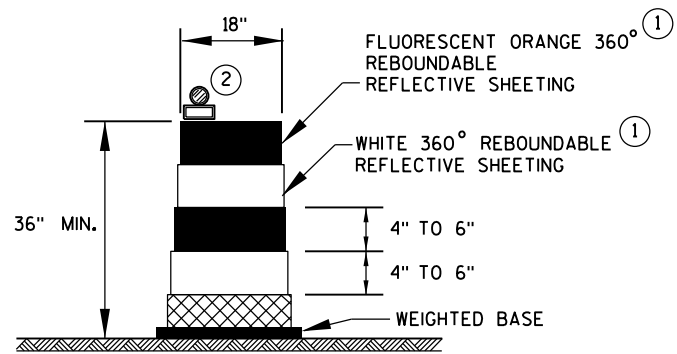
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

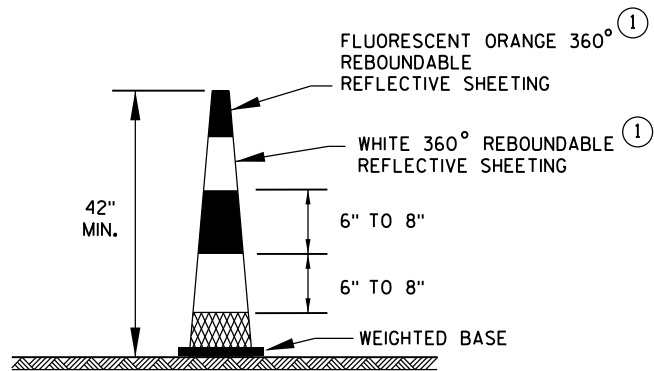
6/04/02  
DATE

FHWA

/S/ Beth Canestra  
CHIEF ROADWAY DEVELOPMENT ENGINEER



**DRUM**

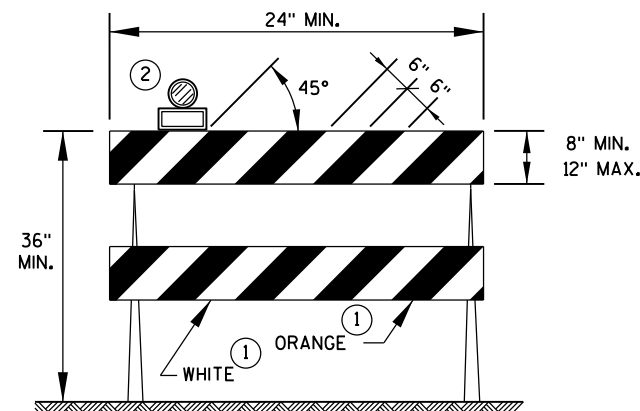


**42" CONE**

DO NOT USE IN TAPERS  
1/2 SPACING OF DRUMS

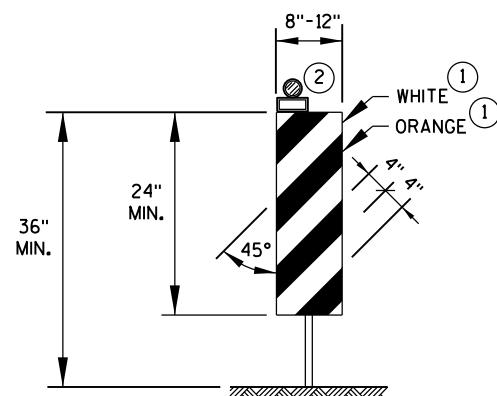
**GENERAL NOTES**

- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.



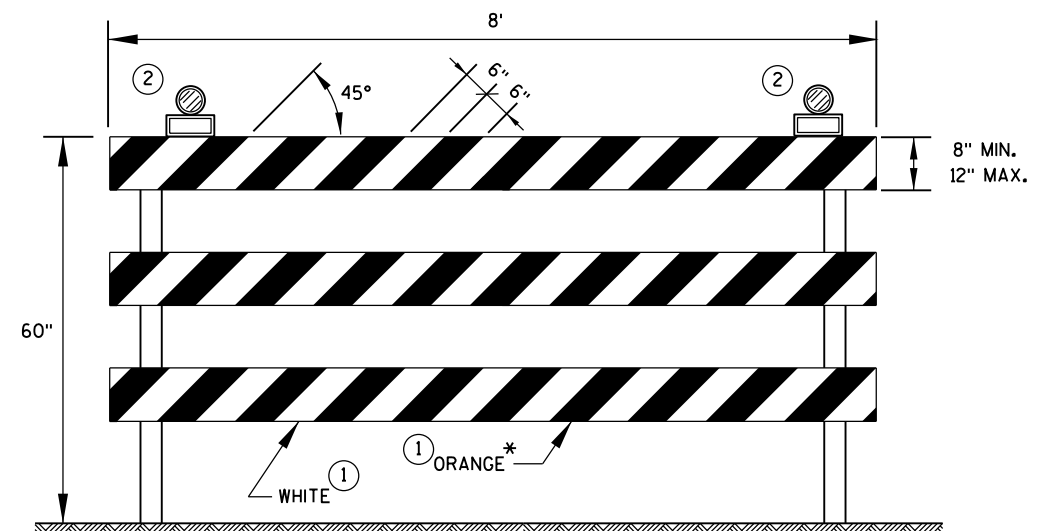
**TYPE 2 BARRICADE**

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES MAY BE USED.  
ALL STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.



**VERTICAL PANEL**

THE STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.



**TYPE 3 BARRICADE**

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

\* IF USED FOR A PERMANENT APPLICATION, USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

LEGEND

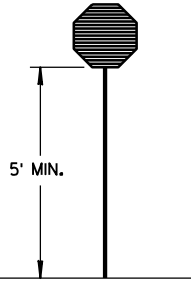
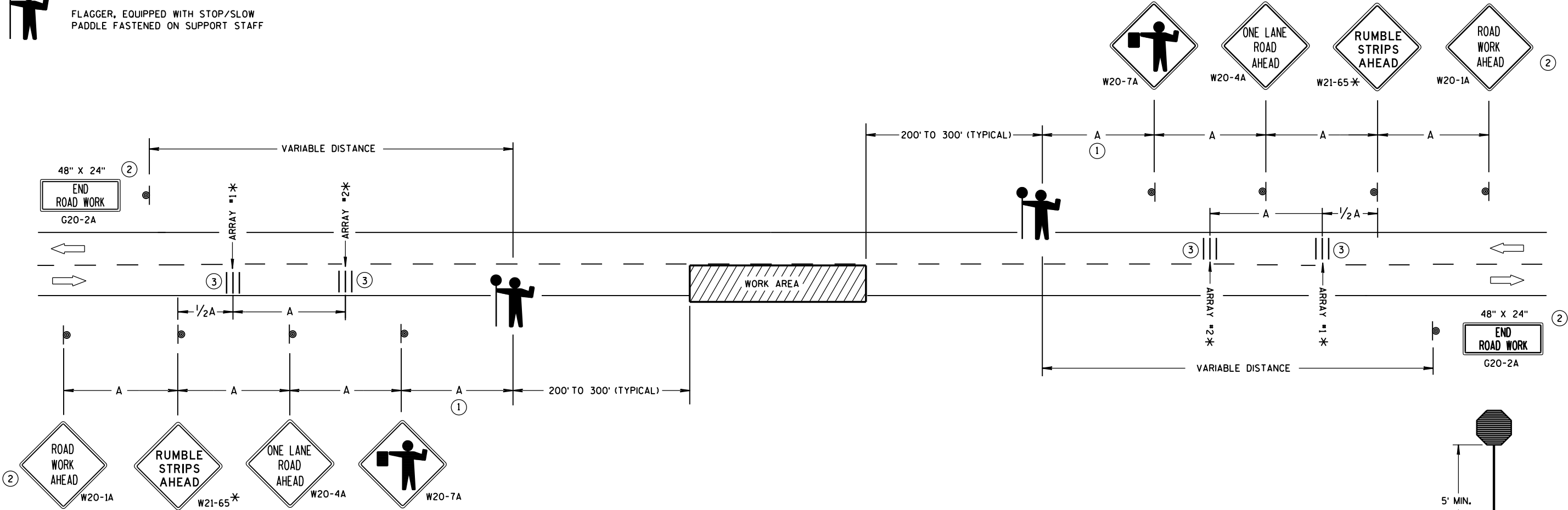
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING A
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 W20-4A SIGNS, USING SPACING A.



STOP/SLOW PADDLE ON SUPPORT STAFF

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

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.

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

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.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS. PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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

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, REMOVE TEMPORARY RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

\* UTILIZE TEMPORARY RUMBLE STRIPS WHEN FLAGGING OPERATION IS ANTICIPATED TO BE STATIONARY IN EXCESS OF TWO HOURS.

- FOR A MOVING WORK OPERATION, SIGNING AND TEMPORARY RUMBLE STRIPS (IF USED) SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3,500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.
- EACH TEMPORARY RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
June 2017 /S/ Andrew Heldtke  
DATE WORK ZONE ENGINEER  
FHWA

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.

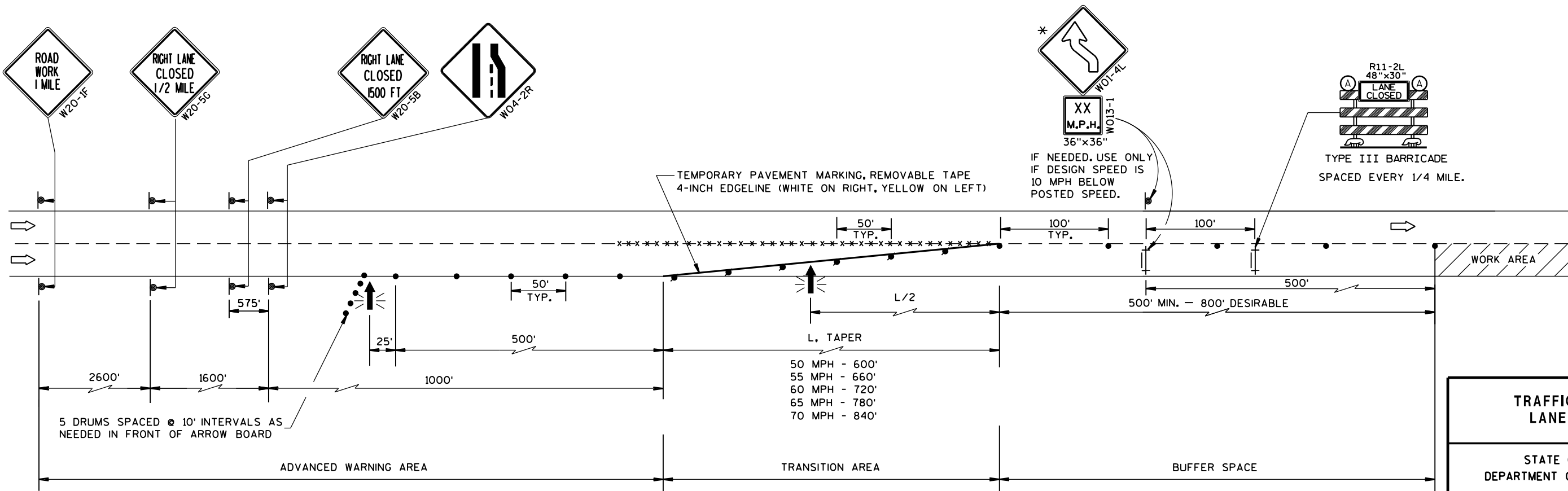
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

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.

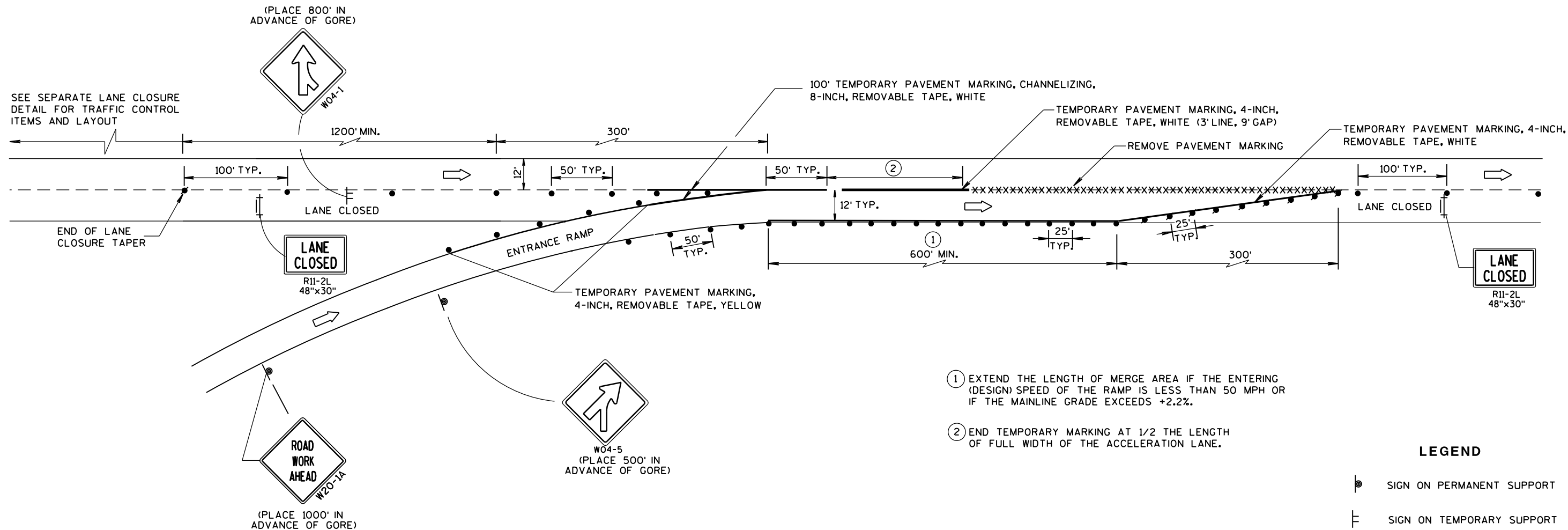
ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN 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	

TRAFFIC CONTROL, ENTRANCE RAMP WITHIN RIGHT LANE CLOSURE



PARALLEL ENTRANCE RAMP

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.

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. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

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.

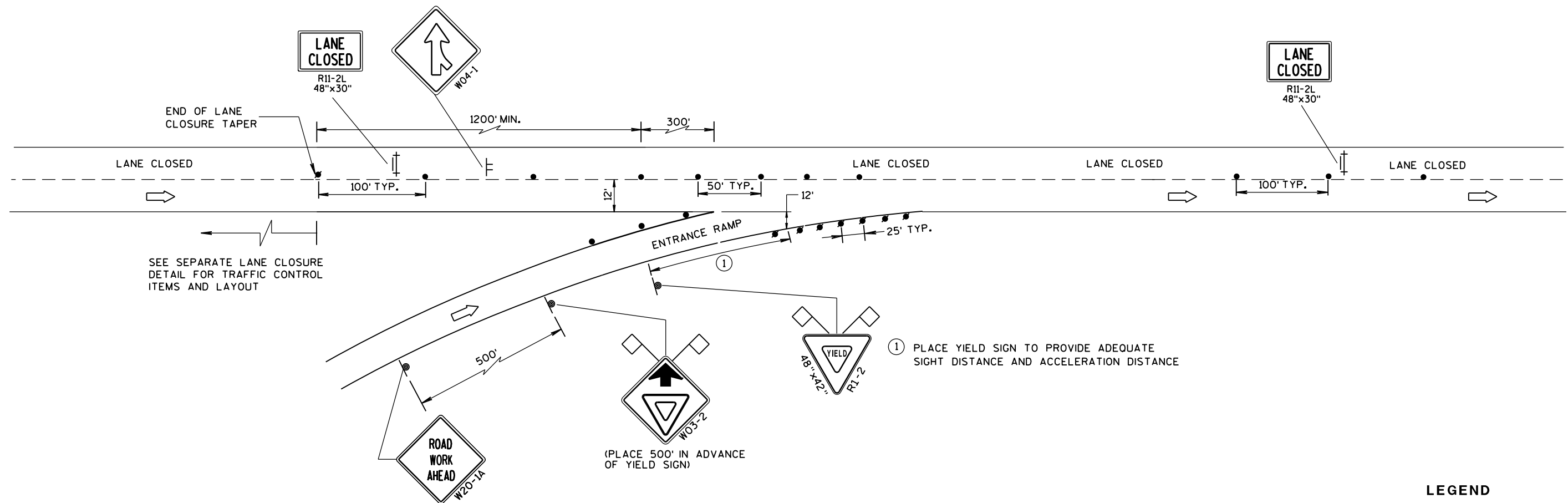
LEGEND

- SIGN ON PERMANENT SUPPORT
- ├ SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- ├ TYPE III BARRICADE WITH ATTACHED SIGN
- XXXXX REMOVING PAVEMENT MARKING
- ➡ DIRECTION OF TRAFFIC

TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
March, 2017 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER  
FHWA



## TAPERED ENTRANCE RAMP WITHIN LEFT LANE CLOSURE

### 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.

### 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

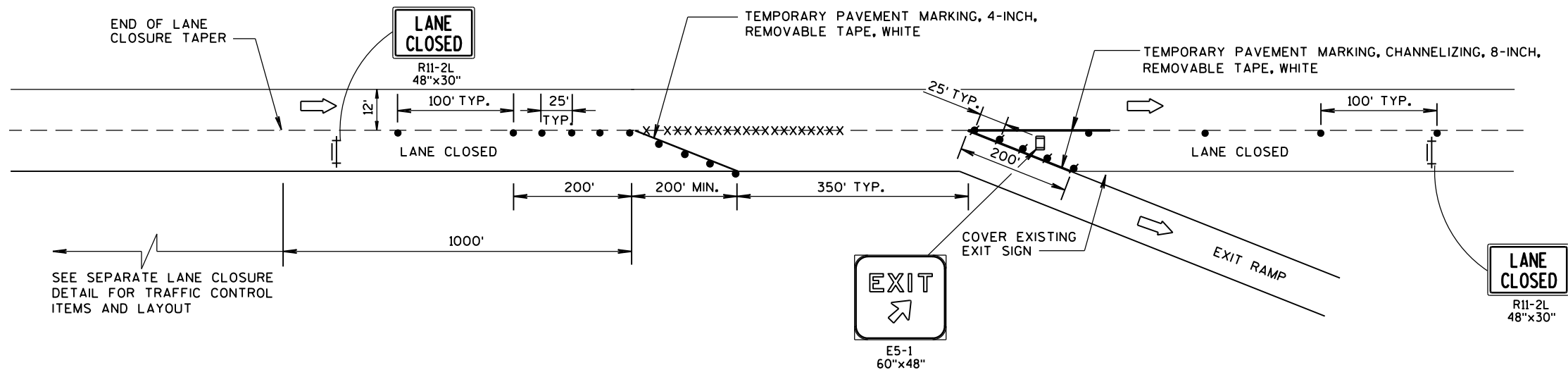
### TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

#### APPROVED

March, 2017 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

FHWA



PARALLEL EXIT RAMP

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.

"W0" 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.

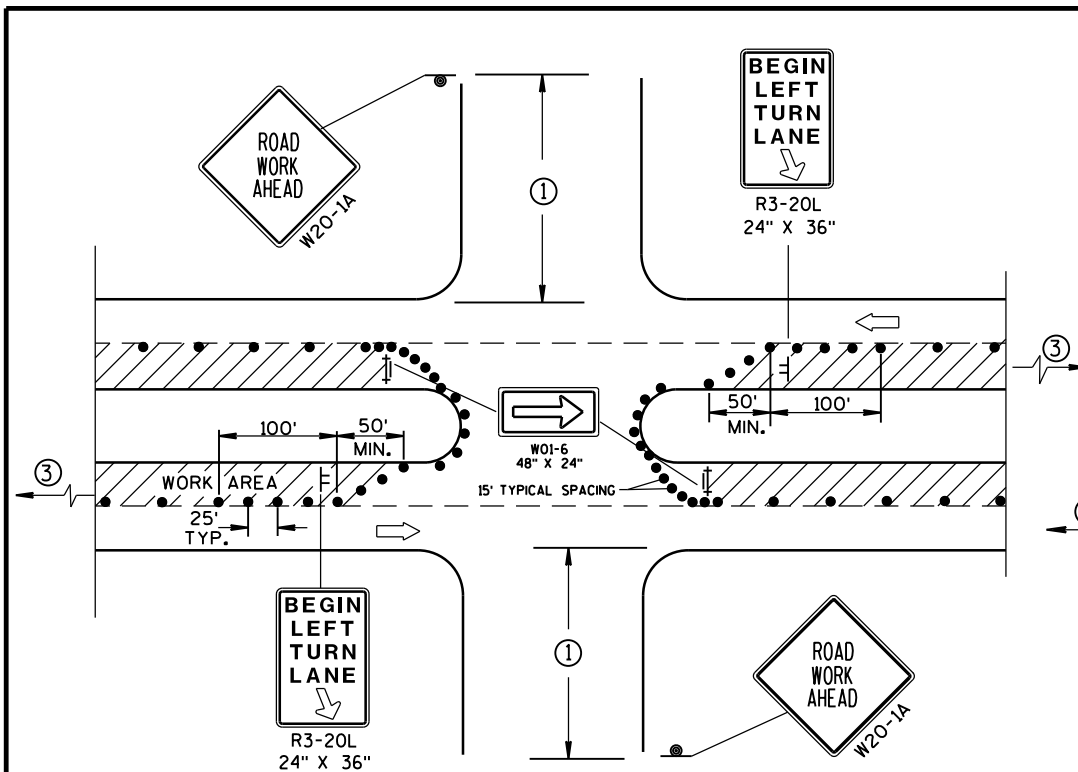
LEGEND

- 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,  
PARALLEL EXIT RAMP  
WITHIN LANE CLOSURE

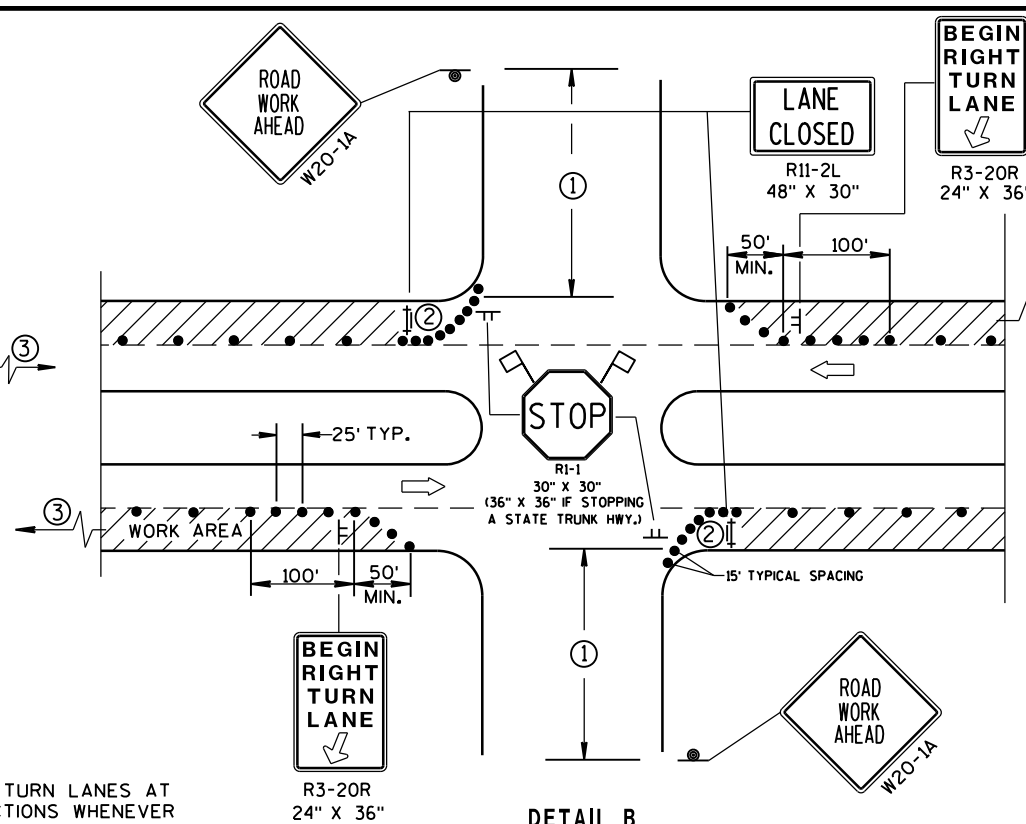
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
March, 2017 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER  
FHWA



DETAIL A  
FOR LEFT LANE CLOSURE AT  
INTERSECTION OR MEDIAN OPENING

PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.



DETAIL B  
FOR RIGHT LANE CLOSURE  
AT INTERSECTION

## 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 SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

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

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

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

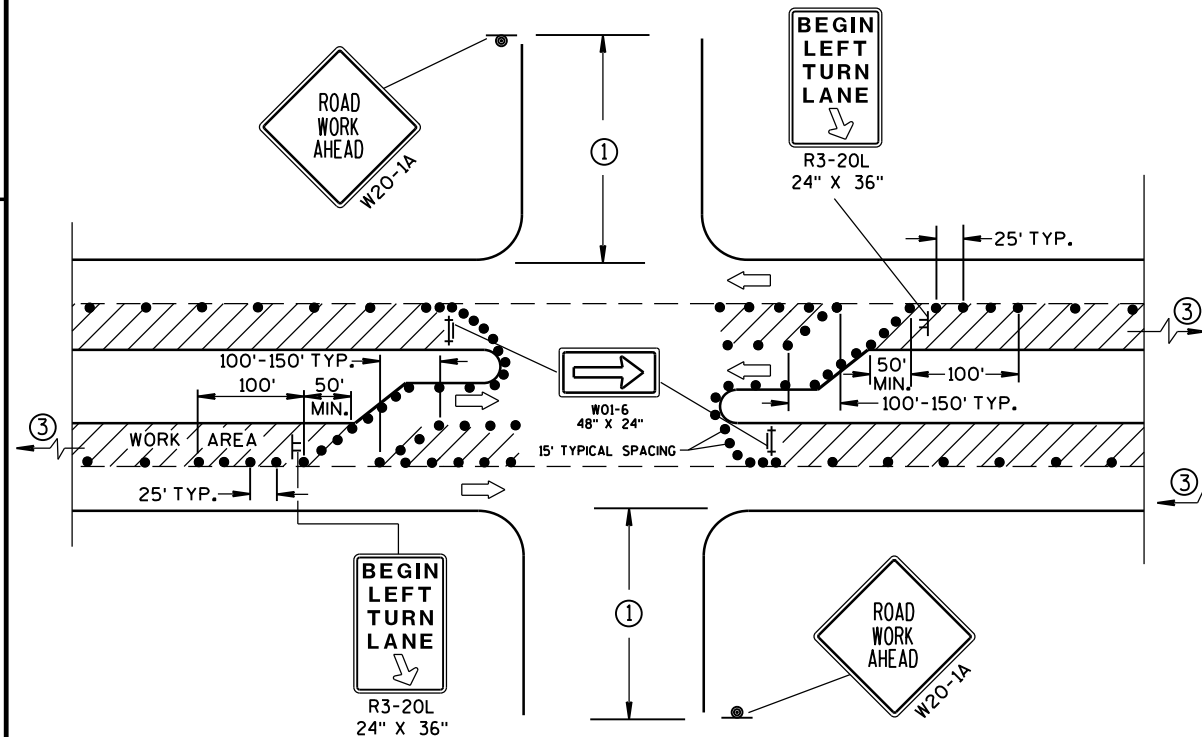
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

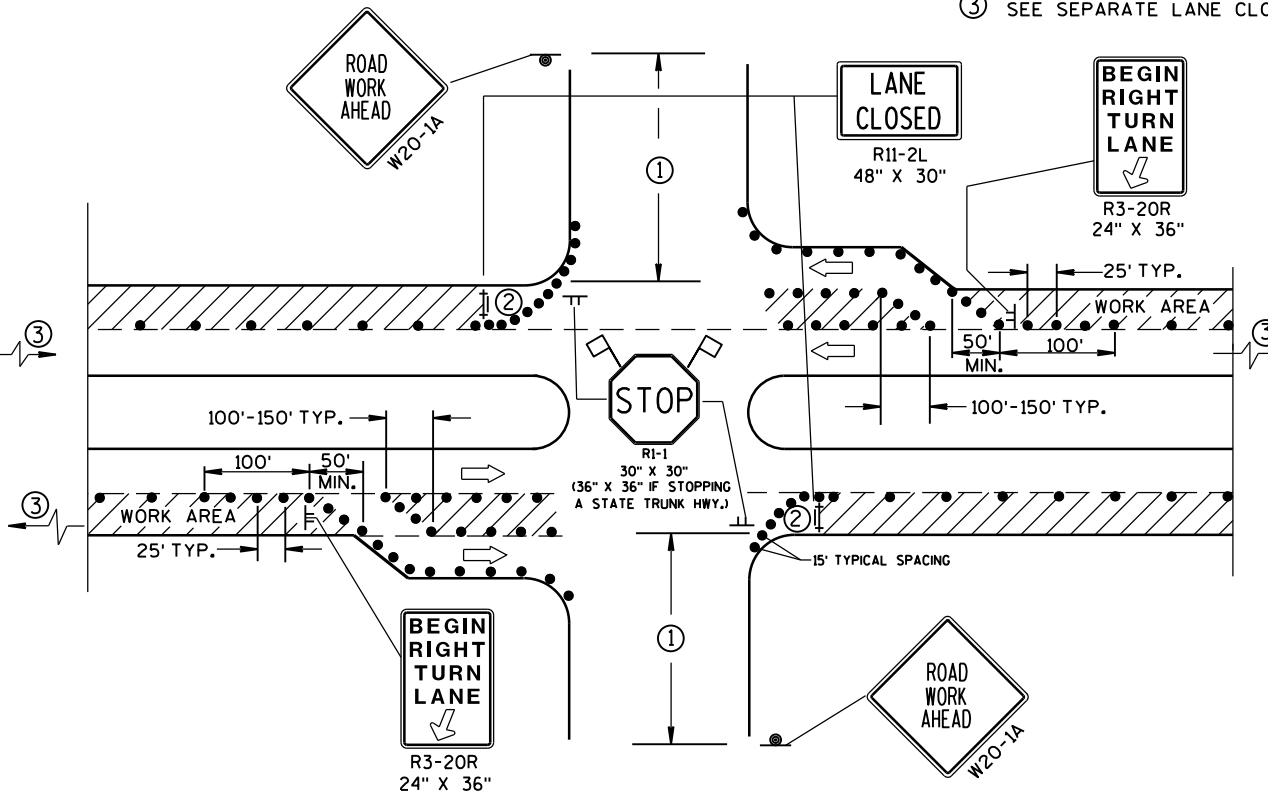
- ① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.  
350' IF 35-40 MPH.  
200' IF 25-30 MPH.
- ② ALSO USE BARRICADE AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.
- ③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.

## LEGEND

- TRAFFIC CONTROL DRUM
- ⊙ SIGN ON PERMANENT SUPPORT
- ⊢ SIGN ON TEMPORARY SUPPORT (5' MIN. MOUNTING HEIGHT)
- ⊢ TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE "A" WARNING LIGHT (FLASHING)
- ➡ DIRECTION OF TRAFFIC
- ⚑ FLAGS, 16" X 16" MIN., (ORANGE)
- ▨ WORK AREA



DETAIL C  
FOR LEFT LANE CLOSURE AT INTERSECTION OR  
MEDIAN OPENING (WITH LEFT TURN BAY OPEN)



DETAIL D  
FOR RIGHT LANE CLOSURE AT INTERSECTION  
(WITH RIGHT TURN BAY OPEN)

## TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
June 2016 /S/ Peter Anakobe Atepe  
DATE STATEWIDE WORK ZONE TRAFFIC  
FHWA SAFETY ENGINEER

LEGEND

- TRAFFIC CONTROL DRUM
- ⦿ SIGN ON PERMANENT SUPPORT
- ➡ DIRECTION OF TRAFFIC
- ⚡➡ FLASHING ARROW BOARD
- ▨ WORK AREA

GENERAL NOTES

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

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

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

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

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

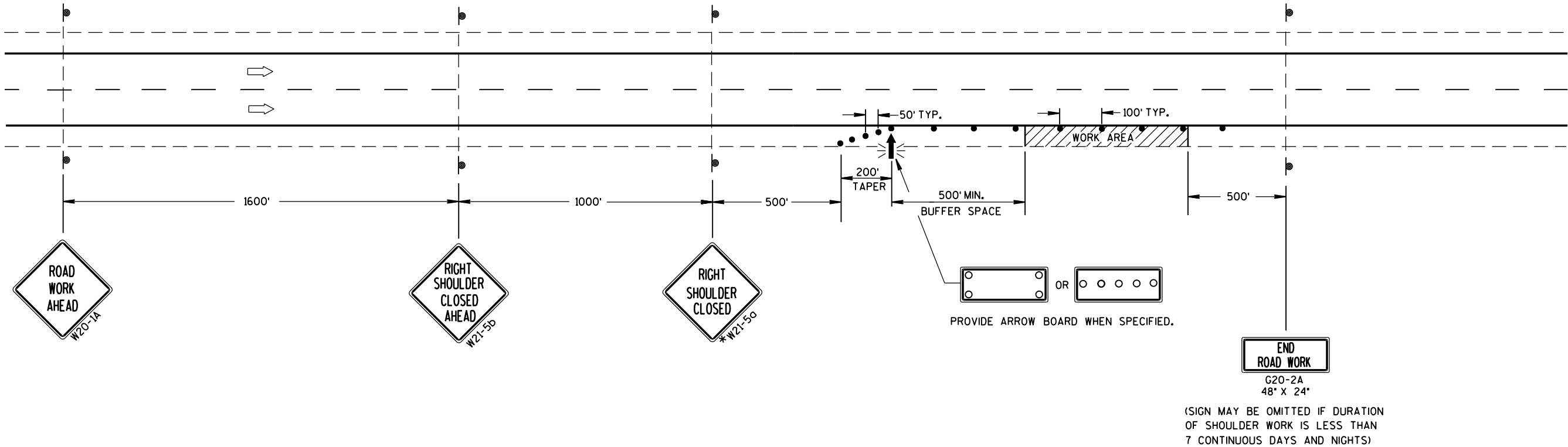
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

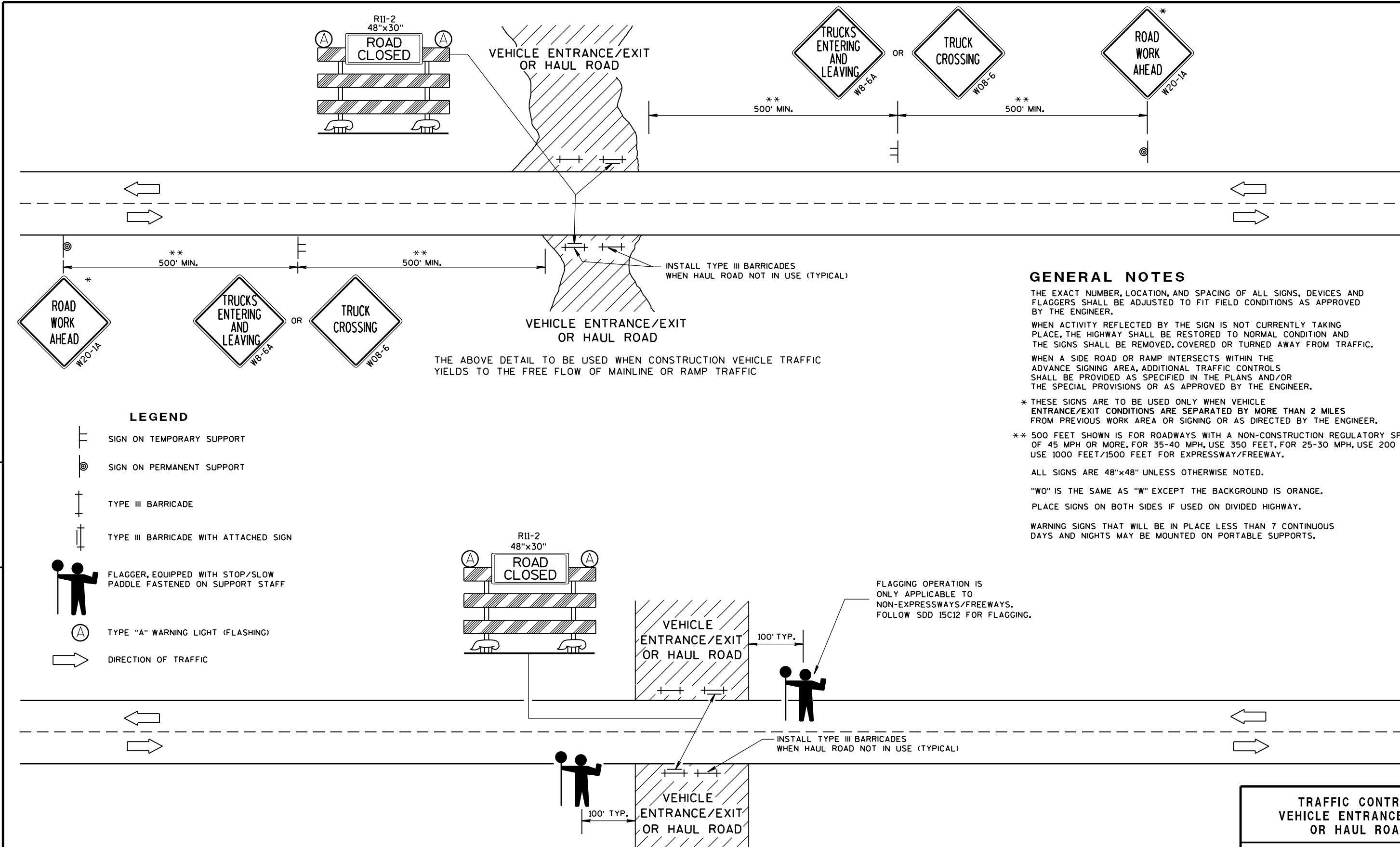
CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

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



TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2016 DATE	/S/ Peter Amakobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA	

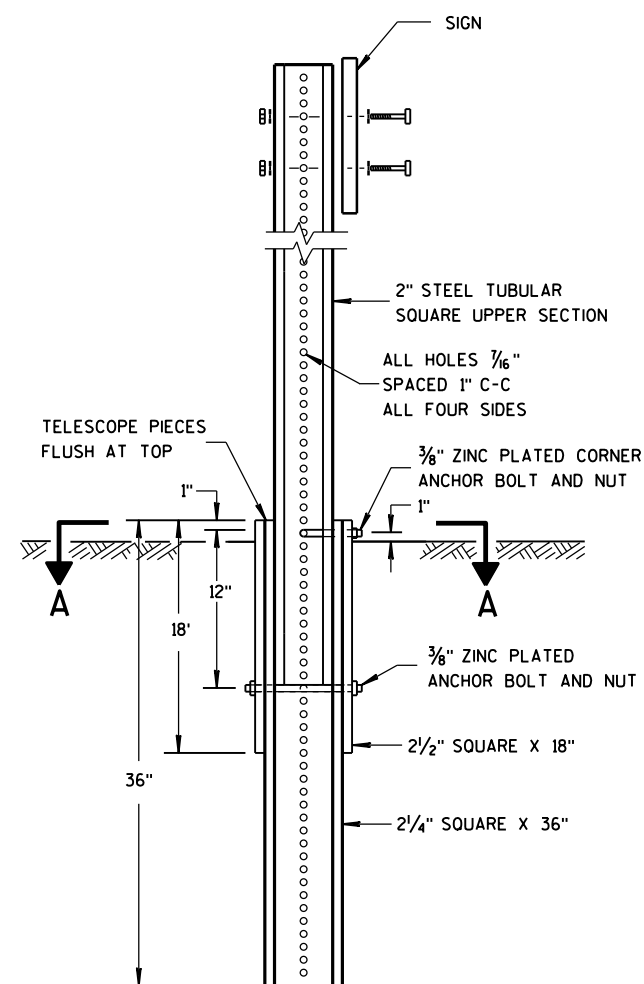


**GENERAL NOTES**

- THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS, DEVICES AND FLAGGERS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
- WHEN ACTIVITY REFLECTED BY THE SIGN IS NOT CURRENTLY TAKING PLACE, THE HIGHWAY SHALL BE RESTORED TO NORMAL CONDITION AND THE SIGNS SHALL BE REMOVED, COVERED OR TURNED AWAY FROM TRAFFIC.
- WHEN A SIDE ROAD OR RAMP INTERSECTS WITHIN THE ADVANCE SIGNING AREA, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.
- \* THESE SIGNS ARE TO BE USED ONLY WHEN VEHICLE ENTRANCE/EXIT CONDITIONS ARE SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA OR SIGNING OR AS DIRECTED BY THE ENGINEER.
- \*\* 500 FEET SHOWN IS FOR ROADWAYS WITH A NON-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350 FEET, FOR 25-30 MPH, USE 200 FEET. USE 1000 FEET/1500 FEET FOR EXPRESSWAY/FREEWAY.
- ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.
- "W0" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.
- PLACE SIGNS ON BOTH SIDES IF USED ON DIVIDED HIGHWAY.
- WARNING SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

THIS DETAIL TO BE USED WHEN CONSTRUCTION WORK INCLUDING TRUCKING ACTIVITY REQUIRES MAINLINE TRAFFIC TO BE TEMPORARILY STOPPED IN ONE OR BOTH DIRECTIONS. DELAY TO HIGHWAY TRAFFIC SHALL BE MINIMIZED.



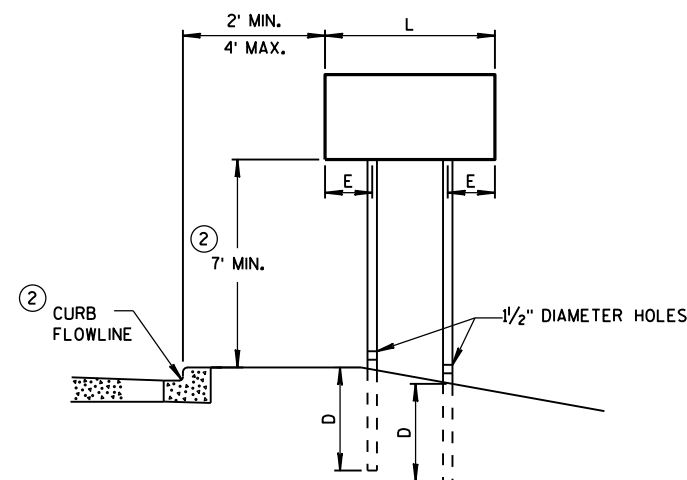
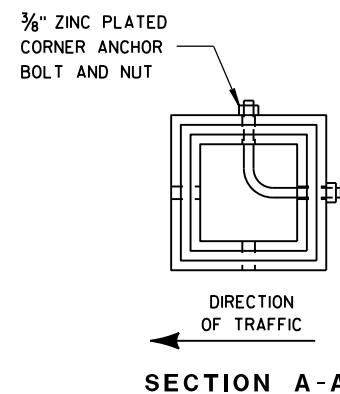
## DETAIL OF TUBULAR STEEL SIGN POST

## TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

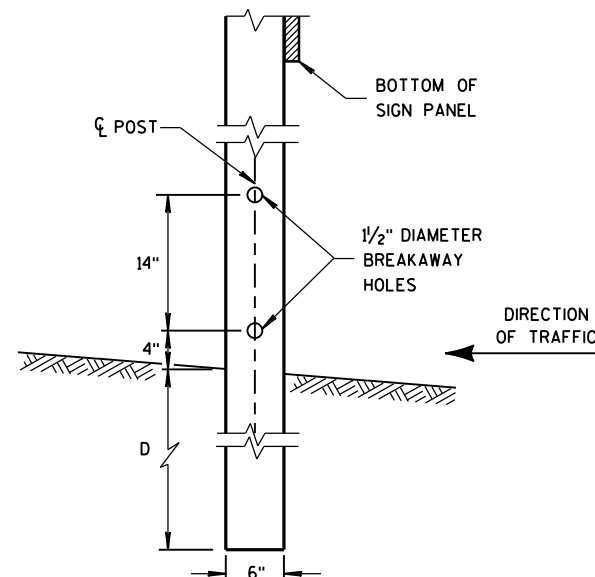


**URBAN AREA**

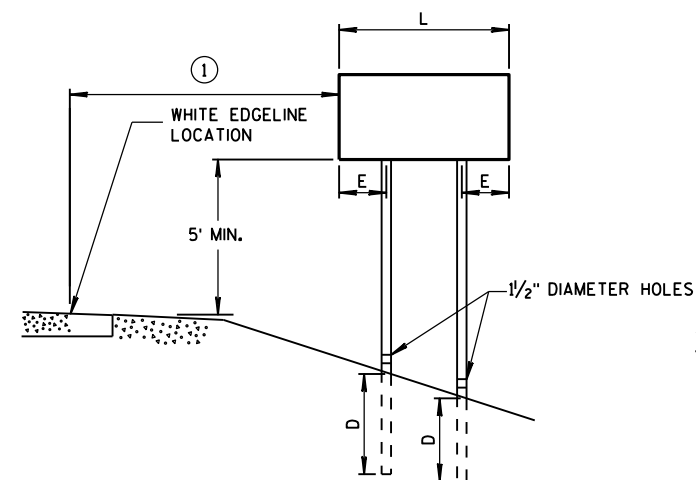
## POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

WOOD POST  
EMBEDMENT DEPTH

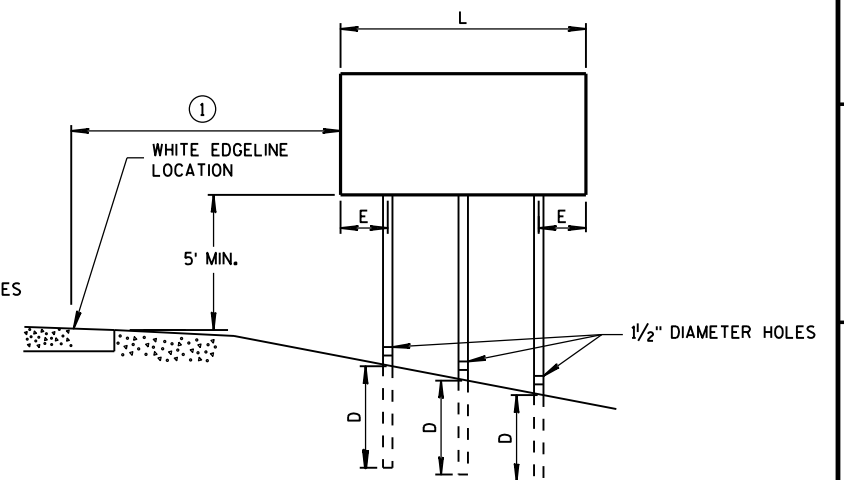
AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'



## 4" x 6" WOOD POST MODIFICATION



## RURAL AREA



## GENERAL NOTES

- ① 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.
- ② THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.
- ③ FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.

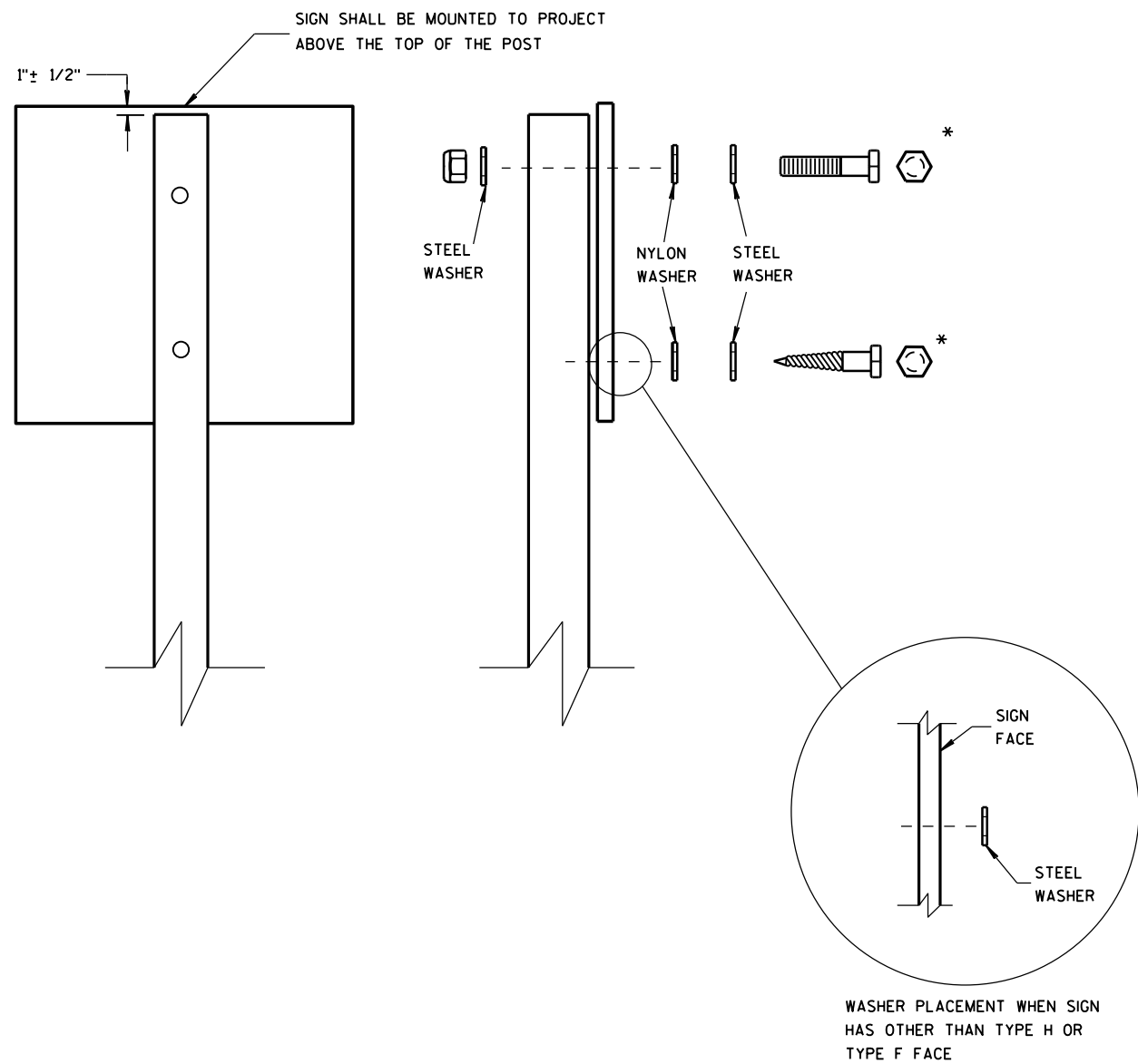
4" X 6" WOOD POST

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

SEE NOTE (3)

## TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

- A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3
- B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

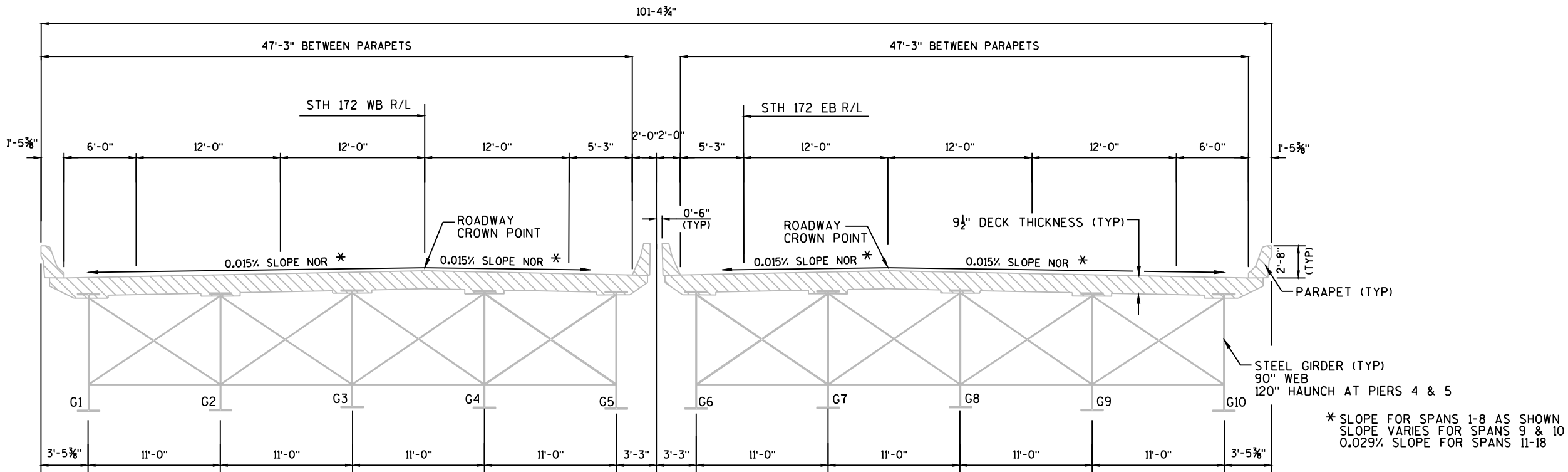
- WOOD POSTS (4" x 4" or 4" x 6")
- LAG SCREWS - 3/8" x 3"
  - MACHINE BOLTS - 5/16" x 6-1/2" OR 7" LENGTH W/ NUTS

- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - 3/8" x 3-1/4" LENGTH W/ NUTS
  - RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

- WASHERS (ALL POSTS) -
- 1-1/4" O.D. x 3/8" I.D. x 1/16" STEEL
  - 1-1/4" O.D. x 3/8" I.D. x .080 NYLON FOR ALL TYPE H SIGNS

\* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

ATTACHMENT OF SIGNS TO POSTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	



EXISTING STH 172 CROSS SECTION THRU ROADWAY - SPANS 1 THROUGH 14  
(LOOKING EAST)

NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON ASBUILT STRUCTURE PLANS.

SEE HIGHWAY STRUCTURE INFORMATION SYSTEM FOR ADDITIONAL DETAIL.

PAINT COLOR SHALL BE FEDERAL STANDARD COLOR NO. 25240 BLUE.

ALL EXPOSED STEEL SURFACES UNDERNEATH THE BRIDGE ARE TO BE CLEANED AND PAINTED. THE SURFACES INCLUDE GIRDERS, CROSS FRAMING, DIAPHRAGMS, STIFFENERS, BEARINGS AND CONNECTIONS.

FORTY-SIX (46) FIBERGLASS DOWNSPOUTS HAVE BEEN IDENTIFIED ON THE STRUCTURE. PRIOR TO BLASTING OPERATIONS, REMOVE DOWNSPOUT BRACKETS FROM GIRDER WEB AND STORE. REINSTALL DOWNSPOUT BRACKETS AFTER PAINTING OPERATIONS ARE COMPLETE. COVER AND PROTECT FIBERGLASS DOWNSPOUTS TO AVOID DAMAGE DURING BLASTING AND PAINTING OPERATIONS. THIS WORK IS INCIDENTAL TO BID ITEM 517.1800.S.

DOT LIGHTING CONDUIT LOCATED ON THE FRONT FACE OF BOTH ABUTMENTS. NAVIGATIONAL LIGHTING, CONDUIT, AND JUNCTION BOXES LOCATED IN SPAN 5, AND ON PIER 4 AND PIER 5. DO NOT PAINT THESE FACILITIES. PROTECT TO AVOID DAMAGE DURING BLASTING AND PAINTING OPERATIONS.

BRIDGE COMPONENTS CONSIST OF ROCKER BEARINGS AND PIN AND HANGER HINGES.

DESIGN DATA

LIVE LOAD (TAKEN FROM HSI - 10/2/2017)  
DESIGN LOADING: HS=20  
INVENTORY RATING: HS=20  
OPERATING RATING: HS=33  
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV)=250 (KIPS)

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	TOTAL
517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE B-5-149	LS	1
517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-5-149	LS	1
517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH	1

FOR INFORMATION ONLY: APPROXIMATELY 852,615 SF OF STRUCTURAL STEEL

CONTACTS

NE REGION PROJECT MANAGER  
ERIC GWIDT (920) 366-8896  
BUREAU OF STRUCTURES  
WILLIAM DREHER (608) 266-8489

LIST OF DRAWINGS

1. STH 172 CROSS SECTION, NOTES & QUANTITIES
2. STH 172 CROSS SECTION & DOWNSPOUT DETAIL
3. PART FRAMING PLAN (SPANS 1 THROUGH 14)
4. PART FRAMING PLAN (SPANS 15 THROUGH 18)
5. GENERAL PLAN WEST PORTION
6. GENERAL PLAN MIDDLE PORTION
7. GENERAL PLAN EAST PORTION



Plans Prepared By **WISDOT**

ACCEPTED *William C. Dreher* <sup>SDR</sup> **01/16/18**  
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE **B-5-149**

STH 172 OVER FOX RIVER & STH 57

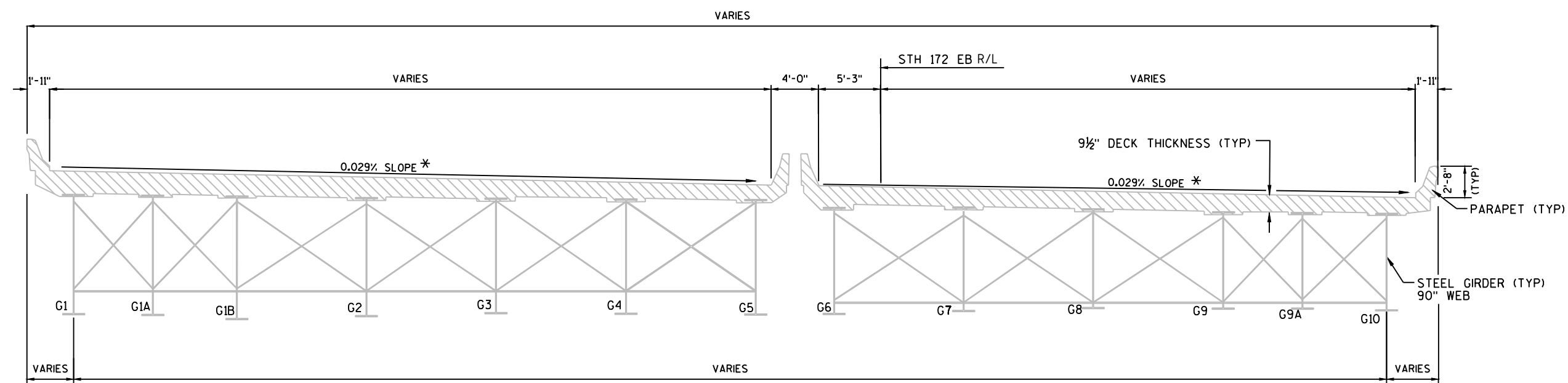
COUNTY **BROWN** VILLAGE **ASHWAUBENON**

DESIGN SPEC. **REHABILITATION N/A**

DESIGNED BY **MAJ** DESIGN CK'D. **EAD** DRAWN BY **JBS** PLANS CK'D. **ESG**

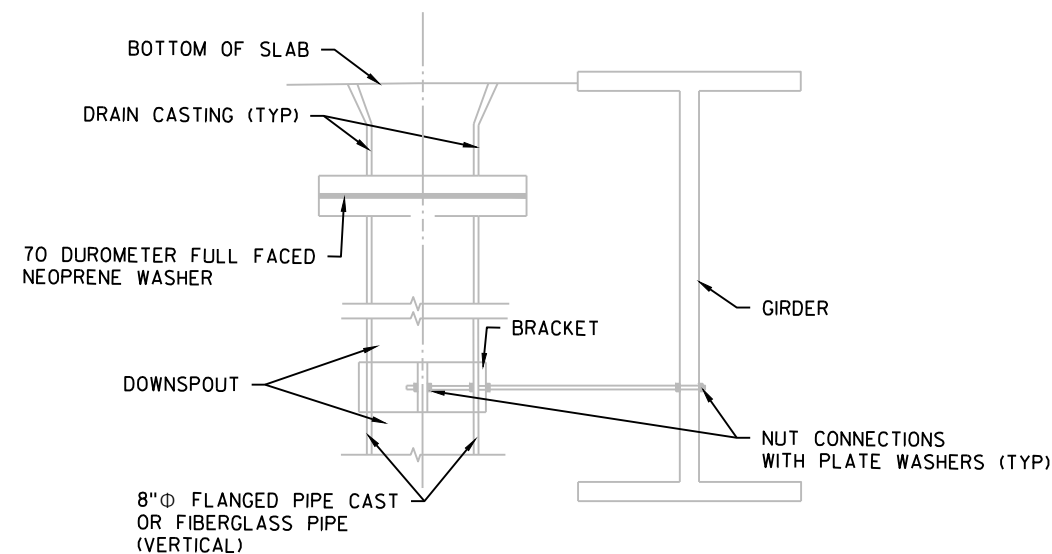
STH 172 CROSS  
SECTION, NOTES  
& QUANTITIES

SHEET 1 OF 7

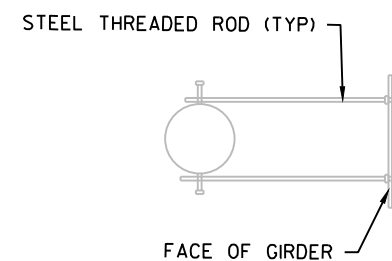


\* SLOPE FOR SPANS 1-8 AS SHOWN  
SLOPE VARIES FOR SPANS 9 & 10  
0.029% SLOPE FOR SPANS 11-18

EXISTING STH 172 CROSS SECTION THRU ROADWAY - SPANS 15 THROUGH 18  
(LOOKING EAST)

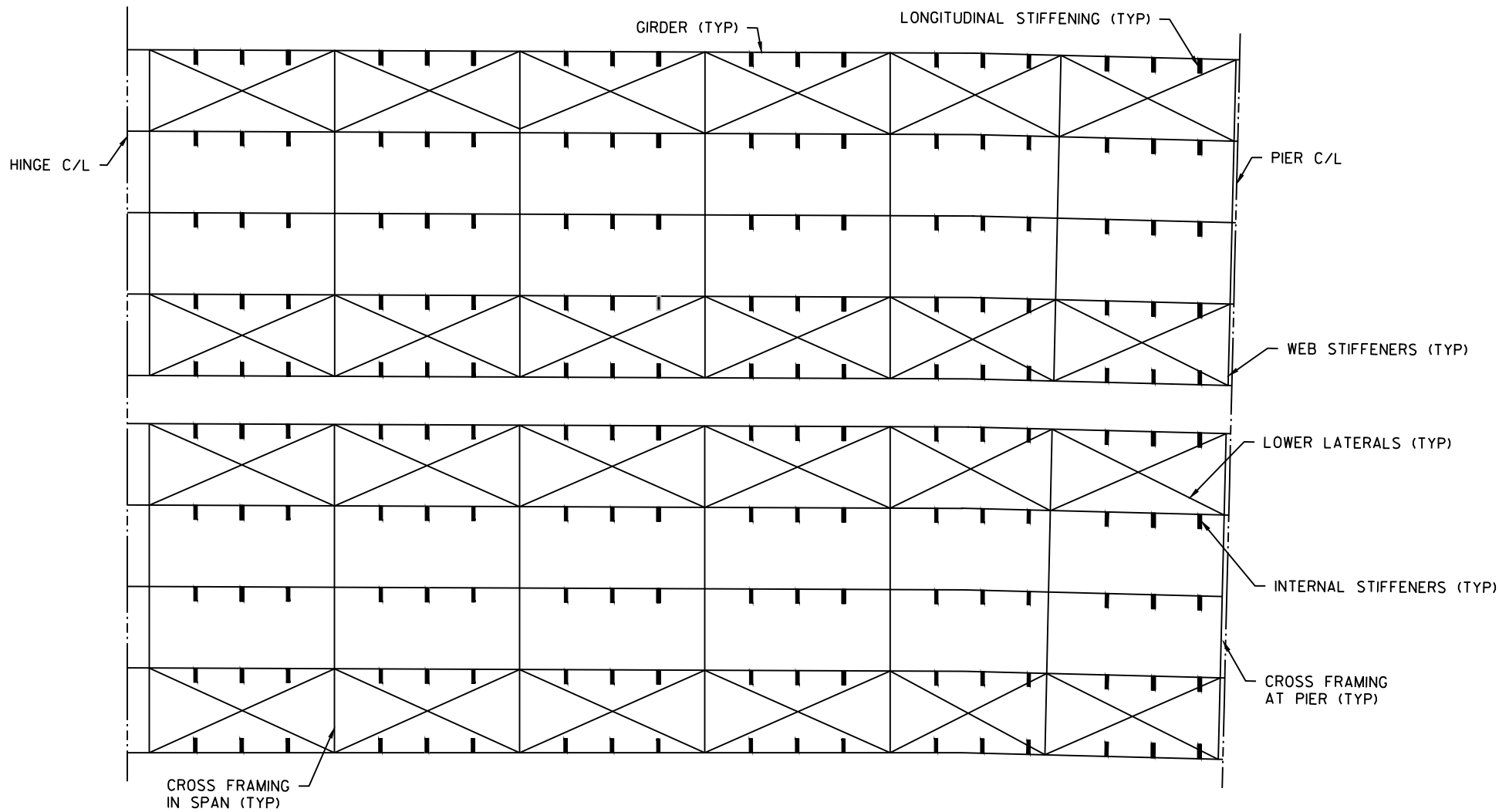


DOWNSPOUT DETAIL  
(SIDE VIEW)



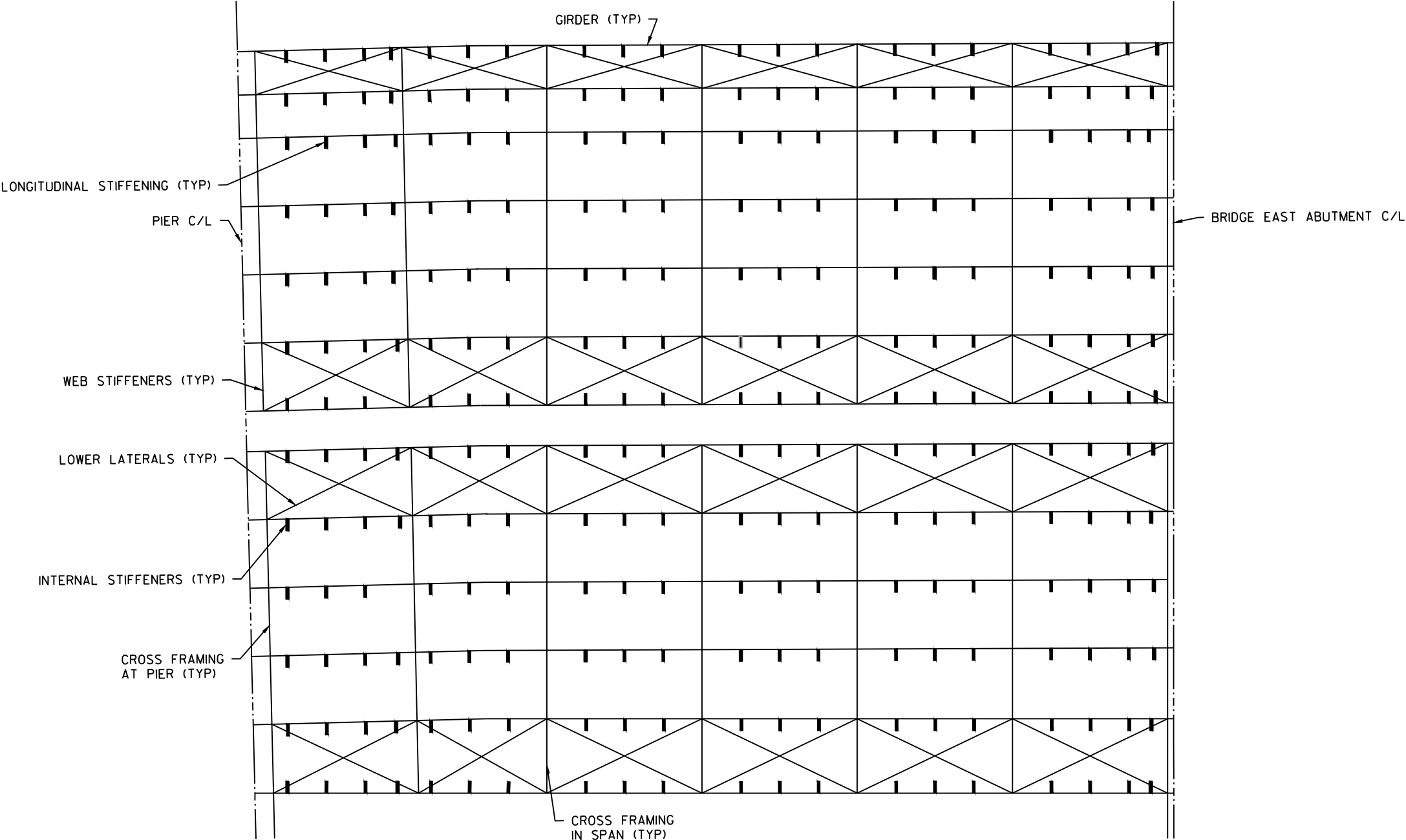
DOWNSPOUT DETAIL  
(PLAN VIEW)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-5-149			
CONST. SPEC.	DRAWN BY	CHK'D.	ESG
STH 172 CROSS SECTION & DOWNSPOUT DETAIL			SHEET 2 OF 7



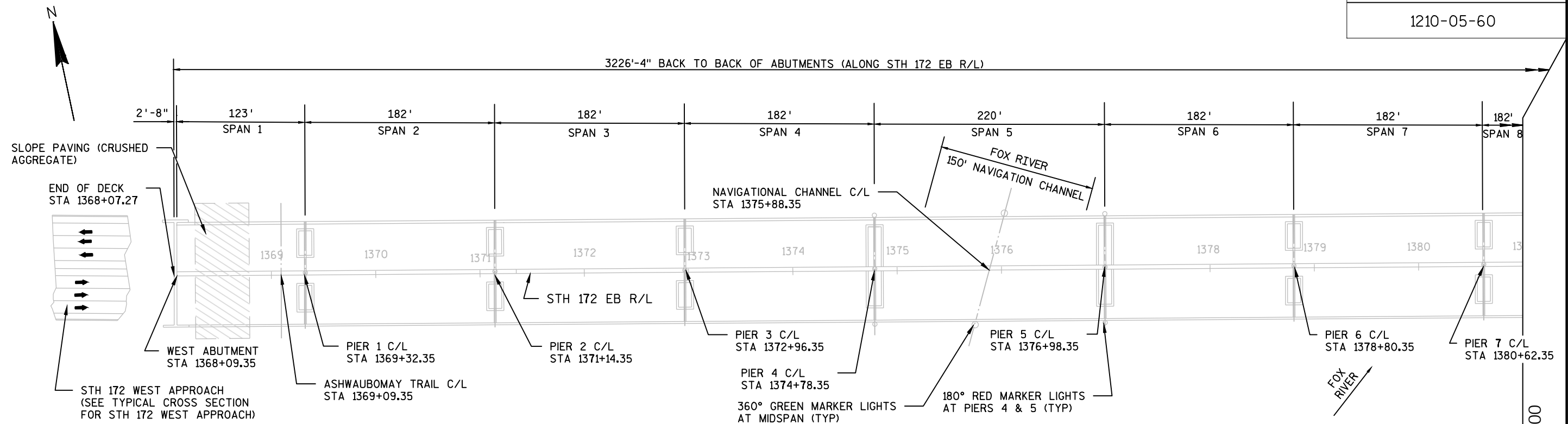
PART FRAMING PLAN  
(SPANS 1 THROUGH 14)  
FOR INFORMATION ONLY

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-5-149			
CONST. SPEC.		DRAWN BY ---JBS	PLANS CK'D. ---ESG
PART FRAMING PLAN			SHEET 3 OF 7

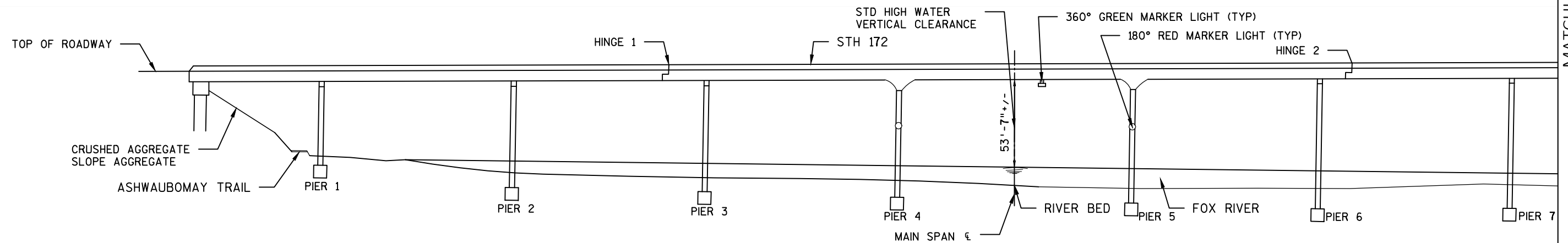


PART FRAMING PLAN  
(SPANS 15 THROUGH 18)  
FOR INFORMATION ONLY

NO.	DATE	REVISION			BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS					
STRUCTURE B-5-149					
CONST. SPEC.		DRAWN BY ---JBS		PLANS CK'D. ---ESG	
PART FRAMING PLAN				SHEET 4 OF 7	



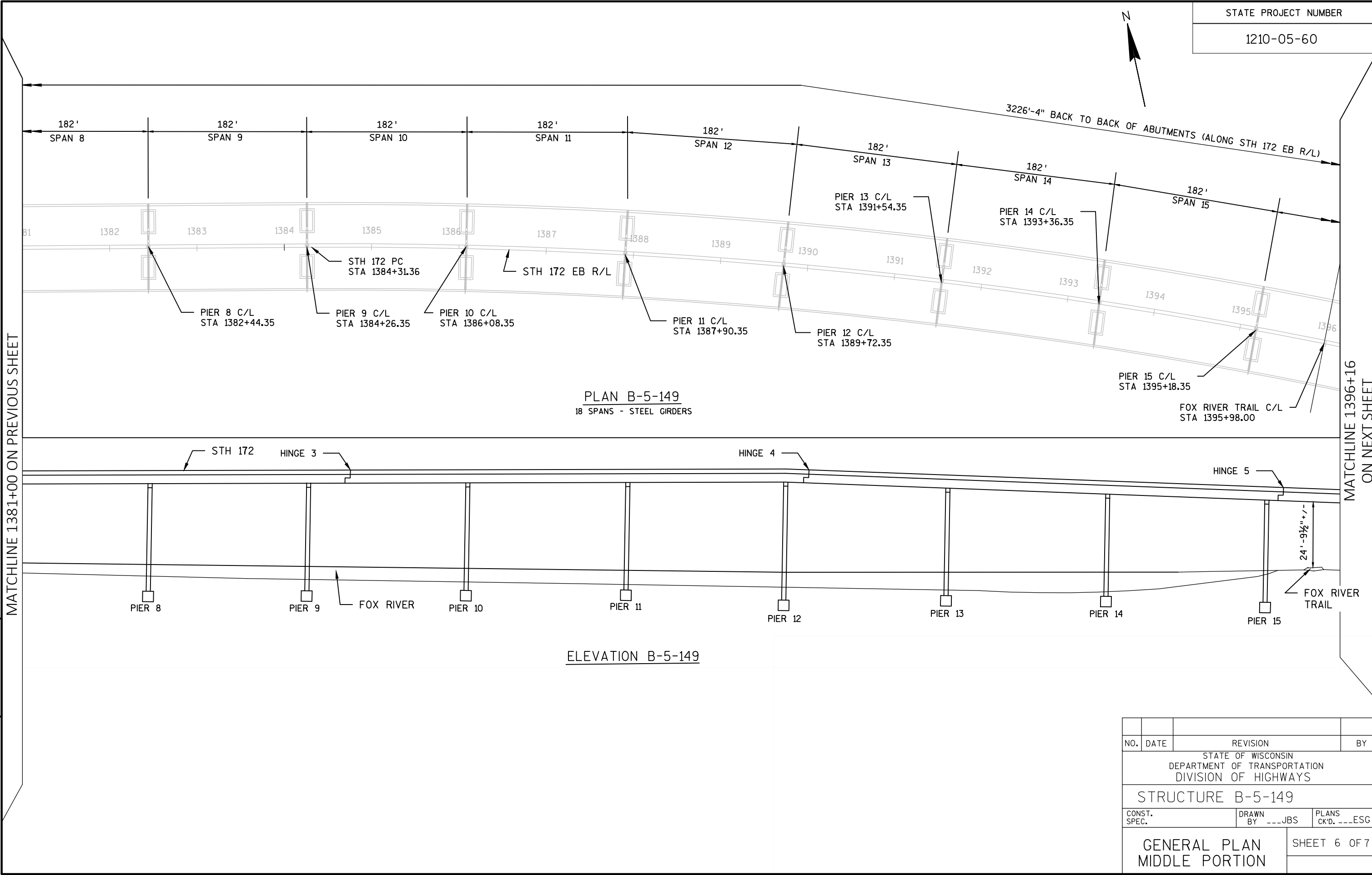
PLAN B-5-149  
18 SPANS - STEEL GIRDERS



ELEVATION B-5-149

MATCHLINE 1381+00  
ON NEXT SHEET

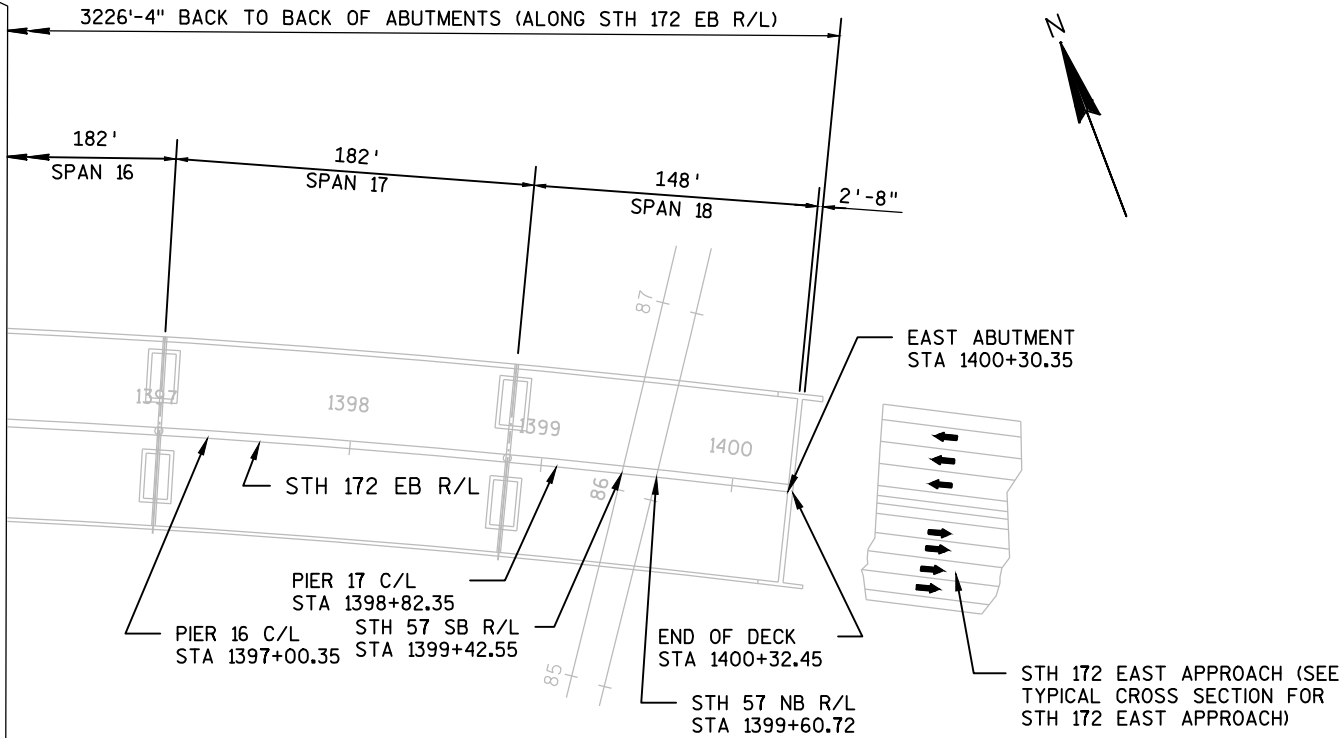
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-5-149			
CONST. SPEC.		DRAWN BY ---JBS	PLANS CK'D. ---ESG
GENERAL PLAN WEST PORTION			SHEET 5 OF 7



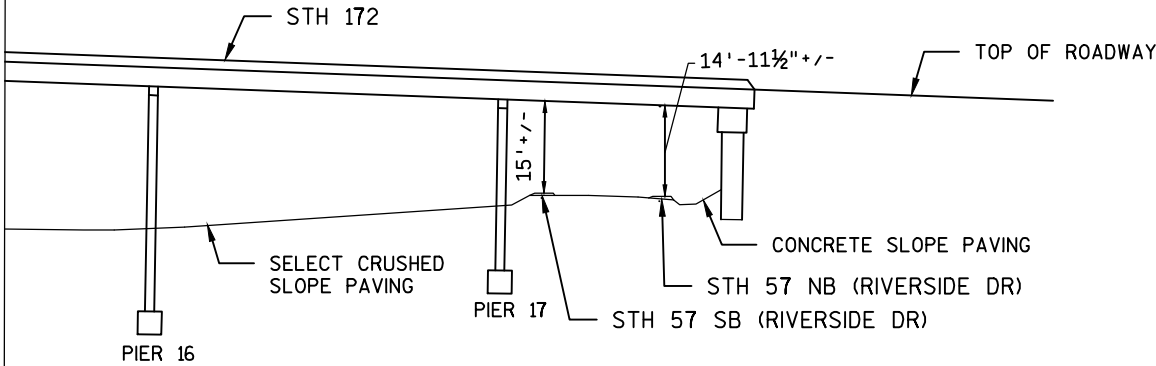
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-5-149			
CONST. SPEC.	DRAWN BY ---JBS	PLANS CK'D. ---ESG	
GENERAL PLAN MIDDLE PORTION			SHEET 6 OF 7

STATE PROJECT NUMBER
1210-05-60

MATCHLINE 1396+16  
ON PREVIOUS SHEET

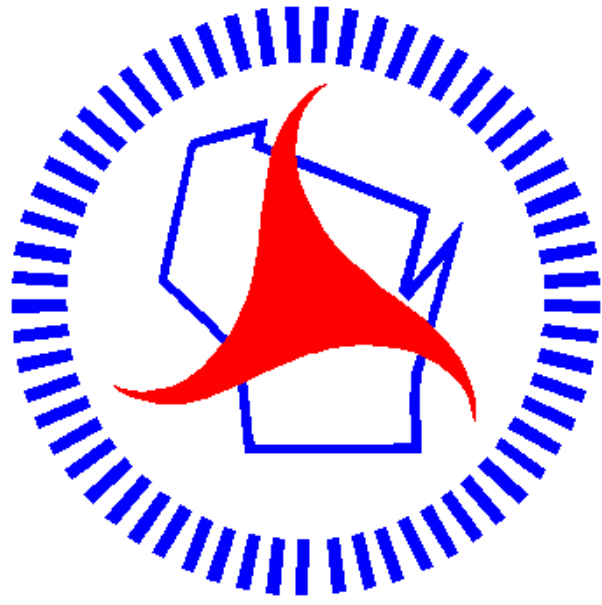


PLAN B-5-149  
18 SPANS - STEEL GIRDERS



ELEVATION B-5-149

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-5-149			
CONST. SPEC.	DRAWN BY ---JBS		PLANS CK'D. ---ESG
GENERAL PLAN EAST PORTION			SHEET 7 OF 7



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

Dedicated people creating transportation solutions  
through innovation and exceptional service.

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