

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN SHALL BE IN ACCORDANCE WITH THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS.

THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS PROVIDED IN THE SPECIAL PROVISIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS IN THE AREA THAT ARE NOT PROVIDED. THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.

TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

ALL EROSION CONTROL FEATURES ARE SHOWN AT SUGGESTED LOCATIONS IN THE PLANS. EXACT LOCATIONS WILL BE DETERMINED BY THE CONTRACTORS ECIP AND APPROVED BY THE ENGINEER IN CONSULTATION WITH THE DNR.

ORDER OF SECTION 2 SHEETS

PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
SIGNING AND PAVEMENT MARKING
LIGHTING
TRAFFIC CONTROL
PCMS
DETOUR PLAN
ALIGNMENT

ABUT ABUTMENT
A.D.T. AVERAGE DAILY TRAFFIC
AP ACCESS POINT
B.F. BACK FACE
B.M. BENCH MARK
B.O.P. BEGIN OF PROJECT
CL CENTER LINE
CTR. CENTER
CY CUBIC YARD
CP CULVERT PIPE
C&G CURB AND GUTTER
D.H.V. DESIGN HOURLY VOLUME
DIA. DIAMETER
DIM. DIMENSION
EL ELEVATION
EW END WALL
EBS EXCAVATION BELOW SUBGRADE
E.O.P. END OF PROJECT
EXC. EXCAVATION
EXIST EXISTING
F.F. FRONT FACE
FL FLOW LINE
HT HEIGHT
CWT HUNDREDWEIGHT
INL INLET
INV INVERT

ABBREVIATIONS

LT LEFT
ML MATCH LINE
MAX. MAXIMUM
MIN. MINIMUM
NORM. NORMAL
O.H. OVER HEAD POWER LINE
PT POINT
PC POINT OF CURVAURE
PI POINT OF INTERSECTION
PT POINT OF TANGENCY
PL PROPERTY LINE
PB PULL BOX
RAD. RADIUS
RL REFERENCE LINE
REQ'D REQUIRED
RT RIGHT
RHF RIGHT HAND FORWARD
R/W RIGHT OF WAY
STA. STATION
SSPRC STORM SEWER PIPE
REINFORCED CONCRETE
SE SUPERELEVATION
STR. STRUCTURE
TLE TEMPORARY LIMITED EASEMENT
TYP. TYPICAL
V. DESIGN SPEED

REGION CONTACT

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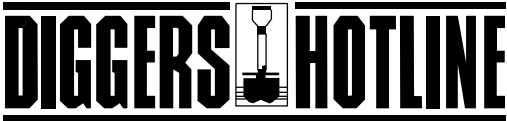
DESIGN CONSULTANT

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7633 GANSER WAY, SUITE 206,
MADISON, WI 53719

CHAD HALVERSON
608-821-8703
CHALVERSON@MBAKERCORP.COM

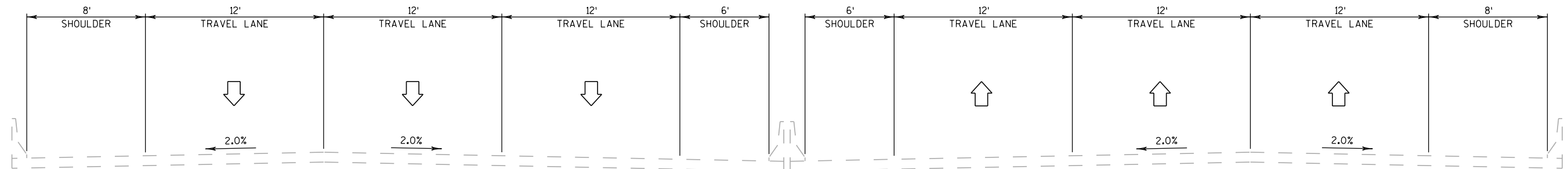
UTILITIES

UTILITY OR MUNICIPALITY	ADDRESS	CONTACT	UTILITY TYPE
ALLIANT ENERGY ELECTRICITY	4902 N. BILTMORE LN. SUITE 1000 MADISON, WI 53718	MR. JASON HOGAN 608-395-7395 JASONHOGAN@ALLIANTENERGY.COM	ELECTRIC
ATC MANAGEMENT, INC. ELECTRICITY	801 O'KEEFE RD. P.O. BOX 6113 DEPERE, WI 54115	MR. MIKE OLSEN 920-338-6582 MOLSEN@ATCLLC.COM	ELECTRIC
WISCONSIN DEPT. OF TRANSPORTATION COMMUNICATIONS	433 W. ST. PAUL AVE. SUITE 300 MILWAUKEE, WI 53203	MR. DONALD SCHELL 414-227-2148 DONALD.SCHELL@DOT.WI.GOV	COMMUNICATIONS
CHARTER COMMUNICATIONS	2701 DANIELS ST. MADISON, WI 53718	MR. BRANDON STORM 608-274-3882 EXT. 6642 BRANDON.STORM@CHARTERCOM.COM	COMMUNICATIONS
AT&T WISCONSIN	221 W. WASHINGTON ST. 4TH FLOOR APPLETON, WI 54911	MR. SCOTT GRINDE 920-735-3240 SG5813@ATT.COM	COMMUNICATIONS
WISDOT RWIS PROGRAM COMMUNICATION TOWER	P.O. BOX 7986 MADISON, WI 53707	MR. MIKE ADAMS 608-267-7856 MICHAEL.ADAMS@DOT.WI.GOV	COMMUNICATIONS
WINDSTREAM COMMUNICATIONS	13935 BISHOPS DR. BROOKFIELD, WI 53005	MR. JAMES KOSTUCH 262-792-7938 JAMES.KOSTUCH@WINDSTREAM.COM	COMMUNICATIONS
CITY OF MADISON TRAFFIC ENGINEERING COMM. & STREET LIGHTS	215 MARTIN LUTHER KING, JR. BLVD. MADISON, WI 53701	MR. DAVID DRYER 608-266-6546 TRAFFIC@CITYOFMADISON.COM	COMMUNICATIONS
MG&E GAS AND ELECTRIC	P.O. BOX 1231 MADISON, WI 53701	MR. TIM STATZ 608-252-4727 TSTATZ@MGE.COM	GAS/ELECTRIC
MADISON WATER UTILITY	119 E. OLIN AVE. MADISON, WI 53713	MR. DENNIS CAWLEY 608-266-4651 DCAWLEY@CITYOFMADISON.COM	WATER
CITY OF MADISON ENGINEERING SEWER	210 MARTIN LUTHER KING, JR. BLVD. RM. 115 MADISON, WI 53703	MR. ROB PHILLIPS 608-266-4751 ENGINEERING@CITYOFMADISON.COM	SEWER
MADISON METROPOITIAN SEWERAGE DISTRICT	1610 MOORLAND RD. MADISON, WI 53713	MR. ERIC HJELLEN 608-347-3613 ERICH@MADSEWER.ORG	SEWER
CITY OF MONONA ENGINEERING/PUBLIC WORKS	5211 SCHULTER RD. MONONA, WI 53716	MR. MARK MODAFF 608-222-2525 MMODAFF@CI.MONONA.WI.US	PUBLIC WORKS



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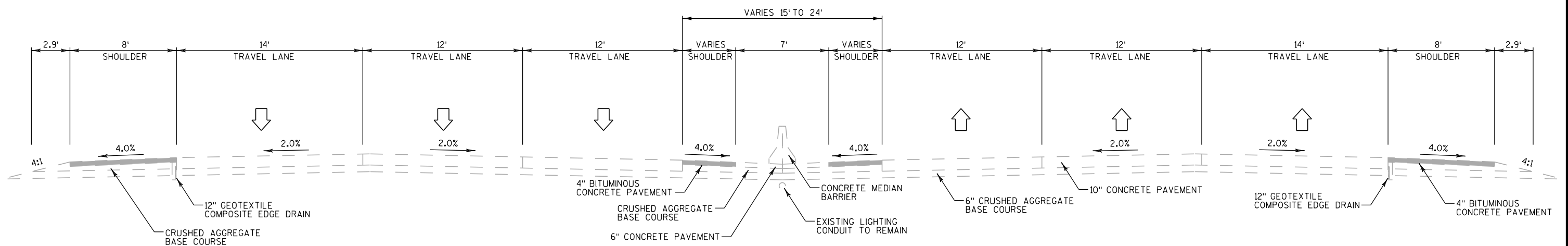




STRUCTURE B-13-16

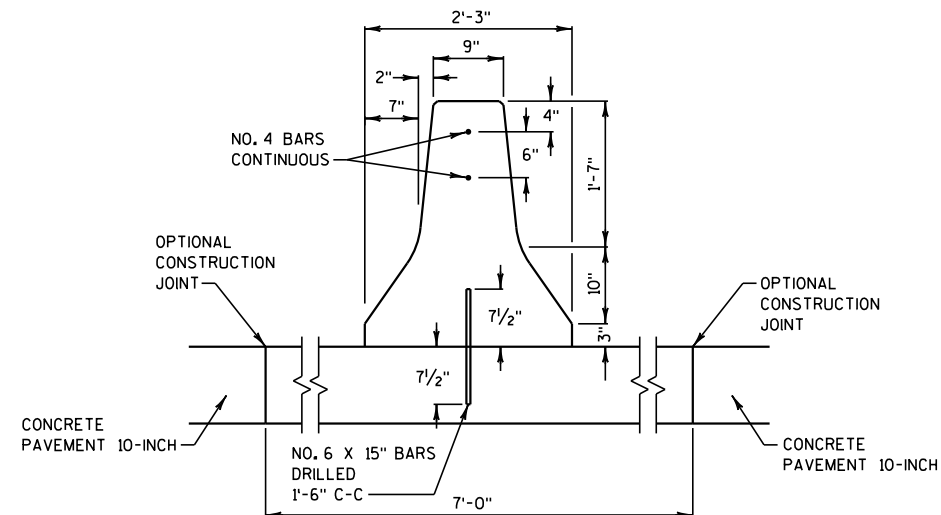
EXISTING TYPICAL SECTION - USH 12
STA. 99+67.57 TO STA. 125+69.05
(LOOKING EAST)

STRUCTURE B-13-15



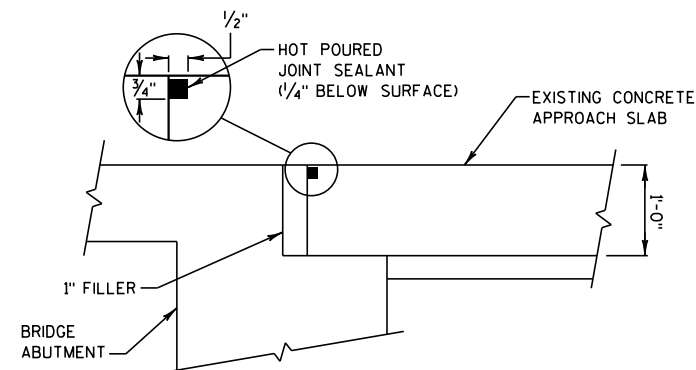
EXISTING TYPICAL SECTION - USH 12
STA. 82+34.00 TO STA. 99+67.57
STA. 125+69.05 TO STA. 141+45.00
(LOOKING EAST)



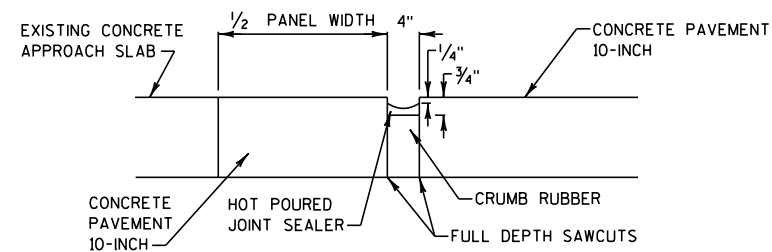


NOTE:
ALL OTHER INFORMATION SHALL COMPLY WITH
STANDARD DETAIL DRAWING FOR CONCRETE BARRIER
(DOUBLE FACED).

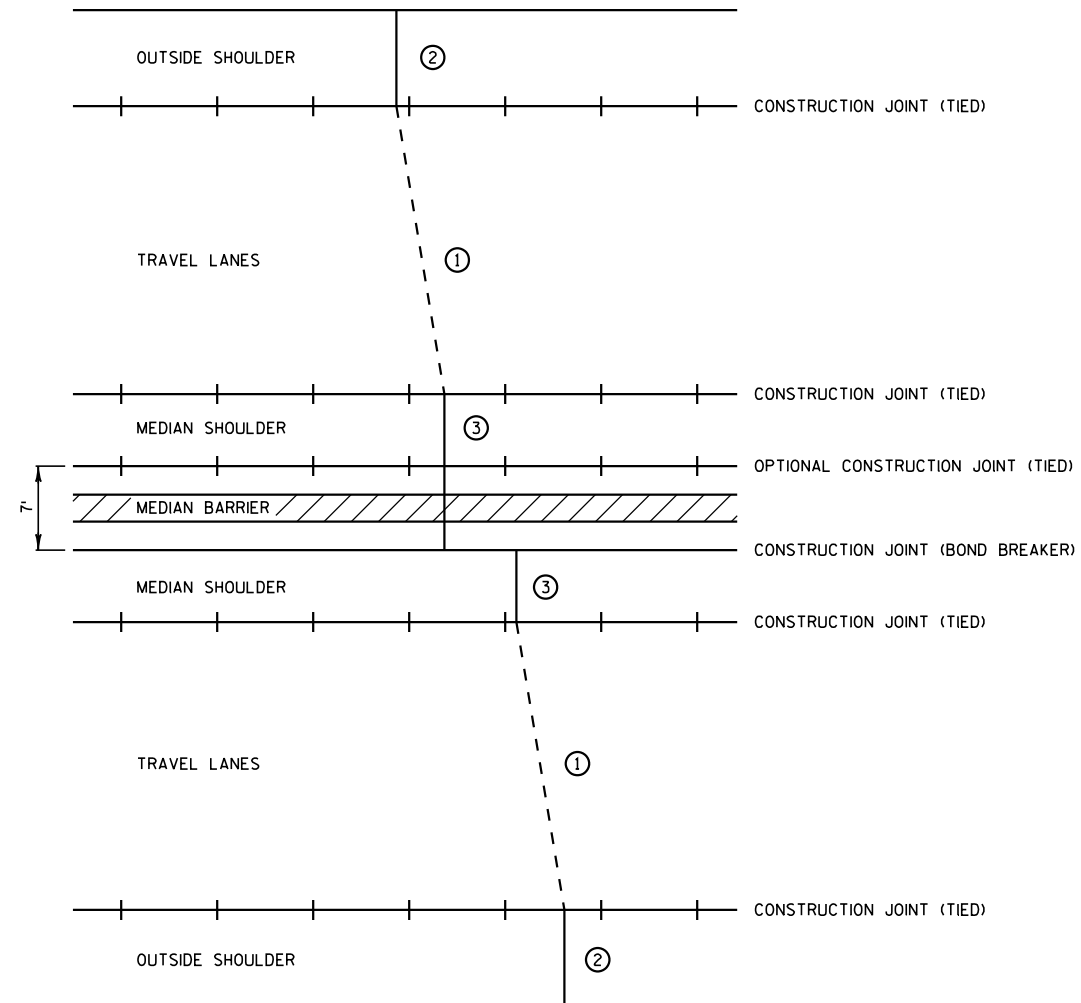
CONCRETE MEDIAN BARRIER DOUBLE FACED 32-INCH SPECIAL
N.T.S.



EXPANSION JOINT
N.T.S.



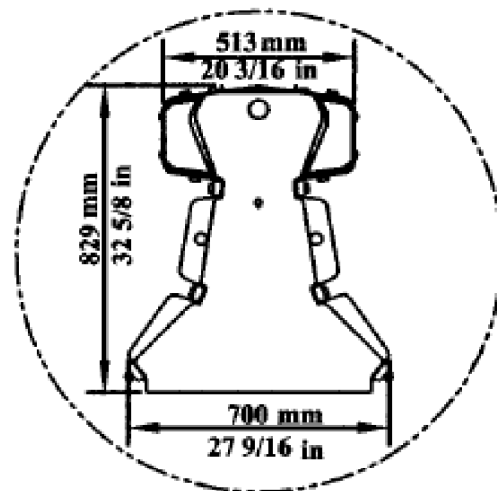
SAWING CONCRETE RELIEF JOINT
N.T.S.



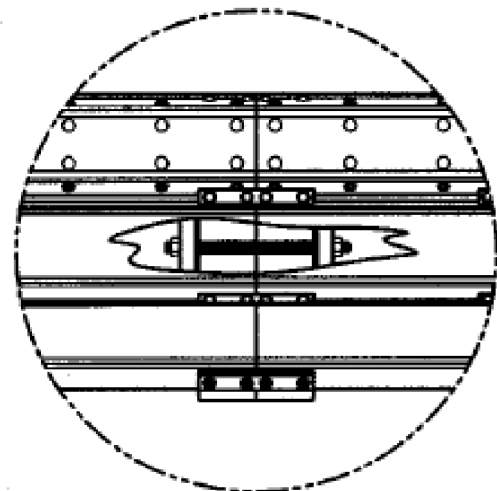
NOTES:

- EXISTING TRANSVERSE JOINTS ARE SKEWED AT 1:6 AND A SPACING OF 13', 19', 18', AND 12'.
- CONSTRUCT JOINTS ON OUTSIDE SHOULDERS PERPENDICULAR TO DIRECTION OF TRAVEL AND MATCH EXISTING JOINTS AND SPACING.
- CONSTRUCT JOINTS IN MEDIAN PERPENDICULAR TO DIRECTION OF TRAVEL AND MATCH EXISTING TRAVEL LANE JOINTS AND SPACING. ATTEMPT TO ALIGN EASTBOUND AND WESTBOUND MEDIAN JOINTS. ADD LONGITUDINAL BOND BREAKER AT ONE MEDIAN CONSTRUCTION JOINT.

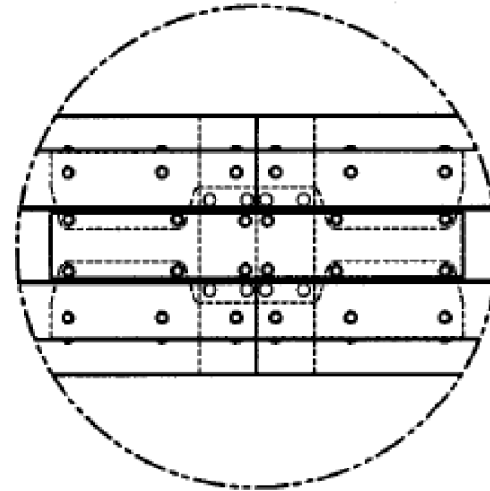
JOINT LAYOUT
N.T.S.



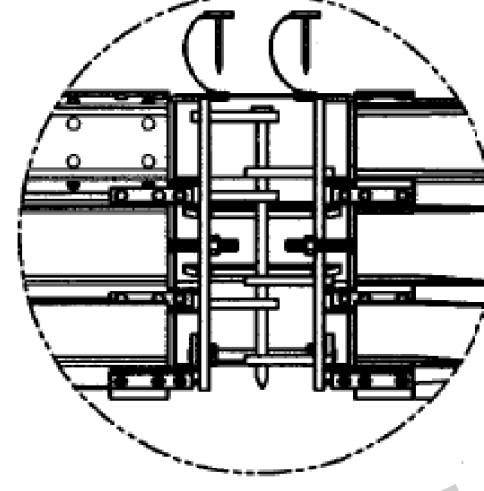
DETAIL A



DETAIL B

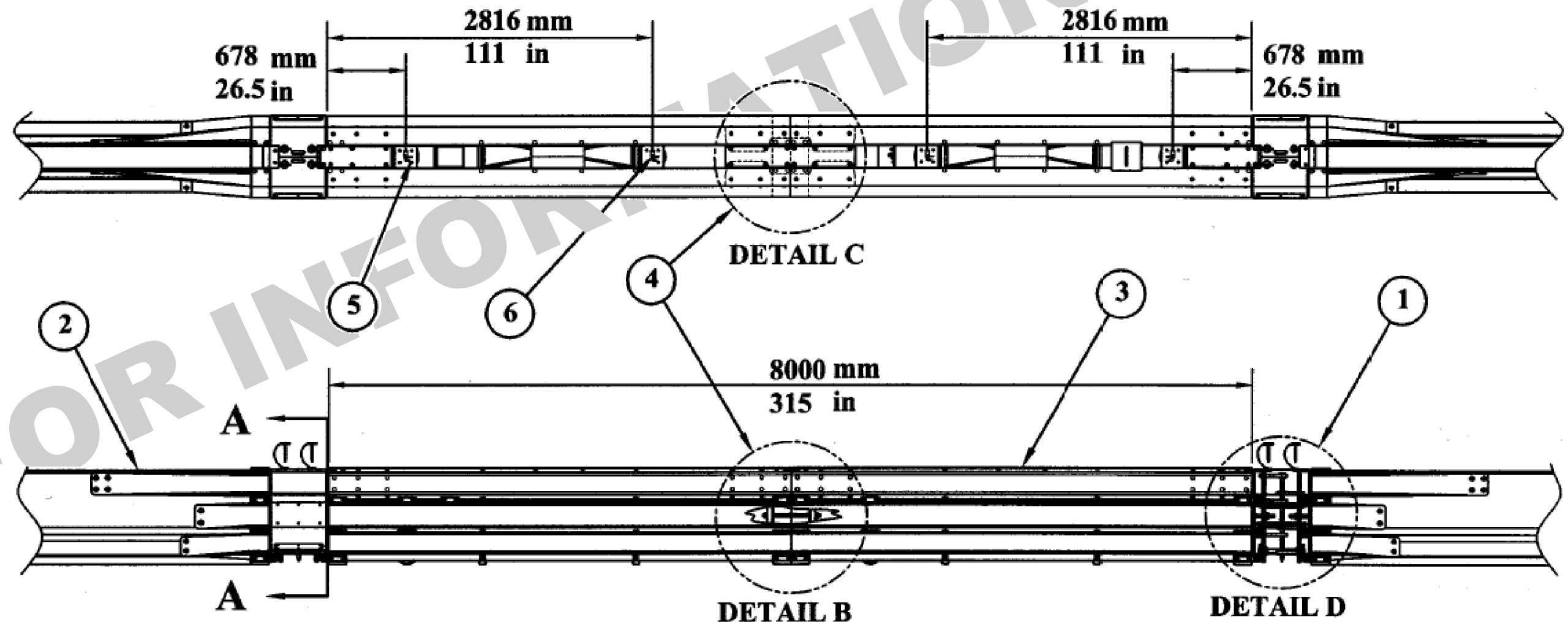


DETAIL C



DETAIL D

REFER TO MANUFACTURER'S
SPECIFICATIONS FOR
INSTALLATION INSTRUCTIONS.

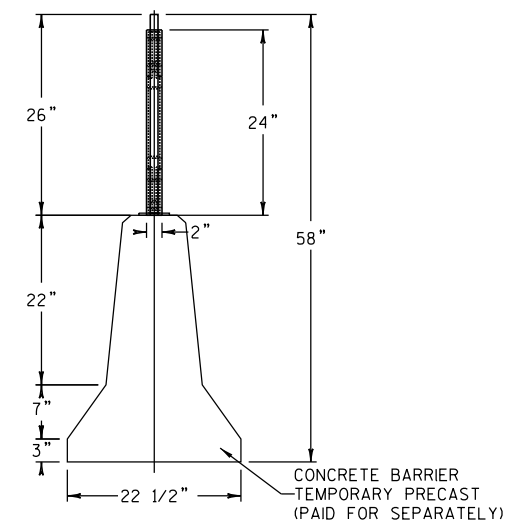
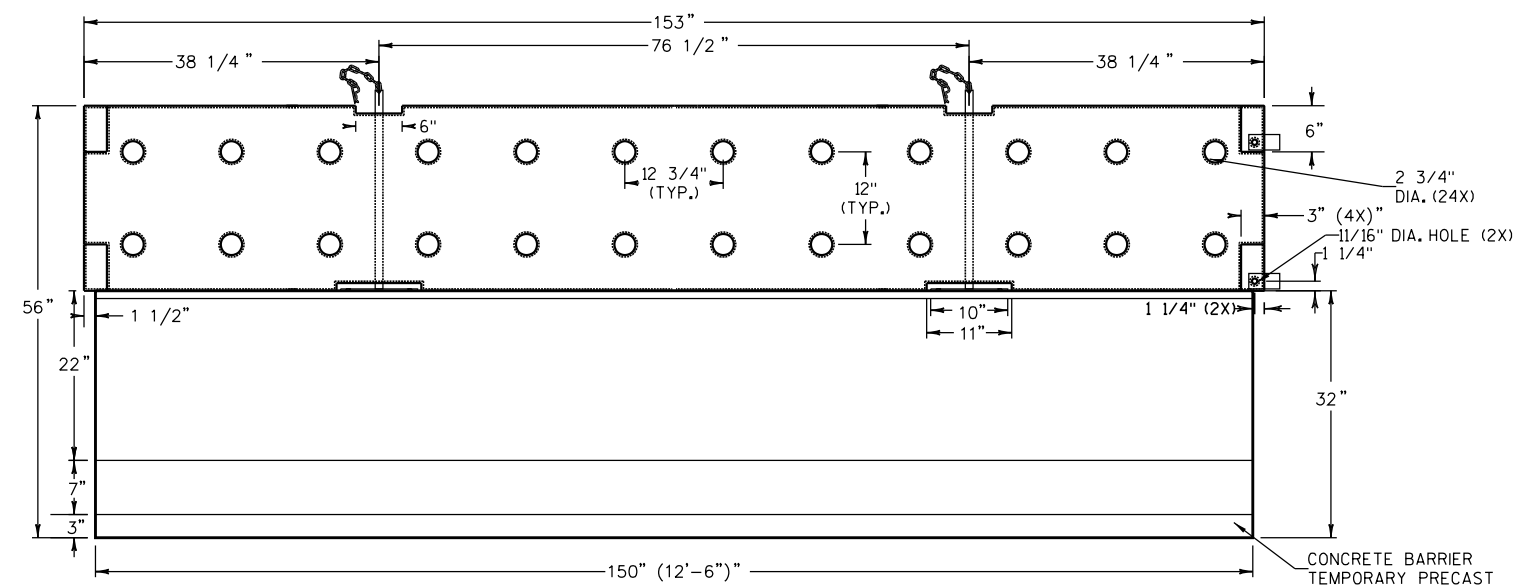
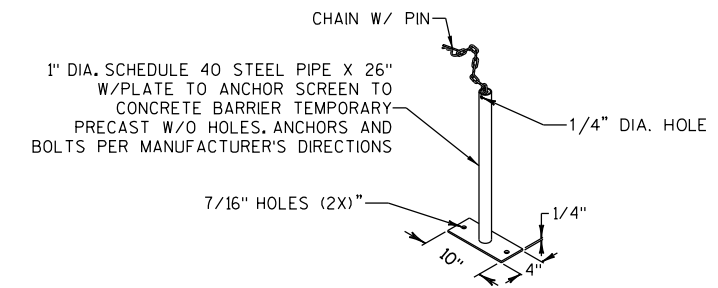
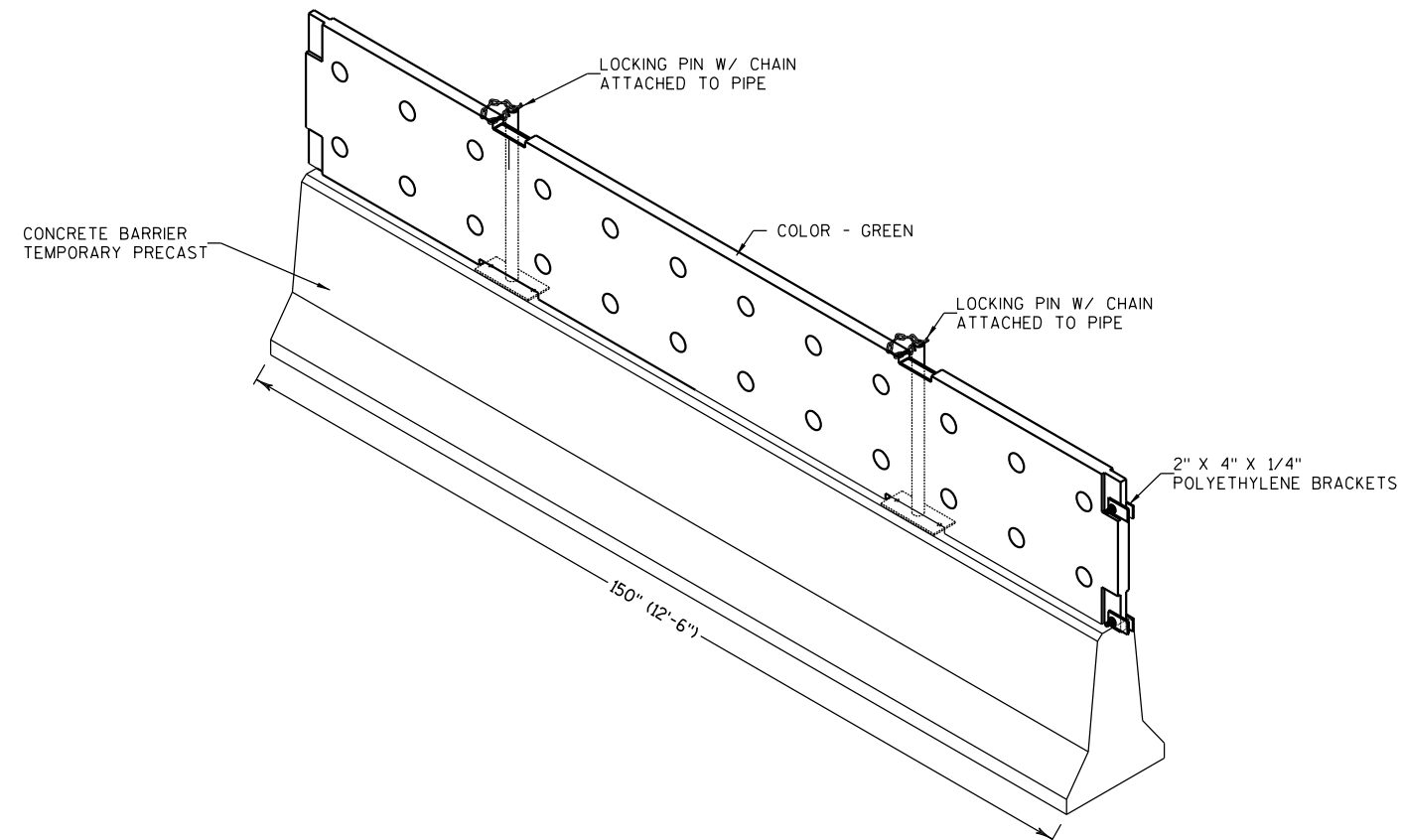


DETAIL C

DETAIL B

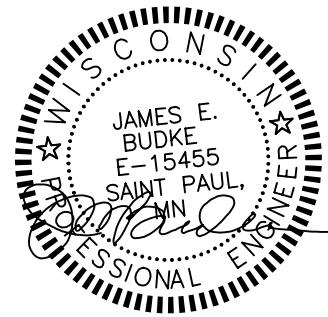
DETAIL D

DETAIL A
SECTION A-A



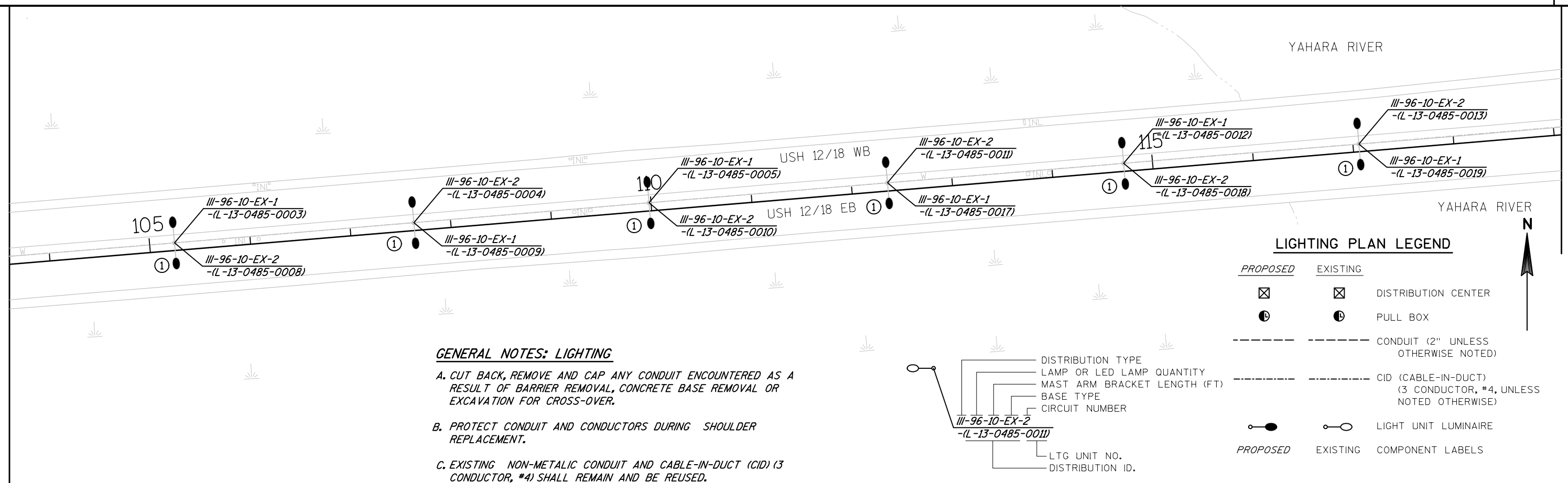
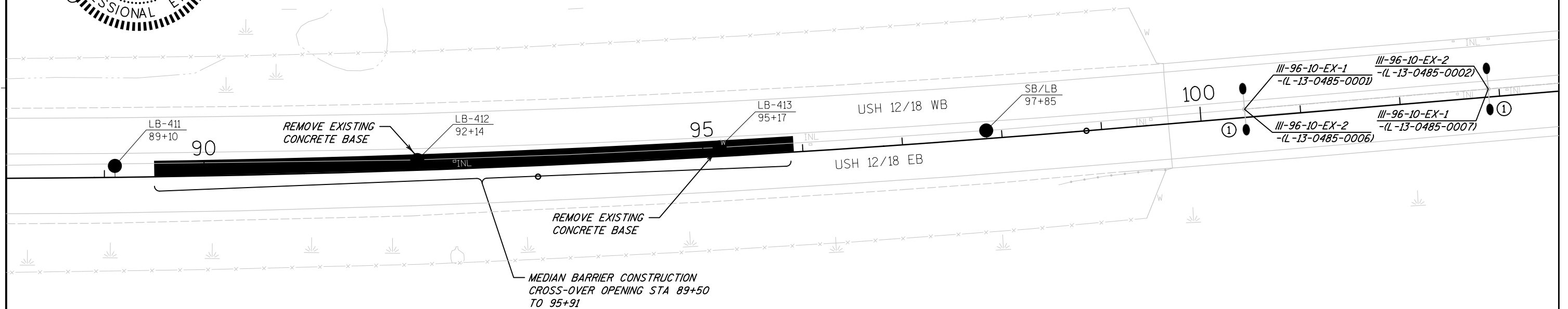
PROTECTIVE SCREEN DETAIL
N.T.S.

NOTE: DETAIL IS ARMORCAST PART NUMBER P6000963



KEYED NOTE LEGEND

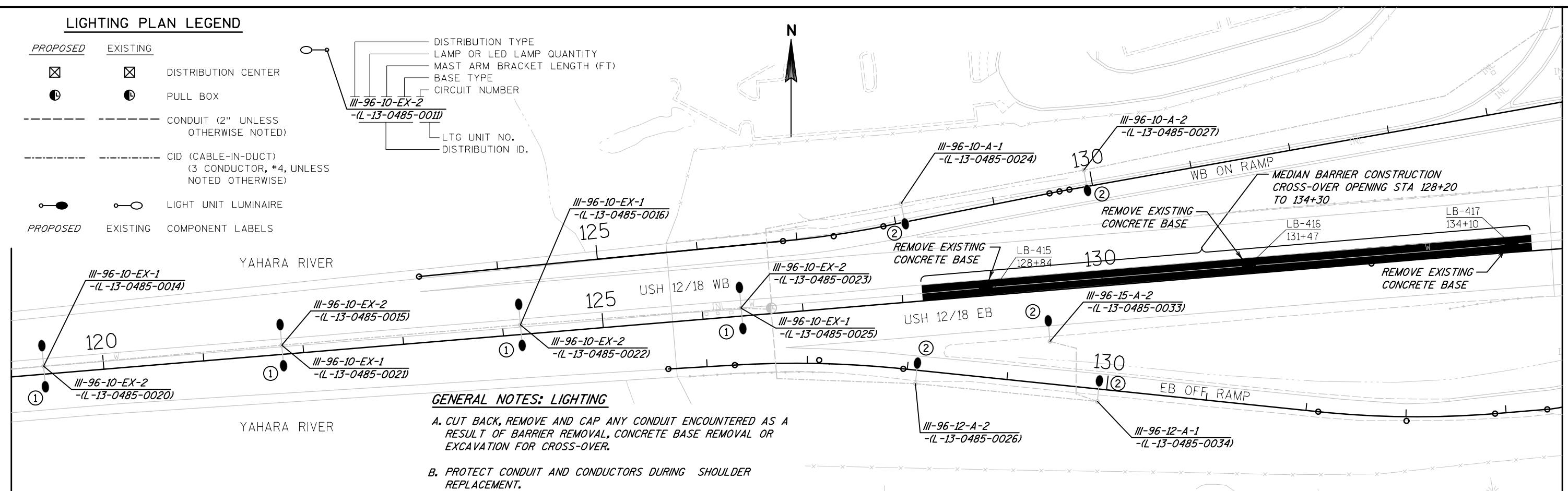
- ① EXISTING POLE, BASE AND ARMS SHALL REMAIN AND BE REUSED; DISCONNECT, REMOVE EXISTING LUMINAIRES (REFER TO SPV). DISCONNECT AND REMOVE WIRING, SPLICE BLOCKS AND FUSE HOLDERS IN POLE. PROVIDE NEW SPLICE BLOCKS, (2) NEW FUSE HOLDERS, 6 AMP FUSES, 4*12, 2*12 GND WIRE IN POLE AND (2) LED LUMINAIRES, REFER TO SPV.
- ② EXISTING POLE, BASE AND ARM SHALL REMAIN AND BE REUSED; DISCONNECT, REMOVE EXISTING LUMINAIRE (REFER TO SPV). DISCONNECT AND REMOVE WIRING, SPLICE BLOCKS AND FUSE HOLDER IN POLE. PROVIDE NEW SPLICE BLOCKS, NEW FUSE HOLDER, 6 AMP FUSE, 2*12, 1*12 GND WIRE IN POLE AND (1) LED LUMINAIRE, REFER TO SPV.



LIGHTING PLAN LEGEND

PROPOSED	EXISTING	
		DISTRIBUTION CENTER
		PULL BOX
		CONDUIT (2" UNLESS OTHERWISE NOTED)
		CID (CABLE-IN-DUCT) (3 CONDUCTOR, #4, UNLESS NOTED OTHERWISE)
		LIGHT UNIT LUMINAIRE
		COMPONENT LABELS

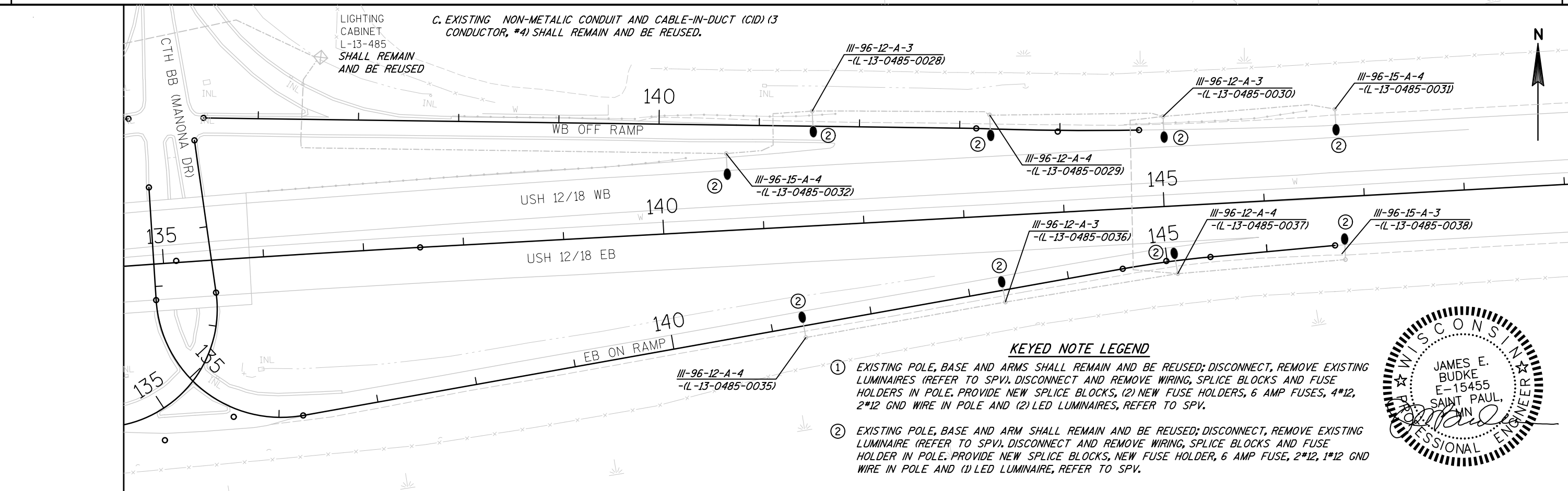
DISTRIBUTION TYPE
LAMP OR LED LAMP QUANTITY
MAST ARM BRACKET LENGTH (FT)
BASE TYPE
CIRCUIT NUMBER
LTG UNIT NO.
DISTRIBUTION ID.



GENERAL NOTES: LIGHTING

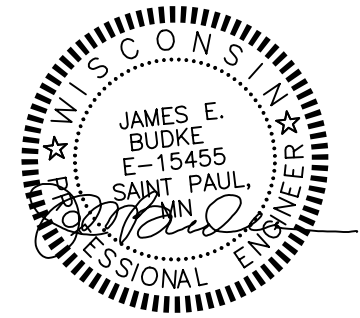
- A. CUT BACK, REMOVE AND CAP ANY CONDUIT ENCOUNTERED AS A RESULT OF BARRIER REMOVAL, CONCRETE BASE REMOVAL OR EXCAVATION FOR CROSS-OVER.
- B. PROTECT CONDUIT AND CONDUCTORS DURING SHOULDER REPLACEMENT.
- C. EXISTING NON-METALIC CONDUIT AND CABLE-IN-DUCT (CID) (3 CONDUCTOR, #4) SHALL REMAIN AND BE REUSED.

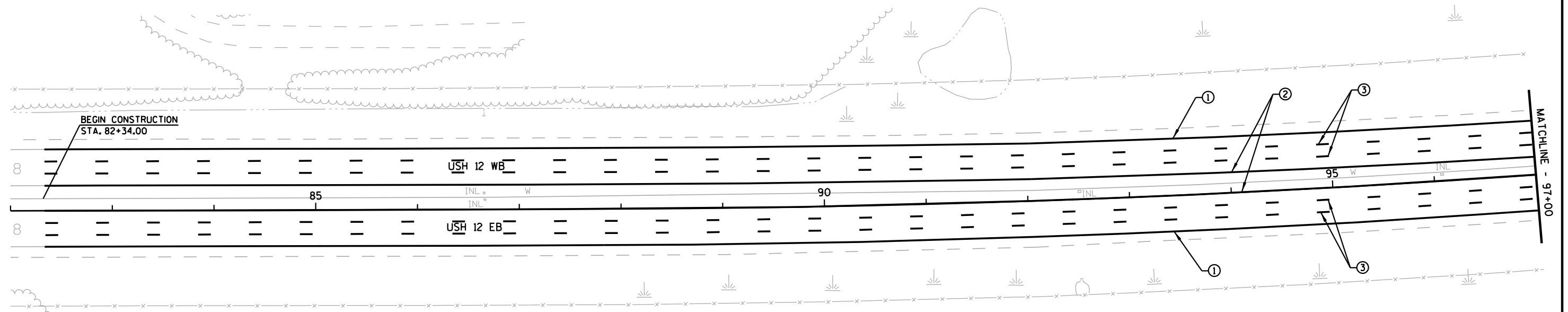
LIGHTING CABINET L-13-485 SHALL REMAIN AND BE REUSED



KEYED NOTE LEGEND

- ① EXISTING POLE, BASE AND ARMS SHALL REMAIN AND BE REUSED; DISCONNECT, REMOVE EXISTING LUMINAIRES (REFER TO SPV). DISCONNECT AND REMOVE WIRING, SPLICE BLOCKS AND FUSE HOLDERS IN POLE. PROVIDE NEW SPLICE BLOCKS, (2) NEW FUSE HOLDERS, 6 AMP FUSES, 4*12, 2*12 GND WIRE IN POLE AND (2) LED LUMINAIRES, REFER TO SPV.
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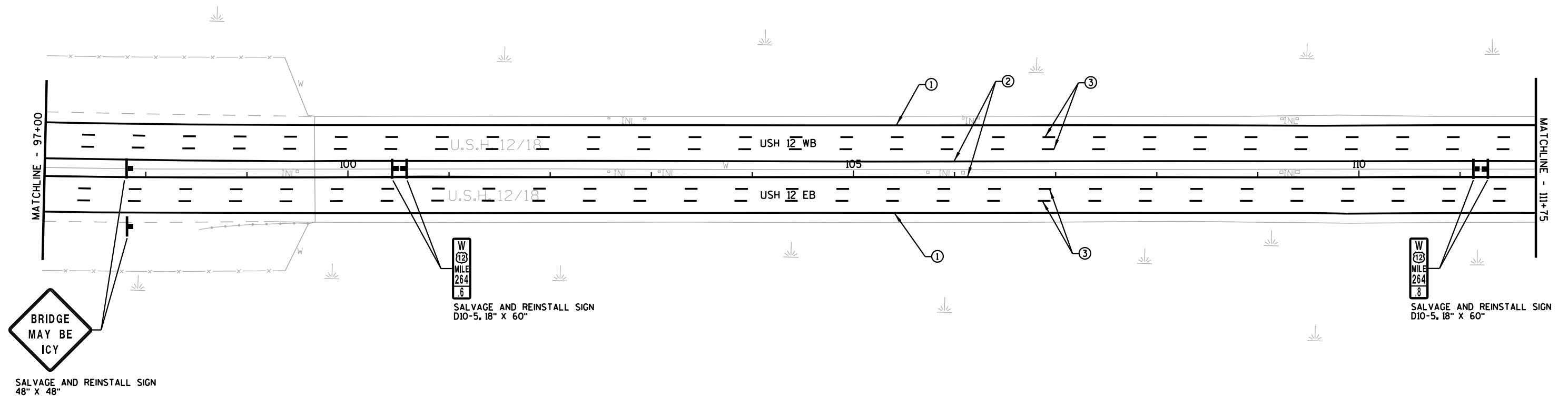




NOTE:
INSTALLATION SHALL CONFORM TO REQUIREMENTS
OF STANDARD DETAIL DRAWING FOR PAVEMENT MARKING (MAINLINE),
EXCEPT WET REFLECTIVE TAPE SUPPLEMENT IS NOT REQUIRED.

LEGEND

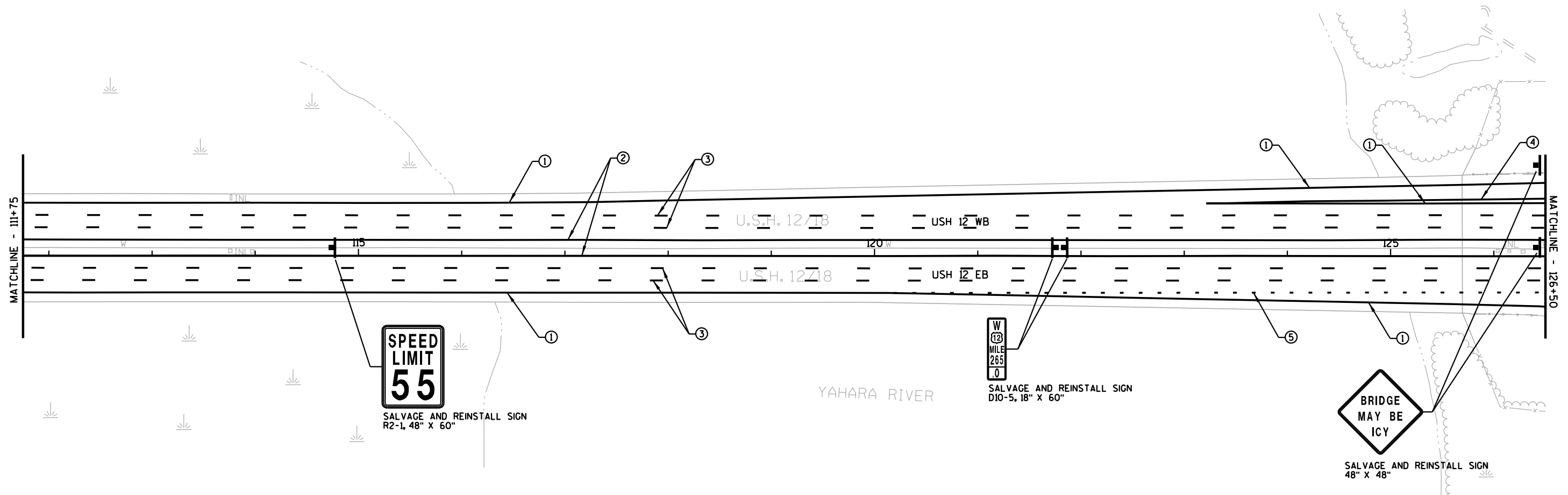
- ① PAVEMENT MARKING EPOXY 4-INCH (WHITE)
- ② PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
- ③ PAVEMENT MARKING EPOXY 4-INCH (12.5' LINE - 37.5' GAP)
- ④ PAVEMENT MARKING EPOXY 8-INCH
- ⑤ PAVEMENT MARKING EPOXY 4-INCH (3' LINE - 9' GAP)



NOTE:
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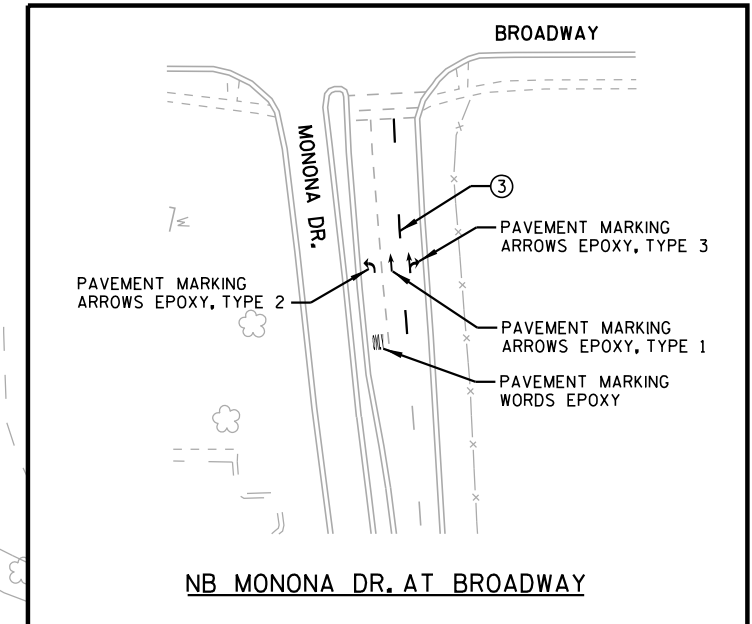
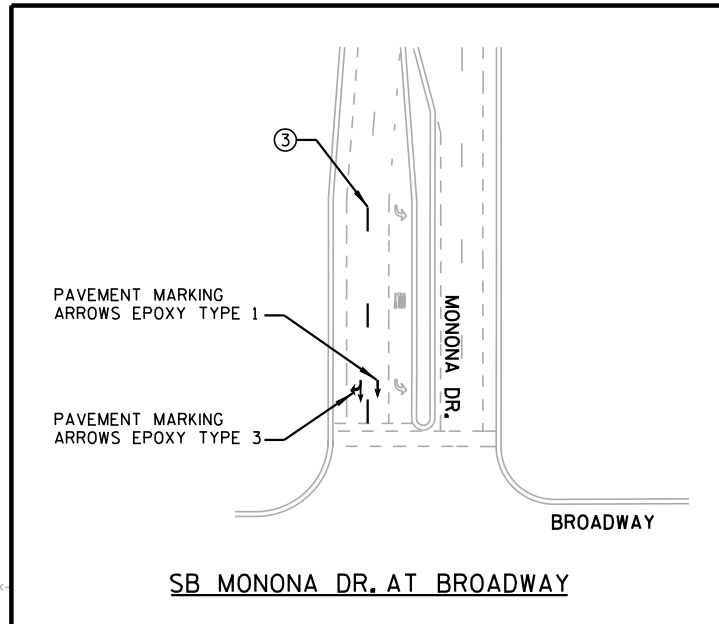
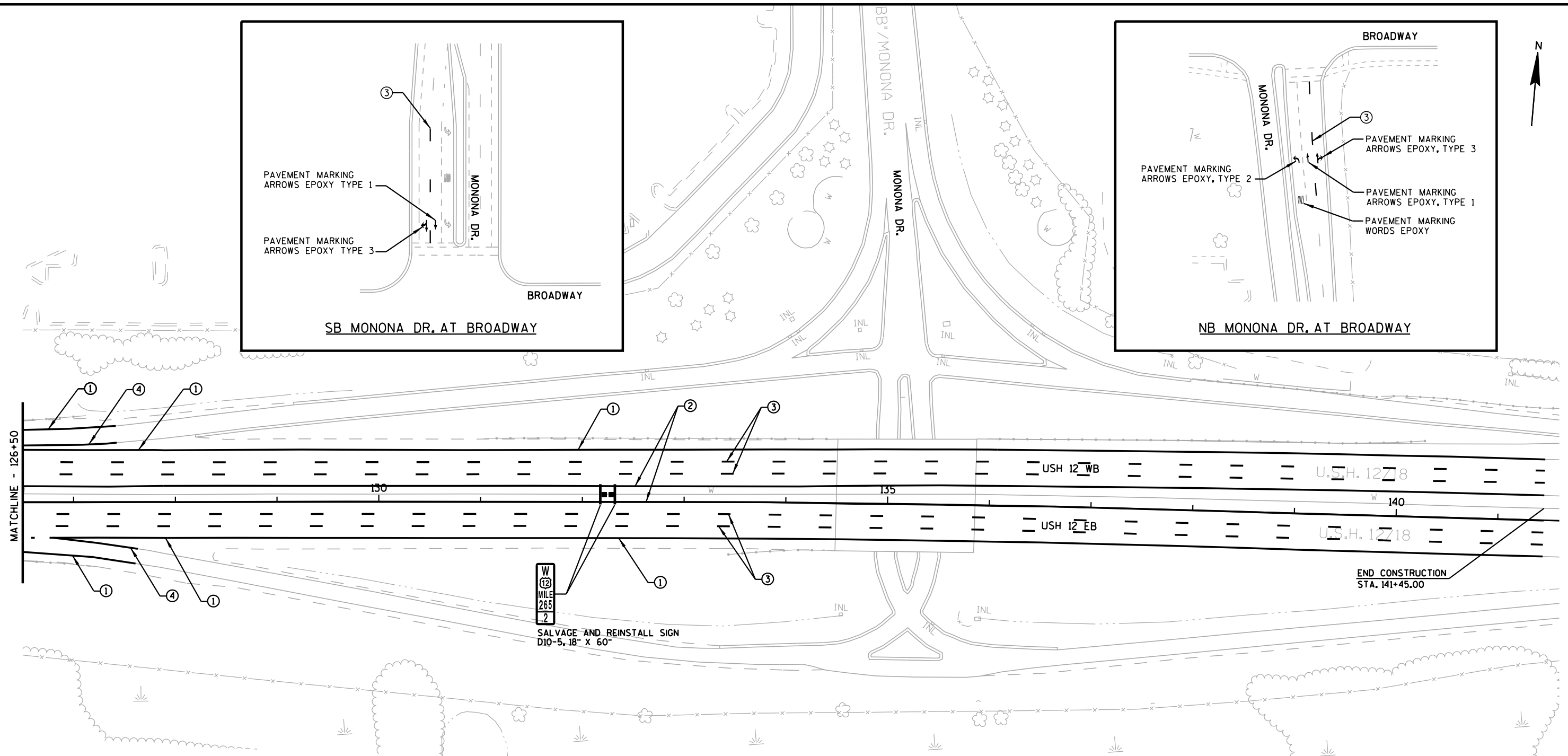
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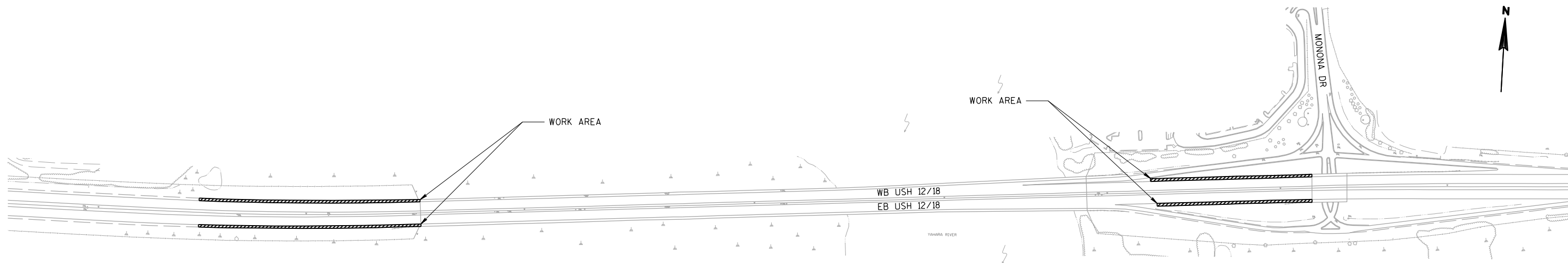
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TRAFFIC CONTROL - GENERAL NOTES

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 200 FEET (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.

ANY SIGN, TEMPORARY OR EXISTING, WHICH CONFLICTS WITH TRAFFIC CONTROL SIGNS SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS, ARROW BOARDS AND PORTABLE CHANGEABLE MESSAGE SIGNS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD, PORTABLE CHANGEABLE MESSAGE SIGNS, AND LANE CLOSURE CHANNELIZING DEVICES FOR A MINIMUM 1500 FEET IN ADVANCE OF LANE CLOSURE.

IF LANE CLOSURES ARE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

THE LANE CLOSURE SERIES SHALL BE INSTALLED AS A COMPLETE UNIT WITH INCLUDES ALL WARNING SIGNS, CHANNELING DEVICES, AND ARROW BOARDS.

PAVEMENT MARKINGS NOT APPROPRIATE TO THE TRAVEL PATH SHALL BE REMOVED.

TEMPORARY RAISED PAVEMENT MARKERS SHALL BE USED TO SEPARATE TRAVEL LANES IN THE SAME DIRECTION IN LANE SHIFTS AND AS DIRECTED BY THE ENGINEER.

ALL TRAFFIC CONTROL SIGNING SHALL CONFORM TO: PART VI OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), THE WISCONSIN SUPPLEMENT TO THE MUTCD, AND OTHER CONTRACT DOCUMENTS.

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF: THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H:1V,. FOR EXAMPLE, THE EDGE OF BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IF LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 45 MPH OR GREATER.

CONTRACTORS EQUIPMENT AND MATERIALS STOCKPILES MAY NOT BE STORED WITHIN 30 FEET OF THE EDGE OF TRAVEL LANE OF USH 12/USH 18 OR USH 12/USH 18 RAMPS WHILE THE CONTRACTOR IS NOT WORKING, UNLESS THEY ARE PROTECTED BY CONCRETE BARRIER TEMPORARY PRECAST.

THE TURNING OF TRAFFIC CONTROL DEVICES WHEN NOT IN USE TO OBSCURE THE MESSAGE WILL NOT BE ALLOWED.

PROTECTIVE SCREEN SHALL BE INSTALLED WHERE INDICATED OR WHERE DIRECTED BY THE ENGINEER. ATTACHMENT TO CONCRETE BARRIER TEMPORARY PRECAST OR EXISTING BRIDGE BARRIER SHALL BE APPROVED BY THE ENGINEER.

TRAFFIC CONTROL SIGNS PLACED BEHIND PROTECTIVE SCREEN SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGN AT 9'-0" OR GREATER TO INCREASE SIGN VISIBILITY.

TEMPORARY CONCRETE BARRIER GATE SHALL BE INSTALLED IN ACCORDANCE WITH THE PROJECT SPECIAL PROVISIONS AND AT A LOCATION IDENTIFIED BY THE ENGINEER. ANCHORING OF CONCRETE BARRIER TEMPORARY PRECAST AT GATE LOCATIONS IN INCIDENTAL TO THE INSTALLATION AND RESET OF THE TEMPORARY CONCRETE BARRIER GATE.

PLACE W08-6A SIGN, TRUCKS ENTERING AND LEAVING IN ADVANCE OF WORK ZONE.

CONSTRUCTION STAGING OVERVIEW - STAGE 1A

TRAFFIC OPERATIONS

USH 12/USH 18

TRAFFIC WILL BE MAINTAINED ON EXISTING LANES. ALL LANES WILL BE OPEN DURING PEAK PERIODS. ONE LANE AND TWO LANE CLOSURES PERMITTED IN ACCORDANCE WITH PROJECT SPECIAL PROVISIONS.

USH 12/USH 18 RAMPS

TRAFFIC WILL BE MAINTAINED ON ALL EXISTING LANES OF USH 12/USH 18 RAMPS AT ALL TIMES.

CONSTRUCTION OPERATIONS

USH 12/USH 18

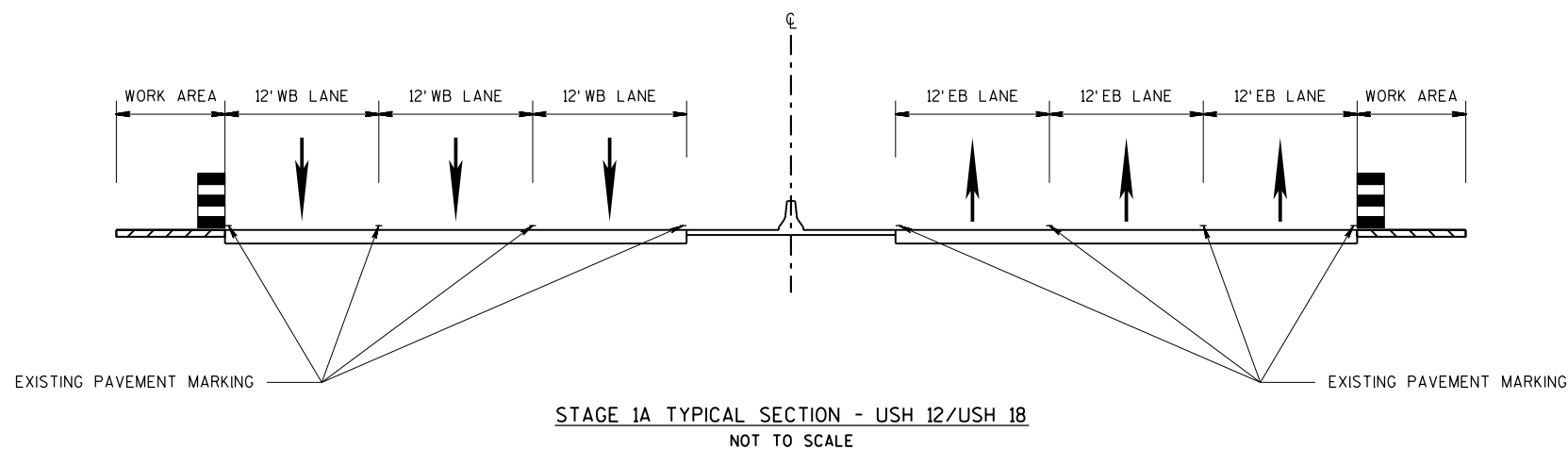
OPERATION WILL CONSIST OF REMOVAL AND RECONSTRUCTION OF THE EXISTING OUTSIDE SHOULDER PAVEMENT OF USH 12/USH 18 TO ACCOMMODATE SUBSEQUENT LANE SHIFTS.

NOTES - STAGE 1A

BACKFILL ANY EXCAVATION GREATER THAN 0'-4" ADJACENT TO TRAVEL LANES AT 3:1 WITH SUITABLE MATERIAL. NO DROPOFF GREATER THAN 0'-4" SHALL IS PERMITTED DURING PEAK PERIODS.

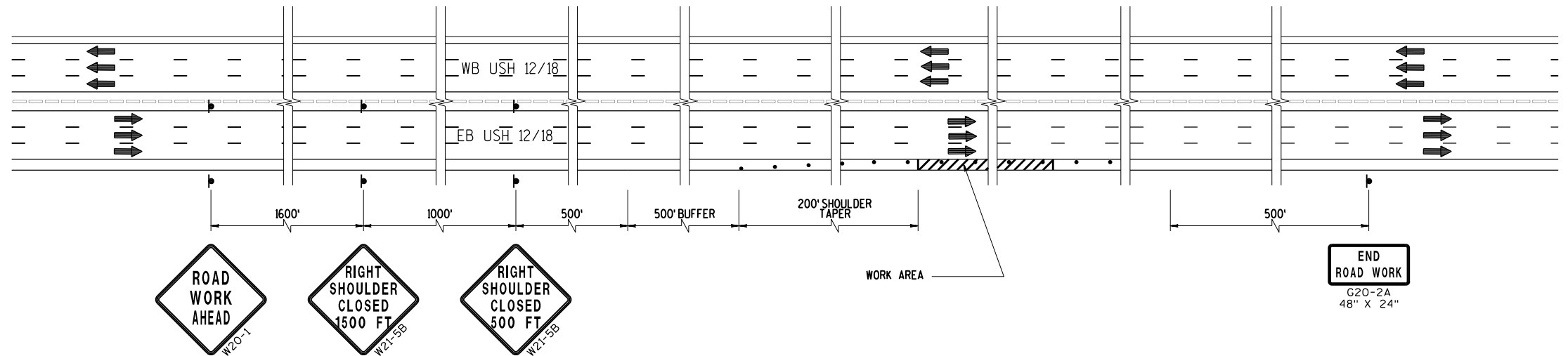
REFER TO THE FOLLOWING STANDARD DETAIL DRAWINGS FOR TRAFFIC CONTROL DEVICES, AS WELL AS OTHER STANDARD DETAIL DRAWINGS AS NECESSARY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER:

TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 MPH
TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)
TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE

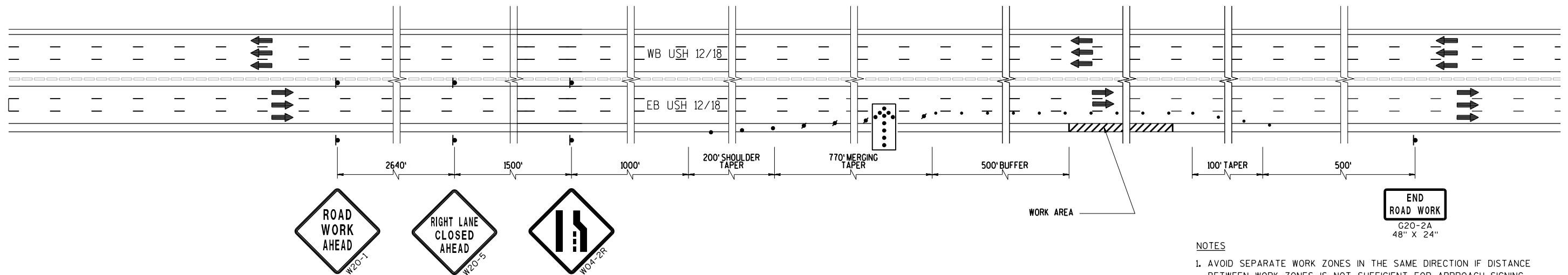


LEGEND

- TRAFFIC CONTROL DRUM
- ⦿ TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- ▬ SIGN ON TEMPORARY SUPPORT
- ▬ CONCRETE MEDIAN BARRIER
- ⬢ ARROW BOARD
- ▨ WORK AREA
- ➡ DIRECTION OF TRAFFIC



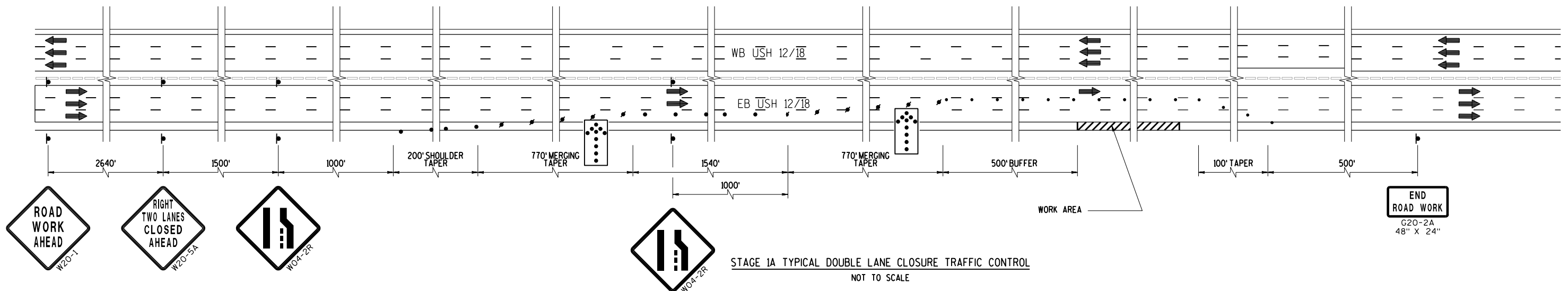
STAGE 1A TYPICAL PEAK PERIOD TRAFFIC CONTROL
NOT TO SCALE



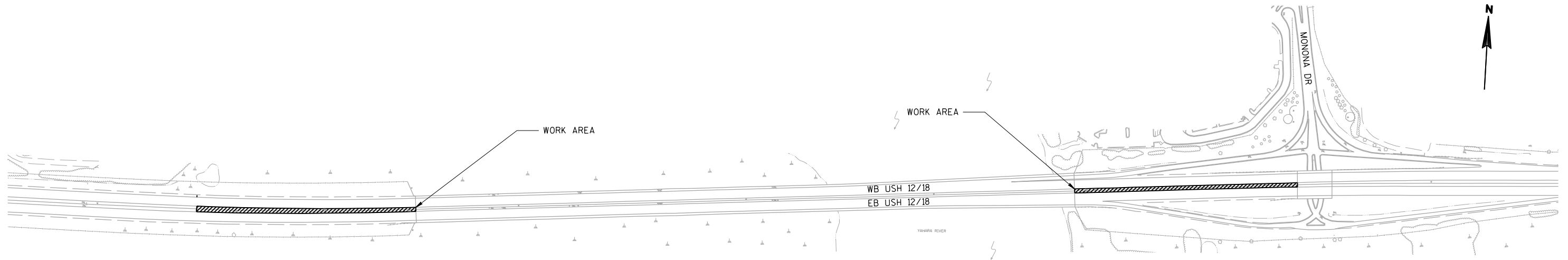
STAGE 1A TYPICAL SINGLE CLOSURE TRAFFIC CONTROL
NOT TO SCALE

NOTES

1. AVOID SEPARATE WORK ZONES IN THE SAME DIRECTION IF DISTANCE BETWEEN WORK ZONES IS NOT SUFFICIENT FOR APPROACH SIGNING.
2. USE LEFT LANE CLOSURE(S) FOR WESTBOUND WORK ZONE ADJACENT TO MONONA DRIVE ENTRANCE RAMP. SHIFT TRAFFIC AS REQUIRED. REVERSE TRAFFIC CONTROL SHOWN IN DETAIL.



STAGE 1A TYPICAL DOUBLE LANE CLOSURE TRAFFIC CONTROL
NOT TO SCALE



CONSTRUCTION STAGING OVERVIEW - STAGE 1B

TRAFFIC OPERATIONS

USH 12/USH 18
TRAFFIC WILL BE MAINTAINED ON EXISTING LANES. ALL LANES WILL BE OPEN DURING PEAK PERIODS. ONE LANE AND TWO LANE CLOSURES PERMITTED IN ACCORDANCE WITH PROJECT SPECIAL PROVISIONS.

USH 12/USH 18 RAMP
TRAFFIC WILL BE MAINTAINED ON ALL EXISTING LANES OF USH 12/USH 18 RAMP AT ALL TIMES.

CONSTRUCTION OPERATIONS

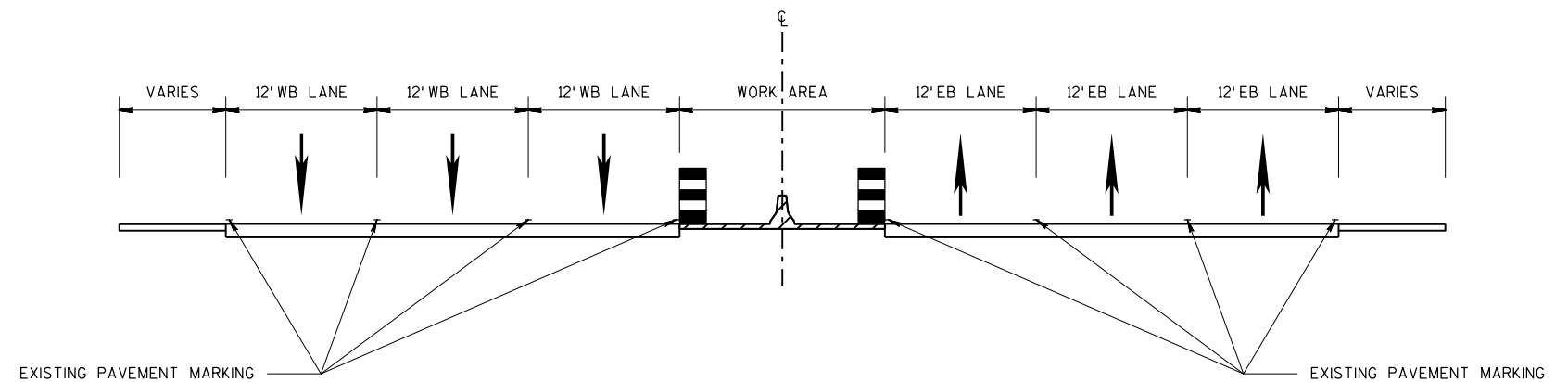
USH 12/USH 18
OPERATION WILL CONSIST OF REMOVING THE EXISTING MEDIAN BARRIER AND MEDIAN PAVEMENT ON USH 12/USH 18, INSTALLATION OF STORM SEWER, AND CONSTRUCTION OF NEW MEDIAN PAVEMENT FOR SINGLE LANE CROSSOVERS.

NOTES - STAGE 1B

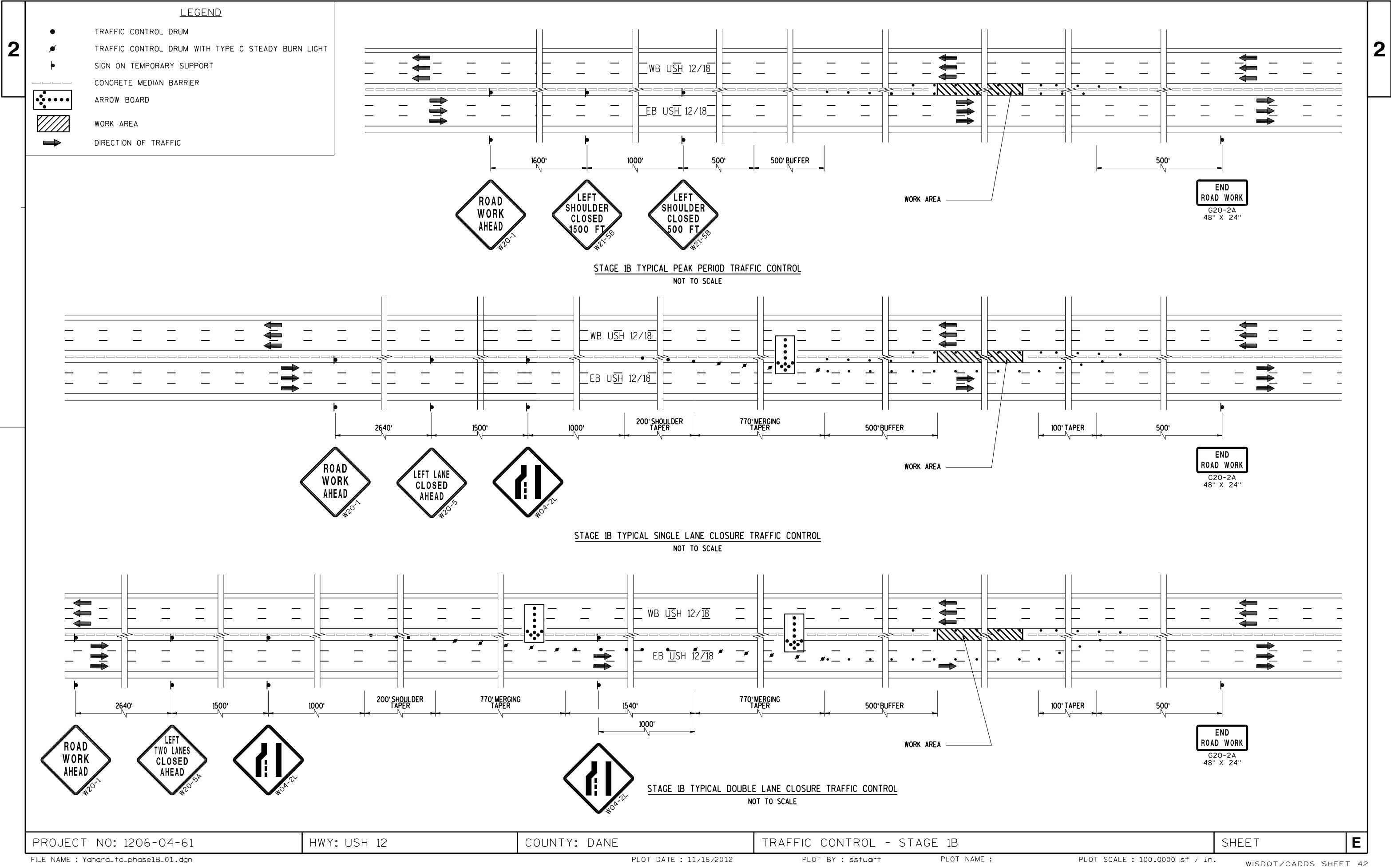
BACKFILL ANY EXCAVATION GREATER THAN 0'-4" ADJACENT TO TRAVEL LANES AT 3:1 WITH SUITABLE MATERIAL. NO DROPOFF GREATER THAN 0'-4" SHALL BE PERMITTED DURING PEAK PERIODS.

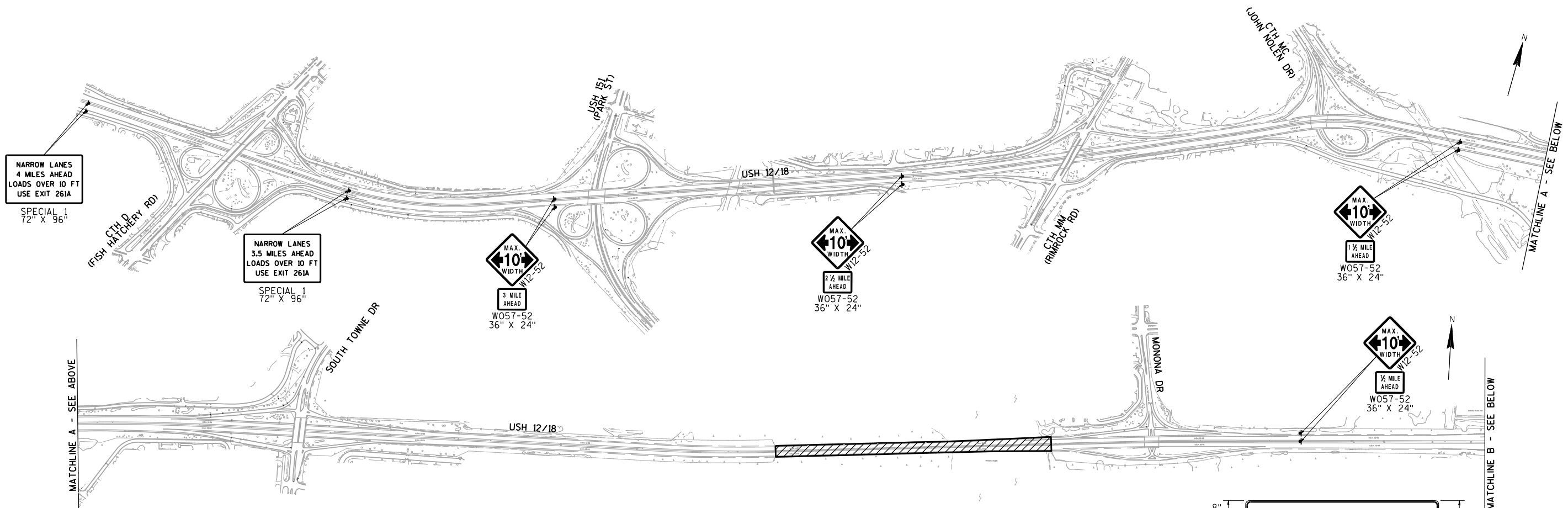
REFER TO THE FOLLOWING STANDARD DETAIL DRAWINGS FOR TRAFFIC CONTROL DEVICES, AS WELL AS OTHER STANDARD DETAIL DRAWINGS AS NECESSARY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER:

TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 MPH
TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)



STAGE 1B TYPICAL SECTION - USH 12/USH 18
NOT TO SCALE





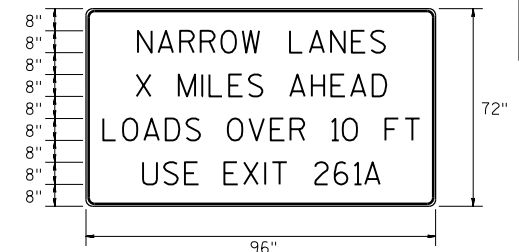
MATCHLINE B - SEE ABOVE

LEGEND

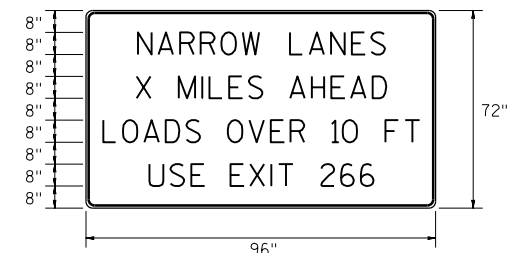
- SIGN ON TEMPORARY SUPPORT
- WORK AREA

NOTES

- THE EXACT LOCATION AND SPACING OF SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
- INSTALL WIDTH RESTRICTION SIGNS AT THE BEGINNING OF STAGE 2A AND MAINTAIN THROUGH THE COMPLETION OF STAGE 3B OR AS DIRECTED BY THE ENGINEER.

**NOTES**

- TRAFFIC CONTROL SIGN FIXED MESSAGE
- COLOR:
 - BACKGROUND - ORANGE
 - MESSAGE - BLACK
- MESSAGE SERIES - B

SPECIAL 1
NOT TO SCALE**NOTES**

- TRAFFIC CONTROL SIGN FIXED MESSAGE
- COLOR:
 - BACKGROUND - ORANGE
 - MESSAGE - BLACK
- MESSAGE SERIES - B

SPECIAL 2
NOT TO SCALE

PROJECT NO: 1206-04-61

HWY: USH 12

COUNTY: DANE

TRAFFIC CONTROL - STAGE 2A, 2B, 3A, AND 3B

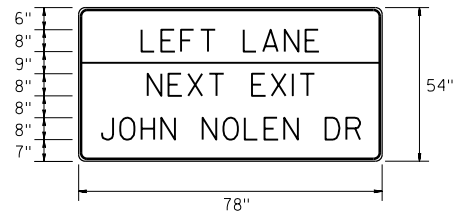
SHEET

E



- NOTES
1. TRAFFIC CONTROL SIGN FIXED MESSAGE
 2. COLOR:
BACKGROUND - ORANGE
MESSAGE - BLACK
 3. MESSAGE SERIES - B

SPECIAL 3
NOT TO SCALE



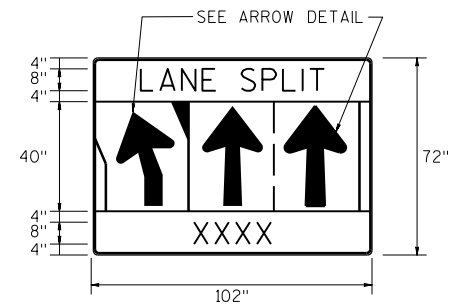
- NOTES
1. TRAFFIC CONTROL SIGN FIXED MESSAGE
 2. COLOR:
BACKGROUND - ORANGE
MESSAGE - BLACK
 3. MESSAGE SERIES - B

SPECIAL 4
NOT TO SCALE



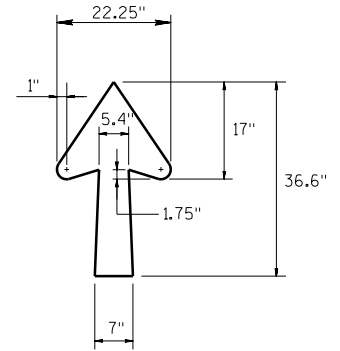
- NOTES
1. TRAFFIC CONTROL SIGN FIXED MESSAGE
 2. COLOR:
BACKGROUND - ORANGE
MESSAGE - BLACK
 3. MESSAGE SERIES - B

SPECIAL 5
NOT TO SCALE

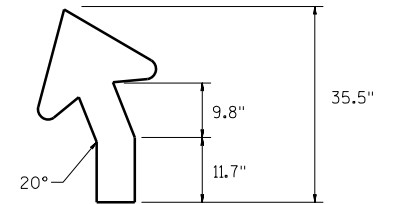


- NOTES
1. TRAFFIC CONTROL SIGN FIXED MESSAGE
 2. COLOR:
BACKGROUND - ORANGE
MESSAGE - BLACK
 3. MESSAGE SERIES - B

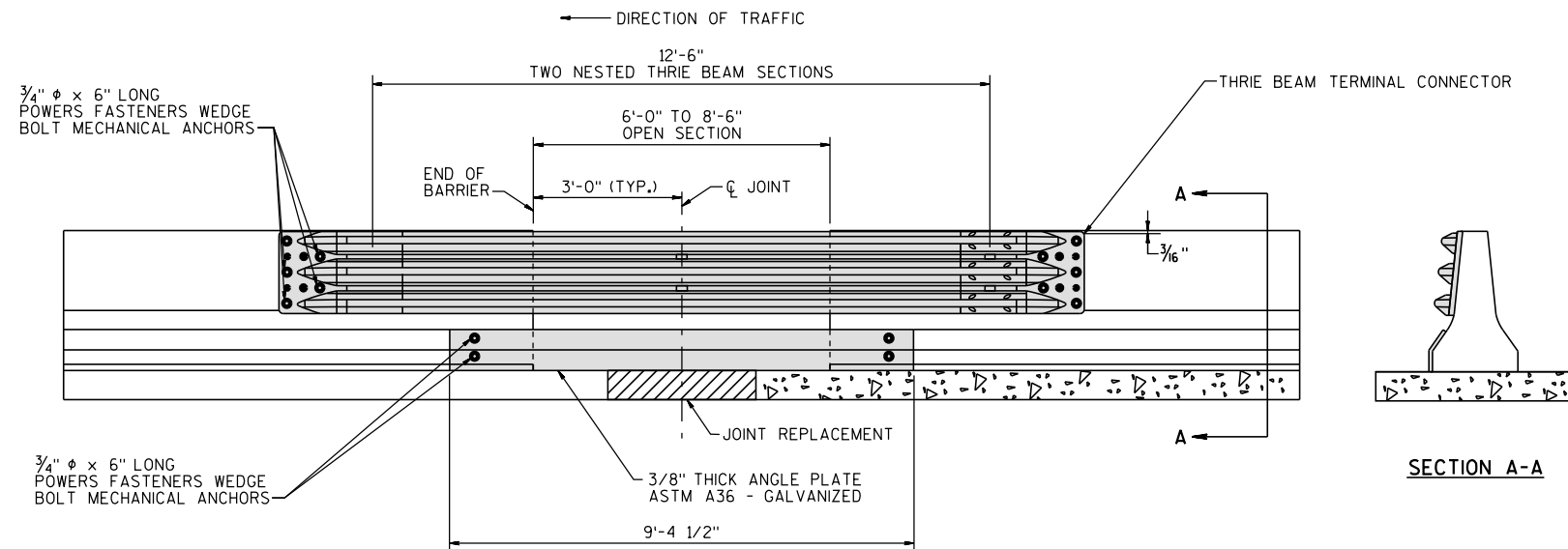
SPECIAL 6
NOT TO SCALE



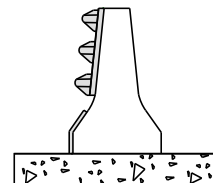
ARROW DETAIL
NOT TO SCALE



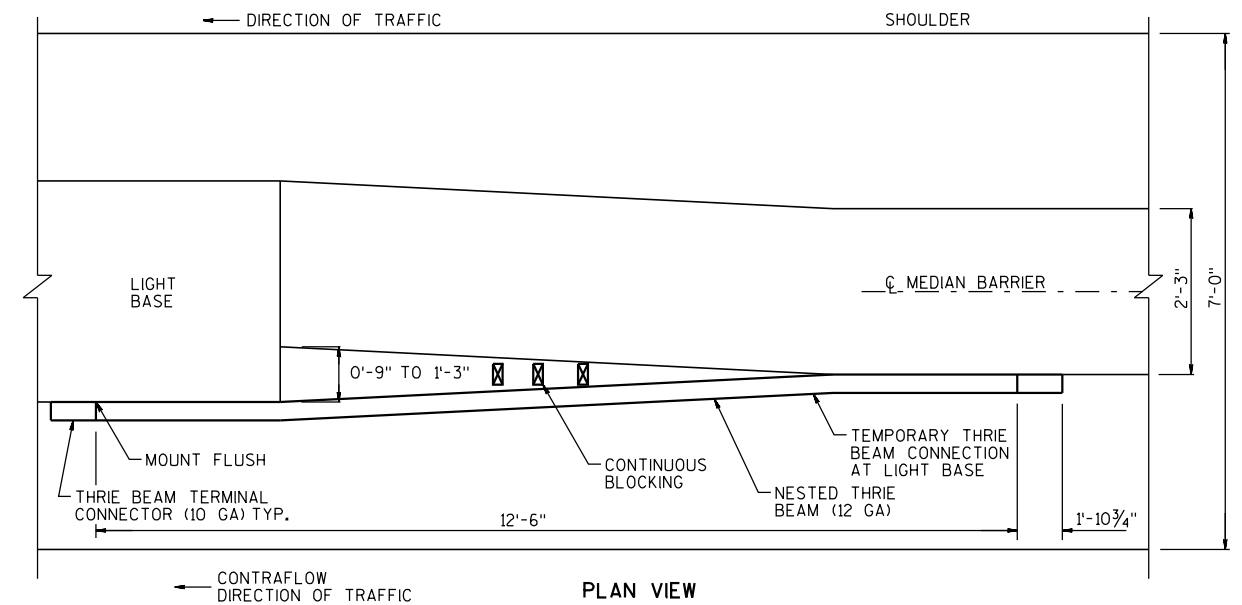
ARROW DETAIL
NOT TO SCALE



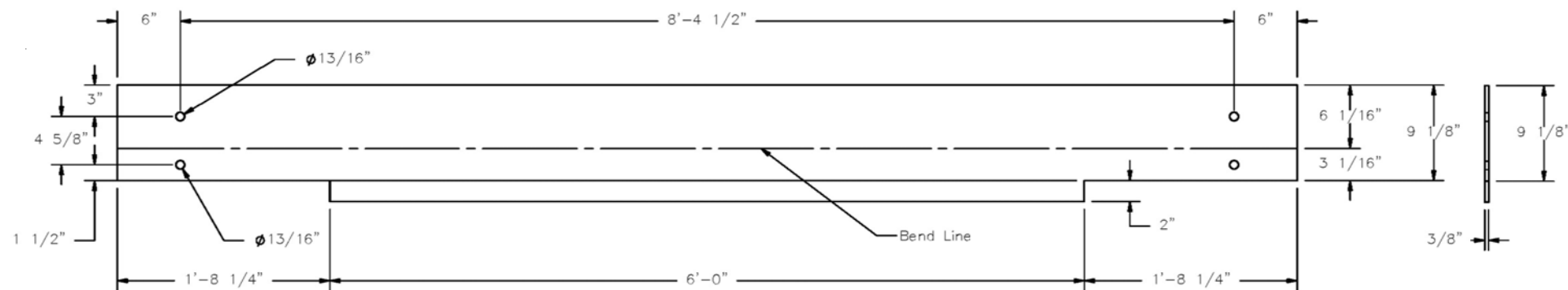
TEMPORARY THRIE BEAM CONNECTION
NOT TO SCALE



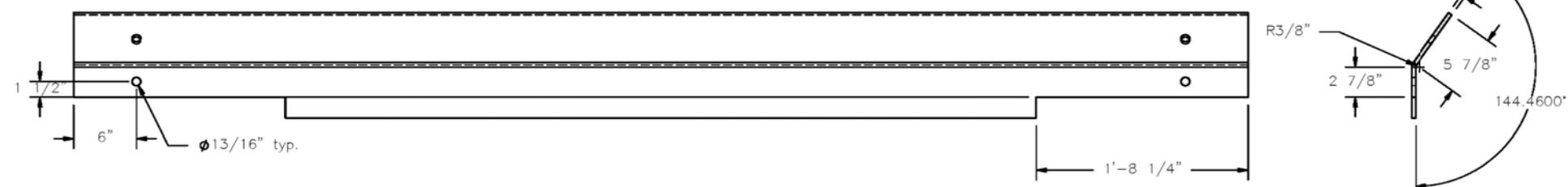
SECTION A-A



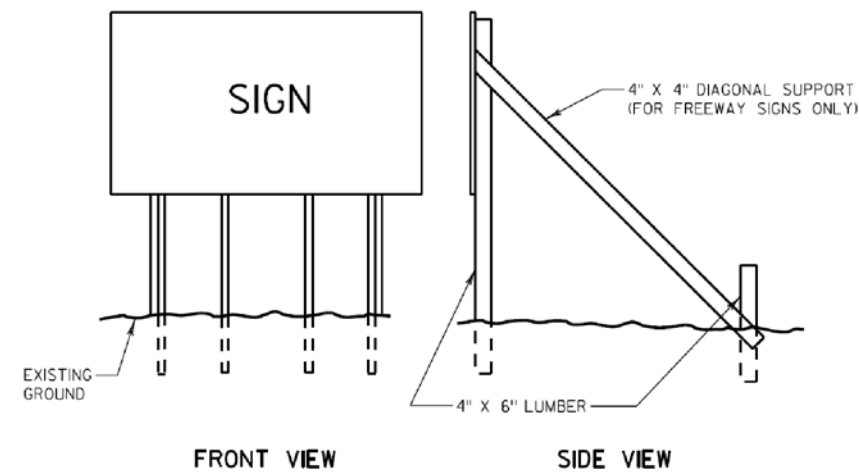
TEMPORARY THRIE BEAM CONNECTION AT LIGHT BASE
NOT TO SCALE



ANGLED PLATE FLAT PLATE TEMPLATE
NOT TO SCALE



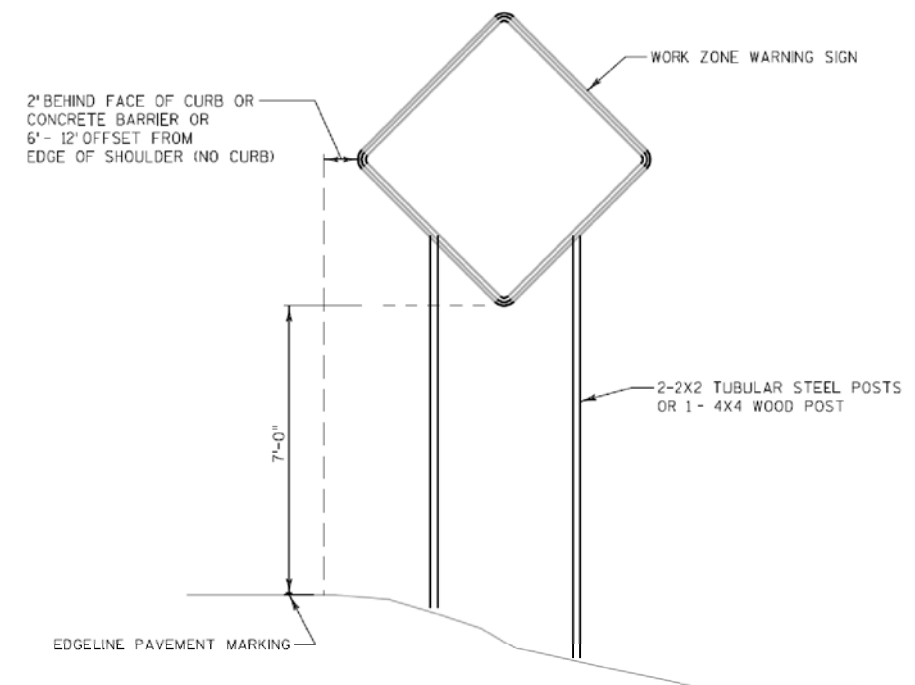
TEMPORARY THRIE BEAM CONNECTION - ANGLED PLATE DETAIL
NOT TO SCALE



MOUNTING DETAIL FOR EXISTING SIGN
OR FIXED MESSAGE SIGNS

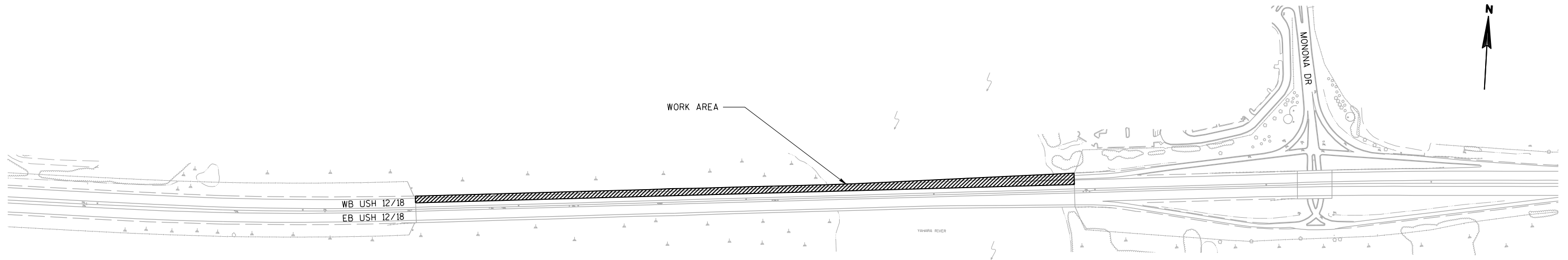
NOTES:

1. SEE TRAFFIC CONTROL SHEETS FOR SIGN LOCATIONS.
2. DIAGONAL SUPPORTS TO BE AFFIXED TO THE OUTSIDE SUPPORTS AND TO BE INCIDENTAL TO TRAFFIC CONTROL SIGN FIXED MESSAGE OR SIGNS TYPE II.
3. SEE "TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS" SIGN PLATE FOR ADDITIONAL REQUIREMENTS.



TYPICAL TEMPORARY TRAFFIC CONTROL DETAIL
MOUNTING ON FIXED SUPPORT

LONG TERM
7 DAYS OR MORE



CONSTRUCTION STAGING OVERVIEW - STAGE 2A

TRAFFIC OPERATIONS

USH 12/USH 18

EASTBOUND TRAFFIC WILL BE MAINTAINED ON SHIFTED AND NARROWED LANES. TWO WESTBOUND LANES WILL BE MAINTAINED ON THE EXISTING WESTBOUND STRUCTURE AND THE THIRD WESTBOUND LANE WILL UTILIZE A CROSSOVER AND TRAVEL CONTRAFLOW ON THE EASTBOUND STRUCTURE. ALL LANES WILL BE OPEN DURING PEAK PERIODS. ONE LANE AND TWO LANE CLOSURES PERMITTED IN ACCORDANCE WITH PROJECT SPECIAL PROVISIONS.

USH 12/USH 18 RAMP

THE WESTBOUND ENTRANCE RAMP FROM MONONA DRIVE AND THE EASTBOUND ENTRNCE RAMP FROM SOUTH TOWNE DRIVE WILL BE CLOSED. ALL OTHER RAMP TRAFFIC WILL BE MAINTAINED ON ALL EXISTING LANES OF USH 12/USH 18 RAMP AT ALL TIMES.

CONSTRUCTION OPERATIONS

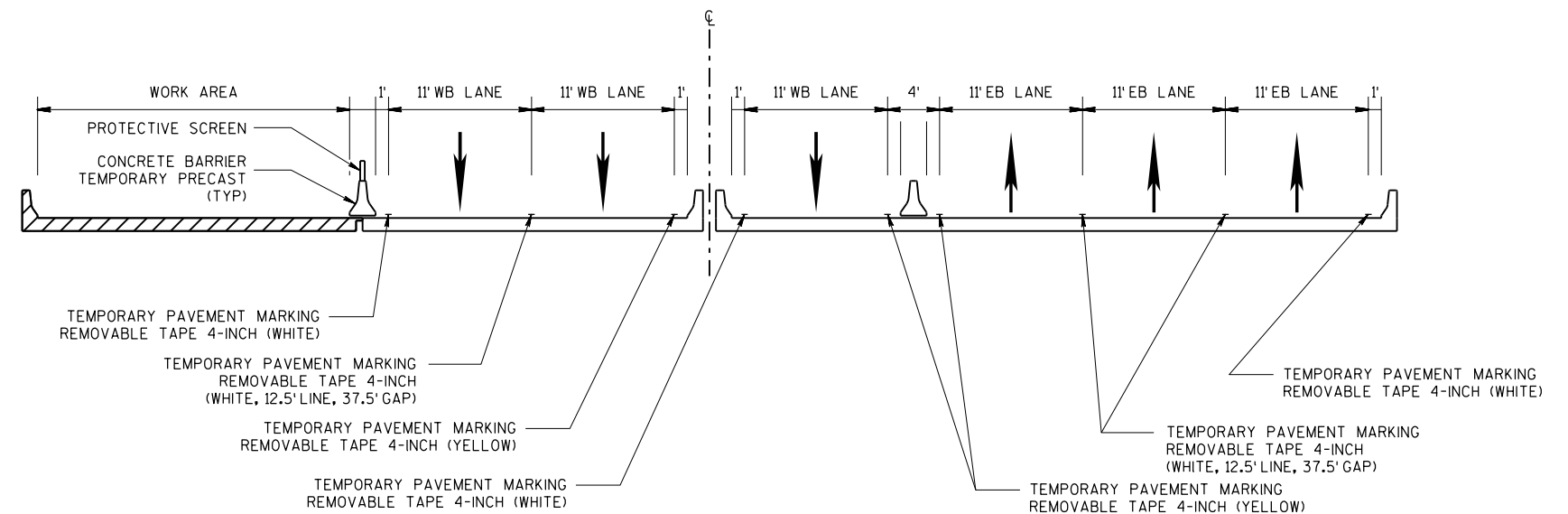
USH 12/USH 18

SINGLE LANE CROSSOVER FOR ONE WESTBOUND LANE OF USH 12/USH 18 WILL BE OPERATIONAL. WESTBOUND STRUCTURE EXPANSION JOINT WILL BE REMOVED/REPLACED ON THE NORTHERN HALF OF WESTBOUND STRUCTURE.

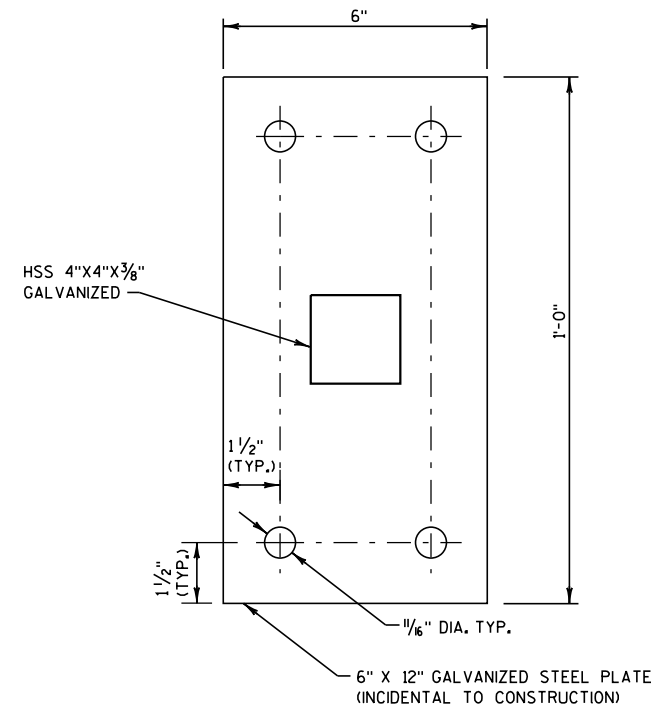
NOTES - STAGE 2A

REFER TO THE FOLLOWING STANDARD DETAIL DRAWINGS FOR TRAFFIC CONTROL DEVICES, AS WELL AS OTHER STANDARD DETAIL DRAWINGS AS NECESSARY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER:

TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 MPH
TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)
TRAFFIC CONTROL, SINGLE LANE CROSSOVER



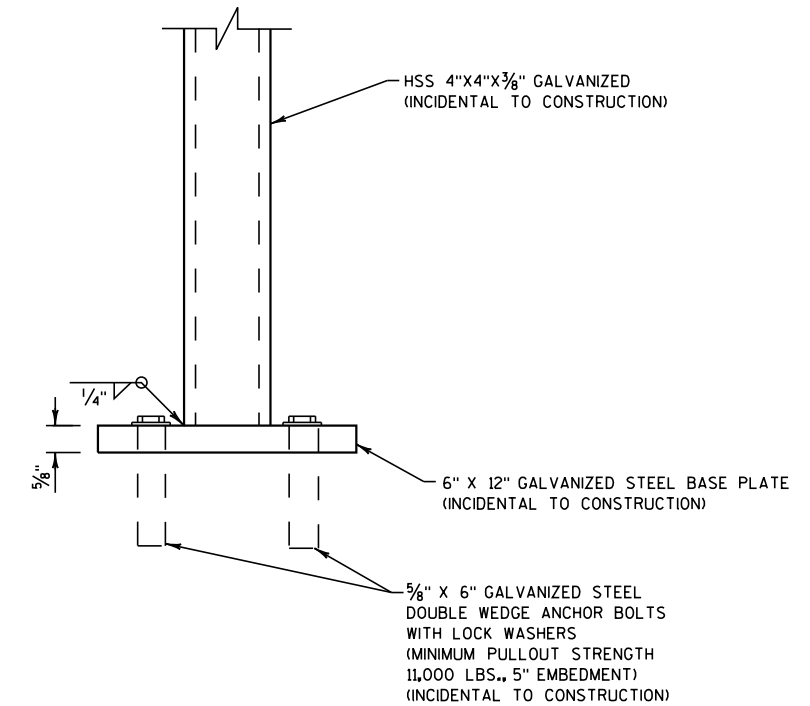
STAGE 2A TYPICAL SECTION - USH 12/USH 18
NOT TO SCALE



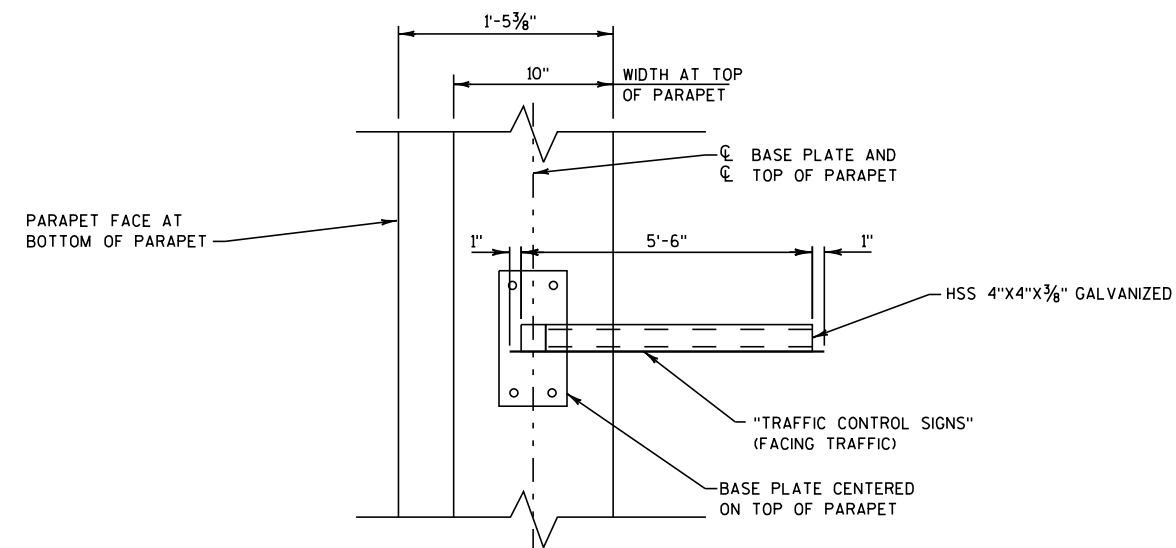
PLAN VIEW - BASE PLATE

NOTES:

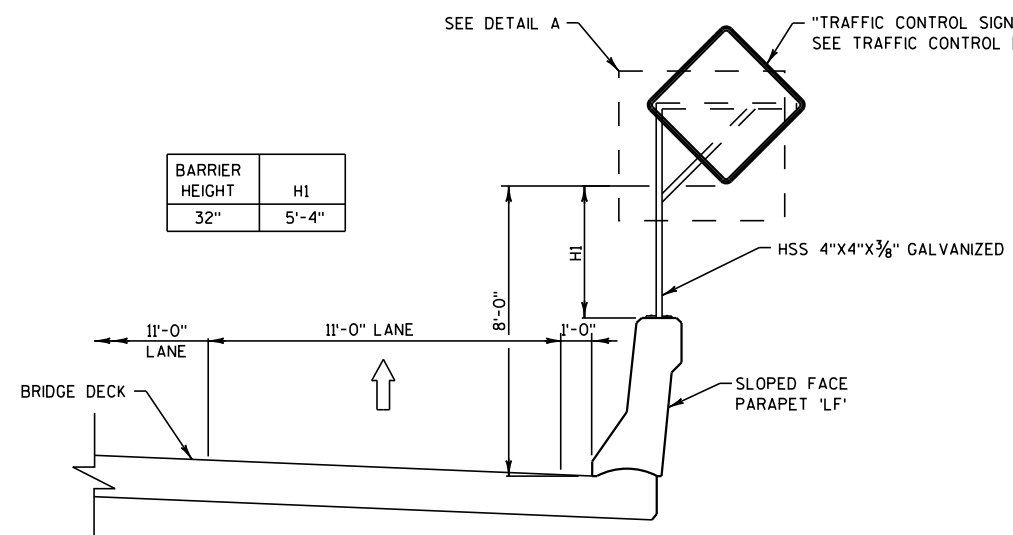
1. BRIDGE PARAPET SIGN POSTS ARE TEMPORARY.
2. UPON REMOVAL OF THE BASE PLATES AND ANCHOR BOLTS, COMPLETELY FILL REMAINING HOLES WITH A NON-SHRINK COMMERCIAL GROUT OR EPOXY MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST. (INCIDENTAL TO CONSTRUCTION)
3. MOUNTING HARDWARE, FABRICATING, FURNISHING, INSTALLATION, AND REMOVAL OF THE BARRIER WALL SIGN BRACKETS ARE INCIDENTAL TO "TRAFFIC CONTROL SIGNS".



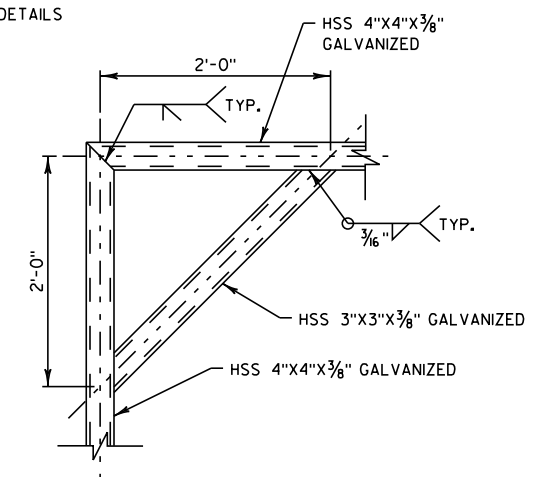
SIDE VIEW - SIGN POST & BASE PLATE



PLAN VIEW - OVERALL



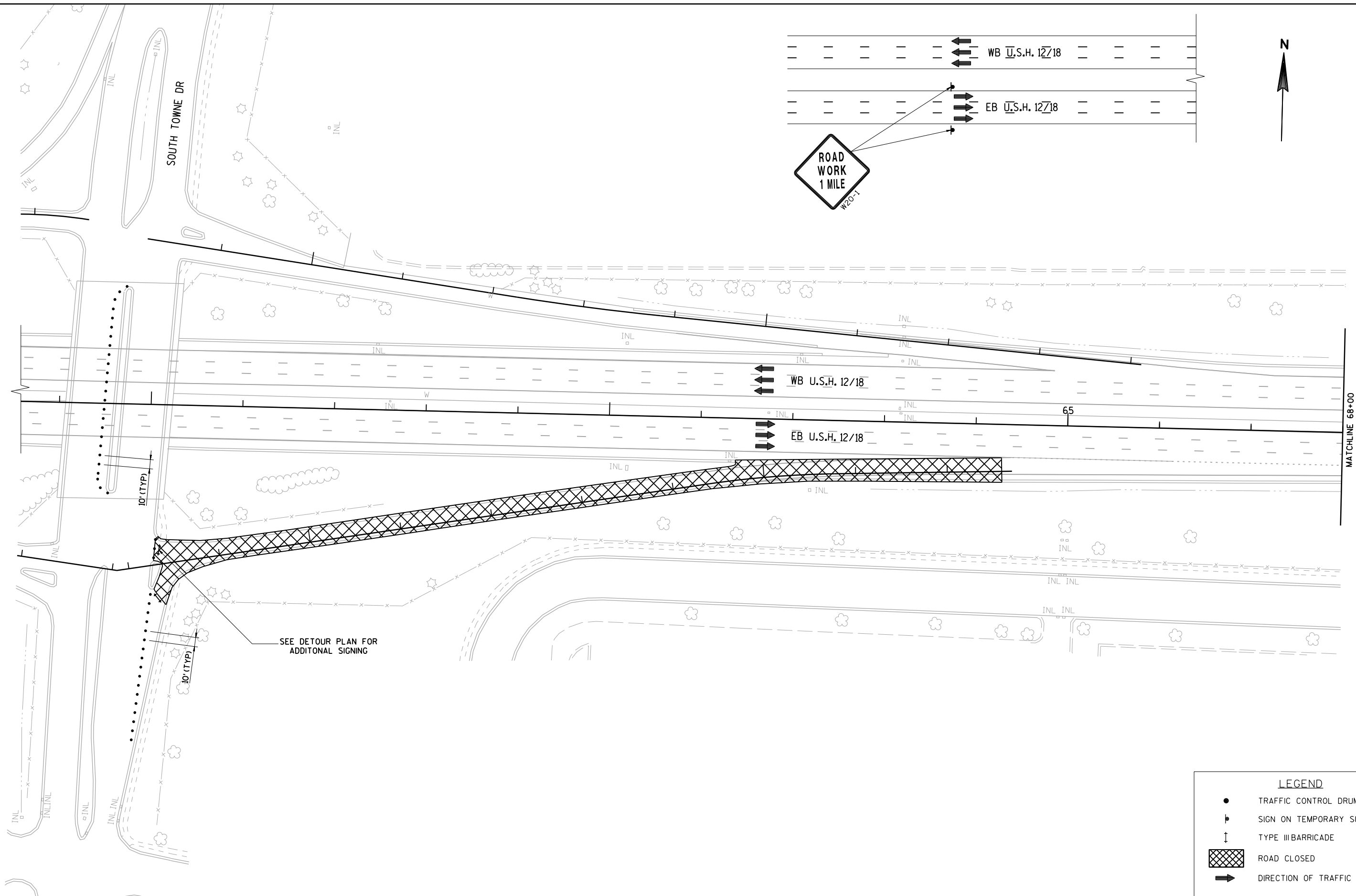
SIDE VIEW - OVERALL

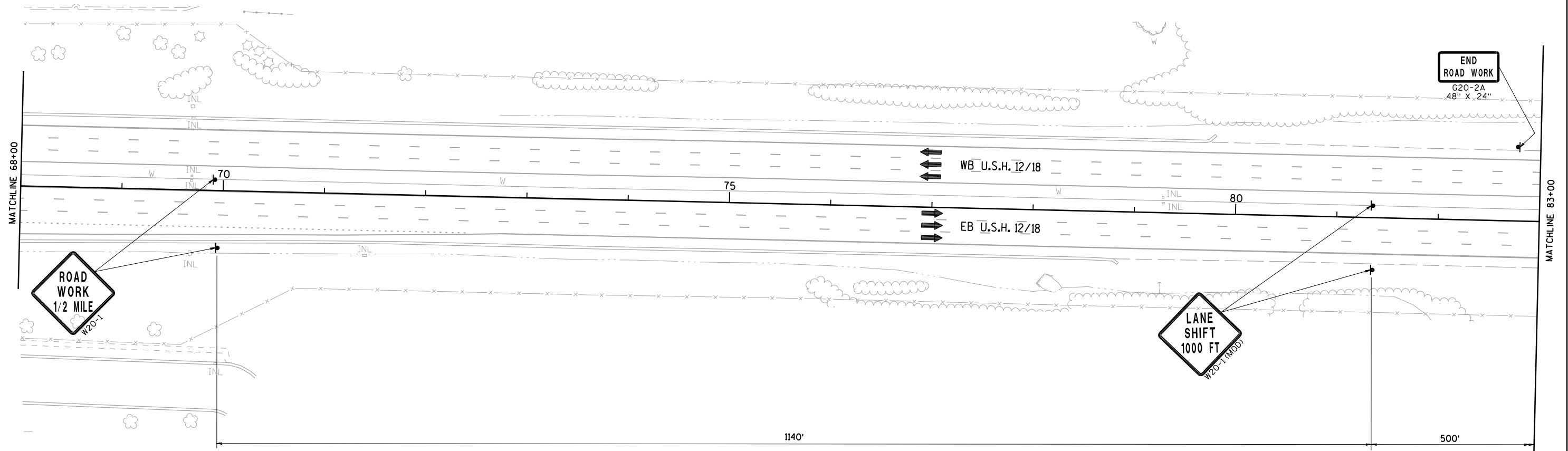
DETAIL A
SIGN NOT SHOWN FOR CLARITY

BRIDGE PARAPET MOUNTING DETAIL

MOUNTING TRAFFIC CONTROL SIGNS TO BRIDGE PARAPET

N.T.S.



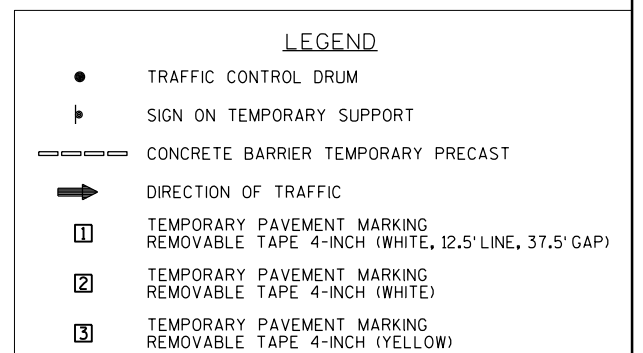


END
ROAD WORK
G20-2A
48" X 24"

LEGEND

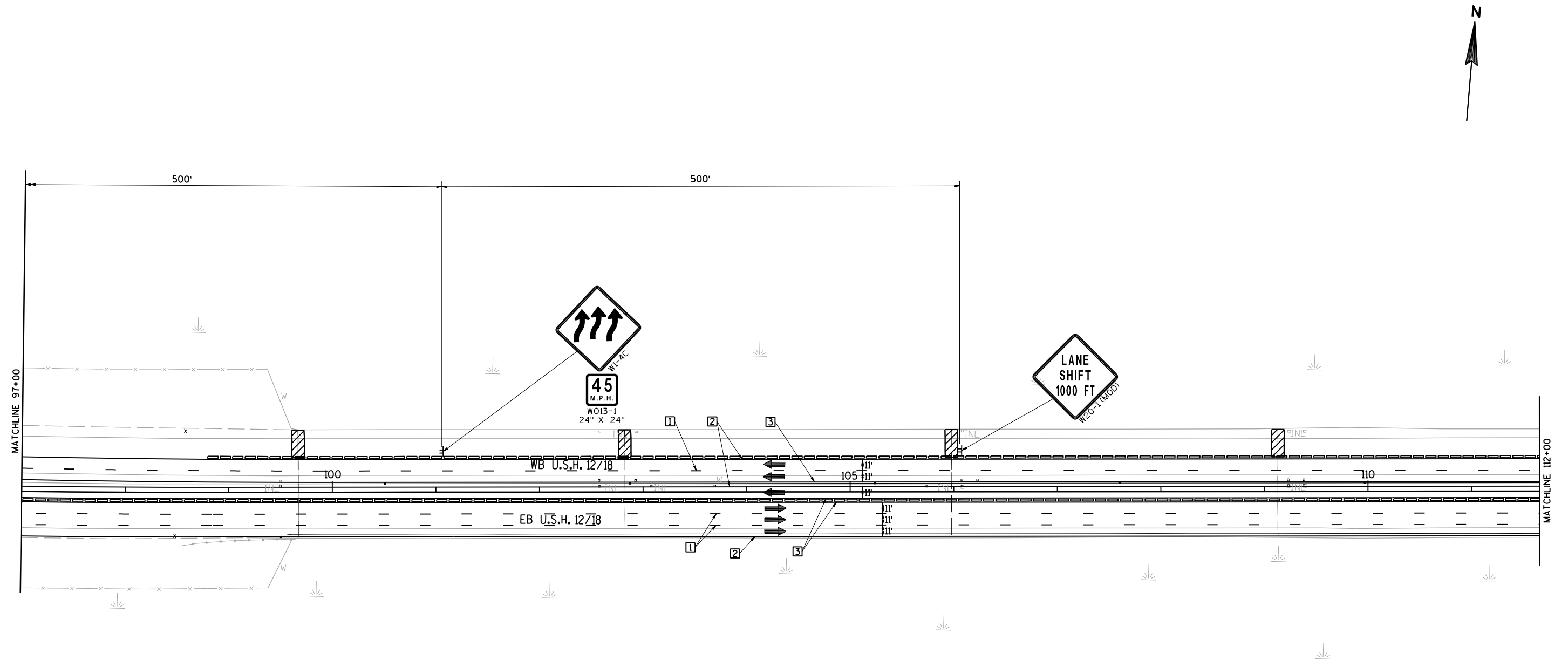
SIGN ON TEMPORARY SUPPORT








DIRECTION OF TRAFFIC

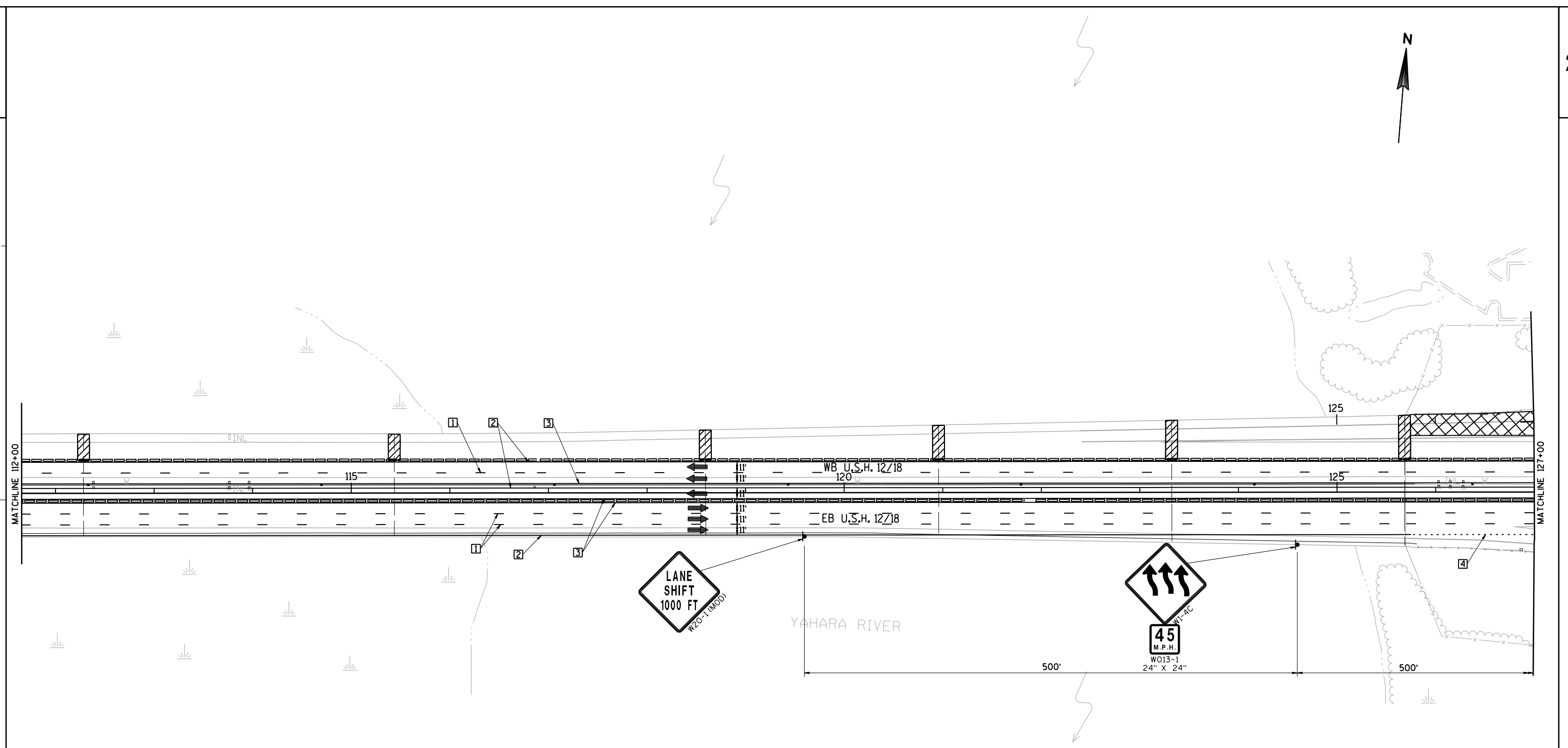


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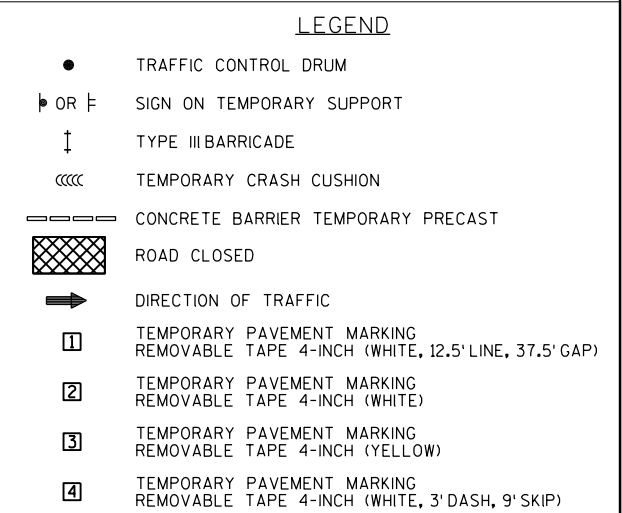
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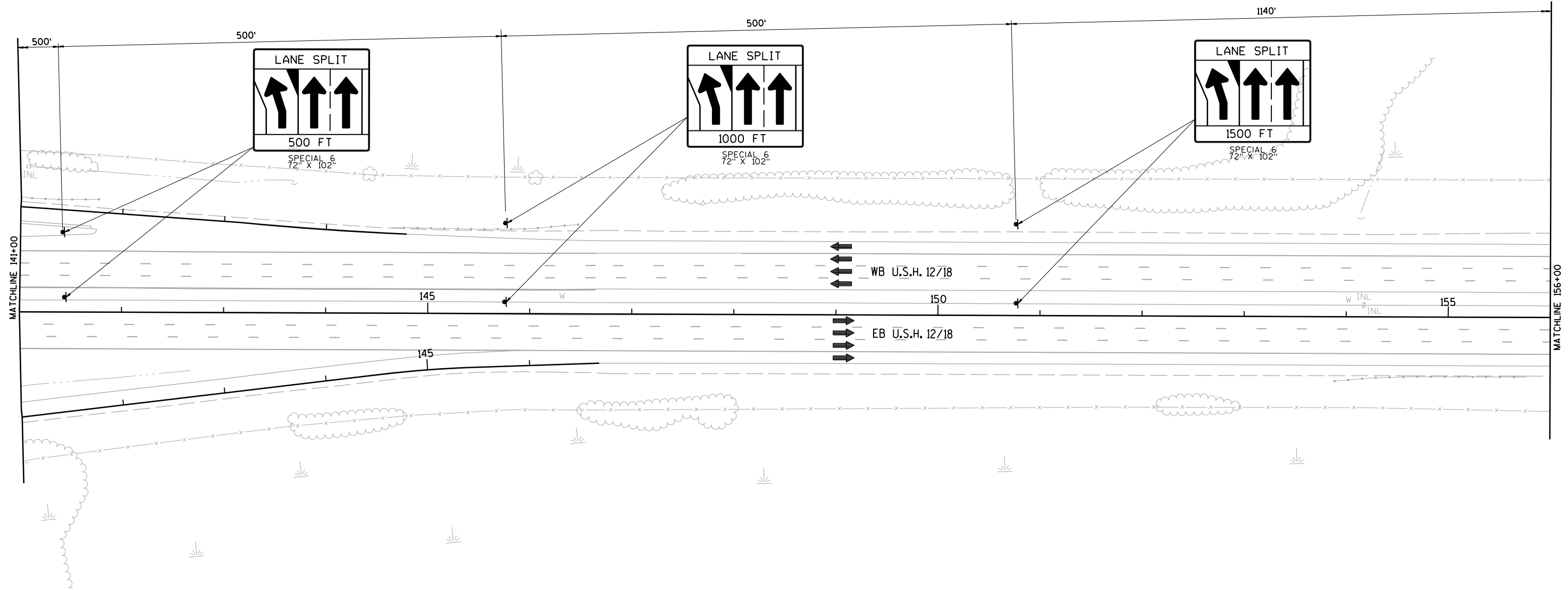


	SIGN ON TEMPORARY SUPPORT
	CONCRETE BARRIER TEMPORARY PRECAST
	WORK AREA
	DIRECTION OF TRAFFIC
	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE, 12.5' LINE, 37.5' GAP)
	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)



LEGEND	
	SIGN ON TEMPORARY SUPPORT
	CONCRETE BARRIER TEMPORARY PRECAST
	WORK AREA
	DIRECTION OF TRAFFIC
	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE, 12.5' LINE, 37.5' GAP)
	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE, 3' DASH, 9' SKIP)

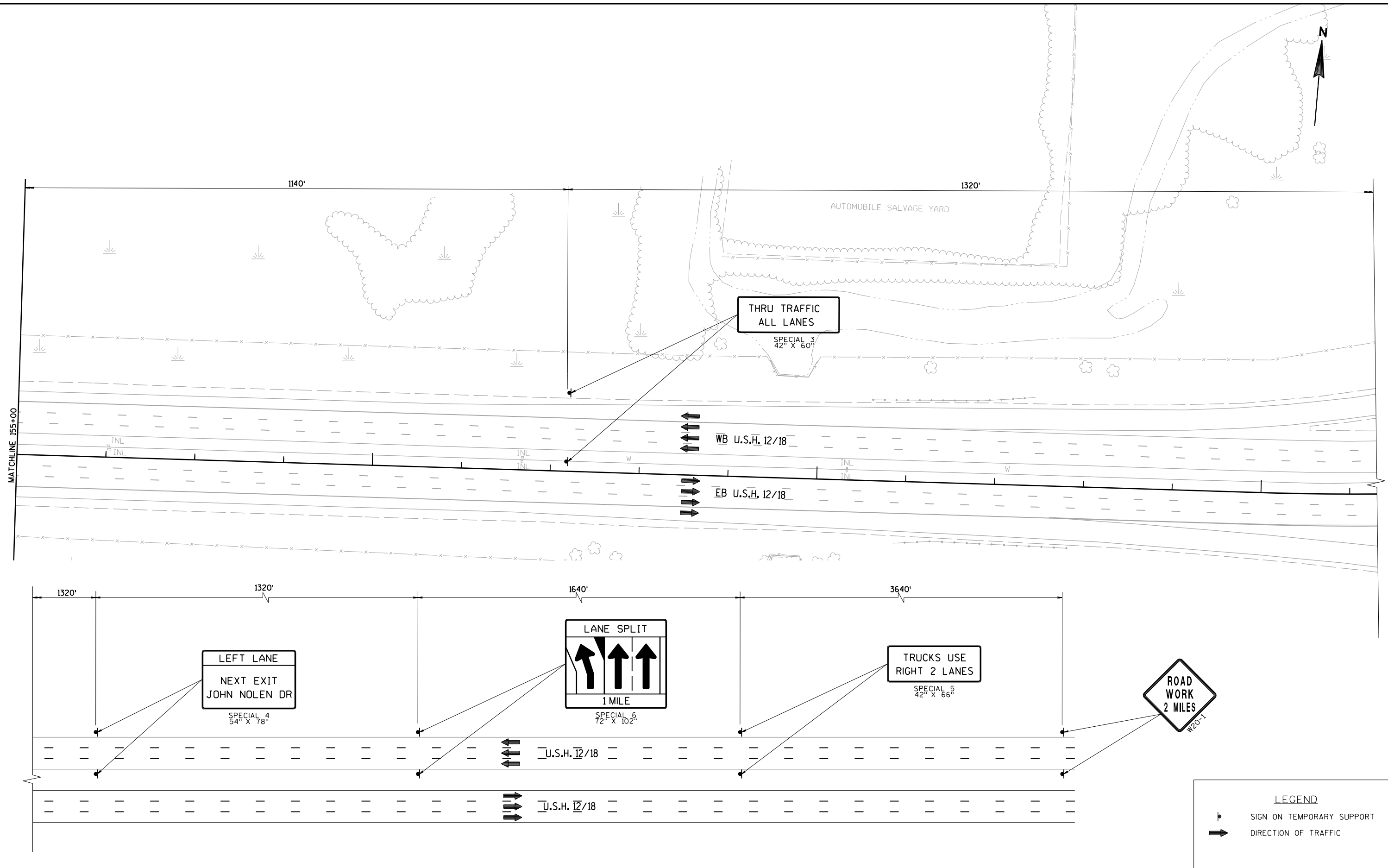




LEGEND

SIGN ON TEMPORARY SUPPORT


DIRECTION OF TRAFFIC

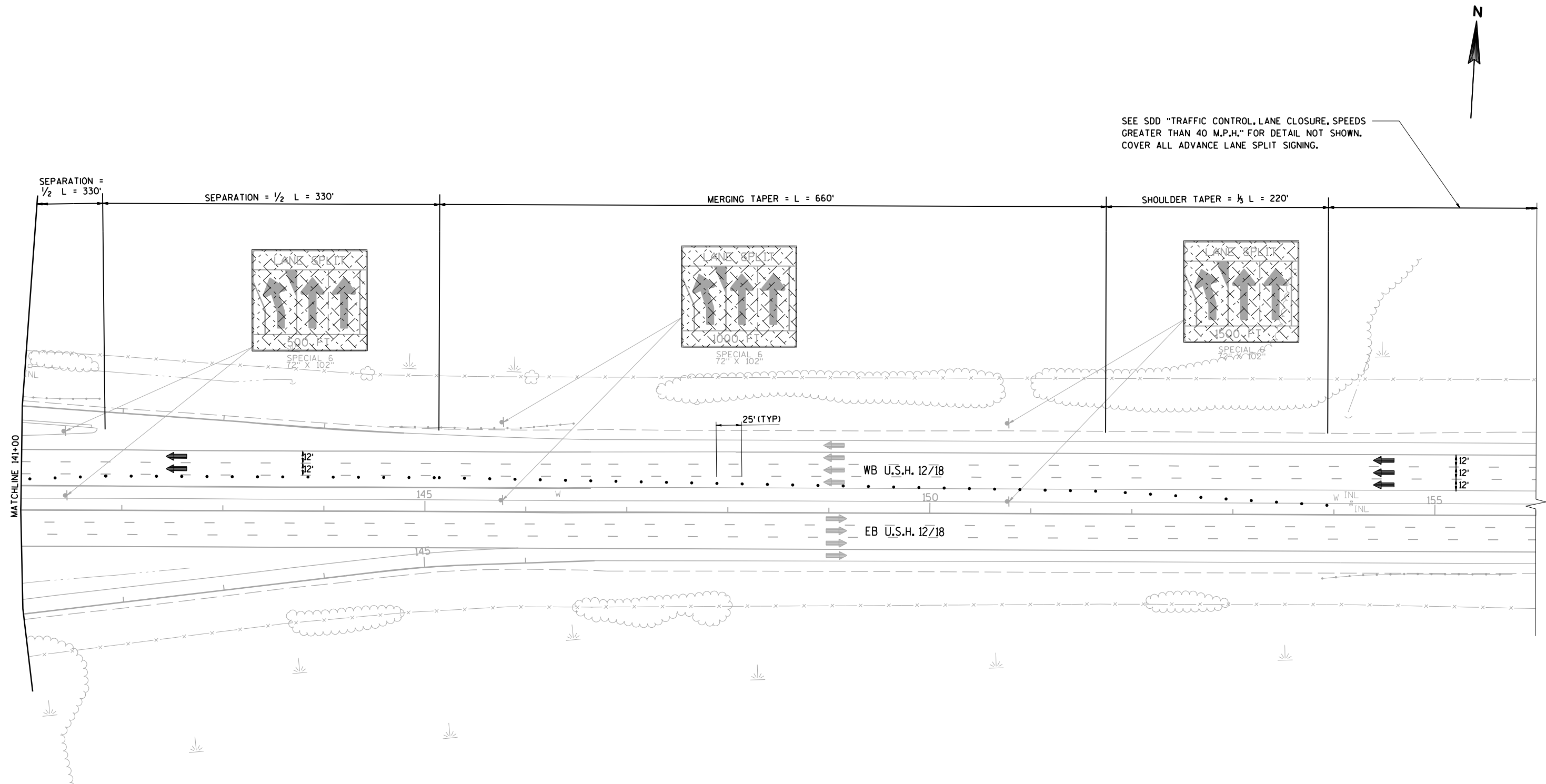




1. BASE MAPPING PAVEMENT MARKINGS AND SIGNING ARE LONG TERM TRAFFIC CONTROL FOR STAGE 2A.
2. PLACE A TYPE C STEADY BURN LIGHT ON ALL CHANNELIZING DEVICES IN LANE MERGE AND SHIFTING TAPERS.
3. THE EXACT PLACEMENT OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
4. COVER ALL SIGNS IN A MANNER APPROVED BY THE ENGINEER.

LEGEND

- | | |
|---|--|
| ● | TRAFFIC CONTROL DRUM |
| └ OR ┘ | SIGN ON TEMPORARY SUPPORT |
| == | CONECRETE BARRIER TEMPORARY PRECAST |
|  | SIGN NOT USED |
| ➡ | DIRECTION OF TRAFFIC |
| ① | TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (WHITE, 12.5' LINE, 37.5' GAP) |
| ② | TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (WHITE) |
| ③ | TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (YELLOW) |
| ④ | TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (WHITE, 3' DASH, 9' SKIP) |

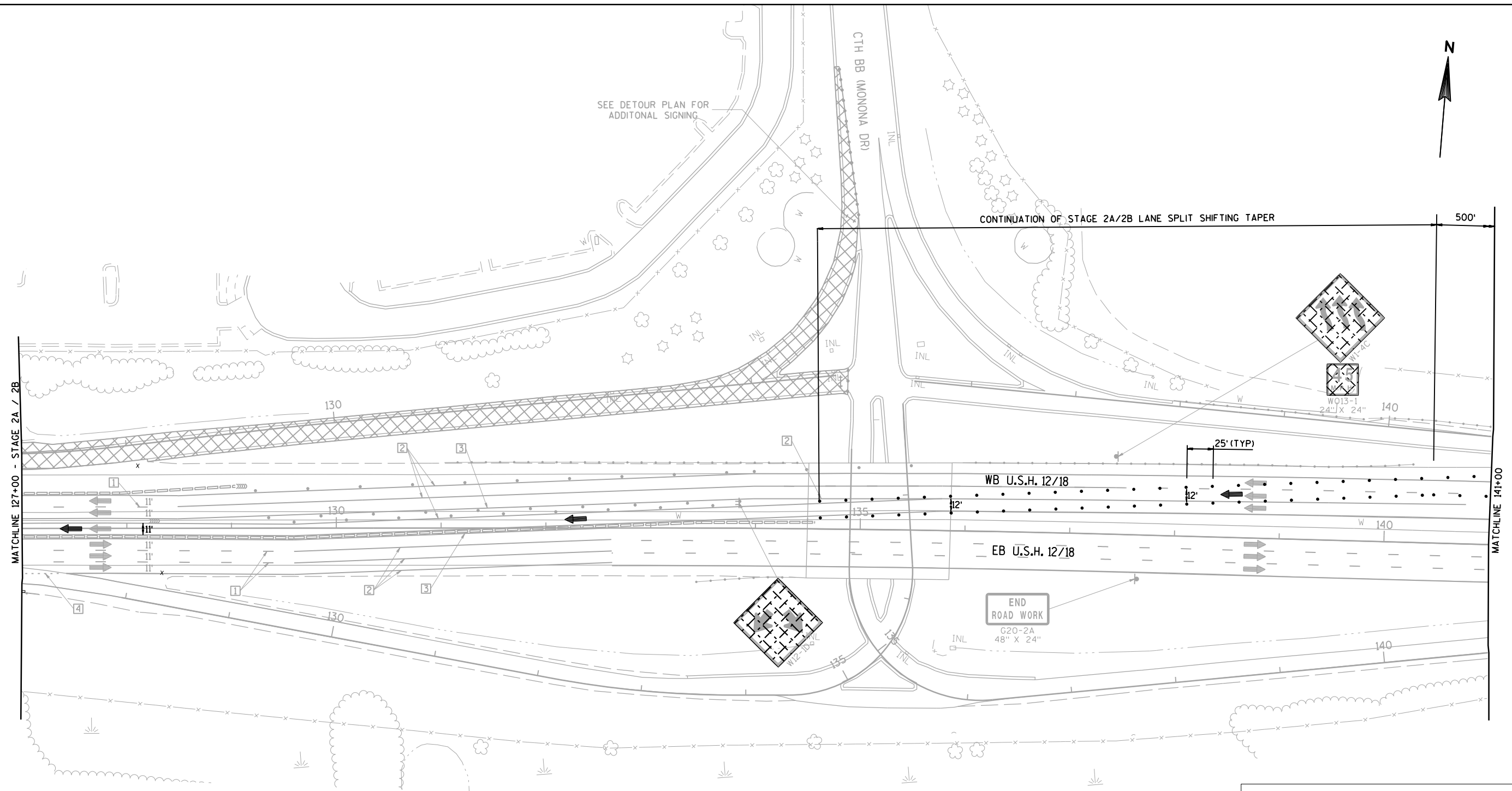


NOTES

1. BASE MAPPING PAVEMENT MARKINGS AND SIGNING ARE LONG TERM TRAFFIC CONTROL FOR STAGE 2A.
2. PLACE A TYPE C STEADY BURN LIGHT ON ALL CHANNELIZING DEVICES IN LANE MERGE AND SHIFTING TAPERS.
3. THE EXACT PLACEMENT OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
4. COVER ALL SIGNS IN A MANNER APPROVED BY THE ENGINEER.

LEGEND

- TRAFFIC CONTROL DRUM
- ▬ SIGN ON TEMPORARY SUPPORT
- ▬ SIGN NOT USED
- ➡ DIRECTION OF TRAFFIC



NOTES

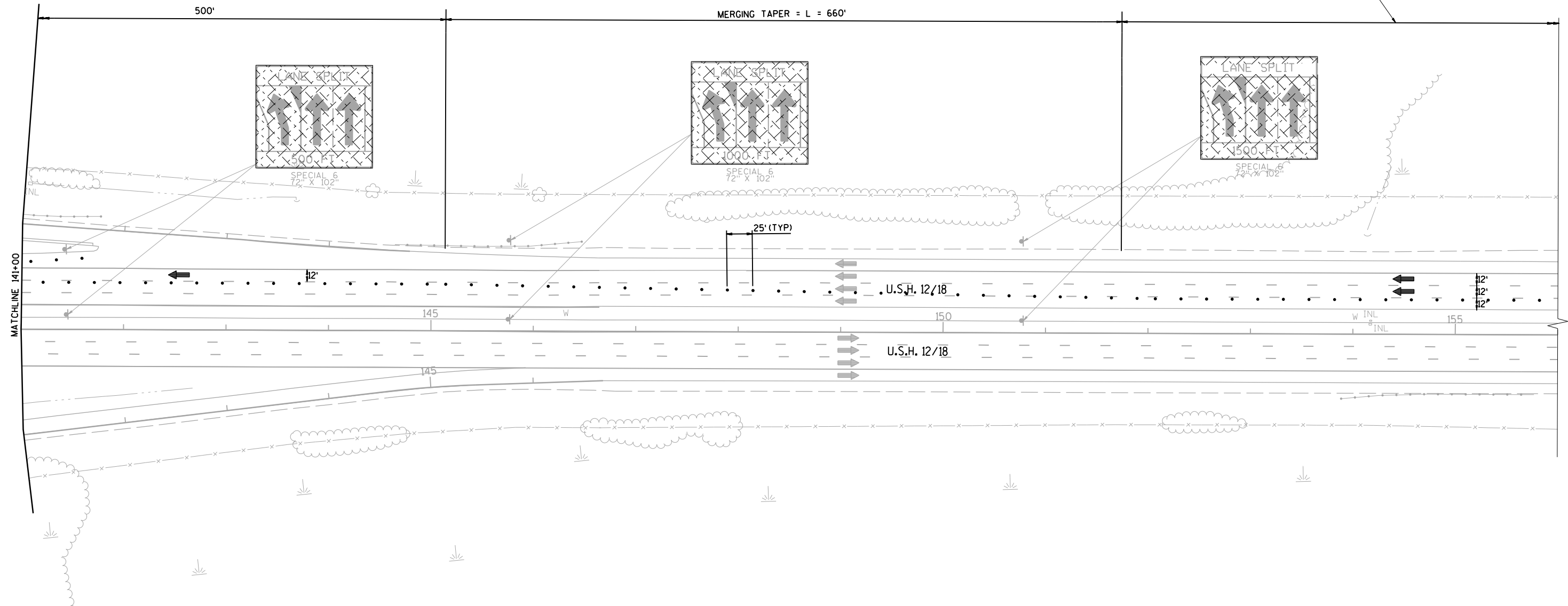
1. BASE MAPPING PAVEMENT MARKINGS AND SIGNING ARE LONG TERM TRAFFIC CONTROL FOR STAGE 2A.
2. PLACE A TYPE C STEADY BURN LIGHT ON ALL CHANNELIZING DEVICES IN LANE MERGE AND SHIFTING TAPERS.
3. THE EXACT PLACEMENT OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
4. COVER ALL SIGNS IN A MANNER APPROVED BY THE ENGINEER.

LEGEND

- TRAFFIC CONTROL DRUM
- OR SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- SIGN NOT USED
- DIRECTION OF TRAFFIC
- TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (WHITE, 12.5' LINE, 37.5' GAP)
- TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (WHITE)
- TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (YELLOW)
- TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (WHITE, 3'DASH, 9'SKIP)



SEE SDD "TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT-TERM (LESS THAN 24 HOURS)" FOR DETAIL NOT SHOWN. CLOSE LEFT TWO LANES AND COVER ALL ADVANCE LANE SPLIT SIGNING.



NOTES

1. BASE MAPPING PAVEMENT MARKINGS AND SIGNING ARE LONG TERM TRAFFIC CONTROL FOR STAGE 2A.
2. PLACE A TYPE C STEADY BURN LIGHT ON ALL CHANNELIZING DEVICES IN LANE MERGE AND SHIFTING TAPERS.
3. THE EXACT PLACEMENT OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
4. COVER ALL SIGNS IN A MANNER APPROVED BY THE ENGINEER.

LEGEND

- TRAFFIC CONTROL DRUM
- ⌋ SIGN ON TEMPORARY SUPPORT
- ⊞ SIGN NOT USED
- ➡ DIRECTION OF TRAFFIC

PROJECT NO: 1206-04-61

HWY: USH 12

COUNTY: DANE

TRAFFIC CONTROL - STAGE 2A/2B - DOUBLE LANE CLOSURE

SHEET

E

FILE NAME : Yahara_tc_phase2a_27.dgn

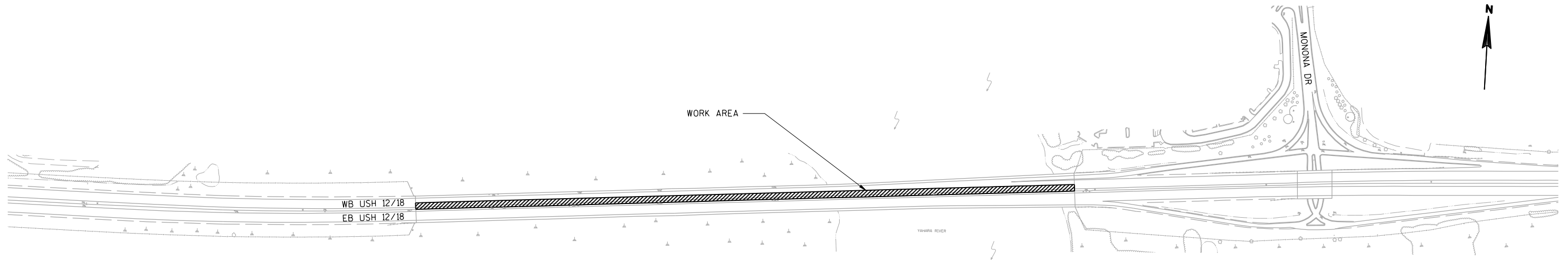
PLOT DATE : 11/15/2012

PLOT BY : sstuart

PLOT NAME :

PLOT SCALE : 100.0000 sf / in.

WISDOT/CADDs SHEET 42



CONSTRUCTION STAGING OVERVIEW - STAGE 2B

TRAFFIC OPERATIONS

USH 12/USH 18

EASTBOUND TRAFFIC WILL BE MAINTAINED ON SHIFTED AND NARROWED LANES. TWO WESTBOUND LANES WILL BE MAINTAINED ON THE EXISTING WESTBOUND STRUCTURE AND THE THIRD WESTBOUND LANE WILL UTILIZE A CROSSOVER AND TRAVEL CONTRAFLOW ON THE EASTBOUND STRUCTURE. ALL LANES WILL BE OPEN DURING PEAK PERIODS. ONE LANE AND TWO LANE CLOSURES PERMITTED IN ACCORDANCE WITH PROJECT SPECIAL PROVISIONS.

USH 12/USH 18 RAMP

THE WESTBOUND ENTRANCE RAMP FROM MONONA DRIVE AND THE EASTBOUND ENTRNCE RAMP FROM SOUTH TOWNE DRIVE WILL BE CLOSED. ALL OTHER RAMP TRAFFIC WILL BE MAINTAINED ON ALL EXISTING LANES OF USH 12/USH 18 RAMP AT ALL TIMES.

CONSTRUCTION OPERATIONS

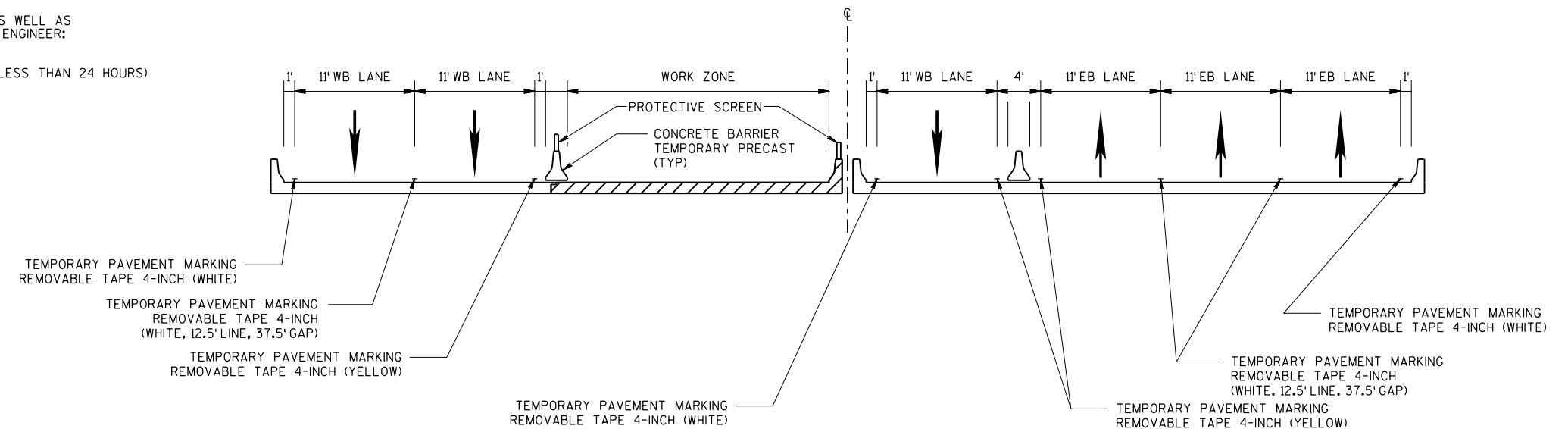
USH 12/USH 18

SINGLE LANE CROSSOVER FOR ONE WESTBOUND LANE OF USH 12/USH 18 WILL BE OPERATIONAL. WESTBOUND STRUCTURE EXPANSION JOINT WILL BE REMOVED/REPLACED ON THE SOUTHERN HALF OF WESTBOUND STRUCTURE.

NOTES - STAGE 2B

REFER TO THE FOLLOWING STANDARD DETAIL DRAWINGS FOR TRAFFIC CONTROL DEVICES, AS WELL AS OTHER STANDARD DETAIL DRAWINGS AS NECESSARY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER:

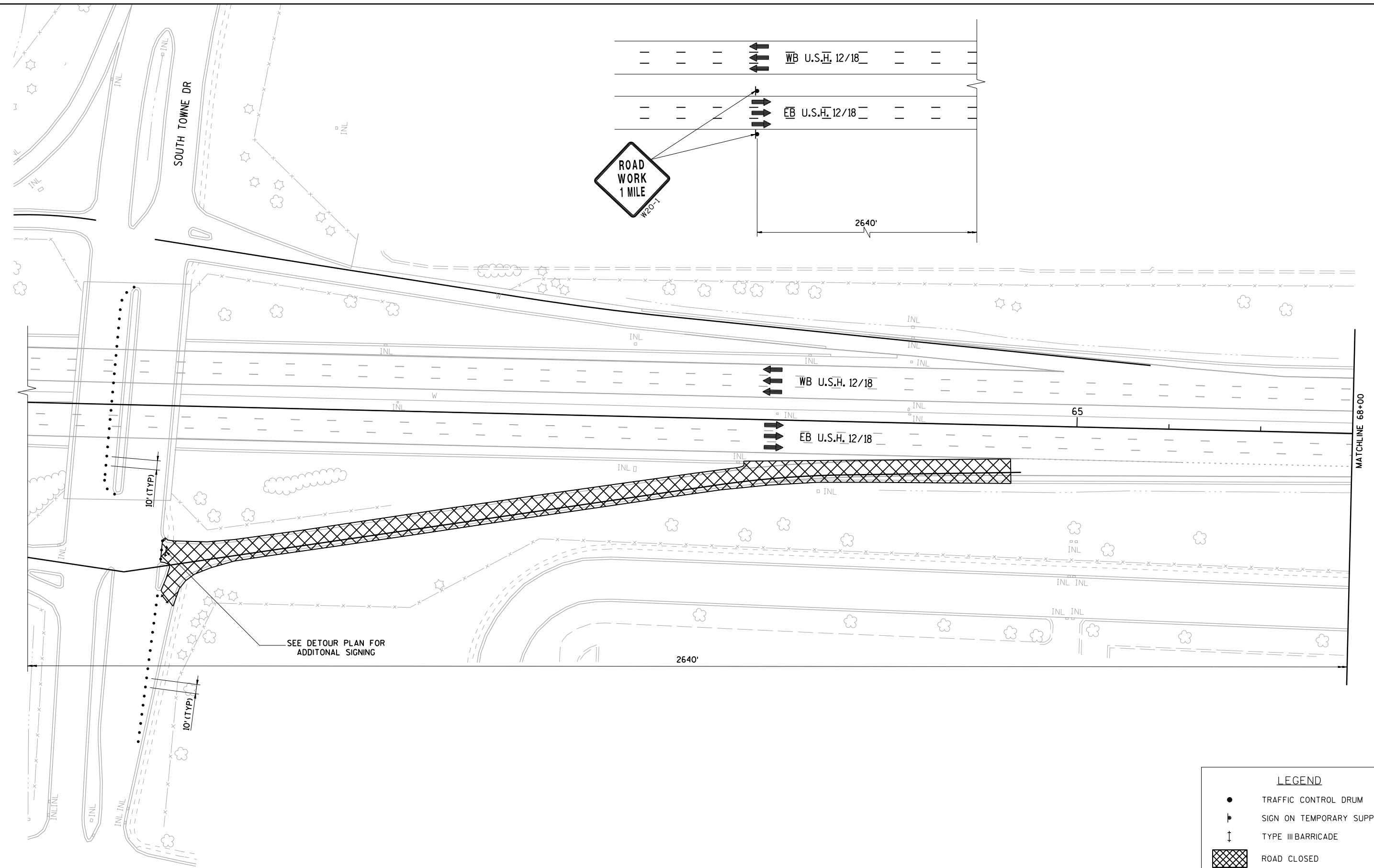
TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 MPH
TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)
TRAFFIC CONTROL, SINGLE LANE CROSSOVER








STAGE 2B TYPICAL SECTION - USH 12/USH 18
NOT TO SCALE

2

2 |



LEGEND

- | | |
|---|---------------------------|
|  | TRAFFIC CONTROL DRUM |
|  | SIGN ON TEMPORARY SUPPORT |
|  | TYPE III BARRICADE |
|  | ROAD CLOSED |
|  | DIRECTION OF TRAFFIC |

PROJECT NO: 1206-04-61

HWY: USH 12

COUNTY: DANE

TRAFFIC CONTROL - STAGE 2B

SHEET

3

FILE NAME : Yahara_tc_phase2b_01.dgn

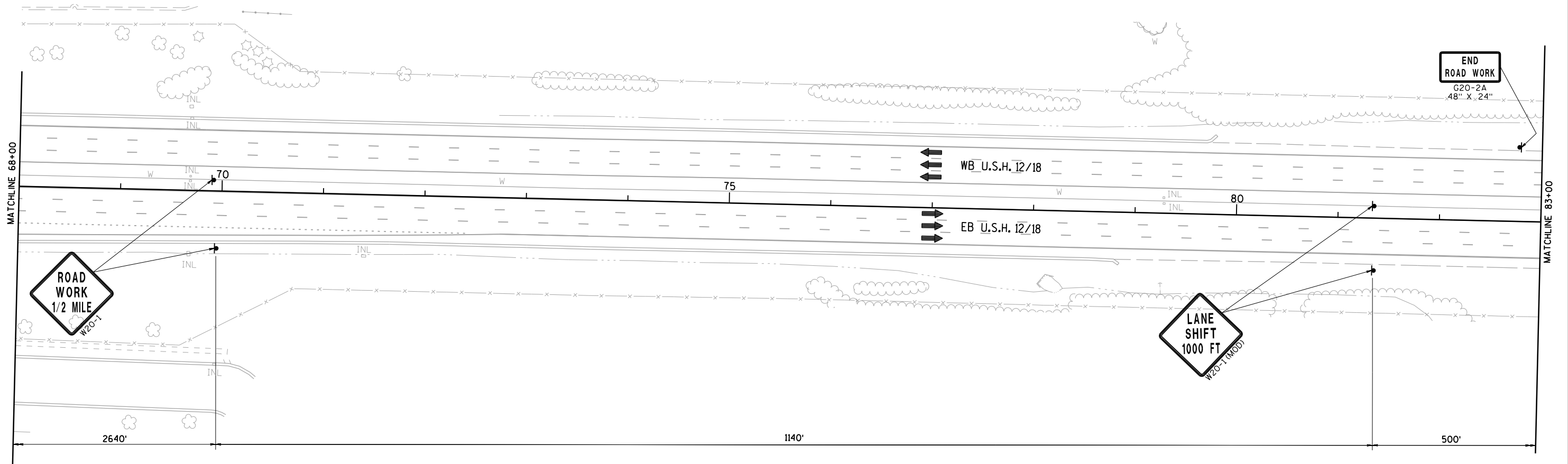
PLOT DATE : 11/15/2012

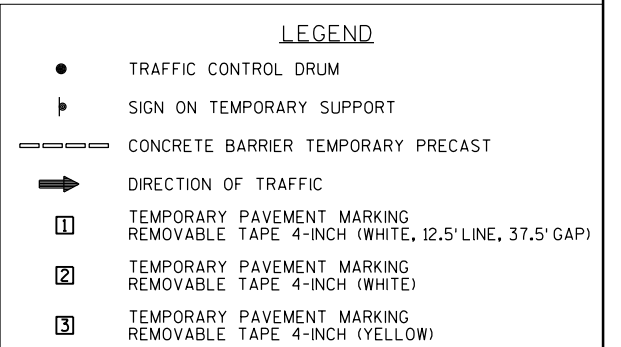
PLOT BY : sstuart

PLOT NAME :

PLOT SCALE : 100.0000 sf / in.

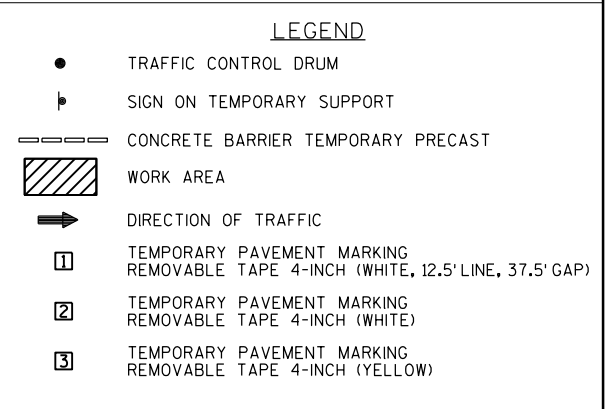
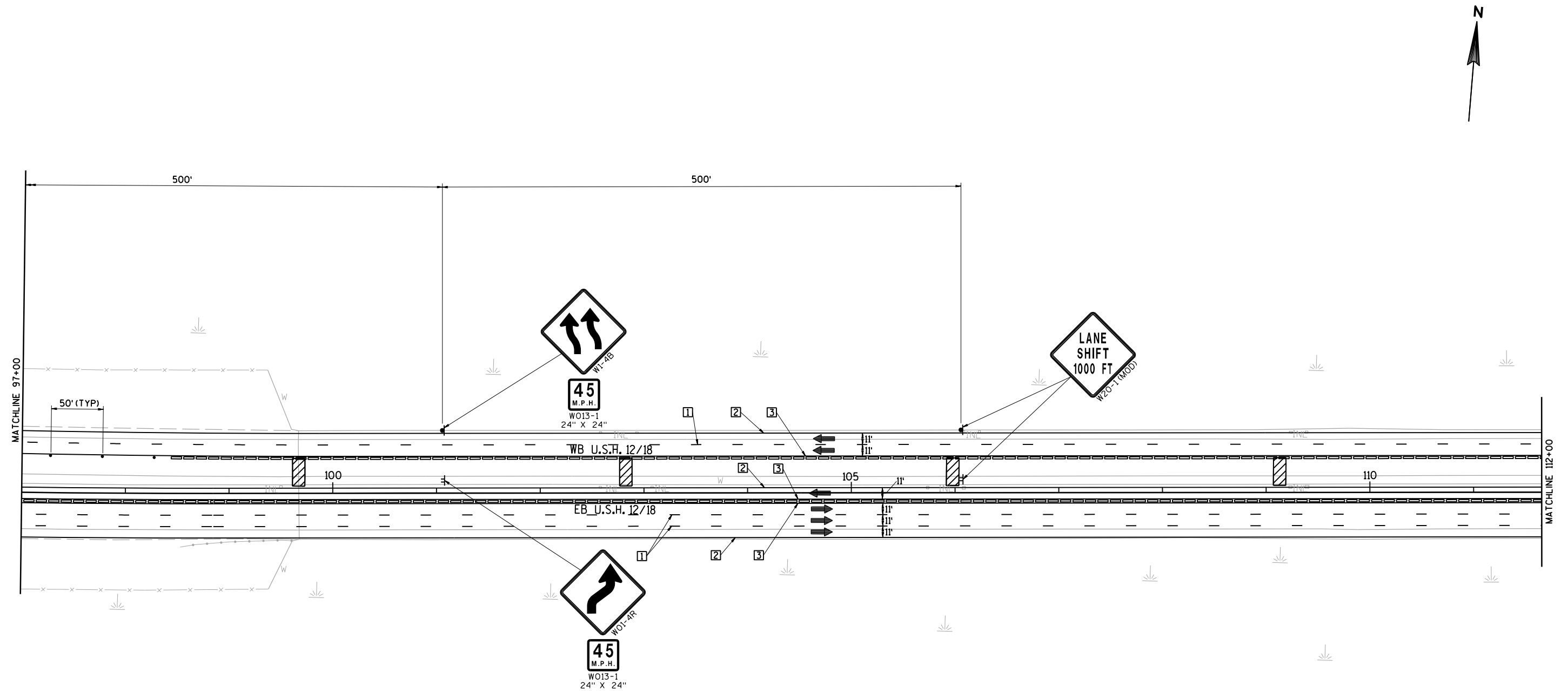
WISDOT/CADDS SHEET 42

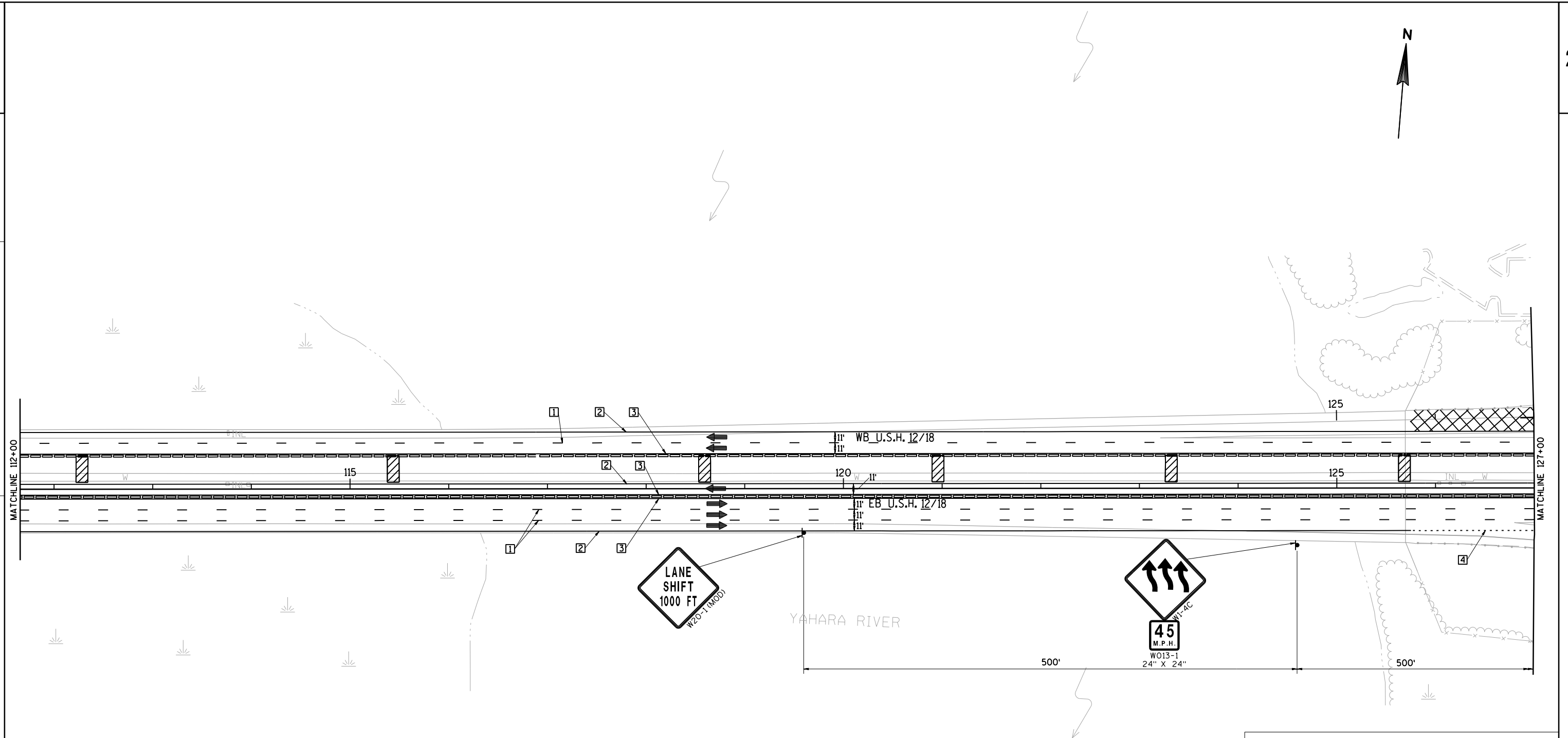




2

2








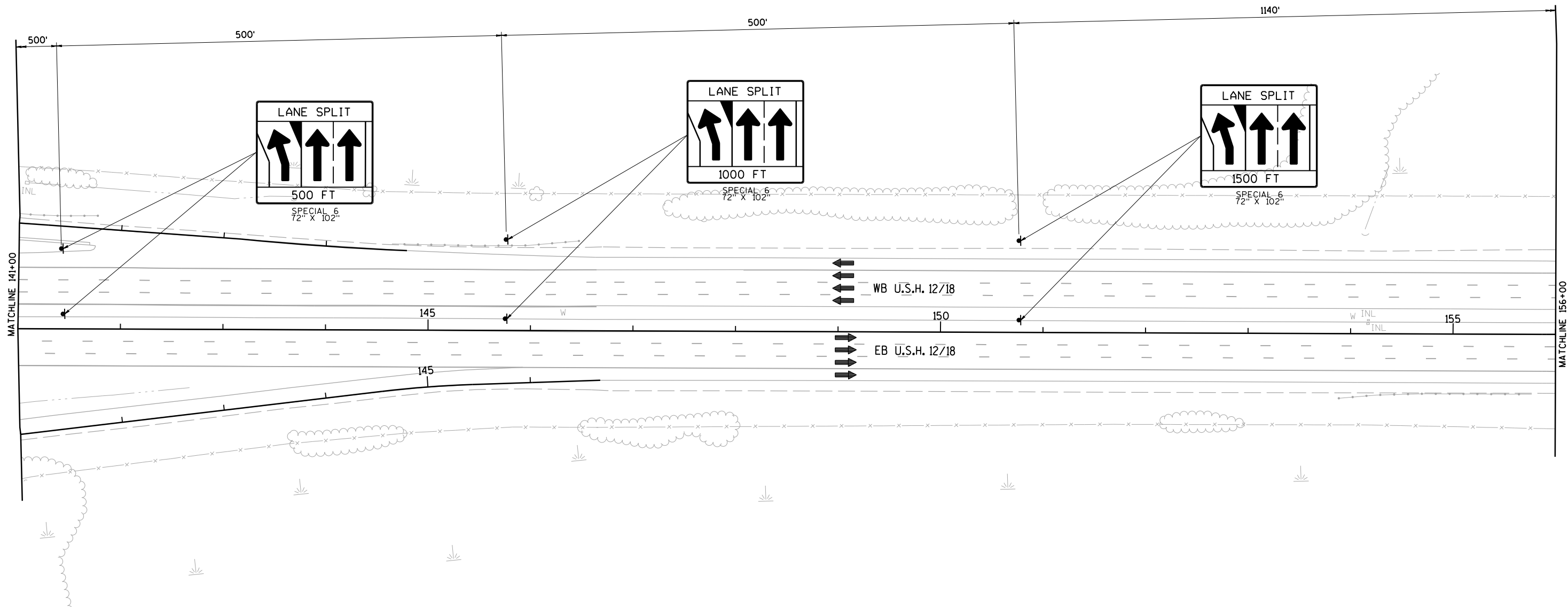
LEGEND

- TRAFFIC CONTROL DRUM
- ▬ SIGN ON TEMPORARY SUPPORT
- ▬▬▬ CONCRETE BARRIER TEMPORARY PRECAST
- ▨ ROAD CLOSED
- ➡ DIRECTION OF TRAFFIC
- ① TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (WHITE, 12.5' LINE, 37.5' GAP)
- ② TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (WHITE)
- ③ TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (YELLOW)
- ④ TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (WHITE, 3' DASH, 9' SKIP)



LEGEND

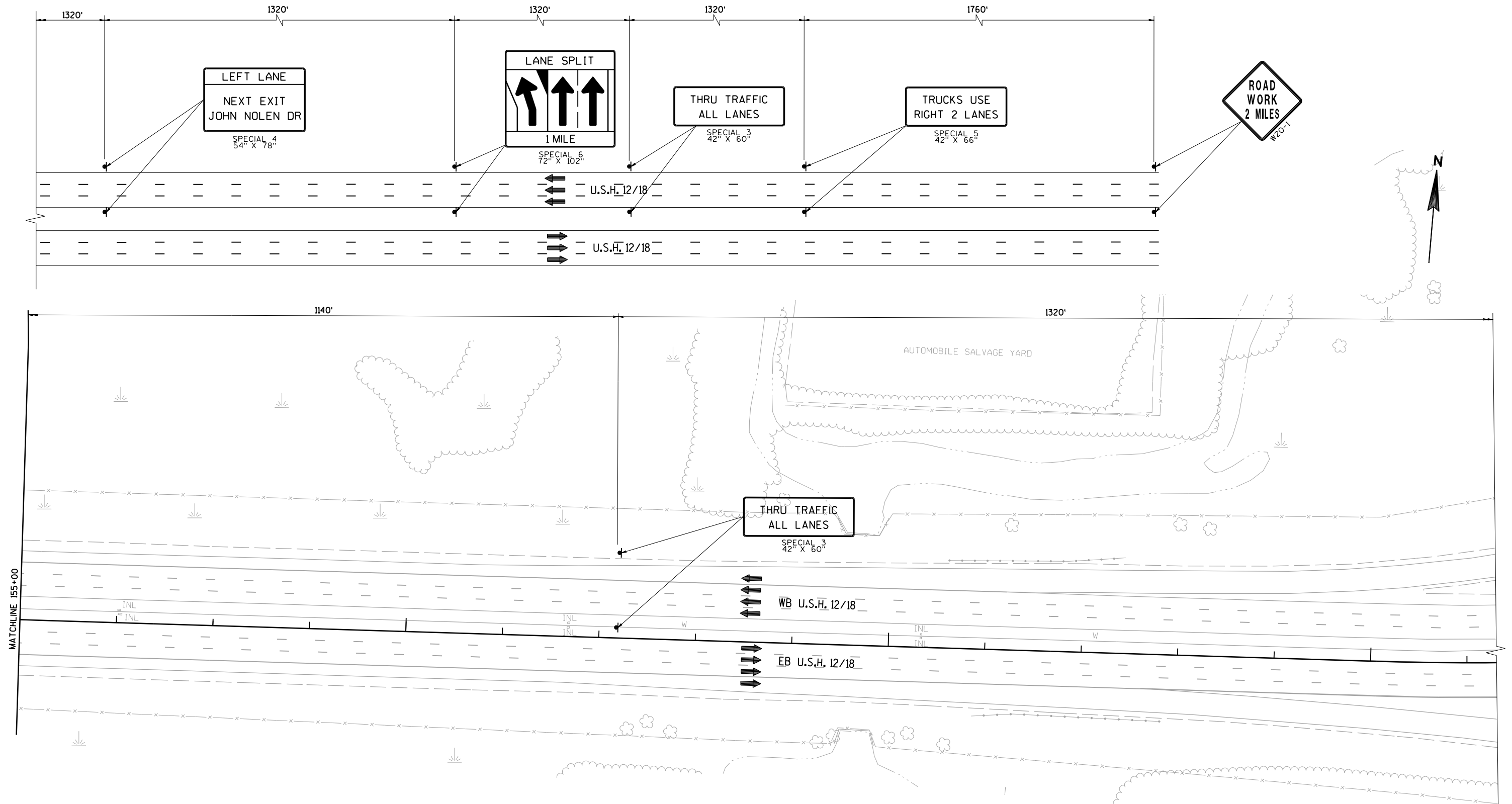
●	TRAFFIC CONTROL DRUM
├ OR ┤	SIGN ON TEMPORARY SUPPORT
↑	TYPE III BARRICADE
CCCC	TEMPORARY CRASH CUSHION
=====	CONCRETE BARRIER TEMPORARY PRECAST
	ROAD CLOSED
	WORK AREA
	DIRECTION OF TRAFFIC
①	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE, 12.5' LINE, 37.5' GAP)
②	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
③	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
④	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE, 3' DASH, 9' SKIP)



LEGEND

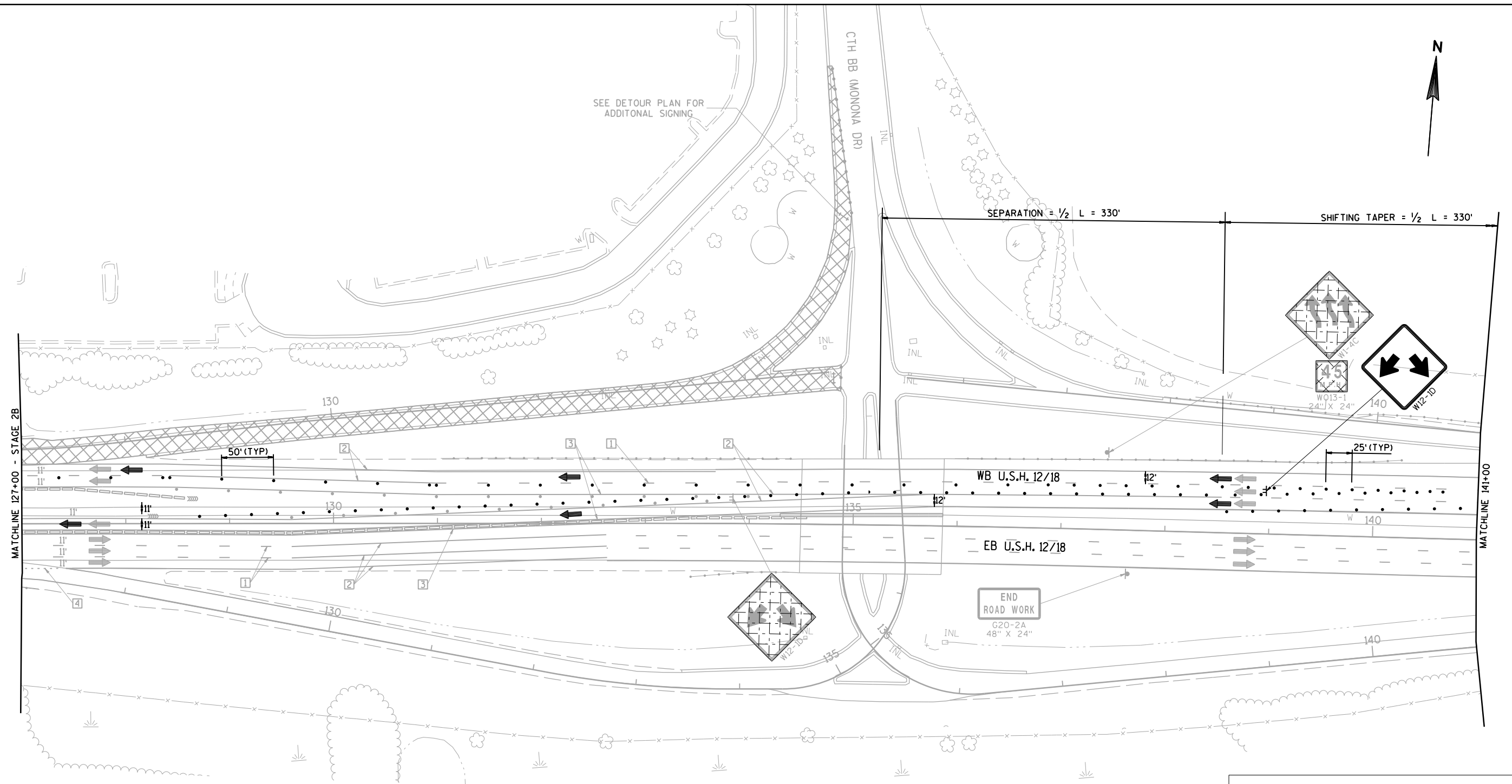
SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC



LEGEND

- ▬ SIGN ON TEMPORARY SUPPORT
➡ DIRECTION OF TRAFFIC

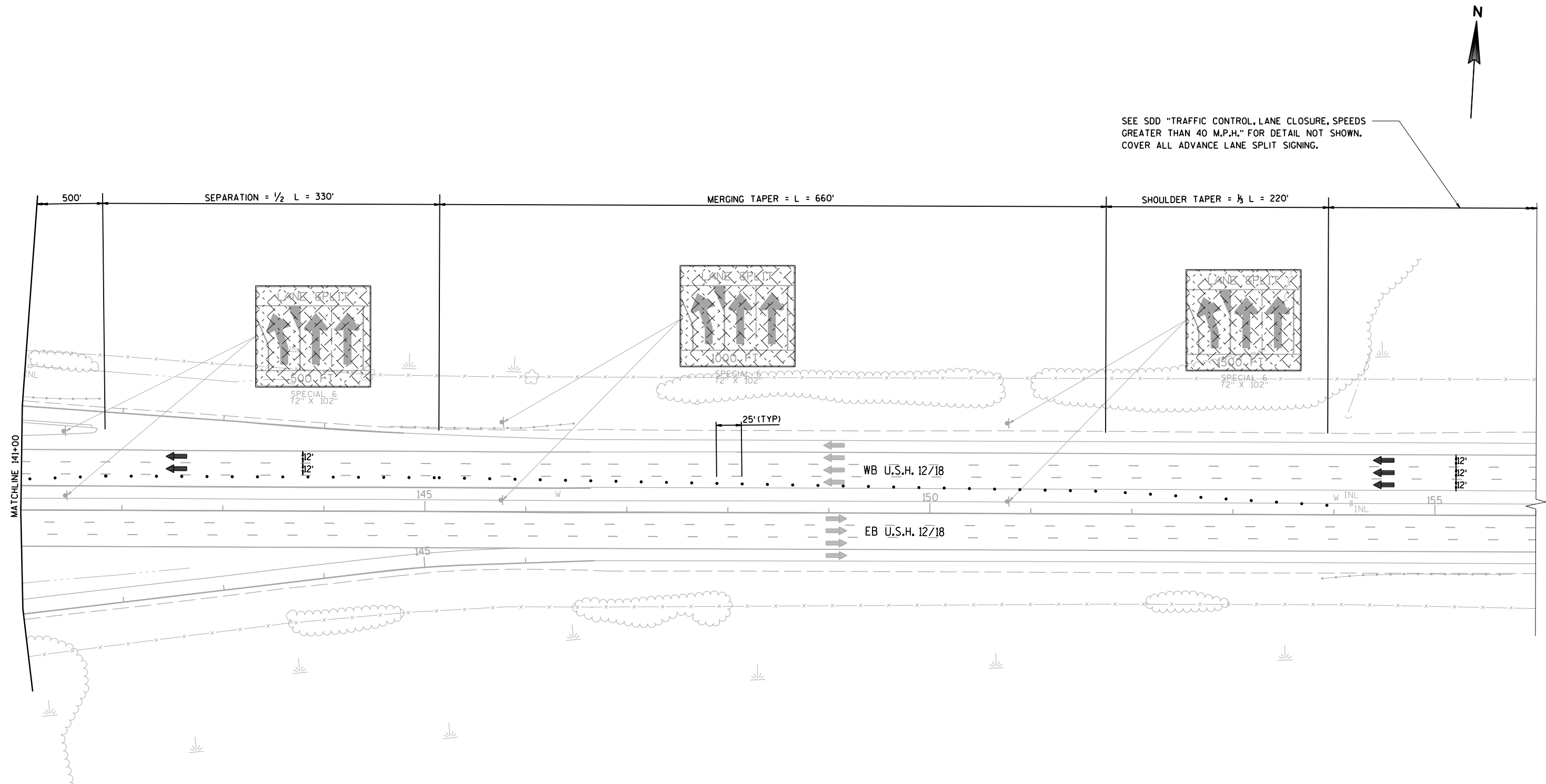


NOTES

1. BASE MAPPING PAVEMENT MARKINGS AND SIGNING ARE LONG TERM TRAFFIC CONTROL FOR STAGE 2B.
2. PLACE A TYPE C STEADY BURN LIGHT ON ALL CHANNELIZING DEVICES IN LANE MERGE AND SHIFTING TAPERS.
3. THE EXACT PLACEMENT OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
4. COVER ALL SIGNS IN A MANNER APPROVED BY THE ENGINEER.

LEGEND

- TRAFFIC CONTROL DRUM
- ▮ OR ▮ SIGN ON TEMPORARY SUPPORT
- ▬▬▬ CONCRETE BARRIER TEMPORARY PRECAST
- ▨ SIGN NOT USED
- ➡ DIRECTION OF TRAFFIC
- ① TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE, 12.5' LINE, 37.5' GAP)
- ② TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
- ③ TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
- ④ TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE, 3'DASH, 9'SKIP)



NOTES

1. BASE MAPPING PAVEMENT MARKINGS AND SIGNING ARE LONG TERM TRAFFIC CONTROL FOR STAGE 2B.
2. PLACE A TYPE C STEADY BURN LIGHT ON ALL CHANNELIZING DEVICES IN LANE MERGE AND SHIFTING TAPERS.
3. THE EXACT PLACEMENT OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
4. COVER ALL SIGNS IN A MANNER APPROVED BY THE ENGINEER.

LEGEND

- TRAFFIC CONTROL DRUM
- ⌋ SIGN ON TEMPORARY SUPPORT
- ⊞ SIGN NOT USED
- ➡ DIRECTION OF TRAFFIC

PROJECT NO: 1206-04-61

HWY: USH 12

COUNTY: DANE

TRAFFIC CONTROL - STAGE 2B - SINGLE LANE CLOSURE

SHEET

E

FILE NAME : Yahara_tc_phase2b-17.dgn

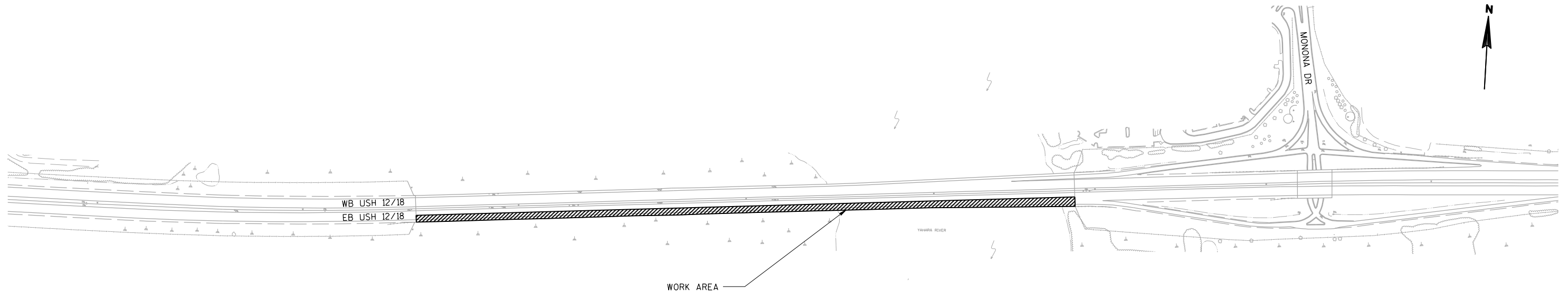
PLOT DATE : 11/16/2012

PLOT BY : sstuart

PLOT NAME :

PLOT SCALE : 100.0000 sf / in.

WISDOT/CADDs SHEET 42



CONSTRUCTION STAGING OVERVIEW - STAGE 3A

TRAFFIC OPERATIONS

USH 12/USH 18

WESTBOUND TRAFFIC WILL BE MAINTAINED ON SHIFTED AND NARROWED LANES. TWO EASTBOUND LANES WILL BE MAINTAINED ON THE EXISTING EASTBOUND STRUCTURE AND THE THIRD EASTBOUND LANE WILL UTILIZE A CROSSOVER AND TRAVEL CONTRAFLOW ON THE WESTBOUND STRUCTURE. ONE LANE AND TWO LANE CLOSURES PERMITTED IN ACCORDANCE WITH PROJECT SPECIAL PROVISIONS.

USH 12/USH 18 RAMP

THE WESTBOUND ENTRANCE RAMP FROM MONONA DRIVE AND THE EASTBOUND ENTRANCE RAMP SOUTH TOWNE DRIVE WILL BE CLOSED. EASTBOUND EXIT RAMP TO MONONA DRIVE WILL BE CLOSED. ALL OTHER RAMP TRAFFIC WILL BE MAINTAINED ON ALL EXISTING LANES OF USH 12/USH 18 RAMP AT ALL TIMES.

CONSTRUCTION OPERATIONS

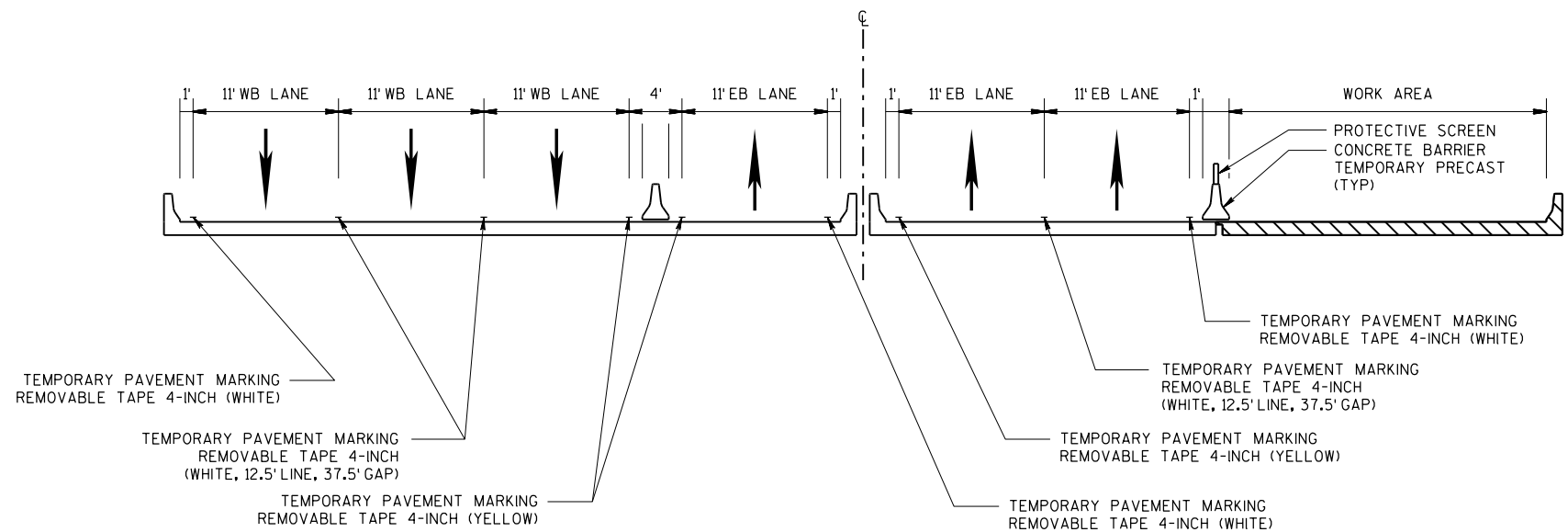
USH 12/USH 18

SINGLE LANE CROSSOVER FOR ONE EASTBOUND LANE OF USH 12/USH 18 WILL BE OPERATIONAL. EASTBOUND STRUCTURE EXPANSION JOINT WILL BE REMOVED/REPLACED ON THE SOUTHERN HALF OF EASTBOUND STRUCTURE.

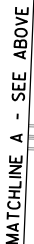
NOTES - STAGE 3A

REFER TO THE FOLLOWING STANDARD DETAIL DRAWINGS FOR TRAFFIC CONTROL DEVICES, AS WELL AS OTHER STANDARD DETAIL DRAWINGS AS NECESSARY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER:

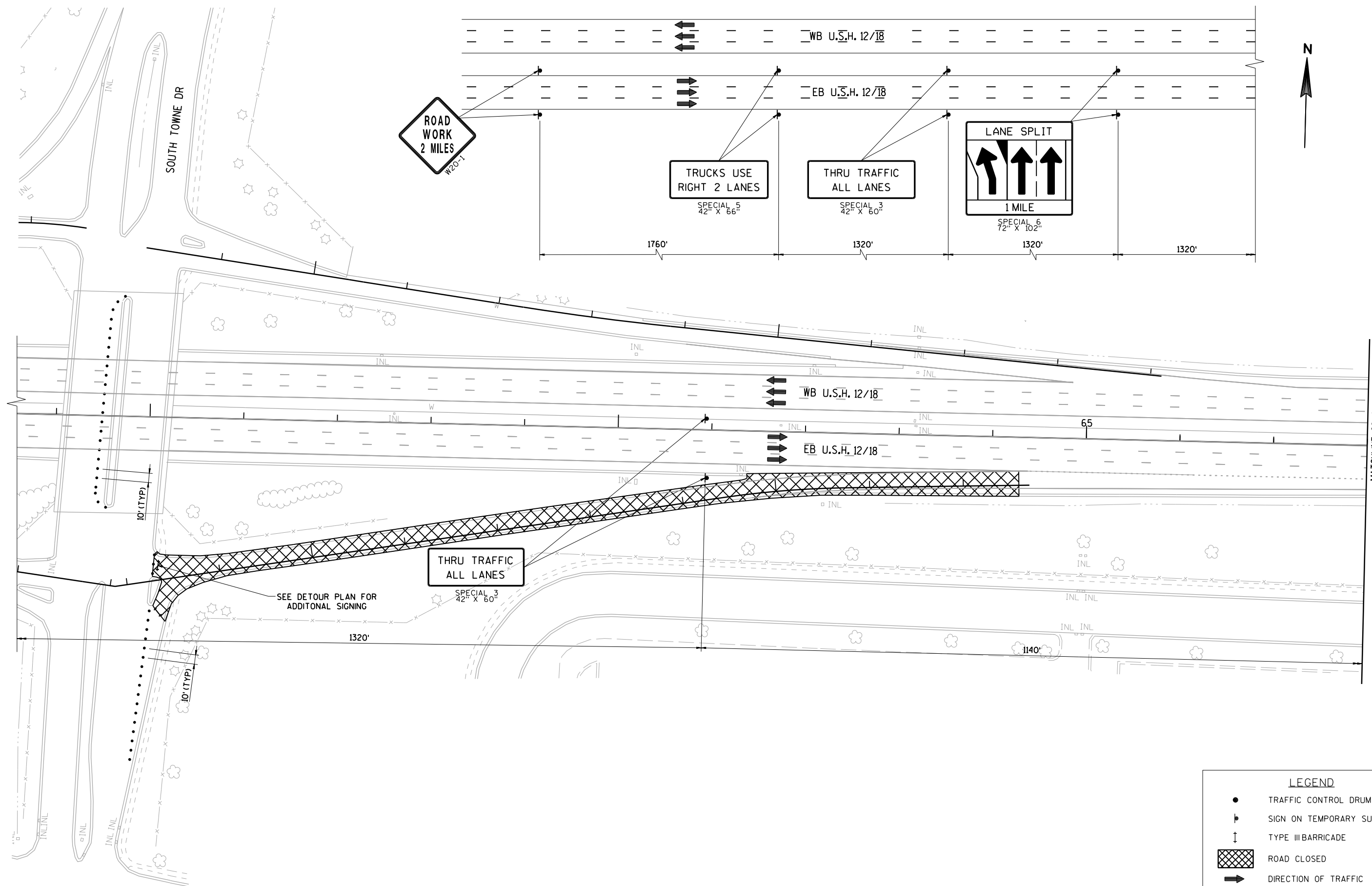
- TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 MPH
- TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)
- TRAFFIC CONTROL, SINGLE LANE CROSSOVER
- TRAFFIC CONTROL, EXIT RAMP CLOSURE

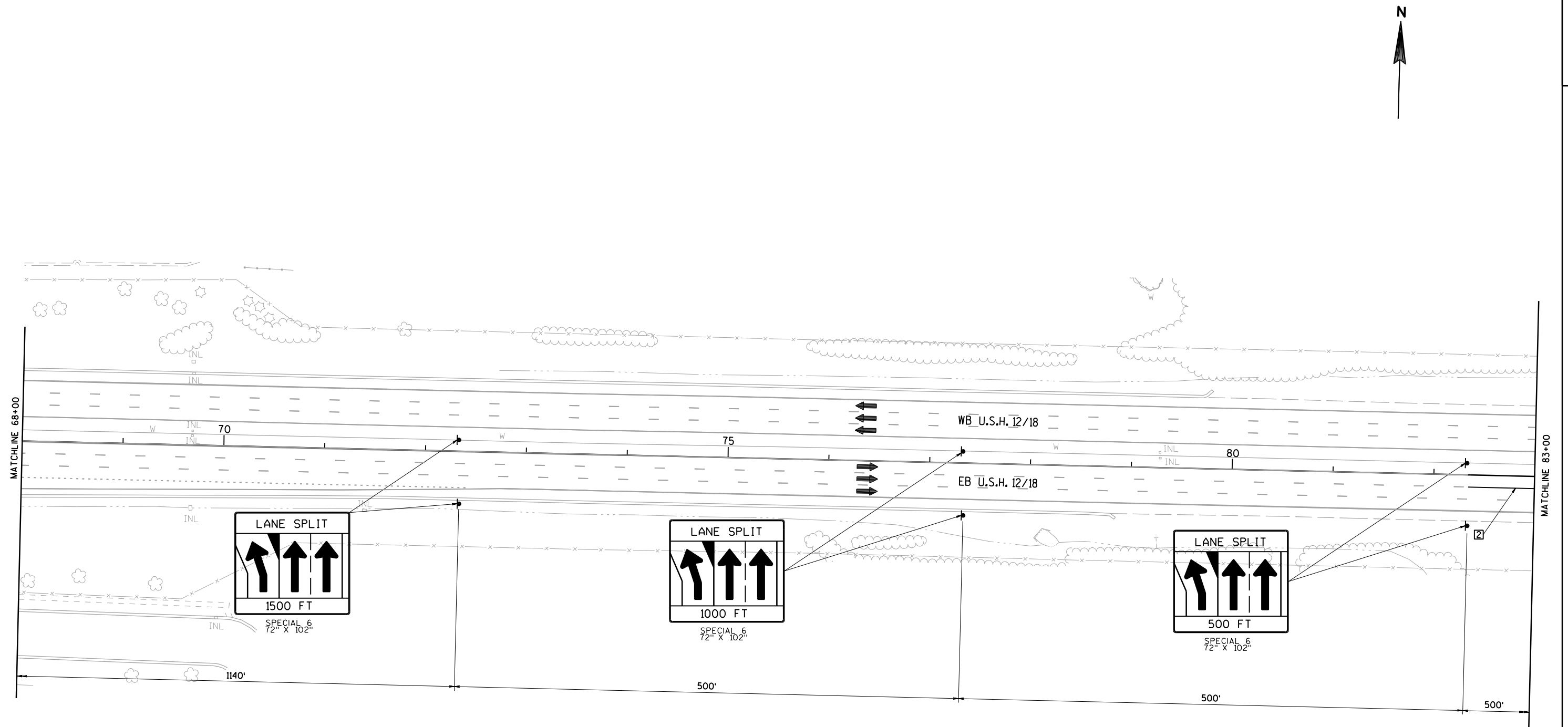


STAGE 3A TYPICAL SECTION - USH 12/USH 18
NOT TO SCALE



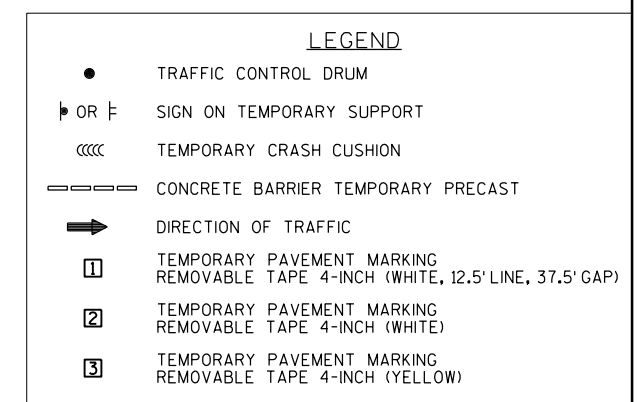
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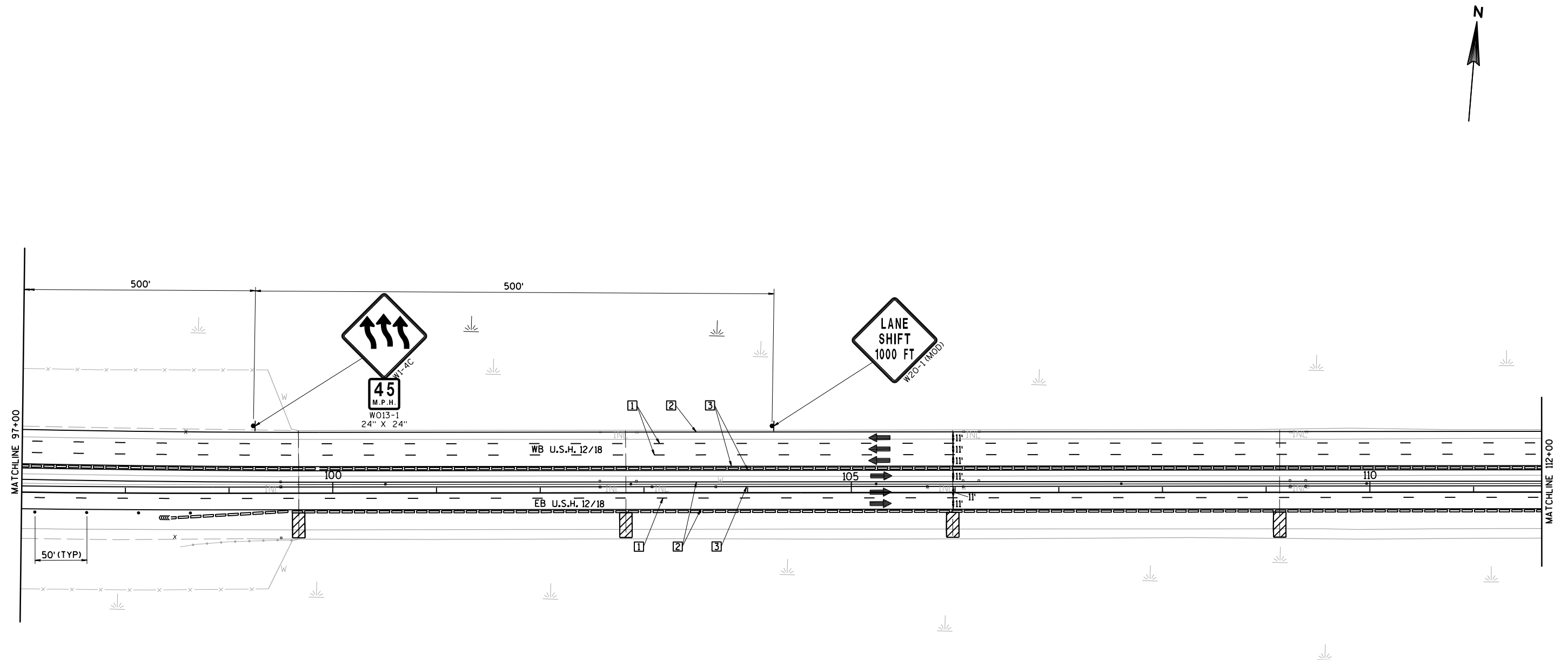




LEGEND

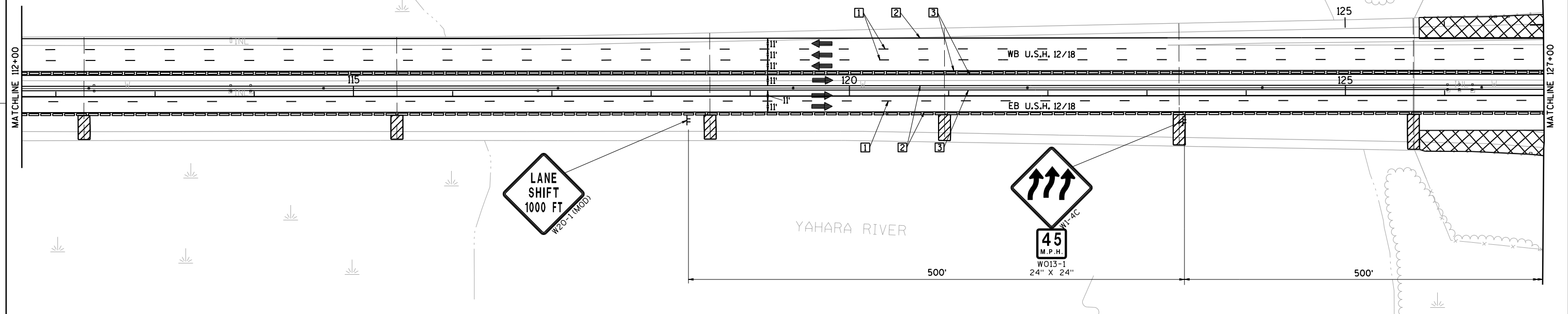
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (WHITE)



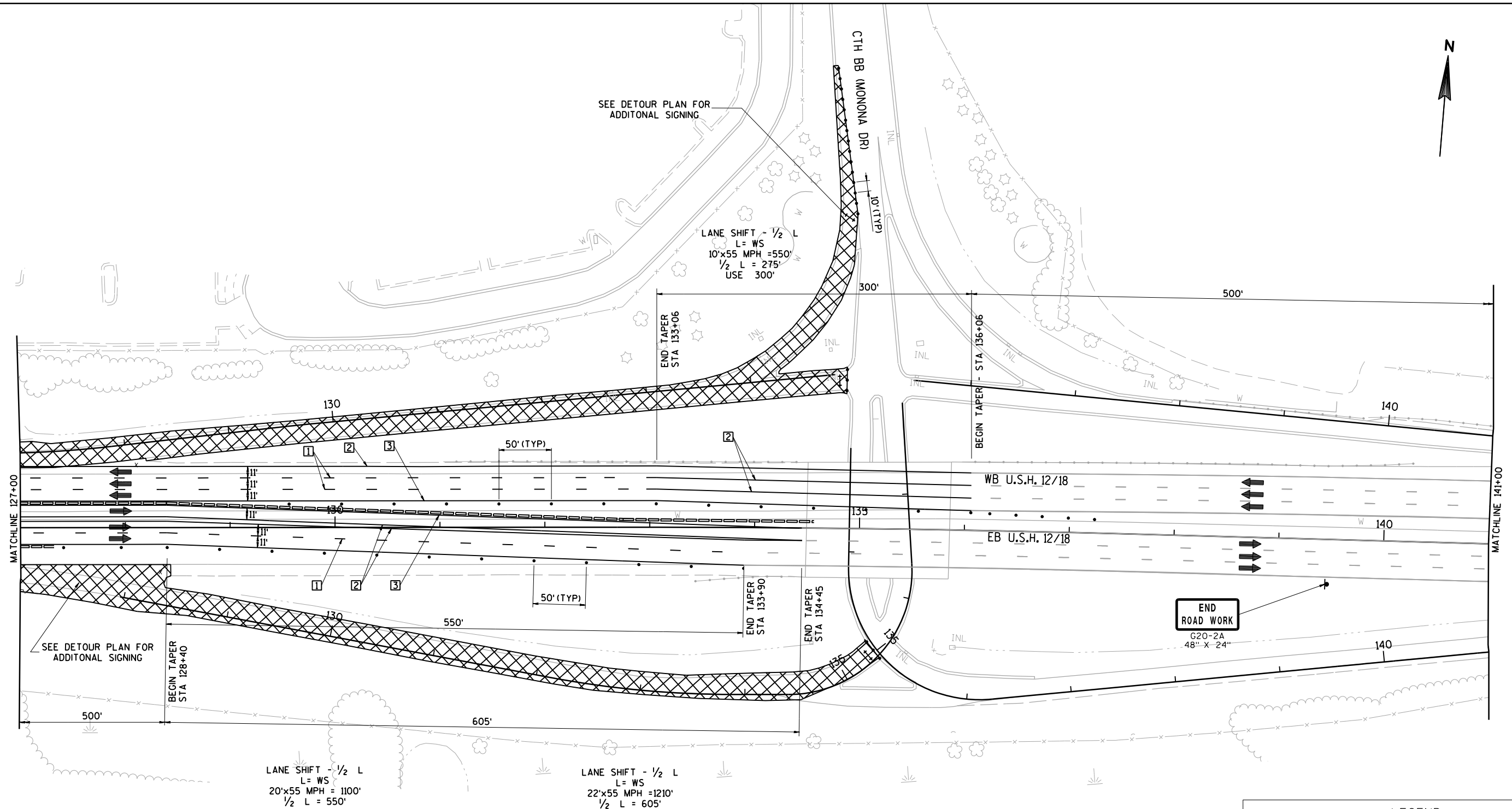


LEGEND

- TRAFFIC CONTROL DRUM
- ▬ SIGN ON TEMPORARY SUPPORT
- ▬▬▬ TEMPORARY CRASH CUSHION
- ▬▬▬ CONCRETE BARRIER TEMPORARY PRECAST
- ▨ WORK AREA
- ➡ DIRECTION OF TRAFFIC
- 1 TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (WHITE, 12.5' LINE, 37.5' GAP)
- 2 TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (WHITE)
- 3 TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (YELLOW)

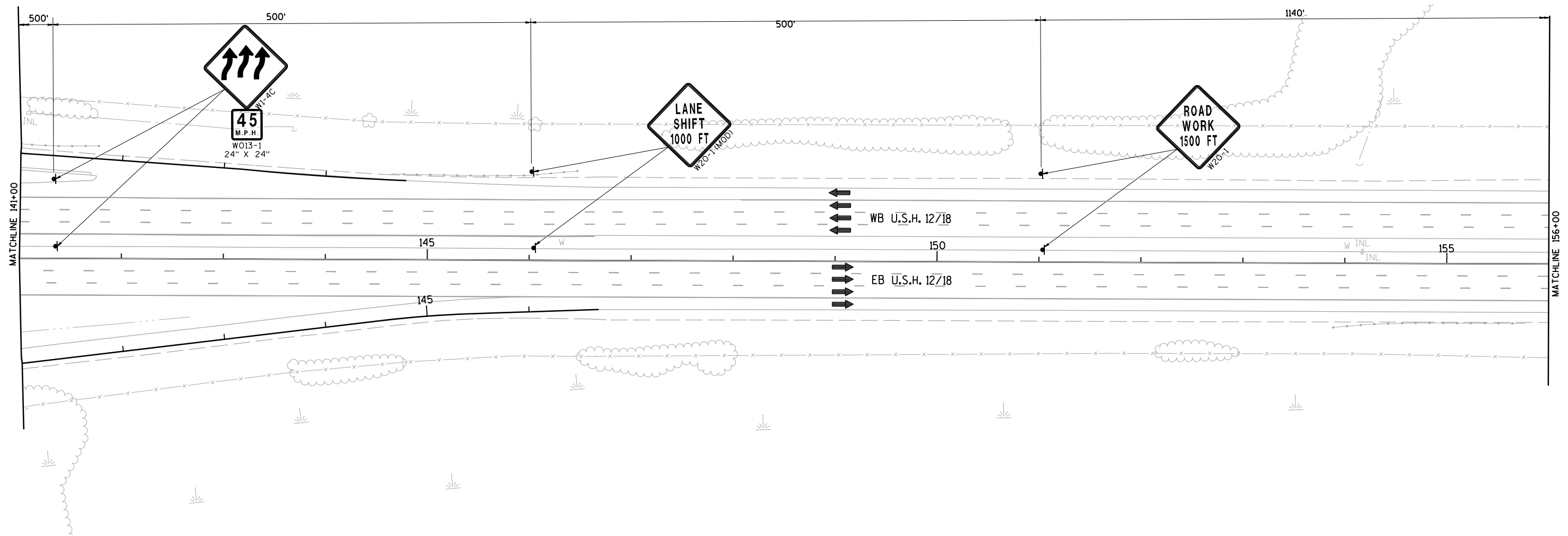


LEGEND	
●	TRAFFIC CONTROL DRUM
⌄	SIGN ON TEMPORARY SUPPORT
----	CONCRETE BARRIER TEMPORARY PRECAST
▣	ROAD CLOSED
▨	WORK AREA
➡	DIRECTION OF TRAFFIC
1	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE, 12.5' LINE, 37.5' GAP)
2	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
3	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE, 3'DASH, 9' SKIP)



LEGEND

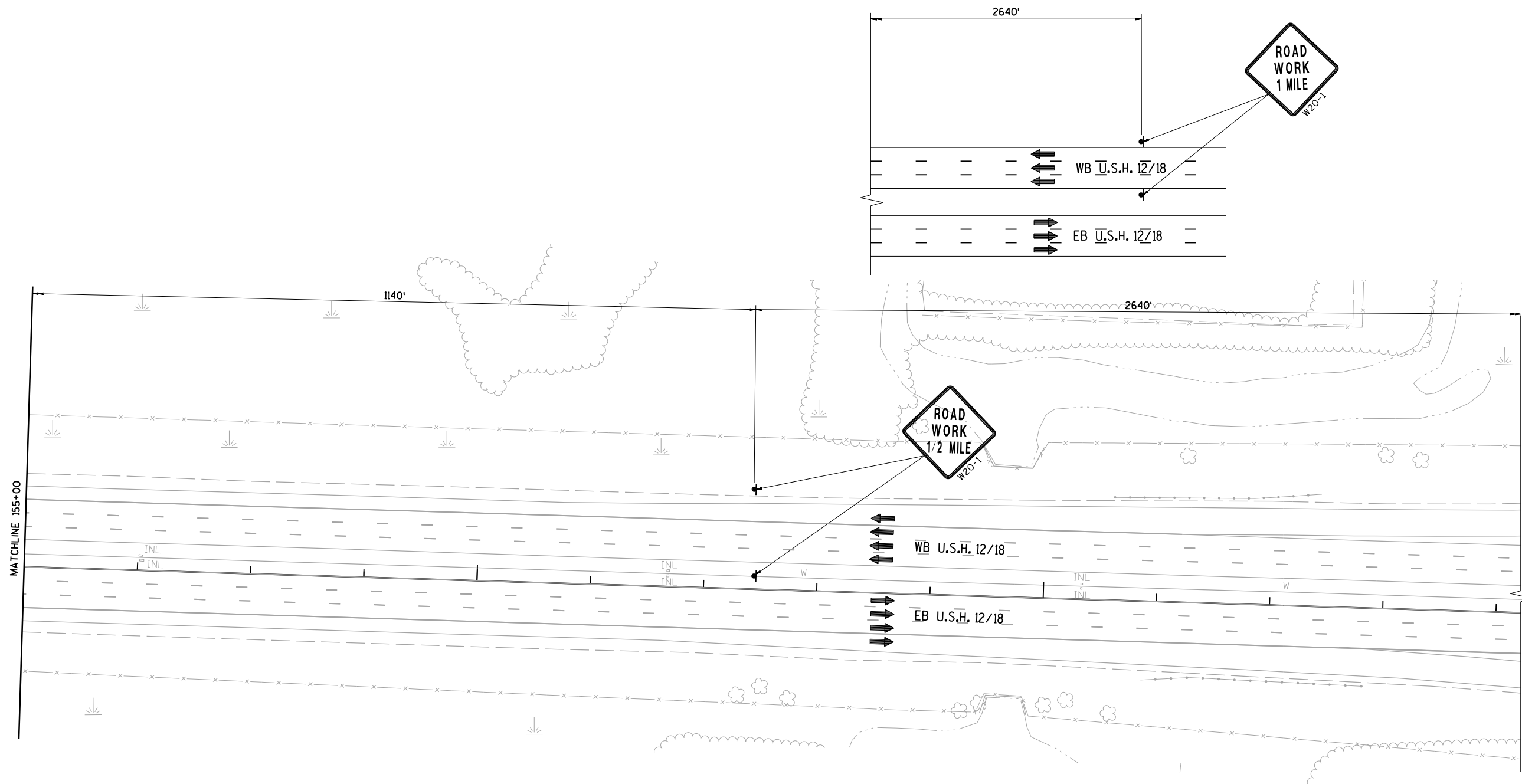
- TRAFFIC CONTROL DRUM
- ⌋ SIGN ON TEMPORARY SUPPORT
- ↑ TYPE III BARRICADE
- ▬ CONCRETE BARRIER TEMPORARY PRECAST
- ▨ ROAD CLOSED
- ➡ DIRECTION OF TRAFFIC
- ① TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (WHITE, 12.5' LINE, 37.5' GAP)
- ② TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (WHITE)
- ③ TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (YELLOW)



LEGEND

SIGN ON TEMPORARY SUPPORT

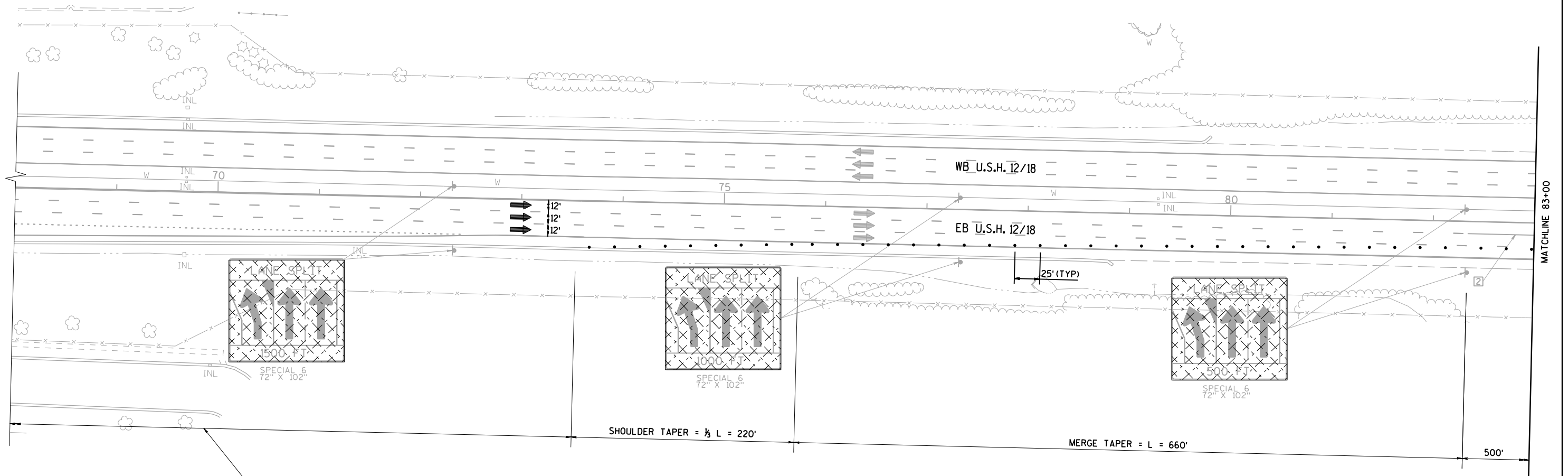
DIRECTION OF TRAFFIC



LEGEND

▬ SIGN ON TEMPORARY SUPPORT

➡ DIRECTION OF TRAFFIC



SEE SDD "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS
GREATER THAN 40 M.P.H." FOR DETAIL NOT SHOWN.
COVER ALL ADVANCE LANE SPLIT SIGNING.

NOTES

1. BASE MAPPING PAVEMENT MARKINGS AND SIGNING ARE LONG TERM TRAFFIC CONTROL FOR STAGE 3A.
2. PLACE A TYPE C STEADY BURN LIGHT ON ALL CHANNELIZING DEVICES IN LANE MERGE AND SHIFTING TAPERS.
3. THE EXACT PLACEMENT OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
4. COVER ALL SIGNS IN A MANNER APPROVED BY THE ENGINEER.

LEGEND

- TRAFFIC CONTROL DRUM
- ⌋ SIGN ON TEMPORARY SUPPORT
- ⊠ SIGN NOT USED
- ➡ DIRECTION OF TRAFFIC
- ② TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (WHITE)

PROJECT NO: 1206-04-61

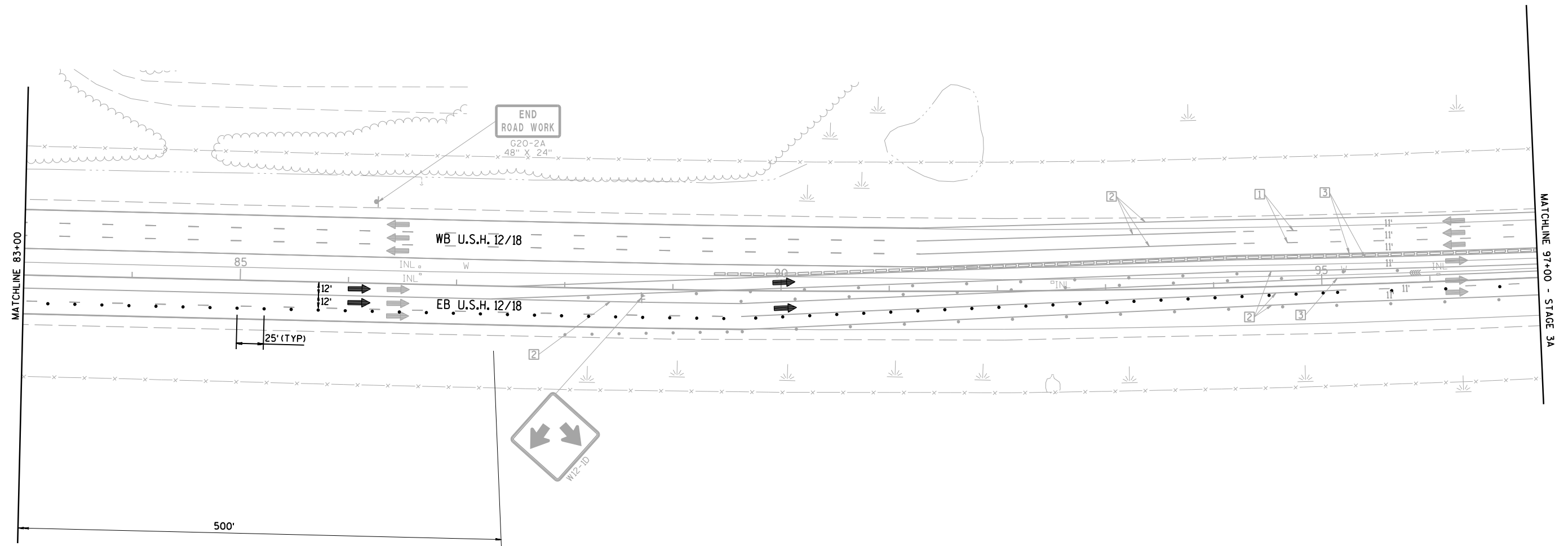
HWY: USH 12

COUNTY: DANE

TRAFFIC CONTROL - STAGE 3A - SINGLE LANE CLOSURE

SHEET

E



NOTES

1. BASE MAPPING PAVEMENT MARKINGS AND SIGNING ARE LONG TERM TRAFFIC CONTROL FOR STAGE 3A.
2. PLACE A TYPE C STEADY BURN LIGHT ON ALL CHANNELIZING DEVICES IN LANE MERGE AND SHIFTING TAPERS.
3. THE EXACT PLACEMENT OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
4. COVER ALL SIGNS IN A MANNER APPROVED BY THE ENGINEER.

PROJECT NO: 1206-04-61

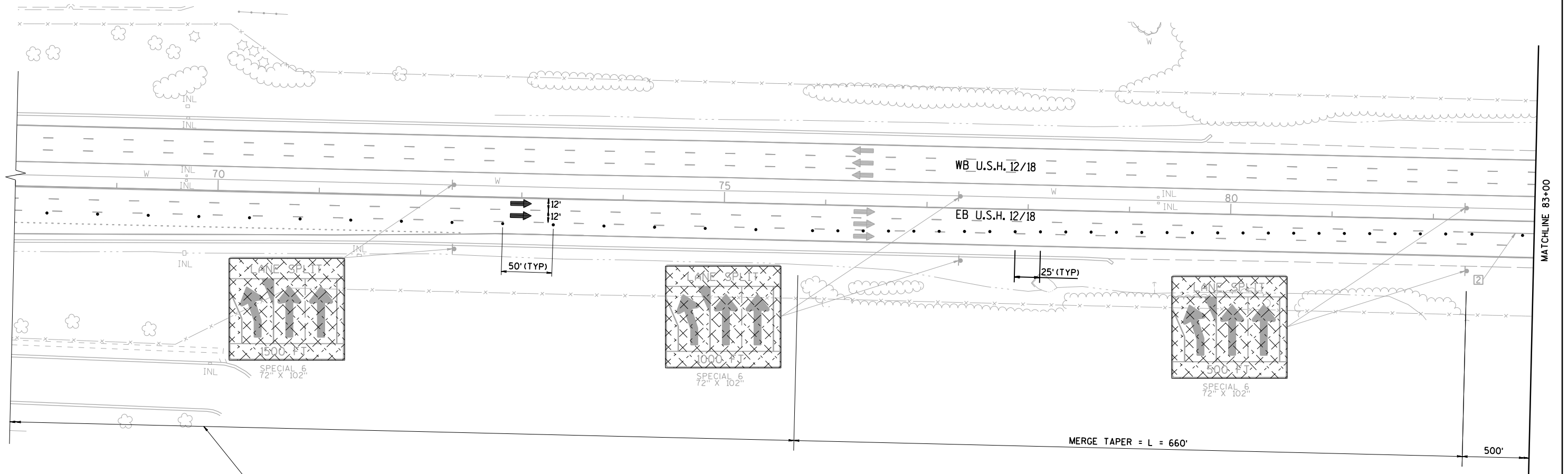
HWY: USH 12

COUNTY: DANE

TRAFFIC CONTROL - STAGE 3A - SINGLE LANE CLOSURE

SHEET

E



SEE SDD "TRAFFIC CONTROL, TWO LANE LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT-TERM (LESS THAN 24 HOURS)" FOR DETAIL NOT SHOWN. COVER ALL ADVANCE LANE SPLIT SIGNING.

NOTES

1. BASE MAPPING PAVEMENT MARKINGS AND SIGNING ARE LONG TERM TRAFFIC CONTROL FOR STAGE 3A.
2. PLACE A TYPE C STEADY BURN LIGHT ON ALL CHANNELIZING DEVICES IN LANE MERGE AND SHIFTING TAPERS.
3. THE EXACT PLACEMENT OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
4. COVER ALL SIGNS IN A MANNER APPROVED BY THE ENGINEER.

LEGEND

- TRAFFIC CONTROL DRUM
- ⌋ SIGN ON TEMPORARY SUPPORT
- ⊠ SIGN NOT USED
- ➡ DIRECTION OF TRAFFIC
- ② TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)

PROJECT NO: 1206-04-61

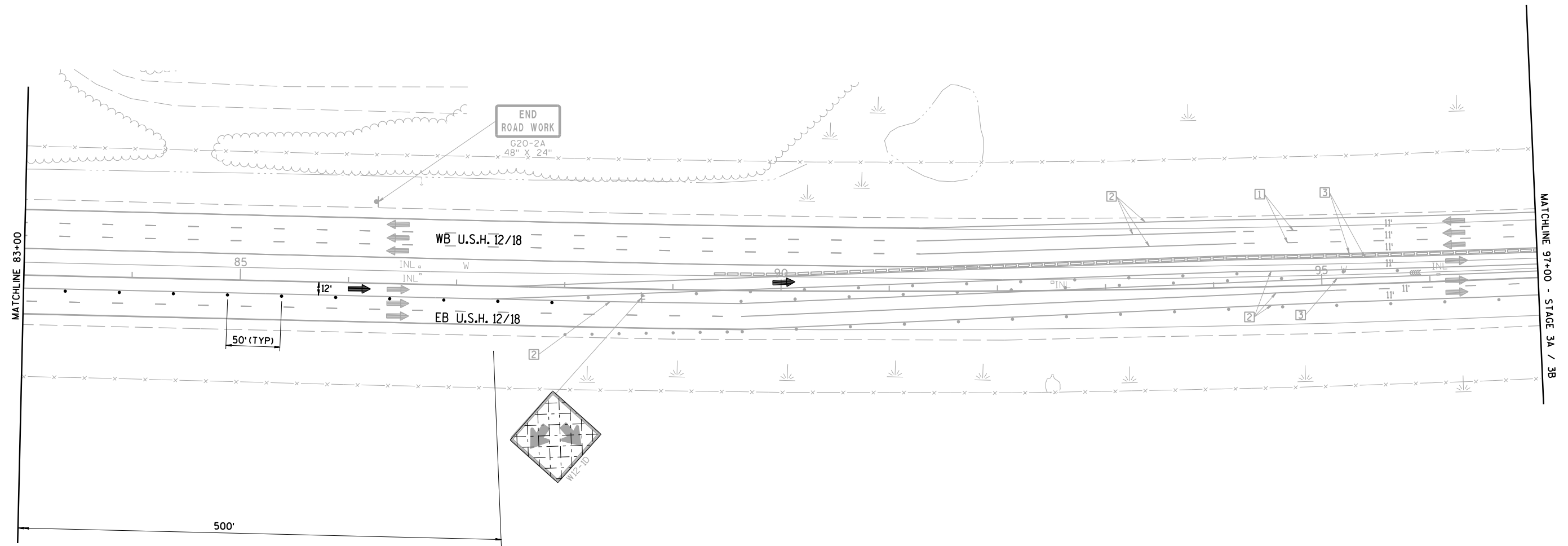
HWY: USH 12

COUNTY: DANE

TRAFFIC CONTROL - STAGE 3A/3B - DOUBLE LANE CLOSURE

SHEET

E



NOTES

1. BASE MAPPING PAVEMENT MARKINGS AND SIGNING ARE LONG TERM TRAFFIC CONTROL FOR STAGE 3A.
2. PLACE A TYPE C STEADY BURN LIGHT ON ALL CHANNELIZING DEVICES IN LANE MERGE AND SHIFTING TAPERS.
3. THE EXACT PLACEMENT OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
4. COVER ALL SIGNS IN A MANNER APPROVED BY THE ENGINEER.

LEGEND

- TRAFFIC CONTROL DRUM
 - ▮ SIGN ON TEMPORARY SUPPORT
 - ===== TEMPORARY CRASH CUSHION
 - ===== CONCRETE BARRIER TEMPORARY PRECAST
 - ➡ DIRECTION OF TRAFFIC
 - ① TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (WHITE, 12.5' LINE, 37.5' GAP)
 - ② TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (WHITE)
 - ③ TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (YELLOW)
- SIGN NOT USED

PROJECT NO: 1206-04-61

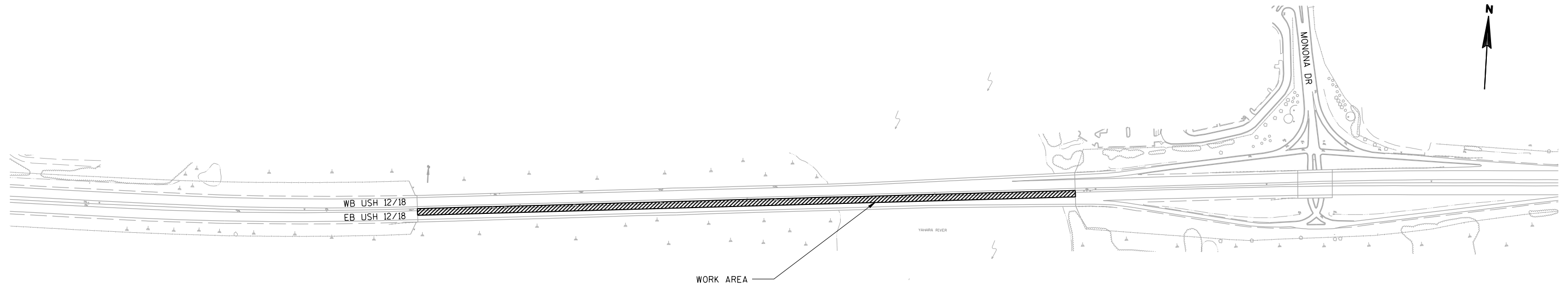
HWY: USH 12

COUNTY: DANE

TRAFFIC CONTROL - STAGE 3A/3B - DOUBLE LANE CLOSURE

SHEET

E



CONSTRUCTION STAGING OVERVIEW - STAGE 3B

TRAFFIC OPERATIONS

USH 12/USH 18

WESTBOUND TRAFFIC WILL BE MAINTAINED ON SHIFTED AND NARROWED LANES. TWO EASTBOUND LANES WILL BE MAINTAINED ON THE EXISTING EASTBOUND STRUCTURE AND THE THIRD EASTBOUND LANE WILL UTILIZE A CROSSOVER AND TRAVEL CONTRAFLOW ON THE WESTBOUND STRUCTURE. ONE LANE AND TWO LANE CLOSURES PERMITTED IN ACCORDANCE WITH PROJECT SPECIAL PROVISIONS.

USH 12/USH 18 RAMP

THE WESTBOUND ENTRANCE RAMP FROM MONONA DRIVE AND THE EASTBOUND ENTRANCE SOUTH TOWNE DRIVE WILL BE CLOSED. ALL OTHER RAMP TRAFFIC WILL BE MAINTAINED ON ALL EXISTING LANES OF USH 12/USH 18 RAMP AT ALL TIMES.

CONSTRUCTION OPERATIONS

USH 12/USH 18

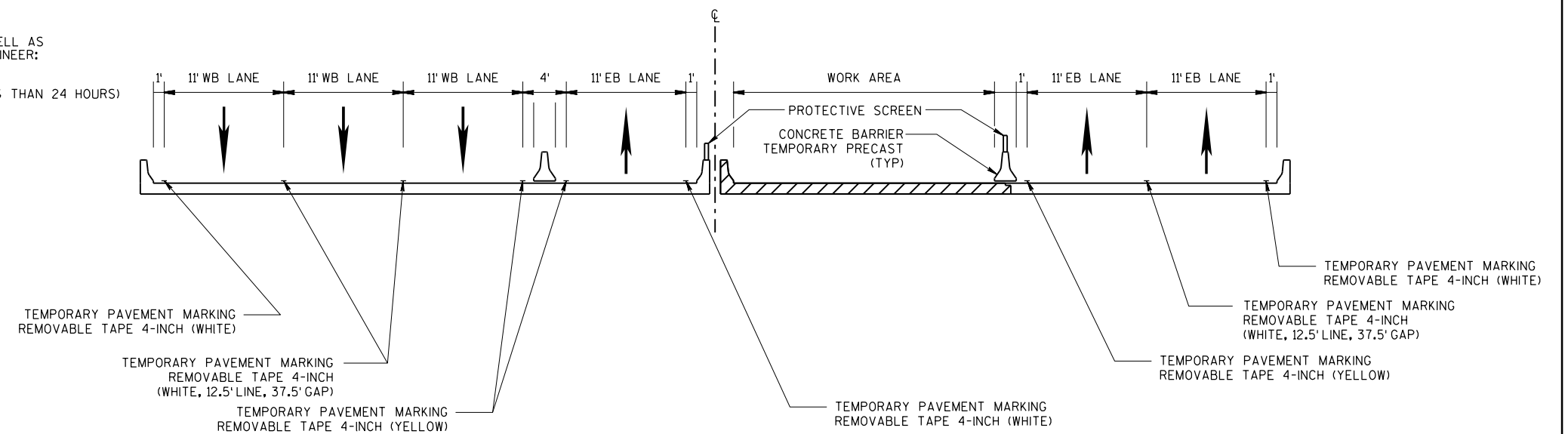
SINGLE LANE CROSSOVER FOR ONE EASTBOUND LANE OF USH 12/USH 18 WILL BE OPERATIONAL. EASTBOUND STRUCTURE EXPANSION JOINT WILL BE REMOVED/REPLACED ON THE NORTHERN HALF OF EASTBOUND STRUCTURE.

AT END OF STAGE, PLACE PERMANENT PAVEMENT MARKINGS.

NOTES - STAGE 3B

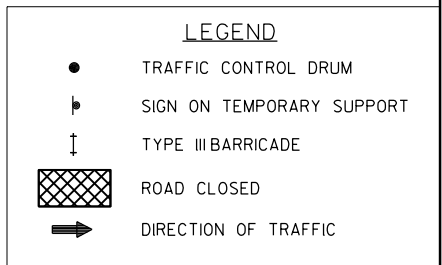
REFER TO THE FOLLOWING STANDARD DETAIL DRAWINGS FOR TRAFFIC CONTROL DEVICES, AS WELL AS OTHER STANDARD DETAIL DRAWINGS AS NECESSARY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER:

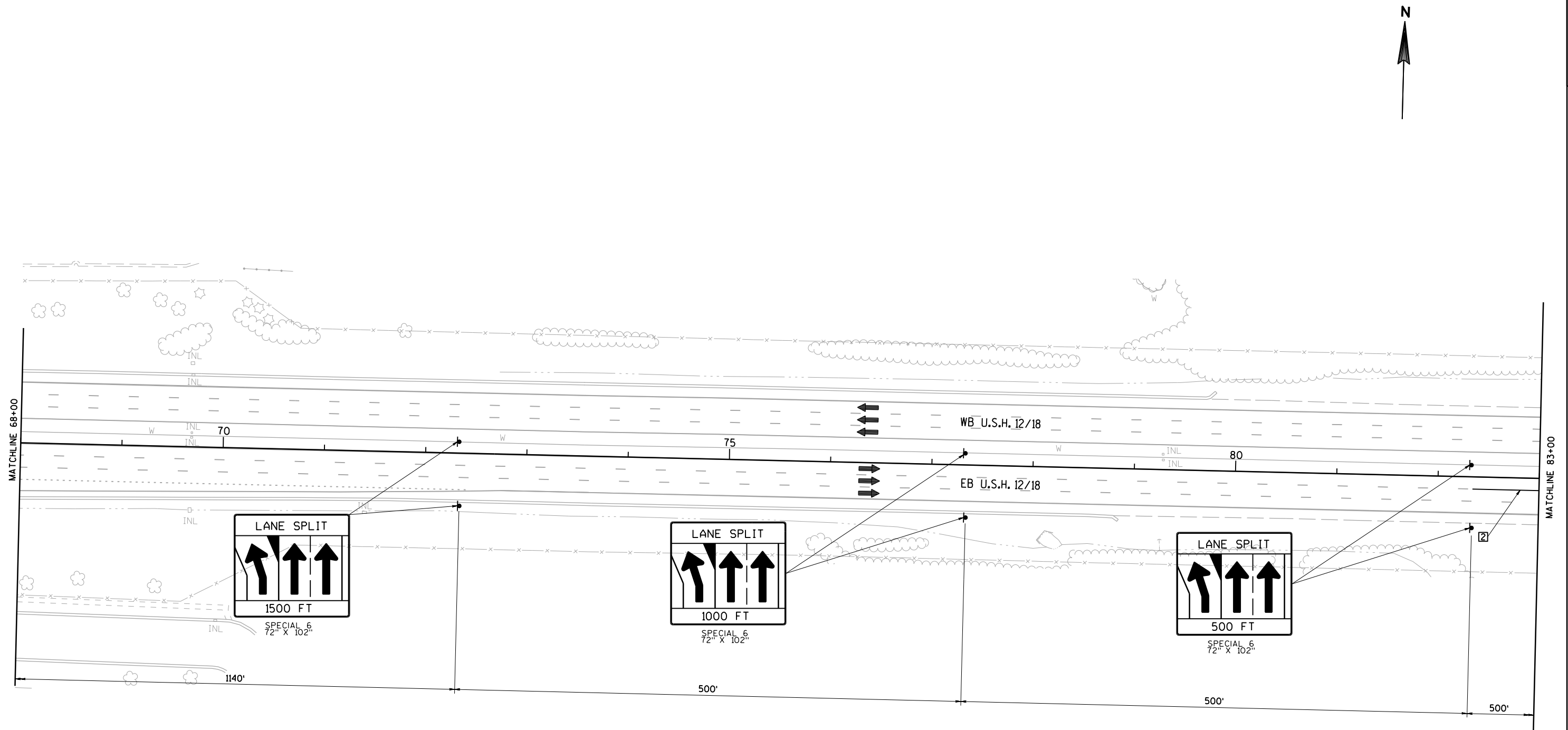
TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 MPH
TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)
TRAFFIC CONTROL, SINGLE LANE CROSSOVER



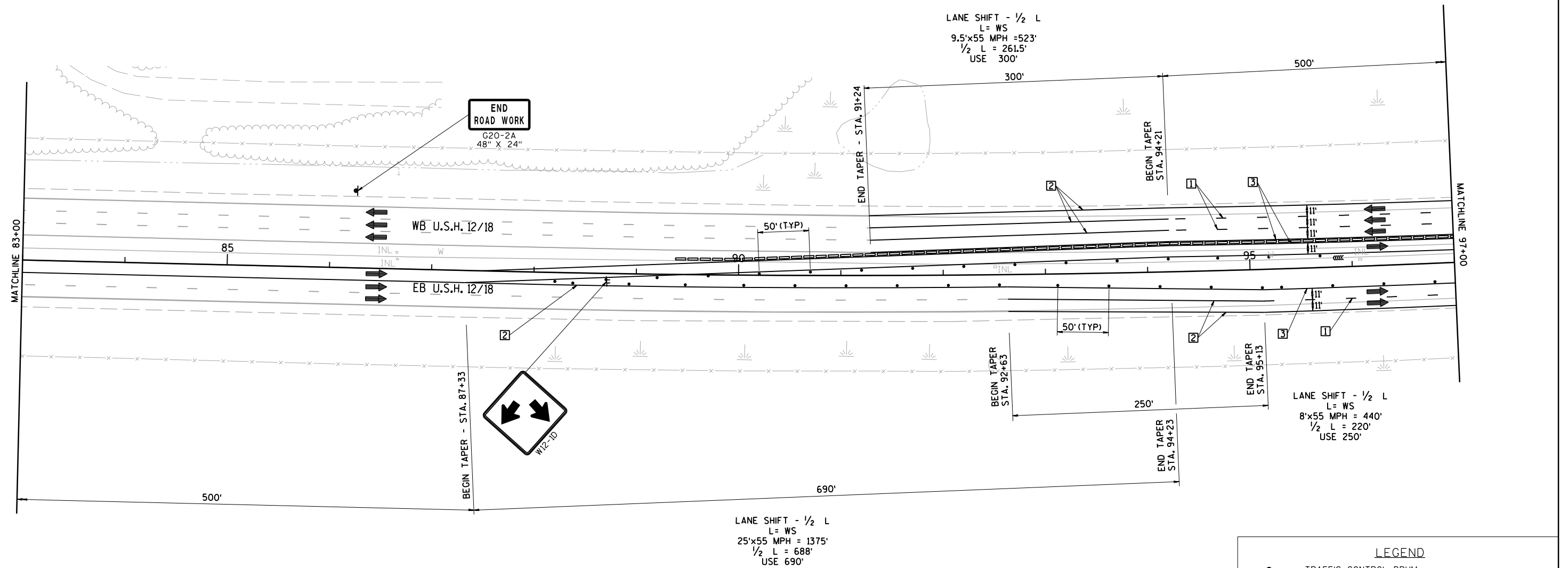
STAGE 3B TYPICAL SECTION - USH 12/USH 18

NOT TO SCALE



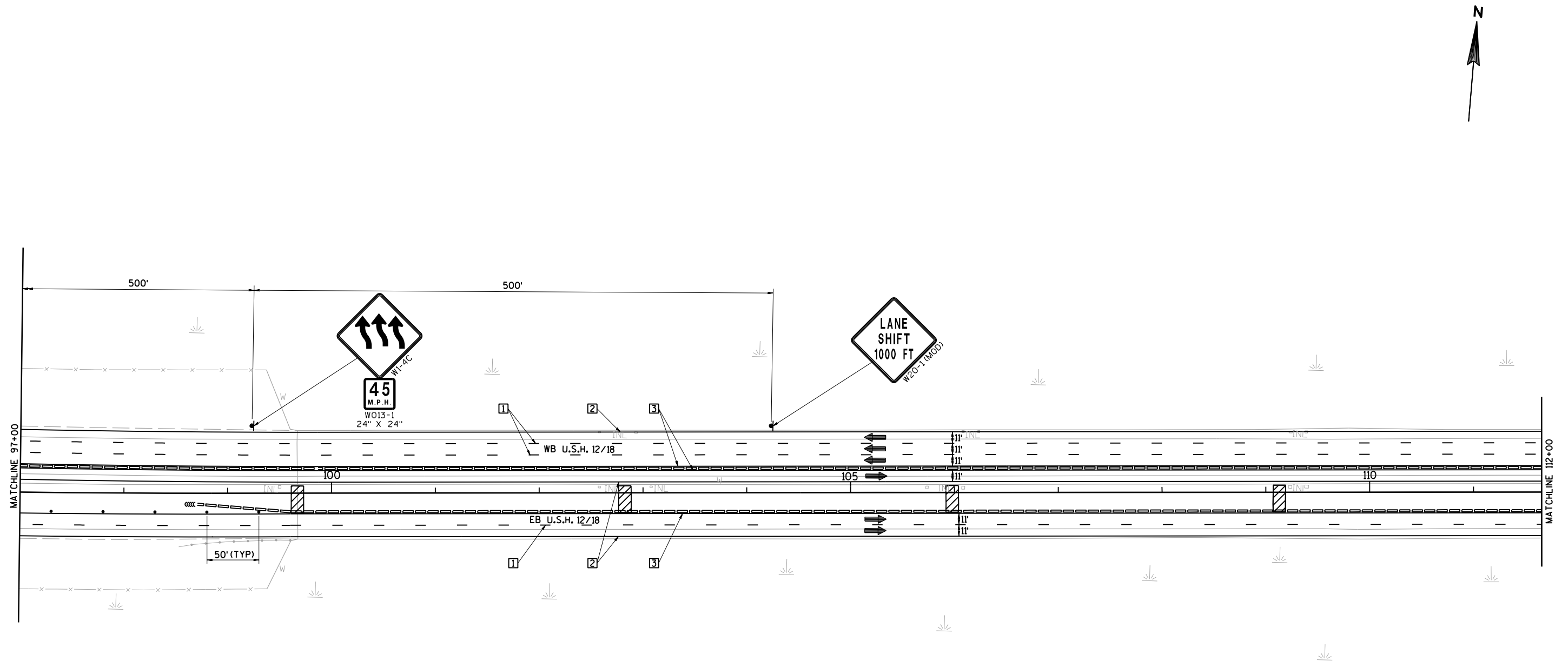


LEGEND	
	SIGN ON TEMPORARY SUPPORT
	DIRECTION OF TRAFFIC
	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)



LEGEND

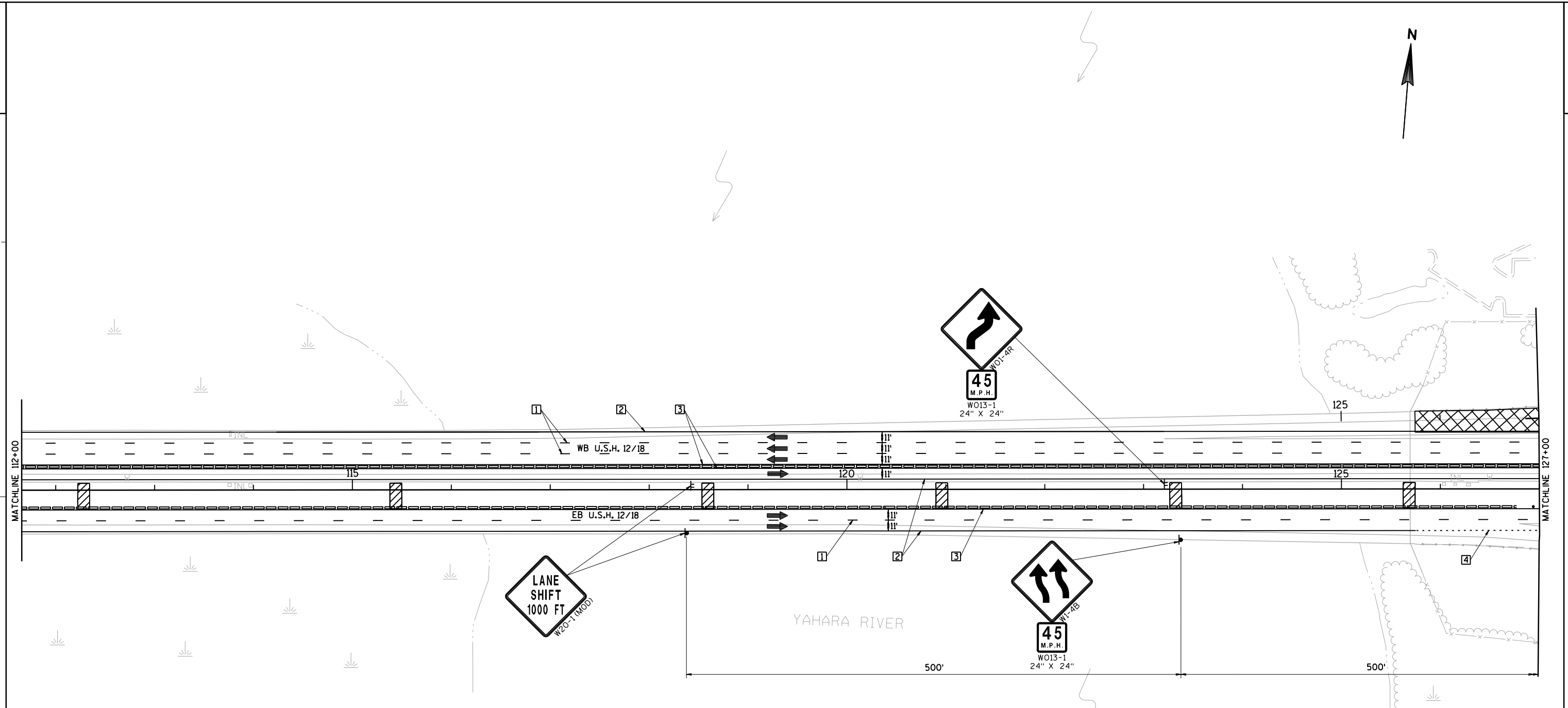
- TRAFFIC CONTROL DRUM
- ▮ OR ▮ SIGN ON TEMPORARY SUPPORT
- ===== TEMPORARY CRASH CUSHION
- ===== CONCRETE BARRIER TEMPORARY PRECAST
- ➔ DIRECTION OF TRAFFIC
- ① TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (WHITE, 12.5' LINE, 37.5' GAP)
- ② TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (WHITE)
- ③ TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (YELLOW)



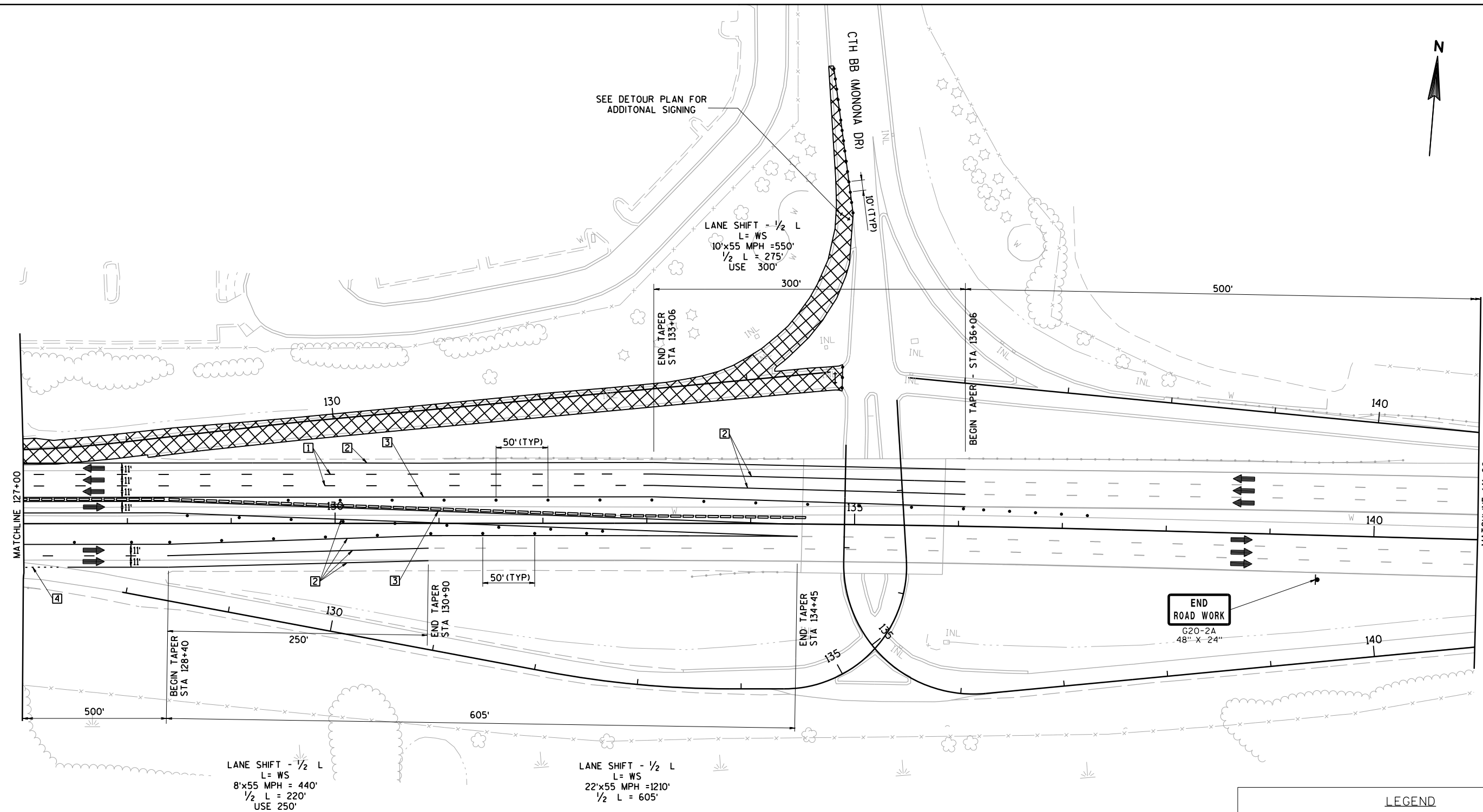
LEGEND

- TRAFFIC CONTROL DRUM
- ▬ SIGN ON TEMPORARY SUPPORT
- ▬▬▬ TEMPORARY CRASH CUSHION
- ▬▬▬ CONCRETE BARRIER TEMPORARY PRECAST
- ▨ WORK AREA
- ➡ DIRECTION OF TRAFFIC
- 1 TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (WHITE, 12.5' LINE, 37.5' GAP)
- 2 TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (WHITE)
- 3 TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (YELLOW)

2

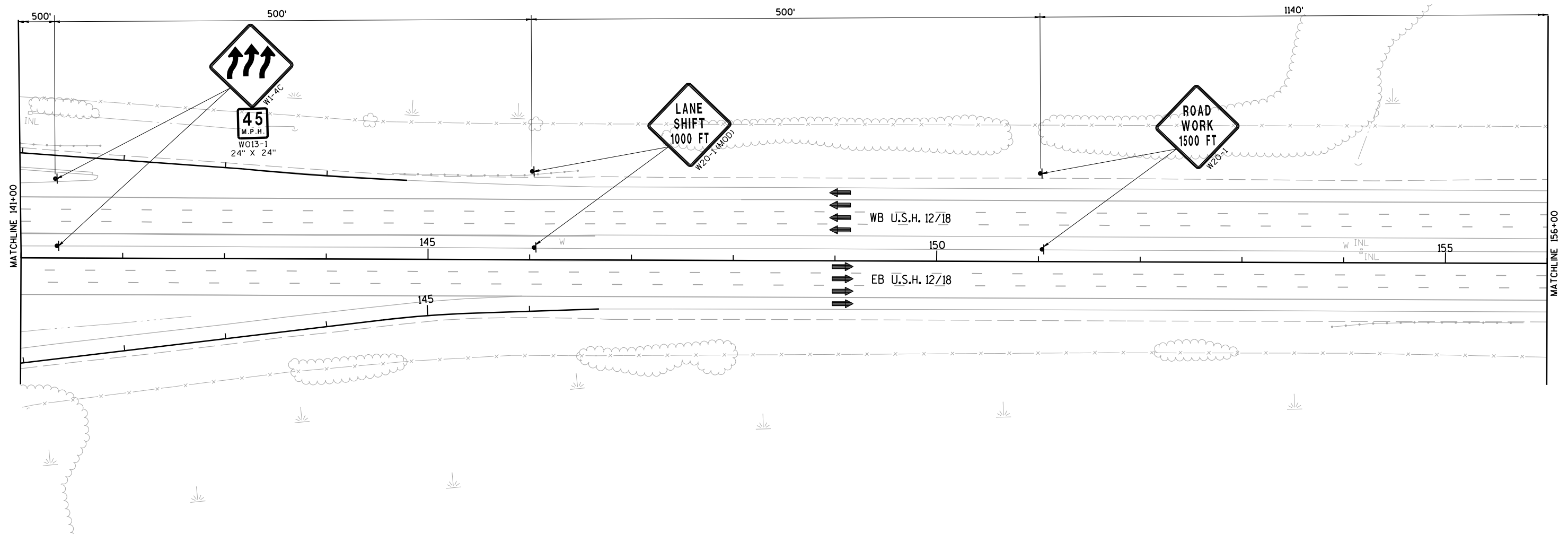


●	TRAFFIC CONTROL DRUM
⌋ OR ⌋	SIGN ON TEMPORARY SUPPORT
=====	CONCRETE BARRIER TEMPORARY PRECAST
	ROAD CLOSED
	WORK AREA
	DIRECTION OF TRAFFIC
1	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE, 12.5' LINE, 37.5' GAP)
2	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
3	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
4	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE, 3' DASH, 9' SKIP)



LEGEND

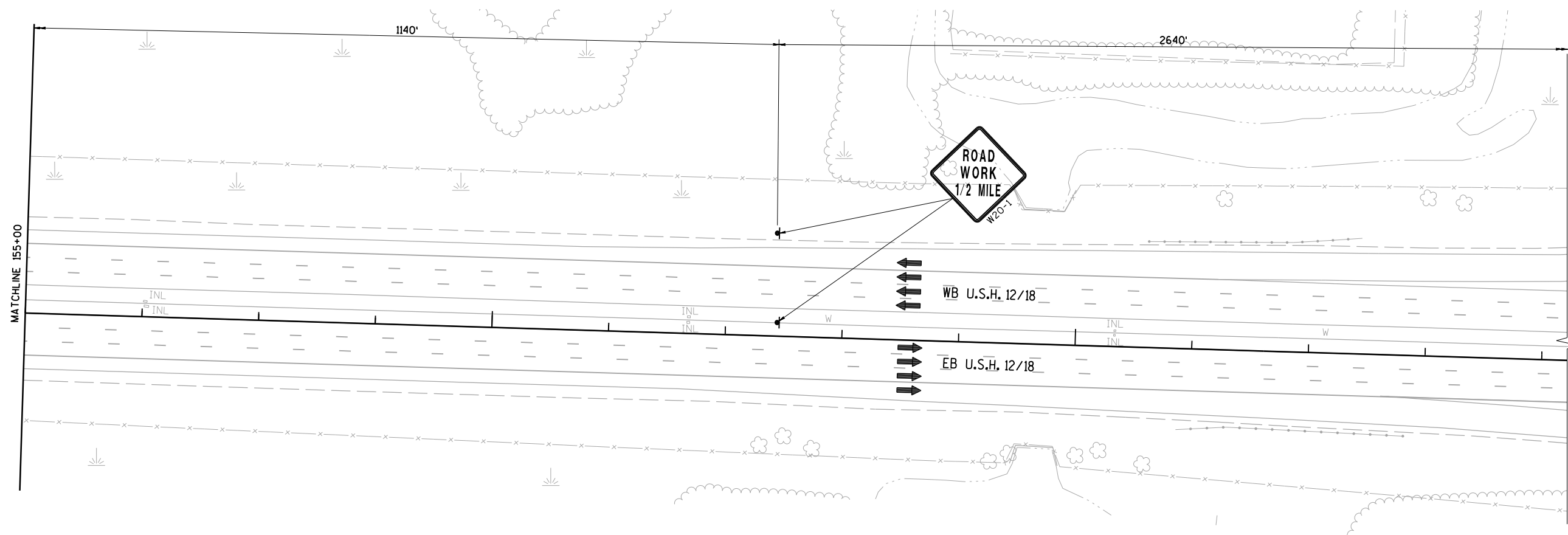
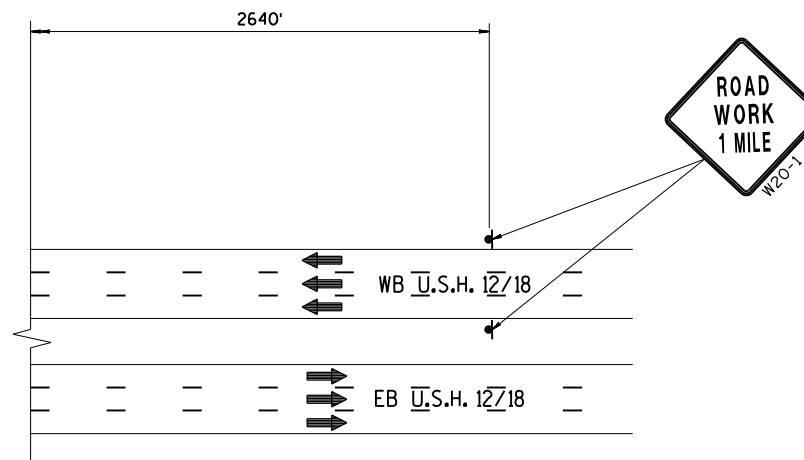
- TRAFFIC CONTROL DRUM
- ↑ SIGN ON TEMPORARY SUPPORT
- ↑ TYPE III BARRICADE
- CONCRETE BARRIER TEMPORARY PRECAST
- ▨ ROAD CLOSED
- ➡ DIRECTION OF TRAFFIC
- ① TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (WHITE, 12.5' LINE, 37.5' GAP)
- ② TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (WHITE)
- ③ TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (YELLOW)



LEGEND

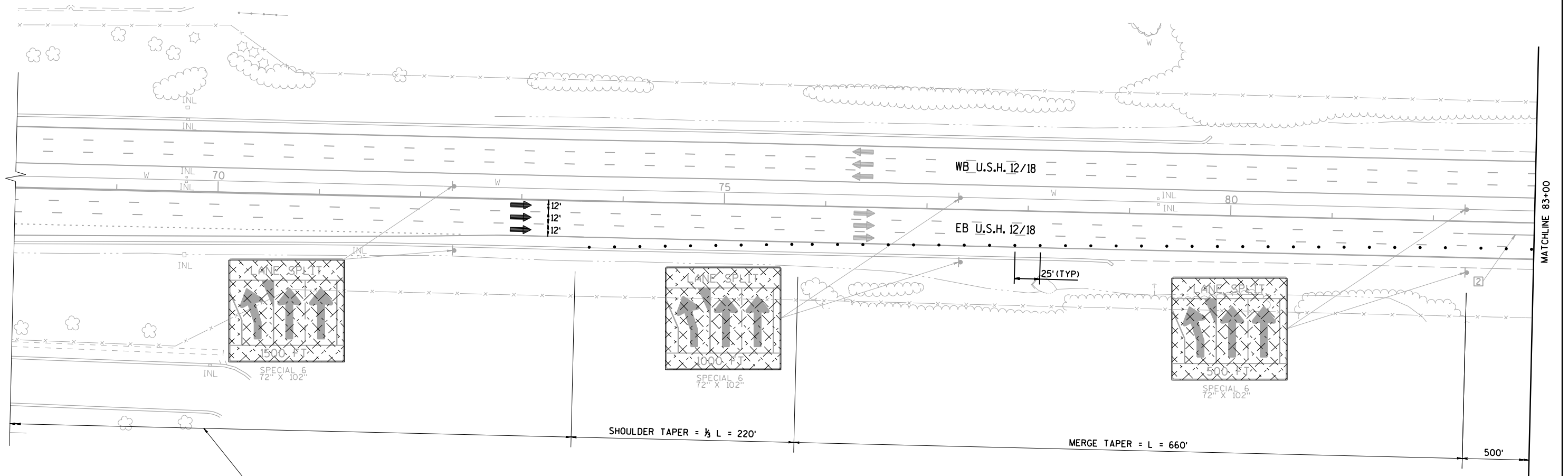
SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC



LEGEND

- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC



SEE SDD "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS
GREATER THAN 40 M.P.H." FOR DETAIL NOT SHOWN.
COVER ALL ADVANCE LANE SPLIT SIGNING.

NOTES

1. BASE MAPPING PAVEMENT MARKINGS AND SIGNING ARE LONG TERM TRAFFIC CONTROL FOR STAGE 3B.
2. PLACE A TYPE C STEADY BURN LIGHT ON ALL CHANNELIZING DEVICES IN LANE MERGE AND SHIFTING TAPERS.
3. THE EXACT PLACEMENT OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
4. COVER ALL SIGNS IN A MANNER APPROVED BY THE ENGINEER.

LEGEND

- TRAFFIC CONTROL DRUM
- ⌋ SIGN ON TEMPORARY SUPPORT
- ⊠ SIGN NOT USED
- ➡ DIRECTION OF TRAFFIC
- ② TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (WHITE)

PROJECT NO: 1206-04-61

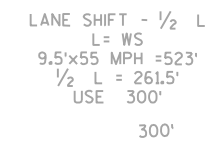
HWY: USH 12

COUNTY: DANE

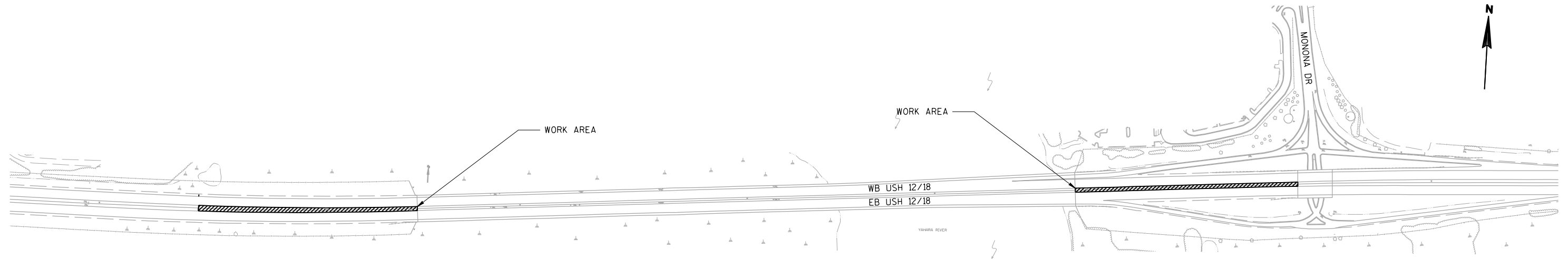
TRAFFIC CONTROL - STAGE 3B - SINGLE LANE CLOSURE

SHEET

E



- ## LEGEND
- | | |
|--------|--|
| ● | TRAFFIC CONTROL DRUM |
| P OR T | SIGN ON TEMPORARY SUPPORT |
| CCCC | TEMPORARY CRASH CUSHION |
| ===== | CONCRETE BARRIER TEMPORARY PRECAST |
| ➡ | DIRECTION OF TRAFFIC |
| 1 | TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (WHITE, 12.5' LINE, 37.5' GAP) |
| 2 | TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (WHITE) |
| 3 | TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH (YELLOW) |



CONSTRUCTION STAGING OVERVIEW - STAGE 4

TRAFFIC OPERATIONS

USH 12/USH 18

TRAFFIC WILL BE EXISTING LANES. ALL LANES WILL BE OPEN DURING PEAK PERIODS. ONE LANE AND TWO LANE CLOSURES PERMITTED IN ACCORDANCE WITH PROJECT SPECIAL PROVISIONS.

USH 12/USH 18 RAMP

TRAFFIC WILL BE MAINTAINED ON ALL EXISTING LANES OF USH 12/USH 18 RAMP AT ALL TIMES.

CONSTRUCTION OPERATIONS

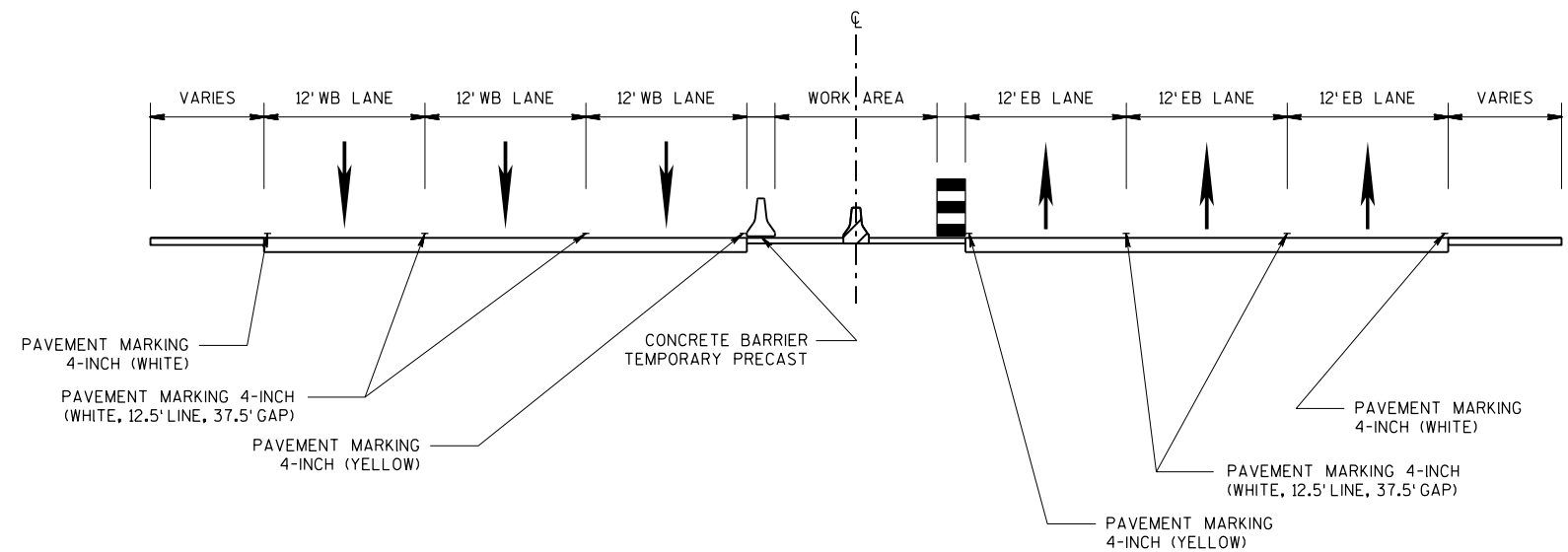
USH 12/USH 18

OPERATION WILL CONSIST OF REMOVAL OF CROSSOVER FEATURES AND CONSTRUCTION NEW MEDIAN BARRIER ON USH 12/USH 18.

NOTES - STAGE 4

REFER TO THE FOLLOWING STANDARD DETAIL DRAWINGS FOR TRAFFIC CONTROL DEVICES, AS WELL AS OTHER STANDARD DETAIL DRAWINGS AS NECESSARY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER:

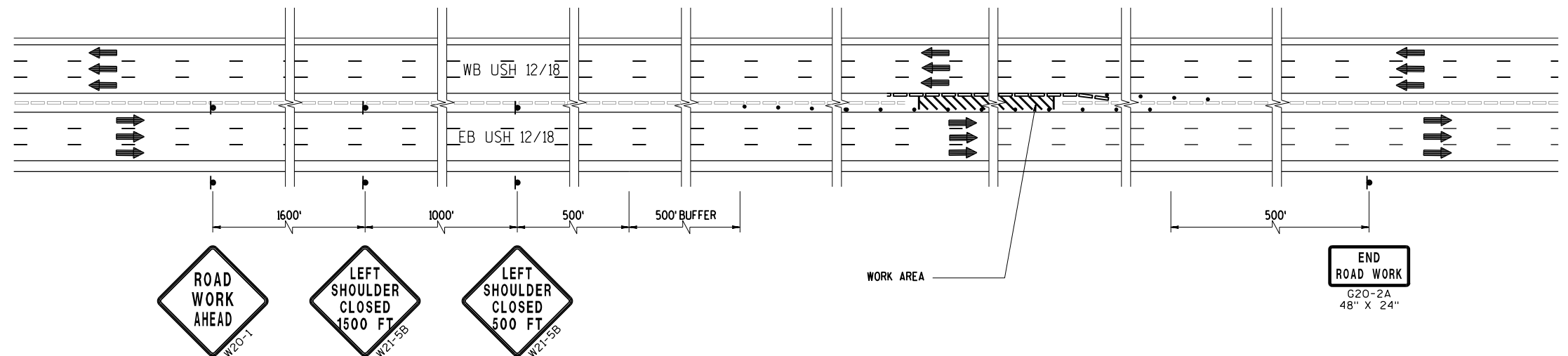
- TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
- TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 MPH
- TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)



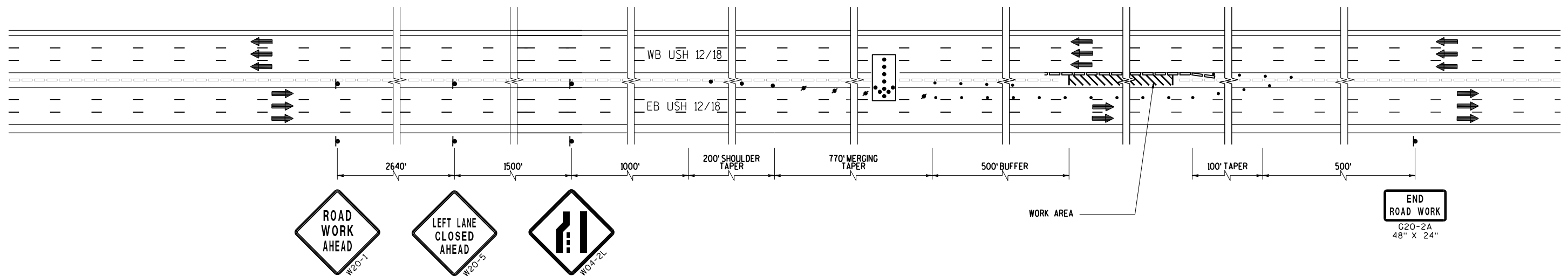
STAGE 4 TYPICAL SECTION - USH 12/USH 18
NOT TO SCALE

LEGEND

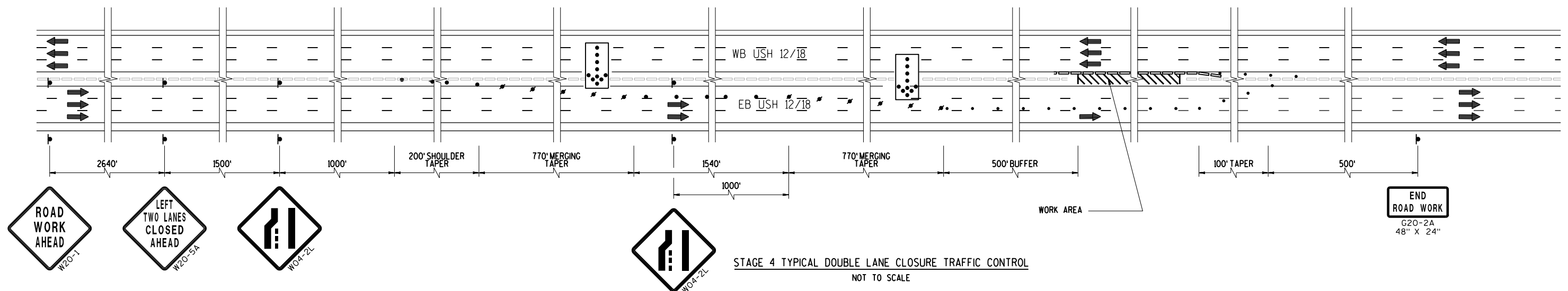
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE MEDIAN BARRIER
- CONCRETE BARRIER TEMPORARY PRECAST
- ARROW BOARD
- ▨ WORK AREA
- ➔ DIRECTION OF TRAFFIC



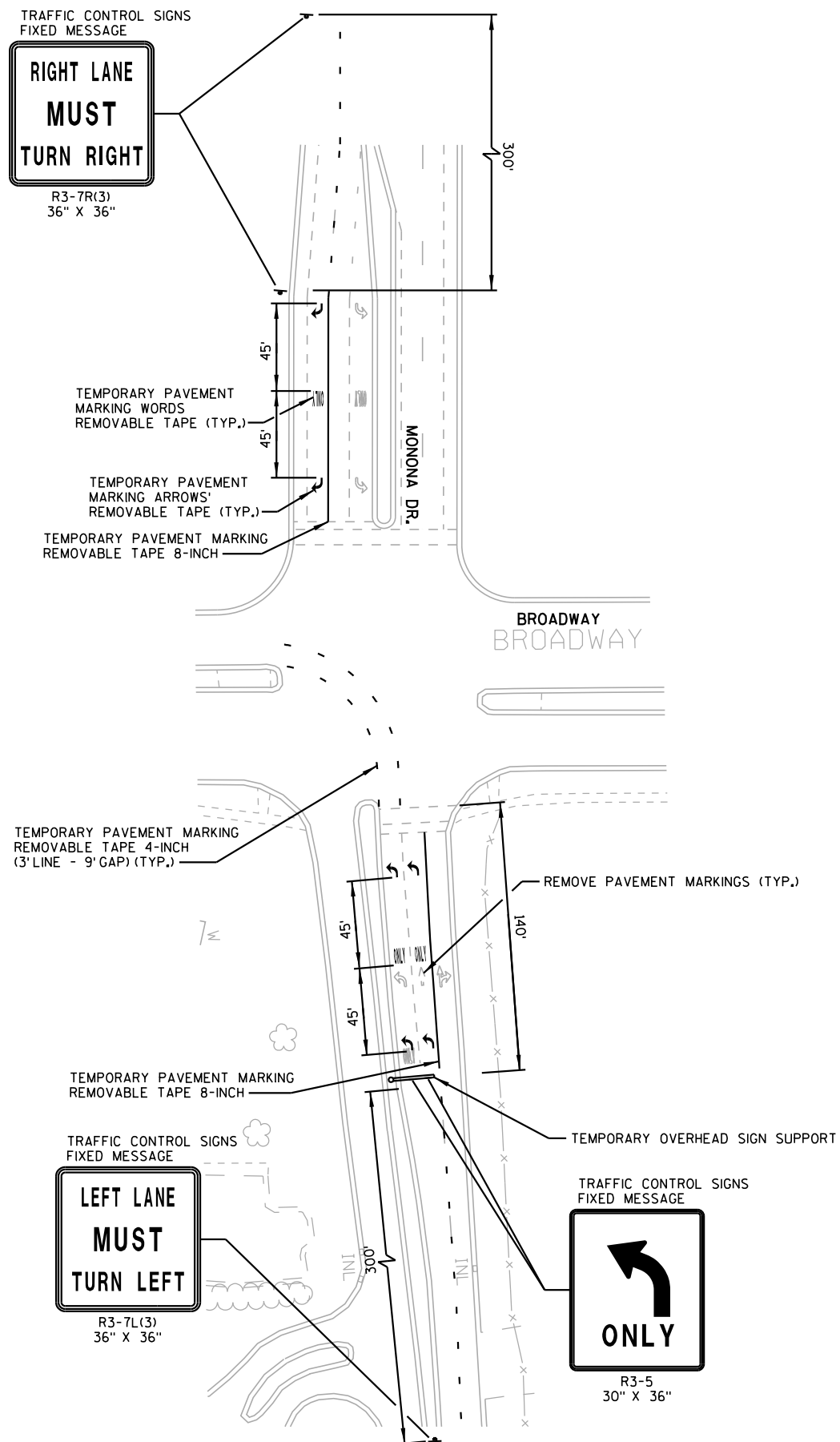
STAGE 4 TYPICAL PEAK PERIOD TRAFFIC CONTROL
NOT TO SCALE



STAGE 4 TYPICAL SINGLE LANE CLOSURE TRAFFIC CONTROL
NOT TO SCALE



STAGE 4 TYPICAL DOUBLE LANE CLOSURE TRAFFIC CONTROL
NOT TO SCALE



NOTE:
TEMPORARY OVERHEAD SIGN SUPPORT IS
CANTILEVER, WITH 30-INCH DIAMETER BASE.

SITE NO.	LOCATION
1	EASTBOUND USH 12/18 BETWEEN PARK STREET AND FISH HATCHERY ROAD
2	SOUTHBOUND PARK STREET NEAR OLIN STREET
3	SOUTHBOUND JOHN NOLAN DRIVE AT THE JOHN NOLAN COLISEUM GATE
4	EASTBOUND USH 12/18 BETWEEN JOHN NOLAN DRIVE AND RIMROCK ROAD
5	NORTHBOUND USH 14 NORTH OF LACY ROAD INTERCHANGE
6	SOUTHBOUND MONONA DRIVE NEAR FEMRITE DRIVE
7	SOUTHBOUND STOUGHTON ROAD SOUTH OF PFLAUM ROAD
8	NORTHBOUND STAUGHTON ROAD NORTH OF SIGGELKOW
9	WESTBOUND USH 12/18 BETWEEN IH 39 AND CTH AB
10	SOUTHBOUND IH 39 BETWEEN COTTAGE GROVE ROAD AND BUCKEYE ROAD
11	EASTBOUND USH 12/18 NEAR TODD DRIVE
12	WESTBOUND USH 12/18 NEAR AGRICULTURE DRIVE
13	RAMP FROM SOUTHBOUND STOUGHTON ROAD TO WESTBOUND USH 12/18
14	EASTBOUND USH 12/18 BETWEEN JOHN NOLAN DRIVE AND SOUTH TOWNE DRIVE
15	RAMP FROM SOUTHBOUND IH 39 TO WESTBOUND USH 12/18
16	RAMP FROM NORTHBOUND IH 39 TO WESTBOUND USH 12/18
17	AS NEEDED
18	ENTRANCE RAMP FROM MONONA DRIVE TO WESTBOUND USH 12/18
19	ENTRANCE RAMP FROM SOUTH TOWNE DRIVE TO EASTBOUND USH 12/18
20	EXIT RAMP FROM EASTBOUND USH 12/18 TO MONONA DRIVE

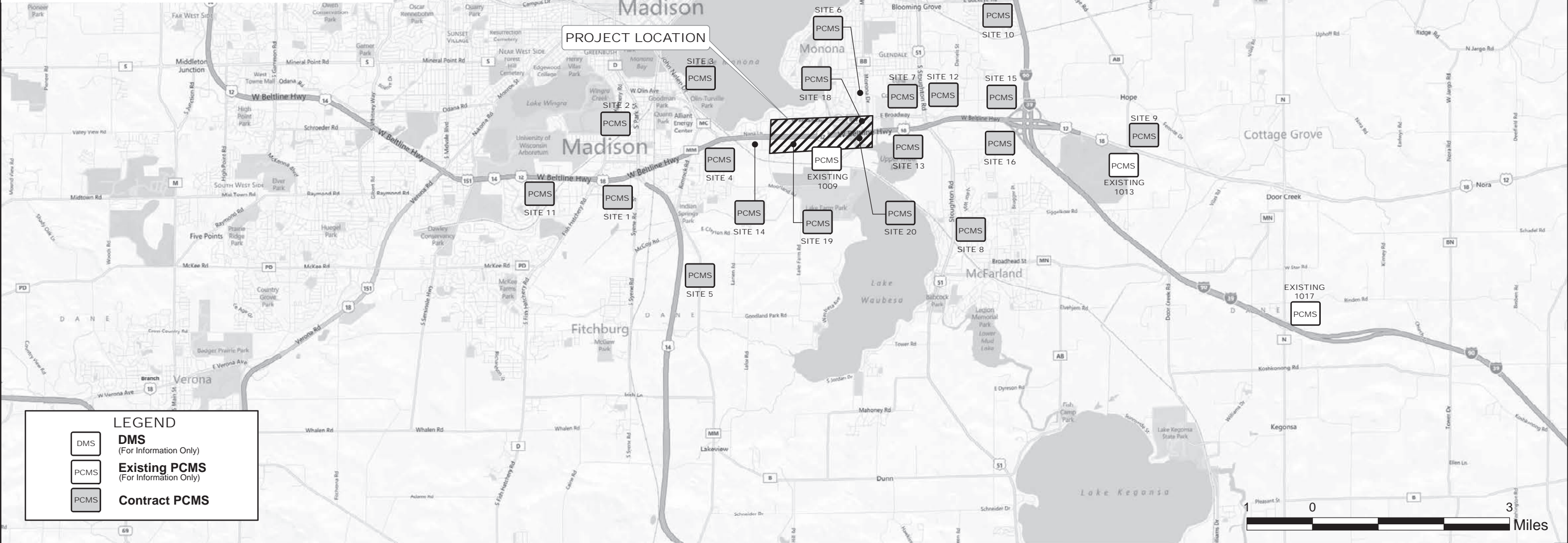
GENERAL NOTES FOR SIGNS PCMS

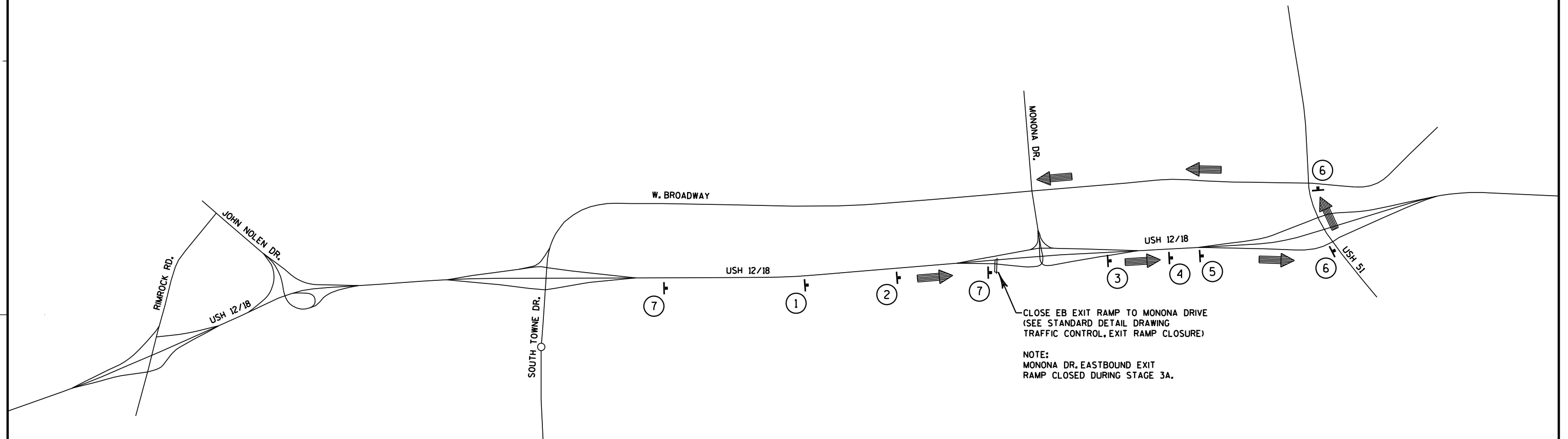
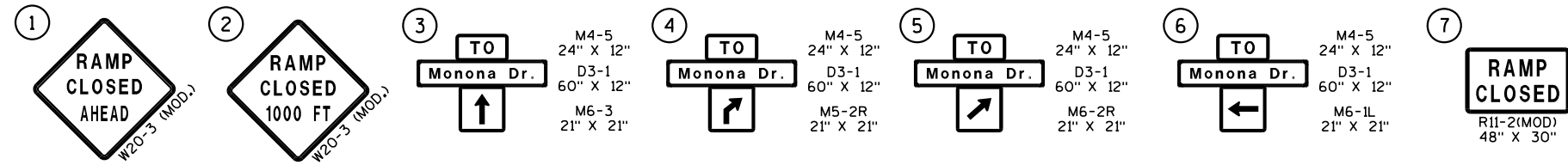
CONSIDER GEOMETRICS WHEN LOCATING PCMS SO DRIVER HAS A CLEAR VIEW OF THE BOARD FOR A MINIMUM OF 1000 FEET IN FRONT OF THE PCMS.

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

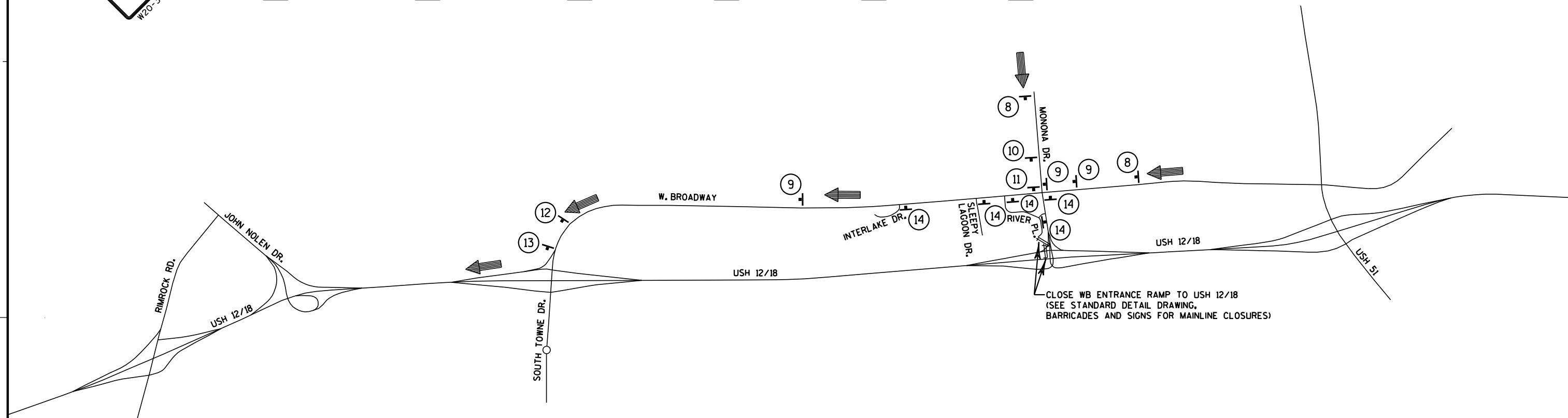
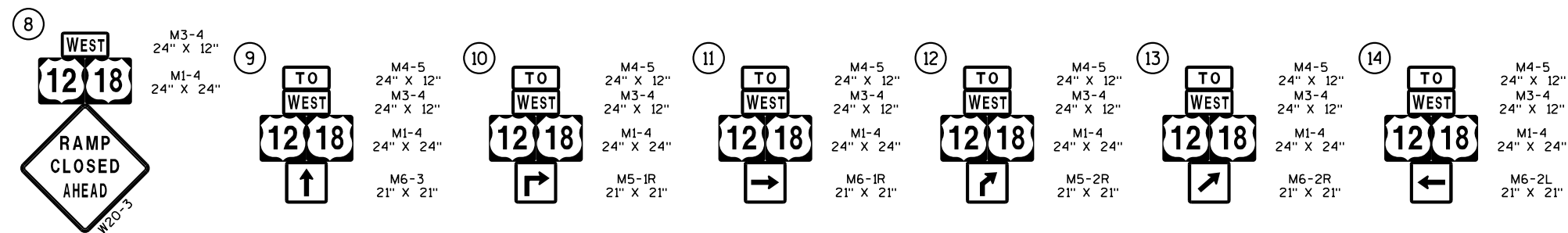
SPECIAL PROVISIONS

PCMS MESSAGES TO BE COORDINATED BY REGIONAL TRAFFIC STAFF

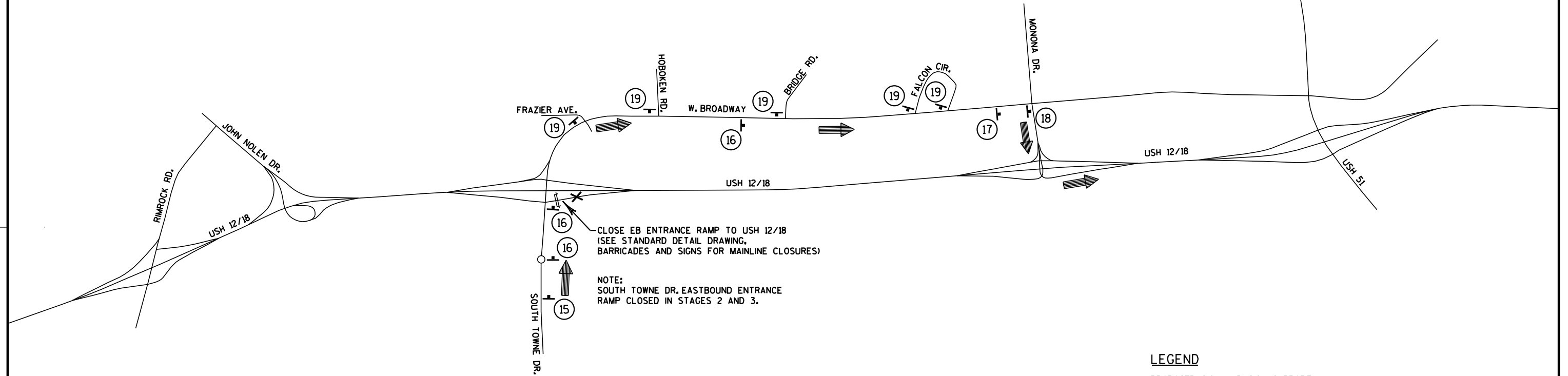
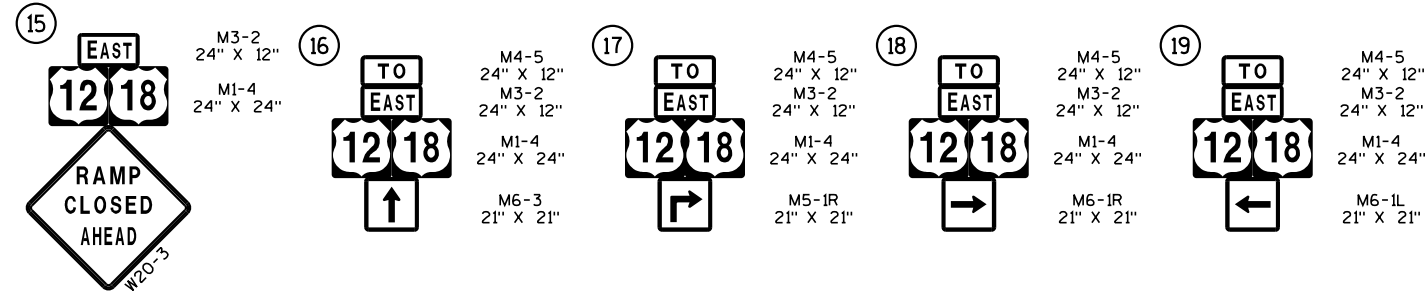


**LEGEND**

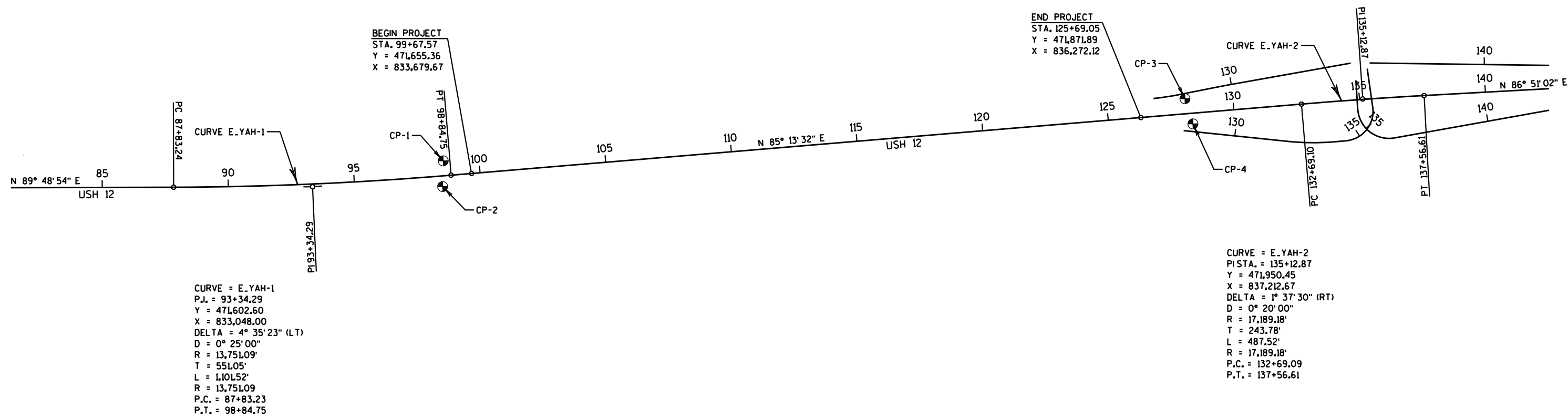
- ┐ PROPOSED SIGN AND SIGN SUPPORT
- ← DETOUR ROUTE
- ↑ TYPE III BARRICADE WITH ATTACHED SIGN AND WARNING LIGHT TYPE A
- ⑫ SEE SIGN DETAILS ON DETOUR SIGNING DETAILS

**LEGEND**

- PROPOSED SIGN AND SIGN SUPPORT
- DETOUR ROUTE
- TYPE III BARRICADE WITH ATTACHED SIGN AND WARNING LIGHT TYPE A
- SEE SIGN DETAILS ON DETOUR SIGNING DETAILS

**LEGEND**

- PROPOSED SIGN AND SIGN SUPPORT
- DETOUR ROUTE
- TYPE III BARRICADE WITH ATTACHED SIGN AND WARNING LIGHT TYPE A
- SEE SIGN DETAILS ON DETOUR SIGNING DETAILS



DATE 05DEC12		E S T I M A T E O F Q U A N T I T I E S			
LINE					1206-04-61
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0002	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 01. B-13-315	LS	1.000	1.000
0004	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 02. B-13-316	LS	1.000	1.000
0006	203.0700.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH DEBRIS CAPTURE SYSTEM (STATION) 01. 112+68	LS	1.000	1.000
0008	203.0700.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH DEBRIS CAPTURE SYSTEM (STATION) 02. 112+68 'AUX'	LS	1.000	1.000
0010	204.0100	REMOVING PAVEMENT	SY	2,600.000	2,600.000
0012	204.0157	REMOVING CONCRETE BARRIER	LF	1,266.000	1,266.000
0014	204.0195	REMOVING CONCRETE BASES	EACH	6.000	6.000
0016	205.0100	EXCAVATION COMMON	CY	5,300.000	5,300.000
0018	211.0200	PREPARE FOUNDATION FOR CONCRETE PAVEMENT (PROJECT) 01. 1206-04-61	LS	1.000	1.000
0020	213.0100	FINISHING ROADWAY (PROJECT) 01. 1206-04-61	EACH	1.000	1.000
0022	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	60.000	60.000
0024	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	1,820.000	1,820.000
0026	415.1100	CONCRETE PAVEMENT HES 10-INCH	SY	14,500.000	14,500.000
0028	416.0610	DRILLED TIE BARS	EACH	3,050.000	3,050.000
0030	416.1110	CONCRETE RUMBLE STRIPS SHOULDER	LF	7,627.000	7,627.000
0032	465.0110	ASPHALTIC SURFACE PATCHING	TON	5.000	5.000
0034	502.3100	EXPANSION DEVICE (STRUCTURE) 01. B-13-315	LS	1.000	1.000
0036	502.3100	EXPANSION DEVICE (STRUCTURE) 02. B-13-316	LS	1.000	1.000
0038	502.3200	PROTECTIVE SURFACE TREATMENT	SY	531.000	531.000
0040	502.5005	MASONRY ANCHORS TYPE L NO. 5 BARS	EACH	245.000	245.000
0042	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	52,310.000	52,310.000
0044	505.0904	BAR COUPLERS NO. 4	EACH	72.000	72.000
0046	505.0905	BAR COUPLERS NO. 5	EACH	12.000	12.000
0048	505.0906	BAR COUPLERS NO. 6	EACH	260.000	260.000
0050	505.0907	BAR COUPLERS NO. 7	EACH	216.000	216.000
0052	509.0301	PREPARATION DECKS TYPE 1	SY	175.000	175.000
0054	509.0302	PREPARATION DECKS TYPE 2	SY	70.000	70.000
0056	509.0500	CLEANING DECKS	SY	210.000	210.000
0058	509.1000	JOINT REPAIR	SY	521.000	521.000
0060	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	198.000	198.000
0062	603.8000	CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	LF	7,600.000	7,600.000
0064	603.8125	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	LF	19,320.000	19,320.000
0066	608.0318	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH	LF	320.000	320.000
0068	611.0430	RECONSTRUCTING INLETS	EACH	1.000	1.000
0070	611.0654	INLET COVERS TYPE V	EACH	2.000	2.000
0072	611.3220	INLETS 2X2-FT	EACH	2.000	2.000
0074	611.8115	ADJUSTING INLET COVERS	EACH	2.000	2.000
0076	612.0104	PIPE UNDERDRAIN 4-INCH	LF	20.000	20.000
0078	614.0905	CRASH CUSHIONS TEMPORARY	EACH	10.000	10.000
0080	619.1000	MOBILIZATION	EACH	1.000	1.000
0082	625.0500	SALVAGED TOPSOIL	SY	200.000	200.000
0084	627.0200	MULCHING	SY	200.000	200.000

DATE 05DEC12		E S T I M A T E O F Q U A N T I T I E S			
LINE					1206-04-61
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0086	628.1504	SILT FENCE	LF	6,500.000	6,500.000
0088	628.1520	SILT FENCE MAINTENANCE	LF	6,500.000	6,500.000
0090	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	2.000	2.000
0092	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	2.000	2.000
0094	628.2004	EROSION MAT CLASS I TYPE B	SY	200.000	200.000
0096	629.0210	FERTILIZER TYPE B	CWT	7.000	7.000
0098	630.0130	SEEDING MIXTURE NO. 30	LB	4.000	4.000
0100	642.5001	FIELD OFFICE TYPE B	EACH	1.000	1.000
0102	643.0100	TRAFFIC CONTROL (PROJECT) 01. 1206-04-61	EACH	1.000	1.000
0104	643.0300	TRAFFIC CONTROL DRUMS	DAY	60,240.000	60,240.000
0106	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	1,570.000	1,570.000
0108	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	1,570.000	1,570.000
0110	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	21,600.000	21,600.000
0112	643.0800	TRAFFIC CONTROL ARROW BOARDS	DAY	342.000	342.000
0114	643.0900	TRAFFIC CONTROL SIGNS	DAY	5,900.000	5,900.000
0116	643.0910	TRAFFIC CONTROL COVERING SIGNS TYPE I	EACH	3.000	3.000
0118	643.1000	TRAFFIC CONTROL SIGNS FIXED MESSAGE	SF	1,470.000	1,470.000
0120	643.2000	TRAFFIC CONTROL DETOUR (PROJECT) 01. 1206-04-61	EACH	1.000	1.000
0122	643.3000	TRAFFIC CONTROL DETOUR SIGNS	DAY	13,530.000	13,530.000
0124	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	30,280.000	30,280.000
0126	646.0126	PAVEMENT MARKING EPOXY 8-INCH	LF	500.000	500.000
0128	646.0600	REMOVING PAVEMENT MARKINGS	LF	10,600.000	10,600.000
0130	646.0790.S	REMOVING RAISED PAVEMENT MARKERS	EACH	104.000	104.000
0132	647.0156	PAVEMENT MARKING ARROWS EPOXY TYPE 1	EACH	2.000	2.000
0134	647.0166	PAVEMENT MARKING ARROWS EPOXY TYPE 2	EACH	1.000	1.000
0136	647.0176	PAVEMENT MARKING ARROWS EPOXY TYPE 3	EACH	2.000	2.000
0138	647.0356	PAVEMENT MARKING WORDS EPOXY	EACH	1.000	1.000
0140	647.0955	REMOVING PAVEMENT MARKINGS ARROWS	EACH	4.000	4.000
0142	647.0965	REMOVING PAVEMENT MARKINGS WORDS	EACH	1.000	1.000
0144	649.0200	TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH	LF	21,500.000	21,500.000
0146	649.0400	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	LF	84,045.000	84,045.000
0148	649.0801	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH	LF	240.000	240.000
0150	649.1800	TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE	EACH	6.000	6.000
0152	649.2000	TEMPORARY PAVEMENT MARKING WORDS REMOVABLE TAPE	EACH	3.000	3.000
0154	649.2100	TEMPORARY RAISED PAVEMENT MARKERS	EACH	180.000	180.000
0156	650.4000	CONSTRUCTION STAKING STORM SEWER	EACH	2.000	2.000
0158	650.7000	CONSTRUCTION STAKING CONCRETE PAVEMENT	LF	5,170.000	5,170.000
0160	650.7500	CONSTRUCTION STAKING CONCRETE BARRIER	LF	1,266.000	1,266.000
0162	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 1206-04-61	LS	1.000	1.000
0164	655.0610	ELECTRICAL WIRE LIGHTING 12 AWG	LF	6,840.000	6,840.000
0166	690.0150	SAWING ASPHALT	LF	160.000	160.000
0168	715.0415	INCENTIVE STRENGTH CONCRETE PAVEMENT	DOL	4,350.000	4,350.000
0170	SPV.0045	SPECIAL 01. PORTABLE CHANGEABLE MESSAGE SIGN SPECIAL	DAY	2,570.000	2,570.000
0172	SPV.0045	SPECIAL 02. INCENTIVE FOR COMPLETION	DAY	15.000	15.000
0174	SPV.0045	SPECIAL 03. DISINCENTIVE FOR COMPLETION	DAY	0.010	0.010
0176	SPV.0045	SPECIAL 04. SAFETY VEHICLE	DAY	130.000	130.000

DATE 05DEC12		E S T I M A T E O F Q U A N T I T I E S				
LINE						1206-04-61
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY	
0178	SPV. 0060	SPECIAL 01. TEMPORARY CONCRETE BARRIER	EACH	1. 000	1. 000	
0180	SPV. 0060	GATE SPECIAL 02. REMOVE LUMI NAI RE	EACH	38. 000	38. 000	
0182	SPV. 0060	SPECIAL 03. INSTALL LED LUMI NAI RE	EACH	38. 000	38. 000	
0184	SPV. 0060	SPECIAL 04. SALVAGE AND REINSTALL SIGN	EACH	13. 000	13. 000	
0186	SPV. 0060	SPECIAL 05. ASPHALT SURFACE PATCHING	EACH	5. 000	5. 000	
0188	SPV. 0060	MOBIL I ZATION SPECIAL 06. STREET SWEEPING	EACH	1. 000	1. 000	
0190	SPV. 0060	SPECIAL 07. TEMPORARY THRI E BEAM CONNECTION	EACH	42. 000	42. 000	
0192	SPV. 0060	SPECIAL 08. CONCRETE BARRIER TEMPORARY EMERGENCY REPAI R MOBIL I ZATION	EACH	1. 000	1. 000	
0194	SPV. 0060	SPECIAL 09. TEMPORARY THRI E BEAM CONNECTION AT LIGHT BASE	EACH	4. 000	4. 000	
0196	SPV. 0090	SPECIAL 01. PROTECTIVE SCREEN FURNI SHED	LF	5, 840. 000	5, 840. 000	
0198	SPV. 0090	SPECIAL 02. PROTECTIVE SCREEN INSTALLED	LF	11, 540. 000	11, 540. 000	
0200	SPV. 0090	SPECIAL 03. REMOVI NG PAVEMENT MARKINGS WATER BLASTI NG	LF	45, 600. 000	45, 600. 000	
0202	SPV. 0090	SPECIAL 04. SAWING CONCRETE RELIEF JOINT	LF	145. 000	145. 000	
0204	SPV. 0090	SPECIAL 05. CONCRETE MEDIAN BARRIER	LF	1, 250. 000	1, 250. 000	
0206	SPV. 0105	DOUBLE FACED 32-INCH SPECIAL SPECIAL 01. CONCRETE BARRIER TEMPORARY	LS	1. 000	1. 000	
0208	SPV. 0105	PRECAST EMERGENCY REPAI R STANDBY TIME SPECIAL 02. TEMPORARY OVERHEAD SIGN	LS	1. 000	1. 000	
0210	SPV. 0105	SUPPORT SPECIAL 03. MAINTAIN LIGHTING SYSTEM	LS	1. 000	1. 000	

3

REMOVING PAVEMENT				REMOVING CONCRETE BARRIER				EARTHWORK SUMMARY			
			204.0100				204.0157				
<u>STAGE</u>	<u>STATION</u>	<u>TO STATION</u>	<u>SY</u>	<u>STAGE</u>	<u>STATION</u>	<u>TO</u>	<u>STATION</u>	<u>LF</u>	<u>STATION TO STATION</u>	<u>LOCATION</u>	205.0100 EXCAVATION COMMON (CY)
1	89+37	95+93	1540	1	89+37.00		95+93.00	656	82+34 - 99+67 AND 125+69 - 141+45	INSIDE SHOULDER	2600
1	128+20	134+30	1060	1	128+20.00		134+30.00	610	82+34 - 99+67 AND 125+69 - 141+45	OUTSIDE SHOULDER	<u>2700</u>
PROJECT TOTAL			2600	PROJECT TOTAL				1266	TOTAL		5300

3

EACH AND LUMP SUM ITEMS						BASE AGGREGATE DENSE						
								305.0110 3/4-INCH		305.0120 1 1/4-INCH		
CATEGORY	ITEM NUMBER	DESCRIPTION	SUPPLEMENTAL DESCRIPTION	EACH	LS	STAGE	STATION TO STATION	OFFSET	TON	TON		
010	211.0200	PREPARE FOUNDATION FOR CONCRETE PAVEMENT	PROJECT 1206-04-61		1	1	82+34 99+68	46' R	16	497		
010	213.0100	FINISHING ROADWAY	PROJECT 1206-04-61	1		1	82+34 99+68	70' L	16	497		
010	619.1000	MOBILIZATION		0.4		1	125+69 128+16	79' L	1	71		
020	619.1000	MOBILIZATION		0.3		1	128+20 134+50	52' L	6	180		
030	619.1000	MOBILIZATION		0.3		1	128+36 134+50	36' R	6	176		
010	642.5001	FIELD OFFICE TYPE B	PROJECT 1206-04-61	1		1	125+69 128+33	48' R	2	76		
010	643.0100	TRAFFIC CONTROL	PROJECT 1206-04-61	1		1	135+86 141+45	36' R	6	160		
010	643.2000	TRAFFIC CONTROL DETOUR	PROJECT 1206-04-61	1		1	135+86 141+45	55' L	6	164		
010	SPV.0060.05	ASPHALT SURFACE PATCHING MOBILIZATION		5		PROJECT TOTAL					60	1820
010	SPV.0060.06	STREET SWEEPING		1								
010	SPV.0060.08	CONCRETE BARRIER TEMPORARY EMERGENCY REPAIR MOBILIZATION		1								
010	SPV.0105.01	CONCRETE BARRIER TEMPORARY PRECAST EMERGENCY REPAIR STANDBY TIME			1							
010	SPV.0105.02	TEMPORARY OVERHEAD SIGN SUPPORT			1							
						ASPHALT SURFACE PATCHING						
								465.0110				
						STAGE		TON				
						1-4		5				
						PROJECT TOTAL		5				

CONCRETE PAVEMENT ITEMS							STORM SEWER ITEMS						
			415.1100	416.0610	416.1110								
			CONCRETE PAVEMENT	DRILLED TIE	CONCRETE								
			HES 10-INCH	BARS	RUMBLE STRIPS								
			SY	EACH	SHOULDER								
STAGE	STATION	TO	STATION	SY	EACH	LF	REINF. CONC. PIPE, CL. III, STORM SEWER	611.3220	611.043	611.0654	611.8115	612.0104	
1	82+34		99+68	4162	693	1734	608.0318	INLETS	RECONSTRUCTING	INLET	ADJUSTING	PIPE UNDERDRAIN	
1	125+69		134+50	1534	352	880	18-INCH	2x2 FT	INLETS	COVERS	INLET	***	
1	135+86		141+45	1399	224	559				TYPE V	COVERS	DEPTH	
1	82+34		99+68	3782	693	1734	(LF)	(EACH)	(EACH)	(EACH)	(EACH)	(FT)	
1	125+69		134+50	911	352	880						(LF)	
1	126+80		134+50	896	308	770							
1	125+69		128+33	263	106	264							
1	125+69		128+16	220	99	247							
1	135+86		141+45	1333	223	559							
PROJECT TOTAL				14500	3050	7627							

***STRUCTURE DEPTH IS APPROXIMATE AND SHALL BE CONFIRMED BY CONTRACTOR PRIOR TO ORDERING MATERIALS

NOTE: CATEGORY 010, UNLESS OTHERWISE NOTED.

3

3

EROSION CONTROL ITEMS														
LOCATION				628.1504 SILT FENCE	628.1520 SILT FENCE MAINTENANCE	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.2021 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.2004 EROSION MAT CLASS 1, TYPE B SY	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO 30 LB		
STAGE	STATION	TO	STATION	LF	LF									
1	82+34.00		99+67.57	3497	3497									
1	125+69.05		128+16.03	262	262									
1	128+20.15		134+49.54	634	634									
1	128+35.63		134+49.54	624	624									
1	125+69.05		128+32.94	279	279									
1	135+85.96		141+45.00	1148	1148									
UNDISTRIBUTED				56	56	2	2	200	200	200	7	4		
PROJECT TOTAL				6500	6500	2	2	200	200	200	7	4		
TRAFFIC CONTROL DETOUR SIGNS														
							643.3000							
			STAGE	LOCATION				DAYS						
			3	MONONA DR. EB EXIT RAMP CLOSURE				600						
			1-4	MONONA DR. WB ENTRANCE RAMP CLOSURE				6450						
			2-3	SOUTH TOWNE DR. EB ENTRANCE RAMP CLOSURE				6480						
PROJECT TOTAL							13530							
PAVEMENT MARKING														
LOCATION				646.0106 PAVEMENT MARKING EPOXY 4-INCH (WHITE) LF	646.0106 PAVEMENT MARKING EPOXY 4-INCH (YELLOW) LF	646.0126 PAVEMENT MARKING EPOXY 8-INCH (WHITE) LF	647.0156 PAVEMENT MARKING ARROWS EPOXY TYPE 1 (WHITE) EA	647.0166 PAVEMENT MARKING ARROWS EPOXY TYPE 2 (WHITE) EA	647.0176 PAVEMENT MARKING ARROWS EPOXY TYPE 3 (WHITE) EA	647.0356 PAVEMENT MARKING WORDS EPOXY (WHITE) EA				
STAGE	STATION	TO	STATION											
4	82+34.00		127+60.86	4527										
4	126+80.04		141+45.00	1465										
4	82+34.00		127+41.38	4507										
4	123+21.26		141+45.00	1824										
4	82+34.00		141+45.00		5910									
4	82+34.00		141+45.00		5910									
4	123+21.26		127+42.41			417								
4	126+80.04		127+63.07			83								
4	82+34.00		141+45.00	1478										
4	82+34.00		141+45.00	1478										
4	82+34.00		141+45.00	1478										
4	82+34.00		141+45.00	1478										
4	120+13.15		126+80.04	166										
4	SB MONONA AT BROADWAY			30			1		1					
4	NB MONONA AT BROADWAY			30			1	1	1	1				
PROJECT TOTAL				18460	11820	500	2	1	2	1				
NOTE: CATEGORY 010, UNLESS OTHERWISE NOTED.														
PAVEMENT MARKINGS REMOVAL														
				646.0600 REMOVING PAVEMENT MARKINGS LF	647.0955 REMOVING PAVEMENT MARKINGS ARROWS EACH	647.0965 REMOVING PAVEMENT MARKINGS WORDS EACH								
			STAGE	LOCATION										
			1	SB MONONA AT BROADWAY				30	2					
			1	NB MONONA AT BROADWAY				30	2	1				
				UNDISTRIBUTED				10,000						
PROJECT TOTAL								10,060	4	1				
TEMPORARY PAVEMENT MARKING														
				649.1800 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE ARROWS EA	649.2000 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE WORDS EA	649.0801 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE) LF								
			STAGE	LOCATION										
			1	SB MONONA AT BROADWAY				2	1	120				
			1	NB MONONA AT BROADWAY				4	2	120				
PROJECT TOTAL								6	3	240				
PROJECT NO: 1206-04-61				HWY: USH 12			COUNTY: DANE			MISCELLANEOUS QUANTITIES				SHEET
														E

3

CONSTRUCTION STAKING ITEMS							
STAGE	STATION	-	STATION	O/S	650.4000	650.7000	650.7500
					CONSTRUCTION	CONSTRUCTION	CONSTRUCTION
					STAKING STORM	STAKING	STAKING
					SEWER	CONCRETE	CONCRETE
						PAVEMENT	BARRIER
					<u>EA</u>	<u>LF</u>	<u>LF</u>
1	89+37		99+67	LT	2	2060	656
1	125+70		141+25	LT	0	3110	610
PROJECT TOTAL					2	5170	1266

SAWING ITEMS				
STAGE	STATION	STATION	690.0150	SPV.0090.04
			SAWING	SAWING
			ASPHALT	CONCRETE
				RELIEF JOINT
			<u>EA</u>	<u>LF</u>
1	89+37	141+25	160	0
1	125+70	141+25	0	145
PROJECT TOTAL			160	145

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PORTABLE CHANGEABLE MESSAGE SIGN SPECIAL		
STAGE	LOCATION	SPV.0045.01
		<u>DAY</u>
1	SITES 1-17	340
1	SITES 18-20	20
2	SITES 1-17	1020
3	SITES 1-17	1020
4	SITES 1-17	170
PROJECT TOTAL		2570

SALVAGE AND REINSTALL SIGNS		
STAGE	STATION	SPV.0060.04
		<u>EACH</u>
1	97+80	2
1	100+60	2
1	111+20	2
1	114+80	1
1	121+85	2
1	126+45	2
1	132+25	2
PROJECT TOTAL		13

TEMPORARY THRIE BEAM CONNECTION		
STAGE	STATION	SPV.0060.07
		<u>EACH</u>
2-3	STA. 99+67.57 TO STA. 125+69.05	40
	UNDISTRIBUTED	2
PROJECT TOTAL		42

TEMPORARY THRIE BEAM CONNECTION AT LIGHT BASE		
STAGE	STATION	SPV.0060.09
		<u>EACH</u>
2-3	98+85	2
2-3	126+40	2
PROJECT TOTAL		4

SAFETY VEHICLE	
	SPV.0045.04
<u>STAGE</u>	<u>DAYS</u>
1 -4	130
PROJECT TOTAL	130

CONCRETE MEDIAN BARRIER DOUBLE FACED 32-INCH SPECIAL					
STAGE	STATION	TO	STATION	LOCATION	SPV.0090.05
					<u>LF</u>
4	89+37	-	95+93	LT	656
0	128+39	-	134+33	LT	594
PROJECT TOTAL					1250

NOTE: CATEGORY 010, UNLESS OTHERWISE NOTED.

TRAFFIC CONTROL													
		603.8000 CONCRETE BARRIER TEMPORARY PRECAST FURNISHED	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	SPV.0090.01 PROTECTIVE SCREEN FURNISHED	SPV.0090.02 PROTECTIVE SCREEN INSTALLED	SPV.0060.01 TEMPORARY CONCRETE BARRIER GATE	614.0905 CRASH CUSHIONS TEMPORARY	643.0300 TRAFFIC CONTROL DRUMS	643.0420 TRAFFIC CONTROL BARRICADES TYPE III	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A			
SHEET	LOCATION	LF	LF	LF	LF	EACH	EACH	DRUM	DAYS	BARRICADE	DAYS	EACH	DAYS
STAGE 1A LONG TERM								94	752				
STAGE 1A SHORT TERM 1 LANE NIGHTTIME CLOSURE								288	2304				
STAGE 1A SHORT TERM 2 LANE NIGHTTIME CLOSURE								437	3496				
STAGE 1B LONG TERM			1950				4	236	2832				
STAGE 1B SHORT TERM 1 LANE NIGHTTIME CLOSURE								268	3216				
STAGE 1B SHORT TERM 2 LANE NIGHTTIME CLOSURE								396	4752				
STAGE 2A LONG TERM		7450	7450	2800	2800	1	2	110	3300	12	360	12	360
STAGE 2A SHORT TERM 1 LANE NIGHTTIME CLOSURE								225	3600				
STAGE 2A SHORT TERM 2 LANE NIGHTTIME CLOSURE								173	2768				
STAGE 2B LONG TERM			110	2900	2900		1	122	3660	12	360	12	360
STAGE 2B SHORT TERM 1 LANE NIGHTTIME CLOSURE								225	3600				
STAGE 2B SHORT TERM 2 LANE NIGHTTIME CLOSURE								173	2768				
STAGE 3A LONG TERM			7410	90	2890		2	156	4680	16	480	16	480
STAGE 3A SHORT TERM 1 LANE NIGHTTIME CLOSURE								219	3504				
STAGE 3A SHORT TERM 2 LANE NIGHTTIME CLOSURE								137	2192				
STAGE 3B LONG TERM			100		2900		1	123	3690	12	360	12	360
STAGE 3B SHORT TERM 1 LANE NIGHTTIME CLOSURE								174	2784				
STAGE 3B SHORT TERM 2 LANE NIGHTTIME CLOSURE								137	2192				
STAGE 4 LONG TERM			2150					79	790				
STAGE 4 SHORT TERM 1 LANE NIGHTTIME CLOSURE								134	1340				
STAGE 4 SHORT TERM 2 LANE NIGHTTIME CLOSURE								198	1980				
UNDISTRIBUTED		150	150	50	50			40	40	10	10	10	10
PROJECT TOTAL		7600	19320	5840	11540	1	10	4144	60240	62	1570	62	1570

NOTE: CATEGORY 010, UNLESS OTHERWISE NOTED.

TRAFFIC CONTROL																
		643.0715		643.0800		643.0900		643.1000	643.0910		SPV.0090.03	649.0400		649.0200		649.2100
		TRAFFIC CONTROL WARNING LIGHTS TYPE C		TRAFFIC CONTROL ARROW BOARDS		TRAFFIC CONTROL SIGNS		TRAFFIC CONTROL SIGNS FIXED MESSAGE	TRAFFIC CONTROL COVERING SIGNS TYPE I		REMOVING PAVEMENT MARKINGS WATER BLASTING	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH		TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH		TEMPORARY RAISED PAVEMENT MARKERS
SHEET	LOCATION	EACH	DAYS	EACH	DAYS	EACH	DAYS	SF	EACH	LF	WHITE LF	YELLOW LF	WHITE LF	YELLOW LF	EACH	
STAGE 1A LONG TERM						24	192									
STAGE 1A SHORT TERM 1 LANE NIGHTTIME CLOSURE		64	512	2	16	13	104									
STAGE 1A SHORT TERM 2 LANE NIGHTTIME CLOSURE		182	1456	4	32	18	144									
STAGE 1B LONG TERM						24	288									
STAGE 1B SHORT TERM 1 LANE NIGHTTIME CLOSURE		64	768	2	24	14	168									
STAGE 1B SHORT TERM 2 LANE NIGHTTIME CLOSURE		128	1536	4	48	18	216									
STAGE 2A LONG TERM		45	1350			40	1200	946			24095	19056	13845			68
STAGE 2A SHORT TERM 1 LANE NIGHTTIME CLOSURE		118	1890	1	16	4	64									
STAGE 2A SHORT TERM 2 LANE NIGHTTIME CLOSURE		114	1824	2	32	10	160									
STAGE 2B LONG TERM		38	1140			26	780				5816	3770			25	
STAGE 2B SHORT TERM 1 LANE NIGHTTIME CLOSURE		118	1888	1	16	4	64									
STAGE 2B SHORT TERM 2 LANE NIGHTTIME CLOSURE		114	1824	2	32	10	160									
STAGE 3A LONG TERM		38	1140			24	720	517	3			18698	12980			68
STAGE 3A SHORT TERM 1 LANE NIGHTTIME CLOSURE		80	1280	1	16	6	96									
STAGE 3A SHORT TERM 2 LANE NIGHTTIME CLOSURE		54	864	2	32	10	160									
STAGE 3B LONG TERM		38	1140			24	720					5690	4190			10
STAGE 3B SHORT TERM 1 LANE NIGHTTIME CLOSURE		71	1136	1	16	6	96									
STAGE 3B SHORT TERM 2 LANE NIGHTTIME CLOSURE		54	864	2	32	10	160									
STAGE 4 LONG TERM						24	240									
STAGE 4 SHORT TERM 1 LANE NIGHTTIME CLOSURE		32	320	1	10	6	60									
STAGE 4 SHORT TERM 2 LANE NIGHTTIME CLOSURE		64	640	2	20	8	80									
UNDISTRIBUTED			28			28	7			21505			12500	9000	9	
PROJECT TOTAL		1416	21600	27	342	323	5900	1470	3	45600	49260	34785	12500	9000	180	

NOTE: CATEGORY 010, UNLESS OTHERWISE NOTED.

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REMOVAL ITEMS	
STATION	204.0195 REMOVING CONCRETE BASES EACH
89+10	1
92+14	1
95+17	1
128+84	1
131+47	1
134+10	1
TOTALS	6
NOTE: ALL CONDUIT WILL BE CUT BACK AND CAPPED. THE WORK WILL BE CONSIDERED INCIDENTAL TO THE ITEM OF REMOVING CONCRETE BASES.	
MAINTAIN LIGHTING SYSTEM	
STATION - STATION	SPV.0105.03 LS
100+45 - 146+77	1

LIGHTING UNIT ITEMS

STATION	LUMINAIRE NO.	SPV.0060.02 REMOVE LUMINAIRE EACH	SPV.0060.03 INSTALL LED LUMINAIRE EACH
100+45	L-13-0485-0001	1	1
102+89	L-13-0485-0002	1	1
105+22	L-13-0485-0003	1	1
107+62	L-13-0485-0004	1	1
109+98	L-13-0485-0005	1	1
100+45	L-13-0485-0006	1	1
102+89	L-13-0485-0007	1	1
105+22	L-13-0485-0008	1	1
107+62	L-13-0485-0009	1	1
109+98	L-13-0485-0010	1	1
112+35	L-13-0485-0011	1	1
114+70	L-13-0485-0012	1	1
117+05	L-13-0485-0013	1	1
119+40	L-13-0485-0014	1	1
121+80	L-13-0485-0015	1	1
124+19	L-13-0485-0016	1	1
112+35	L-13-0485-0017	1	1
114+70	L-13-0485-0018	1	1
117+05	L-13-0485-0019	1	1
119+40	L-13-0485-0020	1	1
121+80	L-13-0485-0021	1	1
124+19	L-13-0485-0022	1	1
126+38	L-13-0485-0023	1	1
128+10 WB ON	L-13-0485-0024	1	1
126+38	L-13-0485-0025	1	1
128+10 EB OFF	L-13-0485-0026	1	1
129+90 WB ON	L-13-0485-0027	1	1
141+52 WB OFF	L-13-0485-0028	1	1
143+30 WB OFF	L-13-0485-0029	1	1
145+02	L-13-0485-0030	1	1
146+77	L-13-0485-0031	1	1
140+65	L-13-0485-0032	1	1
129+45	L-13-0485-0033	1	1
129+90 EB OFF	L-13-0485-0034	1	1
141+30 EB ON	L-13-0485-0035	1	1
143+32 EB ON	L-13-0485-0036	1	1
145+10 EB ON	L-13-0485-0037	1	1
146+77	L-13-0485-0038	1	1
ITEM TOTAL		38	38

LIGHTING ELECTRICAL WIRE AND CONDUIT ITEMS

STATION	LUMINAIRE NO.	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG* (FT)
100+45	L-13-0485-0001	180
102+89	L-13-0485-0002	180
105+22	L-13-0485-0003	180
107+62	L-13-0485-0004	180
109+98	L-13-0485-0005	180
100+45	L-13-0485-0006	180
102+89	L-13-0485-0007	180
105+22	L-13-0485-0008	180
107+62	L-13-0485-0009	180
109+98	L-13-0485-0010	180
112+35	L-13-0485-0011	180
114+70	L-13-0485-0012	180
117+05	L-13-0485-0013	180
119+40	L-13-0485-0014	180
121+80	L-13-0485-0015	180
124+19	L-13-0485-0016	180
112+35	L-13-0485-0017	180
114+70	L-13-0485-0018	180
117+05	L-13-0485-0019	180
119+40	L-13-0485-0020	180
121+80	L-13-0485-0021	180
124+19	L-13-0485-0022	180
126+38	L-13-0485-0023	180
128+10 WB ON	L-13-0485-0024	180
126+38	L-13-0485-0025	180
128+10 EB OFF	L-13-0485-0026	180
129+90 WB ON	L-13-0485-0027	180
141+52 WB OFF	L-13-0485-0028	180
143+30 WB OFF	L-13-0485-0029	180
145+02	L-13-0485-0030	180
146+77	L-13-0485-0031	180
140+65	L-13-0485-0032	180
129+45	L-13-0485-0033	180
129+90 EB OFF	L-13-0485-0034	180
141+30 EB ON	L-13-0485-0035	180
143+32 EB ON	L-13-0485-0036	180
145+10 EB ON	L-13-0485-0037	180
146+77	L-13-0485-0038	180
ITEM TOTALS		6840

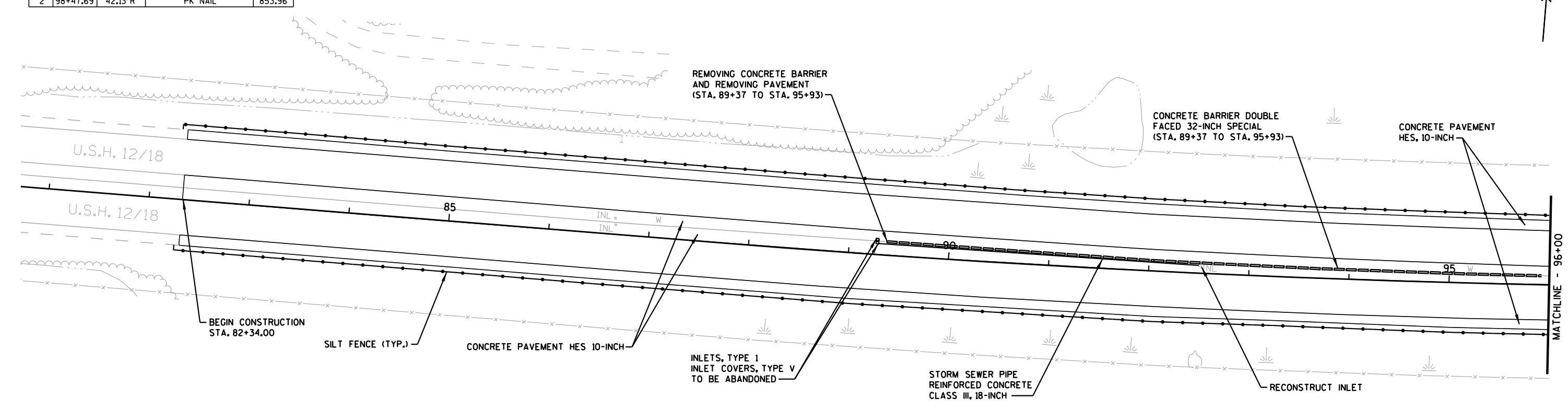
*POLE RISER WIRE

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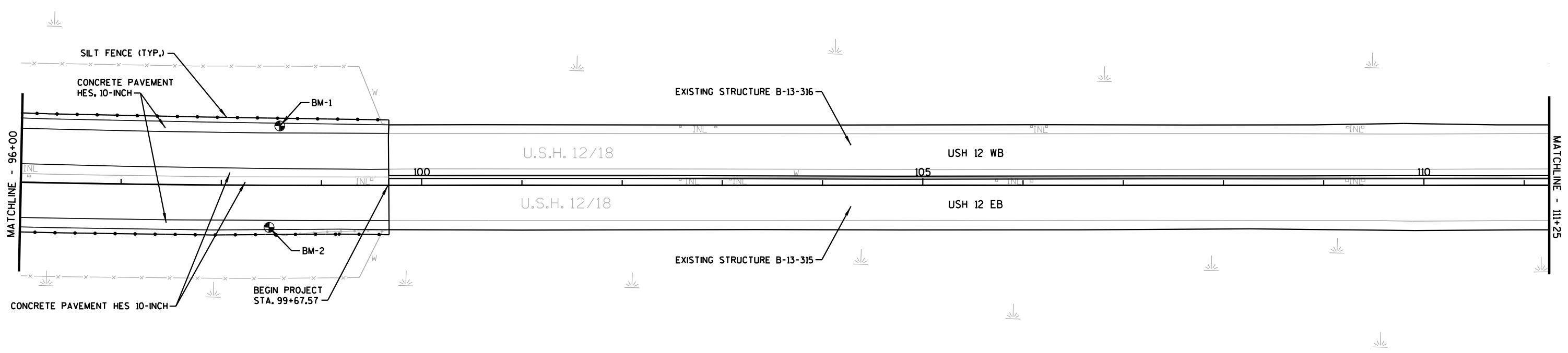
BENCH MARKS				
NO.	STATION	OFFSET	DESCRIPTION	ELEV.
1	98+58.40	59.25' L	PK NAIL	853.91
2	98+47.69	42.13' R	PK NAIL	853.96



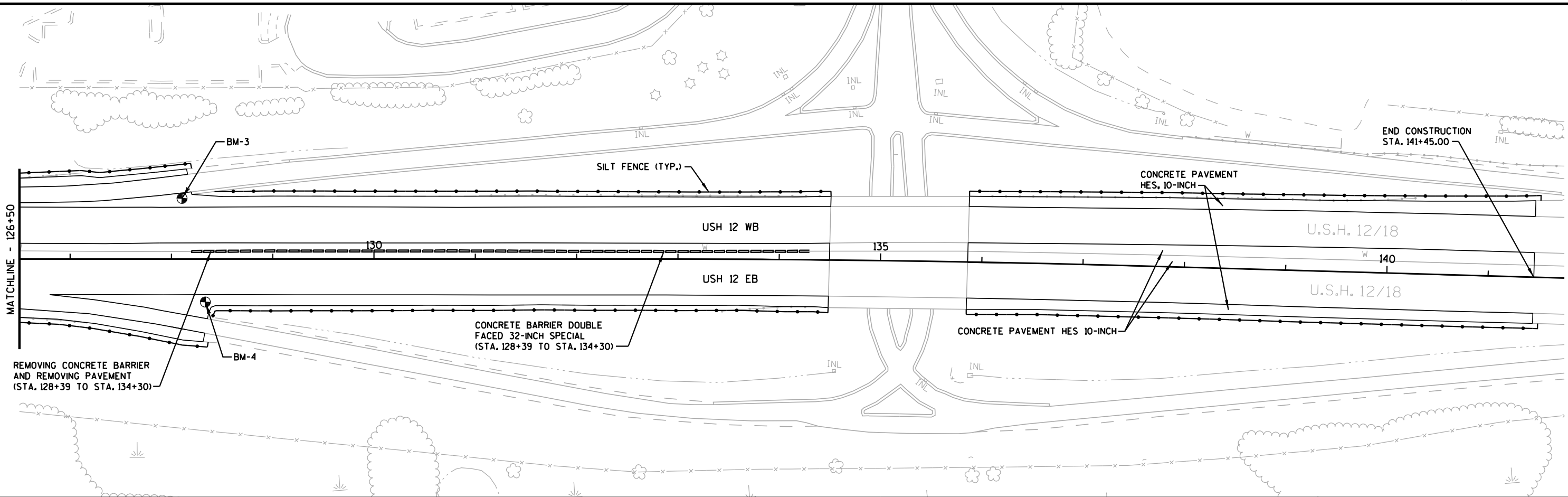
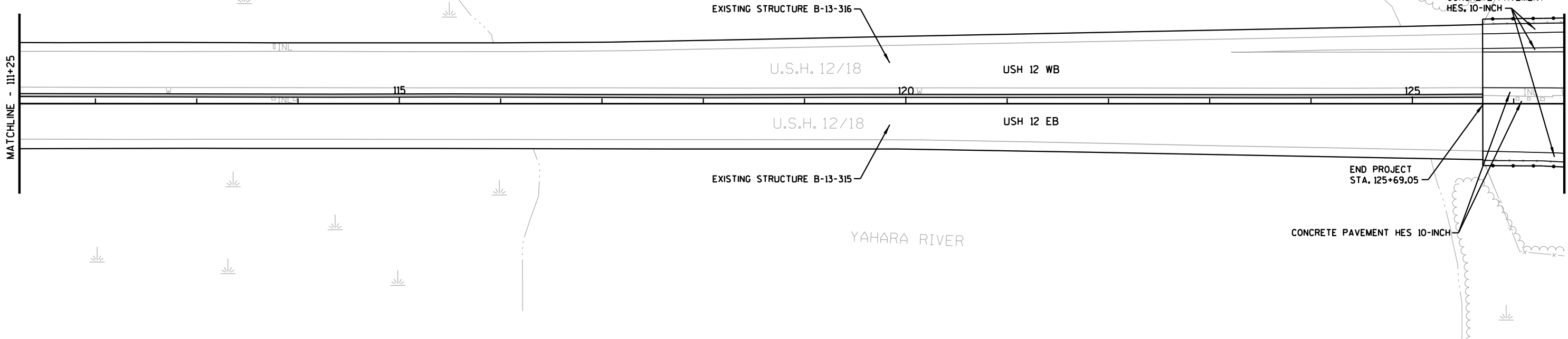
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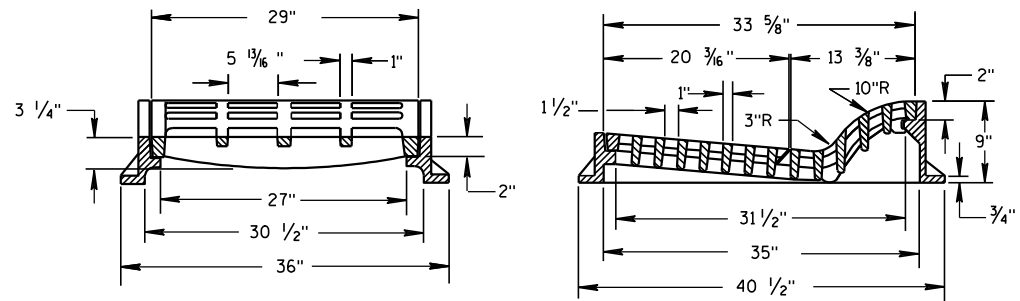
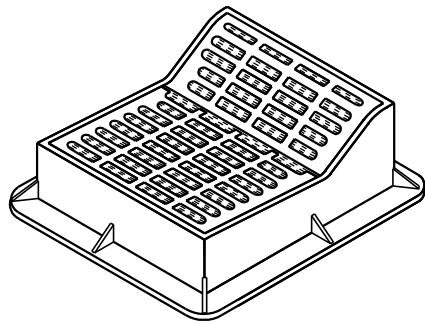


BENCH MARKS				
NO.	STATION	OFFSET	DESCRIPTION	ELEV.
3	128+10.49	59.76' L	PK NAIL	861.73
4	128+33.50	42.45' R	PK NAIL	862.37



Standard Detail Drawing List

08A05-18C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08C07-01	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08E09-06	SILT FENCE and 9E3-4 NON-FREEWAY LIGHTING UNIT POLE WIRING
13A03-05	CONCRETE PAVEMENT SHOULDERS
13A05-04A	SHOULDER RUMBLE STRIP, MILLING
13A05-04B	SHOULDER RUMBLE STRIP, MILLING
13C01-15	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C04-15	URBAN NON-DOWELED CONCRETE PAVEMENT
13C18-01C	CONCRETE PAVEMENT JOINT TIES
13C18-01D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
14B07-12A	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-12B	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-12C	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-12D	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B11-02	CONCRETE BARRIER (DOUBLE FACED)
14B20-10A	STEEL THRIE BEAM STRUCTURE APPROACH
15C02-04A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-04B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-04C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C07-12B	PAVEMENT MARKING WORDS
15C07-12C	PAVEMENT MARKING ARROWS
15C08-14A	PAVEMENT MARKING (MAINLINE)
15C12-03	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C19-01C	MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY
15C23-02	30" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE
15C31-01A	PAVEMENT MARKING (RAMPS AND GORES)
15C31-01D	PAVEMENT MARKING FOR PARALLEL ON-RAMP AND PARALLEL OFF-RAMP
15D03-01	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. WITH BARRIER
15D11-03	TRAFFIC CONTROL, SINGLE LANE CROSSOVER
15D12-02	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H.
15D14-01	TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT-TERM (LESS THAN 24 HOURS)
15D15-01	TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE
15D16-01	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D27-01	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

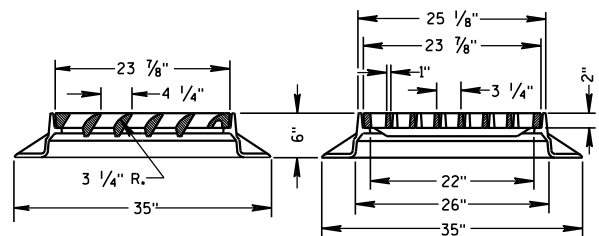
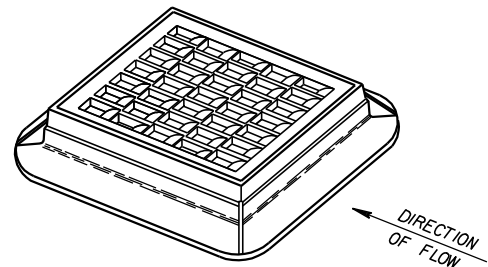


TYPE "F"

(APPROXIMATE WEIGHT 644 LBS.)

FRAME.....302 LBS.
GRATE.....160 LBS.
GRATE.....182 LBS.

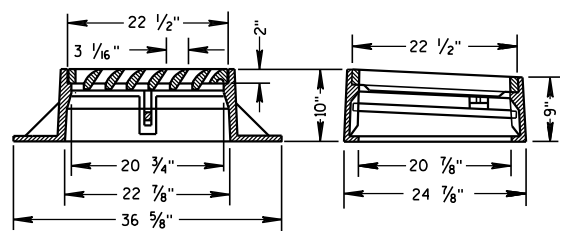
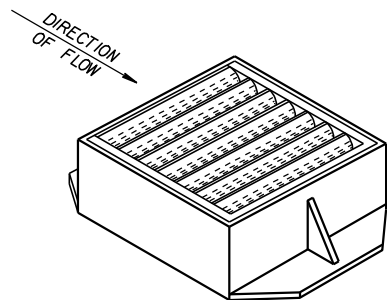
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.



TYPE "S"

(APPROXIMATE WEIGHT 333 LBS.)

FRAME.....164 LBS.
GRATE.....169 LBS.



TYPE "V"

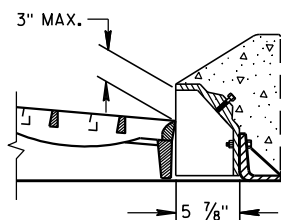
(APPROXIMATE WEIGHT 410 LBS.)

FRAME.....269 LBS.
GRATE.....136 LBS.
SAFETY BAR.....5 LBS.

**ALTERNATIVE CURB BOX
FOR TYPE "HM" COVER**

(APPROXIMATE WEIGHT CURB BOX 68 LBS.)

USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE



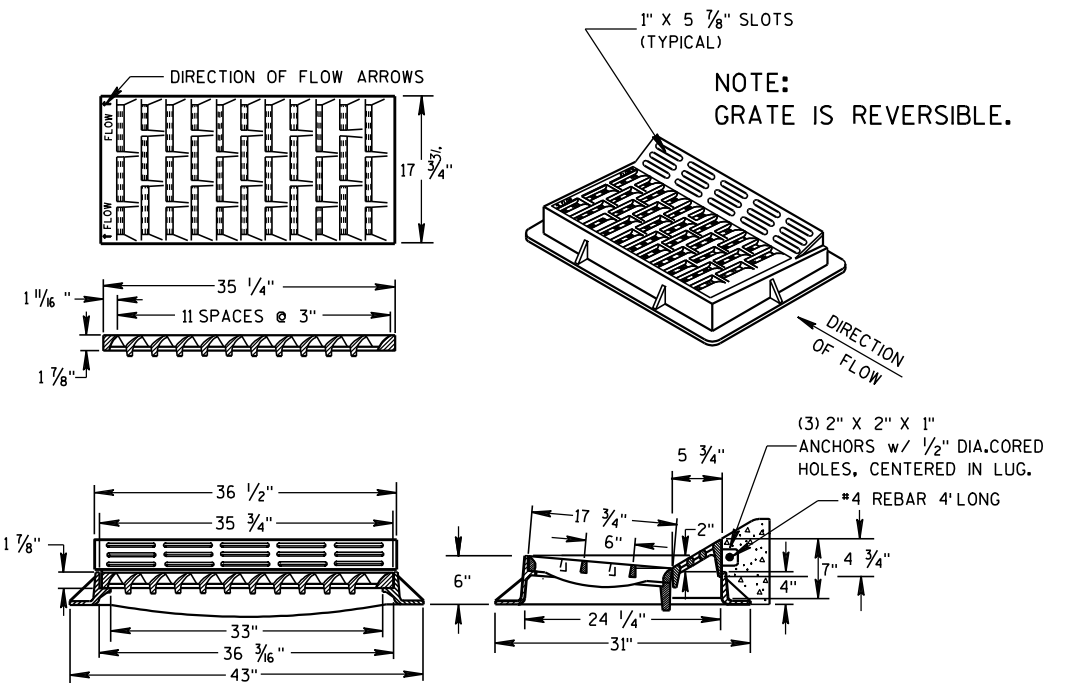
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

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.

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.



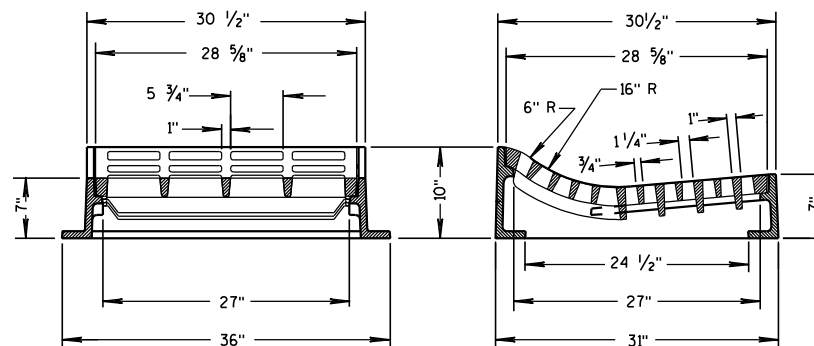
TYPE "HM"

(APPROXIMATE WEIGHT 414 LBS.)

FRAME.....181 LBS.
GRATE.....159 LBS.
CURB BOX.....74 LBS.

USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE

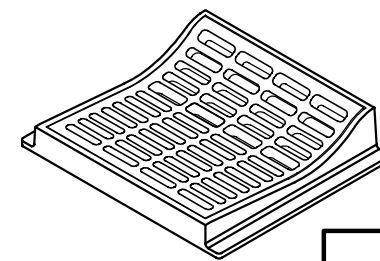


TYPE "T"

(APPROXIMATE WEIGHT 530 LBS.)

FRAME.....270 LBS.
GRATE.....260 LBS.

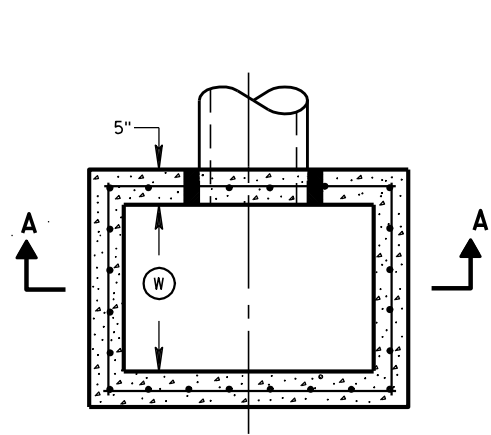
USE WITH TYPES R & T CONCRETE CURB & GUTTER, 36 INCH.



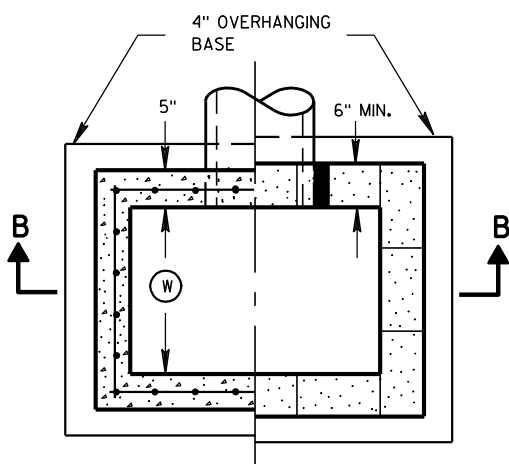
INLET COVERS
TYPE F, HM, HM-S, S, T, V,
HM-GJ, & HM-GJ-S

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA

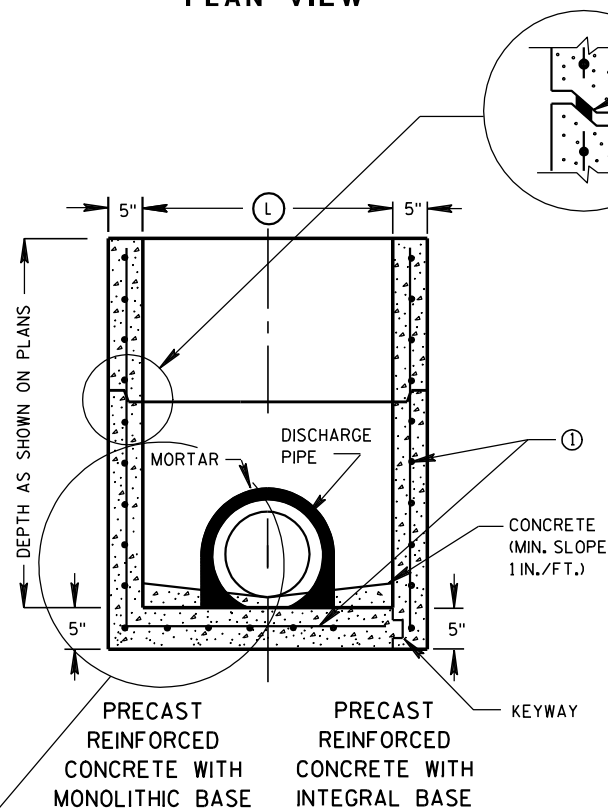


PLAN VIEW

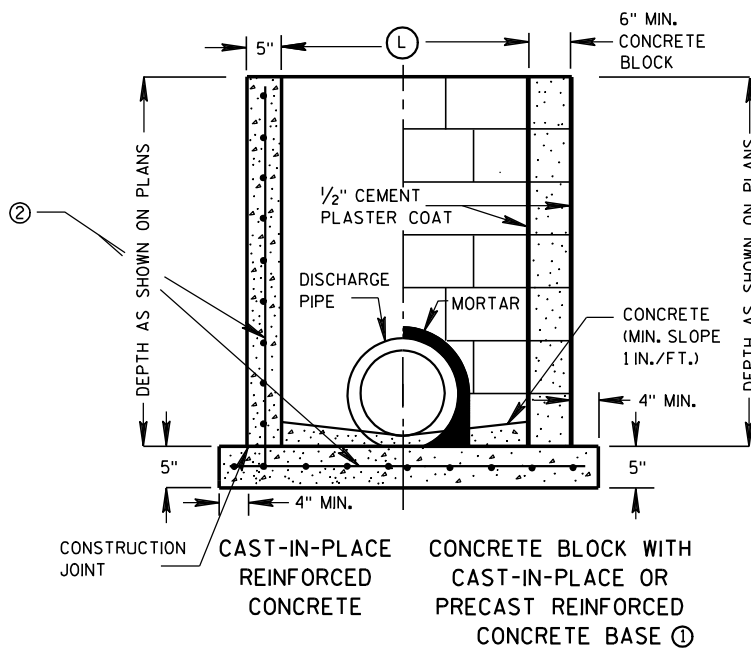


PLAN VIEW

RISER JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



SECTION A-A



SECTION B-B

SEPERATE PRECAST REINFORCED CONCRETE BASE OPTION

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

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.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

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

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPERATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3 INCH CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

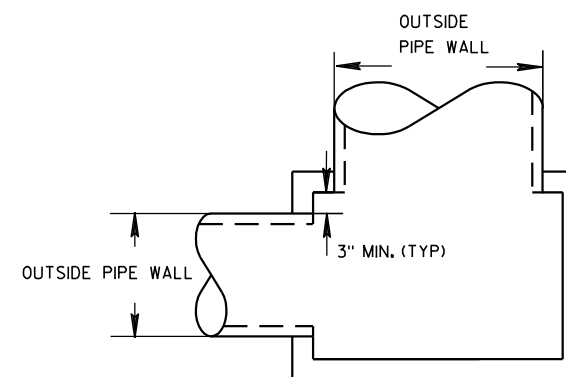
- FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE	WIDTH (W) (FT)	INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
		LENGTH (L) (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



DETAIL "A"

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/5/2012

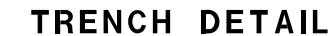
DATE

FHWA

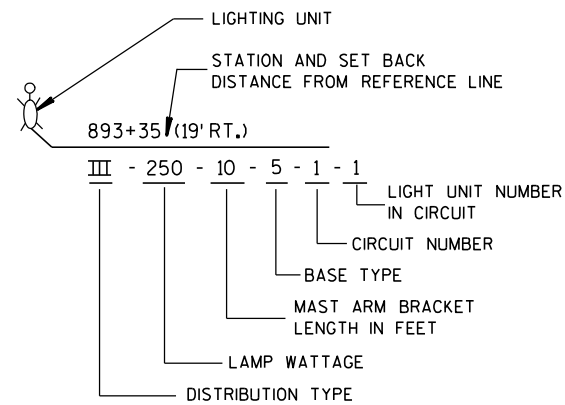
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



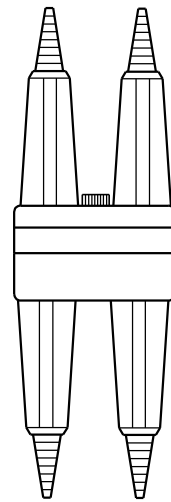
- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS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



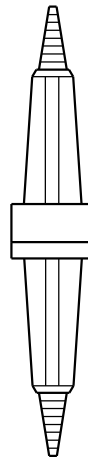
SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4-29-05 DATE	/S/ Beth Canestra CHIEF ROADWAY DEVELOPMENT ENGINEER



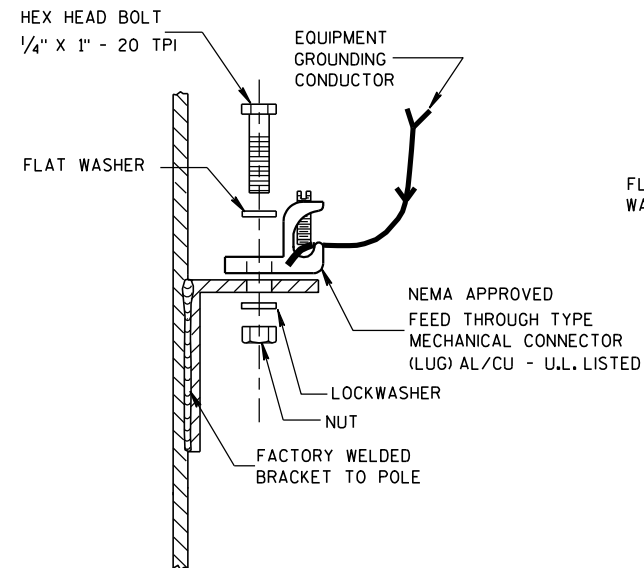
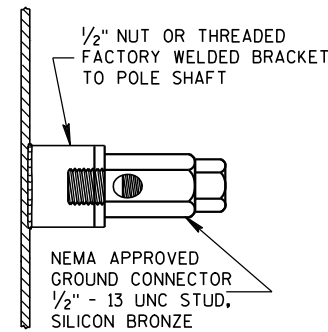
LIGHTING UNIT CODE
(TYPICAL)



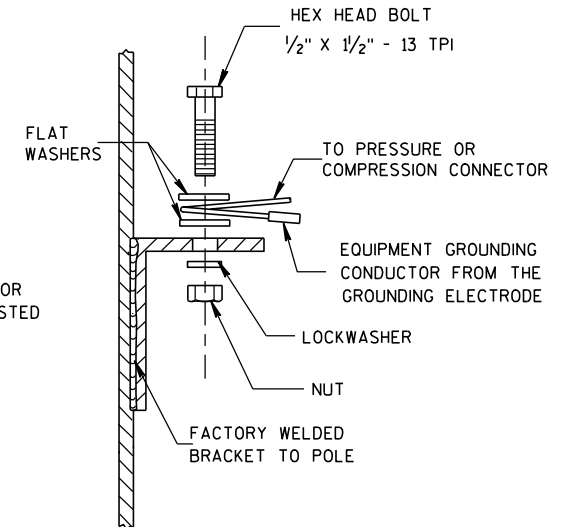
DETAIL "A"
BREAKAWY
DOUBLE POLE WITH
WATERPROOF
INSULATING BOOT



DETAIL "B"
BREAKAWY
SINGLE POLE WITH
WATERPROOF
INSULATING BOOT



TYPICAL GROUNDING CONNECTIONS
NUT, BOLT, WASHERS AND LOCKWASHERS SHALL BE STAINLESS STEEL



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EQUIPMENT GROUNDING CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND THEN 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.

ADDITIONAL CONDUCTORS
AND FUSE FOR TWIN
LIGHTING UNITS

EQUIPMENT GROUNDING
CONDUCTOR(S) TO LUMINAIRE(S)

APPROVED MECHANICAL TYPE
CONNECTOR FOR EQUIPMENT
GROUNDING CONDUCTORS.
COMPRESSION, CRIMP OR
WIRE NUT CONNECTORS ARE
NOT ALLOWED.

TYPICAL GROUNDING CONNECTION -
STAINLESS STEEL BOLT,
NUT AND WASHERS
1/2" X 1 1/2" - 13 TPI

AWG #4 (MIN.) BARE EQUIPMENT
GROUNDING CONDUCTOR.
NOTE: THIS WIRE SHALL BE
CONTINUOUS WITHOUT SPLICES
FROM THE GROUNDING ELECTRODE
TO THE EQUIPMENT GROUNDING
CONDUCTOR SPLICE CONNECTOR.

INSULATED EQUIPMENT GROUNDING
CONDUCTORS FROM SYSTEM RACEWAY

EXOTHERMICALLY WELDED
TO GROUNDING ELECTRODE

CONDUCTORS TO
LUMINAIRES SHALL BE #12 AWG,
COPPER STRANDED, U.S.E. RATED,
XLP INSULATED. SINGLE
LIGHTING UNIT SHOWN

CIRCUIT TAGS, BOTH SIDES
OF ALL FUSES (TYPICAL)

IN LINE SINGLE POLE FUSE ASSEMBLY.
600 VAC, WITH 5 AMP FNO FUSE
(SEE DETAIL "B")
TAPE AND VARNISH
CRIMPED END FERRULES

HANDHOLE & COVER

18" PIGTAIL BETWEEN
CONNECTOR AND FUSEHOLDER

APPROVED INSULATED MULTITAP
TERMINAL BLOCK TYPE CONNECTORS.
COMPRESSION, CRIMP OR WIRE NUT
CONNECTORS ARE NOT ALLOWED.

INSULATED UNGROUNDED CIRCUIT
CONDUCTORS FROM SYSTEM RACEWAY

ALTERNATE PHASE UNGROUNDED
CIRCUIT CONDUCTOR PASSING
THROUGH THIS POLE

TWIN LIGHTING UNITS REQUIRE
INDIVIDUAL SETS OF UNGROUNDED
CONDUCTORS AND FUSE ASSEMBLY.

AWG #4 (MIN.) BARE EQUIPMENT
GROUNDING CONDUCTOR.
NOTE: THIS WIRE SHALL BE
CONTINUOUS WITHOUT SPLICES
FROM THE GROUNDING ELECTRODE
TO THE EQUIPMENT GROUNDING
CONDUCTOR SPLICE CONNECTOR.

EQUIPMENT GROUNDING
CONDUCTOR(S) TO LUMINAIRE(S)
TYPICAL GROUNDING CONNECTION -
STAINLESS STEEL BOLT,
NUT AND WASHERS
1/2" X 1 1/2" - 13 TPI

APPROVED MECHANICAL TYPE
CONNECTOR FOR EQUIPMENT
GROUNDING CONDUCTORS.
COMPRESSION, CRIMP OR
WIRE NUT CONNECTORS ARE
NOT ALLOWED.

INSULATED EQUIPMENT GROUNDING
CONDUCTORS FROM SYSTEM RACEWAY

EXOTHERMICALLY WELDED
TO GROUNDING ELECTRODE

CIRCUIT TAGS, BOTH SIDES
OF ALL FUSES (TYPICAL)

IN LINE FUSE ASSEMBLY
TWO POLE, 600 VAC,
WITH 5 AMP FNO FUSES
(SEE DETAIL "A")
TAPE AND VARNISH
CRIMPED END FERRULES

HANDHOLE & COVER

18" PIGTAIL BETWEEN
CONNECTORS AND FUSEHOLDERS

APPROVED INSULATED MULTITAP
TERMINAL BLOCK TYPE CONNECTORS.
COMPRESSION, CRIMP OR WIRE NUT
CONNECTORS ARE NOT ALLOWED.

INSULATED UNGROUNDED CIRCUIT
CONDUCTORS FROM SYSTEM RACEWAY

3 WIRE - 120, 240 OR 480 VAC (UNGROUND CONDUCTOR)
WITH GROUNDED CONDUCTOR AND
WITH EQUIPMENT GROUNDING CONDUCTOR

2 WIRE - 240 OR 480 VAC (UNGROUND CONDUCTORS)
WITH EQUIPMENT GROUNDING CONDUCTOR

**NON-FREWAY LIGHTING UNIT
POLE WIRING**

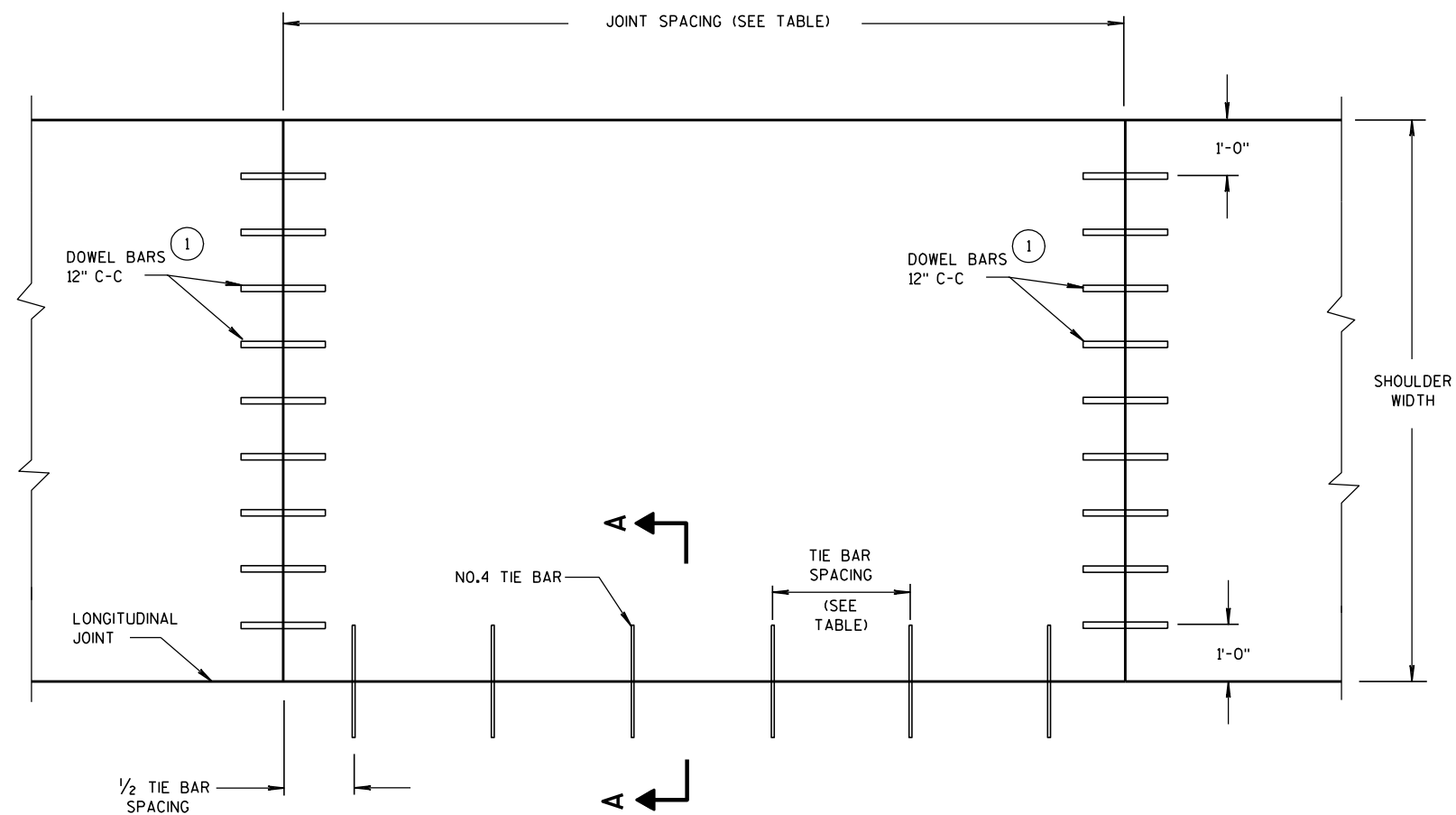
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/2/2011
DATE

FHWA

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



PLAN VIEW
CONCRETE PAVEMENT SHOULDER

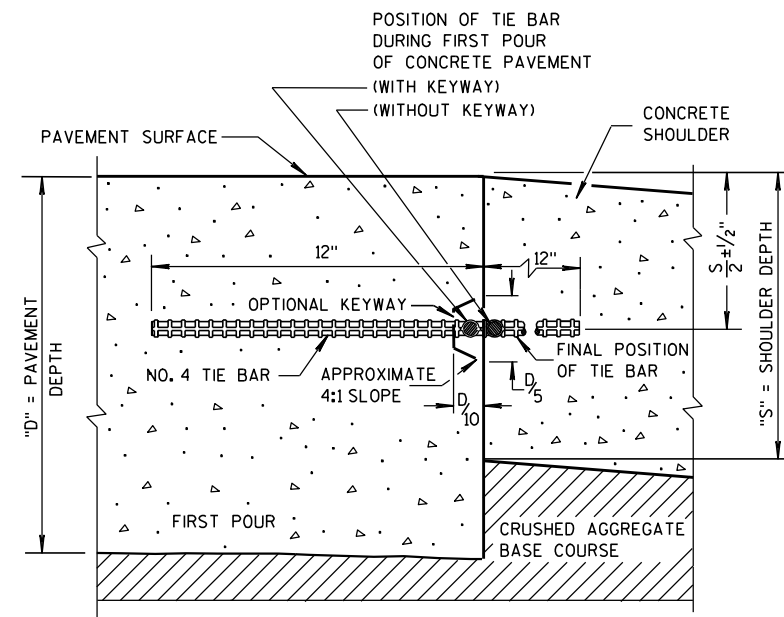
GENERAL NOTES

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.

TRANSVERSE JOINT DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

FINISH THE SHOULDER PAVEMENT CONFORMING TO SUBSECTION 415.3.8 OF THE STANDARD SPECIFICATIONS.

TIE BARS SHALL CONFORM TO SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.



SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT

1
PAVEMENT DEPTH, DOWEL BAR SIZE
AND JOINT SPACING TABLE

PAVEMENT TYPE OF TRAFFIC LANES	TIE BAR SPACING	SHOULDER JOINT SPACING
NON-REINFORCED	30"	MATCH JOINT SPACING OF ADJACENT TRAFFIC LANE
CONTINUOUSLY REINFORCED	30"	15' FOR 6' TO 10' WIDE SHOULDER
CONTINUOUSLY REINFORCED	36"	12' FOR 3' WIDE SHOULDER

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6", 6 1/2"	NONE	12'
7", 7 1/2"	1"	14'
8", 8 1/2"	1 1/4"	15'
9", 9 1/2"	1 1/4"	15'
10" & ABOVE	1 1/2"	15'

FOR DOWELED CONCRETE SHOULDER WITH TRAPEZOIDAL CROSS SECTIONS, CHOSE THE APPROPRIATE DOWEL BAR DIAMETER BASED ON THE SMALLER PAVEMENT DEPTH (LIKELY THE OUTSIDE EDGE OF THE SHOULDER). IF USING BASKETS, USE BASKETS FOR THE AVERAGE THICKNESS OF THE CROSS SECTION.

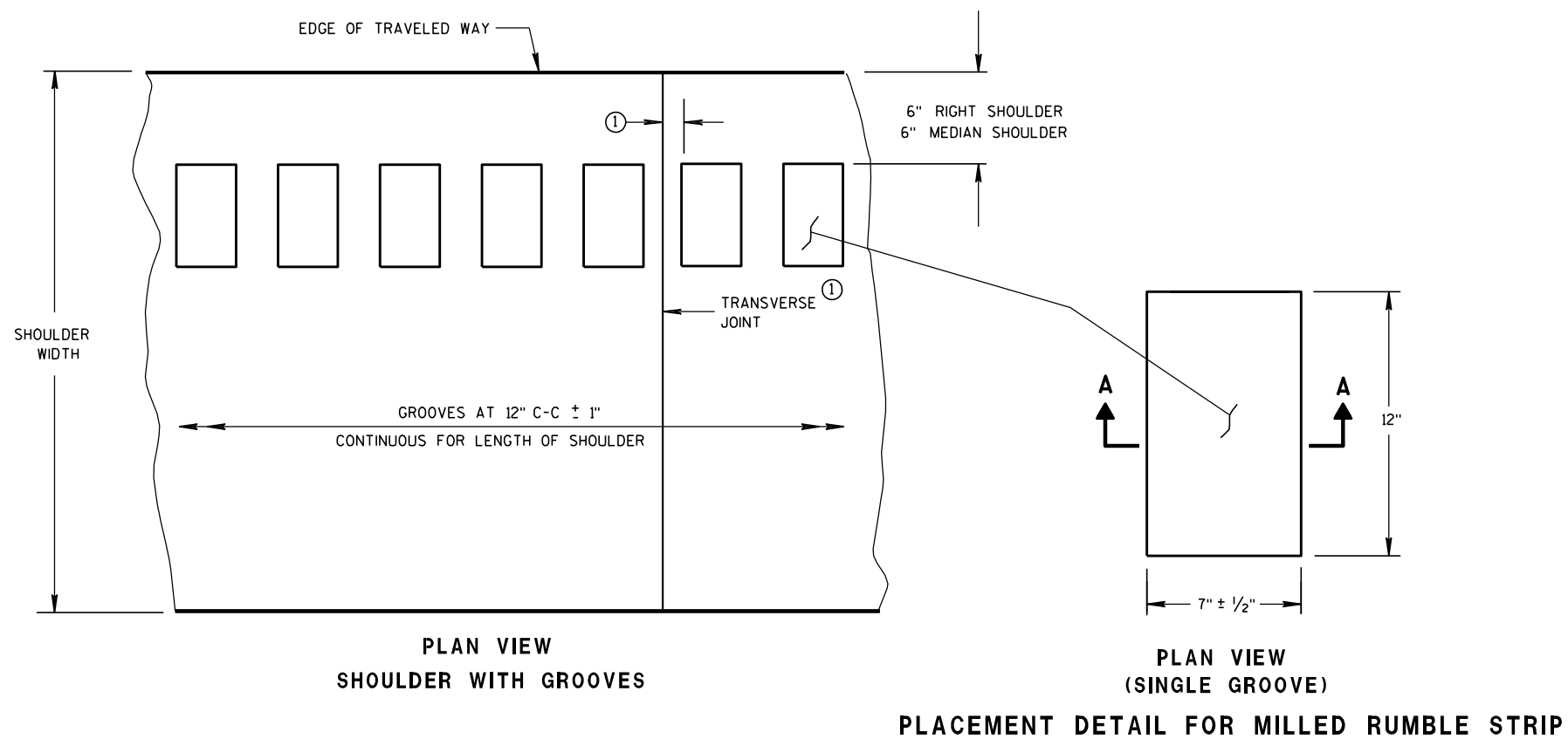
CONCRETE PAVEMENT SHOULDERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/15/2011
DATE

FWHA

/S/ Deb Bischoff
PAVEMENT POLICY & DESIGN ENGINEER



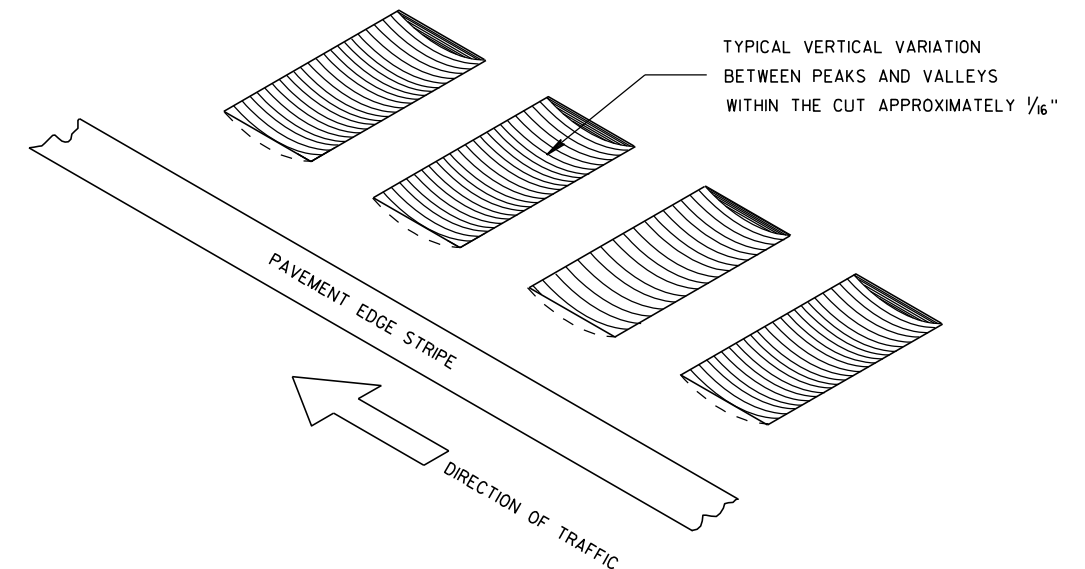
GENERAL NOTES

DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

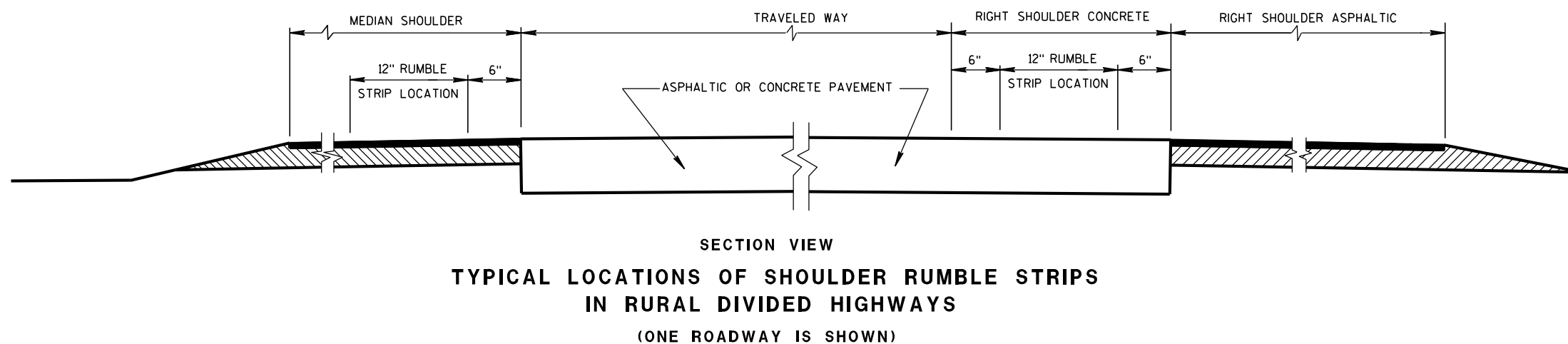
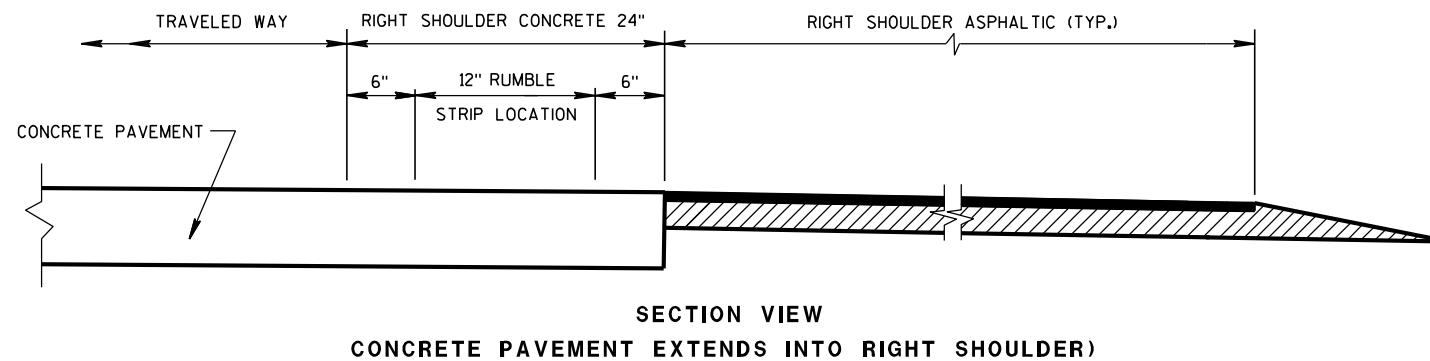
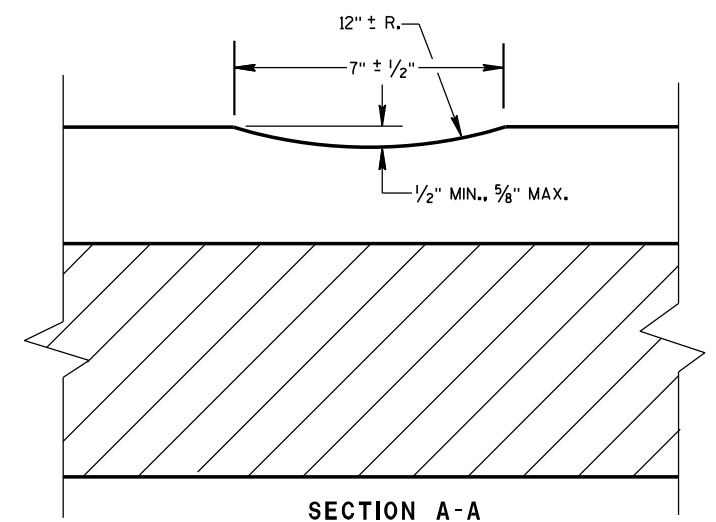
RUMBLE STRIPS ON EXPRESSWAYS

DO NOT INSTALL RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL DRIVEWAYS OR ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES OR TURN LANE TAPERS. THE ATTACHED STANDARD DETAIL DRAWING SHOWS THE LOCATION OF THE RUMBLE STRIPS AT INTERCHANGE AREAS.

① CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6" AWAY FROM TRANSVERSE JOINTS.

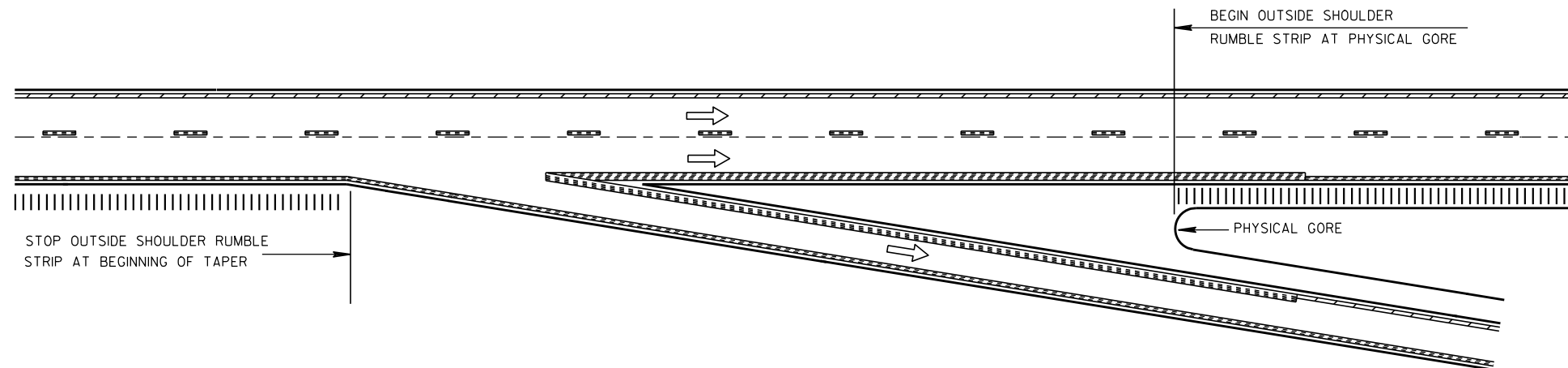


ISOMETRIC



**SHOULDER RUMBLE STRIP,
MILLING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

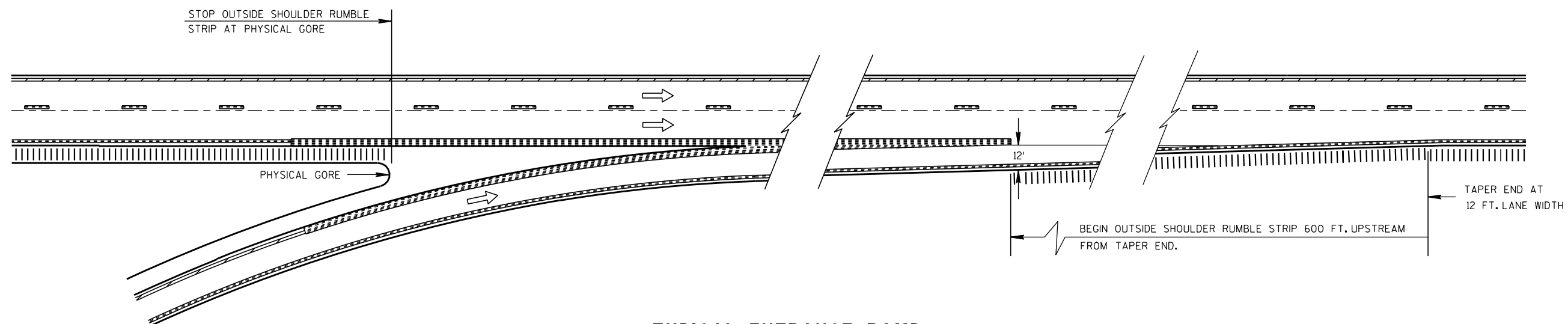


TYPICAL EXIT RAMP

NOTE:
ARROW SYMBOL (→)
SHOWS DIRECTION OF TRAVEL

NOTES:

NO RUMBLE STRIP ON EXIT, DIRECTIONAL, OR ENTRANCE RAMPS, EXCEPT NEAR THE ENTRANCE TAPER END AS SHOWN.
PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

TYPICAL ENTRANCE RAMP
RAMP AND GORE RUMBLE STRIP LOCATIONSSHOULDER RUMBLE STRIP,
MILLINGSTATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

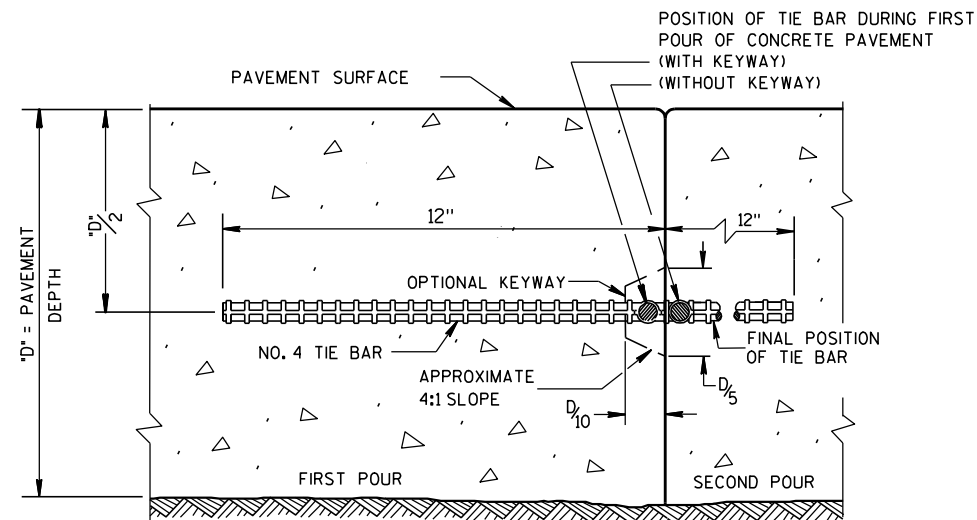
8/17/2011

DATE

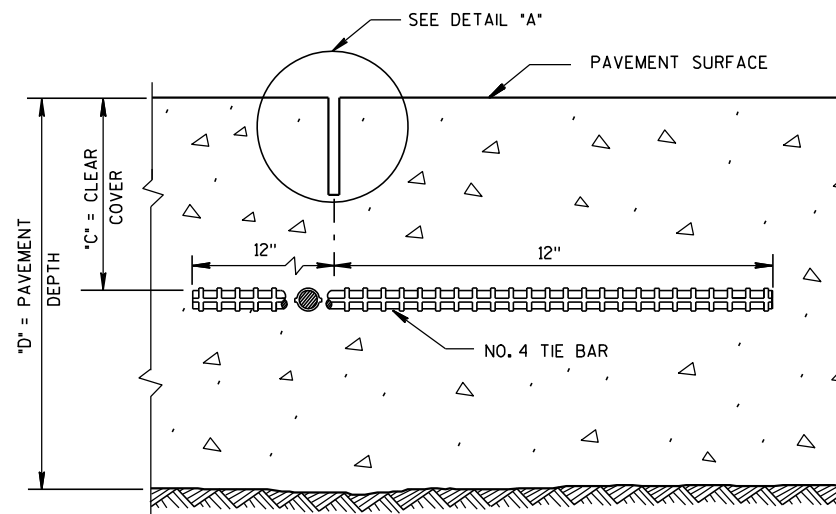
FHWA

/S/ Jerry H. Zogg

ROADWAY STANDARDS DEVELOPMENT
ENGINEER



CONSTRUCTION JOINT



SAWED JOINT

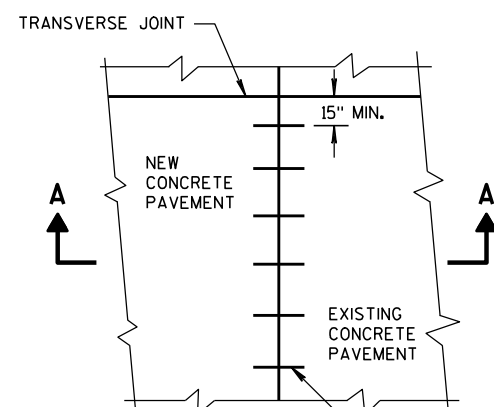
GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

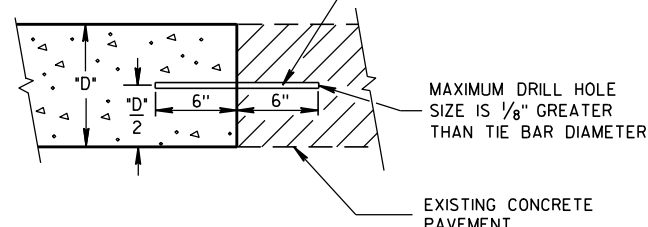
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

① ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

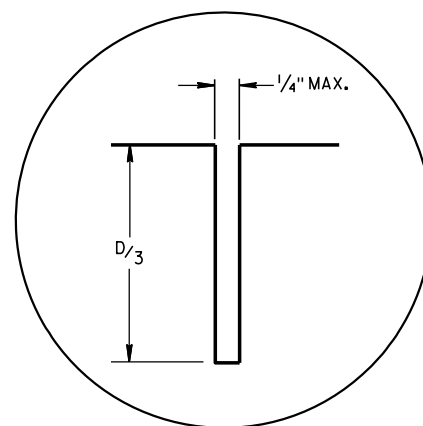


PLAN VIEW

NO. 6 TIE BARS SPACED 2'-6" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT. ①

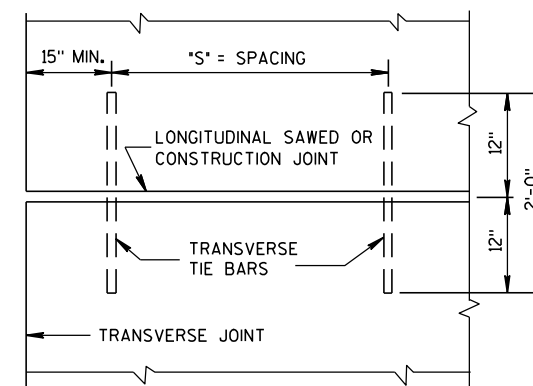


**SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT
TIE BARS ANCHORED
INTO EXISTING PAVEMENT**



DETAIL "A"

PAVEMENT DEPTH "D"	CLEAR COVER "C"	MAXIMUM TIE BAR SPACING "S"	
		PAVEMENT WIDTH 24' OR 26'	≥ 30'
6, 6 1/2"	3" ± 1/2"	48"	42"
7, 7 1/2"	3 1/4" ± 1"	45"	36"
8, 8 1/2"	3 3/4" ± 1"	39"	30"
9, 9 1/2"	4 1/4" ± 1"	33"	27"
10, 10 1/2"	4 3/4" ± 1"	30"	24"
11, 11 1/2"	5 1/4" ± 1"	27"	21"
12"	5 3/4" ± 1"	24"	21"



**PLAN VIEW
SHOWING LOCATION OF TIE BARS**

**CONCRETE PAVEMENT
LONGITUDINAL JOINTS AND TIES**

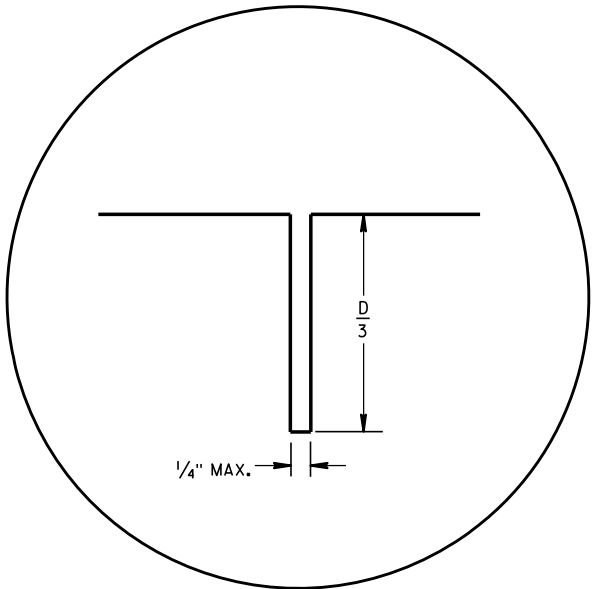
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10-5-2010
DATE

FHWA

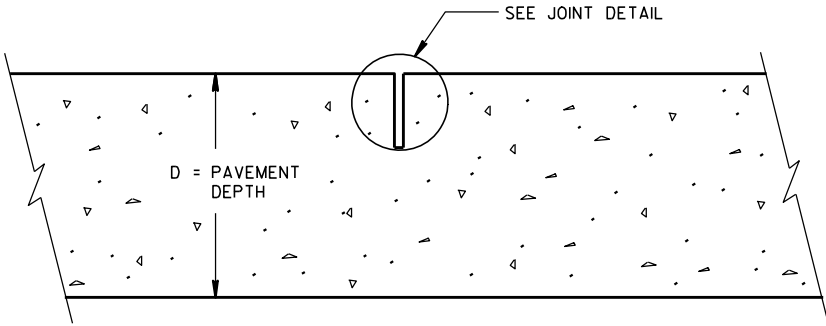
/S/ Deb Bischoff
PAVEMENT POLICY & DESIGN ENGINEER



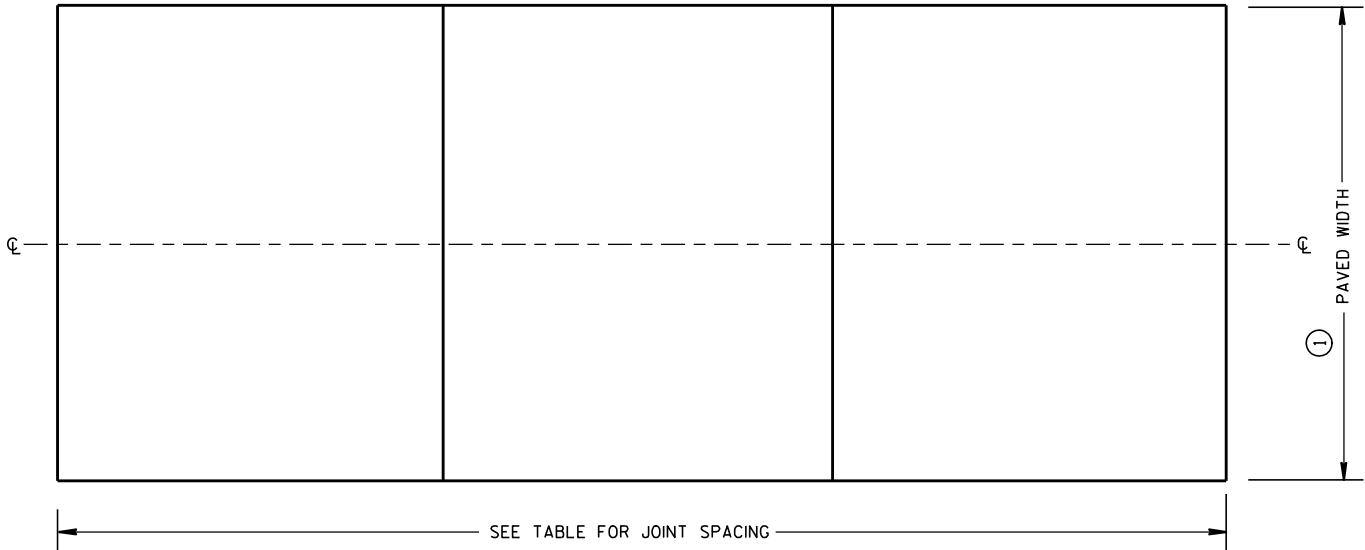
JOINT DETAIL

PAVEMENT DEPTH AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 1/2"	12'
7", 7 1/2"	14'
8" & ABOVE	15'



CONTRACTION JOINT



CONTRACTION JOINT LOCATIONS

GENERAL NOTES

CONTRACTION JOINTS

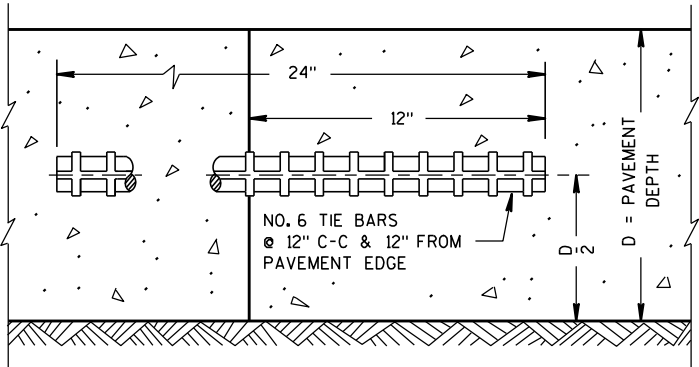
CONSTRUCT CONTRACTION JOINTS NORMAL TO THE CENTERLINE.
LOCATE AND ORIENT CONTRACTION JOINTS THROUGH INTERSECTIONS
AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
DO NOT SEAL OR FILL CONTRACTION JOINTS.

CONSTRUCTION JOINTS

LOCATE CONSTRUCTION JOINTS A MINIMUM OF 4 FEET FROM THE NEAREST
CONTRACTION JOINT AND ALIGN PARALLEL TO THE CONTRACTION JOINTS.

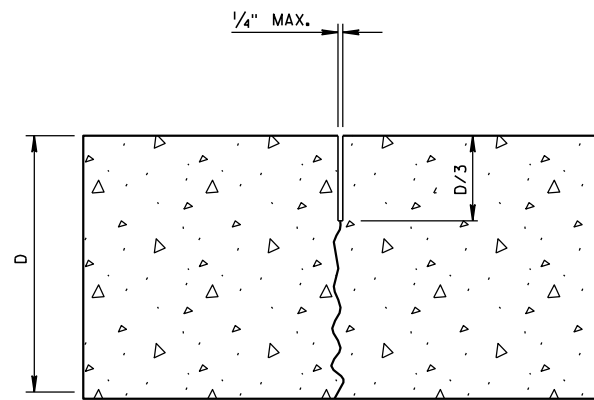
THE CONTRACTOR MAY INSERT TIE BARS THROUGH THE HEADER BOARD AFTER
THE CONCRETE HAS BEEN PLACED.

① REFER TO TYPICAL CROSS SECTIONS FOR PAVED WIDTH AND LOCATION OF
LONGITUDINAL JOINTS.

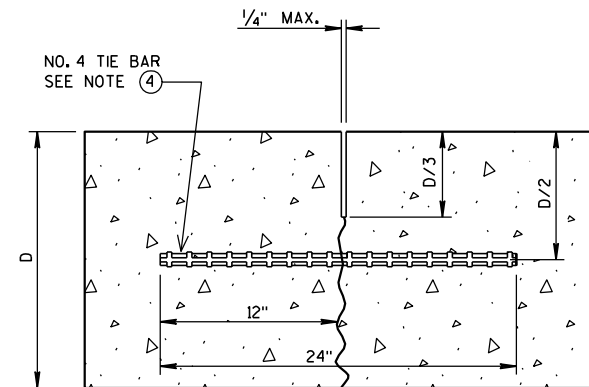


CONSTRUCTION JOINT

URBAN NON-DOWELED CONCRETE PAVEMENT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 12/11/2009 DATE FHWA	/S/ Deb Bischoff PAVEMENT POLICY & DESIGN ENGINEER

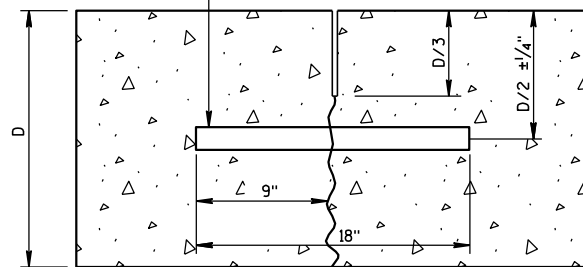


UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

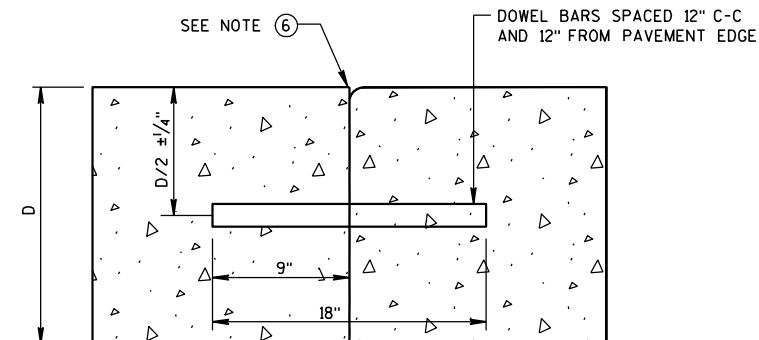
DOWEL BARS AT 12" C-C
12" FROM PAVEMENT EDGE



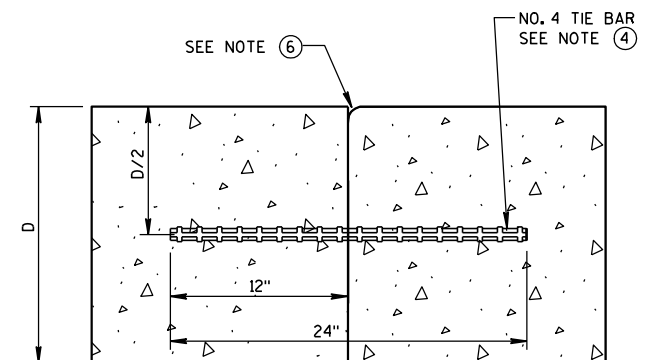
DOWELED-TRANSVERSE

CONTRACTION JOINTS

SEE NOTE ②

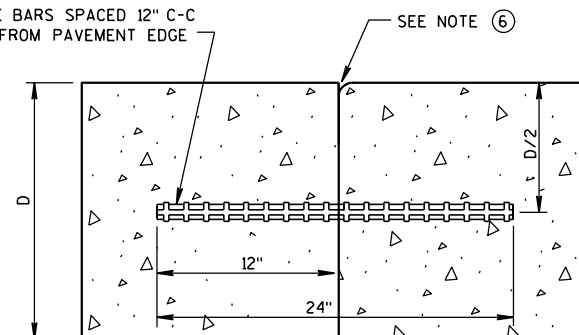


DOWELED TRANSVERSE



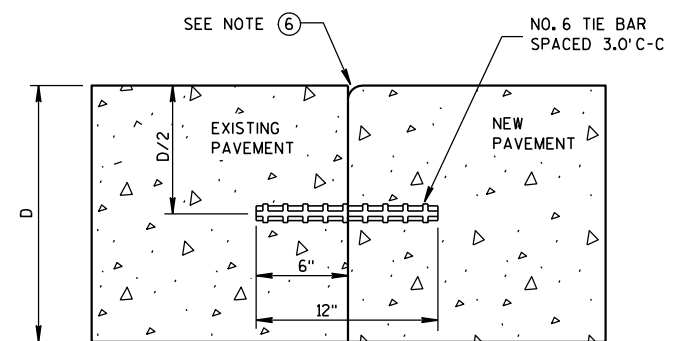
TIED LONGITUDINAL

NO. 6 TIE BARS SPACED 12" C-C
AND 12" FROM PAVEMENT EDGE



TIED TRANSVERSE

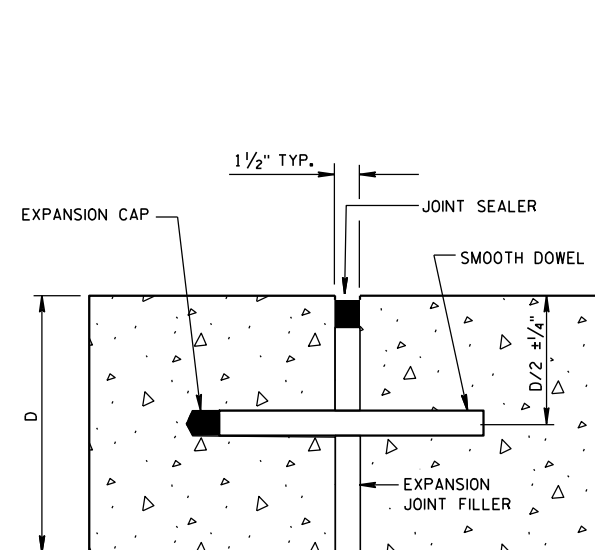
SEE NOTE ③



TIED LONGITUDINAL TO EXISTING

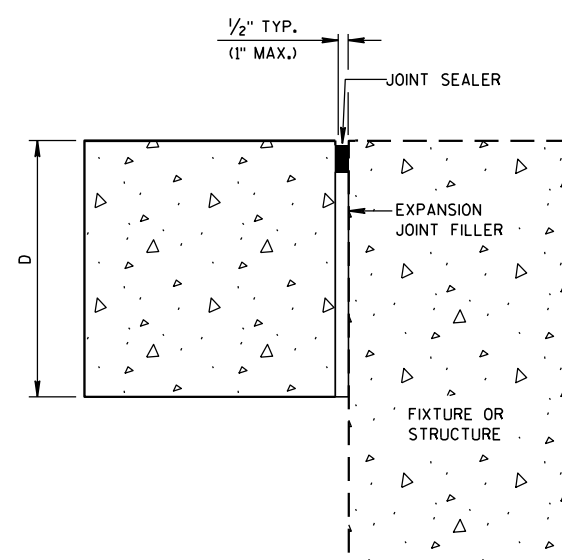
CONSTRUCTION JOINTS

SEE NOTE ⑤



DOWELED-TRANSVERSE

SEE NOTE ①



UNTIED-LONGITUDINAL

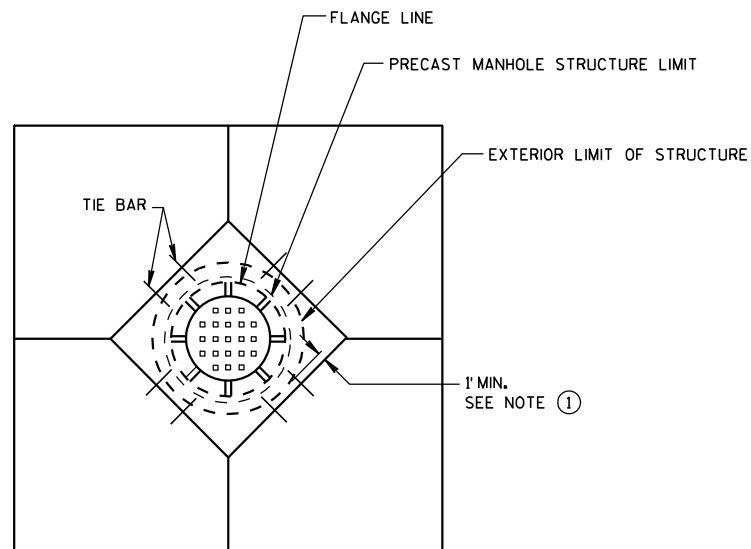
EXPANSION JOINTS

GENERAL NOTES

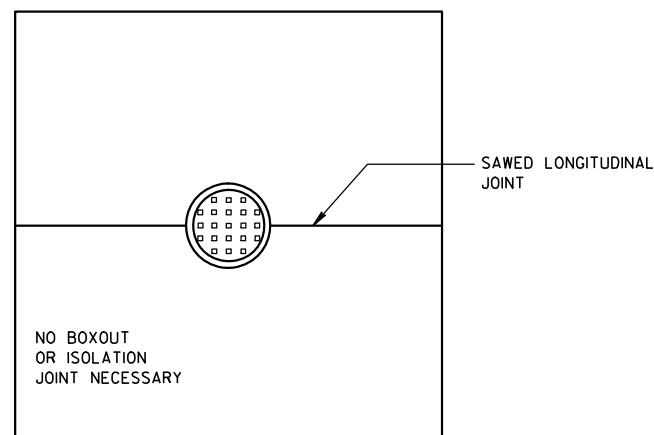
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 4 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO THE CONTRACTION JOINTS.
4. SPACE TIE BARS AT LONGITUDINAL CONSTRUCTION OR CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C1.
5. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
6. IF JOINT IS FORMED, PROVIDE A 1/4-INCH RADIUS.

CONCRETE PAVEMENT
JOINT TYPES

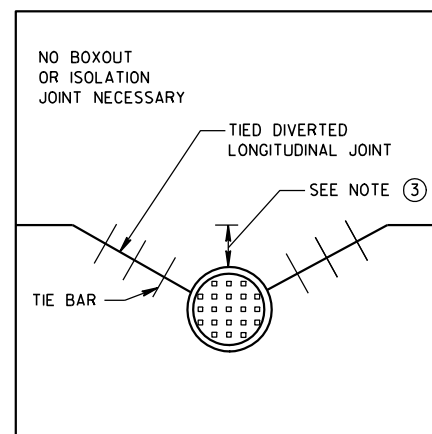
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



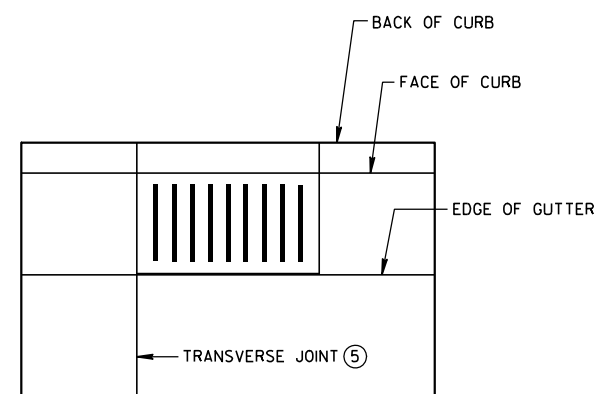
**DIAGONAL MANHOLE BOXOUT
FOR CONSTRUCTION JOINTS**



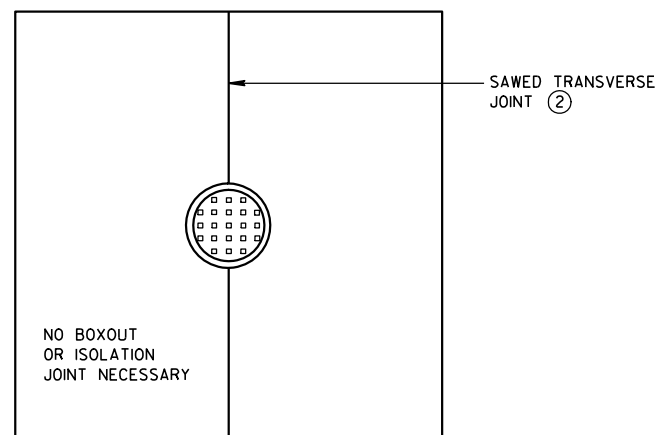
**MANHOLE WITH
LONGITUDINAL JOINT**



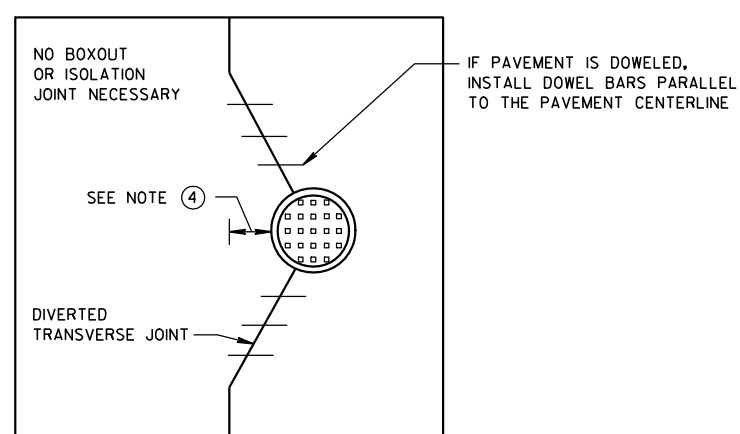
**MANHOLE WITH DIVERTED
LONGITUDINAL CONTRACTION JOINT**



**INLET WITH
TRANSVERSE JOINT**



**MANHOLE WITH
TRANSVERSE JOINT**



**MANHOLE WITH DIVERTED
TRANSVERSE CONTRACTION JOINT**

GENERAL NOTES

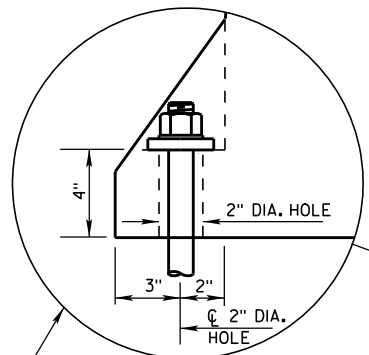
1. USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1 FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
2. ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
3. IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS GREATER THAN 2 FEET, DO NOT DIVERT JOINT AND SAW LONGITUDINAL JOINT AS NORMAL. IF DISTANCE IS 2 FEET OR LESS, DIVERT LONGITUDINAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE.
4. IF DISTANCE FROM THE EDGE OF MANHOLE TO THE NEAREST TRANSVERSE JOINT IS GREATER THAN 4 FEET, REDIRECT JOINT TO INTERSECT MANHOLE. IF DISTANCE IS 4 FEET OR LESS, PLACE REBAR REINFORCEMENT AROUND MANHOLE.
5. ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.

**CONCRETE PAVEMENT
JOINTING AT UTILITY FIXTURES**

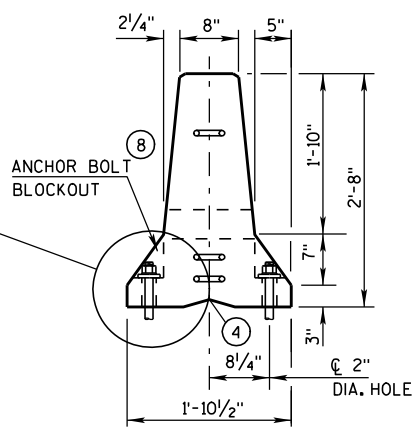
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10-5-2010
DATE
FHWA

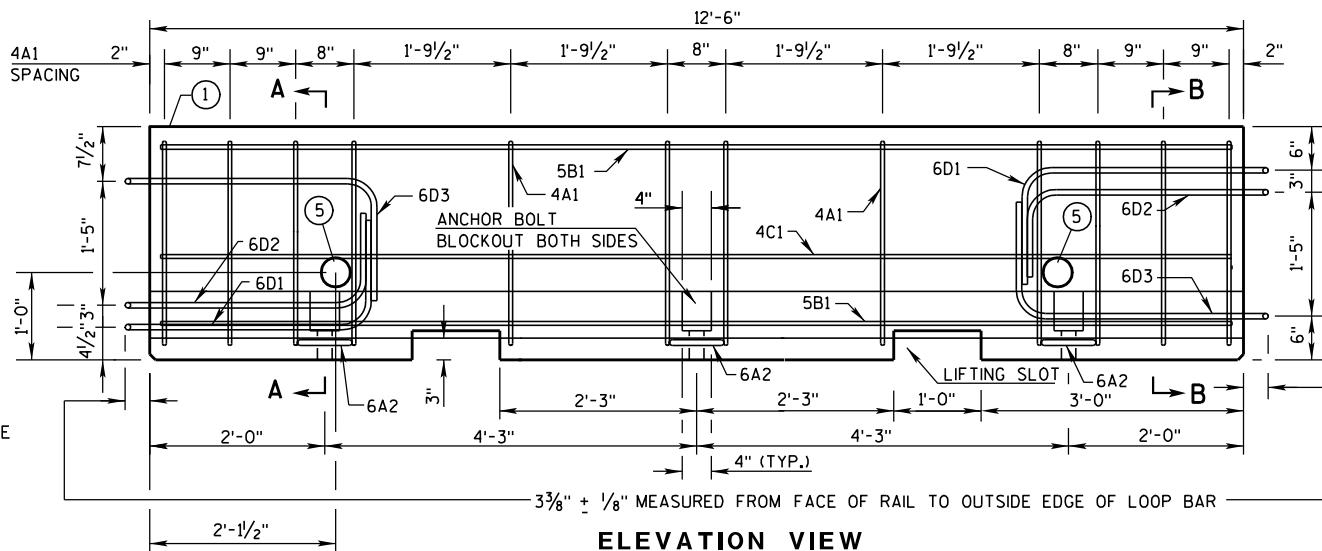
/S/ Deb Bischoff
PAVEMENT POLICY & DESIGN ENGINEER



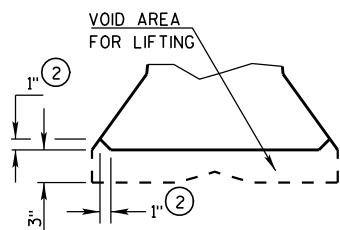
ANCHOR ON TRAFFIC SIDE ONLY WHEN REQUIRED (SEE SHEET D FOR ADDITIONAL ANCHOR DETAIL)



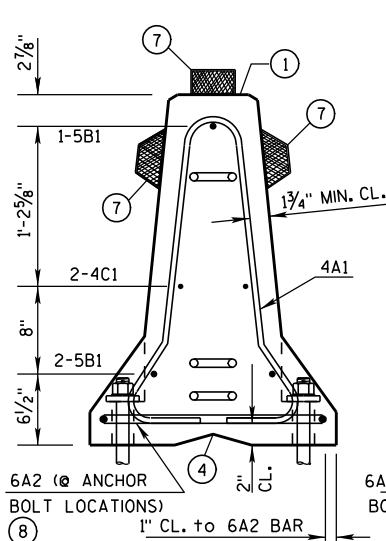
END VIEW



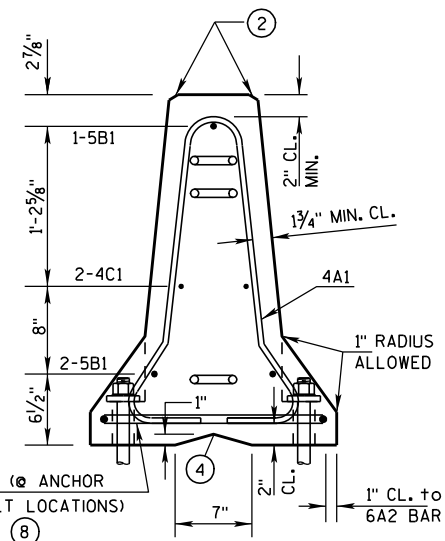
ELEVATION VIEW



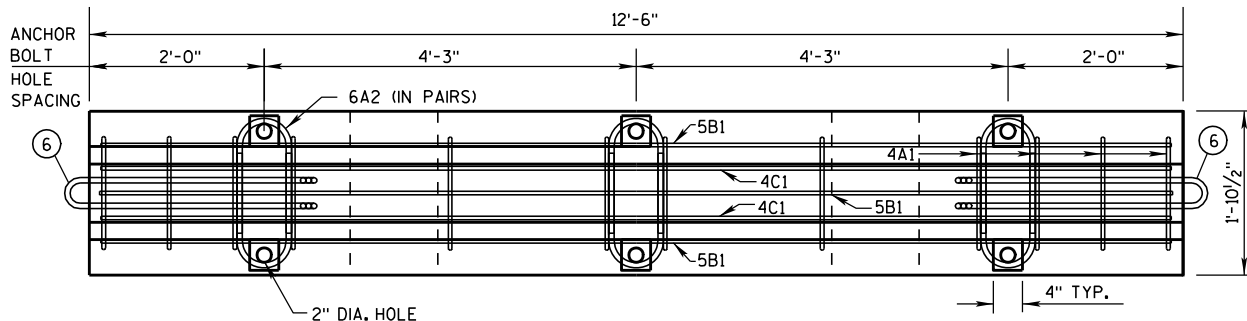
DETAIL "B"
LIFTING SLOT DETAIL



SECTION A-A
(STIRRUP PLACEMENT)

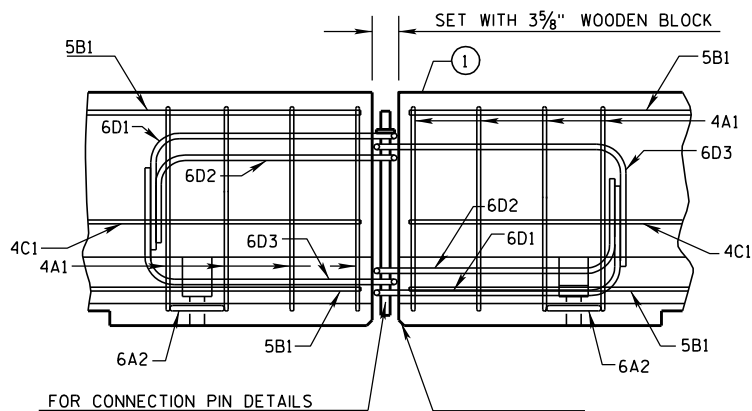


SECTION B-B
(STIRRUP PLACEMENT)



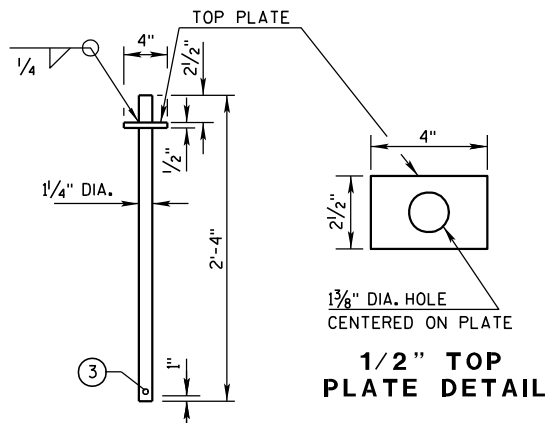
PLAN VIEW

DETAILS OF BARRIER SECTION



FOR CONNECTION PIN DETAILS SEE DETAIL "A"

DETAILS OF BARRIER CONNECTION



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

GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-12(a) THRU 14B7-12(d).

DETAILS AND REQUIREMENTS FOR THE FABRICATION AND INSTALLATION OF CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" (CBTP12.5) ARE SHOWN ON 4 SHEETS, 14B7-12(a) THRU 14B7-12(d)

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" (CBTP12.5) WITH OTHER TEMPORARY CONCRETE BARRIERS.

USE ASTM A-615, GRADE 60, DEFORMED STEEL BARS FOR BARS 4A1, 6A2, 5B1 AND 4C1 IN THE BARRIER SECTION AND FOR 4V1, 4V2, 4V3, 4V4, 4V5, 4V6, 4F1, 4F2 AND 5F3 IN THE BARRIER TAPER SECTION.

LOOP BARS 6D1, 6D2 AND 6D3 SHALL BE 3/4" SMOOTH STEEL BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSI, A TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH BUT A MINIMUM OF 80 KSI, A MINIMUM 14% ELONGATION IN 8 INCHES AND PASSING A 180 DEGREE BEND TEST USING A 3-1/2" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN 1/8" OF THE PLAN DIMENSION.

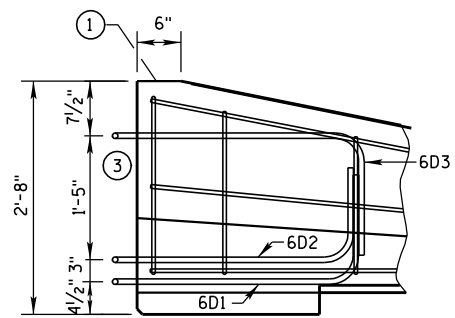
CONSTRUCT LIFTING SLOTS AS SPECIFIED ON THE PLANS TO FACILITATE THE DRAINAGE OF WATER AFTER INSTALLATION.

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

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

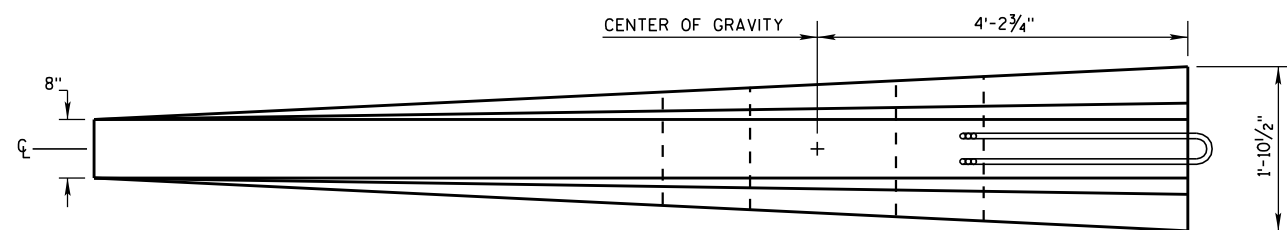
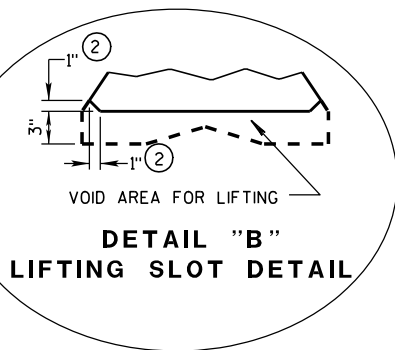
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

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



**CHAMFER
DETAIL**

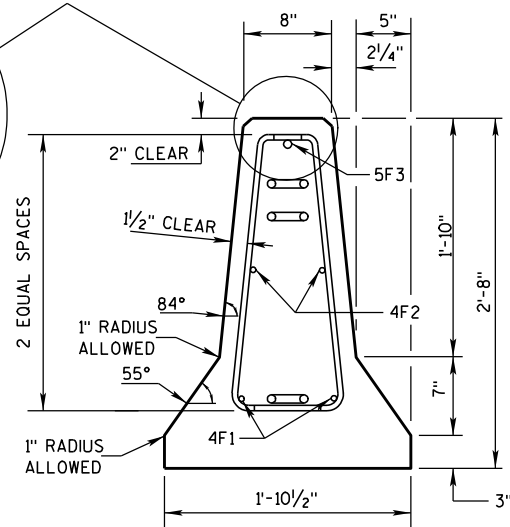


Diagram illustrating the barrier on a curve. The diagram shows a cross-section of a barrier with a 12'-6" offset from the centerline. The barrier is angled at 5° ± MAX. The distance from the centerline to the barrier is 12'-6". The barrier is labeled "BARRIER ON CURVE". The diagram also shows the "END SECTION" of the barrier.

FLARE AT BARRIER END

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

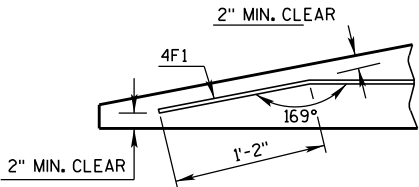
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

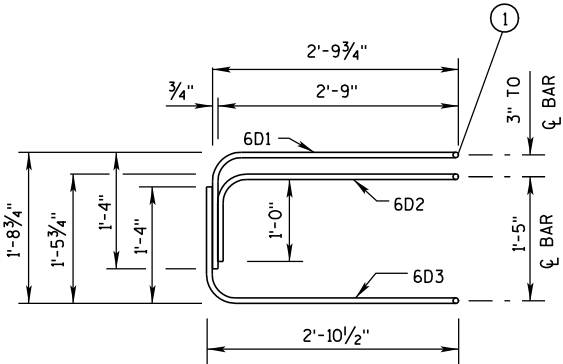
BARRIER TAPER SECTION
BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

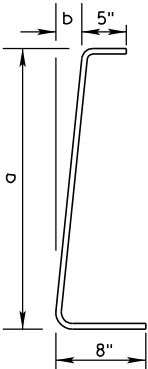
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



DETAIL "C"
BENT BAR DETAIL



ELEVATION
LOOP BAR ASSEMBLY



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

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

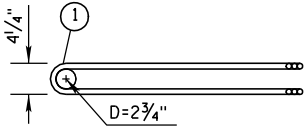
GENERAL NOTES

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

BARRIER SECTION
BILL OF MATERIALS

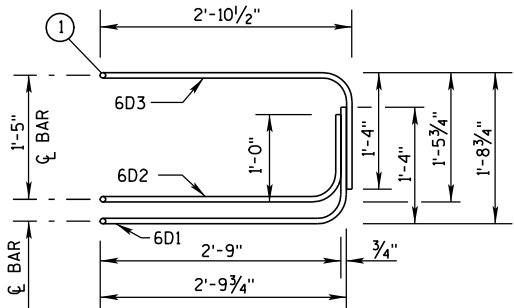
(PER 12'-6" BARRIER SECTION)

BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"

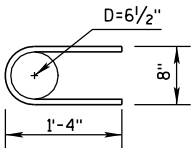


PLAN VIEW
LOOP BAR ASSEMBLY

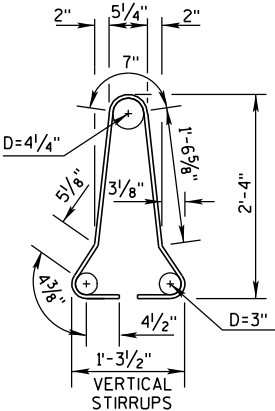
(MARKED END SHOWN, INVERT FOR OTHER END)



ELEVATION VIEW



6A2

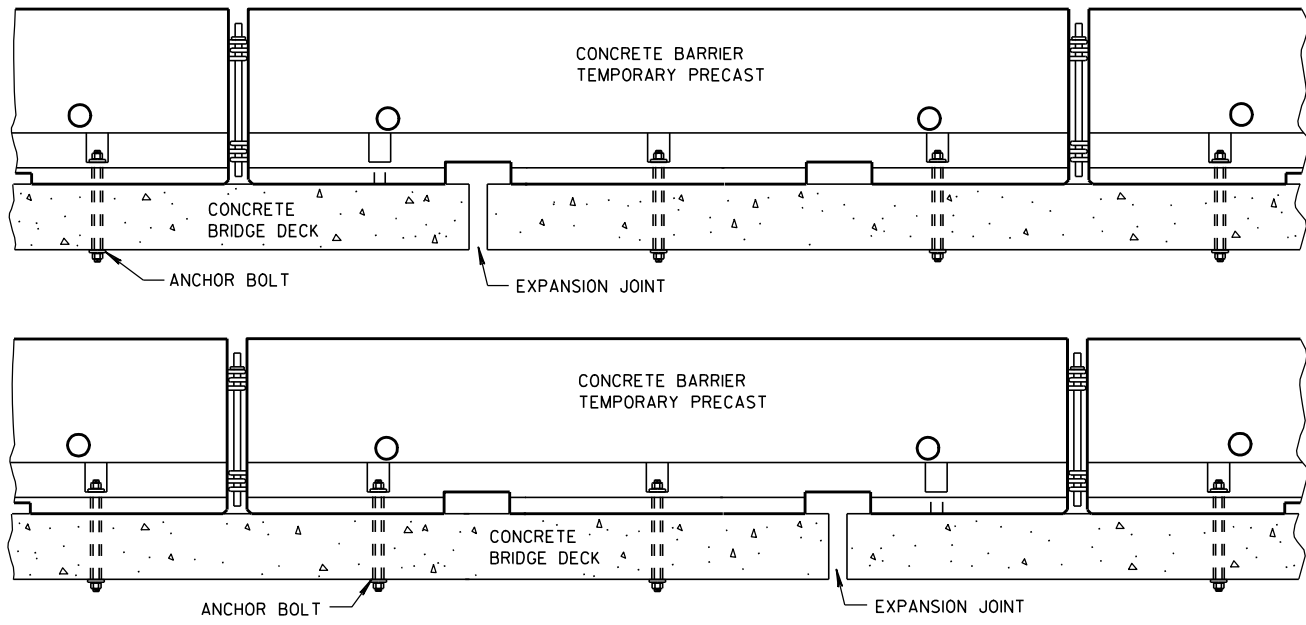


4A1

BARRIER SECTION

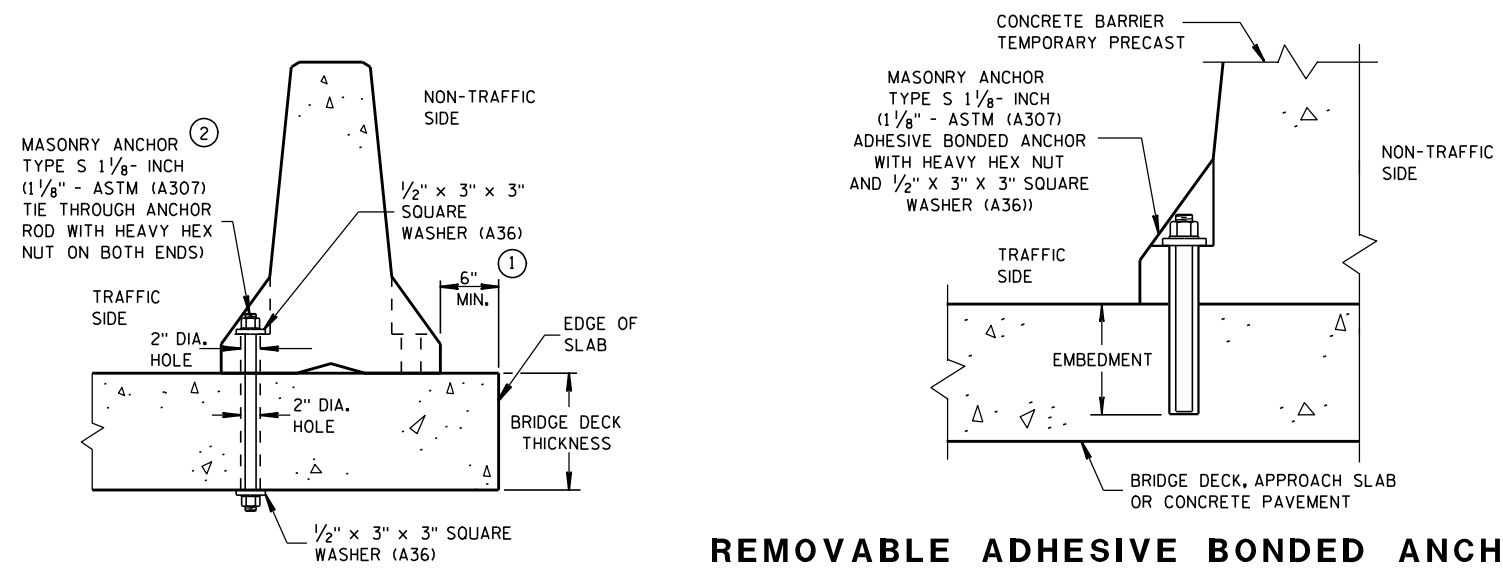
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.)

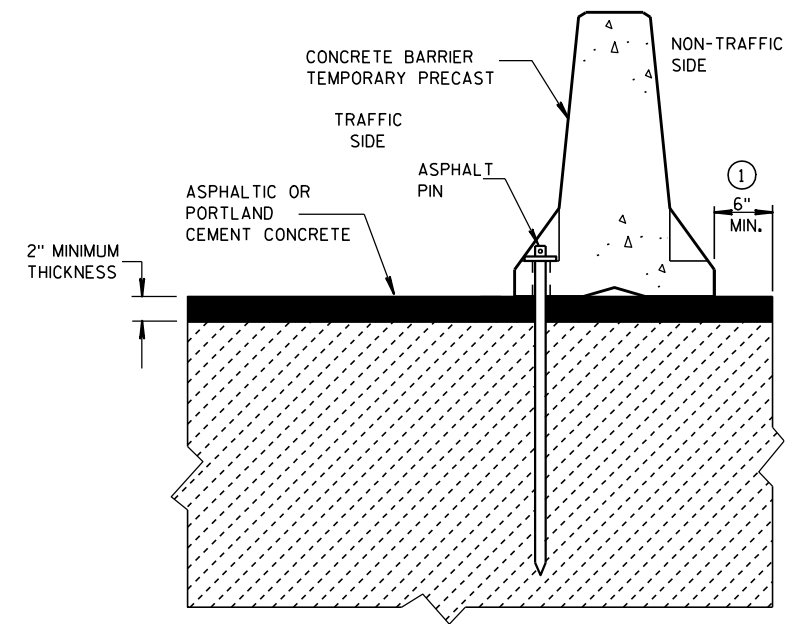


THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

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

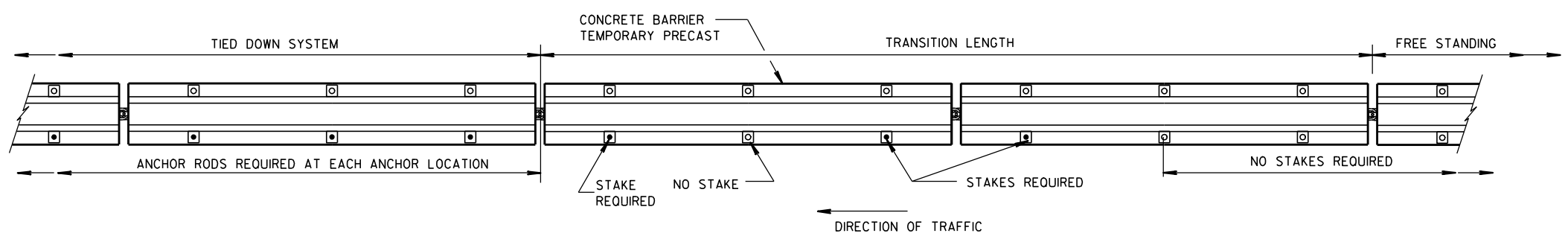
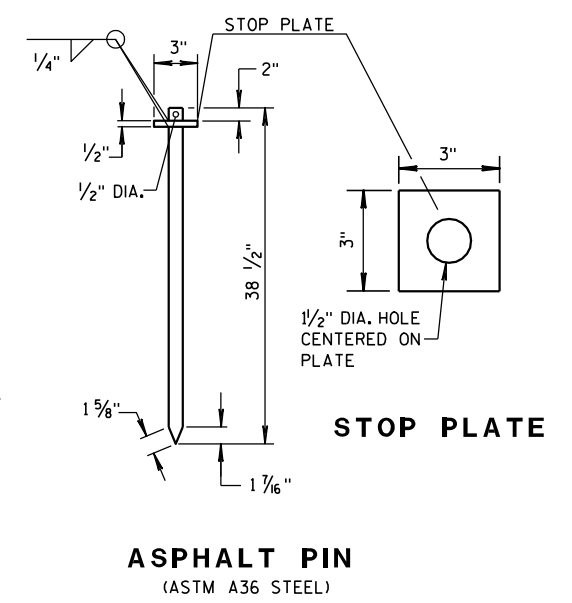
REMOVABLE ADHESIVE BONDED ANCHOR INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)



STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

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

GENERAL NOTES

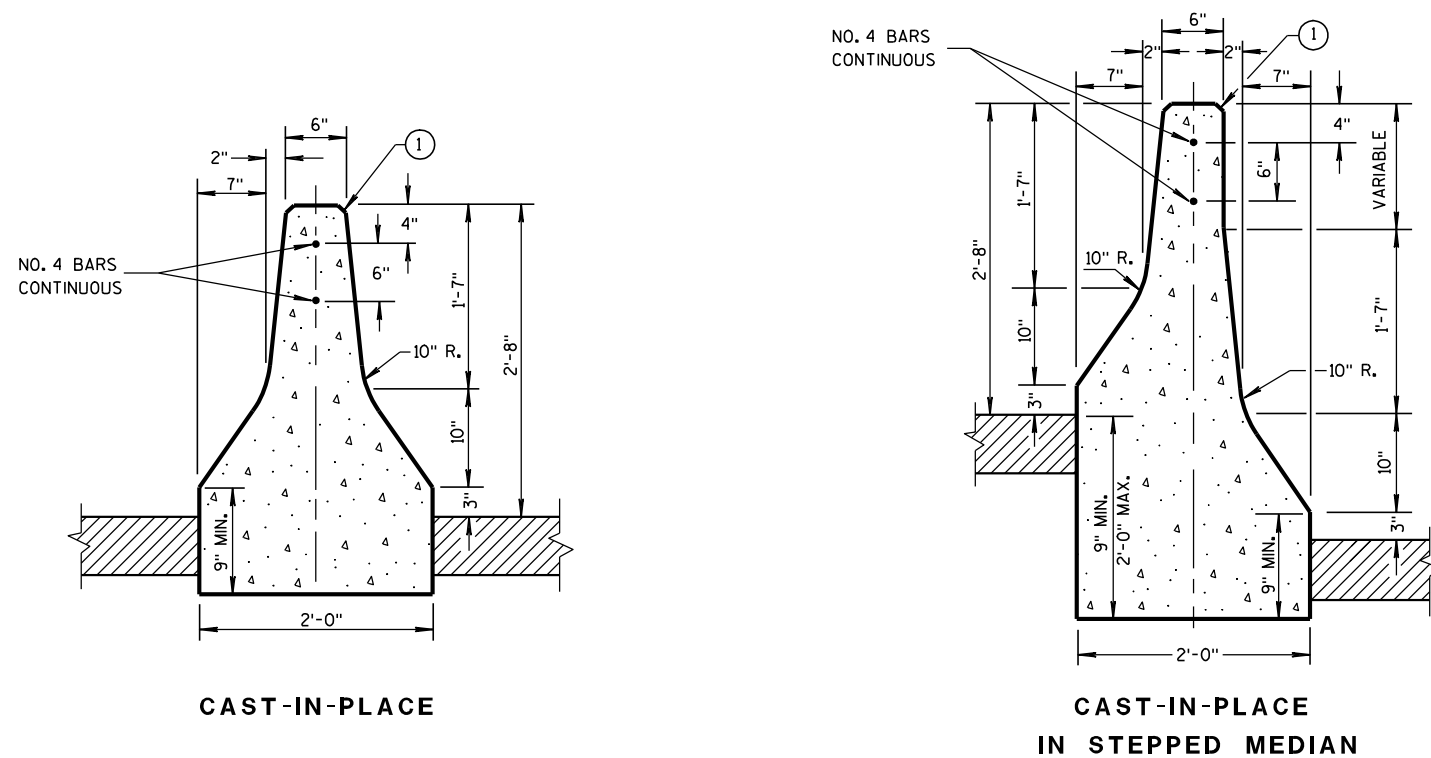
- ① CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 45 MPH OR GREATER, OR

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

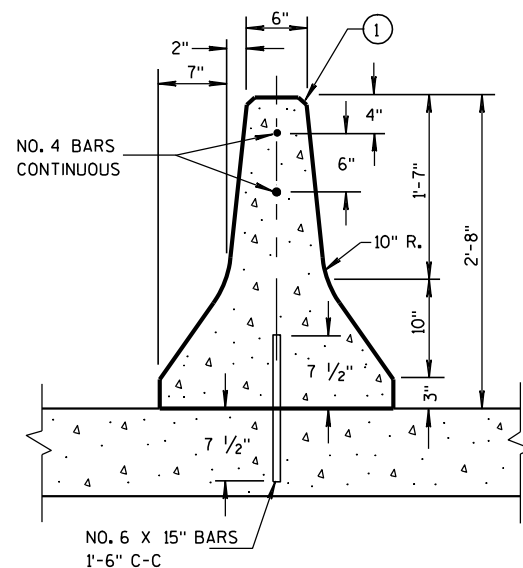
WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED (EPOXY) ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1 1/8-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE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

UPON REMOVAL OR RELOCATION OF THE BARRIER UNITS, REMOVE ALL ANCHOR BOLTS AND COMPLETELY FILL IN THE REMAINING HOLES IN CONCRETE BRIDGE DECKS, CONCRETE APPROACH SLABS AND CONCRETE PAVEMENTS THAT ARE TO REMAIN, WITH A NON-SHRINK COMMERCIAL GROUT OR EPOXY MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST.

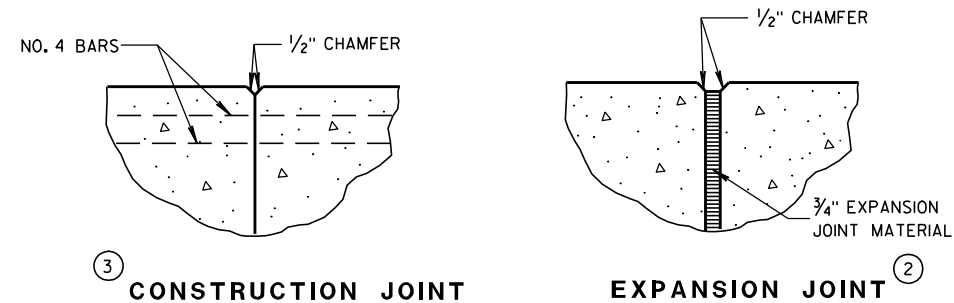
CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 6-3-2010 DATE	/S/ Jerry H. Zogg ROADWAY STANDARD DEVELOPMENT ENGINEER
FHWA	



CONCRETE MEDIAN BARRIER WITH INTEGRAL FOOTING



CONCRETE MEDIAN BARRIER ON NEW OR EXISTING RIGID BASE



JOINT DETAILS

GENERAL NOTES

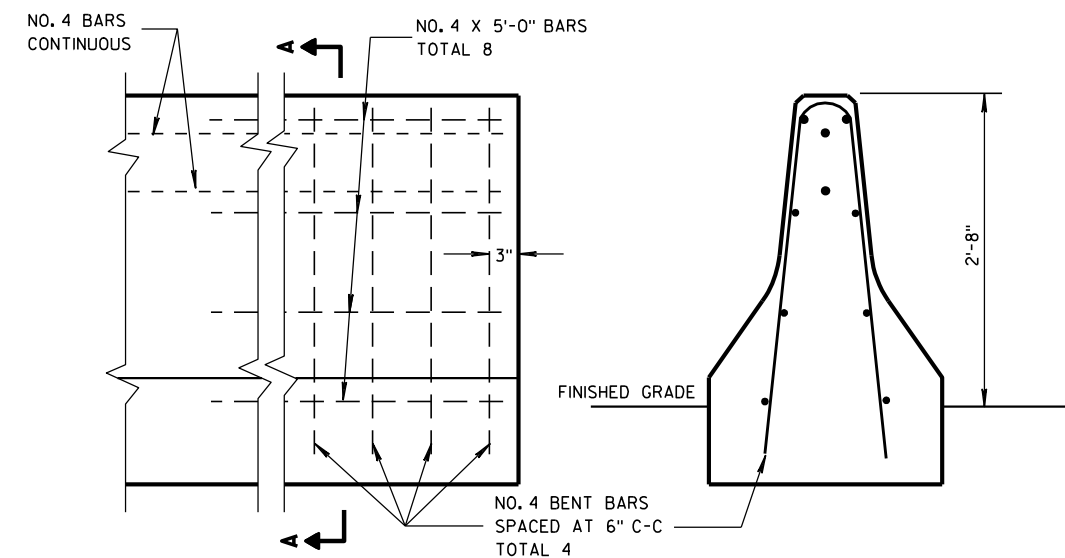
ALL BAR STEEL REINFORCEMENT SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.

SPLICES OF LONGITUDINAL BARS SHALL BE MADE WITH THE BARS LAPPED AT LEAST 18 INCHES AND FIRMLY TIED OR FASTENED TOGETHER.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED AT LEAST 2 INCHES.

NO. 6 BARS TO ANCHOR THE BARRIERS SHALL BE EITHER INSTALLED IN THE SUPPORTING SURFACE WHEN PLACED, OR IN DRILLED HOLES USING AN EPOXY RESIN APPROVED BY THE ENGINEER.

- ① $\frac{3}{4}$ INCH BEVEL OR 1 INCH RADIUS (TYPICAL)
- ② EXPANSION JOINTS SHALL BE PLACED AT EXISTING EXPANSION JOINTS IN THE PAVEMENT AND AT STRUCTURES.
- ③ NO. 4 BARS SHALL BE CONTINUED THROUGH CONSTRUCTION JOINTS.
- ④ STEM REINFORCEMENT REQUIRED AT EXPANSION JOINTS AND WHERE CONCRETE BARRIER IS TERMINATED.



CONCRETE BARRIER (DOUBLE FACED)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/12/2010
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

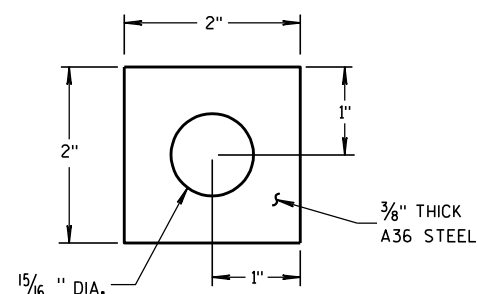
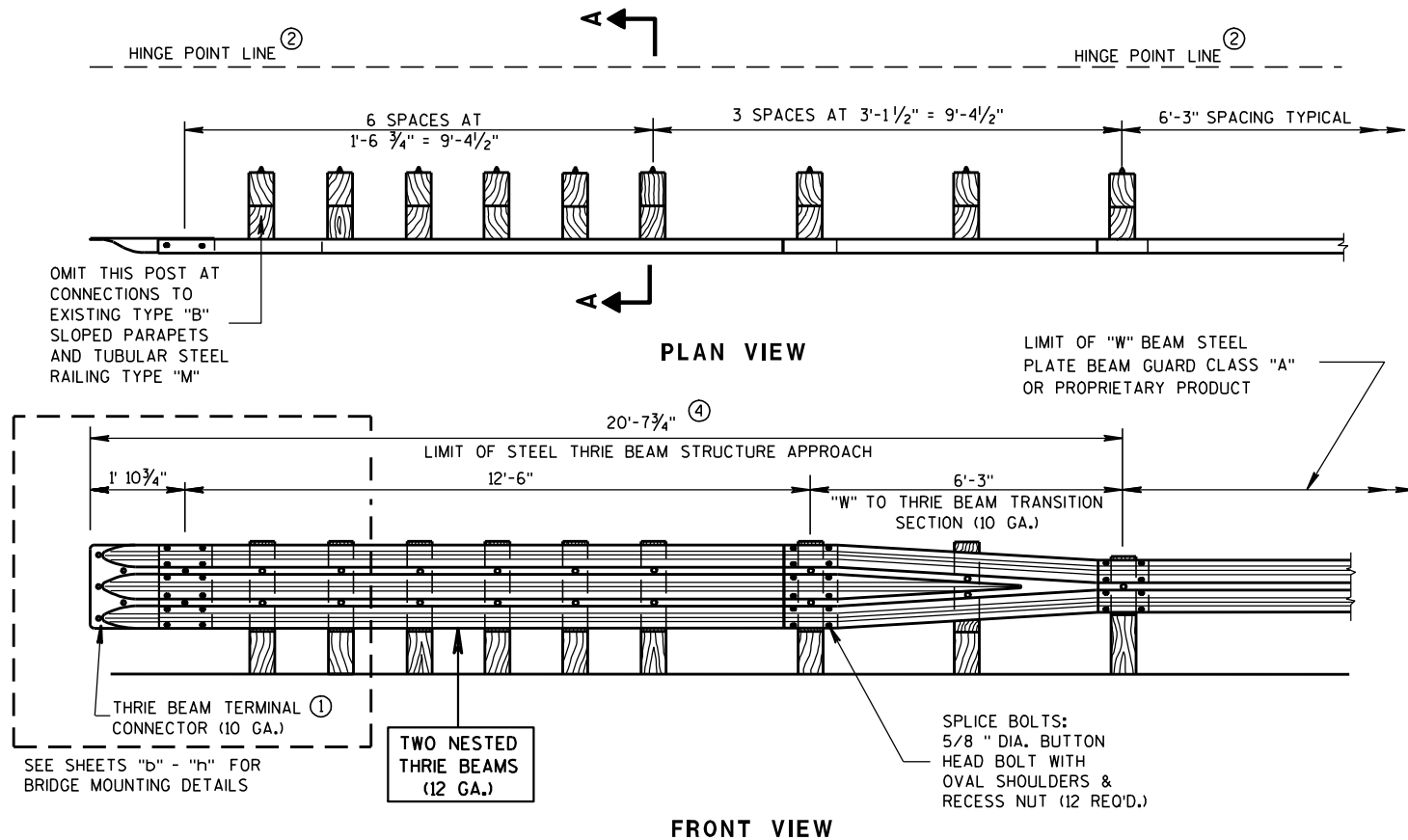


PLATE WASHER DETAIL

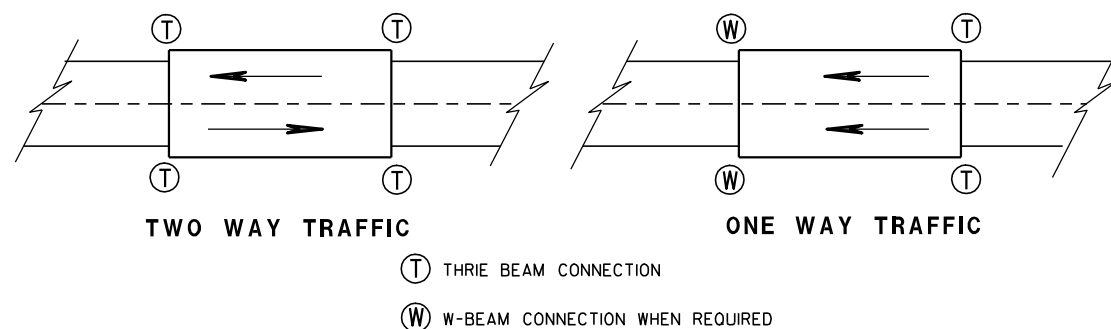
GENERAL NOTES

BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3".

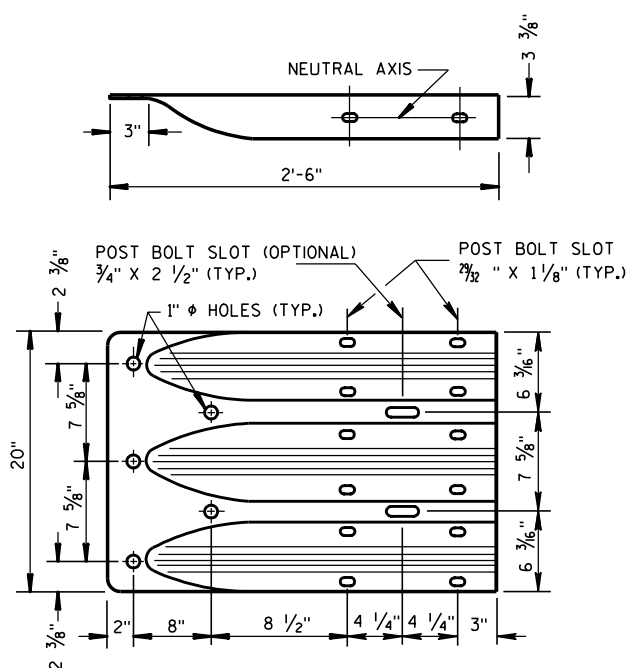
DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 1/2 INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN THE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATELY. (SEE SDD 14 B 15 - a).

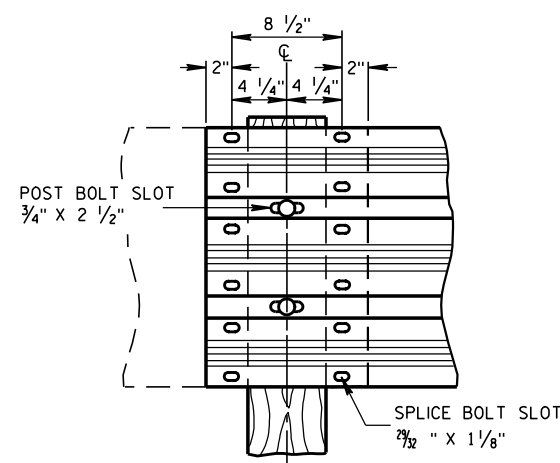
- ① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.
- ② MINIMUM EMBEDMENT SHALL BE 4'-0". WHERE EXISTING CONDITIONS DO NOT PERMIT THE APPROPRIATE EARTHWORK SHOWN ON THE PLAN TYPICAL SECTIONS OR DETAILS, THE ENGINEER MAY ALLOW THE REDUCTION OR ELIMINATION OF THE 2 FOOT DISTANCE TO THE HINGE POINT. OTHERWISE BUILD AS THE PLAN SHOWS OR AS THE ENGINEER DIRECTS. IF THE 2 FOOT DISTANCE TO THE HINGE POINT IS REDUCED OR ELIMINATED, INCREASE THE POST EMBEDMENT DEPTH TO 4'-6" OR MORE.
- ③ POST BOLTS ARE 5/8" DIAMETER ASTM A307 BUTTON HEAD BOLT. A POST BOLT REQUIRES A 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX AND A 5/8" DIAMETER F844 FLAT WASHER. LENGTH OF POST BOLT MAY VARY.
- ④ ALL WOOD POSTS MUST BE 6" X 8" AND AT LEAST 7'-0" LONG.



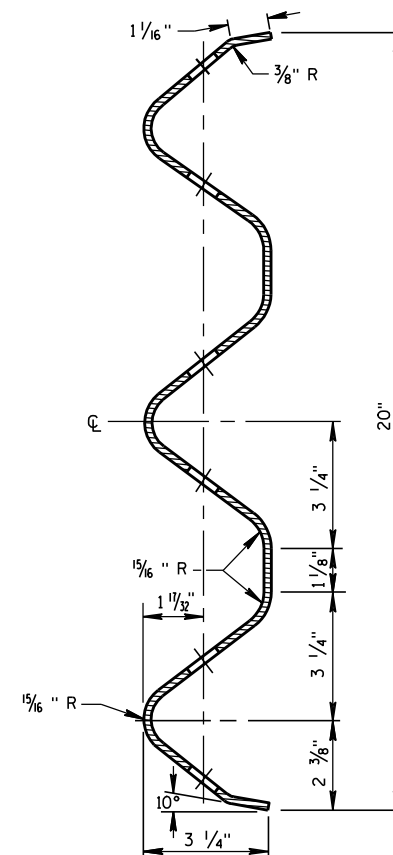
TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE



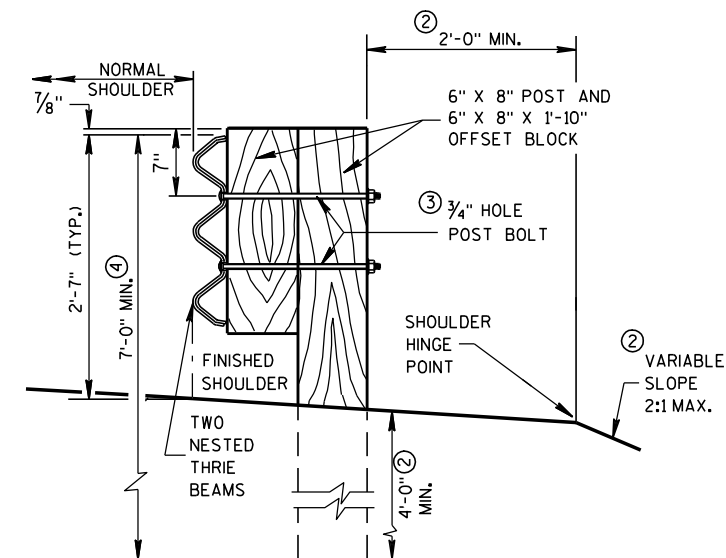
THRIE BEAM TERMINAL CONNECTOR



THRIE BEAM SPLICE



SECTION THRU THRIE BEAM RAIL ELEMENT



SECTION A-A

STEEL THRIE BEAM STRUCTURE APPROACH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

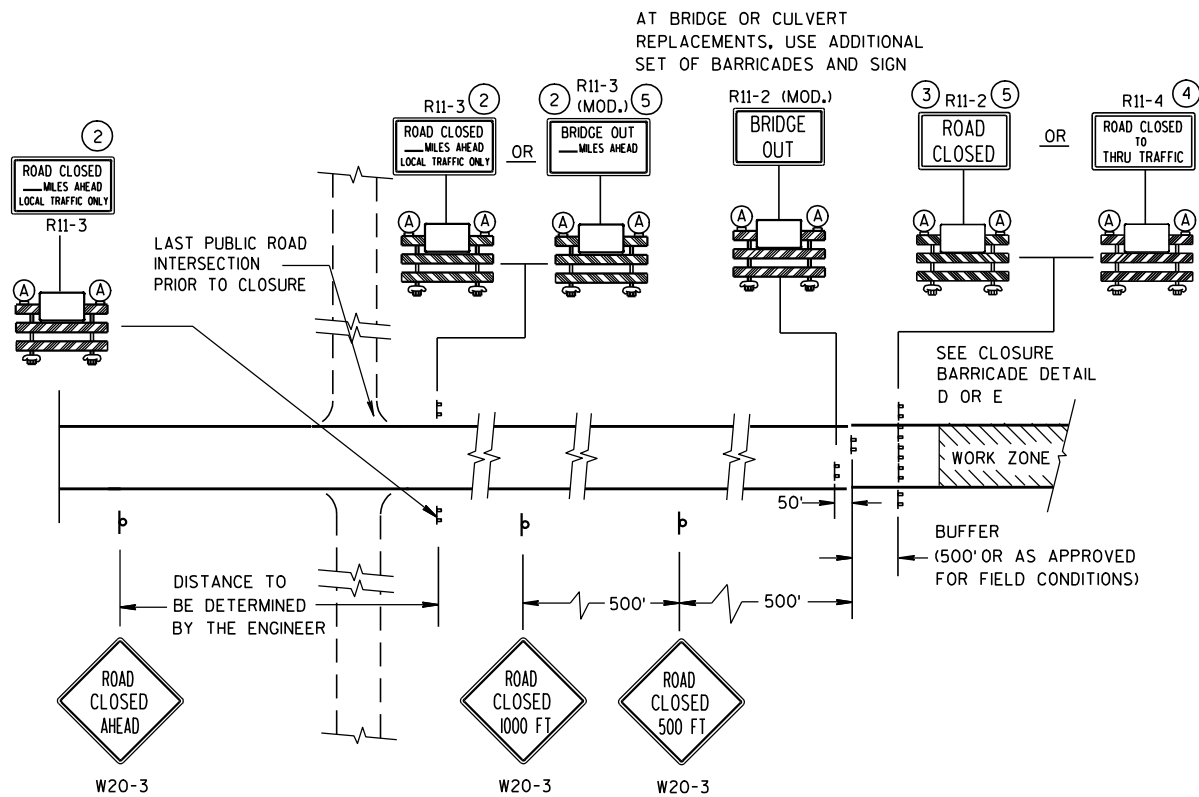
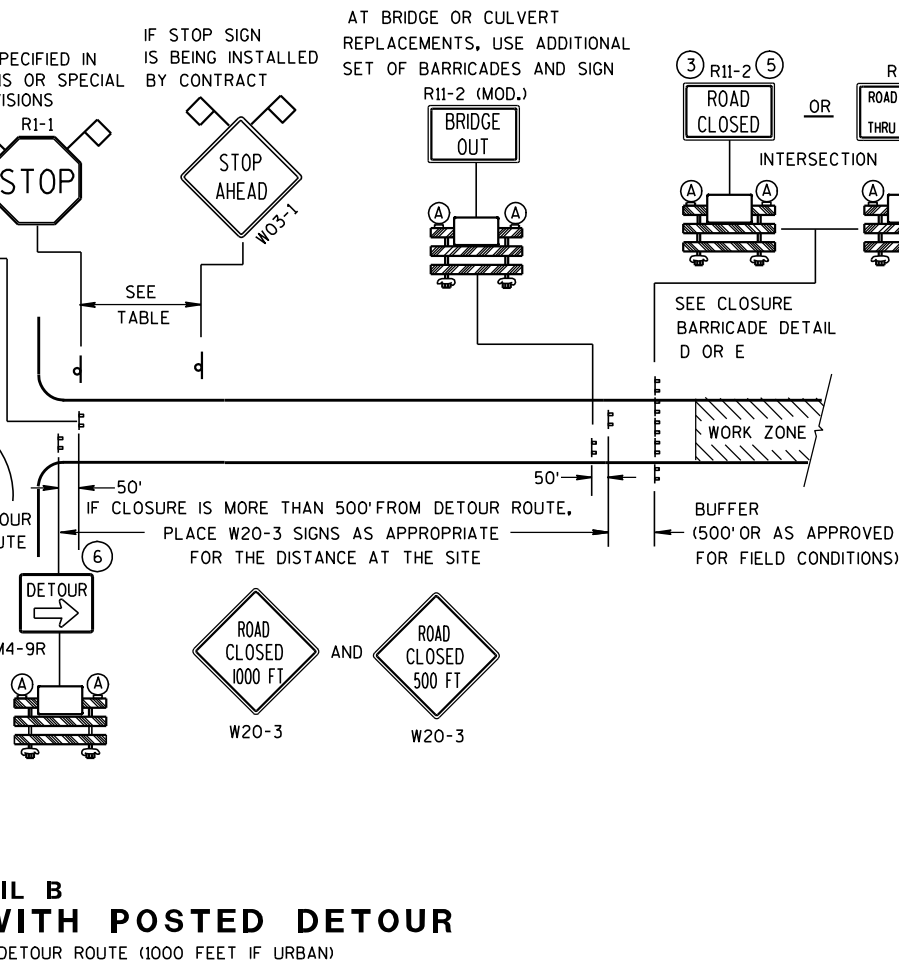
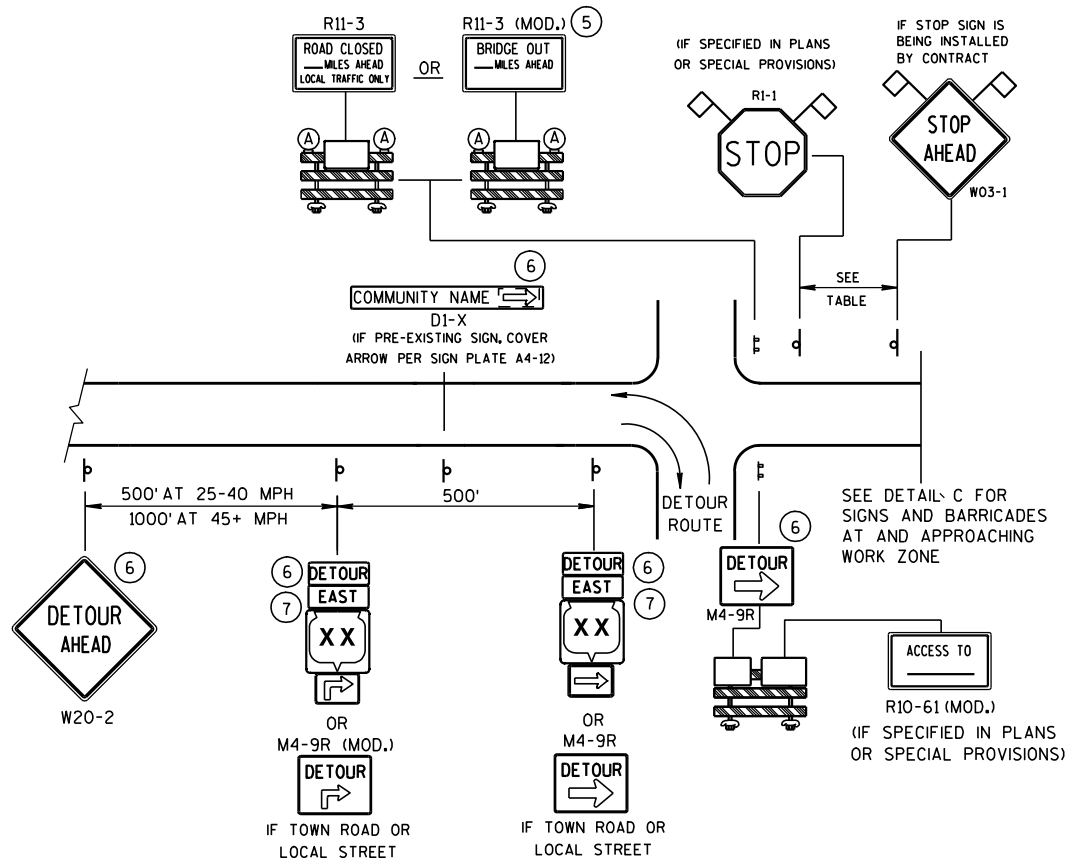
APPROVED

2-8-2012

DATE

FHWA

/s/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



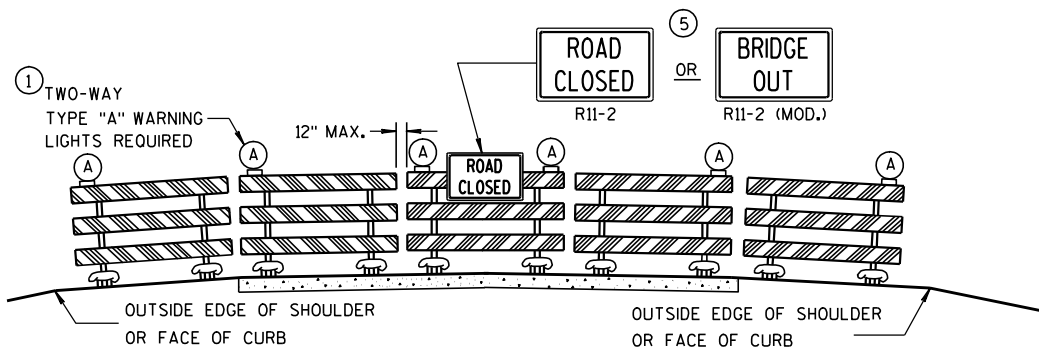
SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

SEE SDD 15C2-4b
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

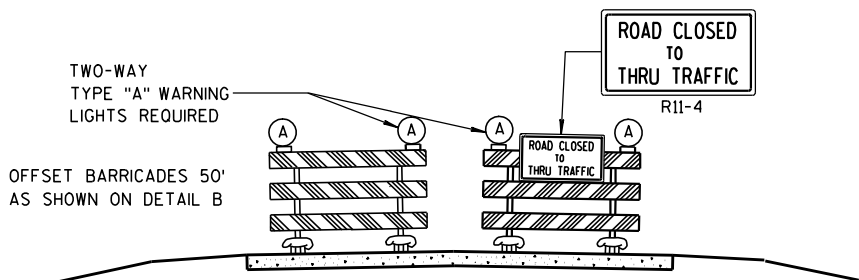
- LEGEND**
- POST MOUNTED SIGN
 - TYPE III BARRICADES
 - TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)
 - WORK ZONE
 - DETOUR EAST M4-8 M3-X
 - MI-4 OR MI-5A OR MI-6
 - MO5-1 OR MO6-1
 - FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS
FOR
MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2-4a FOR LEGEND

GENERAL NOTES

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

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

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

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

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, M4-9, R11-4 AND R10-61 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

THE REFLECTIVE SHEETING USED ON R11-2, R11-3, R11-4, R10-61 AND R1-1 SIGNS SHALL COMPLY WITH SUBSECTION 637.2.2.2 OF THE STANDARD SPECIFICATIONS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X AND M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

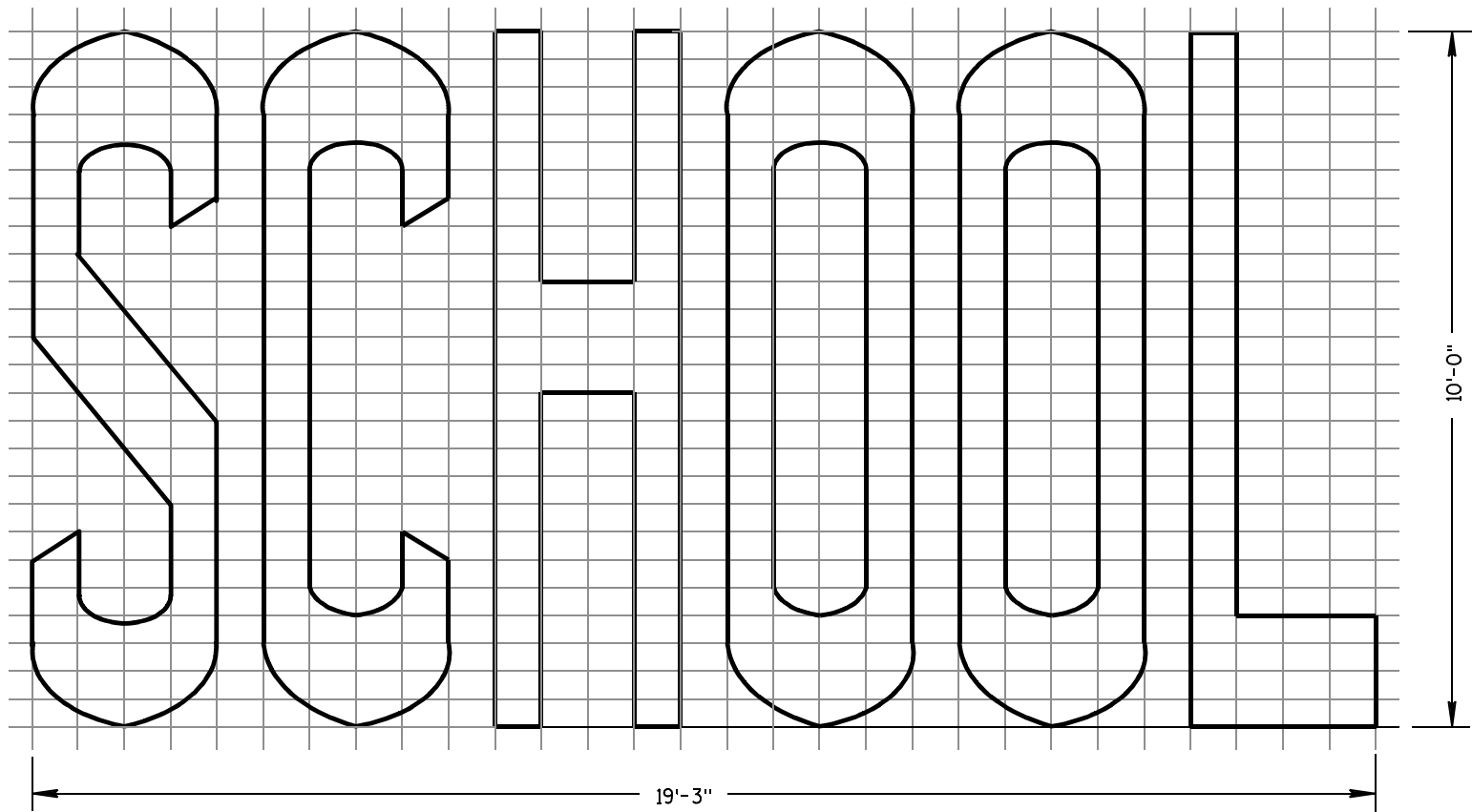
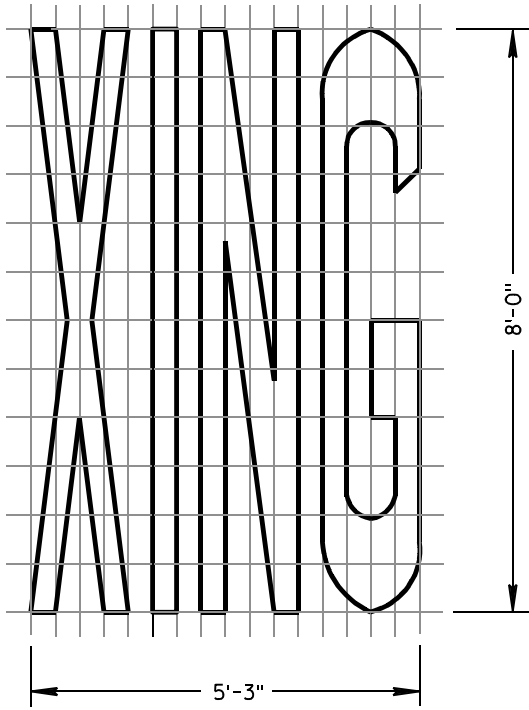
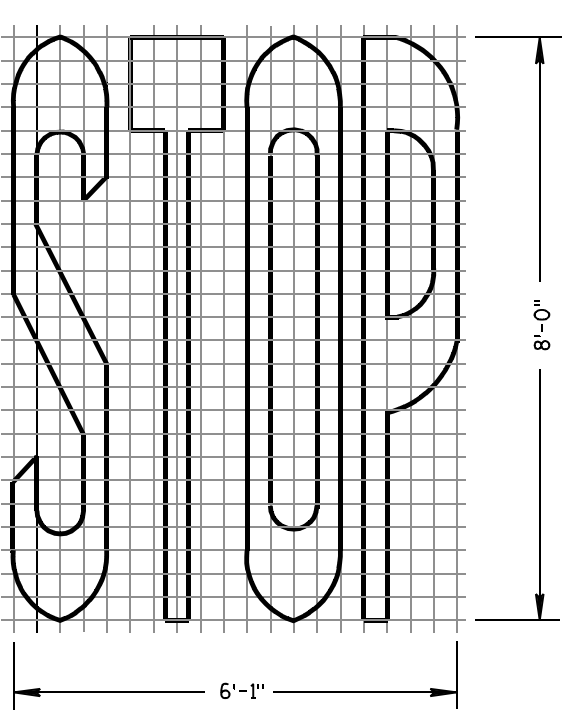
- 1 TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).
- 2 THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.
- 3 FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.
- 4 FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.
- 5 FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.
- 6 INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- 7 "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
9/16/03 DATE	/S/ Thomas N. Notbohm CHIEF SIGNS AND MARKING ENGINEER
FHWA	

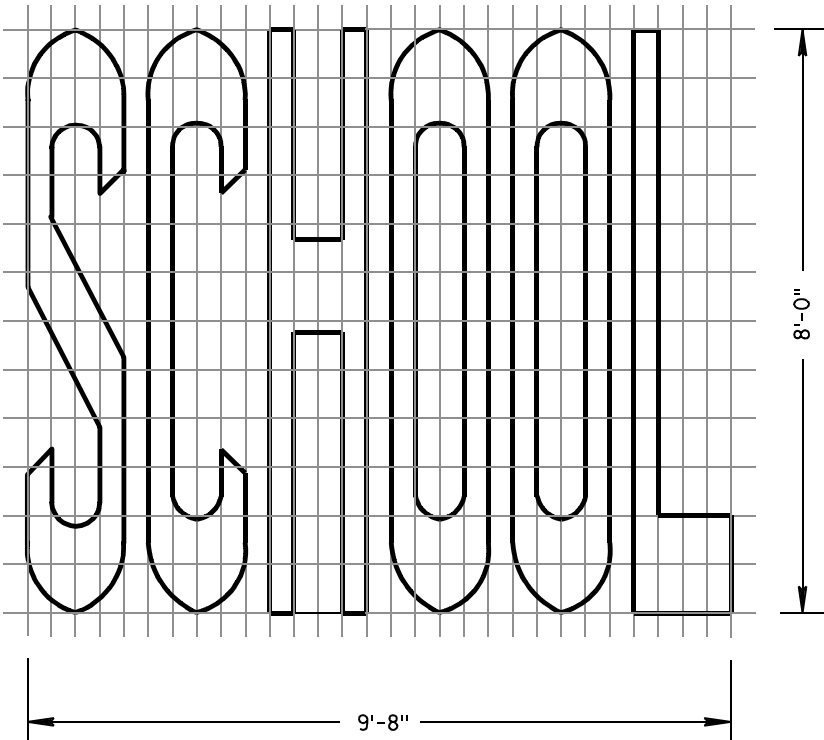
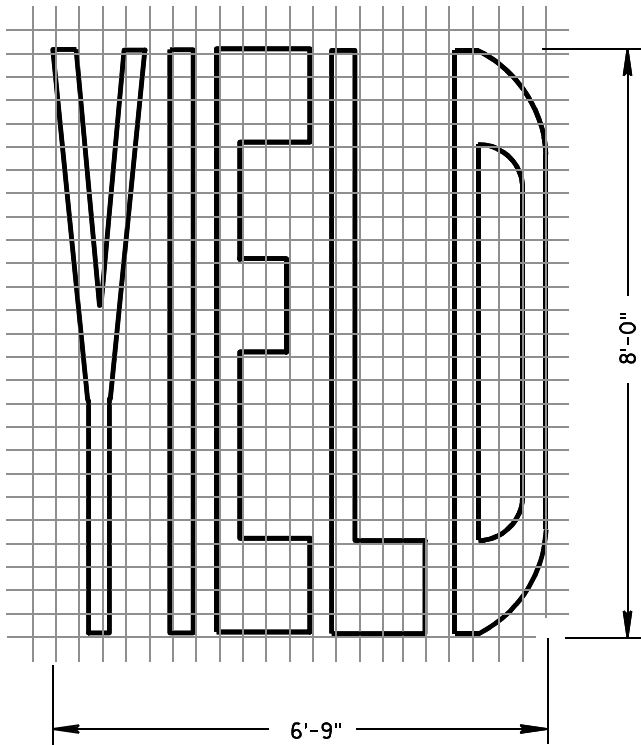
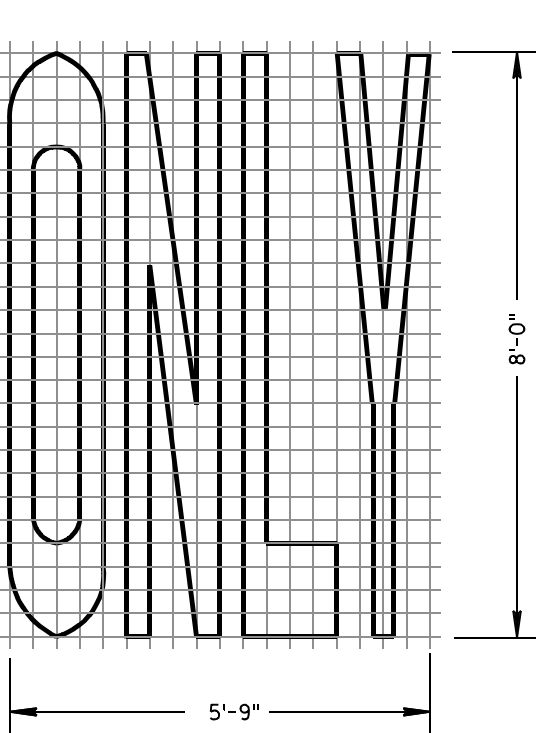
GENERAL NOTES

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

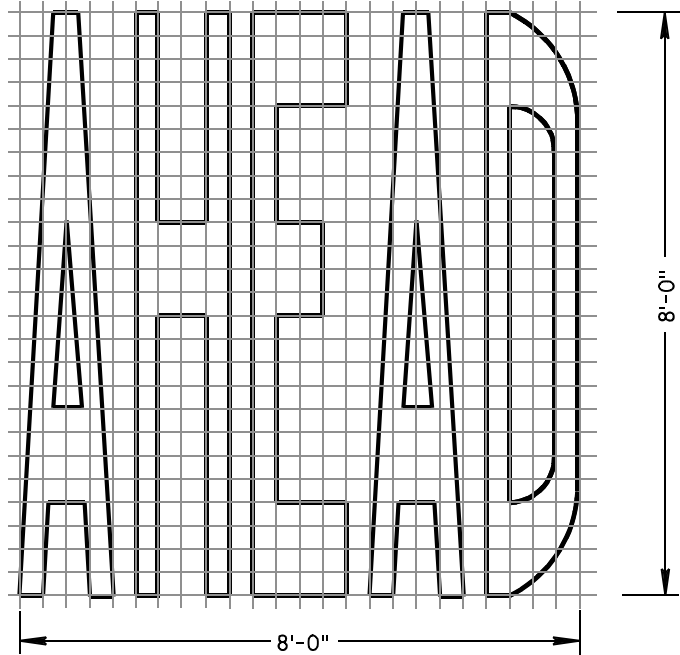
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.



TWO-LANE



SINGLE-LANE



PAVEMENT MARKING WORDS

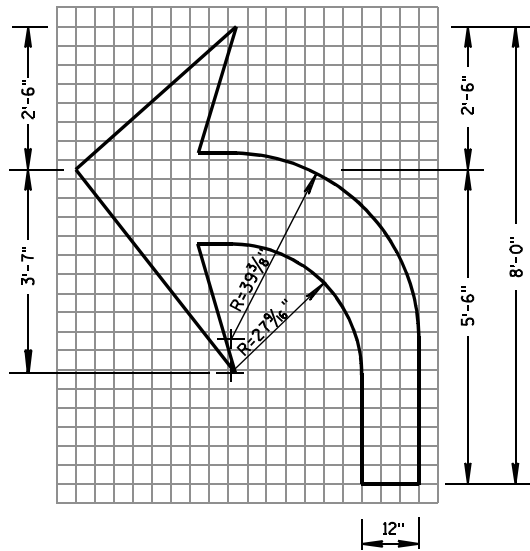
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

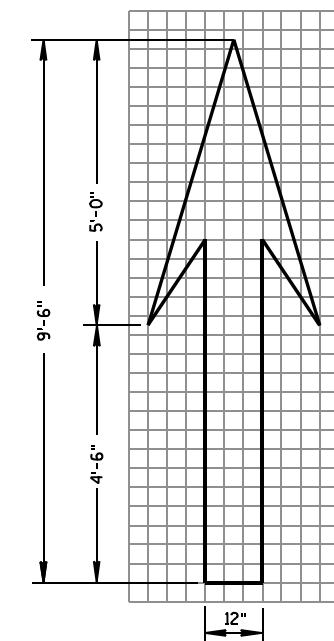
7-1-11
DATE

/S/ Thomas N. Notbohm
STATE TRAFFIC ENGINEER OF DESIGN

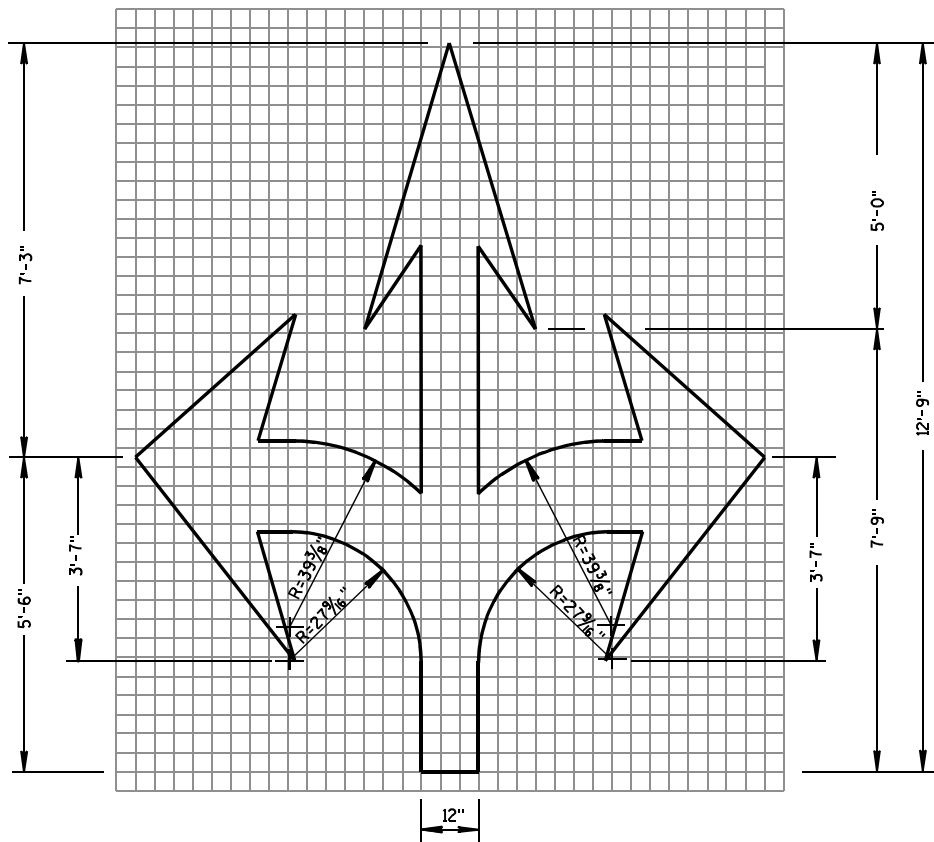
FHWA



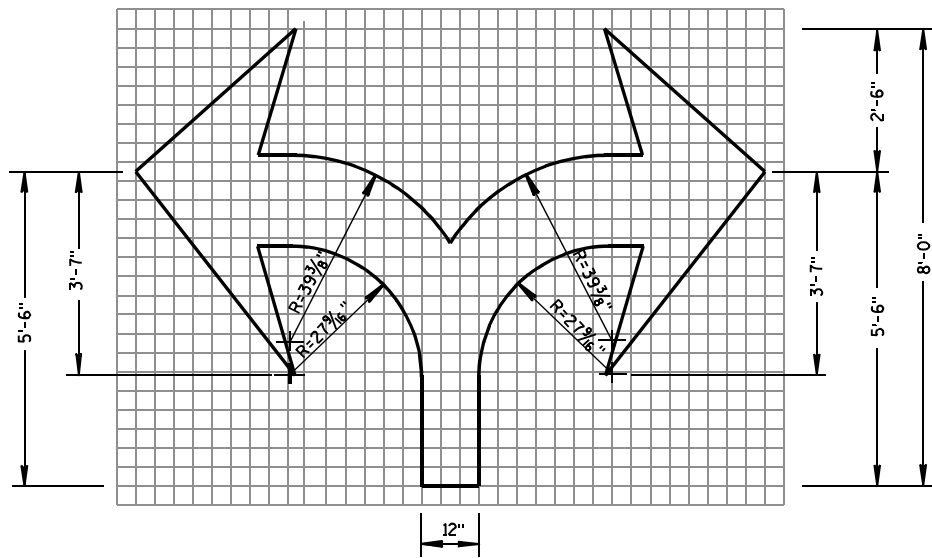
TYPE 2



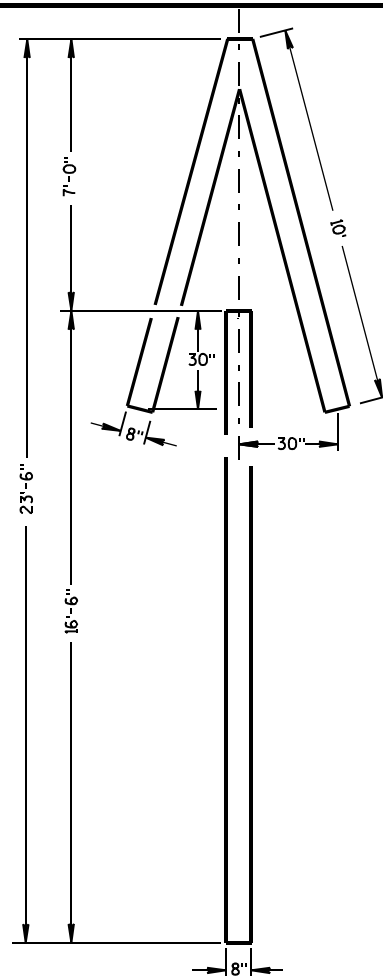
TYPE 1



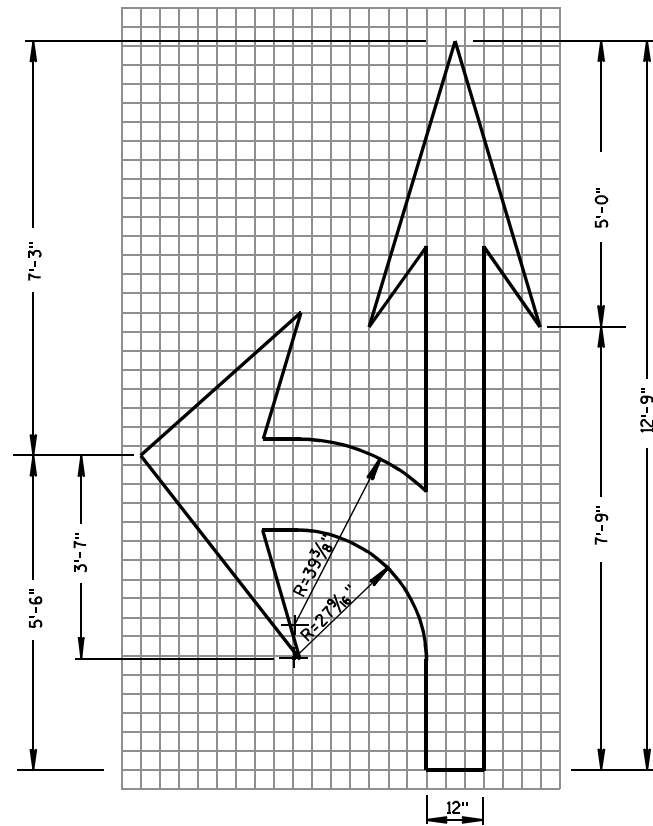
TYPE 6



TYPE 7



TYPE 4

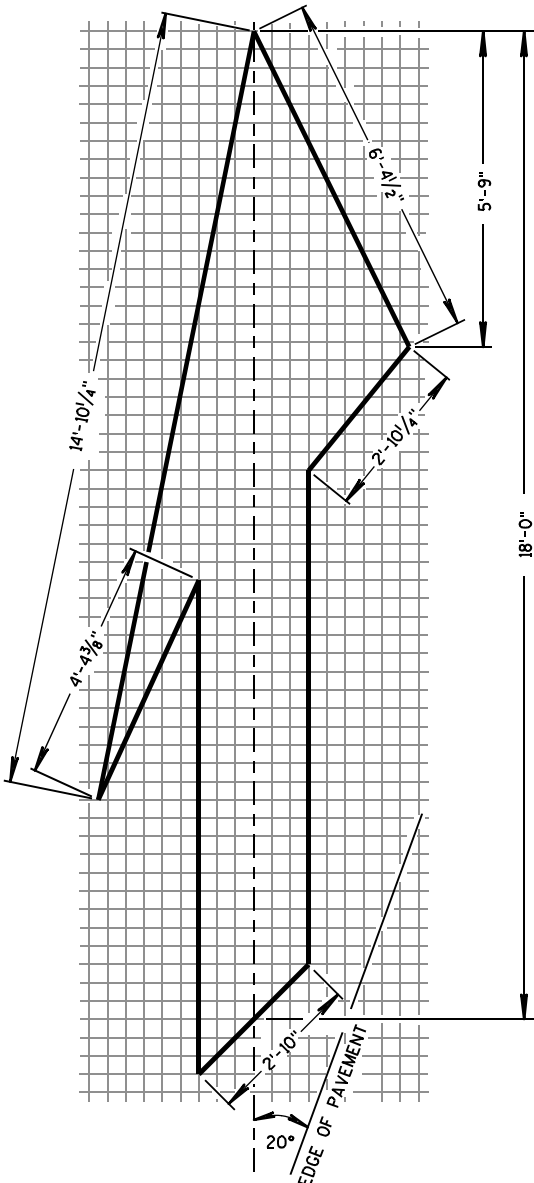


TYPE 3

GENERAL NOTES

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

ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.

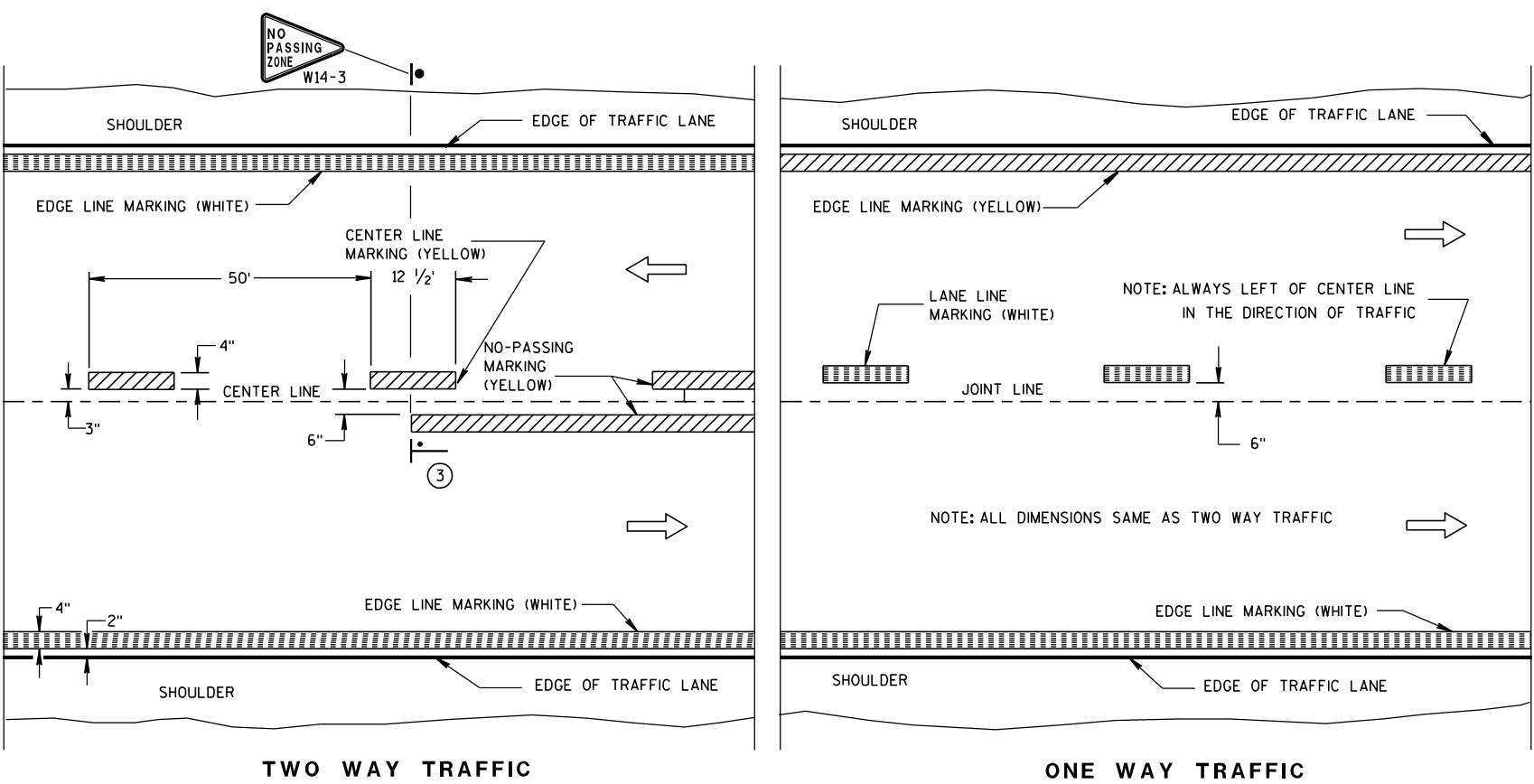


TYPE 5 LANE DROP ARROW

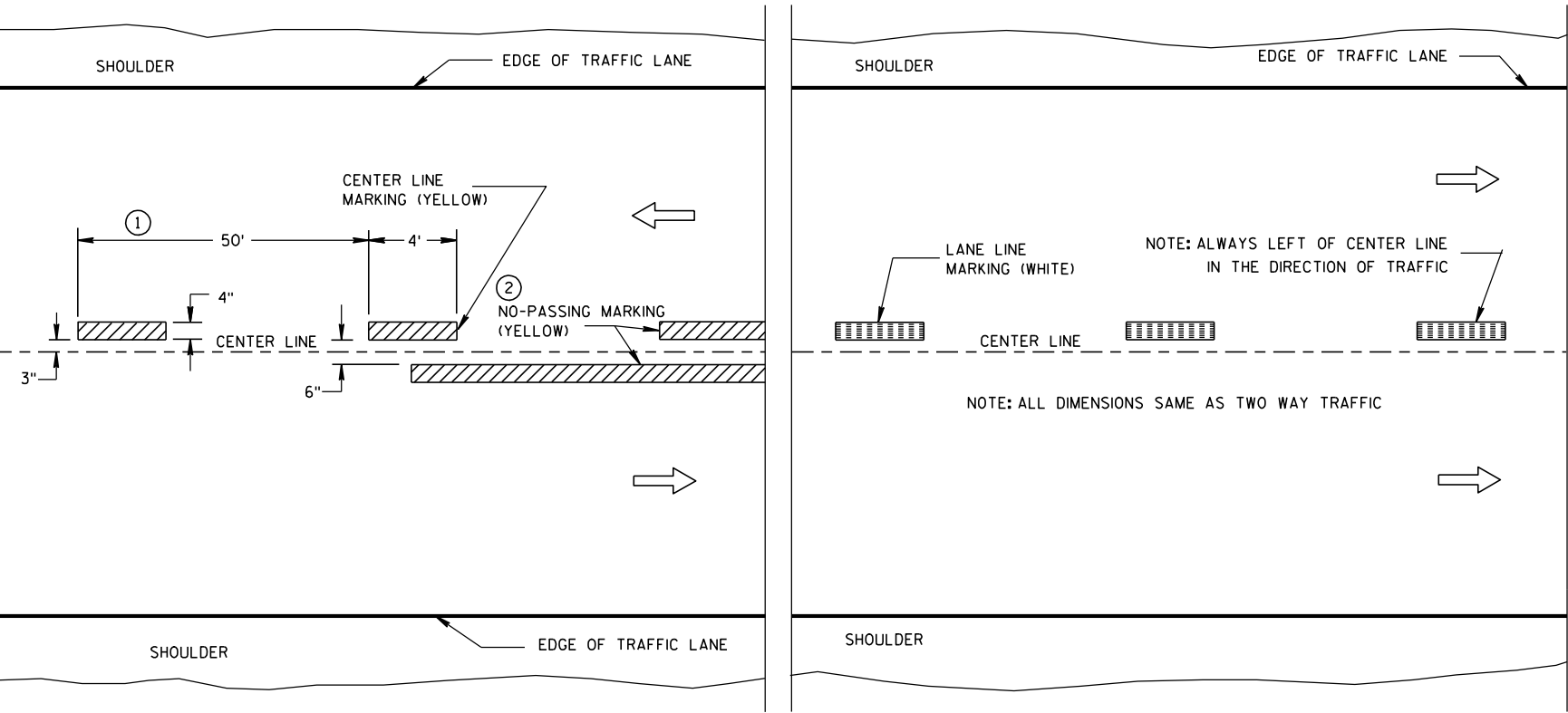
PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/1/11
DATE
/S/ Thomas N. Notbohm
STATE TRAFFIC ENGINEER OF DESIGN
FHWA



PERMANENT PAVEMENT MARKING



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

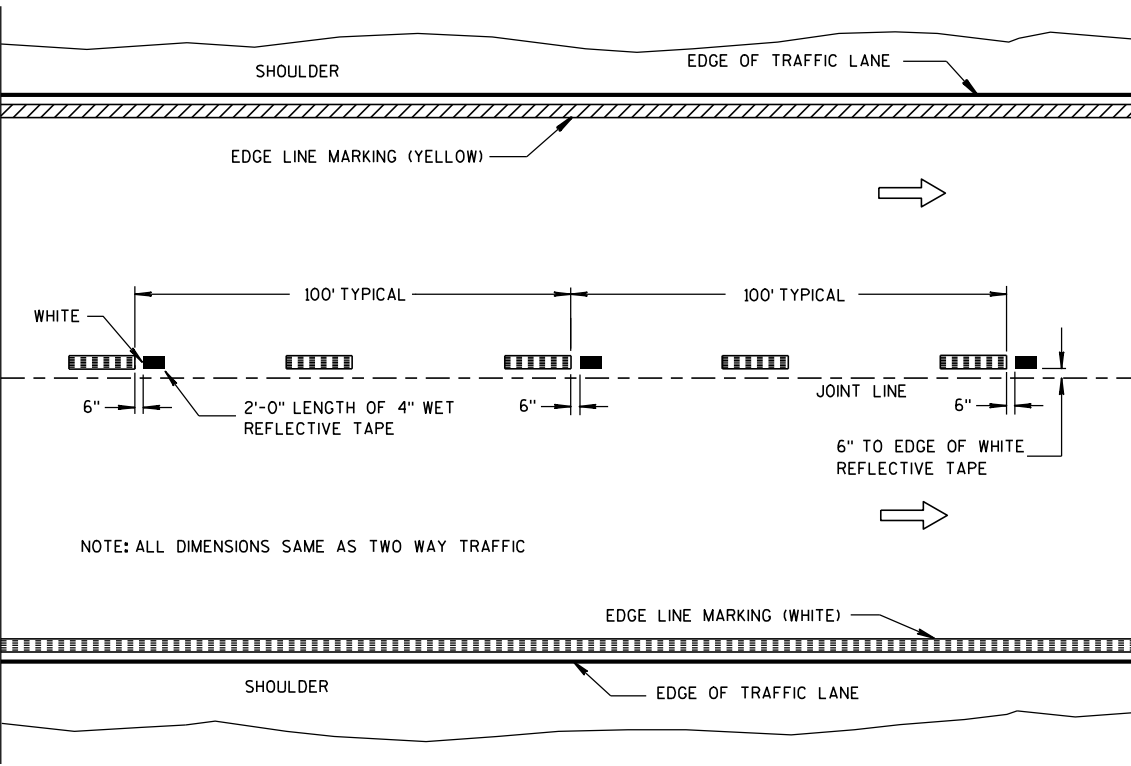
GENERAL NOTES

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

- ① HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
- ② NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
- ③ NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE


LEGEND

- "T" MARKING
- POST MOUNTED SIGN


PAVEMENT MARKING (MAINLINE)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 6-23-11 DATE	/S/ Thomas N. Notbohm STATE TRAFFIC ENGINEER OF DESIGN
FHWA	

TWO-LANE ROADWAY


SYMBOLS



WORK AREA



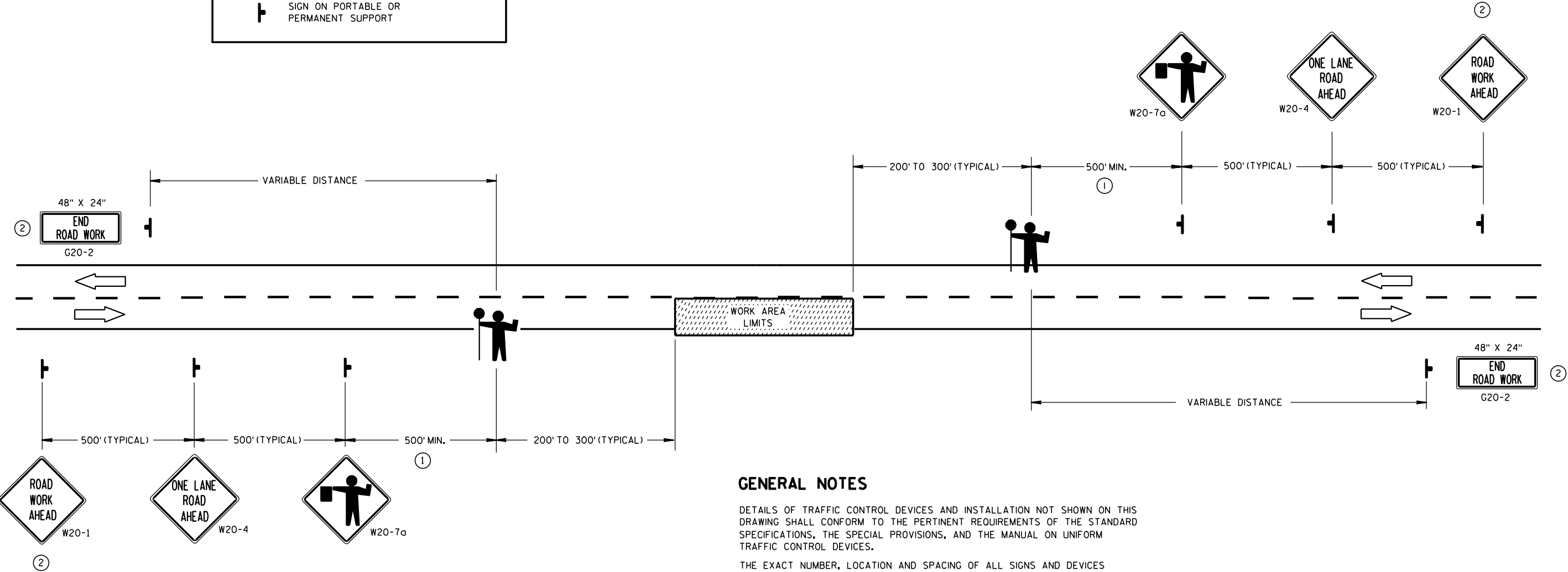
FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF



SIGN ON PORTABLE OR PERMANENT SUPPORT



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



GENERAL NOTES

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

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

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

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

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, THE "FLAGGER AHEAD", THE "ROAD WORK AHEAD" AND THE ONE LANE ROAD AHEAD" SIGNS SHALL BE COVERED OR REMOVED AND THE HIGHWAY RESTORED TO NORMAL OPERATION.

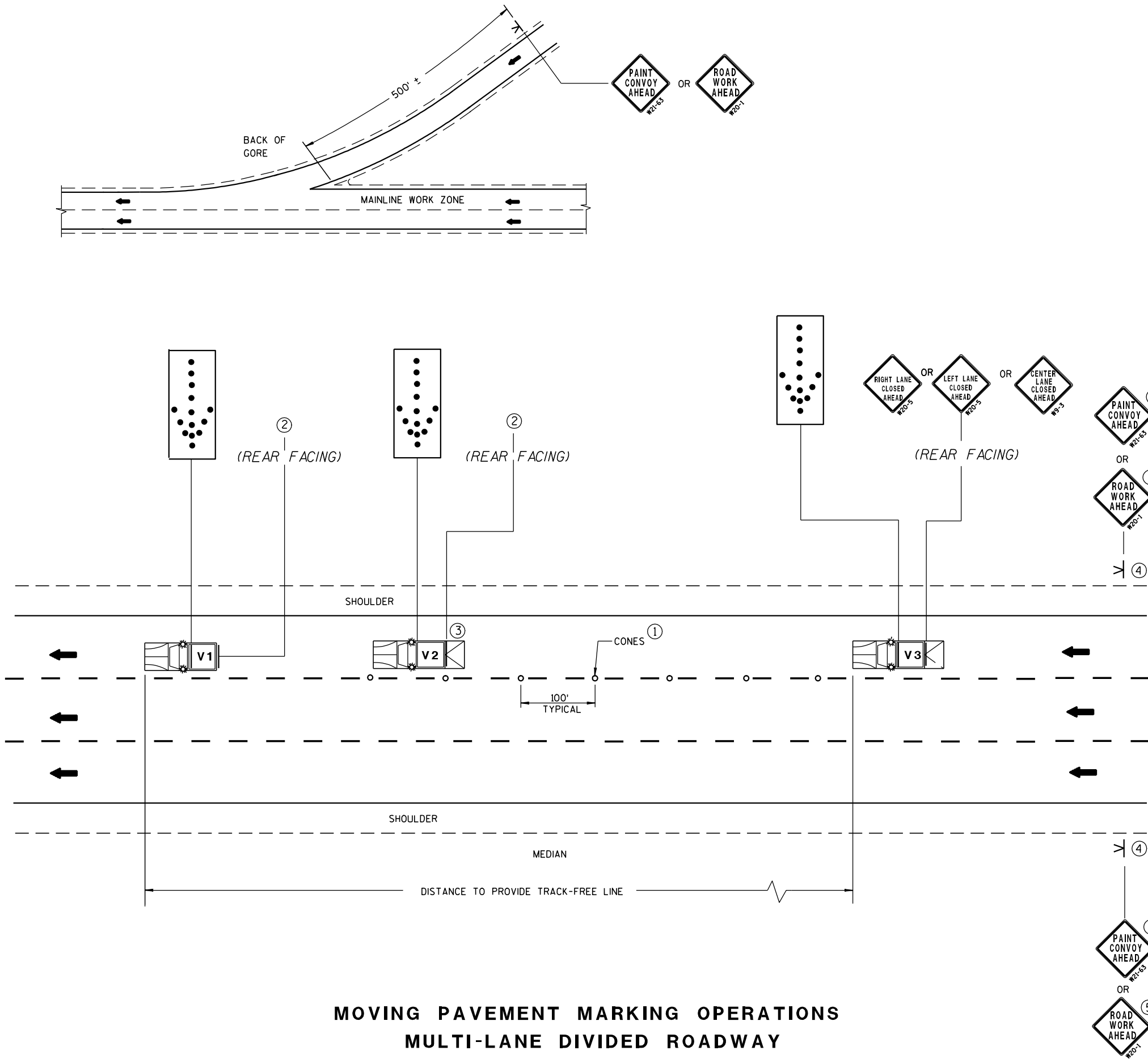
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/5/06 /S/ Thomas N. Notbohm
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA



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. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

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 OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

FOR EDGELINE MARKING OR IF CONES ARE NOT USED, POSITION THE REARMOST SHADOW VEHICLE ON THE SHOULDER AS SHOWN IN THE MUTCD IF THE SHOULDER HAS ADEQUATE WIDTH. USE DOUBLE ARROWS WHEN CONVOY IS IN CENTER LANE ONLY.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

THIS DRAWING SHALL BE USED FOR EDGELINE OR LANELINE MARKING FOR MULTILANE DIVIDED ROADWAYS.

- ① CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.
- ② USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.
- ③ OPTIONAL TRUCK-MOUNTED ATTENUATOR.
- ④ SIGNS SHALL BE REPEATED AFTER EVERY ON RAMP OR EVERY THREE MILES.
- ⑤ IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

LEGEND

- V1 LEAD VEHICLE
- V2 SHADOW VEHICLE
- V3 TRAIL VEHICLE WITH TMA
- TMA TRUCK-MOUNTED ATTENUATOR
- SIGN ON PORTABLE SUPPORT
- DIRECTION OF TRAVEL
- CONES
- FLASHING ARROW PANEL (MERGE)

MOVING PAVEMENT MARKING OPERATION
MULTI-LANE DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/6/2011 /S/ Thomas N. Notbohm
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA

GENERAL NOTES

ORIENT ANCHOR BOLTS IN FOOTING AND PROVIDE ANCHOR BOLT STICK OUT ABOVE TOP OF CONCRETE FOOTING BASE PER FABRICATION DRAWING.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

SIGN SUPPORTS SHALL BE LOCATED NORMAL TO ROADWAY.

THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

WELDING OF ANCHOR BOLTS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

BAR CAGE TO BE ASSEMBLED USING TIE WIRES ONLY, NO WELDING.

BASES (SHAFT) SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACK FILLING AROUND THE BASE. ANY REQUIRED BACKFILL SHALL BE WELL COMPACTED IN LAYERS OF 1 FOOT OR LESS. COMPACTION SHALL BE BY MECHANICAL MEANS. CARE SHALL BE TAKEN SO NO DAMAGE OCCURS TO THE CONCRETE BASE DURING COMPACTION.

EXCAVATION OF MATERIALS NOT OCCUPIED BY CONCRETE SHALL BE MINIMIZED TO REDUCE DISTURBANCE OF THE SURROUNDING SOILS.

THE BOTTOM OF THE DRILLED HOLE SHALL BE FIRM AND THOROUGHLY CLEANED SO NO LOOSE OR COMPRESSIBLE MATERIALS ARE PRESENT AT THE TIME OF THE CONCRETE PLACEMENT.

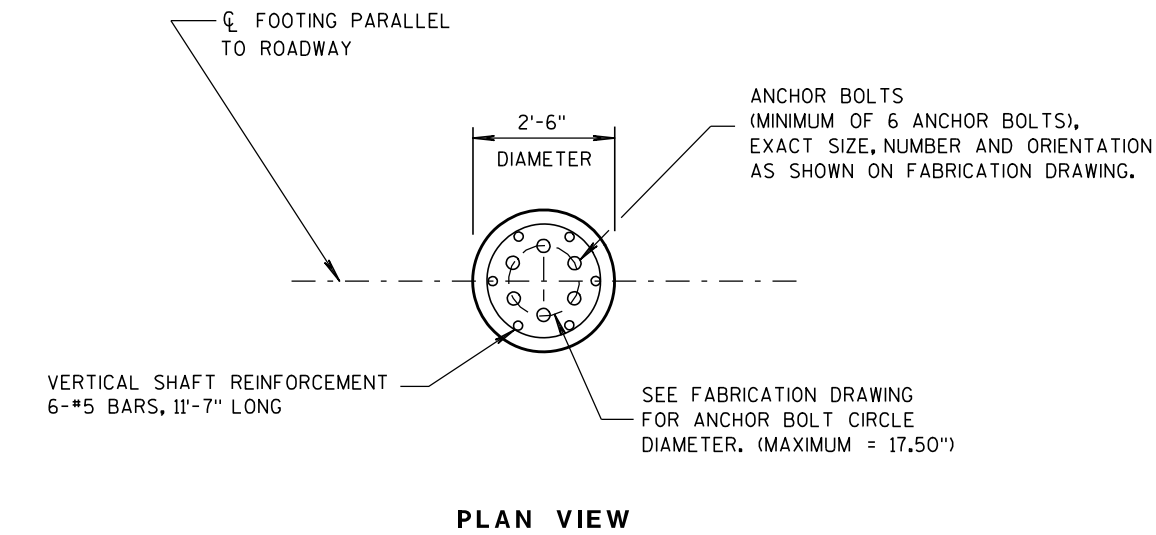
IF THE DRILLED HOLE CONTAINS STANDING WATER, THE CONCRETE SHALL BE PLACED USING A TREMIE TO DISPLACE THE WATER.

THE REINFORCEMENT AND ANCHOR BOLTS SHALL BE ADEQUATELY SUPPORTED IN THE PROPER POSITIONS SO NO MOVEMENT OCCURS DURING CONCRETE PLACEMENT.

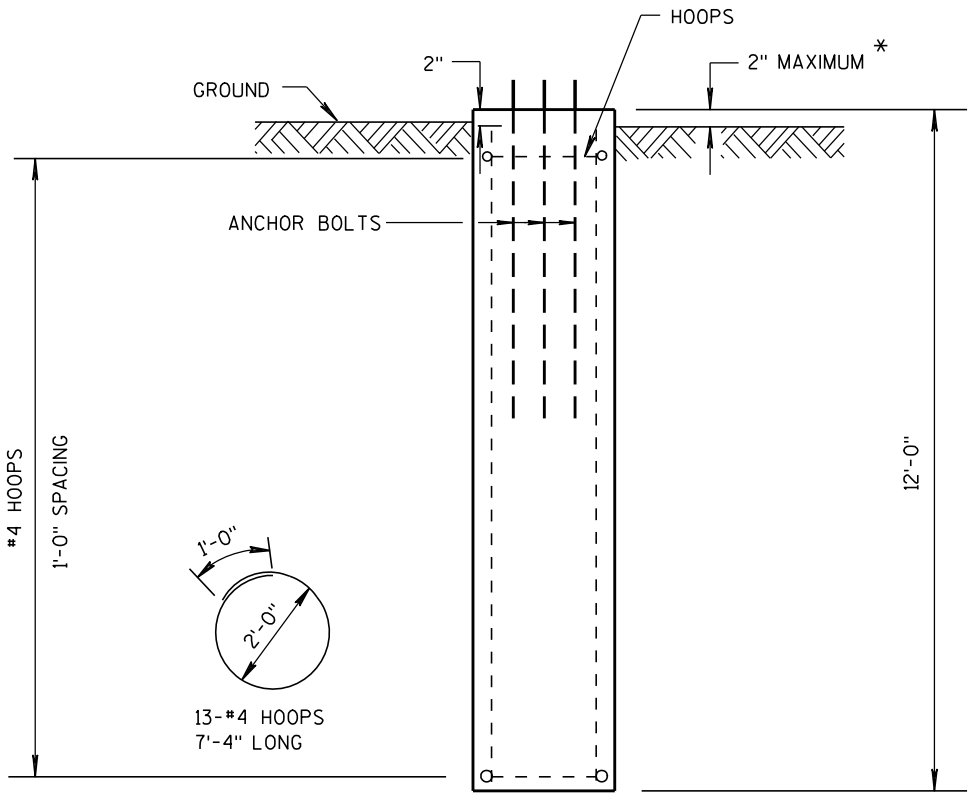
ANY DAMAGE TO THE CONCRETE BASE DURING CONSTRUCTION OPERATIONS SHALL BE REPAIRED AT THE ENGINEER'S DIRECTION, AT THE EXPENSE OF THE CONTRACTOR.

CONCRETE MASONRY ----- $f_c=3,500$ p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 ----- $f_y=60,000$ p.s.i.
ANCHOR BOLTS ----- AASHTO M314 GRADE 55

THIS FOOTING HAS BEEN DESIGNED FOR SITES WHERE SOILS EXHIBIT A PHI-ANGLE GREATER THAN OR EQUAL TO 20 DEGREES (GRANULAR SOILS), OR A COHESION VALUE GREATER THAN OR EQUAL TO 350 PSF (COHESIVE SOILS).



* FOR OVERHEAD SIGN SUPPORTS THAT ARE INSTALLED ADJACENT TO SIDEWALKS, THE TOP OF THE BASE SHALL BE POURED FLUSH WITH THE GROUND.



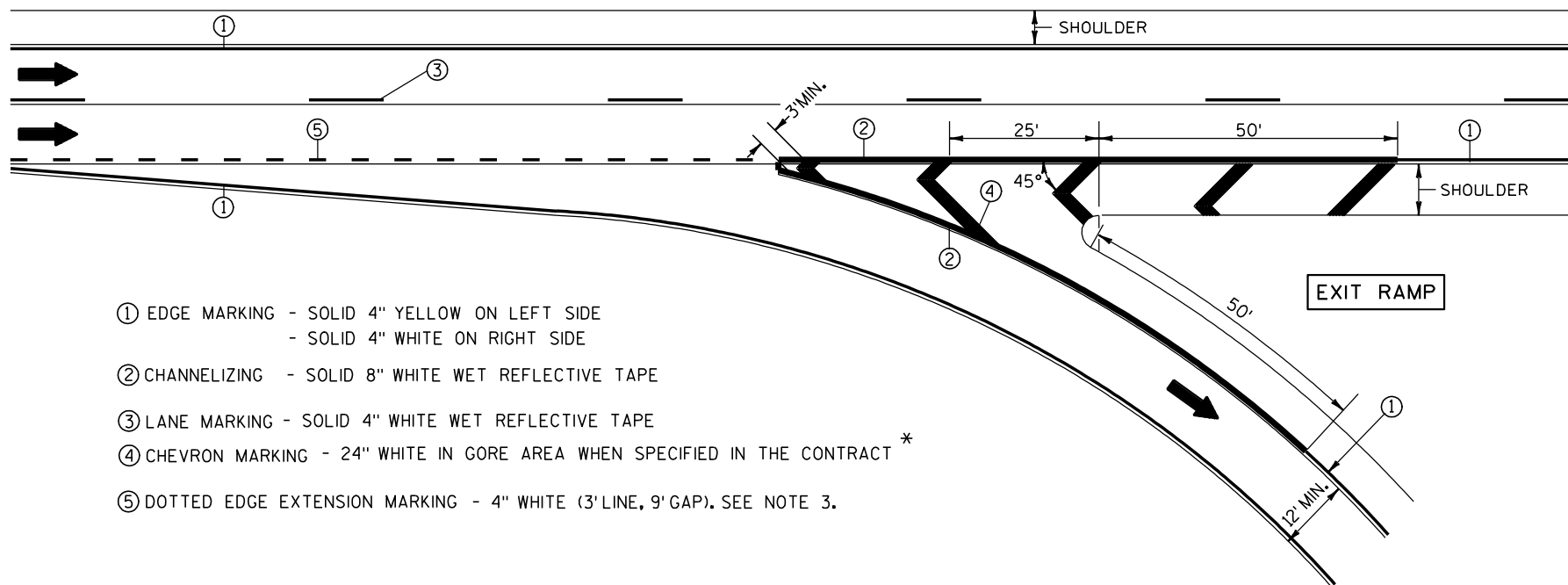
ELEVATION VIEW

CONCRETE - 2.2 C.Y. PER FOOTING
H.S. REINFORCEMENT - 136 LBS. PER FOOTING

30" DIAMETER CANTILEVER
OVERHEAD SIGN SUPPORT BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/17/2009 DATE /S/ Thomas N. Notbohm
STATE TRAFFIC ENGINEER OF DESIGN
FHWA

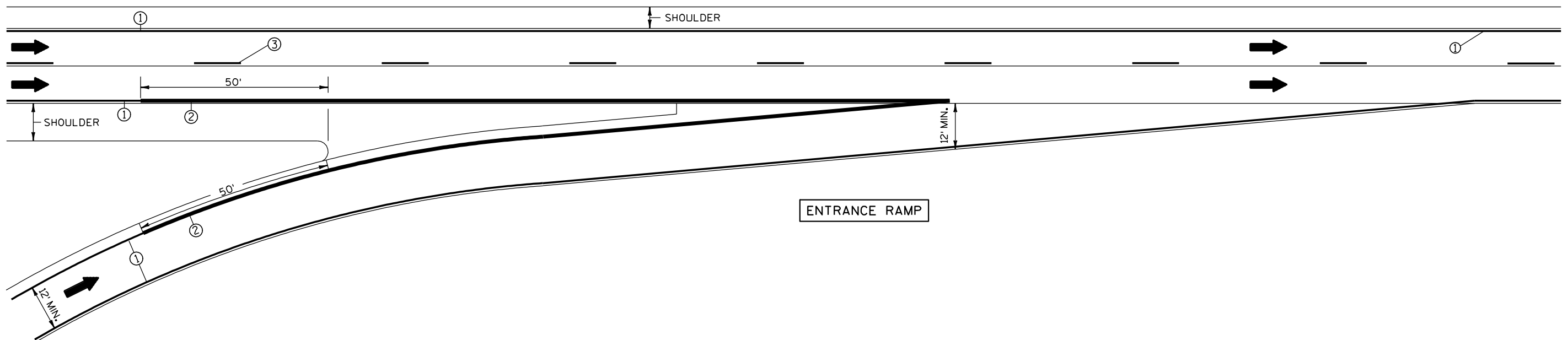


- ① EDGE MARKING - SOLID 4" YELLOW ON LEFT SIDE
- SOLID 4" WHITE ON RIGHT SIDE
- ② CHANNELIZING - SOLID 8" WHITE WET REFLECTIVE TAPE
- ③ LANE MARKING - SOLID 4" WHITE WET REFLECTIVE TAPE
- ④ CHEVRON MARKING - 24" WHITE IN GORE AREA WHEN SPECIFIED IN THE CONTRACT *
- ⑤ DOTTED EDGE EXTENSION MARKING - 4" WHITE (3' LINE, 9' GAP). SEE NOTE 3.

NOTES:

- 1. ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.
- 2. PLACE WHITE EDGE OF TAPE 6" LEFT FROM JOINT.
- 3. 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE-GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- 4. RETRACE EXISTING DIAGONAL MARKINGS.

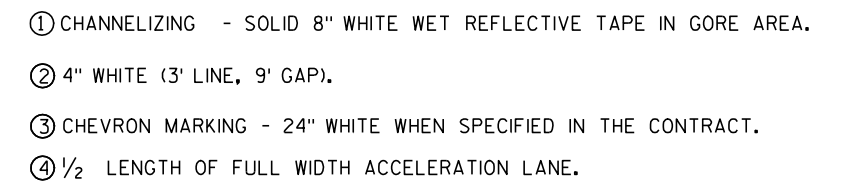
* REFER TO DESIGN NOTES.



PAVEMENT MARKING
(RAMPS AND GORES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

1. AHEAD ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.
2. PLACE WHITE EDGE OF TAPE 6" LEFT FROM JOINT.
3. RETRACE EXISTING DIAGONAL MARKINGS.



6



APPROVED
6/23/2011
DATE

/S/ Thomas N. Notbohm
STATE TRAFFIC ENGINEER OF DESIGN

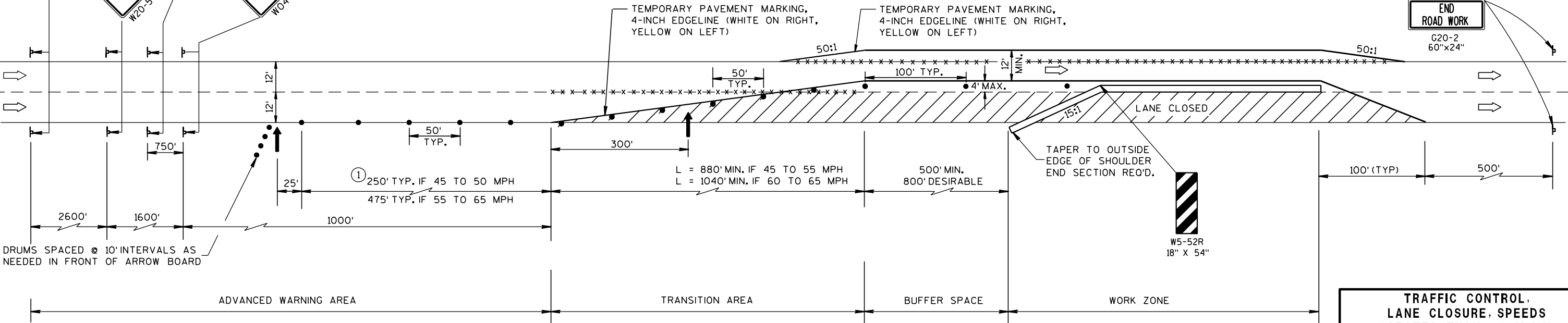
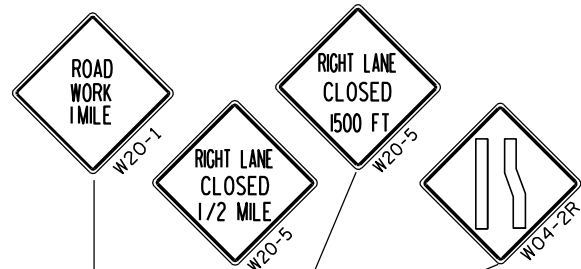
FHWA

S.D.D. 15 C 31-1d

S.D.D. 15 C 37-1d

LEGEND

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



GENERAL NOTES :

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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

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

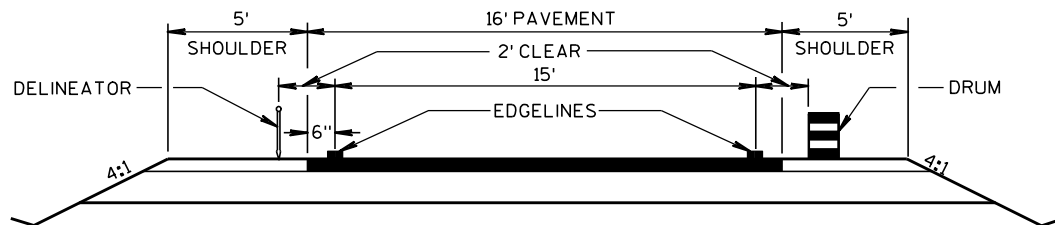
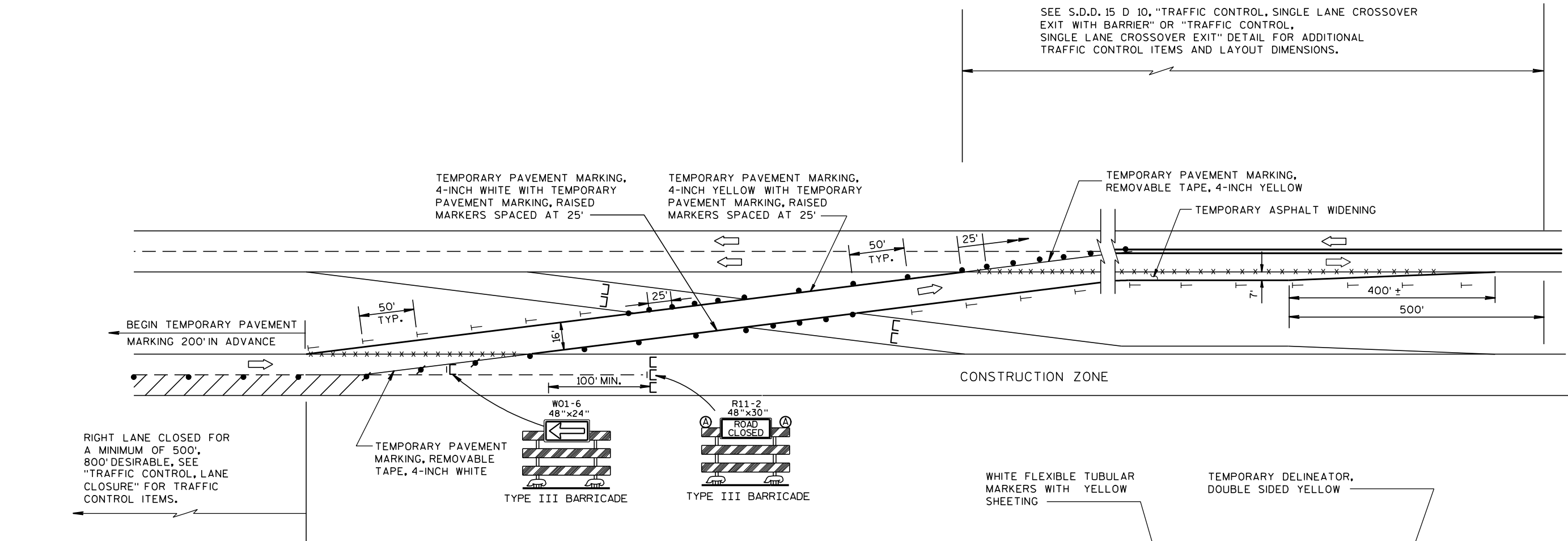
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 7 CONTINUOUS DAYS AND NIGHTS.

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

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

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

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



TYPICAL CROSSOVER ROADWAY DIMENSIONS

LEGEND

- 8' TYPE III BARRICADE WITHOUT/WITH ATTACHED SIGN
- DRUM WITH WARNING LIGHTS, TYPE C
- DRUM
- TEMPORARY DELINEATOR (STEEL POST W/SINGLE DELINEATOR) COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE PAINT
- WARNING LIGHT, TYPE A
- REMOVING PAVEMENT MARKINGS
- TEMPORARY DELINEATOR (DOUBLE SIDED)
- FLEXIBLE TUBULAR MARKER AND BASE
- DIRECTION OF TRAFFIC

GENERAL NOTES :

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

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

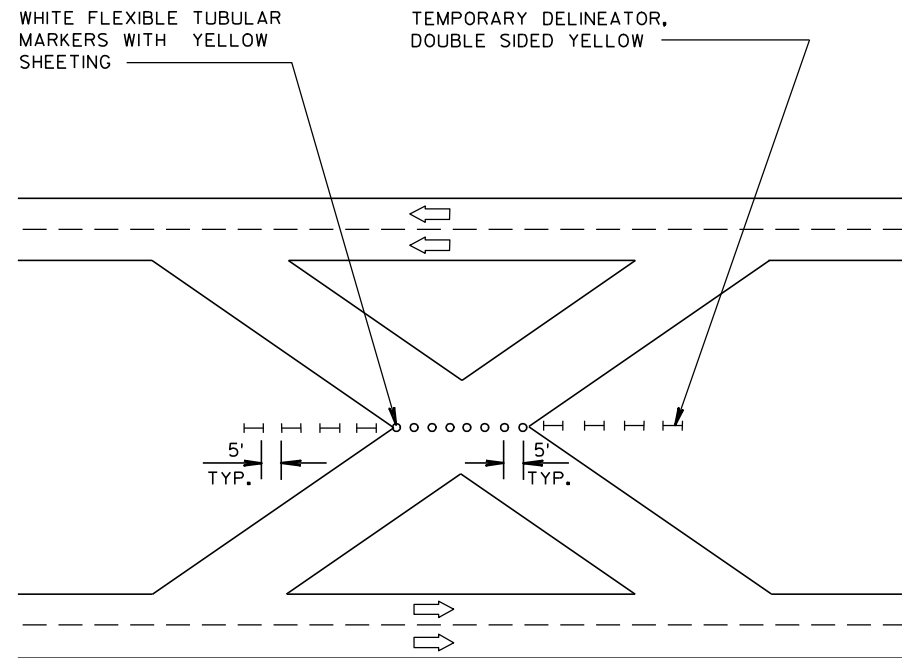
TEMPORARY PAVEMENT MARKING REMOVABLE TAPE SHALL BE USED WHEN CROSSING PERMANENT ROADWAY SURFACES THAT WILL REMAIN AFTER USE OF CROSSOVER AND TEMPORARY PAVEMENT MARKING WHERE USED.

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 THE 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.

REVERSE DEVICES WHEN OTHER LEG OF CROSSOVER IS IN USE.



PROTECTION OF CROSSOVER NOT IN USE
WHEN CONSTRUCTION IS NOT TAKING PLACE

TRAFFIC CONTROL,
SINGLE LANE CROSSOVER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10-22-96
DATE
/S/ Chester J. Spang
STATE TRAFFIC ENGINEER
FHWA

LEGEND

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

GENERAL NOTES :

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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

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

GENERAL NOTES CONTINUED:

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

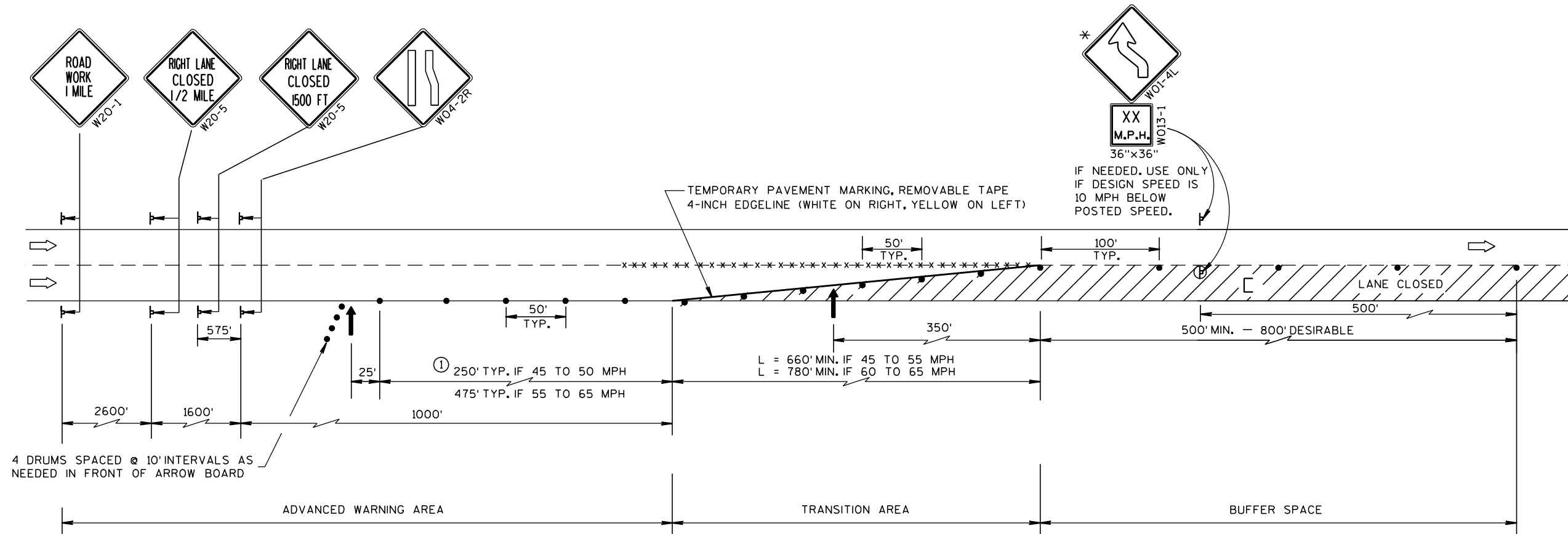
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

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

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

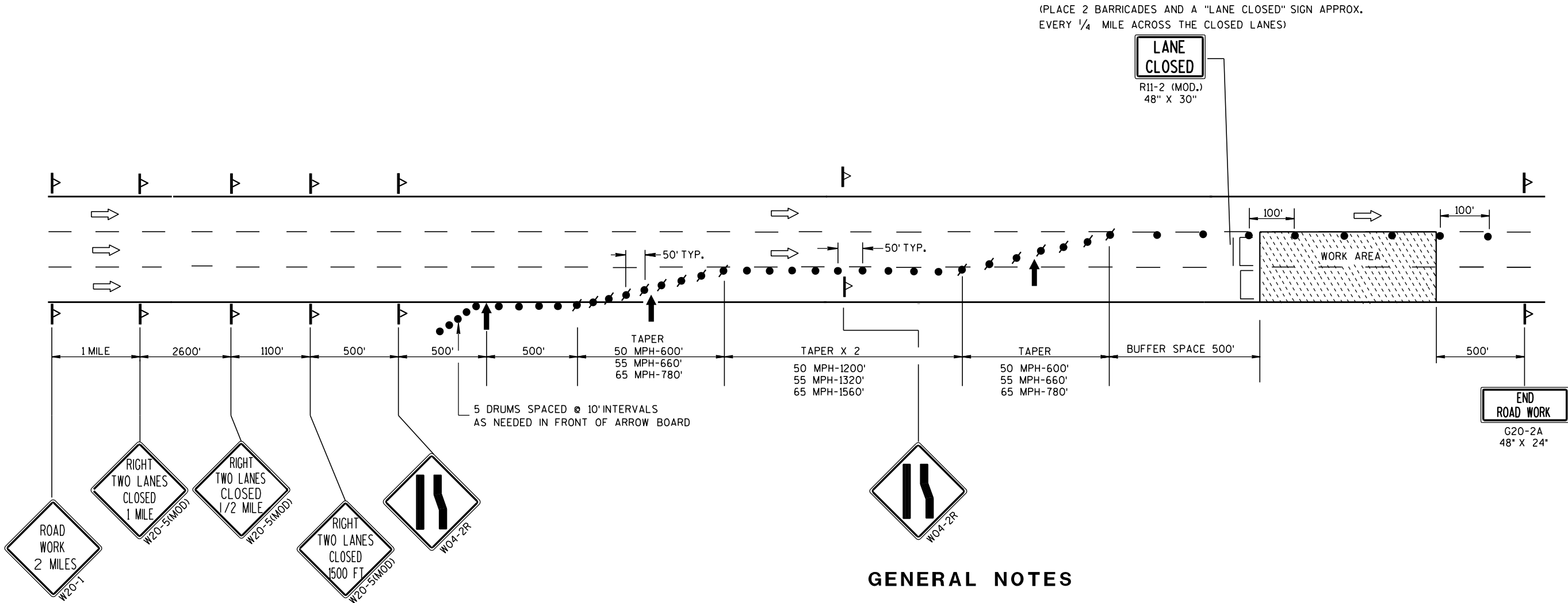
- * THE LEFT REVERSE CURVE SIGN (W01-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



LEGEND

- DRUM WITH/WITHOUT WARNING LIGHT, TYPE C (STEADY BURN)
- SIGN ON POST OR PORTABLE SUPPORT
- FLASHING ARROW BOARD
- TYPE III BARRICADE (8' EQUIVALENT) WITH/WITHOUT SIGN
- DIRECTION OF TRAFFIC FLOW

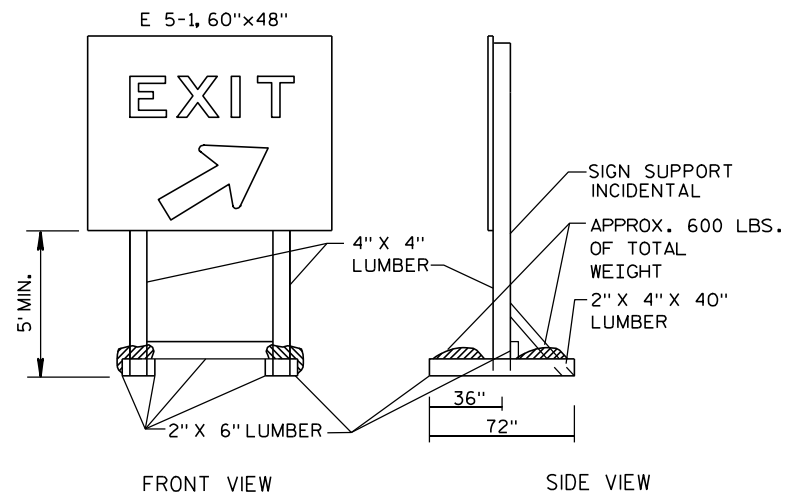
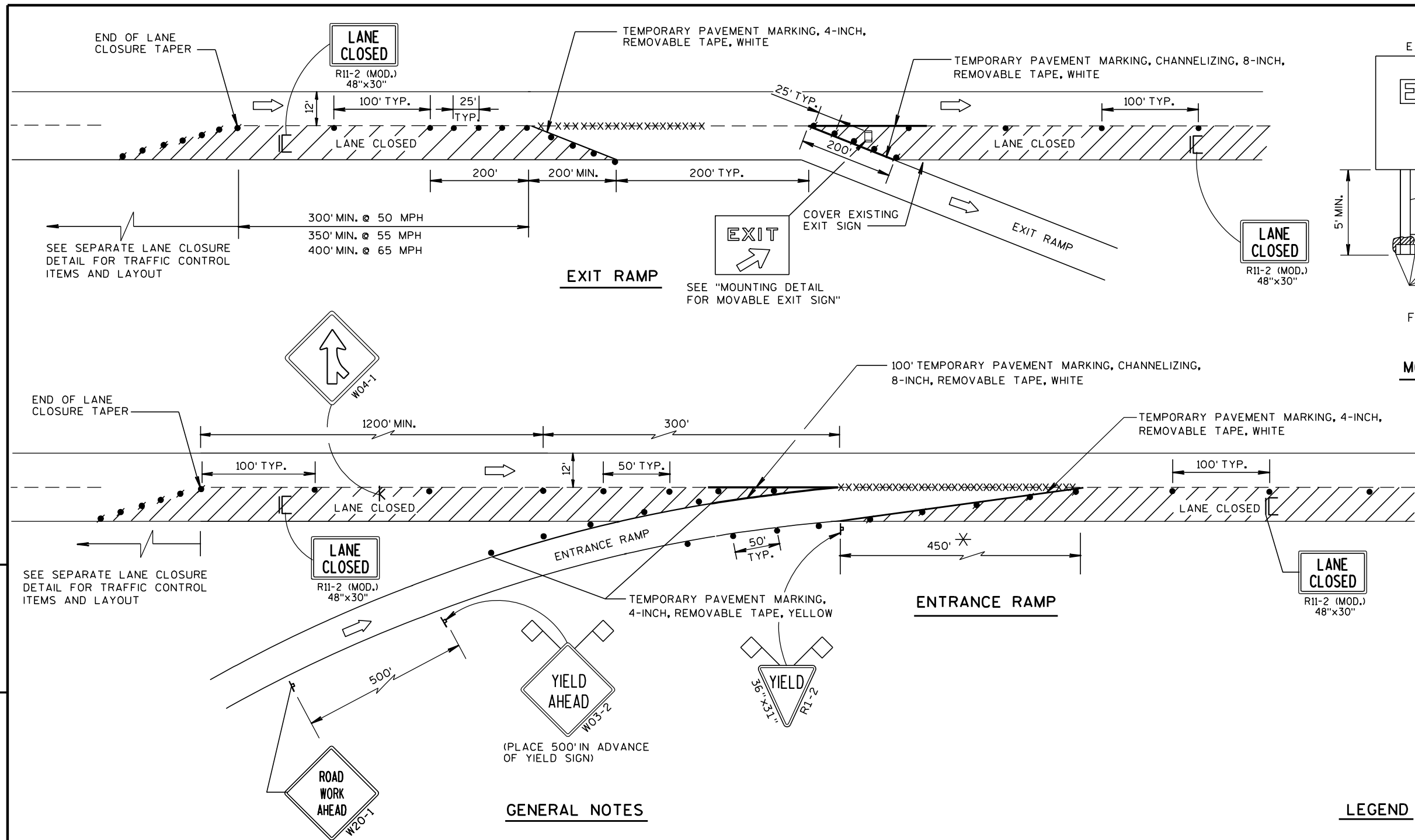
GENERAL NOTES

- THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT TWO LANES. FOR CLOSING THE LEFT TWO LANES, REVERSE THE TRAFFIC CONTROL.
- THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
- THE SPACING BETWEEN 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.
- "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 AND AS APPROVED BY THE ENGINEER.
- W20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.
- CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.
- WHEN A RAMP OR SIDE ROAD INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.
- 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.
- CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.
- WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

TRAFFIC CONTROL,
TWO LANE CLOSURE ON
FREEWAY OR EXPRESSWAY,
SHORT-TERM (LESS THAN 24 HOURS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/2000 DATE /S/ Chester J. Spang
CHIEF SIGNS AND MARKING ENGINEER
FHWA



SYMBOLS

- IC/C TYPE III BARRICADE (8' EQUIVALENT)
WITH/WITHOUT SIGN
- DRUM
- ┐ POST MOUNTED SIGN
- Ⓐ WARNING LIGHT, TYPE A (FLASHING)
- ➔ DIRECTION OF TRAFFIC

GENERAL NOTES

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

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

THE SPACING BETWEEN 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 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.

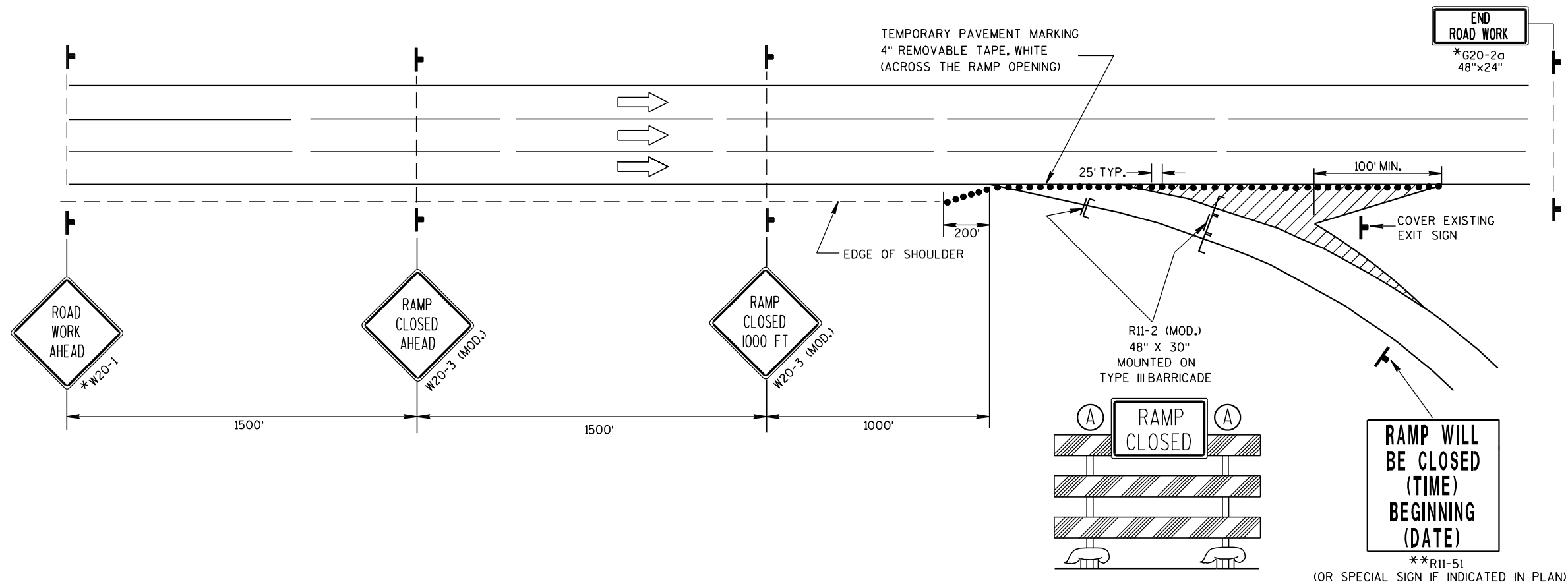
PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF RAMP CLOSURE IS TO BE IN PLACE FOR 7 OR MORE CONTINUOUS DAYS AND NIGHTS.

WORK AREAS WITH A DROPOFF ALONG THE EDGE OF AN OPEN TRAVEL LANE SHALL BE LEVELED WITH TEMPORARY FILL WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE TRAVEL LANE. DRUMS SHALL BE PLACED ENTIRELY OUTSIDE THE TRAVEL LANE, ALLOWING THE FULL UNOBSTRUCTED LANE WIDTH, WHEN THE WORK IS NOT IN PROGRESS.

WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12-HOUR DURATION.

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

**USE THE "RAMP WILL BE CLOSED" SIGN IF INDICATED IN MISCELLANEOUS QUANTITIES. PLACE 10 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.

TRAFFIC CONTROL,
EXIT RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/23/2000

DATE

FHWA

/S/ Chester J. Spang
CHIEF SIGNS AND MARKING ENGINEER

SYMBOLS

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

GENERAL NOTES

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

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

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

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

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

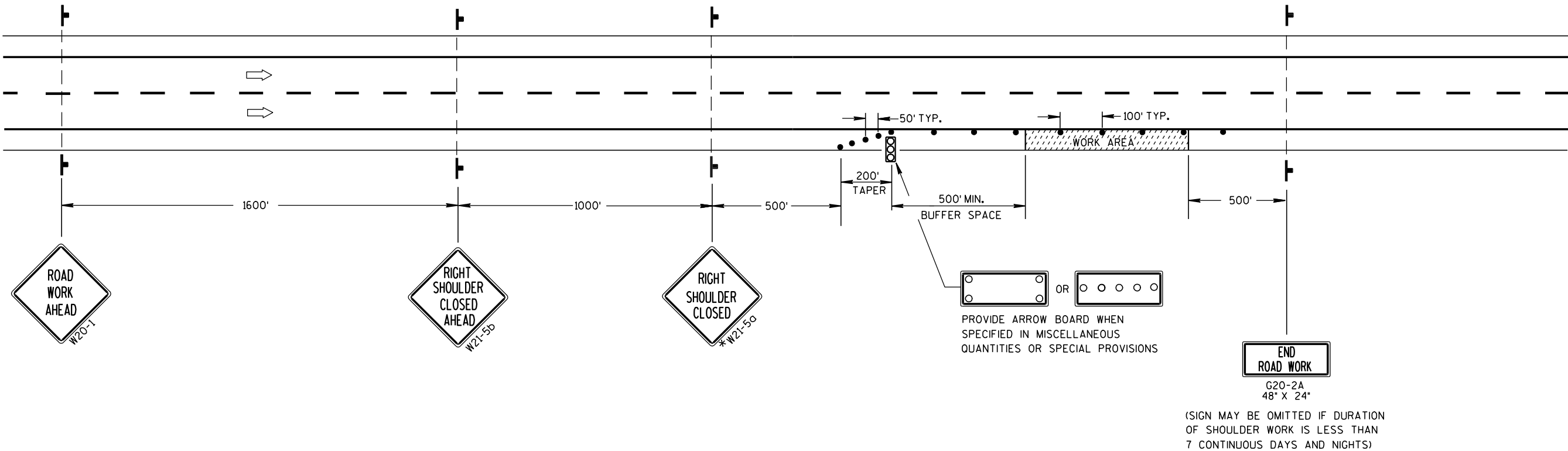
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

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

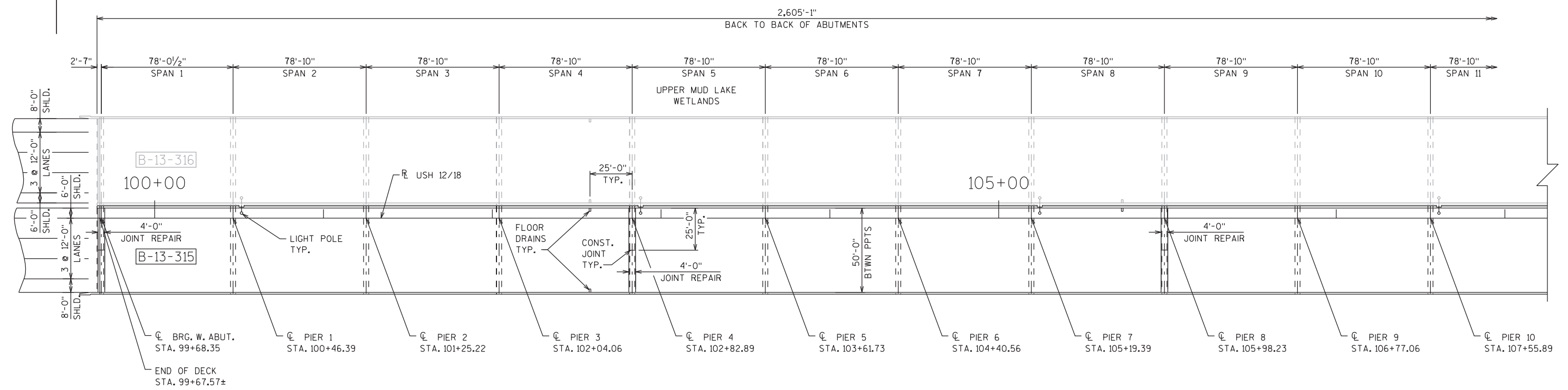
*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



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

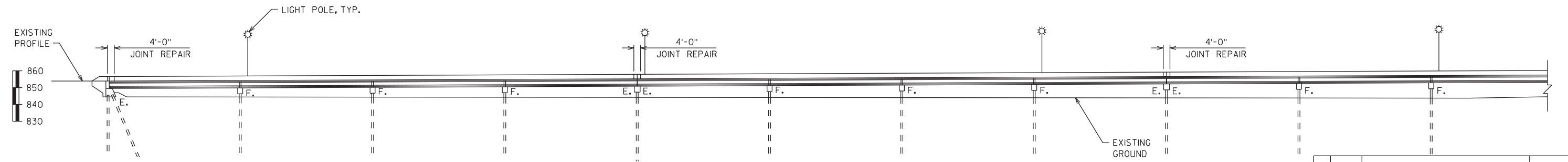
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



PLAN

33 SPANS - 45" PRESTRESSED GIRDERS
JOINT REPAIR



ELEVATION



DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HS20
INVENTORY RATING: HS21
OPERATING RATING: HS39
MAXIMUM STANDARD PERMIT VEHICLE LOAD = 250 KIPS

DESIGN STRESSES:
CONCRETE MASONRY SUPERSTRUCTURE $f'_c = 4$ KSI
ALL OTHER $f'_c = 3.5$ KSI
BAR STEEL REINFORCEMENT, GRADE 60 $f_y = 60$ KSI

(INFORMATION FROM PREVIOUS PLANS)

HYDRAULIC DATA

100 YEAR FREQUENCY:
 $Q / 100 = 860$ CFS
VELOCITY = 0.1 FPS
HW ELEV. = 847.6
WATERWAY AREA = 9420 SQ. FT.
DRAINAGE AREA = 281 SQ. MI.
OVERTOPPING RD = N/A
(HYDRAULIC INFORMATION FROM PREVIOUS STRUCTURE PLANS)

TRAFFIC VOLUME

USH 12 & 18
A.D.T = 118,500 (2011)
R.D.S. = 60 M.P.H.
(TRAFFIC INFORMATION FROM AS-BUILT ROADWAY PLANS)

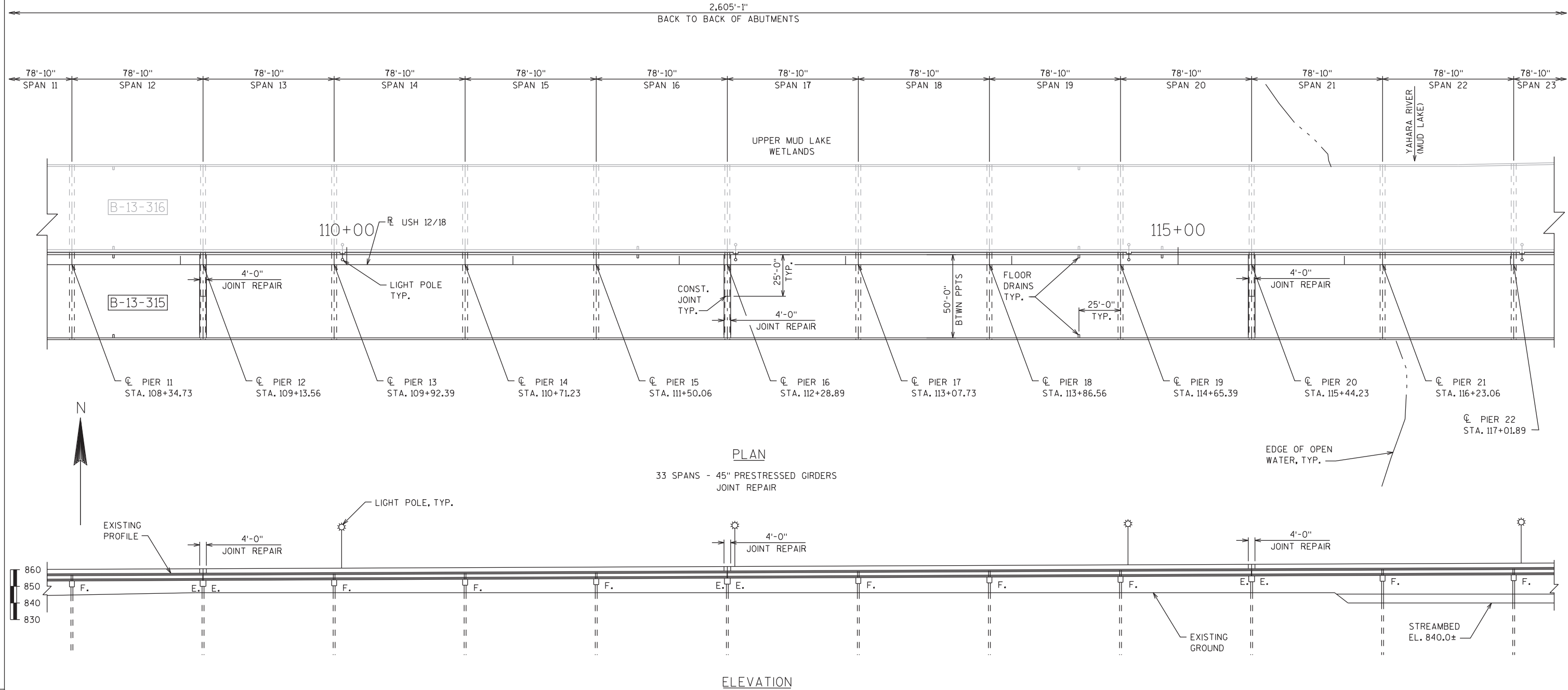
LIST OF DRAWINGS

1. GENERAL PLAN 1 OF 3
2. GENERAL PLAN 2 OF 3
3. GENERAL PLAN 3 OF 3
4. CROSS SECTION & QUANTITIES
5. CONSTRUCTION STAGING
6. REFLECTOR PLAN
7. WEST ABUTMENT
8. EAST ABUTMENT
9. DECK JOINTS
10. ABUTMENT PARAPET DETAILS
11. PIER PARAPET DETAILS
12. EXPANSION DEVICE
13. COVER PLATE DETAILS

STRUCTURE DESIGN CONTACTS

CONSULTANT: MIKE CARPENTER 608-821-8713
BRIDGE OFFICE: WILLIAM DREHER 608-266-8489

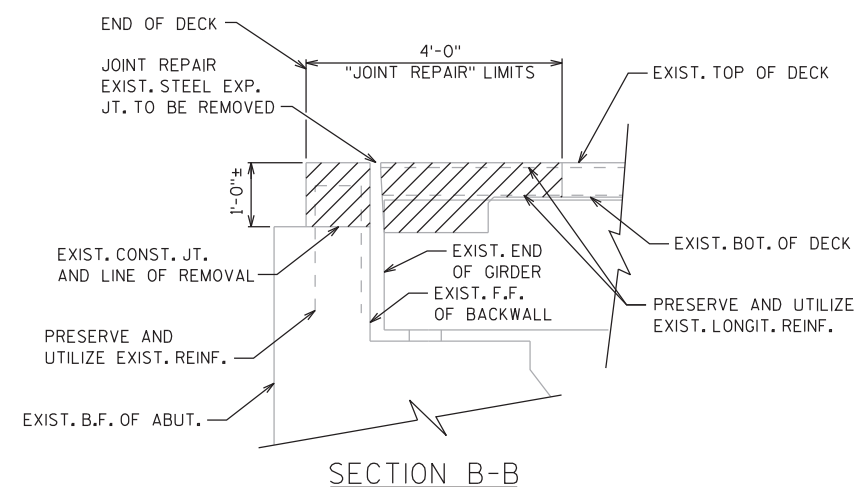
NO.	DATE	REVISION	BY
Baker MICHAEL BAKER JR., INC. 7633 GANSER WAY, SUITE 206 MADISON, WI 53719			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED	<i>William C. Dreher</i>	KAR	11/07/12
CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-13-315			
EB USH 12/18 (BELTLINE) OVER YAHARA RIVER			
COUNTY	DANE	TOWN/CITY/VILLAGE	MONONA
DESIGN SPEC. REHABILITATION N/A			
DESIGNED BY	MSC	DESIGN CK'D.	CDH
DRAWN BY	MSC	PLANS CK'D.	CDH
GENERAL PLAN 1 OF 3			SHEET 1 OF 13



GENERAL NOTES

- DRAWINGS SHALL NOT BE SCALED.
- BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
- THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
- DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.
- UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.
- EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE, SHALL BE PAID FOR IN THE LUMP SUM PRICE BID AS "EXPANSION DEVICE B-13-315".
- EXCAVATION REQUIRED TO COMPLETE THE PAVING BLOCK AT THE ABUTMENTS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "JOINT REPAIR".

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-13-315			
DRAWN BY MSC		PLANS CK'D. CDH	
GENERAL PLAN 2 OF 3			SHEET 2 OF 13



PARAPET TO BE REMOVED AND REPLACED
WITHIN LIMITS OF JOINT REPAIR

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-13-315			
DRAWN BY		MSC	PLANS CK'D. CDR
GENERAL PLAN 3 OF 3		SHEET 3 OF 13	

TOTAL ESTIMATED QUANTITIES

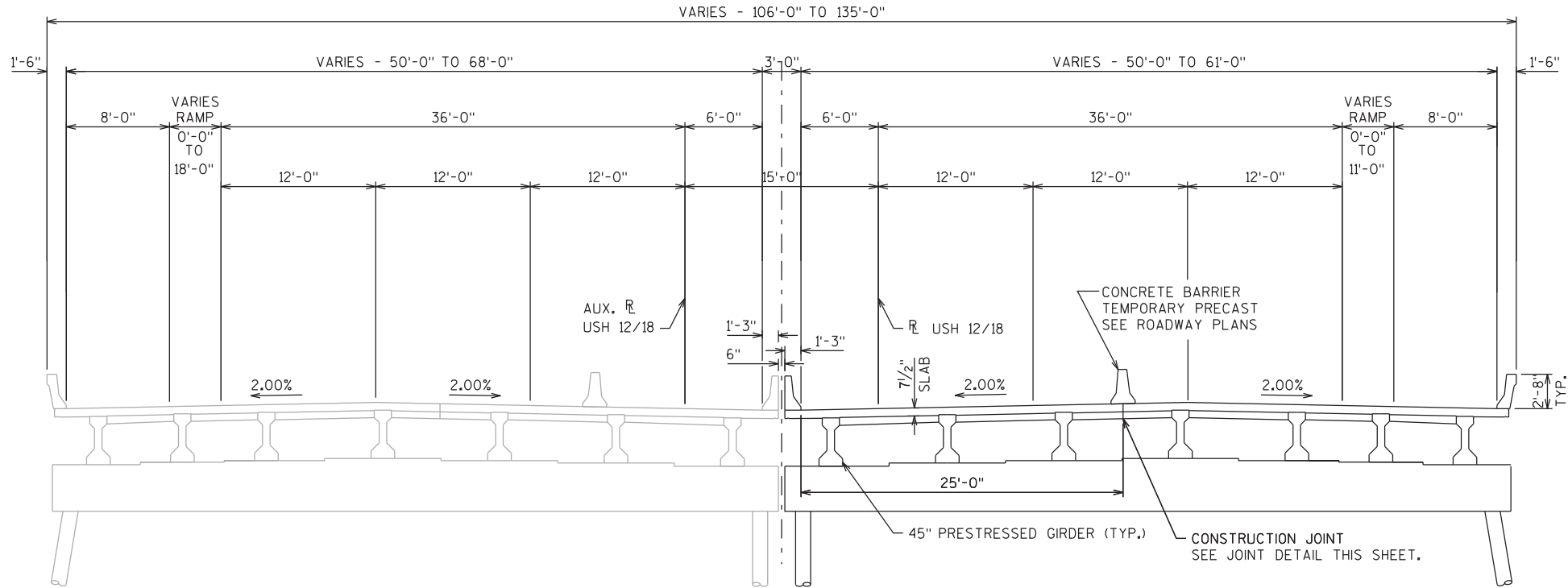
BID ITEM	DESCRIPTION	UNIT	W. ABUT.	E. ABUT.	SUPER.	TOTAL
203.0225.S	DEBRIS CONTAINMENT (B-13-315)	LS	--	--	--	1
203.0700.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH DEBRIS CAPTURE SYSTEM STA. 112+68	LS	--	--	--	1
502.3100	EXPANSION DEVICE (B-13-315)	LS	--	--	--	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	--	--	260	260
502.5005	MASONRY ANCHORS TYPE L NO.5 BARS	EACH	54	65	119	119
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	450	550	24,540	25,540
505.0904	BAR COUPLERS NO. 4	EACH	--	--	36	36
505.0905	BAR COUPLERS NO. 5	EACH	3	3	6	6
505.0906	BAR COUPLERS NO. 6	EACH	--	--	130	130
505.0907	BAR COUPLERS NO. 7	EACH	--	--	108	108
509.0301	PREPARATION DECKS TYPE 1	SY	--	--	85	85
509.0302	PREPARATION DECKS TYPE 2	SY	--	--	34	34
509.0500	CLEANING DECKS	SY	--	--	102	102
509.1000	JOINT REPAIR	SY	--	--	255	255
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	2.2	2.6	92.2	97
646.0790.S	REMOVING RAISED PAVEMENT MARKERS	EACH	--	--	52	52

BENCH MARK TABLE

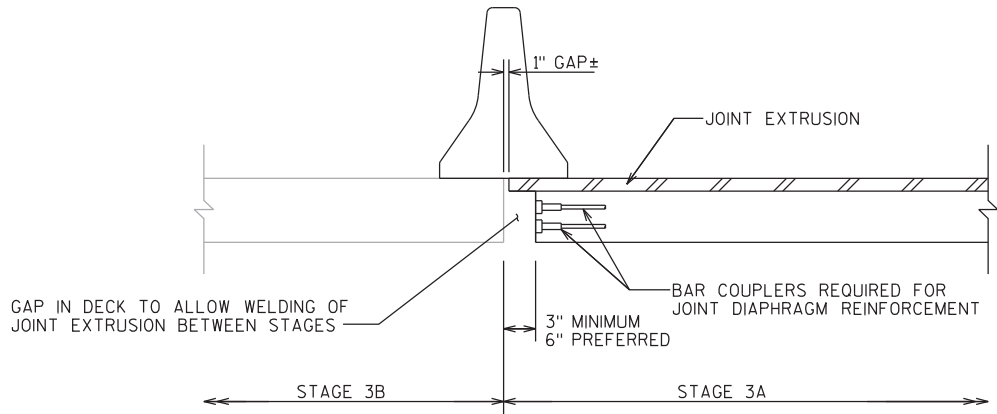
No.	STATION	OFFSET	DESCRIPTION	ELEVATION
1	98+58.40	59.25' L	PK NAIL	853.91
2	98+47.69	42.13' R	PK NAIL	853.96
3	128+10.49	59.76' L	PK NAIL	861.73
4	128+33.50	42.45' R	PK NAIL	862.37

STATE PROJECT NUMBER

1206-04-61

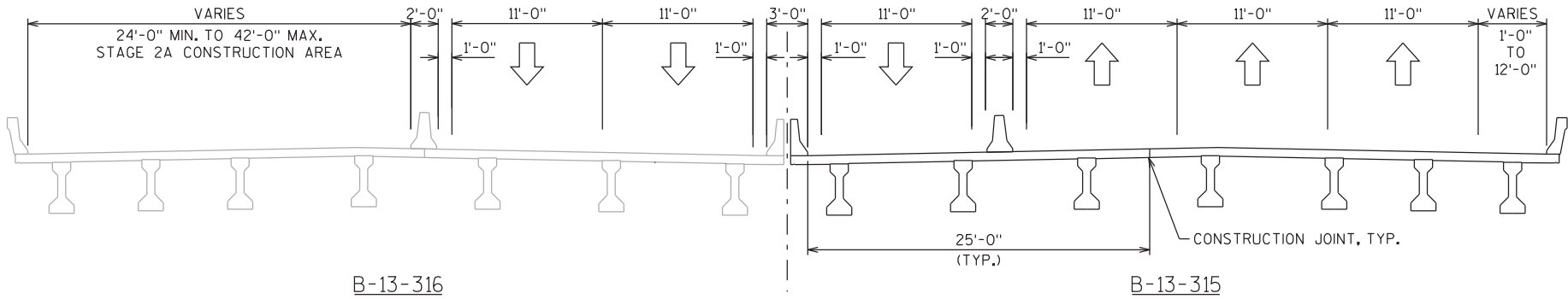


CROSS SECTION THRU ROADWAY
(LOOKING EAST)

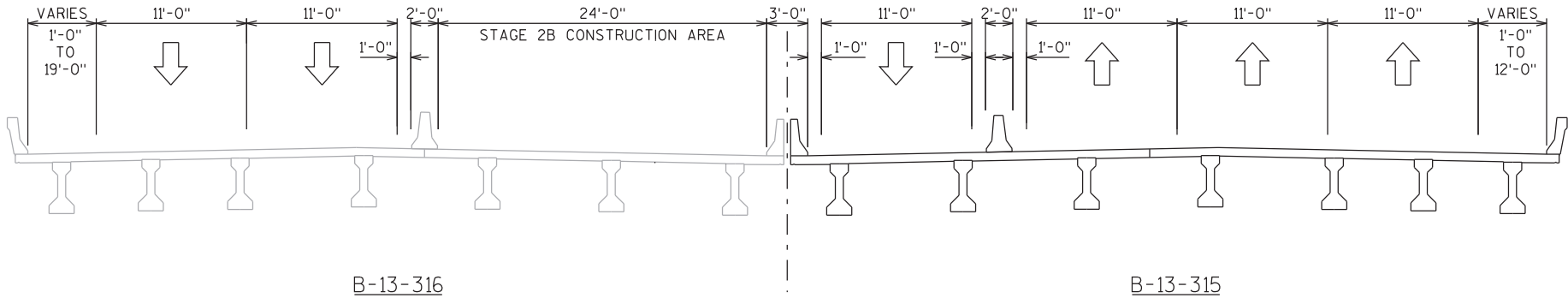


JOINT DETAIL

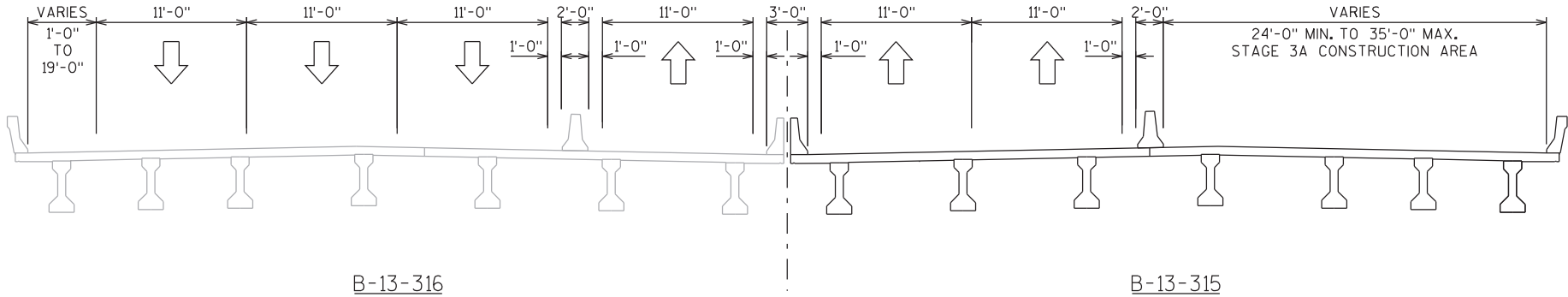
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-13-315			
DRAWN BY MSC		PLANS CK'D. CDH	
CROSS SECTION & QUANTITIES			SHEET 4 OF 13



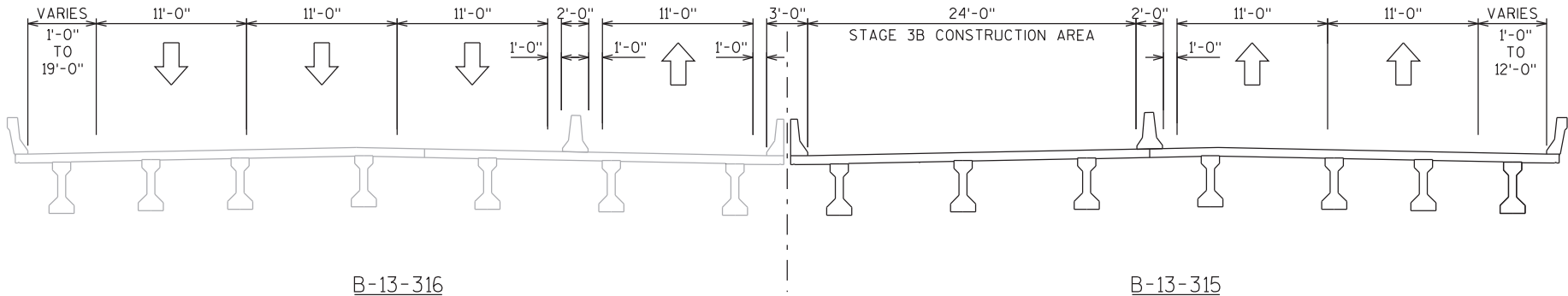
CROSS SECTION THRU ROADWAY
STAGE 2A



CROSS SECTION THRU ROADWAY
STAGE 2B



CROSS SECTION THRU ROADWAY
STAGE 3A

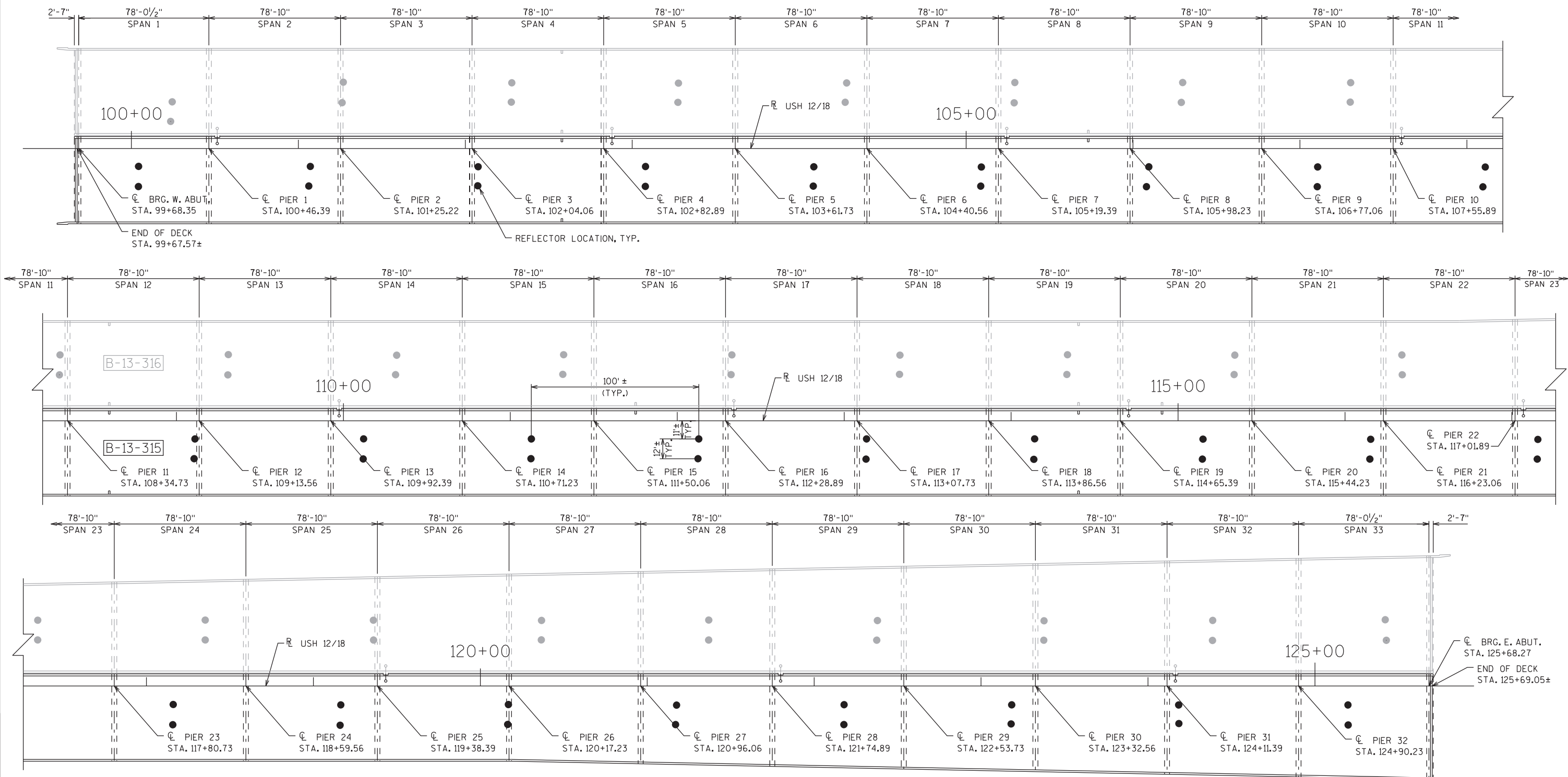


CROSS SECTION THRU ROADWAY
STAGE 3B

NOTES

SEE ROADWAY PLANS FOR COMPLETE
PROJECT STAGING DETAILS.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-13-315			
DRAWN BY		MSC	PLANS CK'D. CDH
CONSTRUCTION STAGING		SHEET 5 OF 13	



PLAN

REMOVING RAISED PAVEMENT MARKERS

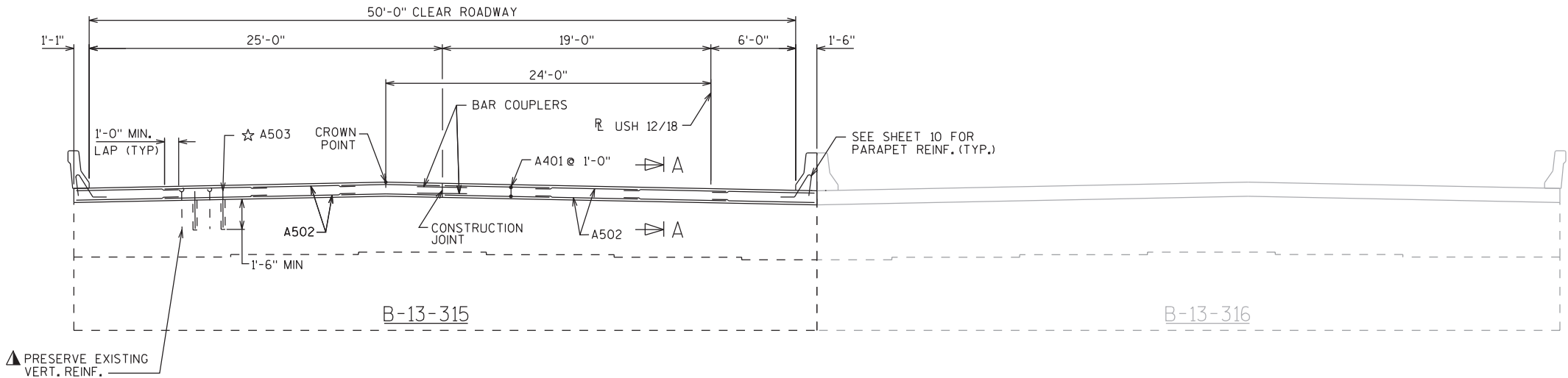
LEGEND

- EXISTING RAISED PAVEMENT MARKER TO BE REMOVED AND PATCHED.

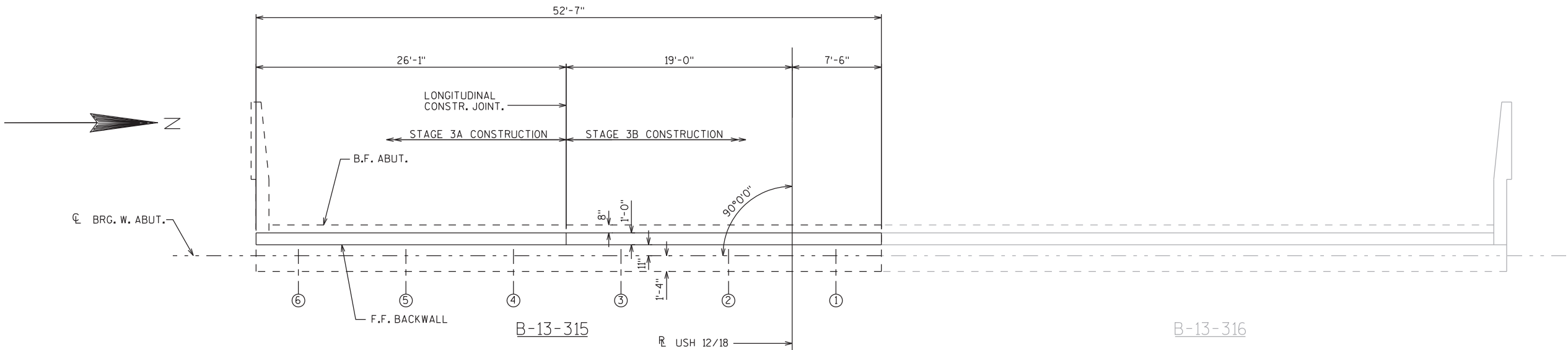
NOTES

ALL WORK TO BE PAID FOR UNDER THE BID ITEM "REMOVING RAISED PAVEMENT MARKERS".

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-13-315			
DRAWN BY		MSC	PLANS CK'D. CDH
REFLECTOR PLAN			SHEET 6 OF 13



ELEVATION
(LOOKING WEST)



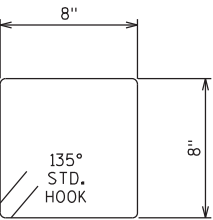
PLAN

BILL OF BARS
WEST ABUTMENT

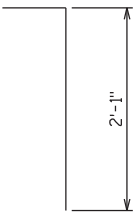
TOTAL COATED: 450 LBS

BAR MARK	NO. REQ'D. 3A	NO. REQ'D. 3B	NO. REQ'D. TOTAL	LENGTH	COAT	BENT	LOCATION
A401	27	27	54	3'-2"	X	X	PAVING BLOCK - VERT.
A502	12	12	24	7'-6"	X		PAVING BLOCK - HORIZ.
A503	27	27	54	2'-6"	X	X	PAVING BLOCK - VERT. - CONC. MASONRY ANCHORS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
ALL BAR BEND DIMENSIONS ARE OUT-TO-OUT OF BAR.



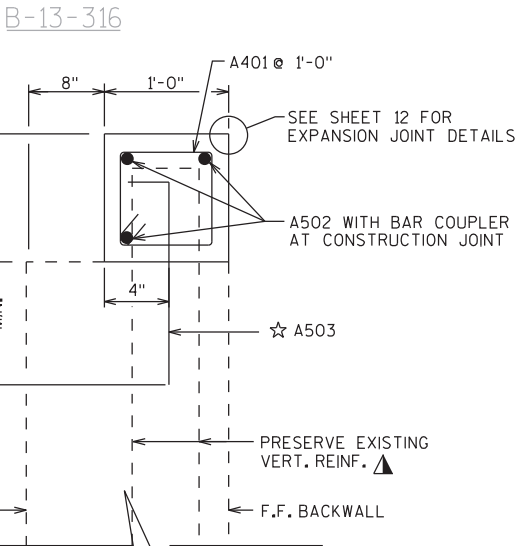
A401



A503

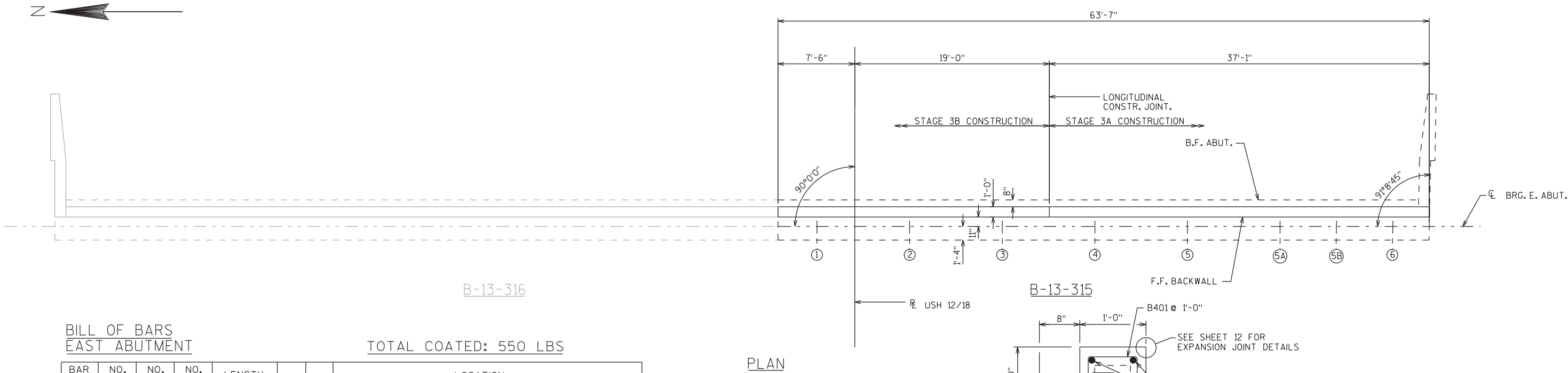
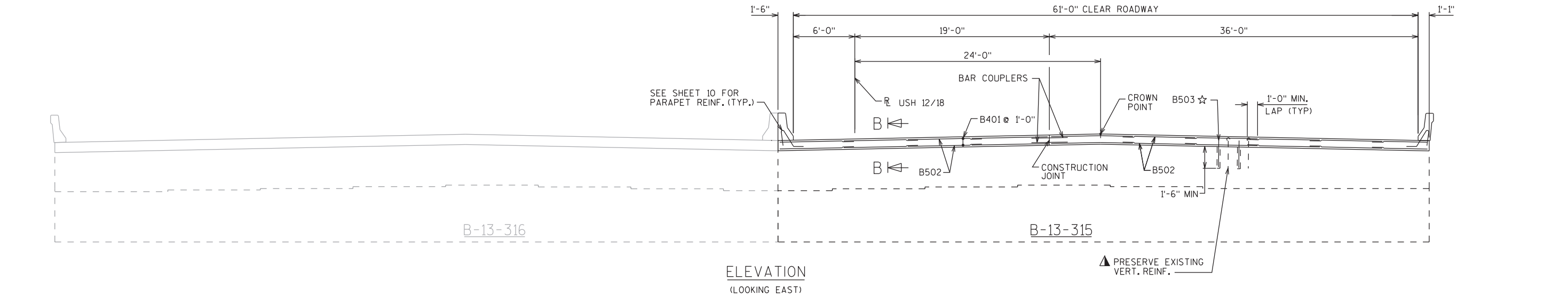
LEGEND

- ▲ EXISTING BARS ARE LIKELY TO BE CORRODED AND/OR DAMAGED DURING CONCRETE REMOVAL. PRESERVE AND INCORPORATE AS MUCH REBAR AS PRACTICAL. SUPPLEMENT WITH THE BARS INDICATED BY ☆.
- ☆ "MASONRY ANCHORS TYPE L NO 5 BARS". MIN. PULLOUT CAPACITY OF 19 KIPS. EMBED A MINIMUM OF 1'-6" INTO CONCRETE. SPACE AT 1'-0". TURN 10" LEG AS NECESSARY TO FIT.
- ⊕ INDICATES GIRDER NUMBER
- BAR COUPLERS REQUIRED



SECTION A-A

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-13-315			
DRAWN BY MSC		PLANS CK'D. CDH	
WEST ABUTMENT		SHEET 7 OF 13	

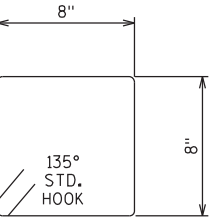


BILL OF BARS
EAST ABUTMENT

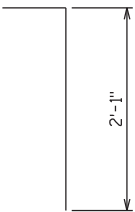
TOTAL COATED: 550 LBS

BAR MARK	NO. REQ'D. 3A	NO. REQ'D. 3B	NO. REQ'D. TOTAL	LENGTH	COAT	BENT	LOCATION
B401	38	27	65	3'-2"	X	X	PAVING BLOCK - VERT.
B502	18	12	30	7'-6"	X		PAVING BLOCK - HORIZ.
B503	38	27	65	2'-6"	X	X	PAVING BLOCK - VERT. - CONC. MASONRY ANCHORS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
ALL BAR BEND DIMESIONS ARE OUT-TO-OUT OF BAR.



B401



B503

LEGEND

▲ EXISTING BARS ARE LIKELY TO BE CORRODED AND/OR DAMAGED DURING CONCRETE REMOVAL. PRESERVE AND INCORPORATE AS MUCH REBAR AS PRACTICAL. SUPPLEMENT WITH THE BARS INDICATED BY ☆.

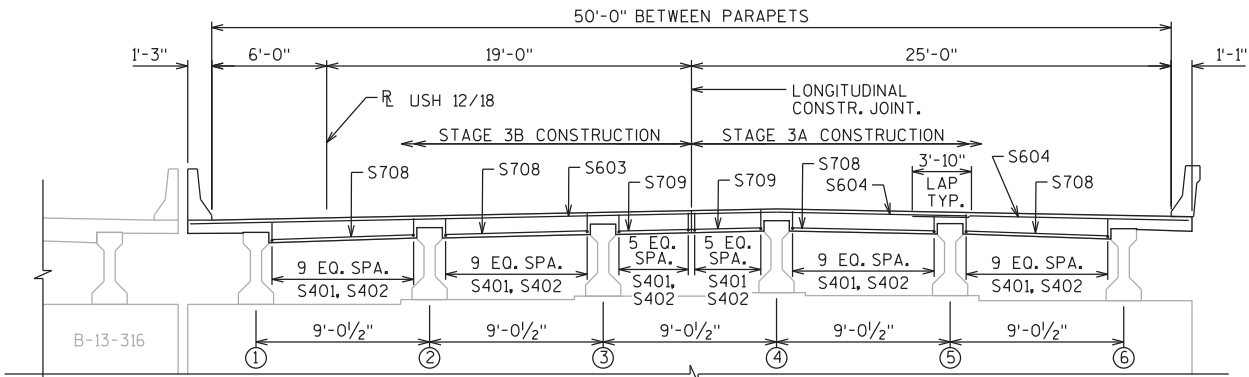
☆ "MASONRY ANCHORS TYPE L NO 5 BARS". MIN. PULLOUT CAPACITY OF 19 KIPS. EMBED A MINIMUM OF 1'-6" INTO CONCRETE. SPACE AT 1'-0". TURN 10" LEG AS NECESSARY TO FIT.

⊕ INDICATES GIRDER NUMBER

● BAR COUPLERS REQUIRED

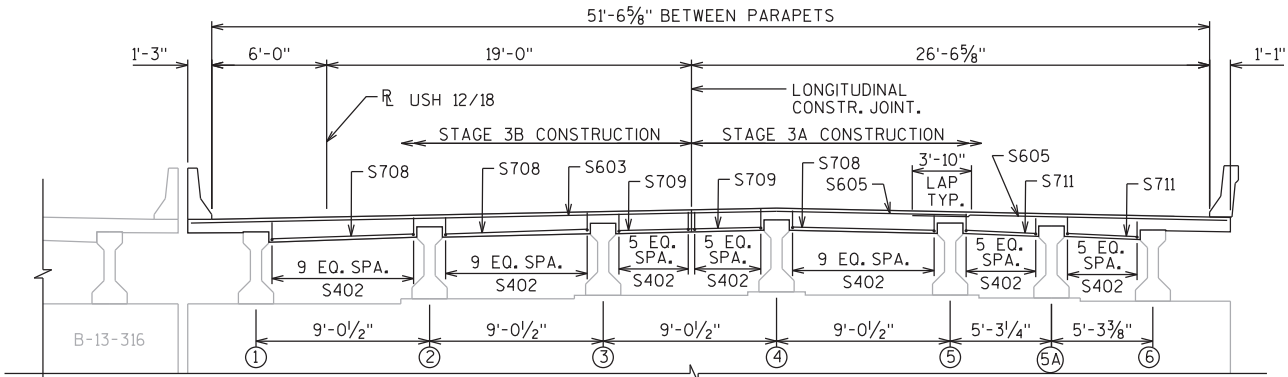
SECTION B-B

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-13-315			
DRAWN BY MSC		PLANS CK'D. CDH	
EAST ABUTMENT			SHEET 8 OF 13



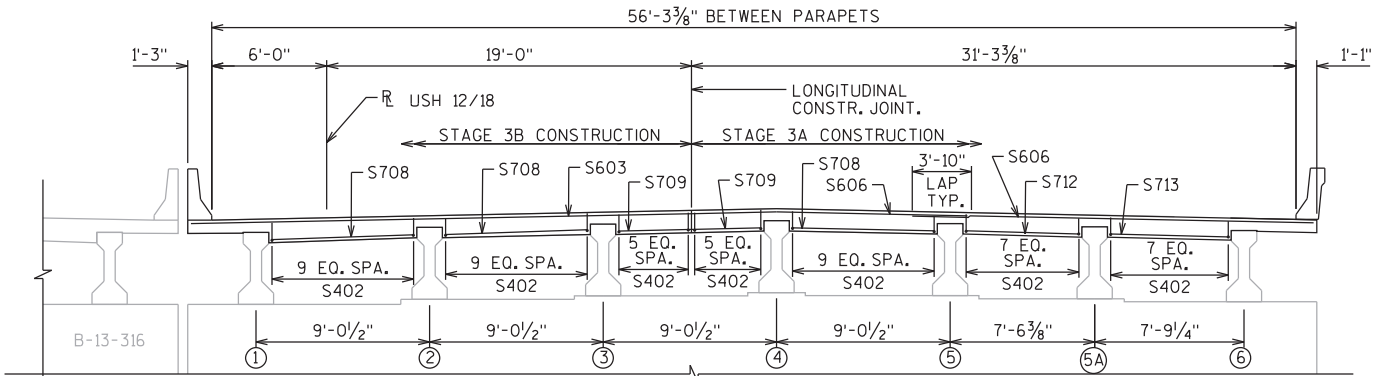
ELEVATION

WEST ABUT. & PIERS 4, 8, 12, 16, 20 & 24



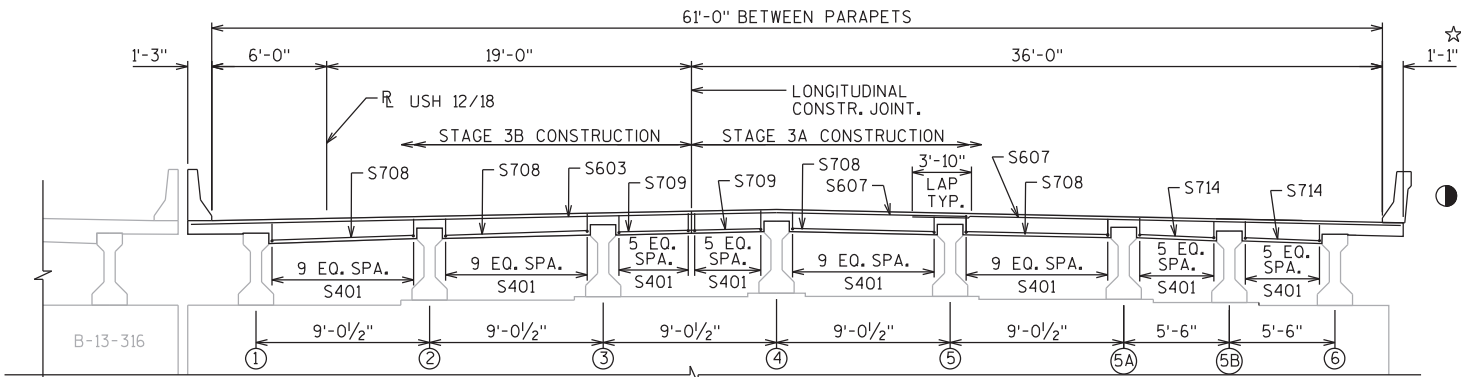
ELEVATION

PIER 27



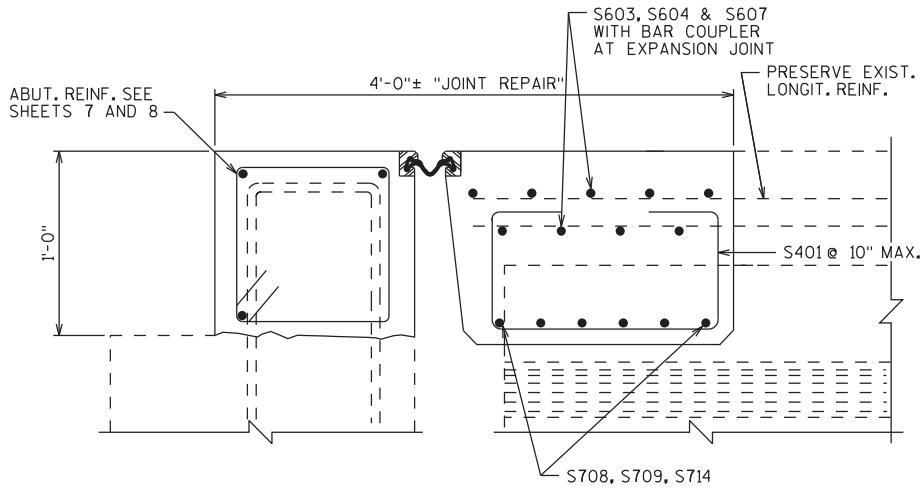
ELEVATION

PIER 30



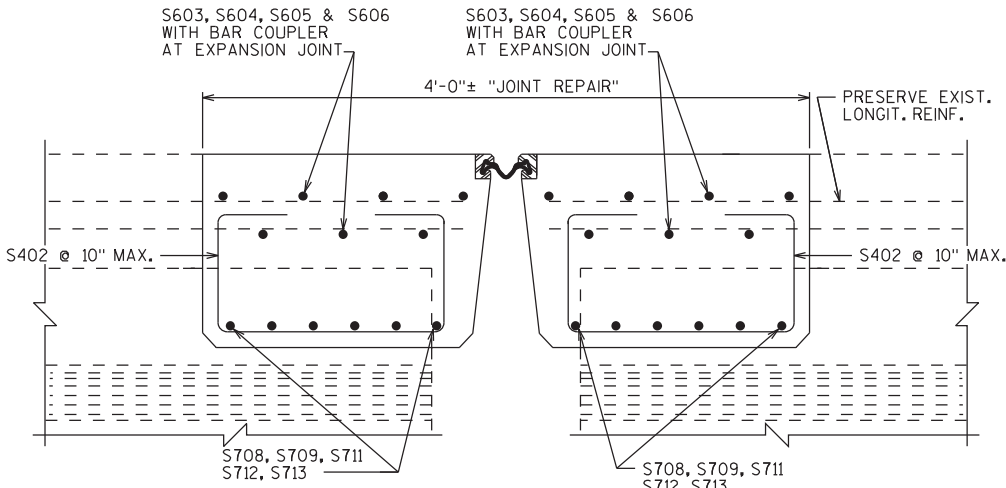
ELEVATION

EAST ABUT.



SECTION THRU JOINT AT ABUTMENTS

NORMAL TO CL SUBSTRUCTURE



SECTION THRU JOINT AT PIERS

NORMAL TO CL SUBSTRUCTURE

BILL OF BARS

DECK JOINTS

TOTAL COATED: 23,360 LBS

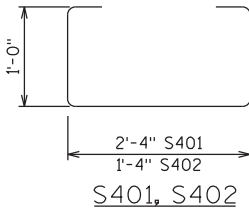
BAR MARK	NO. REQ'D. 3A	NO. REQ'D. 3B	NO. REQ'D. TOTAL	LENGTH	COAT	BENT	LOCATION	
S401	64	52	116	4'-9"	X	X	SLAB - JOINT AT ABUT.S	VERT.
S402	432	416	848	3'-9"	X	X	SLAB - JOINT AT PIERS	VERT.
S603	--	130	130	26'-1"	X		SLAB - JOINT AT ABUT.S & PIERS	HORIZ.
S604	186	--	186	15'-0"	X		SLAB - JOINT AT ABUT.S & PIERS	HORIZ.
S605	28	--	28	16'-0"	X		SLAB - JOINT AT PIER 27	HORIZ.
S606	28	--	28	18'-2"	X		SLAB - JOINT AT PIER 30	HORIZ.
S607	18	--	18	20'-6"	X		SLAB - JOINT AT E. ABUT.	HORIZ.
S708	192	216	408	7'-4"	X		SLAB - JOINT AT ABUT.S & PIERS	HORIZ.
S709	108	108	216	4'-3"	X		SLAB - JOINT AT ABUT.S & PIERS	HORIZ.
							(NOT USED)	
S711	12	--	24	3'-7"	X		SLAB - JOINT AT PIER 27	HORIZ.
S712	12	--	12	5'-10"	X		SLAB - JOINT AT PIER 30	HORIZ.
S713	12	--	12	6'-1"	X		SLAB - JOINT AT PIER 30	HORIZ.
S714	12	--	12	3'-10"	X		SLAB - JOINT AT E. ABUT.	HORIZ.
S415	64	72	136	9'-0"	X		SLAB AT W. ABUT. & PIERS	HORIZ.
S416	36	36	72	4'-6"	X		SLAB AT CONST. JT.	HORIZ.
S417	8	--	8	5'-3"	X		SLAB AT PIER 27	HORIZ.
S418	8	--	8	7'-9"	X		SLAB AT PIER 30	HORIZ.
S419	4	--	4	5'-6"	X		SLAB AT E. ABUT.	HORIZ.

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
ALL BAR BEND DIMENSIONS ARE OUT-TO-OUT OF BAR.

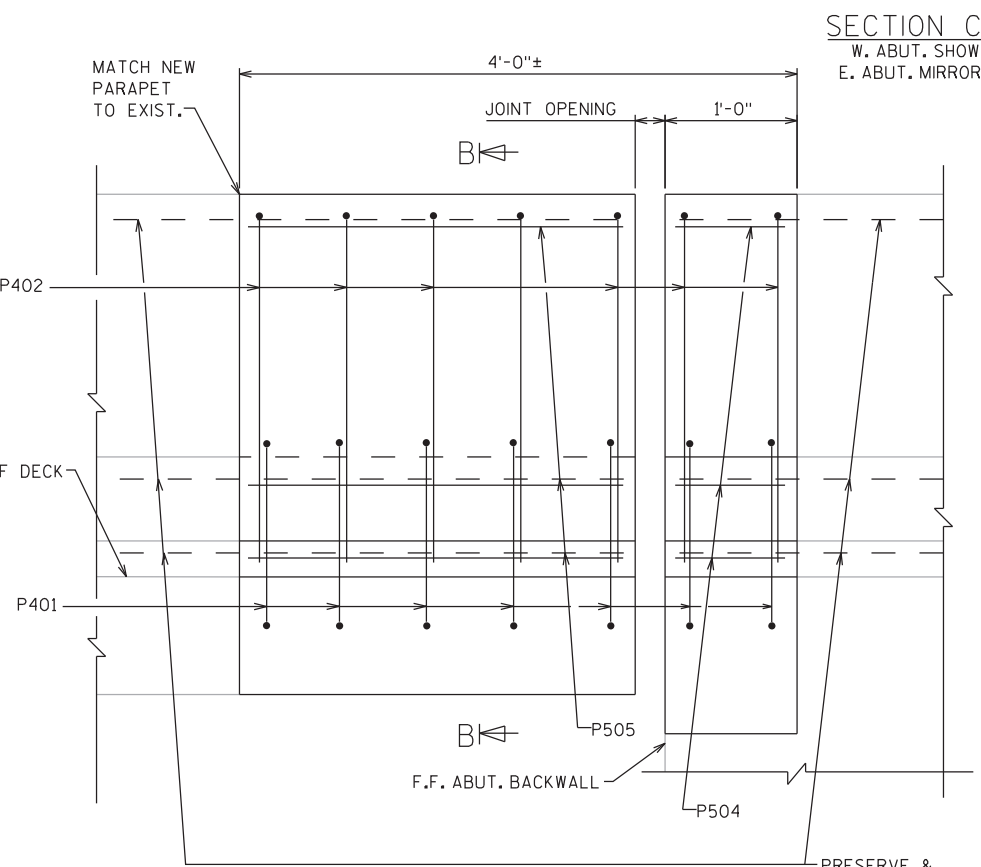
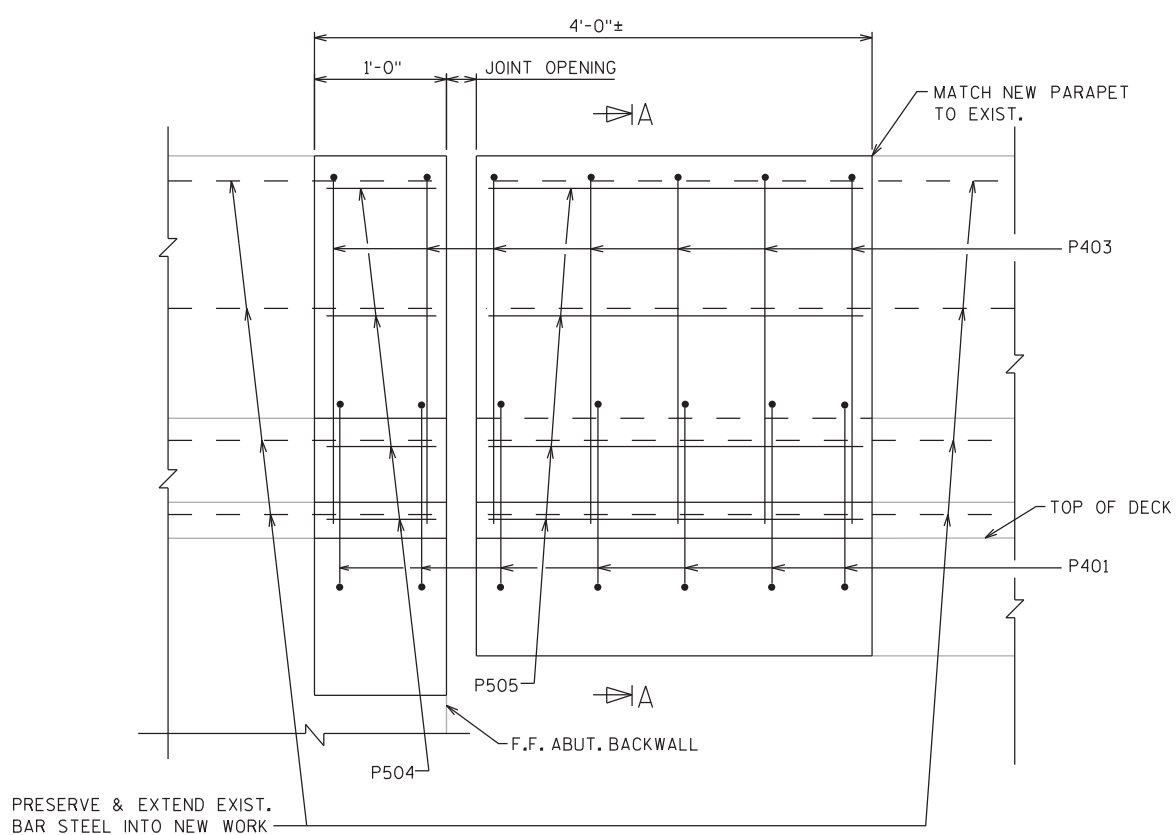
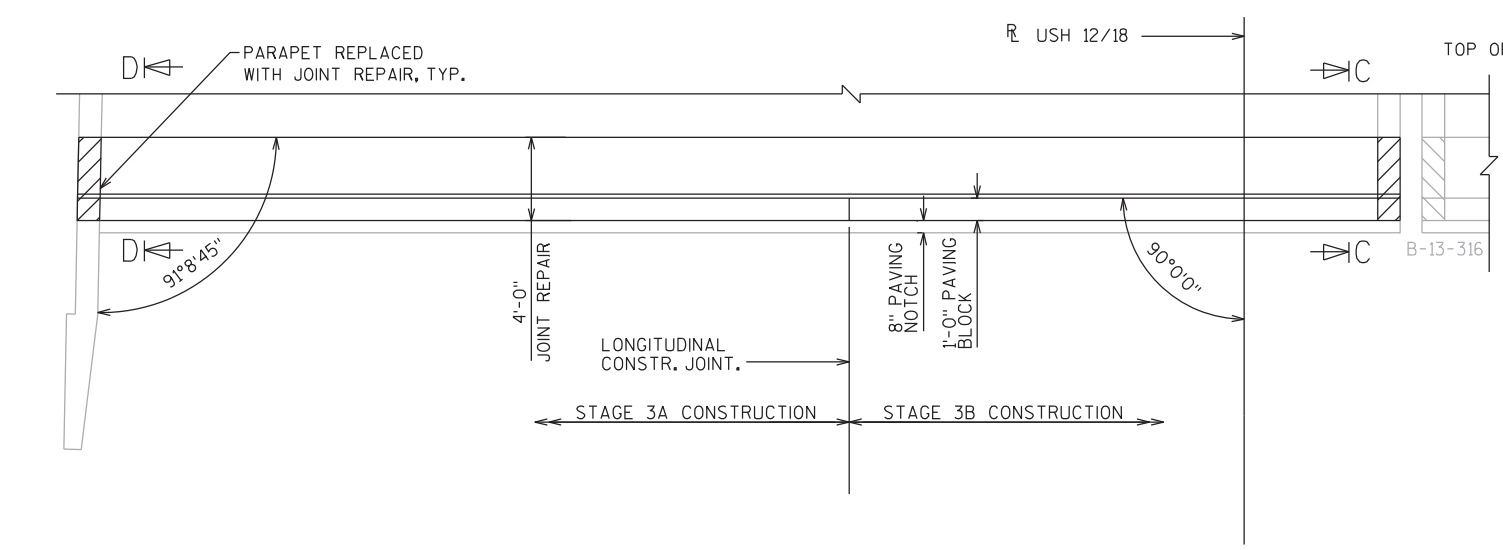
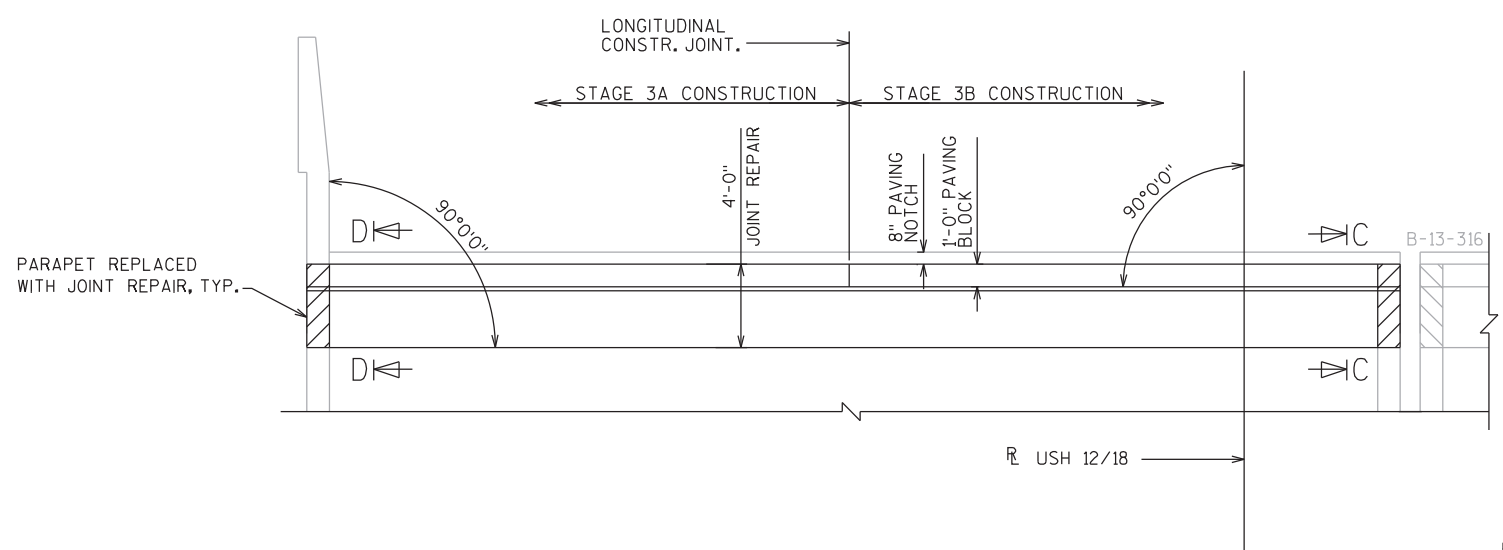
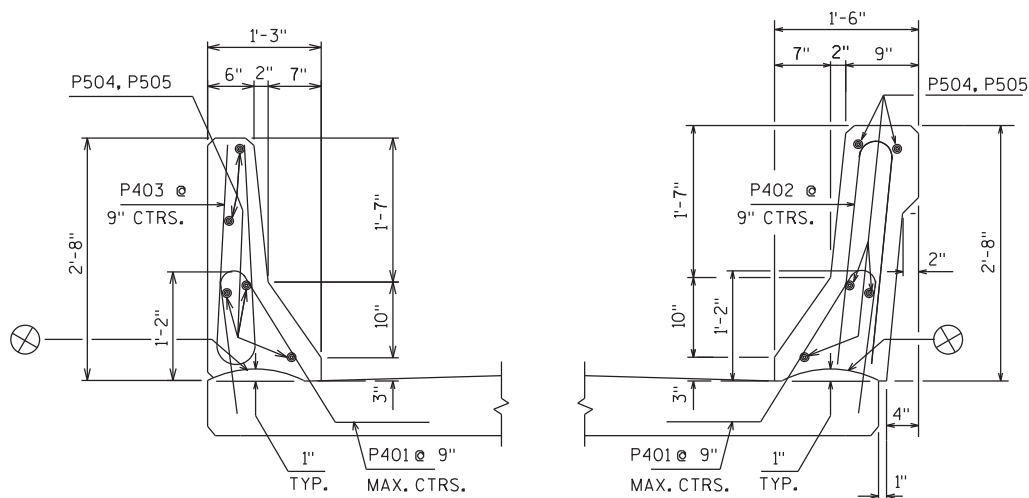
☆ ADJUST BAR LENGTHS AS NECESSARY TO ACCOMMODATE JOINT OPENING. IF BARS ARE FIELD CUT, APPLY EPOXY COATING TO BAR ENDS.

■ SEE SHT. 12 FOR LOCATION

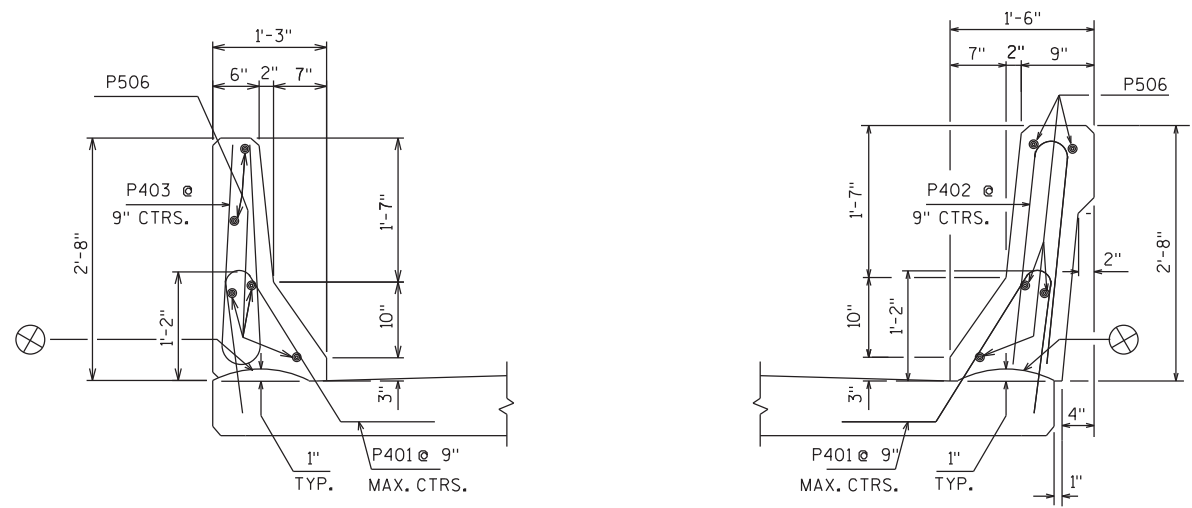
● BAR COUPLERS REQUIRED



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-13-315			
		DRAWN BY MSC	PLANS CDH
DECK JOINTS		SHEET 9 OF 13	



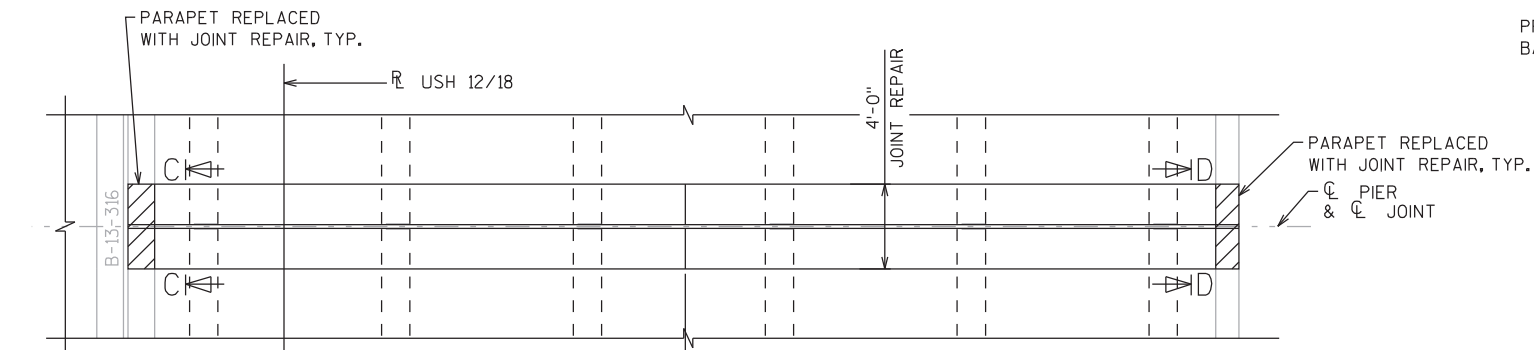
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-13-315			
DRAWN BY MSC		PLANS CK'D. CDH	
ABUTMENT PARAPET DETAILS			SHEET 10 OF 13



SECTION A-A
PARAPET TYPE 'C'

SECTION B-B
PARAPET TYPE 'B'

CONST. JOINT - STRIKE OFF
AS SHOWN.



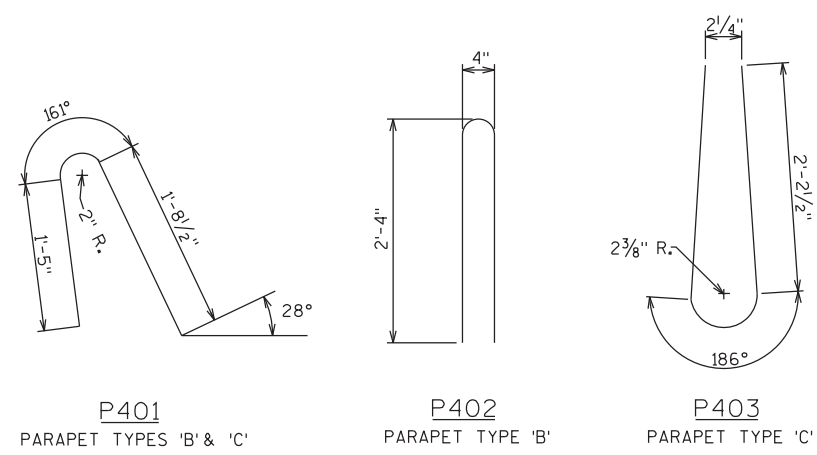
PLAN - PIERS
PIERS 4 THRU 24 SHOWN
PIERS 27 & 30 SIMILAR

BILL OF BARS
PARAPETS

TOTAL COATED = 1,180 LBS

BAR MARK	NO. REQ'D. 3A	NO. REQ'D. 3B	NO. REQ'D. TOTAL	LENGTH	COAT	BENT	LOCATION
P401	62	62	124	4'-3"	X	X	PARAPET VERT.
P402	62	--	62	4'-10"	X	X	PARAPET TYPE 'B' VERT.
P403	--	62	62	5'-0"	X	X	PARAPET TYPE 'C' VERT.
P504	10	10	20	0'-8"	X		PARAPET AT ABUTS. HORIZ.
P505	10	10	20	2'-6"	X		PARAPET AT ABUTS. HORIZ.
P506	80	80	160	1'-7"	X		PARAPET AT PIERS HORIZ.

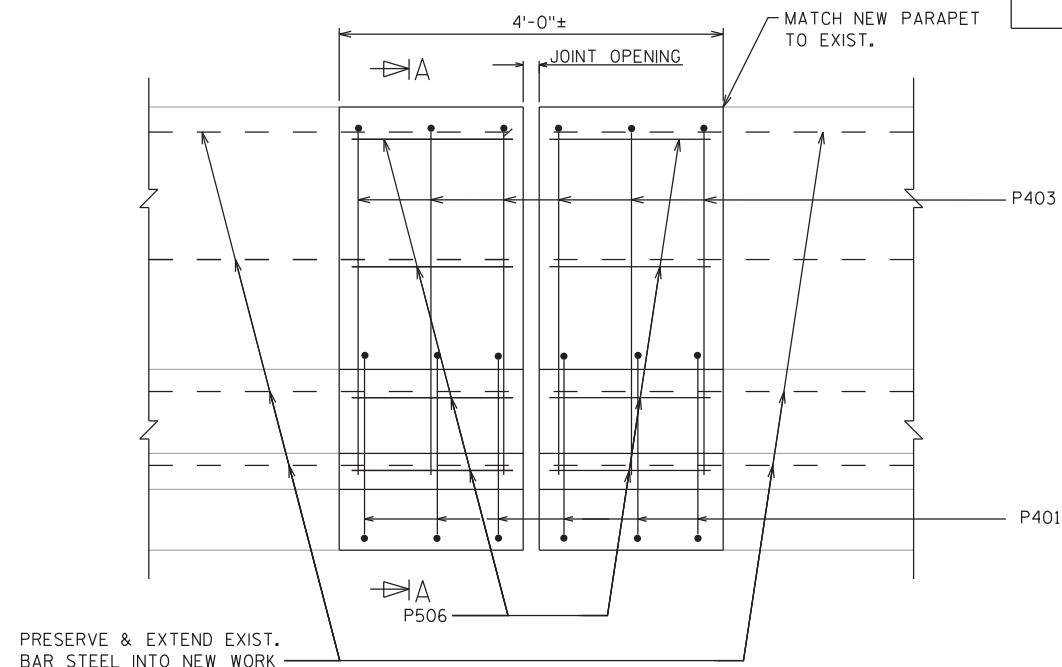
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
ALL BAR BEND DIMENSIONS ARE OUT-TO-OUT OF BAR.



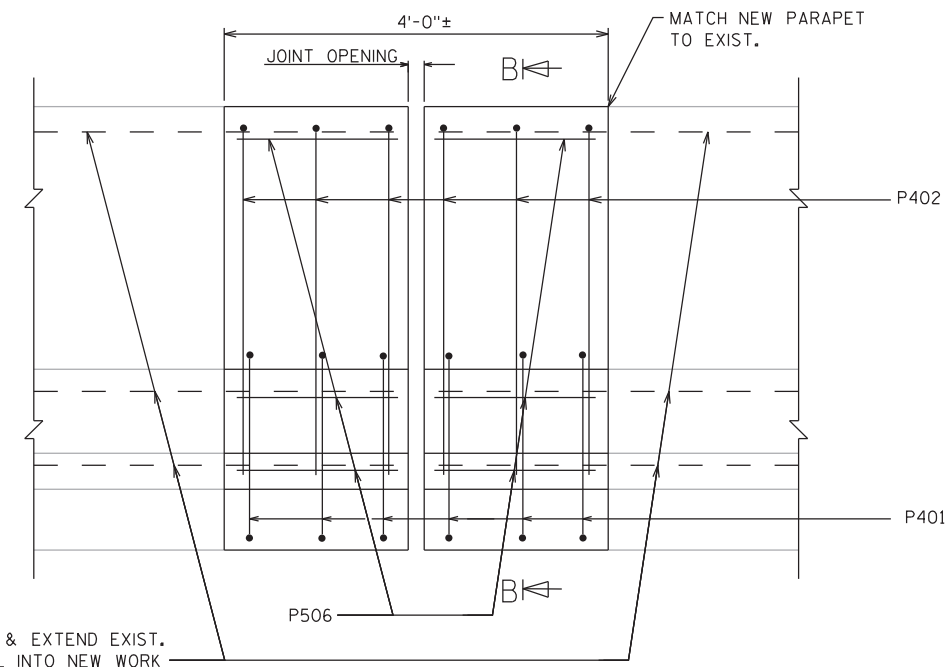
P401
PARAPET TYPES 'B' & 'C'

P402
PARAPET TYPE 'B'

P403
PARAPET TYPE 'C'

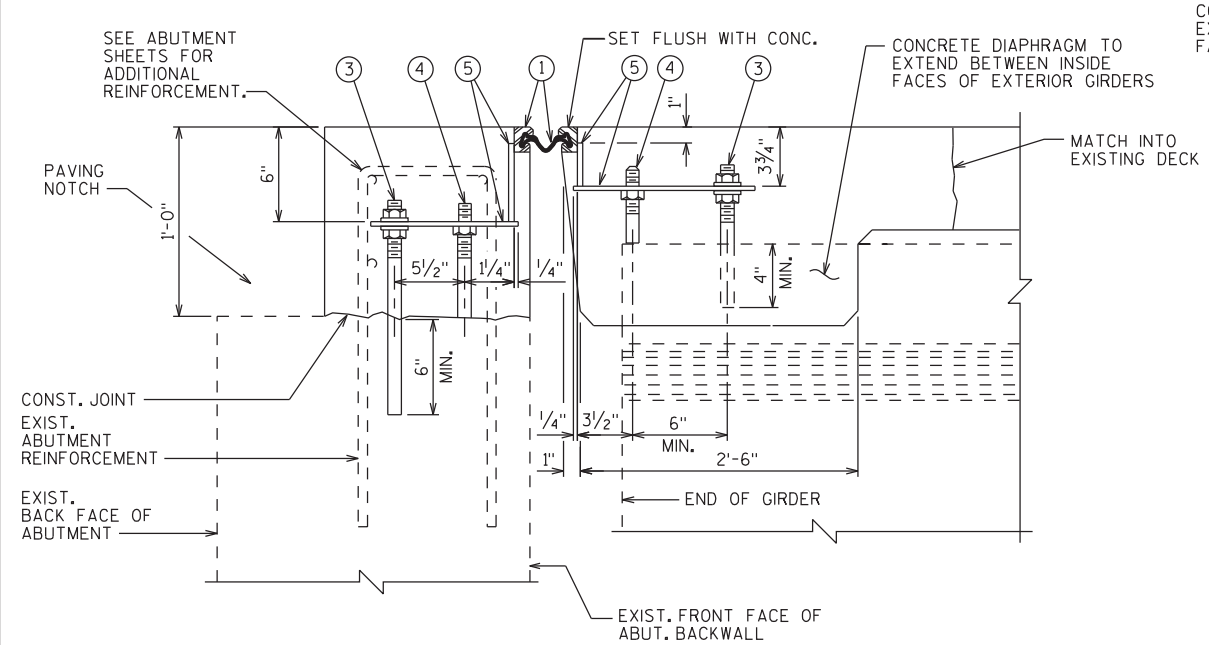


SECTION C-C

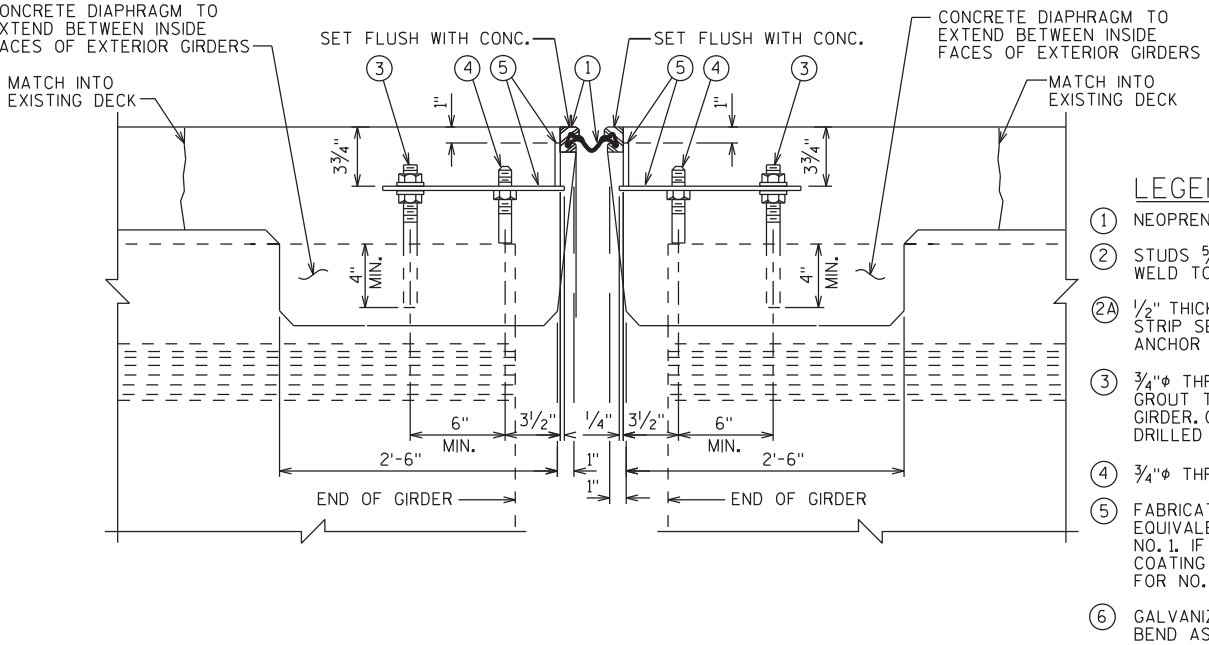


SECTION D-D

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-13-315			
DRAWN BY MSC		PLANS CK'D. CDH	
PIER PARAPET DETAILS		SHEET 11 OF 13	

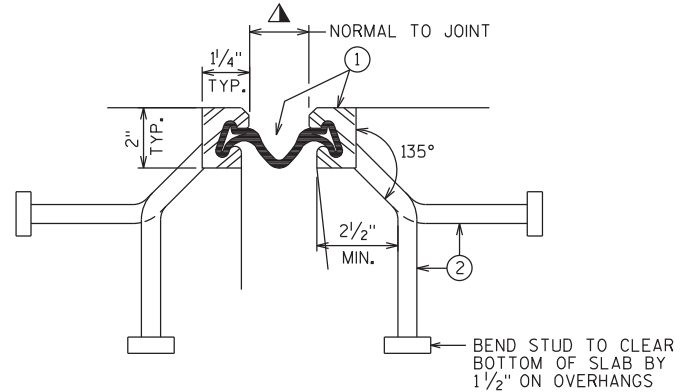


TYPICAL SECTION THRU JOINT AT ABUTMENTS
NORMAL TO C SUBSTRUCTURE

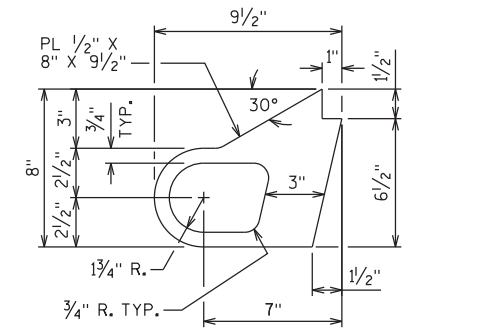


TYPICAL SECTION THRU JOINT AT PIERS
NORMAL TO C SUBSTRUCTURE

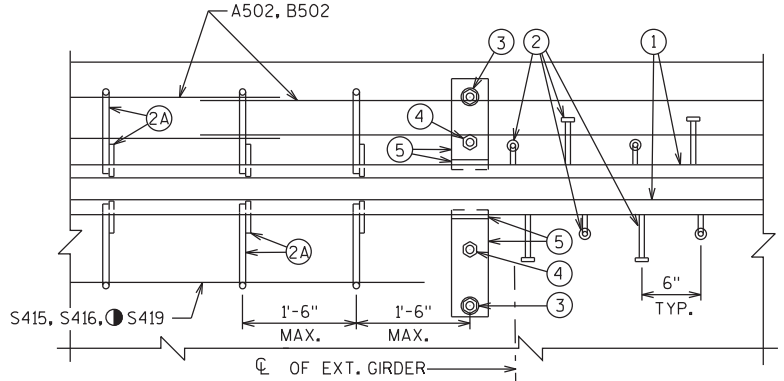
- LEGEND**
- ① NEOPRENE STRIP SEAL (4 - INCH) AND STEEL EXTRUSIONS.
 - ② STUDS 5/8"φ X 6 3/8" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.
 - ②A 1/2" THICK ANCHOR PLATE WITH 5/8"φ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.
 - ③ 3/4"φ THREADED ROD WITH 2 NUTS AND PLATE WASHERS. GROUT THREADED ROD INTO FIELD DRILLED HOLES ON C OF GIRDER. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.
 - ④ 3/4"φ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 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"φ HOLE FOR NO. 3 AND 1"φ HOLE FOR NO. 4.
 - ⑥ GALVANIZED PLATE 3/8" X 10" X 2'-0" LONG WITH HOLES FOR NO. 7. BEND AS SHOWN.
 - ⑦ 3/4"φ X 1 1/2" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.
 - ⑧ 3/4"φ X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
 - ⑨ 3/4"φ X 2 1/4" GALVANIZED THREADED COUPLING.
 - ⑩ 1" X 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.



SECTION THRU JOINT
EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS, MEDIANS AND SIDEWALKS



ALTERNATE STRIP SEAL ANCHOR

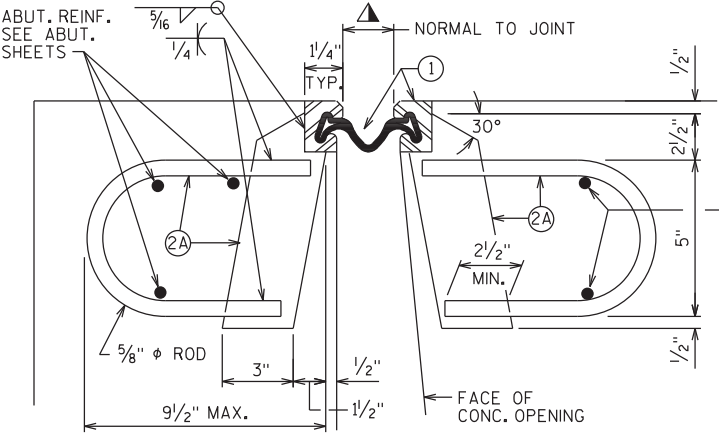


PART PLAN

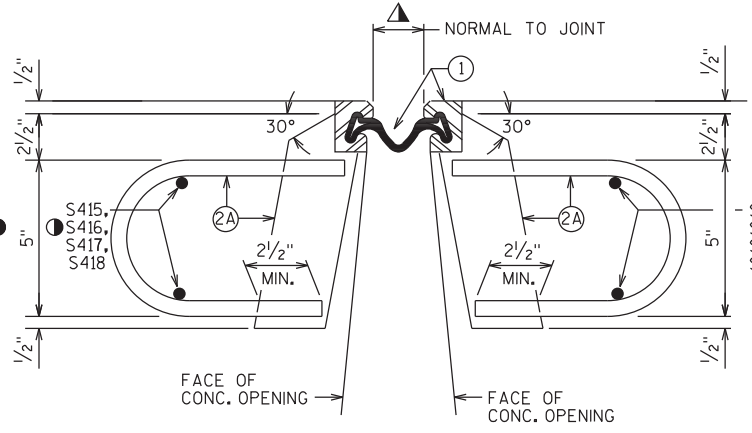
TEMPERATURE TABLE

SHADED UNDERSIDE DECK TEMP. (°F)	JOINT OPENING (NORMAL TO JT.)		
	PIERS 4, 8, 12, 16, 20 & 24	PIERS 27 & 30	ABUTMENTS
85°	1 3/8"	1 5/8"	1 3/4"
75°	1 5/8"	1 3/4"	
65°	1 3/4"	1 1/8"	
55°	2"	2 1/8"	
45°	2 1/4"	2 1/4"	
35°	2 1/2"	2 3/8"	
25°	2 5/8"	2 5/8"	
15°	2 7/8"	2 3/4"	
5°	3 1/8"	2 7/8"	

A SMALL JOINT 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.



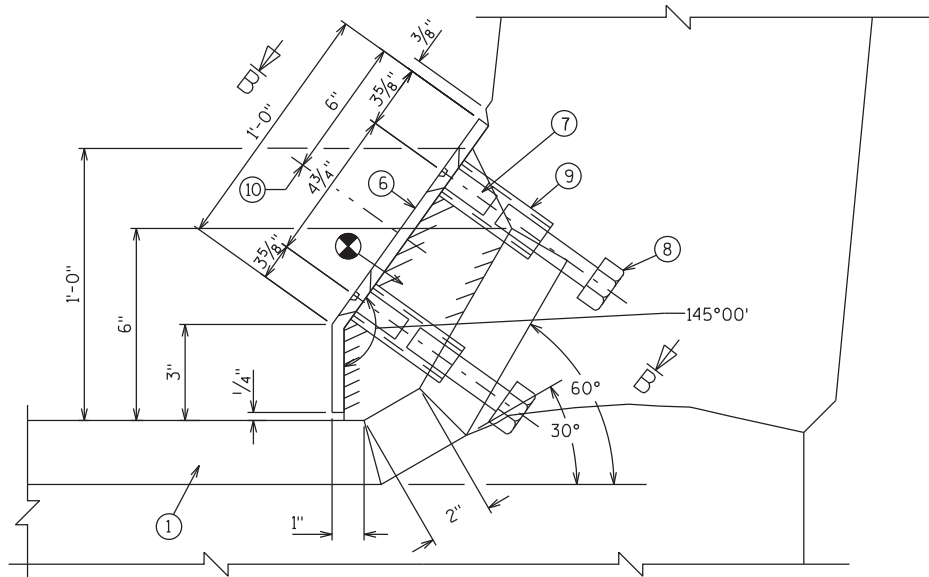
SECTION THRU JOINT AT ABUTMENTS
ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.



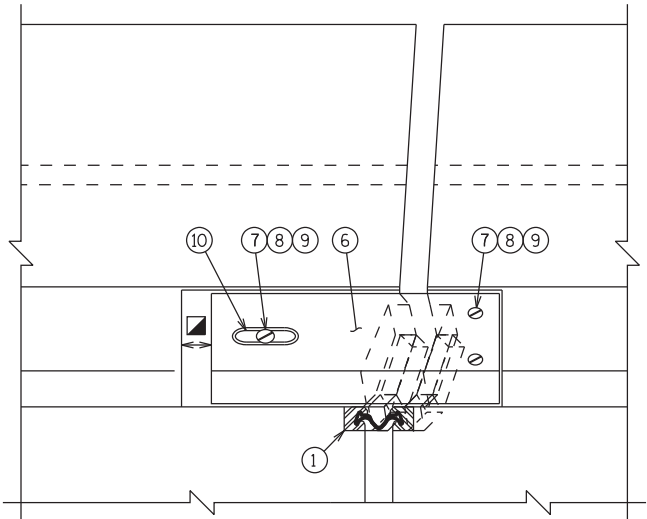
SECTION THRU JOINT AT PIERS
ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.

- GENERAL NOTES**
- ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS, UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION. IF USED, 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 AND SWEEP.
 - FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN AND SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.
 - SANDBLAST PLATES, SUPPORTS AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.
 - ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORM TO ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.
 - STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-13-315".
 - BAR COUPLERS REQUIRED

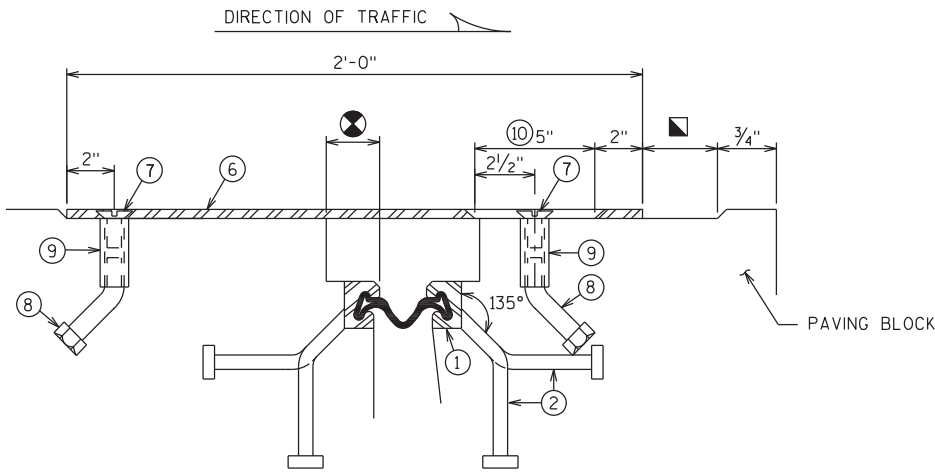
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-13-315			
DRAWN BY MSC		PLANS CK'D. CDH	
EXPANSION DEVICE			SHEET 12 OF 13



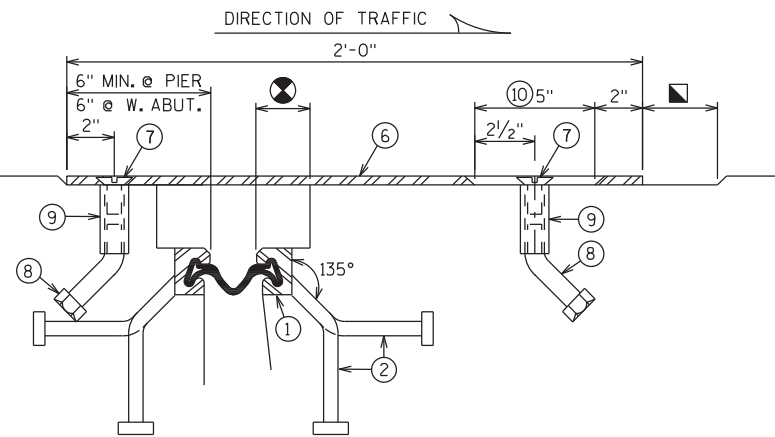
SECTION A-A
(SOUTH PARAPET TYPE 'B' SHOWN,
NORTH PARAPET TYPE 'C' SIMILAR)



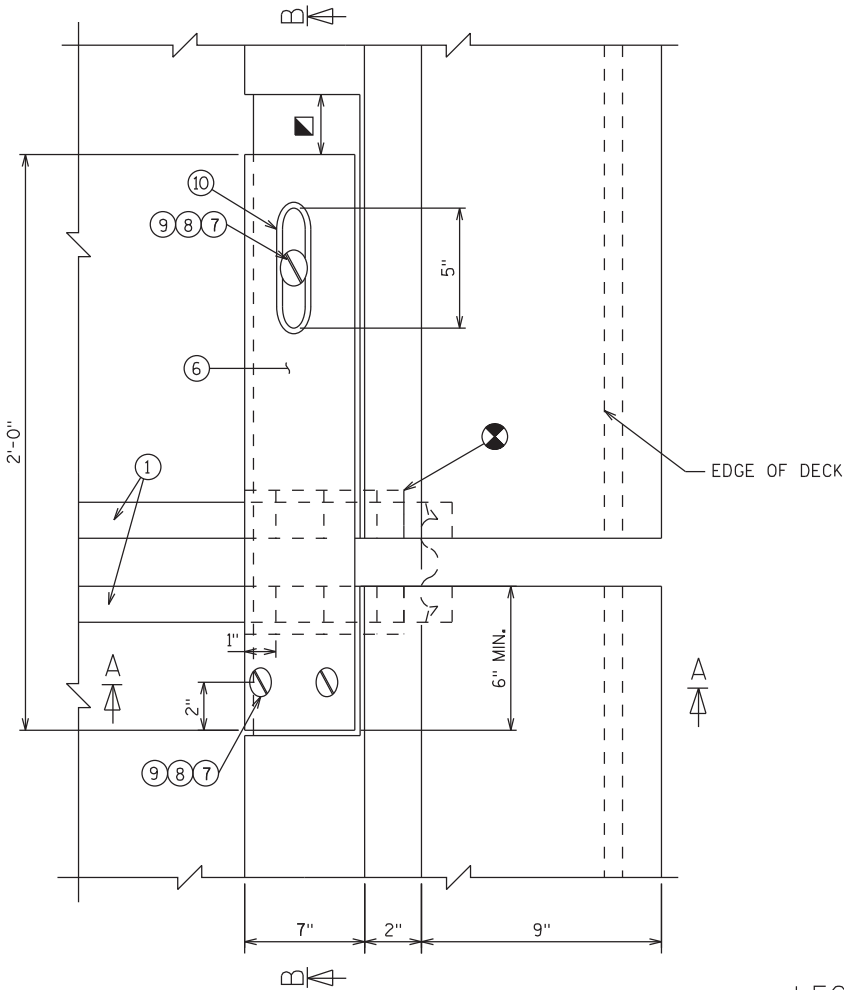
VIEW OF PARAPET PLATE
FROM ROADWAY



SECTION B-B
(AT EAST ABUT.)



SECTION B-B
(AT WEST ABUT. AND AT PIERS)

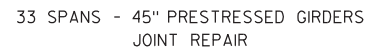


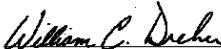
PLAN
(SOUTH PARAPET TYPE 'B' SHOWN,
NORTH PARAPET TYPE 'C' SIMILAR)

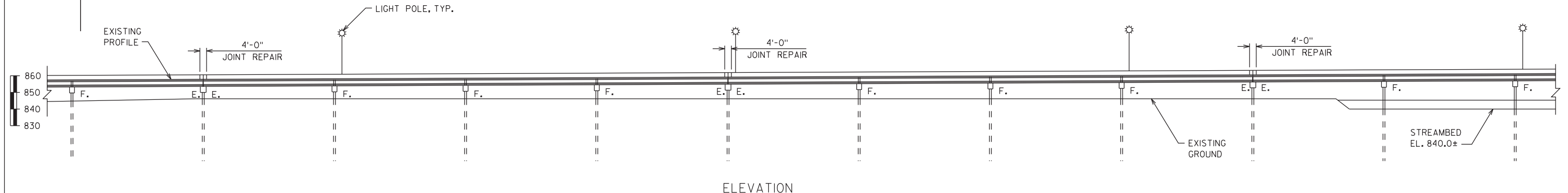
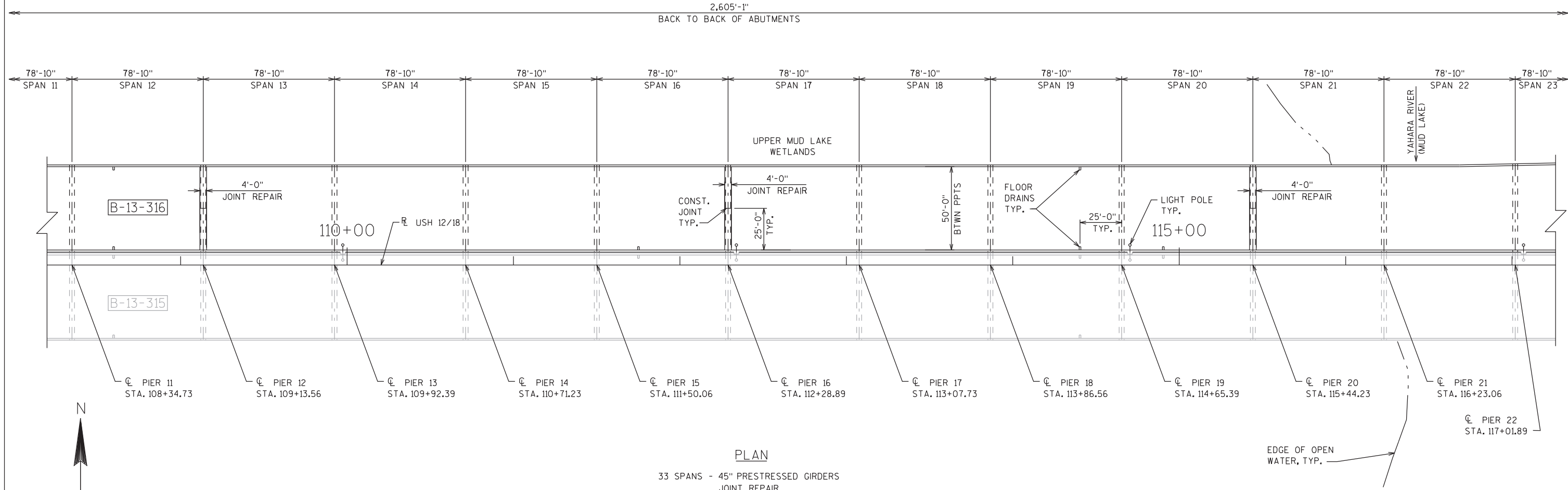
LEGEND

- ⊗ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.
- ▣ JOINT OPENING DIMENSION ALONG SKEW PLUS 1/2".

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-13-315			
DRAWN BY		MSC	PLANS CK'D. CDH
COVER PLATE DETAILS		SHEET 13 OF 13	



NO.		DATE		REVISION		BY	
				MICHAEL BAKER JR., INC 7633 GANSER WAY, SUITE 206 MADISON, WI 53719			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION							
ACCEPTED						KAR 11/07/12	
		CHIEF STRUCTURES DESIGN ENGINEER				DATE	
STRUCTURE B-13-316							
WB USH 12/18 (BELTLINE) OVER YAHARA RIVER							
COUNTY				DANE		TOWN/CITY/VILLAGE	
						MONONA	
DESIGN SPEC. REHABILITATION N/A							
DESIGNED BY		MSC		DESIGN CK'D.		CDH	
DRAWN BY		MSC		PLANS CK'D.		CDH	
GENERAL PLAN						SHEET 1 OF 13	
1 OF 3							



GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

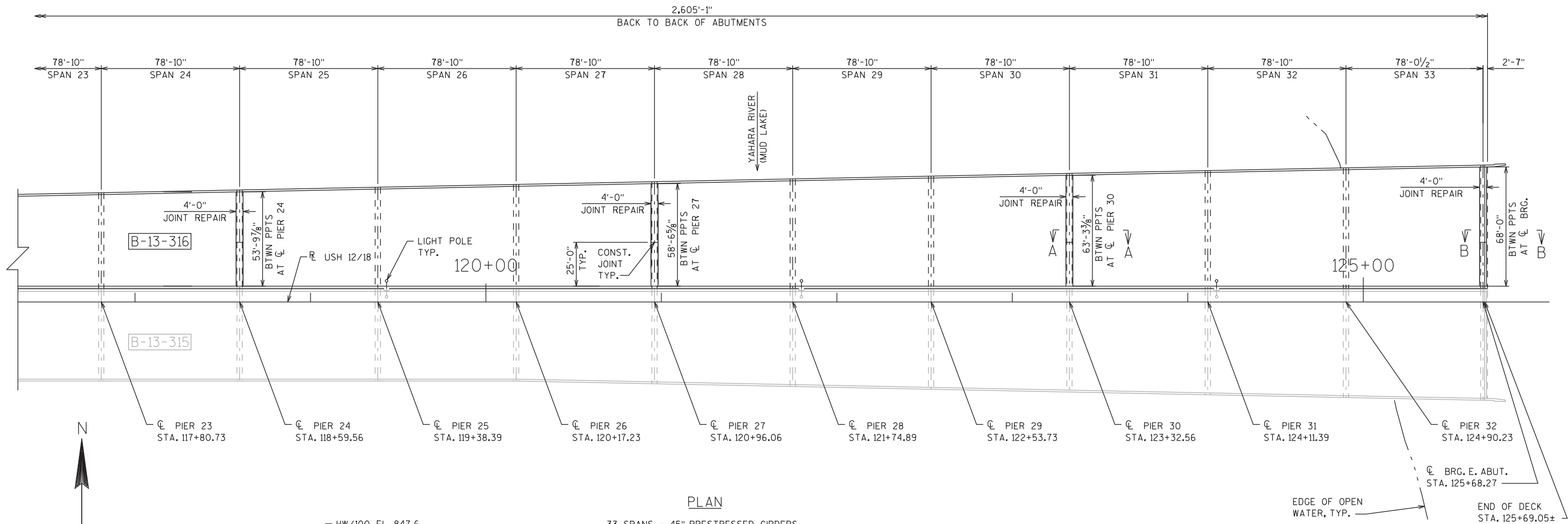
DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE, SHALL BE PAID FOR IN THE LUMP SUM PRICE BID AS "EXPANSION DEVICE B-13-316".

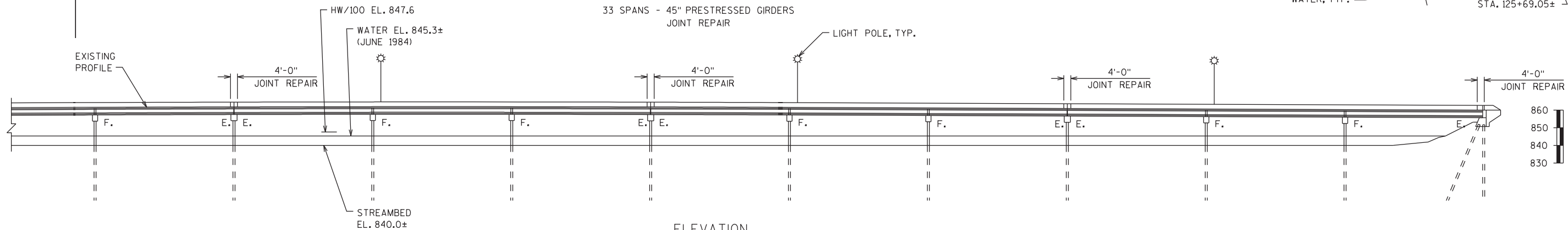
EXCAVATION REQUIRED TO COMPLETE THE PAVING BLOCK AT THE ABUTMENTS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "JOINT REPAIR".

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-13-316			
DRAWN BY MSC		PLANS CK'D. CDH	
GENERAL PLAN 2 OF 3			SHEET 2 OF 13

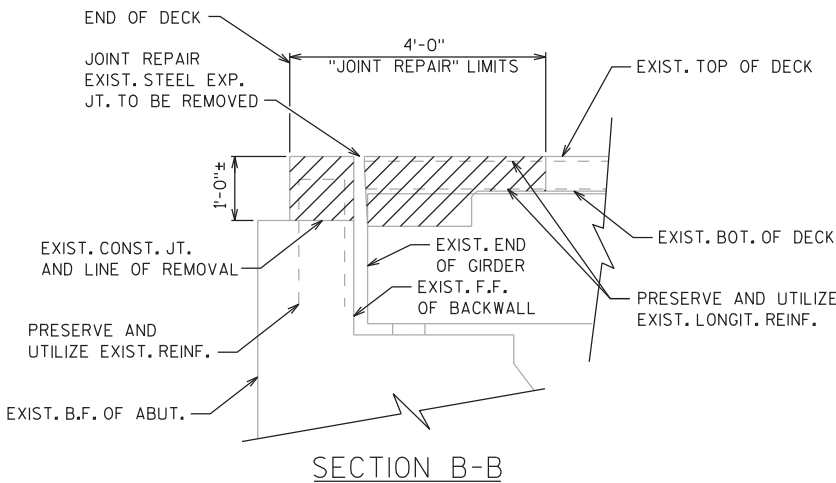
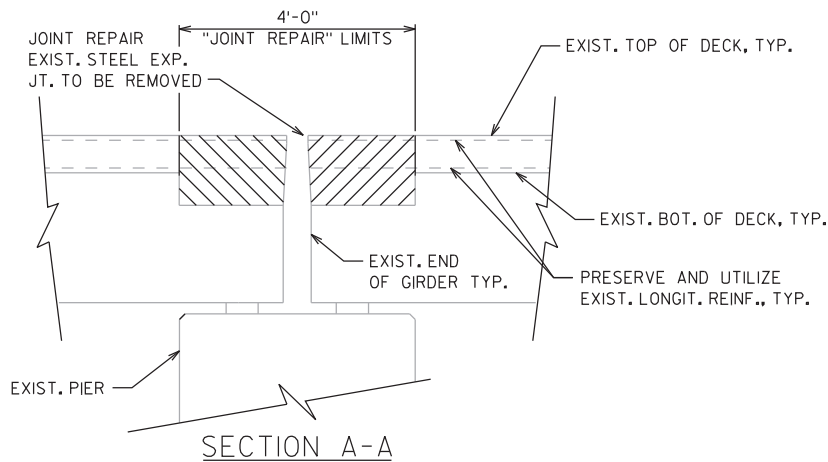


PLAN

33 SPANS - 45" PRESTRESSED GIRDERS
JOINT REPAIR



ELEVATION



NOTES

SEE SHTS. 12 AND 13 FOR DETAILS OF NEW EXP. DEVICE

PARAPET TO BE REMOVED AND REPLACED WITHIN LIMITS OF JOINT REPAIR

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-13-316			
DRAWN BY MSC		PLANS CK'D. CDH	
GENERAL PLAN 3 OF 3			SHEET 3 OF 13

TOTAL ESTIMATED QUANTITIES

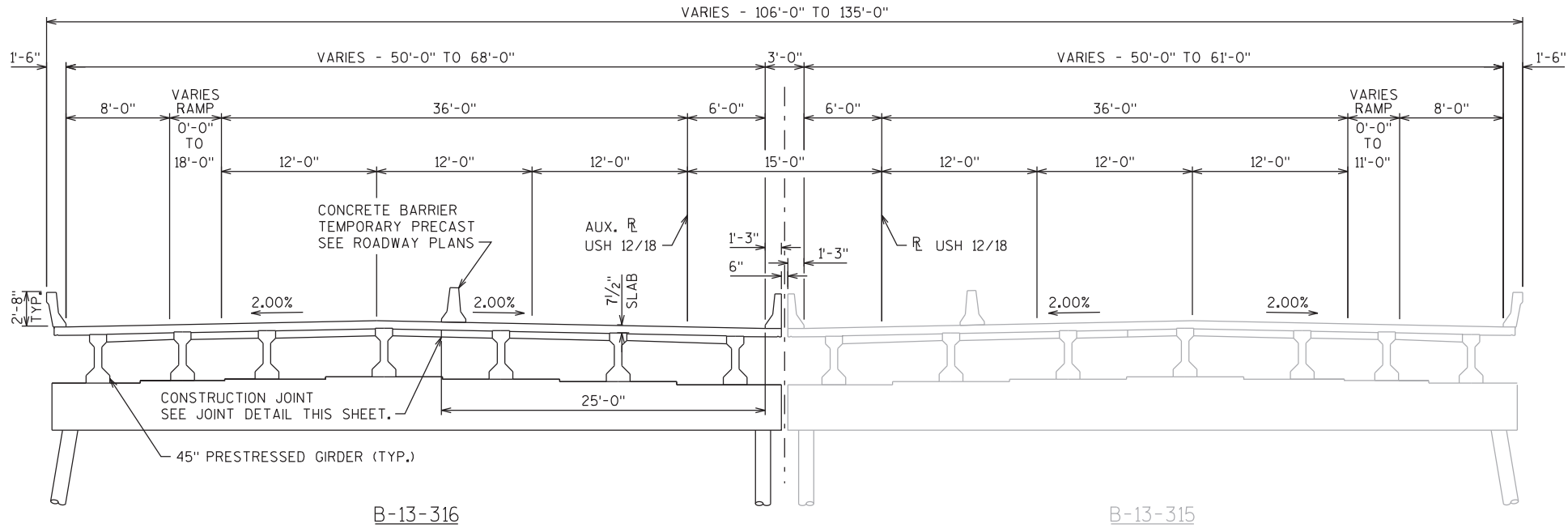
BID ITEM	DESCRIPTION	UNIT	W. ABUT.	E. ABUT.	SUPER.	TOTAL
203.0225.S	DEBRIS CONTAINMENT (B-13-316)	LS	--	--	--	1
203.0700.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH DEBRIS CAPTURE SYSTEM STA. 112+68 'AUX'	LS	--	--	--	1
502.3100	EXPANSION DEVICE (B-13-316)	LS	--	--	--	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	--	--	271	271
502.5005	MASONRY ANCHORS TYPE L NO.5 BARS	EACH	54	72	--	126
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	450	600	25,720	26,770
505.0904	BAR COUPLERS NO. 4	EACH	--	--	36	36
505.0905	BAR COUPLERS NO. 5	EACH	3	3	--	6
505.0906	BAR COUPLERS NO. 6	EACH	--	--	130	130
505.0907	BAR COUPLERS NO. 7	EACH	--	--	108	108
509.0301	PREPARATION DECKS TYPE 1	SY	--	--	90	90
509.0302	PREPARATION DECKS TYPE 2	SY	--	--	36	36
509.0500	CLEANING DECKS	SY	--	--	108	108
509.1000	JOINT REPAIR	SY	--	--	266	266
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	2.1	2.9	96	101
646.0790.S	REMOVING RAISED PAVEMENT MARKERS	EACH	--	--	52	52

BENCH MARK TABLE

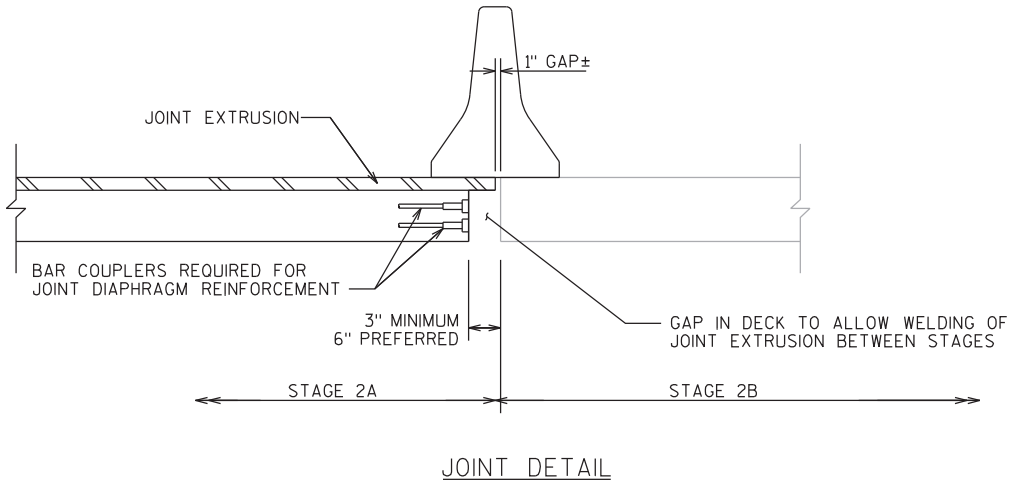
No.	STATION	OFFSET	DESCRIPTION	ELEVATION
1	98+58.40	59.25' L	PK NAIL	853.91
2	98+47.69	42.13' R	PK NAIL	853.96
3	128+10.49	59.76' L	PK NAIL	861.73
4	128+33.50	42.45' R	PK NAIL	862.37

STATE PROJECT NUMBER

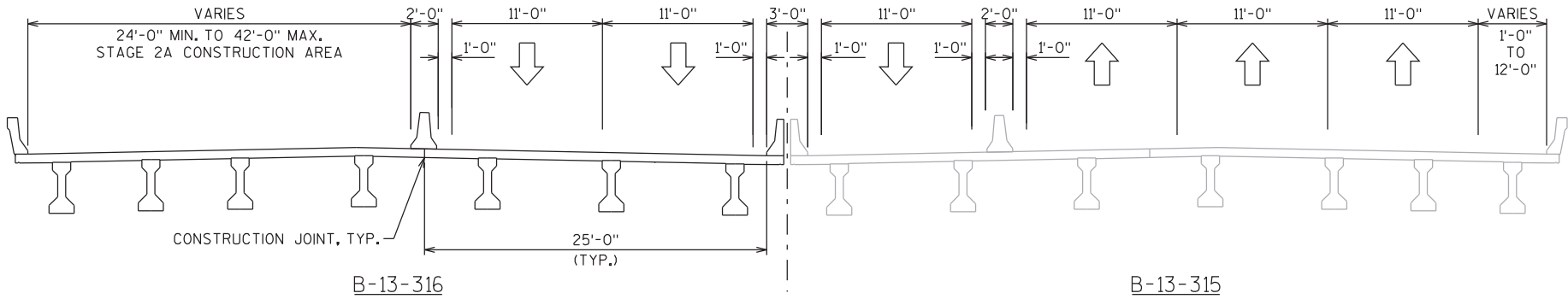
1206-04-61



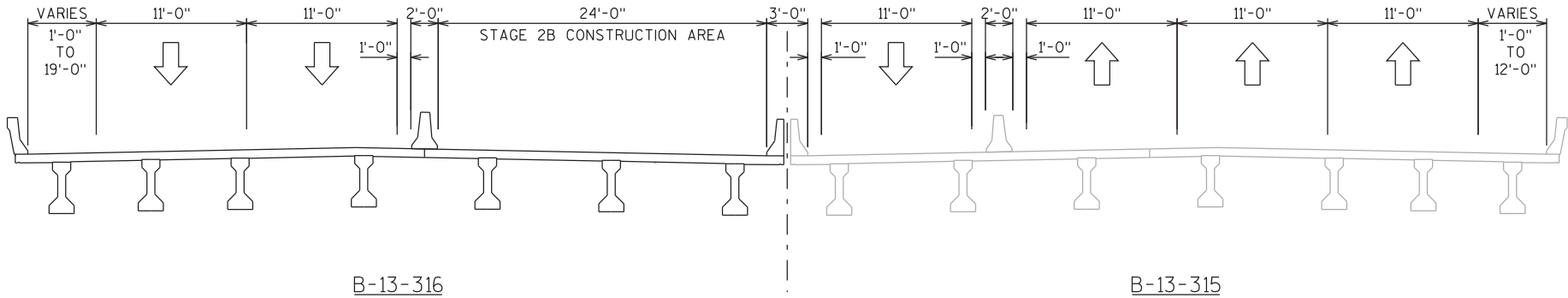
CROSS SECTION THRU ROADWAY
(LOOKING EAST)



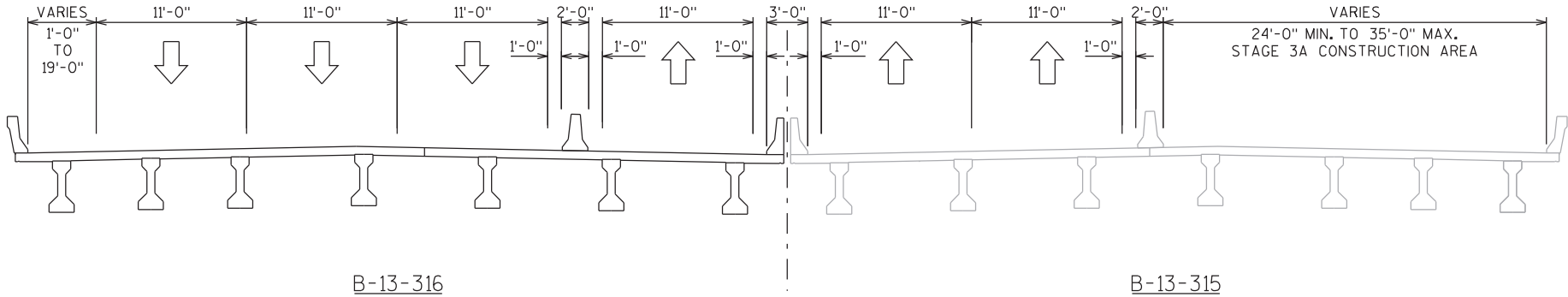
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-13-316			
DRAWN BY MSC		PLANS CK'D. CDH	
CROSS SECTION & QUANTITIES			SHEET 4 OF 13



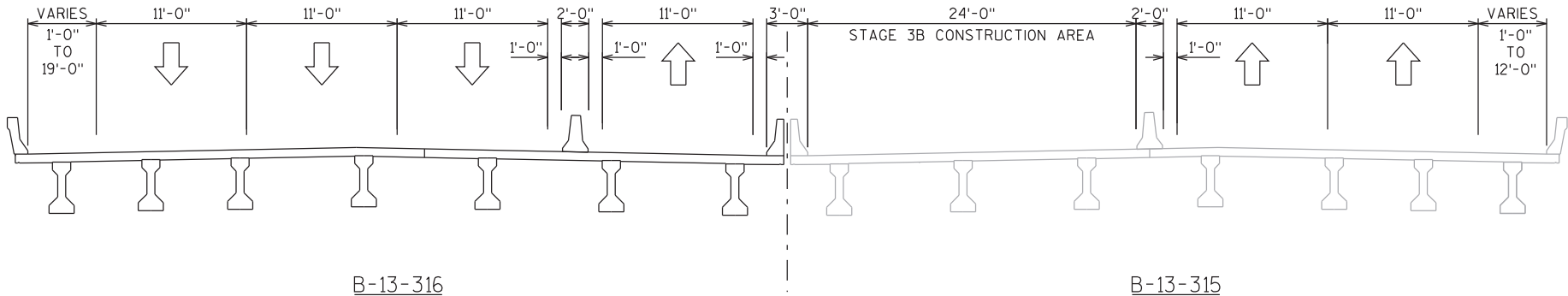
CROSS SECTION THRU ROADWAY
STAGE 2A



CROSS SECTION THRU ROADWAY
STAGE 2B



CROSS SECTION THRU ROADWAY
STAGE 3A

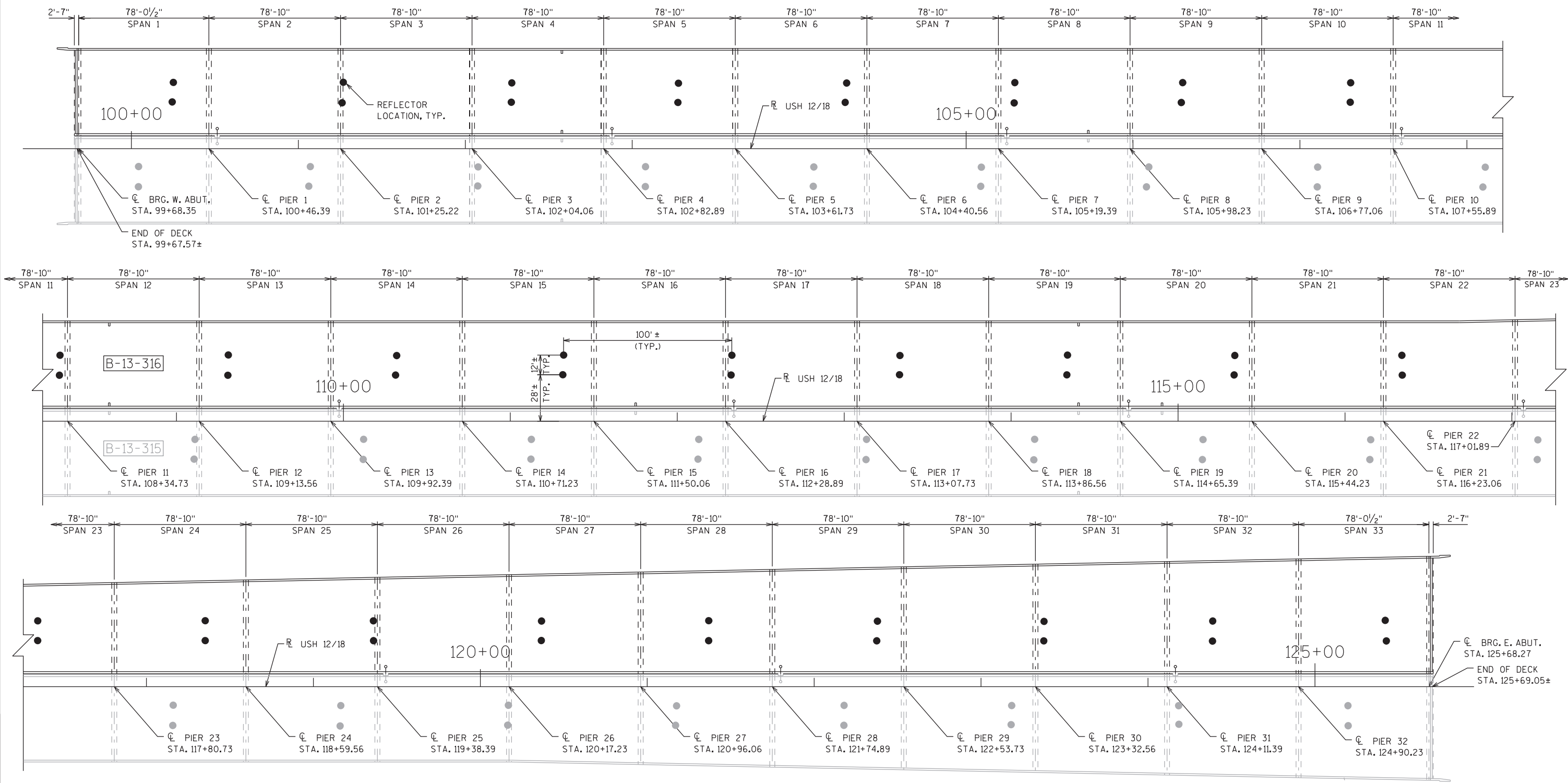


CROSS SECTION THRU ROADWAY
STAGE 3B

NOTES

SEE ROADWAY PLANS FOR COMPLETE
PROJECT STAGING DETAILS.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-13-316			
DRAWN BY		MSC	PLANS CK'D. CDH
CONSTRUCTION STAGING		SHEET 5 OF 13	



PLAN

REMOVING RAISED PAVEMENT MARKERS

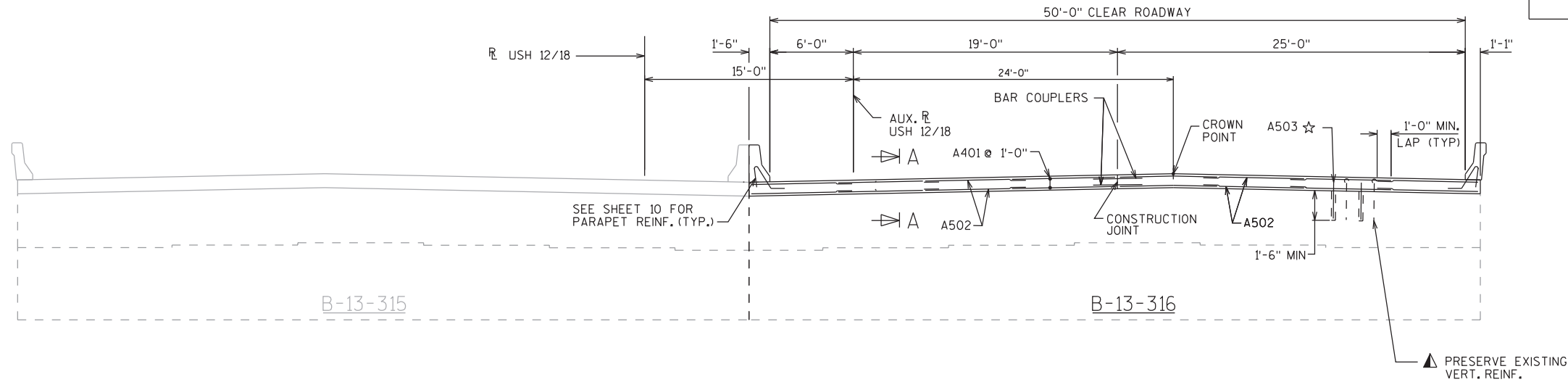
LEGEND

- EXISTING RAISED PAVEMENT MARKER TO BE REMOVED AND PATCHED.

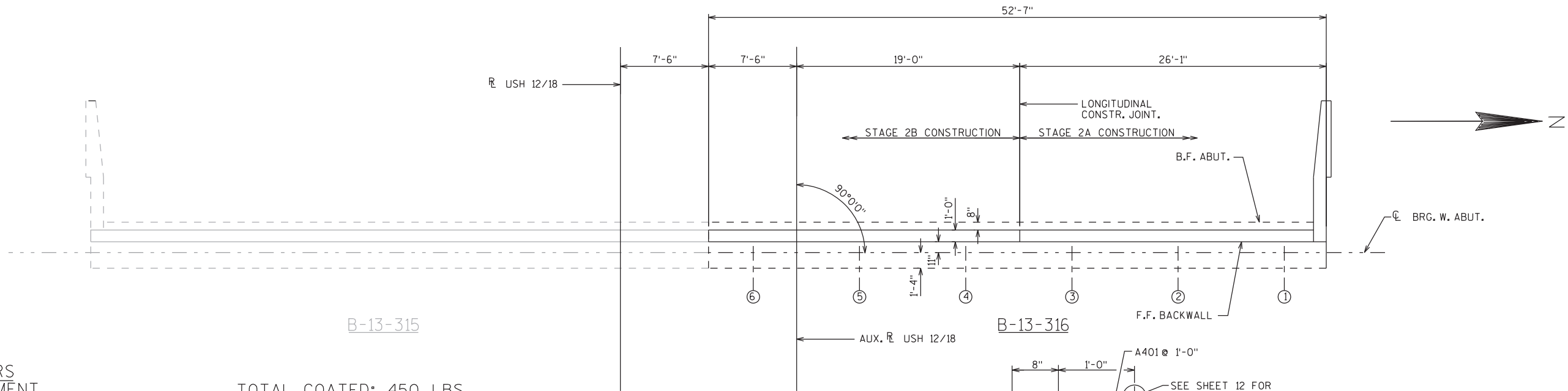
NOTES

ALL WORK TO BE PAID FOR UNDER THE BID ITEM "REMOVING RAISED PAVEMENT MARKERS".

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-13-316			
DRAWN BY		MSC	PLANS CK'D. CDH
REFLECTOR PLAN			SHEET 6 OF 13



ELEVATION
(LOOKING WEST)



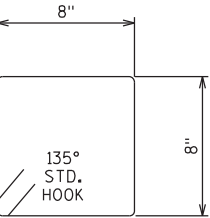
PLAN

BILL OF BARS
WEST ABUTMENT

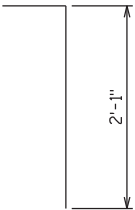
TOTAL COATED: 450 LBS

BAR MARK	NO. REQ'D. 2A	NO. REQ'D. 2B	NO. REQ'D. TOTAL	LENGTH	COAT	BENT	LOCATION
A401	27	27	54	3'-2"	X	X	PAVING BLOCK - VERT.
A502	12	12	24	7'-6"	X		PAVING BLOCK - HORIZ.
A503	27	27	54	2'-6"	X	X	PAVING BLOCK - VERT. - CONC. MASONRY ANCHORS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
ALL BAR BEND DIMESIONS ARE OUT-TO-OUT OF BAR.



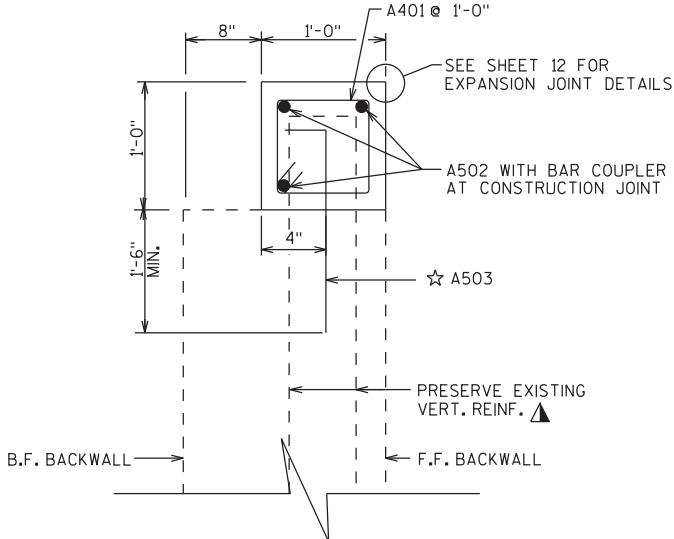
A401



A503

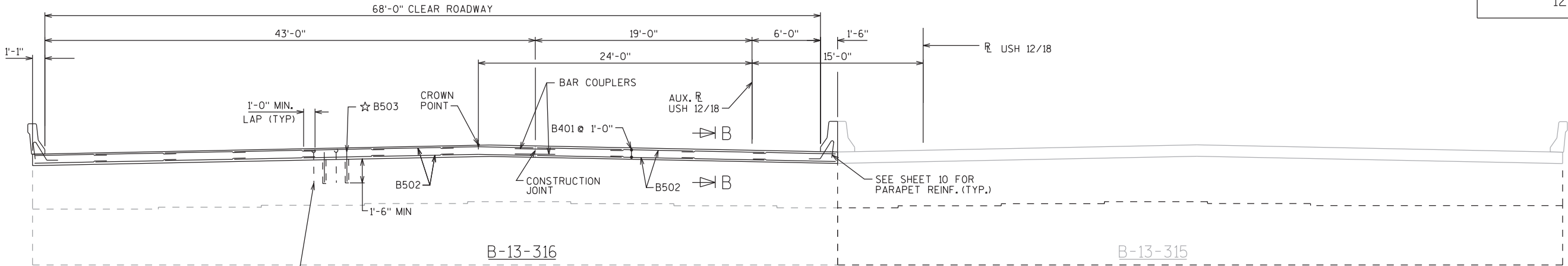
LEGEND

- ▲ EXISTING BARS ARE LIKELY TO BE CORRODED AND/OR DAMAGED DURING CONCRETE REMOVAL. PRESERVE AND INCORPORATE AS MUCH REBAR AS PRACTICAL. SUPPLEMENT WITH THE BARS INDICATED BY ☆.
- ☆ "MASONRY ANCHORS TYPE L NO 5 BARS". MIN. PULLOUT CAPACITY OF 19 KIPS. EMBED A MINIMUM OF 1'-6" INTO CONCRETE. SPACE AT 1'-0". TURN 10" LEG AS NECESSARY TO FIT.
- ⊕ INDICATES GIRDER NUMBER
- BAR COUPLERS REQUIRED



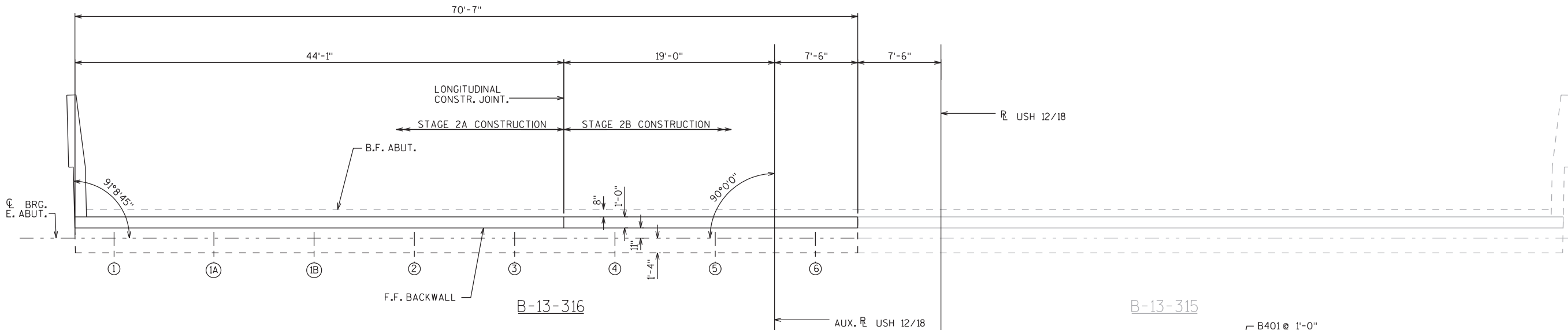
SECTION A-A

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-13-316			
DRAWN BY MSC		PLANS CK'D. CDH	
WEST ABUTMENT		SHEET 7 OF 13	



▲ PRESERVE EXISTING VERT. REINF.

ELEVATION
(LOOKING EAST)

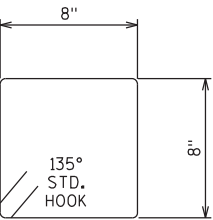


BILL OF BARS
EAST ABUTMENT

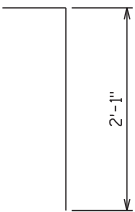
TOTAL COATED: 600 LBS

BAR MARK	NO. REQ'D. 2A	NO. REQ'D. 2B	NO. REQ'D. TOTAL	LENGTH	COAT	BENT	LOCATION
B401	45	27	72	3'-2"	X	X	PAVING BLOCK - VERT.
B502	21	12	33	7'-6"	X		PAVING BLOCK - HORIZ.
B503	45	27	72	2'-6"	X	X	PAVING BLOCK - VERT. - CONC. MASONRY ANCHORS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
ALL BAR BEND DIMENSIONS ARE OUT-TO-OUT OF BAR.



B401



B503

LEGEND

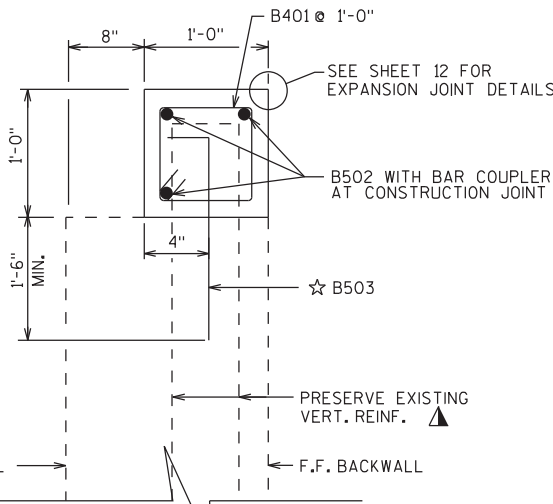
▲ EXISTING BARS ARE LIKELY TO BE CORRODED AND/OR DAMAGED DURING CONCRETE REMOVAL. PRESERVE AND INCORPORATE AS MUCH REBAR AS PRACTICAL. SUPPLEMENT WITH THE BARS INDICATED BY ☆.

☆ "MASONRY ANCHORS TYPE L NO 5 BARS". MIN. PULLOUT CAPACITY OF 19 KIPS. EMBED A MINIMUM OF 1'-6" INTO CONCRETE. SPACE AT 1'-0". TURN 10" LEG AS NECESSARY TO FIT.

⊕ INDICATES GIRDER NUMBER

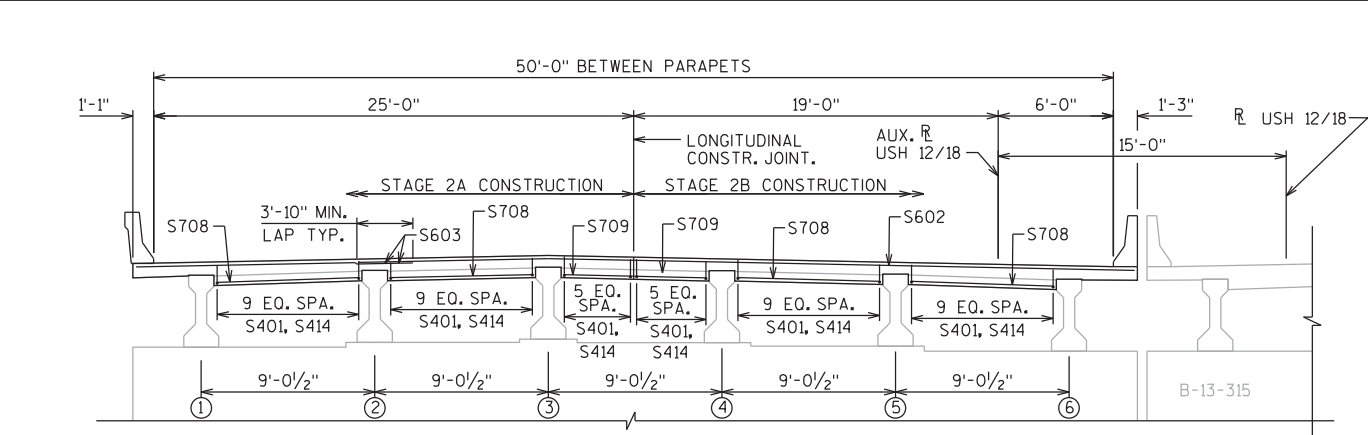
● BAR COUPLERS REQUIRED

B-13-315

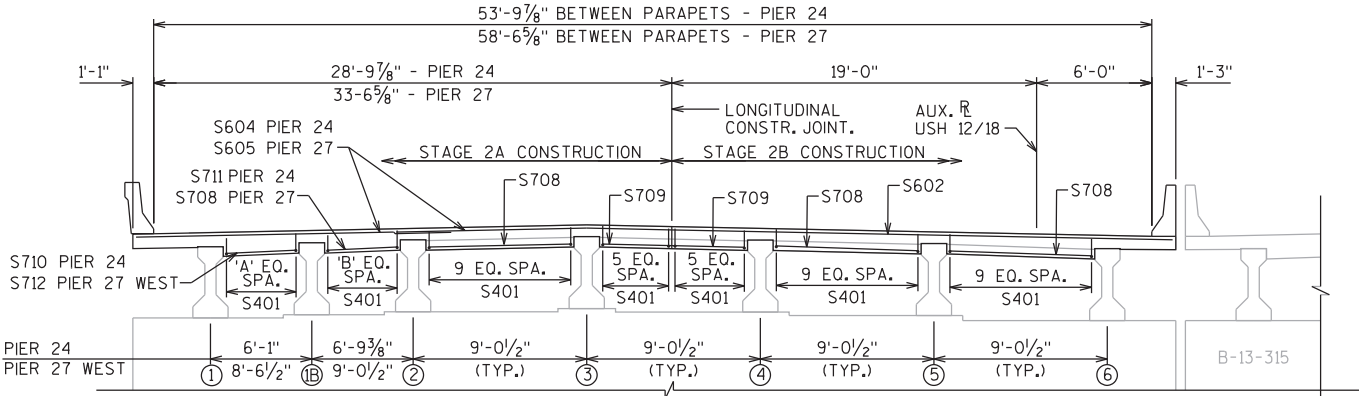


SECTION B-B

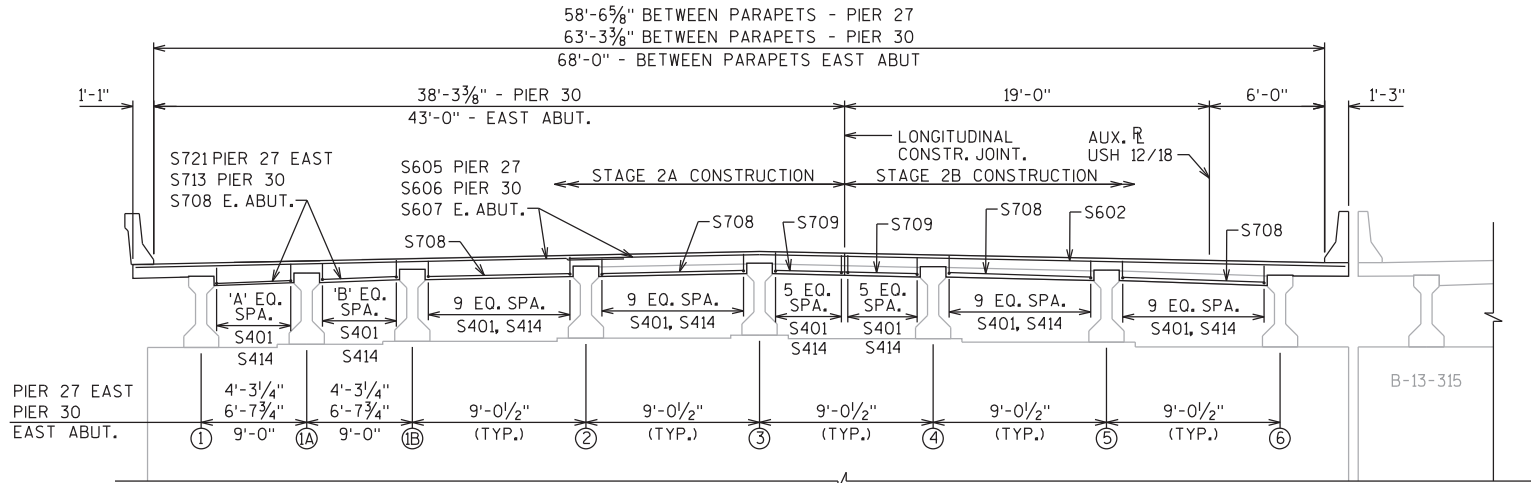
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-13-316			
		DRAWN BY MSC	PLANS CK'D. CDH
EAST ABUTMENT		SHEET 8 OF 13	



ELEVATION
WEST ABUT. & PIERS 4, 8, 12, 16 & 20



ELEVATION
PIERS 24 & PIER 27 (WEST SIDE)



ELEVATION
EAST ABUT., PIER 27 (EAST SIDE) & PIER 30

BAR SPACING TABLE

LOCATION	'A' EQ. SPA.	'B' EQ. SPA.
PIER 24	6	7
PIER 27 WEST	9	9
PIER 27 EAST	4	4
PIER 30	6	6
E. ABUT.	9	9

(S401, S414 @ PIERS 24, 27, 30 & E. ABUT.)

BILL OF BARS - DECK JOINTS

TOTAL COATED: 24,540 LBS

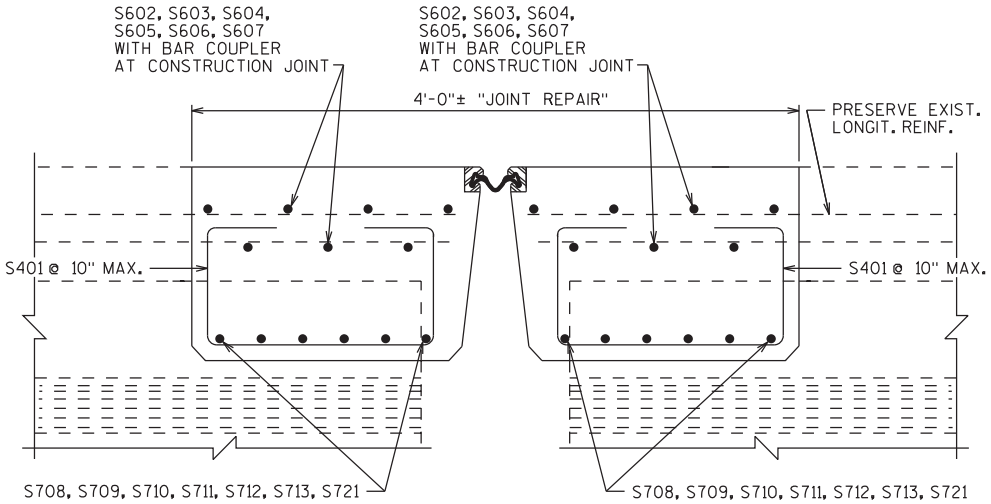
BAR MARK	NO. REQ'D. 2A	NO. REQ'D. 2B	NO. REQ'D. TOTAL	LENGTH	COAT	BENT	LOCATION
S401	474	416	890	3'-9"	X	X	SLAB - JOINT AT PIERS
S602	--	130	130	26'-1"	X		SLAB - JOINT AT PIERS & ABUTMENTS
S603	158	--	158	15'-1"	X		SLAB - JOINT AT W. ABUT., AND PIERS 4, 8, 12, 16, & 20
S604	28	--	28	17'-0"	X		SLAB - JOINT AT PIER 24
S605	28	--	28	19'-4"	X		SLAB - JOINT AT PIER 27
S606	28	--	28	21'-9"	X		SLAB - JOINT AT PIER 30
S607	18	--	18	24'-1"	X		SLAB - JOINT AT E. ABUT.
S708	216	216	432	7'-4"	X		SLAB - JOINT AT PIERS & ABUTMENTS
☆ S709	108	108	216	4'-3"	X		SLAB - JOINT AT PIERS & ABUTMENTS @ CONSTR. JOINT
S710	12	--	12	4'-5"	X		SLAB - JOINT AT PIER 27
S711	12	--	12	5'-1"	X		SLAB - JOINT AT PIER 24
S712	6	--	6	6'-10"	X		SLAB - JOINT AT PIER 27
S713	24	--	24	4'-11"	X		SLAB - JOINT AT PIER 30
S414	72	52	124	4'-9"	X	X	SLAB - JOINT AT ABUTMENTS
S415	72	72	144	9'-0"	X		SLAB AT PIERS AND ABUTS.
S416	36	36	72	4'-6"	X		SLAB AT PIERS AND ABUTS. CONSTR. JOINT
S417	4	--	4	6'-0"	X		SLAB AT PIER 24
S418	4	--	4	6'-9"	X		SLAB AT PIER 24
S419	4	--	4	8'-6"	X		SLAB AT PIER 27
S420	8	--	8	6'-7"	X		SLAB AT PIER 30
S721	12	--	12	2'-7"	X		SLAB - JOINT AT PIER 27 (AT START OF GIRDER 1A)

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
ALL BAR BEND DIMENSIONS ARE OUT-TO-OUT OF BAR.

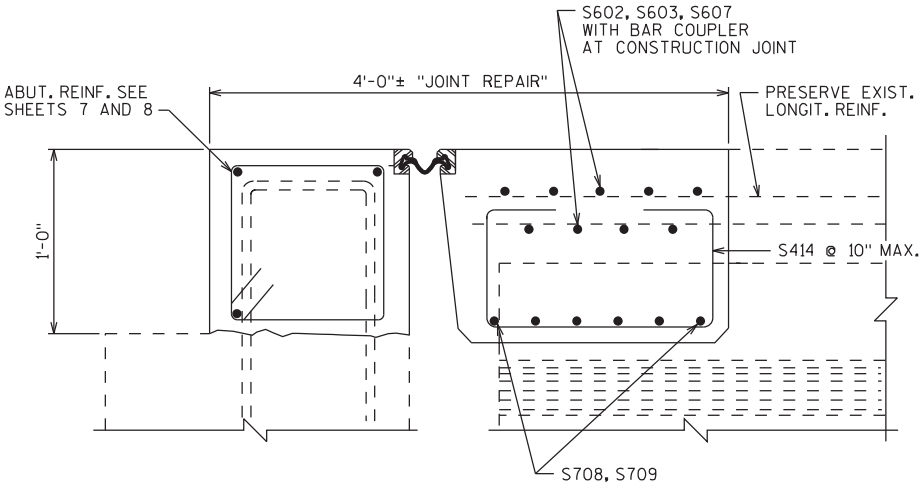
☆ ADJUST BAR LENGTHS AS NECESSARY TO ACCOMMODATE JOINT OPENING. IF BARS ARE FIELD CUT, APPLY EPOXY COATING TO BAR ENDS.

■ SEE SHT. 12 FOR LOCATION

● BAR COUPLERS REQUIRED

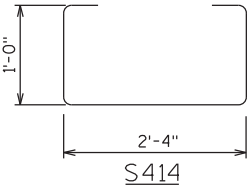
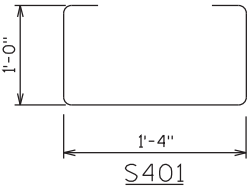


SECTION THRU JOINT AT PIERS
NORMAL TO C SUBSTRUCTURE

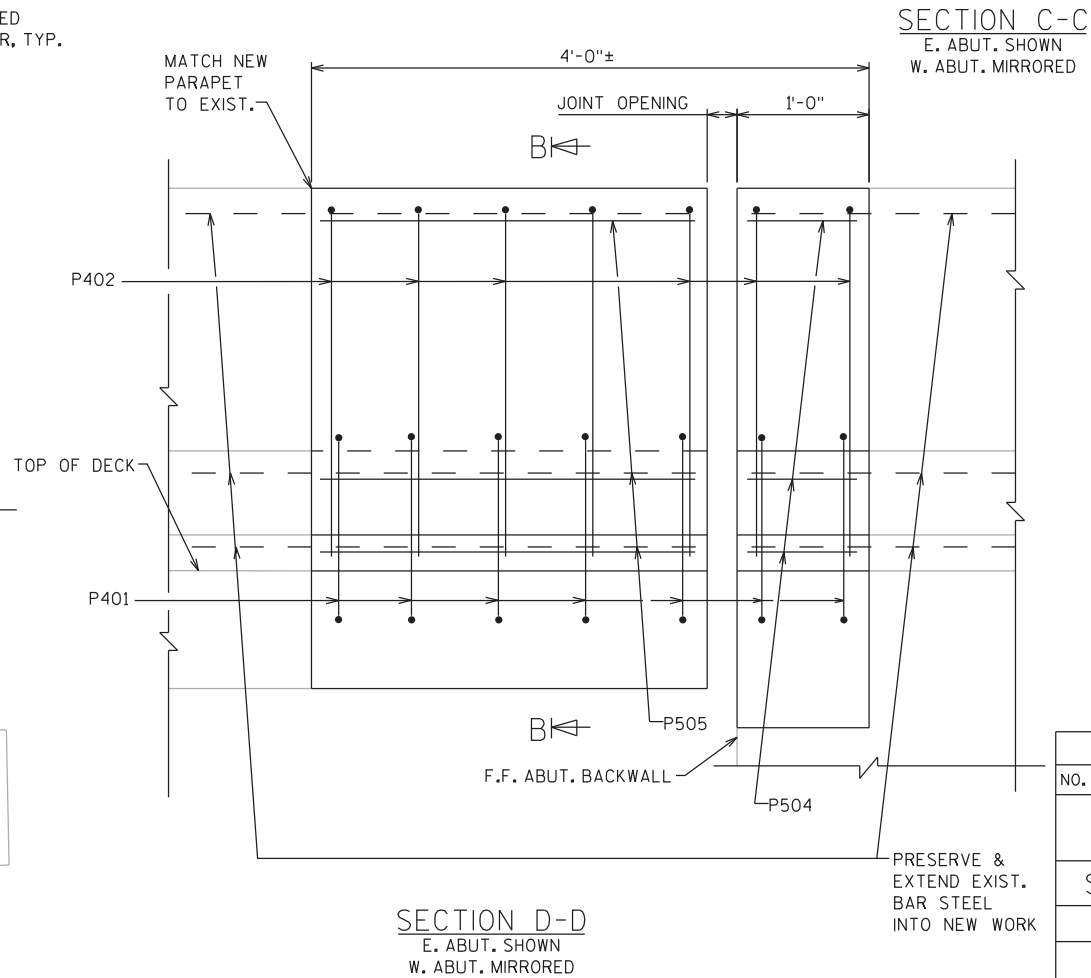
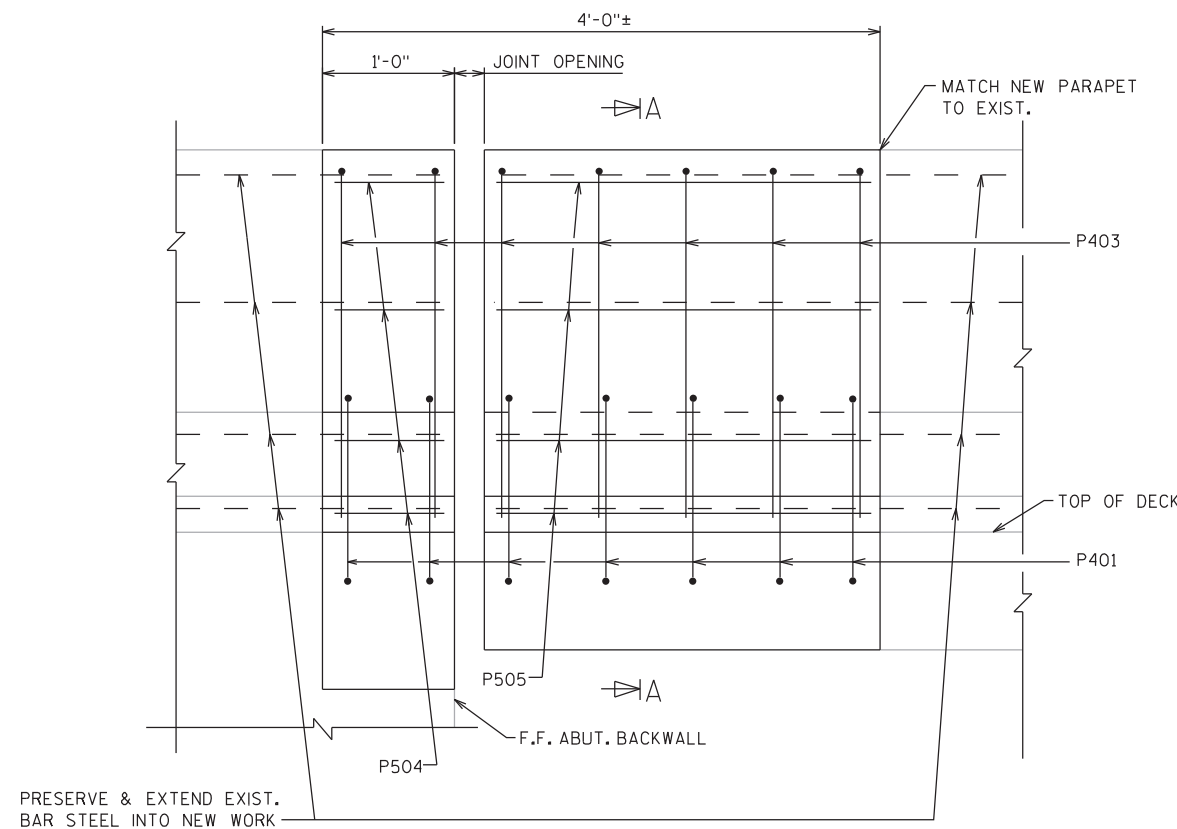
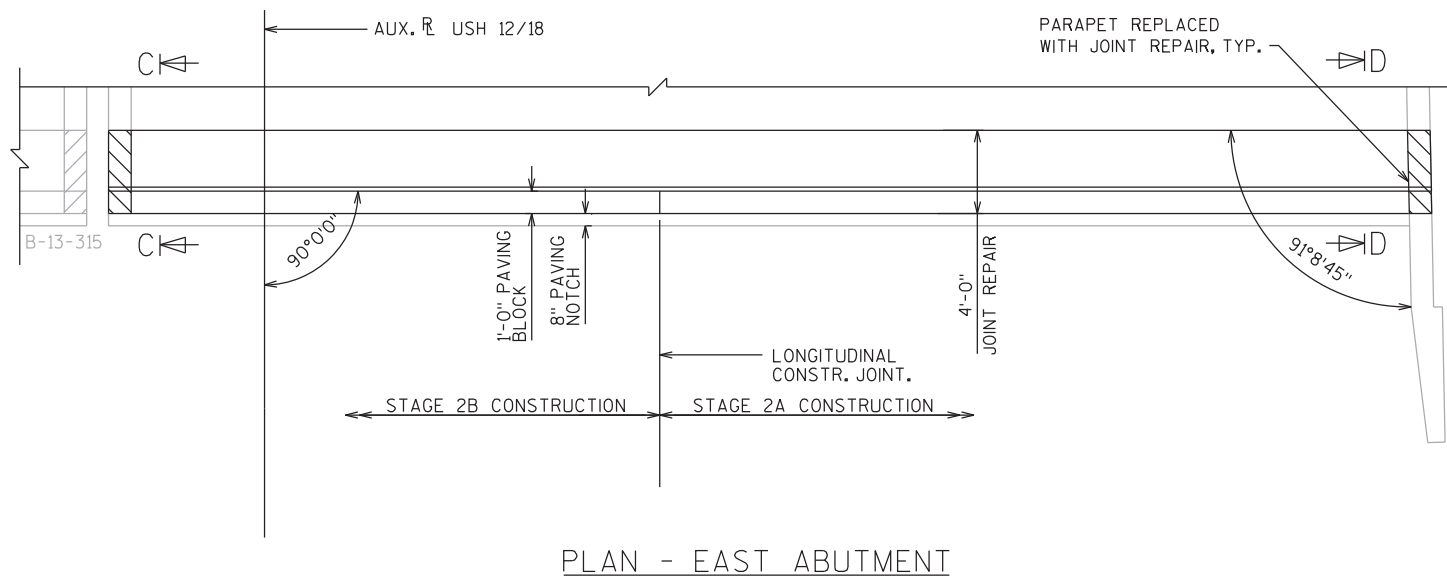
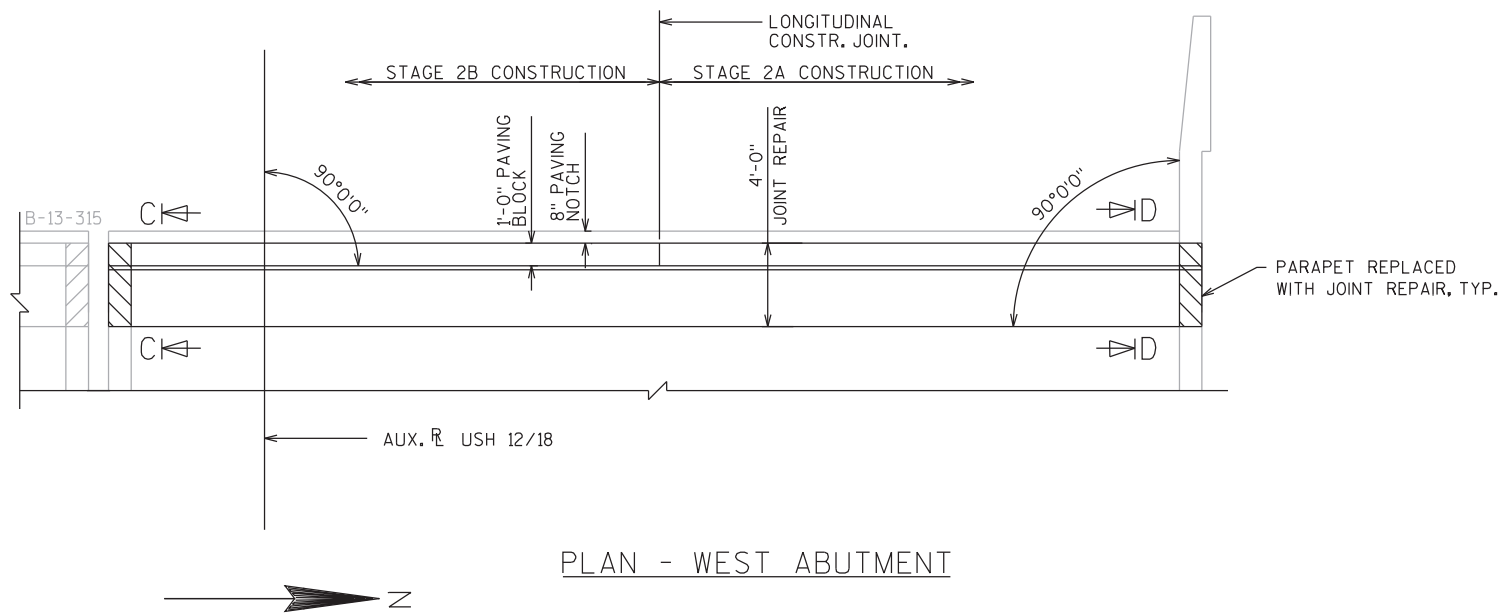
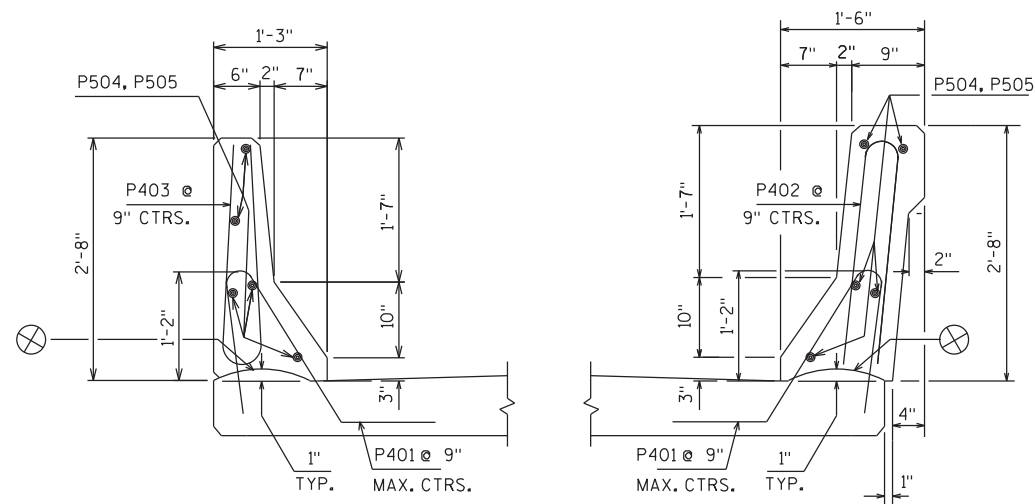


SECTION THRU JOINT AT ABUTMENTS
NORMAL TO C SUBSTRUCTURE

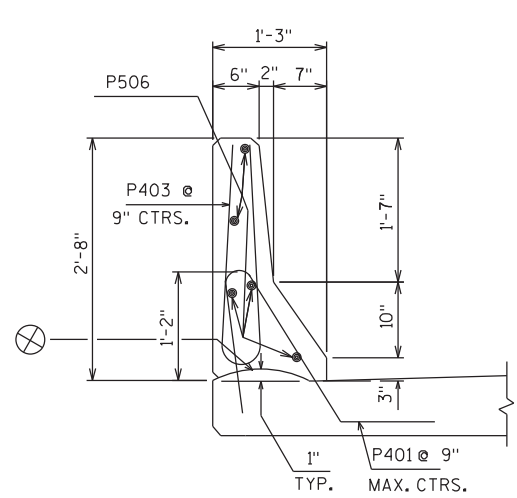
STATE PROJECT NUMBER
1206-04-61



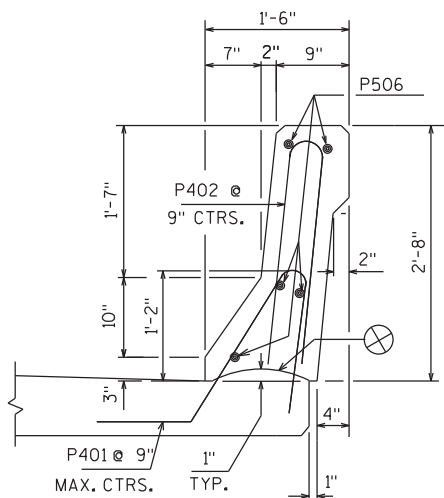
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-13-316			
DRAWN BY MSC		PLANS CK'D. CDH	
DECK JOINTS		SHEET 9 OF 13	



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-13-316			
DRAWN BY		MSC	PLANS CK'D. CDH
ABUTMENT PARAPET DETAILS			SHEET 10 OF 13

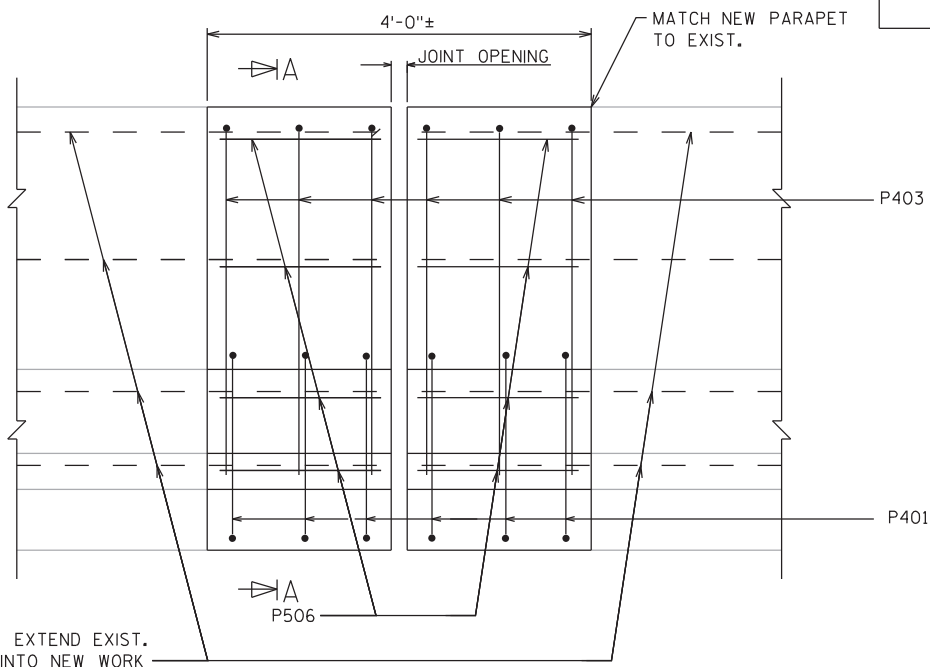


SECTION A-A
PARAPET TYPE 'C'

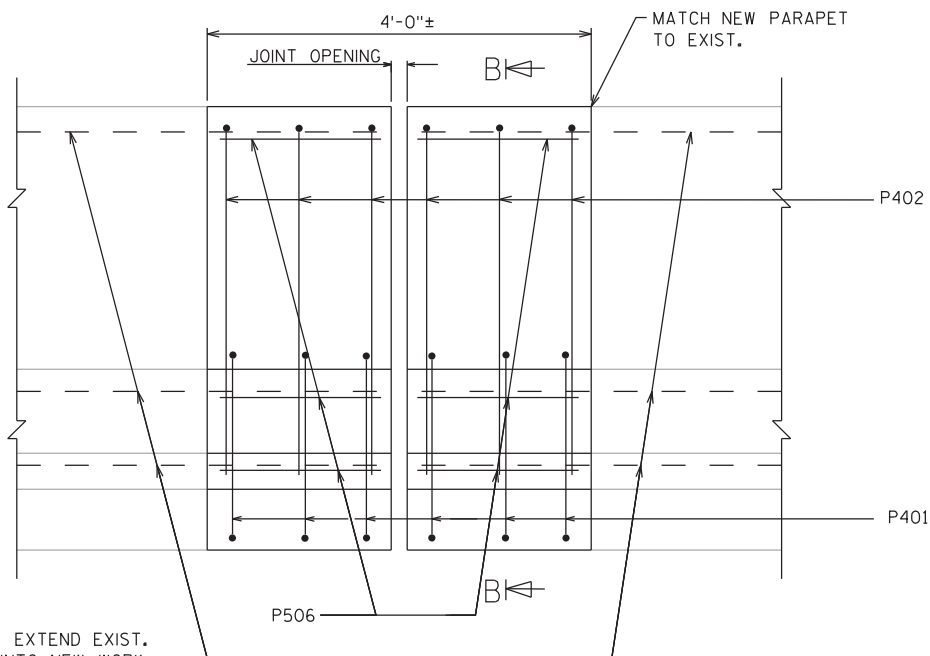


SECTION B-B
PARAPET TYPE 'B'

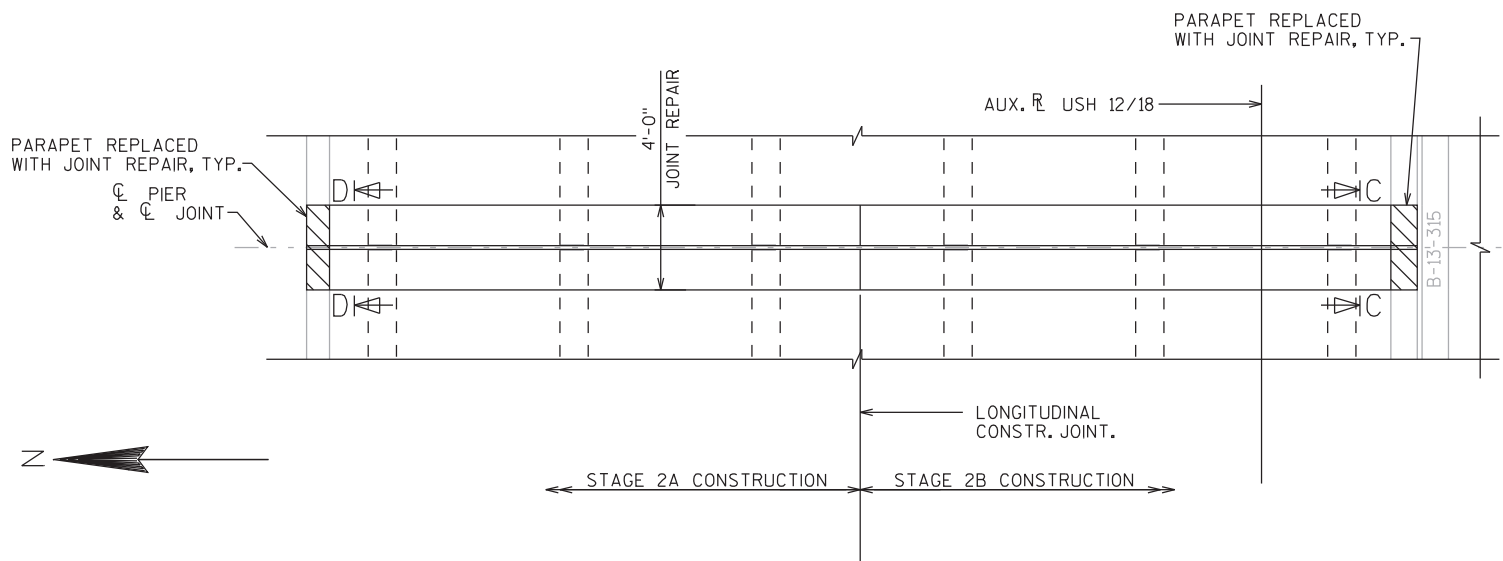
CONST. JOINT - STRIKE OFF
AS SHOWN.



SECTION C-C



SECTION D-D



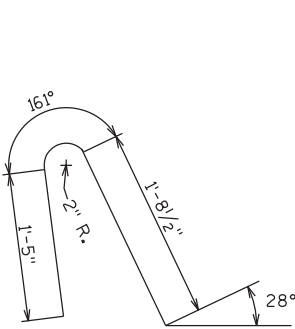
PLAN - PIERS
PIERS 4 THRU 20 SHOWN
PIERS 24, 27 & 30 SIMILAR

BILL OF BARS
PARAPETS

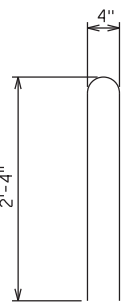
TOTAL COATED = 1,180 LBS

BAR MARK	NO. REQ'D. 2A	NO. REQ'D. 2B	NO. REQ'D. TOTAL	LENGTH	COAT	BENT	LOCATION
P401	62	62	124	4'-3"	X	X	PARAPET VERT.
P402	--	--	62	4'-10"	X	X	PARAPET TYPE 'B' VERT.
P403	--	62	62	5'-0"	X	X	PARAPET TYPE 'C' VERT.
P504	10	10	20	0'-8"	X		PARAPET AT ABUTS. HORIZ.
P505	10	10	20	2'-6"	X		PARAPET AT ABUTS. HORIZ.
P506	80	80	160	1'-7"	X		PARAPET AT PIERS HORIZ.

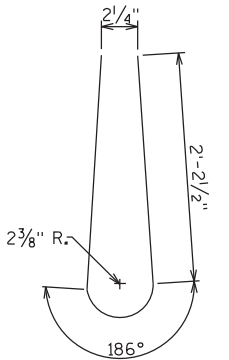
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
ALL BAR BEND DIMENSIONS ARE OUT-TO-OUT OF BAR.



P401
PARAPET TYPES 'B' & 'C'

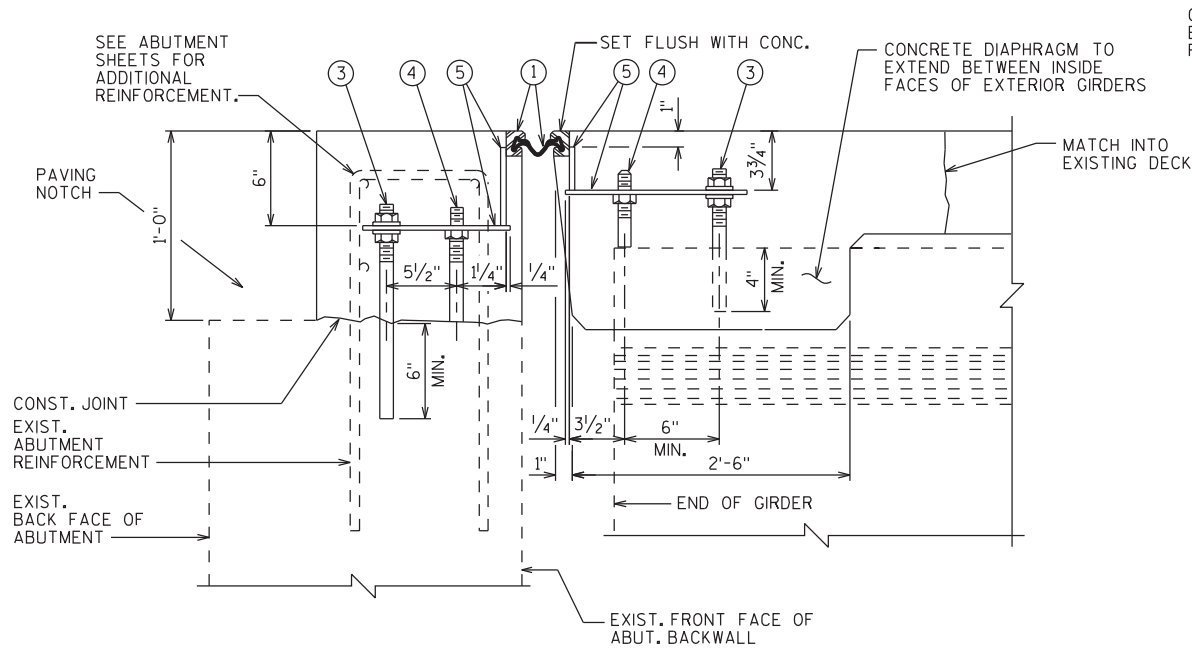


P402
PARAPET TYPE 'B'

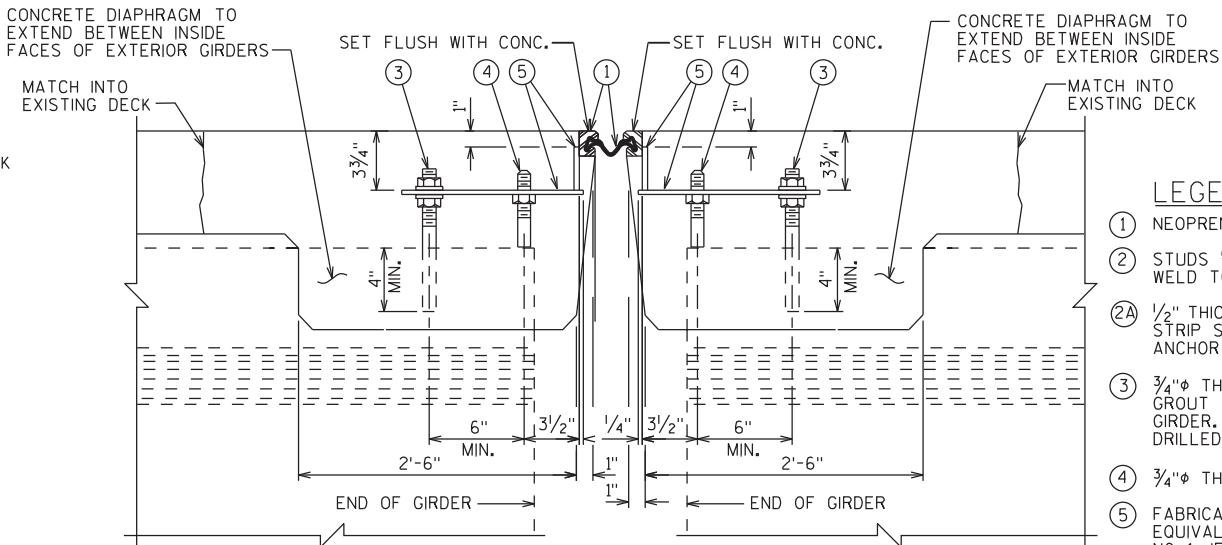


P403
PARAPET TYPE 'C'

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-13-316			
DRAWN BY MSC		PLANS CK'D. CDH	
PIER PARAPET DETAILS		SHEET 11 OF 13	



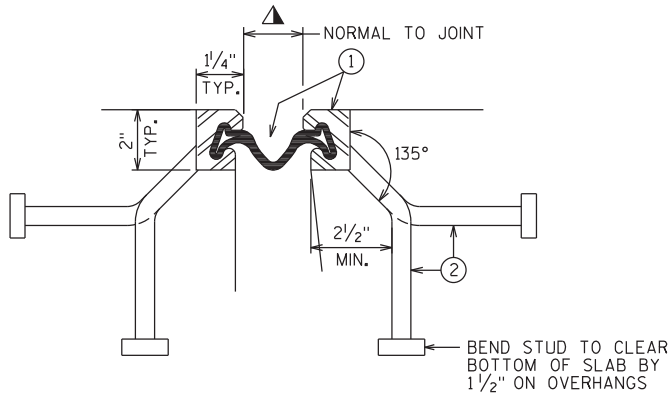
TYPICAL SECTION THRU JOINT AT ABUTMENTS
NORMAL TO C SUBSTRUCTURE



TYPICAL SECTION THRU JOINT AT PIERS
NORMAL TO C SUBSTRUCTURE

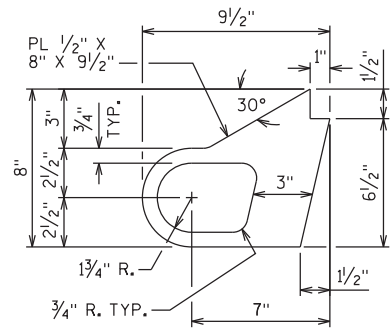
LEGEND

- 1 NEOPRENE STRIP SEAL (4 - INCH) AND STEEL EXTRUSIONS.
- 2 STUDS 5/8"φ X 6 3/8" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.
- 2A 1/2" THICK ANCHOR PLATE WITH 5/8"φ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.
- 3 3/4"φ THREADED ROD WITH 2 NUTS AND PLATE WASHERS. GROUT THREADED ROD INTO FIELD DRILLED HOLES ON C OF GIRDER. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.
- 4 3/4"φ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 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"φ HOLE FOR NO. 3 AND 1"φ HOLE FOR NO. 4.
- 6 GALVANIZED PLATE 3/8" X 10" X 2'-0" LONG WITH HOLES FOR NO. 7. BEND AS SHOWN.
- 7 3/4"φ X 1 1/2" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.
- 8 3/4"φ X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
- 9 3/4"φ X 2 1/4" GALVANIZED THREADED COUPLING.
- 10 1" X 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

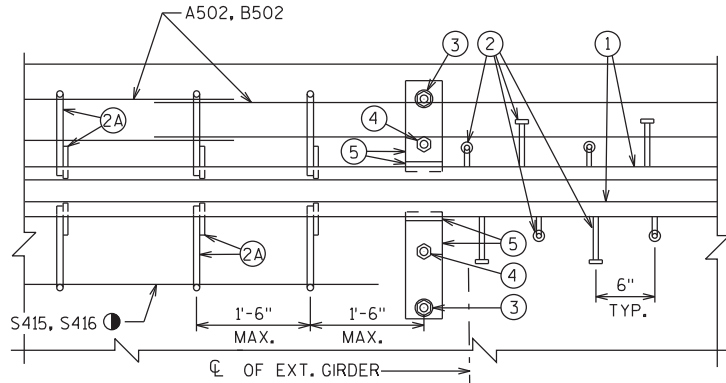


SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS, MEDIANS AND SIDEWALKS



ALTERNATE STRIP SEAL ANCHOR



PART PLAN

TEMPERATURE TABLE

SHADED UNDERSIDE DECK TEMP. (°F)	JOINT OPENING (NORMAL TO JT.)		
	PIERS 4, 8, 12, 16, 20 & 24	PIERS 27 & 30	ABUTMENTS
85°	1 3/8"	1 5/8"	1 3/4"
75°	1 5/8"	1 3/4"	
65°	1 3/4"	1 1/8"	
55°	2"	2 1/8"	
45°	2 1/4"	2 1/4"	
35°	2 1/2"	2 3/8"	
25°	2 5/8"	2 5/8"	
15°	2 7/8"	2 3/4"	
5°	3 1/8"	2 7/8"	

A SMALL JOINT 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.

GENERAL NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS, UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION. IF USED, 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 AND SWEEP.

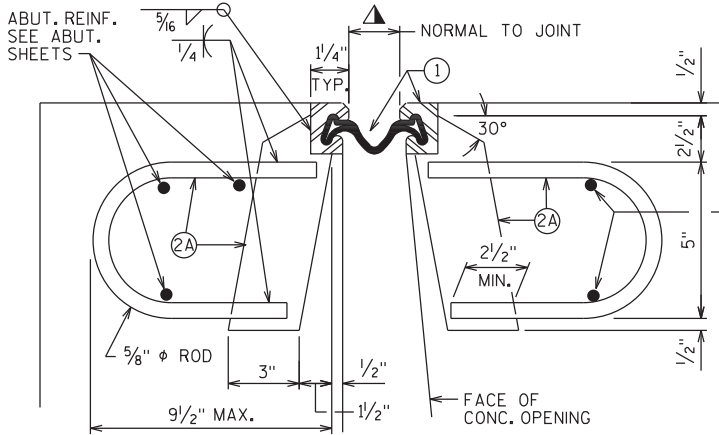
FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN AND SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

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

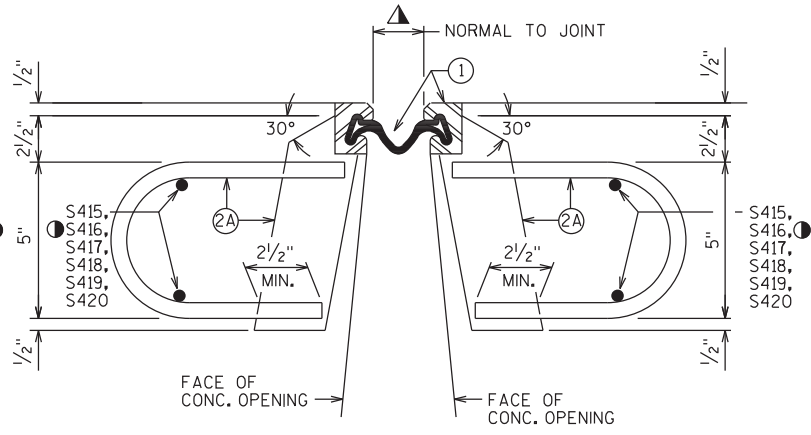
ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORM TO ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-13-316".

BAR COUPLERS REQUIRED



SECTION THRU JOINT AT ABUTMENTS
ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.



SECTION THRU JOINT AT PIERS
ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-13-316			
DRAWN BY		MSC	PLANS CDH
EXPANSION DEVICE		SHEET 12 OF 13	

(NORTH PARAPET TYPE 'B' SHOWN,
SOUTH PARAPET TYPE 'C' SIMILAR)



VIEW OF PARAPET PLATE
FROM ROADWAY

(AT WEST ABUT.)

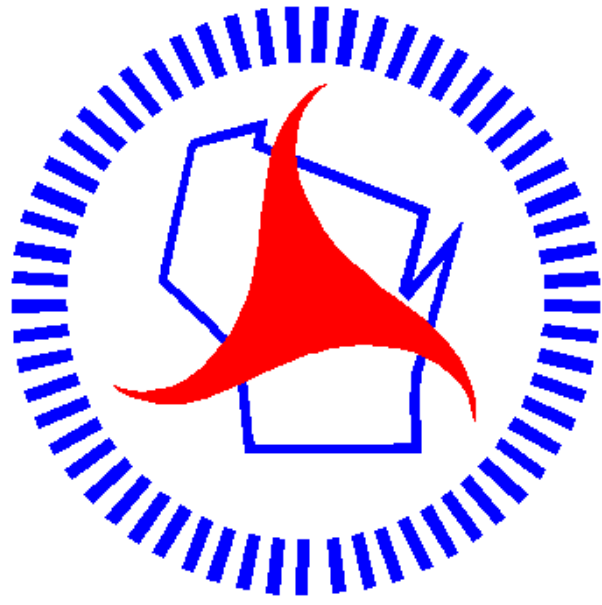
(AT EAST ABUT. AND AT PIERS)

(NORTH PARAPET TYPE 'B' SHOWN,
SOUTH PARAPET TYPE 'C' SIMILAR)

LEGEND

-  BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.
 JOINT OPENING DIMENSION ALONG SKEW PLUS 1/2".

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-13-316			
DRAWN BY		MSC	PLANS CK'D. CDR
COVER PLATE DETAILS		SHEET 13 OF 13	



Wisconsin Department of Transportation

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