MAD

PROJECT ID: 1206-04-70

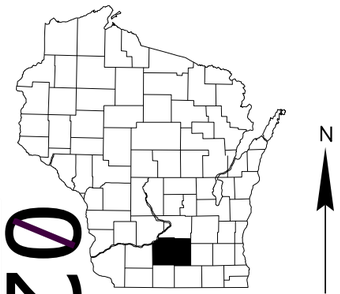
WITH: N/A

COUNTY: DANE

AUGUST 2017

ORDER OF SHEETS

TOTAL SHEETS = 28



02

N

DESIGN DESIGNATION USH 12/18

A.A.D.T. (2017)	=	118,500
A.A.D.T. (2037)	=	128,300
D.H.V. (2038)	=	12,158
D.D.	=	51/49
T.	=	7.0%
DESIGN SPEED	=	60 MPH
ESALS	=	16,000,000

CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE (PL + 58.1)
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- PROPOSED JOINT LINE
- SLOPE INTERCEPT
- REFERENCE LINE
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (95.36)
- CULVERT (Profile View)

UTILITIES

- COMMUNICATION OVERHEAD (C-OH)
- COMMUNICATION UNDERGROUND (C-UG)
- ELECTRIC OVERHEAD (OH)
- ELECTRIC UNDERGROUND (E)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

MADISON - CAMBRIDGE

CTH D TO IH 39/90

USH 12

DANE COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1206-04-70		

STATE PROJECT NUMBER

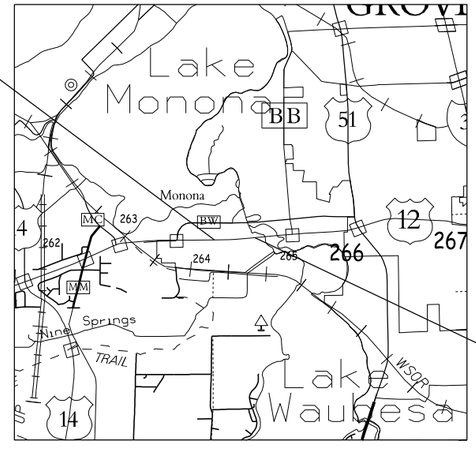
1206-04-70

BEGIN PROJECT

STA E 77EB+25.00

X = 831608.181

Y = 471597.931



END PROJECT

STA E 97EB+50

LAYOUT

SCALE 0 1.0 MI.

TOTAL NET LENGTH OF USH 12 CENTERLINE = 0.384 MI.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD 88 (2011).

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), DANE COUNTY

ORIGINAL PLANS PREPARED BY

HNTB

10 W MIFFLIN STREET
SUITE 300
MADISON, WI 53703
(608) 294-5000

WISCONSIN
ANDREW D. ROSEMEYER
E-43027
MADISON, WI
PROFESSIONAL ENGINEER

05/31/2017 (Date)

(Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	
Designer	HNTB
Project Manager	DAVID LAYTON
Regional Examiner	
Regional Supervisor	BRENDA SCHOENFELD
C.O. Examiner	

APPROVED FOR THE DEPARTMENT

DATE: 6/1/2017 (Signature)

E

GENERAL NOTES

THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY ANY OPERATION OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS AT THE CONTRACTOR'S EXPENSE OR AS OTHERWISE DIRECTED BY THE FIELD ENGINEER.

TEMPORARY STORAGE OF ANY EXCAVATED MATERIAL OR EQUIPMENT WITHIN WETLANDS OR PROTECTED AREAS IS NOT ALLOWED. WETLAND BOUNDARIES ARE SHOWN ON PLAN SHEETS.

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

STATIONING, DISTANCES AND OFFSETS FOR TRAFFIC CONTROL SIGNS SHOWN IN THE PLANS ARE APPROXIMATE AND THE FINAL LOCATION OF SIGNS ARE TO BE DETERMINED BY THE ENGINEER.

TACK COAT APPLICATION RATES ARE ESTIMATED AT 0.07 GALLONS PER SY BETWEEN THE EXISTING CONCRETE PAVEMENT AND THE LOWER ASPHALT LIFT AND 0.05 GALLONS PER SY BETWEEN THE TWO LAYERS OF HMA PAVEMENT.

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

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

ORDER OF SECTION 2 DETAIL SHEETS

DNR AREA LIAISON

ERIC HEGGELUND
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
(608) 275-3301
ERIC.HEGGELUND@WISCONSIN.GOV

REGION CONTACT

DAVID LAYTON
2101 WRIGHT STREET
MADISON, WI 53704
(608) 246-3821
DAVID.LAYTON@DOT.WI.GOV

DESIGN CONTACT

ANDREW ROSEMEYER
10 W. MIFFLIN ST, SUITE 300
MADISON, WI 53703
(608) 294-5015
AROSEMEYER@HNTB.COM

PAVEMENT TYPE	TOTAL LAYER PAVEMENT THICKNESS	LAYERS
4 HT 58-28 V**	4"	2" SURFACE LAYER 2" LOWER LAYER

* HMA PAVEMENT WEIGHT CALCULATIONS BASED ON 112 LBS/SY/IN.
**WARM MIX ADDITIVE ALL LAYERS

ABBREVIATIONS

AEW	APRON END WALL
AGG	AGGREGATE
BAD	BASE AGGREGATE DENSE
BM	BENCH MARK
C&G	CURB AND GUTTER
C/L	CENTER OR CONSTRUCTION LINE
CMCP	CULVERT PIPE CORRUGATED METAL
CONC	CONCRETE
CP	CULVERT PIPE
CPRC	CULVERT PIPE REINFORCED CONCRETE
CSD	CONCRETE SURFACE DRAIN
CY	CUBIC-YARD
D	DEGREE OF CURVE
Δ	DELTA
DISCH	DISCHARGE
EAT	ENERGY ABSORBING TERMINAL
FE	FIELD ENTRANCE
HMA	HOT MIX ASPHALT
INV	INVERT
L	LENGTH OF CURVE
LHF	LEFT HAND FORWARD
LT	LEFT
MIN	MINIMUM
M/L	MATCHLINE
NB	NORTHBOUND
NC	NORMAL CROWN
PAVT	PAVEMENT
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PE	PRIVATE ENTRANCE
PI	POINT OF INTERSECTION
PLE	PERMANENT LIMITED EASMENT
PT	POINT OF TANGENT
R	RADIUS OF CURVE
R/L	REFERENCE LINE
R/W	RIGHT OF WAY
RC	REVERSE CROWN
RCAEW	APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE
REQD	REQUIRED
RHF	RIGHT HAND FORWARD
RO	RUN OFF LENGTH
RRSP	RAILROAD SPIKE
RT	RIGHT
SALV	SALVAGED
SAPBC	SALVAGED ASPHALTIC PAVEMENT BASE COARSE
SB	SOUTHBOUND
SDD	STANDARD DETAIL DRAWINGS
SE	SUPER ELEVATION
SF	SQUARE FOOT
SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
STA	STATION
SY	SQUARE YARD
T	TANGENT LENGTH
TLE	TEMPORARY LIMITED EASEMENT
VCL	VERTICAL CURVE LENGTH
VPC	POINT OF VERTICAL CURVE
VPI	POINT OF VERTICAL INTERSECTION
VPT	POINT OF VERTICAL TANGENT

2

N

SOUTH TOWNE DRIVE

END PROJECT
STA. E 97EB+50.00
N = 471651.425
E = 833631.725

YAHARA RIVER

F 660WB F 665WB F 670WB WB USH 12 F 680WB F 685WB F 690WB F 695WB F 700WB F 705WB G 710WB G 715WB

E 50EB E 55EB E 60EB E 65EB EB USH 12 E 75EB E 80EB E 85EB E 90EB E 95EB E 100EB E 105EB

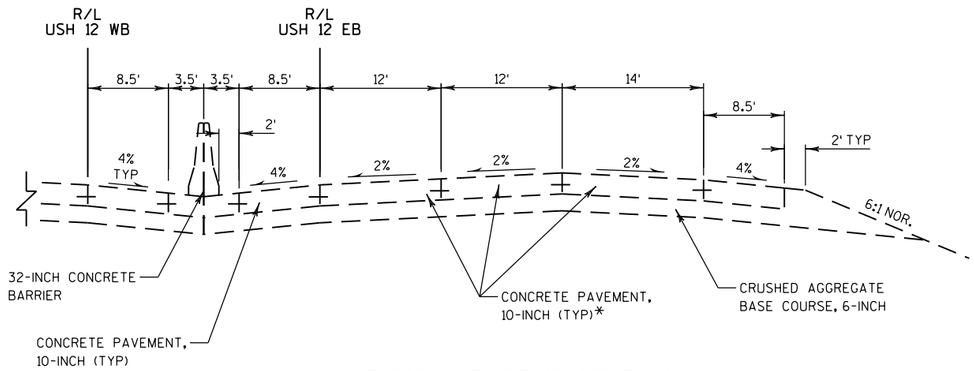
BEGIN PROJECT
STA. E 77EB+25.00
N = 471597.931
E = 831608.181

PROJECT NO: 1206-04-70	HWY: USH 12	COUNTY: DANE	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : \\madw00\ingrproj\66224\t1\cds\020201_po.dgn PLOT DATE : 5/31/2017 PLOT BY : cjustman PLOT NAME : PLOT SCALE : 400:1

WISDOT/CADDS SHEET 42

2

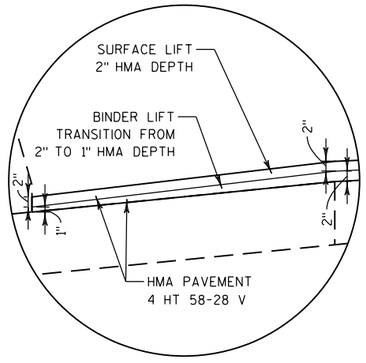


TYPICAL EXISTING SECTION

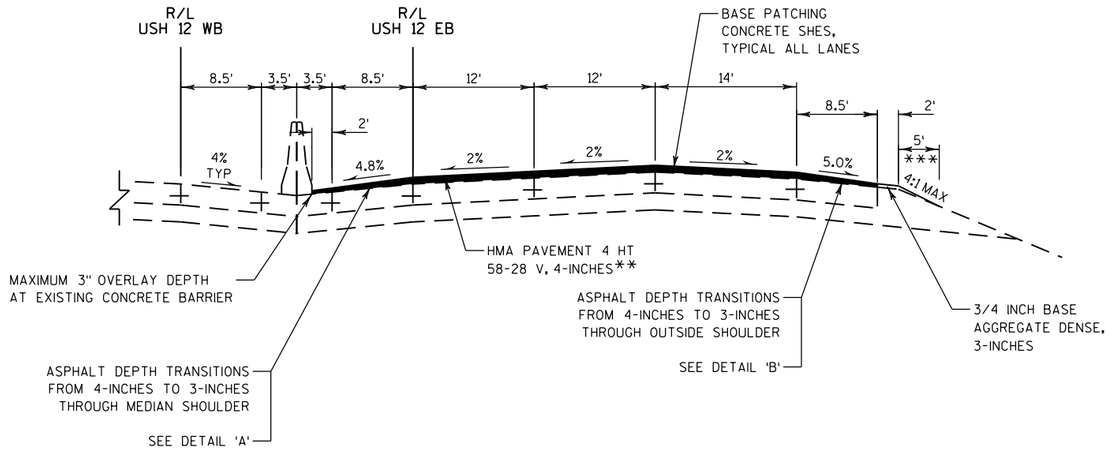
EB USH 12/18

E77EB+25.00 TO E97EB+50.00

*POLYMER CONCRETE PATCH MATERIALS
EXIST WITHIN THE DRIVING LANES



DETAIL A



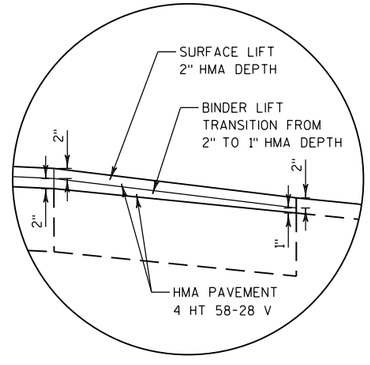
TYPICAL PROPOSED SECTION

EB USH 12/18

E77EB+25.00 TO E97EB+50.00

** TWO LAYERS OF TWO-INCHES WITH WARM MIX ADDITIVE

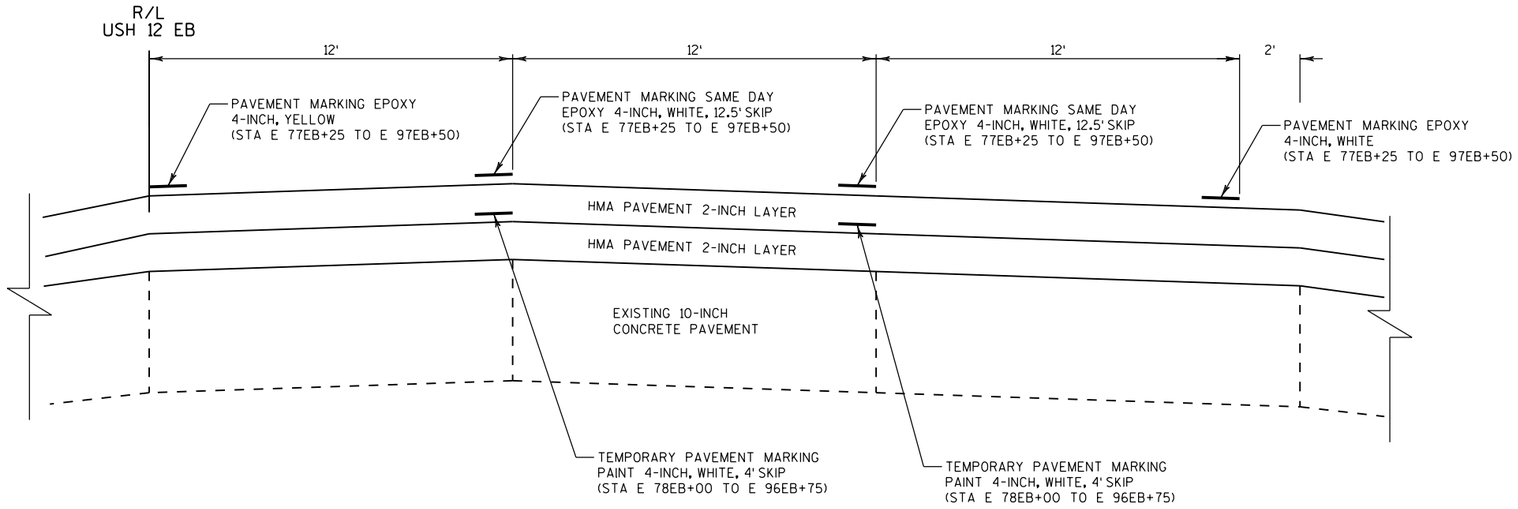
*** SEEDING AND FERTILIZER



DETAIL B

PROJECT NO: 1206-04-70	HWY: USH 12	COUNTY: DANE	TYPICAL SECTIONS	SHEET 4	E

2

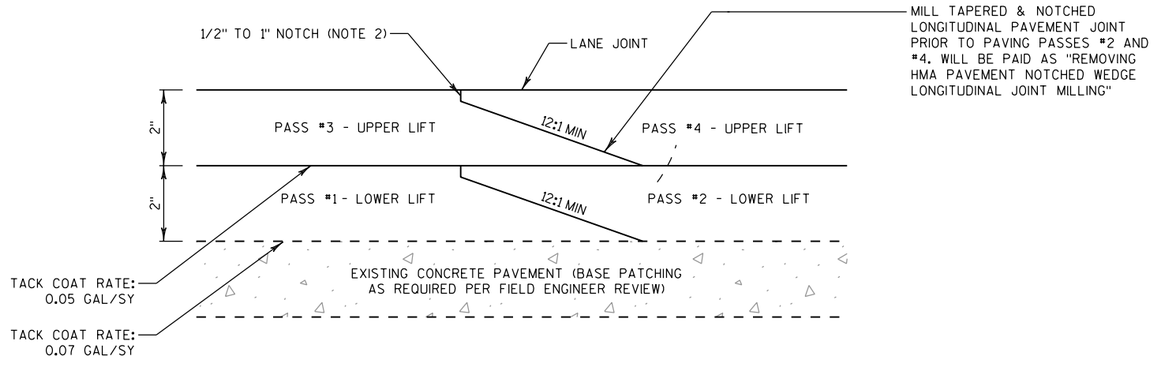


PAVEMENT MARKING DETAIL

NO SCALE

LOOKING EAST

FOR MORE DETAILS SEE SDD "LONGITUDINAL MARKINGS (MAINLINE)"



TYPICAL PAVEMENT CROSS SECTION OF TAPERED & LONGITUDINAL JOINTS

NO SCALE

NOTES:

1. FOR QUANTITY ESTIMATION, EACH LIFT OF PAVEMENT WILL REQUIRE FOUR PASSES FOR A TOTAL OF EIGHT NIGHTS OF PAVING. THREE ASPHALT WEDGES WILL BE NEEDED PER LIFT OF ASPHALT.

2. PER 450.3.2.8(3)(4)

W8-20
48" X 48"
(ORANGE)

W8-11
48" X 48"
(ORANGE)

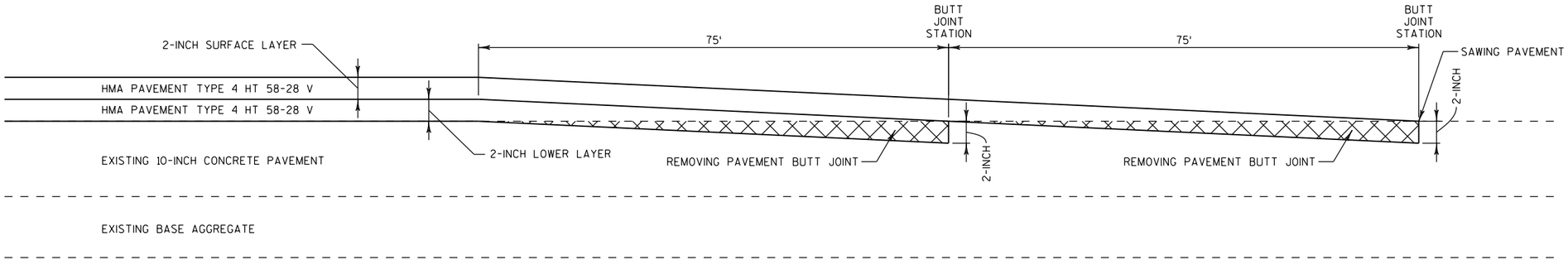
TRAFFIC CONTROL NOTES:

1. TO BE UTILIZED DURING DAYTIME HOURS BETWEEN NIGHTTIME PAVING OPERATIONS.

2. SIGNS ARE TO BE INSTALLED PRIOR TO OPENING TRAFFIC BACK TO THEIR ORIGINAL LANES.

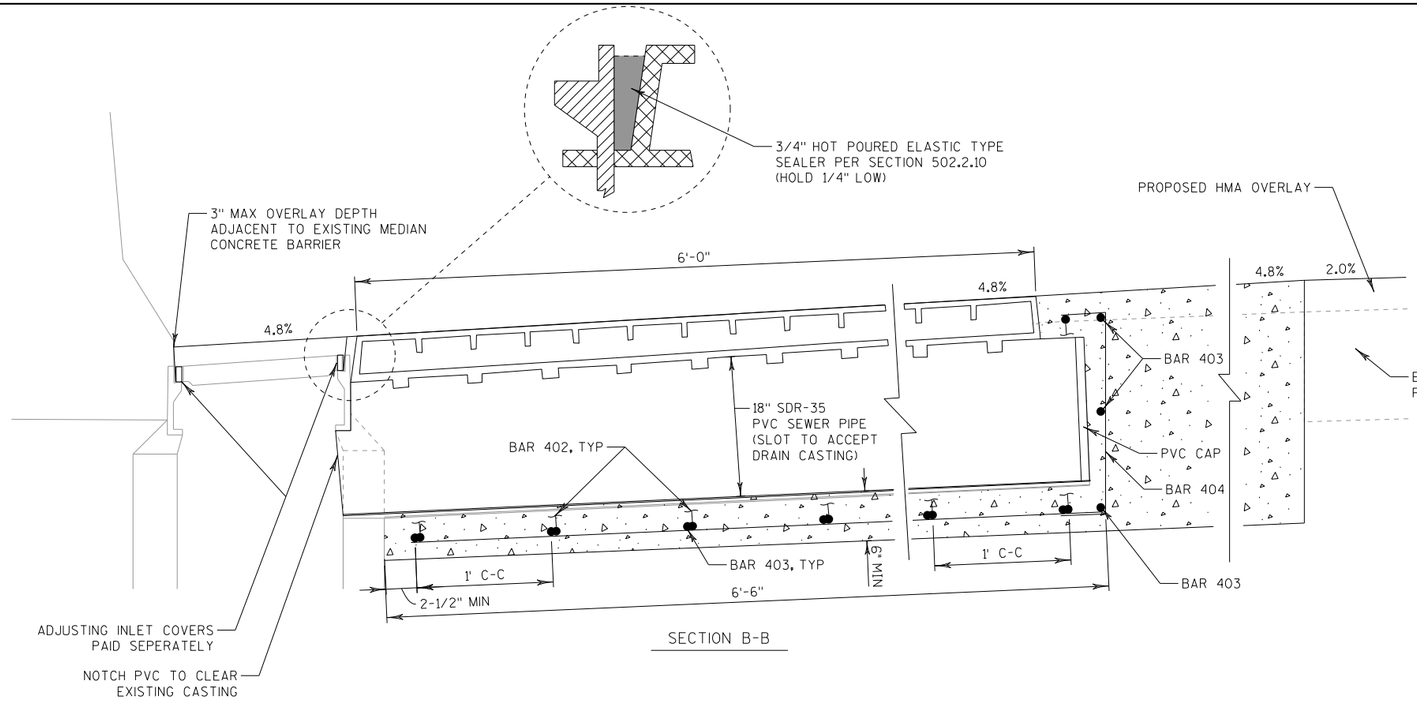
3. W8-11 PLACED 1,000-FEET PRIOR TO THE BEGINNING OF THE PROJECT ON BOTH SHOULDERS.

4. W8-20 PLACED 500-FEET PRIOR TO THE BEGINNING OF THE PROJECT ON BOTH SHOULDERS.

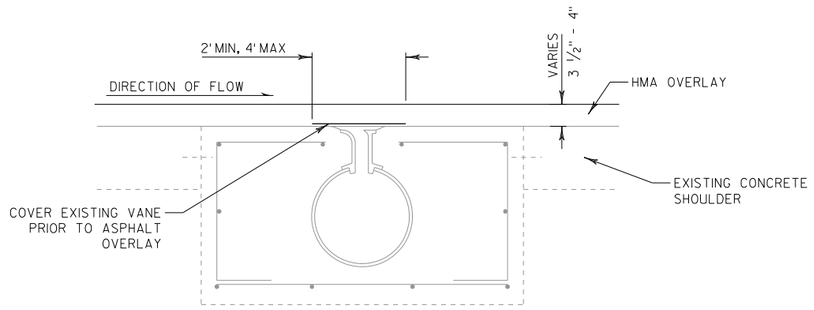


BUTT JOINT DETAIL (CONCRETE PAVEMENT MATCH)

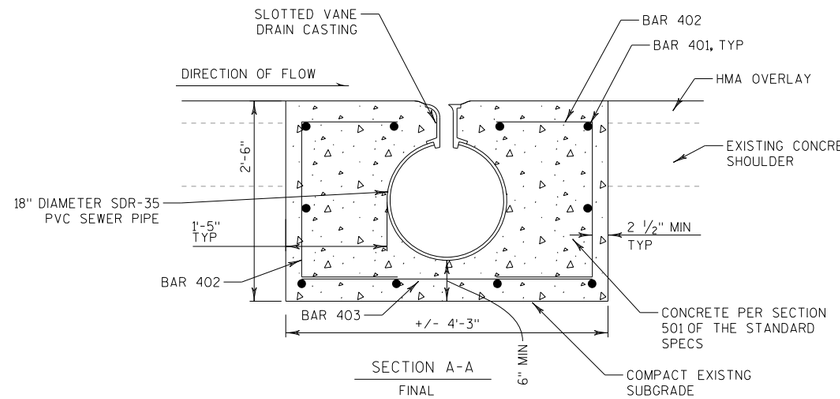
NO SCALE
STA E 77EB+25.00 (MIRROR DETAIL)
STA E 78EB+00.00 (MIRROR DETAIL)
STA E 96EB+75.00
STA E 97EB+50.00



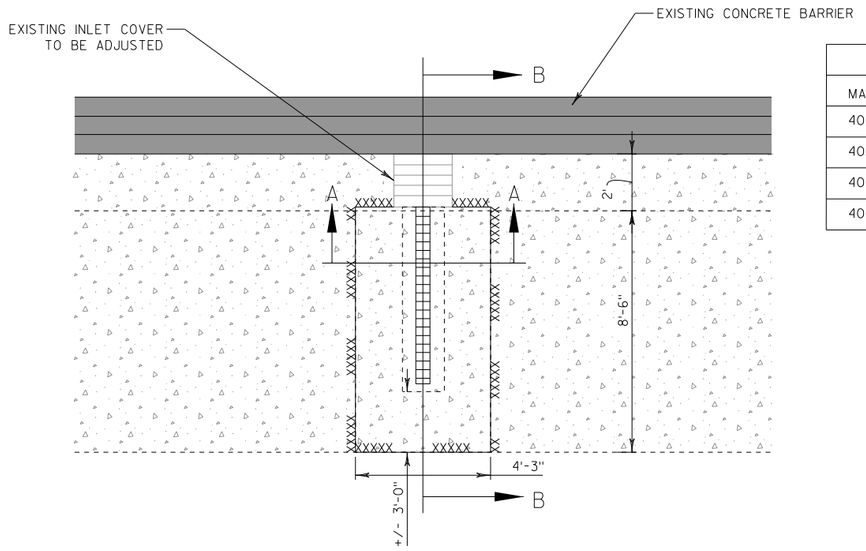
SECTION B-B



SECTION A-A
EXISTING

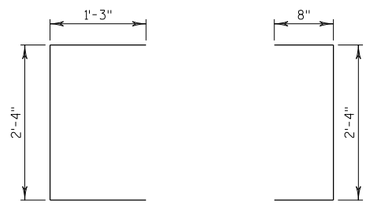


SECTION A-A
FINAL

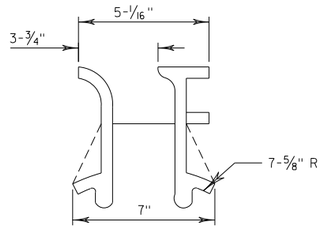


PLAN VIEW

BILL OF BARS				
MARK	QUANTITY	LENGTH	BENT	LOCATION
401	10	5'-6"		HORIZ., SIDES/TOP/BOTTOM
402	14	4'-10"	X	VERTICAL - SIDES
403	10	3'-11"		HORIZ., END/BOTTOM
404	3	3'-8"	X	VERTICAL - END



402 BAR 404 BAR



SLOTTED VANE DRAIN CASTING

NOTES:

1. THE FIRST DIGIT OF THE BAR NUMBER SIGNIFIES THE BAR SIZE. ALL BARS SHALL BE EPOXY COATED

2. THE PIPE USED SHALL BE A 18" DIAMETER SDR-35 POLYVINYL CHLORIDE SEWER PIPE. THE PIPE SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN STANDARD SPECIFICATION 612.2.6

3. ADJUST PIPE TO GRADE AND ASSURE 6" OF CONCRETE ENCASEMENT BENEATH THE PIPE. ATTACH BLOCK TO PIPE WITH 16 GAGE WIRE. WIRE SLOTTED VANE DRAIN CASTING SECURELY TO THE PIPE.

4. THE CASTING AND PVC PIPE SHALL BE SECURELY STACKED AND ANCHORED INTO PLACE DURING CONCRETE PLACEMENT

RECONSTRUCTING VANE DRAIN

2

2

N

SOUTH TOWNE DRIVE

SIGN MOUNTED TO BARRICADE
"RAMP CLOSED" (1 EACH)

BARRICADE TYPE 3 (3 EACH)
EQUALLY SPACED BEHIND DRUMS

DRUMS AT 20-FT SPACING FOR EB
ENTRANCE RAMP CLOSURE (14 EACH)

54TNE

56TNE

SOUTH TOWNE DRIVE NE RAMP

58TNE

60TNE

62TNE

64TNE

R/L WB USH 12/18

WB USH 12/18

F 664WB F 666WB F 668WB F 670WB F 672WB F 674WB F 676WB F 67

N 89° 48' 54" E

E 54EB E 56EB E 58EB E 60EB E 62EB E 64EB E 66EB E 6

EB USH 12/18

MATCHLINE E 68EB+00

STA E 54EB+00.00
N = 471590.444
E = 829283.194

60TSE

62TSE

58TSE

56TSE

54TSE

SOUTH TOWNE DRIVE SE RAMP

MESSAGE BOARD PLACED 7-DAYS
PRIOR TO RAMP CLOSURE

R/L EB USH 12/18

BARRICADE TYPE 3 (5 EACH)
EQUALLY SPACED BEHIND DRUMS

SIGN MOUNTED TO BARRICADE
"RAMP CLOSED" (2 EACH)

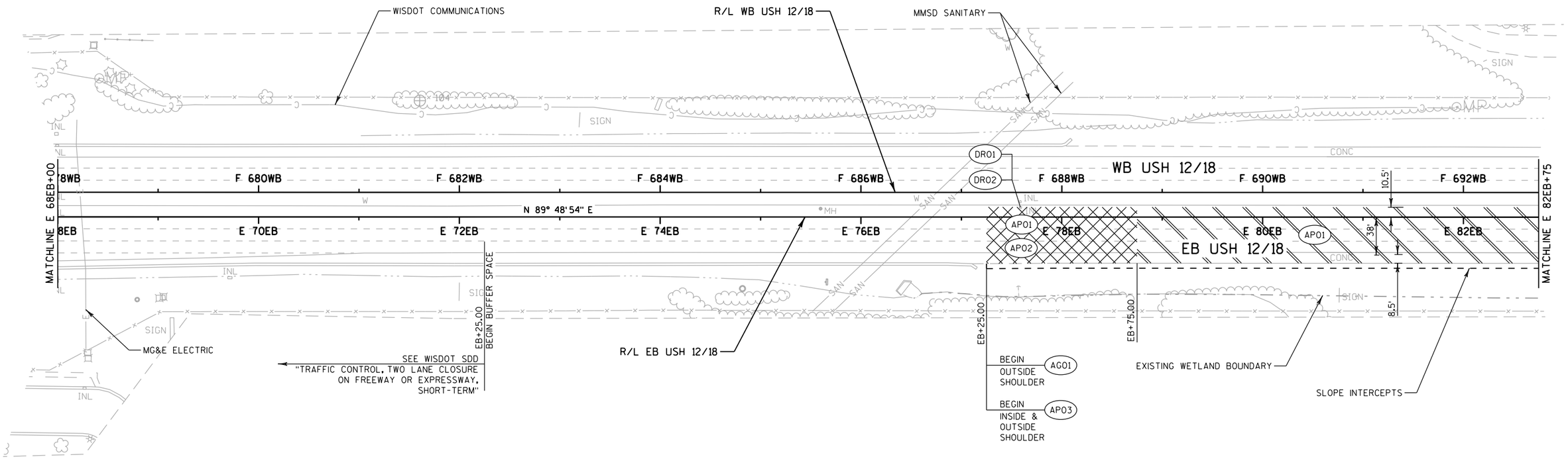
DRUMS AT 20-FT SPACING FOR EB
ENTRANCE RAMP CLOSURE (17 EACH)

BARRICADE TYPE 3 SPACED AT
100-FEET BEHIND DRUMS (3 EACH)

SIGN MOUNTED TO BARRICADE
"RAMP CLOSED" (1 EACH)

PROJECT NO: 1206-04-70	HWY: USH 12	COUNTY: DANE	PLAN DETAILS	SHEET 8	E

2



LEGEND

- AG01 BASE AGGREGATE DENSE 3/4-INCH
- AP01 HMA PAVEMENT TYPE 4 HT 58-28 V
- AP02 REMOVING PAVEMENT BUTT JOINTS
- AP03 ASPHALTIC SHOULDER RUMBLE STRIPS
- DR01 ADJUSTING INLET COVERS
- DR02 VANE DRAIN SPECIAL
- ASPHALT DEPTH TRANSITION / BUTT JOINT
- 4-INCH OVERLAY DEPTH

NOTES
1) REFER TO SEPARATE CONSTRUCTION DETAIL FOR ADDITIONAL INFORMATION REGARDING PAVEMENT BUTT JOINTS.

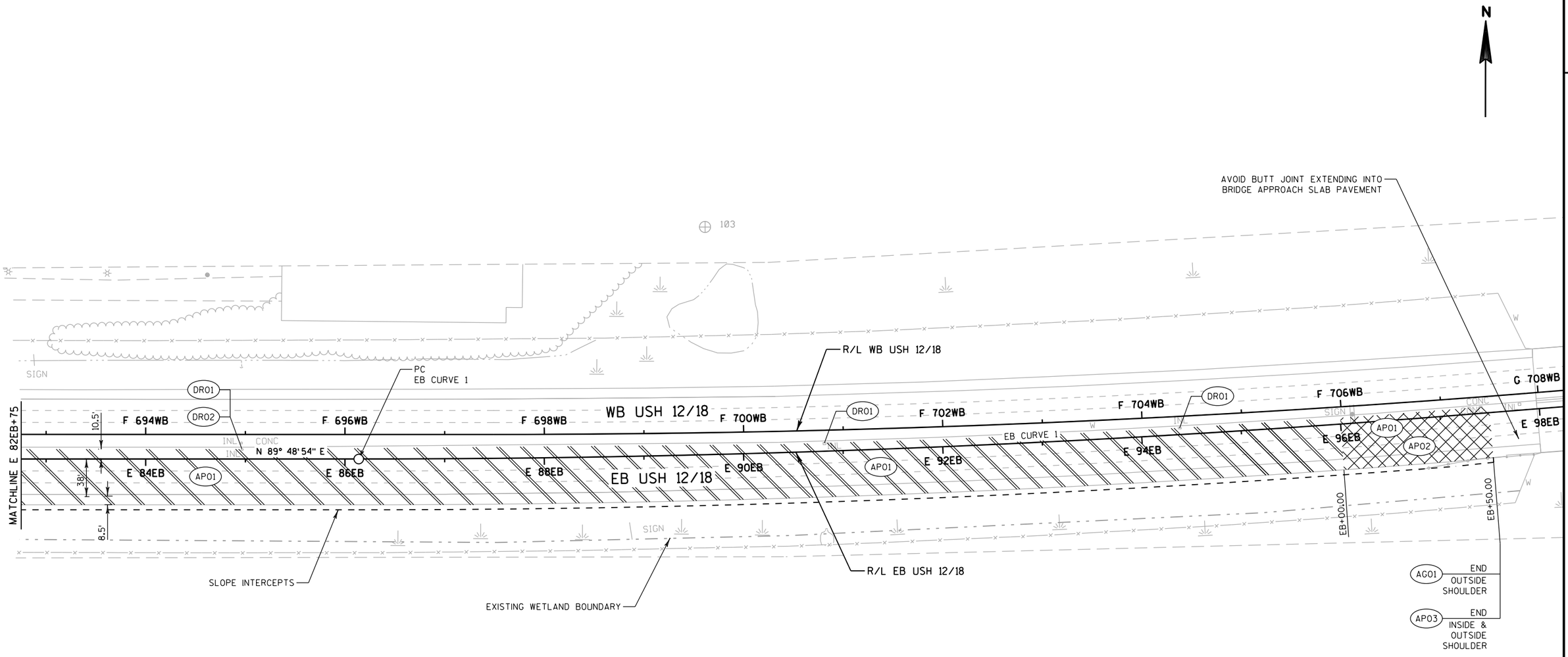
2) PAVEMENT MARKINGS ARE SHOWN WITHIN SEPARATE CONSTRUCTION DETAIL.

3) BASE PATCHING WILL BE LOCATED AT THE DIRECTION OF THE ENGINEER.

4) CONTRACTOR MUST REMOVE ALL LOOSE MATERIAL AND DEBRIS PRIOR TO PLACING TACK COAT PER 455.3.2.1 AND SHALL BE INCIDENTAL TO THE PAY ITEM "TACK COAT"

PROJECT NO: 1206-04-70	HWY: USH 12	COUNTY: DANE	PLAN DETAILS	SHEET 9	E

2



LEGEND

- AG01 BASE AGGREGATE DENSE 3/4-INCH
- AP01 HMA PAVEMENT TYPE 4 HT 58-28 V
- AP02 REMOVING PAVEMENT BUTT JOINTS
- APO3 ASPHALTIC SHOULDER RUMBLE STRIPS
- DR01 ADJUSTING INLET COVERS
- DR02 VANE DRAIN SPECIAL
- ASPHALT DEPTH TRANSITION / BUTT JOINT
- 4-INCH OVERLAY DEPTH

EB CURVE 1

PC STA E 86+13.77
N = 832496.95
E = 471600.82
PI STA E 91+64.82
N = 833048.00
E = 471602.60
PT STA E 97+15.28
N = 833597.13
E = 471648.46
R = 13751.11'
T = 551.05'
E = 11.04'
L = 1101.51'
Dc = 0° 24'60"
Delta = 4° 35'22.46" LEFT
Bk = N 89° 48'54" E
Ah = N 85° 13'32" E

NOTES
1) REFER TO SEPARATE CONSTRUCTION DETAIL FOR ADDITIONAL INFORMATION REGARDING PAVEMENT BUTT JOINTS.

2) PAVEMENT MARKINGS ARE SHOWN WITHIN SEPARATE CONSTRUCTION DETAIL.

3) BASE PATCHING WILL BE LOCATED AT THE DIRECTION OF THE ENGINEER.

4) CONTRACTOR MUST REMOVE ALL LOOSE MATERIAL AND DEBRIS PRIOR TO PLACING TACK COAT PER 455.3.2.1 AND SHALL BE INCIDENTAL TO THE PAY ITEM "TACK COAT"

PROJECT NO: 1206-04-70	HWY: USH 12	COUNTY: DANE	PLAN DETAILS	SHEET 10	E

1206-04-70

Line	Item	Item Description	Unit	Total	Qty
0010	204.0105	Removing Pavement Butt Joints	SY	1,900.000	1,900.000
0020	213.0100	Finishing Roadway (project) 01. 1206-04-70	EACH	1.000	1.000
0030	305.0110	Base Aggregate Dense 3/4-Inch	TON	200.000	200.000
0040	390.0403	Base Patching Concrete Shes	SY	177.000	177.000
0050	416.0620	Drilled Dowel Bars	EACH	336.000	336.000
0060	440.4410	Incentive IRI Ride	DOL	3,039.000	3,039.000
0070	455.0605	Tack Coat	GAL	1,473.000	1,473.000
0080	460.2000	Incentive Density HMA Pavement	DOL	2,190.000	2,190.000
0090	460.7624	HMA Pavement 4 HT 58-28 V	TON	2,676.000	2,676.000
0100	465.0400	Asphaltic Shoulder Rumble Strips	LF	4,050.000	4,050.000
0110	611.8115	Adjusting Inlet Covers	EACH	4.000	4.000
0120	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1206-04-70	EACH	1.000	1.000
0130	619.1000	Mobilization	EACH	1.000	1.000
0140	624.0100	Water	MGAL	4.000	4.000
0150	629.0210	Fertilizer Type B	CWT	1.000	1.000
0160	630.0130	Seeding Mixture No. 30	LB	28.000	28.000
0170	642.5001	Field Office Type B	EACH	1.000	1.000
0180	643.0100	Traffic Control (project) 01. 1206-04-70	EACH	1.000	1.000
0190	643.0300	Traffic Control Drums	DAY	2,234.000	2,234.000
0200	643.0420	Traffic Control Barricades Type III	DAY	250.000	250.000
0210	643.0705	Traffic Control Warning Lights Type A	DAY	500.000	500.000
0220	643.0715	Traffic Control Warning Lights Type C	DAY	559.000	559.000
0230	643.0800	Traffic Control Arrow Boards	DAY	44.000	44.000
0240	643.0900	Traffic Control Signs	DAY	342.000	342.000
0250	643.1050	Traffic Control Signs PCMS	DAY	72.000	72.000
0260	646.0106	Pavement Marking Epoxy 4-Inch	LF	4,050.000	4,050.000
0270	646.0406	Pavement Marking Same Day Epoxy 4-Inch	LF	1,012.000	1,012.000
0280	649.0402	Temporary Pavement Marking Paint 4-Inch	LF	300.000	300.000
0290	650.8000	Construction Staking Resurfacing Reference	LF	2,025.000	2,025.000
0300	690.0250	Sawing Concrete	LF	950.000	950.000
0310	SPV.0060	Special 01. Repositioning Traffic Control Devices for Mainline Closures	EACH	17.000	17.000
0320	SPV.0060	Special 02. Traffic Control Close-Open Freeway Entrance Ramp	EACH	17.000	17.000
0330	SPV.0060	Special 03. Reconstructing Vane Drain	EACH	2.000	2.000
0340	SPV.0090	Special 01. Removing HMA Pavement Notched Wedge Longitudinal Joint Milling	LF	11,700.000	11,700.000

3

REMOVING PAVEMENT BUTT JOINTS

ROADWAY	STATION	OFFSET	204.0105 REMOVING PAVEMENT BUTT JOINTS SY	690.0250* SAWING CONCRETE LF
USH 12 EB	E 77EB+25	RT/LT	475	--
USH 12 EB	E 78EB+00	RT/LT	475	57
USH 12 EB	E 96EB+75	RT/LT	475	--
USH 12 EB	E 97EB+50	RT/LT	475	57
PROJECT 1206-04-70 TOTAL			1,900	114

* ADDITIONAL QUANTITIES FOUND ELSEWHERE

BASE PATCHING

ROADWAY	STATION			OFFSET	390.0403 BASE PATCHING CONCRETE SHES SY	416.0620* DRILLED DOWEL BARS EACH	690.0250* SAWING CONCRETE LF	COMMENTS
USH 12 EB	E 77EB+25	-	E 97EB+50	RT	56	112	252	LANE 1
USH 12 EB	E 77EB+25	-	E 97EB+50	RT	56	112	252	LANE 2
USH 12 EB	E 77EB+25	-	E 97EB+50	RT	65	112	280	LANE 3
PROJECT 1206-04-70 TOTAL					177	336	784	

* ADDITIONAL QUANTITIES FOUND ELSEWHERE

AGGREGATE SHOULDER

ROADWAY	STATION			OFFSET	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	624.0100 WATER MGAL
USH 12 EB	E 77EB+25	-	E 97EB+50	RT	200	4
PROJECT 1206-04-70 TOTAL					200	4

HMA PAVEMENT

ROADWAY	OFFSET	STATION FROM		TO	455.0605 TACK COAT GAL	460.7624 HMA PAVEMENT 4 HT 58-28 V* TON	SPV.0090.01 REMOVING HMA PAVEMENT NOTCHED WEDGE LONGITUDINAL JOINT MILLING LF	COMMENTS
USH 12 EB	LT/RT	E 78EB+00	-	E 96EB+75	328	459	--	MEDIAN SHOULDER & LANE 1
USH 12 EB	RT	E 78EB+00	-	E 96EB+75	175	280	1,875	LANE 2
USH 12 EB	RT	E 78EB+00	-	E 96EB+75	204	327	1,875	LANE 3
USH 12 EB	RT	E 78EB+00	-	E 96EB+75	124	174	1,875	OUTSIDE SHOULDER
USH 12 EB	LT/RT	E 77EB+25	-	E 97EB+50	253	567	--	MEDIAN SHOULDER & LANE 1
USH 12 EB	RT	E 77EB+25	-	E 97EB+50	135	302	2,025	LANE 2
USH 12 EB	RT	E 77EB+25	-	E 97EB+50	158	353	2,025	LANE 3
USH 12 EB	RT	E 77EB+25	-	E 97EB+50	96	214	2,025	OUTSIDE SHOULDER
PROJECT 1206-04-70 TOTAL					1,473	2,676	11,700	

*WARM MIX ADDITIVE REQUIRED

RUMBLE STRIPS

ROADWAY	STATION			OFFSET	465.0400 ASPHALTIC SHOULDER RUMBLE STRIPS LF
USH 12 EB	E 77EB+25	-	E 97EB+50	LT	2,025
USH 12 EB	E 77EB+25	-	E 97EB+50	RT	2,025
PROJECT 1206-04-70 TOTAL					4,050

FINISHING ROADWAY

ROADWAY	STATION	OFFSET	213.0100 EACH
USH 12 EB	--	--	1
PROJECT 1206-04-70 TOTAL			1

MAINTENANCE AND REPAIR OF HAUL ROADS

ROADWAY	STATION	OFFSET	618.0100 EACH
USH 12 EB	--	--	1
PROJECT 1206-04-70 TOTAL			1

3

STORM SEWER ADJUSTMENTS

ROADWAY	STATION	OFFSET	611.8115 ADJUSTING INLET COVERS EACH	690.0250* SAWING CONCRETE LF	SPV.0060.03 RECONSTRUCTING VANE DRAIN EACH
USH 12 EB	E 77EB+60	LT	1	26	1
USH 12 EB	E 84EB+98	LT	1	26	1
USH 12 EB	E 90EB+82	LT	1	--	--
USH 12 EB	E 94EB+38	LT	1	--	--
PROJECT 1206-04-70 TOTAL			4	52	2

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

FIELD OFFICE TYPE B

ROADWAY	STATION	OFFSET	642.5001 EACH
USH 12 EB	--	--	1
PROJECT 1206-04-70 TOTAL			1

CONSTRUCTION STAKING RESURFACING REFERENCE

ROADWAY	STATION	650.8000 LF
USH 12 EB	E 77EB+25 - E 97EB+50	2,025
PROJECT 1206-04-70 TOTAL		2,025

FINISHING ITEMS

ROADWAY	STATION	OFFSET	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO. 30 LBS
USH 12 EB	E 77EB+25 - E 97EB+50	RT	1.0	28
PROJECT 1206-04-70 TOTAL			1.0	28

PAVEMENT MARKING

ROADWAY	STATION	646.0106 PAVEMENT MARKING EPOXY 4-INCH YELLOW LF	646.0106 PAVEMENT MARKING EPOXY 4-INCH WHITE LF	646.0406 PAVEMENT MARKING SAME DAY EPOXY 4-INCH 12.5' LINE, 37.5' SKIP LF	649.0402 TEMPORARY PAVEMENT MARKING PAINT 4-INCH 4' LINE, 46' SKIP LF
USH 12 EB	E 78EB+00 - E 96EB+75	--	--	--	300
USH 12 EB	E 77EB+25 - E 97EB+50	2,025	2,025	1,012	--
PROJECT 1206-04-70 TOTAL		4,050		1,012	300

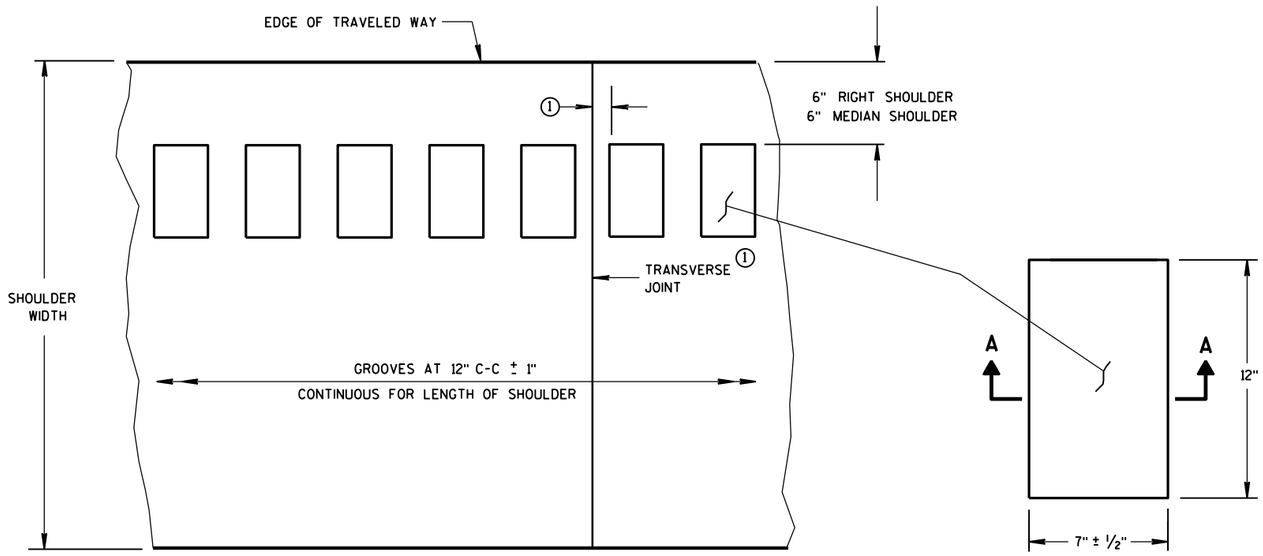
TRAFFIC CONTROL ITEMS

ROADWAY	DURATION DAYS	643.0100 TRAFFIC CONTROL (1206-04-70) EACH	643.0300 TRAFFIC CONTROL DRUMS EACH*	DAYS	643.0420 TRAFFIC CONTROL BARRICADES TYPE III EACH*	DAYS	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH*	DAYS	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C EACH*	DAYS	643.0800 TRAFFIC CONTROL ARROW BOARDS EACH*	DAYS	643.0900 TRAFFIC CONTROL SIGNS EACH*	DAYS	643.1051 TRAFFIC CONTROL SIGNS PCMS EACH*	DAYS	SPV.0060.01 REPOSITIONING TRAFFIC CONTROL DEVICES FOR MAINLINE CLOSURE EACH	SPV.0060.02 TRAFFIC CONTROL CLOSE-OPEN FREEWAY ENTRANCE RAMP EACH
PRECONSTRUCTION																		
SOUTH TOWNE DRIVE	7	--	--	--	--	--	--	--	--	--	--	--	--	--	1	7	--	--
USH 12 EB	7	--	--	--	--	--	--	--	--	--	--	--	--	--	1	7	--	--
PRECONSTRUCTION SUBTOTAL		--		--		--		--		--		--		--		14	--	--
STAGE 1 CONSTRUCTION																		
SOUTH TOWNE DRIVE	4	--	31	124	11	44	22	88	10	40	--	--	4	16	1	8	--	4
USH 12 EB	4	--	121	484	6	24	12	48	28	112	3	12	17	68	1	8	4	--
STAGE 1 SUBTOTAL		--		608		68		136		152		12		84		16	4	4
STAGE 2 CONSTRUCTION																		
SOUTH TOWNE DRIVE	4	--	31	124	11	44	22	88	10	40	--	--	4	16	1	7	--	4
USH 12 EB	4	--	121	484	6	24	12	48	28	112	3	12	21	84	1	7	4	--
STAGE 2 SUBTOTAL		--		608		68		136		152		12		100		14	4	4
STAGE 3 CONSTRUCTION																		
SOUTH TOWNE DRIVE	4	--	31	124	11	44	22	88	10	40	--	--	4	16	1	7	--	4
USH 12 EB	4	--	121	484	6	24	12	48	28	112	3	12	21	84	1	7	4	--
STAGE 3 SUBTOTAL		--		608		68		136		152		12		100		14	4	4
STAGE 4 CONSTRUCTION																		
SOUTH TOWNE DRIVE	2	--	31	62	11	22	22	44	10	20	--	--	4	8	1	4	--	2
USH 12 EB	2	--	121	242	6	12	12	24	28	56	3	6	17	34	1	4	2	--
STAGE 4 SUBTOTAL		--		304		34		68		76		6		42		8	2	2
UNDISTRIBUTED		1		106		12		24		27		2		16	--	6	3	3
PROJECT 1206-04-70 TOTAL		1		2,234		250		500		559		44		342		72	17	17

* PROVIDED FOR INFORMATION ONLY

Standard Detail Drawing List

13A05-05A	SHOULDER RUMBLE STRIP, MILLING
13A05-05B	SHOULDER RUMBLE STRIP, MILLING
13C01-18	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C11-11A	RURAL DOWELED CONCRETE PAVEMENT
13C11-11B	RURAL DOWELED CONCRETE PAVEMENT
13C14-06A	BASE PATCHING CONCRETE
13C14-06B	BASE PATCHING CONCRETE
13C14-06C	BASE PATCHING CONCRETE
15C08-17A	LONGITUDINAL MARKING (MAINLINE)
15D12-06A	TRAFFIC CONTROL, LANE CLOSURE
15D14-03	TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT-TERM (LESS THAN 24 HOURS)
15D16-03	TRAFFIC CONTROL, EXIT RAMP CLOSURE



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

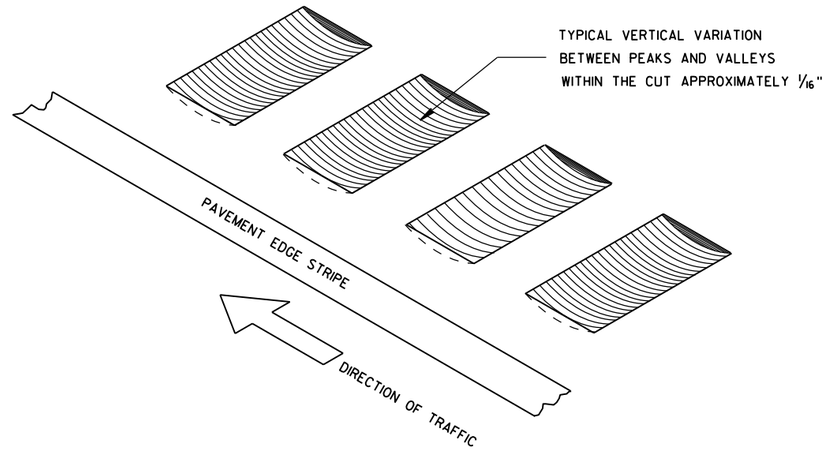
GENERAL NOTES

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

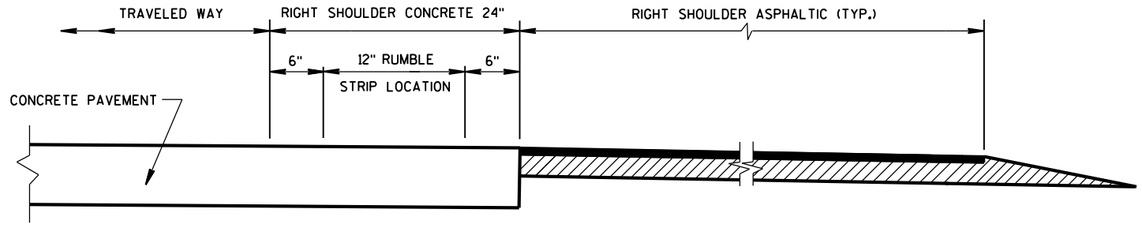
RUMBLE STRIPS ON EXPRESSWAYS

DO NOT INSTALL RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL DRIVEWAYS, PRIVATE DRIVEWAYS OR ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, BRIDGE DECKS, BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSING. THE ATTACHED STANDARD DETAIL DRAWING SHOWS THE LOCATION OF THE RUMBLE STRIPS AT INTERCHANGE AREAS.

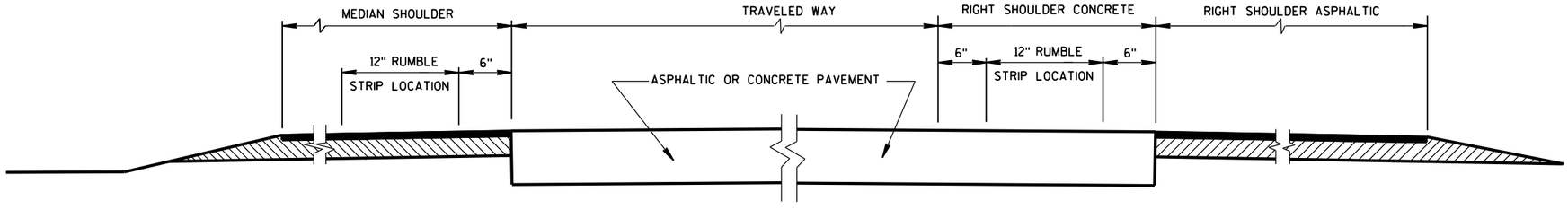
(1) CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6" AWAY FROM TRANSVERSE JOINTS.



ISOMETRIC



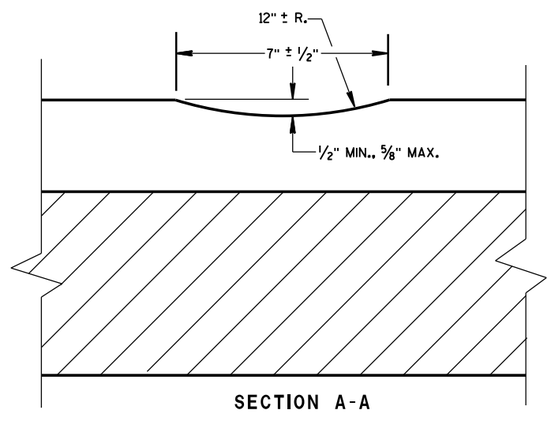
SECTION VIEW
CONCRETE PAVEMENT EXTENDS INTO RIGHT SHOULDER)



SECTION VIEW

TYPICAL LOCATIONS OF SHOULDER RUMBLE STRIPS IN RURAL DIVIDED HIGHWAYS

(ONE ROADWAY IS SHOWN)



SECTION A-A

SHOULDER RUMBLE STRIP, MILLING

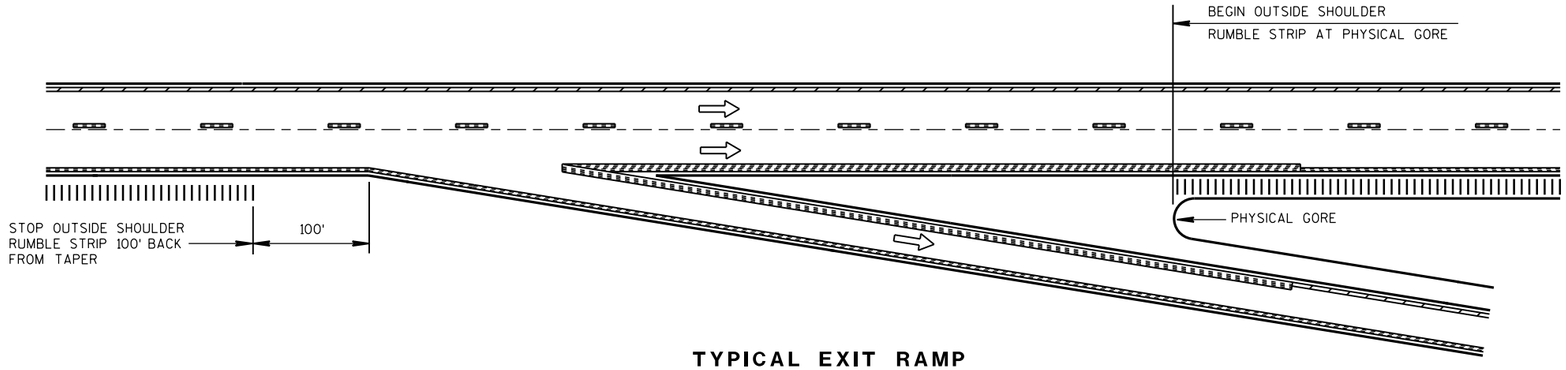
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 13 A 5-5a

6

S.D.D. 13 A 5-5a



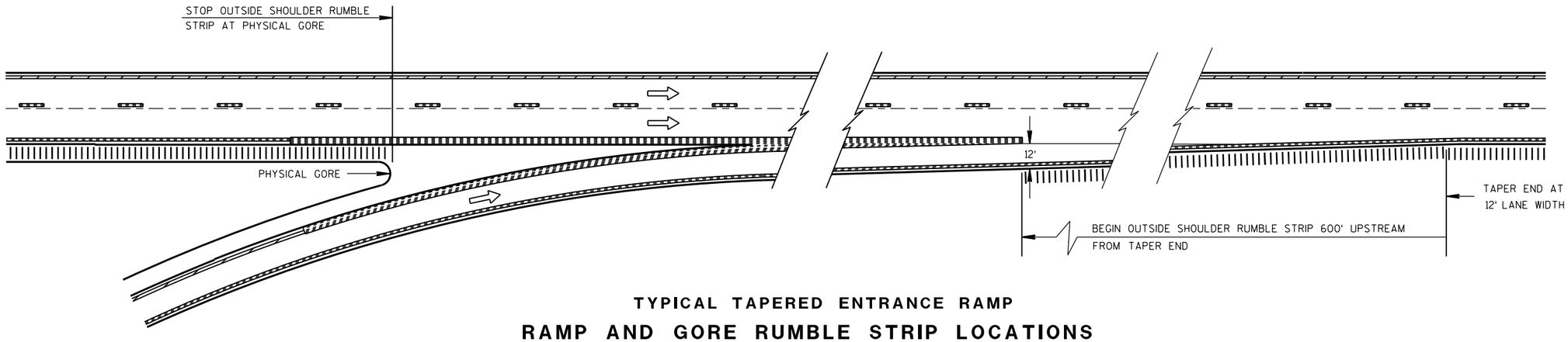
TYPICAL EXIT RAMP

NOTES:

NO RUMBLE STRIP ON EXIT, DIRECTIONAL, OR ENTRANCE RAMPS, EXCEPT NEAR THE ENTRANCE TAPER END AND ALONG THE PARALLEL RAMP AREA AS SHOWN.

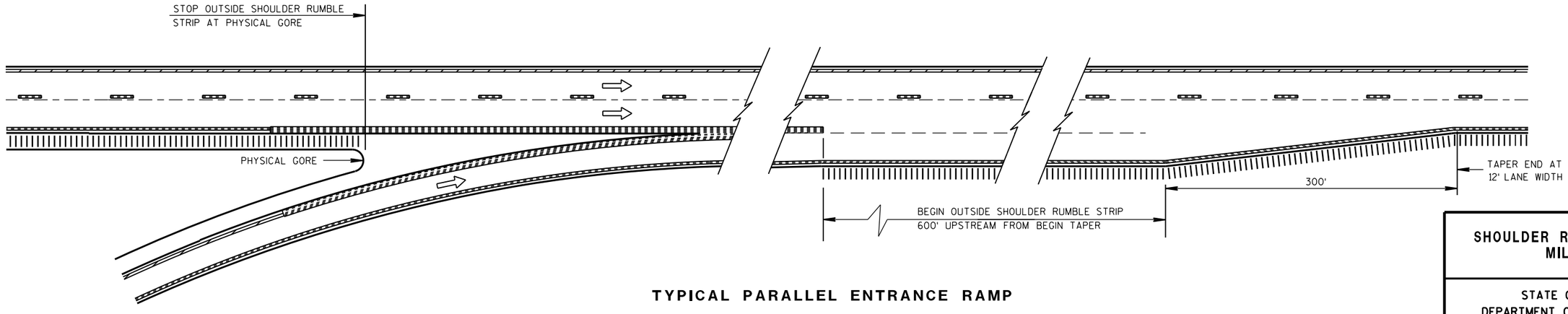
PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TYPICAL TAPERED ENTRANCE RAMP

RAMP AND GORE RUMBLE STRIP LOCATIONS



TYPICAL PARALLEL ENTRANCE RAMP

RAMP AND GORE RUMBLE STRIP LOCATIONS

SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

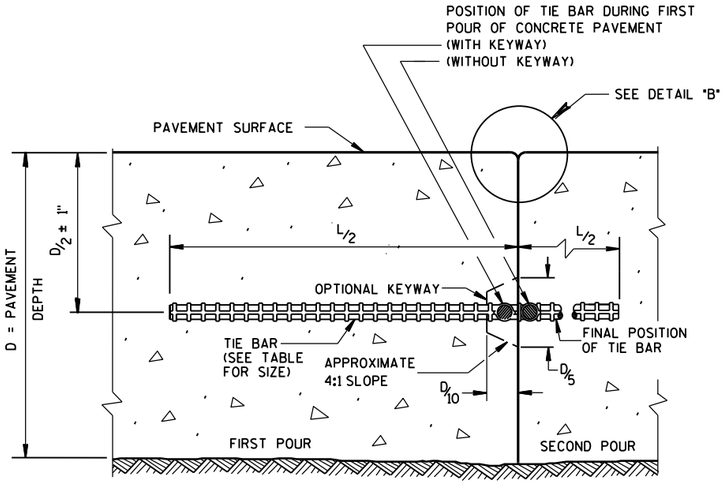
APPROVED
12/17/2012 DATE
/S/ Jerry H. Zoga
ROADWAY STANDARDS ENGINEER
FHWA

6

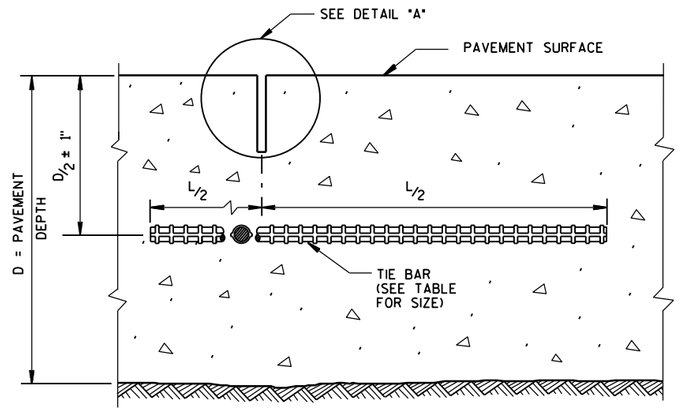
S.D.D. 13 A 5-5b

6

S.D.D. 13 A 5-5b



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.

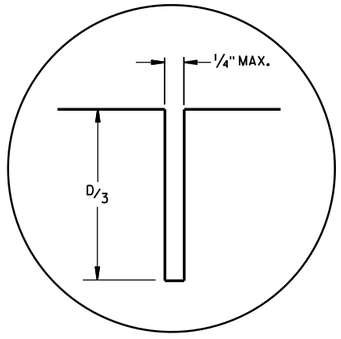
(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

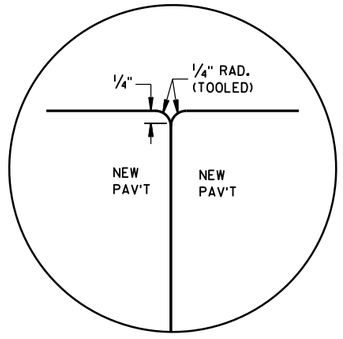
PLAN VIEW

SECTION A-A

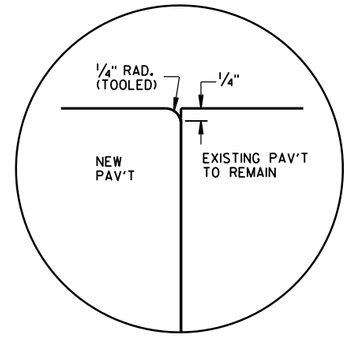
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT



DETAIL "A"



DETAIL "B"



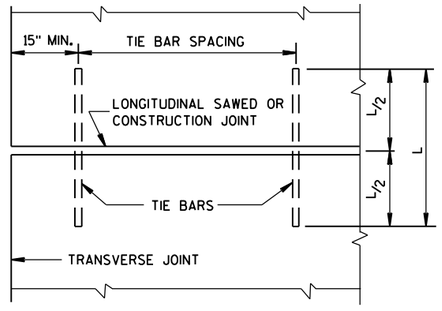
DETAIL "C"

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24"**

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



PLAN VIEW
SHOWING LOCATION OF TIE BARS

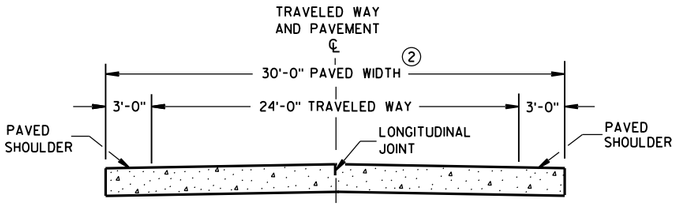
CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

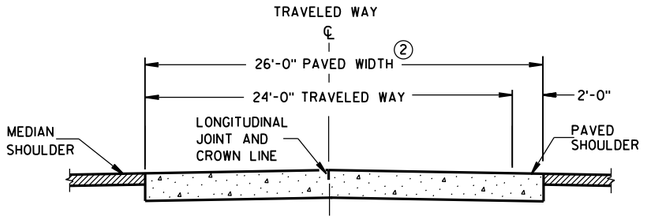
6

S.D.D. 13 C 1-18

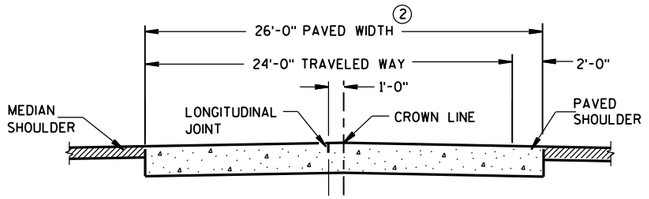


SECTION A-A ①

TWO-LANE TWO-WAY HIGHWAY



SECTION B-B



ALTERNATIVE SECTION B-B ①

DIVIDED HIGHWAY

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT SEAL OR FILL CONTRACTION JOINTS.

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES AND A MAXIMUM OF 18 INCHES FROM THE FREE EDGE OF PAVEMENT.

CONSTRUCTION JOINTS

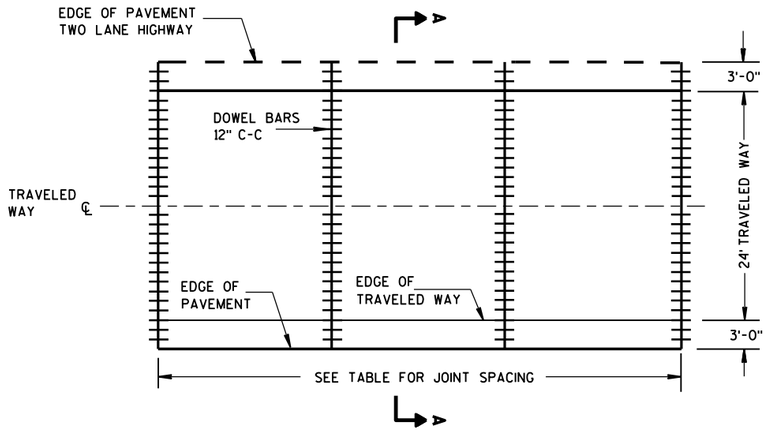
LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

① REFER TO TYPICAL CROSS SECTIONS FOR ADDITIONAL DETAILS.

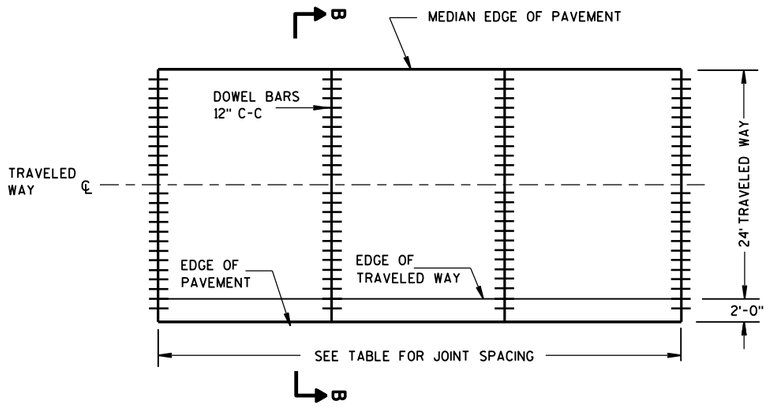
② MEASURE THE ENTIRE PAVED WIDTH INCLUDING THE PORTION(S) LABELED PAVED SHOULDER AS CONCRETE PAVEMENT.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'



CONTRACTION JOINT LAYOUT
FOR TWO-LANE TWO-WAY HIGHWAY



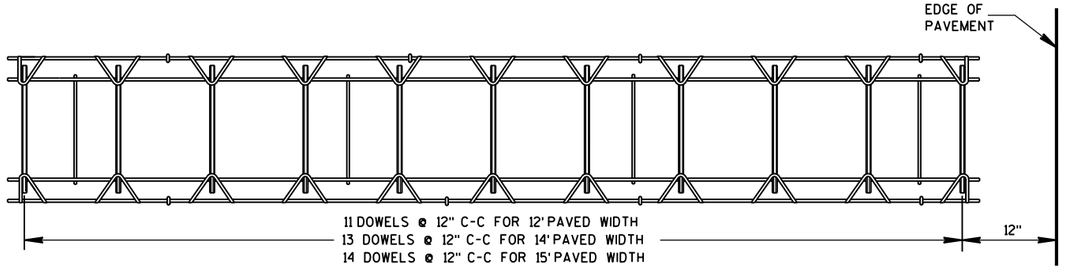
CONTRACTION JOINT LAYOUT
FOR DIVIDED HIGHWAY

RURAL DOWELED
CONCRETE PAVEMENT

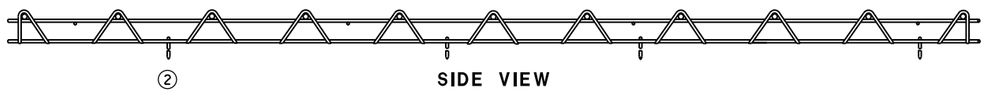
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 13 C 11-11a



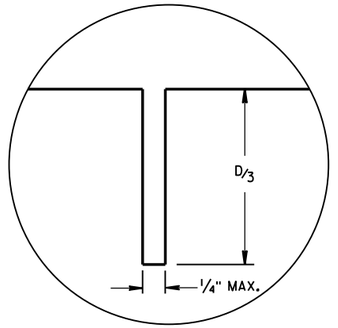
PLAN VIEW



SIDE VIEW

(NORMAL TO CENTERLINE)

CONTRACTION JOINT DOWEL ASSEMBLY ①



JOINT DETAIL

GENERAL NOTES

① OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.

② SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.

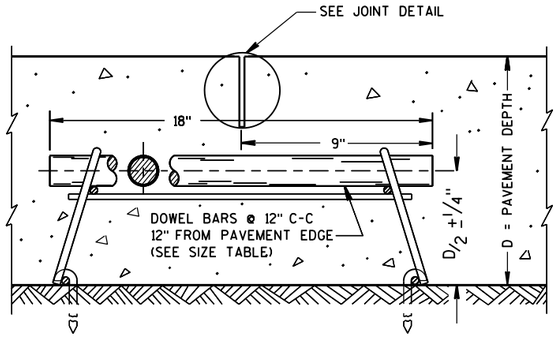
③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A 1/4-INCH RADIUS AT FORMED JOINTS.

④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.

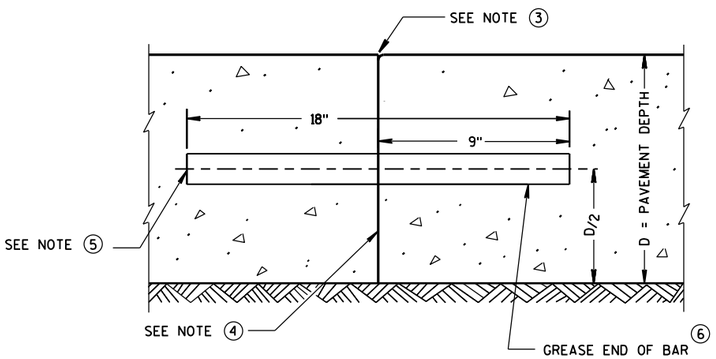
⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL BAR CONSTRUCTION JOINT* DETAIL.

⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

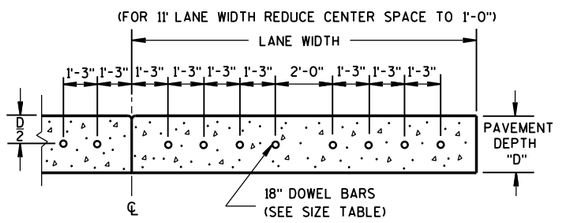
⑦ ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS 1/8-INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



DOWELED CONTRACTION JOINT



TRANSVERSE CONSTRUCTION JOINT



DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦

RURAL DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/3/2013 DATE

/S/ Deb Bischoff
PAVEMENT POLICY & DE ENGINEER

FHWA

6

S.D.D. 13 C 11-11b

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S.D.D. 13 C 11-11b

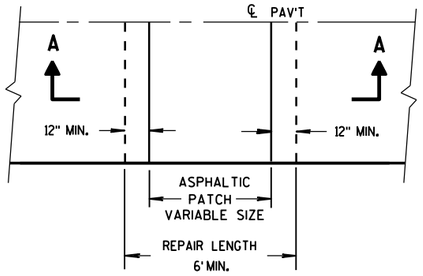
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

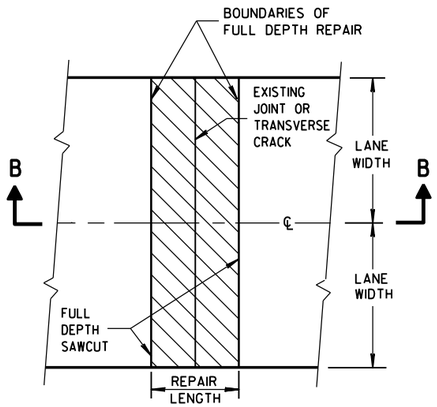
PROVIDE 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NONDOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

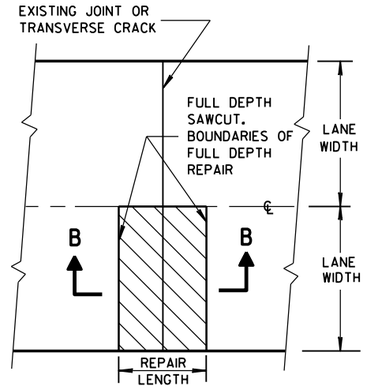
(1) DOWEL BARS MIGHT NOT EXIST.



PLAN VIEW

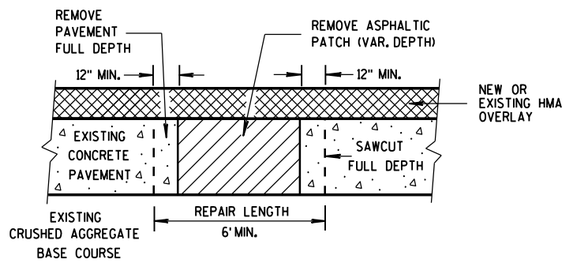


PLAN VIEW
(DOUBLE LANE REPAIR)



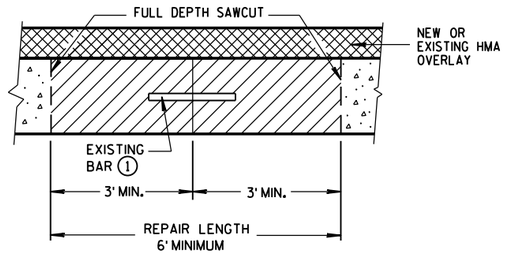
PLAN VIEW
(SINGLE LANE REPAIR)

FULL DEPTH CONCRETE PAVEMENT REMOVAL



SECTION A-A

HMA PATCH REMOVAL



SECTION B-B

CONCRETE REMOVAL

BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 13 C 14-6a

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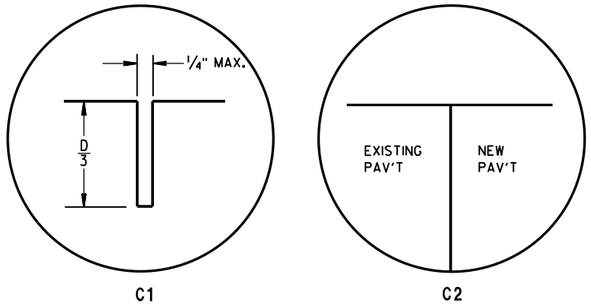
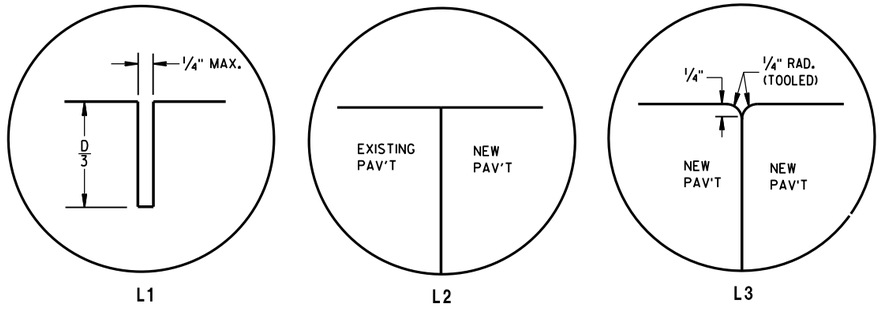
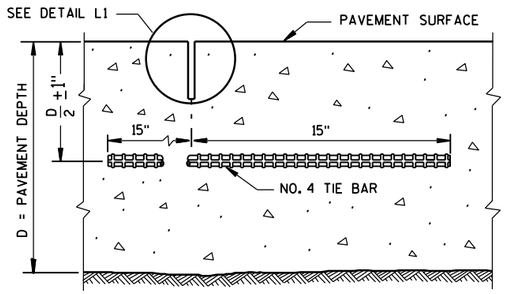
S.D.D. 13 C 14-6a



TRANSVERSE JOINTS

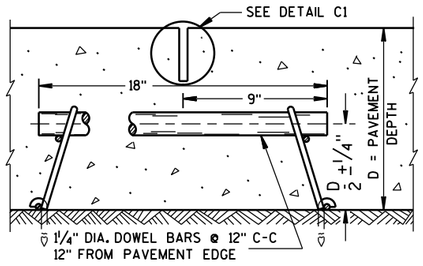


LONGITUDINAL JOINTS



SECTION C-C

SAWED LONGITUDINAL JOINT



SECTION F-F

CONTRACTION JOINT

GENERAL NOTES

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

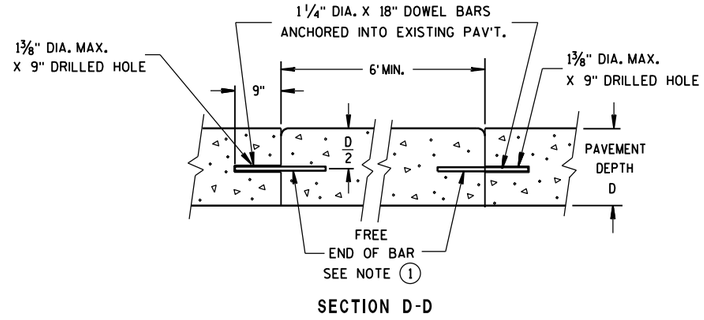
CONCRETE BASE PATCHES OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

DO NOT SEAL OR FILL JOINTS.

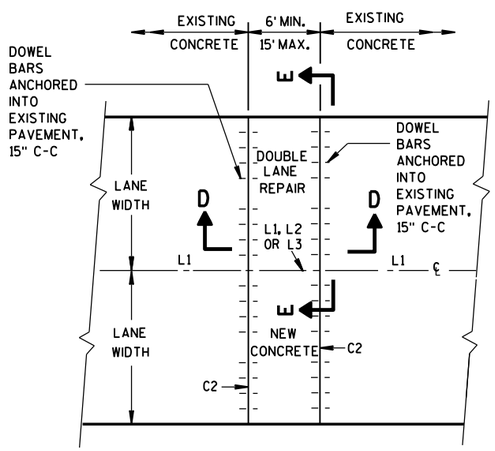
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM AN EXISTING TRANSVERSE JOINT OR THE EDGE OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

(1) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

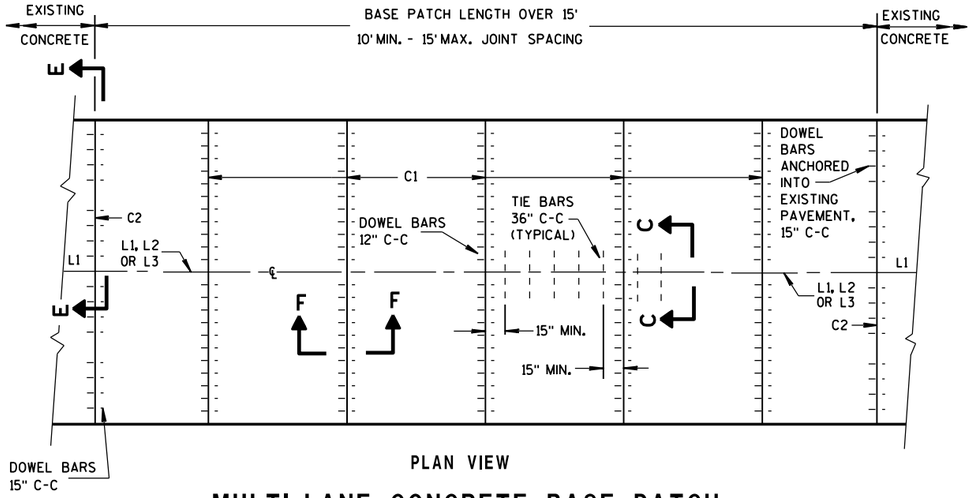


SECTION D-D



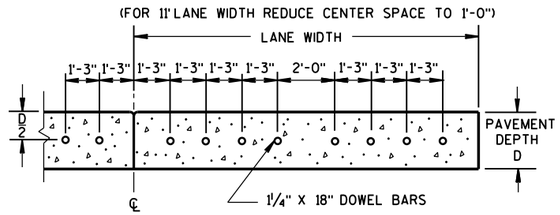
PLAN VIEW

MULTI-LANE CONCRETE BASE PATCH 15' MAXIMUM LENGTH



PLAN VIEW

MULTI-LANE CONCRETE BASE PATCH GREATER THAN 15' IN LENGTH



SECTION E-E

SPACING OF DOWEL BARS ANCHORED INTO EXISTING PAVEMENT

BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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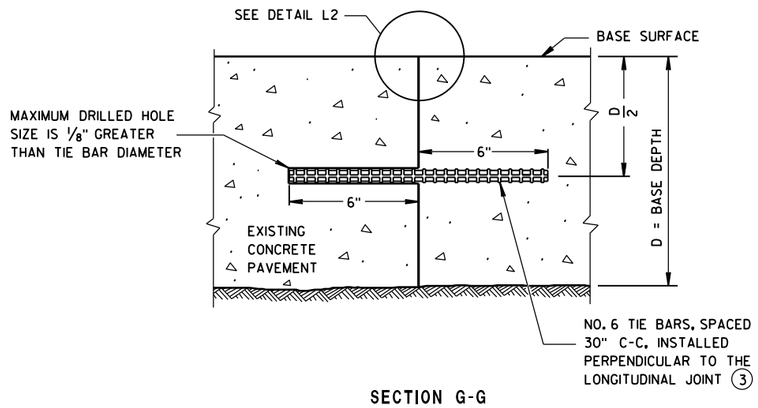
S.D.D. 13 C 14-6b

GENERAL NOTES

(1) USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE BASE PATCHES UP TO 15 FEET IN LENGTH.

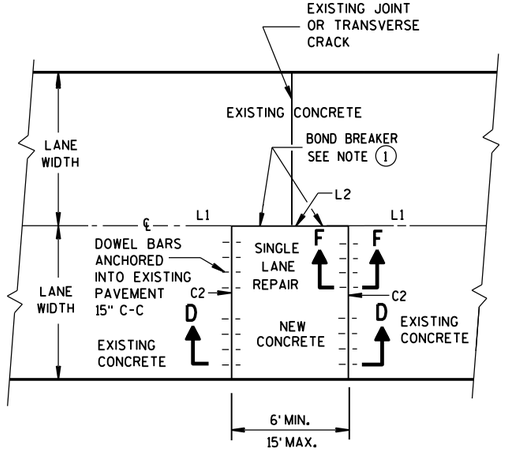
(2) WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, DRILLED TIE BARS MAY BE INSTALLED ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.

(3) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



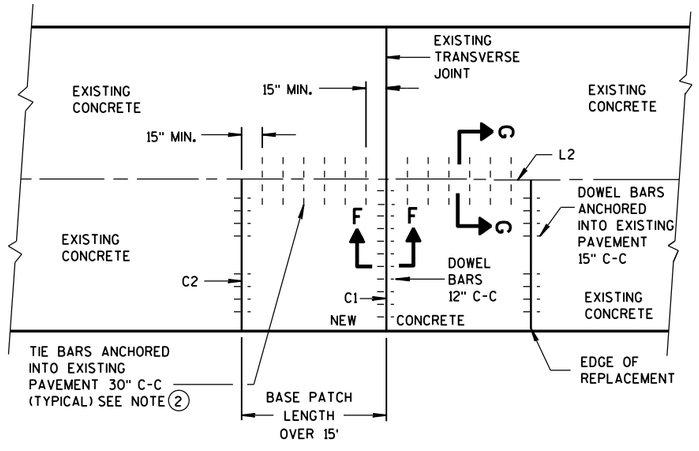
SECTION G-G

TIE BARS ANCHORED INTO EXISTING PAVEMENT



PLAN VIEW

SINGLE LANE CONCRETE BASE PATCH 15' MAXIMUM LENGTH



PLAN VIEW

SINGLE LANE CONCRETE BASE PATCH GREATER THAN 15' IN LENGTH

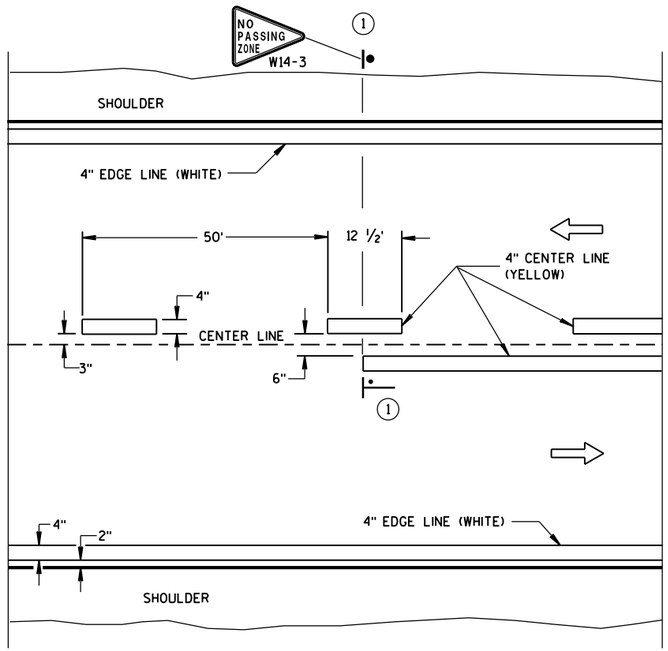
BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

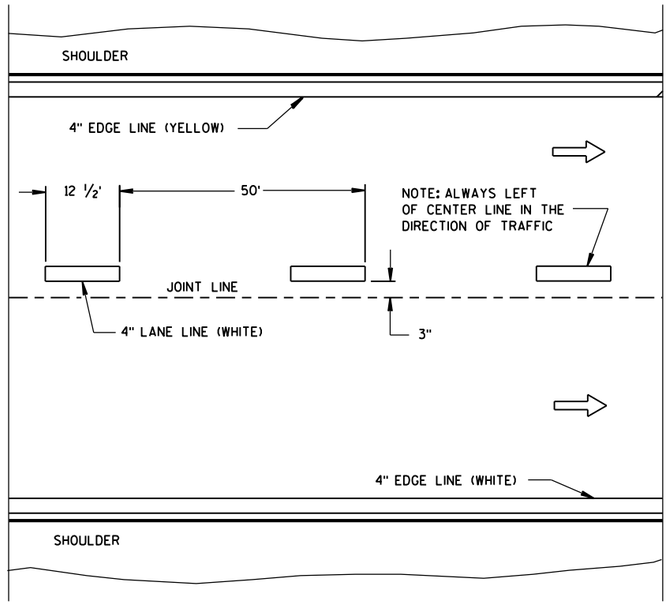
APPROVED
Sept., 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPER
FHWA

6

S.D.D. 13 C 14-6c



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

GENERAL NOTES

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

(1) NO PASSING ZONE W14-3 SIGN SHALL BE LOCATED WITHIN 50 FEET OF THE "T" MARKING.

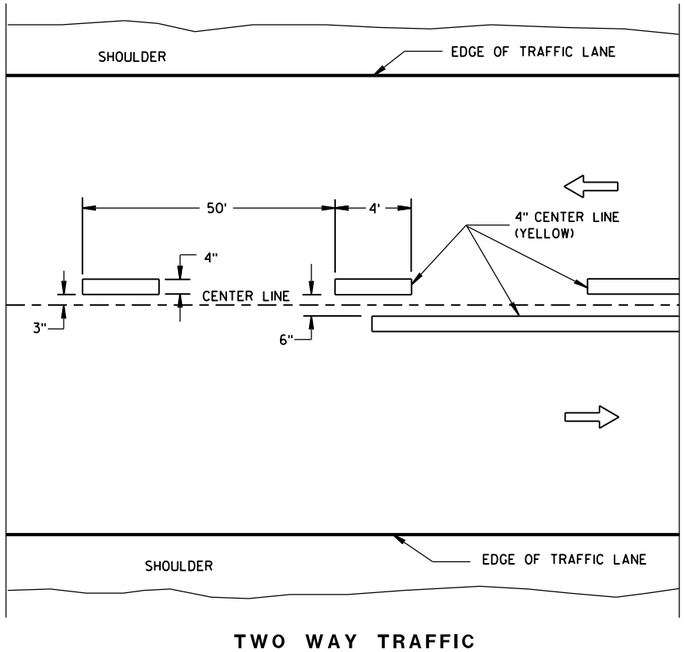
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

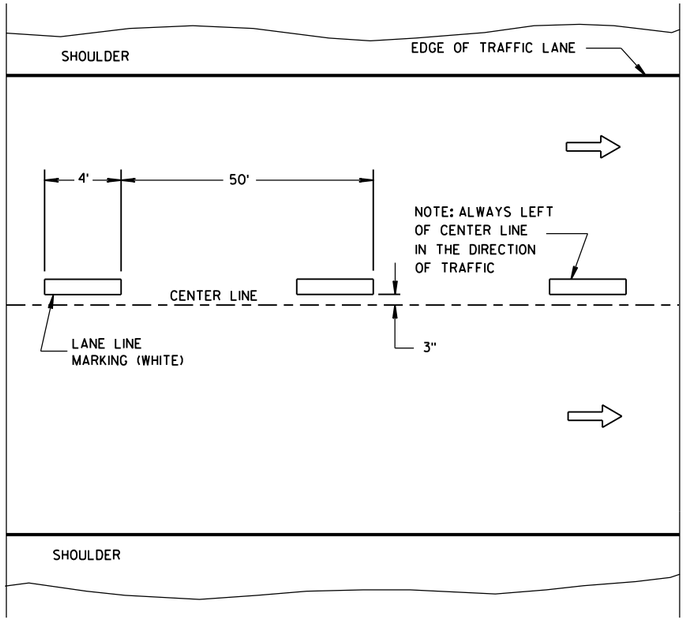
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MARKING ENGINEER
FHWA

6

S.D.D. 15 C 8-17a

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S.D.D. 15 C 8-17a

LEGEND

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

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

"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.

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

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

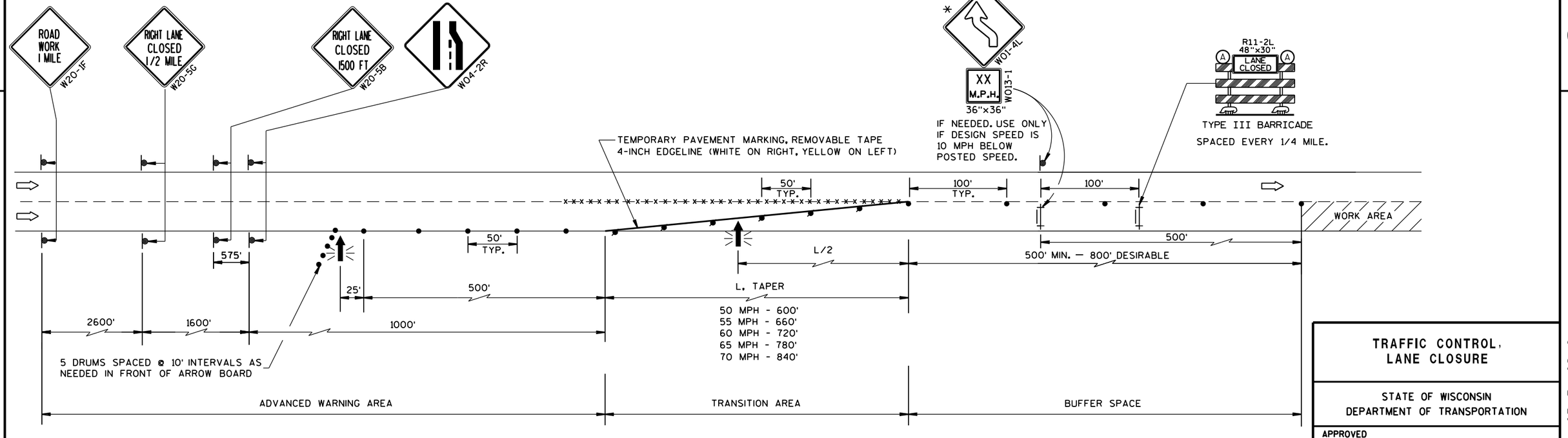
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

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

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

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

* THE LEFT REVERSE CURVE SIGN (WO1-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.



TRAFFIC CONTROL, LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 15 D 12-6a

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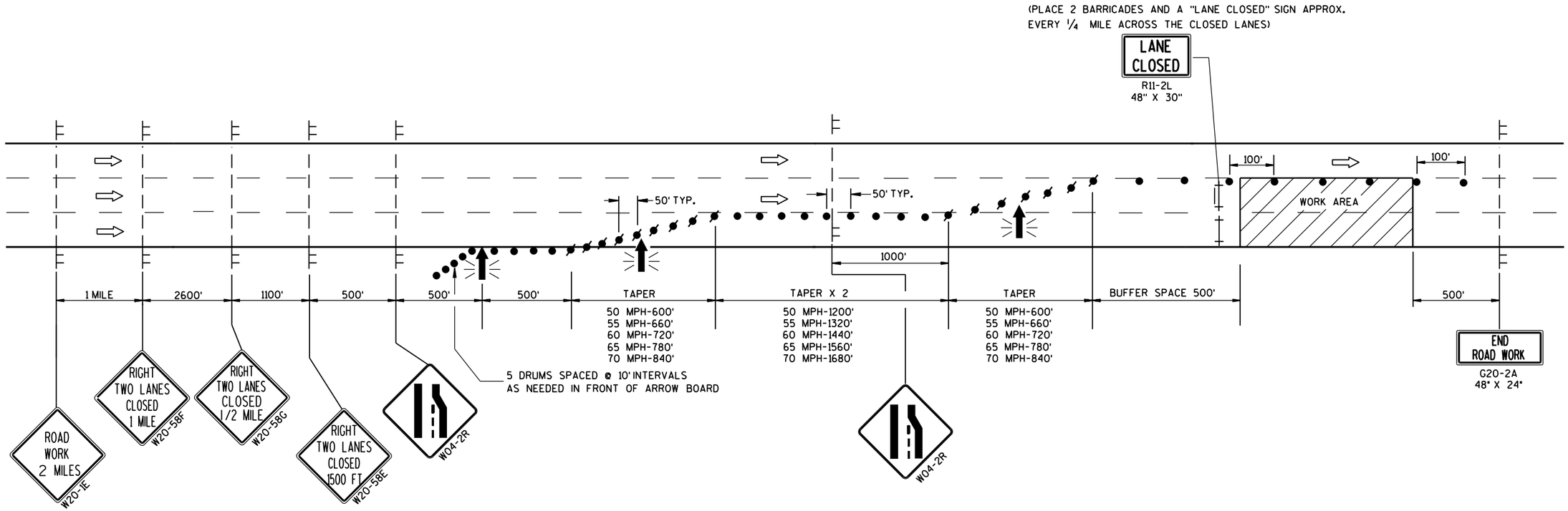
S.D.D. 15 D 12-6a



LEGEND

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

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.

W20-1E 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
July 14, 2015 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

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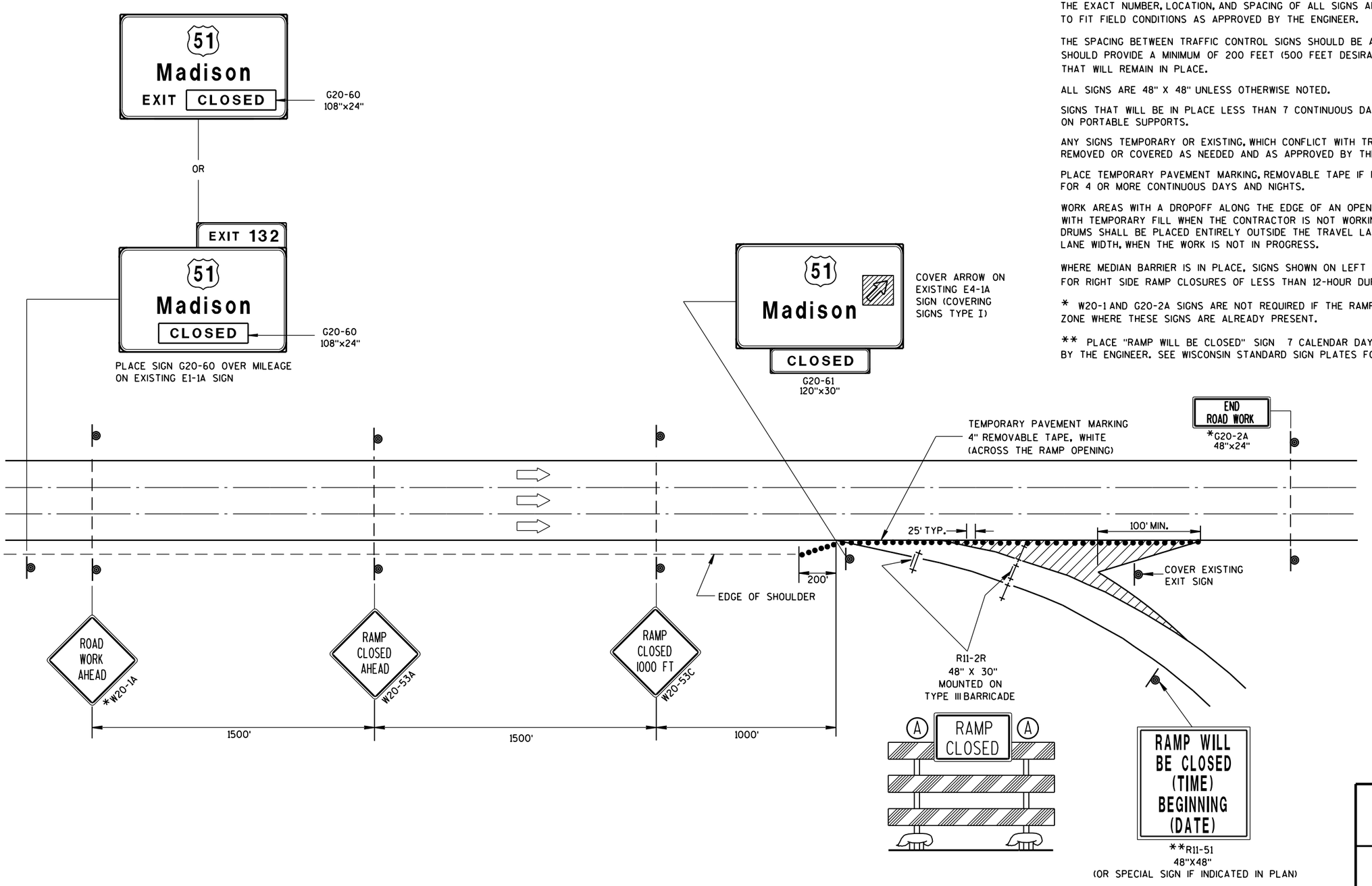
S.D.D. 15 D 14-3



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 4 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.

** PLACE "RAMP WILL BE CLOSED" SIGN 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL, EXIT RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZO 27 SAFETY ENGII — FIC
FHWA

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S.D.D. 15 D 16-3

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