WKE May 11, 2021

PROJECT ID WITH: N/A 2030-15-70

COUNTY MILWAUKEE

ORDER OF SHEETS

SECTION NO.	1	TITLE
SECTION NO.	2	TYPICAL SECTIONS AND DETAILS
SECTION NO.	3	ESTIMATE OF QUANTITIES
SECTION NO.	3	MISCELLANEOUS QUANTITIES
~~SECTION NO.~~	~~4~~	~~RIGHT OF WAY PLAT~~
SECTION NO.	5	PLAN AND PROFILE
SECTION NO.	6	STANDARD DETAIL DRAWINGS
~~SECTION NO.~~	~~7~~	~~SIGN PLATES~~
SECTION NO.	8	STRUCTURE PLANS
~~SECTION NO.~~	~~9~~	~~COMPUTER EARTHWORK DATA~~
~~SECTION NO.~~	~~9~~	~~CROSS SECTIONS~~

TOTAL: 86

DESIGN DESIGNATION

A.D.T. CURRENT	=	8,100
A.D.T. 2040	=	9,700
D.H.V.	=	-
D.	=	-
T.	=	4.0%
DESIGN SPEED	=	35
ESALS	=	-

CONVENTIONAL SIGNS

COUNTY LINE		CABLE TELEVISION	TV
TOWNSHIP OR RANGE LINE		CITY UNDERGROUND CONDUIT	CUC
SECTION LINE		ELECTRIC	E
CORPORATE OR CITY LIMITS		GAS	G
PROPERTY LINE	P.L.	TRAFFIC & ELECTRICAL SERVICES	TE&ES
STANDARD BENCH MARK		MILWAUKEE METRO SEWERAGE DISTRICT	MMSD
EXISTING RIGHT OF WAY LINE	R/W	STEAM	STEAM
BUILDING LIMITS		WATER	W
PROPOSED SEWER LATERAL		FIRE & POLICE CALL BOX	
BASE OF SURVEY LINE		LIGHT POLE	
CONCRETE WALK/DWY. REMOVAL		POWER POLE	
LIMITS OF CONCRETE PAVEMENT REMOVAL	X X X X X X	TELEPHONE OR TELEGRAPH POLE	
CATCH BASIN OR INLET EXISTING / PROPOSED		TRAFFIC SIGNAL	
		TRAFFIC SIGNAL CONTROL BOX	
COMBUSTIBLE FLUIDS UNDER PRESSURE	CAUTION	HYDRANT	
		GAS OR WATER GATE VALVE	
RAILROADS		MANHOLES - SEWER / UTILITY (TYPE)	
FENCE	— x — x (TYPE) x —	TREES - EXISTING / TO BE REMOVED	

DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

NORTH LOVERS LANE ROAD

BRIDGE OVER UP RR B-40-0435

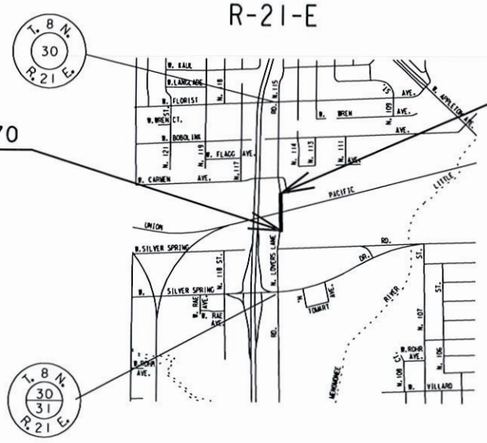
LOCAL STREET
MILWAUKEE COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
2030-15-70		

STATE PROJECT NUMBER
2030-15-70

N

R-21-E



BEGIN PROJECT 2030-15-70
STA. 34+16.47, T/L
Y. = 414,401.4823
X. = 2,519,162.4405

END PROJECT 2030-15-70
STA. 38+48.0, T/L

LAYOUT
SCALE 1/4 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.081 MI. (URBAN)

THE COORDINATES ON THIS PLAN ARE BASED ON THE WISCONSIN STATE PLANE COORDINATE SYSTEM, MILWAUKEE COUNTY, NAD 27 SOUTH ZONE.

COMBINED SCALE AND SEA LEVEL REDUCTION FACTOR .9992542

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE CITY OF MILWAUKEE DATUM.

TO CONVERT ELEVATIONS SHOWN ON THIS PLAN TO NATIONAL GEODEDIC VERTICAL DATUM OF 1929, ADD 580.603 TO ELEVATIONS SHOWN ON THIS PLAN.

Accepted For
City of Milwaukee

2/5/21 (Date)
Commissioner of Public Works

Original Plans Prepared By

WISCONSIN
JERREL KRUSCHKE
43536-6
MILWAUKEE, WIS.
PROFESSIONAL ENGINEER

2/5/2021 (Date)
City Engineer

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

SURVEYOR	CITY OF MILWAUKEE
DESIGNER	CITY OF MILWAUKEE
PROJECT MANAGER	GREG HAFEMAN
DISTRICT EXAMINER	
DISTRICT SUPERVISOR	JEFF BOHEN
C.O. EXAMINER	

APPROVED FOR DISTRICT OFFICE

DATE: 02/05/2021 (SIGNATURE)

E

FILE NAME = W:\STR\B0842\APPROACH PLAN\TITLE.DGN

REVISED DATE: 02-01-2021 BY AA

GENERAL NOTES

1. ALL OPENINGS BELOW SUBGRADE, RESULTING FROM REMOVALS OR ABANDONMENTS, SHALL BE BACKFILLED WITH BASE AGGREGATE DENSE, 1-1/4 INCH.

2. ALL DISTURBED AREAS, NOT SURFACED, ARE TO BE COVERED WITH 4" OF TOPSOIL, SODDED AND FERTILIZED UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

3. NO TREES OR SHRUBS SHALL BE REMOVED UNLESS DESIGNATED FOR REMOVAL BY THE ENGINEER.

4. TRANSVERSE JOINTS IN THE SIDEWALK SHALL BE CONSTRUCTED AT INTERVALS EQUAL TO THE WIDTH OF THE CONCRETE UNLESS OTHEREWISE DIRECTED BY THE ENGINEER.

5. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLAN IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN. THE CONTRACTOR SHALL CONTACT DIGGERS HOTLINE AND OTHER UTILITIES NOT AFFILIATED WITH DIGGERS HOTLINE.

6. INLET PROTECTIONS ARE TO BE PLACED BETWEEN THE FRAME AND GRATE OF CATCH BASINS / INLETS TO PREVENT SOIL FROM ENTERING THE SEWERS. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THE MEASURES ARE NO LONGER NECESSARY.

7. EROSION CONTROL BMP'S ARE AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTORS "ECIP" AND BY THE ENGINEER. EROSION CONTROL BMP'S SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL ENGINEER DETERMINES THAT THE BMP IS NO LONGER REQUIRED.

STANDARD ABBREVIATIONS

ASPH.	- ASPHALT
B.M.	- BENCH MARK
CTR.	- CENTER
C/L	- CENTER LINE
COMB.	- COMBINED
CONC.	- CONCRETE
C.W.	- CONCRETE WALK
COR.	- CORNER
C	- CURB
ELEV.	- ELEVATION
ENT.	- ENTRANCE
EXIST.	- EXISTING
F	- FLANGE
G	- GUTTER, OR GAS
HAST	- HANK AARON STATE TRAIL
HYD.	- HYDRANT
LT.	- LEFT
MMSD	- MILWAUKEE METROPOLITAN SEWERAGE DISTRICT
P/L.	- PROPERTY LINE
R OR RAD.	- RADIUS
RET.	- RETAINING
RT.	- RIGHT
R/W	- RIGHT OF WAY
TEL	- AMERITECH
TES	- TRAFFIC ENGINEERING, AND ELECTRICAL SERVICES
T/L	- TRANSIT LINE
WEP	- WISCONSIN ELECTRIC POWER

ORDER OF SECTION 2 SHEETS

3-INCH ASPHALTIC SURFACE
UPPER LAYER: 1-1/2 INCH 4LT 58-28 S
LOWER LAYER: 1-1/2 INCH 4LT 58-28 S

UTILITY CONTACTS

AMERICAN TRANSMISSION COMPANY
TONY MARCINAK
PO BOX 47
WAUKESHA, WI 53187-0047
PHONE: 262-506-6814
amarciniak@atcllc.com

AT & T
MR. JAY BULANEK
PHONE: 262-896-7669
PHONE: 414-491-2855
JB5175@ATT.COM

CHARTER/ SPECTRUM
CHARLES BRASILE
1320 N. DR. MARTIN LUTHER KING JR. DR.
MILWAUKEE, WI 53212
PHONE: 414-908-4822
charles.brasile@charter.com

CITY OF MILWAUKEE- STREET LIGHTING
DENIS KOZELEK
841 N. BROADWAY
MILWAUKEE, WI 53202
PHONE: 414-286-3252
dkozel@milwaukee.gov

SPRINT COMMUNICATIONS
DAN HILLIARD
849 EARL STREET
SAINT PAUL MN 55106
PHONE: 612-217-3526
dan.j.hilliard@t-mobile.com

WE ENERGIES - ALL CORRESPONDANCE
NICOLE SMULLEN
333 W. EVERETT ST., RM. A291
MILWAUKEE, WI 53203
PHONE: 414-221-5617
nicole.smullen@we-energies.com

WE ENERGIES FIELD CONTACT- ELECTRIC
ALEX DANTINNE
500 S. 116TH ST.
WEST ALLIS, WI 53214
PHONE: 414-218-2053
alex.dantinne@we-energies.com

WE ENERGIES FIELD CONTACT- GAS
ALEX DANTINNE
500 S. 116TH ST.
WEST ALLIS, WI 53214
PHONE: 414-218-2053
alex.dantinne@we-energies.com

OTHER CONTACTS

CITY OF MILWAUKEE - DESIGN
SAMUEL MEDHIN
841 N. BROADWAY, RM. 902
MILWAUKEE, WI 53202
PHONE: 414-286-0474
smedhi@milwaukee.gov

CITY OF MILWAUKEE - FORESTRY
JAMES KRINGER
841 N. BROADWAY, RM. 801
MILWAUKEE, WI 53202
PHONE: 414-708-2428
james.kringer@milwaukee.gov

MILWAUKEE COUNTY TRANSIT SYSTEM - ROUTES
MELANIE FLYNN
1942 N. 17TH ST.
MILWAUKEE, WI 53205
PHONE: 414-343-1764
mflynn@mets.org

MILWAUKEE COUNTY TRANSIT SYSTEM - BUS STOPS
ANDY TILLMAN
1942 N. 17TH ST.
MILWAUKEE, WI 53205
PHONE: 414-343-1728
atillman@mcts.org

SEWRPC - LAND MONUMENTS
JOHN WASHBURN
W239 N1812 ROCKWOOD DR.
WAUKESHA, WI 53187
PHONE: 262-953-4286
CELL: 920-9123-1036

WISCONSIN DEPT. OF NATURAL RESOURCES
KRISTINA BETZOLD
2300 N. DR. MARTIN LUTHER KING, JR. DR.
MILWAUKEE, WI 53212
PHONE: 414-263-8517
Kristina.Betzold@wisconsin.gov

CITY OF MILWAUKEE-UTILITY COORDINATOR
ELLIOT SMYTH
841 N. BROADWAY, RM 710
MILWAUKEE, WI 53202
PHONE: 414-704-0468
esmyth@milwaukee.gov

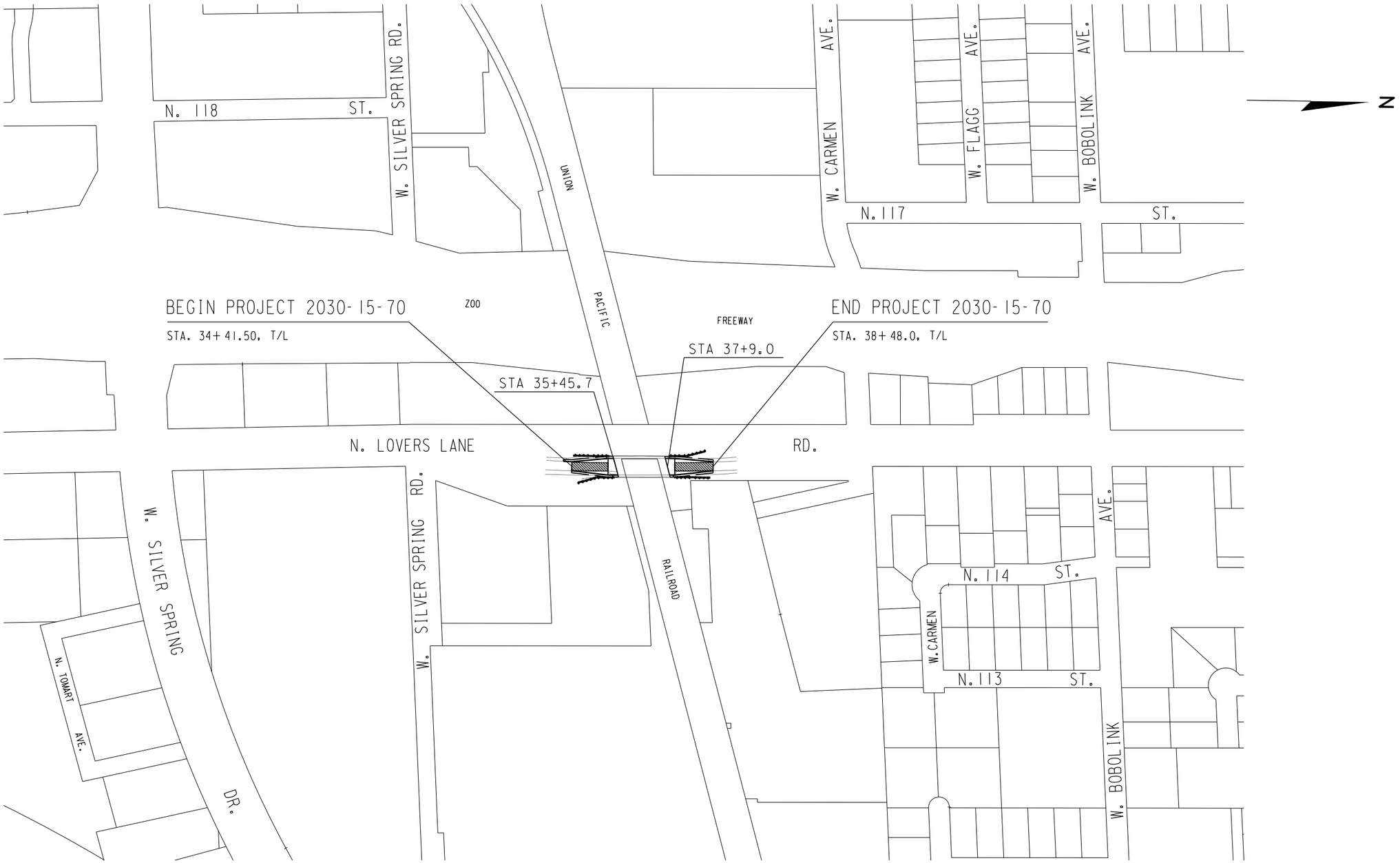
DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com

STATE PROJECT NUMBER 2030-15-70	HWY: LOVERS LANE ROAD	COUNTY: MILWAUKEE	UTILITY CONTACTS	SCALE FEET	SHEET NO: 3	E

FILENAME: W:\STR\B0842\APPROACH PLAN\CONTACTS.DGN

REVISED DATE: 02-03-2021 BY AA

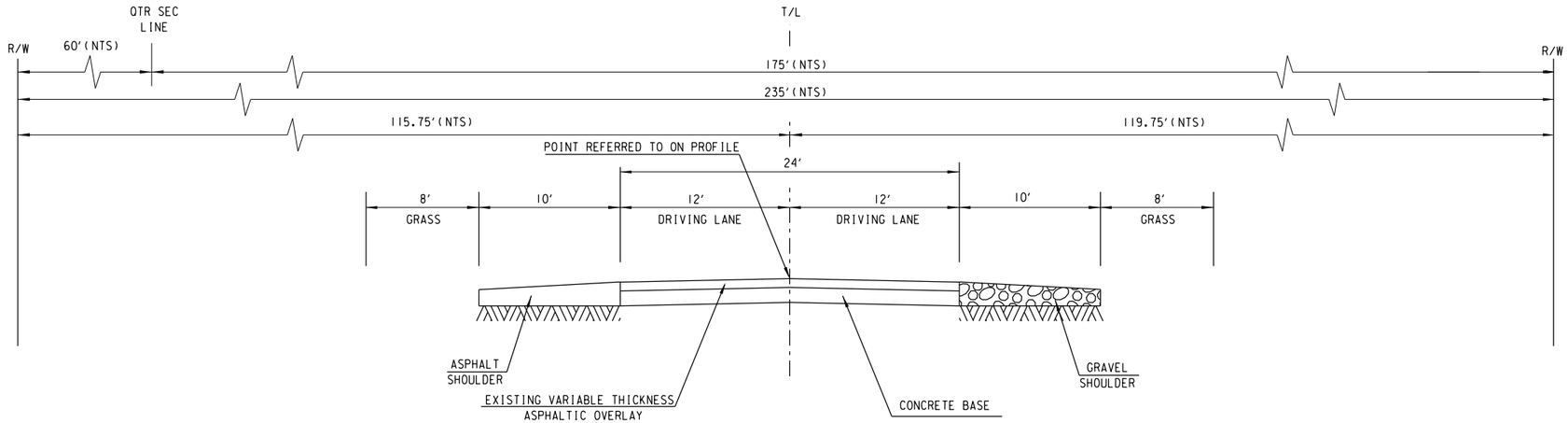
2



STATE PROJECT NUMBER 2030-15-70	HWY: LOVERS LANE ROAD	COUNTY: MILWAUKEE	PROJECT OVERVIEW	SCALE FEET 0' 150'	SHEET NO: 4	E

FILENAME: W:\STR\B0842\APPROACH PLAN\OVERVIEW.DGN

REVISED DATE: 01-21-2021 BY AA



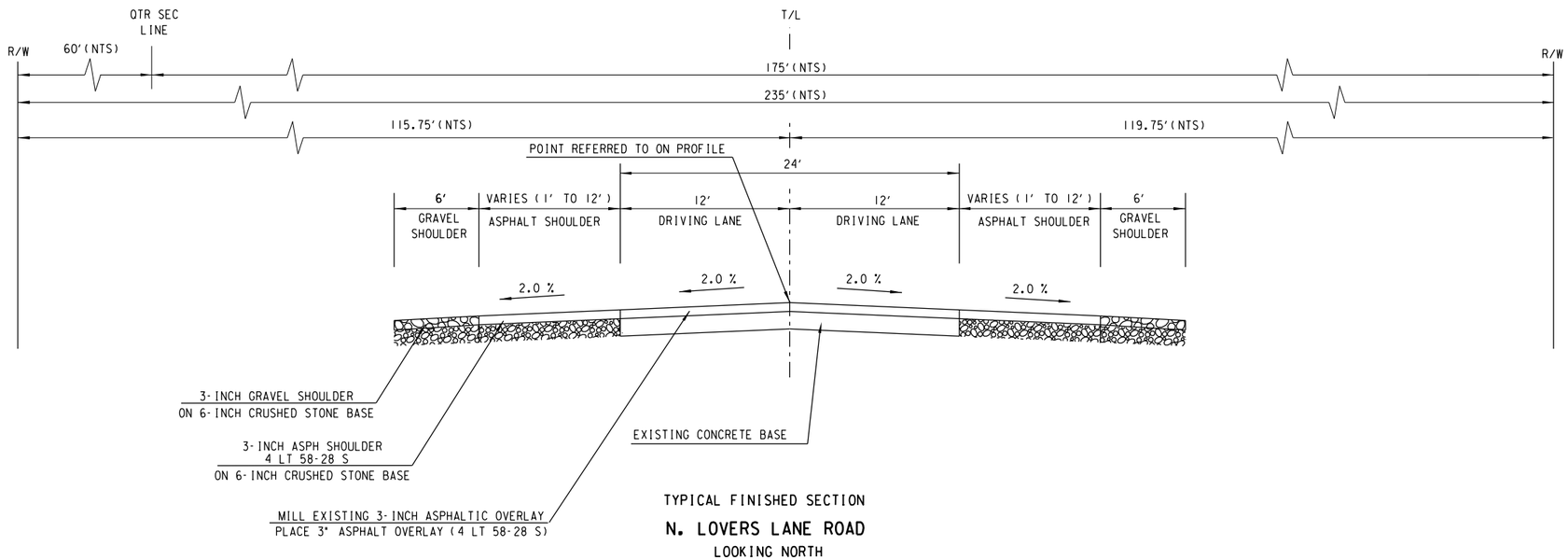
TYPICAL EXISTING SECTION

N. LOVERS LANE ROAD

LOOKING NORTH

SOUTH SIDE APPROACH

STA. 34+41.5 TO 35+45.7



TYPICAL FINISHED SECTION

N. LOVERS LANE ROAD

LOOKING NORTH

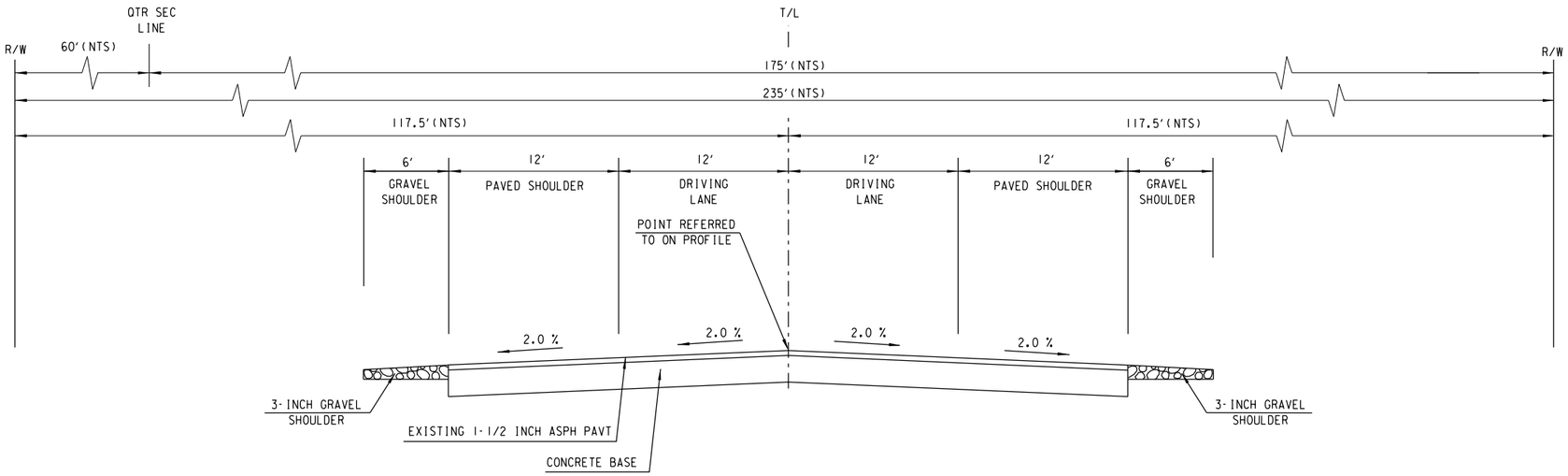
SOUTH SIDE APPROACH

STA. 34+41.5 TO 35+45.7

STATE PROJECT NUMBER 2030-15-70	HWY: LOVERS LANE ROAD	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SCALE FEET	SHEET NO: 5	E

FILENAME: W:\STR\BO842\APPROACH PLAN\TYPSEC.DGN

REVISED DATE: 12-09-2020 BY SB



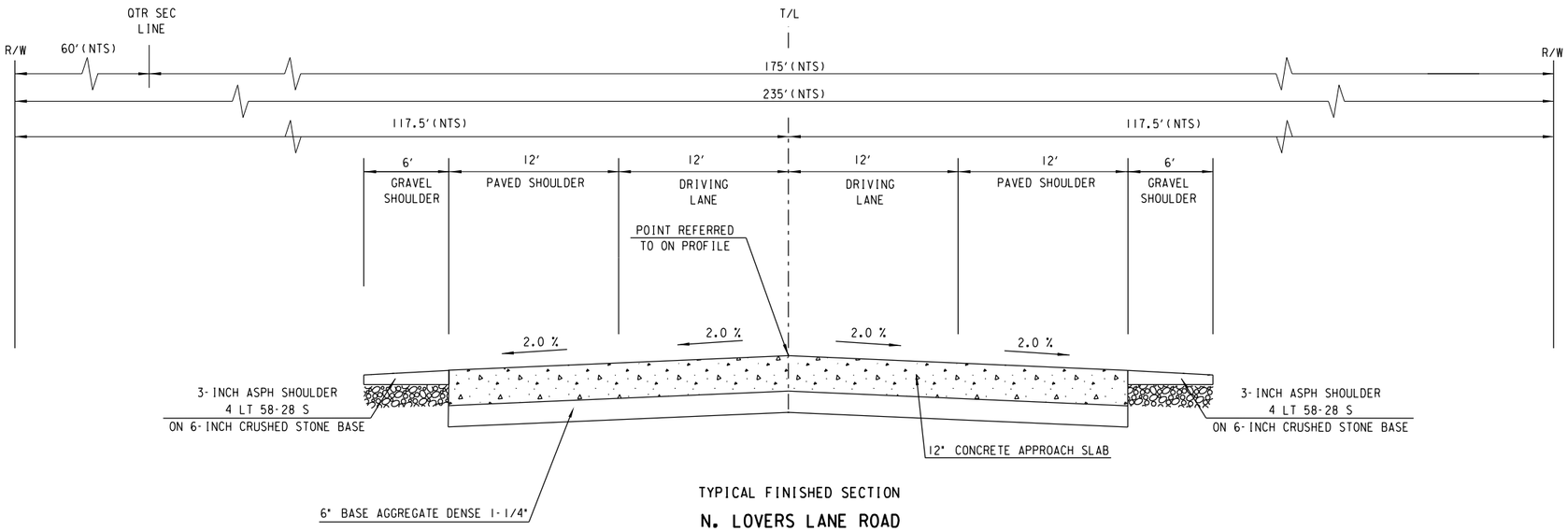
TYPICAL EXISTING SECTION

N. LOVERS LANE ROAD

LOOKING NORTH

SOUTH SIDE APPROACH SLAB

STA. 35+45.7 TO 35+68.1



TYPICAL FINISHED SECTION

N. LOVERS LANE ROAD

LOOKING NORTH

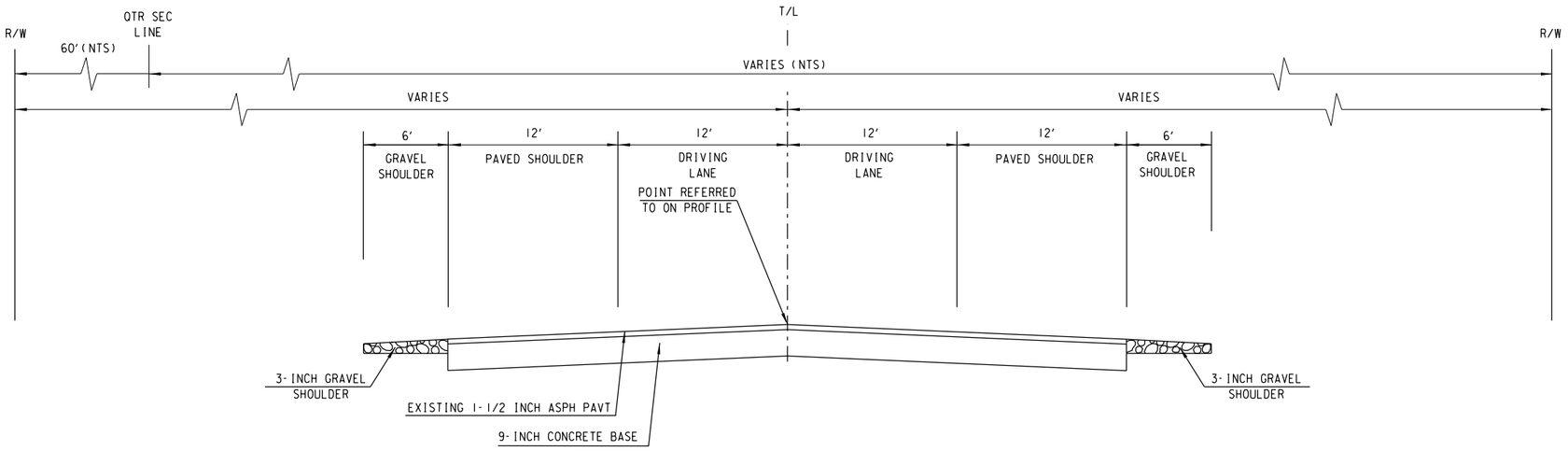
SOUTH SIDE APPROACH SLAB

STA. 35+45.7 TO 35+68.1

STATE PROJECT NUMBER 2030-15-70	HWY: LOVERS LANE ROAD	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SCALE FEET	SHEET NO: 6	E

FILENAME: W:\STR\B0842\APPROACH PLAN\TYPSEC.DGN

REVISED DATE: 12-09-2020 BY SB



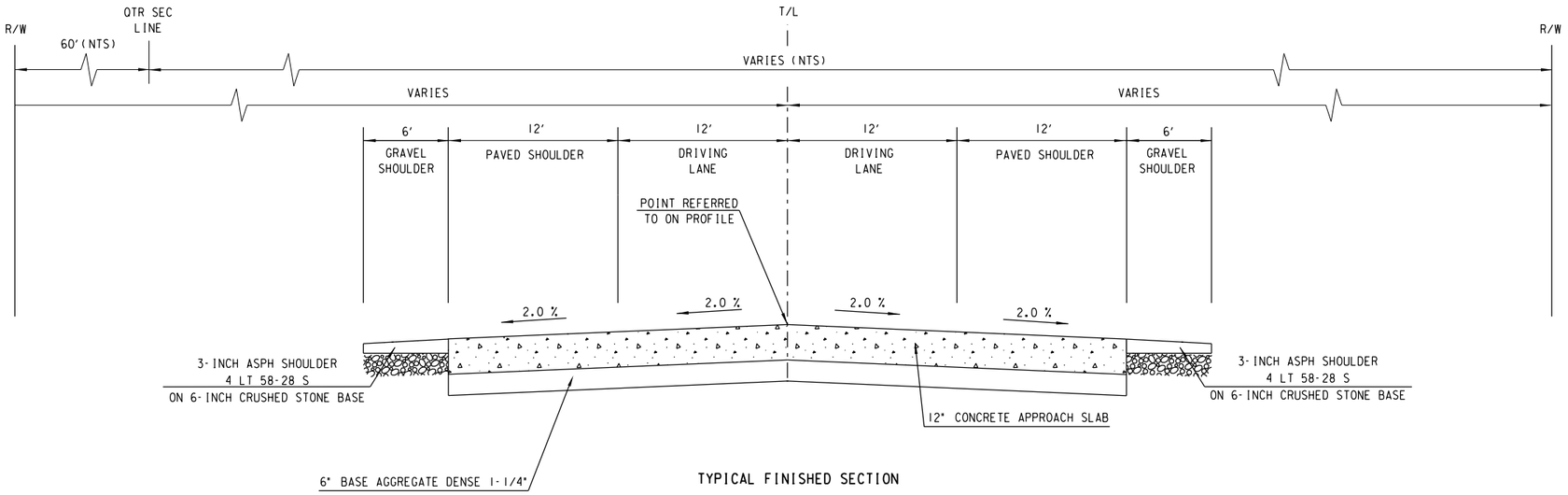
TYPICAL EXISTING SECTION

N. LOVERS LANE ROAD

LOOKING NORTH

NORTH SIDE APPROACH

STA. 37+16.8 TO 37+37.7



TYPICAL FINISHED SECTION

N. LOVERS LANE ROAD

LOOKING NORTH

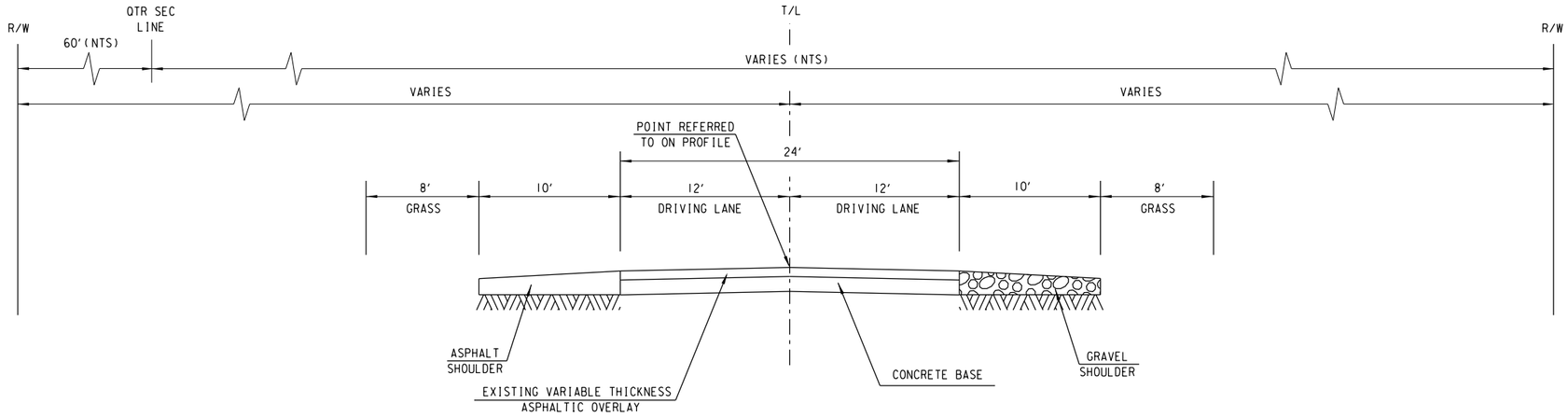
NORTH SIDE APPROACH SLAB

STA. 37+16.8 TO 37+37.7

STATE PROJECT NUMBER 2030-15-70	HWY: LOVERS LANE ROAD	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SCALE FEET	SHEET NO: 7	E

FILENAME: W:\STR\B0842\APPROACH PLAN\TYPSEC.DGN

REVISED DATE: 12-09-2020 BY SB



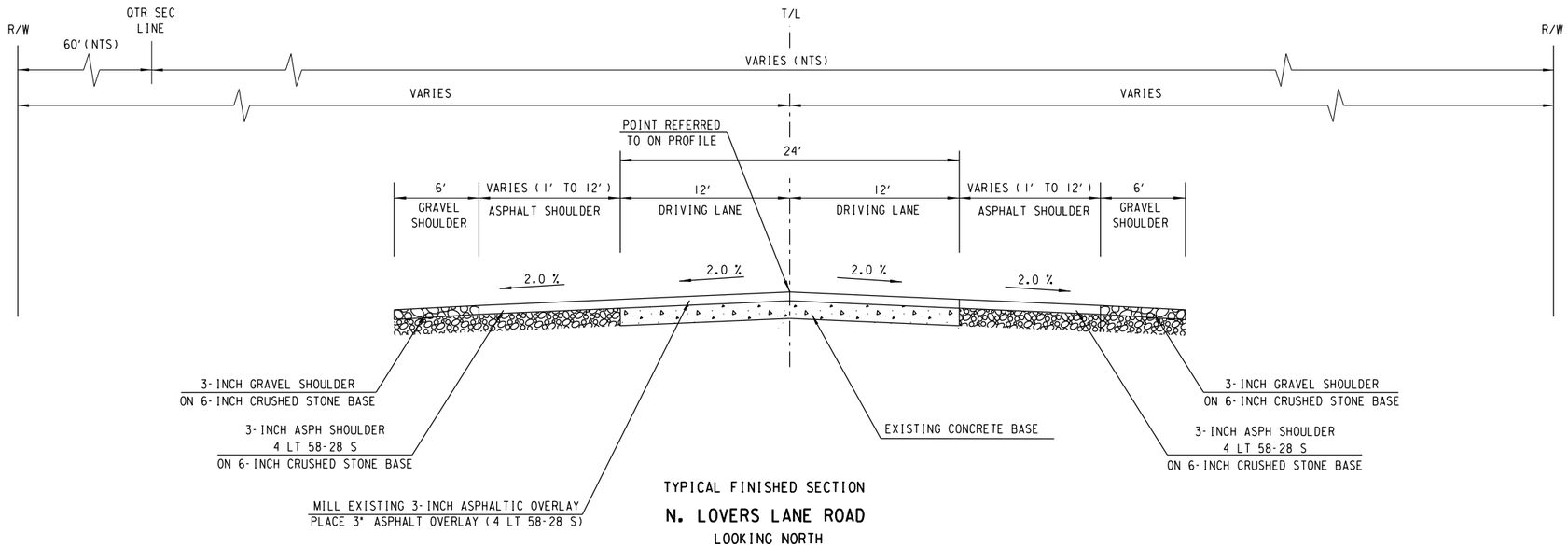
TYPICAL EXISTING SECTION

N. LOVERS LANE ROAD

LOOKING NORTH

NORTH SIDE APPROACH

STA. 37+37.7 TO 38+48.0



TYPICAL FINISHED SECTION

N. LOVERS LANE ROAD

LOOKING NORTH

NORTH SIDE APPROACH

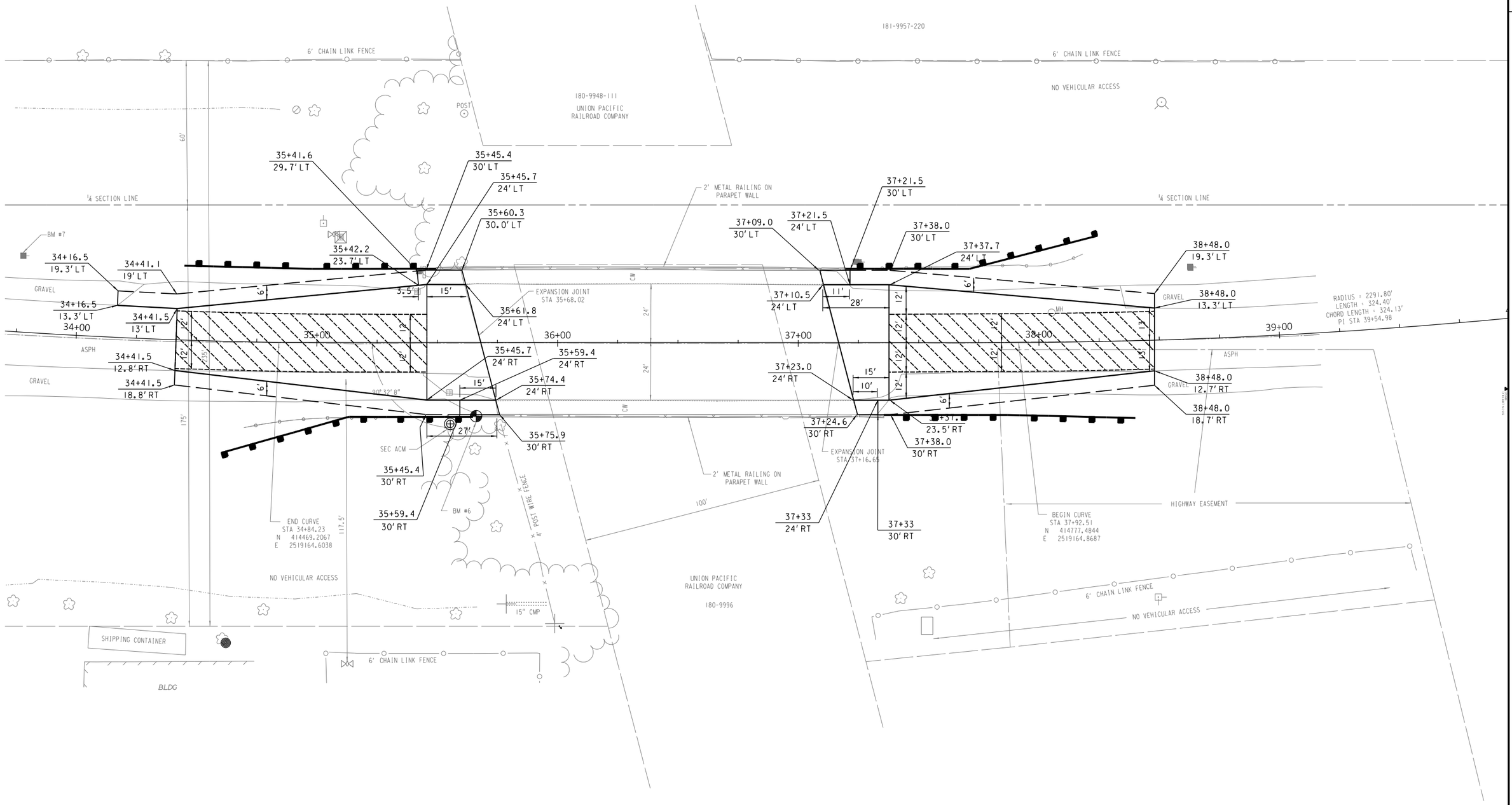
STA. 37+37.7 TO 38+48.0

STATE PROJECT NUMBER 2030-15-70	HWY: LOVERS LANE ROAD	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SCALE FEET	SHEET NO: 8	E

FILENAME: W:\STR\BO842\APPROACH PLAN\TYPSEC.DGN

REVISED DATE: 12-09-2020 BY SB

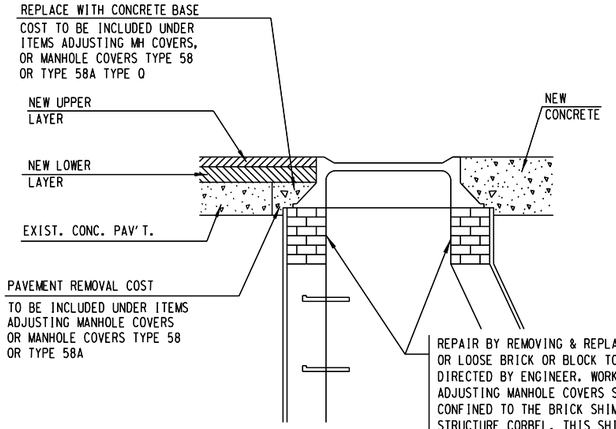
2



STATE PROJECT NUMBER 2030-15-70	HWY: LOVERS LANE ROAD	COUNTY: MILWAUKEE	PLAN DETAIL	SCALE FEET 0' 40'	SHEET NO: 9	E

FILE NAME: W:\STR\B0842\APPROACH PLAN\33+50_39+50 PDET.DGN

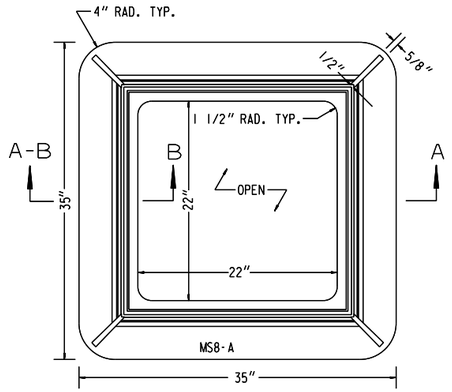
REVISED DATE: 01-08-2021 BY SB



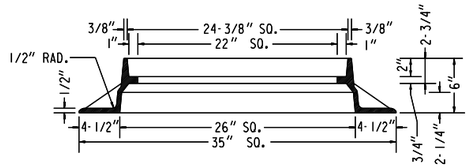
REPAIR BY REMOVING & REPLACING DAMAGED OR LOOSE BRICK OR BLOCK TO DEPTH AS DIRECTED BY ENGINEER. WORK UNDER ADJUSTING MANHOLE COVERS SHALL BE CONFINED TO THE BRICK SHIMMING ABOVE THE STRUCTURE CORBEL. THIS SHIMMING SHALL NOT EXCEED 1 FOOT BETWEEN THE TOP OF THE CORBEL AND THE FRAME BOTTOM. ANY WORK MORE EXTENSIVE THAN DESCRIBED IMMEDIATELY ABOVE SHALL BE CONSTRUED AS WORK UNDER RECONSTRUCTING MANHOLES. DEPTHS OF BRICK-WORK TO BE REPAIRED, AS INDICATED ON THE PLAN, ARE ESTIMATES ONLY AND MAY VARY AT TIME OF CONSTRUCTION.

MANHOLE COVERS TYPE 58A

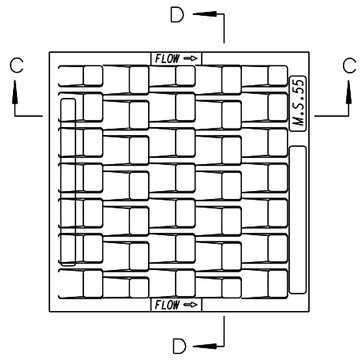
NOTE: ADJUSTMENT WORK INCIDENTAL WITH PLACING NEW COVER.

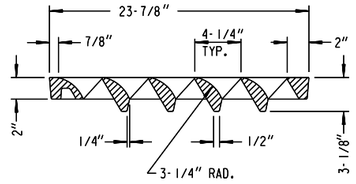


TOP VIEW

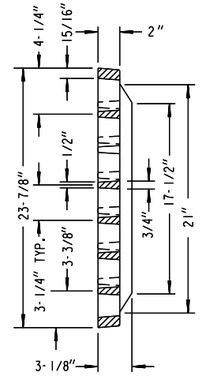


SECTION A-A





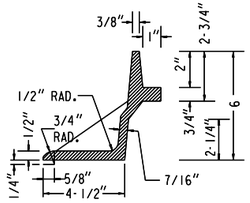
SECTION C-C



SECTION D-D

GRATE DETAIL

MS-55
SCALE N.T.S.



SECTION B-B

FRAME DETAIL

MS-8A
SCALE N.T.S.

INLET COVER - TYPE 55

GRATE-159 LBS., FRAME-165 LBS.

GENERAL NOTES

ALL EDGES ARE TO BE GROUND.

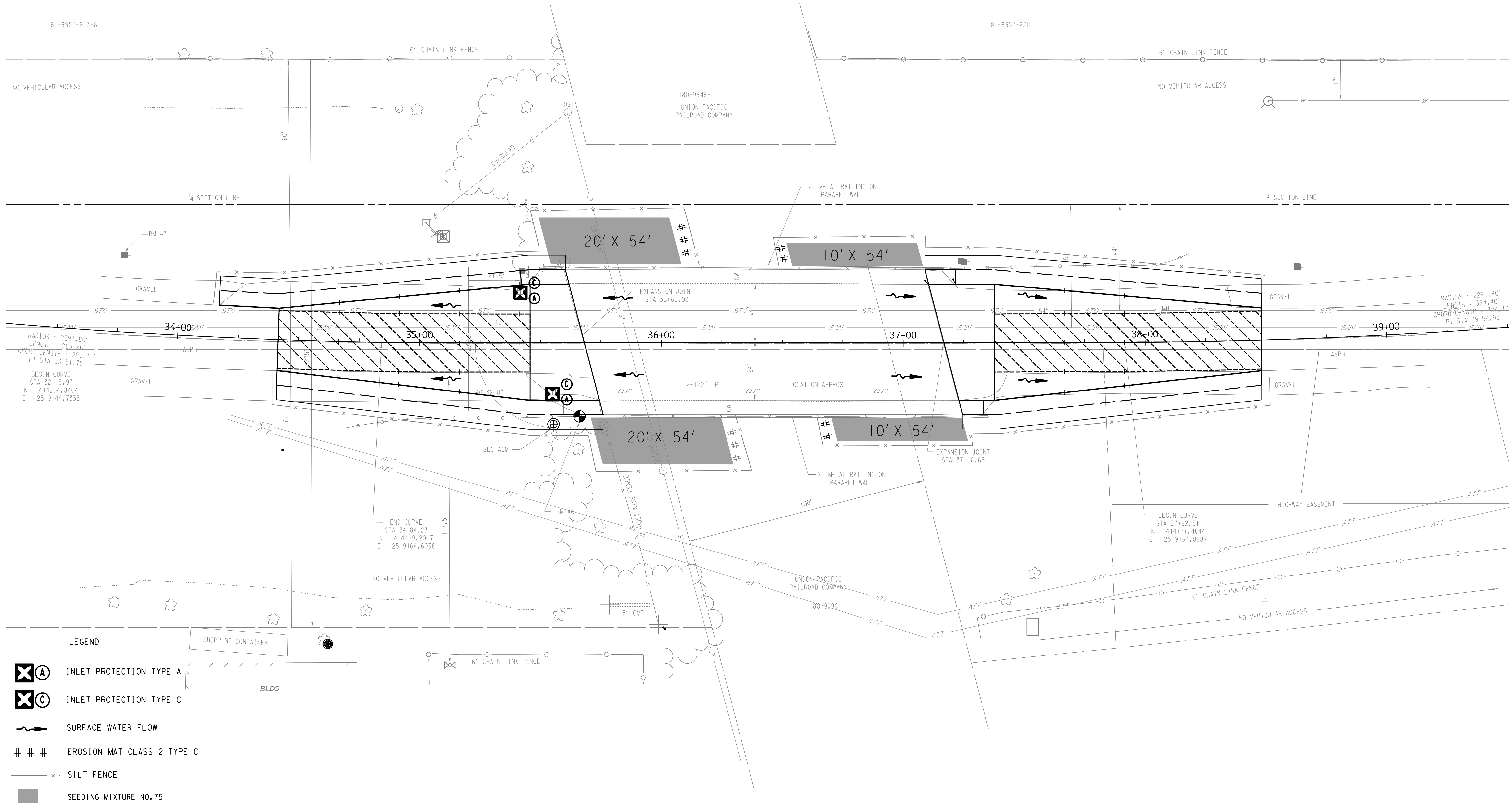
ALL CASTINGS SHALL BEAR THE FOLLOWING IDENTIFICATION MARKS IN THE FORM OF LEGIBLE LETTERS OR NUMERALS RAISED 1/8 INCH

ON THE FRAME

1. ON THE UPPER FACE OF THE FLANGE IN 1 INCH HIGH LETTERS THE INITIALS OR MONOGRAM OF THE FOUNDRY, THE CASTING IDENTIFICATION NUMBER (MS-8A), THE YEAR MADE AND THE SERIAL NUMBER OF THE INDIVIDUAL CASTING.
2. ON THE SEAT OF THE FRAME IN 3/4 INCH HIGH LETTERS, THE CASTING IDENTIFICATION NUMBER (8).

ON THE GRATE

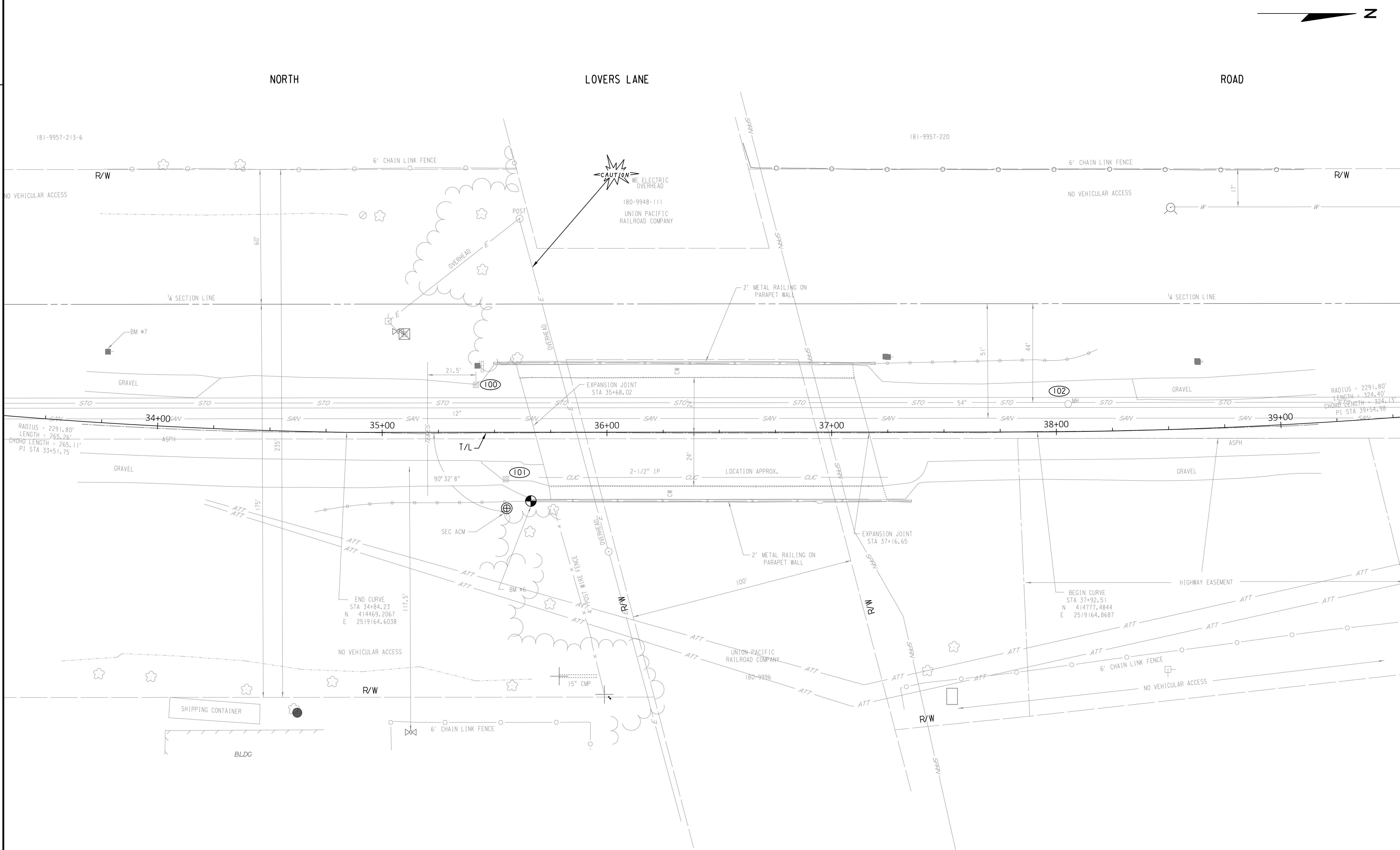
1. ON THE UPPER SIDE OF THE GRATE IN 1 INCH HIGH LETTERS, THE INITIALS OR MONOGRAM OF THE FOUNDRY, THE YEAR MADE, THE CASTING IDENTIFICATION NUMBER (MS-55) AND THE SERIAL NUMBER OF THE INDIVIDUAL CASTING.



STATE PROJECT NUMBER 2030-15-70	HWY: LOVERS LANE ROAD	COUNTY: MILWAUKEE	EROSION CONTROL PLAN	SCALE FEET 0' 40'	SHEET NO: 11	E

FILE NAME: W:\STR\B0842\APPROACH PLAN\33+50_39+50 - EROSION.DGN

REVISED DATE: 2-5-2021 BY AA

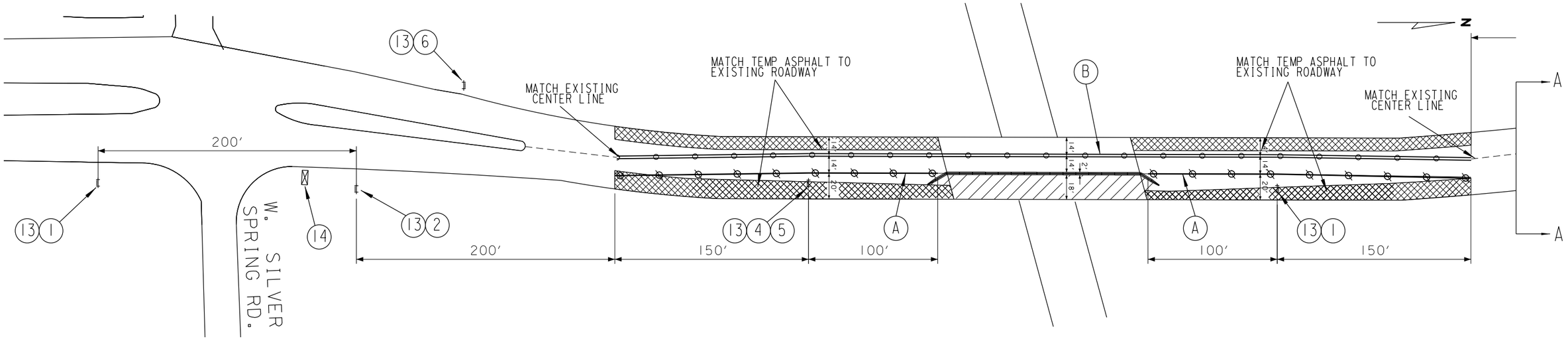


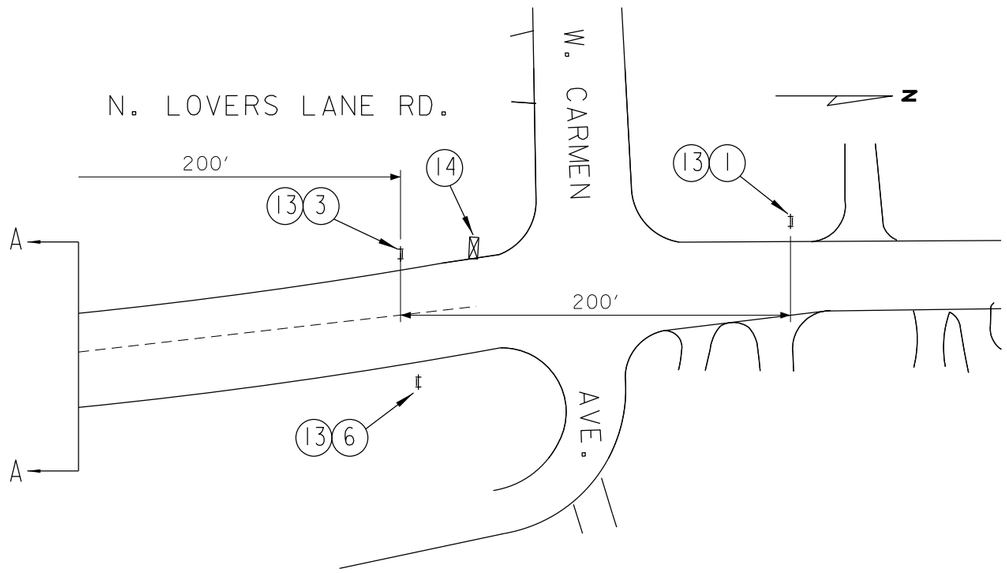
STATE PROJECT NUMBER 2030-15-70	HWY: LOVERS LANE ROAD	COUNTY: MILWAUKEE	UTILITIES AND DRAINAGE	SCALE FEET 0' 40'	SHEET NO: 12	E

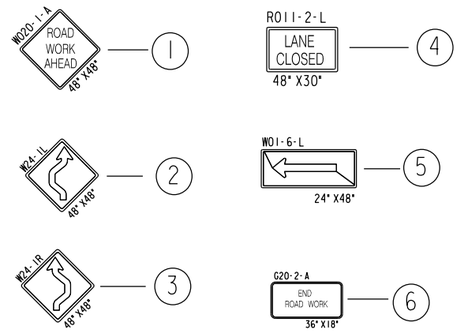
FILENAME: W:\STR\B0842\APPROACH PLAN\UTIL_33+50_39+50.DGN

REVISED DATE: 06-19-2021 BY SB

STAGE I







LEGEND

- DRUMS W/LIGHTS 30' SPACING
- TYPE III BARRICADES
- TYPE III BARRICADES W/ SIGN — (13)+(X)
- WORK AREA
- TEMPORARY ASPHALT
- DIRECTION OF TRAFFIC
- PORTABLE CHANGEABLE MESSAGE SIGN — (14)
- CONCRETE BARRIER SECTION
- CONCRETE BARRIER SECTION
- (A) TPM, REMOVABLE TAPE, 4" WHITE
- (B) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY.

ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.

CONTRACTOR RESPONSIBLE FOR COVERING OR REMOVING ALL CONFLICTING PAVEMENT MARKINGS.

CONTRACTOR RESPONSIBLE FOR COVERING ALL SIGNS THAT ARE IN CONFLICT WITH TEMPORARY TRAFFIC CONTROL SIGNS.

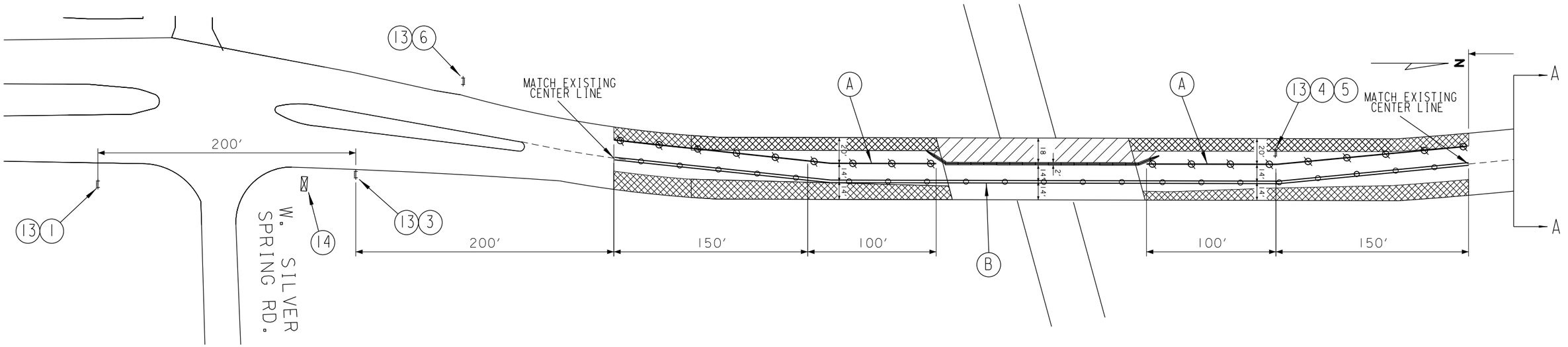
TRAFFIC CONTROL DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS.

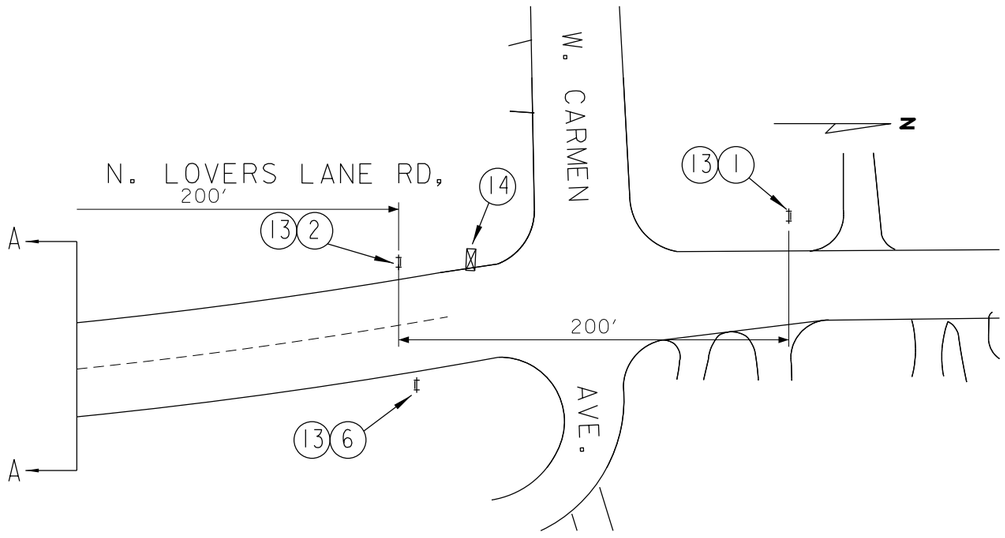
STATE PROJECT NUMBER 2030-15-70	HWY: LOVERS LANE ROAD	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 13	E

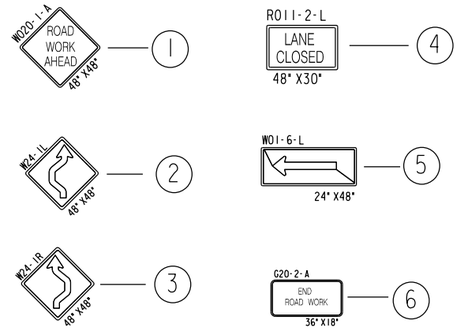
FILENAME: W:\STR\B0842\PLANS\LOVERS LANETRAFFIC CONTROL.DGN

REVISED DATE: 02-04-2021 BY CP

STAGE II







LEGEND

- DRUMS W/LIGHTS 30' SPACING
- TYPE III BARRICADES
- TYPE III BARRICADES W/ SIGN — (13)+(X)
- WORK AREA
- TEMPORARY ASPHALT
- DIRECTION OF TRAFFIC
- PORTABLE CHANGEABLE MESSAGE SIGN — (14)
- CONCRETE BARRIER SECTION
- CONCRETE BARRIER SECTION
- (A) TPM, REMOVABLE TAPE, 4" WHITE
- (B) TPM, REMOVABLE TAPE, 4" DOUBLE YELLOW

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY.

ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.

CONTRACTOR RESPONSIBLE FOR COVERING OR REMOVING ALL CONFLICTING PAVEMENT MARKINGS.

CONTRACTOR RESPONSIBLE FOR COVERING ALL SIGNS THAT ARE IN CONFLICT WITH TEMPORARY TRAFFIC CONTROL SIGNS.

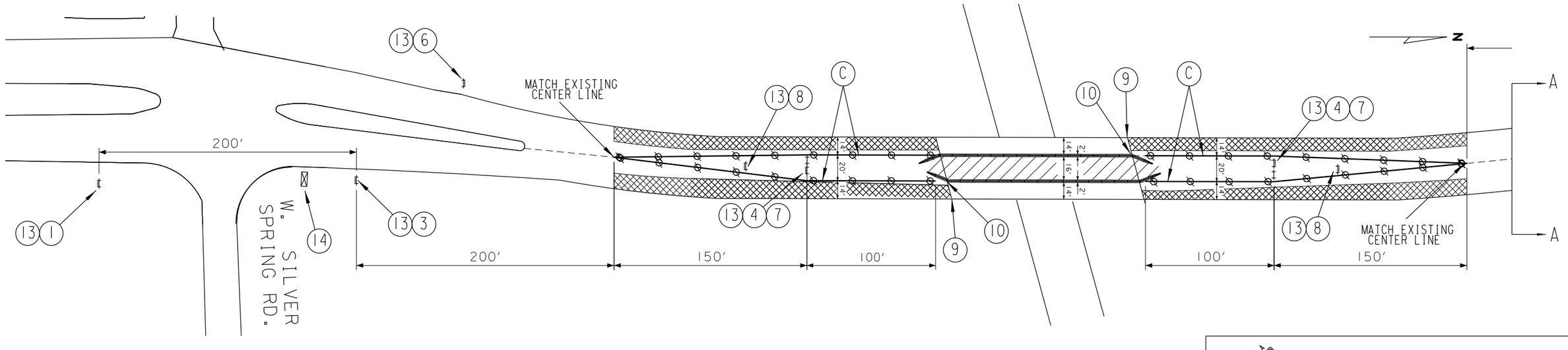
TRAFFIC CONTROL DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS.

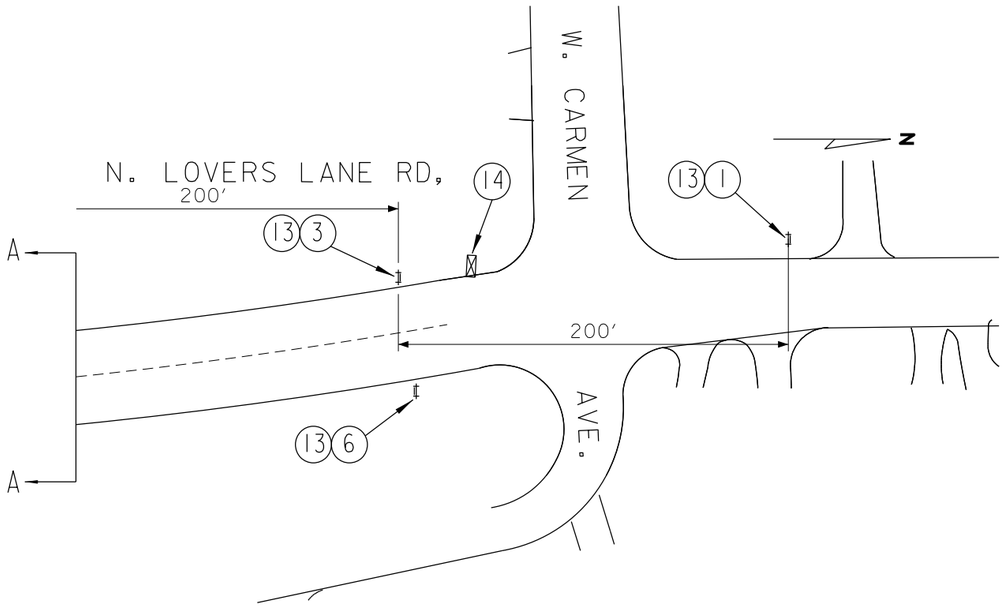
STATE PROJECT NUMBER 2030-15-70	HWY: LOVERS LANE ROAD	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 14	E

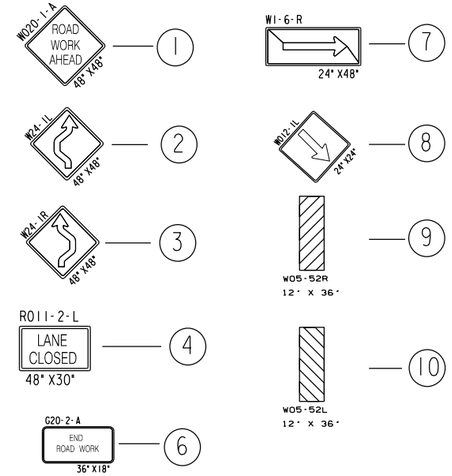
FILENAME: W:\STR\B0842\PLANS\LOVERS LANETRAFFIC CONTROL.DGN

REVISED DATE: 02-04-2021 BY CP

STAGE III







LEGEND

- DRUMS W/LIGHTS 30' SPACING
- TYPE III BARRICADES
- TYPE III BARRICADES W/ SIGN — (13)+(X)
- WORK AREA
- TEMPORARY ASPHALT
- PORTABLE CHANGEABLE MESSAGE SIGN — (14)
- DIRECTION OF TRAFFIC
- CONCRETE BARRIER SECTION
- CONCRETE BARRIER SECTION
- (C) TPM, REMOVABLE TAPE, 4" YELLOW

NOTE: ALL SIGNING SHALL BE THE CONTRACTORS RESPONSIBILITY.

ALL SIGNS SHALL BE BANDED TO EXISTING UTILITY POLES UNLESS OTHERWISE NOTED.

CONTRACTOR RESPONSIBLE FOR COVERING OR REMOVING ALL CONFLICTING PAVEMENT MARKINGS.

CONTRACTOR RESPONSIBLE FOR COVERING ALL SIGNS THAT ARE IN CONFLICT WITH TEMPORARY TRAFFIC CONTROL SIGNS.

TRAFFIC CONTROL DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS.

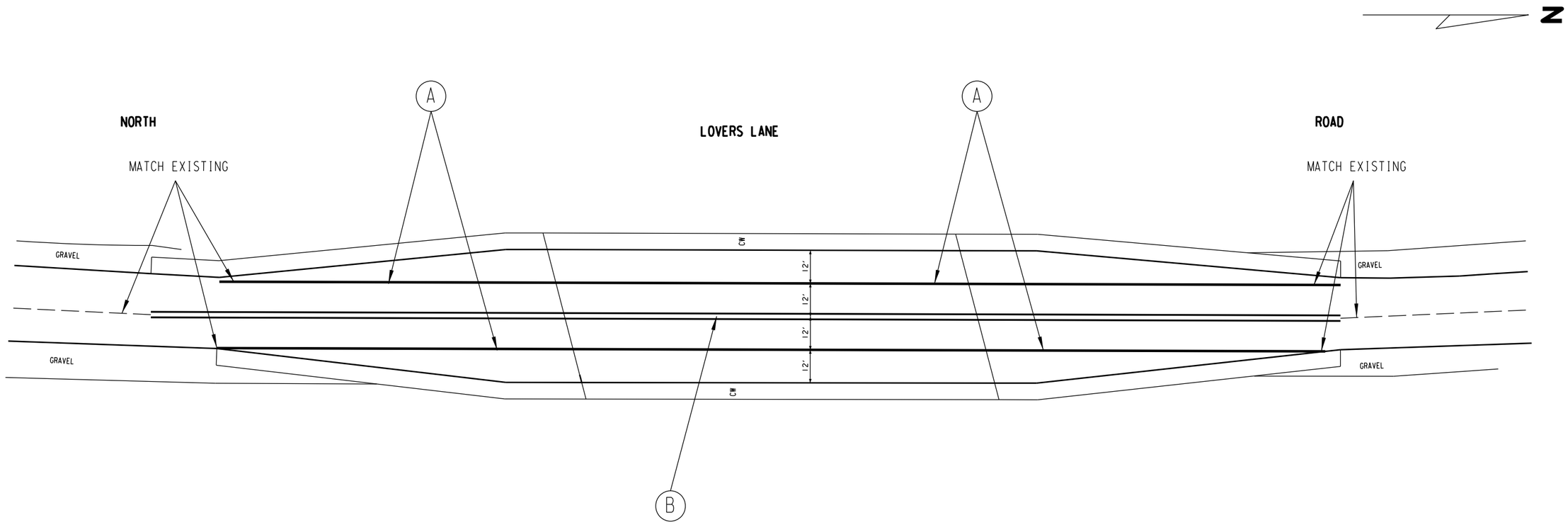
SHEET 3 OF 3

STATE PROJECT NUMBER 2030-15-70	HWY: LOVERS LANE ROAD	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 15	E

FILENAME: W:\STR\B0842\PLANS\LOVERS LANETRAFFIC CONTROL.DGN

REVISED DATE: 02-04-2021 BY CP

2



(A) PAVEMENT MARKING, 4-INCH WHITE

(B) PAVEMENT MARKING 4-INCH DOUBLE YELLOW

STATE PROJECT NUMBER 2030-15-70	HWY: LOVERS LANE ROAD	COUNTY: MILWAUKEE	PAVEMENT MARKING	SCALE FEET 0' 40'	SHEET NO: 16	E

FILENAME: W:\STR\B0842\PLANS\TRAFFIC & PAVEMARK\LOVERS LANE PAVEMENT MARKING.DGN

REVISED DATE: 11-16-2020 BY CP

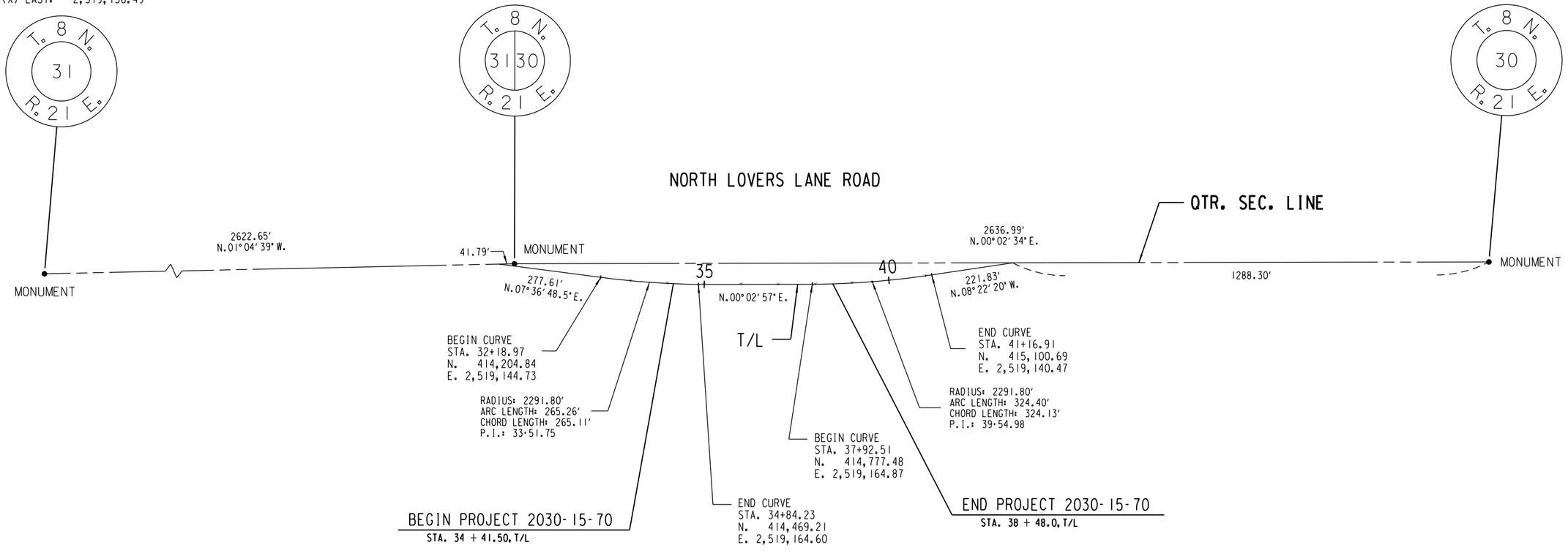
2

N

TOWNSHIP 8 NORTH, RANGE 21 EAST
MILWAUKEE COUNTY, WISCONSIN
CONCRETE MONUMENT W/ SEWRPC BRASS CAP
STATE PLANE COORDINATES OF SECTION CORNER
(Y) NORTH: 411,349.28
(X) EAST: 2,519,156.49

TOWNSHIP 8 NORTH, RANGE 21 EAST
MILWAUKEE COUNTY, WISCONSIN
CONCRETE MONUMENT W/ SEWRPC BRASS CAP
STATE PLANE COORDINATES OF SECTION CORNER
(Y) NORTH: 413,971.47
(X) EAST: 2,519,107.16

TOWNSHIP 8 NORTH, RANGE 21 EAST
MILWAUKEE COUNTY, WISCONSIN
CONCRETE MONUMENT W/ SEWRPC BRASS CAP
STATE PLANE COORDINATES OF SECTION CORNER
(Y) NORTH: 416,608.46
(X) EAST: 2,519,109.13



STATE PROJECT NUMBER 2030-15-70	HWY: LOVERS LANE ROAD	COUNTY: MILWAUKEE	ALIGNMENT	SCALE FEET 0' 300'	SHEET NO: 17	E

FILENAME: W:\STR\BO842\APPROACH PLAN\ALIGNMENT.DGN

REVISED DATE: - - BY

2030-15-70

Line	Item	Item Description	Unit	Total	Qty
0002	201.0110	Clearing	SY	360.000	360.000
0004	201.0210	Grubbing	SY	360.000	360.000
0006	203.0225.S	Debris Containment (structure) 001. B-40-435	LS	1.000	1.000
0008	204.0100	Removing Concrete Pavement	SY	229.000	229.000
0010	204.0120	Removing Asphaltic Surface Milling	SY	574.000	574.000
0012	204.0165	Removing Guardrail	LF	210.000	210.000
0014	204.0175	Removing Concrete Slope Paving	SY	216.000	216.000
0016	205.0100	Excavation Common	CY	102.000	102.000
0018	213.0100	Finishing Roadway (project) 001. 2030-15-70	EACH	1.000	1.000
0020	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	238.000	238.000
0022	305.0500	Shaping Shoulders	STA	4.000	4.000
0024	312.0110	Select Crushed Material	TON	48.000	48.000
0026	415.0410	Concrete Pavement Approach Slab	SY	229.000	229.000
0028	416.0620	Drilled Dowel Bars	EACH	40.000	40.000
0030	455.0605	Tack Coat	GAL	52.000	52.000
0032	460.5224	HMA Pavement 4 LT 58-28 S	TON	146.000	146.000
0034	465.0125	Asphaltic Surface Temporary	TON	356.000	356.000
0036	502.3200	Protective Surface Treatment	SY	795.000	795.000
0038	502.3215.S	Protective Surface Treatment Reseal	SY	300.000	300.000
0040	509.0301	Preparation Decks Type 1	SY	54.000	54.000
0042	509.0302	Preparation Decks Type 2	SY	18.000	18.000
0044	509.0500	Cleaning Decks	SY	795.000	795.000
0046	509.1200	Curb Repair	LF	216.000	216.000
0048	509.1500	Concrete Surface Repair	SF	305.000	305.000
0050	509.2000	Full-Depth Deck Repair	SY	2.000	2.000
0052	509.2500	Concrete Masonry Overlay Decks	CY	62.000	62.000
0054	509.9025.S	Epoxy Injection Crack Repair	LF	785.000	785.000
0056	509.9026.S	Cored Holes 2-Inch Diameter	EACH	5.000	5.000
0058	601.0331	Concrete Curb & Gutter 31-Inch	LF	52.000	52.000
0060	602.0410	Concrete Sidewalk 5-Inch	SF	306.000	306.000
0062	603.8000	Concrete Barrier Temporary Precast Delivered	LF	368.000	368.000
0064	603.8125	Concrete Barrier Temporary Precast Installed	LF	736.000	736.000
0066	604.0400	Slope Paving Concrete	SY	216.000	216.000
0068	614.2300	MGS Guardrail 3	LF	50.000	50.000
0070	614.2500	MGS Thrie Beam Transition	LF	158.000	158.000
0072	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0074	619.1000	Mobilization	EACH	1.000	1.000
0076	625.0100	Topsoil	SY	360.000	360.000
0078	628.1504	Silt Fence	LF	950.000	950.000
0080	628.1520	Silt Fence Maintenance	LF	950.000	950.000

2030-15-70

Line	Item	Item Description	Unit	Total	Qty
0082	628.2023	Erosion Mat Class II Type B	SY	360.000	360.000
0084	628.7005	Inlet Protection Type A	EACH	2.000	2.000
0086	628.7015	Inlet Protection Type C	EACH	2.000	2.000
0088	630.0175	Seeding Mixture No. 75	LB	4.000	4.000
0090	630.0500	Seed Water	MGAL	3.000	3.000
0092	642.5201	Field Office Type C	EACH	1.000	1.000
0094	643.0300	Traffic Control Drums	DAY	3,926.000	3,926.000
0096	643.0420	Traffic Control Barricades Type III	DAY	1,482.000	1,482.000
0098	643.0500	Traffic Control Flexible Tubular Marker Posts	EACH	1,806.000	1,806.000
0100	643.0600	Traffic Control Flexible Tubular Marker Bases	EACH	1,806.000	1,806.000
0102	643.0705	Traffic Control Warning Lights Type A	DAY	2,964.000	2,964.000
0104	643.0715	Traffic Control Warning Lights Type C	DAY	3,926.000	3,926.000
0106	643.0900	Traffic Control Signs	DAY	1,850.000	1,850.000
0108	643.1050	Traffic Control Signs PCMS	DAY	42.000	42.000
0110	643.5000	Traffic Control	EACH	1.000	1.000
0112	646.1020	Marking Line Epoxy 4-Inch	LF	3,339.000	3,339.000
0114	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	4,652.000	4,652.000
0116	650.6500	Construction Staking Structure Layout (structure) 001. P-40-589	LS	1.000	1.000
0118	650.9910	Construction Staking Supplemental Control (project) 001. 2030-15-70	LS	1.000	1.000
0120	690.0150	Sawing Asphalt	LF	60.000	60.000
0122	690.0250	Sawing Concrete	LF	100.000	100.000
0124	715.0415	Incentive Strength Concrete Pavement	DOL	1,374.000	1,374.000
0126	715.0502	Incentive Strength Concrete Structures	DOL	1,746.000	1,746.000
0128	999.2000.S	Installing and Maintaining Bird Deterrent System	EACH	1.000	1.000
0130	SPV.0060	Special 101. Inlet Cover Type 55	EACH	2.000	2.000
0132	SPV.0060	Special 103. Manhole Cover Type 58-A	EACH	1.000	1.000
0134	SPV.0090	Special 540. Urethane Injection Crack Repair	LF	182.000	182.000

3

REMOVALS

ITEM NO.	CLEARING 201.0110	GRUBBING 201.0210	REMOVING CONCRETE PAVEMENT 204.0100	REMOVING ASPHALTIC SURFACE MILLING 204.0120	REMOVING GUARDRAIL 204.0165	SAWING ASPHALT 690.0150	SAWING CONCRETE 690.0250
UNIT PAY	SY	SY	SY	SY	LF	LF	LF
CATEGORY	0010	0010	0010	0010	0010	0010	0010
LOCATION							
STA 34+16.47 TO 38+48.0 LT	180	180	114	287	105	30	50
SUBTOTALS (LEFT)	**180**	**180**	**114**	**287**	**105**	**30**	**50**
STA 34+16.47 TO 38+48.0 RT	180	180	115	287	105	30	50
SUBTOTALS (RIGHT)	**180**	**180**	**115**	**287**	**105**	**30**	**50**
GRAND TOTALS	**360**	**360**	**229**	**574**	**210**	**60**	**100**

3

ROADWAY CONSTRUCTION ITEMS

ITEM NO.	BASE AGGREGATE DENSE 1 1/4-INCH 305.0120	SHAPING SHOULDERS 305.0500	CONCRETE PAVEMENT APPROACH SLAB 415.0410	DRILLED DOWEL BARS 416.0620	CONCRETE CURB & GUTTER 31-INCH 601.0331	CONCRETE SIDEWALK 602.0410
UNIT PAY	TON	STA	SY	EACH	LF	SF
CATEGORY	0010	0010	0010	0010	0010	0010
LOCATION						
STA 34+16.47 TO 38+48.0 LT	119	2	114	20	26	153
SUBTOTALS (LEFT)	**119**	**2**	**114**	**20**	**26**	**153**
STA 34+16.47 TO 38+48.0 RT	119	2	115	20	26	153
SUBTOTALS (RIGHT)	**119**	**2**	**115**	**20**	**26**	**153**
GRAND TOTALS	**238**	**4**	**229**	**40**	**52**	**306**

3

LANDSCAPING ITEMS

		TOPSOIL	INLET PROTECTION TYPE C	INLET PROTECTION TYPE A	SEEDING MIXTURE No.75	SEED WATER	SILT FENCE	SILT FENCE MAINTANCE	EROSION MAT CLASS II TYPE B
ITEM NO.		625.0100	628.7015	628.7005	630.0175	630.0500	628.1504	628.1520	628.2023
UNIT PAY		SY	EACH	EACH	LB	MGAL	LF	LF	SY
CATEGORY		0010	0010	0010	0010	0010	0010	0010	0010
LOCATION									
STA 34+16.47 TO 38+48.0	LT	180	1	1	2	1.5	488	488	180
SUBTOTALS (LEFT)		**180**	**1**	**1**	**2**	**1.5**	**488**	**488**	**180**
STA 34+16.47 TO 38+48.0	RT	180	1	1	2	1.5	462	462	180
SUBTOTALS (RIGHT)		**180**	**1**	**1**	**2**	**1.5**	**462**	**462**	**180**
GRAND TOTALS		**360**	**2**	**2**	**4**	**3**	**950**	**950**	**360**

3

GUARDRAIL

		MGS GUARDRAIL 3	MGS THRIE BEAM TRANSITION	MGS GUARDRAIL TERMINAL EAT
ITEM NO.		614.2300	614.2500	614.2610
UNIT PAY		LF	LF	EACH
CATEGORY		0010	0010	0010
LOCATION				
STA 34+16.47 TO 38+48.0	LT	25	79	2
SUBTOTALS (LEFT)		**25**	**79**	**2**
STA 34+16.47 TO 38+48.0	RT	25	79	2
SUBTOTALS (RIGHT)		**25**	**79**	**2**
GRAND TOTALS		**50**	**158**	**4**

MOBILIZATION

	FINISHING ROADWAY (PROJECT) 001. 2030-15-70	MOBILIZATION
ITEM NO.	213.0100	619.1000
UNIT PAY	EACH	EACH
CATEGORY	0010	0010
LOCATION		
PROJECT 2030-15-70	1	1
GRAND TOTALS	**1**	**1**

CONSTRUCTION STAKING ITEMS

		CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 001. B- 40-435	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 001. 2030-15-70
ITEM NO.		650.6500	650.9910
UNIT PAY		LS	LS
CATEGORY		0020	0020
LOCATION			
PROJECT 2030-15-70	LT	1	1
GRAND TOTALS		**1**	**1**

FIELD OFFICE

	FIELD OFFICE TYPE C
ITEM NO.	642.5201
UNIT PAY	EACH
CATEGORY	0010
LOCATION	
PROJECT 2030-15-70	1
GRAND TOTALS	**1**

ASPHALT ITEMS

		TACK COAT	HMA PAVEMENT 4 LT 58-28 S	ASPHALTIC SURFACE TEMPORARY
ITEM NO.		455.0605	460.5224	465.0125
UNIT PAY		GAL	TON	TON
CATEGORY		0010	0010	0010
LOCATION				
STA 34+16.47 TO 38+48.0	LT	26	73	178
SUBTOTALS (LEFT)		**26**	**73**	**178**
STA 34+16.47 TO 38+48.0	RT	26	73	178
SUBTOTALS (RIGHT)		**26**	**73**	**178**
GRAND TOTALS		**52**	**146**	**356**

STRUCTURE ITEM

	INCENTIVE STRENGTH CONCRETE PAVEMENT
ITEM NO.	715.0415
UNIT PAY	DOL
CATEGORY	0020
LOCATION	
PROJECT 2030-15-70	1746
GRAND TOTALS	**1746**

TRAFFIC CONTROL ITEMS REQUIRED (CATEGORY 0010)		STAGE 1		STAGE 2		STAGE 3		TOTAL
ITEM #	DESCRIPTION	(Each) * (Days)		(Each) * (Days)		(Each) * (Days)		
643.0300	TRAFFIC CONTROL DRUMS	18	42	18	42	34	71	**3,926**
643.0420	TRAFFIC CONTROL BARRICADES TYPE III	8	42	7	42	12	71	**1,482**
643.0500	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS	22	42	21	42	0	71	**1,806**
643.0600	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES	22	42	21	42	0	71	**1,806**
643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	16	42	14	42	24	71	**2,964**
643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	18	42	18	42	34	71	**3,926**
643.0900	TRAFFIC CONTROL SIGNS	9	42	8	42	16	71	**1,850**
643.1050	TRAFFIC CONTROL SIGNS PCMS	2	7	2	7	2	7	**42**

ITEM #	DESCRIPTION	LF	LF	LF	TOTAL
649.0150	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)	500	500	1,000	**2,000**
649.0150	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)	1,322	1,330	0	**2,652**
643.5000	TRAFFIC CONTROL				**1**

ITEMS	STAGE 1	STAGE 2	STAGE 3	SIZE
W20-1-A	3	2	2	48"X48"
W24-1L	1	1	–	48"X48"
W24-1R	1	1	2	48"X48"
R011-2-L	1	1	2	48"X30"
W01-6-L	1	1	–	24"X48"
G20-2-A	2	2	2	36"X18"
W1-6-R	–	–	2	24"X48"
W012-1L	–	–	2	24"X24"
W05-52R	–	–	2	12"X36"
W05-52L	–	–	2	12"X36"
TOTAL	**9**	**8**	**16**	

NOTES:

ALL DRUMS HAVE ONE STEADY BURNING YELLOW LIGHT (LIGHTS ARE TO BE PAID FOR SEPERATLY UNDER THEIR APPROPRIATE BID ITEM)

ALL TYPE III BARRICADES HAVE TWO (2) FLASHING YELLOW LIGHTS (LIGHTS ARE TO BE PAID FOR SEPERATLY UNDER THEIR APPROPRIATE BID ITEM)

WHEN PLACING TEMPORARY PAVEMENT MARKING REMOVABLE TAPE, THE TAPE SHALL BE SLICED OR CUT ACROSS IT'S WIDTH EVERY TWENTY FIVE (25) FEET

ALL TEMPORARY PAVEMENT MARKINGS MUST BE REMOVED PRIOR TO FINAL ACCEPTANCE OF PROJECT

3

TRAFFIC CONTROL ITEMS

	CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED
ITEM NO.	603.8000	603.8125
UNIT PAY	LF	LF
CATEGORY	0010	0010
LOCATION		
STAGE 1	184	184
STAGE 2	–	184
STAGE 3	184	368
PROJECT TOTAL	**368**	**736**

3

PAVEMENT MARKING

		MARKING LINE EPOXY4-INCH (WHITE)	MARKING LINE EPOXY4-INCH (YELLOW)
ITEM NO.		646.1020	646.1020
UNIT PAY		LF	LF
CATEGORY		0010	0010
LOCATION			
STA 34+16.47 TO 38+48.0	LT	812	862
SUBTOTALS (LEFT)		812	862
STA 34+16.47 TO 38+48.0	RT	803	862
SUBTOTALS (RIGHT)		803	862
GRAND TOTALS		**1615**	**1724**

NEW INLET COVERS

CATEGORY	No	LOCATION		PROPOSED ELEVATION	COVER TYPE	Remarks
		STATION	OFFSET			
0010	100	35+41.7	21.4' LT	184.23	55	
0010	101	35+55.0	20.5' RT	184.53	55	

0010 INLET COVER TYPE 55 (SPV.0060.101) 2

NEW MANHOLE COVERS

CATEGORY	No	LOCATION		PROPOSED ELEVATION	COVER TYPE	Remarks
		STATION	OFFSET			
0010	102	38+05.3	12.3' LT	185.36	58A	

0010 MANHOLE COVER TYPE 58A (SPV.0060.103) 1

EARTH WORK SUMMARY

STATION/ TO STATION	LOCATION	EXCAVATION COMMON (I) ITEM NO. 205.0100	SALVAGED/ UNUSABLE PAVEMENT MATERIAL (3)	AVAILABLE MATERIAL (4)	EXPANDED FILL (5)	MASS ORDINATE ± (6)	WASTE	BORROW
		CUT (2)						
		CY	CY	CY	CY	CY	CY	CY
STA 34+16.47 TO 38+48.0	NORTH LOVERS LANE	102	102	0	0	102	102	0

EXISTING ASPHALTIC PAV'T THICKNESS IS VARIABLE

1) NO EBS IS ANTICIPATED, IF EBS IS REQUIRED IT WILL BE PAID AS EXCAVATION COMMON, ITEM NO. 205.0100

2) SALVAGED/ UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.

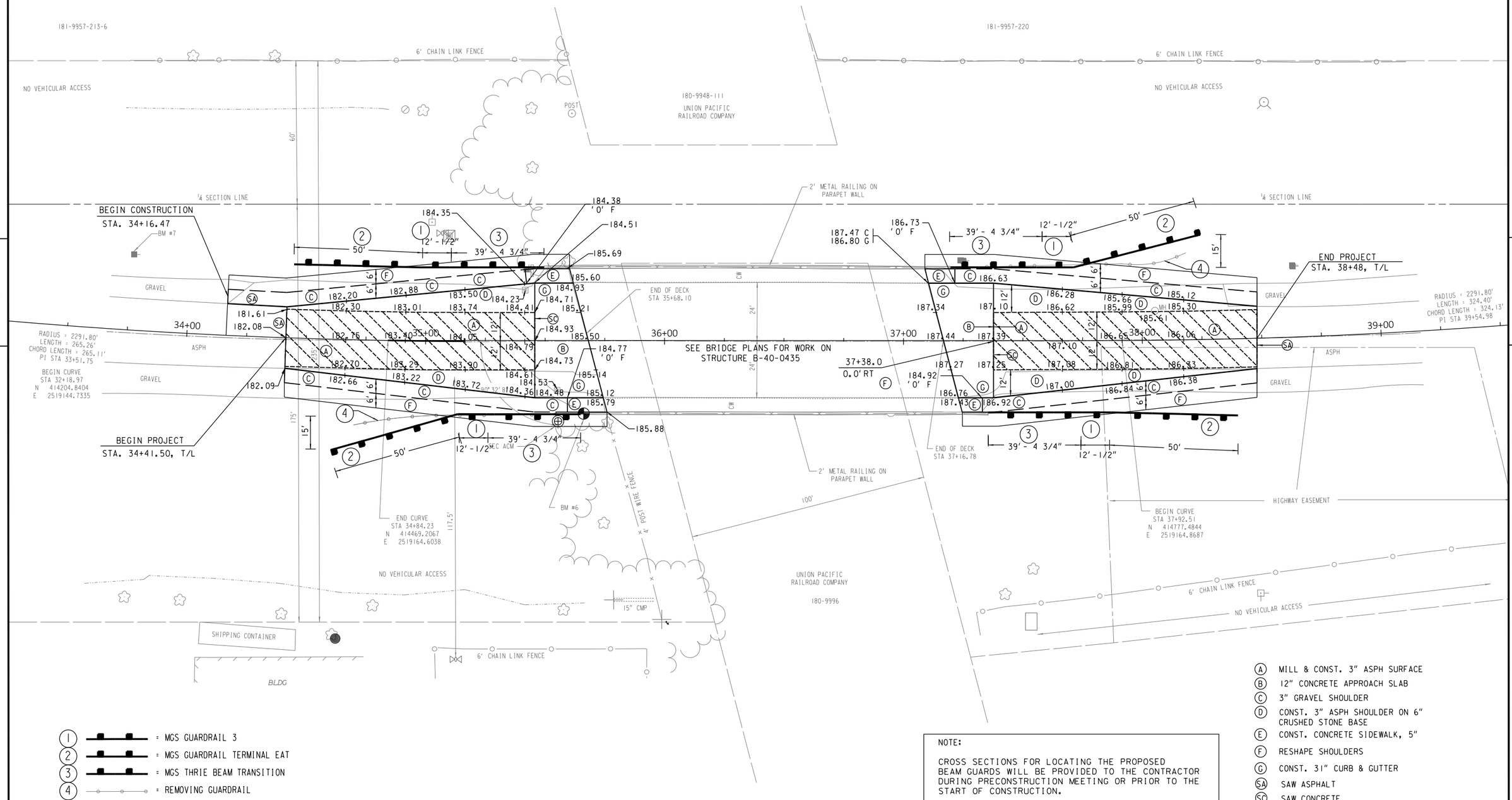
3) SALVAGED/ UNUSABLE PAVEMENT MATERIAL.

4) AVAILABLE MATERIAL = CUT - SALVAGED/ UNUSABLE PAVEMENT MATERIAL

5) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL.

CUT FILL QUANTITY

STATION	CUT CY	FILL CY	LARGEST CUT IN FEET
35+43 TO 35+74	51	0	1.33
37+10 TO 37+38	51	0	1.33
SUMMARY	**102**		



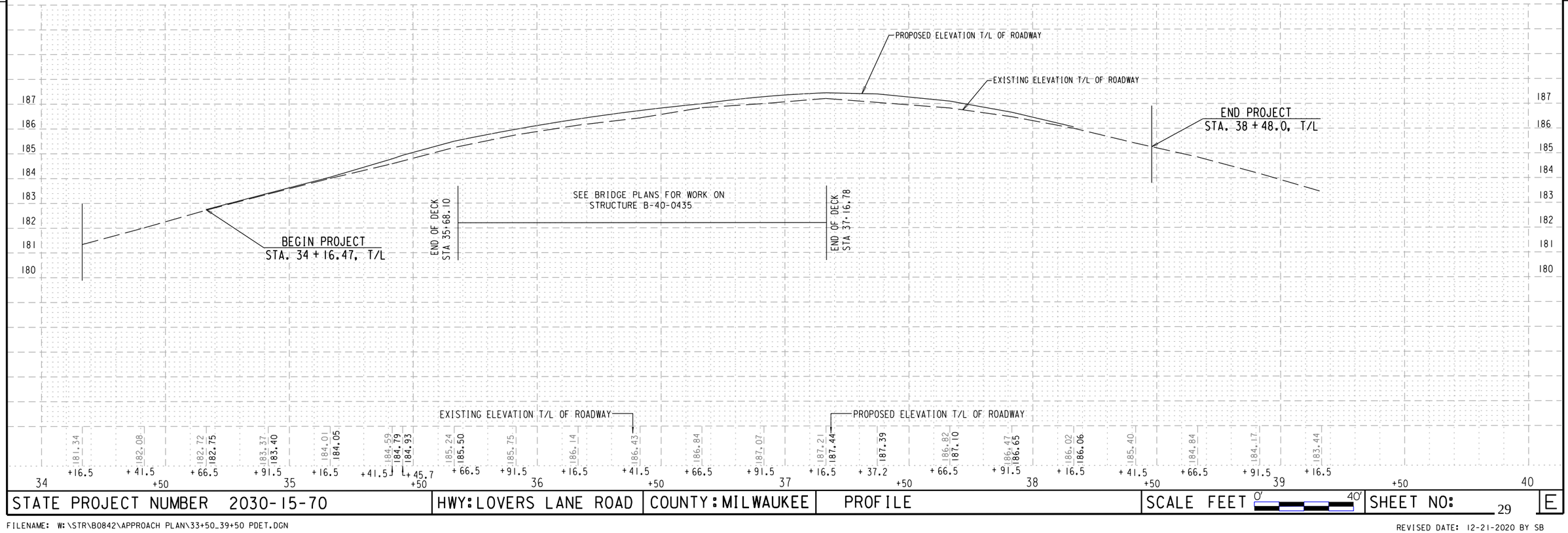
NOTE:

CROSS SECTIONS FOR LOCATING THE PROPOSED BEAM GUARDS WILL BE PROVIDED TO THE CONTRACTOR DURING PRECONSTRUCTION MEETING OR PRIOR TO THE START OF CONSTRUCTION.

STATE PROJECT NUMBER 2030-15-70	HWY: LOVERS LANE ROAD	COUNTY: MILWAUKEE	PLAN	SCALE FEET 0' 40'	SHEET NO: 28	E

FILE NAME: W:\STR\B0842\APPROACH PLAN\33+50_39+50.DGN

REVISED DATE: 2-5-2021 BY AA



STATE PROJECT NUMBER 2030-15-70	HWY: LOVERS LANE ROAD	COUNTY: MILWAUKEE	PROFILE	SCALE FEET 0' 40'	SHEET NO: 29	E

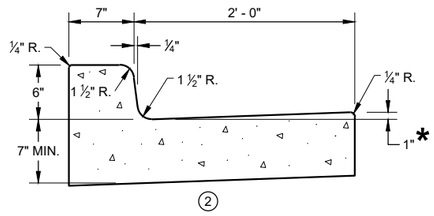
FILENAME: W:\STR\B0842\APPROACH PLAN\33+50_39+50 PDET.DGN

REVISED DATE: 12-21-2020 BY SB

Standard Detail Drawing List

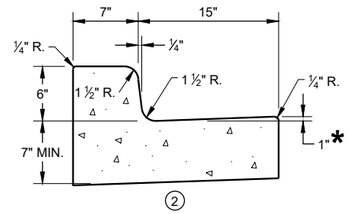
08D16-11	CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
14B07-15A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15I	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B42-06A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C11-08A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-08B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C21-10	SIGNING AND MARKING FOR TWO LANE TO FOUR LANE DIVIDED TRANSITIONS
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS

6

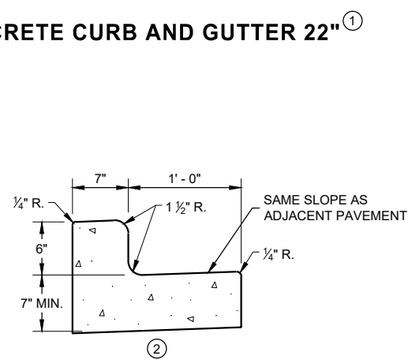


CONCRETE CURB AND GUTTER 31" ①

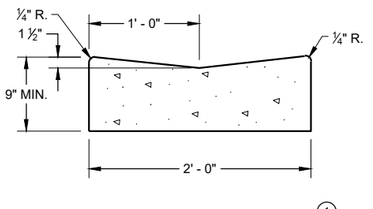
*TO BE MEASURED TO A MAXIMUM OF 3" WHERE DRAINAGE PROBLEMS EXIST.



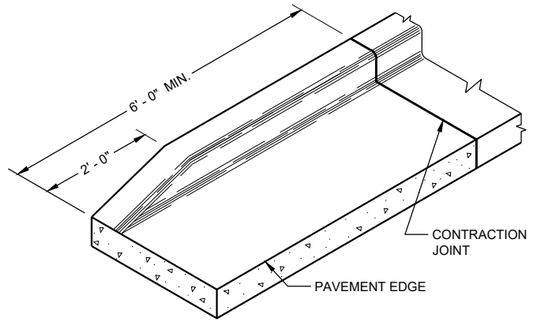
CONCRETE CURB AND GUTTER 22" ①



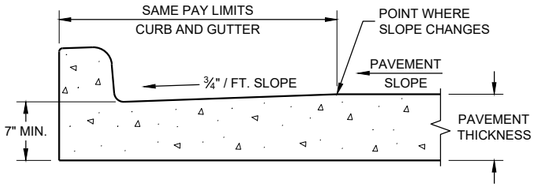
CONCRETE CURB AND GUTTER 19" ①



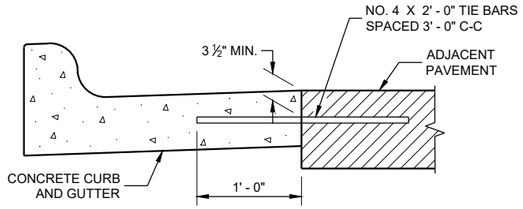
CONCRETE GUTTER 24" ①



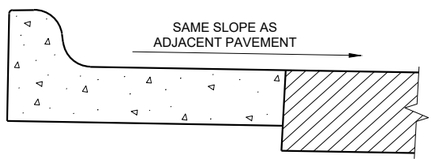
END SECTIONCURB AND GUTTER



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB AND GUTTER



TYPICAL TIE BAR LOCATION ①



HIGH SIDE SECTION ③

(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

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

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

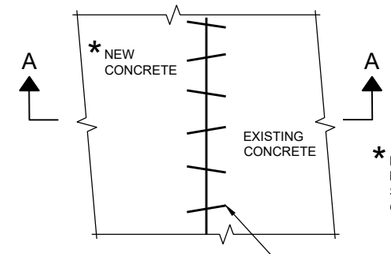
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE COURSE AND UNCLASSIFIED EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

① WHEN PLACED ADJACENT TO NEW CONCRETE, TIE BARS ARE REQUITED FOR CURB AND GUTTER 31", 22", 19" AND CONCRETE GUTTER 24".

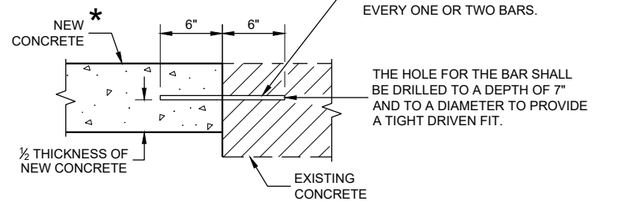
② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE COURSE PROVIDED A 7" MINIMUM GUTTER THICKNESS IS MAINTAINED.

③ WHEN HIGH SIDE CURB SECTION IS REQUIRED, THE LOCATION(S) WILL BE NOTED ON THE PLANS



*EXISTING AND NEW CONCRETE MAY BE CURB AND GUTTER, SURFACE DRAINS, PAVEMENT OR OTHER CONCRETE STRUCTURE.

PLAN VIEW



SECTION A - A

PAVEMENT TIES

CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES

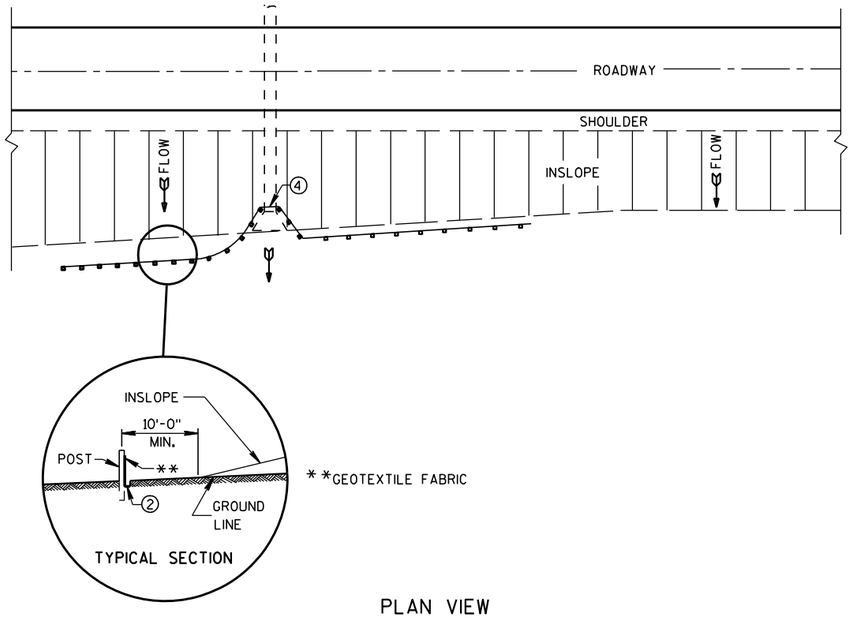
(For Optional use in Milwaukee Co. Only)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER
FHWA

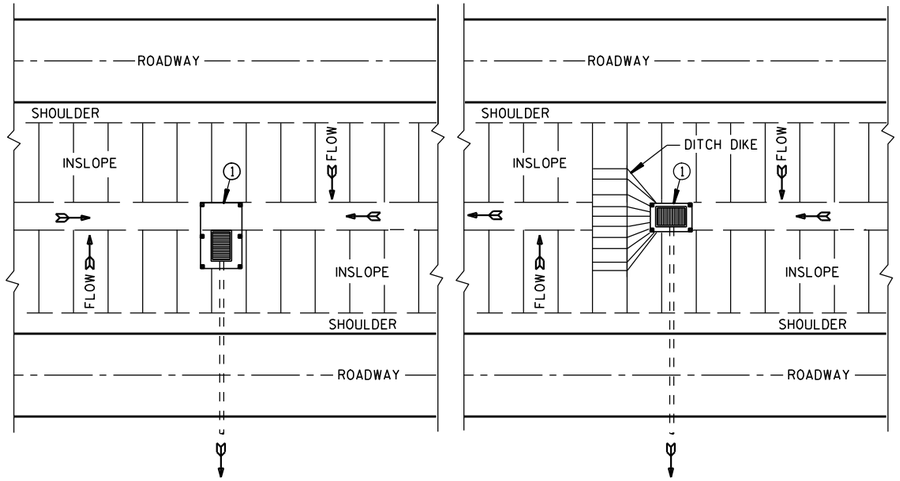
6

SDD 08D16 - 11



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

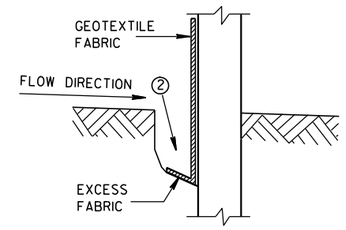
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

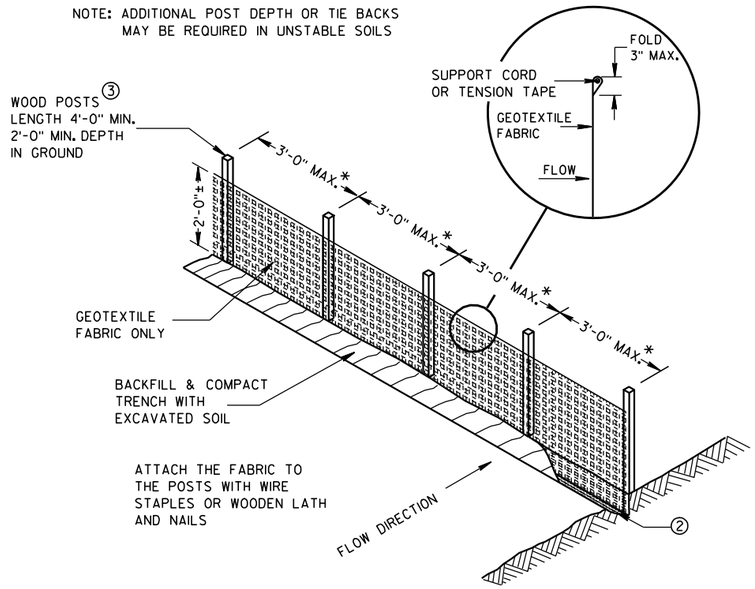
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

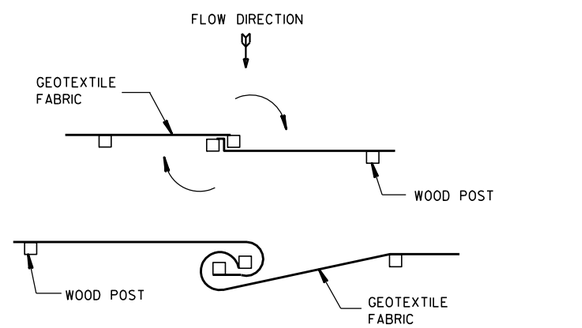
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



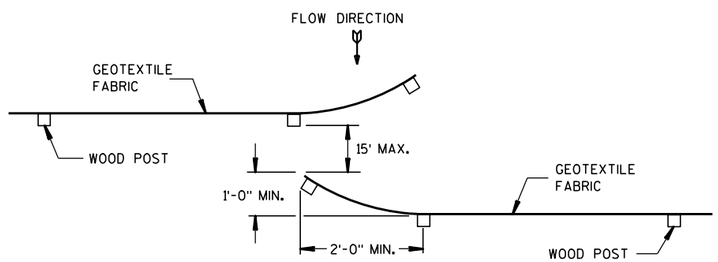
TRENCH DETAIL



SILT FENCE

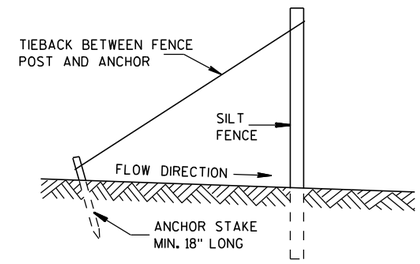


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

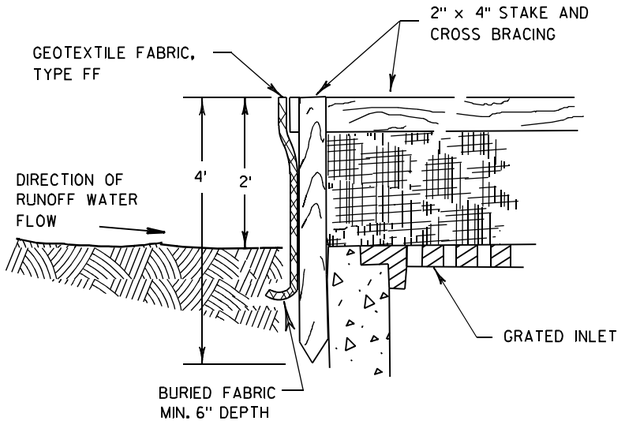
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

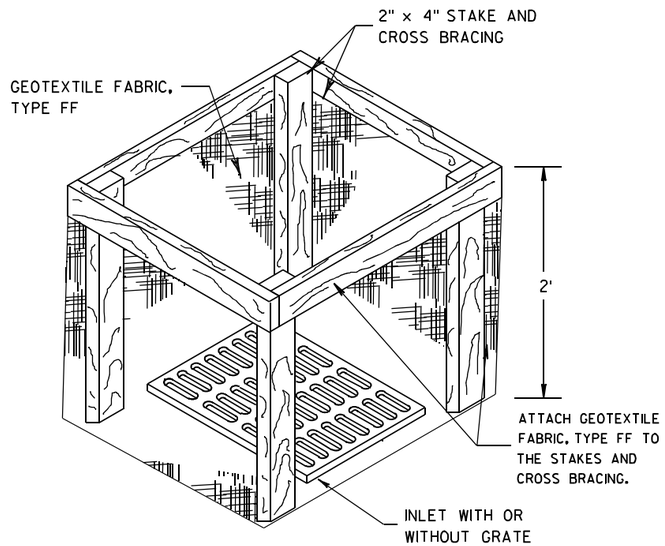
6

S.D.D. 8 E 9-6

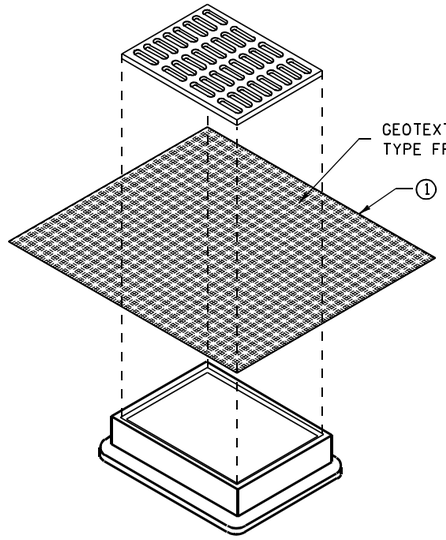
6

S.D.D. 8 E 9-6



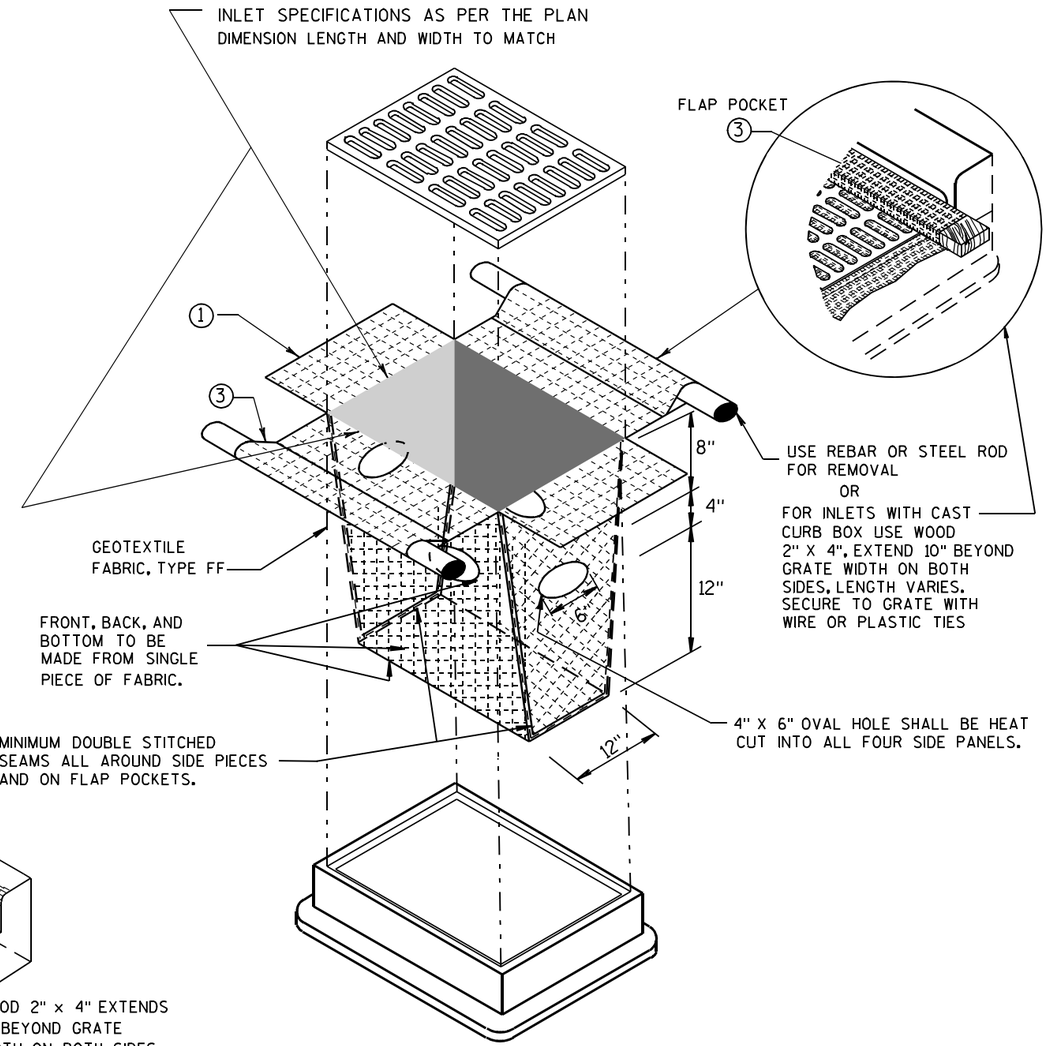


INLET PROTECTION, TYPE A



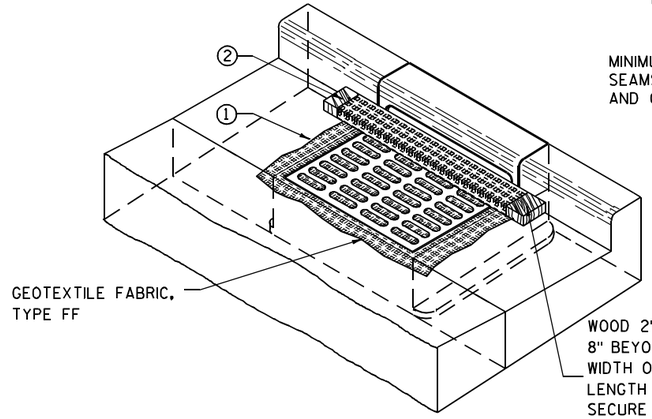
INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH
OR WITHOUT A CURB BOX AS PER NOTE ②)



INLET PROTECTION, TYPE C (WITH CURB BOX)

GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

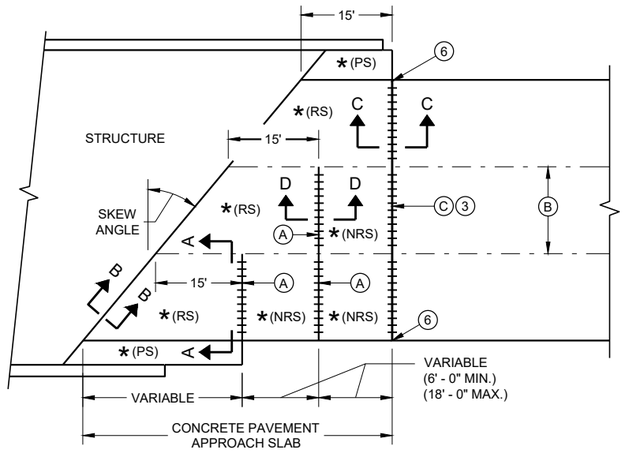
TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



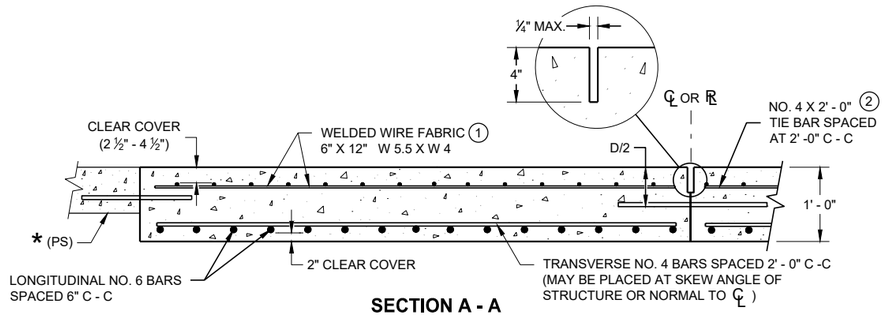
SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES)

(RS) = REINFORCED CONCRETE SLAB

(PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB

(NRS) - NON - REINFORCED CONCRETE SLAB

*** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



SECTION A - A
REINFORCEMENT POSITIONING DETAIL

GENERAL NOTES

THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

(1) THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2' - 0 " C - C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

(2) THE CONTRACTOR MAY OMIT THE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

(3) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

(4) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

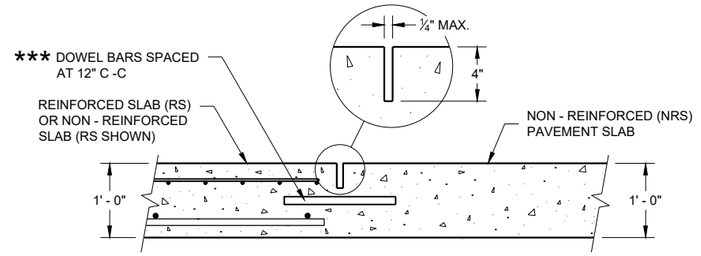
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

(6) EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.

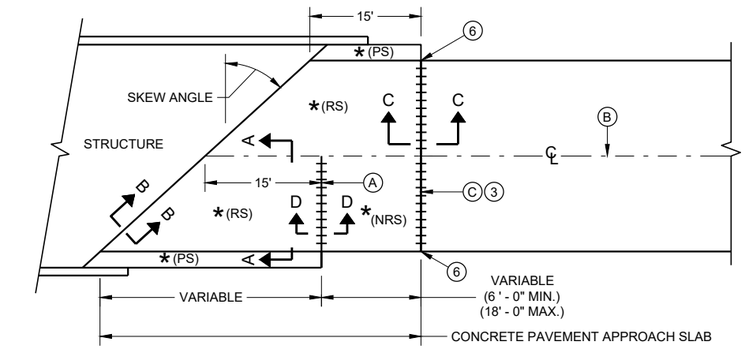
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

(C) 1 ½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℞ .

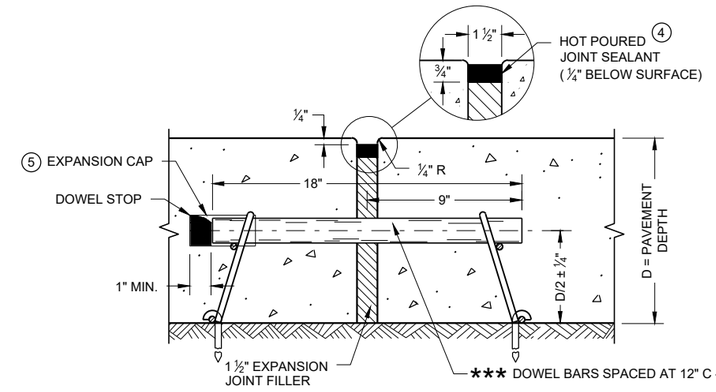


SECTION D - D
CONTRACTION JOINT

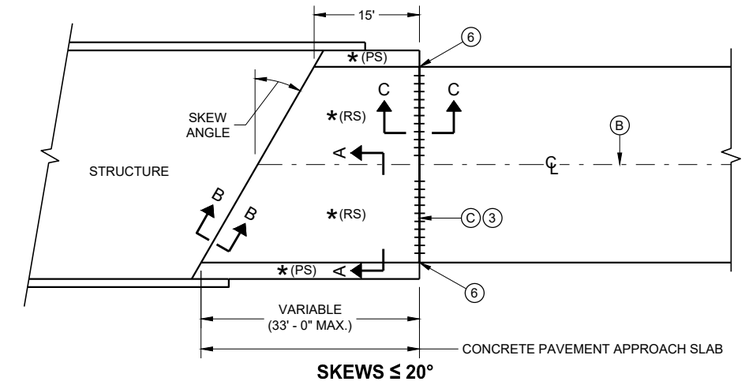


SKEWS > 20°
(PAVEMENT WIDTH ≤ 30')

SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT

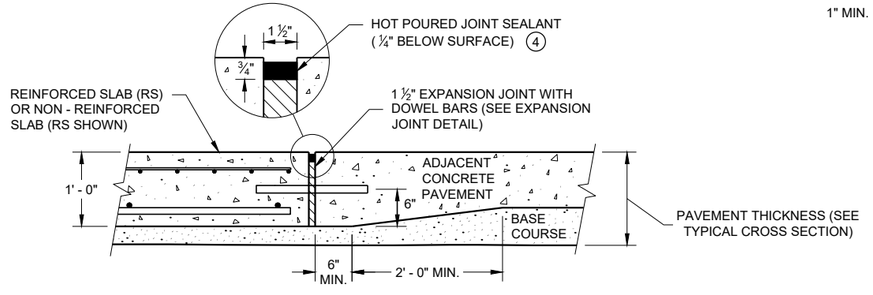


EXPANSION JOINT DETAIL



SKEWS ≤ 20°
(PAVEMENT WIDTH ≤ 30')

APPROACH SLAB AND ADJACENT PAVEMENT



SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

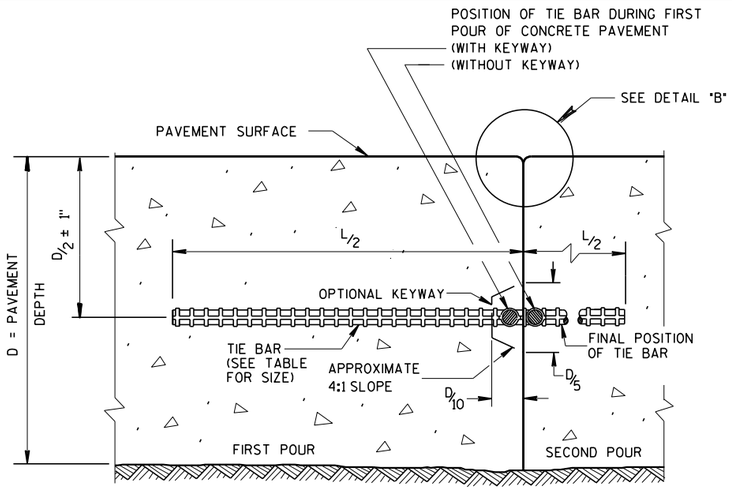
APPROVED
November 2018
DATE

/S/ Peter Kemp, P.E.
PAVEMENT SUPERVIS

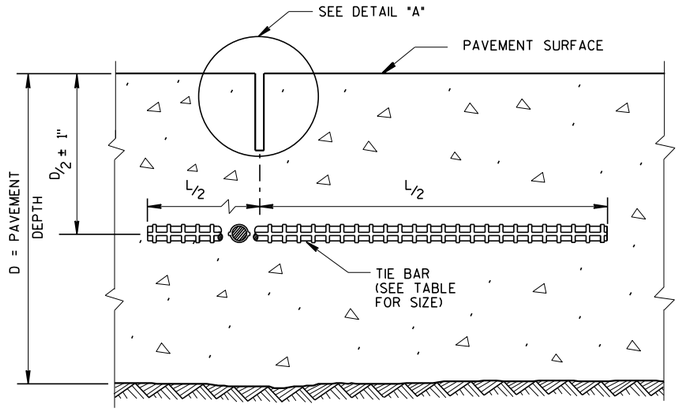
FHWA

6

SDD 13B02 - 09a



CONSTRUCTION JOINT



SAWED JOINT

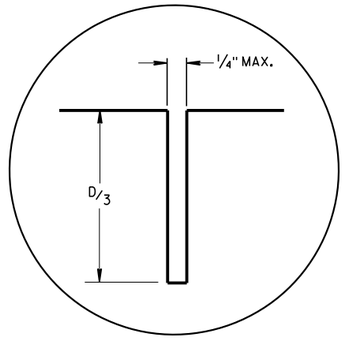
GENERAL NOTES

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

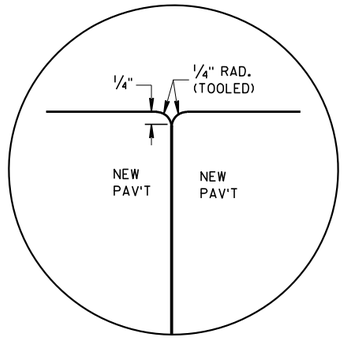
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

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

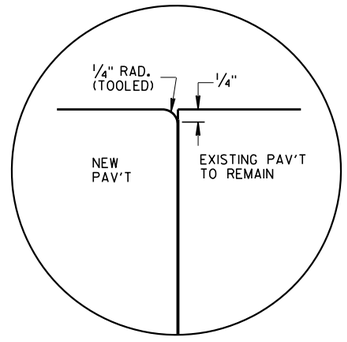
(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.



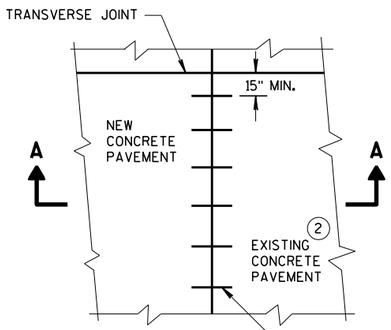
DETAIL "A"



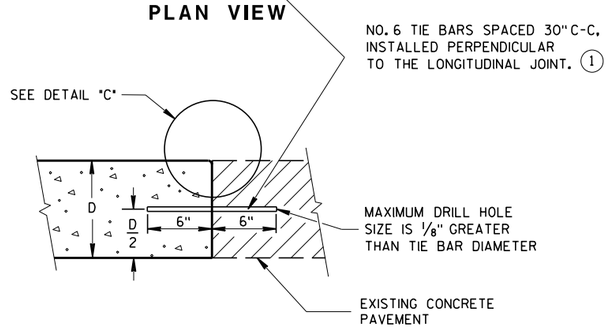
DETAIL "B"



DETAIL "C"



PLAN VIEW



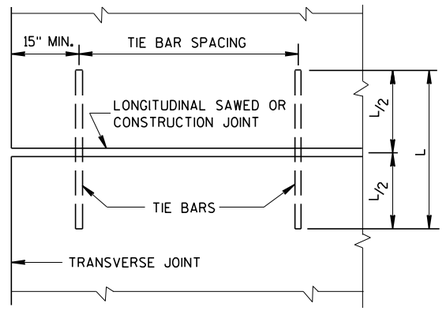
SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT

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.



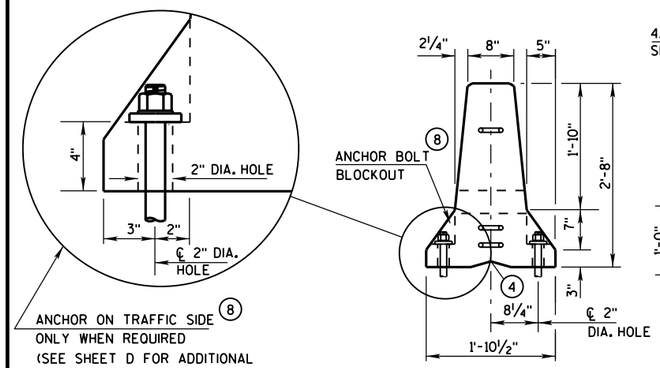
PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

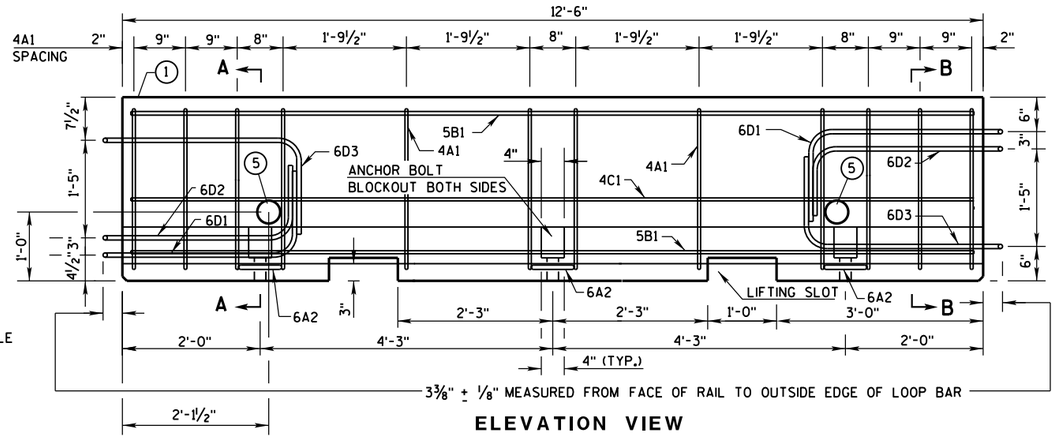
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Peter Kerr, P.E. — PAVEMENT SUPE
FHWA

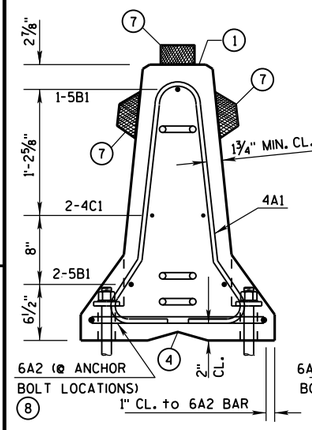
6
S.D.D. 13 C 1-19



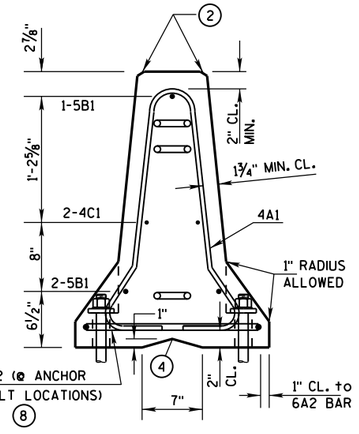
END VIEW



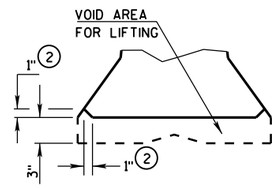
ELEVATION VIEW



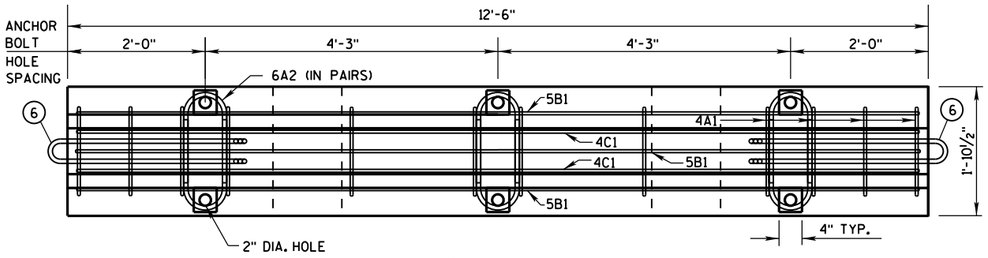
SECTION A-A
(STIRRUP PLACEMENT)



SECTION B-B
(STIRRUP PLACEMENT)

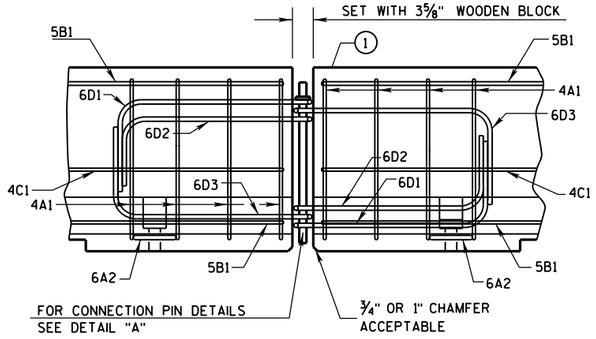


DETAIL "B"
LIFTING SLOT DETAIL

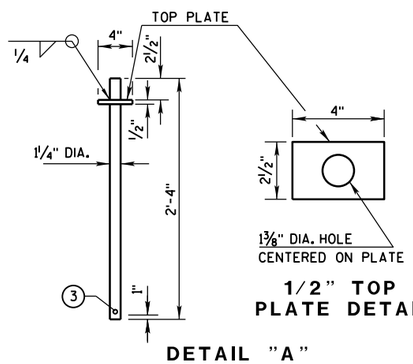


PLAN VIEW

DETAILS OF BARRIER SECTION

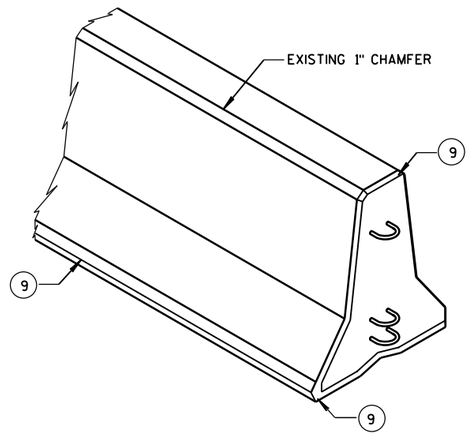


DETAILS OF BARRIER CONNECTION



1/2" TOP
PLATE DETAIL

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



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-15(a) THRU 14B7-15(i).

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRCAST, 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 ¾" 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 3-½" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN ⅛" 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.

INSTALL MECHANICAL OR ADHESIVE ANCHORS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE MANUFACTURER'S INFORMATION TO PROJECT ENGINEER.

(1) MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
- a. TYPE: WI CBTP
- b. MANUFACTURER
- c. DATE MANUFACTURED (MONTH AND YEAR)

(2) 1" CHAMFER TO PREVENT SPALLING.

(3) A ⅜" 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 HOW TO ANCHOR BARRIER. SEE SHEET E FOR WHEN TO ANCHOR BARRIER.

(9) 1" CHAMFER OPTIONAL.

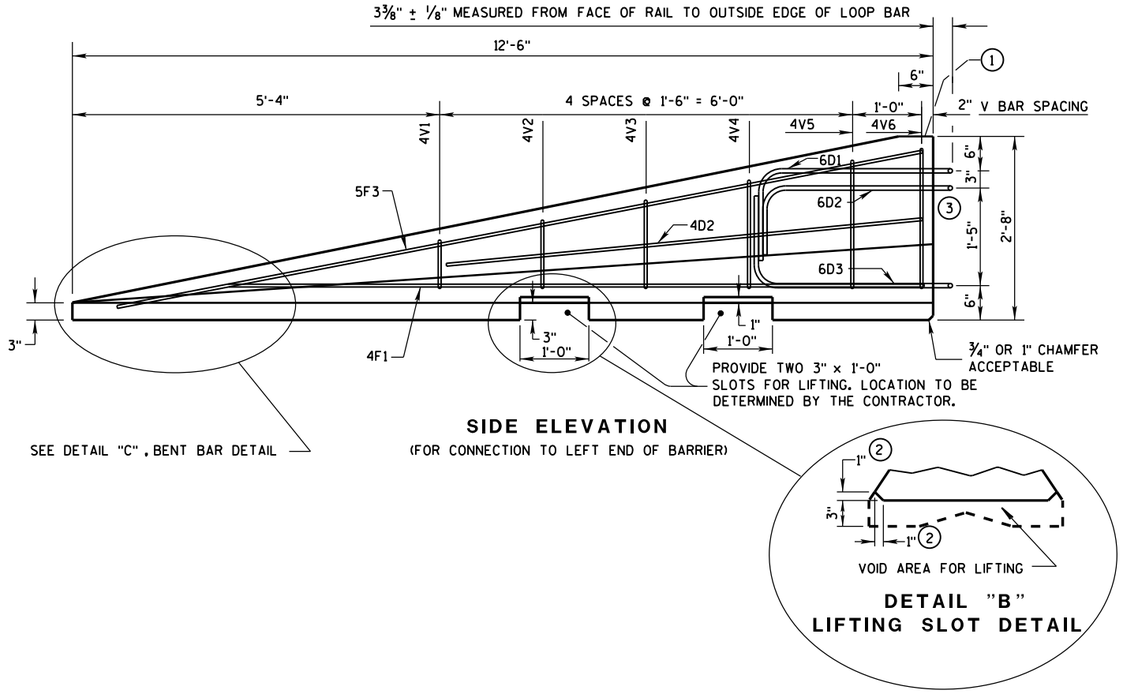
f'c = 4,000 psi

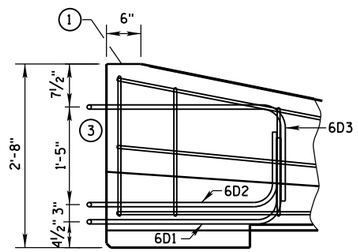
CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

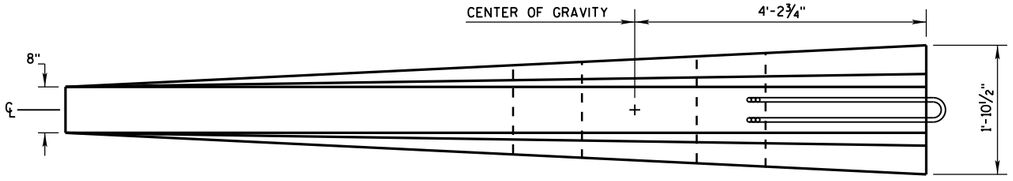
S.D.D. 14 B 7-15a

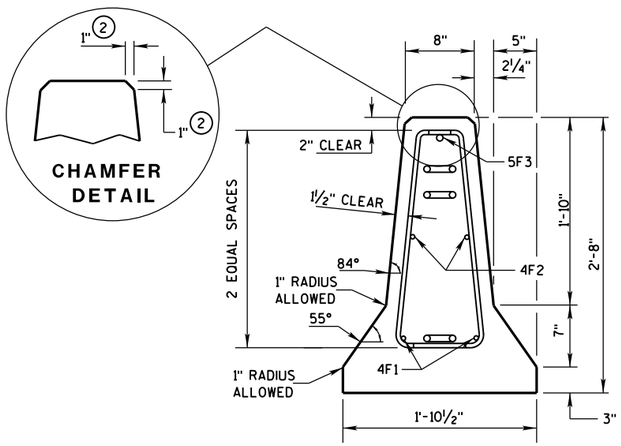


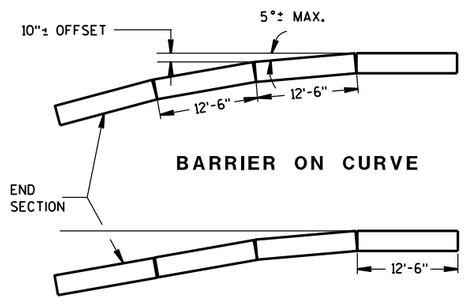


GENERAL NOTES

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.







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

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

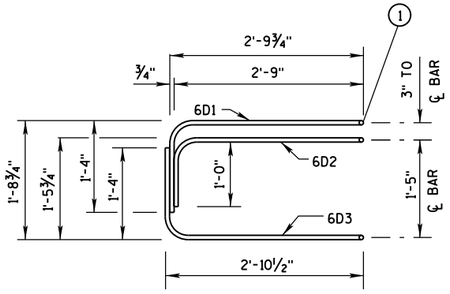
6

S.D.D. 14 B 7-15b

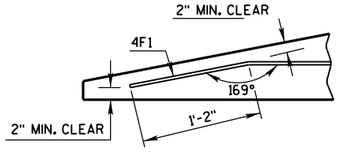
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

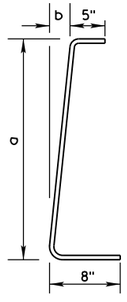
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



ELEVATION
LOOP BAR ASSEMBLY



DETAIL "C"
BENT BAR DETAIL



BAR	a	b
V1	10"	1"
V2	1'-1"	1¼"
V3	1'-5"	1⅝"
V4	1'-8"	1⅞"
V5	2'-0½"	2⅜"
V6	2'-3"	2¾"

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

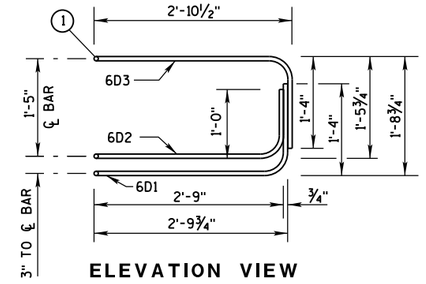
GENERAL NOTES

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

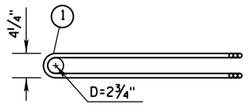
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

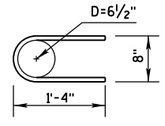
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



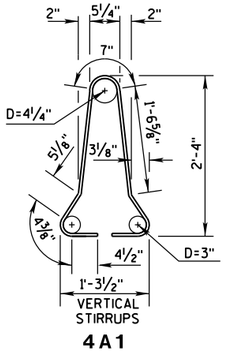
ELEVATION VIEW



PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



6A2



4A1

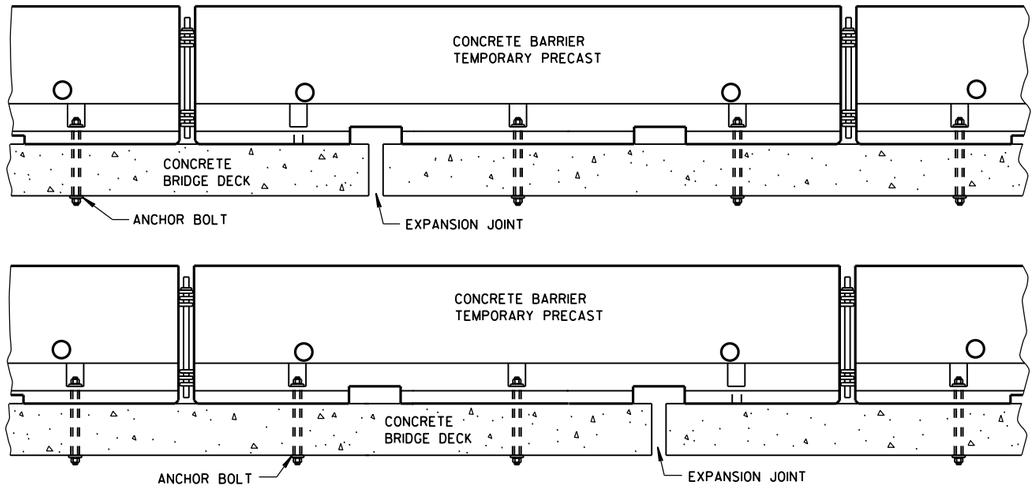
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 7-15c



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.)

GENERAL NOTES

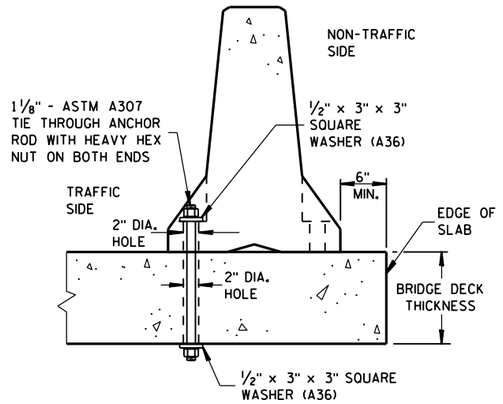
SEE SHEET E FOR WHEN TO ANCHOR. OTHER PARTS OF THE PLAN MAY SHOW ADDITIONAL LOCATIONS REQUIRING ANCHORING.

REMOVE ALL ANCHORS WHEN NO LONGER NEEDED. FILL CONCRETE PAVEMENTS, DECKS AND APPROACH SLABS WITH NON-SHRINK COMMERICAL GROUT FROM THE APPROVED PRODUCT LIST. FILL ASPHALT PAVEMENTS WITH ASTM D6690 TYPE II RUBBERIZED CRACK FILLER.

(1) 1⅛" DIAMENTER A307 THREADED ROD. ½" X 3" X 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL. ASTM A563A HEAVY HEX NUT.

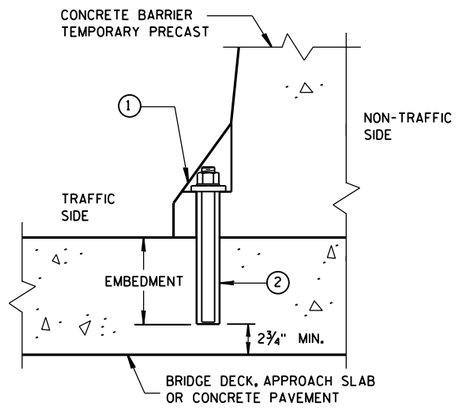
(2) ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5¼" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.

(3) ASPHALT SURFACE SHOWN. CONTRACTOR MAY DRILL THROUGH CONCRETE PAVEMENT AND THAN DRIVE ASPHALT ANCHOR PIN.



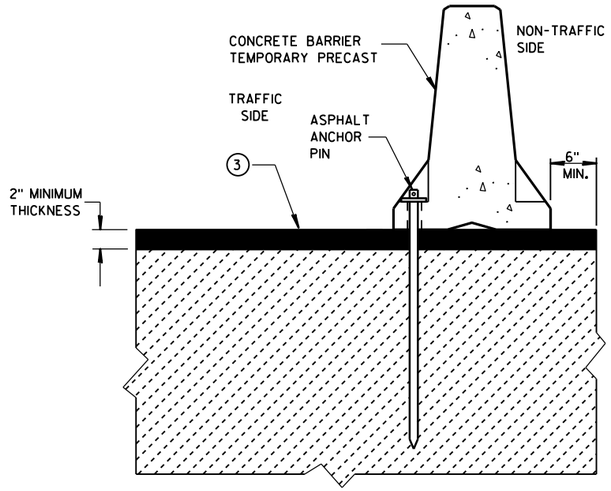
THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)

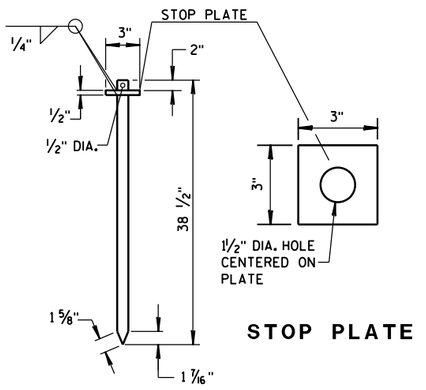


REMOVABLE ADHESIVE ANCHOR INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)



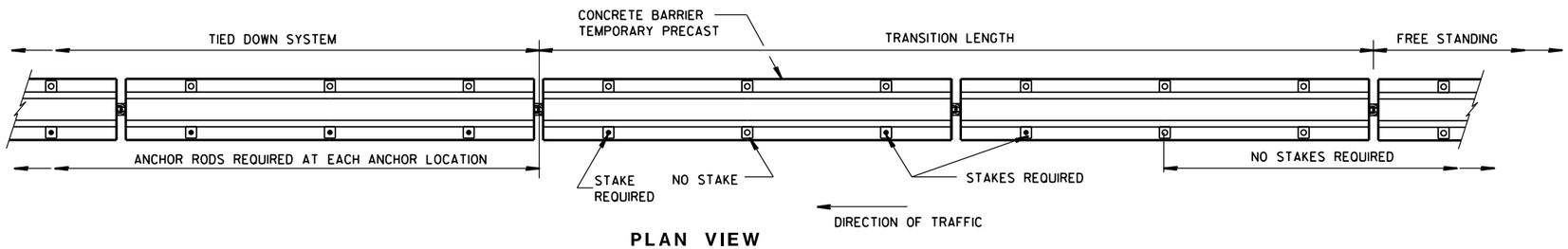
STAKE DOWN INSTALLATION FOR ASPHALTIC SURFACE



STOP PLATE

ASPHALT ANCHOR PIN

(ASTM A36 STEEL)



PLAN VIEW

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.)

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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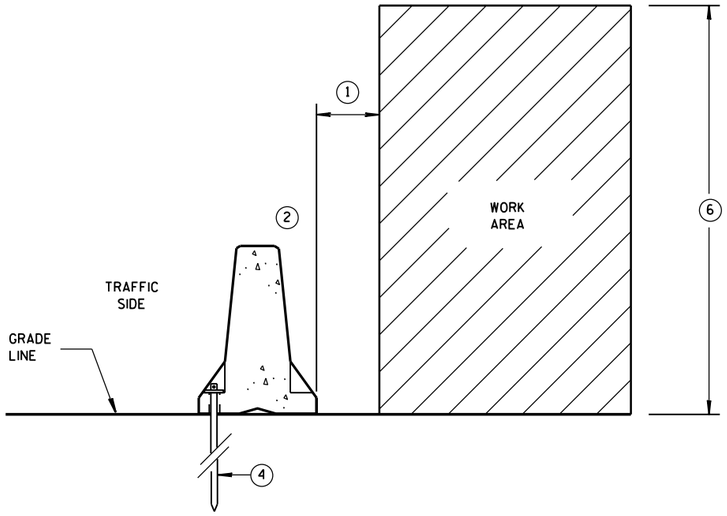
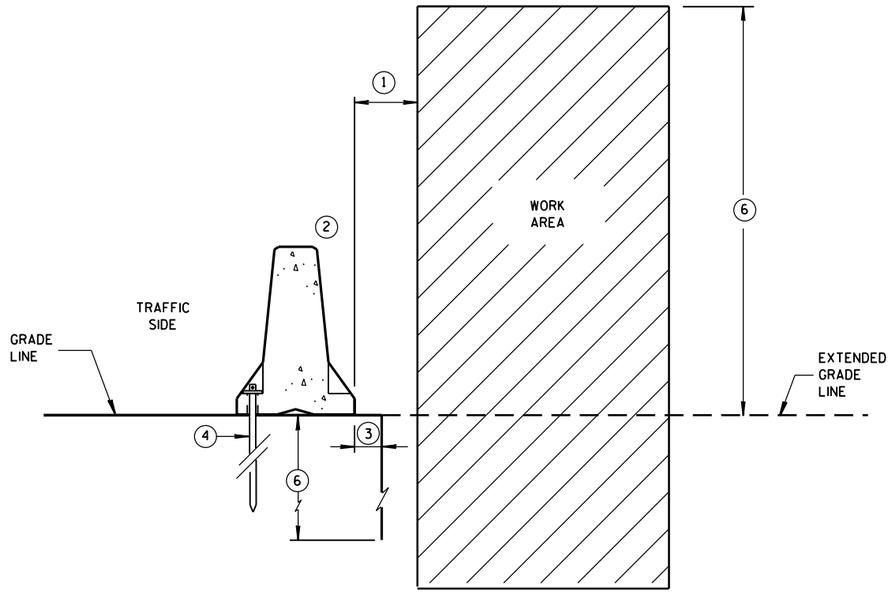
S.D.D. 14 B 7-15d



ANCHORED BARRIER SPACE REQUIREMENTS FOR HAZARDS EXTENDED ABOVE THE GRADE LINE

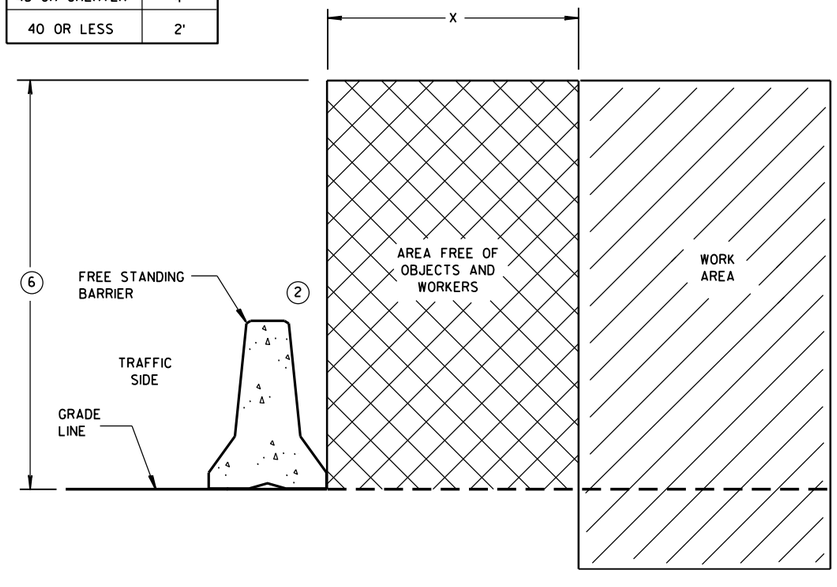


ANCHORED BARRIER SPACE REQUIREMENTS ON VERTICAL DROP OFFS

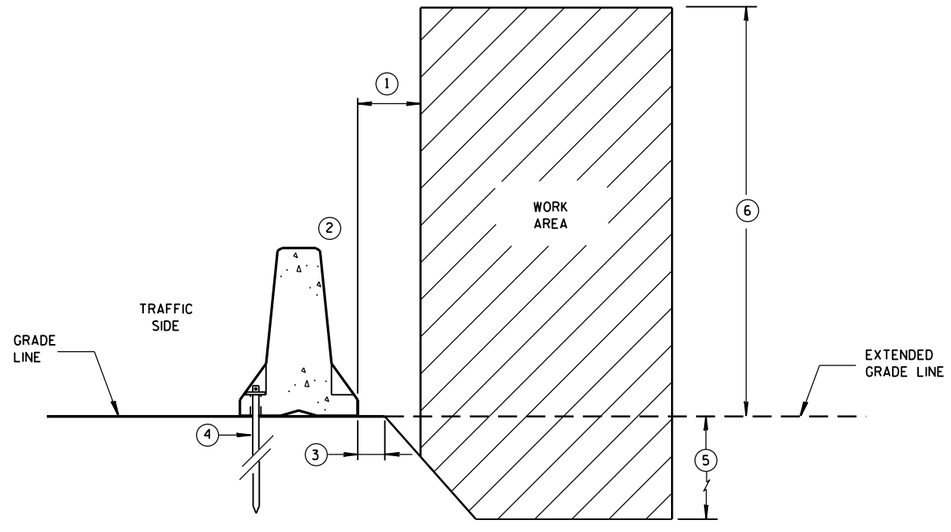
GENERAL NOTES

1. WHEN OBJECTS EXTEND ABOVE THE GRADE, A MINIMUM OF 1 FOOT IS REQUIRED FROM BACK OF BARRIER TO OBJECT. SEE OTHER DETAILS FOR FOR THE MINIMUM OFFSET FROM BACK OF BARRIER TO SLOPES OR VERTICAL DROPS.
2. OBJECTS ARE NOT TO BE PLACED ON, MOUNTED TO, OR LEANED AGAINST THE BARRIER WITHOUT PERMISSION OF THE PROJECT ENGINEER.
3. SEE OTHER DETAIL ON SHEET "D" FOR SPACE REQUIREMENTS.
4. SEE BOLT THROUGH DECK, REMOVABLE ADHESIVE ANCHOR, OR A STAKE DOWN FOR ASPHALTIC SURFACE TREATMENT DETAILS. ASPHALTIC ANCHOR SHOWN.
5. DEPTH OF 3 FEET OR MORE.
6. Y = 6'-6".

POSTED SPEED MPH	X
45 OR GREATER	4'
40 OR LESS	2'



FREE STANDING BARRIER SPACE REQUIREMENTS



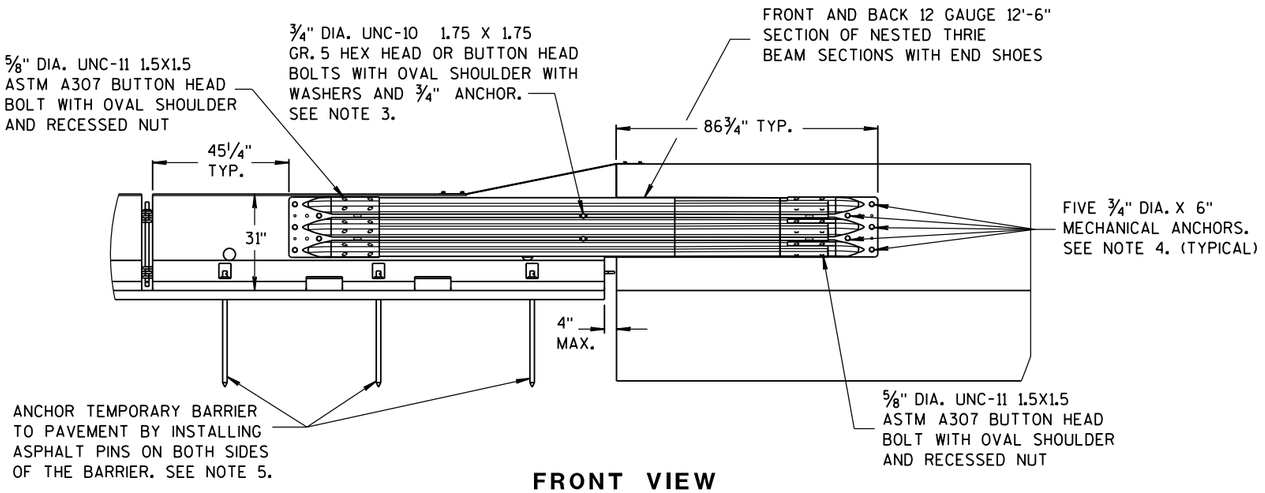
ANCHORED BARRIER SPACE REQUIREMENTS ON SLOPES

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

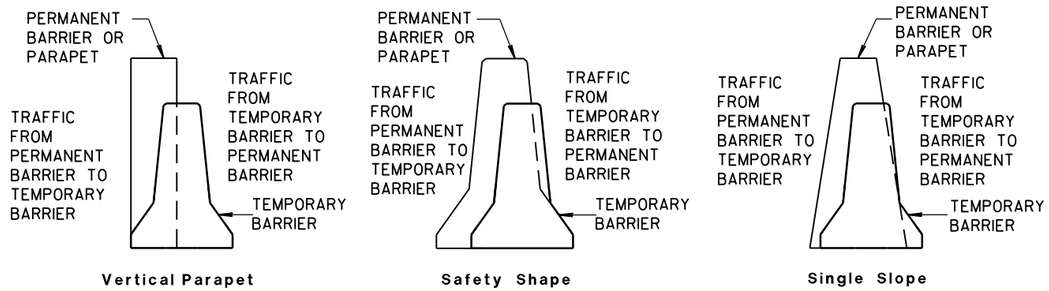
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 7-15e



FRONT VIEW

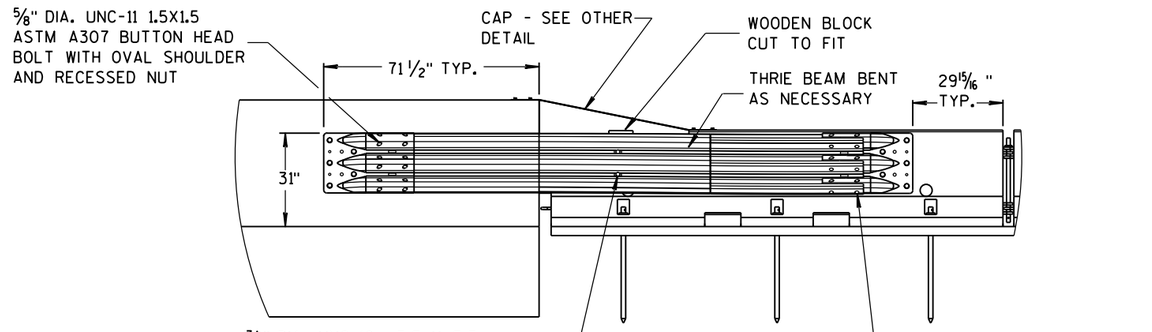


TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

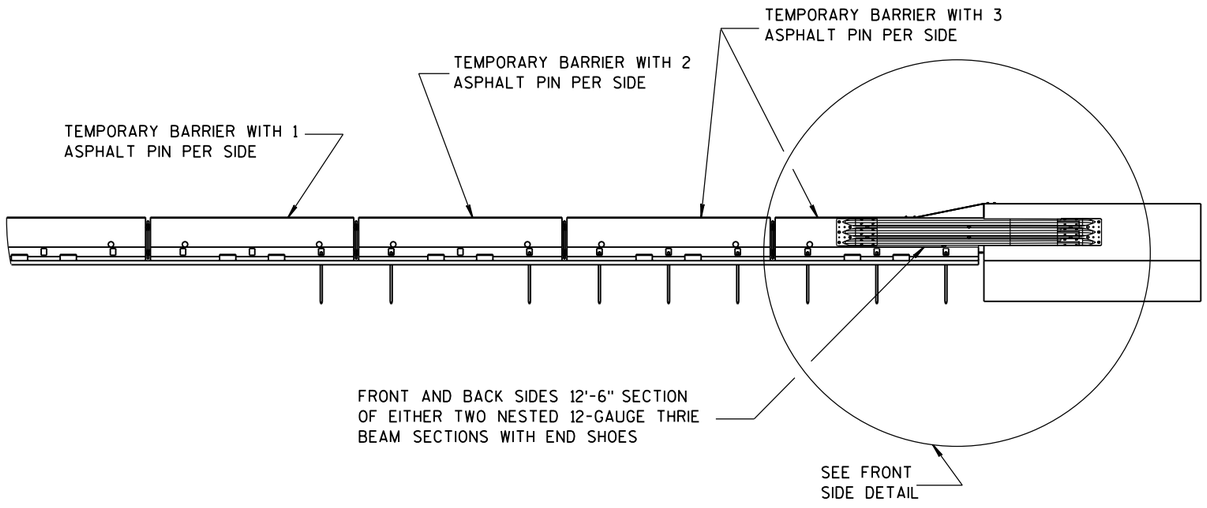
NOTES

NESTED THRIE BEAM IS REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS REGARDLESS OF TRAFFIC.

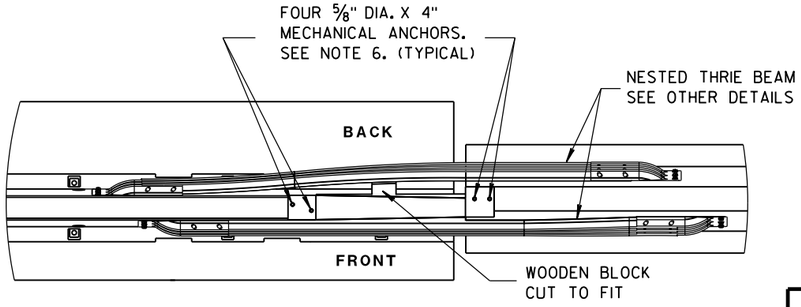
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.
4. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS.
5. MAY BE USED ON CONCRETE OR ASPHALT PAVEMENTS. ASPHALT OPTION SHOWN. FOR CONCRETE OPTION SEE OTHER DETAILS.
6. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.



BACK VIEW



FRONT VIEW



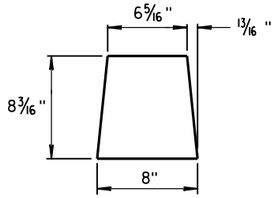
PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

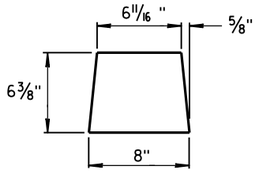
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

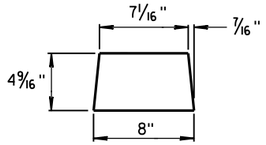
6
S.D.D. 14 B 7-15f



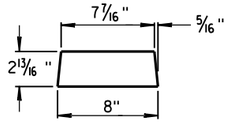
GUSSET 1



GUSSET 2

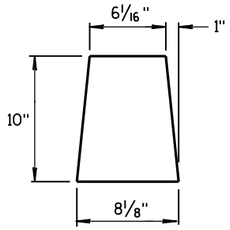


GUSSET 3

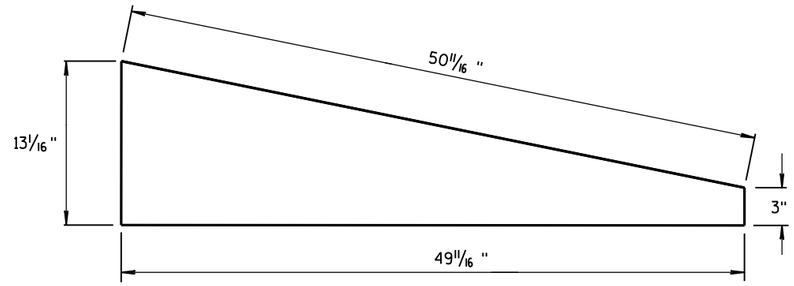


GUSSET 4

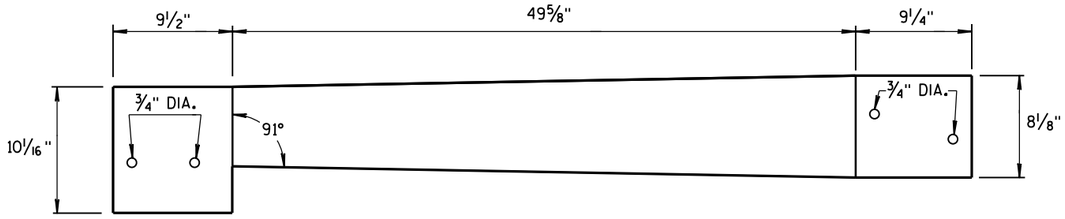
GUSSETS

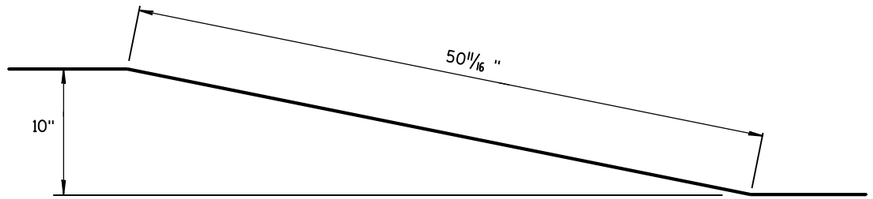


END PLATE



SIDE PLATE

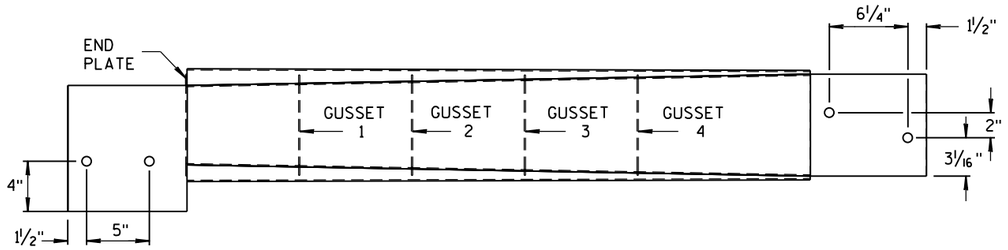


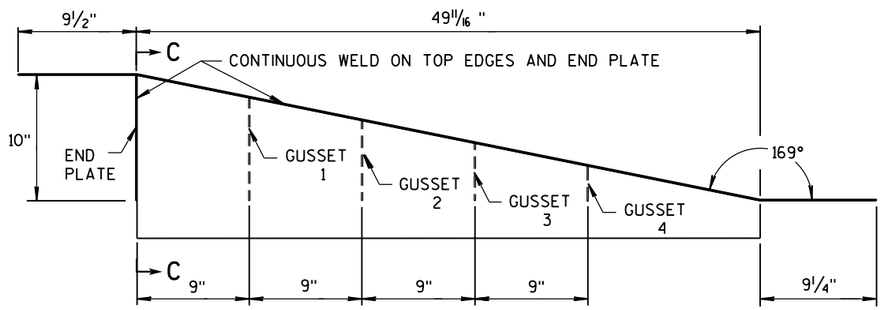


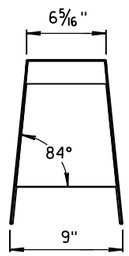
TOP PLATE

SIDE, TOP AND END PLATES FOR CAP FROM TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.







SECTION C-C

NOTES

1. FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
2. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE, AND GUSSETS.

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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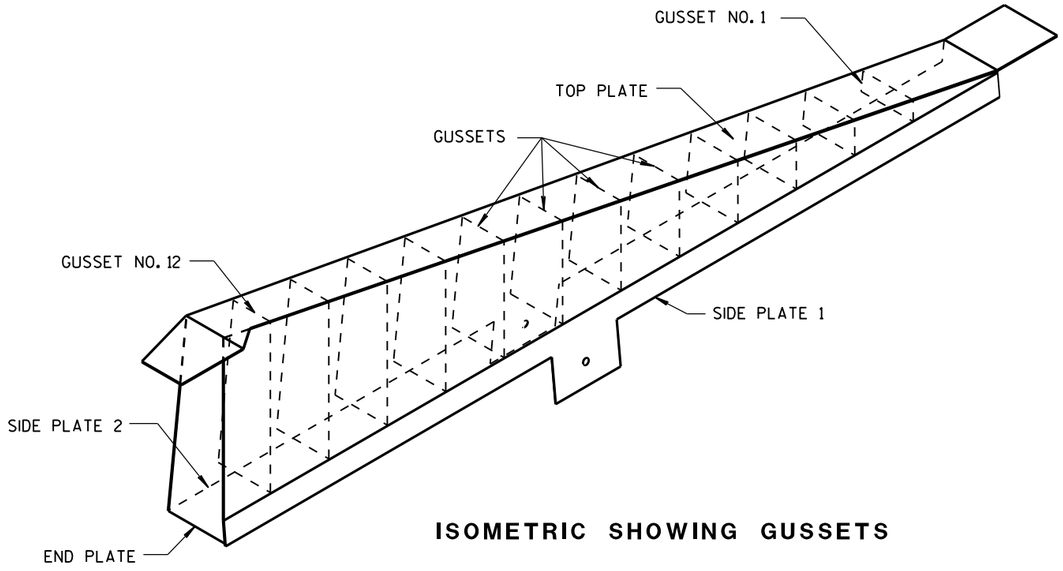
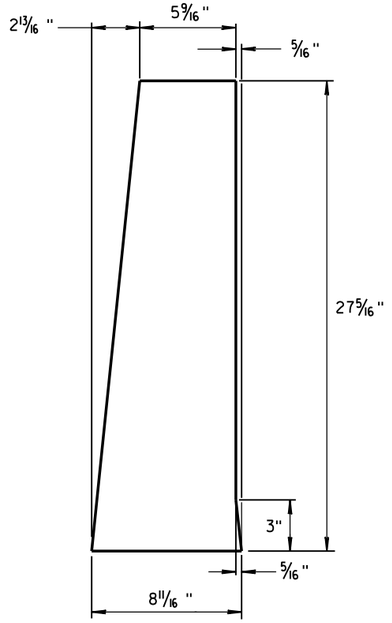
S.D.D. 14 B 7-15g

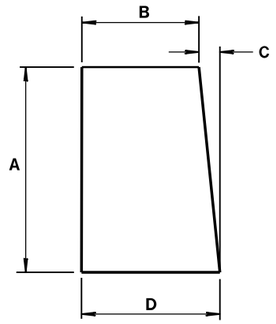


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



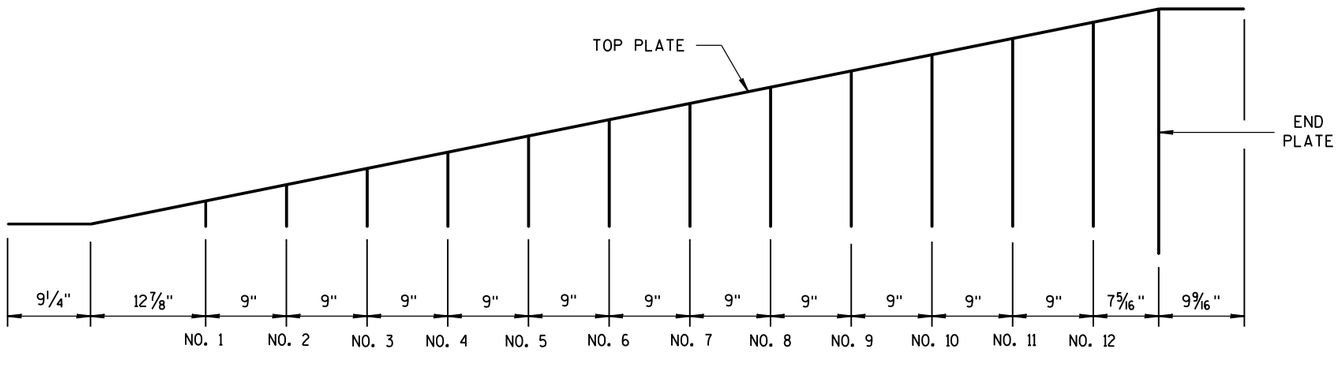
GUSSETS 1 - 12

ALL GUSSETS 1/8" STEEL PLATE

GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
1	2 7/8"	7 3/4"	1/4"	8
2	4 11/16 "	7 9/16 "	1/2"	8
3	6 1/2"	7 3/8"	11/16 "	8 1/16 "
4	8 5/16 "	7 3/16 "	7/8"	8 1/16 "
5	10 1/8"	7"	1 1/16 "	8 1/16 "
6	11 15/16 "	6 13/16 "	1 1/4"	8 1/16 "
7	13 3/4"	6 5/8"	1 7/16 "	8 1/16 "
8	15 9/16 "	6 7/16 "	1 9/16 "	8 1/16 "
9	17 3/8"	6 1/4"	1 13/16 "	8 1/16 "
10	19 3/16 "	6 1/16 "	1 15/16 "	8 1/16 "
11	21"	5 7/8"	2 3/16 "	8 1/16 "
12	22 13/16 "	5 11/16 "	2 5/16 "	8 1/16 "

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 STEEL AND GALVANIZED.

GUSSETS AND END PLATE ARE STITCH WELDED ON 3 SIDES. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE AND GUSSETS.



GUSSET LOCATION

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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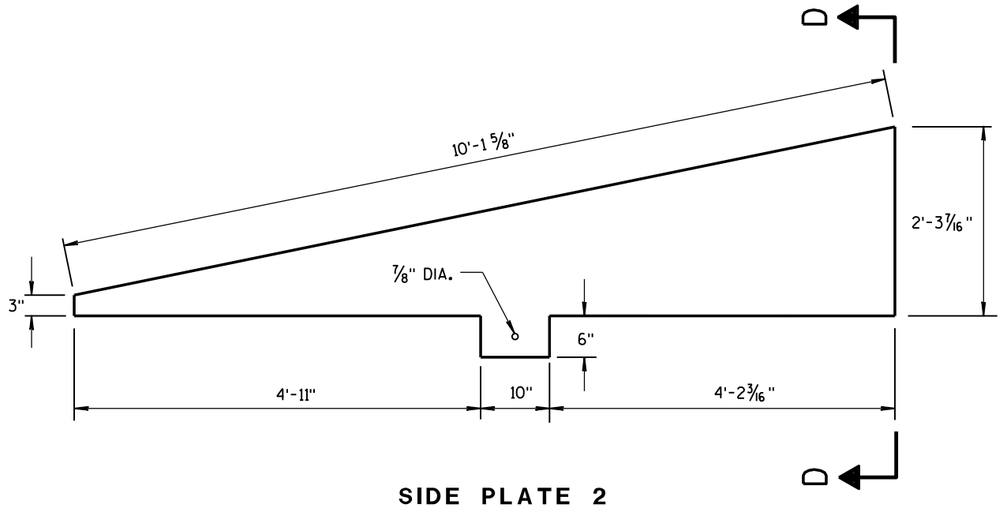
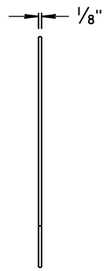
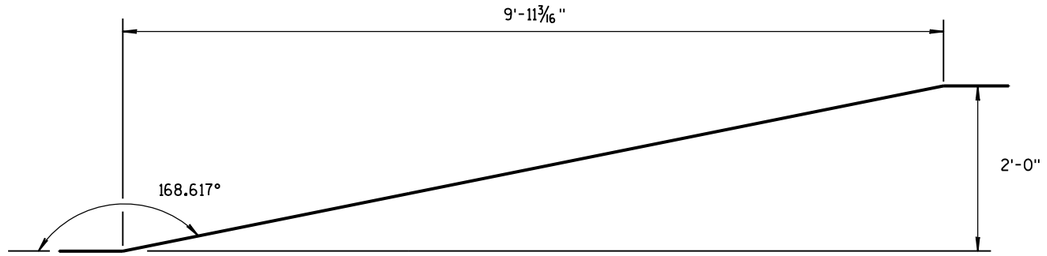
S.D.D. 14 B 7-15h



SIDE PLATE 2

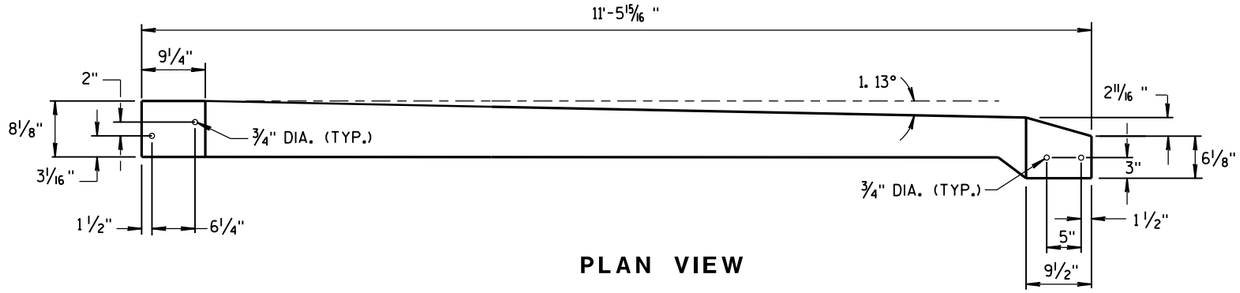


END VIEW



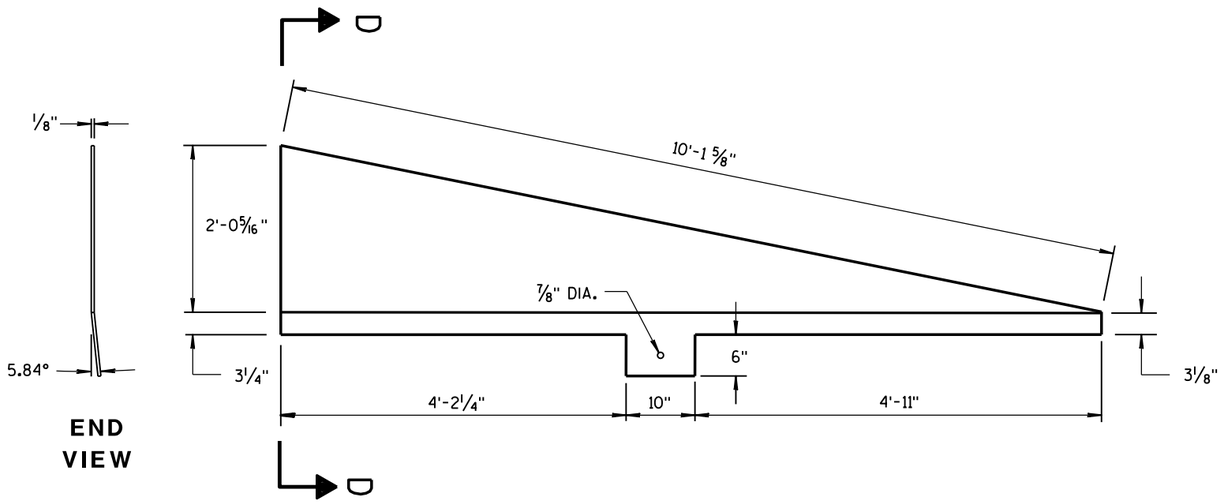
SIDE VIEW

TOP PLATE



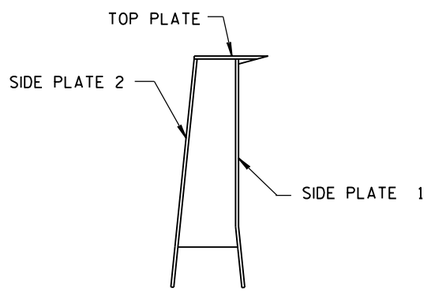
PLAN VIEW

TOP PLATE



END VIEW

SIDE PLATE 1



SECTION D-D

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERV

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FHWA

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S.D.D. 14 B 7-15i

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S.D.D. 14 B 7-15i

(1) WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

(2) USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

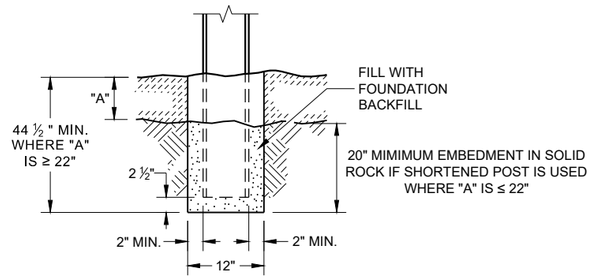
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

(4) WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

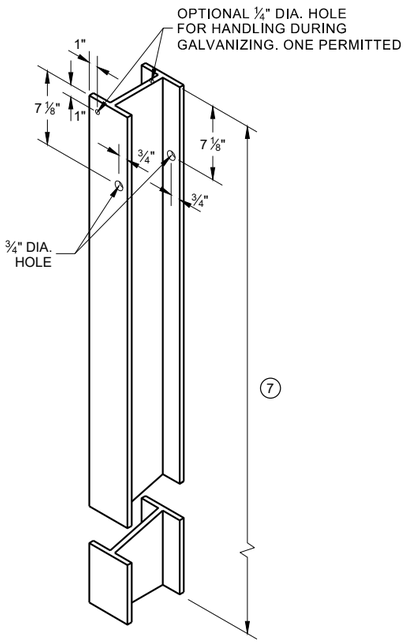
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS +1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

(6) WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

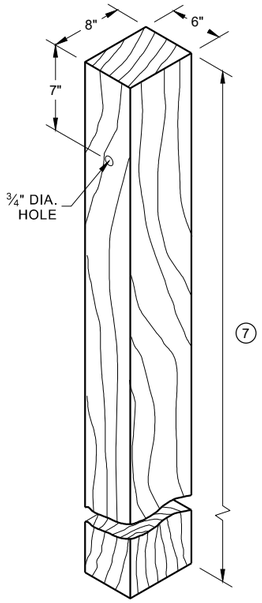
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



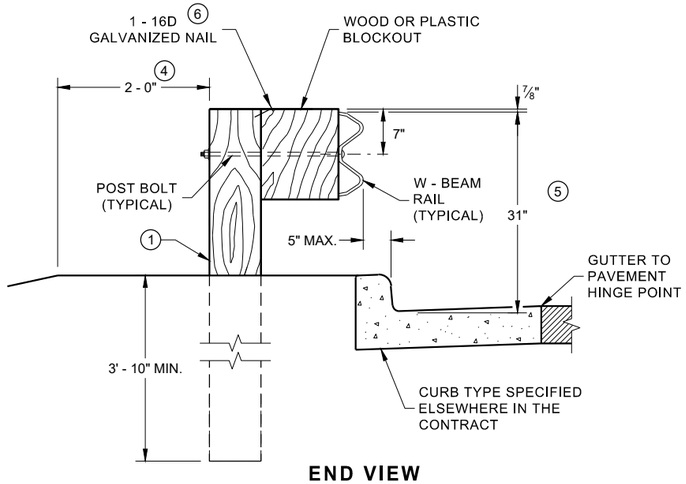
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



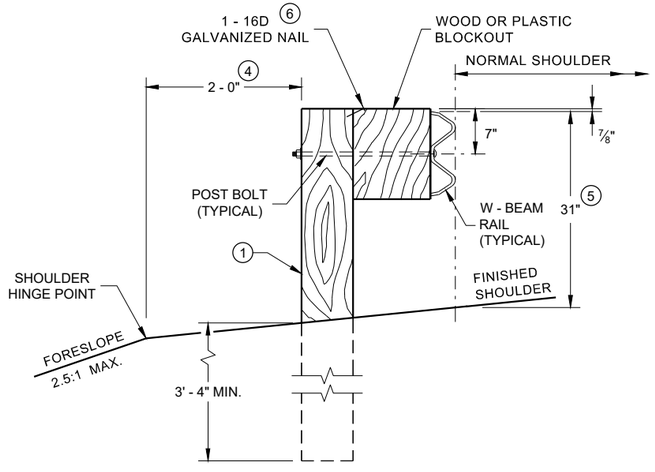
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



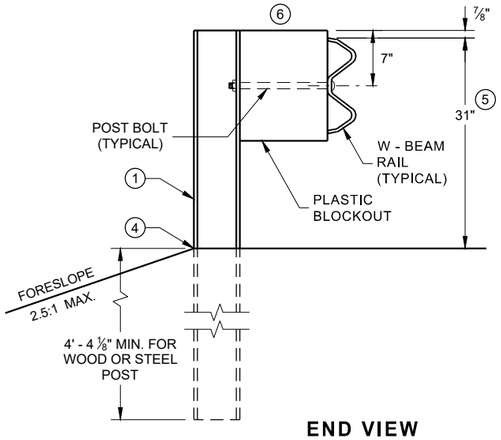
WOOD POST (6" X 8") NOMINAL (1)



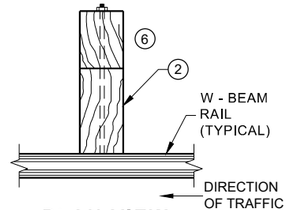
END VIEW
LOCATED ALONG A CURBED ROADWAY



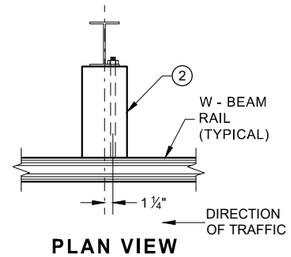
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



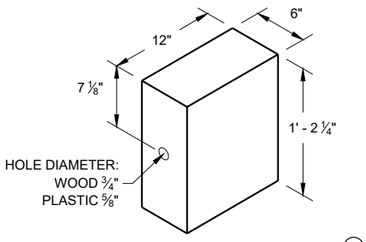
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B42 - 06a

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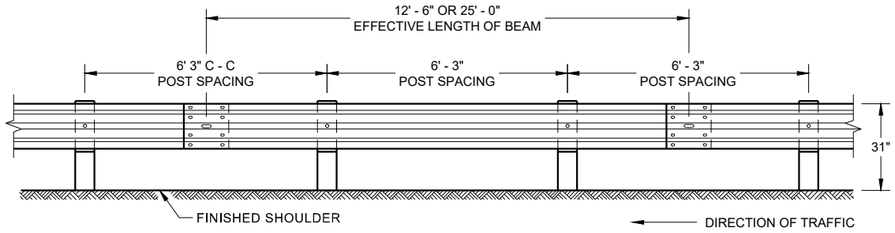
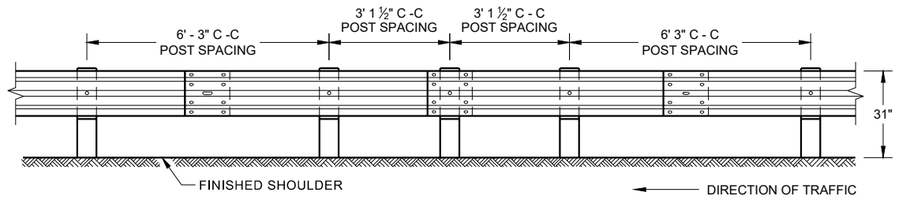
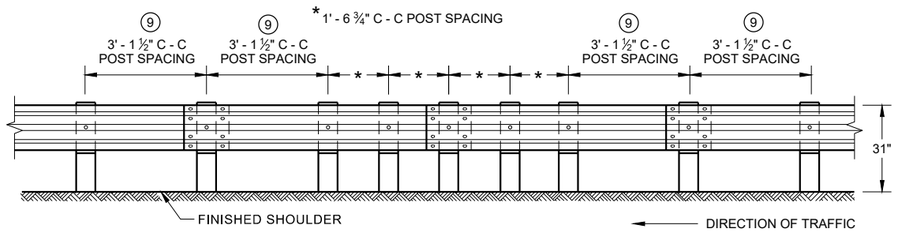
SDD 14B42 - 06a



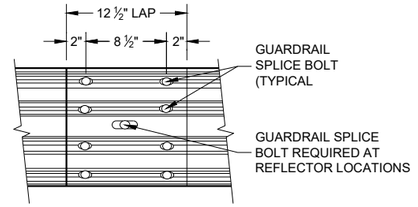
FRONT VIEW
POST SPACING STANDARD INSTALLATION



FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)



FRONT VIEW
QUARTER POST SPACING (QS)



FRONT VIEW
MID-SPAN BEAM SPLICE

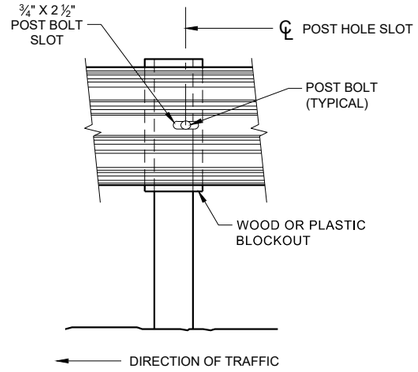
GENERAL NOTES

⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

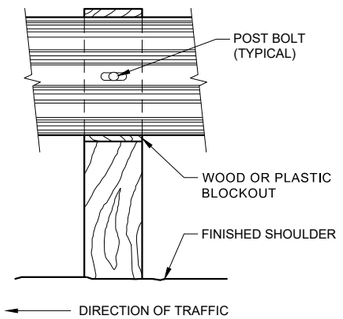
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

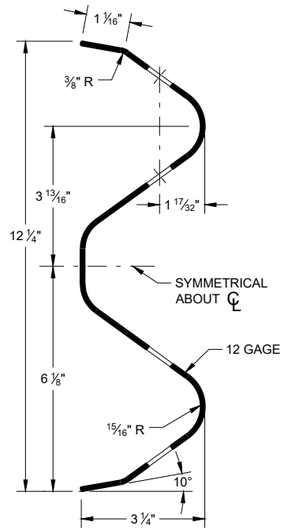
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



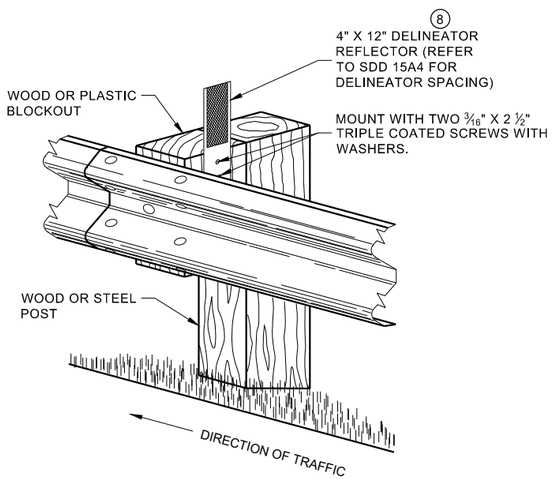
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL

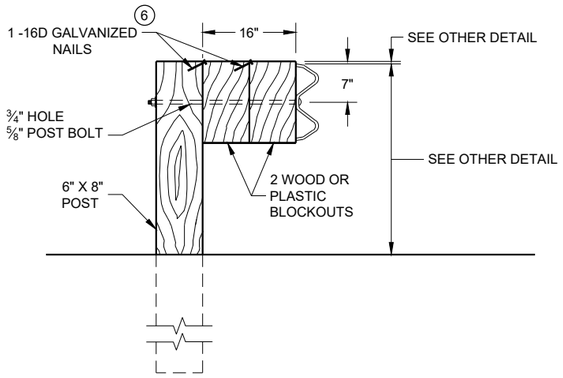


ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B42 - 06b

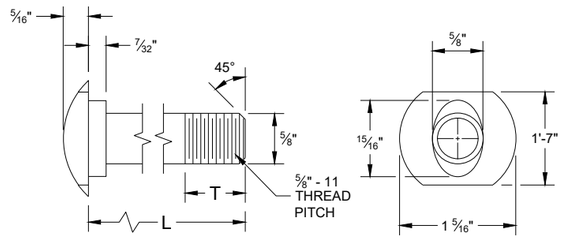


DETAIL FOR 16" BLOCKOUT DEPTH

IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

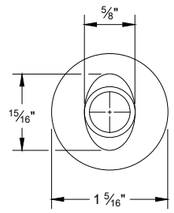
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3⁄16".
2. IF THE BOLT EXTENDS MORE THAN ¼" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

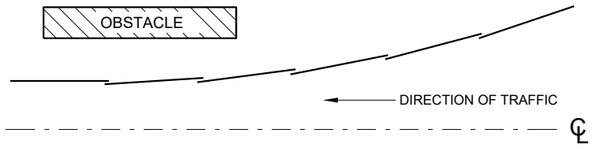


POST BOLT TABLE

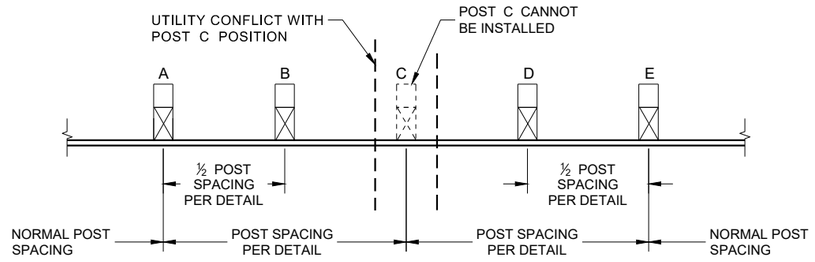
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



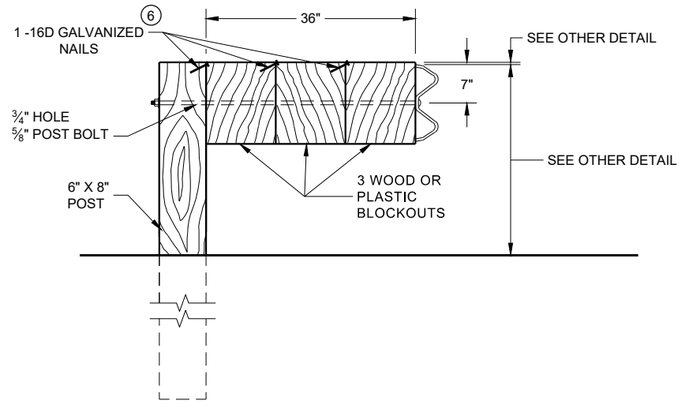
ALTERNATE BOLT HEAD



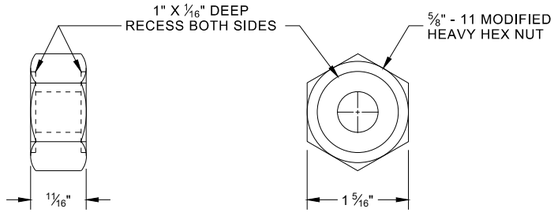
PLAN VIEW
BEAM LAPPING DETAIL



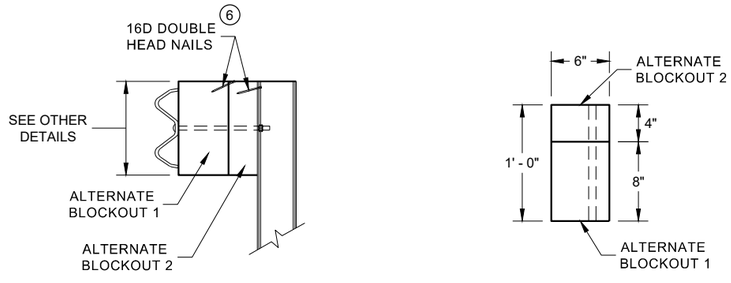
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW

PLAN VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

(6) WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

6

SDD 14B42 - 06c

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED

(C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.

(D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.

(E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

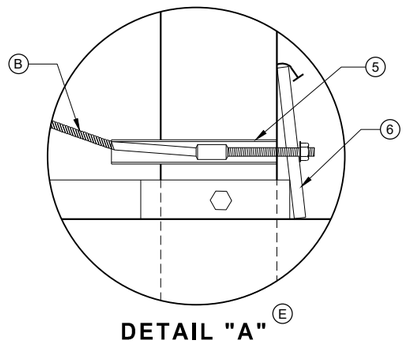
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

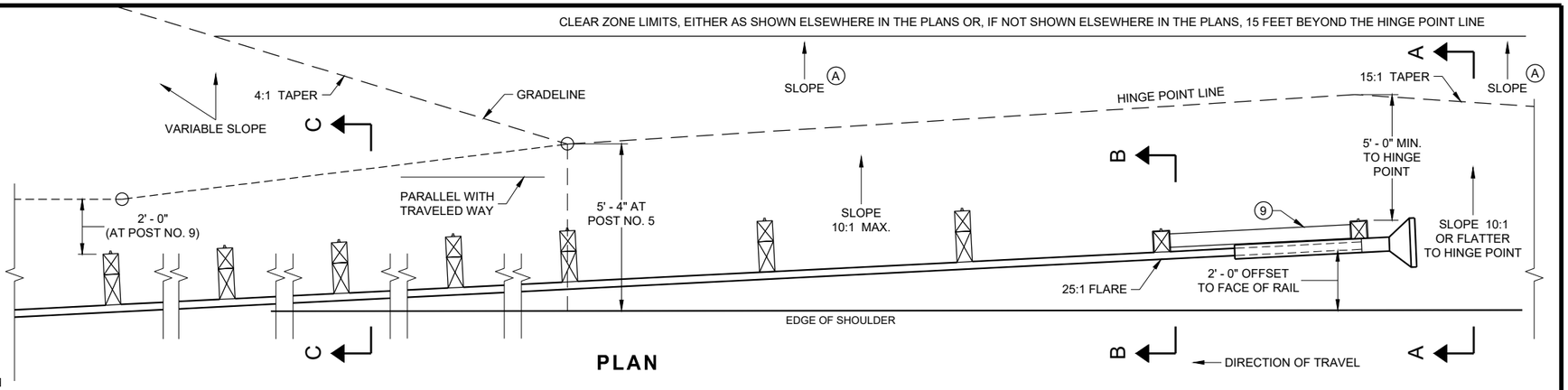
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

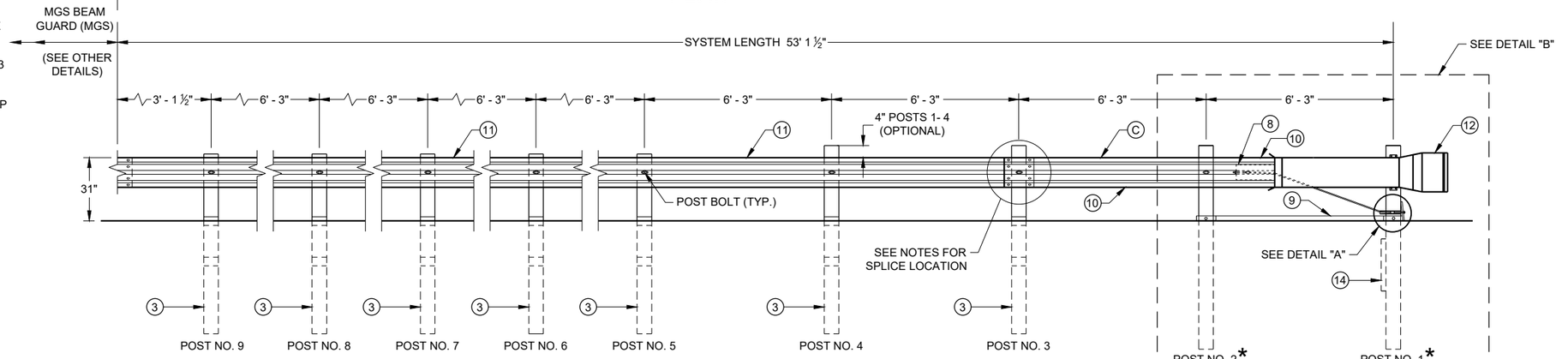
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



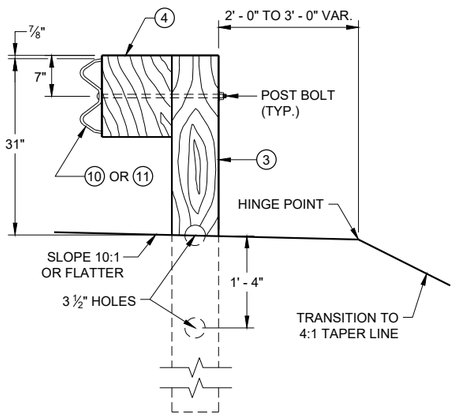
DETAIL "A" (E)



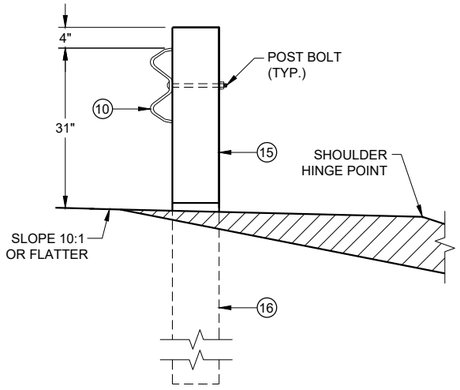
PLAN



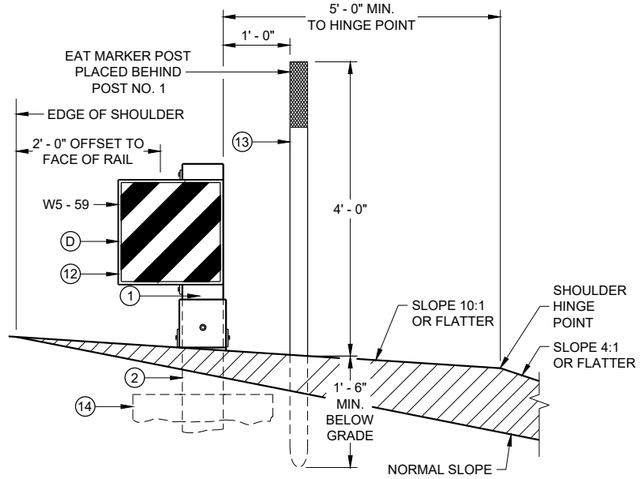
ELEVATION



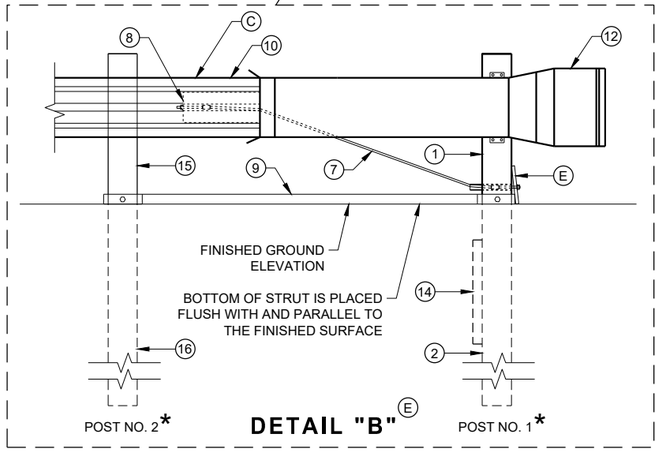
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



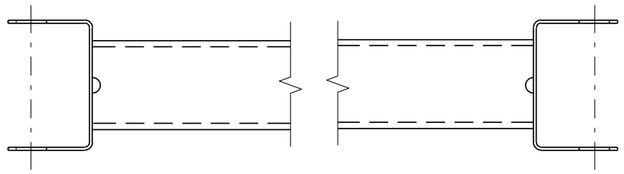
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

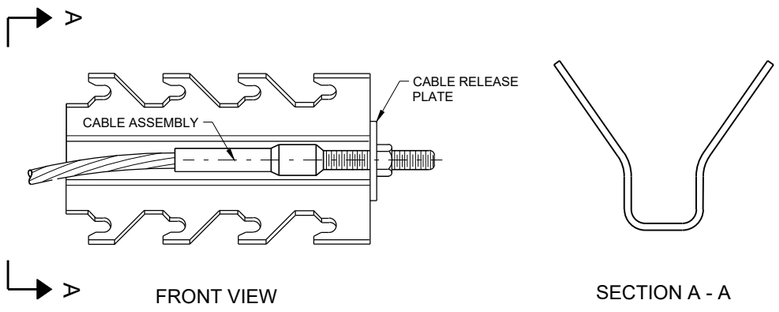
SDD 14B44 - 04a



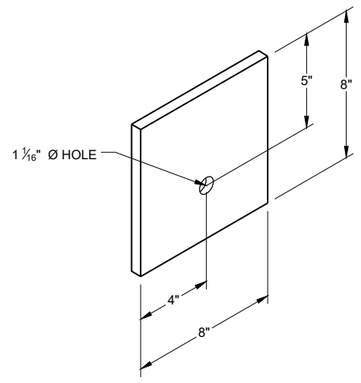
GENERIC GROUND STRUT (9) (E)

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUGACTURER'S DETAILS FOR MORE INFORMATION.
(1)	UPPER POST NO. 1 6" X 6" TUBE
(2)	LOWER POST NO. 1
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR CABLE BOX
(9)	GROUND STRUT
(10)	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
(11)	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
(12)	IMPACT HEAD
(13)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
(14)	SOIL PLATE
(15)	UPPER POST NO. 2
(16)	LOWER POST NO. 2



GENERIC ANCHOR CABLE BOX (9) (E)



BEARING PLATE (6) (E)

6

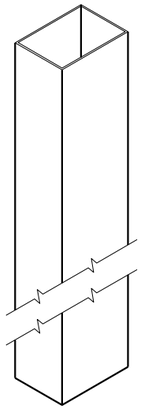
6

SDD 14B44 - 04b

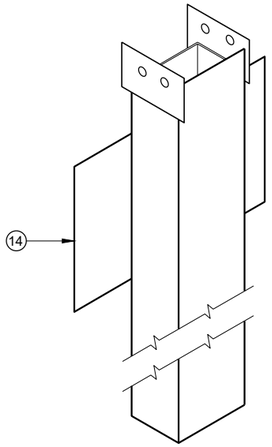
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

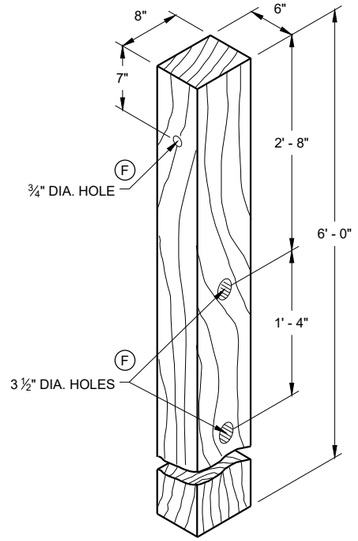
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



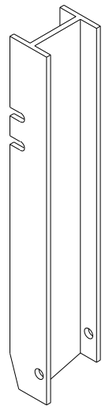
UPPER POST NO. 1 (1) (E)



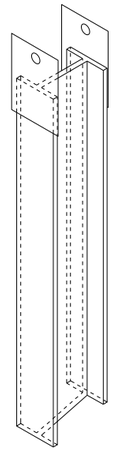
LOWER POST NO. 1 (2) (E)



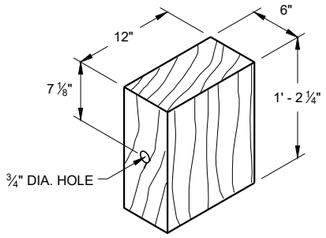
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



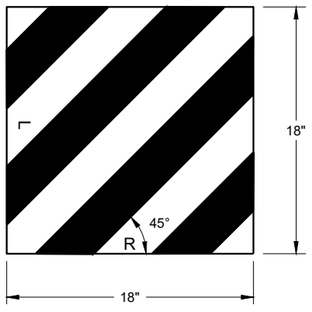
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

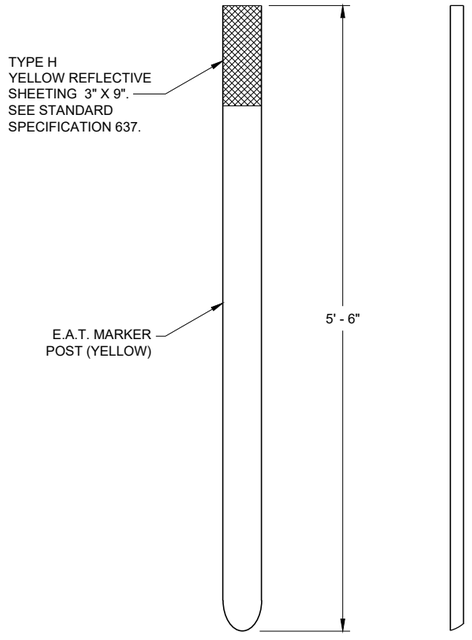


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



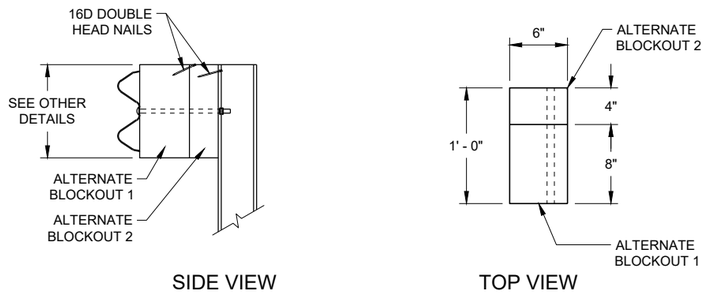
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

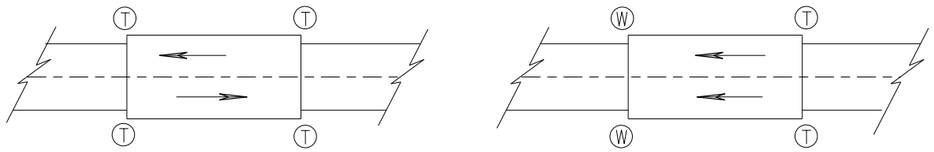
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

FHWA

6

SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

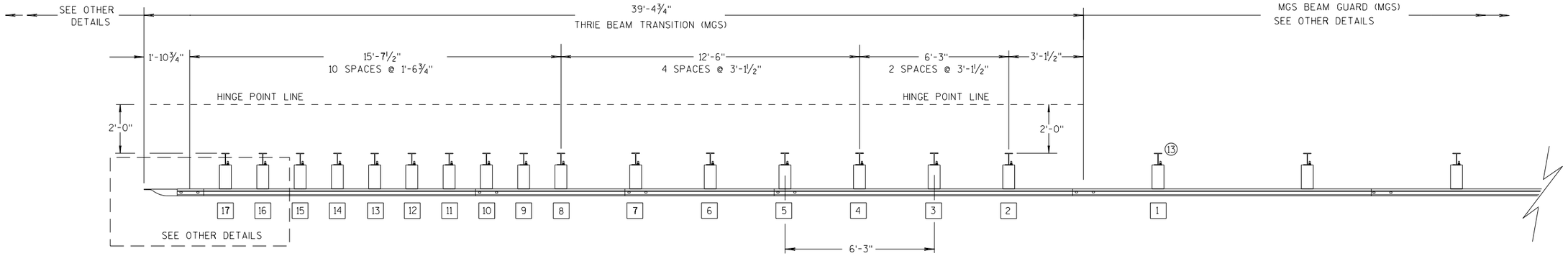
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

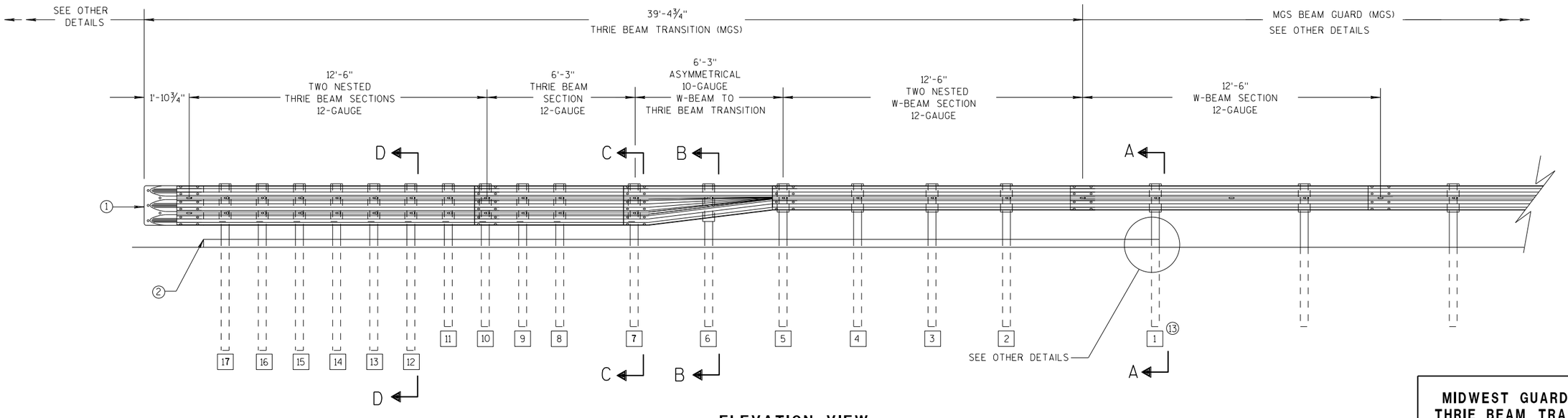
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD14B42



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 45-5a

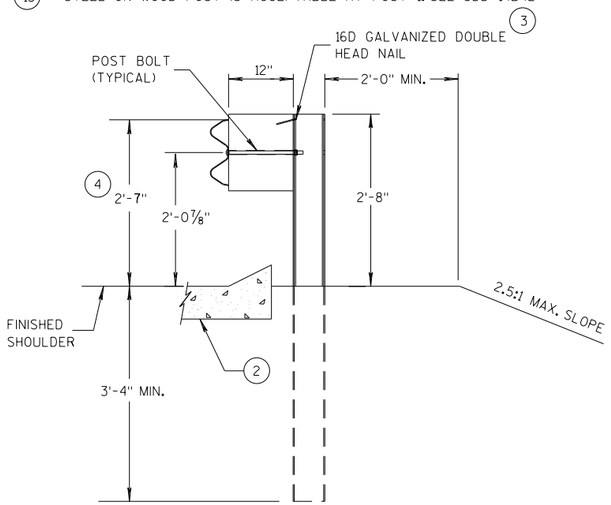
GENERAL NOTES

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

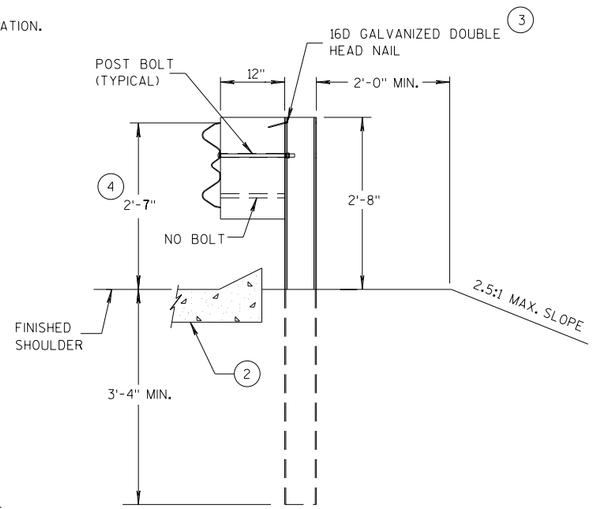
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42



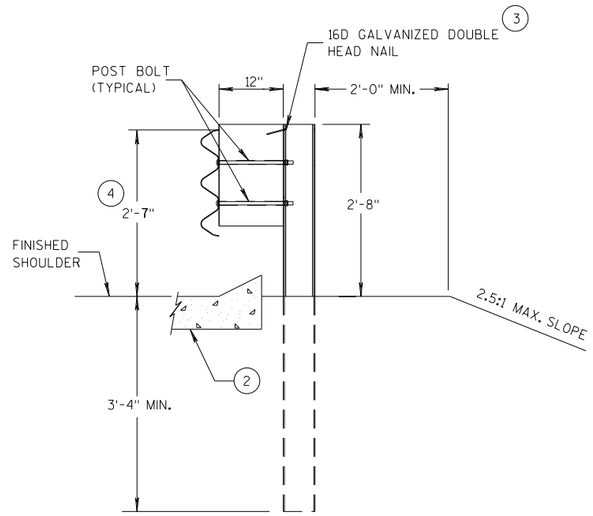
SECTION A-A (13)

POSTS 1-5



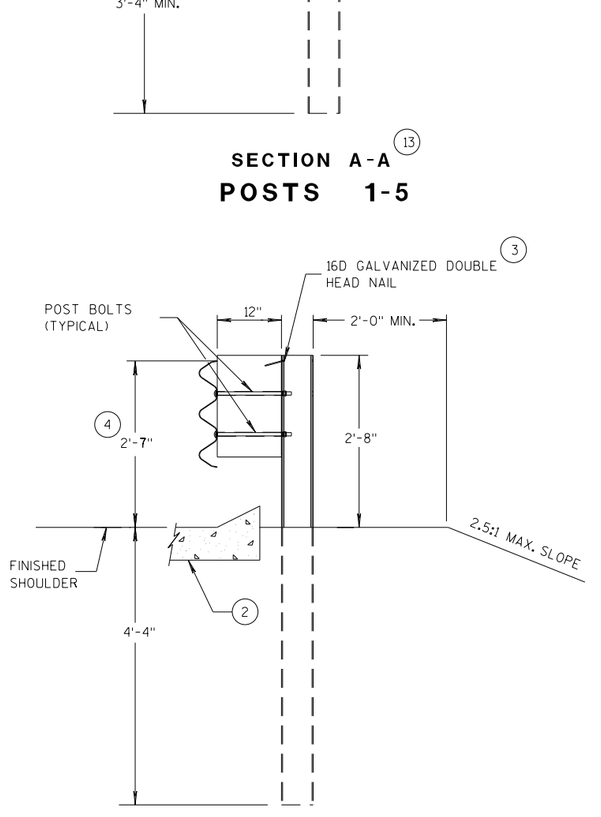
SECTION B-B

POST 6



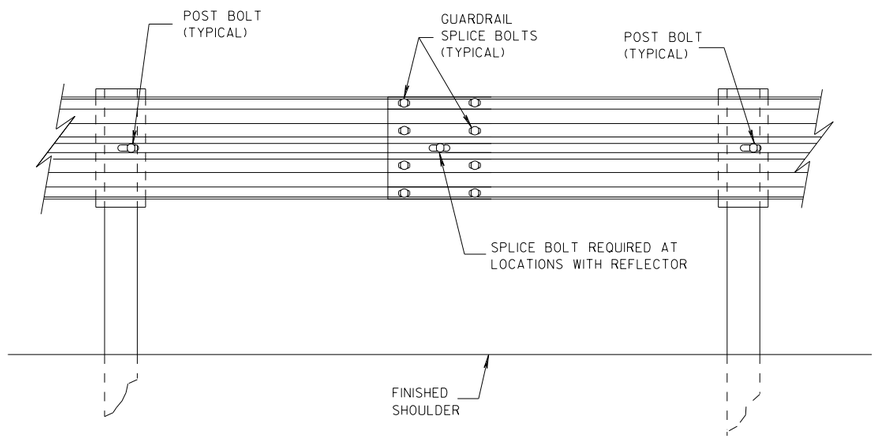
SECTION C-C

POSTS 7-11



SECTION D-D

POSTS 12-17



SPLICE DETAIL

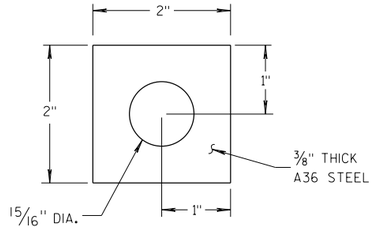
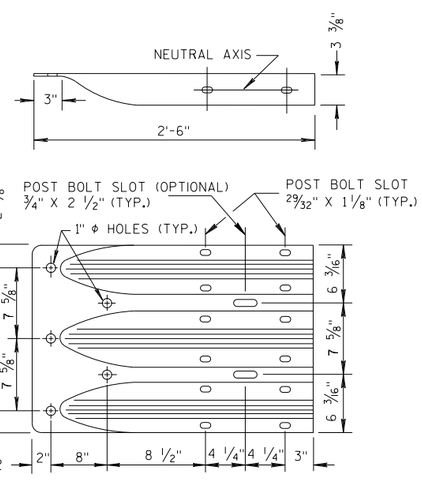
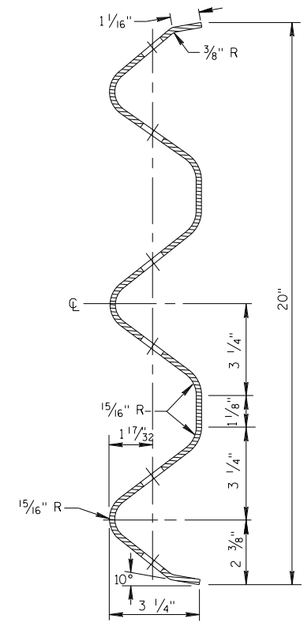


PLATE WASHER DETAIL



THRIE BEAM TERMINAL CONNECTOR



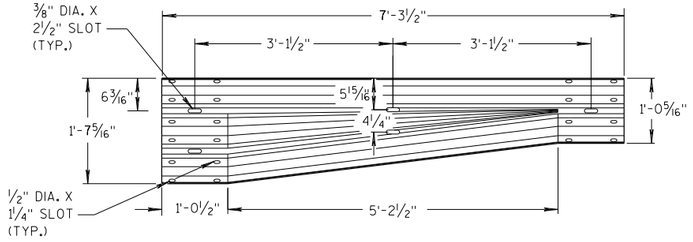
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

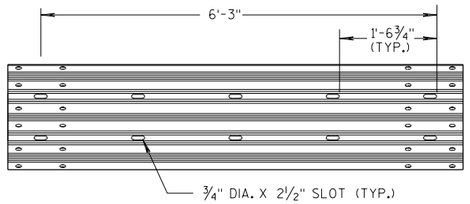
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF

6

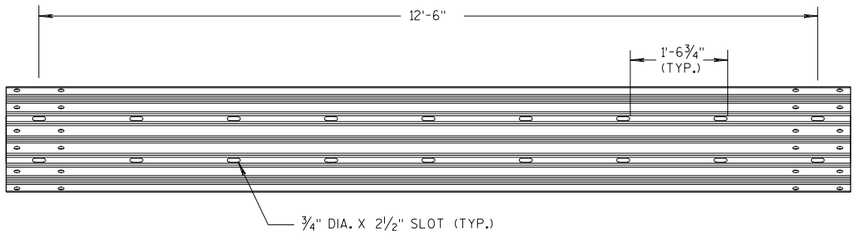
S.D.D. 14 B 45-5b



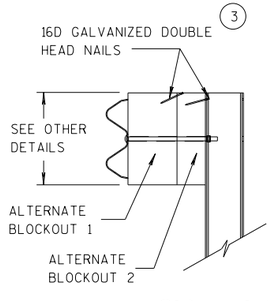
W-BEAM TO THRIE BEAM TRANSITION SECTION



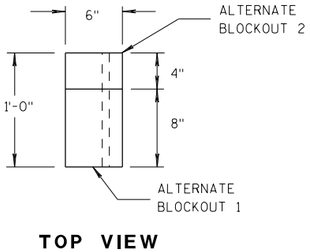
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

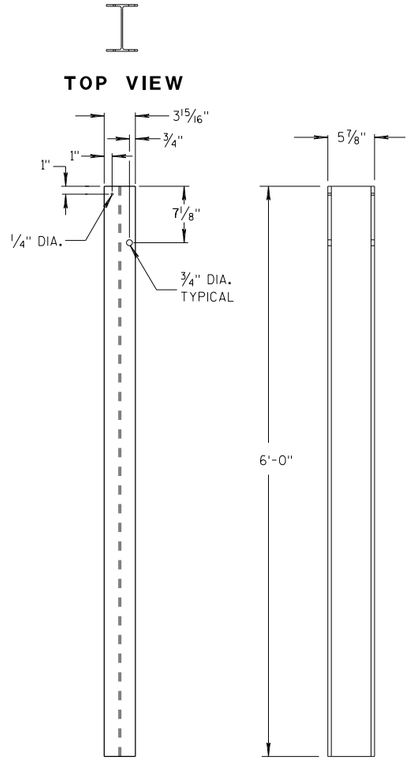


SIDE VIEW



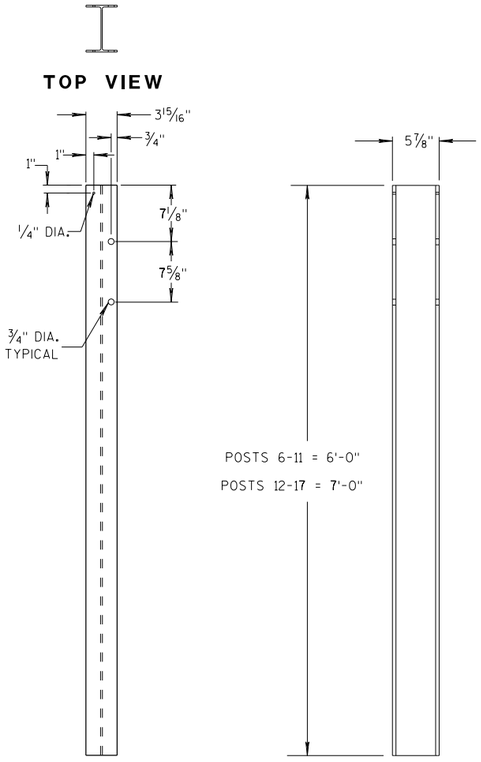
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



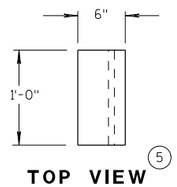
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

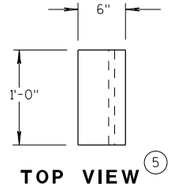


FRONT VIEW SIDE VIEW

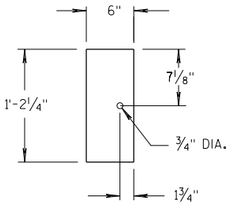
STEEL POSTS 6-17



TOP VIEW (5)

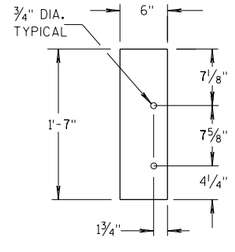


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

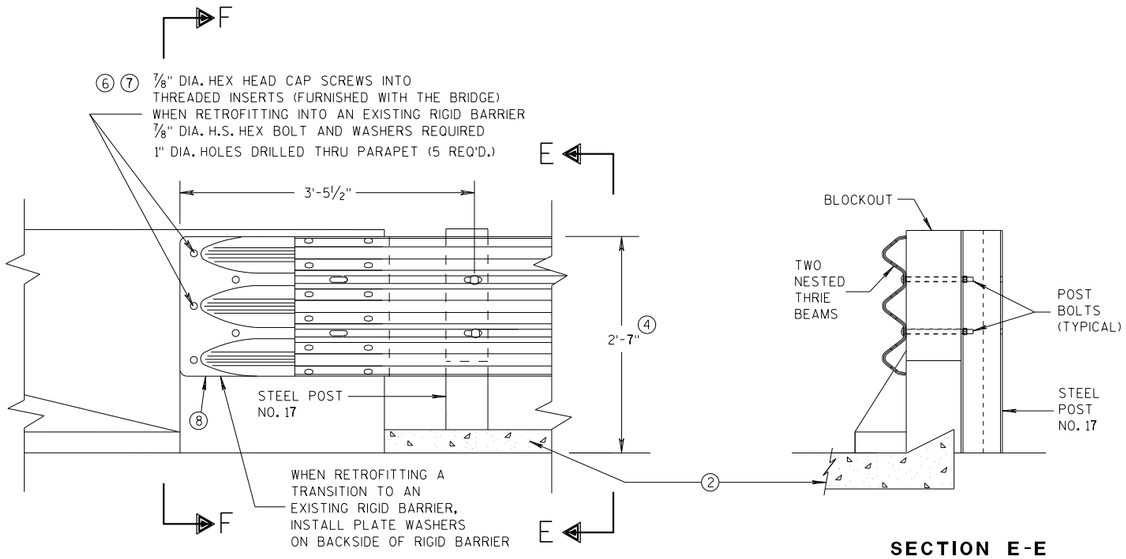
(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 45-5c



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

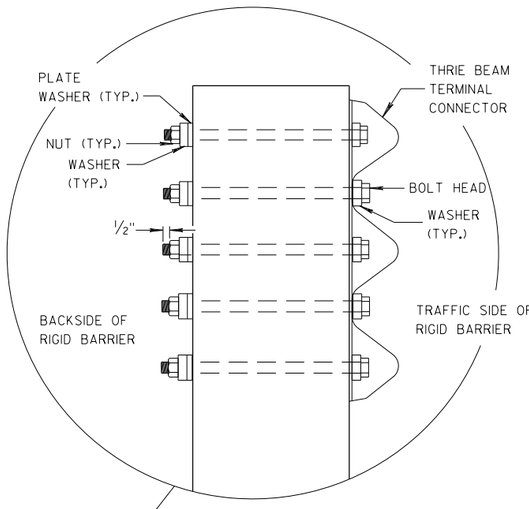
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

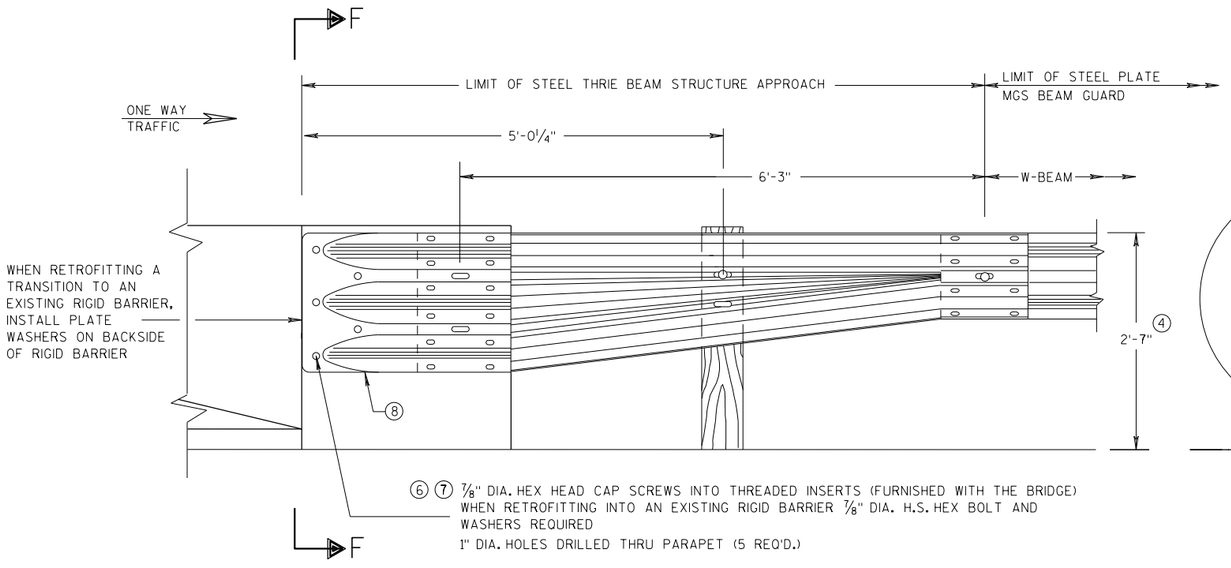
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

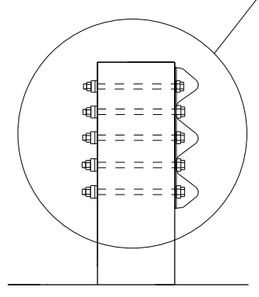
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

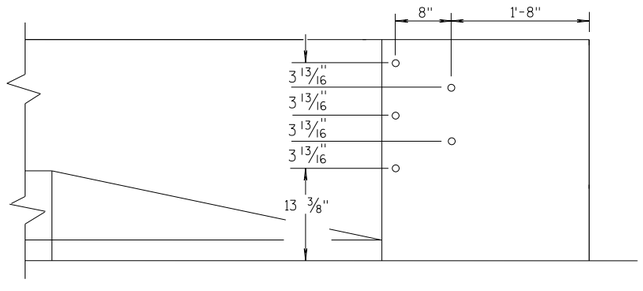




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS D[UNIT SUPERVIS
NT
FHWA

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S.D.D. 14 B 45-5d

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

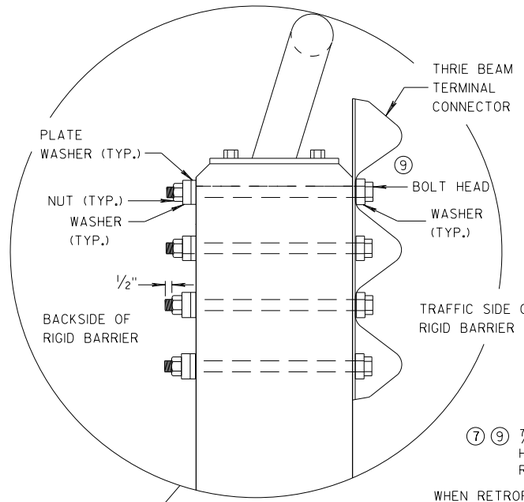
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

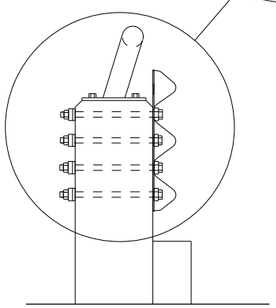
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

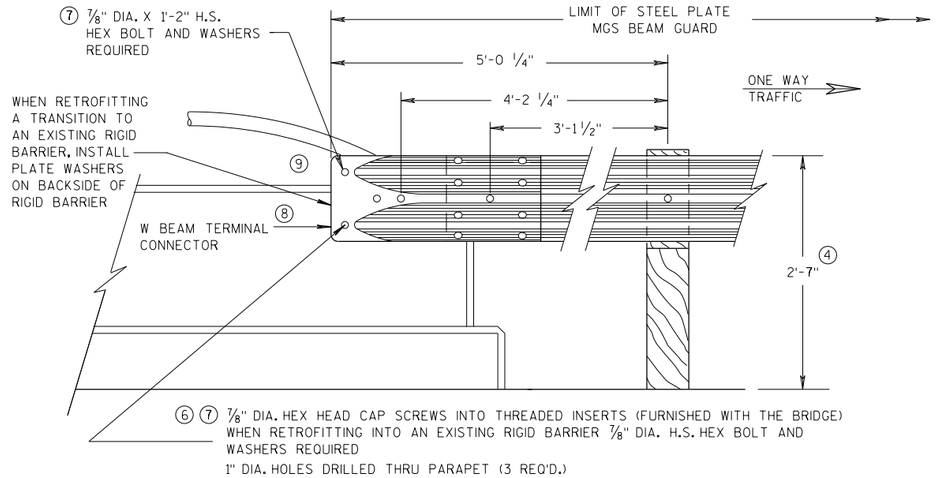
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

(9) BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.





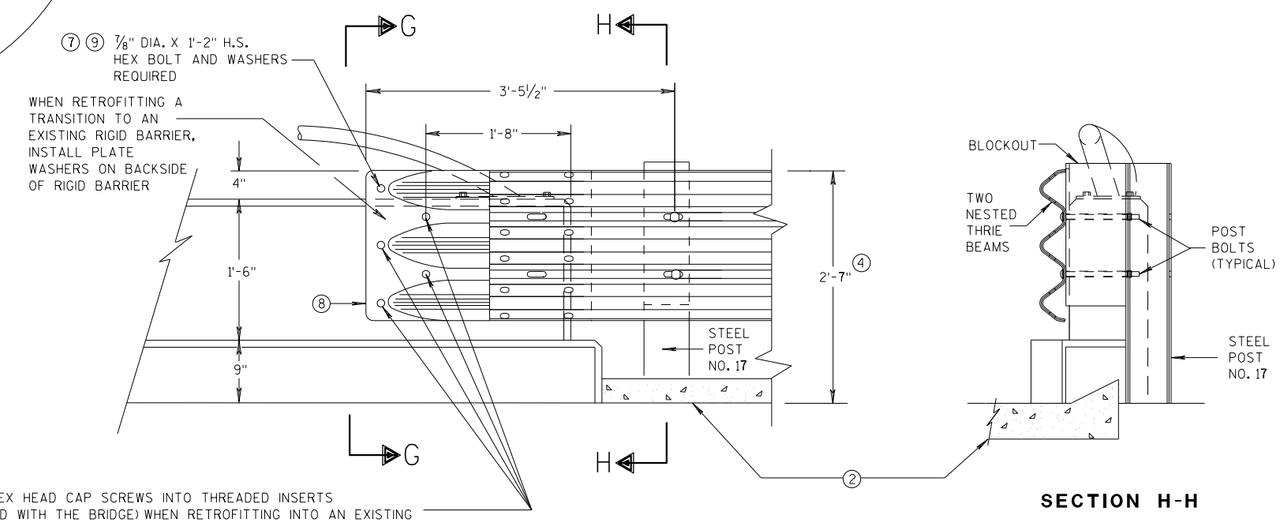
SECTION G-G



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS D UNIT SUPERVIS
FHWA

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S.D.D. 14 B 45-5e

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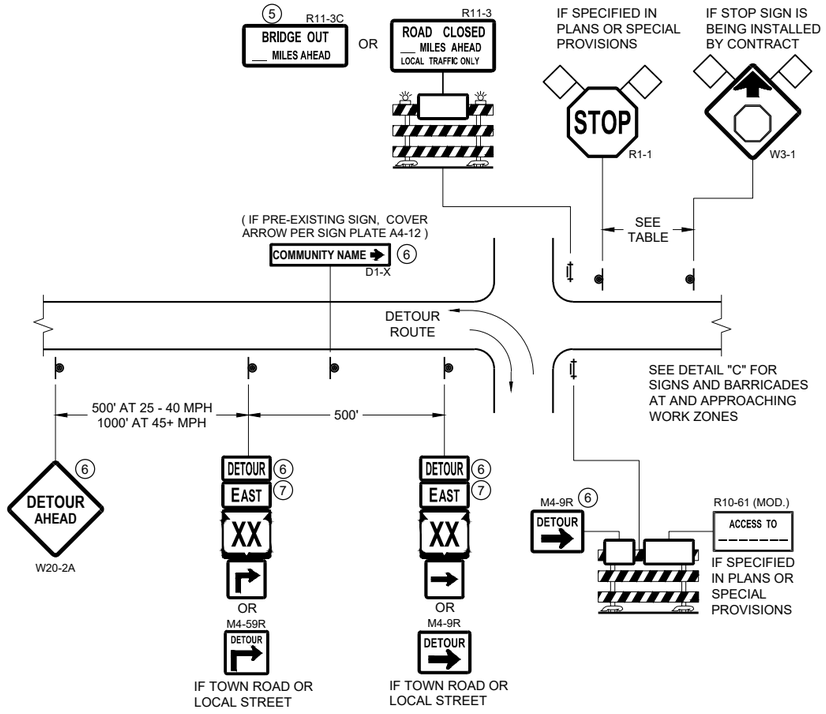
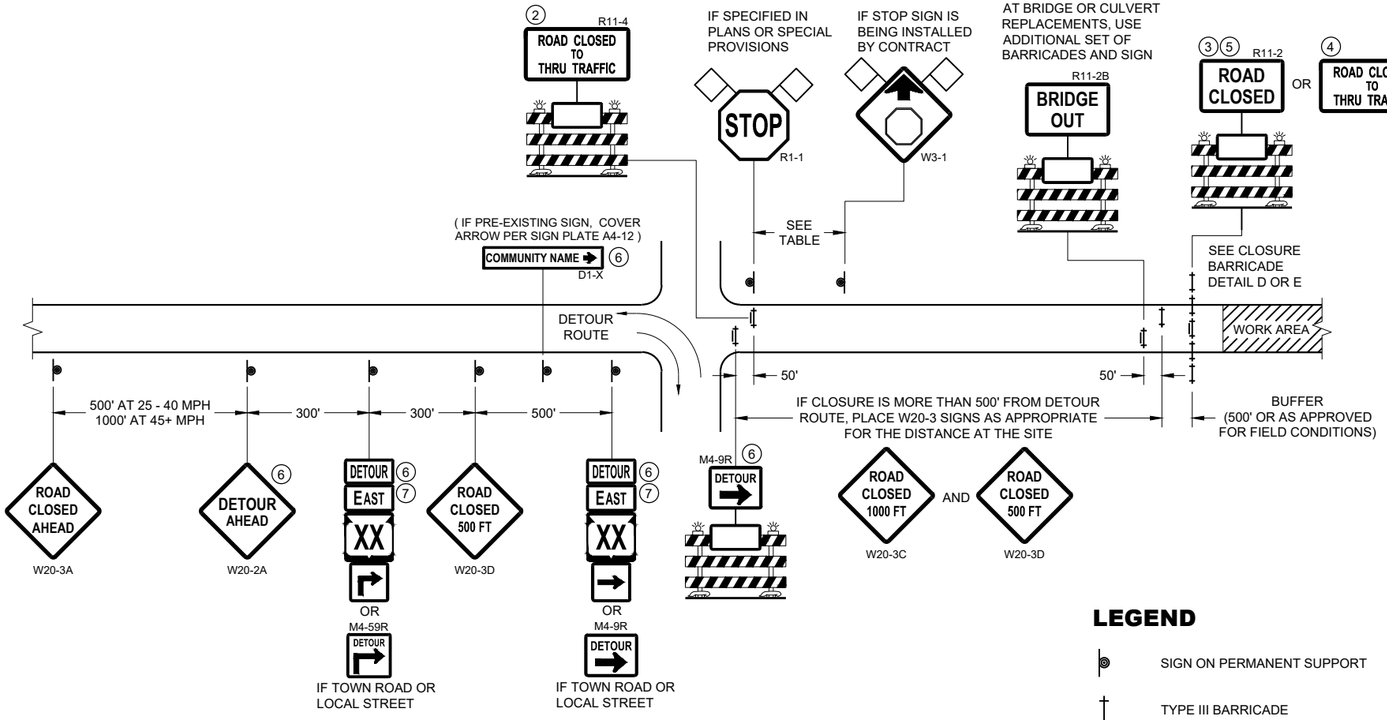
S.D.D. 14 B 45-5e



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



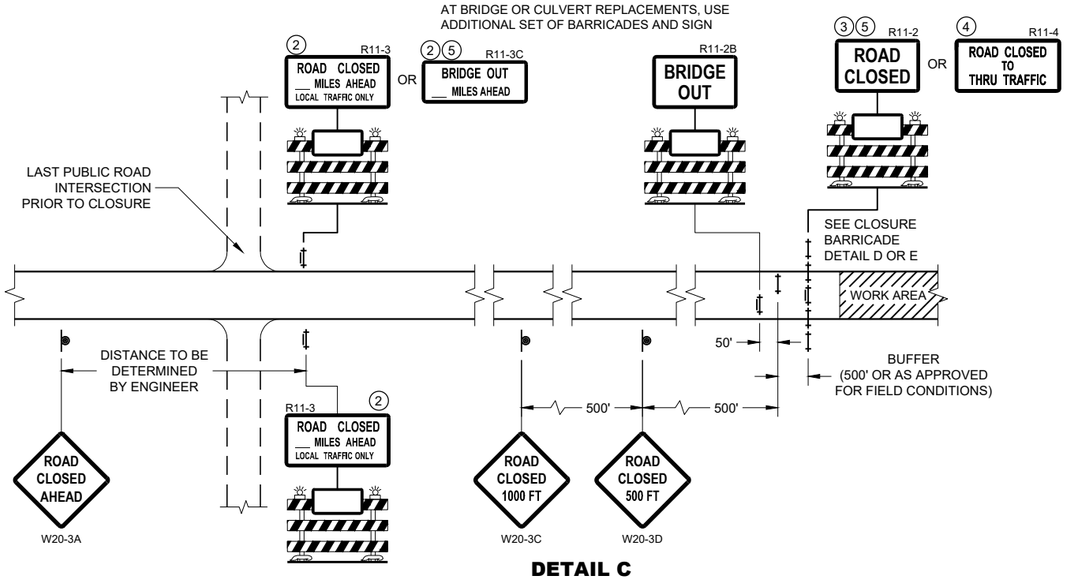
DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)

DETOUR M4 - 8
EAST M3 - X
XX M1 - 4 OR XX M1 - 6 OR COUNTY X M1 - 5A
M05 - 1 OR M06 - 1



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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-SHEET "b"
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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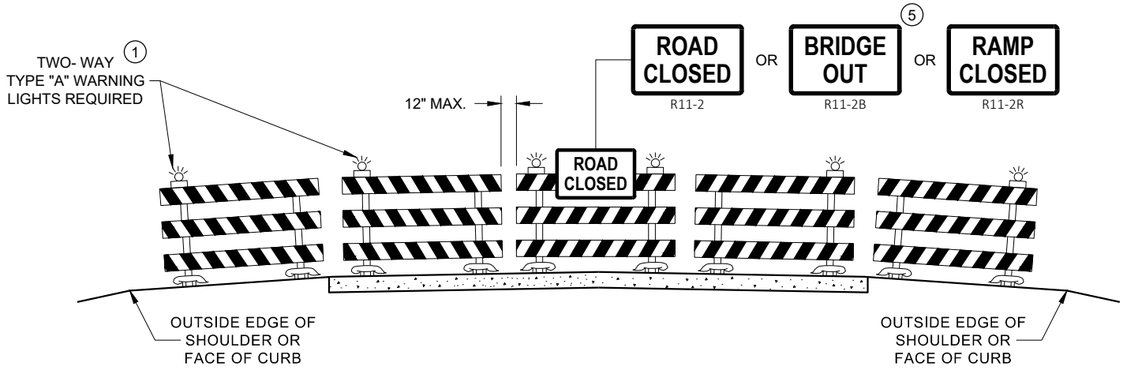
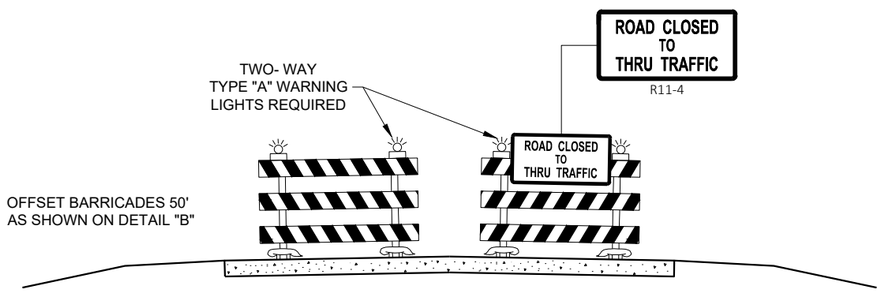
SDD 15C02 - 08a

SDD 15C02 - 08a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" 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 THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

"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 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" 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)
- MO5 - 1 AND MO6 - 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 AN 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 ROAD 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 VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

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SDD 15C02 - 08b

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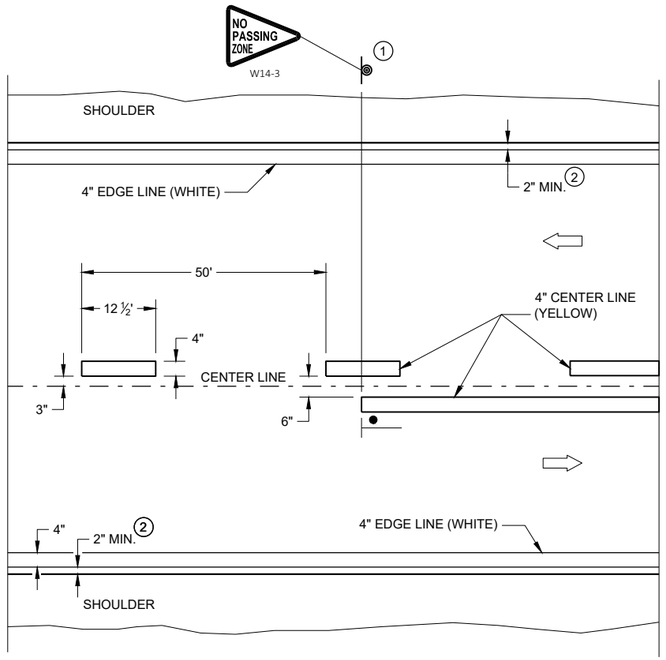
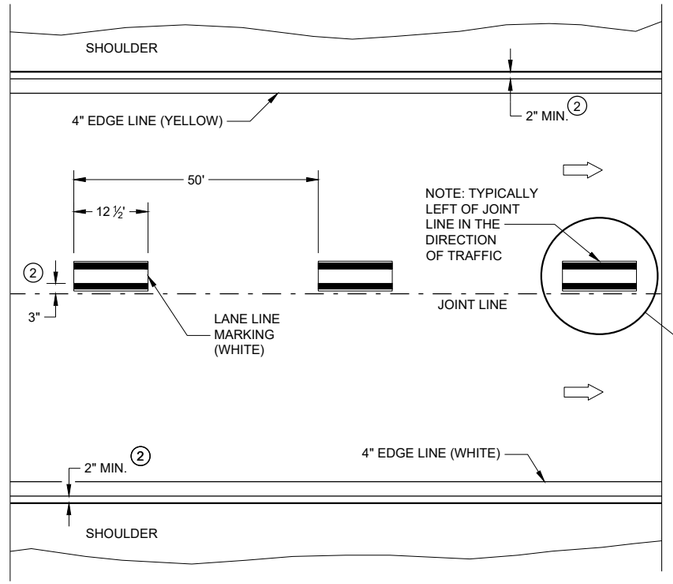
SDD 15C02 - 08b

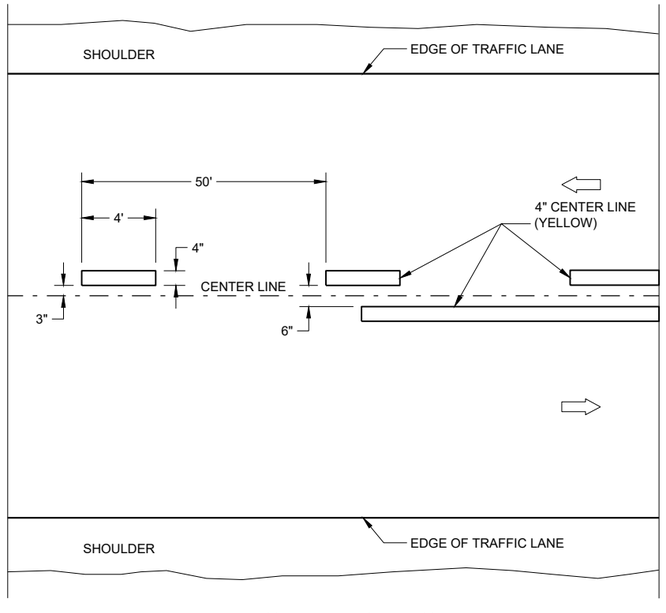


TWO WAY TRAFFIC

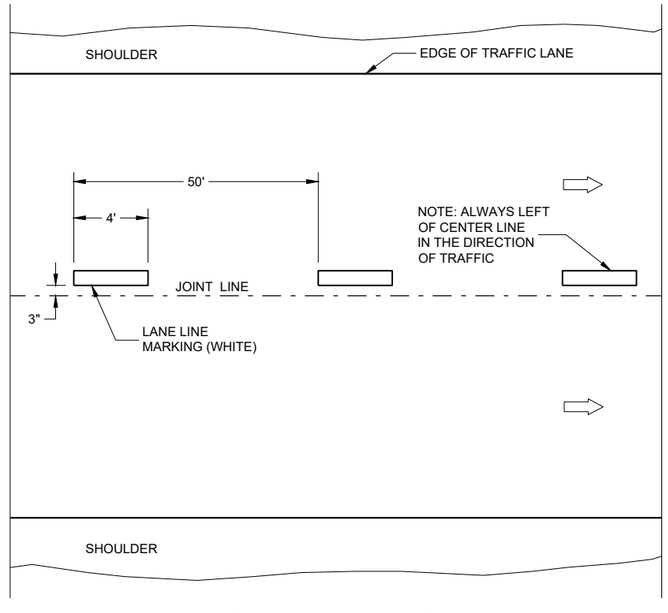


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

DETAILS OF CONSTRUCTION NO SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

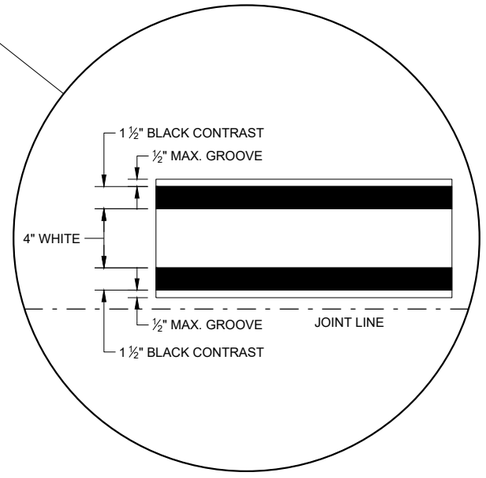
1. LOCATE THE NO PASSING ZONE W14-3 SIGN WITH 50 FEET OF THE "T" MARKING
2. MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



LONGITUDINAL MARKING (MAINLINE)

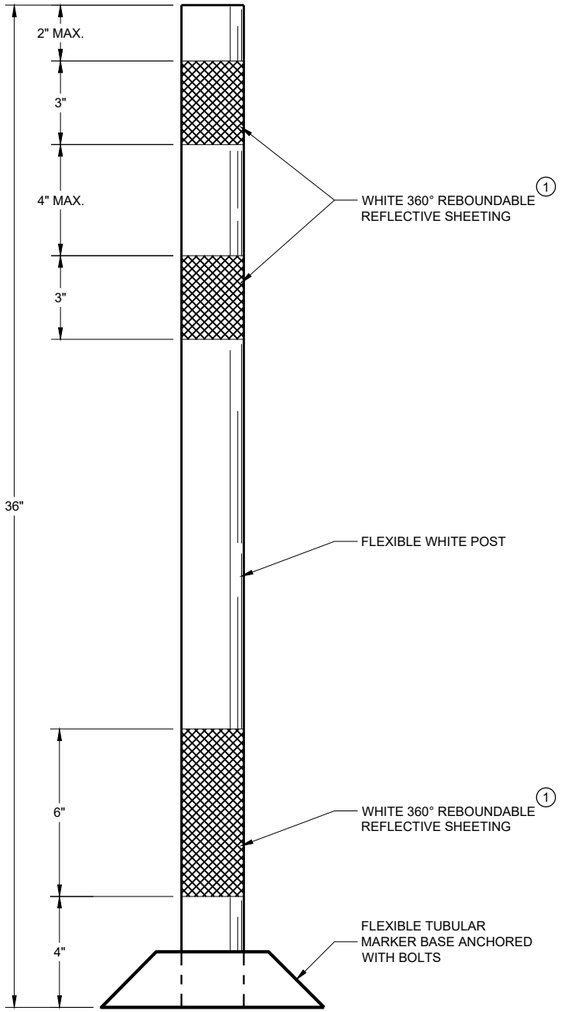
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE
/S/ Matthew Rauch
STATEWIDE SIGNING AND M ENGINEER

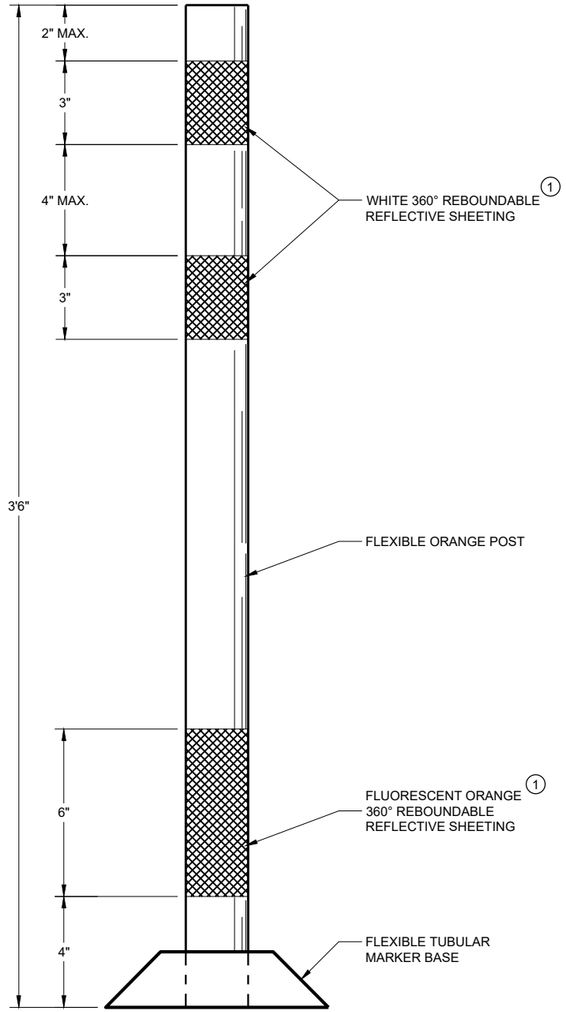
FHWA

SDD 15C08 - 20a

SDD 15C08 - 20a



FLEXIBLE TUBULAR MARKER POST PERMANENT CROSSOVER



FLEXIBLE TUBULAR MARKER POST WORK ZONE

GENERAL NOTES

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

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, UNLESS DIRECTED BY THE ENGINEER TO USE BOLTS.

(1) REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

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SDD 15C11 - 08a

CHANNELIZING DEVICES
FLEXIBLE TUBULAR MARKER POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

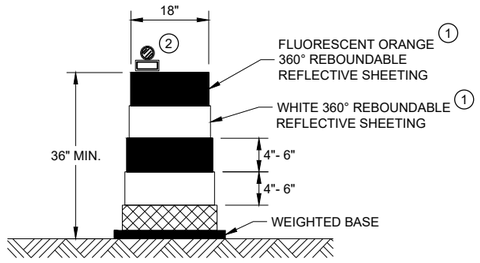
FHWA

6

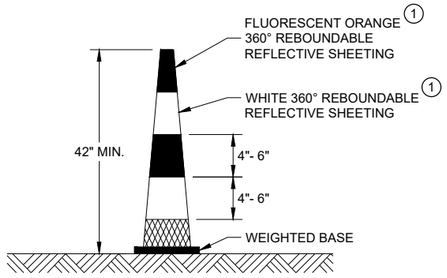
SDD 15C11 - 08a

GENERAL NOTES

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

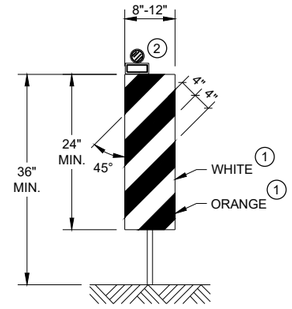


DRUM



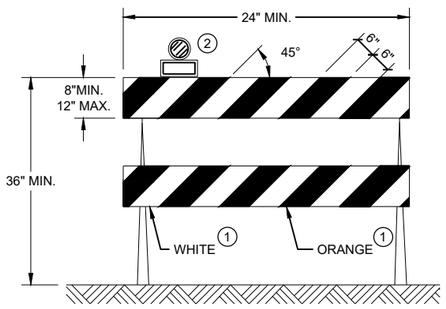
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



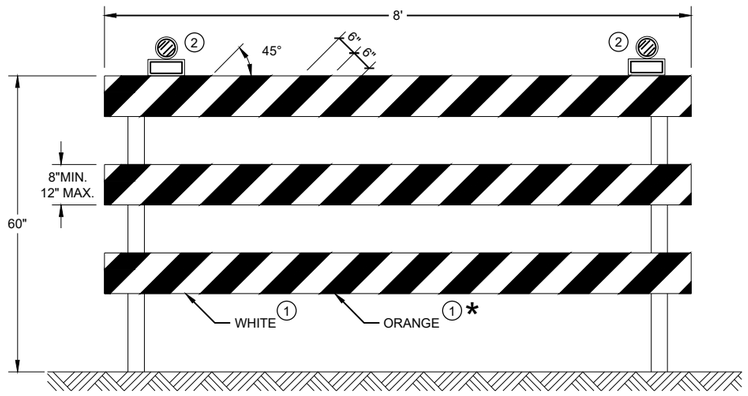
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

6

SDD15C11 - 08b

6

SDD15C11 - 08b

GENERAL NOTES

SIGNING AND MARKING IS SHOWN AS TYPICAL PLACEMENT. FIELD CONDITIONS MAY DICTATE CHANGES IN SIGNING AND MARKING PLACEMENT.

(1) USED ONLY WHEN APPROVED BY REGION TRAFFIC ENGINEER.

* SIGNS MAY BE OMITTED IF SPACE DOES NOT PERMIT PLACEMENT.

** IF POSTED SPEED IS 45 MPH OR GREATER, PLACE W5-54 SIGN UNDER R4-7 SIGN. MOUNT W5-54 SIGN AT 4' MOUNTING HEIGHT (TOP OF ROADWAY TO BOTTOM OF SIGN).

LEGEND

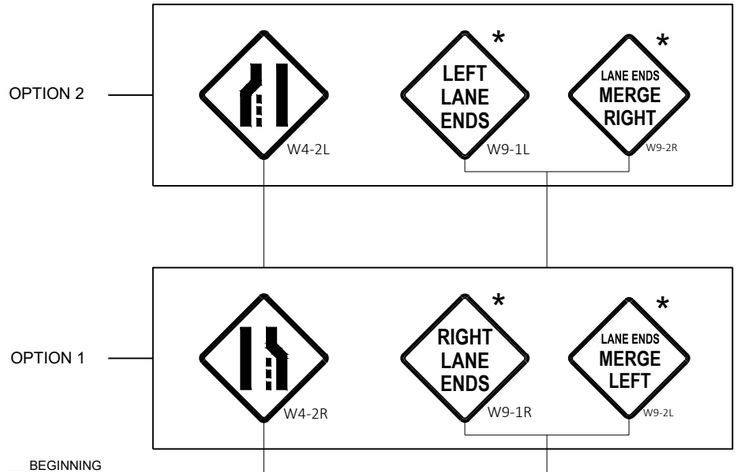
A DISTANCE DEPENDENT ON SPEED (SEE TABLE)

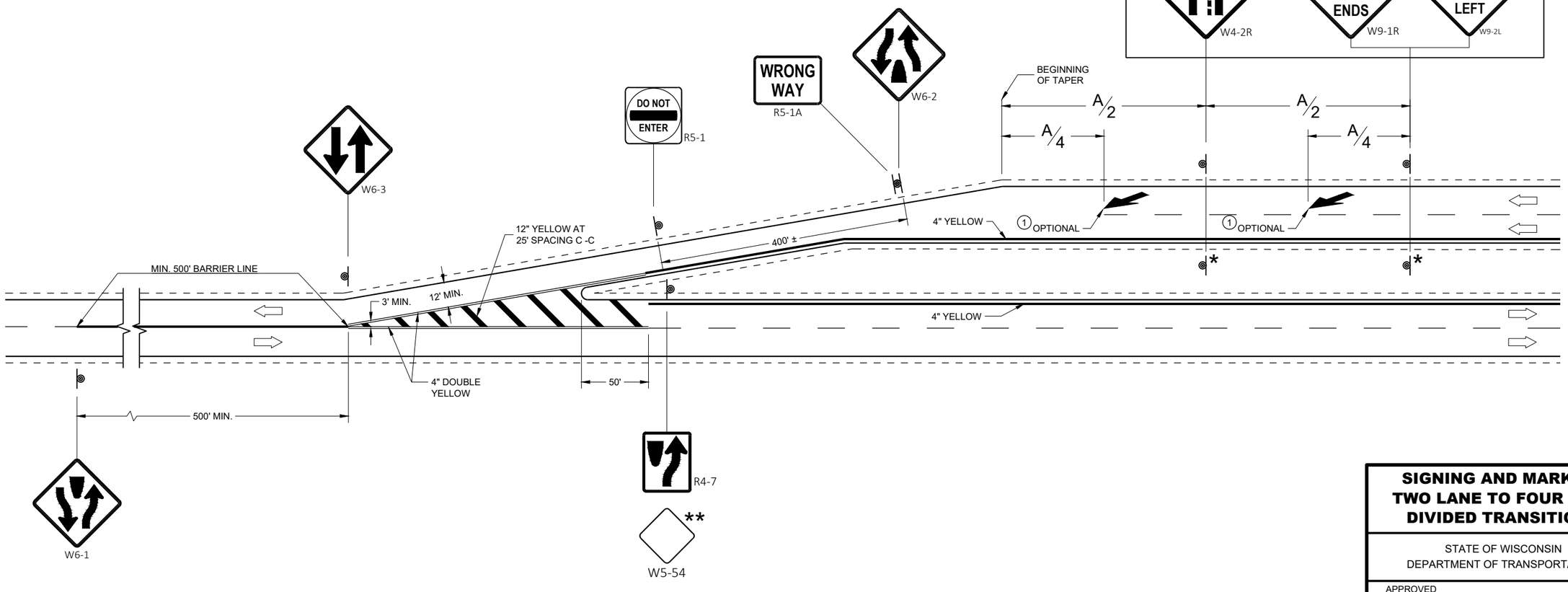
SIGN MOUNTED ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

DISTANCE TABLE

POSTED OR 85TH PERCENTILE SPEED	DISTANCE "A"
25	325'
30	460'
35	565'
40	670'
45	775'
50	885'
55	990'
65	1200'
70	1250'





SIGNING AND MARKING TWO LANE TO FOUR LANE DIVIDED TRANSITIONS

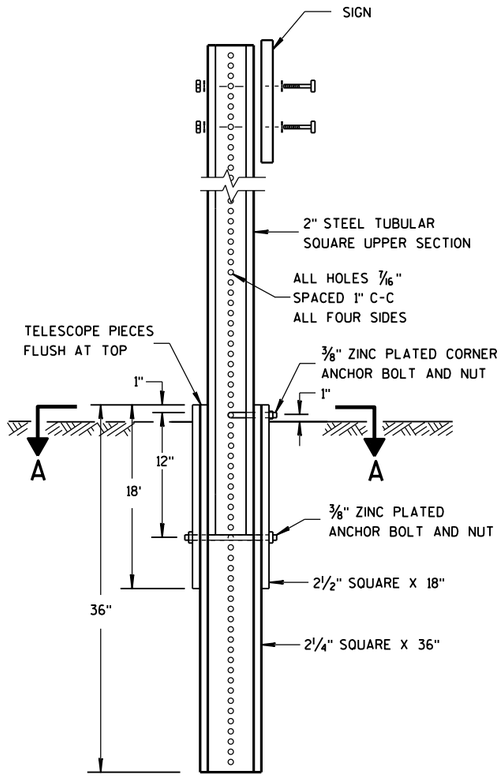
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020 — DATE
/S/ Matthew Rauch — STATE SIGNING AND MAR ENGINEER

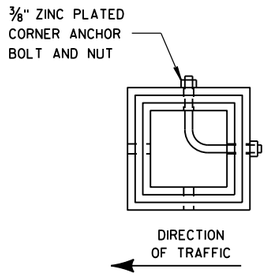
FHWA

SDD 15C21 - 10

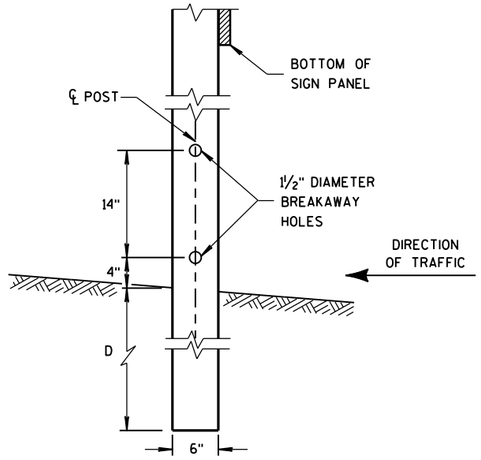
SDD 15C21 - 10



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



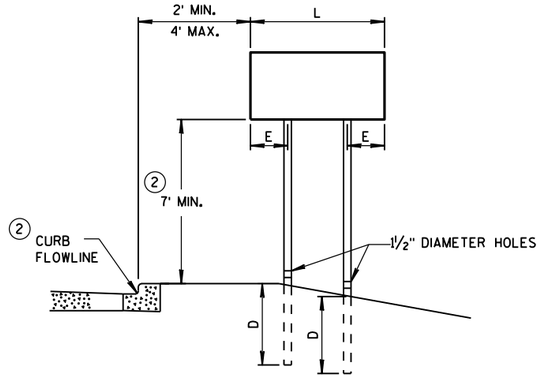
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

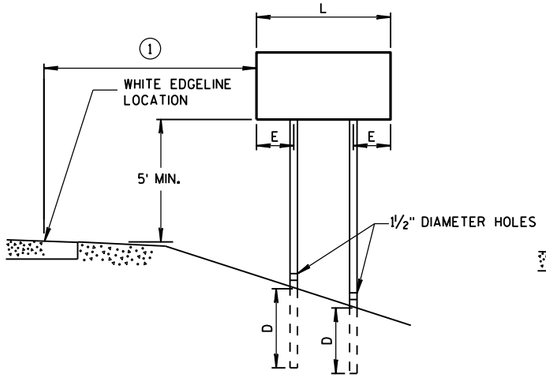
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

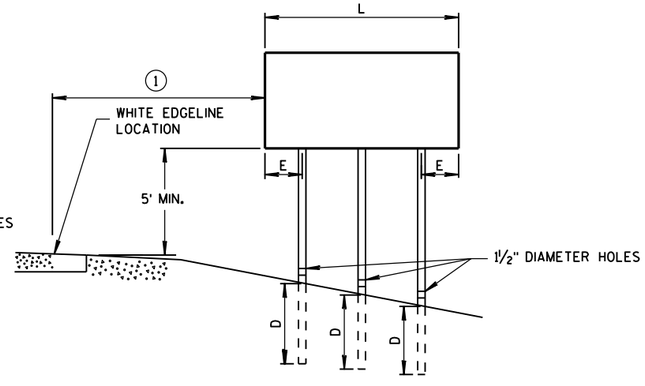
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

(3) FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

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

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

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

WOOD POST EMBEDMENT DEPTH

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

4" X 6" WOOD POST

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

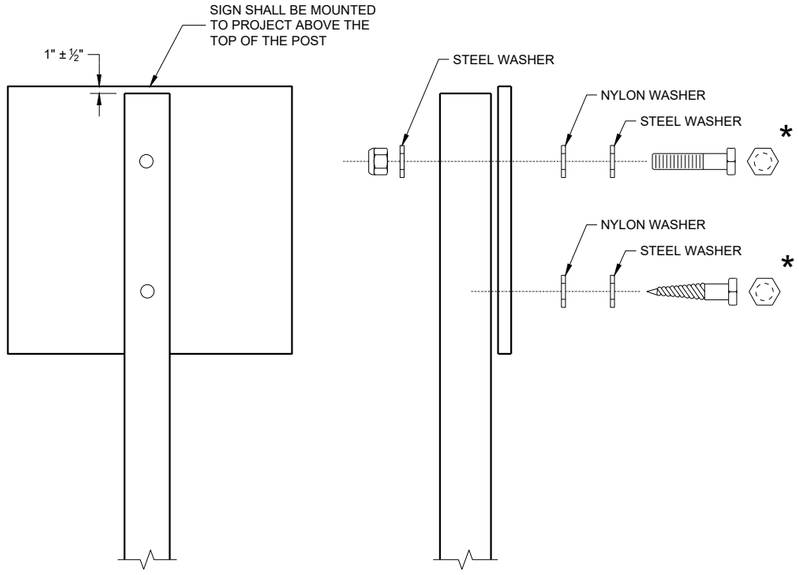
SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 15 D 38-2a
S.D.D. 15 D 38-2a



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

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

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

WOOD POST (4" x 6")
LAG SCREWS - ⅜" x 3"
MACHINE BOLTS - 5/16" x 6 ½" OR 7" LENGTH W/NUTS

SQUARE STEEL POST (2" x 2")
MACHINE BOLTS - ⅜" x 3 ¼" LENGTH W/NUTS
RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE 0.720 - 0.765 INCH, GRIP RANGE 0.042 - 0.375 INCH

WASHERS (ALL POSTS) -
1 ¼" O.D. x ⅜" I.D. x 1/16" STEEL
1 ¼" O.D. x ⅜" I.D. x 0.080 NYLON

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

6

6

SDD 15D38 - 02b

SDD 15D38 - 02b

ATTACHMENT OF SIGNS TO POSTS

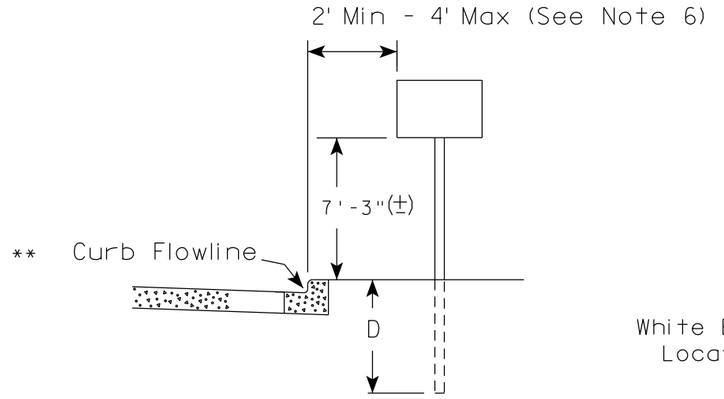
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE

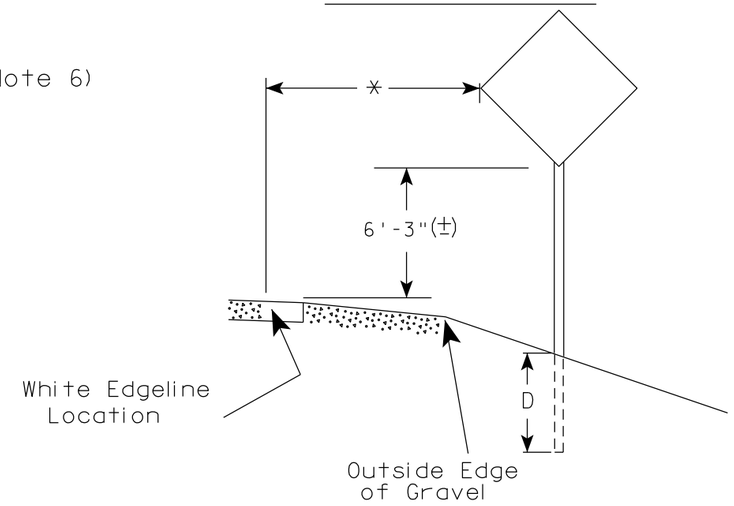
/S/ Andrew Heidtke
WORK ZONE ENGINEE

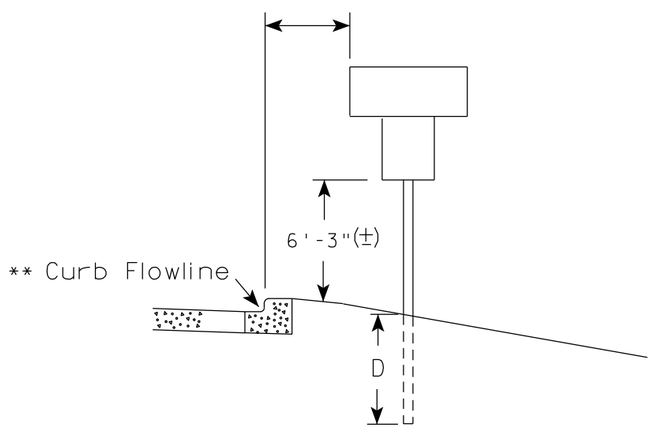
FHWA

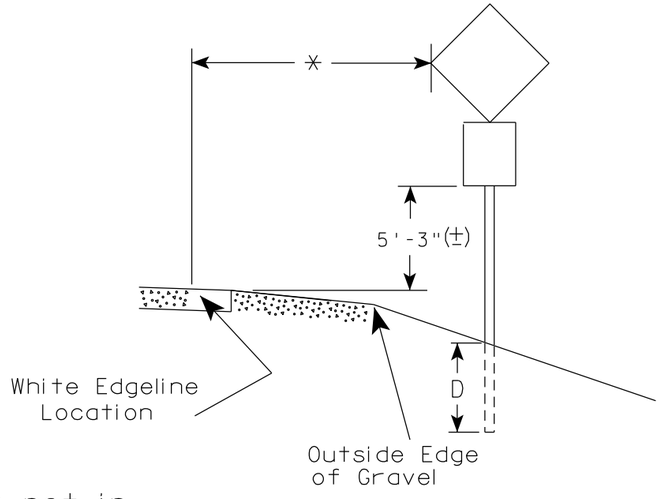
URBAN AREA



RURAL AREA (See Note 2)







** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq.Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.
   The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. The (±) tolerance for mounting height is 3 inches.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.

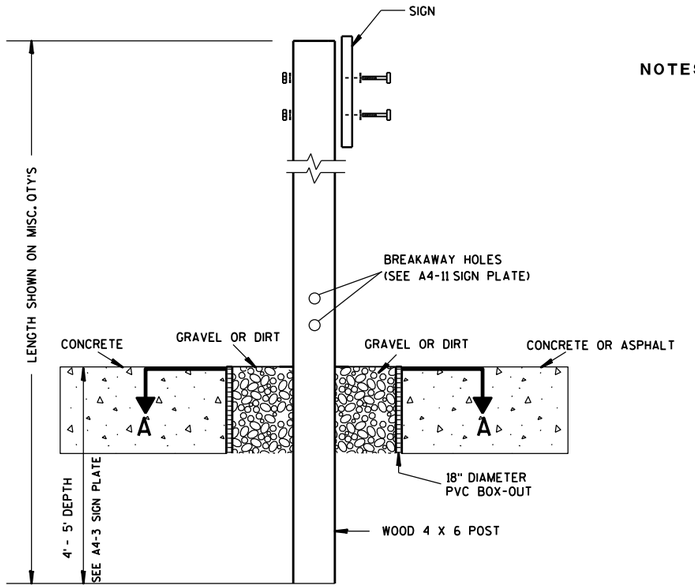
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/13/2020 PLATE NO. A4-3.22

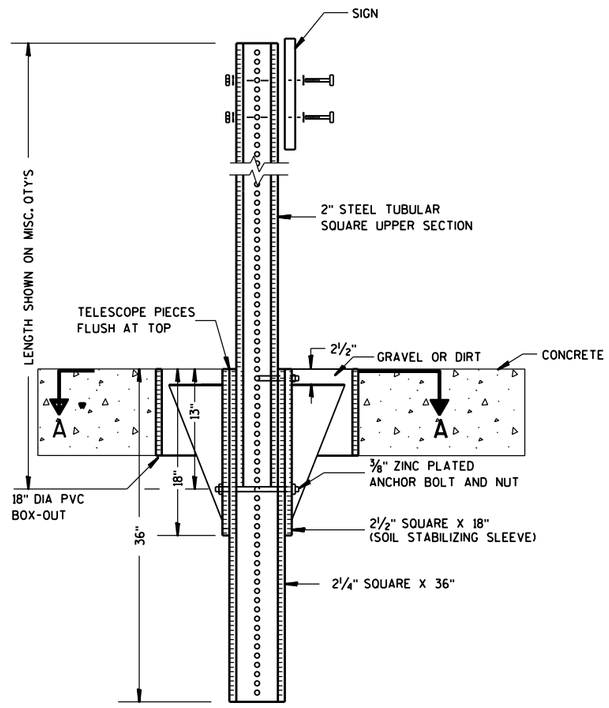
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 64	E



ELEVATION VIEW

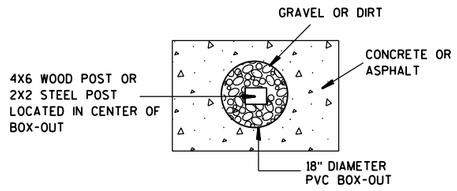
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

NOTES:
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

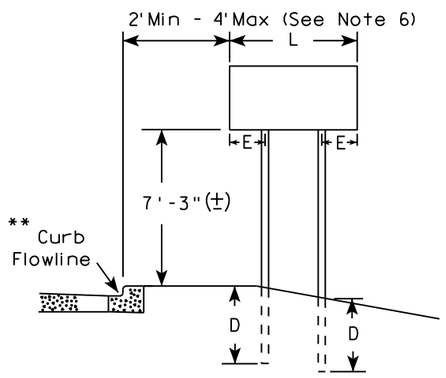
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

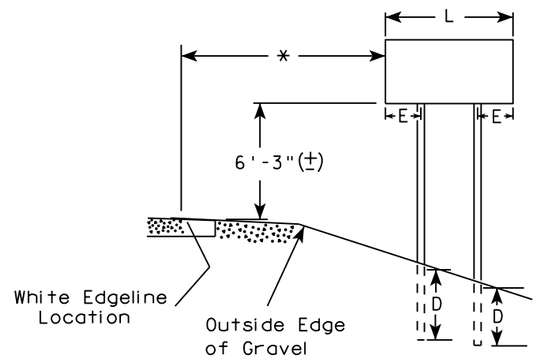
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

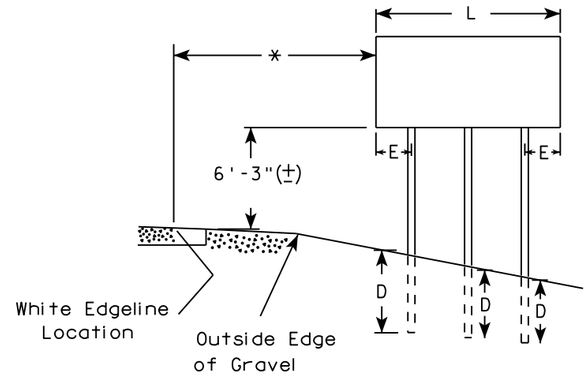
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

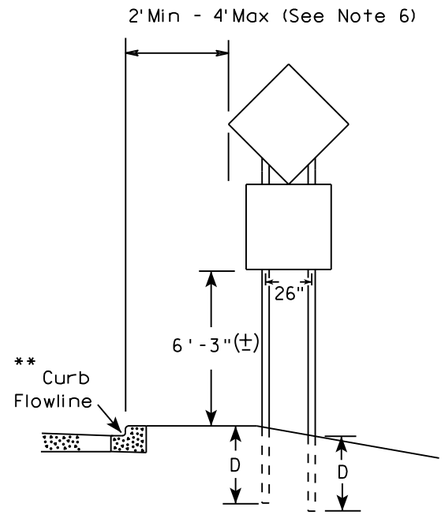
URBAN AREA



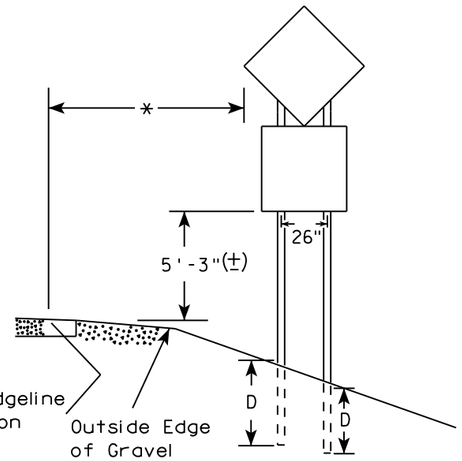
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)		
	L	E
***	Greater than 48" Less than 60"	12"
	60" to 108"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

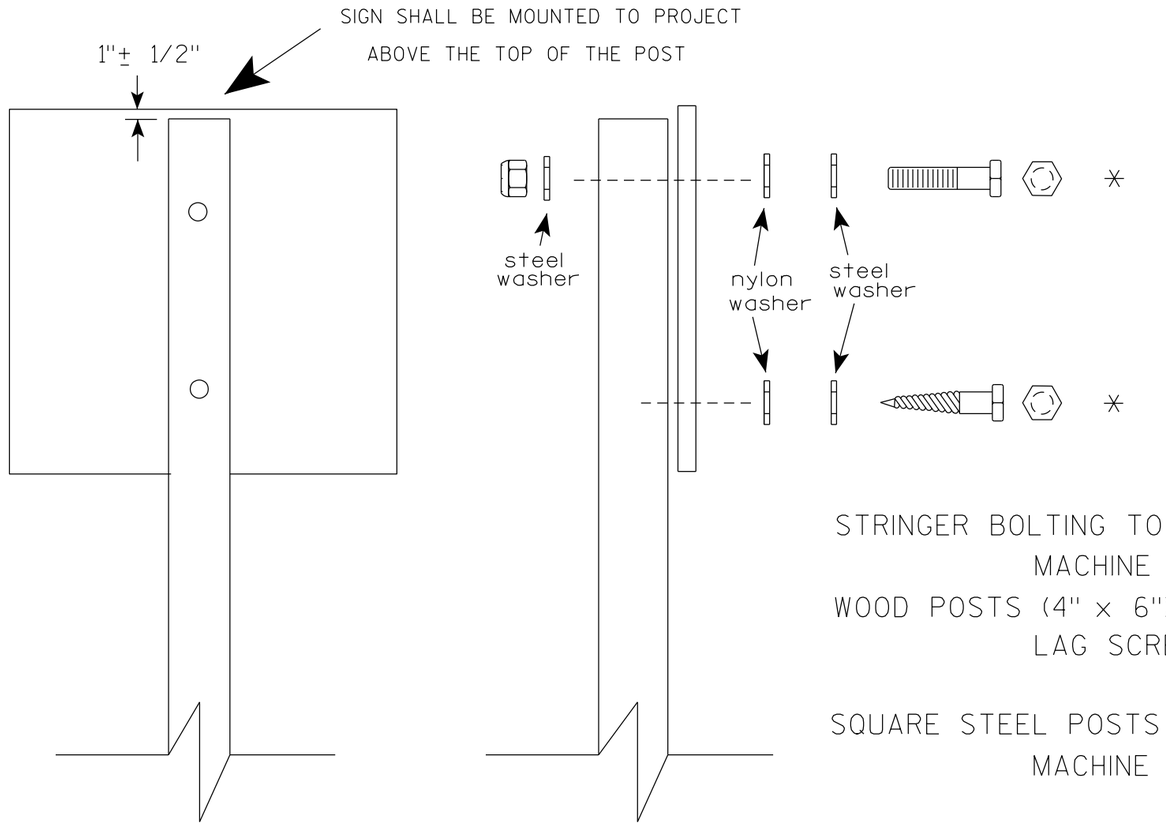
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 66	E



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS

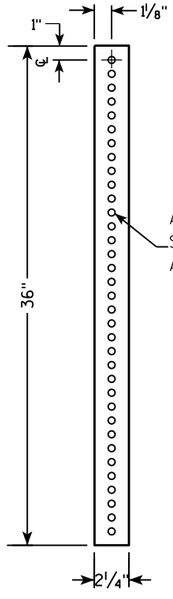
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

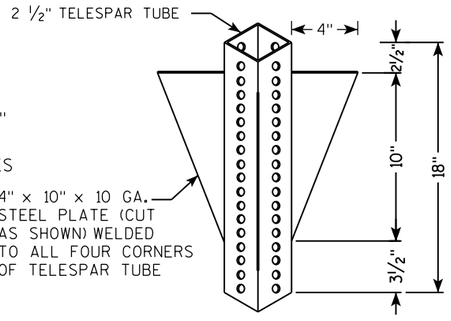
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

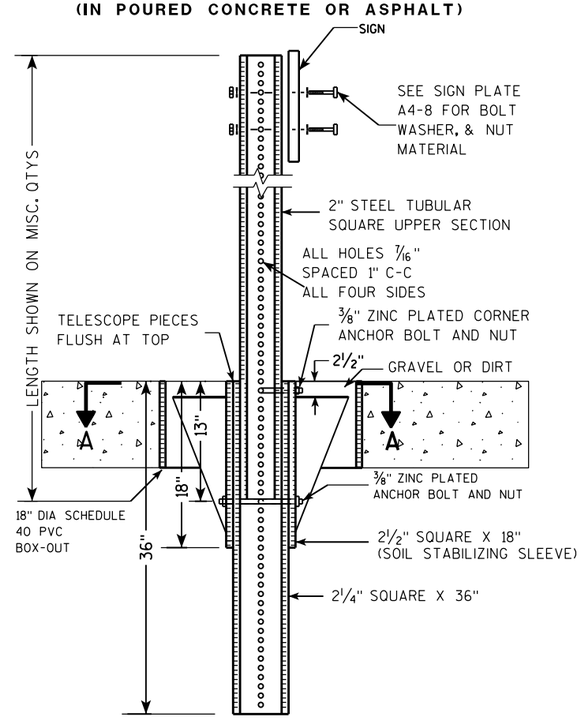
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



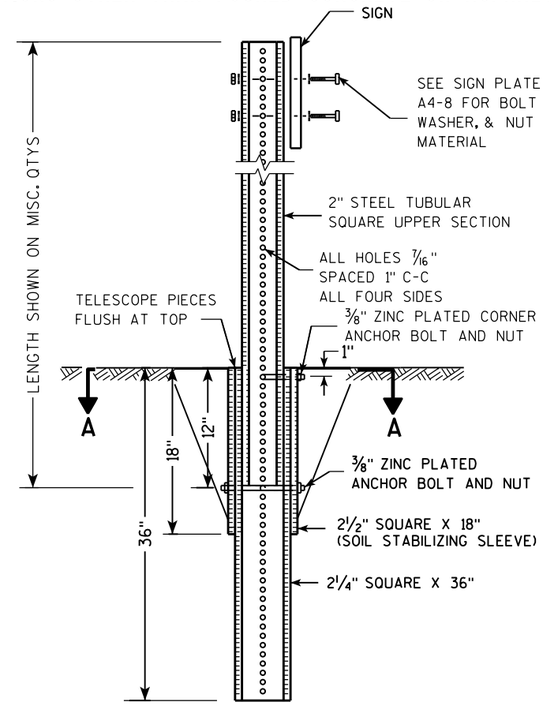
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

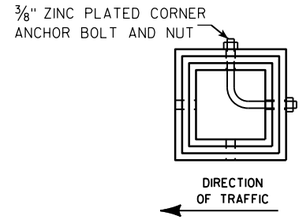


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)





SECTION A-A

Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

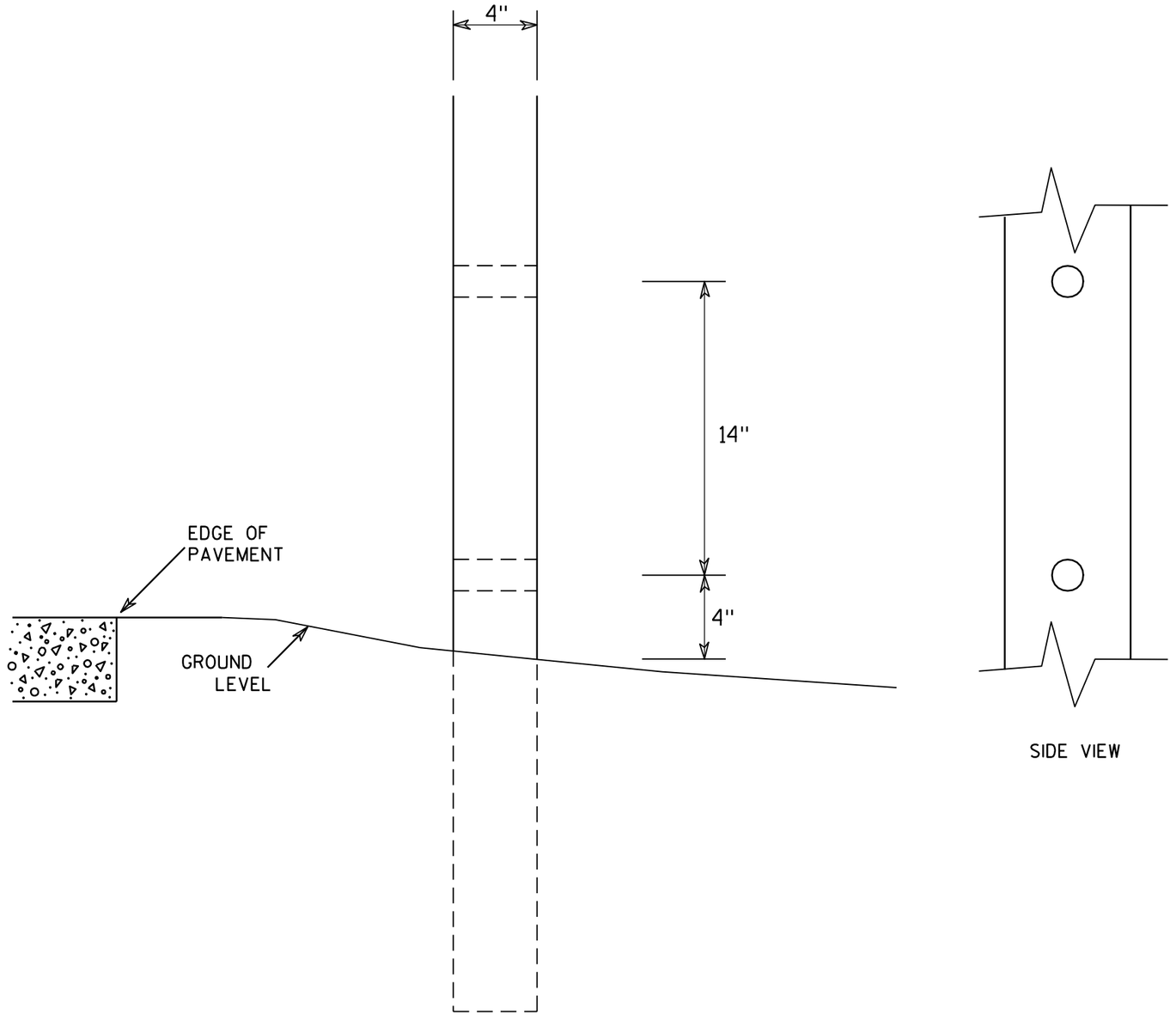
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 68 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE : 05-FEB-2015 17:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000

WISDOT/CADDS SHEET 42



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

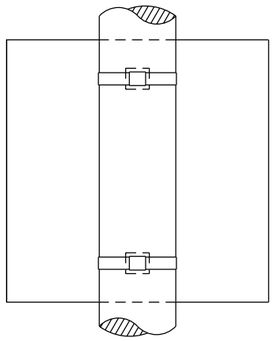
APPROVED Chester J Spang for State Traffic Engineer

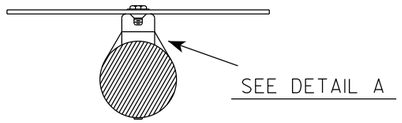
DATE 3/27/97 PLATE NO. A4-11.2

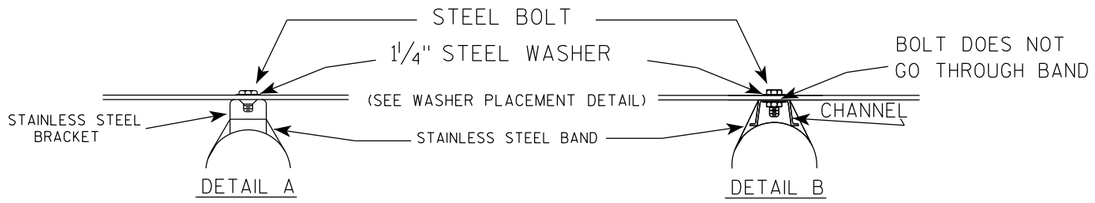
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 69	E

BANDING

SINGLE SIGN



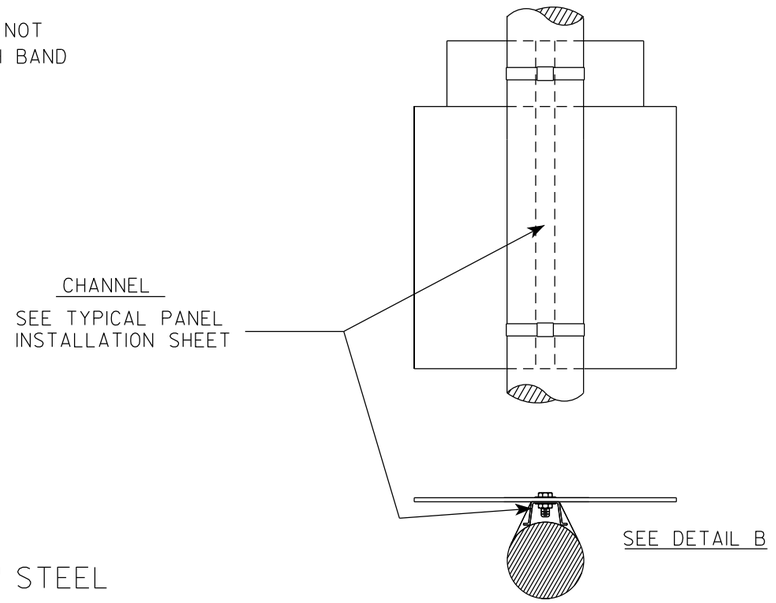




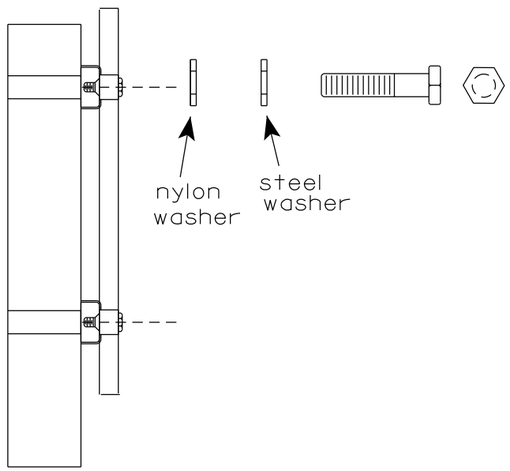
GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY



WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X ⅜" I.D. X 1/16" STEEL
1-1/4" O.D. X ⅜" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

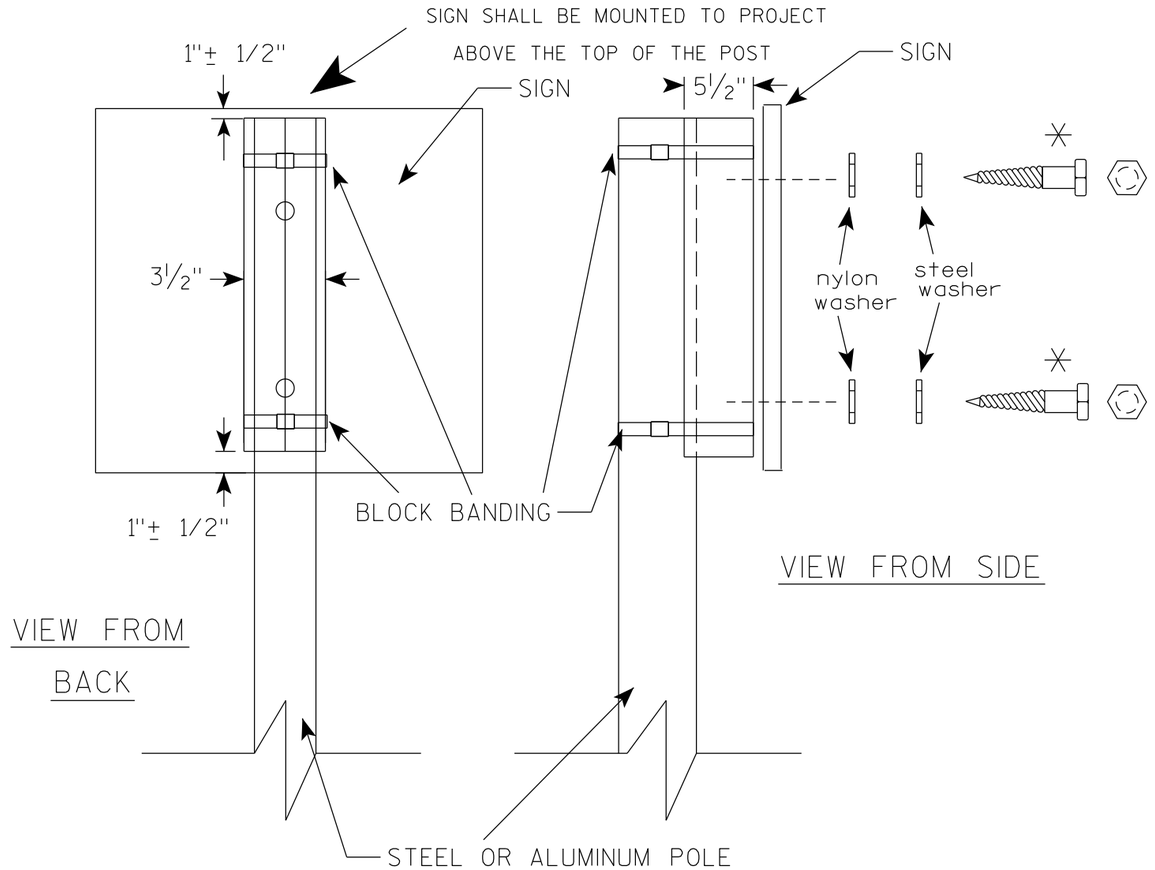
WISCONSIN DEPT OF TRANSPORTATION

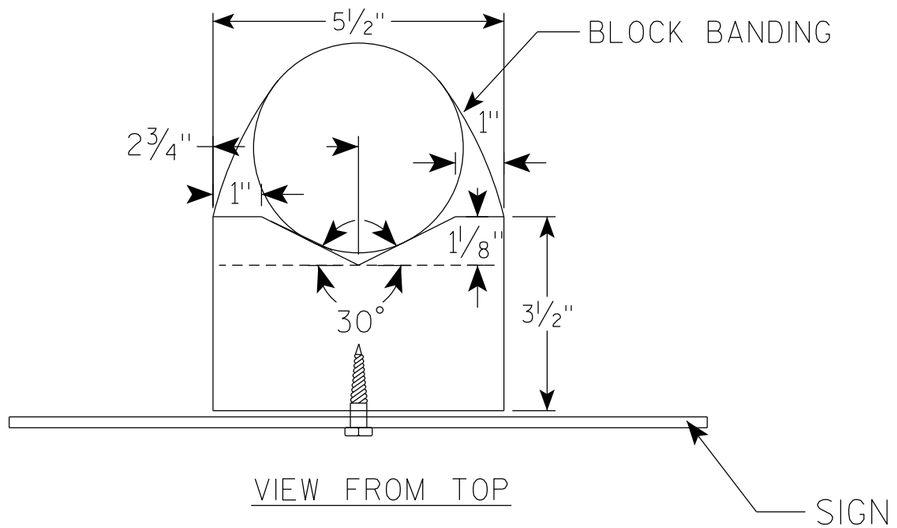
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-9.4

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 70	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A59.dgn PLOT DATE : 10-JUN 2019 4:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

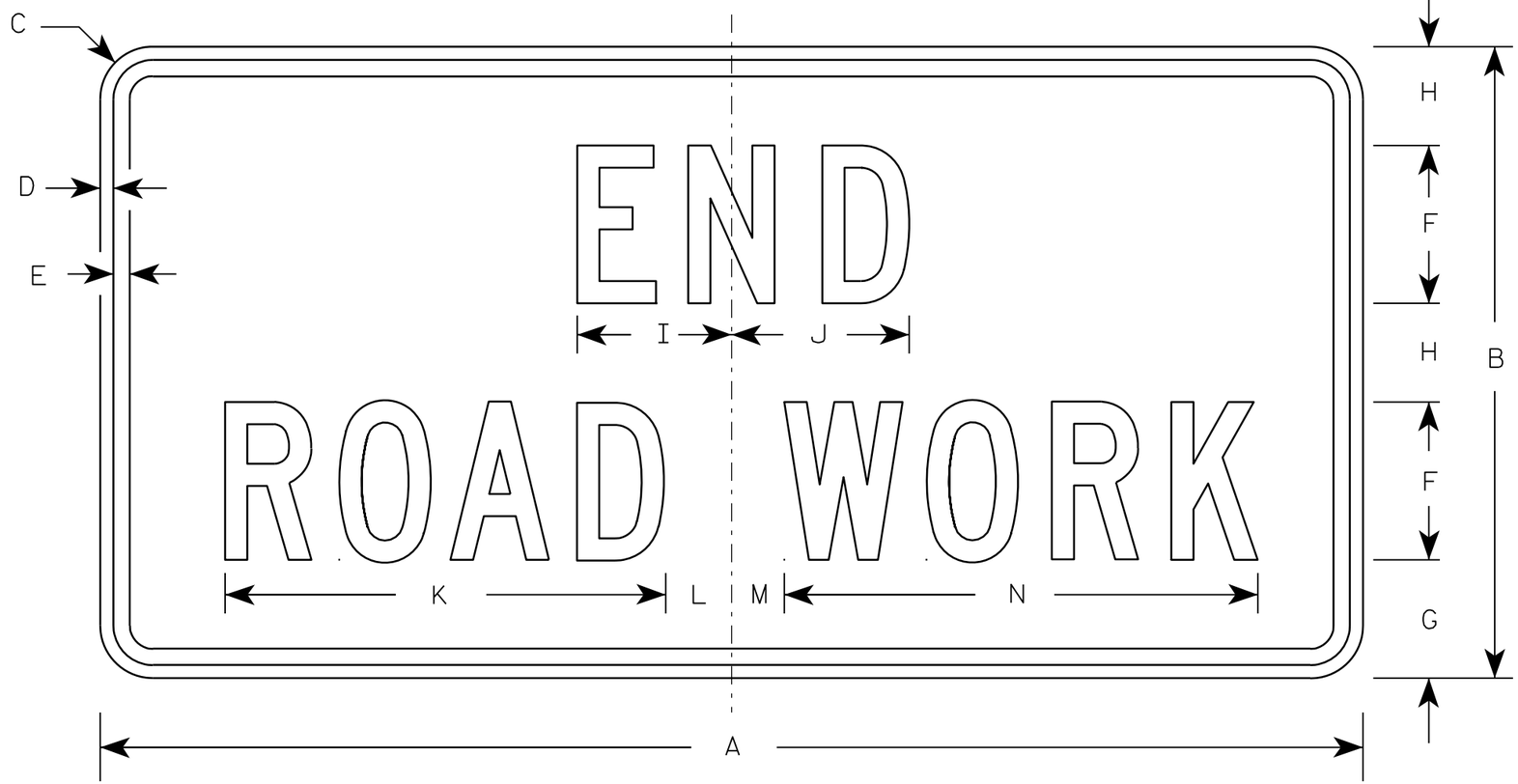
BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-10.2

PROJECT NO:				SHEET NO: 71	E



G20-2A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

Metric equivalent for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

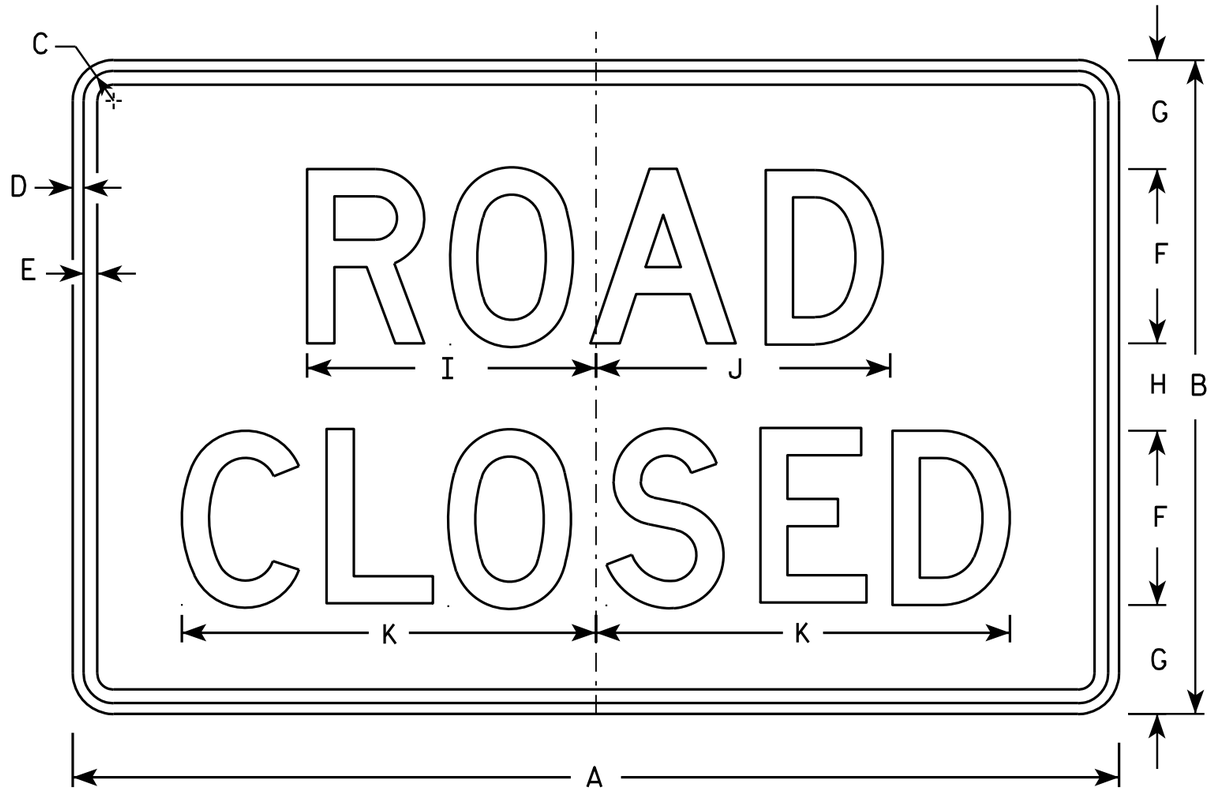
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

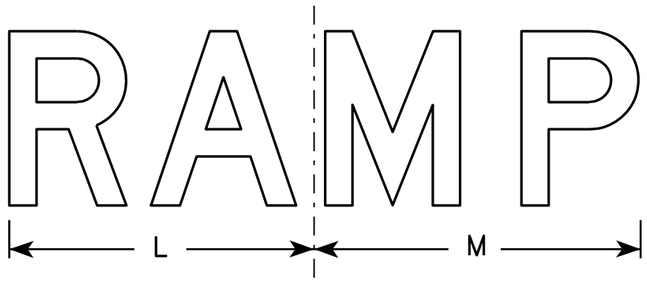
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 72	E



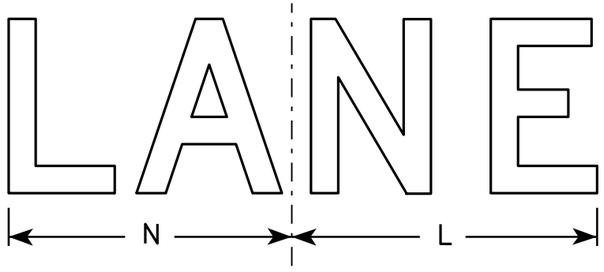
R11-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.



R11-2R



R11-2L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0

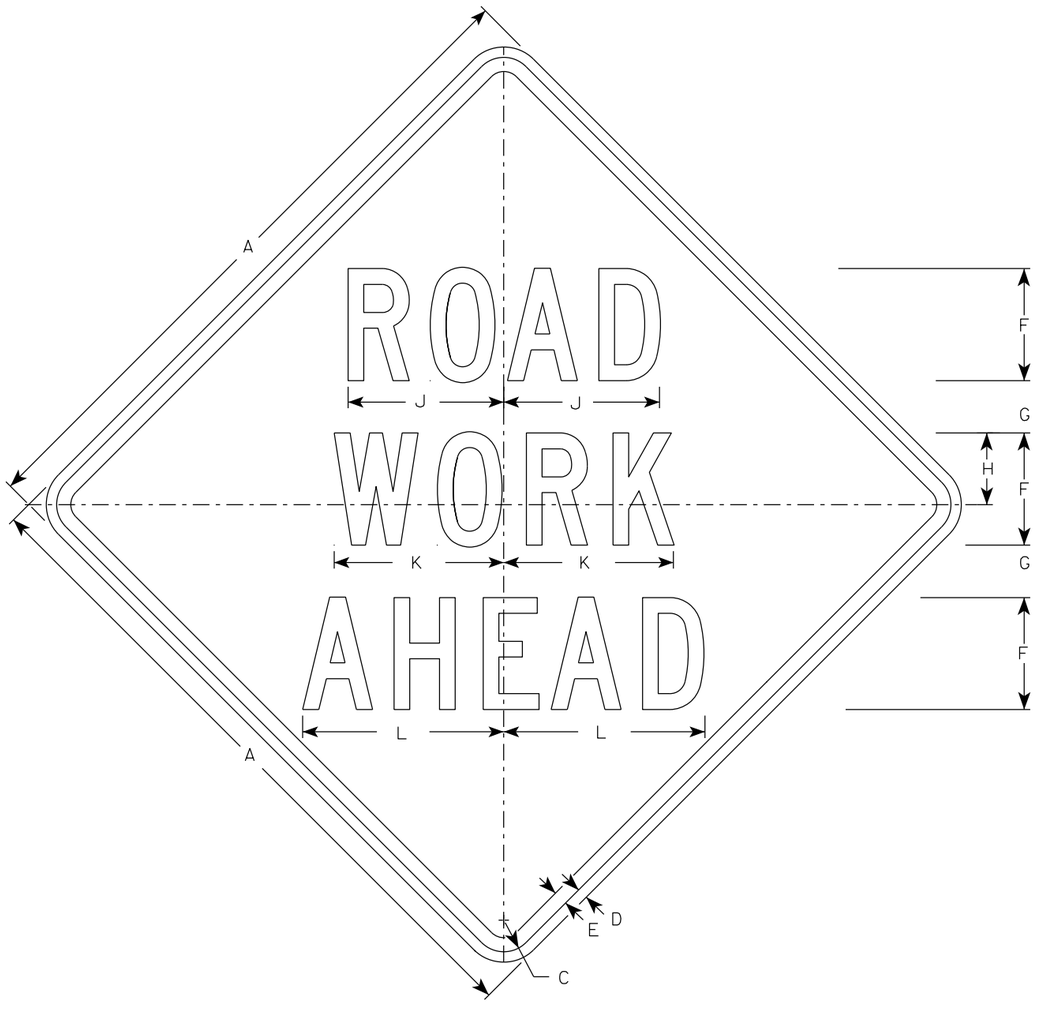
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

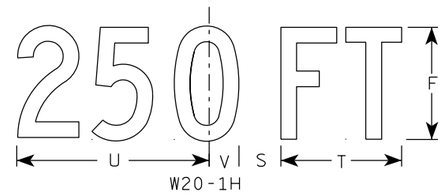
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2.10

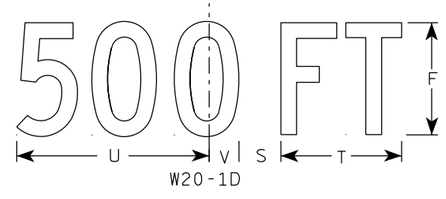
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 73	E



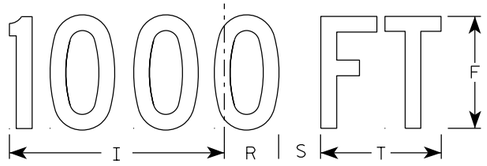
W20-1A



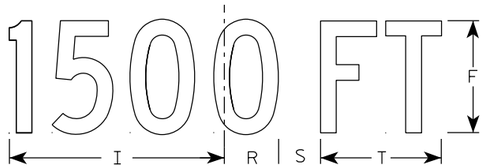
W20-1H



W20-1D



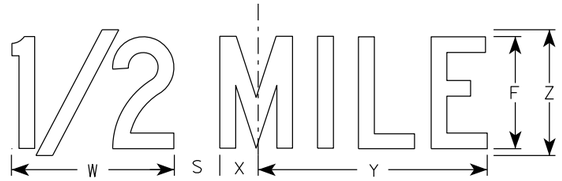
W20-1C



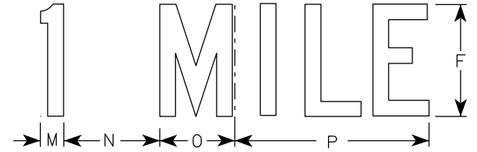
W20-1B

NOTES

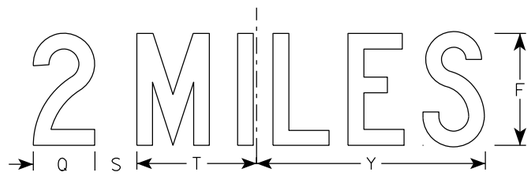
1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1G



W20-1F



W20-1E

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, E, F, G & H

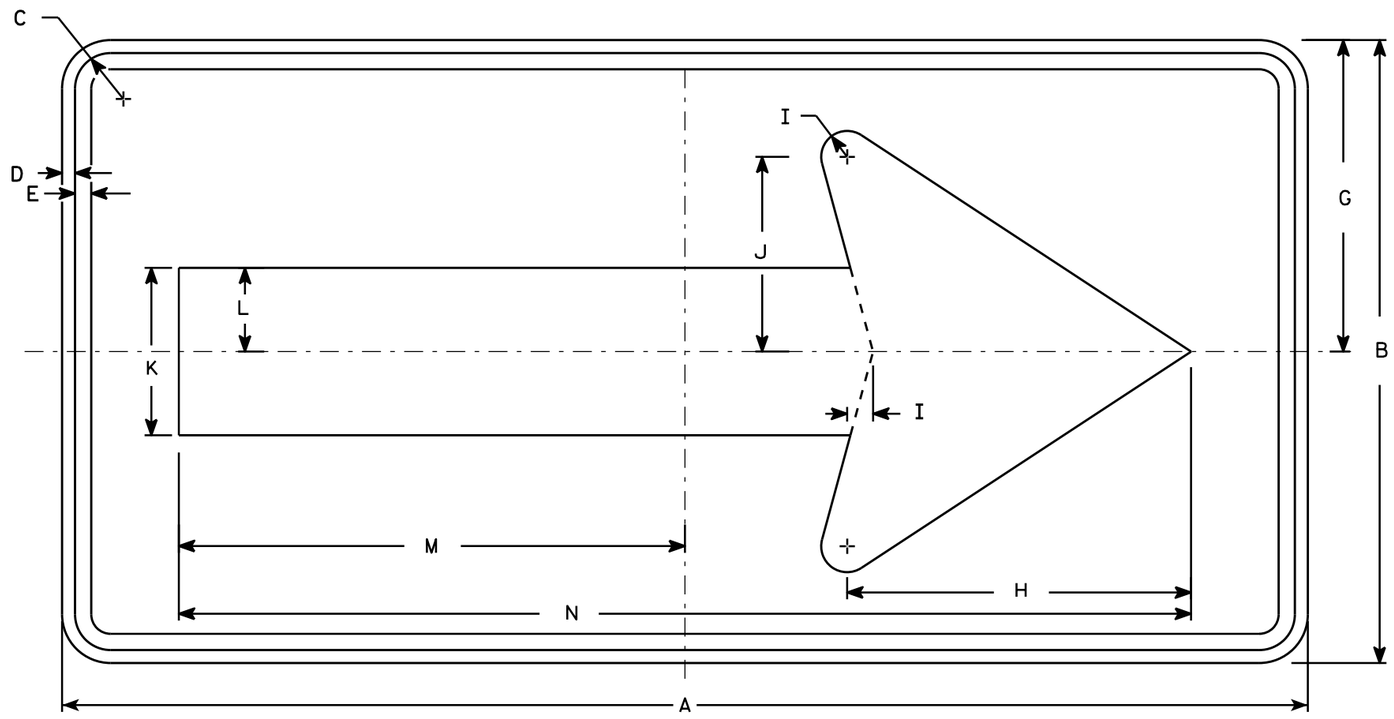
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 3/25/2020 PLATE NO. W20-1.11

PROJECT NO:

SHEET NO: 74 E



W01-6

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

STANDARD SIGN
W01-6

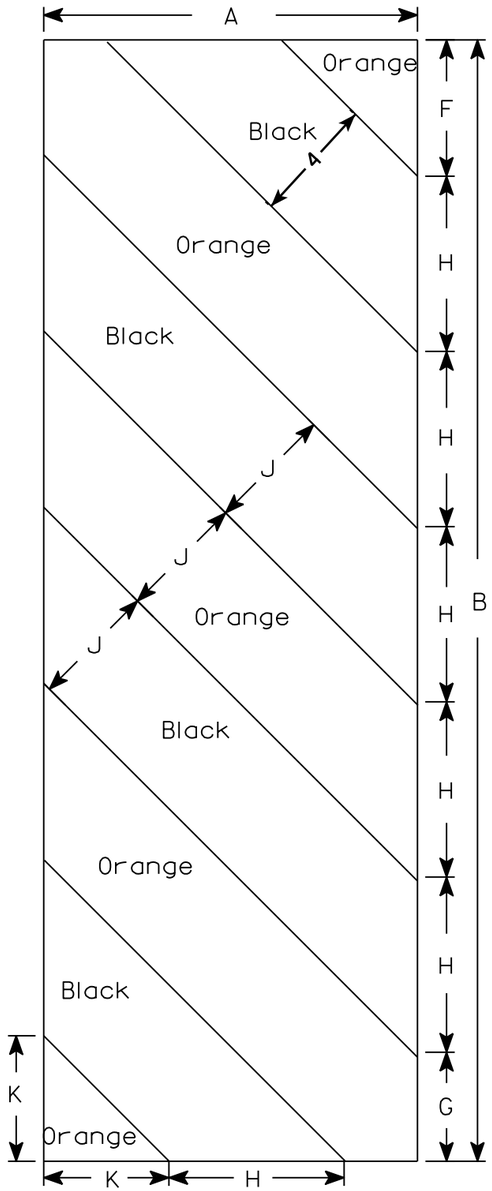
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

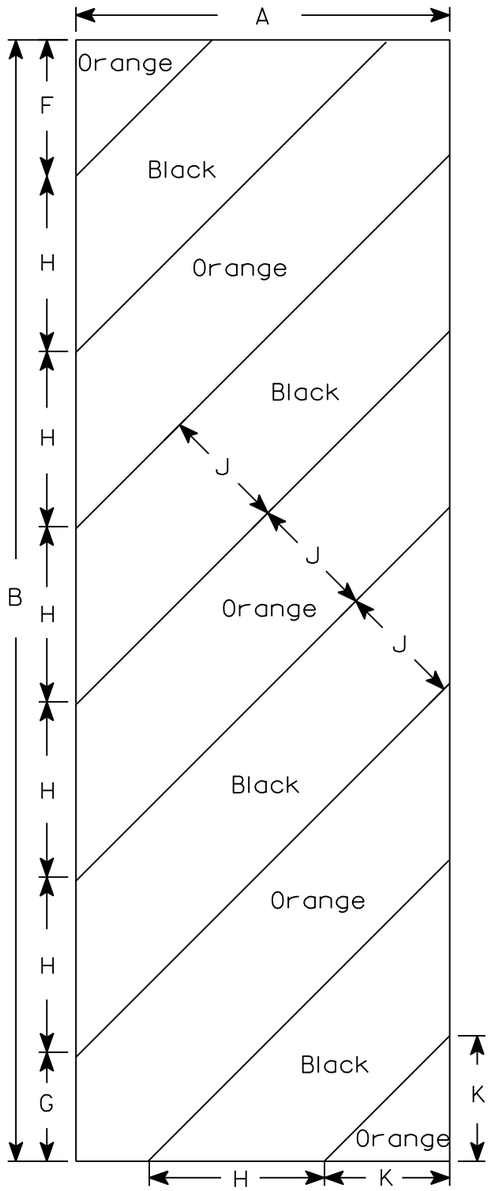
DATE 11/18/13 PLATE NO. W01-6.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W016.DGN PLOT DATE : 28-FEB-2014 11:37 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.837526:1.000000 WISDOT/CADDS SHEET 42



W05-52L



W05-52R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Alternate colors of stripes as shown.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

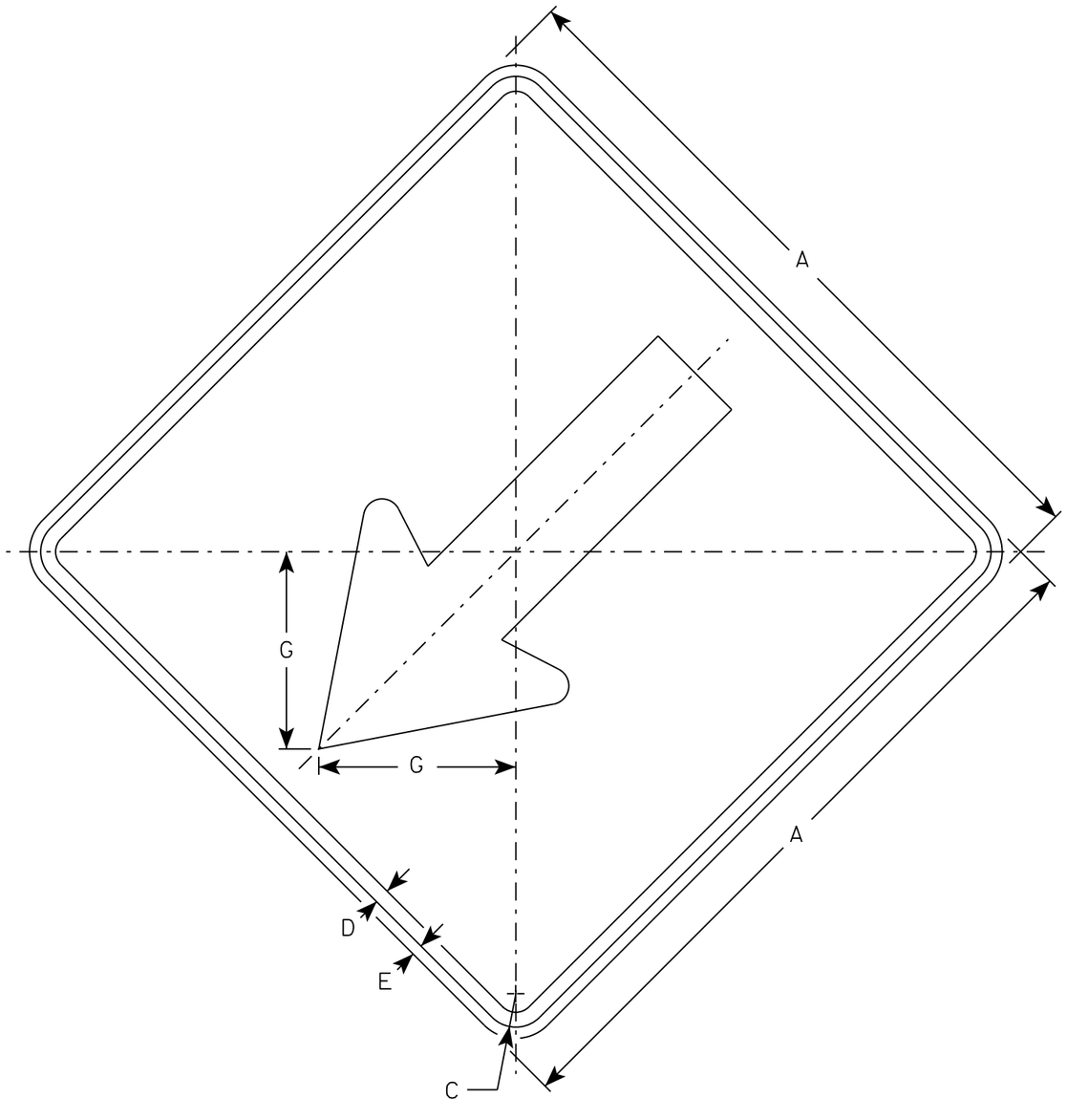
STANDARD SIGN
W05-52L & W05-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE W05-52.1

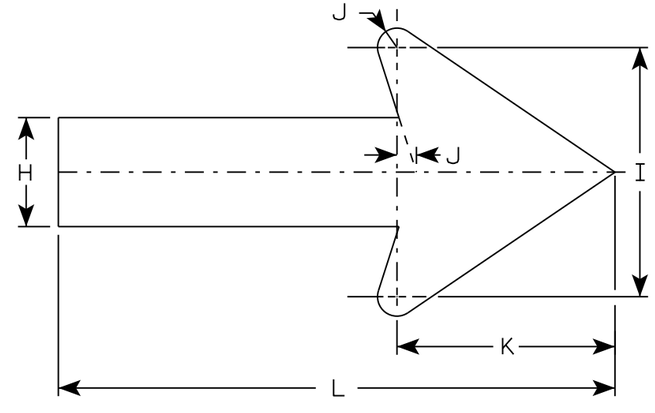
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



WO12-1

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	1/2	3/8		6 5/8	3 1/2	8	5/8	7	18															4
2S	24		1 1/8	1/2	3/8		6 5/8	3 1/2	8	5/8	7	18															4
2M	24		1 1/8	1/2	3/8		6 5/8	3 1/2	8	5/8	7	18															4
3	30		1 3/8	5/8	1/2		8 1/4	4 3/8	10	3/4	8 3/4	22 3/8															6.25
4	36		1 3/4	3/4	5/8		10 3/8	5 1/2	12 1/2	1	11	27 7/8															9.0
5	36		1 3/4	3/4	5/8		10 3/8	5 1/2	12 1/2	1	11	27 7/8															9.0

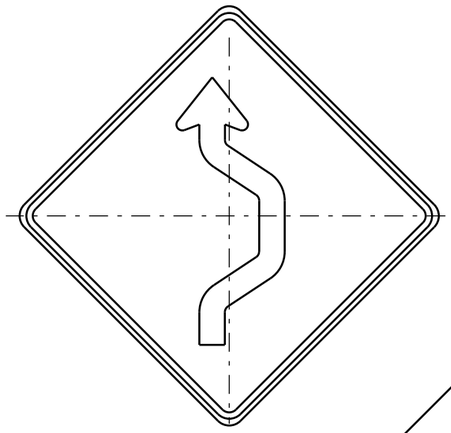
STANDARD SIGN
WO12-1

WISCONSIN DEPT OF TRANSPORTATION

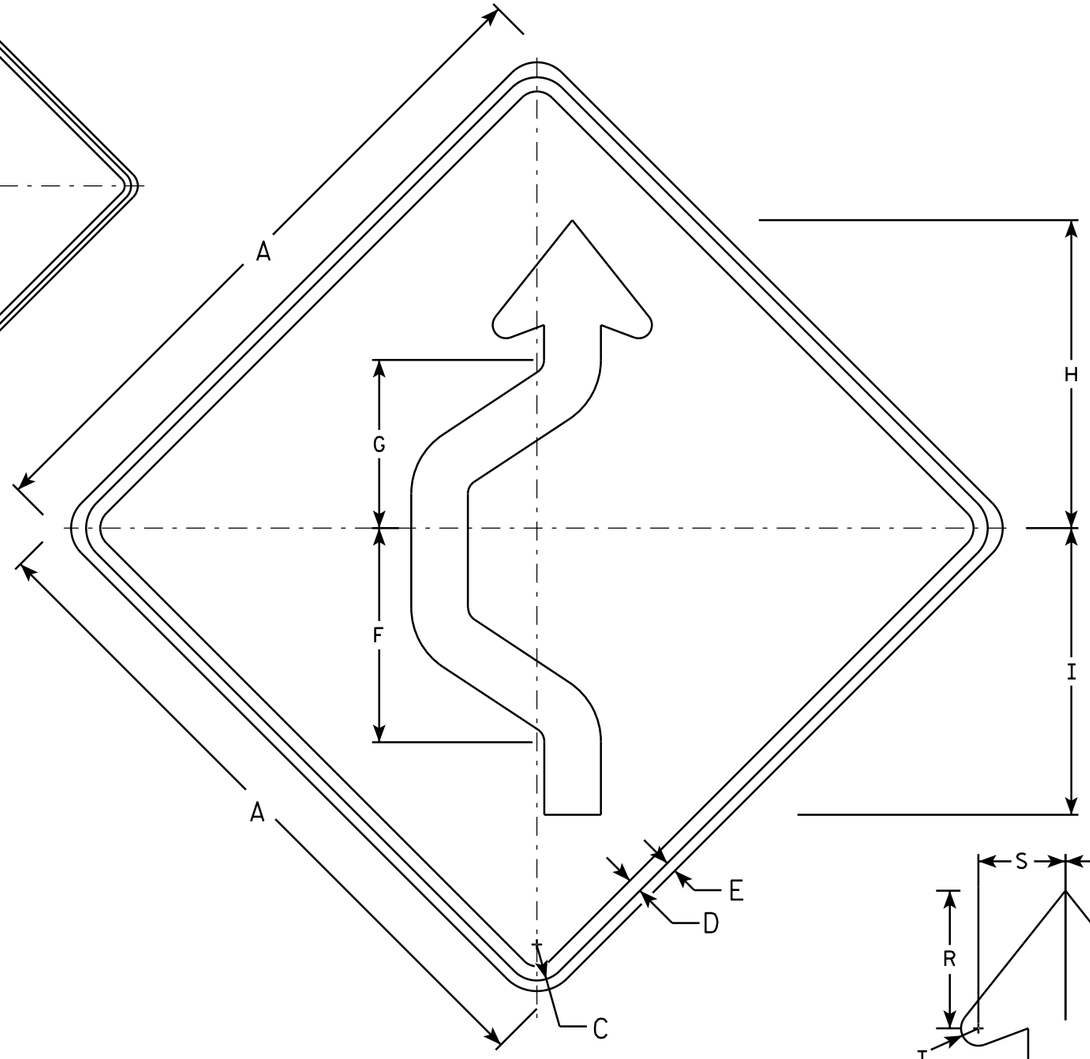
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/26/16 PLA 77 WO12-1.2

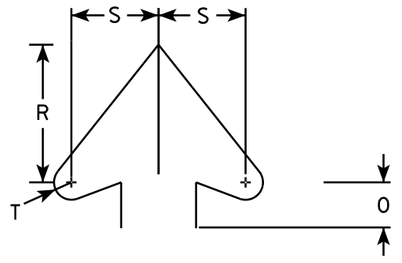
PROJECT NO: | HWY: | COUNTY: | SHEET NO: E



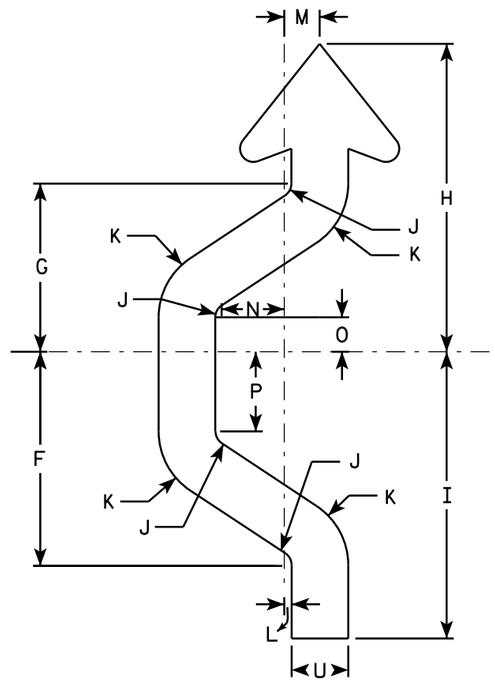
W024-1R



W024-1L



Arrowhead Detail



Arrow Detail

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W024-1R is the same as W024-1L except reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	5/8	1/2	11 3/8	8 7/8	16 3/8	15 1/4	3/4	3 3/4	3/8	2	3 3/8	1 7/8	4 1/4		5 1/2	3 1/2	5/8	3						9
2S	48		2 1/4	1	3/4	15 1/8	11 7/8	21 3/4	20 1/4	1	5	1/2	2 1/2	4 3/8	2 3/8	5 5/8		7 3/8	4 3/4	7/8	4						16
2M	48		2 1/4	1	3/4	15 1/8	11 7/8	21 3/4	20 1/4	1	5	1/2	2 1/2	4 3/8	2 3/8	5 5/8		7 3/8	4 3/4	7/8	4						16
3	48		2 1/4	1	3/4	15 1/8	11 7/8	21 3/4	20 1/4	1	5	1/2	2 1/2	4 3/8	2 3/8	5 5/8		7 3/8	4 3/4	7/8	4						16
4	48		2 1/4	1	3/4	15 1/8	11 7/8	21 3/4	20 1/4	1	5	1/2	2 1/2	4 3/8	2 3/8	5 5/8		7 3/8	4 3/4	7/8	4						16
5	48		2 1/4	1	3/4	15 1/8	11 7/8	21 3/4	20 1/4	1	5	1/2	2 1/2	4 3/8	2 3/8	5 5/8		7 3/8	4 3/4	7/8	4						16

STANDARD SIGN
W024-1 L & R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/25/2013 PLATE W024-1.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W0241.DGN PLOT DATE : 25-SEP-2013 13:08 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 10.702132:1.000000 WISDOT/CADDS SHEET 42

W:\STRVB0842\PLANS\01_SITE & ELEVATION.DGN

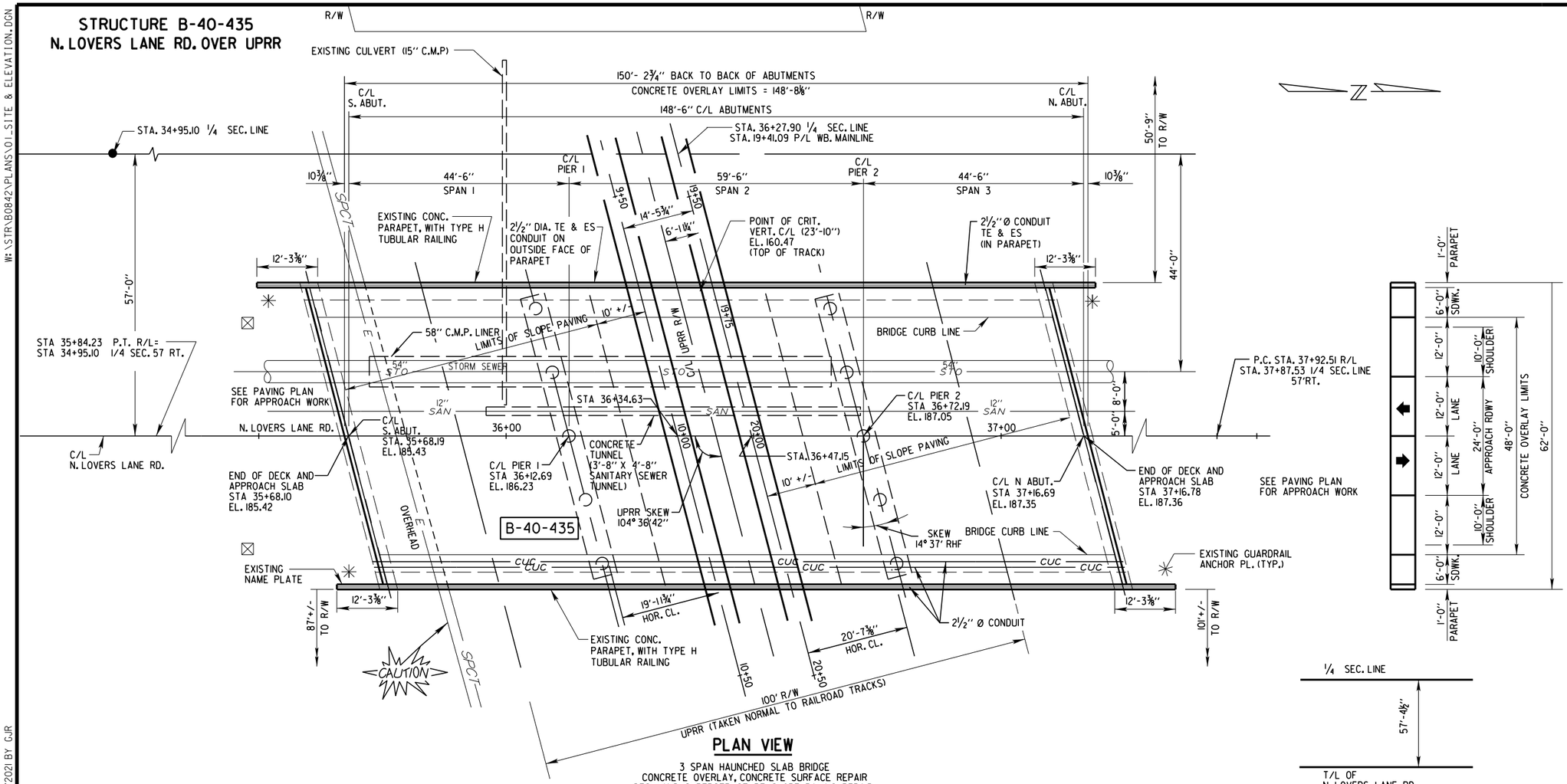
REVISED DATE: 01/15/2021 BY GJR

STRUCTURE B-40-435
N. LOVERS LANE RD. OVER UPRR

STATE PROJECT NUMBER

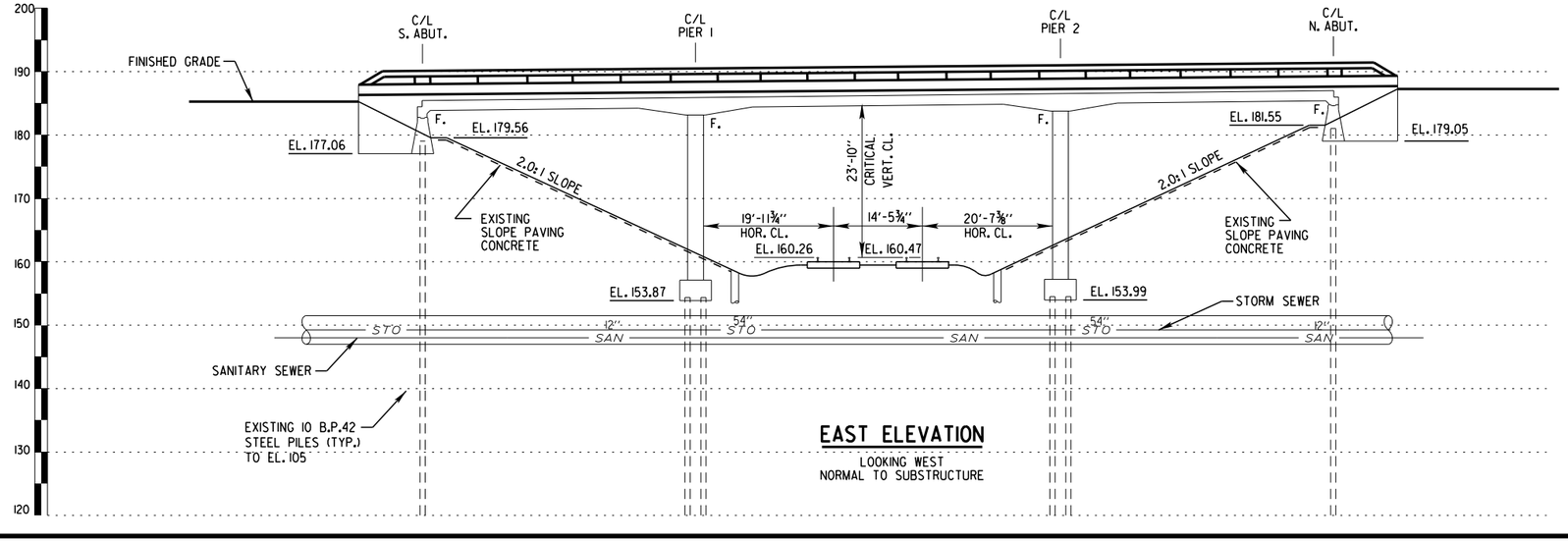
2030 - 15 - 70

LIST OF DRAWINGS



PLAN VIEW

3 SPAN HAUNCHED SLAB BRIDGE
CONCRETE OVERLAY, CONCRETE SURFACE REPAIR
DECK AND SUPERSTRUCTURE, SLOPE PAVING REPAIR,
CONCRETE APPROACH SLAB



EAST ELEVATION

LOOKING WEST
NORMAL TO SUBSTRUCTURE

TRANSIT LINE PLAN

NOTE: T/L IS OFFSET 0.375' (0'-4½") EAST AND PARALLEL TO C/L OF N. LOVERS LANE RD.

WISDOT BRIDGE OFFICE CONTACT:
AARON BONK 608-261-0261

CITY OF MILWAUKEE CONTACT:
JONATHAN THOMAS 414-286-0463

BENCH MARK:
S.E. CORNER OF N. 114TH ST. & W. BOBOLINK AVE.
8.7' WEST AND 9.5' SOUTH OF SOUTHEAST CORNER (5.4' EAST OF CURB AND 8.3' SOUTH OF HYDRANT.
ELEV. 177.735

WISCONSIN
JONATHAN D. THOMAS
E-42372
MILWAUKEE, WI
PROFESSIONAL ENGINEER
1/15/2021

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
INFRASTRUCTURE SERVICES DIVISION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 02/22/21
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-40-435

N. LOVERS LANE RD. OVER UPRR

COUNTY MILWAUKEE	~~TOWN~~/CITY/ ~~VILLAGE~~ MILWAUKEE
DESIGN SPEC. REHABILITATION N/A	
DESIGNED BY M.V.	DESIGN CK'D. J.P.H.
DRAWN BY D.B.	PLANS CK'D. J.P.H.

SITE PLAN & ELEVATION

SHEET 1 OF 7
79

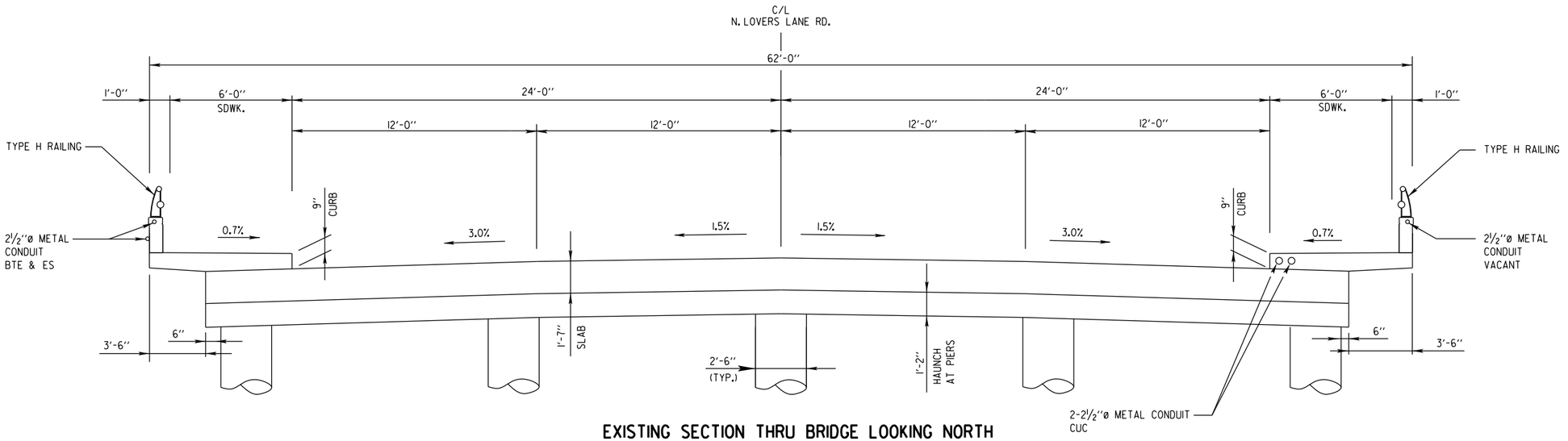
8

8

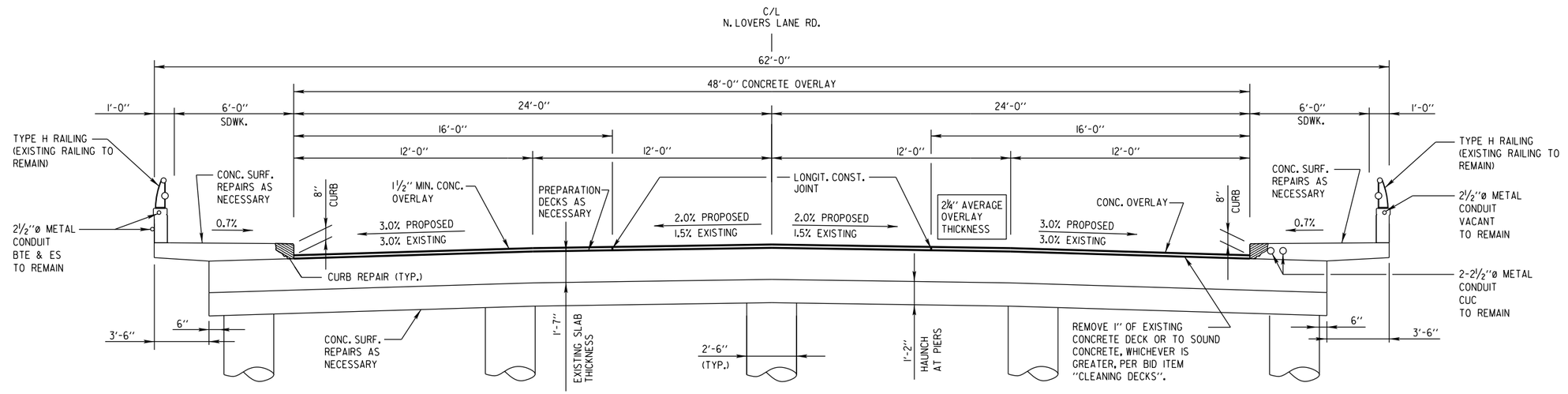
W:\STR\B0842\PLANS\02_SUPERSTRUCTURE CROSS SECTION.DGN

REVISED: 01-13-2021 BY GJR

STATE PROJECT NUMBER
2030 - 15 - 70



EXISTING SECTION THRU BRIDGE LOOKING NORTH



PROPOSED SECTION THRU BRIDGE LOOKING NORTH

NOTE:

SEE TRAFFIC CONTROL PLANS FOR CONSTRUCTION STAGING.

ASBESTOS CONTAINING MATERIALS ARE IN BRIDGE RAILING POST GASKETS LOCATED AT EAST & WEST PARAPETS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-435

DRAWN BY	A.A.	PLANS CK'D.	M.V. J.P.H.

SUPERSTRUCTURE CROSS SECTIONS

SHEET 2 OF 7

8

8

W:\STR\80842\PLANS\03_ESTIMATE OF QUANTITIES.DGN

REVISED: 01-15-2021 BY GJR

8

GENERAL NOTES

ALL STATIONS AND ELEVATIONS ARE IN FEET.

DIMENSIONS SHOWN ARE BASED ON ORIGINAL STRUCTURE PLANS.

DRAWINGS SHALL NOT BE SCALED.

ELEVATIONS ARE REFERRED TO CITY OF MILWAUKEE DATUM: 580.6 NGVD.

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

BEVEL EXPOSED CONCRETE EDGES ¾" UNLESS OTHERWISE NOTED.

JOINT FILLER SHALL CONFORM TO AASHTO DESIGNATION M 153 TYPE I, II, OR III, OR AASHTO DESIGNATION M213.

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

SEE ROADWAY PLANS FOR EXISTING UTILITY LOCATIONS.

AMERICAN TRANSMISSION COMPANY HIGH VOLTAGE TRANSMISSION LINES ARE PERMANENTLY IN PLACE APPROXIMATLEY 75' NORTH OF THE CONSTRUCTION SITE. SEE SPECIAL PROVISIONS REGARDING ALL WORK DONE AT THIS LOCATION.

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

AT "CURB REPAIR" EXPOSE EXISTING REINFORCEMENT A MINIMUM OF 1" CLEAR.

IF AN ITEM IS LISTED OR DESCRIBED IN SPECIAL PROVISIONS AND IS NOT SPECIFICALLY SHOWN ON DRAWINGS, OR IF AN ITEM IS SHOWN ON THE DRAWINGS AND IS NOT SPECIFICALLY LISTED OR DESCRIBED IN SPECIAL PROVISIONS, THEN IT SHALL BE CONSIDERED A PART OF THE WORK AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED. IF IT IS NOT OBVIOUS AS TO WHICH PAY ITEM IT BELONGS, THEN ENGINEER SHALL BE CONSULTED FOR INTERPRETATION, AND THE ENGINEER'S DECISION SHALL GOVERN.

PROTECTIVE SURFACE TREATMENT, BID ITEM 502.3200, SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE NEW CONCRETE OVERLAY.

PROTECTIVE SURFACE TREATMENT RESEAL, BID ITEM 502.3215.S, SHALL BE APPLIED TO THE CURB (INCLUDING VERTICAL FACE), SIDEWALK SURFACES, AND THE INSIDE FACES AND TOP SURFACES OF THE CONCRETE PARAPETS.

SEAL OVERLAY CONSTRUCTION JOINTS ACCORDING TO SECTION 502.3.13.1 OF THE STANDARD SPECIFICATIONS. COST INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

A MINIMUM OF 1-INCH OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER THE BID ITEM "CLEANING DECKS".

THE AVERAGE OVERLAY THICKNESS IS BASED ON THE MINIMUM OVERLAY THICKNESS PLUS ½-INCH TO ACCOUNT FOR VARIATIONS IN THE DECK SURFACE.

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH REPAIR AREAS ARE BASED ON THE PLANS AND AS DETERMINED BY THE ENGINEER. DECK PREPARATION AND FULL-DEPTH DECK REPAIRS SHALL BE FILLED WITH "CONCRETE MASONRY OVERLAY DECKS".

ANY EXCAVATION REQUIRED TO COMPLETE THE OVERLAY AT THE ABUTMENTS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 1½" PLACED ABOVE THE DECK SURFACE AFTER SURFACE PREPARATION. EXPECTED AVERAGE OVERLAY THICKNESS IS 2¼". IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION.

DEBRIS CONTAINMENT IS TO BE USED ONLY FOR FULL-DEPTH DECK REPAIRS OVER THE RAILROAD. USE OF DEBRIS CONTAINMENT AT OTHER LOCATIONS WILL NOT BE ALLOWED OR PAID FOR.

ASBESTOS CONTAINING MATERIALS ARE IN BRIDGE RAILING POST GASKETS LOCATED AT EAST & WEST PARAPETS.

ESTIMATE OF QUANTITIES

ITEM NUMBER	BID ITEMS	UNIT	SOUTH ABUT.	PIER 1	PIER 2	NORTH ABUT.	SUPER.	TOTAL
203.0225.S	DEBRIS CONTAINMENT STRUCTURE B-40-435	LS					1	1
204.0175	REMOVING CONCRETE SLOPE PAVING	SY	156			60		216
312.0110	SELECT CRUSHED MATERIAL	TON	34			14		48
502.3200	PROTECTIVE SURFACE TREATMENT	SY					795	795
502.3215.S	PROTECTIVE SURFACE TREATMENT RESEAL	SY					300	300
509.0301	PREPARATION DECKS TYPE 1	SY					54	54
509.0302	PREPARATION DECKS TYPE 2	SY					18	18
509.0500	CLEANING DECKS	SY					795	795
509.1200	CURB REPAIR	LF					216	216
509.1500	CONCRETE SURFACE REPAIR	SF	11			21	273	305
509.2000	FULL-DEPTH DECK REPAIR	SY					2	2
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY					62	62
509.9025.S	EPOXY INJECTION CRACK REPAIR	LF	28			28	729	785
509.9026.S	CORED HOLES 2 INCH DIAMETER	EACH	1			1	3	5
604.0400	SLOPE PAVING CONCRETE	SY	156			60		216
SPV.0090.540	URETHANE INJECTION CRACK REPAIR	LF					182	182
	NON-BID ITEMS							
	PREFORMED JOINT FILLER	LF						
	NON-BITUMINUS JOINT FILLER	LF						
	POLYETHYLENE SHEETS	SF						

DESIGN DATA

DEAD LOAD

CONCRETE = 150 PCF
F.W.S. = 20 PSF
RAILING = 245 PLF

LIVE LOAD

INVENTORY RATING HS-15
OPERATING RATING HS-24
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

MATERIAL PROPERTIES

CONCRETE MASONRY (DECK SLAB) f'_c = 4,000 PSI
CONCRETE MASONRY (OVERLAY DECKS) f'_c = 4,000 PSI
CONCRETE MASONRY (ALL OTHERS) f'_c = 3,500 PSI
BAR STEEL REINFORCEMENT f_y = 60,000 PSI

TRAFFIC VOLUME

ADT (2018) = 8,994
ADT (2041) = 9,700
R.D.S. = 30 MPH

UTILITIES

EXISTING UTILITIES ARE TO BE KEPT IN SERVICE AND PROTECTED DURING THE REHABILITATION PROJECT. SEE PROJECT SPECIAL PROVISION FOR DETAILS ON UTILITY WORK.

SEE ROADWAY PLANS FOR EXISTING UTILITY LOCATIONS.

STATE PROJECT NUMBER

2030 - 15 - 70

BRIDGE REHABILITATION CONSTRUCTION NOTES

EXISTING BRIDGE PLANS ARE ON FILE IN CITY OF MILWAUKEE INFRASTRUCTURE SERVICES DIVISION'S STRUCTURAL DESIGN UNIT, ROOM 907, FRANK P. ZEIDLER MUNICIPAL BUILDING, 841 N. BROADWAY, MILWAUKEE, WI 53202 PHONE (414)-286-0463.

EXISTING BRIDGE WILL BE REHABILITATED IN THREE STAGES TO KEEP N. LOVERS LANE ROAD OPEN FOR 2-WAY TRAFFIC DURING CONSTRUCTION.

DURING STAGE 1 THE WEST SIDE OF THE BRIDGE WILL BE OPEN WITH ONE LANE FOR THE NORTHBOUND TRAFFIC AND ONE LANE FOR THE SOUTHBOUND TRAFFIC WHILE THE EAST SIDE OF THE BRIDGE IS CLOSED FOR CONSTRUCTION.

DURING STAGE 2 THE EAST SIDE OF THE BRIDGE WILL BE OPEN WITH ONE NORTHBOUND LANE AND ONE SOUTHBOUND LANE WHILE THE WEST SIDE OF THE BRIDGE IS CLOSED.

DURING STAGE 3 THE BRIDGE WILL BE OPEN WITH ONE NORTHBOUND LANE AT THE EAST SIDE AND ONE SOUTHBOUND TRAFFIC LANE AT THE WEST SIDE WHILE THE CENTER LANES OF THE BRIDGE ARE CLOSED.

PROPOSED IMPROVEMENTS

PROJECT AS PROPOSED CONSISTS OF: CONCRETE SURFACE REPAIR OF TOP AND UNDERSIDE OF SLAB ALONG WITH REPAIRS TO THE ABUTMENTS AND PIERS AS DIRECTED BY ENGINEER; INSTALLATION OF NEW CONCRETE OVERLAY; SLOPE PAVING REPAIR; CONCRETE APPROACH SLAB.

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-435

DRAWN BY A.A. | PLANS CK'D. M.V. J.P.H.

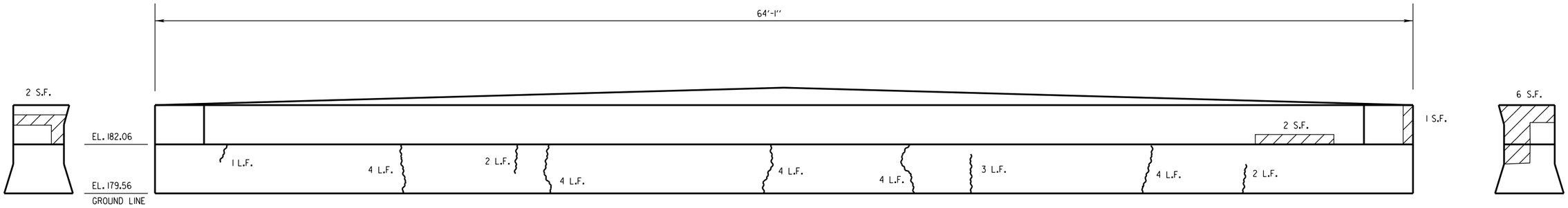
ESTIMATE OF QUANTITIES

SHEET 3 OF 7

W:\STR\B0842\PLANS\04_ABUTMENT REPAIR PLAN.DGN

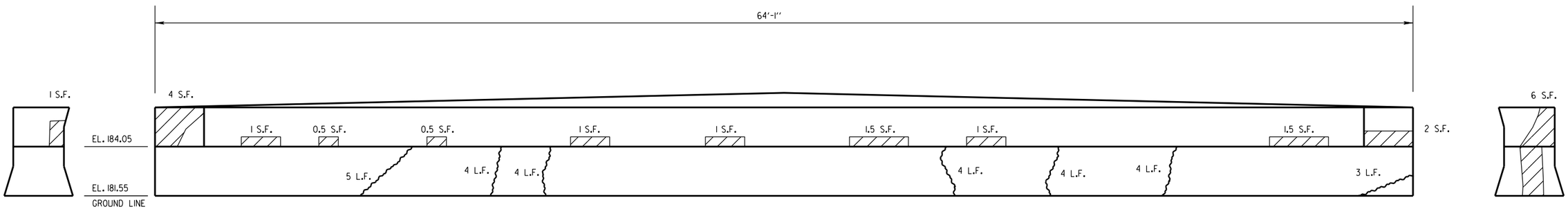
REVISED DATE: 01/13/2021 BY GJR

STATE PROJECT NUMBER
2030 - 15 - 70



SOUTH ABUTMENT

LOOKING SOUTH



NORTH ABUTMENT

LOOKING NORTH

8

8

LEGEND

= CONCRETE SURFACE REPAIR

= EPOXY INJECTION CRACK REPAIR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-435

DRAWN BY	M.P.F.	PLANS CK'D.	J.P.H. M.V.

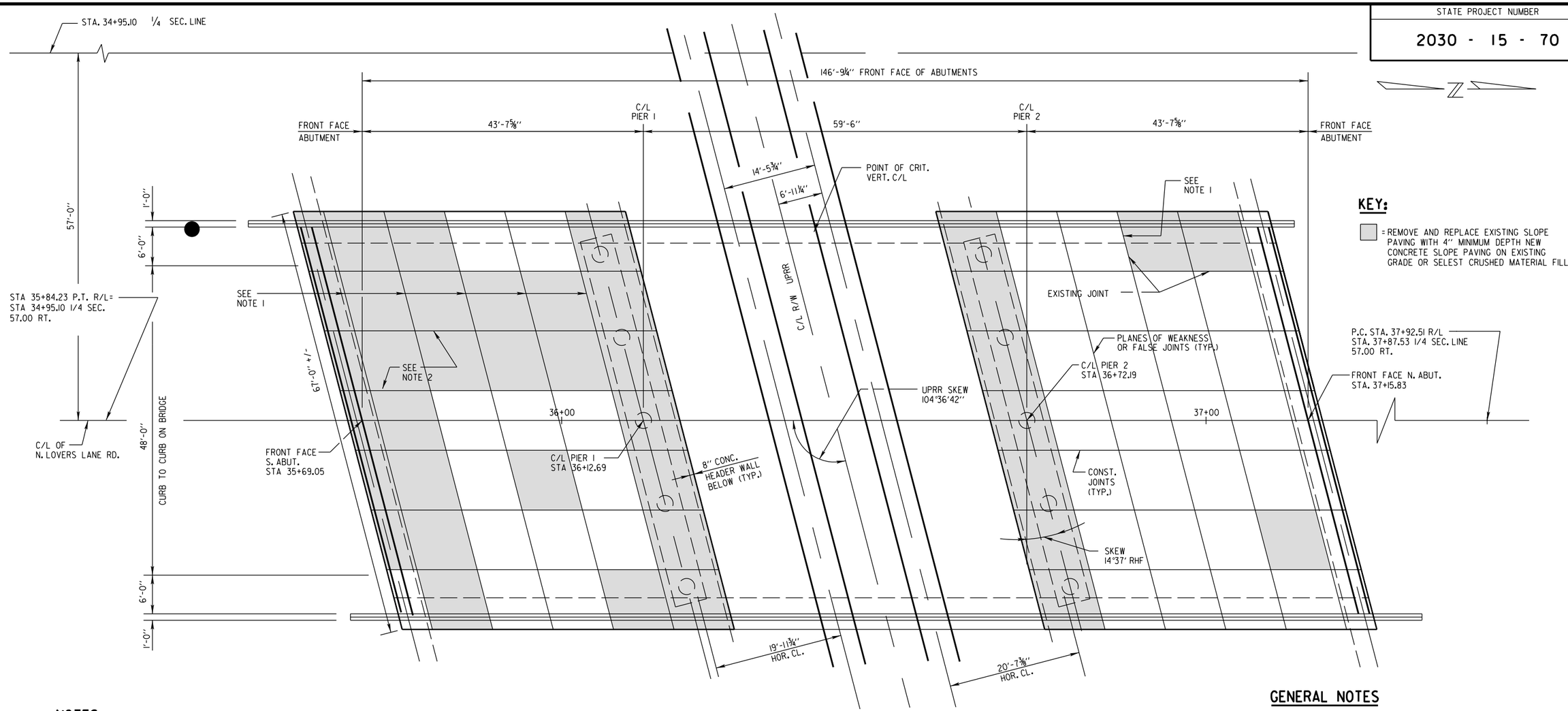
ABUTMENT REPAIR PLAN

SHEET 4 OF 7

W:\STR\B0842\PLANS\05_SLOPE PAVEMENT REPAIR.DGN

REVISED DATE:12/23/2020 BY CJR

STATE PROJECT NUMBER
2030 - 15 - 70



KEY:

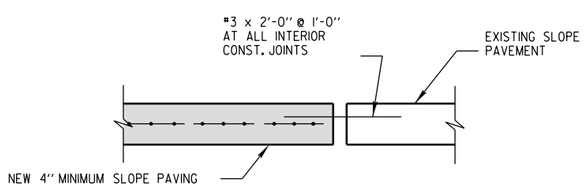
▭ = REMOVE AND REPLACE EXISTING SLOPE PAVING WITH 4" MINIMUM DEPTH NEW CONCRETE SLOPE PAVING ON EXISTING GRADE OR SELEST CRUSHED MATERIAL FILL.

SLOPE PAVEMENT REPAIR PLAN VIEW

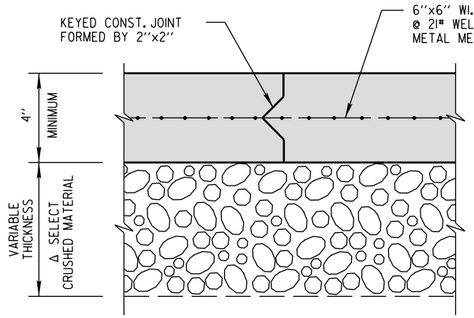
NOTES

NOTE NO. 1 - FORM PLANES OF WEAKNESS OR FALSE JOINTS IN THE CONCRETE BY SCORING THE FINISHED SURFACE AT LEAST ½" DEEP WITH A JOINT TOOL.

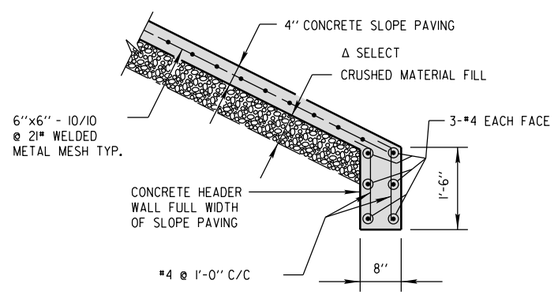
NOTE NO. 2 - CONSTRUCT JOINTS PARALLEL TO T/L & C/L OF N. LOVERS LANE RD



TYPICAL INTERIOR CONSTRUCTION JOINT



CONSTRUCTION JOINT DETAIL



TYPICAL SECTION

8" CONCRETE HEADER

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN HEREON SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS.

Δ SLOPE PAVING HAS VARIABLE DEPTH (4"-8"). MATCH EXISTING GRADES AND MAINTAIN EXISTING CROSS SLOPES. BID ITEM: 312.0115 SELECT CRUSHED MATERIAL INCLUDED TO ALLOW LEVELING OF EXISTING AGGREGATE OR GRADE.

USE ONE-INCH EXPANSION JOINT FILLER WHERE SLOPE PAVING ABUTS PIERS, ABUTMENTS, OR OTHER SOLID FIXTURES.

LIMITS OF SLOPE PAVING REPLACEMENT OR REPAIR ARE INDICATED WITH GRAY SHADING. SEE KEY ABOVE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-435

DRAWN BY R.S.A. | PLANS CK'D. J.P.H. M.V.

SLOPE PAVEMENT REPAIR PLAN

SHEET 5 OF 7
83

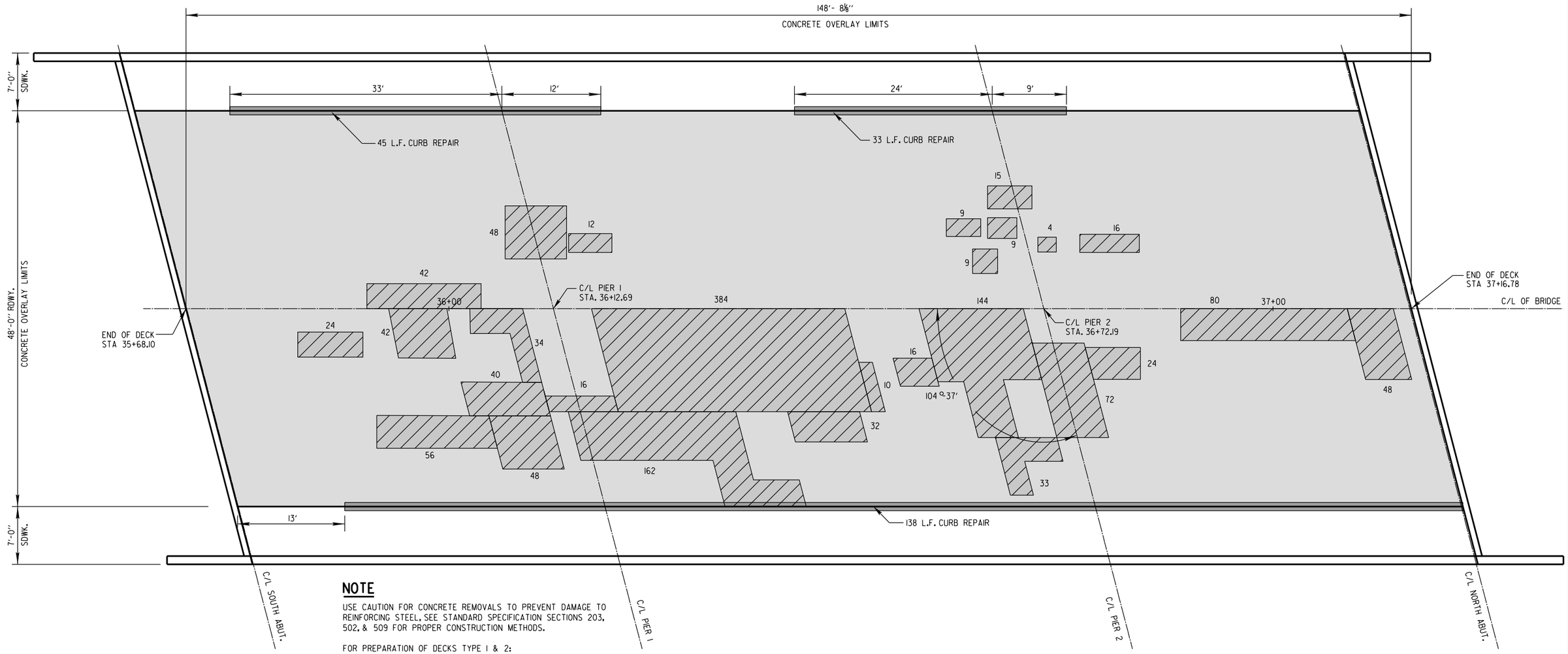
8

8

W:\STR\B0842\PLANS\06_TOP OF DECK.DGN

REVISED DATE: 01/13/2021 BY GJR

STATE PROJECT NUMBER
2030 - 15 - 70



NOTE

USE CAUTION FOR CONCRETE REMOVALS TO PREVENT DAMAGE TO REINFORCING STEEL, SEE STANDARD SPECIFICATION SECTIONS 203, 502, & 509 FOR PROPER CONSTRUCTION METHODS.

FOR PREPARATION OF DECKS TYPE 1 & 2:

S.F. OF AREAS ARE GIVEN ON TOP OF DECK REPAIR PLAN FOR PREPARATION OF DECKS TYPE 1.

AREA FOR PREPARATION OF DECKS TYPE 2 IS ONE-THIRD (1/3) OF PREPARATION OF DECKS TYPE 1 AREA.

TYPE 2 LOCATIONS TO BE DETERMINED AS DIRECTED BY THE ENGINEER AFTER TYPE 1 REMOVALS ARE UNDERWAY.

AREAS OF FULL-DEPTH DECK REPAIR TO BE DETERMINED AS DIRECTED BY THE ENGINEER AFTER TYPE 2 REMOVALS ARE UNDERWAY.

TOP OF DECK REPAIR PLAN

SURVEY TYPE

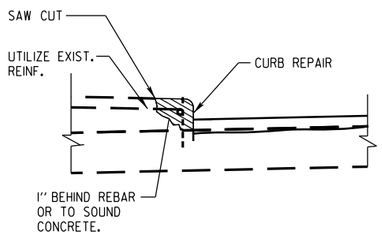
TOP OF DECK
SURVEY COMPLETED
ON 06/03/2020

LEGEND

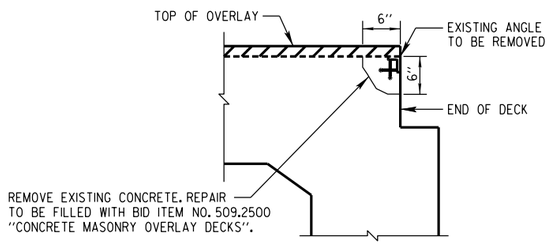
= CONCRETE OVERLAY

= PREPARATION DECK AREA, TYPE 1 AND/OR TYPE 2

= CURB REPAIR



CURB REPAIR DETAIL



SECTION AT END OF SLAB

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-435

DRAWN BY	M.P.F.	PLANS CK'D.	J.P.H. M.V.

TOP OF DECK REPAIR PLAN

SHEET 6 OF 7

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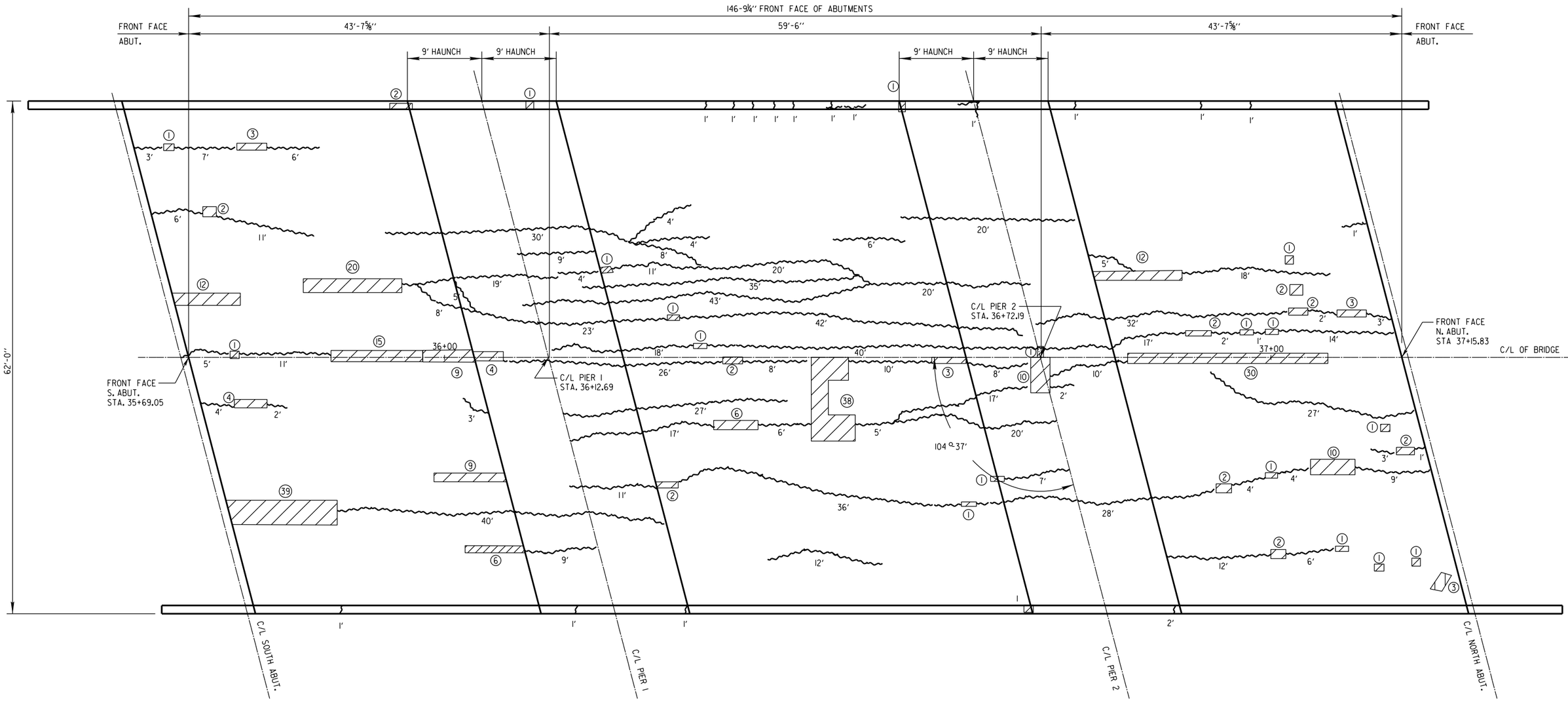
W:\STR\B0842\PLANS\07_UNDERSIDE OF DECK.DGN

REVISED DATE: 01/13/2021 BY GJR

STATE PROJECT NUMBER
2030 - 15 - 70



UNDERSIDE OF DECK REPAIR PLAN

LEGEND

- = CONCRETE SURFACE REPAIR
- (XX) = CONCRETE SURFACE REPAIR S.F.
- = URETHANE INJECTION/EPOXY INJECTION CRACK REPAIR
- XX' = URETHANE INJECTION/EPOXY INJECTION CRACK REPAIR L.F. (BELOW LINE)

NOTE:

TOTAL OF 810 L.F. OF COMBINED URETHANE AND EPOXY INJECTION CRACK REPAIR IS SHOWN ON PLAN. CRACK REPAIR QUANTITIES BASED ON RATIO OF 4/5 EPOXY INJECTION, 1/5 URETHANE INJECTION.

AREAS OF REPAIR TO BE DETERMINED AS DIRECTED BY ENGINEER IN FIELD.

DO NOT INJECT CRACKS LESS THAN 0.05" WIDE.

BID ITEM NUMBER 509.9025.S, EPOXY INJECTION CRACK REPAIR TO BE USED ON CRACKS LESS THAN 1/4" WIDE.

BID ITEM NUMBER SPV.0090.540, URETHANE INJECTION CRACK REPAIR TO BE USED ON CRACKS GREATER THAN 1/4" WIDE OR CRACKS WHICH ARE LEAKING AND/OR WET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-435

DRAWN BY	M.P.F.	PLANS CK'D.	J.P.H. M.V.

UNDERSIDE OF DECK REPAIR PLAN

SHEET 7 OF 7

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Wisconsin Department of Transportation

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