WKE

JANUARY 2023

PROJECT ID: 1228-22-74

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 SHEETS = 388



DESIGN DESIGNATION

A.A.D.T.	2023	=	130,500
A.A.D.T.	2043	=	144,200
D.H.V.		=	19,755
D.D.		=	56/44
T.		=	16.7%
DESIGN SPEED		=	60 MPH
ESALS		=	54,000,000

CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (300'EB')
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

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

UTILITIES

- ELECTRIC (E)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

IH43 NORTH SOUTH FREEWAY

HAMPTON AVE-SB RAMP OVER MILW RVR

IH 43

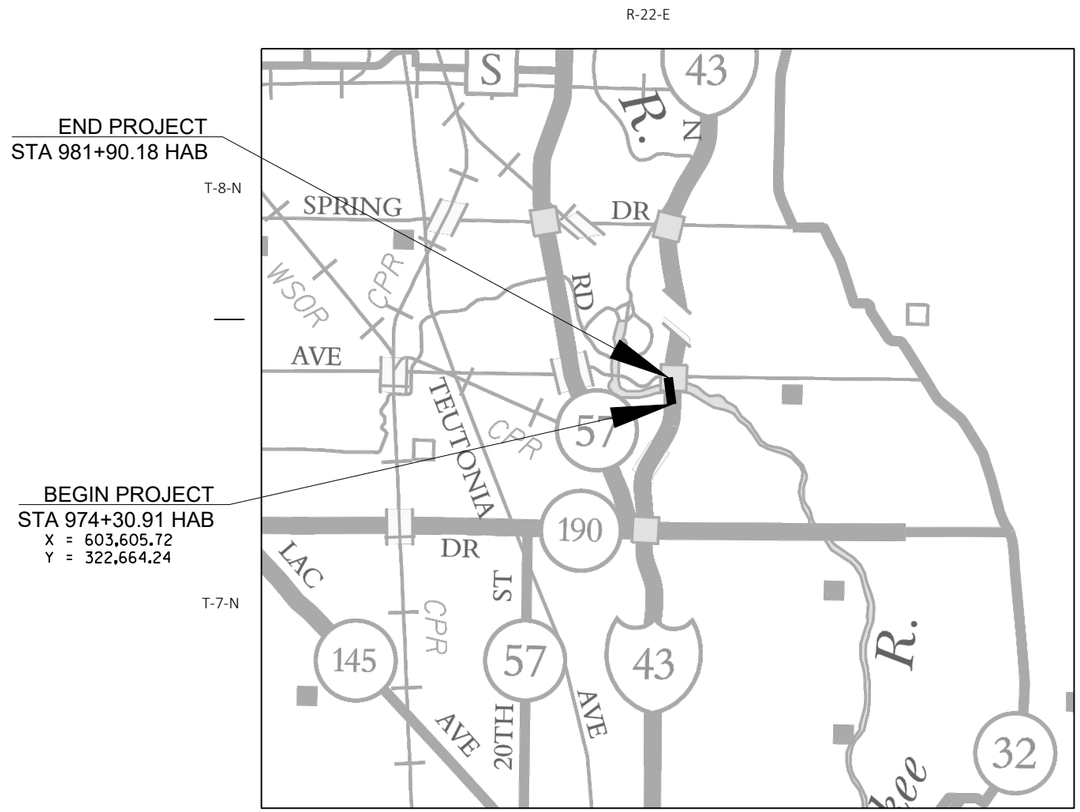
MILWAUKEE COUNTY

STATE PROJECT NUMBER
1228-22-74

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1228-22-74	WISC 2023175	1

END PROJECT
STA 981+90.18 HAB

BEGIN PROJECT
STA 974+30.91 HAB
X = 603,605.72
Y = 322,664.24



LAYOUT

SCALE 0 1.0 MI

TOTAL NET LENGTH OF CENTERLINE = 0.144 MI

STRUCTURES
B-40-893

NOISE WALLS
N-40-104

RETAINING WALLS
R-40-728

SIGN STRUCTURES
S-40-3103

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, MILWAUKEE COUNTY, NAD83 (2007), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD88 (2007)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT
Designer	WISDOT
Project Manager	DAVID PITTMAN
Regional Examiner	
Regional Supervisor	JOE GALLAMORE

APPROVED FOR THE DEPARTMENT

DAT : 10/10/2022

E

FILE NAME : N:\PDS\C3D\12282274\SHEETSPLAN\010101-TI.DWG PLOT DATE : 9/16/2021 2:42 PM PLOT BY : FERGUSON, JULIE PLOT NAME :

GENERAL NOTES

NO TREES OR SHRUBS SHALL BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.

ANY REINFORCEMENT LOCATED IN EXISTING CONCRETE PAVEMENT SHALL BE CONSIDERED INCIDENTAL TO THE REMOVING PAVEMENT ITEM, AND NO ADDITIONAL COMPENSATION WILL BE GRANTED.

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

NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.

WHEN THE QUANTITY OF HMA PAVEMENT OR BASE AGGREGATE IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS OF THE LAYER SHOWN ON THE PLAN IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

THE QUANTITY OF TOPSOIL IS COMPUTED FROM MEASUREMENTS BETWEEN THE SUBGRADE SHOULDER POINTS AND THE SLOPE INTERCEPTS AS SHOWN ON THE CROSS SECTIONS PLUS 5 FEET FOR ROUNDING.

CURB AND GUTTER GRADES ARE GIVEN TO THE FLANGE OF CURB AND GUTTER OR THEORETICAL FLANGE POINT OF INTEGRAL CURB AND GUTTER. CURB AND GUTTER RADII ARE MEASURED TO THE FLANGE OF CURB AND GUTTER OR THEORETICAL FLANGE POINT OF INTEGRAL CURB AND GUTTER.

EXISTING DRIVEWAYS AND FIELD ENTRANCES SHALL BE RESTORED IN KIND AS DIRECTED BY THE ENGINEER IN THE FIELD AND AT THE LOCATION DETERMINED BY THE ENGINEER.

PROVIDE A TYPICAL SIDEWALK CROSS SLOPE OF 1.5% WITH A CONSTRUCTION TOLERANCE OF +/- 0.5%.

BROKEN CONCRETE CONTAINING RE-BAR SHALL NOT BE USED AS RIPRAP MEDIUM.

CROSS SECTIONS SHOWN INCLUDE THE THICKNESS OF TOPSOIL WHERE REQUIRED. TOPSOIL SHALL BE REPLACED WITH 6-INCH TYPICAL DEPTH THROUGHOUT THE PROJECT.

A SAWED JOINT IS REQUIRED WHERE NEW HMA PAVEMENT MEETS EXISTING HMA PAVEMENT.

FERTILIZER SHALL NOT BE USED WITHIN 100' OF NAVIGABLE WATERWAYS OR WETLANDS.

WHEN DEFINING THE PAVEMENT STRUCTURE, THE BOTTOM OF THE BASE AGGREGATE DENSE IS CONSIDERED THE SUBGRADE LINE. THE SELECT CRUSHED MATERIAL LAYER IS A SUBGRADE IMPROVEMENT.

CONTACT THE PROJECT ENGINEER AND THE SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION (SEWRPC) AT LEAST TWO WEEKS PRIOR TO WORK NEAR ANY PUBLIC SURVEY MONUMENT.

SAWCUT ASPHALTIC AND CONCRETE DRIVEWAYS AND/OR PARKING LOTS AT THE MATCHLINE AS SHOWN ON THE PAVING DETAILS OR AS DIRECTED BY THE ENGINEER.

VERIFY EXISTING PAVEMENT ELEVATIONS AT ALL TIE-INS TO EXISTING PAVEMENT PRIOR TO CONSTRUCTION. IF A DISCREPANCY IS FOUND BETWEEN PROPOSED PLAN ELEVATIONS AND EXISTING PAVEMENT ELEVATIONS, CONTRACTOR IS TO NOTIFY ENGINEER.

EXISTING BUSINESS SIGNS LOCATED WITHIN THE TLE ARE TO REMAIN UNLESS SHOWN IN THE REMOVAL PLAN.

THE EXACT LOCATION OF EXCAVATION BELOW SUBGRADE (EBS) WILL BE DETERMINED BY THE ENGINEER.

ALL PRIVATE EXISTING UTILITIES ARE TO BE ADJUSTED BY THE UTILITIES CONCERNED.

DUE TO POTENTIAL SOIL VARIABILITY, ACTUAL QUANTITIES MAY VARY. NO QUANTITY ADJUSTMENTS WILL BE MADE FOR DIFFERING SOIL EXPANSION FACTORS ENCOUNTERED IN THE FIELD.

ORDER OF SECTION 2 DETAIL SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
REMOVAL PLANS
PLAN DETAILS
PAVING GRADES
FTMS PLANS
CONTOUR MAP
EROSION CONTROL
SEEDING PLANS
LANDSCAPING PLANS
STORM SEWER PLANS
EXISTING UTILITY PLANS
PERMANENT SIGNING PLANS
LIGHTING PLANS
TRAFFIC SIGNAL PLANS
PAVEMENT MARKING
TRAFFIC CONTROL
TEMPORARY CAUSEWAY
WATERWAY MARKER PLACEMENT
DETOURS
FENCING PLANS
ALIGNMENT LAYOUT

STANDARD ABBREVIATIONS

AC	ACRES
BLK	BLOCK
BM	BENCHMARK
C/L	CENTERLINE
CONC	CONCRETE
D	LANE DISTRIBUTION
DHV	DESIGN HOURLY VOLUME
DIM	DIMENSION
EB	EASTBOUND
EL	ELEVATION
HMA	HOT MIX ASPHALT
L	LENGTH
LT	LEFT
LC	LONG CHORD
MAX	MAXIMUM
MIN	MINIMUM
MON	MONUMENT
NB	NORTHBOUND
NORM	NORMAL
P	PAGE
PAVT	PAVEMENT
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENT
PP	POWER POLE
PL	PROPERTY LINE
R	RADIUS
R/L	REFERENCE LINE
R/W	RIGHT OF WAY
RT	RIGHT
SB	SOUTHBOUND
SDD	STANDARD DETAIL DRAWING
SE	SUPERELEVATION
SEC	SECTION
SF	SQUARE FOOT
SI	SLOPE INTERCEPT
STA	STATION
SY	SQUARE YARD
TAN	TANGENT
TYP	TYPICAL
VCL	VERTICAL CURVE LENGTH
VPC	POINT OF VERTICAL CURVE
VPI	POINT OF VERTICAL INTERSECTION
WB	WESTBOUND
V	DESIGN SPEED

2

MILWAUKEE COUNTY TRANSIT SYSTEM (MCTS)

MELANIE FLYNN
COORDINATOR OF STREET SUPERVISION (ROUTES)
1942 N 17TH ST.
MILWAUKEE, WI 53205
PHONE: (414) 343-1764
MFLYNN@MCTS.ORG

DAVID LOCHER
TRANSPORTATION SPECIALIST
1942 N 17TH ST.
MILWAUKEE, WI 53205
PHONE: (414) 343-1727
DLOCHER@MCTS.ORG

MILWAUKEE COUNTY SHERIFF

COLIN BRIGGS, CAPTAIN
PATROL DIVISION - COMMANDER
10320 W. WATERTOWN PLANK ROAD
WAUWATOSA, WI 53226
OFFICE: (414) 454-4084
CELL: (414) 659-4275
COLIN.BRIGGS@MILWAUKEECOUNTYWI.GOV

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2300 N MARTIN LUTHER KING DR
MILWAUKEE, WI 53212
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KRISTINA.BETZOLD@WISCONSIN.GOV

SOUTHEASTERN WISONSIN REGIONAL PLANNING COMMISSION
ROB MERRY
W239 N1812 ROCKWOOD DRIVE
P.O. BOX 1607
WAUKESHA, WI 53187-1607
PHONE: (262) 953-4289
CELL: (920) 912-1086
RMERRY@SEWRPC.ORG

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

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	GENERAL NOTES	SHEET: 3	E

UTILITY CONTACTS

JAY BULANEK
AT&T WISCONSIN - COMMUNICATION LINE
435 SOUTH 95TH STREET
MILWAUKEE, WI 53214-1226
(262) 896-7669
JB5175@ATT.COM

BRAHIM GADDOUR
CENTURYLINK COMMUNICATIONS, LLC - COMMUNICATION
32353 INTERTECH DRIVE
BROOKFIELD, WI 53045
(414) 704-1026
BRAHIM.GADDOUR@LUMEN.COM

CHARLIE IMIG
CITY OF GLENDALE - SEWER / STREET LIGHTING
5909 N MILWAUKEE RIVER PARKWAY
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C.IMIG@GLENDALE-WI.GOV

CHARLIE IMIG
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C.IMIG@GLENDALE-WI.GOV

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841 N BROADWAY, 9TH FLOOR
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NEAL KARWEIK
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SHAD GARCIA
EVERSTREAM - COMMUNICATION LINE
324 E WISCONSIN AVE, SUITE 730
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SGARCIA@EVERSTREAM.NET

NETWORK RELOCATIONS
LEVEL 3 COMMUNICATIONS LLC - COMMUNICATION LINE
1025 ELDORADO BLVD
BROOMFIELD, CO 80021
RELOCATIONS@LUMEN.COM

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MIDWEST FIBER NETWORKS LLC - COMMUNICATION LINE
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MICKI KLAPPA-SULLIVAN
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VERIZON BUSINESS - COMMUNICATION LINE
15725 W RYERSON ROAD
NEW BERLIN, WI 53151
(262) 232-1323
RANDY.CICTELLO@VERIZON.COM

JEFF MADSON
WISCONSIN DEPARTMENT OF TRANSPORTATION - COMMUNICATION LINE
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ALEX DANTINNE
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WEST ALLIS, WI 53214
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WE-UTILITY-RELOCATIONS@WE-ENERGIES.COM

WE ENERGIES ELECTRIC DISPATCH 1-800-662-4797

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WE-UTILITY-RELOCATIONS@WE-ENERGIES.COM

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(414) 274-9215
LORI.KETTER@WINDSTREAM.COM

2

2

2

N

W GLENDALE AVENUE

N IRONWOOD LANE

MILWAUKEE RIVER

W HAMPTON AVENUE

OAK LEAF TRAIL

BEGIN PROJECT ID 1228-22-74
STA 974+30.91 HAB
X=603,605.72
Y=322,664.24

END PROJECT ID 1228-22-74
STA 981+90.18 HAB
X=603,532.58
Y=323,419.94

BEGIN CONSTRUCTION
STA 11+40.52 HA

OLD: B-40-67
NEW: B-40-893
BRIDGE RECONSTRUCTION

R-40-728

R/L HAB

N-40-104

RAMP HAB

S-40-3103

IH 43 SB

IH 43 NB

R/L GD

RAMP HAA

R/L HAA

R/L IH 43

N PORT WASHINGTON ROAD

R/L PW

END CONSTRUCTION
STA 17+04.09 HA

R/L HA

W RIVER WOODS PARKWAY

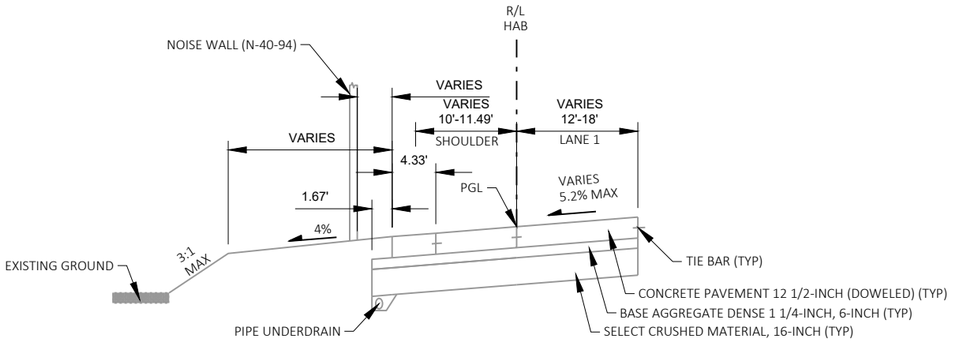
W CHATEAU PLACE

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	PROJECT OVERVIEW	SHEET 5	E

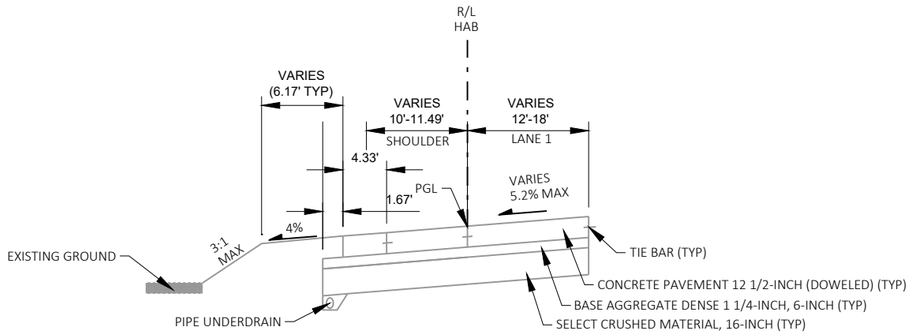
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LAYOUT NAME - 01

PLOT DATE : 11/3/2022 4:49 PM PLOT BY : FERGUSON, JULIE PLOT NAME : PLOT SCALE : 1 IN:200 FT

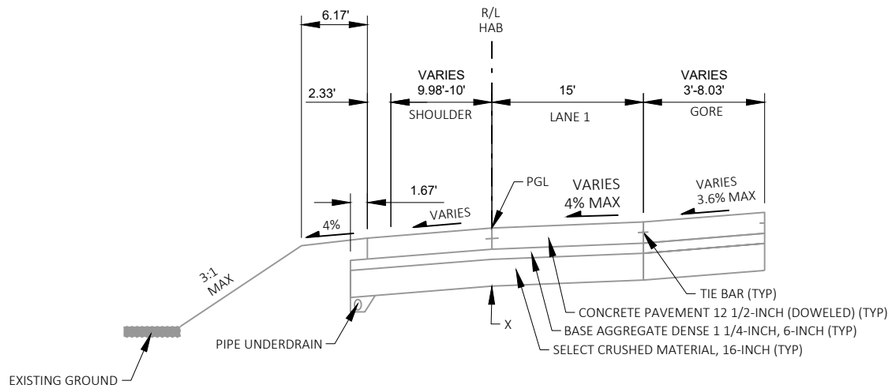
WISDOT/CADDS SHEET 42



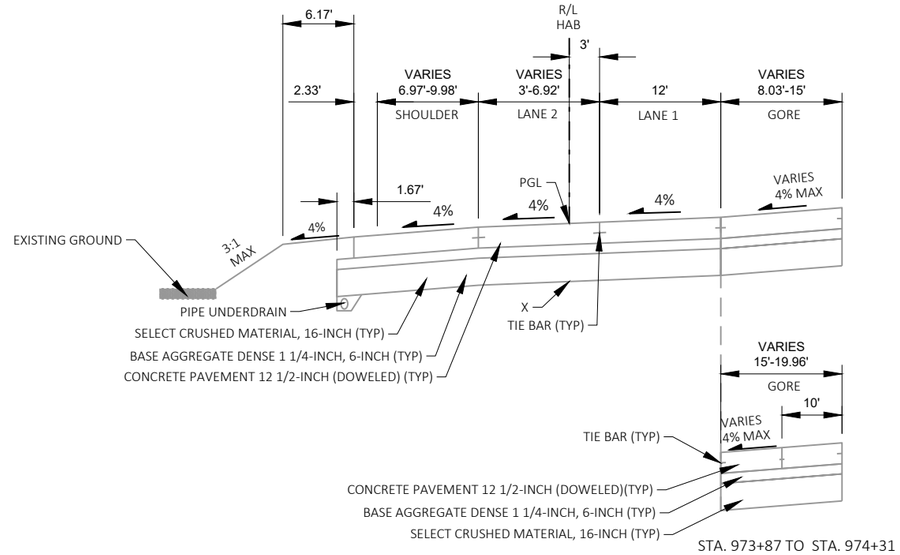
TYPICAL EXISTING SECTION
RAMP HAB
STA. 969+13 TO STA. 969+61



TYPICAL EXISTING SECTION
RAMP HAB
STA. 969+61 TO STA. 971+93

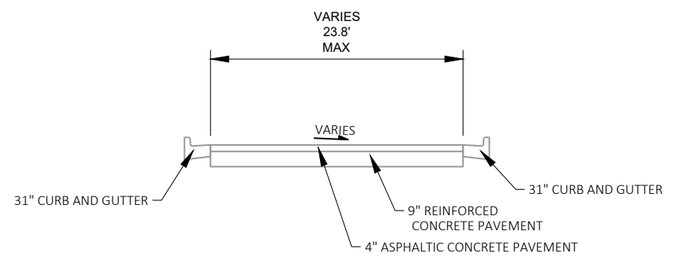


TYPICAL EXISTING SECTION
RAMP HAB
STA. 971+93 TO STA. 973+06



STA. 973+87 TO STA. 974+31

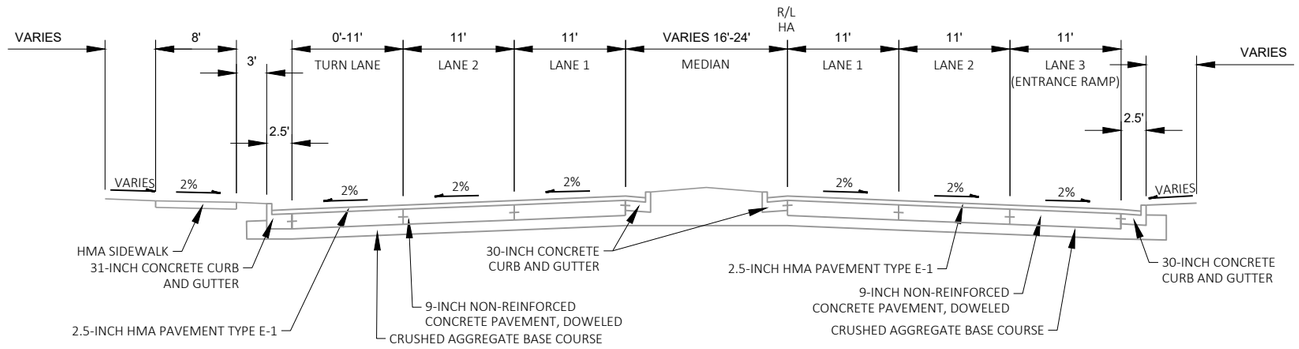
TYPICAL EXISTING SECTION
RAMP HAB
STA. 973+06 TO STA. 974+31



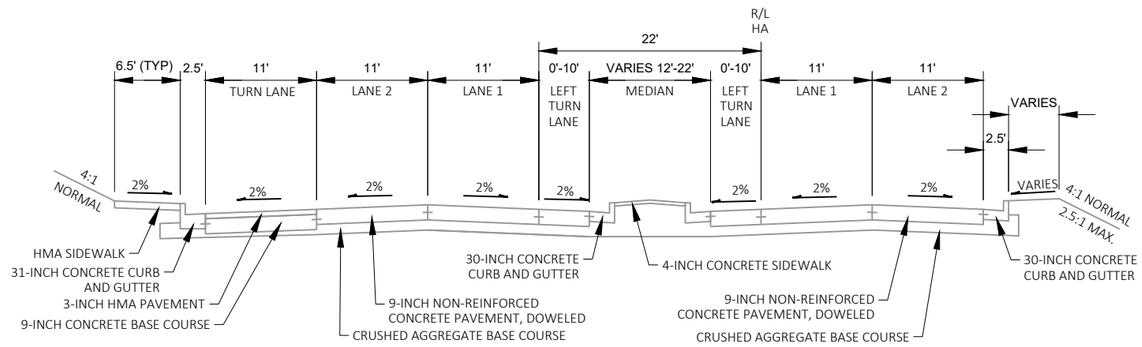
TYPICAL EXISTING SECTION
RAMP HAB
STA. 974+31 TO 981+90

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	TYPICAL SECTION	SHEET 6	E

2

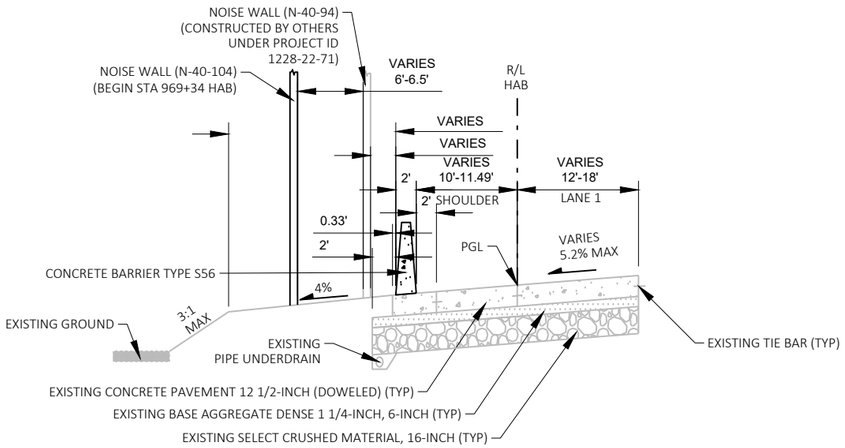


TYPICAL EXISTING SECTION
HAMPTON AVE
STA. 11+41 TO STA. 12+51

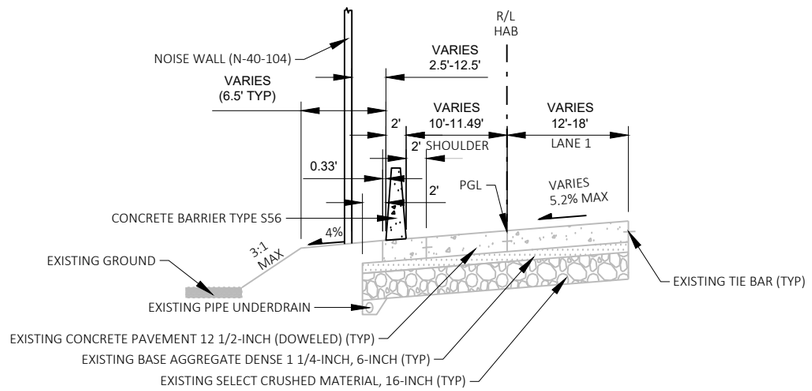


TYPICAL EXISTING SECTION
HAMPTON AVE
STA. 12+51 TO STA. 17+05

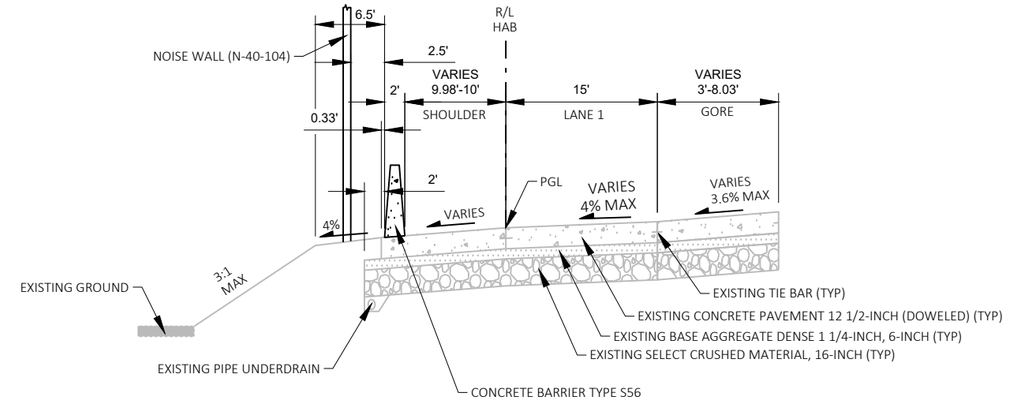
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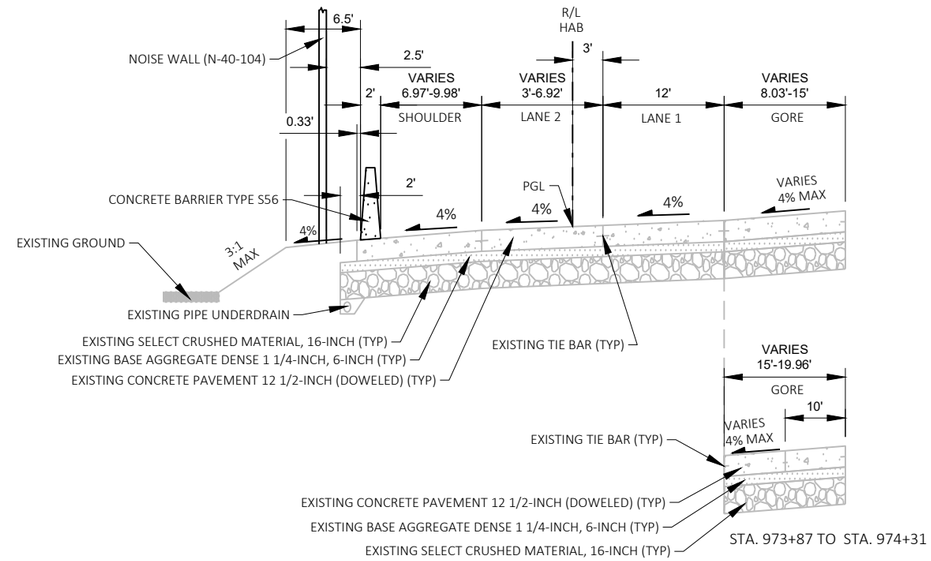
TYPICAL FINISHED SECTION
RAMP HAB
STA. 969+13 TO STA. 969+61



TYPICAL FINISHED SECTION
RAMP HAB
STA. 969+61 TO STA. 971+93



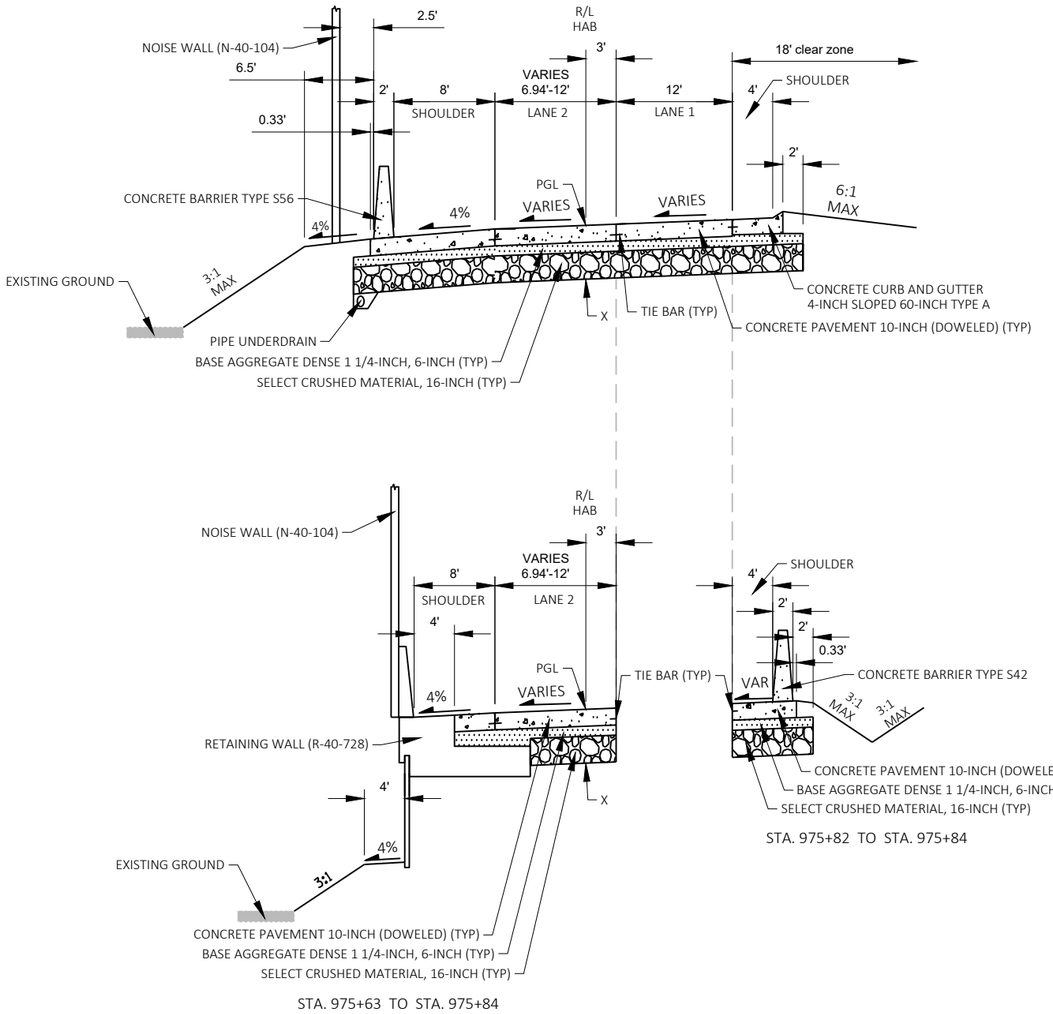
TYPICAL FINISHED SECTION
RAMP HAB
STA. 971+93 TO STA. 973+06



STA. 973+87 TO STA. 974+31

TYPICAL FINISHED SECTION
RAMP HAB
STA. 973+06 TO STA. 974+31

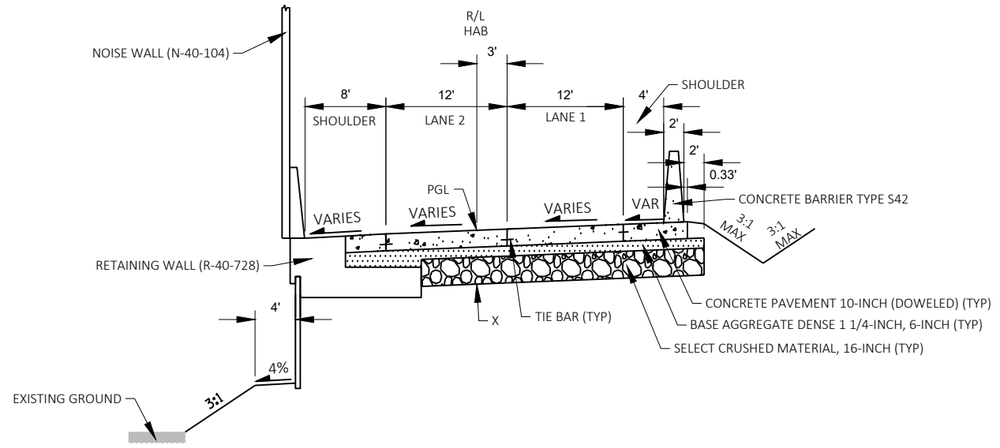
NOTES:
X = POINT REFERRED TO ON CROSS-SECTION
PGL = POINT REFERRED TO ON PROFILE AND
PIVOT POINT FOR SUPERELEVATIONS



STA. 975+82 TO STA. 975+84

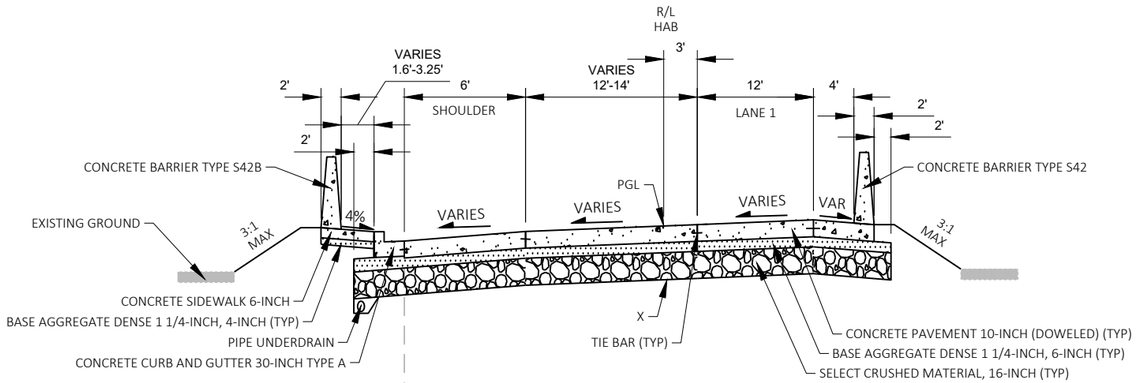
STA. 975+63 TO STA. 975+84

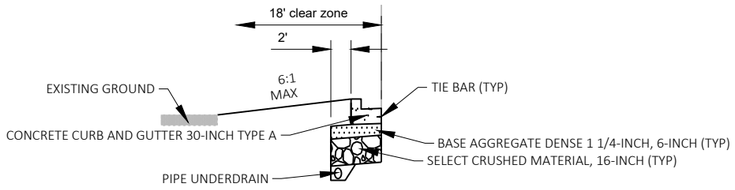
TYPICAL FINISHED SECTION
RAMP HAB
STA. 974+31 TO STA. 975+84



TYPICAL FINISHED SECTION
RAMP HAB
STA. 975+84 TO STA. 977+05

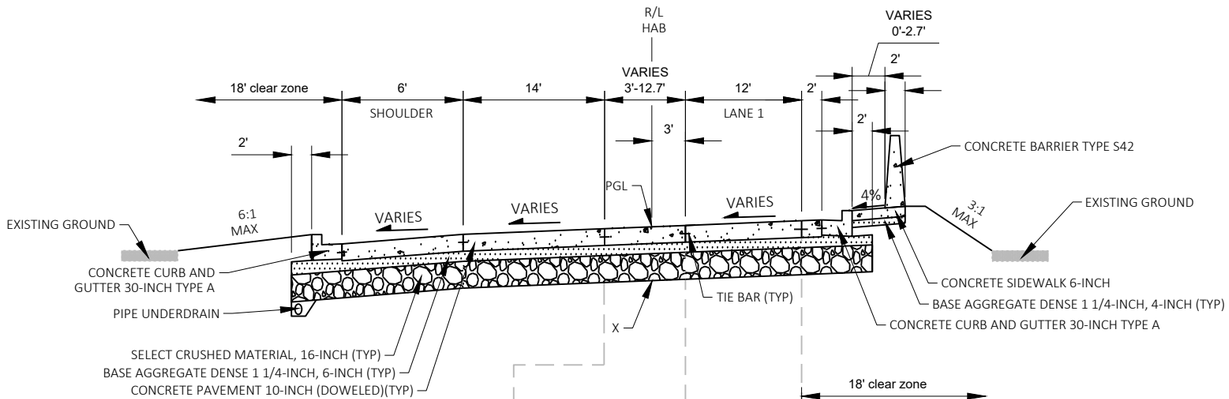
NOTES:
X = POINT REFERRED TO ON CROSS-SECTION
PGL = POINT REFERRED TO ON PROFILE AND
PIVOT POINT FOR SUPERELEVATIONS

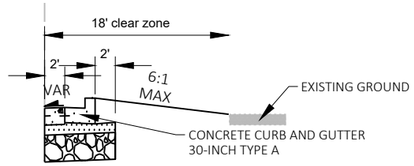




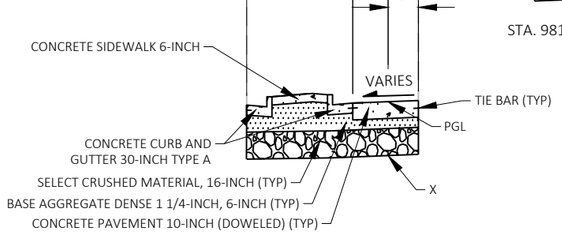
STA. 981+37 TO STA. 981+46

TYPICAL FINISHED SECTION
RAMP HAB
STA. 981+12 TO STA. 981+46





STA. 981+65 TO STA. 981+90

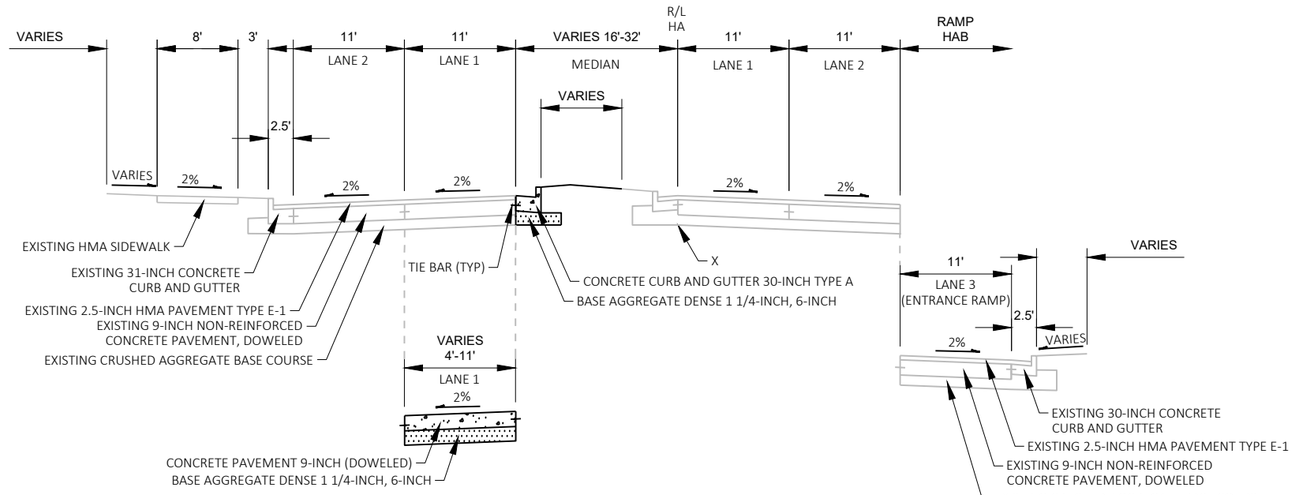


STA. 981+67 TO STA. 981+90

TYPICAL FINISHED SECTION
RAMP HAB
STA. 981+46 TO STA. 981+90

NOTES:
X = POINT REFERRED TO ON CROSS-SECTION
PGL = POINT REFERRED TO ON PROFILE AND
PIVOT POINT FOR SUPERELEVATIONS

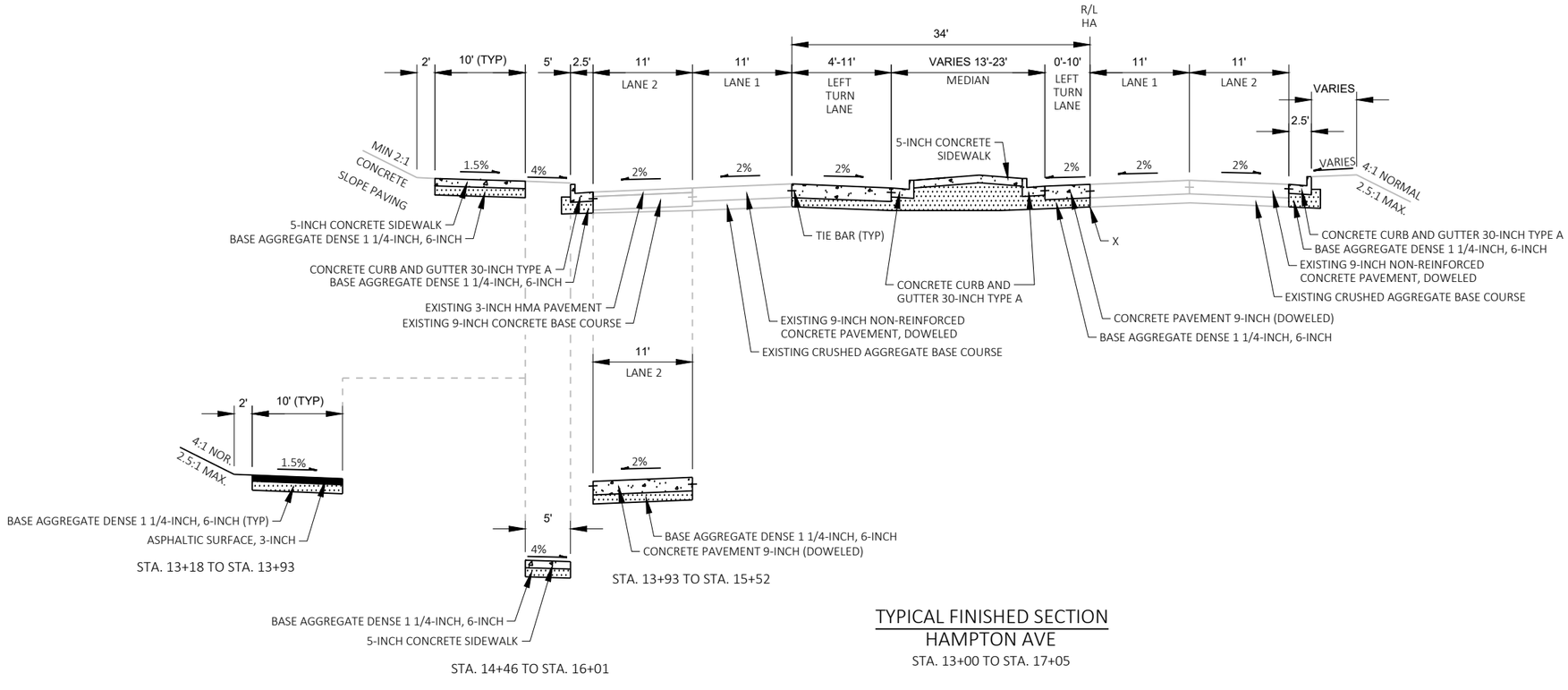
PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	TYPICAL SECTION	SHEET 10	E



STA. 12+00 TO STA. 13+00

STA. 11+41 TO STA. 12+16

TYPICAL FINISHED SECTION
HAMPTON AVE
STA. 11+41 TO STA. 13+00



STA. 13+18 TO STA. 13+93

STA. 13+93 TO STA. 15+52

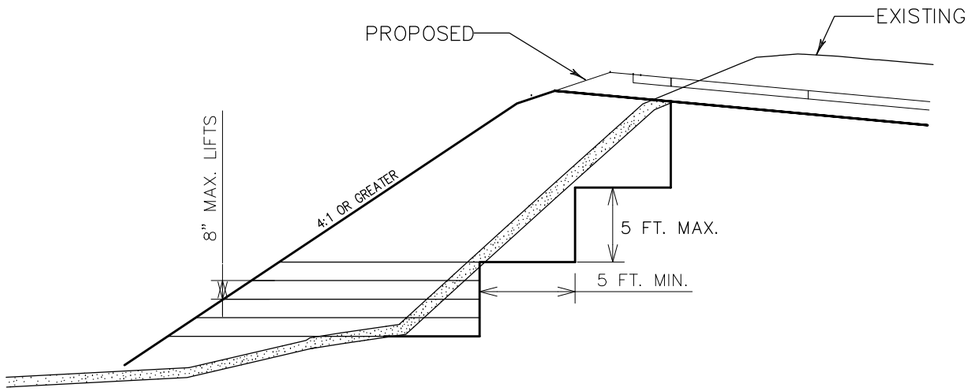
STA. 14+46 TO STA. 16+01

TYPICAL FINISHED SECTION
HAMPTON AVE
STA. 13+00 TO STA. 17+05

NOTES:
X = POINT REFERRED TO ON CROSS-SECTION
PGL = POINT REFERRED TO ON PROFILE AND
PIVOT POINT FOR SUPERELEVATIONS

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	TYPICAL SECTION	SHEET 11	E

2

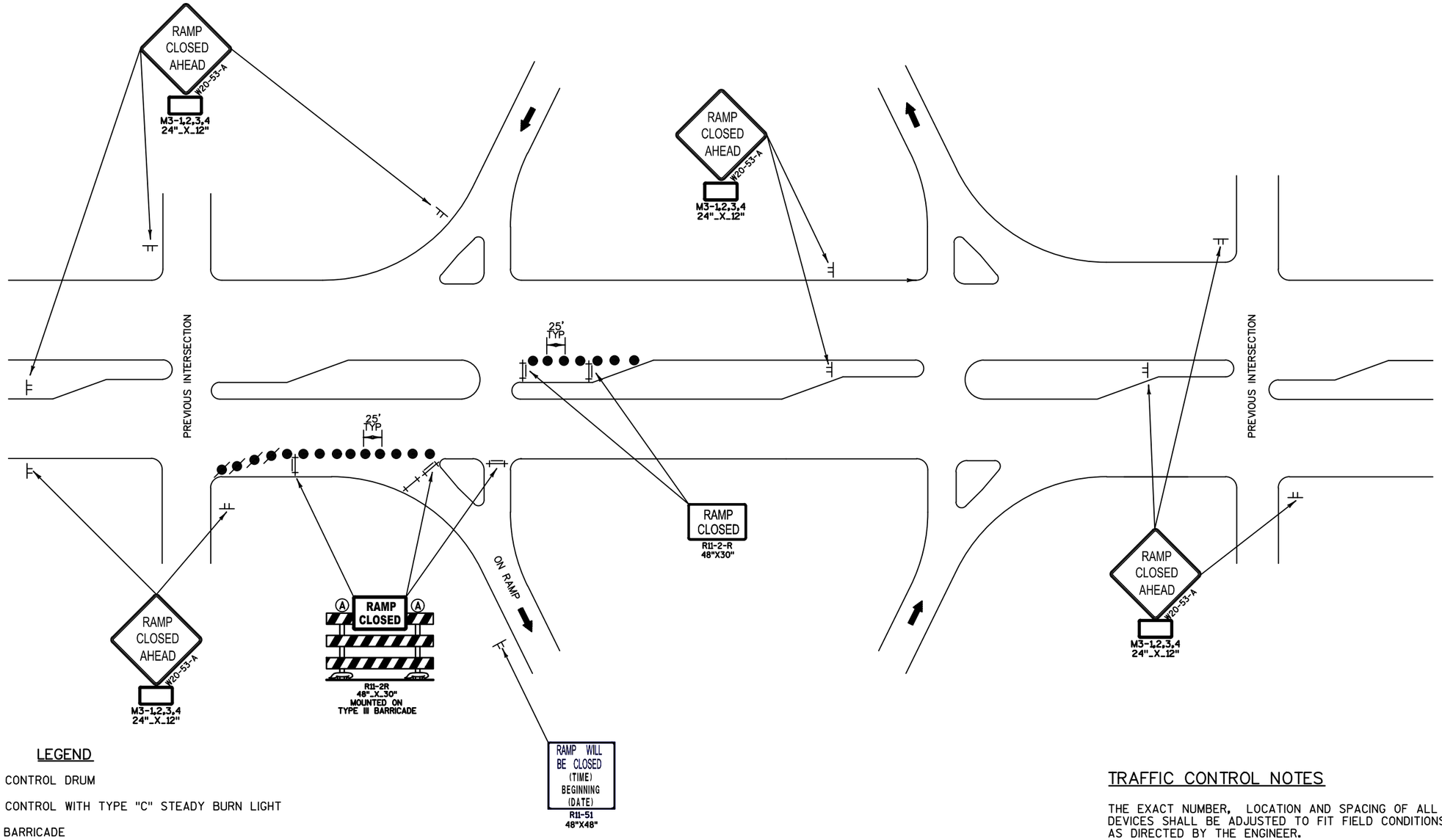


BENCH CONSTRUCTION

(APPLICABLE TO EXISTING SLOPES STEEPER THAN
3:1 AND HIGHER THAN 10 FEET.)

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	CONSTRUCTION DETAIL	SHEET 12	E

2



LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH 2 TYPE "A" WARNING LIGHT (FLASHING)
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE
SHORT TERM ONLY

TRAFFIC CONTROL NOTES

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

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

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

SHORT TERM DEFINED AS 7 DAYS OR LESS.
FOR NIGHT TIME OPERATIONS ALL DRUMS IN TAPERS SHALL HAVE WARNING LIGHT, TYPE C (STEADY BURN). MAY BE APPLIED TO ARTERIALS OR LOCAL ROADS.

GENERAL NOTES

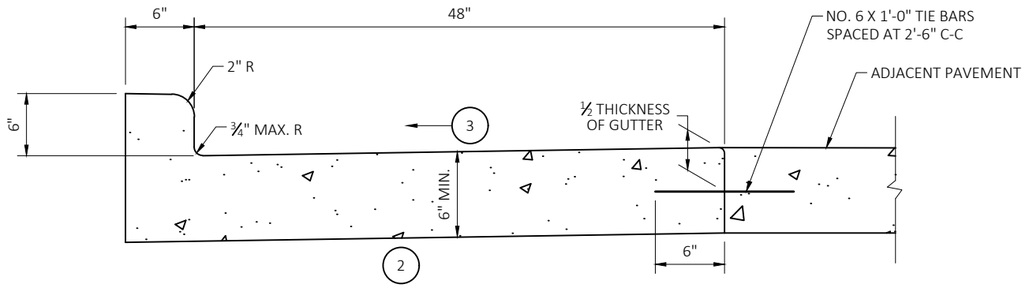
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

(1) DRILLED TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPE A.

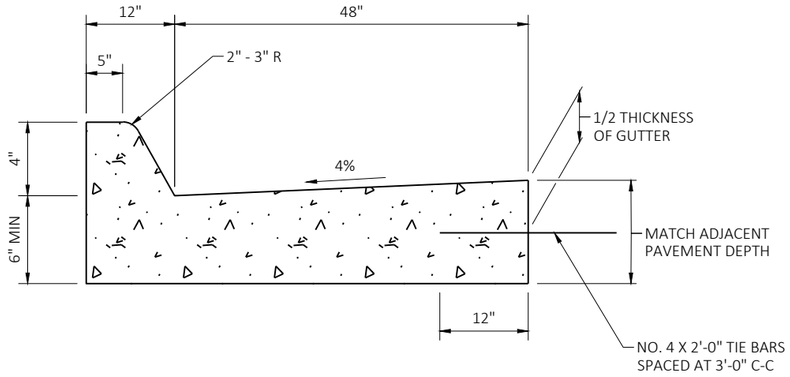
(2) THE BOTTOM OF THE CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(3) USE 4% GUTTER SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.



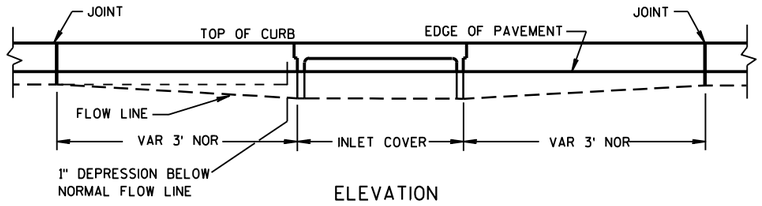
(1)

CONCRETE CURB & GUTTER
54-INCH TYPE A

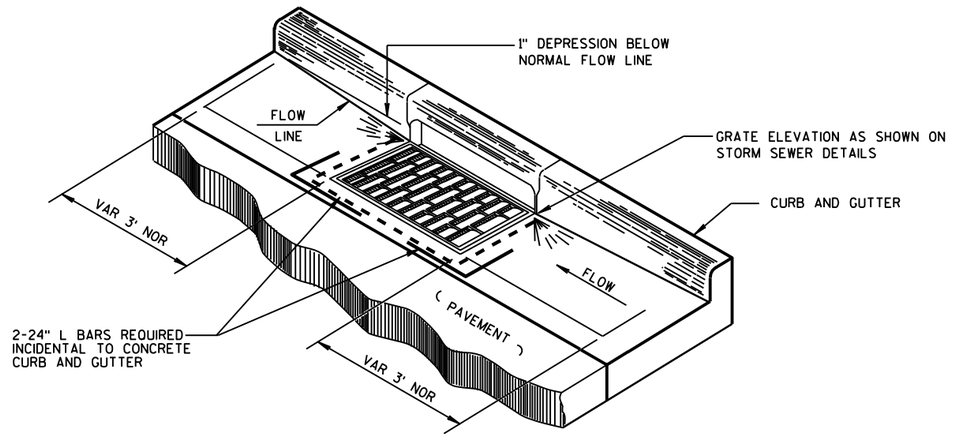


CONCRETE CURB & GUTTER
4-INCH SLOPED 60-INCH TYPE A

2

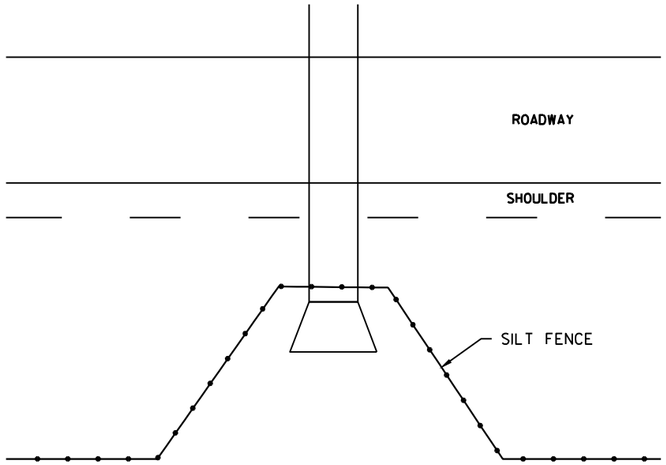


ELEVATION



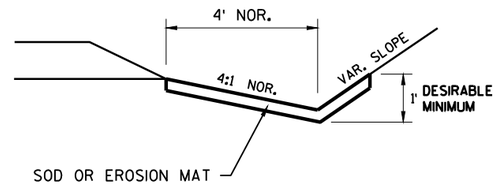
CURB AND GUTTER AT DEPRESSED INLETS

SEE STORM SEWER PLANS FOR LOCATIONS



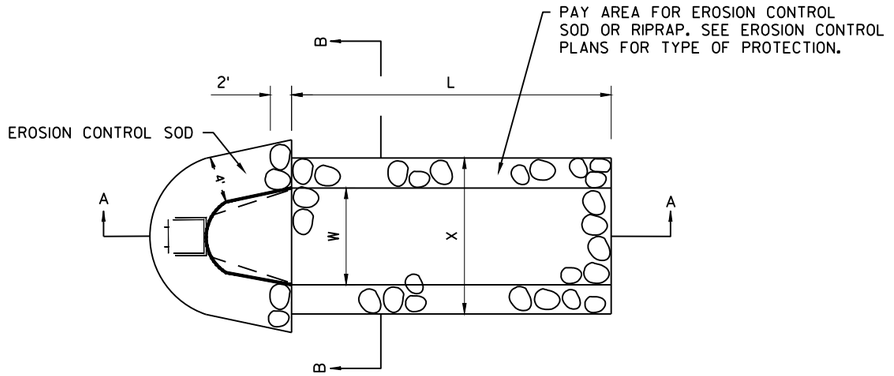
NOTE
SEE SILT FENCE SDD FOR ADDITIONAL INFORMATION.

TYPICAL SILT FENCE DETAIL AT PIPE INLET

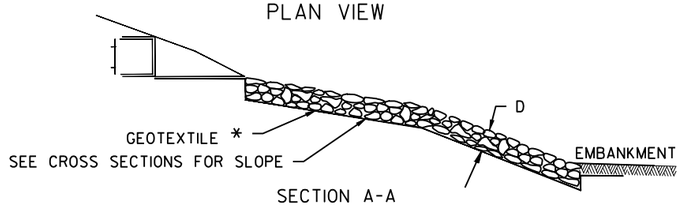


SOD OR EROSION MAT DETAIL FOR DITCHES

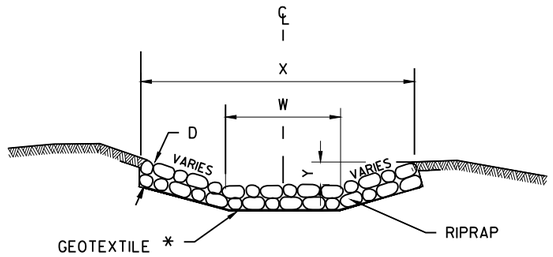
2



PLAN VIEW



SECTION A-A



SECTION B-B

L = 3 x W (NOR) OR 10' MIN
OR AS INDICATED IN THE PLANS
OR AS DIRECTED BY THE ENGINEER

D = 12" FOR RIPRAP LIGHT
18" FOR RIPRAP MEDIUM
24" FOR RIPRAP HEAVY

X = W+2' FOR TYPICAL CULVERT
DISCHARGE INTO DITCH
W+5' FOR CULVERT DISCHARGE
DOWN ENBANKMENT SLOPE

Y = 0' FOR TYPICAL CULVERT DISCHARGE INTO DITCH
12" MIN. FOR RIPRAP LIGHT
18" MIN FOR RIPRAP MEDIUM
24" FOR RIPRAP HEAVY

CONSTRUCTION NOTES:

1. GEOTEXTILE FABRIC SHALL EXTEND BENEATH THE APRON END SECTION. INSTALL ON PREPARED FOUNDATION GRADE PRIOR TO END WALL INSTALLATION.

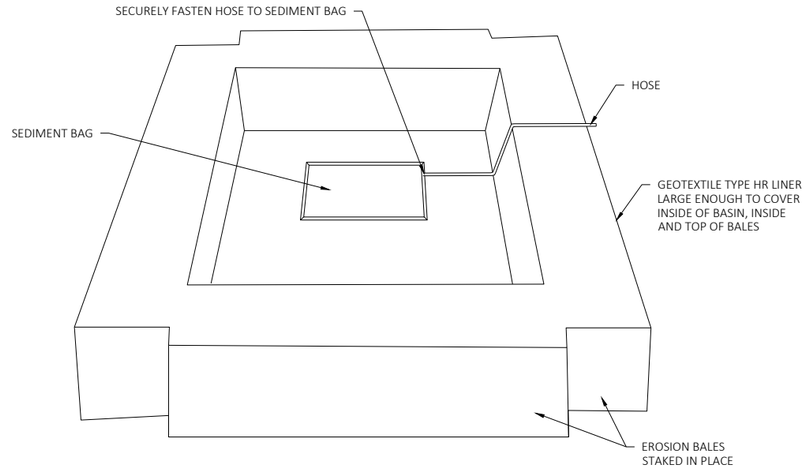
2. COMPLETE GEOTEXTILE FABRIC AND RIPRAP SECTION INSTALLATION PRIOR TO STORM WATER FLOW.

SOD, RIPRAP AND GEOTEXTILE DETAIL AT APRON ENDWALLS

SEE EROSION CONTROL PLANS FOR LOCATIONS

* TYPE R (FOR RIPRAP LIGHT ONLY)
TYPE HR (FOR RIPRAP HEAVY AND MEDIUM ONLY)

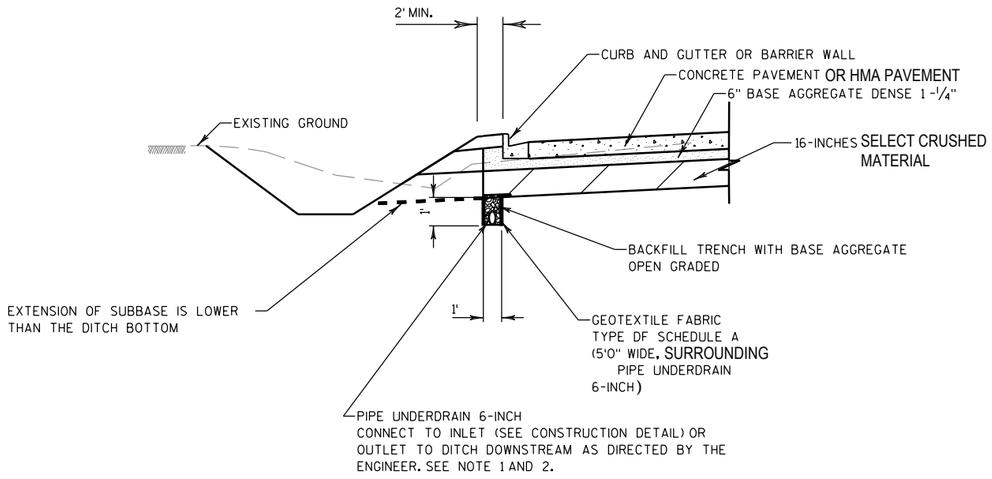
2



NOTES

1. CONTRACTOR SHALL PUMP TURBID WATER FROM EXCAVATION TO SEDIMENT BAG PLACED INSIDE FABRIC LINED STAKED BALE ENCLOSURE PRIOR TO DISCHARGING TO DITCHES/INLETS/WETLANDS OR WATERWAYS.
2. SEDIMENT BAG TO BE PLACED IN AN UPLAND VEGETATED AREA OR EQUIVALENT LOCATION APPROVED BY THE ENGINEER.
3. BASIN TO BE KEPT LESS THAN 10% FULL OF SEDIMENT. GEOTEXTILE FABRIC AND SEDIMENTS TO BE DISPOSED BY THE CONTRACTOR OFF OF THE PROJECT SITE.
4. TEMPORARY SETTLING BASIN AND SEDIMENT BAG TO BE INCIDENTAL TO CONTRACT.
5. SEDIMENT BAG, BALES AND FABRIC TO BE REPLACED AS NECESSARY AND IS INCIDENTAL TO CONTRACT.
6. SIZE TO BE DETERMINED BY THE CONTRACTOR AS PART OF THE ECIP SUBMITTAL.

TEMPORARY SETTLING BASIN DETAIL



PIPE UNDERDRAIN IN URBAN SECTIONS

NOTES:

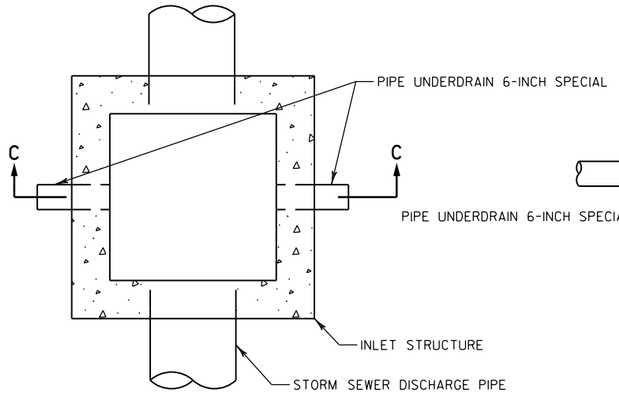
1. PIPE UNDERDRAIN UNPERFORATED REQUIRED AT LOCATIONS WHERE UNDERDRAIN IS REQUIRED TO CONNECT TO DITCHES OUTSIDE THE EBS AREA.

2. PIPE UNDERDRAIN UNPERFORATED REQUIRED AT LOCATIONS WHERE UNDERDRAIN IS REQUIRED TO OUTFALL IN DITCHES ON THE OPPOSITE SIDE OF THE ROAD (SEE UNDERDRAIN LATERAL CROSSING OUTLET DETAIL)

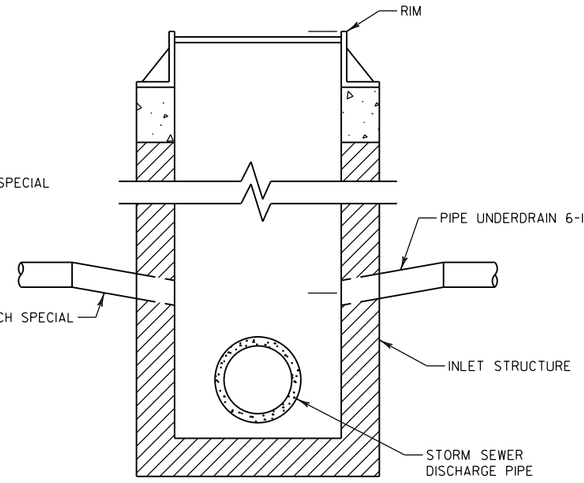
3. ADJUST LATERAL LOCATION OF PIPE UNDERDRAIN AS NECESSARY TO AVOID CONFLICTS WITH THE STORM SEWER.

NOTES

1. CONNECTIONS TO INLETS OR MANHOLES IN MEDIAN SHALL USE PIPE UNDERDRAIN 6-INCH
2. PROVIDE TWO 6" DIA. OPENINGS FOR UNDERDRAIN PIPE A MINIMUM OF 49" BELOW THE RIM ELEVATION.
3. SEE TYPICAL SECTIONS, STORM SEWER, AND UNDERDRAIN PLANS FOR PIPE UNDERDRAIN LOCATIONS.
3. CORE CONNECTION FOR THE INLET DRAIN IS INCIDENTAL TO PIPE UNDERDRAIN 6-INCH



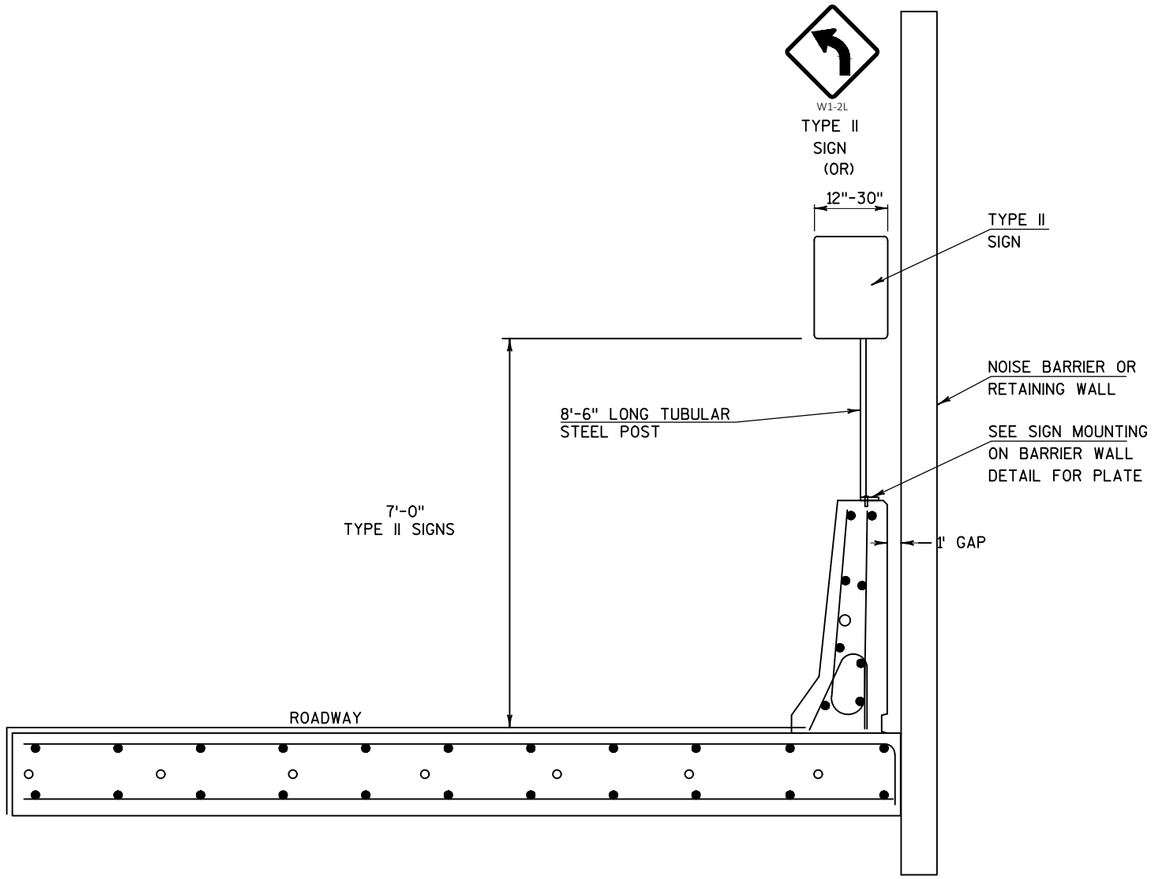
PLAN VIEW



SECTION C-C

UNDERDRAIN OUTFALL AT INLET

2



TYPE II SIGN AT NOISE WALL OR RETAINING WALL APPLICATION

2

GENERAL NOTES:

1) ALL ITEMS ASSOCIATED WITH LIGHTING REMOVALS ARE SHOWN IN LIGHTING PLAN.

2) ALL ITEMS ASSOCIATED WITH BRIDGE REMOVALS ARE SHOWN IN BRIDGE PLAN.

3) ALL ITEMS ASSOCIATED WITH FTMS REMOVALS ARE SHOWN IN FTMS PLAN.

4) ALL ITEMS ASSOCIATED WITH STORM SEWER REMOVALS ARE SHOWN IN STORM SEWER PLANS.

5) ALL ITEMS ASSOCIATED WITH SIGN REMOVALS ARE SHOWN IN THE SIGNING PLANS.

6) CLEARING AND GRUBBING SHALL BE PAID BY THE STATION

7) FOR ADDITIONAL UTILITY INFORMATION SEE EXISTING UTILITY PLAN.

8) THE LOCATION OF THE EXISTING UTILITY INSTALLATIONS AS SHOWN ON THE PLANS IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN, INCLUDING BUILDING SERVICES AND LATERALS.

REMOVAL LEGEND

- CLEARING AND GRUBBING (STA.)
- REMOVING PAVEMENT
- REMOVING ASPHALTIC SURFACE
- REMOVING CONCRETE SIDEWALK
- REMOVING CURB AND GUTTER
- REMOVING CONCRETE BARRIER
- SLOPE INTERCEPT
- SAWING ASPHALT
- SAWING CONCRETE PAVEMENT
- REMOVING FENCE

N

W GLENDALE AVENUE

W ROCK PLACE

MILWAUKEE RIVER

W HAMPTON AVENUE

OAK LEAF TRAIL

IH 43 SB

IH 43 NB

N PORT WASHINGTON ROAD

RAMP.HAB

RAMP HAA

970HAB 972HAB 974HAB 976HAB 978HAB 980HAB 982HAB

968HAA 970HAA 972HAA 974HAA 976HAA 978HAA

968 970 972 974 976 978 980

98PW 100PW 102PW 104PW 106PW

12GD 14GD

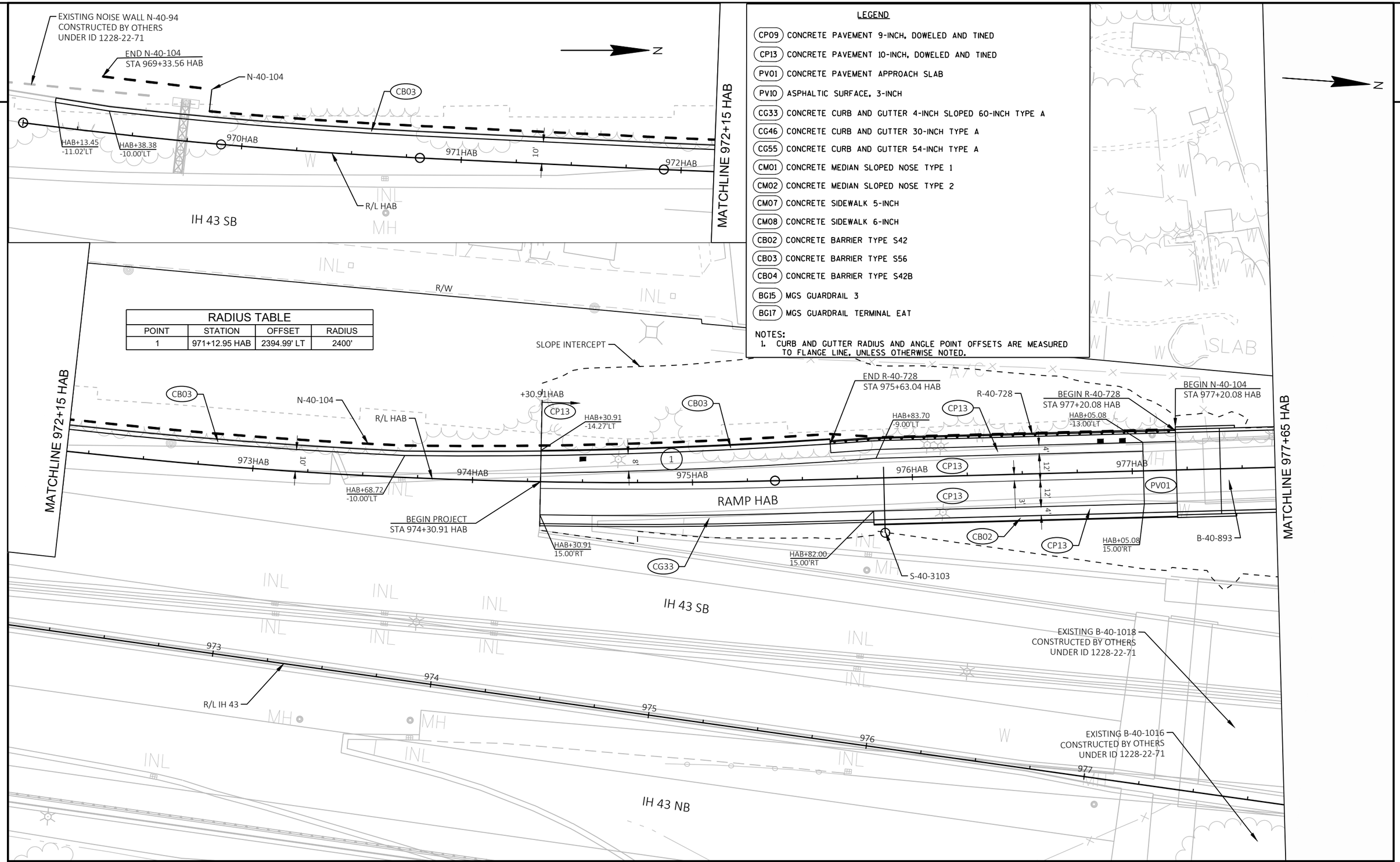
12HA 14HA 16HA 18HA

RIPRAP

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET 21	E

FILE NAME : N:\PDS\C3D\12282274\SHEETSPLAN\021101-RM.DWG
LAYOUT NAME - 01

PLOT DATE : 10/7/2022 7:02 AM PLOT BY : FERGUSON, JULIE PLOT NAME : PLOT SCALE : 1 IN:100 FT



RADIUS TABLE			
POINT	STATION	OFFSET	RADIUS
1	971+12.95 HAB	2394.99' LT	2400'

LEGEND

CP09	CONCRETE PAVEMENT 9-INCH, DOWELED AND TINED
CP13	CONCRETE PAVEMENT 10-INCH, DOWELED AND TINED
PV01	CONCRETE PAVEMENT APPROACH SLAB
PV10	ASPHALTIC SURFACE, 3-INCH
CG33	CONCRETE CURB AND GUTTER 4-INCH SLOPED 60-INCH TYPE A
CG46	CONCRETE CURB AND GUTTER 30-INCH TYPE A
CG55	CONCRETE CURB AND GUTTER 54-INCH TYPE A
CM01	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CM02	CONCRETE MEDIAN SLOPED NOSE TYPE 2
CM07	CONCRETE SIDEWALK 5-INCH
CM08	CONCRETE SIDEWALK 6-INCH
CB02	CONCRETE BARRIER TYPE S42
CB03	CONCRETE BARRIER TYPE S56
CB04	CONCRETE BARRIER TYPE S42B
BG15	MGS GUARDRAIL 3
BG17	MGS GUARDRAIL TERMINAL EAT

NOTES:
1. CURB AND GUTTER RADIUS AND ANGLE POINT OFFSETS ARE MEASURED TO FLANGE LINE, UNLESS OTHERWISE NOTED.

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 22	E

LEGEND

CP09	CONCRETE PAVEMENT 9-INCH, DOWELED AND TINED
CP13	CONCRETE PAVEMENT 10-INCH, DOWELED AND TINED
PV01	CONCRETE PAVEMENT APPROACH SLAB
PV10	ASPHALTIC SURFACE, 3-INCH
CG33	CONCRETE CURB AND GUTTER 4-INCH SLOPED 60-INCH TYPE A
CG46	CONCRETE CURB AND GUTTER 30-INCH TYPE A
CG55	CONCRETE CURB AND GUTTER 54-INCH TYPE A
CM01	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CM02	CONCRETE MEDIAN SLOPED NOSE TYPE 2
CM07	CONCRETE SIDEWALK 5-INCH
CM08	CONCRETE SIDEWALK 6-INCH
CB02	CONCRETE BARRIER TYPE S42
CB03	CONCRETE BARRIER TYPE S56
CB04	CONCRETE BARRIER TYPE S42B
BG15	MGS GUARDRAIL 3
BG17	MGS GUARDRAIL TERMINAL EAT

NOTES:
1. CURB AND GUTTER RADIUS AND ANGLE POINT OFFSETS ARE MEASURED TO FLANGE LINE, UNLESS OTHERWISE NOTED.

RADIUS TABLE			
POINT	STATION	OFFSET	RADIUS
2	981+14.86 HAB	90.91' LT	75'
3	981+45.81 HAB	116.67' RT	100'
4	981+63.39 HAB	40.90' RT	22'
5	12+83.35 HA	10.01' LT	10'
6	13+90.35 HA	77.00' LT	100'

MATCHLINE 977+65 HAB

R/W

R/L HAB

978HAB

979HAB

980HAB

981HAB

RAMP HAB

B-40-893

MILWAUKEE RIVER

EXISTING B-40-1018
CONSTRUCTED BY OTHERS
UNDER ID 1228-22-71

EXISTING B-40-1016
CONSTRUCTED BY OTHERS
UNDER ID 1228-22-71

IH 43 SB

R/L IH 43

978

979

IH 43 NB

R/L HA

11HA

BEGIN CONSTRUCTION
STA 11+40.52 HA

N

HA+40.52
-20.27'LT

CG46

HA+15.93
21.81'RT

HA+15.94
31.96'RT

HA+00.00
-23.82'LT

HA+00.00
-34.00'LT

CP09

2

SLOPE INTERCEPT

WETLAND BOUNDARY

HAB+85.69
-26.77'LT

HAB+94.15
-34.66'LT

CG46

R/W

CP13

HAB+36.72
-23.53'LT

CM08

CB04

HAB+17.03
-20.02'LT

CG46

CM02

CM01

HAB+92.87
-23.42'LT

CM08

HA+78.34
-0.02'LT

CG55

5

HA+89.36
-0.01'LT

HA+92.75
-6.59'LT

W. HAMPTON AVENUE

OAK LEAF TRAIL

SLAB

AG EX

INL

HAB+11.92
-15.00'LT

HAB+65.56
-9.70'LT

CP13

982HAB

CM01

HA+99.95
-34.00'LT

HAB+90.64
-4.00'LT

HA+99.95
-29.79'LT

HA+99.96
-0.02'LT

HA+99.96
-20.90'LT

CP09

HA+18.43
-61.39'LT

HA+18.32
-68.46'LT

HAB+42.07
3.00'RT

CP13

PV01

HAB+67.30
-4.00'LT

END PROJECT
STA 981+90.18 HAB

HAB+11.92
19.00'RT

HAB+17.25
19.00'RT

CB02

HAB+45.74
17.00'RT

3

CM08

HAB+64.50
18.78'RT

4

HAB+65.06
24.18'RT

HAB+67.48
19.34'RT

HA+31.28
21.60'RT

HA+34.82
0.00'

R/W

6

HA+34.82
-6.17'LT

HA+34.82
-23.00'LT

PV10

CM01

CP09

CG46

CG46

CM07

HA+70.45
-23.00'LT

CG46

HA+76.33
-56.23'LT

MATCHLINE 13+85HA

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 23	E

FILE NAME : N:\PDS\C3D\12282274\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 02
PLOT DATE : 11/7/2022 11:16 AM
PLOT BY : FERGUSON, JULIE
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

LEGEND

- (CP09) CONCRETE PAVEMENT 9-INCH, DOWELED AND TINED
- (CP13) CONCRETE PAVEMENT 10-INCH, DOWELED AND TINED
- (PV01) CONCRETE PAVEMENT APPROACH SLAB
- (PV10) ASPHALTIC SURFACE, 3-INCH
- (CG33) CONCRETE CURB AND GUTTER 4-INCH SLOPED 60-INCH TYPE A
- (CG46) CONCRETE CURB AND GUTTER 30-INCH TYPE A
- (CG55) CONCRETE CURB AND GUTTER 54-INCH TYPE A
- (CM01) CONCRETE MEDIAN SLOPED NOSE TYPE 1
- (CM02) CONCRETE MEDIAN SLOPED NOSE TYPE 2
- (CM07) CONCRETE SIDEWALK 5-INCH
- (CM08) CONCRETE SIDEWALK 6-INCH
- (CB02) CONCRETE BARRIER TYPE S42
- (CB03) CONCRETE BARRIER TYPE S56
- (CB04) CONCRETE BARRIER TYPE S42B
- (BG15) MGS GUARDRAIL 3
- (BG17) MGS GUARDRAIL TERMINAL EAT

NOTES:
1. CURB AND GUTTER RADIUS AND ANGLE POINT OFFSETS ARE MEASURED TO FLANGE LINE, UNLESS OTHERWISE NOTED.

RADIUS TABLE			
POINT	STATION	OFFSET	RADIUS
7	16+65.18 HA	96.06' LT	30'

MATCHLINE 13+85HA

OAK LEAF TRAIL

W HAMPTON AVENUE

N PORT WASHINGTON RD

IH 43 SB

IH 43 NB

RIPRAP

MILWAUKEE RIVER

WETLAND BOUNDARY

SLOPE INTERCEPT

R/L HA

R/L IH 43

R/L PW

END CONSTRUCTION
STA 17+04.09 HA

NOTE:
SEE PLAN DETAILS - CURB RAMPS FOR INFORMATION ON CURB RAMP CONSTRUCTION

14HA 15HA 16HA 17HA 18HA

984 983 982 981

107PW 106PW 105PW 104PW

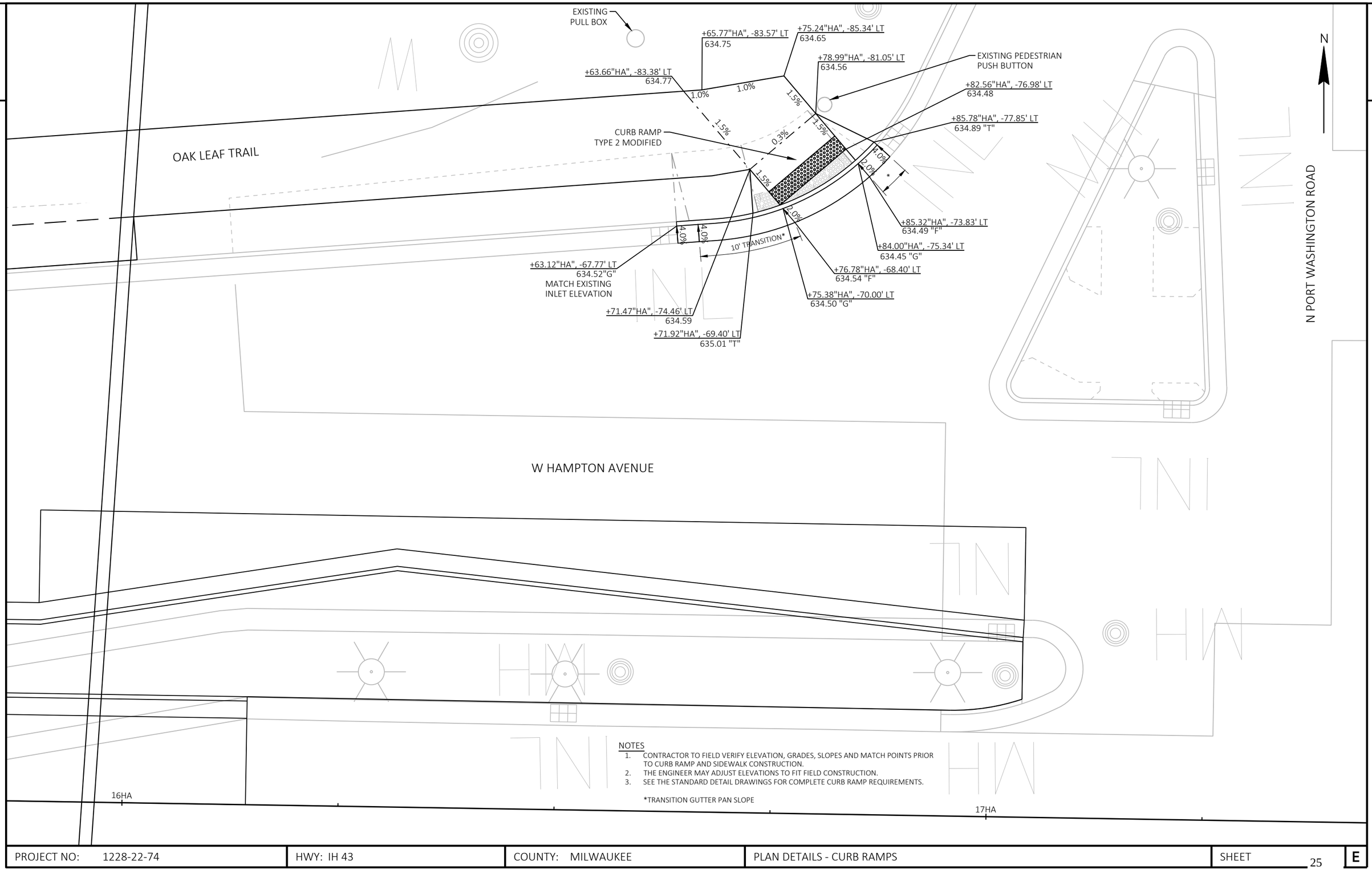
R/W

INL MH HW

N

2

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 24	E



NOTES

1. CONTRACTOR TO FIELD VERIFY ELEVATION, GRADES, SLOPES AND MATCH POINTS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.
2. THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONSTRUCTION.
3. SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.

*TRANSITION GUTTER PAN SLOPE

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	PLAN DETAILS - CURB RAMPS	SHEET 25	E

2

2

N

SLOPE INTERCEPT

R/W

N-40-104

R/L HAB

R-40-728

B-40-893

MATCHLINE 977+65 HAB

972HAB

973HAB

974HAB

RAMP HAB

975HAB

976HAB

977HAB

642.55 642.44 642.30 642.17 642.08 642.03 641.97 641.39 641.36

4.0% 642.96 642.85 642.72 642.58 642.50 642.44 642.22 642.16 642.02 641.87 641.70 641.53 641.44

643.12 643.04 642.93 642.82 642.71 642.61 642.49 642.32 642.18 642.03 641.86 641.68 641.48 641.62

4.0% 643.24 643.16 643.05 642.94 642.81 642.67 642.55 642.36 642.21 642.04 641.86 641.66 641.68

4.0% 643.72 643.64 643.53 643.42 643.19 642.93 642.79 642.42 642.27 642.10 641.92 641.72 641.92

4.0% 3.2% 2.2% 2.0% 4.0% 3.8% 2.3% 2.0%

642.66 642.51 642.34 642.16 641.96

S-40-3103

IH 43 SB

973

974

975

976

977

R/L IH 43

IH 43 NB

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	PAVING GRADES	SHEET 26	E

FILE NAME : N:\PDS\C3D\12282274\SHEETSPLAN\021301-PG.DWG
LAYOUT NAME - 01

PLOT DATE : 11/7/2022 9:22 AM PLOT BY : FERGUSON, JULIE PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

MILWAUKEE RIVER

W. HAMPTON AVENUE

11HA

12HA

13HA

R/L HA

N

638.25
638.24
638.22
638.11
638.26
638.16
638.02
637.85
637.86
637.76
637.71

R/W

SLOPE INTERCEPT

637.63
638.10
638.11
638.12
637.68
637.78
637.44
637.61
637.63
637.56
637.84
637.55
637.57
637.81
638.03
637.89
637.82
637.76
638.19
638.05
637.93
638.00
637.67
637.85
637.91
637.74
638.12
638.10
637.59
638.23
638.18
637.96
637.72
637.56
638.29
638.42
638.15
637.79
637.55
638.20
637.68
638.09
638.53
638.61
638.50
638.21
638.25
638.07
637.45
637.44
637.60
637.48
637.61
637.44
637.25
637.26
637.17
637.39
637.35
637.34
637.26
637.24
637.05
637.24
637.21
636.73
637.15
OAK LEAF TRAIL

MATCHLINE 13+85HA

R/W

R/L HAB

MATCHLINE 977+65 HAB

978HAB

979HAB

980HAB

981HAB

982HAB

RAMP HAB

B-40-893

IH 43 SB

978

979

R/L IH 43

IH 43 NB

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	PAVING GRADES	SHEET 27	E

FILE NAME : C:\CIVIL 3D PROJECTS\12282274\SHEETSPLAN\021301-PG.DWG
LAYOUT NAME - 02

PLOT DATE : 10/6/2022 11:30 AM PLOT BY : FERGUSON, JULIE PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

N

SLOPE INTERCEPT

NOTE:
SEE PLAN DETAILS - CURB RAMPS FOR INFORMATION ON CURB RAMP CONSTRUCTION

OAK LEAF TRAIL

N PORT WASHINGTON ROAD

107PW

106PW

105PW

104PW

R/L PW

R/L HA

R/L IH 43

MATCHLINE 13+85HA

W. HAMPTON AVENUE

14HA

15HA

16HA

17HA

18HA

IH 43 SB

IH 43 NB

MILWAUKEE RIVER

984

983

982

981

637.32 637.17 637.06 637.05 636.94 636.80 636.67 636.57 636.56 636.17 635.76 635.09 634.91
636.77
636.73 636.57 636.46 636.34 636.21 636.08 635.94 635.93 635.56 635.19 635.56 635.01 634.12
2.0%
636.95 636.80 636.68 636.57 636.43 636.30 636.16 636.15
637.00
637.11 636.91 636.77 636.64 636.51 636.39 636.31 635.95 635.59 635.30 635.03 634.71 634.54 634.53
637.09
1.0% 2.0%
637.00 636.69 636.55 636.42 636.30 636.17 636.10 635.74 635.41 635.20 634.92 634.56 634.39 634.41
637.11
635.51 635.14
636.75 636.69 636.49 636.27 636.29 636.18 636.05 635.89 635.59 635.45
2.0%
637.06 636.91 636.73 636.60 636.48 636.38 636.25 636.09 635.79 635.65
636.93 636.80 636.68 636.58 636.48 636.30 636.18 635.95 635.69 635.43 635.31

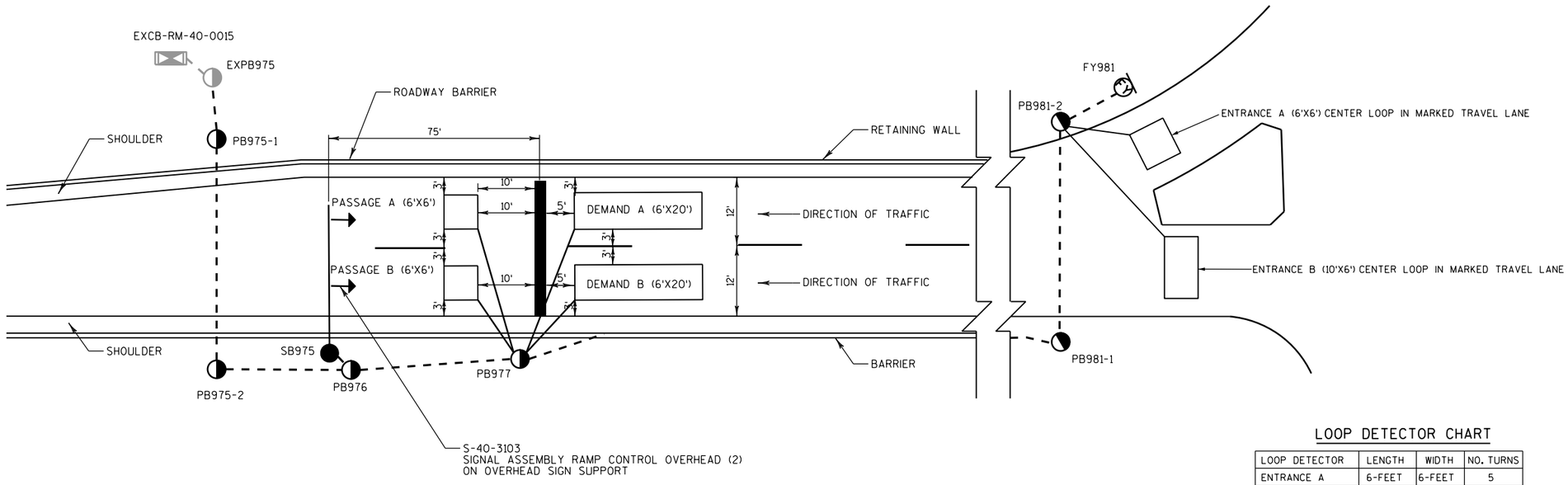
PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	PAVING GRADES	SHEET 28	E

FILE NAME : C:\CIVIL 3D PROJECTS\12282274\SHEETSPLAN\021301-PG.DWG
LAYOUT NAME - 03

PLOT DATE : 10/6/2022 11:30 AM PLOT BY : FERGUSON, JULIE PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2



LOOP DETECTOR CHART

LOOP DETECTOR	LENGTH	WIDTH	NO. TURNS
ENTRANCE A	6-FEET	6-FEET	5
ENTRANCE B	6-FEET	10-FEET	6
DEMAND A	20-FEET	6-FEET	3
DEMAND B	20-FEET	6-FEET	4
PASSAGE A	6-FEET	6-FEET	3
PASSAGE B	6-FEET	6-FEET	4

DEMAND/PASSAGE LAYOUT

HAMPTON AVENUE SB ENTRANCE RAMP
(RM-40-0015)
NOT TO SCALE

CONDUCTOR CHART

FROM	TO	CABLE SIZE	HEAD NO.	COLOR CODE
CB-RM-40-0015	SB975	7C	1	WHITE, RED, GREEN
CB-RM-40-0015	SB975	7C	2	ORANGE, BLUE, WHITE-BLK

NOTE: FTMS IN PROJECT 1228-22-71 SHOWN GRAYSHADED.

N

IN EXISTING CONDUITS
(1) WITH (1) NO. 10 AWG TRAFFIC SIGNAL WIRE,
(1) 5/C NO. 14 TRAFFIC SIGNAL CABLE,
AND (1) 7/C NO. 14 TRAFFIC SIGNAL CABLE
AND (1) WITH (6) LDLIC

(1) INSTALL CONDUIT
INTO EXISTING ITEM

(2) 2-INCH NONMETALLIC CONDUITS
(1) WITH (1) NO. 10 AWG TRAFFIC SIGNAL WIRE,
(1) 5/C NO. 14 TRAFFIC SIGNAL CABLE,
AND (1) 7/C NO. 14 TRAFFIC SIGNAL CABLE
AND (1) WITH (6) LDLIC

EXCB-RM-40-0015

S-40-3103

(2) OVERHEAD RAMP CONTROL SIGNAL ASSEMBLIES

EXPB975

PB975-1

PB975-2

PA

DA

PB

DB

SB975

PB976

PB977

(2) 2-INCH NONMETALLIC CONDUITS
(1) WITH (1) NO. 10 AWG TRAFFIC SIGNAL WIRE
AND (1) 7/C NO. 14 TRAFFIC SIGNAL CABLE

(2) 2-INCH NONMETALLIC CONDUITS
(1) WITH (1) NO. 10 AWG TRAFFIC SIGNAL WIRE,
(1) 5/C NO. 14 TRAFFIC SIGNAL CABLE,
AND (6) LDLIC

(2) 2-INCH CONDUITS
IN BRIDGE PARAPET
(1) 5/C NO. 14 TRAFFIC SIGNAL
CABLE, (2) LDLIC AND
(1) NO. 10 AWG TRAFFIC SIGNAL WIRE
(TRACER WIRE)

(2) 2-INCH NONMETALLIC
CONDUITS
(1) WITH (1) 5/C NO. 14
TRAFFIC SIGNAL CABLE,
AND (1) NO. 10 AWG
TRAFFIC SIGNAL WIRE
(TRACER WIRE)

MAINTAIN EXISTING OR PROPOSED
LOOP DETECTOR
WHEN RAMP IS OPEN
TO TRAFFIC.

PB981-2

PB981-1

FY981

EA

EB

(2) 2-INCH NONMETALLIC CONDUITS
(1) WITH (1) 5/C NO. 14 TRAFFIC SIGNAL CABLE,
(2) LDLIC AND (1) NO. 10 AWG TRAFFIC SIGNAL WIRE
(TRACER WIRE)

MILWAUKEE
RIVER

RAMP HAB

IH 43 SB

IH 43 NB

RAMP HAA

N. PORT WASHINGTON RD.

W. HAMPTON AVE.

970HAB 972HAB 974HAB 976HAB 978HAB 980HAB 982HAB 984HAB 14HA 16HA

970HAA 972HAA 974HAA 976HAA 978HAA 16HAA

970 972 974 976 978 980 982 984

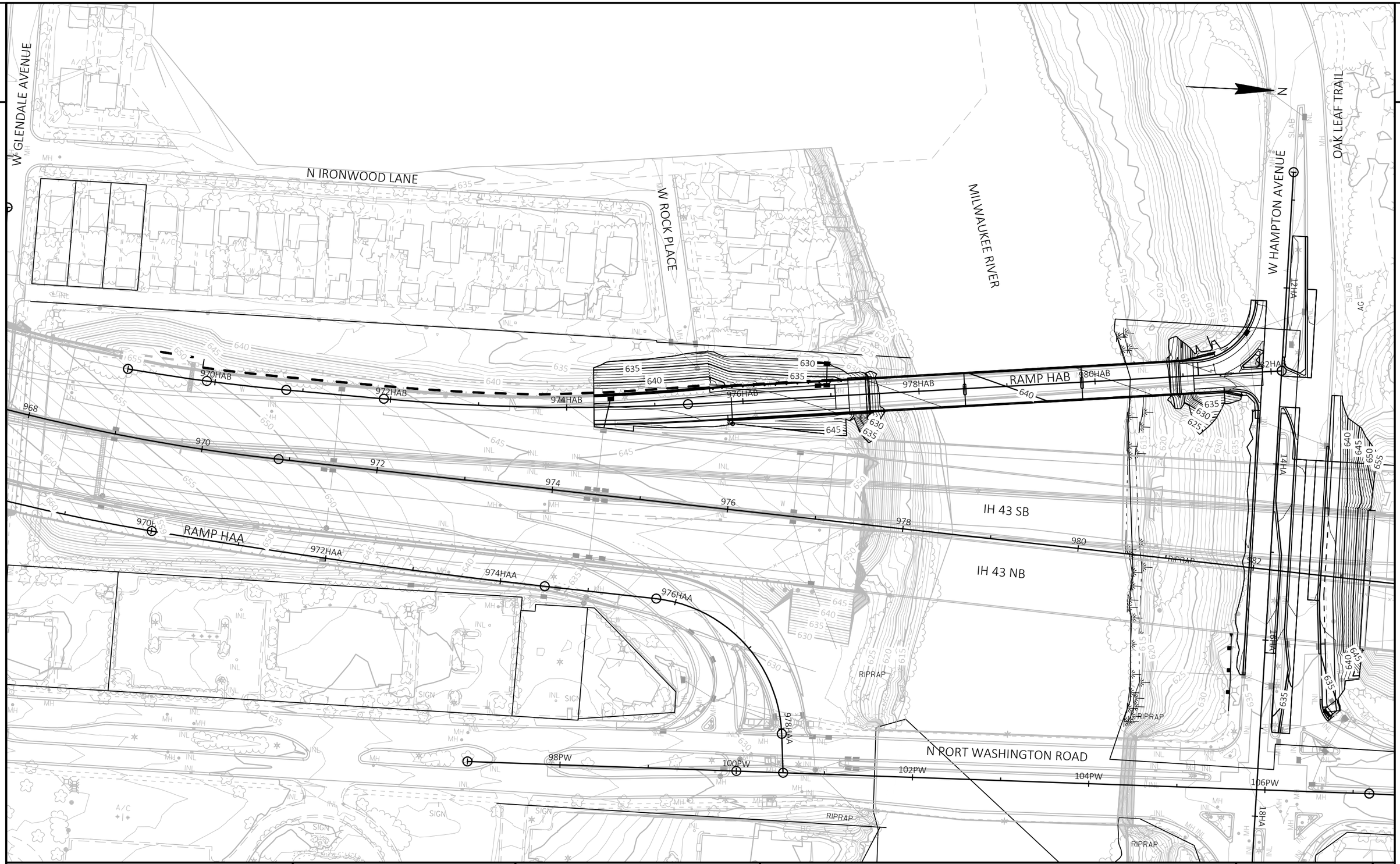
98PW 100PW 102PW 104PW 106PW 108 18HA

PROJECT NO:1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	FTMS PLANS	SHEET 30	E

FILE NAME : \\minw00\pmwork\Jobs\69372\t1\cds\021418_FM.dgn PLOT DATE : 9/30/2022 10:53:51 AM PLOT BY : Mdonnelly PLOT NAME : $FILE$ PLOT SCALE : 97.3542:1

WISDOT/CADDS SHEET 42

2



PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	CONTOUR MAP	SHEET 31	E

FILE NAME : C:\CIVIL 3D PROJECTS\12282274\SHEETSPLAN\021601-CM.DWG
LAYOUT NAME - 01

PLOT DATE : 10/6/2022 11:39 AM PLOT BY : FERGUSON, JULIE PLOT NAME : PLOT SCALE : 1 IN:100 FT

NOTES

1. PLACE INLET PROTECTION TYPE A AT ALL NEW INLET LOCATIONS DURING GRADING STAGES.
2. PLACE INLET PROTECTION TYPE B, C, OR D UNDER INLET COVERS LOCATED IN CURB AND GUTTER UNTIL COMPLETION OF THE PROJECT.
3. DO NOT STORE MATERIALS OR OPERATE EQUIPMENT WITHIN THE WETLAND LIMITS OUTSIDE THE SLOPE INTERCEPTS
4. PLACE SEEDING MIXTURE NO. 20 IN AREAS WITH EROSION MAT UNLESS OTHERWISE NOTED IN THE SEEDING PLAN.

LEGEND

- EROSION MAT CLASS I, TYPE B
- EROSION MAT CLASS II, TYPE C
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION A
- INLET PROTECTION B
- INLET PROTECTION C
- INLET PROTECTION D
- TEMPORARY DITCH CHECK
- SURFACE WATER FLOW

W GLENDALE AVENUE
N IRONWOOD LANE
W ROCK PLACE
MILWAUKEE RIVER
W HAMPTON AVENUE
OAK LEAF TRAIL
IH 43 SB
IH 43 NB
RAMP HAB
RAMP HAA
N PORT WASHINGTON ROAD
WETLAND BOUNDARY
RIPRAP
968
970
972
974
976
978
980
982
970HAB
972HAB
974HAB
976HAB
978HAB
980HAB
982HAB
970HAA
972HAA
974HAA
976HAA
978HAA
98PW
100PW
102PW
104PW
106PW
12HA
14HA
16HA
18HA

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	EROSION CONTROL - EXISTING CONDITION	SHEET 32	E

FILE NAME : N:\PDS\C3D\12282274\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 01

PLOT DATE : 11/22/2022 2:51 PM PLOT BY : FERGUSON, JULIE PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

NOTES

1. PLACE INLET PROTECTION TYPE A AT ALL NEW INLET LOCATIONS DURING GRADING STAGES.
2. PLACE INLET PROTECTION TYPE B, C, OR D UNDER INLET COVERS LOCATED IN CURB AND GUTTER UNTIL COMPLETION OF THE PROJECT.
3. DO NOT STORE MATERIALS OR OPERATE EQUIPMENT WITHIN THE WETLAND LIMITS OUTSIDE THE SLOPE INTERCEPTS
4. PLACE SEEDING MIXTURE NO. 20 IN AREAS WITH EROSION MAT UNLESS OTHERWISE NOTED IN THE SEEDING PLAN.

LEGEND

- EROSION MAT CLASS I, TYPE B
- EROSION MAT CLASS II, TYPE C
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION A
- INLET PROTECTION B
- INLET PROTECTION C
- INLET PROTECTION D
- TEMPORARY DITCH CHECK
- SURFACE WATER FLOW

W GLENDALE AVENUE
N IRONWOOD LANE
W ROCK PLACE
MILWAUKEE RIVER
W HAMPTON AVENUE
OAK LEAF TRAIL
IH 43 SB
IH 43 NB
RAMP HAB
RAMP HAA
N PORT WASHINGTON ROAD
WETLAND BOUNDARY
RIPRAP
SIGN
968
970
972
974
976
978
980
982
970HAB
972HAB
974HAB
976HAB
978HAB
980HAB
982HAB
970HAA
972HAA
974HAA
976HAA
978HAA
98PW
100PW
102PW
104PW
106PW
12HA
14HA
18HA

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	EROSION CONTROL - FINAL	SHEET 33	E

FILE NAME : N:\PDS\C3D\12282274\SHEETSPLAN\022002-EC.DWG
LAYOUT NAME - 02

PLOT DATE : 11/22/2022 3:00 PM PLOT BY : FERGUSON, JULIE PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

2

N GREEN BAY AVENUE

W MESSMER STREET

N 9TH STREET

N 10TH STREET

N 8TH STREET

RAMP GBC

RAMP GBB2

RAMP GBA2

RAMP GBD

IH 43 SB

IH 43 NB

MATCHLINE 944+00

940GBB2

938GBB2

936GBB2

934GBB2

930GBB2

942GBA2

940GBA2

938GBA2

936GBA2

934GBA2

930GBA2

932GBA2

942GBC

940GBC

938GBC

936GBC

934GBC

942GBD

940GBD

938GBD

936GBD

934GBD

932GBD

942

940

938

936

934

932

930

944G

N

SEEDING MIXTURE NO.70, FERTILIZER TYPE B, AND MULCH

SEEDING MIXTURE NO. 70 AND EROSION MAT CLASS II TYPE C

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	SEEDING PLAN	SHEET 34	E

FILE NAME : N:\PDS\C3D\12282274\SHEETSPLAN\022010-SE.DWG
LAYOUT NAME - 38

PLOT DATE : 9/30/2022 10:53 AM PLOT BY : PESCHEL, KYLE R PLOT NAME : PLOT SCALE : 1 IN:100 FT

SEEDING MIXTURE NO.70, FERTILIZER TYPE B, AND MULCH

SEEDING MIXTURE NO. 70 AND EROSION MAT CLASS II TYPE C

IH 43 SB

IH 43 NB

MATCHLINE 944+00

MATCHLINE 958+50

950 952 954 956 958

948 946

STORAGE

RAMP

SIGN

INL

MH

W

BD

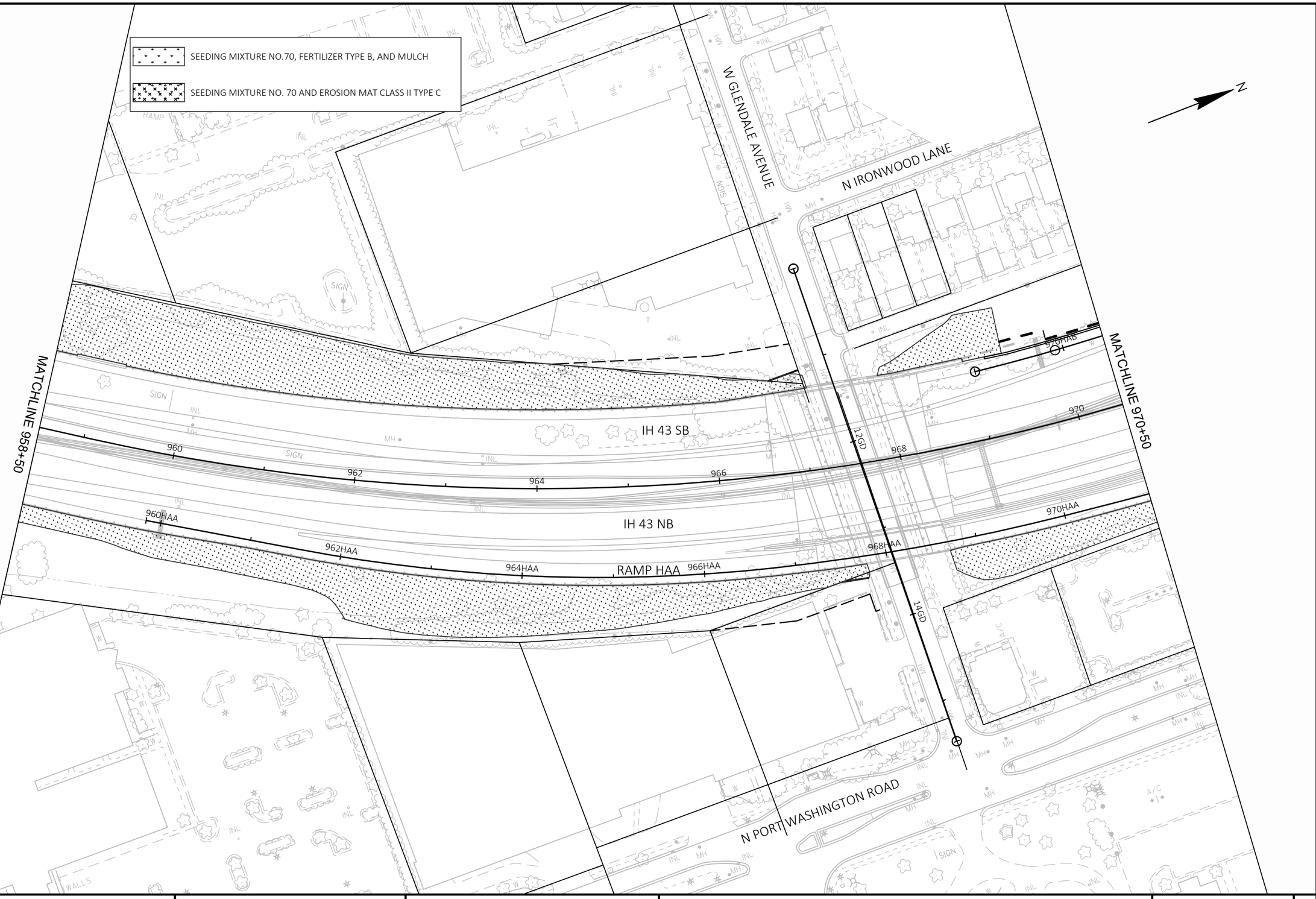
PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	SEEDING PLAN	SHEET 35	E

FILE NAME : N:\PDS\C3D\12282274\SHEETSPLAN\022010-SE.DWG
LAYOUT NAME - 39

PLOT DATE : 9/30/2022 10:54 AM PLOT BY : PESCHEL, KYLE R PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2



PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	SEEDING PLAN	SHEET 36	E

FILE NAME : N:\PDS\C3D\12282274\SHEETSPLAN\022010-SE.DWG
LAYOUT NAME - 40

PLOT DATE : 11/22/2022 2:39 PM PLOT BY : FERGUSON, JULIE PLOT NAME : PLOT SCALE : 1 IN:100 FT

SEEDING MIXTURE NO.70, FERTILIZER TYPE B, AND MULCH

SEEDING MIXTURE NO. 70 AND EROSION MAT CLASS II TYPE C

NOTE:

NO FERTILIZER IS TO BE APPLIED WITHIN 75FT OF SURFACE WATERS.

CONTRACTOR TO INSTALL WISDOT EROSION MAT CLASS II TYPE C IN LIEU OF MULCH WITHIN 75FT OF SURFACE WATERS.

N

N IRONWOOD LANE

W ROCK PLACE

MILWAUKEE RIVER

W HAMPTON AVENUE

OAK LEAF TRAIL

MATCHLINE 970+50

MATCHLINE 984+50

IH 43 SB

IH 43 NB

RAMP HAB

RAMP HAA

N PORT WASHINGTON ROAD

972HAB 974HAB 976HAB 978HAB 980HAB 982HAB

972HAA 974HAA 976HAA 978HAA

12HA 14HA 16HA 18HA

972 974 976 978 980 982 984

98PW 100PW 102PW 104PW 106PW 108PW

75' MIN.

RIPRAP

SIGN

SLAB

INL

MH

W

A/C

BG

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	SEEDING PLAN	SHEET 37	E

FILE NAME : N:\PDS\C3D\12282274\SHEETSPLAN\022010-SE.DWG
LAYOUT NAME - 41

PLOT DATE : 11/22/2022 2:41 PM PLOT BY : FERGUSON, JULIE PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

SEEDING MIXTURE NO.70, FERTILIZER TYPE B, AND MULCH

SEEDING MIXTURE NO. 70 AND EROSION MAT CLASS II TYPE C

N

MATCHLINE 984+50

MATCHLINE 997+50

GOLF GREEN

GOLF COURSE

GOLF COURSE

IH 43 SB

IH 43 NB

N PORT WASHINGTON ROAD

W CHATEAU PLACE

986 988 990 992 994 996

110PW 112PW

SIGN

U/C

SLAB

INL

MH

A/C

2

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	SEEDING PLAN	SHEET 38	E

FILE NAME : N:\PDS\C3D\12282774\SHEETSPLAN\022010-SE.DWG
LAYOUT NAME - 42

PLOT DATE : 9/30/2022 10:58 AM PLOT BY : PESCHEL, KYLE R PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

SEEDING MIXTURE NO.70, FERTILIZER TYPE B, AND MULCH

SEEDING MIXTURE NO. 70 AND EROSION MAT CLASS II TYPE C

MATCHLINE 997+50

IH 43 SB

IH 43 NB

OAK LEAF TRAIL

N PORT WASHINGTON ROAD

W MARNE AVENUE

W HENRY CLAY STREET

RIPRAP

RIPRAP

998 1000 1002 1004 1006 1008 1010 1012

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	SEEDING PLAN	SHEET 39	E

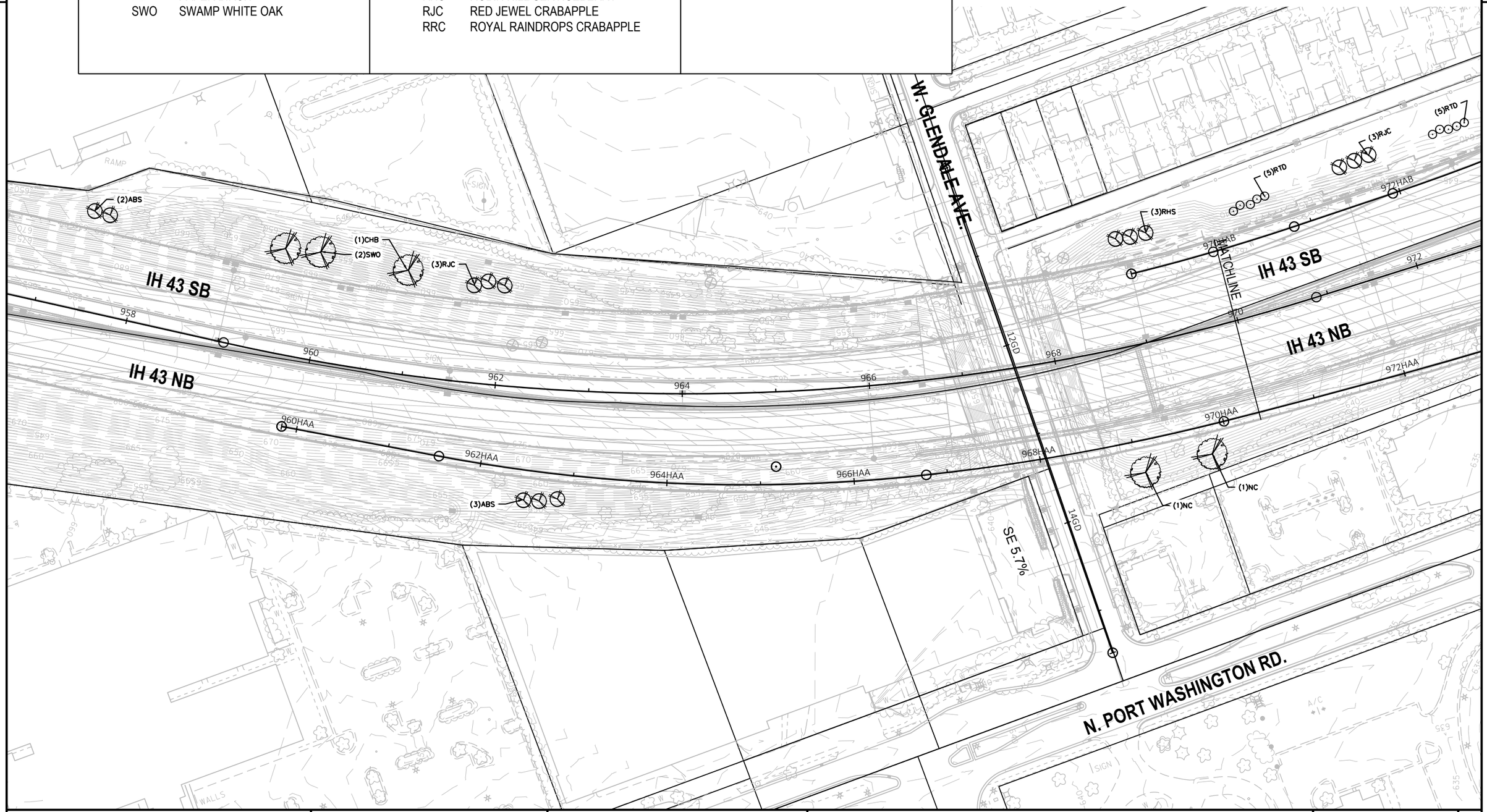
FILE NAME : N:\PDS\C3D\12282274\SHEETSPLAN\022010-SE.DWG
LAYOUT NAME - 43

PLOT DATE : 9/30/2022 10:59 AM PLOT BY : PESCHEL, KYLE R PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

PLANT KEY								
SYM.	ABBR.	COMMON NAME	SYM.	ABBR.	COMMON NAME	SYM.	ABBR.	COMMON NAME
DECIDUOUS SHADE TREES			DECIDUOUS ORNAMENTAL			SHRUBS		
	CHB	COMMON HACKBERRY		ABS	AUTUMN BRILLIANCE SERVICEBERRY		AWV	ARROWWOOD VIBURNUM
	NC	NORTHERN CATALPA		PFC	PRAIRIFIRE CRABAPPLE		RTD	RED TWIG DOGWOOD
	PB	PAPER BIRCH		RHS	ROBIN HILL SERVICEBERRY			
	SWO	SWAMP WHITE OAK		RJC	RED JEWEL CRABAPPLE			
				RRC	ROYAL RAINDROPS CRABAPPLE			



PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	LANDSCAPE PLAN	SHEET 40	E

FILE NAME : S:\DOT\DOT_SE\190224_I43_N-S_FREEWAY_NORTH-HAMPTON\DESIGN\DGN\12282271_NORTH\REFERENCE\LANDSCAPING DWG\LANDSCAPE PLAN 100SCALEBDR.DWG
LAYOUT NAME - Plan 4 IN 100 FT
PLOT DATE : 8/19/2022 3:54 PM PLOT BY : EMILY ONDREY PLOT NAME : PLOT SCALE : ##########

2

PLANT KEY

SYM.	ABBR.	COMMON NAME
DECIDUOUS SHADE TREES		
	CHB	COMMON HACKBERRY
	NC	NORTHERN CATALPA
	PB	PAPER BIRCH
	SWO	SWAMP WHITE OAK

SYM.	ABBR.	COMMON NAME
DECIDUOUS ORNAMENTAL		
	ABS	AUTUMN BRILLIANCE SERVICEBERRY
	PFC	PRAIRIFIRE CRABAPPLE
	RHS	ROBIN HILL SERVICEBERRY
	RJC	RED JEWEL CRABAPPLE
	RRC	ROYAL RAINDROPS CRABAPPLE

SYM.	ABBR.	COMMON NAME
SHRUBS		
	AWV	ARROWWOOD VIBURNUM
	RTD	RED TWIG DOGWOOD

N

(5)RTD (3)RJC (5)RTD (5)AWV (3)RHS

(2)CHB (1)PFC (6)RTD

(1)NC (1)PB (3)PFC (1)RRC (11)RTD (3)SWO SEED MIX 70 1240 SQFT. (2)RJC

(2)RRC (1)PB (1)PFC (3)RTD (3)PFC (1)PB (1)PFC SEED MIX 70 1020 SQFT. (7)AWV (2)SWO

(3)PFC (11)AWV (3)PB (1)RRC (1)NC (1)RRC SEED MIX 70 920 SQFT. (3)RHS

(1)RRC (1)RRC (3)N

970HAB 972HAB 974HAB 976HAB 978HAB 980HAB 982HAB

970HAA 972HAA 974HAA 976HAA 978HAA

12HA 14HA 16HA 18HA

MATCHLINE MATCHLINE

970 972 974 976 978 980 982 984

98PW 100PW 102PW 104PW 106PW 108PW

IH 43 SB

IH 43 NB

IH 43 SB

IH 43 NB

N. PORT WASHINGTON RD.

N. PORT WASHINGTON RD.

W. HAMPTON AVE.

SLAB SLAB SIGN SIGN SIGN SIGN RIPRAP RIPRAP BUS STOP

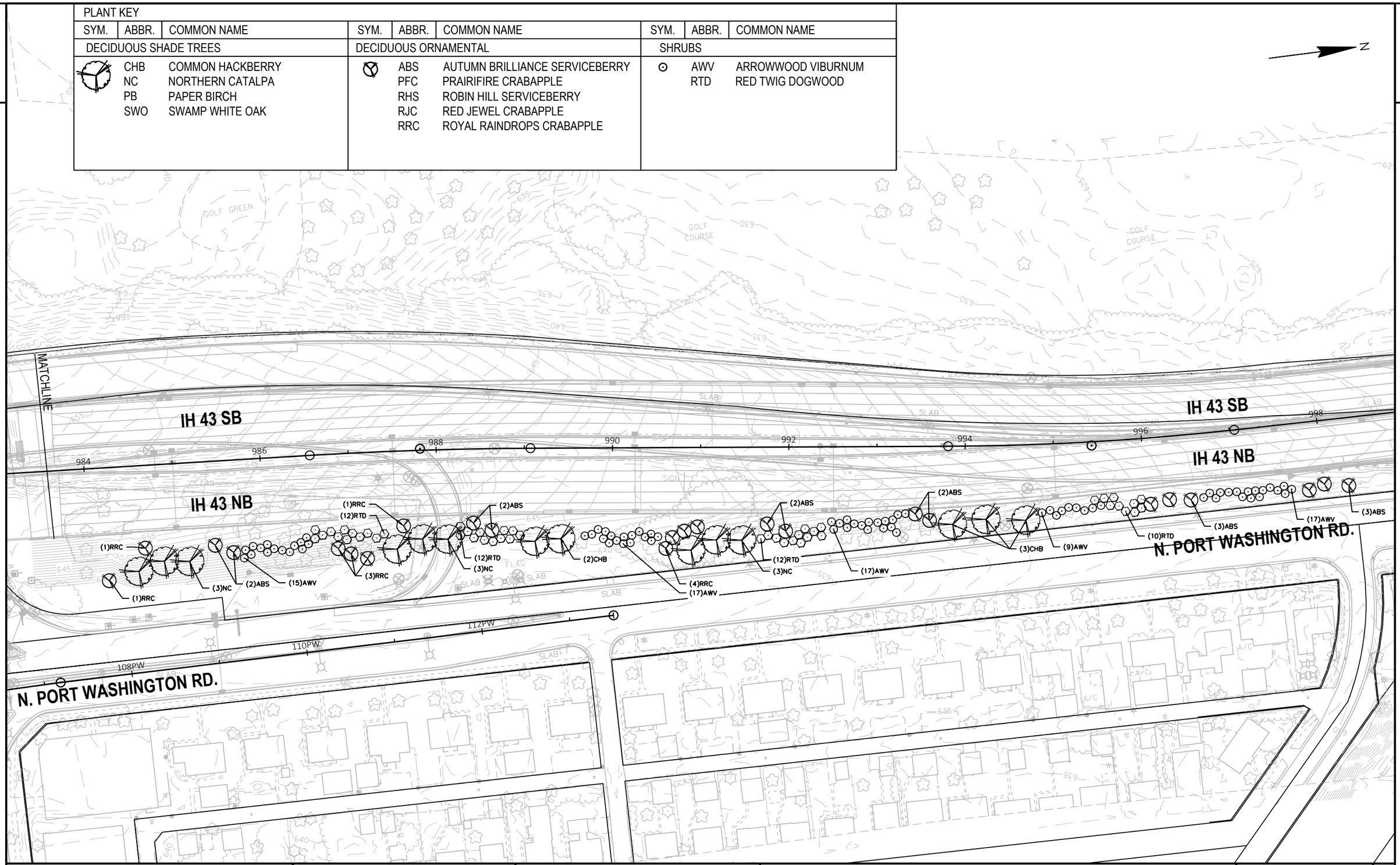
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PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	LANDSCAPE PLAN	SHEET 41	E

FILE NAME : S:\DOT\DOT_SE\190224_I43_N-S_FREEWAY_NORTH-HAMPTON\DESIGN\DGN\12282271_NORTH\REFERENCE\LANDSCAPING DWG\LANDSCAPE PLAN 100SCALEBDR.DWG
LAYOUT NAME - Plan 5 IN 100 FT

PLOT DATE : 8/19/2022 3:54 PM PLOT BY : EMILY ONDREY PLOT NAME : PLOT SCALE : ##########

PLANT KEY								
SYM.	ABBR.	COMMON NAME	SYM.	ABBR.	COMMON NAME	SYM.	ABBR.	COMMON NAME
DECIDUOUS SHADE TREES			DECIDUOUS ORNAMENTAL			SHRUBS		
	CHB	COMMON HACKBERRY		ABS	AUTUMN BRILLIANCE SERVICEBERRY	⊙	AWV	ARROWWOOD VIBURNUM
	NC	NORTHERN CATALPA		PFC	PRAIRIFIRE CRABAPPLE		RTD	RED TWIG DOGWOOD
	PB	PAPER BIRCH		RHS	ROBIN HILL SERVICEBERRY			
	SWO	SWAMP WHITE OAK		RJC	RED JEWEL CRABAPPLE			
				RRC	ROYAL RAINDROPS CRABAPPLE			



PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	LANDSCAPE PLAN	SHEET 42	E

FILE NAME : S:\DOT\DOT_SE\190224_I43_N-S_FREEWAY_NORTH-HAMPTON\DESIGN\DGN\12282271_NORTH\REFERENCE\LANDSCAPING DWG\LANDSCAPE PLAN 100SCALEBDR.DWG
LAYOUT NAME - Plan 6 IN 100 FT

PLOT DATE : 8/19/2022 3:55 PM PLOT BY : EMILY ONDREY PLOT NAME : PLOT SCALE : ##########

SYMBOL	COMMON NAME	SCIENTIFIC NAME	QUANTITY (EACH)	TYPE	AVG. MATURE HEIGHT	SIZE WHEN PLANTED	ROOT ZONE MODE	MINIMUM BALL OR POT SIZE		MINIMUM HOLE SIZE		BRACE OR GUY	FERT. UNITS REQ'D	RODENT PROT'CT REQ'D	MULCH RING DIAM.
								DIAM.	DEPTH	DIAM.	DEPTH				
Deciduous Trees:															
ABS	Autumn Brilliance Serviceberry	Amelanchier x grandiflora 'Autumn Brilliance'	9	3T	20'	2" CAL	B&B	24"	14"	48"	14"	GUY	3	YES	60"
CHB	Common Hackberry	Celtis occidentalis	6	2T	50'	2.5" CAL	B&B	28"	17"	52"	17"	GUY	4	YES	64"
NC	Northern Catalpa	Catalpa speciosa	7	1T	50'	2.5" CAL	B&B	28"	17"	52"	17"	GUY	4	YES	64"
PB	Paper Birch	Betula papyrifera	6	1T	30'	2.5" CAL	B&B	28"	17"	52"	17"	GUY	4	YES	64"
PFC	Prairifire Crabapple	Malus x 'Prairifire'	12	3T	20'	2" CAL	B&B	24"	14"	48"	14"	GUY	3	YES	60"
RHS	Robin Hill Serviceberry	Amelanchier x grandiflora 'Robin Hill'	11	3T	20'	2" CAL	B&B	24"	14"	48"	14"	GUY	3	YES	60"
RJC	Red Jewel Crabapple	Malus 'Jewelcole'	8	3T	20'	2" CAL	B&B	24"	14"	48"	14"	GUY	3	YES	60"
RRC	Royal Raindrops Crabapple	Malus x 'Royal Raindrops'	13	3T	20'	2" CAL	B&B	24"	14"	48"	14"	GUY	3	YES	60"
SWO	Swamp White Oak	Quercus bicolor	7	1T	50'	2.5" CAL	B&B	28"	17"	52"	17"	GUY	4	YES	64"
Deciduous Shrubs:															
AWV	Arrowwood Viburnum	Viburnum dentatum	73	3S	6'	24"	CONT.	14"	8"	34"	8"	N/A	1	NO	46"
RTD	Redtwig Dogwood	Cornus sericea	76	3S	8'	24"	CONT.	14"	8"	34"	8"	N/A	1	NO	46"
Perennials:															
SEED MIX 70	Mix 70 Native Seed Mix	WisDOT Spec 630 Seeding	0.4 lbs/1,000sqft	3'	2.5'	N/A	SEED	N/A	N/A	N/A	N/A	N/A	N/A	NO	N/A

NOTE: Installation contractor is responsible for verifying plant count from plan. Plan quantities take precedence over list.

2

GENERAL DRAINAGE NOTES

LOCATION OF STRUCTURES IN CURB OR AT BARRIER AND GUTTER REFER TO CURB AND GUTTER/BARRIER FLOW LINE. LOCATION OF STRUCTURES NOT IN CURB AND GUTTER SECTION OR AT BARRIER REFER TO CENTER OF STRUCTURE OR AS NOTED ON PLAN. SEE STRUCTURE LOCATION DETAIL.

RIM ELEVATIONS ARE GIVEN AT FLOW LINE OF INLET OR AT CENTER OF MANHOLE. SEE STRUCTURE LOCATION DETAIL.

PLAN LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE AND IS USED FOR ESTIMATING. PIPE LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM INSIDE FACE OF STRUCTURE TO INSIDE FACE OF STRUCTURE AND IS USED TO COMPUTE PIPE SLOPE.

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES AND PIPES SHOWN ON THE PLANS MAY BE ADJUSTED BY THE ENGINEER TO FIT EXISTING FIELD CONDITIONS.

UTILITY INFORMATION SHOWN ON THE PLANS IS APPROXIMATE. LOCATIONS SHOWN ARE TAKEN FROM EXISTING RECORDS AND BEST INFORMATION AVAILABLE FROM EXISTING PLANS. IT IS EXPECTED THAT THERE MAY BE DISCREPANCIES AND OMISSIONS IN THE LOCATION OF UTILITIES AND STRUCTURES SHOWN. VERIFY ALL LOCATIONS IN THE FIELD.

COORDINATE WITH DIGGERS HOTLINE TO FIELD LOCATE UTILITIES. SHEETING SHALL NOT GO THROUGH UTILITIES. ANY UTILITIES DAMAGED DUE TO CONTRACTOR ACTIVITIES SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE COMPLETE SATISFACTION OF THE UTILITY FACILITY.

VERIFY THE EXISTING STORM SEWER SYSTEM CONNECTION LOCATIONS AND ELEVATIONS PRIOR TO ORDERING DRAINAGE STRUCTURES AND PIPES. NOTIFY THE ENGINEER OF ANY DEVIATIONS FROM THE INFORMATION SHOWN ON THE PLANS PRIOR TO INSTALLING THE PROPOSED STORM SEWER.

PROVIDE BOLTED COVERS FOR MANHOLE COVERS TYPE J SPECIAL. COST OF PROVIDING BOLTED COVERS IS CONSIDERED INCIDENTAL TO COVER.

PROVIDE TEMPORARY POSITIVE DRAINAGE THROUGHOUT THE PROJECT DURING ALL PROJECT STAGES. PROVIDING TEMPORARY POSITIVE DRAINAGE IS INCIDENTAL TO CONSTRUCTION.

SUPPORTING UTILITIES DURING STORM SEWER CONSTRUCTION IS INCIDENTAL TO STORM SEWER PIPE AND/OR STORM SEWER STRUCTURE.

STORM SEWER LEGEND

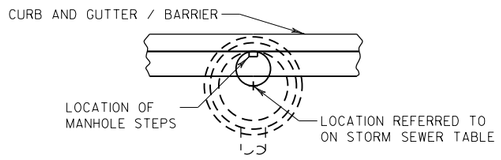
→	PROPOSED STORM SEWER PIPE PLAN VIEW
→—/—SS—	EXISTING STORM SEWER PLAN VIEW
———	EXISTING STORM SEWER PROFILE VIEW
***	PROPOSED DRAINAGE STRUCTURE
E***	EXISTING DRAINAGE STRUCTURE
●	PROPOSED MANHOLE
■	PROPOSED INLET
△	PROPOSED ENDWALL
P***	PROPOSED STORM SEWER PIPE
PE***	EXISTING STORM SEWER PIPE

2

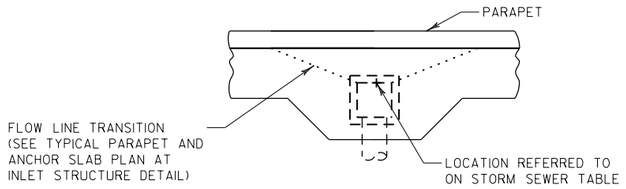
PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	STORM SEWER CONSTRUCTION DETAILS	SHEET 44	E

2

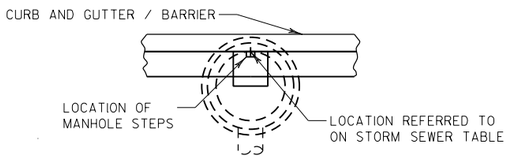
NOTE
1) LOCATION OF STRUCTURE MAY BE ADJUSTED TO FIT FIELD CONDITIONS.
2) LOCATION AND SIZE OF STRUCTURE COVER OPENING DEPENDS ON TYPE OF CASTING. CASTING TYPES ARE SHOWN ON THE STORM SEWER TABLE.



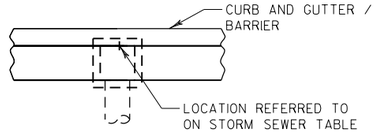
MANHOLE IN CURB AND GUTTER / AT BARRIER



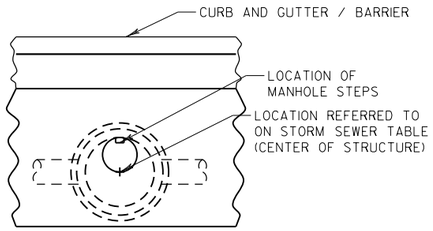
INLET IN RETAINING WALL ANCHOR SLAB



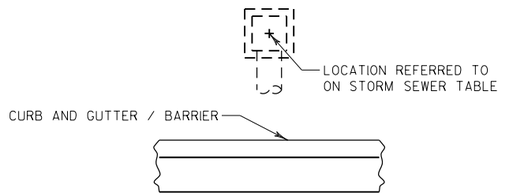
MANHOLE WITH INLET COVER IN CURB AND GUTTER / AT BARRIER



INLET IN CURB AND GUTTER / AT BARRIER



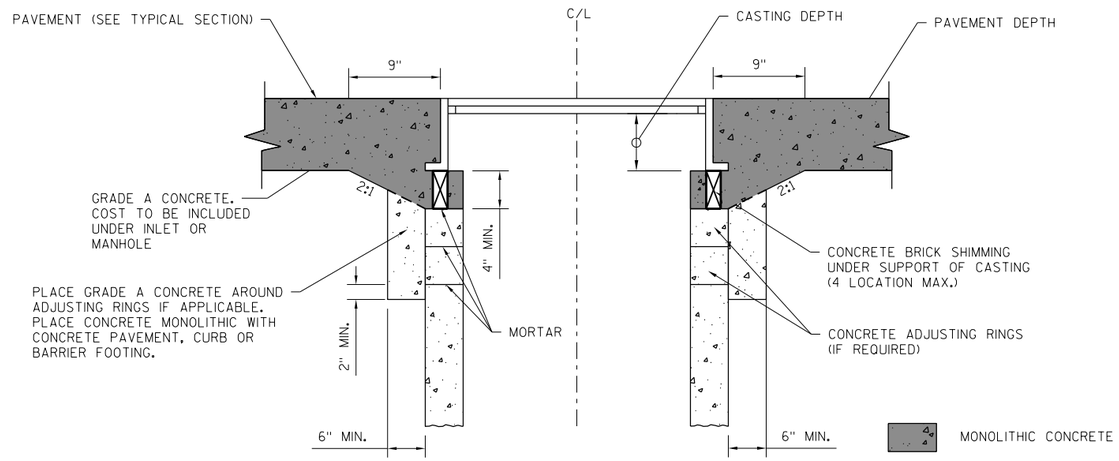
MANHOLE NOT IN CURB AND GUTTER / NOT AT BARRIER



INLET NOT IN CURB AND GUTTER / NOT AT BARRIER

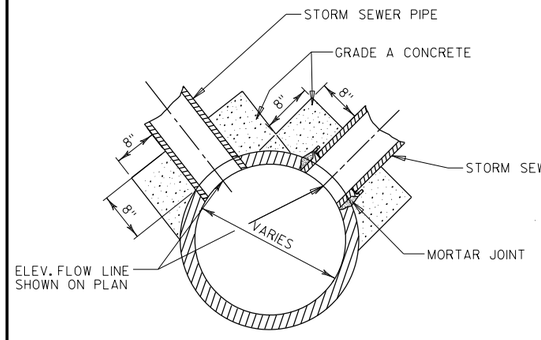
STRUCTURE LOCATION DETAIL

NOTES
1) PROVIDE MONOLITHIC CONCRETE SHIMMING FOR FINAL ADJUSTMENT OF DRAINAGE STRUCTURES LOCATED WITHIN THE ROADWAY CONCRETE PAVEMENT AND CONCRETE CURB & GUTTER.
2) INCIDENTAL TO STORM SEWER STRUCTURE.

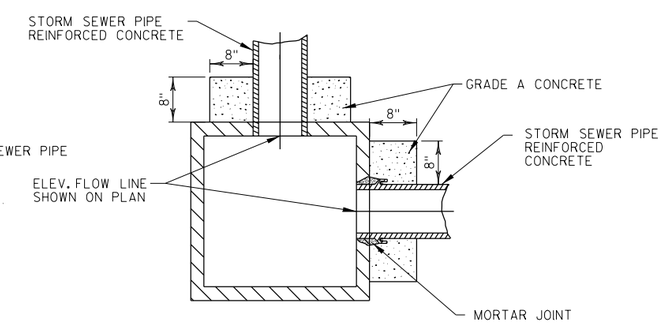


MONOLITHIC CONCRETE SHIMMING DETAIL

NOTE
CONCRETE COLLAR TO BE PAID AS A BID ITEM WHEN CONNECTING AN EXISTING PIPE TO A NEW STRUCTURE.



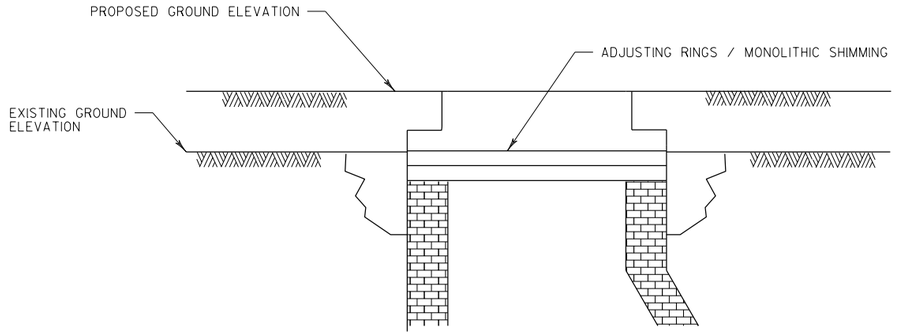
AT MANHOLE
INCIDENTAL TO NEW STRUCTURE AND NEW PIPE ITEMS



AT STORM SEWER INLET
INCIDENTAL TO NEW STRUCTURE AND NEW PIPE ITEMS

CONCRETE COLLAR DETAIL

2

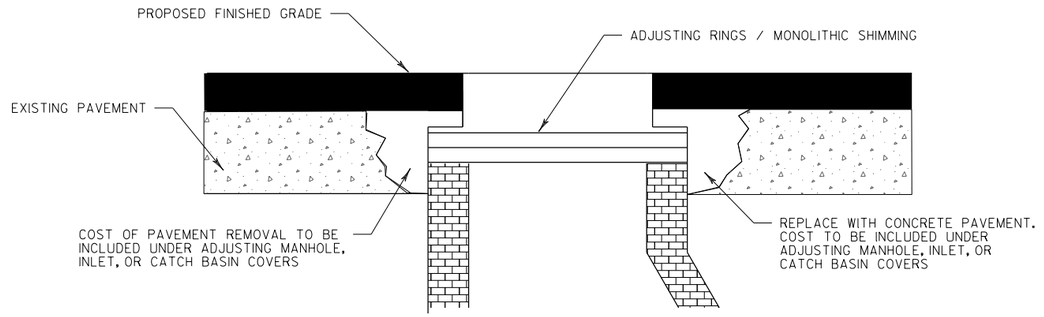


NON-PAVED LOCATION

NOTES

1. IF EXISTING PAVEMENT REMOVAL IS NOT SHOWN IN THE REMOVAL PLANS AND A SAWCUT IS REQUIRED THE SAWCUT IS CONSIDERED INCIDENTAL TO ADJUSTING MANHOLE OR INLET COVERS.

2. ADJUST CHIMNEY WITH PROPER SIZE CONCRETE ADJUSTING RINGS (SIZE OF OPENING OF CONCRETE ADJUSTING RING TO BE DETERMINED BY SIZE OF OPENING IN FRAME) OR MONOLITHIC CONCRETE SHIMMING AND REINSTALL EXISTING FRAME AND LID TO FINISHED GRADE. BACKFILL AND OTHER WORK TO BE DONE IN ACCORDANCE WITH ITEM ADJUSTING INLET COVERS.



PAVED LOCATION

ADJUSTING MANHOLE OR INLET COVERS

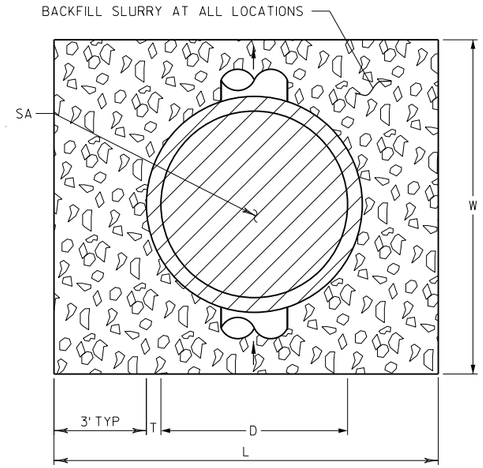
2

BACKFILL SLURRY STRUCTURES

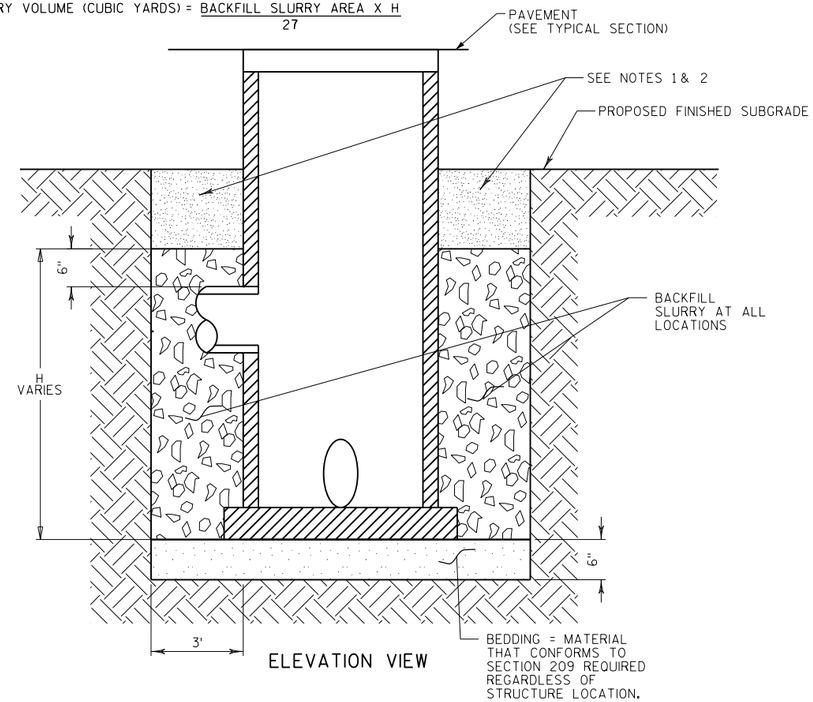
DESCRIPTION	DIAMETER / STR LENGTH D FT	RECTANGULAR STR WIDTH RW FT	WALL THICKNESS T INCH	SLAB THICKNESS ST INCH	STRUCTURE EXCAVATION LENGTH L FT	STRUCTURE EXCAVATION WIDTH W FT	STRUCTURE EXCAVATION AREA SF	STRUCTURE AREA SA SF	BACKFILL SLURRY AREA SF
INLETS 2x2.5-FT	2	2.5	5	5	8.83	9.33	82.44	9.44	73.00
INLETS 4-FT	4	4	5	5	10.83	10.83	117.36	23.36	94.00

H = UP TO 6" ABOVE THE TOP OF THE HIGHEST PIPE IN THE STRUCTURE

BACKFILL SLURRY VOLUME (CUBIC YARDS) = $\frac{\text{BACKFILL SLURRY AREA X H}}{27}$



PLAN VIEW



ELEVATION VIEW

NOTES

(1) IF THE STRUCTURE IS OUTSIDE THE TRAVELED WAY INCLUSIVE OF SHOULDERS AND AUXILIARY LANES, NATIVE BACKFILL MAY BE USED ABOVE BACKFILL SLURRY AND SHALL CONFORM TO SECTION 207 EMBANKMENT SPECIFICATIONS.

(2) IF THE STRUCTURE IS WITHIN THE TRAVELED WAY INCLUSIVE OF SHOULDERS AND AUXILIARY LANES, BACKFILL ABOVE BACKFILL SLURRY SHALL CONFORM TO SECTION 209.

(3) BACKFILL SLURRY IS CONSIDERED INCIDENTAL TO DRAINAGE STRUCTURES. NO SEPARATE PAYMENTS WILL BE MADE.

(4) WHEN TEMPORARY SUBGRADE IS HIGHER THAN PROPOSED FINISHED SUBGRADE, PROVIDE GRANULAR BACKFILL AT ALL LOCATIONS. COST FOR GRANULAR BACKFILL IS CONSIDERED INCIDENTAL TO CONSTRUCTION.

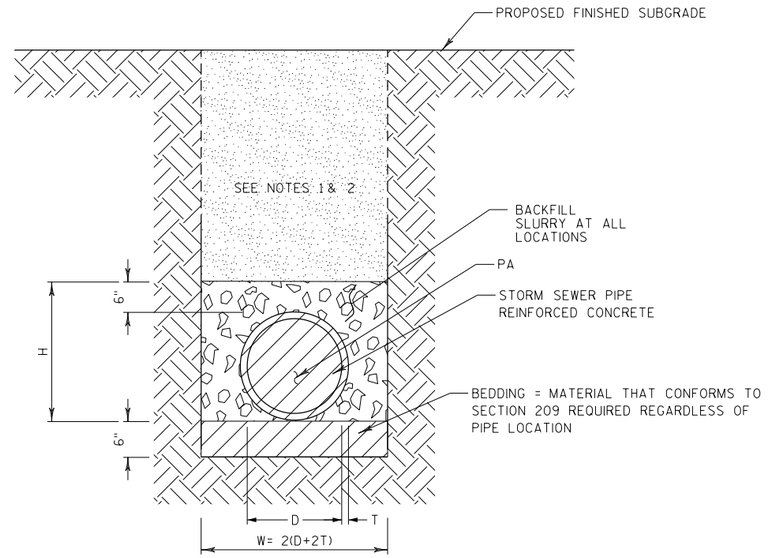
(5) AT DIRECTION OF ENGINEER, BACKFILL SLURRY CAN BE ELIMINATED IN HIGH EMBANKMENT AREAS.

BACKFILL SLURRY DETAIL - STORM SEWER STRUCTURES

BACKFILL SLURRY TRENCHES (FOR INFORMATION ONLY)

PIPE DIAMETER D INCHES	PIPE HEIGHT PH INCHES	PIPE WIDTH PW INCHES	Wall Thickness T Inches	Trench Width W FT	Height of Pipe Zone H (From pipe bottom to 6" above top of pipe)	Area of Pipe Zone SF	Area of Pipe PA SF	Backfill Slurry Area SF
12	12	12	2.00	2.67	1.83	4.89	1.40	3.49
15	15	15	2.25	3.25	2.13	6.91	2.07	4.83
18	18	18	2.50	3.83	2.42	9.26	2.89	6.38

BACKFILL SLURRY VOLUME (CUBIC YARDS) = $\frac{\text{(PIPE ZONE AREA - PIPE AREA) X PIPE PLAN LENGTH}}{27}$



NOTES

(1) IF THE PIPE IS OUTSIDE THE TRAVELED WAY INCLUSIVE OF SHOULDERS AND AUXILIARY LANES, NATIVE BACKFILL MAY BE USED ABOVE BACKFILL SLURRY AND SHALL CONFORM TO SECTION 207 EMBANKMENT SPECIFICATIONS.

(2) IF THE PIPE IS WITHIN THE TRAVELED WAY INCLUSIVE OF SHOULDERS AND AUXILIARY LANES, BACKFILL ABOVE BACKFILL SLURRY SHALL CONFORM TO SECTION 209.

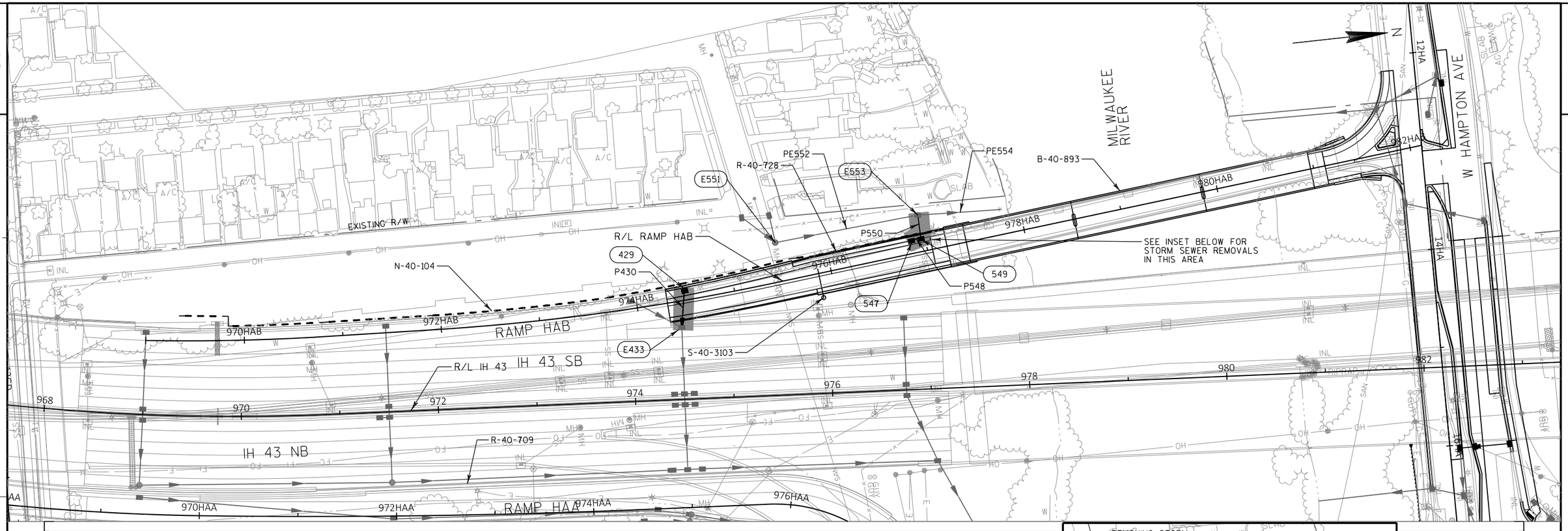
(3) BACKFILL SLURRY IS CONSIDERED INCIDENTAL TO DRAINAGE PIPE. NO SEPARATE PAYMENTS WILL BE MADE.

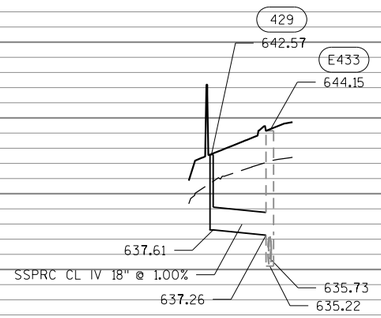
(4) WHEN TEMPORARY SUBGRADE IS HIGHER THAN PROPOSED FINISHED SUBGRADE, PROVIDE GRANULAR BACKFILL AT ALL LOCATIONS. COST FOR GRANULAR BACKFILL IS CONSIDERED INCIDENTAL TO CONSTRUCTION.

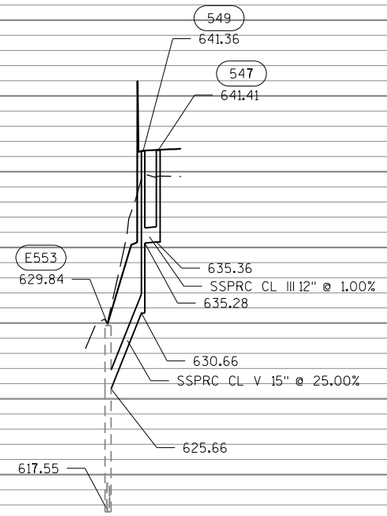
(5) AT DIRECTION OF ENGINEER, BACKFILL SLURRY CAN BE ELIMINATED IN HIGH EMBANKMENT AREAS.

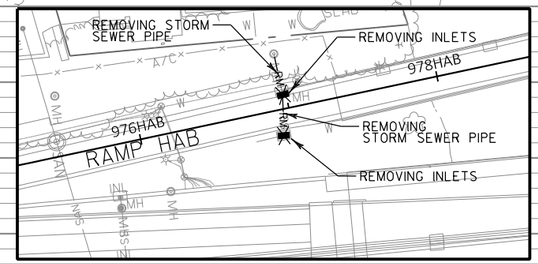
BACKFILL SLURRY DETAIL - STORM SEWER TRENCH

2









STORM SEWER REMOVALS

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	STORM SEWER PLAN AND PROFILE	SHEET 48	E

2

SEE INSET BELOW FOR STORM SEWER REMOVALS IN THIS AREA

PIPE CONNECTION TO EXISTING STRUCTURE
RECONSTRUCT E595 AS MANHOLE

INSTALL CONCRETE COLLAR

INSTALL CONCRETE COLLAR

INSTALL CONCRETE COLLAR

INSTALL CONCRETE COLLAR

IH 43 SB

IH 43 NB

W HAMPTON AVE

W HAMPTON AVE

597

599

P600

601

P602

603

605

P598

E595

E555

E598

PE604

E607

PE606

12HA

14HA

18HA

20HA

982HA

980HAB

984

982

980

108PW

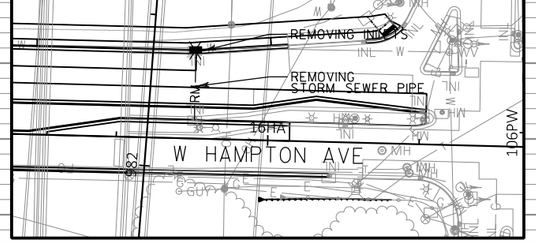
106PW

104PW

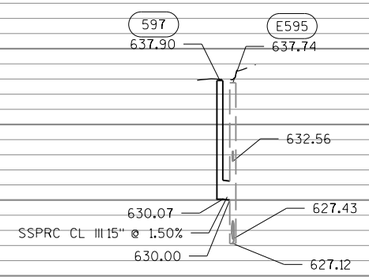
GUY POLE

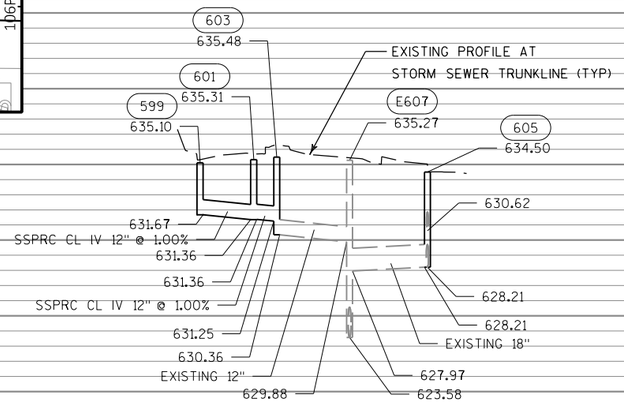
RIPRAP

N



STORM SEWER REMOVALS





650 645 640 635 630 625 620 615 610

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	STORM SEWER PLAN AND PROFILE	SHEET 49	E

NOTE

THE LOCATION OF THE EXISTING UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN, INCLUDING BUILDING SERVICES AND LATERALS.

N

W GLENDALE AVENUE

N IRONWOOD LANE

W ROCK PLACE

MILWAUKEE RIVER

OAK LEAF TRAIL

W HAMPTON AVENUE

IH 43 SB

IH 43 NB

RAMP.HAB

RAMP.HAA

N PORT WASHINGTON ROAD

GUY POLE

RIPRAP

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	EXISTING UTILITY PLAN	SHEET 50	E

FILE NAME : C:\CIVIL 3D PROJECTS\12282274\SHEETSPLAN\023001-UP.DWG
LAYOUT NAME - 01

PLOT DATE : 9/7/2021 9:47 AM PLOT BY : FERGUSON, JULIE PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN

4 FORM SINGLE LINE
REMOVE
FORM SINGLE LINE R3-58 (2S)

5 MILE 0 77 D10-2
MOVE

1 FORM SINGLE LINE R3-58 (2S)
ON TOP OF BARRIER WALL

PART OF #3
RIGHT LANE SIGNAL
REMOVE

7 LEFT LANE SIGNAL R10-65L (2S)
3 RIGHT LANE SIGNAL R10-65R (2S)
ON OVERHEAD

2 STOP HERE ON RED
REMOVE
STOP HERE ON RED R10-6 (2S)

S-40-3103
CANTILEVER
OVERHEAD SIGN SUPPORT
(SIGNS & SIGNALS)
STA 975HAB+87

STOP BAR
STA 976HAB+62

6 STOP HERE ON RED R10-6
MODIFIED
ON UPRIGHT

PART OF #6
STOP HERE ON RED
REMOVE

PART OF #7
LEFT LANE SIGNAL
REMOVE
(SEE FTMS PLAN)

IH-43

TYPE II ALUMINUM SIGNS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE COUNTY SIGN SHOP. CONTACT THE FOLLOWING INDIVIDUAL AT THE SIGN SHOP FOR DISTRIBUTION COUNTY LOCATION.

SIGNING COORDINATOR COUNTY(S) PHONE#

- JENNY BUCKETT MILWAUKEE, KENOSHA, WASHINGTON, OZAUKEE 414-750-2427
- CHUCK SALDIVAR RACINE, WALWORTH, WAUKESHA 414-750-1682

SIGNS SHALL BE CAREFULLY REMOVED FROM SIGN SUPPORTS. THE SIGNS SHALL BE PALLETIZED FOR HANDLING WITH A FORKLIFT (SEE STANDARD SPEC 638.3.4). THE REGIONAL SIGN SHOP (414-266-1165) SHALL BE NOTIFIED THREE WORKING DAYS PRIOR TO DELIVERY OF THE SIGNS.

WHEN AN EXISTING STOP SIGN SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED, THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

WOOD POST SIZES, FOR TYPE II SIGNS ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

STREET NAME SIGNS ARE PROPERTY OF THE MUNICIPALITY (CITY, VILLAGE OR TOWN). THE MUNICIPALITY SHALL BE CONTACTED TO REMOVE THEIR STREET NAME SIGNS PRIOR TO CONSTRUCTION AND IT IS THEIR RESPONSIBILITY TO REINSTALL THE OLD SIGNS OR REPLACE THEM FOLLOWING CONSTRUCTION. WISDOT DOES NOT FURNISH OR INSTALL STREET NAME SIGNS. THE STREET NAME SIGNS SHALL NOT BE PLACED ON TOP OF THE STOP SIGNS.

BOX OUT OR CORING OF CONCRETE SIGN POSTS IS INCIDENTAL TO THE POST.

SHEET 1 OF 2

PROJECT NO: 1228-22-74	HWY: IH-43	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN	SHEET 51	E

FILE NAME : N:\PDS\C3D\CAD\12282201\74\SIGN\023201_PS_18.DWG
LAYOUT NAME - 023201_PS_PG1

PLOT DATE : 9/30/2022 10:36 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- ESTR — EXISTING SIGN TO REMAIN

2

N

W HAMPTON AVE

180' TO NEAR RIGHT SIGNAL

978HAB+00 979HAB+00 980HAB+00 981HAB+00 982HAB+00 11HA+00 12HA+00 13HA+00

IH-43 SB ON RAMP

IH-43

978+00 979+00 980+00

8 REMOVE RAMP METERED WHEN FLASHING
RAMP METERED WHEN FLASHING
W3-8 (2S) ON S.P. SEE FTMS FOR SIGNAL POLE

9 REMOVE RAMP CLOSED USE ALT ROUTE
RAMP CLOSED USE ALT ROUTE
R11-54F (2S)

14 15 REMOVE YIELD
R1-2 (2S)

16 REMOVE STOP
R1-1F (2M) ON S.P.

ADJUST PB ONLY

PB1 PB2 PB4 PB5 PB6 PB7 PB8 SB1 SB2 SB3 CB1 CVI01 I/C PB3

3" 2-3" 3-3" 25'

10 STOP REMOVE
STOP
R1-1F (2M)

11 REMOVE
R4-7 (2M)

12 REMOVE SOUTH INTERSTATE 43
SOUTH INTERSTATE 43
J3-1 (2S)

13 STOP REMOVE
STOP
R1-1F (2M)

17 LANE ENDS MERGE LEFT REMOVE
REMOVE

18
R4-7 (2M)

19 REMOVE 3 TONS OR OVER
R5-2 (2S)

20
3 TONS OR OVER
R5-2A (2S) ESTR

21 REMOVE BEGIN LEFT TURN LANE
R3-20L (2M)

STREET NAME SIGN BY OTHERS

W HAMPTON AVE ONLY

SLAB

SHEET 2 OF 2

PROJECT NO: 1228-22-74	HWY: IH-43	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN	SHEET 52	E

FILE NAME : N:\PDS\C3D\CAD\12282201\74\SIGN\023201_PS_18.DWG
LAYOUT NAME - 023202_PS_PG2

PLOT DATE : 9/30/2022 10:37 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

GENERAL NOTES

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

THE CONTRACTOR IS RESPONSIBLE FOR NOT BACKFEEDING CIRCUITS PRIOR TO DISCONNECTING ANY BRANCH CIRCUITS FROM OLD SOURCE.

LOCATIONS OF THE PVC CONDUITS ARE IDENTIFIED IN THE PLANS WHERE THEY ARE REQUIRED. APPROPRIATE ADJUSTMENT ON CONDUIT LOCATIONS MAY BE MADE IF THE FIELD CONDITIONS ARE SUCH THAT THE CONDUIT CANNOT BE INSTALLED AT THE SPECIFIED LOCATIONS. FIELD MARK EACH CONDUIT LOCATION IN RED.

ALL CONDUITS SHALL BE CAPPED OR PLUGGED WITH ENGINEER APPROVED FITTINGS IMMEDIATELY AFTER INSTALLATION. THE TRENCH SHALL NOT BE BACK FILLED PRIOR TO INSPECTION OF THE CONDUIT.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR IMMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT. ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON ALL CONDUITS.

PRIOR TO CONDUIT ACCEPTANCE, ALL CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND BE CAPPED WITH THE APPROPRIATE CAST PLASTIC CAP WHICH FITS SNUGGLY ON THE CONDUIT, BUT EASILY REMOVED IN THE FUTURE. DUCT TAPE OR ANY OTHER CAPPING METHOD IS NOT ACCEPTABLE.

CONDUIT RUNS SHALL BE THE SAME SIZE PIPE FROM ONE END TO THE OTHER (FROM PULL BOX-TO-PULL BOX OR JUNCTION BOX OR BASE-TO-BASE, ETC.) UNLESS OTHERWISE NOTED ON PLANS.

PULL ROPE (3/8-INCH NYLON) SHALL BE INSTALLED IN ALL NEW CONDUITS.

CONTRACTOR SHALL SUPPLY AS-BUILT DRAWING FOR ALL THE WORK BEING DONE.

INSTALLATION OF LATERAL UNDERGROUND CONDUIT UNDER PAVEMENT SHALL BE INSTALLED MINIMUM 30 INCHES BELOW PROPOSED GRADE AND A MINIMUM OF 3 INCHES BELOW ALL PAVEMENT BASE MATERIALS. CONDUIT LATERALS SHALL BE TRENCHED UNDER PAVEMENT BEFORE PAVEMENT CONSTRUCTION. CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH ROADWAY CONSTRUCTION FOR CONDUIT LATERALS INSTALLATION.

PITCH ALL CONDUITS TOWARD PULL BOXES. INSTALL A 2" DRAIN DUCT TO STORM SEWER OR DRAIN SUMP AS REQUIRED FOR DRAINAGE. THE 2" DRAIN DUCT OR SUMP IS INCIDENTAL TO THE PULL BOX BID ITEM AND IS NOT SHOWN.

THE LOCATION OF EXISTING AND PROPOSED UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. IN ADDITION, THERE MAY BE OTHER UTILITIES WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.

HAND DIGGING MAY BE REQUIRED FOR LOCATIONS ADJACENT TO EXISTING GAS AND POWER LINES. HAND EXCAVATION SHOULD BE ANTICIPATED & WILL BE CONSIDERED INCIDENTAL TO THE CONCRETE BASES BID ITEM. COORDINATE ALL WORK NEAR GAS LINE WITH WE ENERGIES.

EXISTING CONDUIT AND CID NO LONGER BEING USED IS ABANDONED IN PLACE. THE CONTRACTOR MAY REMOVE ABANDONED WIRING AT THE CONTRACTOR'S EXPENSE. ABANDONED PULL BOX REMOVAL IS INCIDENTAL TO THE ROAD CONSTRUCTION.

ALL UNDERGROUND WIRING AND CONDUIT FOR POLES BEING REMOVED IS ABANDONED IN PLACE UNLESS NOTED OTHERWISE. CONTRACTOR MAY SALVAGE ABANDONED WIRING AT HIS OWN EXPENSE.

IF CID CONTAINS PHASE CONDUCTOR(S) THAT WILL NOT BE USED FOR SUBSEQUENT POLES, I.E. AT THE END OF A CIRCUIT, DO NOT ENERGIZE THE RESPECTIVE CONDUCTOR(S) PAST THE LAST POLE THE PHASE WAS UTILIZED. REMOVE UNUSED CONDUCTOR(S) EXPOSED BEYOND THE CID RACEWAY IN ALL SUBSEQUENT POLES.

SEAL THE ENDS OF ALL CID RACEWAY WITH A UL RECOGNIZED FOAM CONDUIT SEALANT. PROVIDE A 1/2" NYLON ROPE EXTENDING BEYOND THE PLUG TO ASSIST IN REMOVING THE PLUG IN THE FUTURE.

SEE DETAIL "CONDUIT DETAILS AT STRUCTURE PARAPET TO ROADWAY BARRIER INTERFACE" WHEN CONDUIT EXITS TO GRADE FROM A BRIDGE PARAPET OR RETAINING WALL. RIGID METALLIC CONDUIT IN THE CONCRETE BARRIER IS INCIDENTAL TO THE RIGID NONMETALLIC CONDUIT.

PROVIDE MINIMUM CABLE SLACK AS NOTED BELOW:

PULL BOXES:	10-FT	LIGHTING CONTROL CENTERS:	10-FT
EMBEDDED JUNCTION BOXES:	3-FT	POLES:	5-FT IN AND 5-FT OUT

SIGN STRUCTURES WHICH HAVE A BASE THAT EXTENDS THE COMPLETE WIDTH OF THE MEDIAN TYPICALLY HAVE A 4" SLEEVE FOR LIGHTING.

WIRE AND CONDUIT IS LISTED IN THE MISCELLANEOUS QUANTITIES BASED UPON THE EARLIEST STAGE SHOWN. CONTRACTOR MAY INSTALL LATER WHEN LOAD NEEDS TO BE ENERGIZED.

CONDUCTOR COLORS: 240/480V, 1 PHASE - BLACK / RED / WHITE (NEUTRAL) / BARE OR GREEN (GROUND)

STAGING NOTES

MAINTAIN LIGHTING AT ALL TIMES DURING CONSTRUCTION USING EXISTING LIGHTING, PROPOSED TEMPORARY, FINAL LIGHTING OR COMBINATIONS.

DO NOT REMOVE EXISTING LIGHTING UNTIL THE NEW OR TEMPORARY LIGHTING IS OPERATIONAL. REFER TO DRAWINGS FOR STAGING INFORMATION.

MAINTAINING SYSTEM CONTINUITY SHALL BE INCIDENTAL TO THE "REMOVE EXISTING STREET LIGHTS" BID ITEM.

DUE TO THE PHASING OF CONSTRUCTION SOME FINAL LIGHTING UNITS MAY BE ORPHANED UNTIL A LATER STAGE IS COMPLETE. IT IS AT THE DISCRETION OF THE CONTRACTOR TO SCHEDULE THESE ITEMS. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF THE PLACEMENT OF RACEWAY THAT SPANS TWO DIFFERENT PHASES OF CONSTRUCTION. MISCELLANEOUS QUANTITIES SHOW WIRING ADDED WHEN CONDUIT IS INSTALLED. WIRING INSTALLATION MAY BE DEFERRED SUBJECT TO THE LIMITATIONS NOTED HEREIN.

TEMPORARY OR FINAL LIGHTING MUST ILLUMINATE AN AREA BEFORE EXISTING LIGHTING UNITS IN AN AREA CAN BE REMOVED. THE SCHEDULING OF REMOVAL IS AT THE DISCRETION OF THE CONTRACTOR WITH THE PROVISION THAT LIGHTING OF THE ROADWAY IS PROVIDED AT ALL TIMES. COORDINATE POLE REMOVAL WITH TRAFFIC CONTROL.

LEGEND - FINAL LIGHTING

- CID (CABLE IN DUCT)
- 2" CONDUIT - UNLESS OTHERWISE NOTED
- PROPOSED SINGLE ARM FREEWAY LIGHTING UNIT
- PROPOSED TWIN ARM FREEWAY LIGHTING UNIT
- EXISTING FREEWAY LIGHTING UNIT TO REMAIN
- LIGHTING CONTROL CABINET
- PULL BOX 24" x 36"
- PULL BOX 24" x 42"
- UDL (UNDER DECK LUMINAIRE)
- ELECTRIC METER SOCKET
- SM — DENOTES STRUCTURE MOUNTED
- XX — DENOTES THE CONSTRUCTION STAGE FOR INSTALLATION
- STUBOUT
- LUMINAIRE IDENTIFICATION

STATION - OFFSET (TWO CALLOUTS IF TWIN)

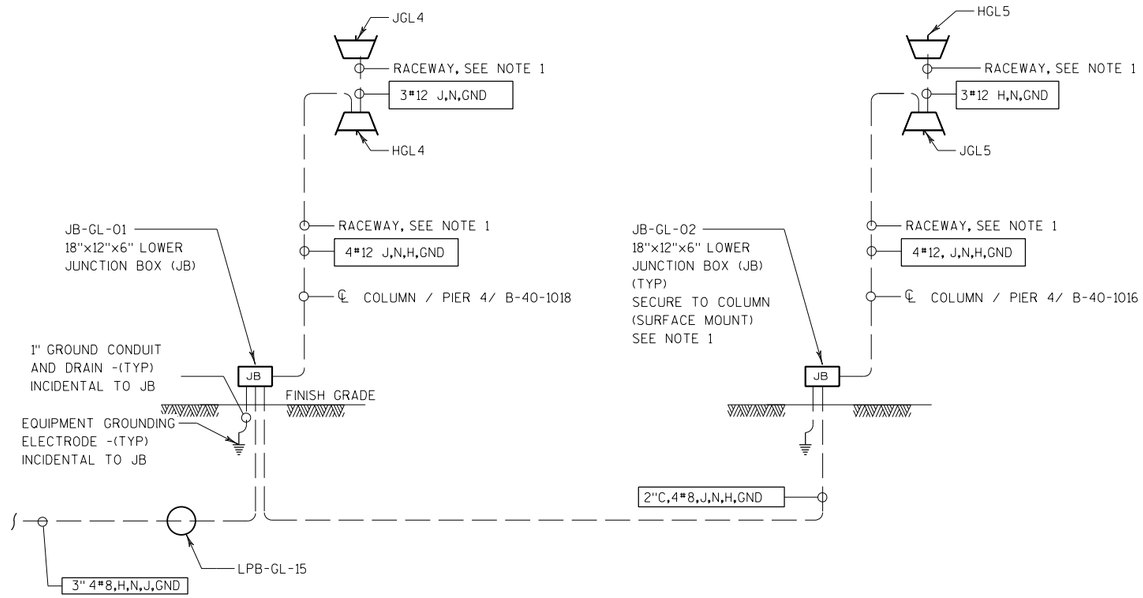
LED-X-X(T)-4-XYYZ

- LUMINAIRE NUMBER
- LIGHTING CONTROL CABINET
- CIRCUIT

} PLAQUE SEQUENCE IDENTIFICATION

- LUMINAIRE ARM LENGTH
- POLE TYPE, (T) WITH TRANSFORMER BASE BREAKAWAY
- LUMINAIRE UTILITY CATEGORY
- LUMINAIRE TYPE SOURCE

2



UNDERDECK LIGHTS AT B-40-1016/B-40-1018 PIER 4

NTS

@ N. HAMPTON AVE.

NOTES

1. RACEWAY AND JUNCTION BOX PROVIDE AS A STRUCTURAL BID ITEM IN PROJECT ID: 1228-22-71.

2. LUMINAIRE FUSING IN JUNCTION BOX.

3. SEE SDD 10A4-3, 10A-15-4A AND 10A15-4B.

NOTE:
1. LIGHTING CONTROL CABINET, PULL BOXES, CONDUITS AND WIRES, AND LIGHTING UNITS TO BE INSTALLED IN PROJECT ID: 1228-22-71.
2. UNDERDECK LUMINAIRES AT B-40-1016/1018 TO BE INSTALLED IN PROJECT ID: 1228-22-71. SEE STRUCTURAL PLAN FOR CONDUITS, JUNCTION BOX DETAILS. CONTRACTOR TO CONNECT WIRES AT UNDERDECK LUMINAIRES.
3. CONTRACTOR TO COORDINATE WITH PROJECT ID: 1228-22-71 CONSTRUCTION.
4. CONTRACTOR TO ONLY SPLICE WIRE IN POLE, DO NOT SPLICE WIRE IN PULL BOX.

HL-40-GL (SEE NOTE 1)
LPB-GL-1 SEE NOTE 1)
LED B-5(T)-4-HGL1 (SEE NOTE 1)
LPB-GL-2 (SEE NOTE 1)
LED B-5(T)-4-JGL1 (SEE NOTE 1)
2"C, 4#8, H, N, J, GND
STA. 974HAB+60.2, 19.8'LT LED B-5(T)-4-HGL2
STA. 975HAB+28.3, 22.4'LT LPB-GL-11
2"C, 4#8, H, N, J, GND IN PARAPET
STA. 977HAB+72.4, SM LED B-5(T)-4-JGL2
2"C, 4#8, H, N, J, GND IN PARAPET
STA. 979HAB+46.0, SM LED B-5(T)-4-HGL3
2"C, 3#8, H, N, J, GND IN PARAPET
STA. 981HAB+37.5, 35.4'LT LPB-GL-12
2"C, 8#8, H, N, J, GND
STA. 981HAB+19.5, 26.5'LT LED B-5(T)-4-JGL3
3"C, 8#8, H, N, J, GND
STA. 975HAB+69.8, 26.0'RT LED B-5(T)-4-JGL6
3"C, 4#8, H, N, J, GND
STA. 14HA+33.4, 38.9'RT LPB-GL-14
3"C, BORE 4#8, H, N, J, GND
STA. 14HA+33.3, 7.4'LT LPB-GL-15
2"C, 4#8, H, N, J, GND TO UDL-HGL5/JGL5 (INSTALL CONDUIT TO JUNCTION BOXES JB-GL-01 AND JB-GL-02)
STA. 14HA+81.0, 17.0'LT LED C-UDL-HGL4/JGL4 (SEE NOTE 2)
STA. 15HA+51.6, 17.2'LT LED C-UDL-HGL5/JGL5 (SEE NOTE 2)

B-40-893
B-40-1018
B-40-1016

IH 43 SB
IH 43 NB
RAMP HAA
RAMP HAB
N. PORT WASHINGTON RD.
W. GLENDALE AVE.
W. HAMPTON AVE.

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	LIGHTING PLANS - FINAL	SHEET 55	E

FILE NAME : S:\DOT\DOT_SE\190224_I43_N-S_Freeway_North-Hampton\Design\DGN\12282274_Ramp\Plansheets\023502_LP.dgn PLOT DATE : 9/30/2022 PLOT BY : kchai PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- NONMETALLIC INTERCONNECT CONDUIT
- LOOP DETECTOR CONDUIT, 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX') MONOTUBE BASE, POLE, 15'-30' ARM
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- VIDEO DETECTION AREA
- XX VIDEO DETECTION CAMERA
- PULL BOX, 24" X 42"
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- EY Y YELLOW ARROW
- EG G GREEN ARROW
- X EVP DESIGNATOR
- EVP DETECTOR HEAD
- V COMMUNICATIONS VAULT
- Y YIELD SIGN

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

N

W HAMPTON AVE

R/W

SB3 SB4 SB2 SB1

PB5 PB6 PB4 PB3 PB2 PB1 PB8 PB7

CB1 CV101

11+00 12+00 3+00 14+00 15+00 16+00

180' TO NEAR RIGHT SIGNAL

SALVAGE PEDESTAL BASE, POLE AND HEADS 1 & 6 ON SB2

IH-43 SB ON RAMP

IH-43 SB

IH-43 NB

CONSTRUCTION NOTES:

1. EXISTING CONDUIT RUNS TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS REMAINING IN THE CONDUIT.
2. THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. GRAYSHADE REPRESENTS EXISTING. BOLD REPRESENTS ITEMS TO BE REMOVED.
4. REMOVE AND SALVAGE PEDESTAL BASE, POLE AND HEADS 1 & 6 ON SB2. PEDESTAL BASE, POLE, AND HEADS 1 & 6 TO BE REINSTALLED ON NEW SB2.
5. DISCONNECT EXISTING VIDEO DETECTION CABLE AND EVP DETECTION CABLE FROM THE SIGNAL CABINET (CB1) AND PULL CABLES FROM CB1 BACK TO PB2. COIL CABLES IN PB2.

TRAFFIC CONTROL SIGNAL
IH-43 SB RAMP & W HAMPTON AVE
CITY OF GLENDALE
MILWAUKEE COUNTY

SIGNAL NO. S40-1432

REGION CONTACT: P. VIRK
DESIGNED BY:
REVISED BY: S. WAGNER

PAGE 1 OF 1

PROJECT NO: 1228-22-74	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 56	E

FILE NAME : N:\PDS\C3D\CAD\122822201\74\SIG\S40-1432\S40-1432_REM_18.DWG
LAYOUT NAME - S40-1432_rem_pg1

PLOT DATE : 11/2/2022 9:38 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- NONMETALLIC INTERCONNECT CONDUIT
- LOOP DETECTOR CONDUIT, 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX') MONOTUBE BASE, POLE, 15'-30' ARM
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- VIDEO DETECTION AREA
- XX VIDEO DETECTION CAMERA
- PULL BOX, 24" X 42"
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- FY Y YELLOW ARROW
- AG G GREEN ARROW
- X EVP DESIGNATOR
- EVP DETECTOR HEAD
- COMMUNICATIONS VAULT
- Y YIELD SIGN

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

N

IH-43 SB

IH-43 NB

SPEED LIMIT= 25 MPH

W HAMPTON AVE

11+00 12+00 13+00 14+00 15+00 16+00

983+00 984+00 982+00 981+00

180' TO NEAR RIGHT SIGNAL

SB1 SB2 SB3 SB4

PB1 PB2 PB4 PB5 PB6 PB7 PB8

CB1 CV101

I/C PB2 I/C PB3

REINSTALL SALVAGED PEDESTAL BASE, POLE AND HEADS 1 & 6 ON NEW CONCRETE BASE FOR SB2

ADJUST EXISTING PB2 TO MATCH FINAL GRADE

IH-43 SB ON RAMP

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL FIELD UNIT TO MAKE ARRANGEMENTS. (414) 266-1170.
2. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. ALL LUMINAIRES ARE LED-C UNLESS OTHERWISE NOTED.
4. LUMINAIRES ON SB3 AND SB4 TO REMAIN OPERATIONAL DURING CONSTRUCTION. CONTRACTOR TO INSTALL A UF 2-10 AWG GROUNDED LIGHTING WIRE FROM SB4 TO SB3 PRIOR TO THE REMOVAL OF ANY PULL BOXES.
5. ADJUST PB2 TO MATCH FINAL GRADE.
6. REINSTALL SALVAGED PEDESTAL BASE, POLE AND HEADS 1 & 6 ON NEW CONCRETE BASE FOR SB2.
7. PULL EXISTING COILED VIDEO DETECTION CABLE AND EVP DETECTION CABLE FROM PB2 TO CB1 AND RECONNECT IN SIGNAL CABINET.

MONOTUBE STRUCTURE NUMBERS
SB3 = S-40-1896
SB4 = S-40-1897

INITIAL INSTALLATION
2-14-19

REVISION				
REV. NO.	RELOCATE PB1, PB4, AND SB2; ADJUST PB2; ASBUILT PER 1228-22-72, REPOSITION WB SIGNAL HEADS AND ADJUST ZONE 11			
	APPROVAL RECOMMENDED		APPROVED	
1	REGION		CENTRAL OFFICE	
	DATE	BY	DATE	BY
	10/25/21	PSV	10/28/21	VR

TRAFFIC CONTROL SIGNAL
IH-43 SB RAMP & W HAMPTON AVE
CITY OF GLENDALE
MILWAUKEE COUNTY

SIGNAL NO. S40-1432
CABINET TYPE: TS2-S
CONTROLLER TYPE: ECONOLITE

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
DATE 2/7/19 PARWINDER VIRK
REGION TRAFFIC ENGINEER

APPROVED
DATE 2/14/19 JEREMY R. IWEN
STATE TRAFFIC ENGINEER

REGION CONTACT: P. VIRK
DESIGNED BY:
REVISED BY: S. WAGNER

PAGE 1 OF 2

10-25-21 JMM

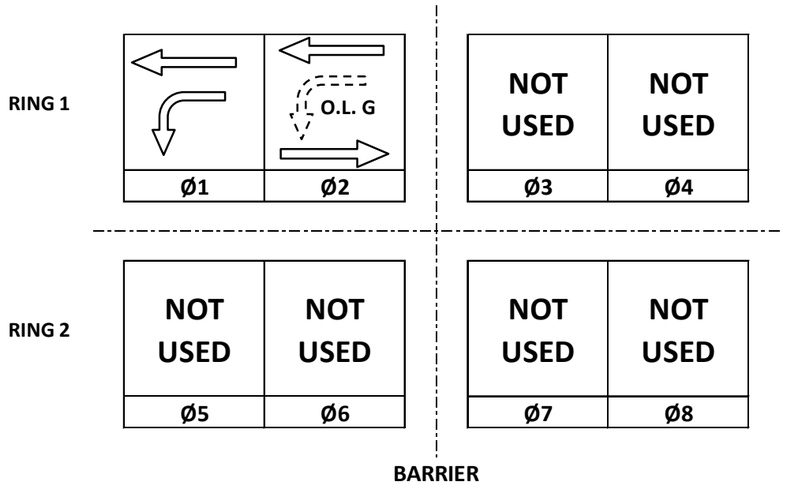
PROJECT NO: 1228-22-74	HWY: IH-43	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET 57	E

FILE NAME : N:\PDS\C3D\CAD\122822O1\74\SIG\S40-1432\S40-1432_R1_18.DWG
LAYOUT NAME - S40-1432_R1_pg1

PLOT DATE : 9/30/2022 10:29 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

	HEAD NUMBERS	FLASH
Ø1	6,7	R ←
Ø2	1,2,3	R
Ø3		
Ø4		
Ø5		
Ø6		
Ø7		
Ø8		
Ø2P		
Ø4P		
Ø6P		
Ø8P		
OLE	6,7	-
OLF		
OLG		
OLH		



CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				X
2	X		MIN	X
3				
4				
5				
6				
7				
8				

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B
MOVEMENT	←	↓
PHASE	1	2

AFTER PREEMPTION SEQUENCE 1 OR 2, CONTROLLER SHALL RETURN TO PHASES 2.

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	
CLOSED LOOP	
TWISTED PAIR	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	X
RADIO	
CELL MODEM	

TYPE OF COORDINATION		
NONE		
TBC		X
TRAFFIC RESPONSIVE		
ADAPTIVE		
*LOCATION OF MASTER CONTROLLER NO:	S-	
SIGNAL SYSTEM NO:	SS-	40-0027

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	
TOMAR	X
HARDWIRE	
OTHER	
CONFIRMATION LIGHTS	
LIFT BRIDGE	
QUEUE DETECTION	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR*(S)	11	22						
CALLED PHASE	1	2						
CALL OPTION	X	X						
DELAY TIME								
EXTENTION OPTION	X	X						
EXTEND TIME								
USE ADDED INITIAL		X						
CROSS SWITCH PHASE								

19	17	23	21	27	25	31	29	DETECTOR INPUT
								PLAN LOOP DETECTOR*(S)
								CALLED PHASE
								CALL OPTION
								DELAY TIME
								EXTENTION OPTION
								EXTEND TIME
								USE ADDED INITIAL
								CROSS SWITCH PHASE

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR*(S)	21							
CALLED PHASE	2							
CALL OPTION	X							
DELAY TIME								
EXTENTION OPTION	X							
EXTEND TIME								
USE ADDED INITIAL	X							
CROSS SWITCH PHASE								

20	18	24	22	28	26	32	30	DETECTOR INPUT
								PLAN LOOP DETECTOR*(S)
								CALLED PHASE
								CALL OPTION
								DELAY TIME
								EXTENTION OPTION
								EXTEND TIME
								USE ADDED INITIAL
								CROSS SWITCH PHASE

GENERAL NOTES:

1. HEAD 4 AND 5 ARE WIRED TO STAY ON AT ALL TIMES EVEN DURING FLASH OPERATIONS

IH 43 SB ON RAMP & W HAMPTON AVE
CITY OF GLENDALE
MILWAUKEE COUNTY

SIGNAL NO: S40-1432 CABINET TYPE: TS2-S
CONTROLLER TYPE: ECONOLITE
DATE: SEP - 2021 PAGE NUMBER: 2 OF 2

2

PROJECT ID:	1228-22-74
INTERSECTION:	IH-43 SB RAMP & W HAMPTON AVE

Signal Wire Color Coding	BLK - black	RED - red	GRN - green
	WHT - white	BLU - blue	ORG - orange

CB1 TO	AWG14 # OF CONDUCTORS	HEAD NO.	SIGNAL INDICATION WIRE COLOR									PED BUTTON	FUTURE APS
			RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	<FLASHING YELLOW>	D/WALK	WALK		
SB2	12	1	RED	ORG	GRN								
		6				RED/BLK	ORG/BLK	GRN/BLK	BLU/BLK				
SB3	12	4			GRN								
		5			GRN								
		7				RED/BLK	ORG/BLK	GRN/BLK	BLU/BLK				

Equipment Grounding Conductor 10 AWG Green XLP	
From	To
CB1	SB2
SB2	SB3

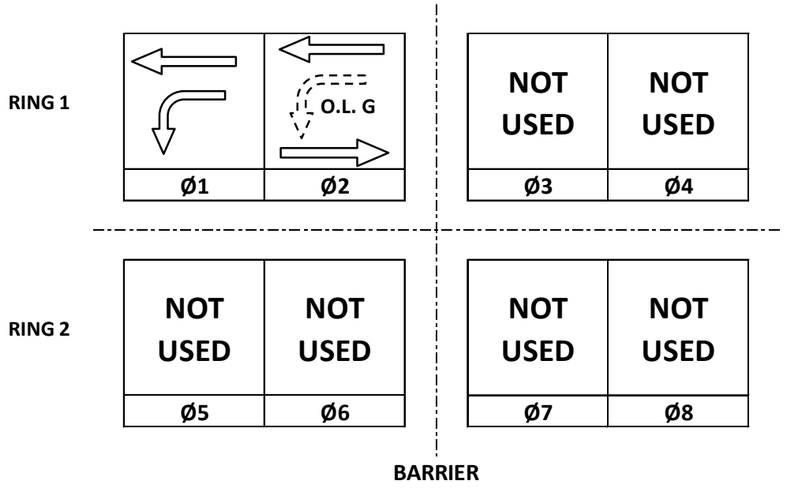
Pull Box Bonding Jumper 10 AWG Green XLP	
From	To
PB1	CB1
PB2	SB2
PB4	SB2

Lighting UF 2-10 AWG Grounded	
From	To
CB1	SB1
CB1	SB3

Emergency Vehicle Preemption	
From	To
CB1	SB3 (HEAD A)

Video Detection Cable	
From	To
CB1	SB3 (V1)

	HEAD NUMBERS	FLASH
Ø1	6,7	R ←
Ø2	1,2,3	R
Ø3		
Ø4		
Ø5		
Ø6		
Ø7		
Ø8		
Ø2P		
Ø4P		
Ø6P		
Ø8P		
OLE	6,7	-
OLF		
OLG		
OLH		



CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				X
2	X		MIN	X
3				
4				
5				
6				
7				
8				

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B
MOVEMENT	←	↓
PHASE	1	2

AFTER PREEMPTION SEQUENCE 1 OR 2, CONTROLLER SHALL RETURN TO PHASES 2.

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	
CLOSED LOOP	
TWISTED PAIR	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	X
RADIO	
CELL MODEM	

TYPE OF COORDINATION		
NONE		
TBC		X
TRAFFIC RESPONSIVE		
ADAPTIVE		
*LOCATION OF MASTER CONTROLLER NO:	S-	
SIGNAL SYSTEM NO:	SS-	40-0027

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	
TOMAR	X
HARDWIRE	
OTHER	
CONFIRMATION LIGHTS	
LIFT BRIDGE	
QUEUE DETECTION	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR*(S)	11	22						
CALLED PHASE	1	2						
CALL OPTION	X	X						
DELAY TIME								
EXTENTION OPTION	X	X						
EXTEND TIME								
USE ADDED INITIAL		X						
CROSS SWITCH PHASE								

19	17	23	21	27	25	31	29	DETECTOR INPUT
								PLAN LOOP DETECTOR*(S)
								CALLED PHASE
								CALL OPTION
								DELAY TIME
								EXTENTION OPTION
								EXTEND TIME
								USE ADDED INITIAL
								CROSS SWITCH PHASE

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR*(S)	21							
CALLED PHASE	2							
CALL OPTION	X							
DELAY TIME								
EXTENTION OPTION	X							
EXTEND TIME								
USE ADDED INITIAL	X							
CROSS SWITCH PHASE								

20	18	24	22	28	26	32	30	DETECTOR INPUT
								PLAN LOOP DETECTOR*(S)
								CALLED PHASE
								CALL OPTION
								DELAY TIME
								EXTENTION OPTION
								EXTEND TIME
								USE ADDED INITIAL
								CROSS SWITCH PHASE

GENERAL NOTES:

1. HEAD 4 AND 5 ARE WIRED TO STAY ON AT ALL TIMES EVEN DURING FLASH OPERATIONS

IH 43 SB ON RAMP & W HAMPTON AVE
CITY OF GLENDALE
MILWAUKEE COUNTY

SIGNAL NO: S40-1432 CABINET TYPE: TS2-S
CONTROLLER TYPE: ECONOLITE
DATE: SEP - 2021 PAGE NUMBER: 2 OF 2

2

PROJECT ID:	1228-22-74
INTERSECTION:	IH-43 SB RAMP & W HAMPTON AVE

Signal Wire Color Coding	BLK - black	RED - red	GRN - green
	WHT - white	BLU - blue	ORG - orange

CB1 TO	AWG14 # OF CONDUCTORS	HEAD NO.	SIGNAL INDICATION WIRE COLOR									PED BUTTON	FUTURE APS
			RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	<FLASHING YELLOW>	D/WALK	WALK		
SB2	12	1	RED	ORG	GRN								
		6				RED/BLK	ORG/BLK	GRN/BLK	BLU/BLK				
SB3	12	4			GRN								
		5			GRN								
		7				RED/BLK	ORG/BLK	GRN/BLK	BLU/BLK				

Equipment Grounding Conductor 10 AWG Green XLP	
From	To
CB1	SB2
SB2	SB3

Pull Box Bonding Jumper 10 AWG Green XLP	
From	To
PB1	CB1
PB2	SB2
PB4	SB2

Lighting UF 2-10 AWG Grounded	
From	To
CB1	SB1
CB1	SB3

Emergency Vehicle Preemption	
From	To
CB1	SB3 (HEAD A)

Video Detection Cable	
From	To
CB1	SB3 (V1)

2

N IRONWOOD LANE

W ROCK PLACE

MILWAUKEE RIVER

W HAMPTON AVENUE

OAK LEAF TRAIL

MARKING REMOVAL LINE 4-INCH

RAMP HAB

IH 43 SB

IH 43 NB

N PORT WASHINGTON ROAD

RIPRAP

SLAB

HAB+62 HAB+13 HAB+31 HAB+31 HAB+77 HAB+12 HAB+34 HA+00 HA+31 HA+47 HA+95 HA+01 HA+16 HA+58 HA+78 HA+56 HA+85 HA+46 HA+90 HA+14 HA+05

12' 12' 3' 11' 11'

970HAB 972HAB 974HAB 976HAB 978HAB 980HAB 12HA 14HA 16HA 18HA

970 972 974 976 978 980 982 984

102PW 104PW 106PW 108PW

LEGEND

3	MARKING LINE EPOXY 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
6	MARKING LINE EPOXY 8-INCH (WHITE)
7	MARKING STOP LINE EPOXY 18-INCH (WHITE)
14	MARKING WORDS EPOXY (WHITE)
16	MARKING ARROWS EPOXY (TYPE 2) (WHITE)
20	MARKING CURB EPOXY (YELLOW)
21	MARKING ISLAND NOSE EPOXY (YELLOW)
29	MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH (WHITE)
30	MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
183	MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
184	MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (YELLOW)

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	PAVEMENT MARKING PLAN	SHEET 62 E

FILE NAME : N:\PDS\C3D\12282274\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 05

PLOT DATE : 10/3/2022 4:05 PM PLOT BY : FERGUSON, JULIE PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

GENERAL NOTES FOR TRAFFIC CONTROL

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

2) A FLAGGER MAY BE REQUIRED WHERE CONSTRUCTION VEHICLES ENTER OR LEAVE WORK AREAS IF WARRANTED BY CONDITIONS OR AS DIRECTED BY THE ENGINEER.
FLAGGING IS NOT PERMITTED ON FREEWAY LANES.

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

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

5) FOR NIGHTTIME OPERATION ALL DRUMS IN TAPERS SHALL HAVE A TYPE C STEADY BURN WARNING LIGHT.

6) ALL TYPE III BARRICADES SHALL BE 8' WIDE, UNLESS OTHERWISE NOTED, AND EQUIPPED WITH TWO TYPE "A" (LOW INTENSITY FLASHING) LIGHTS.

7) DIMENSIONS TO CONCRETE BARRIER TEMPORARY PRECAST ARE TO THE FACE OF BARRIER ADJACENT TO TRAFFIC. STATION CALL-OUTS TO CONCRETE BARRIER TEMPORARY PRECAST ARE TO THE FACE OF BARRIER.

8) WORK AREAS SHOWN MAY NOT ILLUSTRATE ALL REMOVALS.
SEE REMOVAL SHEETS FOR ADDITIONAL INFORMATION.

9) ALL TRAFFIC CONTROL SIGNS LOCATED IN MEDIANS SHALL BE MOUNTED ON CONCRETE BARRIER UNLESS OTHERWISE NOTED, SEE TRAFFIC CONTROL DETAILS.

10) WHEN A SEGMENT OF THE PROJECT IS NOT SHOWN ON THE STAGING PLANS, USE THE SAME TRAFFIC CONTROL AS THE PREVIOUS STAGE FOR THAT SEGMENT.

11) TRAFFIC CONTROL DRUM SPACING SHALL BE 50' UNLESS OTHERWISE NOTED.

12) 16" X 16" ORANGE FLAGS SHALL BE INCIDENTAL TO TRAFFIC CONTROL SIGN BID ITEM.

13) 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.

14) TEMPORARY RAISED PAVEMENT MARKERS WHERE SHOWN SHALL BE PLACED AS WEATHER PERMITS OR AS DIRECTED BY THE ENGINEER.

15) INSTALL PROPOSED TRAFFIC CONTROL SIGNS ON BOTH OUTSIDE SHOULDER AND MEDIAN SIDE OF ALL DIVIDED ROADWAYS

16) CONCRETE BARRIER TEMPORARY PRECAST SHALL BE ANCHORED AS DEFINED IN STANDARD DETAIL DRAWING "CONCRETE BARRIER TEMPORARY PRECAST, 12'6""

17) MAINTAIN 2/10 MILE MARKER SIGNS. MOVE EXISTING SIGNS OR PROVIDE TEMPORARY SIGNS AS NEEDED DURING STAGED TRAFFIC AND AS DIRECTED BY THE ENGINEER.

LEGEND

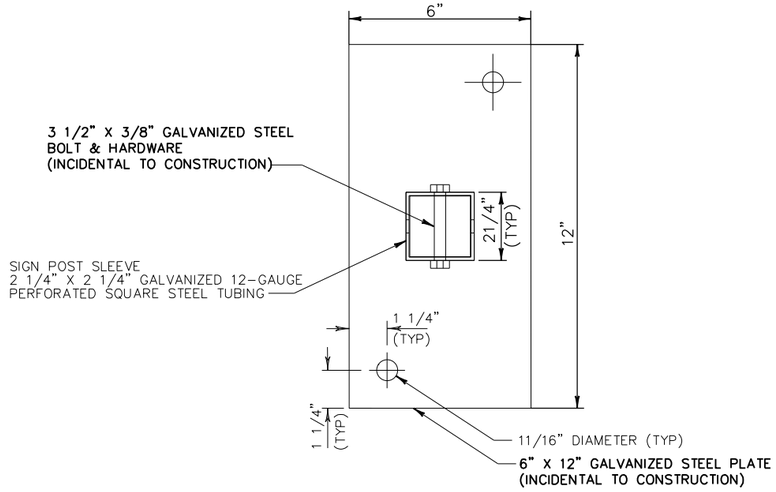
- TRAFFIC CONTROL BARRICADE TYPE III WITH TWO (2) WARNING LIGHTS TYPE "A"
- TRAFFIC CONTROL BARRICADE TYPE III WITH TWO (2) WARNING LIGHTS TYPE "A" AND ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- (1) TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH
- (2) TEMPORARY MARKING REMOVABLE MASK OUT TAPE 6-INCH
- (3) TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH
- WORK AREA
- CONSTRUCTION TRAFFIC ONLY
- DIRECTION OF TRAFFIC

TEMPORARY PAVEMENT MARKING LEGEND (FIO SHEETS ONLY)

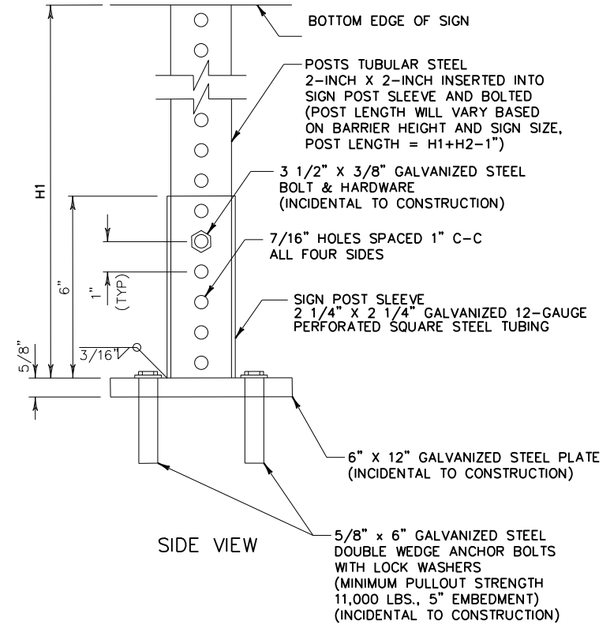
- (239) TEMPORARY MARKING LINE EPOXY 4-INCH (YELLOW)
- (240) TEMPORARY MARKING LINE EPOXY 4-INCH (WHITE)
- (241) TEMPORARY MARKING LINE EPOXY 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - NOTES AND LEGEND	SHEET 63	E

2

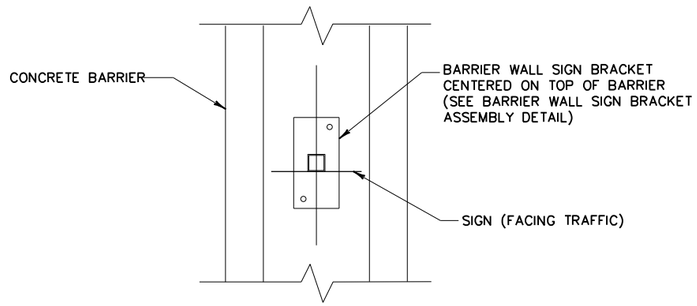


PLAN VIEW

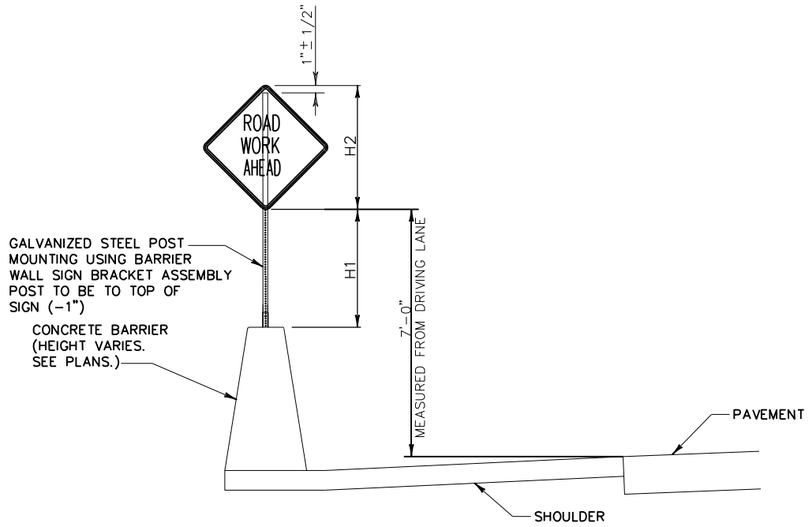


SIDE VIEW

BARRIER WALL SIGN BRACKET ASSEMBLY DETAIL



PLAN VIEW



SIDE VIEW

MEDIAN BARRIER MOUNTING DETAIL

MOUNTING SIGNS TO MEDIAN BARRIER

NOT TO SCALE

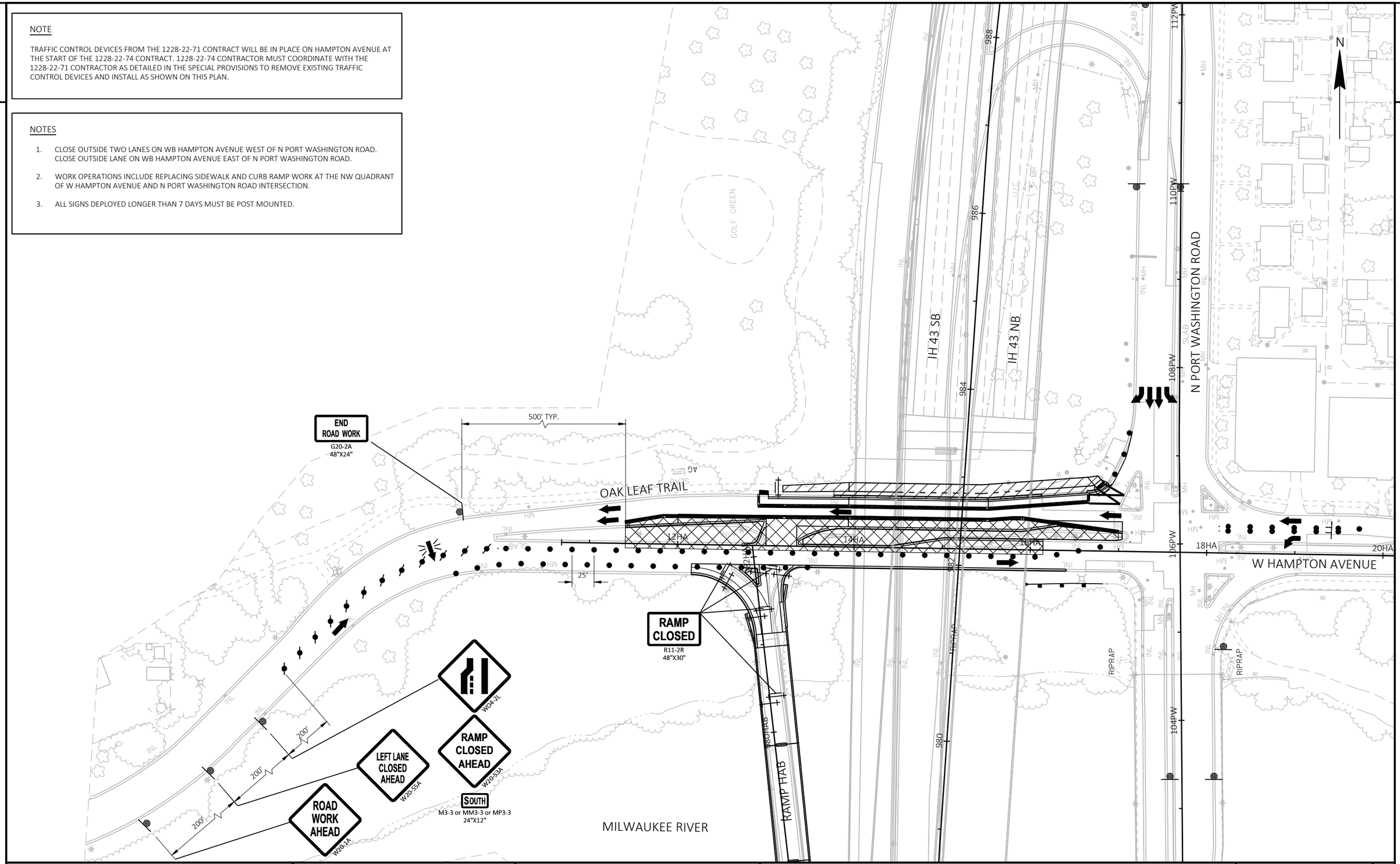
2

NOTE

TRAFFIC CONTROL DEVICES FROM THE 1228-22-71 CONTRACT WILL BE IN PLACE ON HAMPTON AVENUE AT THE START OF THE 1228-22-74 CONTRACT. 1228-22-74 CONTRACTOR MUST COORDINATE WITH THE 1228-22-71 CONTRACTOR AS DETAILED IN THE SPECIAL PROVISIONS TO REMOVE EXISTING TRAFFIC CONTROL DEVICES AND INSTALL AS SHOWN ON THIS PLAN.

NOTES

1. CLOSE OUTSIDE TWO LANES ON WB HAMPTON AVENUE WEST OF N PORT WASHINGTON ROAD. CLOSE OUTSIDE LANE ON WB HAMPTON AVENUE EAST OF N PORT WASHINGTON ROAD.
2. WORK OPERATIONS INCLUDE REPLACING SIDEWALK AND CURB RAMP WORK AT THE NW QUADRANT OF W HAMPTON AVENUE AND N PORT WASHINGTON ROAD INTERSECTION.
3. ALL SIGNS DEPLOYED LONGER THAN 7 DAYS MUST BE POST MOUNTED.



PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - HAMPTON AVENUE STAGE 1	SHEET 65	E

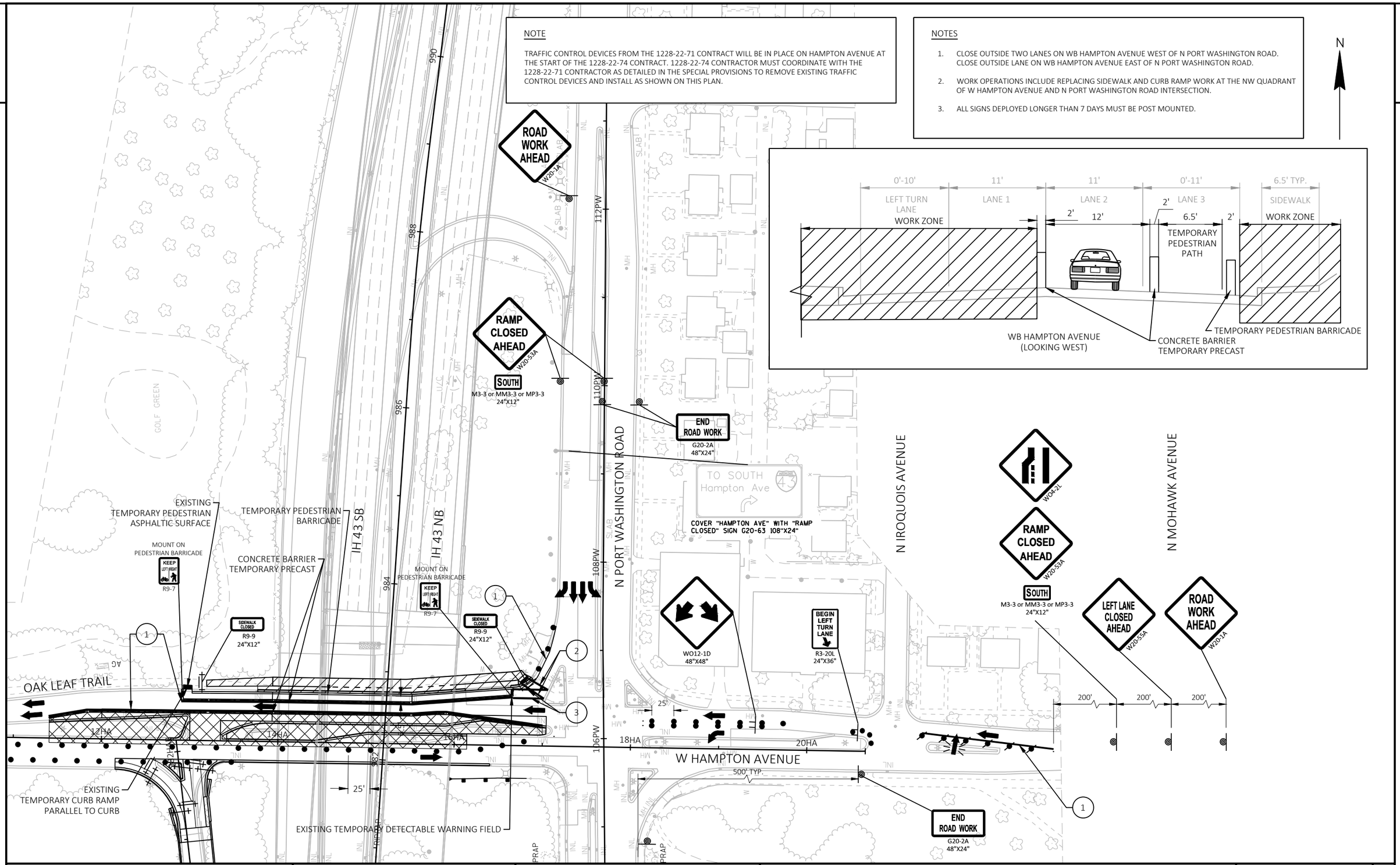
NOTE

TRAFFIC CONTROL DEVICES FROM THE 1228-22-71 CONTRACT WILL BE IN PLACE ON HAMPTON AVENUE AT THE START OF THE 1228-22-74 CONTRACT. 1228-22-74 CONTRACTOR MUST COORDINATE WITH THE 1228-22-71 CONTRACTOR AS DETAILED IN THE SPECIAL PROVISIONS TO REMOVE EXISTING TRAFFIC CONTROL DEVICES AND INSTALL AS SHOWN ON THIS PLAN.

NOTES

1. CLOSE OUTSIDE TWO LANES ON WB HAMPTON AVENUE WEST OF N PORT WASHINGTON ROAD. CLOSE OUTSIDE LANE ON WB HAMPTON AVENUE EAST OF N PORT WASHINGTON ROAD.
2. WORK OPERATIONS INCLUDE REPLACING SIDEWALK AND CURB RAMP WORK AT THE NW QUADRANT OF W HAMPTON AVENUE AND N PORT WASHINGTON ROAD INTERSECTION.
3. ALL SIGNS DEPLOYED LONGER THAN 7 DAYS MUST BE POST MOUNTED.

N



PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - HAMPTON AVENUE STAGE 1	SHEET 66	E

FILE NAME : N:\PDS\C3D\12282274\SHEETSPLAN\026001-ST1_HAMPTON.DWG
LAYOUT NAME - 026001-st1-02
PLOT DATE : 10/28/2022 9:58 AM
PLOT BY : PESCHEL, KYLE R
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

N

N PORT WASHINGTON ROAD

N IROQUOIS AVENUE

N MOHAWK AVENUE

W HAMPTON AVENUE

OAK LEAF TRAIL

IH 43 SB

IH 43 NB

GOLF GREEN

MILWAUKEE RIVER

RAMP HAB

12HA

14HA

16HA

18HA

20HA

986

984

982

980

978

110PW

108PW

106PW

104PW

102PW

RIPRAP

350'

350'

350'

LEFT LANE CLOSED AHEAD
W20-5A

ROAD WORK AHEAD
W20-1A

END ROAD WORK
G20-2A
48"X24"

RAMP CLOSED AHEAD
W20-5A

SOUTH
M3-3 or MM3-3 or MP3-3
24"X12"

NOTE

TRAFFIC CONTROL DEVICES FROM THE 1228-22-71 CONTRACT WILL BE IN PLACE ON HAMPTON AVENUE AT THE START OF THE 1228-22-74 CONTRACT. 1228-22-74 CONTRACTOR MUST COORDINATE WITH THE 1228-22-71 CONTRACTOR AS DETAILED IN THE SPECIAL PROVISIONS TO REMOVE EXISTING TRAFFIC CONTROL DEVICES AND INSTALL AS SHOWN ON THIS PLAN.

NOTES

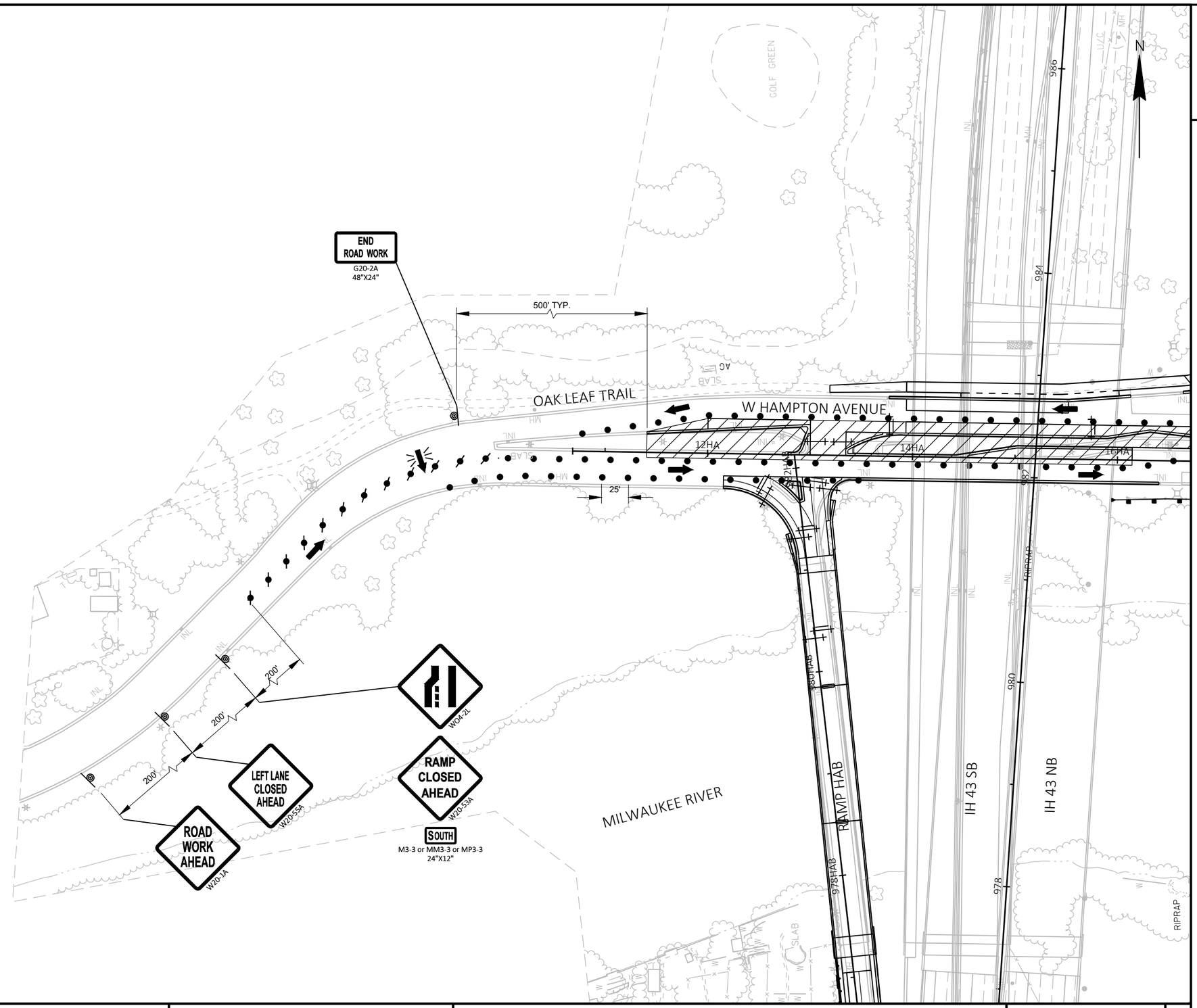
1. CLOSE OUTSIDE TWO LANES ON WB HAMPTON AVENUE WEST OF N PORT WASHINGTON ROAD. CLOSE OUTSIDE LANE ON WB HAMPTON AVENUE EAST OF N PORT WASHINGTON ROAD.
2. WORK OPERATIONS INCLUDE REPLACING SIDEWALK AND CURB RAMP WORK AT THE NW QUADRANT OF W HAMPTON AVENUE AND N PORT WASHINGTON ROAD INTERSECTION.
3. ALL SIGNS DEPLOYED LONGER THAN 7 DAYS MUST BE POST MOUNTED.

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - HAMPTON AVENUE STAGE 1	SHEET 67	E

FILE NAME : N:\PDS\C3D\12282274\SHEETSPLAN\026001-ST1_HAMPTON.DWG
LAYOUT NAME - 026001-st1-03
PLOT DATE : 10/27/2022 1:47 PM
PLOT BY : PESCHEL, KYLE R
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

NOTES

1. TRAFFIC ON W HAMPTON AVENUE WILL BE ON THE OUTER LANE, THE INNER LANE WILL BE CLOSED TO TRAFFIC
2. WORK OPERATIONS INCLUDE MEDIAN RECONSTRUCTION, CURB AND GUTTER, AND PAVEMENT REPLACEMENT.
3. ALL SIGNS DEPLOYED LONGER THAN 7 DAYS MUST BE POST MOUNTED.



2

NOTES

1. TRAFFIC ON W HAMPTON AVENUE WILL BE ON THE OUTER LANE, THE INNER LANE WILL BE CLOSED TO TRAFFIC
2. WORK OPERATIONS INCLUDE MEDIAN RECONSTRUCTION, CURB AND GUTTER, AND PAVEMENT REPLACEMENT.
3. ALL SIGNS DEPLOYED LONGER THAN 7 DAYS MUST BE POST MOUNTED.

N

RAMP CLOSED AHEAD W20-53A
SOUTH
M3-3 or MM3-3 or MP3-3 24"X12"

LEFT LANE CLOSED AHEAD W20-55A

END ROAD WORK G20-2A 48"X24"

TO SOUTH Hampton Ave

COVER "HAMPTON AVE" WITH "RAMP CLOSED" SIGN G20-63 108"X24"

WO4-2L

RAMP CLOSED AHEAD W20-53A
SOUTH
M3-3 or MM3-3 or MP3-3 24"X12"

LEFT LANE CLOSED AHEAD W20-55A

ROAD WORK AHEAD W20-1A

200' 200' 200'

END ROAD WORK G20-2A 48"X24"

RAMP CLOSED R11-2R 48"X30"

WO12-1D 48"X48"

BEGIN LEFT TURN LANE R3-20L 24"X36"

OAK LEAF TRAIL

W HAMPTON AVENUE

25'

12HA 14HA 16HA 18HA 20HA

986 984 982 980 978

110PW 108PW 106PW 104PW 102PW

SLAB

GOLF GREEN

RAMP CLOSED R11-2R 48"X30"

180THAB

RAMP HAB

978THAB

IH 43 SB

IH 43 NB

MILWAUKEE RIVER

350'

RIPRAP

LEFT LANE CLOSED AHEAD W20-55A

350'

500' TYP.

N PORT WASHINGTON ROAD

TEMPORARY MARKING LINE
REMOVABLE TAPE 4-INCH (YELLOW)

END ROAD WORK G20-2A 48"X24"

END ROAD WORK G20-2A 48"X24"

RAMP CLOSED AHEAD W20-53A
SOUTH
M3-3 or MM3-3 or MP3-3 24"X12"

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - HAMPTON AVENUE STAGE 2	SHEET 69	E

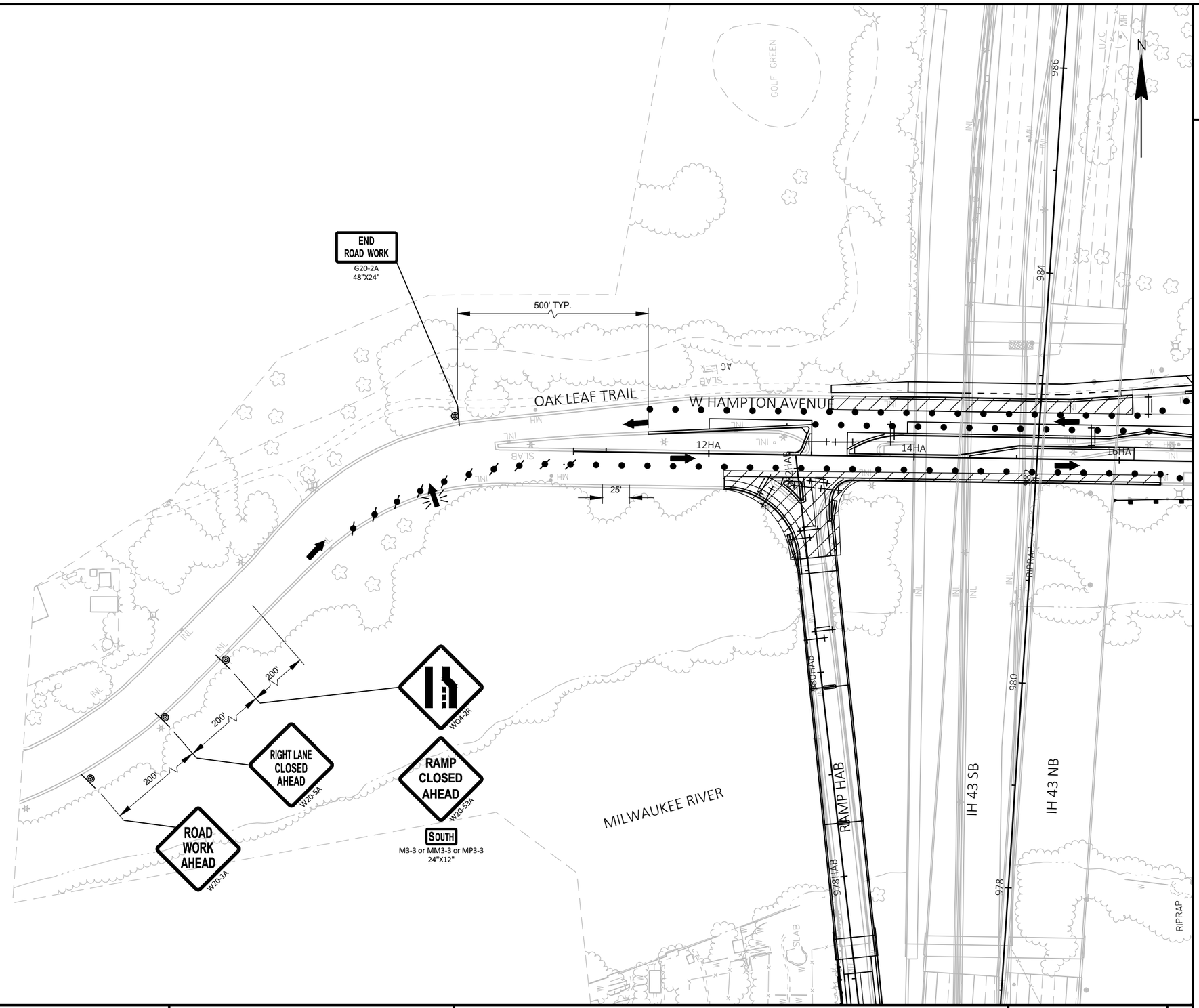
FILE NAME : N:\PDS\C3D\12282274\SHEETSPLAN\026001-ST2_HAMPTON.DWG
LAYOUT NAME - 026001-st2-02

PLOT DATE : 10/3/2022 2:24 PM PLOT BY : PESCHEL, KYLE R PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

NOTES

1. TRAFFIC ON W HAMPTON AVENUE WILL BE ON THE INNER LANE, THE OUTER LANE WILL BE CLOSED TO TRAFFIC. LEFT TURN LANE TO RAMP HAB WILL BE CLOSED.
2. WORK OPERATIONS INCLUDE CURB AND GUTTER AND PAVEMENT REPLACEMENT.
3. ALL SIGNS DEPLOYED LONGER THAN 7 DAYS MUST BE POST MOUNTED.



PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - HAMPTON AVENUE STAGE 3	SHEET 70	E

FILE NAME : N:\PDS\C3D\12282274\SHEETSPLAN\026001-ST3_HAMPTON.DWG
LAYOUT NAME - 026001-st3-01

PLOT DATE : 10/3/2022 2:31 PM PLOT BY : PESCHEL, KYLE R PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

NOTES

1. TRAFFIC ON W HAMPTON AVENUE WILL BE ON THE INNER LANE, THE OUTER LANE WILL BE CLOSED TO TRAFFIC. LEFT TURN LANE TO RAMP HAB WILL BE CLOSED.
2. WORK OPERATIONS INCLUDE CURB AND GUTTER AND PAVEMENT REPLACEMENT.
3. ALL SIGNS DEPLOYED LONGER THAN 7 DAYS MUST BE POST MOUNTED.

RAMP CLOSED AHEAD W20-53A
SOUTH
M3-3 or MM3-3 or MP3-3 24"X12"

RIGHT LANE CLOSED AHEAD W20-5A

END ROAD WORK G20-2A 48"X24"

LANE CLOSED R11-2L 48"X30"

RAMP CLOSED R11-2R 48"X30"

END ROAD WORK G20-2A 48"X24"

TO SOUTH Hampton Ave

COVER "HAMPTON AVE" WITH "RAMP CLOSED" SIGN G20-63 108"X24"

WO4-2R

RAMP CLOSED AHEAD W20-53A
SOUTH
M3-3 or MM3-3 or MP3-3 24"X12"

RIGHT LANE CLOSED AHEAD W20-5A

ROAD WORK AHEAD W20-1A

WO12-1D 48"X48"

ONLY R3-50R 30"X36"

RIGHT LANE MUST TURN RIGHT R3-7R 30"X30"

ONLY ONLY ONLY R3-8B 54"X30"

200' 200' 200'

N

OAK LEAF TRAIL

W HAMPTON AVENUE

12HA 14HA 16HA 18HA 20HA

25'

110PW 108PW 106PW 104PW 102PW

986 984 982 980 978

350' 350'

RIPRAP

500' TYP.

RAMP CLOSED R11-2R 48"X30"

RAMP CLOSED AHEAD W20-53A
SOUTH
M3-3 or MM3-3 or MP3-3 24"X12"

END ROAD WORK G20-2A 48"X24"

RIGHT LANE CLOSED AHEAD W20-5A

END ROAD WORK G20-2A 48"X24"

RAMP HAB

978HAB 980HAB

IH 43 SB

IH 43 NB

N PORT WASHINGTON ROAD

MILWAUKEE RIVER

GOLF GREEN

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - HAMPTON AVENUE STAGE 3	SHEET 71	E

FILE NAME : N:\PDS\C3D\12282274\SHEETSPLAN\026001-ST3_HAMPTON.DWG
LAYOUT NAME - 026001-st3-02

PLOT DATE : 10/3/2022 2:32 PM PLOT BY : PESCHEL, KYLE R PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

NOTES

1. TRAFFIC ON W HAMPTON AVENUE WILL BE OPEN TO TRAFFIC IN BOTH LANES.
2. LEFT TURN LANE TO RAMP HAB WILL BE CLOSED UNTIL RAMP HAB WORK IS COMPLETE AND 1228-22-71 CONTRACT STAGING ALLOWS FOR TRAFFIC TO ENTER I-43 SB. 1228-22-74 CONTRACTOR MUST COORDINATE WITH 1228-22-71 CONTRACTOR PRIOR TO OPENING RAMP HAB.
3. ALL SIGNS DEPLOYED LONGER THAN 7 DAYS MUST BE POST MOUNTED.

N IRONWOOD LANE
W ROCK PLACE
MILWAUKEE RIVER
W HAMPTON AVENUE
OAK LEAF TRAIL
IH 43 SB
IH 43 NB
RAMP HAB
RAMP HAA
N PORT WASHINGTON ROAD
MATCHLINE 984+50

SOUTH INTERSTATE 43
M3-3 24"X12"
M1-1 24"X24"
RAMP CLOSED AHEAD W20-5SA

R11-2R 48" X 30"
RAMP CLOSED
TYPE III BARRICADE

R11-2R 48"X30"
RAMP CLOSED
TYPE III BARRICADE

970HAB 972HAB 974HAB 976HAB 978HAB 980HAB 982HAB
970 972 974 976 978 980 982 984
972HAA 974HAA 976HAA 978HAA
98PW 100PW 102PW 104PW 106PW 108PW
12HA 14HA 16HA 18HA
25' 25'
RIPRAP
SIGN
BG
SLAB
INL
MH

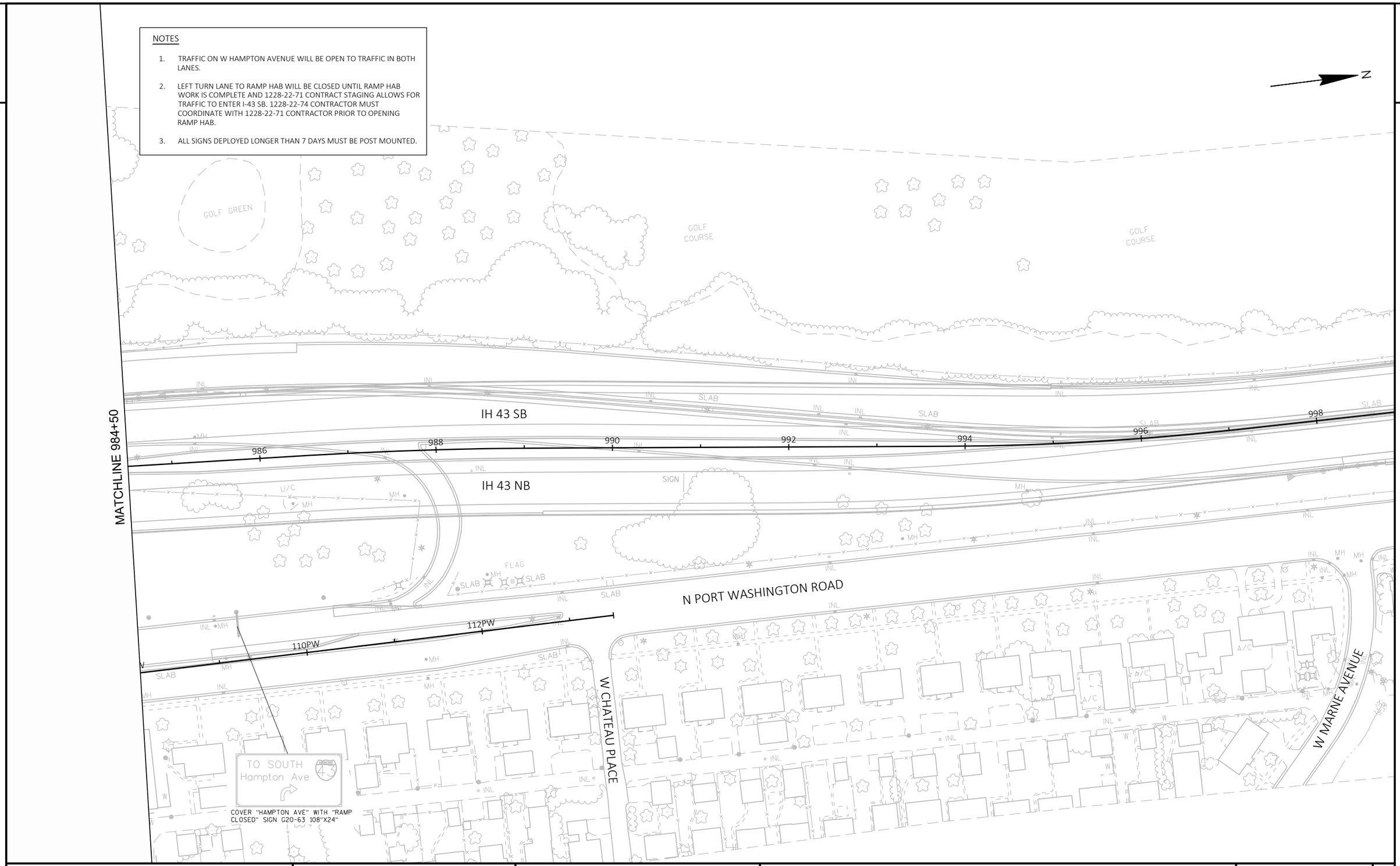
2

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - HAMPTON AVENUE STAGE 4	SHEET 72	E

FILE NAME : N:\PDS\C3D\12282274\SHEETSPLAN\026001-ST4_HAMPTON.DWG
LAYOUT NAME - 026001-st4-01
PLOT DATE : 10/3/2022 4:06 PM
PLOT BY : PESCHEL, KYLE R
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

NOTES

1. TRAFFIC ON W HAMPTON AVENUE WILL BE OPEN TO TRAFFIC IN BOTH LANES.
2. LEFT TURN LANE TO RAMP HAB WILL BE CLOSED UNTIL RAMP HAB WORK IS COMPLETE AND 1228-22-71 CONTRACT STAGING ALLOWS FOR TRAFFIC TO ENTER I-43 SB. 1228-22-74 CONTRACT MUST COORDINATE WITH 1228-22-71 CONTRACTOR PRIOR TO OPENING RAMP HAB.
3. ALL SIGNS DEPLOYED LONGER THAN 7 DAYS MUST BE POST MOUNTED.



PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL - HAMPTON AVENUE STAGE 4	SHEET 73	E

FILE NAME : N:\PDS\C3D\12282274\SHEETSPLAN\026001-ST4_HAMPTON.DWG
LAYOUT NAME - 026001-st4-02

PLOT DATE : 9/30/2022 11:42 AM PLOT BY : PESCHEL, KYLE R PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

FOR INFORMATION ONLY

2

2

W GLENDALE AVENUE

N IRONWOOD LANE

N PORT WASHINGTON ROAD

MATCHLINE 970+50

IH 43 SB

IH 43 NB

RAMP HAA

+88.98, -73.22' LT

+75.09, -15.26' LT

+00.00, -69.77' LT
BEGIN TEMP BARRIER

22'

22'

R2350'

R2400'

240

241

239

958

960

962

964

966

968

970

960HAA

962HAA

964HAA

966HAA

968HAA

970HAA

970HAB

14GD

2GD

R11-2L
48" X 30"

LANE CLOSED

TYPE III BARRICADE

R9-11
24"X12"

EXIT 77 B
Hampton Ave
WEST
1/4 MILE

COVER "HAMPTON AVE WEST" WITH "RAMP CLOSED" SIGN G20-63 108"X24"

EXIT 77 A
Hampton Ave
EAST

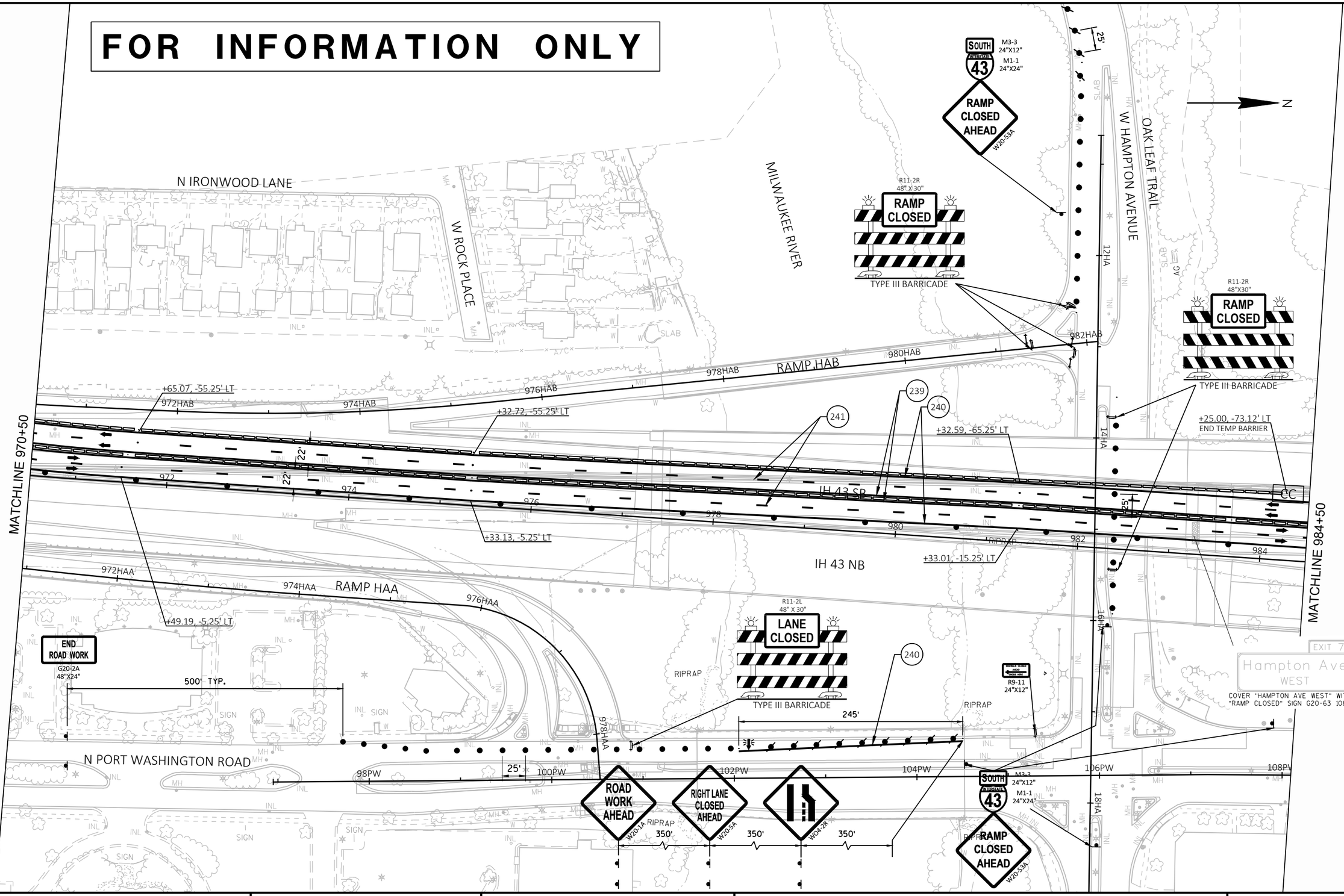
COVER "HAMPTON AVE EAST" WITH "RAMP CLOSED" SIGN G20-63 108"X24"

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL (1228-22-71 STAGE 4 - FOR INFORMATION ONLY)	SHEET 74	E

FILE NAME : N:\PDS\C3D\12282274\SHEETSPLAN\026001-TC_MAINLINE_FIO.DWG
LAYOUT NAME - 04

PLOT DATE : 9/27/2022 8:54 PM PLOT BY : PESCHEL, KYLE R PLOT NAME : PLOT SCALE : 1 IN:100 FT

FOR INFORMATION ONLY



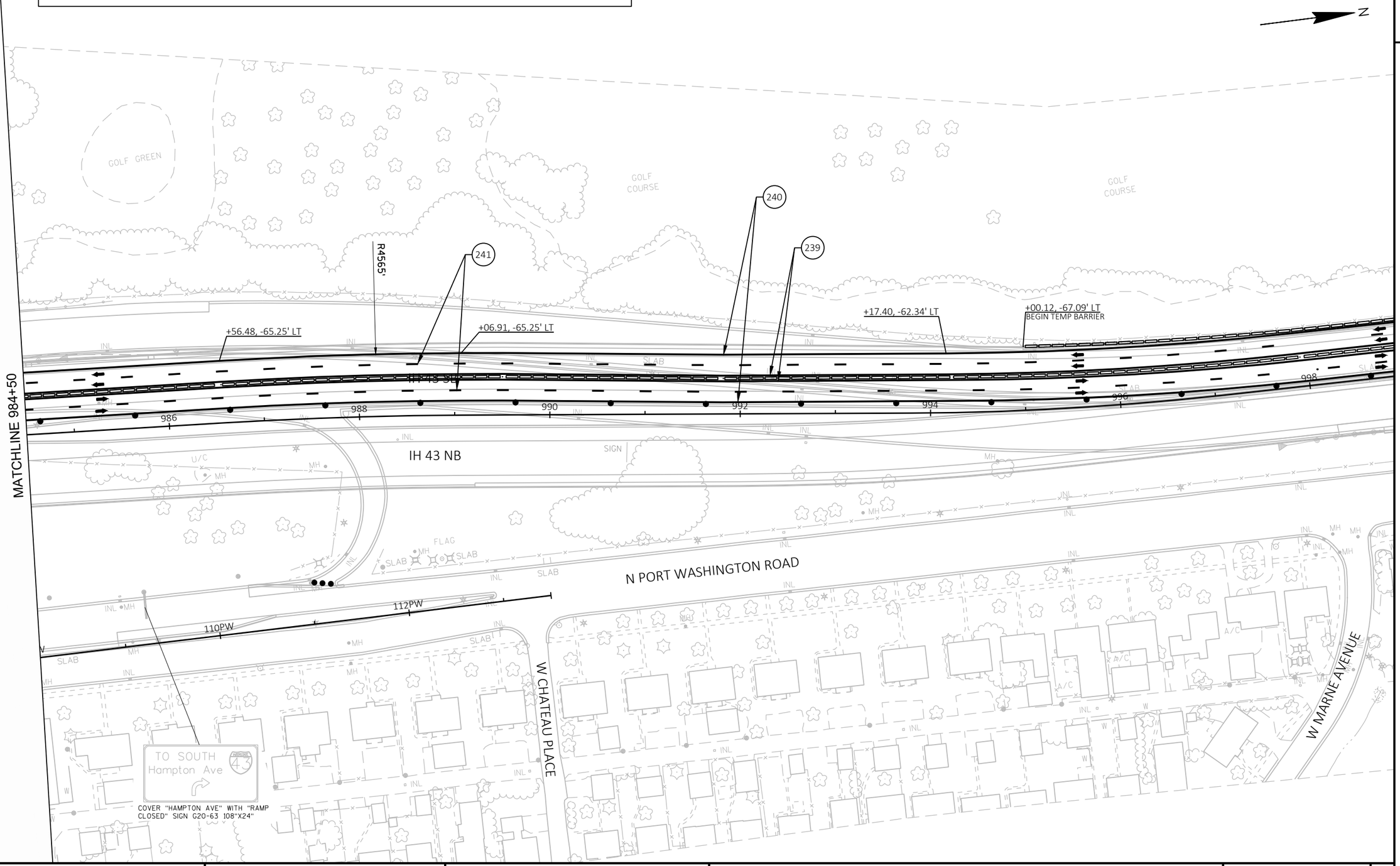
PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL (1228-22-71 STAGE 4 - FOR INFORMATION ONLY)	SHEET 75	E

FILE NAME : N:\PDS\C3D\12282274\SHEETSPLAN\026001-TC_MAINLINE_FIO.DWG
LAYOUT NAME - 05

PLOT DATE : 9/28/2022 12:06 AM PLOT BY : PESCHEL, KYLE R PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

FOR INFORMATION ONLY



PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	TRAFFIC CONTROL (1228-22-71 STAGE 4 - FOR INFORMATION ONLY)	SHEET 76	E

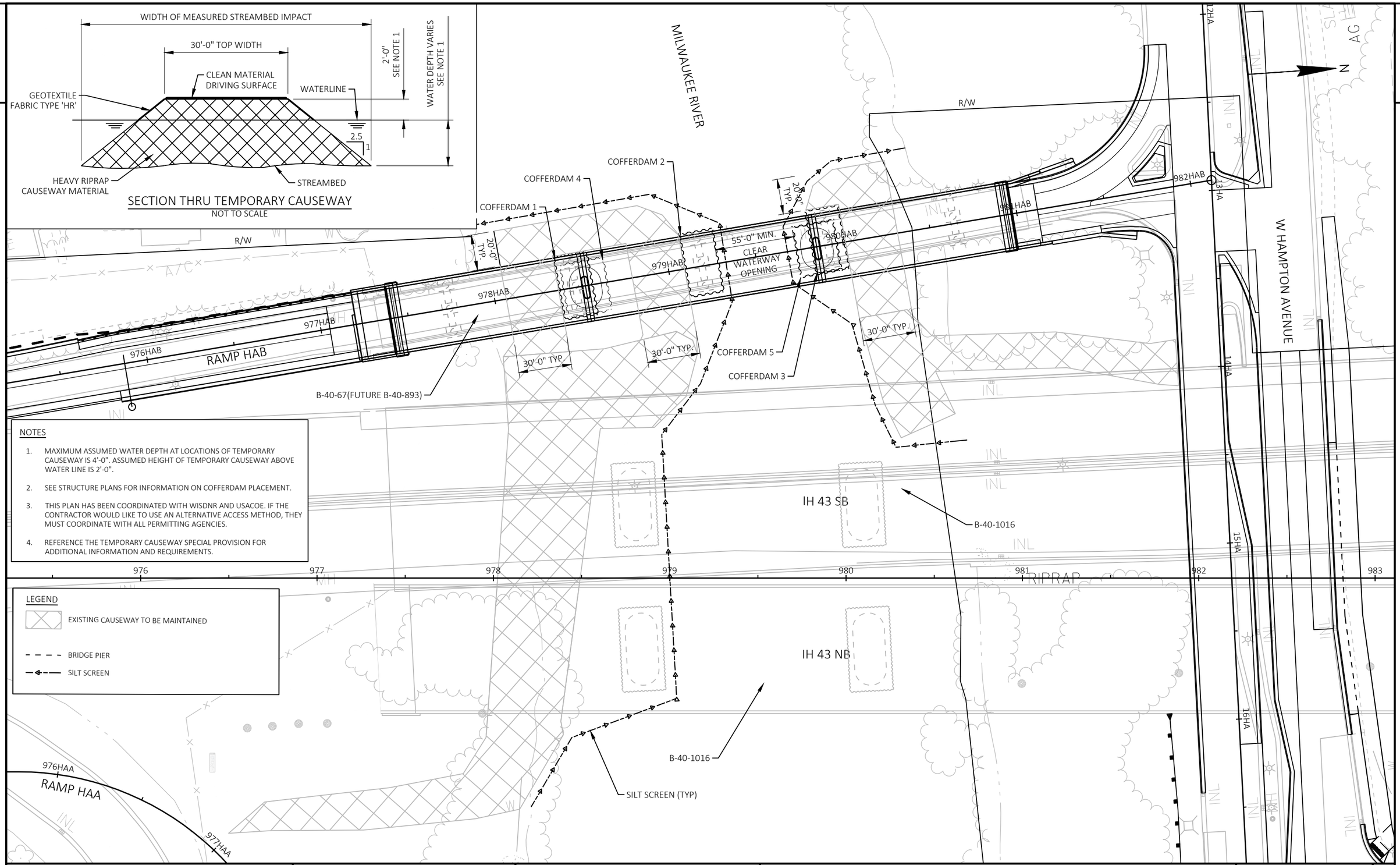
FILE NAME : N:\PDS\C3D\12282274\SHEETSPLAN\026001-TC_MAINLINE_FIO.DWG
LAYOUT NAME - 06

PLOT DATE : 9/27/2022 8:56 PM PLOT BY : PESCHEL, KYLE R PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

SECTION THRU TEMPORARY CAUSEWAY

NOT TO SCALE



NOTES

1. MAXIMUM ASSUMED WATER DEPTH AT LOCATIONS OF TEMPORARY CAUSEWAY IS 4'-0". ASSUMED HEIGHT OF TEMPORARY CAUSEWAY ABOVE WATER LINE IS 2'-0".
2. SEE STRUCTURE PLANS FOR INFORMATION ON COFFERDAM PLACEMENT.
3. THIS PLAN HAS BEEN COORDINATED WITH WISDNR AND USACOE. IF THE CONTRACTOR WOULD LIKE TO USE AN ALTERNATIVE ACCESS METHOD, THEY MUST COORDINATE WITH ALL PERMITTING AGENCIES.
4. REFERENCE THE TEMPORARY CAUSEWAY SPECIAL PROVISION FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

LEGEND

EXISTING CAUSEWAY TO BE MAINTAINED

BRIDGE PIER

SILT SCREEN

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	TEMPORARY CAUSEWAY	SHEET 77 E

2

LAYOUT DURING BRIDGE REMOVAL AND CONSTRUCTION

1. BOAT TRAFFIC WILL TRAVEL UNDER SPAN 4 OF EXISTING IH 43 HAB ENTRANCE BRIDGE AND SPAN 2 OF THE EXISTING IH 43 NB AND SB BRIDGES.
2. BUOYS WILL BE MOVED TO ALLOW BOAT TRAFFIC UNDER A PREVIOUSLY REMOVED SPAN THAT IS TO BE DETERMINED BY CONTRACTOR'S OPERATIONS.
3. BUOYS TO REMAIN IN THE WATER AT ALL TIMES DURING BRIDGE REMOVAL AND BRIDGE CONSTRUCTION.

NOTE

EXISTING WATERWAY MARKERS FROM THE 1228-22-71 CONTRACT WILL BE IN PLACE PRIOR TO THE START OF THE 1228-22-74 CONTRACT.

THE 1228-22-74 CONTRACTOR MUST INSTALL WATERWAY MARKERS AS SHOWN IN THE PLAN AND CONSISTENT WITH SPECIFICATION SECTION 107.19 FOLLOWING THE REMOVAL OF THE EXISTING WATERWAY MARKERS BY 1228-22-71 CONTRACTOR AT THE TIME OF CAUSEWAY OWNERSHIP TRANSFER. THE 1228-22-74 CONTRACTOR MUST ALSO REMOVE THE WATERWAY MARKERS AT THE CONCLUSION OF THE CONTRACT OR WHEN TRANSFERAL OF CAUSEWAY OWNERSHIP IS RETURNED TO THE 1228-22-71 CONTRACTOR.

THE 1228-22-71 AND 1228-22-74 CONTRACTORS MUST COORDINATE TO ENSURE NO TIME ELAPSES BETWEEN REMOVAL AND INSTALLATION OF WATERWAY MARKERS BETWEEN CONTRACTS.

LEGEND

- D — DANGER BUOY
- G — GREEN DIRECTIONAL BUOY
- R — RED DIRECTIONAL BUOY

NOTES

1. FLASHING LIGHT REQUIRED.
2. WHITE BUOY WITH ORANGE MARKING
3. BUOYS ARE GREEN OR RED DEPENDING ON THE LOCATION. GREEN BUOYS ARE PROVIDED ON THE RIGHT SIDE OF THE CHANNEL LOOKING DOWNSTREAM AND RED BUOYS ARE PROVIDED ON THE LEFT SIDE OF THE CHANNEL LOOKING DOWNSTREAM.

OAK LEAF TRAIL

W HAMPTON AVENUE

IH 43 SB

IH 43 NB

N PORT WASHINGTON ROAD

MILWAUKEE RIVER

RIPRAP

R/W

SLAB

SPAN 5

SPAN 4

SPAN 3

SPAN 2

SPAN 1

RAMP SLAB

8' MIN

25' TYP.

SILT SCREEN (TYP)

POINT 1

POINT 2

POINT 3

POINT 4

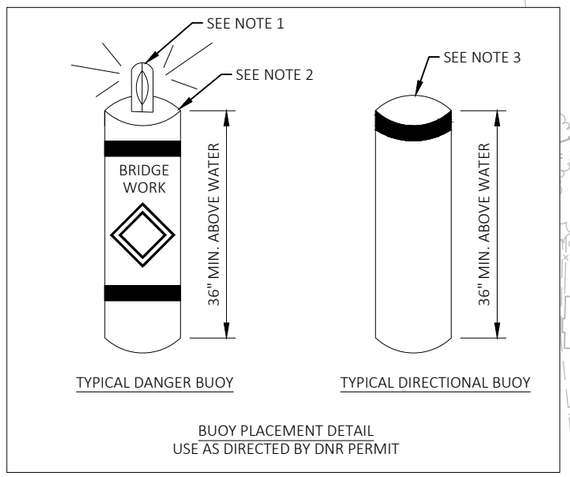
POINT 5

POINT 6

POINT 7

POINT 8

N



BUOY PLACEMENT DETAIL
USE AS DIRECTED BY DNR PERMIT

POINT TABLE		
POINT	NORTHING	EASTING
1	323,188	603,322
2	323,205	603,521
3	322,965	603,378
4	323,161	603,526
5	323,108	604,076
6	322,974	604,225
7	323,193	604,272
8	323,164	604,074

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	WATERWAY MARKER PLACEMENT	SHEET 78	E

FILE NAME : N:\PDS\C3D\12282274\SHEETSPLAN\026001-ST9D_WATERWAY MARKERS.DWG
LAYOUT NAME - 01

PLOT DATE : 11/10/2022 2:22 PM PLOT BY : PESCHEL, KYLE R PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

- TYPE III BARRICADE WTH ATTACHED SIGN
- DETOUR ROUTE
- WORK AREA
- DIRECTION OF TRAFFIC

N

DETOUR M4-9BL 30"X24"

DETOUR M4-9BR 30"X24"

DETOUR M4-9BL 30"X24" M6-1 21"X21" SEE NOTE 4

DETOUR M4-9BL 30"X24" M6-1 21"X21" SEE NOTE 4

OAK LEAF TRAIL

N SANTA MONICA BLVD

N MILWAUKEE RIVER PKWY

DETOUR AHEAD M4-9A 30"X18"

DETOUR M4-9BL 30"X24" M6-1 21"X21" SEE NOTE 4

DETOUR M4-9BL 30"X24" M6-1 21"X21" SEE NOTE 4

DETOUR M4-9BL 30"X24" M6-1 21"X21" SEE NOTE 4

DETOUR M4-9BL 30"X24"

DETOUR M4-9BL 30"X24" M6-1 21"X21" SEE NOTE 4

W1-11L 36"X36"

SIDEWALK CLOSED R9-9 24"X12"

SIDEWALK CLOSED R9-9 24"X12"

R9-11 24"X12"

END DETOUR M4-8A 24"X18"

R9-11 24"X12"

N PORT WASHINGTON ROAD

DETOUR M4-9BL 30"X24" M6-1 21"X21" SEE NOTE 4

N LYDELL AVENUE

DETOUR M4-9BL 30"X24" M6-1 21"X21" SEE NOTE 4

END DETOUR M4-8A 24"X18"

W HAMPTON AVENUE

DETOUR M4-9BR 30"X24"

DETOUR M4-9BR 30"X24"

DETOUR M4-9BL 30"X24" M6-1 21"X21" SEE NOTE 4

DETOUR AHEAD M4-9A 30"X18"

DETOUR AHEAD M4-9A 30"X18"

DETOUR M4-9BL 30"X24"

MILWAUKEE RIVER

IH 43

NOTES

1. THE EXACT NUMBER , LOCATION AND SPACING BETWEEN ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
2. THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED NOT TO CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.
3. ANY SIGNS, TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE COVERED AND UNCOVERED DURING EACH CLOSURE AS NEEDED AND APPROVED BY THE ENGINEER.
4. COVER THE ARROW DISPLAYED ON SIGN M4-9BL WITH THE ARROW SPECIFIED.

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	DETOUR-OAK LEAF TRAIL	SHEET 79	E

1 | TO NORTH I-43 M4-5 24"X12" MB3-1 24"X12" M1-1 24"X24"
2 | TO NORTH I-43 M4-5 36"X18" MB3-1 36"X18" M1-1 36"X36"
3 | TO NORTH I-43 M4-5 24"X12" MB3-1 24"X12" M1-1 24"X24"
7 | TO EAST HAMPTON AVE M4-5 24"X12" MB3-2 24"X12"
8 | TO EAST HAMPTON AVE M4-5 36"X18" MB3-2 36"X18"
9 | TO EAST HAMPTON AVE M4-5 24"X12" MB3-2 24"X12"
13 | EAST HAMPTON AVE MB3-2 24"X12"
17 | TO SOUTH 57 M4-5 24"X12" MB3-3 24"X12" M1-6 24"X24"

4 | TO SOUTH I-43 M4-5 24"X12" MB3-3 24"X12" M1-1 24"X24"
5 | TO SOUTH I-43 M4-5 36"X18" MB3-3 36"X18" M1-1 36"X36"
6 | TO SOUTH I-43 M4-5 24"X12" MB3-3 24"X12" M1-1 24"X24"
10 | TO SOUTH 57 190 M4-5 24"X12" MB3-3 24"X12" M1-6 24"X24" M1-6 24"X24"
11 | TO SOUTH 57 190 M4-5 36"X18" MB3-3 36"X18" M1-6 36"X36" M1-6 36"X36"
12 | TO SOUTH 57 190 M4-5 24"X12" MB3-3 24"X12" M1-6 36"X36" M1-6 36"X36"
14 | SOUTH I-43 MB3-3 24"X12" M1-1 24"X24"
15 | NORTH I-43 MB3-1 24"X12" M1-1 24"X24"
16 | SOUTH 57 190 MB3-3 24"X12" M1-6 24"X24" M1-6 24"X24"

A | MO6-1 21"X21"
B | MO6-1 21"X21"
C | MO6-1 21"X21"
D | MO6-2 21"X21"
E | MO6-2 21"X21"
F | MO5-1L 21"X21"
G | MO5-1R 21"X21"
H | MO5-2R 21"X21"
I | MO5-2L 21"X21"
18 | TO 190 M4-5 24"X12" M1-6 24"X24"
J | MO6-1 30"X30"
K | MO6-1 30"X30"
L | MO6-1 30"X30"
M | MO6-2 30"X30"
N | MO6-2 30"X30"
O | MO5-1L 30"X30"
P | MO5-1R 30"X30"
Q | MO5-2R 30"X30"
R | MO5-2L 30"X30"
S | RAMP CLOSED AHEAD W20-53A

GENERAL NOTES

ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN THE PLANS.

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

LOCATION AND SPACING OF SIGNS AND DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS DETOUR SHALL BE COVERED AS DIRECTED BY THE ENGINEER.

DETOUR SIGNS SHALL BE COVERED OR REMOVED WHEN DETOUR IS NOT IN USE OR AS DIRECTED BY THE ENGINEER.

INSTALL PROPOSED DETOUR SIGNS ON OUTSIDE SHOULDER AND MEDIAN SIDE ON DIVIDED ROADWAY.

LEGEND

- EXISTING SIGN POST
- PROPOSED SIGN MOUNTED ON POST
- FIXXED MESSAGE SIGN GROUND MOUNT
- TRAFFIC CONTROL DETOUR SIGNS
- DETOUR ROUTE
- XXXX RAMP CLOSURE
- TRAFFIC FLOW ARROW

N

N GREEN BAY AVENUE
W HAMPTON AVENUE
W SILVER SPRING DRIVE
IH 43
8Q
8M
N 7TH STREET
W CAPITOL DRIVE
W FIEBRANTZ AVE
7H
7D
7A
7C
13B
N PORT WASHINGTON ROAD
I-43 RAMP CLOSED TO HAMPTON AVE XX-XX USE RAMP 76A
BEGINS XXX XX

FOR INFORMATION ONLY

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	DETOUR PLAN - RAMP HAA CLOSED (FOR INFORMATION ONLY)	SHEET 80	E

FILE NAME : N:\PDS\C3D\12282274\SHEETSPLAN\027001-DT.DWG
LAYOUT NAME - 027001_DT
PLOT DATE : 9/26/2022 4:45 PM
PLOT BY : PESCHEL, KYLE R
PLOT NAME :
PLOT SCALE : 1 IN:1000 FT

2

1 — TO NORTH M4-5 24"X12" / MB3-1 24"X12" / INTERSTATE 43 M1-1 24"X24"

2 — TO NORTH M4-5 36"X18" / MB3-1 36"X18" / INTERSTATE 43 M1-1 36"X36"

3 — TO NORTH M4-5 24"X12" / MB3-1 24"X12" / INTERSTATE 43 M1-1 24"X24"

7 — TO EAST M4-5 24"X12" / MB3-2 24"X12" / HAMPTON AVE

8 — TO EAST M4-5 36"X18" / MB3-2 36"X18" / HAMPTON AVE

9 — TO EAST M4-5 24"X12" / MB3-2 24"X12" / HAMPTON AVE

13 — EAST MB3-2 24"X12" / HAMPTON AVE

17 — TO SOUTH M4-5 24"X12" / MB3-3 24"X12" / 57 M1-6 24"X24"

4 — TO SOUTH M4-5 24"X12" / MB3-3 24"X12" / INTERSTATE 43 M1-1 24"X24"

5 — TO SOUTH M4-5 36"X18" / MB3-3 36"X18" / INTERSTATE 43 M1-1 36"X36"

6 — TO SOUTH M4-5 24"X12" / MB3-3 24"X12" / INTERSTATE 43 M1-1 24"X24"

10 — TO SOUTH M4-5 24"X12" / MB3-3 24"X12" / 57 M1-6 24"X24" / 190 M1-6 24"X24"

11 — TO SOUTH M4-5 36"X18" / MB3-3 36"X18" / 57 M1-6 36"X36" / 190 M1-6 36"X36"

12 — TO SOUTH M4-5 24"X12" / MB3-3 24"X12" / 57 M1-6 36"X36" / 190 M1-6 36"X36"

14 — SOUTH MB3-3 24"X12" / INTERSTATE 43 M1-1 24"X24"

15 — NORTH MB3-1 24"X12" / INTERSTATE 43 M1-1 24"X24"

16 — SOUTH MB3-3 24"X12" / 57 M1-6 24"X24" / 190 M1-6 24"X24"

A — MO6-1 21"X21"

B — MO6-1 21"X21"

C — MO6-1 21"X21"

D — MO6-2 21"X21"

E — MO6-2 21"X21"

F — MO5-1L 21"X21"

G — MO5-1R 21"X21"

H — MO5-2R 21"X21"

I — MO5-2L 21"X21"

18 — TO 190 M4-5 24"X12" / M1-6 24"X24"

J — MO6-1 30"X30"

K — MO6-1 30"X30"

L — MO6-1 30"X30"

M — MO6-2 30"X30"

N — MO6-2 30"X30"

O — MO5-1L 30"X30"

P — MO5-1R 30"X30"

Q — MO5-2R 30"X30"

R — MO5-2L 30"X30"

S — RAMP CLOSED AHEAD W20-53A

GENERAL NOTES

ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN THE PLANS.

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

LOCATION AND SPACING OF SIGNS AND DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS DETOUR SHALL BE COVERED AS DIRECTED BY THE ENGINEER.

DETOUR SIGNS SHALL BE COVERED OR REMOVED WHEN DETOUR IS NOT IN USE OR AS DIRECTED BY THE ENGINEER.

INSTALL PROPOSED DETOUR SIGNS ON OUTSIDE SHOULDER AND MEDIAN SIDE ON DIVIDED ROADWAY.

LEGEND

- EXISTING SIGN POST
- PROPOSED SIGN MOUNTED ON POST
- FIXXED MESSAGE SIGN GROUND MOUNT
- TRAFFIC CONTROL DETOUR SIGNS
- DETOUR ROUTE
- XXXX RAMP CLOSURE
- TRAFFIC FLOW ARROW

N

N GREEN BAY AVENUE

IH 43

N 7TH STREET

W CAPITOL DRIVE

W HEBRANTZ AVE

N PORT WASHINGTON ROAD

W HAMPTON AVENUE

W SILVER SPRING DRIVE

RAMP CLOSED BEGINNING XXX-XX G20-58 90"X48"

4A 4B 4C 4D 4F 4G 14S

FOR INFORMATION ONLY

2

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	DETOUR PLAN - RAMP HAB CLOSED (FOR INFORMATION ONLY)	SHEET 81	E

FILE NAME : N:\PDS\C3D\12282274\SHEETSPLAN\027001-DT.DWG
LAYOUT NAME - 027002_DT

PLOT DATE : 9/26/2022 4:46 PM PLOT BY : PESCHEL, KYLE R PLOT NAME : PLOT SCALE : 1 IN:1000 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

FENCE CHAIN LINK 6-FT

NOTES

LOCATE FENCE 3-FT INSIDE RIGHT OF WAY UNLESS OTHERWISE NOTED.

N

W GLENDALE AVENUE

N IRONWOOD LANE

W ROCK PLACE

MILWAUKEE RIVER

W HAMPTON AVENUE

OAK LEAF TRAIL

+03.59
-139.10'LT
MATCH EXISTING
LOCATION AND
12282271 FENCE

INSTALL GATE
CHAIN LINK 12 FT

+17.66
-187.18'LT

+18.84
-163.10'LT

12HA

970HAB

972HAB

974HAB

976HAB

978HAB

RAMP HAB

980HAB

982HAB

14HA

16HA

18HA

12GD

14GD

968

970

972

974

976

978

980

982

968HAA

970HAA

972HAA

974HAA

RAMP HAA

976HAA

978HAA

IH 43 SB

IH 43 NB

RIPRAP

N PORT WASHINGTON ROAD

98PW

100PW

102PW

104PW

106PW

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	FENCING PLAN	SHEET 82	E

FILE NAME : N:\PDS\C3D\12282274\SHEETSPLAN\027101-FN.DWG
LAYOUT NAME - 01

PLOT DATE : 10/3/2022 6:02 PM PLOT BY : FERGUSON, JULIE PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

N

SECTION CORNER
CONCRETE MONUMENT
w/SEWRPC BRASS CAP
Y: 318103.25
X: 601279.31

925

N1°06'21"E
841.90'

PC
IH 43 C1

930

IH 43 CURVE 1
FS: 3.5%

PI
IH 43 C1

935

PT
IH 43 C1

N6°20'27"W
683.68'

940

PC
IH 43 C2

PI
IH 43 C2

945

IH 43 CURVE 2
FS: 6.0%

950

PT
IH 43 C2

955

N33°56'18"E
755.78'

STA. 926+02.64 IH 43
X = 602,710.88
Y = 318,089.63

R/L IH 43

QUARTER SECTION CORNER
CONCRETE MONUMENT
w/SEWRPC BRASS CAP
Y: 320755.00
X: 601344.86

STA. 953+42.24 IH 43
X = 602,987.07
Y = 320,736.63

CURVE DATA											
CURVE NO.	PI STA	PI EASTING	PI NORTHING	DELTA	D	T	L	M	R	PC	PT
IH 43 CURVE 1	930+92.25	602720.33	318579.15	7°26'47"	1°29'21"	250.35	500.00	8.12	3847.16	928+41.90	933+41.90
IH 43 CURVE 2	946+12.35	602552.36	320090.65	40°16'45"	3°34'52"	586.77	1124.81	97.83	1600.00	940+25.58	951+50.39

QUARTER SECTION CORNER
CONCRETE MONUMENT
w/SEWRPC BRASS CAP
Y: 318078.08
X: 603925.29

CENTER SECTION CORNER
CONCRETE MONUMENT
w/SEWRPC BRASS CAP
Y: 320725.69
X: 603965.16

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT	SHEET 83	E

FILE NAME : C:\CIVIL 3D PROJECTS\12282274\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 01
PLOT DATE : 11/16/2021 4:26 PM
PLOT BY : FERGUSON, JULIE
PLOT NAME :
PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

CURVE DATA											
CURVE NO.	PI STA	PI EASTING	PI NORTHING	DELTA	D	T	L	M	R	PC	PT
HAA CURVE 1	964+17.88HAA	603637.78	321598.05	16°58'06"	3°14'46"	263.28	522.71	19.32	1765.00	961+54.60HAA	966+77.31HAA
HAA CURVE 2	968+39.17HAA	603747.79	322008.71	7°52'39"	2°26'14"	161.86	323.21	5.55	2350.75	966+77.31HAA	970+00.51HAA
HAA CURVE 3	972+25.57HAA	603795.74	322392.64	3°15'49"	0°43'31"	225.06	449.99	3.20	7900.00	970+00.51HAA	974+50.51HAA
HAA CURVE 4	977+16.03HAA	603828.73	322882.12	81°35'39"	35°48'36"	138.09	227.85	38.88	160.00	975+77.94HAA	978+05.79HAA
HAB CURVE 1	969+90.61HAB	603597.03	322224.16	4°41'44"	2°35'33"	90.61	181.11	1.86	2210.00	969+00.00HAB	970+81.11HAB
HAB CURVE 2	973+65.15HAB	603614.74	322598.38	8°25'13"	2°26'17"	172.99	345.36	6.34	2350.00	971+92.16HAB	975+37.52HAB
IH 43 CURVE 3	965+10.79	603639.48	321706.10	30°04'58"	2°32'47"	604.63	1181.35	77.09	2250.00	959+06.16	970+87.52

QUARTER SECTION CORNER
CONCRETE MONUMENT
w/SEWRPC BRASS CAP
Y: 320755.00
X: 601344.86

STA. 953+42.24 IH 43
X = 602,987.07
Y = 320,736.63

955 N33°56'18"E 755.78'

PC
IH 43 C3

R/L IH 43

960

960HAA

IH 43 CURVE 3
FS: 5.2%

N31°57'55"E
170.95'

PC
HAA C1

HAA CURVE 1
FS: 4.7%

R/L HAA

PI
IH 43 C3

965

965HAA

PI
HAA C1

STA. 959+83.65 HAA =
STA. 959+83.65 IH 43, 75.25 RT
X = 603,407.90
Y = 321,229.66

PCC
HAA C1/C2

HAA CURVE 2
FS: 4.0%

PI
HAA C2

970HAA

PCC
HAA C2/C3

HAA CURVE 3
FS: 2.0%

PI
HAA C3

975HAA

PC
HAA C4

PI
HAA C4

N3°51'20"E
127.43'

HAA CURVE 4
FS: 4.0%

PT
HAA C3

PT
HAA C4

100PW

N85°26'59"E
44.09'

STA. 968+05.81 HAA =
STA. 13+27.71 GD
X = 603,735.75
Y = 321,977.34

R/L GD

15GD

STA. 15+47.15 GD =
STA. 968+05.30 IH 43, 317.34' RT
X = 603,955.04
Y = 321,968.94

STA. 10+00.00 GD =
STA. 967+11.92 IH 43, 221.55' LT
X = 603,408.29
Y = 321,989.88

STA. 967+55.81 IH 43 =
STA. 12+25.44 GD
X = 603,633.56
Y = 321,981.25

S87°48'23"E
547.15'

STA. 969+00.00 HAB =
STA. 969+00.00 IH 43, 75.25' LT
X = 603,585.35
Y = 322,134.31

PC
HAB C1

HAB CURVE 1
970HAB

N2°42'35"E
111.04'

PI
HAB C1

PT
HAB C1

HAB CURVE 2
FS: 4.0%

PC
HAB C2

PI
HAB C2

975HAB

PT
HAB C2

970

975

980

STA. 96+94.83 PW =
STA. 973+38.36 IH 43, 316.92' RT
X = 604,013.21
Y = 322,538.33

STA. 100+53.08 PW =
STA. 978+49.88 HAA
X = 604,010.34
Y = 322,896.57

STA. 102+47.01 PW
X = 604,008.79
Y = 323,090.49

N

NORTH SECTION CORNER
CONCRETE MONUMENT
w/SEWRPC BRASS CAP
Y: 323495.98
X: 601398.24

SOUTH SECTION CORNER
CONCRETE MONUMENT
w/SEWRPC BRASS CAP
Y: 323496.31
X: 601370.32

STA. 12+84.68 HA =
STA. 982+13.16 HAB
X = 603,520.91
Y = 323,441.80

R/L HA

R/L HAB

N5°42'38"W
674.48'

980HAB

STA. 982+12.00 HAB =
STA. 12+94.19 HA
X = 603,530.14
Y = 323,441.65

S89°04'23"E
998.06'

STA. 982+36.99 IH 43
X = 603,757.42
Y = 323,456.19

15HA

N3°51'20"E
1568.96'

985

STA. 982+18.70 IH 43 =
STA. 15+20.00 HA
X = 603,756.20
Y = 323,437.99

SOUTH QUARTER
SECTION CORNER
CONCRETE MONUMENT
w/SEWRPC BRASS CAP
Y: 323452.34
X: 603986.58

STA. 105+90.48 PW =
STA. 17+69.87 HA
X = 604,006.04
Y = 323,433.95

N0°27'30"W
1023.46'

105PW

STA. 17+78.96 HA
X = 604,015.12
Y = 323,433.80

STA. 107+18.29 PW
X = 604,005.02
Y = 323,561.76

STA. 106+08.58 PW
X = 604,005.89
Y = 323,452.05

20HA

NORTH QUARTER
SECTION CORNER
CONCRETE MONUMENT
w/SEWRPC BRASS CAP
Y: 323451.89
X: 604015.46

STA. 20+66.41 HA =
STA. 982+46.62 IH 43, 545.70' RT
X = 603,130.62
Y = 322,994.14

CENTER SECTION CORNER
CONCRETE MONUMENT
w/SEWRPC BRASS CAP
Y: 320725.69
X: 603965.16

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT	SHEET 84	E

2

N

CURVE DATA											
CURVE NO.	PI STA	PI EASTING	PI NORTHING	DELTA	D	T	L	M	R	PC	PT
IH 43 CURVE 4	987+81.73	603794.05	323999.74	3°11'19"	1°16'24"	125.25	250.43	1.74	4500.00	986+56.48	989+06.91
IH 43 CURVE 5	995+43.35	603887.46	324755.68	6°00'41"	1°50'54"	162.77	325.24	4.26	3100.00	993+80.58	997+05.82
IH 43 CURVE 6	1005+68.42	603905.95	325780.88	12°10'04"	3°29'37"	174.80	348.28	9.24	1640.00	1003+93.62	1007+41.91

NORTH SECTION CORNER
CONCRETE MONUMENT
w/SEWRPC BRASS CAP
Y: 323495.98
X: 601398.24

SOUTH SECTION CORNER
CONCRETE MONUMENT
w/SEWRPC BRASS CAP
Y: 323496.31
X: 601370.32

STA. 12+84.68 HA =
STA. 982+13.16 HAB
X = 603,520.91
Y = 323,441.80

R/L HA

R/L HAB

N5°42'38"W
674.48'

980HAB

STA. 982+12.00 HAB =
STA. 12+94.19 HA
X = 603,530.14
Y = 323,441.65

S89°04'23"E
998.06'

STA. 982+36.99 IH 43
X = 603,757.42
Y = 323,456.19

980

N3°51'20"E
1568.96'

985

STA. 982+18.70 IH 43 =
STA. 15+20.00 HA
X = 603,756.20
Y = 323,437.99

PC
IH 43 C4

PI
IH 43 C4

IH 43 CURVE 4
FS: 3.3%

990

PT
IH 43 C4

R/L IH 43

995

PC
IH 43 C5

IH 43 CURVE 5
FS: 4.3%

PI
IH 43 C5

PT
IH 43 C5

N1°01'58"E
687.80'

1000

1005

PC
IH 43 C6

IH 43 CURVE 6
FS: 7.9%

PI
IH 43 C6

N11°08'06"W
151.30'

PT
IH 43 C6

1010

SOUTH QUARTER
SECTION CORNER
CONCRETE MONUMENT
w/SEWRPC BRASS CAP
Y: 323452.34
X: 603986.58

STA. 105+90.48 PW =
STA. 17+69.87 HA
X = 604,006.04
Y = 323,433.95

N0°27'30"W
1023.46'

105PW

110PW

R/L PW

N0°23'31"E
631.71'

STA. 17+78.96 HA
X = 604,015.12
Y = 323,433.80

STA. 107+18.29 PW
X = 604,005.02
Y = 323,561.76

STA. 106+08.58 PW
X = 604,005.89
Y = 323,452.05

STA. 113+50.00 PW =
STA. 990+00.31 IH 43, 189.91' RT
X = 604,009.34
Y = 324,193.45

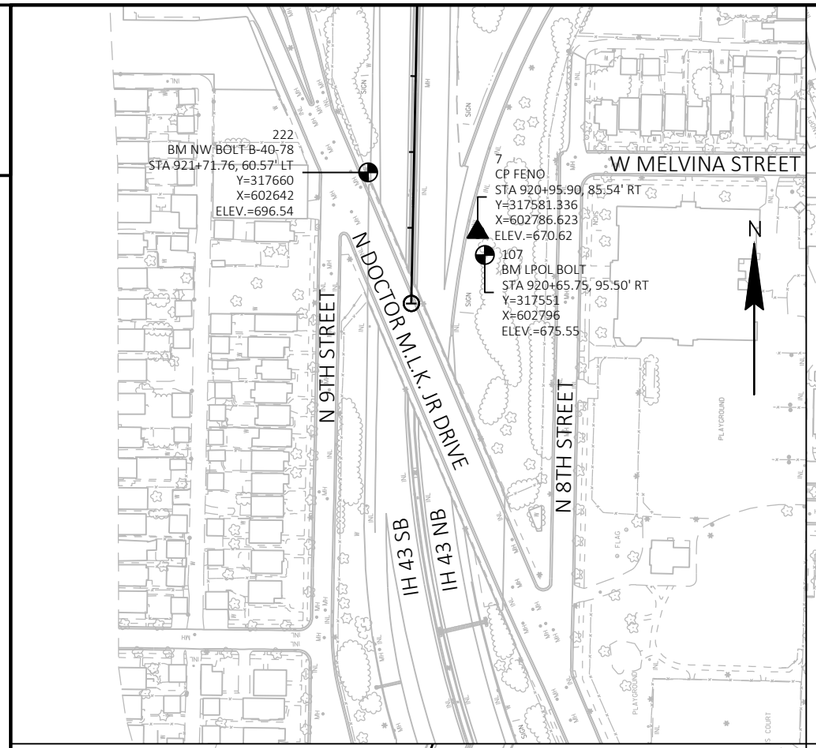
20HA

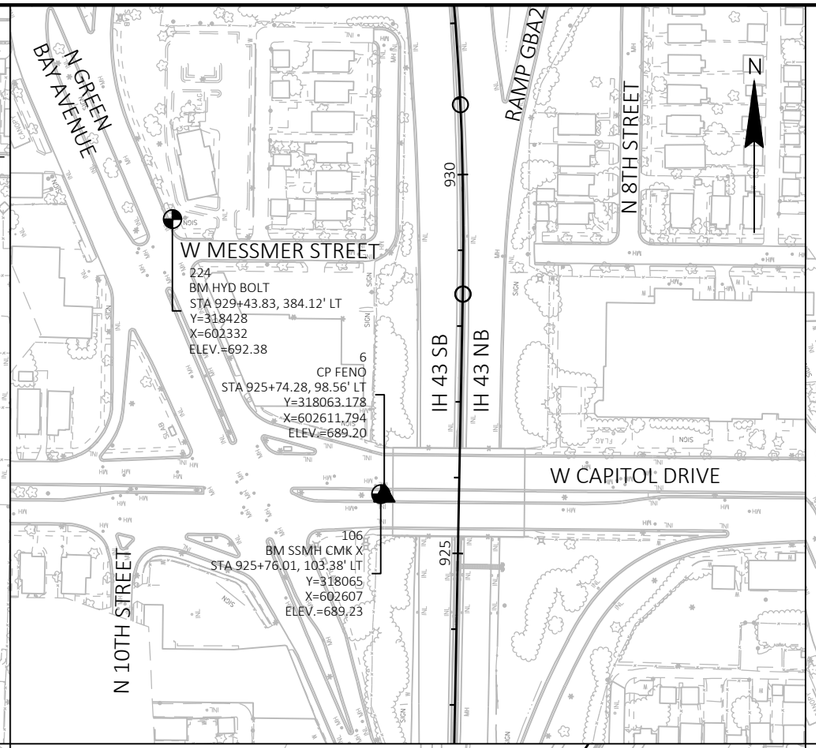
NORTH QUARTER
SECTION CORNER
CONCRETE MONUMENT
w/SEWRPC BRASS CAP
Y: 323451.89
X: 604015.46

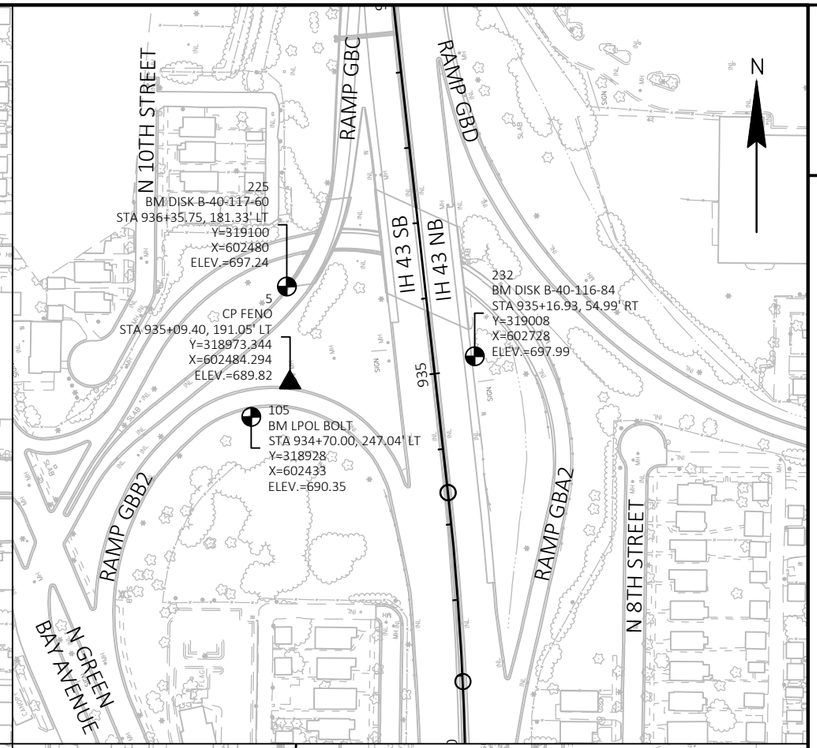
STA. 20+66.41 HA =
STA. 982+46.62 IH 43, 545.70' RT
X = 603,130.62
Y = 322,994.14

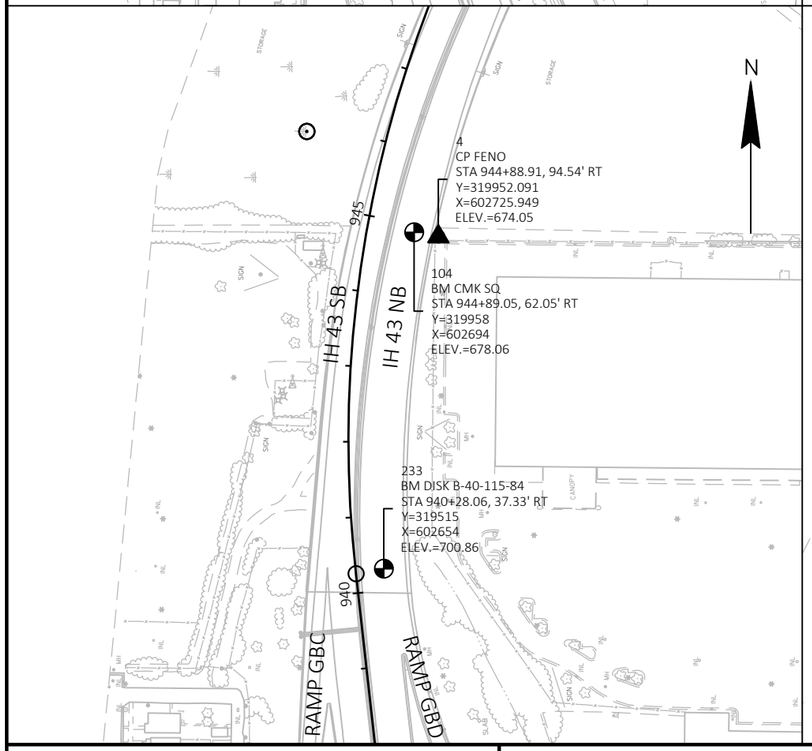
PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT	SHEET 85	E

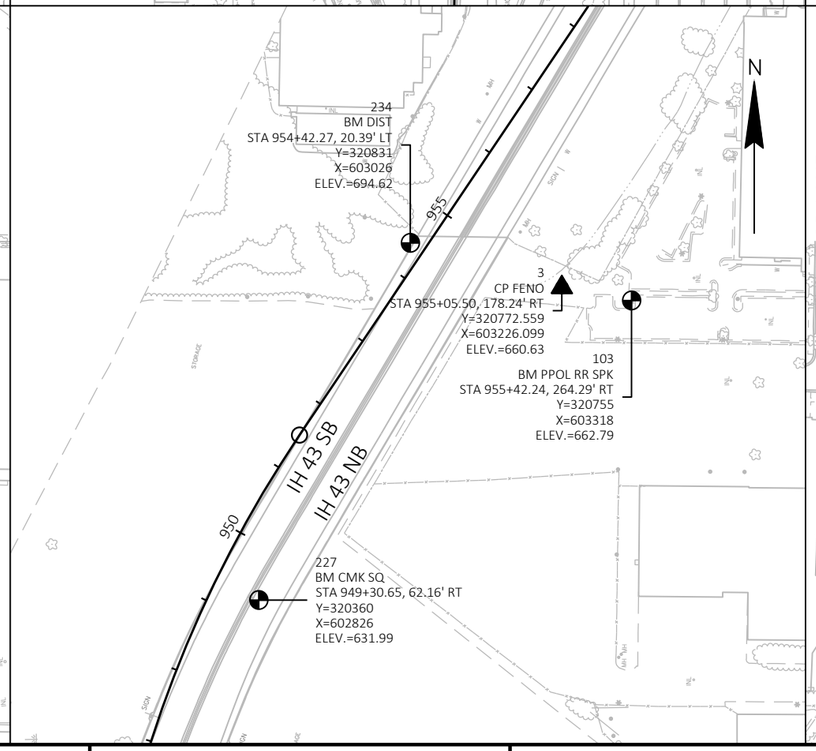
FILE NAME : C:\CIVIL 3D PROJECTS\12282274\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 03
PLOT DATE : 11/16/2021 4:26 PM
PLOT BY : FERGUSON, JULIE
PLOT NAME :
PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

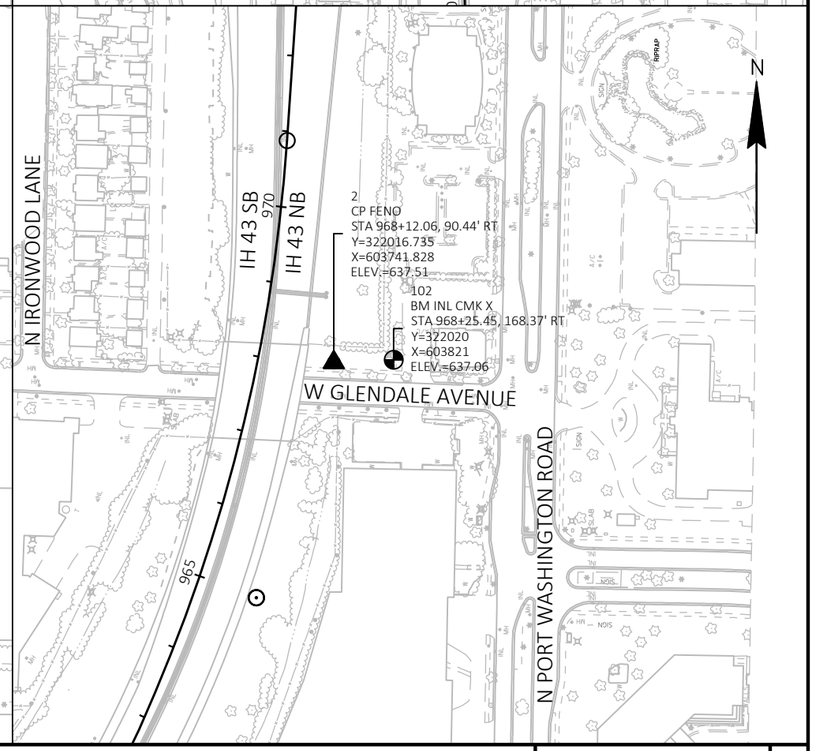






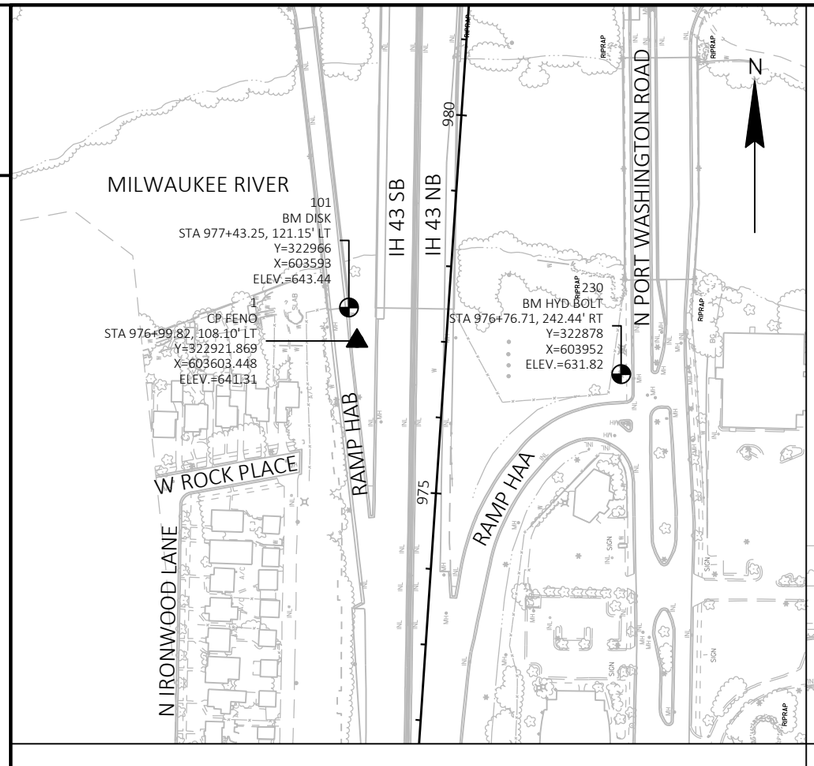


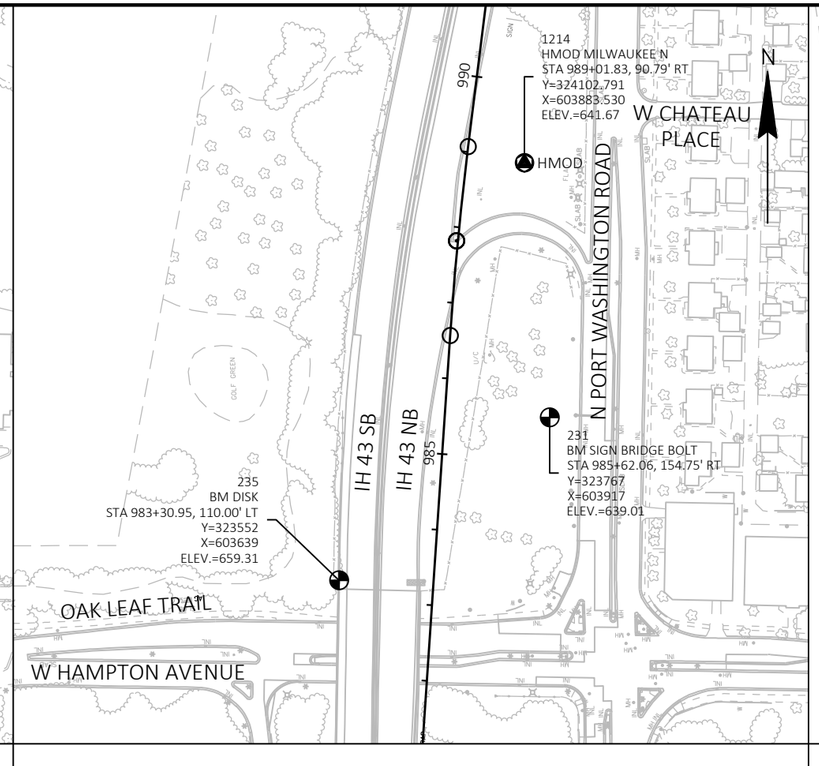


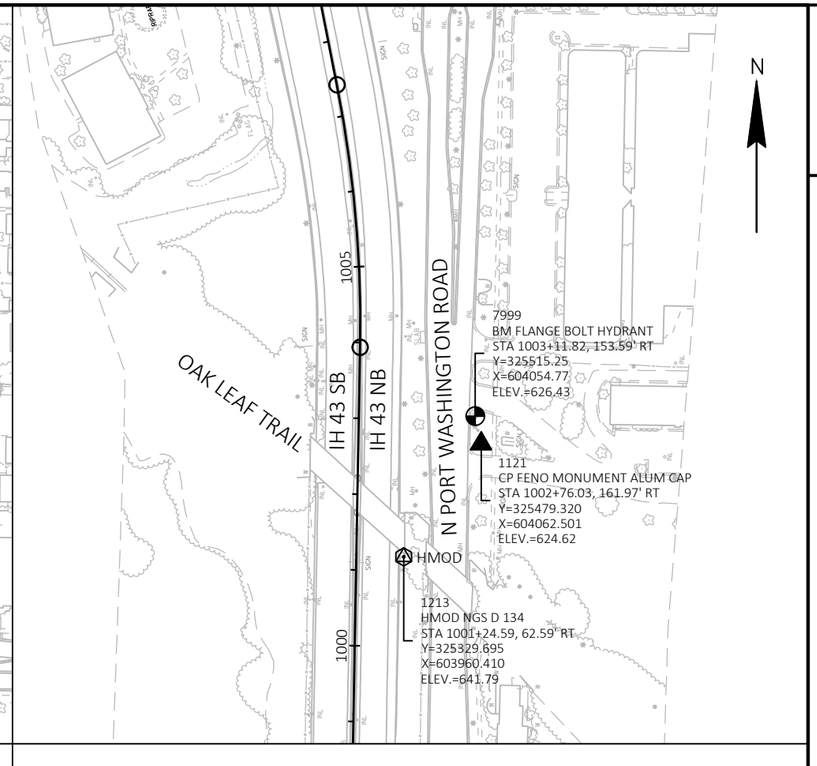


PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT - SURVEY CONTROL	SHEET 86	E

FILE NAME : C:\CIVIL 3D PROJECTS\12282274\SHEETSPLAN\027251-AD.DWG
LAYOUT NAME - 01
PLOT DATE : 11/16/2021 3:04 PM
PLOT BY : FERGUSON, JULIE
PLOT NAME :
PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42







2

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT - SURVEY CONTROL	SHEET 87	E

1228-22-74

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	6.000	6.000
0004	201.0205	Grubbing	STA	6.000	6.000
0006	203.0260	Removing Structure Over Waterway Minimal Debris (structure) 0001. B-40-893	EACH	1.000	1.000
0008	204.0100	Removing Concrete Pavement	SY	1,390.000	1,390.000
0010	204.0110	Removing Asphaltic Surface	SY	360.000	360.000
0012	204.0150	Removing Curb & Gutter	LF	630.000	630.000
0014	204.0155	Removing Concrete Sidewalk	SY	210.000	210.000
0016	204.0157	Removing Concrete Barrier	LF	180.000	180.000
0018	204.0170	Removing Fence	LF	840.000	840.000
0020	204.0195	Removing Concrete Bases	EACH	1.000	1.000
0022	204.0220	Removing Inlets	EACH	3.000	3.000
0024	204.0245	Removing Storm Sewer (size) 0001. 12-inch	LF	46.000	46.000
0026	204.0245	Removing Storm Sewer (size) 0002. 15-inch	LF	44.000	44.000
0028	205.0100	Excavation Common	CY	3,118.000	3,118.000
0030	206.1001	Excavation for Structures Bridges (structure) 0001. B-40-893	EACH	1.000	1.000
0032	206.5001	Cofferdams (structure) 0001. B-40-893	EACH	1.000	1.000
0034	210.1500	Backfill Structure Type A	TON	551.000	551.000
0036	211.0201	Prepare Foundation for Concrete Pavement (project) 0001. 1228-22-74	EACH	1.000	1.000
0038	213.0100	Finishing Roadway (project) 0001. 1228-22-74	EACH	1.000	1.000
0040	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,753.000	1,753.000
0042	310.0110	Base Aggregate Open-Graded	TON	19.000	19.000
0044	312.0110	Select Crushed Material	TON	1,600.000	1,600.000
0046	390.0403	Base Patching Concrete Shes	SY	500.000	500.000
0048	415.0090	Concrete Pavement 9-Inch	SY	808.000	808.000
0050	415.0100	Concrete Pavement 10-Inch	SY	1,440.000	1,440.000
0052	415.0410	Concrete Pavement Approach Slab	SY	110.000	110.000
0054	416.0610	Drilled Tie Bars	EACH	725.000	725.000
0056	416.0620	Drilled Dowel Bars	EACH	214.000	214.000
0058	465.0105	Asphaltic Surface	TON	12.000	12.000
0060	495.1000.S	Cold patch	TON	1.000	1.000
0062	502.0100	Concrete Masonry Bridges	CY	1,130.000	1,130.000
0064	502.3101	Expansion Device	LF	72.000	72.000
0066	502.3200	Protective Surface Treatment	SY	1,577.000	1,577.000
0068	502.3210	Pigmented Surface Sealer	SY	488.000	488.000
0070	503.0172	Prestressed Girder Type I 72W-Inch	LF	1,408.000	1,408.000
0072	504.0500	Concrete Masonry Retaining Walls	CY	176.000	176.000
0074	505.0400	Bar Steel Reinforcement HS Structures	LB	44,960.000	44,960.000
0076	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	174,590.000	174,590.000
0078	505.0800.S	Bar Steel Reinforcement HS Stainless Structures	LB	680.000	680.000
0080	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	16.000	16.000
0082	506.2610	Bearing Pads Elastomeric Laminated	EACH	8.000	8.000
0084	506.4000	Steel Diaphragms (structure) 0001. B-40-893	EACH	18.000	18.000
0086	516.0500	Rubberized Membrane Waterproofing	SY	39.000	39.000
0088	520.8000	Concrete Collars for Pipe	EACH	4.000	4.000
0090	531.2042	Drilling Shaft 42-Inch	LF	18.000	18.000
0092	531.5130	Foundation Single-Shaft Type MC-III (structure) 0001. S-40-3103	EACH	1.000	1.000
0094	531.8990	Anchor Assemblies Poles on Structures	EACH	2.000	2.000
0096	532.5130	Monotube Cantilever Type III (structure) 0001. S-40-3103	EACH	1.000	1.000
0098	541.0300.S	Noise Barriers Double-Sided Sound Absorptive (structure) 0001. N-40-104	SF	16,423.000	16,423.000

1228-22-74

Line	Item	Item Description	Unit	Total	Qty
0100	550.0020	Pre-Boring Rock or Consolidated Materials	LF	495.000	495.000
0102	550.1140	Piling Steel HP 14-Inch X 73 Lb	LF	559.000	559.000
0104	601.0409	Concrete Curb & Gutter 30-Inch Type A	LF	1,616.000	1,616.000
0106	602.0410	Concrete Sidewalk 5-Inch	SF	8,030.000	8,030.000
0108	602.0415	Concrete Sidewalk 6-Inch	SF	350.000	350.000
0110	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	24.000	24.000
0112	603.1142	Concrete Barrier Type S42	LF	187.000	187.000
0114	603.1156	Concrete Barrier Type S56	LF	648.000	648.000
0116	603.1342	Concrete Barrier Type S42B	LF	20.000	20.000
0118	603.8000	Concrete Barrier Temporary Precast Delivered	LF	975.000	975.000
0120	603.8125	Concrete Barrier Temporary Precast Installed	LF	975.000	975.000
0122	603.8500	Anchoring Concrete Barrier Temporary Precast	LF	250.000	250.000
0124	604.0500	Slope Paving Crushed Aggregate	SY	88.000	88.000
0126	606.0300	Riprap Heavy	CY	350.000	350.000
0128	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	46.000	46.000
0130	608.0315	Storm Sewer Pipe Reinforced Concrete Class III 15-Inch	LF	9.000	9.000
0132	608.0412	Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	LF	13.000	13.000
0134	608.0418	Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	LF	38.000	38.000
0136	608.0515	Storm Sewer Pipe Reinforced Concrete Class V 15-Inch	LF	23.000	23.000
0138	611.0420	Reconstructing Manholes	EACH	3.000	3.000
0140	611.0530	Manhole Covers Type J	EACH	2.000	2.000
0142	611.0612	Inlet Covers Type C	EACH	1.000	1.000
0144	611.0624	Inlet Covers Type H	EACH	6.000	6.000
0146	611.0639	Inlet Covers Type H-S	EACH	1.000	1.000
0148	611.0654	Inlet Covers Type V	EACH	3.000	3.000
0150	611.3004	Inlets 4-FT Diameter	EACH	5.000	5.000
0152	611.3225	Inlets 2x2.5-FT	EACH	3.000	3.000
0154	611.8115	Adjusting Inlet Covers	EACH	2.000	2.000
0156	612.0106	Pipe Underdrain 6-Inch	LF	507.000	507.000
0158	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	421.000	421.000
0160	614.2300	MGS Guardrail 3	LF	84.000	84.000
0162	614.2610	MGS Guardrail Terminal EAT	EACH	1.000	1.000
0164	616.0206	Fence Chain Link 6-FT	LF	816.000	816.000
0166	616.0329	Gates Chain Link (width) 0002. 12-FT	EACH	1.000	1.000
0168	619.1000	Mobilization	EACH	1.000	1.000
0170	620.0300	Concrete Median Sloped Nose	SF	245.000	245.000
0172	623.0200	Dust Control Surface Treatment	SY	3,900.000	3,900.000
0174	624.0100	Water	MGAL	45.000	45.000
0176	627.0200	Mulching	SY	43,680.000	43,680.000
0178	628.1104	Erosion Bales	EACH	10.000	10.000
0180	628.1504	Silt Fence	LF	1,445.000	1,445.000
0182	628.1520	Silt Fence Maintenance	LF	1,445.000	1,445.000
0184	628.1550	Silt Screen	LF	1,000.000	1,000.000
0186	628.2004	Erosion Mat Class I Type B	SY	3,382.000	3,382.000
0188	628.2027	Erosion Mat Class II Type C	SY	3,918.000	3,918.000
0190	628.6505	Soil Stabilizer Type A	ACRE	1.000	1.000
0192	628.6510	Soil Stabilizer Type B	ACRE	1.000	1.000
0194	628.7005	Inlet Protection Type A	EACH	11.000	11.000
0196	628.7010	Inlet Protection Type B	EACH	1.000	1.000

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Line	Item	Item Description	Unit	Total	Qty
0198	628.7015	Inlet Protection Type C	EACH	6.000	6.000
0200	628.7020	Inlet Protection Type D	EACH	20.000	20.000
0202	628.7504	Temporary Ditch Checks	LF	48.000	48.000
0204	628.7560	Tracking Pads	EACH	2.000	2.000
0206	629.0210	Fertilizer Type B	CWT	34.000	34.000
0208	630.0120	Seeding Mixture No. 20	LB	294.000	294.000
0210	630.0170	Seeding Mixture No. 70	LB	236.000	236.000
0212	630.0500	Seed Water	MGAL	1,146.000	1,146.000
0214	632.0101	Trees (species) (size) (root) 0001. Autumn Brilliance Serviceberry 2" CAL B&B	EACH	9.000	9.000
0216	632.0101	Trees (species) (size) (root) 0002. Common Hackberry 2.5" CAL B&B	EACH	6.000	6.000
0218	632.0101	Trees (species) (size) (root) 0003. Northern Catalpa 2.5" CAL B&B	EACH	7.000	7.000
0220	632.0101	Trees (species) (size) (root) 0004. Paper Birch 2.5" CAL B&B	EACH	6.000	6.000
0222	632.0101	Trees (species) (size) (root) 0005. Prairifire Crabapple 2" CAL B&B	EACH	12.000	12.000
0224	632.0101	Trees (species) (size) (root) 0006. Robin Hill Serviceberry 2" CAL B&B	EACH	11.000	11.000
0226	632.0101	Trees (species) (size) (root) 0007. Red Jewel Crabapple 2" CAL B&B	EACH	8.000	8.000
0228	632.0101	Trees (species) (size) (root) 0008. Royal Raindrops Crabapple 2" CAL B&B	EACH	13.000	13.000
0230	632.0101	Trees (species) (size) (root) 0009. Swamp White Oak 2.5" CAL B&B	EACH	7.000	7.000
0232	632.0201	Shrubs (species) (size) (root) 0001. Arrowwood Viburnum 24" CG.	EACH	73.000	73.000
0234	632.0201	Shrubs (species) (size) (root) 0002. Redtwig Dogwood 24" CG.	EACH	76.000	76.000
0236	632.9101	Landscape Planting Surveillance and Care Cycles	EACH	10.000	10.000
0238	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	11.000	11.000
0240	634.0809	Posts Tubular Steel 2x2-Inch X 9.5-FT	EACH	2.000	2.000
0242	637.2210	Signs Type II Reflective H	SF	71.260	71.260
0244	637.2215	Signs Type II Reflective H Folding	SF	32.380	32.380
0246	637.2230	Signs Type II Reflective F	SF	16.000	16.000
0248	638.2102	Moving Signs Type II	EACH	1.000	1.000
0250	638.2602	Removing Signs Type II	EACH	17.000	17.000
0252	638.3000	Removing Small Sign Supports	EACH	11.000	11.000
0254	643.0300	Traffic Control Drums	DAY	22,330.000	22,330.000
0256	643.0420	Traffic Control Barricades Type III	DAY	2,400.000	2,400.000
0258	643.0705	Traffic Control Warning Lights Type A	DAY	4,800.000	4,800.000
0260	643.0715	Traffic Control Warning Lights Type C	DAY	3,260.000	3,260.000
0262	643.0800	Traffic Control Arrow Boards	DAY	500.000	500.000
0264	643.0900	Traffic Control Signs	DAY	7,685.000	7,685.000
0266	643.0920	Traffic Control Covering Signs Type II	EACH	2.000	2.000
0268	643.3150	Temporary Marking Line Removable Tape 4-Inch	LF	1,185.000	1,185.000
0270	643.3250	Temporary Marking Line Removable Tape 8-Inch	LF	70.000	70.000
0272	643.3960	Temporary Marking Removable Mask Out Tape 6-Inch	LF	60.000	60.000
0274	643.5000	Traffic Control	EACH	1.000	1.000
0276	644.1810	Temporary Pedestrian Barricade	LF	400.000	400.000
0278	645.0111	Geotextile Type DF Schedule A	SY	345.000	345.000
0280	645.0120	Geotextile Type HR	SY	567.000	567.000
0282	646.1020	Marking Line Epoxy 4-Inch	LF	179.000	179.000
0284	646.1040	Marking Line Grooved Wet Ref Epoxy 4-Inch	LF	1,515.000	1,515.000
0286	646.1555	Marking Line Grooved Contrast Permanent Tape 4-Inch	LF	77.000	77.000
0288	646.3020	Marking Line Epoxy 8-Inch	LF	357.000	357.000
0290	646.3555	Marking Line Grooved Contrast Permanent Tape 8-Inch	LF	366.000	366.000
0292	646.5020	Marking Arrow Epoxy	EACH	3.000	3.000
0294	646.5120	Marking Word Epoxy	EACH	1.000	1.000

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Line	Item	Item Description	Unit	Total	Qty
0296	646.6120	Marking Stop Line Epoxy 18-Inch	LF	45.000	45.000
0298	646.8120	Marking Curb Epoxy	LF	105.000	105.000
0300	646.8220	Marking Island Nose Epoxy	EACH	3.000	3.000
0302	646.9000	Marking Removal Line 4-Inch	LF	52.000	52.000
0304	652.0125	Conduit Rigid Metallic 2-Inch	LF	239.000	239.000
0306	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	2,377.000	2,377.000
0308	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	410.000	410.000
0310	652.0615	Conduit Special 3-Inch	LF	51.000	51.000
0312	652.0700.S	Install Conduit into Existing Item	EACH	1.000	1.000
0314	652.0800	Conduit Loop Detector	LF	465.000	465.000
0316	653.0140	Pull Boxes Steel 24x42-Inch	EACH	12.000	12.000
0318	653.0220	Junction Boxes 18x6x6-Inch	EACH	2.000	2.000
0320	653.0222	Junction Boxes 18x12x6-Inch	EACH	5.000	5.000
0322	653.0900	Adjusting Pull Boxes	EACH	1.000	1.000
0324	653.0905	Removing Pull Boxes	EACH	2.000	2.000
0326	654.0101	Concrete Bases Type 1	EACH	2.000	2.000
0328	654.0105	Concrete Bases Type 5	EACH	3.000	3.000
0330	655.0230	Cable Traffic Signal 5-14 AWG	LF	618.000	618.000
0332	655.0240	Cable Traffic Signal 7-14 AWG	LF	272.000	272.000
0334	655.0320	Cable Type UF 2-10 AWG Grounded	LF	171.000	171.000
0336	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	535.000	535.000
0338	655.0610	Electrical Wire Lighting 12 AWG	LF	1,175.000	1,175.000
0340	655.0615	Electrical Wire Lighting 10 AWG	LF	200.000	200.000
0342	655.0620	Electrical Wire Lighting 8 AWG	LF	5,084.000	5,084.000
0344	655.0700	Loop Detector Lead In Cable	LF	2,040.000	2,040.000
0346	655.0800	Loop Detector Wire	LF	1,205.000	1,205.000
0348	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	3.000	3.000
0350	657.0322	Poles Type 5-Aluminum	EACH	5.000	5.000
0352	657.0605	Luminaire Arms Single Member 4 1/2-Inch Clamp 4-FT	EACH	5.000	5.000
0354	658.0171	Traffic Signal Face 1S 12-Inch	EACH	2.000	2.000
0356	658.0174	Traffic Signal Face 4S 12-Inch	EACH	1.000	1.000
0358	658.5070	Signal Mounting Hardware (location) 0001. IH-43 SB Ramp & W Hampton Ave	EACH	1.000	1.000
0360	659.1120	Luminaires Utility LED B	EACH	5.000	5.000
0362	659.5000.S	Lamp, Ballast, LED, Switch Disposal by Contractor	EACH	3.000	3.000
0364	670.0101	Field System Integrator	EACH	1.000	1.000
0366	670.0201	ITS Documentation	EACH	1.000	1.000
0368	674.0300	Remove Cable	LF	709.000	709.000
0370	674.0400	Reinstall Cable	LF	566.000	566.000
0372	678.0501	Communication System Testing	EACH	1.000	1.000
0374	690.0150	Sawing Asphalt	LF	8.000	8.000
0376	690.0250	Sawing Concrete	LF	3,334.000	3,334.000
0378	715.0502	Incentive Strength Concrete Structures	DOL	7,836.000	7,836.000
0380	715.0603	Incentive Strength Concrete Barrier	DOL	170.000	170.000
0382	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	708.000	708.000
0384	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 0001. 977+33	EACH	1.000	1.000
0386	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	3,200.000	3,200.000
0388	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	14,400.000	14,400.000
0390	SPV.0060	Special 0001. Survey Project 1228-22-74	EACH	1.000	1.000
0392	SPV.0060	Special 0002. Maintain and Improve Temporary Causeway Left-In-Place	EACH	1.000	1.000

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Line	Item	Item Description	Unit	Total	Qty
0394	SPV.0060	Special 0006. Baseline CPM Progress Schedule	EACH	1.000	1.000
0396	SPV.0060	Special 0007. Monthly CPM Progress Schedule Updates	EACH	6.000	6.000
0398	SPV.0060	Special 0603. Exposing Existing Infrastructure Paved Area	EACH	3.000	3.000
0400	SPV.0060	Special 0604. Exposing Existing Infrastructure Unpaved Area	EACH	3.000	3.000
0402	SPV.0060	Special 2021. Signal Assembly Ramp Control Overhead	EACH	2.000	2.000
0404	SPV.0060	Special 2022. Signal Assembly Advance Flasher Type 1	EACH	1.000	1.000
0406	SPV.0060	Special 3001. Relocate Existing Signal Pole and Heads SB2	EACH	1.000	1.000
0408	SPV.0060	Special 4001. Anchor Assemblies Noise Barrier Structures R-40-728	EACH	14.000	14.000
0410	SPV.0060	Special 8004. Pipe Connection to Existing Structure	EACH	3.000	3.000
0412	SPV.0075	Special 0001. Pavement Cleanup Project 1228-22-74	HRS	500.000	500.000
0414	SPV.0090	Special 0001. Concrete Curb & Gutter 4-inch Sloped 60-inch Type A	LF	152.000	152.000
0416	SPV.0090	Special 0002. Concrete Curb & Gutter 54-inch Type A	LF	10.000	10.000
0418	SPV.0165	Special 4001. Wall Concrete Panel Mechanically Stabilized Earth R-40-728	SF	872.000	872.000
0420	SPV.0180	Special 0301. Topsoil Special	SY	50,979.000	50,979.000
0422	SPV.0195	Special 0001. Management of Contaminated Sediment	TON	170.000	170.000
0424	SPV.0195	Special 2001. Select Crushed Material for Travel Corridor	TON	18.000	18.000

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CLEARING AND GRUBBING ITEMS

ROADWAY	STATION	TO	STATION	OFFSET	201.0105 CLEARING STA	201.0205 GRUBBING STA
RAMP HAB						
	974+00 HAB	-	978+00 HAB	LT	4	4
	980+00 HAB	-	982+00 HAB	LT	2	2
TOTAL					6	6

REMOVING CONCRETE PAVEMENT ITEM

ROADWAY	STATION	TO	STATION	204.0100 REMOVING CONCRETE PAVEMENT SY
RAMP HAB				
	976+00 HAB	-	977+33 HAB	360
	981+05 HAB	-	981+90 HAB	460
W HAMPTON AVENUE				
	10+74 HA	-	17+05 HA	570
TOTAL				1390

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REMOVING ASPHALTIC SURFACE ITEM

ROADWAY	STATION	TO	STATION	OFFSET	204.0110 REMOVING ASPHALTIC SURFACE SY
W HAMPTON AVENUE					
	13+18 HA	-	15+53 HA	LT	360
TOTAL					360

REMOVING CURB & GUTTER ITEM

ROADWAY	STATION	TO	STATION	204.0150 REMOVING CURB & GUTTER LF
W HAMPTON AVENUE				
	13+71 HA	-	16+86 HA	630
TOTAL				630

REMOVING SIDEWALK ITEM

ROADWAY	STATION	TO	STATION	OFFSET	204.0155 REMOVING CONCRETE SIDEWALK SY
RAMP HAB					
	981+26 HAB	-	981+72 HAB	RT	20
W HAMPTON AVENUE					
	13+09 HA	-	17+05 HA	LT/RT	190
TOTAL					210

REMOVING CONCRETE BARRIER ITEM

ROADWAY	STATION	TO	STATION	OFFSET	204.0157 REMOVING CONCRETE BARRIER LF
RAMP HAB					
	976+00 HAB	-	977+32 HAB	LT	130
	977+16 HAB	-	977+33 HAB	RT	20
	981+05 HAB	-	981+18 HAB	LT	15
	981+05 HAB	-	981+19 HAB	RT	15
TOTAL					180

*ADDITIONAL QUANTITIES FOUND ELSEWHERE CATEGORY 1000 UNLESS OTHERWISE NOTED

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REMOVING FENCE ITEM

ROADWAY	STATION	TO	STATION	OFFSET	204.0170 REMOVING FENCE LF
RAMP HAB					
	969+05 HAB	-	977+35 HAB	LT	840
TOTAL					840

SAWING ITEMS

ROADWAY	STATION	TO	STATION	690.0150 SAWING ASPHALT LF	* 690.0250 SAWING CONCRETE LF
RAMP HAB					
	976+00 HAB	-	976+00 HAB	-	24
	981+05 HAB	-	981+90 HAB	-	150
W HAMPTON AVENUE					
	11+40 HA	-	17+05 HA	8	2160
TOTAL				8	2334

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EARTHWORK SUMMARY

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1) CUT (2)	205.0100 COMMON EXCAVATION (1) EBS EXCAVATION	SALVAGED/UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (6) FACTOR 1.10	MASS ORDINATE +/- (7)	WASTE	COMMENT
DIVISION 1											
RAMP HAB	974+31/981+78	RAMP HAB	1,234	0	0	1,234	525	578	657	657	
W. HAMPTON AVENUE	11+41/17+04	W. HAMPTON AVENUE	1,884	0	0	1,884	381	419	1,465	1,465	
DIVISION 1 SUBTOTAL			3,118	0	0	3,118	906	997	2,121	2,121	
GRAND TOTAL			3,118	0	0	3,118	906	997	2,121	2,121	
TOTAL COMMON EXC			3,118								

NOTES:
(1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
(4) SALVAGED/UNUSABLE PAVEMENT MATERIAL
(5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL
(6) EXPANDED FILL FACTOR = 1.10 EXPANDED FILL = UNEXPANDED FILL * FILL FACTOR
(7) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.
(8) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

*ADDITIONAL QUANTITIES FOUND ELSEWHERE
CATEGORY 1000 UNLESS OTHERWISE NOTED

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BASE AGGREGATE ITEMS

ROADWAY	STATION	TO	STATION	* 305.0120 BASE AGGREGATE DENSE 1 1/4 INCH TON	312.0110 SELECT CRUSHED MATERIAL TON
RAMP HAB					
	974+31 HAB	-	977+20 HAB	430	1030
	980+97 HAB	-	981+90 HAB	230	570
W HAMPTON AVENUE					
	11+40 HA	-	17+04 HA	670	-
TOTAL				1330	1600

CONCRETE PAVEMENT ITEMS

ROADWAY	STATION	TO	STATION	415.009 CONCRETE PAVEMENT 9-INCH SY	415.0100 CONCRETE PAVEMENT 10-INCH SY	415.0410 CONCRETE PAVEMENT APPORACH SLAB SY
RAMP HAB						
	974+31 HAB	-	977+20 HAB	-	1000	50
	980+97 HAB	-	981+90 HAB	-	440	60
W HAMPTON AVENUE						
	12+00 HA	-	17+05 HA	808	-	-
TOTAL				808	1440	110

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DRILLED BAR ITEMS

ROADWAY	STATION	TO	STATION	OFFSET	* 416.0610 DRILLED TIE BARS EACH	* 416.0620 DRILLED DOWEL BARS EACH
RAMP HAB						
	974+31 HAB	-	974+31 HAB	LT/RT	-	28
	981+90 HAB	-	982+00 HAB	LT/RT	-	11
W HAMPTON AVENUE						
	10+74 HA	-	17+04 HA	LT	450	75
TOTAL					450	114

ASPHALTIC ITEMS

ROADWAY	STATION	TO	STATION	465.0105 ASPHALTIC SURFACE TON
W HAMPTON AVENUE				
	13+18 HA	-	13+93 HA	12
TOTAL				12

BASE PATCHING ITEMS

ROADWAY	STATION	TO	STATION	390.0403 BASE PATCHING CONCRETE SHES SY	* 416.0610 DRILLED TIE BARS EACH	* 416.0620 DRILLED DOWEL BARS EACH	* 690.0250 SAWING CONCRETE LF
W HAMPTON AVENUE							
	13+42 HA	-	17+04 HA	500	275	100	1000
TOTAL				500	275	100	1000

COLD PATCH ITEM

ROADWAY	495.1000.S COLD PATCH TON
W HAMPTON AVENUE	
	1
TOTAL	1

*ADDITIONAL QUANTITIES FOUND ELSEWHERE CATEGORY 1000 UNLESS OTHERWISE NOTED

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CONCRETE CURB & GUTTER ITEMS

ROADWAY	STATION	TO	STATION	OFFSET	601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A LF	SPV.0090.0001 CONCRETE CURB & GUTTER 4-INCH SLOPED 60-INCH TYPE A LF	SPV.0090.0002 CONCRETE CURB & GUTTER 54-INCH TYPE A LF
RAMP HAB							
	974+31 HAB	-	977+05 HAB	RT	-	152	-
	980+97 HAB	-	981+90 HAB	LT/RT	211	-	10
W HAMPTON AVENUE							
	10+74 HA	-	17+04 HA	LT/RT	1405	-	-
TOTAL					1616	152	10

CONCRETE BARRIER ITEMS

ROADWAY	STATION	TO	STATION	OFFSET	603.1142 CONCRETE BARRIER TYPE S42 LF	603.1156 CONCRETE BARRIER TYPE S56 LF	603.1342 CONCRETE BARRIER TYPE S42B LF
RAMP HAB							
	969+13 HAB	-	974+31 HAB	LT	-	516	-
	974+31 HAB	-	977+20 HAB	RT/LT	138	132	-
	980+97 HAB	-	981+90 HAB	RT/LT	49	-	20
TOTAL					187	648	20

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CONCRETE SIDEWALK ITEMS

ROADWAY	STATION	TO	STATION	OFFSET	* 305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	602.0410 CONCRETE SIDEWALK 5-INCH SF	602.0415 CONCRETE SIDEWALK 6-INCH SF	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF
RAMP HAB								
	980+97 HAB	-	981+90 HAB	LT/RT	13	-	350	-
W HAMPTON AVENUE								
	13+42 HA	-	17+04 HA	LT	300	8030	-	24
TOTAL					313	8030	350	24

BEAM GUARD ITEMS

ROADWAY	FROM STATION	FROM OFFSET	TO STATION	TO OFFSET	614.2300 MGS GUARDRAIL 3 LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
W HAMPTON AVENUE						
	15+99 HA	39' RT	16+83 HA	37' RT	84	1
TOTAL					84	1

*ADDITIONAL QUANTITIES FOUND ELSEWHERE CATEGORY 1000 UNLESS OTHERWISE NOTED

3

3

PIPE UNDERDRAIN ITEM

ROADWAY	BEGIN STATION	END STATION	END STRUCTURE	OFFSET AT END STRUCTURE	310.0110 BASE AGGREGATE OPEN GRADED TON	612.0106 PIPE UNDERDRAIN 6-INCH LF	645.0111 GEOTEXTILE TYPE DF SCHEDULE A SY
RAMP HAB							
	974+31 HAB	977+20 HAB	NEW STRUCTURE	17' LT	11	289	161
	980+97 HAB	981+90 HAB	END OF NEW PAVEMENT	81' LT	5	124	69
	981+12 HAB	981+90 HAB	EXISTING INLET	52' RT	3	94	52
TOTAL					19	507	282

FENCE ITEMS

ROADWAY	FROM STATION	FROM OFFSET	TO STATION	TO OFFSET	616.0206 FENCE CHAIN LINK 6-FT LF	616.0329.0001 GATES CHAIN LINK 12-FT EACH
RAMP HAB						
	969+04	139' LT	977+19	163' LT	816	1
TOTAL					816	1

CONCRETE MEDIAN SLOPED NOSE ITEM

ROADWAY	STATION	TO	STATION	OFFSET	620.0300 CONCRETE MEDIAN SLOPED NOSE TYPE 1 SF	620.0300 CONCRETE MEDIAN SLOPED NOSE TYPE 2 SF
RAMP HAB						
	981+12 HAB	-	981+90 HAB	RT	70	45
W HAMPTON AVENUE						
	12+91 HA	-	13+42 HA	LT	130	-
TOTAL					200	45

DUST CONTROL SURFACE TREATMENT

LOCATION	623.0200 DUST CONTROL SURFACE TREATMENT SY
PROJECT 1228-22-74	3,900
TOTAL	3,900

WATER

LOCATION	624.0100 WATER MGAL
PROJECT-BASE AGGREGATE	45
TOTAL	45

*ADDITIONAL QUANTITIES FOUND ELSEWHERE CATEGORY 1000 UNLESS OTHERWISE NOTED

RESTORATION ITEMS

ROADWAY	STATION	TO	STATION	OFFSET	627.0200 MULCHING SY	628.2004 EROSION MAT CLASS I TYPE B SY	628.2027 EROSION MAT CLASS II TYPE C SY	628.6505 SOIL STABILIZER TYPE A ACRE	628.6510 SOIL STABILIZER TYPE B ACRE	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	* 630.0170 SEEDING MIXTURE NO. 70 LB	630.0500 SEED WATER MGAL	SPV.0180.0301 TOPSOIL SPECIAL SY
IH 43	928+00	-	1004+00	LT/RT	43,680	-	40	-	-	28	-	236	982	43,719
RAMP HAB	969+34 HAB	-	981+90 HAB	LT/RT	-	2,607	2,923	1	1	4	224	-	124	5,530
W HAMPTON AVENUE	13+00 HA	-	18+00 HA	LT/RT	-	775	955	-	-	2	70	-	40	1,729
TOTAL					43,680	3,382	3,918	1	1	34	294	236	1,146	50,979

EROSION CONTROL ITEMS

ROADWAY	STATION	TO	STATION	OFFSET	645.0120 GEOTEXTILE TYPE HR SY	628.1104 EROSION BALES EACH	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.7504 TEMPORARY DITCH CHECKS LF
RAMP HAB	969+34 HAB	-	981+90 HAB	LT/RT	28	10	1,325	1,325	48
W HAMPTON AVENUE	15+50 HA	-	17+00 HA	LT/RT	-	-	120	120	-
TOTAL					28	10	1,445	1,445	48

SILT SCREEN ITEM

LOCATION	628.1550 SILT SCREEN LF
MILWAUKEE RIVER	1,000
TOTAL	1,000

INLET PROTECTION ITEMS

ROADWAY	STATION	TO	STATION	OFFSET	628.7005 INLET PROTECTION TYPE A EACH	628.7010 INLET PROTECTION TYPE B EACH	628.7015 INLET PROTECTION TYPE C EACH	628.7020 INLET PROTECTION TYPE D EACH
RAMP HAB	974+31 HAB	-	981+90 HAB	LT/RT	6	-	6	8
W HAMPTON AVENUE	13+00 HA	-	18+00 HA	LT/RT	5	1	-	12
TOTAL					11	1	6	20

TRACKING PAD ITEM

LOCATION	628.7560 TRACKING PADS EACH
PROJECT 1228-22-74	2
TOTAL	2

*ADDITIONAL QUANTITIES FOUND ELSEWHERE CATEGORY 1000 UNLESS OTHERWISE NOTED

TRAFFIC CONTROL ITEMS

CATEGORY	STAGE	LOCATION	NUMBER OF CLOSURES	643.0300 TRAFFIC CONTROL DRUMS		643.0420 TRAFFIC CONTROL BARRICADES TYPE III		643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A		643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C		643.0800 TRAFFIC CONTROL ARROW BOARDS		643.0900 TRAFFIC CONTROL SIGNS		643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II		
			DAYS	EACH**	DAY	EACH**	DAY	EACH**	DAY	EACH**	DAY	EACH**	DAY	EACH**	DAY	# SIGNS	# CYCLES	EACH
1000	1	**MAINLINE**	30															
		RAMP HAB		--	--	9	270	18	540	--	--	--	--	3	90	--	--	--
		LOCAL ROADS																
		HAMPTON AVENUE		83	2490	2	60	4	120	18	540	2	60	18	540	--	--	--
		PORT WASHINGTON ROAD		--	--	--	--	--	--	--	--	--	--	15	450	1	1	1
		SUBTOTAL			2,490		330		660		--		60		990			1
1000	2	**MAINLINE**	120															
		RAMP HAB		--	--	9	1080	18	2160	--	--	--	--	3	90	--	--	--
		LOCAL ROADS																
		HAMPTON AVENUE		107	12,840	5	600	10	1200	18	2,160	2	240	17	2,040	--	--	--
		PORT WASHINGTON ROAD		--	--	--	--	--	--	--	--	--	--	15	450	--	--	--
		SUBTOTAL			12,840		600		1,200		2,160		240		2,490			0
1000	3	**MAINLINE**	100															
		RAMP HAB		--	--	9	900	18	1800	--	--	--	--	3	90	--	--	--
		LOCAL ROADS																
		HAMPTON AVENUE		63	6,300	5	500	10	1,000	10	1,000	2	200	18	1,800	--	--	--
		PORT WASHINGTON ROAD		--	--	--	--	--	--	--	--	--	--	15	450	--	--	--
		SUBTOTAL			6,300		500		1000		1000		200		2250			0
1000	4	**MAINLINE**	25															
		RAMP HAB		--	--	9	225	18	450	--	--	--	--	3	90	--	--	--
		LOCAL ROADS																
		HAMPTON AVENUE		28	700	4	100	8	200	4	100	--	--	17	425	1	1	1
		PORT WASHINGTON ROAD																
		SUBTOTAL			700		100		200		100		0		425			1
1000		**LOCAL ROADS**																
		OAK LEAF TRAIL DETOUR	30	--	--	29	870	58	1740	--	--	--	--	51	1530	--	--	--
		SUBTOTAL			0		870		1,740		0		0		1,530			0
		TOTAL			22,330		2,400		4,800		3,260		500		7,685			2

*ADDITIONAL QUANTITIES FOUND ELSEWHERE
**FOR INFORMATION ONLY
CATEGORY 1000 UNLESS OTHERWISE NOTED

3

TEMPORARY CONCRETE BARRIER ITEMS

STAGE	LOCATION	STATION	TO	STATION	OFFSET	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF	603.8500 ANCHORING CONCRETE BARRIER TEMPORARY PRECAST LF
1	W HAMPTON AVENUE							
		11+40	-	17+00	LT	575	575	250
		12+91	-	16+64	LT	400	400	
	TOTAL					975	975	250

TEMPORARY PEDESTRIAN BARRICADE

STAGE	LOCATION	STATION	TO	STATION	OFFSET	644.1810 TEMPORARY PEDESTRIAN BARRICADE LF
1	W HAMPTON AVENUE					
		12+91	-	16+64	LT	400
	TOTAL					400

3

TEMPORARY PAVEMENT MARKING ITEMS

STAGE	LOCATION	STATION TO STATION	643.3150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH WHITE LF	643.3150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH YELLOW LF	643.3250 TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH WHITE LF	643.3960 TEMPORARY MARKING LINE REMOVABLE MASK OUT TAPE 6-INCH LF
1	HAMPTON AVENUE					
		11+40 HA - 17+00 HA	390	560	70	60
		21+30 HA - 22+80 HA	--	150	--	--
1	PORT WASHINGTON ROAD					
		106+55 - 107+30	85	--	--	--
	TOTAL		475	710	70	60

TRAFFIC CONTROL

LOCATION	643.5000 TRAFFIC CONTROL EACH
PROJECT 1228-22-74	1
TOTAL	1

*ADDITIONAL QUANTITIES FOUND ELSEWHERE CATEGORY 1000 UNLESS OTHERWISE NOTED

PAVEMENT MARKING ITEMS

ROADWAY	STATION	TO	STATION	646.1020 MARKING LINE EPOXY 4-INCH DASHED WHITE LF	646.3020 MARKING LINE EPOXY 8-INCH SOLID WHITE LF	646.1040 MARKING LINE GROOVED WET REF EPOXY 4-INCH SOLID WHITE LF	646.1040 MARKING LINE GROOVED WET REF EPOXY 4-INCH SOLID YELLOW LF	646.1555 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH DASHED WHITE LF	646.3555 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH WHITE LF	646.5020 MARKING ARROW WHITE EACH	646.5120 MARKING WORD EPOXY WHITE EACH	646.6120 MARKING STOP LINE EPOXY 18-INCH SOLID WHITE LF	646.8120 MARKING CURB EPOXY YELLOW LF	646.8220 MARKING ISLAND NOSE EPOXY YELLOW EACH
RAMP HAB	974+31	-	981+93	-	-	798	717	77	366	-	-	24	10	1
W HAMPTON AVENUE	HA	-	17+06 HA	179	357	-	-	-	-	3	1	21	95	2
TOTAL				179	357	1515		77	366	3	1	45	105	3

PREPARE FOUNDATION FOR CONCRETE PAVEMENT

211.0201.0001
PREPARE FOUNDATION FOR CONCRETE PAVEMENT 1228-22-74

LOCATION	EACH
PROJECT 1228-22-74	1
TOTAL	1

FINISHING ROADWAY

213.0100.0001
FINISHING ROADWAY 1228-22-74

LOCATION	EACH
PROJECT 1228-22-74	1
TOTAL	1

MOBILIZATION

619.1000
MOBILIZATION

LOCATION	EACH
PROJECT 1228-22-74	1
TOTAL	1

MARKING REMOVAL ITEMS

ROADWAY	STATION	TO	STATION	646.9000 MARKING REMOVAL LINE 4-INCH LF
W HAMPTON AVENUE	HA	-	12+94 HA	52
TOTAL				52

BIRD DETERRENT SYSTEM

999.2000.S
INSTALLING AND MAINTAINING BIRD DETERRENT SYSTEM

LOCATION	EACH
B-40-893 (STA. 977+33)	1
TOTAL	1

*ADDITIONAL QUANTITIES FOUND ELSEWHERE CATEGORY 1000 UNLESS OTHERWISE NOTED

FILE NAME : N:\PDS\...\030200_mq.pptx PLOT DATE : June 14, 1911 PLOT BY : A.R.H. PLOT NAME : PLOT SCALE : 1:1

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SURVEY PROJECT

LOCATION	SPV.0060.0001 SURVEY PROJECT 1228-22-74 EACH
PROJECT 1228-22-74	1
TOTAL	1

MAINTAIN TEMPORARY CAUSEWAY

LOCATION	SPV.0060.0002 MAINTAIN AND IMPROVE TEMPORARY CAUSEWAY LEFT-IN-PLACE EACH
PROJECT 1228-22-74	1
TOTAL	1

3

CPM SCHEDULE ITEMS

LOCATION	SPV.0060.0006 BASELINE CPM PROGRESS SCHEDULE EACH	SPV.0060.0007 MONTHLY CPM PROGRESS SCHEDULE UPDATES EACH
PROJECT 1228-22-74	1	6
TOTAL	1	6

EXPOSING EXISTING INFRASTRUCTURE

LOCATION	SPV.0060.0603 EXPOSING EXISTING INFRASTRUCTURE PAVED AREA EACH	SPV.0060.0604 EXPOSING EXISTING INFRASTRUCTURE UNPAVED AREA EACH
PROJECT 1228-22-74	3	3
TOTAL	3	3

PAVEMENT CLEANUP

LOCATION	SPV.0075.0001 PAVEMENT CLEANUP PROJECT 1228-22-74 HRS
PROJECT 1228-22-74	500
TOTAL	500

MANAGEMENT OF CONTAMINATED SEDIMENT

LOCATION	SPV.0195.0001 MANAGEMENT OF CONTAMINATED SEDIMENT TON
PROJECT 1228-22-74	170
TOTAL	170

*ADDITIONAL QUANTITIES FOUND ELSEWHERE CATEGORY 1000 UNLESS OTHERWISE NOTED

STORM SEWER PIPE REMOVALS

ROADWAY	STATION	OFFSET	TO	STATION	OFFSET	204.0245.0001 REMOVING STORM SEWER 12-INCH LF	204.0245.0002 REMOVING STORM SEWER 15-INCH LF
RAMP HAB							
	976HAB+98	8' LT	--	976HAB+93	15' RT	23	---
	976HAB+98	35' LT	--	976HAB+98	12' LT	23	
HAMPTON AVE							
	15HA+50.58	57' LT	--	15HA+51.34	13' LT	---	44
TOTALS						46	44

ADJUSTING / RECONSTRUCTING STRUCTURES

LOCATION	STRUCTURE ID	STATION	OFFSET FT	EXISTING RIM* ELEVATION	TO	PROPOSED RIM** ELEVATION	611.0420 RECONSTRUCTING MANHOLES EACH	611.0530*** MANHOLE COVERS TYPE J EACH	611.0624*** INLET COVERS TYPE H EACH	611.8115 ADJUSTING INLET COVERS EACH
RAMP HAB										
	E551	975HAB+51	40' LT	635.95		636.57	1	---	---	---
	E553	976HAB+98	37' LT	632.02		629.84	1	---	---	---
	E555	981HAB+73	46' LT	637.02		637.39	---	---	---	1
HAMPTON AVE										
	E595	12HA+26	21' LT	638.06		637.74	1	1	---	---
	E598	13HA+51	24' RT	636.77		637.04	---	---	1	1
TOTALS							3	1	1	2

* VERIFY EXISTING RIM ELEVATION IN FIELD
** FINAL RIM ELEVATION TO BE DETERMINED IN FIELD
***ADDITIONAL QUANTITIES SHOWN ELSEWHERE

REMOVING INLETS

STATION	OFFSET	204.0220 REMOVING INLETS EACH
RAMP HAB		
976+93	17' RT	1
976+98	9' LT	1
HAMPTON AVE		
15HA+52	12' LT	1
TOTAL		3

CONCRETE COLLARS FOR PIPE

ROADWAY	STATION	OFFSET	PIPE ID	SIZE (IN)	520.8000 CONCRETE COLLARS FOR PIPE EACH
HAMPTON AVE					
	16+06.90	10' LT	PE604	12	1
	16+97.15	22' LT	PE606	18	1
	17+00.48	25' LT	EXISTING	18	1
	17+04.07	23' LT	EXISTING	15	1
SUBTOTAL					4
TOTAL					4

PIPE CONNECTION TO EXISTING STRUCTURE

ROADWAY	STRUCTURE ID	STATION	OFFSET	SPV.0060.8004 PIPE CONNECTION TO EXISTING STRUCTURE EACH
RAMP HAB				
	E433	974HAB+42	24' RT	1
	E555	976HAB+98	35' LT	1
HAMPTON AVE				
	E595	12HA+26	22' LT	1
TOTAL				3

S:\DOT\DOT_SE\190224_I43_N-S_Freeway_North-Hampton\Design\DGN\12282274_Ramp\Plansheets\SS_MQ_74.ppt PLOT DATE : 10/28/2022 11:40:23 AM PLOT BY : BRIAN C. ADAMS PLOT NAME : SS_MQ1 PLOT SCALE : 1:1

STORM SEWER STRUCTURES											STORM SEWER PIPES												
ROADWAY	STRUCTURE NO.	STATION	OFFSET (FT)	LOCATION	RIM OR FLOW ELEV	STRUCTURE TYPE	INLET/MANHOLE COVERS TYPE	DEPTH [1] (FT)	BACKFILL SLURRY CY	STRUCTURE COMMENTS	PIPE ID	FROM STR	TO STR	INLET ELEV	DISCH ELEV	SLOPE [A] %	PIPE LENGTH [B] (FT)	PLAN LENGTH [C] (FT)	PIPE CLASS	PIPE SIZE (INCH)	BACKFILL SLURRY CY	PIPE COMMENTS	TOTAL BACKFILL SLURRY CY
RAMP HAB	429	974+50.00	11.5	LT	642.57	INLETS 2x2.5-FT	V	4.96	7	---	P430	429	E433	637.61	637.26	1.00	35	38	IV	18	8	---	15
RAMP HAB	E433	974+41.35	24.3	RT	644.15	---	---	---	---	---	---	---	---	--	---	---	---	---	---	---	---	---	---
RAMP HAB	547	976+85.86	15.0	LT	641.41	INLETS 2x2.5-FT	V	6.05	6	---	P548	547	549	635.36	635.28	1.00	8	10	III	12	1	---	7
RAMP HAB	549	976+95.86	15.0	LT	641.36	INLETS 2x2.5-FT	V	10.70	6	---	P550	549	E553	630.66	625.66	25.00	20	23	V	15	4	---	10
RAMP HAB	E551	975+50.51	39.8	LT	636.57	---	J	---	---	RECONSTRUCT STRUCTURE AND INSTALL NEW COVER	---	---	---	--	---	---	---	---	---	---	---	---	---
RAMP HAB	E553	976+97.71	37.0	LT	629.84	---	C	---	---	RECONSTRUCT STRUCTURE AND INSTALL NEW COVER	---	---	---	--	---	---	---	---	---	---	---	---	---
RAMP HAB	E555	981+73.26	46.3	LT	637.39	---	H-S	---	---	ADJUST STRUCTURE AND INSTALL NEW COVER	---	---	---	--	---	---	---	---	---	---	---	---	---
HAMPTON AVE	597	12+33.42	23.9	LT	637.90	INLETS 4-FT DIAMETER	H	7.83	9	---	P598	597	E595	630.07	630.00	1.50	5	9	III	15	1	---	10
HAMPTON AVE	603	16+03.31	12.0	LT	636.07	INLETS 4-FT DIAMETER	H	5.58	8	---	PE604	603	E607	630.49	---	---	---	---	---	12	---	EXIST PIPE INTERPOL ELEV	8
HAMPTON AVE	601	16+03.35	23.2	LT	636.13	INLETS 4-FT DIAMETER	H	4.83	8	---	P602	601	603	631.30	631.21	1.00	9	13	IV	12	1	---	9
HAMPTON AVE	605	17+00.95	21.2	LT	634.50	INLETS 4-FT DIAMETER	H	6.29	10	---	PE606	605	E607	628.21	---	---	---	---	---	18	---	EXIST PIPE INTERPOL ELEV	10
HAMPTON AVE	599	16+03.30	62.6	LT	636.02	INLETS 4-FT DIAMETER	H	3.89	8	---	P600	599	601	632.13	631.79	1.08	32	36	III	12	4	---	12

STORM SEWER STRUCTURE SUMMARY						
611.3225 INLETS 2x2.5-FT EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.0530* MANHOLE COVERS TYPE J EACH	611.0612 INLET COVERS TYPE C EACH	611.0624* INLET COVERS TYPE H EACH	611.0639 INLET COVERS TYPE H-S EACH	611.0654 INLET COVERS TYPE V EACH
3	5	1	1	5	1	3

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

STORM SEWER PIPE SUMMARY				
608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH LF	608.0412 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH LF	608.0418 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 18-INCH LF	608.0515 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 15-INCH LF
46	9	13	38	23

[1]DEPTH = RIM OR FLOW ELEV - LOWEST PIPE INVERT ELEVATION

[A] SLOPE CALCULATED BASED ON PIPE LENGTH. PIPE LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM INSIDE FACE OF STRUCTURE TO INSIDE FACE OF STRUCTURE

[B]PIPE LENGTH SHOWN FOR SLOPE CALCULATION ONLY. NOT INTENDED FOR PAY QUANTITY.

[C]PLAN LENGTH SHOWN FOR PAY QUANTITY.

LANDSCAPE PLANTINGS

BID ITEMS	SYMBOL	COMMON NAME	SCIENTIFIC NAME	QUANTITY (EACH)	TYPE	AVG. MATURE HEIGHT	SIZE WHEN PLANTED	ROOT ZONE MODE	MINIMUM BALL OR POT SIZE		MINIMUM HOLE SIZE		BRACE OR GUY	FERT. UNITS REQ'D	RODENT PROT'CT REQ'D	MULCH RING DIAM.
									DIAM.	DEPTH	DIAM.	DEPTH				
	Deciduous Trees:															
632.0101.0001	ABS	Autumn Brilliance Serviceberry	Amelanchier x grandiflora 'Autumn Brilliance'	9	3T	20'	2" CAL	B&B	24"	14"	48"	14"	GUY	3	YES	60"
632.0101.0002	CHB	Common Hackberry	Celtis occidentalis	6	2T	50'	2.5" CAL	B&B	28"	17"	52"	17"	GUY	4	YES	64"
632.0101.0003	NC	Northern Catalpa	Catalpa speciosa	7	1T	50'	2.5" CAL	B&B	28"	17"	52"	17"	GUY	4	YES	64"
632.0101.0004	PB	Paper Birch	Betula papyrifera	6	1T	30'	2.5" CAL	B&B	28"	17"	52"	17"	GUY	4	YES	64"
632.0101.0005	PFC	Prairifire Crabapple	Malus x 'Prairifire'	12	3T	20'	2" CAL	B&B	24"	14"	48"	14"	GUY	3	YES	60"
632.0101.0006	RHS	Robin Hill Serviceberry	Amelanchier x grandiflora 'Robin Hill'	11	3T	20'	2" CAL	B&B	24"	14"	48"	14"	GUY	3	YES	60"
632.0101.0007	RJC	Red Jewel Crabapple	Malus 'Jewelcole'	8	3T	20'	2" CAL	B&B	24"	14"	48"	14"	GUY	3	YES	60"
632.0101.0008	RRC	Royal Raindrops Crabapple	Malus x 'Royal Raindrops'	13	3T	20'	2" CAL	B&B	24"	14"	48"	14"	GUY	3	YES	60"
632.0101.0009	SWO	Swamp White Oak	Quercus bicolor	7	1T	50'	2.5" CAL	B&B	28"	17"	52"	17"	GUY	4	YES	64"
	Deciduous Shrubs:															
632.0201.0001	AWV	Arrowwood Viburnum	Viburnum dentatum	73	3S	6'	24"	CONT.	14"	8"	34"	8"	N/A	1	NO	46"
632.0201.0002	RTD	Redtwig Dogwood	Cornus sericea	76	3S	8'	24"	CONT.	14"	8"	34"	8"	N/A	1	NO	46"
	Perennials:															
632.0301.0001	SEED MIX 70	Mix 70 Native Seed Mix	WisDOT Spec 630 Seeding	2 lbs	3'	2.5'	N/A	SEED	N/A	N/A	N/A	N/A	N/A	N/A	NO	N/A
	NOTE: Installation contractor is responsible for verifying plant count from plan. Plan quantities take precedence over list.															

LANDSCAPE PLANTING

LOCATION	632.9101 SURVEILLANCE AND CARE CYCLES EACH	630.0170* SEEDING MIXTURE NO. 70 LB
I43	10	--
UNDISTRIBUTED	--	2
PROJECT 1228-22-74 TOTAL	10	2

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN THE PLAN

3

FTMS PULL BOXES

CATEGORY	ROADWAY	ITEM ID	LOCATION STATION	LOCATION OFFSET	653.0140* PULL BOXES STEEL 24 X 42 - INCH EACH
1300	IH 43				
		PB975-1	975HAB+17	28' LT	1
		PB975-2	975HAB+17	28' RT	1
		PB976	975HAB+95	32' RT	1
		PB977	976HAB+62	28' RT	1
		PB981-1	981HAB+35	28' RT	1
		PB981-2	981HAB+41	30' LT	1
		TOTALS			6

FTMS CONDUIT AND WIRE

CATEGORY	ROADWAY	ITEM ID	LINEAR DISTANCE	652.0225* CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	655.0230* CABLE TRAFFIC SIGNAL 5-14 AWG LF	655.0240* CABLE TRAFFIC SIGNAL 7-14 AWG LF	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF	655.0700 LOOP DETECTOR LEAD IN CABLE LF
1300	IH 43							
		EXCB-RM-40-0015 - EXPB975	35	--	45	35	45	210
		EXPB975 - PB975-1	40	80	50	40	50	240
		PB971-1 - PB975-2	55	110	65	55	65	330
		PB975-2 - PB976	80	160	90	80	90	480
		SB975 - PB976	10	20	20	10	20	60
		PB976 - PB977	70	140	80	--	80	420
		PB977 - BRIDGE	50	100	60	--	60	100
		BRIDGE - PB981-1	20	40	30	--	30	60
		PB981-1 - PB981-2	60	120	70	--	70	140
		PB982-2 - FY981	15	30	25	--	25	--
		TOTALS		800	535	220	535	2,040

FTMS RAMP METER AND SYSTEM DETECTORS

CATEGORY	ROADWAY	ITEM ID	LOCATION	OFFSET	LOOP NUMBER	LENGTH	WIDTH	IN / OUT	NUMBER OF TURNS	652.0800 CONDUIT LOOP DETECTOR LF	655.0800 LOOP DETECTOR WIRE LF
1300	IH 43										
	RAMP HAB	RM-40-0015	976HAB+51.9	2 'LT	PASSAGE A	6	6	30	3	85	140
			976HAB+52.1	9 'RT	PASSAGE B	6	6	25	4	75	155
			976HAB+86.9	3 'LT	DEMAND A	20	6	25	3	105	220
			976HAB+87.1	9 'RT	DEMAND B	20	6	20	4	95	265
			981HAB+60.7	17 'LT	ENTRANCE A	6	6	15	5	85	160
			981HAB+66.9	10 'RT	ENTRANCE B	6	10	30	6	20	265
		TOTALS								465	1,205

* ADDITIONAL QUANTITY SHOWN ELSEWHERE ON PLAN

3

FTMS UNDERGROUND EACH ITEMS

CATEGORY	ROADWAY	ITEM ID	LOCATION STATION	LOCATION OFFSET	652.0700.S* INSTALL CONDUIT INTO EXISTING ITEM EACH	654.0101* CONCRETE BASES TYPE 1 EACH	SPV.0060.2021 SIGNAL ASSEMBLY RAMP CONTROL OVERHEAD EACH	SPV.0060.2022 SIGNAL ASSEMBLY ADVANCE FLASHER TYPE 1 EACH
1300	IH 43							
		EXPB975	975HAB+15	64' LT	1	--	--	--
		SB975	SEE STRUCTURE PLAN		--	--	2	--
		FY981	981HAB+52	28 'LT	--	1	--	1
		TOTALS			1	1	2	1

MISCELLANEOUS ITEMS

CATEGORY	ROADWAY	670.0101.2001 FIELD SYSTEM INTEGRATOR EACH	670.0201.2001 ITS DOCUMENTATION EACH	678.0501.2001 COMMUNICATION SYSTEM TESTING EACH
1300	IH 43			
	PROJECT	1	1	1
	TOTALS	1	1	1

3

* ADDITIONAL QUANTITY SHOWN ELSEWHERE ON PLAN

3

LIGHTING AND MISCELLANEOUS - FINAL

CATEGORY	STAGE	DESCRIPTION	LOCATION		653.0140* PULL BOXES STEEL 24x42-INCH EACH	654.0105 CONCRETE BASES TYPE 5 EACH	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF	655.0615 ELECTRICAL WIRE LIGHTING 10 AWG LF	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0322 POLES TYPE 5-ALUMINUM EACH	657.0605 LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 4-FT EACH	659.1120 LUMINAIRE UTILITY LED B EACH	REMARKS
1100		HGL2	974HAB+60.2	19.80'LT	--	1	195	--	1	1	1	1	
		JGL2	977HAB+72.4	SM	--	--	195	--	--	1	1	1	
		HGL3	979HAB+46.0	SM	--	--	195	--	--	1	1	1	
		JGL3	981HAB+19.5	26.50'LT	--	1	195	--	1	1	1	1	
		JGL6	975HAB+69.8	26.00'RT	--	1	195	--	1	1	1	1	
		LPB-GL-11	975HAB+28.3	22.40'LT	1	--	--	50	--	--	--	--	
		LPB-GL-12	981HAB+37.5	35.40'LT	1	--	--	50	--	--	--	--	
		LPB-GL-14	14HA+33.4	38.90'RT	1	--	--	50	--	--	--	--	
		LPB-GL-15	14HA+33.3	7.43'LT	1	--	--	50	--	--	--	--	
		HGL4/JGL4	14HA+81.0	17.00'LT	--	--	100	--	--	--	--	--	UDL INSTALLED IN PROJECT 1228-22-71
		HGL5/JGL5	15HA+51.6	17.20'LT	--	--	100	--	--	--	--	--	UDL INSTALLED IN PROJECT 1228-22-71
			TOTALS		4	3	1,175	200	3	5	5	5	

* ADDITIONAL QUANTITIES FOUND ELSEWHERE

3

LIGHTING - WIRE AND CONDUIT - FINAL

CATEGORY	STAGE	FROM	TO	652.0225* CONDUIT RIGID NONMETALLIC SCHEDULE 40 2 -INCH LF	652.0235* CONDUIT RIGID NONMETALLIC SCHEDULE 40 3 -INCH LF	652.0615 CONDUIT SPECIAL 3 -INCH LF	655.0620 ELECTRICAL WIRE LIGHTING 8 AWG LF	REMARKS
1100		JGL1	HGL2	174	--	--	726	
		HGL2	LPB-GL-11	73	--	--	318	
		LPB-GL-11	JGL6	--	69	--	605	
		LPB-GL-11	JGL2	20	--	--	108	
		LPB-GL-11	JGL2	SM	--	--	224	
		JGL2	HGL3	SM	--	--	742	
		HGL3	LPB-GL-12	20	--	--	108	
		HGL3	LPB-GL-12	SM	--	--	497	
		LPB-GL-12	JGL3	25	--	--	257	
		LPB-GL-12	LPB-GL-14	--	177	--	738	
		LPB-GL-14	LPB-GL-15	--	BORED	51	233	
		LPB-GL-15	HGL4/JGL4/HGL5/JGL5	125	--	--	528	
			TOTALS	437	246	51	5,084	

* ADDITIONAL QUANTITIES FOUND ELSEWHERE

TYPE II PERMANENT SIGNING 1228-22-74

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING (SF)	638.2102 MOVING SIGNS TYPE II [EA]	638.2602 REMOVING SIGNS TYPE II (EA)	638.3000 REM SMALL SIGN SUP [EA]	634.0618 POSTS WOOD 4" X 6" X 18' [EA]	634.0809 POSTS TUBULAR STEEL 2 X 2 X 9.5 FT (EA)	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
1	R3-58(2S)		24	X	30	5.000							1		MOUNT ON TOP OF BARRIER WALL . SEE DETAIL-BRACKET INCIDENTAL
2	R10-6(2S)		24	X	36	6.000				1			1		OLD SIGN IS ON SIGNAL POLE. MOUNT NEW SIGN ON TOP OF BARRIER WALL . SEE DETAIL-BRACKET INCIDENTAL
3	R10-65R (2S)		24	X	30	5.000				1					OLD SIGN IS ON SIGNAL POLE. NEW SIGN WILL BE ON S-40-3103 OVERHEAD
4	R3-58(2S)		24	X	30	5.000				1	1	1			
5	D10-2	MILE 77							1					4	
6	R10-6 MODIFIED (2S)		24	X	36	6.000				1		1			OLD SIGN IS ON SIGNAL POLE. MOUNT NEW SIGN ON WOOD POST
7	R10-65L(2S)		24	X	30	5.000				1					OLD SIGN IS ON SIGNAL POLE. NEW SIGN WILL BE ON S-40-3103 OVERHEAD
8	W3-8(2S)		48	X	48		16.000			1					MOUNT ON SIGNAL POLE
9	R11-54F(2S)		48	X	30			10.000		1	2	2			
10	R1-1F(2M)		36	X	36			7.460		1	1	1			
11	R4-7(2M)		24	X	30	5.000				1				10	
12	J3-1(2S)		24	X	57	9.500				1	1	1			
	MB3-3		24	X	12										
	M1-1	IH 43	24	X	24										
	MB6-1		21	X	21										
13	R1-1F(2M)		36	X	36			7.460		1	1	1			
14	R1-2(2S)		36	X	31	3.880				1	1	1			
15	R1-2(2S)		36	X	31	3.880				1	1	1			
16	R1-1F(2M)		36	X	36			7.460		1					MOUNT ON SIGNAL POLE
17	W9-2L									1	1				
18	R4-7(2M)		24	X	30	5.000									MOUNT ON SIGNAL POLE
19	R5-2(2S)		24	X	24	4.000				1	1	1			
20	R5-2A(2S)	3 TONS	24	X	12	2.000								19	
21	R3-20L(2M)		24	X	36	6.000				1	1	1			
TOTALS						71.260	16.000	32.380	1	17	11	11	2		

SHEET: 1 OF 1

IH-43 SB RAMP & W HAMPTON AVE
MILWAUKEE COUNTY
CATEGORY 1500
S40-1432

3

3

REMOVING CONCRETE BASES

SIGNAL BASE NO.	204.0195 REMOVING CONCRETE BASES EACH
SB2	1
TOTAL	1

REMOVING PULL BOXES

PULL BOX NO.	653.0905 REMOVING PULL BOXES EACH
PB1	1
PB4	1
TOTAL	2

LAMP, BALLAST, LED, SWITCH DISPOSAL

FIXTURE TYPE	659.5000.S LAMP, BALLAST, LED, SWITCH DISPOSAL BY CONTRACTOR EACH
TRAFFIC SIGNAL, ONE SECTION	2
TRAFFIC SIGNAL, FOUR SECTION	1
TOTAL	3

LAMP, BALLAST, LED, SWITCH DISPOSAL (FOR INFORMATION ONLY)

SIGNAL BASE NO.	TRAFFIC SIGNAL, ONE SECTION EACH	TRAFFIC SIGNAL, FOUR SECTION EACH
SB3	2	1
TOTAL	2	1

CONDUIT

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH L.F.
PB1	PB2	--	128
PB2	PB4	--	36
PB4	SB2	10	--
	TOTAL	10	164

PULL BOXES

PULL BOX NO.	LOCATION^	653.0140 PULL BOXES STEEL 24x42-INCH EACH	653.0900 ADJUSTING PULL BOXES EACH
PB1	981+64.5, 27.9'RT	1	--
PB2		--	1
PB4	981+75.4, 9.7'LT	1	--
	TOTAL	2	1

^ FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

CONCRETE BASES

SIGNAL BASE NO.	LOCATION^	654.0101 CONCRETE BASES TYPE 1 EACH
SB2	981+84.1, 12.5'LT	1
	TOTAL	1

^ FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

IH-43 SB RAMP & W HAMPTON AVE
MILWAUKEE COUNTY
CATEGORY 1500
S40-1432

3

SALVAGE AND REUSE SIGNAL EQUIPMENT

LOCATION	SPV.0060.3001 RELOCATE EXISTING SIGNAL POLE AND HEADS EACH
SB2	1
TOTAL	1

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0320 CABLE TYPE UF 2-10 AWG GROUNDED L.F.
SB4	SB3	171
	TOTAL	171

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG L.F.	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG L.F.
SB2	HEAD 1	19	--
SB2	HEAD 6	--	22
SB3	HEAD 4	39	
SB3	HEAD 5	25	
SB3	HEAD 7		30
	TOTAL	83	52

REMOVE AND REPLACE TRAFFIC SIGNAL CABLE AND WIRE

REMOVE FROM	REMOVE TO	INSTALL FROM	INSTALL TO	674.0300 REMOVE CABLE L.F.	674.0400 REINSTALL CABLE L.F.	NOTES
SB2 (EXIST)	CB1	CB1	SB2 (NEW)	178	179	REMOVE AND REINSTALL EQUIPMENT GROUNDING CONDUCTOR. USE EXISTING SLACK FOR ADDITIONAL LENGTH.
SB2 (EXIST)	PB2	PB2	SB2 (NEW)	63	66	REMOVE AND REINSTALL EQUIPMENT GROUNDING CONDUCTOR (SB2 TO SB3)
PB1 (EXIST)	CB1	CB1	PB1 (NEW)	50	33	REMOVE AND REINSTALL EXISTING PULL BOX BONDING JUMPER.
SB2 (EXIST)	PB2	PB2	SB2 (NEW)	63	66	REMOVE AND REINSTALL EXISTING PULL BOX BONDING JUMPER. USE EXISTING SLACK FOR ADDITIONAL LENGTH.
PB4 (EXIST)	SB2 (EXIST)	PB4 (NEW)	SB2 (NEW)	28	30	REMOVE AND REINSTALL EXISTING PULL BOX BONDING JUMPER. USE EXISTING SLACK FOR ADDITIONAL LENGTH.
CB1	PB2	PB2	CB1	99	97	REMOVE AND REINSTALL LIGHTING UF 2-10 AWG FOR SB1
SB3	SB1	--	--	143	--	REMOVE AND DISPOSE EXISTING LIGHTING UF 2-10 AWG FOR SB3
CB1	PB2	PB2	SB1	99	97	REMOVE AND REINSTALL EMERGENCY VEHICLE PREEMPTION CABLE
CB1	PB2	PB2	CB1	99	97	REMOVE AND REINSTALL VIDEO DETECTION CABLE
SB2 (EXIST)	CB1	CB1	SB2 (NEW)	178	179	REMOVE AND REINSTALL CABLE TRAFFIC SIGNAL 12-14 AWG FOR SB2. USE EXISTING SLACK FOR ADDITIONAL LENGTH.
CB1	PB2	PB2	CB1	99	97	REMOVE AND REINSTALL CABLE TRAFFIC SIGNAL 12-14 AWG FOR SB3.
			TOTAL	709	566	

FACES

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0171 TRAFFIC SIGNAL FACE 1S 12-INCH EACH	658.0174 TRAFFIC SIGNAL FACE 4S 12-INCH EACH
4	SB3	1	
5	SB3	1	--
7	SB3	--	1
	TOTAL	2	1

SIGNAL MOUNTING HARDWARE

LOCATION	658.5070.01 SIGNAL MOUNTING HARDWARE EACH
IH-43 SB RAMP & W HAMPTON AVE	1
TOTAL	1

PROJECT NO: 1228-22-74	HWY: IH-43	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET: 112	E

FILE NAME : N:\PDS\C3D\CAD\12282201\74\SIG\S40-1432\S40-1432_mq.pptx PLOT DATE : 11/2/2022 PLOT BY : DOTCMV PLOT NAME : S40-1432_mq.pdf PLOT SCALE : 1:1

N IRONWOOD LANE

W ROCK PLACE

MILWAUKEE RIVER

W HAMPTON AVENUE

OAK LEAF TRAIL

STRUCTURE B-40-1020
CONSTRUCTED BY OTHERS
UNDER 1228-22-71

RETAINING WALL R-40-712
CONSTRUCTED BY OTHERS
UNDER 1228-22-71

SIGN STRUCTURE S-40-3020
CONSTRUCTED BY OTHERS
UNDER 1228-22-71

PROPOSED
NOISE WALL
N-40-104

NOISE WALL N-40-94
CONSTRUCTED BY OTHERS
UNDER 1228-22-71

R/L HAB

BEGIN PROJECT
STA 974+30.91 HAB

SLOPE INTERCEPT

STATION 979+00 HAB
REMOVE STRUCTURE B-40-67
6-SPAN PREST CONC DECK GIRDER
374' OVERALL LENGTH
29' OVERALL WIDTH

STATION 979+00 HAB
STRUCTURE B-40-893 REQUIRED
3-SPAN 72W PRESTRESSED GIRDER
36' CLEAR ROADWAY
SKEW 0^0 RHF

R/L HA

RAMP HAB

STRUCTURE B-40-1018
CONSTRUCTED BY OTHERS
UNDER 1228-22-71

END PROJECT
STA 981+90.18 HAB

STATION 975+87 HAB
SIGN STRUCTURE S-40-3103 REQUIRED
MONOTUBE & 2-CHORD TRUSS

STATION 976+50 HAB
RETAINING WALL R-40-728 REQUIRED
MSE WALL

IH 43 SB

IH 43 NB

STRUCTURE B-40-1019
CONSTRUCTED BY OTHERS
UNDER 1228-22-71

SIGN STRUCTURE S-40-3023
CONSTRUCTED BY OTHERS
UNDER 1228-22-71

R/L IH 43

WETLAND
BOUNDARY

STRUCTURE B-40-1021
CONSTRUCTED BY OTHERS
UNDER 1228-22-71

R/L HAA

RAMP HAA

RETAINING WALL R-40-712
CONSTRUCTED BY OTHERS
UNDER 1228-22-71

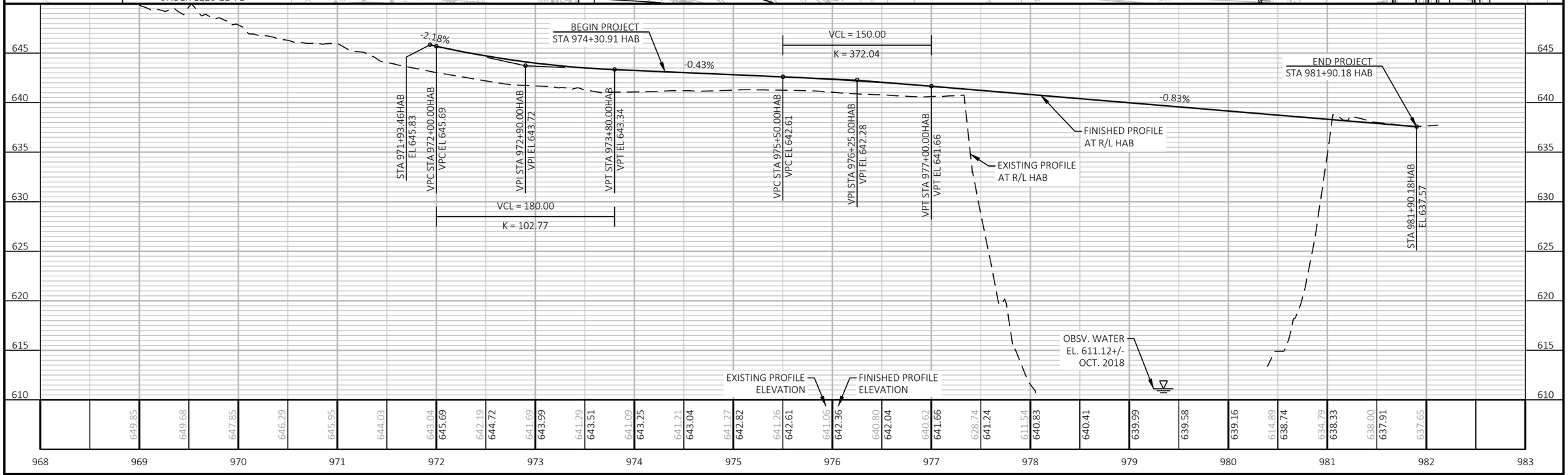
RETAINING WALL R-40-709
CONSTRUCTED BY OTHERS
UNDER 1228-22-71

STRUCTURE B-40-1016
CONSTRUCTED BY OTHERS
UNDER 1228-22-71

RIPRAP

5

5



PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	PLAN AND PROFILE: RAMP HAB	SHEET 113	E

FILE NAME : N:\PDS\C3D\12282274\SHEETSPLAN\050301-PP_HAB.DWG
LAYOUT NAME - 01

PLOT DATE : 11/7/2022 11:27 AM PLOT BY : FERGUSON, JULIE PLOT NAME : PLOT SCALE : 1 IN:100 FT

N

IH 43 SB

IH 43 NB

R/W

986

984

982

980

978

110PW

108PW

106PW

104PW

102PW

GOLF GREEN

GUY POLE

MH

GUY

SLOPE INTERCEPT

END CONSTRUCTION
STA 17+04.09 HA

N IROQUOIS AVENUE

OAK LEAF TRAIL

W HAMPTON AVENUE

12HA

14HA

16HA

18HA

20HA

82HA

BEGIN CONSTRUCTION
STA 11+40.52 HA

R/L HA

R/L IH 43

WETLAND
BOUNDARY

80HAB

PROPOSED
STRUCTURE
B-40-893

R/L HAB

RAMP HAB

78HAB

REMOVING
STRUCTURE
B-40-67

STRUCTURE B-40-1018
CONSTRUCTED BY OTHERS
UNDER 1228-22-71

STRUCTURE B-40-1016
CONSTRUCTED BY OTHERS
UNDER 1228-22-71

R/L PW

N PORT WASHINGTON ROAD

MILWAUKEE RIVER

EXISTING STRUCTURE
B-40-10
NO WORK

RIPRAP

SAN

PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	PLAN: W. HAMPTON AVENUE	SHEET 114	E

FILE NAME : N:\PDS\C3D\12282274\SHEETSPLAN\050602-PN_HA.DWG
LAYOUT NAME - 01

PLOT DATE : 10/7/2022 10:46 AM PLOT BY : FERGUSON, JULIE PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

Standard Detail Drawing List

08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-03	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT, 10-FT DIAMETER
08C06-02	INLETS 3-FT AND 4-FT DIAMETER
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-22A	CONCRETE CURB & GUTTER
08D01-22B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D05-20A	CURB RAMPS TYPES 1 AND 1-A
08D05-20B	CURB RAMPS TYPES 2 AND 3
08D05-20C	CURB RAMPS TYPES 4A AND 4A1
08D05-20D	CURB RAMPS TYPE 4B AND 4B1
08D05-20E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-20F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-20G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E12-01	SILT SCREEN
08E14-01	TRACKING PAD
09B02-10	CONDUIT
09B04-12	PULL BOX
09C02-09	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09E01-15D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E01-15G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E02-05	FREEWAY LIGHTING UNIT POLE WIRING
09E07-06	TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS
09F04-05	LOOP DETECTOR INSTALLED IN NEW CONCRETE PAVEMENT ROUND CSCP PULLBOX
09F09-05	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW CONCRETE PAVEMENT)
09F14-03	LOOP DETECTOR INSTALLED IN NEW CONCRETE PAVEMENT ROUND CSCP PULL BOX 45 DEGREE ELBOWS TO PULL BOX
09F15-04A	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)
09F15-04B	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
09F16-02	LOOP DETECTOR INSTALLED IN NEW CONCRETE PAVEMENT ROUND CSCP PULL BOX 45 DEGREE ELBOWS TO PULL BOX
09H06-02	SIGNAL ASSEMBLY ADVANCE FLASHER TYPE 1
09H07-01	SIGNAL ASSEMBLY RAMP CONTROL SIDEMOUNT
09H11-01	IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENTS
10A01-04	ELECTRICAL HANDHOLE WIRING
10A02-03	IDENTIFICATION PLAQUES LIGHT POLES
10A03-03	CIRCUIT IDENTIFICATION PLAQUES SIGN BRIDGES
10A04-03	IDENTIFICATION PLAQUES UNDERDECK AND HIGH MAST LIGHTING
10A05-03	ELECTRICAL DETAILS GROUND MOUNT LIGHT POLES ISOLATED NEUTRAL SYSTEMS
10A08-03	ELECTRICAL DETAILS STRUCTURE MOUNT LIGHT POLES ISOLATED NEUTRAL SYSTEMS
10A11-03	ELECTRICAL DETAILS MEDIAN MOUNT LIGHT POLES ISOLATED NEUTRAL SYSTEMS
10A15-04A	ELECTRICAL DETAILS UNDERDECK LIGHTING
10A15-04B	ELECTRICAL DETAILS UNDERDECK LIGHTING
11B02-02	CONCRETE MEDIAN NOSE
12A03-10	NAME PLATE (STRUCTURES)
12A04-03	STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES & OVERHEAD SIGN SUPPORTS & TRAFFIC SIGNALS
13A03-06	CONCRETE PAVEMENT SHOULDERS
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
13B02-09B	STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C14-07A	BASE PATCHING CONCRETE
13C14-07B	BASE PATCHING CONCRETE
13C14-07C	BASE PATCHING CONCRETE
13C17-01A	CONCRETE JOINT DETAIL FOR EXIT RAMP TERMINI
13C17-01B	CONCRETE JOINT DETAIL FOR ENTRANCE RAMP TERMINI
13C18-07A	CONCRETE PAVEMENT JOINTING
13C18-07B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-07C	CONCRETE PAVEMENT JOINT TYPES
13C18-07D	CONCRETE PAVEMENT JOINT TYPES AT UTILITY FIXTURES
13C18-07F	CONCRETE PAVEMENT INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER
13C18-07G	CONCRETE PAVEMENT JOINTING ACCELERATION/DECELERATION LANE
14A02-01	TREE PLANTING DETAIL
14B07-16A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

6

Standard Detail Drawing List

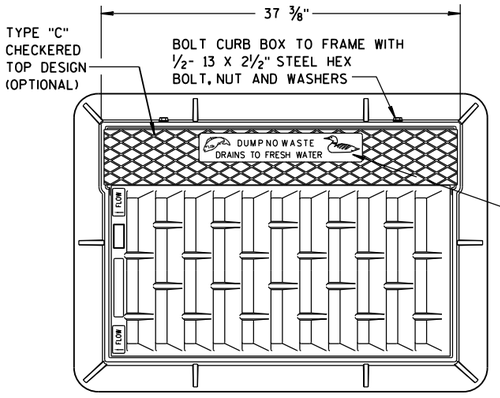
14B07-16B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16I	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16J	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16K	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16L	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16M	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16N	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B08-02A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B32-10A	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-10B	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-10C	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-10D	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-10E	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-10F	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-10G	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-10H	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B33-02G	CONCRETE BARRIER SINGLE SLOPE 42" THRIE BEAM ANCHOR
14B33-02H	CONCRETE BARRIER SINGLE SLOPE 42" THRIE BEAM ANCHOR
14B34-02A	32", 36" & 42" CONCRETE BARRIER SINGLE SLOPE CLASS B
14B34-02B	56" CONCRETE BARRIER SINGLE SLOPE CLASS B
14B34-02C	CONCRETE BARRIER SINGLE SLOPE CLASS B
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	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)
15B03-15A	FENCE CHAIN LINK
15B03-15B	FENCE CHAIN LINK
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-08C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C02-08D	ON RAMP LANE CLOSURE
15C02-08E	OFF RAMP LANE CLOSURE
15C02-08F	ADVANCED WIDTH RESTRICTION SIGNING
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-15B	PAVEMENT MARKING WORDS
15C07-15C	PAVEMENT MARKING ARROWS
15C08-21A	LONGITUDINAL MARKING (MAINLINE)
15C08-21B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C08-21C	PAVEMENT MARKING (TURN LANES)
15C08-21D	PAVEMENT MARKING (TURN LANES)
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C18-06A	MEDIAN ISLAND MARKING PAVEMENT MARKINGS
15C19-07C	MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-05A	PAVEMENT MARKING (INTERSECTIONS)
15C35-05B	PAVEMENT MARKING AND SIGNING (CLIMBING LANE & PASSING LANE)
15C35-05C	PAVEMENT MARKING AND SIGNING (CLIMBING LANE & PASSING LANE)
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D29-06	TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD
15D30-07A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-07B	TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION
15D30-07C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

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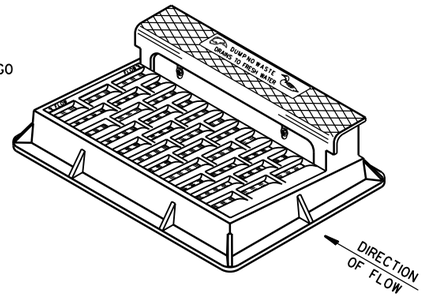
Standard Detail Drawing List

15D30-07D	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-07E	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-07F	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-07G	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-07H	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-07I	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-07J	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING

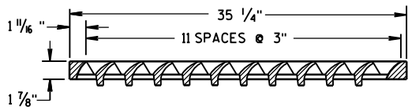
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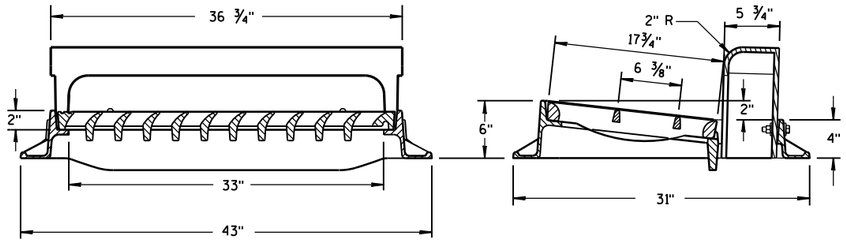


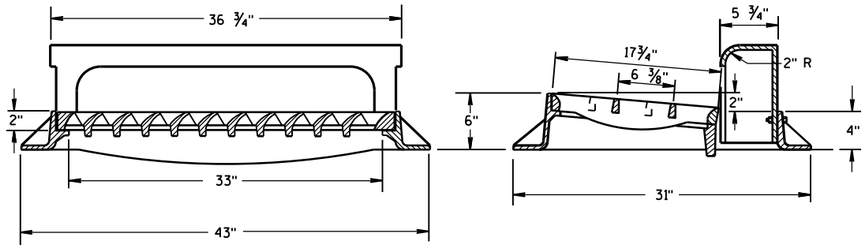
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

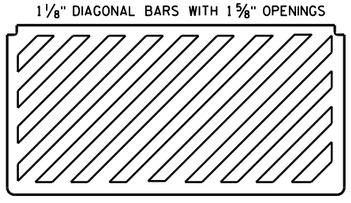






TYPE "H"

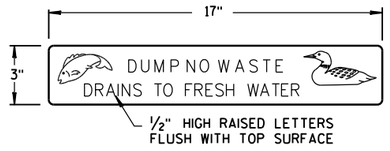
NOTE: EITHER CASTING IS ACCEPTABLE



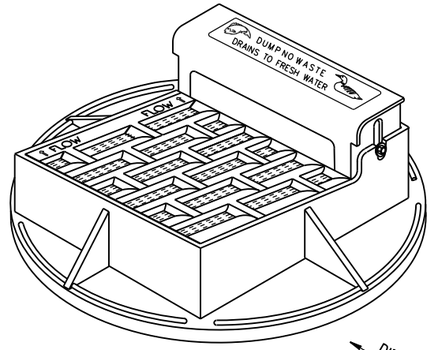
SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35 1/4" X 17 3/4" X 2")

(NOTED AS TYPE H-S ON DRAINAGE TABLE)



LOGO DETAIL



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

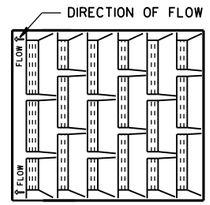
NOTE:
GRATE IS REVERSIBLE.

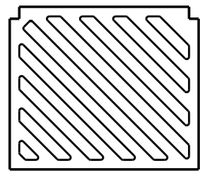
GENERAL NOTES

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

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

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

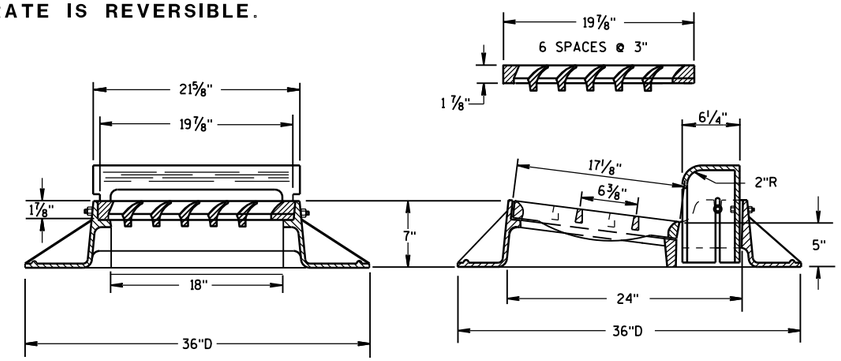




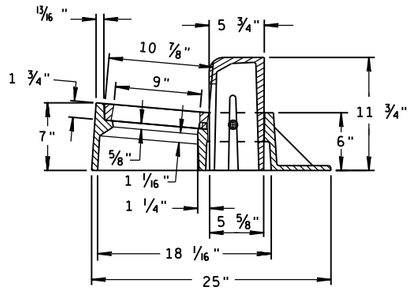
SPECIAL GRATE FOR TYPE "A" COVER

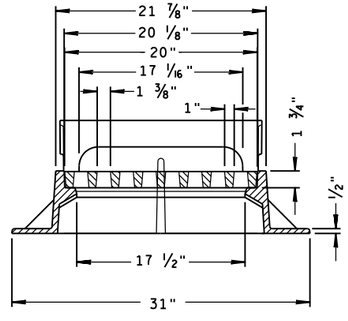
(MEASURES 19 3/4" X 17" X 1 7/8")

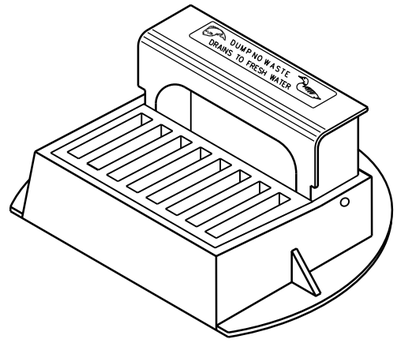
(NOTED AS TYPE A-S ON DRAINAGE TABLE)



TYPE "A"







TYPE "Z"

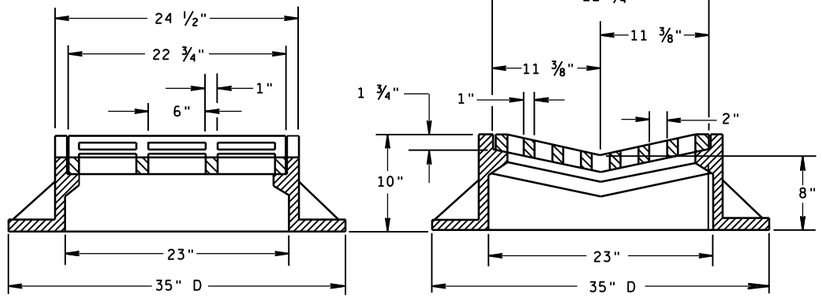
INLET COVERS
TYPE A, H, A-S, H-S & Z

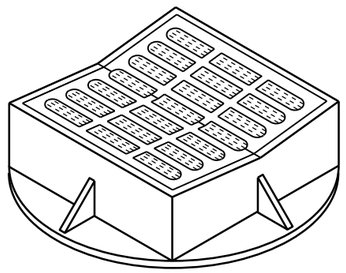
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11-27-13 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

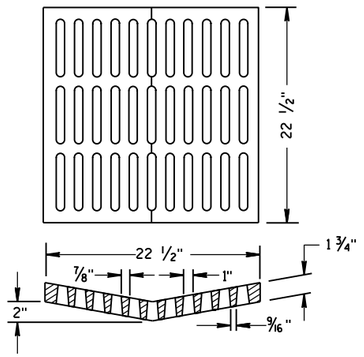
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S.D.D. 8 A 5-19a



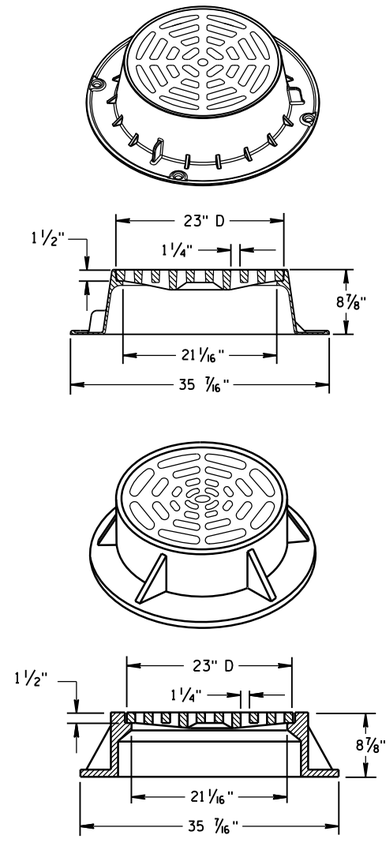


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.
NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

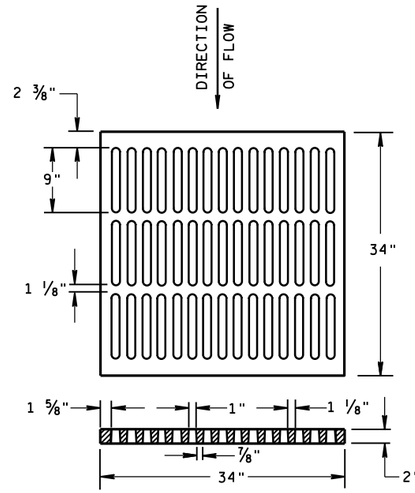
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

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

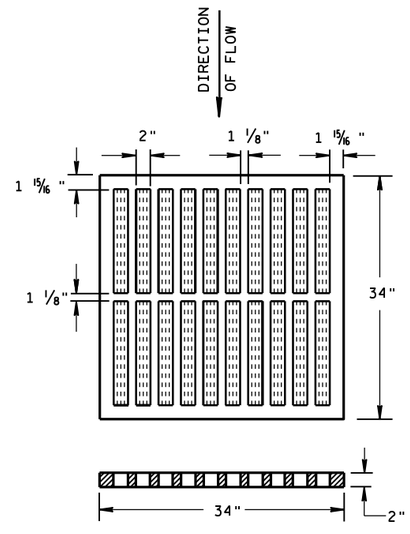
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



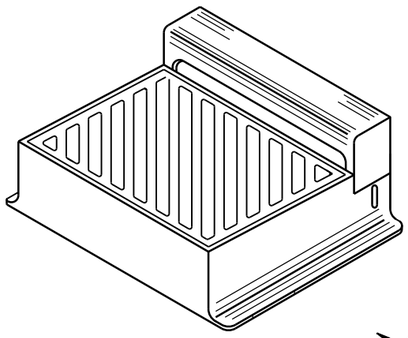
ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE

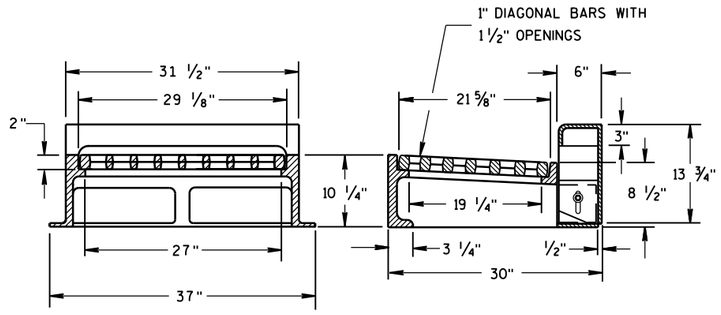


TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS
NOTED AS TYPE MS ON DRAINAGE TABLE



DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

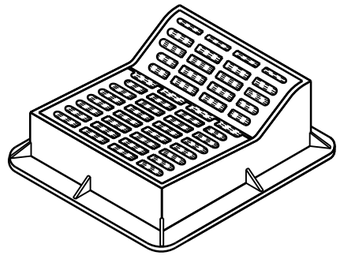
INLET COVERS
TYPE B, B-A, C,
MS, MS-A, & WM

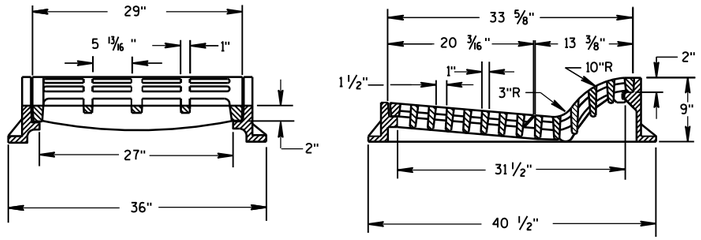
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

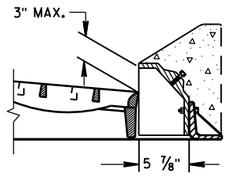
S.D.D. 8 A 5-19b





TYPE "F"

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



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

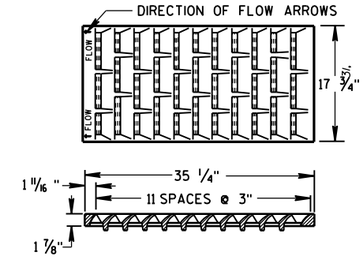
USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

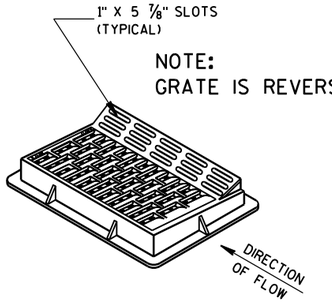
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

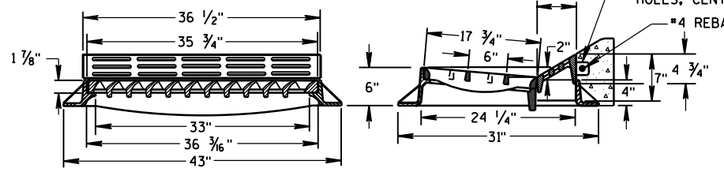
GENERAL NOTES

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

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



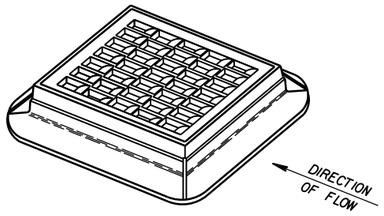


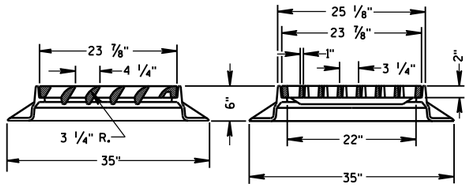


TYPE "HM"

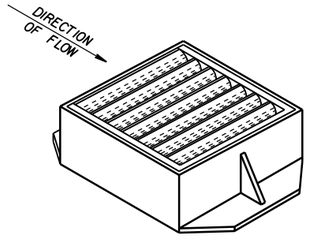
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

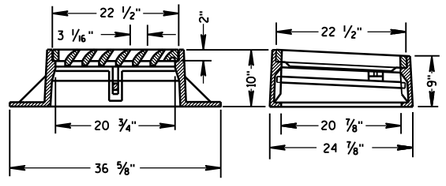
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



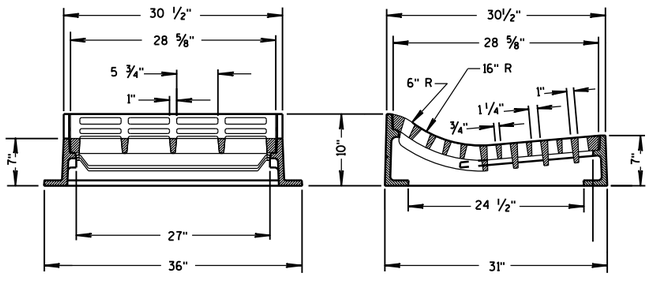


TYPE "S"



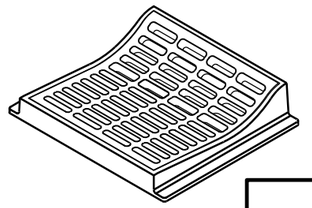


TYPE "V"



TYPE "T"

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



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

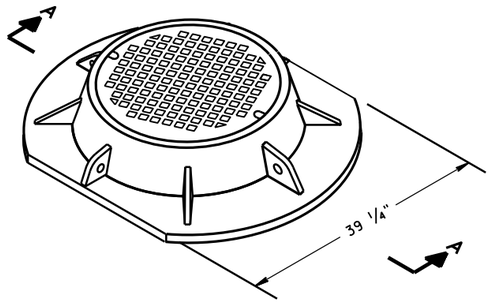
APPROVED
11/27/2013
DATE

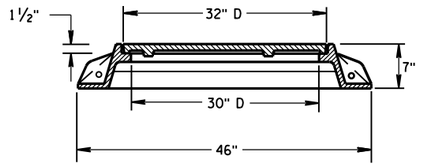
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA

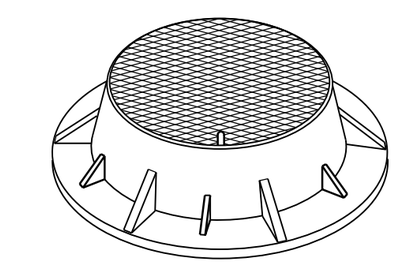
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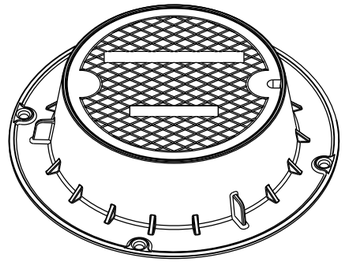
S.D.D. 8 A 5-19c

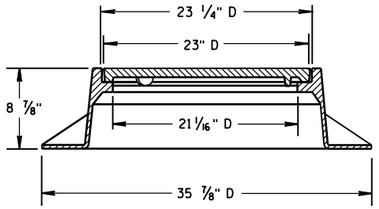


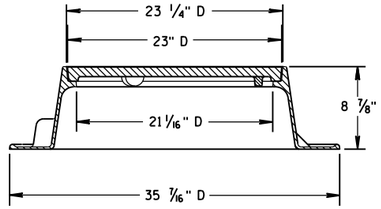


SECTION A-A
TYPE "K"









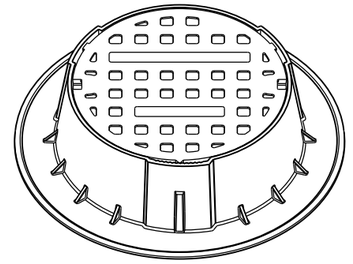
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

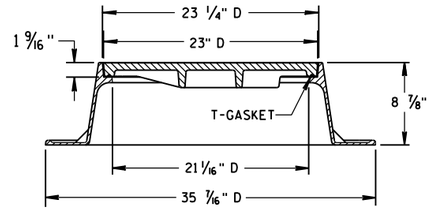
GENERAL NOTES

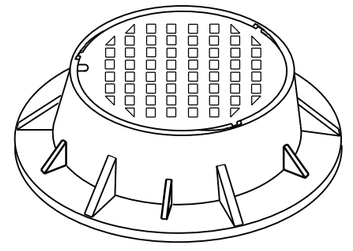
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

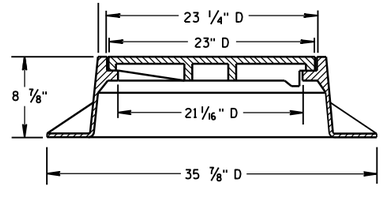
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

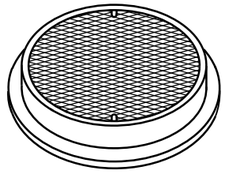


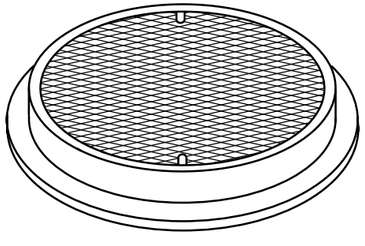


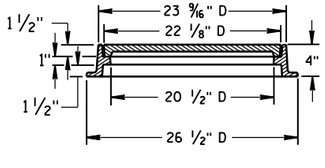




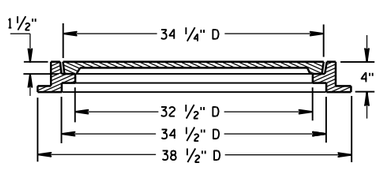
TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE



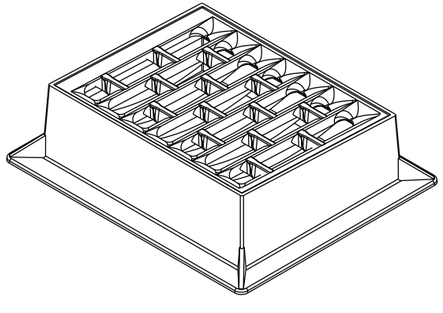


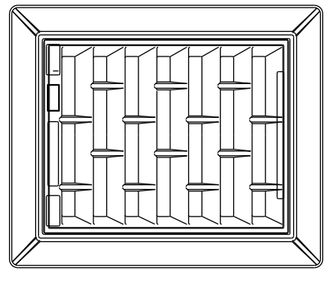


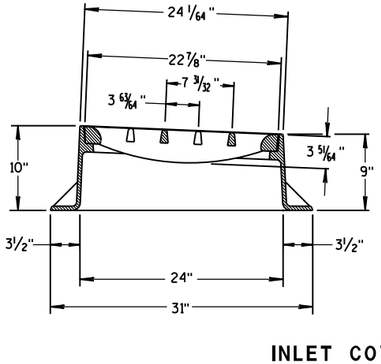
TYPE "L"

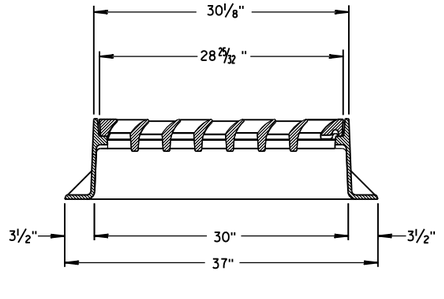


TYPE "M"









INLET COVER TYPE "BW"

INLET COVER TYPE BW
MANHOLE COVERS, TYPE K, J, J-S, L & M

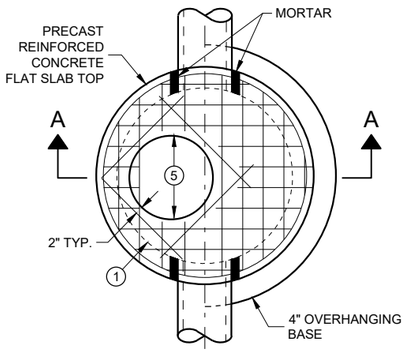
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
FHWA

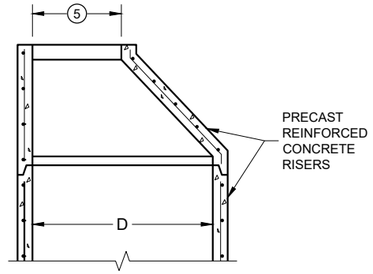
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

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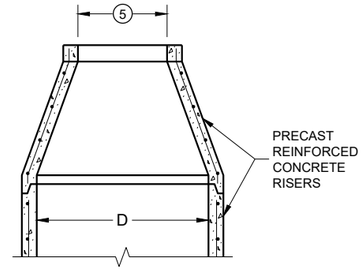
S.D.D. 8 A 5-19d



PLAN VIEW
CIRCULAR OPENING



OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP



OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

MANHOLE COVER OPENING MATRIX

OPENING SIZE (FT.) \ MANHOLE COVER TYPE	C	ALL J'S	K	L	M
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

MANHOLE SIZE (DIA.)	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES		MINIMUM WALL THICKNESS (IN)	MINIMUM PRECAST FLAT SLAB TOP AND BASE THICKNESS
	180° SEPARATION (IN)	90° SEPARATION (IN)		
3-FT	15	12	4	6
4-FT	24	18	4	6
5-FT	36	24	5	8
6-FT	42	36	6	8
7-FT	48	36/42*	7	8
8-FT	60	42	8	8
9-FT	66	54	9	10
10-FT	72	60	10	10

*A 36" PIPE AND A 42" PIPE CAN BE PLACED WITHIN 90 DEGREES. SEE MINIMUM HORIZONTAL PIPE SEPARATION DETAIL.

GENERAL NOTES

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

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

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

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

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

PRECAST REINFORCED CONCRETE CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES. CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½ INCH AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

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

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

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

CONCRETE BLOCK WILL NOT BE PERMITTED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "D".

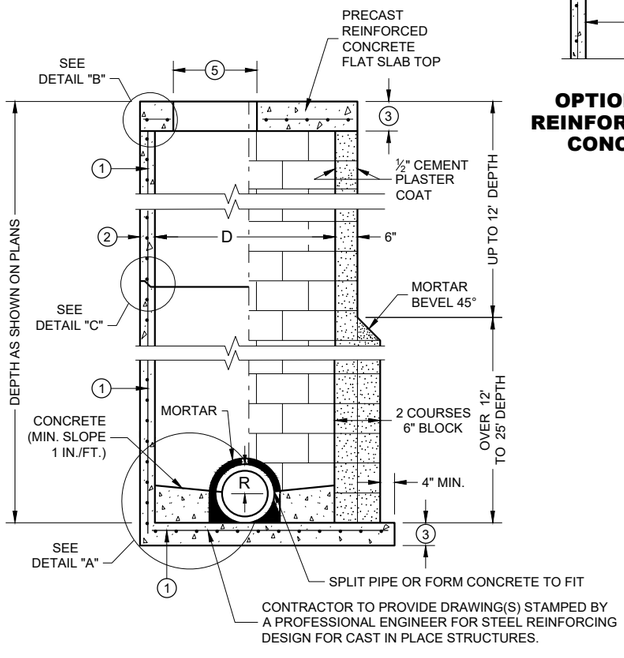
(1) FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

(2) SEE PIPE MATRIX TABLE FOR MINIMUM WALL THICKNESS FOR PRECAST MANHOLES

(3) SEE PIPE MATRIX TABLE FOR MINIMUM THICKNESS OF PRECAST FLAT SLAB TOPS AND BASES.

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

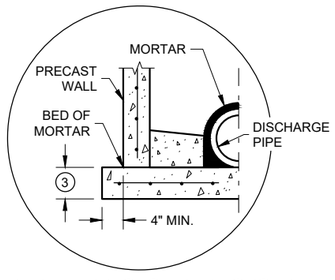
(5) SEE MANHOLE COVER OPENING MATRIX.



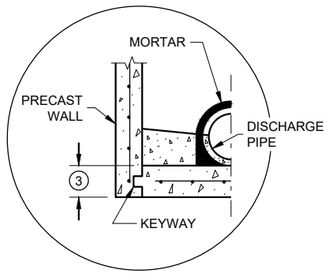
SECTION A - A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST IN PLACE OR PRECAST REINFORCED CONCRETE BASE (1)

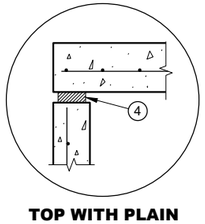


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

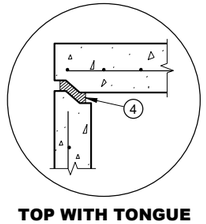


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

DETAIL "A"

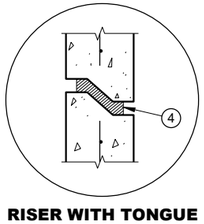


TOP WITH PLAIN END JOINT



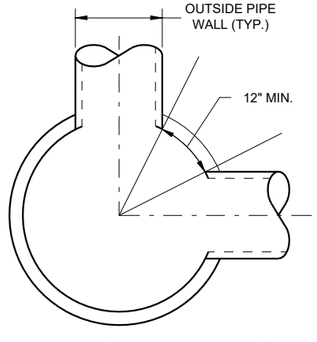
TOP WITH TONGUE AND GROOVE JOINT

DETAIL "B"



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "C"



MINIMUM HORIZONTAL PIPE SEPARATION

MANHOLES, 3-FT, 4-FT 5-FT, 6-FT, 7-FT, 8-FT, 9-FT AND 10-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

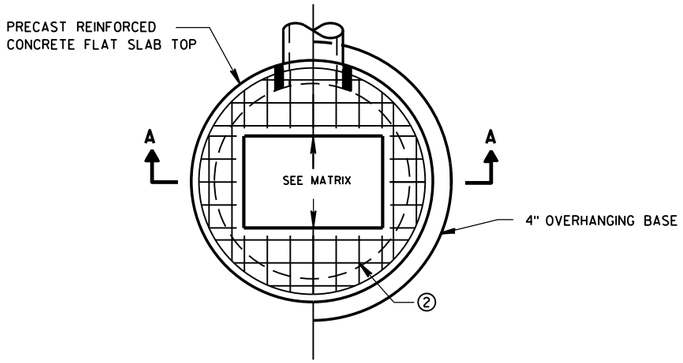
APPROVED
November 2021 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

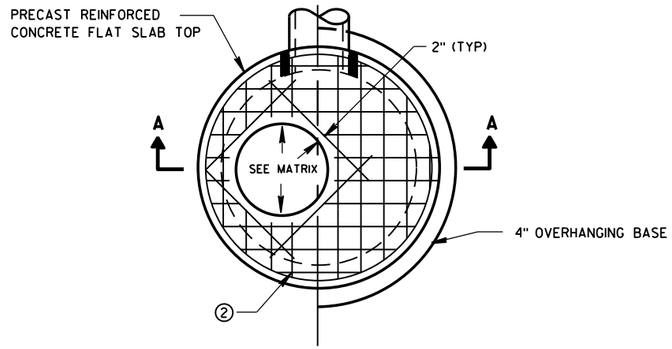
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT AND 10-FT DIAMETER

6

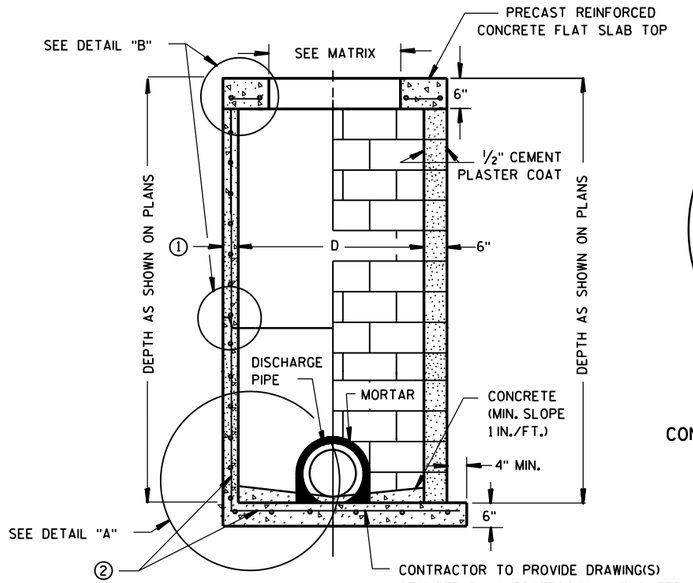
SDD 08B09 - 03



PLAN VIEW RECTANGULAR OPENING



PLAN VIEW CIRCULAR OPENING

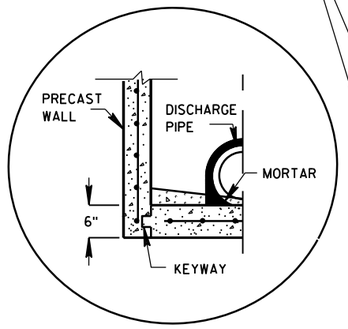


SECTION A-A

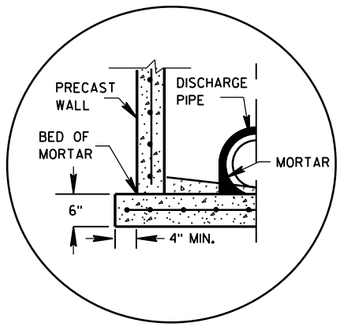
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

CIRCULAR INLETS W/ FLAT TOP

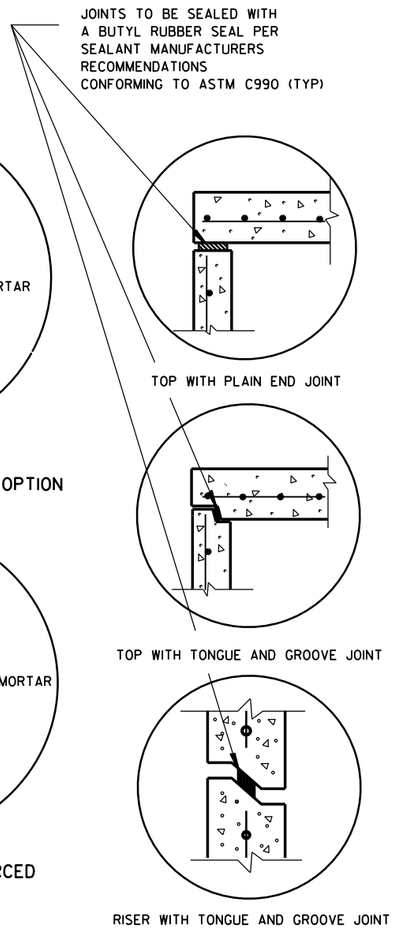


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "B"

GENERAL NOTES

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

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

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

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

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

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

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

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

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

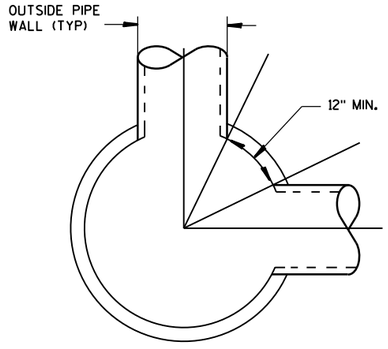
FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4-IN FOR 3-FT DIAMETER AND 5-IN FOR 4-FT DIAMETER PRECAST INLETS.

② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

INLET COVER OPENING MATRIX

	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
INLET SIZE	OPENING SIZE (FT)											
3-FT	2 DIA.				X							X
	2X2	X	X					X		X		
4-FT	2 DIA.				X							X
	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2X3						X					
	2.5X3					X						



DETAIL "C"

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18

INLETS 3-FT AND 4-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

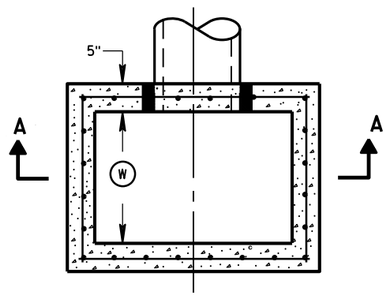
APPROVED
Sept., 2016 — /S/ Rodney Taylor
DATE — ROADWAY STANDARDS | UNIT SUPERVI ENT
FHWA

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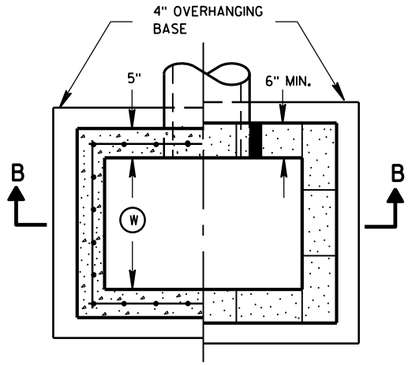
S.D.D. 8 C 6-2

6

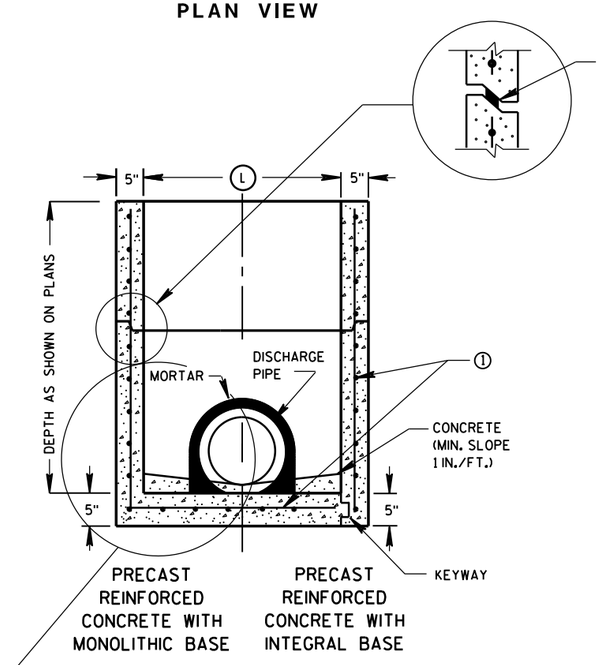
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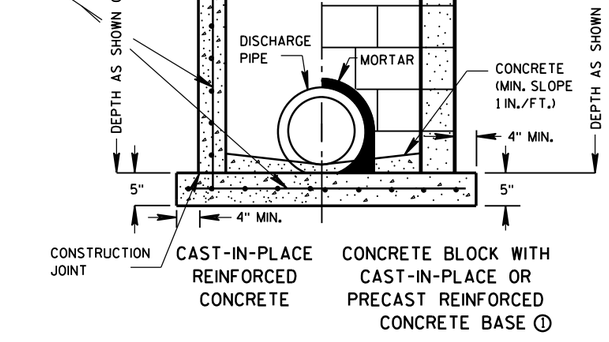
PLAN VIEW



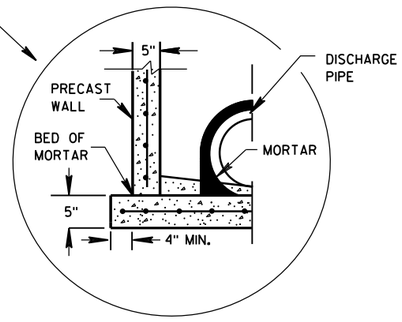
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

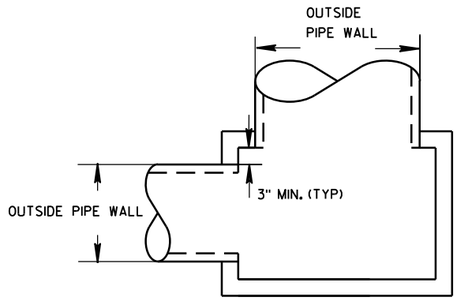
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

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

PIPE MATRIX

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



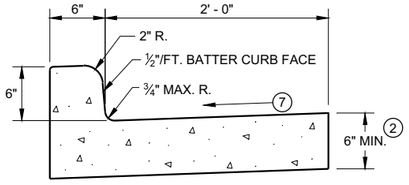
DETAIL "A"

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

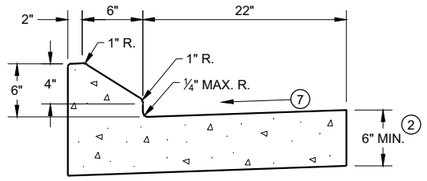
STATE OF WISCONSIN
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APPROVED
Sept., 2016
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D IT
UNIT SUPERVIS
FHWA

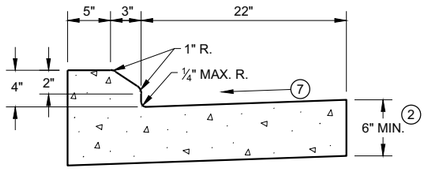
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT



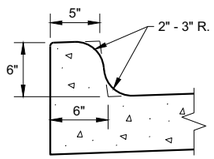
TYPES A (1) & D



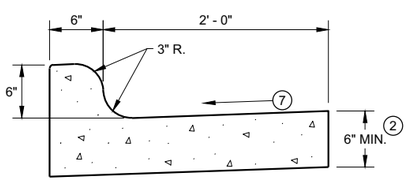
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

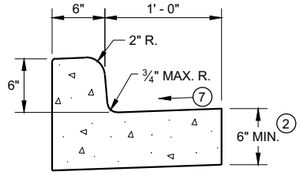


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



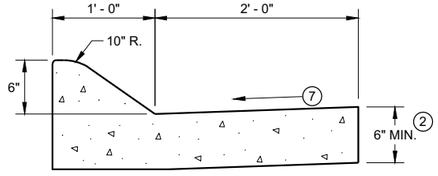
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"



TYPES A (1) & D

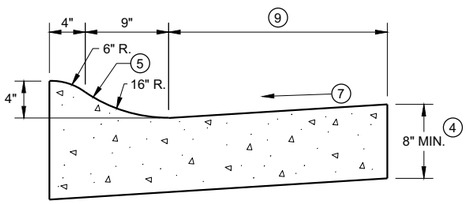
CONCRETE CURB AND GUTTER 18"



6" SLOPED CURB TYPES A (1) & D

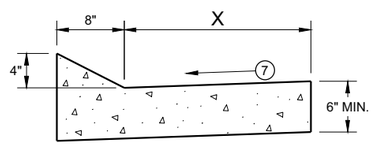
4" SLOPED CURB TYPES A (1) & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R (1) & T

TBT & TBTT	X
30"	22"
36"	28"

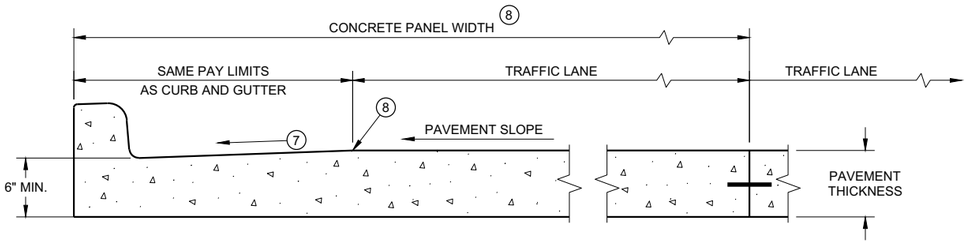


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

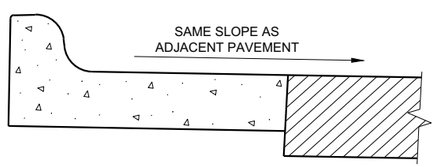
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



REVERSE SLOPE GUTTER (6)
(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.

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

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(3) USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

(4) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(5) UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

(6) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

(7) USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.

(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

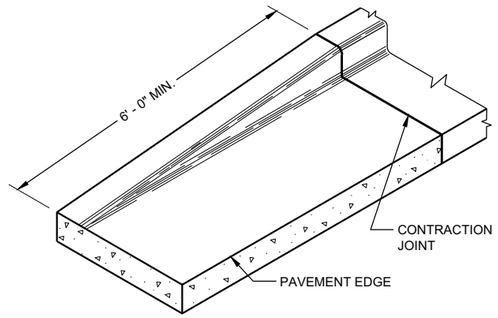
(9) CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

CONCRETE CURB AND GUTTER

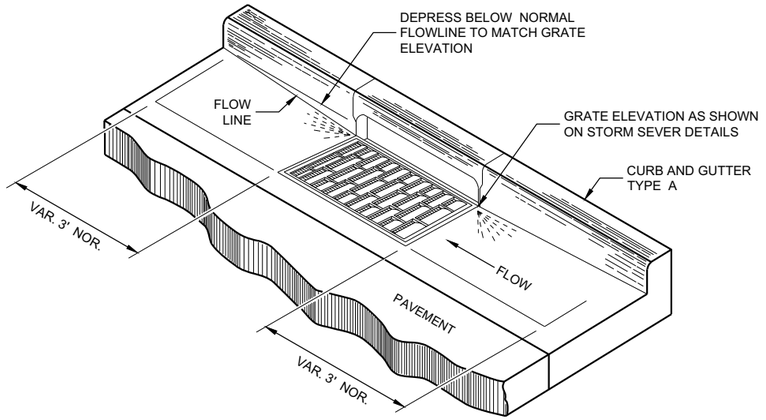
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D01 - 22a
SDD 08D01 - 22a



END SECTIONCURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

GENERAL NOTES

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

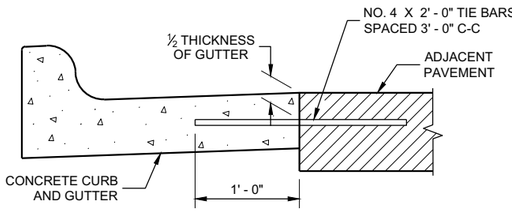
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

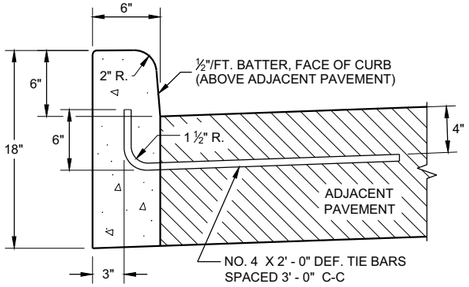
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

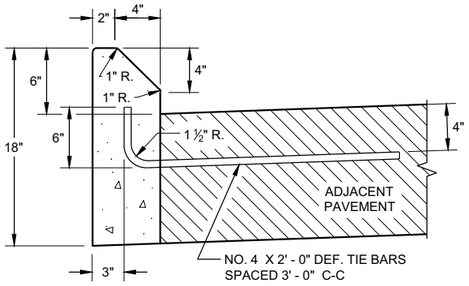
(9) REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.



TYPICAL TIE BAR LOCATION (1)

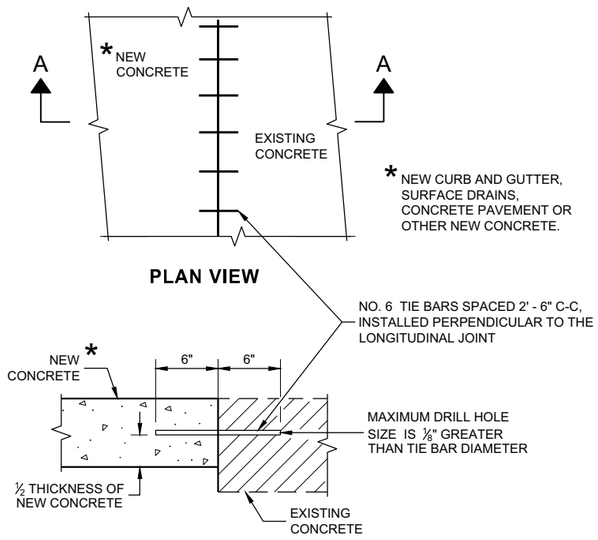


TYPES A (1) & D



TYPES G (1) & J

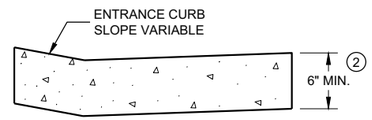
CONCRETE CURB



PLAN VIEW

SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



DRIVEWAY ENTRANCE CURB (9)

(WHEN DIRECTED BY THE ENGINEER)

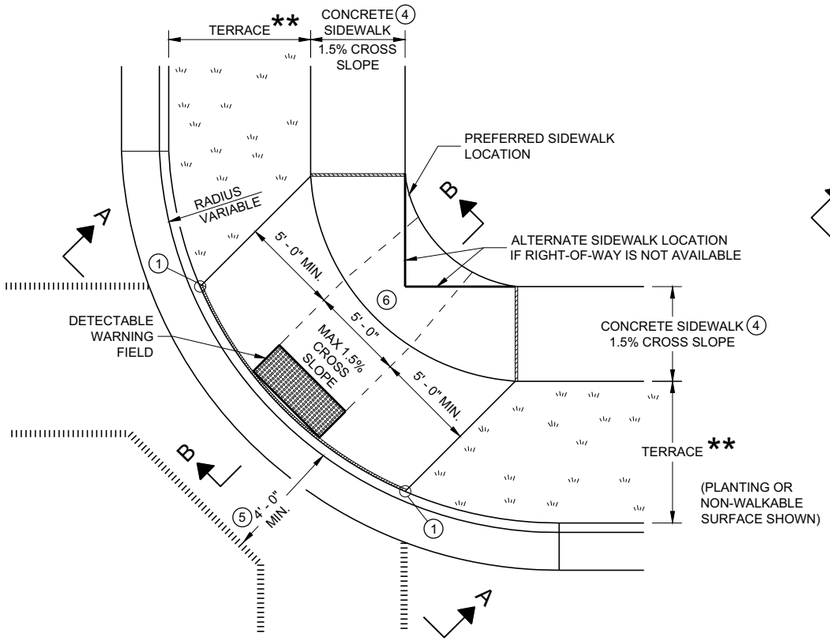
CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVE ENGINEER
FHWA

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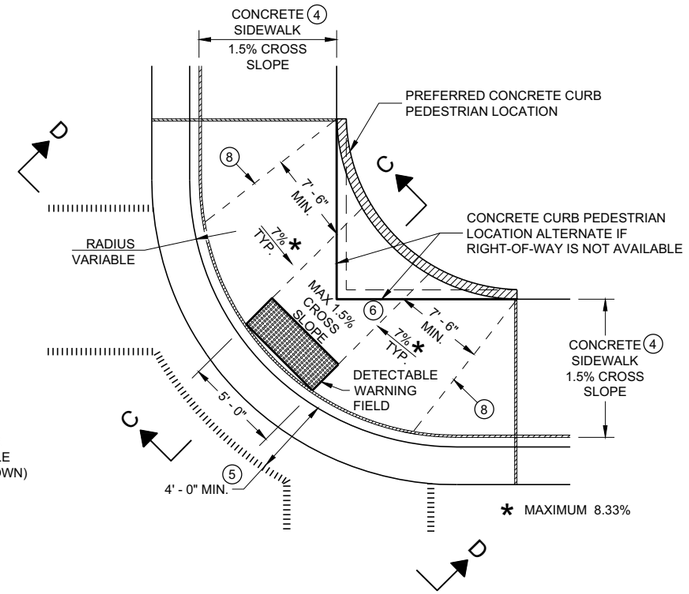
SDD08D01 - 22b



PLAN VIEW

CURB RAMP TYPE 1

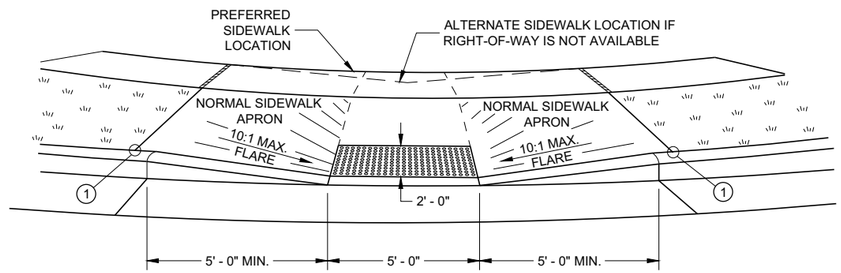
(CENTER OF CORNER RADIUS)



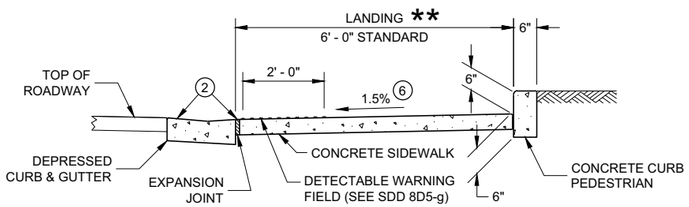
PLAN VIEW

CURB RAMP TYPE 1 - A

(NO TERRACE)

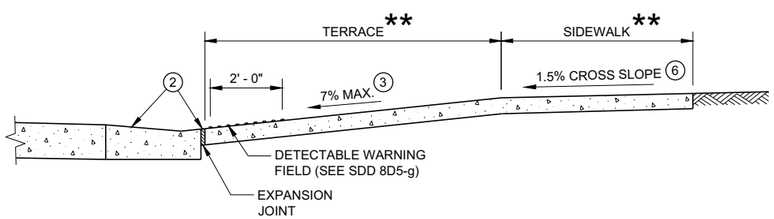


VIEW A - A FOR TYPE 1

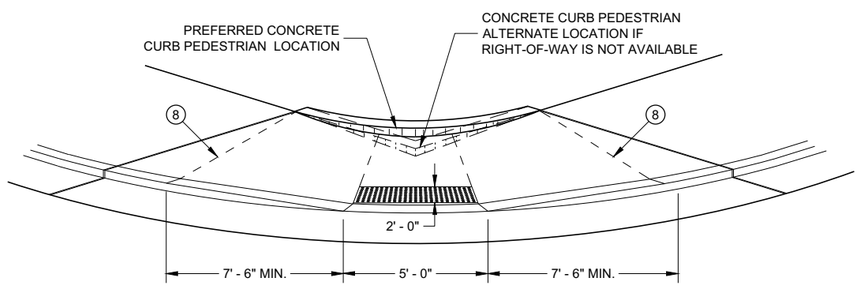


SECTION C - C FOR TYPE 1 - A

** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B - B FOR TYPE 1



VIEW D - D FOR TYPE 1 - A

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 CURB RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FILED SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAR FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD"

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

(1) THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) MAXIMUM 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(5) PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

LEGEND

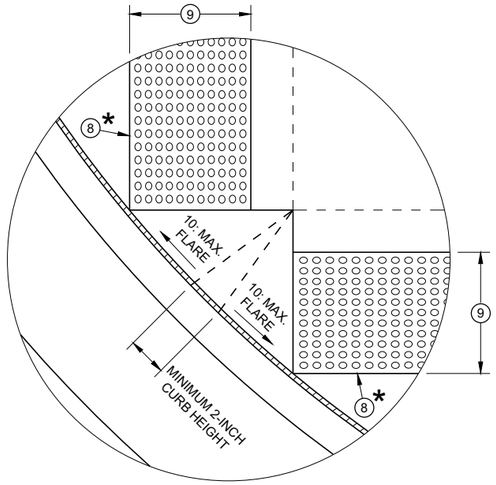
- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPE 1 AND 1-A

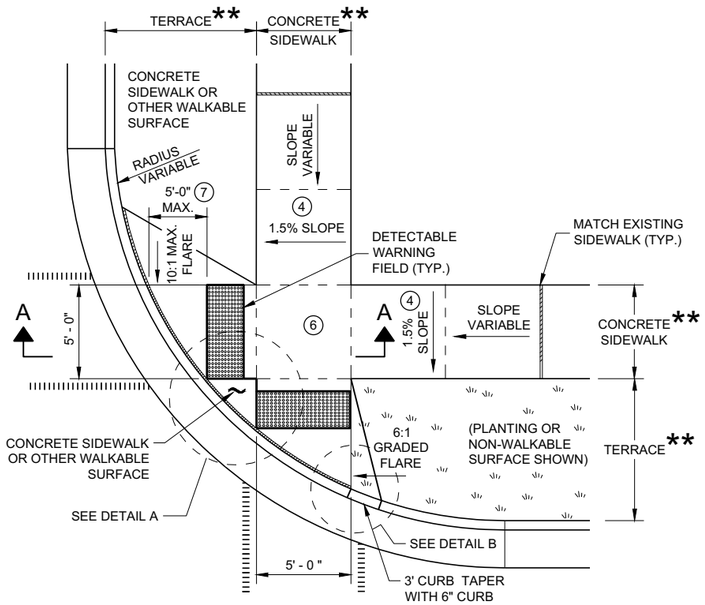
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05 - 20a



DETAIL A



PLAN VIEW
CURB RAMP TYPE 2
(CENTER OF CORNER RADIUS)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE (2.67% OR LESS) AND NOT TO EXCEED 11% GRADE CHANGE.

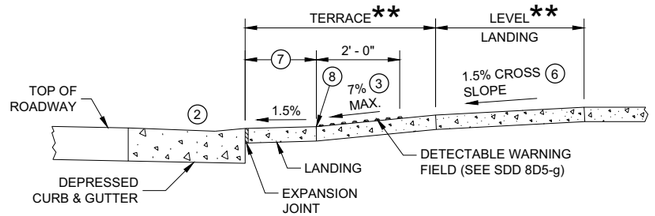
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET X 5 FEET.

(7) WHEN GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

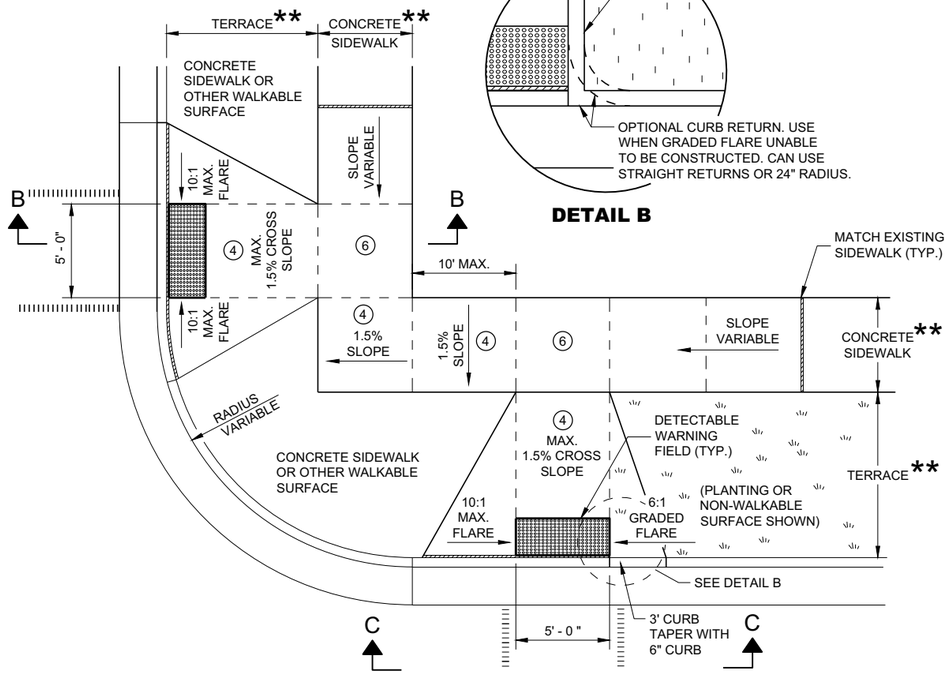
(9) WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.



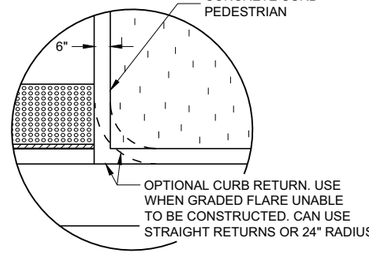
SECTION A - A FOR TYPE 2

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

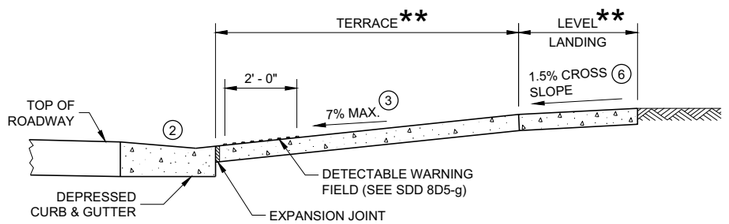
** WIDTH SHOWN ELSEWHERE IN THE PLANS



PLAN VIEW
CURB RAMP TYPE 3
(OUTSIDE OF CROSSWALK AREA)



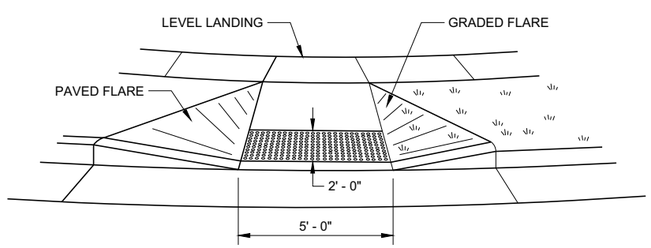
DETAIL B



SECTION B - B FOR TYPE 3

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)



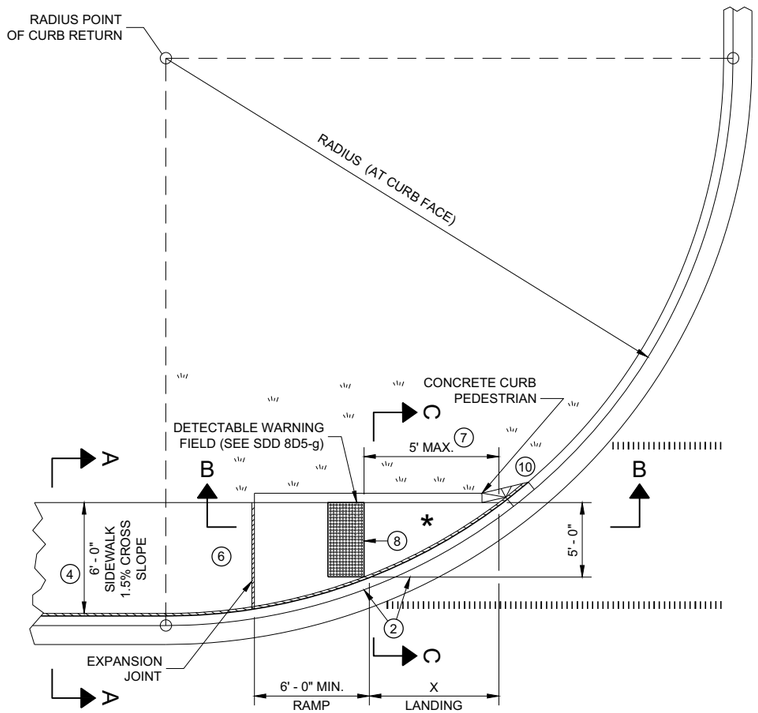
VIEW C - C FOR TYPE 3

CURB RAMPS TYPE 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05 - 20b

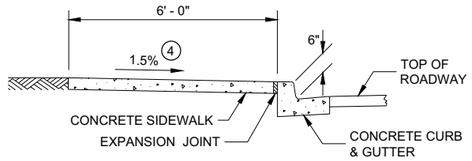


PLAN VIEW

CURB RAMP TYPE 4A

RADIUS (AT CURB FACE)	X
10 FEET	4' - 7"
15 FEET	6' - 5½"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A - A FOR TYPE 4A

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

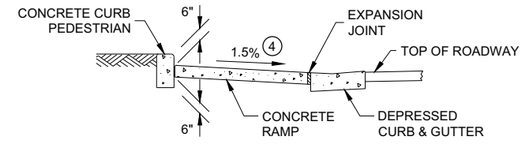
(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

LEGEND

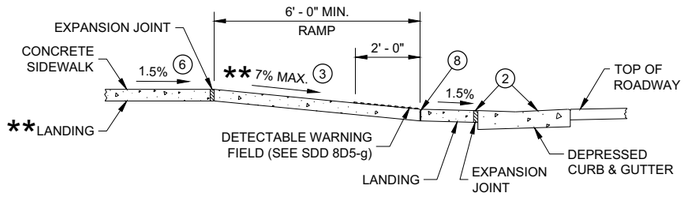
½" EXPANSION JOINT SIDEWALK

CONTRACTION JOINT SIDEWALK

PAVEMENT MARKING CROSSWALK (WHITE)



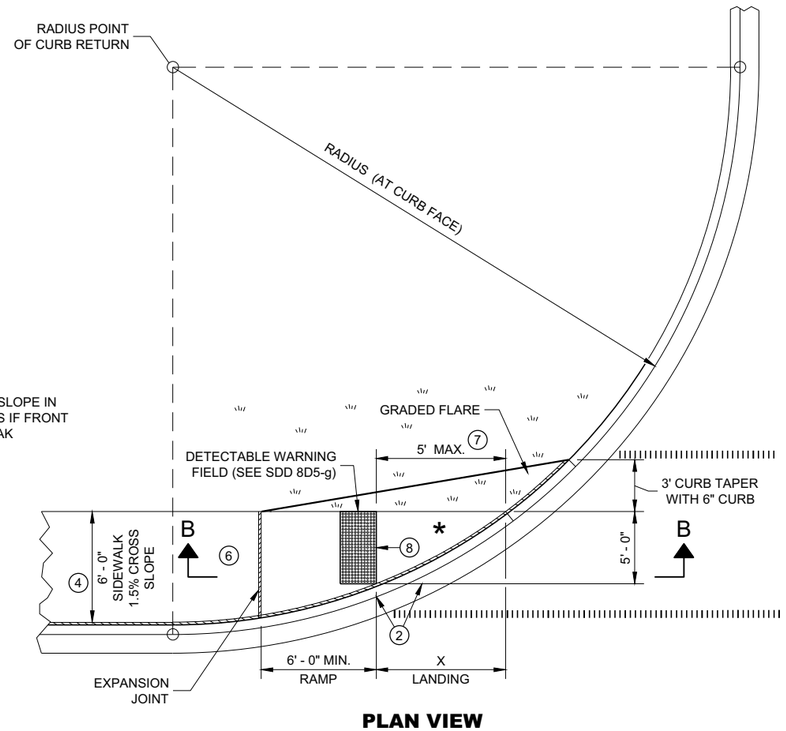
SECTION C - C FOR TYPE 4A



SECTION B - B FOR TYPE 4A AND TYPE 4A1

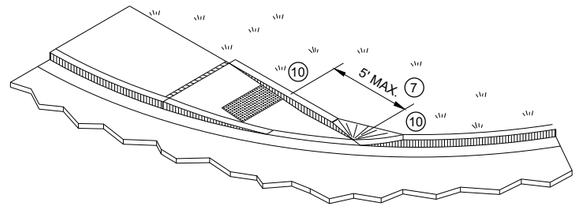
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

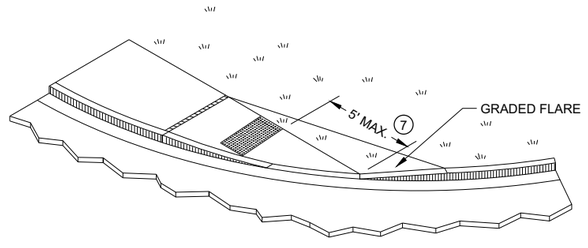


PLAN VIEW

CURB RAMP TYPE 4A1



ISOMETRIC VIEW FOR TYPE 4A



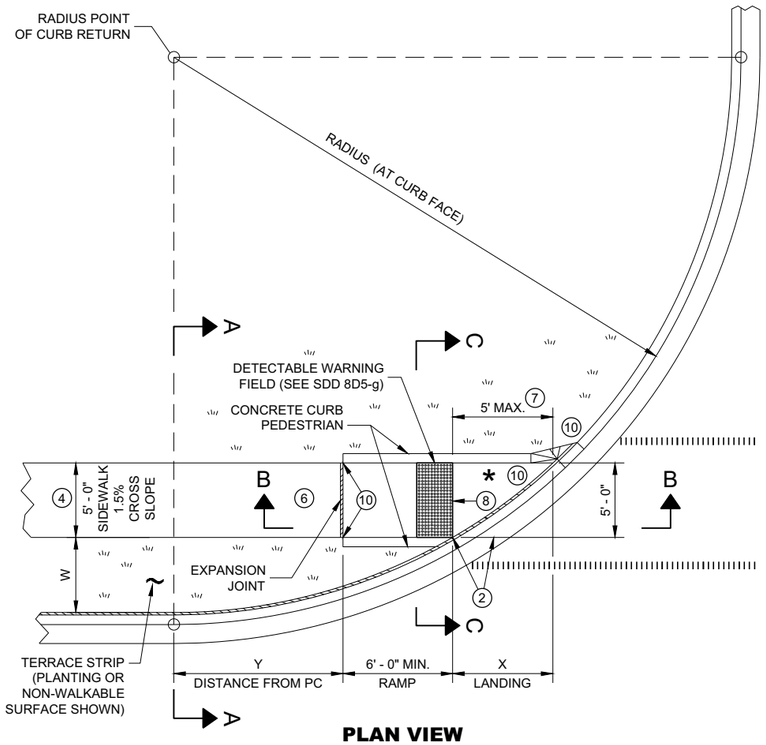
ISOMETRIC VIEW FOR TYPE 4A1

CURB RAMPS
TYPE 4A AND 4A1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05 - 20c

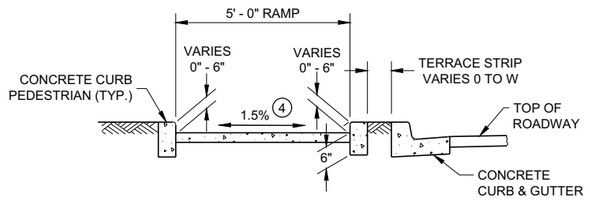


PLAN VIEW

CURB RAMP TYPE 4B

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"		W = 8' - 0"		W = 9' - 0"		W = 10' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2' - 10 ¼"	0' - 5"	2' - 1"	1' - 4 ½"	1' - 5"	2' - 1"	0' - 10"	2' - 7 ½"	0' - 3 ¼"	3' - 0 ¼"						
15 FEET	4' - 6 ¾"	2' - 1 ¾"	3' - 9"	3' - 5 ¾"	3' - 1 ¼"	4' - 6"	2' - 6 ¾"	5' - 4 ½"	2' - 1"	6' - 1"	1' - 8"	6' - 8 ½"	1' - 3 ¼"	7' - 2 ½"	0' - 10 ¾"	7' - 7 ¼"
20 FEET	5' - 9 ¾"	3' - 6 ½"	4' - 11 ½"	5' - 1 ¾"	4' - 3 ¼"	6' - 5 ½"	3' - 8 ¾"	7' - 7"	3' - 3"	8' - 6 ½"	2' - 10"	9' - 4 ½"	2' - 5 ½"	10' - 1 ¼"	2' - 1 ¼"	10' - 9"
30 FEET			6' - 9 ¼"	7' - 11 ¼"	6' - 0 ¼"	9' - 8"	5' - 5"	11' - 1 ¾"	4' - 10 ¾"	12' - 5 ¾"	4' - 5 ½"	13' - 7 ¾"	4' - 0 ¾"	14' - 8 ½"	3' - 8 ½"	15' - 8 ¼"
40 FEET									6' - 1 ¾"	15' - 8 ½"	5' - 8"	17' - 2"	5' - 3"	18' - 5 ¾"	4' - 10 ¾"	19' - 8 ¼"
50 FEET															5' - 10 ¼"	23' - 2"

INTERMEDIATE RADII CAN BE INTERPOLATED
DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH
DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH



SECTION C - C FOR TYPE 4B

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

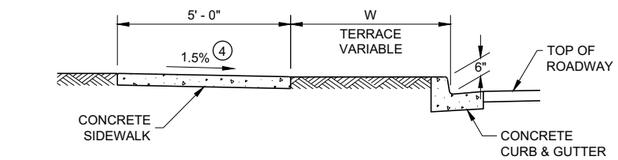
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

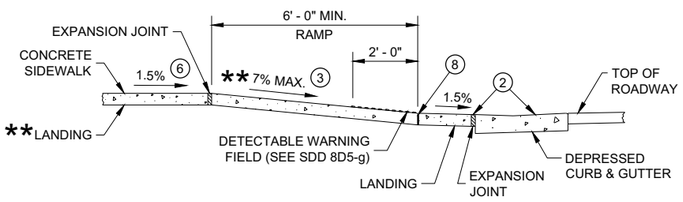
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

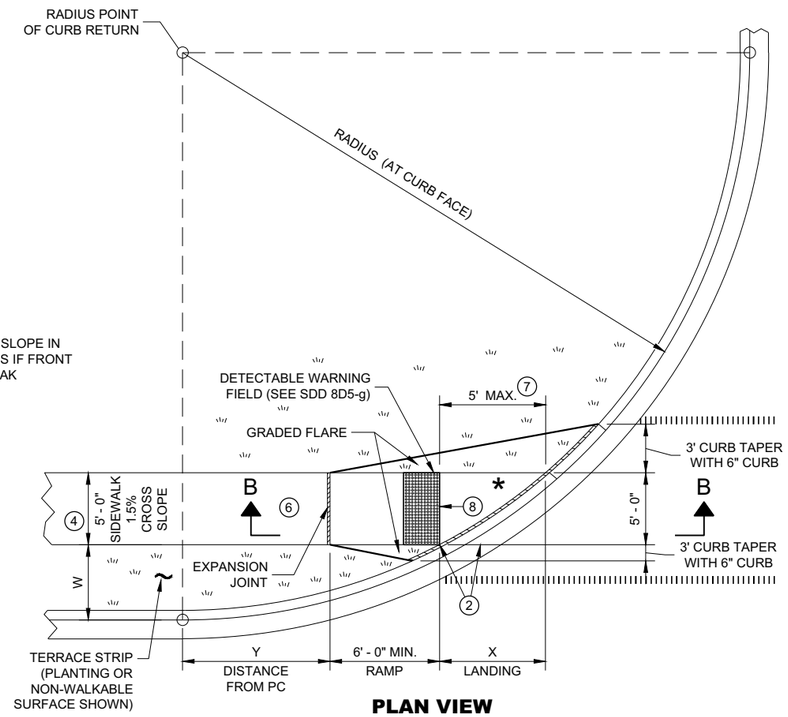


SECTION A - A FOR TYPE 4B



** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

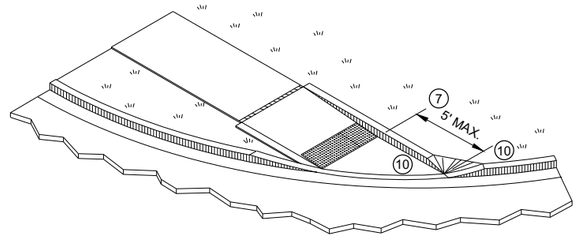
SECTION B - B FOR TYPE 4B AND TYPE 4B1



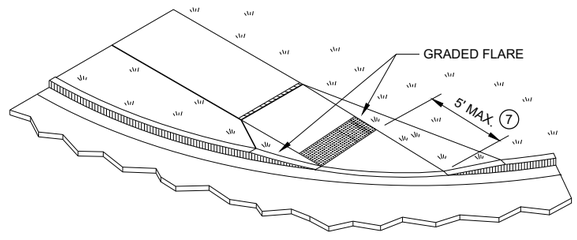
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

PLAN VIEW

CURB RAMP TYPE 4B1



ISOMETRIC VIEW FOR TYPE 4B



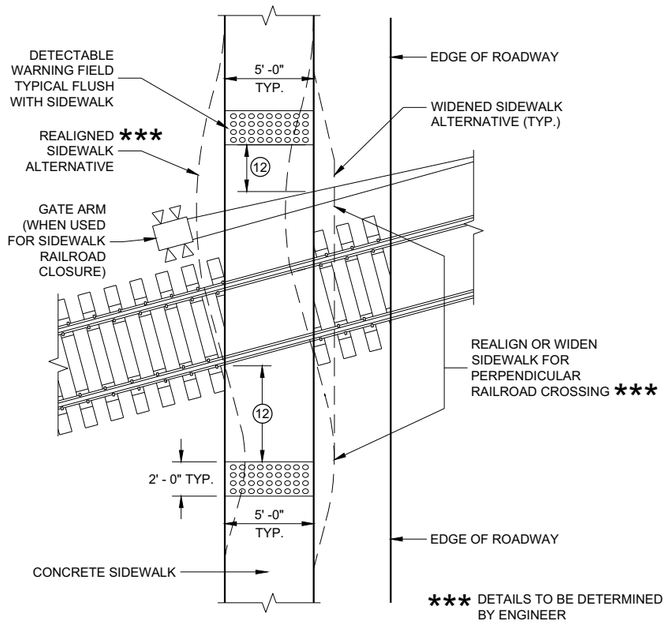
ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

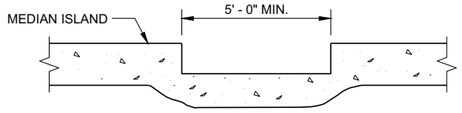
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SDD 08D05 - 20d

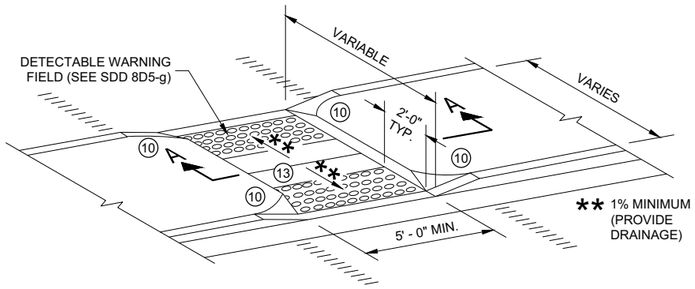


CURB RAMP TYPE 8

DETECTABLE WARNINGS AT RAILROAD CROSSING



SECTION A - A FOR TYPE 5



CURB RAMP TYPE 5

MEDIAN ISLAND NON-ELEVATED PEDESTRIAN CROSSING

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

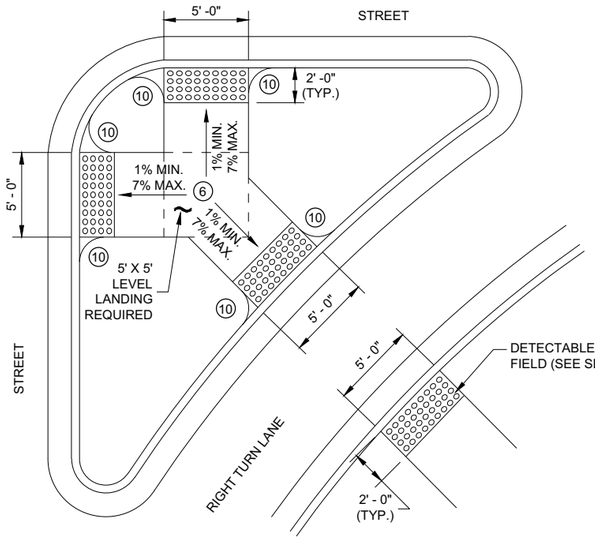
(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(12) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ±0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.

(13) DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STEET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2 FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.

LEGEND

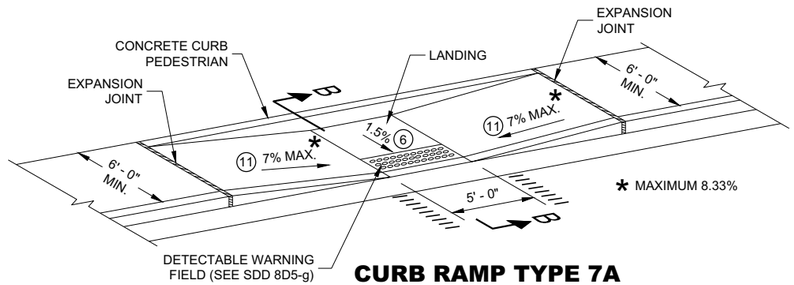
- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)



CURB RAMP TYPE 6

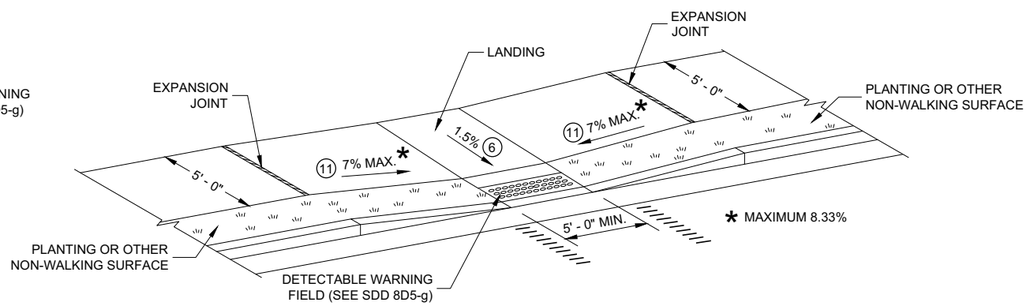
DETECTABLE WARNING AT ISLANDS

REFER TO GENERAL NOTES (2) AND (3) FOR ALL ISLAND CURB RAMPS



CURB RAMP TYPE 7A

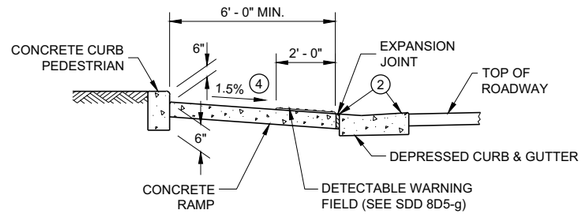
MID BLOCK CROSSING



CURB RAMP TYPE 7B

MID BLOCK CROSSING

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.



SECTION B - B FOR TYPE 7A

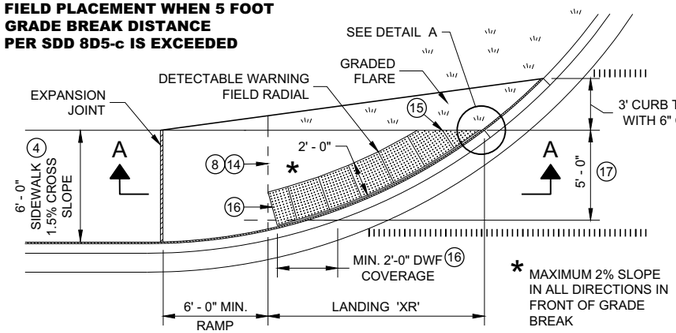
CURB RAMPS TYPE 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05 - 20e

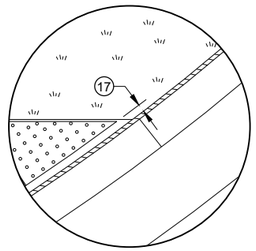
RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-c IS EXCEEDED



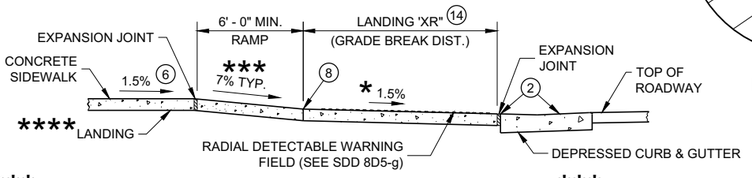
PLAN VIEW

CURB RAMP TYPE 4A1

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



DETAIL A

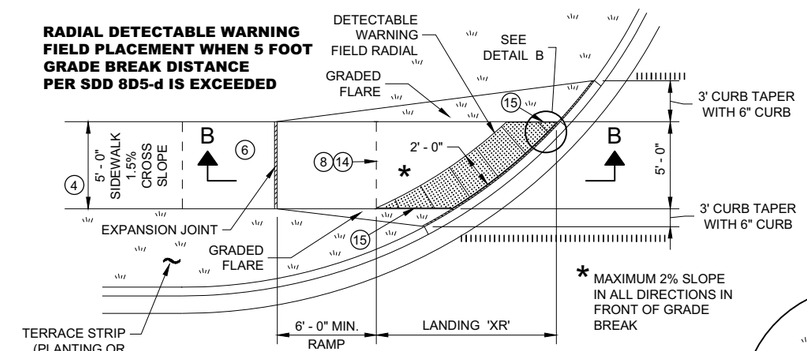


**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** MAXIMUM 8.33%

SECTION A - A FOR TYPE 4A1

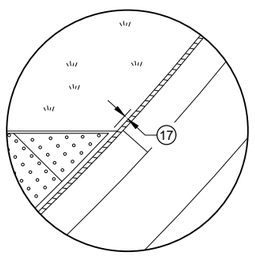
RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-d IS EXCEEDED



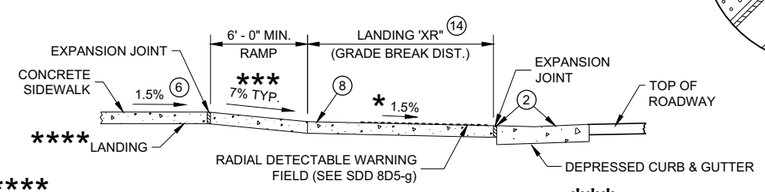
PLAN VIEW

CURB RAMP TYPE 4B1

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



DETAIL B



**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** MAXIMUM 8.33%

SECTION B - B FOR TYPE 4B1

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B CURB RAMPS ARE NOT SHOWN.

REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AD ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

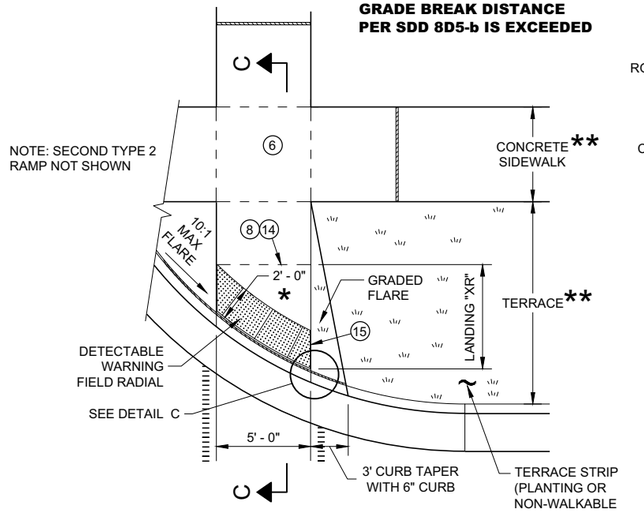
(14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.

(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN ⅛" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

(16) USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.

(17) A MAXIMUM 3 INCH CONCRETE BORDER WITH IS ALLOWABLE IN FROM OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-b IS EXCEEDED

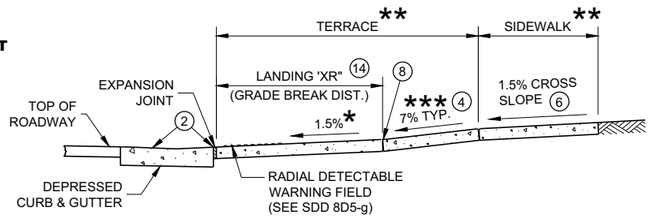


PLAN VIEW

CURB RAMP TYPE 2

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)

(ON LINE WITH SIDEWALK)

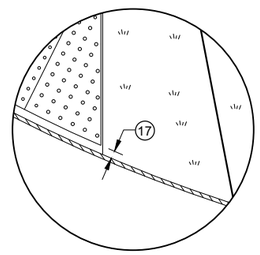


SECTION C - C FOR TYPE 2

* MAXIMUM 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** WIDTH SHOWN ELSEWHERE IN THE PLANS

*** MAXIMUM 8.33%



DETAIL C

CURB RAMPS
RADIAL DETECTABLE WARNING FIELD APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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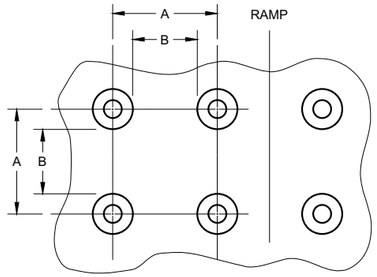
SDD 08D05 - 20f

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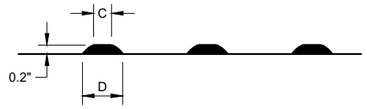
SDD 08D05 - 20f

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.

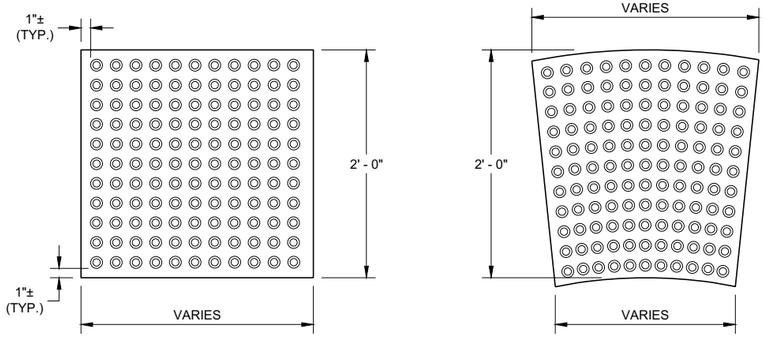


PLAN VIEW



ELEVATION VIEW

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



RECTANGULAR PLATES

RADIAL PLATES

PLAN VIEW
DETECTABLE WARNING FIELDS (TYPICAL)

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AT A CURB RAMP SHALL BE FROM THE SAME MANUFACTURER.

PLACE ALL DETECTABLE WARNING FIELD SYSTEMS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

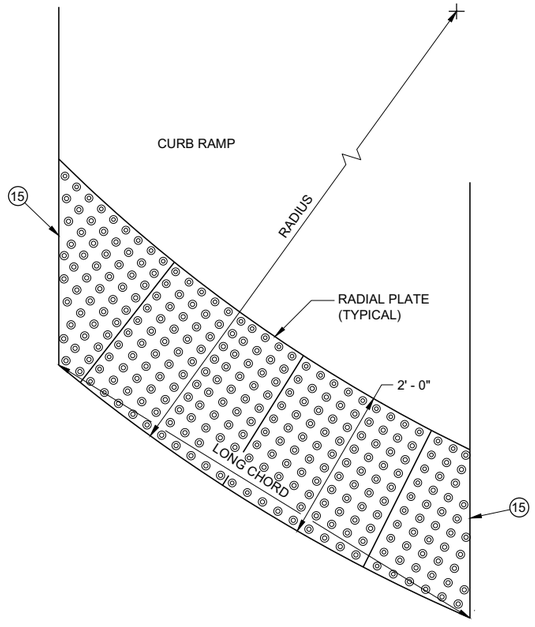
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.

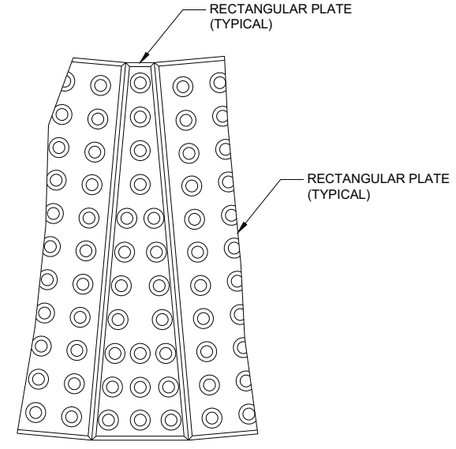
REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN ⅛" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.



PLAN VIEW
RADIAL DETECTABLE WARNING FIELD ATTRIBUTES



PLAN VIEW
RADIAL WEDGE PLATE CONNECTION DETAIL

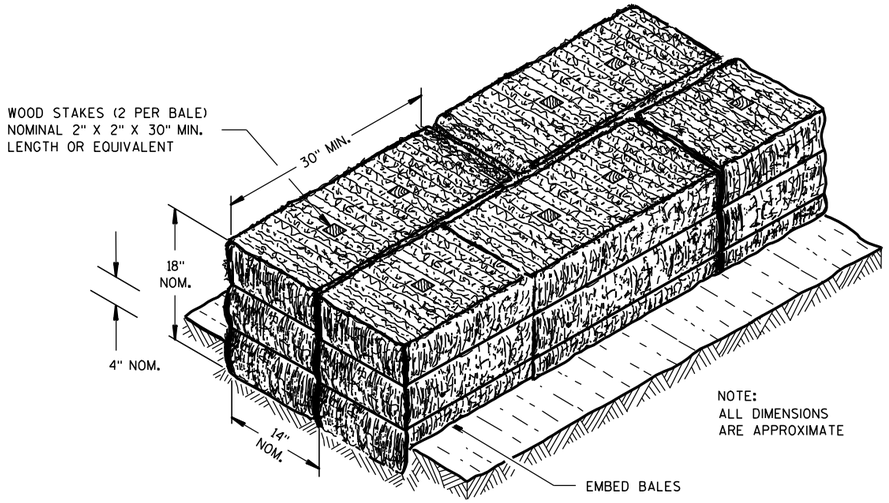
CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

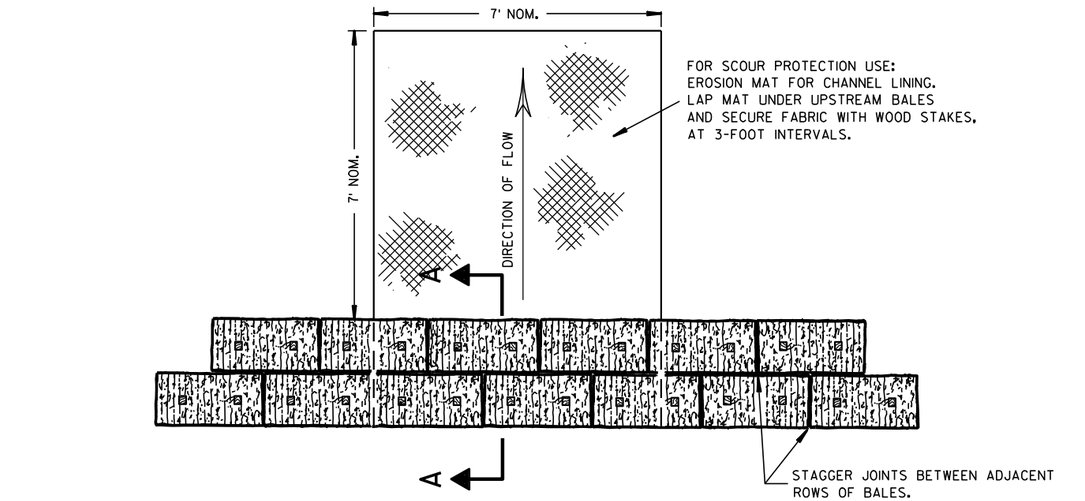
APPROVED
May 2019 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR

FHWA

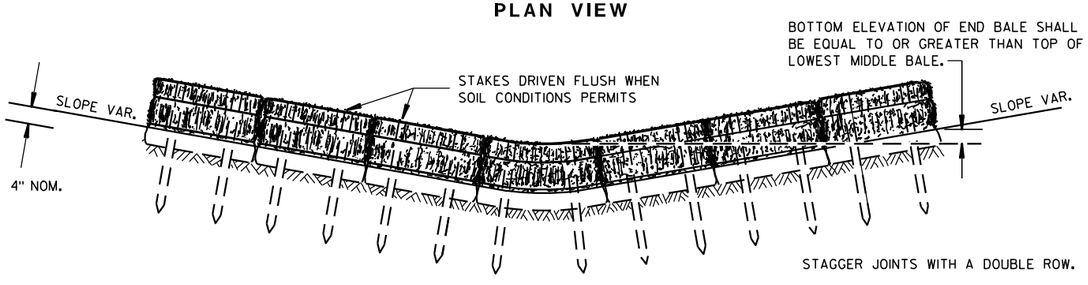
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SDD 08D05 - 20g



SECTION A-A



PLAN VIEW



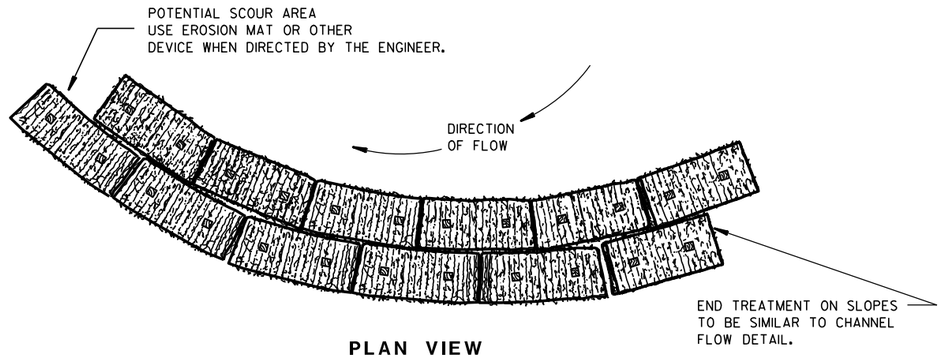
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

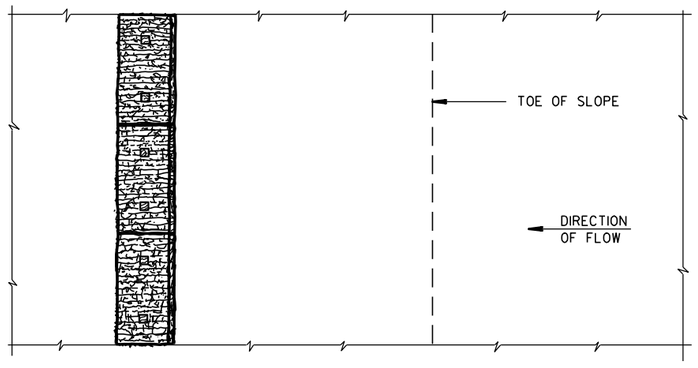
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

① TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

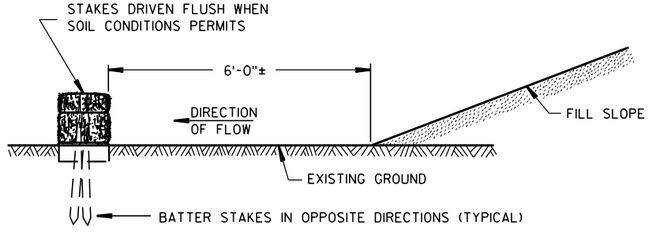


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

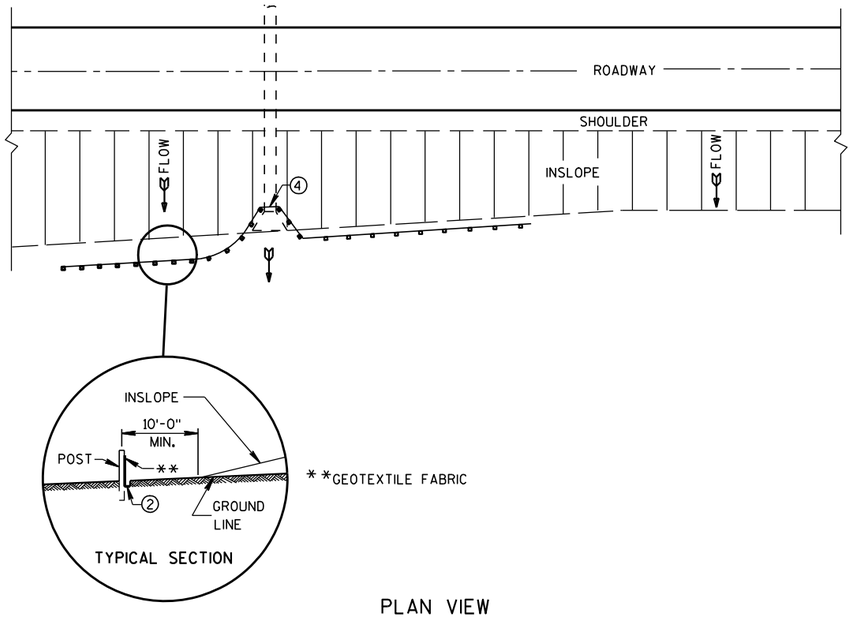
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02 DATE — /S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER

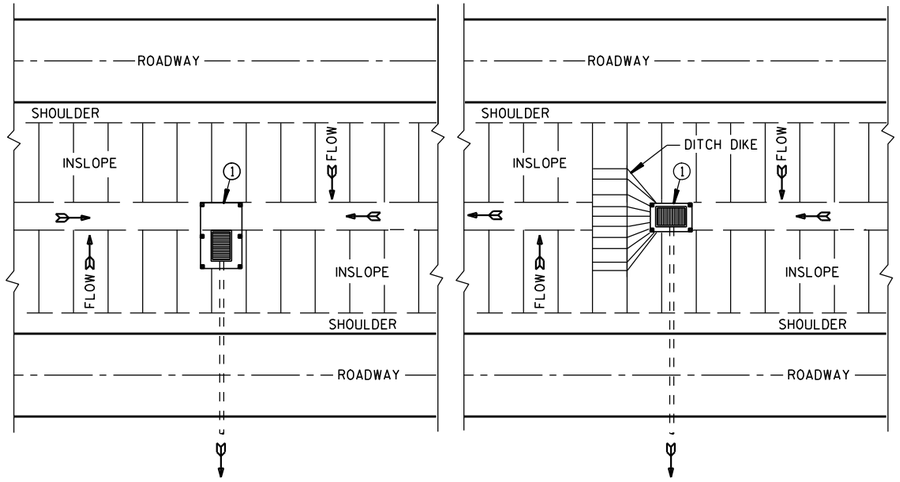
FHWA

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S.D.D. 8 E 8-3



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.

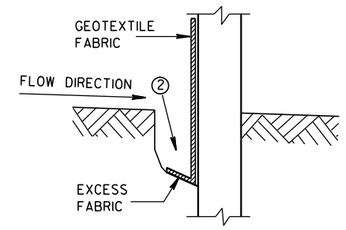
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

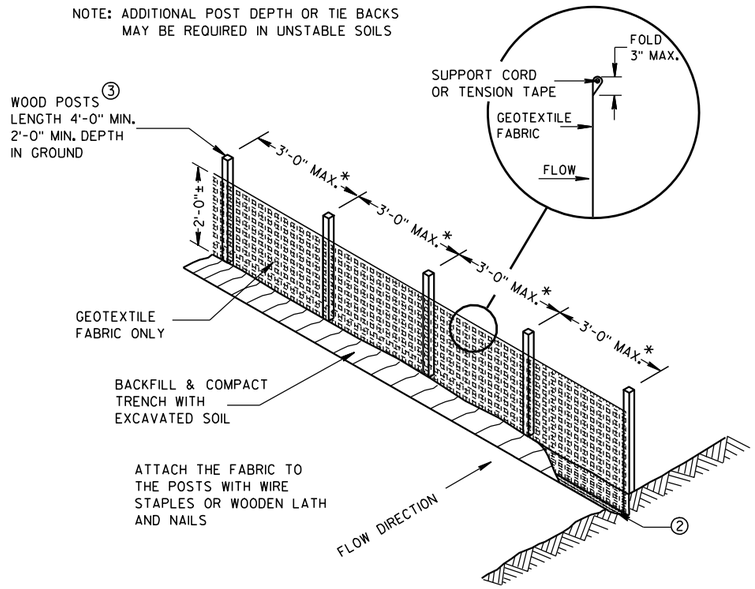
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

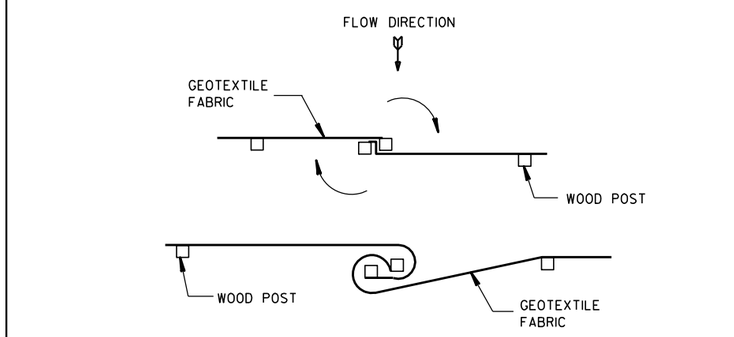
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



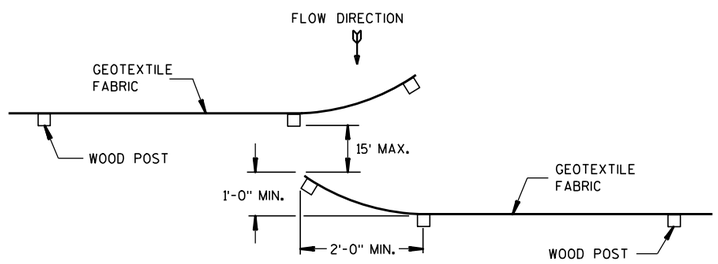
TRENCH DETAIL



SILT FENCE

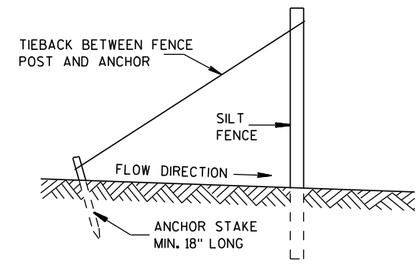


TWIST METHOD



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

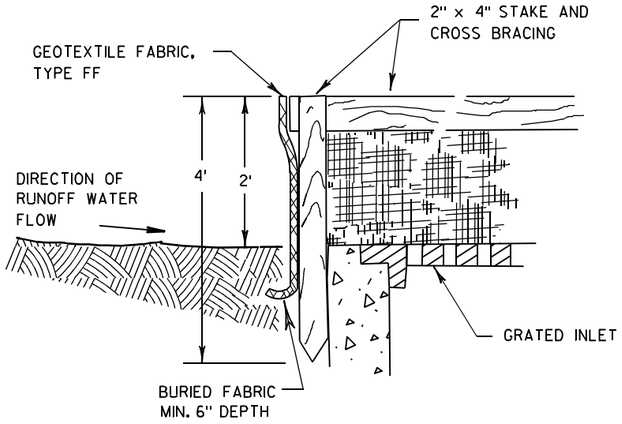
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

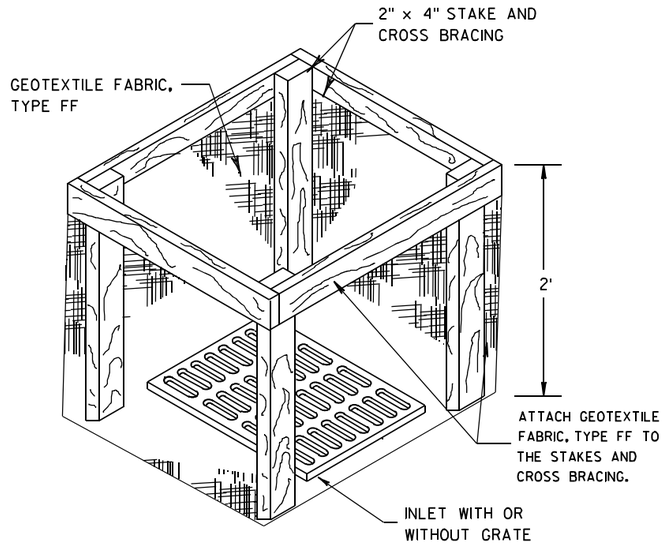
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S.D.D. 8 E 9-6

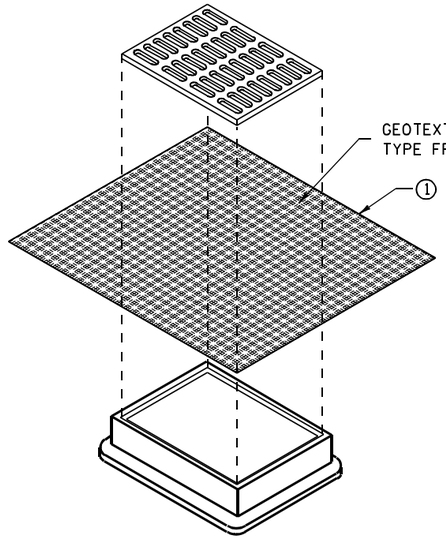
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S.D.D. 8 E 9-6



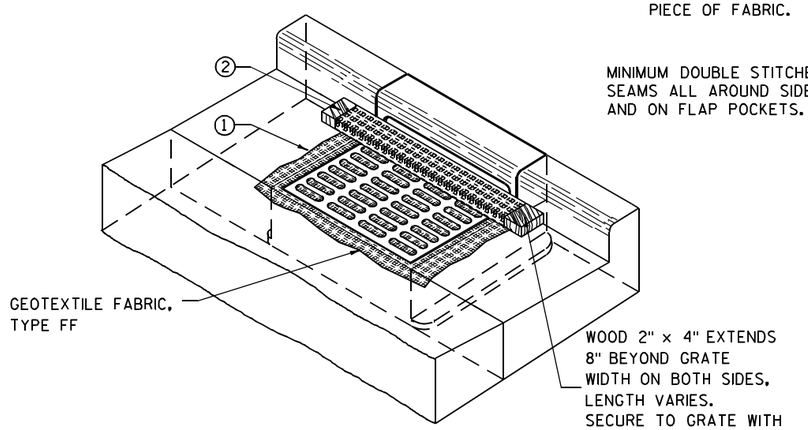


INLET PROTECTION, TYPE A

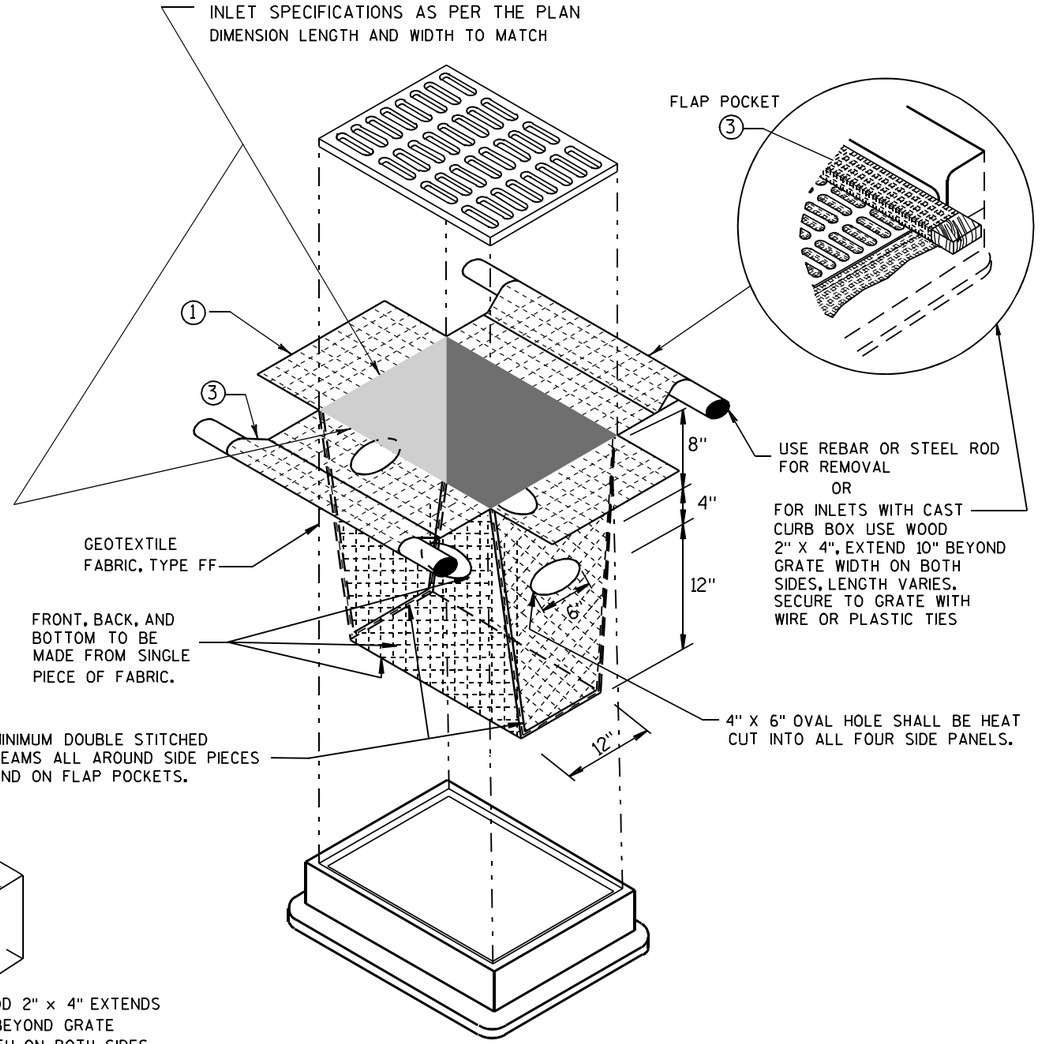


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

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

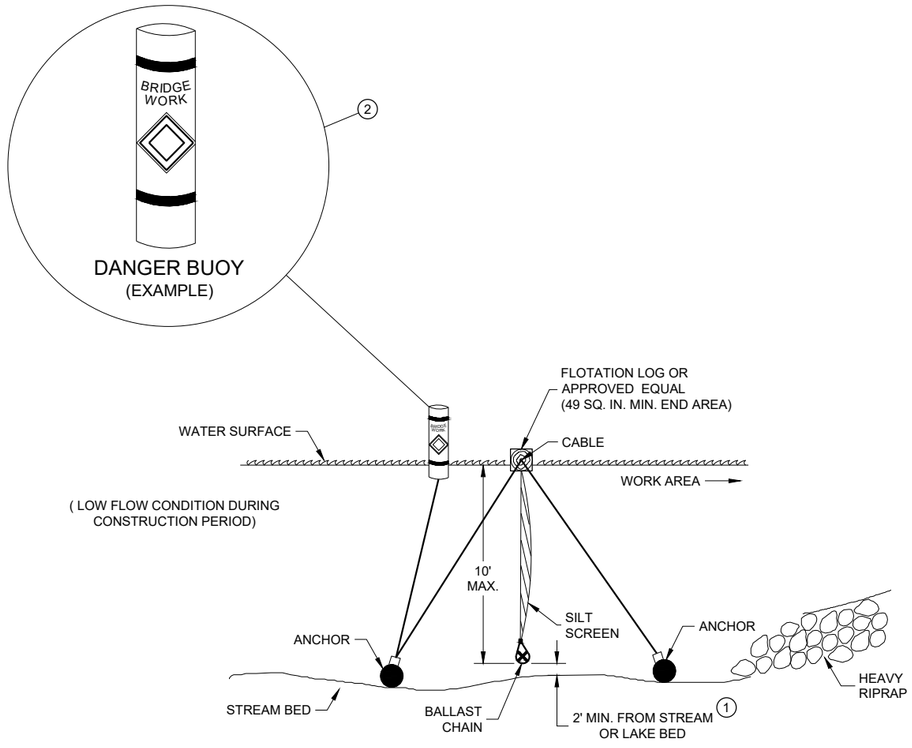
APPROVED
10/16/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

GENERAL NOTES

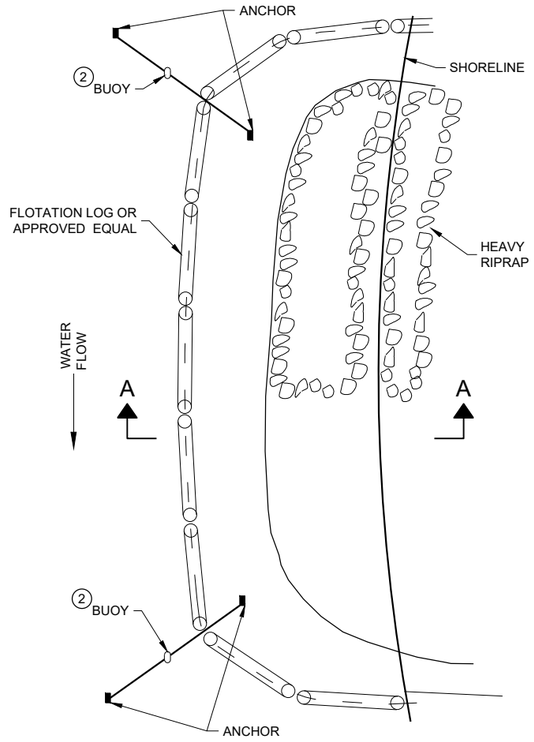
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(1) 2' MINIMUM SHALL BE MAINTAINED DURING CONSTRUCTION PERIOD.

(2) USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



SECTION A - A



PLAN VIEW

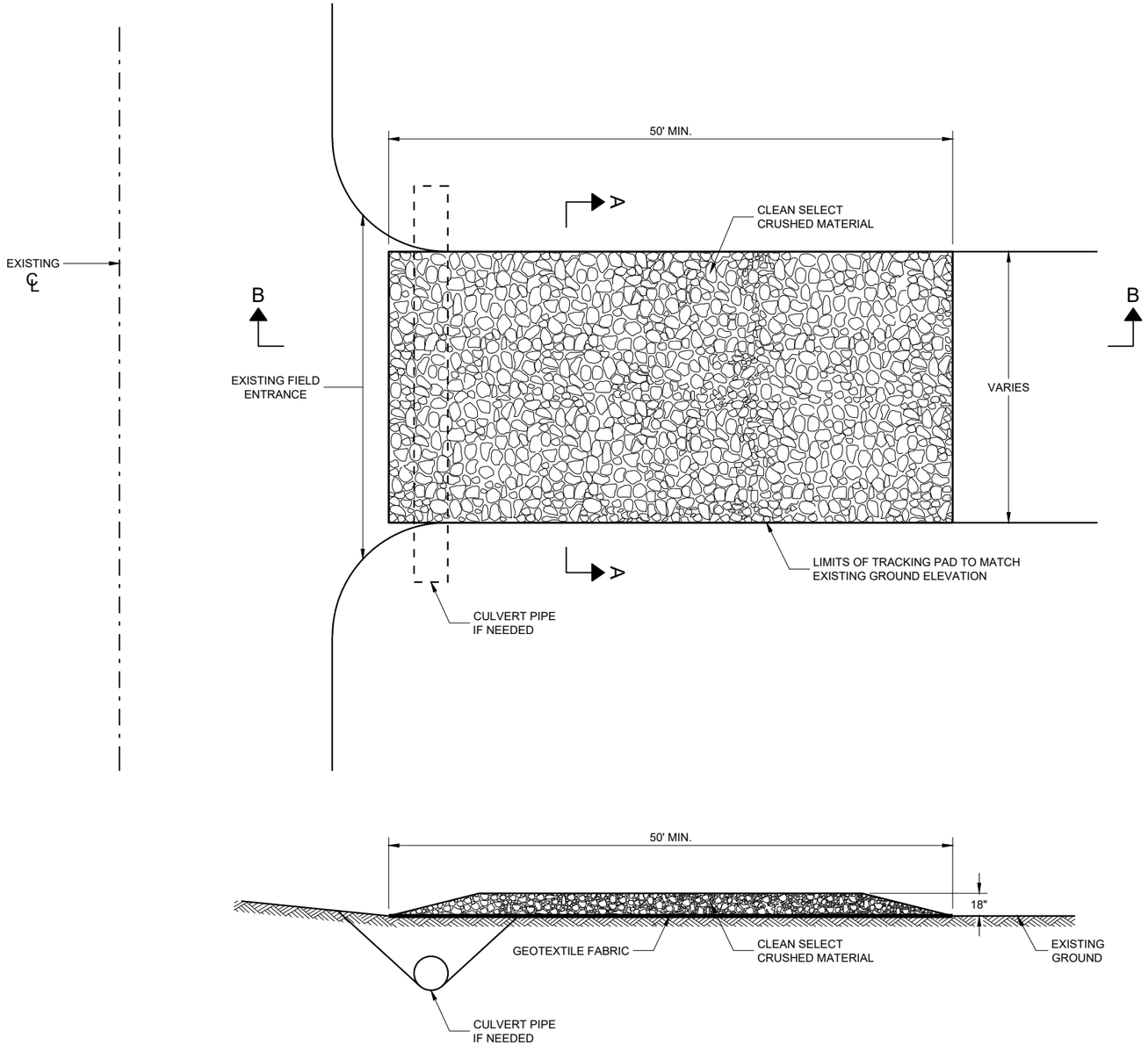
SILT SCREEN PLACEMENT DETAIL

SILT SCREEN	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 6/04/02 DATE	/S/ Beth Cannestra CHIEF ROADWAY DEVELOI ENGINEER
FHWA	

SDD 08E12 - 01

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SDD 08E12 - 01



SECTION B - B

GENERAL NOTES

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

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

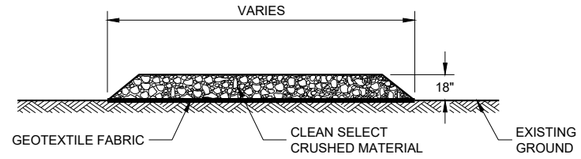
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



SECTION A - A

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SDD 08E14 - 01

TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

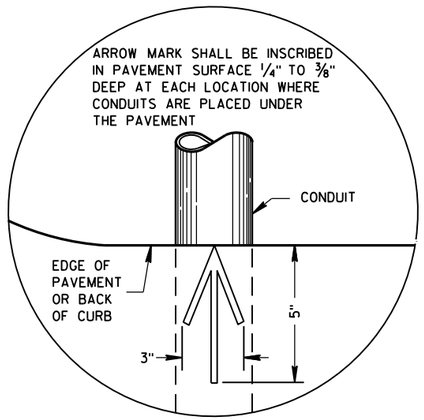
3/24/2011
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVE ENGINEER

FHWA

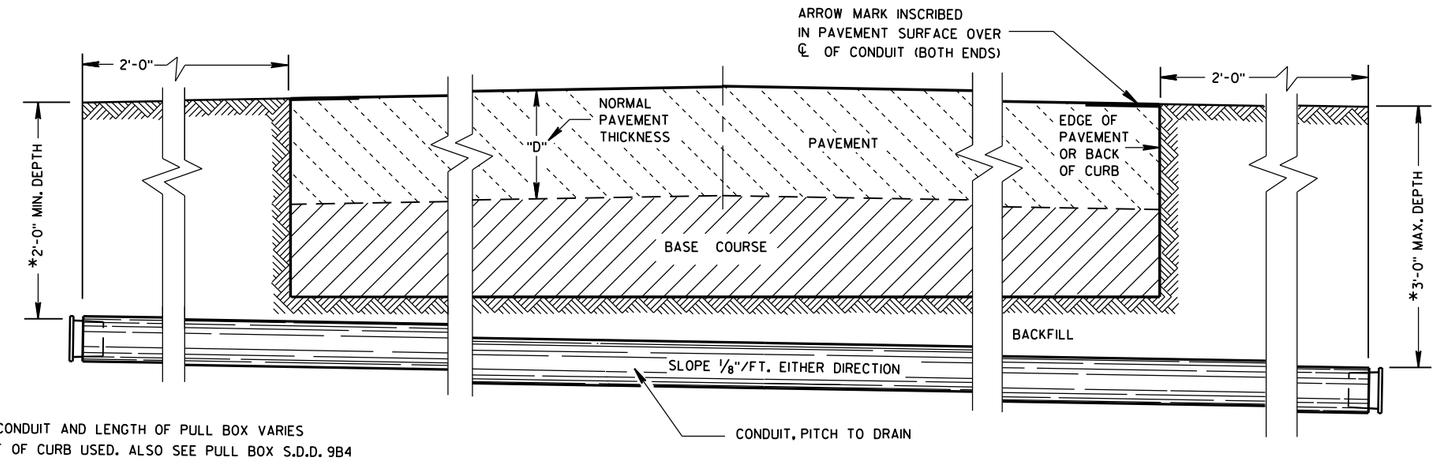
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SDD 08E14 - 01



PLAN VIEW

ARROW MARK



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

GENERAL NOTES

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

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.

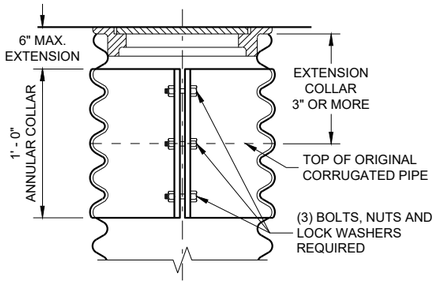
CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

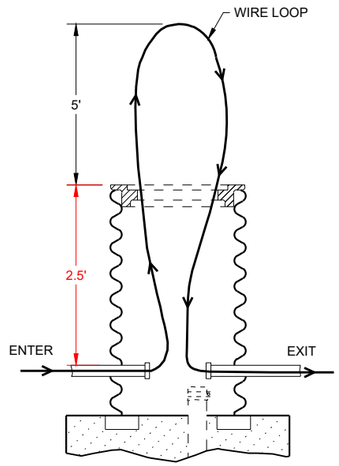
APPROVED
March, 2017 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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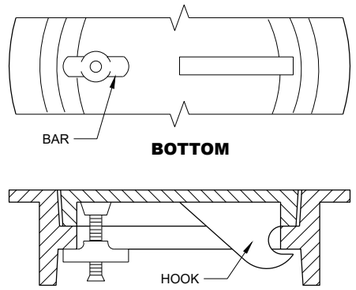
S.D.D. 9 B 2-10



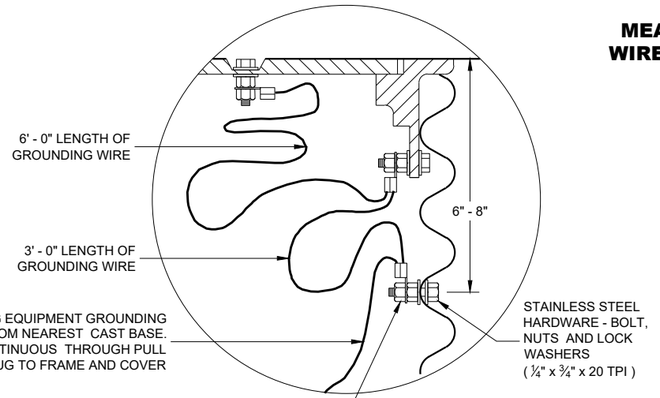
CORRUGATED PIPE EXTENDER



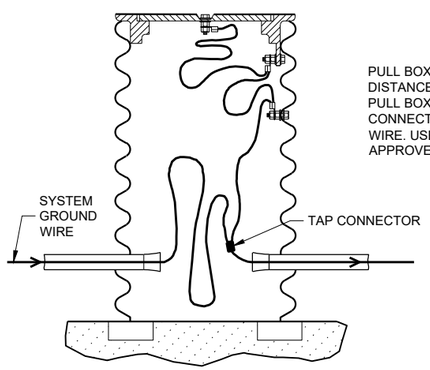
MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



ALTERNATE COVER (LOCKING)
TIGHTENING BAR TYPE

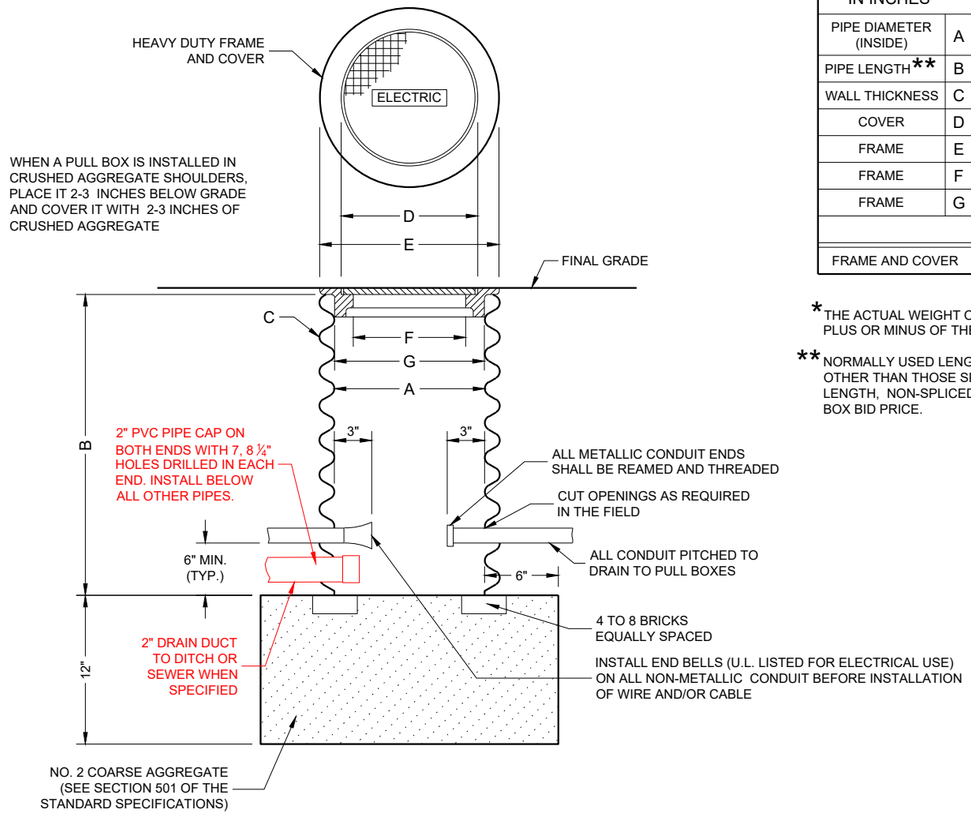


EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



PULL BOX TO NEAREST BASE DISTANCE MORE THAN 20 FEET. PULL BOX GROUND WIRE SHALL CONNECT AT SYSTEM GROUNDING WIRE. USE DEPARTMENT APPROVED TAP CONNECTOR.

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



PULL BOX

GENERAL NOTES

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

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN ¼".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH**	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 ¼	10 ¼	10 ¼	16 ¼	16 ¼	16 ¼	22 ¼	22 ¼	22 ¼
FRAME	E	14 ½	14 ½	14 ½	20 ½	20 ½	20 ½	26 ½	26 ½	26 ½
FRAME	F	8 ½	8 ½	8 ½	14 ½	14 ½	14 ½	20 ½	20 ½	20 ½
FRAME	G	11 ½	11 ½	11 ½	17 ½	17 ½	17 ½	23 ½	23 ½	23 ½
WEIGHT IN POUNDS*										
FRAME AND COVER		60	60	60	110	110	110	155	155	155

*THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

**NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.

PULL BOX

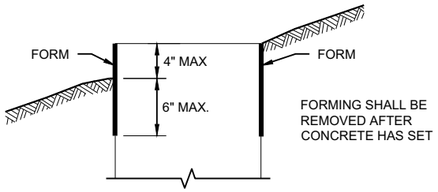
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

FHWA

FORM DEPTH SHALL BE NO MORE THAN 6" BELOW GRADE ON THE LOWER SIDE OF BASE



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN A THE ENTRANCE OF THE BASE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FRO FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION.

WHEN REQUIRED TO CONNECT NON-METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 2, TYPE 5 AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER ALL BASE TYPES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

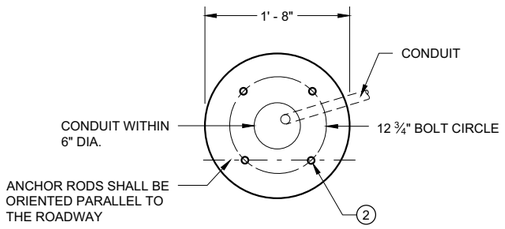
WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

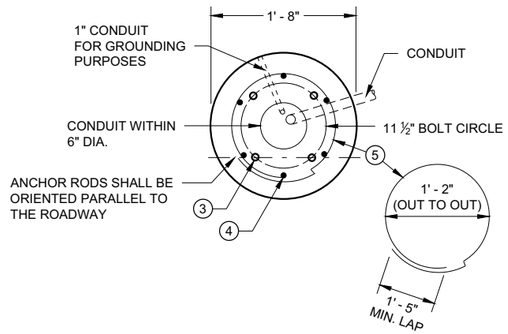
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH"L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

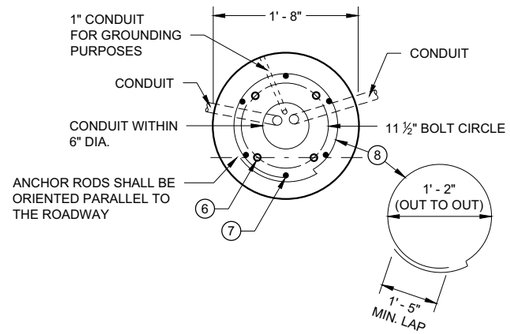
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).







1 THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.

2 (4) 1" DIA. X 3' - 6" ANCHOR RODS.

3 (4) 1" DIA. X 5' - 0" ANCHOR RODS.

4 (6) NO. 6 X 6' - 8" BAR STEEL REINFORCEMENT.

5 (7) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.

6 (4) 1" DIA. X 3' - 6" ANCHOR RODS.

7 (6) NO. 4 X 4' - 8" BAR STEEL REINFORCEMENT.

8 (5) NO. 4 X 5' - 1" BAR STELL REINFORCEMENT @ 1' - 0" C -C.

9 EXOTHERMIC CONNECTION TO EUIPMENT GROUNDING CONDUCTOR

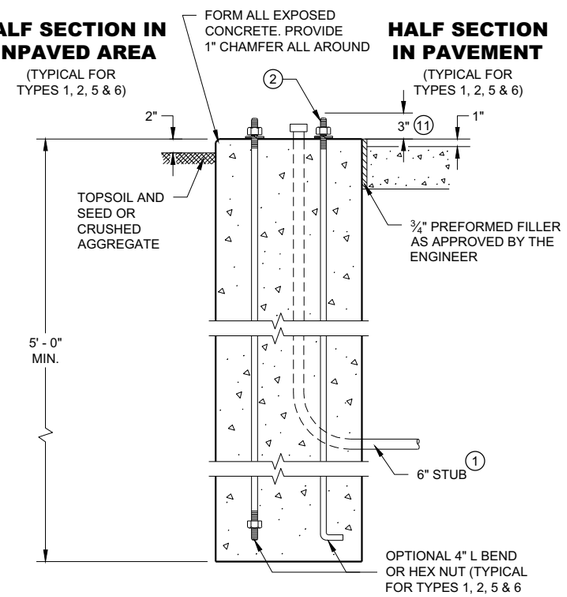
10 ⅝" DIA. X 8' -0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED

11 ANY ANCHOR ROD PROJECTION SHORTER THAN 2 ¾" OR LONGER THAN 3 ¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

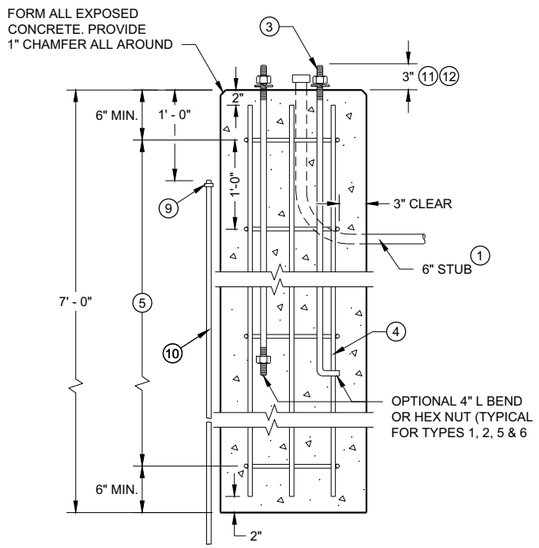
12 FOR NON - BREAKAWAY INSTALLATIONS, 4 ½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2, 5 & 6)

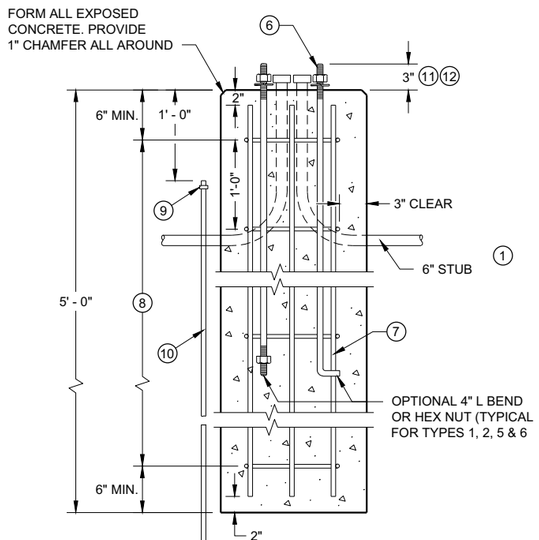
HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2, 5 & 6)



TYPE 1



TYPE 2



TYPE 5 & 6

CONCRETE BASES

CONCRETE BASES
TYPES 1, 2, 5, & 6

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

FHWA

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SDD 09C02 - 09

GENERAL NOTES

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

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

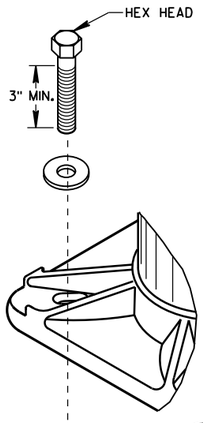
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

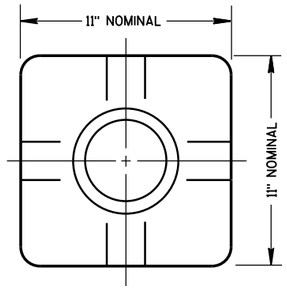
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

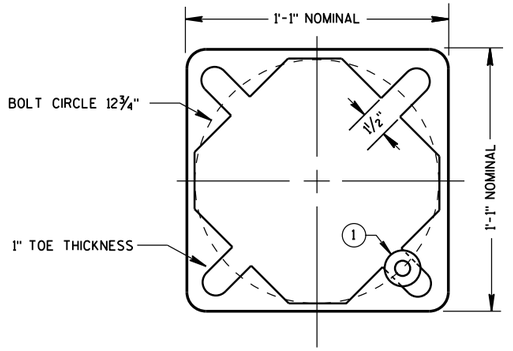
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

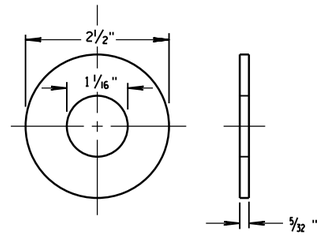




TOP VIEW
(PEDESTAL BASE)

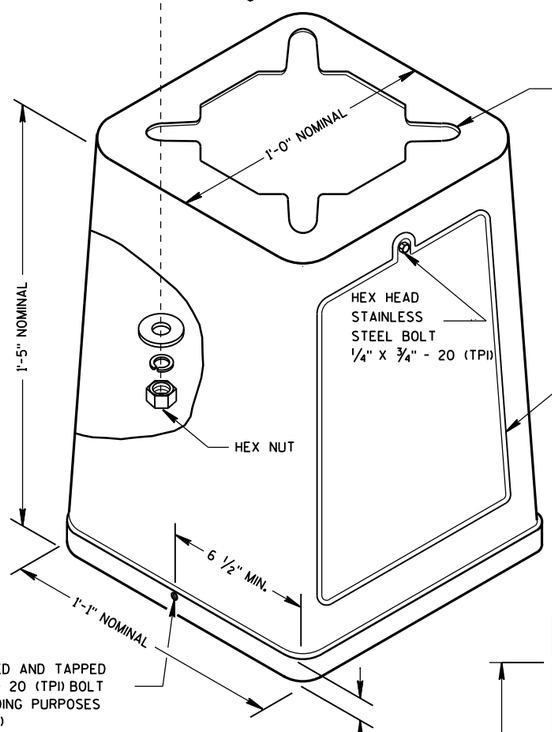


BOTTOM VIEW
(PEDESTAL BASE)

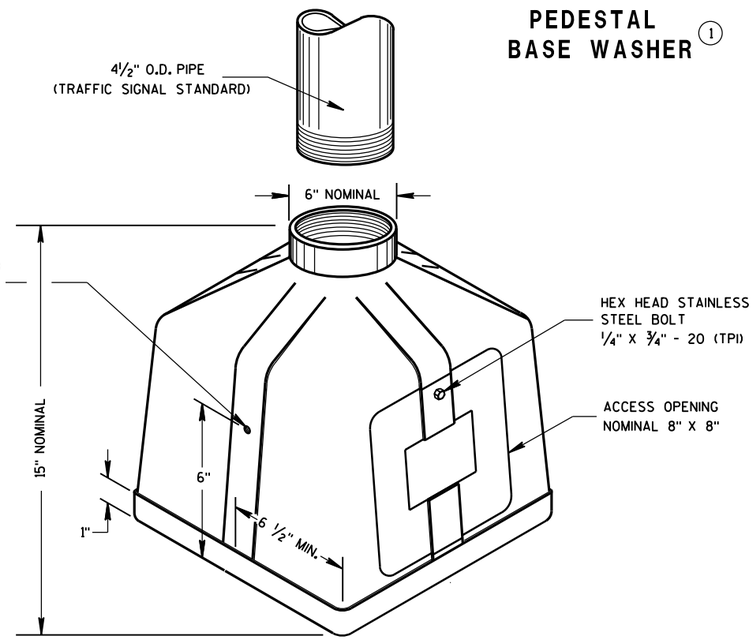


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

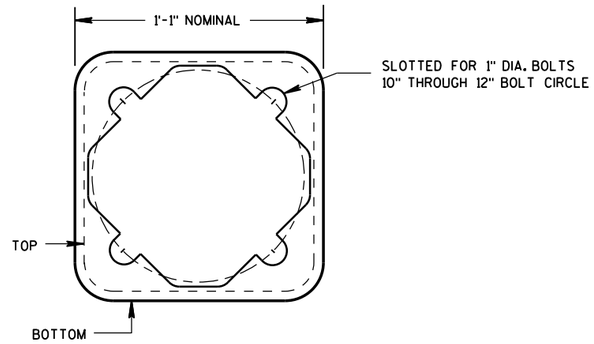


ISOMETRIC VIEW

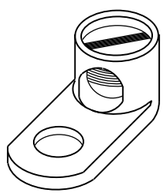


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

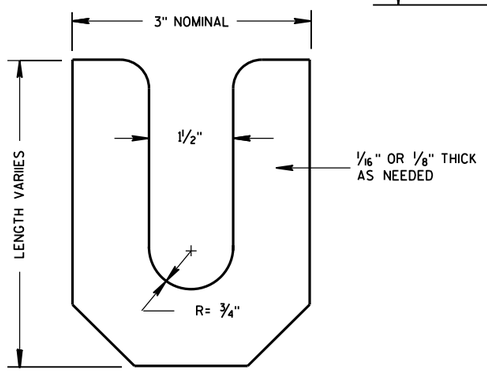


TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES



LEVELING SHIM

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

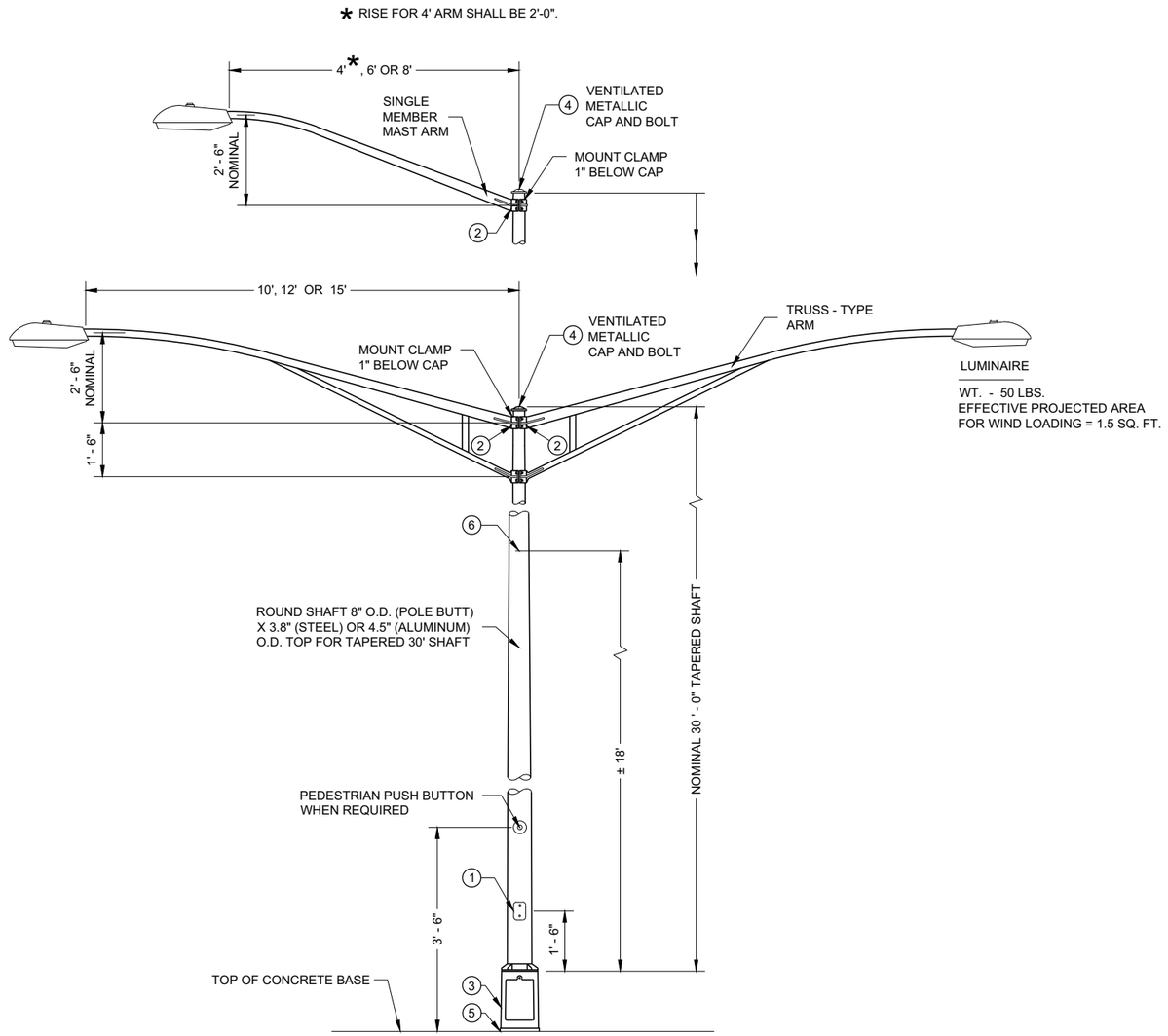
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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S.D.D. 9 C 3-4

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S.D.D. 9 C 3-4



TYPE 5 POLE MOUNTING CONFIGURATION
(MAXIMUM LOAD)
LIGHTING ONLY

GENERAL NOTES

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

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

ALL TYPE 5 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL OR ALUMINUM, AS CALLED FOR IN THE CONTRACT.

TYPE 5 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063 - T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

TYPE 5 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.1888".

TYPE 5 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (0.1196").

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 ⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) ¼" X ¾" - 20 TPI , STAINLESS STEEL, HEX HEAD BOLTS.

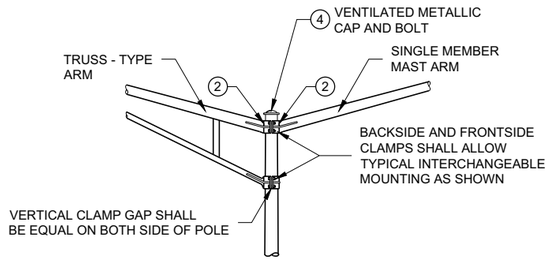
(2) GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 ⅜" HOLE IN POLE SHAFT FOR WIRING.

(3) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

(4) FURNISH AND INSTALL VENTILATED, CAST METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

(5) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.

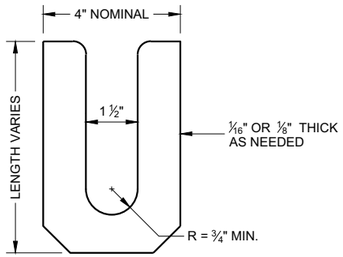
(6) INTERNAL DUMBBELL - TYPE VIBRATION DAMPER.



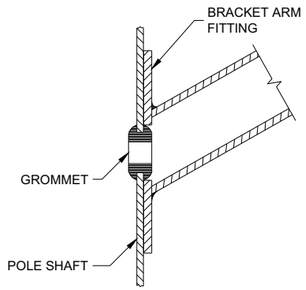
INTERCHANGEABLE MOUNTING DETAIL

POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)

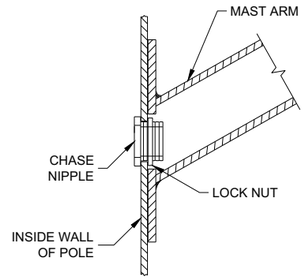
SDD 09E01 - 15d
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LEVELING SHIM (1)
SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

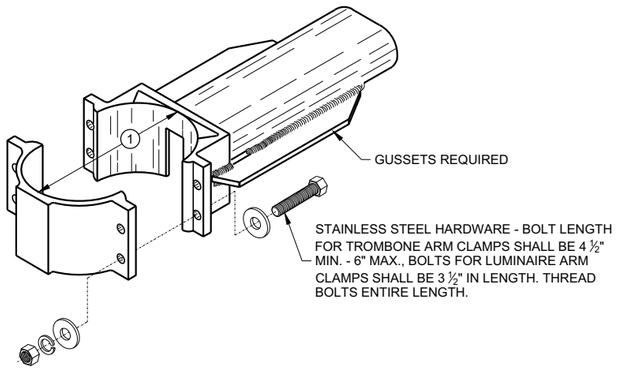
(1) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

(2) INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)

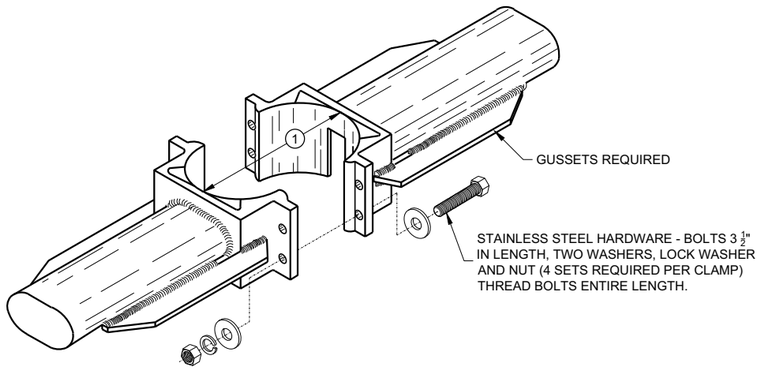
(3) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

(4) LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

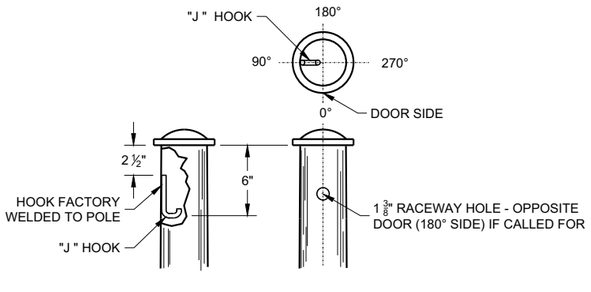
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



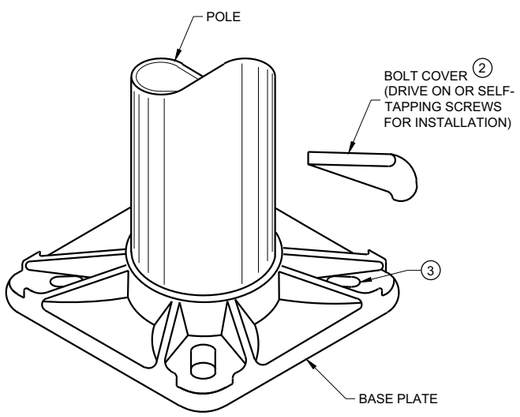
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



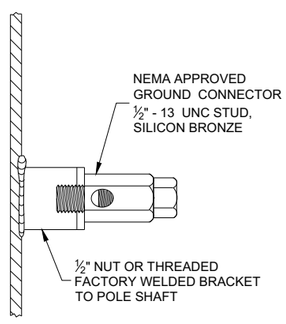
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

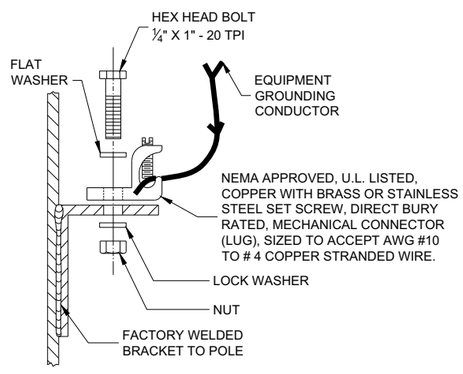


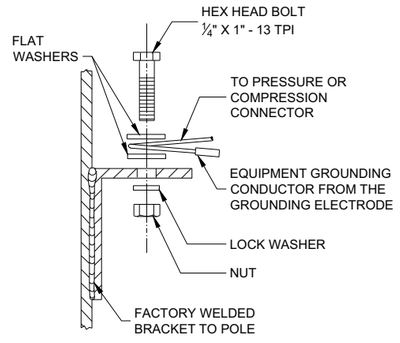
TYPICAL "J" HOOK LOCATION



BASE PLATE







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

HARDWARE DETAILS FOR POLE MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

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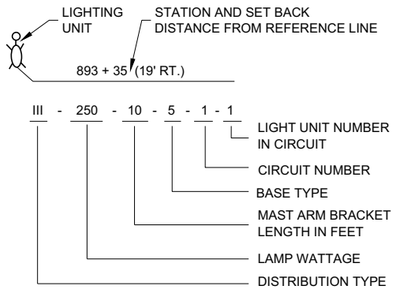
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GENERAL NOTES

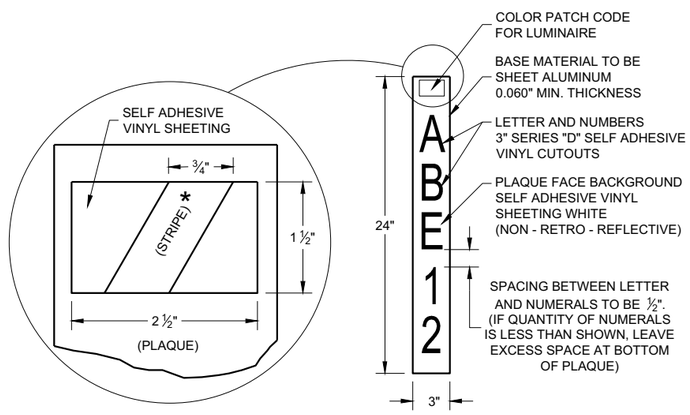
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

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



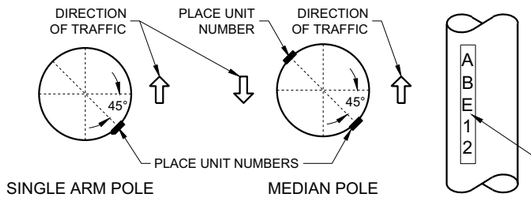
LIGHTING UNIT CODE
(TYPICAL)



COLOR PATCH CODE FOR LUMINAIRES

(HIGH PRESSURE SODIUM)	(MERCURY VAPOR)
1000 WATT - NO PATCH	400 WATT - NO PATCH
400 WATT - ORANGE	250 WATT - YELLOW
310 WATT - BLUE	
250 WATT - ORANGE W / WHITE STRIPE *	
200 WATT - RED	
150 WATT - GREEN	
100 WATT - BROWN	

IDENTIFICATION PLAQUE



NOTES

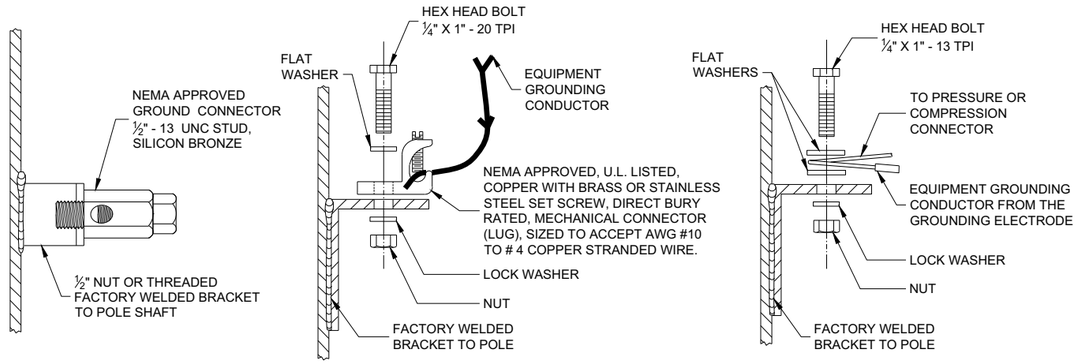
1) PLACE BOTTOM OF UNIT NUMBER PLAQUE 5'-0" ABOVE ELEVATION OF ADJACENT CURB OR SHOULDER.

2) UNIT NUMBER: ONE REQUIRED FOR SINGLE ARM POLES. TWO REQUIRED FOR MEDIAN MOUNT POLES.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE WITH 3 ALUMINUM POP RIVETS (ALUMINUM POLES) OR STAINLESS STEEL POP RIVETS (STEEL POLES).

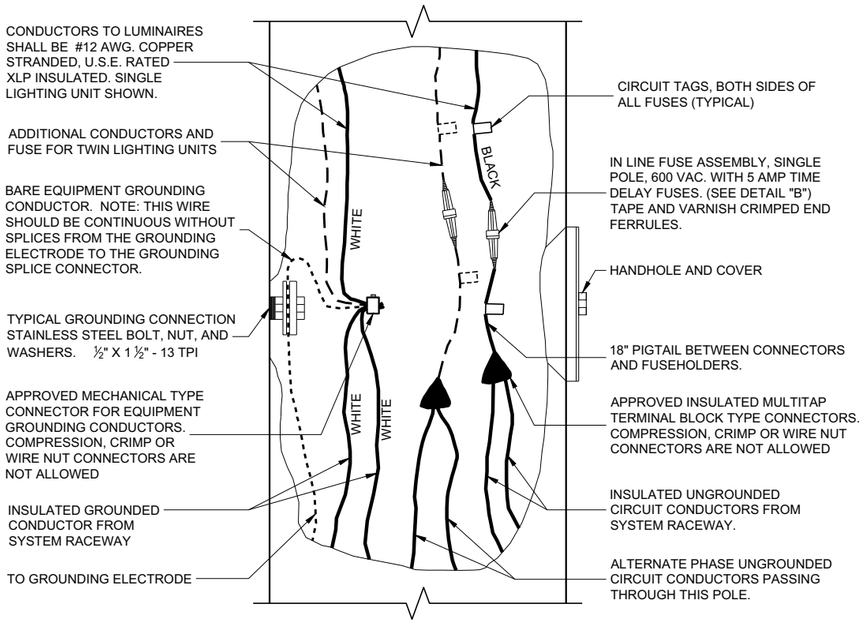
LIGHTING UNIT IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENT
(TYPICAL, ALL LIGHTING UNITS)

FURNISH PLAQUE WHEN CALLED FOR BY SPECIAL PROVISIONS

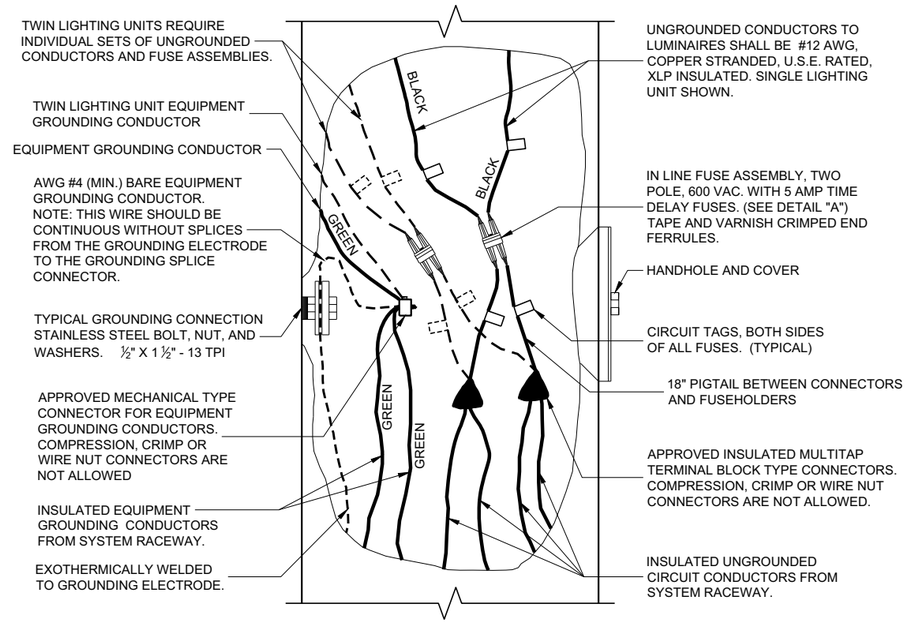


TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

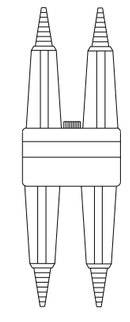
OLD EXISTING FREEWAY WIRING (SOME AREAS)



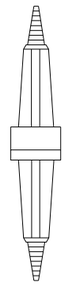
2 WIRE - 120, 240, OR 480 VAC TO GROUND



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



DETAIL "A"
BREAKAWAY DOUBLE POLE WITH WATERPROOF INSULATING BOOT



DETAIL "B"
BREAKAWAY SINGLE POLE WITH WATERPROOF INSULATING BOOT

FREEWAY LIGHTING UNIT POLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Ahmet Demirbilek
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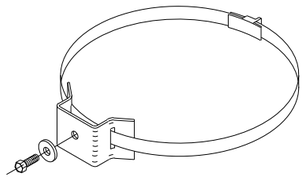
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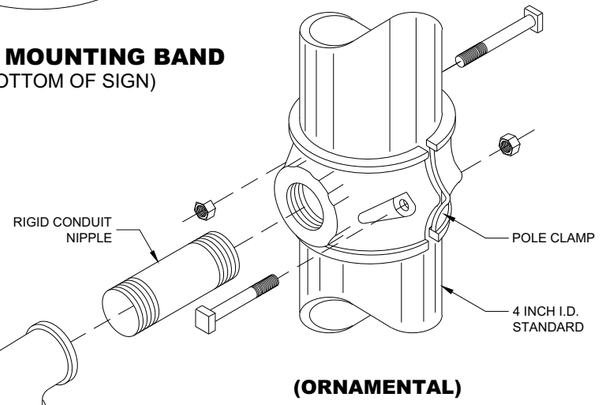
SDD 09E02 - 05

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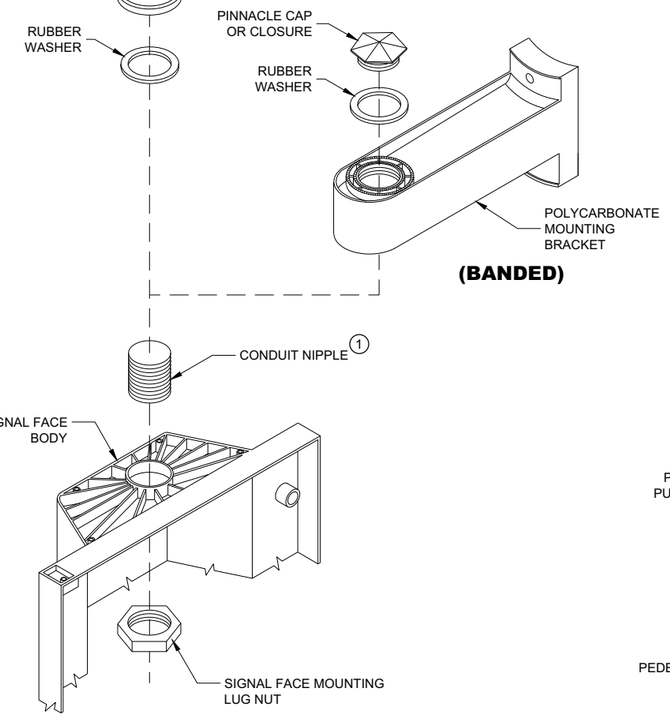
SDD 09E02 - 05



TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)

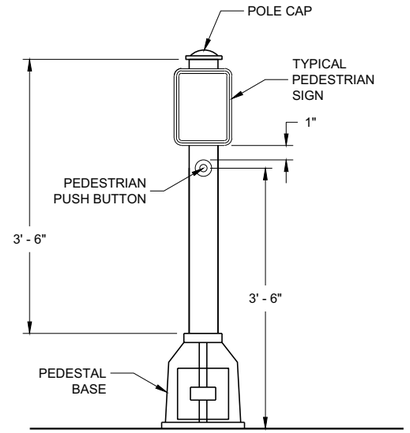


(ORNAMENTAL)



(BANDED)

SIGNAL FACE MOUNTING DETAILS



PEDESTRIAN PUSH BUTTON TYPICAL MOUNTING

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

LOCATIONS SHALL BE AS SHOWN ON THE PLANS, UNLESS APPROVED BY THE ENGINEER IN THE FIELD.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIFICATIONS.

POLYCARBONATE SIGNAL FACE MOUNTING BRACKETS SHALL BE USED UNLESS ORNAMENTAL POLE CLAMPS ARE SPECIFIED.

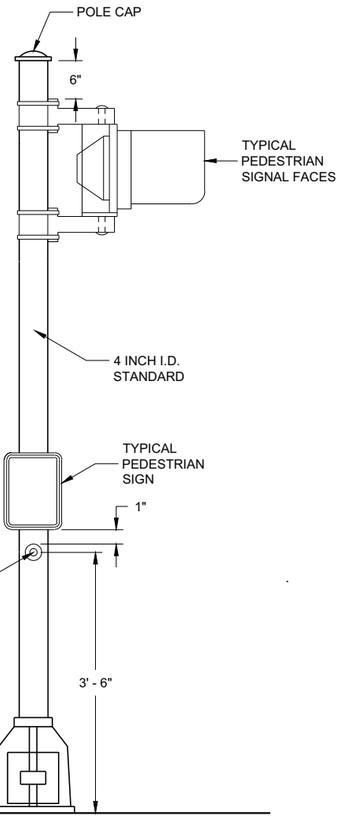
LENGTH OF TRAFFIC STANDARDS SHALL BE AS SHOWN ON THE PLANS.

MOUNTINGS AND BRACKETS SHALL BE AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIAL PROVISIONS (BY THE REGION TRAFFIC ENGINEER).

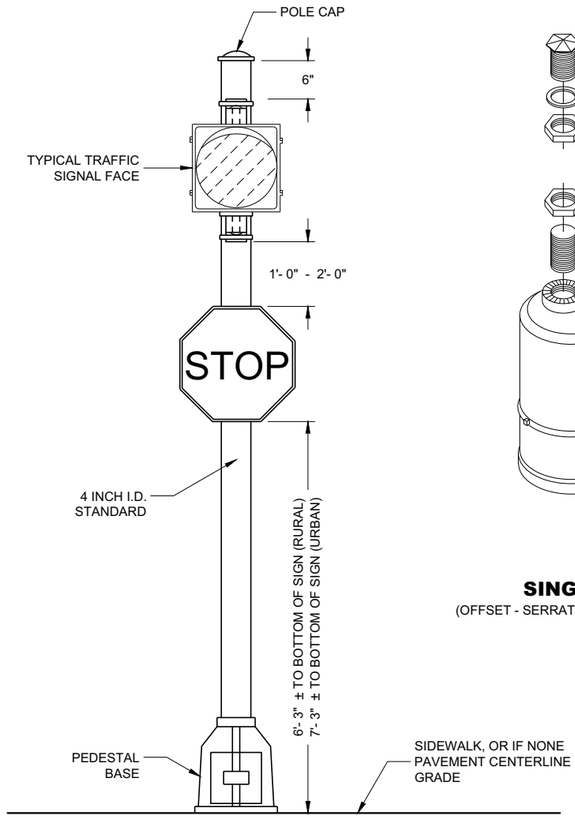
PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

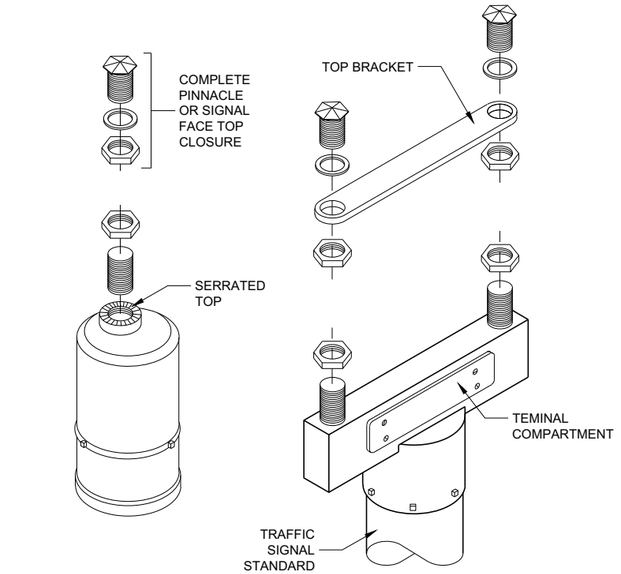
(1) USE 1 ½" ID NIPPLES ZINC-COATED RIGID METAL CONDUIT, LONG ENOUGH TO ACCOMMODATE FULL DEPTH THREADING INTO THE HEAD MOUNTING LOCK NUT IN ORDER TO TIGHTEN THE FACE, BUT THAT DO NOT INTERFERE WITH REFLECTOR CLOSURE. THREAD THE NIPPLE INTO THE MOUNTING BRACKET/ELBOW UNTIL TIGHT. USE APPROVED PINNACLE TYPE HARDWARE FROM A DEPARTMENT APPROVED MANUFACTURER TO CLOSE THE UNUSED 1 ½" OPENING IN SIGNAL FACESAND BRACKET ENDS.



PEDESTRIAN FACE STANDARD - 10 FT.
(WALK - DON'T WALK)



STANDARD FLASHER
10 FOOT, 13 FOOT OR 15 FOOT AS REQUIRED



SINGLE
(OFFSET - SERRATED MOUNTING)

DOUBLE
(SERRATED MOUNTING)

SLIPFITTERS

TRAFFIC SIGNAL STANDARD
PEDESTRIAN AND FLASHER
TYPICAL MOUNTING DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

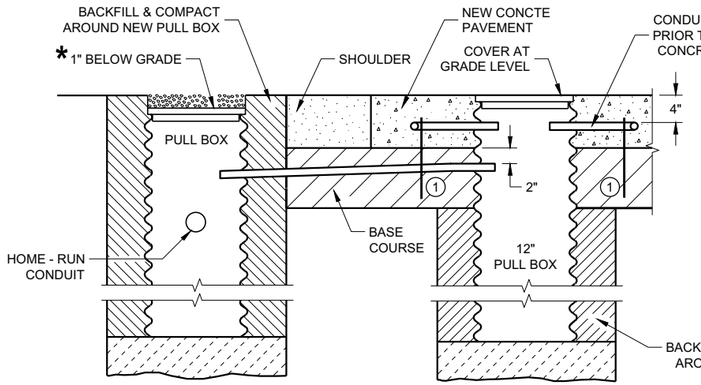
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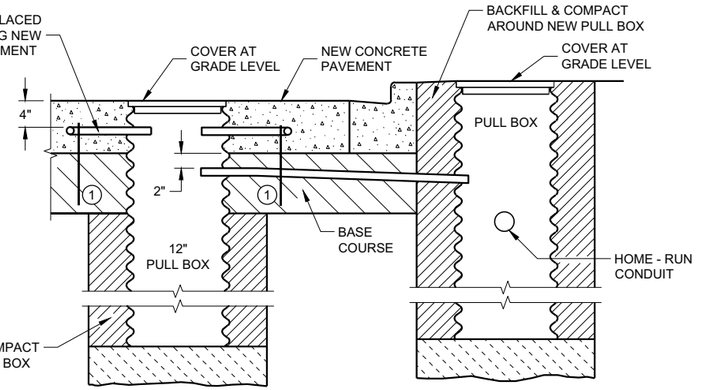
SDD 09E07 - 06

SDD 09E07 - 06



SECTION A - A
NO CURB AND GUTTER

LOOP DETECTOR INSTALLATION DETAIL



SECTION B - B
CURB AND GUTTER

LOOP DETECTOR INSTALLATION DETAIL

* RECESS PULL BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

GENERAL NOTES

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

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL BOX.

LOOP SIZE, LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READING TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

ANY PVC LEADOUT CONDUIT CONTAINING MORE THAN ONE TWISTED PAIR OF LOOP LEAD WIRE SHALL BE 2".

THE #12 AWG LOOP WIRE FROM THE LOOP TO THE ROADSIDE PULL BOX, SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE INSTALLATION.

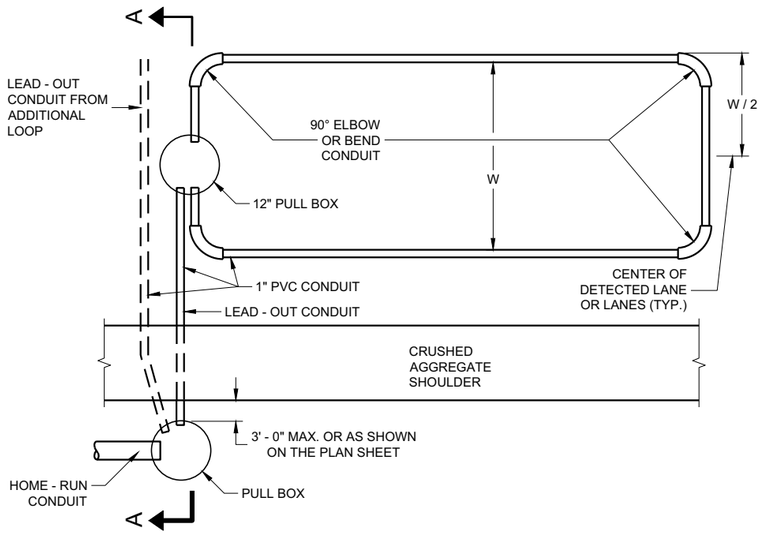
SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL BOXES AT THE SIDE OF THE ROAD.

THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL BOX, INTO THE PULL BOX IN THE PAVEMENT, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL BOX, AND BE INSTALLED IN ONE NON-SPLICED CONTINUOUS LENGTH.

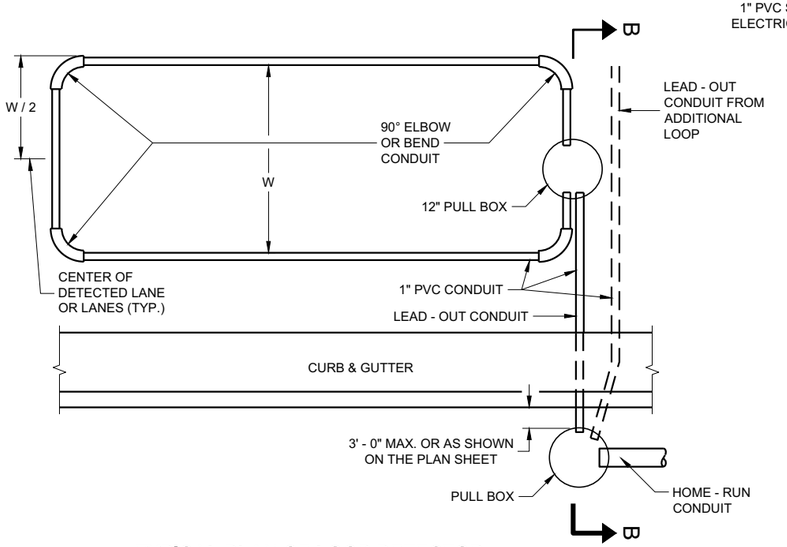
PROTECTION OF THE PULL BOX IN THE BASE COURSE, AND THE RELATED CONDUITS SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW CONCRETE PAVEMENT IS POURED.

12" PULL BOXES IN PAVEMENT SHALL BE CORRUGATED STEEL ONLY.

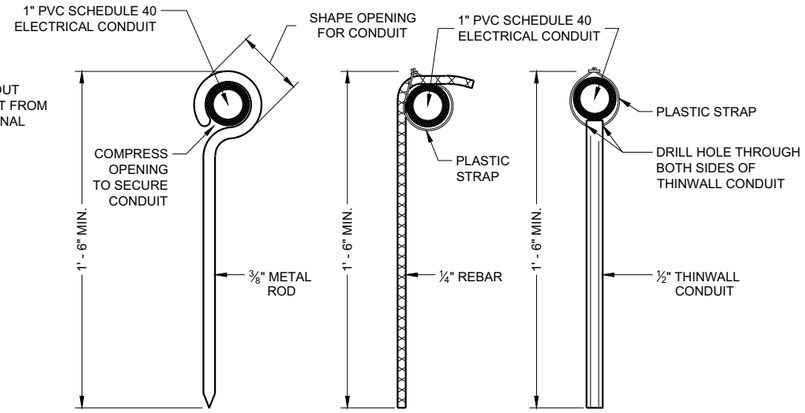
(1) HOLD DOWN PINS TO HOLD CONDUIT DURING POUR.



TYPICAL PLAN OF LOOP DETECTOR WITH 12" PULLBOX



TYPICAL PLAN OF LOOP DETECTOR WITH 12" PULLBOX



TYPICAL DETAILS FOR HOLD DOWN PINS (1)

LOOP DETECTOR INSTALLED IN NEW CONCRETE PAVEMENT ROUND CSCP PULLBOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

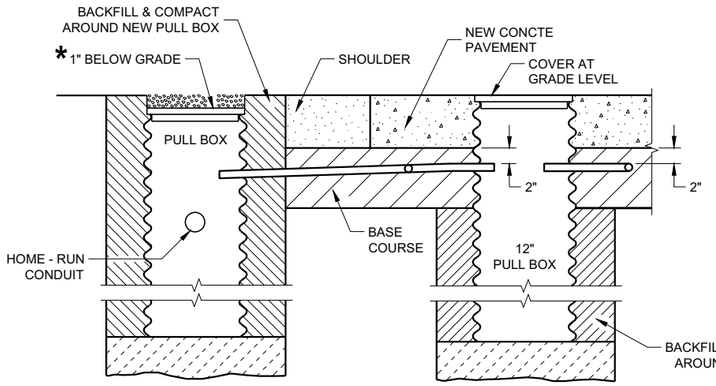
APPROVED
November 2018
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

FHWA

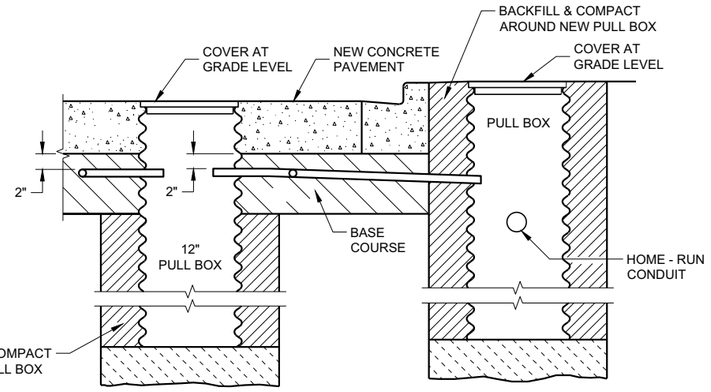
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SDD 09F04 - 05



SECTION A - A
NO CURB AND GUTTER

LOOP DETECTOR INSTALLATION DETAIL



SECTION B - B
CURB AND GUTTER

LOOP DETECTOR INSTALLATION DETAIL

* RECESS PULL BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

GENERAL NOTES

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

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL BOX.

LOOP SIZE, LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READING TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

ANY PVC LEADOUT CONDUIT CONTAINING MORE THAN ONE TWISTED PAIR OF LOOP LEAD WIRE SHALL BE 2".

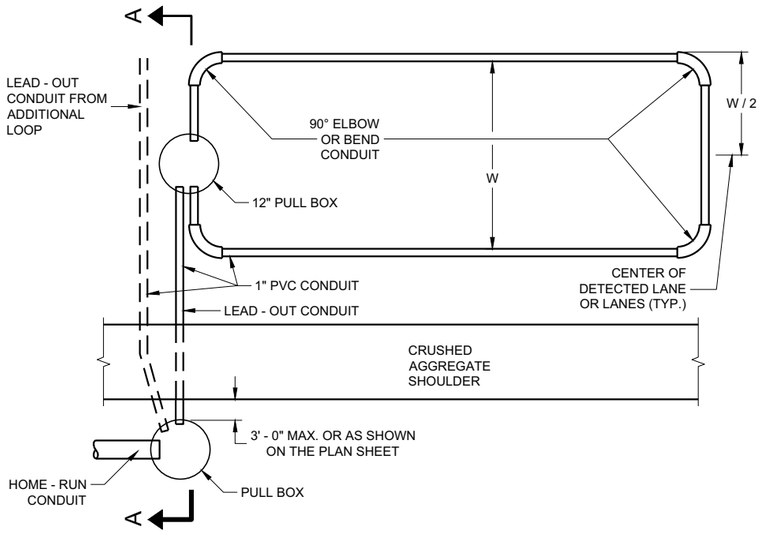
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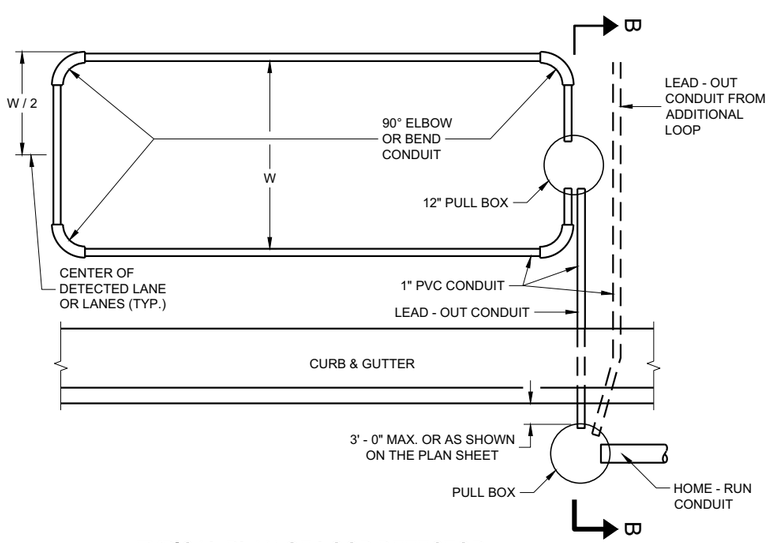
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PROTECTION OF THE CONDUIT, CONDULET, PULL BOX SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW CONCRETE PAVEMENT IS POURED.

12" PULL BOXES IN PAVEMENT SHALL BE CORRUGATED STEEL ONLY.



TYPICAL PLAN OF LOOP DETECTOR WITH 12" PULLBOX



TYPICAL PLAN OF LOOP DETECTOR WITH 12" PULLBOX

LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW CONCRETE PAVEMENT)

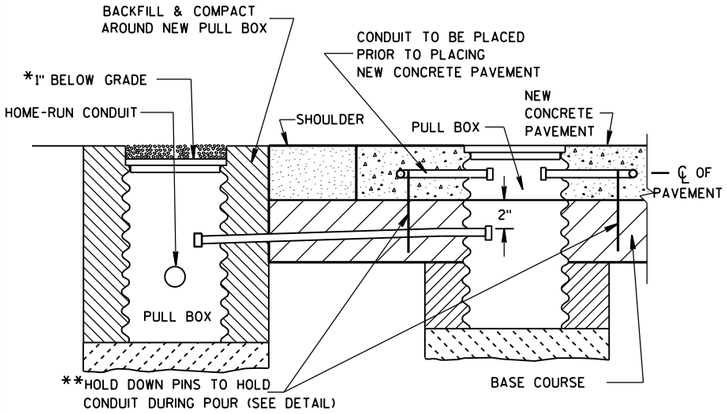
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE
/S/ Ahmet Demirbilek
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SDD 09F09 - 05



SECTION A-A
NO CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAIL

*RECESS PULL BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

GENERAL NOTES

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

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PITCH LEAD-OUT CONDUIT TO DRAIN TO ROADSIDE PULL BOX.

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MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

ANY PVC LEAD-OUT CONDUIT CONTAINING MORE THAN TWO TWISTED PAIR OF LOOP LEAD-IN WIRE SHALL BE 2".

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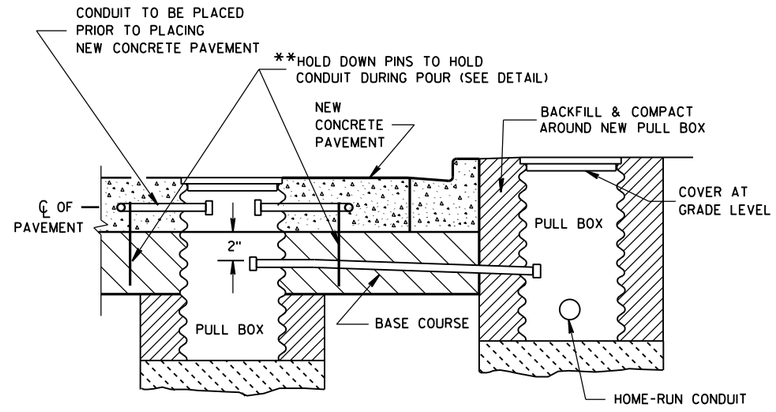
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PROTECTION OF THE PULL BOX IN THE BASE COURSE, AND THE RELATED CONDUITS SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW CONCRETE PAVEMENT IS POURED. ANY DAMAGE THAT OCCURS DUE TO FAILURE TO PROTECT THE INSTALLATION SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.

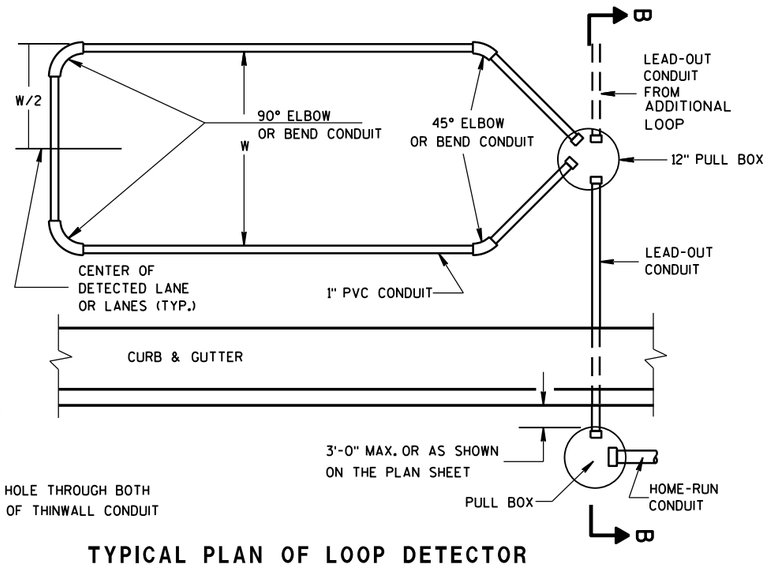
SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE ACCOMPLISHED UNDER THE DIRECTION OF THE PROJECT ENGINEER.

12" PULL BOXES IN PAVEMENT SHALL BE CORRUGATED STEEL ONLY.

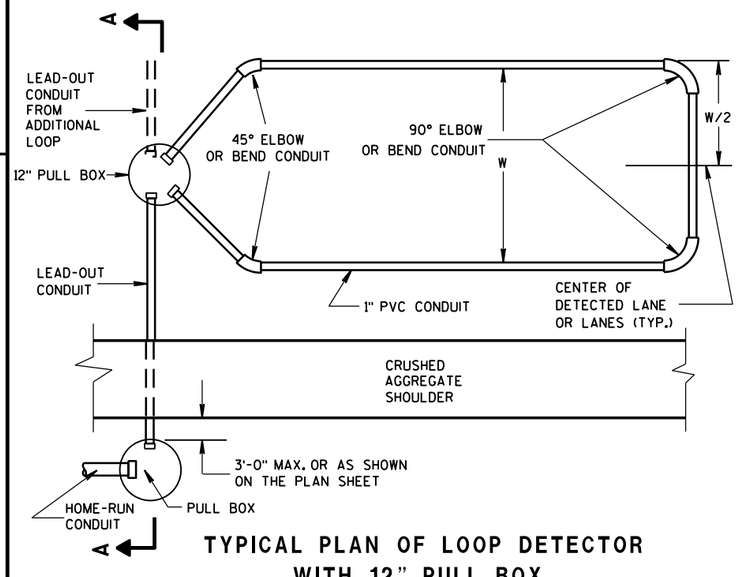


SECTION B-B
CURB & GUTTER

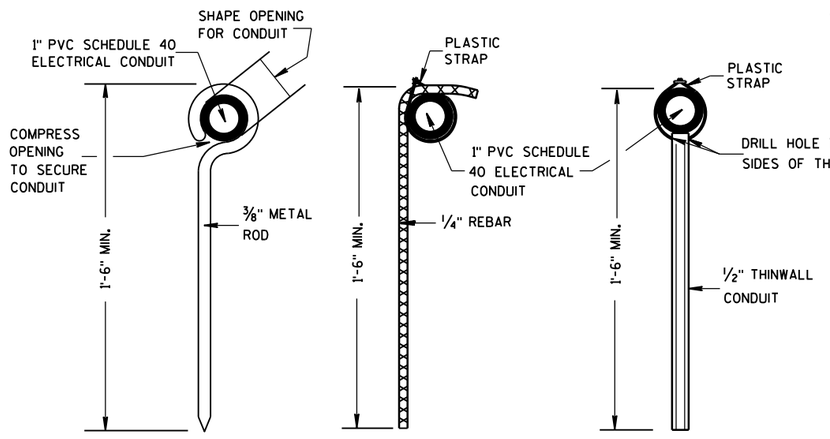
LOOP DETECTOR INSTALLATION DETAIL



TYPICAL PLAN OF LOOP DETECTOR WITH 12" PULL BOX



TYPICAL PLAN OF LOOP DETECTOR WITH 12" PULL BOX



TYPICAL DETAILS FOR HOLD DOWN PINS

**HOLD DOWN PINS ARE REQUIRED TO STABILIZE THE LOOP TO MEET THE DIMENSIONAL AND PHYSICAL CONSTRUCTION REQUIREMENTS OF THE PLANS. THE NUMBER OF HOLD DOWN PINS SHALL BE DETERMINED IN THE FIELD, BY THE PROJECT ENGINEER.

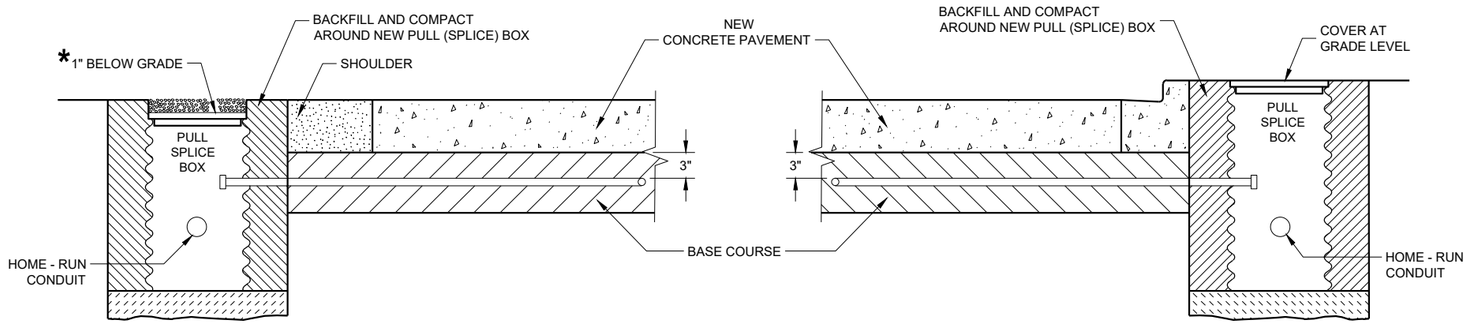
LOOP DETECTOR INSTALLED IN NEW CONCRETE PAVEMENT
ROUND CSCP PULL BOX
45 DEGREE ELBOWS TO PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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SECTION A - A
NO CURB AND GUTTER

SECTION B - B
CURB AND GUTTER

*RECESS PULL (SPLICE) BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

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

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL (SPLICE) BOX.

LOOP SIZE, LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

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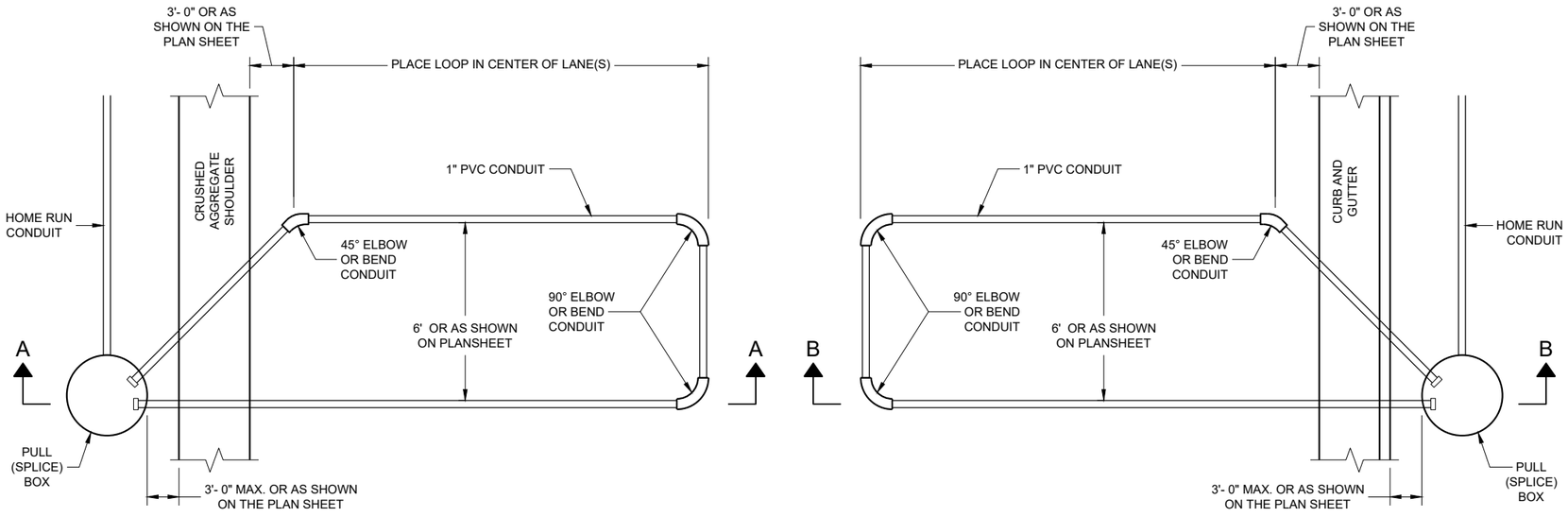
THE #12 AWG LOOP WIRE IN THE ROADSIDE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL (SPLICE) BOXES AT THE SIDE OF THE ROAD.

THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPLICE) BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPLICE) BOX, AND BE INSTALLED IN ONE NON-SPLICED, CONTINUOUS LENGTH.

PROTECTION OF THE CONDUIT IN THE BASE COURSE SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW PAVEMENT IS INSTALLED.

SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE DONE UNDER THE DIRECTION OF THE PROJECT ENGINEER.



TYPICAL PLAN LOOP DETECTOR WITH 18" OR 24" PULL (SPLICE) BOX

LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
September 2014
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

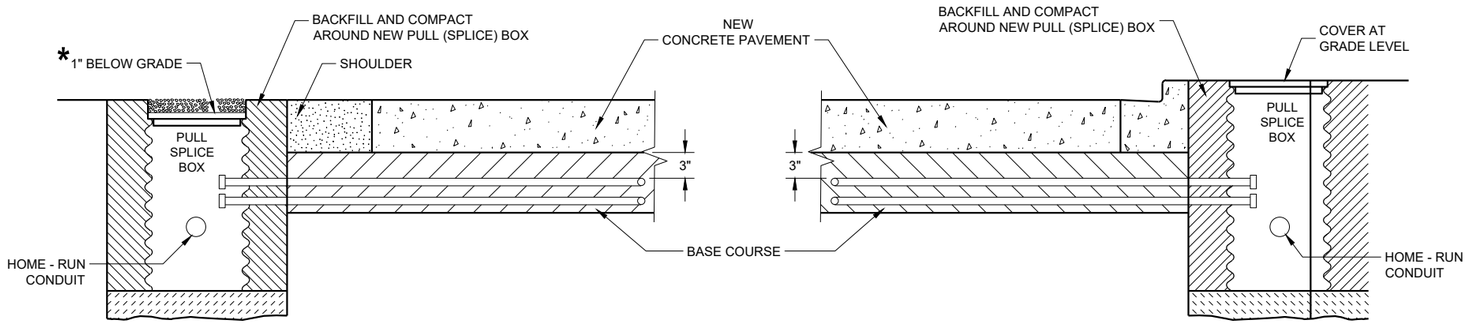
FHWA

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SDD 09F15 - 04a

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SDD 09F15 - 04a



SECTION A - A
NO CURB AND GUTTER

SECTION B - B
CURB AND GUTTER

* RECESS PULL (SPLICE) BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

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

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL (SPLICE) BOX.

LOOP SIZE, LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

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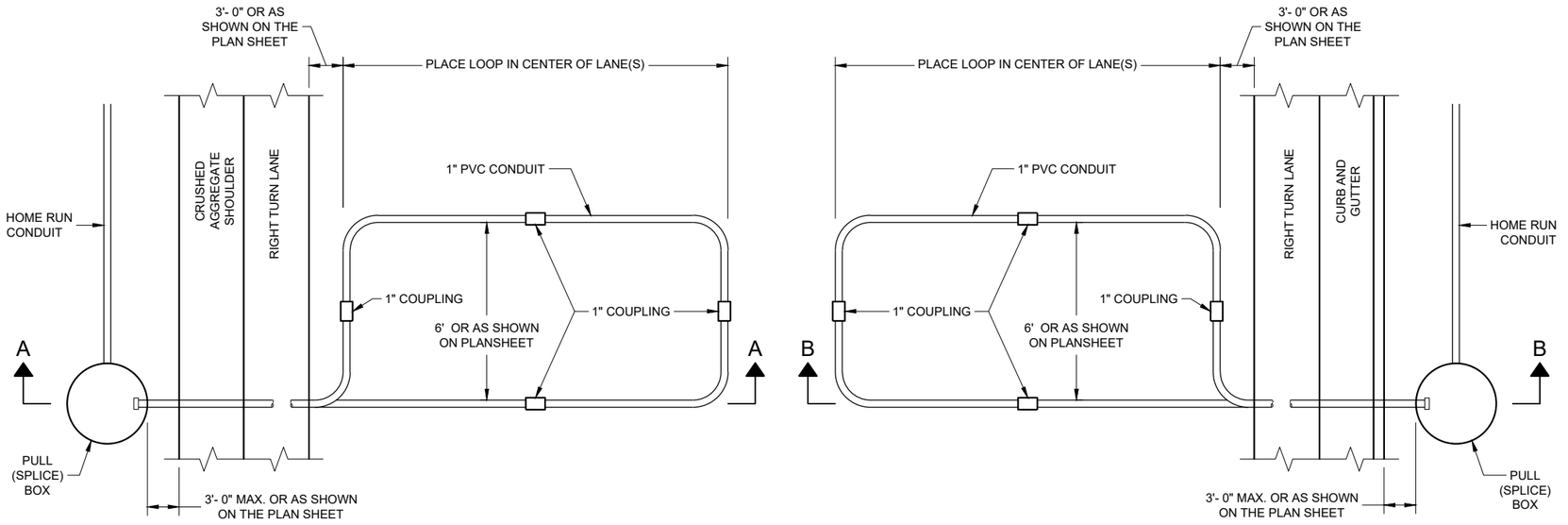
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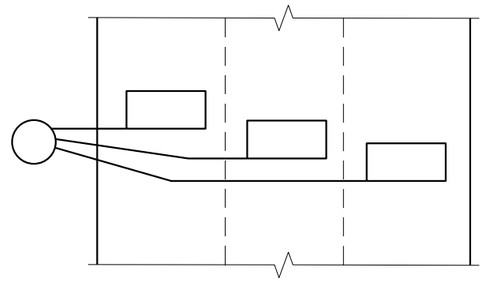
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PROTECTION OF THE CONDUIT IN THE BASE COURSE SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW PAVEMENT IS INSTALLED.

SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE DONE UNDER THE DIRECTION OF THE PROJECT ENGINEER.



TYPICAL PLAN LOOP DETECTOR WITH 24" PULL (SPLICE) BOX



MULTI-LANE INSTALLATION

LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
September 2014
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

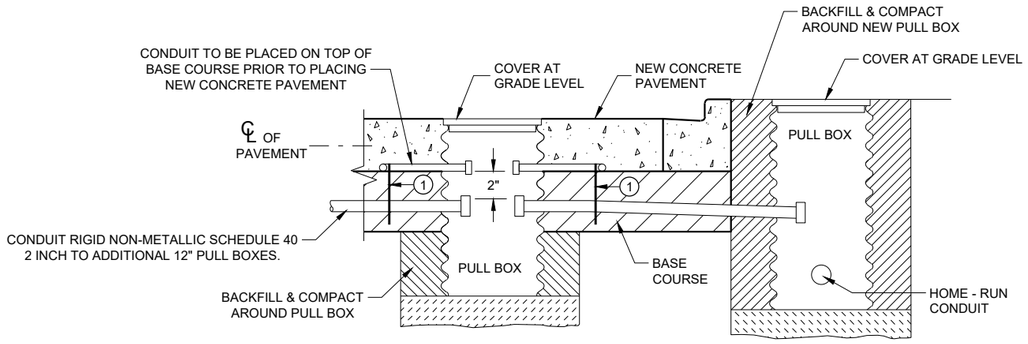
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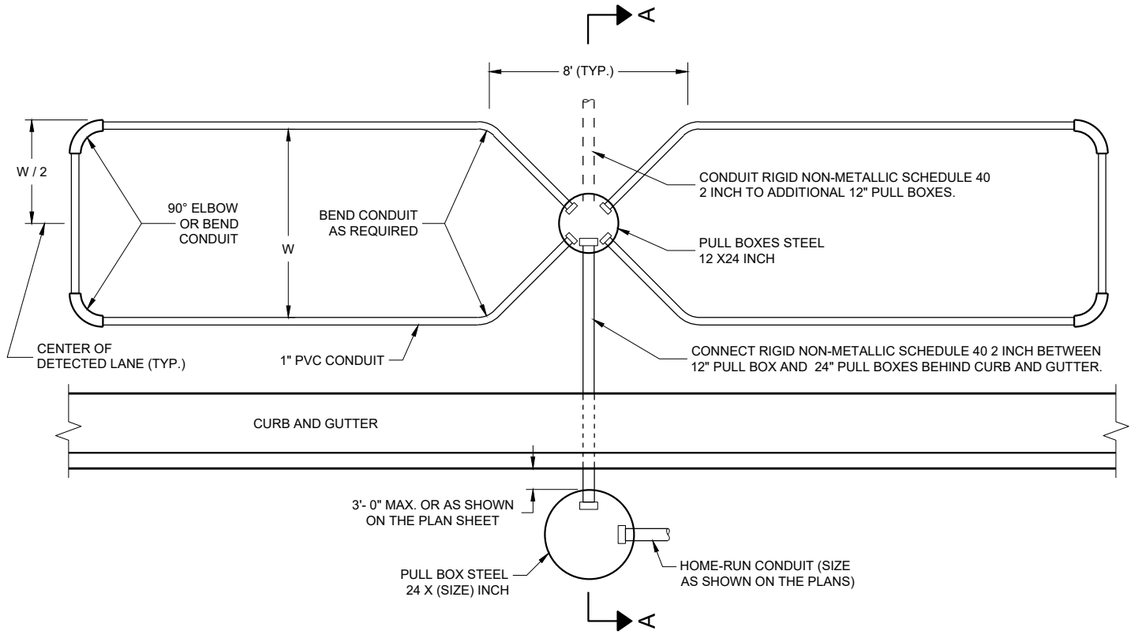
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SDD 09F15 - 04b



SECTION A - A
CURB AND GUTTER
LOOP DETECTOR INSTALLATION DETAIL



TYPICAL PLAN OF LOOP DETECTOR WITH 12" PULL BOX

GENERAL NOTES

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

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL BOX.

LOOP SIZE, LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

THE GROUND RESISTANCE READING OF THE LOOP SHALL READ "INFINITY" TO GROUND ON AN OHMMETER USING A MULTIPLIER SCALE OF 1 MEGOHM AND AN INPUT RESISTANCE OF 11 MEGOHMS MINIMUM BEFORE SPLICING THE LOOP TO THE LEAD-IN CABLE.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READING TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

THE #12 AWG LOOP WIRE FROM THE LOOP TO THE ROADSIDE PULL BOX, SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE INSTALLATION.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL BOXES AT THE SIDE OF THE ROAD.

THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL BOX, INTO THE PULL BOX IN THE PAVEMENT, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL BOX, AND BE INSTALLED IN ONE NON-SPLICED CONTINUOUS LENGTH.

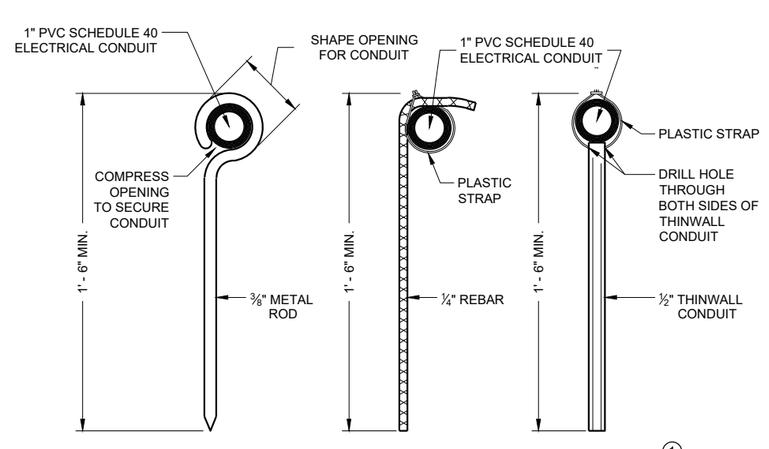
ANY PVC LEAD-OUT CONDUIT CONTAINING LOOP LEAD-IN CABLES SHALL BE 2 INCHES.

PROTECTION OF THE PULL BOX IN THE BASE COURSE AND THE RELATED CONDUITS SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW CONCRETE PAVEMENT IS POURED. ANY DAMAGE THAT OCCURS DUE TO FAILURE TO PROTECT THE INSTALLATION SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE ACCOMPLISHED UNDER THE DIRECTION OF THE PROJECT ENGINEER.

12 INCH PULL BOXES IN PAVEMENT SHALL BE CORRUGATED STEEL ONLY.

(1) HOLD DOWN PINS TO HOLD CONDUIT DURING POUR. HOLD DOWN PINS ARE REQUIRED TO STABILIZE THE LOOP TO MEET THE DIMENSIONAL CONSTRUCTION REQUIREMENTS OF THE PLANS. THE NUMBER OF HOLD DOWN PINS SHALL BE DETERMINED IN THE FIELD BY THE PROJECT ENGINEER.

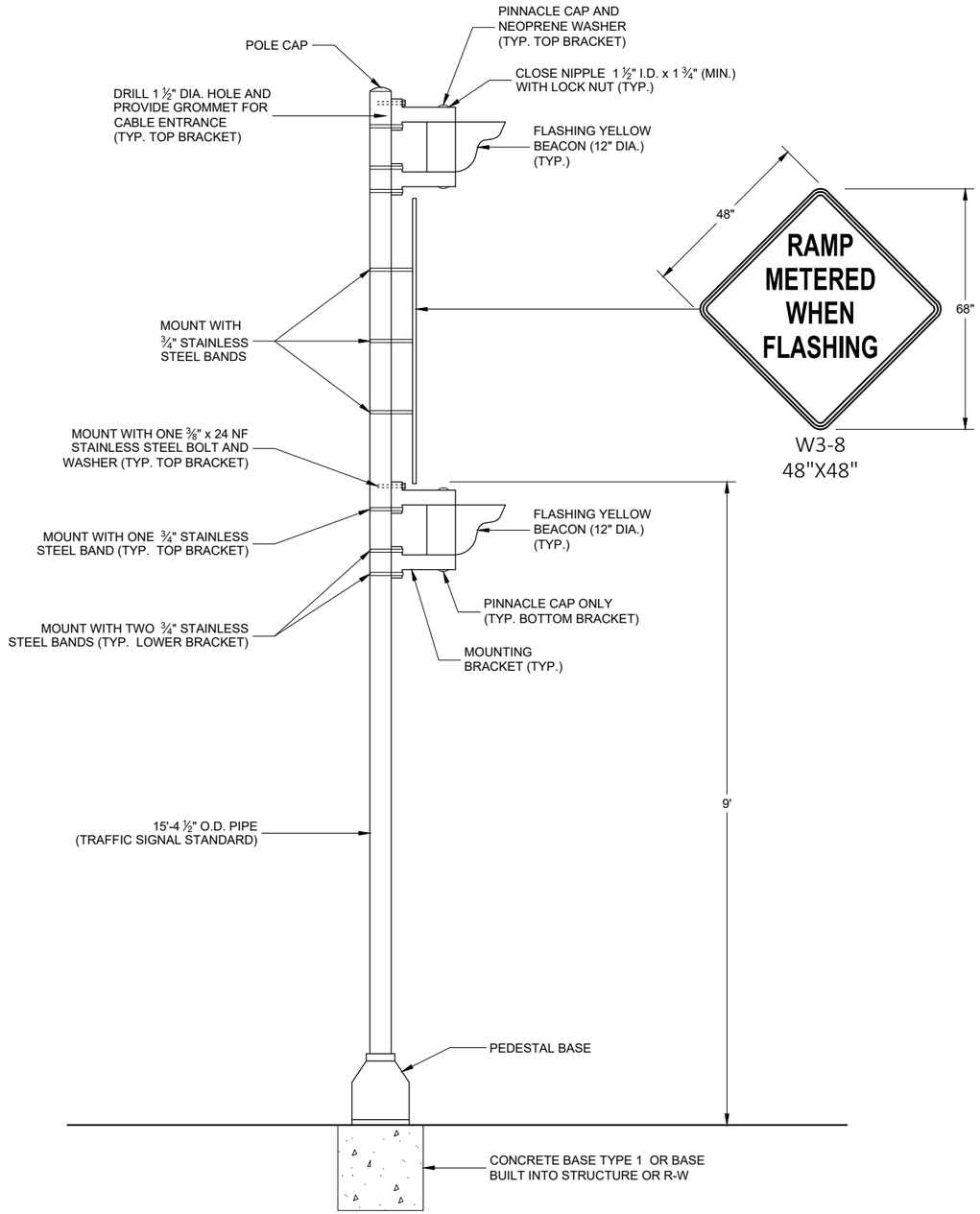


TYPICAL DETAILS FOR HOLD DOWN PINS (1)

TWO LOOP DETECTORS INSTALLED IN NEW CONCRETE PAVEMENT ROUND CSCP PULL BOX 45° ELBOWS TO PULL BOX

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September 2014
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/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 152
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SIGNAL ASSEMBLY ADVANCE FLASHER TYPE 1

SIGNAL ASSEMBLY
ADVANCE FLASHER TYPE 1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2015
DATE

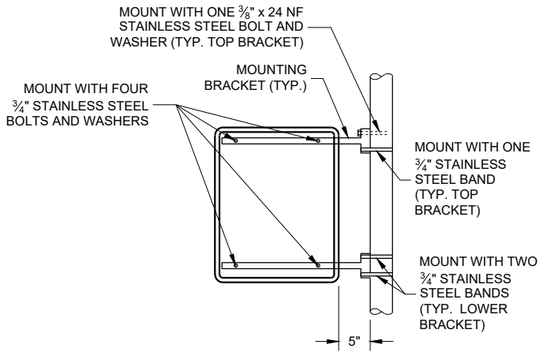
/S/ Ahmet Demirbilek
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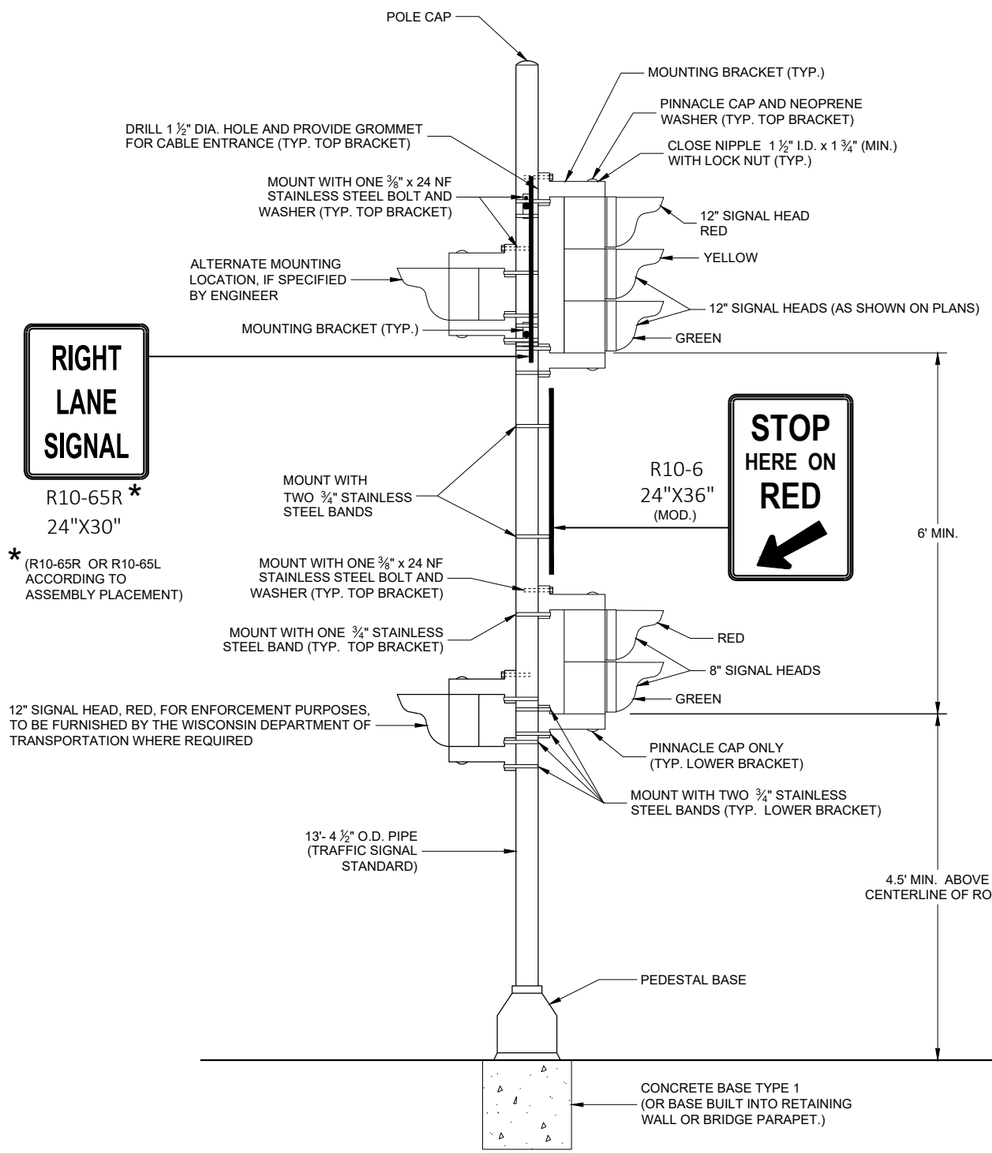
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SDD 09H06 - 02

NOTE
R10-6 SIGN: AN ARROW POINTING LEFT SHALL BE USED ON A RIGHT SIDE SIGNAL AND AN ARROW POINTING RIGHT SHALL BE USED ON A LEFT SIDE SIGNAL.



REAR VIEW



SIGNAL ASSEMBLY RAMP CONTROL SIDEMOUNT

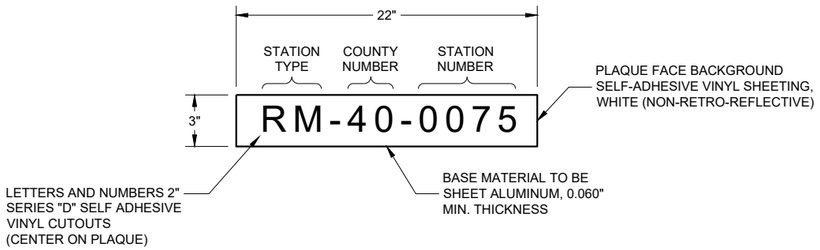
SIGNAL ASSEMBLY RAMP CONTROL SIDEMOUNT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

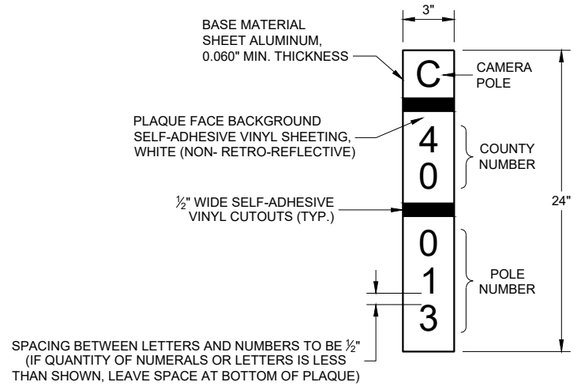
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CONTROL CABINET IDENTIFICATION PLAQUE DETAIL



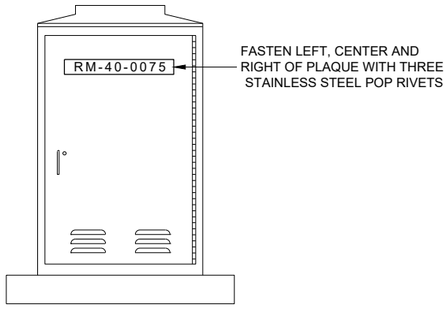
POLE IDENTIFICATION PLAQUE DETAIL

GENERAL NOTES

1. TWO PLAQUES PER CABINET REQUIRED ON CONTROL CABINET.
2. FASTEN ONE PLAQUE ON FRONT DOOR, UPPER HALF.
3. FASTEN ONE PLAQUE ON SIDE FACING LOCAL STREET. IF NO LOCAL STREET NEARBY, OR IF SUCH LOCATION COINCIDES WITH LOCATION OF PLAQUE IN NOTE 2 , FASTEN PLAQUE ON REAR OF CABINET, UPPER HALF.
4. COUNTY NUMBER NOT REQUIRED ON RAMP METER CABINETS.

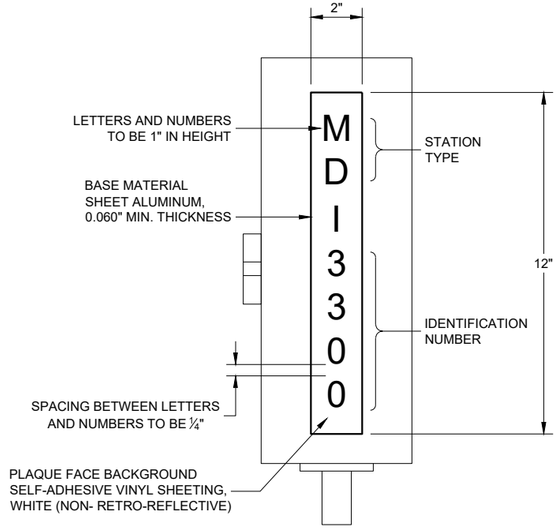
LEGEND STATION TYPE

RM - RAMP METER
CCTV - CLOSED CIRCUIT TELEVISION
ATR - AUTOMATIC TRAFFIC RECORDER
SDS - SYSTEM DETECTOR STATION
MD - MICROWAVE DETECTOR



CONTROL CABINET IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENTS

(TYPICAL ALL CONTROL CABINETS)



MICROWAVE DETECTOR FIELD CABINET IDENTIFICATION PLAQUE DETAIL

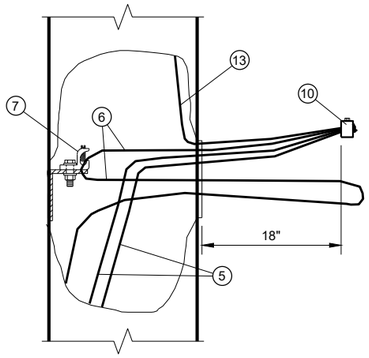
IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

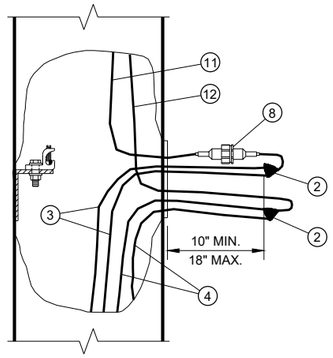
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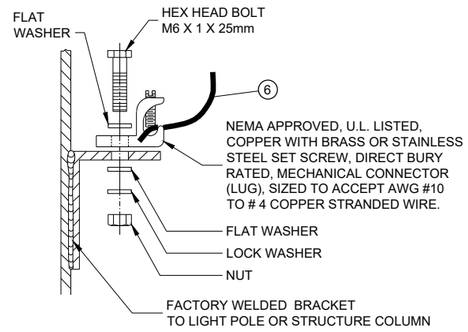


EQUIPMENT GROUNDING CONDUCTOR SLACK



UNGROUNDED CONDUCTOR SLACK (AND GROUNDED NEUTRAL SLACK IN GROUNDED NEUTRAL SYSTEM)

TYPICAL CONDUCTOR SLACK AT HANDHOLES



HANDHOLE GROUNDING LUG

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

GENERAL NOTES

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

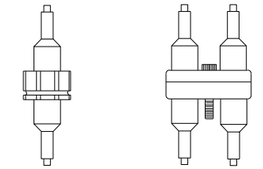
USE THIS DETAIL IN CONJUNCTION WITH THE ELECTRICAL DETAILS FOR THE APPLICATION, WHICH MAY BE A LIGHT POLE, SIGN BRIDGE, ETC.

THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLE GROUNDING LUG TO THE CONNECTOR.

THREE POLE WIRES ARE SHOWN FOR A SINGLE LUMINAIRE LIGHT POLE. THREE ADDITIONAL POLE WIRES REQUIRED FOR TWIN LUMINAIRE LIGHT POLES ARE OMITTED FROM THE DRAWING FOR CLARITY. IN THE TWIN POLE CASE, BUNDLE EACH SET OF THREE WIRES WITH A NYLON CABLE TIE.

IN 3-PHASE SYSTEMS, THERE WILL BE ONE MORE UNGROUNDED LINE WIRE, WHICH IS OMITTED FROM THE DRAWING FOR CLARITY.

CIRCUIT TAGS SHALL BE INSTALLED ONLY WHERE REQUIRED IN THE SPECIAL PROVISIONS.



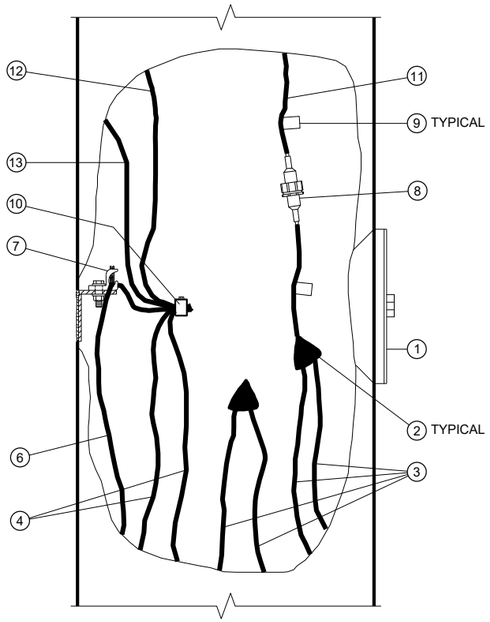
1 POLE (1P) 2 POLE (2P)

FUSE ASSEMBLIES

CONDUCTOR COLOR CODES

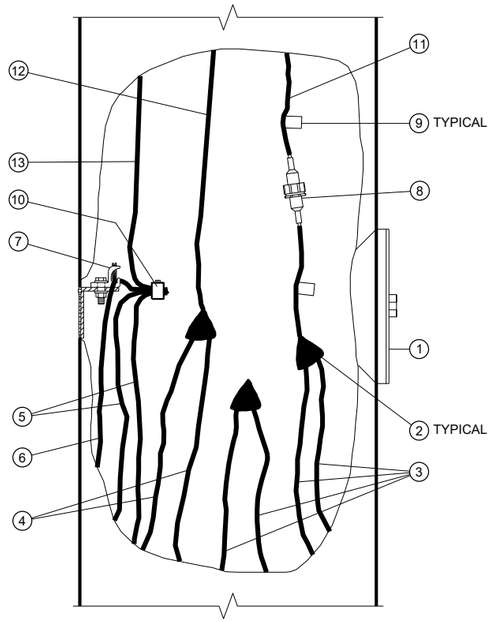
KEY	CONDUCTOR	COLOR
3	UNGROUNDED LINE WIRE	*
4	GROUNDED LINE WIRE	WHITE
5	SYSTEM GROUNDING LINE WIRE	GREEN
6	GROUNDING ELECTRODE CONDUCTOR	BARE
11	UNGROUNDED POLE WIRE	*
12	GROUNDED POLE WIRE	WHITE
13	EQUIPMENT GROUNDING POLE WIRE	GREEN

* FOLLOW COLOR CODING SHOWN IN THE PLANS. WHERE THE PLANS DO NOT SHOW COLOR CODING, USE BLACK FOR SINGLE LUMINAIRE POLES; BLACK AND RED FOR TWIN LUMINAIRE POLES.



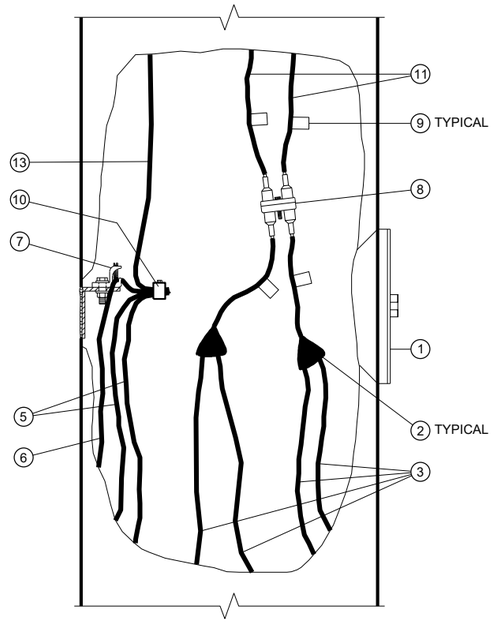
CUTAWAY HANDHOLE DETAIL

GROUNDED NEUTRAL SYSTEMS
1-ϕ



CUTAWAY HANDHOLE DETAIL

ISOLATED NEUTRAL SYSTEMS
1-ϕ SHOWN; 3-ϕ WYE SIMILAR
(SEE GENERAL NOTE)



CUTAWAY HANDHOLE DETAIL

PHASE TO PHASE SYSTEMS
1-ϕ SHOWN; 3-ϕ DELTA SIMILAR
(SEE GENERAL NOTE)

NOTE: REQUIRED CONDUCTOR SLACK NOT SHOWN ON "CUTAWAY HAND HOLE" DETAILS FOR DRAWING CLARITY, SEE "TYPICAL CONDUCTOR SLACK AT HANDHOLES" ON THIS SHEET.

1. HANDHOLE AND COVER
2. INSULATED SPLICE
3. UNGROUNDED LINE WIRE
4. GROUNDED LINE WIRE
5. SYSTEM GROUNDING LINE WIRE
6. GROUNDING ELECTRODE CONDUCTOR
7. HANDHOLE GROUNDING LUG
8. FUSE ASSEMBLY, 1P OR 2P AS REQUIRED
9. CIRCUIT TAG (SEE GENERAL NOTE)
10. REVERSIBLE PRESSURE OR COMPRESSION GROUNDING CONNECTOR (NOT INSULATED)
11. UNGROUNDED POLE WIRE
12. GROUNDED POLE WIRE
13. EQUIPMENT GROUNDING POLE WIRE

ELECTRICAL HANDHOLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

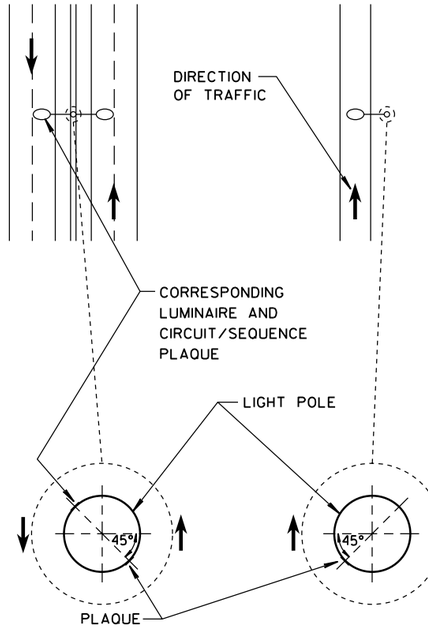
APPROVED
May 2022
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 156

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SDD 10A01 - 04



MEDIAN POLE SINGLE ARM POLE

LOCATION OF LIGHT POLE CIRCUIT/SEQUENCE PLAQUE

GENERAL NOTES

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

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

WHERE SHOWN IN THE PLANS, REPLACEMENT PLAQUES WILL BE MEASURED AND PAID SEPARATELY.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

GALVANIZED STEEL SHAFT - STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

ALUMINUM SHAFTS - ALUMINUM POP RIVETS

MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

PLAQUE MATERIALS:

BASE - SHEET ALUMINUM, 0.060" THICK.

FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETRORFLECTIVE

LINES - BLACK, 1/2" WIDE, SELF-ADHESIVE

CHARACTERS - BLACK, SELF-ADHESIVE, SERIES "D", SIZE AS SHOWN

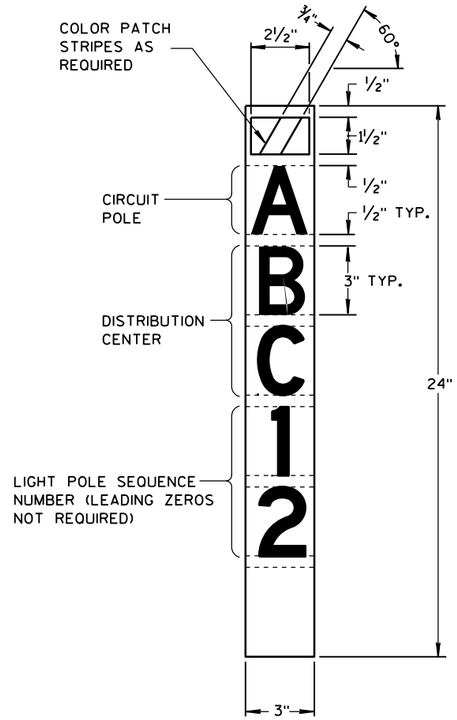
COLOR PATCHES - VARIOUS COLORS, SELF-ADHESIVE VINYL SHEETING

WITH THE APPROVAL OF THE ENGINEER, THE BASE MATERIAL MAY BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE SURFACE, IN CASES SUCH AS SMOOTH, CLEAN ALUMINUM POLES.

ALTERNATIVE COMPUTER-GENERATED SIGN LETTERING MAY BE ACCEPTED IF THE ENGINEER FINDS IT TO BE EQUIVALENT.

COLOR PATCH CODE FOR HPS AND LED LUMINAIRES

HPS	LED	COLOR PATCH CODE
1000 WATT		NO PATCH
400 WATT	CATEGORY D	ORANGE
310 WATT		BLUE
250 WATT	CATEGORY C	ORANGE WITH WHITE STRIPE
200 WATT		RED
150 WATT	CATEGORY B	GREEN
100 WATT	CATEGORY A	BROWN
70 WATT	CATEGORY UDL	BROWN WITH WHITE STRIPE



LIGHT POLE CIRCUIT/SEQUENCE PLAQUE

IDENTIFICATION PLAQUES LIGHT POLES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

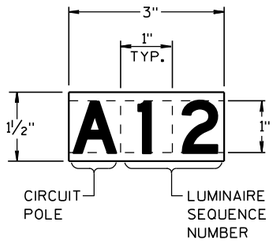
APPROVED
Feb. 2015 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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S.D.D. 10 A 2-3

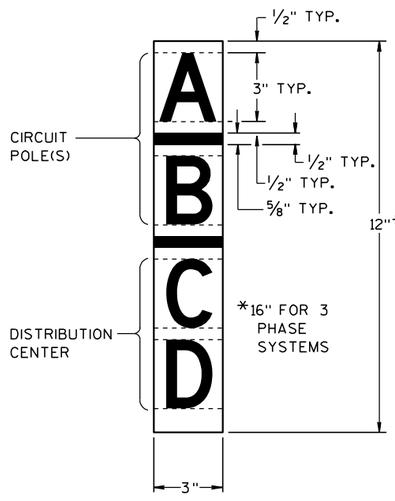
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S.D.D. 10 A 2-3



SEQUENCE DECAL

(MOUNT ON LUMINAIRE)



SIGN BRIDGE CIRCUIT PLAQUE

GENERAL NOTES

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

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

WHERE SHOWN IN THE PLANS, REPLACEMENT PLAQUES WILL BE MEASURED AND PAID SEPARATELY.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

GALVANIZED STEEL SHAFT - 3 STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

ALUMINUM SHAFTS - 3 ALUMINUM POP RIVETS

MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

PLAQUE MATERIALS:

BASE - SHEET ALUMINUM, 0.060" THICK.

FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETROREFLECTIVE

LINES - BLACK, ½" WIDE, SELF-ADHESIVE

CHARACTERS - BLACK, SELF-ADHESIVE, SERIES "D", SIZE AS SHOWN

WITH THE APPROVAL OF THE ENGINEER, THE BASE MATERIAL MAY BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE SURFACE, IN CASES SUCH AS SMOOTH, CLEAN ALUMINUM STRUCTURES.

ALTERNATIVE COMPUTER-GENERATED SIGN LETTERING MAY BE ACCEPTED IF THE ENGINEER FINDS IT TO BE EQUIVALENT.

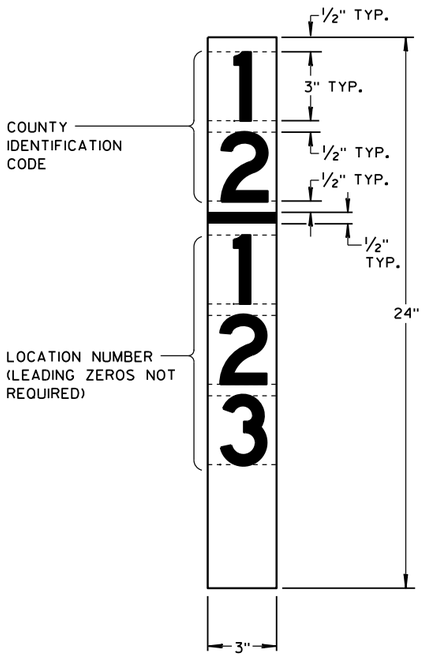
ALL SIGN BRIDGE STRUCTURES MUST ALSO HAVE STRUCTURE ID PLAQUES AS SHOWN IN THE STRUCTURE DETAILS.

CIRCUIT PLAQUES SHALL BE MOUNTED IN THE STEM WHICH HAS THE ELECTRICAL CIRCUIT, FACING TRAFFIC.

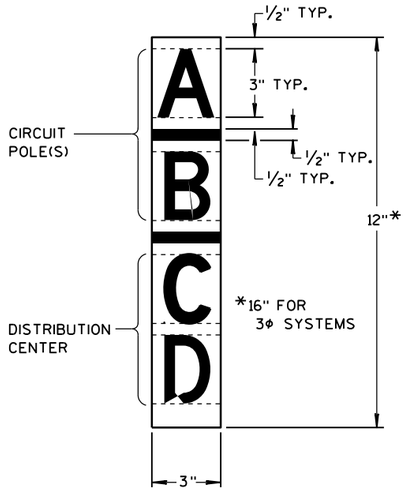
CIRCUIT IDENTIFICATION PLAQUES SIGN BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

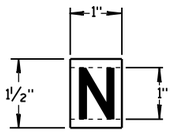
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10/25/2010 — DATE
/S/ John Corbin — STATE ELECTRICAL ENGI
158 — HWYS
FHWA



HIGH MAST LIGHT TOWER STRUCTURE PLAQUE

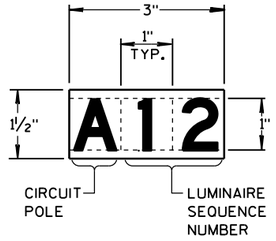


UNDERDECK LIGHTING OR HIGH MAST LIGHT TOWER CIRCUIT PLAQUE



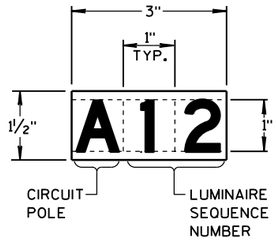
HIGH MAST LIGHT TOWER NORTH PLAQUE

(MOUNT ON LOWERING RING - INDICATING NORTH HEADING ^{2} ± 10^{o3} WHEN RING IS RAISED AND LATCHED)



HIGH MAST LIGHT TOWER LUMINAIRE SEQUENCE PLAQUE

(MOUNT ON LUMINAIRE RING)



UNDER DECK LUMINAIRE SEQUENCE DECAL

(MOUNT ON LUMINAIRE)

GENERAL NOTES

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

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

CONCRETE SURFACE - MASONRY ANCHORS

GALVANIZED STEEL SHAFT - STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

PLAQUE MATERIALS:

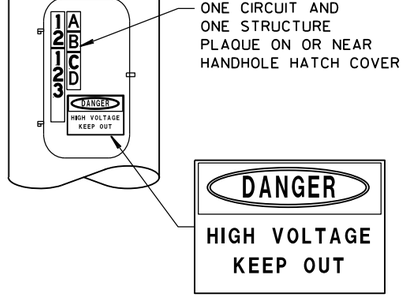
BASE - SHEET ALUMINUM, 0.060" THICK.

FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETRORFLECTIVE

LINES - BLACK, ½" WIDE, SELF-ADHESIVE

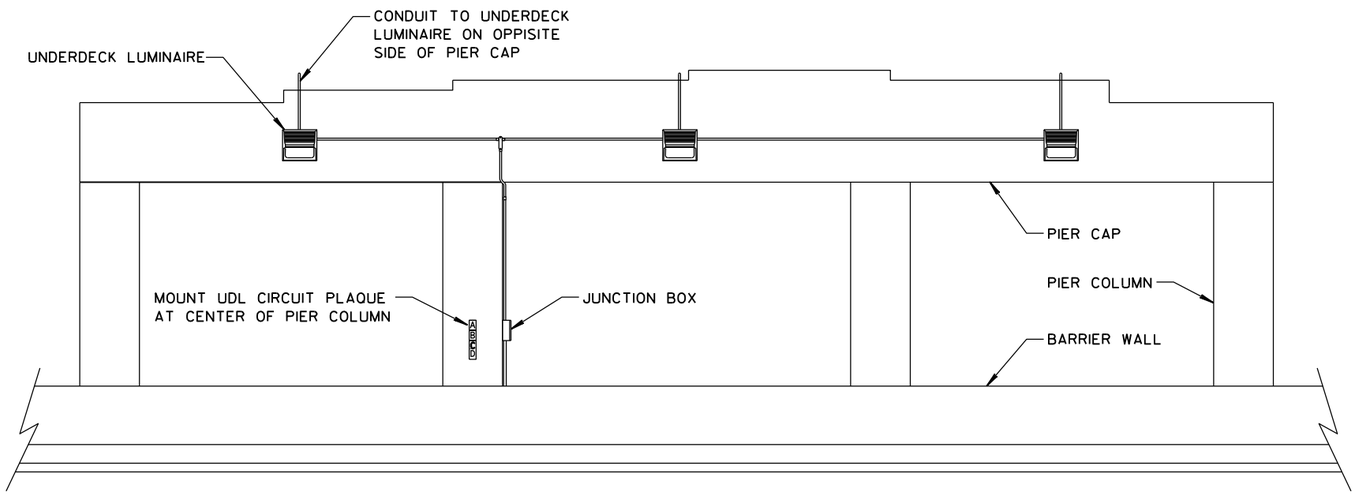
CHARACTERS - BLACK, SELF-ADHESIVE, SERIES "D", SIZE AS SHOWN

ALTERNATIVE COMPUTER-GENERATED SIGN LETTERING MAY BE ACCEPTED IF THE ENGINEER FINDS IT TO BE EQUIVALENT.



NOTE: NEMA PLAQUE SHOWN ABOVE IS REQUIRED ONLY IN PARK AND RIDE LOTS OR IN OTHER PEDESTRIAN ACCESSIBLE AREAS.

LOCATION OF HIGH MAST LIGHT TOWER STRUCTURE PLAQUE AND CIRCUIT PLAQUE



LOCATION OF UNDERDECK LIGHTING CIRCUIT PLAQUE

IDENTIFICATION PLAQUES UNDERDECK AND HIGH MAST LIGHTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Ahmet Demriblek — STATE ELECTRICAL
FHWA

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S.D.D. 10 A 4-3

GENERAL NOTES

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

USE THIS DETAIL IN CONJUNCTION WITH THE DETAIL FOR ELECTRICAL HANDHOLE WIRING, SDD10A01.

USE TIME DELAY FUSE PER LUMINAIRE MANUFACTURER RECOMMENDATION.

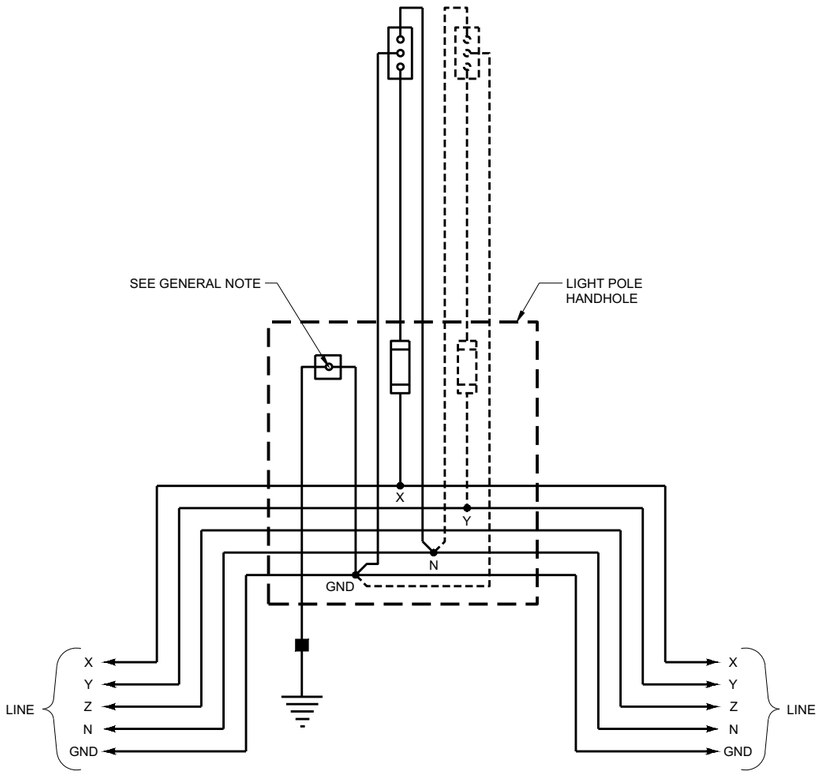
THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLD GROUNDING LUG TO THE CONNECTOR.

WIRING FOR SINGLE LUMINAIRE POLES IS SHOWN WITH SOLID LINES. WIRING FOR THE SECOND LUMINAIRE OF TWIN LUMINAIRE POLES IS SHOWN WITH DOTTED LINES.

THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.

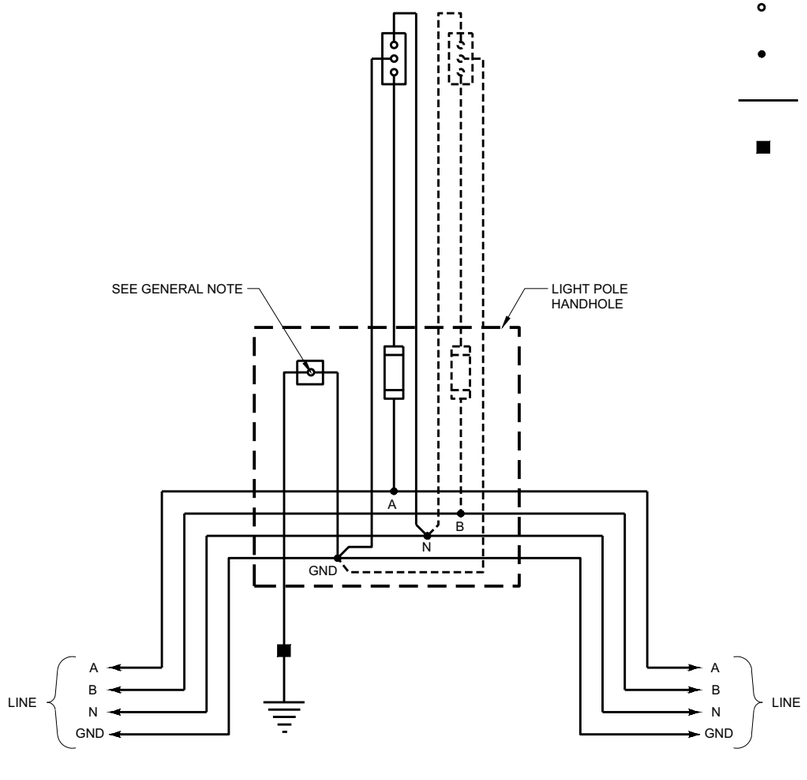
LEGEND

A,B,X,Y,Z	UNGROUNDED CIRCUIT CONDUCTORS
N	GROUNDED CIRCUIT CONDUCTORS
GND	EQUIPMENT GROUNDING CONDUCTOR
P	POLE (ELECTRICAL CIRCUIT)
ϕ	PHASE (ELECTRICAL CURRENT)
	HANDHOLE GROUND LUG
	SINGLE-POLE (1P) FUSE ASSEMBLY
	UNFUSED LUMINAIRE
	EQUIPMENT GROUNDING ELECTRODE
	TERMINAL
	SPLICE
	CONDUCTOR
	EXOTHERMIC WELD



TYPICAL WIRING DIAGRAM

ISOLATED NEUTRAL SYSTEM
3 - ϕ 208Y / 120VAC OR 480Y / 277VAC 4 WIRE



TYPICAL WIRING DIAGRAM

ISOLATED NEUTRAL SYSTEM
1 - ϕ 120 / 240VAC OR 240 / 480VAC 3 WIRE

ELECTRICAL DETAILS
GROUND MOUNT LIGHT POLES
ISOLATED NEUTRAL SYSTEM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

FHWA

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SDD 10A05 - 03

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SDD 10A05 - 03

GENERAL NOTES

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

USE THIS DETAIL IN CONJUNCTION WITH THE DETAIL FOR ELECTRICAL HANDHOLE WIRING, SDD10A01.

USE TIME DELAY FUSE PER LUMINAIRE MANUFACTURER RECOMMENDATION.

WIRING FOR SINGLE LUMINAIRE POLES IS SHOWN WITH SOLID LINES. WIRING FOR THE SECOND LUMINAIRE OF TWIN LUMINAIRE POLES IS SHOWN WITH DOTTED LINES.

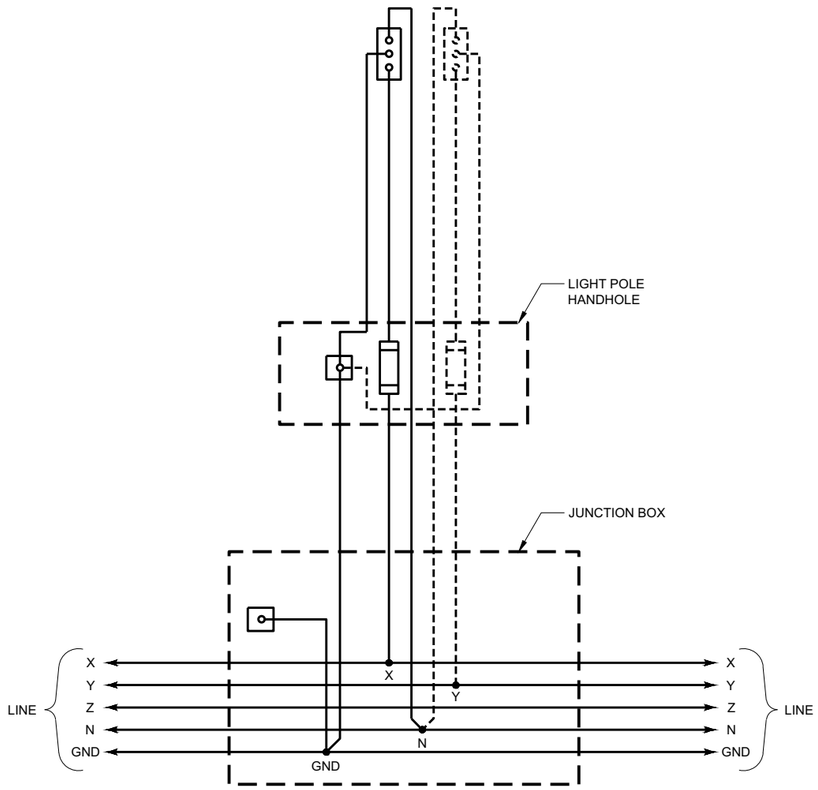
THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.

WIRE SIZE FROM THE JUNCTION BOX TO THE POLE HANDHOLE SHALL EQUAL THE SIZE OF THE POLE WIRE.

THE INTENT OF JUNCTION BOX SPLICES AS SHOWN IN THIS DETAIL IS FOR LIGHTING SYSTEMS WITH HEAVY LINE WIRE TOO LARGE TO PULL THROUGH THE CONDUIT INTO THE POLE HANDHOLE, DUE TO CONDUIT FILL REQUIREMENTS OF N.E.C. AND / OR THE STIFFNESS OF THE WIRE COMPARED TO THE NUMBER OF BENDS IN THE CONDUIT. IN CASES WHERE LINE WIRE IS LIGHTER, SUCH AS SMALL ER SYSTEMS OR TOWARD THE FURTHEST END OF A LARGER SYSTEM PULL THE LINE WIRE INTO THE POLE HANDHOLE FOR SPLICING.

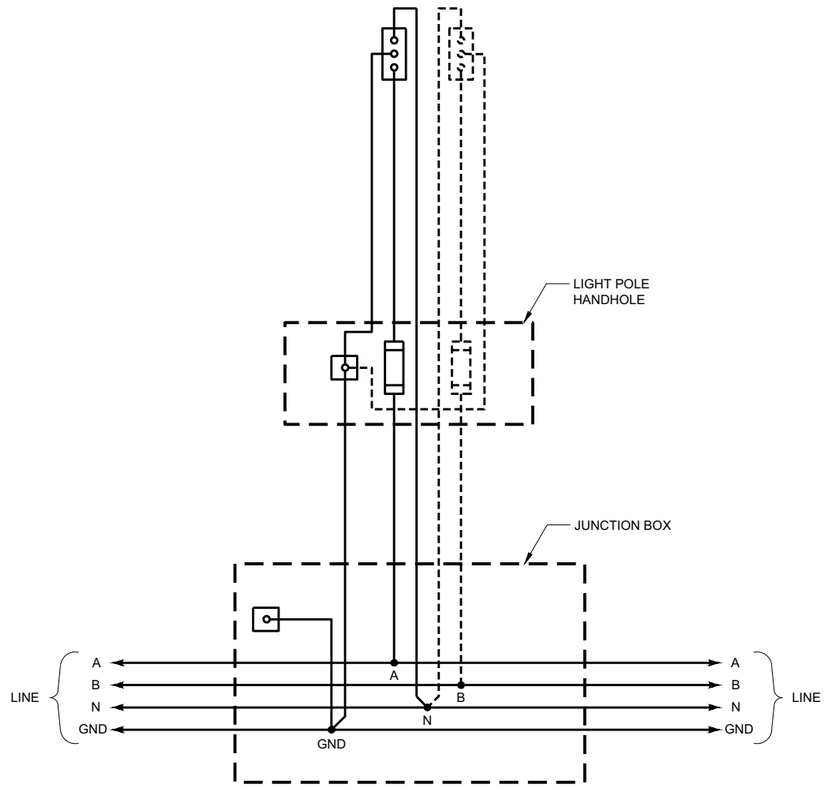
LEGEND

A,B,X,Y,Z	UNGROUNDED CIRCUIT CONDUCTORS
N	GROUNDED CIRCUIT CONDUCTORS
GND	EQUIPMENT GROUNDING CONDUCTOR
P	POLE (ELECTRICAL CIRCUIT)
ϕ	PHASE (ELECTRICAL CURRENT)
	HANDHOLE GROUND LUG
	SINGLE-POLE (1P) FUSE ASSEMBLY
	UNFUSED LUMINAIRE
	EQUIPMENT GROUNDING ELECTRODE
	TERMINAL
	SPLICE
	CONDUCTOR
	EXOTHERMIC WELD



TYPICAL WIRING DIAGRAM

ISOLATED NEUTRAL SYSTEM
3 - ϕ 208Y / 120VAC OR 480Y / 277VAC 4 WIRE



TYPICAL WIRING DIAGRAM

ISOLATED NEUTRAL SYSTEM
1 - ϕ 120 / 240VAC OR 240 / 480VAC 3 WIRE

ELECTRICAL DETAILS
STRUCTURE MOUNT LIGHT POLES
ISOLATED NEUTRAL SYSTEMS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

FHWA

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SDD 10A08 - 03

GENERAL NOTES

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

USE THIS DETAIL IN CONJUNCTION WITH THE DETAIL FOR ELECTRICAL HANDHOLE WIRING, SDD10A01.

USE TIME DELAY FUSE PER LUMINAIRE MANUFACTURER RECOMMENDATION.

THE GROUNDING ELECTROCDE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLD GROUNDING LUG TO THE CONNECTOR.

WIRING FOR SINGLE LUMINAIRE POLES IS SHOWN WITH SOLID LINES. WIRING FOR THE SECOND LUMINAIRE OF TWIN LUMINAIRE POLES IS SHOWN WITH DOTTED LINES.

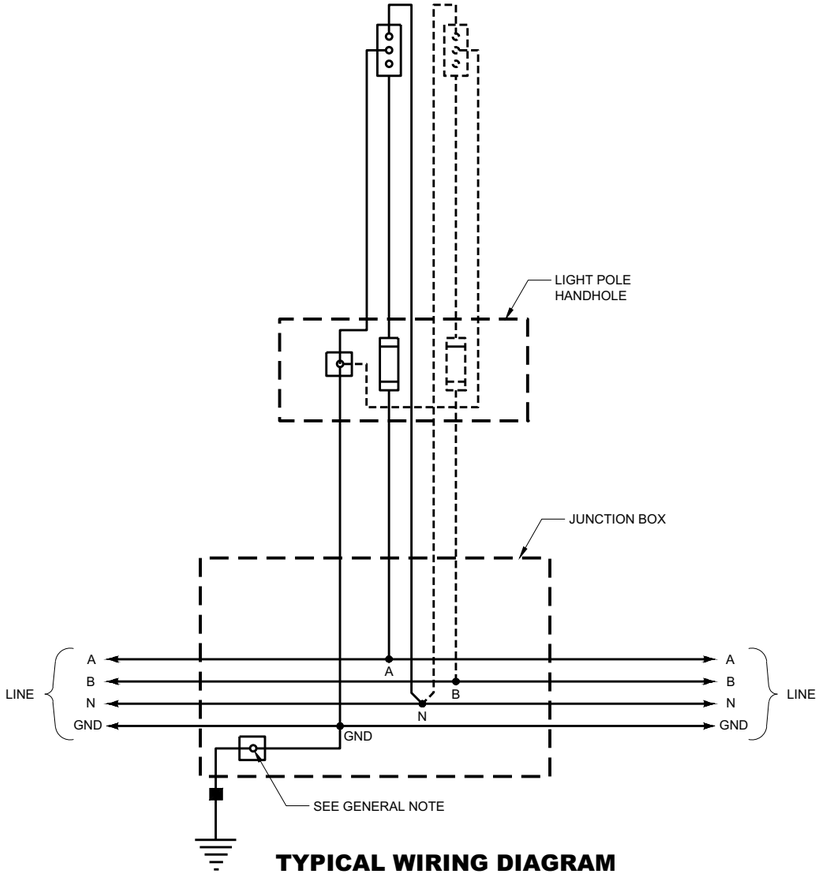
THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.

WIRE SIZE FROM THE JUNCTION BOX TO THE POLE HANDHOLE SHALL EQUAL THE SIZE OF THE POLE WIRE.

THE INTENT OF JUNCTION BOX SPLICES AS SHOWN IN THIS DETAIL IS FOR LIGHTING SYSTEMS WITH HEAVY LINE WIRE TOO LARGE TO PULL THROUGH THE CONDUIT INTO THE POLE HANDHOLE, DUE TO CONDUIT FILL REQUIREMENTS OF N.E.C. AND / OR THE STIFFNESS OF THE WIRE COMPARED TO THE NUMBER OF BENDS IN THE CONDUIT. IN CASES WHERE LINE WIRE IS LIGHTER, SUCH AS SMALL ER SYSTEMS OR TOWARD THE FURTHEST END OF A LARGER SYSTEM PULL THE LINE WIRE INTO THE POLE HANDHOLE FOR SPLICING.

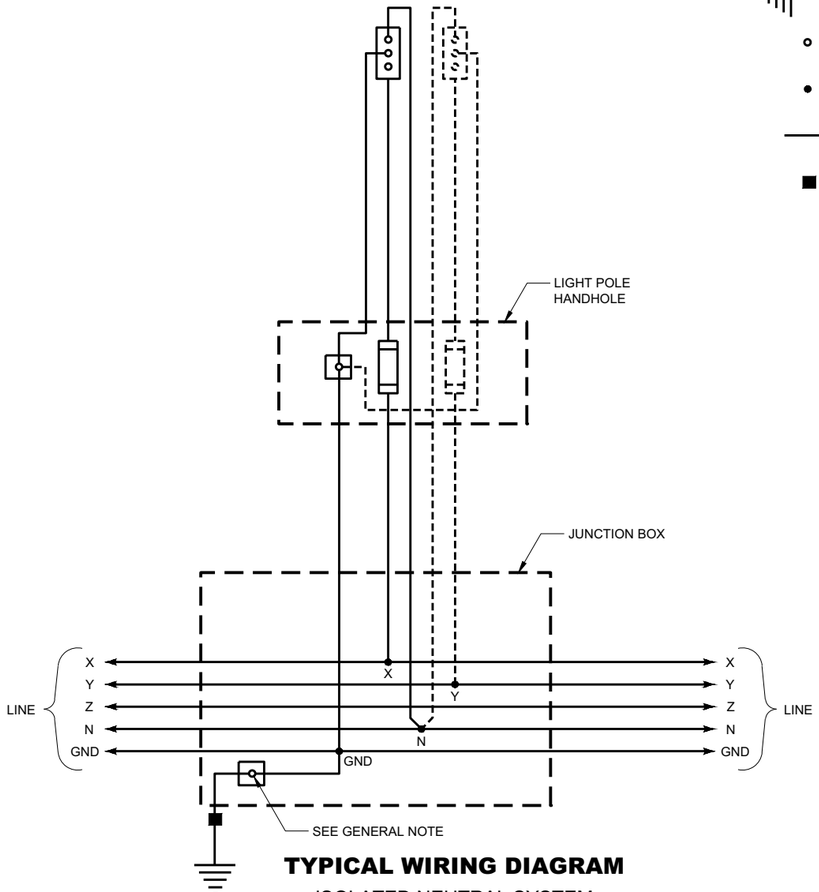
LEGEND

A,B,X,Y,Z	UNGROUNDED CIRCUIT CONDUCTORS
N	GROUNDED CIRCUIT CONDUCTORS
GND	EQUIPMENT GROUNDING CONDUCTOR
P	POLE (ELECTRICAL CIRCUIT)
ϕ	PHASE (ELECTRICAL CURRENT)
	HANDHOLE GROUND LUG
	SINGLE-POLE (1P) FUSE ASSEMBLY
	UNFUSED LUMINAIRE
	EQUIPMENT GROUNDING ELECTRODE
	TERMINAL
	SPLICE
	CONDUCTOR
	EXOTHERMIC WELD



TYPICAL WIRING DIAGRAM

ISOLATED NEUTRAL SYSTEM
1 - ϕ 240 / 480VAC 3 WIRE



TYPICAL WIRING DIAGRAM

ISOLATED NEUTRAL SYSTEM
3 - ϕ 480Y / 277VAC 4 WIRE

ELECTRICAL DETAILS
MEDIAN MOUNT LIGHT POLES
ISOLATED NEUTRAL SYSTEMS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

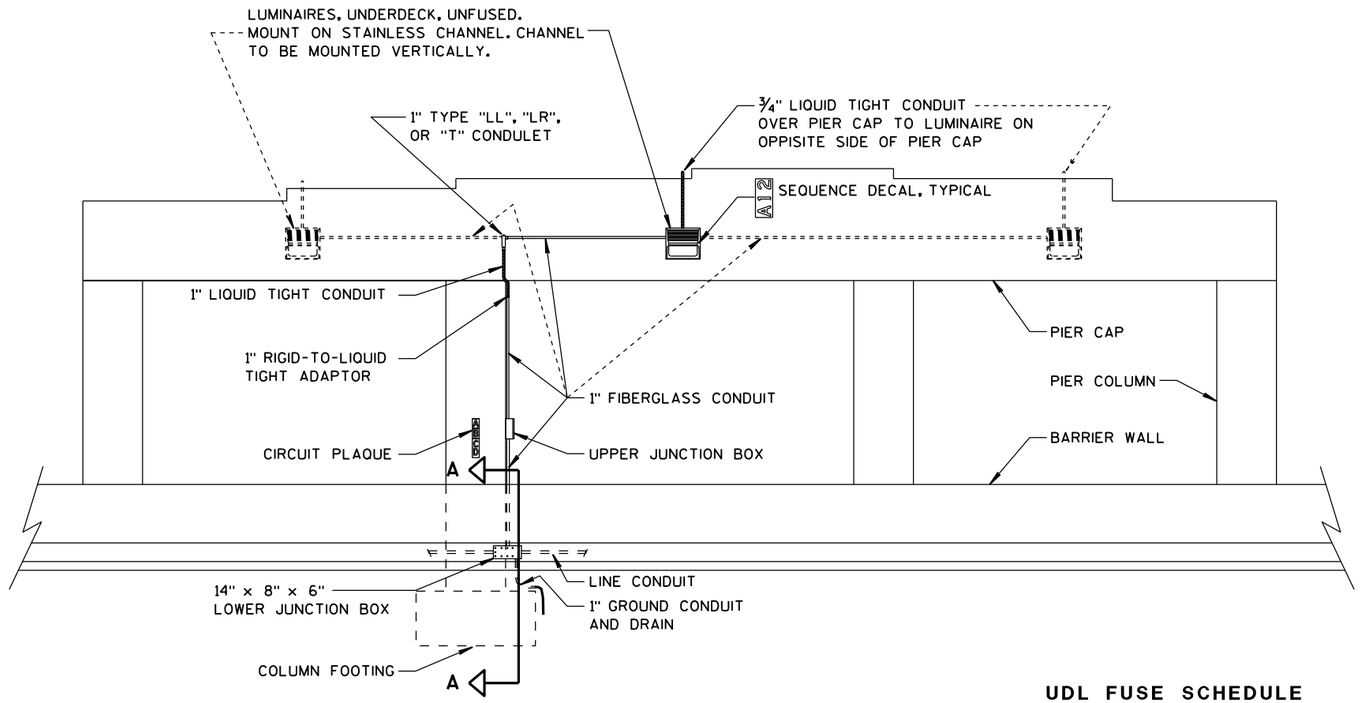
FHWA

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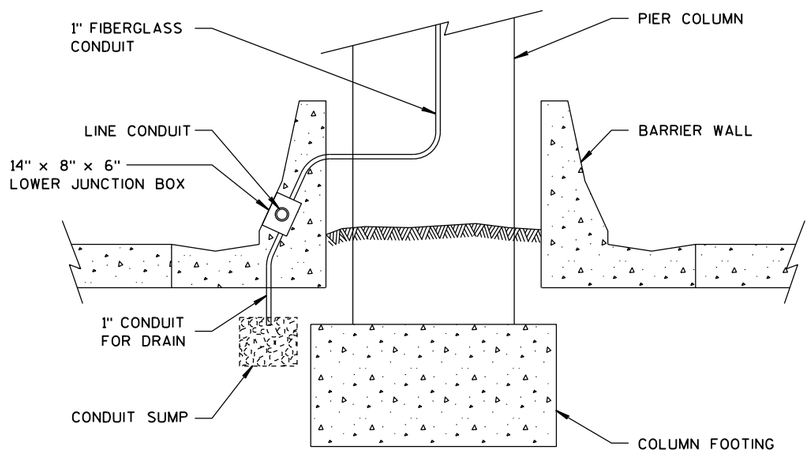
SDD 10A11 - 03

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SDD 10A11 - 03



TYPICAL UNDERDECK LIGHTING INSTALLATION



SECTION "A-A"

UDL FUSE SCHEDULE

LINE VOLTAGE ϕ-GROUND	TOP JUNCTION BOX FUSES
120VAC	5 A
208VAC	5 A
240VAC	5 A
480VAC	3 A

GENERAL NOTES

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

USE THIS DETAIL IN CONJUNCTION WITH THE DETAIL FOR ELECTRICAL HANDHOLE WIRING, SUBSTITUTING THE LOWER JUNCTION BOX FOR THE HANDHOLE SHOWN IN THAT DETAIL.

THE PLANS WILL SHOW WHICH CIRCUIT LEGS(S) ARE CONNECTED TO EACH INSTALLATION AND THE REQUIRED NUMBER OF LUMINAIRES.

THE UPPER JUNCTION BOX (FOR FUSE ASSEMBLIES) SHALL CONFORM TO THE APPLICABLE PROVISIONS OF SECTION 653.2.2 OF THE STANDARD SPECIFICATIONS; SHALL BE SUITABLE FOR SURFACE MOUNTING WITH EXTERNAL MOUNTING LUGS; AND SHALL HAVE A HINGED COVER, WING-NUT FASTENERS, AND PADLOCK HASP. ALL HARDWARE SHALL BE STAINLESS STEEL. FURNISH O-Z/GEDNEY YW-120603, SPRING CITY HC-12-06-04, CROUSE-HINDS WTB-120604, OR APPROVED EQUAL.

MEDIAN CONFIGURATIONS VARY; NOT ALL CASES CAN BE SHOWN IN THIS DETAIL.

WIRING FOR THE FIRST LUMINAIRE PAIR IS SHOWN IN SOLID LINES. WIRING FOR ADDITIONAL LUMINAIRE PAIRS, WHERE REQUIRED, IS SHOWN IN DOTTED LINES.

LEGEND

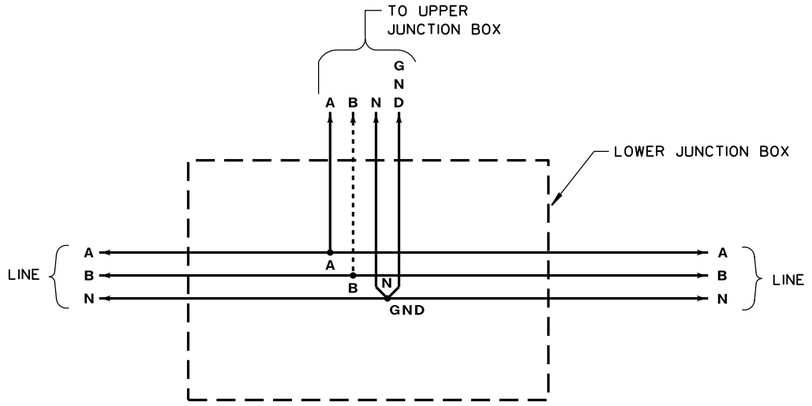
A,B,X,Y,Z	UNGROUNDED CIRCUIT CONDUCTORS
N	GROUNDED CIRCUIT CONDUCTORS
GND	EQUIPMENT GROUNDING CONDUCTOR
P	POLE (ELECTRICAL CIRCUIT)
ϕ	PHASE (ELECTRICAL CURRENT)
	HANDHOLE GROUND LUG
	UNFUSED LUMINAIRE
	SINGLE POLE (1P) FUSE ASSEMBLY
	TERMINAL
	SPLICE
	CONDUCTOR

ELECTRICAL DETAILS
UNDERDECK LIGHTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

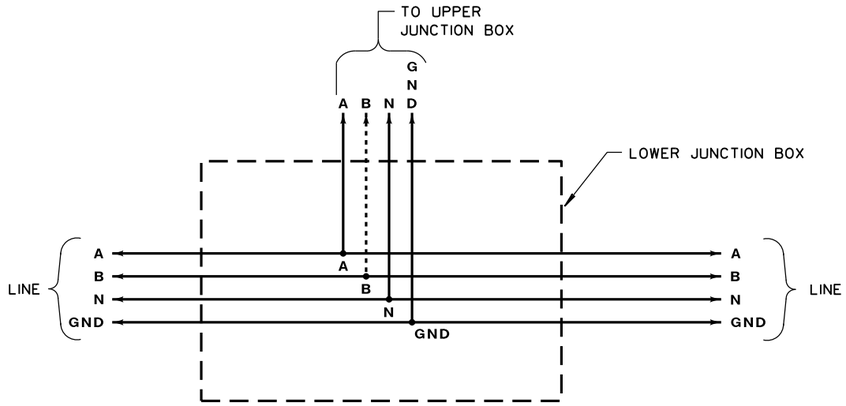
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S.D.D. 10 A 15-4a



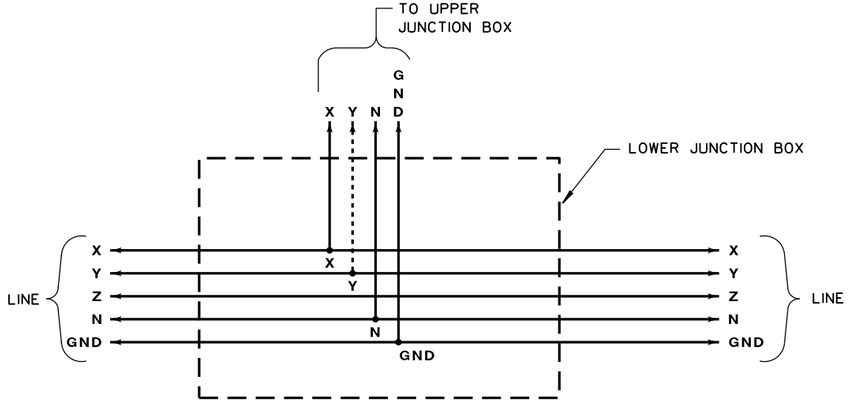
TYPICAL WIRING DIAGRAM, LOWER JUNCTION BOX

GROUNDED NEUTRAL SYSTEM
1-ϕ 240/480VAC OR 3 WIRE OR 480VAC 2 WIRE



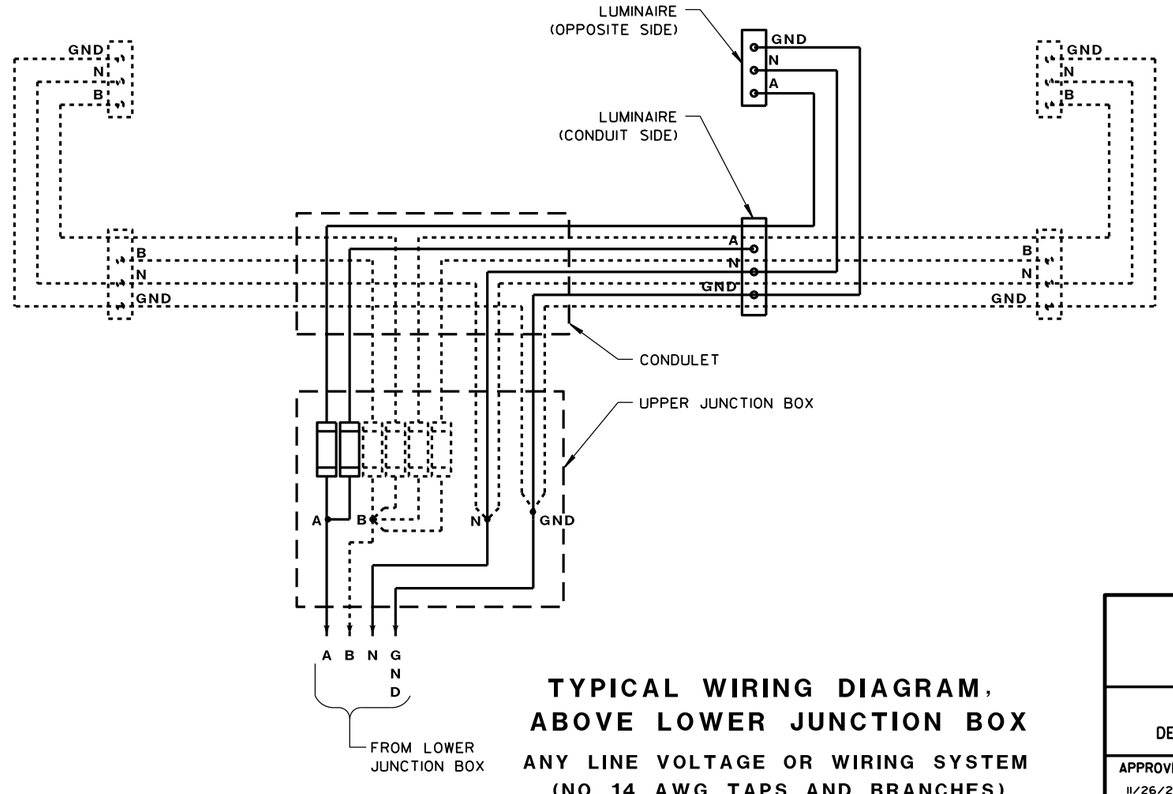
TYPICAL WIRING DIAGRAM, LOWER JUNCTION BOX

ISOLATED NEUTRAL SYSTEM
1-ϕ 120/240VAC OR 240/480VAC 3 WIRE



TYPICAL WIRING DIAGRAM, LOWER JUNCTION BOX

ISOLATED NEUTRAL SYSTEM
3-ϕ 208Y/120VAC OR 480Y/277VAC 4 WIRE



TYPICAL WIRING DIAGRAM, ABOVE LOWER JUNCTION BOX

ANY LINE VOLTAGE OR WIRING SYSTEM
(NO. 14 AWG TAPS AND BRANCHES)

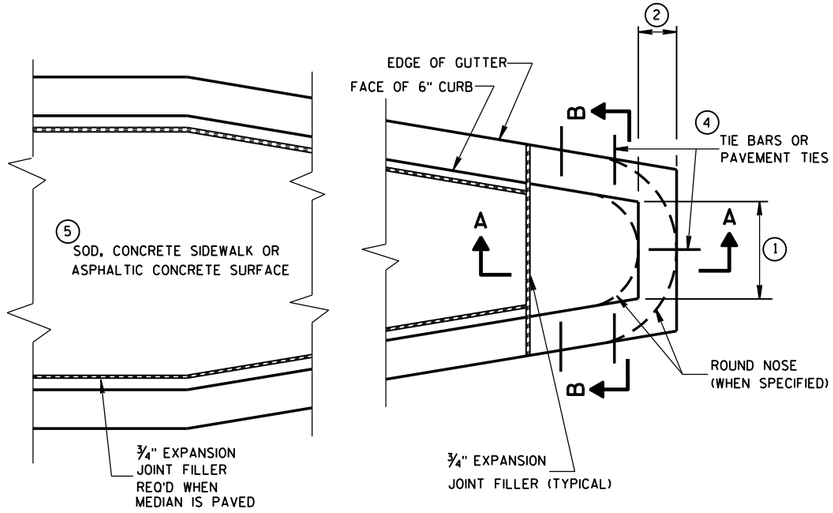
ELECTRICAL DETAILS
UNDERDECK LIGHTING

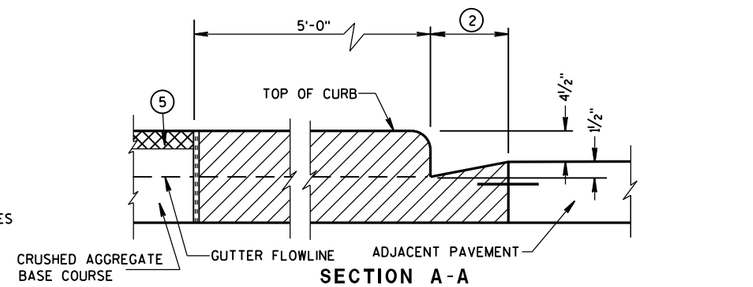
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

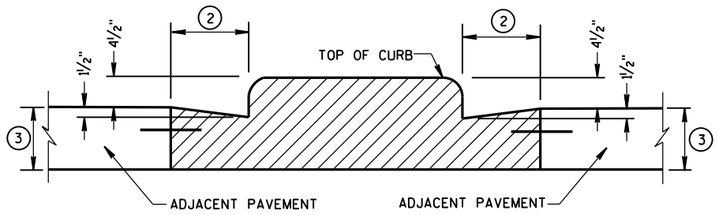
APPROVED
11/26/2013 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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S.D.D. 10 A 15-4b







CONCRETE MEDIAN BLUNT NOSE DETAIL

GENERAL NOTES

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

(1) SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).

(2) WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.

(3) DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:

(1) NEW OR EXISTING CONCRETE PAVEMENT.

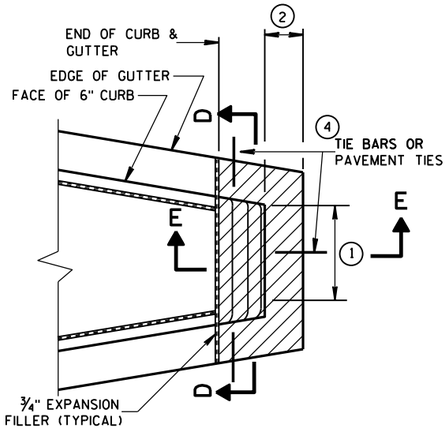
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

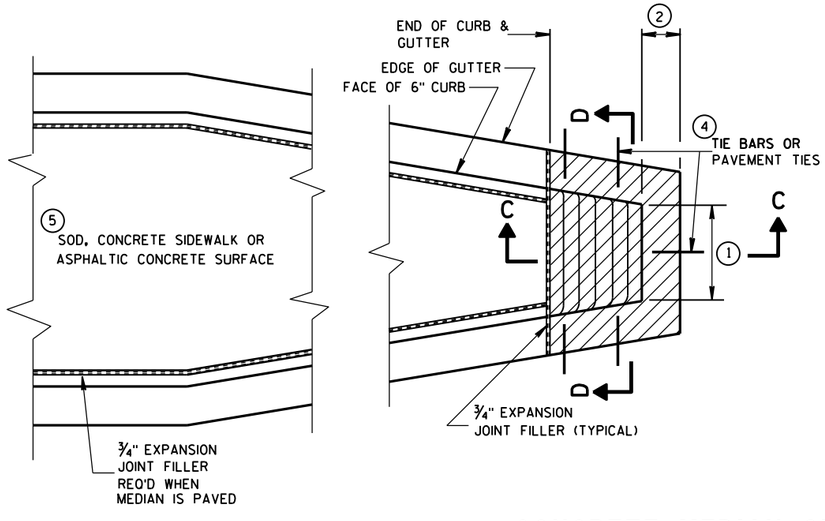
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

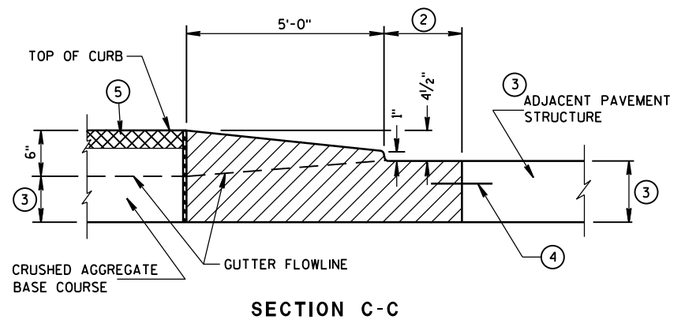
(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

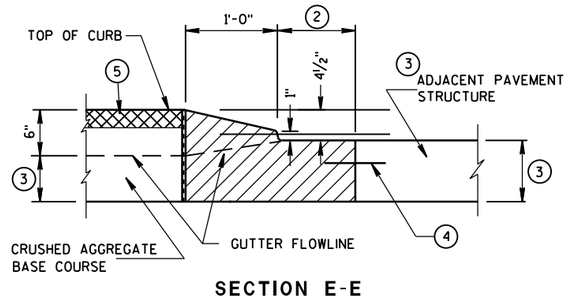
PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.



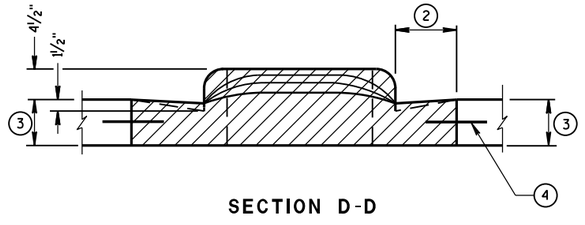






CONCRETE MEDIAN SLOPED NOSE TYPE 2

CONCRETE MEDIAN SLOPED NOSE TYPE 1



CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

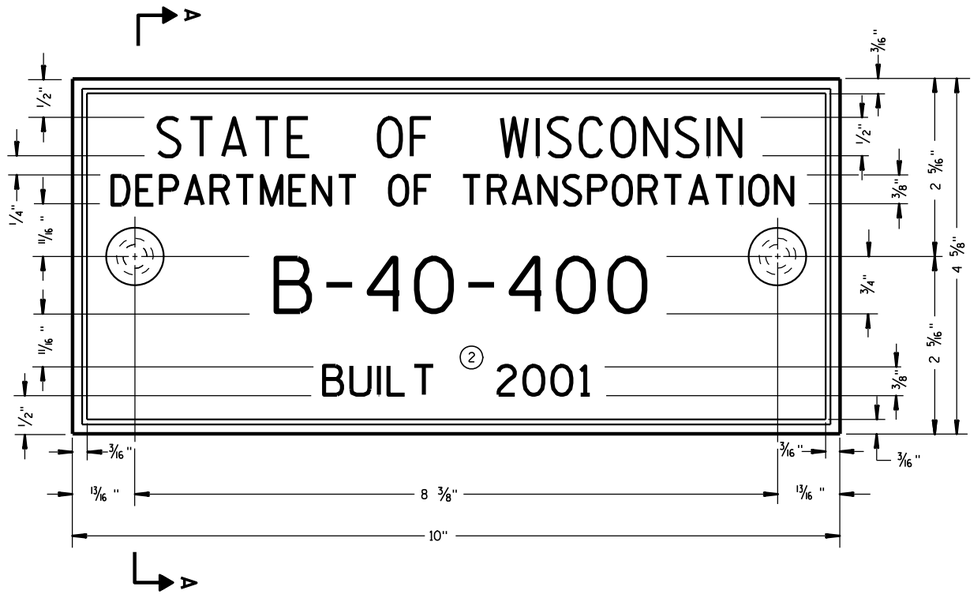
APPROVED
6/8/2006
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS D ENGINEER
FHWA

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S.D.D. 11 B 2-2

6

S.D.D. 11 B 2-2



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION MULTI-UNIT STRUCTURES

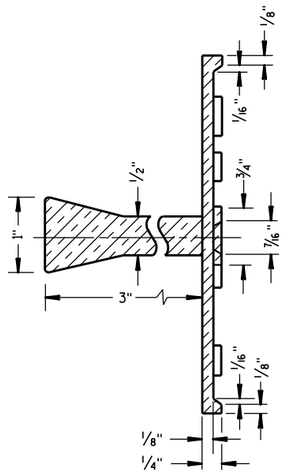
GENERAL NOTES

NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

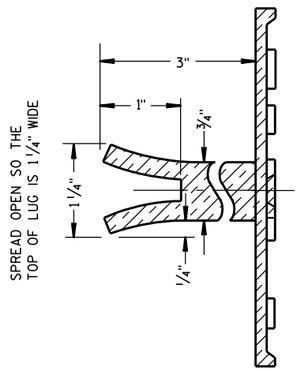
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(1) EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

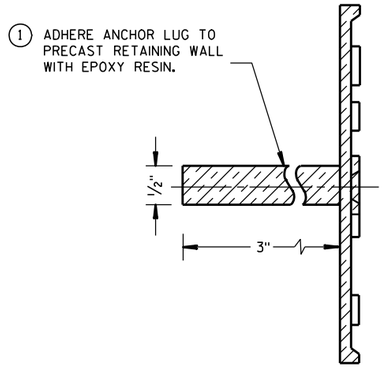
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

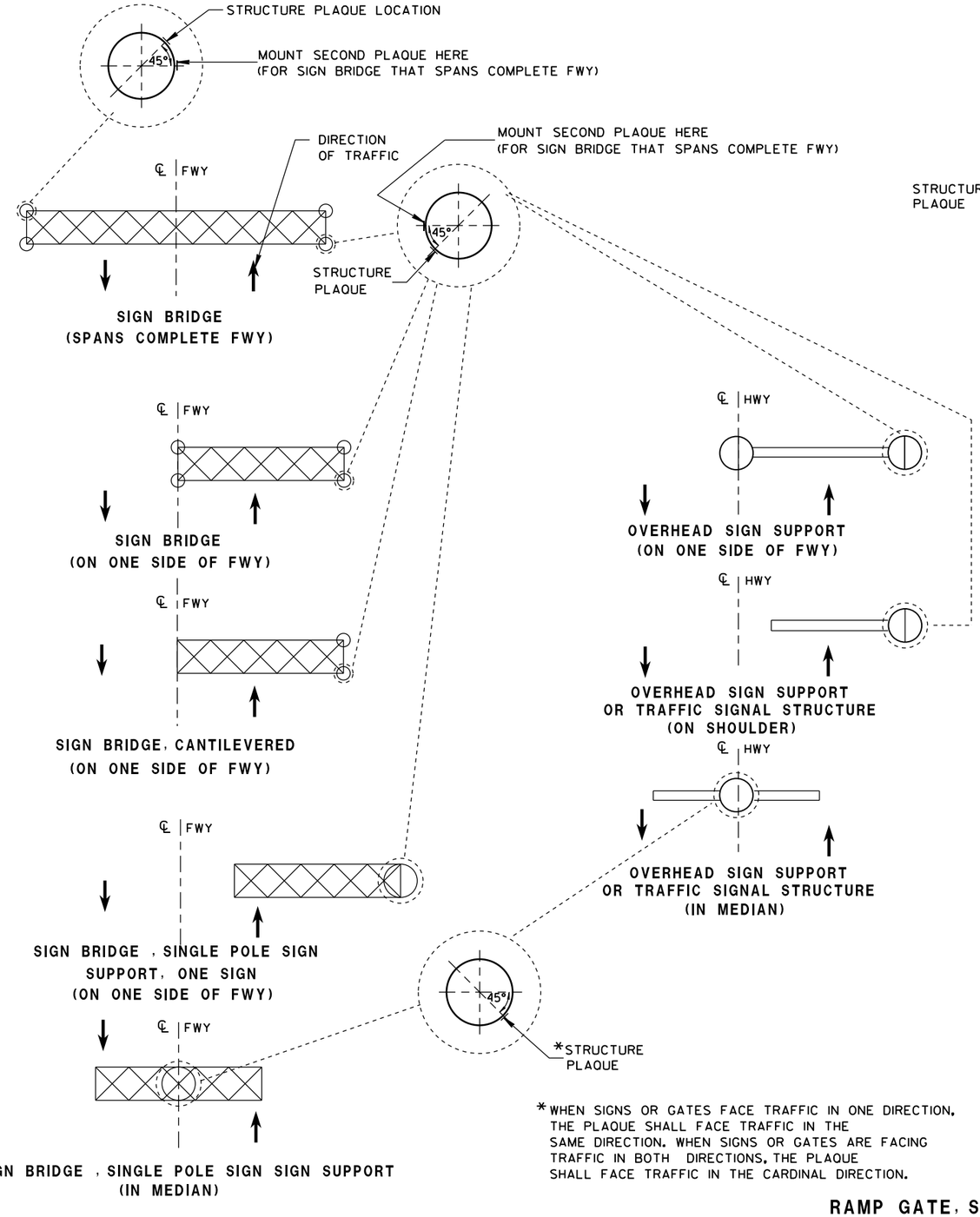
NAME PLATE (STRUCTURES)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
3/26/10 DATE	/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER
FHWA	

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S.D.D. 12 A 3-10

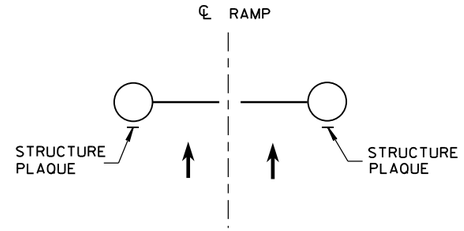
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S.D.D. 12 A 3-10

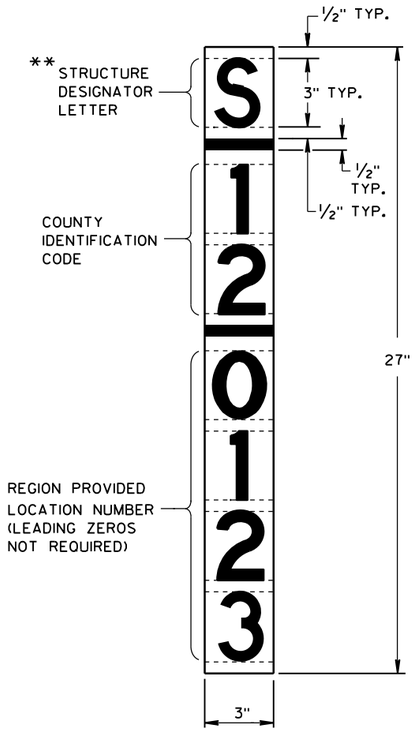


LOCATION OF RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT & TRAFFIC SIGNAL STRUCTURE PLAQUES

*WHEN SIGNS OR GATES FACE TRAFFIC IN ONE DIRECTION, THE PLAQUE SHALL FACE TRAFFIC IN THE SAME DIRECTION. WHEN SIGNS OR GATES ARE FACING TRAFFIC IN BOTH DIRECTIONS, THE PLAQUE SHALL FACE TRAFFIC IN THE CARDINAL DIRECTION.



RAMP GATE
(ACROSS FWY ON-RAMP)



** LETTER "G" UTILIZED FOR RAMP GATES. LETTER "S" UTILIZED FOR SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, AND TRAFFIC SIGNALS.

RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT AND TRAFFIC SIGNAL STRUCTURE PLAQUE FOR SIGN BRIDGES AND OVERHEAD SIGN SUPPORT WHICH ARE NOT STRUCTURE MOUNTED

GENERAL NOTES

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

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

IF THE PROPOSED SIGN BRIDGE OR OVERHEAD SIGN SUPPORT IS REPLACING AN EXISTING SIGN BRIDGE OR OVERHEAD SIGN SUPPORT, A NEW IDENTIFICATION PLAQUE WILL BE REQUIRED.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

GALVANIZED STEEL SHAFT - 3 STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

ALUMINUM SHAFTS - 3 ALUMINUM POP RIVETS

MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

PLAQUE MATERIALS:

BASE - SHEET ALUMINUM, 0.060" THICK.

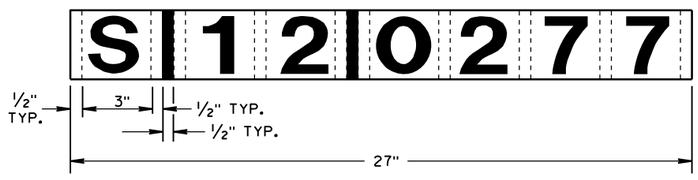
FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETROREFLECTIVE

LINES - BLACK, ½" WIDE, SELF-ADHESIVE

CHARACTERS:- BLACK, SELF ADHESIVE, SERIES "D", SIZE AS SHOWN.

FOR SIGN BRIDGES, STRUCTURE MOUNTED, THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY AS SHOWN ON THE DRAWING. THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY TO THE BACK OF THE SIGN, BETWEEN THE ALUMINUM EXTRUSIONS, NEAR THE TOP LEFT HAND CORNER OF THE SIGN. THE BASE MATERIAL SHALL BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE ALUMINUM SURFACE. PRIOR TO ADHERING THE MATERIAL, THE ALUMINUM SURFACE SHALL BE SMOOTH, CLEAN AND DRY.

WHERE SIGN BRIDGE ILLUMINATION IS PROVIDED, THE STRUCTURE MUST ALSO HAVE A SIGN BRIDGE CIRCUIT PLAQUE AS SHOWN IN THE ELECTRICAL DETAILS.



IDENTIFICATION PLAQUE FOR SIGN BRIDGE, STRUCTURE MOUNTED

STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, & TRAFFIC SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

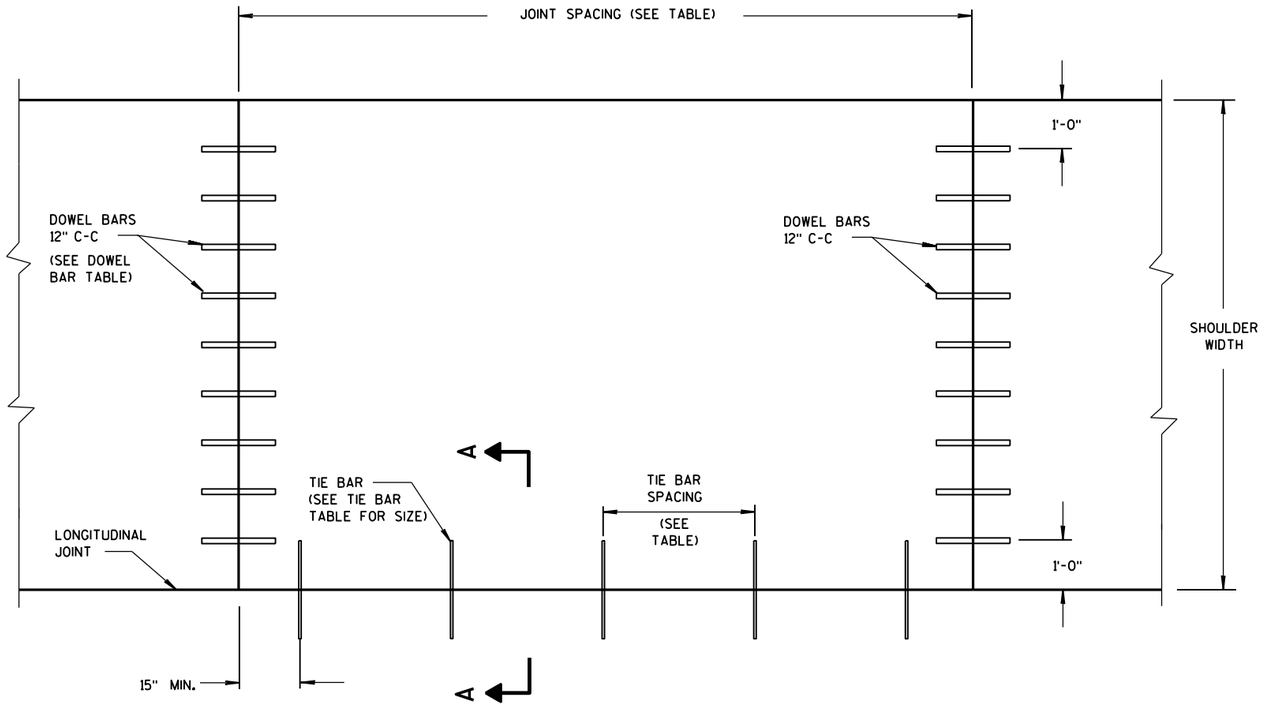
APPROVED
12/4/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

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S.D.D. 12 A 4-3

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S.D.D. 12 A 4-3



PLAN VIEW

CONCRETE PAVEMENT SHOULDER

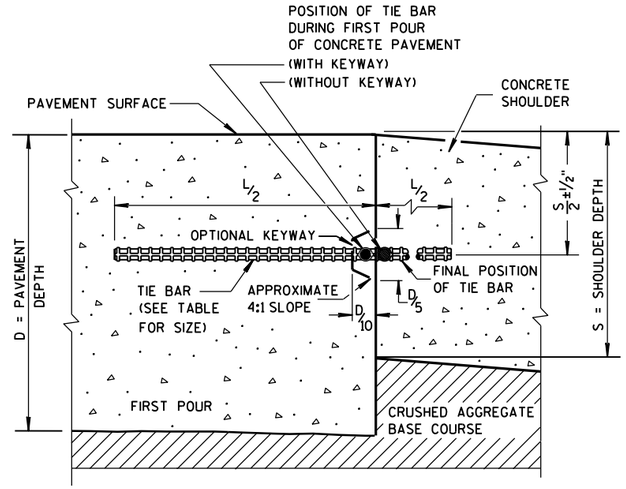
GENERAL NOTES

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

TRANSVERSE JOINT DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

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

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



SECTION A-A

LONGITUDINAL CONSTRUCTION JOINT

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	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.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

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

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

CONCRETE PAVEMENT SHOULDERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

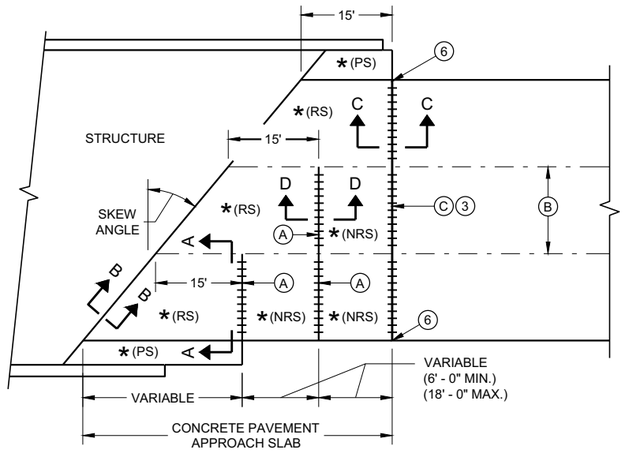
APPROVED
June, 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPEF
FHWA

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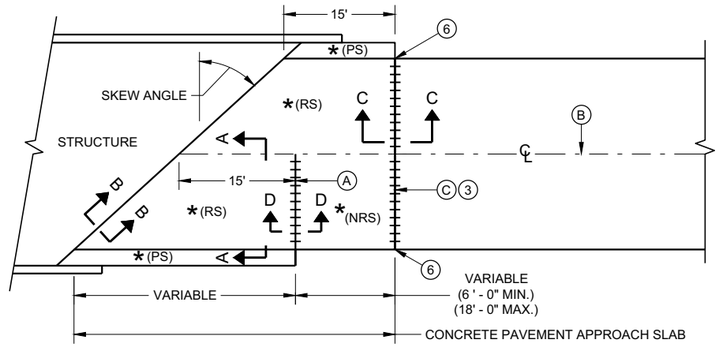
S.D.D. 13 A 3-6

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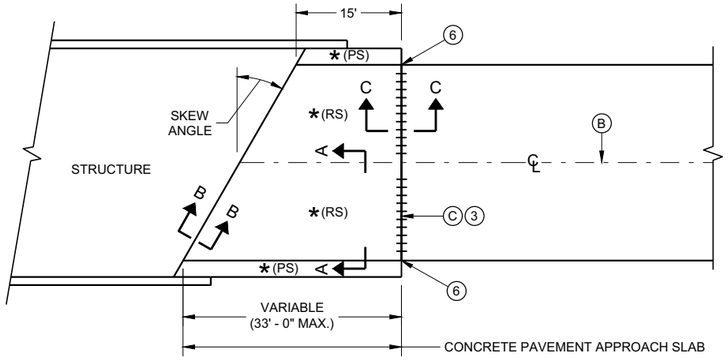
S.D.D. 13 A 3-6



SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES)



SKEWS > 20°
(PAVEMENT WIDTH ≤ 30')



SKEWS ≤ 20°
(PAVEMENT WIDTH ≤ 30')

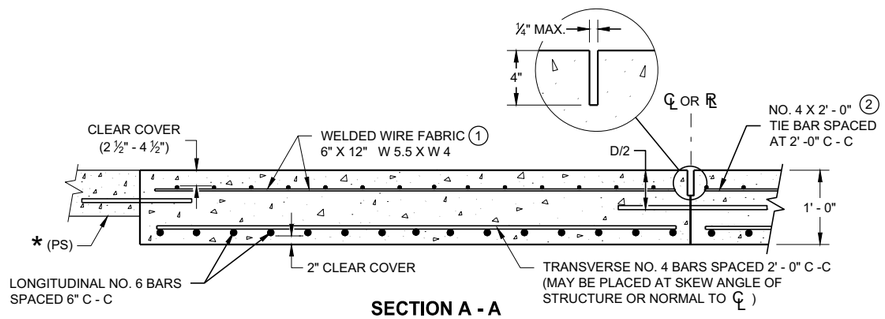
APPROACH SLAB AND ADJACENT PAVEMENT

* (RS) = REINFORCED CONCRETE SLAB

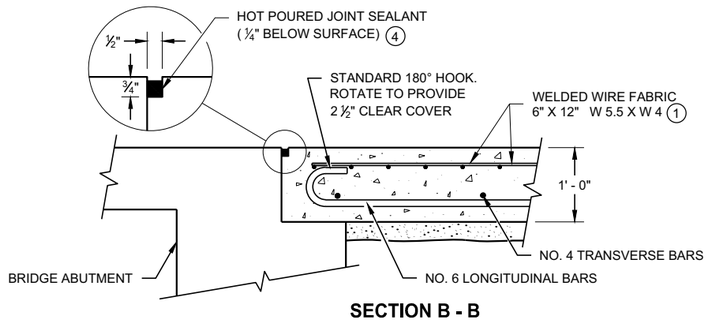
* (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB

* (NRS) - NON - REINFORCED CONCRETE SLAB

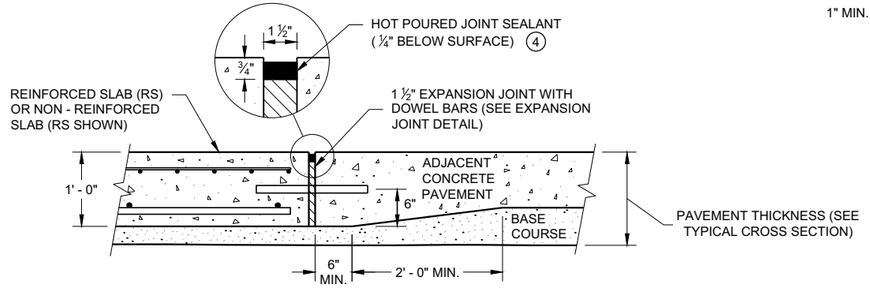
*** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



SECTION A - A
REINFORCEMENT POSITIONING DETAIL



SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT



SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT

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.

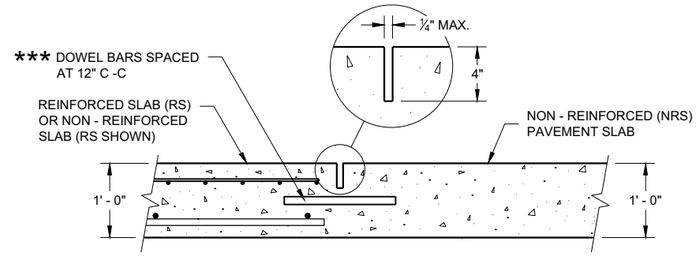
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

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

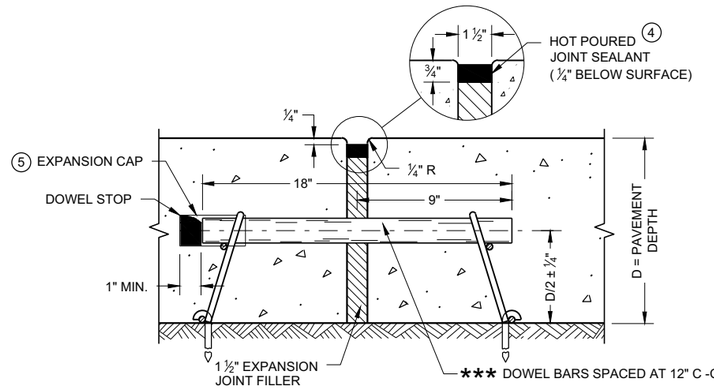
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

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



SECTION D - D
CONTRACTION JOINT



EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

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DEPARTMENT OF TRANSPORTATION

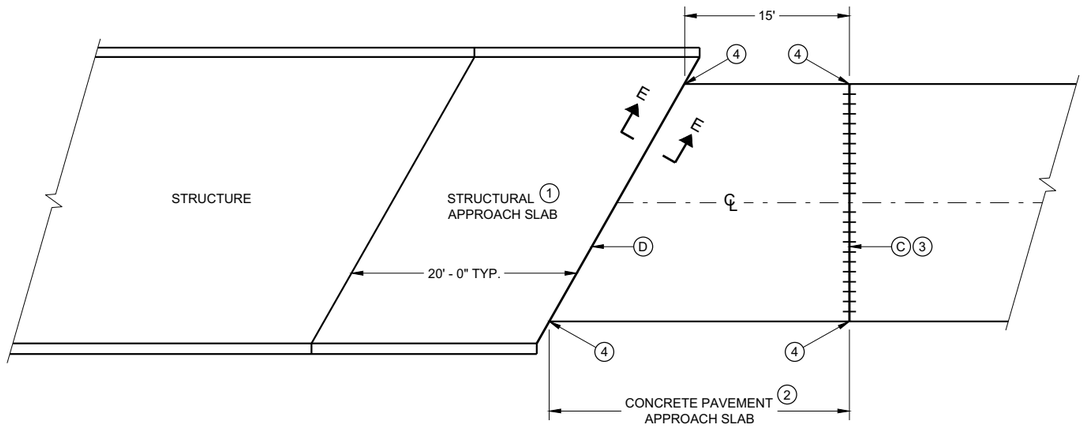
APPROVED
November 2018
DATE

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

FHWA

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SDD 13B02 - 09a



BRIDGE APPROACHES

GENERAL NOTES

ALL PROJECTS THAT INVOLVE A STRUCTURAL APPROACH SLAB WILL ALSO HAVE A CONCRETE PAVEMENT APPROACH SLAB.

(1) SEE BRIDGE PLAN.

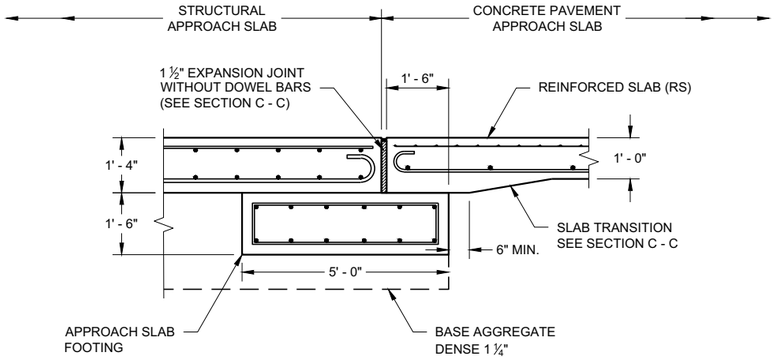
(2) CONFORM TO SDD 13B02 SHEET A FOR CONCRETE PAVEMENT APPROACH SLAB DETAILS

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

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

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

(D) 1 ½" EXPANSION JOINT (NO DOWELS)



SECTION E - E
FOOTING DETAIL
STRUCTURAL APPROACH SLAB TO CONCRETE BRIDGE APPROACH

STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB

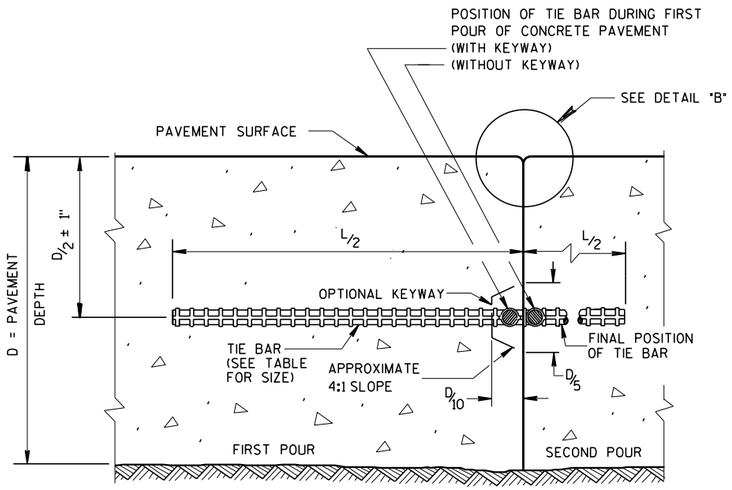
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE
/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS

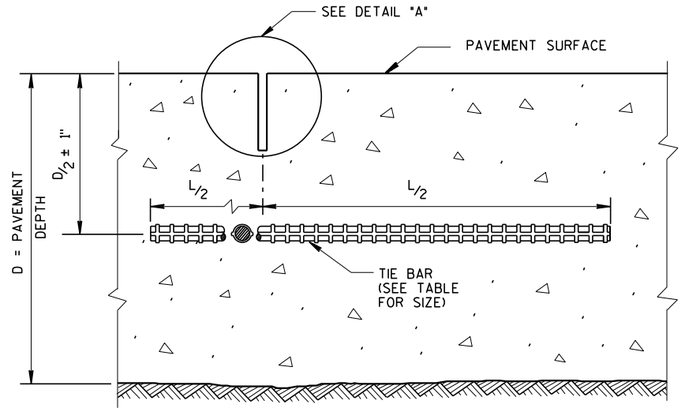
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SDD 13B02 - 09b



CONSTRUCTION JOINT



SAWED JOINT

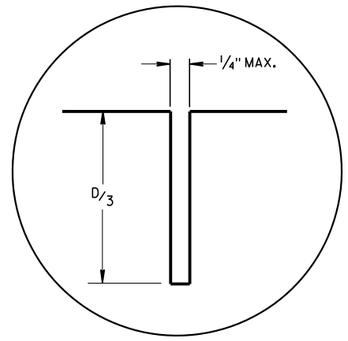
GENERAL NOTES

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

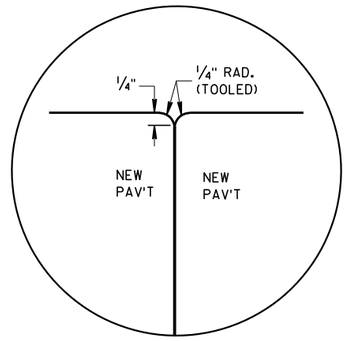
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

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

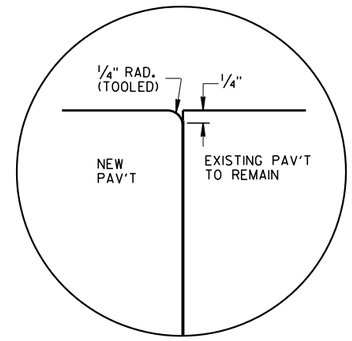
(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.



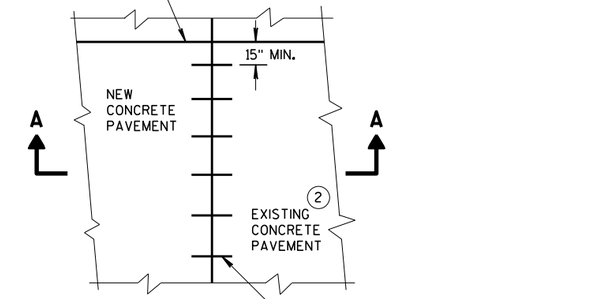
DETAIL "A"



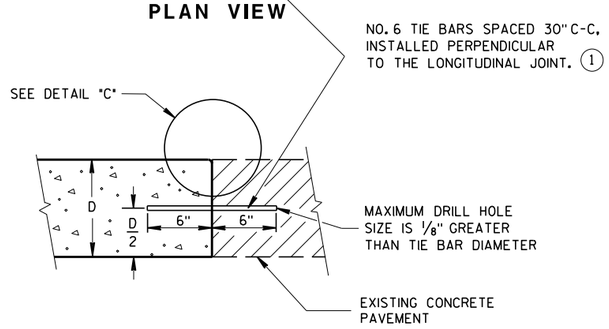
DETAIL "B"



DETAIL "C"



PLAN VIEW



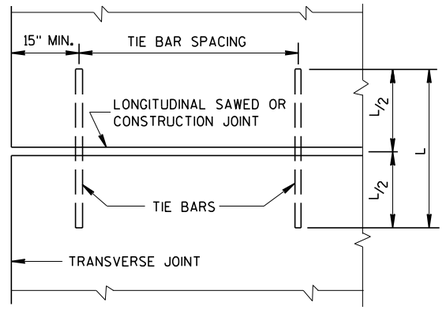
SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT

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

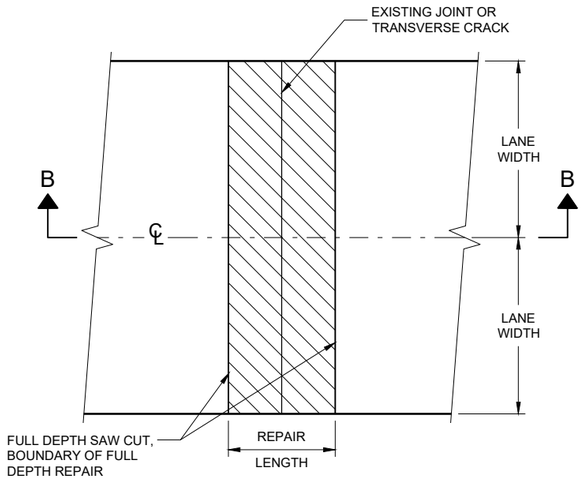
APPROVED
March 2018 — DATE
/S/ Peter Kemp — PAVEMENT SUPE
FHWA

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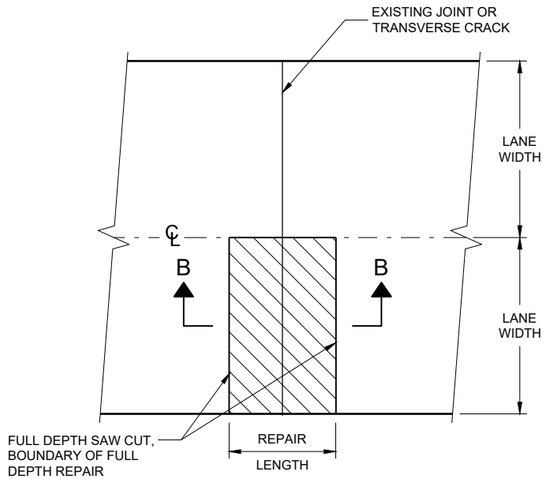
S.D.D. 13 C 1-19

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S.D.D. 13 C 1-19



PLAN VIEW
DOUBLE LANE REPAIR



PLAN VIEW
SINGLE LANE REPAIR

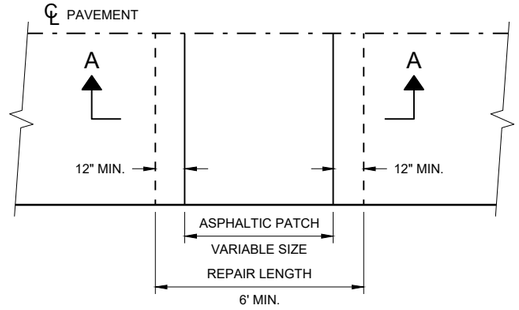
GENERAL NOTES

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

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

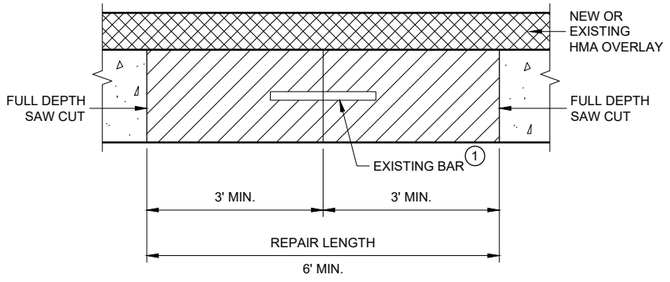
THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NON-DOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

(1) DOWEL BARS MAY NOT BE PRESENT.

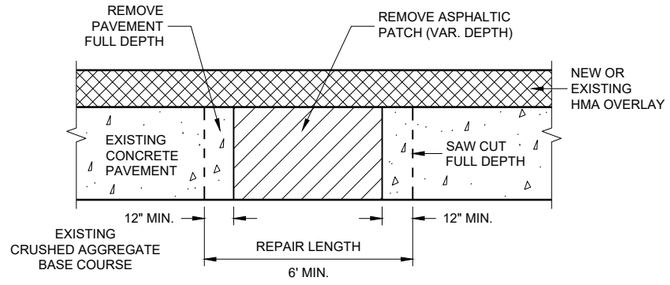


PLAN VIEW

FULL DEPTH CONCRETE PAVEMENT REMOVAL



SECTION B - B
CONCRETE REMOVAL



SECTION A - A

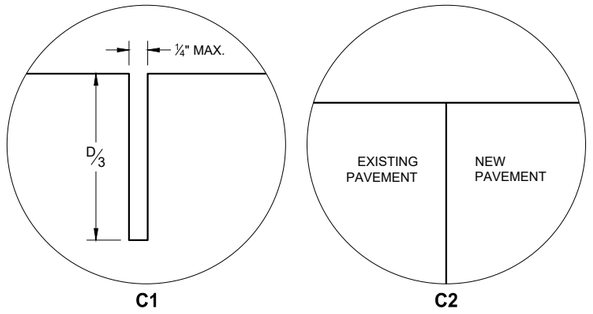
HMA PATCH REMOVAL

BASE PATCHING CONCRETE

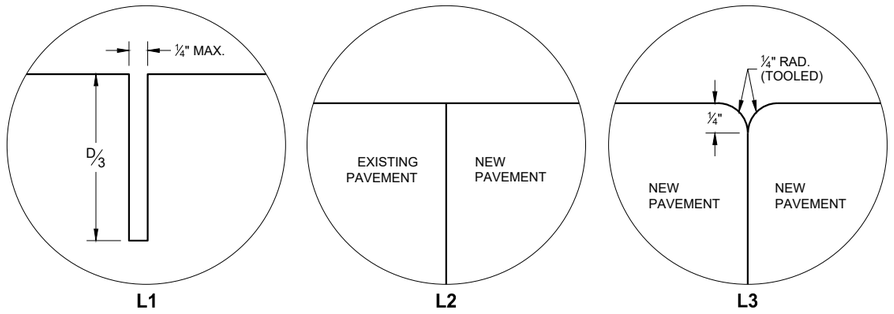
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

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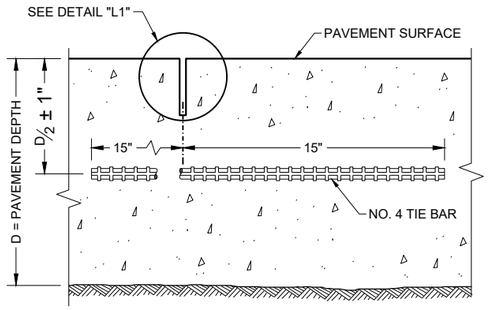
SDD 13C14 - 07a



TRANSVERSE JOINTS

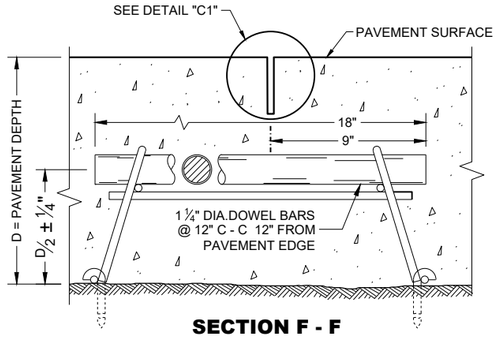


LONGITUDINAL JOINTS



SECTION C - C

SAWED LONGITUDINAL JOINT



SECTION F - F

CONTRACTION JOINT

GENERAL NOTES

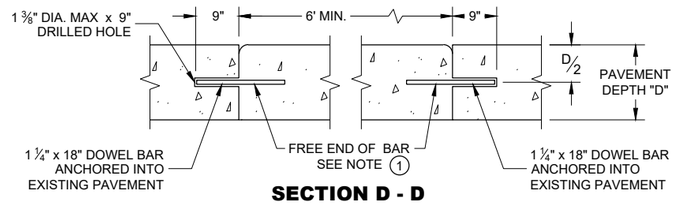
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

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

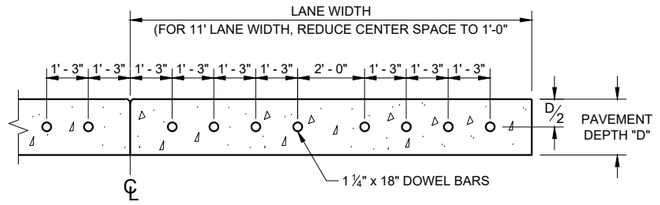
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT O EDGE.

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

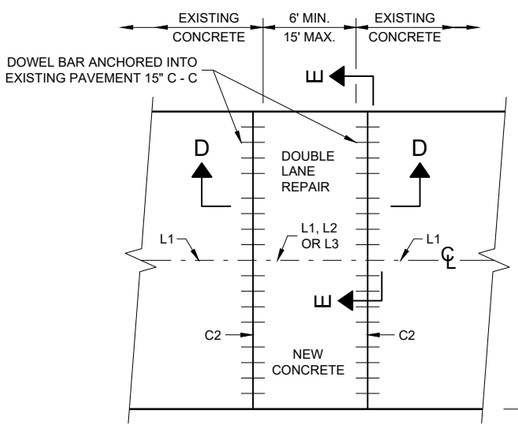


SECTION D - D



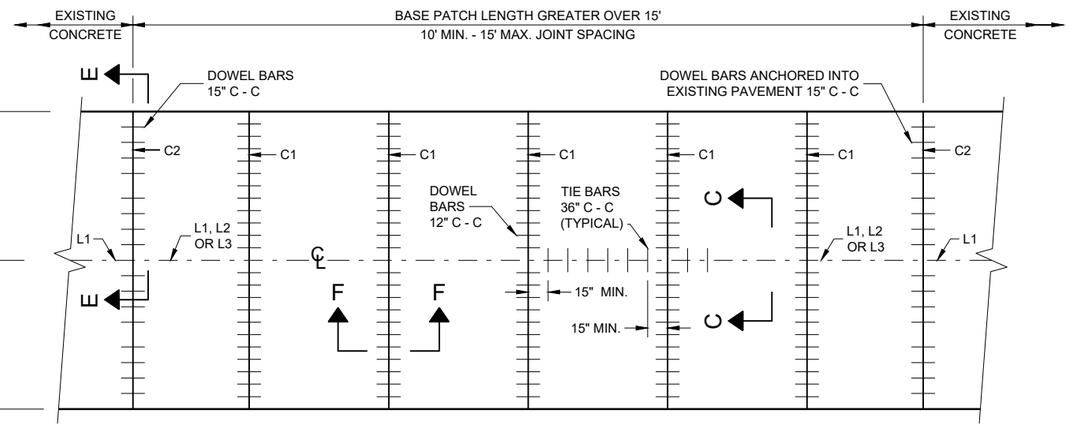
SECTION E - E

SPACING OF DOWEL BARS ANCHORED INTO EXISTING PAVEMENT



PLAN VIEW

MULTILANE CONCRETE BASE PATCH 15' MAXIMUM LENGTH



PLAN VIEW

MULTILANE CONCRETE BASE PATCH GREATER THAN 15' IN LENGTH

BASE PATCHING CONCRETE

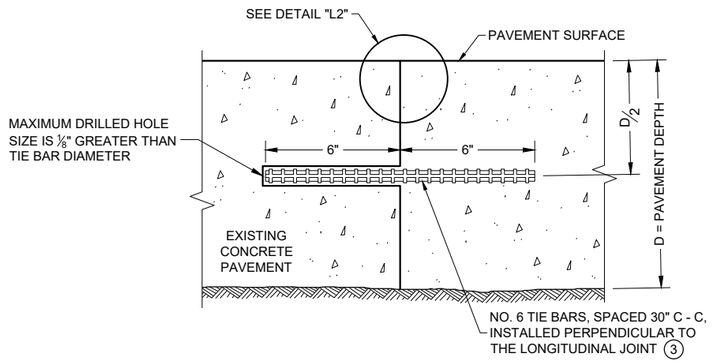
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA 173

SDD 13C14 - 07b

SDD 13C14 - 07b

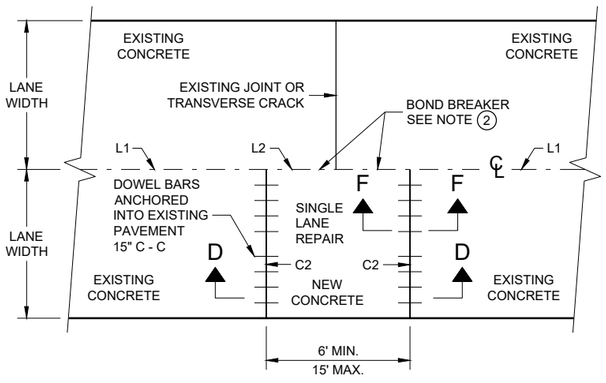
GENERAL NOTES

1. WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.
2. USE AN ENGINEER APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.
3. ANCHOR TIE BARS INTO DRILLED HOES WITH AN EPOXY.



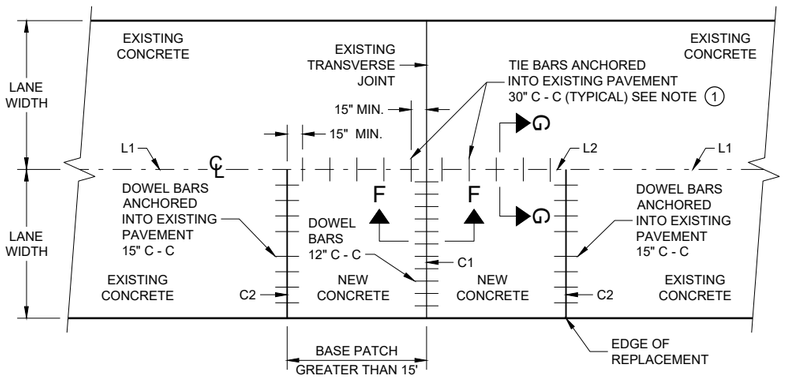
SECTION G - G

TIE BARS ANCHORED INTO EXISTING PAVEMENT



PLAN VIEW

SINGLE LANE CONCRETE BASE PATCH
15' MAXIMUM LENGTH



PLAN VIEW

SINGLE LANE CONCRETE BASE PATCH
GREATER THAN 15' LENGTH

BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018
DATE

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

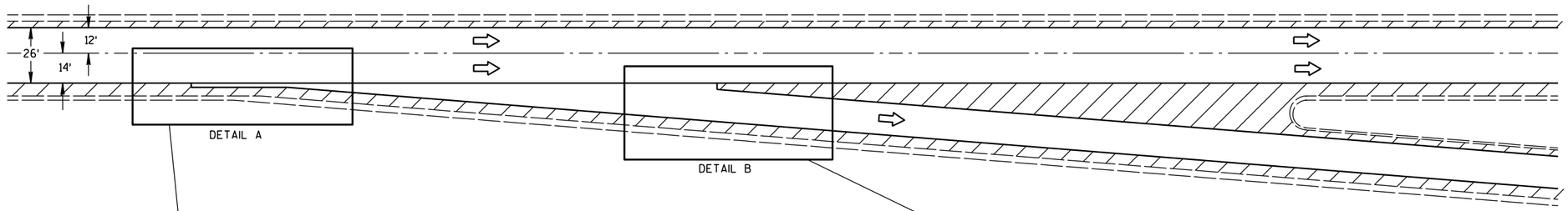
FHWA

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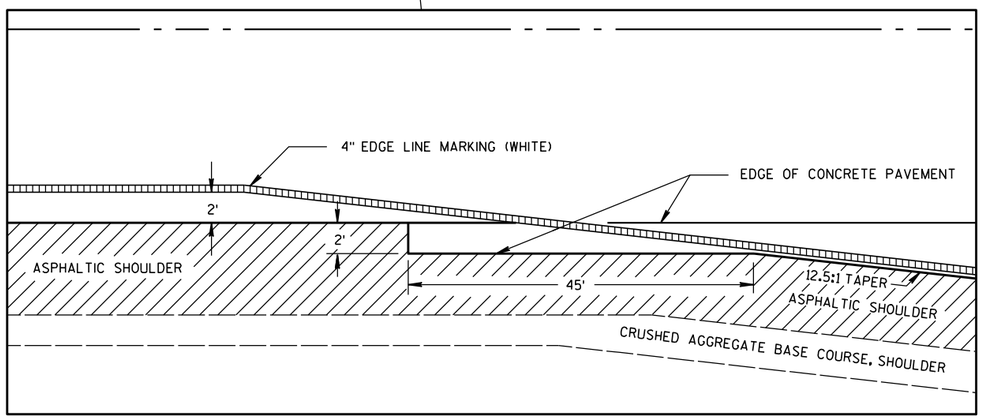
SDD 13C14 - 07c

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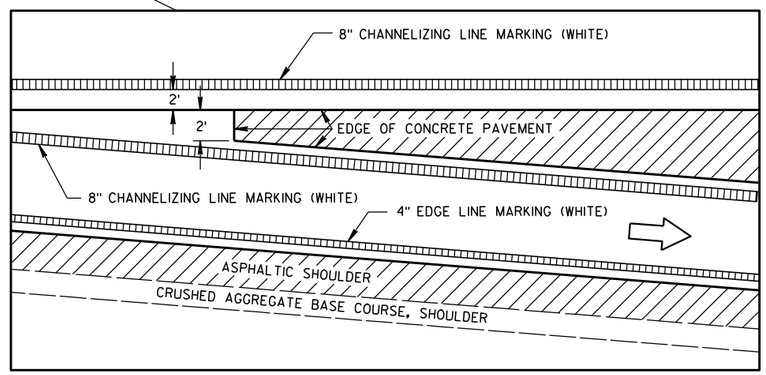
SDD 13C14 - 07c



EXIT RAMP DETAIL



DETAIL A



DETAIL B

CONCRETE JOINT PAVING DETAILS

GENERAL NOTES

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

SEE SDD 13 A 4-4c OR SDD 13 A 5-1b FOR RAMP AND GORE RUMBLE STRIP LOCATION.

CONCRETE JOINT DETAIL FOR EXIT RAMP TERMINI

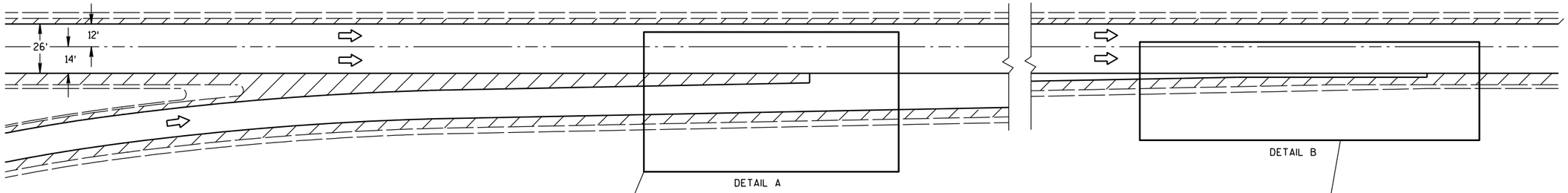
STATE OF WISCONSIN
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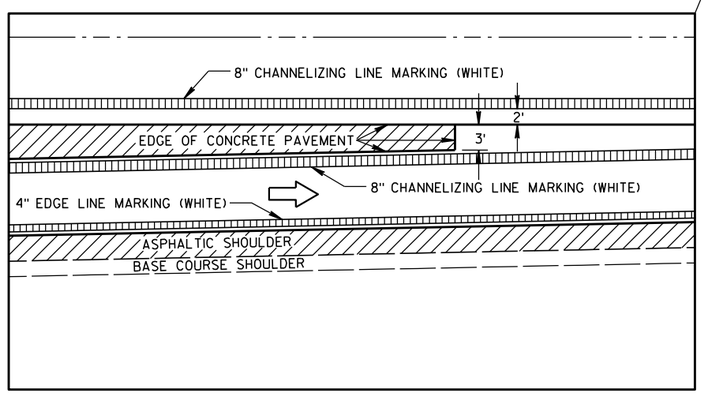
S.D.D. 13 C 17-1a

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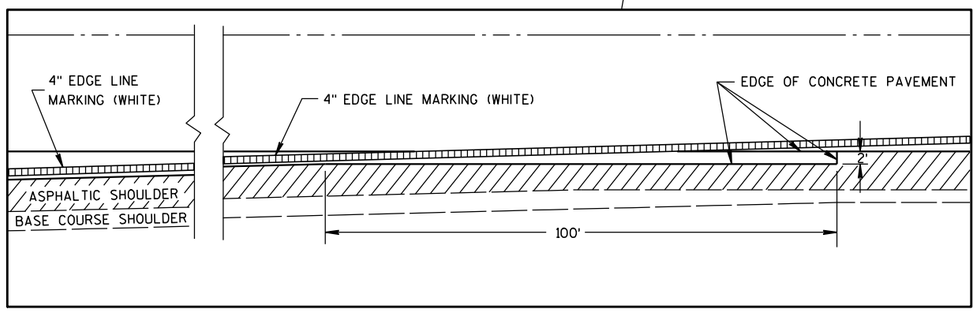
S.D.D. 13 C 17-1a



ENTRANCE RAMP DETAIL



DETAIL A



DETAIL B

CONCRETE JOINT PAVING DETAILS

GENERAL NOTES

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

SEE SDD 13 A 4-4c OR SDD 13 A 5-1b FOR RAMP AND GORE RUMBLE STRIP LOCATION.

CONCRETE JOINT DETAIL FOR ENTRANCE RAMP TERMINI

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

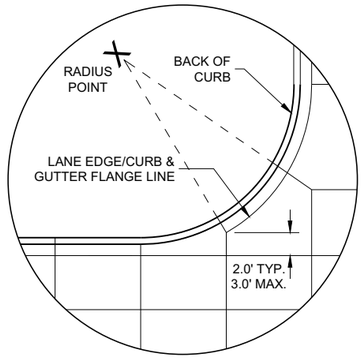
5/27/98
DATE

/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER

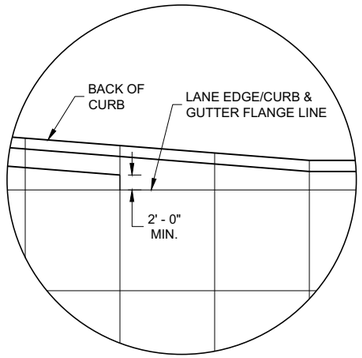
FHWA

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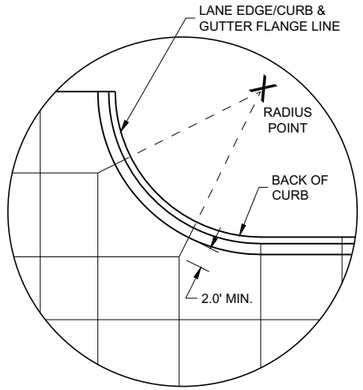
S.D.D. 13 C 17-1b



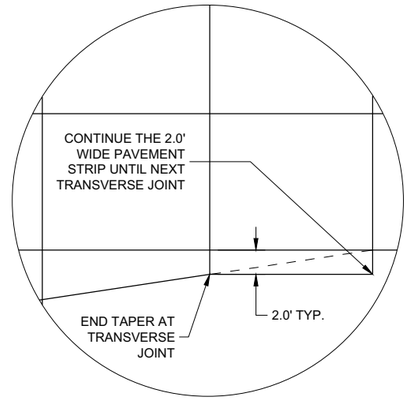
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.

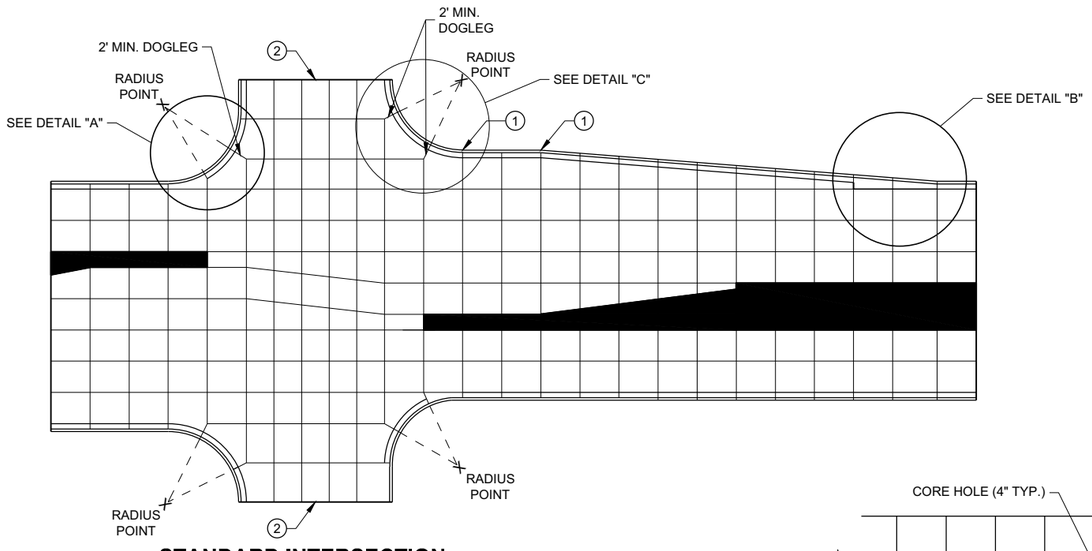
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.

AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITHEDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.

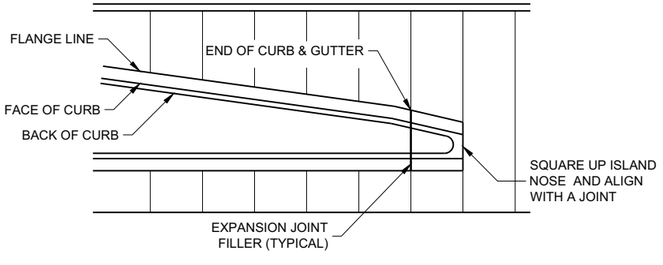


STANDARD INTERSECTION

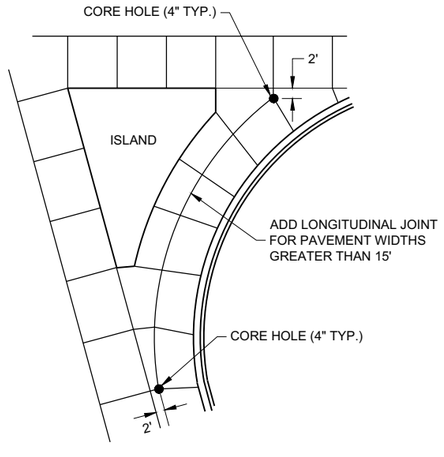
PAVEMENT DEPTH AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 ½"	12'
7", 7 ½"	14'
8" & ABOVE	15'

SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 13C18 - 07a

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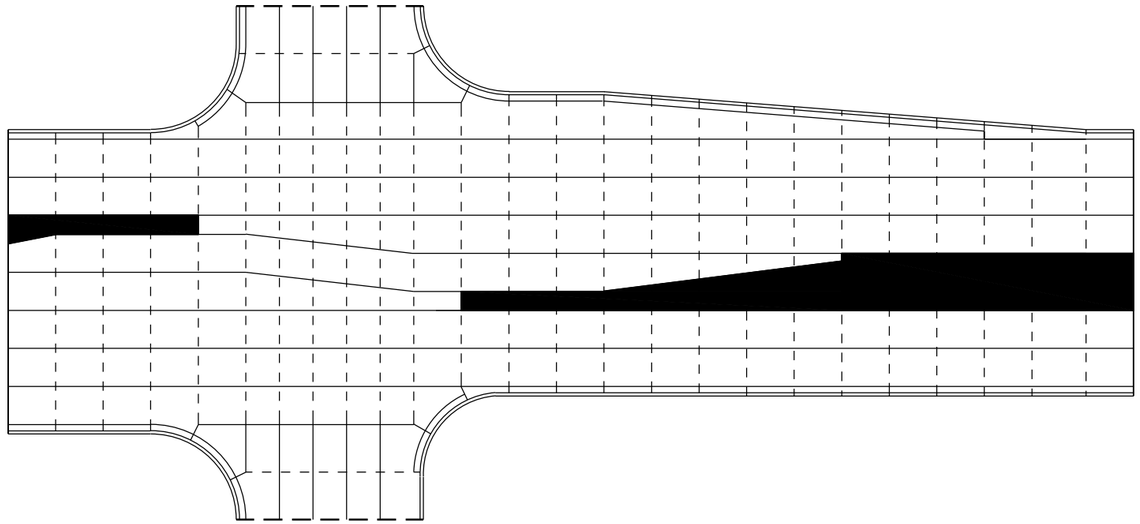
SDD 13C18 - 07a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

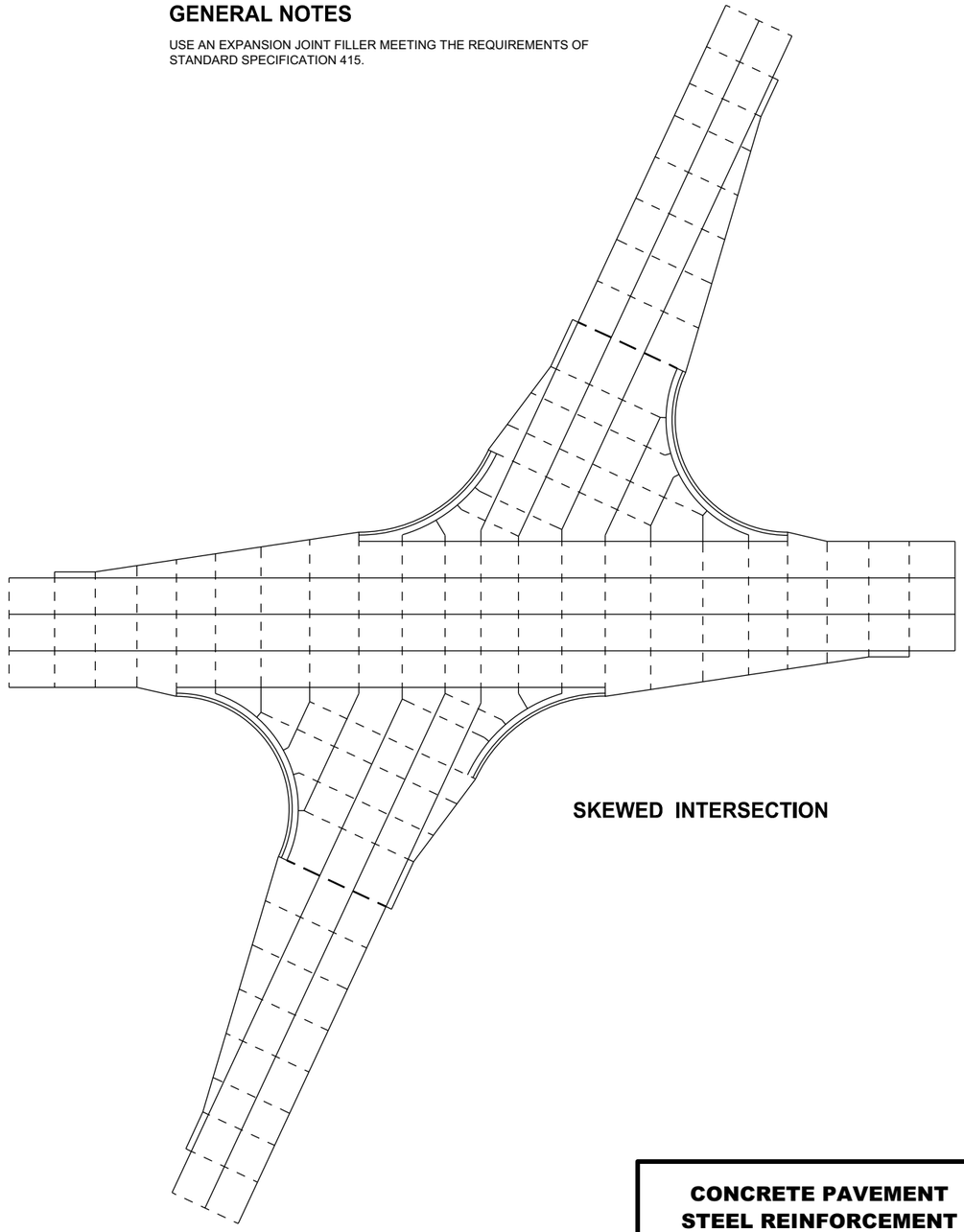
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



SKEWED INTERSECTION

6

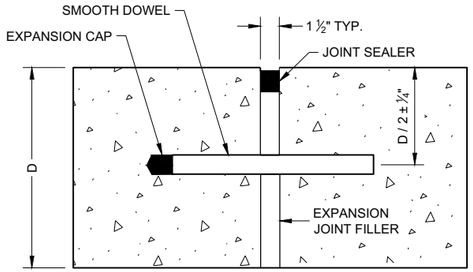
SDD 13C18 - 07b

CONCRETE PAVEMENT
STEEL REINFORCEMENT

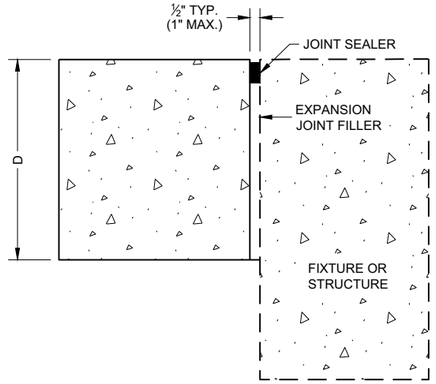
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 13C18 - 07b



DOWELED TRANSVERSE (1)



UNTIED - LONGITUDINAL

EXPANSION JOINTS

TIE BAR TABLE

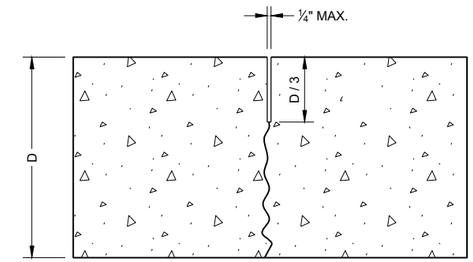
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4*	30"	24"**

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

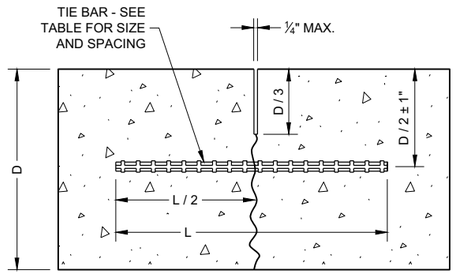
** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

GENERAL NOTES

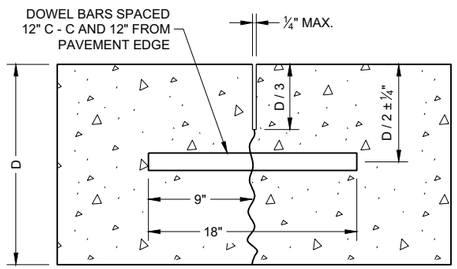
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATETHE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
4. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
5. IF JOINT IS FORMED, PROVIDE A ¼" RADIUS.
6. ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



UNDOWELED TRANSVERSE

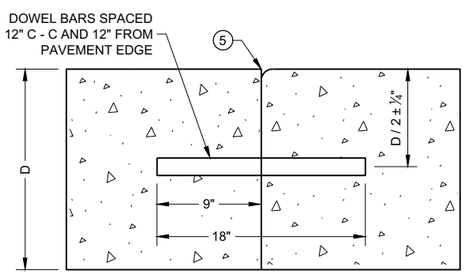


TIED LONGITUDINAL

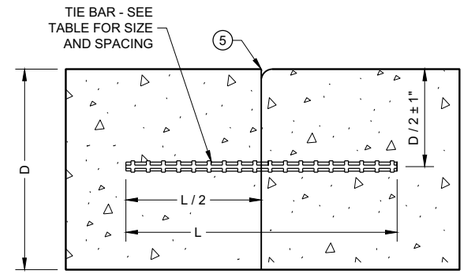


DOWELED TRANSVERSE

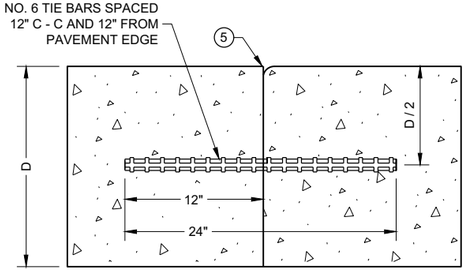
CONTRACTION JOINTS (2)



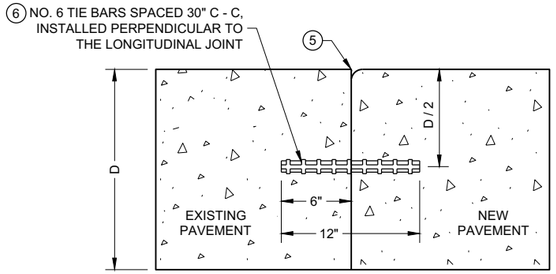
DOWELED TRANSVERSE (3)



TIED LONGITUDINAL



TIED TRANSVERSE (3)
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



TIED LONGITUDINAL TO EXISTING

CONSTRUCTION JOINTS (4)

CONCRETE PAVEMENT JOINT TYPES

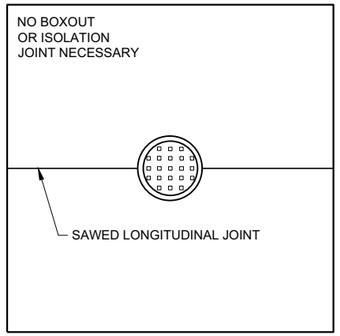
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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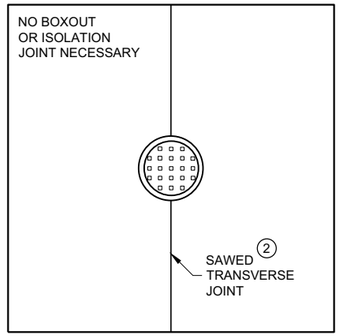
SDD 13C18 - 07c

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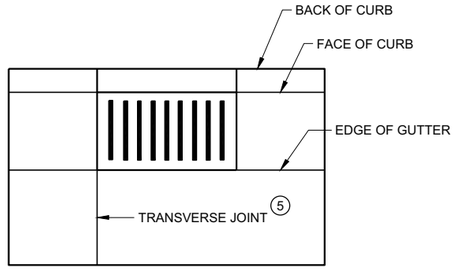
SDD 13C18 - 07c



MANHOLE WITH LONGITUDINAL JOINT



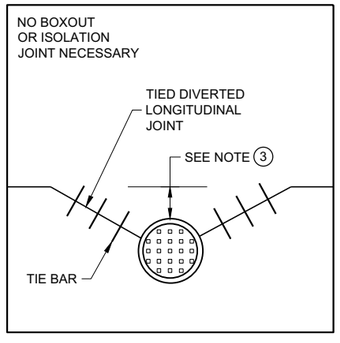
MANHOLE WITH TRANSVERSE JOINT



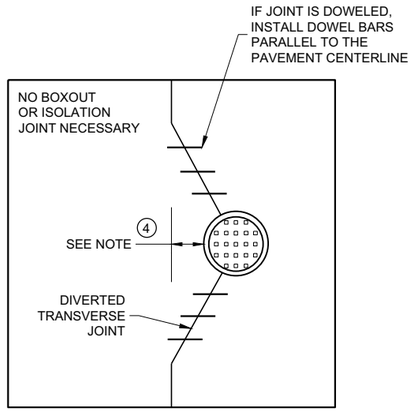
INLET WITH TRANSVERSE JOINT

GENERAL NOTES

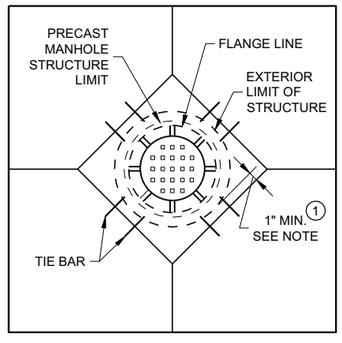
1. USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1 FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
2. ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
3. IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF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



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT



DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS

CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS

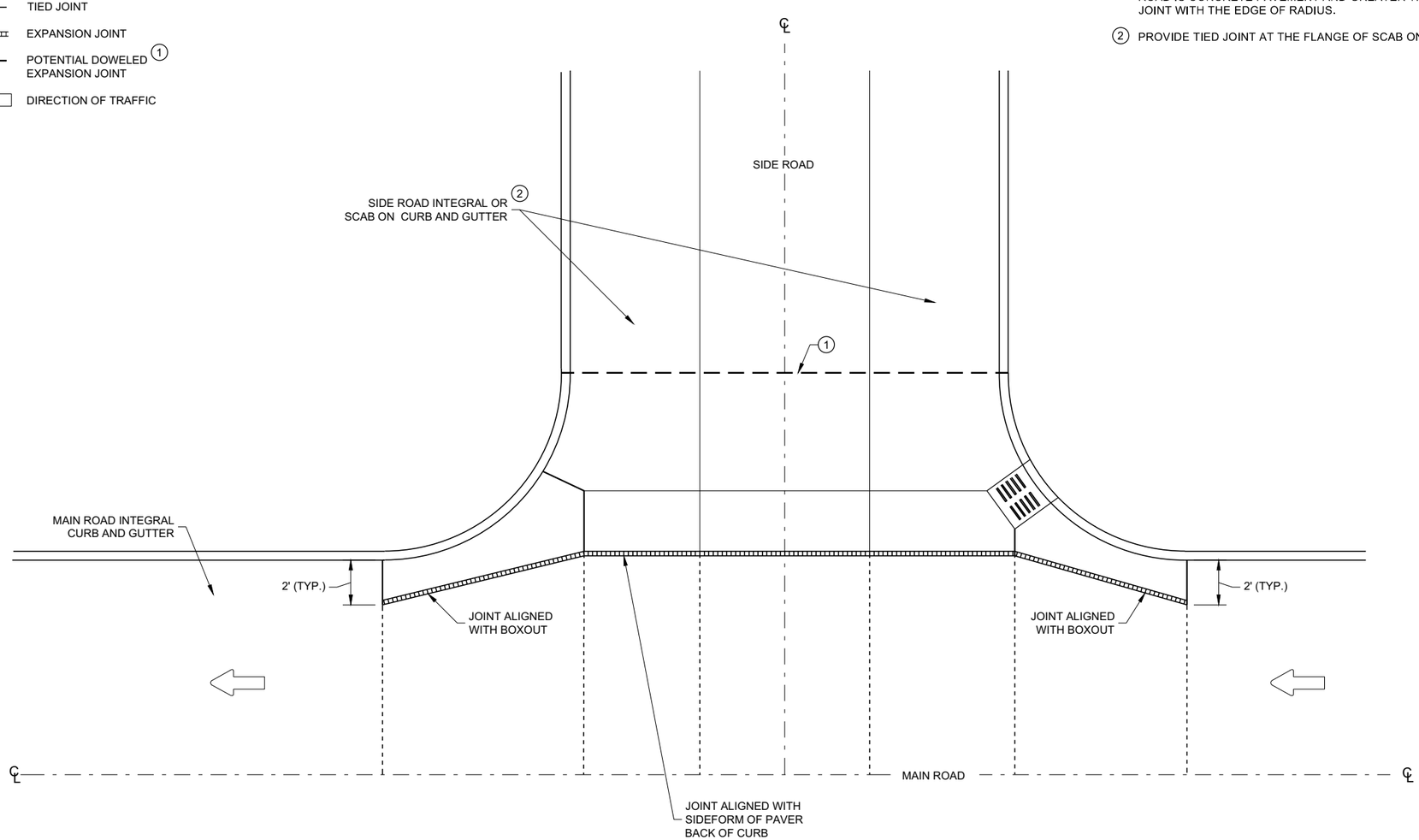
FHWA

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SDD 13C18 - 07d

LEGEND

- DOWELED JOINT
- TIED JOINT
- EXPANSION JOINT
- POTENTIAL DOWELED EXPANSION JOINT (1)
- DIRECTION OF TRAFFIC



GENERAL NOTES

(1) CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH THE EDGE OF RADIUS.

(2) PROVIDE TIED JOINT AT THE FLANGE OF SCAB ON CURB IF SCAB ON CURB AND GUTTER IS USE.

INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER

CONCRETE PAVEMENT INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Peter Kemp P.E.
ROADWAY STANDARDS DEVE ENGINEER

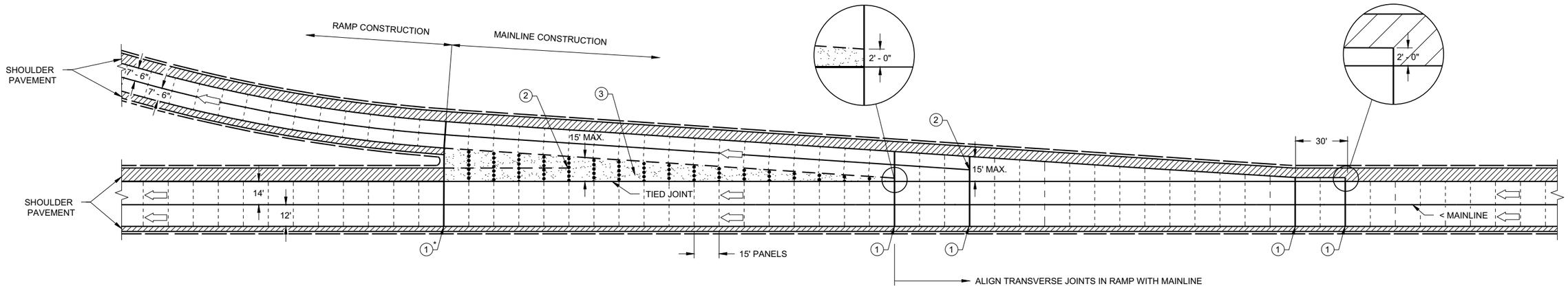
FHWA

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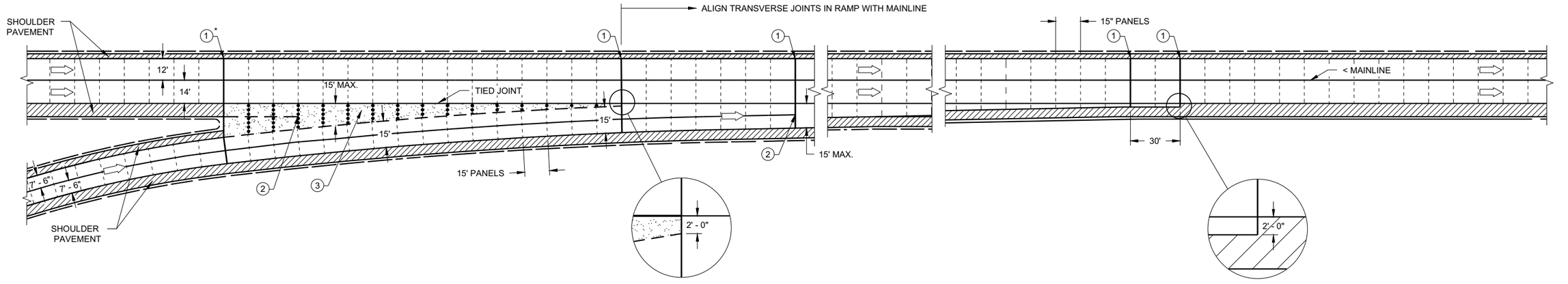
SDD 13C18 - 07f

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SDD 13C18 - 07f



DECELERATION LANE



ACCELERATION LANE

GENERAL NOTES

PAVEMENT AND BASE THICKNESS, PANEL LENGTHS, JOINTS AND REINFORCEMENT FOR THE DECELERATION AND ACCELERATION LANES, INCLUDING TAPERS, SHALL BE THE SAME AS THE MAINLINE, EXCEPT WHERE OTHERWISE NOTED.

ALL REINFORCEMENT BARS SHALL BE EPOXY COATED CONFORMING TO SUBSECTION 505.2.6 OF THE STANDARD SPECIFICATIONS.

LANE AND SHOULDER WIDTHS MAY VARY FROM SHOWN. SEE CONSTRUCTION PLANS FOR ACTUAL PROPOSED WIDTHS.

(1) CRITICAL TRANSVERSE JOINT LOCATIONS AT PAVEMENT WIDTH CHANGES. ((1)* IS NOT A CRITICAL TRANSVERSE JOINT WHEN ASPHALTIC GORE IS INSTALLED).

(2) STOP LONGITUDINAL JOINT WITH CORE HOLE (2" TYP.) WHEN IT MEETS THE FIRST TRANSVERSE JOINT LESS THAN 15' WIDE OR STOP LONGITUDINAL JOINT WHEN IT MEETS 2' AWAY FROM THE TIED JOINT OF THE MAINLINE.

(3) DISREGARD THE JOINT DETAILS IN AND AROUND THE GORE WHEN ASPHALTIC GORE IS INSTALLED.

LEGEND

- DOWELED JOINT
- UNDOWELED JOINT
- TIED JOINT
- UNTIED JOINT
- GORE
- DIRECTION OF TRAVEL

CONCRETE PAVEMENT JOINTING ACCELERATION/ DECELERATION LANE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

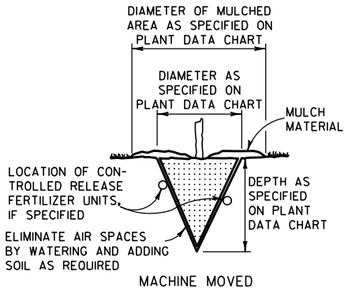
APPROVED
November 2018 — DATE
/S/ Peter Kemp P.E. — ROADWAY STANDARDS DEVE ENGINEER
FHWA

6

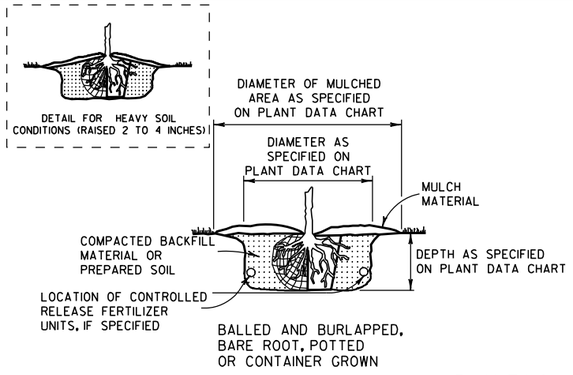
SDD 13C18 - 07g

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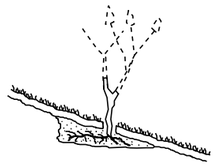
SDD 13C18 - 07g



MACHINE MOVED

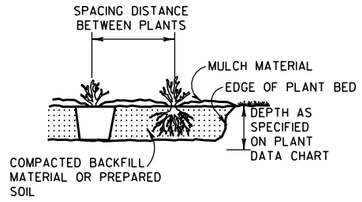


BALLED AND BURLAPPED, BARE ROOT, POTTED OR CONTAINER GROWN



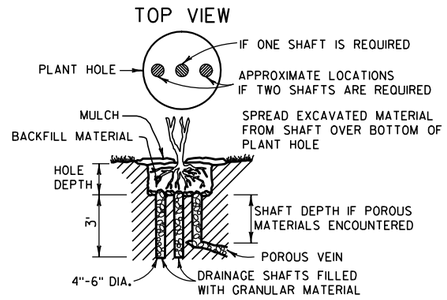
ACCOMMODATE ROOTS (SMOOTH AND STAGHORN SUMAC)

NOTE:
1) ENGINEER SHALL REQUIRE 3 SLITS IN POT TO SPEED DETERIORATION
2) METAL, PLASTIC OR OTHER NONDEGRADABLE POTS SHALL BE REMOVED PRIOR TO PLANTING



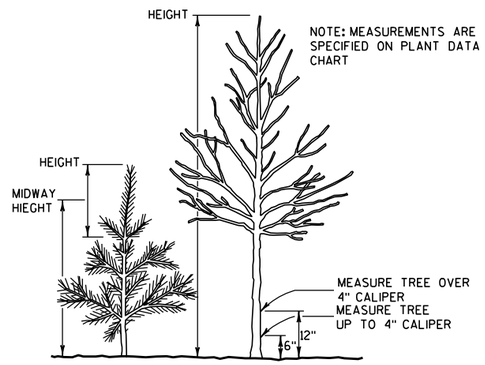
PREPARED BED (BARE ROOT AND POTTED)

PLANTING

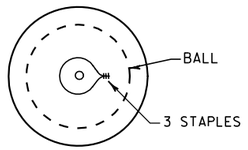


NOTE:
DRAINAGE SHAFT AS SPECIFIED ON PLANT DATA CHART

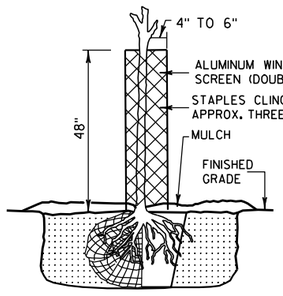
DRAINING



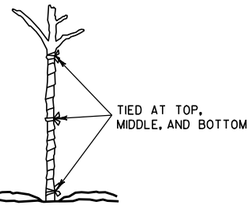
MEASURING



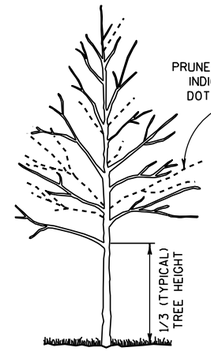
TOP VIEW



RODENT PROTECTION



WRAPPING

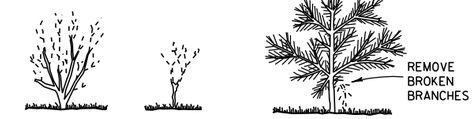


TALL DECIDUOUS TREES (ASH, MAPLE, LINDEN, OAK)

SINGLE STEMMED LOW DECIDUOUS TREES (CRABS AND OTHER SINGLE STEM TYPE)

MULTI-STEMMED LOW DECIDUOUS TREES OR LARGE SHRUBS (HAWTHORN, SERVICEBERRY)

NOTE: WHEN PRUNING, PRESERVE CHARACTER AND SHAPE OF TREE. AVOID LEAVING STUBS - REMOVE BRANCH OR TWIG BACK TO THE NEAREST CROTCH
1) PRUNE TO REMOVE DEAD AND BROKEN BRANCHES
2) PRUNE TO REMOVE BRANCHES THAT TOUCH OR ARE TOO CLOSE TO OTHER BRANCHES

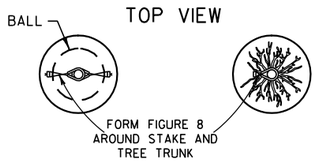


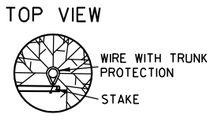
SHRUBS (GRAY DOGWOOD ARROWWOOD VIBURNUM)

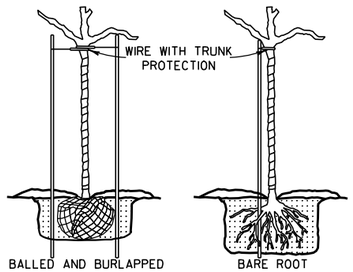
SUMAC

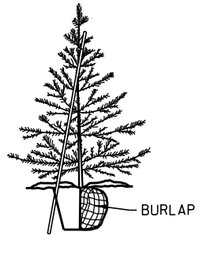
TREE TYPE EVERGREENS (PINE, SPRUCE, FIR) EVERGREENS USUALLY ARE NOT PRUNED

PRUNING



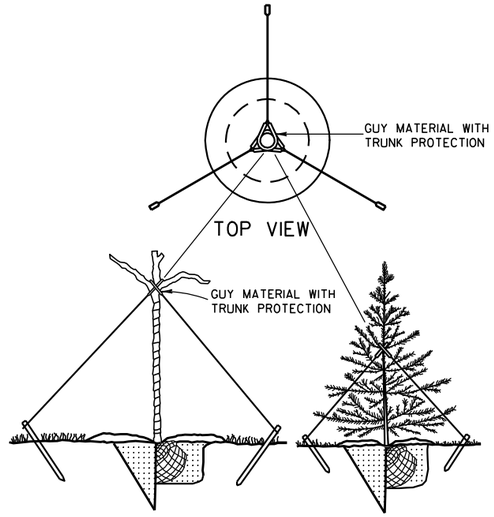






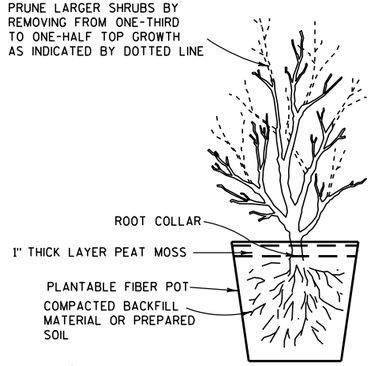
NOTE: BRACING STAKE
1) SHALL BE DRIVEN INTO THE GROUND AS CLOSE TO THE TREE AS POSSIBLE WITHOUT DAMAGING THE BRANCHES.
2) MAY BE DRIVEN AT SUCH AN ANGLE THAT IT DOES NOT PENETRATE THE BALL OR POT.
3) SHALL NOT PROTRUDE ABOVE THE TOP OF THE TREE; AND
4) SHALL HAVE A HOLE NEAR THE TOP TO HOLD THE WIRE IN PLACE.

BRACING



GUYING

PRUNE LARGER SHRUBS BY REMOVING FROM ONE-THIRD TO ONE-HALF TOP GROWTH AS INDICATED BY DOTTED LINE



POTTING

NOTES

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

BRACING, WRAPPING, GUYING, RODENT PROTECTION, FERTILIZER AND MULCH SHALL BE USED ONLY WHEN SPECIFIED ON THE PLANT DATA CHART (PART OF PLAN) OR SPECIAL PROVISIONS.

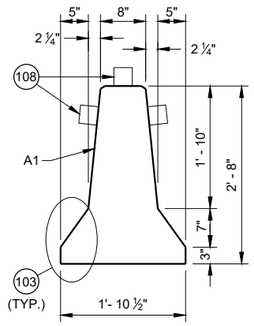
TREE PLANTING DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

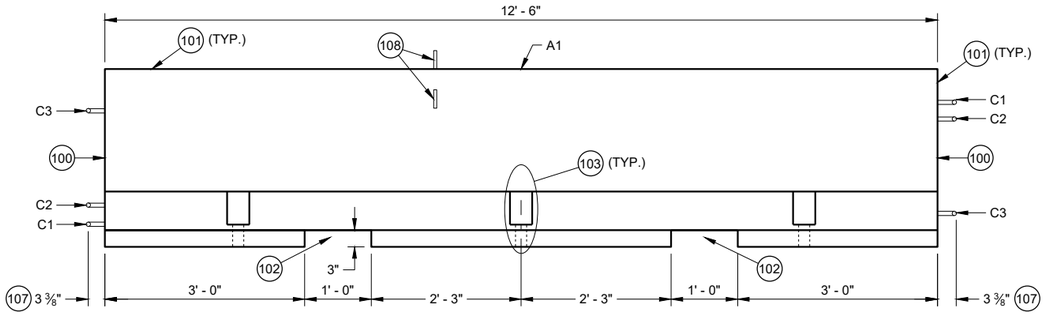
APPROVED
4/11/94 DATE
/S/ Rory L. Rhinesmith
CHIEF METHODS DEVELOPMENT ENGINEER
FHWA

S.D.D. 14 A 2-1

S.D.D. 14 A 2-1



CROSS SECTION



PROFILE VIEW

GENERAL NOTES

PLACE BARRIER ON PAVED SURFACE. BEFORE PLACEMENT OF TEMPORARY BARRIER, REMOVE ALL LOOSE MATERIAL FROM PAVED SURFACE.

LOOP BARS C1, C2 AND C3 ARE NOT FOR PLACEMENT OR MOVEMENT OF BARRIER.

(100) PERMANENTLY FORM INTO ONE END OF BARRIER THE FOLLOWING INFORMATION:
- A. TYPE OF BARRIER: WI-CBTP
- B. MANUFACTURER
- C. DATE OF MANUFACTURE (MONTH AND YEAR)

(101) 1" OPTIONAL CHAMFER

(102) SEE LIFTING SLOT DETAIL

(103) SEE ANCHOR BLOCK DETAIL

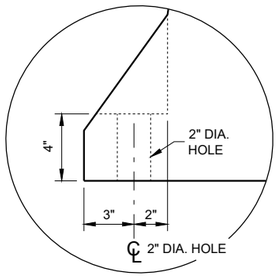
(104) 1 ¼" MIN. CLEAR COVER

(105) 2" MIN. CLEAR COVER

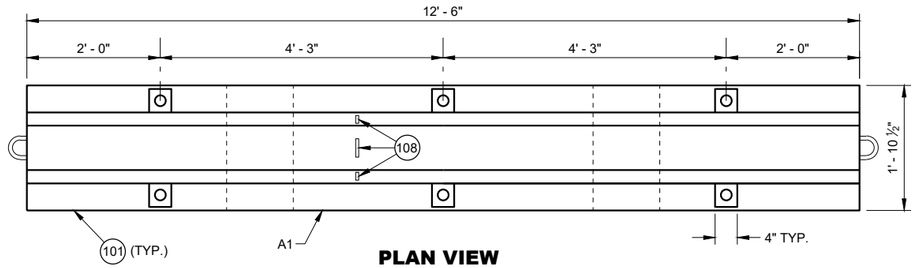
(106) 1" MIN. CLEAR COVER

(107) ± ⅛" MEASURED FROM FACE OF CONCRETE BARRIER TO OUTSIDE OF LOOP BAR (TYP.)

(108) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURERS INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED LEFT OF TRAFFIC AND WHITE WHEN BARRIER IS LOCATED RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART, PROVIDE TO MOUNTED DELINEATORS IN ADDITION TO SIDE MOUNTED DELINEATORS ON BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAT 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.

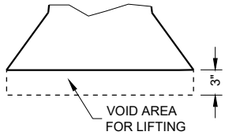


ANCHOR BLOCK DETAIL

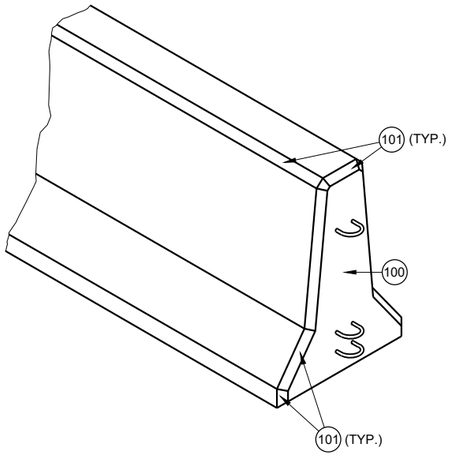


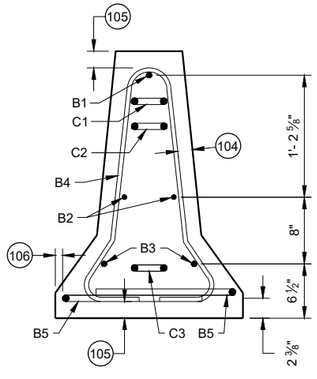
PLAN VIEW

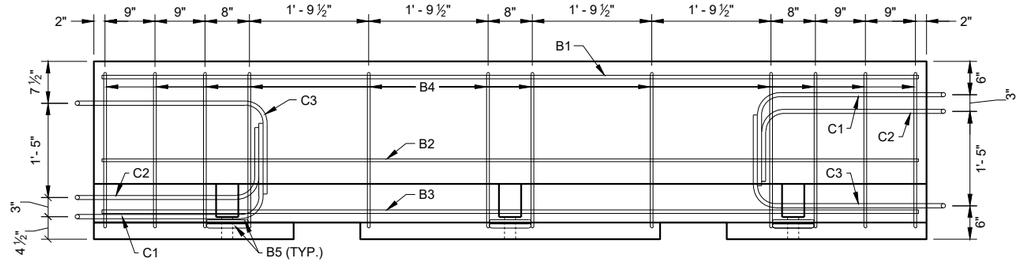
TEMPORARY BARRIER



LIFTING SLOT DETAIL (TYP.)







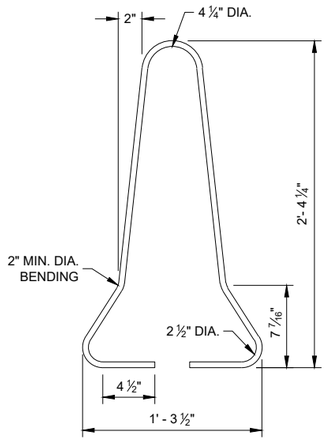
PROFILE VIEW

TEMPORARY BARRIER REINFORCEMENT

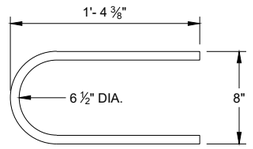
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTA	184

SDD14B07 - 16a

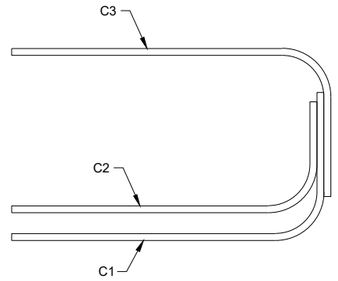
SDD14B07 - 16a



B4 BAR DETAIL

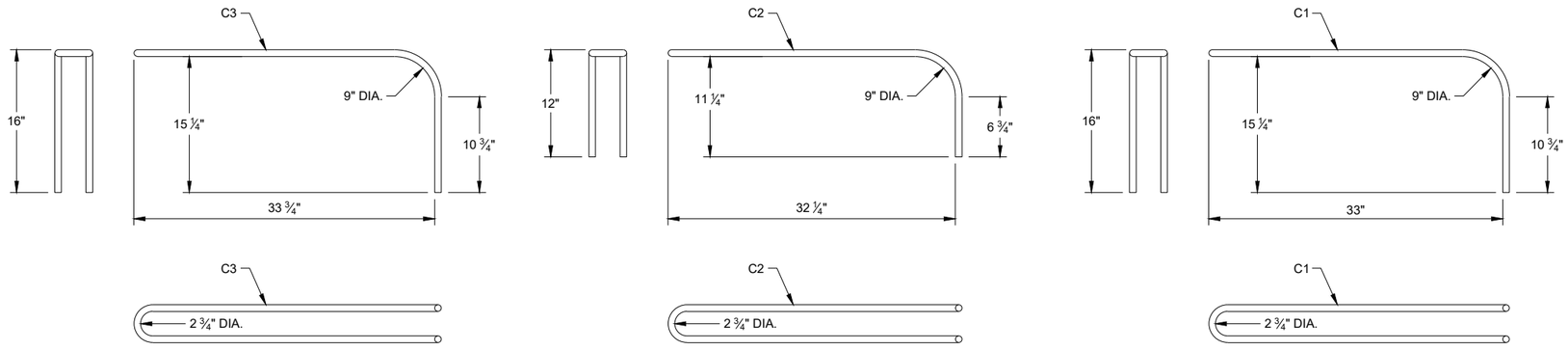


B5 BAR DETAIL



PROFILE VIEW

LOOP BAR ASSEMBLY



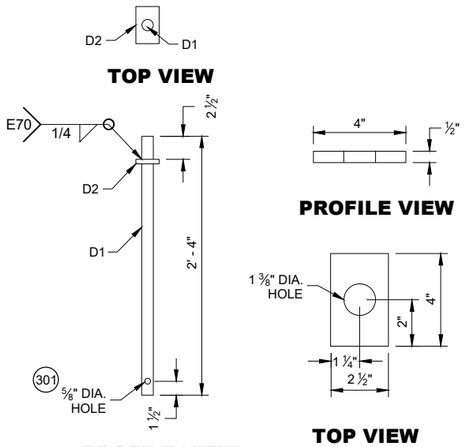
C BAR DETAILS

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

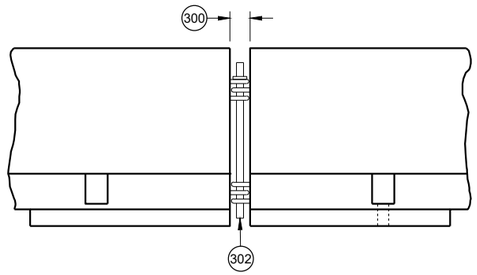
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B07 - 16b



CONNECTOR PIN ASSEMBLY



CONNECTING TEMPORARY BARRIER SECTIONS

GENERAL NOTES

300 SET WITH 3 ⅝" WOOD BLOCK.

301 HOLE IS OPTIONAL.

302 CONNECTOR PIN ASSEMBLY.

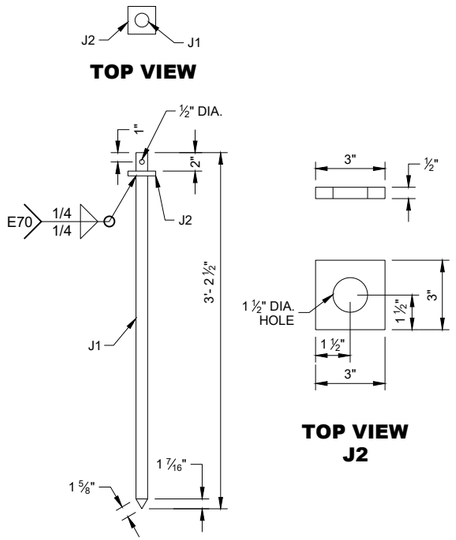
303 CONCRETE PAVEMENT, APPROACH SLAB, OR DECK.

304 CONCRETE DECK.

305 DO NOT USE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY OR CONCRETE PAVEMENT WITH ASPHALT OVERLAY.

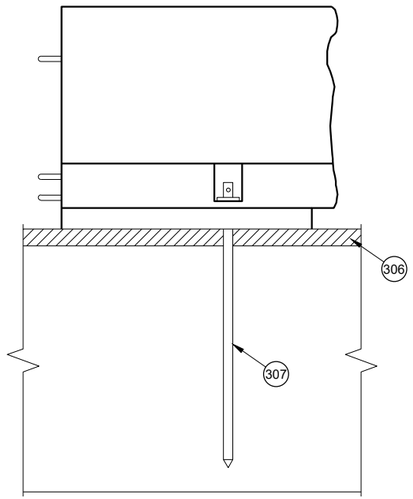
306 MINIMUM OF 2" OF ASPHALT.

307 ASPHALT ANCHOR PIN ASSEMBLY



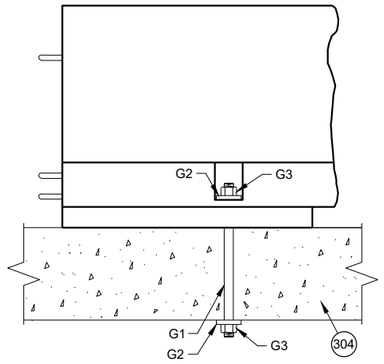
PROFILE VIEW

ASPHALT ANCHOR PIN ASSEMBLY



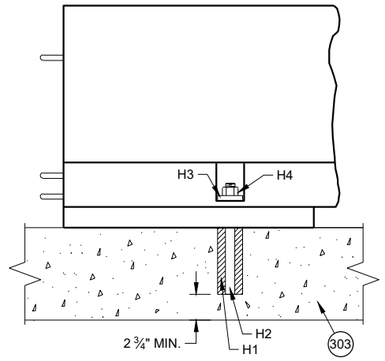
SIDE VIEW

ASPHALT ANCHOR INSTALLATION



SIDE VIEW

THROUGH BOLT ANCHOR INSTALLATION 305



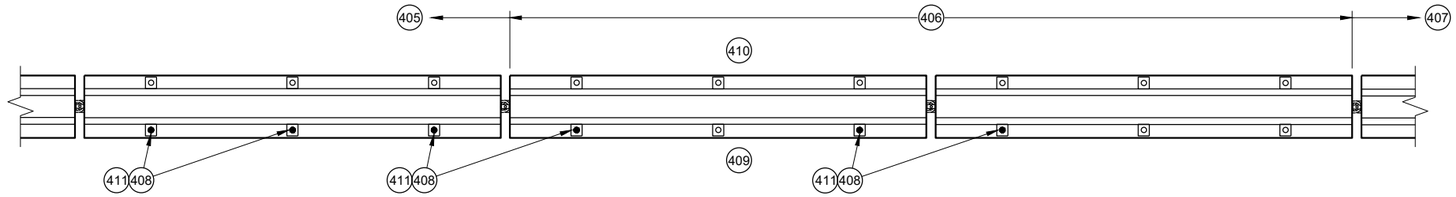
SIDE VIEW

ADHESIVE ANCHOR INSTALLATION 305

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

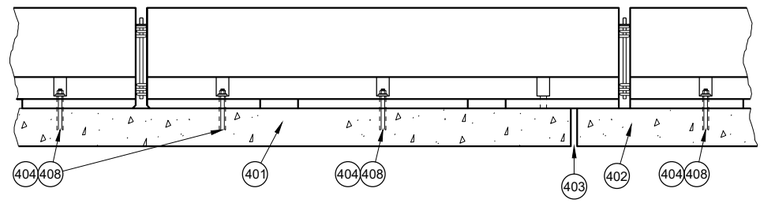
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SDD 14B07 - 16c



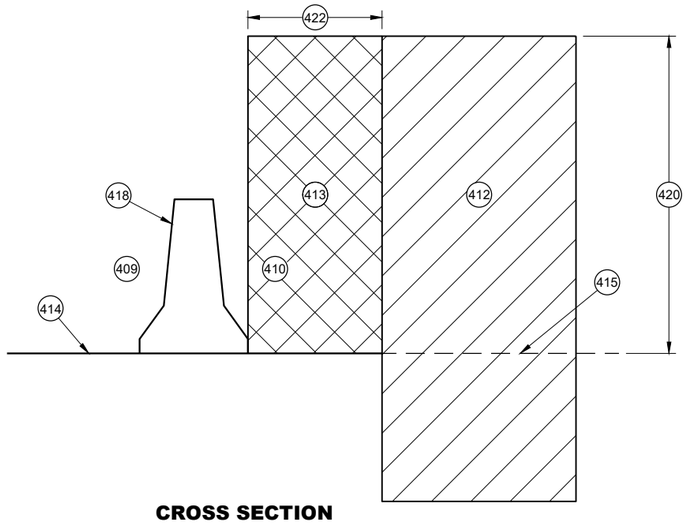
PLAN VIEW

TRANSITION FROM FREE STANDING TO ANCHORED BARRIER



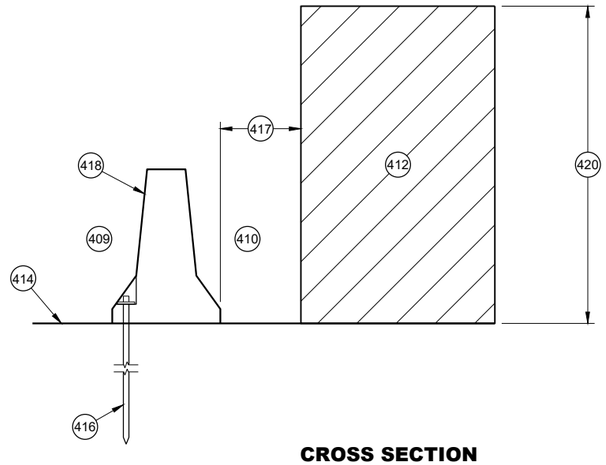
PROFILE VIEW

ANCHORED BARRIER NEAR EXPANSION JOINT (400)



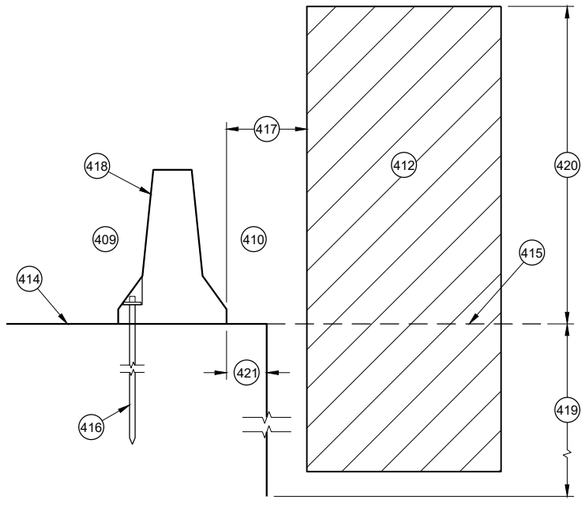
CROSS SECTION

FREE STANDING BARRIER



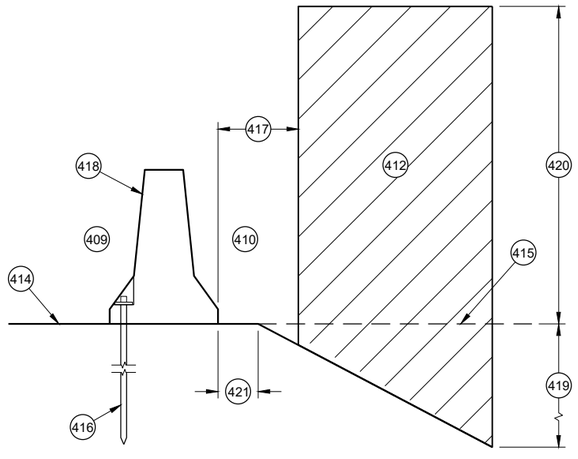
CROSS SECTION

ANCHORED BARRIER FOR OBJECTS ABOVE THE GRADE LINE AND NEAR THE BARRIER



CROSS SECTION

ANCHORED BARRIER NEAR VERTICAL DROP OFF



CROSS SECTION

ANCHORED BARRIER NEAR A SLOPE

GENERAL NOTES

(400) 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.

(401) CONCRETE DECK

(402) CONCRETE DECK OR APPROACH SLAB.

(403) EXPANSION JOINT

(404) ADHESIVE ANCHOR SHOWN. SEE ANCHOR DETAILS.

(405) ANCHORED TEMPORARY BARRIER

(406) TRANSITION FROM ANCHORED TEMPORARY BARRIER TO FREE STANDING

(407) FREE STANDING BARRIER

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

(409) TRAFFIC SIDE

(410) NON-TRAFFIC SIDE

(411) ANCHOR LOCATION. SEE ANCHORING DETAILS.

(412) WORK AREA

(413) AREA FREE OF OBJECTS AND WORKERS

(414) GRADE LINE

(415) EXTENDED GRADE LINE

(416) ANCHORED TEMPORARY BARRIER. SEE BOLT THROUGH DECK, REMOVABLE ADHESIVE ANCHOR, OR AN ASPHALT ANCHOR ROD DETAILS FOR MORE INFORMATION. ASPHALT ANCHOR ROD SHOWN.

(417) WHEN OBJECTS EXTEND ABOVE THE GRADE. A MINIMUM OF 1 FOOT IS REQUIRED FROM BACK OF BARRIER TO OBJECT.

(418) OBJECTS ARE NOT TO BE PLACED ON, MOUNTED TO, OR ALLOWED TO LEAN AGAINST THE BARRIER WITHOUT WRITTEN PERMISSION OF THE PROJECT ENGINEER.

(419) DEPTHS OF 3 FEET OR MORE.

(420) Y = 6.5'

(421) OFFSET FROM BACK OF BARRIER EDGE:

CONCRETE PAVEMENT	0.5'
ASPHALT	0.5'

(422) POSTED SPEED (MPH):

45 OR GREATER	4.0'
40 OR LOWER	2.0'

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 14B07 - 16d

GENERAL NOTES

(500) EXISTING RIGID BARRIERS (VARIES)

(501) TEMPORARY BARRIER

(502) SEE OTHER DETAIL ON HOW TO ANCHOR TEMPORARY BARRIER (BARRIER ASPHALT ANCHOR SHOWN).

(503) ANCHORS ARE REQUIRED ON BOTH SIDE OF THE TEMPORARY BARRIER.

(504) NESTED RAILS ARE REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS.

(505) TRAFFIC TRAVELS FROM PERMANENT BARRIER TO TEMPORARY BARRIER.

(506) TRAFFIC TRAVELS FROM TEMPORARY BARRIER TO PERMANENT BARRIER.

(507) VERTICAL BARRIER

(508) SAFETY SHAPE BARRIER

(509) SINGLE SLOPE BARRIER

(510) CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF RIGID BARRIER.

(511) BENT THRIE BEAM TO FIT.

(512) THRIE BEAM PIECES ARE OFFSET 15 ¼" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.

(513) TWO (2) P1, P2 AND P3 ARE REQUIRED

(514) FIVE (5) N1, N2 AND N3 ARE REQUIRED

(515) TWO (2) R1, R2 AND R3 ARE REQUIRED

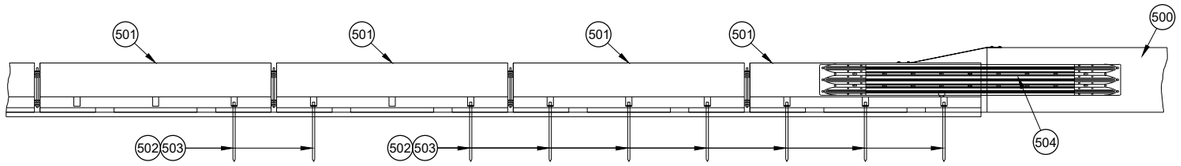
(516) CUT WOOD BLOCK TO FIT.

(517) SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL ASSEMBLY.

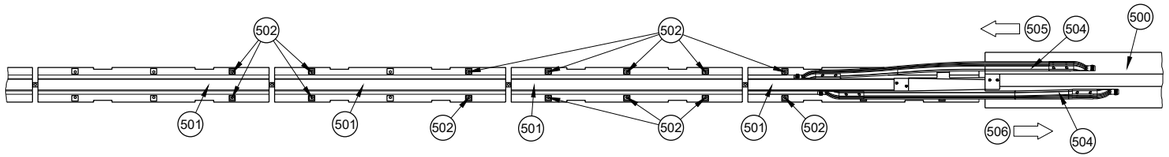
(518) CAP ASSEMBLY

(519) 4" MAX. GAP BETWEEN TEMPORARY BARRIER AND RIGID BARRIER.

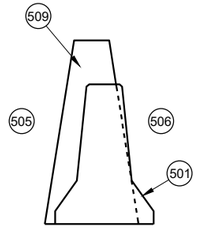
(520) ALL TWELVE SPLICE HOLES REQUIRE M1 AND M2



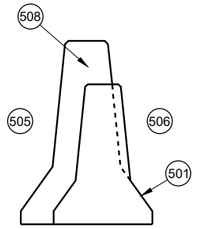
PROFILE VIEW



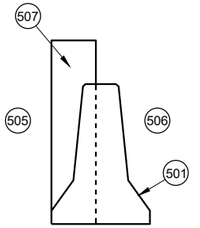
PLAN VIEW
TRANSITION TO RIGID BARRIER



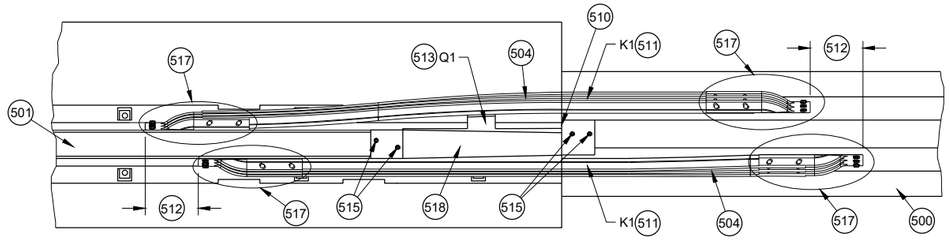
CROSS SECTION TEMPORARY BARRIER PLACEMENT SINGLE SLOPE



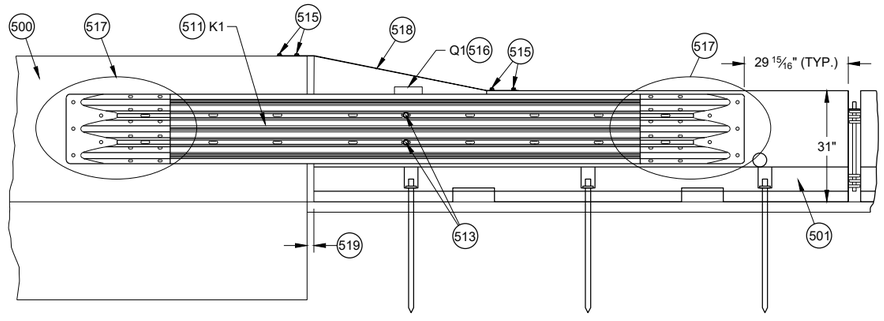
CROSS SECTION TEMPORARY BARRIER PLACEMENT SAFETY SHAPE



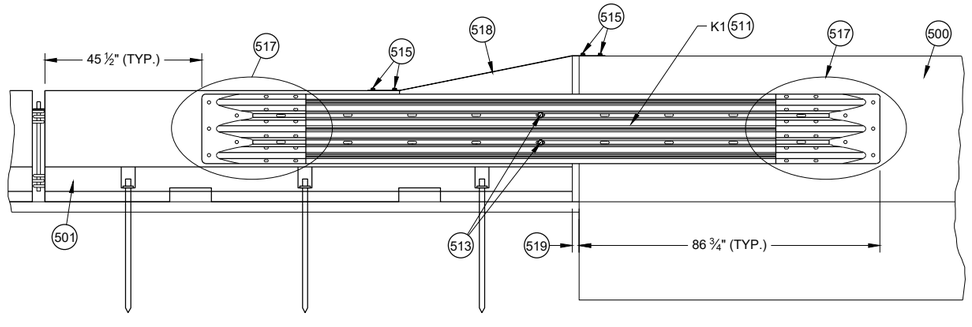
CROSS SECTION TEMPORARY BARRIER PLACEMENT VERTICAL



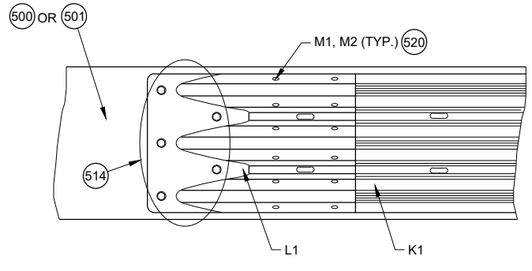
PLAN DETAIL VIEW
TRANSITION TO RIGID BARRIER



BACK DETAIL VIEW
TRANSITION TO RIGID BARRIER

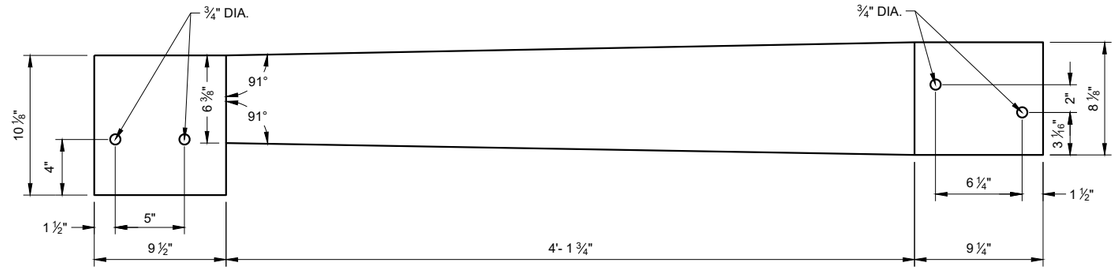


FRONT DETAIL VIEW
TRANSITION TO RIGID BARRIER



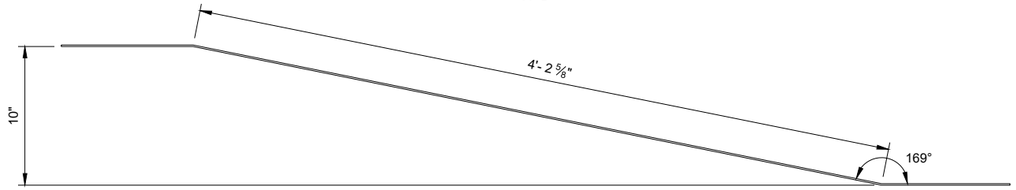
517 DETAIL PLAN VIEW
THRIE BEAM RAIL TERMINAL CONNECTOR ASSEMBLY

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"



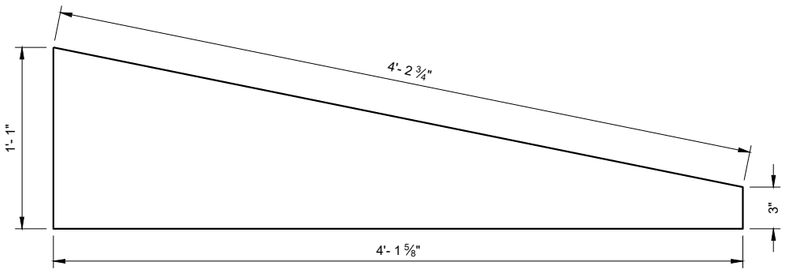
TOP VIEW

S1



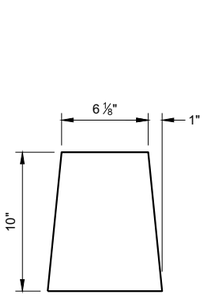
ELEVATION VIEW

S1

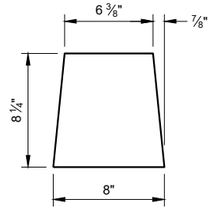


SIDE VIEW

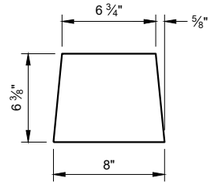
S3



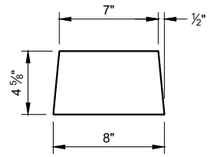
S2



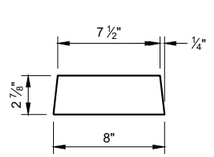
S4



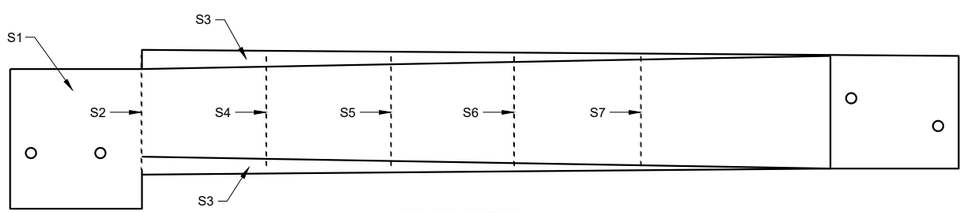
S5



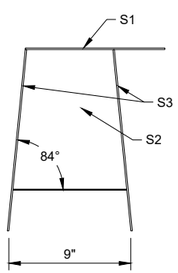
S6



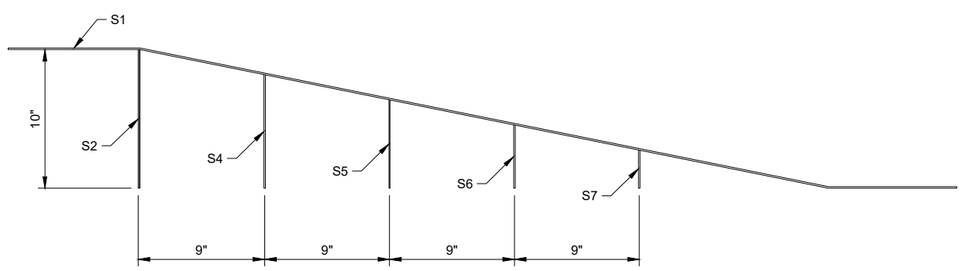
S7



PLAN VIEW



BACK VIEW



SIDE VIEW (600)

42" TOP CAP ASSEMBLY

GENERAL NOTES

STITCH WELD GUSSET PLATES AND END PLATES ON THREE SIDES

STITCH WELD TWO SIDE PLATES TO TOP PLATE, END PLATE AND GUSSETS.

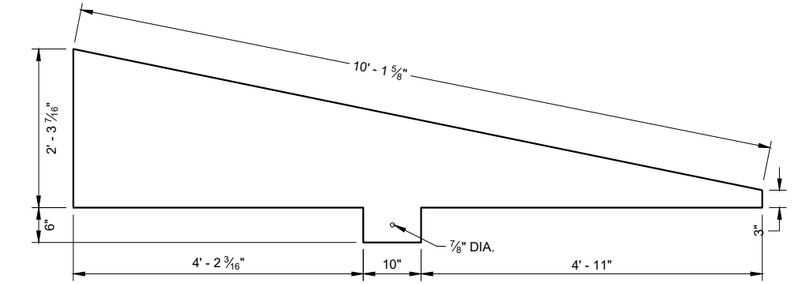
(600) SIDE PLATES (S3) NOT SHOWN FOR CLARITY.

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

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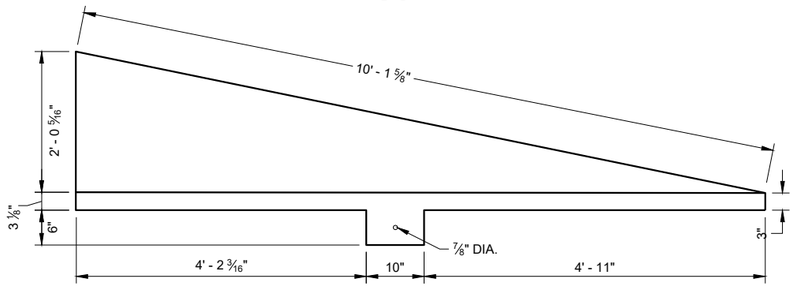
SDD 14B07 - 16f



SIDE VIEW
T4



END VIEW



SIDE VIEW
T3

END VIEW

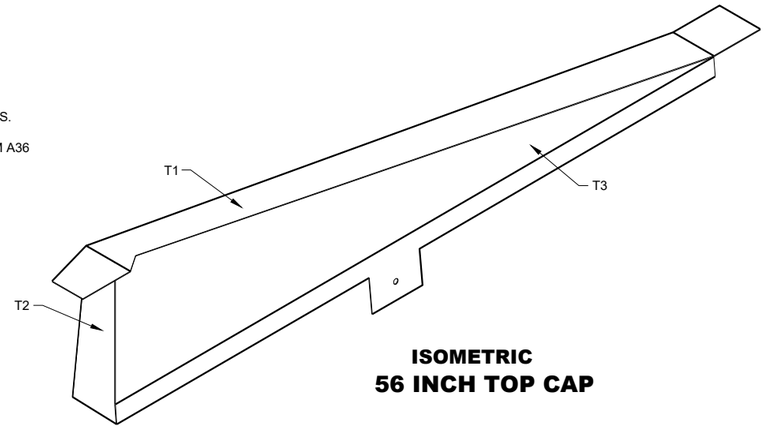
GENERAL NOTES

STITCH WELD GUSSET PLATES AND END PLATES ON THRIE SIDES

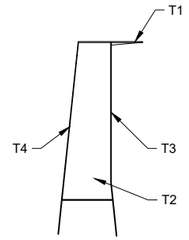
STITCH WELD TWO SIDE PLATES TO TOP PLATE, END PLATE AND GUSSETS.

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

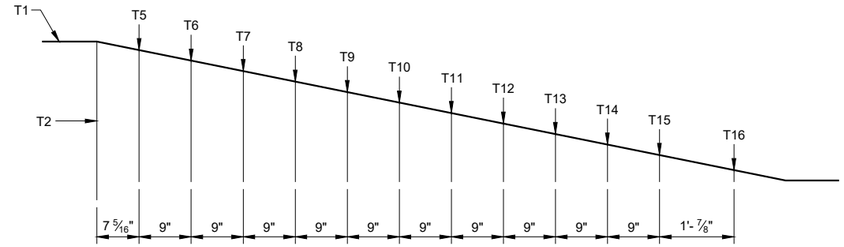
(700) SIDE PLATES (T3 AND T4) NOT SHOWN FOR CLARITY.



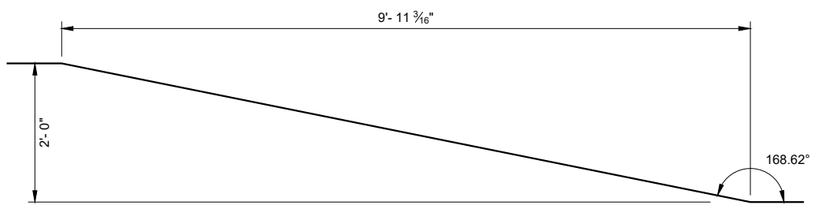
ISOMETRIC
56 INCH TOP CAP



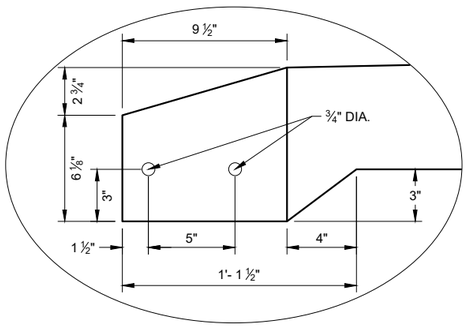
END VIEW
56 INCH TOP CAP



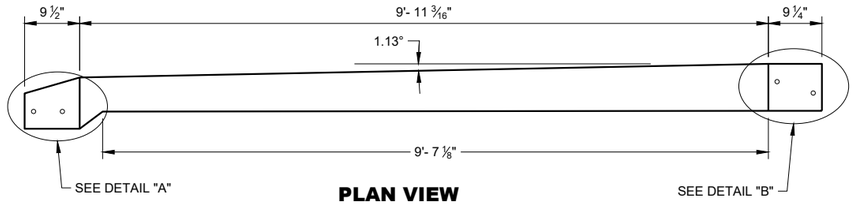
SIDE VIEW (700)
56 INCH TOP CAP



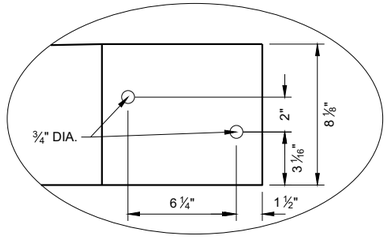
SIDE VIEW
TOP PLATE T1



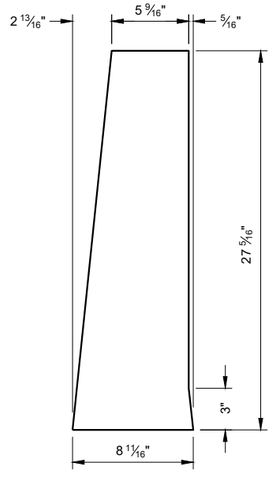
DETAIL "A"



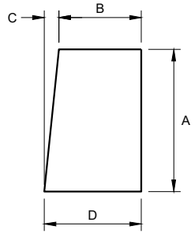
PLAN VIEW
TOP PLATE T1



DETAIL "B"



END PLATE T2



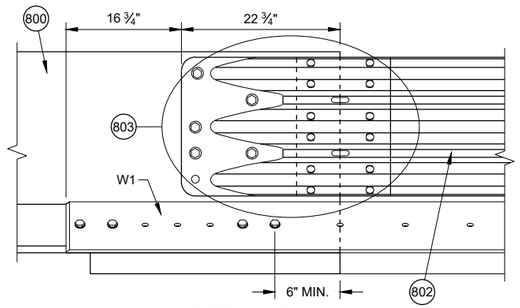
GUSSET PLATES
T5 - T16

GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
T5	22 13/16"	5 1/16"	2 5/16"	8 1/16"
T6	21"	5 7/8"	2 3/16"	8 1/16"
T7	19 3/16"	6 1/16"	1 15/16"	8 1/16"
T8	17 3/8"	6 1/4"	1 13/16"	8 1/16"
T9	15 5/16"	6 7/16"	1 9/16"	8 1/16"
T10	13 3/4"	6 5/8"	1 7/16"	8 1/16"
T11	11 15/16"	6 13/16"	1 1/4"	8 1/16"
T12	10 1/8"	7"	1 1/16"	8 1/16"
T13	8 5/16"	7 3/16"	7/8"	8 1/16"
T14	6 1/2"	7 3/8"	1 1/16"	8 1/16"
T15	4 11/16"	7 9/16"	1/2"	8"
T16	2 7/8"	7 3/4"	1/4"	8"

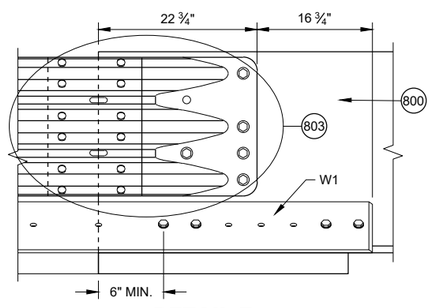
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

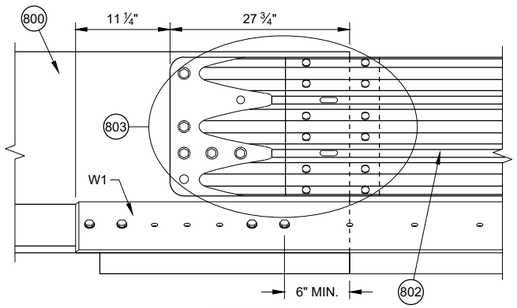
SDD 14B07 - 16g



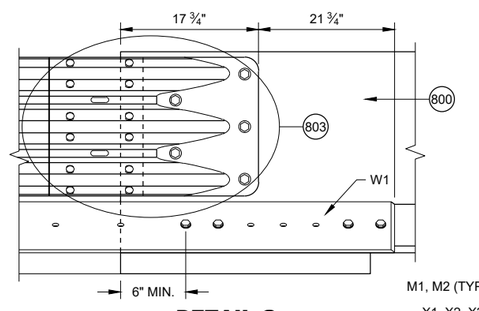
DETAIL D



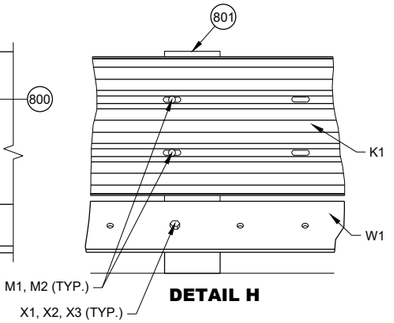
DETAIL E



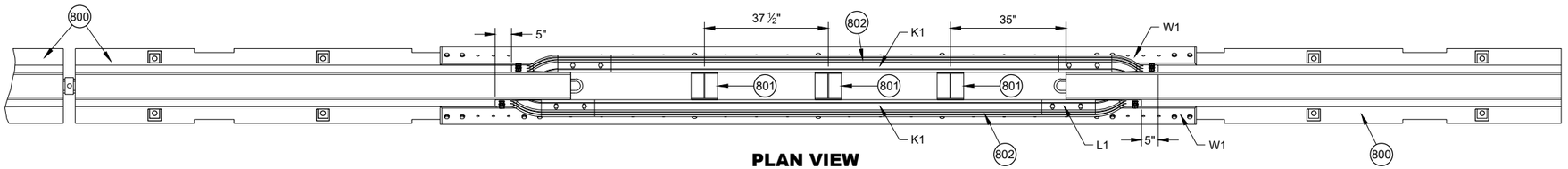
DETAIL F



DETAIL G



DETAIL H



PLAN VIEW

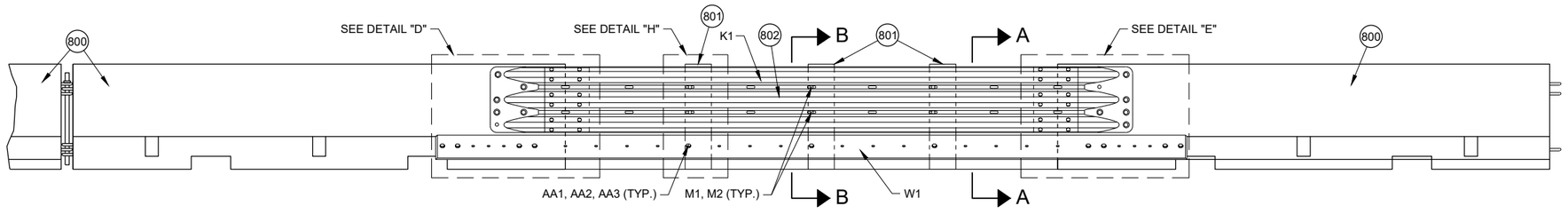
GENERAL NOTES

(800) FREE STANDING TEMPORARY BARRIER

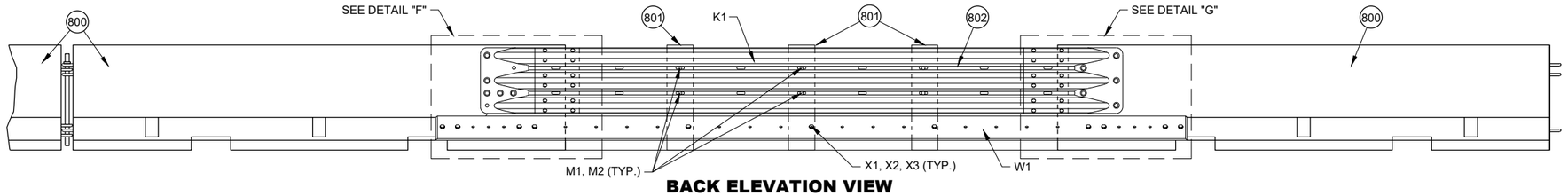
(801) GAP STIFFENER ASSEMBLY

(802) THRIE BEAMS ARE NESTED ON BOTH SIDES OF THE TEMPORARY BARRIER.

(803) SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL



FRONT ELEVATION VIEW



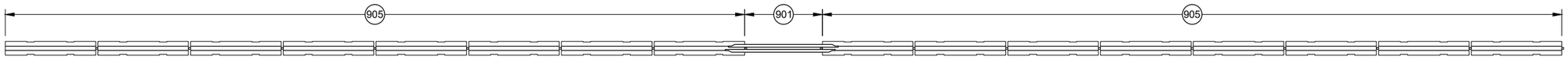
BACK ELEVATION VIEW

PORTABLE CONCRETE BARRIER GAP THRIE BEAM COVER

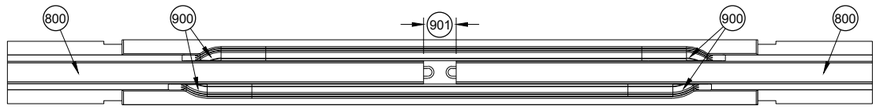
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD14B07 - 16h



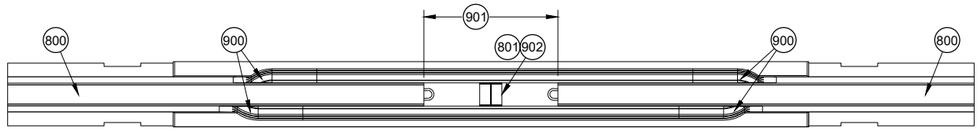
PLAN VIEW
GAP WITHIN SPACING



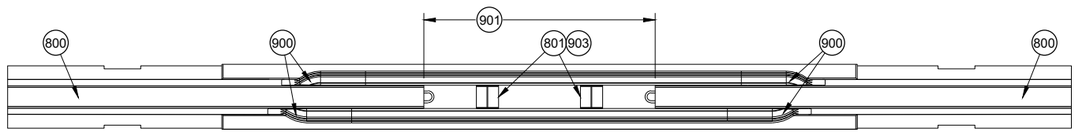
PLAN VIEW
TEMPORARY BARRIER GAP OVER 4" TO 1' MAX. (904)

GENERAL NOTES

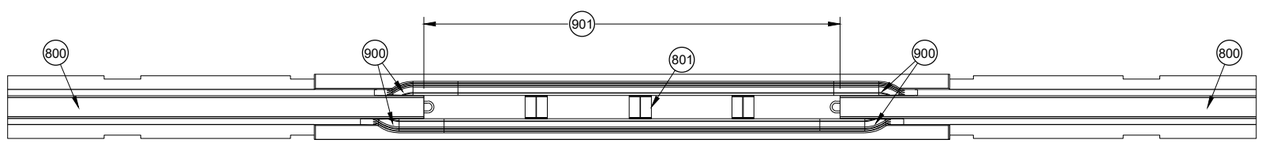
(900) SEE OTHER DETAILS FOR TEMPORARY GAP HARDWARE (TYP.)
(901) TEMPORARY BARRIER GAP
(902) GAP STIFFENER ASSEMBLY CENTERED IN THE GAP.
(903) GAP STIFFENER ASSEMBLY IS OFFSET 18 ¾" FROM CENTER
(904) MINIMUM NUMBER OF GAP STIFFENERS SHOWN FOR THE GAP RANGE SHOWN.
(905) MINIMUM OF 8 CONTINUOUS FREE STANDING TEMPORARY BARRIERS



PLAN VIEW
TEMPORARY BARRIER GAP OVER 1' TO 4' MAX. (904)



PLAN VIEW
TEMPORARY BARRIER GAP OVER 4' TO 7' MAX. (904)

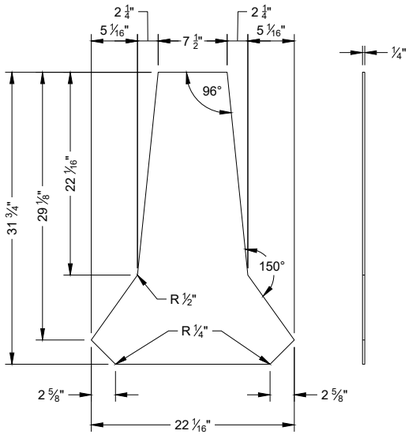


PLAN VIEW
TEMPORARY BARRIER GAP OVER 7' TO 12.5' MAX. (904)

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

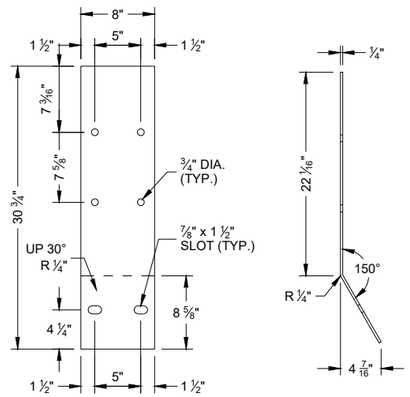
6

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PROFILE VIEW **SIDE VIEW**

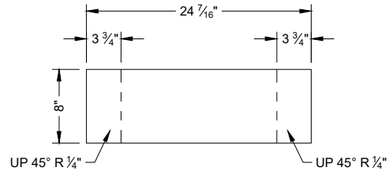
STIFFENER ASSEMBLY CENTER PANEL U1



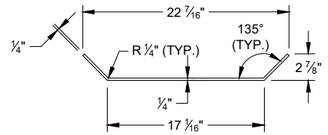
FLAT PATTERN

SIDE VIEW

STIFFENER ASSEMBLY SIDE PANEL U2

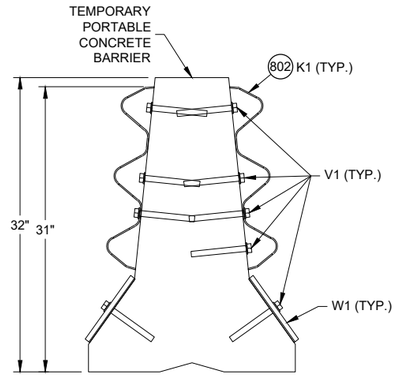


FLAT PATTERN

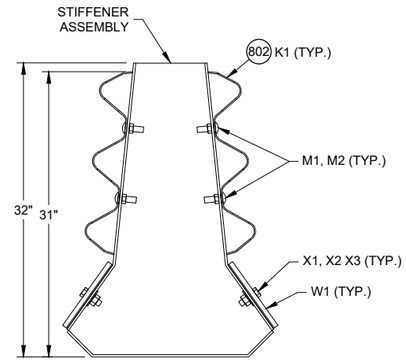


PROFILE VIEW

STIFFENER ASSEMBLY BOTTOM PANEL U3



SECTION A - A



SECTION B - B

PLAN VIEW

PROFILE VIEW

SIDE VIEW

ISOMETRIC

GAP STIFFENER ASSEMBLY

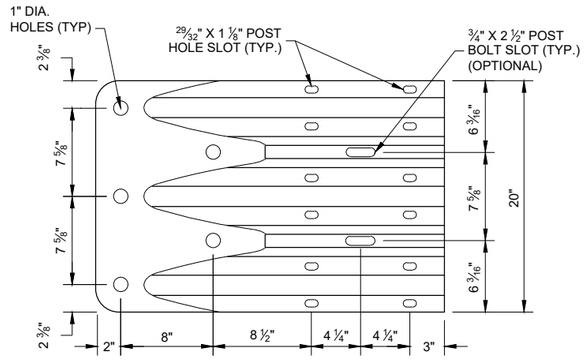
PLAN VIEW

SIDE VIEW

ELEVATION VIEW

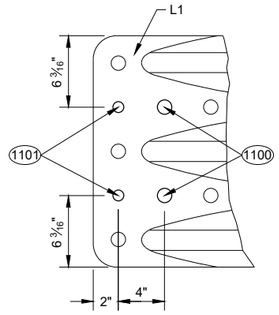
W1 TOE PLATE

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"



ELEVATION VIEW

THRIE BEAM TERMINAL CONNECTOR



ELEVATION VIEW

ADDITIONAL THRIE BEAM (1102) TERMINAL CONNECTOR HOLE DETAIL

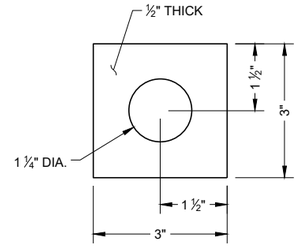


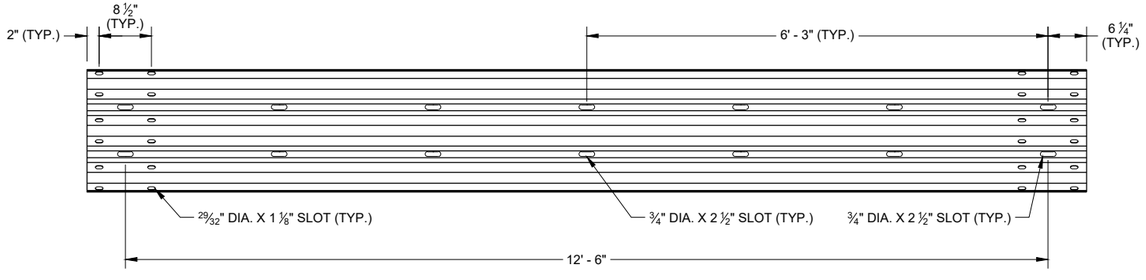
PLATE WASHER DETAIL G2, H3

GENERAL NOTES

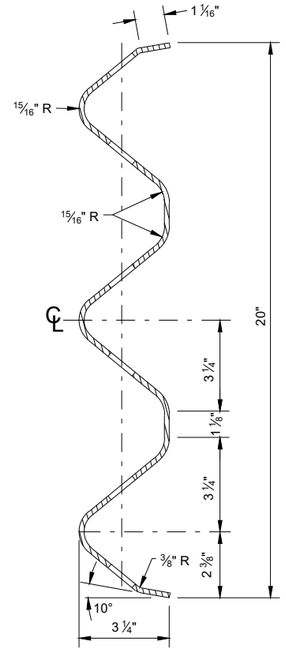
(1100) 1" DIA. HOLE

(1101) 3/4" DIA. HOLE

(1102) PROVIDE HOLES IN THRIE BEAM TERMINAL CONNECTOR TO LIMIT STEEL REINFORCEMENT OR LOOP BAR CONFLICT. CONTRACTOR MAY FIELD DRILL ADDITIONAL HOLE OR PROVIDE THRIE BEAM TERMINAL CONNECTOR WITH ADDITIONAL HOLES FROM SUPPLIER.



SLOTTED THRIE BEAM RAIL K1

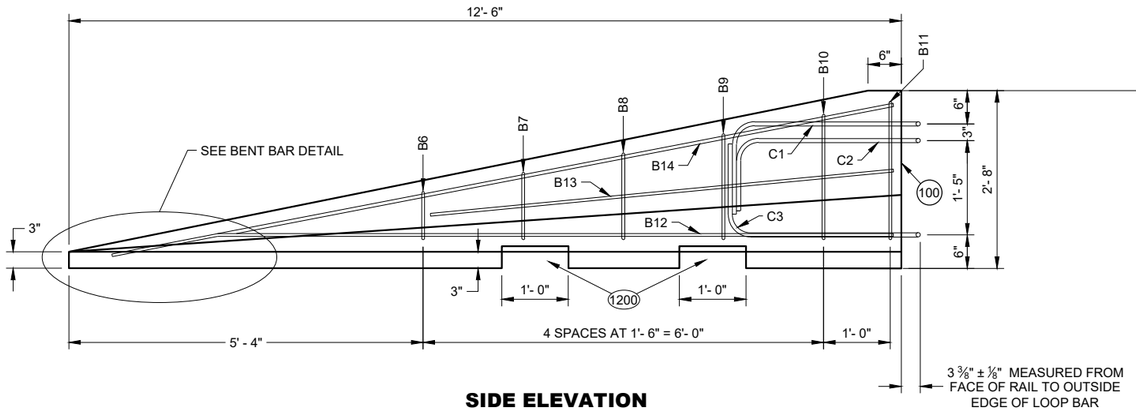


SECTION THROUGH BEAM K1

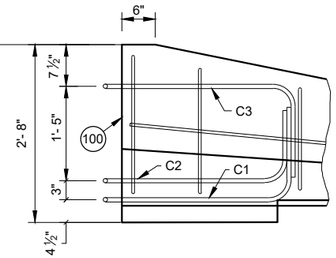
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

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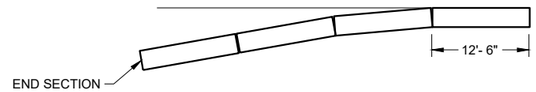
SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



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

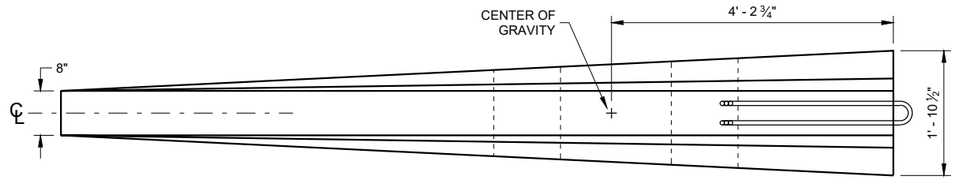
GENERAL NOTES

(1200) SEE LIFTING SLOT DETAIL. LOCATION OF LIFTING SLOTS DETERMINED BY CONTRACTOR.

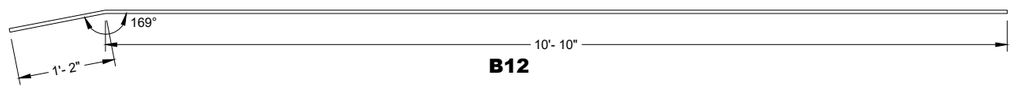


FLARE AT BARRIER END

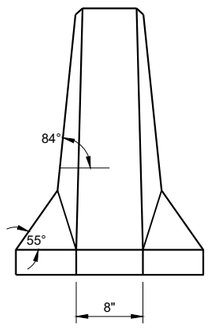
POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1



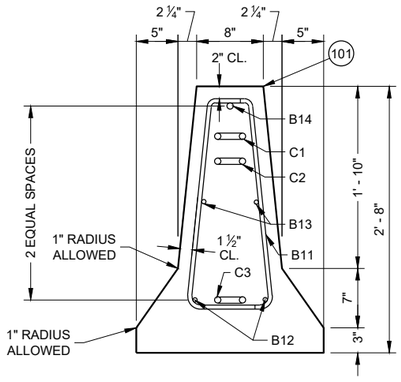
PLAN VIEW



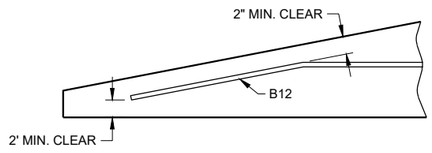
B12



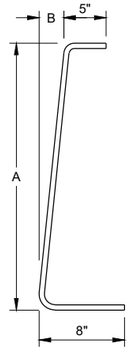
FRONT ELEVATION



END SECTION



BENT BAR DETAIL



BAR	A	B
B6	10"	1"
B7	1'- 1"	1 ¼"
B8	1'- 5"	1 ⅝"
B9	1'- 8"	1 ⅞"
B10	2'- 0 ½"	2 ⅜"
B11	2'- 3"	2 ¾"

B BARS
2 OF EACH SIZE REQUIRED FOR STIRRUP ASSEMBLY

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B07 - 16I

BILL OF MATERIALS - CONCRETE BARRIER PRECAST

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	PRECAST TEMPORARY BARRIER - CONCRETE	MIN. = f'c 5000 PSI	
B1	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 12'-2"
B2	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 12'-2"
B3	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 12'-2"
B4	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 6'-0"
B5	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#6 REBAR, LENGTH 2'-11"
B6	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 1'-11"
B7	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-2"
B8	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-6"
B9	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-9"
B10	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 3'-2"
B11	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 3'-4"
B12	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 12'-0"
B13	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 7'-9"
B14	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 11'-9"
C1	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
C2	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
C3	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
D1	CONNECTION PIN - ROD	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	1 ¼" DIA.
D2	CONNECTION PIN - TOP PLATE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
G1	BOLT THROUGH ANCHOR - THREADED ROD	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 A307 GRADE A OR SAE J429 GRADE 2 UNC	1 ⅛" DIA.
G2	BOLT THROUGH ANCHOR - WASHER, SQUARE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
G3	BOLT THROUGH ANCHOR - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
H1	ADHESIVE ANCHOR - ADHESIVE	ICC-ES-AC308 5 ¼" EMBEDMENT WITH A MIN. STRENGTH OF 1,800 PSI. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
H2	ADHESIVE ANCHOR - THREADED ROD	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 A307 GRADE A / SAE J429 GRADE 2 UNC	1 ⅛" DIA.
H3	ADHESIVE ANCHOR - WASHER, SQUARE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
H4	ADHESIVE ANCHOR - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
J1	ASPHALT ANCHOR PIN - ROD	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	1 ½" DIA.
J2	ASPHALT ANCHOR PIN - STOP PLATE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
K1	THRIE BEAM RAIL	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER	12 GAUGE
L1	THRIE BEAM RAIL - TERMINAL	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER	12 GAUGE

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
M1	SPLICE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	⅝" DIA.
M2	SPLICE BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
N1	THRIE BEAM RAIL TERMINAL - MECHANICAL ANCHOR	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	¾" DIA. LENGTH 6"
N2	THRIE BEAM RAIL TERMINAL - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
N3	THRIE BEAM RAIL TERMINAL MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
P1	THRIE BEAM RAIL CONNECTION 1-BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	¾" DIA.
P2	THRIE BEAM RAIL CONNECTION 1-WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
P3	THRIE BEAM RAIL CONNETION 1- MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
Q1	BLOCK WOOD	SEE STANDARD SPEC. 614	
R1	CAP - BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	⅝" DIA.
R2	CAP- BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
R3	CAP - BOLT - MECHANICAL ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	12 GAUGE
S1	CAP 42-INCH TOP PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S2	CAP 42-INCH END PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S3	CAP 42-INCH SIDE PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S4	CAP 42-INCH GUSSET 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S5	CAP 42-INCH GUSSET 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S6	CAP 42-INCH GUSSET 3	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S7	CAP 42-INCH GUSSET 4	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE

6

SDD14B07 - 16m

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

6

SDD14B07 - 16m

BILL OF MATERIALS - CONCRETE BARRIER PRECAST

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
T1	CAP 56-INCH TOP PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T2	CAP 56-INCH END PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T3	CAP 56-INCH SIDE PLATE 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T4	CAP 56-INCH SIDE PLATE 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T5	CAP 56-INCH GUSSET 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T6	CAP 56-INCH GUSSET 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T7	CAP 56-INCH GUSSET 3	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T8	CAP 42-INCH GUSSET 4	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T9	CAP 42-INCH GUSSET 5	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T10	CAP 42-INCH GUSSET 6	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T11	CAP 42-INCH GUSSET 7	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T12	CAP 42-INCH GUSSET 8	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T13	CAP 42-INCH GUSSET 9	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T14	CAP 42-INCH GUSSET 10	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T15	CAP 42-INCH GUSSET 11	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T16	CAP 42-INCH GUSSET 12	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
U1	GAP STIFFENER	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
U2	GAP STIFFENER - CONNECTOR PLATE 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
U3	GAP STIFFENER - CONNECTOR PLATE 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
V1	THRIE BEAM RAIL TERMINAL MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS ULTIMATE TENSILE LOAD 24.0 KIPS AND ULTIMATE SHEAR LOAD 21.5 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	¾" DIA.
V2	GAP STIFFENER - BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C O R MECHANICAL GALVANIZE TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
W1	TOE PLATE	AASHTO M111/ASTM A123 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
X1	TOE PLATE - CONNECTION BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 UNC HEAVY HEX HEAD OR AASTHO M180 HEAD, ASTM F3125 GRADE A325 TYPE 1 HEAVY HEX HEAD OR SAE J429 GRADE 5 HEAVY HEX HEAD / ASTM A449 TYPE 1 HEAVY HEX HEAD. BOLTS MAY BE FULLY THREADED. PROVIDE ENOUGH THREADING FOR PROPER TIGHTENING OF BOLT.	¾" DIA.
X2	TOE PLATE - CONNECTION BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1 (HARDEN WASHER ONLY)	
X3	TOE PLATE - CONNECTION BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	

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SDD 14B07 - 16n

SDD 14B07 - 16n

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

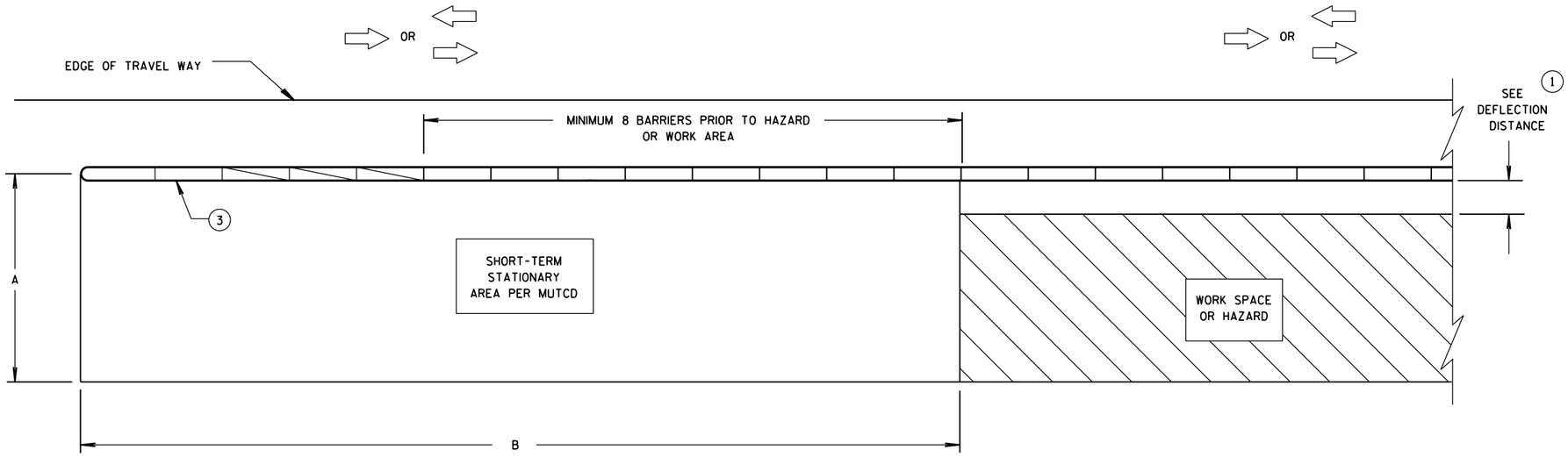
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2022
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA



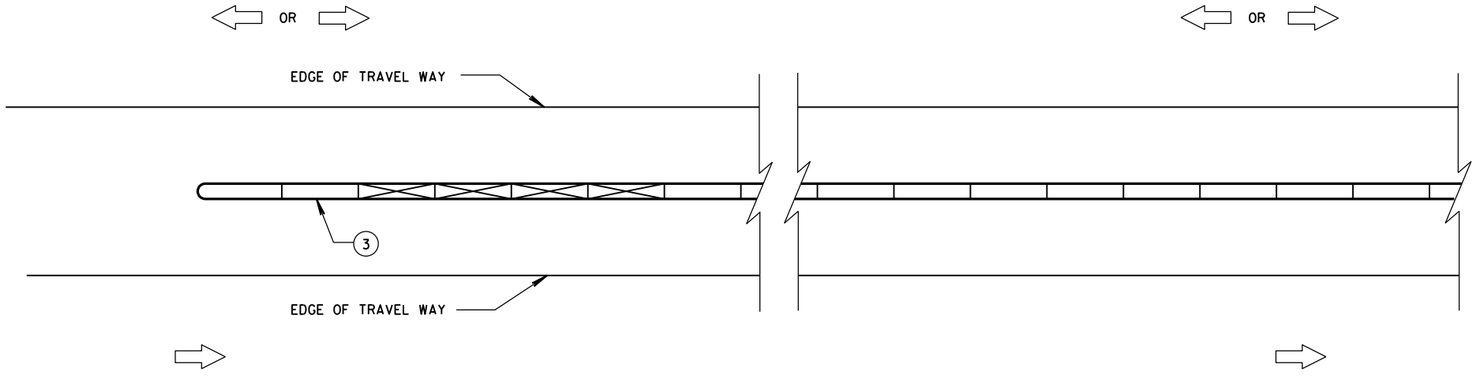
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

DIMENSION A TABLE (2)

FACILITY	POSTED SPEED MPH	DIMENSION A	
		MIN. FT	MAX. FT
FREEWAY/EXPRESSWAY	ALL	15	20
NON-FREEWAY/EXPRESSWAY	GREATER THAN OR EQUAL TO 45	10	15
NON-FREEWAY/EXPRESSWAY	LESS THAN 45	8	10
AADT LESS THAN 1,500	ALL	8	10

DIMENSION B TABLE (2)

POSTED SPEEDS MPH	DIMENSION B FT
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON BOTH SIDES OF BARRIER

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

DETAILS PROVIDE A GENERAL LAYOUT OF TEMPORARY CONCRETE BARRIER, CRASH CUSHIONS, SAND BARREL ARRAYS AND TIE DOWN TRANSITIONS. DETAILS PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

ADDITIONAL TEMPORARY BARRIER MAY BE REQUIRED TO PROTECT TRAVELING PUBLIC FROM HAZARDS, CONTRACTOR'S OPERATIONS OR TO CONTROL TRAFFIC.

TEMPORARY BARRIER MAY BE REQUIRED TO BE ANCHORED TO PAVEMENT OR BRIDGE DECK.

FOR DETAILS ON CRASH CUSHION OR SAND BARREL ARRAYS SEE OTHER SECTIONS OF THE PLAN AND MANUFACTURE'S DETAILS.

SLOPES LEADING TO TEMPORARY BARRIER, CRASH CUSHION OR SAND BARREL ARRAY ARE 10:1 OR LESS.

(1) FOR DEFLECTION INFORMATION SEE STANDARD DETAIL DRAWING 14B7.

(2) VALUES PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

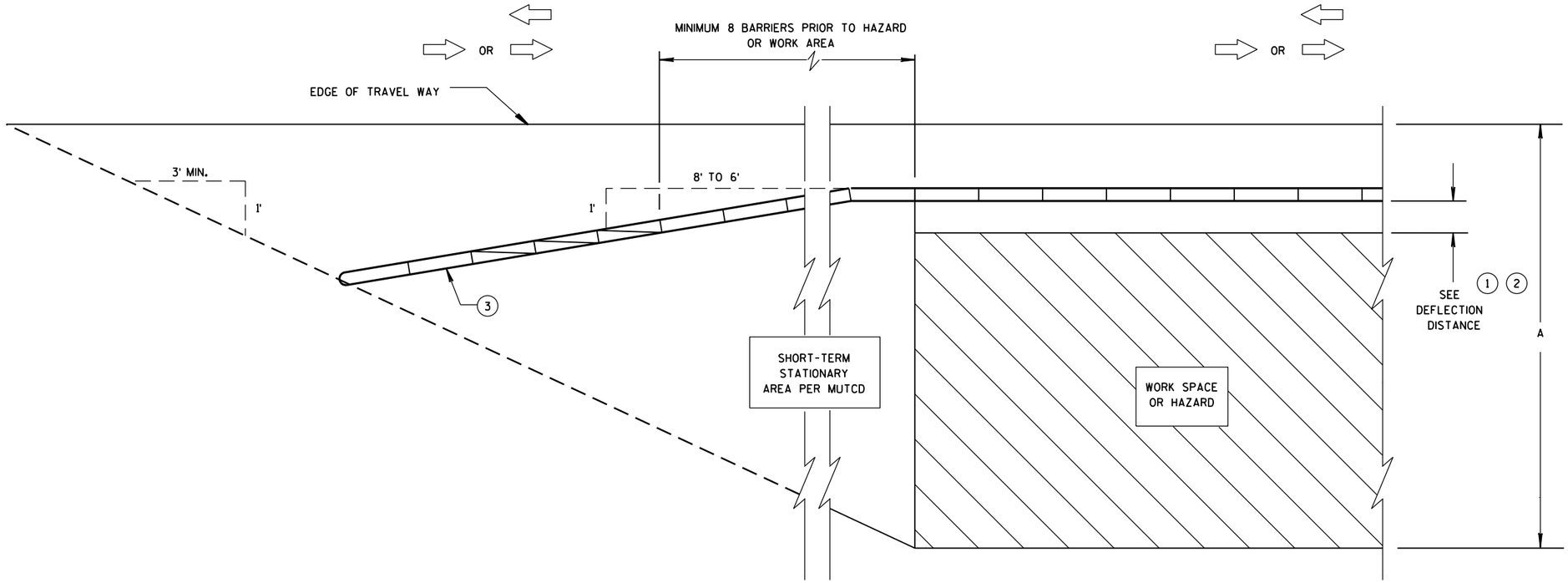
(3) ANCHOR TEMPORARY BARRIER ACCORDING TO CRASH CUSHION OR SAND BARREL MANUFACTURER'S RECOMMENDATIONS. IF MANUFACTURER'S RECOMMENDATIONS ARE NOT PROVIDED, ANCHOR 3 PINS ON TRAFFIC SIDE.

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

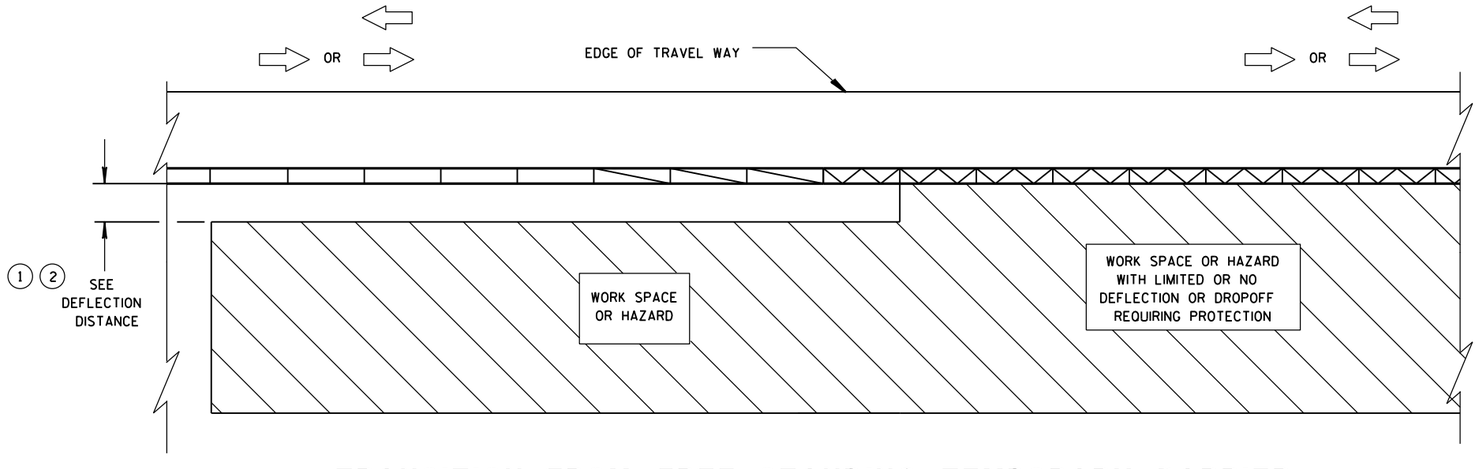
STATE OF WISCONSIN
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S.D.D. 14 B 8-2a



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE - FLARED INSTALLATION



TRANSITION FROM FREE STANDING TEMPORARY BARRIER TO ANCHORED BARRIER

LEGEND

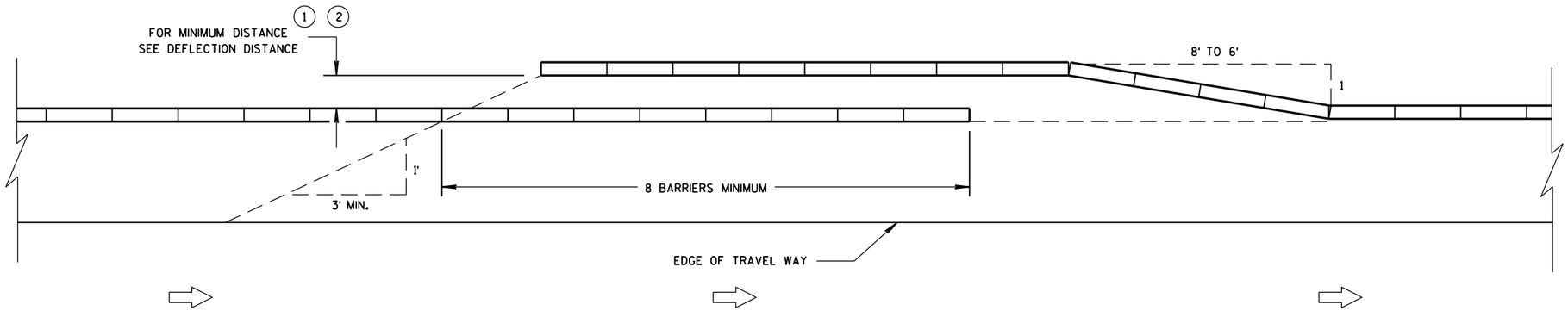
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

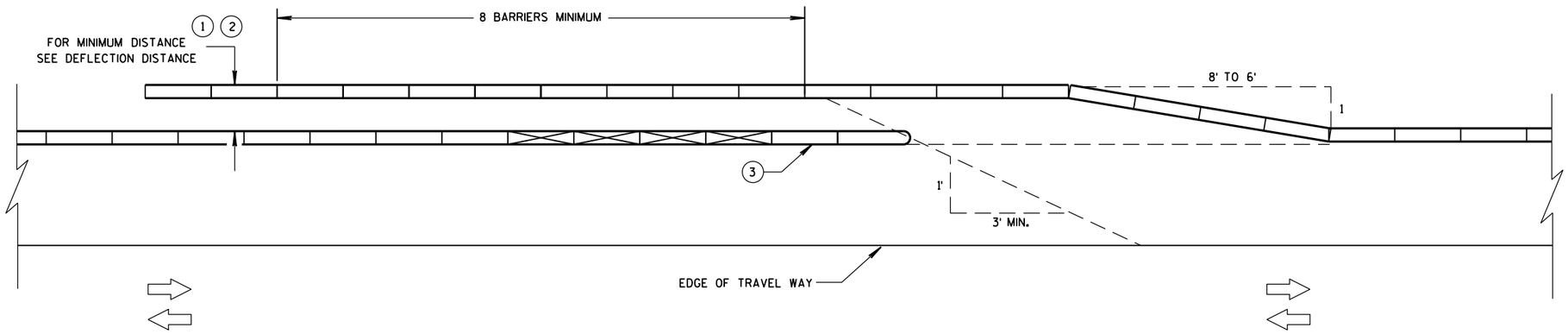
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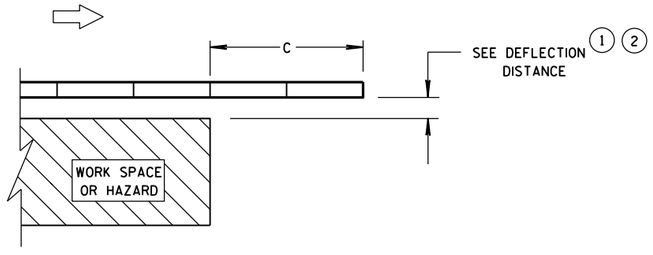
S.D.D. 14 B 8-2b



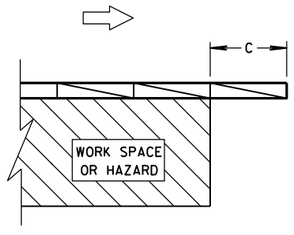
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

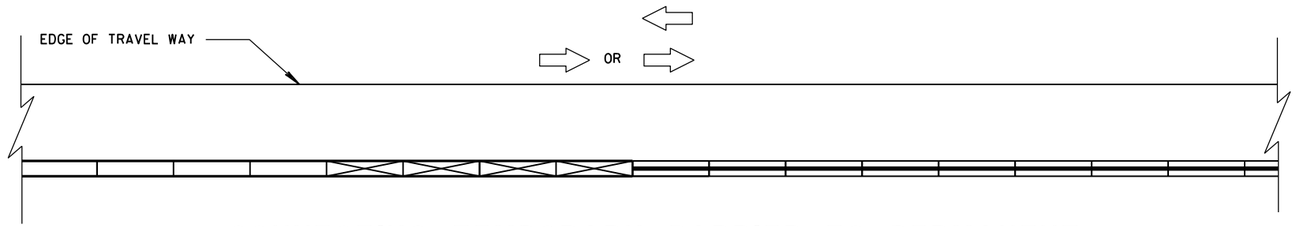
STATE OF WISCONSIN
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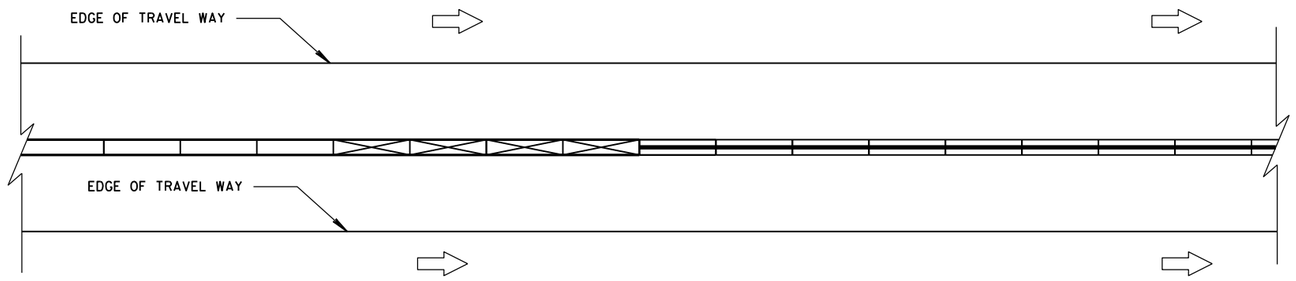
S.D.D. 14 B 8-2c

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S.D.D. 14 B 8-2c



CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON ONE SIDE



CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON BOTH SIDES

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR
SAND BARREL ARRAY

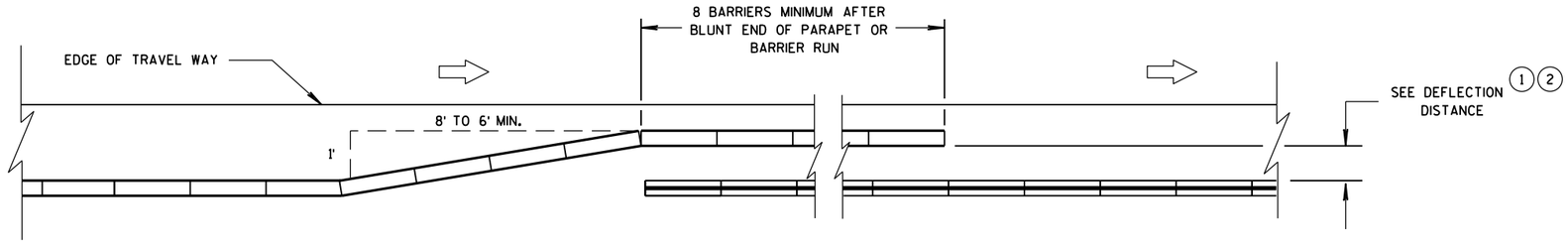
SEE FREE STANDING TRANSITION
TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION
TO TIED-DOWN SYSTEM DETAILS

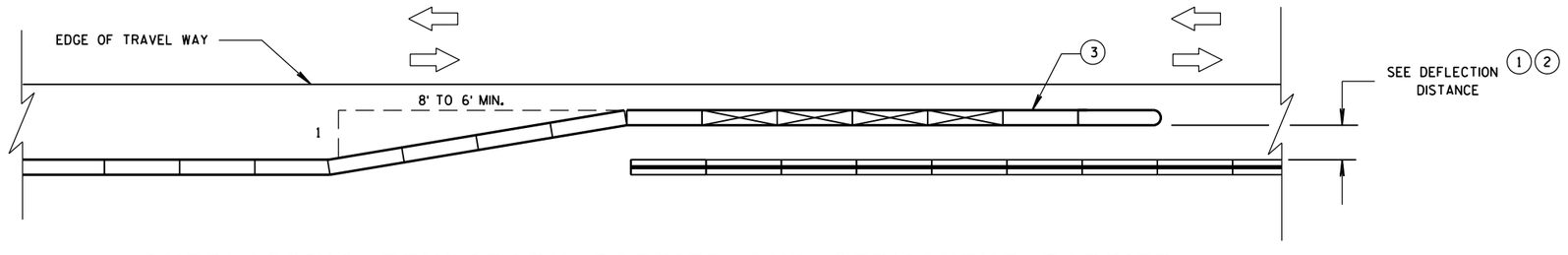
3 PINS PLACED ON
TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER
OR CONCRETE PARAPET

FREE STANDING TEMPORARY
BARRIER



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
ONE WAY TRAFFIC



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
TWO WAY TRAFFIC

CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 14 B 8-2d

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

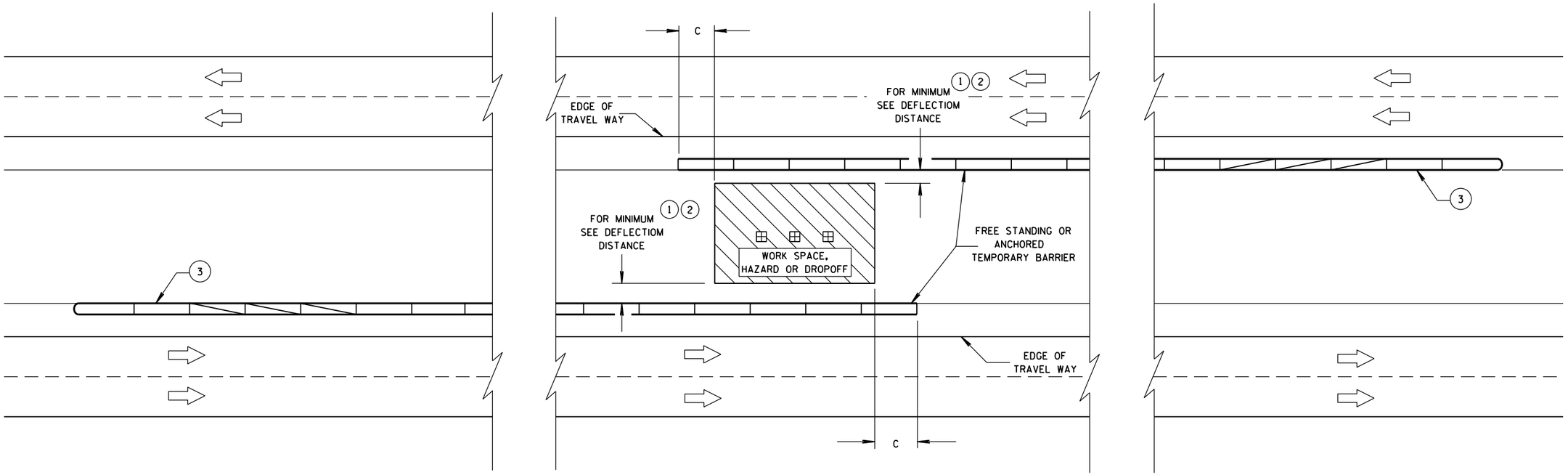
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE (2)

AVAILABLE DEFLECTION DISTANCE	MINIMUM LENGTH OF BARRIER BEYOND HAZARD FT
GREATER THAN 8'	12.5
LESS THAN OR EQUAL TO 8' BUT GREATER THAN 4'	50
LESS THAN OR EQUAL TO 4'	100



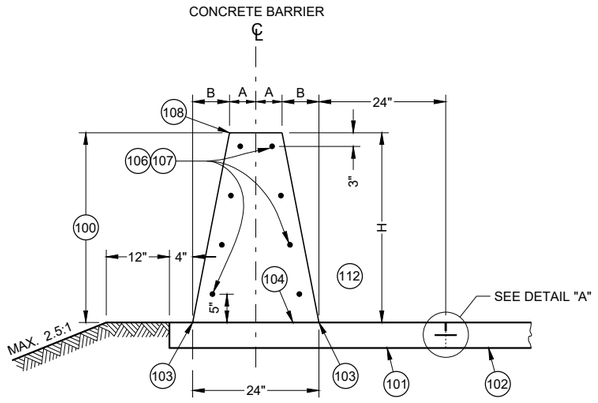
CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

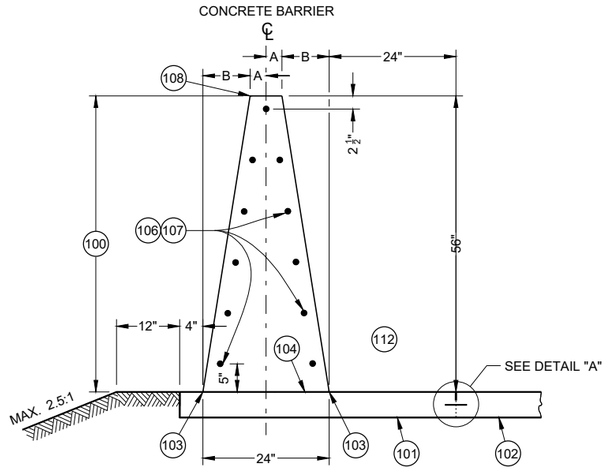
APPROVED
June, 2015
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINNER
FHWA

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S.D.D. 14 B 8-2e



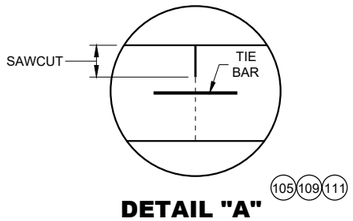
32 - INCH, 36 - INCH OR 42 - INCH SINGLE SLOPE CONCRETE BARRIER
(TYPE S32, TYPE S36, TYPE S42)



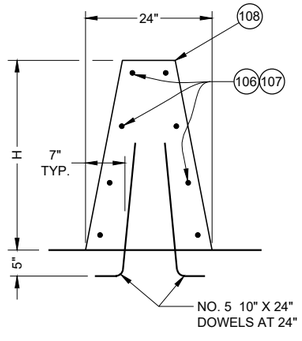
56 - INCH SINGLE SLOPE CONCRETE BARRIER
(TYPE S56)

TABLE "A"

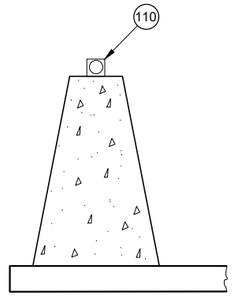
BARRIER HEIGHT H INCHES	A INCHES	B INCHES	NUMBER OF NO. 5 BARS EACH
32	7	5	8
36	6 ¼	5 ¾	8
42	5 ¼	6 ¾	10
56	3	9	11



DETAIL "A"



SINGLE SLOPE CONCRETE BARRIER ON BRIDGE
(NON OUTER PARAPET APPLICATION)



DELINEATION

GENERAL NOTES

WHERE THE CONCRETE BARRIER IS ADDED TO THE FACE OF EXISTING CONCRETE STRUCTURE, MATCH EXISTING WEEP HOLES.

LOCATE EXPANSION JOINTS IN CONCRETE BARRIER SHALL AT ALL DECK AND PRINCIPAL WALL JOINTS. FILL EXPANSION JOINT WITH EXPANSION JOINT MATERIAL. SEAL THE EXPANSION JOINT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

PLACE BARRIER PERPENDICULAR TO SHOULDER GRADE, UNLESS INDICATED IN PLAN.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATION 501.

2" CLEAR COVER TYPICAL

ANCHORS ARE REQUIRED AT CONCRETE BARRIER ENDS AND AT INTERRUPTIONS IN CONCRETE BARRIER. ANCHOR MAY BE AS SHOWN IN THIS SDD OR DETAIL SHOWN ON SDD 14B33. ANCHORS INCIDENTAL TO CBSS.

PROVIDE A 1" DEEP CONTRACTION JOINT IN BARRIER PAD AND BARRIER. JOINT IS TO MATCH ADJACENT CONCRETE JOINTS. NO DOWEL BARS ARE REQUIRED FOR BARRIER PAD. IF ADJACENT TO ASPHALT, CONTRACTION JOINT IS REQUIRED EVERY 15'.

ALL REBAR SHALL BE EPOXY COATED M31 TYPE S. SEE STANDARD SPECIFICATION 505.

CONCRETE BARRIER, UPPER CONCRETE BARRIER, LOWER CONCRETE BARRIER, CONCRETE BARRIER PAD, AND FOOTINGS ARE TERMS USED TO DESCRIBE PARTS OF SINGLE SLOPE CONCRETE BARRIER BID ITEMS. THESE PARTS ARE INCIDENTAL TO THE SINGLE SLOPE CONCRETE BARRIER BID ITEMS.

(100) CONCRETE BARRIER

(101) CONCRETE BARRIER PAD

(102) PAVEMENT

(103) WHERE VERTICAL ROADWAY OFFSET IS GREATER THAN 1 ½", USE TYPE A SINGLE SLOPE BARRIER.

(104) OPTIONAL CONSTRUCTION JOINT.

(105) CONSTRUCTION JOINTS MAY BE ELIMINATED WHEN CONCRETE SHOULDER IS LESS THAT 10'.

(106) STAGGER LAPPING OF LONGITUDINAL STEEL. MINIMUM OVERLAP OF STEEL IS 2' BARS AT LAPS TO BE FIRMLY TIED OR CONNECTED.

(107) NO. 5 CONTINUOUS BARS EVENLY SPACED (SEE TABLE "A").

(108) USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS OTHERWISE NOTED.

(109) CONCRETE BARRIER PAD UNDER CBSS MAY BE PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED ⅓ DEPTH. CONCRETE BARRIER PAD AND SAWING OF CONCRETE SHOULDER IS INCIDENTAL TO CONCRETE BARRIER BID ITEM. CONCRETE BARRIER PAD MINIMUM DEPTH IS 6", OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER.

(110) SEE SDD 15A04 FOR DELINEATOR DETAILS AND SPACING.

(111) SEE SDD 13C01 FOR DETAILS TYPING CONCRETE BARRIER TO ADJACENT CONCRETE

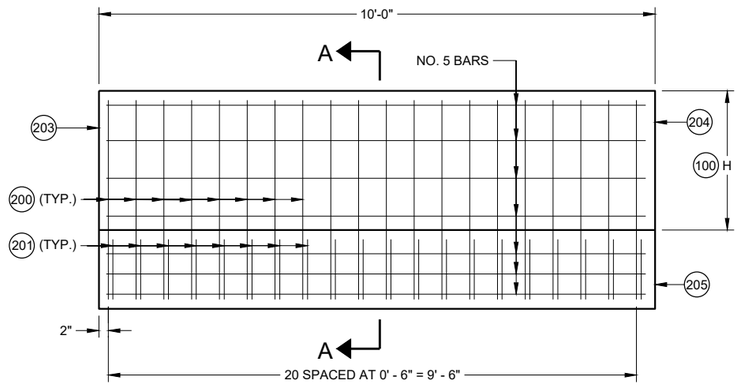
(112) TRAFFIC SIDE

CONCRETE BARRIER SINGLE SLOPE (CBSS)

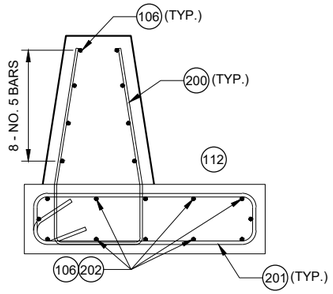
STATE OF WISCONSIN
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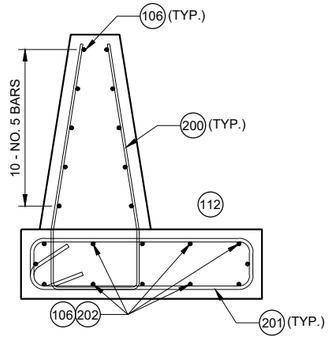
SDD 14B32 - 10a



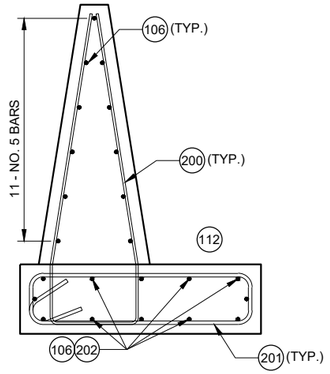
END ANCHOR SINGLE SLOPE CONCRETE BARRIER



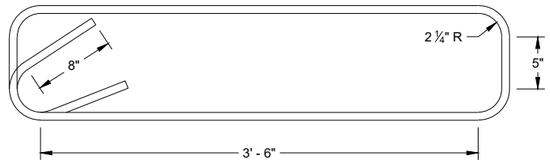
32" AND 36" CBSS



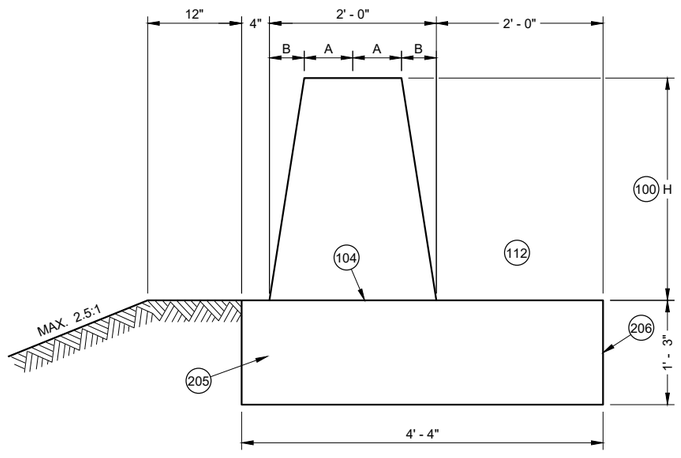
42" CBSS



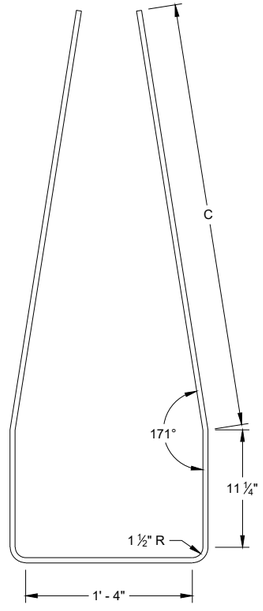
56" CBSS



STIRRUP BAR BENDING DETAIL



SECTION A - A



V1 BAR BENDING DETAIL

TABLE "B"

BARRIER HEIGHT H INCHES	C INCHES
32	2' - 6"
36	2' - 11"
42	3' - 4"
56	4' - 6 ½"

GENERAL NOTES

200 V1 BARS ARE NO. 5 BARS. (SEE BAR BENDING DETAIL)

201 STIRRUPS ARE NO. 6 BARS. (SEE BAR BENDING DETAIL)

202 TWELVE (12) NO. 5 BARS EVENLY SPACED

203 END OF INSTALLATION OR EXPANSION JOINT.

204 SEE COLD JOINT DETAIL TO CONNECT END ANCHOR SINGLE SLOPE CONCRETE BARRIER TO SINGLE SLOPE CONCRETE BARRIER.

205 FOOTING

206 DO NOT TIE TO FOOTING TO ADJACENT PAVEMENT.

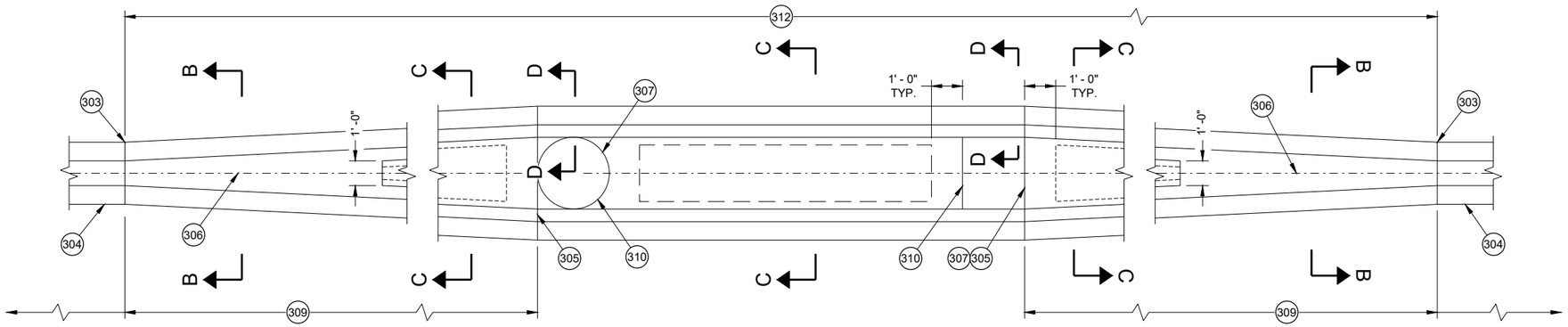
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CONCRETE BARRIER SINGLE SLOPE (CBSS)

6

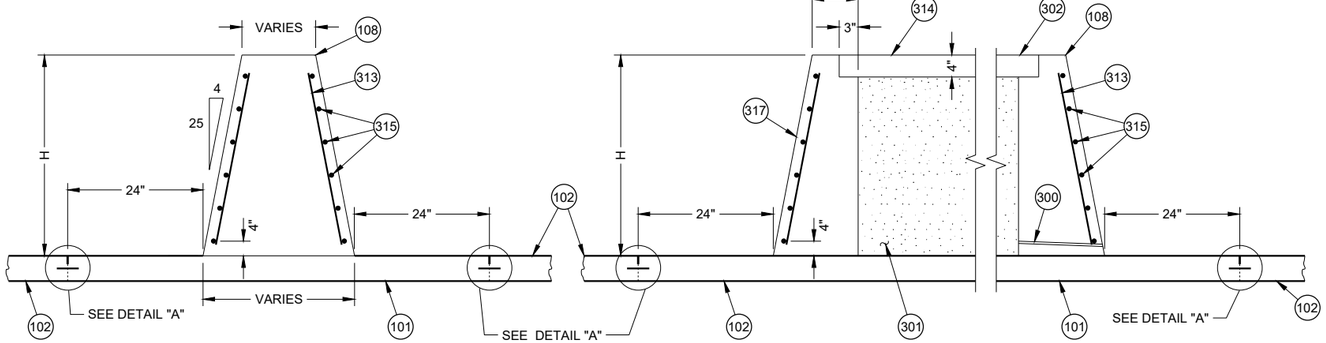
SDD 14B32 - 10b



LARGE FIXED OBJECTS PROTECTION
(TYPE S32, TYPE S36, TYPE S42, TYPE S56)

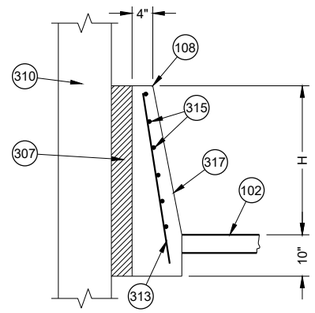
TABLE "C"

BARRIER HEIGHT H INCHES	BAR SIZE	NUMBER OF BARS EACH
32	4	6
36	4	6
42	5	6
56	5	6

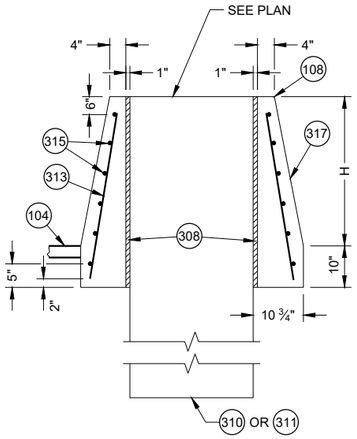


SECTION B - B

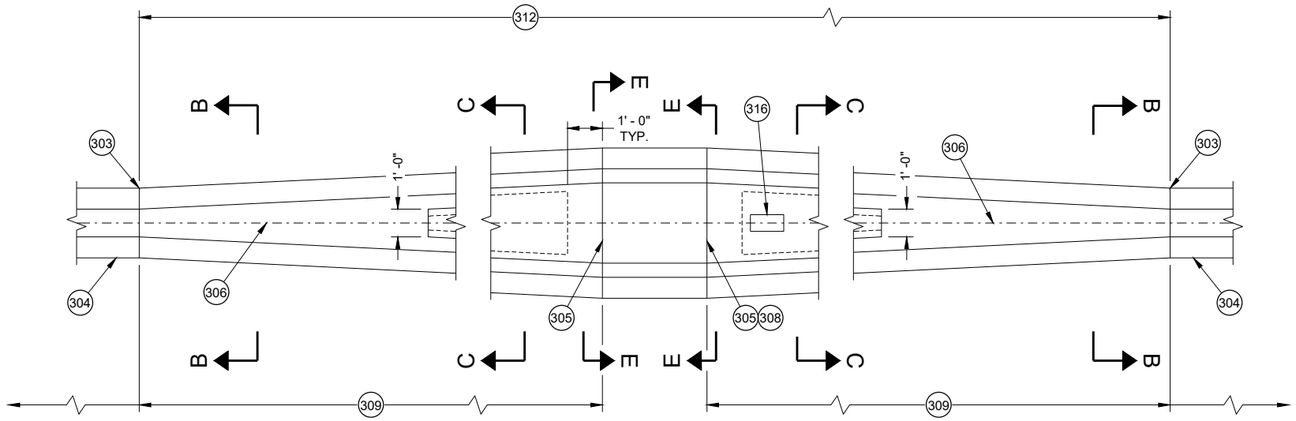
SECTION C - C



SECTION D - D



SECTION E - E



SMALL FIXED OBJECTS PROTECTION
(TYPE S32, TYPE S36, TYPE S42, TYPE S56)

GENERAL NOTES

(300) INSTALL 1 INCH DIAMETER DRAIN PIPE EVERY 20 FEET OF CROSS SECTION B -B. MINIMUM ONE DRAIN CAVITY.

(301) BETWEEN CONCRETE BARRIER WALLS FILL WITH FOUNDATION BACKFILL.

(302) LEVEL THE TOP OF CONCRETE BARRIER CAP ACROSS TOP OF BARRIER. ADJUST HEIGHT OF CONCRETE BARRIER WALL ON LOW SIDE OF OFFSET OR SUPERELEVATED ROADWAYS TO PROVIDE LEVEL GRADE ACROSS TOP OF CONCRETE CAP.

(303) USE COLD JOINTS BETWEEN FIXED OBJECT PROTECTION AND CONCRETE BARRIER ANCHOR.

(304) INSTALL END ANCHOR SINGLE SLOPE CONCRETE BARRIER.

(305) SEE COLD JOINT DETAIL

(306) CENTERLINE OF CONCRETE BARRIER.

(307) INSTALL 4" EXPANDED POLYSTYRENE BETWEEN COLUMN AND CONCRETE BARRIER.

(308) INSTALL 1" EXPANDED POLYSTYRENE BETWEEN PEDESTAL AND CONCRETE BARRIER.

(309) 20:1 MIN. TRANSITION.

(310) COLUMN

(311) PEDESTAL

(312) LIMITS OF PAYMENT FOR LARGE FIXED OBJECT PROTECTION (SEE PLAN)

(313) NO. 4 BARS SPACED 12" CENTER TO CENTER (TYP.)

(314) USE NO. 3 BAR SPACED 12 INCHES CENTER TO CENTER (PLACED IN EACH DIRECTION) OR EQUIVALENT WIRE MESH.

(315) SEE TABLE "C" FOR BAR INFORMATION

(316) ELECTRICAL PULL BOX FOR SIGN FLUSH WITH TOP OF CONCRETE BARRIER.

(317) VARIABLE SLOPE

CONCRETE BARRIER SINGLE SLOPE (CBSS)

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GENERAL NOTES

(400) END ANCHOR SINGLE SLOPE CONCRETE BARRIER.

(401) PARAPET, SIGN BRIDGE BASE, LIGHT POLE BASE OR OTHER OBJECT SINGLE SLOPE CONCRETE BARRIER CANNOT TIE INTO.

(402) JOINT SEAL CONFORMING TO STANDARD SPECIFICATION 415.2.6

(403) EXPANSION JOINT MATERIAL.

(404) INLET (SEE PLAN)

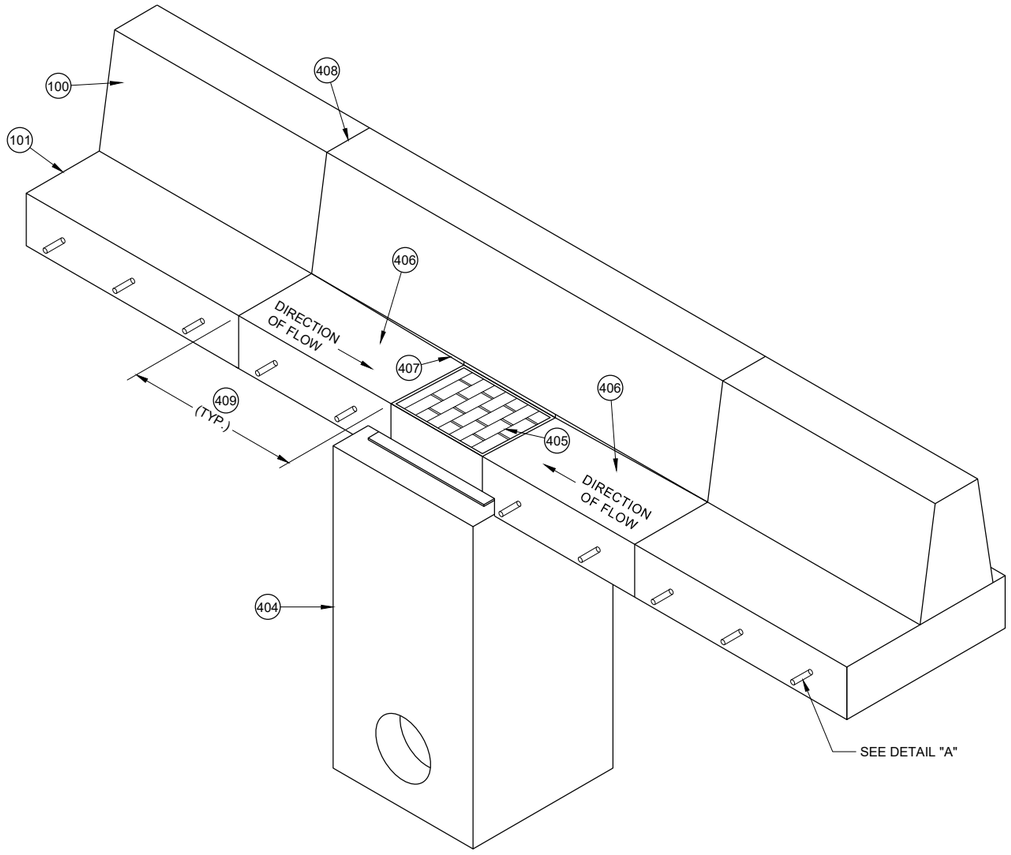
(405) INLET COVER BW (SEE PLAN)

(406) WARP PAN TO MATCH INLET COVER.

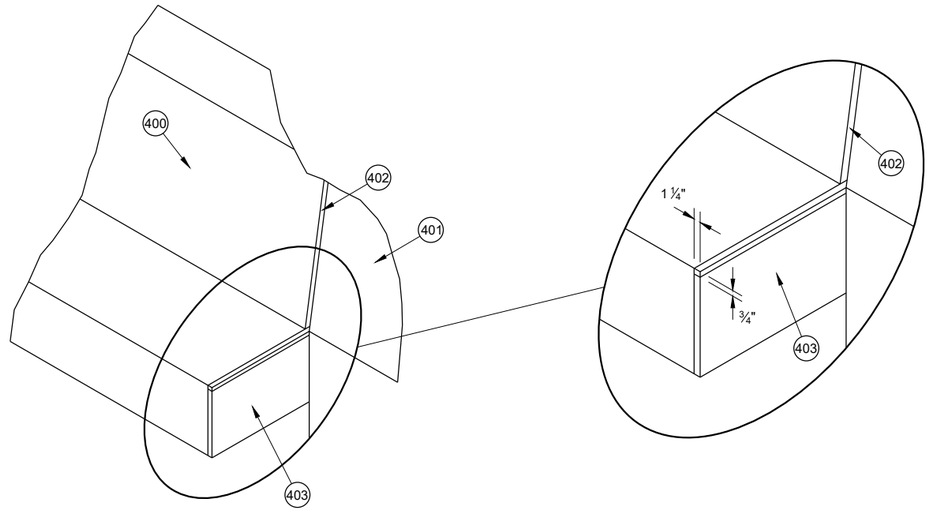
(407) EXTEND BARRIER SLOPE TO INLET. SEE PLAN FOR THE LENGTH OF EXTENSION.

(408) CONTRACTION JOINT.

(409) 3' (TYP.)



DRAINAGE DETAIL



EXPANSION JOINT DETAIL

6

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SDD 14B32 - 10d

SDD 14B32 - 10d

CONCRETE BARRIER SINGLE SLOPE (CBSS)

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GENERAL NOTES

USE COLD JOINT TO CONNECT MULTIPLE HEIGHT TRANSITIONS.

(500) SEE TABLE "A" FOR DIMENSIONS

(501) SEE TABLE "D"

(502) MULTIPLE HEIGHT TRANSITION MAY BE USED IN SEQUENCE TO GET APPROPRIATE HEIGHT.

(503) COLD JOINT

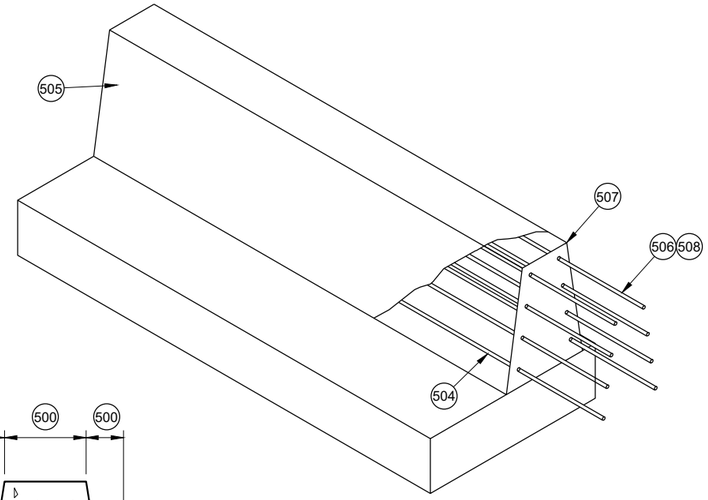
(504) BARRIER REBAR (SEE OTHER DETAILS FOR BAR SIZE, QUANTITY AND LOCATION).

(505) SINGLE SLOPE BARRIER SHOWN. SIMILAR DETAIL CAN BE USED FOR COLD JOINT IN END ANCHORS AND TRANSITIONS.

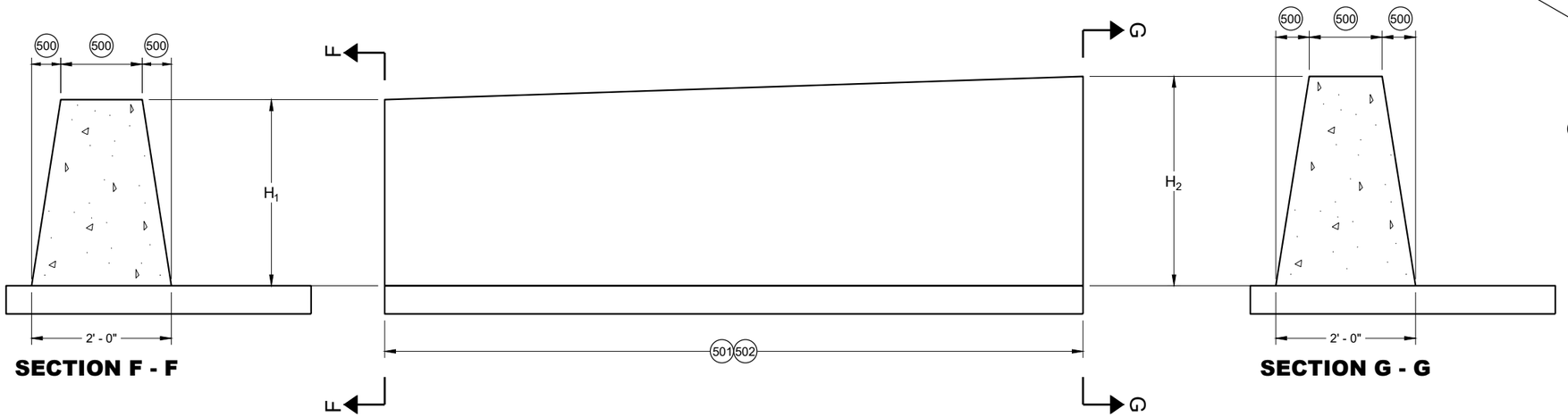
(506) NO. 5 REBAR FOR SPLICE. 3' OF SPLICE REBAR IS LAPPED AND TIED TO BARRIER REBAR. EXTEND 3' OF SPLICE REBAR BEYOND END OF POUR. ALL BARS ARE FIRMLY TIED OR CONNECTED. EVERY REBAR IN THE BARRIER SECTION REQUIRES A SPLICE BAR.

(507) END OF POUR.

(508) LAP AND TIE 3' OF NEXT POUR'S REBAR TO SPLICE REBAR.



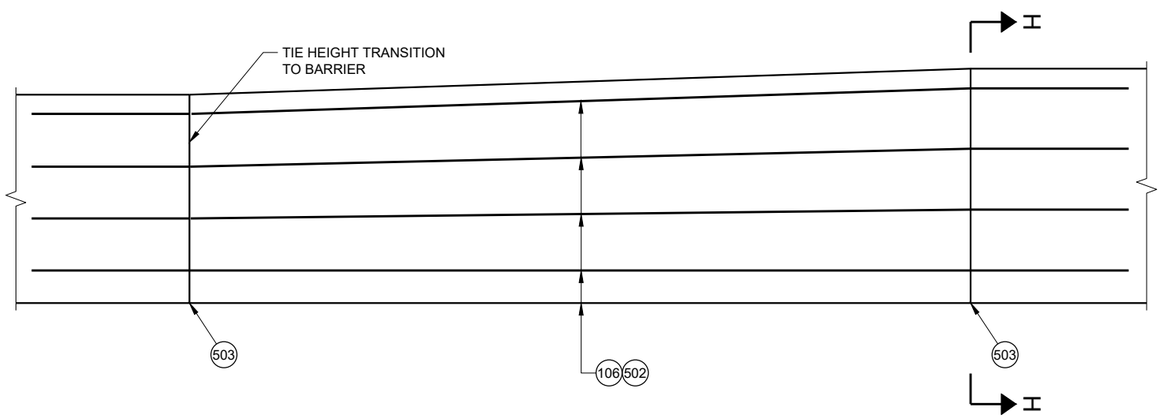
COLD JOINT DETAIL



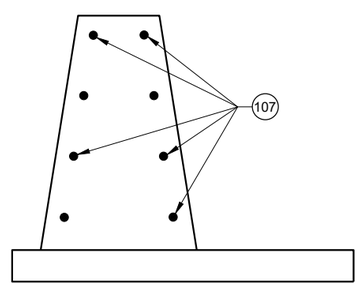
DOUBLE COLD JOINT HEIGHT TRANSITION

TABLE "D"

H_1	H_2	L	NUMBER OF NO. 5 BARS
32"	36"	10' - 0"	8
36"	42"	10' - 6"	10
42"	56"	24' - 6"	11



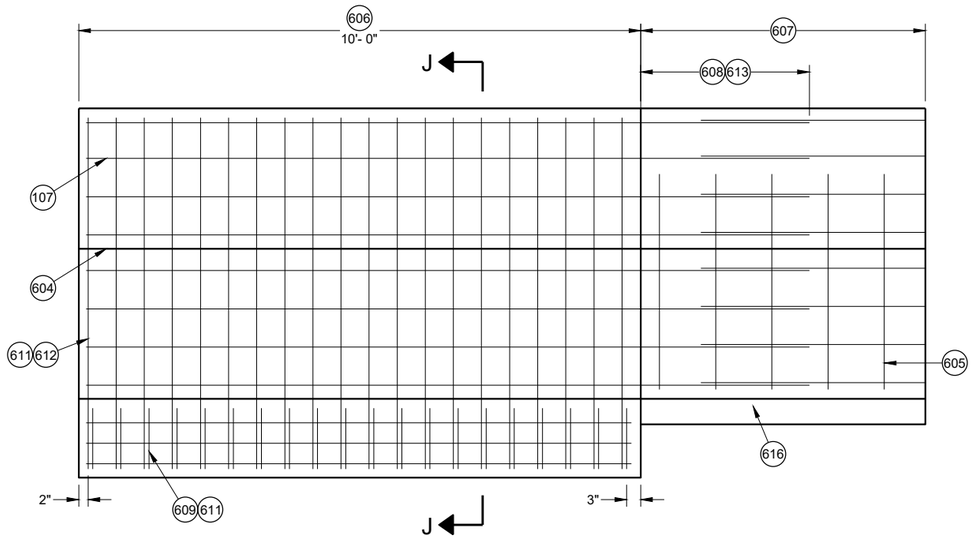
STEEL REINFORCEMENT DETAIL



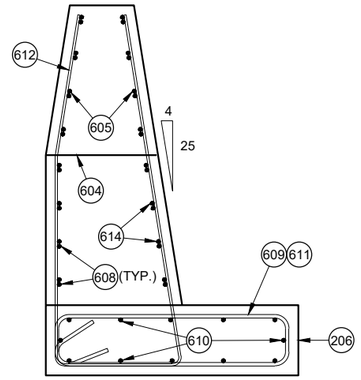
CONCRETE BARRIER SINGLE SLOPE (CBSS)

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END ANCHOR MEDIAN BARRIER AND RETAINING WALL



SECTION J - J
END ANCHOR AND MEDIAN WALL END ANCHOR REINFORCEMENT DETAIL

GENERAL NOTES

600 UPPER CONCRETE BARRIER

601 LOWER CONCRETE BARRIER

602 MAX HEIGHT 36".

603 VERTICAL OFFSET FROM TOP ROADWAY SURFACES

604 OPTIONAL CONSTRUCTION JOINT WHEN HEIGHT IS GREATER THAN 1 ½".

605 NO. 4 BARRIER LOOP BARS ARE NOT REQUIRED FOR ROADWAY OFFSETS ARE LESS THAN 1'- 0", EXCEPT WHEN USED IN ANCHORS. BARRIER LOOP BARS ARE SPACED 12" CENTER TO CENTER OUTSIDE OF MEDIAN BARRIER AND RETAINING WALL END ANCHOR.

606 SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL ANCHOR

607 SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL (SEE OTHER DETAILS)

608 NO. 5 REBAR 3' OF LAP OF LONGITUDINAL STEEL.

609 NO. 6 REBAR END ANCHOR FOOTING LOOP

610 TWELVE (12) NO. 5 BARS EVENLY SPACED.

611 SS ANCHOR END LOOP AND END ANCHOR FOOTING LOOP ARE SPACED 6" CENTER TO CENTER.

612 END ANCHOR LOOP BAR IS NO. 5 REBAR.

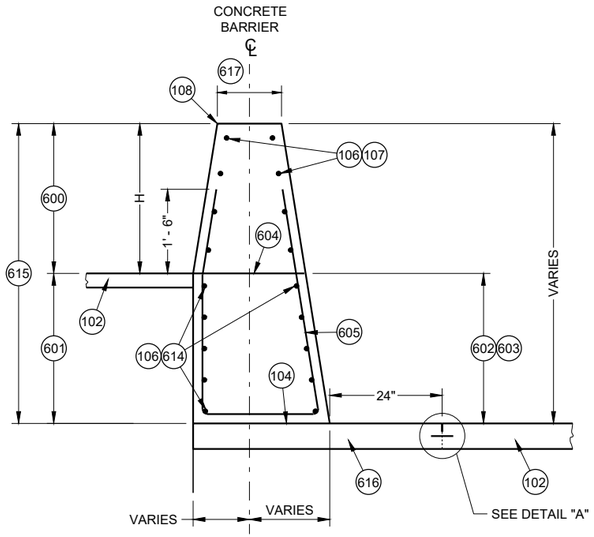
613 SEE COLD JOINT DETAIL.

614 SEE TABLE "E" FOR REQUIRED REBAR

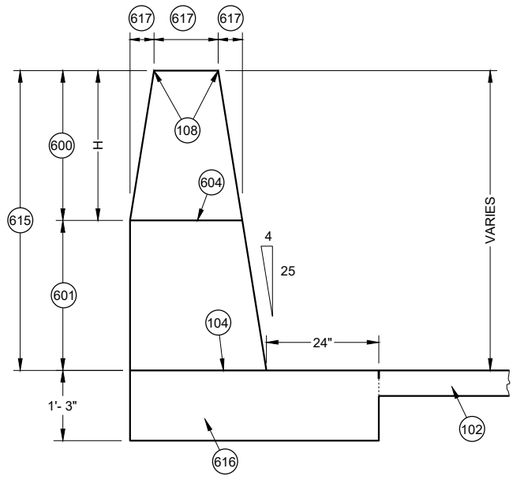
615 TOTAL BARRIER HEIGHT (SEE PLAN FOR HEIGHT)

616 FOR SOME LOCATIONS, NO PAN IS NEEDED. SEE OTHER DETAILS.

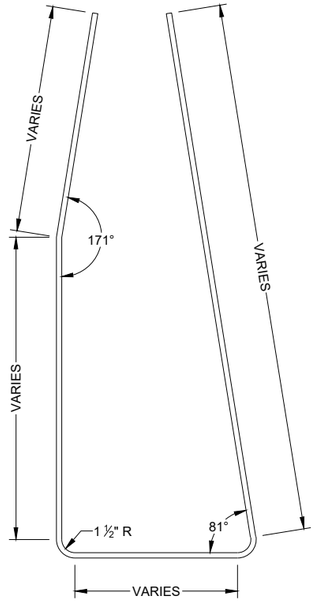
617 SEE TABLE "A" FOR DIMENSIONS



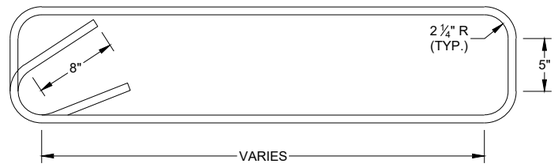
SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL
(TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)
(BETWEEN ADJACENT ROADWAYS)



SECTION J - J
MEDIAN BARRIER AND RETAINING WALL END ANCHOR DIMENSIONS



LOOP BAR BENDING DETAIL



END ANCHOR STIRRUP BAR BENDING DETAIL

TABLE "E"

HEIGHT BETWEEN ROADWAY	QUANTITY OF NO. 6 BARS
0 TO 3"	0
GREATER THAN 3" TO 8"	2
GREATER THAN 8" TO 12"	4
GREATER THAN 12" TO 36"	8

CONCRETE BARRIER SINGLE SLOPE (CBSS)

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GENERAL NOTES

700 END ANCHOR SINGLE SLOPE CONCRETE BARRIER

701 SEE EXPANSION JOINT DETAIL

702 END ANCHOR SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL

703 PAY LIMIT FOR SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL

704 SEE COLD JOINT DETAIL

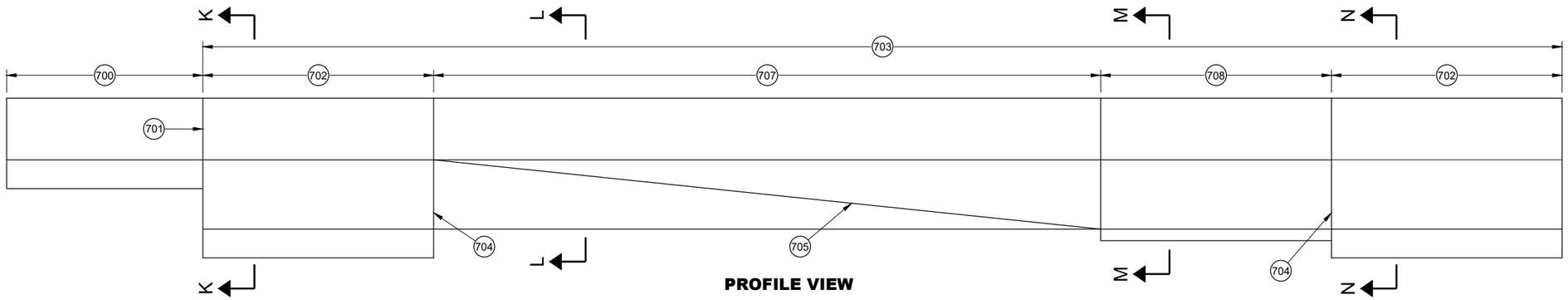
705 LOW SIDE SHOULDER

706 HIGH SIDE SHOULDER

707 SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL INSTALLED WITHOUT A PAN.

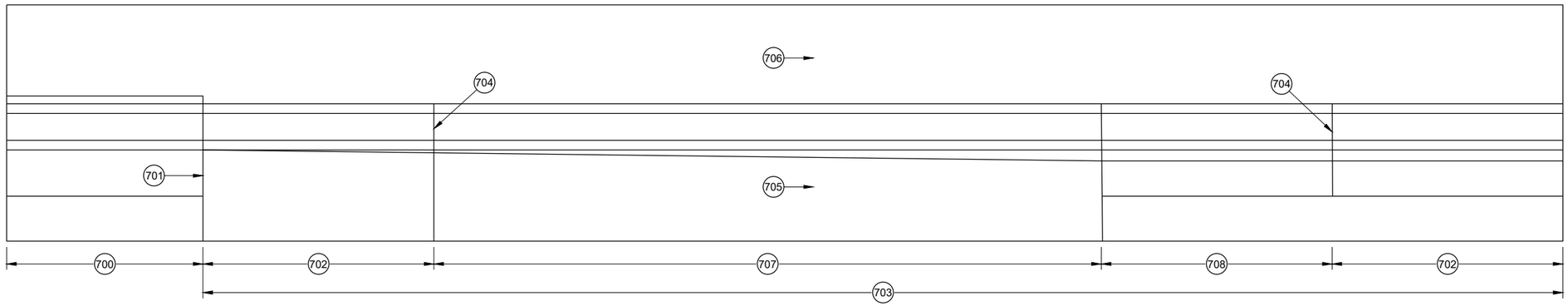
708 SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL INSTALLED WITH A PAN.

709 EXCAVATION AND COMPACTION



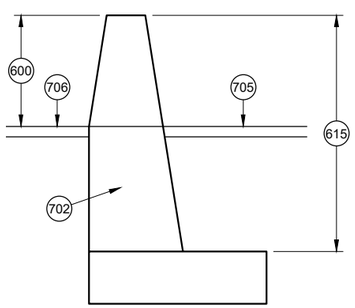
PROFILE VIEW

SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL

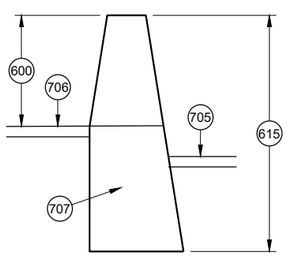


PLAN VIEW

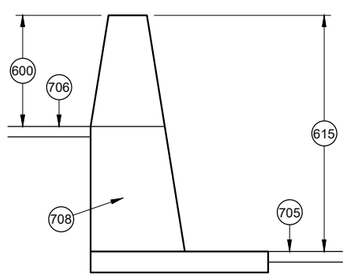
SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL



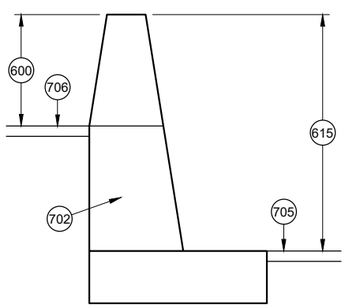
SECTION K - K



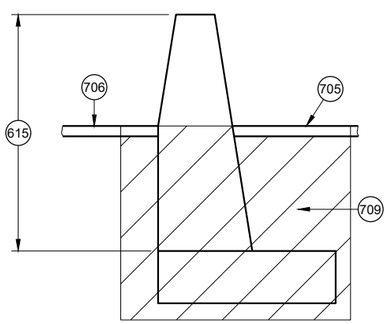
SECTION L - L



SECTION M - M



SECTION N - N

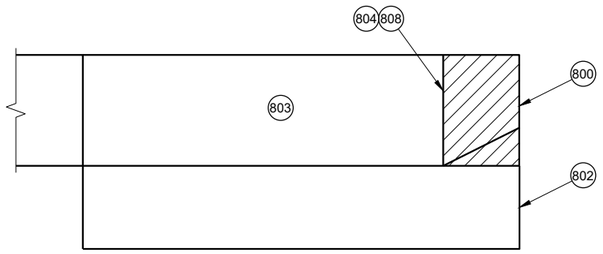


CONCRETE BARRIER
SINGLE SLOPE (CBSS)

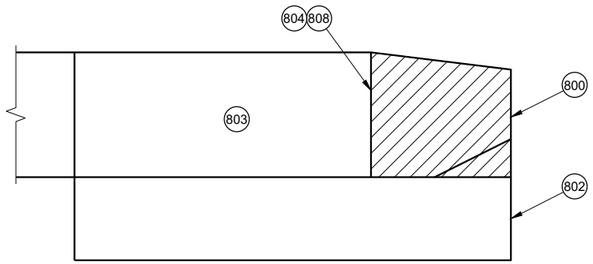
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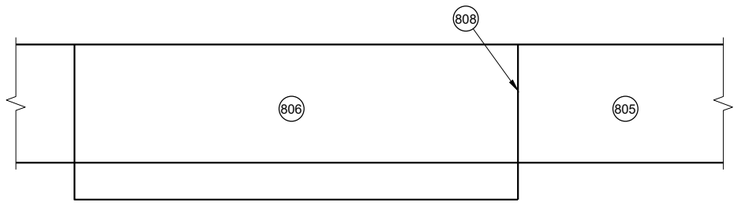
SDD 14B32 - 10g



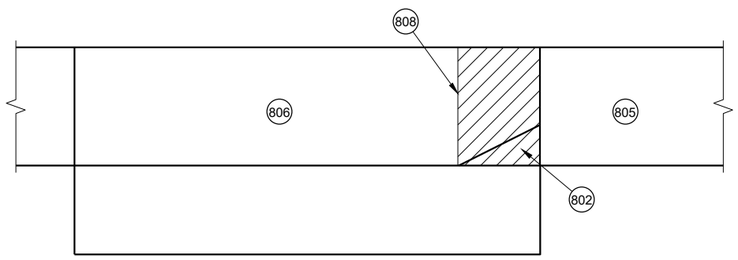
REMOVAL AREA OF
32" CONCRETE THRIE BEAM ANCHORAGE



REMOVAL AREA OF CONCRETE THRIE BEAM
ANCHORAGE WITH HEIGHT GREATER THAN 32"



CONCRETE BARRIER EXTENSION NEAR END ANCHORAGE



CONCRETE BARRIER EXTENSION NEAR THRIE BEAM TERMINAL

GENERAL NOTES

END ANCHORAGE MAY OR MAY NOT BE PRESENT ON EXISTING BARRIER.

REMOVE THRIE BEAM ANCHORAGE AS SHOWN.

(800) AREA OF BARRIER REMOVAL AN NEW CONCRETE AND STEEL IS INSTALLED.

(801) MINIMUM LENGTH OF REMOVAL IS 15'

(802) FOOTING BELOW GROUND MAY REMAIN IN PLACE.

(803) CONCRETE BARRIER SINGLE SLOPE THRIE BEAM ANCHOR TO REMAIN.

(804) SAW CUT

(805) NEW SINGLE SLOPE CONCRETE BARRIER.

(806) CONCRETE BARRIE SINGLE SLOPE TO REMAIN.

(807) SINGLE SLOPE CONCRETE BARRIER OR CONCRETE BARRIER SINGLE SLOPE THRIE BEAM ANCHOR TO REMAIN.

(808) SEE CONNECTION DETAIL.

(809) NO. 5 CONTINUOUS BAR.

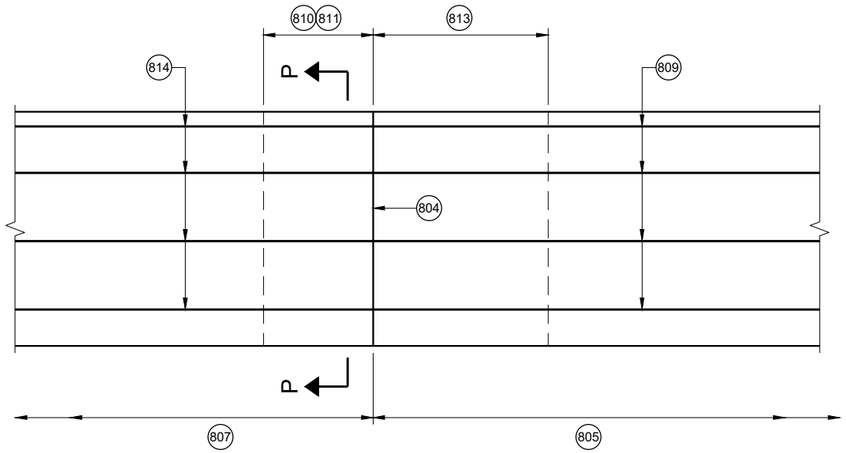
(810) 3" MIN. DRILL HOLES. USES NO. 5 ADHESIVE ANCHORS.

(811) THE NUMBER OF DRILL HOLES IS EQUAL TO THE NUMBER OF HORIZONTAL REBAR IN BARRIER. DRILL HOLES ARE TO BE A MINIMUM OF 4" FROM EDGE OF CONCRETE.

(812) EXISTING REBAR IN EXISTING BARRIER OR END ANCHOR.

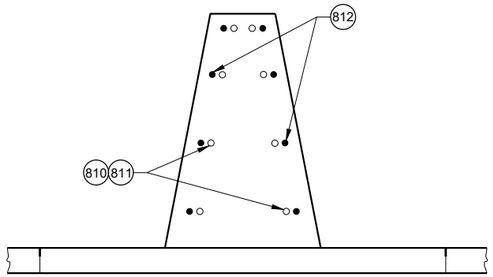
(813) 3" BAR OVERLAP

(814) EXISTING REINFORCEMENT

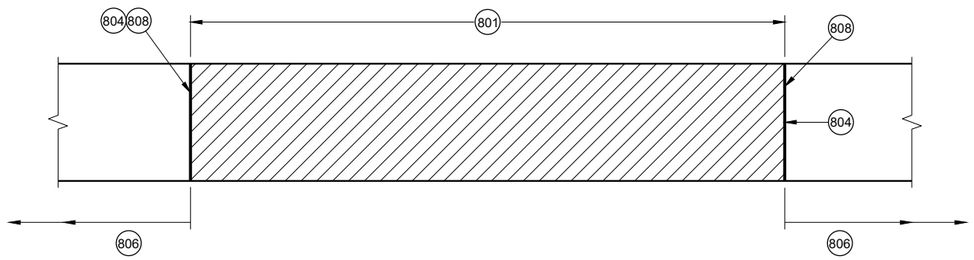


CONNECTION DETAIL

SINGLE SLOPE CONCRETE BARRIER TO
NEW SINGLE SLOPE CONCRETE BARRIER



SECTION P - P



BARRIER REMOVAL AND REPLACEMENT

RETROFIT OR REPAIR SINGLE SLOPE CONCRETE BARRIER

CONCRETE BARRIER
SINGLE SLOPE (CBSS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR

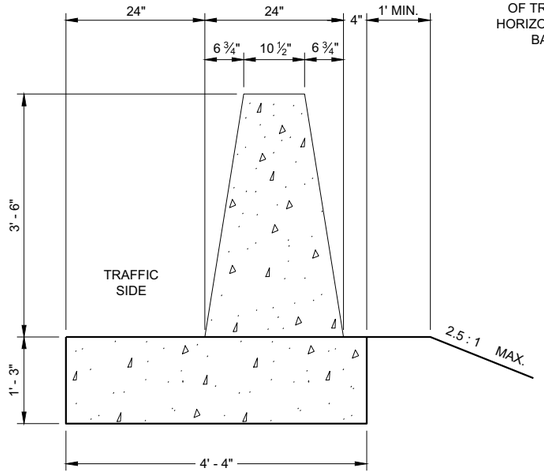
FHWA

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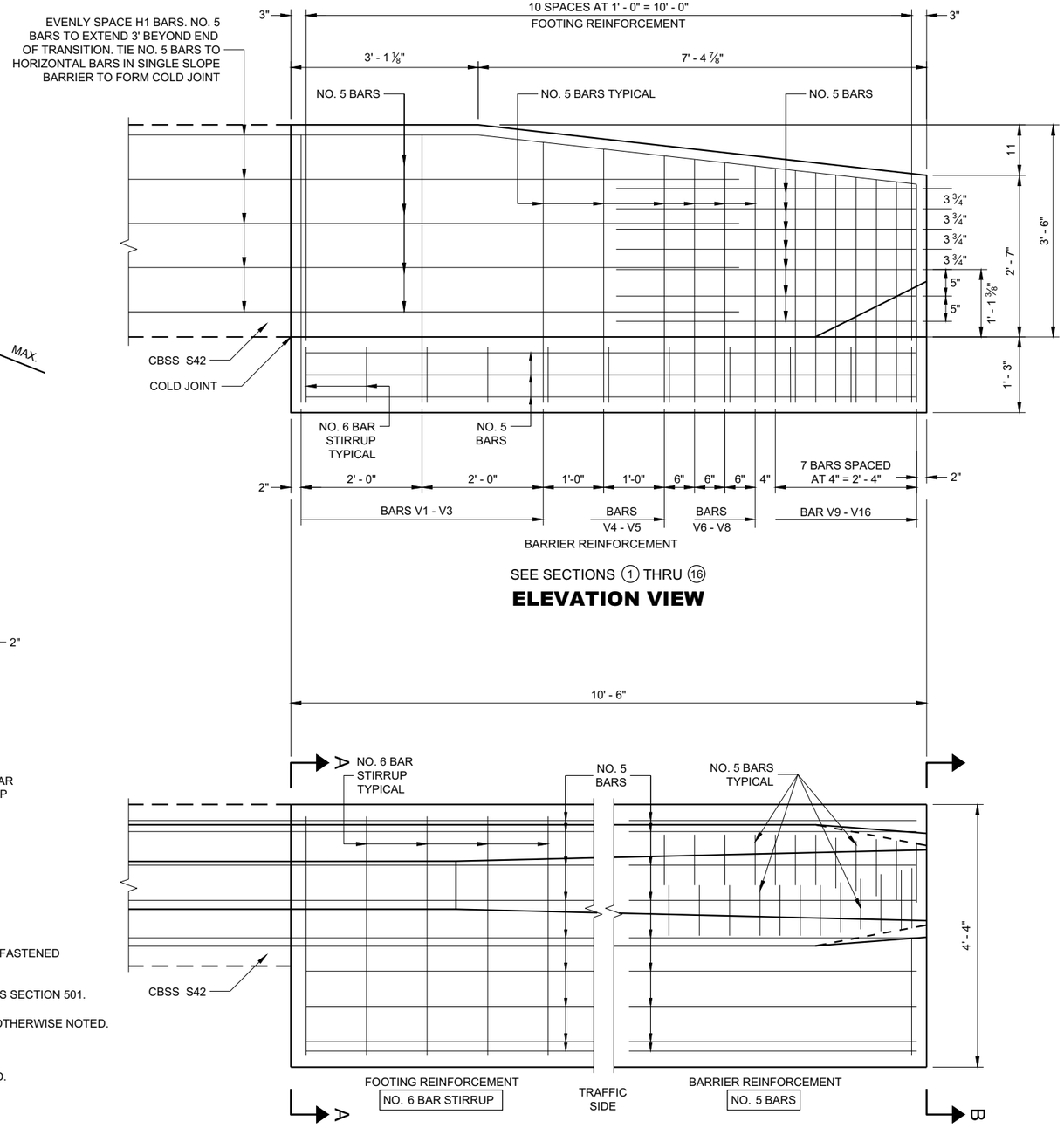
SDD 14B32 - 10h

6

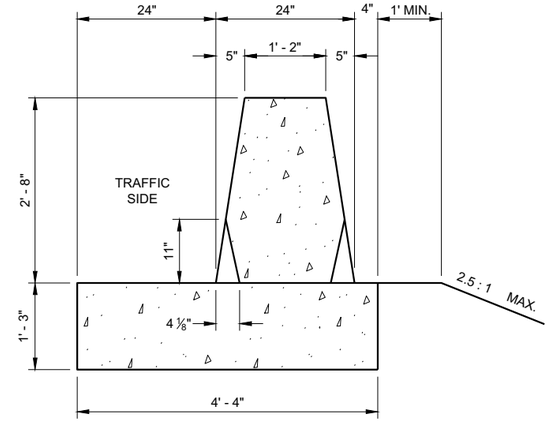
SDD 14B32 - 10h



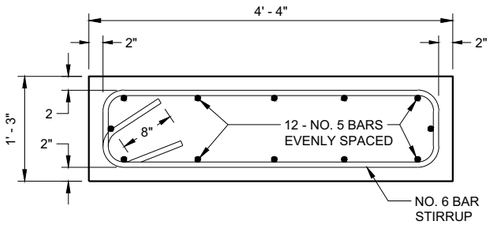
SECTION A - A



ELEVATION VIEW

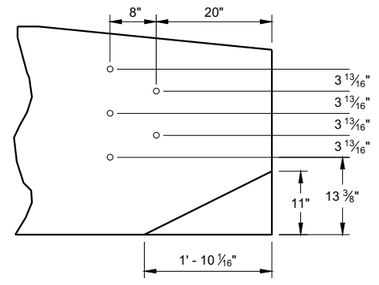


SECTION B - B



TYPICAL FOOTING

PLAN VIEW



PVC PIPE LOCATIONS

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2' LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS OTHERWISE NOTED.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS SECTION 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS OTHERWISE NOTED.

THRIE BEAM ANCHOR INCIDENTAL TO CONCRETE BARRIER ITEM.

INSTALL SCHEDULE 40 PVC PIPE 1" DIAMETER AT LOCATIONS INDICATED.

EXTEND PVC PIPE COMPLETELY THROUGH BARRIER.

CUT ENDS OF PVC PIPE FLUSH WITH FINISHED FACE OF BARRIER.

THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

CONCRETE BARRIER
SINGLE SLOPE 42"
THRIE BEAM ANCHOR

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

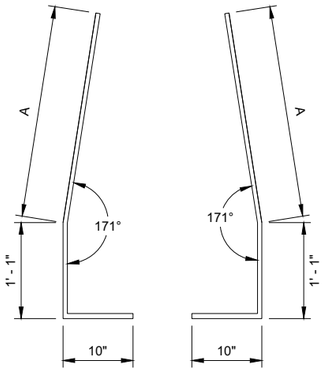
6

SDD 14B33 - 02g

SDD 14B33 - 02g

BAR CHART
BAR POSITIONS
1 - 11

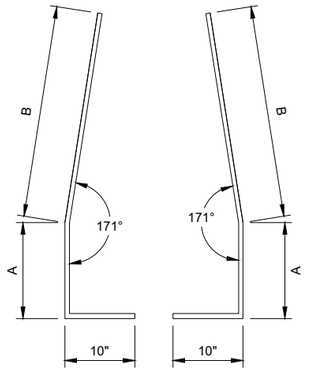
BAR	A
V1	3' - 4 ½"
V2	3' - 4 ½"
V3	3' - 2 ½"
V4	3' - 1"
V5	2' - 11 ½"
V6	2' - 11"
V7	2' - 10 ½"
V8	2' - 9 ½"
V9	2' - 9"
V10	2' - 8 ½"
V11	2' - 8"



BAR BENDING DETAIL
SECTIONS V1 - V4

BAR CHART
BAR POSITIONS
12 - 13

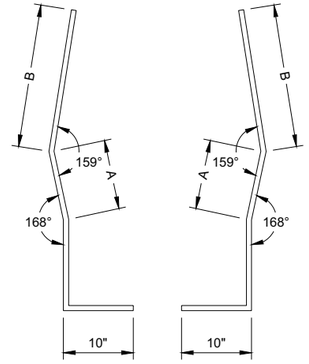
BAR	A	B
V12	1' - 3"	2' - 6"
V13	1' - 8"	2' - 1 ½"



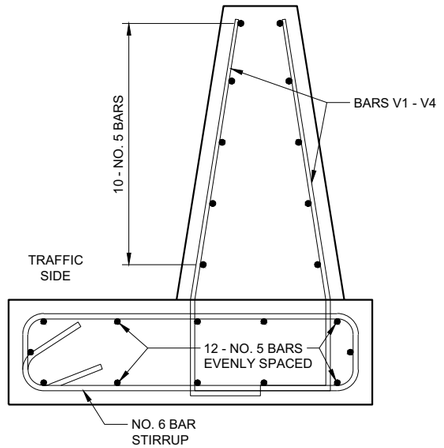
BAR BENDING DETAIL
SECTIONS V12 - V13

BAR CHART
BAR POSITIONS
14 - 16

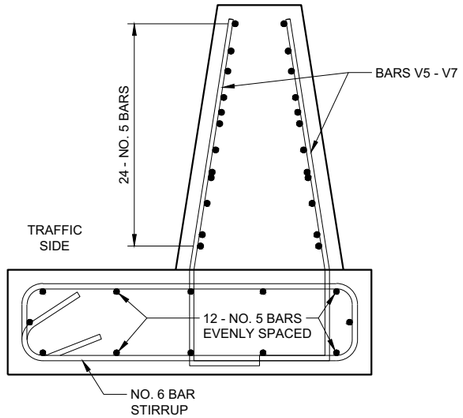
BAR	A	B
V14	6"	2' - 1"
V15	8"	1' - 11"
V16	10"	1' - 8 ½"



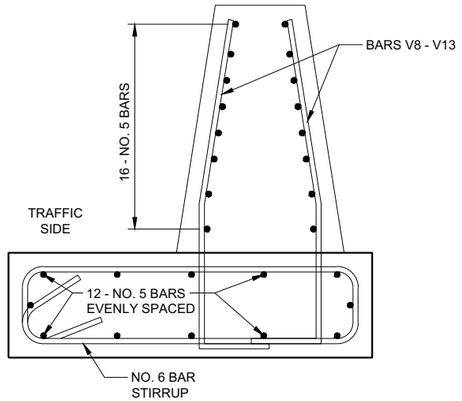
BAR BENDING DETAIL
SECTIONS V14 - V16



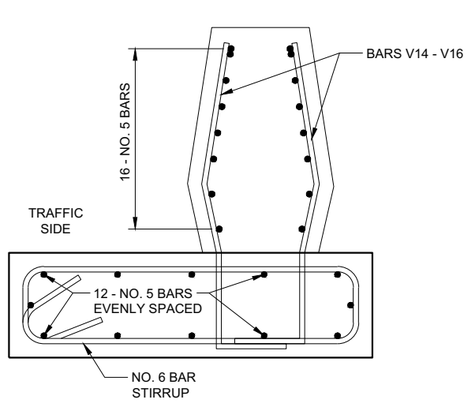
BAR DETAIL
SECTIONS 1 - 4



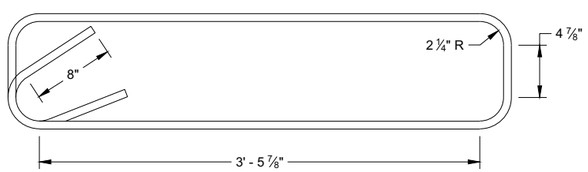
BAR DETAIL
SECTIONS 5 - 7



BAR DETAIL
SECTIONS 8 - 13



BAR DETAIL
SECTIONS 14 - 16



STIRRUP BAR
BENDING DETAIL

CONCRETE BARRIER
SINGLE SLOPE 42"
THRIE BEAM ANCHOR

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

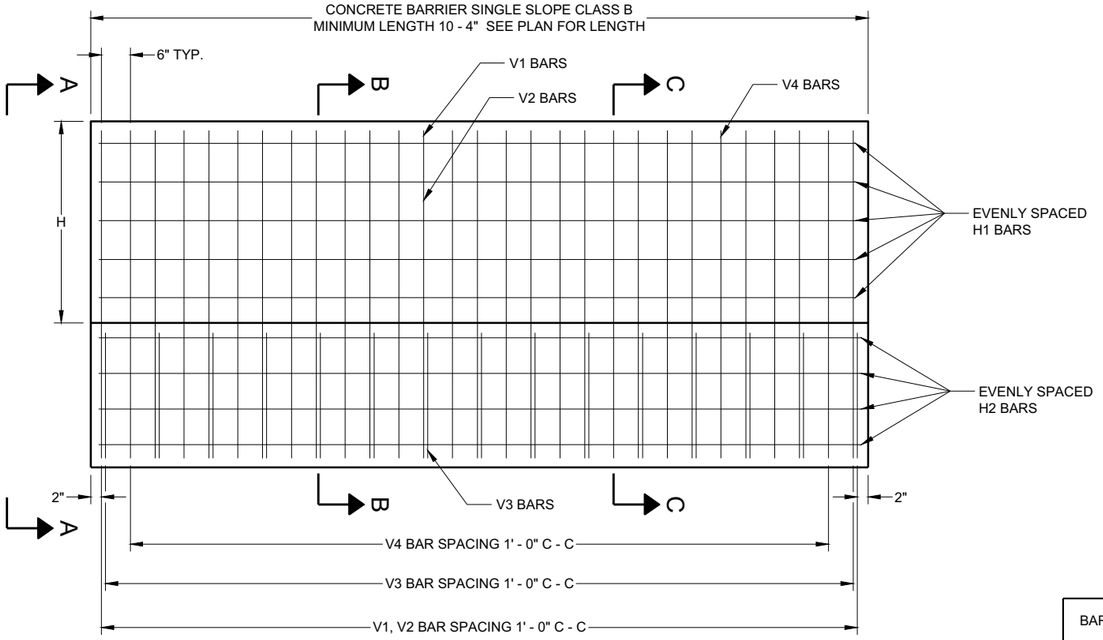
APPROVED
February 2020
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

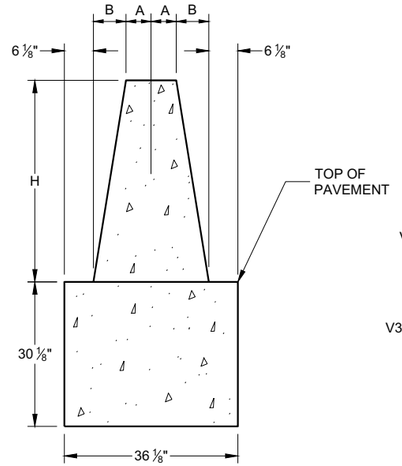
FHWA

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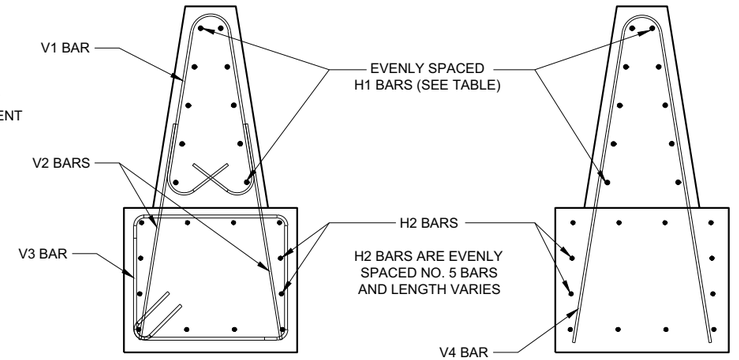
SDD 14B33 - 02h
SDD 14B33 - 02h



ELEVATION VIEW



SECTION A - A

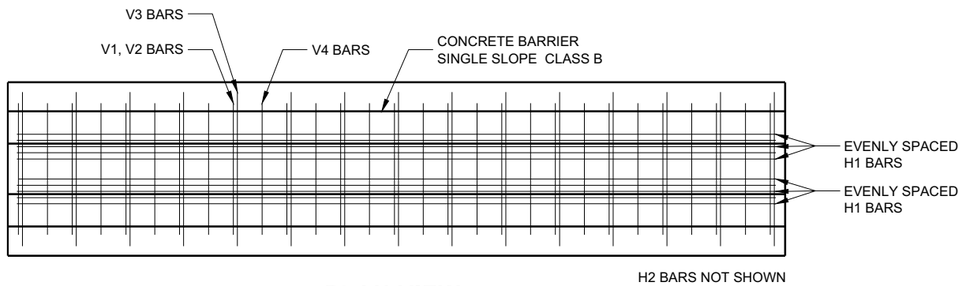


SECTION B - B

SECTION C - C

BARRIER HEIGHT H INCHES	A INCHES	B INCHES	NUMBER OF H1 BARS EACH
32	7	5	8
36	6 ¼	5 ¾	8
42	5 ¼	6 ¾	10

BARRIER HEIGHT H INCHES	V1 BAR		V4 BAR	
	C RAD. INCHES	D INCHES	E RAD. INCHES	F INCHES
32	5 ⅝	18 ¾	5 ½	53 ¾
36	4 ¾	23 ¾	4 ⅞	58 ⅜
42	3 ⅝	30 ½	3 ⅝	65 ⅜



PLAN VIEW

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2' LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS 501.

USE ¾ " BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

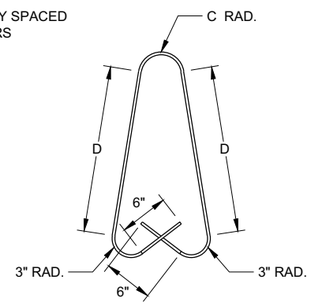
WHERE THE CONCRETE BARRIER IS ADDED TO THE FACE OF EXISTING CONCRETE STRUCTURE, MATCH EXISTING WEEP HOLES.

PAVEMENT AND PRINCIPAL WALL JOINTS. EXPANSION JOINT FILLER MATERIAL.

PLACE BARRIER PERPENDICULAR TO SHOULDER GRADE, UNLESS INDICATED IN PLAN.

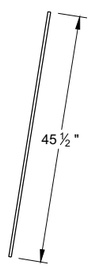
WHEN SWITCHING BETWEEN SLIP FORM AND CAST-IN-PLACE OPERATIONS, EXTEND LONGITUDINAL STEEL 3 FEET BEYOND SLIP-FORMING CUT OFF POINT. EXPOSED STEEL INTO NEXT POURS REINFORCEMENT. LAPS TO BE FIRMLY TIED.

IF REQUIRED USE THRIE BEAM ANCHOR. NO OTHER ANCHOR REQUIRED.



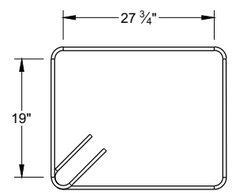
V1 BAR BENDING DETAIL

V1 BARS ARE NO. 4 BARS



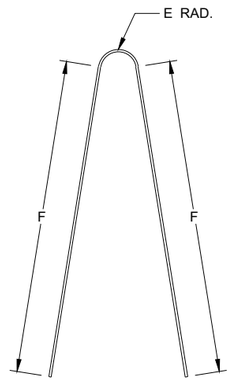
V2 BAR DETAIL

V2 BARS ARE NO. 5 BARS



V3 BAR BENDING DETAIL

V3 BARS ARE NO. 6 BARS



V4 BAR BENDING DETAIL

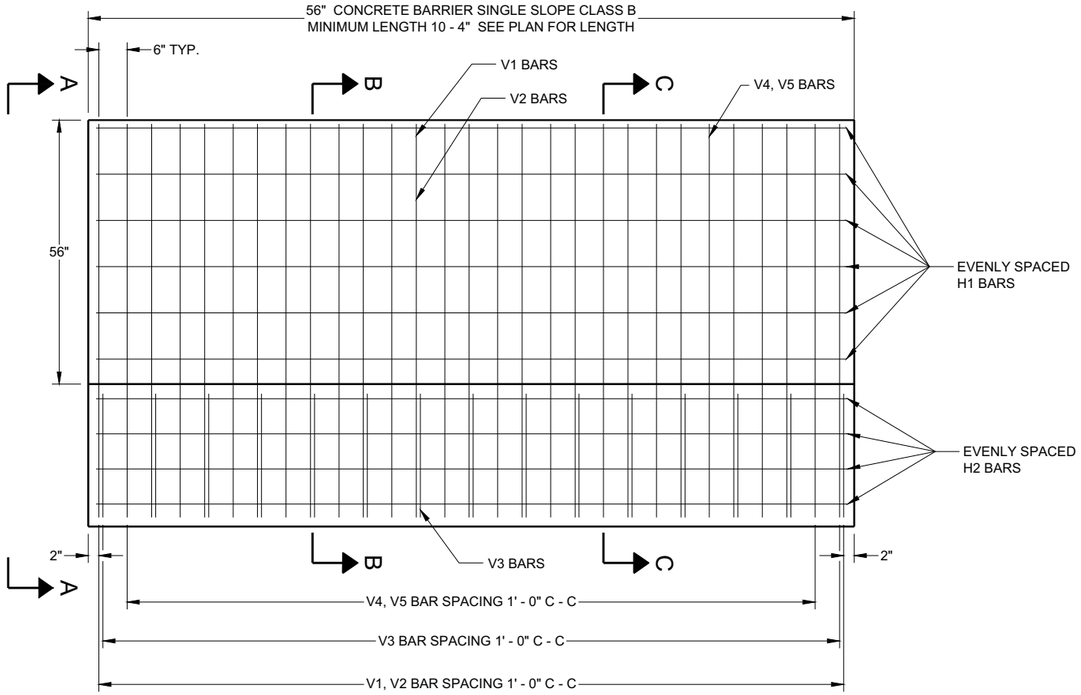
V4 BARS ARE NO. 6 BARS

32", 36", & 42"
CONCRETE BARRIER
SINGLE SLOPE CLASS B

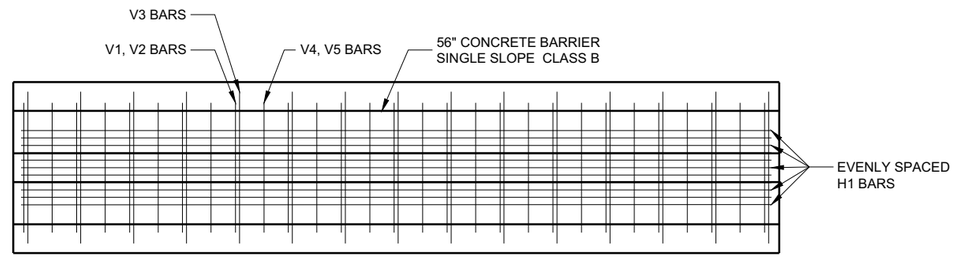
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B34 - 02a

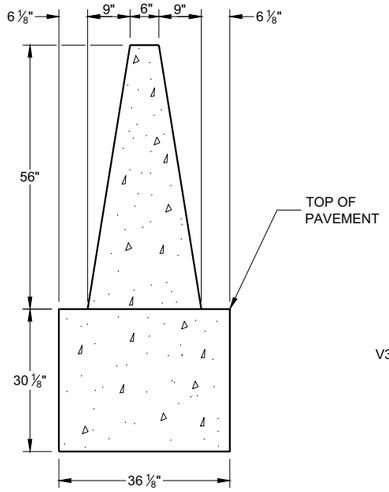


ELEVATION VIEW

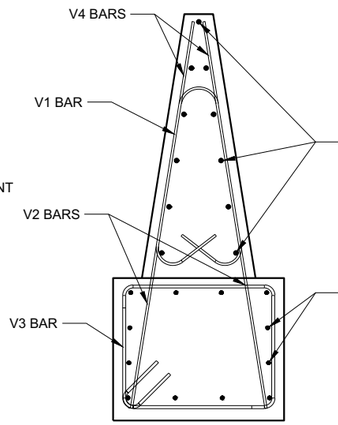


H2 BARS NOT SHOWN

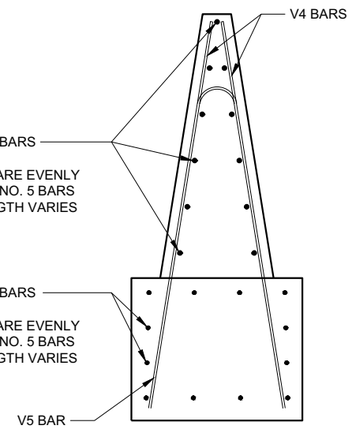
PLAN VIEW



SECTION A - A



SECTION B - B



SECTION C - C

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2' LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

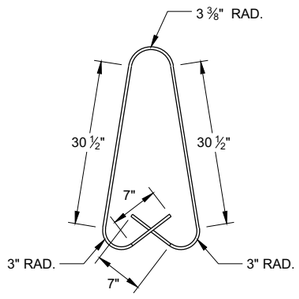
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PAVEMENT AND PRINCIPAL WALL JOINTS. EXPANSION JOINT FILLER MATERIAL.

PLACE BARRIER PERPENDICULAR TO SHOULDER GRADE, UNLESS INDICATED IN PLAN.

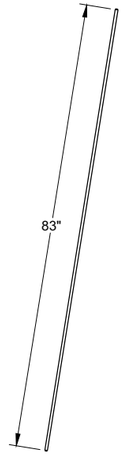
WHEN SWITCHING BETWEEN SLIP FORM AND CAST-IN-PLACE OPERATIONS, EXTEND LONGITUDINAL STEEL 3 FEET BEYOND SLIP-FORMING CUT OFF POINT. EXPOSED STEEL INTO NEXT POURS REINFORCEMENT. LAPS TO BE FIRMLY TIED.

IF REQUIRED USE THRIE BEAM ANCHOR. NO OTHER ANCHOR REQUIRED.



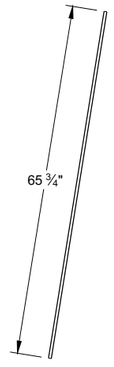
V1 BAR BENDING DETAIL

V1 BARS ARE NO. 4 BARS



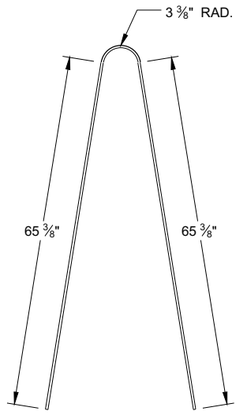
V2 BAR DETAIL

V2 BARS ARE NO. 5 BARS



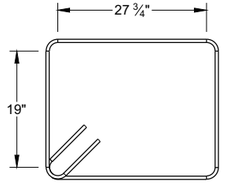
V4 BAR DETAIL

V4 BARS ARE NO. 5 BARS



V5 BAR BENDING DETAIL

V5 BARS ARE NO. 6 BARS



V3 BAR BENDING DETAIL

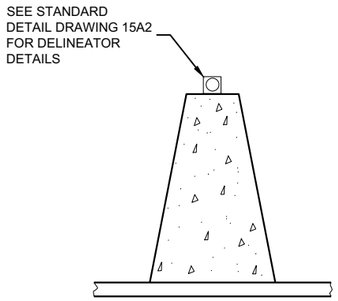
V3 BARS ARE NO. 6 BARS

56" CONCRETE BARRIER SINGLE SLOPE CLASS B

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B34 - 02b



DELINEATION

DELINEATOR SPACING ON HORIZONTAL CURVES

RADIUS OF CURVE	APPROXIMATE SPACING ON CURVE
50 FEET	20 FEET
115 FEET	25 FEET
180 FEET	35 FEET
250 FEET	40 FEET
300 FEET	50 FEET
400 FEET	55 FEET
500 FEET	65 FEET
600 FEET	70 FEET
700 FEET	75 FEET
800 FEET	80 FEET
900 FEET	85 FEET
1000 FEET	90 FEET

DELINEATOR SPACING ON RADIUS GREATER THAN 1000 FEET OR TANGENT SECTIONS

	LENGTH OF BARRIER	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200' > 200'	50' C - C 100' C - C	1 1	3
TWO WAY TRAFFIC	< 200' > 200'	25' C - C 50' C - C	1 1	3
TWO WAY TRAFFIC	< 200' > 200'	50' C - C 100' C - C	2 2	6

6

6

SDD 14B34 - 02c

SDD 14B34 - 02c

CONCRETE BARRIER SINGLE SLOPE CLASS B

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

07/2018
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

FHWA

(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.

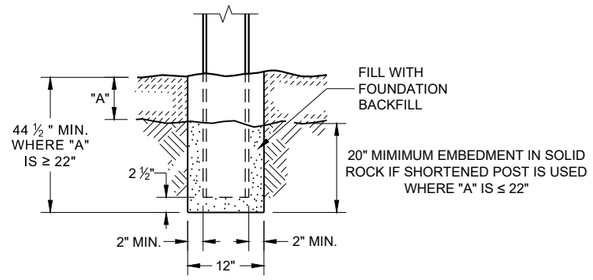
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

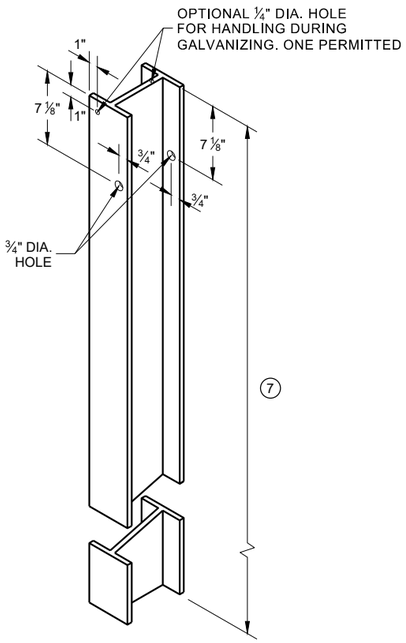
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

(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.

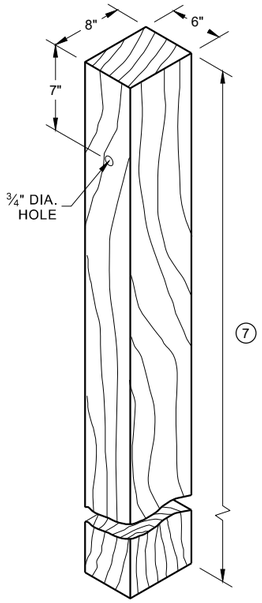
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



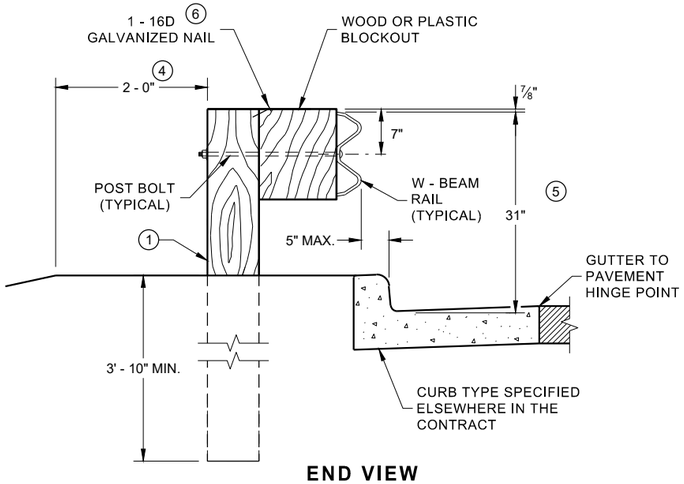
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



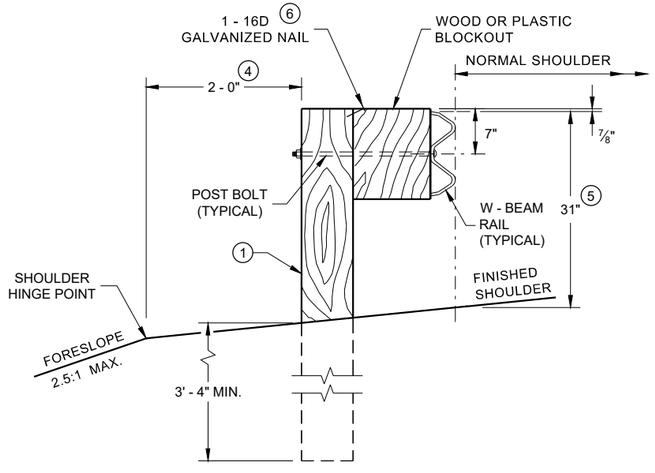
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



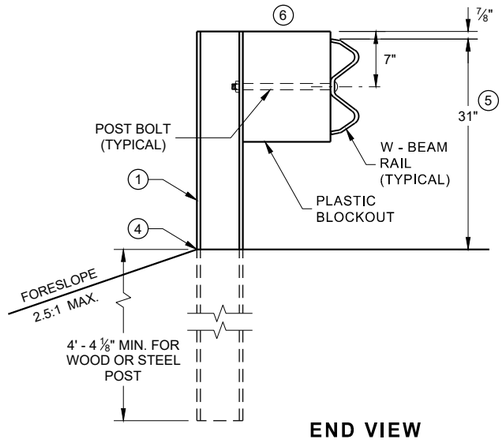
WOOD POST (6" X 8") NOMINAL (1)



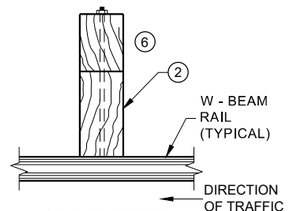
END VIEW
LOCATED ALONG A CURBED ROADWAY



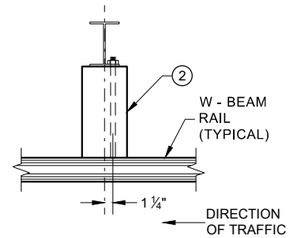
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



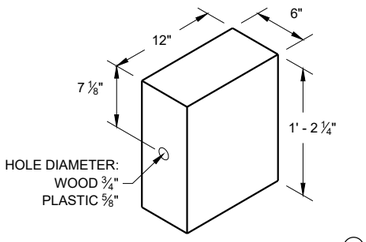
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW WOOD POST, BLOCKOUT & BEAM



PLAN VIEW STEEL POST, PLASTIC BLOCKOUT & BEAM



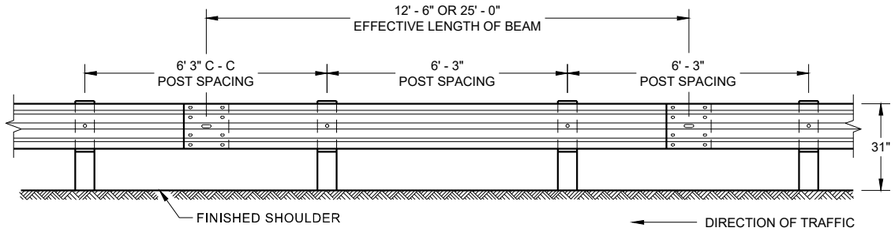
WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

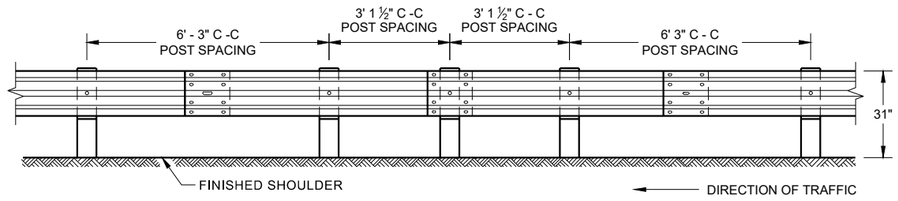
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

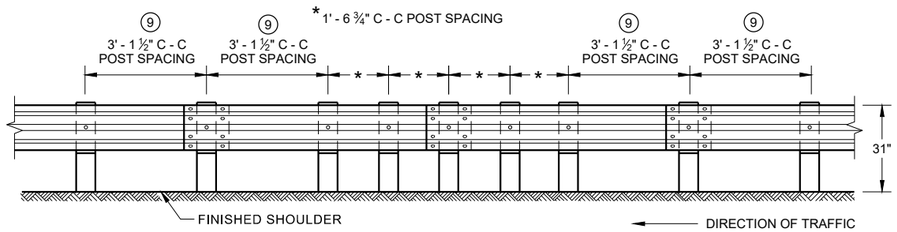
SDD 14B42 - 07a



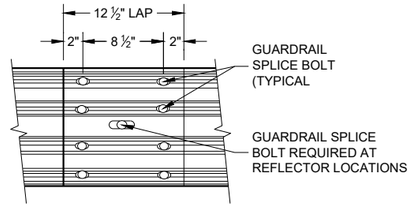
FRONT VIEW
POST SPACING STANDARD INSTALLATION



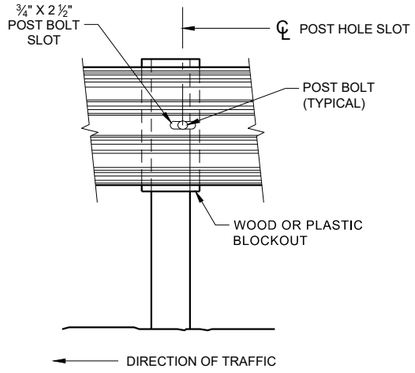
FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)



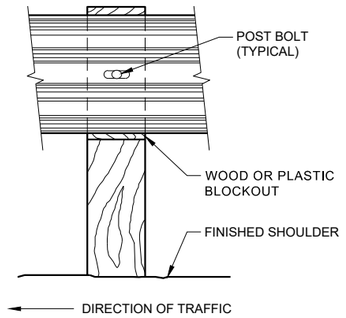
FRONT VIEW
QUARTER POST SPACING (QS)



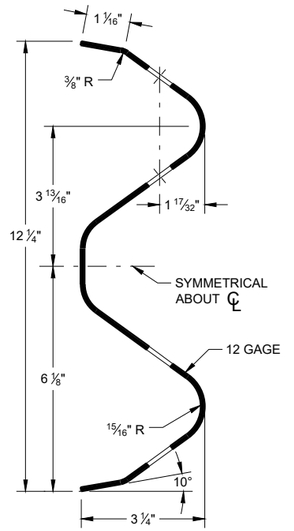
FRONT VIEW
MID-SPAN BEAM SPLICE



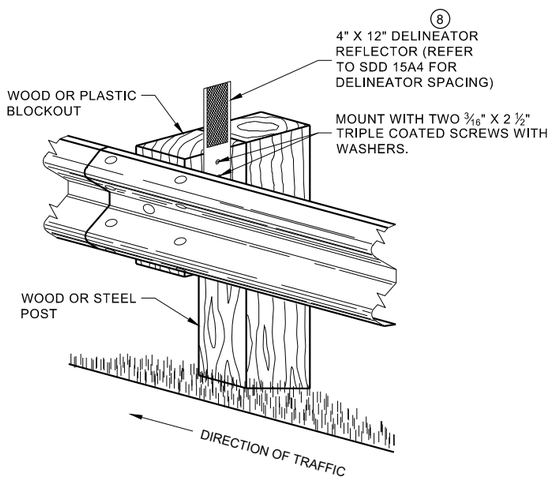
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

GENERAL NOTES

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

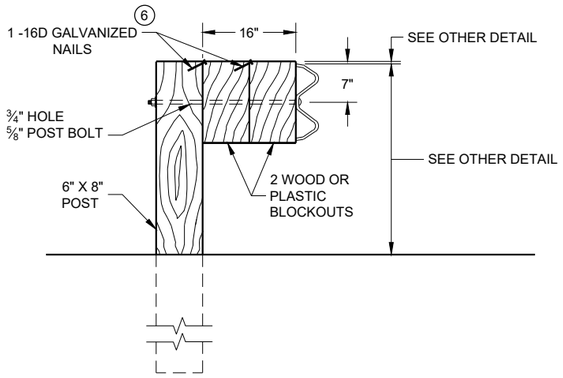
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

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.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

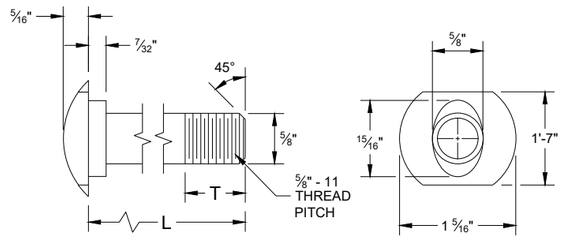


DETAIL FOR 16" BLOCKOUT DEPTH

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.

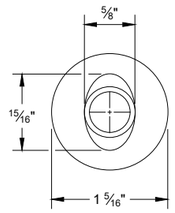
NOTE:

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.

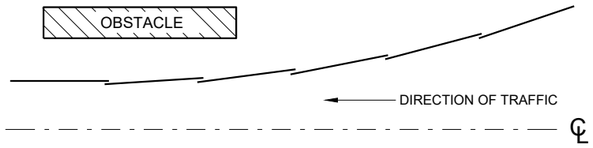


POST BOLT TABLE

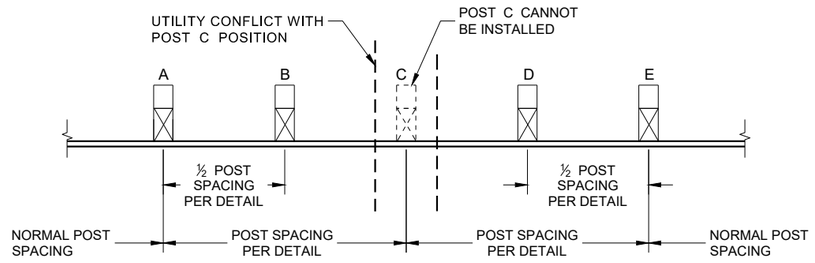
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



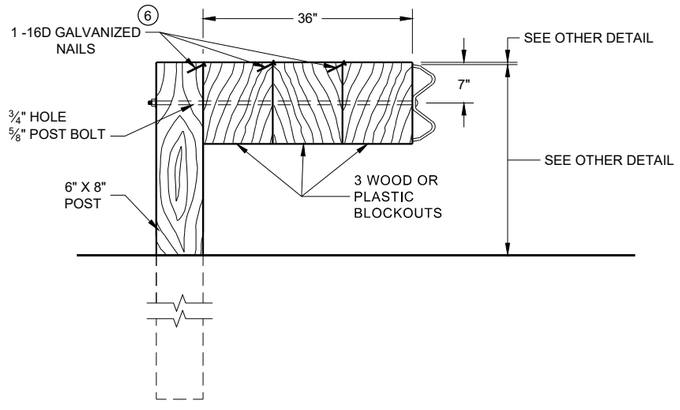
ALTERNATE BOLT HEAD



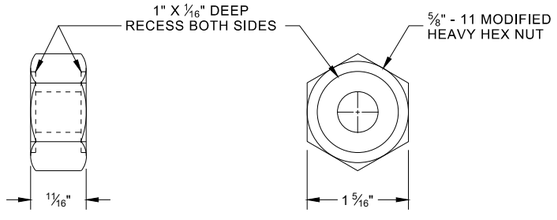
PLAN VIEW
BEAM LAPPING DETAIL



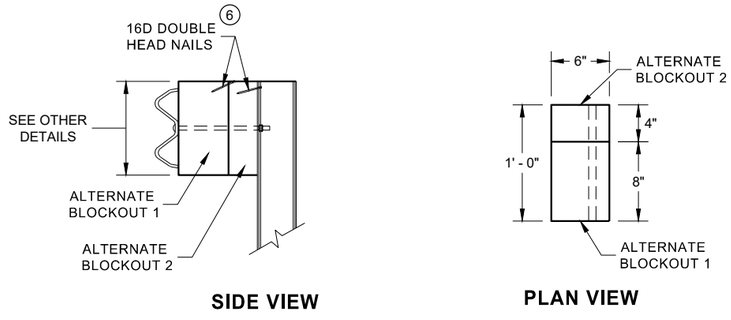
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW

PLAN VIEW

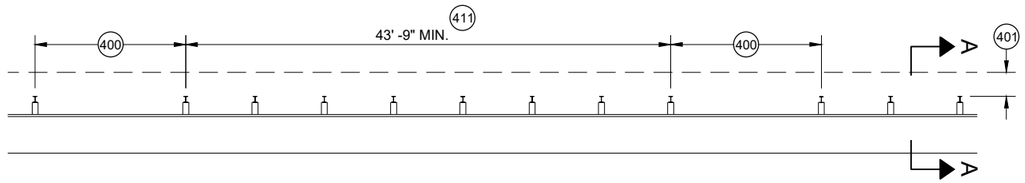
ALTERNATE WOOD BLOCKOUT DETAIL

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.

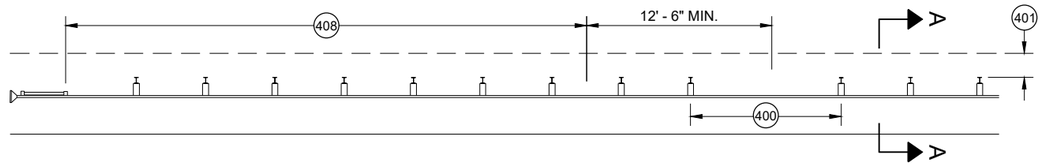
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

(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.

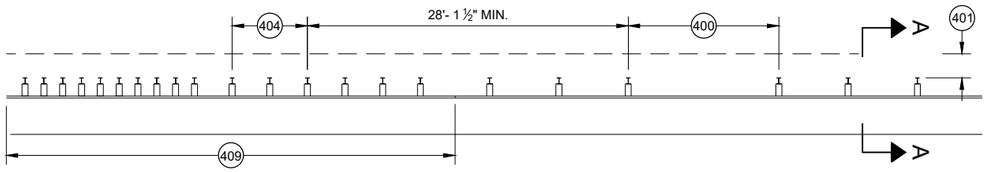
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL



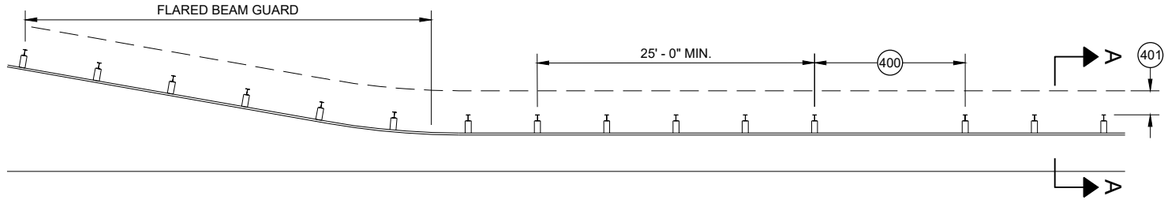
MISSING POST IN MGS GUARDRAIL



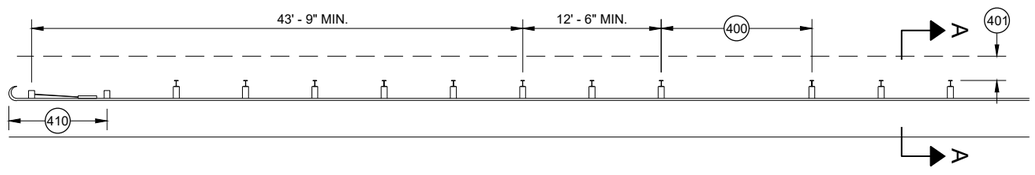
MISSING POST IN MGS GUARDRAIL NEAR EAT



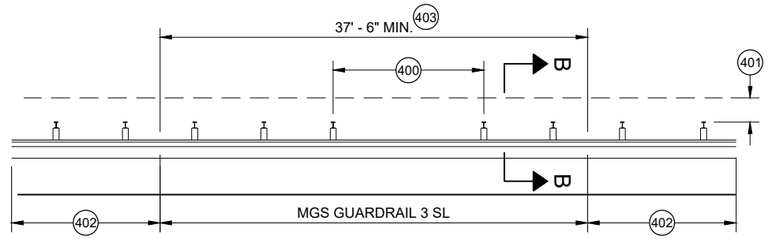
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

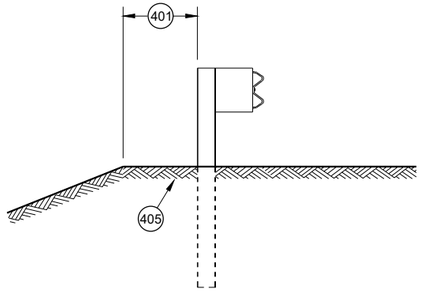


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

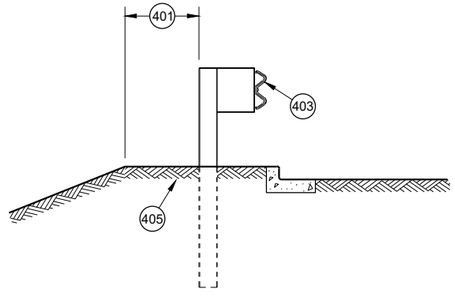


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

(400) MAX SPAN 12' - 6"
(401) 2' MIN.
(402) MGS GUARDRAIL 3
(403) NESTING BEAM GUARD
(404) ASYMMETRIC TRANSITION
(405) SOIL WELL DRAINED AND COMPACTED
(406) SEE OTHER DRAWINGS IN THIS SDD
(407) SEE OTHER DRAWINGS FOR MIN. SPACING BETWEEN SPANS
(408) SEE SDD 14B44
(409) SEE SDD 14B45
(410) SEE SDD 14B47
(411) MINIMUM DISTANCE BETWEEN MISSING POST SPANS.



SECTION A - A 406



SECTION B - B 406

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

FHWA

6

SDD 14B42 - 07d

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.

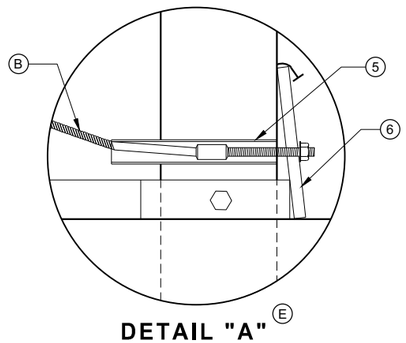
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

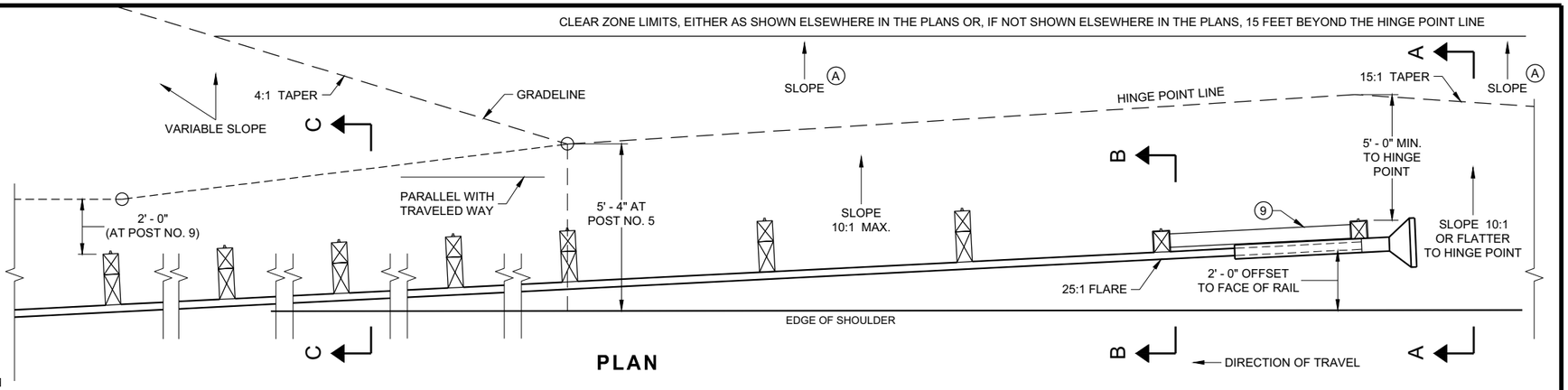
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

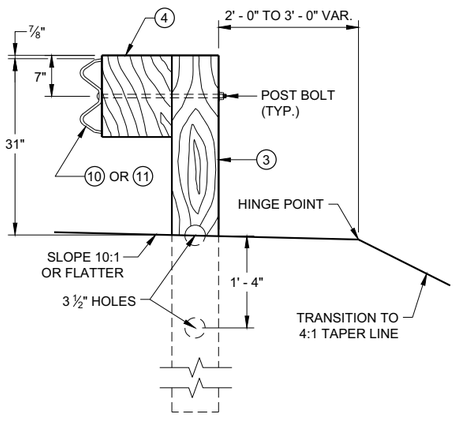
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

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.

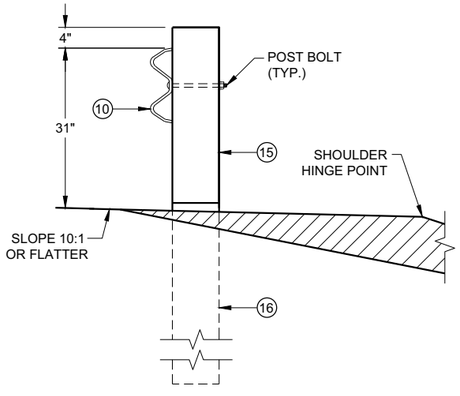


DETAIL "A" (E)

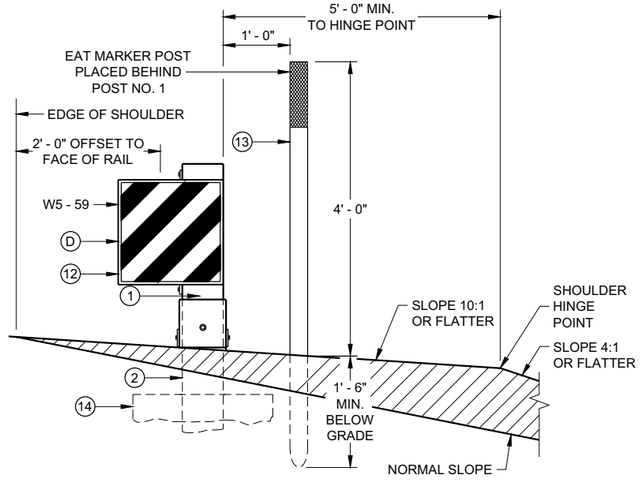




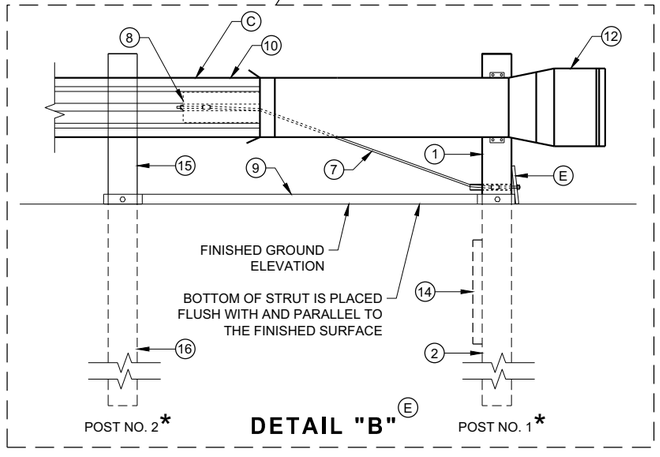
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



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)

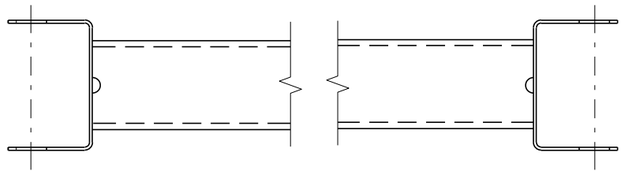
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

SDD 14B44 - 04a

6

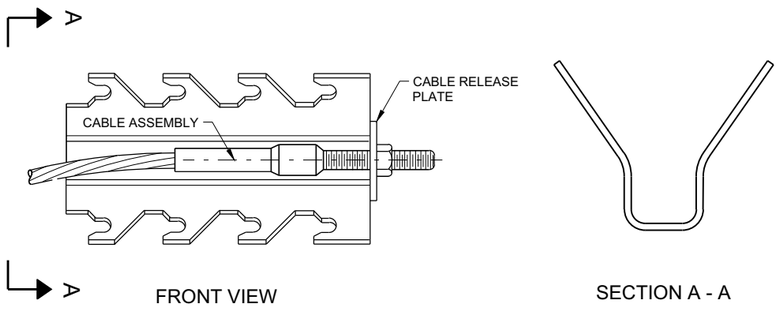
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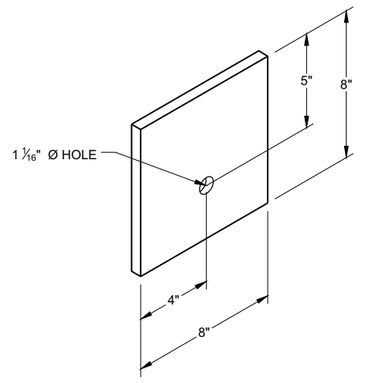
GENERIC GROUND STRUT ⑨ Ⓔ

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 ⑧ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

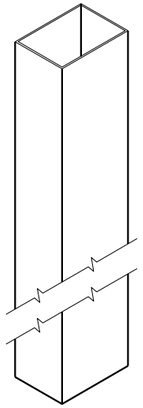
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SDD 14B44 - 04b

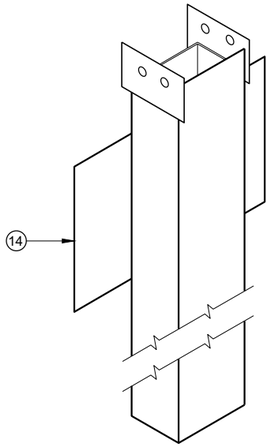
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

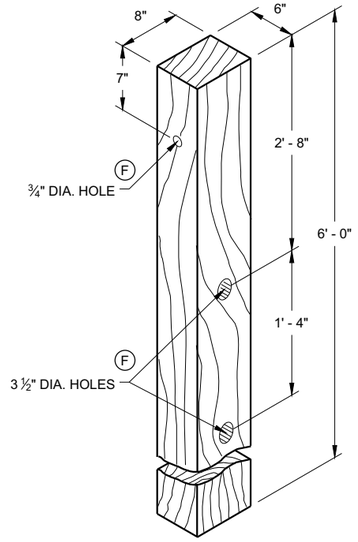
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



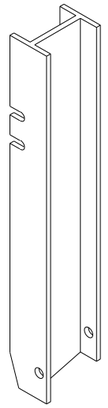
UPPER POST NO. 1 (1) (E)



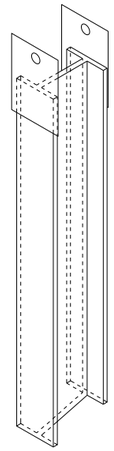
LOWER POST NO. 1 (2) (E)



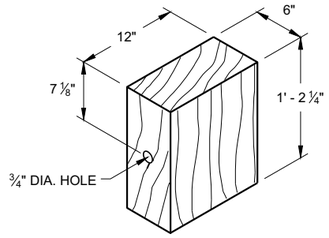
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



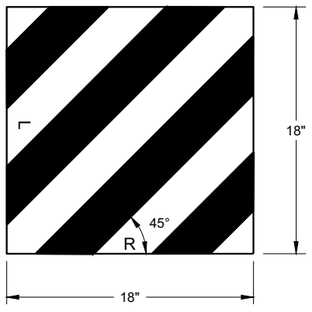
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

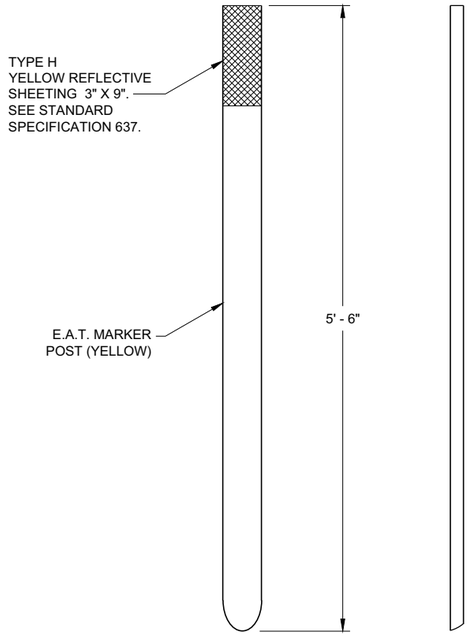


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



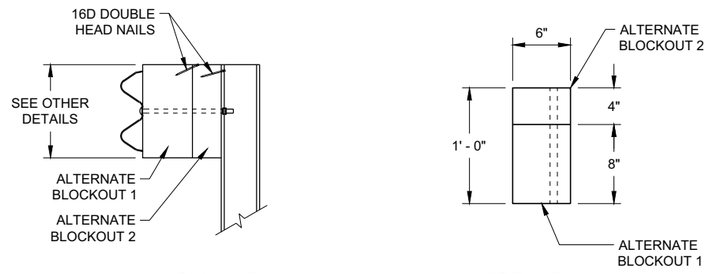
W5 - 59

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)

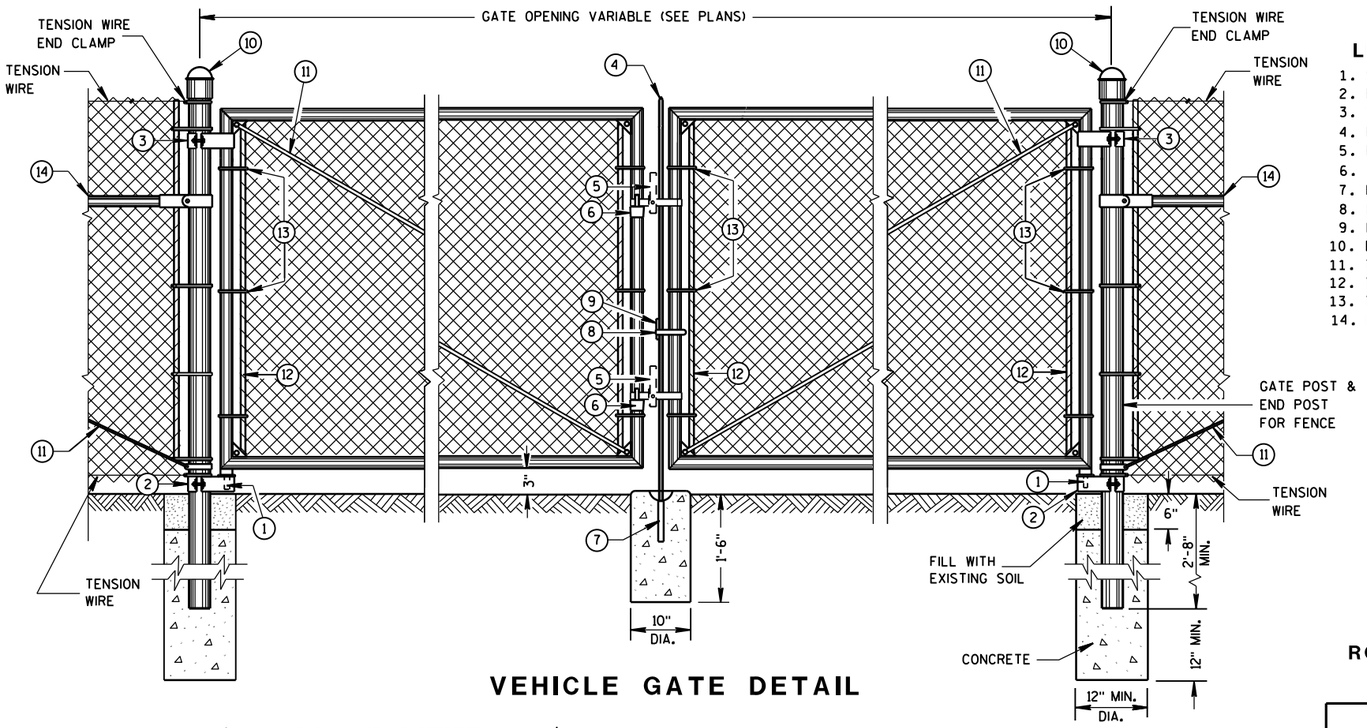
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

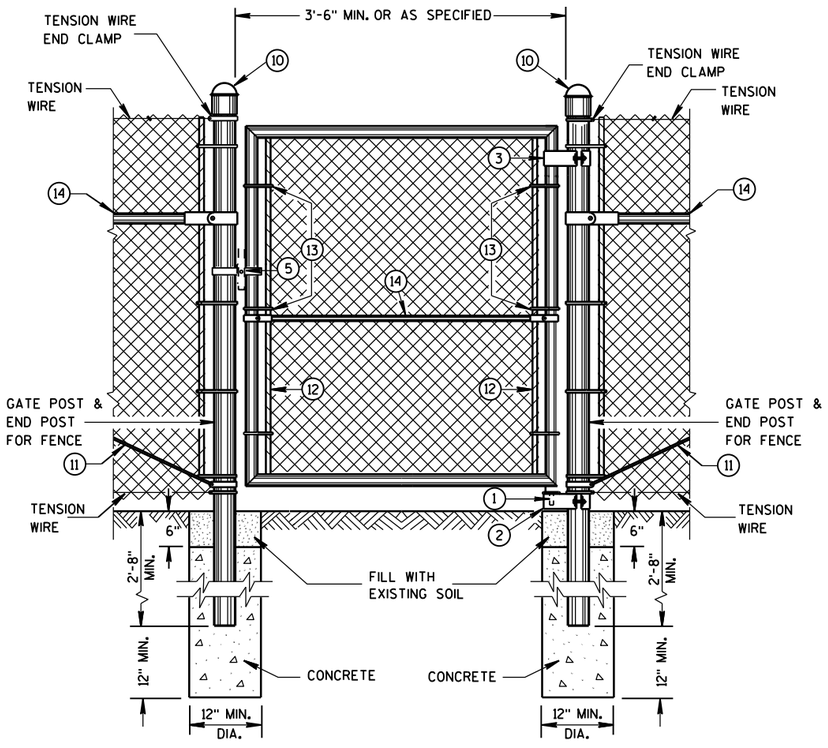
FHWA

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SDD 14B44 - 04c



VEHICLE GATE DETAIL



PEDESTRIAN GATE DETAIL

LEGEND

1. STRAIGHT PLUG
2. BOTTOM HINGE
3. TOP HINGE
4. PLUNGER ROD
5. FULCRUM LATCH
6. FORK CATCH *
7. PLUNGER ROD CATCH
8. LOCK KEEPER GUIDE
9. LOCK KEEPER
10. DOME TOPS
11. TRUSS RODS
12. TENSION BAR
13. TENSION BANDS
14. BRACE RAIL

*NOT REQUIRED ON SINGLE SWING PEDESTRIAN GATE

GENERAL NOTES

FENCE POSTS INSTALLED ON CONCRETE WALLS SHALL BE ANCHORED INTO EMBEDDED METAL SLEEVES OR CORED HOLE BY FILLING THE ANNULAR SPACE WITH PEA GRAVEL FOLLOWED BY AN EPOXY RESIN ADHESIVE. THE EPOXY RESIN ADHESIVE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 235, CLASS A, B OR C.

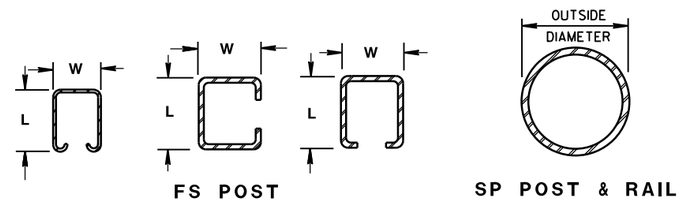
USE FENCE FABRIC KNUCKLED AT BOTH SELVAGES.

FOR LEAF GATES GREATER THAN 8 FEET WIDE, INSTALL INTERIOR VERTICAL BRACE RAIL AT 8 FOOT INTERVALS.

FOR FABRIC HEIGHTS GREATER THAN 8 FEET, INSTALL INTERIOR HORIZONTAL BRACE RAILS TO LEAF GATE.

MAXIMUM SAG FOR OUTER GATE MEMBER SHALL NOT EXCEED THE GREATER OF 1% OF THE LEAF GATE WIDTH OR 2 INCHES.

USE TYPE 2, CLASS 3, MARCELLED/CRIMPED, TENSION WIRE PER ASTM A 817.



CROSS SECTIONS OF POSTS AND RAILS

REQUIRED FENCE POST SIZES

USE	FABRIC HEIGHTS FEET	POST TYPE
TERMINAL POSTS **	LESS THAN OR EQUAL TO 6 FT.	SP3
	GREATER THAN OR EQUAL TO 6 FT.	SP4
LINE POSTS	LESS THAN OR EQUAL TO 6 FT.	SP2
	LESS THAN OR EQUAL TO 8 FT.	SP3
	GREATER THAN OR EQUAL TO 8 FT.	SP4
	LESS THAN OR EQUAL TO 8 FT.	FS2 OR FS2†
	GREATER THAN OR EQUAL TO 8 FT.	FS3

BRACE RAIL TYPES

USE		TYPE
BRACE RAIL		SP1 OR FS1

** INCLUDES END, CORNER, ANGLE, INTERSECTION AND INTERMEDIATE BRACED POSTS

ROLLED-FORMED STEEL FENCE POST (2.0 OZ./SQ. FT. COATING)

POST TYPE	LENGTH (L) INCH	WIDTH (W) INCH	WEIGHT LBS/FT
FS1	1.625	1.25	1.35
FS2†	1.875	1.625	1.850
FS2	1.875	1.625	2.400
FS3	2.250	1.700	2.780

REQUIRED POST SIZE FOR GATES

USE	LEAF WIDTHS FEET	POST TYPE
GATES	LESS THAN OR EQUAL TO 6 FT.	SP4
	LESS THAN OR EQUAL TO 13 FT.	SP5
	LESS THAN OR EQUAL TO 18 FT.	SP6
	LESS THAN OR EQUAL TO 23 FT.	SP7

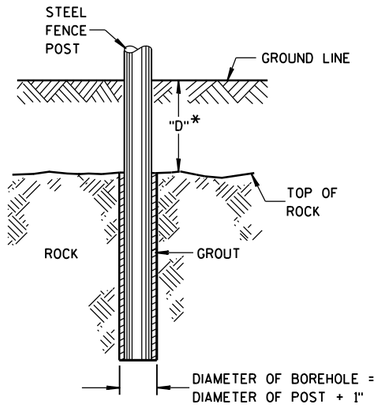
ROUND STEEL FENCE POST (1.8 OZ./SQ. FT. COATING)

POST TYPE	OUTSIDE DIMENSION INCH	WALL THICKNESS INCH	WEIGHT LBS/FT
SP1	1.660	0.140	2.270
SP2	1.900	0.145	2.720
SP3	2.375	0.154	3.650
SP4	2.875	0.203	5.800
SP5	4.000	0.226	9.120
SP6	6.625	0.280	18.990
SP7	8.625	0.322	28.580

FENCE CHAIN LINK

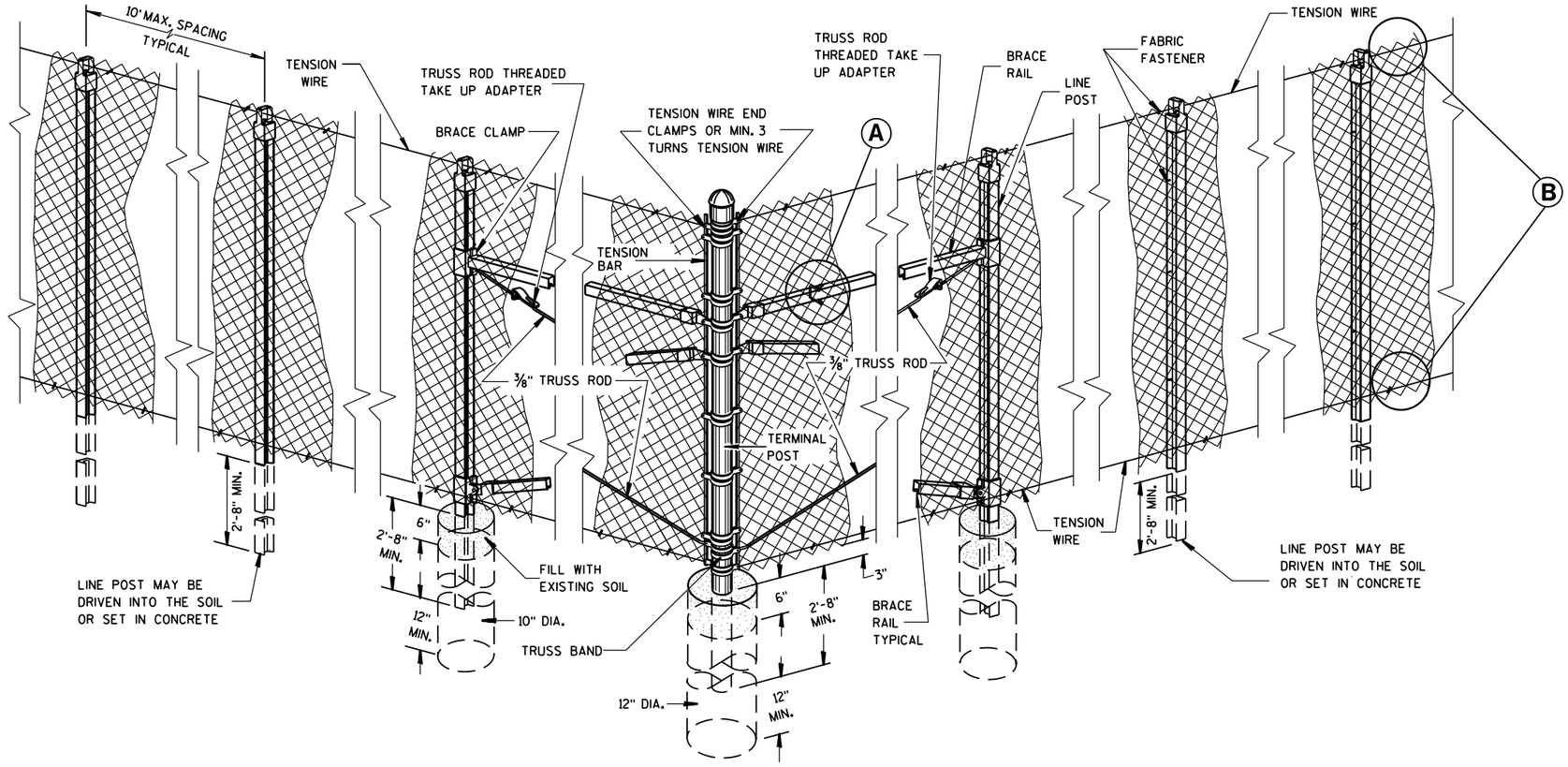
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 15 B 3-15a

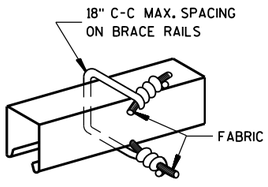


*IF "D" IS LESS THAN 2'-6", DRILL ROCK AND INSTALL GROUT

ROCK INSTALLATION OF LINE POST



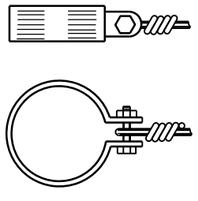
END, CORNER, ANGLE INTERSECTION & INTERMEDIATE BRACED POSTS



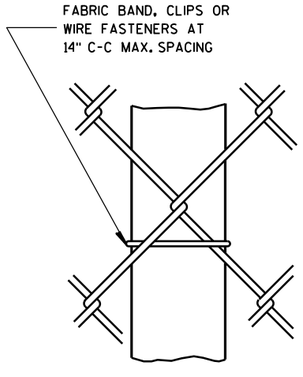
BRACE RAIL

FABRIC FASTENER

Ⓐ



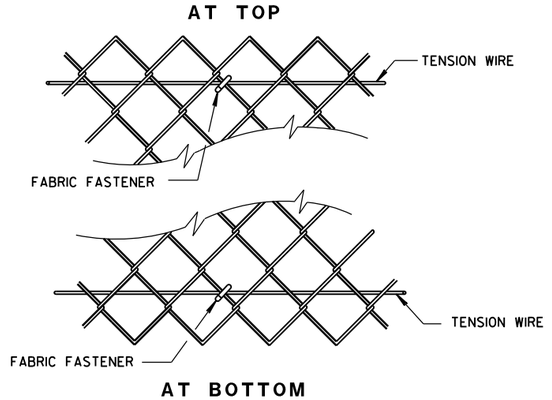
TENSION WIRE END CLAMP



LINE POST

FABRIC FASTENER

AT TOP



AT BOTTOM

SELVAGES

Ⓑ

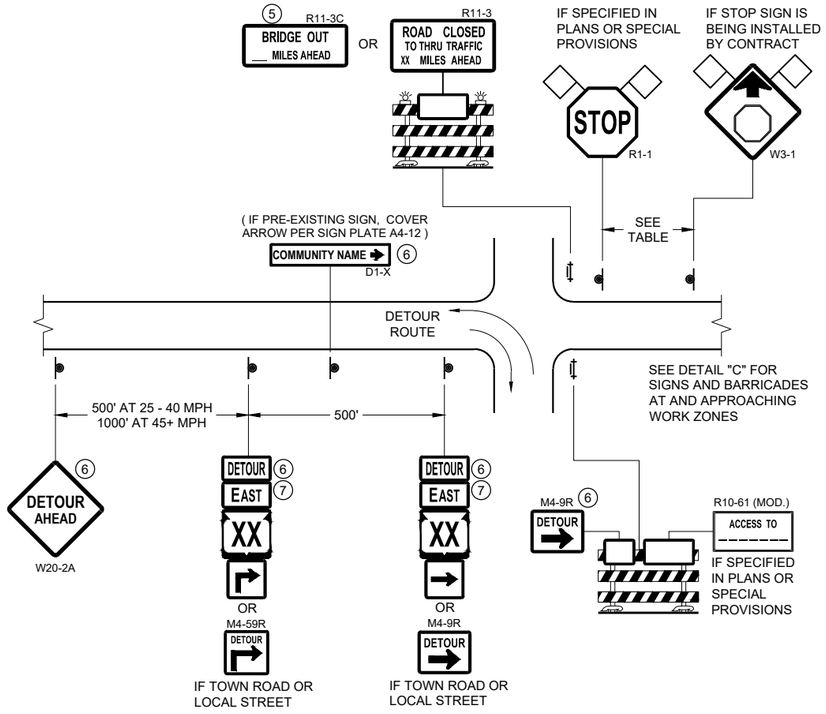
FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
FEB. 2015 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

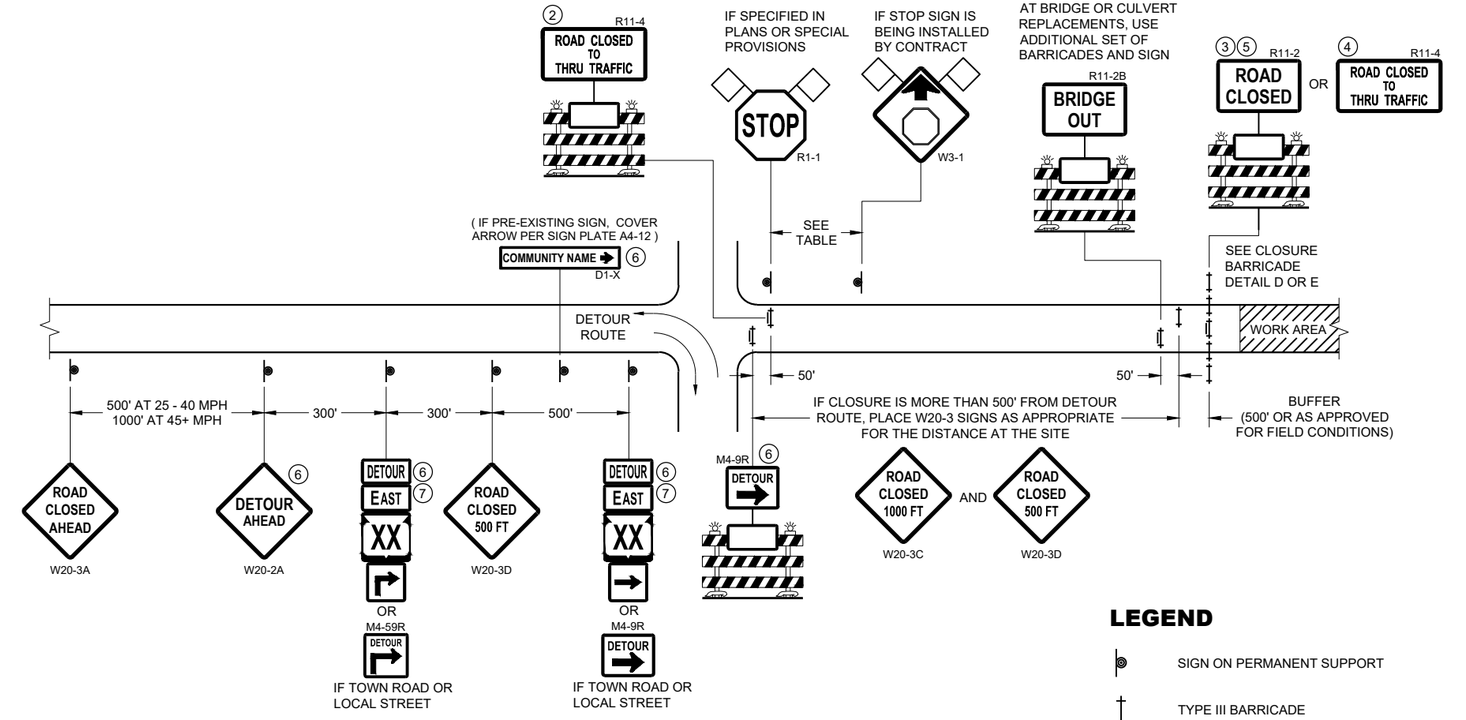
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S.D.D. 15 B 3-15b



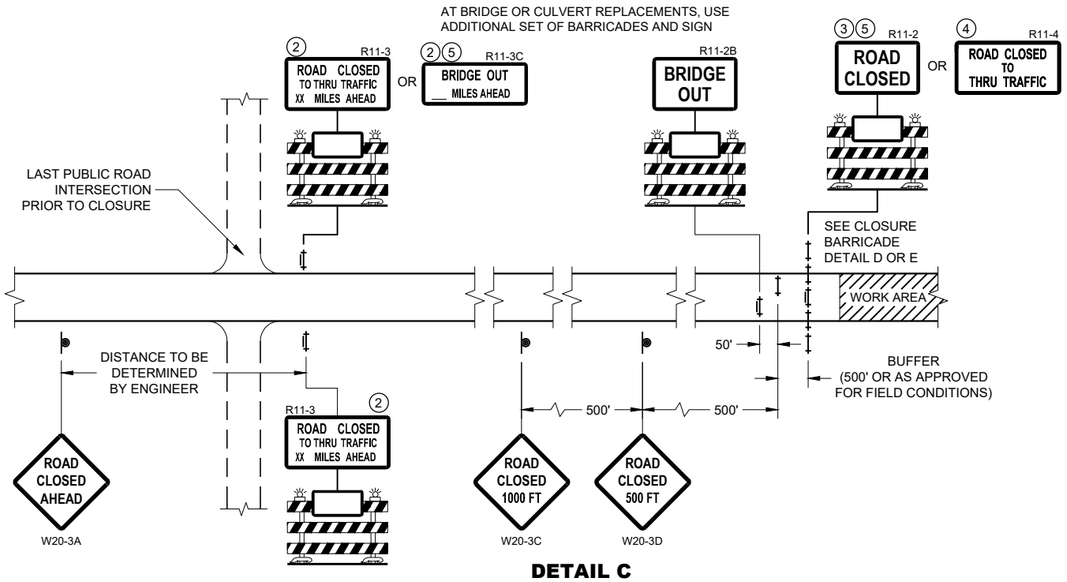
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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)



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

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

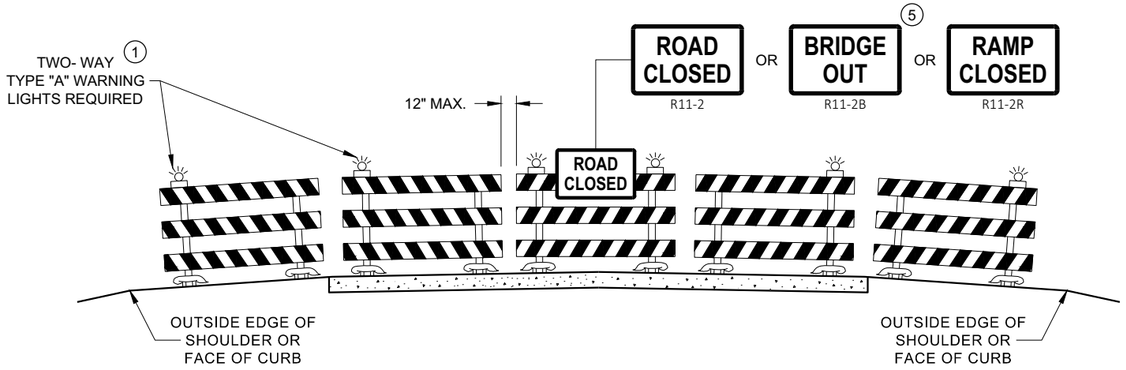
APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

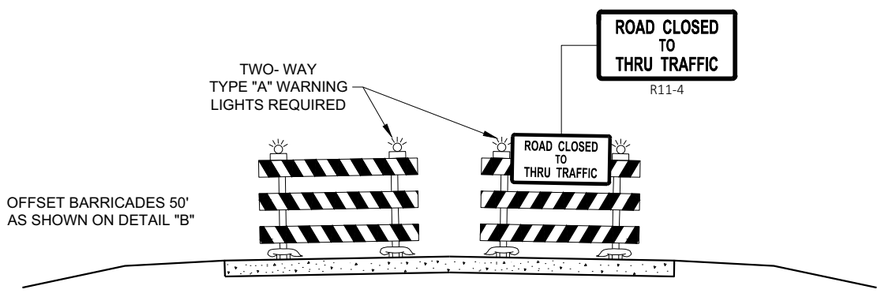
6

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

6

SDD 15C02 - 08b

6

SDD 15C02 - 08b

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DETOUR / EAST — M4 - 8, M3 - X
- XX — M1 - 4
- XX — M1 - 6
- COUNTY / X — M1 - 5A
- M05 - 1
- M06 - 1
- M06 - 1

GENERAL NOTES

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

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. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

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

SIGN SIZES SHALL BE AS FOLLOWS:

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)
M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
M4-9 AND M4-59 SHALL BE 30" X 24"
M4-8a SHALL BE 24" X 18"
G20-51 SHALL BE 60" X 24"
W20-2A SHALL BE 48" X 48"
D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.

M3-X 24" X 12"
M1-X 24" X 24"
DETOUR AHEAD
W20-2A
USE ON STATE TRUNK, U.S. OR INTERSTATE HIGHWAYS, OR AS SPECIFIED IN THE CONTRACT

500' AT 25-40 MPH
1000' AT 45+ MPH

500'

D1-X COMMUNITY NAME *
(IF PRE-EXISTING SIGN, COVER ARROW PER SIGN PLATE A4-12)

M4-8a END DETOUR WEST *

DETOUR ROUTE

WORK AREA

DETOUR NEXT X MILES *
G20-51

M4-9L DETOUR ** OR
IF TOWN ROAD OR LOCAL STREET

M4-59L DETOUR ** OR
IF TOWN ROAD OR LOCAL STREET

MATCH POINT

M4-59L DETOUR ** OR
IF TOWN ROAD OR LOCAL STREET

D1-X COMMUNITY NAME *
(IF PRE-EXISTING SIGN, COVER ARROW PER SIGN PLATE A4-12)

M4-9L DETOUR ** OR
IF TOWN ROAD OR LOCAL STREET

M4-9R DETOUR ** OR
IF TOWN ROAD OR LOCAL STREET

M4-59R DETOUR ** OR
IF TOWN ROAD OR LOCAL STREET

500' AT 25 - 40 MPH
1000' AT 45+ MPH

500'

M3-X 24" X 12"
M1-X 24" X 24"
DETOUR AHEAD
W20-2A
USE ON STATE TRUNK, U.S. OR INTERSTATE HIGHWAYS, OR AS SPECIFIED IN THE CONTRACT

D1-X COMMUNITY NAME *
(IF PRE-EXISTING SIGN, COVER ARROW PER SIGN PLATE A4-12)

DETOUR ROUTE

D1-X COMMUNITY NAME *
(IF PRE-EXISTING SIGN, COVER ARROW PER SIGN PLATE A4-12)

PLACE SIGNS BEYOND INTERSECTIONS WITH STATE OR COUNTY TRUNK HIGHWAYS OR AT 4 MILE MAXIMUM SPACING (4 BLOCKS IF URBAN AREA)

500' AT 25 - 40 MPH
1000' AT 45+ MPH

M3-X 24" X 12"
M1-X 24" X 24"
DETOUR AHEAD
W20-2A
USE ON STATE TRUNK, U.S. OR INTERSTATE HIGHWAYS, OR AS SPECIFIED IN THE CONTRACT

SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"

DETAIL F
DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE

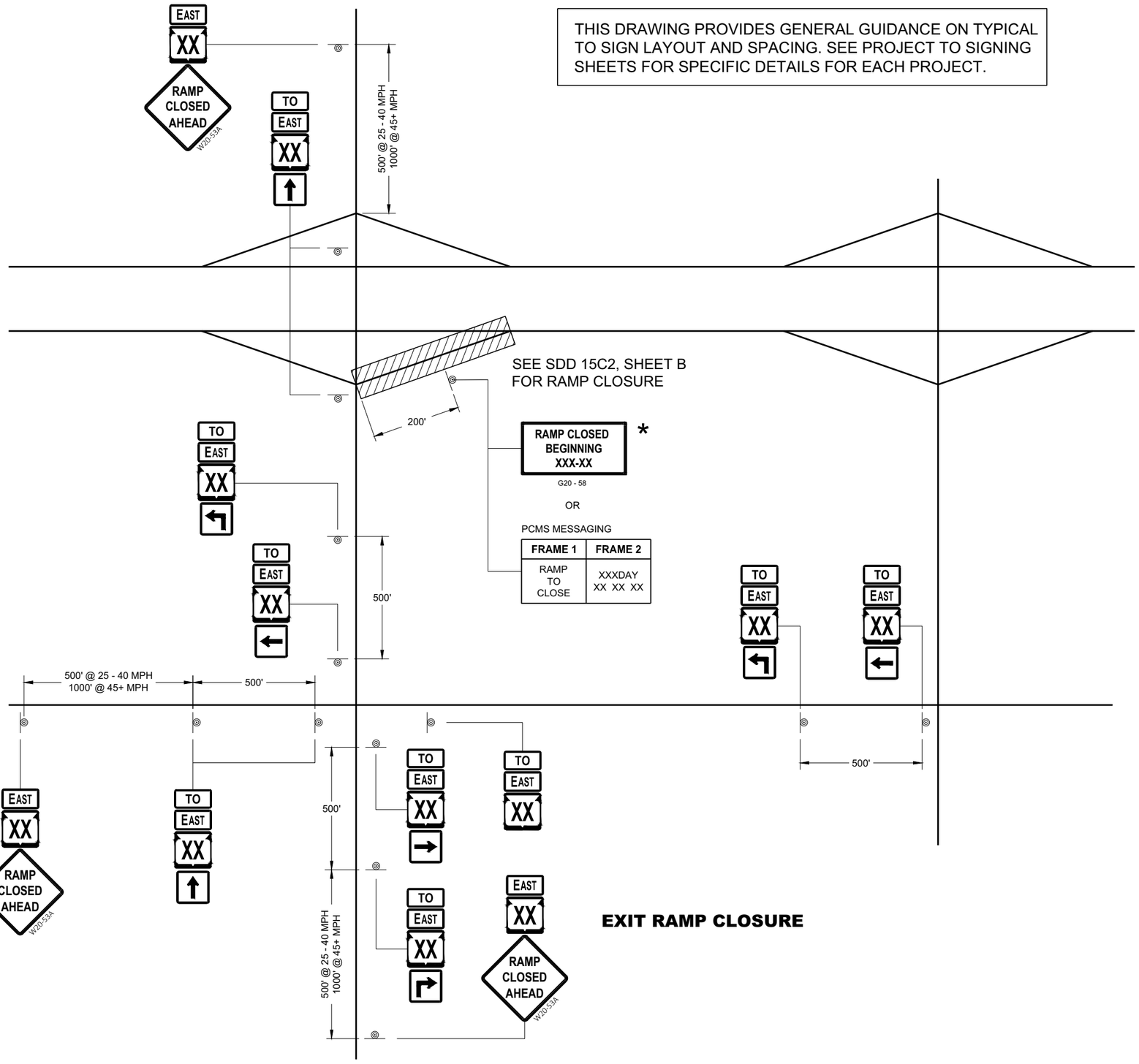
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

227

6

SDD 15C02 - 08c



EXIT RAMP CLOSURE

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL TO SIGN LAYOUT AND SPACING. SEE PROJECT TO SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

LEGEND

SIGN ON PERMANENT SUPPORT

TO / EAST — MO4 - 5, M3 - X

XX — M1 - 6 OR XX — M1 - 4 OR INTERSTATE XX — M1 - 1

M05 - 1 OR M06 - 1 OR M06 - 1

GENERAL NOTES

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

IF THERE ARE ANY ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE TO ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT TO SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

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

SIGN SIZES SHALL BE AS FOLLOW:
- M3 - X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS).
- MO4 - 5 SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS).
- M1 - 1, M1 - 4, AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS).
- MO5 - 1, MO5 - 2, AND MO6 - 1, SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS).
- W20 - 53A SHALL BE 48" X 48"

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

ON RAMP LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

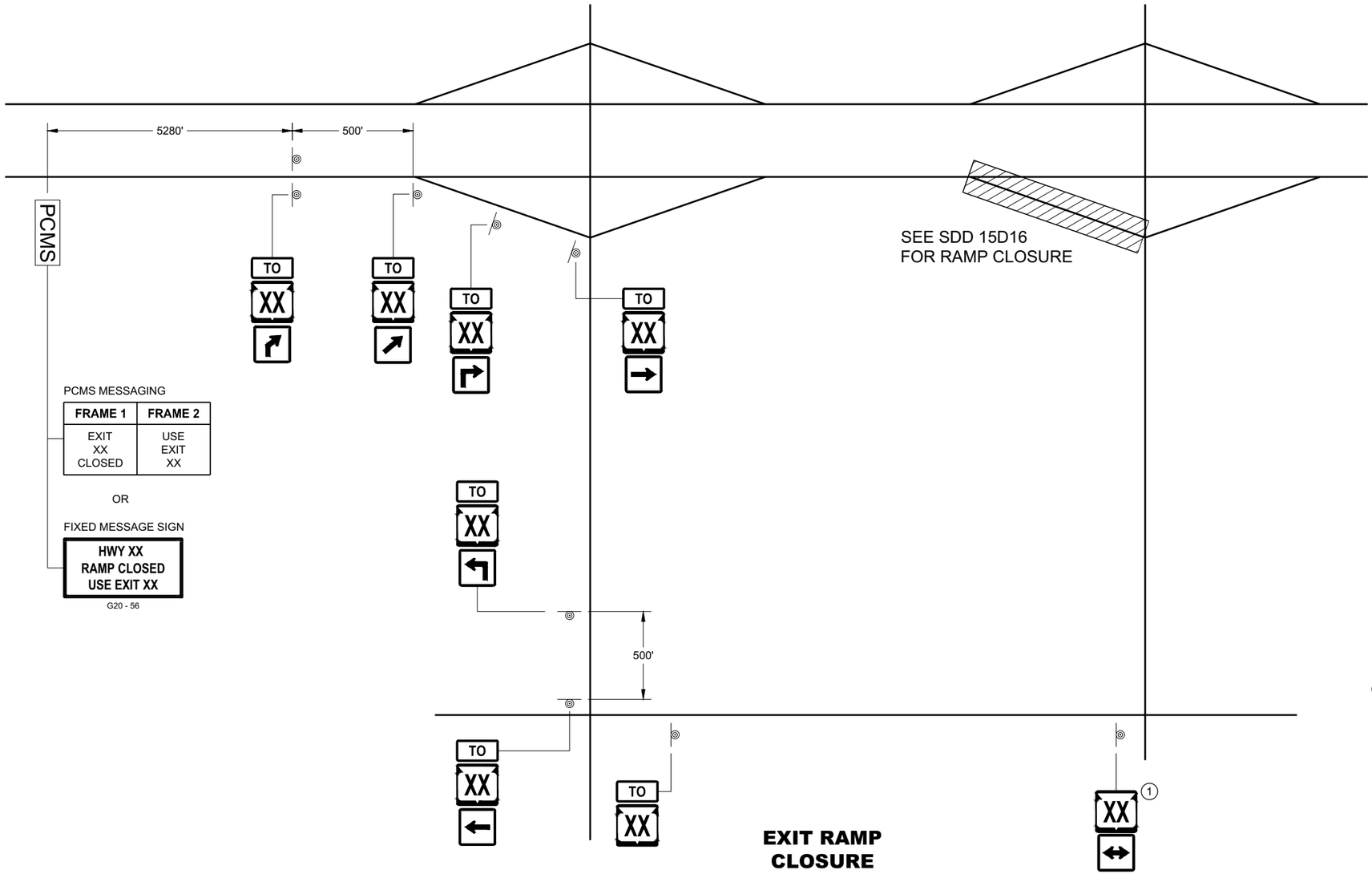
APPROVED
February 2020 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER
FHWA

SDD 15C02 - 08d

6

SDD 15C02 - 08d

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL "TO" MO-4 SIGN LAYOUT AND SPACING. SEE PROJECT TO SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.



PCMS MESSAGING

FRAME 1	FRAME 2
EXIT XX CLOSED	USE EXIT XX

OR

FIXED MESSAGE SIGN

HWY XX
RAMP CLOSED
USE EXIT XX

G20 - 56

EXIT RAMP CLOSURE

LEGEND

SIGN ON PERMANENT SUPPORT

PCMS PORTABLE CHANGEABLE MESSAGE SIGN

TO MO4 - 5

XX M1 - 4 OR XX M1 - 6 OR COUNTY X M1 - 5A

M05 - 1 OR M05 - 2 OR M06 - 1 OR M06 - 2 OR M06 - 4

GENERAL NOTES

SEE SDD 15D16 "TRAFFIC CONTROL, EXIT RAMP CLOSURE" DETAIL FOR TRAFFIC CONTROL AT EXIT RAMP CLOSURE.

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

IF THERE ARE ANY ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE "TO" MO-4 ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT TO SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

THE SPACING BETWEEN TRAFFIC CONTROL AND "TO" MO-4 SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

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

SIGN SIZES SHALL BE AS FOLLOW:
- MO4 - 5 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, MO5 - 2, AND MO6 - 1, SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS).

(1) ONLY ADD IF THERE ARE NO EXISTING ROUTE MARKERS FOR THE INTERSECTING ROADWAY.

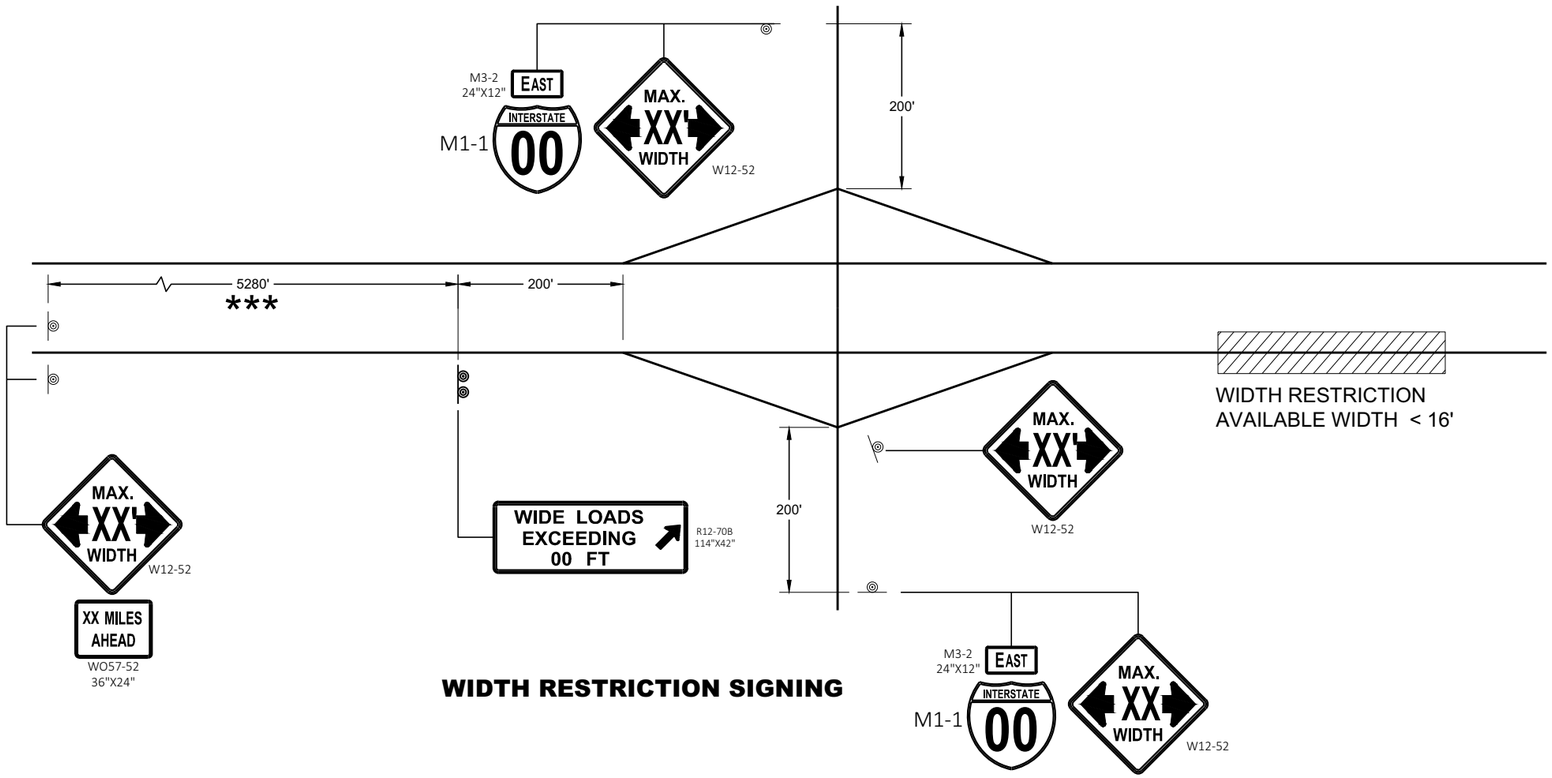
OFF RAMP LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

SDD 15C02 - 08e
SDD 15C02 - 08e



WIDTH RESTRICTION SIGNING

LEGEND

◎ SIGN ON PERMANENT SUPPORT

GENERAL NOTES

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

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

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

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

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

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

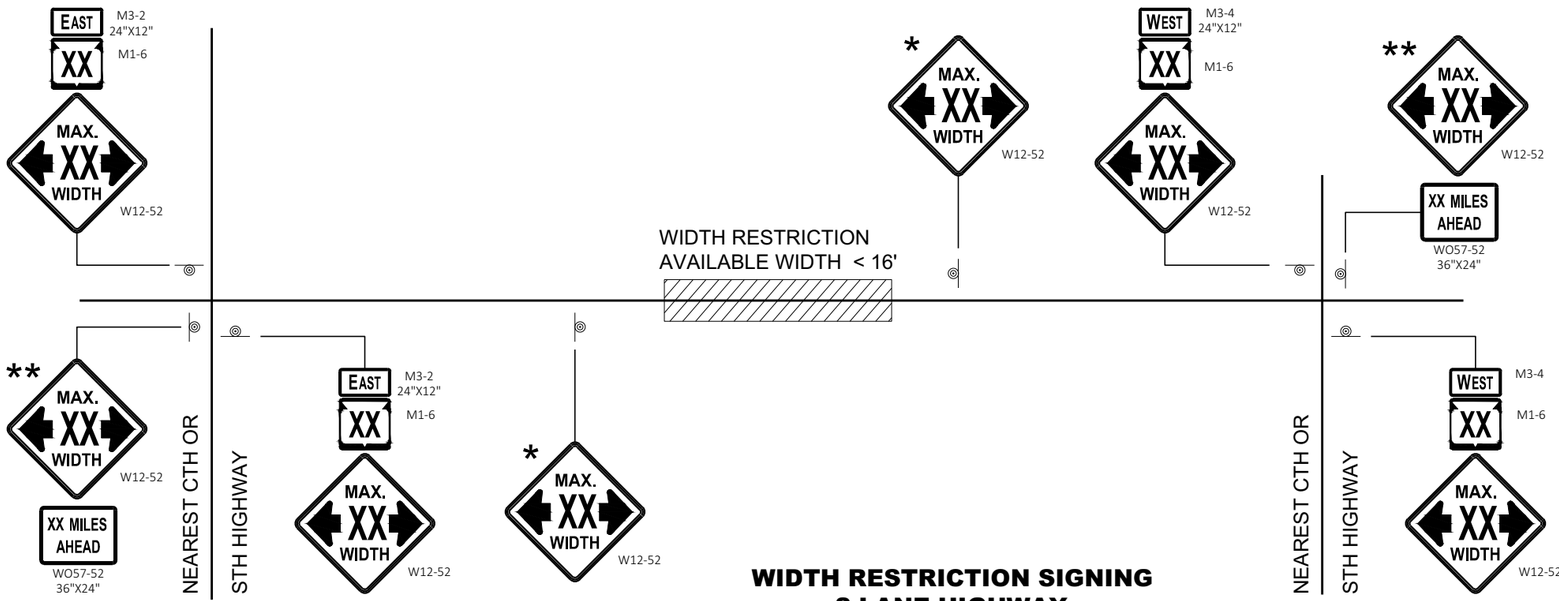
* PLACE 500 FEET AFTER THE W20 - 1A AND 500 FEET BEFORE ADDITIONAL SIGNS FOR ROADWAYS WITH A PRE - CONSTRUCTION SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25-30 MPH, USE 200 FOOT TYPICAL SPACING.

** SIGN SHALL BE VISIBLE FROM ROADWAY.

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



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



WIDTH RESTRICTION SIGNING
2 LANE HIGHWAY

ADVANCED WIDTH RESTRICTION SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

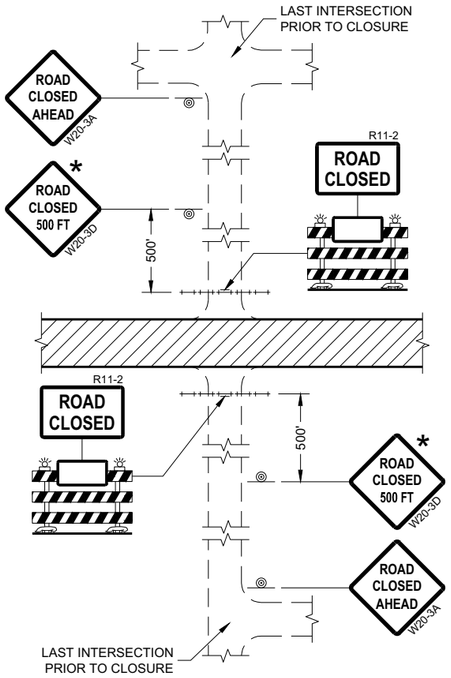
APPROVED
February 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE 230

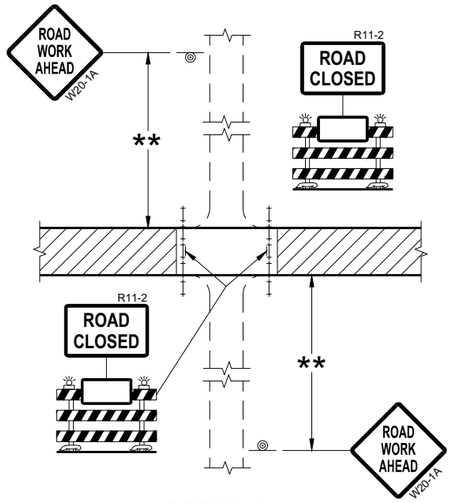
FHWA

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SDD 15C02 - 08f



DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT)

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 (500 FEET DESIRABLE) TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

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

SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN 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.

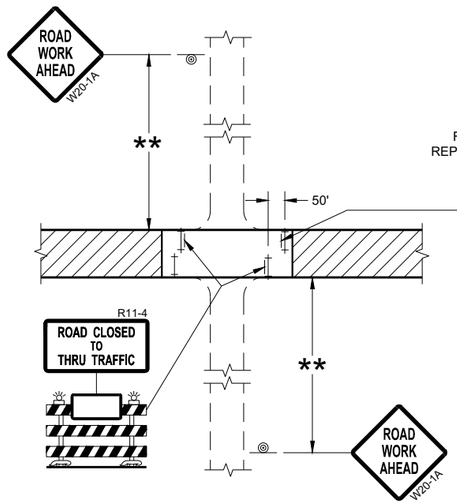
TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

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

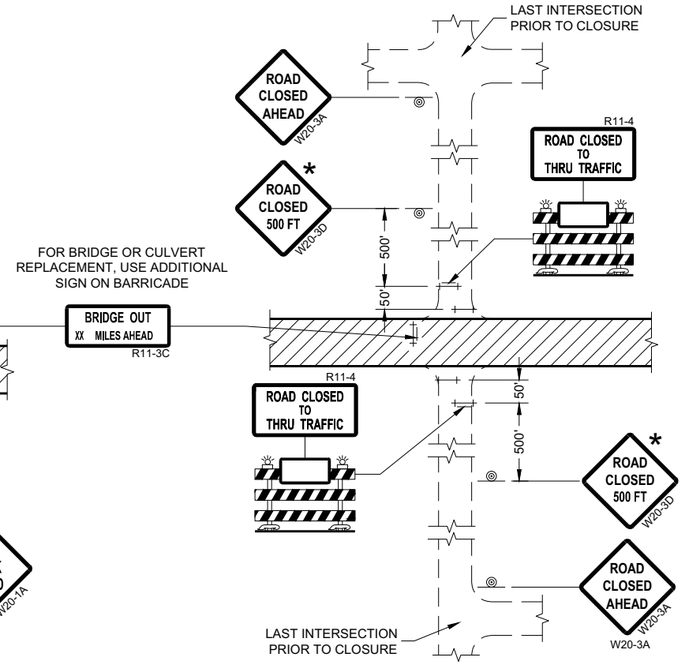
ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

* OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.

** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED.
CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15C03 - 05

GENERAL NOTES

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

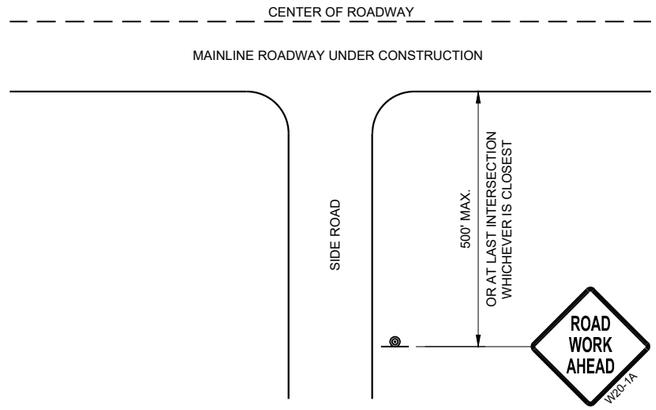
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS

** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



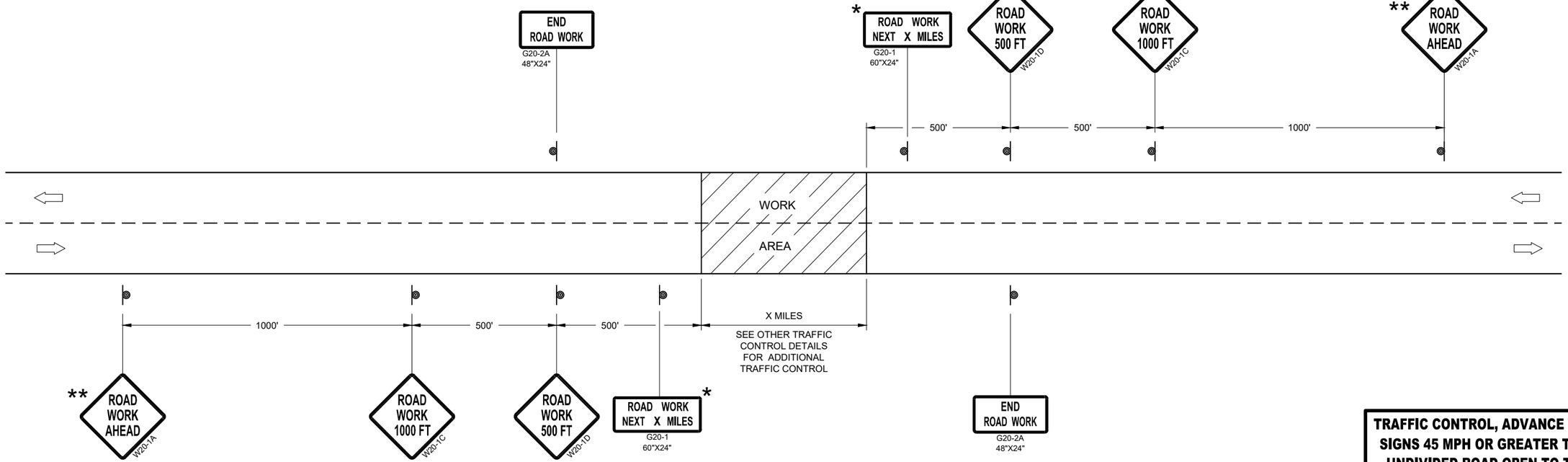
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 MPH OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15C04 - 05

6

SDD 15C04 - 05

GENERAL NOTES

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

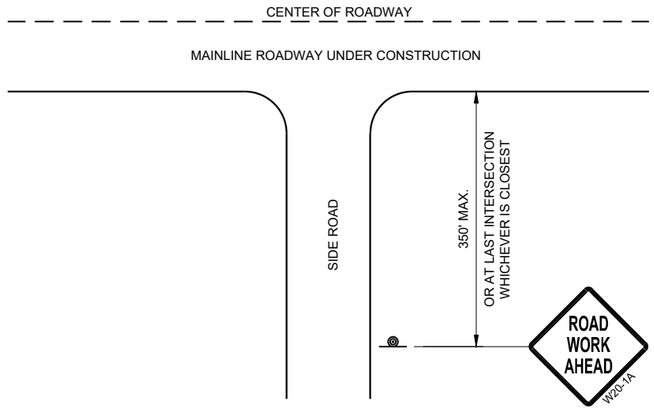
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"X36" SIGNS MAY BE USED INSTEAD OF 48" X 48" SIGNS.

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

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

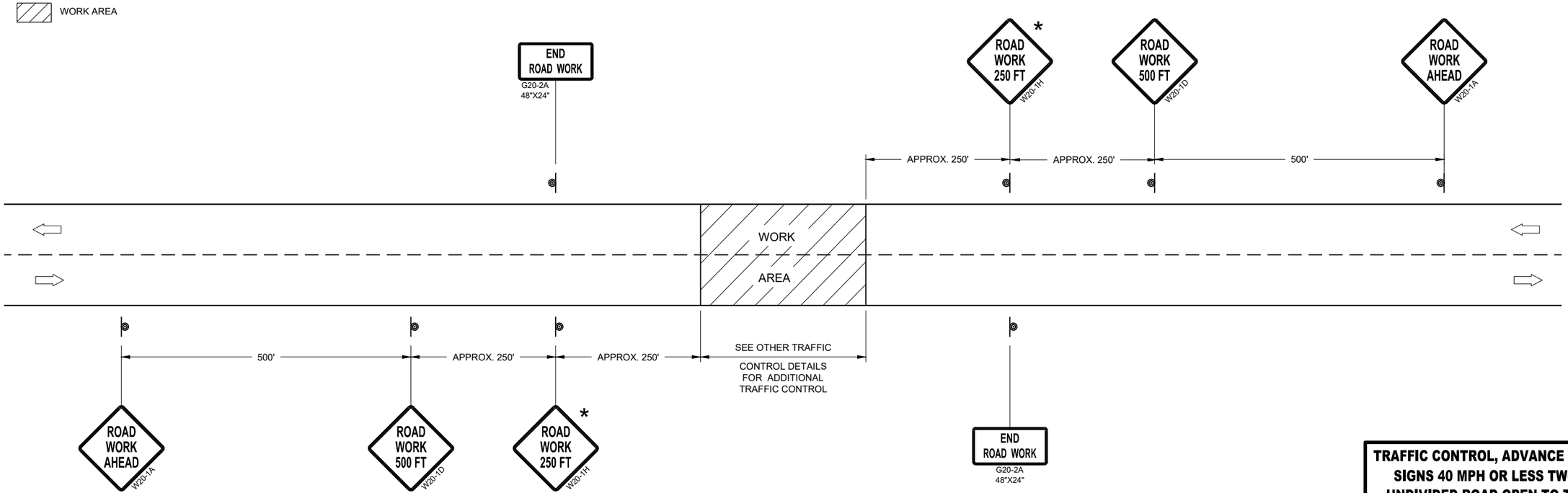
* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.



TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 MPH OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

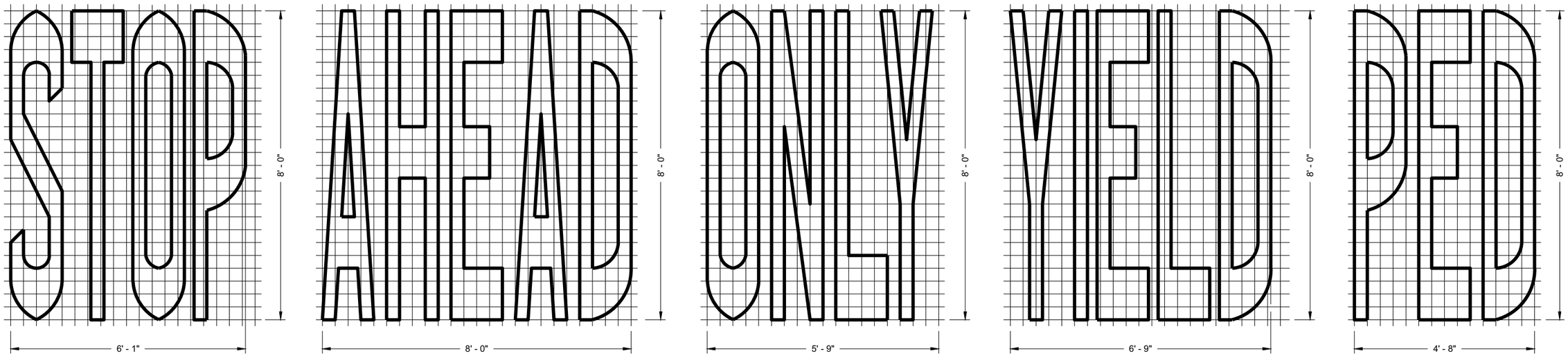
APPROVED
July 2018
DATE

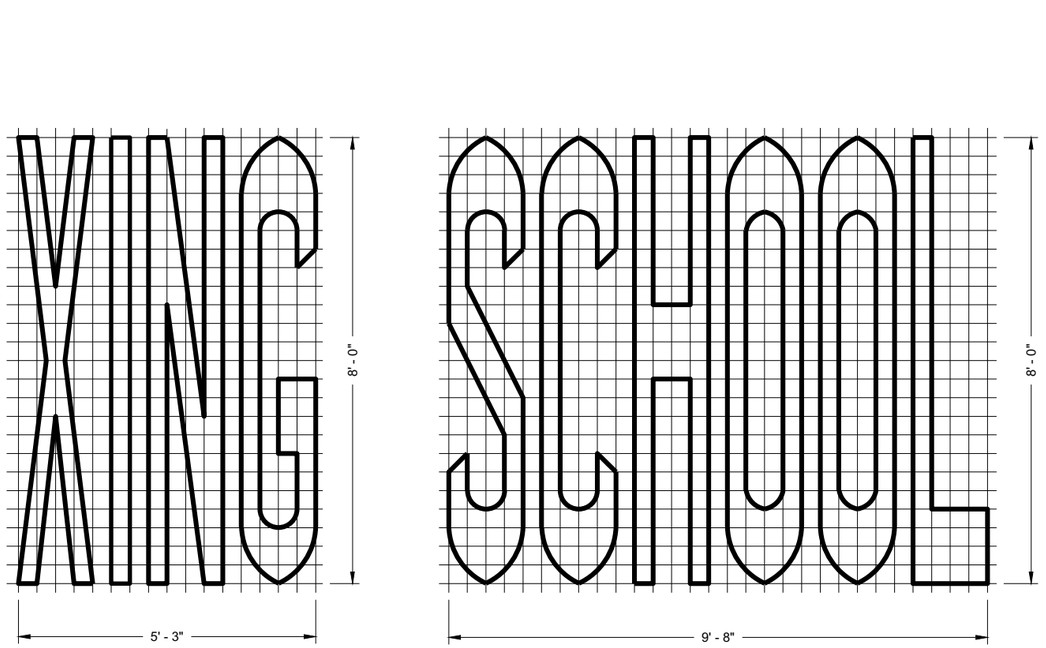
/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

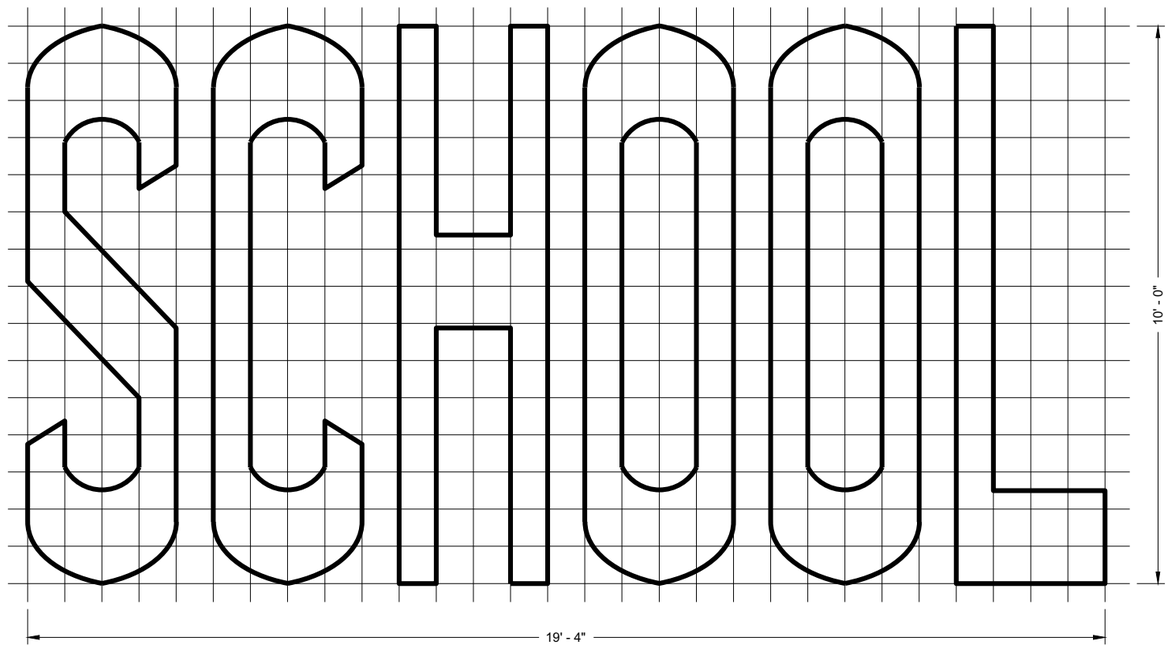
6

SDD 15C05 - 05





SINGLE LANE



TWO - LANE

GENERAL NOTES

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

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

/S/ Matthew Rauch
STATE SIGNING AND MAF ENGINEER

FHWA

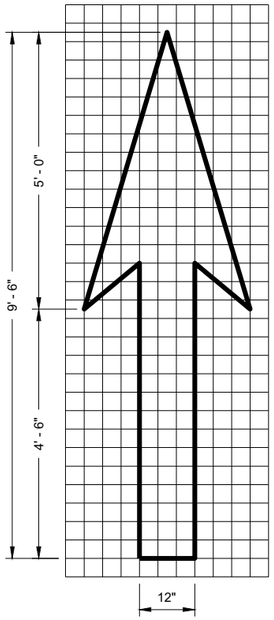
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SDD 15C07 - 15b

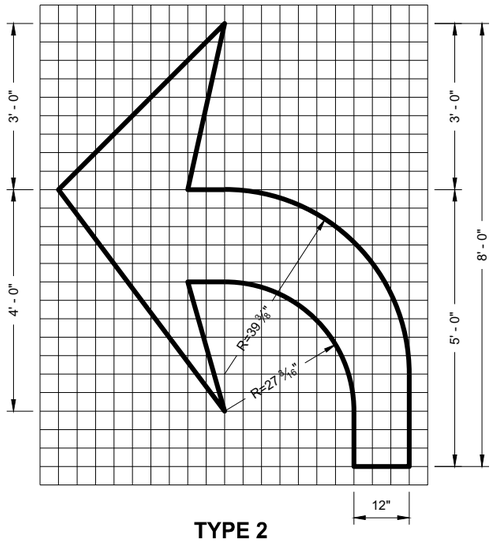
SDD 15C07 - 15b

GENERAL NOTES

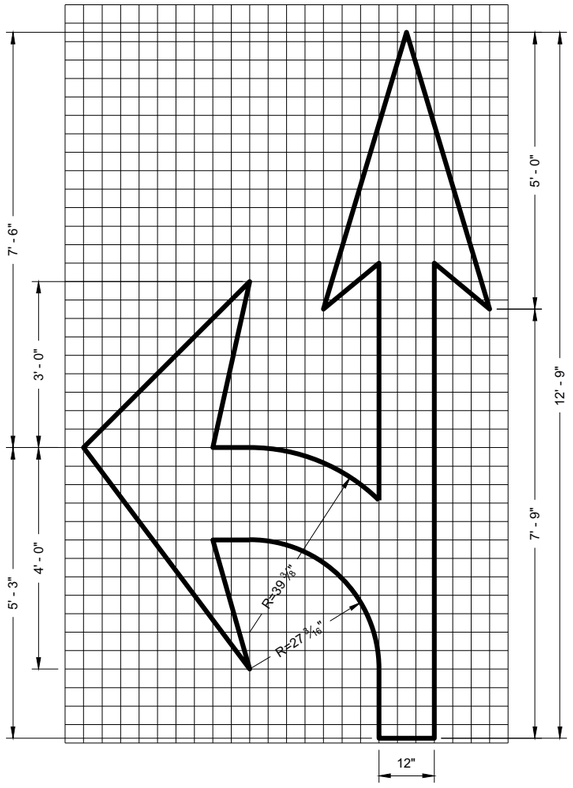
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



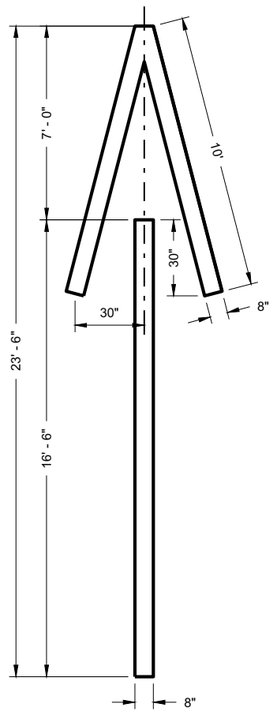
TYPE 1



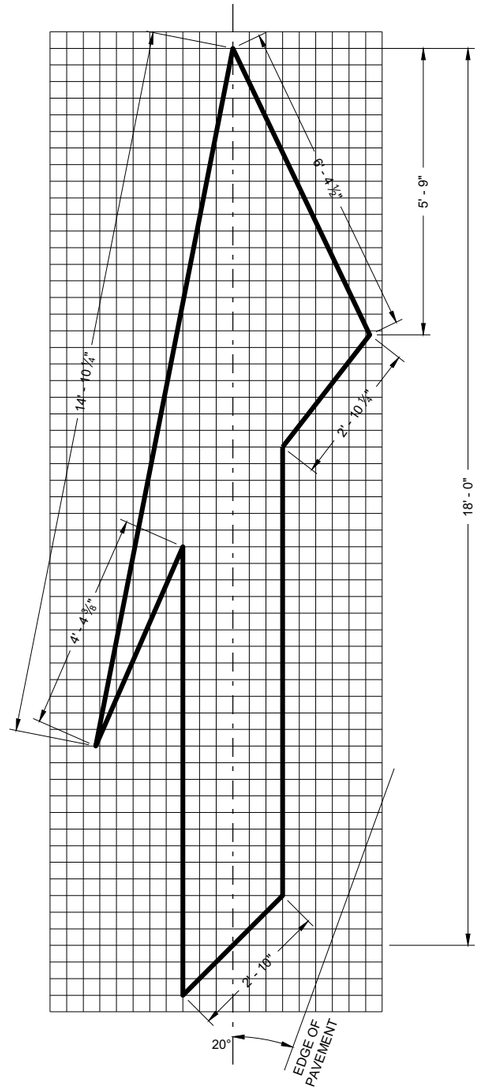
TYPE 2



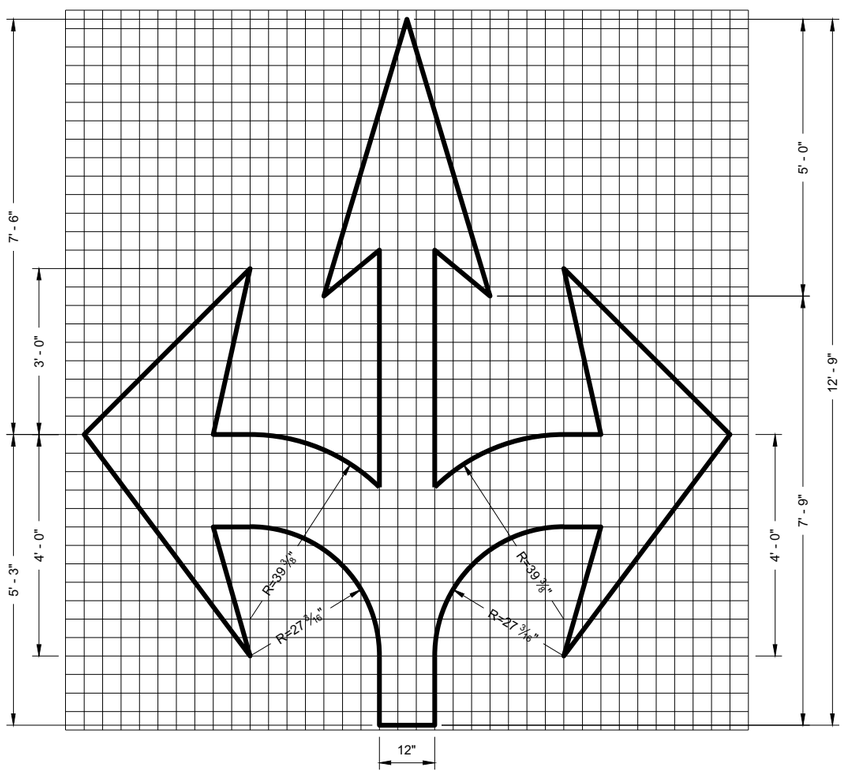
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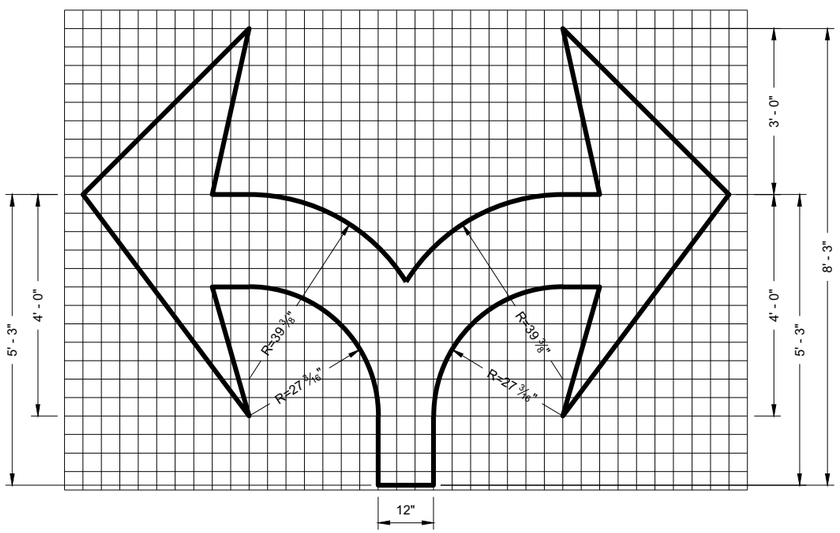
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 6



TYPE 7

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 — DATE
/S/ Matthew Rauch — STATE SIGNING AND MAF ENGINEER

FHWA

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SDD 15C07 - 15c

6

SDD 15C07 - 15c

GENERAL NOTES

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

(1) LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING

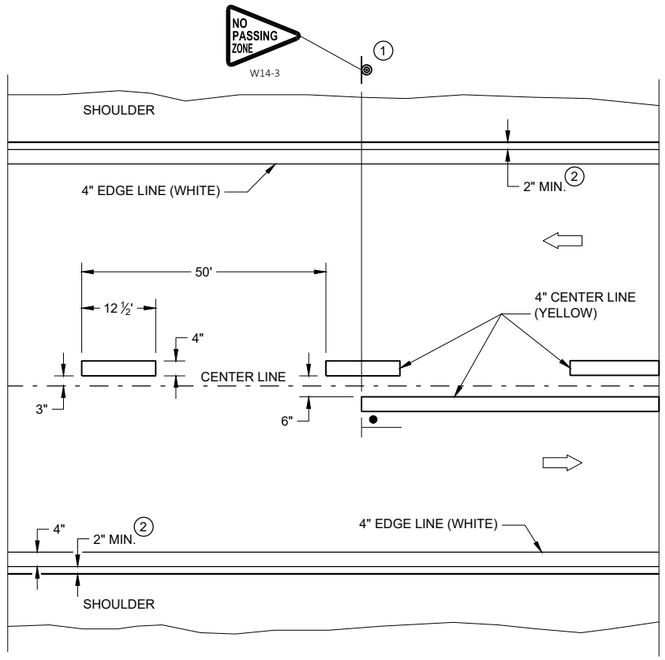
(2) MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

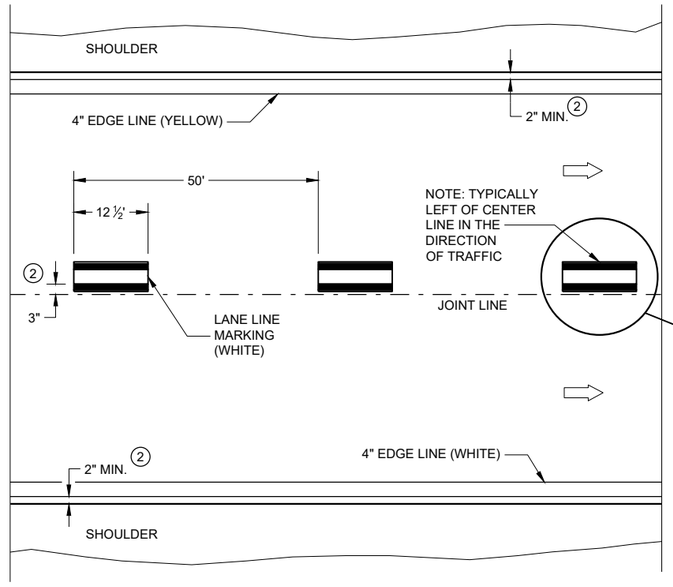
"T" MARKING

SIGN ON PERMANENT SUPPORT

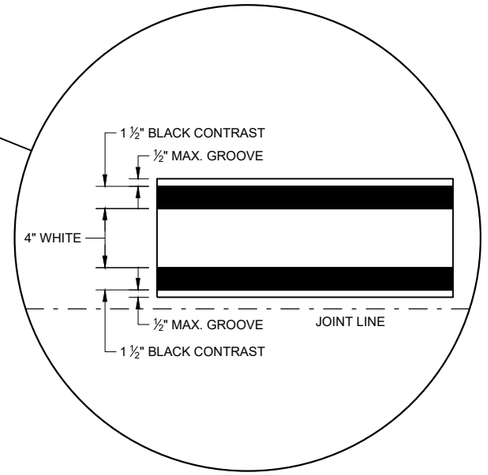
DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC



PERMANENT PAVEMENT MARKING

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

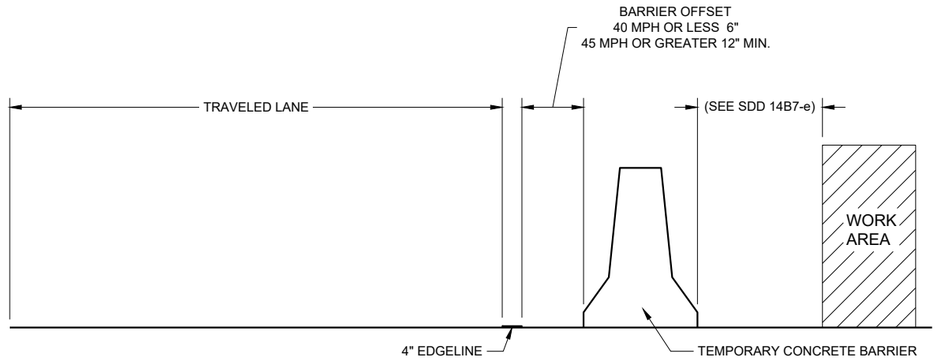
FHWA

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SDD 15C08 - 21a

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SDD 15C08 - 21a



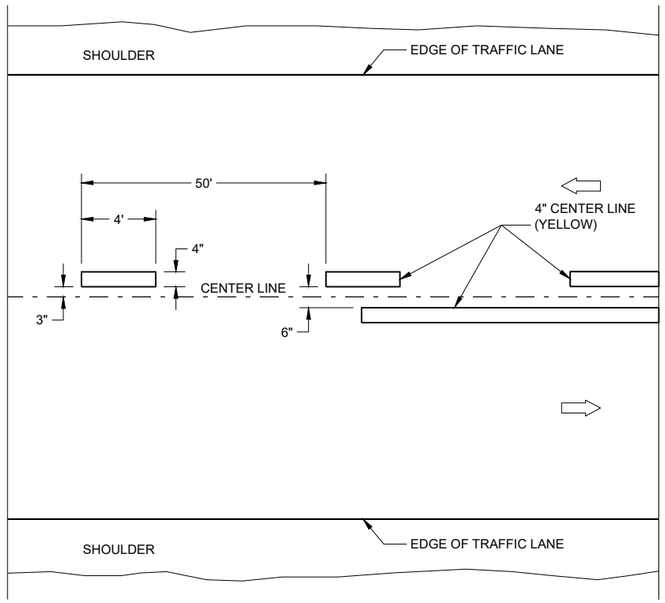
TEMPORARY BARRIER OFFSET FROM EDGELINE

GENERAL NOTES

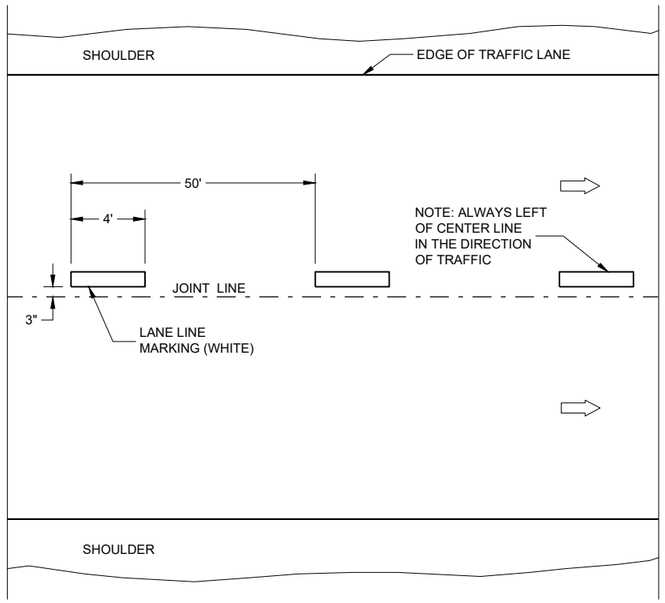
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

LEGEND

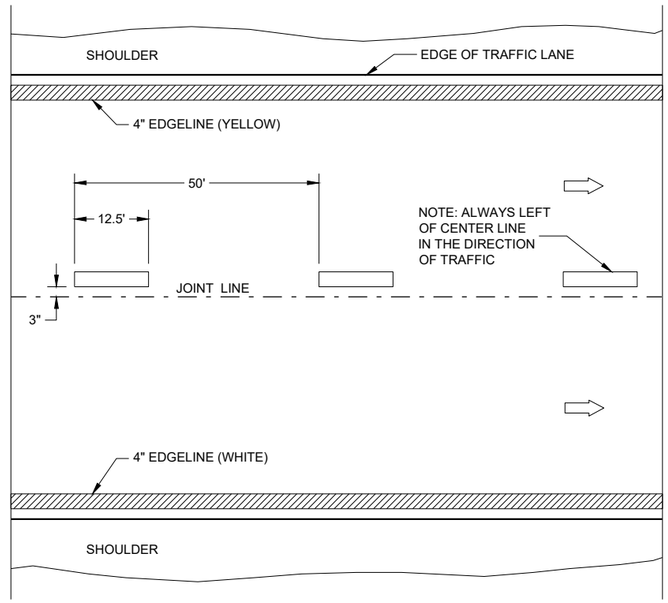
DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 15C08 - 21b

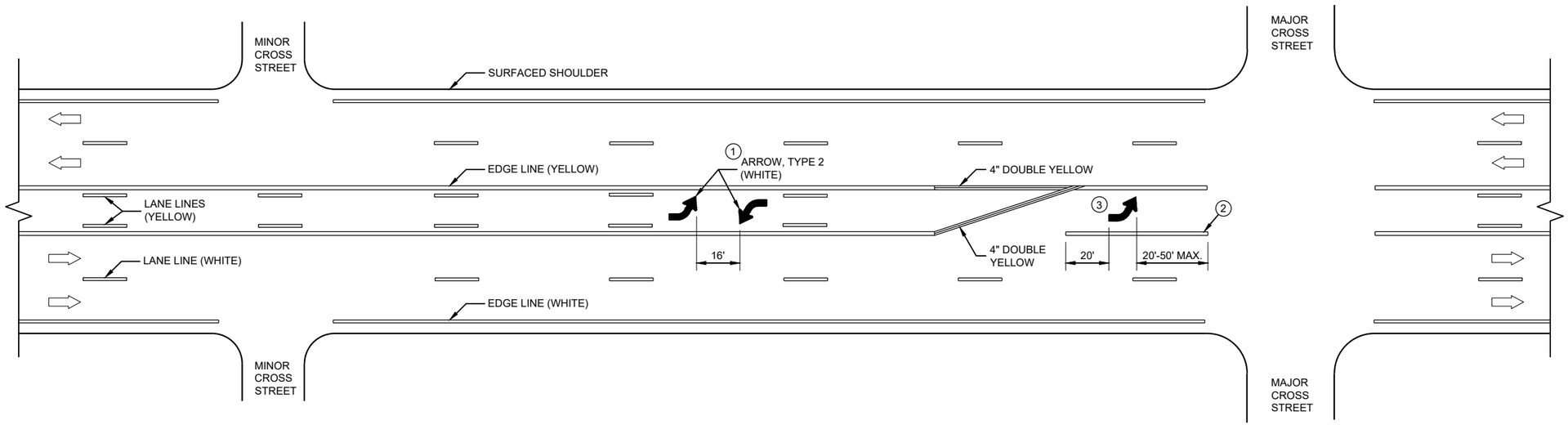
6

SDD 15C08 - 21b

GENERAL NOTES

1. A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
2. 8" WHITE
3. TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT.

DIRECTION OF TRAFFIC



TWO WAY LEFT TURN LANE

6

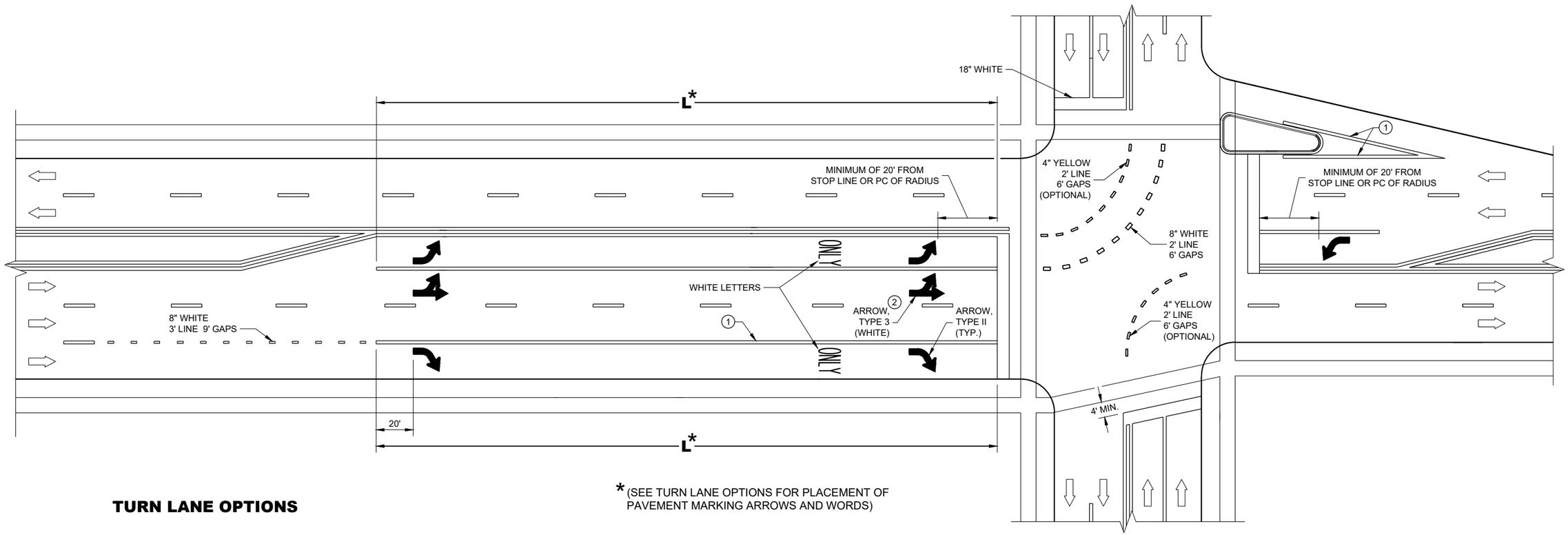
SDD 15C08 - 21c

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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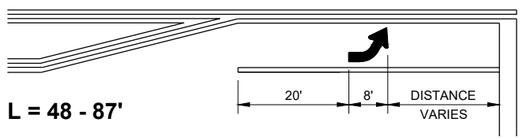
SDD 15C08 - 21c



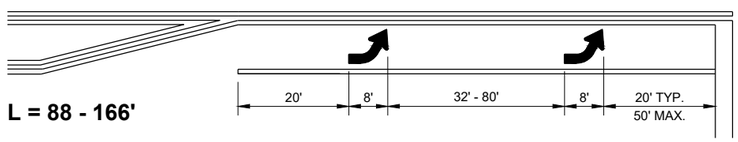
* (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

TURN LANE OPTIONS

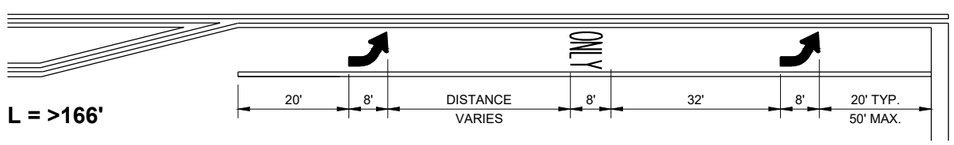
LENGTH OF TURN BAY (**L**) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



L = 48 - 87'



L = 88 - 166'



L = >166'

GENERAL NOTES

1. 8" WHITE
2. QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

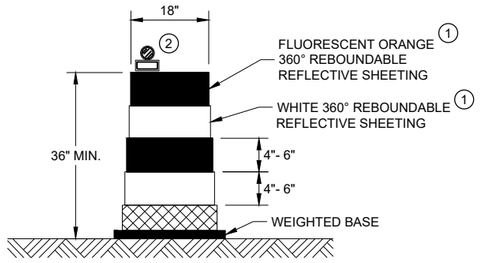
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SDD 15C08 - 21d

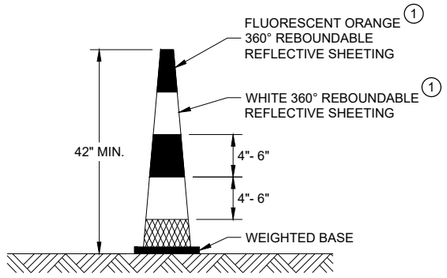
SDD 15C08 - 21d

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.

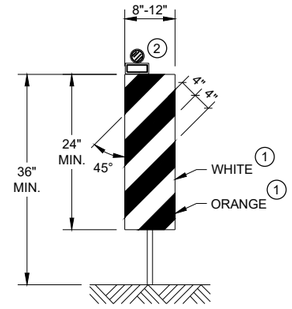


DRUM



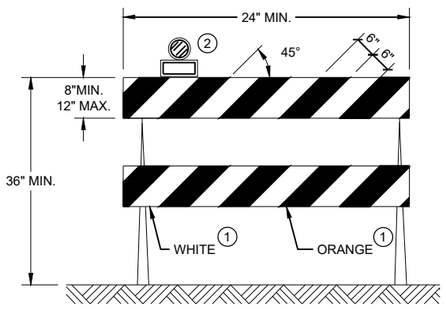
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



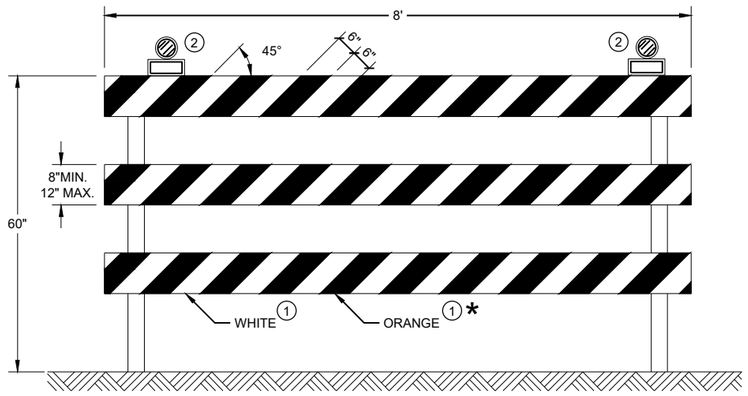
VERTICAL PANEL

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
May 2021
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

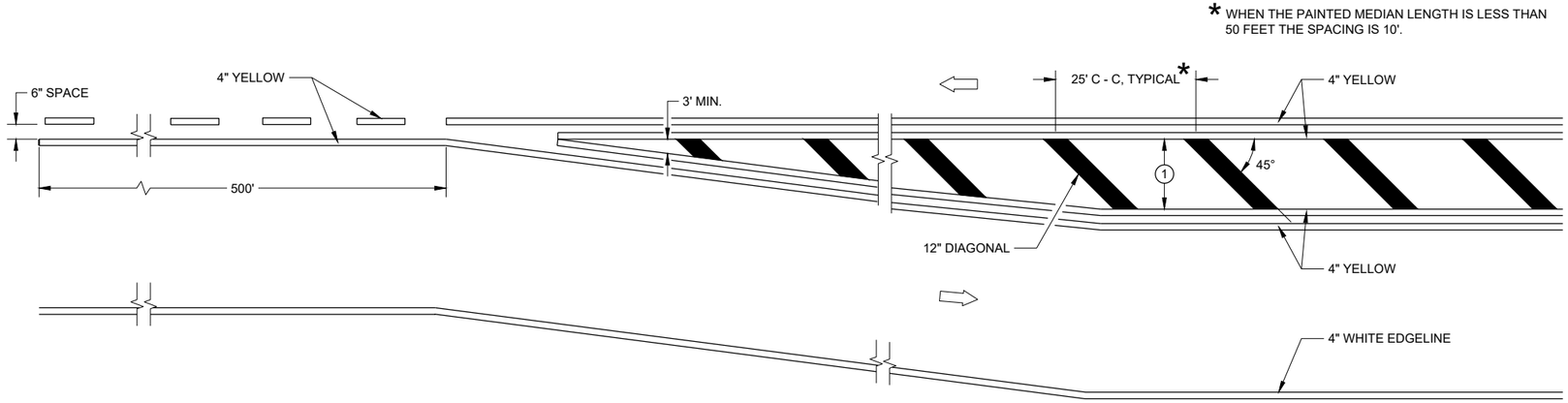
FHWA

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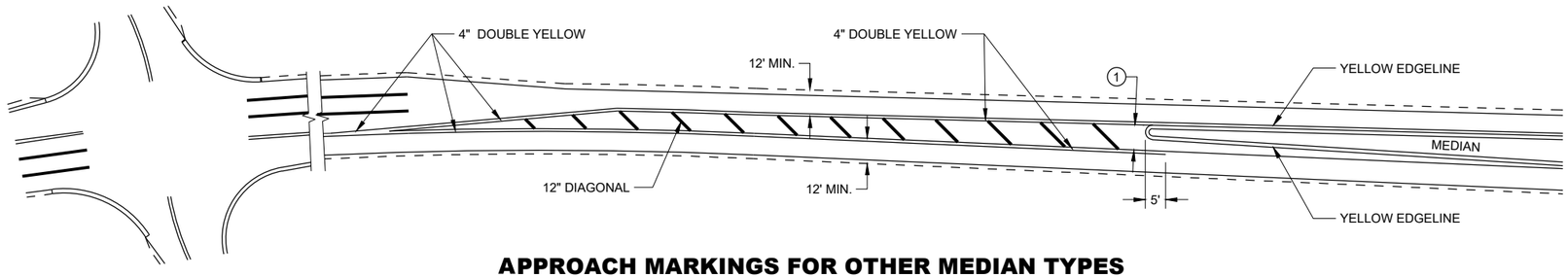
SDD 15C11 - 09b

6

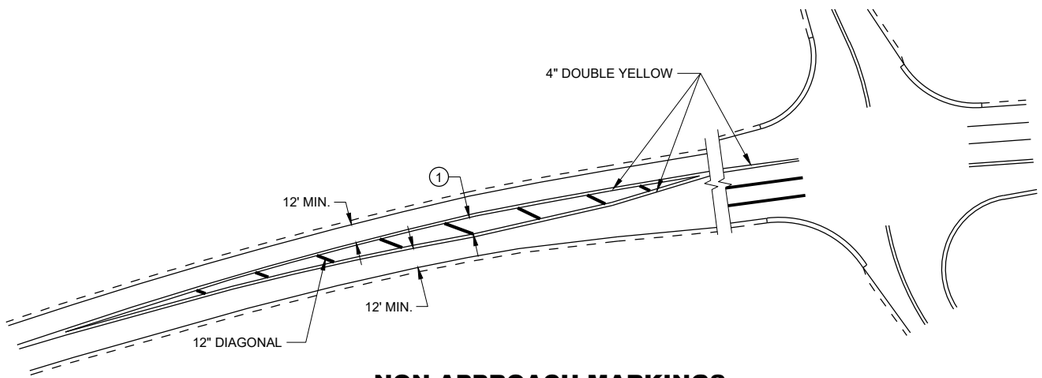
SDD 15C11 - 09b



MEDIAN ISLAND DETAIL



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON-APPROACH MARKINGS

GENERAL NOTES

1. DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT THE WIDEST POINT. OMIT DIAGONALS IF WIDTH IS LESS THAN 4 FEET.

⇨ DIRECTION OF TRAVEL

MEDIAN ISLAND PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2022
DATE

/S/ Jeannie Silver
STATE SIGNING AND MAF ENGINEER

FHWA

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SDD 15C18 - 06a

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SDD 15C18 - 06a

LEGEND

V1 MARKING VEHICLE

V2 SHADOW VEHICLE

V3 TRAIL VEHICLE

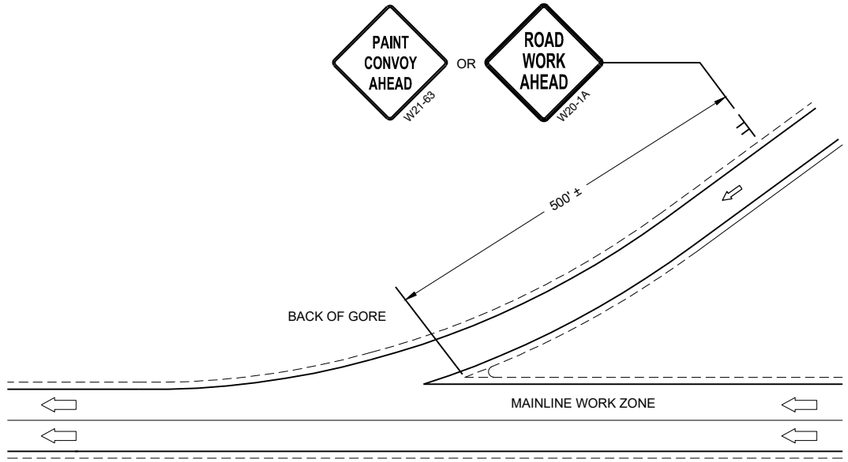
TRUCK MOUNTED ATTENUATOR (TMA)

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC

FLASHING ARROW PANEL (MERGE)

FLASHING ARROW PANEL (CAUTION)



GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

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

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

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

IF THE SHOULDER IS TOO NARROW TO ACCOMMODATE THE LAST TRAILING VEHICLE, THE VEHICLE SHOULD STRADDLE THE EDGE LINE.

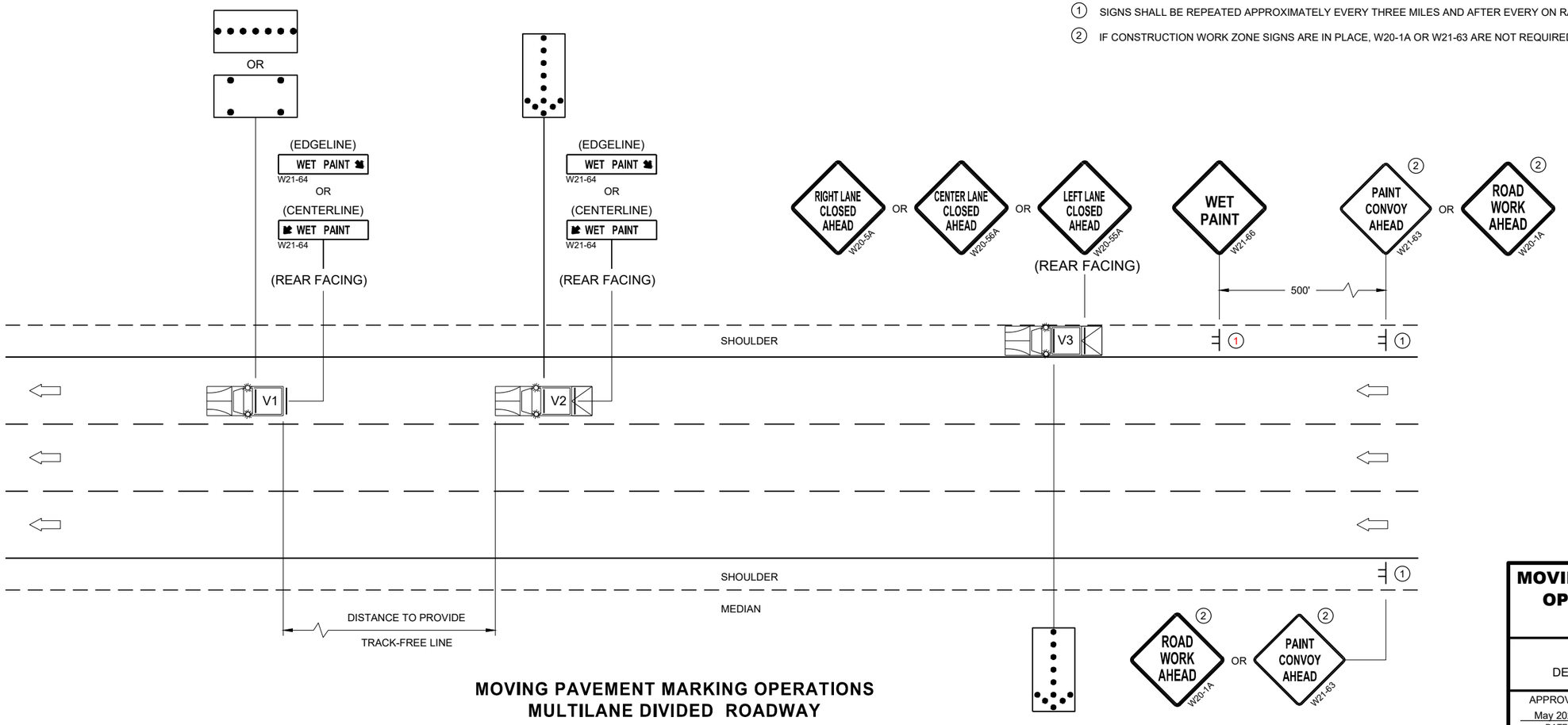
WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC

CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL BE A MINIMUM HEIGHT OF 28" FOR WET PAVEMENT MARKINGS

(1) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES AND AFTER EVERY ON RAMP.

(2) IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.



MOVING PAVEMENT MARKING OPERATIONS
MULTILANE DIVIDED ROADWAY

MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD15C19 - 07c

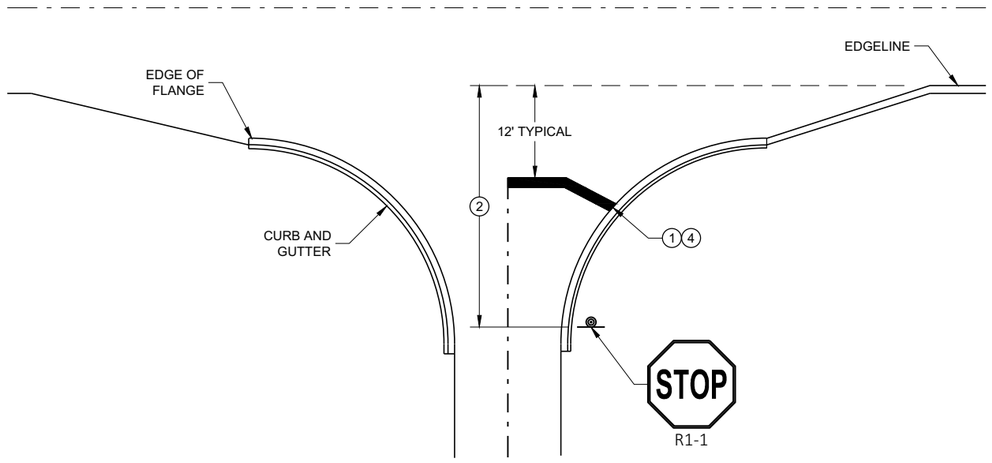
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SDD15C19 - 07c

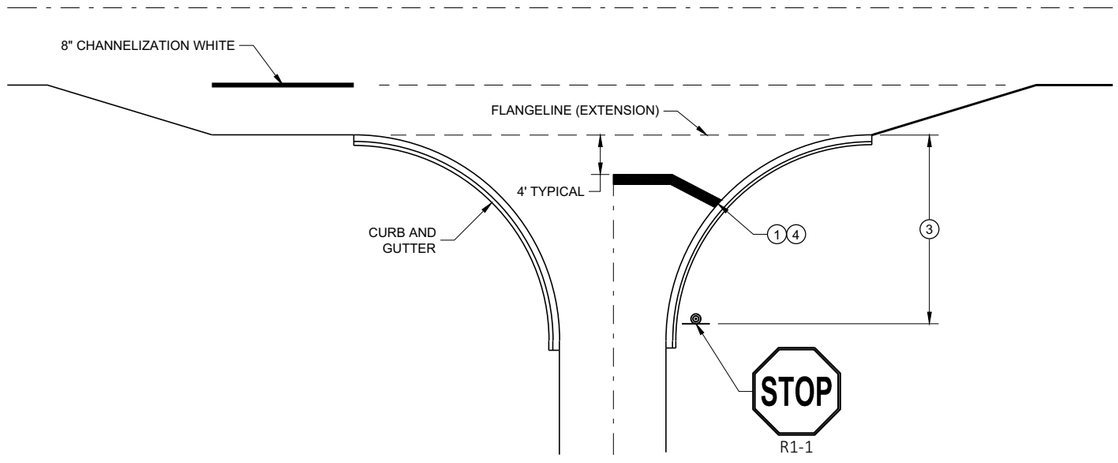
GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

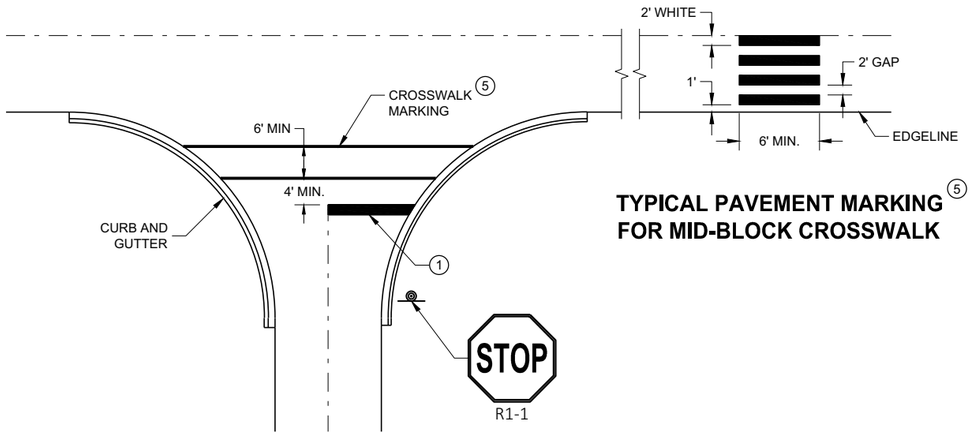
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION.
4. MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
5. LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES INSTEAD.



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

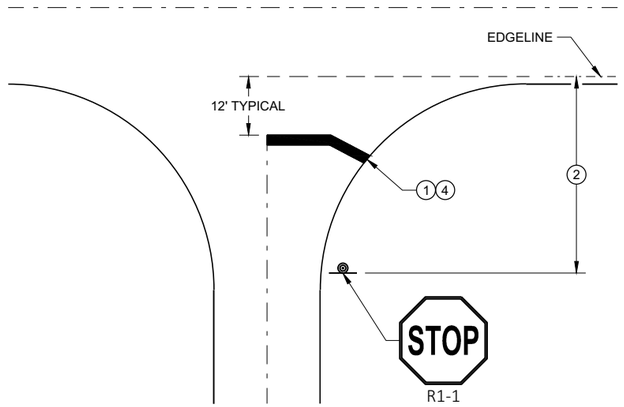


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK 5

TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 — DATE
/S/ Matthew Rauch — STATE SIGNING AND MARKING ENGINEER

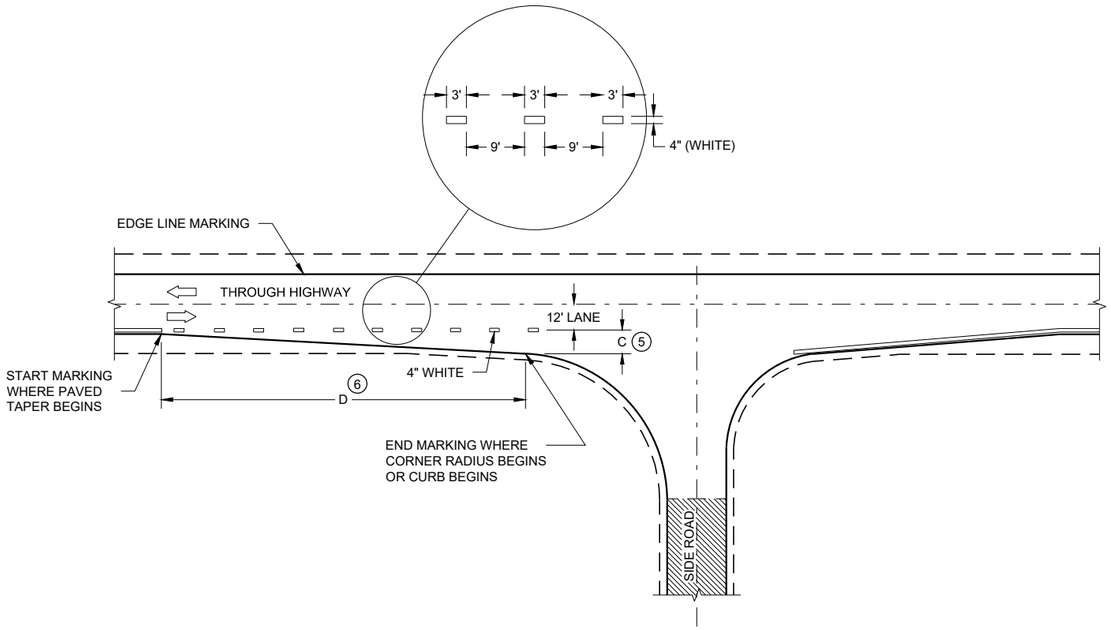
FHWA

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SDD 15C33 - 04

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SDD 15C33 - 04



MINOR INTERSECTION

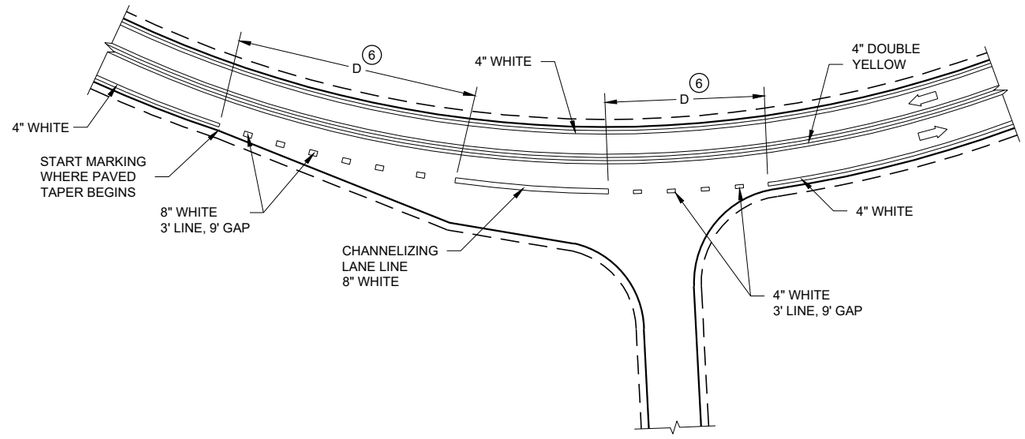
GENERAL NOTES

OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

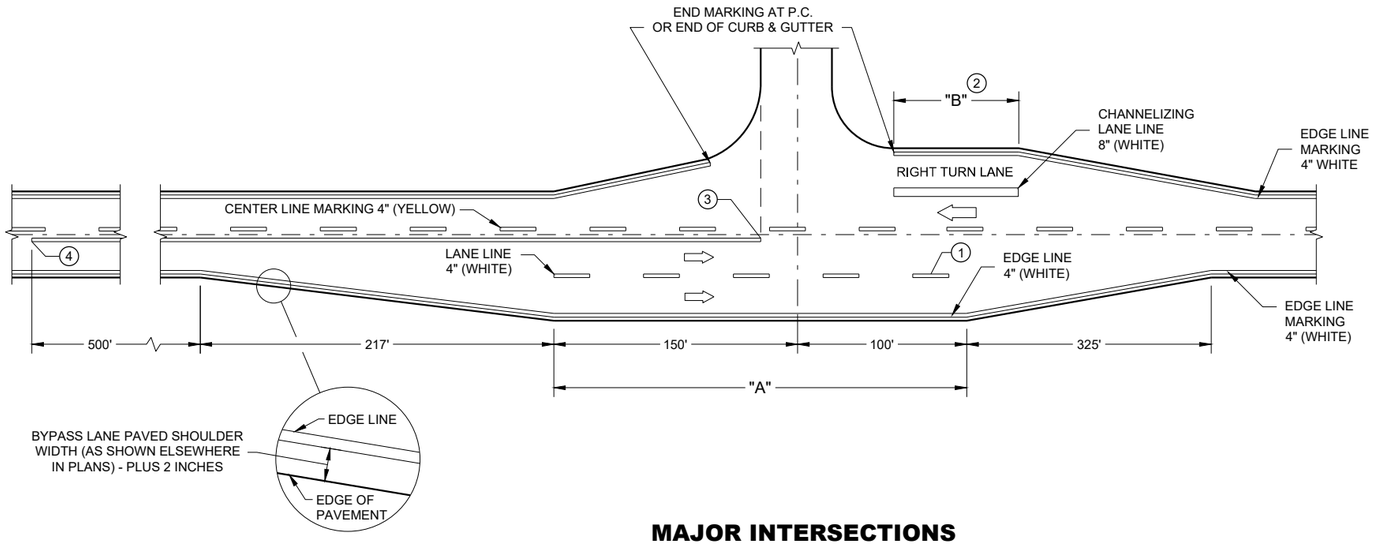
1. WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
2. WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
3. BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
4. BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
5. WHEN DISTANCE "C" IS LESS THAN 4 FEET, OMIT DOTTED EXTENSION.
6. WHEN DISTANCE "D" IS LESS THAN 50 FEET, OMIT DOTTED EXTENSION.

LEGEND

DIRECTION OF TRAVEL



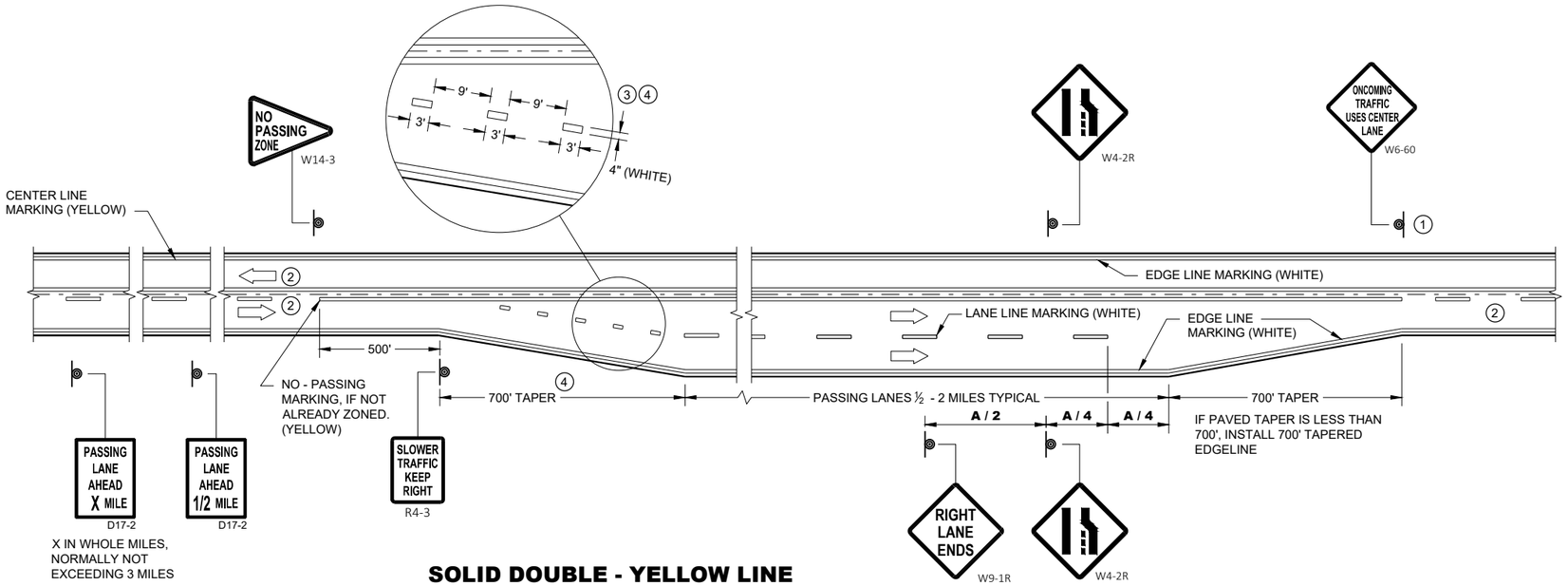
INTERSECTION ON OUTSIDE OF CURVE



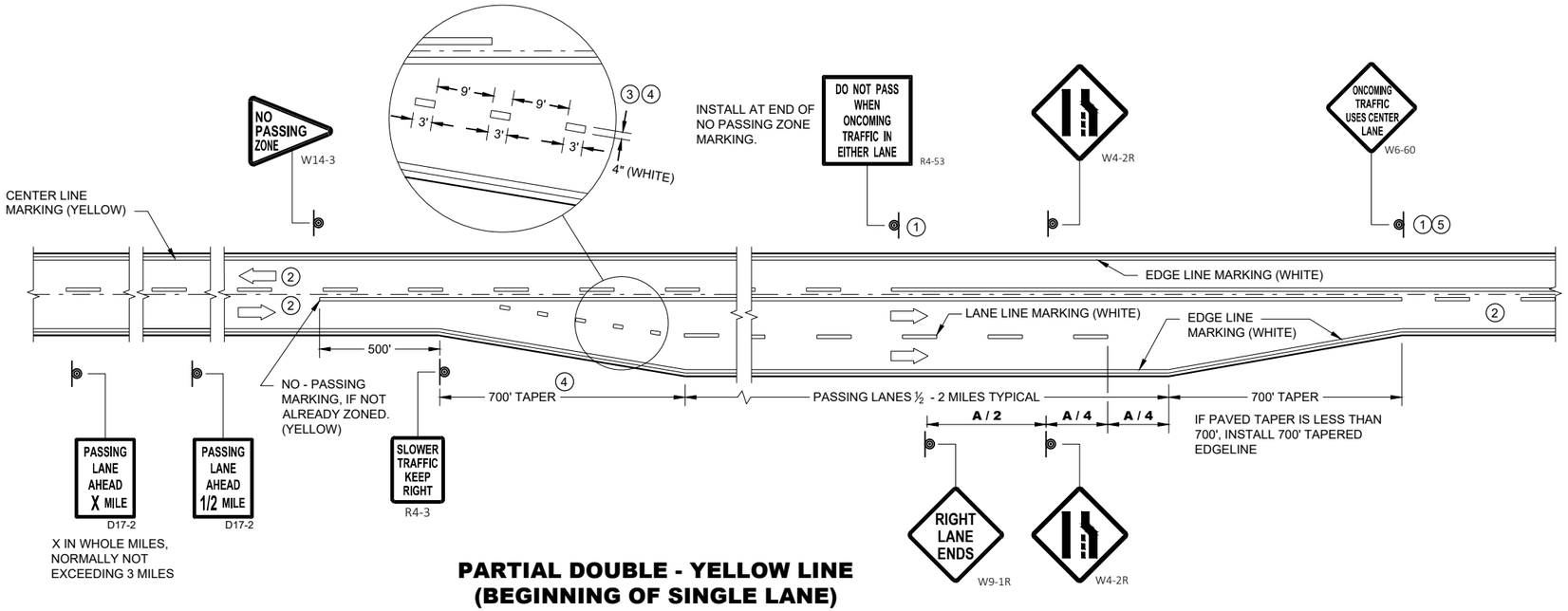
MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

PAVEMENT MARKING (INTERSECTIONS)



SOLID DOUBLE - YELLOW LINE
(THROUGHOUT ENTIRE PASSING / CLIMBING LANE)



PARTIAL DOUBLE - YELLOW LINE
(BEGINNING OF SINGLE LANE)

GENERAL NOTES

1. SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
2. THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
3. THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE, 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
4. WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING / CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.
5. REPEAT EVERY 1 MILE UP UNTIL R4-53.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

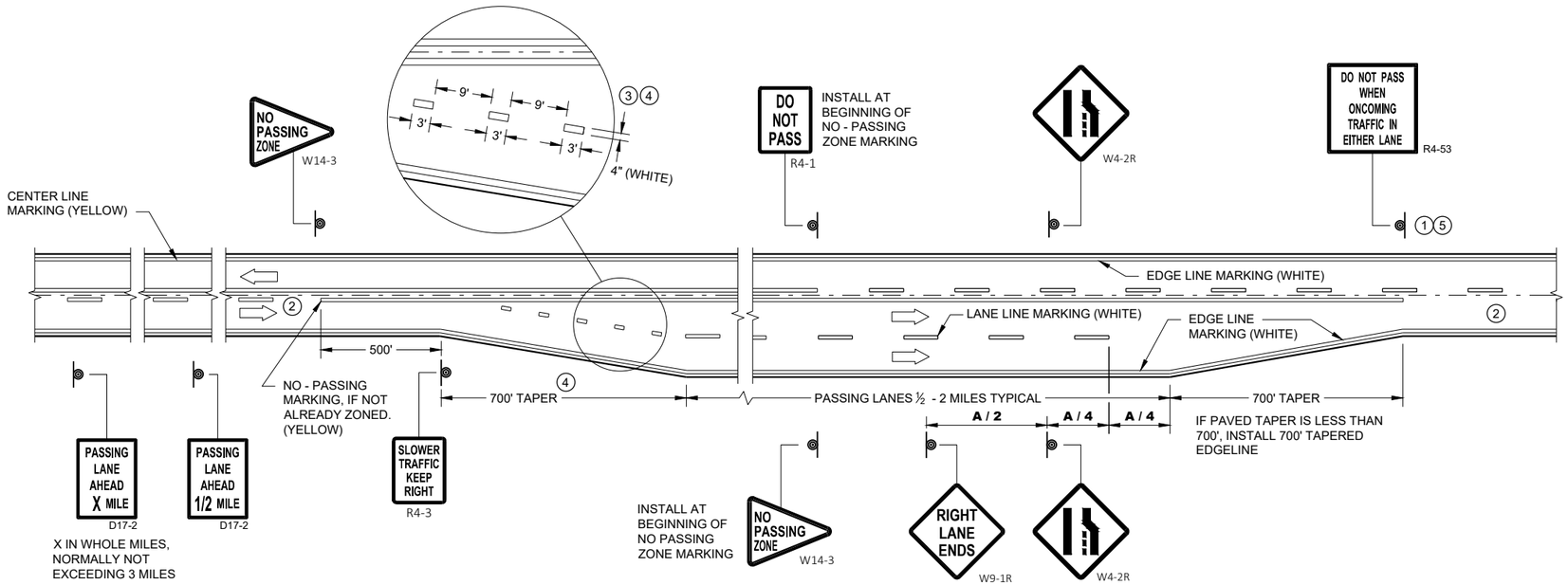
POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	775
50	885
55	990

PAVEMENT MARKING & SIGNING (CLIMBING LANE & PASSING LANE)

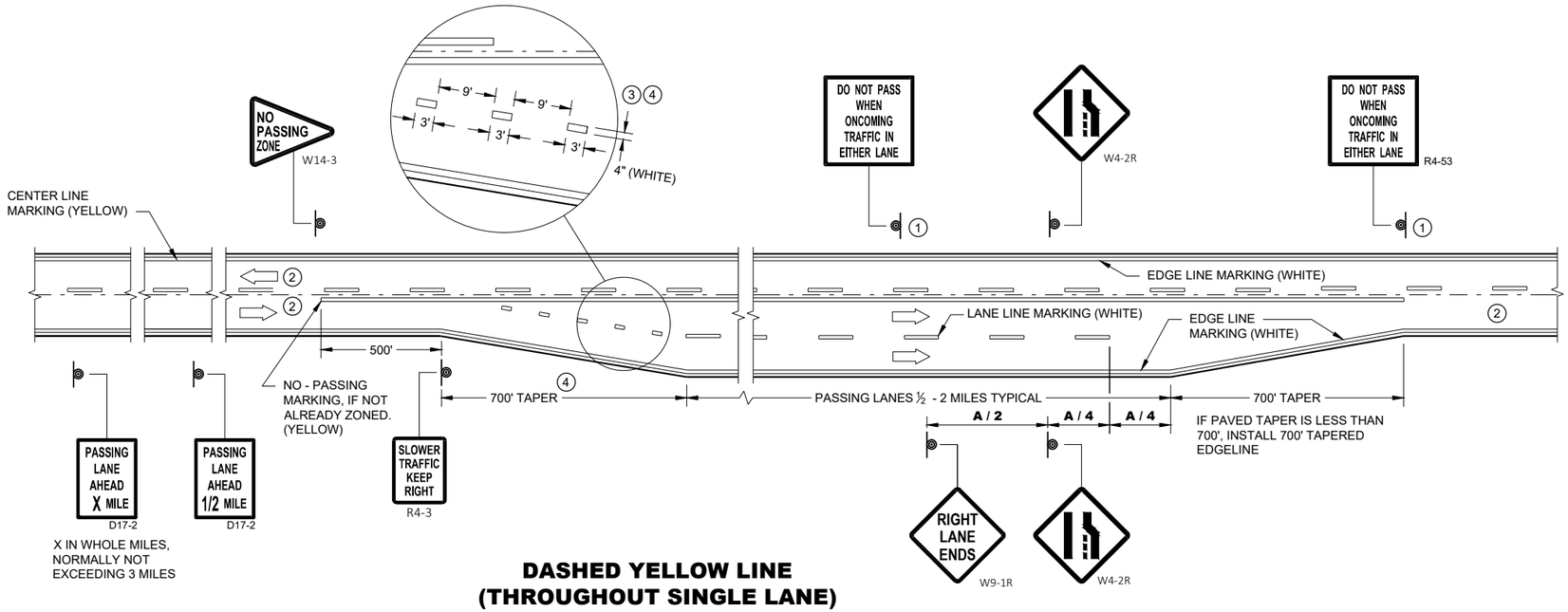
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 15C35 - 05b

SDD 15C35 - 05b



SOLID DOUBLE - YELLOW LINE (END OF SINGLE LANE)



DASHED YELLOW LINE (THROUGHOUT SINGLE LANE)

GENERAL NOTES

1. SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
2. THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
3. THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE, 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
4. WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING / CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.
5. REPEAT EVERY ONE MILE UP UNTIL NO PASSING ZONE.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	775
50	885
55	990

PAVEMNET MARKING & SIGNING (CLIMBING LANE & PASSING LANE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

SDD 15C35 - 05c

SDD 15C35 - 05c

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW BOARD
- WORK AREA

GENERAL NOTES

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

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

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

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

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

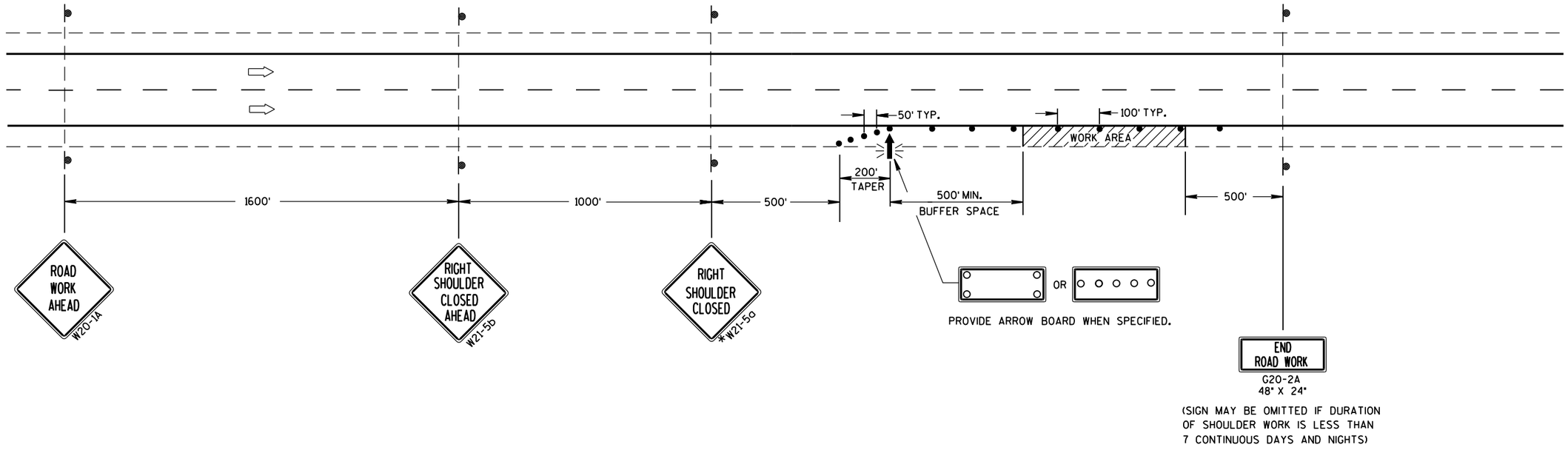
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

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

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



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2016 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO[illegible] SAFETY ENGI[illegible]

FHWA

6

S.D.D. 15 D 27-3

LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET
0-30	200'
35-40	350'
45-55	500'

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

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

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

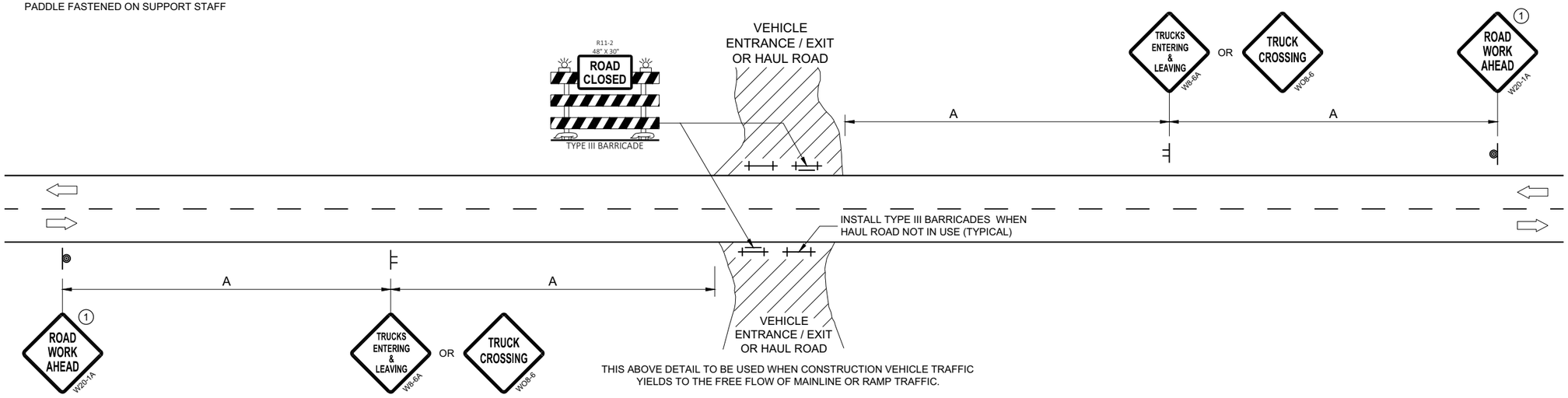
WARNING SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

WHEN ACTIVITY REFLECTED BY THE SIGN IS NOT CURRENTLY TAKING PLACE, THE HIGHWAY SHALL BE RESTORED TO NORMAL CONDITION AND THE SIGNS SHALL BE REMOVED, COVERED OR TURNED AWAY FROM TRAFFIC.

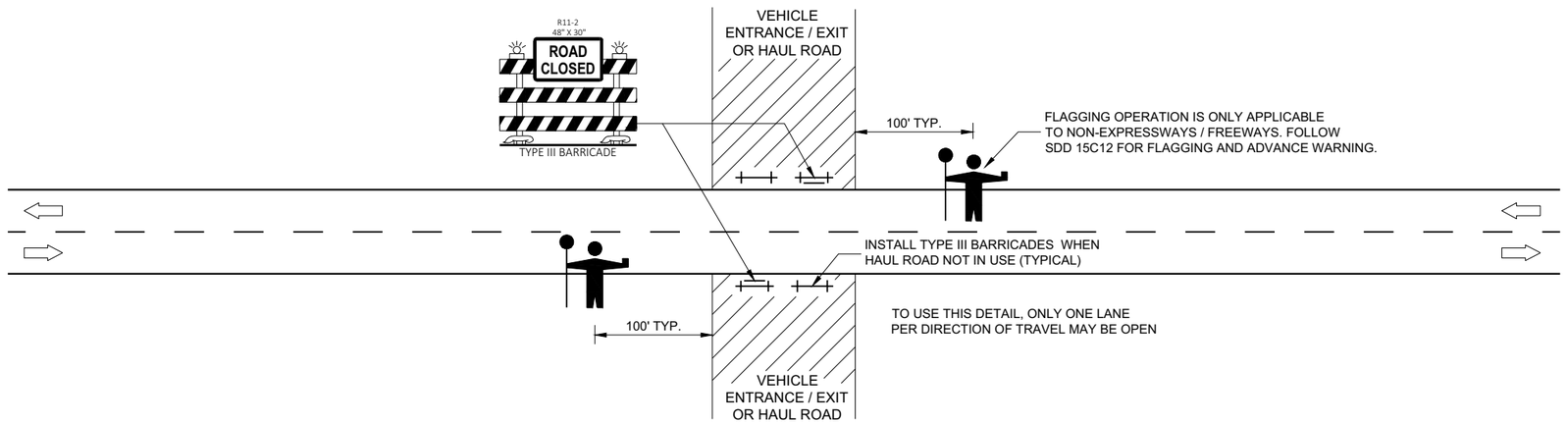
WHEN A SIDE ROAD OR RAMP INTERSECTS WITHIN THE ADVANCE SIGNING AREA, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND / OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

PLACE SIGNS ON BOTH SIDES IF USED ON DIVIDED HIGHWAY.

(1) THESE SIGNS ARE TO BE USED ONLY WHEN VEHICLE ENTRANCE / EXIT CONDITIONS ARE SEPARATED BY MORE THAN TWO MILES FROM PREVIOUS WORK AREA OR SIGNING OR AS DIRECTED BY THE ENGINEER.



THIS ABOVE DETAIL TO BE USED WHEN CONSTRUCTION VEHICLE TRAFFIC YIELDS TO THE FREE FLOW OF MAINLINE OR RAMP TRAFFIC.



TO USE THIS DETAIL, ONLY ONE LANE PER DIRECTION OF TRAVEL MAY BE OPEN

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

TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6
SDD 15D29 - 06

GENERAL NOTES

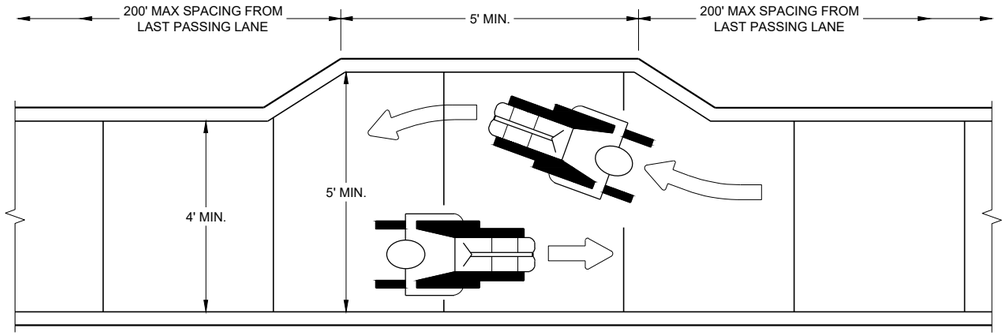
BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST

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

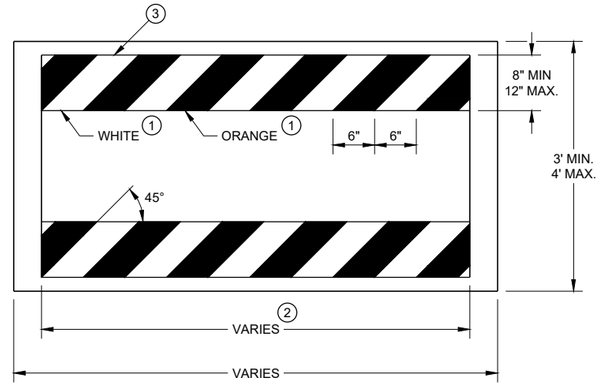
(2) SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.

(3) PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.

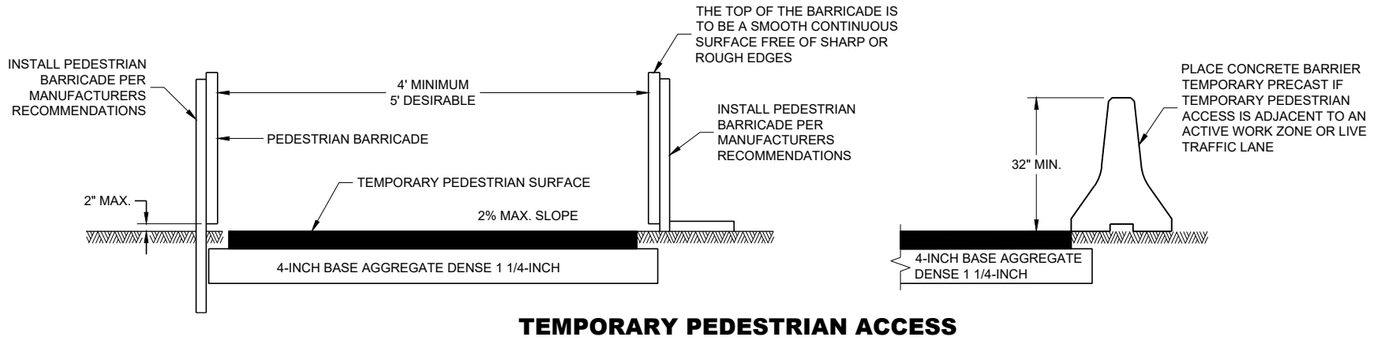
* USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.



NARROW SIDEWALK PASSING DETAIL



TEMPORARY PEDESTRIAN BARRICADE*



TEMPORARY PEDESTRIAN ACCESS

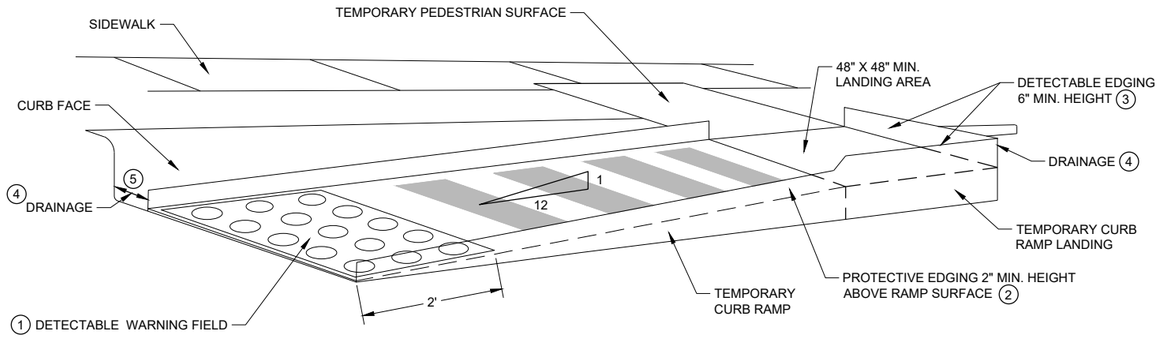
6

6

SDD 15D30 - 07a

SDD 15D30 - 07a

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION



PERSPECTIVE VIEW

GENERAL NOTES

CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.

CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.

CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN ½" WIDTH.

CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES MAY BE VERTICAL UP TO ¼" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN ¼" AND ½".

(1) INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS.

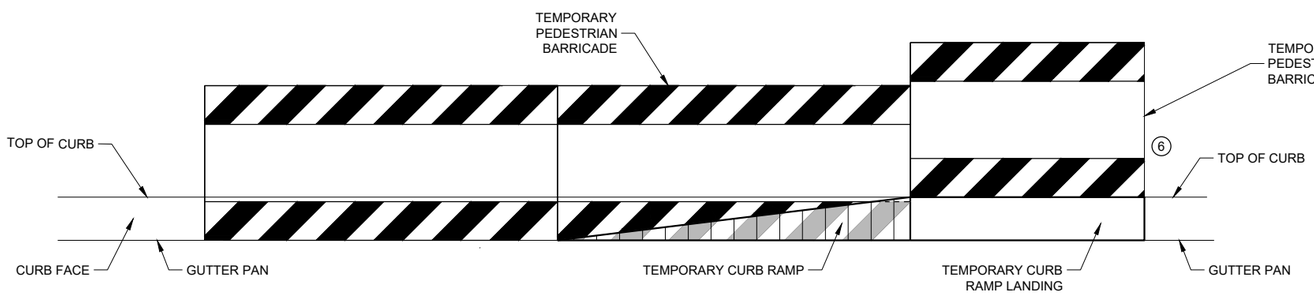
(2) PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.

(3) DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

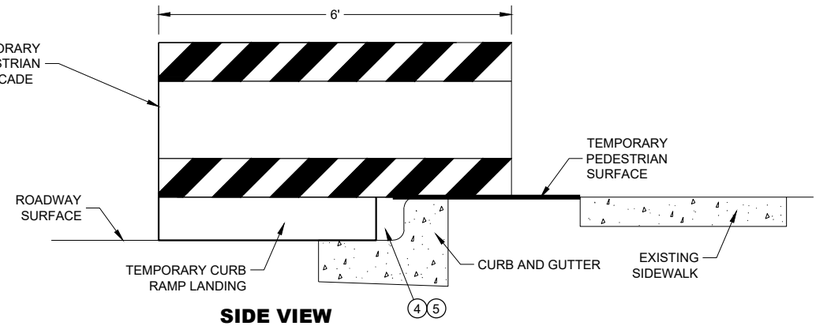
(4) DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.

(5) 6" MINIMUM BETWEEN CURB FACE AND EDGE OF RAMP

(6) IF ONLY PART OF THE END PANEL OF TEMPORARY PEDESTRIAN BARRICADE PANEL IS NEEDED, EXTEND EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL HERE.



FRONT VIEW



SIDE VIEW

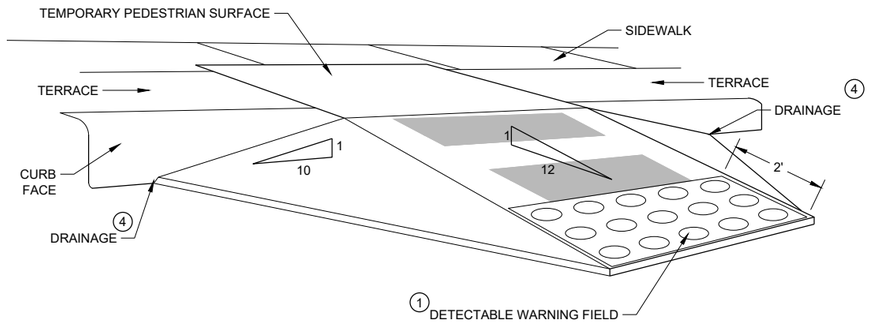
TEMPORARY CURB RAMP PARALLEL TO CURB

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

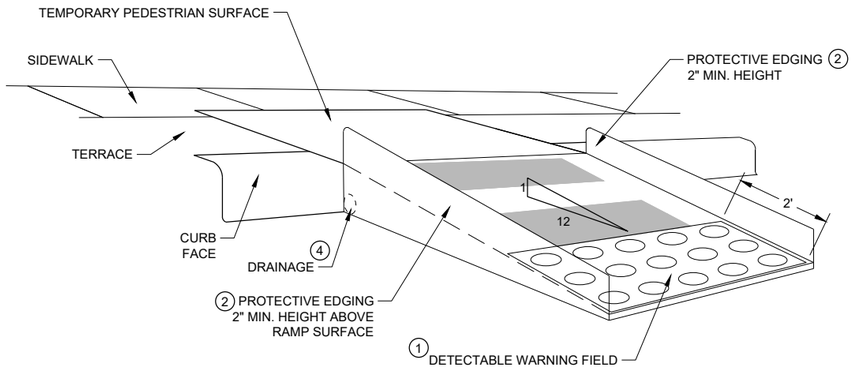
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15D30 - 07b
SDD 15D30 - 07b



WITH SIDE APRON (5)



WITH PROTECTIVE EDGE

TEMPORARY CURB RAMP PERPENDICULAR TO CURB

GENERAL NOTES

CURB RAMPS SHALL BE 48" MINIMUM WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.

ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.

CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.

LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN ½" WIDTH.

CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES MAY BE VERTICAL UP TO ¼" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN ¼" AND ½".

(1) INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS

(2) PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.

(3) DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

(4) DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.

(5) CAN ONLY BE USED FOR RAMPS WITH 6" OR LESS OF VERTICAL CHANGE.

6

SDD 15D30 - 07c

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

GENERAL NOTES

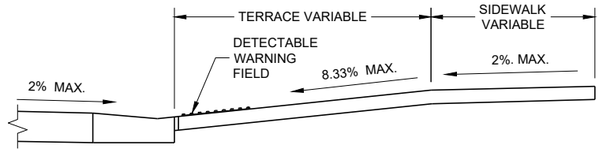
BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST

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

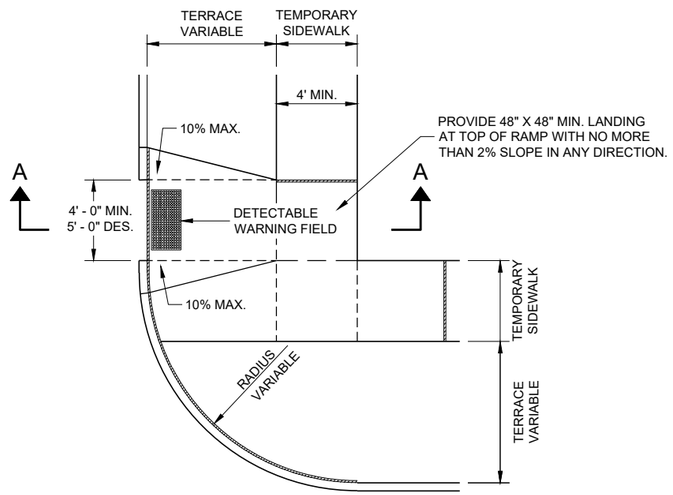
(2) SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.

(3) PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.

* USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.



SECTION A - A



PLAN VIEW

TEMPORARY TYPE 3 RAMP

(OUTSIDE OF CROSSWALK AREA)

6

6

SDD 15D30 - 07d

SDD 15D30 - 07d

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

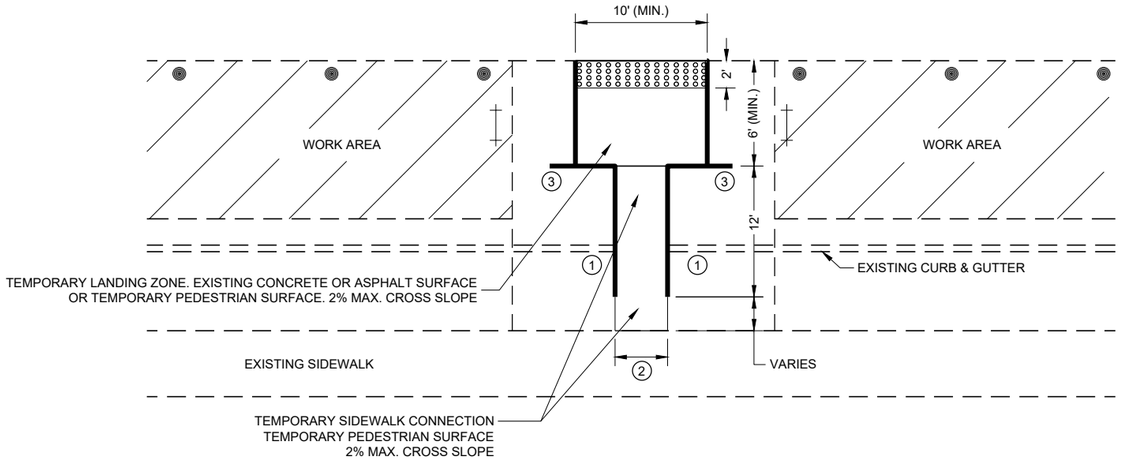
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

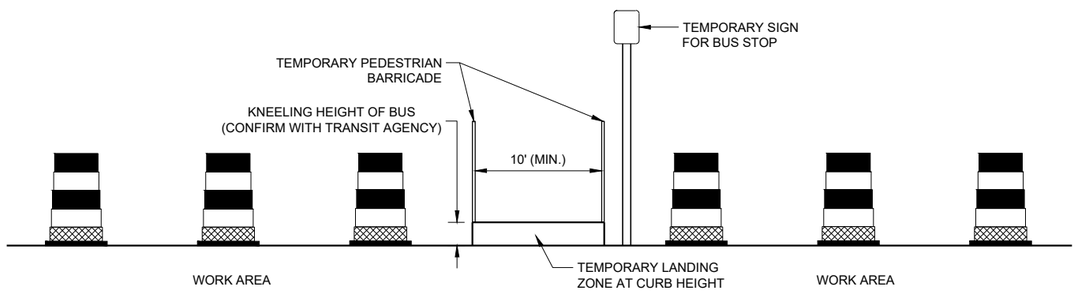
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA



PLAN VIEW



PROFILE VIEW

TEMPORARY BUS STOP PAD

GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

NOTIFY THE BUS COMPANY 7 DAYS IN ADVANCE OF THE BUS STOP RELOCATION.

PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.

DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN ½" WIDTH.

CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES MAY BE VERTICAL UP TO ¼" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN ¼" AND ½".

CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.

(1) DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.

(2) 5' WIDE MIN. WITH TEMPORARY PEDESTRIAN BARRICADE, 10' WIDE MIN. WITHOUT TEMPORARY PEDESTRIAN BARRICADE.

(3) PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE INTO THIS SPACE.

LEGEND

- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE
- TEMPORARY PEDESTRIAN BARRICADE
- TEMPORARY DETECTABLE WARNING FIELD
- WORK AREA

6

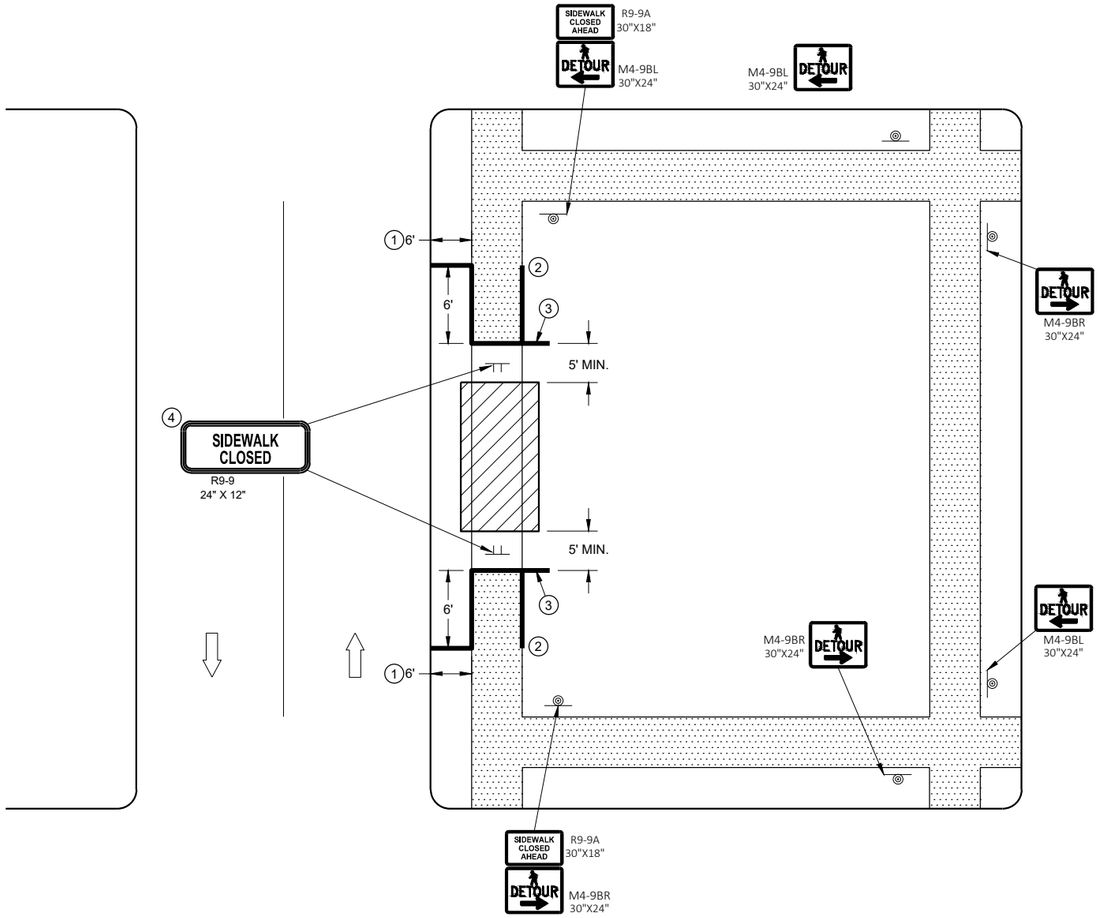
SDD 15D30 - 07e

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC



SIDEWALK DETOUR, SIDEWALK ONLY ON ONE SIDE

GENERAL NOTES

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.

WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

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

1. IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
2. PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
3. IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
4. MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

6

SDD 15D30 - 07f

LEGEND

- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- UNDER PEDESTRIAN TRAFFIC
- TEMPORARY PEDESTRIAN SURFACE
- TEMPORARY PEDESTRIAN BARRICADE
- OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC

GENERAL NOTES

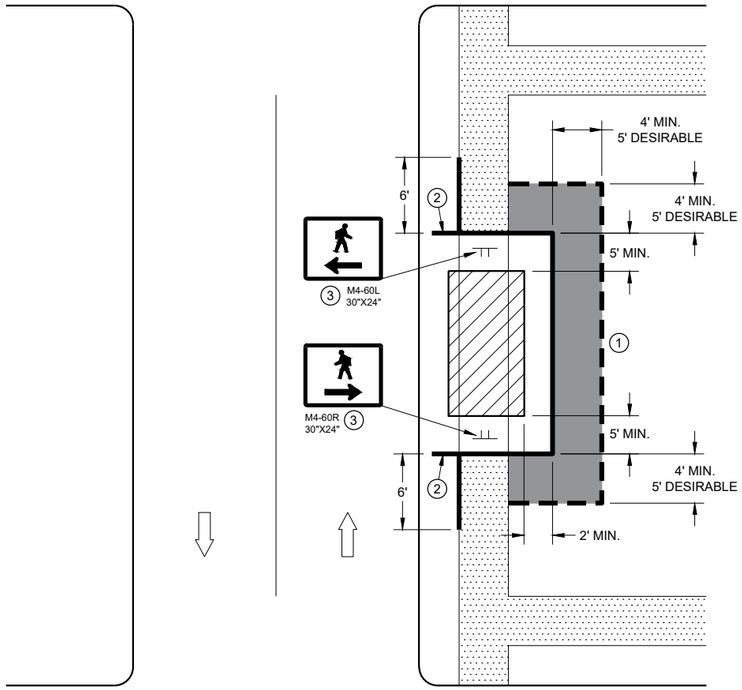
TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.

WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

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

1. USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.
2. IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
3. MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.



SIDEWALK DIVERSION
SINGLE SIDE

6

SDD 15D30 - 07g

TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15D30 - 07g

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- WORK AREA
- UNDER PEDESTRIAN TRAFFIC
- TEMPORARY CURB RAMP
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC

GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.

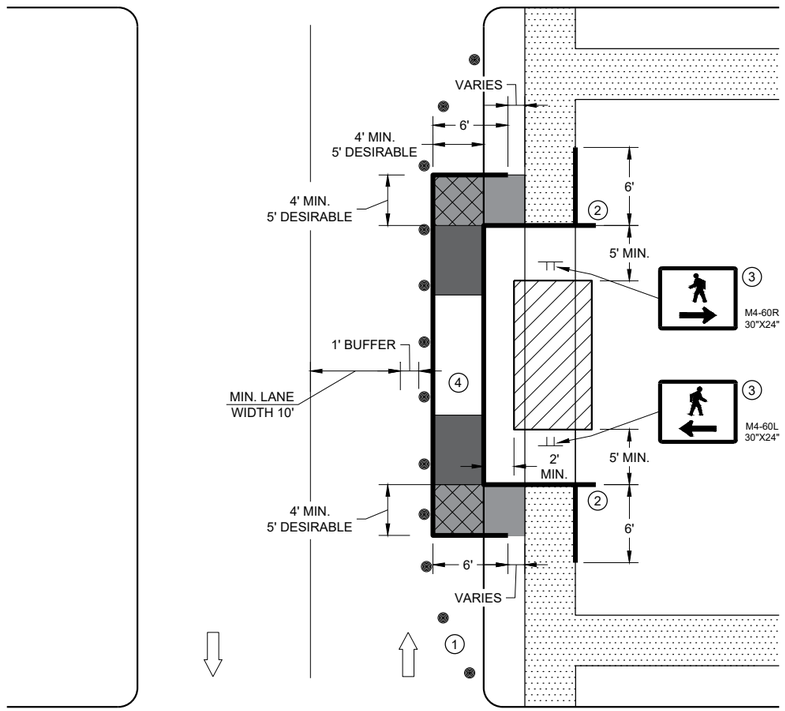
WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

(1) SHOULDER OR LANE CLOSURE ADVANCE WARNING AND BUFFER SPACE REQUIRED.

(2) PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL PAST THE SIDEWALK ON THE SIDE AWAY FROM THE ROAD.

(3) MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.

(4) USE EXISTING PAVEMENT SURFACE. IF EXISTING PAVEMENT SURACE HAS BEEN REMOVED, USE A TEMPORARY PEDESTRIAN SURFACE.



SIDEWALK DIVERSION, SINGLE SIDE

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

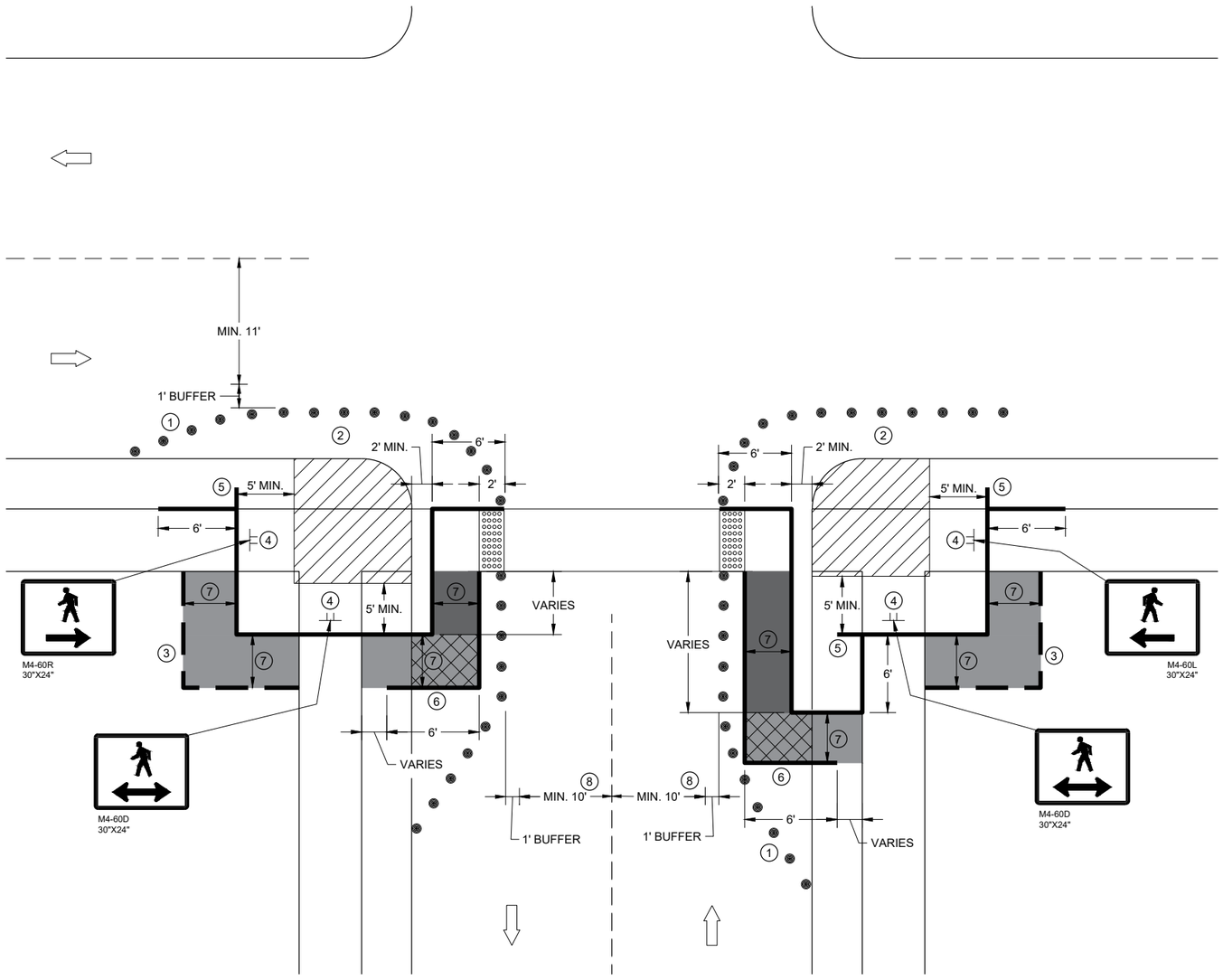
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15D30 - 07h

6

SDD 15D30 - 07h



CURB RAMP PEDESTRIAN TRAFFIC CONTROL
SIDEWALK ON SINGLE SIDE

GENERAL NOTES

IF PEDESTRIAN PUSH BUTTONS ARE PRESENT ON THE EXISTING FACILITY, ENSURE THEY ARE MAINTAINED/ACCESSIBLE FOR PEDESTRIAN USE THROUGHOUT THE TEMPORARY PEDESTRIAN ACCOMMODATIONS.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG

WHEN TEMPORARY PEDESTRIAN BARRICADE RUNS PARALLEL ALONG THE SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

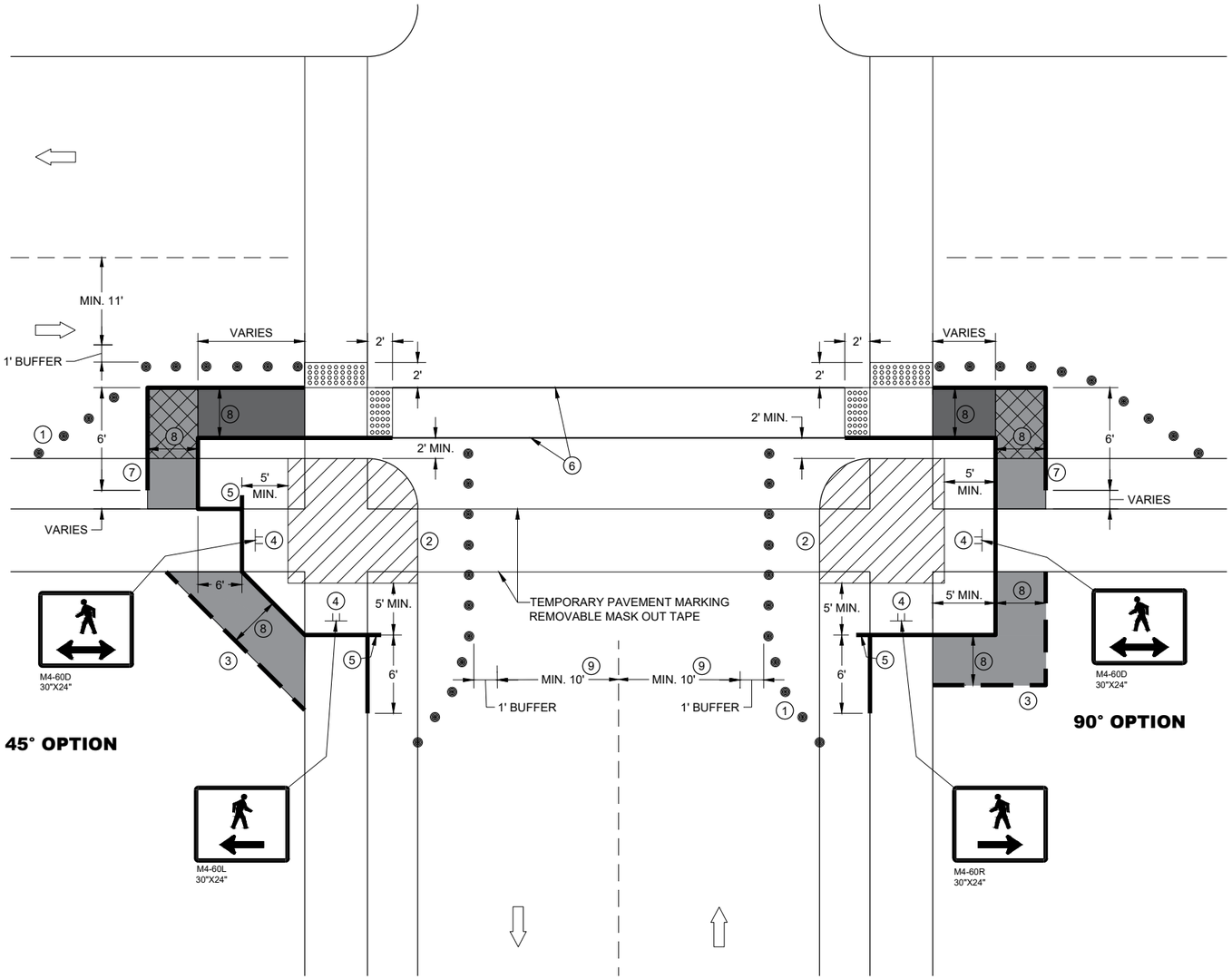
1. SHOULDER OR LANE CLOSURE ADVANCE WARNING AND PROPER BUFFER SPACE REQUIRED.
2. PROVIDE ADEQUATE SPACE FOR CONTRACTOR OPERATIONS
3. USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.
4. MOUNTING HEIGHT OF 5 FEET FROM SIDEWALK SURFACE TO BOTTOM OF SIGN.
5. PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL IN THE SIDEWALK TERRACE.
6. IF TEMPORARY PEDESTRIAN BARRICADE DOES NOT REACH THE FACE OF THE CURB, USE AN ADDITIONAL PANEL AND EXTEND INTO THE TERRACE.
7. 4 FEET MINIMUM, 5 FEET DESIRABLE
8. IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, CURB RAMPS MAY NEED TO BE CONSTRUCTED AT SEPARATE TIMES.

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- WORK AREA
- TEMPORARY CURB RAMP
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- TEMPORARY DETECTABLE WARNING FIELD
- TEMPORARY PEDESTRIAN BARRICADE
- OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION

6
SDD 15D30 - 07i



CURB RAMP PEDESTRIAN TRAFFIC CONTROL

GENERAL NOTES

IF PEDESTRIAN PUSH BUTTONS ARE PRESENT ON THE EXISTING FACILITY, ENSURE THEY ARE MAINTAINED/ACCESSIBLE FOR PEDESTRIAN USE THROUGHOUT THE TEMPORARY PEDESTRIAN ACCOMMODATIONS.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG

WHEN TEMPORARY PEDESTRIAN BARRICADE RUNS PARALLEL ALONG THE SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

1. SHOULDER OR LANE CLOSURE ADVANCE WARNING AND PROPER BUFFER SPACE REQUIRED.
2. PROVIDE ADEQUATE SPACE FOR CONTRACTOR OPERATIONS
3. USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.
4. MOUNTING HEIGHT OF 5 FEET FROM SIDEWALK SURFACE TO BOTTOM OF SIGN.
5. PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL IN THE SIDEWALK TERRACE.
6. WHITE 6" TEMPORARY PAVEMENT MARKING
7. IF TEMPORARY PEDESTRIAN BARRICADE DOES NOT REACH THE FACE OF THE CURB, USE AN ADDITIONAL PANEL AND EXTEND INTO THE TERRACE.
8. 4 FEET MINIMUM, 5 FEET DESIRABLE
9. IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, CURB RAMPS MAY NEED TO BE CONSTRUCTED AT SEPARATE TIMES.

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- WORK AREA
- TEMPORARY CURB RAMP
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- TEMPORARY DETECTABLE WARNING FIELD
- TEMPORARY PEDESTRIAN BARRICADE
- OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC

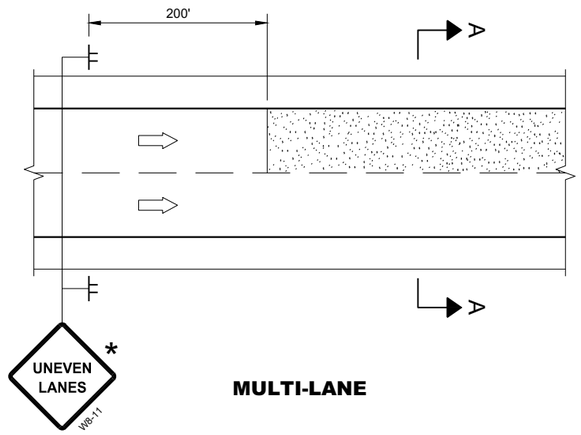
TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

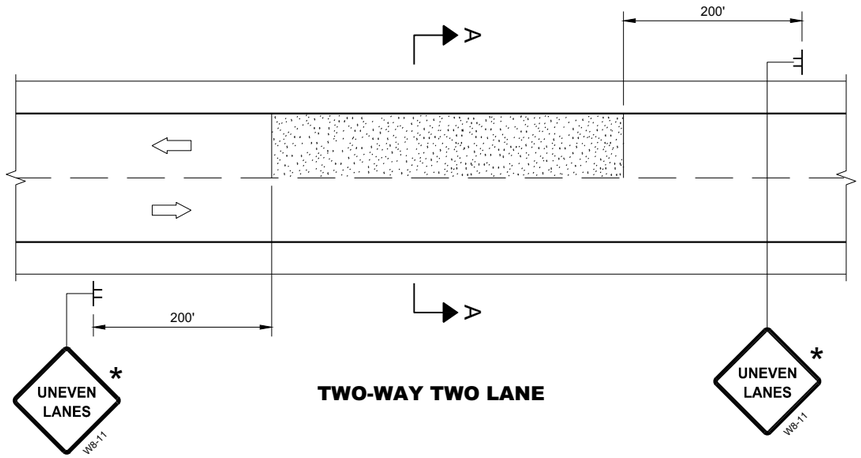
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SDD 15D30 - 07j

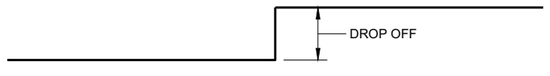
SDD 15D30 - 07j



MULTI-LANE

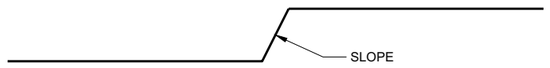


TWO-WAY TWO LANE

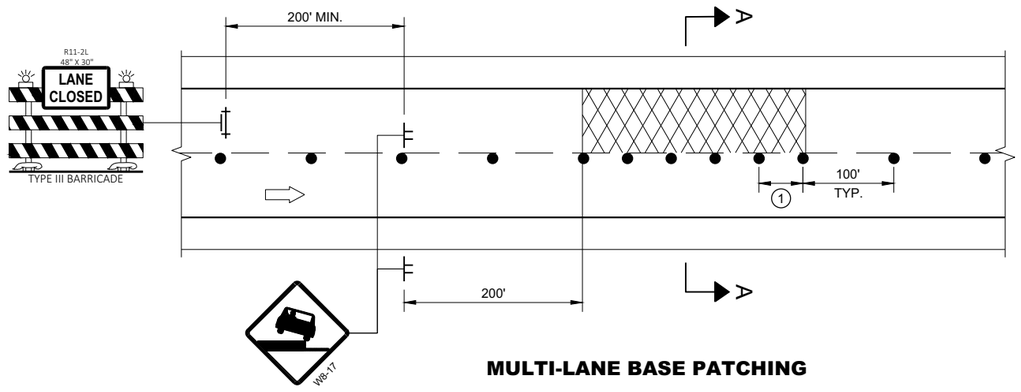


SECTION A - A

OR

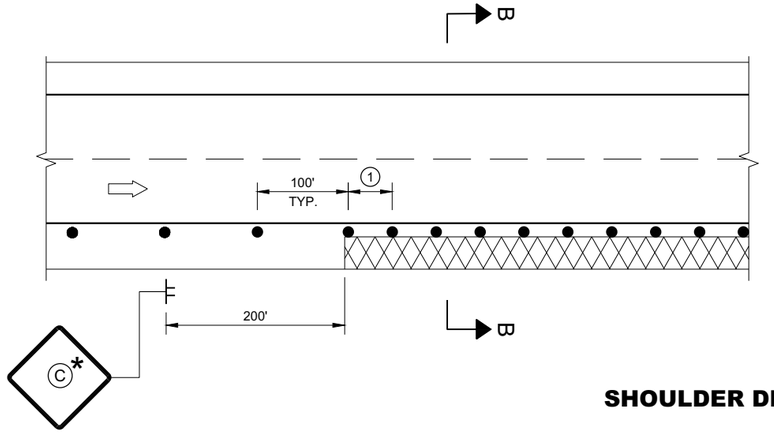


SECTION A - A

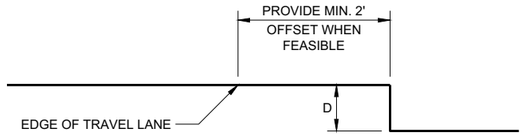


MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS



SHOULDER DROP-OFFS



SECTION B - B

D	SIGN (C)
< 2" WITH A SLOPE STEEPER THAN 3:1	LOW SHOULDER WO8-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	SHOULDER DROP - OFF W8-9A PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT

GENERAL NOTES

FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.

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

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

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

* IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.

(1) USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE

TRAFFIC CONTROL, DROP-OFF SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

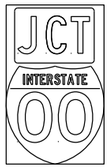
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SDD 15D39 - 02

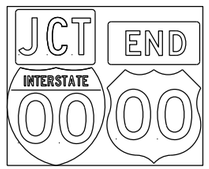
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SDD 15D39 - 02

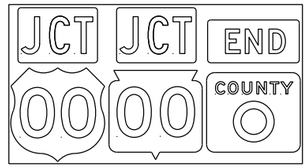
TYPICAL ASSEMBLIES



J1-1



J1-2



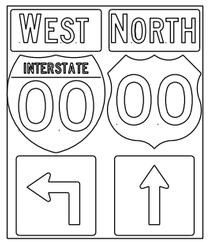
J1-3



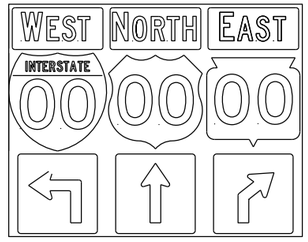
JR1-1



J2-1



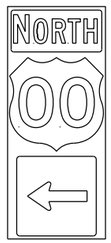
J2-2



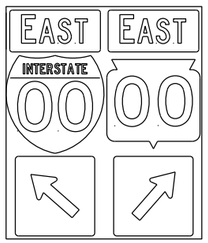
J2-3



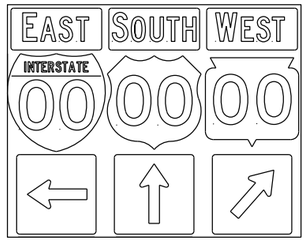
JV
(Typical Vertical J-Assembly
See Note 10 and 11)



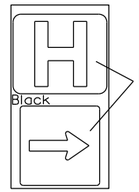
J3-1



J3-2



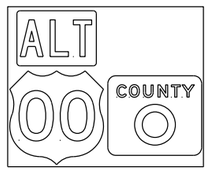
J3-3



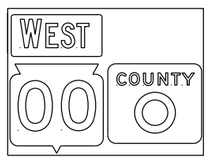
Blue Background
JH-1



J4-1



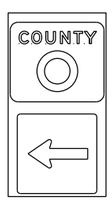
J4-2



J4-2



J12-1



J13-1



J32-1



J33-1



J22-1



J23-1



JR13-1

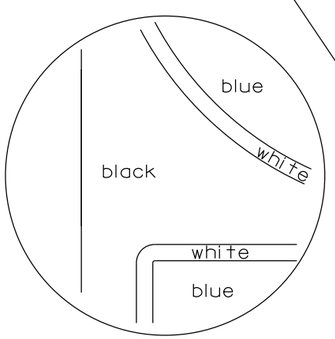


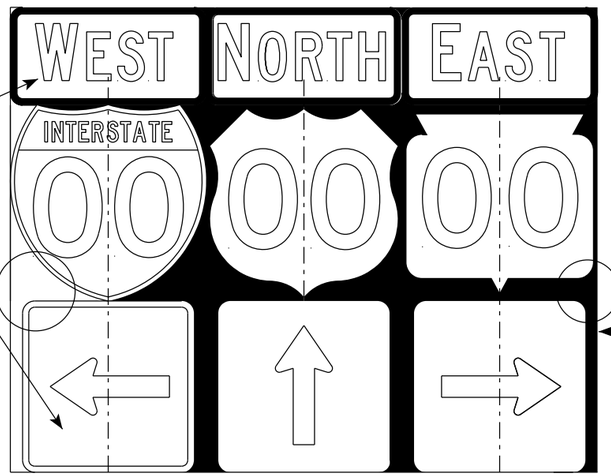
JR23-1

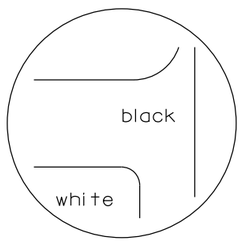


JR99-1

[blue background with interstate]







[black background]

NOTES

1. Signs are Type II - Type H Reflective
2. Color:
   Background - Black Non-reflective
   Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inchs (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/21 PLATE NO. A2-1S.9

PROJECT NO:

SHEET NO: 260 E

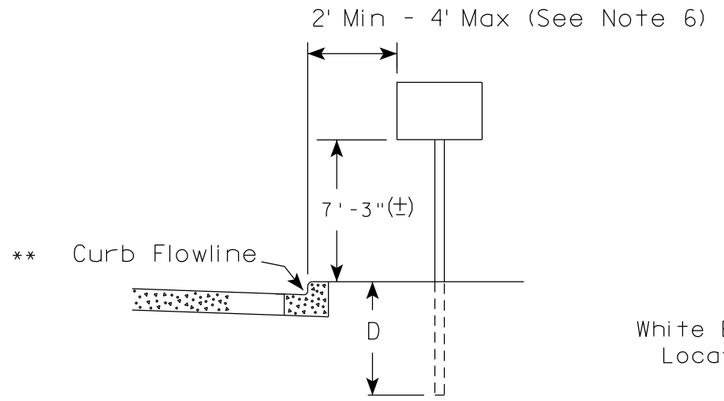
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WISDOT/CADDS SHEET 42

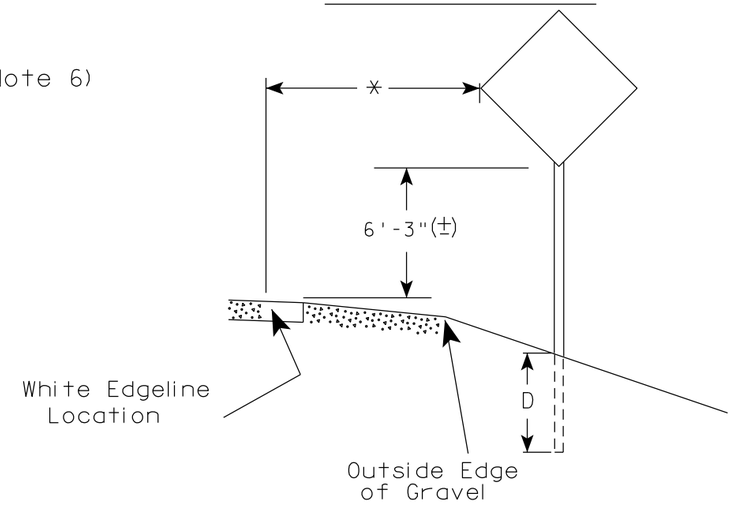
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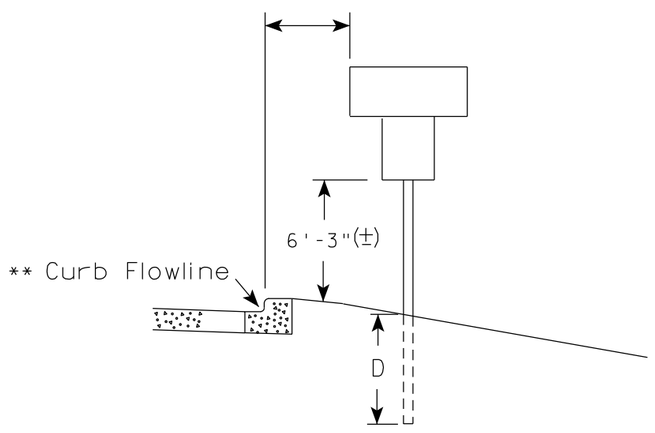
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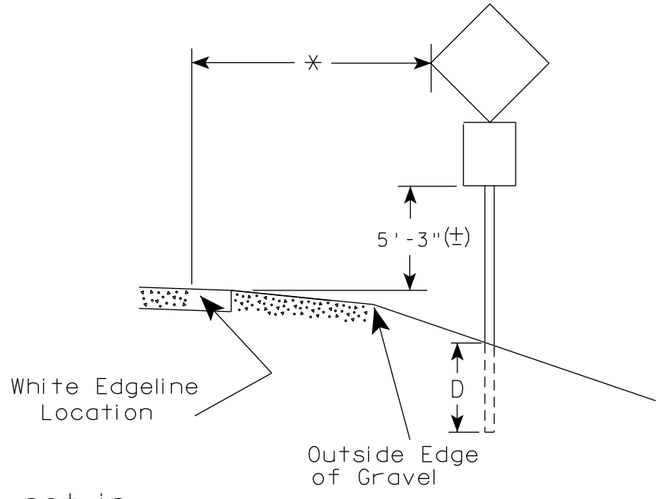
URBAN AREA



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.

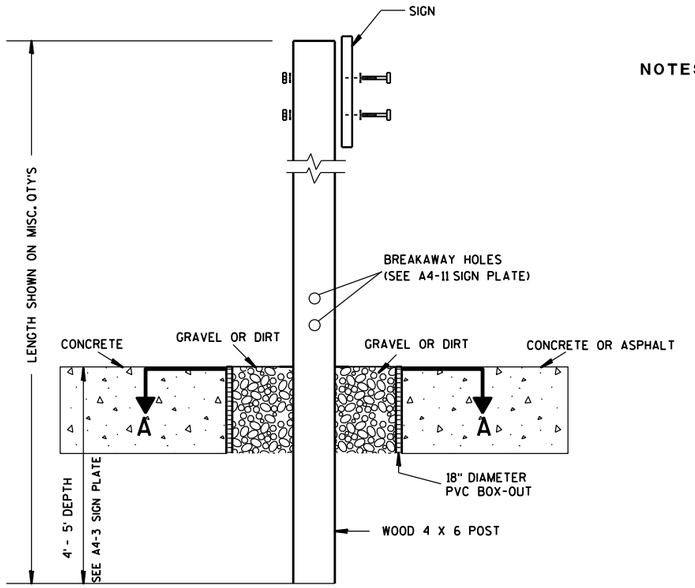
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

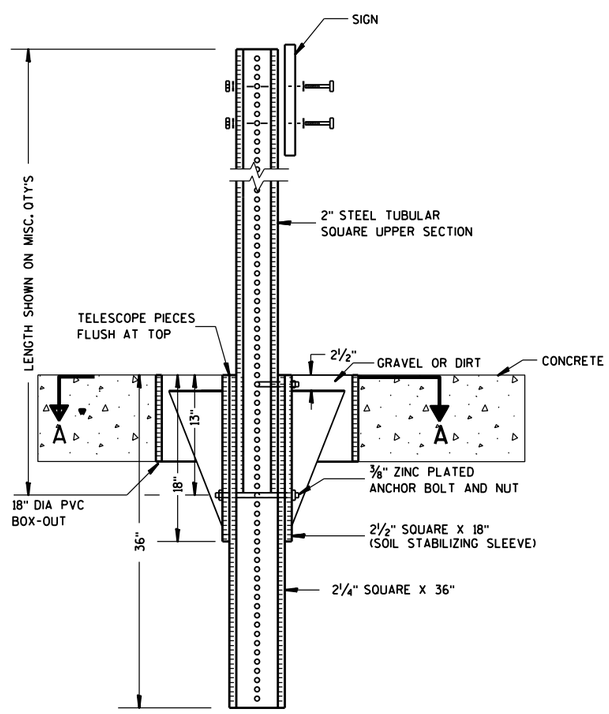
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 261	E



ELEVATION VIEW

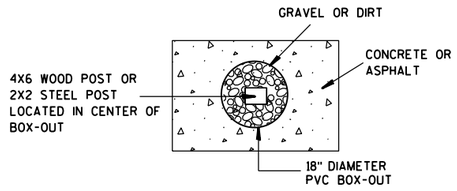
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

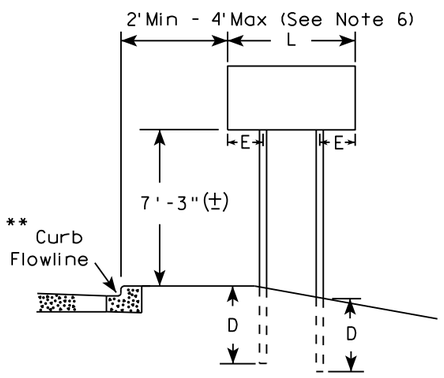
APPROVED Matthew R Rauch
for State Traffic Engineer

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

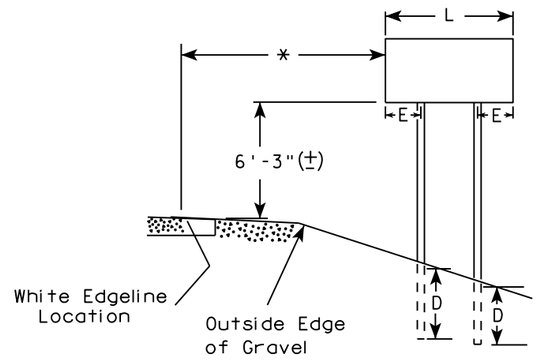
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

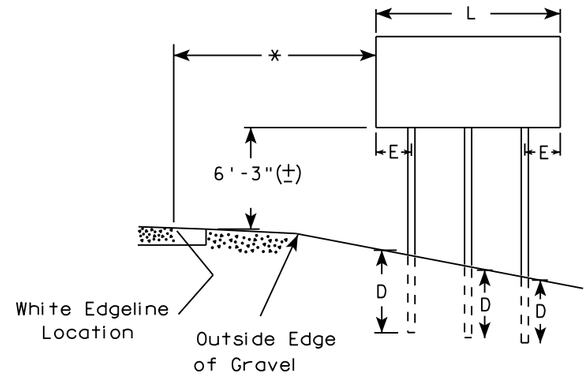
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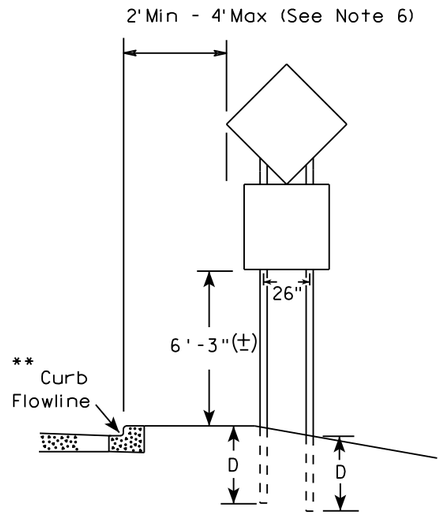
URBAN AREA



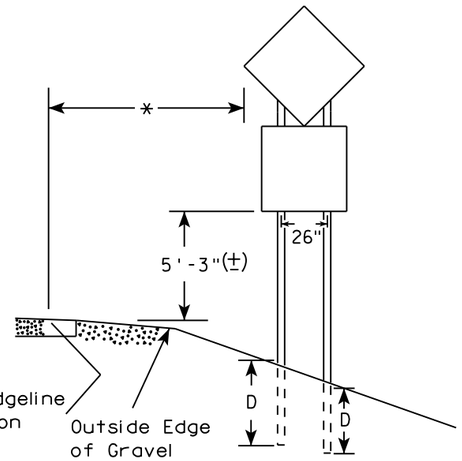
RURAL AREA (See Note 3)







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

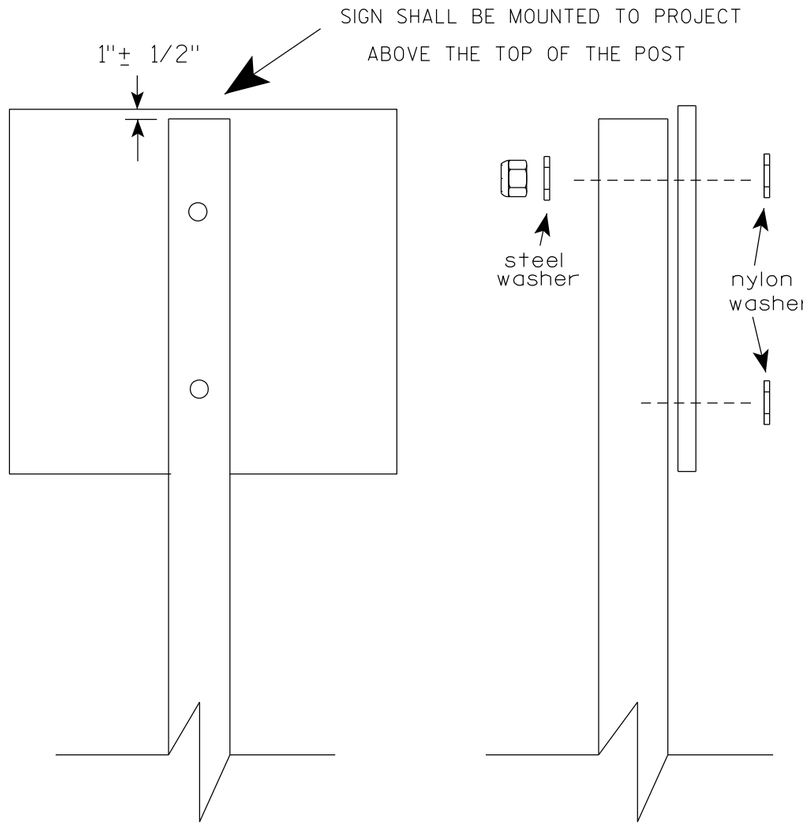
APPROVED Matthew R Rauch
for State Traffic Engineer

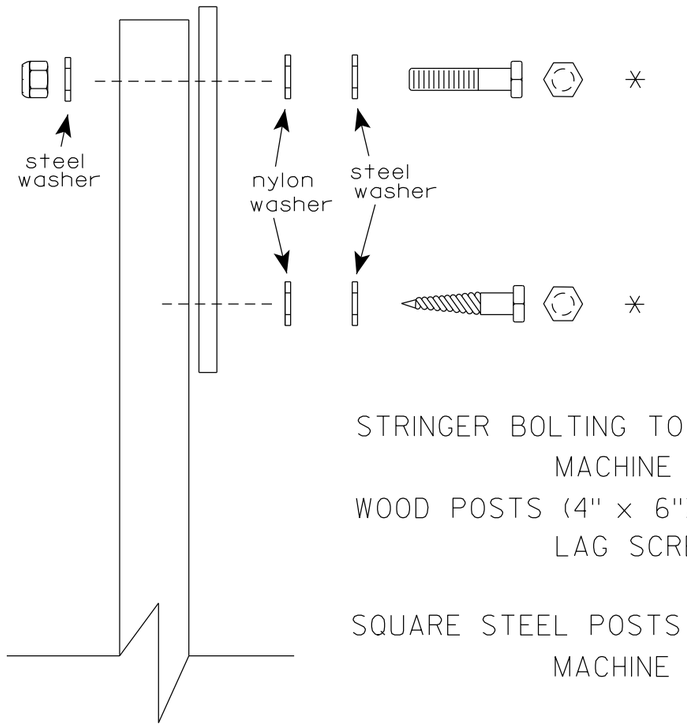
DATE 8/21/17 PLATE NO. A4-4.15

7

7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 263 | 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

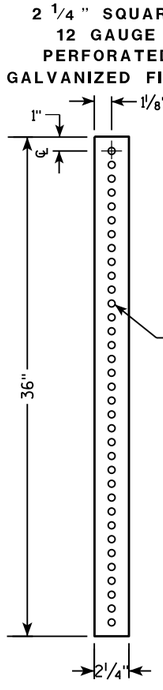
DATE 4/1/2020 PLATE NO. A4-8.9

PROJECT NO:

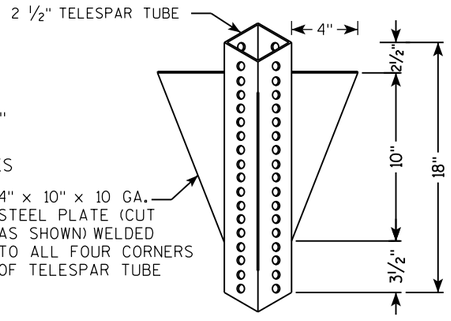
SHEET NO: 264 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

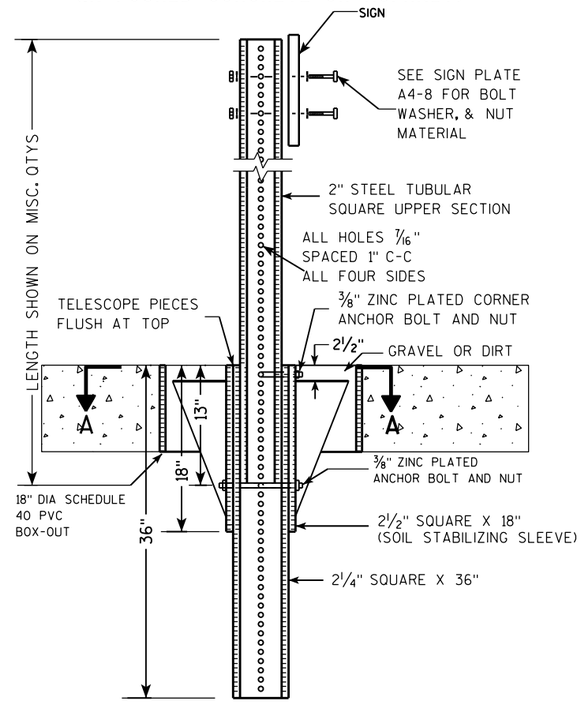
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



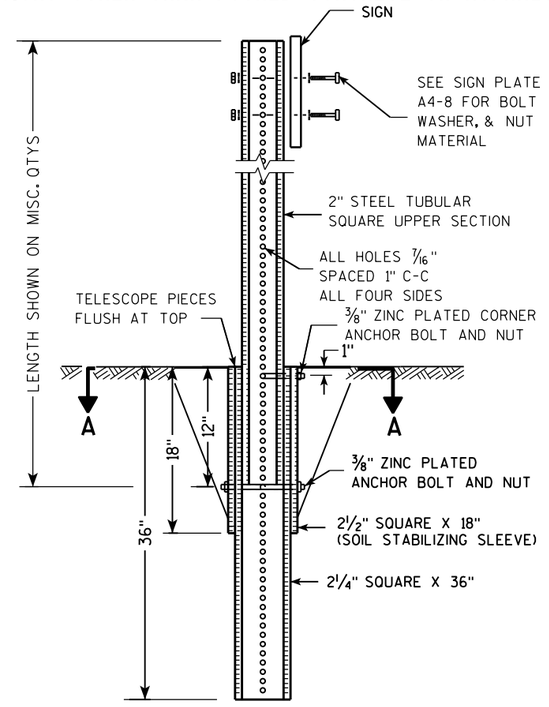
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

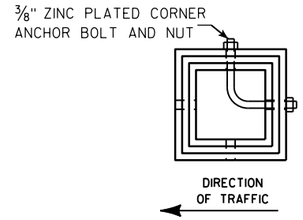


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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).

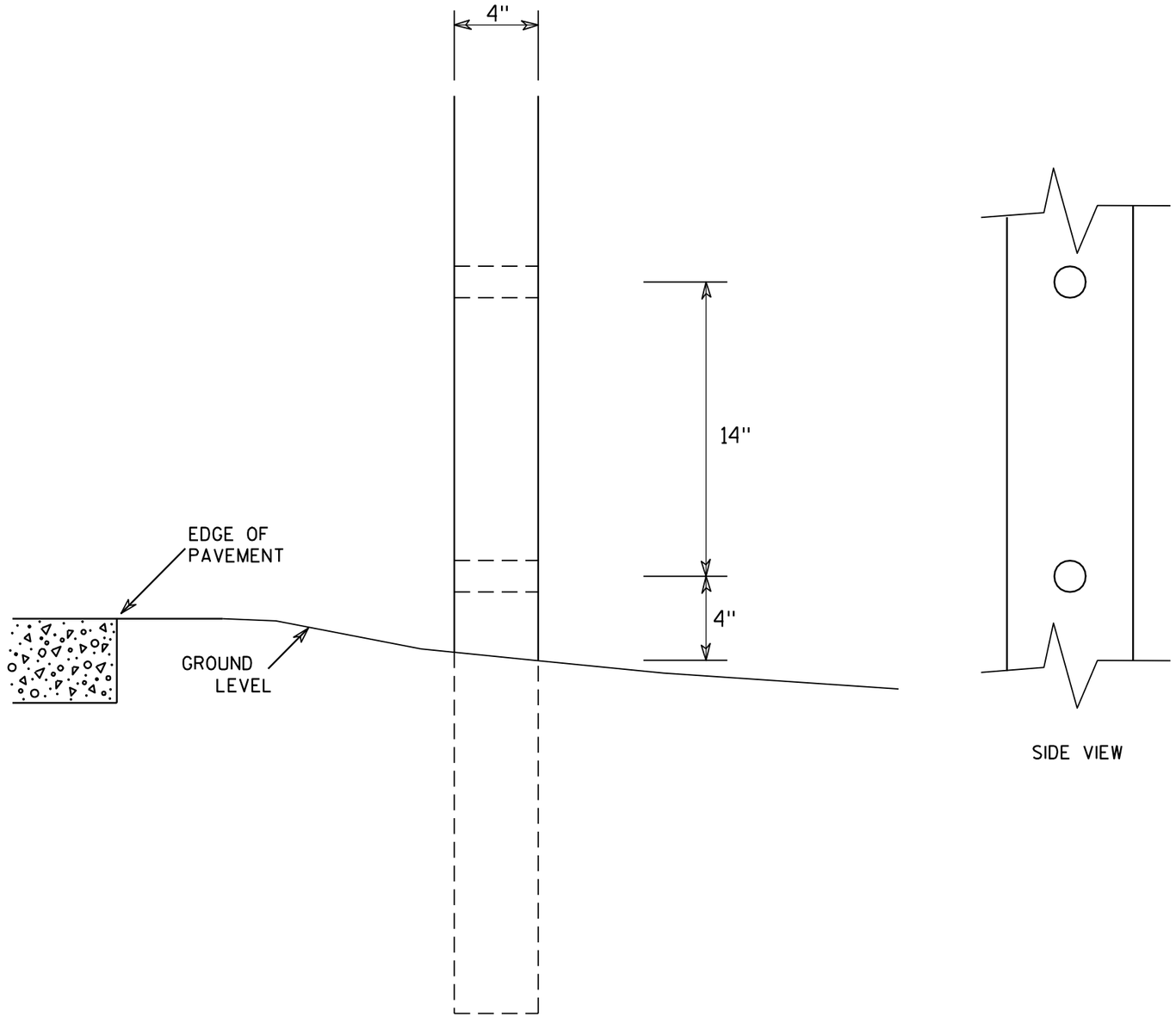
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 265 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



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

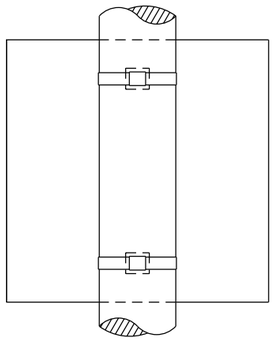
APPROVED Chester J Spang
for State Traffic Engineer

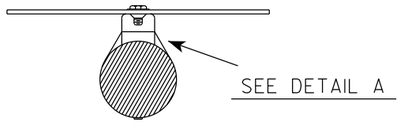
DATE 3/27/97 PLATE NO. A4-11.2

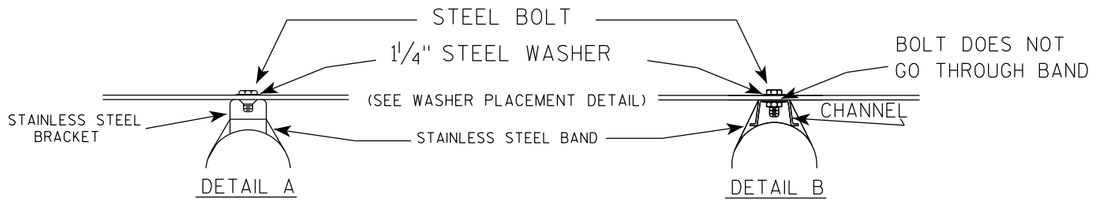
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 266	E

BANDING

SINGLE SIGN



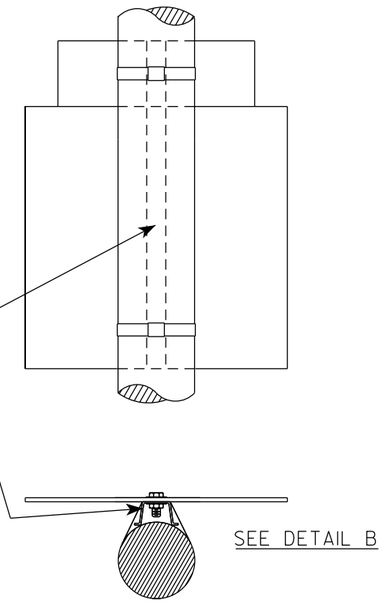




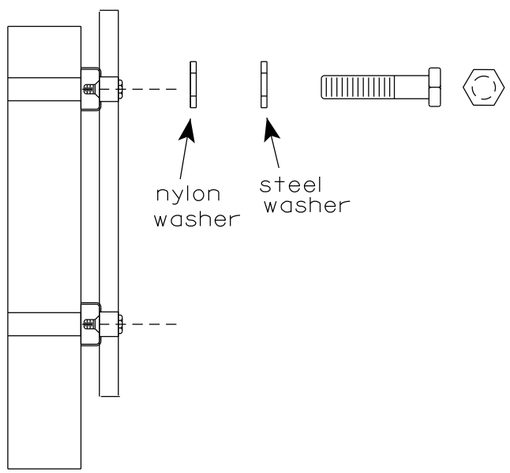
GENERAL NOTES

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

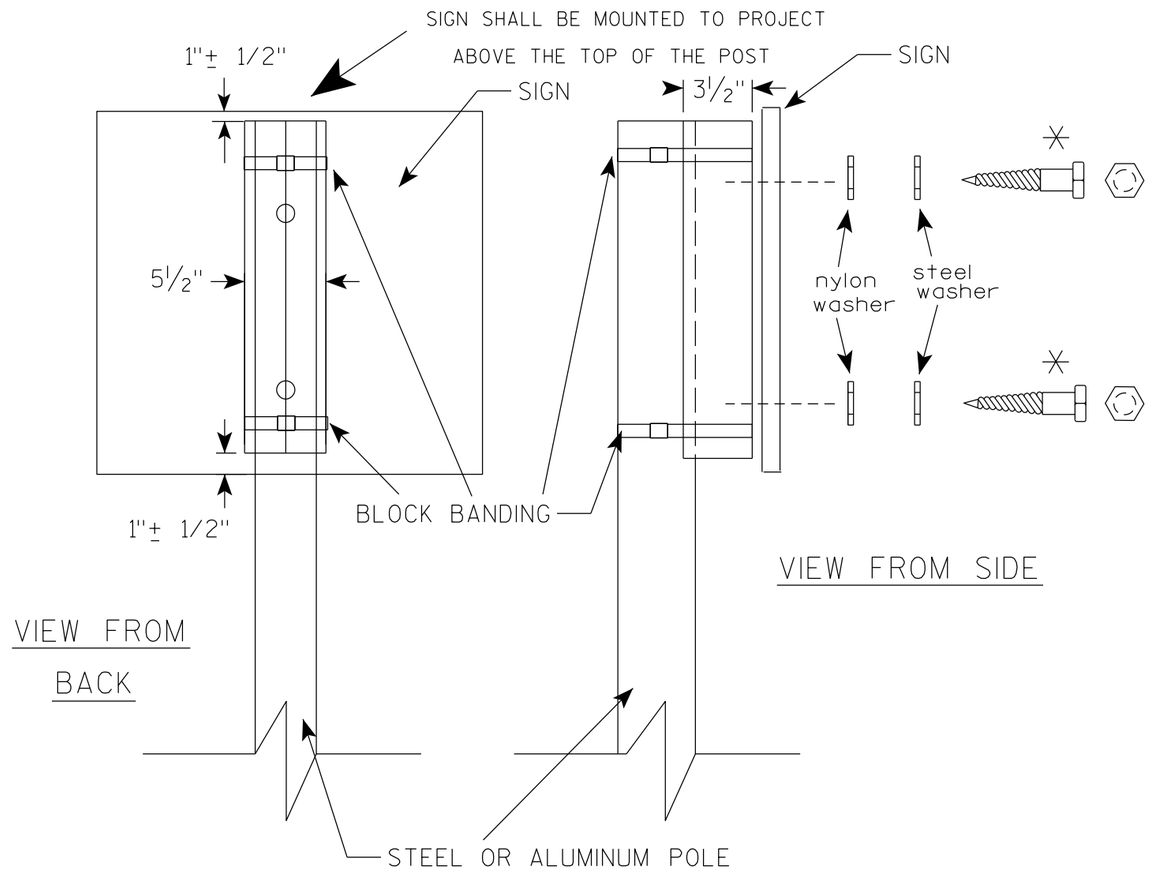
DATE 6/10/19 PLATE NO. A5-9.4

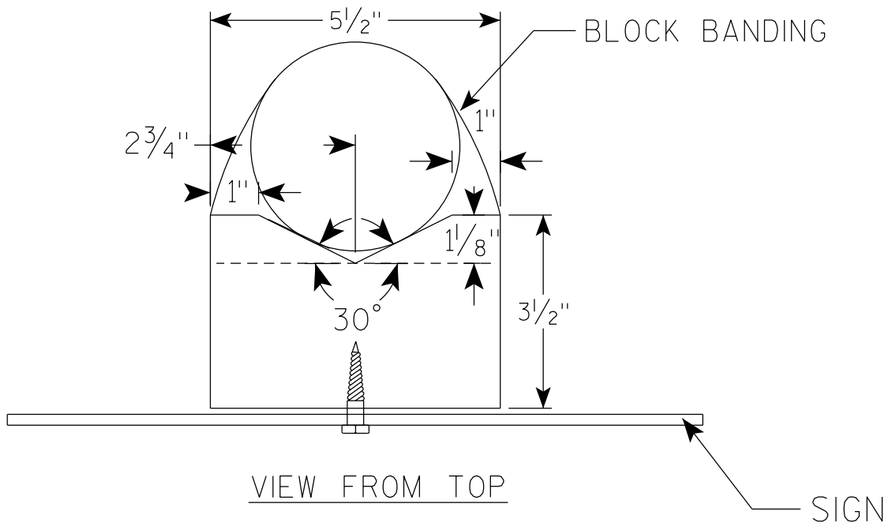
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 267	E

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

7

7





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)

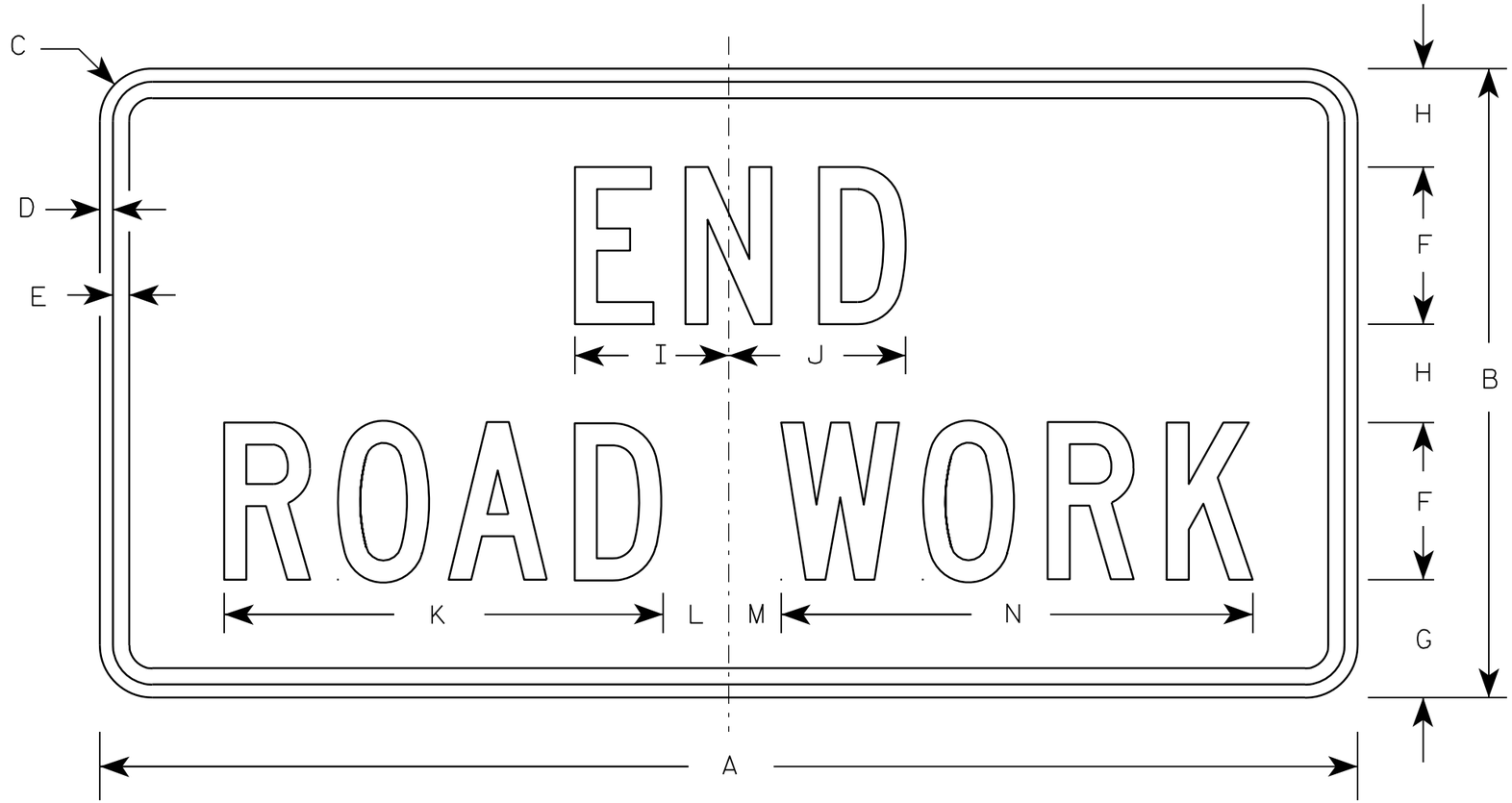
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 268 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

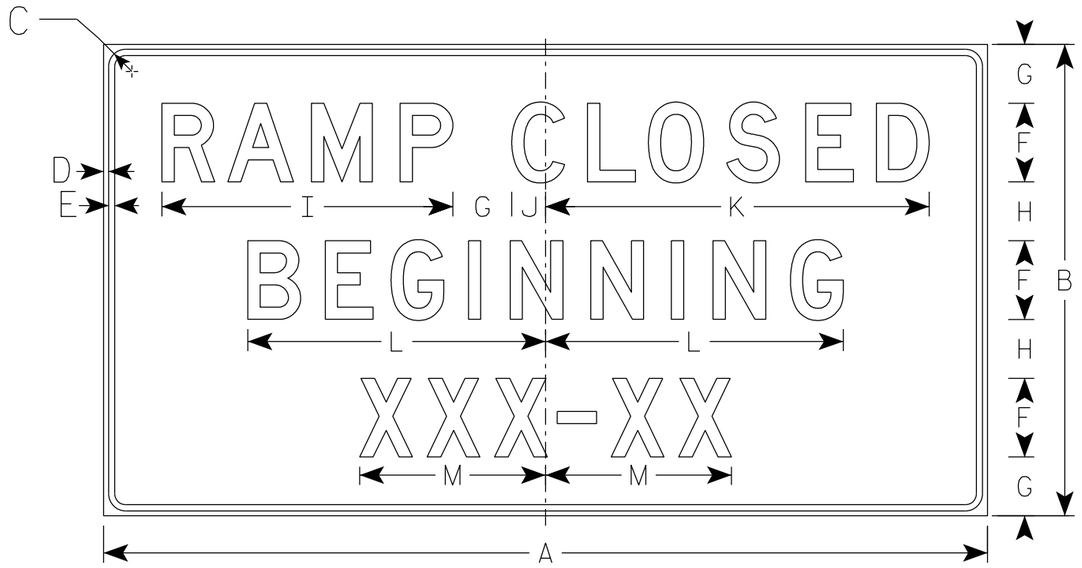
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 269	E

NOTES

1. Sign is Type II- Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D



G20-58

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																											
2	72	36	1 5/8	5/8	3/4	6	5	4	22 1/4	2 3/8	29 1/2	22 3/4	14 1/4														18.0
3	90	48	1 5/8	5/8	3/4	8	6	6	29 5/8	3 3/8	39	30 3/8	19														30.0
4																											
5																											

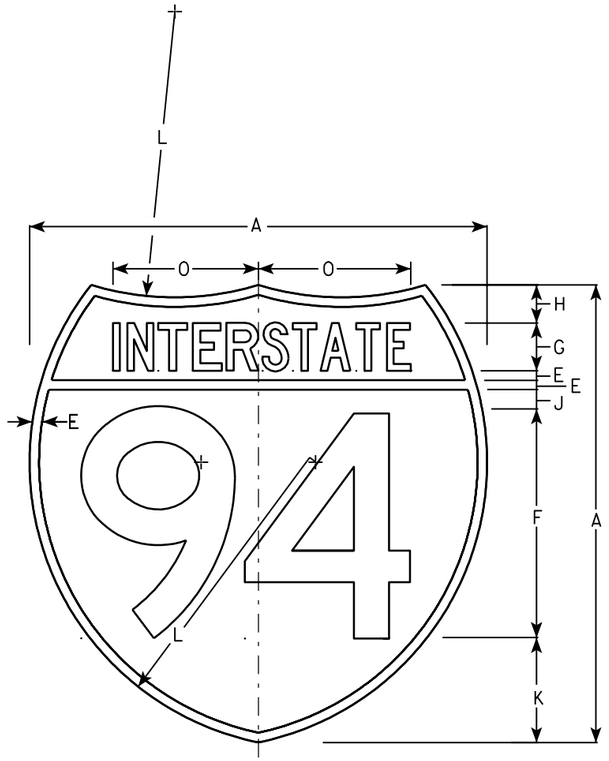
STANDARD SIGN
G20-58

WISCONSIN DEPT OF TRANSPORTATION

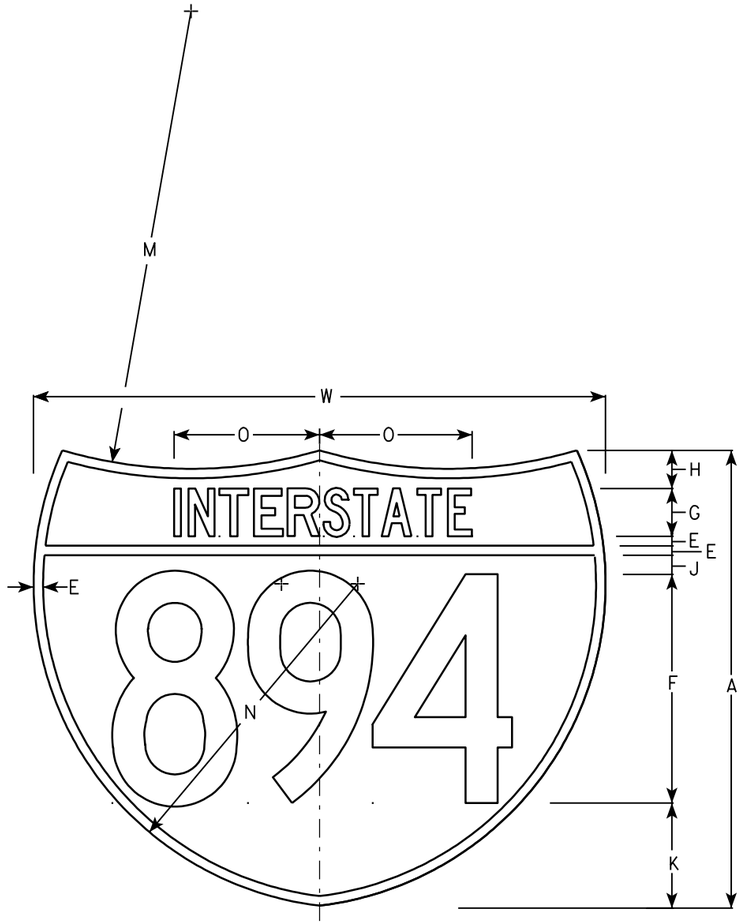
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/19/2020 PLATE NO. G20-58.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 270 | E



M1-1



M1-1A

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Top Red - Bottom Blue (See Note 6)
   Message - White - See Note 6
3. Message Series - See note 5
4. Substitute appropriate numerals & ajust spacing as per plate A10-1.
5. M1-1 - Numerals - D
   Interstate - C
   M1-1A - All copy - C
6. Permanent Signs
   Message - Type H Reflective
   Detour or other temporary signs
   Background - Reflective
   Message - Reflective

Metric equivalent for these signs are:

SIZE	M1-1	SIZE	M1-1A
1			
2	600 mm X 600 mm	2	600 mm X 750 mm
3	900 mm X 900 mm	3	900 mm X 1125 mm
4	900 mm X 900 mm	4	900 mm X 1125 mm
5	900 mm X 900 mm	5	900 mm X 1125 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	M1-1 Area sq. ft.	M1-1A Area sq. ft.	M1-1 Area m2	M1-1A Area m2
1																													
2	24				1/2	12	2 1/2	2		1	5 1/2	15	24	17	7 7/8								30			3.13	3.91	.36	.46
3	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
4	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
5	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05

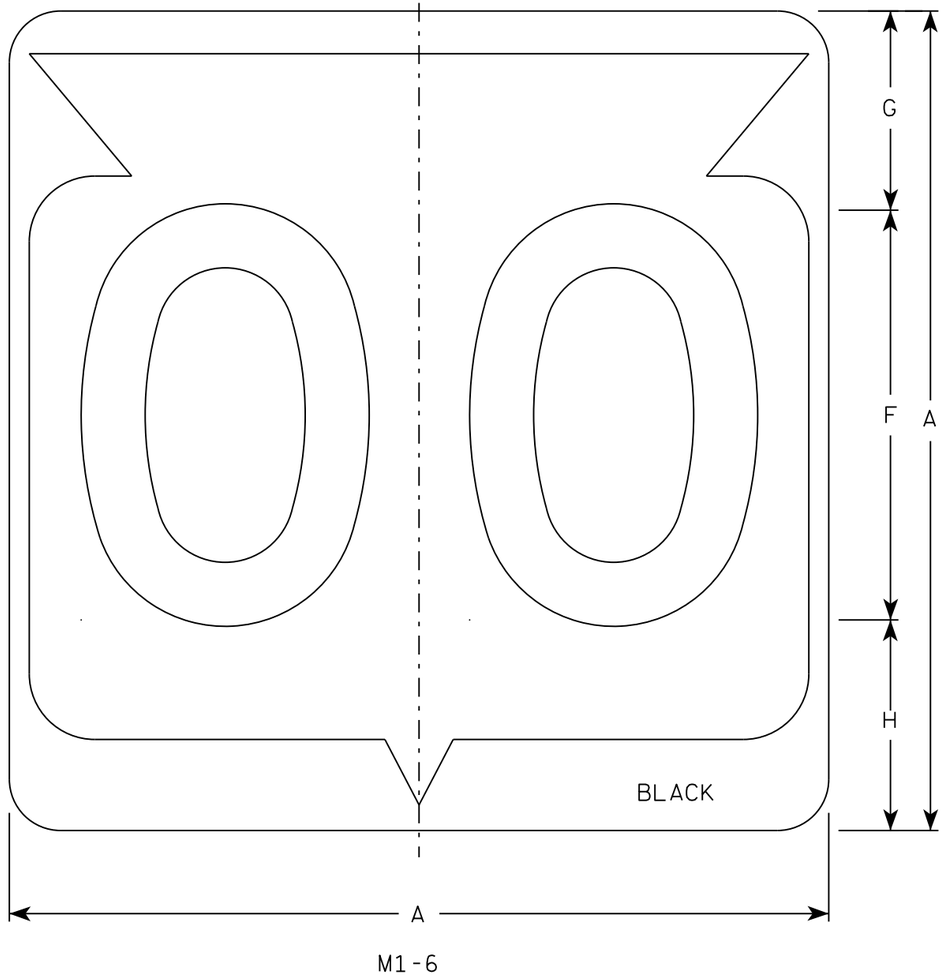
INTERSTATE ROUTE MARKER
M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/23/05 PLATE NO. M1-1.8

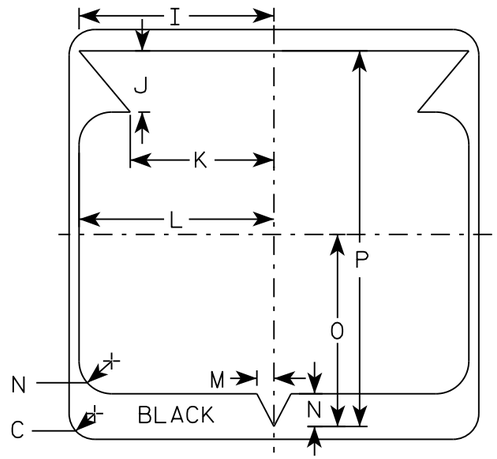
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 271	E



M1-6

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D except 3 number signs 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.



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																											
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0

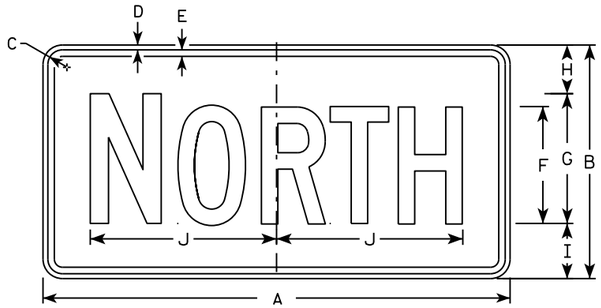
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

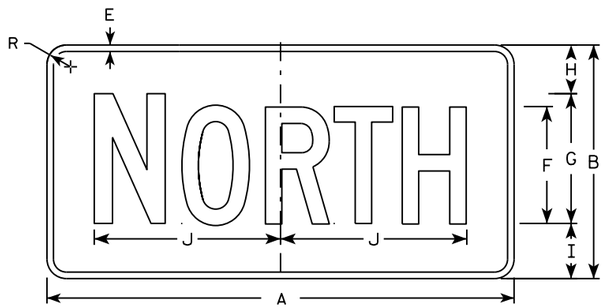
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/16/18 PLATE NO. M1-6.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 272 | E



M3-1
MM3-1
MP3-1



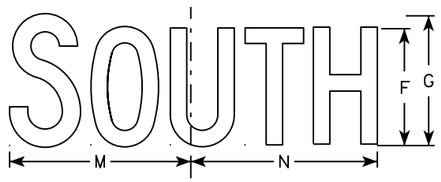
MB3-1
MK3-1
MN3-1



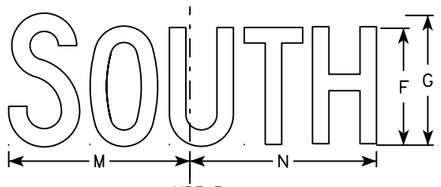
M3-2
MM3-2
MP3-2



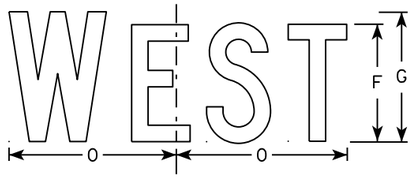
MB3-2
MK3-2
MN3-2



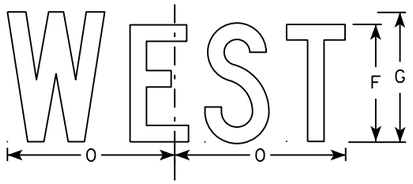
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

1. All Signs Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
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.
5. M3-1 thru M3-4 Background - White
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White
   MK3-1 thru MK3-4 Background - Green
   Message - White
   MM3-1 thru MM3-4 Background - White
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White
   MP3-1 thru MP3-4 Background - White
   Message - Blue
6. Note the first letter of each direction is larger than the remainder of the message.

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																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS
M3-1 thur M3-4
SERIES

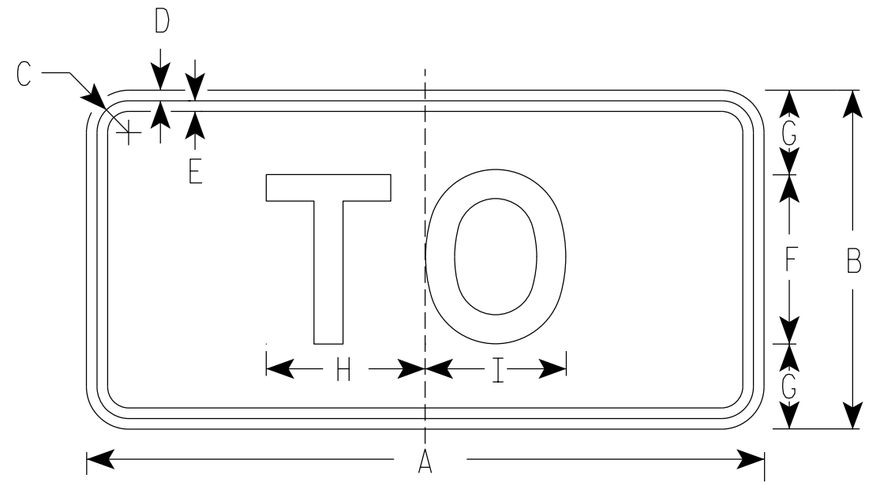
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

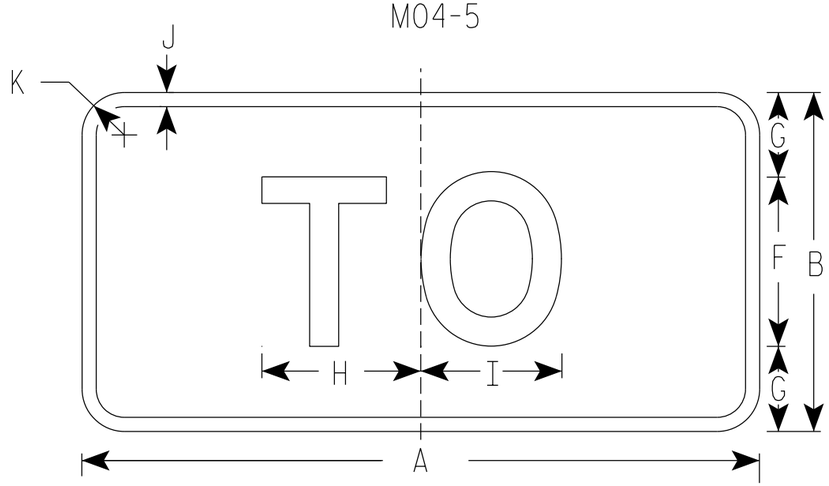
DATE 10/15/15 PLATE NO M3-1.14

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M31.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



M4-5
MM4-5
MP4-5
M04-5



MB4-5
MK4-5
MN4-5

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - E
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. M4-5 Background - White
   Message - Black

   MB4-5 Background - Blue
   Message - White

   MK4-5 Background - Green
   Message - White

   MM4-5 Background - White
   Message - Green

   MN4-5 Background - Brown
   Message - White

   MP4-5 Background - White
   Message - Blue

   M04-5 Background - Orange Type F Reflective
   Message - Black

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																											
2	24	12	1 1/8	3/8	3/8	6	3	5 3/8	5 1/4	1/2	1 1/2																2.00
3	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
4	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
5	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5

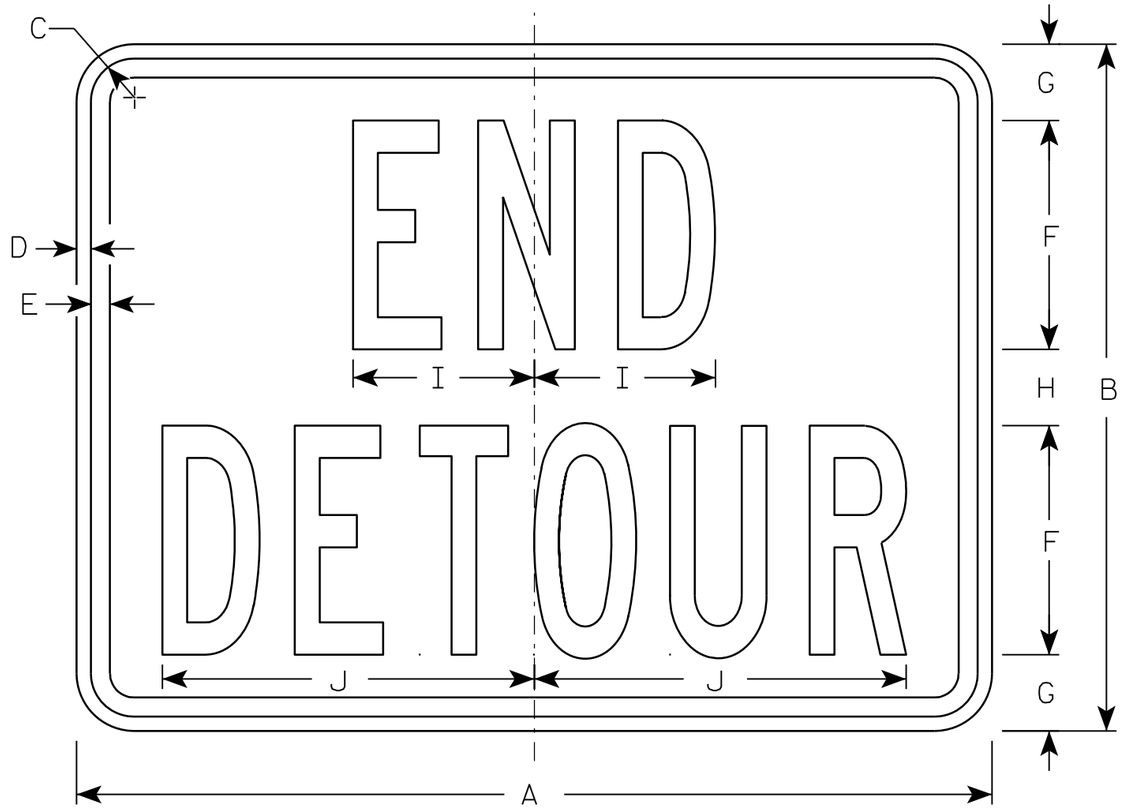
STANDARD SIGN
M4-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/7/19 PLATE NO. M4-5.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 274 | E



M4-8A

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 - B
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.

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																											
2	24	18	1 1/8	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/8	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4																											
5																											

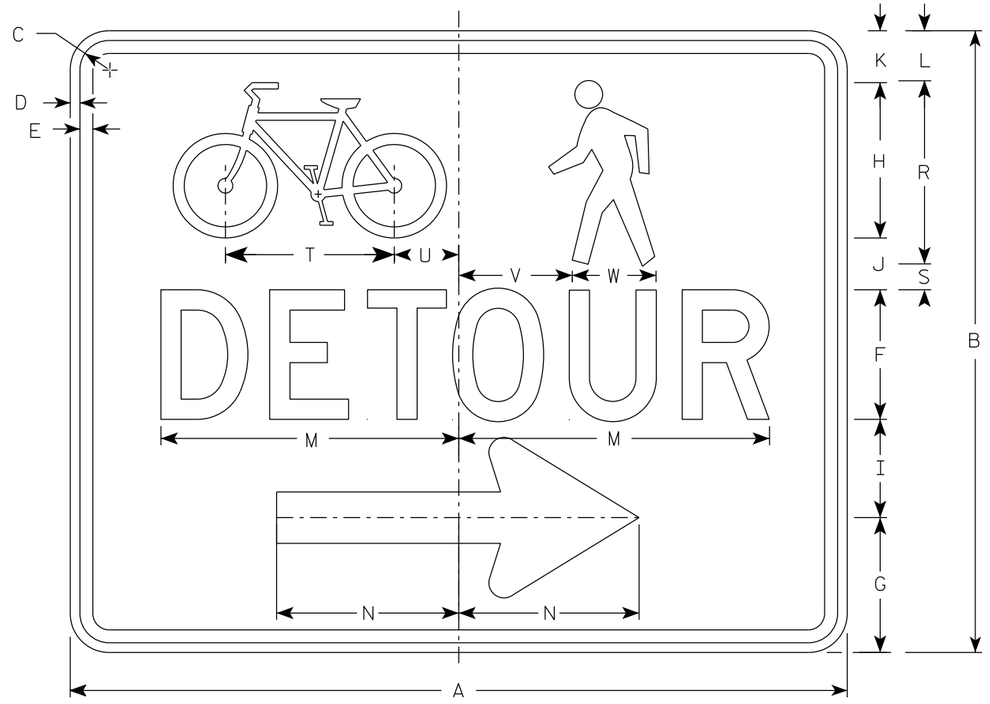
STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-8A.2

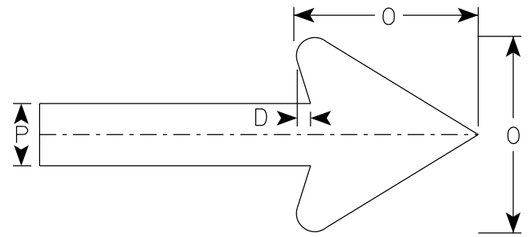
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 275	E



M4-9AR

NOTES

1. Sign is Type II-Type F Reflective
2. Color:
   Background - Orange
   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. M4-9AL is the same as M4-9AR except the arrow is reversed.



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																											
2	30	24	1 1/8	3/8	1/2	5	5 1/4	6	3 3/4	2	2	1 7/8	11 3/4	7	6	2		7 1/8	1	6 1/2	2 1/2	4 3/8	3 1/4				5.00
3																											
4																											
5																											

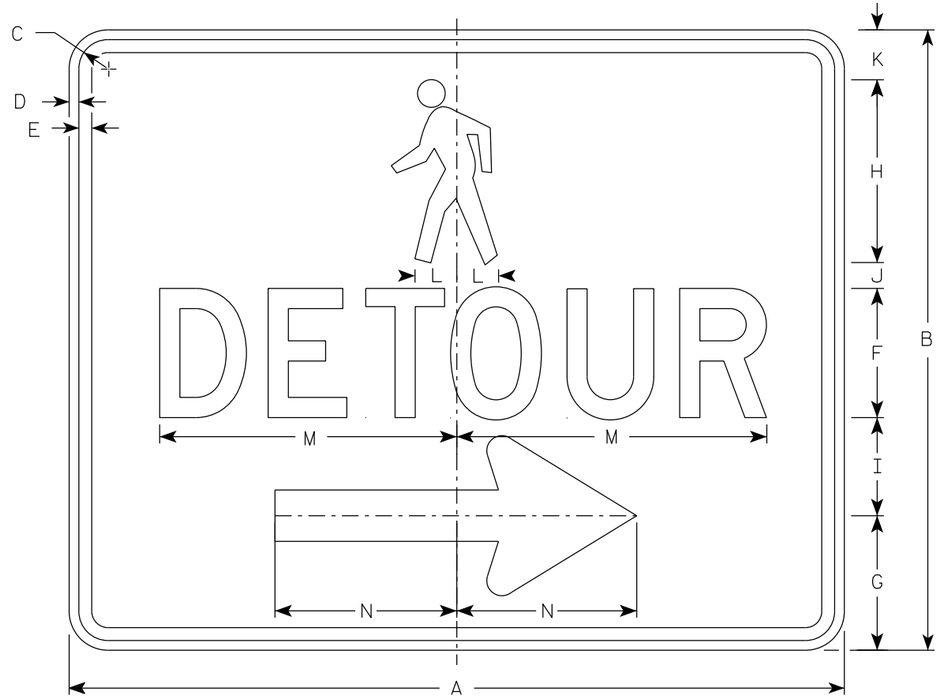
STANDARD SIGN
M4-9A L&R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/2/19 PLATE NO. M4-9A.1

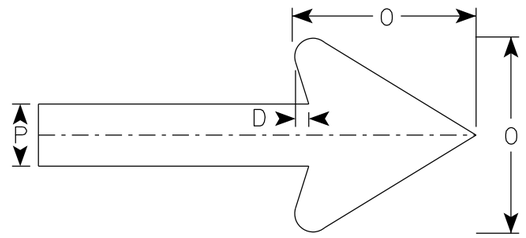
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 276 | E



M4-9BR

NOTES

1. Sign is Type II-Type F Reflective
2. Color:
   Background - Orange
   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. M4-9BL is the same as M4-9BR except the arrow is reversed.



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																											
2	30	24	1 1/8	3/8	1/2	5	5 1/4	7 1/8	3 3/4	1	1 1/8	1 5/8	11 3/4	7	6	2											5.00
3																											
4																											
5																											

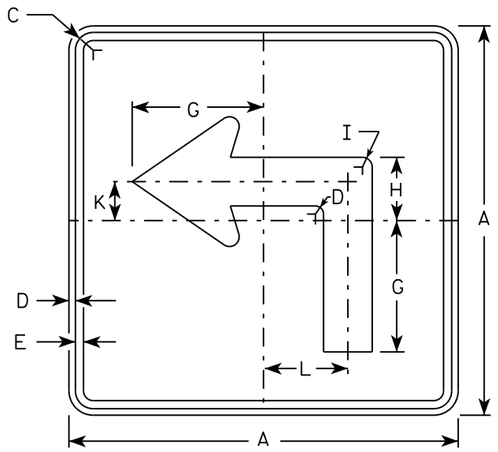
STANDARD SIGN
M4-9B L&R

WISCONSIN DEPT OF TRANSPORTATION

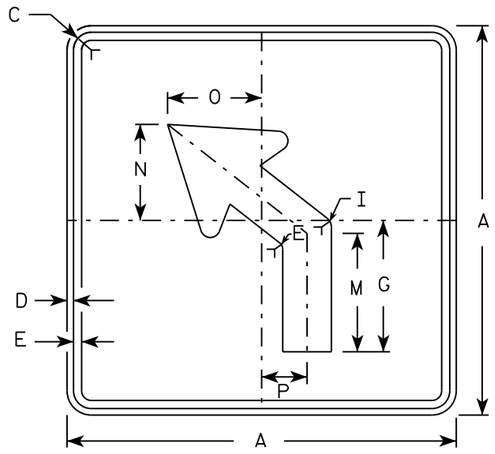
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 7/1/19 PLATE NO. M4-9B.2

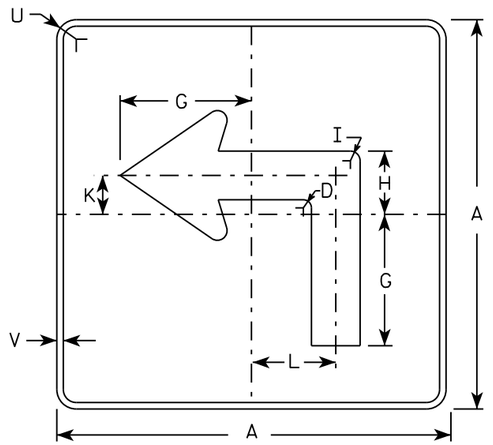
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 277 | E



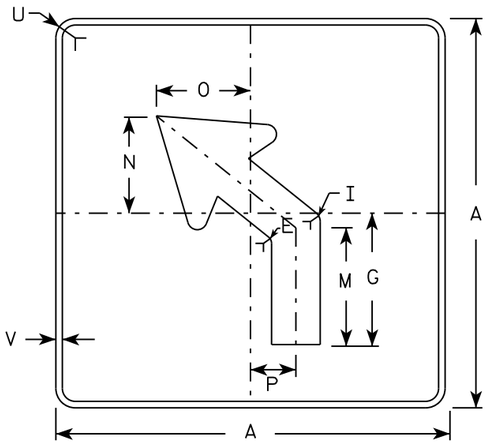
M5-1L
MM5-1L
MO5-1L
MP5-1L



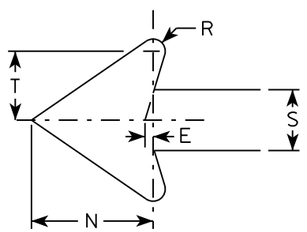
M5-2L
MM5-2L
MO5-2L
MP5-2L



MB5-1L
MK5-1L
MN5-1L
MR5-1L



MB5-2L
MK5-2L
MN5-2L
MR5-2L



NOTES

1. Signs are Type II - Type H reflective except as shown
2. Color:
   Background - See note 4
   Message - See note 4
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. M5-1 and M5-2 Background - White
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White
   MK5-1 and MK5-2 Background - Green
   Message - White
   MM5-1 and MM5-2 Background - White
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White - Type H Reflective
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

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																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

STANDARD SIGN
M5-1 & M5-2

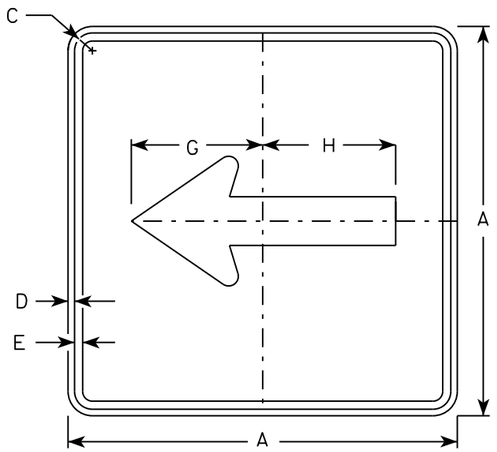
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

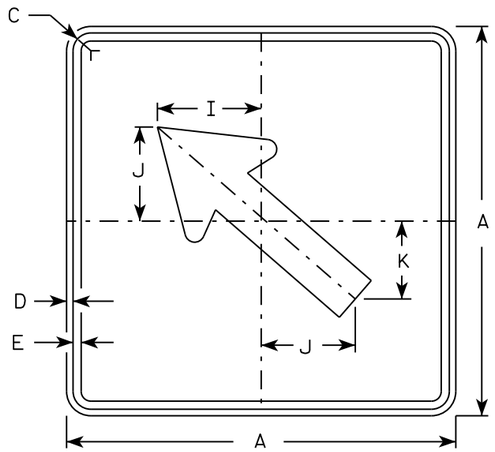
DATE 10/15/15 PLATE NO. M5-1.13

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M51.DGN PLOT DATE : 01-DEC-2015 18:07 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



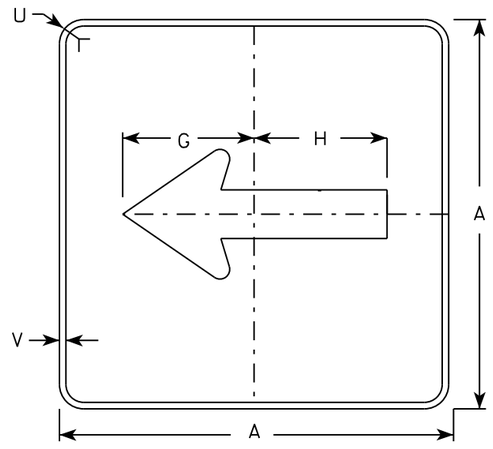
M6-1
MM6-1
MO6-1
MP6-1



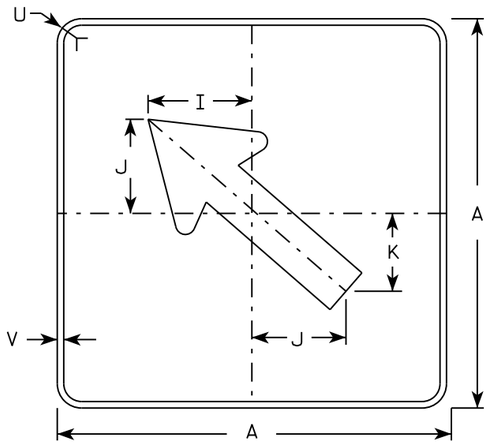
M6-2
MM6-2
MO6-2
MP6-2

NOTES

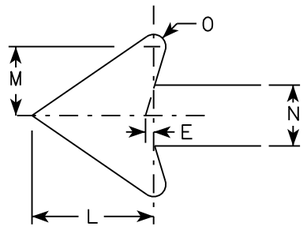
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow



MB6-1
MK6-1
MN6-1
MR6-1



MB6-2
MK6-2
MN6-2
MR6-2



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																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2						3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25

STANDARD SIGN
M6-1 & M6-2
SERIES

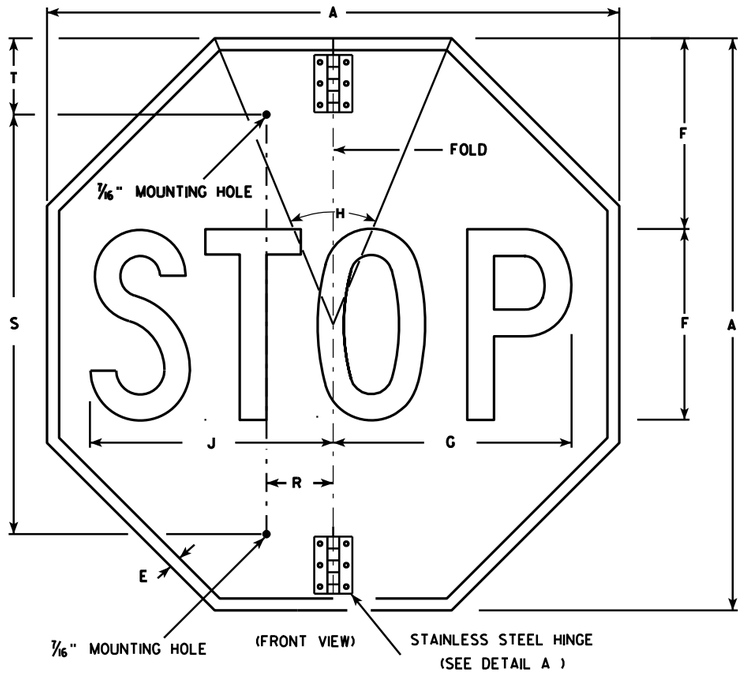
WISCONSIN DEPT OF TRANSPORTATION

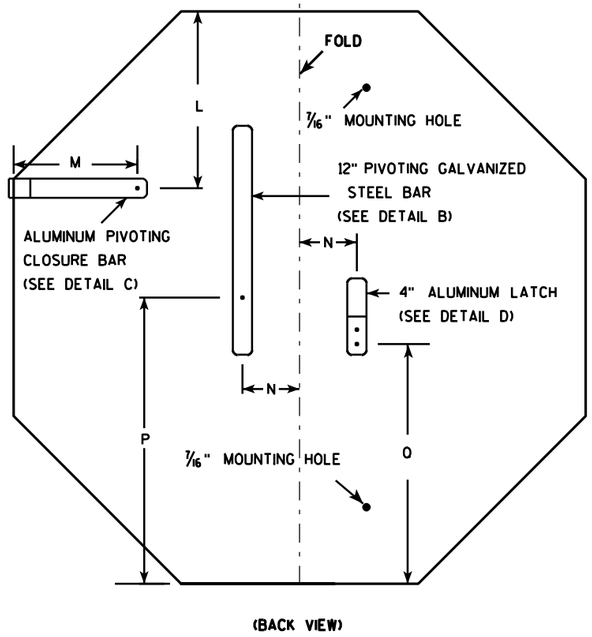
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 279 M6-1.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

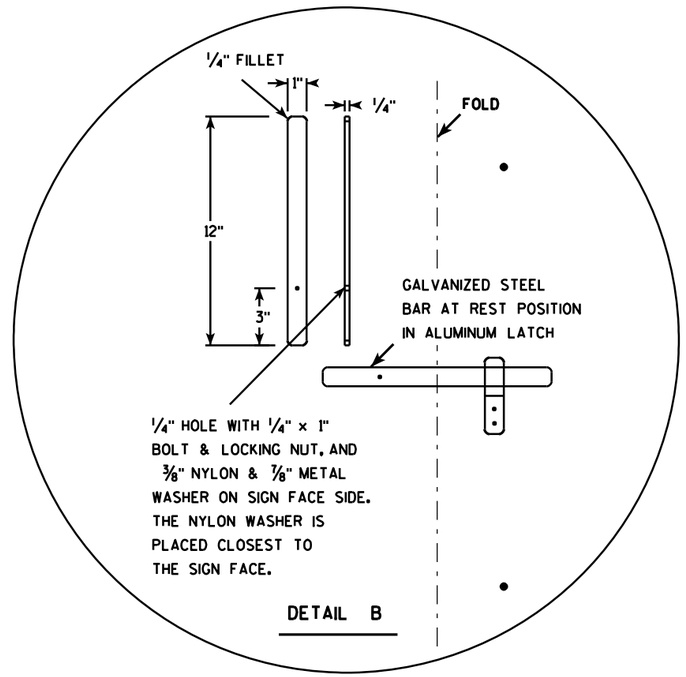
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M61.DGN PLOT DATE : 01-DEC-2015 17:57 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000

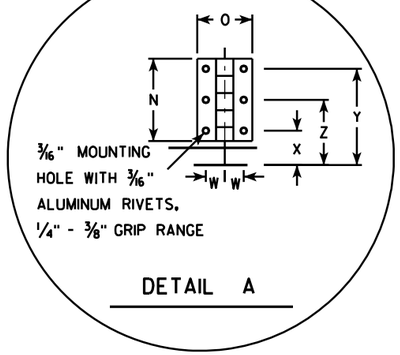


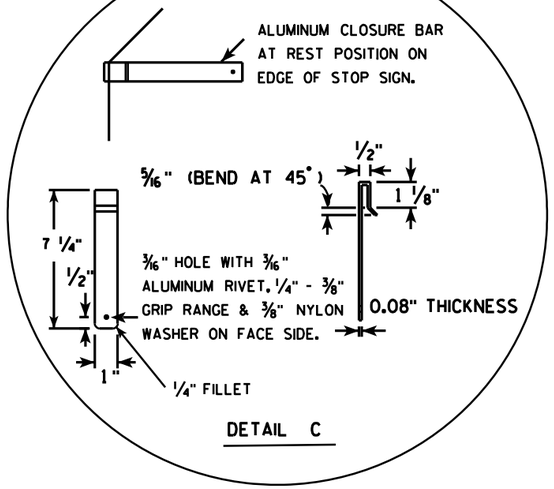


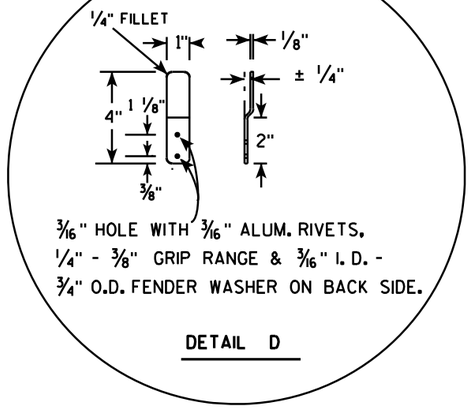
NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C
4. All hardware used on the folding STOP sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.









SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30				5/8	10	12 1/2	45		12 3/4		9 1/4	6 1/2	3	2	15	12 3/8	2 1/2	22	5			11/16	1 1/4	3 1/2	2 3/8	5.18
2M	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
3	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
4																											
5																											

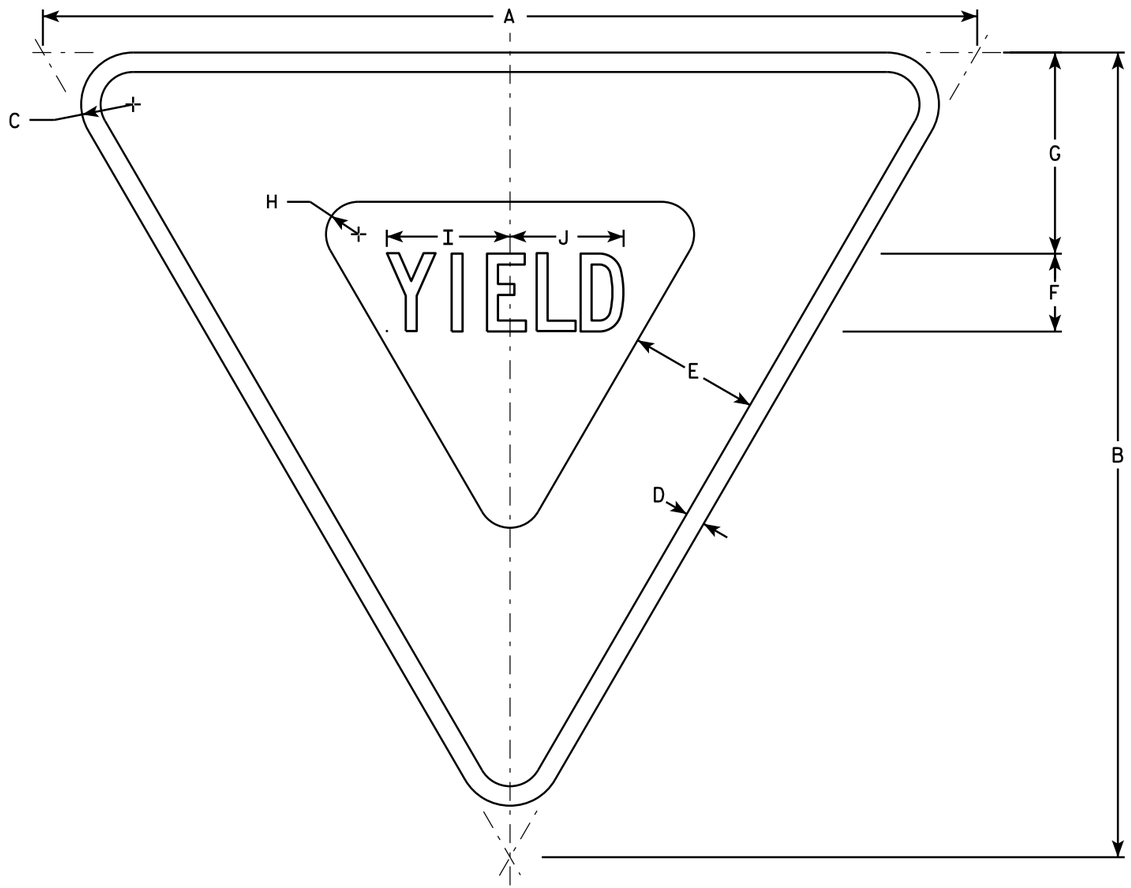
STANDARD SIGN
R1-1F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1F.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 280 | E



R1-2

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 - See note 5
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.
5. The border strip and word message are reflectorized red.

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	30	26	1 1/2	5/8	4	2 1/2	6 3/8	7/8	4	3 5/8																	2.71
2S	36	31	2	3/4	5	3	7 3/4	1 1/4	4 3/4	4 3/8																	3.88
2M	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
3	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
4	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
5	60	52	3	1 1/2	8	5	13	2 1/2	7 7/8	7 1/4																	10.83
6																											
7	18	15 1/2	1	3/8	2 1/2	1 1/2	3 7/8	5/8	2 3/8	2 1/4																	0.97

STANDARD SIGN
R1-2

WISCONSIN DEPT OF TRANSPORTATION

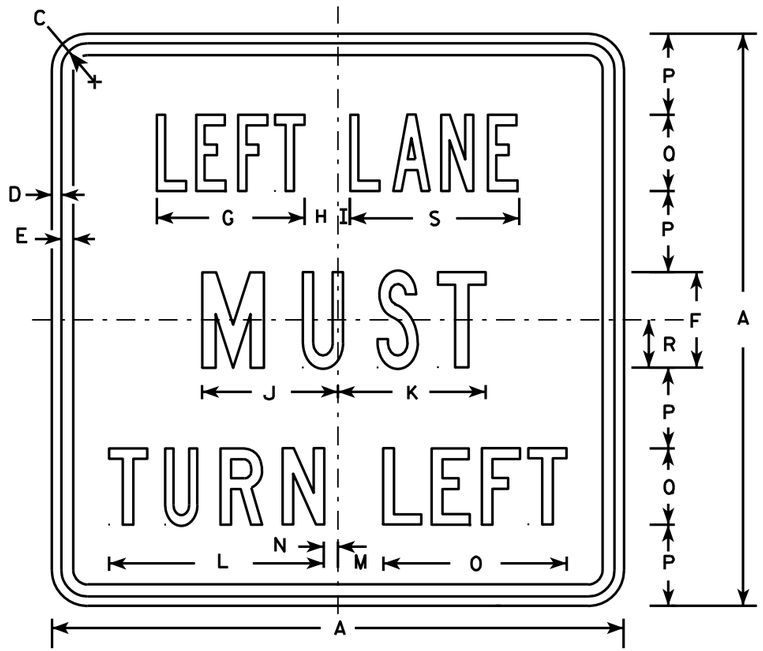
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/13/14 PLATE R1-2.12

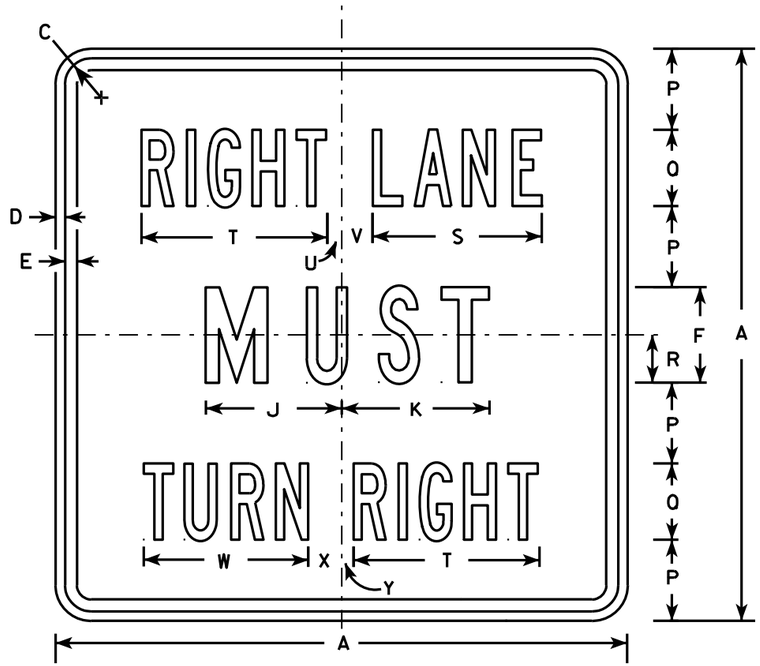
PROJECT NO: | HWY: | COUNTY: | | SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R12.DGN PLOT DATE : 13-OCT-2014 15:12 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.837526:1.000000

WISDOT/CADDS SHEET 42



R3-7L



R3-7R

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 - Line 1 is Series B.
   Line 2 is Series C.
   Line 3 on plate R3-7R is Series B and Series C on plate R3-7L.
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.

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	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2S	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2M	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
3	36		1 5/8	5/8	3/4	6	9 5/8	2	1 1/8	8 3/4	9	13 1/2	3 7/8	1 1/2	12 1/2	5	5	3	10 5/8	12	7/8	2 1/4	10 5/8	2 1/8	1		9.00
4	48		2 1/4	3/4	1	8	13 1/2	2 3/8	1 1/2	11 1/2	11 7/8	17 3/4	3 5/8	2 1/2	16 3/8	6 1/2	7	4	14 3/8	16 7/8	5/8	3 1/4	15 1/8	2 3/4	1 1/8		16.00
5																											

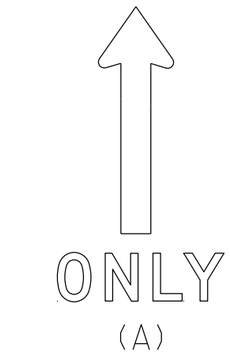
STANDARD SIGN
R3-7L & R3-7R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-7.3

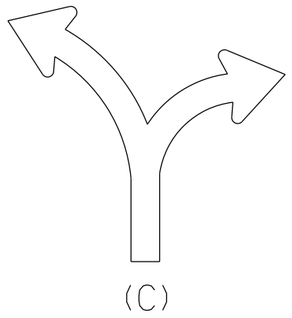
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 282 | E

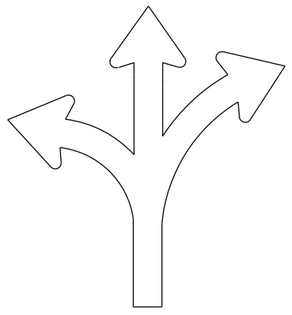


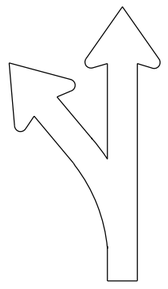
(A)

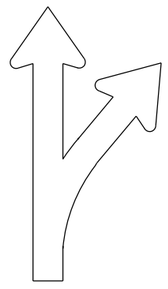


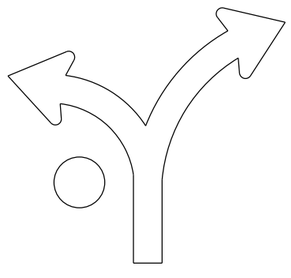
(B)

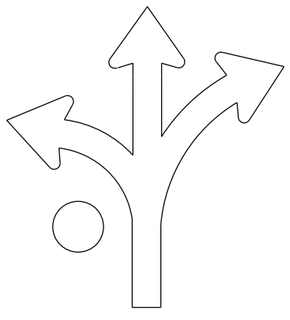

(C)

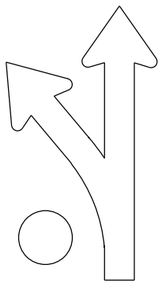

(D)

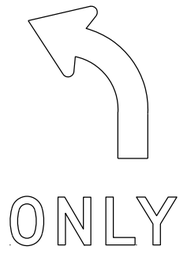

(E)


(F)

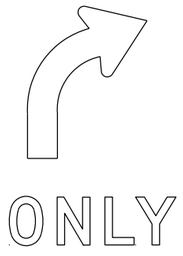

(G)


(H)

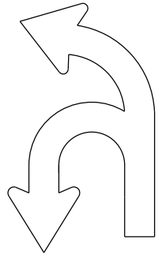

(I)



(L)



(R)


(U)

NOTES

1. Sigs are Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Use appropriate Letter for Sign Code
   Each letter added makes sign wider. Example R3-8EAR
5. Square footage of sign varies by letters

1	Letter =	3.75 sq ft for Size 2
		6.0 sq ft for Size 3
		10.0 sq ft for Size 4 or 5
2	Letters =	7.5 sq ft for Size 2
		12.0 sq ft for Size 3
		20.0 sq ft for Size 4 or 5
3	Letters =	11.25 sq ft for Size 2
		18.0 sq ft for Size 3
		30.0 sq ft for Size 4 or 5
4	Letters =	15.0 sq ft for Size 2
		24.0 sq ft for Size 3
		40.0 sq ft for Size 4 or 5
5	Letters =	18.75 sq ft for Size 2
		30.0 sq ft for Size 3
		50.0 sq ft for Size 4 or 5
6	Letters =	22.5 sq ft for Size 2
		36.0 sq ft for Size 3
		60.0 sq ft for Size 4 or 5

6. When letters C,D,G,H are used on the Left or Right end of the sign the Sq. Ft. changes.
   Add the amounts when these letters are used:
   1.25 sq ft for Size 2
   1.5 sq ft for Size 3
   2.0 sq ft for Size 4 or 5

STANDARD SIGN
R3-8 Series

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

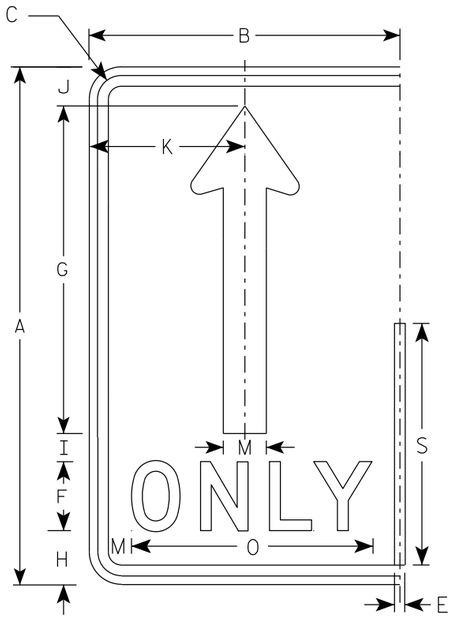
PROJECT NO:

SHEET NO: 283 E

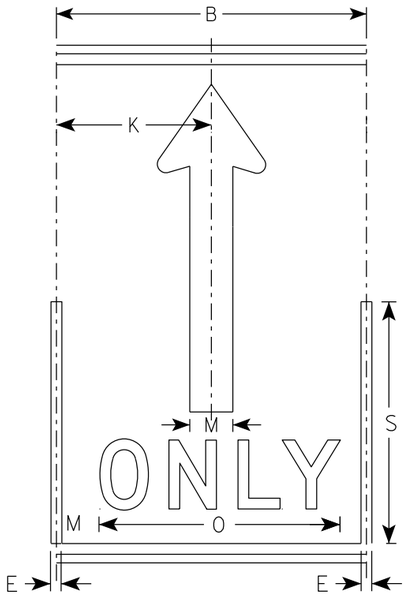
FILE NAME : C:\CAEfiles\Projects\stdplate_R38.dgn PLOT DATE : 21-MAY 2019 4:37 PLOT BY : mscj9h PLOT NAME :
WISDOT/CADDS SHEET 42

NOTES

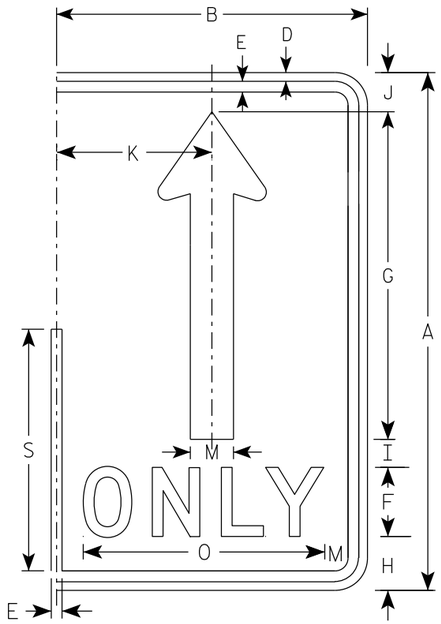
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



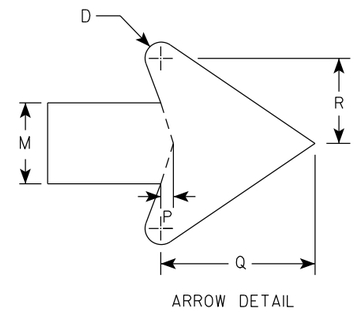
(A)



(A)



(A)



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																											
2S	30	18	1 3/8	1/2	5/8	4	19	3 1/8	1 5/8	2 1/4	9		2 1/2		14	3/8	4 3/4	2 5/8	14								3.75
2M	30	18	1 3/8	1/2	5/8	4	19	3 1/8	1 5/8	2 1/4	9		2 1/2		14	3/8	4 3/4	2 5/8	14								3.75
3	36	24	1 3/8	1/2	5/8	5	22 3/4	3 3/4	1 3/4	2 3/4	12		3		17 5/8	1/2	5 3/4	3 1/8	16 3/4								6.0
4	48	30	2 1/4	3/4	1	6	30 3/8	5 1/8	2 7/8	3 5/8	15		4		21 3/4	5/8	7 5/8	4 1/4	22 3/8								10.0
5	48	30	2 1/4	3/4	1	6	30 3/8	5 1/8	2 7/8	3 5/8	15		4		21 3/4	5/8	7 5/8	4 1/4	22 3/8								10.0

STANDARD SIGN
R3-8 (A) Arrow

WISCONSIN DEPT OF TRANSPORTATION

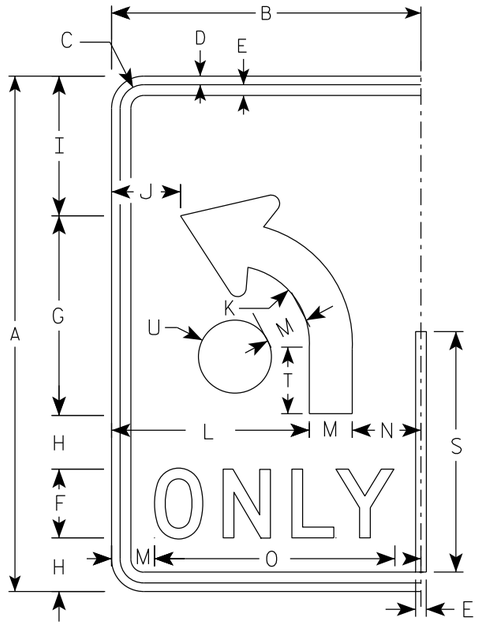
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

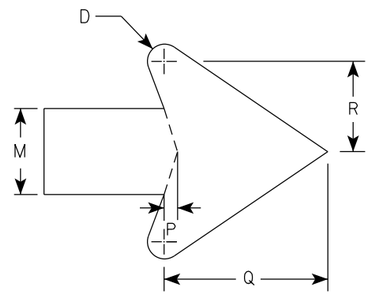
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 284 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
   Message Series - D



(B)



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																											
2S	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8	2 1/8						3.75
2M	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8	2 1/8						3.75
3	36	24	1 3/8	1/2	5/8	5	14	3 1/2	9 3/4	6	5 3/8	15	3	6	17 5/8	1/2	5 3/4	3 1/8	16 3/4	4 5/8	2 1/2						6.0
4	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4	3 3/8						10.0
5	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4	3 3/8						10.0

STANDARD SIGN

R3-8 (B) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

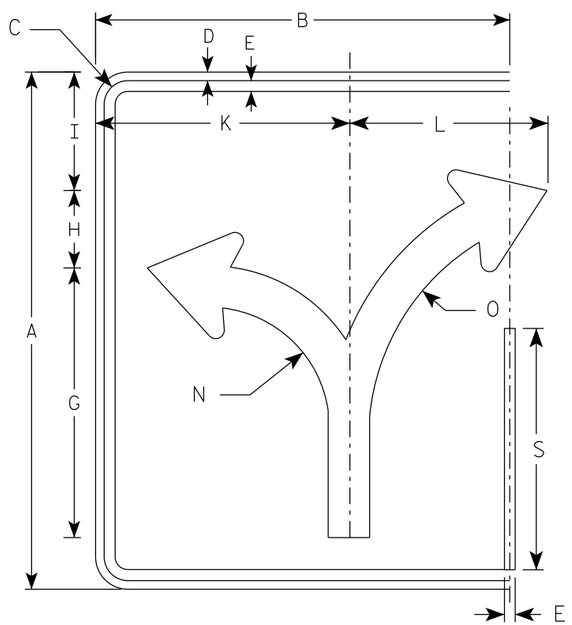
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

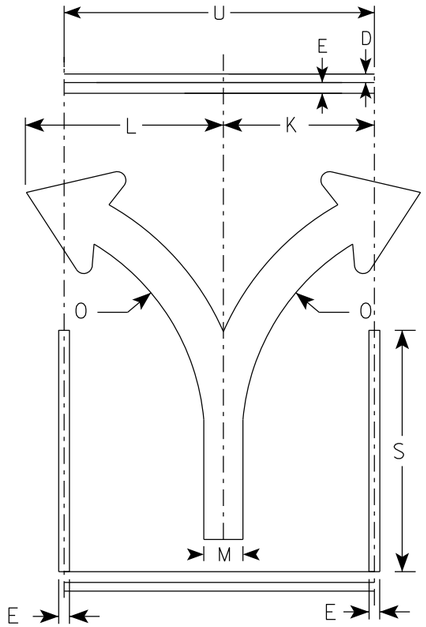
SHEET NO: 285 E

NOTES

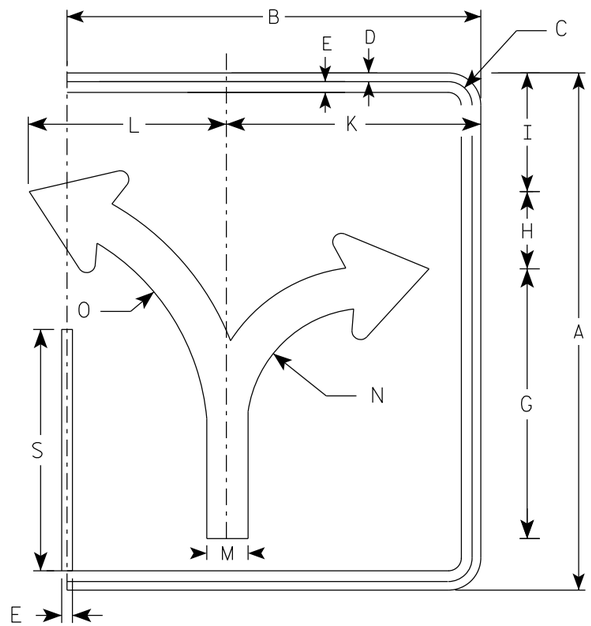
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



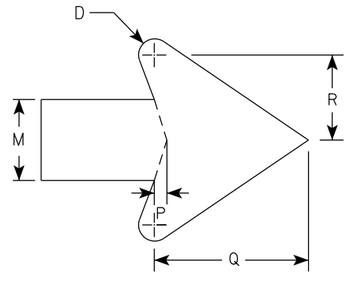
(C)



(C)



(C)



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	ENDS Area sq. ft.	MIDDLE Area sq. ft.
1																												
2S	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
2M	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
3	36	30	1 3/8	1/2	5/8		18 3/4	5 1/2	8 1/4		17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		24						7.5	6.0
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0

STANDARD SIGN
R3-8 (C) Arrow

WISCONSIN DEPT OF TRANSPORTATION

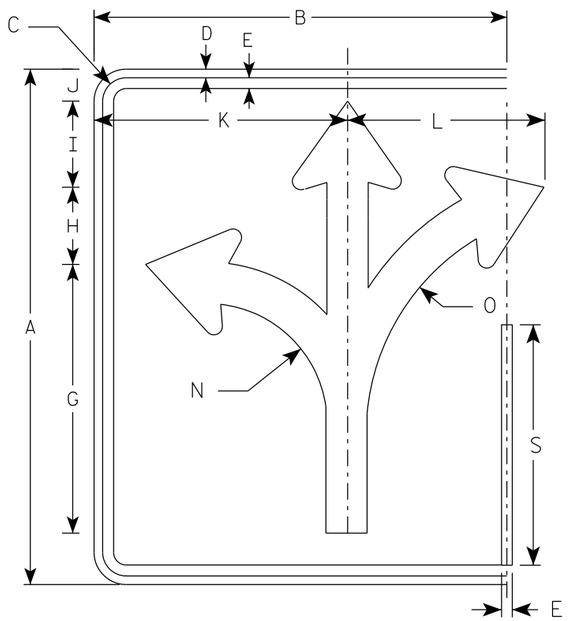
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

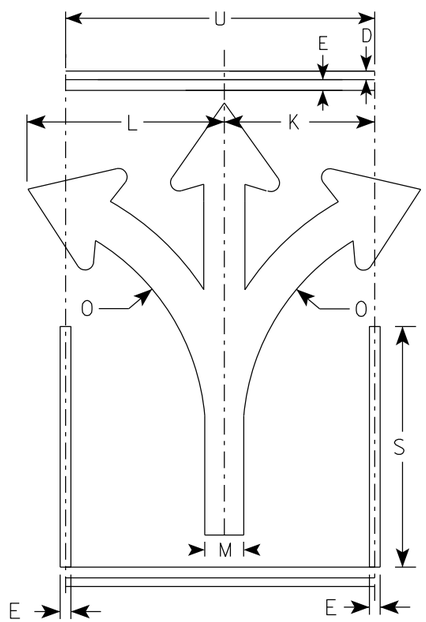
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 286 | E

NOTES

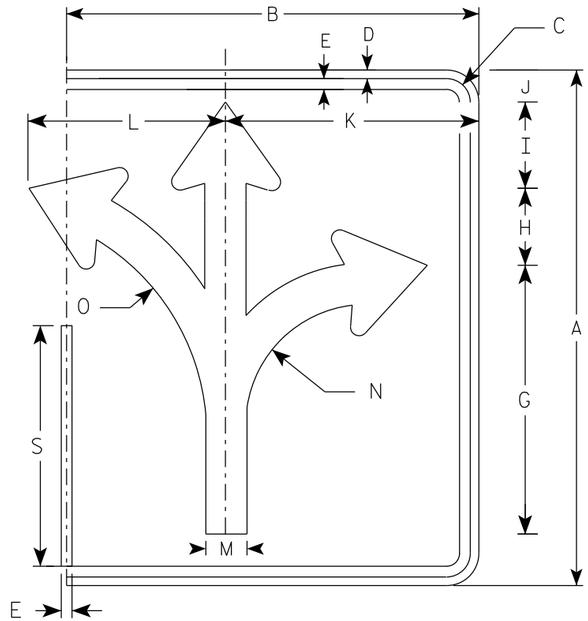
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



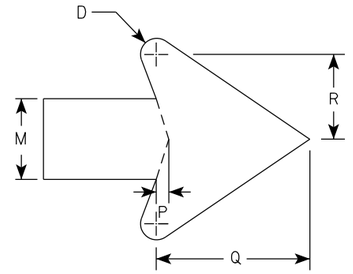
(D)



(D)



(D)



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	ENDS Area sq. ft.	MIDDLE Area sq. ft.
1																												
2S	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
2M	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
3	36	30	1 3/8	1/2	5/8		18 3/4	5 1/2	6	2 1/4	17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		24						7.5	6.0
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0

STANDARD SIGN
R3-8 (D) Arrow

WISCONSIN DEPT OF TRANSPORTATION

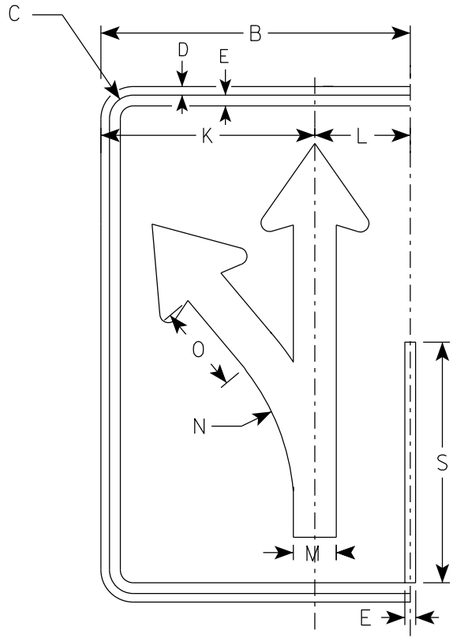
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

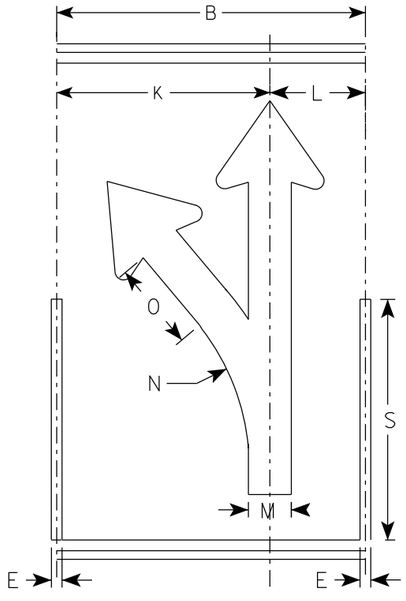
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 287 | E

NOTES

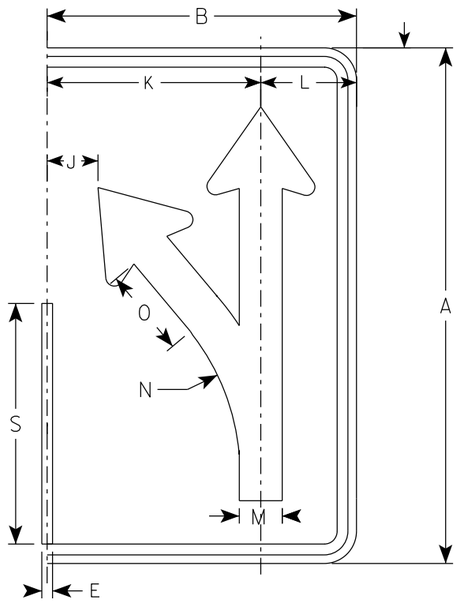
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



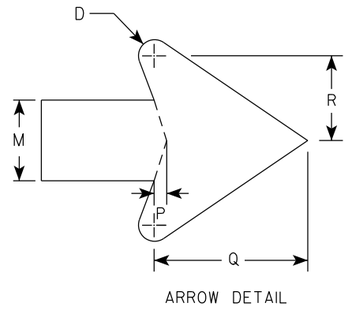
(E)



(E)



(E)



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																											
2S	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
2M	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
3	36	24	1 3/8	1/2	5/8		21 7/8	5 5/8	4	4 7/8	16 1/8	7 3/4	3	15 7/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4								6.0
4	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0
5	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0

STANDARD SIGN
R3-8 (E) Arrow

WISCONSIN DEPT OF TRANSPORTATION

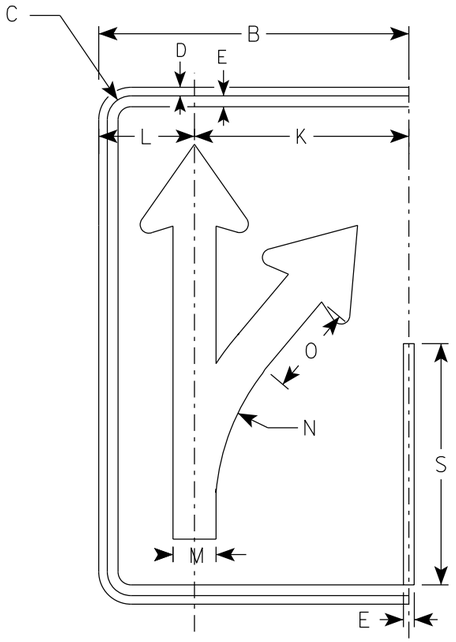
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

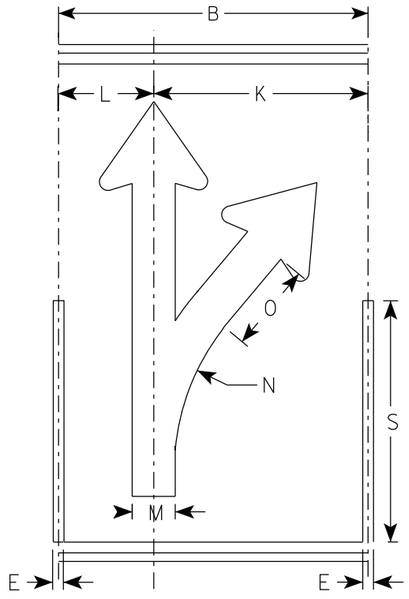
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 288 | E

NOTES

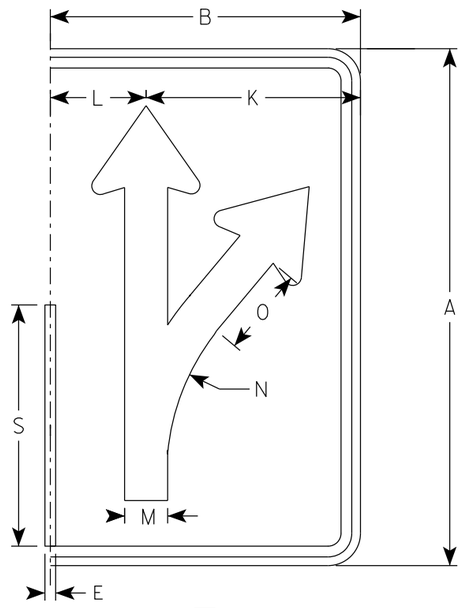
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



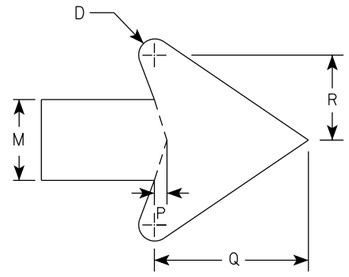
(F)



(F)



(F)



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																											
2S	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
2M	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
3	36	24	1 3/8	1/2	5/8		21 7/8	5 5/8	4	4 7/8	16 1/8	7 3/4	3	15 7/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4								6.0
4	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0
5	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0

STANDARD SIGN
R3-8 (F) Arrow

WISCONSIN DEPT OF TRANSPORTATION

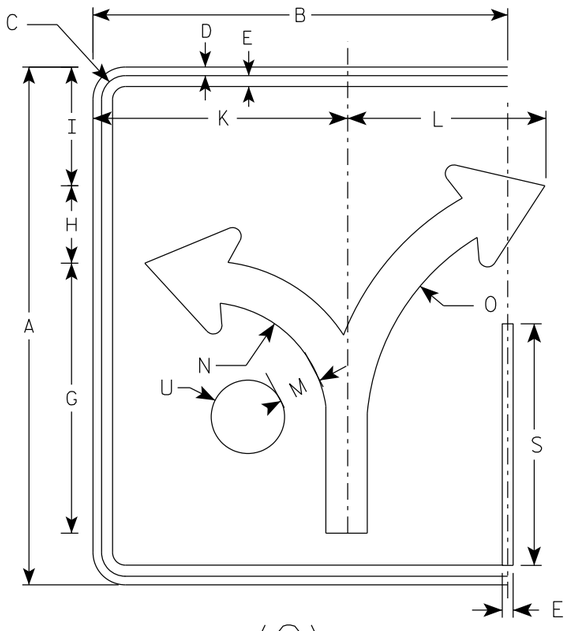
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

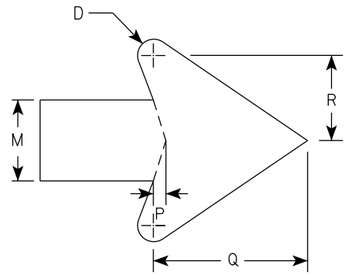
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 289 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(G)



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																											
2S	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
2M	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
3	36	30	1 3/8	1/2	5/8		18 3/4	5 1/2	8 1/4		17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		2 1/2						7.5
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0

STANDARD SIGN
R3-8 (G) Arrow

WISCONSIN DEPT OF TRANSPORTATION

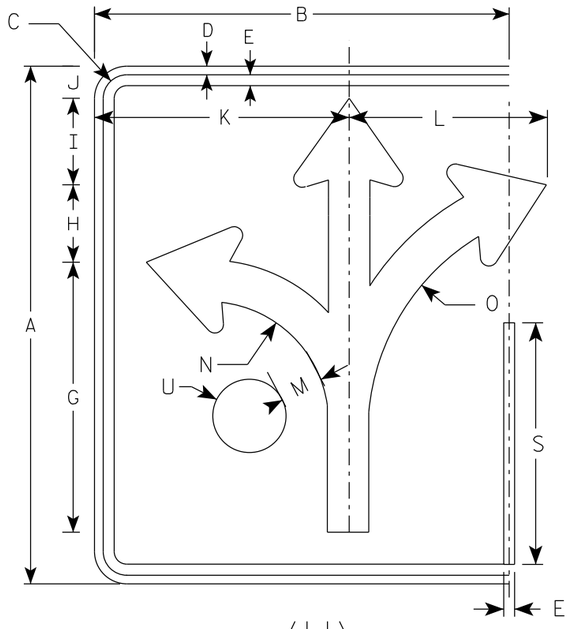
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

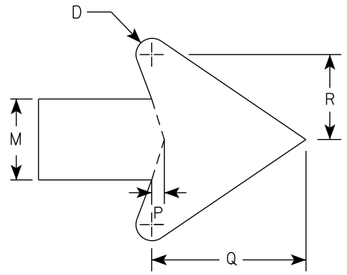
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 290 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(H)



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																											
2S	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
2M	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
3	36	30	1 3/8	1/2	5/8		18 3/4	5 1/2	6	3 1/8	17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		2 1/2						7.5
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0

STANDARD SIGN
R3-8 (H) Arrow

WISCONSIN DEPT OF TRANSPORTATION

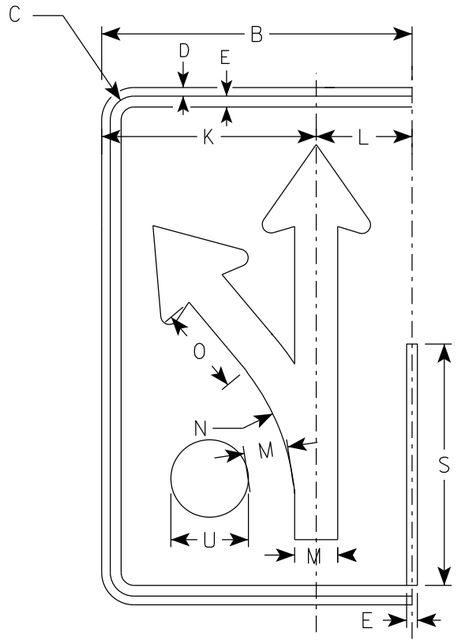
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

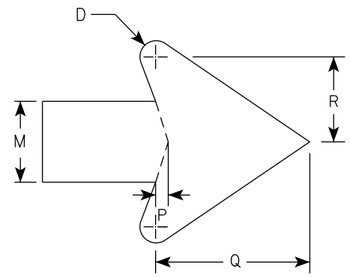
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 291	E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(I)



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																											
2S	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14		2 1/8						3.75
2M	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14		2 1/8						3.75
3	36	24	1 3/8	1/2	5/8		21 7/8	5 5/8	4	4 7/8	16 1/8	7 3/4	3	15 7/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4		2 1/2						6.0
4	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8		3 3/8						10.0
5	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8		3 3/8						10.0

STANDARD SIGN
R3-8 (I) Arrow

WISCONSIN DEPT OF TRANSPORTATION

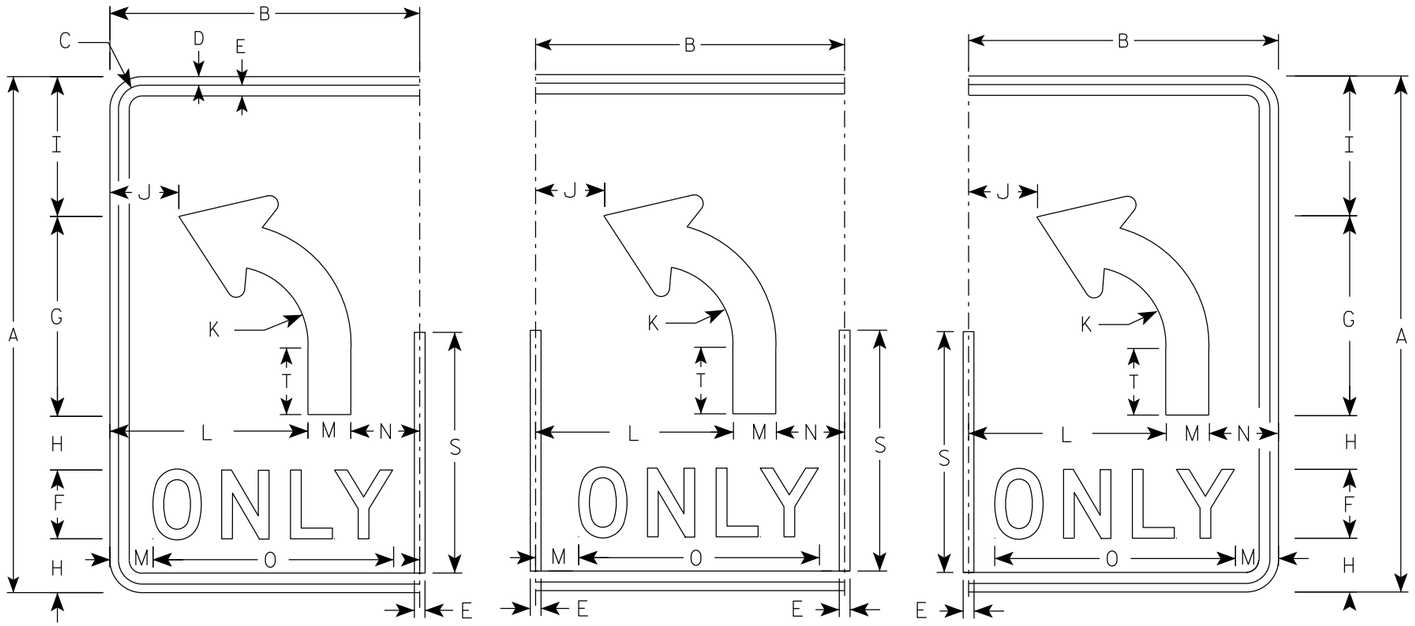
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

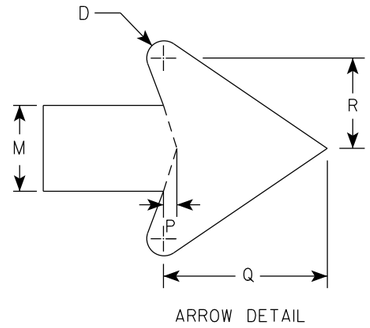
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 292 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



(L) (L) (L)



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																											
2S	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
2M	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
3	36	24	1 3/8	1/2	5/8	5	14	3 1/2	9 3/4		5 3/8	15	3	6	17 5/8	1/2	5 3/4	3 1/8	16 3/4	4 5/8							6.0
4	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0
5	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0

STANDARD SIGN

R3-8 (L) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

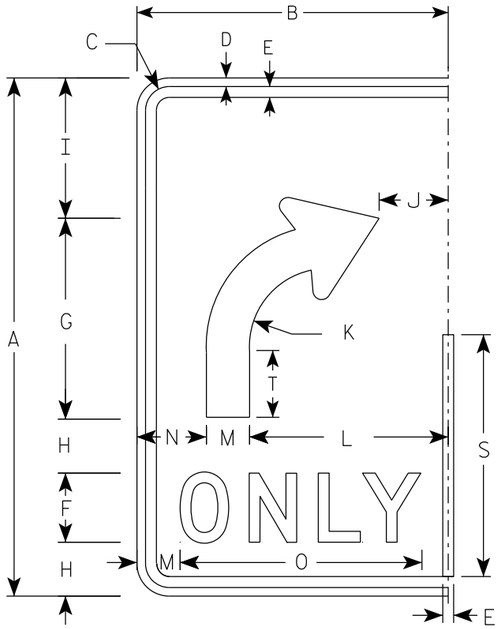
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

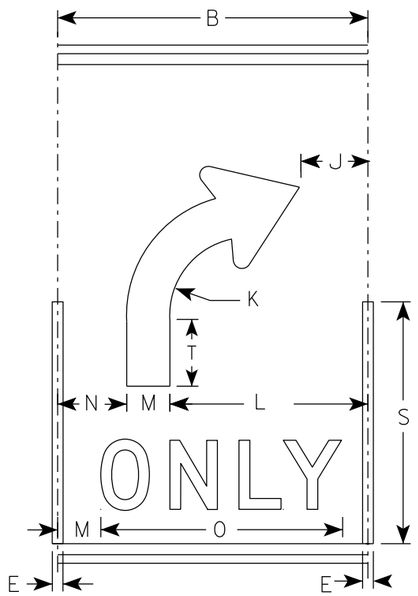
SHEET NO: 293 E

NOTES

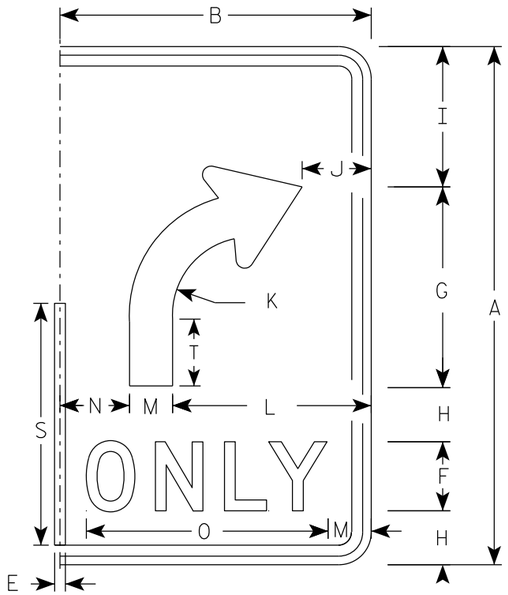
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



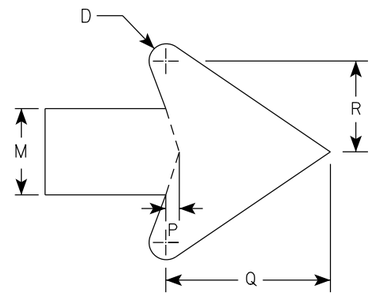
(R)



(R)



(R)



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																											
2S	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
2M	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
3	36	24	1 3/8	1/2	5/8	5	14	3 1/2	9 3/4	6	5 3/8	15	3	6	17 5/8	1/2	5 3/4	3 1/8	16 3/4	4 5/8							6.0
4	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0
5	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0

STANDARD SIGN

R3-8 (R) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

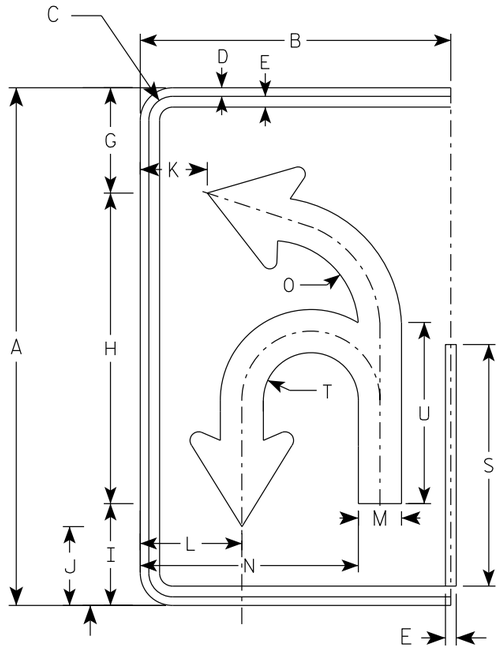
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

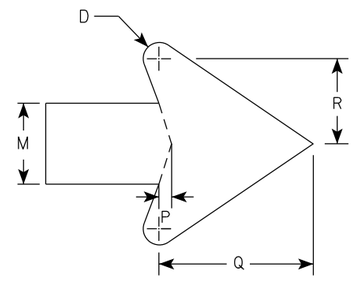
SHEET NO: 294 E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(U)



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																											
2S	30	18	1 3/8	1/2	5/8		6 1/8	18	5 7/8	4 5/8	3 7/8	5 7/8	2 1/2	12 5/8	5 1/8	3/8	4 3/4	2 5/8	14	2 3/4	10 1/2						3.75
2M	30	18	1 3/8	1/2	5/8		6 1/8	18	5 7/8	4 5/8	3 7/8	5 7/8	2 1/2	12 5/8	5 1/8	3/8	4 3/4	2 5/8	14	2 3/4	10 1/2						3.75
3	36	24	1 3/8	1/2	5/8		21 7/8	21 5/8	7 1/8	5 1/2	5 7/8	8 1/4	3	16 3/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4	3 1/4	12 5/8						6.0
4	48	30	2 1/4	3/4	1		29 1/8	28 3/4	9 3/8	7 1/4	6 7/8	10	4	20 7/8	8 1/8	5/8	7 5/8	4 1/4	22 3/8	4 3/8	16 3/4						10.0
5	48	30	2 1/4	3/4	1		29 1/8	28 3/4	9 3/8	7 1/4	6 7/8	10	4	20 7/8	8 1/8	5/8	7 5/8	4 1/4	22 3/8	4 3/8	16 3/4						10.0

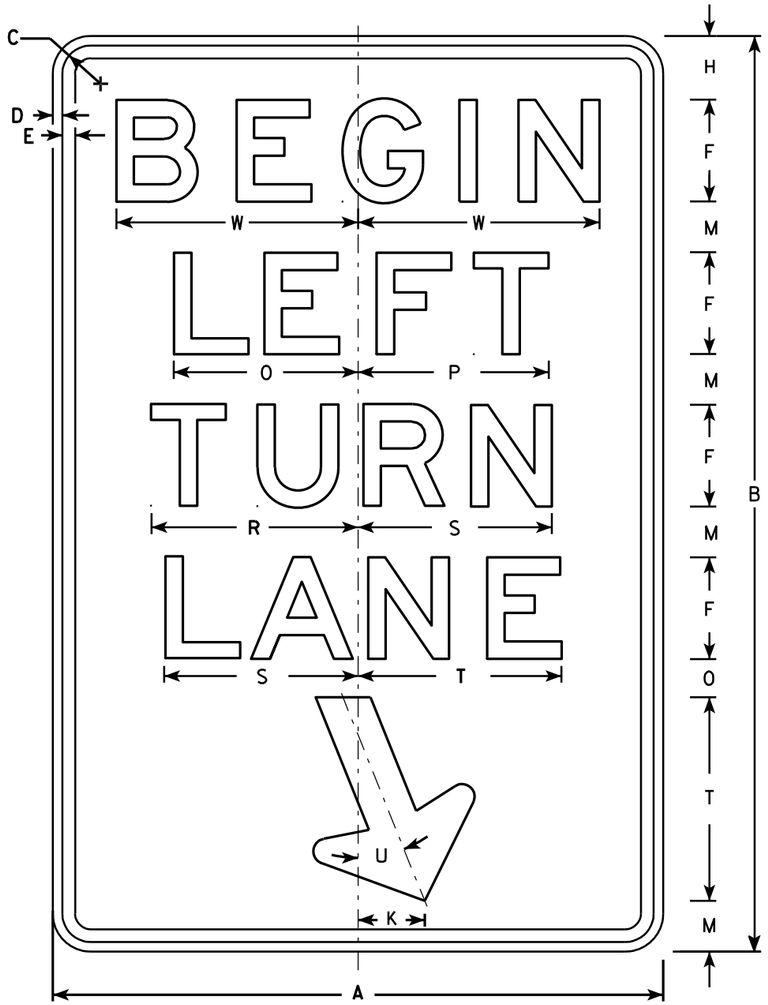
STANDARD SIGN
R3-8 (U) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

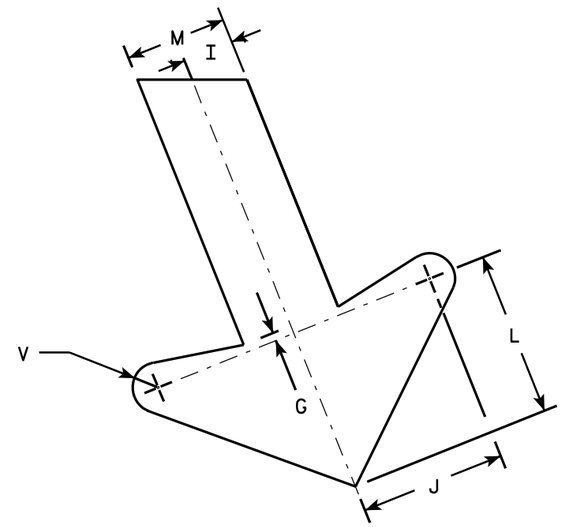
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 295 | E



R3-20L

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 - E
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.



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																											
2S	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
2M	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
3	36	54	1 3/4	1/2	5/8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 7/8	3	2 1/4	10 7/8	11 1/4		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

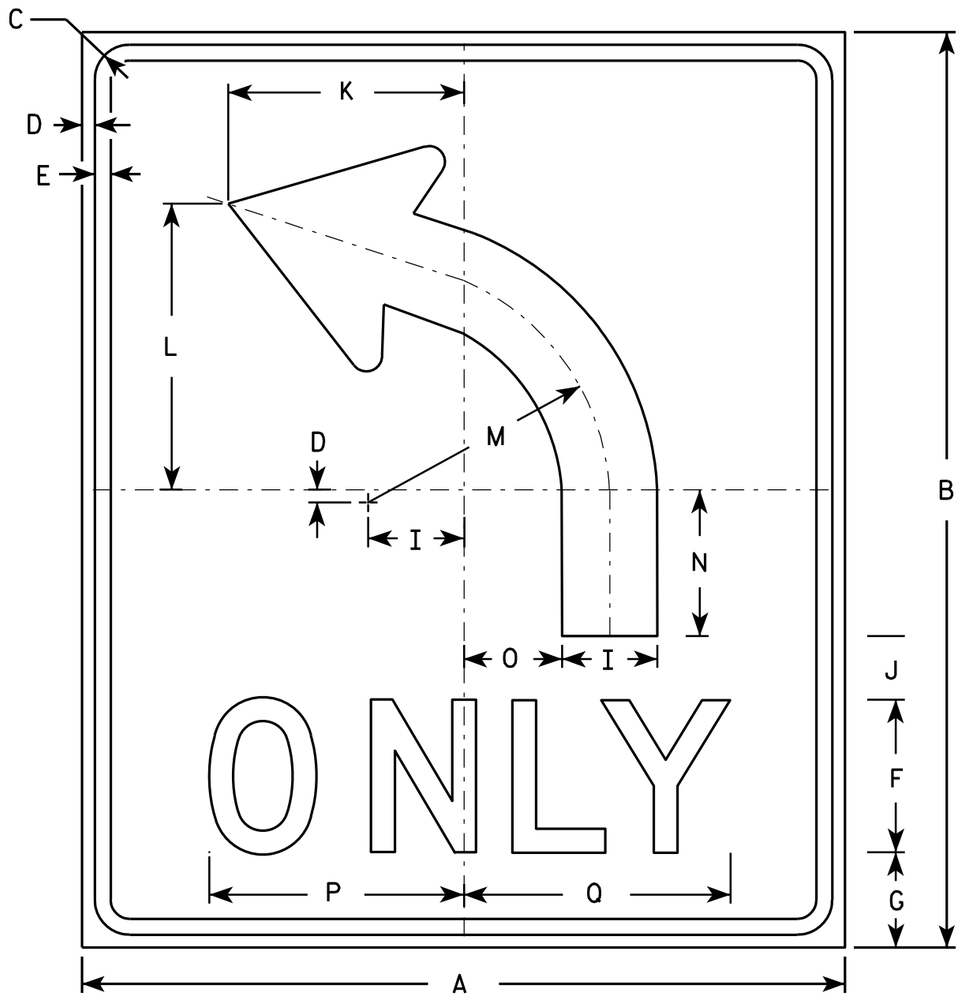
STANDARD SIGN
R3-20L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20L.7

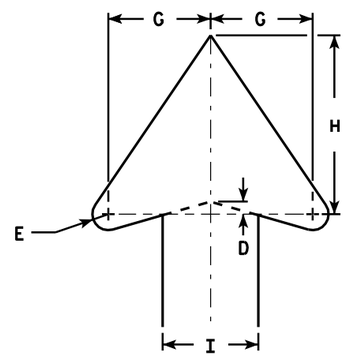
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 296 | E



R3-50L

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. R3-50R is the same as R3-50L except curved portion of arrow points right.



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																											
2S	30	36	1 3/8	1/2	5/8	6	4	7	3 3/4	2 1/2	9 1/4	11 1/4	9 1/2	5 3/4	3 7/8	10	10 1/2										7.5
2M	30	36	1 3/8	1/2	5/8	6	4	7	3 3/4	2 1/2	9 1/4	11 1/4	9 1/2	5 3/4	3 7/8	10	10 1/2										7.5
3																											
4																											
5																											

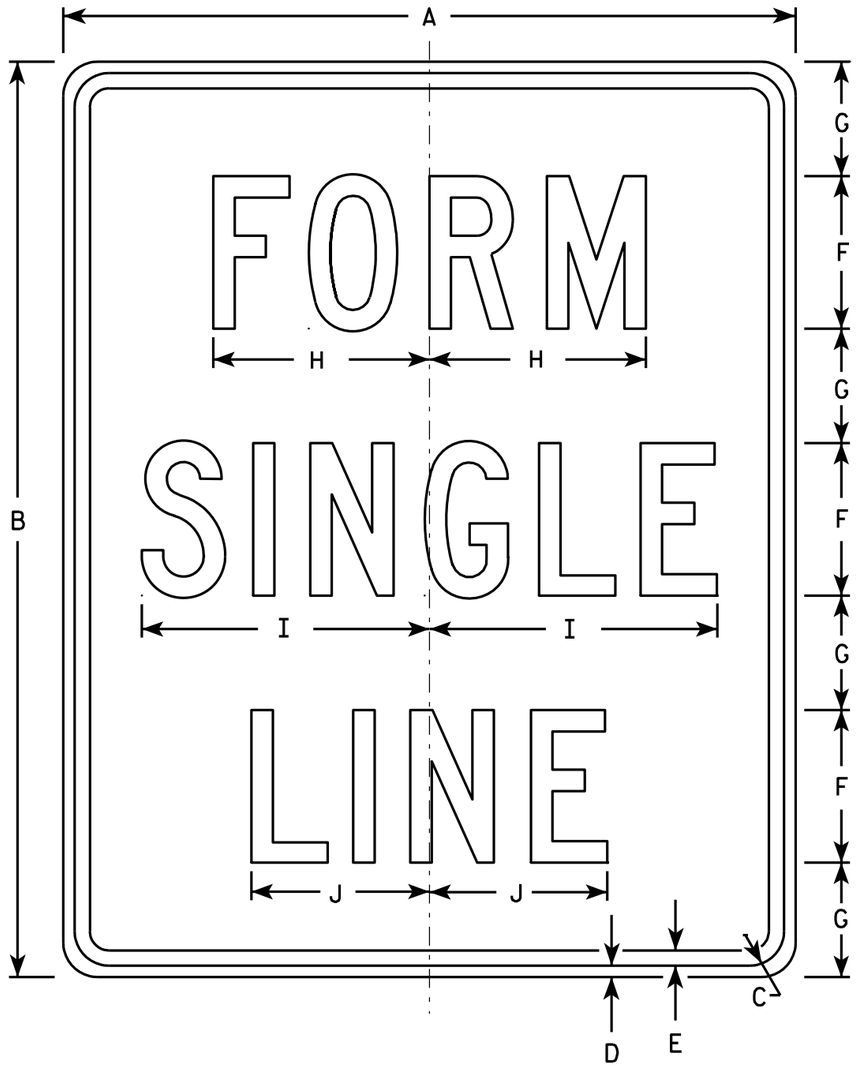
STANDARD SIGN
R3-50

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-50.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 297 | E



R3-58

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 - 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.

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	30	1 1/8	3/8	1/2	5	3 3/4	7 1/8	9 3/8	5 7/8																	5.0
2S	24	30	1 1/8	3/8	1/2	5	3 3/4	7 1/8	9 3/8	5 7/8																	5.0
2M	24	30	1 1/8	3/8	1/2	5	3 3/4	7 1/8	9 3/8	5 7/8																	5.0
3	36	48	1 3/8	1/2	5/8	8	6	11 3/8	15 1/8	9 3/8																	12.0
4	36	48	1 3/8	1/2	5/8	8	6	11 3/8	15 1/8	9 3/8																	12.0
5																											

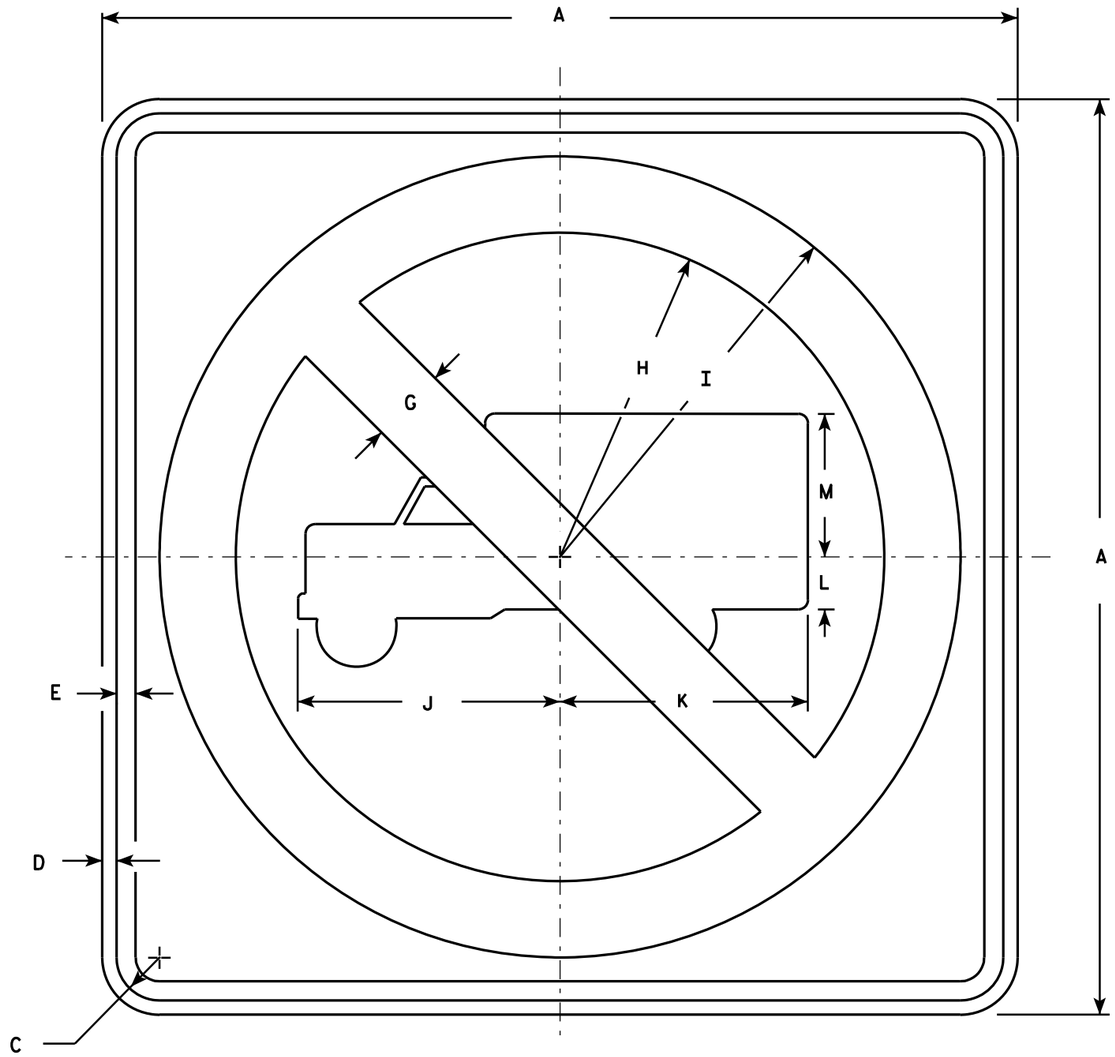
STANDARD SIGN
R3-58

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-58.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 298 | E



R5-2

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 - See Note 4
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. Circle & Diagonal - Reflective red.
   Truck Symbol & Border - Non-reflective black.

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	24		1 1/8	3/8	1/2		2	8 1/2	10 1/2	6 7/8	6 1/2	1 3/8	3 3/4														4.0
2M	24		1 1/8	3/8	1/2		2	8 1/2	10 1/2	6 7/8	6 1/2	1 3/8	3 3/4														4.0
3	30		1 3/8	1/2	5/8		2 1/2	10 5/8	13 1/8	8 1/2	8 1/8	1 5/8	4 3/4														6.25
4	36		1 5/8	5/8	3/4		3	12 3/4	15 3/4	10 1/4	9 3/4	2	5 3/4														9.0
5	48		2 1/4	3/4	1		4	17	21	13 5/8	13	2 5/8	7 5/8														16.0

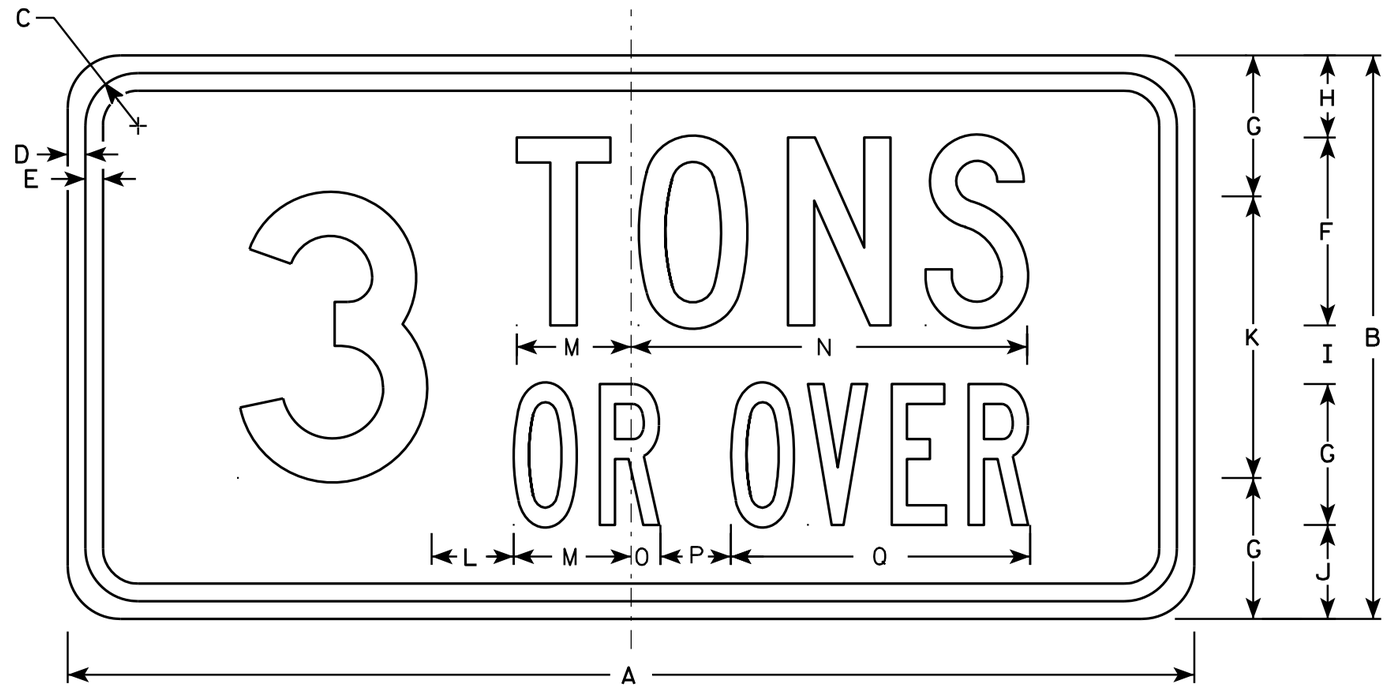
STANDARD SIGN
R5-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-2.6

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 299	E



R5-2A

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 - See note 5
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. Line 1 is Series "C"
   Line 2 is Series "B"
   Numeral is Series "D"
6. Substitute appropriate numerals.

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	24	12	1 1/8	3/8	3/8	4	3	1 3/4	1 1/4	2	6	1 3/4	2 1/2	8 1/2	5/8	1 1/2	6 3/8										2.0
2M	24	12	1 1/8	3/8	3/8	4	3	1 3/4	1 1/4	2	6	1 3/4	2 1/2	8 1/2	5/8	1 1/2	6 3/8										2.0
3	30	15	1 1/8	3/8	1/2	5	4	2 1/8	1 3/8	2 1/2	7	2 1/4	3 1/8	10 1/2	1	2 3/8	8 1/2										2.25
4	36	18	1 1/8	3/8	1/2	6	5	2 5/8	1 3/8	3	9	2 1/2	3 3/4	12 5/8	1 3/8	3 1/8	10 1/2										4.5
5	48	24	1 3/8	3/8	5/8	8	6	3 1/2	2 1/2	4	12	3 1/2	4 7/8	16 7/8	1 1/4	3	12 3/4										8.0

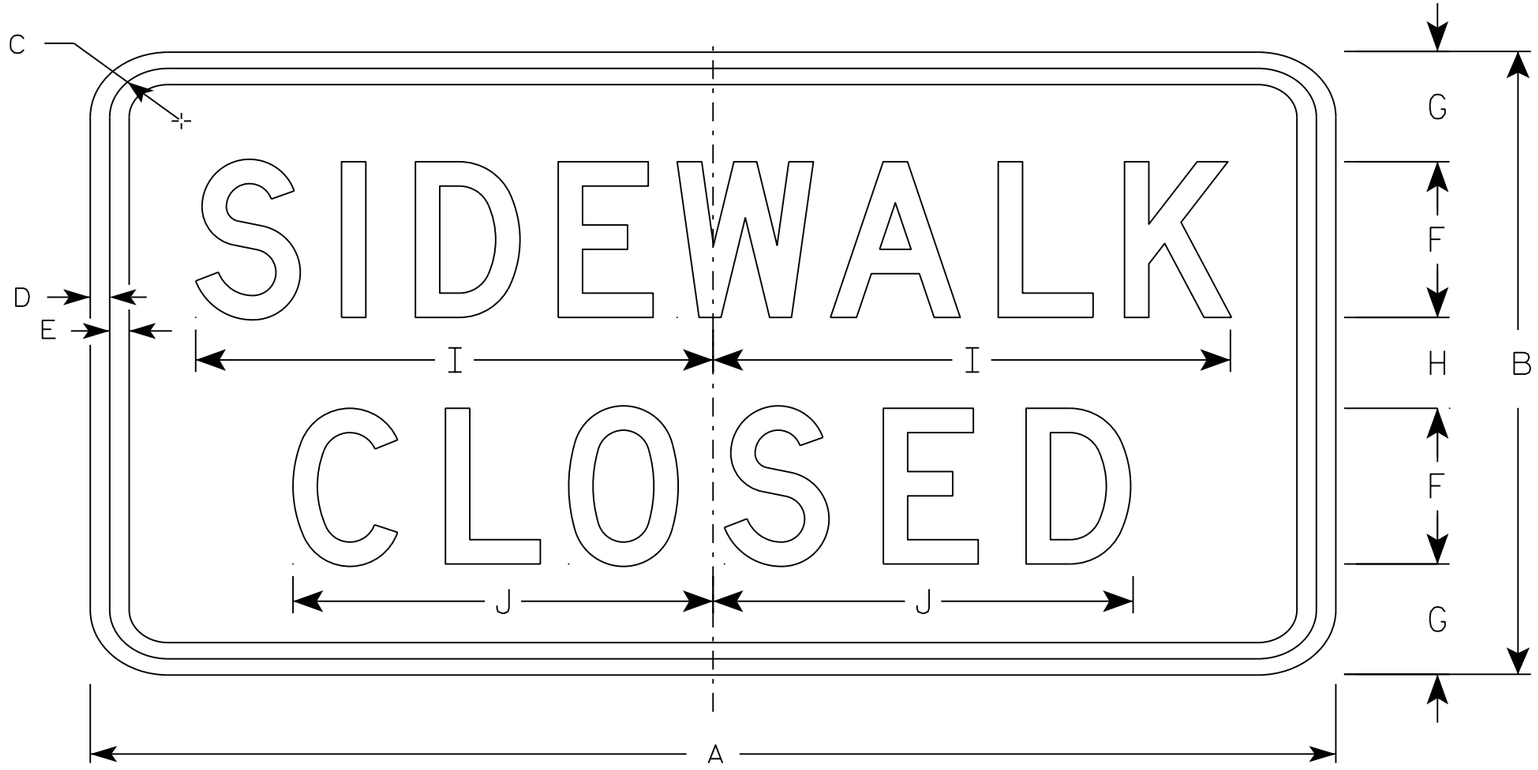
STANDARD SIGN
R5-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-2A.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 300 | E



R9-9

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 - 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.
5. Use Size 2 for Sidewalks. Use Size 3 for Paths and Trails.

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	24	12	1 3/4	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
2M	24	12	1 3/4	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
3	30	18	1 3/4	1/2	1/2	4	3 1/2	3	12 1/2	10 1/4																	3.75
4																											
5																											

STANDARD SIGN
R9-9

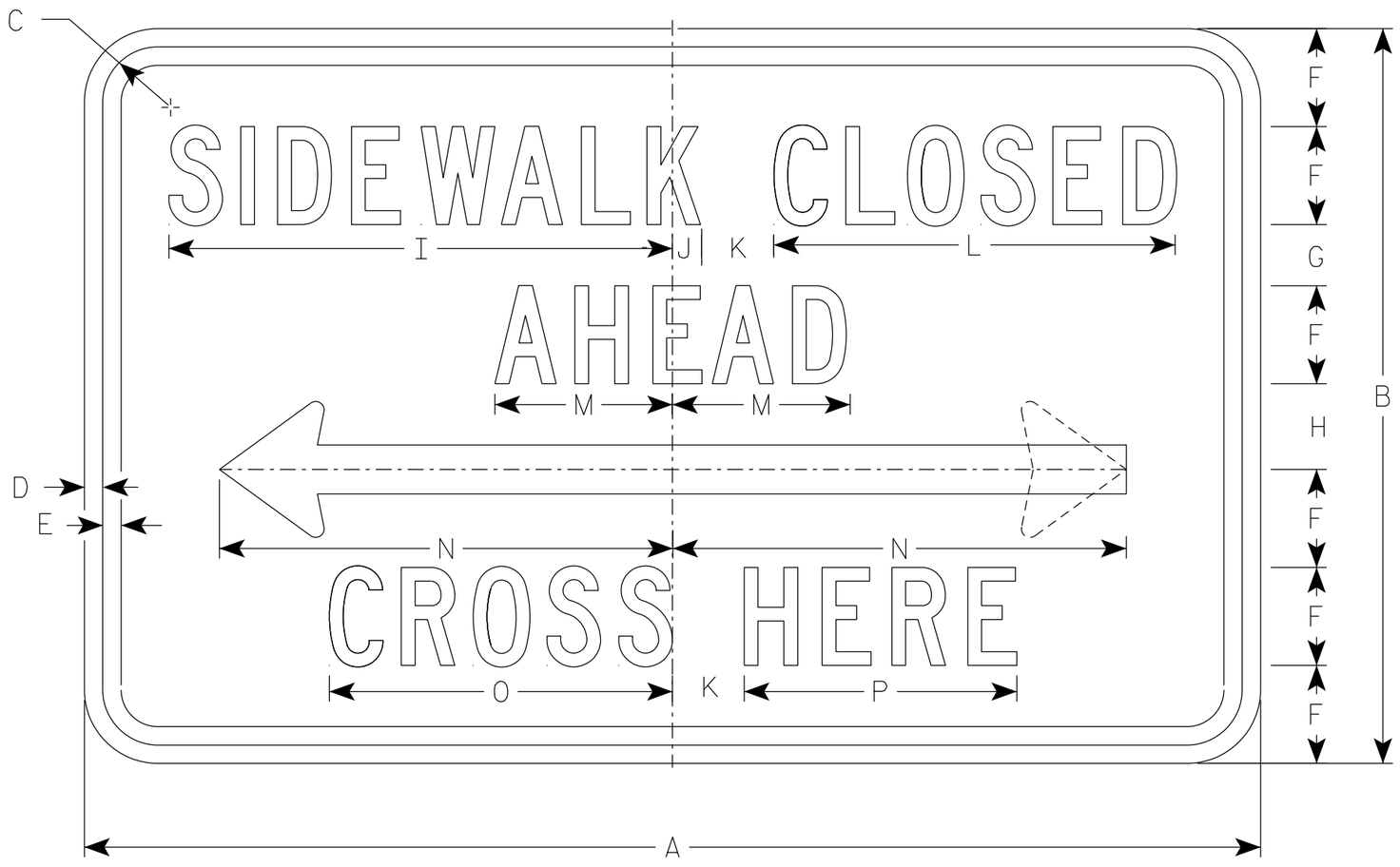
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

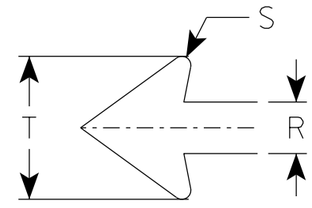
DATE 8/11/16 PLATE 301 R9-9.6

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\R99.DGN PLOT DATE : 11-AUG-2016 11:33 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 2.918761:1.000000



R9-11



NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C except Size 1 is 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. Use Size 2 for Sidewalks. Use Size 3 for Paths and Trails.
6. R9-11 D (double arrow)
   R9-11 L (left arrow)
   R9-11 R (right arrow)

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	24	12	1 1/8	3/8	3/8	1 1/2	1 1/2	1 1/2	9 3/4	5/8	1 1/2	7 5/8	3 1/2	9 1/4	6 5/8	5 1/8		1	1/8	2 3/4							2.0
2M	24	12	1 1/8	3/8	3/8	1 1/2	1 1/2	1 1/2	9 3/4	5/8	1 1/2	7 5/8	3 1/2	9 1/4	6 5/8	5 1/8		1	1/8	2 3/4							2.0
3	30	15	1 1/8	3/8	1/2	2	1 1/2	1 1/2	13	3/4	2	10 1/4	4 5/8	12 3/8	8 7/8	6 7/8		1 1/4	1/4	3 5/8							3.125
4																											
5																											

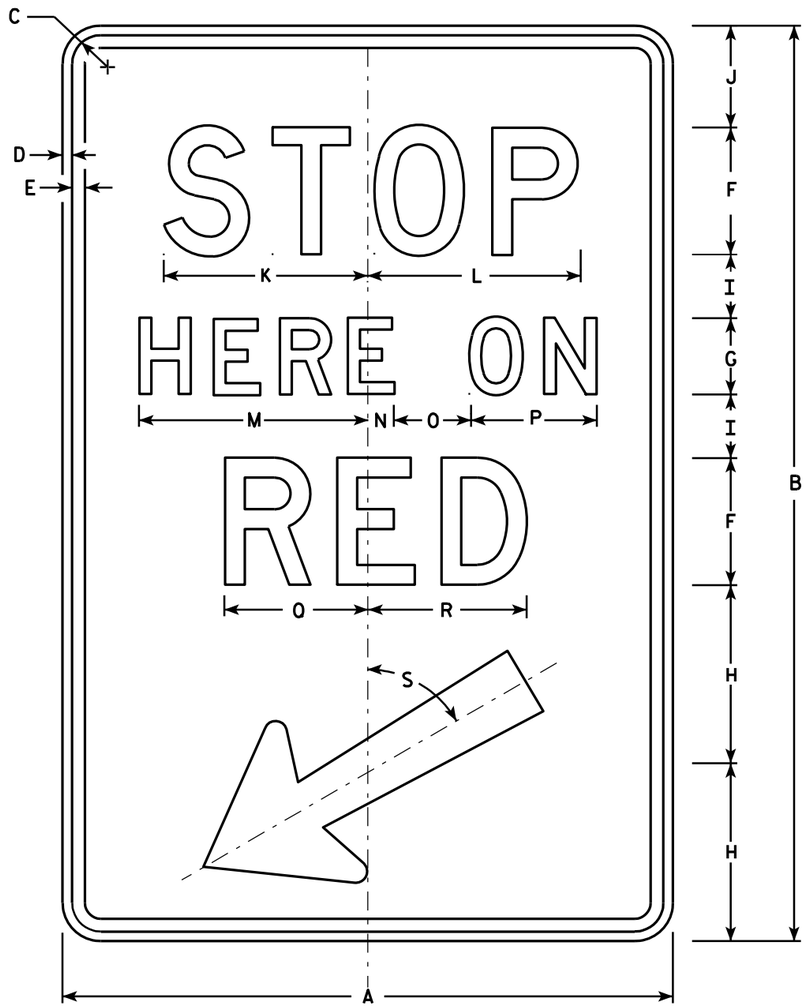
STANDARD SIGN
R9-11

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 3/30/2021 PLATE NO. R9-11.4

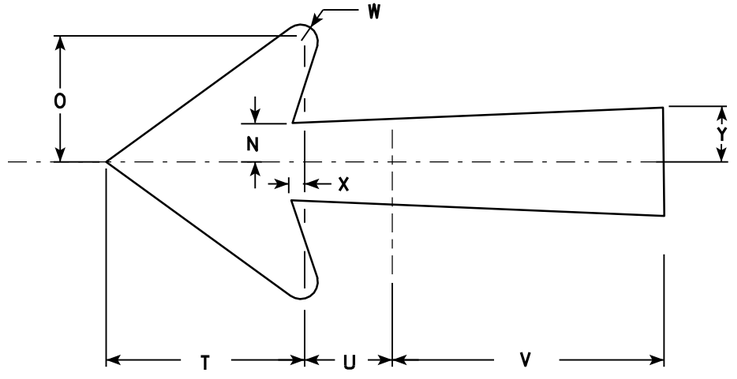
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 302 | E



R10-6

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.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	5	3	7	2 1/2	4	8	8 3/8	9	1	3	5	5 5/8	6 1/4	60°	5 1/4	2 1/4	7 1/8	1/2	3/8	1 3/8		6.0
2M	24	36	1 1/8	3/8	1/2	5	3	7	2 1/2	4	8	8 3/8	9	1	3	5	5 5/8	6 1/4	60°	5 1/4	2 1/4	7 1/8	1/2	3/8	1 3/8		6.0
3																											
4																											
5																											

STANDARD SIGN
R10-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/5/11 PLATE NO. R10-6.6

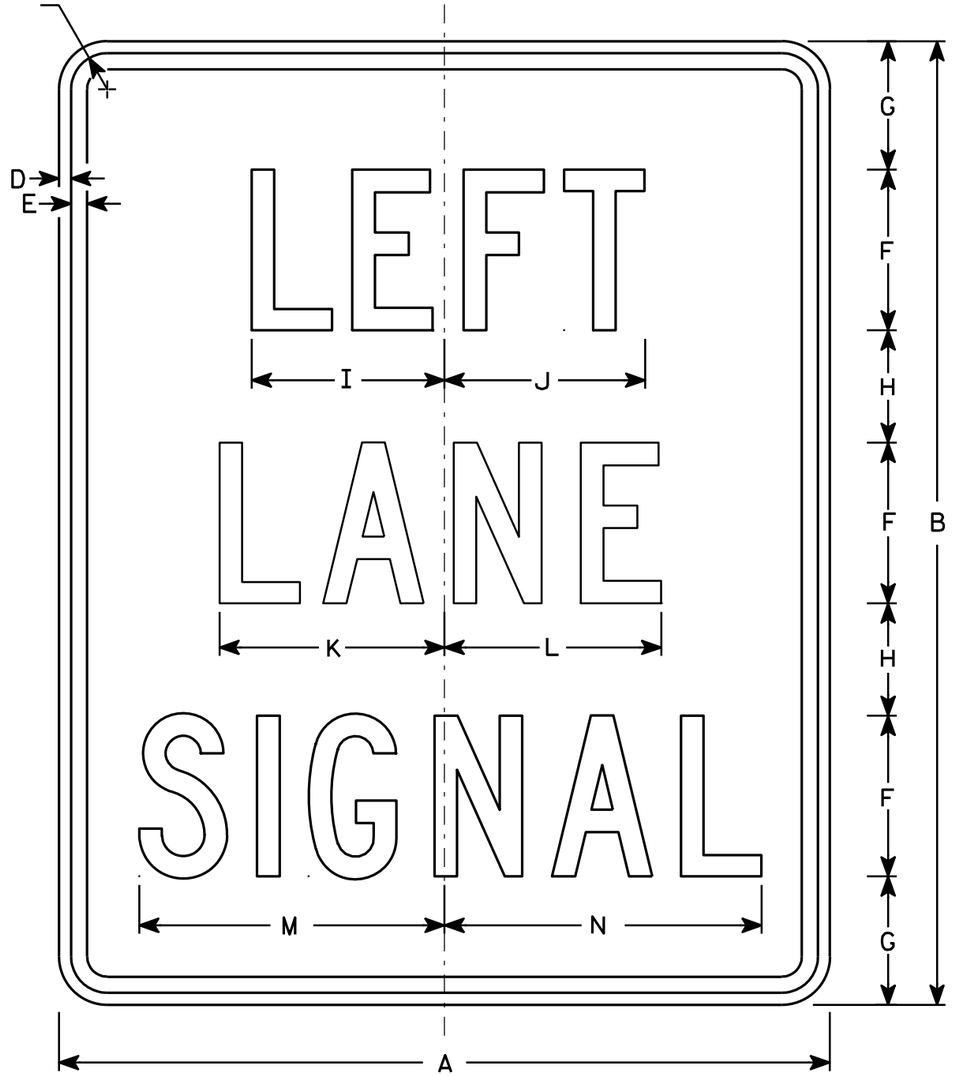
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 303	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R106.DGN PLOT DATE : 05-APR-2011 09:50 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.959043:1.000000

WISDOT/CADDS SHEET 42

7

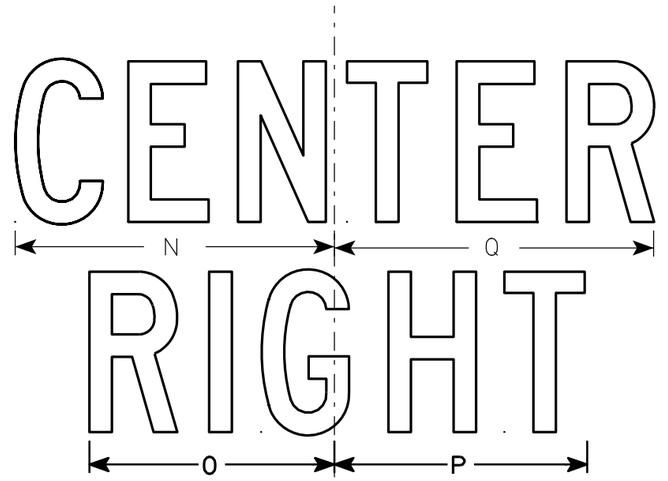
7



R10-65L

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 - 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.



R10-65C

R10-65R

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	24	30	1 1/8	3/8	1/2	5	4	3 1/2	6	6 1/4	7	6 3/4	9 1/2	9 7/8	7 5/8	7 7/8	10										5.0
2M	24	30	1 1/8	3/8	1/2	5	4	3 1/2	6	6 1/4	7	6 3/4	9 1/2	9 7/8	7 5/8	7 7/8	10										5.0
3																											
4																											
5																											

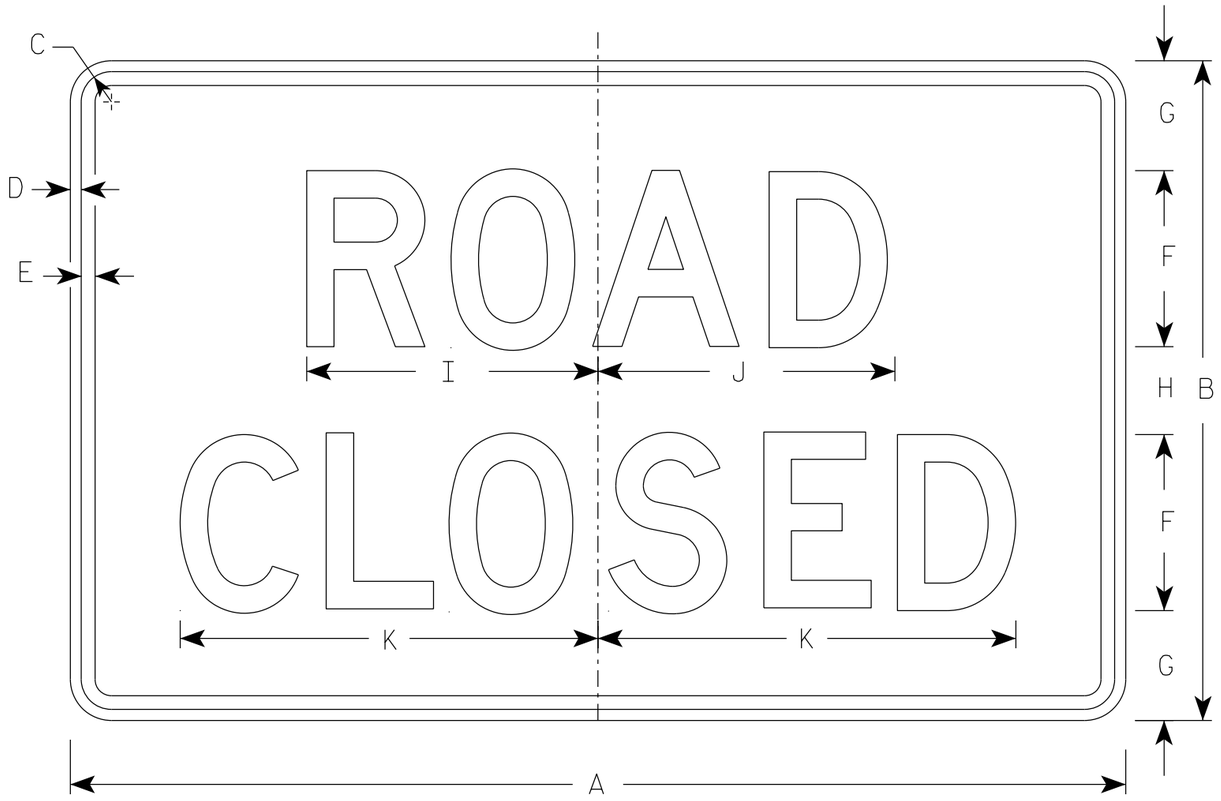
STANDARD SIGN
R10-65

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/4/11 PLATE NO. R10-65.2

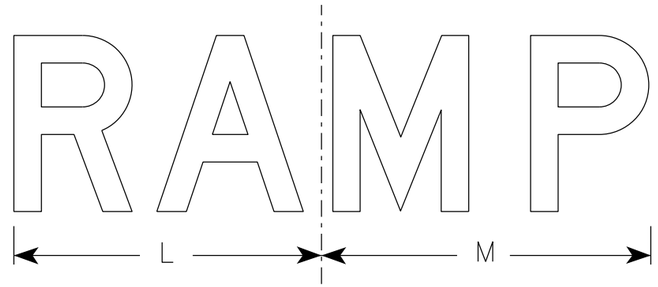
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 304 | E



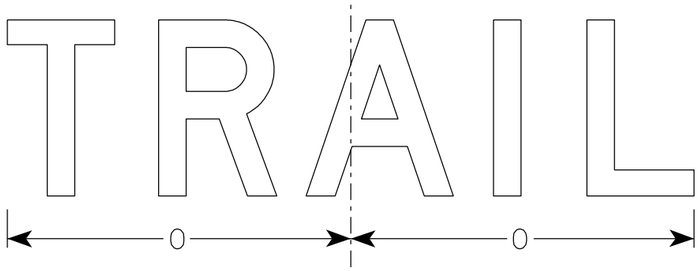
R11-2

NOTES

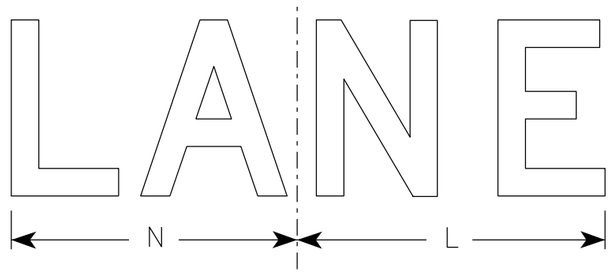
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the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



R11-2R



R11-2T



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	15 5/8												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	15 5/8												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	15 5/8												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	15 5/8												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	15 5/8												10.0

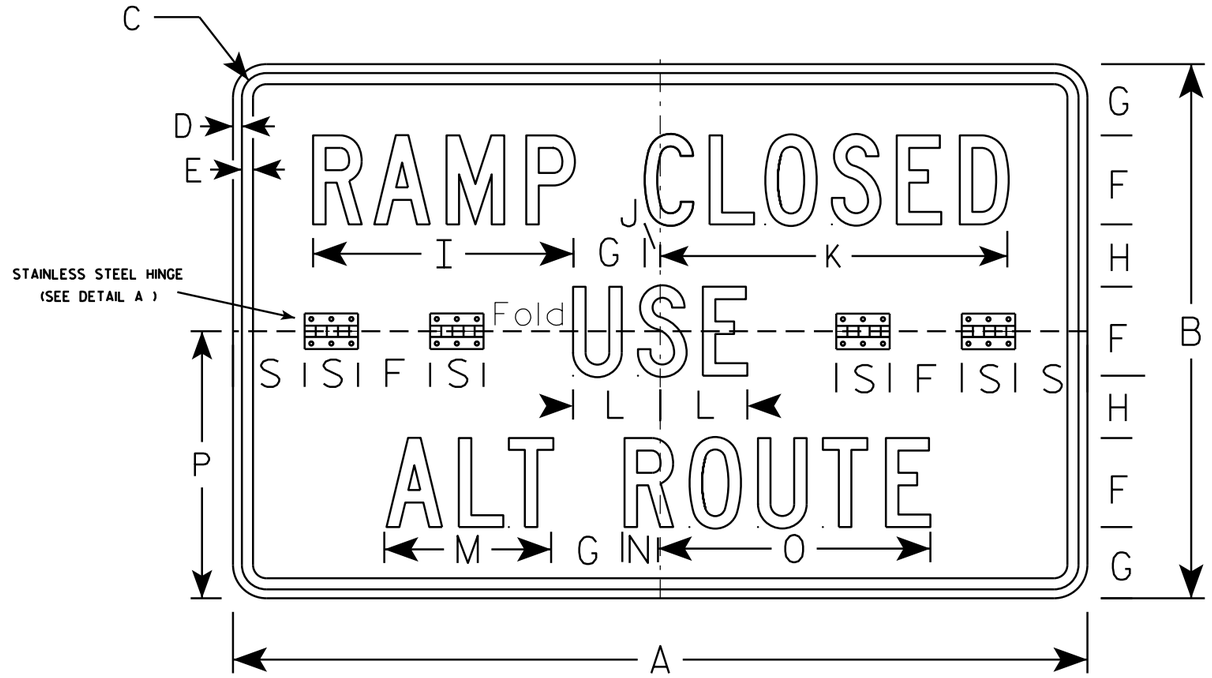
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

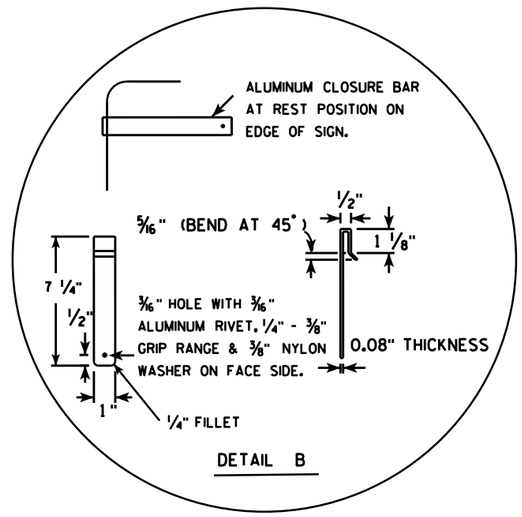
DATE 3/29/2021 PLATE NO. R11-2.11

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 305	E



R11-54F

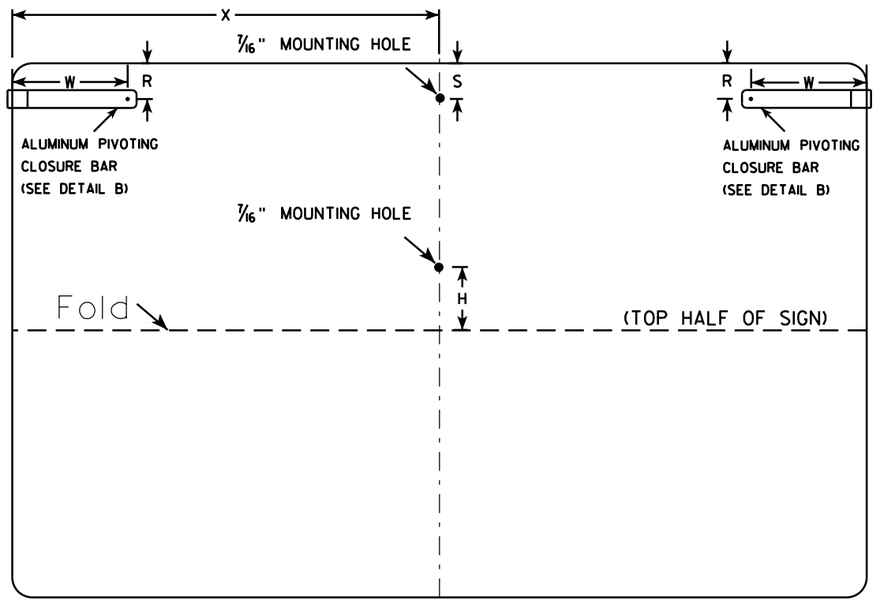
DETAIL A



DETAIL B

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - WHITE
   Message - BLACK
3. Message Series - C
4. Sign Base Material shall be aluminum, corners and borders shall be rounded.
5. All hardware used on the folding sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.
6. Refer to plate A5-3A for sign blank layout.



(BACK VIEW)

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	5	4	3 1/2	14 5/8	7/8	19 1/2	4 7/8	9 3/8	2	15 1/4	15		2	3	2 5/8	1 1/4	11/16	6 1/2	24			10.0
2M	48	30	1 3/8	1/2	5/8	5	4	3 1/2	14 5/8	7/8	19 1/2	4 7/8	9 3/8	2	15 1/4	15		2	3	2 5/8	1 1/4	11/16	6 1/2	24			10.0
3																											
4																											
5																											

STANDARD SIGN
R11-54F

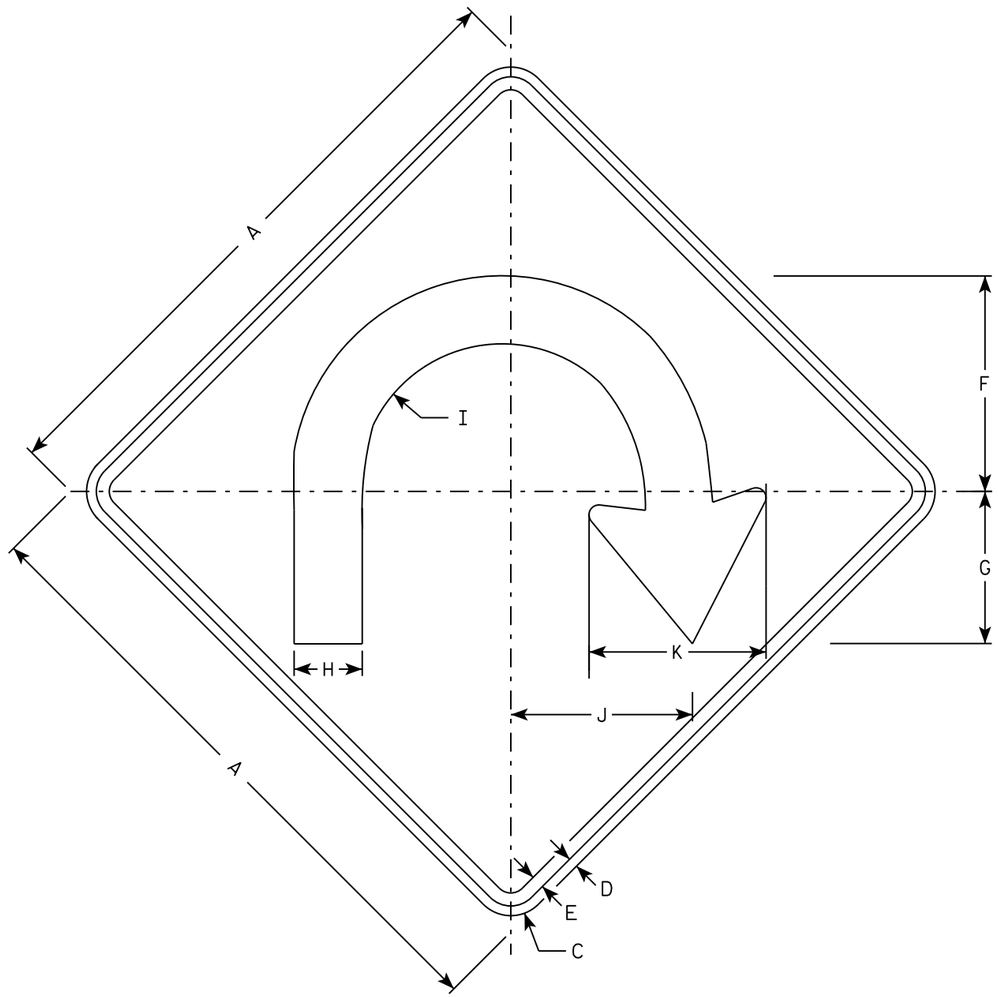
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/28/14 PLATE NO. R11-54F.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R1154F.DGN PLOT DATE : 28-MAY-2014 14:15 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 8.511110:1.000000
WISDOT/CADDS SHEET 42



W1-11R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. W1-11L is the same as W1-11R except arrow is 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																											
2S	36		1 5/8	5/8	3/4	12 1/2	8 3/4	4	8 1/4	10 1/2	10 1/4																9.0
2M	36		1 5/8	5/8	3/4	12 1/2	8 3/4	4	8 1/4	10 1/2	10 1/4																9.0
3	36		1 5/8	5/8	3/4	12 1/2	8 3/4	4	8 1/4	10 1/2	10 1/4																9.0
4	36		1 5/8	5/8	3/4	12 1/2	8 3/4	4	8 1/4	10 1/2	10 1/4																9.0
5	48		2 1/4	3/4	1	16 5/8	11 3/4	5 1/4	11	14	13 5/8																16.0

STANDARD SIGN
W1-11 L&R

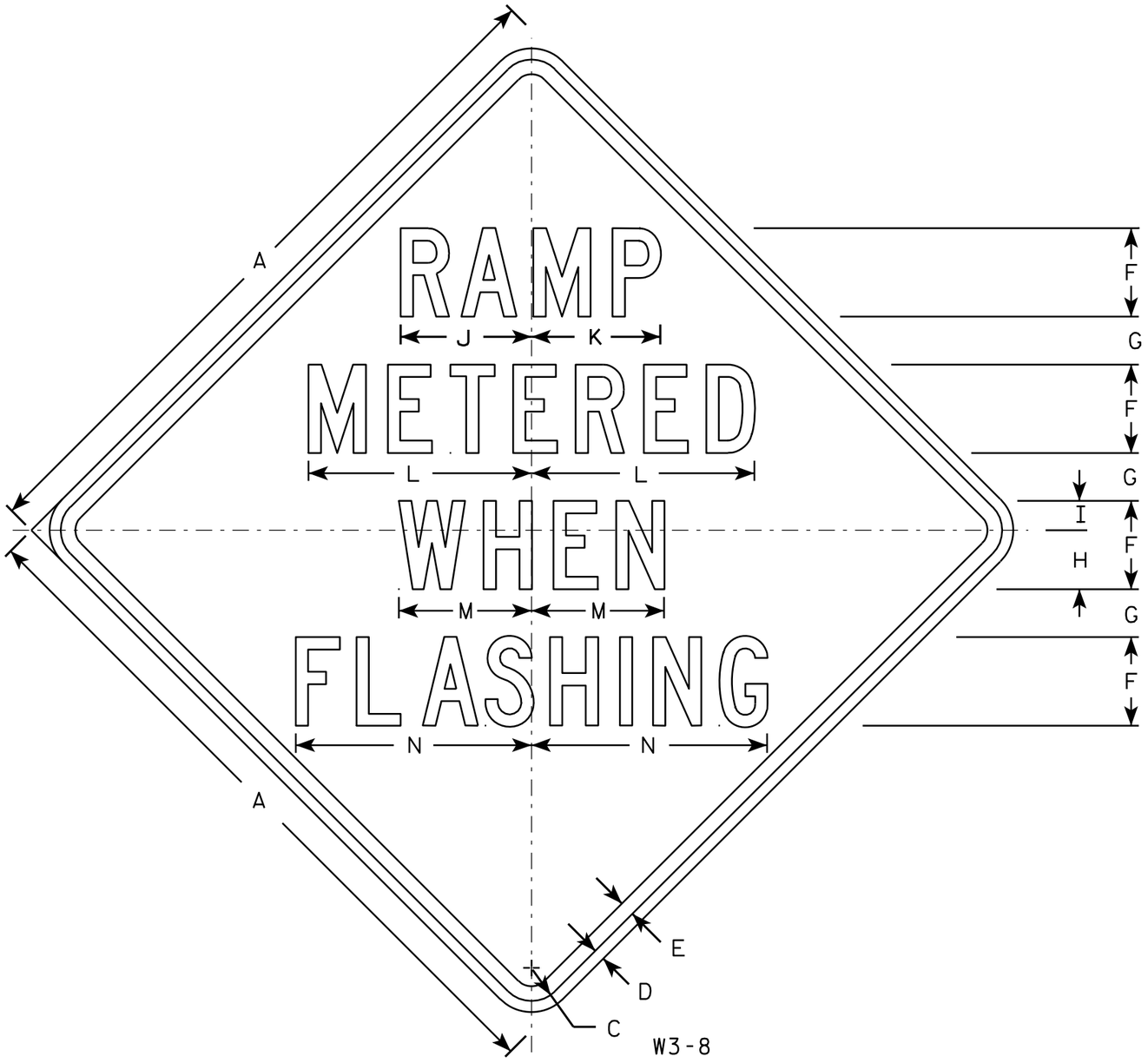
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/1/16 PLATE NO W1-11A.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W11A.DGN PLOT DATE : 04-AUG-2016 10:34 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   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.

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		2 1/4	3/4	1	6	3 3/4	4	2	8 7/8	8 3/4	15 1/8	9	16													16.0
2M	48		2 1/4	3/4	1	6	3 3/4	4	2	8 7/8	8 3/4	15 1/8	9	16													16.0
3	48		2 1/4	3/4	1	6	3 3/4	4	2	8 7/8	8 3/4	15 1/8	9	16													16.0
4	48		2 1/4	3/4	1	6	3 3/4	4	2	8 7/8	8 3/4	15 1/8	9	16													16.0
5	48		2 1/4	3/4	1	6	3 3/4	4	2	8 7/8	8 3/4	15 1/8	9	16													16.0

STANDARD SIGN
W3-8

WISCONSIN DEPT OF TRANSPORTATION

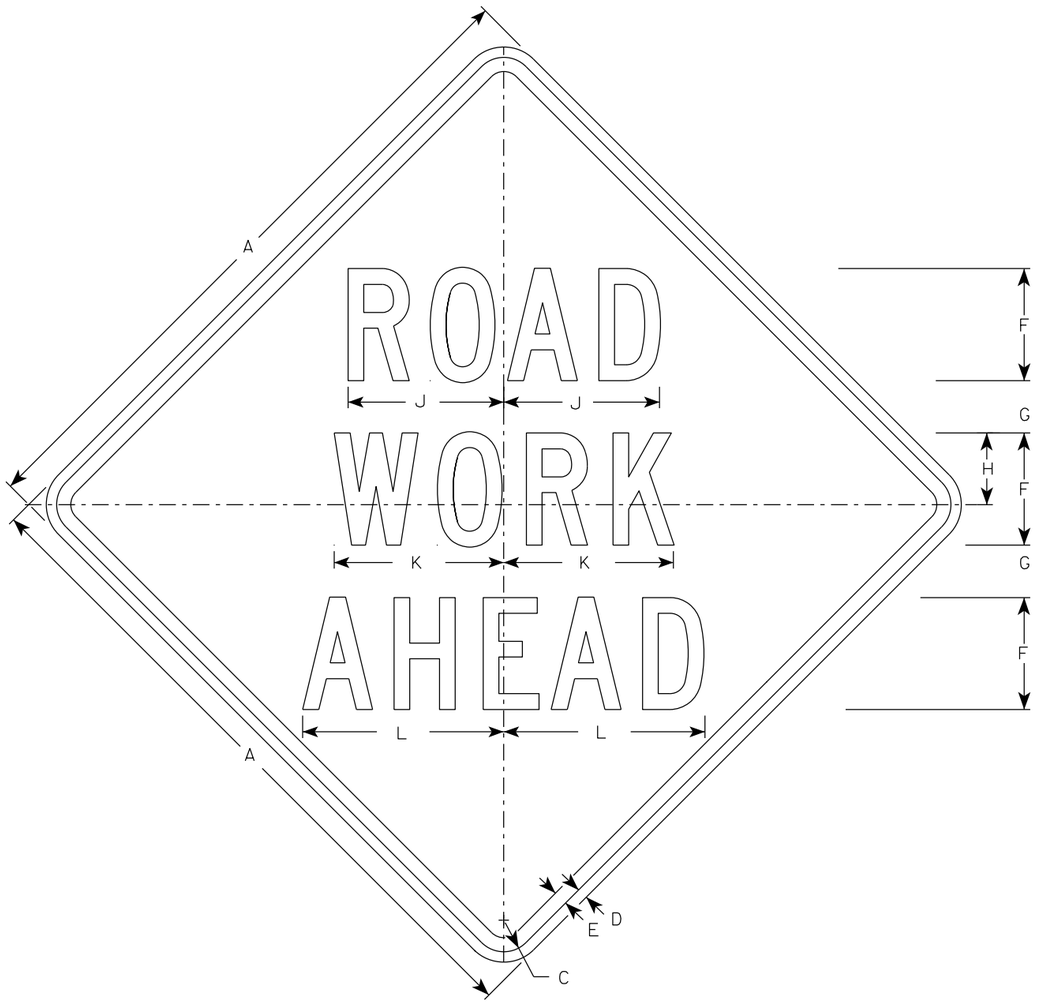
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W3-8.2

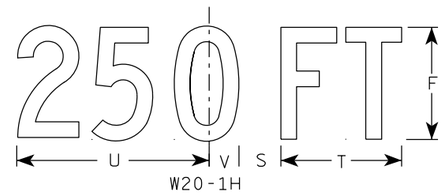
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 308	E

NOTES

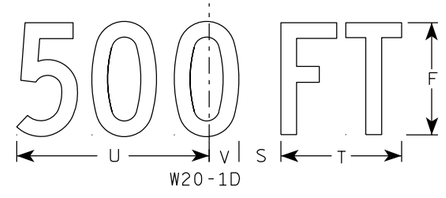
1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1A



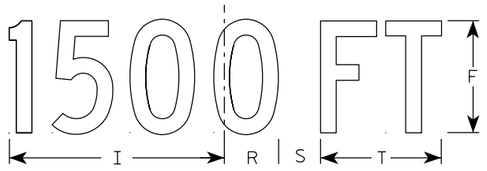
W20-1H



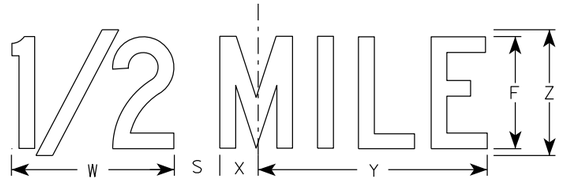
W20-1D



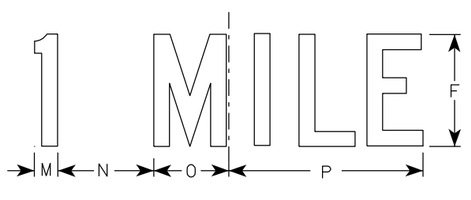
W20-1C



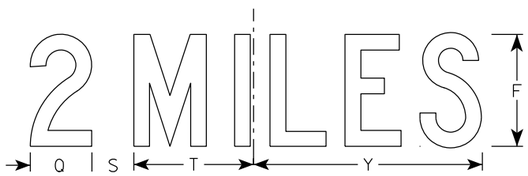
W20-1B



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: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 25-MARCH-2020 PLOT BY : dotc4c

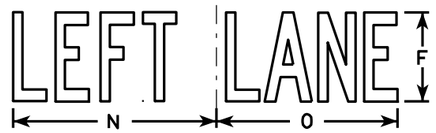
WISDOT/CADDS SHEET 42

7

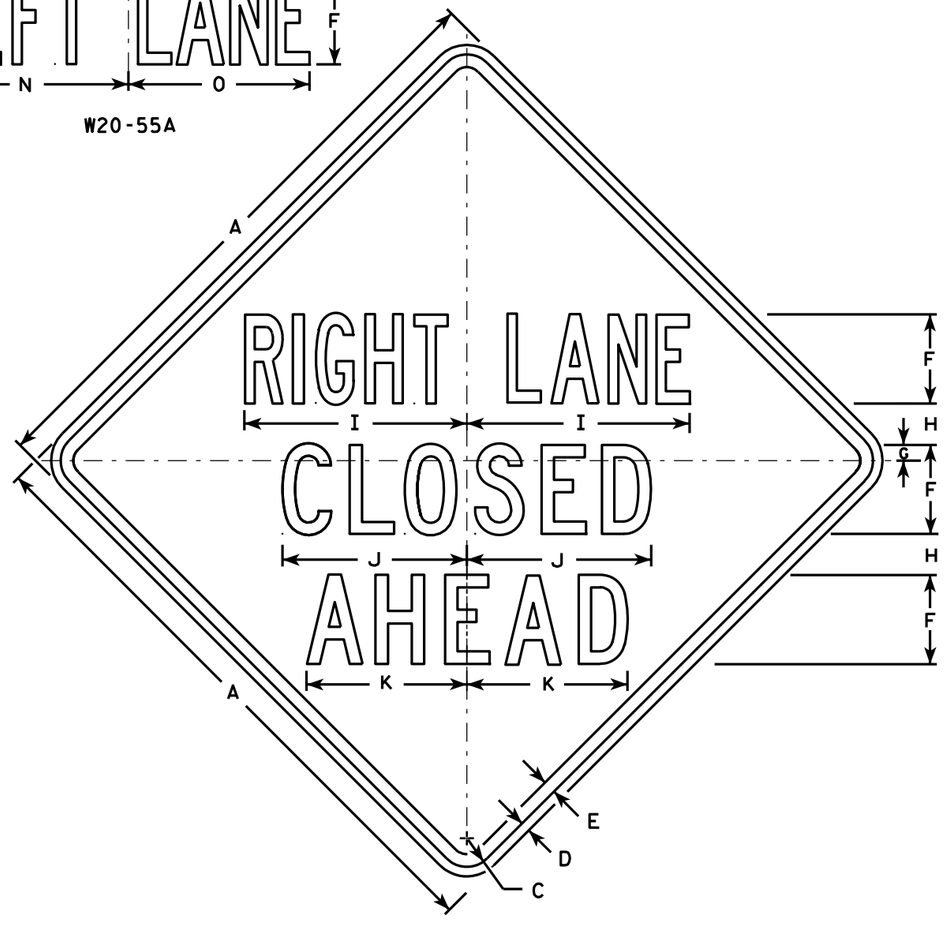
7



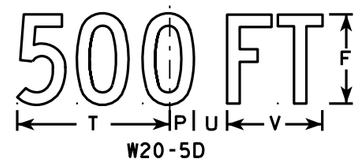
W20-56A



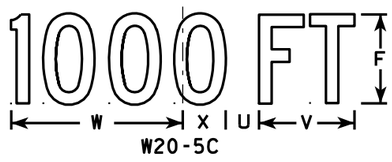
W20-55A



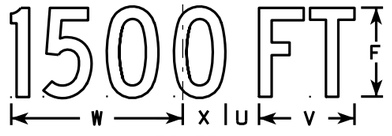
W20-5A



W20-5D



W20-5C



W20-5B



W20-5G



W20-5F

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 - See Note 5
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. " _____ LANE" is Series B.
   All other copy is Series C.

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	6	1 5/8	5/8	3/4	5	1/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 1/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

STANDARD SIGN
W20-5A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

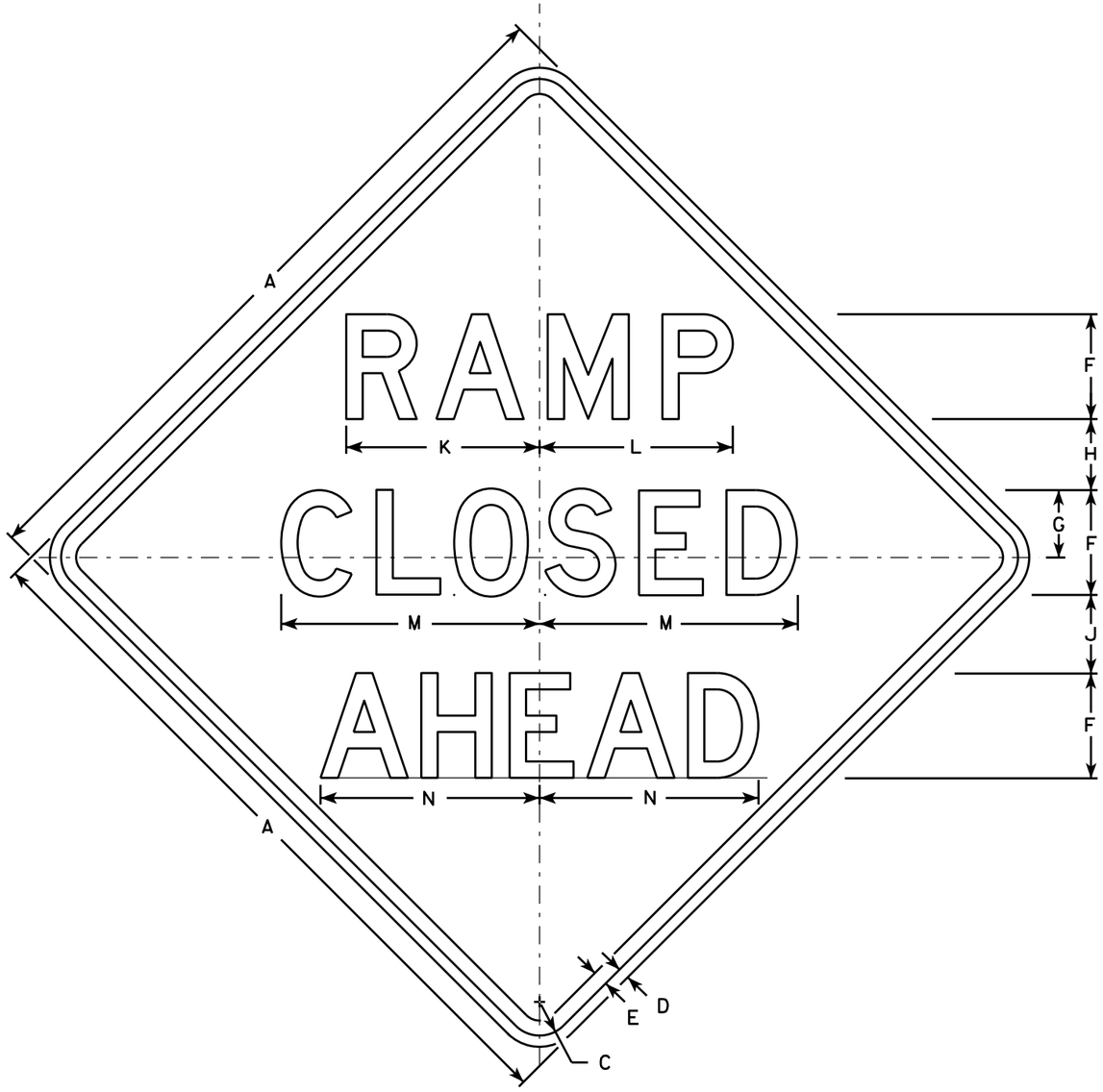
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-5.11

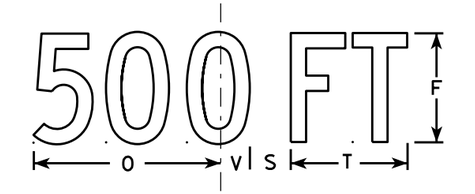
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 310	E

7

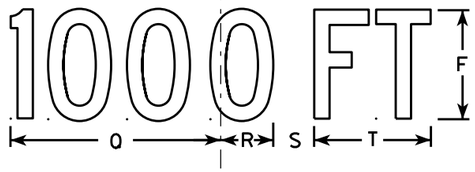
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W205.DGN PLOT DATE : 18-MAR-2011 12:15 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 11.918087:1.000000
WISDOT/CADDS SHEET 42



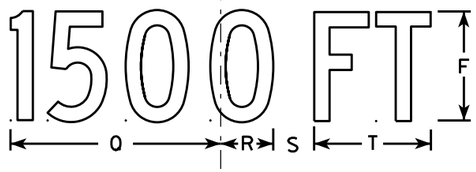
W20-53A



W20-53D



W20-53C



W20-53B



W20-53G



W20-53F

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 - see note 5
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. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

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	3 3/8	3 1/2	1 1/8	4	9 1/4	9 1/4	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-53A,B,C,D,F,G

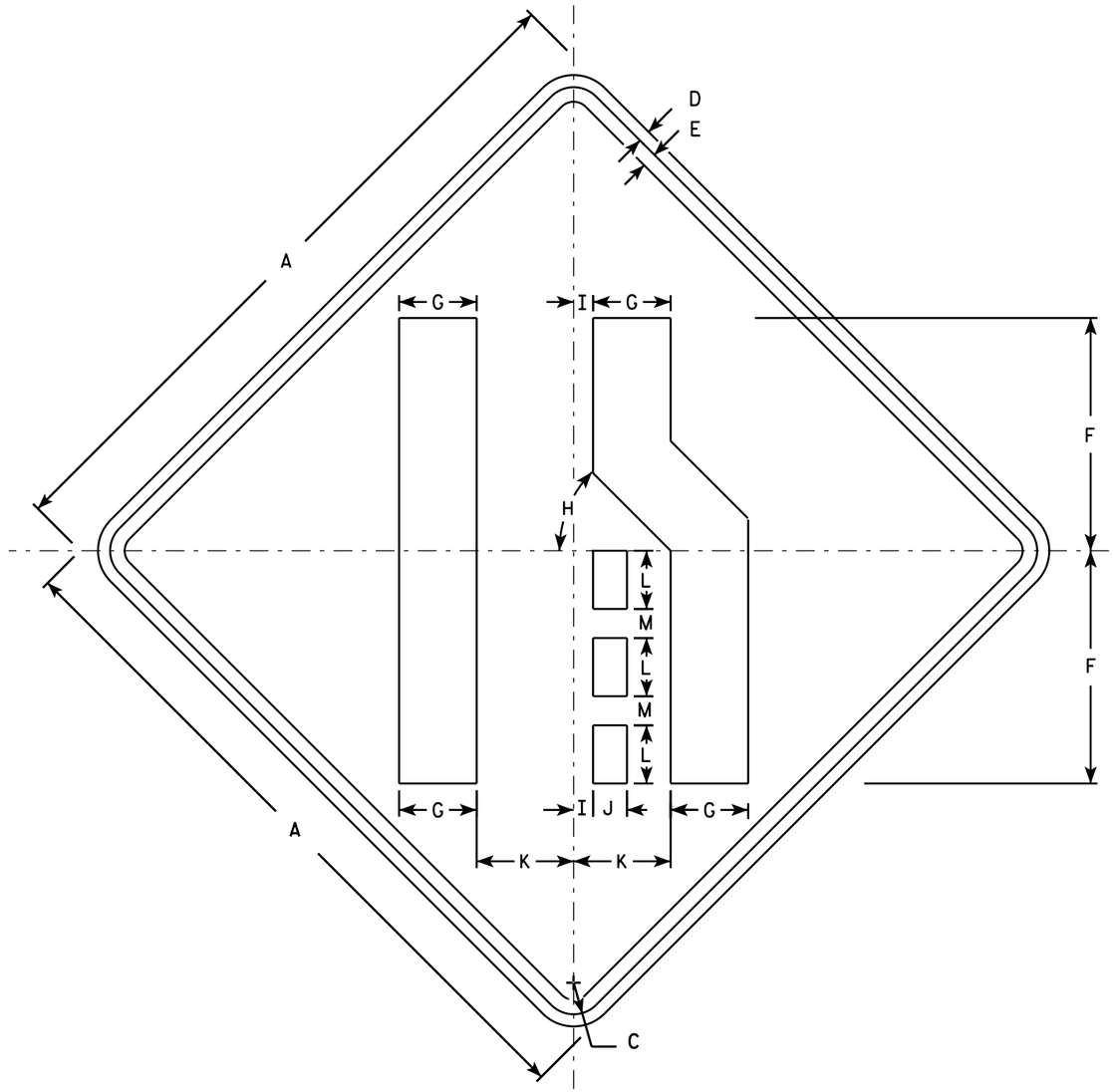
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/27/15 PLATE NO. W20-53.1

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W2053.DGN PLOT DATE : 27-MAY-2015 19:40 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.729210:1.000000
WISDOT/CADDS SHEET 42



W04-2R

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. W04-2L is the same as W04-2R except the symbol is 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 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2S	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

STANDARD SIGN
W04-2

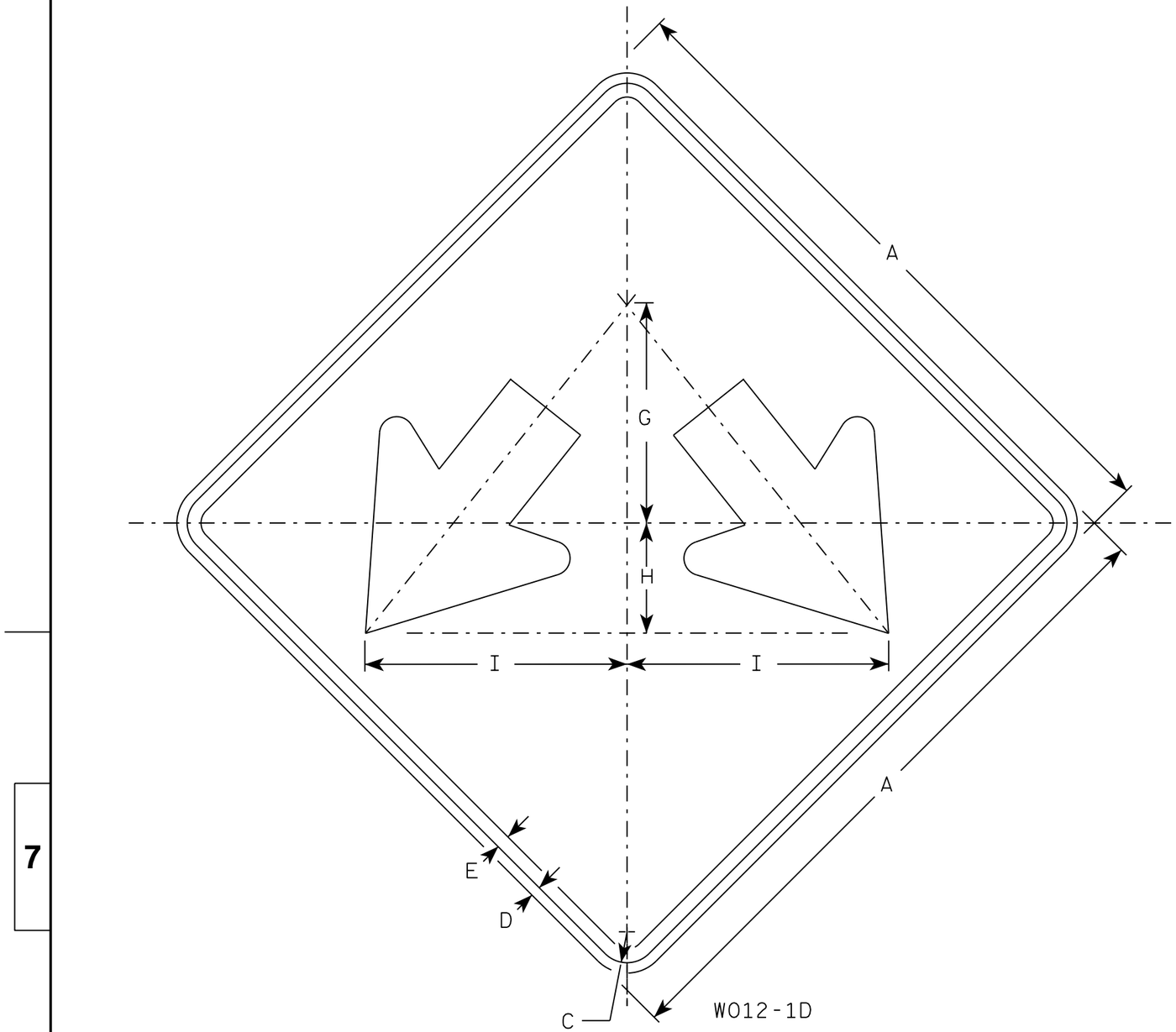
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 312 W04-2.1

PROJECT NO:

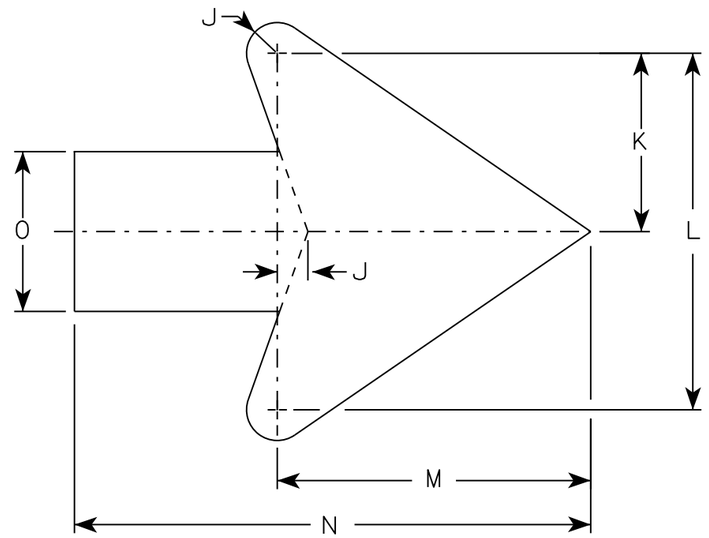
SHEET NO: E



W012-1D

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		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2S	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2M	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
3	30		1 3/8	1/2	5/8		10	5	11 7/8	3/4	4 1/2	9	7 7/8	13	4												6.25
4	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0
5	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0

STANDARD SIGN
W012-1D

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

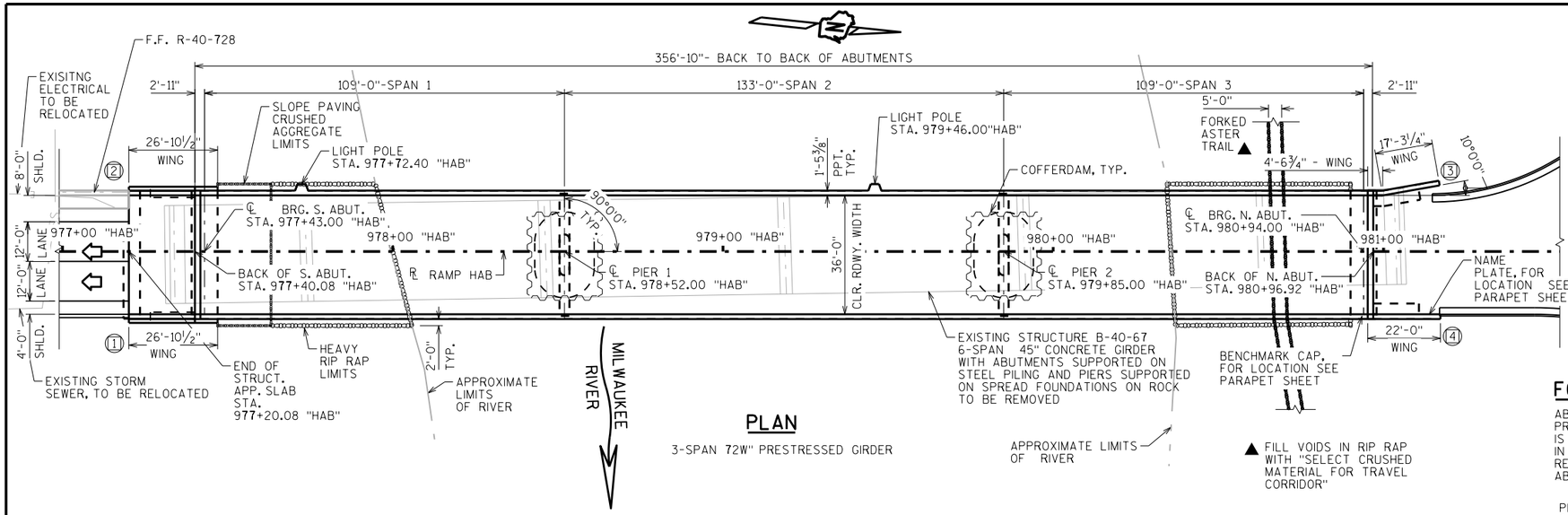
DATE 7/28/16 PLATE NO W012-1D.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CADfiles\Projects\tr_stdplate\W0121D.DGN PLOT DATE : 11-AUG-2016 11:28 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 4.621375:1.000000

STATE PROJECT NUMBER

1228-22-74



PLAN

3-SPAN 72W" PRESTRESSED GIRDER

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.11
OPERATING RATING FACTOR: RF = 1.52
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250 (KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE & STRUCTURAL APPROACH SLAB — f'c = 4,000 P.S.I.
ALL OTHER — f'c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT:
GRADE 60 — fy = 60,000 P.S.I.
STAINLESS, GRADE 60 — fy = 60,000 P.S.I.

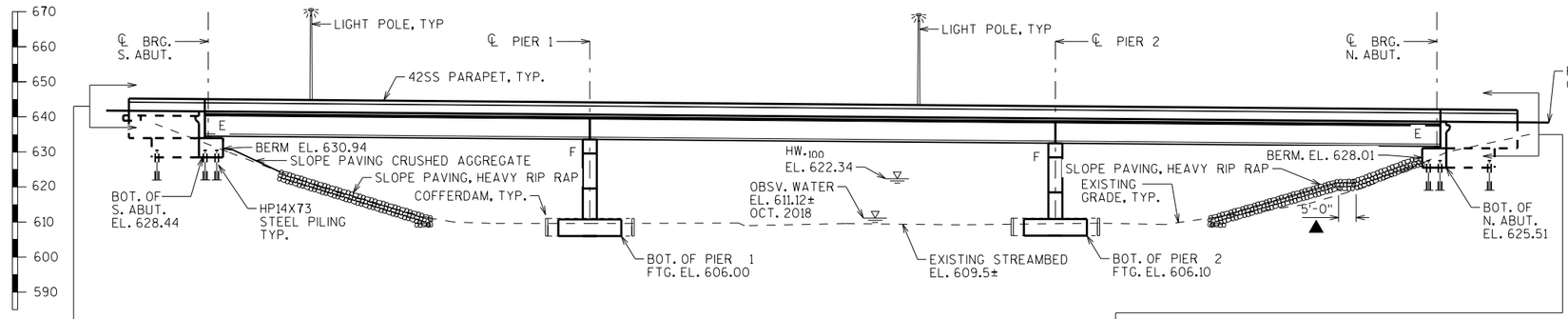
72W" PRESTRESSED GIRDERS:
CONCRETE MASONRY — f'c = 8,000 P.S.I.
STRANDS: 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP14X73 PILING SEATED IN PREBORED HOLES CORED 3 FEET MINIMUM INTO ROCK. PILE DRIVING IS NOT REQUIRED. THE FACTORED AXIAL RESISTANCE OF THE PILES IN COMPRESSION USED FOR DESIGN IS 250 TONS MULTIPLIED BY A RESISTANCE FACTOR OF 0.5. ESTIMATED 18 FEET LONG AT SOUTH ABUTMENT AND 17 FEET LONG AT NORTH ABUTMENT.

PIERS 1 & 2 WITH SPREAD FOOTINGS TO BE SUPPORTED ON SOUND ROCK WITH A REQUIRED FACTORED BEARING RESISTANCE*** OF 20,000 PSF, KEYED 2'-0" MIN. INTO SOUND ROCK AT PIER 1 AND 1'-0" MIN. AT PIER 2. A GEOTECHNICAL ENGINEER WILL DETERMINE THE FACTORED BEARING RESISTANCE BY VISUAL INSPECTION PRIOR TO CONSTRUCTION OF THE PIER FOOTING.

***THE FACTORED BEARING RESISTANCE IS THE VALUE USED FOR DESIGN.



ELEVATION

LOOKING WEST - UPSTREAM

HYDRAULIC DATA

100 YEAR FREQUENCY

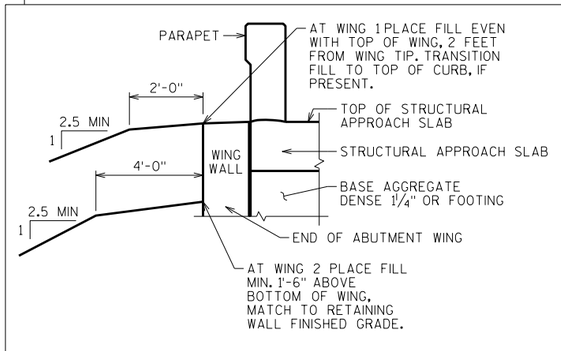
Q_{100} = 14760 C.F.S.
$VEL._{100}$ = 5.2 F.P.S.
$HW._{100}$ = EL. 622.34
WATERWAY AREA = 2855 SQ. FT.
DRAINAGE AREA = 682 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 5

2 YEAR FREQUENCY

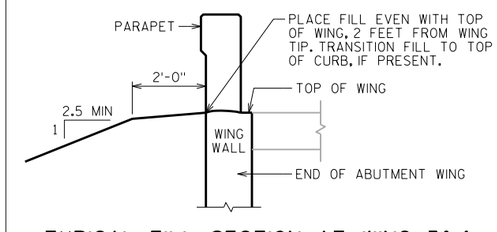
Q_2 = 4270 C.F.S.
$VEL._2$ = 3.2 F.P.S.
$HW._2$ = EL. 616.65

TRAFFIC VOLUME

IH43 SB ON RAMP
ADT = 7000 (2014)
R.D.S. = 60 M.P.H.



TYPICAL FILL SECTION AT WING 1&2 TIPS



TYPICAL FILL SECTION AT WING 3&4 TIPS

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION
3. QUANTITIES AND NOTES
4. SUBSURFACE EXPLORATION
5. SOUTH ABUTMENT
6. SOUTH ABUTMENT DETAILS 1
7. SOUTH ABUTMENT DETAILS 2
8. NORTH ABUTMENT
9. NORTH ABUTMENT DETAILS 1
10. NORTH ABUTMENT DETAILS 2
11. PIER 1 & 2 FOOTING DETAILS
12. PIER 1 & 2
13. PIER 1 & 2 DETAILS
14. PRESTRESSED GIRDER BEARINGS
15. 72W" PRESTRESSED GIRDER DETAILS 1
16. 72W" PRESTRESSED GIRDER DETAILS 2
17. STEEL DIAPHRAGM
18. SUPERSTRUCTURE CROSS SECTION
19. SUPERSTRUCTURE DETAILS
20. EXPANSION DEVICE
21. COVER PLATE DETAILS
22. SUPERSTRUCTURE PLAN
23. SUPERSTRUCTURE BAR DETAILS
24. CONDUIT PLAN
25. ELECTRICAL DETAILS AT PARAPET
26. WEST PARAPET CONDUIT DETAILS
27. EAST PARAPET CONDUIT DETAILS
28. SE SINGLE SLOPE PARAPET 42SS
29. SW SINGLE SLOPE PARAPET 42SS MODIFIED
30. NE SINGLE SLOPE PARAPET 42SS
31. NW SINGLE SLOPE PARAPET 42SS
32. SOUTH STRUCTURAL APPROACH SLAB
33. SLOPE PAVING SOUTH ABUTMENT
34. SLOPE PAVING NORTH ABUTMENT

STRUCTURE DESIGN CONTACTS:

MAXWELL KULICK (608) 261-6108
DOMINIQUE BECHLE (608) 261-8205

NO.	DATE	REVISION	BY

WISCONSIN DEPARTMENT OF TRANSPORTATION — BUREAU OF STRUCTURES

ACCEPTED DMB 10/03/22
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-40-893

IH43 SB ON RAMP OVER MILWAUKEE RIVER

COUNTY	CITY
MILWAUKEE	GLENDALE

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
MJK	JRS	MJK	LMK

GENERAL PLAN

SHEET 1 OF 34

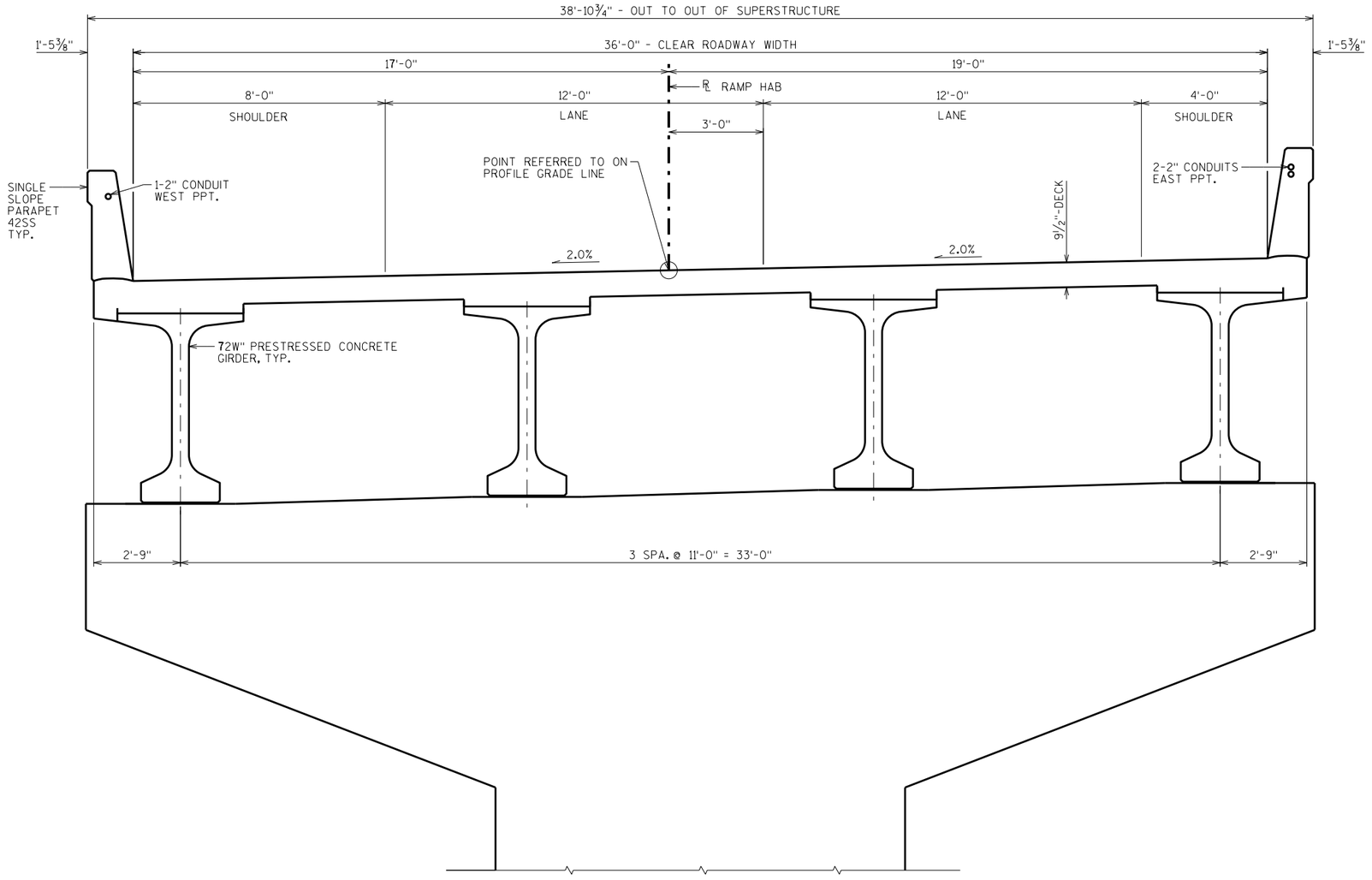
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I.D. 1228-22-01DK DATE: DEC. 2021

SCALE = 20.00

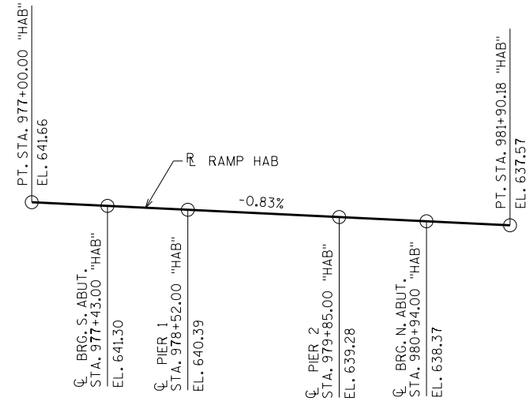
STATE PROJECT NUMBER

1228-22-74



CROSS SECTION THRU ROADWAY

LOOKING NORTH - UPSTATION



PROFILE GRADE LINE - IH43 SB ON RAMP

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-893

DRAWN BY MJK | PLANS CK'D. JRS

CROSS SECTION

SHEET 2

315

SCALE = 2.00

TOTAL ESTIMATED QUANTITIES

NOTE: ALL BID ITEMS ARE CATEGORY NUMBER 2000

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER	S. STRUCT. APP. SLAB	SOUTH ABUT.	PIER 1	PIER 2	NORTH ABUT.	TOTALS
203.0260	REMOVING STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS B-40-67	EACH	---	---	---	---	---	---	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-40-893	EACH							1
206.5001	COFFERDAMS B-40-893	EACH							1
210.1500	BACKFILL STRUCTURE TYPE A	TON			280			271	551
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON		110					110
502.0100	CONCRETE MASONRY BRIDGES	CY	607	54	114	119	118	118	1,130
◐ 502.3101	EXPANSION DEVICE	LF	72						72
502.3200	PROTECTIVE SURFACE TREATMENT	SY	1,427	90					1,507
502.3210	PIGMENTED SURFACE SEALER	SY	352	21				20	393
503.0172	PRESTRESSED GIRDER TYPE I 72W-INCH	LF	1,408						1,408
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB			4,490	17,690	17,650	5,130	44,960
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	126,940	9,100	6,710			8,120	150,870
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB		680					680
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH				8	8		16
506.2610	BEARING PADS ELASTOMERIC LAMINATED	EACH			4			4	8
506.4000	STEEL DIAPHRAGMS B-40-893	EACH	18						18
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY			13			13	26
531.8990	ANCHOR ASSEMBLIES POLES ON STRUCTURES	EACH	2						2
550.0020	PRE-BORING ROCK OR CONSOLIDATED MATERIALS	LF			240			255	495
550.1140	PILING STEEL HP 14-INCH X 73 LB	LF			270			289	559
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY			88				88
606.0300	RIPRAP HEAVY	CY			143			207	350
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF			129			122	251
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY			34			29	63
645.0120	GEOTEXTILE TYPE HR	SY			224			315	539
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	81		74			75	230
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	980						980
653.0220	JUNCTION BOXES 18X6X6-INCH	EACH	1						1
653.0222	JUNCTION BOXES 18X12X6-INCH	EACH	5						5
SPV.0195	SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR	TON						18	18
	NON-BID ITEMS								
	BRIDGE SEAT PROTECTION	LS							
	FILLER	SIZE							1/2",3/4",1 1/2"

◐ QUANTITY IS MEASURED FROM GUTTER LINE TO GUTTER LINE AT EACH EXPANSION JOINT LOCATION

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-40-893" SHALL BE THE EXISTING GROUNDLINE.

AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL TYPE A. ALSO EXCLUDED IS THE "BASE AGGREGATE DENSE 1 1/4-INCH" AS DETAILED ON THE STRUCTURAL APPROACH SLAB SHEETS.

EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

COORDINATE CONSTRUCTION OF B-40-893 WITH R-40-728.

THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE A" REQUIRED DIRECTLY BEHIND ABUTMENTS AND ABUTMENT WINGS FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES.

NON-LAMINATED ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK, PAVING BLOCK, AND APPROACH SLAB SURFACES AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT DIAPHRAGMS.

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS ON APPROACH SLABS.

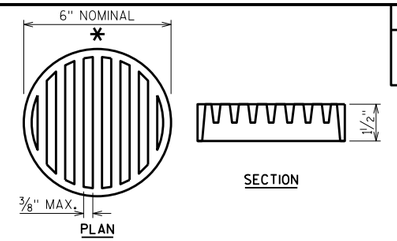
THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING AND HEAVY RIPRAP MATERIAL TO THE EXTENT SHOWN ON THE SLOPE PAVING DETAIL SHEETS AND THE ABUTMENT DETAILS.

APPLY BRIDGE SEAT PROTECTION, AS PER SECTION 502.3.12 OF THE STANDARD SPECIFICATIONS, TO THE TOP SURFACES OF THE ABUTMENTS BELOW THE EXPANSION DEVICE.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE GIRDER DETAIL SHEETS.

THE EXISTING STREAM BED SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION AT THE PIERS.

PIER 1 & 2 FOOTINGS ARE TO BE POURED IN THE DRY, WITHOUT THE USE OF A TYPICAL CONCRETE SEAL BETWEEN THE FOOTING AND SOUND ROCK. ANY WORK REQUIRED TO ACCOMPLISH A DRY CONDITION IS INCLUDED IN THE BID ITEM "COFFERDAMS B-40-893".

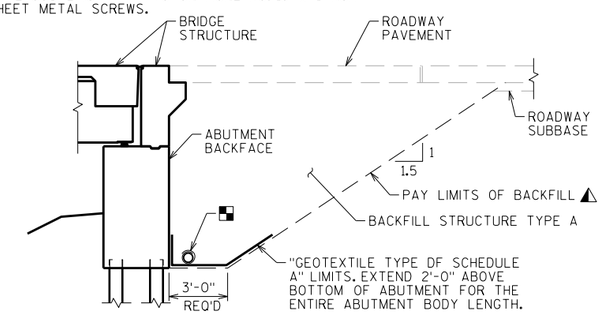


RODENT SHIELD DETAIL

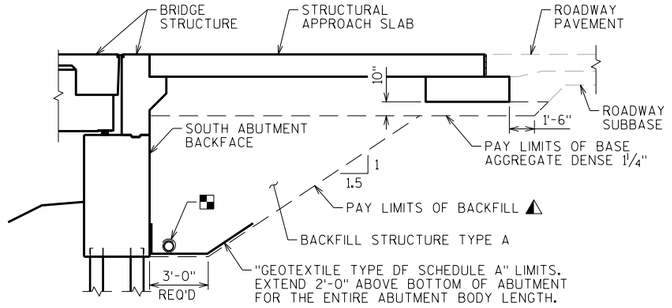
* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



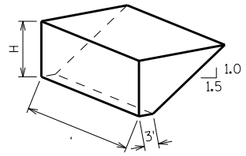
TYPICAL SECTION THRU NORTH ABUTMENT



TYPICAL SECTION THRU SOUTH ABUTMENT

⚠ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

▪ PIPE UNDERDRAIN WRAPPED (6 INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.



ABUTMENT BACKFILL DIAGRAM FOR WINGS PARALLEL TO ROADWAY

L = OUT TO OUT OF ABUTMENT, INCLUDING WINGS (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H)
V_{CY} = V_{CF} (EF)/27
V_{TON} = V_{CY} (2.0)

STATE PROJECT NUMBER
1228-22-74

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-893

DRAWN BY MJK | PLANS CK'D. LMK

QUANTITIES & NOTES

SHEET 3

316

SCALE = 5.00

8

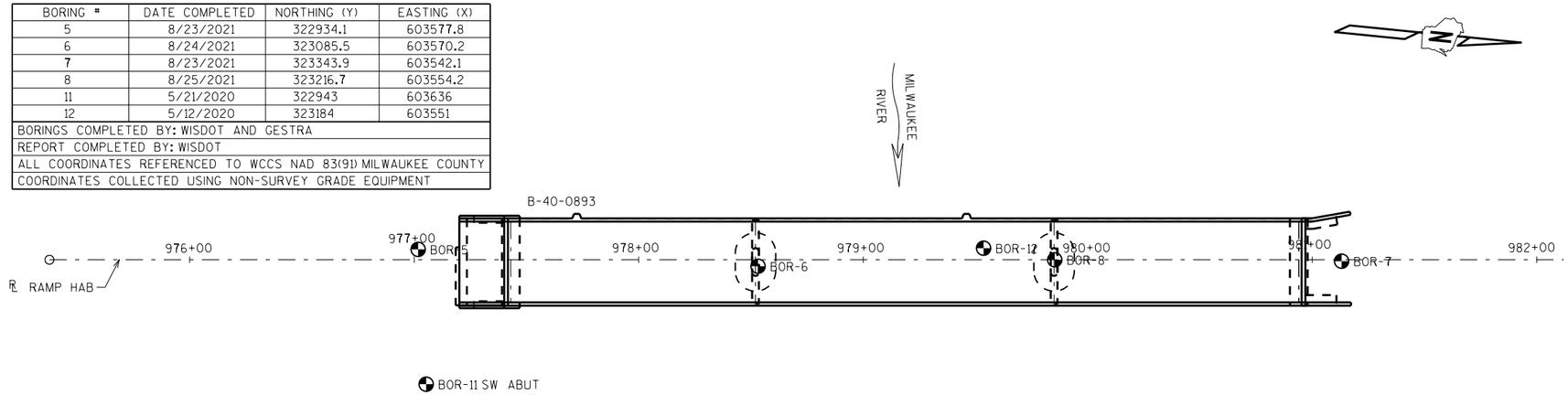
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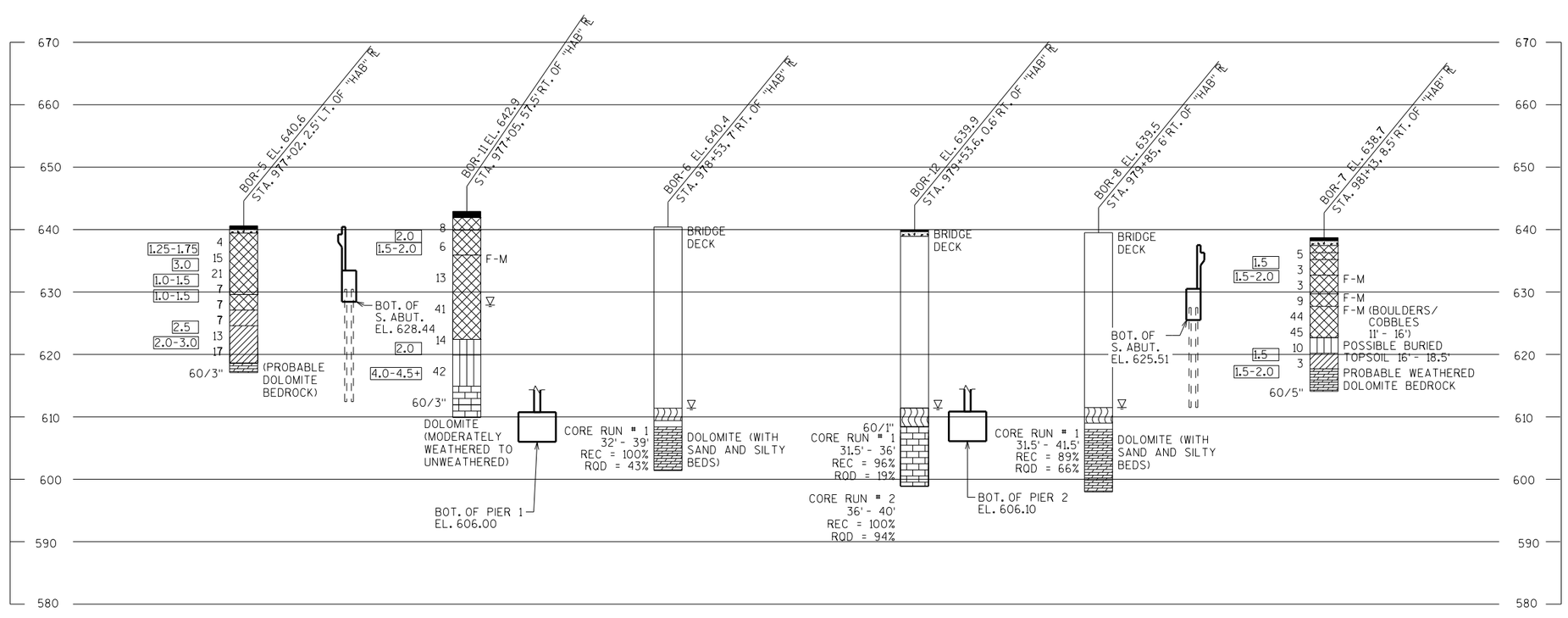
BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
5	8/23/2021	322934.1	603577.8
6	8/24/2021	323085.5	603570.2
7	8/23/2021	323343.9	603542.1
8	8/25/2021	323216.7	603554.2
11	5/21/2020	322943	603636
12	5/12/2020	323184	603551

BORINGS COMPLETED BY: WISDOT AND GESTRA

REPORT COMPLETED BY: WISDOT

ALL COORDINATES REFERENCED TO WCCS NAD 83(91) MILWAUKEE COUNTY COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT





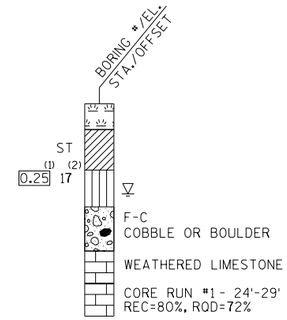
STATE PROJECT NUMBER

1228-22-74

MATERIAL SYMBOLS

ASPHALT, TOPSOIL, PEAT, CONCRETE, FILL, GRAVEL, SAND, CLAY, SILT, BOULDERS OR COBBLES, LIMESTONE, BEDROCK (UNKNOWN), SHALE, SANDSTONE, IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

▽ AT TIME OF DRILLING

▼ END OF DRILLING

▼ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-893

DRAWN BY MJK/TLP | PLANS CK'D. JRS

SUBSURFACE EXPLORATION

SHEET 4

317

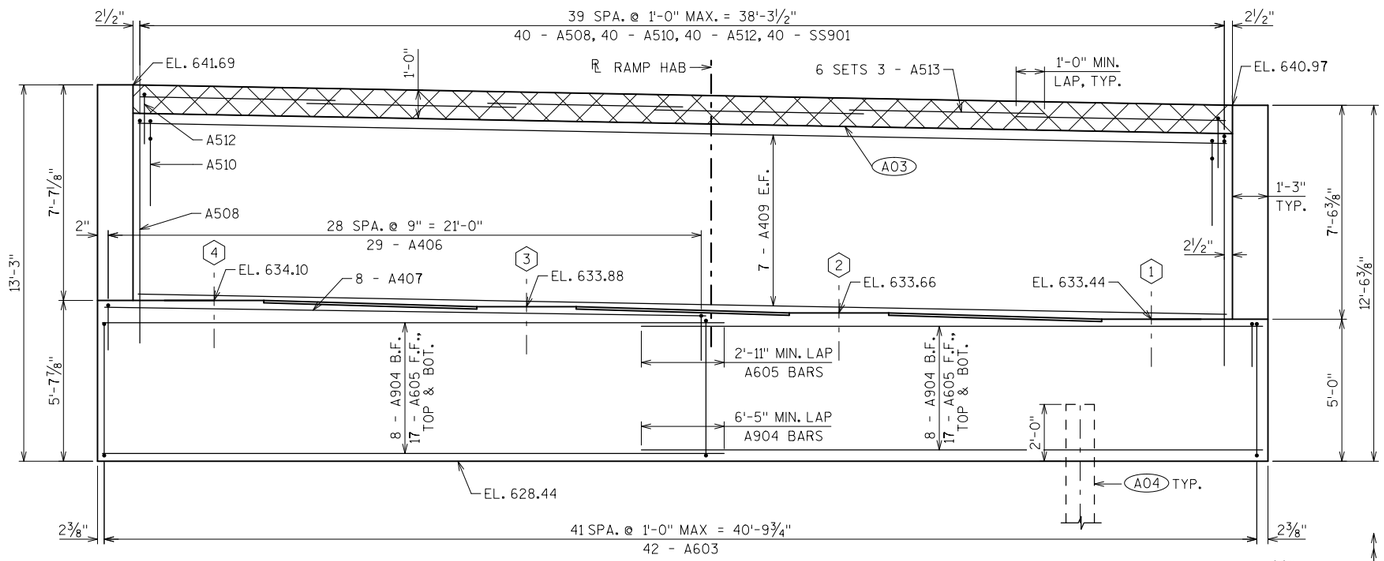
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STATE PROJECT NUMBER

1228-22-74

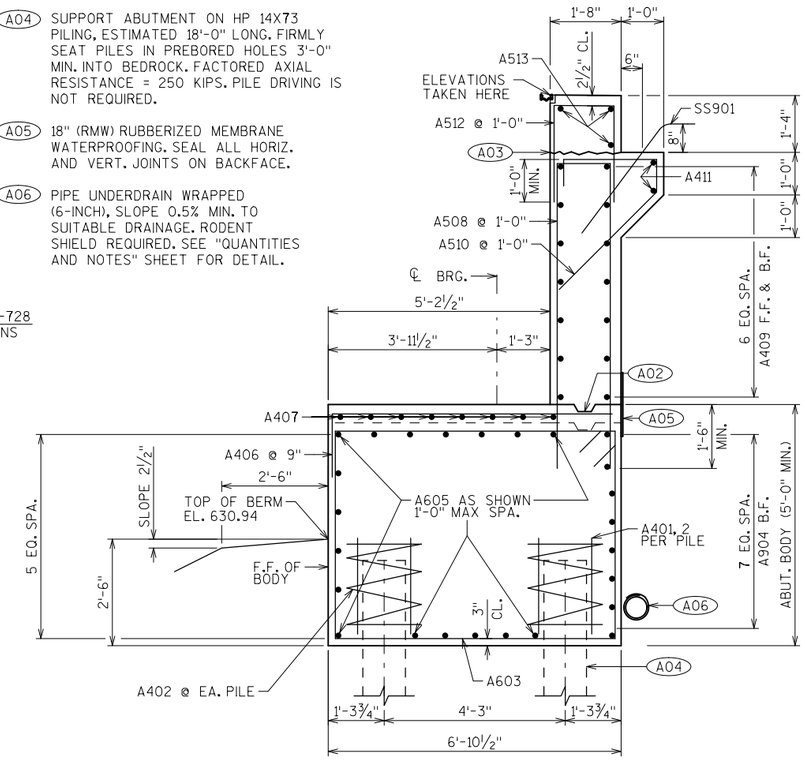


FRONT ELEVATION

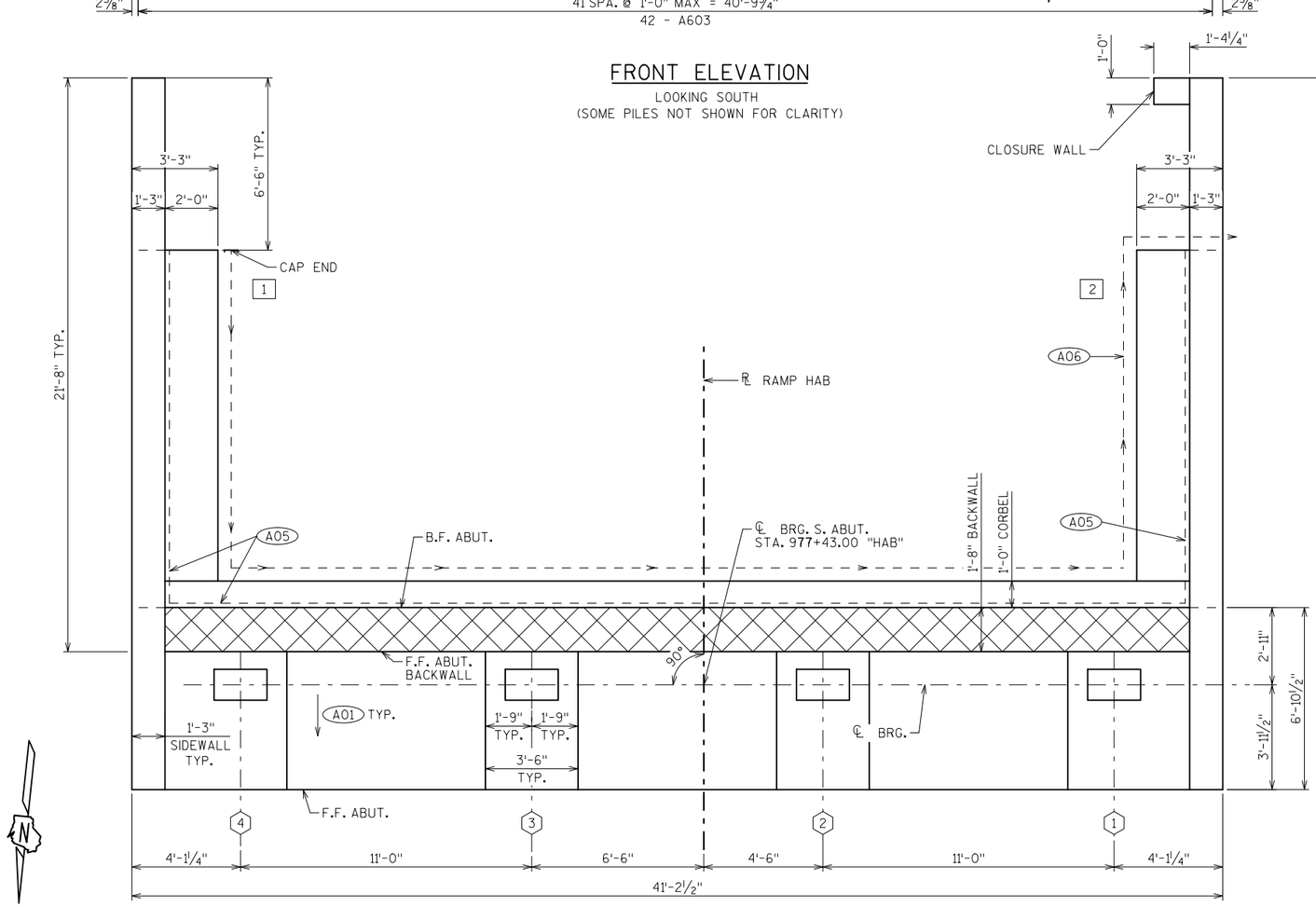
LOOKING SOUTH
(SOME PILES NOT SHOWN FOR CLARITY)

LEGEND

- [X] INDICATES WING NUMBER
- (X) INDICATES GIRDER NUMBER
- (A01) SLOPE 1" BETWEEN BEAM SEATS.
- (A02) CONST. JOINT: KEYWAY FORMED BY A BEVELED 2" X 6".
- (A03) CONST. JOINT: POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.
- (A04) SUPPORT ABUTMENT ON HP 14X73 PILING, ESTIMATED 18'-0" LONG. FIRMLY SEAT PILES IN PREBORED HOLES 3'-0" MIN. INTO BEDROCK. FACTORED AXIAL RESISTANCE = 250 KIPS. PILE DRIVING IS NOT REQUIRED.
- (A05) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. AND VERT. JOINTS ON BACKFACE.
- (A06) PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED. SEE "QUANTITIES AND NOTES" SHEET FOR DETAIL.



SECTION THRU ABUTMENT



PLAN

(PILES NOT SHOWN FOR CLARITY)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-893

DRAWN BY	RBH	PLANS CK'D.	TJN

SOUTH ABUTMENT

SHEET 5
318

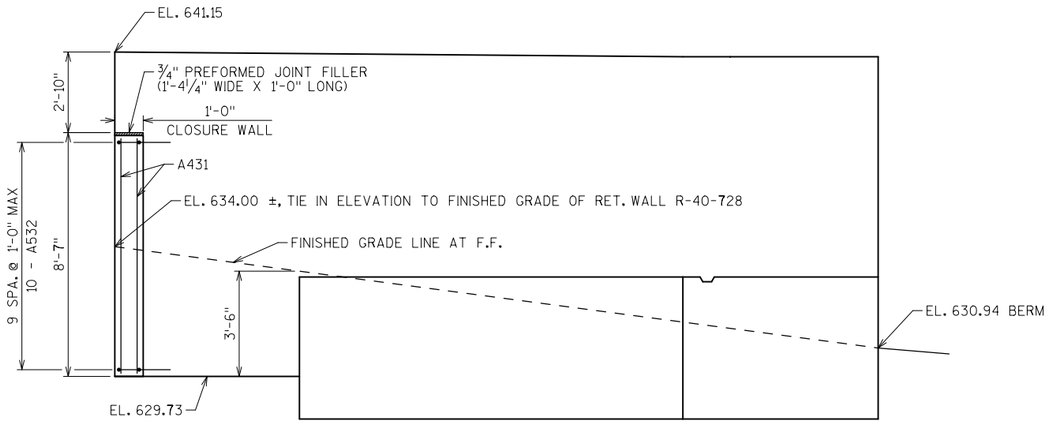
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8

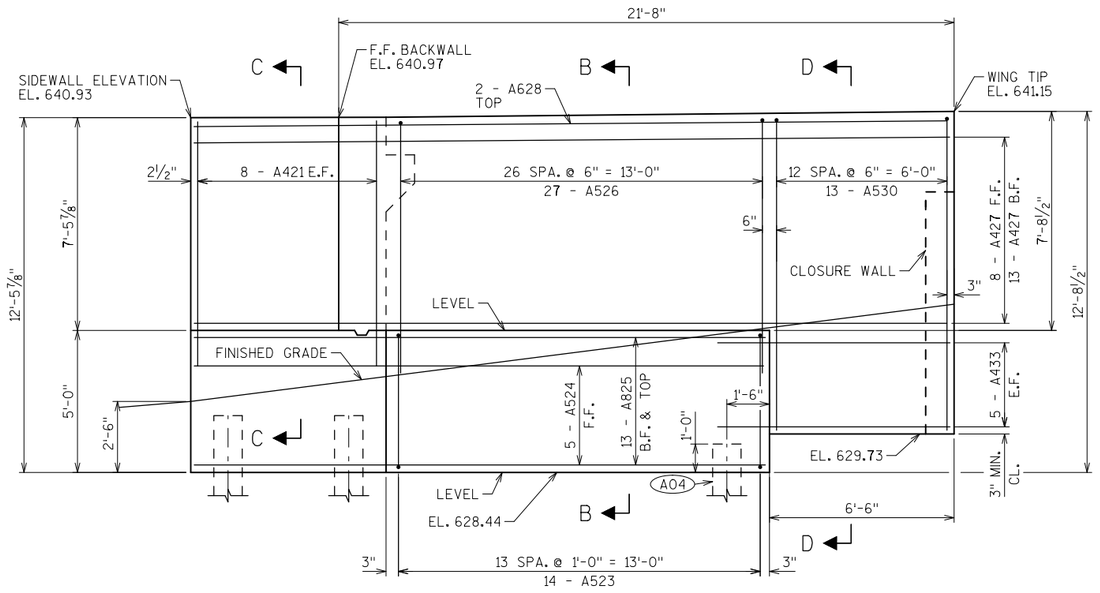
STATE PROJECT NUMBER

1228-22-74

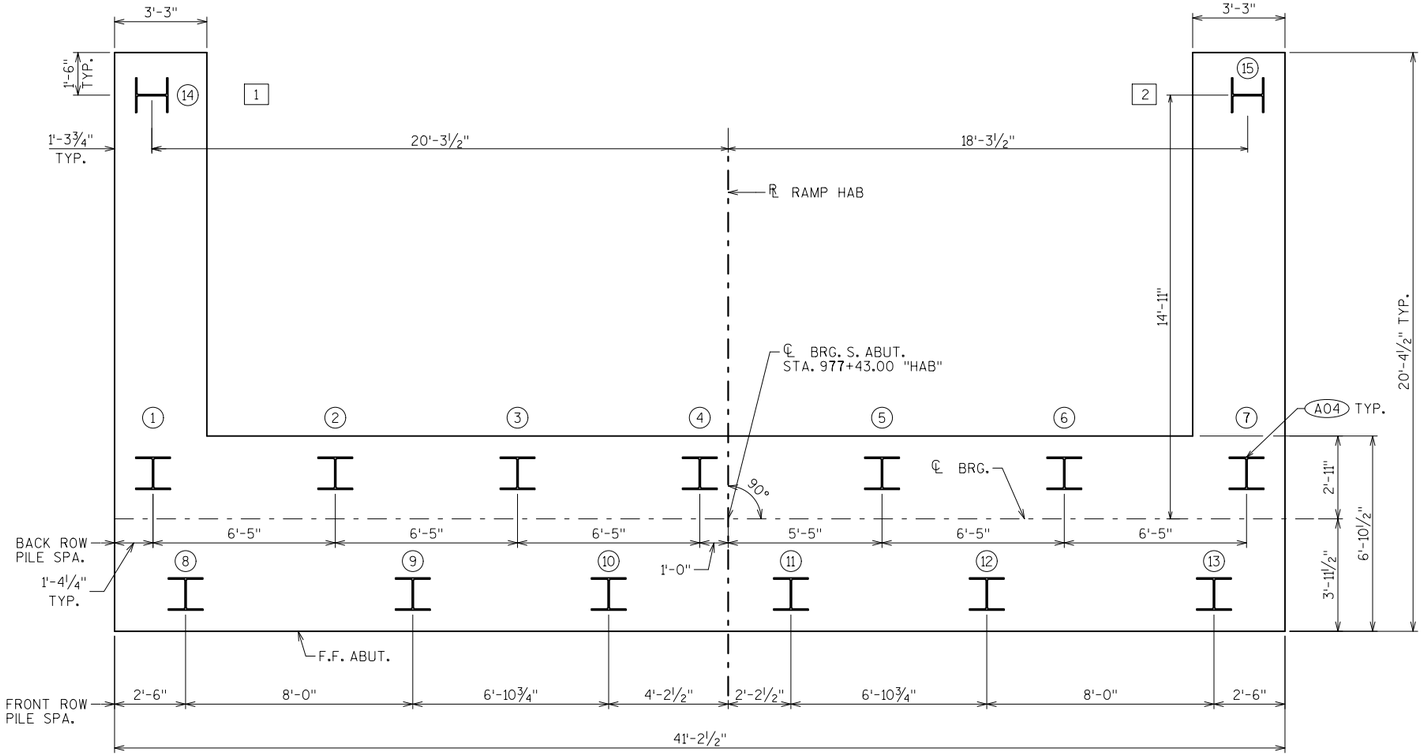


WINGWALL 2 ELEVATION

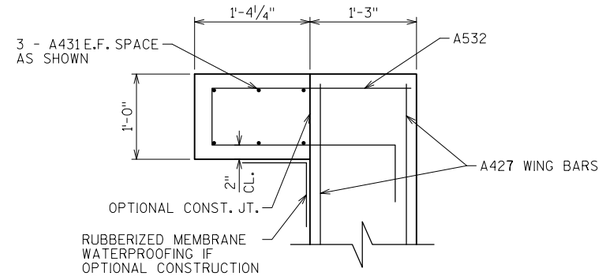
(LOOKING AT B.F., PILES NOT SHOWN)
(WINGWALL REINF. NOT SHOWN)



WINGWALL 2 ELEVATION



PILE PLAN



SECTION THRU CLOSURE WALL

NOTE:

FOR SECTION B-B, C-C AND D-D, SEE "SOUTH ABUTMENT DETAILS 2" SHEET.

LEGEND

[X] INDICATES WING NUMBER

(X) INDICATES PILE NUMBER

(A04) SUPPORT ABUTMENT ON HP 14X73 PILING, ESTIMATED 18'-0" LONG. FIRMLY SEAT PILES IN PREBORED HOLES 3'-0" MIN. INTO BEDROCK. FACTORED AXIAL RESISTANCE = 250 KIPS. PILE DRIVING IS NOT REQUIRED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-893

DRAWN BY RBH | PLANS CK'D. TJN

SOUTH ABUTMENT DETAILS 1

SHEET 6
319

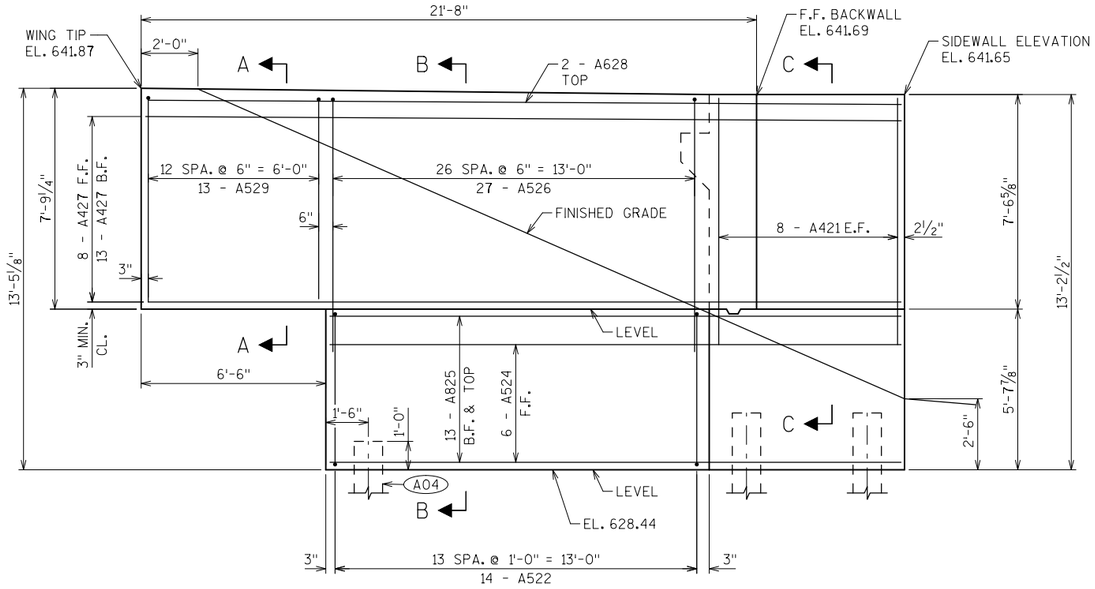
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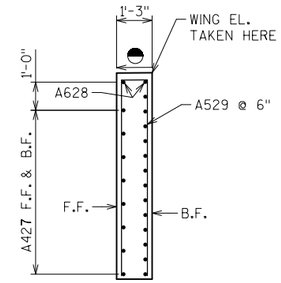
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STATE PROJECT NUMBER

1228-22-74



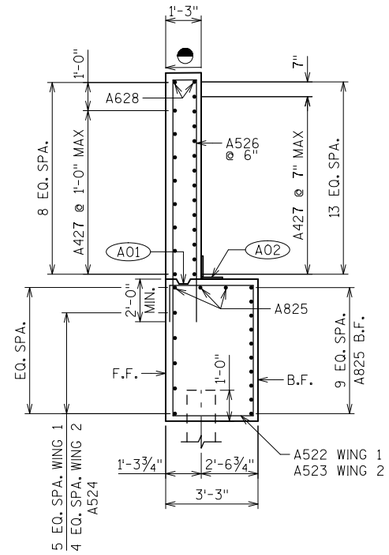
WINGWALL 1 ELEVATION



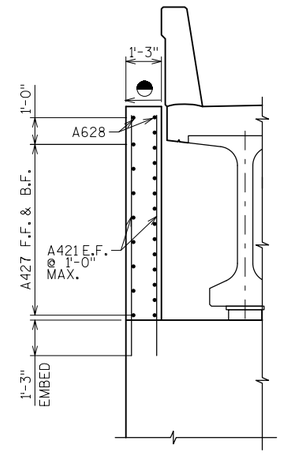
SECTION A-A

(WING 1)

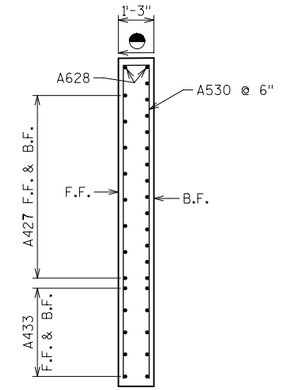
● = SLOPE ⅛" PER FOOT MIN.



SECTION B-B



SECTION C-C



SECTION D-D

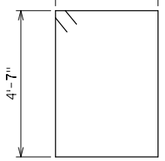
(WING 2)

BILL OF BARS

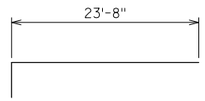
BAR MARK	NO. REQ'D.	LENGTH	COAT	STAINLESS STEEL	BENT	BAR SERIES	LOCATION
A401	26	2'-3"					BODY PILES VERTICAL
A402	13	28'-0"			X		BODY PILES SPIRAL
A603	42	23'-0"			X		BODY VERTICAL
A904	16	25'-0"			X		BODY HORIZ. B.F.
A605	34	22'-0"					BODY HORIZ. TOP, BOT., F.F.
A406	29	8'-1"			X		BODY VERTICAL TOP AT BEAMS 3 & 4
A407	8	21'-0"					BODY HORIZ. TOP AT BEAMS 3 & 4
A508	40	16'-3"	X		X		BACKWALL VERTICAL
A409	14	38'-5"	X				BACKWALL HORIZONTAL
A510	40	6'-9"	X		X		CORBEL VERTICAL
A411	2	38'-5"	X				CORBEL HORIZONTAL
A512	40	5'-9"	X		X		PAVING BLOCK VERTICAL
A513	18	7'-3"	X				PAVING BLOCK HORIZONTAL
A421	32	8'-8"	X				SIDEWALLS VERTICAL
A522	14	15'-8"	X		X		WING 1 BASE STIRRUP
A523	14	17'-0"	X		X		WING 2 BASE STIRRUP
A524	11	20'-0"	X				WING 1 & 2 HORIZONTAL F.F.
A825	26	20'-0"	X				WING 1 & 2 HORIZONTAL B.F. & TOP
A526	54	19'-10"	X		X		WING 1 & 2 VERTICAL
A427	42	26'-6"	X				WING 1 & 2 HORIZONTAL
A628	4	26'-6"	X				WING 1 & 2 HORIZONTAL TOP
A529	13	15'-6"	X		X		WING 1 VERTICAL @ END
A530	13	22'-6"	X		X		WING 2 VERTICAL @ END
A431	6	8'-2"	X				WING 2 CLOSURE WALL VERTICAL
A532	10	5'-7"	X		X		WING 2 CLOSURE WALL HORIZ.
A433	10	7'-9"	X				WING 2 HORIZONTAL AT BOTTOM
SS901	40	5'-0"		X			BACKWALL TO APPROACH SLAB

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

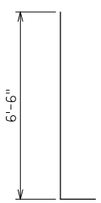
A402



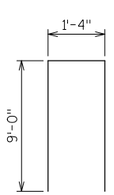
A603



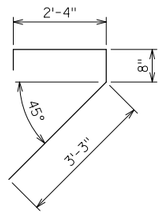
A904



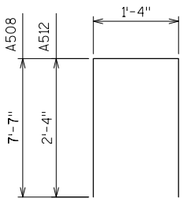
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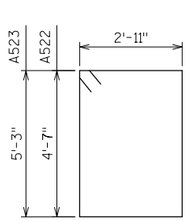
A409



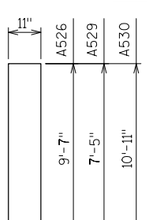
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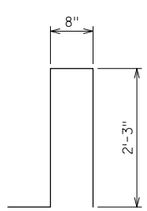
A508, A512



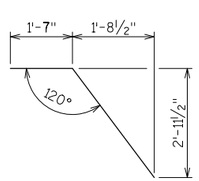
A522, A523



A526, A529, A530



A532



SS901

LEGEND

(A01) OPTIONAL CONST. JOINT: KEYWAY FORMED BY A BEVELED 2" X 6". (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

(A02) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. AND VERT. JOINTS ON BACKFACE.

(A03) PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED. SEE "QUANTITIES AND NOTES" SHEET FOR DETAIL.

(A04) SUPPORT ABUTMENT ON HP 14X73 PILING, ESTIMATED 18'-0" LONG. FIRMLY SEAT PILES IN PREBORED HOLES 3'-0" MIN. INTO BEDROCK. FACTORED AXIAL RESISTANCE = 250 KIPS. PILE DRIVING IS NOT REQUIRED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-893

DRAWN BY RBH | PLANS CK'D. TJN

SOUTH ABUTMENT DETAILS 2

SHEET 7
320

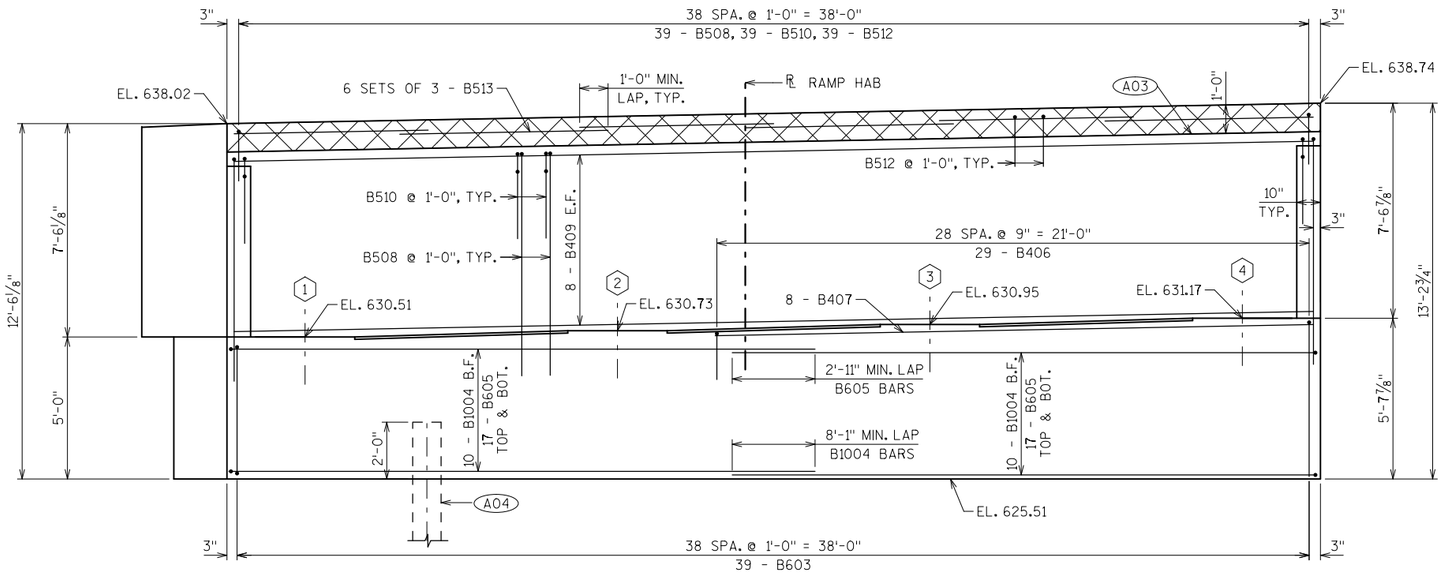
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8

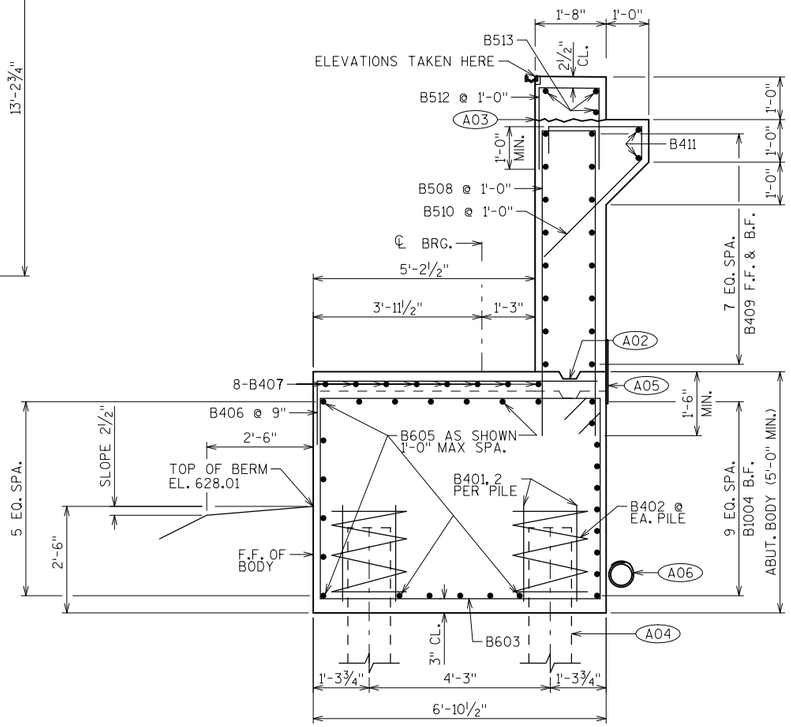
STATE PROJECT NUMBER

1228-22-74

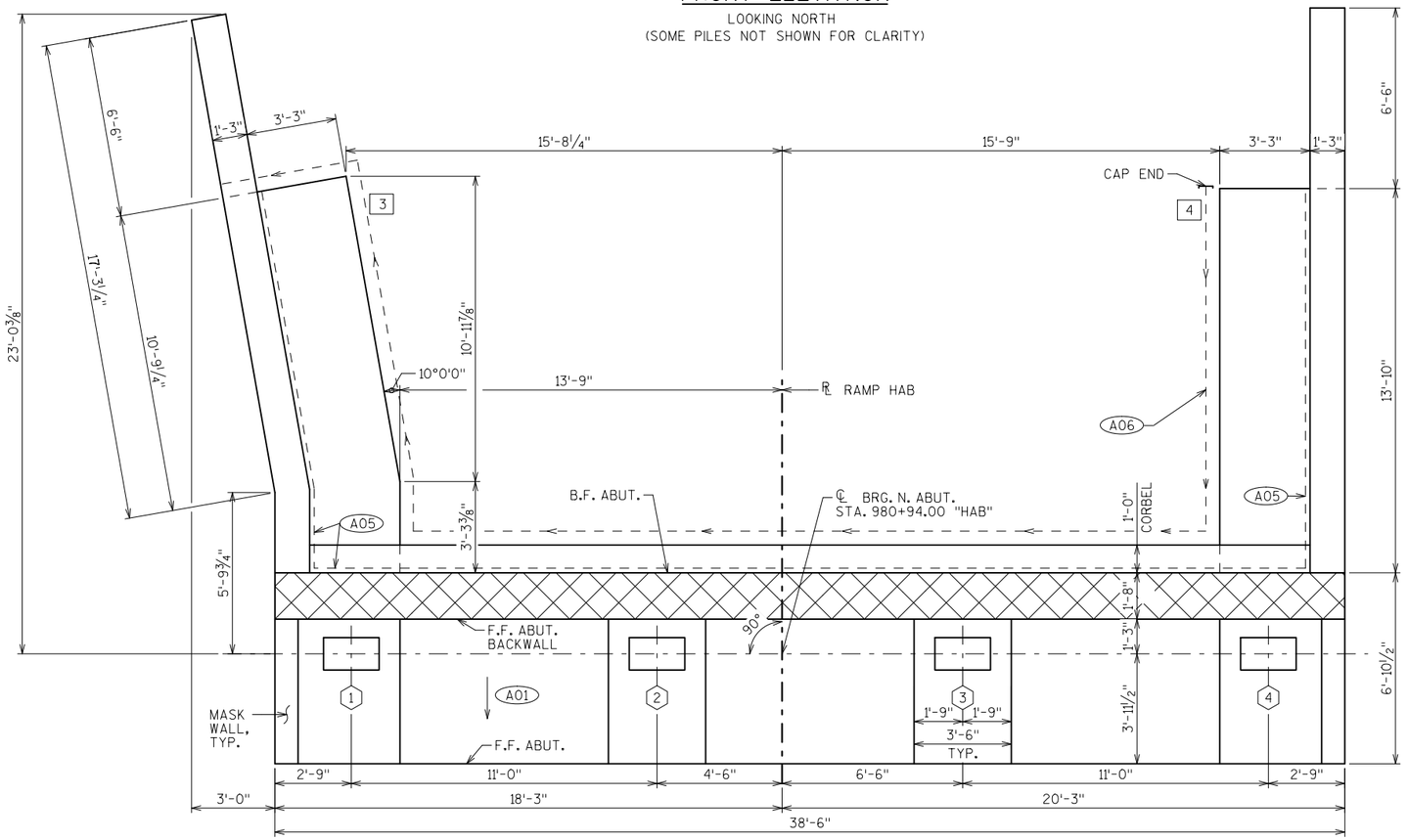


FRONT ELEVATION

LOOKING NORTH
(SOME PILES NOT SHOWN FOR CLARITY)



SECTION THRU ABUTMENT



PLAN

(PILES NOT SHOWN FOR CLARITY)

LEGEND

- [X] INDICATES WING NUMBER
- ⬡X INDICATES GIRDER NUMBER
- (A01) SLOPE 1" BETWEEN BEAM SEATS.
- (A02) CONST. JOINT: KEYWAY FORMED BY A BEVELED 2" X 6".
- (A03) CONST. JOINT: POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.
- (A04) SUPPORT ABUTMENT ON HP 14X73 PILING, ESTIMATED 17'-0" LONG. FIRMLY SEAT PILES IN PREBORED HOLES 3'-0" MIN. INTO BEDROCK. FACTORED AXIAL RESISTANCE = 250 KIPS. PILE DRIVING IS NOT REQUIRED.
- (A05) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. AND VERT. JOINTS ON BACKFACE.
- (A06) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED, SEE "QUANTITIES AND NOTES" SHEET FOR DETAIL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-893

DRAWN BY RBH | PLANS CK'D. TJN

NORTH ABUTMENT

SHEET 8
321

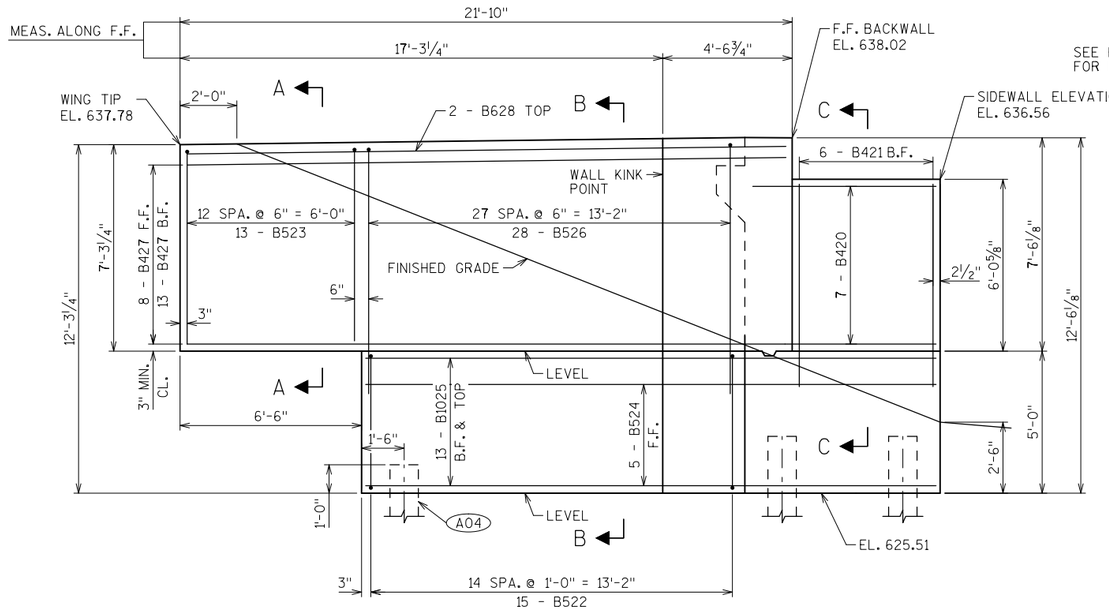
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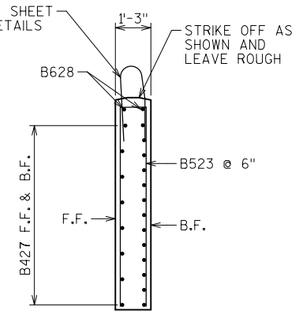
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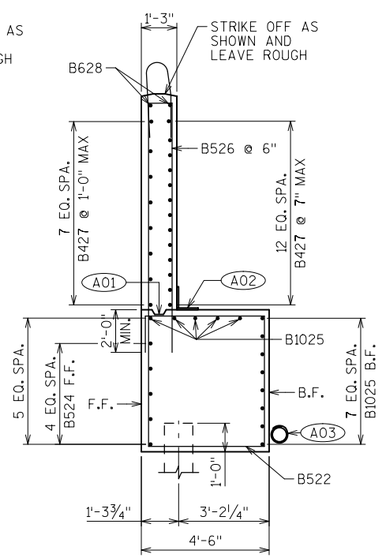


WING 3 ELEVATION

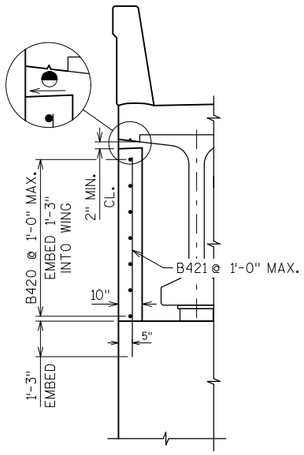
(LOOKING AT FRONT FACE OF WING)



SECTION A-A

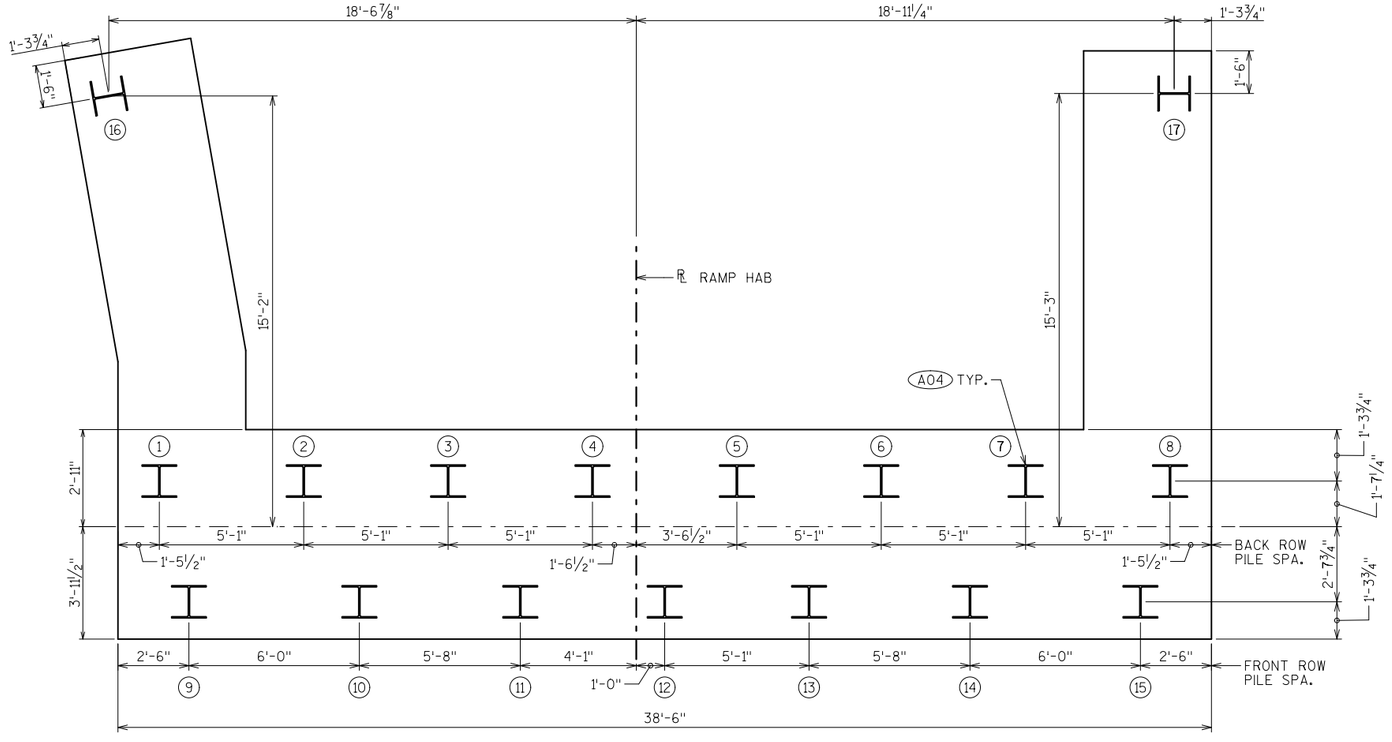


SECTION B-B



SECTION C-C

◓ = SLOPE ⅛" PER FOOT MIN.



FOOTING PLAN AND PILE LAYOUT

LEGEND

A01 OPTIONAL CONST. JOINT: KEYWAY FORMED BY A BEVELED 2" X 6". (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

A02 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. AND VERT. JOINTS ON BACKFACE.

A03 PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED, SEE "QUANTITIES AND NOTES" SHEET FOR DETAIL.

A04 SUPPORT ABUTMENT ON HP 14X73 PILING, ESTIMATED 17'-0" LONG. FIRMLY SEAT PILES IN PREBORED HOLES 3'-0" MIN. INTO BEDROCK. FACTORED AXIAL RESISTANCE = 250 KIPS. PILE DRIVING IS NOT REQUIRED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-893

DRAWN BY	RBH	PLANS CK'D.	TJN

NORTH ABUTMENT DETAILS 1

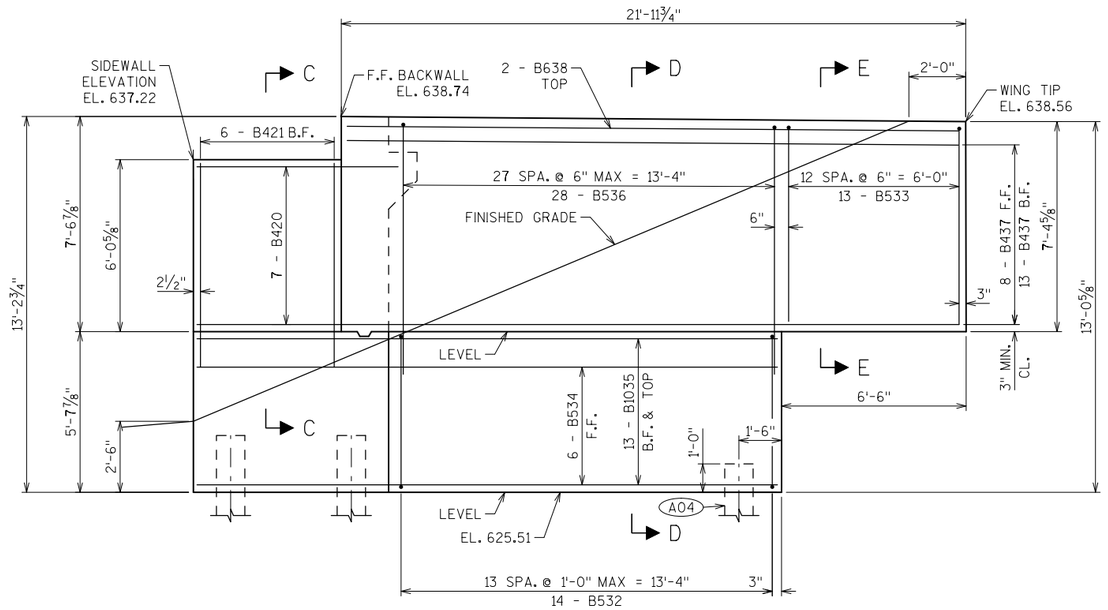
SHEET 9
322

8

8

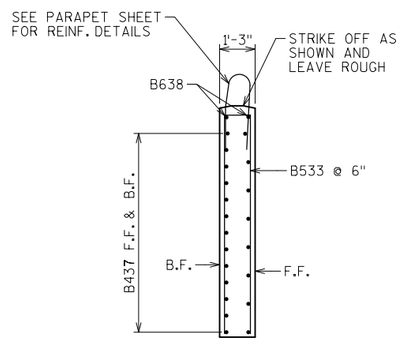
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STATE PROJECT NUMBER
1228-22-74

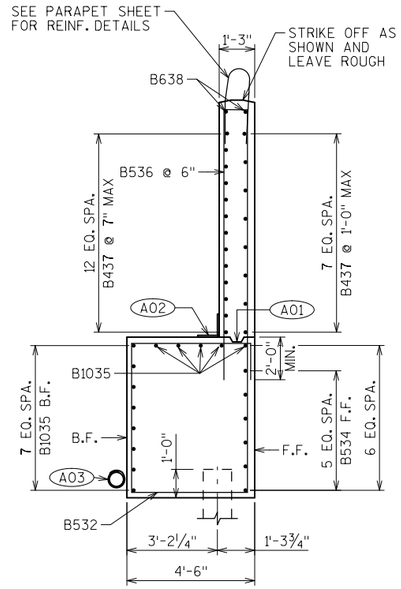


WING 4 ELEVATION

(LOOKING AT FRONT FACE OF WING)



SECTION E-E

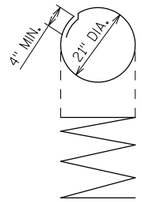


SECTION D-D

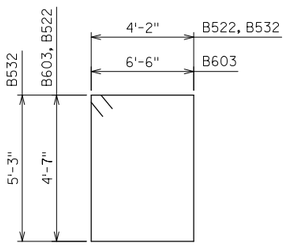
BILL OF BARS

BAR MARK	NO. REQ'D.	LENGTH	COAT	STAINLESS STEEL	BENT	BAR SERIES	LOCATION
B401	30	2'-3"					BODY PILES VERTICAL
B402	15	28'-0"			X		BODY PILES SPIRAL
B603	39	23'-0"			X		BODY VERTICAL
B1004	20	24'-8"			X		BODY HORIZ. B.F.
B605	34	20'-8"					BODY HORIZ. TOP, BOT., F.F.
B406	29	8'-5"			X		BODY VERTICAL TOP AT BEAMS 3 & 4
B407	8	21'-0"					BODY HORIZ. TOP AT BEAMS 3 & 4
B508	39	17'-1"	X		X		BACKWALL VERTICAL
B409	16	38'-2"	X				BACKWALL HORIZONTAL
B510	39	6'-9"	X		X		CORBEL VERTICAL
B411	2	38'-2"	X				CORBEL HORIZONTAL
B512	39	5'-1"	X		X		PAVING BLOCK VERTICAL
B513	18	7'-3"	X				PAVING BLOCK HORIZONTAL
B420	14	6'-4"	X				SIDEWALLS HORIZONTAL
B421	12	7'-3"	X				SIDEWALLS VERTICAL
B522	15	18'-2"	X		X		WING 3 BASE STIRRUP
B523	13	14'-4"	X		X		WING 3 VERTICAL @ END
B524	5	20'-1"	X		X		WING 3 HORIZONTAL F.F.
B1025	13	20'-4"	X		X		WING 3 HORIZONTAL B.F. & TOP
B526	28	19'-6"	X		X		WING 3 VERTICAL
B427	21	21'-6"	X		X		WING 3 HORIZONTAL
B628	2	21'-6"	X		X		WING 3 HORIZONTAL TOP
B532	14	19'-6"	X		X		WING 4 BASE STIRRUP
B533	13	14'-8"	X		X		WING 4 VERTICAL @ END
B534	6	20'-1"	X				WING 4 HORIZONTAL F.F.
B1035	13	20'-1"	X				WING 4 HORIZONTAL B.F. & TOP
B536	28	19'-6"	X		X		WING 4 VERTICAL
B437	21	21'-8"	X				WING 4 HORIZONTAL
B638	2	21'-8"	X				WING 4 HORIZONTAL TOP

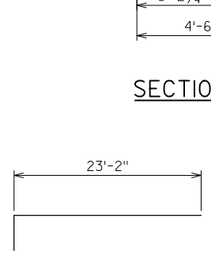
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
ALL BAR BEND DIMENSIONS ARE OUT-TO-OUT OF BAR.



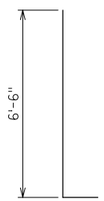
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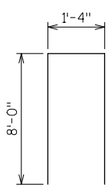
B603, B522, B532



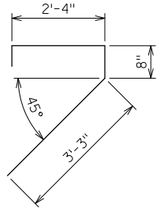
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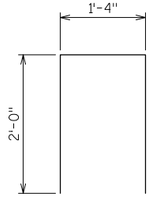
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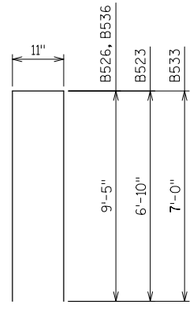
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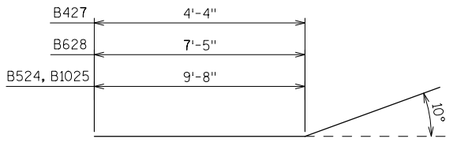
B510



B512



B523, B526, B533, B536



B524, B1025, B427, B628

NOTES

FOR MIRRORED SECTION C-C, SEE "NORTH ABUTMENT DETAILS 1" SHEET.

LEGEND

(A01) OPTIONAL CONST. JOINT: KEYWAY FORMED BY A BEVELED 2" X 6". (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

(A02) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. AND VERT. JOINTS ON BACKFACE.

(A03) PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED, SEE "QUANTITIES AND NOTES" SHEET FOR DETAIL.

(A04) SUPPORT ABUTMENT ON HP 14X73 PILING, ESTIMATED 17'-0" LONG. FIRMLY SEAT PILES IN PREBORED HOLES 3'-0" MIN. INTO BEDROCK. FACTORED AXIAL RESISTANCE = 250 KIPS. PILE DRIVING IS NOT REQUIRED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-893

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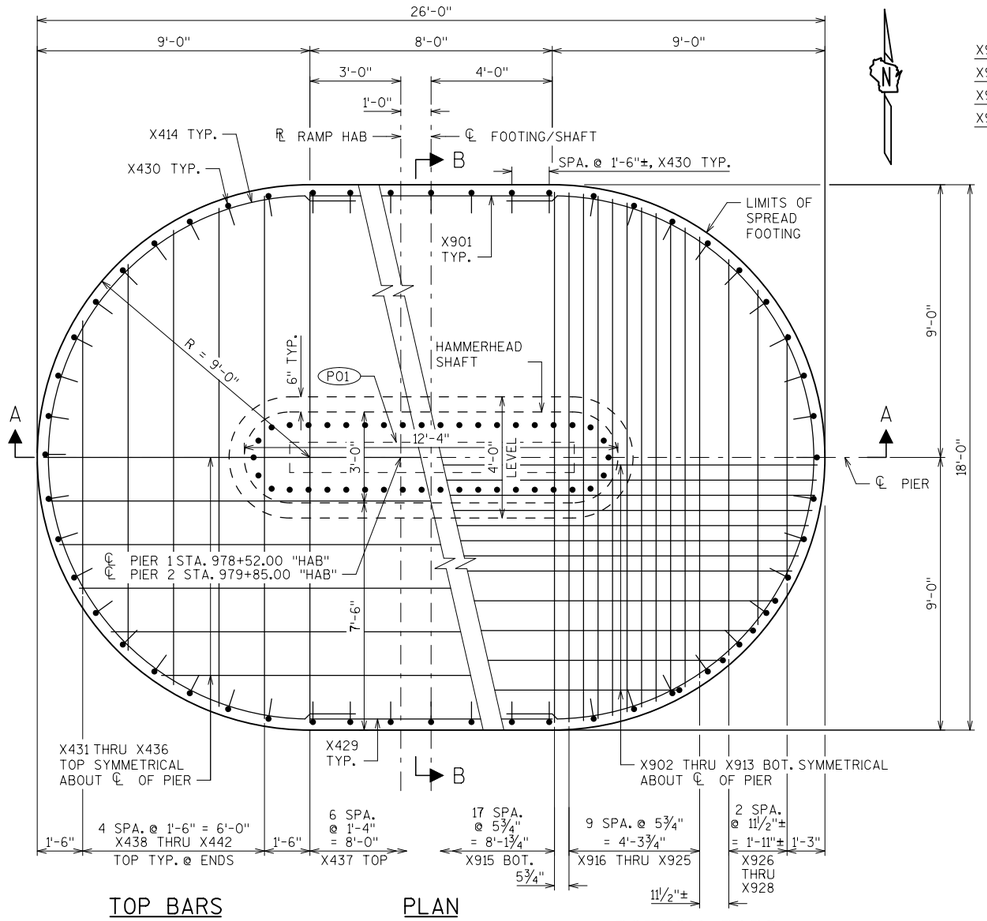
NORTH ABUTMENT DETAILS 2

SHEET 10
323

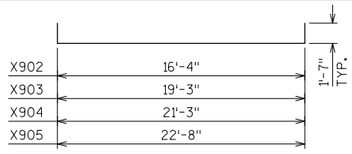
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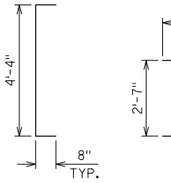
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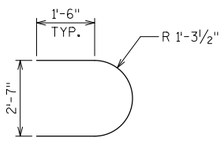
TOP BARS PLAN BOTTOM BARS



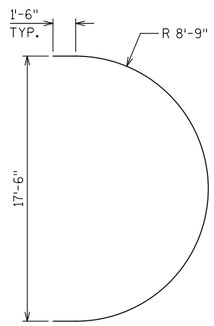
X902, X903, X904, 905

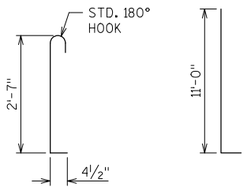


X430



X444

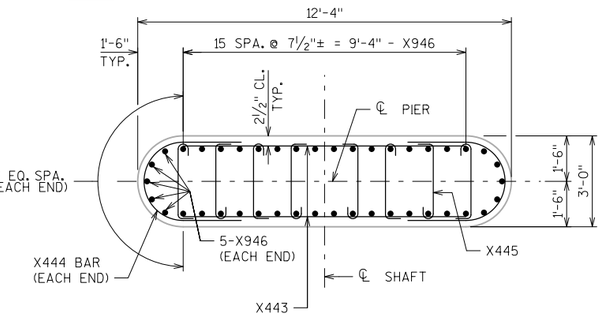




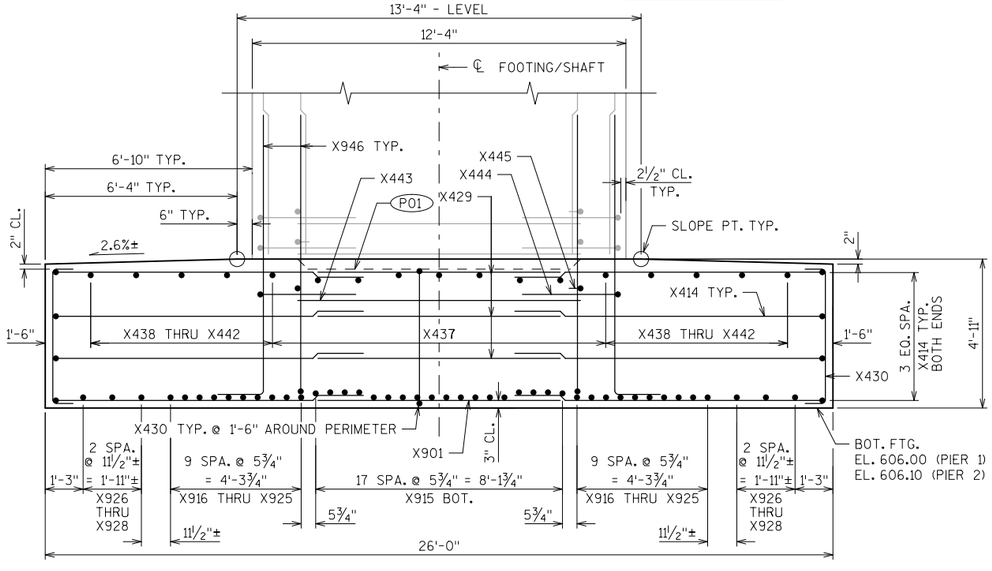
X445

X946

X414

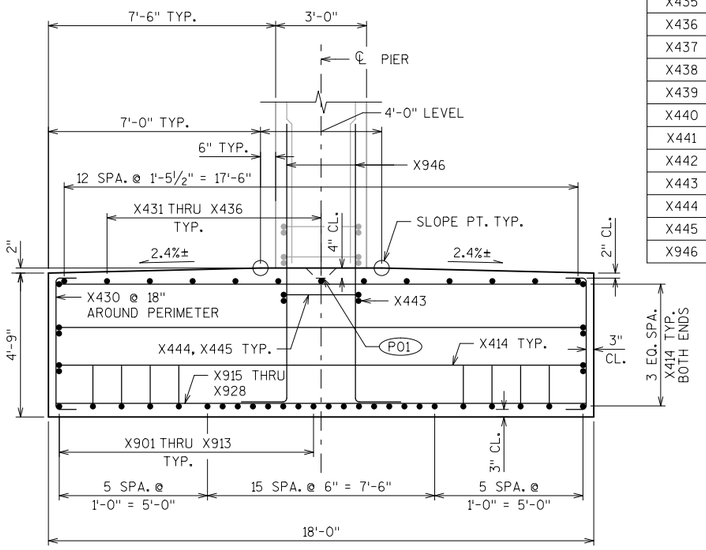


PLAN - FOOTING/SHAFT DETAILS



SECTION A-A

(P01) 8'-4" X 1'-0" X 4" DEEP FORMED BY A BEVELED KEYWAY.



SECTION B-B

PIER 1 & 2 FOOTING BILL OF BARS

BAR MARK	COAT	PIER 1 NO. REQ'D.	PIER 2 NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
X901		2	2	8'-0"			FOOTING - LONGIT. BOT. - HORIZ.
X902		2	2	19'-0"	X		FOOTING - LONGIT. BOT. - HORIZ.
X903		2	2	21'-11"	X		FOOTING - LONGIT. BOT. - HORIZ.
X904		2	2	23'-11"	X		FOOTING - LONGIT. BOT. - HORIZ.
X905		2	2	25'-4"	X		FOOTING - LONGIT. BOT. - HORIZ.
X906		2	2	23'-9"			FOOTING - LONGIT. BOT. - HORIZ.
X907		2	2	24'-3"			FOOTING - LONGIT. BOT. - HORIZ.
X908		2	2	24'-7"			FOOTING - LONGIT. BOT. - HORIZ.
X909		2	2	24'-11"			FOOTING - LONGIT. BOT. - HORIZ.
X910		2	2	25'-1"			FOOTING - LONGIT. BOT. - HORIZ.
X911		2	2	25'-3"			FOOTING - LONGIT. BOT. - HORIZ.
X912		2	2	25'-5"			FOOTING - LONGIT. BOT. - HORIZ.
X913		2	2	25'-5"			FOOTING - LONGIT. BOT. - HORIZ.
X414		8	8	30'-6"	X		FOOTING - CURVE - HORIZ. - ENDS
X915		18	18	17'-6"			FOOTING - TRANS. BOT. - HORIZ.
X916		2	2	17'-5"			FOOTING - TRANS. BOT. - HORIZ.
X917		2	2	17'-4"			FOOTING - TRANS. BOT. - HORIZ.
X918		2	2	17'-2"			FOOTING - TRANS. BOT. - HORIZ.
X919		2	2	17'-0"			FOOTING - TRANS. BOT. - HORIZ.
X920		2	2	16'-9"			FOOTING - TRANS. BOT. - HORIZ.
X921		2	2	16'-5"			FOOTING - TRANS. BOT. - HORIZ.
X922		2	2	16'-1"			FOOTING - TRANS. BOT. - HORIZ.
X923		2	2	15'-8"			FOOTING - TRANS. BOT. - HORIZ.
X924		2	2	15'-1"			FOOTING - TRANS. BOT. - HORIZ.
X925		2	2	14'-6"			FOOTING - TRANS. BOT. - HORIZ.
X926		2	2	13'-0"			FOOTING - TRANS. BOT. - HORIZ.
X927		2	2	11'-0"			FOOTING - TRANS. BOT. - HORIZ.
X928		2	2	8'-1"			FOOTING - TRANS. BOT. - HORIZ.
X429		6	6	8'-0"			FOOTING - EDGE OF FOOTING - HORIZ.
X430		52	52	5'-6"	X		FOOTING - EDGE OF FOOTING - VERT.
X431		2	2	17'-10"			FOOTING - LONGIT. TOP - HORIZ.
X432		2	2	21'-1"			FOOTING - LONGIT. TOP - HORIZ.
X433		2	2	23'-2"			FOOTING - LONGIT. TOP - HORIZ.
X434		2	2	24'-6"			FOOTING - LONGIT. TOP - HORIZ.
X435		2	2	25'-3"			FOOTING - LONGIT. TOP - HORIZ.
X436		1	1	25'-6"			FOOTING - LONGIT. TOP - HORIZ.
X437		7	7	17'-6"			FOOTING - TRANS. TOP - HORIZ.
X438		2	2	9'-0"			FOOTING - TRANS. TOP - HORIZ.
X439		2	2	12'-8"			FOOTING - TRANS. TOP - HORIZ.
X440		2	2	15'-0"			FOOTING - TRANS. TOP - HORIZ.
X441		2	2	16'-5"			FOOTING - TRANS. TOP - HORIZ.
X442		2	2	17'-2"			FOOTING - TRANS. TOP - HORIZ.
X443		2	2	9'-4"			FOOTING - HORIZ. - TOP
X444		2	2	7'-1"	X		FOOTING - HORIZ. - TOP
X445		8	8	3'-5"	X		FOOTING - HORIZ. - TOP
X946		42	42	12'-4"	X		FOOTING/SHAFT - VERT.

STATE PROJECT NUMBER

1228-22-74

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-893

DRAWN BY TJN | PLANS CK'D. JRS

PIER 1 & 2 FOOTING DETAILS

SHEET 11
324

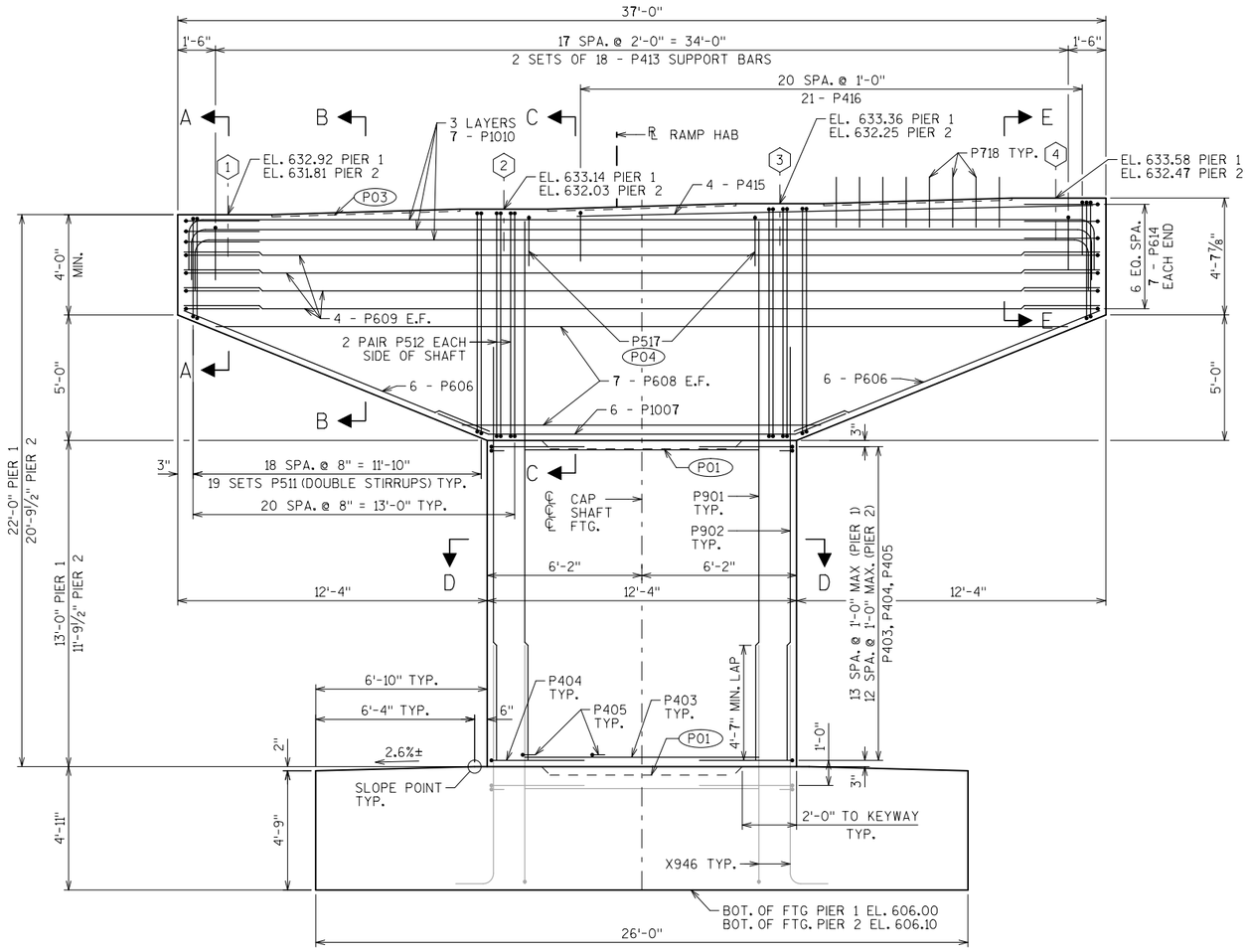
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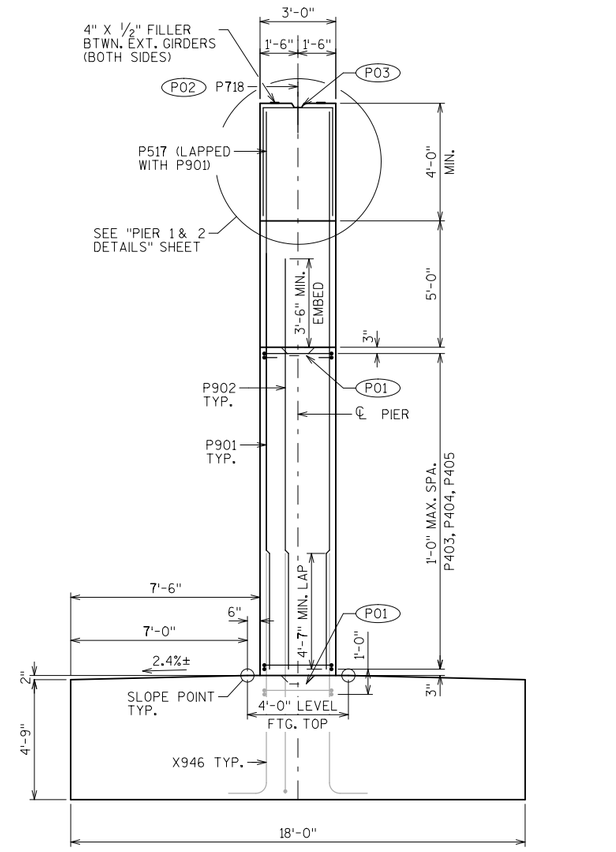
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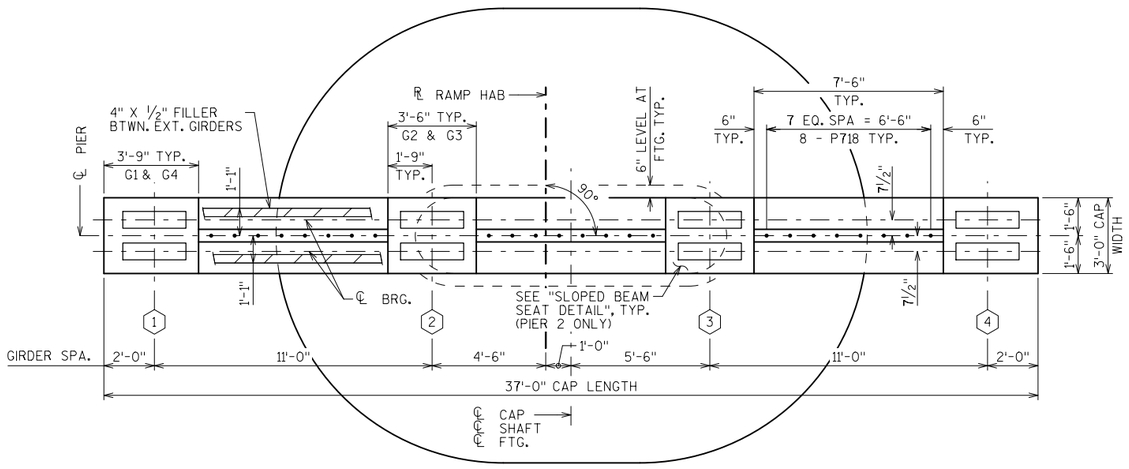


ELEVATION

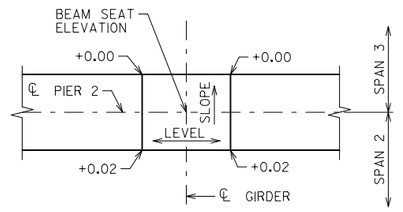
LOOKING NORTH



END VIEW



CAP PLAN



SLOPED BEAM SEAT DETAIL

SLOPED SEATS AT PIER 2 ONLY. PIER 1 SEAT IS LEVEL.

NOTE:

SEE FOOTING SHEETS FOR FOOTING REINFORCEMENT DETAILS.

LEGEND

- (X) INDICATES GIRDER NUMBER
- (P01) 8'-4" X 1'-0" X 4" DEEP FORMED BY A BEVELED KEYWAY.
- (P02) P718 BARS @ 1'-0" CTRS. BETWEEN BEAM SEATS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-7" INTO CONC.)
- (P03) KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6" BETWEEN BEAM SEATS.
- (P04) LAP 12 - P517 BARS WITH P901 BARS. NOT REQUIRED WHERE P512 STIRRUPS ARE LOCATED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-893

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PIER 1 & 2

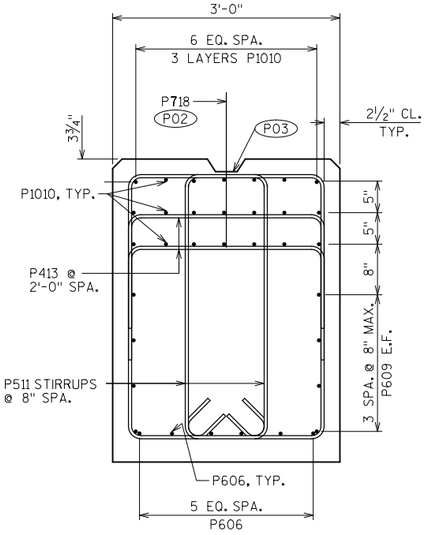
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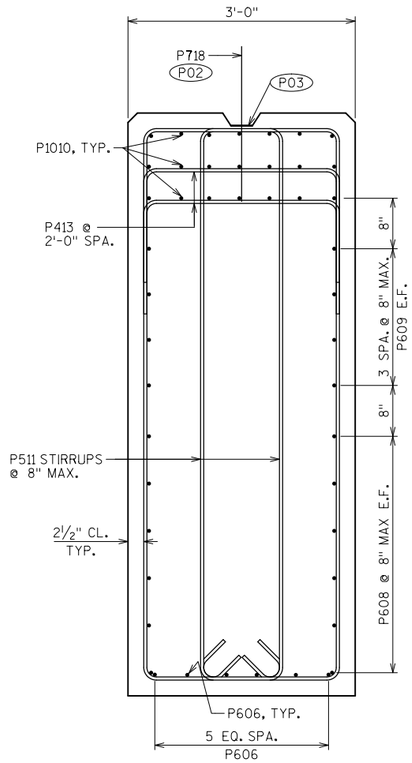
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STATE PROJECT NUMBER
1228-22-74

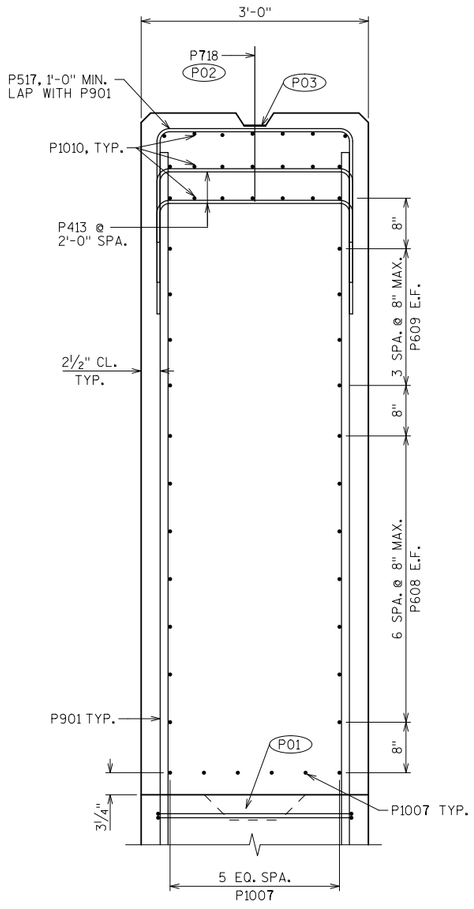


CAP SECTION A-A

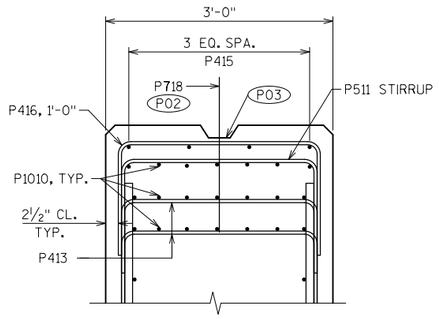
(HOOKS ON P1010 AND END BARS P614 NOT SHOWN FOR CLARITY)



CAP SECTION B-B



CAP SECTION C-C



CAP SECTION E-E

TOP OF CAP AT G3 AND G4

PIER 1 & 2 BILL OF BARS

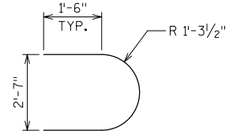
BAR MARK	PIER 1 NO. REQ'D.	PIER 2 NO. REQ'D.	LENGTH	COAT	BENT	BAR SERIES	LOCATION
P901	32	32	20'-4"				PIER SHAFT VERTICAL
P902	10	10	16'-6"				PIER SHAFT VERTICAL AT ENDS
P403	28	26	9'-4"				PIER SHAFT HORIZ.
P404	28	26	7'-1"		X		PIER SHAFT HORIZ. ENDS
P405	112	104	3'-5"		X		PIER SHAFT HORIZ. CROSS TIES
P606	12	12	13'-1"				PIER CAP HORIZ. BOTTOM
P1007	6	6	16'-7"		X		PIER CAP HORIZ. BOTTOM
P608	14	14	24'-8"			⚠	PIER CAP HORIZ. SIDES
P609	8	8	36'-7"				PIER CAP HORIZ. SIDES
P1010	21	21	40'-0"		X		PIER CAP HORIZ. TOP
P511	76	76	16'-7"		X	⚠	PIER CAP STIRRUP
P512	8	8	21'-8"		X		PIER CAP STIRRUP
P413	36	36	5'-5"		X		PIER CAP VERTICAL SUPPORT BAR
P614	14	14	7'-11"		X		CAP HORIZ. ENDS
P415	4	4	21'-0"				CAP HORIZ TOP
P416	21	21	5'-9"		X		CAP VERTICAL TOP
P517	12	12	8'-6"		X		CAP VERTICAL TOP
P718	24	24	2'-7"				CAP VERTICAL DOWELS

⚠ NOTE: LENGTH SHOWN FOR ANY BAR IN A BAR SERIES IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

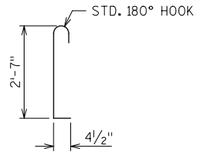
BAR SERIES TABLE

MARK	NO. REQ'D.	LENGTH
P608	4 SETS OF 7	15'-10" TO 33'-6"
P511	8 SETS OF 19	11'-8" TO 21'-6"

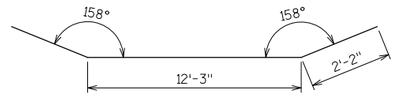
BUNDLE AND TAG EACH SERIES SEPARATELY.



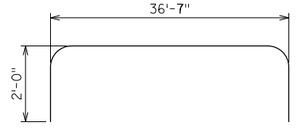
P404



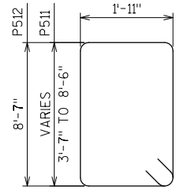
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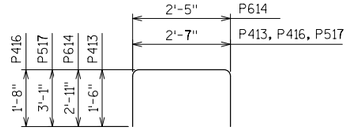
P1007



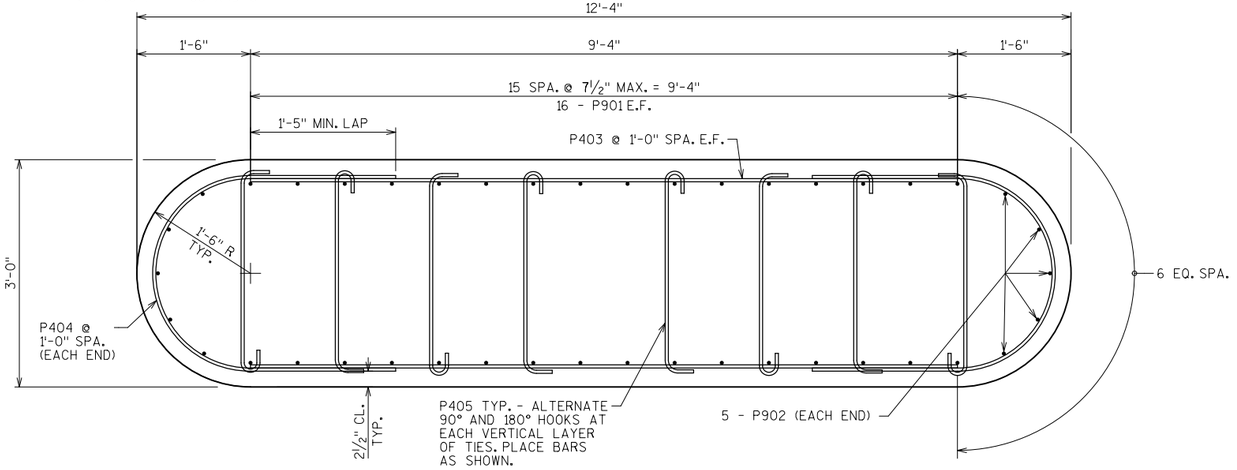
P1010



P511, P512



P413, P614, P416, P517



SHAFT SECTION D-D

LEGEND

(P01) 8'-4" X 1'-0" X 4" DEEP FORMED BY A BEVELED KEYWAY.

(P02) P718 BARS @ 1'-0" CTRS. BETWEEN BEAM SEATS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-7" INTO CONC.)

(P03) KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6" BETWEEN BEAM SEATS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-893

DRAWN BY RBH | PLANS CK'D. TJN

PIER 1 & 2 DETAILS

SHEET 13
326

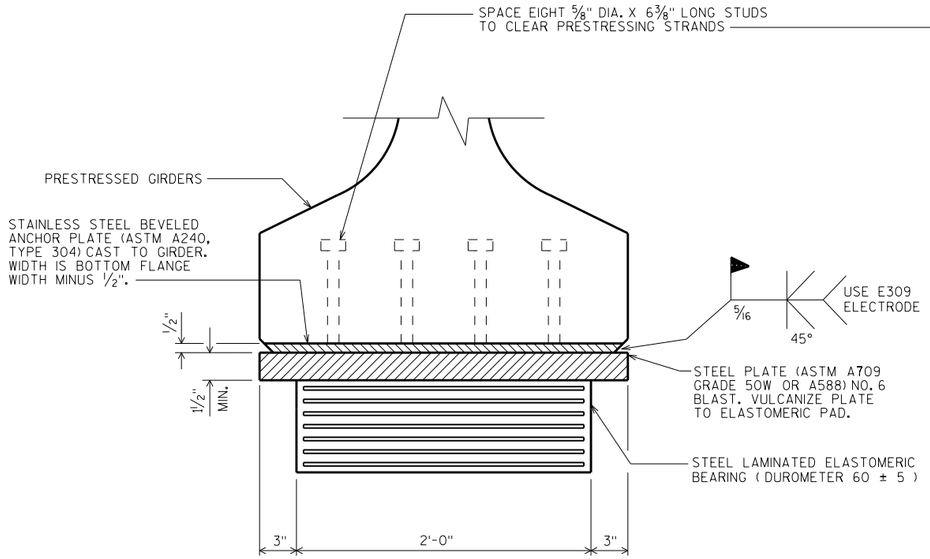
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8

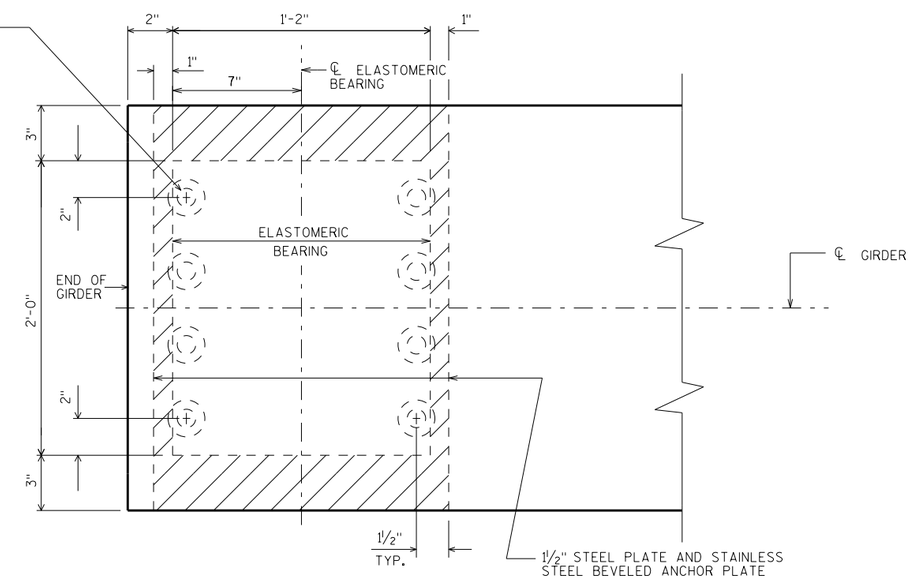
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STATE PROJECT NUMBER

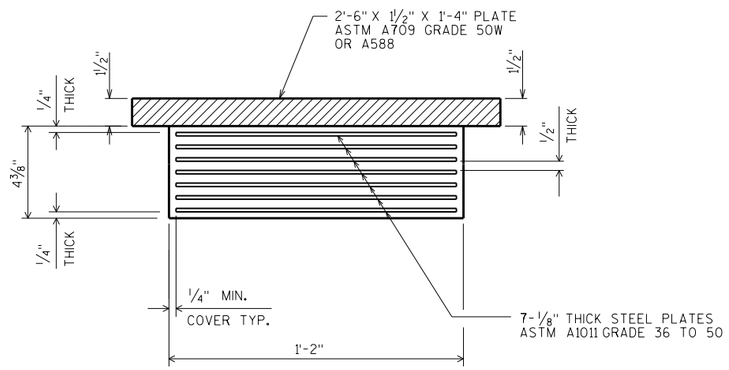
1228-22-74



END VIEW

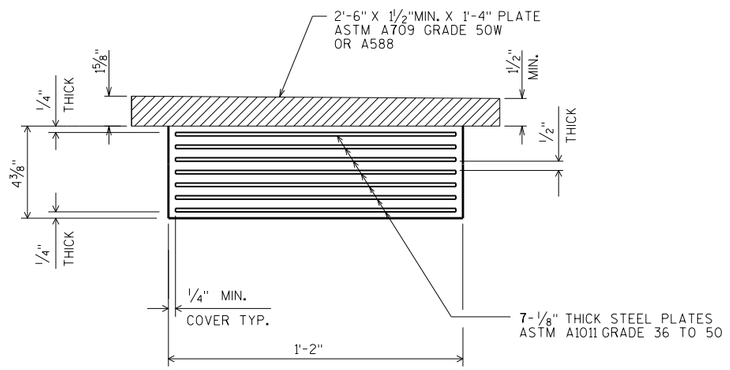


PLAN VIEW



SECTION THRU ELASTOMERIC BEARING

SOUTH ABUTMENT



SECTION THRU ELASTOMERIC BEARING

NORTH ABUTMENT

NOTES

BEARINGS SHALL NOT BE PLACED AT A TEMPERATURE GREATER THAN 85° F.

ALL MATERIAL USED FOR BEARINGS SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING PADS ELASTOMERIC LAMINATED", EACH.

ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-893

DRAWN BY EJV | PLANS CK'D. LMK

PRESTRESSED GIRDER BEARINGS

SHEET 14

327

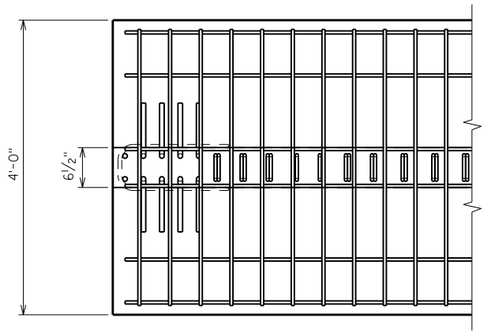
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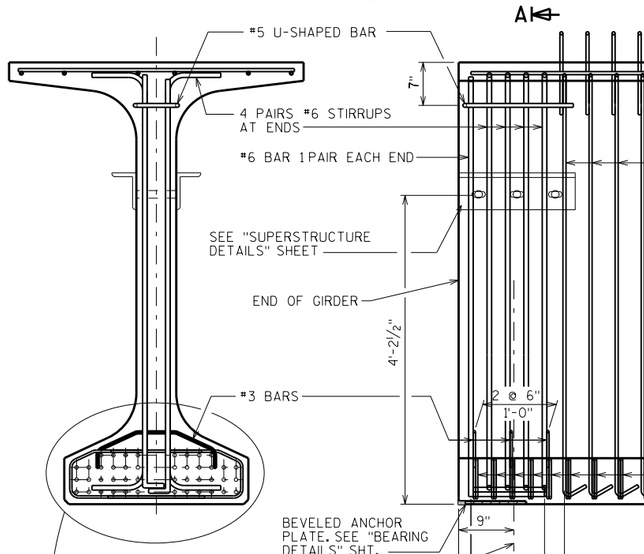
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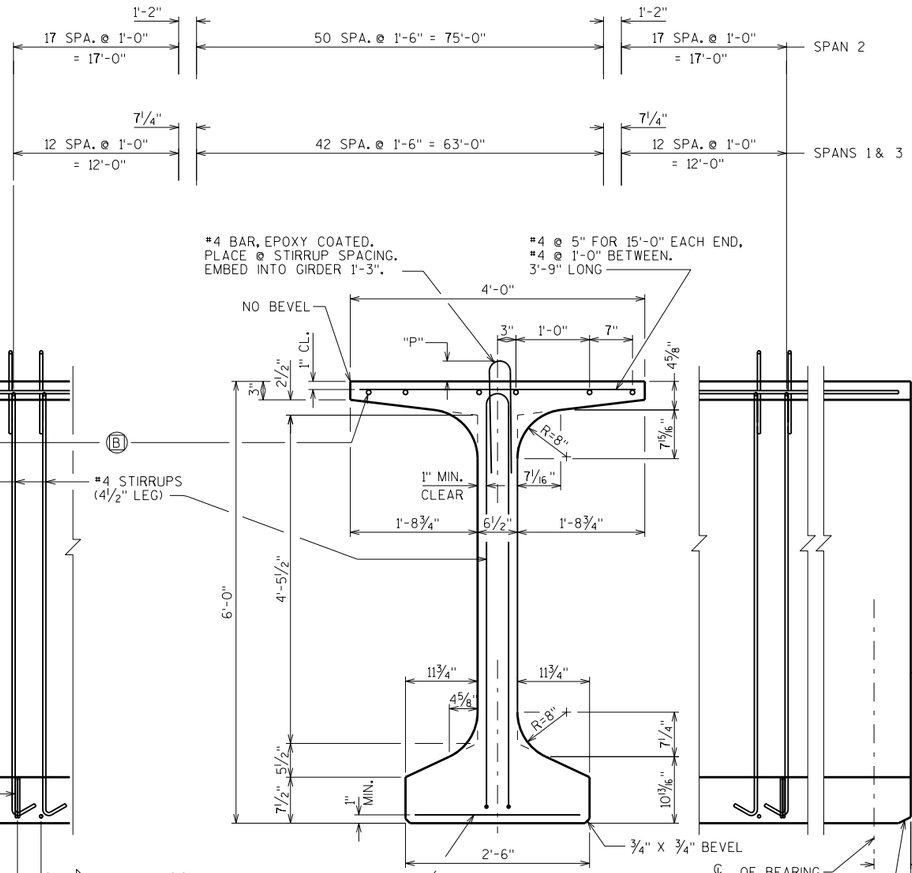
1228-22-74

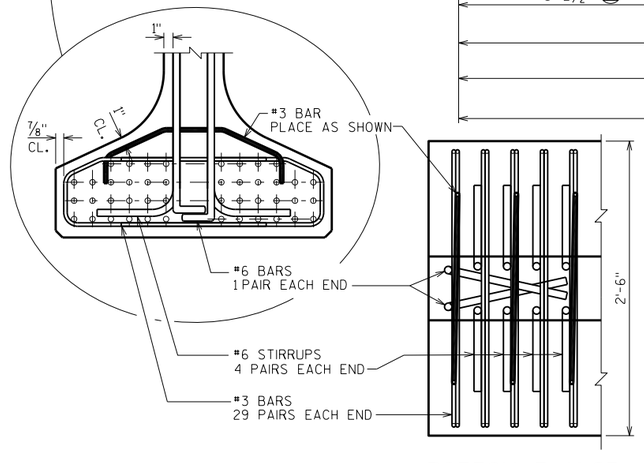


TOP FLANGE

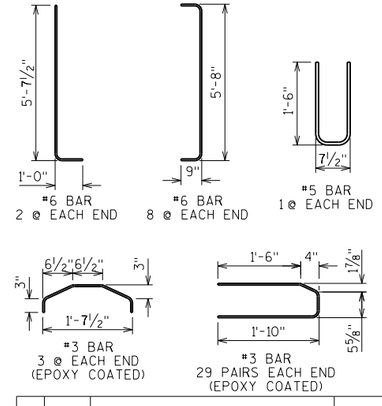


SECTION A-A





BOTTOM FLANGE



NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 15" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 15" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER OR EPOXY TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A1064 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON ACCEPTANCE OF THE STRUCTURES MAINTENANCE SECTION. IF USED, WWF SUBSTITUTION DETAILS SHALL BE SUBMITTED ELECTRONICALLY TO THE WISDOT FABRICATION LIBRARY AND ACCEPTED PRIOR TO SHOP DRAWING SUBMITTAL.

PRESTRESSING STRANDS SHALL BE (0.6" DIA.)-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.

SIDE VIEW & TYP. SECTION IN SPAN

- (A) DETAIL TYP. AT EACH END
- (B) 6 #5 BARS 25'-0" AT BOTH ENDS OF GIRDERS AND 6 #4 BARS IN BETWEEN WITH MIN. LAPS = 1'-11"
- (C) STEEL DIAPHRAGM SPACING
- ✳ MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L" (FEET)	DEAD LOAD DEFL. (IN.)									CONC. STRGTH. f'c (p.s.i.)	"P" (IN.)			DIA. OF STRAND (IN.)	DRAPED PATTERN						UNDRAPED PATTERN	
			1/10	3/10	5/10	7/10	9/10	4/10	6/10	8/10	10/10		1ST 1/3 OF GIRDER	MID 1/3 OF GIRDER	END 1/3 OF GIRDER		TOTAL NO. OF STRANDS	f'ci (P.S.I.) ✳	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	TOTAL NO. OF STRANDS	f'ci (P.S.I.) ✳
1&3	2&3	109.625	0.4	0.7	1.0	1.1	1.2	1.1	1.0	0.7	0.4	8,000	8.5	8	8.5	0.6	28	6,800	56	17	20	4		
1&3	1&4	109.625	0.3	0.6	0.8	0.9	1.0	0.9	0.8	0.6	0.3	8,000	8.5	8	8.5	0.6	28	6,800	56	17	20	4		
2	2&3	132.75	0.8	1.5	2.1	2.4	2.5	2.4	2.1	1.5	0.8	8,000	8.5	8	8.5	0.6	40	6,800	67	20.5	23.5	5		
2	1&4	132.75	0.6	1.2	1.7	2.0	2.1	2.0	1.7	1.2	0.6	8,000	8.5	8	8.5	0.6	40	6,800	67	20.5	23.5	5		

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-893

DRAWN BY MJK | PLANS CK'D. LMK

72W" PRESTRESSED GIRDER DETAILS 1

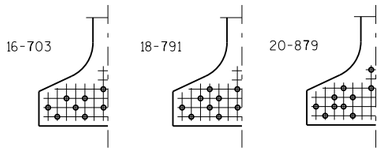
SHEET 15

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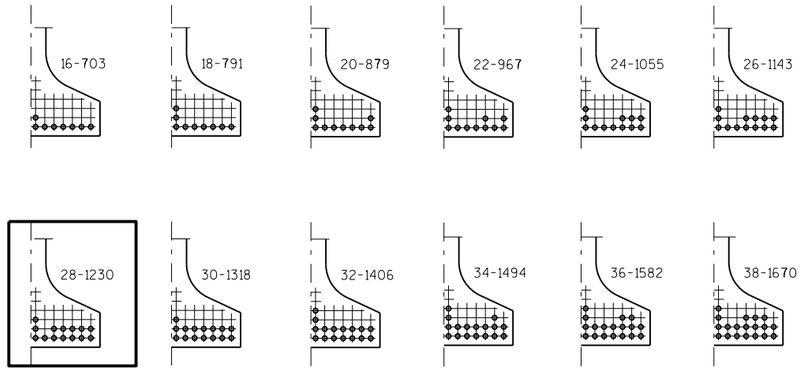
STATE PROJECT NUMBER

1228-22-74

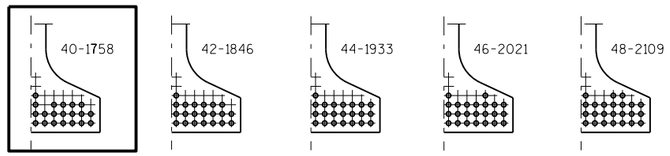


STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6" DIA. STRANDS



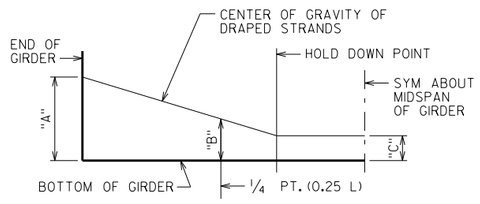
SPANS 1&3



SPAN 2

ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6" DIA. STRANDS



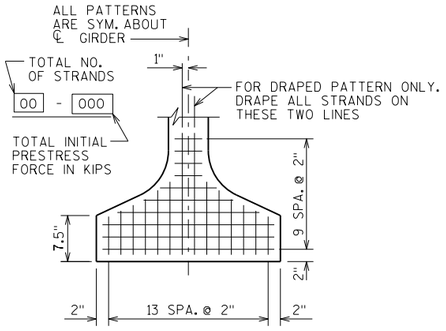
DRAPED STRAND PROFILE

*THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

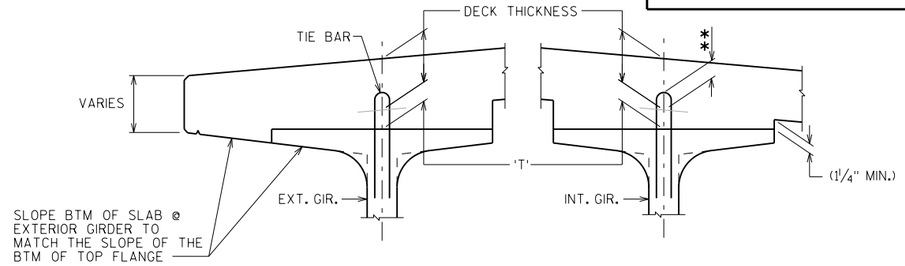
SPAN	CAMBER (IN.) *
1&3	1.88
2	3.5

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.



TYP. STRAND PATTERN



DECK HAUNCH DETAIL

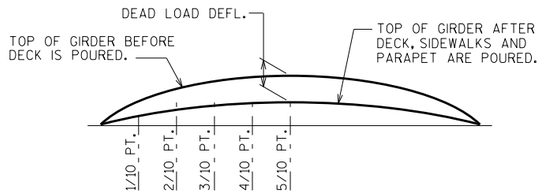
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- DECK THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 3.2 WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



DEAD LOAD DEFLECTION DIAGRAM

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-893

DRAWN BY MJK | PLANS CK'D. LMK

72W" PRESTRESSED GIRDER DETAILS 2

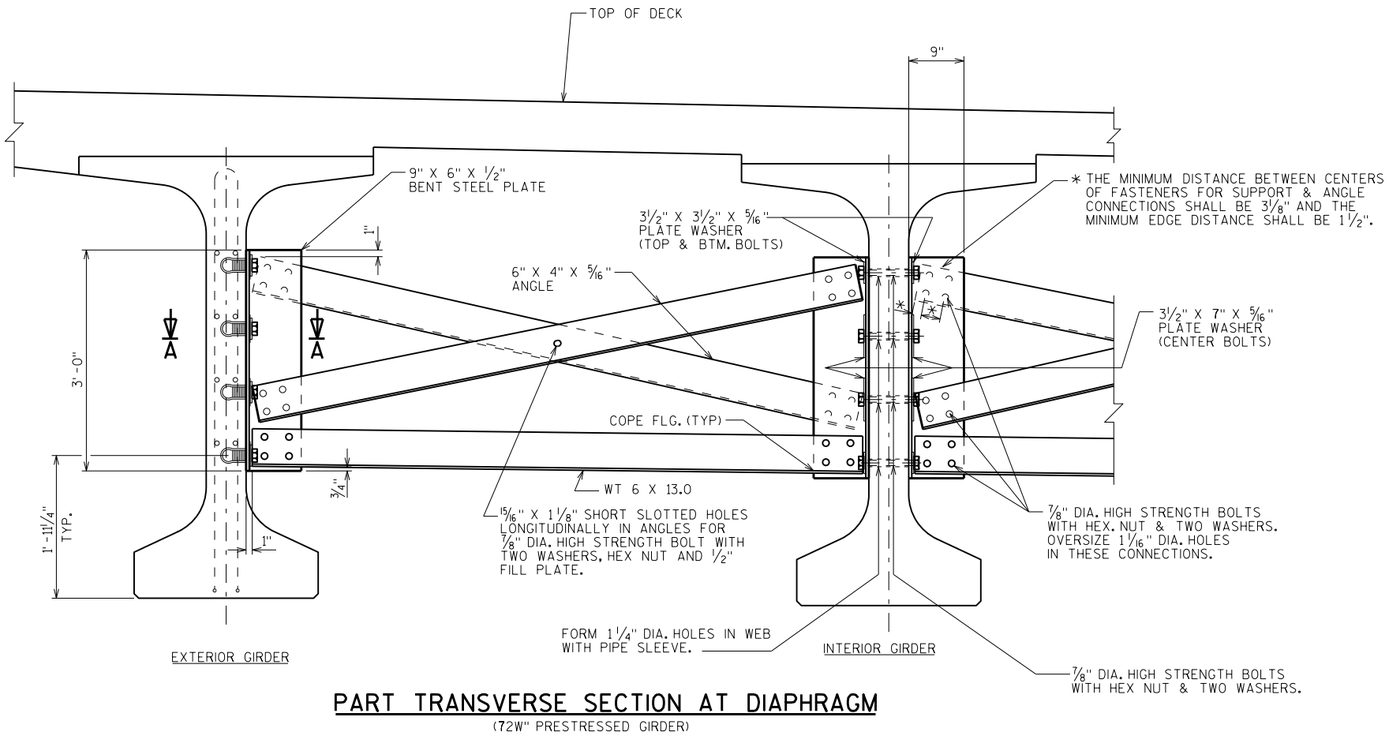
SHEET 16

329

SCALE =

STATE PROJECT NUMBER

1228-22-74



PART TRANSVERSE SECTION AT DIAPHRAGM

(72W" PRESTRESSED GIRDER)

NOTES

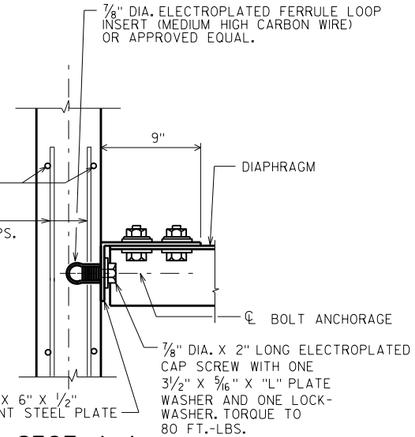
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-40-893", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

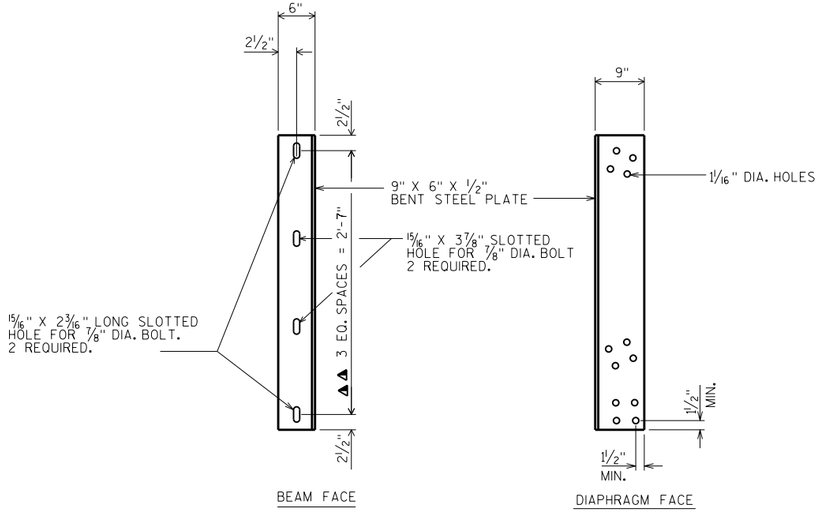
STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS 1/4 TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.



SECT. A-A

(FOR EXTERIOR ATTACHMENT)

"L" = 3 1/2"; TOP AND BOTTOM BOLTS
"L" = 7"; CENTER BOLTS



DIAPHRAGM SUPPORT

▲▲ BOLT HOLES SHALL BE SPACED SO AS TO MISS PRESTRESSED STRANDS IN CONCRETE BEAMS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-893

DRAWN BY EJV | PLANS CK'D. LMK

STEEL DIAPHRAGM

SHEET 17

330

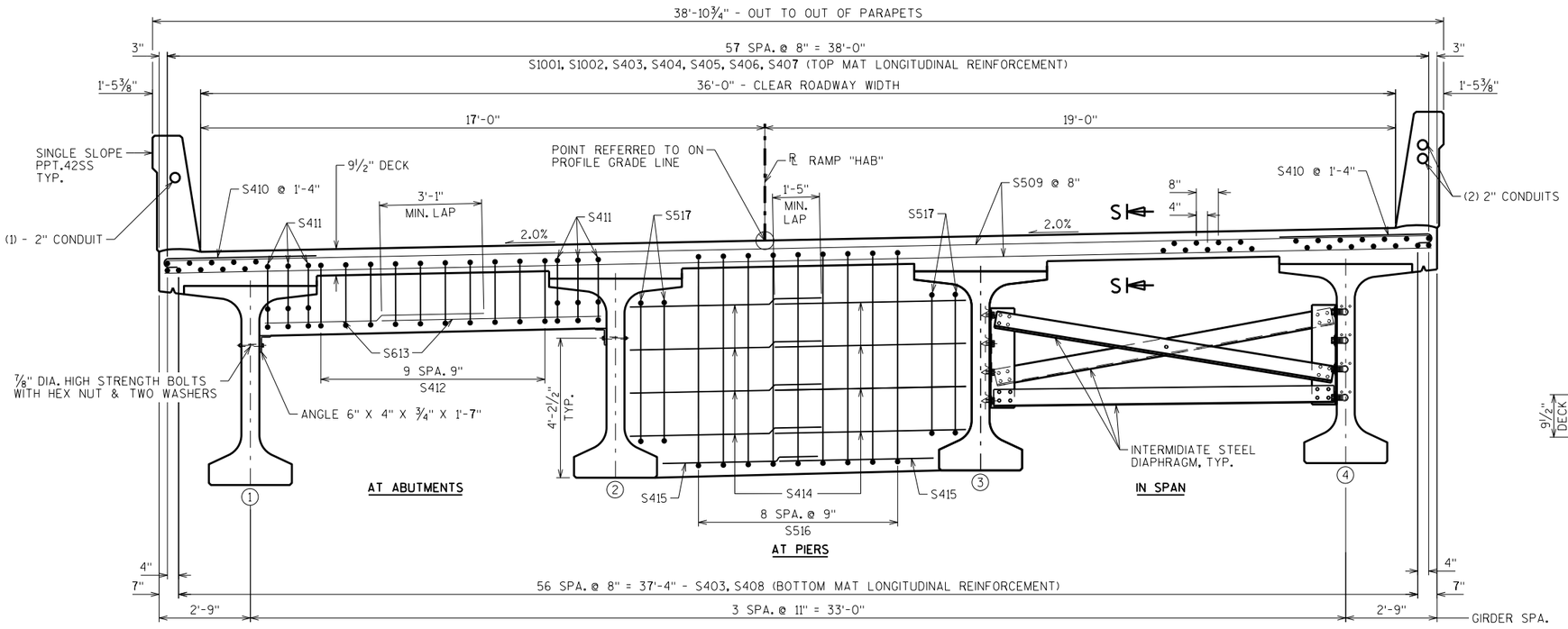
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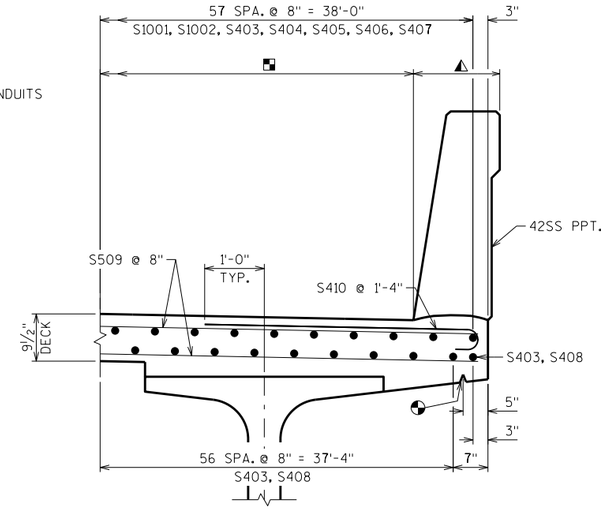
STATE PROJECT NUMBER

1228-22-74



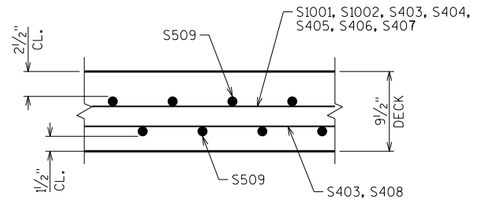
CROSS SECTION THRU SPANS 1-3

LOOKING NORTH



CROSS SECTION THRU EDGE OF DECK

BOTH EDGES SIMILAR



SECTION S-S

TOP OF DECK ELEVATIONS - SPANS 1-2

	℄ BRG. S. ABUT.	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	℄ PIER 1	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	℄ PIER 2
W. EOD	640.96	640.87	640.78	640.69	640.60	640.51	640.42	640.32	640.23	640.14	640.05	639.94	639.83	639.72	639.61	639.50	639.39	639.27	639.16	639.05	638.94
G1	640.99	640.90	640.81	640.72	640.63	640.54	640.45	640.35	640.26	640.17	640.08	639.97	639.86	639.75	639.64	639.53	639.42	639.30	639.19	639.08	638.97
G2	641.21	641.12	641.03	640.94	640.85	640.76	640.67	640.57	640.48	640.39	640.30	640.19	640.08	639.97	639.86	639.75	639.64	639.52	639.41	639.30	639.19
RL RMP HAB	641.30	641.21	641.12	641.03	640.94	640.85	640.76	640.66	640.57	640.48	640.39	640.28	640.17	640.06	639.95	639.84	639.73	639.61	639.50	639.39	639.28
G3	641.43	641.34	641.25	641.16	641.07	640.98	640.89	640.79	640.70	640.61	640.52	640.41	640.30	640.19	640.08	639.97	639.86	639.74	639.63	639.52	639.41
G4	641.65	641.56	641.47	641.38	641.29	641.20	641.11	641.01	640.92	640.83	640.74	640.63	640.52	640.41	640.30	640.19	640.08	639.96	639.85	639.74	639.63
E. EOD	641.68	641.59	641.50	641.41	641.32	641.23	641.14	641.04	640.95	640.86	640.77	640.66	640.55	640.44	640.33	640.22	640.11	639.99	639.88	639.77	639.66

TOP OF DECK ELEVATIONS - SPAN 3

	℄ PIER 2	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	℄ BRG. N. ABUT.
W. EOD	638.94	638.85	638.76	638.67	638.58	638.49	638.40	638.31	638.21	638.12	638.03
G1	638.97	638.88	638.79	638.70	638.61	638.52	638.43	638.34	638.24	638.15	638.06
G2	639.19	639.10	639.01	638.92	638.83	638.74	638.65	638.56	638.46	638.37	638.28
RL RMP HAB	639.28	639.19	639.10	639.01	638.92	638.83	638.74	638.65	638.55	638.46	638.37
G3	639.41	639.32	639.23	639.14	639.05	638.96	638.87	638.78	638.68	638.59	638.50
G4	639.63	639.54	639.45	639.36	639.27	639.18	639.09	639.00	638.90	638.81	638.72
E. EOD	639.66	639.57	639.48	639.39	639.30	639.21	639.12	639.03	638.93	638.84	638.75

NOTES:

- ¾" V-GROOVE REQUIRED. EXTEND TO 2'-0" FROM F.F. OF ABUTMENT BODY.
- SEE "QUANTITIES AND NOTES" SHEET FOR "PROTECTIVE SURFACE TREATMENT" GENERAL NOTES.
- SEE "QUANTITIES AND NOTES" SHEET FOR "PIGMENTED SURFACE SEALER" GENERAL NOTES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-893

DRAWN BY EJV | PLANS CK'D. LMK

SUPERSTRUCTURE CROSS SECTION

SHEET 18

331

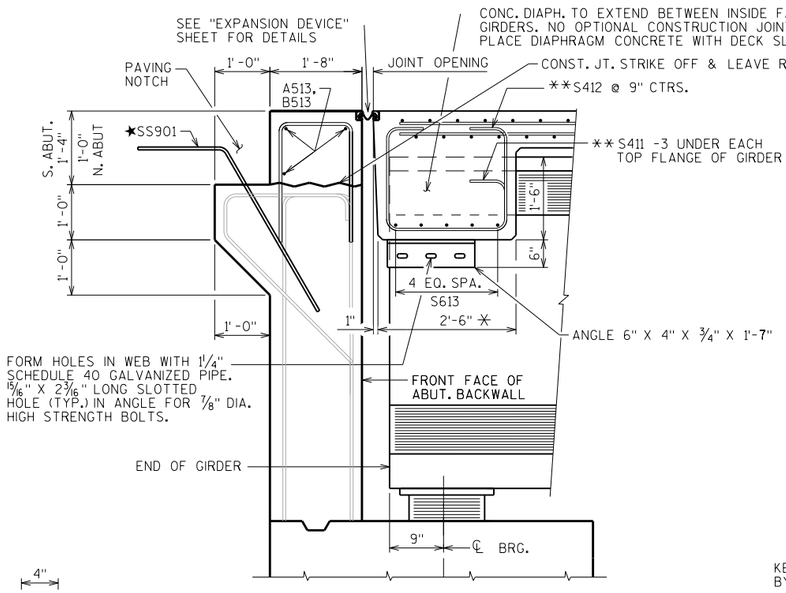
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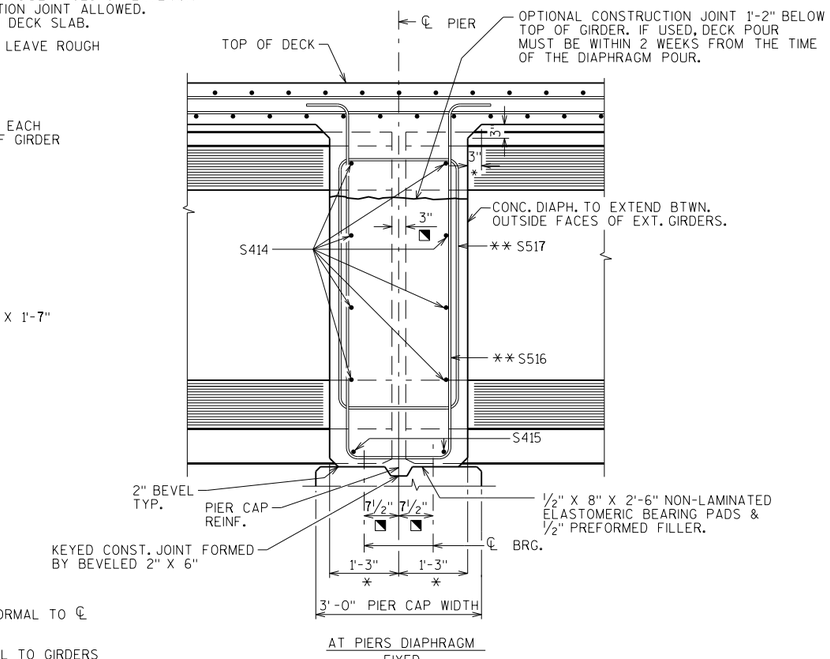
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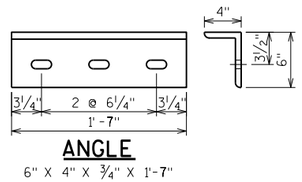
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STATE PROJECT NUMBER

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ANGLE

6" X 4" X ¾" X 1'-7"

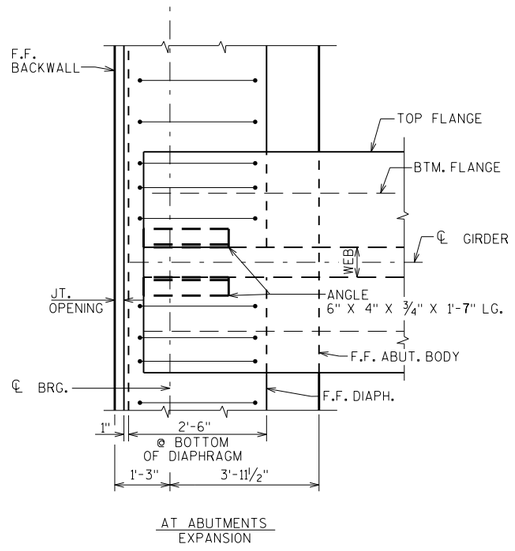
* DIMENSION IS TAKEN NORMAL TO ℄ SUBSTRUCTURE UNITS.

** BARS PLACED PARALLEL TO GIRDERS SPACING PERPENDICULAR TO ℄ GIRDERS

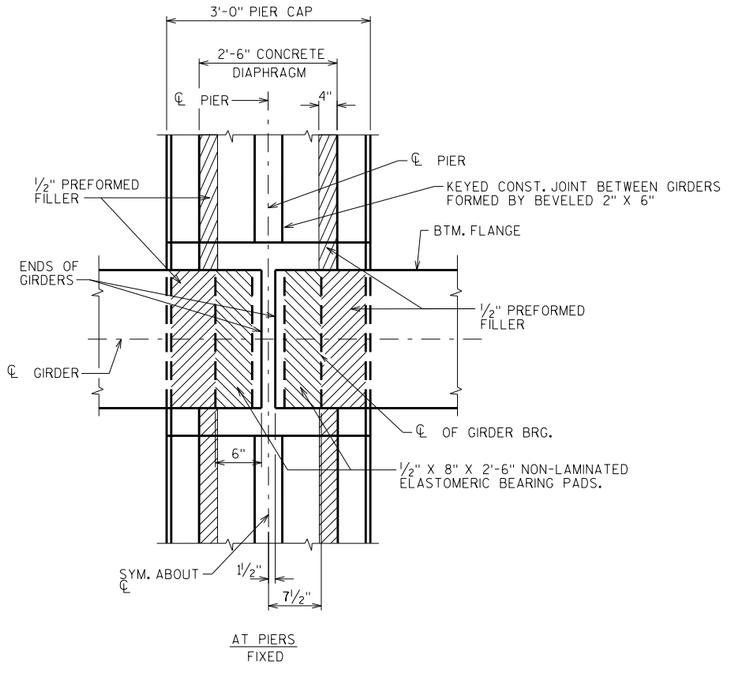
◥ DIMENSION IS TAKEN PARALLEL TO ℄ GIRDER

★ BAR TO BE USED ONLY AT SOUTH ABUT.

PROVIDE 3½" x 3½" x 5/16" PLATE WASHERS AT ALL LOCATIONS EXCEPT AT EXTERIOR FACES OF EXTERIOR GIRDERS WHERE 3½" x 3½" x ½" PLATE WASHERS SHALL BE PROVIDED.



AT ABUTMENTS
EXPANSION



AT PIERS
FIXED

NOTES

ALL DIAPHRAGM SUPPORT HARDWARE SHALL BE INCIDENTAL TO "CONCRETE MASONRY BRIDGES".

DIAPHRAGM SUPPORT ANGLES SHALL BE ASTM A709 GRADE 36.

ALL DIAPHRAGM SUPPORT HARDWARE INCLUDING BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

STEEL DIAPHRAGM SUPPORT ANGLE TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS ¼ TURN. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.

TOP VIEW OF DIAPHRAGM

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-893

DRAWN BY EJV | PLANS CK'D. LMK

SUPERSTRUCTURE DETAILS

SHEET 19

332

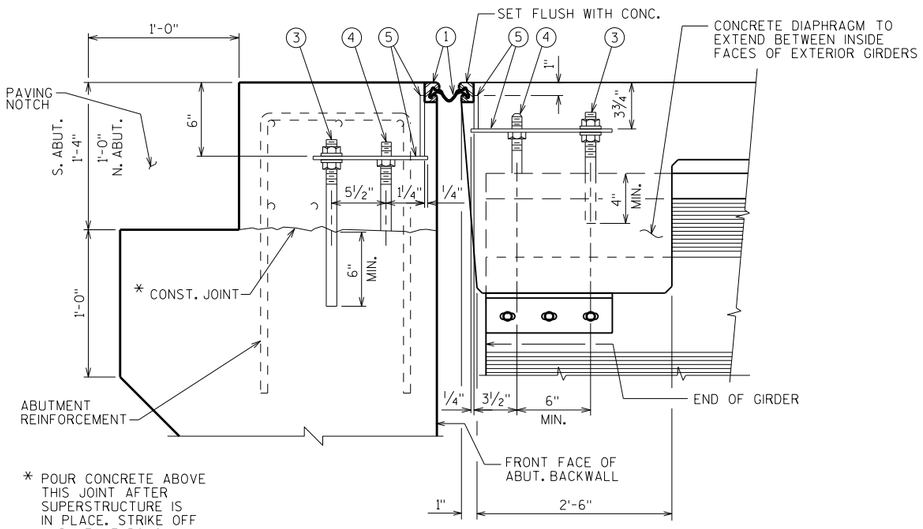
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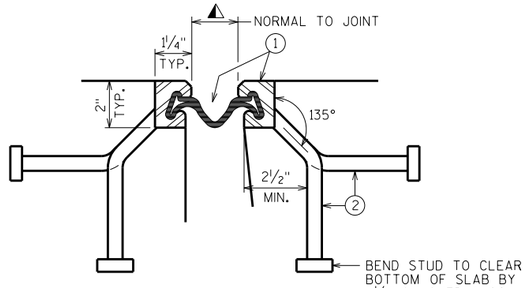
STATE PROJECT NUMBER

1228-22-74



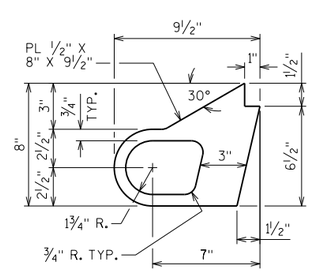
SECTION THRU JOINT AT ABUTMENT

NORMAL TO ℄ SUBSTRUCTURE

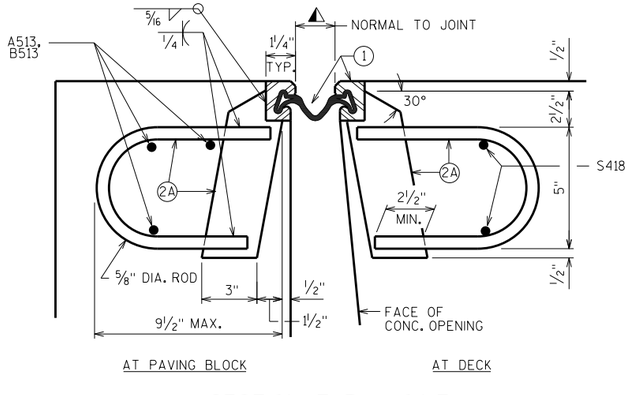


SECTION THRU JOINT

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

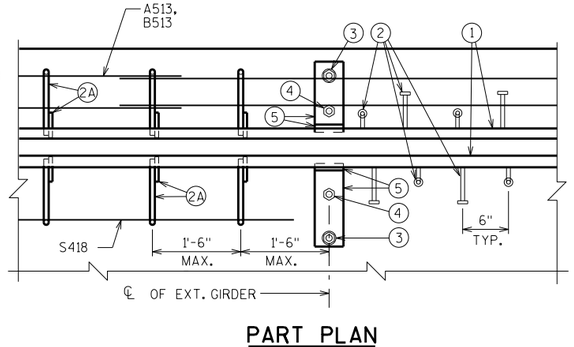


ALTERNATE STRIP SEAL ANCHOR



SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.



PART PLAN

LEGEND

⚠ (1) NEOPRENE STRIP SEAL (4 - INCH) AND STEEL EXTRUSIONS. SET JOINT OPENING AT 1¾".

(2) STUDS ⅝" DIA. X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.

(2A) ½" THICK ANCHOR PLATE WITH ⅝" DIA. ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.

(3) ¾" DIA. THREADED ROD WITH 2 NUTS AND PLATE WASHERS. GROUT THREADED ROD INTO FIELD DRILLED HOLES ON ℄ OF GIRDER. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.

(4) ¾" DIA. THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.

(5) FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" DIA. HOLE FOR NO. 3 AND 1" DIA. HOLE FOR NO. 4.

(6) GALVANIZED PLATE ⅜" X 10" X 2'-2" LONG WITH HOLES FOR NO. 7.

(7) ¾" DIA. X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.

(8) ¾" DIA. X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.

(9) ¾" DIA. X 2¼" GALVANIZED THREADED COUPLING.

(11) 1" X 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS, UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING OR GALVANIZING REQUIREMENTS. IF USED, ANCHOR PLATES SHALL BE PROVIDED 3" FROM EACH SIDE OF THE FIELD SPLICE. DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST AND SWEEP.

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

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

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

ALL MATERIAL IN THE EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE SHALL BE PAID AT THE UNIT PRICE BID FOR "EXPANSION DEVICE B-40-893", LF.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-893

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EXPANSION DEVICE

SHEET 20

333

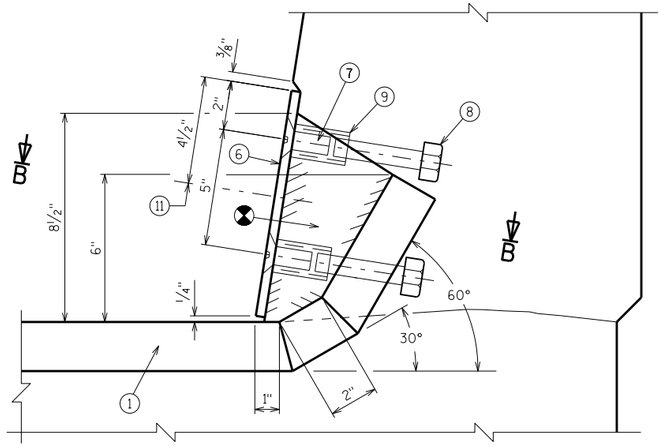
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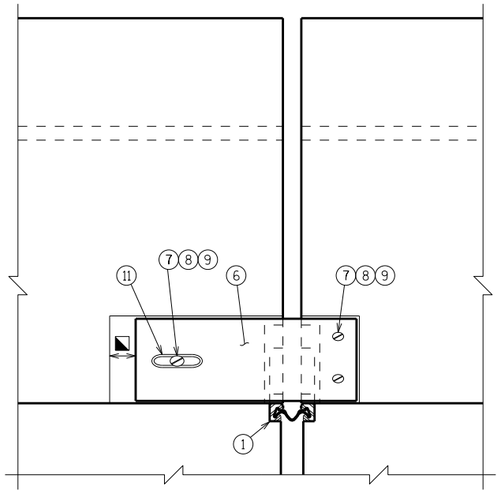
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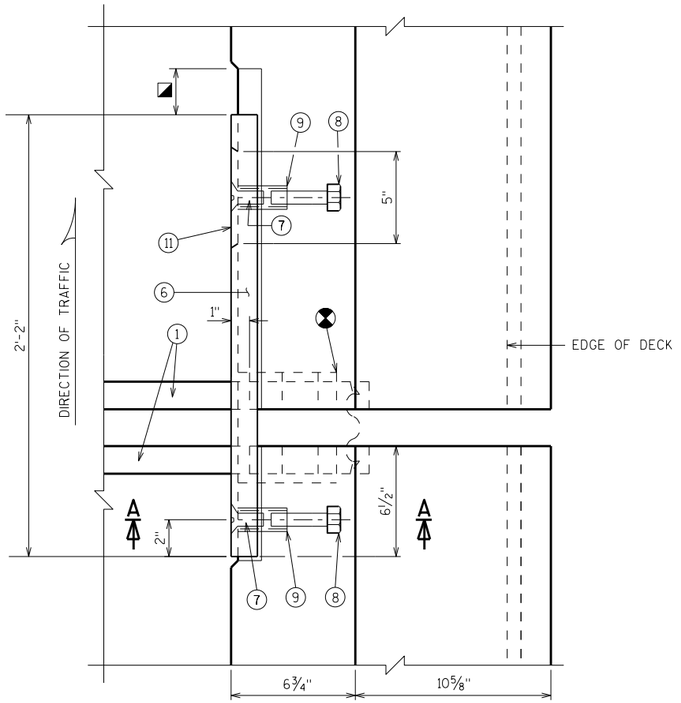
1228-22-74



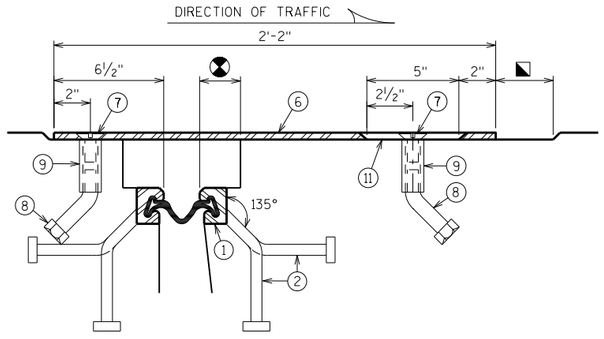
SECTION A-A



VIEW OF PARAPET PLATE FROM ROADWAY



PLAN



SECTION B-B

⊗ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

◥ JOINT OPENING DIMENSION ALONG SKEW PLUS 1/2".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-893

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COVER PLATE DETAILS

SHEET 21

334

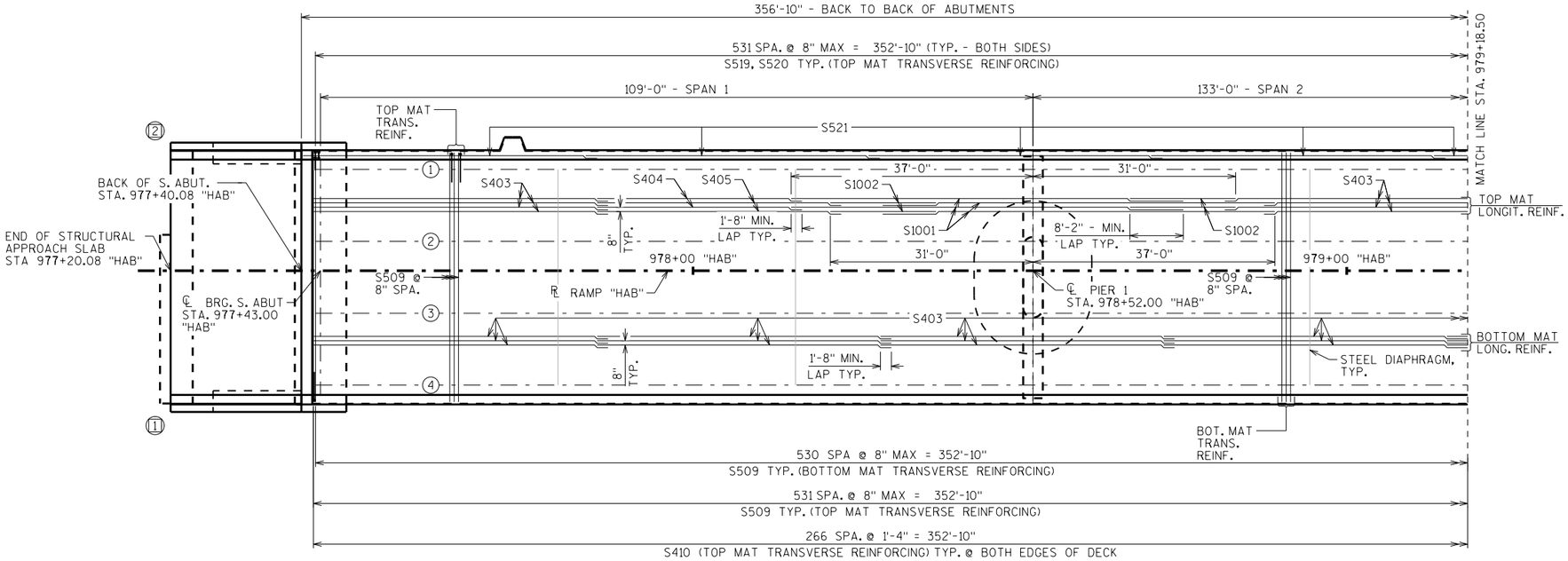
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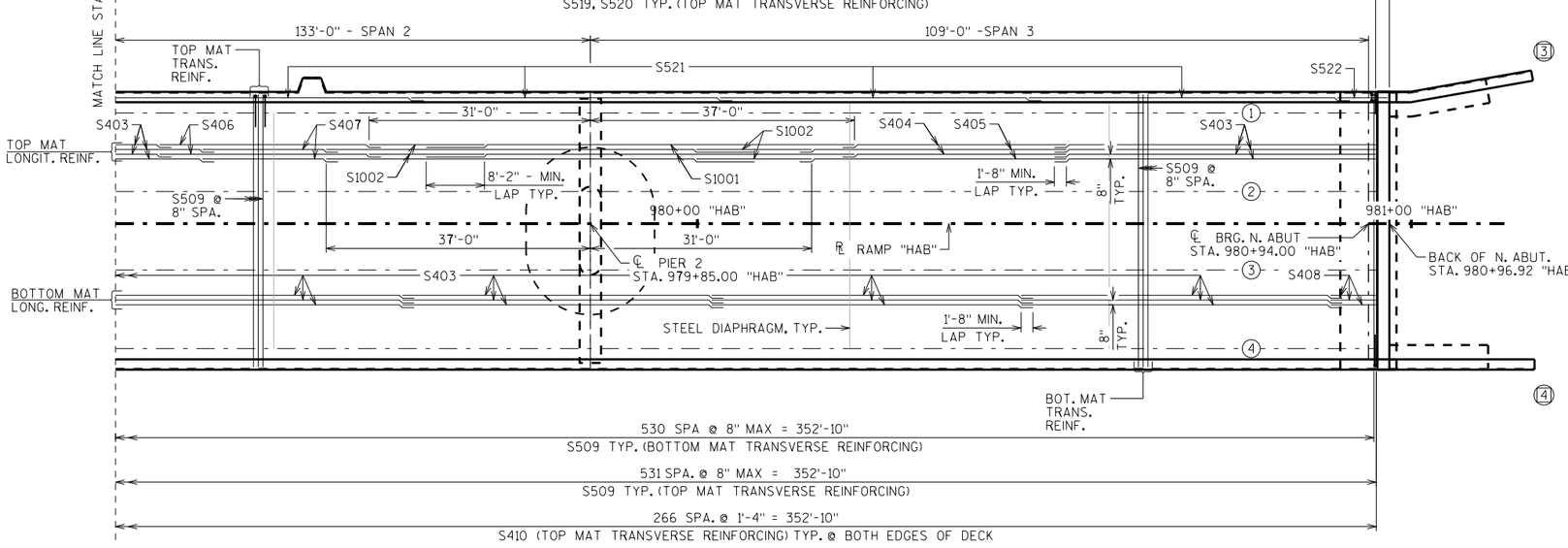
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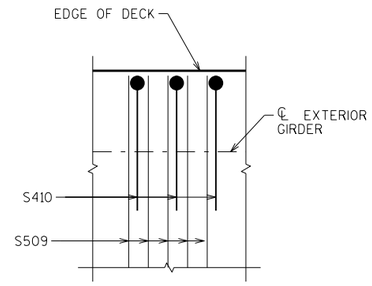
1228-22-74



PLAN

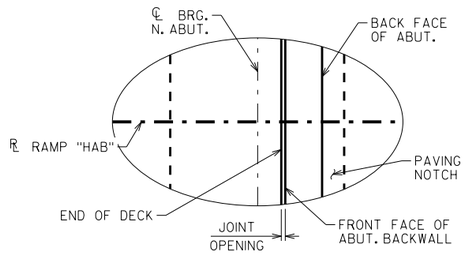


PLAN



OVERHANG STEEL DETAIL

(TYPICAL BOTH EDGES)



NORTH END OF DECK DETAIL

(SOUTH ABUTMENT SIMILAR)

◯ INDICATES GIRDER NUMBER

▢ INDICATES WING NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-893

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SUPERSTRUCTURE PLAN

SHEET 22

335

SCALE = 10.00

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8

STATE PROJECT NUMBER

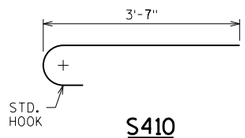
1228-22-74

BILL OF BARS

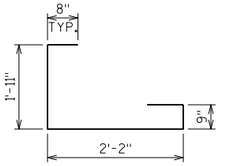
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S1001	X	116	60'-0"			DECK - LONGITUDINAL - TOP - OVER PIERS
S1002	X	116	16'-2"			DECK - LONGITUDINAL - TOP - OVER PIERS
S403	X	646	45'-0"			DECK - LONGITUDINAL - TOP & BOTTOM
S404	X	58	31'-4"			DECK - LONGITUDINAL - TOP
S405	X	58	37'-4"			DECK - LONGITUDINAL - TOP
S406	X	29	31'-0"			DECK - LONGITUDINAL - TOP
S407	X	29	19'-0"			DECK - LONGITUDINAL - TOP
S408	X	59	6'-4"			DECK - LONGITUDINAL - BOTTOM
S509	X	1063	38'-2"			DECK - TRANSVERSE - TOP & BOTTOM
S410	X	532	4'-1"	X		DECK - TRANSVERSE - TOP - EDGES OF DECK
S411	X	36	5'-10"	X		ABUTMENT DIAPHRAGM - VERTICAL AT GIRDERS
S412	X	60	7'-0"	X		ABUTMENT DIAPHRAGM - VERTICAL
S613	X	60	6'-8"			ABUTMENT DIAPHRAGM - HORIZONTAL
S414	X	48	5'-10"			PIER DIAPHRAGM HORIZONTAL
S415	X	12	4'-10"			PIER DIAPHRAGM HORIZONTAL
S516	X	54	16'-2"	X		PIER DIAPHRAGM - VERTICAL
S517	X	24	13'-8"	X		PIER DIAPHRAGM - STIRRUP AT GIRDERS
S418	X	6	10'-0"			ABUTMENT - HORIZONTAL -STRIP SEAL BAR
S519	X	1076	4'-5"	X		PARAPET VERTICAL
S520	X	1064	6'-8"	X		PARAPET VERTICAL
S521	X	128	45'-0"			PARAPET HORIZONTAL
S522	X	16	7'-0"			PARAPET HORIZONTAL
S523	X	8	3'-2"			JUNCTION BOX - VERT. - PARAPET

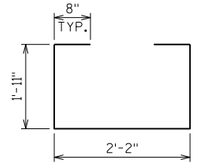
← NOTE: (12) S519 BARS ARE USED AS ADDITIONAL BARS AT JUNCTION BOXES. SEE "WEST PARAPET CONDUIT DETAILS" AND "EAST PARAPET CONDUIT DETAILS" SHEETS.



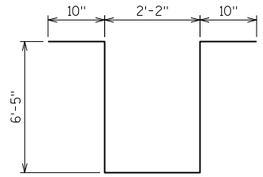
S410



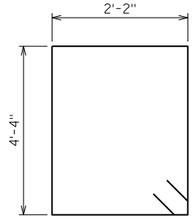
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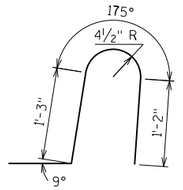
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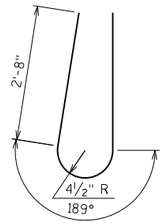
S516



S517



S519



S520

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8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-893

DRAWN BY EJV | PLANS CK'D. LMK

SUPERSTRUCTURE BAR DETAILS

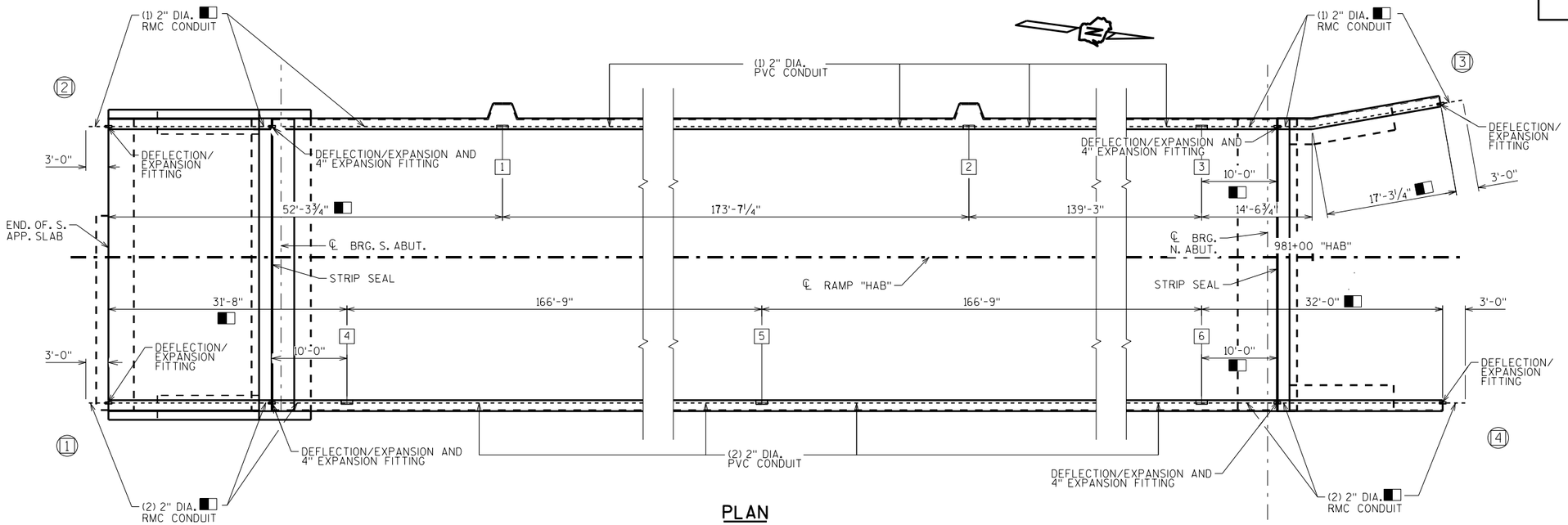
SHEET 23

336

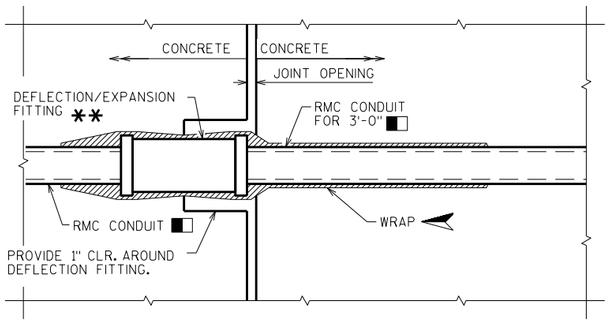
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STATE PROJECT NUMBER

1228-22-74

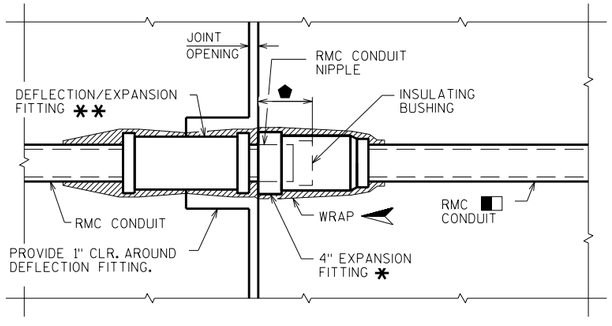


PLAN



DEFLECTION/EXPANSION FITTING

THIS DETAIL ACCOMMODATES A MAXIMUM OF ¾" TOTAL MOVEMENT AND UP TO 30 DEGREES OF ANGULAR MISALIGNMENT IN ANY DIRECTION. BOND JUMPER NOT SHOWN FOR CLARITY (CONCRETE TO CONCRETE FITTING)



DEFLECTION/EXPANSION AND 4" EXPANSION FITTING

THIS DETAIL ACCOMMODATES A MAXIMUM OF 4" TOTAL MOVEMENT AND UP TO 30 DEGREES OF ANGULAR MISALIGNMENT IN ANY DIRECTION. BOND JUMPER NOT SHOWN FOR CLARITY

LEGEND

(1) WING NUMBER

1 JUNCTION BOX I.D.

USE 2" DIA. RIGID METALLIC (RMC) CONDUIT AT FITTINGS. PROVIDE RMC FOR 3'-0" MIN. ON EACH SIDE OF JOINT OPENINGS UNLESS NOTED OTHERWISE.

SPONGE RUBBER WRAP TO BE AASHTO M153, TYPE 1 OR EQUIVALENT - ¼" MINIMUM THICKNESS. PROVIDE WRAP FOR THE ENTIRE LENGTH OF THE FITTING OR AS SHOWN. SPONGE RUBBER WRAP INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH".

POSITION MOVABLE END OF CONDUIT INSIDE EXPANSION FITTING, SUCH THAT IT WILL HAVE THE SAME ALLOWANCE FOR MOVEMENT (EXPANSION/CONTRACTION) AS THE EXPANSION DEVICE SET IN PLACE IN THE DECK BELOW IT. TAKE CARE TO INSTALL EXPANSION FITTING AND CONDUIT EXACTLY PARALLEL TO BRIDGE MOVEMENT.

* EXPANSION FITTING REQUIREMENTS (IF USED):
4" TOTAL MOVEMENT WITH BONDING JUMPER
8" TOTAL MOVEMENT WITH BONDING JUMPER

** DEFLECTION/EXPANSION FITTING REQUIREMENTS (IF USED):
UP TO 3"4" CONDUIT CONTRACTION OR EXPANSION AND UP TO 30° OF ANGULAR MISALIGNMENT IN ANY DIRECTION WITH BONDING JUMPER

PVC = POLYVINYL CHLORIDE (RIGID NONMETALLIC) CONDUIT

RMC = RIGID METALLIC CONDUIT

℄ JUNCTION BOX STATIONING LOCATIONS

1 = STA. 977+72.40 "HAB" @ WEST PARAPET
2 = STA. 979+46.00 "HAB" @ WEST PARAPET
3 = STA. 980+85.25 "HAB" @ WEST PARAPET
4 = STA. 977+51.75 "HAB" @ EAST PARAPET
5 = STA. 979+18.50 "HAB" @ EAST PARAPET
6 = STA. 980+85.25 "HAB" @ EAST PARAPET

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-893

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CONDUIT PLAN

SHEET 24

337

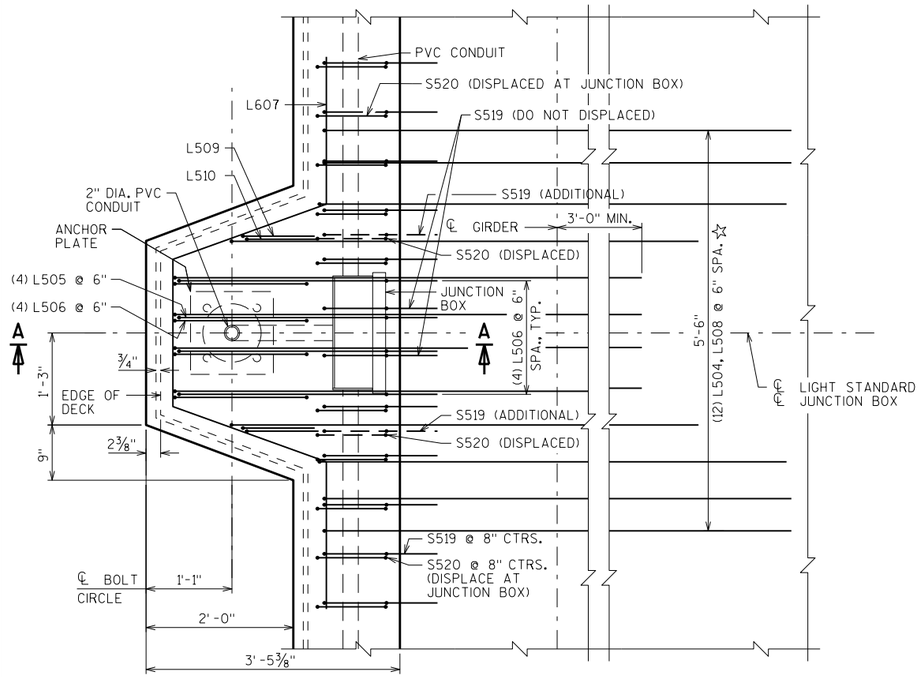
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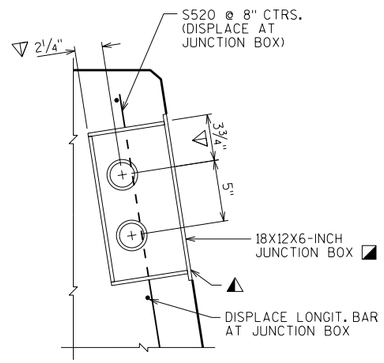
STATE PROJECT NUMBER

1228-22-74



PLAN AT LIGHT STANDARD

(DECK STEEL NOT SHOWN FOR CLARITY)



JUNCTION BOX DETAIL

NOTES

CONDUIT SHALL BE EMBEDDED 2" CLEAR.

USE 2" DIA. RIGID NONMETALLIC CONDUIT (PVC) UNLESS NOTED OTHERWISE.

CONDUIT FITTINGS, CONDUIT BENDS, AND ADAPTER FITTINGS INCIDENTAL TO CONDUIT WORK.

PROVIDE JUNCTION BOXES FROM THE APPROVED PRODUCTS LIST.

SEE "CONDUIT PLAN", "WEST PARAPET CONDUIT DETAILS", AND "EAST PARAPET CONDUIT DETAILS" SHEETS FOR ADDITIONAL INFORMATION.

LEGEND

☆ THESE BARS ARE IN ADDITION TO STANDARD TRANSVERSE BARS IN DECK.

⬬ 1" DIA. ANCHOR RODS ASTM F1554 GR 55, HEAVY HEX NUTS ASTM A563, AND WASHERS ASTM F436. ANCHOR ASSEMBLIES SHALL BE GALVANIZED PER SECTION 531 OF THE STANDARD SPECIFICATION. PROVIDE (2) WASHERS AND (7) NUTS PER ANCHOR ROD.

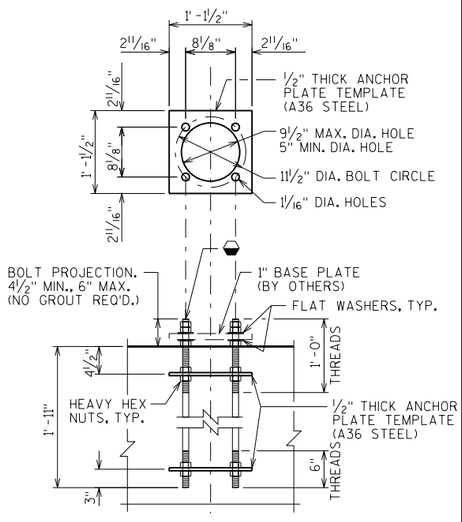
◐ CONSTRUCTION JOINT, STRIKE OFF AS SHOWN.

◭ CUT OUT ± 1" OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.

▽ LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX.

◪ USE A 12X6X6 JUNCTION BOX AT JUNCTION BOX NUMBER 3 SEE "WEST PARAPET CONDUIT DETAILS" SHEET.

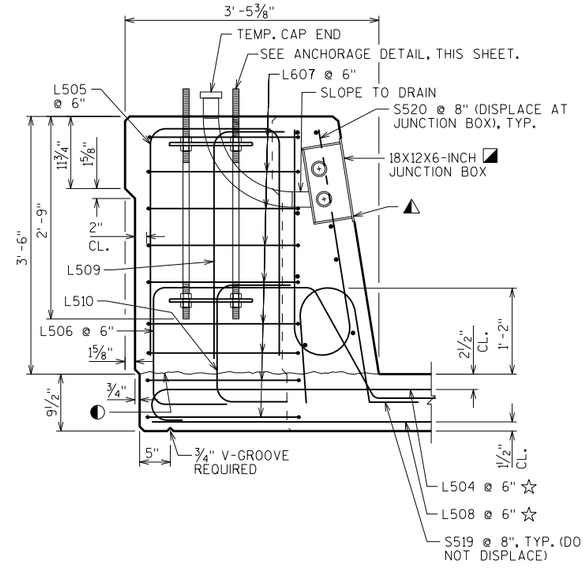
PVC = POLYVINYL CHLORIDE (RIGID NONMETALLIC) CONDUIT.



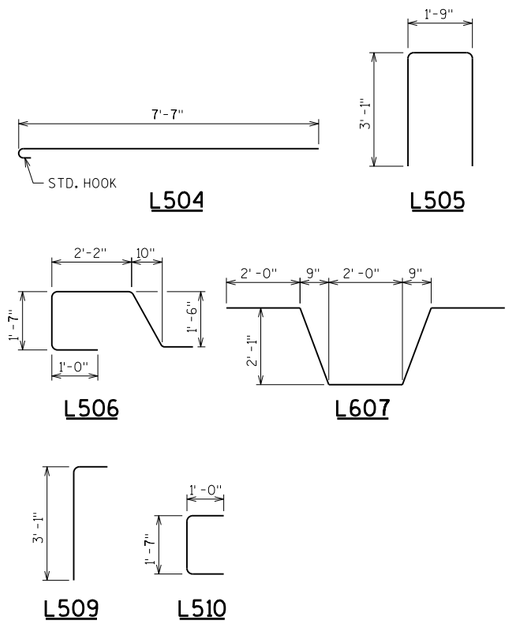
ANCHOR ROD ASSEMBLY DETAIL

(2 REQ'D.)

(4) - ANCHOR RODS REQUIRED PER ASSEMBLY



SECTION A-A



BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
L504	X	24	8'-2"	X		LIGHT STD. - TRANS. - DECK - TOP
L505	X	8	7'-8"	X		LIGHT STD. - VERT. - PARAPET
L506	X	8	7'-0"	X		LIGHT STD. - VERT. - PARAPET
L607	X	18	10'-0"	X		LIGHT STD. - HORIZ. - PARAPET
L508	X	24	7'-7"			LIGHT STD. - TRANS. - DECK - BOT.
L509	X	4	4'-0"	X		LIGHT STD. - VERT. - PARAPET
L510	X	4	3'-4"	X		LIGHT STD. - VERT. - PARAPET

NOTE: NUMBER REQUIRED IS FOR (2) LIGHT STANDARDS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-893

DRAWN BY EJV | PLANS CK'D. LMK

ELECTRICAL DETAILS AT PARAPET

SHEET 25

338

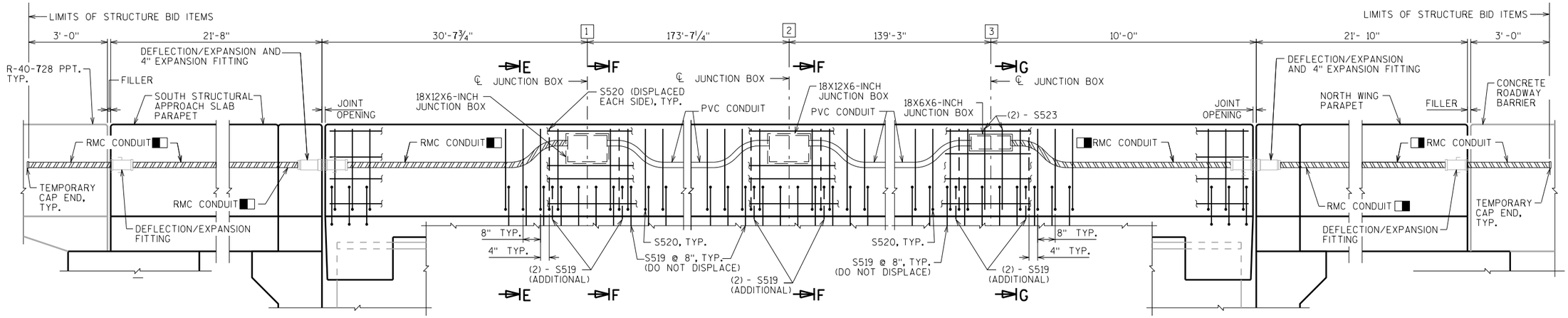
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SCALE = 1.00

STATE PROJECT NUMBER

1228-22-74



INSIDE ELEVATION AT SOUTH ABUTMENT

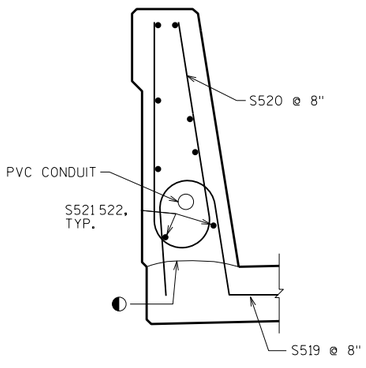
REINF. NOT SHOWN FOR CLARITY

INSIDE ELEVATION AT JUNCTION BOXES

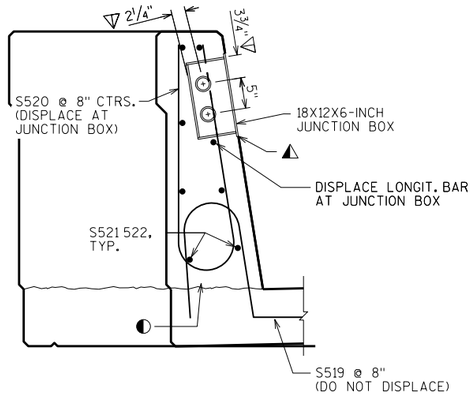
DECK STEEL NOT SHOWN FOR CLARITY

INSIDE ELEVATION AT NORTH ABUTMENT

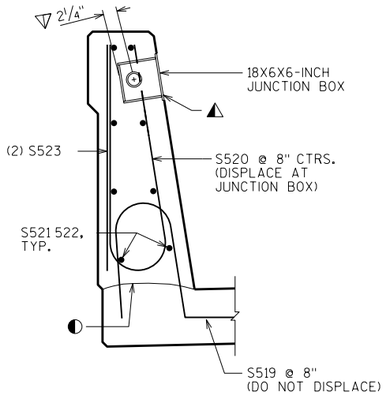
REINF. NOT SHOWN FOR CLARITY



SECTION E-E



SECTION F-F



SECTION G-G

NOTES

CONDUIT SHALL BE EMBEDDED 2" CLEAR.

USE 2" DIA. RIGID NONMETALLIC CONDUIT (PVC) UNLESS NOTED OTHERWISE.

CONDUIT FITTINGS, CONDUIT BENDS, AND ADAPTER FITTINGS INCIDENTAL TO CONDUIT WORK.

PROVIDE JUNCTION BOXES FROM THE APPROVED PRODUCTS LIST.

SEE "ELECTRICAL DETAILS AT PARAPET" AND "CONDUIT PLAN" SHEETS FOR ADDITIONAL INFORMATION.

LEGEND

[1] JUNCTION BOX I.D.

USE 2" DIA. RIGID METALLIC (RMC) CONDUIT AT FITTINGS. PROVIDE RMC FOR 3'-0" MIN. ON EACH SIDE OF JOINT OPENINGS UNLESS NOTED OTHERWISE.

CONSTRUCTION JOINT, STRIKE OFF AS SHOWN.

CUT OUT ± 1" OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.

LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX.

PVC = POLYVINYL CHLORIDE (RIGID NONMETALLIC) CONDUIT.

RMC = RIGID METALLIC CONDUIT.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-893

DRAWN BY EJV | PLANS CK'D. LMK

WEST PARAPET CONDUIT DETAILS

SHEET 26

339

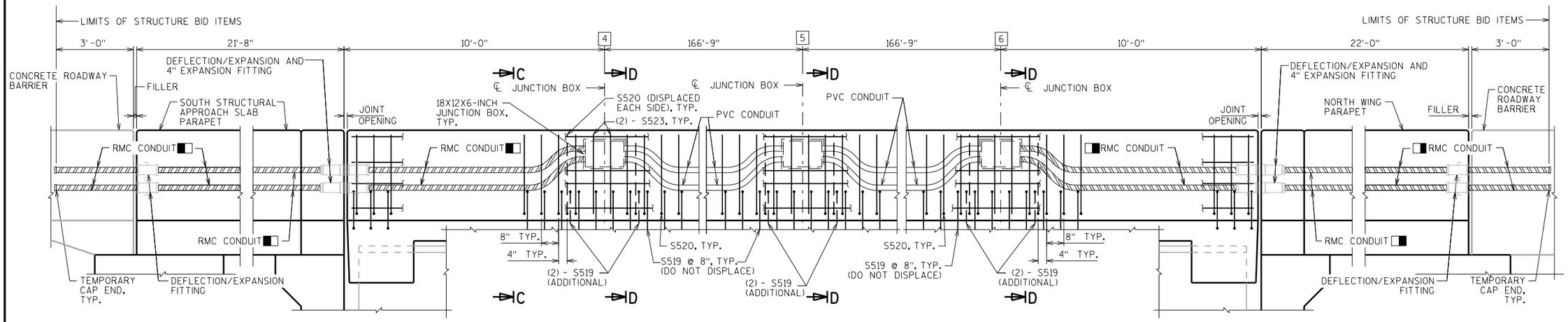
SCALE = 2.00

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8

STATE PROJECT NUMBER

1228-22-74



OUTSIDE ELEVATION AT SOUTH ABUTMENT

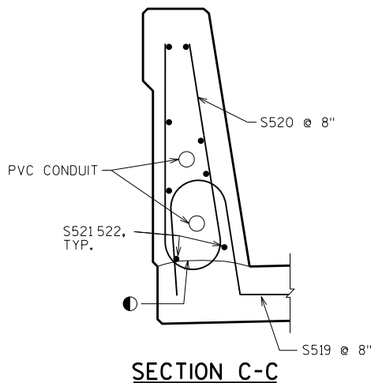
REINF. NOT SHOWN FOR CLARITY

OUTSIDE ELEVATION AT JUNCTION BOXES

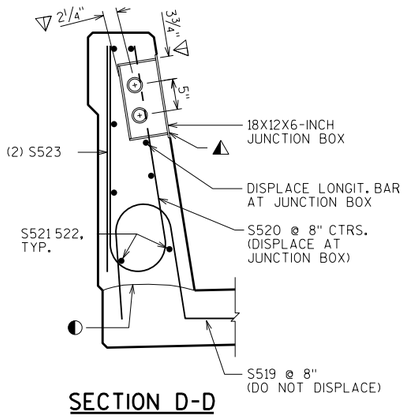
DECK STEEL NOT SHOWN FOR CLARITY

OUTSIDE ELEVATION AT NORTH ABUTMENT

REINF. NOT SHOWN FOR CLARITY



SECTION C-C



SECTION D-D

NOTES

CONDUIT SHALL BE EMBEDDED 2" CLEAR.

USE 2" DIA. RIGID NONMETALLIC CONDUIT (PVC) UNLESS NOTED OTHERWISE.

CONDUIT FITTINGS, CONDUIT BENDS, AND ADAPTER FITTINGS INCIDENTAL TO CONDUIT WORK.

PROVIDE JUNCTION BOXES FROM THE APPROVED PRODUCTS LIST.

SEE "ELECTRICAL DETAILS AT PARAPET" AND "CONDUIT PLAN" SHEET FOR ADDITIONAL INFORMATION.

LEGEND

[1] JUNCTION BOX I.D.

USE 2" DIA. RIGID METALLIC (RMC) CONDUIT AT FITTINGS. PROVIDE RMC FOR 3'-0" MIN. ON EACH SIDE OF JOINT OPENINGS UNLESS NOTED OTHERWISE.

CONSTRUCTION JOINT, STRIKE OFF AS SHOWN.

CUT OUT ± 1" OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.

LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX.

PVC = POLYVINYL CHLORIDE (RIGID NONMETALLIC) CONDUIT.

RMC = RIGID METALLIC CONDUIT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-893

DRAWN BY EJV | PLANS CK'D. LMK

EAST PARAPET CONDUIT DETAILS

SHEET 27

340

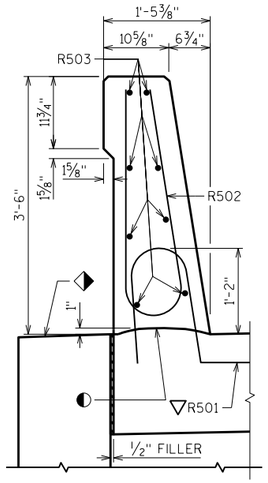
SCALE = 2.00

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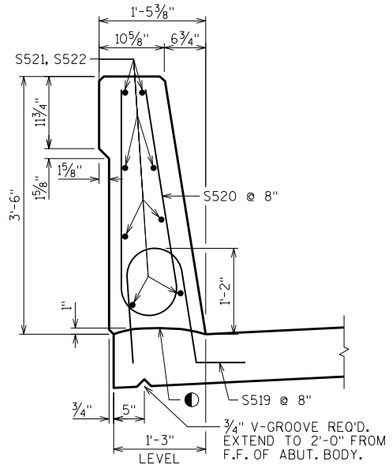
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STATE PROJECT NUMBER

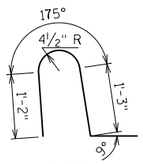
1228-22-74



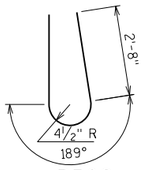
SECTION C-C



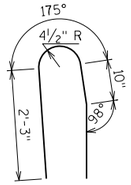
SECTION THRU PARAPET ON DECK



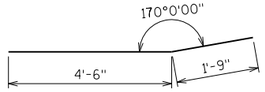
R501



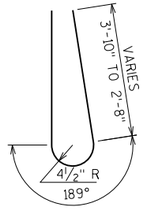
R502



R504



R505



R508

BILL OF BARS

FOR ABUTMENT PARAPETS

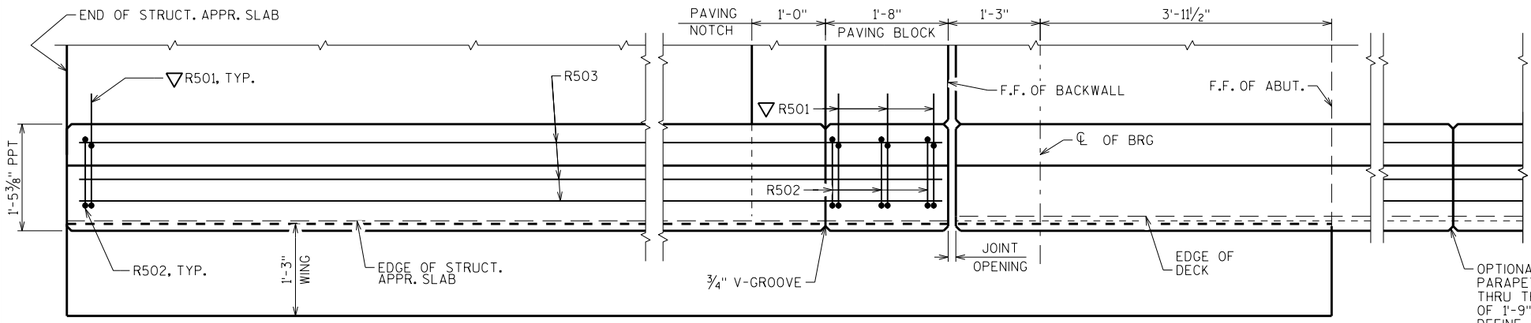
BAR MARK	COAT	S. ABUT.	N. ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	66		4'-5"	X		PARAPET VERT.
R502	X	33	68	6'-8"	X		PARAPET VERT.
R503	X	18		21'-3"			PARAPET HORIZ.
R504	X		68	5'-10"	X		PARAPET VERT.
R505	X		8	6'-3"	X		PARAPET HORIZ.
R506	X		8	17'-4"			PARAPET HORIZ.
R507	X		8	21'-8"			PARAPET HORIZ.
R508	X	33		7'-10"		◭	PARAPET VERT.

◭ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LEGTHS.

BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
R508	1 SERIES OF 33	6'-8" TO 8'-11"

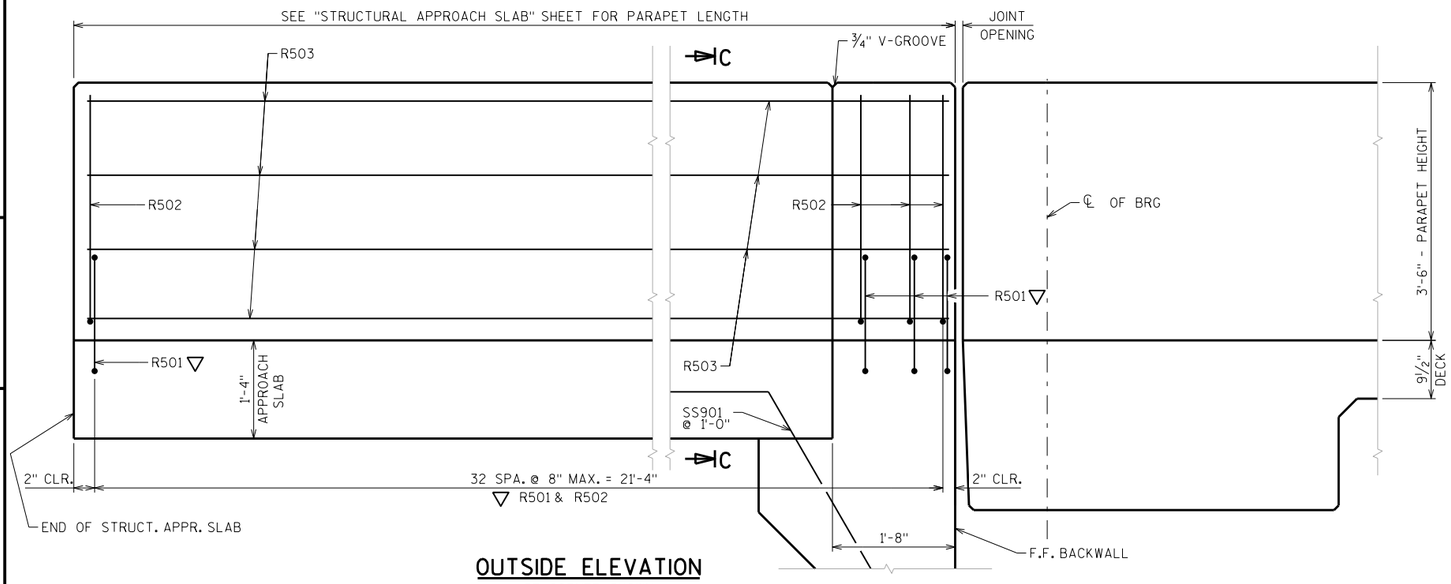
BUNDLE AND TAG EACH SERIES SEPARATELY.



PLAN

SE CORNER SHOWN

OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" - 'V' GROOVE.



OUTSIDE ELEVATION

SE CORNER SHOWN

WING, CONDUIT & STRUCTURAL APPROACH SLAB FOOTING NOT SHOWN FOR CLARITY

LEGEND

◐ CONST. JOINT - STRIKE OFF AS SHOWN

◆ SLOPE FOR DRAINAGE

▽ R501 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB OR ABUT. BACKWALL STEEL BEFORE STRUCTURAL APPROACH SLAB OR ABUT. BACKWALL IS POURED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-893

DRAWN BY EJV | PLANS CK'D. ABP

SE SINGLE SLOPE PARAPET 42SS

SHEET 28

341

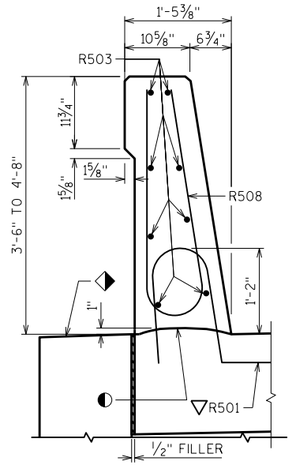
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8

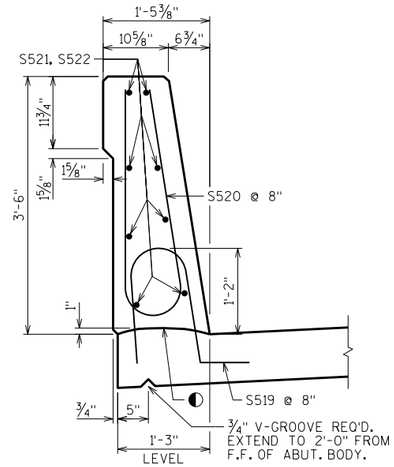
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STATE PROJECT NUMBER

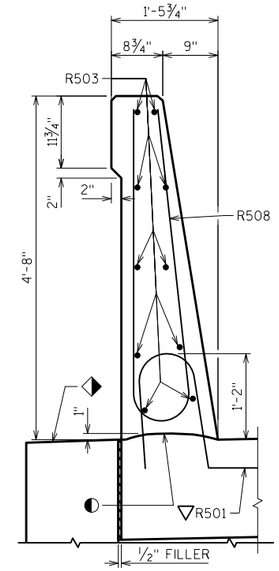
1228-22-74



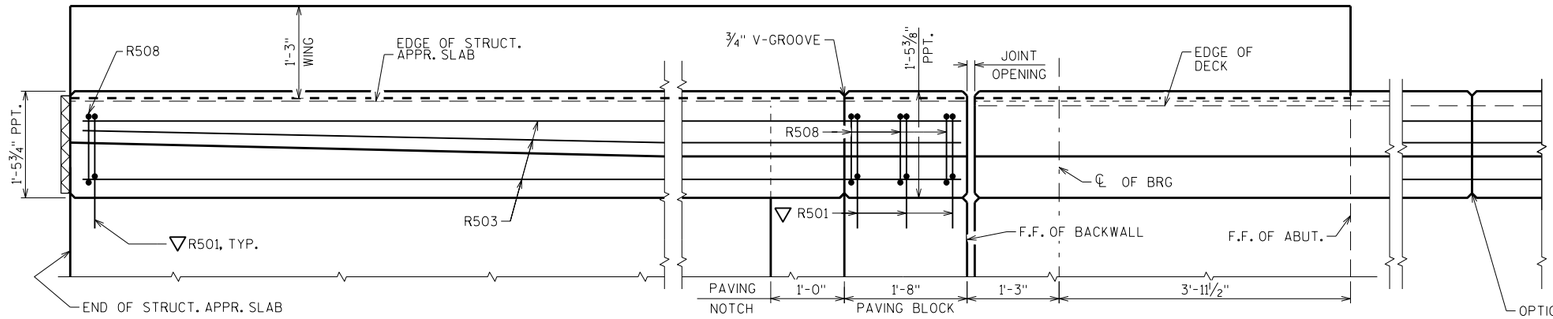
SECTION C-C



SECTION THRU PARAPET ON DECK



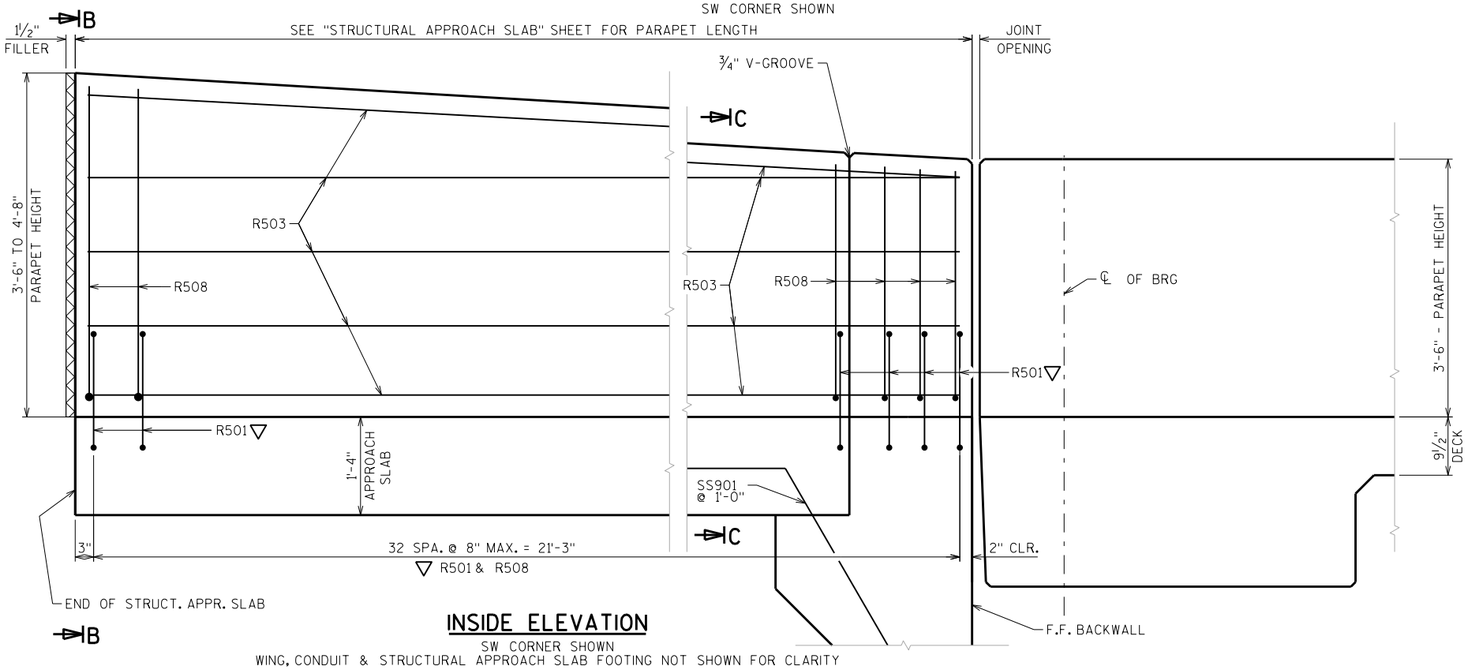
SECTION B-B



PLAN

SW CORNER SHOWN

OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" - 'V' GROOVE.



INSIDE ELEVATION

SW CORNER SHOWN

WING, CONDUIT & STRUCTURAL APPROACH SLAB FOOTING NOT SHOWN FOR CLARITY

◐ CONST. JOINT - STRIKE OFF AS SHOWN

◆ SLOPE FOR DRAINAGE

▽ R501 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB OR ABUT. BACKWALL STEEL BEFORE STRUCTURAL APPROACH SLAB OR ABUT. BACKWALL IS POURED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-893

DRAWN BY EJV | PLANS CK'D. ABP

SW SINGLE SLOPE PARAPET 42SS MODIFIED

SHEET 29

342

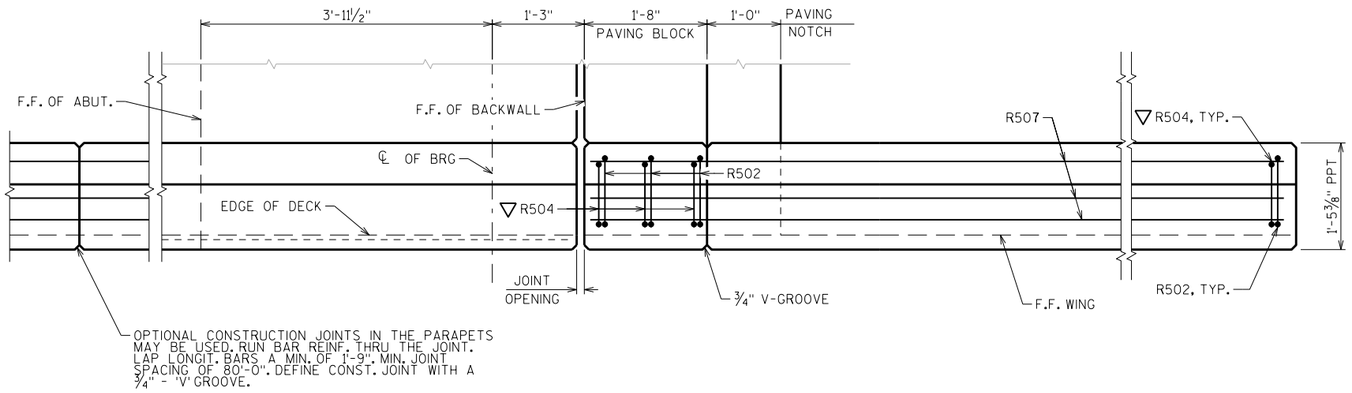
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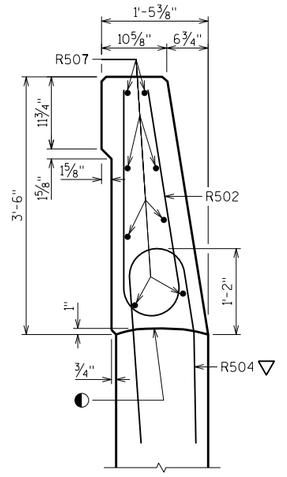
STATE PROJECT NUMBER

1228-22-74

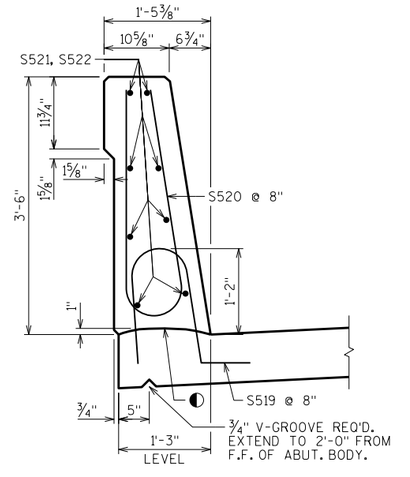


PLAN

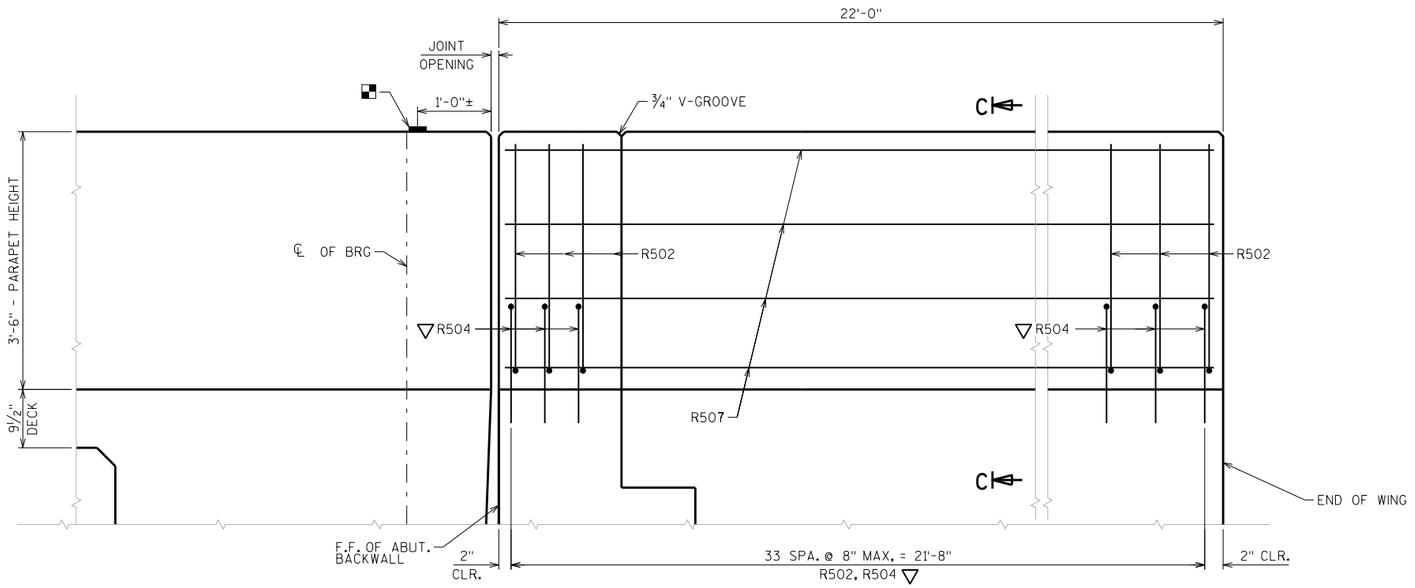
NE CORNER SHOWN



SECTION C-C

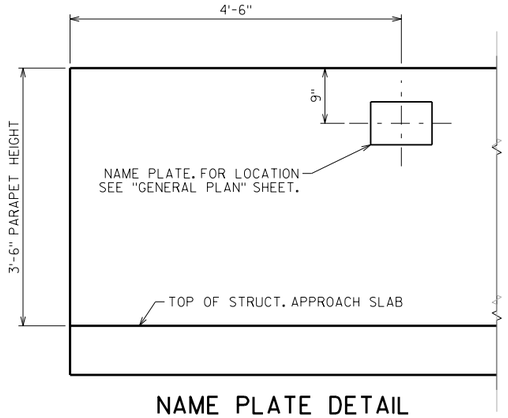


SECTION THRU PARAPET ON DECK



OUTSIDE ELEVATION

NE CORNER SHOWN
WING & CONDUIT NOT SHOWN FOR CLARITY



NAME PLATE DETAIL

INSIDE FACE
WING 4 CORNER

▀ BENCH MARK CAP (NE CORNER)

◐ CONST. JOINT - STRIKE OFF AS SHOWN

▽ R501 BARS TO BE TIED TO WING OR ABUT. BACKWALL STEEL BEFORE WING OR ABUT. BACKWALL IS POURED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-893

DRAWN BY EJV | PLANS CK'D. ABP

NE SINGLE SLOPE PARAPET 42SS

SHEET 30

343

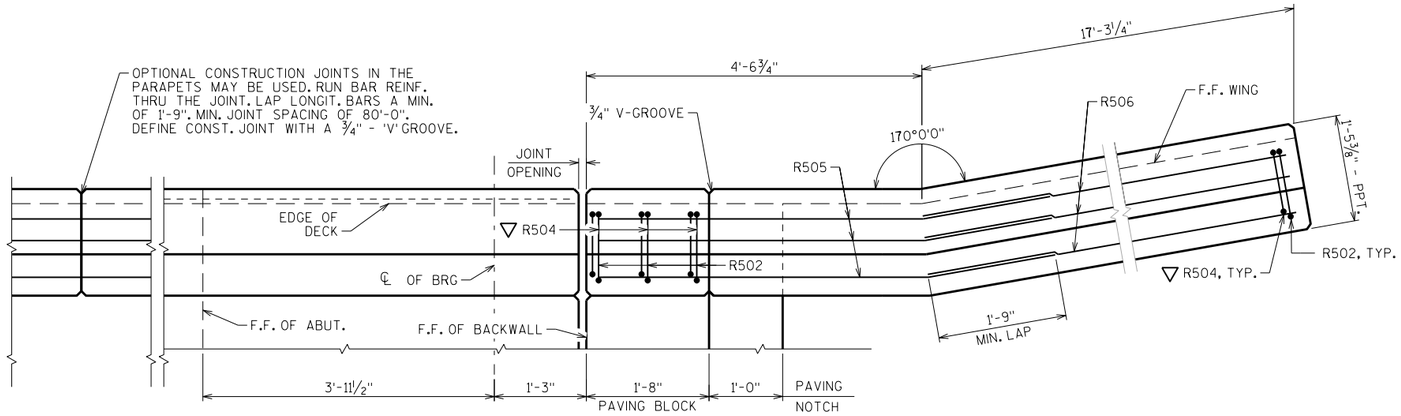
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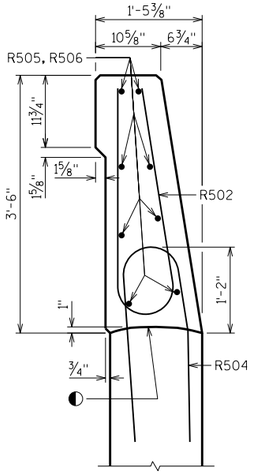
STATE PROJECT NUMBER

1228-22-74

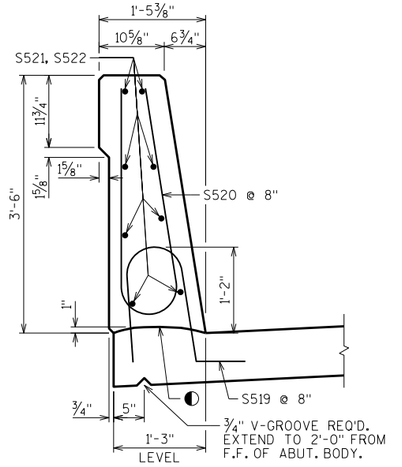


PLAN

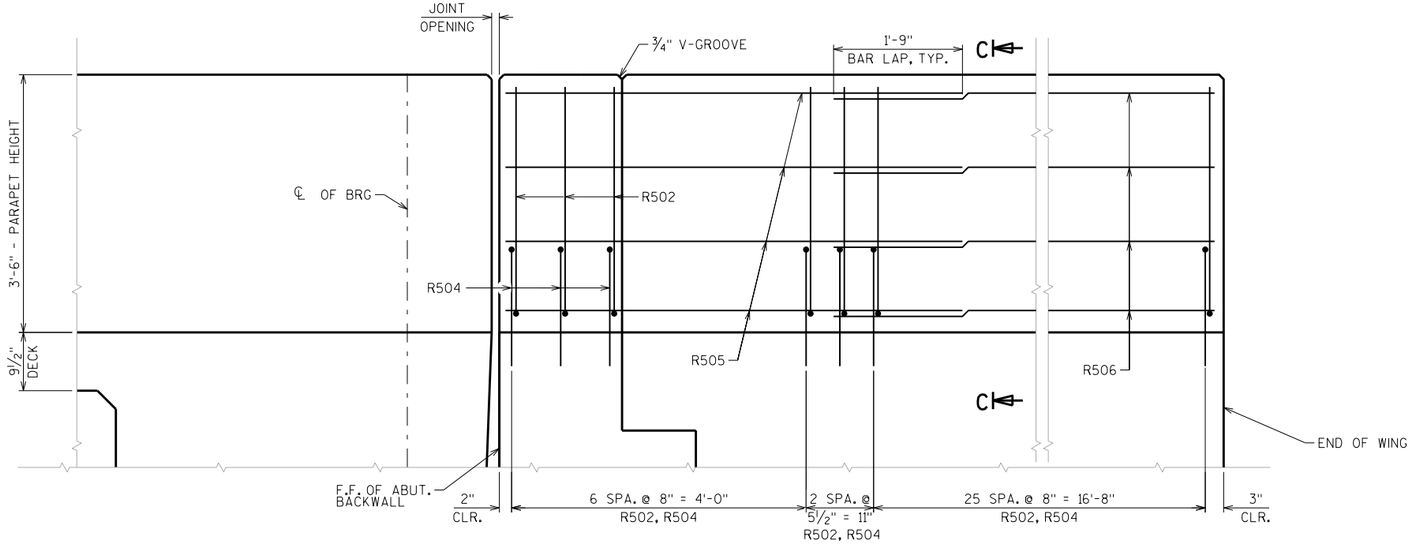
NW CORNER SHOWN



SECTION C-C



SECTION THRU PARAPET ON DECK



INSIDE ELEVATION

NW CORNER SHOWN
WING & CONDUIT NOT SHOWN FOR CLARITY

◐ CONST. JOINT - STRIKE OFF AS SHOWN

▽ R501 BARS TO BE TIED TO WING OR ABUT. BACKWALL STEEL BEFORE WING OR ABUT. BACKWALL IS POURED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-893

DRAWN BY EJV | PLANS CK'D. ABP

NW SINGLE SLOPE PARAPET 42SS

SHEET 31

344

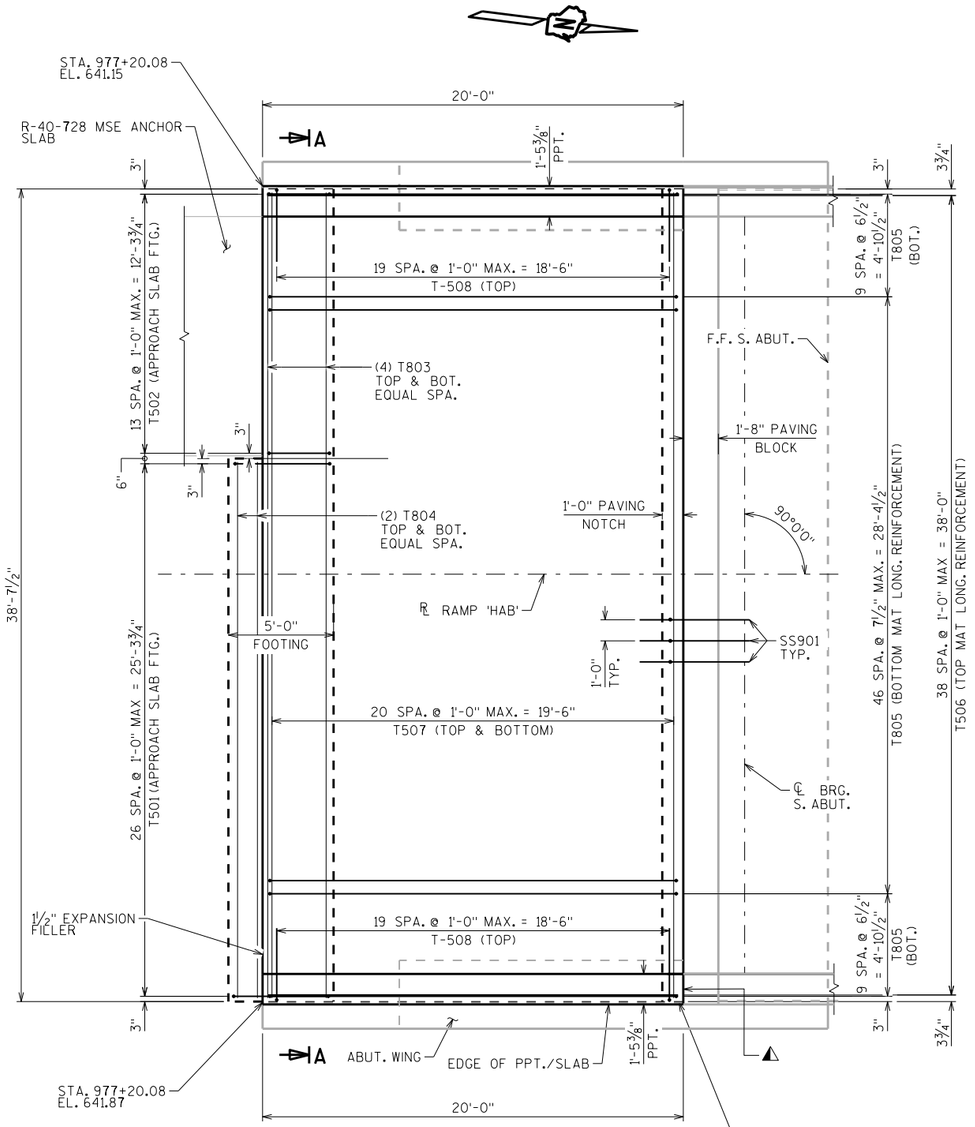
SCALE = 1.00

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8

STATE PROJECT NUMBER

1228-22-74



APPROACH SLAB PLAN

½" FILLER BETWEEN WING AND APPROACH SLAB. SEE SECTION C-C DETAIL ON "SE SINGLE SLOPE PARAPET 42SS" AND "SW SINGLE SLOPE PARAPET 42SS MODIFIED" SHEETS. ◭

LEGEND

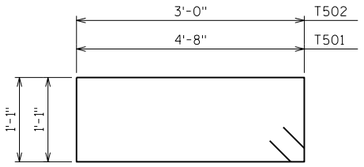
◐ APPLY PROTECTIVE SURFACE TREATMENT TO PAVING NOTCH SURFACES PRIOR TO POURING STRUCTURAL APPROACH SLAB.

◪ MEASURED NORMAL TO ABUTMENT

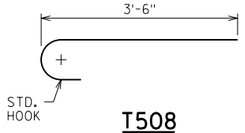
◭ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NONSTAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE CONCRETE).

(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE FOOTING.

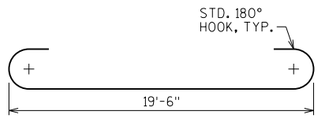
(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE SUBGRADE.



T501, T502



T508

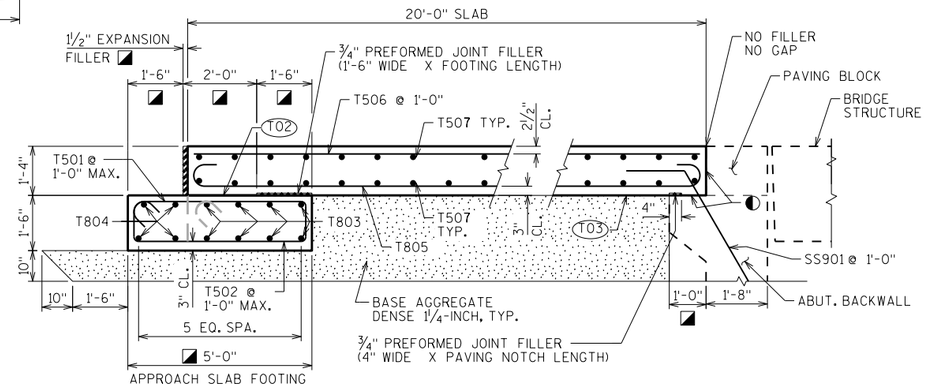


T805

BILL OF BARS

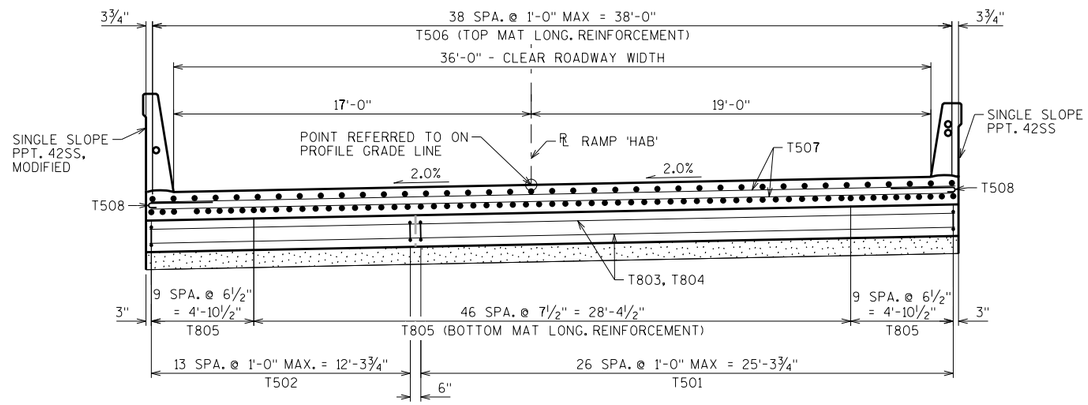
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
T501	X	27	12'-2"	X		APPROACH SLAB FTG. - STIRRUPS
T502	X	14	8'-10"	X		APPROACH SLAB FTG. - STIRRUPS
T803	X	8	38'-1"			APPROACH SLAB FTG. - TRANS.
T804	X	4	25'-3"			APPROACH SLAB FTG. - TRANS.
T805	X	65	21'-4"	X		STRUCT. APPR. SLAB - HORIZ. LONG. - BOT.
T506	X	39	19'-6"			STRUCT. APPR. SLAB - HORIZ. LONG. - TOP
T507	X	42	38'-1"			STRUCT. APPR. SLAB - HORIZ. - TRANS. TOP & BOTTOM
T508	X	40	4'-1"	X		STRUCT. APPR. SLAB - HORIZ. - TRANS. TOP WING



SECTION THRU APPROACH SLAB

LOOKING WEST



SECTION A-A

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-893

DRAWN BY EJV | PLANS CK'D. ABP

SOUTH STRUCTURAL APPROACH SLAB

SHEET 32

345

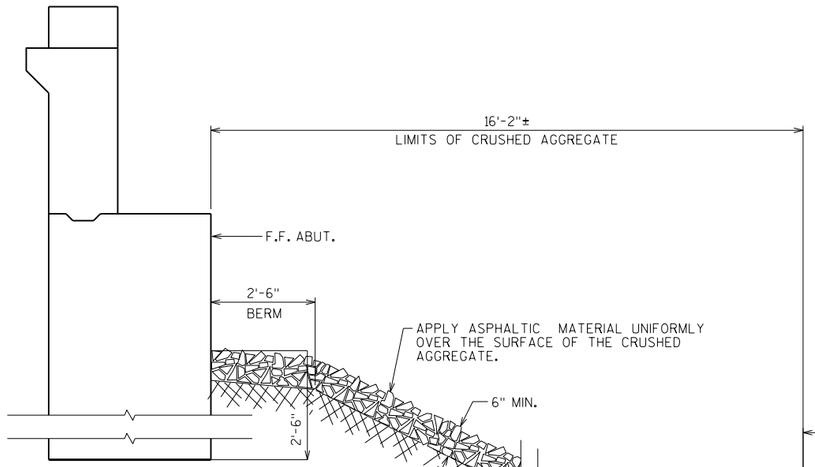
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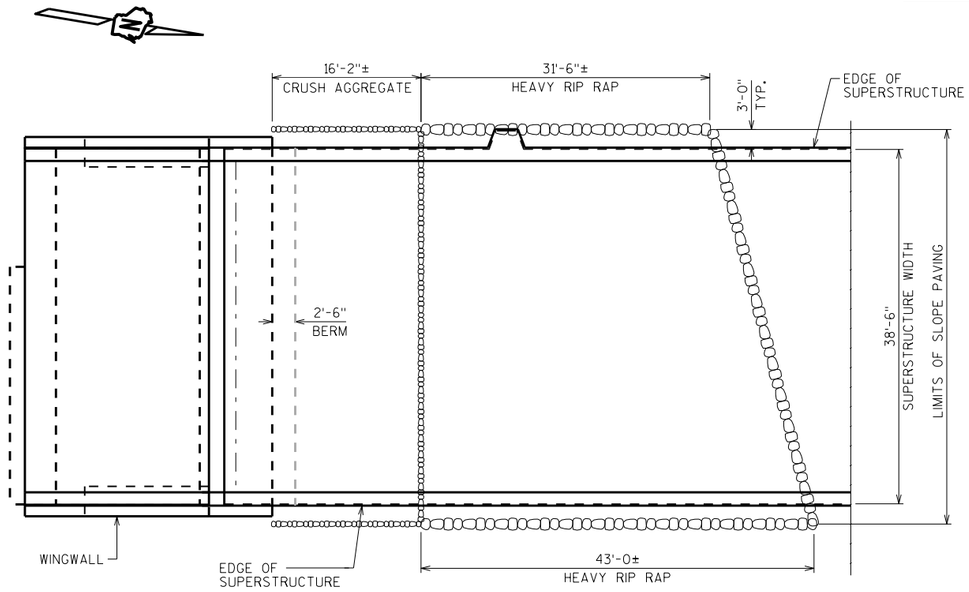
STATE PROJECT NUMBER

1228-22-74

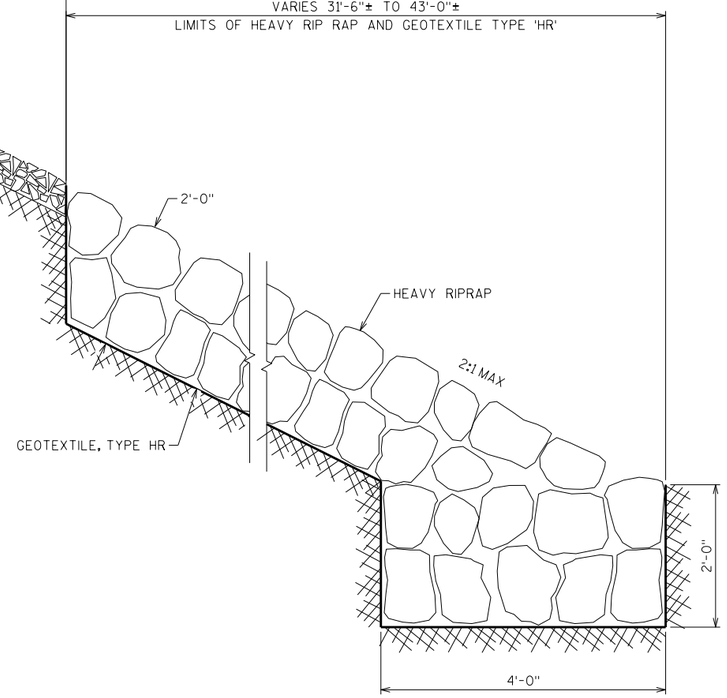


TYPICAL SECTION

LOOKING WEST



PLAN



NOTES:

BID ITEMS SHALL BE "SLOPE PAVING CRUSHED AGGREGATE", "RIP RAP HEAVY" AND "GEOTEXTILE TYPE HR".

ROUND STONE WILL NOT BE ACCEPTED FOR "SLOPE PAVING CRUSHED AGGREGATE".

WOOD FORMS ADJACENT TO CRUSHED AGGREGATE MAY BE LEFT IN PLACE WHEN OF A QUALITY ACCEPTABLE TO THE ENGINEER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-893

DRAWN BY EJV | PLANS CK'D. ABP

SLOPE PAVING
SOUTH ABUTMENT

SHEET 33

346

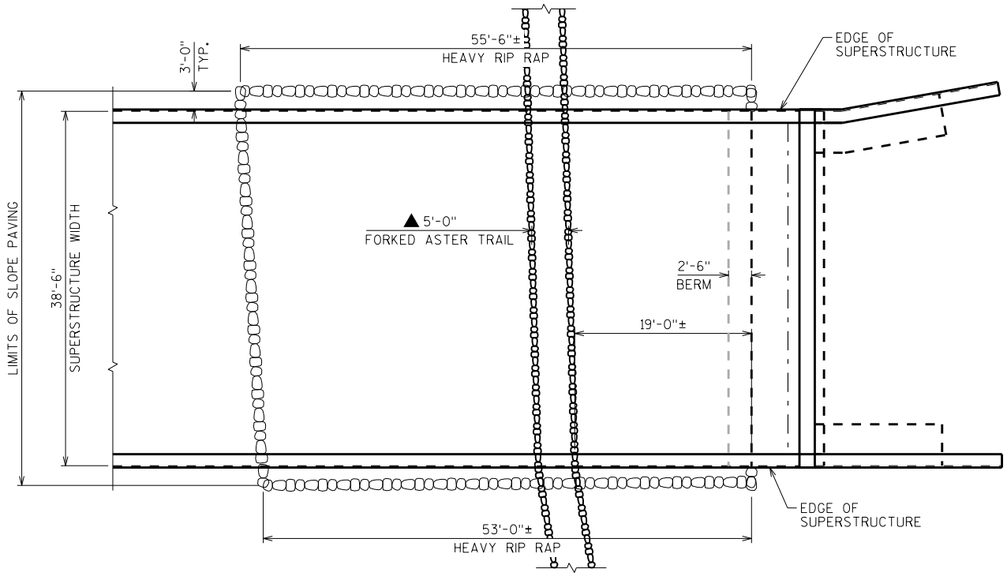
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STATE PROJECT NUMBER

1228-22-74

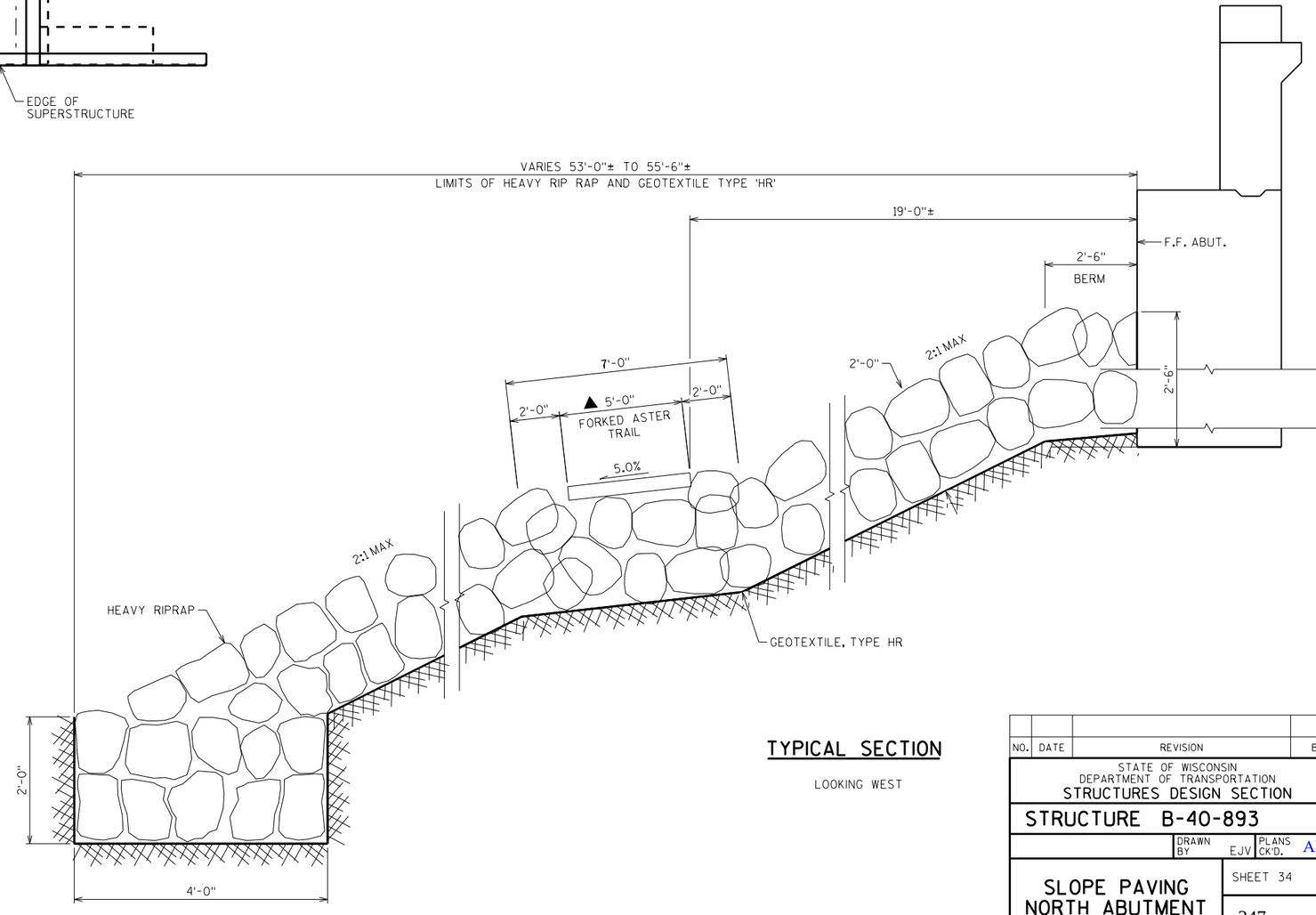


PLAN

NOTES:

BID ITEMS SHOULD BE "RIP RAP HEAVY" AND "GEOTEXTILE TYPE HR"

▲ FILL VOIDS IN HEAVY RIP RAP WITH "SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR"



TYPICAL SECTION

LOOKING WEST

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-893

DRAWN BY EJV | PLANS CK'D. ABP

SLOPE PAVING
NORTH ABUTMENT

SHEET 34

347

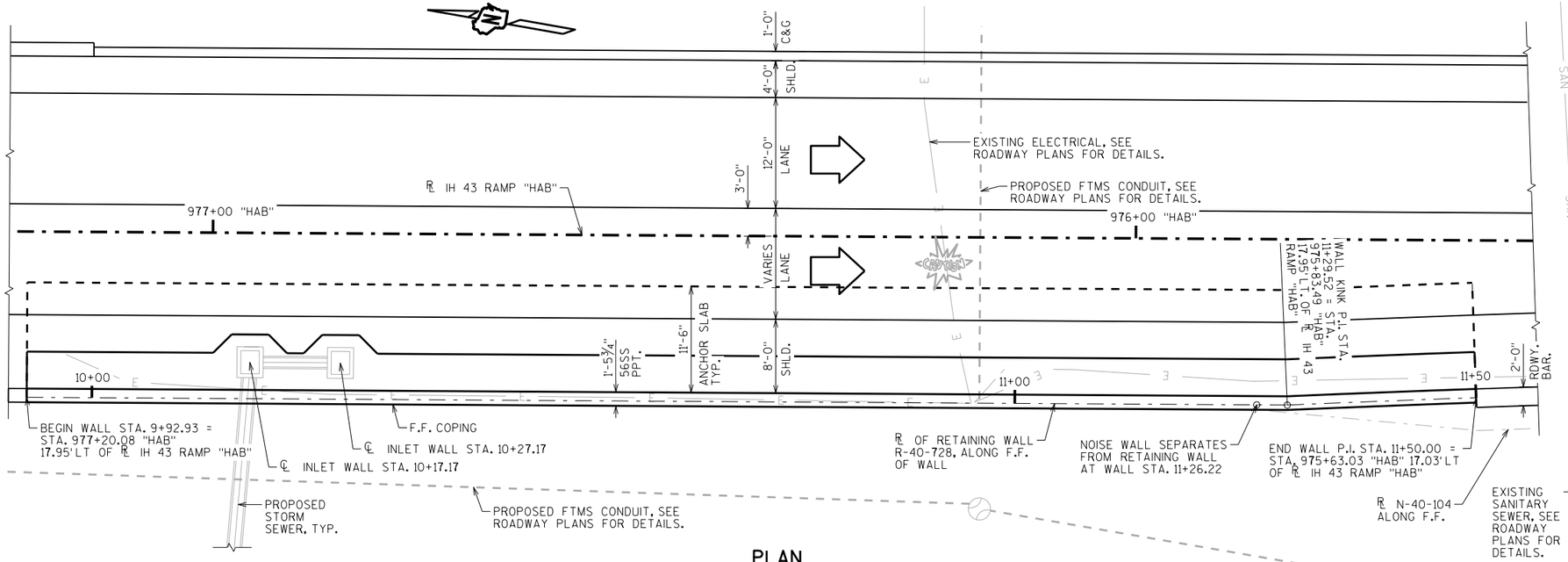
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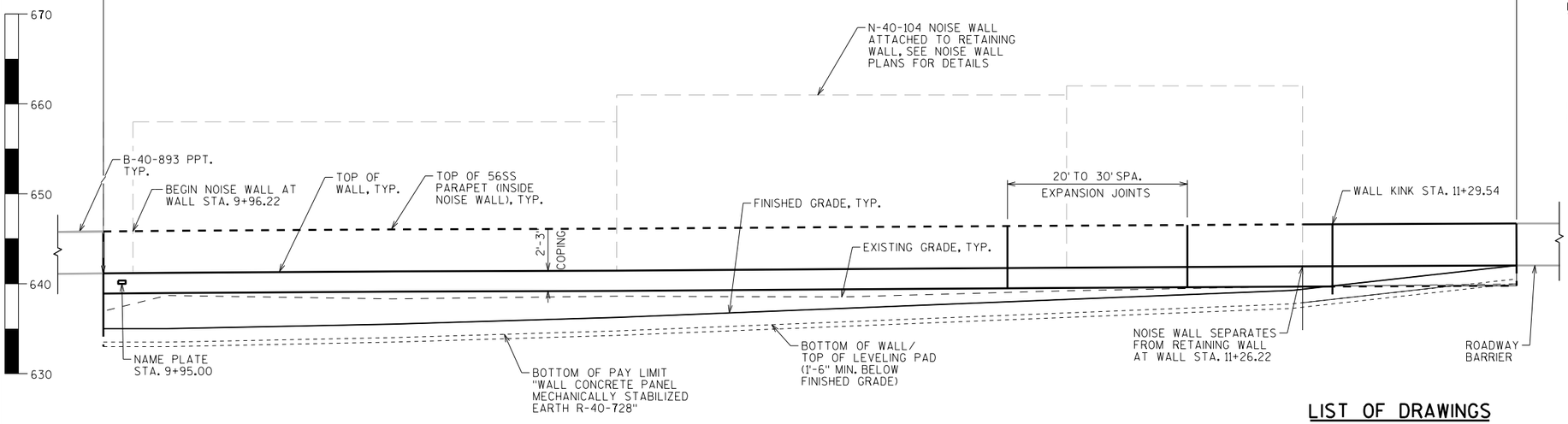
STATE PROJECT NUMBER

1228-22-74



PLAN

PRECAST CONCRETE PANEL MSE WALL



ELEVATION

LOOKING EAST AT FRONT FACE OF WALL

DISTANCES AND STATIONS ARE GIVEN ALONG THE FRONT FACE OF WALL

ALLOWABLE WALL SYSTEMS

WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH

DESIGN DATA

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE MSE RETAIINING WALL IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS SHALL BE INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-40-728".

PLANS, ELEVATIONS AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED, THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE RETAINING WALL IS TO BE DESIGNED USING THE ELEVATIONS GIVEN ON THIS SHEET AND THE WALL GEOMETRY TABLE.

DESIGN FOR RETAINING WALL TO PROVIDE FOR FINISHED GRADE SLOPED BEHIND WALL AS SHOWN.

DESIGN RETAINING WALL FOR A LIVE LOAD SURCHARGE OF 240 PSF.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST VALUES.

NOISE BARRIER:

MAX. HEIGHT ABOVE ROADWAY BARRIER ——— 15.42 FEET
MAX POST SPACING ——— 10 FEET
WIND PRESSURE ON NOISE BARRIER ——— 40 PSF
(NORMAL TO BARRIER, EITHER DIRECTION)

DEAD LOAD: TO BE COORDINATED WITH NOISE WALL MANUFACTURER

MATERIAL PROPERTIES:

CONCRETE MASONRY:
ANCHOR SLAB AND PARAPET ——— f'c = 4,000 P.S.I.
PRECAST CONCRETE WALL PANELS ——— f'c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT:
GRADE 60 ——— fy = 60,000 P.S.I.

CURVE DATA

IH 43 SB ON RAMP CURVE 1

P.I. = 969+90.61 "HAB"
Δ = 4°41'43.65"
D = 2°35'33.25"
T = 90.61'
L = 181.06'
R = 2210'
P.C. = 969+00.00 "HAB"
P.T. = 970+81.11 "HAB"

IH 43 SB ON RAMP CURVE 2

P.I. = 973+65.15 "HAB"
Δ = 8°25'13.20"
D = 2°26'17.23"
T = 172.99'
L = 345.36'
R = 2350'
P.C. = 971+92.16 "HAB"
P.T. = 975+37.52 "HAB"

TRAFFIC VOLUME

IH 43 SB ON RAMP

ADT = 7,000 (2014)
R.D.S. = 50 M.P.H.

STRUCTURE DESIGN CONTACTS:

JOHN SENDOR (608) 261-5163
DOMINIQUE BECHLE (608) 261-8205

LIST OF DRAWINGS

1. GENERAL PLAN
2. QUANTITIES & NOTES
3. WALL GEOMETRY & SOIL DATA
4. WALL DETAILS
5. ANCHOR SLAB PLAN
6. ANCHOR SLAB DETAILS
7. ANCHOR SLAB INLET DETAILS
8. CONDUIT DETAILS
9. NOISE WALL ANCHORAGE DETAILS
10. SUBSURFACE EXPLORATION

NO.	DATE	REVISION	BY

WISCONSIN DEPARTMENT OF TRANSPORTATION — BUREAU OF STRUCTURES

ACCEPTED DMB 12/13/21
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE R-40-728

MSE RETAINING WALL ALONG IH 43 SB RAMP

COUNTY	CITY
MILWAUKEE	GLENDALE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
JJS	ETP	JJS	ETP

GENERAL PLAN

SHEET 1 OF 10

348

I.D. 1228-22-01DL DATE: DEC. 2021

SCALE = 7.00

STATE PROJECT NUMBER

1228-22-74

TOTAL ESTIMATED QUANTITIES

	BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
	502.3200	PROTECTIVE SURFACE TREATMENT	SY	70
	502.3210	PIGMENTED SURFACE SEALER	SY	95
✳✳	504.0500	CONCRETE MASONRY RETAINING WALLS	CY	176
✳✳	505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	23,720
	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	13
	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	170
	652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	9
	652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	150
	653.0220	JUNCTION BOXES 18X6X6-INCH	EACH	1
	SPV.0060	ANCHOR ASSEMBLIES NOISE BARRIER STRUCTURES R-40-728	EACH	14
	SPV.0165	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-40-728	SF	872
		NON-BID ITEMS		
		NON-BITUMINOUS JOINT SEALER	SIZE	½", ¾", 1"
		FILLER	SIZE	½", ¾"
		CORK FILLER	SIZE	1"
		EXPANDED POLYSTYRENE	SIZE	1"

✳✳ QUANTITY INCLUDES: VEHICLE BARRIER (ANCHOR SLAB, COPING, & PARAPET)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

ALL BAR STEEL REINFORCEMENT IN CAST-IN-PLACE CONCRETE IS TO BE EPOXY COATED.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

ALL WALL STATIONING AND OFFSETS ARE GIVEN AT THE FRONT FACE OF WALL R-40-728.

AT THE BACK FACE OF WALL ALL VOLUME WHICH CANNOT BE PLACED BEFORE WALL CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

THE PLAN QUANTITY FOR THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-40-728" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF WALL TO A CONSTANT DEPTH OF 1'-6" BELOW FINISHED GRADE.

THE COST OF FURNISHING AND PLACING THE UNREINFORCED CONCRETE LEVELING PAD UNDER THE MSE PRECAST WALL PANELS IS INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-40-728".

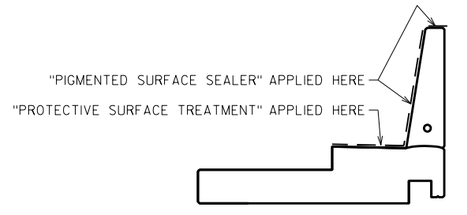
THE VOLUME OF EARTHWORK REQUIRED TO INSTALL THE UNREINFORCED CONCRETE LEVELING PAD, MSE PRECAST WALL PANELS, MSE BACKFILL AND REINFORCING STRIPS IS INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-40-728".

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE TRAFFIC SIDE AND THE TOP OF THE PARAPET.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE TRAFFIC SIDE OF THE EXPOSED ANCHOR SLAB SURFACE.

ANY EXCAVATION BELOW SUBGRADE (EBS) THAT IS REQUIRED PER THE "SOIL DATA" SHEET SHALL BE INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-40-728".

COORDINATE CONSTRUCTION OF R-40-728 WITH B-40-893 AND N-40-104.



PROTECTIVE SURFACE TREATMENT/PIGMENTED SURFACE SEALER LIMITS

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE R-40-728

DRAWN BY JJS | PLANS CK'D. ETP

QUANTITIES & NOTES

SHEET 2

349

SCALE = 1.00

STATE PROJECT NUMBER

1228-22-74

WALL GEOMETRY

WALL STA.	℄ IH 43 RAMP "HAB"	℄ OFFSET TO F.F. OF WALL	TOP OF WALL EL.	FINISHED GRADE EL.	EXISTING GRADE EL.
9+92.93	977+20.08	17.95 LT	641.15	635.00	638.89
10+00.00	977+13.02	17.95 LT	641.21	635.00	638.69
10+25.00	976+88.02	17.95 LT	641.37	635.50	638.32
10+50.00	976+63.02	17.95 LT	641.45	636.25	638.61
10+75.00	976+38.02	17.95 LT	641.62	637.25	638.53
11+00.00	976+13.02	17.95 LT	641.78	638.25	639.21
11+25.00	975+88.02	17.95 LT	641.92	639.25	639.68
11+50.00	975+63.03	17.03 LT	642.03	642.03	639.96

SOIL PARAMETERS

SOIL DESCRIPTION	FRICTION ANGLE (DEGREES)	COHESION (PSF)	UNIT WEIGHT (PCF)
GRANULAR BACKFILL WITHIN THE WALL IN THE REINFORCING ZONE	30	0	120
FILL, BEHIND THE THE REINFORCING ZONE (RETAINED SOIL) EXISTING EMBANKMENT FILL	26 (B-4) 28 (B-5)	0	115 (B-4) 120 (B-5)
BOR-4 - (FOR WALL STA. 11+00)			
EBS OF 1 FOOT OF CLAY FILL - ENGINEERED GRANULAR FILL (SPECIAL COMPACTION) EL. 637.0 TO EL. 636.0	32	0	120
LEAN CLAY, BROWN/GRAY, FEW TO LITTLE SAND, TRACE TO FEW GRAVEL (FILL) EL. 636.0 TO EL. 629.6	0 (ST) 29 (LT)	1,750 (ST) 0 (LT)	120
LEAN CLAY, BROWN/GRAY (MOTTLED), FEW SAND, TRACE GRAVEL EL. 629.6 TO EL. 622.6	0 (ST) 30 (LT)	3,000 (ST) 0 (LT)	125
SILTY SAND, BROWN, SOME GRAVEL EL. 622.6 TO EL. 621.5	36	0	135
PROBABLE DOLOMITE BEDROCK EL. 621.5 TO EL. 621.4	0	96,000	145
BOR-5 - (FOR WALL STA. 9+92.68)			
EBS OF 1 FOOT OF CLAY FILL - ENGINEERED GRANULAR FILL (SPECIAL COMPACTION) EL. 633.4 FT TO EL. 632.4	32	0	120
LEAN CLAY, BROWN/DARK GRAY, LITTLE SAND, FEW GRAVEL (FILL) EL. 632.4 TO EL. 629.6	0 (ST) 28 (LT)	1,250 (ST) 0 (LT)	120
SILTY TO CLAYEY SAND, BROWN/DARK BROWN, FEW GRAVEL, TRACE WOOD/ORGANICS (FILL) EL. 629.6 TO EL. 627.1	28	0	115
LEAN CLAY, BROWN, TRACE SAND (POSSIBLE FILL) EL. 627.1 TO EL. 624.6	0 (ST) 30 (LT)	2,500 (ST) 0 (LT)	125
LEAN CLAY, GRAY/BROWN, FEW TO LITTLE SAND, TRACE TO FEW GRAVEL (POSSIBLE FILL) EL. 624.6 TO EL. 618.6	0 (ST) 30 (LT)	2,500 (ST) 0 (LT)	125
PROBABLE DOLOMITE BEDROCK EL. 618.6 TO EL. 617.1	0	96,000	145

NOTES: LT = LONG TERM STRENGTH PARAMETER; ST = SHORT TERM STRENGTH PARAMETER

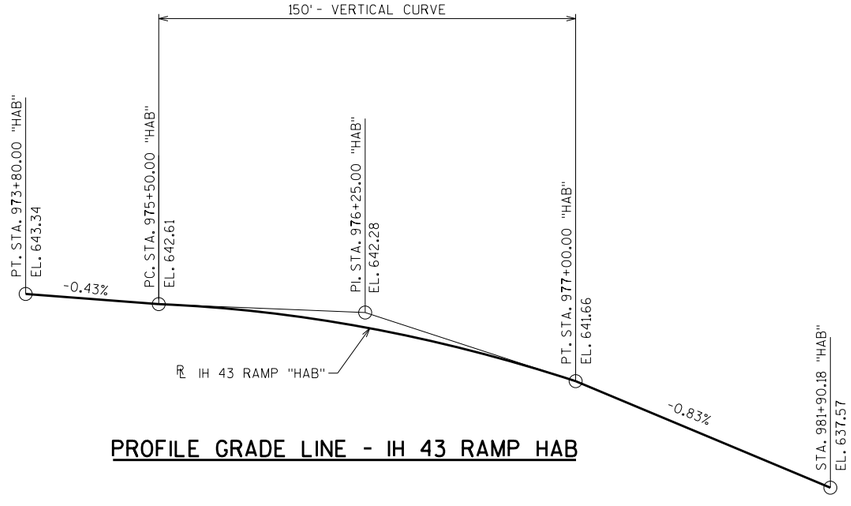
WALL EXTERNAL & OVERALL STABILITY EVALUATION

DIMENSIONS		
TOTAL WALL HEIGHT (FT)[1]	7.8	4.8
EXPOSED WALL HEIGHT (FT)	6.3	3.3
SLOPE IN FRONT OF WALL	3H:1V	3H:1V
ESTIMATED SLOPE HEIGHT (FT)	12	9.5
LENGTH OF REINFORCEMENT (FT)[2]	10	8[(3)]
LENGTH OF REIN./ TOTAL WALL HEIGHT (FT)	1.28	1.67[(3)]
WALL STATION	9+92.68	11+00
BORING USED	5	4
CAPACITY TO DEMAND RATIO (CDR)[6]		
SLIDING (CDR > 1.0)	1.95	2.15
ECCENTRICITY (CDR > 1.0)	4.33	6.08
GLOBAL STABILITY (CDR > 1.0)	1.00 (LT) 2.39 (ST)	——
BEARING RESISTANCE (CDR > 1.0)	1.07	1.58
REQUIRED BEARING RESISTANCE (PSF)	2,000[(5)]	2,000[(5)]
ESTIMATED SETTLEMENT (IN.)	<1.0	<1.0

NOTES:
1. THE TOTAL WALL HEIGHT INCLUDES AN EMBEDMENT OF 1.5 FEET.
2. THE LENGTH OF REINFORCEMENT IS THE MINIMUM REQUIRED LENGTH.
3. REINFORCEMENT LENGTH CONTROLLED BY MINIMUM REINFORCEMENT CRITERIA OF 0.7H OR 8 FEET.
4. CDR FOR GLOBAL STABILITY BASED ON RESISTANCE FACTOR (F) OF 0.75.
5. REQUIRED BEARING RESISTANCE WAS REDUCED FROM MAXIMUM CALCULATED FACTORED BEARING RESISTANCE.
6. CDR REQUIREMENTS AND LOAD AND RESISTANCE FACTORS ARE PRESENTED IN CHAPTER 14 OF THE BRIDGE MANUAL.

SOIL NOTES:

1. THE MINIMUM REINFORCEMENT LENGTH IS THE GREATER OF 1.28H (THE TOTAL WALL HEIGHT MULTIPLIED OF 1.28) OR 8 FEET.
2. THE CONTRACTOR SHALL REMOVE TOPSOIL (IF PRESENT) BELOW THE WALL AND REINFORCED ZONE. A MINIMUM OF 1 FOOT OF SILT OR CLAY SOILS SHALL BE REMOVED BELOW THE WALL AND REINFORCED ZONE, EXTENDING FROM 1 FOOT IN FRONT OF THE WALL FACE TO 1 FOOT BEYOND THE REINFORCED ZONE AND BACKFILL WITH COMPACTED GRANULAR BACKFILL. NOTE THAT ADDITIONAL EXCAVATION BELOW SUBGRADE (EBS) WILL BE REQUIRED IF SOFT OR UNSTABLE SOILS ARE ENCOUNTERED. EBS IS EXPECTED BELOW SOUTHERN PARTS OF THE WALL WHERE THE BOTTOM OF THE WALL STEPS UP IN ELEVATION AND A SOFT CLAY LAYER WAS ENCOUNTERED. BETWEEN WALL STA 11+00 AND STA 11+50, EBS WILL RANGE FROM 1 FOOT BELOW THE BOTTOM OF THE WALL NEAR STA 11+00 TO ABOUT 4 FEET NEAR STA 11+50. THE EBS EXCAVATION SHALL BE OVERSIZED IN FRONT OF THE WALL FACE AND BEHIND THE BACK OF THE REINFORCEMENT A MINIMUM LENGTH OF ONE-HALF THE EBS DEPTH BELOW THE BOTTOM OF THE WALL, BUT NOT LESS THAN 1 FOOT. THE SOILS AT THE BASE OF THE WALL SHALL BE EVALUATED BY THE SOUTHEAST REGION, WAUKESHA OFFICE SOILS ENGINEER DURING EXCAVATION AND PRIOR TO BEGINNING WALL CONSTRUCTION TO DETERMINE THE DEPTH AND EXTENT OF EBS. EBS AREAS SHALL BE BACKFILLED WITH GRANULAR BACKFILL (GRADE 1 OR 2) WITH SPECIAL COMPACTION, OR WITH WELL-COMPACTED COARSE BACKFILL MATERIAL SUCH AS BREAKER RUN, SELECT CRUSHED MATERIAL OR DENSE GRADED BASE.
3. NEW EMBANKMENT SOILS SHALL BE CONSTRUCTED OF ENGINEERED FILL COMPACTED USING SPECIAL COMPACTION METHODS. EMBANKMENT CONSTRUCTION SHALL FOLLOW A QUALITY MANAGEMENT PROGRAM (QMP) TO MONITOR PLACEMENT AND COMPACTION OF EMBANKMENT FILL. ALTHOUGH THE EMBANKMENT FILL SOURCE IS UNKNOWN AND BOTH COHESIVE AND GRANULAR SOILS ARE POTENTIALLY ACCEPTABLE FOR USE AS EMBANKMENT FILL, GRANULAR FILL WOULD BE PREFERABLE TO COHESIVE FILL, ESPECIALLY BELOW THE RETAINING WALLS, TO PROMOTE COMPACTION AND LIMIT LONG-TERM SETTLEMENT. WHERE A SLOPE WILL BE IN FRONT OF THE RETAINING WALL, QMP EMBANKMENT PROCEDURES SHALL EXTEND TO THE TOE OF SLOPE.
4. THE BACKFILL BEHIND THE MSE WALL WITH PRECAST CONCRETE PANELS SHALL BE GRANULAR AND FREE DRAINING.
5. LIGHTWEIGHT COMPACTION EQUIPMENT SHALL BE USED WITHIN 3 TO 5 FEET BEHIND THE BACK OF THE WALL TO REDUCE THE RISK OF EXCESSIVE LATERAL PRESSURES DEVELOPING BEHIND THE WALL.



PROFILE GRADE LINE - IH 43 RAMP HAB

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE R-40-728

DRAWN BY JJS | PLANS CK'D. ETP

WALL GEOMETRY & SOIL DATA

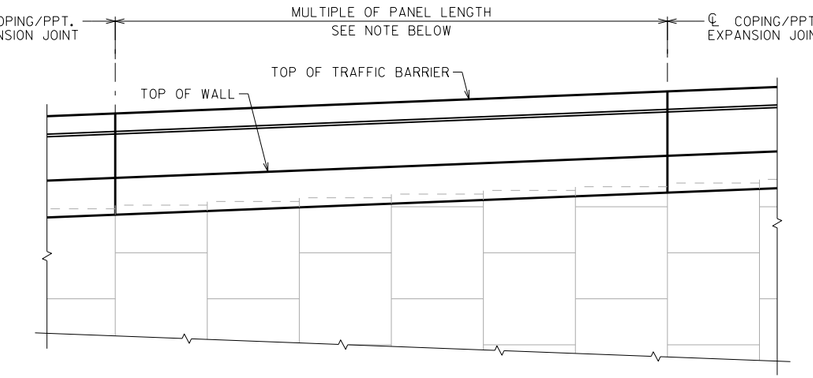
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STATE PROJECT NUMBER

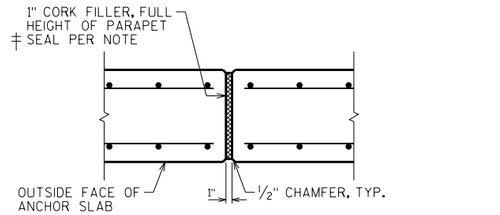
1228-22-74



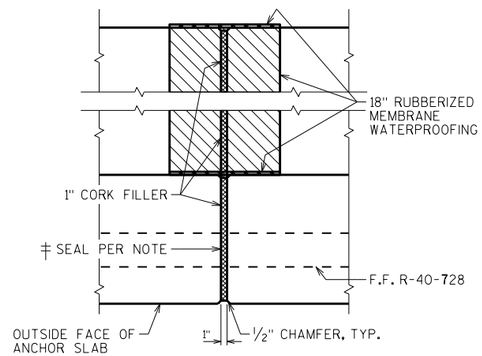
CAST-IN-PLACE CONCRETE TRAFFIC BARRIER PARTIAL ELEVATION

LOOKING AT F.F. WALL

NOTE:
ALL JOINTS MUST COINCIDE WITH PANEL JOINT ON FRONT FACE.



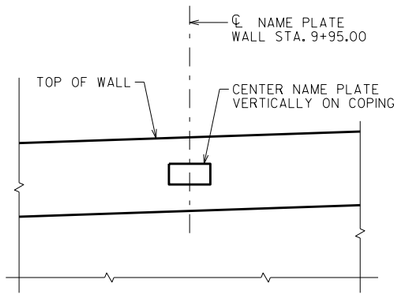
TRAFFIC BARRIER EXPANSION JOINT DETAIL



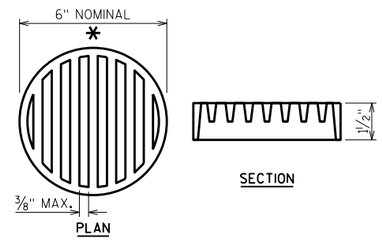
ANCHOR SLAB EXPANSION JOINT DETAIL

EXPANSION JOINTS TO BE SPACED AT A MINIMUM OF 20' AND A MAXIMUM OF 30'. LOCATE EXPANSION JOINTS OVER WALL JOINTS. DO NOT RUN BAR STEEL THRU JOINT, EXCEPT FOR DOWEL BARS. JOINT TO EXTEND FULL DEPTH OF PARAPET AND ANCHOR SLAB.

‡ SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLE ⅛" BELOW SURFACE OF CONC.)



NAME PLATE DETAIL

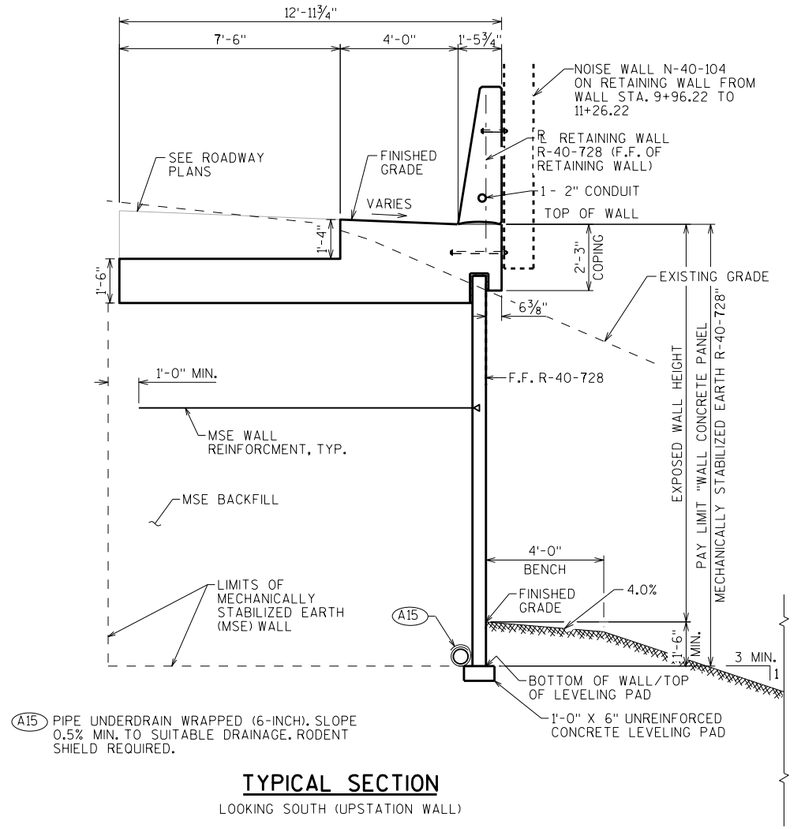


RODENT SHIELD DETAIL

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

TYPICAL SECTION

LOOKING SOUTH (UPSTATION WALL)

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STATE OF WISCONSIN
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STRUCTURES DESIGN SECTION

STRUCTURE R-40-728

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WALL DETAILS

SHEET 4

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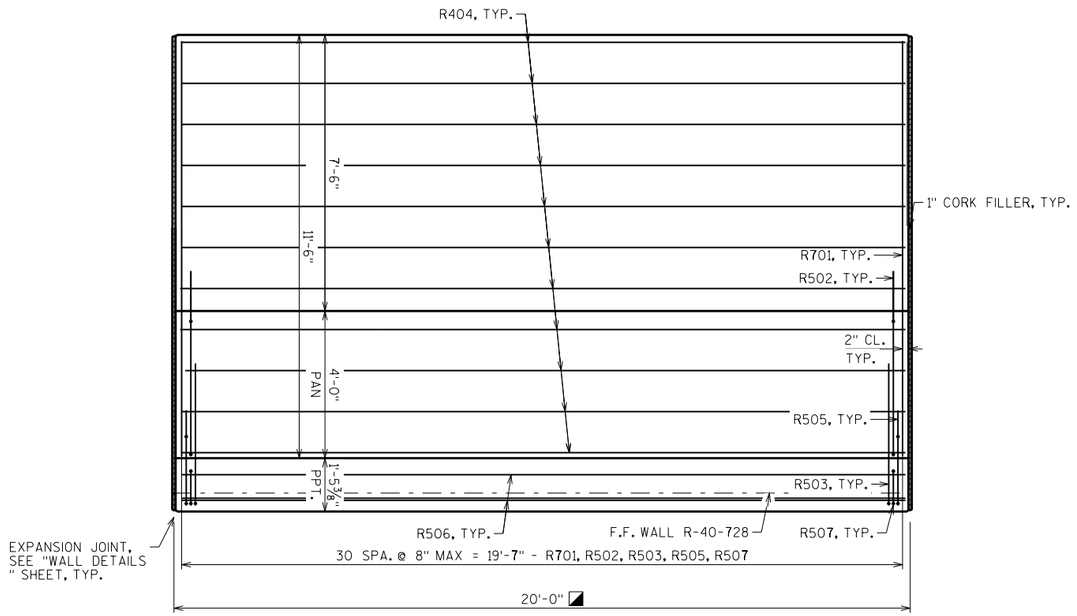
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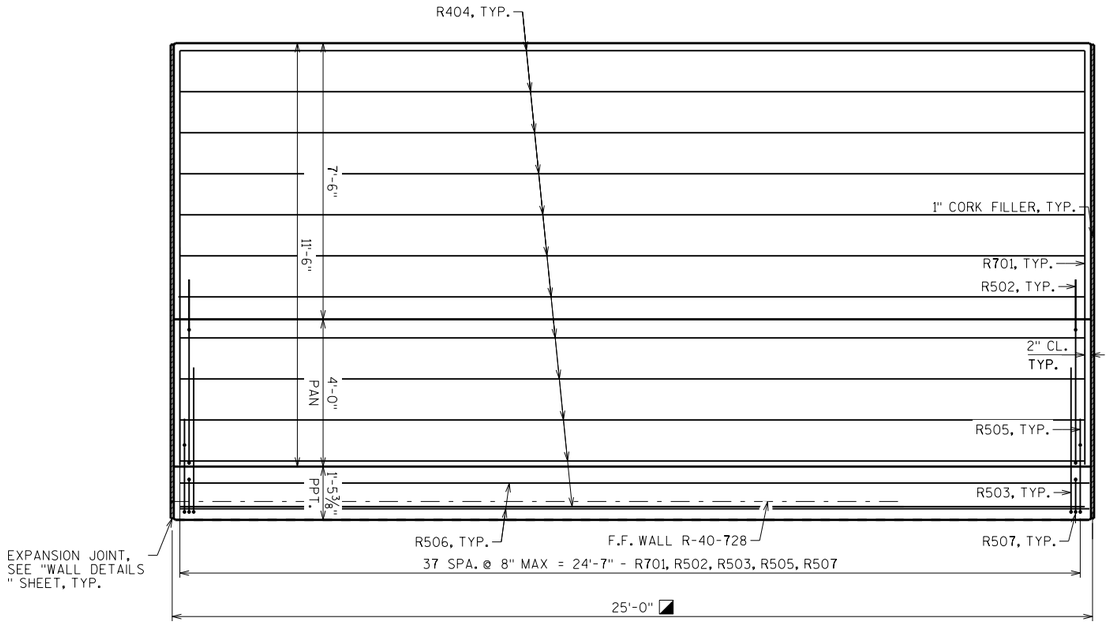
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STATE PROJECT NUMBER

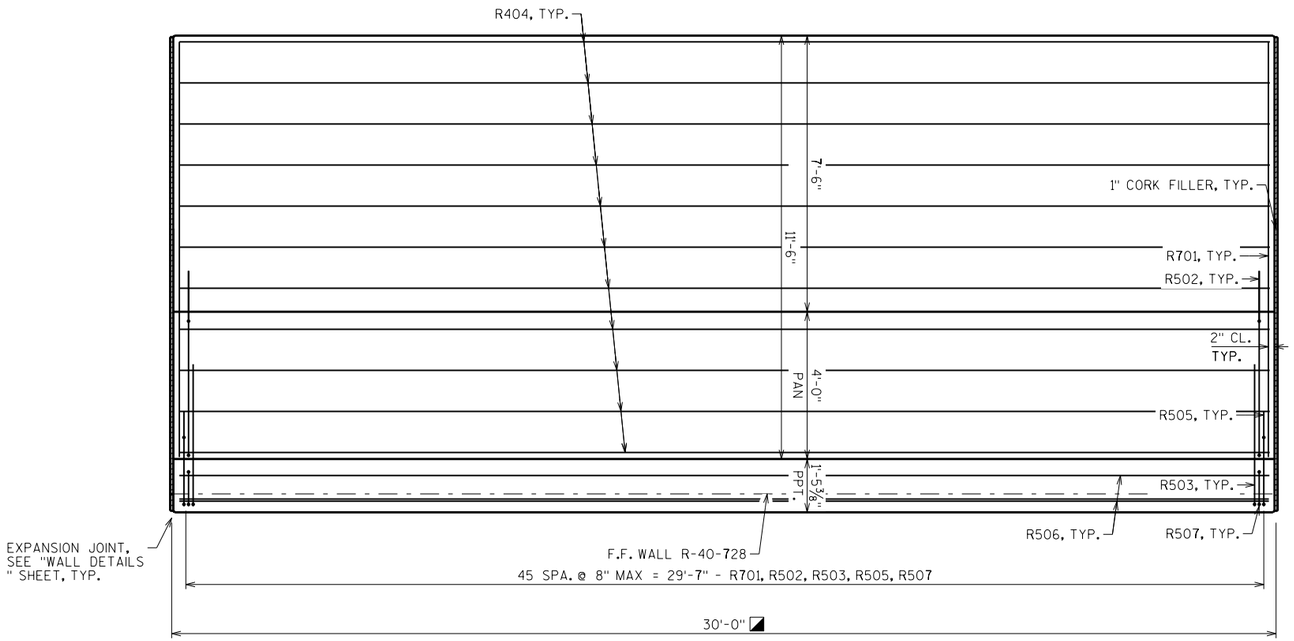
1228-22-74



PLAN 20' SEGMENT



PLAN 25' SEGMENT



PLAN 30' SEGMENT

◪ BARS DETAILED BASED ON AN ASSUMED ANCHOR SLAB EXPANSION JOINTS LOCATED 20'-0" MIN. TO 30'-0" MAX AND 5'-0" MIN. FROM INLETS. CONTRACTOR TO ADJUST BARS AND QUANTITIES AS NEEDED FOR ACTUAL ANCHOR SLAB EXPANSION JOINT SPACING.

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ANCHOR SLAB PLAN

SHEET 5

352

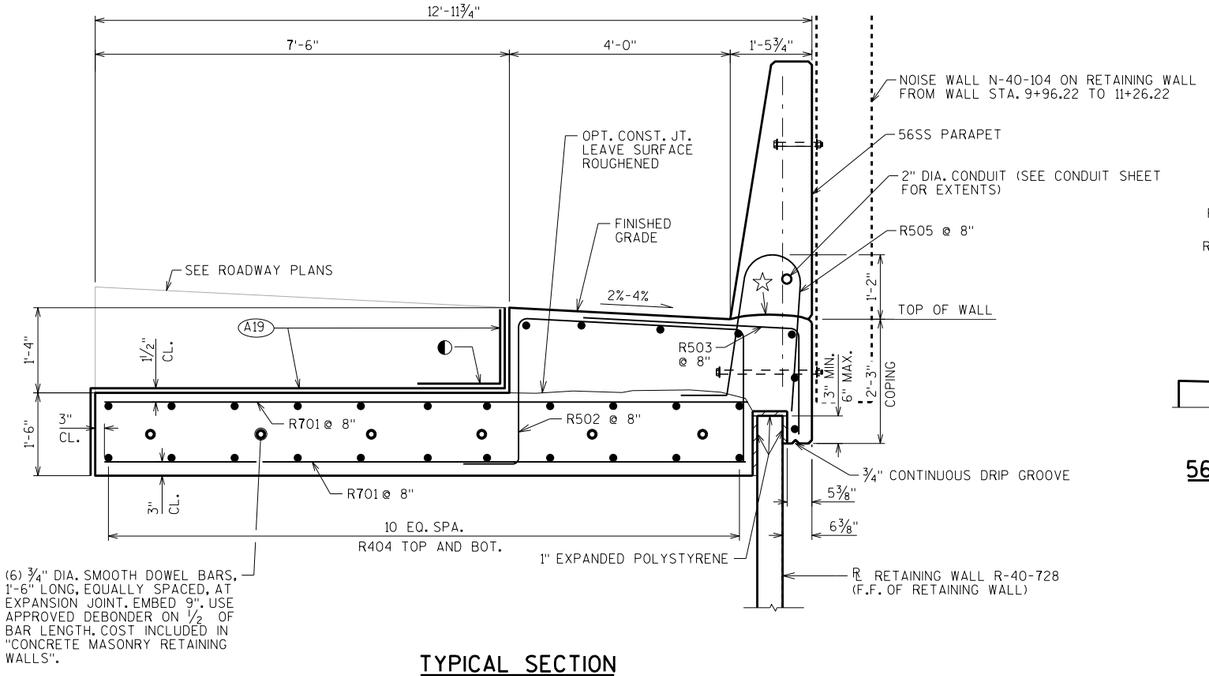
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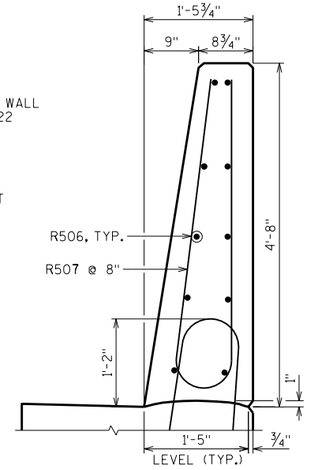
STATE PROJECT NUMBER

1228-22-74



TYPICAL SECTION

TYPICAL SECTION SHOWN WITH NOISEWALL, WALL STATION 9+96.22 TO 11+26.22



56SS PARAPET DETAIL

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

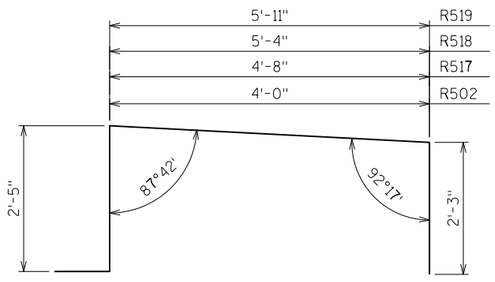
	BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
⬬	R701	X	452	11'-6"			BOT. & TOP - TRANS.
⬬	R502	X	226	9'-2"	X		PAN/ANCHOR SLAB - TRANS.
	R503	X	226	5'-9"	X		PAN/ANCHOR SLAB - TRANS.
◭	R404	X	29	156'-6"			ANCHOR SLAB - LONGIT.
	R505	X	236	6'-8"	X		56SS PARAPET - VERT.
◭	R506	X	10	156'-6"			56SS PARAPET - LONGIT
	R507	X	236	9'-1"	X		56SS PARAPET - VERT.
	R508	X	2	4'-4"			56SS PPT. JUNCTION BOX - VERT.
⬬	R509	X	14	15'-0"	X		ANCHOR SLAB - AT INLET - STIRRUP - VERT.
⬬	R510	X	34	8'-6"	X		ANCHOR SLAB - AT INLET - PAN - VERT.
	R511	X	14	6'-10"	X		ANCHOR SLAB - AT INLET - PAN - VERT.
	R512	X	14	4'-10"	X		ANCHOR SLAB - AT INLET - PAN - VERT.
	R513	X	14	2'-5"	X		ANCHOR SLAB - AT INLET - PAN - VERT.
	R414	X	14	1'-8"			ANCHOR SLAB - AT INLET - PAN - HORIZ.
	R415	X	2	4'-10"			ANCHOR SLAB - AT INLET - PAN - VERT.
	R416	X	4	13'-10"	X		ANCHOR SLAB - AT INLET - PAN - VERT.
⬬	R517	X	4	9'-9"	X		ANCHOR SLAB - AT INLET - PAN - VERT.
⬬	R518	X	4	10'-5"	X		ANCHOR SLAB - AT INLET - PAN - VERT.
⬬	R519	X	4	11'-0"	X		ANCHOR SLAB - AT INLET - PAN - VERT.
◪	R420	X	84	2'-0"			ANCHOR ASSEMBLIES - VERT. & HORIZ.

◪ SEE "NOISE WALL ANCHORAGE DETAILS" SHEET FOR PLACEMENT.

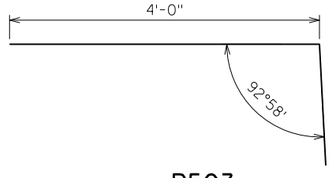
NOTE: BAR QUANTITIES BASED UPON EXPANSION JOINT SPACING AS SHOWN IN ANCHOR SLAB DETAILS SHEETS. CONTRACTOR TO ADJUST QUANTITIES AS NEEDED BASED ON CONTRACTOR-DESIGNED EXPANSION JOINT SPACING.

◭ BAR LENGTH SHOWN IS LONGEST BAR IN THE DESCRIBED COMPONENT (END-TO-END ASSUMING NO JOINTS). FABRICATE OR CUT TO LENGTH AS REQUIRED BASED ON CONTRACTOR-DESIGNED EXPANSION JOINT SPACING.

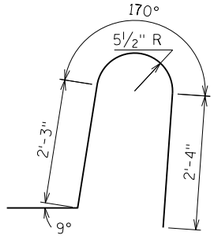
⬬ REBAR DIMENSION BASED ON AN ESTIMATED RETAINING WALL PANEL THICKNESS OF 5½". COORDINATE WITH WALL MANUFACTURER AND ADJUST DIMENSIONS AS NECESSARY.



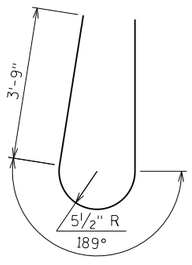
R502, R517, R518, R519



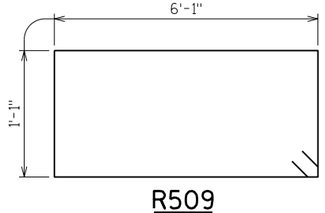
R503



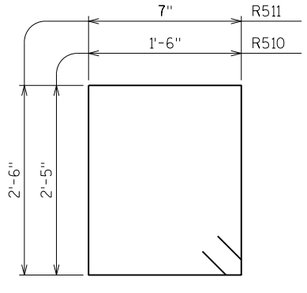
R505



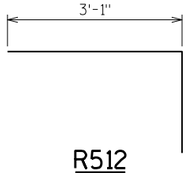
R507



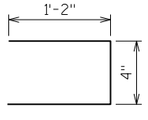
R509



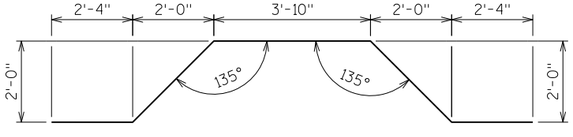
R510, R511



R512



R513



R416

LEGEND

☆ CONSTR. JT. STRIKE OFF AND LEAVE ROUGH AS SHOWN

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING AT EACH JOINT.

◐ IF THE OPT. CONST. JT. IS USED, PLACE 18" RUBBERIZED MEMBRANE WATERPROOFING ALONG THE ENTIRE LONGITUDINAL JOINT. THE RUBBERIZED MEMBRANE WATERPROOFING SEALING THE OPT. CONST. JT. IS INCIDENTAL TO THE CONCRETE MASONRY BID ITEM.

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STRUCTURE R-40-728

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ANCHOR SLAB DETAILS

SHEET 6

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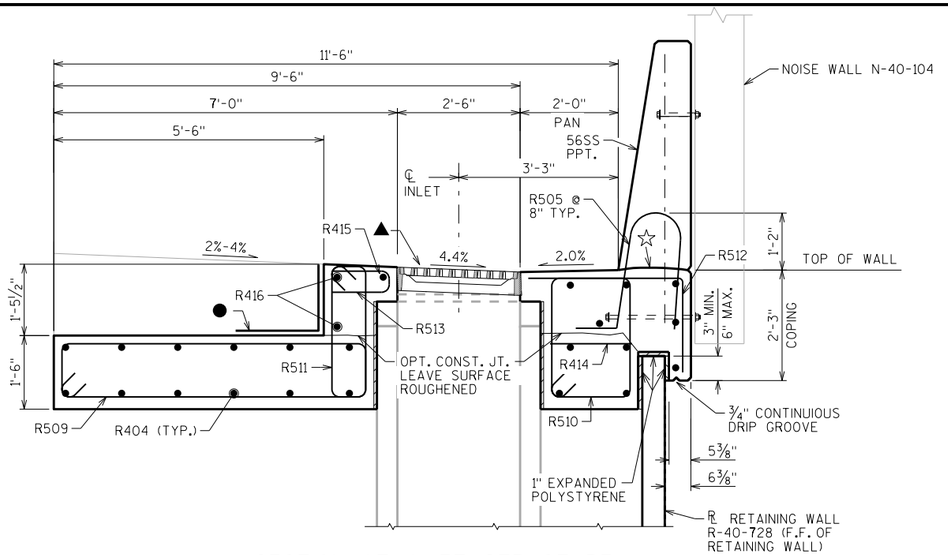
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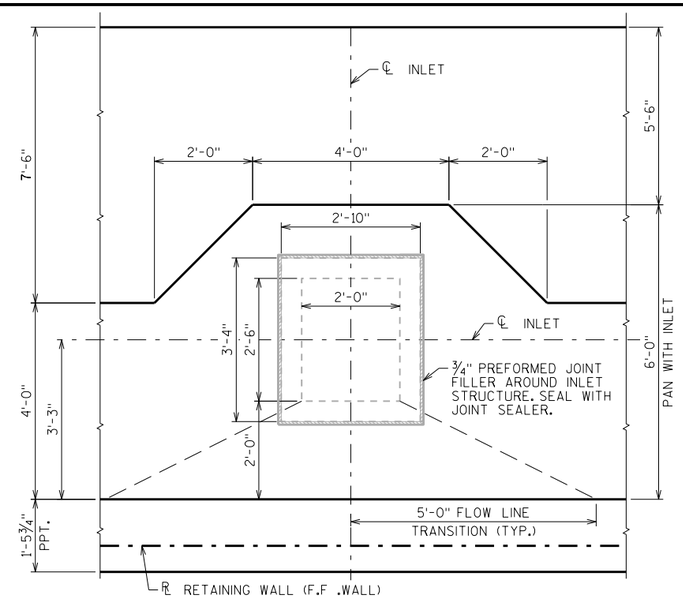
STATE PROJECT NUMBER

1228-22-74

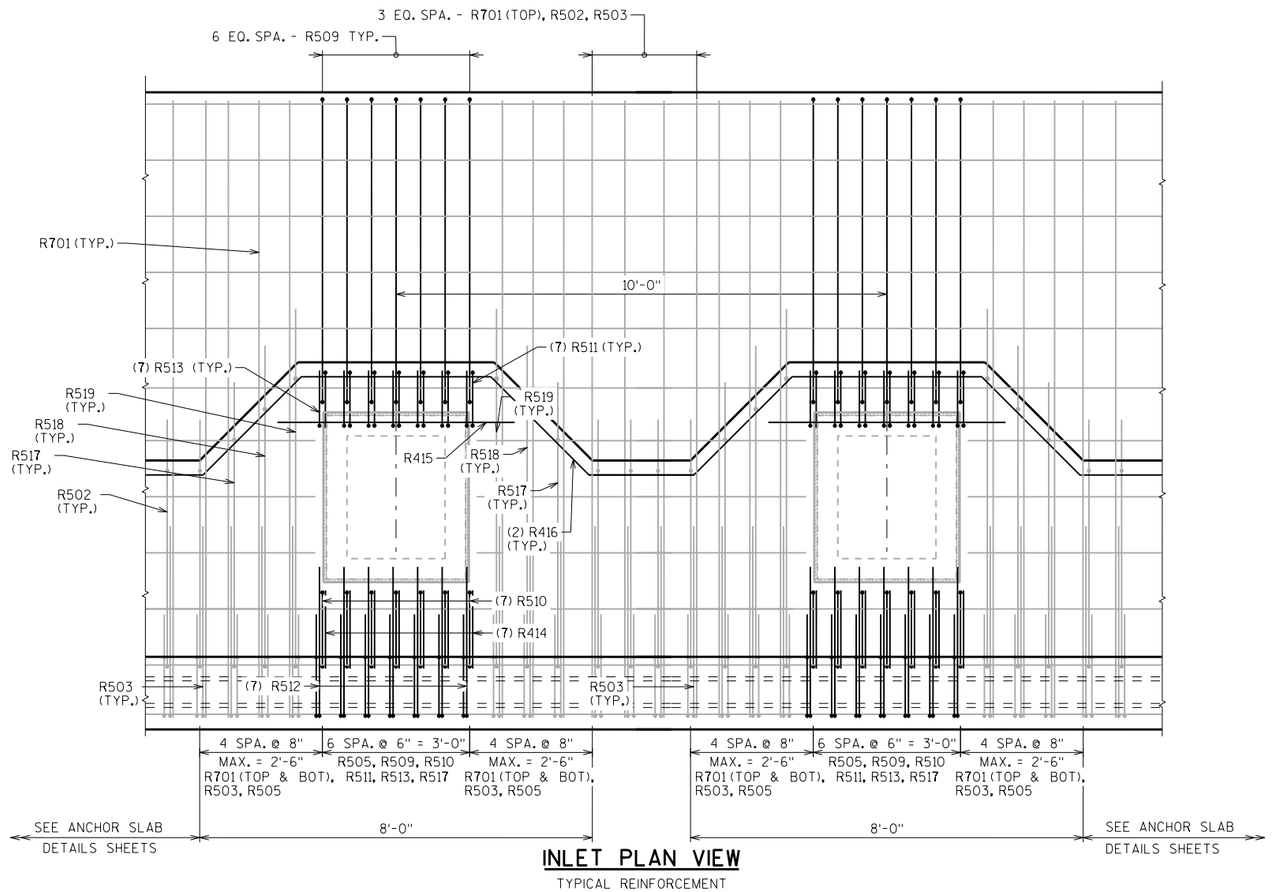


SECTION AT INLET STRUCTURE

TYPICAL AT INLETS STATIONS 10+17.17 AND 10+27.17
SEE PLAN VIEW FOR TRANSVERSE BAR SPACINGS



INLET TRANSITION DETAIL



INLET PLAN VIEW

TYPICAL REINFORCEMENT

LEGEND

☆ CONSTR. JT. STRIKE OFF AND LEAVE ROUGH AS SHOWN

▲ TYPE S INLET COVER, SEE ROADWAY PLANS FOR DETAILS.

● IF THE OPT. CONST. JT. IS USED, PLACE 18" RUBBERIZED MEMBRANE WATERPROOFING ALONG THE ENTIRE LONGITUDINAL JOINT. THE RUBBERIZED MEMBRANE WATERPROOFING SEALING THE OPT. CONST. JT. IS INCIDENTAL TO THE CONCRETE MASONRY BID ITEM.

INLET HOLE DIMENSIONS ARE BASED ON ASSUMED 2'-10" X 3'-4" INLET OUTER DIMENSIONS. RESIZE HOLE AS NECESSARY BASED ON ACTUAL INLET USED. ADJUST REINFORCEMENT LENGTHS TO ACCOMMODATE ACTUAL HOLE SIZE.

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STRUCTURE R-40-728

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ANCHOR SLAB INLET DETAILS

SHEET 7

354

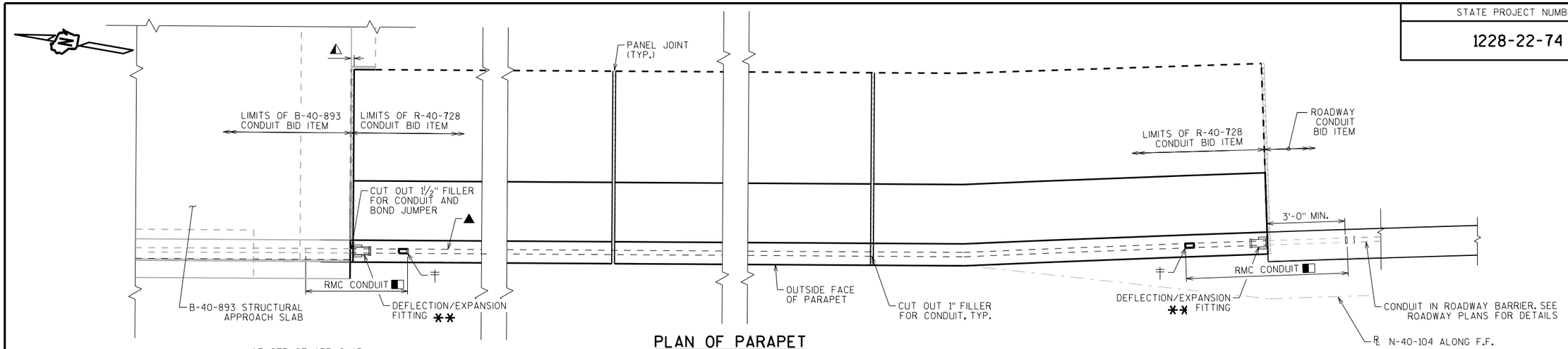
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STATE PROJECT NUMBER

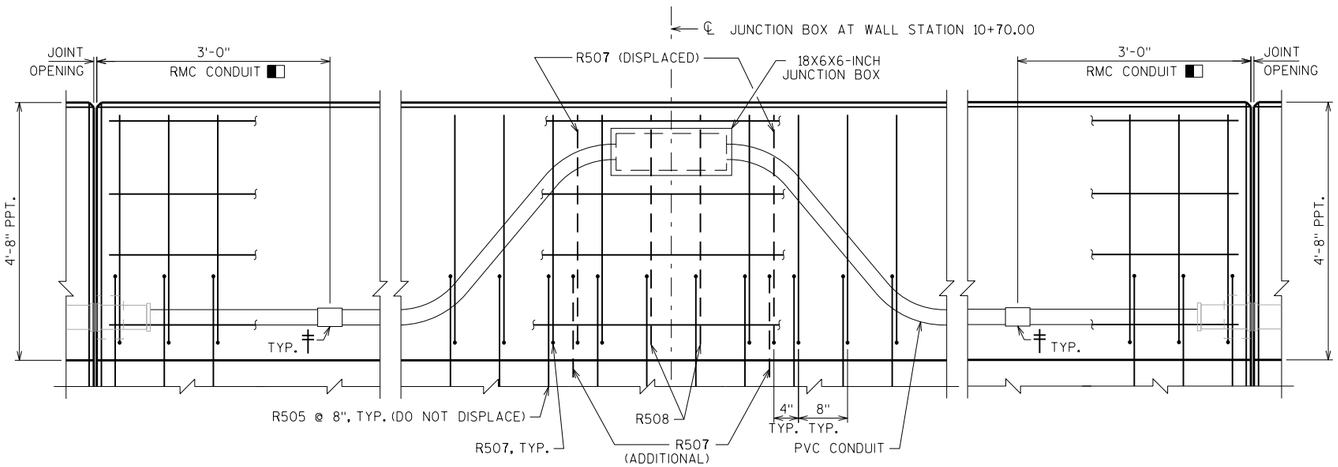
1228-22-74



AT STRUCT. APP. SLAB

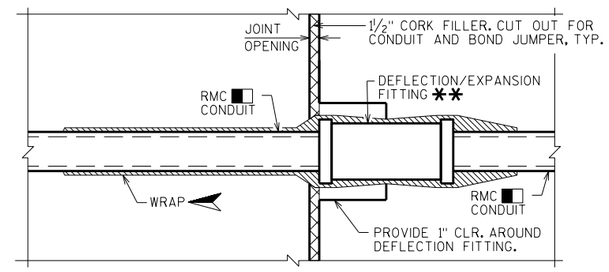
PLAN OF PARAPET

AT END OF WALL



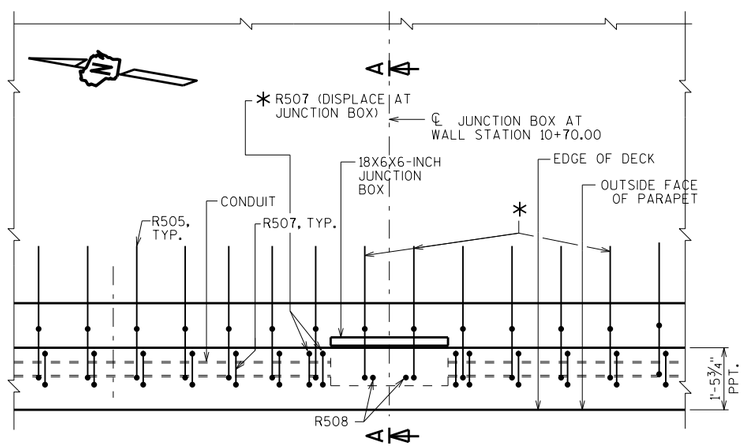
INSIDE ELEVATION AT JUNCTION BOX

(MSE ANCHOR SLAB STEEL NOT SHOWN FOR CLARITY)



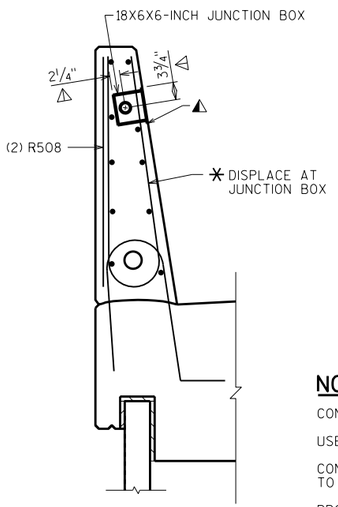
DEFLECTION/EXPANSION FITTING

THIS DETAIL ACCOMMODATES A MAXIMUM OF ¾" TOTAL MOVEMENT AND UP TO 30 DEGREES OF ANGULAR MISALIGNMENT IN ANY DIRECTION. BOND JUMPER NOT SHOWN FOR CLARITY



INSIDE ELEVATION AT JUNCTION BOX

(MSE ANCHOR SLAB STEEL NOT SHOWN FOR CLARITY)



SECTION A-A

LEGEND

- ■ USE 2" DIA. RIGID METALLIC (RMC) CONDUIT AT FITTINGS. PROVIDE RMC FOR 3'-0" MIN. ON EACH SIDE OF JOINT OPENINGS (MAXIMUM LENGTH BETWEEN FITTINGS = 90'-0") UNLESS NOTED OTHERWISE.
- ⫩ NONMETALLIC CONDUIT TO METALLIC CONDUIT ADAPTER FITTING (UL OR NRTL LISTED FOR ELECTRICAL USE SHALL BE USED).
- ◥ SPONGE RUBBER WRAP TO BE AASHTO M153, TYPE 1 OR EQUIVALENT - ¼" MINIMUM THICKNESS. PROVIDE WRAP FOR THE ENTIRE LENGTH OF THE FITTING OR AS SHOWN. SPONGE RUBBER WRAP INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH".
- ** DEFLECTION/EXPANSION FITTING REQUIREMENTS: UP TO ¾" CONDUIT CONTRACTION OR EXPANSION AND UP TO 30° OF ANGULAR MISALIGNMENT IN ANY DIRECTION WITH BONDING JUMPER
- ⚠ 1½" FILLER BETWEEN THE ANCHOR SLAB & THE STRUCTURAL APPROACH SLAB. SEE BRIDGE PLANS FOR DETAILS.
- ▲ 2" NONMETALLIC RIGID CONDUIT FOR LIGHTING.

PVC = POLYVINYL CHLORIDE (RIGID NONMETALLIC) CONDUIT

RMC = RIGID METALLIC CONDUIT

NOTES

CONDUIT SHALL BE EMBEDDED 2" CLEAR.

USE 2" DIA. RIGID NONMETALLIC CONDUIT (PVC) UNLESS NOTED OTHERWISE.

CONDUIT FITTINGS, CONDUIT BENDS, AND ADAPTER FITTINGS INCIDENTAL TO CONDUIT WORK.

PROVIDE JUNCTION BOXES FROM THE APPROVED PRODUCTS LIST.

CONDUIT BENDS SHALL CONFORM TO THE NATIONAL ELECTRIC CODE.

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STRUCTURES DESIGN SECTION

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CONDUIT DETAILS

SHEET 8

355

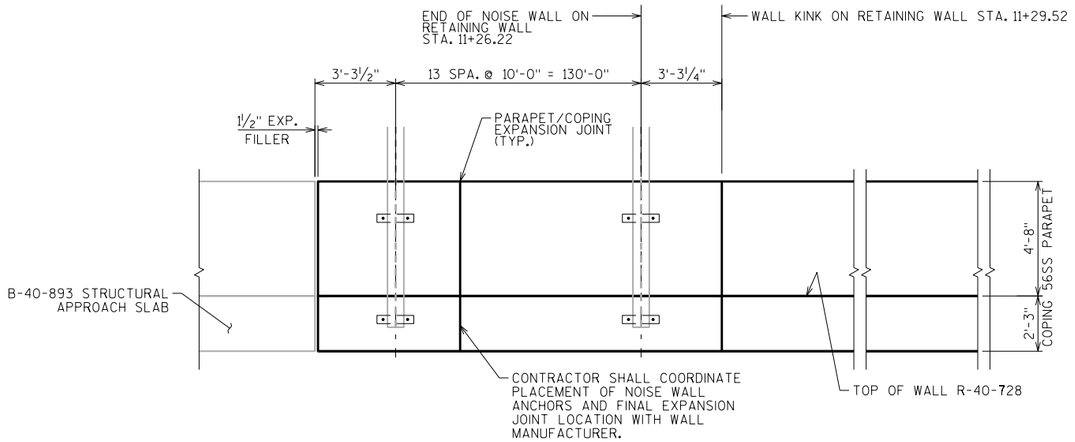
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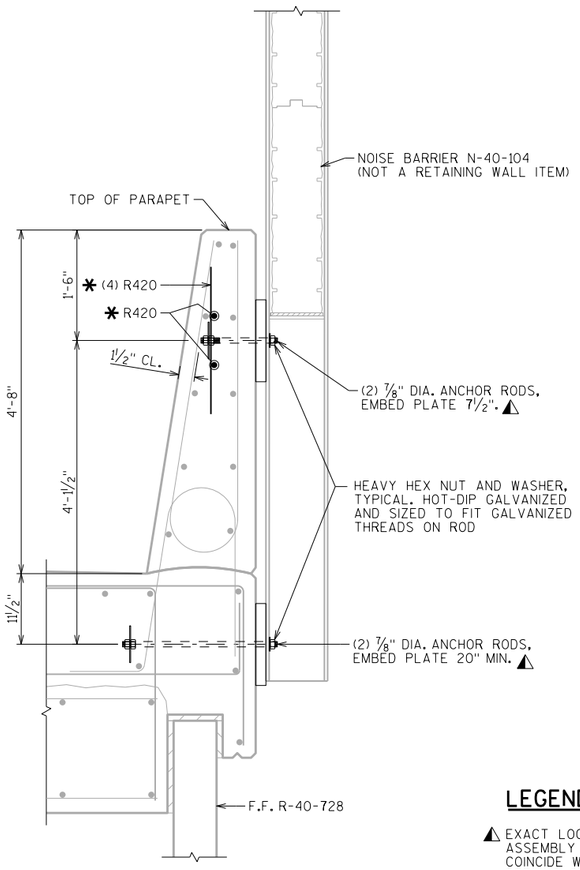
STATE PROJECT NUMBER

1228-22-74



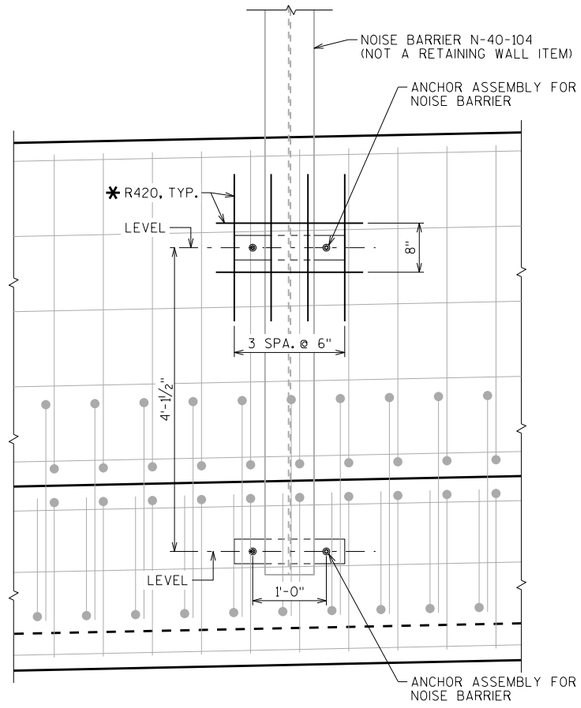
LOCATION OF ANCHORS FOR NOISE BARRIER POST

LOOKING WEST AT F.F. OF WALL



SECTION AT NOISE BARRIER POST

TYPICAL AT EACH POST LOCATION



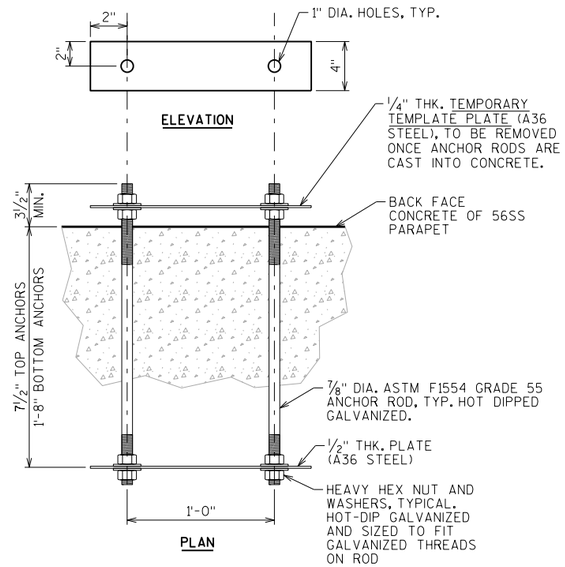
ELEVATION AT NOISE BARRIER POST

TYPICAL AT EACH POST LOCATION

LEGEND

⚠ EXACT LOCATION AND SPACING OF EMBEDDED ANCHOR ASSEMBLY NOISE BARRIER TO BE COORDINATED AND COINCIDE WITH NOISE BARRIER POST SPACING AND MOUNTING DETAILS SHOWN ON APPROVED NOISE BARRIER SHOP DRAWINGS.

✱ EXACT LOCATION AND SPACING OF R420 BARS TO BE COORDINATED AND COINCIDE WITH NOISE BARRIER POST SPACING AND MOUNTING DETAILS SHOWN ON APPROVED NOISE BARRIER SHOP DRAWINGS.



ANCHOR ASSEMBLY NOISE BARRIER STRUCTURES

AN INDIVIDUAL ANCHOR ASSEMBLY INCLUDES ALL ITEMS SHOWN IN PLAN ABOVE AND OUTLINED IN THE SPECIAL PROVISION. (2) ANCHOR ASSEMBLIES ARE REQUIRED PER POST LOCATION. FACTORED DESIGN PULLOUT LOADING PER ANCHOR ASSEMBLY = 26 KIPS.

ANCHOR ASSEMBLY LOCATION TABLE

ANCHOR NO.	NOISE WALL STATION	RETAINING WALL STATION	TOP OF PARAPET EL.
1	9+96.22	9+96.22	645.85
2	10+06.22	10+06.22	645.92
3	10+16.22	10+16.22	645.98
4	10+26.22	10+26.22	646.04
5	10+36.22	10+36.22	646.07
6	10+46.22	10+46.22	646.11
7	10+56.22	10+56.22	646.16
8	10+66.22	10+66.22	646.23
9	10+76.22	10+76.22	646.30
10	10+86.22	10+86.22	646.36
11	10+96.22	10+96.22	646.43
12	11+06.22	11+06.22	646.49
13	11+16.22	11+16.22	646.54
14	11+26.22	11+26.22	646.60

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STATE OF WISCONSIN
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STRUCTURE R-40-728

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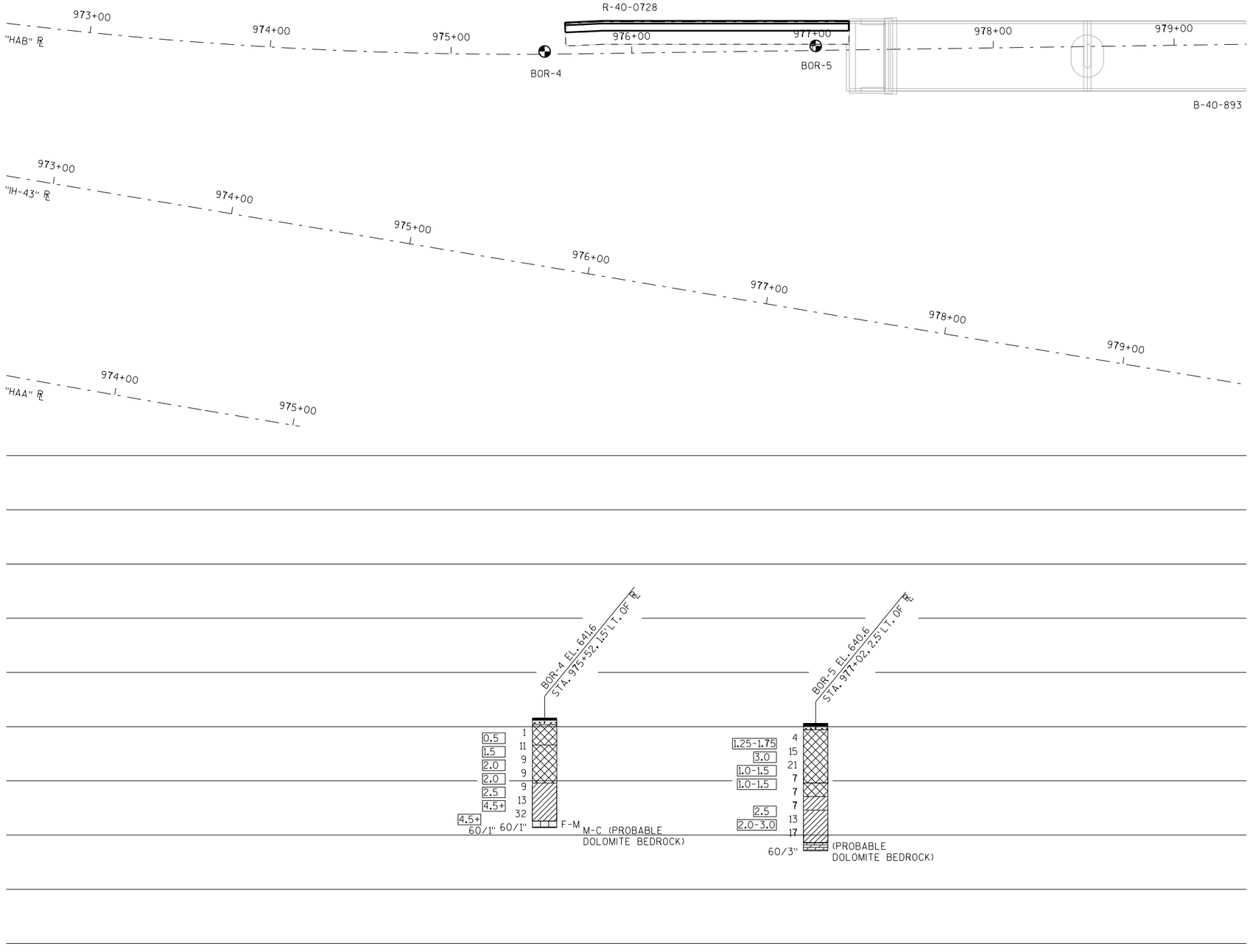
NOISE WALL ANCHORAGE DETAILS

SHEET 9

356

SCALE = 1.00

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
4	8/23/2021	322785.2	603595.8
5	8/23/2021	322934.1	603577.8
BORINGS COMPLETED BY: GESTRA			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) MILWAUKEE COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			



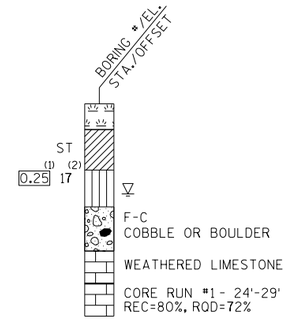
STATE PROJECT NUMBER

1228-22-74

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE R-40-728

DRAWN BY TLP/JJS | PLANS CK'D. ETP

SUBSURFACE EXPLORATION

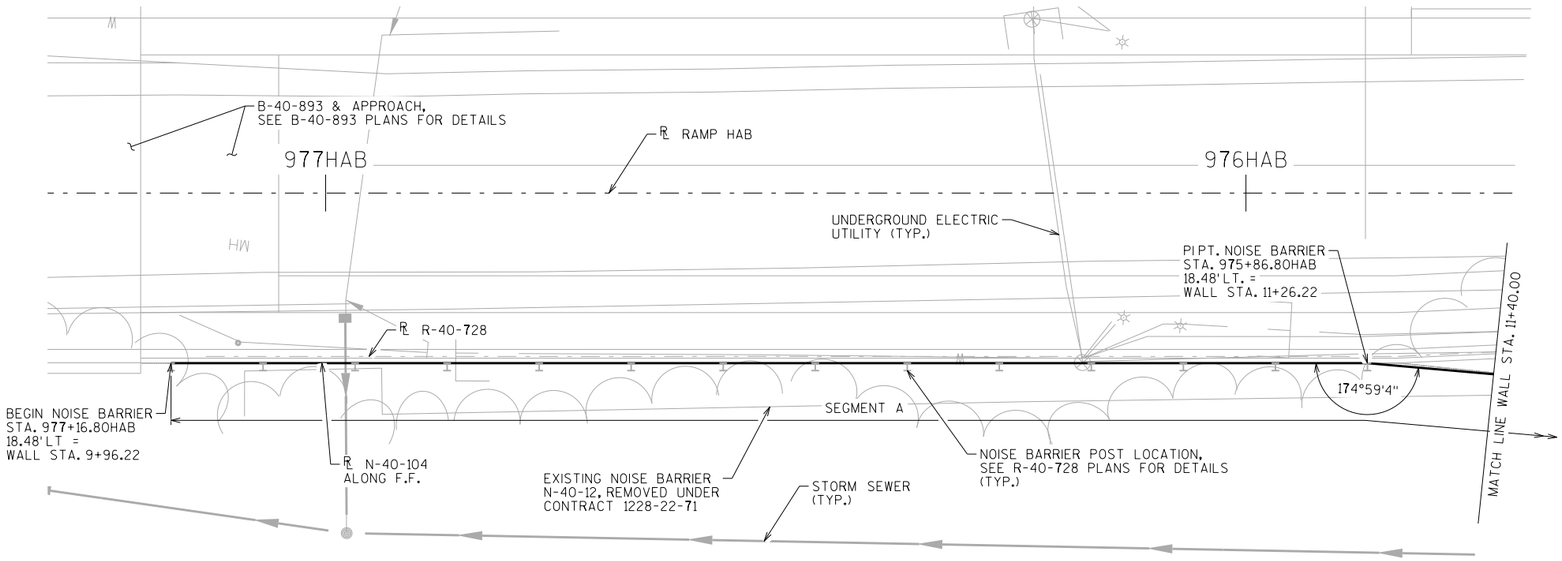
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357

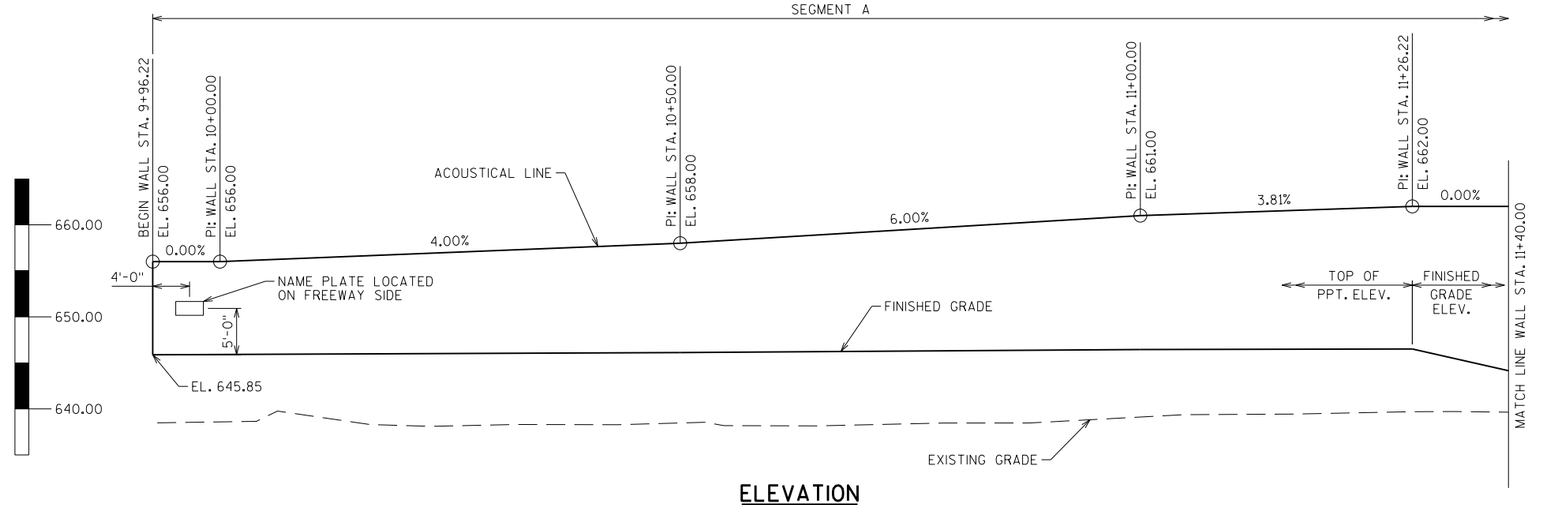
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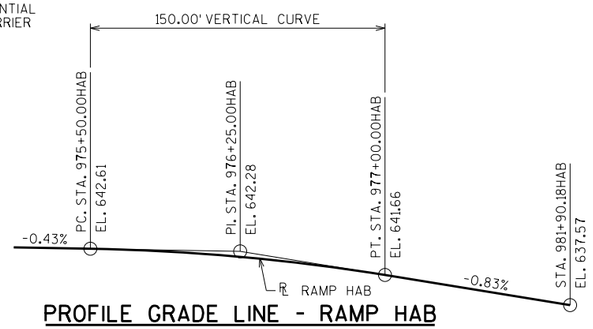


PLAN



ELEVATION

LOOKING AT RESIDENTIAL SIDE OF NOISE BARRIER



PROFILE GRADE LINE - RAMP HAB

LIST OF DRAWINGS

1. GENERAL PLAN 1
2. GENERAL PLAN 2
3. GENERAL PLAN 3
4. GENERAL PLAN 4
5. ELEVATION TABLES
6. NOISE BARRIER POST CONNECTION DETAILS
7. GENERAL DETAILS
8. AESTHETIC WALL TREATMENT DETAILS RESIDENTIAL SIDE
9. AESTHETIC WALL TREATMENT DETAILS FREEWAY SIDE
10. SUBSURFACE EXPLORATION

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
541.0300.S	NOISE BARRIERS DOUBLE-SIDED SOUND ABSORPTIVE N-40-104	SF	16,423

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE NOISE BARRIER IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE NOISE BARRIER MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS SHALL BE INCIDENTAL TO THE BID ITEM "NOISE BARRIERS DOUBLE-SIDED SOUND ABSORPTIVE N-40-104".

PLANS, ELEVATIONS, AND DETAILS SHOWN ARE INTENDED TO INDICATE LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE NOISE BARRIER IS TO BE DESIGNED USING THE FINISHED GRADE LINE AT NOISE BARRIER ℄ AND ACOUSTICAL LINE SHOWN ON THE GENERAL PLAN SHEETS.

ALL NOISE BARRIER SHALL BE DESIGNED IN ACCORDANCE WITH THE CURRENT "GUIDE SPECIFICATIONS FOR STRUCTURAL DESIGN OF SOUND BARRIERS", PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO).

THE FOLLOWING DESIGN WIND PRESSURES SHALL BE USED IN ACCORDANCE WITH THE SPECIAL PROVISIONS:
- 35.0 P.S.F. FOR GROUND MOUNTED BARRIERS
- 40.0 P.S.F. FOR STRUCTURE MOUNTED BARRIERS

NOISE BARRIERS MOUNTED ON RETAINING WALLS REQUIRE THE COMPLETE ROADWAY PAVEMENT STRUCTURE (OR EQUIVALENT EARTH FILL) OVER THE TOP OF THE MOMENT SLAB TO RESIST DESIGN WIND PRESSURE. LIMIT ERECTION OF PANELS TO ⅔ THE HEIGHT OF THE ACOUSTICAL LINE PRIOR TO PLACEMENT OF PAVEMENT.

INCLUDE THE COST OF SURFACE TREATMENT, REVEALS, AND COATING OF STEEL POSTS AND CONNECTIONS UNDER THE BID ITEM "NOISE BARRIERS DOUBLE-SIDED SOUND ABSORPTIVE N-40-104".

THE ACOUSTICAL LINE IS THE TOP PAY LIMIT FOR THE BID ITEM "NOISE BARRIERS DOUBLE-SIDED SOUND ABSORPTIVE N-40-104". NOISE BARRIER PLACED ABOVE THE ACOUSTICAL LINE WILL NOT BE MEASURED FOR PAYMENT.

THE FINISHED GRADE LINE IS THE BOTTOM PAY LIMIT FOR THE BID ITEM "NOISE BARRIERS DOUBLE-SIDED SOUND ABSORPTIVE N-40-104". NOISE BARRIER PLACED BELOW THE FINISHED GRADE LINE WILL NOT BE MEASURED FOR PAYMENT.

REINFORCING STEEL IN THE CONCRETE CORE OF THE NOISE BARRIER PANELS SHALL HAVE A MINIMUM CLEARANCE OF 1 INCH. THE CONCRETE CORE SHALL BE DESIGNED TO RESIST THE LOADS WITHOUT CONSIDERING ANY COMPOSITE ACTION FROM OTHER MATERIAL IN THE PANEL.

BOTTOM NOISE BARRIER PANELS SHALL BE DESIGNED TO SUPPORT THE DEAD LOAD (WEIGHT) OF THE PANELS DIRECTLY ABOVE IT AND ITS OWN DEAD LOAD. THE DEAD LOAD SHALL BE DISTRIBUTED UNIFORMLY ASSUMING SIMPLE BEAM ACTION WITH SUPPORTS AT THE POSTS. BOTTOM PANELS SHALL HAVE A MINIMUM AMOUNT OF PERIMETER REINFORCEMENT OF A #4 BAR WHICH SHALL BE CONTINUOUS AROUND THE CORNERS.

A COMPRESSIBLE BEARING PAD OF ¼" THICKNESS SHALL BE PROVIDED BETWEEN THE FOUNDATION AND THE BOTTOM PANELS. THE BEARING PADS SHALL BE PREFORMED EPDM RUBBER CONFORMING TO ASTM D-2000, GRADE 2, TYPE A, CLASS A WITH A MINIMUM DUROMETER HARDNESS OF 80. BEARING PADS SHALL BE INCIDENTAL TO THE BID ITEM "NOISE BARRIERS DOUBLE-SIDED SOUND ABSORPTIVE N-40-104".

INSTALL FREE DRAINING GRANULAR MATERIAL AT THE BOTTOM OF NOISE BARRIERS AS SHOWN IN THE NOISE BARRIER PLANS. FREE DRAINING GRANULAR MATERIAL IS INCIDENTAL TO THE BID ITEM "NOISE BARRIERS DOUBLE-SIDED SOUND ABSORPTIVE N-40-104".

ALL CONCRETE MASONRY FOR NOISE BARRIER FOUNDATIONS IS SUBJECT TO THE QMP REQUIREMENTS FOR CLASS II ANCILLARY CONCRETE. PERFORM QMP TESTING OF CONCRETE MASONRY FOR NOISE BARRIER FOUNDATIONS IN ACCORDANCE WITH SECTION 716 OF THE STANDARD SPECIFICATIONS FOR CLASS II ANCILLARY CONCRETE. QMP TESTING IS INCIDENTAL TO THE BID ITEM "NOISE BARRIERS DOUBLE-SIDED SOUND ABSORPTIVE N-40-104".

HOTLINE ALL UTILITIES. IN THE AREAS WHERE EXISTING UTILITIES ARE WITHIN 3 FEET OF THE PROPOSED WALL, EXPOSE EXISTING UTILITIES PRIOR TO EXCAVATION.

COORDINATE CONSTRUCTION OF N-40-104 WITH CONSTRUCTION OF RETAINING WALLS R-40-728.

REMOVAL OF EXISTING NOISEWALL (N-40-12) IS COMPLETED UNDER CONTRACT 1228-22-71. EXISTING FOOTINGS WERE REMOVED 2 FT BELOW EXISTING GRADE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR AS TO NOT CONFLICT WITH N-40-104. COST OF LOCATING EXISTING FOOTINGS, AVOIDING CONFLICT, AND REMOVAL (IF NECESSARY) SHALL BE INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-104". IF REMOVAL IS REQUIRED, FOOTING EXCAVATIONS SHALL BE FILLED WITH SLURRY BACKFILL WHICH SHALL BE INCLUDED IN THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-104".

IT IS NOT THE DEPARTMENT'S INTENTION TO PUT COLOR ON THE CONCRETE WALL PANELS.

STATE PROJECT NUMBER

1228-22-74

STRUCTURE DESIGN CONTACTS:

JONATHON RESHESKE (608) 266-8491

LAURA SHADEWALD (608) 267-9592

NO.	DATE	REVISION	BY

WISCONSIN DEPARTMENT OF TRANSPORTATION

BUREAU OF STRUCTURES

ACCEPTED LLS 5/26/22

CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE N-40-104

NOISE WALL ALONG IH 43 SB RAMP

COUNTY	CITY
MILWAUKEE	GLENDALE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
JLR	IFC	JLR	IFC

GENERAL PLAN 1

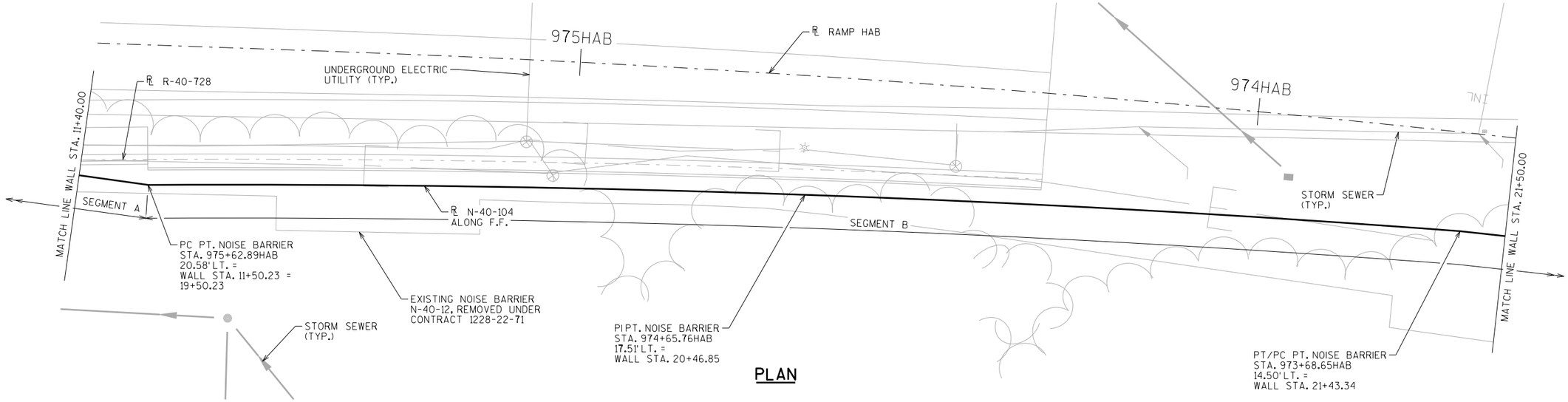
SHEET 1 OF 10

358

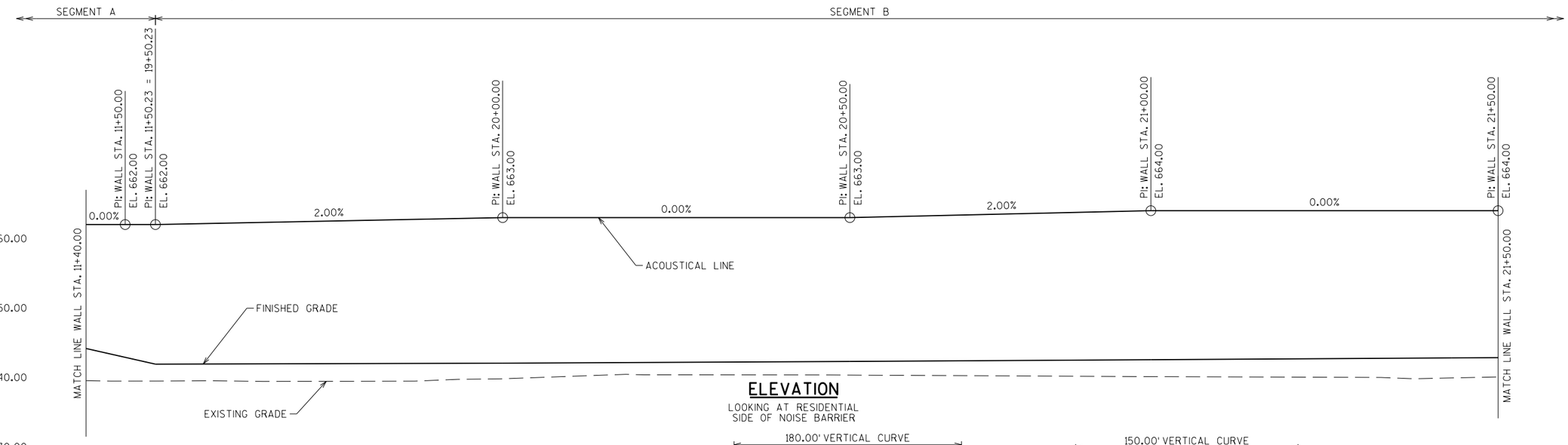
I.D. 1228-22-01LA DATE: OCT/2021

SCALE = 8.00

STATE PROJECT NUMBER
1228-22-74



PLAN

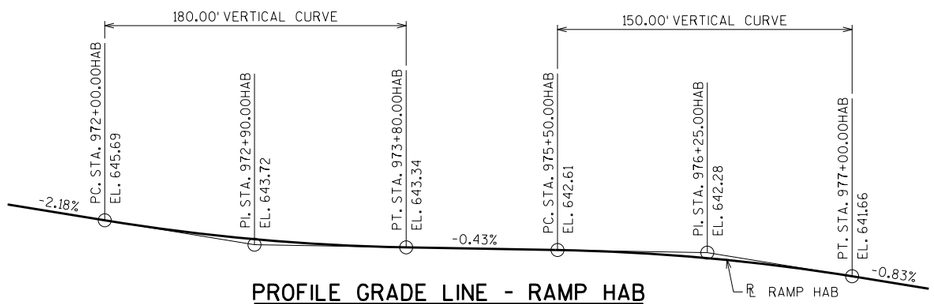


ELEVATION

LOOKING AT RESIDENTIAL SIDE OF NOISE BARRIER

CURVE DATA

RAMP HAB CURVE 2	WALL CURVE 1	WALL CURVE 2
P.I. = 973+65.15HAB	P.I. = 20+46.84	P.I. = 22+31.09
△ = 08°25'13"	△ = 04°38'03"	△ = 04°18'12"
D = 02°26'17"	D = 02°23'59"	D = 02°27'12"
T = 172.99'	T = 96.61'	T = 87.75'
L = 345.36'	L = 193.11'	L = 175.41'
R = 2,350.00'	R = 2,387.50'	R = 2,335.50'
P.C. = 971+92.16HAB	P.C. = 11+50.23 = 19+50.23	P.C. = 21+43.34
P.T. = 975+37.52HAB	P.T. = 21+43.34	P.T. = 23+18.76



PROFILE GRADE LINE - RAMP HAB

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE N-40-104

DRAWN BY JLR | PLANS CK'D. IFC

GENERAL PLAN 2

SHEET 2

359

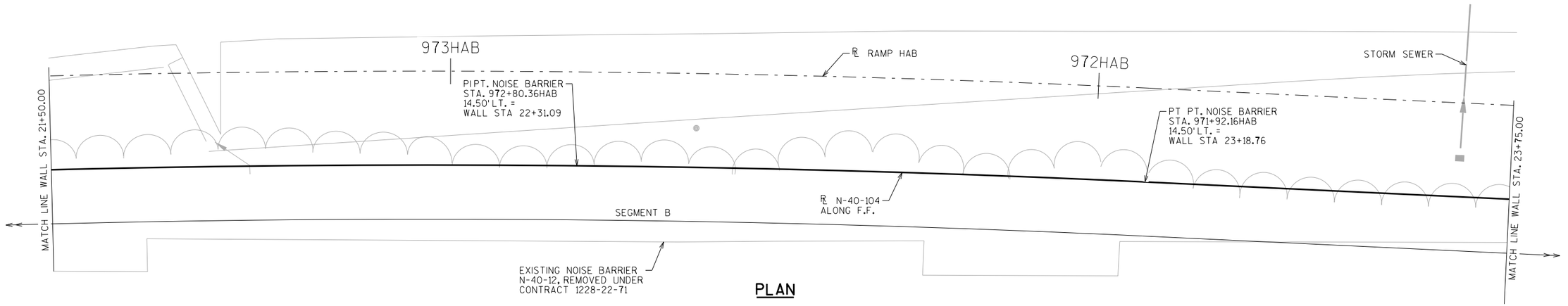
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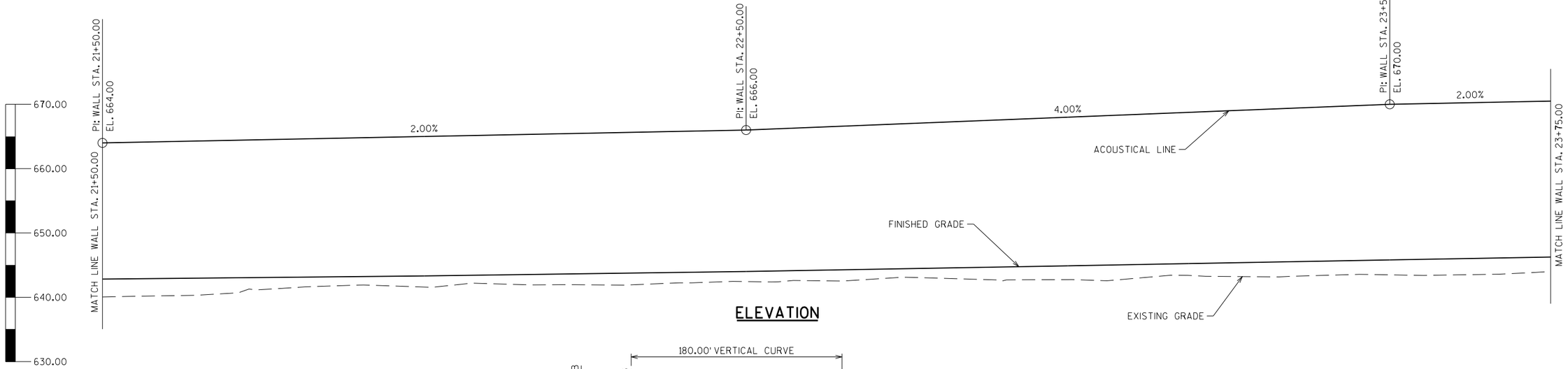
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STATE PROJECT NUMBER

1228-22-74



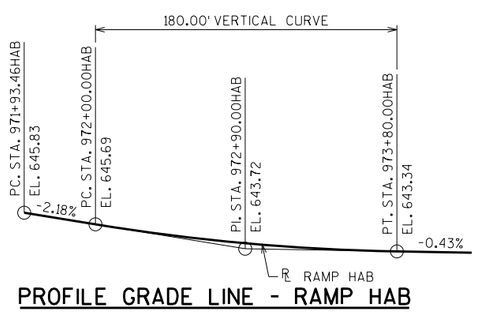
PLAN



ELEVATION

CURVE DATA

RAMP HAB CURVE 2	WALL CURVE 2
P.I. = 973+65.15HAB	P.I. = 22+31.09
△ = 08°25'13"	△ = 04°18'12"
D = 02°26'17"	D = 02°27'12"
T = 172.99'	T = 87.75'
L = 345.36'	L = 175.41'
R = 2,350.00'	R = 2,335.50'
P.C. = 971+92.16HAB	P.C. = 21+43.34
P.T. = 975+37.52HAB	P.T. = 23+18.76



PROFILE GRADE LINE - RAMP HAB

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE N-40-104

DRAWN BY JLR | PLANS CK'D. IFC

GENERAL PLAN 3

SHEET 3

360

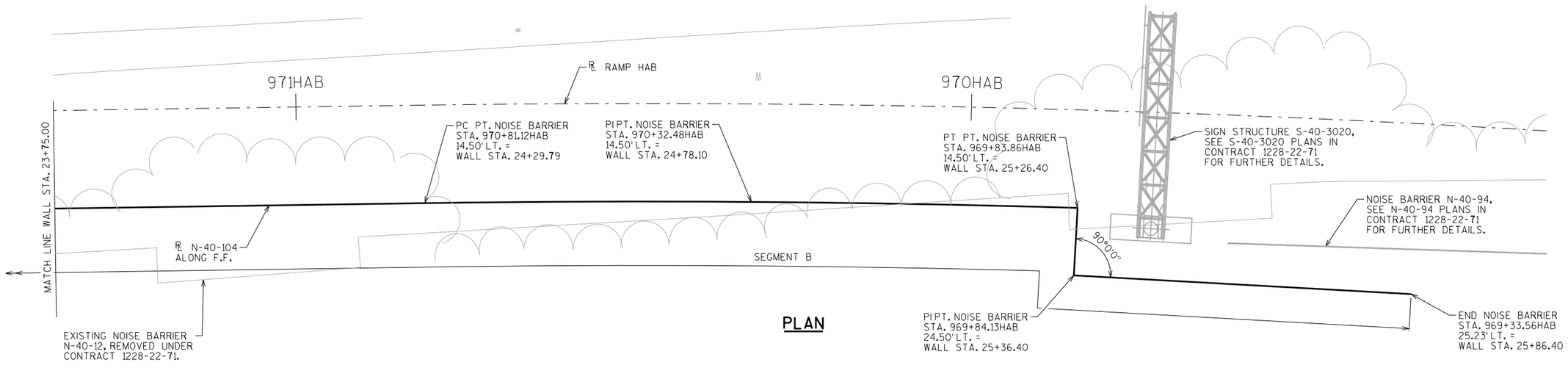
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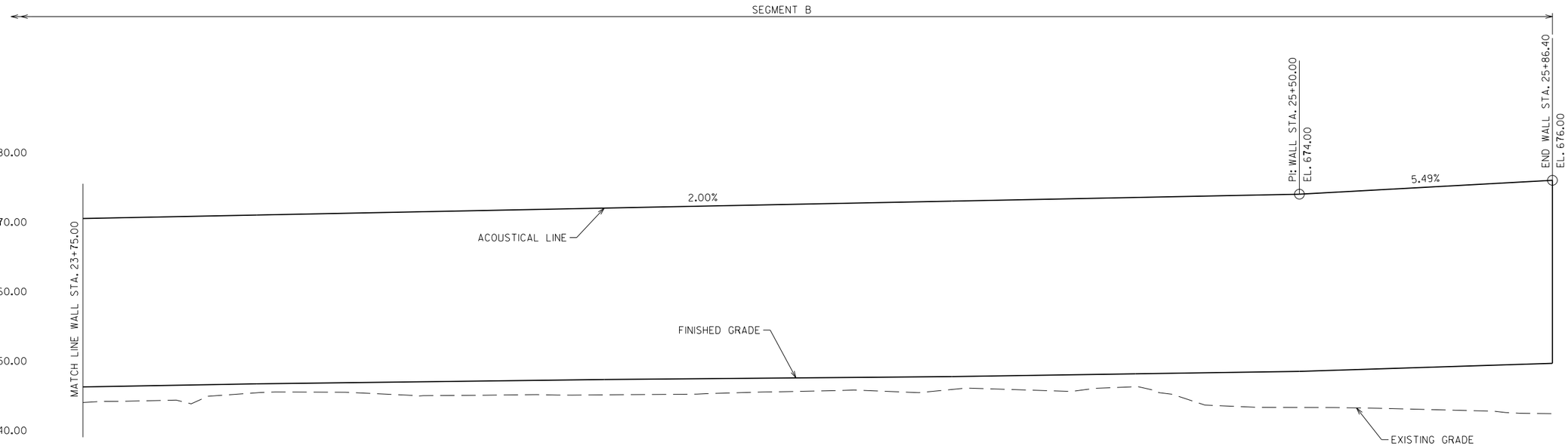
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STATE PROJECT NUMBER

1228-22-74



PLAN



ELEVATION

LOOKING AT RESIDENTIAL
SIDE OF NOISE BARRIER

CURVE DATA

RAMP HAB CURVE 1	WALL CURVE 3
P.I. = 969+90.61HAB	P.I. = 24+78.10
△ = 04°41'44"	△ = 02°31'17"
D = 02°35'33"	D = 02°36'35"
T = 90.61'	T = 48.32'
L = 181.11'	L = 96.61'
R = 2,210.00'	R = 2,195.50'
P.C. = 969+00.00HAB	P.C. = 24+29.79
P.T. = 970+81.11HAB	P.T. = 25+26.40

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE N-40-104

DRAWN BY JLR | PLANS CK'D. IFC

GENERAL PLAN 4

SHEET 4

361

SCALE = 8.00

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8

STATE PROJECT NUMBER

1228-22-74

		NOISE BARRIER WALL STATION	℄ STATION RAMP HAB	PGL IH 43 SB OFFSET	FINISHED ELEVATION	ACOUSTICAL LINE ELEV.
SEGMENT A	R-40-728 *	9+96.22	977+16.80	18.48' LT.	645.85	656.00
		10+00.00	977+13.02	18.48' LT.	645.88	656.00
		10+06.22	977+06.80	18.48' LT.	645.92	656.00
		10+16.22	976+96.80	18.48' LT.	645.98	656.00
		10+26.22	976+86.80	18.48' LT.	646.04	657.00
		10+36.22	976+76.80	18.48' LT.	646.07	657.00
		10+46.22	976+66.80	18.48' LT.	646.11	658.00
		10+50.00	976+63.02	18.48' LT.	646.12	658.00
		10+56.22	976+56.80	18.48' LT.	646.16	658.00
		10+66.22	976+46.80	18.48' LT.	646.23	659.00
		10+76.22	976+36.80	18.48' LT.	646.30	659.00
		10+86.22	976+26.80	18.48' LT.	646.36	661.00
		10+96.22	976+16.80	18.48' LT.	646.43	661.00
		11+00.00	976+13.02	18.48' LT.	646.45	661.00
		11+06.22	976+06.80	18.48' LT.	646.49	661.00
		11+16.22	975+96.80	18.48' LT.	646.54	661.00
		11+26.22	975+86.80	18.48' LT.	646.60	662.00

STRUCTURE MOUNT ELEVATION TABLE

	NOISE BARRIER WALL STATION	℄ STATION IH 43	PGL IH 43 SB OFFSET	FINISHED ELEVATION	ACOUSTICAL LINE ELEV.
SEGMENT A	11+50.00	975+63.11	20.56' LT.	641.89	662.00
	11+50.23	975+62.89	20.58' LT.	641.89	662.00
SEGMENT B	19+50.23	975+62.89	20.58' LT.	641.89	662.00
	20+00.00	975+12.95	18.94' LT.	642.03	663.00
	20+46.85	974+65.76	17.51' LT.	642.27	663.00
	20+50.00	974+62.59	17.42' LT.	642.28	663.00
	21+00.00	974+12.25	15.86' LT.	642.56	664.00
	21+43.34	973+68.65	14.50' LT.	642.81	664.00
	21+50.00	973+61.95	14.50' LT.	642.85	664.00
	22+00.00	973+11.64	14.50' LT.	643.28	665.00
	22+31.09	972+80.36	14.50' LT.	643.70	665.62
	22+50.00	972+61.33	14.50' LT.	643.95	666.00
	23+00.00	972+11.02	14.50' LT.	644.87	668.00
	23+18.76	971+92.16	14.50' LT.	645.28	668.75
	23+50.00	971+60.91	14.50' LT.	645.96	670.00
	24+00.00	971+10.91	14.50' LT.	646.85	671.00
	24+29.79	970+81.12	14.50' LT.	647.51	671.60
	24+50.00	970+60.77	14.50' LT.	647.95	672.00
	24+78.10	970+32.48	14.50' LT.	648.60	672.56
	25+00.00	970+10.44	14.50' LT.	649.12	673.00
	25+26.40	969+83.86	14.50' LT.	649.40	673.53
	25+36.40	969+84.13	24.50' LT.	649.51	673.73
	25+50.00	969+70.38	24.81' LT.	649.65	674.00
	25+86.40	969+33.56	25.23' LT.	650.81	676.00

GROUND MOUNT ELEVATION TABLE

8

8

* SEE CORRESPONDING STRUCTURE PLANS FOR FURTHER DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE N-40-104

DRAWN BY JLR | PLANS CK'D. IFC

ELEVATION TABLES

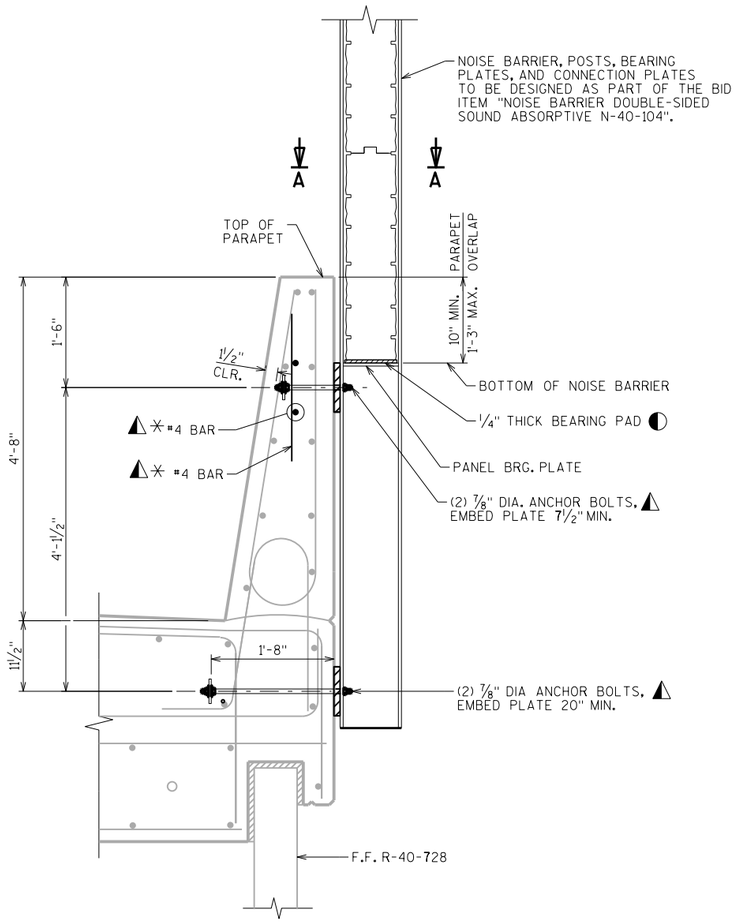
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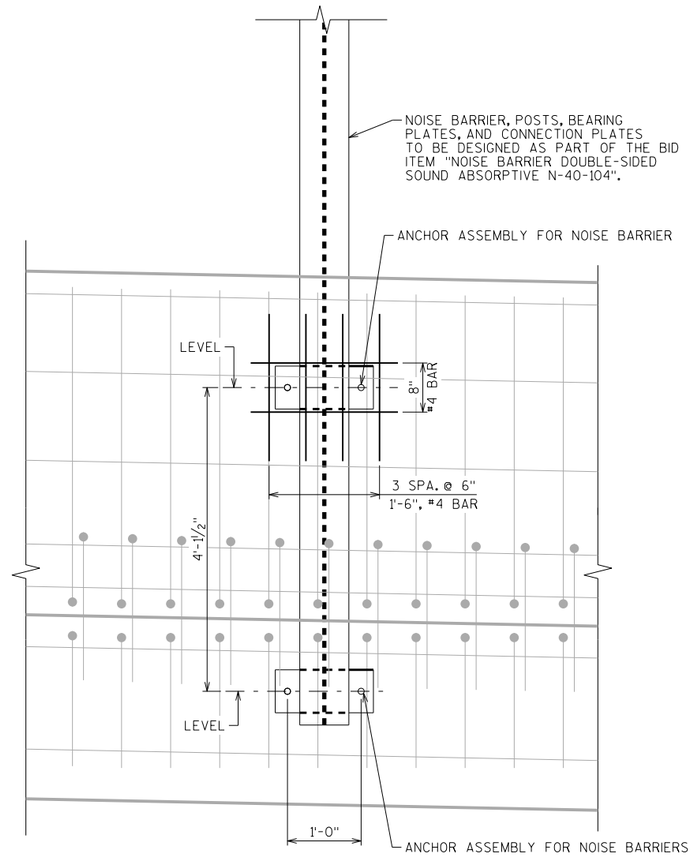
STATE PROJECT NUMBER

1228-22-74



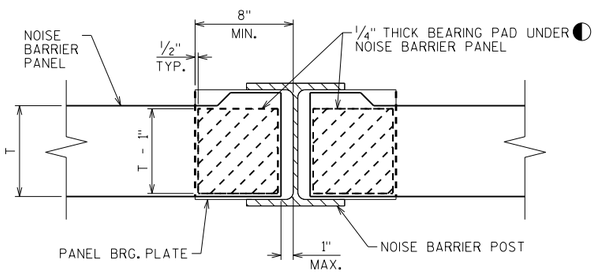
SECTION AT NOISE BARRIER POST

TYPICAL AT EACH POST LOCATION



ELEVATION AT NOISE BARRIER POST

TYPICAL AT EACH POST LOCATION



SECTION A-A

ROADWAY BARRIER NOT SHOWN FOR CLARITY

T = NOISE BARRIER PANEL THICKNESS

LEGEND

▲ NOISE BARRIER ANCHOR BOLT ASSEMBLY IS INCLUDED WITH THE R-40-728 BID ITEMS AND ARE NOT PART OF THE NOISE BARRIER BID ITEMS. SEE RETAINING WALL PLANS FOR DETAILS.

✳ EXACT LOCATION AND SPACING OF BARS TO BE COORDINATED AND COINCIDE WITH NOISE BARRIER POST SPACING AND MOUNTING DETAILS SHOWN ON APPROVED NOISE BARRIER SHOP DRAWINGS. SEE R-40-728 PLANS FOR BAR DETAILS.

◐ BEARING PADS SHALL BE PREFORMED EPDM RUBBER CONFORMING TO ASTM D-2000, GRADE 2, TYPE A, CLASS A WITH A MINIMUM DUROMETER HARDNESS OF 80. SHIMS PROVIDED TO LEVEL THE NOISE BARRIER SHOULD BE THE SAME SIZE AS THE BEARING PAD OR LARGER. A MAX OF 3 SHIMS MAY BE USED WITH A MAX TOTAL SHIM HEIGHT OF ⅜". BEARING PADS AND SHIMS ARE INCIDENTAL TO THE BID ITEM "NOISE BARRIER DOUBLE-SIDED SOUND ABSORTIVE N-40-104".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE N-40-104

DRAWN BY JLR | PLANS CK'D. IFC

NOISE BARRIER POST CONNECTION DETAILS

SHEET 6

363

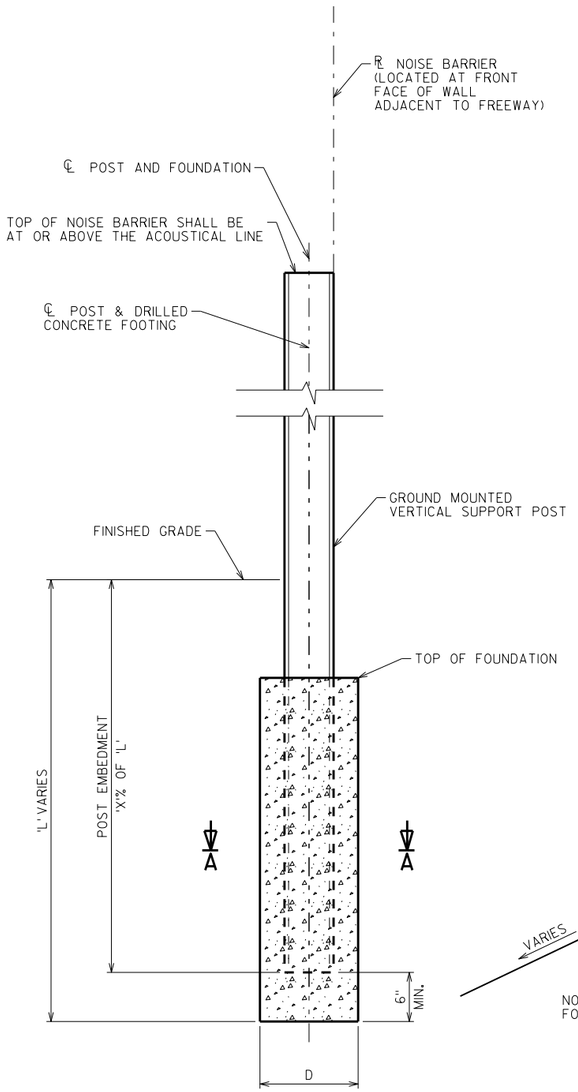
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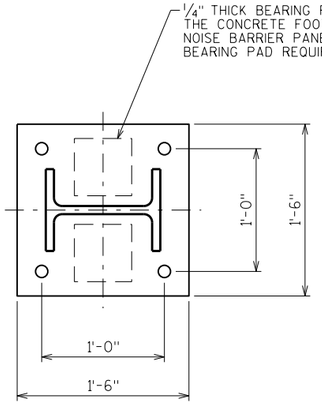
STATE PROJECT NUMBER

1228-22-74

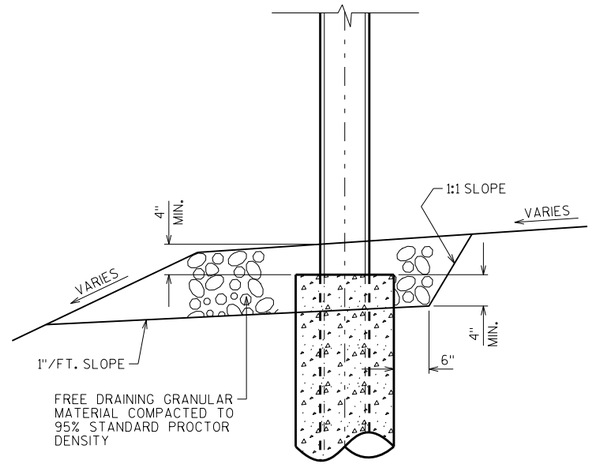


TYPICAL SECTION

TYPICAL AT EACH POST LOCATION
(NOT TO SCALE)
('D', 'L', AND 'X' TO BE DETERMINED BY SUPPLIER)

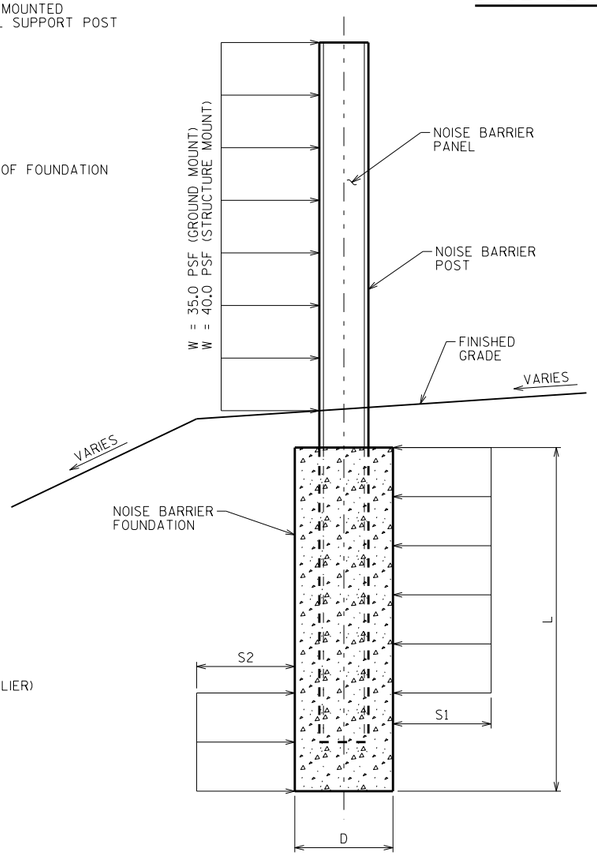


BASE PLATE DETAILS



POST DRAINAGE BACKFILL DETAIL

(NOT TO SCALE)



W = DESIGN WIND LOAD
L = NOISE BARRIER FOUNDATION DEPTH BELOW EXISITNG GROUND
D = NOISE BARRIER FOUNDATION DIAMETER
S = ALLOWABLE SOIL PRESSURE

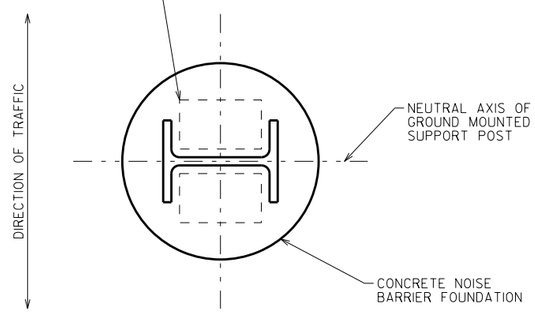
NOISE BARRIER LOADING DIAGRAM

(NOT TO SCALE)

NOTES:

DETAILS SHOWN ARE GENERAL GUIDELINES FOR A VARIETY OF APPLICATIONS THAT MAY NOT ALL BE UTILIZED FOR THE SUBJECT BARRIER. SPECIFIC DETAILS SHALL BE PROVIDED BY THE NOISE BARRIER FABRICATOR AND SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.

1/4" THICK BEARING PAD (MIN. 6" X 6") BETWEEN THE CONCRETE FOOTING AND THE BOTTOM OF THE NOISE BARRIER PANEL. SEE GENERAL NOTES FOR BEARING PAD REQUIREMENT.



SECTION A-A

(NOT TO SCALE)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE N-40-104

DRAWN BY JLR | PLANS CK'D. IFC

GENERAL DETAILS

SHEET 7

364

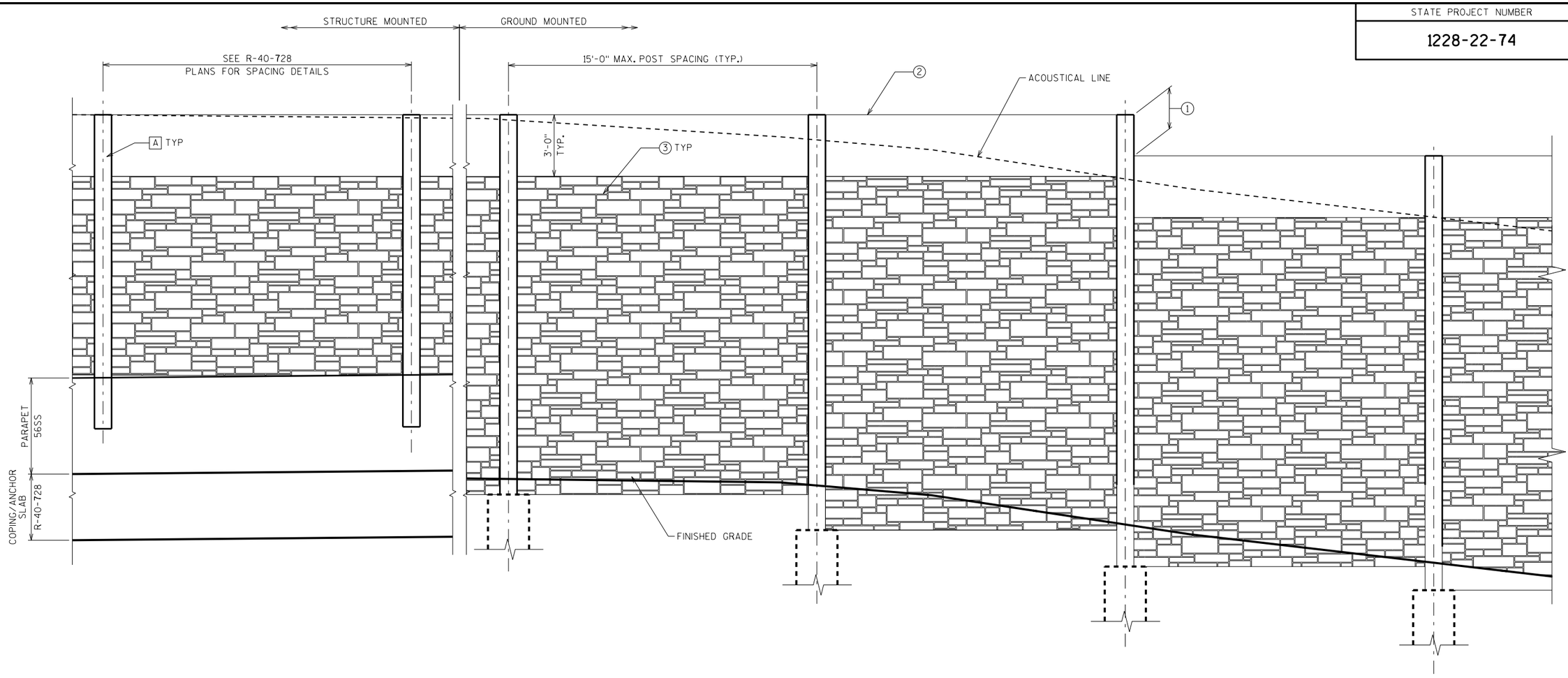
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8

SCALE = 1.50

STATE PROJECT NUMBER

1228-22-74



ELEVATION VIEW - RESIDENTIAL SIDE

LEGEND

1. STEP PANELS IN INCREMENTS OF 2'-0". STEP INCREMENTS LESS THAN 2'-0" SHALL NOT BE PERMITTED UNLESS APPROVED BY THE ENGINEER.
2. ADJUST VERTICAL PLACEMENT OF PANELS TO MAXIMIZE HORIZONTAL RUNS, KEEPING THE TOP OF PANELS AT THE SAME ELEVATION.
3. THE RESIDENTIAL SIDE WALL PATTERN SHALL BE A "RANDOM SPLIT EDGE ASHLAR" PATTERN. THE PATTERN SHALL CONSIST OF RANDOM SIZED PIECES RANGING FROM A MINIMUM OF 1½" HIGH BY 4" LONG TO A MAXIMUM OF 10" HIGH BY 31" LONG WITH A MAXIMUM RELIEF 1½".

[A] AMS STANDARD COLOR 26293

NOTE: IT IS NOT THE DEPARTMENT'S INTENTION TO PUT COLOR ON THE CONCRETE WALL PANELS.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE N-40-104

DRAWN BY JLR | PLANS CK'D. IFC

AESTHETIC WALL TREATMENT DETAILS RESIDENTIAL SIDE

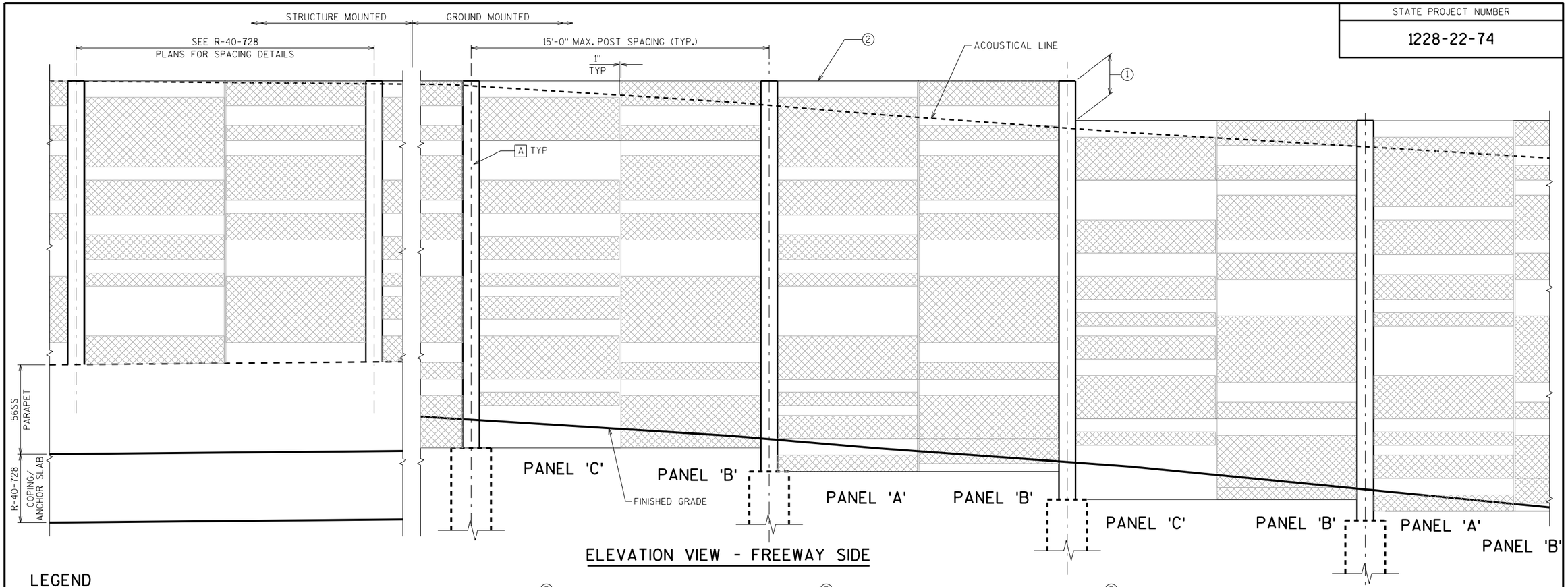
SHEET 8

365

SCALE = 2.50

STATE PROJECT NUMBER

1228-22-74



ELEVATION VIEW - FREEWAY SIDE

LEGEND

1. STEP PANELS IN INCREMENTS OF 2'-0". STEP INCREMENTS LESS THAN 2'-0" SHALL NOT BE PERMITTED UNLESS APPROVED BY THE ENGINEER.
2. ADJUST VERTICAL PLACEMENT OF PANELS TO MAXIMIZE HORIZONTAL RUNS, KEEPING THE TOP OF PANELS AT THE SAME ELEVATION.
3. 0.5 X (POST SPA - POST FLANGE WIDTH - 1")

[A] AMS STANDARD COLOR 26293

☐ PANEL THICKNESS + 0"

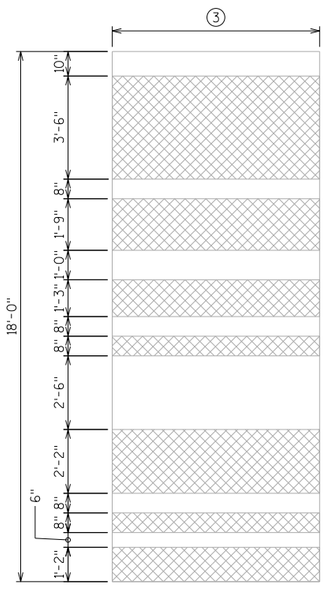
▨ PANEL THICKNESS - ¾" MIN. 1" MAX.

NOTE: IT IS NOT THE DEPARTMENT'S INTENTION TO PUT COLOR ON THE CONCRETE WALL PANELS.

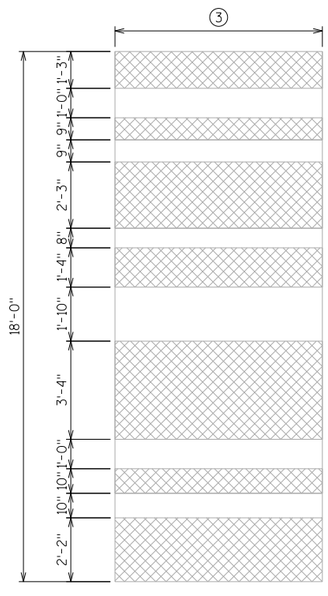
NOTES

ALTERNATE PANEL PATTERNS AS SHOWN. DO NOT PLACE SAME PATTERN HORIZONTALLY ADJACENT TO EACH OTHER.

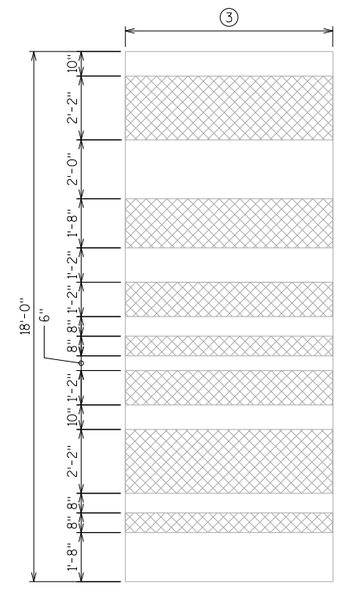
THE PATTERNS SHALL REPEAT VERTICALLY STARTING FROM THE TOP OF WALL AND WORKING DOWNWARD IF WALL HEIGHT GREATER THAN 18'-0" IS REQUIRED.



PANEL 'A' PATTERN



PANEL 'B' PATTERN



PANEL 'C' PATTERN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE N-40-104

DRAWN BY JLR | PLANS CK'D. IFC

AESTHETIC WALL TREATMENT DETAILS FREEWAY SIDE

SHEET 9

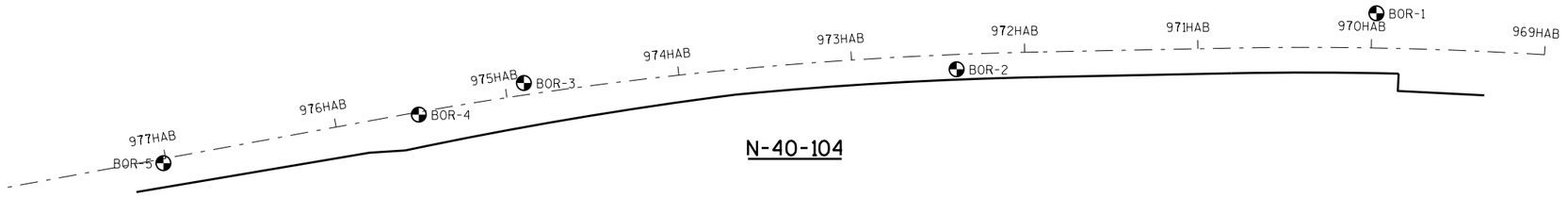
366

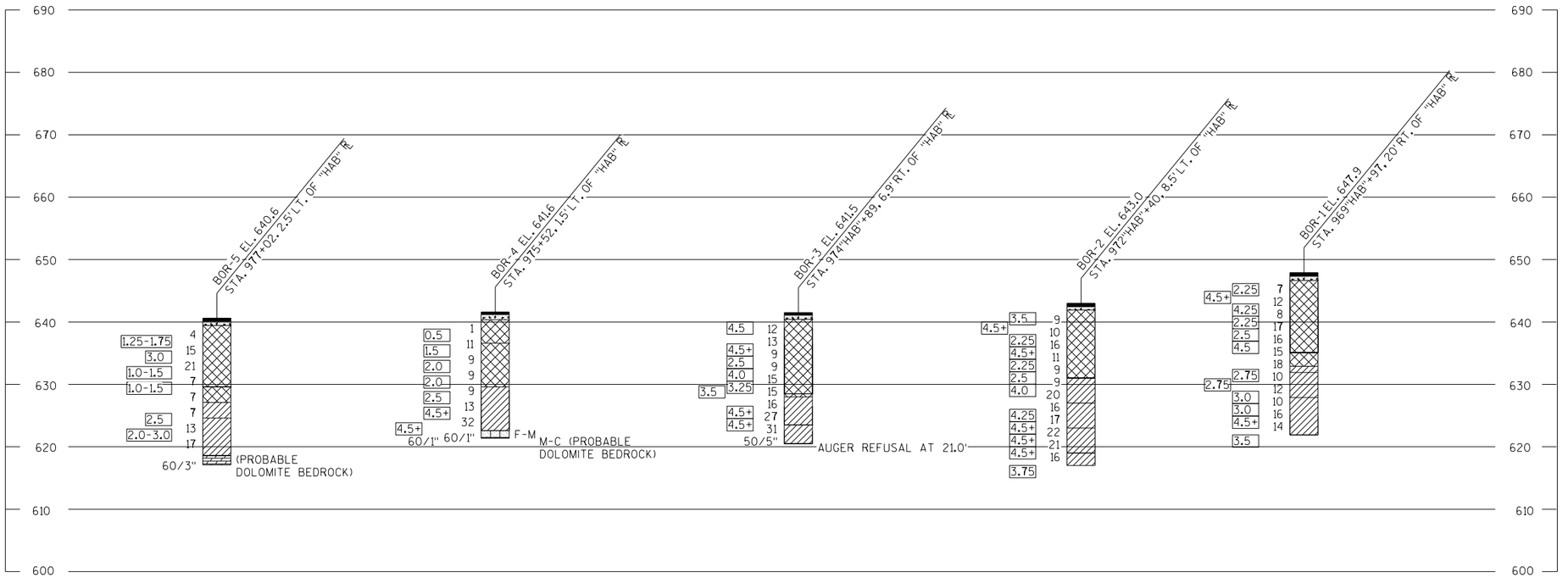
SCALE = 2.50

8

8

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	1/07/2021	322230.1	603616.9
2	1/07/2021	322473.9	603601.0
3	1/07/2021	322723.5	603609.9
4	8/23/2021	322785.2	603595.8
5	8/23/2021	322934.1	603577.8
BORINGS COMPLETED BY: GESTRA			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) MILWAUKEE COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			





8

8

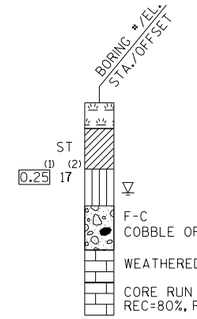
STATE PROJECT NUMBER

1228-22-74

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE N-40-104

DRAWN BY TLP/JLR | PLANS CK'D. IFC

SUBSURFACE EXPLORATION

SHEET 10

367

SCALE = 40.00

DESIGN DATA

CONTRACTOR DESIGNED OVERHEAD SIGN STRUCTURES SHALL BE DESIGNED ACCORDING TO THE AASHTO "LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS", 1ST EDITION AND INTERIM SPECIFICATIONS, AND THE WISDOT BRIDGE MANUAL.

STANDARD FOUNDATIONS DESIGNED ACCORDING TO THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION.

DEAD LOAD: WT. OF SIGN AND SUPPORTING STRUCTURE.
ICE LOAD: 3 PSF TO ONE FACE OF SIGN & SURFACE OF MEMBERS.
WIND PRESSURE: 115 MPH (3-SEC. GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS. (700 YEAR MEAN RECURRENCE INTERVAL)

WIND COMPONENTS	NORMAL	TRANSVERSE
LOAD CASE 1:	1.00	0.00
LOAD CASE 2:	0.00	1.00
LOAD CASE 3:	0.75	0.75

LOAD COMBINATIONS	
STRENGTH I:	1.25 DC + 1.6 LL
EXTREME I (MAX DC):	1.1 DC + 1.0 W + 1.0 ICE
EXTREME I (MIN DC):	0.9 DC + 1.0 W
SERVICE I:	1.0 DC + 1.0 W
FATIGUE I:	1.0 NWG (NATURAL WIND GUST VIBRATION)
	1.0 TRG (TRUCK INDUCED GUST VIBRATION)
	1.0 GVW (GALLOPING - CANTILEVER ONLY)

MATERIAL PROPERTIES

CONCRETE MASONRY.....f'c = 3,500 psi

HIGH STRENGTH STEEL
REINFORCEMENT, GRADE 60.....fy = 60,000 psi

HIGH STRENGTH BOLTS - A325.....fy = 92,000 psi

ANCHOR RODS - ASTM F1554 GRADE 55.....fy = 55,000 psi

HEAVY HEX NUTS FOR ANCHOR RODS - ASTM A563A

WASHERS FOR ANCHOR RODS - ASTM F436

FOUNDATION DATA

SIGN STRUCTURE FOUNDATIONS ARE SUPPORTED ON DRILLED SHAFTS THAT HAVE BEEN DESIGNED FOR SITES WHERE SOILS EXHIBIT A PHI-ANGLE GREATER THAN OR EQUAL TO 24° (GRANULAR SOILS), OR A COHESION VALUE GREATER THAN OR EQUAL TO 750 PSF (COHESIVE SOILS) AND A UNIT WEIGHT OF 125 PCF. THE GROUND WATER TABLE FOR DESIGN IS ASSUMED TO BE AT A DEPTH OF 10'-0" BELOW THE GROUND SURFACE, ACTUAL WATER LEVEL AT SITE MAY VARY. THE REGION GEOTECHNICAL ENGINEER SHALL VISUALLY INSPECT THE SUBSURFACE SOILS DURING DRILLING OF THE SHAFT HOLE TO CONFIRM THESE PROPERTIES PRIOR TO PLACEMENT OF THE DRILLED SHAFT CONCRETE.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALTERNATE DESIGNS ARE NOT ALLOWED.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007). ALL STATIONS AND ELEVATIONS ARE IN U.S. SURVEY FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).

ALL REINFORCING BARS ARE IN ENGLISH UNITS. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

SIGN BRIDGE ID PLAQUES SHALL BE CONSIDERED INCIDENTAL TO THE TRUSS OR MONOTUBE BID ITEMS FOR EACH APPLICABLE SIGN STRUCTURE IN THE PLAN SET. LOCATE THE ID PLAQUE ON THE FREEWAY SIDE OF THE SUPPORT COLUMN SO THAT IT CAN BE SEEN FROM THE ROADWAY. FABRICATE AND INSTALL THE ID PLAQUE IN ACCORDANCE WITH S.D.D. 12 A 4-3.

UNLESS DETAILED OTHERWISE IN THE PLANS, ALL H.S. BOLTED CONNECTIONS SHALL BE MADE WITH ¾" DIA A325 GALVANIZED BOLTS. FIELD CONNECTIONS SHALL BE INSTALLED WITH DTI WASHERS.

WELDED CONNECTIONS CAN BE USED IN LIEU OF BOLTED CONNECTIONS, IF A TRUSS UNIT CAN BE GALVANIZED IN ONE PIECE.

WELD TEST AS PER AWS D1.1.

SEE SIGN PLATE NO. A4-6, A4-7A & A4-7B OF THE SIGN PLATE MANUAL FOR INSTRUCTIONS ON CENTERING SIGNS VERTICALLY ON THE TRUSS.

SIGNS OR BLANKS SHALL BE INSTALLED ON TRUSS AT TIME OF ERECTION. BLANKS SHALL BE 1/4 THE LENGTH OF THE CANTILEVER SPAN, 2'-0" DEEPER THAN THE C/L TO C/L OF CHORDS, AND SHALL BE CENTERED ON THE BRIDGE. SIGNS SHALL BE AS DESIGNATED ON THE PLANS.

THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION OF THE TYPE AND LOCATION OF UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PER THE REQUIREMENTS IN THE STANDARD SPECIFICATIONS PRIOR TO FABRICATION OF THE STRUCTURE. CONTRACTOR SHALL SHOW SIGNS ON THE SHOP DRAWINGS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DRILLING OR EXCAVATING AND MAINTAINING A STABLE AND OPEN HOLE FOR SUBSEQUENT INSTALLATION OF CONCRETE MASONRY FOR THE DRILLED SHAFTS. PARTIAL OR FULL DEPTH TEMPORARY CASING MAY BE REQUIRED TO MAINTAIN THE STABILITY OF THE EXCAVATED HOLE FOR THE SIGN SUPPORT PRIOR TO FILLING THE HOLE WITH CONCRETE. PERMANENT CASING MADE FROM STEEL OR CORRUGATED METAL PIPE MAY BE USED IN LIEU OF TEMPORARY CASING. TEMPORARY/PERMANENT CASING, IF USED, SHALL BE INCIDENTAL TO THE BID ITEM "DRILLING SHAFT (DIA.)".

STRUCTURE DATA

SIGN STR	ACTUAL SIGN AREA	ACTUAL SIGN DEPTH	STANDARD TYPE
S-40-3103	18.17 SF	2'-3"	MC-III

LIST OF DRAWINGS

1. GENERAL NOTES & DESIGN DATA
2. LAYOUT S-40-3103

LIST OF OSS STANDARD DESIGN DRAWINGS

3. I. MONOTUBE & 2-CHORD TRUSS DETAILS 1
4. II. MONOTUBE & 2-CHORD TRUSS DETAILS 2
5. III. MONOTUBE & 2-CHORD TRUSS ELECTRICAL DETAILS
6. IV. MONOTUBE & 2-CHORD TRUSS FOUNDATIONS

TOTAL ESTIMATED QUANTITIES

BID ITEM NO.	BID ITEM	UNIT	S-40-3103
531.2042	DRILLING SHAFT 42-INCH	LF	18
531.5130	FOUNDATION SINGLE-SHAFT TYPE MC-III (S-40-3103)	EA	1
532.5130	MONOTUBE CANTILEVER TYPE III	EA	1

STATE PROJECT NUMBER

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TRAFFIC VOLUME

A.D.T. (2043) = 144,200
R.D.S. = 60 MPH

STRUCTURE DESIGN CONTACTS:
AARON BONK (608) 261-0261
(608)

NO.	DATE	REVISION	BY

WISCONSIN DEPARTMENT OF TRANSPORTATION
BUREAU OF STRUCTURES

ACCEPTED SDR 12/08/21
CHIEF STRUCTURES DESIGN ENGINEER DATE

MONOTUBE AND 2-CHORD TRUSS PLANS

ENTER DESCRIPTION

COUNTY	TOWN/CITY/VILLAGE
MILWAUKEE	GLENDALE

DESIGN SPEC.
AASHTO LRFDLTS-1 W/INTERIMS

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
BOS	BOS	JAF	

GENERAL NOTES & DESIGN DATA

SHEET 1 OF 6
368

I.D. XXXX-XX-XXYY DATE: MMMM YYYY

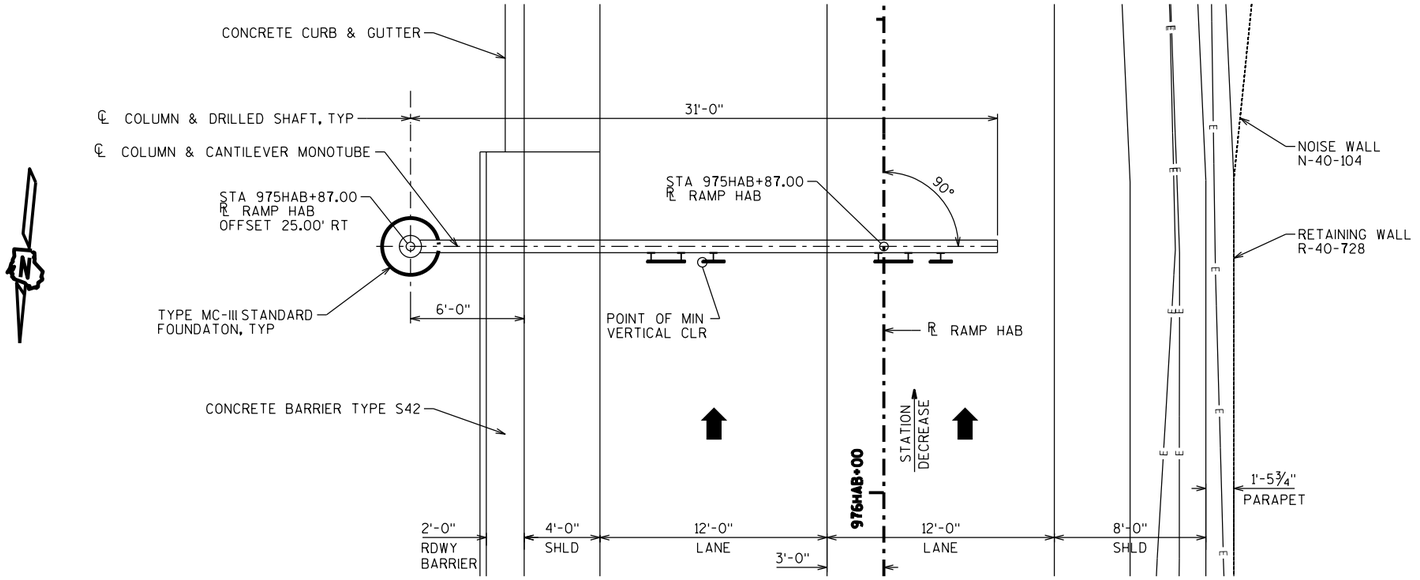
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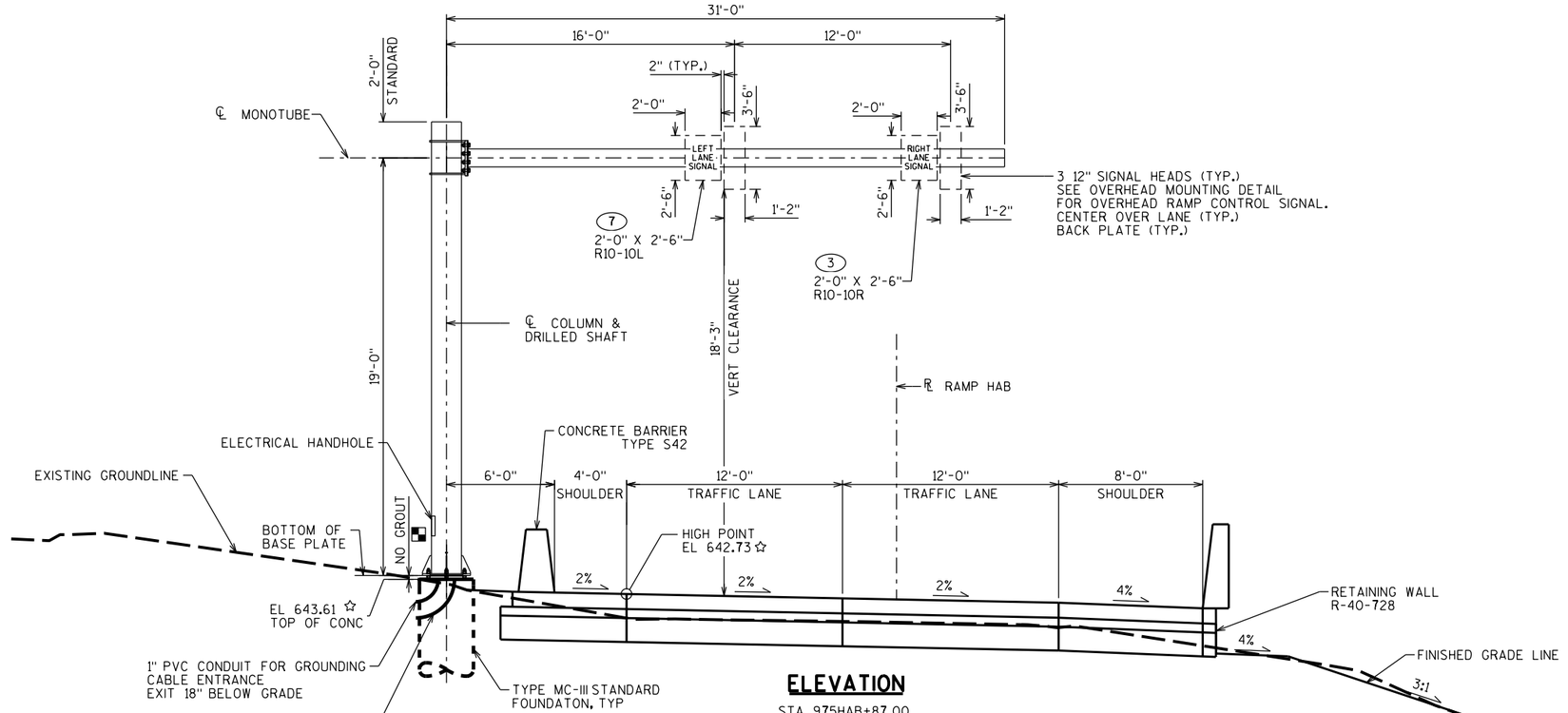
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STATE PROJECT NUMBER

1228-22-74



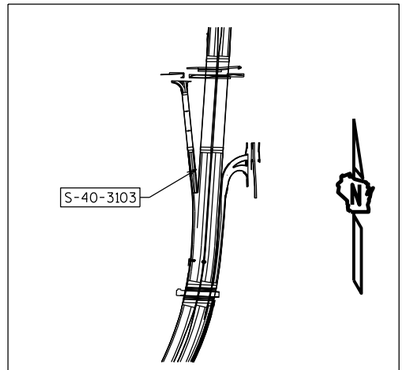
PLAN



ELEVATION

STA 975HAB+87.00
(LOOKING DOWNSTATION AT FRONT OF SIGNS)

HAMPTON AVE ON RAMP SB TO I-43



LOCATION MAP

NOTE

POINT OF MIN VERTICAL CLEARANCE
STA 975+89.25, 9.58' RT
EL 642.61

LEGEND

☆ ELEVATIONS GIVEN ALONG ℄ MONOTUBE CHORD

(XXX) SIGN NUMBERS (PERMANENT SIGNING PLAN)

■ STANDOFF DIMENSION IS ASSUMED TO BE 2½", BUT IS A MAXIMUM OF 2 X ANCHOR ROD DIAMETER. SEE FOUNDATION DETAILS SHEET AND SHOP DRAWINGS FOR MORE INFORMATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-40-3103

DRAWN BY JAF | PLANS CK'D.

GENERAL LAYOUT
S-40-3103

SHEET 2 OF 6

369

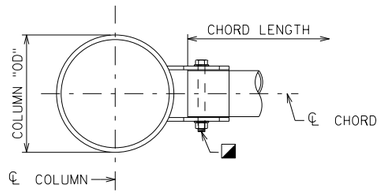
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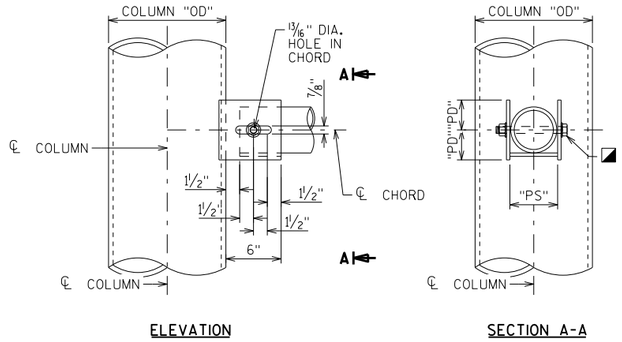
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STATE PROJECT NUMBER

STANDARD



PLAN



ELEVATION SECTION A-A

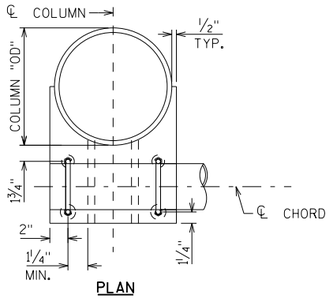
FULL SPAN SADDLE CONNECTION

PREFERRED

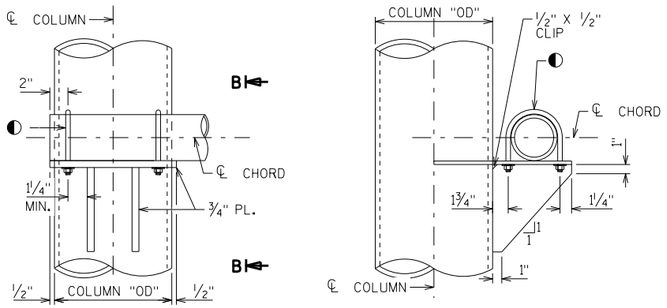
3/4" GALVANIZED A325 OR A449 HEAVY HEX BOLT, NUT, WASHER

"PD" = (CHORD "OD")/2 + 3/4"

"PS" = CHORD "OD" + 3/16"



PLAN

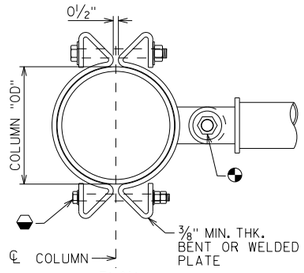


ELEVATION SECTION B-B

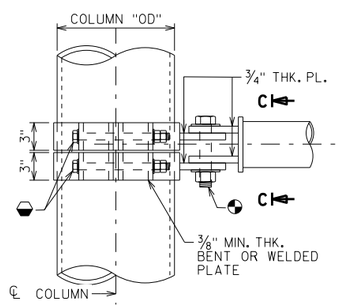
FULL SPAN STIFFENED BEARING CONNECTION

ALTERNATE 1

◐ (2) - 1/2" MIN. GALVANIZED U-BOLT, NUT, WASHER AND LOCK WASHER



PLAN



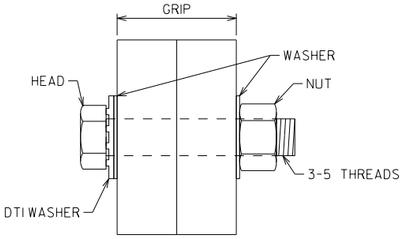
ELEVATION SECTION C-C

FULL SPAN CLAMP CONNECTION

ALTERNATE 2 - TAPERED COLUMNS ONLY

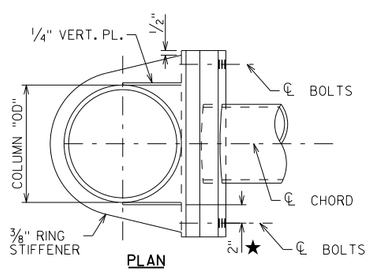
1 1/4" GALVANIZED A325 HEAVY HEX BOLT, NUT AND WASHER

1" GALVANIZED A449 HEAVY HEX BOLT, NUT AND WASHER

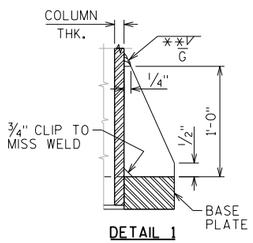


RECOMMENDED BOLT DETAIL WITH DTI

NUT IS THE TURNED ELEMENT

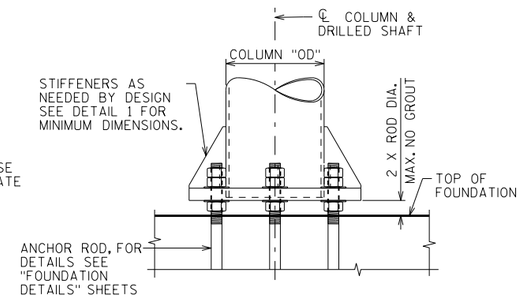


PLAN



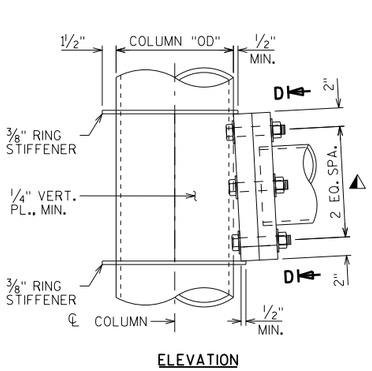
DETAIL 1

** SIZE AS NEEDED

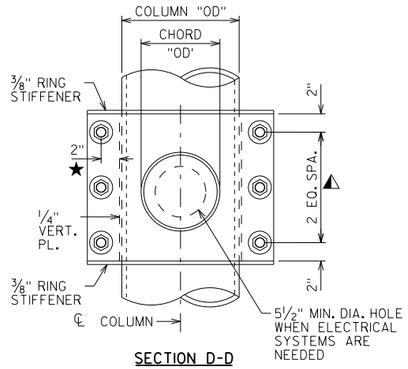


BASE PLATE & COLUMN DETAIL

LOOKING AT FRONT FACE OF STRUCTURE



ELEVATION

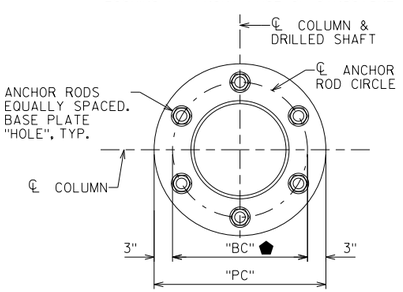


SECTION D-D

CANTILEVER POST TO CHORD CONNECTION

◭ MIN. CONNECTION = (6) - 1" GALVANIZED F3125 GRADE A325 BOLTS, NUT, WASHER AND DTI

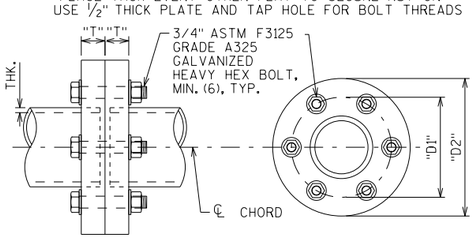
★ MIN. DIMENSION MEASURED FROM EXT. FACE OF VERT. PLATE



BASE PLATE

PLAN

⬟ "BC" = POLE OD + 6"

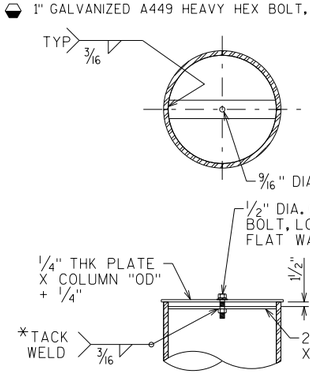


CHORD SPLICE DETAIL

"D1" = CHORD "OD" + 3"

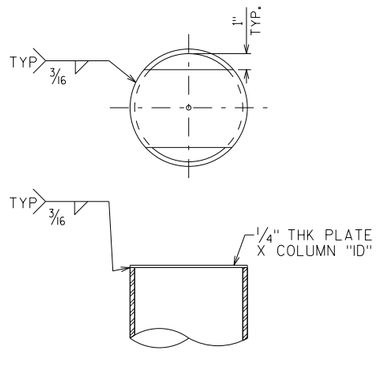
"D2" = CHORD "OD" + 6"

"T" = BY DESIGN



COLUMN/CHORD CAP DETAIL

* PLACE TACK EVERY OTHER FLAT TO SECURE NUT OR USE 1/2" THICK PLATE AND TAP HOLE FOR BOLT THREADS



CHORD CAP DETAIL

NOTES:

MINIMUM VALUES SHOWN

ALL CONNETIONS ARE TO BE DESIGNED FOR ACTUAL STRUCTURE LOADS.

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MONOTUBE & 2-CHORD TRUSS DETAILS 1

SHEET 1 OF IV

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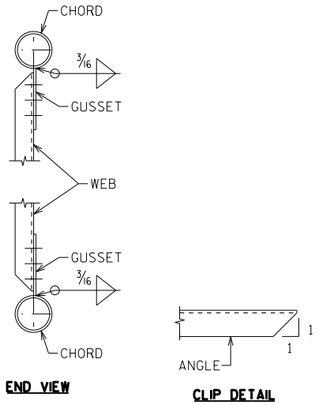
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8

SCALE = 1.00

STATE PROJECT NUMBER

STANDARD

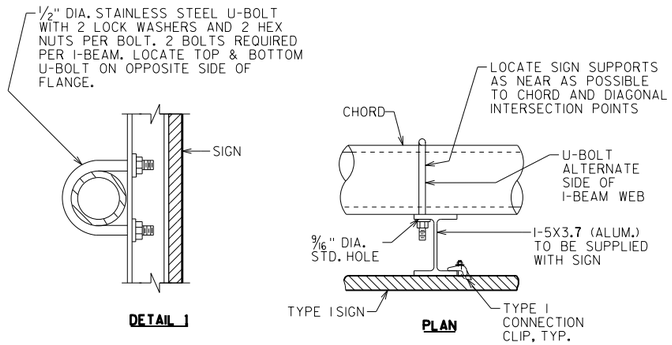


END VIEW

CLIP DETAIL

TRUSS CONNECTION DETAILS

BOLTED CONNECTIONS SHOWN, NUMBER OF BOLTS BY DESIGN
WELDED CONNECTIONS SIMILAR



DETAIL 1

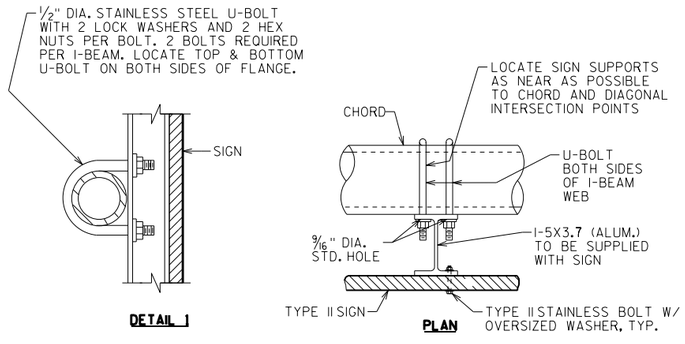
PLAN

2-CHORD TRUSS SIGN CONNECTION

SEE SIGN PLATE MANUAL A4-7A FOR DETAILS

ALUMINUM I-5X3.7 I-BEAMS ARE TO BE SUPPLIED WITH THE SIGN PANEL

HARDWARE TO BE SUPPLIED BY THE CONTRACTOR



DETAIL 1

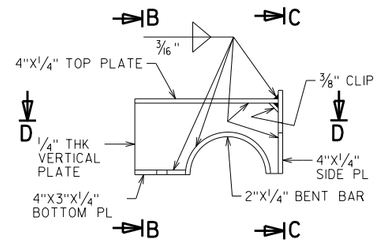
PLAN

MONOTUBE SIGN CONNECTION

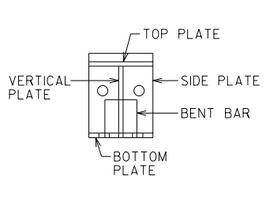
SEE SIGN PLATE MANUAL A4-7B FOR DETAILS

ALUMINUM I-5X3.7 I-BEAMS ARE TO BE SUPPLIED WITH THE SIGN PANEL

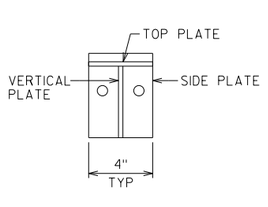
HARDWARE TO BE SUPPLIED BY THE CONTRACTOR



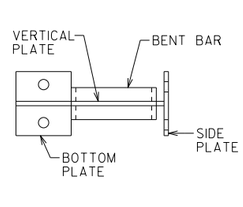
ELEVATION



SECTION B-B



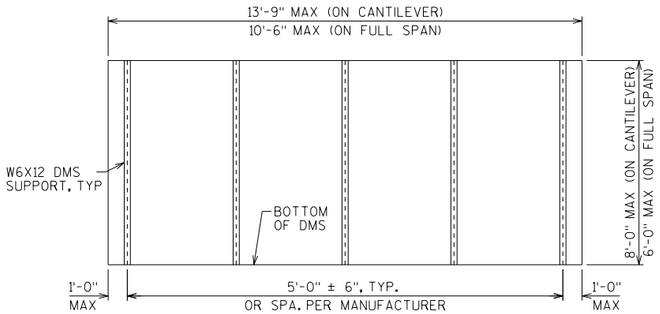
SECTION C-C



SECTION D-D

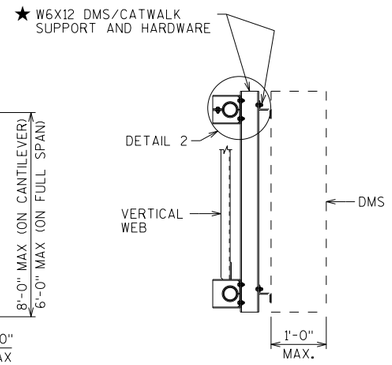
DMS WELDED PLATE CONNECTION DETAILS

TOP PLATE CLAMP SHOWN
BOTTOM PLATE CLAMP SIMILAR



DMS MOUNTING POST SPACING DETAIL

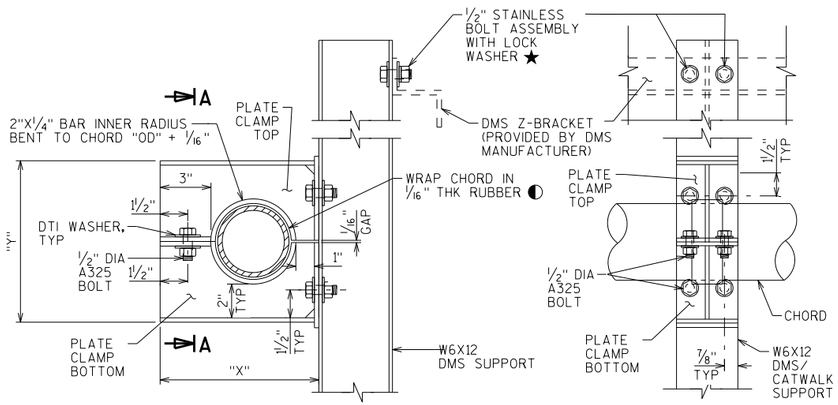
POST SPACING MAY BE ADJUSTED AS REQUIRED IF CONFLICT WITH TRUSS IS ENCOUNTERED.



SECTION THRU TRUSS

FOR DMS/CATWALK CONNECTION

★ W6X12 SUPPORTS AND HARDWARE ARE TO BE SUPPLIED BY THE CONTRACTOR. 1/2" STAINLESS BOLT, NUT, WASHER AND LOCK WASHER REQUIRED, 4 PER W6X12.



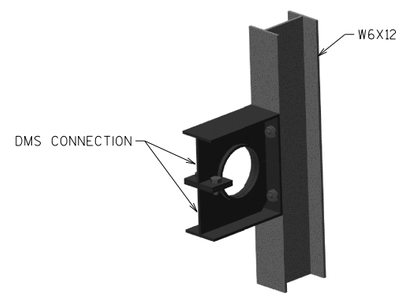
DETAIL 2

SECTION A-A

CHORD OUTER DIA	"X"	"Y"
"OD"	"OD"+4 13/16"	"OD"+5 1/16"

TYPICAL DMS CONNECTION

◐ NEOPRENE, GRADE 45±5, OTHERWISE MEETING THE REQUIREMENTS OF STD SPEC 506.2.6.1



3-D VIEW DMS CONNECTION

CHORD NOT SHOWN FOR CLARITY

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STRUCTURES DESIGN SECTION

UPDATED: APRIL 2021

DRAWN BY: BOS | PLANS CK'D.: BOS

MONOTUBE & 2-CHORD TRUSS DETAILS 2

SHEET II OF IV

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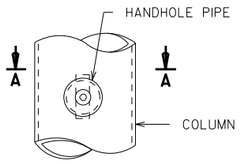
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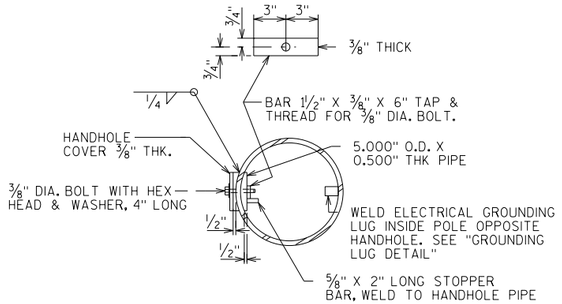
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STATE PROJECT NUMBER

STANDARD



HANDHOLE DETAILS

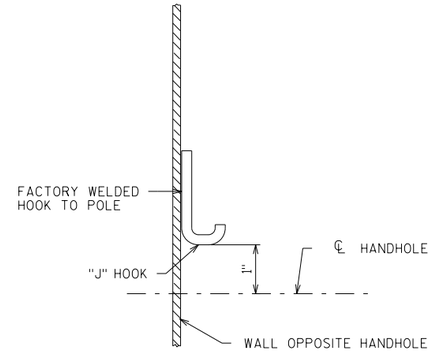


SECTION A-A

HANDHOLE NOTES

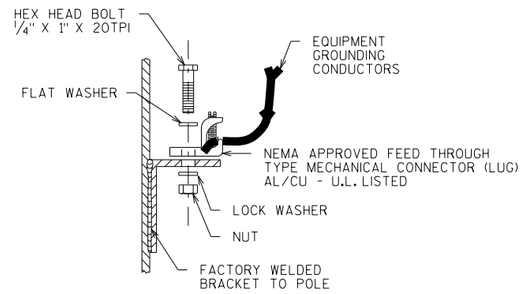
HANDHOLES SHALL BE LOCATED IN ONE COLUMN OF THE SIGN STRUCTURE IF ELECTRICALLY OPERATED DEVICES ARE INSTALLED ON/IN THE STRUCTURE. COLUMNS WITH HANDHOLES SHALL BE NEAR THE ELECTRICAL SERVICE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE ELECTRICAL SERVICE ENTRANCE WITH THE REGION TRAFFIC SECTION PRIOR TO FABRICATION OF THE SIGN COLUMNS AND MEMBERS. CONDUIT (AS REQ'D.) SHALL BE LOCATED, PLACED AND SIZED AS SHOWN ON THE ELECTRICAL PLAN DETAIL SHEETS.

UNLESS NOTED OTHERWISE, ALL HANDHOLE ELEMENTS TO BE GALVANIZED PER THE WISDOT STANDARD SPECIFICATIONS.



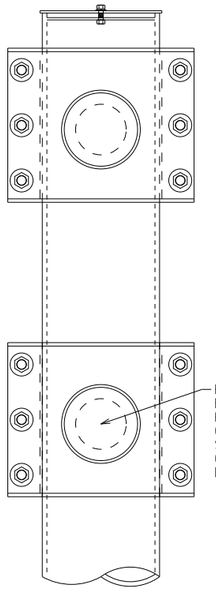
TYPICAL "J" HOOK LOCATION

THE "J" HOOK SHALL BE FACTORY WELDED TO THE INSIDE OF ALL COLUMNS CONTAINING ELECTRICAL WIRING. THE "J" HOOK SHALL BE ATTACHED ABOVE THE CENTERLINE OF THE UPPER HANDHOLE AND MOUNTED DIRECTLY OPPOSITE THE HANDHOLE AS SHOWN IN THE DRAWING.

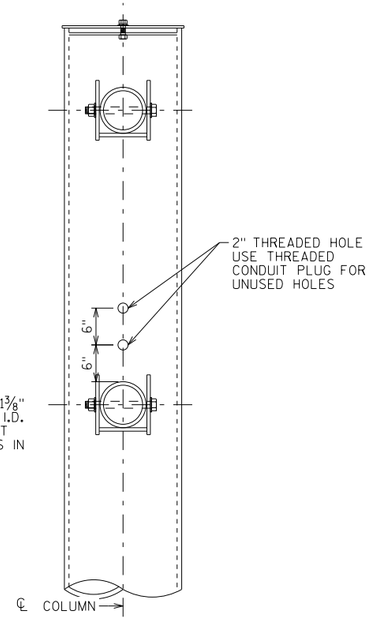


GROUNDING LUG DETAIL

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



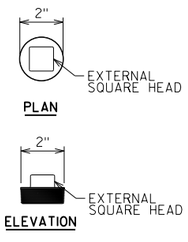
2-CHORD CANTILEVER



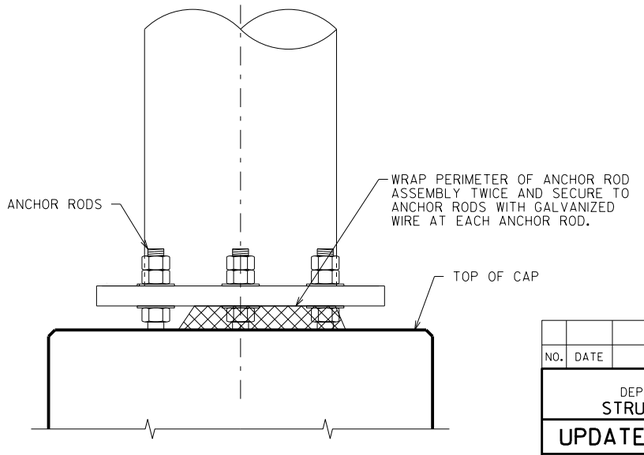
2-CHORD FULL SPAN

SADDLE CONNECTIONS SHOWN, BEARING AND CLAMP CONNECTIONS SIMILAR

CONDUIT HOLE LOCATIONS



CONDUIT PLUG DETAILS



RODENT SCREEN

(ONLY REQ'D. WHEN ELECTRICAL DEVICES ARE INSTALLED)

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STRUCTURES DESIGN SECTION

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MONOTUBE & 2-CHORD TRUSS ELECTRICAL DETAILS

SHEET III OF IV

372

SCALE = 1.00

8

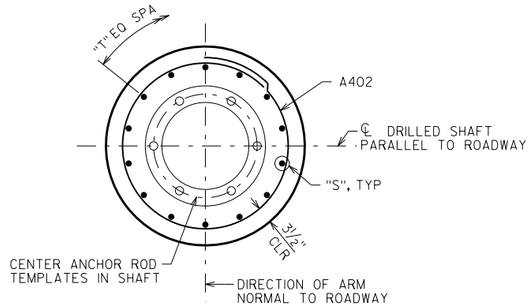
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STATE PROJECT NUMBER

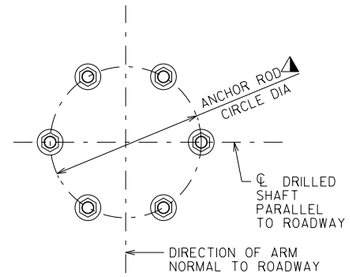
STANDARD

FOUNDATION & REINFORCING DATA

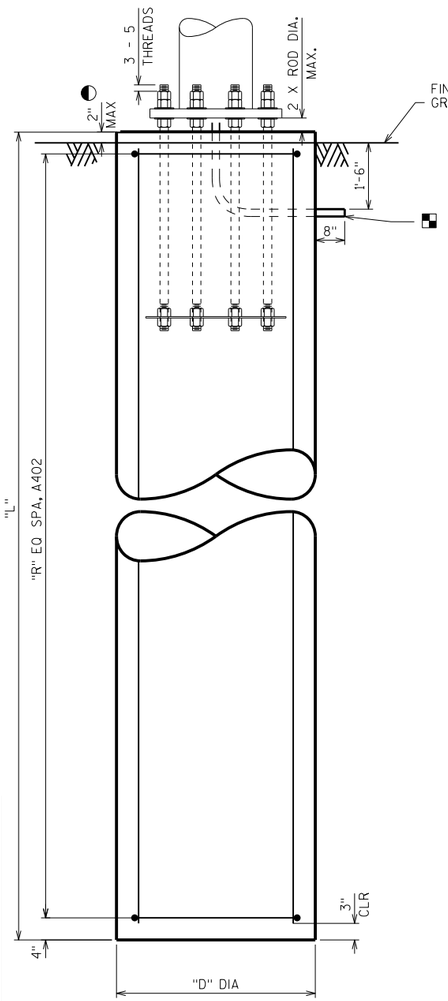
STANDARD FOUNDATION TYPE	SHAFT VARIABLES					
	"D"	"L"	"R"	"S"	"T"	"BC" MAX
MFI	2'-0"	12'-0"	12	A801	6	12"
MFII	2'-6"	13'-0"	13	A801	10	17"
MCI/MCII/TFI	2'-6"	17'-0"	17	A801	10	17"
TCI	3'-0"	18'-0"	18	A801	14	22"
TFII	3'-0"	20'-0"	20	A801	14	22"
MCIII/TCII/TFIII	3'-6"	18'-0"	18	A901	14	28"
MCIV/TFIV	3'-6"	23'-0"	23	A901	14	28"
TCIII	4'-0"	23'-0"	23	A1001	14	34"
TCIV	4'-0"	28'-0"	28	A1001	14	34"



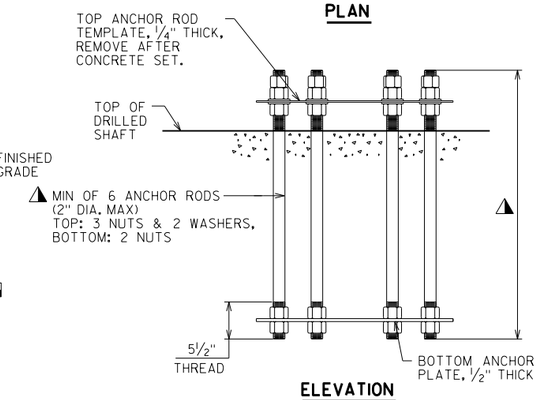
PLAN



PLAN



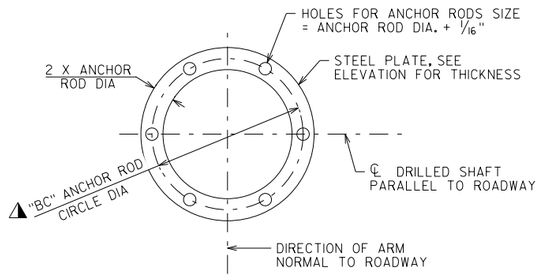
ELEVATION



ELEVATION

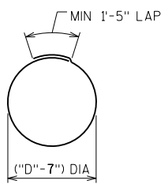
ANCHOR ROD ASSEMBLY DETAILS

△ ANCHOR ROD NUMBER, DIAMETER, LENGTH & ORIENTATION AS SHOWN ON FABRICATION DRAWING.



ANCHOR PLATE/TOP TEMPLATE

PLAN



A402

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BILL OF BARS - STANDARD FOUNDATIONS

STANDARD FOUNDATION MFI

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A801		6	11'-7"			DRILLED SHAFT - VERTICAL
A402		13	5'-10"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION MFII

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A801		10	12'-7"			DRILLED SHAFT - VERTICAL
A402		14	7'-5"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION MCI/MCII/TFI

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A801		10	16'-7"			DRILLED SHAFT - VERTICAL
A402		18	7'-5"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION TCI

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A801		14	17'-7"			DRILLED SHAFT - VERTICAL
A402		19	9'-0"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION TFII

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A801		14	19'-7"			DRILLED SHAFT - VERTICAL
A402		21	9'-0"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION MCIII/TCII/TFIII

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A901		14	17'-7"			DRILLED SHAFT - VERTICAL
A402		19	10'-6"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION MCIV/TFIV

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A901		14	22'-7"			DRILLED SHAFT - VERTICAL
A402		24	10'-6"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION TCIII

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A1001		14	22'-7"			DRILLED SHAFT - VERTICAL
A402		24	12'-2"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION TCIV

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A1001		14	27'-7"			DRILLED SHAFT - VERTICAL
A402		29	12'-2"	X		DRILLED SHAFT - HORIZONTAL

ESTIMATED QUANTITIES - FOUNDATIONS

STANDARD FOUNDATION TYPE	CONCRETE MASONRY (CY)	STEEL REINFORCEMENT HS (LBS)	FOUNDATION DRILLING (LF)				
			24" DIA.	30" DIA.	36" DIA.	42" DIA.	48" DIA.
MFI	2	240	12				
MFII	3	410		13			
MCI/MCII/TFI	4	540		17			
TCI	5	780			18		
TFII	6	860			20		
MCIII/TCII/TFIII	7	970				18	
MCIV/TFIV	9	1,250				23	
TCIII	11	1,560					23
TCIV	13	1,900					28

** QUANTITIES ARE FOR INFORMATION ONLY AND ARE BASED ON STANDARD STRUCTURE DIMENSIONS

NOTES

CENTER ANCHOR ROD ASSEMBLY ON DRILLED SHAFT AND MAKE SURE IT IS PLUMB. MAINTAIN ANCHOR ROD PROJECTION ABOVE FOOTING AS DETAILED. ANCHOR ROD ASSEMBLY SHALL BE RIGIDLY SECURED IN POSITION DURING AND AFTER CONCRETE PLACEMENT. DO NOT WELD THE ANCHOR RODS.

◐ FOR OVERHEAD SIGN STRUCTURES THAT ARE INSTALLED ADJACENT TO SIDEWALKS, THE TOP OF THE SHAFT SHALL BE POURED FLUSH WITH THE FINISHED GRADE.

◪ 2" DIA NONMETALLIC CONDUITS, INSTALL ONLY WITH DMS. EXTEND CONDUITS AS SHOWN AND CAP OR SEAL EACH END WITH A SUITABLE REMOVABLE PLUG. PLACE CONDUITS UNDER COLUMN ADJACENT TO THE DMS. CONDUITS INCIDENTAL TO THE FOUNDATION BID ITEMS.

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STATE OF WISCONSIN
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UPDATED: MARCH 2021

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MONOTUBE & 2-CHORD TRUSS FOUNDATIONS

SHEET IV OF IV

373

SCALE = 1.67

8

8

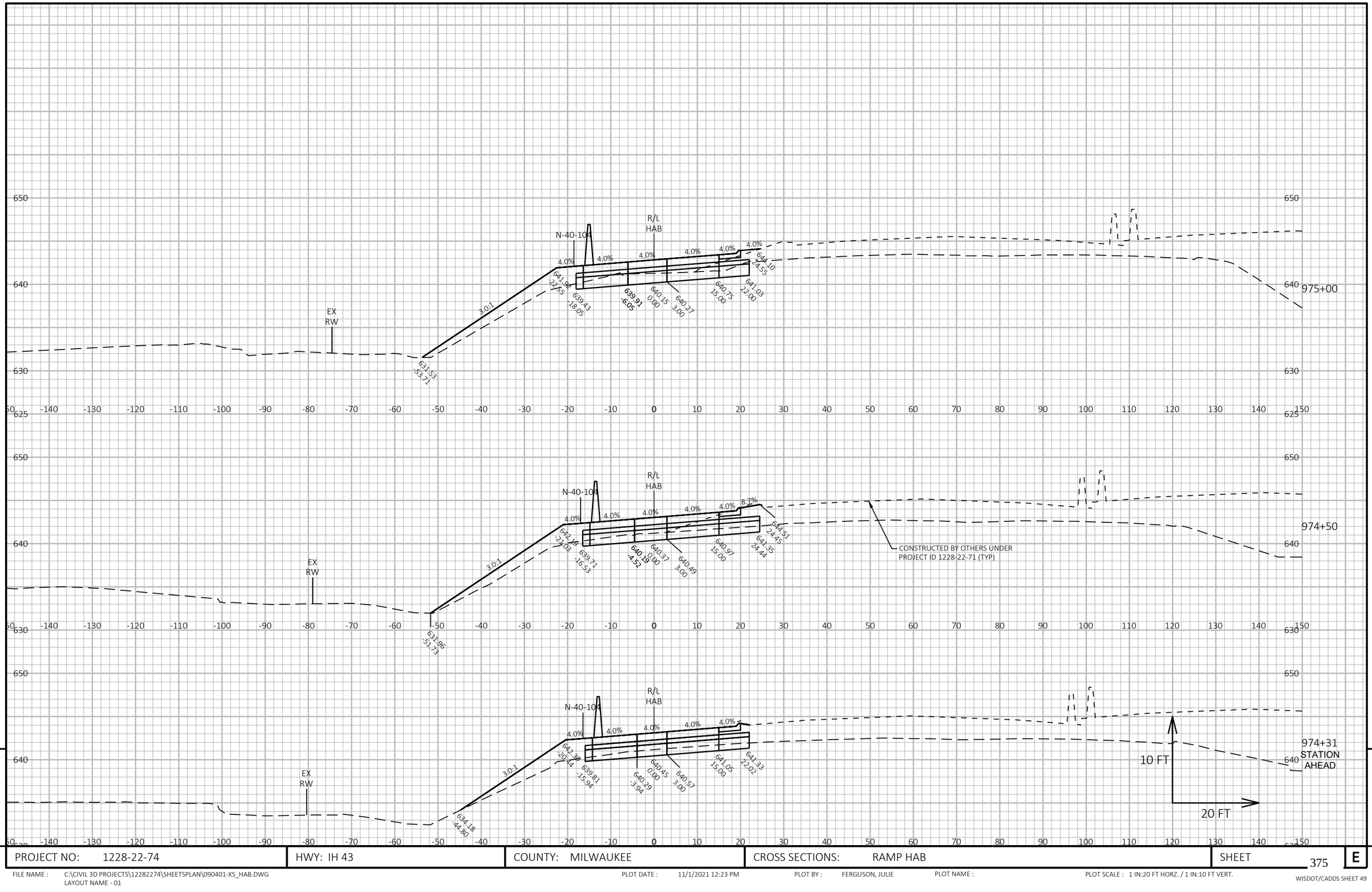
DIVISION 1 - RAMP HAB

STATION	REAL STATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)				
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT	EXPANDED FILL	EXPANDED EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
							NOTE 1	NOTE 2	NOTE 3		1.00 NOTE 1	1.10	1.30 NOTE 5	0.80 NOTE 7	NOTE 8
974+31 AH	97431.00	0.00	106.87	0.00	15.99	0.00	0	0	0	0	0	0	0	0	0
974+50	97450.00	19.00	63.73	0.00	37.28	0.00	60	0	19	0	60	21	0	0	39
975+00	97500.00	50.00	52.70	0.00	49.59	0.00	108	0	80	0	168	109	0	0	59
975+50	97550.00	50.00	53.70	0.00	94.24	0.00	99	0	133	0	267	255	0	0	12
976+00	97600.00	50.00	78.96	0.00	0.03	0.00	123	0	87	0	390	351	0	0	39
976+50	97650.00	50.00	97.72	0.00	0.37	0.00	164	0	0	0	554	351	0	0	203
977+00	97700.00	50.00	92.30	0.00	0.59	0.00	176	0	1	0	730	352	0	0	378
977+40 BK	97740.00	40.00	103.17	0.00	178.14	0.00	145	0	132	0	875	497	0	0	378
980+97 AH	98097.00	0.00	66.58	0.00	124.75	0.00	0	0	0	0	875	497	0	0	378
981+00	98100.00	3.00	45.60	0.00	51.58	0.00	6	0	10	0	881	508	0	0	373
981+50	98150.00	50.00	131.60	0.00	9.91	0.00	164	0	57	0	1,045	571	0	0	474
981+78 BK	98178.00	28.00	232.87	0.00	2.20	0.00	189	0	6	0	1,234	578	0	0	657
							1,234	0	525	0					

DIVISION 1 - W. HAMPTON AVENUE

STATION	REAL STATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)				
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT	EXPANDED FILL	EXPANDED EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
							NOTE 1	NOTE 2	NOTE 3		1.00 NOTE 1	1.10	1.30 NOTE 5	0.80 NOTE 7	NOTE 8
11+41 AH	1141.00	0.00	7.04	0.00	0.02	0.00	0	0	0	0	0	0	0	0	0
11+50	1150.00	9.00	6.85	0.00	1.39	0.00	2	0	0	0	2	0	0	0	2
12+00	1200.00	50.00	21.65	0.00	0.00	0.00	26	0	1	0	28	1	0	0	27
12+50	1250.00	50.00	14.79	0.00	1.51	0.00	34	0	1	0	62	2	0	0	60
12+89 BK	1289.00	39.00	24.07	0.00	7.50	0.00	28	0	7	0	90	10	0	0	80
13+35 AH	1335.00	0.00	31.35	0.00	0.40	0.00	0	0	0	0	90	10	0	0	80
13+50	1350.00	15.00	45.55	0.00	0.29	0.00	21	0	0	0	111	10	0	0	101
14+00	1400.00	50.00	225.19	0.00	0.79	0.00	251	0	1	0	362	11	0	0	351
14+50	1450.00	50.00	244.73	0.00	0.15	0.00	435	0	1	0	797	12	0	0	785
15+00	1500.00	50.00	233.57	0.00	0.22	0.00	443	0	0	0	1,240	12	0	0	1,228
15+50	1550.00	50.00	97.53	0.00	90.60	0.00	307	0	84	0	1,547	105	0	0	1,443
16+00	1600.00	50.00	79.36	0.00	109.10	0.00	164	0	185	0	1,711	308	0	0	1,403
16+50	1650.00	50.00	39.41	0.00	0.42	0.00	110	0	101	0	1,821	419	0	0	1,402
17+00	1700.00	50.00	24.21	0.00	0.00	0.00	59	0	0	0	1,880	419	0	0	1,461
17+04 BK	1704.00	4.00	23.60	0.00	0.00	0.00	4	0	0	0	1,884	419	0	0	1,465
							1,884	0	381	0					

Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
5 - EXPANDED EBS	WILL BE BACKFILLED WITH GRANULAR BACKFILL (OR CUT, OR BORROW)
7 - REDUCED EBS IN FILL	REDUCED EBS EXCAVATION THAT CAN BE USED IN FILL
8 - MASS ORDINATE	(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)

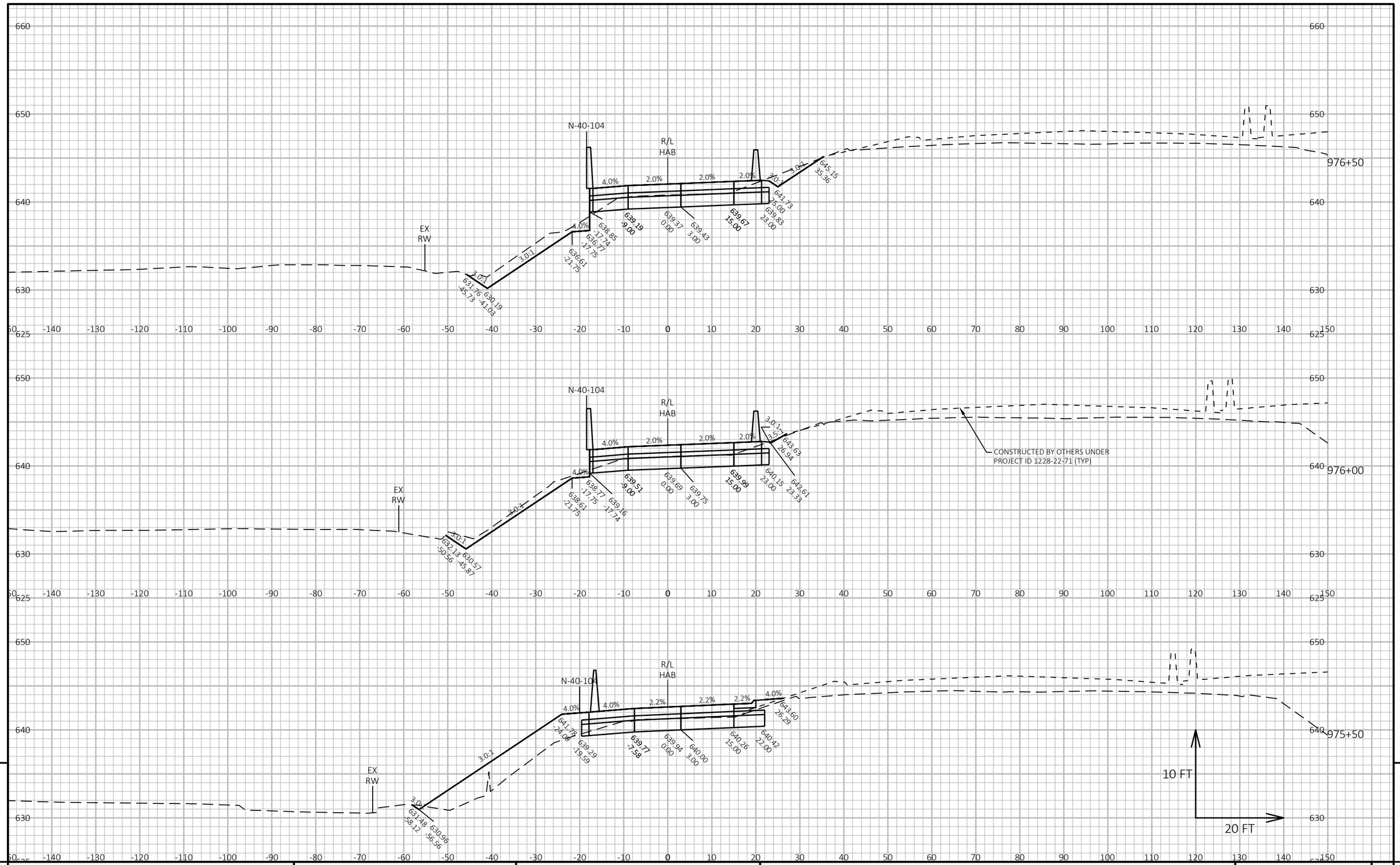


PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP HAB	SHEET 375	E

FILE NAME : C:\CIVIL 3D PROJECTS\12282274\SHEETSPLAN\090401-XS_HAB.DWG
LAYOUT NAME - 01

PLOT DATE : 11/1/2021 12:23 PM PLOT BY : FERGUSON, JULIE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



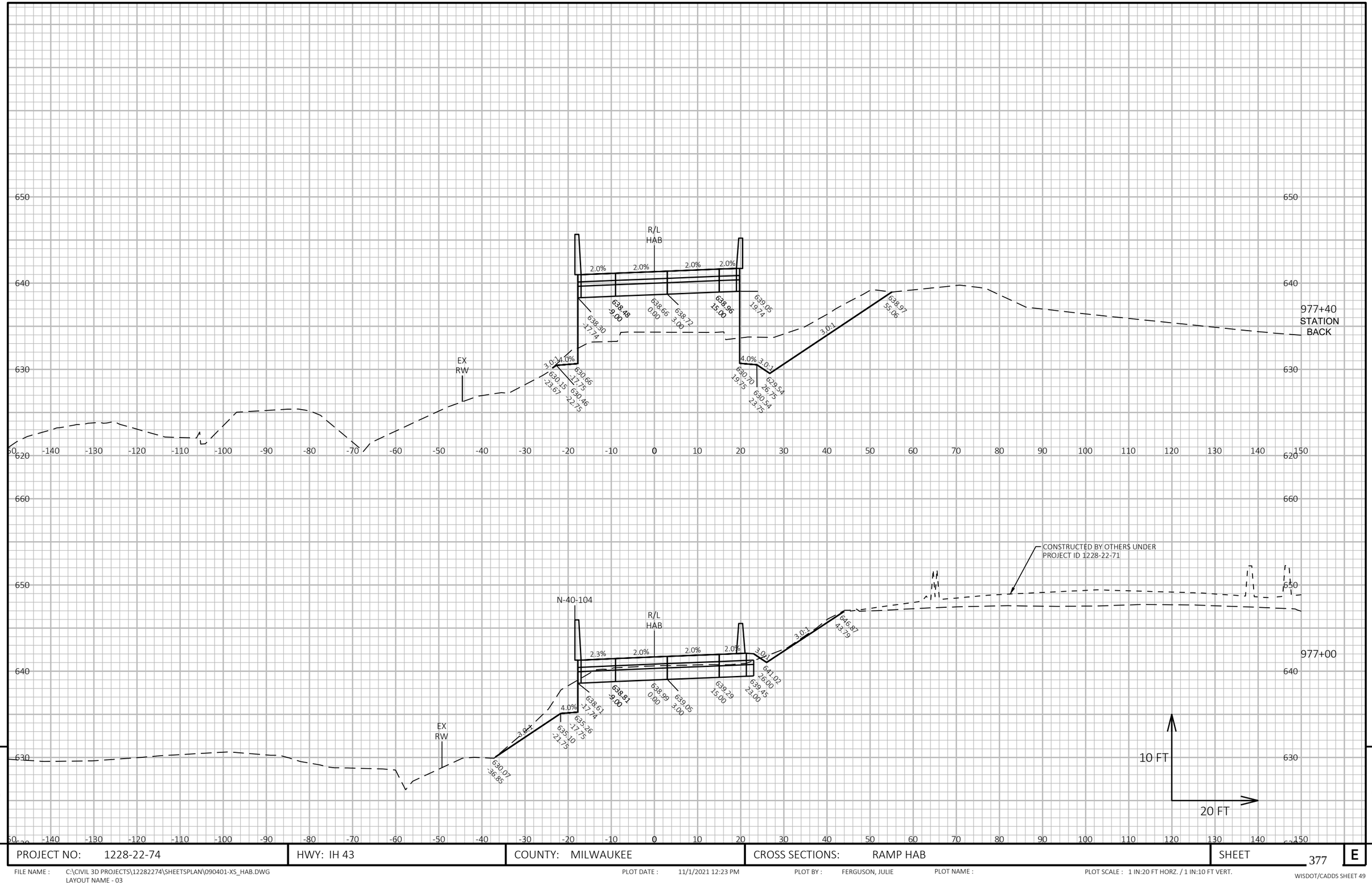
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PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP HAB	SHEET 376	E

FILE NAME : C:\CIVIL 3D PROJECTS\12282274\SHEETSPLAN\090401-XS_HAB.DWG
LAYOUT NAME - 02

PLOT DATE : 11/1/2021 12:23 PM PLOT BY : FERGUSON, JULIE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.



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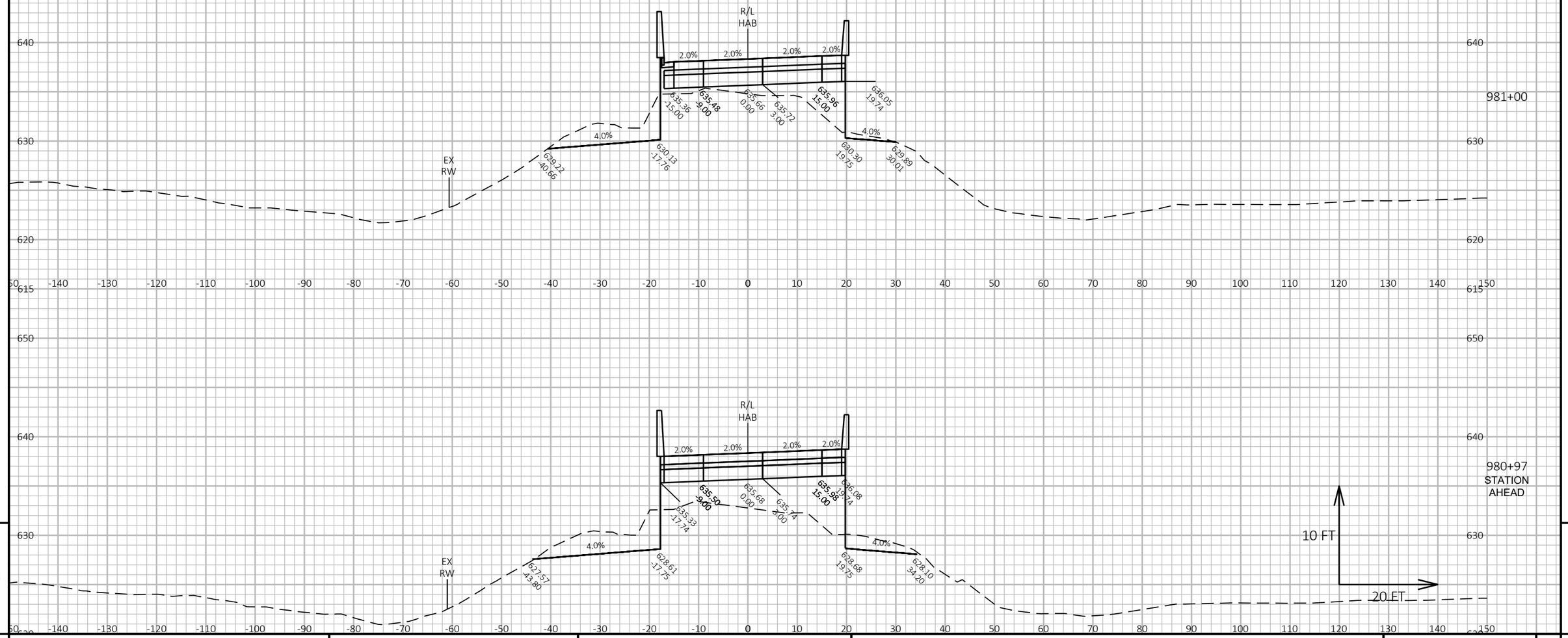
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PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP HAB	SHEET 377	E

FILE NAME : C:\CIVIL 3D PROJECTS\12282274\SHEETSPLAN\090401-XS_HAB.DWG
LAYOUT NAME - 03

PLOT DATE : 11/1/2021 12:23 PM PLOT BY : FERGUSON, JULIE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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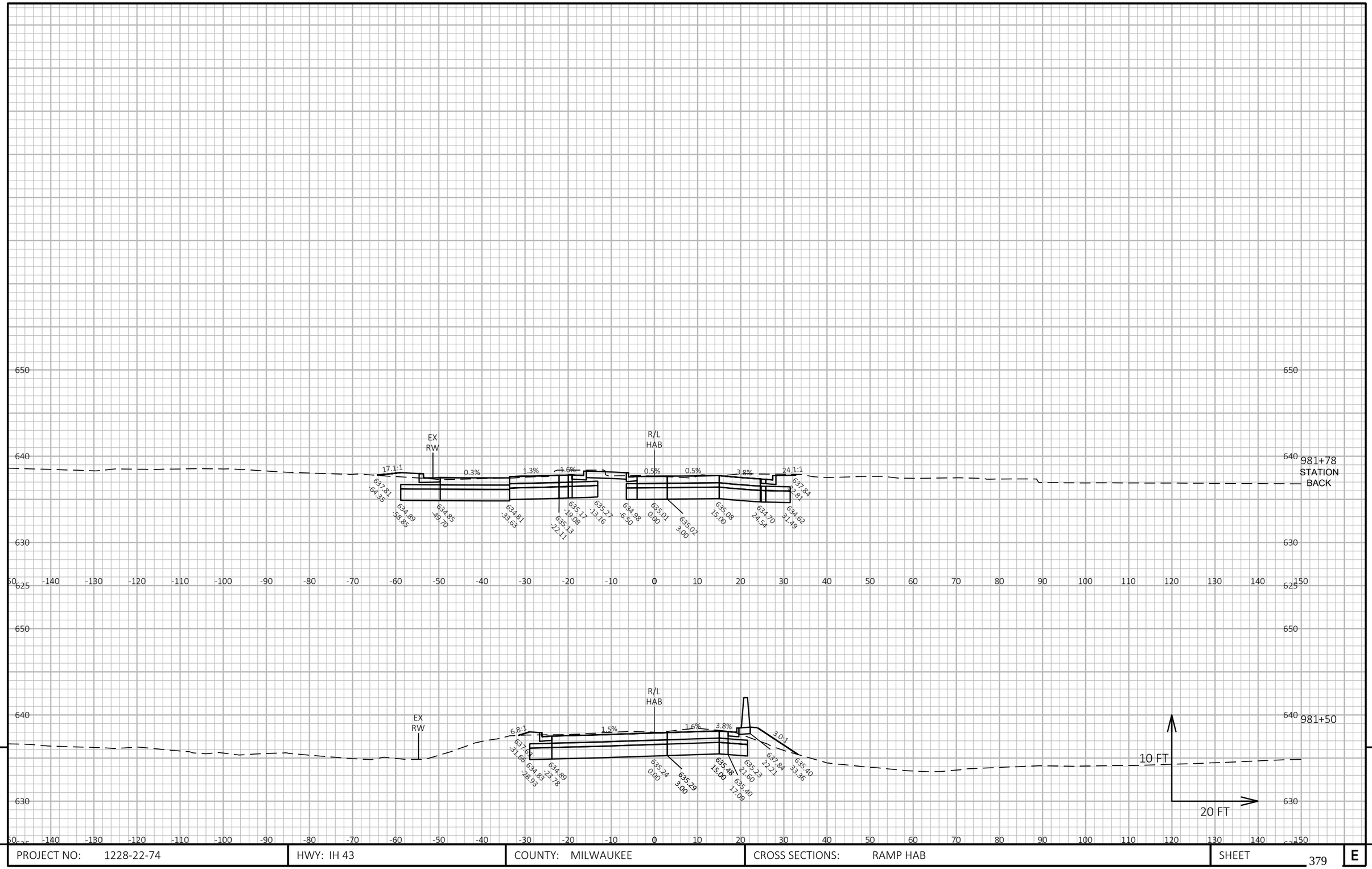
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PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP HAB	SHEET 378	E

FILE NAME : C:\CIVIL 3D PROJECTS\12282274\SHEETSPLAN\090401-XS_HAB.DWG
LAYOUT NAME - 04

PLOT DATE : 11/1/2021 12:23 PM PLOT BY : FERGUSON, JULIE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP HAB	SHEET 379	E

FILE NAME : C:\CIVIL 3D PROJECTS\12282274\SHEETSPLAN\090401-XS_HAB.DWG
LAYOUT NAME - 05

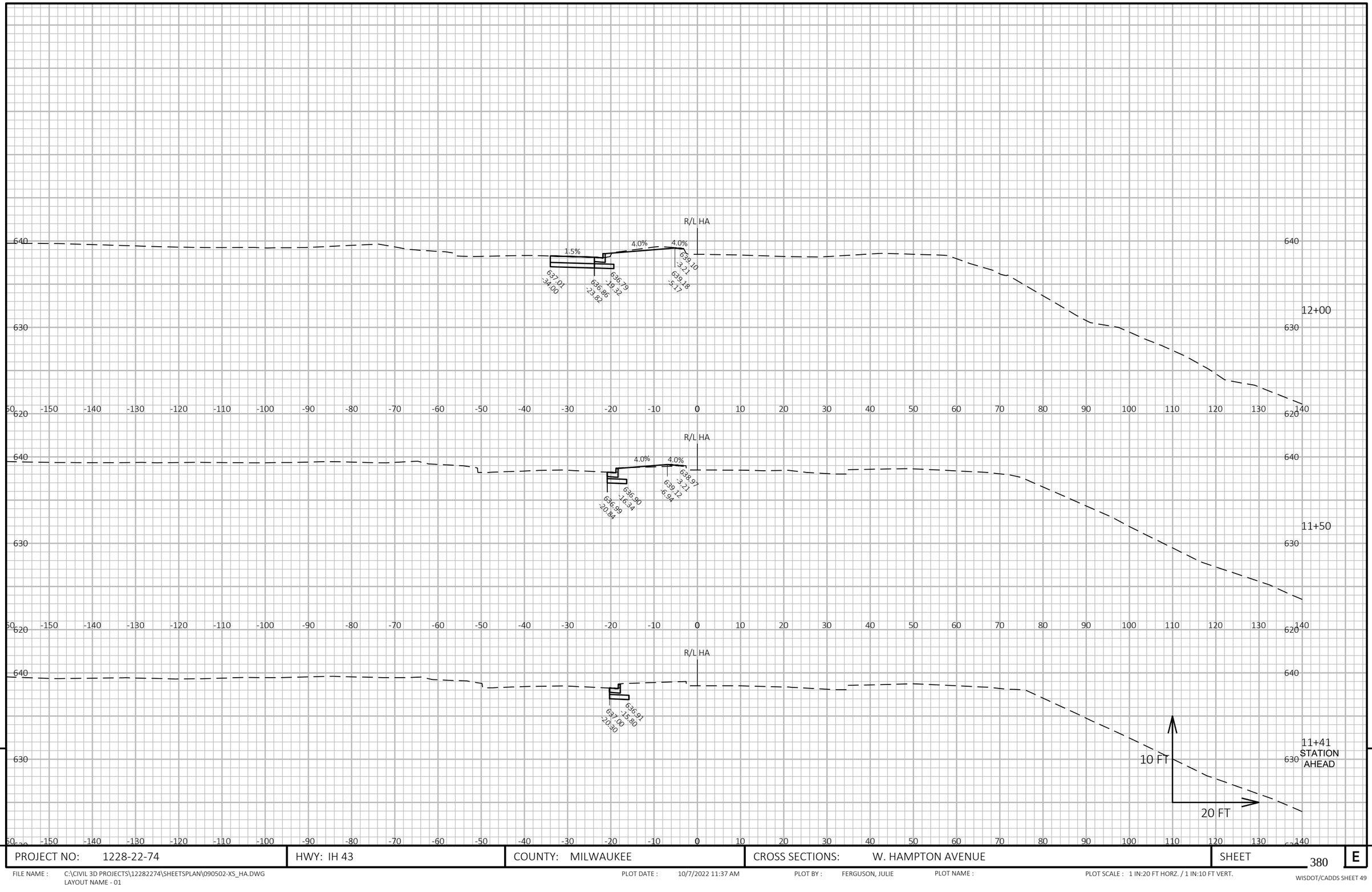
PLOT DATE : 11/1/2021 12:23 PM

PLOT BY : FERGUSON, JULIE

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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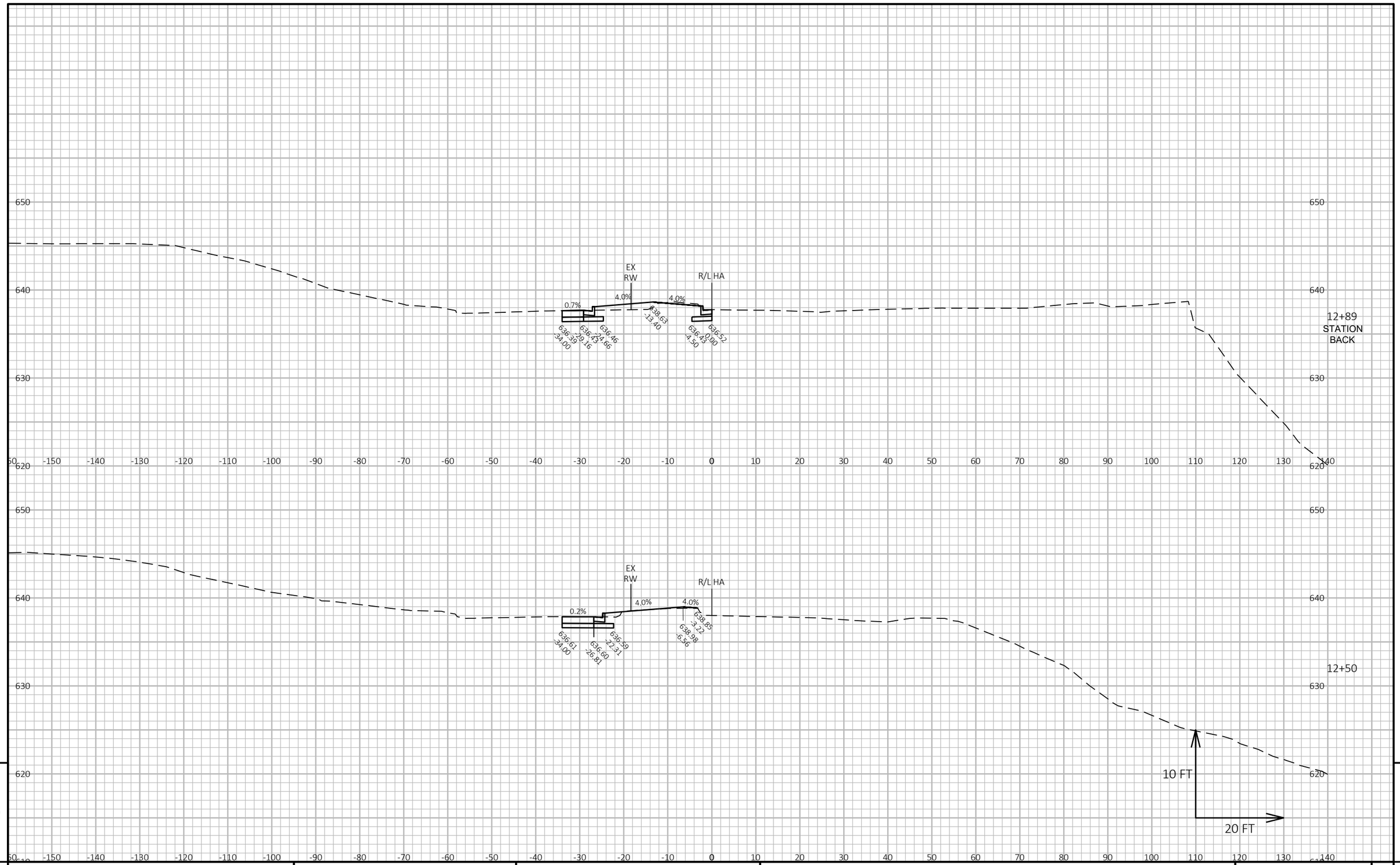
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PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: W. HAMPTON AVENUE	SHEET 380	E

FILE NAME : C:\CIVIL 3D PROJECTS\12282274\SHEETSPLAN\090502-XS_HA.DWG
LAYOUT NAME - 01

PLOT DATE : 10/7/2022 11:37 AM PLOT BY : FERGUSON, JULIE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



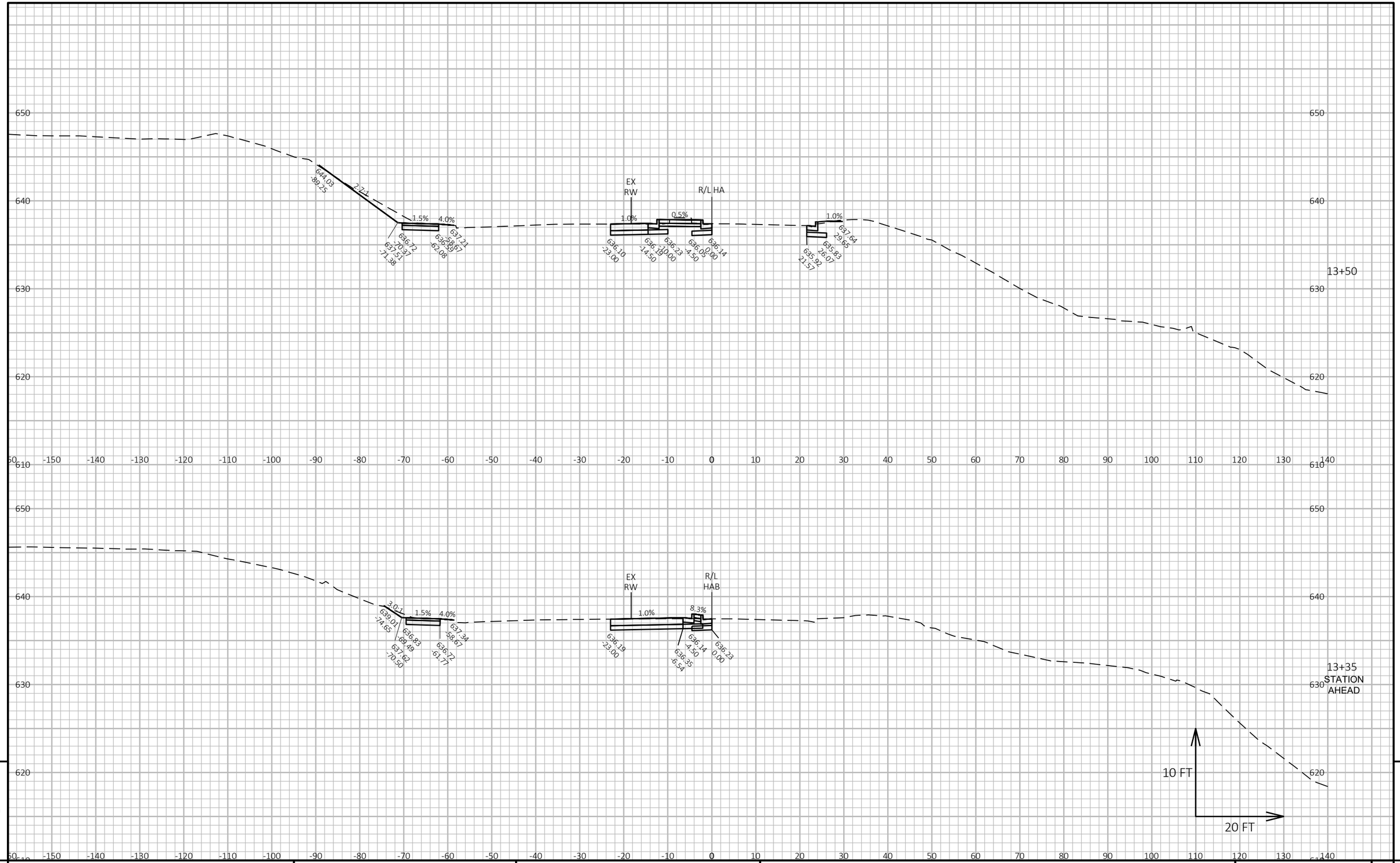
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PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: W. HAMPTON AVENUE	SHEET 381	E

FILE NAME : C:\CIVIL 3D PROJECTS\12282274\SHEETSPLAN\090502-XS_HA.DWG
LAYOUT NAME - 02

PLOT DATE : 10/7/2022 11:37 AM PLOT BY : FERGUSON, JULIE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



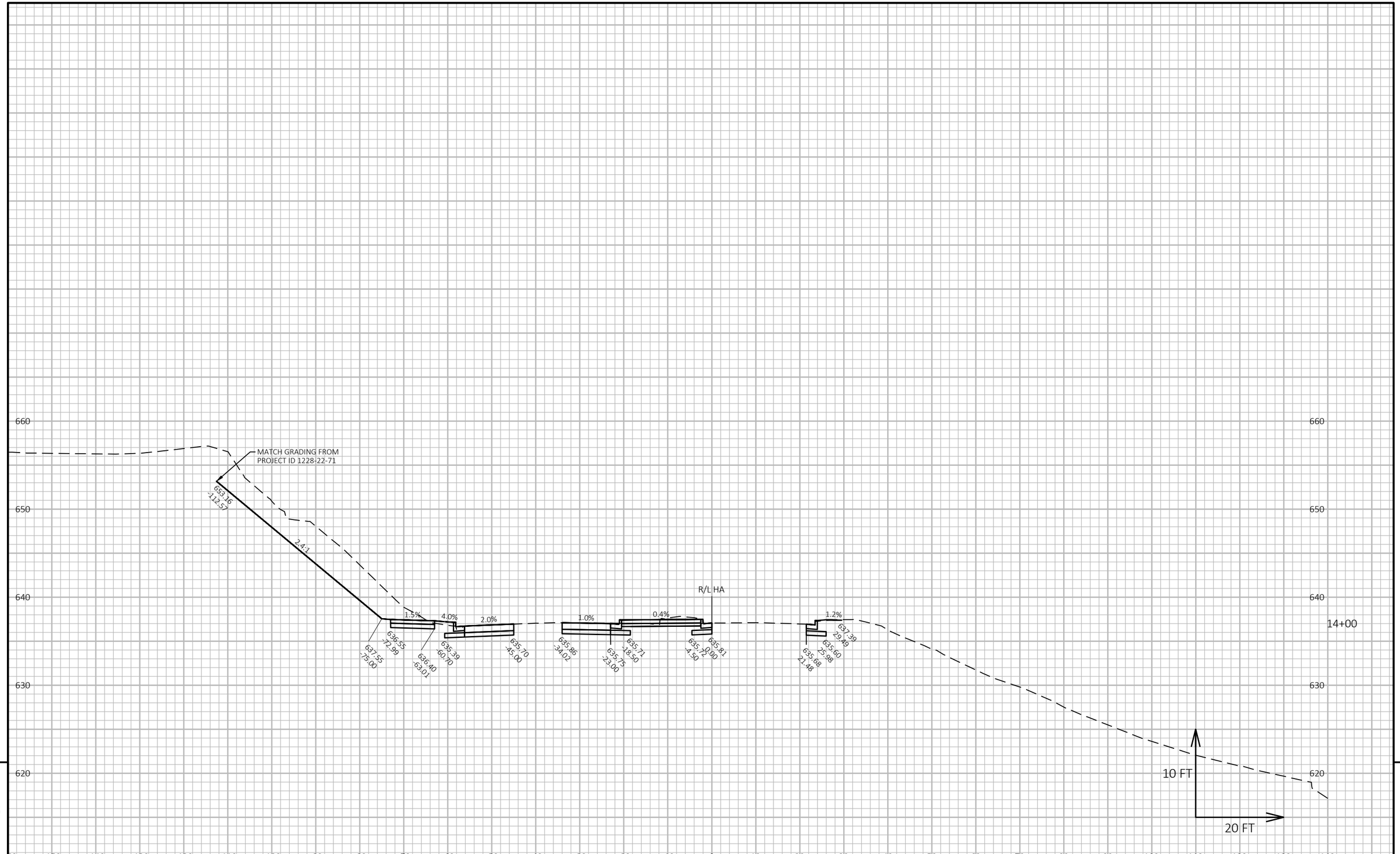
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PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: W. HAMPTON AVENUE	SHEET 382	E

FILE NAME : C:\CIVIL 3D PROJECTS\12282274\SHEETSPLAN\090502-XS_HA.DWG
LAYOUT NAME - 03

PLOT DATE : 10/7/2022 11:37 AM PLOT BY : FERGUSON, JULIE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: W. HAMPTON AVENUE	SHEET 383	E

FILE NAME : C:\CIVIL 3D PROJECTS\12282274\SHEETSPLAN\090502-XS_HA.DWG
LAYOUT NAME - 04

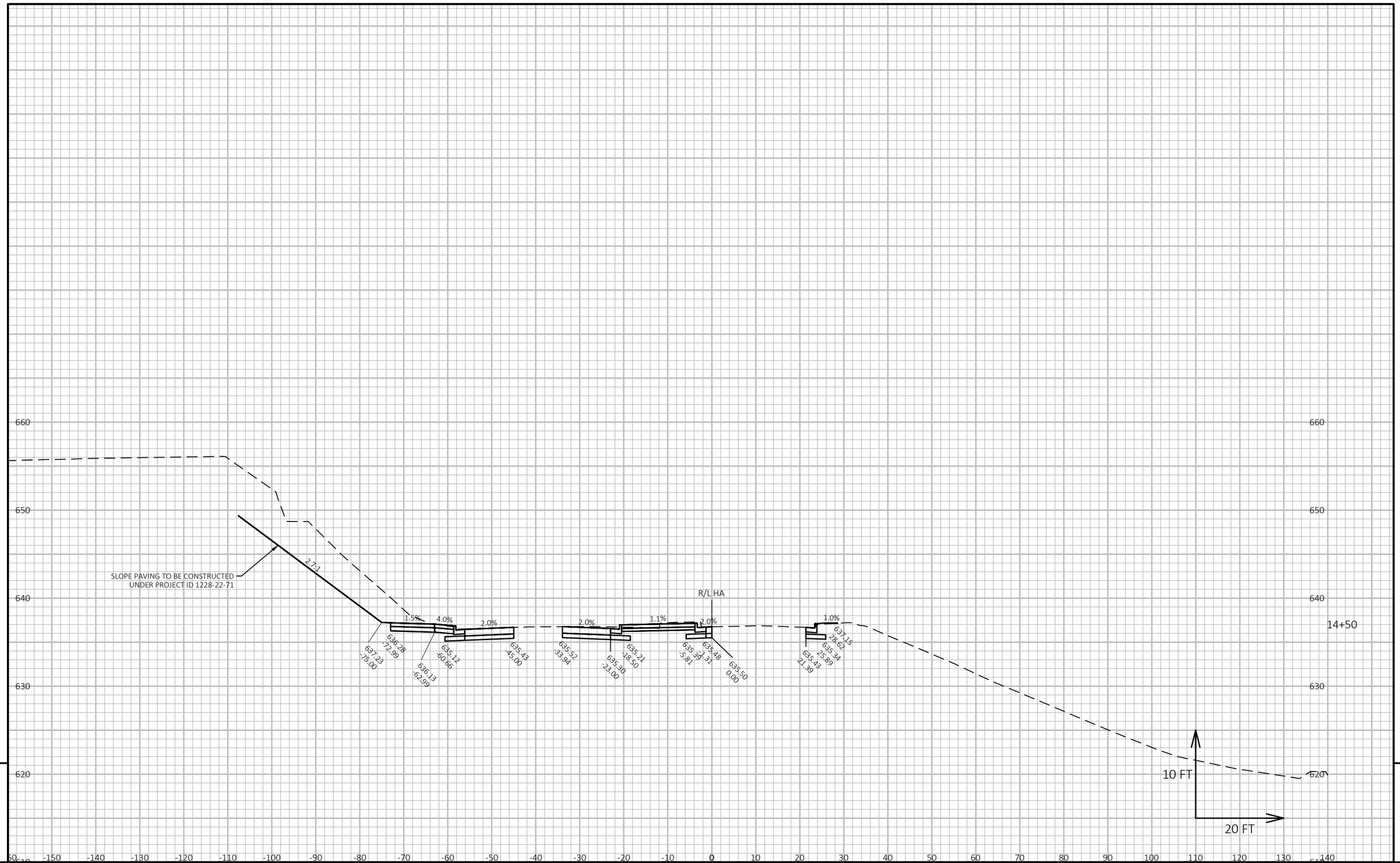
PLOT DATE : 10/7/2022 11:37 AM

PLOT BY : FERGUSON, JULIE

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



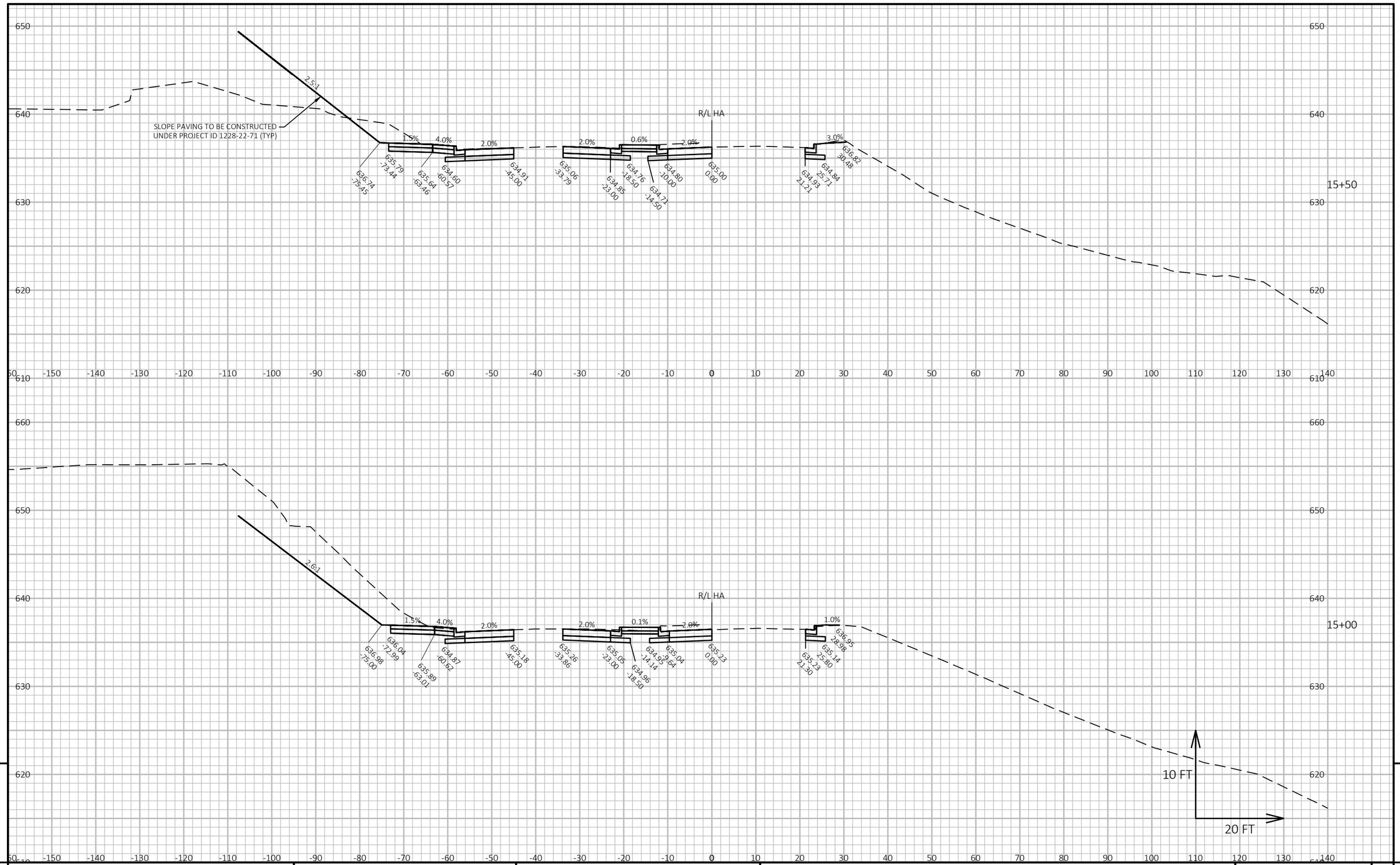
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PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: W. HAMPTON AVENUE	SHEET 384	E

FILE NAME : C:\CIVIL 3D PROJECTS\12282274\SHEETSPLAN\090502-XS_HA.DWG
LAYOUT NAME - 05

PLOT DATE : 10/7/2022 11:37 AM PLOT BY : FERGUSON, JULIE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

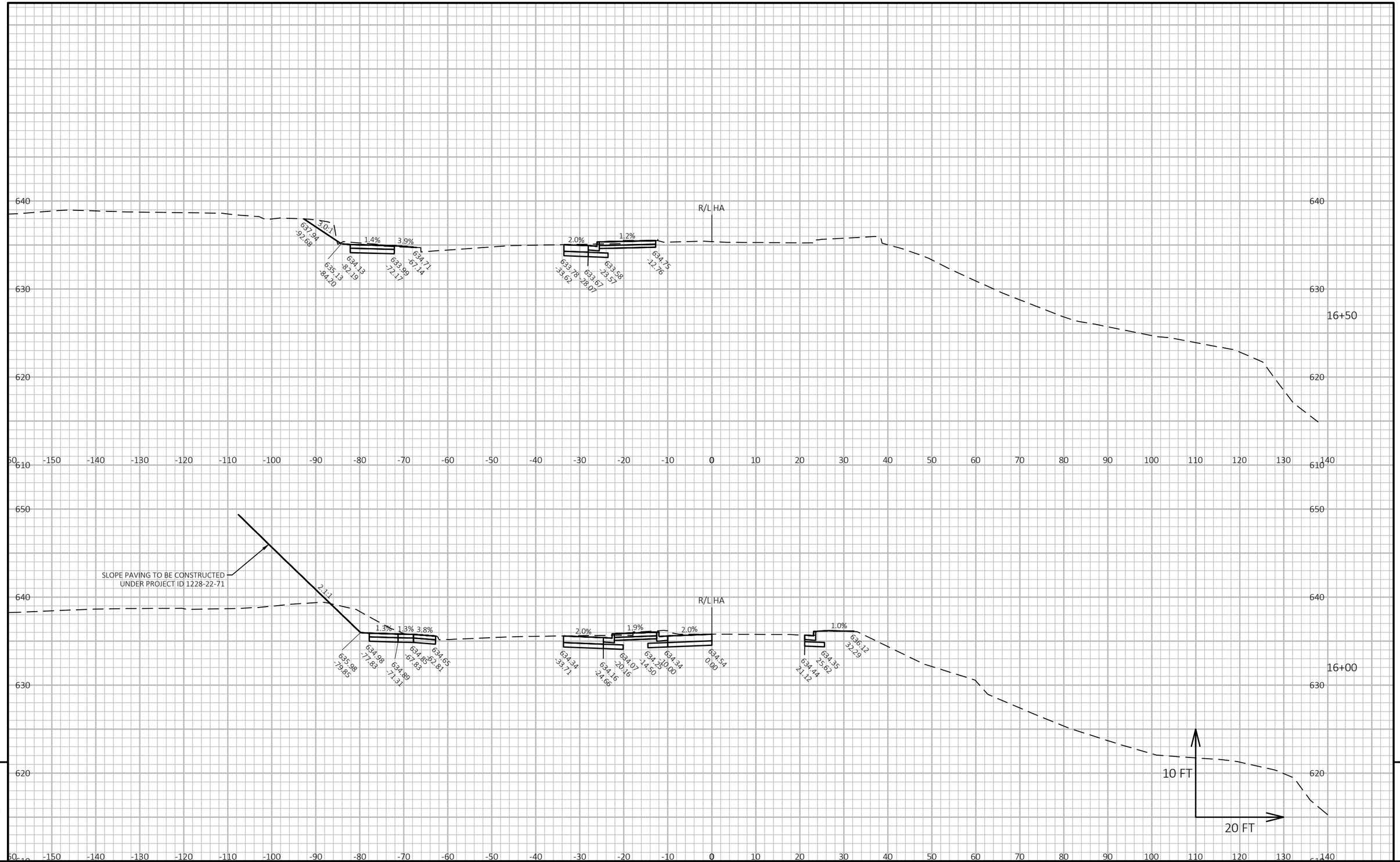


PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: W. HAMPTON AVENUE	SHEET 385 E

FILE NAME : C:\CIVIL 3D PROJECTS\12282274\SHEETSPLAN\090502-XS_HA.DWG
LAYOUT NAME - 06

PLOT DATE : 10/7/2022 11:38 AM PLOT BY : FERGUSON, JULIE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

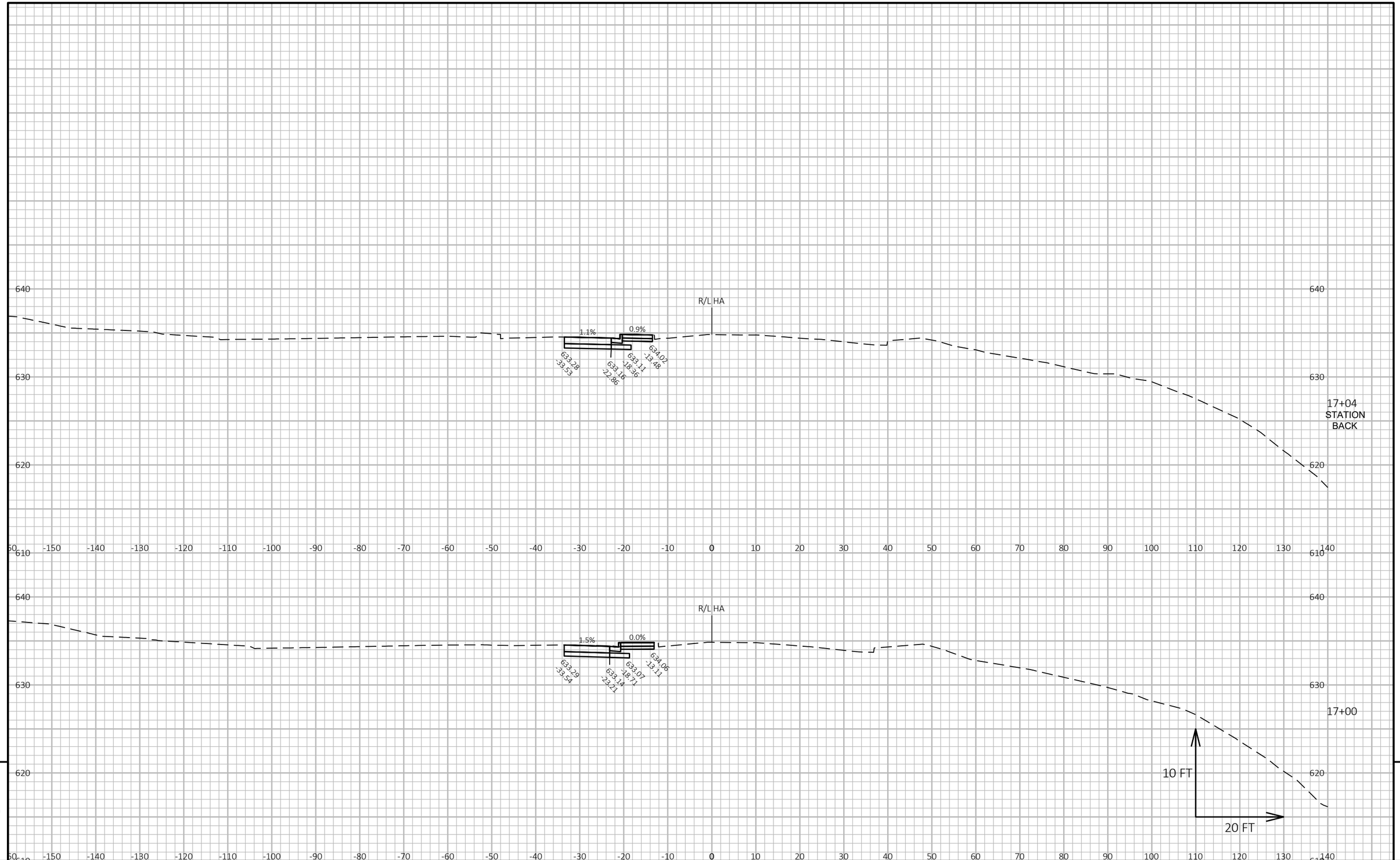


PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: W. HAMPTON AVENUE	SHEET 386	E

FILE NAME : C:\CIVIL 3D PROJECTS\12282274\SHEETSPLAN\090502-XS_HA.DWG
LAYOUT NAME - 07

PLOT DATE : 10/7/2022 11:38 AM PLOT BY : FERGUSON, JULIE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1228-22-74	HWY: IH 43	COUNTY: MILWAUKEE	CROSS SECTIONS: W. HAMPTON AVENUE	SHEET 387	E

FILE NAME : C:\CIVIL 3D PROJECTS\12282274\SHEETSPLAN\090502-XS_HA.DWG
LAYOUT NAME - 08

PLOT DATE : 10/7/2022 11:38 AM PLOT BY : FERGUSON, JULIE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

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