GRE DECEMBER 2021

PROJECT ID: 1440-40-71

WITH: N/A

COUNTY: FOND DU LAC

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 = 214

29

N

DESIGN DESIGNATION

A.A.D.T.	2022	=	32,310
A.A.D.T.	2042	=	37,280
D.H.V.	2042	=	2,222
D.D.		=	59/41
T.		=	6.1%
DESIGN SPEED		=	40 MPH
ESALS		=	8,000,000 (CONCRETE) 5,600,000 (HMA)

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

W JOHNSON ST, C OF FOND DU LAC

PIONEER ROAD INTERSECTION

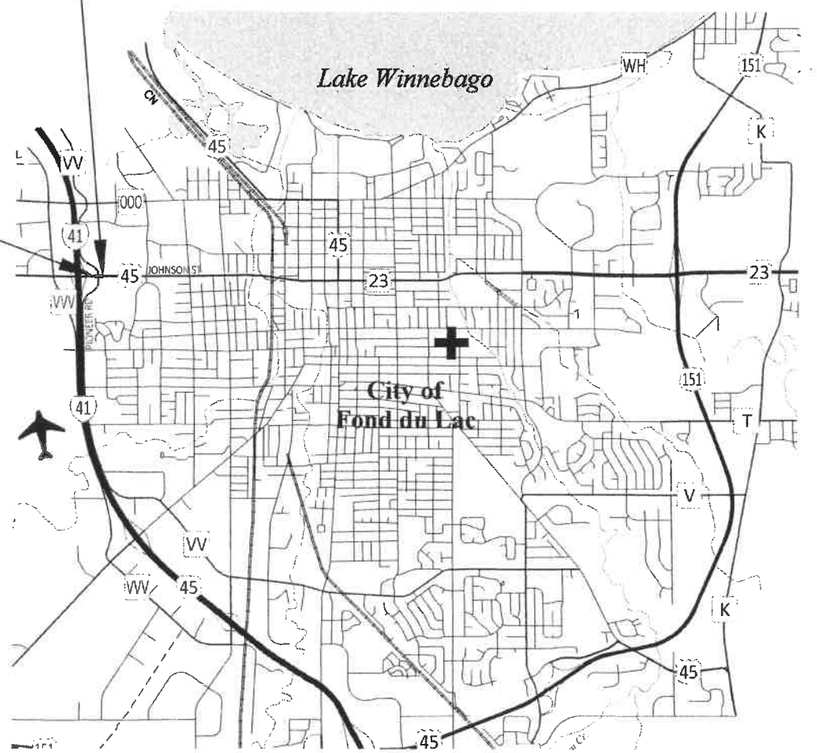
USH 45

FOND DU LAC COUNTY

STATE PROJECT NUMBER
1440-40-71

END PROJECT
STA 111'EB'+06.56

BEGIN PROJECT
STA 104'EB'+83.25
Y = 388170.318
X = 808101.254



LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.118 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), FOND DU LAC COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES. GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1440-40-71	WISC 2022087	1

ACCEPTED FOR

CITY OF FOND DU LAC

Date 7-22-21

Paul Dewies, PE
DIRECTOR OF PUBLIC WORKS

ORIGINAL PLANS PREPARED BY

GREMMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
Stevens Point • Fond du Lac
85 South Pioneer Road, Suite 300 • Fond du Lac, WI 54935
(920) 924-5720 • fax (920) 924-5725

WISCONSIN
BENJAMIN L. OITZINGER
E-36149
NEENAH, WI
PROFESSIONAL ENGINEER

DATE: 7-16-2021

BENJAMIN L. OITZINGER, PE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	GREMMER & ASSOCIATES, INC.
Designer	GREMMER & ASSOCIATES, INC.
Project Manager	BRYAN LEARST, PE
Regional Examiner	NORTHEAST REGION
Regional Supervisor	ROBERT WAGNER, PE

APPROVED FOR THE DEPARTMENT

DATE: 7/22/2021

(Signature) P.E.

E

GENERAL NOTES

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

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

A VERTICAL SAW CUT SHALL BE MADE THROUGH EXISTING DRIVEWAYS, SIDEWALKS AND PAVEMENTS AT THE REMOVAL LIMITS.

SAWCUT LOCATIONS SHOWN ON THE PLANS ARE SUBJECT TO ADJUSTMENT BY THE ENGINEER IN THE FIELD.

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

TOPSOIL, FERTILIZER, SEED AND MULCH OR EROSION MAT AS SHOWN IN PLANS OR AS DIRECTED BY THE ENGINEER SHALL BE PLACED ON ALL DISTURBED AREAS, EXCLUSIVE OF THE AREA OCCUPIED BY THE NEW PAVEMENTS, SIDEWALKS, ENTRANCES, AND RELATED STRUCTURES.

SECTIONS AS SHOWN ON THE CROSS-SECTIONS INCLUDE THE THICKNESS OF TOPSOIL WHERE REQUIRED.

EROSION CONTROL ITEMS SHOWN ARE APPROXIMATE, THE EXACT LOCATION SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THAT THE MEASURE IS NO LONGER NECESSARY. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING EROSION CONTROL MEASURE AS DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL AND DETOUR SIGNS SHALL NOT BE PLACED WITHIN 50' OF RAILROAD RIGHT OF WAY.

ABBREVIATIONS

A.A.D.T.	ANNUAL AVERAGE DAILY TRAFFIC
A.D.T.	AVERAGE DAILY TRAFFIC
AE, AEW	APRON ENDWALL
AGG	AGGREGATE
ASPH	ASPHALT
BAD	BASE AGGREGATE DENSE
BM	BENCHMARK
CABC	CRUSHED AGGREGATE BASE COURSE
CC	CENTER OF CURVATURE
C/L	CENTER LINE
CONC	CONCRETE
CMCP	CORRUGATED METAL CULVERT PIPE
CMP	CORRUGATED METAL PIPE
D	DEGREE OF CURVE
Δ	DELTA
D.H.V.	DESIGN HOURLY VOLUME
E	EXTERNAL DISTANCE FROM MIDPOINT OF CIRCULAR CURVE FROM ANGLE INTERSECTION
EL, ELEV	ELEVATION
ESALS	EQUIVALENT SINGLE AXLE LOADS
EXC	EXCAVATION
F/L, FL	FLOW LINE
HT	HEIGHT
INTER	INTERSECTION
INV	INVERT
L	LENGTH OF CURVE
MP	MARKER POST
NC	NORMAL CROWN
NOM	NOMINAL
NOR, NORM	NORMAL
PAVT	PAVEMENT
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PI	POINT OF INTERSECTION
P.L.	PROPERTY LINE
PLE	PERMANENT LIMITED EASEMENT
PT	POINT OF TANGENT
R	RADIUS OF CURVE
R/L	REFERENCE LINE
R/W	RIGHT OF WAY
RC	REVERSE CROWN
RCP	REINFORCED CONCRETE PIPE
REQ'D	REQUIRED
RO	RUN OFF LENGTH
SALV	SALVAGED
SDD	STANDARD DETAIL DRAWING(S)
SE	SUPERELEVATION
SEG	SEGMENT
SHLD	SHOULDER
S/L	SURVEY LINE
T.	PERCENT TRUCKS
T	TANGENT LENGTH
TEMP	TEMPORARY
TER	TERRACE
TLE	TEMPORARY LIMITED EASEMENT
TYP	TYPICAL
V	VELOCITY OR DESIGN SPEED
VAR	VARIABLE

ORDER OF SECTION 2 SHEETS

REFERENCE LINE CALL OUTS

'EB'	EASTBOUND STH 23/USH 45 (JOHNSON STREET)
'WB'	WESTBOUND STH 23/USH 45 (JOHNSON STREET)
'VV'	CTH VV (PIONEER ROAD)
'A'	EASTBOUND STH23/USH 45 SLOTTED LEFT TURN LANE
'B'	WESTBOUND STH23/USH 45 SLOTTED LEFT TURN LANE
'C'	WESTBOUND STH23/USH 45 RIGHT TURN LANE

UTILITIES

ELECTRIC & GAS

ALLIANT ENERGY CORPORATION - CORPORATE
200 FIRST STREET
CEDAR RAPIDS, IA 52401
PHONE: (319) 786-4768
ATTN: MARY MONTGOMERY
EMAIL: marymontgomery@alliantenergy.com

ALLIANT ENERGY CORPORATION - LOCAL
883 WEST SCOTT STREET
FOND DU LAC, WI 54937
PHONE: (920) 322-6772
MOBILE: (920) 946-6498
ATTN: ALLYSA DUCAT
EMAIL: allysaducat@alliantenergy.com

COMMUNICATIONS

AT&T
70 EAST DIVISION STREET
FOND DU LAC, WI 54935
PHONE: (920) 929-1013
MOBILE: (920) 410-5104
ATTN: CHARLES BARTELT
EMAIL: cb1461@att.com

COMMUNICATIONS

CHARTER COMMUNICATIONS
165 KNIGHTS WAY
FOND DU LAC, WI 54935
PHONE: (920) 907-7724
MOBILE: (920) 794-4946
ATTN: TODD HILDEBRANDT
EMAIL: todd.hildebrandt@charter.com

COMMUNICATIONS

CITY OF FOND DU LAC
530 DOTY STREET
FOND DU LAC, WI 54935
PHONE: (920) 251-9852
ATTN: THOMAS CONTO
EMAIL: tconto@fdl.wi.gov

WATER

CITY OF FOND DU LAC
109 NORTH MACY STREET
FOND DU LAC, WI 54935
PHONE: (920) 322-3683
ATTN: TRAVIS KLOETZKE
EMAIL: tkloetzke@fdl.wi.gov

SEWER

CITY OF FOND DU LAC
160 SOUTH MACY STREET
P.O. BOX 150
FOND DU LAC, WI 54935-0150
PHONE: (920) 322-3473
MOBILE: (920) 517-7890
ATTN: PAUL DEVRIES
EMAIL: pdevries@fdl.wi.gov

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

DNR AREA LIAISON

WISCONSIN DEPT. OF NATURAL RESOURCES
NORTHEAST REGION HQ
2984 SHAWANO AVENUE
GREEN BAY, WI 54313
PHONE: (920) 662-5130
ATTN: MR. JAY SCHIEFELBEIN
EMAIL: jeremiah.schiefelbein@wisconsin.gov

2

2

N

BENCH MARKS

BM	DESCRIPTION	ELEVATION
G	ARROW ON FLANGE OF HYDRANT, SOUTHEAST CORNER OF CTH VV AND WEST JOHNSON STREET	774.03
H	ARROW ON FLANGE OF HYDRANT, SOUTHEAST CORNER OF WEST JOHNSON STREET AND FOREST PLAZA ENTRANCE	764.34
I	ARROW ON FLANGE OF HYDRANT, SOUTHEAST CORNER OF WEST JOHNSON STREET AND ENTRANCE NEAR MCDONALDS	761.96

**VERTICAL DATUM REFERENCED TO NAVD88 (2012).

CTH VVV
ROLLING MEADOWS DRIVE

CTH VV
PIONEER ROAD

505'VV'

CONSTRUCTION LIMITS
STA 501'VV'+48.40

END PROJECT
STA 111'EB'+06.76

90'WB'
90'EB'
95'WB'
95'EB'
100'WB'
100'EB'
105'WB'
105'EB'
110'WB'
110'EB'
115'WB'
115'EB'

USH 45 SB/ STH 23

JOHNSON STREET

BM G
CP 1
CP 2
BM H
CP 3
BM I

BEGIN PROJECT
STA 104'EB'+83.25

IH 41 SB
IH 41 NB

CTH VVV
ROLLING MEADOWS DRIVE

CTH VV
PIONEER ROAD

PIONEER ROAD SOUTH OF JOHNSON STREET SHALL BE CONSTRUCTED AS PART OF A SEPARATE PROJECT

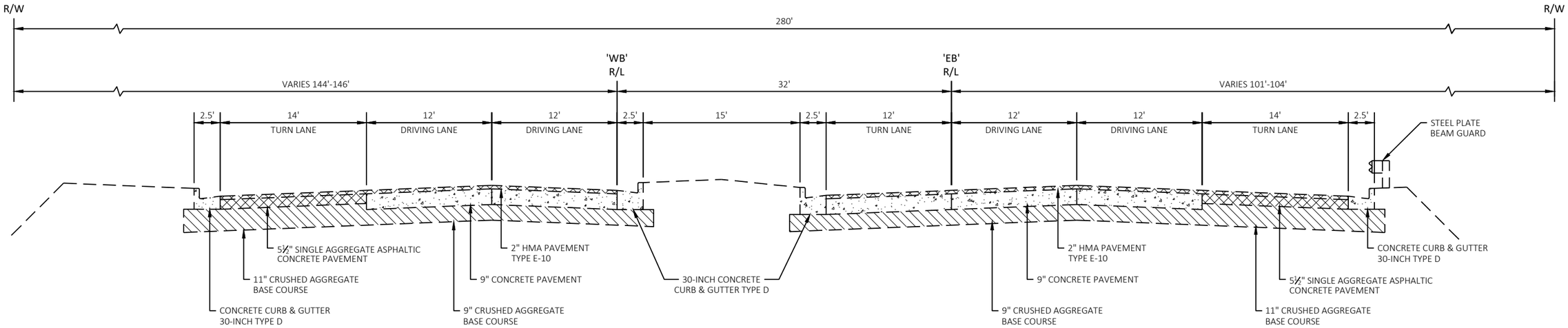
CONTROL POINT TABLE		
Point #	Northing	Easting
1	388112.3770	808441.2840
2	388233.2010	808999.7040
3	388114.7470	809445.7810

PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-020201-PO.DWG
LAYOUT NAME - Sheet-01

PLOT DATE : 9/22/2021 9:43 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:200 FT

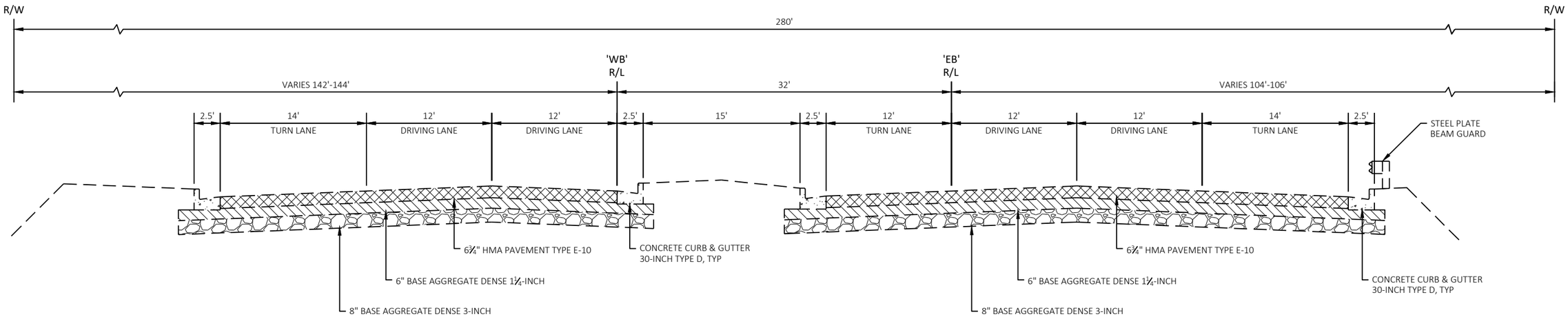
WISDOT/CADDS SHEET 42



TYPICAL EXISTING SECTION

JOHNSON STREET

STA 105'EB'+50 - STA 107'EB'+14



TYPICAL EXISTING SECTION

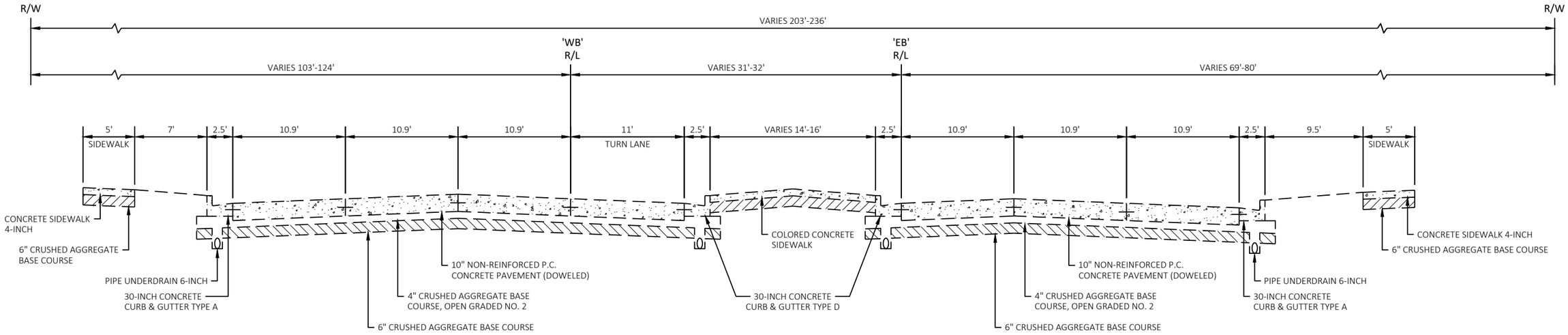
JOHNSON STREET

STA 104'EB'+73 - STA 105'EB'+50

PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	TYPICAL SECTIONS	SHEET 4	E

FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-020301-TS.DWG
LAYOUT NAME - Sheet - 01

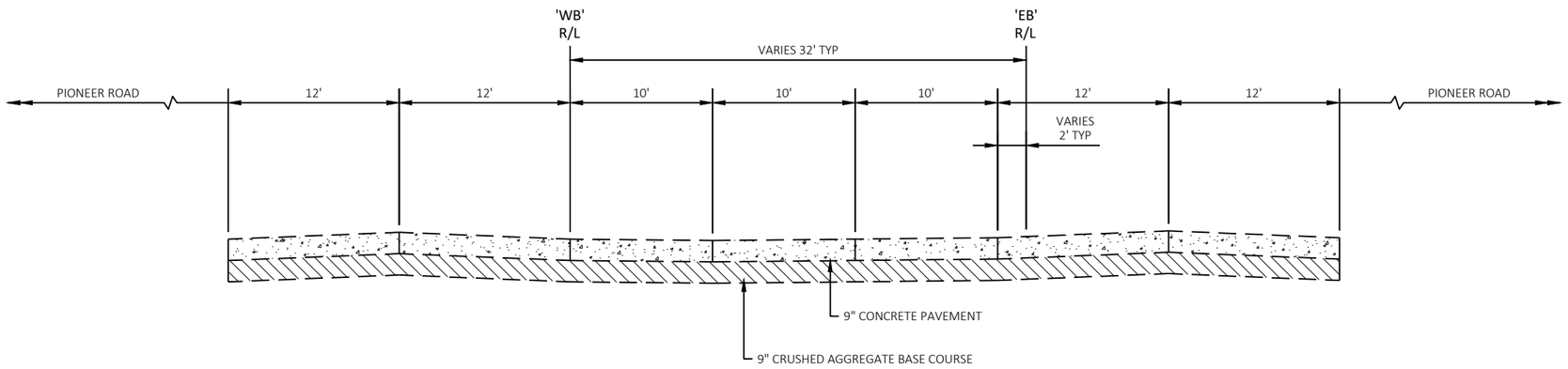
PLOT DATE : 7/15/2021 11:19 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:10 FT



TYPICAL EXISTING SECTION

JOHNSON STREET

STA 107'EB'+66 - STA 109'EB'+97



TYPICAL EXISTING SECTION

JOHNSON STREET

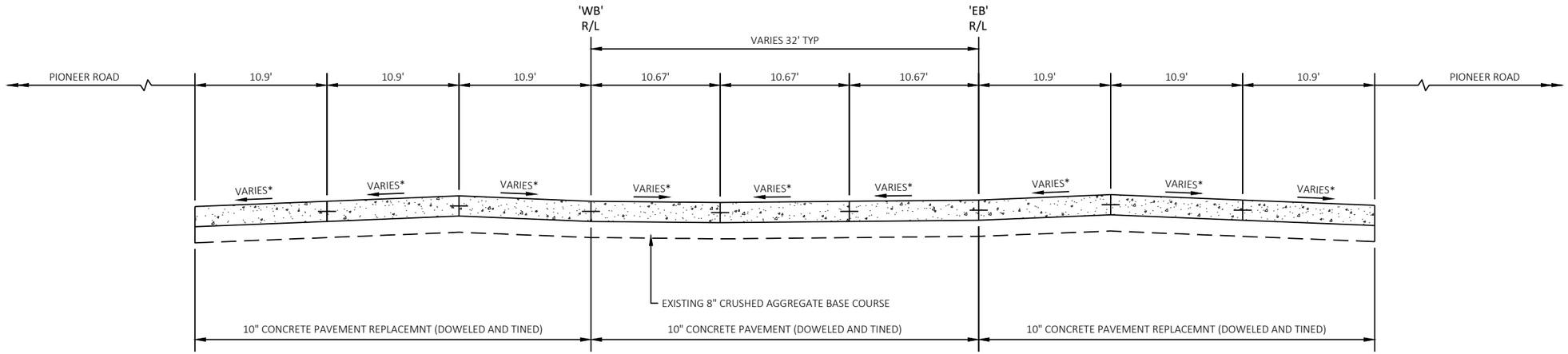
STA 107'EB'+14 - STA 107'EB'+66

PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	TYPICAL SECTIONS	SHEET 5	E

FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-020301-TS.DWG
LAYOUT NAME - Sheet - 02

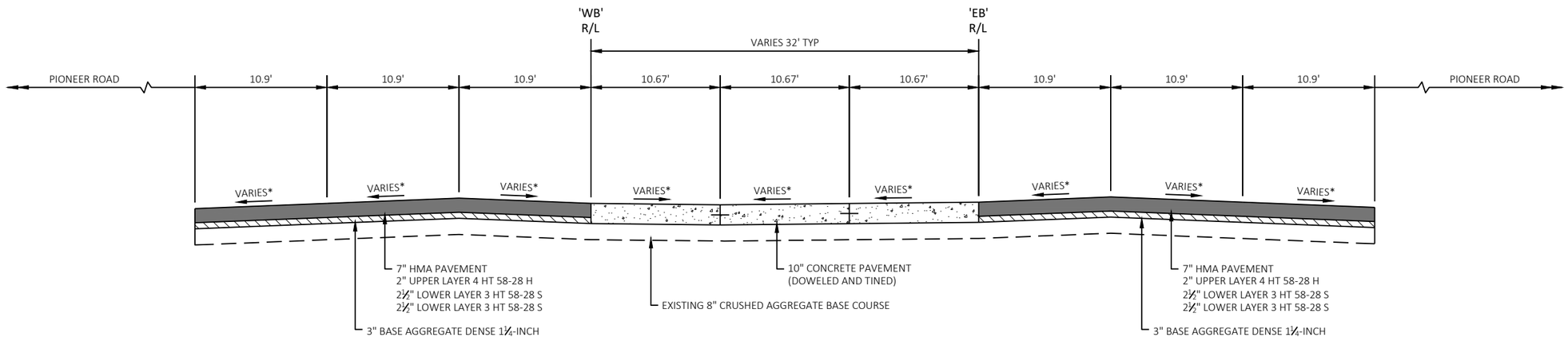
PLOT DATE : 7/15/2021 11:19 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 42



TYPICAL FINISHED SECTION

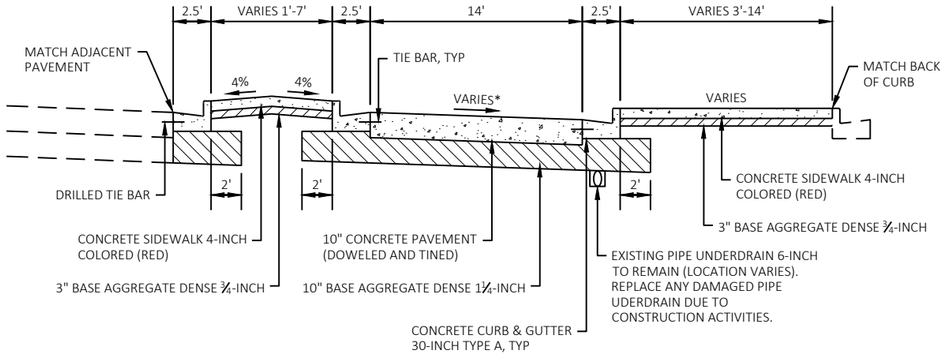
JOHNSON STREET
STA 107'EB'+08 - STA 108'EB'+06
STA 107'WB'+08 - STA 108'WB'+09



TYPICAL FINISHED SECTION

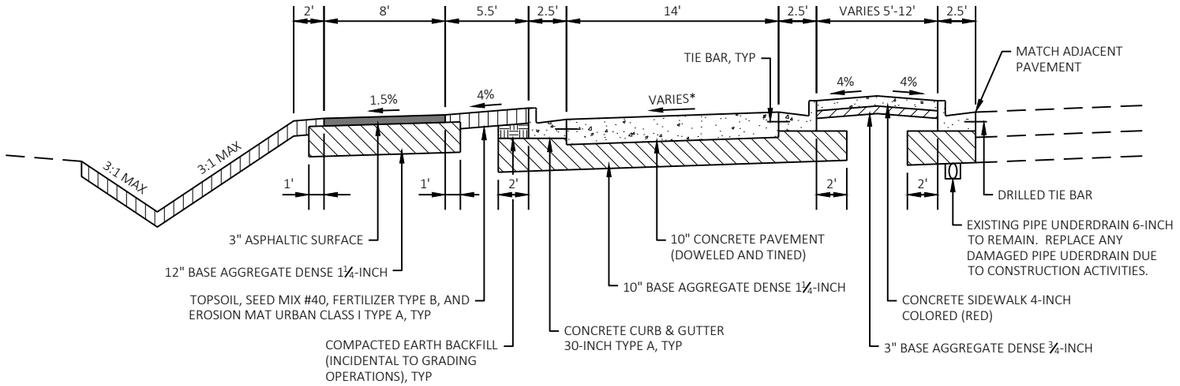
JOHNSON STREET
STA 106'EB'+98 - STA 107'EB'+08
STA 106'WB'+96 - STA 107'WB'+08

* SEE PAVEMENT GRADE SHEETS FOR ADDITIONAL INFORMATION



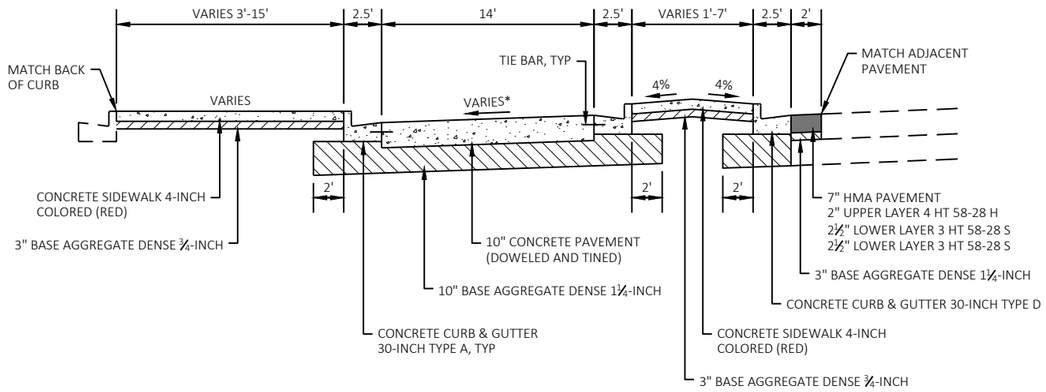
TYPICAL FINISHED SECTION

'WB' SLOTTED LEFT TURN LANE



TYPICAL FINISHED SECTION

'WB' RIGHT TURN LANE



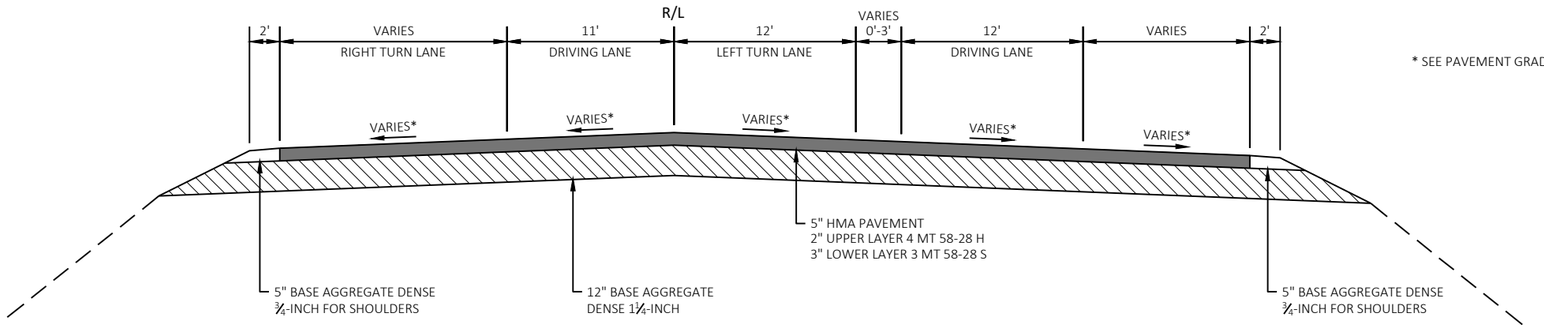
TYPICAL FINISHED SECTION

'EB' SLOTTED LEFT TURN LANE

* SEE PAVEMENT GRADE SHEETS FOR ADDITIONAL INFORMATION

PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	TYPICAL SECTIONS	SHEET 7	E

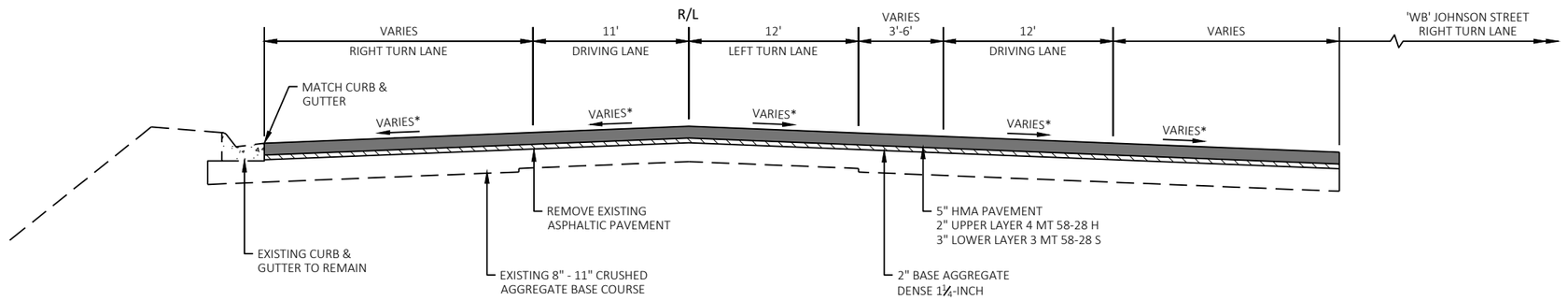
FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-020301-TS.DWG
LAYOUT NAME - Sheet - 04
PLOT DATE : 9/22/2021 9:43 AM
PLOT BY : AARON SARAUER
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42



* SEE PAVEMENT GRADE SHEETS FOR ADDITIONAL INFORMATION

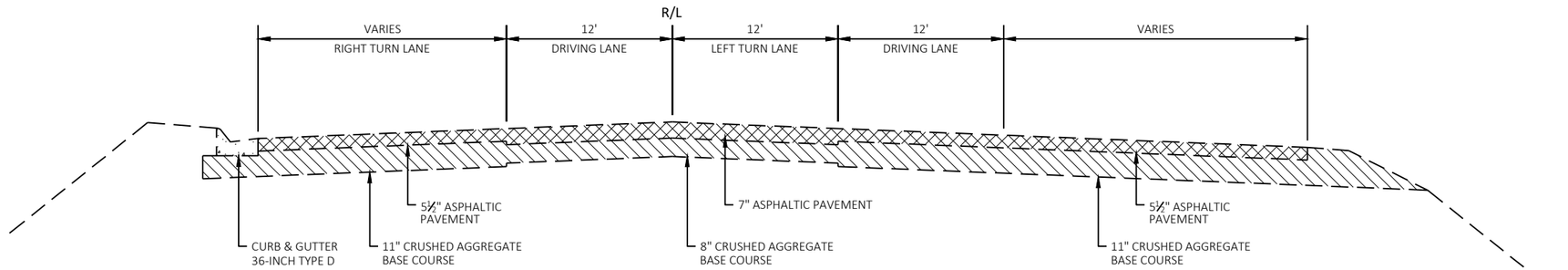
TYPICAL FINISHED SECTION

PIONEER ROAD - CULVERT REPLACEMENT
STA 501'VV'+20 - STA 501'VV'+48



TYPICAL FINISHED SECTION

PIONEER ROAD - PAVEMENT REPLACEMENT
STA 500'VV'+65 - STA 501'VV'+20



TYPICAL EXISTING SECTION

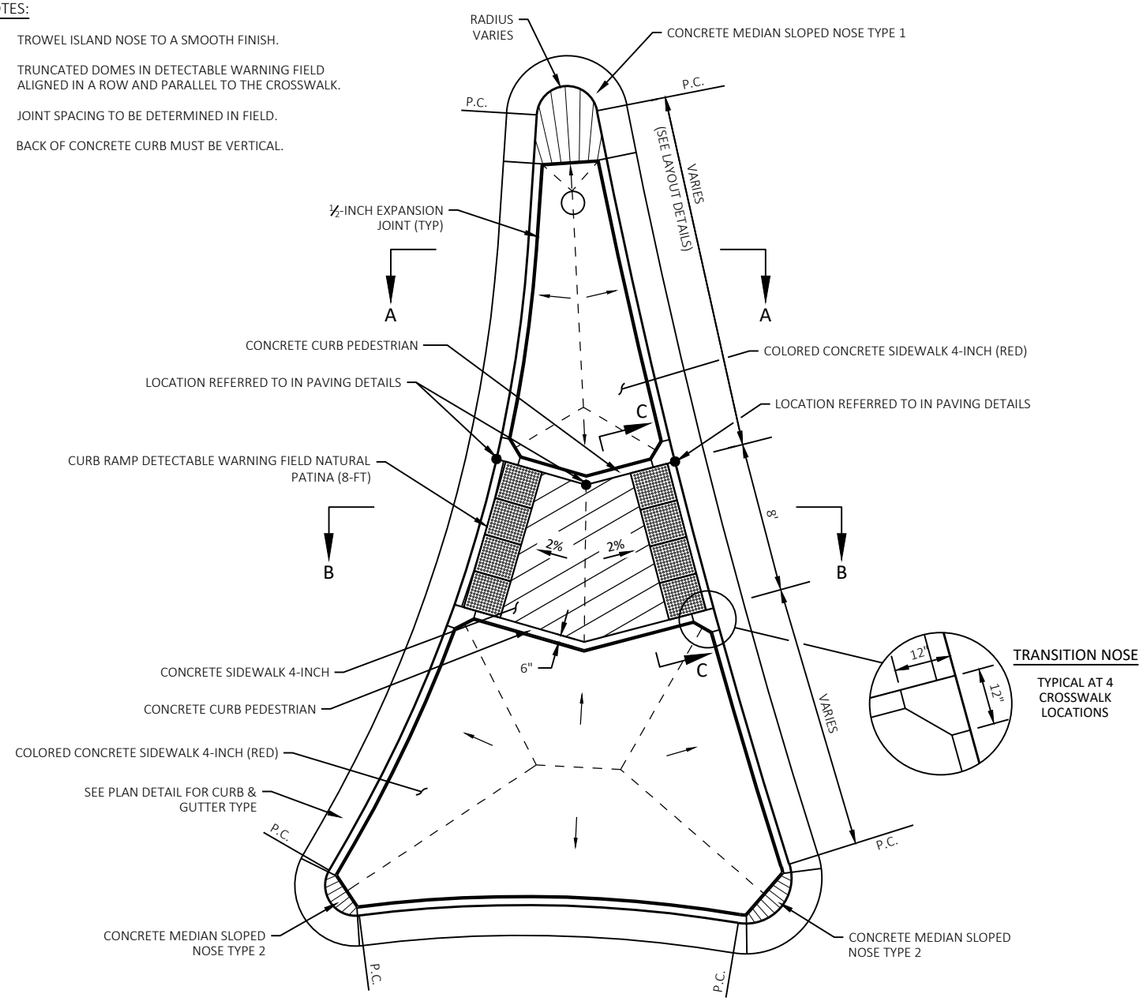
PIONEER ROAD
STA 500'VV'+65 - STA 501'VV'+43

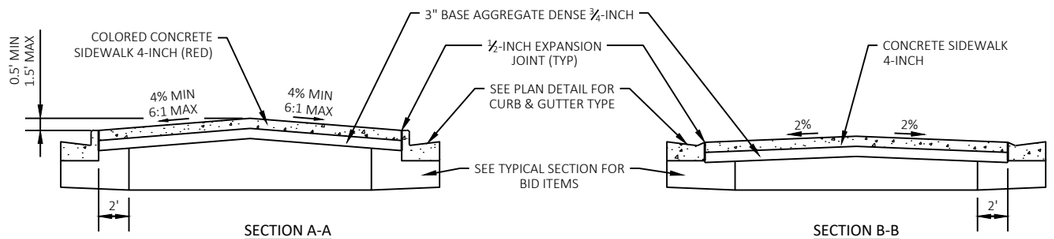
PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	TYPICAL SECTIONS	SHEET 8	E

FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-020301-TS.DWG
LAYOUT NAME - Sheet - 05
PLOT DATE : 7/15/2021 11:19 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:10 FT

NOTES:

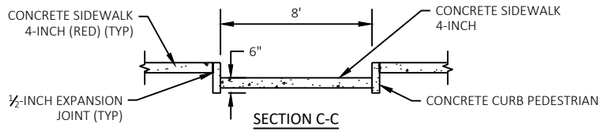
1. TROWEL ISLAND NOSE TO A SMOOTH FINISH.
2. TRUNCATED DOMES IN DETECTABLE WARNING FIELD ALIGNED IN A ROW AND PARALLEL TO THE CROSSWALK.
3. JOINT SPACING TO BE DETERMINED IN FIELD.
4. BACK OF CONCRETE CURB MUST BE VERTICAL.





SECTION A-A

SECTION B-B



SECTION C-C

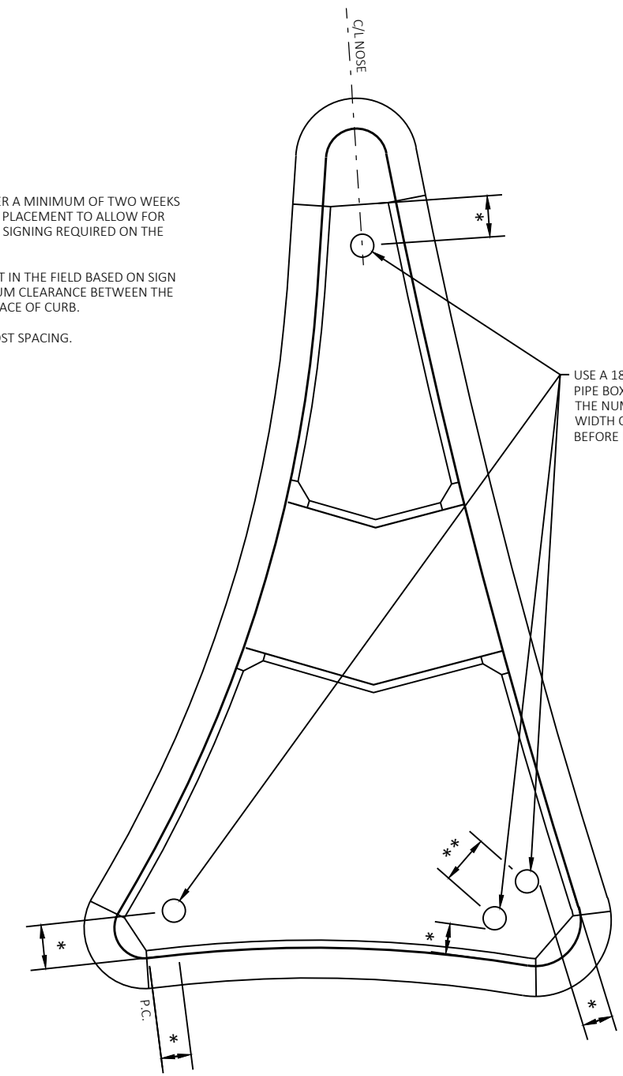
SPLITTER ISLAND DETAIL (TYP)

NOTES:

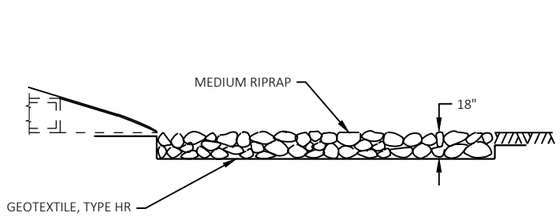
NOTIFY THE PROJECT ENGINEER A MINIMUM OF TWO WEEKS PRIOR TO THE NEED FOR SIGN PLACEMENT TO ALLOW FOR STAKING OF ANY PERMANENT SIGNING REQUIRED ON THE PROJECT.

* DISTANCE TO BE LAID OUT IN THE FIELD BASED ON SIGN SIZE. TWO FOOT MINIMUM CLEARANCE BETWEEN THE EDGE OF SIGN AND THE FACE OF CURB.

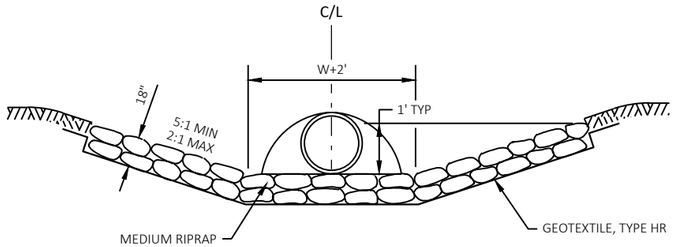
** SEE SIGN DETAILS FOR POST SPACING.



ISLAND SIGN LOCATION DETAIL (TYP)

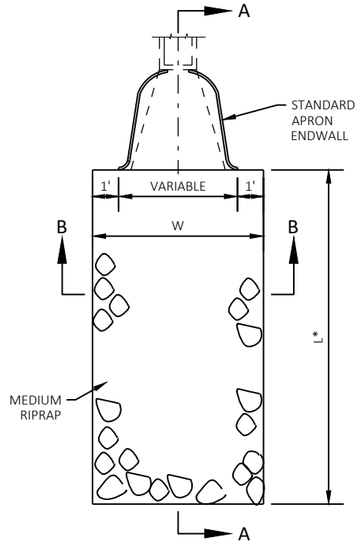


SECTION A-A



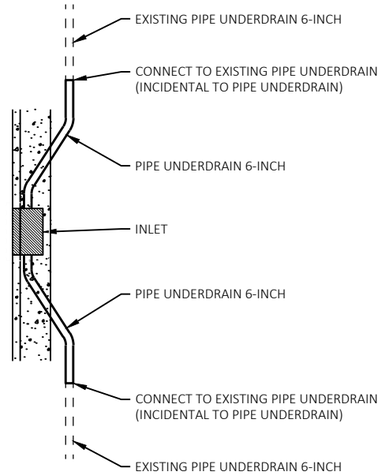
SECTION B-B

* L = 2W (TYP) OR AS DIRECTED BY THE ENGINEER



PLAN VIEW

MEDIUM RIPRAP AND GEOTEXTILE DETAIL AT APRON ENDWALLS

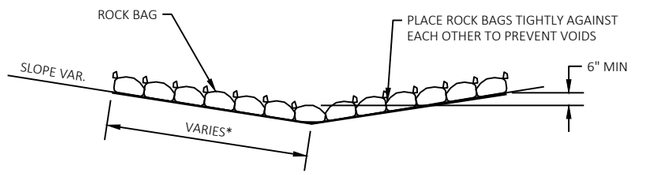


NOTES:

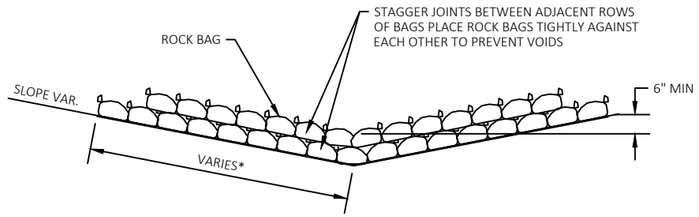
BACKFILL 3" AROUND PIPE UNDERDRAIN WITH BASE AGGREGATE OPEN GRADED (INCIDENTAL TO PIPE UNDERDRAIN).

FINAL PIPE UNDERDRAIN LOCATIONS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

DETAIL FOR PIPE UNDERDRAIN AT CURB & GUTTER INLETS



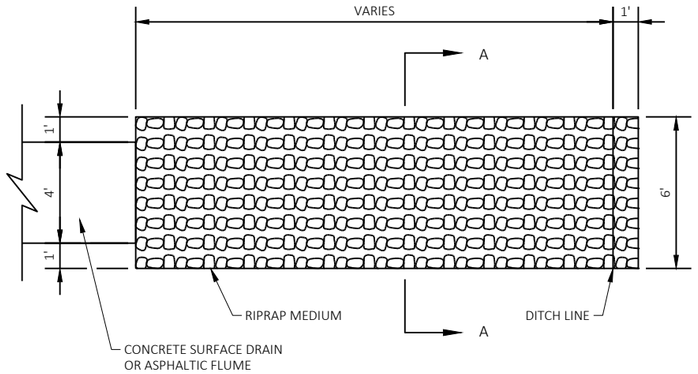
SIDE VIEW (SINGLE LAYER)



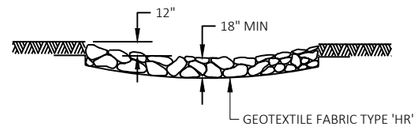
* LENGTH AND NUMBER OF BAGS MAY VARY DEPENDING ON DESIRED DEPTH OF WATER POOL

SIDE VIEW (MULTIPLE LAYER)

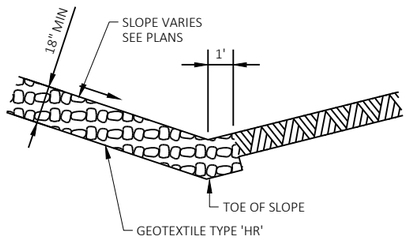
ROCK BAGS USED FOR DITCH CHECKS DETAIL



PLAN VIEW



SECTION A-A



SIDE VIEW

MEDIUM RIPRAP AND GEOTEXTILE DETAIL AT FLUME

GENERAL NOTES (APPLIES TO THIS CONSTRUCTION DETAIL)

THE EXACT LOCATION OF THE ELECTRICAL METER SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD. ADJUST ALL LOCATIONS AROUND SITE CONDITIONS INCLUDING TOPOGRAPHY AND UTILITIES.

CONFER WITH THE LOCAL UTILITY TO DETERMINE WHICH SIDE THE ELECTRICAL SERVICE LATERAL WILL APPROACH.

CONTRACTOR MUST PROVIDE UTILITY APPROVED METER SOCKET AND INSTALL PER UTILITY AND MANUFACTURER'S REQUIREMENTS.

SERVICE CONDUCTOR ENTRANCES SHALL BE TYPE, SIZED AND LOCATED AS REQUIRED BY THE LOCAL UTILITY AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.

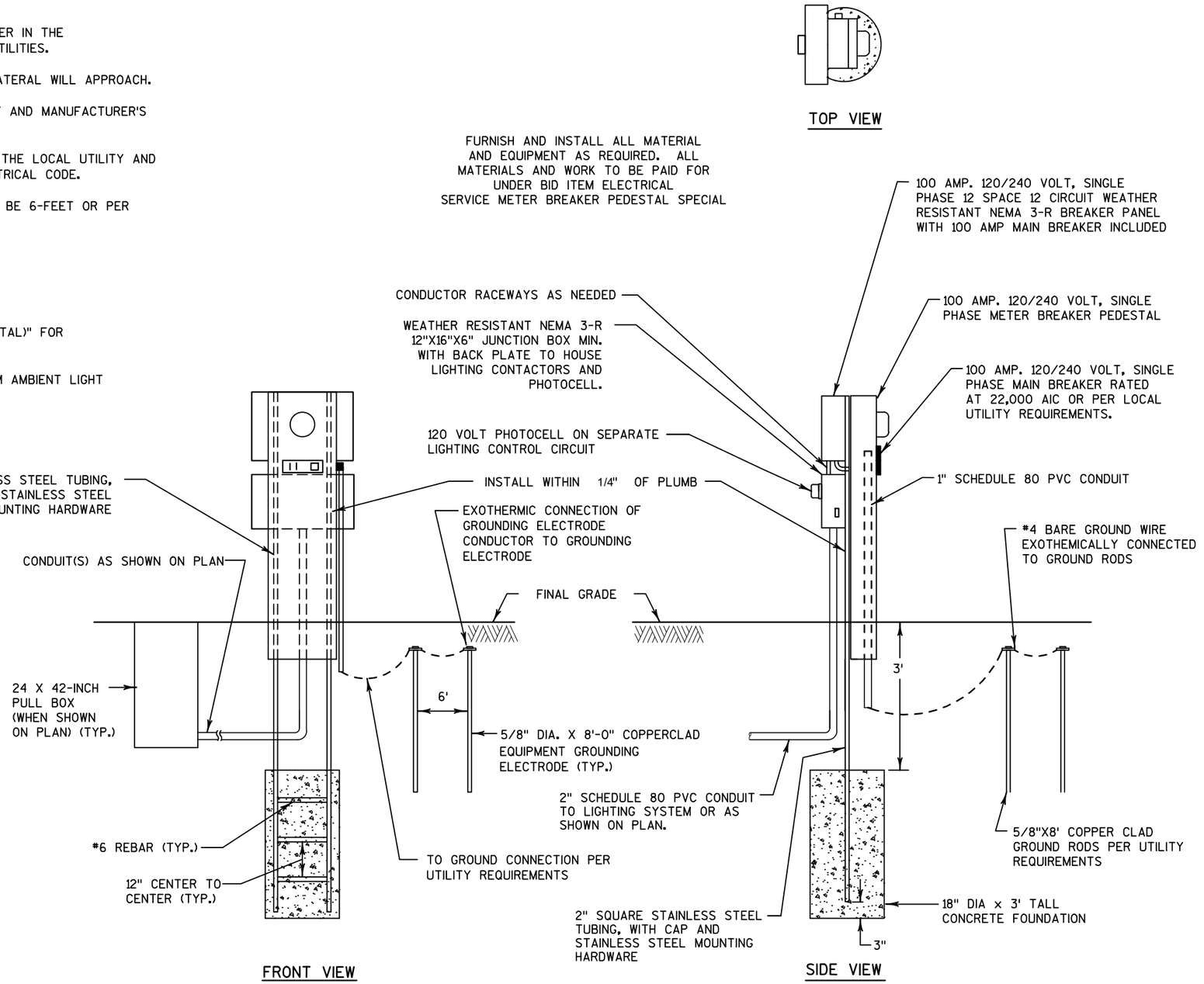
IF MORE THAN TWO GROUNDING ELECTRODES ARE REQUIRED, THE DISTANCE APART SHALL BE 6-FEET OR PER LOCAL UTILITY REGULATIONS.

ALL MOUNTING CHANNEL AND HARDWARE SHALL BE STAINLESS STEEL.

THE LOCATION AND ARRANGEMENT OF ALL EQUIPMENT SHOWN IS APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD.

SEE STANDARD DETAIL DRAWING "CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)" FOR ADDITIONAL INFORMATION NOT SHOWN ON THIS DETAIL.

PROVIDE FOR PHOTOCELL OPERATION ON THE PEDESTAL. ORIENT PHOTOCELL AWAY FROM AMBIENT LIGHT SOURCES AND ONCOMING TRAFFIC HEADLIGHTS.



ELECTRICAL SERVICE METER BREAKER PEDESTAL SPECIAL

NOT TO SCALE SPV.0060.029

PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	PLAN: LIGHTING PLANS - CONSTRUCTION DETAILS	SHEET 11 E

2

LEGEND

- CONCRETE MEDIAN SLOPED NOSE TYPE 1
- CONCRETE MEDIAN SLOPED NOSE TYPE 2
- PROPOSED CATCH BASIN/ INLET
- PROPOSED STORM SEWER MANHOLE
- PROPOSED ENDWALL
- PROPOSED LIGHT POLE
- DATA POINT

NOTES

ALL CURB RADII ARE TO FLANGE OF CURB.

ALL ROADWAY DIMENSIONS ARE TO FLANGE OF CURB OR JOINT LINE.

PAVEMENT GRADES ARE SHOWN AT FLANGE OF CURB FOR CURB & GUTTER SECTIONS.

PAVEMENT GRADES ARE GENERALLY SHOWN AT 25' INTERVALS.

ALL DATA POINT STATION AND OFFSETS ARE TO THE FLANGE OF CURB OR FRONT OF WALK.

ALL CURB RAMPS ARE CONCRETE SIDEWALK 6-INCH UNLESS OTHERWISE NOTED.

* SEE CURB RAMP DETAIL SHEETS FOR ADDITIONAL CURB RAMP INFORMATION.

N

2

SIGN

USH 45 SB/ STH 23 WB
JOHNSON STREET

TOPSOIL, SEED MIX #40, FERTILIZER TYPE B, AND EROSION MAT URBAN CLASS I TYPE A

CONCRETE SIDEWALK 4-INCH COLORED (RED)

103'WB' 104'WB' 105'WB' 106'

INL INL INL SIGN

TFS PBX PBX TFS TFS PBX

'A'+93.14
0.00'
782.99

'A'+00.00
0.00'
782.75

781.92 781.10 780.27 779.44
11'A'

10'A'

'EB'+73.25
-12.00'LT
783.36

CONCRETE CURB & GUTTER 30-INCH TYPE A

'EB'+83.25
-2.00'LT
783.12

782.59 781.82 781.07 780.28 779.49

MATCH LINE STA 106'EB'+00

'EB'+73.25
0.00'
783.51

103'EB' 104'EB' 105'EB' 106'

7" HMA PAVEMENT

USH 45 NB / STH 23 EB
JOHNSON STREET

PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	PLAN DETAILS	SHEET 12	E

FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-021201-PD.DWG
LAYOUT NAME - Sheet-01

PLOT DATE : 7/15/2021 12:41 PM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:20 FT

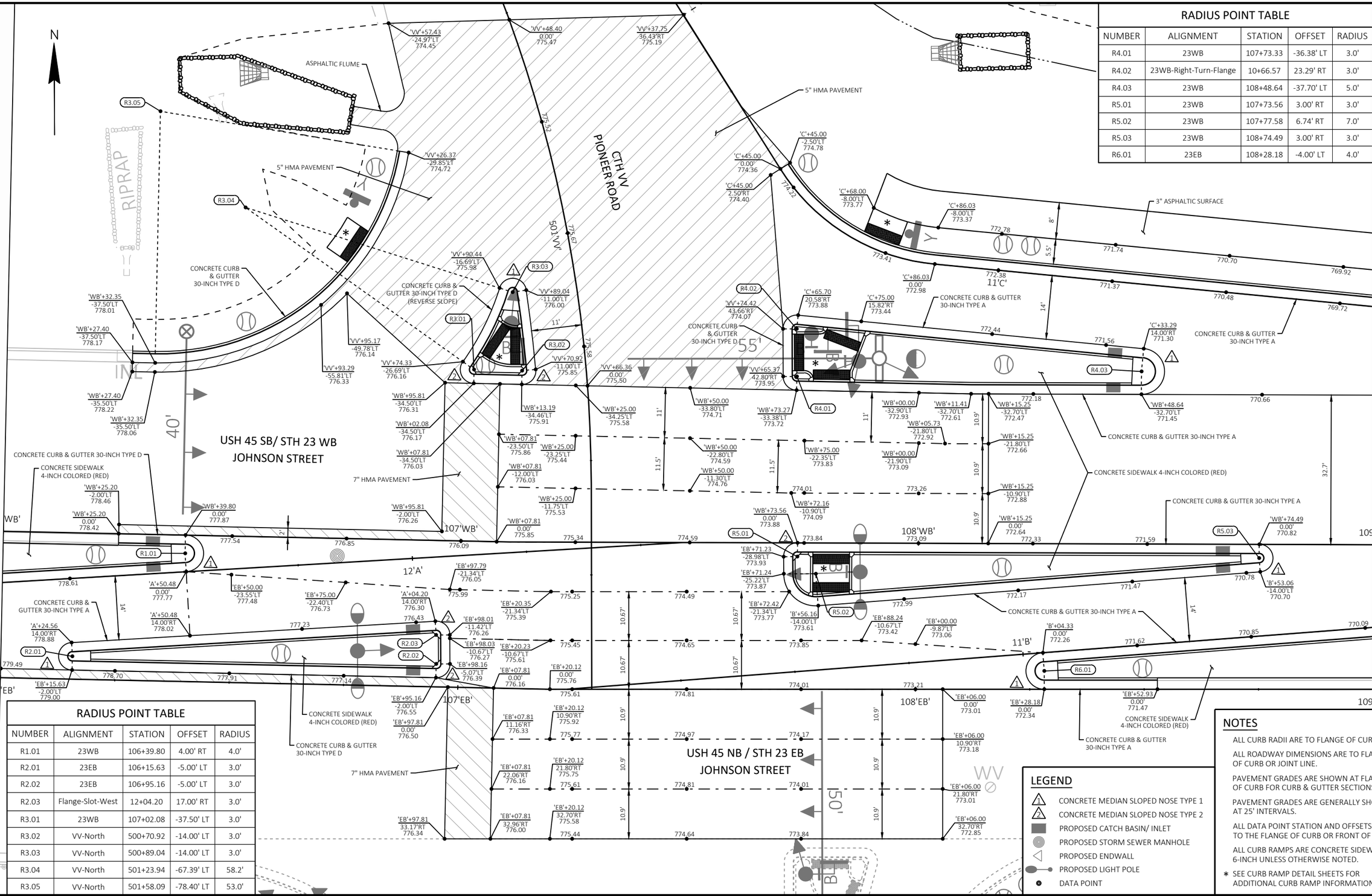
WISDOT/CADDS SHEET 42

2

N

RADIUS POINT TABLE

NUMBER	ALIGNMENT	STATION	OFFSET	RADIUS
R4.01	23WB	107+73.33	-36.38' LT	3.0'
R4.02	23WB-Right-Turn-Flange	10+66.57	23.29' RT	3.0'
R4.03	23WB	108+48.64	-37.70' LT	5.0'
R5.01	23WB	107+73.56	3.00' RT	3.0'
R5.02	23WB	107+77.58	6.74' RT	7.0'
R5.03	23WB	108+74.49	3.00' RT	3.0'
R6.01	23EB	108+28.18	-4.00' LT	4.0'



RADIUS POINT TABLE

NUMBER	ALIGNMENT	STATION	OFFSET	RADIUS
R1.01	23WB	106+39.80	4.00' RT	4.0'
R2.01	23EB	106+15.63	-5.00' LT	3.0'
R2.02	23EB	106+95.16	-5.00' LT	3.0'
R2.03	Flange-Slot-West	12+04.20	17.00' RT	3.0'
R3.01	23WB	107+02.08	-37.50' LT	3.0'
R3.02	VV-North	500+70.92	-14.00' LT	3.0'
R3.03	VV-North	500+89.04	-14.00' LT	3.0'
R3.04	VV-North	501+23.94	-67.39' LT	58.2'
R3.05	VV-North	501+58.09	-78.40' LT	53.0'

NOTES

- ALL CURB RADII ARE TO FLANGE OF CURB.
- ALL ROADWAY DIMENSIONS ARE TO FLANGE OF CURB OR JOINT LINE.
- PAVEMENT GRADES ARE SHOWN AT FLANGE OF CURB FOR CURB & GUTTER SECTIONS.
- PAVEMENT GRADES ARE GENERALLY SHOWN AT 25' INTERVALS.
- ALL DATA POINT STATION AND OFFSETS ARE TO THE FLANGE OF CURB OR FRONT OF WALK.
- ALL CURB RAMPS ARE CONCRETE SIDEWALK 6-INCH UNLESS OTHERWISE NOTED.
- * SEE CURB RAMP DETAIL SHEETS FOR ADDITIONAL CURB RAMP INFORMATION.

LEGEND

- CONCRETE MEDIAN SLOPED NOSE TYPE 1
- CONCRETE MEDIAN SLOPED NOSE TYPE 2
- PROPOSED CATCH BASIN/ INLET
- PROPOSED STORM SEWER MANHOLE
- PROPOSED ENDWALL
- PROPOSED LIGHT POLE
- DATA POINT

PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	PLAN DETAILS	SHEET 13	E

FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-021201-PD.DWG
LAYOUT NAME - Sheet-02

PLOT DATE : 9/22/2021 9:44 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:20 FT

2

2

N

LEGEND

- CONCRETE MEDIAN SLOPED NOSE TYPE 1
- CONCRETE MEDIAN SLOPED NOSE TYPE 2
- PROPOSED CATCH BASIN/ INLET
- PROPOSED STORM SEWER MANHOLE
- PROPOSED ENDWALL
- PROPOSED LIGHT POLE
- DATA POINT

NOTES

ALL CURB RADII ARE TO FLANGE OF CURB.

ALL ROADWAY DIMENSIONS ARE TO FLANGE OF CURB OR JOINT LINE.

PAVEMENT GRADES ARE SHOWN AT FLANGE OF CURB FOR CURB & GUTTER SECTIONS.

PAVEMENT GRADES ARE GENERALLY SHOWN AT 25' INTERVALS.

ALL DATA POINT STATION AND OFFSETS ARE TO THE FLANGE OF CURB OR FRONT OF WALK.

ALL CURB RAMPS ARE CONCRETE SIDEWALK 6-INCH UNLESS OTHERWISE NOTED.

* SEE CURB RAMP DETAIL SHEETS FOR ADDITIONAL CURB RAMP INFORMATION.

TEL
PED

3" ASPHALTIC SURFACE

769.25 768.57 767.90 767.23 766.58 765.99 765.47 765.01

769.05 12'C' 768.37 767.70 767.03 766.38 13'C' 765.79 765.27 764.81

769.91 769.17 768.43 767.74 767.00 766.32 765.73 765.18 764.68

8"

5.5"

'C'+80.78
-8.00'LT
764.87

'C'+89.15
-8.78'LT
764.65

'C'+89.73
0.00'
764.57

'C'+89.97
0.00'
764.57

CONCRETE CURB & GUTTER
30-INCH TYPE A

SIGN

USH 45 SB/ STH 23 WB
JOHNSON STREET

PBX
PBX
32.7'
PBX

'WB' 770.08 769.33 768.60 767.89 110'WB' 767.17 'WB'+13.46 0.00' 766.81 111'WB' 112'WB'

MATCH LINE STA 109'EB'+00

CONCRETE CURB & GUTTER 30-INCH TYPE A

'B'+67.75
0.00'
767.28

'B'+91.04
0.00'
766.59

12'B' 769.32 768.55 767.79 767.06 12'B'

LP
PBX
PBX
PBX
PBX
LP
PBX
COLORED CONC
PBX
INL

'EB' 110'EB' 111'EB' 112'EB'

CONCRETE SIDEWALK 4-INCH COLORED (RED)

PBX
PBX
INL

USH 45 NB / STH 23 EB
JOHNSON STREET

SIGN

PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	PLAN DETAILS	SHEET 14	E

FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-021201-PD.DWG
LAYOUT NAME - Sheet-03

PLOT DATE : 9/22/2021 9:44 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 42

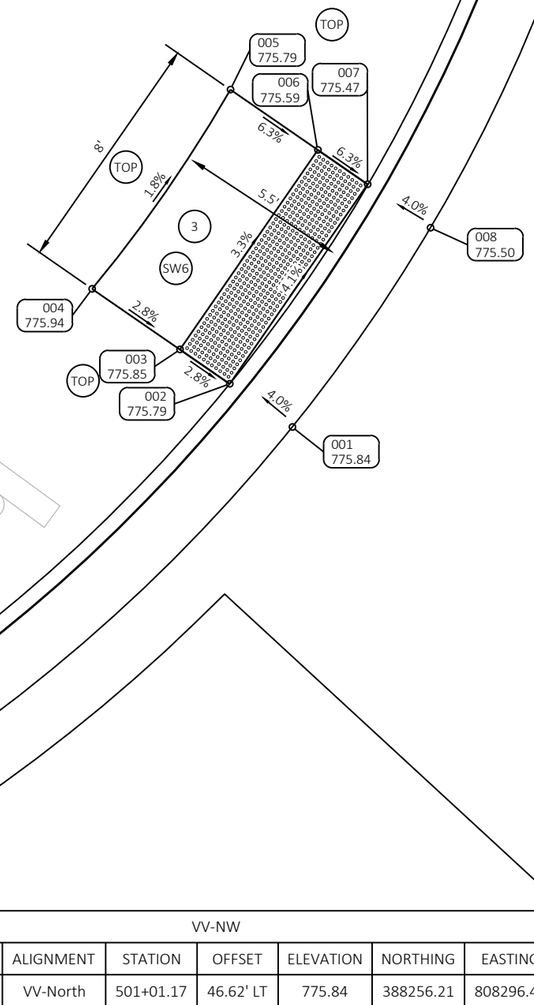
2

LEGEND

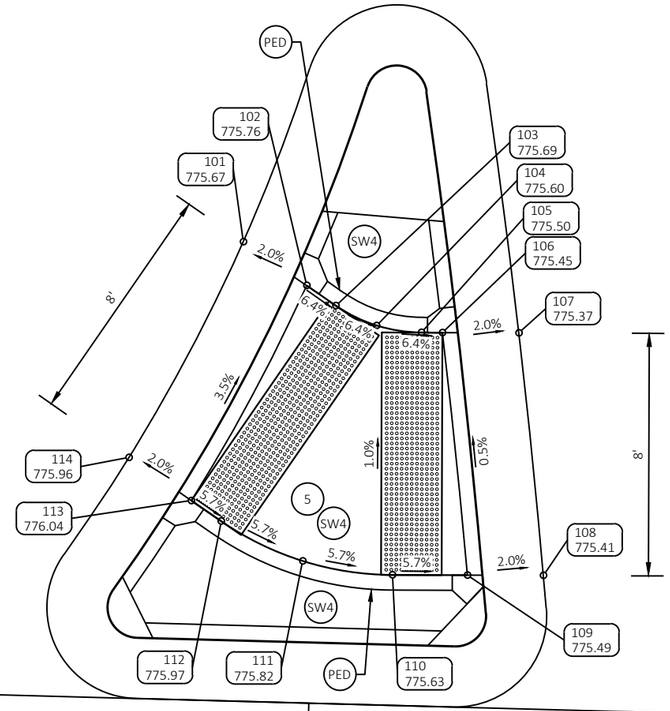
- X — CURB RAMP TYPE
- TOP — TOPSOIL, SEED, FERTILIZER, AND EMAT
- SW4 — CONCRETE SIDEWALK 4-INCH
- SW6 — CONCRETE SIDEWALK 6-INCH
- PED — CONCRETE CURB PEDESTRIAN

NOTES

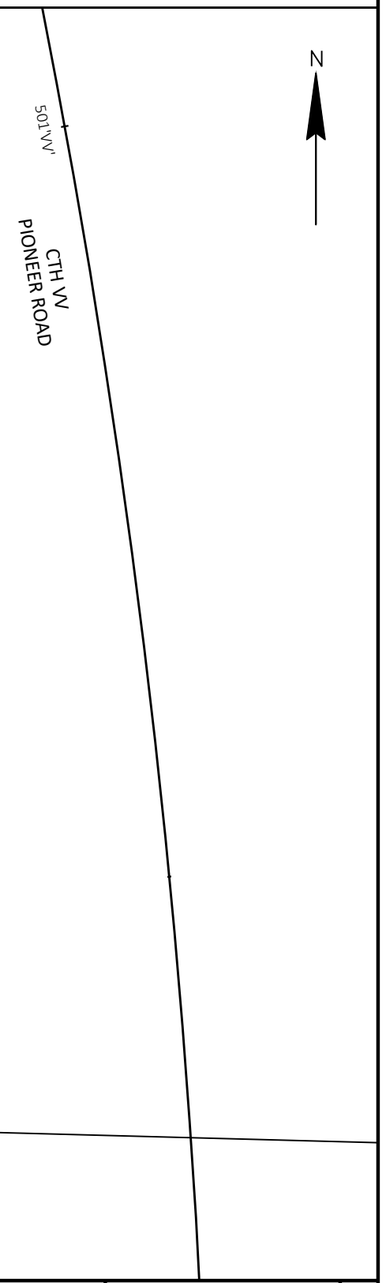
1. CONTRACTOR TO FIELD VERIFY ELEVATION, GRADES, SLOPES, LENGTHS AND MATCH POINTS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.
2. THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONSTRUCTION.
3. DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS.
4. SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.
5. ALL STATION AND OFFSET INFORMATION REFERENCE CTH VV OR USH 45/STH 23 WB ALIGNMENTS.



VV-RT						
POINT NUMBER	ALIGNMENT	STATION	OFFSET	ELEVATION	NORTHING	EASTING
101	VV-North	500+84.72	19.66' LT	775.67	388245.96	808325.36
102	VV-North	500+82.91	17.76' LT	775.76	388244.52	808327.45
103	VV-North	500+82.09	16.89' LT	775.69	388243.85	808328.41
104	VV-North	500+81.23	15.63' LT	775.60	388243.19	808329.76
105	VV-North	500+80.81	14.19' LT	775.50	388242.97	808331.24
106	VV-North	500+80.72	13.50' LT	775.45	388242.96	808331.93
107	VV-North	500+80.41	11.00' LT	775.37	388242.95	808334.45
108	VV-North	500+72.06	11.00' LT	775.41	388234.95	808335.26
109	VV-North	500+72.30	13.50' LT	775.49	388234.96	808332.75
110	VV-North	500+72.54	15.96' LT	775.63	388234.97	808330.28
111	VV-North	500+73.30	18.87' LT	775.82	388235.43	808327.32
112	VV-North	500+74.97	21.42' LT	775.97	388236.74	808324.63
113	VV-North	500+75.81	22.34' LT	776.04	388237.42	808323.64
114	VV-North	500+77.57	24.24' LT	775.96	388238.85	808321.58



VV-NW						
POINT NUMBER	ALIGNMENT	STATION	OFFSET	ELEVATION	NORTHING	EASTING
001	VV-North	501+01.17	46.62' LT	775.84	388256.21	808296.45
002	VV-North	501+03.29	48.38' LT	775.79	388257.63	808294.39
003	VV-North	501+05.00	49.78' LT	775.85	388258.77	808292.74
004	VV-North	501+08.06	52.21' LT	775.94	388260.77	808289.85
005	VV-North	501+14.56	46.34' LT	775.79	388267.34	808294.41
006	VV-North	501+11.52	43.97' LT	775.59	388265.35	808297.29
007	VV-North	501+09.81	42.61' LT	775.47	388264.21	808298.94
008	VV-North	501+07.69	40.88' LT	775.50	388262.78	808301.01

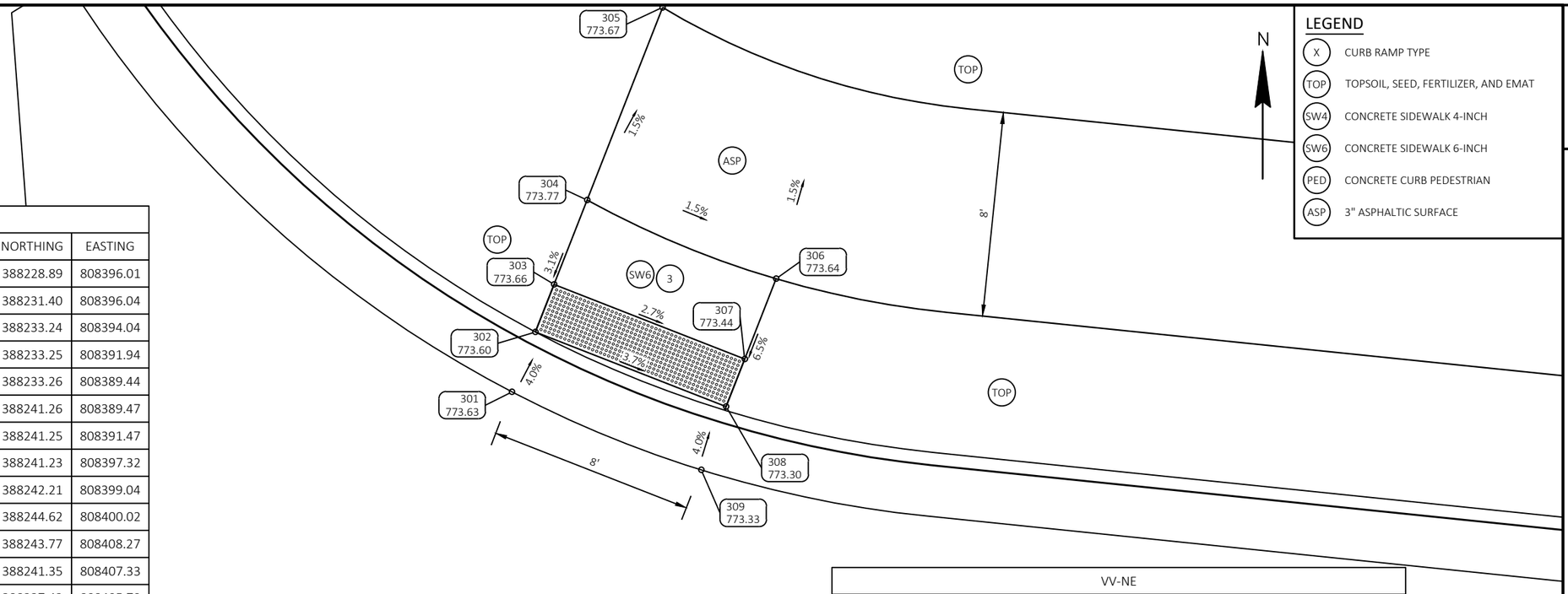


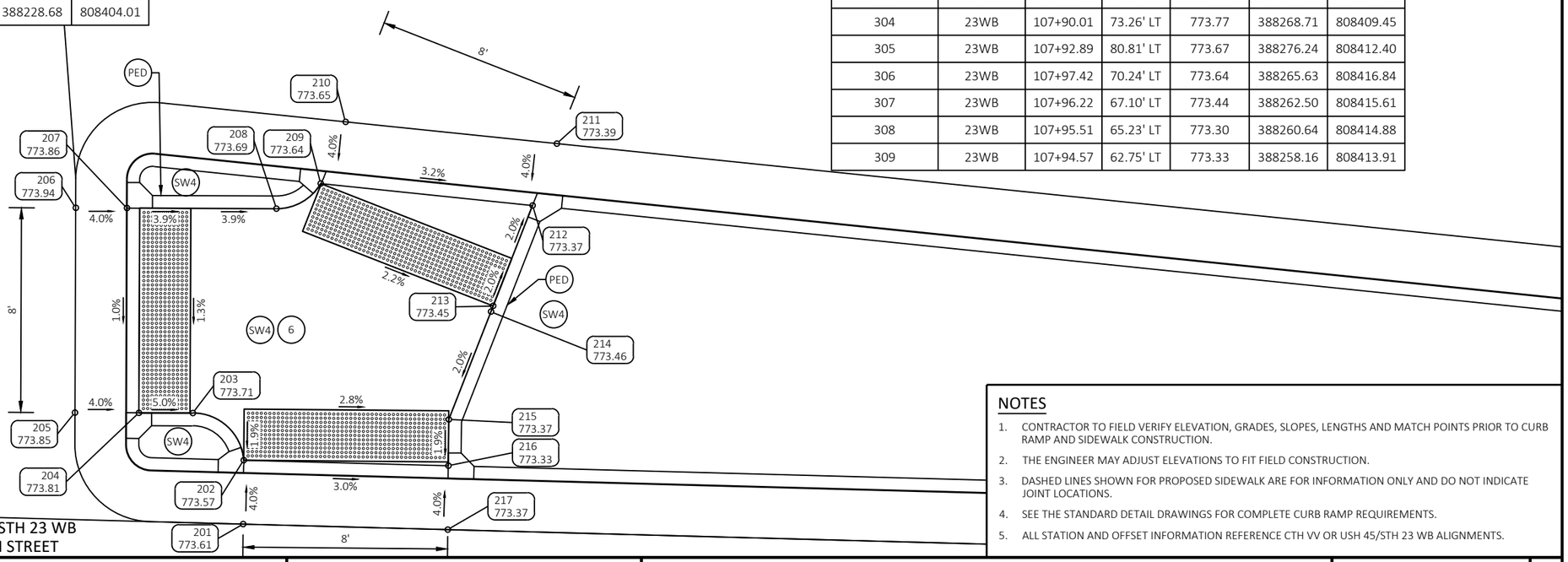
PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	CURB RAMP DETAILS	SHEET 15	E

FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-021301-CR.DWG
LAYOUT NAME - Sheet-01
PLOT DATE : 7/15/2021 12:48 PM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:5 FT
WISDOT/CADDS SHEET 42

2

WB-RT						
POINT NUMBER	ALIGNMENT	STATION	OFFSET	ELEVATION	NORTHING	EASTING
201	23WB	107+76.93	33.32' LT	773.61	388228.89	808396.01
202	23WB	107+76.93	35.82' LT	773.57	388231.40	808396.04
203	23WB	107+74.92	37.64' LT	773.71	388233.24	808394.04
204	23WB	107+72.82	37.63' LT	773.81	388233.25	808391.94
205	23WB	107+70.32	37.62' LT	773.85	388233.26	808389.44
206	23WB	107+70.28	45.62' LT	773.94	388241.26	808389.47
207	23WB	107+72.28	45.63' LT	773.86	388241.25	808391.47
208	23WB	107+78.12	45.66' LT	773.69	388241.23	808397.32
209	23WB	107+79.84	46.66' LT	773.64	388242.21	808399.04
210	23WB	107+80.79	49.08' LT	773.65	388244.62	808400.02
211	23WB	107+89.06	48.30' LT	773.39	388243.77	808408.27
212	23WB	107+88.13	45.88' LT	773.37	388241.35	808407.33
213	23WB	107+86.63	41.93' LT	773.45	388237.42	808405.79
214	23WB	107+86.54	41.71' LT	773.46	388237.20	808405.70
215	23WB	107+84.93	37.48' LT	773.37	388232.99	808404.05
216	23WB	107+84.93	35.68' LT	773.33	388231.18	808404.04
217	23WB	107+84.93	33.17' LT	773.37	388228.68	808404.01





VV-NE						
POINT NUMBER	ALIGNMENT	STATION	OFFSET	ELEVATION	NORTHING	EASTING
301	23WB	107+87.14	65.73' LT	773.63	388261.21	808406.51
302	23WB	107+88.04	68.08' LT	773.60	388263.55	808407.43
303	23WB	107+88.75	69.95' LT	773.66	388265.42	808408.16
304	23WB	107+90.01	73.26' LT	773.77	388268.71	808409.45
305	23WB	107+92.89	80.81' LT	773.67	388276.24	808412.40
306	23WB	107+97.42	70.24' LT	773.64	388265.63	808416.84
307	23WB	107+96.22	67.10' LT	773.44	388262.50	808415.61
308	23WB	107+95.51	65.23' LT	773.30	388260.64	808414.88
309	23WB	107+94.57	62.75' LT	773.33	388258.16	808413.91

LEGEND

X	CURB RAMP TYPE
TOP	TOPSOIL, SEED, FERTILIZER, AND EMAT
SW4	CONCRETE SIDEWALK 4-INCH
SW6	CONCRETE SIDEWALK 6-INCH
PED	CONCRETE CURB PEDESTRIAN
ASP	3" ASPHALTIC SURFACE

NOTES

1. CONTRACTOR TO FIELD VERIFY ELEVATION, GRADES, SLOPES, LENGTHS AND MATCH POINTS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.
2. THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONSTRUCTION.
3. DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS.
4. SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.
5. ALL STATION AND OFFSET INFORMATION REFERENCE CTH VV OR USH 45/STH 23 WB ALIGNMENTS.

PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	CURB RAMP DETAILS	SHEET 16	E

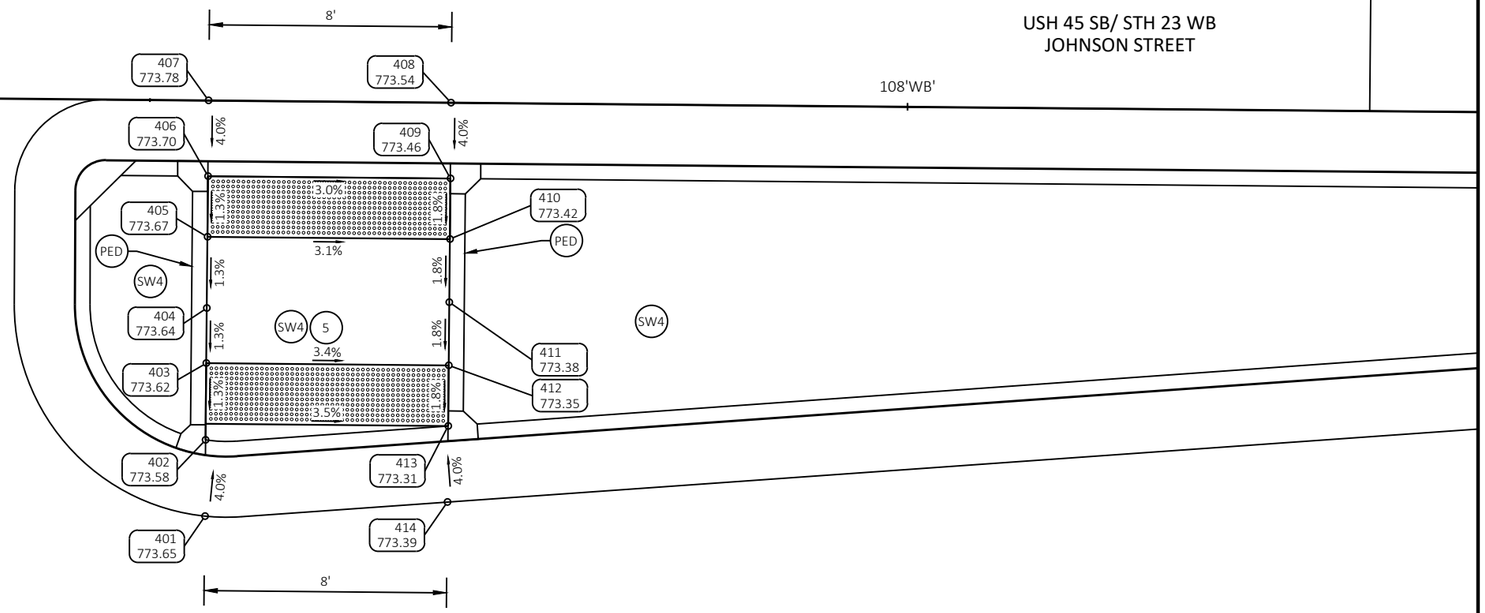
FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-021301-CR.DWG
LAYOUT NAME - Sheet-02
PLOT DATE : 9/22/2021 9:44 AM
PLOT BY : AARON SARAUER
PLOT NAME :
PLOT SCALE : 1 IN:5 FT
WISDOT/CADDS SHEET 42

2

N

LEGEND

- X — CURB RAMP TYPE
- TOP — TOPSOIL, SEED, FERTILIZER, AND EMAT
- SW4 — CONCRETE SIDEWALK 4-INCH
- SW6 — CONCRETE SIDEWALK 6-INCH
- PED — CONCRETE CURB PEDESTRIAN



WB-LT						
POINT NUMBER	ALIGNMENT	STATION	OFFSET	ELEVATION	NORTHING	EASTING
401	23WB	107+76.93	13.71' RT	773.65	388181.87	808395.59
402	23WB	107+76.93	11.19' RT	773.58	388184.39	808395.61
403	23WB	107+76.93	8.67' RT	773.62	388186.91	808395.64
404	23WB	107+76.93	6.85' RT	773.64	388188.73	808395.65
405	23WB	107+76.93	4.50' RT	773.67	388191.08	808395.67
406	23WB	107+76.93	2.50' RT	773.70	388193.08	808395.69
407	23WB	107+76.93	0.00'	773.78	388195.58	808395.71
408	23WB	107+84.93	0.00'	773.54	388195.51	808403.71
409	23WB	107+84.93	2.50' RT	773.46	388193.01	808403.69
410	23WB	107+84.93	4.50' RT	773.42	388191.01	808403.67
411	23WB	107+84.93	6.58' RT	773.38	388188.92	808403.65
412	23WB	107+84.93	8.67' RT	773.35	388186.84	808403.63
413	23WB	107+84.93	10.67' RT	773.31	388184.84	808403.62
414	23WB	107+84.93	13.17' RT	773.39	388182.33	808403.59

NOTES

1. CONTRACTOR TO FIELD VERIFY ELEVATION, GRADES, SLOPES, LENGTHS AND MATCH POINTS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.
2. THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONSTRUCTION.
3. DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS.
4. SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.
5. ALL STATION AND OFFSET INFORMATION REFERENCE CTH VV OR USH 45/STH 23 WB ALIGNMENTS.

2

2

N

CTH VV
PIONEER ROAD

502'VV'

EXISTING R/W

SLOPE INTERCEPTS, TYP

8' MULTI-USE PATH

USH 45 SB/ STH 23 WB
JOHNSON STREET

USH 45 NB / STH 23 EB
JOHNSON STREET

CTH VV
PIONEER ROAD

ASPHALT PARKING LOT

MATCH LINE STA 111'EB'+50

104'WB' 105'WB' 106'WB' 107'WB' 108'WB' 109'WB' 110'WB' 111'WB'

104'EB' 105'EB' 106'EB' 107'EB' 108'EB' 109'EB' 110'EB' 111'EB'

112'WB' 113'WB'

112'EB' 113'EB'

LEGEND

- SLOPE INTERCEPT
- CULVERT PIPE CHECKS
- ROCK BAGS FOR DITCH CHECK
- INLET PROTECTION (TYPE)
- RIPRAP MEDIUM
- SURFACE WATER FLOW EXISTING
- SURFACE WATER FLOW PROPOSED

ALL EXISTING INLETS WITHIN THE PROJECT LIMITS SHALL RECEIVE INLET PROTECTION.

THE FIRST SET OF EXISTING INLETS DOWNSTREAM OF THE CONSTRUCTION LIMITS SHALL RECEIVE INLET PROTECTION.

FINISHING ITEMS FOR TOPSOIL, SEED, FERTILIZER AND EROSION MAT ARE SHOWN ON TYPICAL SECTIONS AND MISCELLANEOUS QUANTITIES.

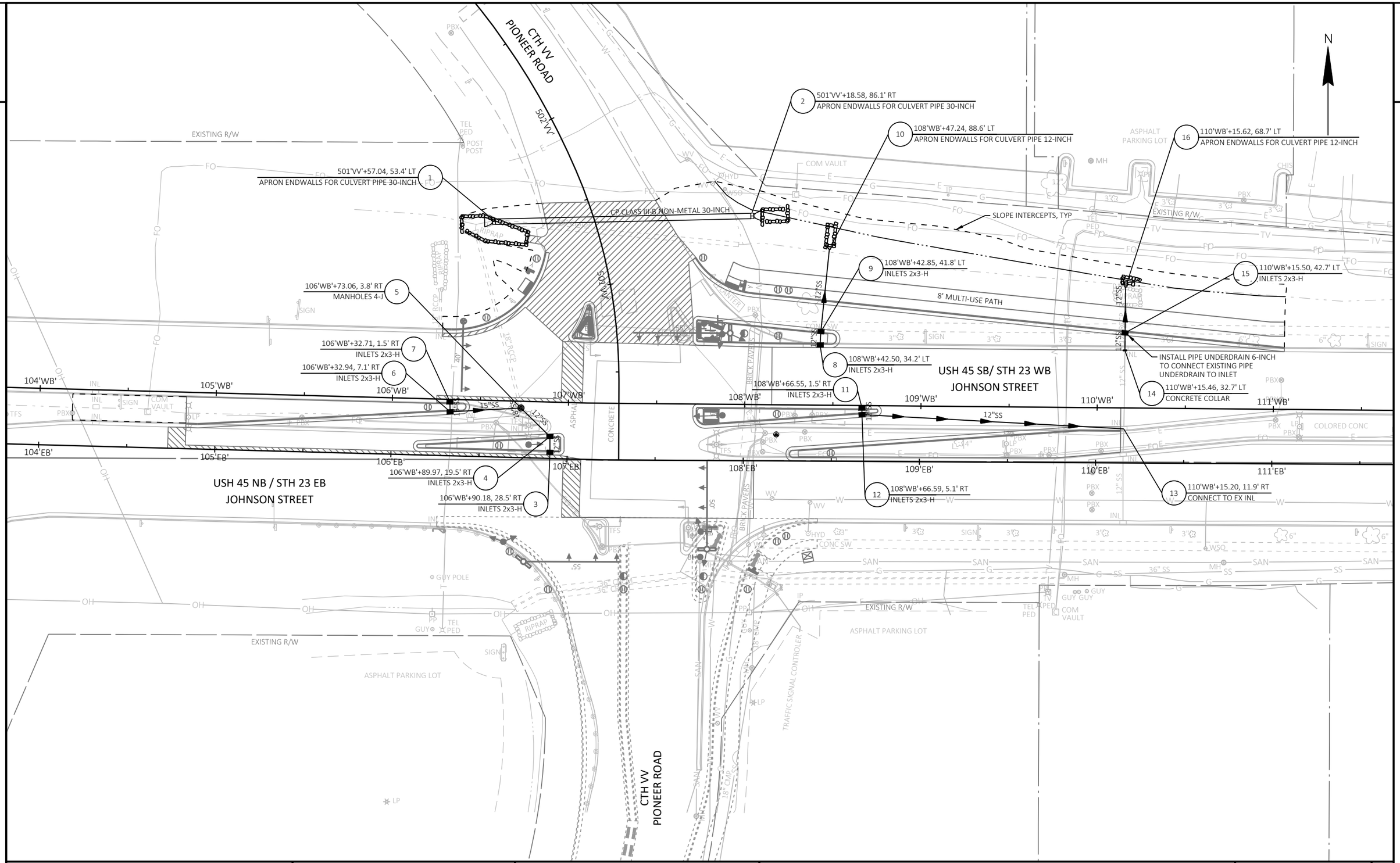
PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	EROSION CONTROL PLAN	SHEET 18	E

FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-022001-EC.DWG
LAYOUT NAME - Sheet - 01

PLOT DATE : 9/22/2021 9:54 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

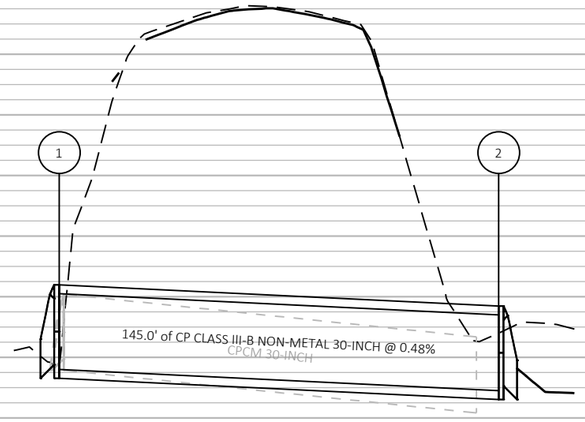
2



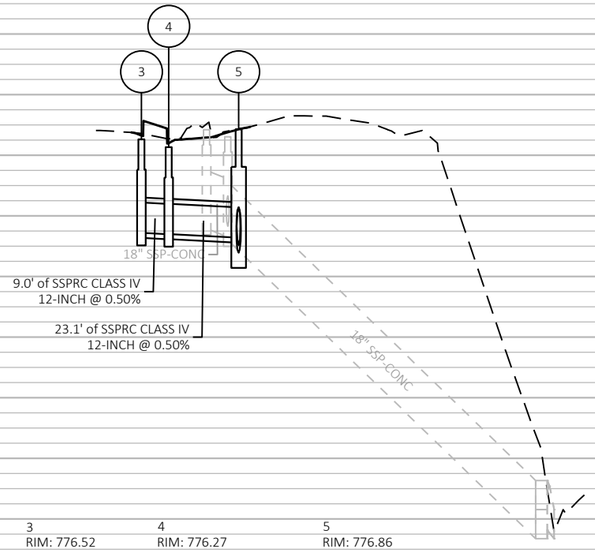
PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	STORM SEWER LAYOUT	SHEET 19	E

FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-022501-SS.DWG
LAYOUT NAME - Sheet - 01

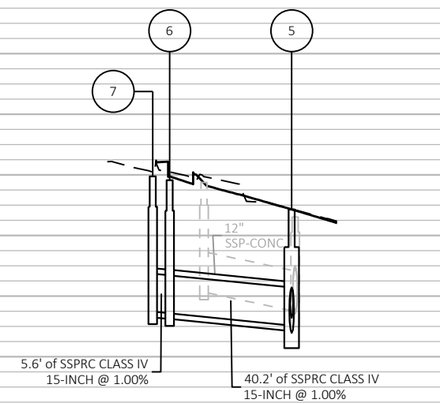
PLOT DATE : 9/22/2021 9:54 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT



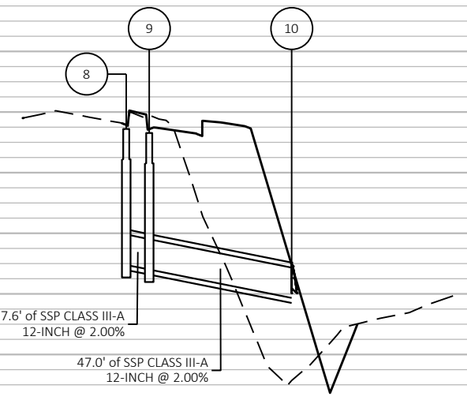
1	2
INV: 763.60	INV: 762.90



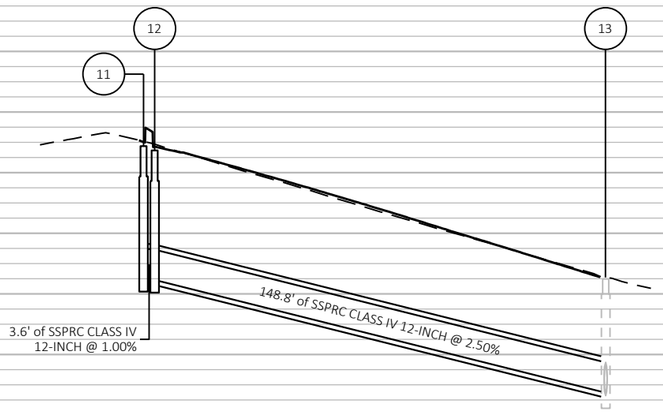
3	4	5
RIM: 776.52	RIM: 776.27	RIM: 776.86
SUMP: 773.44	SUMP: 773.40	SUMP: 772.78
DEPTH: 3.08	DEPTH: 2.87	DEPTH: 4.08
N INV OUT: 773.44	S INV IN: 773.40	SE INV IN: 773.28
	NW INV OUT: 773.40	W INV IN: 773.03
		N INV OUT: 772.78



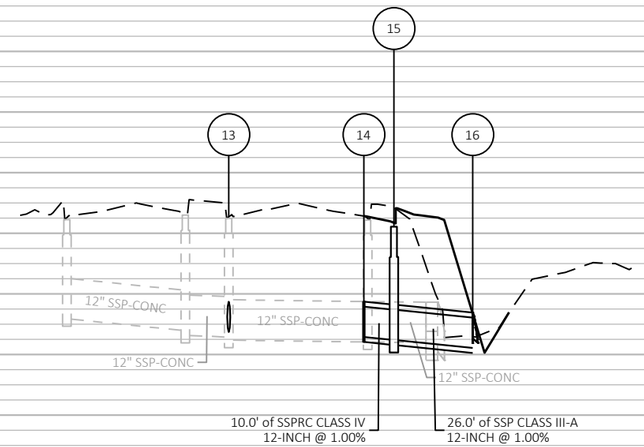
7	6	5
RIM: 777.95	RIM: 777.82	RIM: 776.86
SUMP: 773.49	SUMP: 773.43	SUMP: 772.78
DEPTH: 4.46	DEPTH: 4.39	DEPTH: 4.08
S INV OUT: 773.49	N INV IN: 773.43	SE INV IN: 773.28
	E INV OUT: 773.43	W INV IN: 773.03
		N INV OUT: 772.78



8	9	10
RIM: 771.44	RIM: 771.30	INV: 765.87
SUMP: 766.96	SUMP: 766.81	
DEPTH: 4.48	DEPTH: 4.50	
N INV OUT: 766.96	S INV IN: 766.81	
	N INV OUT: 766.81	



11	12	13
RIM: 770.88	RIM: 770.73	CONNECT TO EX INL
SUMP: 766.50	SUMP: 766.46	12" INV (W): 762.74
DEPTH: 4.38	DEPTH: 4.27	
S INV OUT: 766.50	N INV IN: 766.46	
	E INV OUT: 766.46	



13	14	15	16
CONNECT TO EX INL	INV: 762.58	RIM: 766.21	INV: 762.22
12" INV (W): 762.74		SUMP: 762.48	
		DEPTH: 3.73	
		S INV IN: 762.48	
		N INV OUT: 762.48	

2

STORM SEWER STRUCTURE DATA

STRUCTURE NUMBER	ALIGNMENT	STATION	OFFSET	LOCATION	TYPE	RIM/GRATE ELEVATION	STRUCTURE INV ELEV	TOTAL DEPTH	SUMP DEPTH	CONNECTING PIPES	PIPE DIRECTION	PIPE SIZE & TYPE	PIPE INVERT	PIPE ROUTE	PIPE LENGTH	PIPE SLOPE	REMARKS
3	23WB	106+90.18	28.50	RT	INLETS 2X3-H	776.52	773.44	3.08	0.00	3-4 OUT	N	SSPRC CLASS IV 12-INCH	773.44	TO STR: 4	8.95'	0.50%	
4	23WB	106+89.97	19.55	RT	INLETS 2X3-H	776.27	773.40	2.87	0.00	3-4 IN 4-5 OUT	S NW	SSPRC CLASS IV 12-INCH SSPRC CLASS IV 12-INCH	773.40 773.40	FROM STR: 3 TO STR: 5	-- 23.08'	-- 0.50%	
5	23WB	106+73.06	3.85	RT	MANHOLES 4-J	776.86	772.78	4.08	0.00	4-5 IN 6-5 IN 5-5.1 OUT	SE W N	SSPRC CLASS IV 12-INCH SSPRC CLASS IV 15-INCH 18-INCH OPENING	773.28 773.03 772.78	FROM STR: 4 FROM STR: 6 TO STR:	-- -- 0.00'	-- -- 9.64%	
6	23WB	106+32.94	7.06	RT	INLETS 2X3-H	777.82	773.43	4.39	0.00	7-6 IN 6-5 OUT	N E	SSPRC CLASS IV 15-INCH SSPRC CLASS IV 15-INCH	773.43 773.43	FROM STR: 7 TO STR: 5	-- 40.25'	-- 1.00%	
7	23WB	106+32.71	1.50	RT	INLETS 2X3-H	777.95	773.49	4.46	0.00	7-6 OUT	S	SSPRC CLASS IV 15-INCH	773.49	TO STR: 6	5.56'	1.00%	
8	23WB	108+42.50	-34.20	LT	INLETS 2X3-H	771.44	766.96	4.48	0.00	8-9 OUT	N	SSP CLASS III-A 12-INCH	766.96	TO STR: 9	7.57'	2.00%	
9	23WB	108+42.85	-41.76	LT	INLETS 2X3-H	771.30	766.81	4.50	0.00	8-9 IN 9-10 OUT	S N	SSP CLASS III-A 12-INCH SSP CLASS III-A 12-INCH	766.81 766.81	FROM STR: 8 TO STR: 10	-- 47.00'	-- 2.00%	
10	23WB	108+47.24	-88.55	LT	APRON ENDWALLS FOR CULVERT PIPE 12-INCH					9-10 IN	S	SSP CLASS III-A 12-INCH	765.87	FROM STR: 9	--	--	
11	23WB	108+66.55	1.50	RT	INLETS 2X3-H	770.88	766.50	4.38	0.00	11-12 OUT	S	SSPRC CLASS IV 12-INCH	766.50	TO STR: 12	3.64'	1.00%	
12	23WB	108+66.59	5.14	RT	INLETS 2X3-H	770.73	766.46	4.27	0.00	11-12 IN 12-13 OUT	N E	SSPRC CLASS IV 12-INCH SSPRC CLASS IV 12-INCH	766.46 766.46	FROM STR: 11 TO STR: 13	-- 148.76'	-- 2.50%	
13	23WB	110+15.20	11.89	RT	CONNECT TO EX INL					12-13 IN	W	SSPRC CLASS IV 12-INCH	762.74	FROM STR: 12	--	--	
14	23WB	110+15.46	-32.70	LT	CONCRETE COLLAR					14-15 OUT	N	SSPRC CLASS IV 12-INCH	762.58	TO STR: 15	9.96'	1.00%	
15	23WB	110+15.50	-42.66	LT	INLETS 2X3-H	766.21	762.48	3.73	0.00	14-15 IN 15-16 OUT	S N	SSPRC CLASS IV 12-INCH SSP CLASS III-A 12-INCH	762.48 762.48	FROM STR: 14 TO STR: 16	-- 26.00'	-- 1.00%	CONNECT TO PIPE UNDERDRAIN
16	23WB	110+15.62	-68.65	LT	APRON ENDWALLS FOR CULVERT PIPE 12-INCH					15-16 IN	S	SSP CLASS III-A 12-INCH	762.22	FROM STR: 15	--	--	

CULVERT PIPE DATA

STRUCTURE NUMBER	ALIGNMENT	STATION	OFFSET	LOCATION	TYPE	PIPE SIZE & TYPE	PIPE INVERT	PIPE ROUTE	PIPE LENGTH	PIPE SLOPE	REMARKS
1	VV-North	501+57.04	-53.36	LT	APRON ENDWALLS FOR CULVERT PIPE 30-INCH	CP CLASS III-B NON-METAL 30-INCH	763.60	TO STR: 2	145.00'	0.48%	
2	VV-North	501+18.58	86.15	RT	APRON ENDWALLS FOR CULVERT PIPE 30-INCH	CP CLASS III-B NON-METAL 30-INCH	762.90	FROM STR: 1	--	--	

NOTES:

1. GRATE ELEVATIONS SHOWN FOR TYPE H & H-S COVERS ARE DEPRESSED 0.08' FROM NORMAL GUTTER FLOW LINE ELEVATION.
2. TOTAL DEPTH = RIM/GRATE ELEVATION - STRUCTURE INVERT ELEVATION.
3. MANHOLES SHALL BE CONSTRUCTED IN A WAY THAT WILL ALLOW THE CASTING TO BE ALIGNED IN THE MIDDLE OF A LANE OR ON A JOINT LINE.
4. CONTRACTOR SHALL VERIFY EXISTING PIPE SIZES, MATERIALS AND INVERT ELEVATION WHEN CONNECTING NEW STORM SEWER INTO EXISTING PIPES PRIOR TO MANUFACTURING INLETS AND MANHOLES.
5. STATION/ OFFSET OF STORM SEWER STRUCTURES ARE TO THE CENTER OF STRUCTURE EXCEPT FOR APRON ENDWALLS WHICH ARE TO PIPE END.

2

LEGEND

- XXX — SIGN - REMOVE AND REPLACE
- XXX — SIGN - REMOVE EXISTING
- XXX — SIGN - PLACE NEW
- XXX — SIGN - MOVE EXISTING
- EXISTING SIGN
- PROPOSED SIGN MOUNTED ON POST(S)

N

CTH VV PIONEER ROAD

502'VV

501'VV

USH 45 SB/ STH 23 WB
JOHNSON STREET

104'WB' 105'WB' 106'WB' 107'WB' 108'WB' 109'WB' 110'WB' 111'WB'

104'EB' 105'EB' 106'EB' 107'EB' 108'EB' 109'EB' 110'EB' 111'EB'

USH 45 NB / STH 23 EB
JOHNSON STREET

MATCH LINE STA 111'WB+50

101 — R3-8LAAF 72"X30"

102 — RIGHT LANE MUST TURN RIGHT — REMOVE

103 — ONLY — REMOVE

REMOVE OVERHEAD SIGN SUPPORT (S-20-207)

104 — WRONG WAY — R5-1A 36"X24"

105 — ALTERNATE NORTH INTERSTATE 41 — J3-1 24"X69"

106 — R4-7 24"X30"

107 — W12-1D 24"X24"

108 — STOP — R1-1F 30"X30" MOUNT TO SIGNAL POLE

109 — STOP — R1-1F 30"X30" MOUNT TO SIGNAL POLE

110 — DO NOT ENTER — R5-1 30"X30" MOUNT TO SIGNAL POLE

111 — YIELD — R1-2 36"X31"

112 — STOP — R1-1F 30"X30" MOUNT TO SIGNAL POLE

113 — W12-1D 24"X24" MOUNT TO SIGNAL POLE

114 — PIONEER ROAD — MOVE MOUNT TO SIGNAL ARM

115 — JOHNSON STREET — MOVE MOUNT TO SIGNAL ARM

116 — LEFT ON GREEN ARROW ONLY — R10-5 24"X30" MOUNT TO SIGNAL ARM

117 — JOHNSON STREET — MOVE MOUNT TO SIGNAL ARM

118 — KEEP LEFT — REMOVE

119 — PIONEER ROAD — MOVE MOUNT TO SIGNAL ARM

120 — DO NOT ENTER — R5-1 30"X30" MOUNT TO SIGNAL POLE

121 — NORTH COUNTY VV — REMOVE

122 — STOP — R1-1F 30"X30" MOUNT TO SIGNAL POLE

123 — COUNTY VV — J13-1 24"X45" MOUNT TO SIGNAL POLE

124 — YIELD — R1-2 36"X31"

125 — STOP — R1-1F 30"X30" MOUNT TO SIGNAL POLE

126 — W12-1D 24"X24"

127 — W12-1D 24"X24"

128 — R4-7 24"X30"

129 — SOUTH 45 | SOUTH INTERSTATE 41 | NORTH INTERSTATE 41 SECOND RIGHT — J3-3 72"X57"

130 — NO PARKING ANY TIME — REMOVE

131 — BEGIN RIGHT TURN LANE — R3-20R 24"X36"

JCT INTERSTATE 41 COUNTY VV — BEGIN LEFT TURN LANE — TO REMAIN

SPEED LIMIT 35 — TO REMAIN

BEGIN LEFT TURN LANE — TO REMAIN

ASPHALT PARKING LOT

CTH VV PIONEER ROAD

USH 45 SB/ STH 23 WB JOHNSON STREET

MATCH LINE STA 111'WB+50

JCT INTERSTATE 41 | 45 | COUNTY VV — TO REMAIN

132 — ONLY ONLY ONLY ONLY — REMOVE

133 — NO PARKING ANY TIME — R7-1D 18"X24"

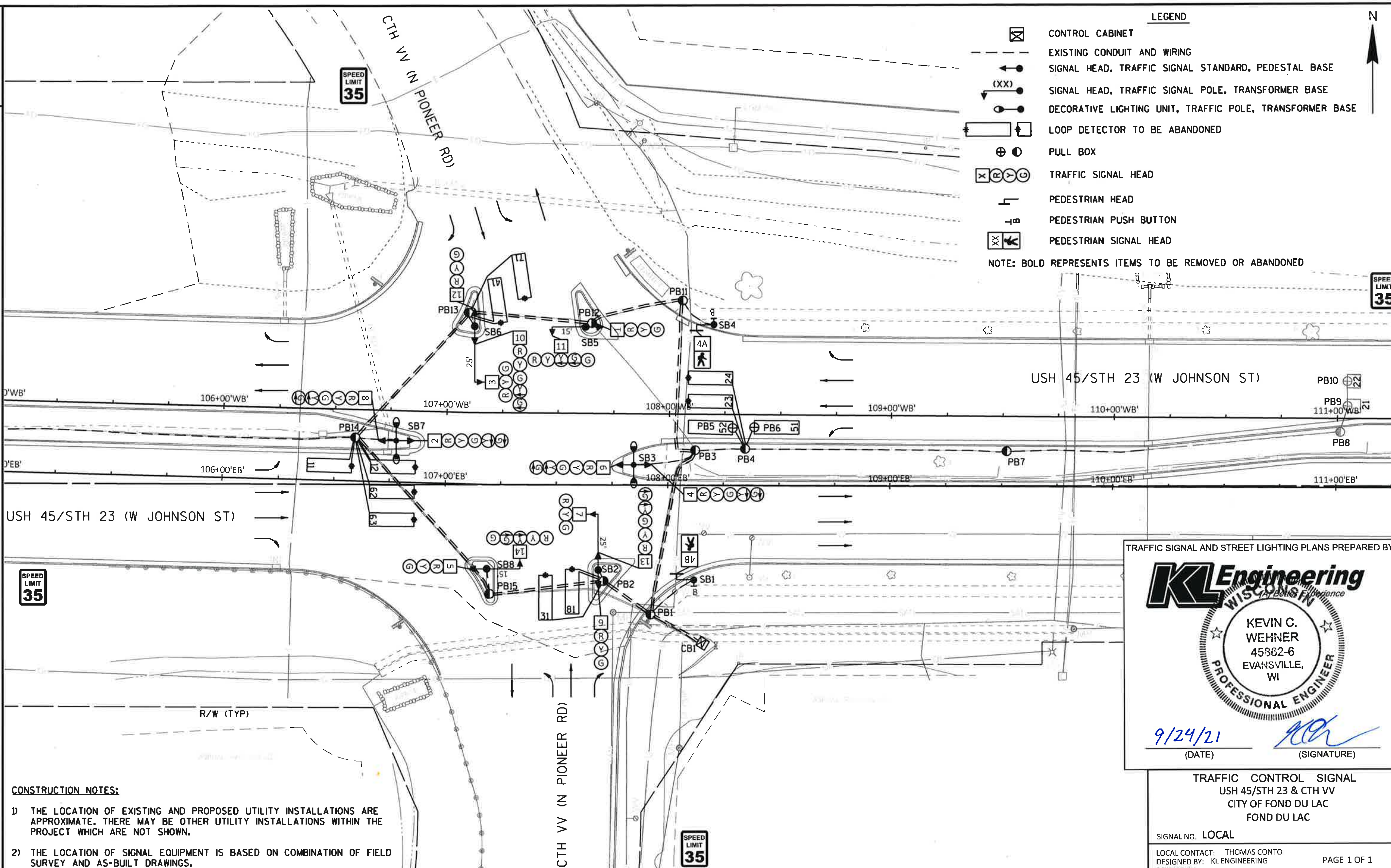
112'WB' 113'WB'

PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	SIGNING PLAN	SHEET 22	E

FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-023201-PS.DWG
LAYOUT NAME - Sheet - 01

PLOT DATE : 9/23/2021 7:46 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42



LEGEND

- CONTROL CABINET
- EXISTING CONDUIT AND WIRING
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- DECORATIVE LIGHTING UNIT, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR TO BE ABANDONED
- PULL BOX
- TRAFFIC SIGNAL HEAD
- PEDESTRIAN HEAD
- PEDESTRIAN PUSH BUTTON
- PEDESTRIAN SIGNAL HEAD

NOTE: BOLD REPRESENTS ITEMS TO BE REMOVED OR ABANDONED

N

CONSTRUCTION NOTES:

1) THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.

2) THE LOCATION OF SIGNAL EQUIPMENT IS BASED ON COMBINATION OF FIELD SURVEY AND AS-BUILT DRAWINGS.

TRAFFIC SIGNAL AND STREET LIGHTING PLANS PREPARED BY:

KL Engineering — For Better Experience

WISCONSIN — KEVIN C. WEHNER 45862-6 EVANSVILLE, WI — PROFESSIONAL ENGINEER

9/24/21 (DATE)

(SIGNATURE)

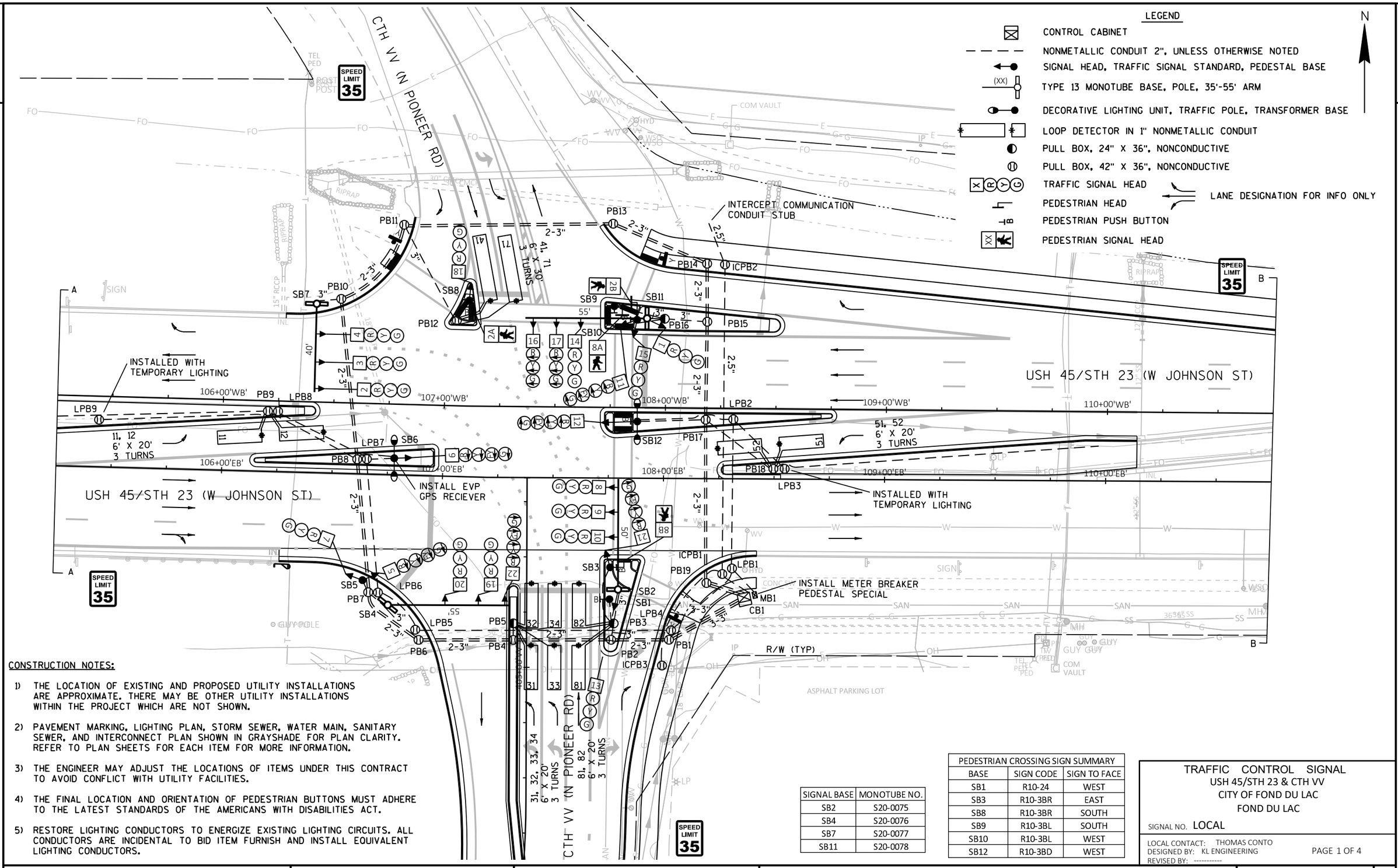
TRAFFIC CONTROL SIGNAL
USH 45/STH 23 & CTH VV
CITY OF FOND DU LAC
FOND DU LAC

SIGNAL NO. LOCAL

LOCAL CONTACT: THOMAS CONTO
DESIGNED BY: KL ENGINEERING
REVISED BY: ----------

PAGE 1 OF 1

PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 23	E



CONSTRUCTION NOTES:

1) THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.

2) PAVEMENT MARKING, LIGHTING PLAN, STORM SEWER, WATER MAIN, SANITARY SEWER, AND INTERCONNECT PLAN SHOWN IN GRAYSHADE FOR PLAN CLARITY. REFER TO PLAN SHEETS FOR EACH ITEM FOR MORE INFORMATION.

3) THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH UTILITY FACILITIES.

4) THE FINAL LOCATION AND ORIENTATION OF PEDESTRIAN BUTTONS MUST ADHERE TO THE LATEST STANDARDS OF THE AMERICANS WITH DISABILITIES ACT.

5) RESTORE LIGHTING CONDUCTORS TO ENERGIZE EXISTING LIGHTING CIRCUITS. ALL CONDUCTORS ARE INCIDENTAL TO BID ITEM FURNISH AND INSTALL EQUIVALENT LIGHTING CONDUCTORS.

SIGNAL BASE	MONOTUBE NO.
SB2	S20-0075
SB4	S20-0076
SB7	S20-0077
SB11	S20-0078

PEDESTRIAN CROSSING SIGN SUMMARY		
BASE	SIGN CODE	SIGN TO FACE
SB1	R10-24	WEST
SB3	R10-3BR	EAST
SB8	R10-3BR	SOUTH
SB9	R10-3BL	SOUTH
SB10	R10-3BL	WEST
SB12	R10-3BD	WEST

TRAFFIC CONTROL SIGNAL
USH 45/STH 23 & CTH VV
CITY OF FOND DU LAC
FOND DU LAC

SIGNAL NO. LOCAL

LOCAL CONTACT: THOMAS CONTO
DESIGNED BY: KL ENGINEERING
REVISED BY: ----------

PAGE 1 OF 4

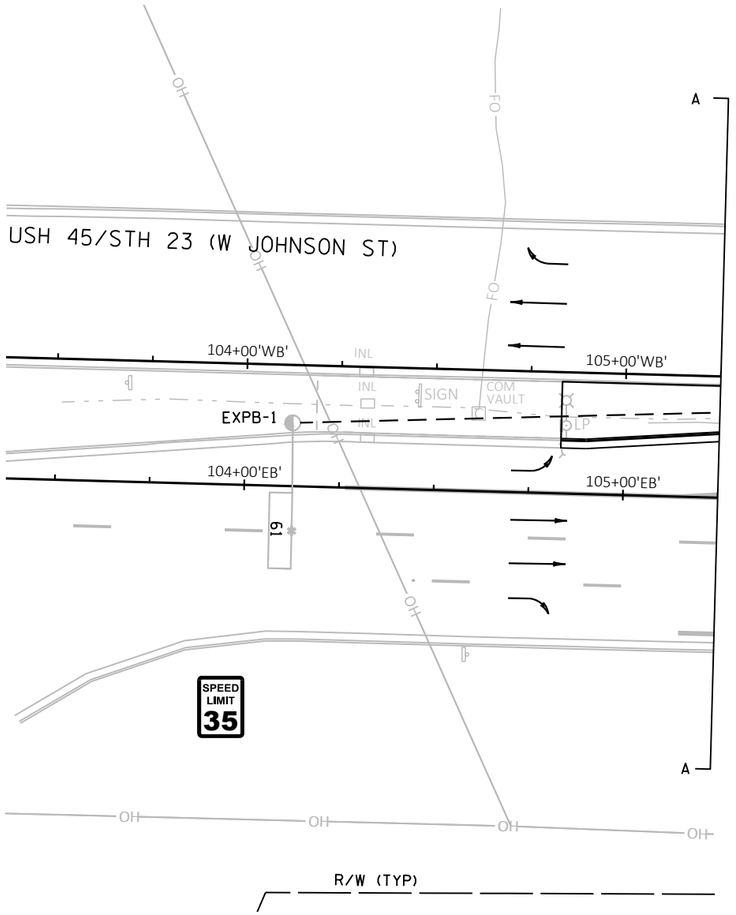
PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	TRAFFIC SIGNAL PLAN	SHEET 24	E

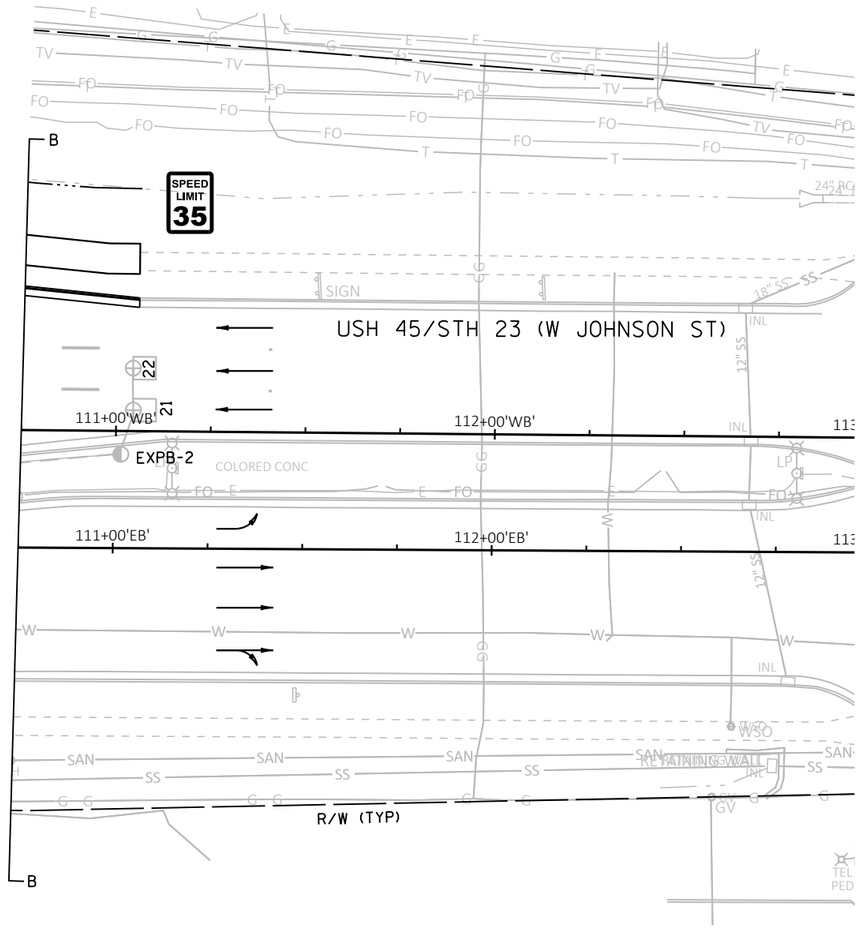
FILE NAME : G:\GREMMER\19070-000 USH 45, W JOHNSON STREET, ID 1440-40-00\CIVIL 3D\SHEETSPLAN\024201-SP.DWG
PLOT DATE : 9/24/2021 1:38 PM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- PULL BOX, 12"X24", NONCONDUCTIVE
- PULL BOX, 24"X36", NONCONDUCTIVE
- LANE DESIGNATION FOR INFO ONLY

N





TRAFFIC CONTROL SIGNAL
USH 45/STH 23 & CTH VV
CITY OF FOND DU LAC
FOND DU LAC

SIGNAL NO. LOCAL

LOCAL CONTACT: THOMAS CONTO
DESIGNED BY: KL ENGINEERING
REVISED BY: ----------

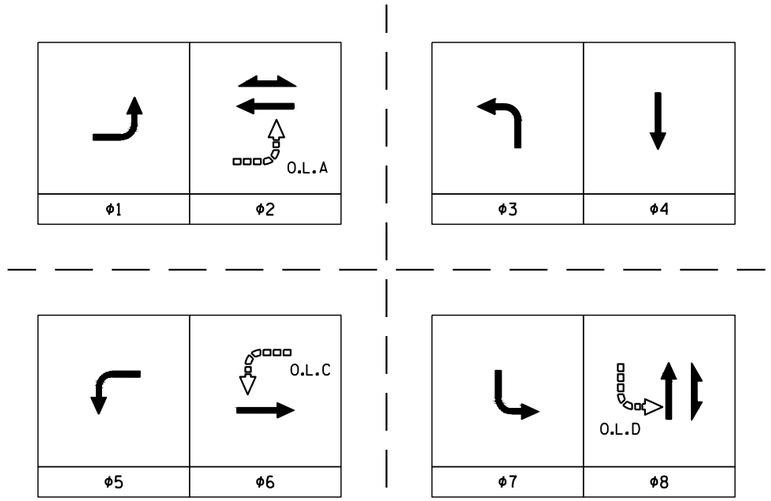
PAGE 2 OF 4

PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	TRAFFIC SIGNAL PLAN	SHEET 25	E

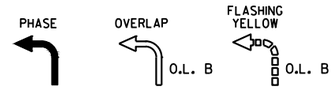
FILE NAME : G:\GREMMER\19070-000 USH 45, W JOHNSON STREET, ID 1440-40-00\CIVIL 3D\SHEETSPLAN\024201-SP.DWG
PLOT DATE : 9/24/2021 1:38 PM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

	HEAD NUMBERS	FLASH
ϕ1	11-12	-
ϕ2	1-4	R
ϕ3	16-17	R
ϕ4	18-20	R
ϕ5	5-6	-
ϕ6	7-10	R
ϕ7	21-22	-
ϕ8	13-15	R
ϕ2 PED	2A-2B	
ϕ4 PED		
ϕ6 PED		
ϕ8 PED	8A-8B	

O.L. ASSIGNMENTS		
O.L.A	11-12	ϕ2
O.L.B		
O.L.C	5-6	ϕ6
O.L.D	21-22	ϕ8
O.L.E		
O.L.F		
O.L.G		
O.L.H		



LEGEND



PREEMPTION ASSIGNMENTS				
PREEMPTION DESIGNATION	PREEMPTION TYPE	EVP CHANNEL	DIRECTION OF TRAVEL	PHASE(S) CALLED
1	RESERVED	-	-	-
2	RESERVED	-	-	-
3	EVP	A	EB	6
4	EVP	B	WB	2
5	EVP	C	NB	8
6	EVP	D	SB	4
7	NOT USED	-	-	-
8	NOT USED	-	-	-
9	NOT USED	-	-	-
10	NOT USED	-	-	-

1. AFTER PREEMPTION SEQUENCE A OR B, CONTROLLER SHALL RETURN TO PHASE 2+6.
2. AFTER PREEMPTION SEQUENCE D, CONTROLLER SHALL RETURN TO PHASE 8.

CONTROLLER LOGIC

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

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT (GPS)	X
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

CENTRAL SYSTEM
LOCATION OF MASTER CONTROLLER NO.: N/A
SIGNAL SYSTEM #:

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

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
DETECTOR #(S)	12			33	34			
PHASE CALLED	5			3	3			
PHASE EXTENDED	5			3	3			
DISCONNECT TIME								
CALLING DELAY								
EXTENSION STRETCH								
LOOP FUNCTION								

19	17	23	21	27	25	31	29	DETECTOR INPUT
								DETECTOR #(S)
								PHASE CALLED
								PHASE EXTENDED
								DISCONNECT TIME
								CALLING DELAY
								EXTENSION STRETCH
								LOOP FUNCTION

DETECTOR INPUT	4	2	8	6	12	10	16	14
DETECTOR #(S)	11	21	22	31	32	41	51	52
PHASE CALLED	5	2	2	3	3	4	5	5
PHASE EXTENDED	5	2	2	3	3	4	5	5
DISCONNECT TIME								
CALLING DELAY								
EXTENSION STRETCH								
LOOP FUNCTION								

20	18	24	22	28	26	32	30	DETECTOR INPUT
61	71	81	82					DETECTOR #(S)
6	7	8	8					PHASE CALLED
6	7	8	8					PHASE EXTENDED
								DISCONNECT TIME
								CALLING DELAY
								EXTENSION STRETCH
								LOOP FUNCTION

TYPE OF INTERCONNECT	
NONE	
TBC	X
CLOSED LOOP TWISTED PAIR	
CLOSED LOOP FIBER OPTIC	
RADIO	

TYPE OF REMOTE COMMUNICATION	
NONE	X
FIBER	
CELL MODEM	
PHONE	

TRAFFIC CONTROL SIGNAL
USH 45/STH 23 & CTH VV
CITY OF FOND DU LAC
FOND DU LAC

SIGNAL NO. LOCAL

LOCAL CONTACT: THOMAS CONTO
DESIGNED BY: KL ENGINEERING
REVISED BY: ----------

PROJECT NO: 1440-40-71 | HWY: USH 45 | COUNTY: FOND DU LAC | TRAFFIC SIGNAL PLAN | SHEET 26 | E

FILE NAME : G:\GREMMER\19070-000 USH 45, W JOHNSON STREET, ID 1440-40-00\CIVIL 3D\SHEETSPLAN\024201-SP.DWG PLOT DATE : 9/24/2021 1:38 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

INTERSECTION:	USH 45/STH 23 & CTH VV

SIGNAL WIRE	BLK-BLACK	RED-RED	GRN-GREEN
COLOR CODING	WHT-WHITE	BLU-BLUE	ORG-ORANGE

DATE:	Apr-21

CB1 TO	AWG 14 # OF COND.	HEAD NO.	PHASE	SIGNAL INDICATION WIRE COLOR									PED BUTTON	OTHER
				RED	YELLOW	GREEN	<RED>	<YELLOW>	<FLASH YEL>	<GREEN>	DWALK	WALK		
SB1	12	BUTTON	8										WHT/BLK	
SB2	12	8	6	RED	ORG	GRN								
		9	6	RED	ORG	GRN								
		10	6	RED	ORG	GRN								
		13	8	RED/BLK	ORG/BLK	GRN/BLK								
SB3	12	21	7				RED/BLK	ORG/BLK	BLK/WHT	GRN/BLK				
		8B	8								BLK	BLU		
		BUTTON	8										WHT/BLK	
SB4	12	19	4	RED	ORG	GRN								
		20	4	RED	ORG	GRN								
		22	7				RED/BLK	ORG/BLK	BLK/WHT	GRN/BLK				
SB5	12	5	5				RED/BLK	ORG/BLK	BLK/WHT	GRN/BLK				
		7	6	RED	ORG	GRN								
SB6	12	6	5				RED/BLK	ORG/BLK	BLK/WHT	GRN/BLK				
SB7	12	2	2	RED	ORG	GRN								
		3	2	RED	ORG	GRN								
		4	2	RED	ORG	GRN								
SB8	12	18	4	RED	ORG	GRN								
		2A	2								BLK	BLU		
		BUTTON	2										WHT/BLK	
SB9	12	8A	8								BLK	BLU		
		BUTTON	8										WHT/BLK	
SB10	15	11	1				RED/BLK	ORG/BLK	BLK/WHT	GRN/BLK				
		15	8	RED	ORG	GRN								
		2B	2								BLK	BLU		
		BUTTON	2										WHT/BLK	
SB11	15	1	2	RED	ORG	GRN								
		14	8	RED/BLK	ORG/BLK	GRN/BLK								
		16	3				RED/WHT	ORG/WHT		BLK/WHT				
		17	3				RED/WHT	ORG/WHT		BLK/WHT				
SB12	12	12	1				RED/BLK	ORG/BLK	BLK/WHT	GRN/BLK				
		BUTTON	8										WHT/BLK	

EQUIPMENT GROUNDING CONDUCTORS 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB7
SB7	SB6
SB6	SB8
SB8	SB9
SB9	SB10
SB10	SB11
SB11	SB12
SB12	CB1

LIGHTING UF 10 AWG W/ GROUND	
FROM	TO
CB1	SB6
CB1	SB12

TRAFFIC CONTROL SIGNAL
USH 45/STH 23 & CTH VV
CITY OF FOND DU LAC
FOND DU LAC

SIGNAL NO. LOCAL

LOCAL CONTACT: THOMAS CONTO
DESIGNED BY: KL ENGINEERING
REVISED BY: ----------

PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	TRAFFIC SIGNAL PLAN	SHEET 27	E

FILE NAME : G:\GREMMER\19070-000 USH 45, W JOHNSON STREET, ID 1440-40-00\CIVIL 3D\SHEETSPLAN\CABLE ROUTING.DWG
PLOT DATE : 7/27/2021 12:24 PM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

2

LEGEND

- CONTROL CABINET
- OVERHEAD LIGHTING CABLE
- CLASS 4 WOOD POLE
- TEMPORARY LIGHTING UNIT, LED B
- LANE DESIGNATION FOR INFO ONLY

N

CTH VV (N PIONEER RD)

USH 45/STH 23 (W JOHNSON ST)

INTERCEPT EXISTING LIGHTING CONDUIT.

LPB9

WP4

106+00'WB'

107+00'WB'

108+00'WB'

109+00'WB'

110+00'WB'

106+00'EB'

107+00'EB'

108+00'EB'

109+00'EB'

110+00'EB'

LPB3

WP1

INTERCEPT EXISTING LIGHTING CONDUIT.

WP3

WP2

LOCATE WP2 NEAR TEMPORARY ELECTRICAL SERVICE.

ASPHALT PARKING LOT

R/W (TYP)

CTH VV (N PIONEER RD)

CONSTRUCTION NOTES:

1) THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.

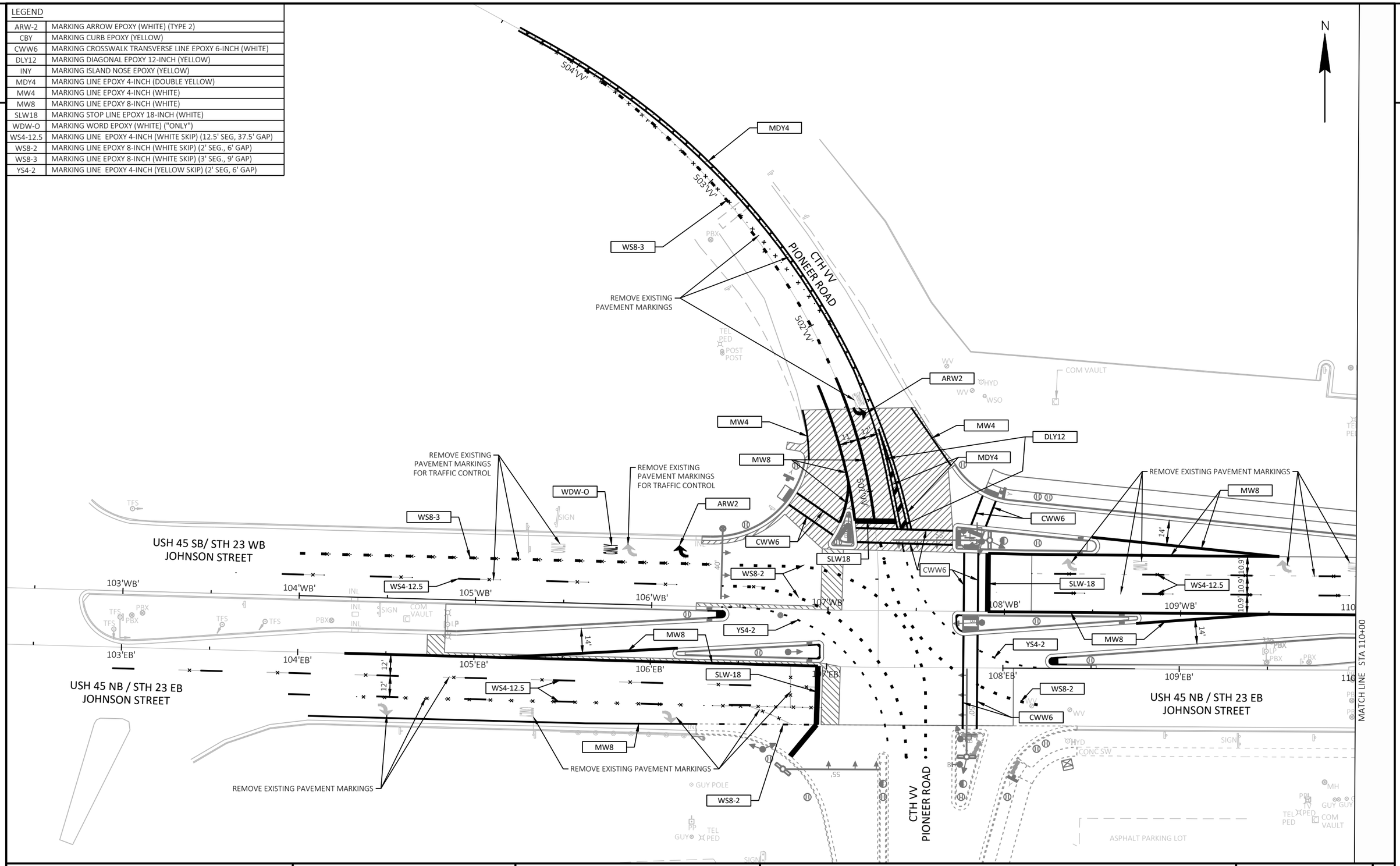
2) PAVEMENT MARKING, LIGHTING PLAN, STORM SEWER, WATER MAIN, SANITARY SEWER, AND INTERCONNECT PLAN SHOWN IN GRAYSHADE FOR PLAN CLARITY. REFER TO PLAN SHEETS FOR EACH ITEM FOR MORE INFORMATION.

3) THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH UTILITY FACILITIES.

PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	TEMPORARY LIGHTING PLAN	SHEET 28	E

FILE NAME : G:\GREMMER\19070-000 USH 45, W JOHNSON STREET, ID 1440-40-00\CIVIL 3D\SHEETSPLAN\TEMP LIGHTING.DWG PLOT DATE : 9/24/2021 1:40 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:40 FT

LEGEND	
ARW-2	MARKING ARROW EPOXY (WHITE) (TYPE 2)
CBY	MARKING CURB EPOXY (YELLOW)
CWW6	MARKING CROSSWALK TRANSVERSE LINE EPOXY 6-INCH (WHITE)
DLY12	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
INY	MARKING ISLAND NOSE EPOXY (YELLOW)
MDY4	MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)
MW4	MARKING LINE EPOXY 4-INCH (WHITE)
MW8	MARKING LINE EPOXY 8-INCH (WHITE)
SLW18	MARKING STOP LINE EPOXY 18-INCH (WHITE)
WDW-O	MARKING WORD EPOXY (WHITE) ("ONLY")
WS4-12.5	MARKING LINE EPOXY 4-INCH (WHITE SKIP) (12.5' SEG, 37.5' GAP)
WS8-2	MARKING LINE EPOXY 8-INCH (WHITE SKIP) (2' SEG., 6' GAP)
WS8-3	MARKING LINE EPOXY 8-INCH (WHITE SKIP) (3' SEG., 9' GAP)
YS4-2	MARKING LINE EPOXY 4-INCH (YELLOW SKIP) (2' SEG, 6' GAP)



PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	PAVEMENT MARKING PLAN	SHEET 29	E

FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-024501-PM.DWG
LAYOUT NAME - Sheet - 01

PLOT DATE : 9/23/2021 7:46 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

N

REMOVE EXISTING PAVEMENT MARKINGS

WS4-12.5

REMOVE EXISTING PAVEMENT MARKINGS FOR TRAFFIC CONTROL

WS4-12.5

USH 45 SB/ STH 23 WB
JOHNSON STREET

USH 45 NB / STH 23 EB
JOHNSON STREET

MATCH LINE STA 110+00

10.9' 10.9'

111'WB' 112'WB' 113'WB' 114'WB' 115'WB' 116'WB' 117'WB'

111'EB' 112'EB' 113'EB' 114'EB' 115'EB' 116'EB' 117'EB'

ASPHALT PARKING LOT

CONC

MH

CHIS

PBX

TEL PED

CONC W/ PED

COM VAULT

ASPH

TFS BASE

BRICK PAVERS

CONC SW

SIGN

INL

WSO

COLORED CONC

LP

CBX

WV

HYD

GV

LEGEND	
ARW-2	MARKING ARROW EPOXY (WHITE) (TYPE 2)
CBY	MARKING CURB EPOXY (YELLOW)
CWW6	MARKING CROSSWALK TRANSVERSE LINE EPOXY 6-INCH (WHITE)
DLY12	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
INY	MARKING ISLAND NOSE EPOXY (YELLOW)
MDY4	MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)
MW4	MARKING LINE EPOXY 4-INCH (WHITE)
MW8	MARKING LINE EPOXY 8-INCH (WHITE)
SLW18	MARKING STOP LINE EPOXY 18-INCH (WHITE)
WDW-O	MARKING WORD EPOXY (WHITE) ("ONLY")
WS4-12.5	MARKING LINE EPOXY 4-INCH (WHITE SKIP) (12.5' SEG, 37.5' GAP)
WS8-2	MARKING LINE EPOXY 8-INCH (WHITE SKIP) (2' SEG., 6' GAP)
WS8-3	MARKING LINE EPOXY 8-INCH (WHITE SKIP) (3' SEG., 9' GAP)
YS4-2	MARKING LINE EPOXY 4-INCH (YELLOW SKIP) (2' SEG, 6' GAP)

PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	PAVEMENT MARKING PLAN	SHEET 30	E

FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-024501-PM.DWG
LAYOUT NAME - Sheet - 02

PLOT DATE : 9/23/2021 7:46 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- WORK AREA
- MB — PORTABLE CHANGEABLE MESSAGE BOARD
- 1 — PLACE TRAFFIC CONTROL SIGNS PER SDD "TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION"
- C — PLACE TRAFFIC CONTROL SIGNS PER "DETAIL C" IN SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES"
- D — PLACE TRAFFIC CONTROL SIGNS PER "DETAIL D" IN SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES"

PCMS MESSAGES

	7 DAYS PRIOR TO PROJECT STARTUP	
LOCATION	PHASE 1 (2 SEC.)	PHASE 2 (2 SEC.)
STH78 NB	ROAD WORK BEGINS	{DAY} {DATE}
STH78 SB	ROAD WORK BEGINS	{DAY} {DATE}

STAGE 1

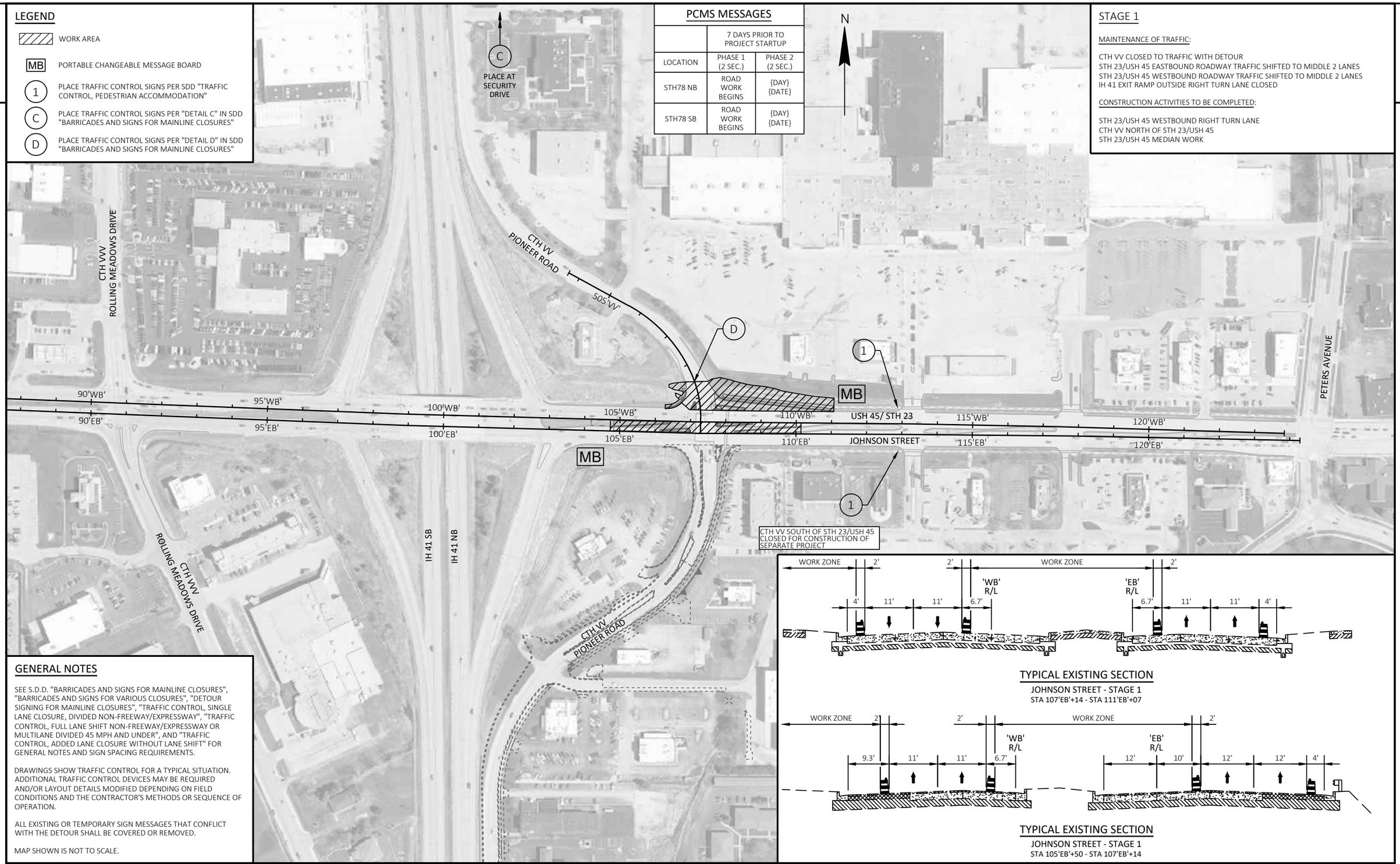
MAINTENANCE OF TRAFFIC:

CTH VV CLOSED TO TRAFFIC WITH DETOUR
STH 23/USH 45 EASTBOUND ROADWAY TRAFFIC SHIFTED TO MIDDLE 2 LANES
STH 23/USH 45 WESTBOUND ROADWAY TRAFFIC SHIFTED TO MIDDLE 2 LANES
IH 41 EXIT RAMP OUTSIDE RIGHT TURN LANE CLOSED

CONSTRUCTION ACTIVITIES TO BE COMPLETED:

STH 23/USH 45 WESTBOUND RIGHT TURN LANE
CTH VV NORTH OF STH 23/USH 45
STH 23/USH 45 MEDIAN WORK

2



GENERAL NOTES

SEE S.D.D. "BARRICADES AND SIGNS FOR MAINLINE CLOSURES", "BARRICADES AND SIGNS FOR VARIOUS CLOSURES", "DETOUR SIGNING FOR MAINLINE CLOSURES", "TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY", "TRAFFIC CONTROL, FULL LANE SHIFT NON-FREEWAY/EXPRESSWAY OR MULTILANE DIVIDED 45 MPH AND UNDER", AND "TRAFFIC CONTROL, ADDED LANE CLOSURE WITHOUT LANE SHIFT" FOR GENERAL NOTES AND SIGN SPACING REQUIREMENTS.

DRAWINGS SHOW TRAFFIC CONTROL FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON FIELD CONDITIONS AND THE CONTRACTOR'S METHODS OR SEQUENCE OF OPERATION.

ALL EXISTING OR TEMPORARY SIGN MESSAGES THAT CONFLICT WITH THE DETOUR SHALL BE COVERED OR REMOVED.

MAP SHOWN IS NOT TO SCALE.

TYPICAL EXISTING SECTION
JOHNSON STREET - STAGE 1
STA 107'EB'+14 - STA 111'EB'+07

TYPICAL EXISTING SECTION
JOHNSON STREET - STAGE 1
STA 105'EB'+50 - STA 107'EB'+14

PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	TRAFFIC CONTROL: STAGE 1 OVERVIEW	SHEET 31	E

FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-025100-TC1.DWG
LAYOUT NAME - Sheet-01
PLOT DATE : 9/23/2021 7:46 AM
PLOT BY : AARON SARAUER
PLOT NAME :
PLOT SCALE : 1 IN:250 FT
WISDOT/CADDS SHEET 42

2

TRAFFIC CONTROL LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA
- WORK COMPLETED IN PREVIOUS STAGE(S)

TEMPORARY MARKING LEGEND

MW4	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
MY4	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
SLW18	TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)
WS4-12.5	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE SKIP) (12.5' SEG, 37.5' GAP)

2

N

IH 41 SB

IH 41 NB

IH 41 NB ON-RAMP

IH 41 SB OFF-RAMP

ROAD WORK AHEAD
W20-1A
48"X48"

WO1-4R
48"X48"

END ROAD WORK
G20-2A
48"X24"

WO1-6
48" X 24"
TYPE III BARRICADE

R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE

USH 45 SB/ STH 23 WB
JOHNSON STREET

97'WB' 98'WB' 99'WB' 100'WB' 101'WB' 102'WB' 103'WB' 104

14' 12' 12'

MY4

MATCH LINE STA 104'EB'+00

97'EB' 98'EB' 99'EB' 100'EB' 101'EB' 102'EB' 103'EB' 104

USH 45 NB / STH 23 EB
JOHNSON STREET

12' 12'

SLW-18

MW4

WS4-12.5

12' 12'

MW4

350' 350' 75'

ROAD WORK AHEAD
W20-1A
48"X48"

WO1-4R
48"X48"

IH 41 SB ON-RAMP

IH 41 NB OFF-RAMP

PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	TRAFFIC CONTROL: STAGE 1	SHEET 32	E

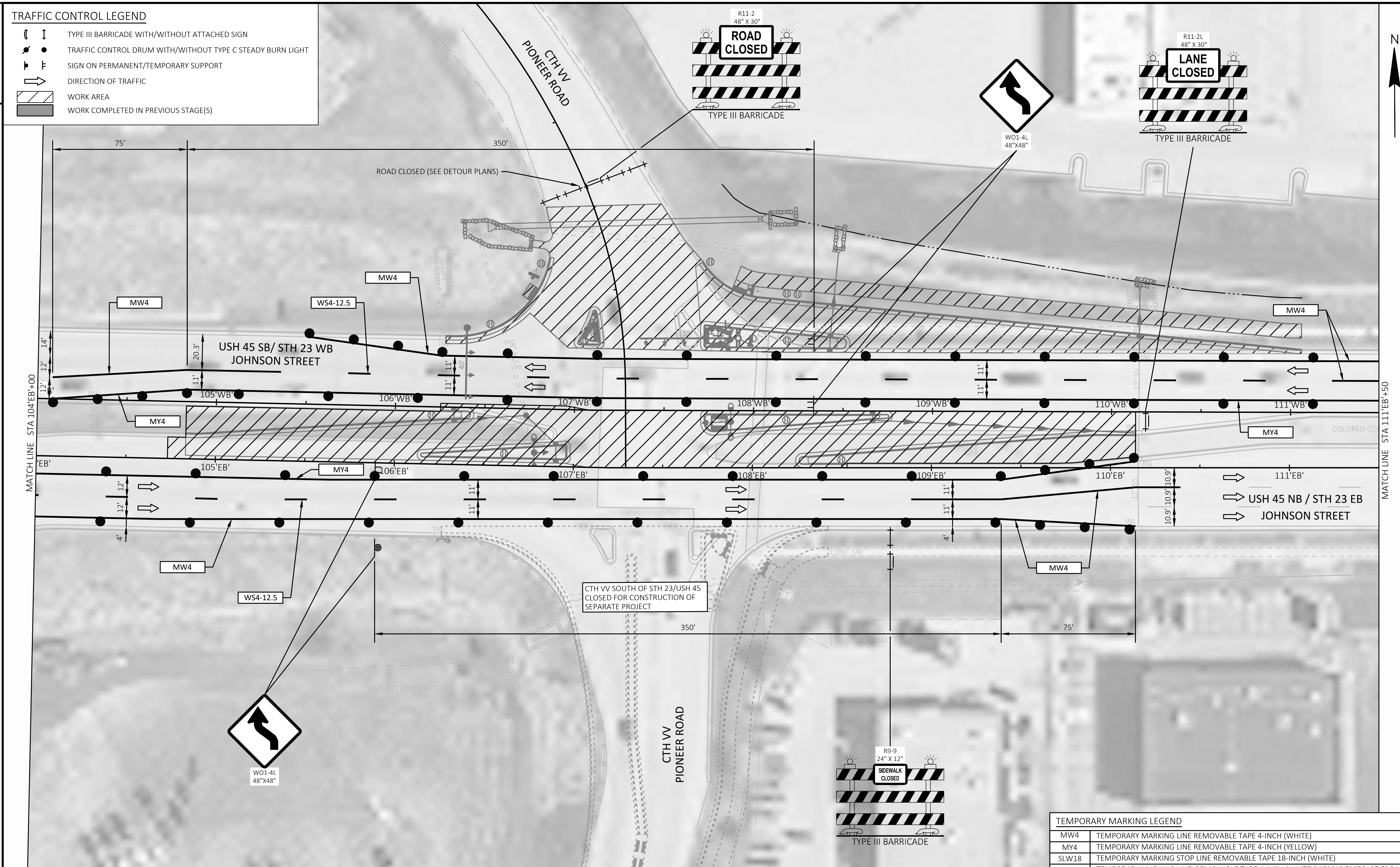
FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-025101-TC1.DWG
LAYOUT NAME - Sheet - 01

PLOT DATE : 7/15/2021 11:21 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

TRAFFIC CONTROL LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA
- WORK COMPLETED IN PREVIOUS STAGE(S)



N
R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE
W01-4L
48"X48"
R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE
CTH VV
PIONEER ROAD
75'
350'
ROAD CLOSED (SEE DETOUR PLANS)
MW4
WS4-12.5
MY4
USH 45 SB/ STH 23 WB
JOHNSON STREET
20.3'
14'
12'
11'
40'
105'WB'
106'WB'
107'WB'
108'WB'
109'WB'
110'WB'
111'WB'
105'EB'
106'EB'
107'EB'
108'EB'
109'EB'
110'EB'
111'EB'
MATCH LINE STA 104'EB'+00
MATCH LINE STA 111'EB'+50
USH 45 NB / STH 23 EB
JOHNSON STREET
10.9'
4'
CTH VV SOUTH OF STH 23/USH 45 CLOSED FOR CONSTRUCTION OF SEPARATE PROJECT
ASPHALT PARKING LOT
CONC SW
COLORED CO
W01-4L
48"X48"
CTH VV
PIONEER ROAD
R9-9
24" X 12"
SIDEWALK CLOSED
TYPE III BARRICADE

TEMPORARY MARKING LEGEND

MW4	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
MY4	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
SLW18	TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)
WS4-12.5	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE SKIP) (12.5' SEG, 37.5' GAP)

PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	TRAFFIC CONTROL: STAGE 1	SHEET 33 E

2

N

R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE

R9-9
24" X 12"
SIDEWALK CLOSED
TYPE III BARRICADE

R9-11
24"X12"
SIDEWALK CLOSED AHEAD
CROSS HERE
TYPE II BARRICADE

WO1-4R
48"X48"

WO1-6
48" X 24"
TYPE III BARRICADE

WO4-2R
48"X48"

RIGHT LANE CLOSED AHEAD
W20-5A
48"X48"

ROAD WORK AHEAD
W20-1A
48"X48"

75' 350' 245' 350' 350' 350'

MW4

MW4

MY4

4' 11' 11' 10.9' 10.9' 10.9' 10.9' 10.9'

MATCH LINE STA 111'EB+50

112'WB' 113'WB' 114'WB' 115'WB' 116'WB' 117'WB' 118'WB' 119'WB'

USH 45 SB/ STH 23 WB
JOHNSON STREET

112'EB' 113'EB' 114'EB' 115'EB' 116'EB' 117'EB' 118'EB' 119'EB'

USH 45 NB / STH 23 EB
JOHNSON STREET

WO1-6
48" X 24"
TYPE III BARRICADE

R9-11
24"X12"
SIDEWALK CLOSED AHEAD
CROSS HERE
TYPE II BARRICADE

WO1-4R
48"X48"

END ROAD WORK
G20-2A
48"X24"

TEMPORARY MARKING LEGEND

MW4	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
MY4	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
SLW18	TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)
WS4-12.5	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE SKIP) (12.5' SEG, 37.5' GAP)

TRAFFIC CONTROL LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA
- WORK COMPLETED IN PREVIOUS STAGE(S)

PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	TRAFFIC CONTROL: STAGE 1	SHEET 34	E

FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-025101-TC1.DWG
LAYOUT NAME - Sheet - 03

PLOT DATE : 7/15/2021 11:21 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

TRAFFIC CONTROL LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA
- WORK COMPLETED IN PREVIOUS STAGE(S)

IH 41 SB

IH 41 NB

N

101 EB'

101 WB'

12'

12'

12'

USH 45 NB / STH 23 EB
JOHNSON STREET

102 WB'

IH 41 NB OFF-RAMP

103 EB'

12'

12'

4'

500'

100'

ROAD WORK AHEAD

W20-1A
48"X48"

R11-2L
48" X 30"

LANE CLOSED

TYPE III BARRICADE

TEMPORARY MARKING LEGEND

MW4	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
MY4	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
SLW18	TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)
WS4-12.5	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE SKIP) (12.5' SEG, 37.5' GAP)

PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	TRAFFIC CONTROL: STAGE 1	SHEET 35	E

FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-025101-TC1.DWG
LAYOUT NAME - Sheet - 04

PLOT DATE : 7/15/2021 11:21 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- WORK AREA
- WORK COMPLETED IN PREVIOUS STAGE(S)
- (1) PLACE TRAFFIC CONTROL SIGNS PER SDD "TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION"
- (B) PLACE TRAFFIC CONTROL SIGNS PER "DETAIL B" IN SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES"
- (C) PLACE TRAFFIC CONTROL SIGNS PER "DETAIL C" IN SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES"
- (D) PLACE TRAFFIC CONTROL SIGNS PER "DETAIL D" IN SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES"

STAGE 2

MAINTENANCE OF TRAFFIC:

CTH VV CLOSED TO TRAFFIC WITH DETOUR
STH 23/USH 45 EASTBOUND & WESTBOUND ROADWAY CLOSED WITH DETOUR

CONSTRUCTION ACTIVITIES TO BE COMPLETED:

STH 23/USH 45 EASTBOUND & WESTBOUND LANES THROUGH INTERSECTION
CTH VV SURFACE HMA PAVEMENT
TRAFFIC SIGNALS

2

N

C PLACE AT SECURITY DRIVE

CTH VV PIONEER ROAD

505'VV'

CTH VVV ROLLING MEADOWS DRIVE

D

1

B

C

D

90'WB' 95'WB' 100'WB' 105'WB' 110'WB' USH 45 / STH 23 115'WB' 120'WB'

90'EB' 95'EB' 100'EB' 105'EB' 110'EB' JOHNSON STREET 115'EB' 120'EB'

PETERS AVENUE

D

1

CTH VV SOUTH OF STH 23/USH 45 CLOSED FOR CONSTRUCTION OF SEPARATE PROJECT

CTH VVV ROLLING MEADOWS DRIVE

IH 41 SB

IH 41 NB

CTH VV PIONEER ROAD

GENERAL NOTES

SEE S.D.D. "BARRICADES AND SIGNS FOR MAINLINE CLOSURES", "BARRICADES AND SIGNS FOR VARIOUS CLOSURES", "DETOUR SIGNING FOR MAINLINE CLOSURES", AND "TRAFFIC CONTROL, ADDED LANE CLOSURE WITHOUT LANE SHIFT" FOR GENERAL NOTES AND SIGN SPACING REQUIREMENTS.

DRAWINGS SHOW TRAFFIC CONTROL FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON FIELD CONDITIONS AND THE CONTRACTOR'S METHODS OR SEQUENCE OF OPERATION.

ALL EXISTING OR TEMPORARY SIGN MESSAGES THAT CONFLICT WITH THE DETOUR SHALL BE COVERED OR REMOVED.

MAP SHOWN IS NOT TO SCALE.

PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	TRAFFIC CONTROL: STAGE 2 OVERVIEW	SHEET 36	E

FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-025120-TC2.DWG
LAYOUT NAME - Sheet-01

PLOT DATE : 9/23/2021 8:31 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:250 FT

WISDOT/CADDS SHEET 42

2

TRAFFIC CONTROL LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA
- WORK COMPLETED IN PREVIOUS STAGE(S)

TEMPORARY MARKING LEGEND

MW4	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
MY4	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
SLW18	TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)
WS4-12.5	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE SKIP) (12.5' SEG, 37.5' GAP)

CTH VV
ROLLING MEADOWS DRIVE

N

ROAD WORK AHEAD
W20-1A 48"X48"

LEFT LANE CLOSED AHEAD
W20-55A 48"X48"

ROAD CLOSED AHEAD
W20-3A 48"X48"

WO4-2L 48"X48"

ROAD CLOSED 1000 FT
W20-3C 48"X48"

WO1-4L 48"X48"

R11-2L 48" X 30"
LANE CLOSED
TYPE III BARRICADE

STH 23 WB
JOHNSON STREET

89'WB' 90'WB' 91'WB' 92'WB' 93'WB' 94'WB' 95'WB' 96'WB'

89'EB' 90'EB' 91'EB' 92'EB' 93'EB' 94'EB' 95'EB' 96'EB'

MATCH LINE STA 96'EB'+50

STH 23 EB
JOHNSON STREET

MW4

COVER EXISTING MARKINGS WITH TEMPORARY MARKING REMOVABLE MASK-OUT TAPE 6-INCH

350' 350' 350' 245' 350'

ROAD WORK AHEAD
W20-1A 48"X48"

LEFT LANE CLOSED AHEAD
W20-55A 48"X48"

WO4-2L 48"X48"

WO1-4L 48"X48"

500' 500'

ROAD CLOSED AHEAD
W20-3A 48"X48"

DETOUR AHEAD
W20-2A
SEE DETOUR PLANS FOR LOCATION

ROAD CLOSED 1000 FT
W20-3C 48"X48"

CTH VV
ROLLING MEADOWS DRIVE

PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	TRAFFIC CONTROL: STAGE 2	SHEET 37	E

FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-025121-TC2.DWG
LAYOUT NAME - Sheet - 01

PLOT DATE : 7/15/2021 12:46 PM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

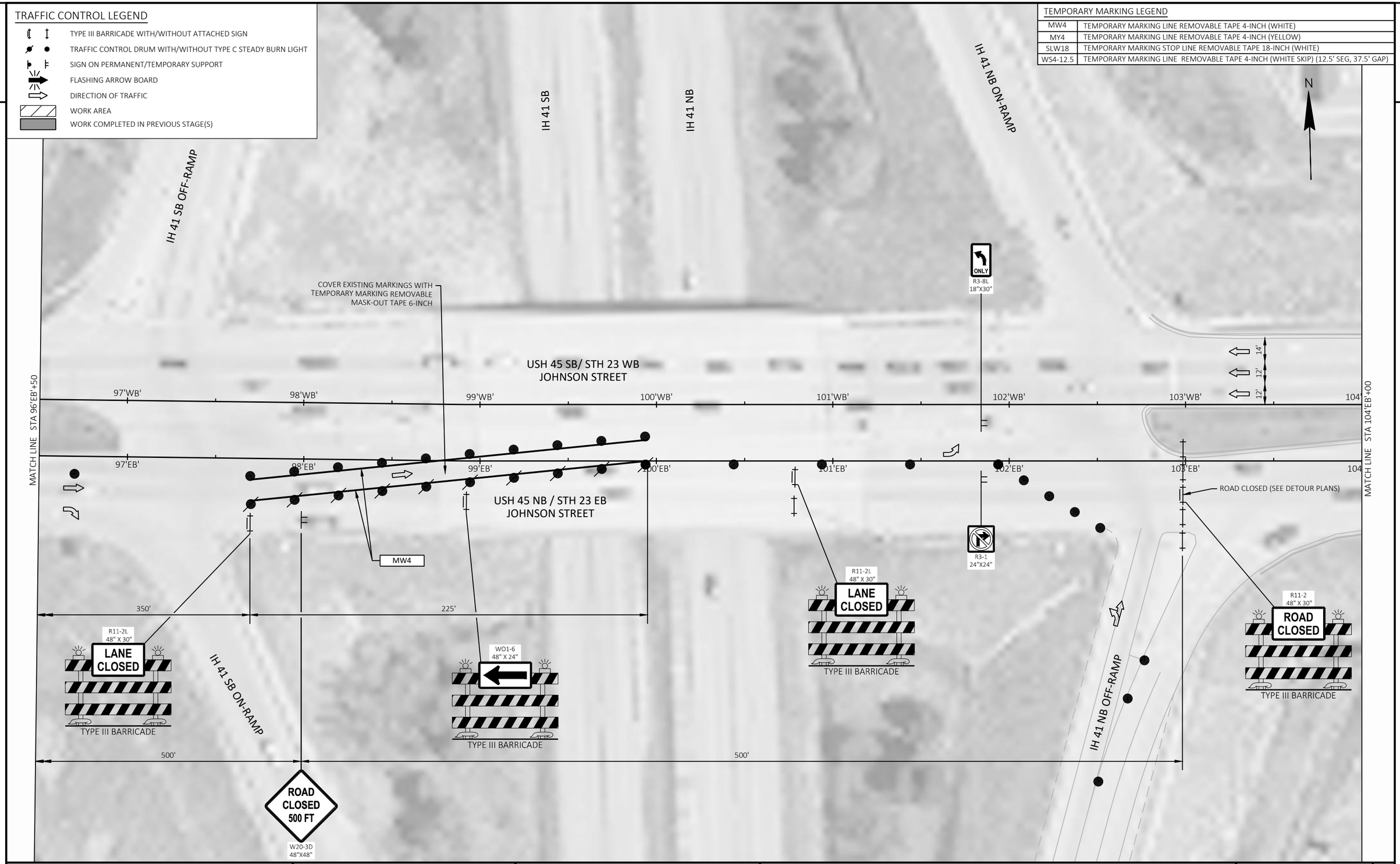
2

TRAFFIC CONTROL LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA
- WORK COMPLETED IN PREVIOUS STAGE(S)

TEMPORARY MARKING LEGEND

MW4	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
MY4	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
SLW18	TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)
WS4-12.5	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE SKIP) (12.5' SEG, 37.5' GAP)



PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	TRAFFIC CONTROL: STAGE 2	SHEET 38	E

2

TRAFFIC CONTROL LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA
- WORK COMPLETED IN PREVIOUS STAGE(S)

TEMPORARY MARKING LEGEND

MW4	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
MY4	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
SLW18	TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)
WS4-12.5	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE SKIP) (12.5' SEG, 37.5' GAP)

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

ROAD CLOSED (SEE DETOUR PLANS)

CTH VV
PIONEER ROAD

N

USH 45 SB/ STH 23 WB
JOHNSON STREET

MATCH LINE STA 104'EB'+00

105'WB' 106'WB' 107'WB' 108'WB' 109'WB' 110'WB' 111'WB'

105'EB' 106'EB' 107'EB' 108'EB' 109'EB' 110'EB' 111'EB'

MATCH LINE STA 111'EB'+50

USH 45 NB / STH 23 EB
JOHNSON STREET

CTH VV SOUTH OF STH 23/USH 45
CLOSED FOR CONSTRUCTION OF
SEPARATE PROJECT

CTH VV
PIONEER ROAD

R9-9
24" X 12"
SIDEWALK
CLOSED
TYPE III BARRICADE

PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	TRAFFIC CONTROL: STAGE 2	SHEET 39	E

FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-025121-TC2.DWG
LAYOUT NAME - Sheet - 03

PLOT DATE : 9/23/2021 12:50 PM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

R9-9
24" X 12"
SIDEWALK CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

R9-11
24"X12"
SIDEWALK CLOSED AHEAD
CROSS HERE
TYPE II BARRICADE

BEGIN RIGHT TURN LANE
R3-20R
24"X36"

R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE

ROAD CLOSED 500 FT
W20-3D
48"X48"

500'

500'

STOP
R1-1
30"X30"

STOP
R1-1
30"X30"

USH 45 SB/ STH 23 WB
JOHNSON STREET

10.9'

112'WB' 113'WB' 114'WB' 115'WB' 116'WB' 117'WB' 118'WB' 119

MATCH LINE STA 111'EB'+50

MATCH LINE STA 119'EB'+00

112'EB' 113'EB' 114'EB' 115'EB' 116'EB' 117'EB' 118'EB' 119

USH 45 NB / STH 23 EB
JOHNSON STREET

10.9' 10.9' 10.9'

R9-11
24"X12"
SIDEWALK CLOSED AHEAD
CROSS HERE
TYPE II BARRICADE

N

TRAFFIC CONTROL LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA
- WORK COMPLETED IN PREVIOUS STAGE(S)

TEMPORARY MARKING LEGEND

MW4	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
MY4	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
SLW18	TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)
WS4-12.5	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE SKIP) (12.5' SEG, 37.5' GAP)

PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	TRAFFIC CONTROL: STAGE 2	SHEET 40	E

FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-025121-TC2.DWG
LAYOUT NAME - Sheet - 04
PLOT DATE : 7/15/2021 12:46 PM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2

2

ROAD CLOSED 1000 FT
W20-3C 48"X48"

500'

R11-2L 48" X 30"
LANE CLOSED
TYPE III BARRICADE

BEGIN RIGHT TURN LANE
R3-20R 24"X36"

USH 45 SB/ STH 23 WB
JOHNSON STREET

MW4

245'

R11-2L 48" X 30"
LANE CLOSED
TYPE III BARRICADE

ROAD CLOSED AHEAD
W20-3A 48"X48"

500'

PETERS AVENUE

W04-2R 48"X48"

RIGHT LANE CLOSED AHEAD
W20-5A 48"X48"

ROAD WORK AHEAD
W20-1A 48"X48"

350'

350'

350'

USH 45 SB/ STH 23 WB
JOHNSON STREET

MATCH LINE STA 119'EB'+00

119'WB' 120'WB' 121'WB' 122'WB' 123'WB'

119'EB' 120'EB' 121'EB' 122'EB' 123'EB' 124'EB'

10.9' 10.9' 10.9'

USH 45 NB / STH 23 EB
JOHNSON STREET

USH 45 NB / STH 23 EB
JOHNSON STREET

COVER EXISTING MARKINGS WITH TEMPORARY MARKING REMOVABLE MASK-OUT TAPE 6-INCH

R10-61 60"X30"
NO ACCESS TO PIONEER ROAD
TYPE III BARRICADE

PETERS AVENUE

N

TRAFFIC CONTROL LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA
- WORK COMPLETED IN PREVIOUS STAGE(S)

TEMPORARY MARKING LEGEND

MW4	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
MY4	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
SLW18	TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)
WS4-12.5	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE SKIP) (12.5' SEG, 37.5' GAP)

PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	TRAFFIC CONTROL: STAGE 2	SHEET 41	E

FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-025121-TC2.DWG
LAYOUT NAME - Sheet - 05

PLOT DATE : 7/15/2021 12:46 PM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

TRAFFIC CONTROL LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT/TEMPORARY SUPPORT
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA
- WORK COMPLETED IN PREVIOUS STAGE(S)

IH 41 SB

IH 41 NB

N

USH 45 NB / STH 23 EB
JOHNSON STREET

101'WB'

101'EB'

102'WB'

102'EB'

IH 41 NB OFF-RAMP

103'EB'

ROAD CLOSED
(SEE DETOUR PLANS)

R11-2
48" X 30"
ROAD CLOSED

TYPE III BARRICADE

500'

100'

ROAD WORK AHEAD

W20-1A
48"X48"

R11-2L
48" X 30"
LANE CLOSED

TYPE III BARRICADE

2

PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	TRAFFIC CONTROL: STAGE 2	SHEET 42	E

FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-025121-TC2.DWG
LAYOUT NAME - Sheet - 06

PLOT DATE : 7/15/2021 12:46 PM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- WORK AREA
- WORK COMPLETED IN PREVIOUS STAGE(S)
- (1) PLACE TRAFFIC CONTROL SIGNS PER SDD "TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION"
- (C) PLACE TRAFFIC CONTROL SIGNS PER "DETAIL C" IN SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES"
- (D) PLACE TRAFFIC CONTROL SIGNS PER "DETAIL D" IN SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES"

STAGE 3

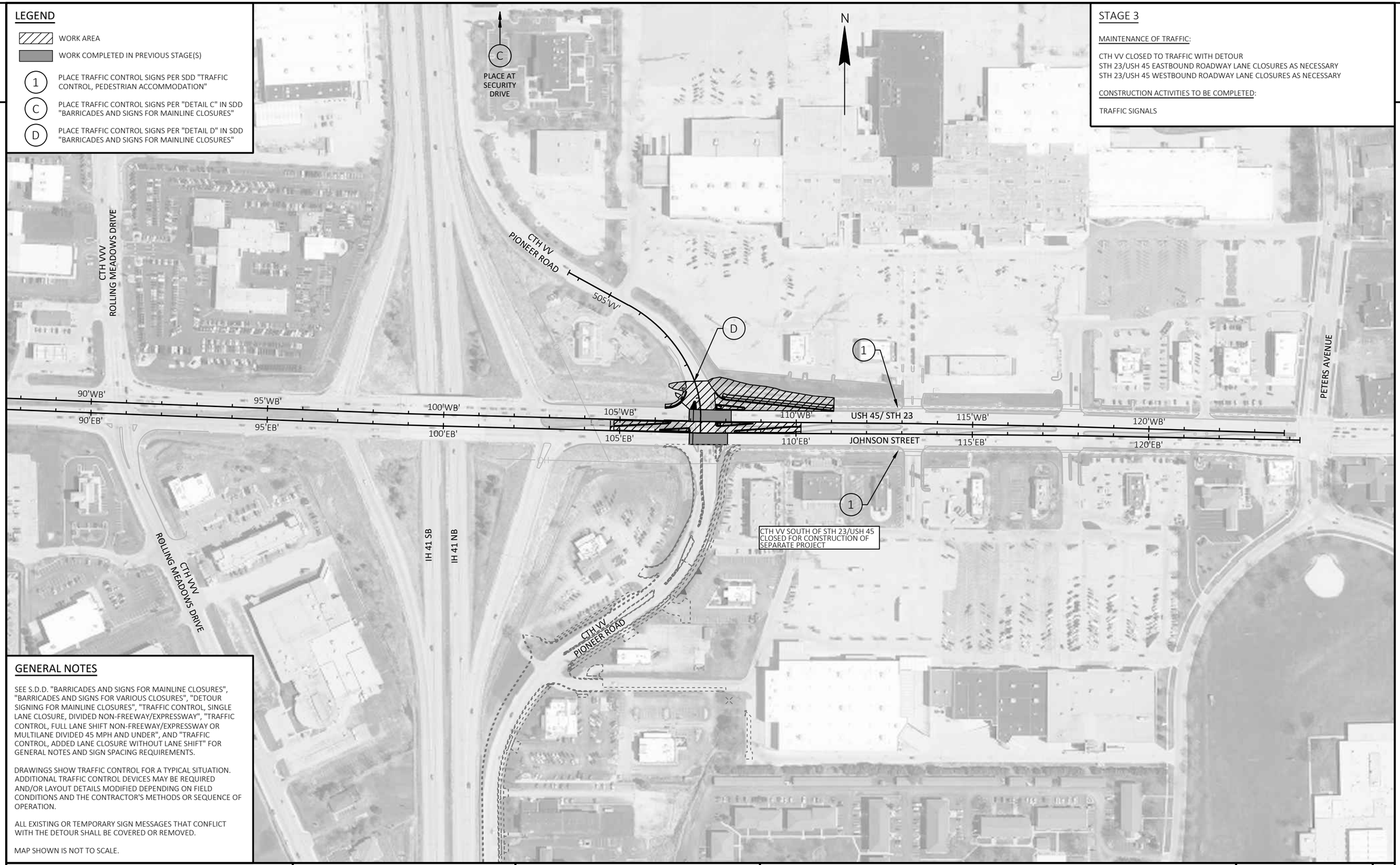
MAINTENANCE OF TRAFFIC:

CTH VV CLOSED TO TRAFFIC WITH DETOUR
STH 23/USH 45 EASTBOUND ROADWAY LANE CLOSURES AS NECESSARY
STH 23/USH 45 WESTBOUND ROADWAY LANE CLOSURES AS NECESSARY

CONSTRUCTION ACTIVITIES TO BE COMPLETED:

TRAFFIC SIGNALS

2



GENERAL NOTES

SEE S.D.D. "BARRICADES AND SIGNS FOR MAINLINE CLOSURES", "BARRICADES AND SIGNS FOR VARIOUS CLOSURES", "DETOUR SIGNING FOR MAINLINE CLOSURES", "TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY", "TRAFFIC CONTROL, FULL LANE SHIFT NON-FREEWAY/EXPRESSWAY OR MULTILANE DIVIDED 45 MPH AND UNDER", AND "TRAFFIC CONTROL, ADDED LANE CLOSURE WITHOUT LANE SHIFT" FOR GENERAL NOTES AND SIGN SPACING REQUIREMENTS.

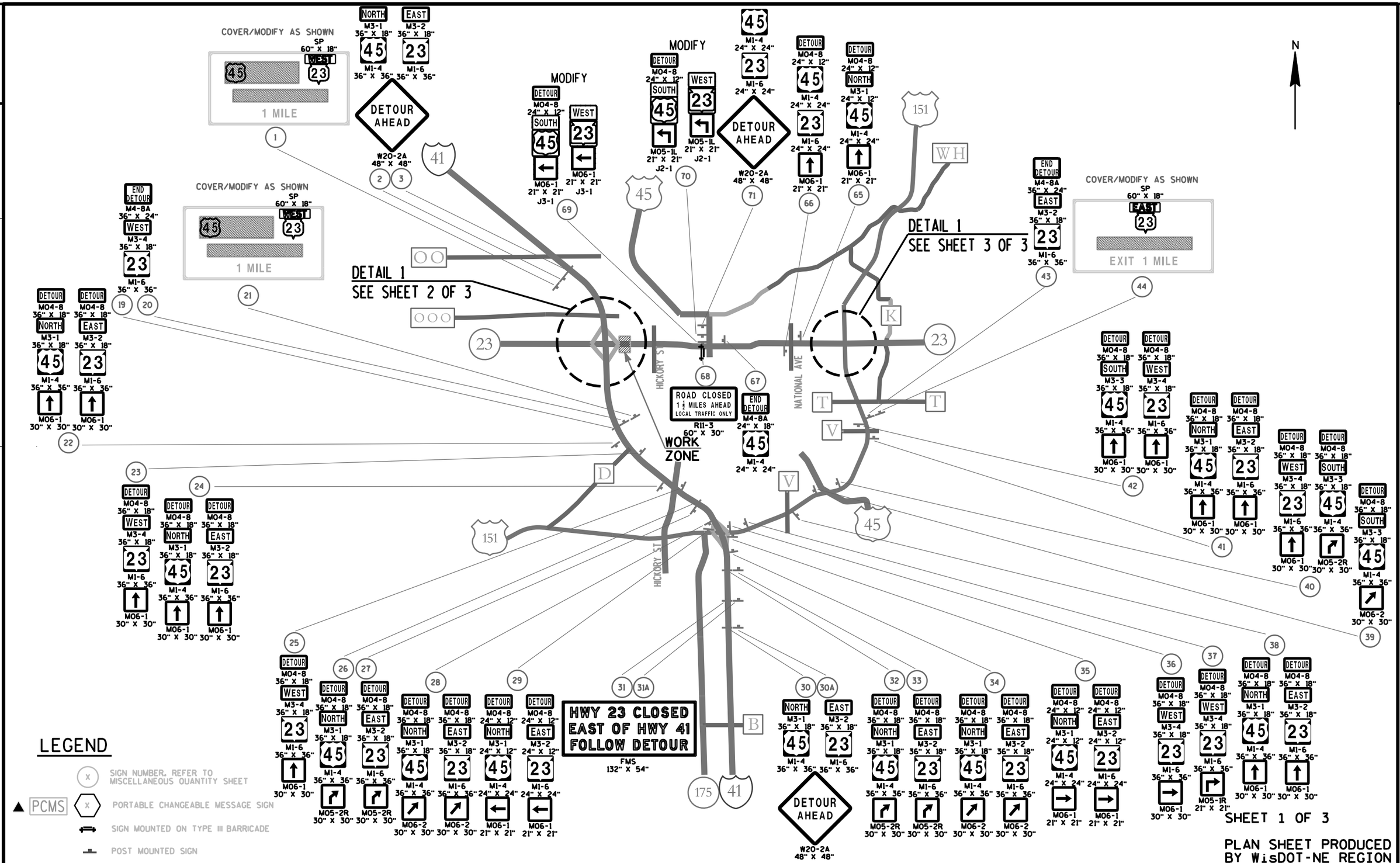
DRAWINGS SHOW TRAFFIC CONTROL FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON FIELD CONDITIONS AND THE CONTRACTOR'S METHODS OR SEQUENCE OF OPERATION.

ALL EXISTING OR TEMPORARY SIGN MESSAGES THAT CONFLICT WITH THE DETOUR SHALL BE COVERED OR REMOVED.

MAP SHOWN IS NOT TO SCALE.

PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	TRAFFIC CONTROL: STAGE 3 OVERVIEW	SHEET 43	E

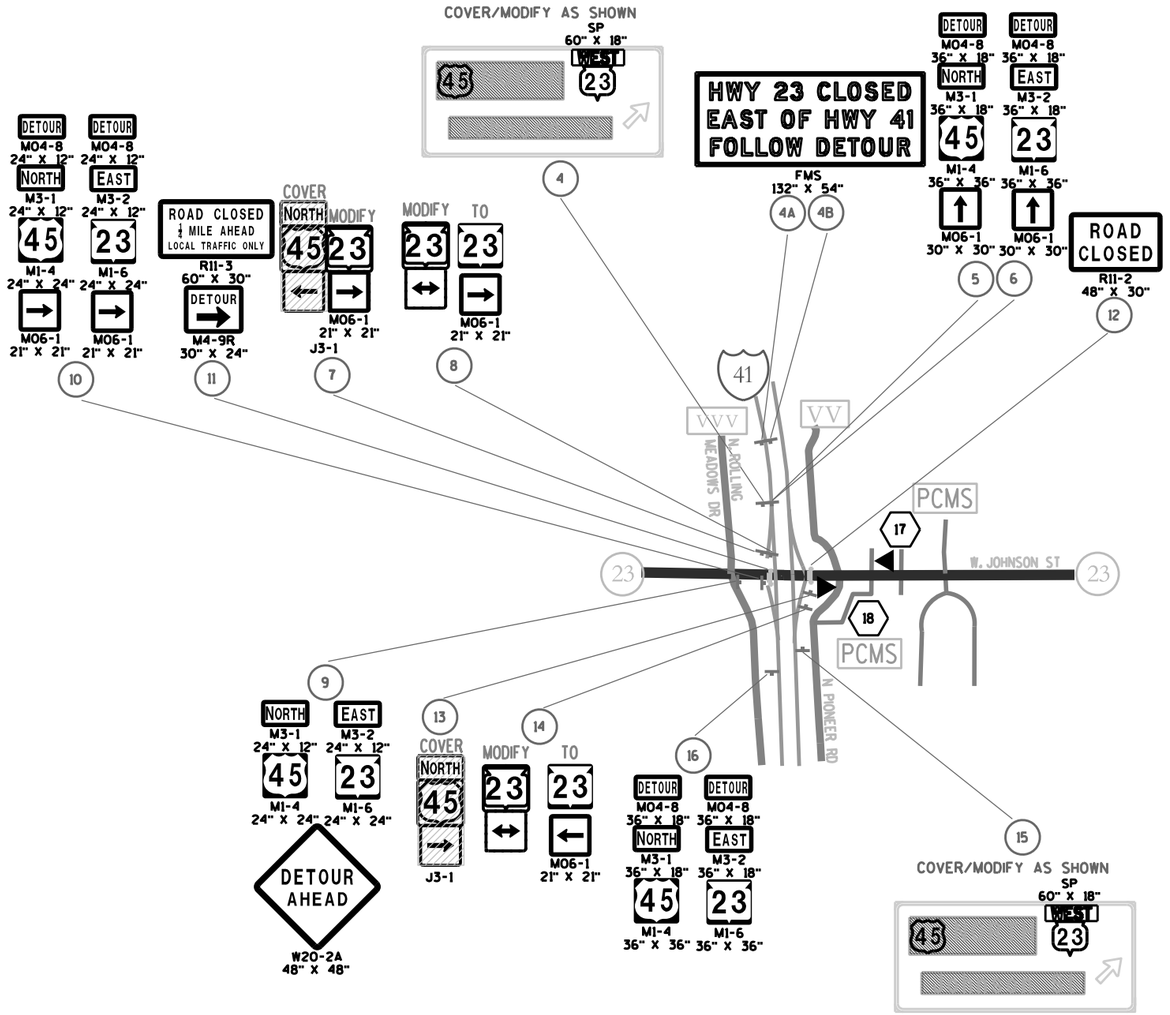
FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-025130-TC3.DWG
LAYOUT NAME - Sheet-01
PLOT DATE : 9/23/2021 8:31 AM
PLOT BY : AARON SARAUER
PLOT NAME :
PLOT SCALE : 1 IN:250 FT
WISDOT/CADDS SHEET 42



PROJECT NO: 1440-40-71	HWY: STH 23	COUNTY: FOND DU LAC	DETOUR SIGNING DETAIL	SHEET	E

FILE NAME : $$....designfile....$$ PLOT DATE : $$...plottingdate...$$ PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

2



LEGEND

- (X) SIGN NUMBER. REFER TO MISCELLANEOUS QUANTITY SHEET
- ▲ PCMS (X) PORTABLE CHANGEABLE MESSAGE SIGN
- SIGN MOUNTED ON TYPE III BARRICADE
- POST MOUNTED SIGN

DETAIL 1

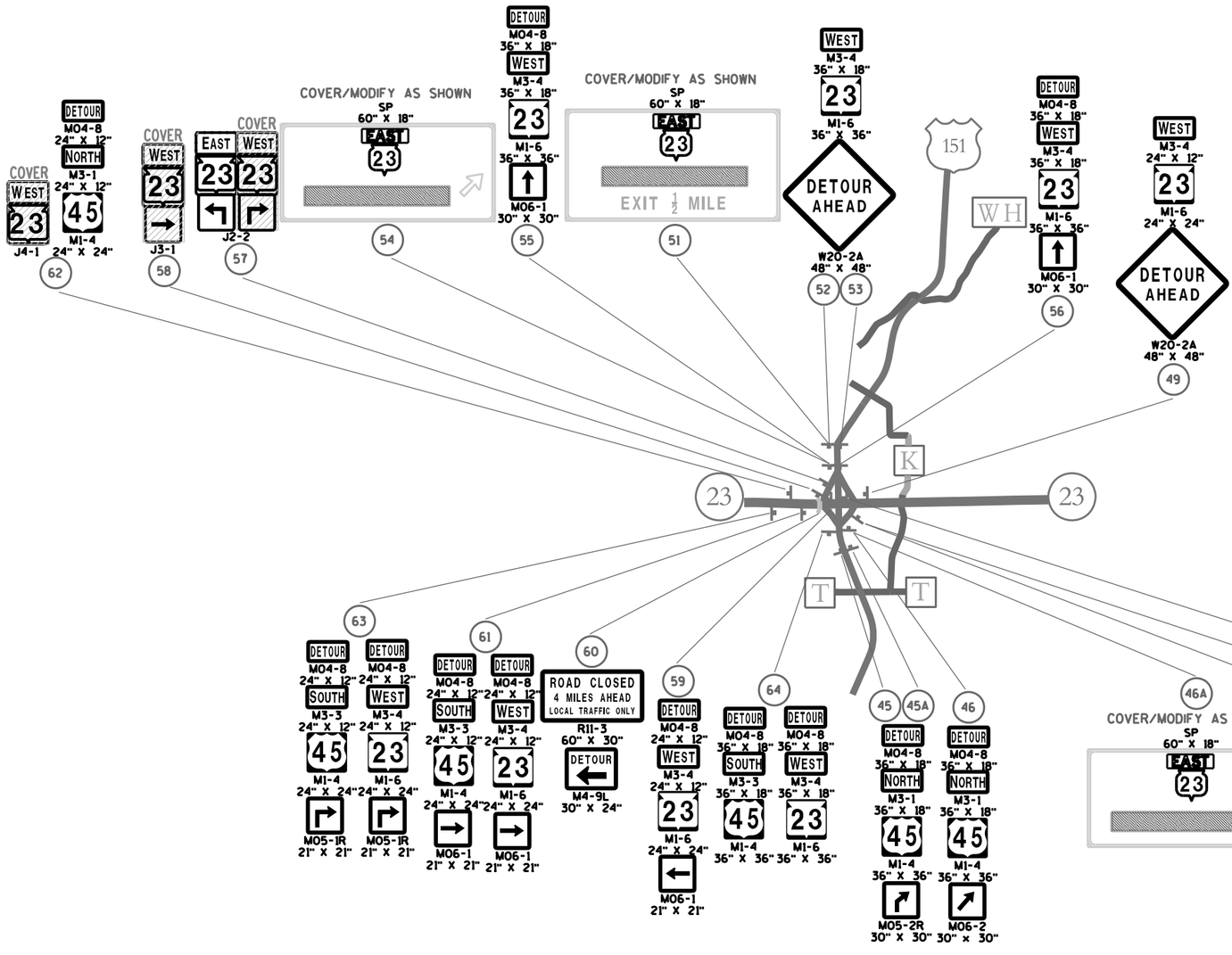
SHEET 2 OF 3

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 1440-40-71	HWY: STH 23	COUNTY: FOND DU LAC	DETOUR SIGNING DETAIL	SHEET 45	E

2

N



LEGEND

- (X) SIGN NUMBER, REFER TO MISCELLANEOUS QUANTITY SHEET
- ▲ PCMS (X) PORTABLE CHANGEABLE MESSAGE SIGN
- SIGN MOUNTED ON TYPE III BARRICADE
- POST MOUNTED SIGN

DETAIL 2

SHEET 3 OF 3

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 1440-40-71	HWY: STH 23	COUNTY: FOND DU LAC	DETOUR SIGNING DETAIL	SHEET	E

FILE NAME : $$....designfile....$$ PLOT DATE : $$...plottingdate...$$ PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

2

2

CTH D

ROGERSVILLE ROAD

CTH VVV
ROLLING MEADOWS DRIVE

CTH VV
PIONEER ROAD

IH 41 NB

IH 41 SB

STH 23

RICKMEYER DRIVE

INDUSTRIAL PARKWAY

CTH OOO

CTH VVV
ROLLING MEADOWS DRIVE

CTH OOO
SCOTT STREET

CTH VV
PIONEER ROAD

GROVE STREET

WESTERN AVENUE

FOREST AVENUE

JOHNSON STREET

SCOTT STREET

CTH D
MILITARY ROAD

SULLIVAN DRIVE

PETERS AVENUE

USH 45/ STH 23

IH 41 SB

IH 41 NB

MILITARY ROAD

CTH VV
PIONEER ROAD

SEYMOUR STREET

HICKORY STREET

N

LEGEND

PROPOSED DETOUR ROUTE

WORK AREA

GENERAL NOTES - DETOUR

CTH VV DETOUR SHOWN FOR INFORMATIONAL PURPOSES ONLY.

CTH VV DETOUR WILL BE SIGNED AND MAINTAINED BY FOND DU LAC COUNTY HIGHWAY DEPARTMENT.

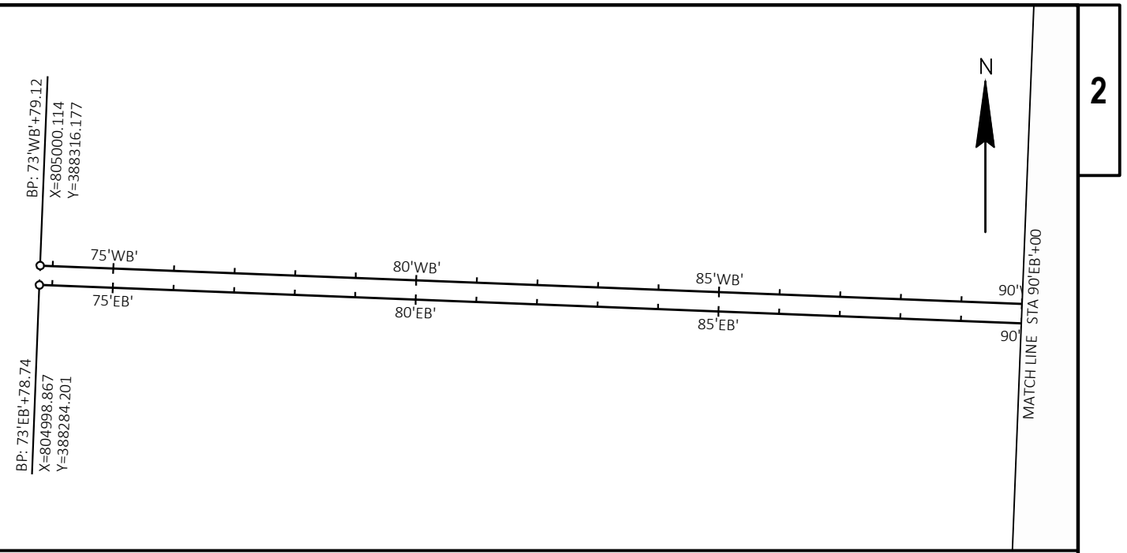
MAP SHOWN IS NOT TO SCALE.

PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	DETOUR: CTH VV - OVERVIEW	SHEET 47	E

FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-027011-DT.DWG
LAYOUT NAME - Sheet-01

PLOT DATE : 7/15/2021 11:22 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:1000 FT

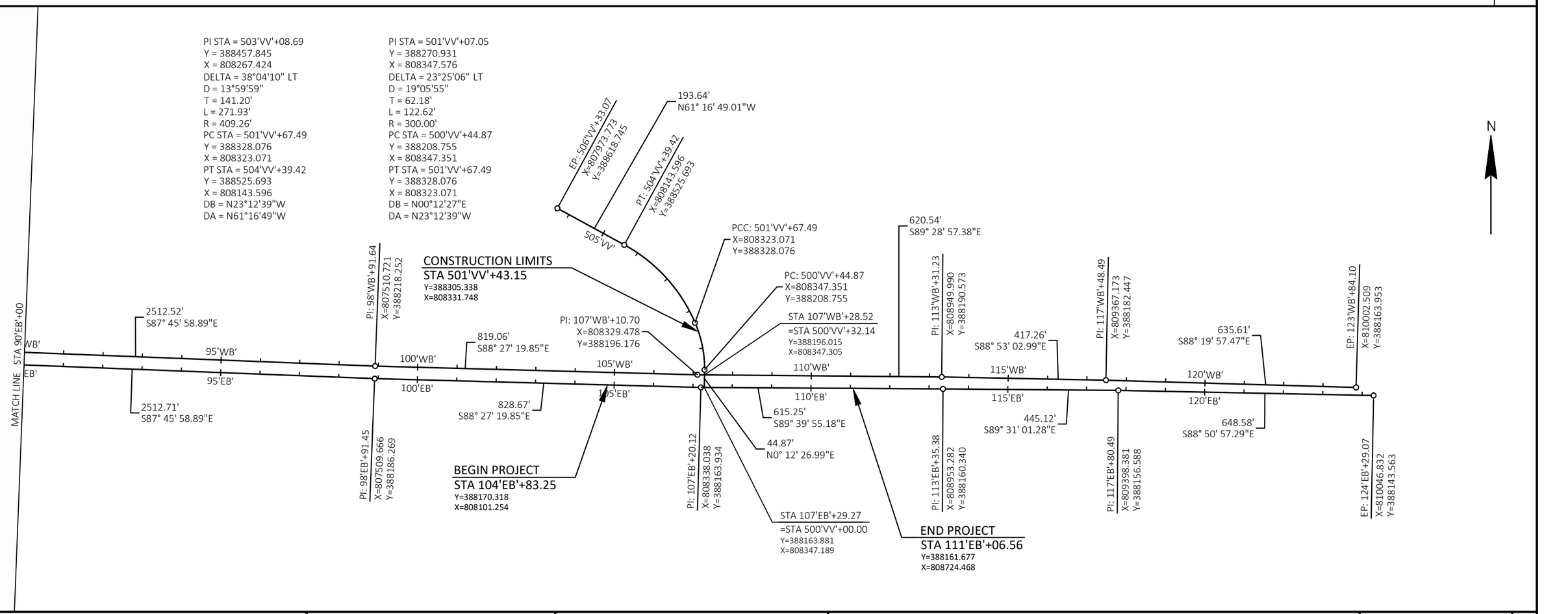
WISDOT/CADDS SHEET 42



2

PI STA = 503'VV'+08.69
Y = 388457.845
X = 808267.424
DELTA = 38°04'10" LT
D = 13°59'59"
T = 141.20'
L = 271.93'
R = 409.26'
PC STA = 501'VV'+67.49
Y = 388328.076
X = 808323.071
PT STA = 504'VV'+39.42
Y = 388525.693
X = 808143.596
DB = N23°12'39"W
DA = N61°16'49"W

PI STA = 501'VV'+07.05
Y = 388270.931
X = 808347.576
DELTA = 23°25'06" LT
D = 19°05'55"
T = 62.18'
L = 122.62'
R = 300.00'
PC STA = 500'VV'+44.87
Y = 388208.755
X = 808347.351
PT STA = 501'VV'+67.49
Y = 388328.076
X = 808323.071
DB = N00°12'27"E
DA = N23°12'39"W



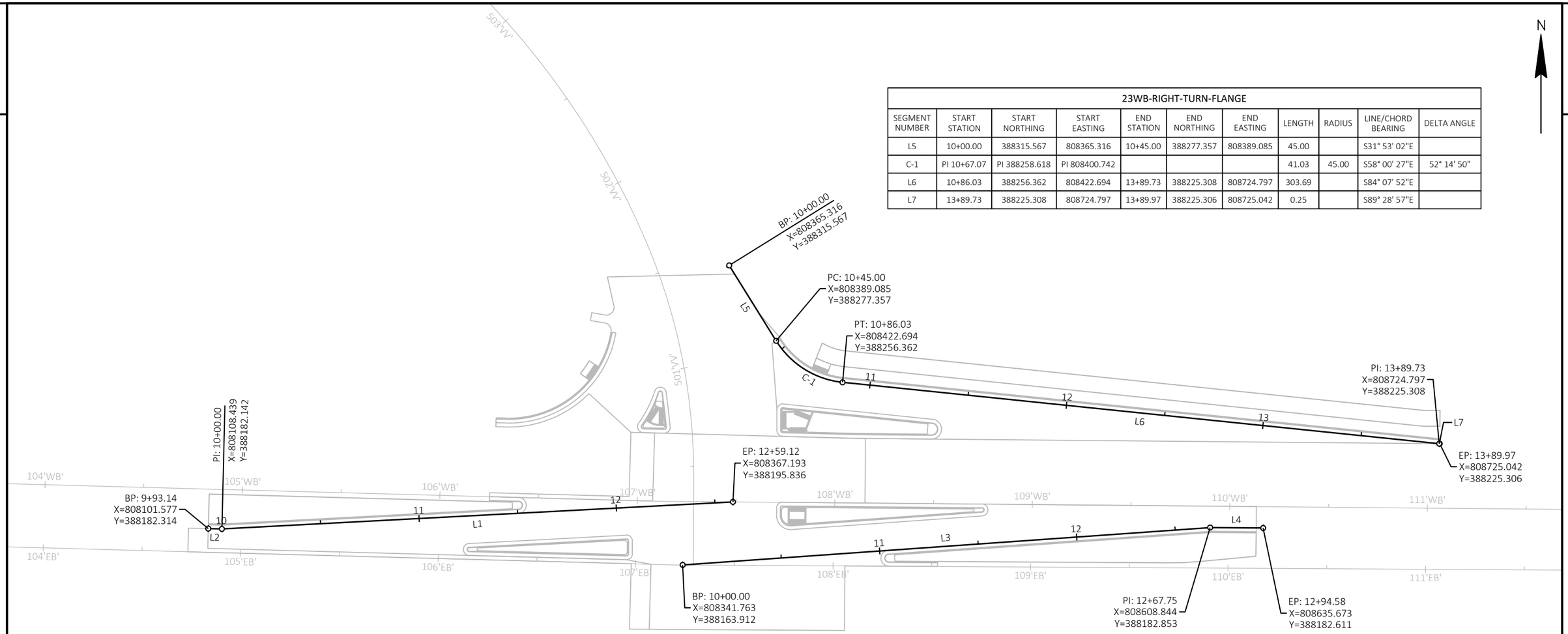
PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	ALIGNMENT DIAGRAM	SHEET 48	E

FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-027201-AD.DWG
LAYOUT NAME - Sheet-01
PLOT DATE : 7/15/2021 11:22 AM
PLOT BY : AARON SARAUER
PLOT NAME :
PLOT SCALE : 1 IN:250 FT
WISDOT/CADDS SHEET 42

2

N

23WB-RIGHT-TURN-FLANGE										
SEGMENT NUMBER	START STATION	START NORTHING	START EASTING	END STATION	END NORTHING	END EASTING	LENGTH	RADIUS	LINE/CHORD BEARING	DELTA ANGLE
L5	10+00.00	388315.567	808365.316	10+45.00	388277.357	808389.085	45.00		S31° 53' 02"E	
C-1	PI 10+67.07	PI 388258.618	PI 808400.742				41.03	45.00	S58° 00' 27"E	52° 14' 50"
L6	10+86.03	388256.362	808422.694	13+89.73	388225.308	808724.797	303.69		S84° 07' 52"E	
L7	13+89.73	388225.308	808724.797	13+89.97	388225.306	808725.042	0.25		S89° 28' 57"E	



FLANGE-SLOT-WEST										
SEGMENT NUMBER	START STATION	START NORTHING	START EASTING	END STATION	END NORTHING	END EASTING	LENGTH	RADIUS	LINE/CHORD BEARING	DELTA ANGLE
L2	9+93.14	388182.314	808101.577	10+00.00	388182.142	808108.439	6.86		S88° 33' 43"E	
L1	10+00.00	388182.142	808108.439	12+59.12	388195.836	808367.193	259.12		N86° 58' 14"E	

FLANGE-SLOT-EAST										
SEGMENT NUMBER	START STATION	START NORTHING	START EASTING	END STATION	END NORTHING	END EASTING	LENGTH	RADIUS	LINE/CHORD BEARING	DELTA ANGLE
L3	10+00.00	388163.912	808341.763	12+67.75	388182.853	808608.844	267.75		N85° 56' 37"E	
L4	12+67.75	388182.853	808608.844	12+94.58	388182.611	808635.673	26.83		S89° 28' 57"E	

Estimate Of Quantities

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Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	3.000	3.000
0004	201.0205	Grubbing	STA	3.000	3.000
0006	203.0100	Removing Small Pipe Culverts	EACH	1.000	1.000
0008	204.0100	Removing Concrete Pavement	SY	1,220.000	1,220.000
0010	204.0110	Removing Asphaltic Surface	SY	785.000	785.000
0012	204.0130	Removing Curb	LF	52.000	52.000
0014	204.0150	Removing Curb & Gutter	LF	520.000	520.000
0016	204.0155	Removing Concrete Sidewalk	SY	570.000	570.000
0018	204.0195	Removing Concrete Bases	EACH	9.000	9.000
0020	204.0220	Removing Inlets	EACH	4.000	4.000
0022	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	56.000	56.000
0024	204.0245	Removing Storm Sewer (size) 02. 18-Inch	LF	15.000	15.000
0026	204.0246	Removing Ancillary Structure (structure) 01. S-20-207	EACH	1.000	1.000
0028	205.0100	Excavation Common	CY	1,419.000	1,419.000
0030	208.0100	Borrow	CY	279.000	279.000
0032	213.0100	Finishing Roadway (project) 01. 1440-40-71	EACH	1.000	1.000
0034	305.0110	Base Aggregate Dense 3/4-Inch	TON	112.000	112.000
0036	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,980.000	1,980.000
0038	405.0100	Coloring Concrete WisDOT Red	CY	56.000	56.000
0040	415.0100	Concrete Pavement 10-Inch	SY	1,550.000	1,550.000
0042	416.0610	Drilled Tie Bars	EACH	226.000	226.000
0044	416.0620	Drilled Dowel Bars	EACH	56.000	56.000
0046	416.1720	Concrete Pavement Replacement	SY	760.000	760.000
0048	455.0605	Tack Coat	GAL	59.000	59.000
0050	460.2000	Incentive Density HMA Pavement	DOL	200.000	200.000
0052	460.6223	HMA Pavement 3 MT 58-28 S	TON	136.000	136.000
0054	460.6424	HMA Pavement 4 MT 58-28 H	TON	90.000	90.000
0056	460.7223	HMA Pavement 3 HT 58-28 S	TON	52.000	52.000
0058	460.7424	HMA Pavement 4 HT 58-28 H	TON	21.000	21.000
0060	465.0105	Asphaltic Surface	TON	54.000	54.000
0062	465.0315	Asphaltic Flumes	SY	8.000	8.000
0064	520.1012	Apron Endwalls for Culvert Pipe 12-Inch	EACH	2.000	2.000
0066	520.1030	Apron Endwalls for Culvert Pipe 30-Inch	EACH	2.000	2.000
0068	520.3630	Culvert Pipe Class III-B Non-metal 30-Inch	LF	145.000	145.000
0070	520.8000	Concrete Collars for Pipe	EACH	1.000	1.000
0072	601.0409	Concrete Curb & Gutter 30-Inch Type A	LF	1,130.000	1,130.000
0074	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	214.000	214.000
0076	601.0600	Concrete Curb Pedestrian	LF	55.000	55.000
0078	602.0405	Concrete Sidewalk 4-Inch	SF	4,756.000	4,756.000
0080	602.0415	Concrete Sidewalk 6-Inch	SF	89.000	89.000
0082	602.0515	Curb Ramp Detectable Warning Field Natural Patina	SF	144.000	144.000
0084	606.0200	Riprap Medium	CY	36.000	36.000
0086	608.0412	Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	LF	195.000	195.000
0088	608.0415	Storm Sewer Pipe Reinforced Concrete Class IV 15-Inch	LF	46.000	46.000
0090	608.3012	Storm Sewer Pipe Class III-A 12-Inch	LF	81.000	81.000
0092	611.0530	Manhole Covers Type J	EACH	1.000	1.000
0094	611.0624	Inlet Covers Type H	EACH	9.000	9.000
0096	611.2004	Manholes 4-FT Diameter	EACH	1.000	1.000
0098	611.3230	Inlets 2x3-FT	EACH	9.000	9.000

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Line	Item	Item Description	Unit	Total	Qty
0100	612.0106	Pipe Underdrain 6-Inch	LF	250.000	250.000
0102	619.1000	Mobilization	EACH	1.000	1.000
0104	620.0300	Concrete Median Sloped Nose	SF	357.000	357.000
0106	624.0100	Water	MGAL	29.000	29.000
0108	625.0100	Topsoil	SY	2,045.000	2,045.000
0110	628.1905	Mobilizations Erosion Control	EACH	6.000	6.000
0112	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0114	628.2006	Erosion Mat Urban Class I Type A	SY	2,045.000	2,045.000
0116	628.7005	Inlet Protection Type A	EACH	1.000	1.000
0118	628.7015	Inlet Protection Type C	EACH	25.000	25.000
0120	628.7555	Culvert Pipe Checks	EACH	10.000	10.000
0122	628.7570	Rock Bags	EACH	20.000	20.000
0124	629.0210	Fertilizer Type B	CWT	1.300	1.300
0126	630.0140	Seeding Mixture No. 40	LB	36.000	36.000
0128	630.0500	Seed Water	MGAL	46.000	46.000
0130	633.5200	Markers Culvert End	EACH	2.000	2.000
0132	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	3.000	3.000
0134	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	9.000	9.000
0136	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	2.000	2.000
0138	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	1.000	1.000
0140	637.2210	Signs Type II Reflective H	SF	139.160	139.160
0142	637.2230	Signs Type II Reflective F	SF	16.000	16.000
0144	638.2102	Moving Signs Type II	EACH	4.000	4.000
0146	638.2602	Removing Signs Type II	EACH	16.000	16.000
0148	638.3000	Removing Small Sign Supports	EACH	9.000	9.000
0150	642.5001	Field Office Type B	EACH	1.000	1.000
0152	643.0300	Traffic Control Drums	DAY	9,812.000	9,812.000
0154	643.0410	Traffic Control Barricades Type II	DAY	164.000	164.000
0156	643.0420	Traffic Control Barricades Type III	DAY	1,876.000	1,876.000
0158	643.0705	Traffic Control Warning Lights Type A	DAY	3,061.000	3,061.000
0160	643.0715	Traffic Control Warning Lights Type C	DAY	1,392.000	1,392.000
0162	643.0800	Traffic Control Arrow Boards	DAY	10.000	10.000
0164	643.0900	Traffic Control Signs	DAY	4,253.000	4,253.000
0166	643.0910	Traffic Control Covering Signs Type I	EACH	5.000	5.000
0168	643.0920	Traffic Control Covering Signs Type II	EACH	5.000	5.000
0170	643.1000	Traffic Control Signs Fixed Message	SF	258.000	258.000
0172	643.1050	Traffic Control Signs PCMS	DAY	28.000	28.000
0174	643.5000	Traffic Control	EACH	1.000	1.000
0176	645.0120	Geotextile Type HR	SY	105.000	105.000
0178	646.1020	Marking Line Epoxy 4-Inch	LF	1,840.000	1,840.000
0180	646.3020	Marking Line Epoxy 8-Inch	LF	1,375.000	1,375.000
0182	646.5020	Marking Arrow Epoxy	EACH	2.000	2.000
0184	646.5120	Marking Word Epoxy	EACH	1.000	1.000
0186	646.6120	Marking Stop Line Epoxy 18-Inch	LF	114.000	114.000
0188	646.7120	Marking Diagonal Epoxy 12-Inch	LF	28.000	28.000
0190	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	376.000	376.000
0192	646.8120	Marking Curb Epoxy	LF	46.000	46.000
0194	646.8220	Marking Island Nose Epoxy	EACH	5.000	5.000
0196	646.9000	Marking Removal Line 4-Inch	LF	895.000	895.000

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Line	Item	Item Description	Unit	Total	Qty
0198	646.9100	Marking Removal Line 8-Inch	LF	173.000	173.000
0200	646.9200	Marking Removal Line Wide	LF	24.000	24.000
0202	646.9300	Marking Removal Special Marking	EACH	12.000	12.000
0204	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	5,321.000	5,321.000
0206	649.0850	Temporary Marking Stop Line Removable Tape 18-Inch	LF	24.000	24.000
0208	649.0960	Temporary Marking Removable Mask Out Tape 6-Inch	LF	282.000	282.000
0210	650.4000	Construction Staking Storm Sewer	EACH	12.000	12.000
0212	650.4500	Construction Staking Subgrade	LF	1,132.000	1,132.000
0214	650.5000	Construction Staking Base	LF	114.000	114.000
0216	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	214.000	214.000
0218	650.6000	Construction Staking Pipe Culverts	EACH	1.000	1.000
0220	650.7000	Construction Staking Concrete Pavement	LF	1,072.000	1,072.000
0222	650.8500	Construction Staking Electrical Installations (project) 01. USH 45/STH 23 & CTH VV	LS	1.000	1.000
0224	650.9000	Construction Staking Curb Ramps	EACH	9.000	9.000
0226	650.9910	Construction Staking Supplemental Control (project) 01. 1440-40-71	LS	1.000	1.000
0228	650.9920	Construction Staking Slope Stakes	LF	336.000	336.000
0230	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	1,110.000	1,110.000
0232	652.0230	Conduit Rigid Nonmetallic Schedule 40 2 1/2-Inch	LF	30.000	30.000
0234	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	890.000	890.000
0236	652.0605	Conduit Special 2-Inch	LF	140.000	140.000
0238	652.0610	Conduit Special 2 1/2-Inch	LF	145.000	145.000
0240	652.0615	Conduit Special 3-Inch	LF	680.000	680.000
0242	652.0800	Conduit Loop Detector	LF	844.000	844.000
0244	653.0154	Pull Boxes Non-Conductive 24x36-Inch	EACH	3.000	3.000
0246	653.0164	Pull Boxes Non-Conductive 24x42-Inch	EACH	28.000	28.000
0248	653.0905	Removing Pull Boxes	EACH	12.000	12.000
0250	654.0101	Concrete Bases Type 1	EACH	6.000	6.000
0252	654.0102	Concrete Bases Type 2	EACH	2.000	2.000
0254	654.0113	Concrete Bases Type 13	EACH	4.000	4.000
0256	654.0217	Concrete Control Cabinet Bases Type 9 Special	EACH	1.000	1.000
0258	655.0230	Cable Traffic Signal 5-14 AWG	LF	990.000	990.000
0260	655.0260	Cable Traffic Signal 12-14 AWG	LF	2,730.000	2,730.000
0262	655.0270	Cable Traffic Signal 15-14 AWG	LF	481.000	481.000
0264	655.0305	Cable Type UF 2-12 AWG Grounded	LF	536.000	536.000
0266	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	2,001.000	2,001.000
0268	655.0610	Electrical Wire Lighting 12 AWG	LF	468.000	468.000
0270	655.0700	Loop Detector Lead In Cable	LF	3,175.000	3,175.000
0272	655.0800	Loop Detector Wire	LF	2,485.000	2,485.000
0274	656.0200	Electrical Service Meter Breaker Pedestal (location) 01. USH 45/STH 23 & CTH VV	LS	1.000	1.000
0276	657.0100	Pedestal Bases	EACH	6.000	6.000
0278	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	2.000	2.000
0280	657.0315	Poles Type 4	EACH	2.000	2.000
0282	657.0355	Poles Type 12	EACH	2.000	2.000
0284	657.0356	Poles Type 12-Over Height	EACH	2.000	2.000
0286	657.0405	Traffic Signal Standards Aluminum 3.5-FT	EACH	1.000	1.000
0288	657.0420	Traffic Signal Standards Aluminum 13-FT	EACH	1.000	1.000
0290	657.0425	Traffic Signal Standards Aluminum 15-FT	EACH	3.000	3.000
0292	657.0430	Traffic Signal Standards Aluminum 10-FT	EACH	1.000	1.000
0294	657.0540	Monotube Arms 40-FT	EACH	1.000	1.000

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Line	Item	Item Description	Unit	Total	Qty
0296	657.0550	Monotube Arms 50-FT	EACH	1.000	1.000
0298	657.0555	Monotube Arms 55-FT	EACH	2.000	2.000
0300	657.0609	Luminaire Arms Single Member 4-Inch Clamp 6-FT	EACH	4.000	4.000
0302	658.0173	Traffic Signal Face 3S 12-Inch	EACH	16.000	16.000
0304	658.0174	Traffic Signal Face 4S 12-Inch	EACH	6.000	6.000
0306	658.0416	Pedestrian Signal Face 16-Inch	EACH	4.000	4.000
0308	658.5069	Signal Mounting Hardware (location) 01. USH 45/STH 23 & CTH VV	LS	1.000	1.000
0310	659.1120	Luminaires Utility LED B	EACH	4.000	4.000
0312	690.0150	Sawing Asphalt	LF	240.000	240.000
0314	690.0250	Sawing Concrete	LF	1,280.000	1,280.000
0316	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	500.000	500.000
0318	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	1,200.000	1,200.000
0320	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	600.000	600.000
0322	SPV.0060	Special 01. Connect to Existing Storm Sewer Structure	EACH	1.000	1.000
0324	SPV.0060	Special 24. Furnish & Install Traffic Signal Cabinet and Controller Black	EACH	1.000	1.000
0326	SPV.0060	Special 25. Furnish & Install APS System (USH 45/STH 23 & CTH VV)	EACH	1.000	1.000
0328	SPV.0060	Special 26. Salvage & Reinstall GPS EVP System (USH 45/STH 23 & CTH VV)	EACH	1.000	1.000
0330	SPV.0060	Special 27. Salvage Traffic Signals (USH 45/STH 23 & CTH VV)	EACH	1.000	1.000
0332	SPV.0060	Special 28. Temporary Street Lighting for Intersections (USH 45/STH 23 & CTH VV)	EACH	1.000	1.000
0334	SPV.0060	Special 29. Electrical Service Meter Breaker Pedestal Special	EACH	1.000	1.000
0336	SPV.0090	Special 10. Furnish and Install Equivalent Lighting Conductors (USH 45/STH 23 & CTH VV)	LF	3,625.000	3,625.000

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CLEARING AND GRUBBING ITEMS

STATION - STATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
CATEGORY CODE 0010		
108'WB'+00 - 111'WB'+00	3	3
TOTALS	**3**	**3**

REMOVING ITEMS

STATION - STATION	LOCATION	204.0100 REMOVING CONCRETE PAVEMENT SY	204.0110 REMOVING ASPHALTIC SURFACE SY	204.0130 REMOVING CURB LF	204.0150 REMOVING CURB & GUTTER LF	204.0155 REMOVING CONCRETE SIDEWALK SY	COMMENTS
CATEGORY CODE 0010							
104'EB'+73 - 110'EB'+14	LT	976	103	--	114	399	MEDIAN
107'WB'+55 - 110'WB'+06	LT	161	--	--	274	171	RIGHT TURN LANE
107'WB'+82 - 108'WB'+00	LT	--	--	52	--	--	RAISED PLANTER
500'VV'+65 - 501'VV'+43	LT & RT	--	682	--	132	--	CTH VV
CATEGORY CODE 0010 SUBTOTALS		1,137	785	52	520	570	
CATEGORY CODE 0020							
106'WB'+96 - 107'WB'+08	LT	46	--	--	--	--	--
106'EB'+98 - 107'EB'+08	RT	37	--	--	--	--	--
CATEGORY CODE 0020 SUBTOTALS		83	--	--	--	--	
TOTALS		**1,220**	**785**	**52**	**520**	**570**	

REMOVING DRAINAGE ITEMS

STATION - STATION	LOCATION	203.0100 REMOVING SMALL PIPE CULVERTS EACH	204.0220 REMOVING INLETS EACH	204.0245.01 REMOVING STORM SEWER 12-INCH LF	204.0245.02 REMOVING STORM SEWER 18-INCH LF	COMMENTS
CATEGORY CODE 0010						
106'WB'+46 - 106'WB'+74	RT	--	3	30	15	--
110'WB'+56	LT	--	1	26	--	--
501'VV'+07 - 501'VV'+57	LT/RT	1	--	--	--	30" CMCP
TOTALS		**1**	**4**	**56**	**15**	

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DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1) CUT (2)	205.0100 COMMON EXCAVATION (1) EBS EXCAVATION (3)	SALVAGED/UNUSABLE PAVEMENT MATERIAL (4)	UNEXPANDED FILL	EXPANDED FILL (13) FACTOR 1.30	MASS ORDINATE +/- (14)	208.0100 BORROW	COMMENT
DIVISION 1										
23EB	104+83.251/110+14.137	MEDIAN	877	0	346	11	14	517		
23WB	107+64.738/111+05.981	WB RIGHT TURN LANE	542	0	65	979	1,273	-795		
DIVISION 1 SUBTOTAL			1,419	0	411	990	1,287	-279	279	
GRAND TOTAL			1,419	0	411	990	1,287	-279	279	
TOTAL COMMON EXC			1,419							

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
(13) EXPANDED FILL FACTOR = 1.30
(14) 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.
(15) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

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BASE AGGREGATE DENSE AND WATER ITEMS

STATION - STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	624.0100 WATER MGAL	COMMENTS
CATEGORY CODE 0010					
104'EB'+73 - 110'EB'+14	LT	88	857	14	MEDIAN
107'WB'+70 - 111'WB'+06	LT	13	777	11	RIGHT TURN LANE
500'VV'+65 - 501'VV'+43	LT & RT	11	284	4	CTH VV
CATEGORY CODE 0010 SUBTOTALS		112	1,918	29	
CATEGORY CODE 0020					
106'WB'+96 - 108'WB'+15	LT	--	33	--	--
106'EB'+98 - 108'EB'+06	RT	--	29	--	--
CATEGORY CODE 0020 SUBTOTALS		--	62	--	
TOTALS		**112**	**1,980**	**29**	

BASE AGGREGATE DENSE 3/4-INCH WEIGHT CALCULATIONS BASED ON 2.1 TONS/CY.
BASE AGGREGATE DENSE 1 1/4-INCH WEIGHT CALCULATIONS BASED ON 2.0 TONS/CY.

CONCRETE PAVEMENT ITEMS

STATION - STATION	LOCATION	415.0100 CONCRETE PAVEMENT 10-INCH SY	416.1720 CONCRETE PAVEMENT REPLACEMENT SY	COMMENTS
CATEGORY CODE 0010				
104'EB'+83 - 110'EB'+14	LT	1,063	--	MEDIAN
107'WB'+70 - 111'WB'+06	LT	487	--	RIGHT TURN LANE
CATEGORY CODE 0010 SUBTOTALS		1,550	--	
CATEGORY CODE 0020				
107'WB'+08 - 108'WB'+15	LT	--	401	--
107'EB'+08 - 108'EB'+06	RT	--	359	--
CATEGORY CODE 0020 SUBTOTALS		--	760	
TOTALS		**1,550**	**760**	

DRILLED TIE BARS AND DRILLED DOWEL BARS

STATION - STATION	LOCATION	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH
CATEGORY CODE 0010			
104'EB'+83	LT	3	--
106'WB'+25	RT	3	--
106'WB'+26	LT	3	--
108'EB'+06 - 108'EB'+53	LT	21	--
108'WB'+15 - 110'WB'+13	RT	77	--
108'WB'+15 - 111'WB'+06	LT	116	--
110'WB'+13	RT	3	8
--	--	--	--
CATEGORY CODE 0010 SUBTOTALS		226	8
CATEGORY CODE 0020			
108'EB'+06	RT	--	24
108'WB'+15	LT	--	24
CATEGORY CODE 0020 SUBTOTALS		--	48
TOTALS		**226**	**56**

ASPHALTIC ITEMS

STATION - STATION	LOCATION	455.0605 TACK COAT GAL	460.6223 HMA PAVEMENT 3 MT 58-28 S TON	460.6424 HMA PAVEMENT 4 MT 58-28 H TON	460.7223 HMA PAVEMENT 3 HT 58-28 S TON	460.7424 HMA PAVEMENT 4 HT 58-28 H TON	465.0105 ASPHALTIC SURFACE TON	COMMENTS
CATEGORY CODE 0010								
104'EB'+73 - 107'EB'+08	LT	9	--	--	25	10	--	MEDIAN
107'WB'+90 - 111'WB'+06	LT	--	--	--	--	--	54	RIGHT TURN LANE
500'VV'+65 - 501'VV'+43	LT & RT	41	136	90	--	--	--	CTH VV
CATEGORY CODE 0010 SUBTOTALS		50	136	90	25	10	54	
CATEGORY CODE 0020								
106'WB'+96 - 107'WB'+08	LT	5	--	--	15	6	--	--
106'EB'+98 - 107'EB'+08	RT	4	--	--	12	5	--	--
CATEGORY CODE 0020 SUBTOTALS		9	--	--	27	11	--	
TOTALS		**59**	**136**	**90**	**52**	**21**	**54**	

HMA PAVEMENT WEIGHT CALCULATIONS BASED ON 112 LB/SY/IN.
TACK COAT CALCULATIONS BASED ON 0.050 GAL/SY ON PREVIOUSLY PLACED LOWER LAYERS

ASPHALTIC FLUMES

STATION	LOCATION	465.0315 SY
CATEGRORY CODE 0010		
106'WB'+86	LT	8
TOTAL		**8**

CULVERT PIPE ITEMS

STATION	LOCATION	520.1030 APRON ENDWALLS FOR CULVERT PIPE 30-INCH EACH	520.3630 CULVERT PIPE CLASS III-B NON-METAL 30-INCH LF	633.5200 MARKERS CULVERT END EACH	650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH
CATEGORY CODE 0010					
501+38.24	VV-NORTH	2	145	2	1
TOTALS		**2**	**145**	**2**	**1**

3

CONCRETE CURB AND GUTTER ITEMS

STATION - STATION	LOCATION	601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A LF	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D LF	601.0600 CONCRETE CURB PEDESTRIAN LF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	COMMENTS
CATEGORY CODE 0010						
104'EB'+83 - 106'EB'+98	LT	233	86	--	86	MEDIAN
107'WB'+71 - 110'WB'+13	RT	405	--	17	--	MEDIAN
107'WB'+70 - 111'WB'+06	LT	492	12	23	12	RIGHT TURN LANE
500'VV'+70 - 500'VV'+85	LT	--	36	15	36	CTH VV RIGHT TURN ISLAND
106'WB'+26 - 106'WB'+85	LT	--	80	--	80	CTH VV CURB OPENING
	TOTALS	**1,130**	**214**	**55**	**214**	

CONCRETE SIDEWALK ITEMS

STATION - STATION	LOCATION	405.0100 COLORING CONCRETE WISDOT RED CY	602.0405 CONCRETE SIDEWALK 4-INCH SF	602.0415 CONCRETE SIDEWALK 6-INCH SF	602.0515 CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA SF
CATEGORY CODE 0010					
104'EB'+83 - 106'EB'+37	LT	18	1,439	--	--
106'EB'+20 - 106'EB'+96	LT	4	330	--	--
107'WB'+73 - 108'WB'+70	RT	5	494	--	32
108'WB'+31 - 110'WB'+13	RT	22	1,788	--	--
107'WB'+73 - 108'WB'+47	LT	6	614	--	48
107'WB'+88 - 107'WB'+97	LT	--	--	45	16
500'VV'+70 - 500'VV'+85	LT	1	91	--	32
501'VV'+03 - 501'VV'+10	LT	--	--	44	16
	TOTALS	**56**	**4,756**	**89**	**144**

*CURB RAMPS TO BE PAID FOR AS CONCRETE SIDEWALK 6-INCH

RIPRAP AND GEOTEXTILE FABRIC ITEMS

STATION - STATION	LOCATION	606.0200 RIPRAP MEDIUM CY	645.0120 GEOTEXTILE TYPE HR SY
CATEGORY CODE 0010			
106'WB'+37 - 106'WB'+74	LT	24	63
108'WB'+03 - 108'WB'+19	LT	7	20
108'WB'+48	LT	3	12
110'WB'+16	LT	2	10
	TOTALS	**36**	**105**

3

STORM SEWER PIPES

FROM - TO	LOCATION	608.0412 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH LF	608.0415 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 15-INCH LF	608.3012 STORM SEWER PIPE CLASS III-A 12-INCH LF
CATEGORY CODE 0010				
3 - 4	23WB	9	--	--
4 - 5	23WB	23	--	--
6 - 5	23WB	--	40	--
7 - 6	23WB	--	6	--
8 - 9	23WB	--	--	8
9 - 10	23WB	--	--	47
11 - 12	23WB	4	--	--
12 - 13	23WB	149	--	--
14 - 15	23WB	10	--	--
15 - 16	23WB	--	--	26
	TOTALS	**195**	**46**	**81**

STORM SEWER STRUCTURES

STRUCTURE	STATION	OFFSET*	LOCATION	520.1012 APRON ENDWALLS FOR CULVERT PIPE 12-INCH EACH	520.8000 CONCRETE COLLARS FOR PIPE EACH	611.0530 MANHOLE COVERS TYPE J EACH	611.0624 INLET COVERS TYPE H EACH	611.2004 MANHOLES 4-FT DIAMETER EACH	611.3230 INLETS 2X3-FT EACH	650.4000 CONSTRUCTION STAKING STORM SEWER EACH	SPV.0060.01 CONNECT TO EXISTING STORM SEWER STRUCTURE EACH
CATEGORY CODE 0010											
3	106+90.18	28.50' RT	23WB	--	--	--	1	--	1	1	--
4	106+89.97	19.55' RT	23WB	--	--	--	1	--	1	1	--
5	106+73.06	3.85' RT	23WB	--	--	1	--	1	--	1	--
6	106+32.94	7.06' RT	23WB	--	--	--	1	--	1	1	--
7	106+32.71	1.50' RT	23WB	--	--	--	1	--	1	1	--
8	108+42.50	34.20' LT	23WB	--	--	--	1	--	1	1	--
9	108+42.85	41.76' LT	23WB	--	--	--	1	--	1	1	--
10	108+47.05	86.56' LT	23WB	1	--	--	--	--	--	1	--
11	108+66.55	1.50' RT	23WB	--	--	--	1	--	1	1	--
12	108+66.59	5.14' RT	23WB	--	--	--	1	--	1	1	--
13	110+15.20	11.89' RT	23WB	--	--	--	--	--	--	--	1
14	110+15.46	32.70' LT	23WB	--	1	--	--	--	--	--	--
15	110+15.50	42.66' LT	23WB	--	--	--	1	--	1	1	--
16	110+15.62	68.15' LT	23WB	1	--	--	--	--	--	1	--
		TOTALS		**2**	**1**	**1**	**9**	**1**	**9**	**12**	**1**

REMARKS

* STATIONS AND OFFSETS ARE TO CENTER OF STRUCTURE

3

PIPE UNDERDRAIN 6-INCH

LOCATION	612.0106 LF
CATEGORY CODE 0010	
UNDISTRIBUTED	250
TOTAL	**250**

CONCRETE MEDIAN SLOPED NOSE

STATION	LOCATION	620.0300 SF	COMMENTS
CATEGORY CODE 0010			
106'EB'+20	LT	39	TYPE 1
106'WB'+37	RT	49	TYPE 1
106'EB'+95	LT	16	TYPE 2
106'EB'+95	LT	16	TYPE 2
107'WB'+74	RT	16	TYPE 2
108'EB'+31	LT	49	TYPE 1
108'WB'+70	RT	39	TYPE 1
108'WB'+47	LT	59	TYPE 1
500'VV'+71	LT	16	TYPE 2
500'VV'+72	LT	15	TYPE 2
500'VV'+85	LT	43	TYPE 1
TOTAL		**357**	

RESTORATION ITEMS

STATION - STATION	LOCATION	625.0100 TOPSOIL SY	628.2006 EROSION MAT URBAN CLASS I TYPE A SY	629.0210 FERTILIZER TYPE B CWT	630.0140 SEED MIX NO. 40 LB	630.0500 SEED WATER MGAL
CATEGORY CODE 0010						
104'EB'+19 - 104'EB'+83	LT	107	107	0.1	2	2
107'WB'+51 - 111'WB'+06	LT	1,404	1,404	0.9	25	32
106'WB'+26 - 501'VV'+48	LT	124	124	0.1	2	3
UNDISTRIBUTED		410	410	0.2	7	9
TOTALS		**2,045**	**2,045**	**1.3**	**36**	**46**

3

EROSION CONTROL MOBILIZATIONS ITEMS

LOCATION	628.1905 EROSION CONTROL EACH	628.1910 EMERGENCY EROSION CONTROL EACH
CATEGORY CODE 0010		
PROJECT 1440-40-71	6	4
TOTALS	**6**	**4**

INLET PROTECTION ITEMS

LOCATION	628.7005 TYPE A EACH	628.7015 TYPE C EACH
CATEGORY CODE 0010		
EXISTING STRUCTURES	1	11
PROPOSED STRUCTURES	--	9
UNDISTRIBUTED	--	5
TOTALS	**1**	**25**

DITCH CHECK ITEMS

STATION	LOCATION	628.7555 CULVERT PIPE CHECKS EACH	628.7570 ROCK BAGS EACH
CATEGORY CODE 0010			
111'WB'+06	LT	--	15
112'WB'+80	LT	3	--
501'VV'+57	LT	5	--
UNDISTRIBUTED		2	5
TOTALS		**10**	**20**

3

SIGNING ITEMS

SIGN NUMBER	SIGN CODE	SIZE	634.0612 POSTS WOOD 4X6X12 EACH	634.0614 POSTS WOOD 4X6X14 EACH	634.0616 POSTS WOOD 4X6X16 EACH	634.0618 POSTS WOOD 4X6X18 EACH	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2102 MOVING SIGNS TYPE II EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	204.0246 REMOVING ANCILLARY STRUCTURE 01. S-20-207 EACH	COMMENTS
CATEGORY CODE 0010													
101	R3-8LAAF	72X30	--	2	--	--	15.00	--	--	--	--	--	--
102	R3-7R	---	--	--	--	--	--	--	--	1	1	--	--
103	R3-5R	---	--	--	--	--	--	--	--	1	--	1	--
104	R5-1A	36X24	--	1	--	--	6.00	--	--	--	--	--	--
105	J3-1	24X57	--	--	--	1	9.50	--	--	1	1	--	MB4-1; MB3-1; M1-1 [41]; MB6-1 [LA]
106	R4-7	24X30	--	1	--	--	5.00	--	--	1	--	--	--
107	W12-1D	24X24	1	--	--	--	--	4.00	--	--	--	--	--
108	R1-1F	30X30	--	--	--	--	5.18	--	--	1	--	--	MOUNT TO TRAFFIC SIGNAL POLE
109	R1-1F	30X30	--	--	--	--	5.18	--	--	--	--	--	MOUNT TO TRAFFIC SIGNAL POLE
110	R5-1	30X30	--	--	--	--	6.25	--	--	--	--	--	MOUNT TO TRAFFIC SIGNAL POLE
111	R1-2	36X31	--	1	--	--	3.88	--	--	1	1	--	--
112	R1-1F	30X30	--	--	--	--	5.18	--	--	1	--	--	MOUNT TO TRAFFIC SIGNAL POLE
113	W12-1D	24X24	--	--	--	--	--	4.00	--	1	--	--	MOUNT TO TRAFFIC SIGNAL POLE
114	STREET NAME	---	--	--	--	--	--	--	1	--	--	--	MOUNT TO TRAFFIC SIGNAL ARM
115	STREET NAME	---	--	--	--	--	--	--	1	--	--	--	MOUNT TO TRAFFIC SIGNAL ARM
116	R10-5	30X36	--	--	--	--	7.50	--	--	--	--	--	MOUNT TO TRAFFIC SIGNAL ARM
117	STREET NAME	---	--	--	--	--	--	--	1	--	--	--	MOUNT TO TRAFFIC SIGNAL ARM
118	R4-8/R4-52	---	--	--	--	--	--	--	--	1	--	--	--
119	STREET NAME	---	--	--	--	--	--	--	1	--	--	--	MOUNT TO TRAFFIC SIGNAL ARM
120	R5-1	30X30	--	--	--	--	6.25	--	--	--	--	--	MOUNT TO TRAFFIC SIGNAL POLE
121	J3-1	---	--	--	--	--	--	--	--	1	--	--	--
122	R1-1F	30X30	--	--	--	--	5.18	--	--	1	--	--	MOUNT TO TRAFFIC SIGNAL POLE
123	J13-1	24X45	--	--	--	--	7.50	--	--	--	--	--	M1-5A [VV]; M6-4
124	R1-2	36X31	--	1	--	--	3.88	--	--	1	1	--	--
125	R1-1F	30X30	--	--	--	--	5.18	--	--	--	--	--	MOUNT TO TRAFFIC SIGNAL POLE
126	W12-1D	24X24	1	--	--	--	--	4.00	--	--	--	--	--
127	W12-1D	24X24	1	--	--	--	--	4.00	--	--	--	--	--
128	R4-7	24X30	--	1	--	--	5.00	--	--	1	--	--	--
129	J3-3	72X57	--	--	2	--	28.50	--	--	1	2	--	M3-3; M1-4 [45]; M6-1 [UA]
130	R7-1D	---	--	--	--	--	--	--	--	1	1	--	--
131	R3-20R	24X36	--	1	--	--	6.00	--	--	--	--	--	--
132	R3-8LAAR	---	--	--	--	--	--	--	--	1	2	--	--
133	R7-1D	18X24	--	1	--	--	3.00	--	--	--	--	--	--
		TOTALS	**3**	**9**	**2**	**1**	**139.16**	**16.00**	**4**	**16**	**9**	**1**	

TRAFFIC CONTROL ITEMS

	NUMBER OF DAYS IN SERVICE	643.0300 TRAFFIC CONTROL DRUMS NO. REQ'D	643.0300 TRAFFIC CONTROL DRUMS TOTAL DAY	643.0410 TRAFFIC CONTROL BARRICADES TYPE II NO. REQ'D	643.0410 TRAFFIC CONTROL BARRICADES TYPE II TOTAL DAY	643.0420* TRAFFIC CONTROL BARRICADES TYPE III NO. REQ'D	643.0420* TRAFFIC CONTROL BARRICADES TYPE III TOTAL DAY	643.0705* TRAFFIC CONTROL WARNING LIGHTS TYPE A NO. REQ'D	643.0705* TRAFFIC CONTROL WARNING LIGHTS TYPE A TOTAL DAY	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C NO. REQ'D	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C TOTAL DAY	643.0800 TRAFFIC CONTROL ARROW BOARDS NO. REQ'D	643.0800 TRAFFIC CONTROL ARROW BOARDS TOTAL DAY	643.0900* TRAFFIC CONTROL SIGNS NO. REQ'D	643.0900* TRAFFIC CONTROL SIGNS TOTAL DAY	643.1050* TRAFFIC CONTROL SIGNS PCMS NO. REQ'D	643.1050* TRAFFIC CONTROL SIGNS PCMS NO. DAYS	643.1050* TRAFFIC CONTROL SIGNS PCMS TOTAL DAY	643.5000 TRAFFIC CONTROL EACH
CATEGORY CODE 0010																			
PROJECT 1440-40-71	82	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*2*	*7*	14	1
EASTBOUND LANE SHIFT - STAGE 1	66	*48*	3,168	--	--	*2*	132	*4*	264	*4*	264	--	--	*9*	594	--	--	--	--
WESTBOUND LANE CLOSURE AND LANE SHIFT - STAGE 1	66	*58*	3,828	--	--	*4*	264	*8*	528	*11*	726	--	--	*12*	792	--	--	--	--
IH 41 RIGHT TURN LANE CLOSURE - STAGE 1	66	*16*	1,056	--	--	*1*	66	*2*	132	--	--	--	--	*2*	132	--	--	--	--
EASTBOUND LANE CLOSURE AT IH 41 RAMPS - STAGE 2	5	*46*	230	--	--	*5*	25	*10*	50	*21*	105	*1*	5	*14*	70	--	--	--	--
EASTBOUND CLOSURE - STAGE 2	5	--	--	--	--	*4*	20	*4*	20	--	--	--	--	*5*	25	--	--	--	--
WESTBOUND LANE CLOSURE AT PETERS AVENUE - STAGE 2	5	*49*	245	--	--	*8*	40	*16*	80	*11*	55	*1*	5	*10*	50	--	--	--	--
WESTBOUND CLOSURE - STAGE 2	5	--	--	--	--	*5*	25	*7*	35	--	--	--	--	*5*	25	--	--	--	--
IH 41 RIGHT TURN LANES CLOSURE - STAGE 2	5	*15*	75	--	--	*2*	10	*4*	20	--	--	--	--	*3*	15	--	--	--	--
STAGE 3 VARIOUS CLOSURES	11	*110*	1,210	--	--	*4*	44	*8*	88	*22*	242	--	--	*18*	198	--	--	--	--
CTH VV SOUTHBOUND CLOSURE - ALL STAGES	82	--	--	--	--	*11*	902	*16*	1,312	--	--	--	--	*7*	574	--	--	--	--
SIDEWALK CLOSURE AT WEST MALL ENTRANCE - ALL STAGES	82	--	--	*2*	164	*4*	328	*6*	492	--	--	--	--	*4*	328	--	--	--	--
	TOTALS		**9,812**		**164**		**1,856**		**3,021**		**1,392**		**10**		**2,803**			**14**	**1**

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PAVEMENT MARKING ITEMS

STATION - STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH WHITE LF	646.1020 MARKING LINE EPOXY 4-INCH YELLOW LF	646.3020 MARKING LINE EPOXY 8-INCH WHITE LF	646.5020 MARKING ARROW EPOXY WHITE EACH	646.5120 MARKING WORD EPOXY WHITE EACH	646.6120 MARKING STOP LINE EPOXY 18-INCH WHITE LF	646.7120 MARKING DIAGONAL EPOXY 12-INCH YELLOW LF	646.7420 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH WHITE LF	646.8120 MARKING CURB EPOXY YELLOW LF	646.8220 MARKING ISLAND NOSE EPOXY YELLOW EACH
CATEGORY CODE 0010											
102'EB'+95 - 107'EB'+85	LT & RT	414	--	369	--	--	57	--	107	25	3
106'WB'+40 - 108'EB'+35	LT & RT	--	66	128	--	--	--	--	--	--	--
104'WB'+00 - 116'WB'+65	LT & RT	389	--	630	1	1	33	--	100	21	2
500'VV'+67 - 504'VV'+39	LT & RT	70	901	248	1	--	24	28	169	--	--
		873	967								
	TOTALS	**1,840**		**1,375**	**2**	**1**	**114**	**28**	**376**	**46**	**5**

REMOVING PAVEMENT MARKING ITEMS

STATION - STATION	LOCATION	646.9000 MARKING REMOVAL LINE 4-INCH LF	646.9100 MARKING REMOVAL LINE 8-INCH LF	646.9200 MARKING REMOVAL LINE WIDE LF	646.9300 MARKING REMOVAL SPECIAL MARKING EACH
CATEGORY CODE 0010					
104'EB'+27 - 106'EB'+98	RT	51	89	24	3
104'WB'+00 - 106'WB'+65	LT	132	--	--	2
108'WB'+15 - 112+86	LT	38	84	--	6
113'WB'+63 - 116'WB'+23	LT	75	--	--	--
501'VV'+44 - 504'VV'+39	LT & RT	599	--	--	1
	TOTALS	**895**	**173**	**24**	**12**

3

TEMPORARY PAVEMENT MARKING ITEMS

STATION - STATION	LOCATION	649.0150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH WHITE LF	649.0150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH YELLOW LF	649.0850 TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH WHITE LF	649.0960 TEMPORARY MARKING REMOVABLE MASK OUT TAPE 6-INCH LF
CATEGORY CODE 0010					
STAGE 1					
100'EB'+25 - 110'EB'+39	RT	1,406	726	24	--
104'WB'+08 - 116'WB'+30	LT	1,417	830	--	--
STAGE 1 SUBTOTALS		2,823	1,556	24	--
STAGE 2					
93'EB'+25 - 95'EB'+70	RT	245	--	--	63
97'EB'+70 - 99'EB'+95	LT & RT	452	--	--	156
121'WB'+60 - 124'WB'+05	LT	245	--	--	63
STAGE 2 SUBTOTALS		942	--	--	282
		3,765	1,556		
TOTALS		**5,321**		**24**	**282**

CONSTRUCTION STAKING ITEMS

STATION - STATION	LOCATION	650.4500 SUBGRADE LF	650.5000 BASE LF	650.7000 CONCRETE PAVEMENT LF	650.9000 CURB RAMPS EACH	650.9910 SUPPLEMENTAL CONTROL LS	650.9920 SLOPE STAKES LF
CATEGORY CODE 0010							
PROJECT 1440-40-71		905	92	867	9	1	336
CATEGORY CODE 0010 SUBTOTALS		905	92	867	9	1	336
CATEGORY CODE 0020							
106'WB'+96 - 108'WB'+15	LT	119	12	107	--	--	--
106'EB'+98 - 108'EB'+06	RT	108	10	98	--	--	--
CATEGORY CODE 0020 SUBTOTALS		227	22	205	--	--	--
TOTALS		**1,132**	**114**	**1,072**	**9**	**1**	**336**

STAKING ITEMS FOR STORM SEWER, CURB & GUTTER, PIPE CULVERTS, AND ELECTRICAL INSTALLATIONS SHOWN ELSEWHERE

3

SAWING PAVEMENT ITEMS

STATION - STATION	LOCATION	690.0150 ASPHALT LF	690.0250 CONCRETE LF
CATEGORY CODE 0010			
104'EB'+73 - 106'EB'+98	LT	90	151
106'WB'+25 - 106'WB'+96	LT & RT	--	75
106'WB'+26 - 106'WB'+96	LT	84	3
106'WB'+96 - 108'WB'+15	LT	--	239
109'EB'+98 - 108'EB'+06	RT	--	108
108'EB'+06 - 108'EB'+53	LT	--	50
108'WB'+15 - 110'WB'+13	RT	--	224
108'WB'+09 - 111'WB'+06	LT	--	298
501'VV'+48	LT & RT	66	--
CATEGORY CODE 0010 SUBTOTALS		240	1,148
CATEGORY CODE 0020			
106'WB'+96	LT	--	33
106'EB'+98	RT	--	33
108'EB'+06	RT	--	33
108'WB'+15	LT	--	33
CATEGORY CODE 0020 SUBTOTALS		--	132
TOTALS		**240**	**1,280**

3

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 5 DAYS	643.0900* TRAFFIC CONTROL SIGNS DAYS	643.0420* BARRICADES TYPE III DAYS	643.0705* LIGHTS TYPE A DAYS	643.1000 FIXED MESSAGE SIGN SF	643.1050* SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO OF CYCLES	643.0910 COVERING SIGNS TYPE I EACH	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
1	I-41, N. OF STH 23, COVER/MODIFY ON EXISTING TYPE I GROUND MOUNT SIGN	SP	60"X18"	1					7.5		1		1	"WEST", COVER AS SHOWN
2	I-41, N. OF STH 23, PLACE LEFT OF SIGN #1 ON RIGHT SHOULDER	M 3-1	36"X18"	1	5	5								
	"	M 1-4	36"X36"	1	5	5								45
	"	M 3-2	36"X18"	1	5	5								
	"	M 1-6	36"X36"	1	5	5								23
	"	W 20-2A	48"X48"	1	5	5								
3	I-41, N. OF STH 23, PLACE ACROSS FROM SIGN #2 IN MEDIAN	M 3-1	36"X18"	1	5	5								
	"	M 1-4	36"X36"	1	5	5								45
	"	M 3-2	36"X18"	1	5	5								
	"	M 1-6	36"X36"	1	5	5								23
	"	W 20-2A	48"X48"	1	5	5								
4	I-41, AT STH 23 EXIT, PLACE/COVER ON EXISTING TYPE I GROUND MOUNT SIGN	SP	60"X18"	1					7.5					"WEST", COVER AS SHOWN
4A	I-41, N. OF STH 23, PLACE 1/4 MILE N. OF STH 23 EXIT ON RIGHT SHOULDER	FMS	132"X54"	1					49.5					SEE SIGN DETAIL SHEET
4B	I-41, N. OF STH 23, PLACE 1/4 MILE N. OF STH 23 EXIT IN MEDIAN	FMS	132"X54"	1					49.5					SEE SIGN DETAIL SHEET
5	I-41, AT STH 23 EXIT, PLACE LEFT OF SIGN #4 ON RIGHT SHOULDER	MO 4-8	36"X18"	1	5	5								
	"	M 3-1	36"X18"	1	5	5								
	"	M 1-4	36"X36"	1	5	5								45
	"	MO 6-1	30"X30"	1	5	5								AHEAD
	"	MO 4-8	36"X18"	1	5	5								
	"	M 3-2	36"X18"	1	5	5								
	"	M 1-6	36"X36"	1	5	5								23
	"	MO 6-1	30"X30"	1	5	5								AHEAD
6	I-41, AT STH 23 EXIT, PLACE ACROSS FROM SIGN #5 IN MEDIAN	MO 4-8	36"X18"	1	5	5								
	"	M 3-1	36"X18"	1	5	5								
	"	M 1-4	36"X36"	1	5	5								45
	"	MO 6-1	30"X30"	1	5	5								AHEAD
	"	MO 4-8	36"X18"	1	5	5								
	"	M 3-2	36"X18"	1	5	5								
	"	M 1-6	36"X36"	1	5	5								23
	"	MO 6-1	30"X30"	1	5	5								AHEAD
7	I-41 OFF-RAMP TO STH 23, COVER/MODIFY EXISTING J3-2 SIGN ON STH 23 RAMP	MO 6-1	21"X21"	1	5	5					1		1	RIGHT
8	I-41 OFF-RAMP TO STH 23, MODIFY EXISTING J13-1 SIGN ON STH 23 RAMP	MO 6-1	21"X21"	1	5	5								RIGHT
9	STH 23, E. OF CTH VVV, PLACE 100' E. OF CTH VVV INTERSECTION	M 3-1	24"X12"	1	5	5								
	"	M 1-4	24"X24"	1	5	5								23
	"	M 3-2	24"X12"	1	5	5								
	"	M 1-6	24"X24"	1	5	5								45
	"	W 20-2A	48"X48"	1	5	5								
10	STH 23, AT I-41 SB RAMP, PLACE RIGHT OF SIGNAL AT I-41 SB RAMP INTERSECTION	MO 4-8	24"X12"	1	5	5								
	"	M 3-1	24"X12"	1	5	5								
	"	M 1-4	24"X24"	1	5	5								45
	"	MO 6-1	21"X21"	1	5	5								RIGHT
	"	MO 4-8	24"X12"	1	5	5								
	"	M 3-2	24"X12"	1	5	5								
	"	M 1-6	24"X24"	1	5	5								23
	"	MO 6-1	21"X21"	1	5	5								RIGHT
	PAGE SUBTOTALS			45		205	0	0	114	0		0	2	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PLAN SHEET PRODUCED

BY WisDOT - NE REGION

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TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 5 DAYS	643.0900* TRAFFIC CONTROL SIGNS DAYS	643.0420* BARRICADES TYPE III DAYS	643.0705* LIGHTS TYPE A DAYS	643.1000 FIXED MESSAGE SIGN SF	643.1050* SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO OF CYCLES	643.0910 COVERING SIGNS TYPE I EACH	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
11	STH 23, AT I-41 SB RAMP, PLACE ON RIGHT SHOULDER IN SE QUADRANT OF RAMP INTERSECTION	R 11-3	60"X30"	1	5	5	5	10						1/4 MILE AHEAD
	"	R 4-9R	30"X24"	1	5	5								
12	STH 23, E. OF I-41 NB RAMP, PLACE IN MIDDLE OF ROADWAY AT HARD CLOSURE	R 11-2	48"X24"	1	5	5	5	10						
13	I-41 OFF-RAMP TO STH 23, COVER EXISTING J3-1 SIGN AS SHOWN										1		1	COVER ENTIRE SIGN
14	I-41 OFF-RAMP TO STH 23, MODIFY EXISTING J13-1 SIGN AS SHOWN	MO 6-1	21"X21"	1	5	5								LEFT
15	I-41, AT STH 23 EXIT, COVER/MODIFY EXISTING TYPE I GROUND MOUNT SIGN	SP	60"X18"	1					7.5		1	1		"WEST", COVER AS SHOWN
16	I-41, S. OF STH 23, PLACE RIGHT OF EXISTING J4-2 SIGN	MO 4-8	36"X18"	1	5	5								
	"	M 3-1	36"X18"	1	5	5								
	"	M 1-4	36"X36"	1	5	5								45
	"	MO 4-8	36"X18"	1	5	5								
	"	M 3-2	36"X18"	1	5	5								
	"	M 1-6	36"X36"	1	5	5								23
17	STH 23, E. OF PIONEER RD, PLACE ON RIGHT SHOULDER, FIELD DETERMINE LOCATION	PCMS		1						7				PLACE IN ADVANCE OF CLOSURE
18	STH 23, W. OF PIONEER RD, PLACE ON RIGHT SHOULDER, FIELD DETERMINE LOCATION	PCMS		1						7				PLACE IN ADVANCE OF CLOSURE
19	I-41, S. OF STH 23, PLACE ACROSS FROM SIGN #20 IN MEDIAN	M 4-8A	36"X24"	1	5	5								
	"	M 3-4	36"X18"	1	5	5								
	"	M 1-6	36"X36"	1	5	5								23
20	I-41, S. OF STH 23, PLACE LEFT OF EXISTING TYPE I GROUND MOUNT SIGN FOR SIGN #21	M 4-8A	36"X24"	1	5	5								
	"	M 3-4	36"X18"	1	5	5								
	"	M 1-6	36"X36"	1	5	5								23
21	I-41, S. OF STH 23, COVER/MODIFY ON EXISTING TYPE I GROUND MOUNT SIGN	SP	60"X18"	1					7.5		1	1		"WEST", COVER AS SHOWN
22	I-41, N. OF CTH D, PLACE 500' N. OF CTH D EXIT RAMP	MO 4-8	36"X18"	1	5	5								
	"	M 3-1	36"X18"	1	5	5								
	"	M 1-4	36"X36"	1	5	5								45
	"	MO 6-1	30"X30"	1	5	5								AHEAD
	"	MO 4-8	36"X18"	1	5	5								
	"	M 3-2	36"X18"	1	5	5								
	"	M 1-6	36"X36"	1	5	5								23
	"	MO 6-1	30"X30"	1	5	5								AHEAD
23	I-41, S. OF CTH D, PLACE 500' S. OF CTH D EXIT RAMP	MO 4-8	36"X18"	1	5	5								
	"	M 3-4	36"X18"	1	5	5								
	"	M 1-6	36"X36"	1	5	5								23
	"	MO 6-1	30"X30"	1	5	5								AHEAD
24	I-41, N. OF HICKORY ST, PLACE 500' N. OF HICKORY ST EXIT RAMP	MO 4-8	36"X18"	1	5	5								
	"	M 3-1	36"X18"	1	5	5								
	"	M 1-4	36"X36"	1	5	5								45
	"	MO 6-1	30"X30"	1	5	5								AHEAD
	"	MO 4-8	36"X18"	1	5	5								
	"	M 3-2	36"X18"	1	5	5								
	"	M 1-6	36"X36"	1	5	5								23
	"	MO 6-1	30"X30"	1	5	5								AHEAD
	PAGE SUBTOTALS			40		180	10	20	15	14		2	1	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

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TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 5 DAYS	643.0900* TRAFFIC CONTROL SIGNS DAYS	643.0420* BARRICADES TYPE III DAYS	643.0705* LIGHTS TYPE A DAYS	643.1000 FIXED MESSAGE SIGN SF	643.1050* SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO OF CYCLES	643.0910 COVERING SIGNS TYPE I EACH	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
25	I-41, S. OF HICKORY ST, PLACE 500' S. OF HICKORY ST EXIT RAMP	MO 4-8	36"X18"	1	5	5								
	"	M 3-4	36"X18"	1	5	5								
	"	M 1-6	36"X36"	1	5	5								23
	"	MO 6-1	30"X30"	1	5	5								AHEAD
26	I-41, N. OF US 151, PLACE 1000' N. OF US 151 EXIT RAMP IN MEDIAN	MO 4-8	36"X18"	1	5	5								
	"	M 3-1	36"X18"	1	5	5								
	"	M 1-4	36"X36"	1	5	5								45
	"	MO 5-2R	30"X30"	1	5	5								
	"	MO 4-8	36"X18"	1	5	5								
	"	M 3-2	36"X18"	1	5	5								
	"	M 1-6	36"X36"	1	5	5								23
	"	MO 5-2R	30"X30"	1	5	5								
27	I-41, N. OF US 151, PLACE 1000' N. OF US 151 EXIT RAMP ON RIGHT SHOULDER	MO 4-8	36"X18"	1	5	5								
	"	M 3-1	36"X18"	1	5	5								
	"	M 1-4	36"X36"	1	5	5								45
	"	MO 5-2R	30"X30"	1	5	5								
	"	MO 4-8	36"X18"	1	5	5								
	"	M 3-2	36"X18"	1	5	5								
	"	M 1-6	36"X36"	1	5	5								23
	"	MO 5-2R	30"X30"	1	5	5								
28	I-41, AT US 151, PLACE LEFT OF EXISTING TYPE I GROUND MOUNT SIGN AT US 151 EXIT RAMP	MO 4-8	36"X18"	1	5	5								
	"	M 3-1	36"X18"	1	5	5								
	"	M 1-4	36"X36"	1	5	5								45
	"	MO 6-2	30"X30"	1	5	5								TILT RIGHT
	"	MO 4-8	36"X18"	1	5	5								
	"	M 3-2	36"X18"	1	5	5								
	"	M 1-6	36"X36"	1	5	5								23
	"	MO 6-2	30"X30"	1	5	5								TILT RIGHT
29	I-41 OFF-RAMP TO US 151, PLACE 150' PRIOR TO INTERSECTION ON LEFT SHOULDER	MO 4-8	24"X12"	1	5	5								
	"	M 3-1	24"X12"	1	5	5								
	"	M 1-4	24"X24"	1	5	5								45
	"	MO 6-1	21"X21"	1	5	5								LEFT
	"	MO 4-8	24"X12"	1	5	5								
	"	M 3-2	24"X12"	1	5	5								
	"	M 1-6	24"X24"	1	5	5								23
	"	MO 6-1	21"X21"	1	5	5								LEFT
30	I-41, S. OF US 151, PLACE 3/4 MILE S. OF US 151 EXIT RAMP IN MEDIAN	M 3-1	36"X18"	1	5	5								
	"	M 1-4	36"X36"	1	5	5								45
	"	M 3-2	36"X18"	1	5	5								
	"	M 1-6	36"X36"	1	5	5								23
	"	W 20-2A	48"X48"	1	5	5								
	PAGE SUBTOTALS			41		205	0	0	0	0		0	0	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

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TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 5 DAYS	643.0900* TRAFFIC CONTROL SIGNS DAYS	643.0420* BARRICADES TYPE III DAYS	643.0705* LIGHTS TYPE A DAYS	643.1000 FIXED MESSAGE SIGN SF	643.1050* SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO OF CYCLES	643.0910 COVERING SIGNS TYPE I EACH	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
30A	I-41, S. OF US 151, PLACE 3/4 MILE S. OF US 151 EXIT RAMP ON RIGHT SHOULDER	M 3-1	36"X18"	1	5	5								
	"	M 1-4	36"X36"	1	5	5								45
	"	M 3-2	36"X18"	1	5	5								
	"	M 1-6	36"X36"	1	5	5								23
	"	W 20-2A	48"X48"	1	5	5								
31	I-41, S. OF US 151, PLACE 1/2 MILE S. OF US 151 EXIT RAMP IN MEDIAN	FMS	132"X54"	1					49.5					SEE SIGN DETAIL SHEET
31A	I-41, S. OF US 151, PLACE 1/2 MILE S. OF US 151 EXIT RAMP ON RIGHT SHOULDER	FMS	132"X54"	1					49.5					SEE SIGN DETAIL SHEET
32	I-41, S. OF US 151, PLACE 1/4 MILE S. OF US 151 EXIT RAMP IN MEDIAN	MO 4-8	36"X18"	1	5	5								
	"	M 3-1	36"X18"	1	5	5								
	"	M 1-4	36"X36"	1	5	5								45
	"	MO 5-2R	30"X30"	1	5	5								
	"	MO 4-8	36"X18"	1	5	5								
	"	M 3-2	36"X18"	1	5	5								
	"	M 1-6	36"X36"	1	5	5								23
	"	MO 5-2R	30"X30"	1	5	5								
33	I-41, S. OF US 151, PLACE 1/4 MILE S. OF US 151 EXIT RAMP ON RIGHT SHOULDER	MO 4-8	36"X18"	1	5	5								
	"	M 3-1	36"X18"	1	5	5								
	"	M 1-4	36"X36"	1	5	5								45
	"	MO 5-2R	30"X30"	1	5	5								
	"	MO 4-8	36"X18"	1	5	5								
	"	M 3-2	36"X18"	1	5	5								
	"	M 1-6	36"X36"	1	5	5								23
	"	MO 5-2R	30"X30"	1	5	5								
34	I-41, AT US 151, PLACE LEFT OF EXISTING TYPE I GROUND MOUNT SIGN AT US 151 EXIT RAMP	MO 4-8	36"X18"	1	5	5								
	"	M 3-1	36"X18"	1	5	5								
	"	M 1-4	36"X36"	1	5	5								45
	"	MO 6-2	30"X30"	1	5	5								TILT RIGHT
	"	MO 4-8	36"X18"	1	5	5								
	"	M 3-2	36"X18"	1	5	5								
	"	M 1-6	36"X36"	1	5	5								23
	"	MO 6-2	30"X30"	1	5	5								TILT RIGHT
35	I-41 OFF-RAMP TO US 151, PLACE 150' PRIOR TO RAMP INTERSECTION ON US 151 EXIT RAMP ON RIGHT SHOULDER	MO 4-8	24"X12"	1	5	5								
	"	M 3-1	24"X12"	1	5	5								
	"	M 1-4	24"X24"	1	5	5								45
	"	MO 6-1	21"X21"	1	5	5								RIGHT
	"	MO 4-8	24"X12"	1	5	5								
	"	M 3-2	24"X12"	1	5	5								
	"	M 1-6	24"X24"	1	5	5								23
	"	MO 6-1	21"X21"	1	5	5								RIGHT
36	US 151, AT I-41 NB RAMP, PLACE RIGHT OF EXISTING J3-1 SIGN AT RAMP INTERSECTION	MO 4-8	36"X18"	1	5	5								
	"	M 3-4	36"X18"	1	5	5								
	"	M 1-6	36"X36"	1	5	5								23
	"	MO 6-1	30"X30"	1	5	5								RIGHT
PAGE SUBTOTALS				43		205	0	0	99	0		0	0	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

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TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 5 DAYS	643.0900* TRAFFIC CONTROL SIGNS DAYS	643.0420* BARRICADES TYPE III DAYS	643.0705* LIGHTS TYPE A DAYS	643.1000 FIXED MESSAGE SIGN SF	643.1050* SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO OF CYCLES	643.0910 COVERING SIGNS TYPE I EACH	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
37	US 151, N. OF I-41, PLACE 1000' N. OF I-41 RAMP INTERSECTION	MO 4-8	36"X18"	1	5	5								
	"	M 3-4	36"X18"	1	5	5								
	"	M 1-6	36"X36"	1	5	5								23
	"	MO 5-1R	30"X30"	1	5	5								
38	US 151, S. OF US 45/CTH V, PLACE 250' S. OF US 45/CTH V OFF-RAMP	MO 4-8	36"X18"	1	5	5								
	"	M 3-1	36"X18"	1	5	5								
	"	M 1-4	36"X36"	1	5	5								45
	"	MO 6-1	30"X30"	1	5	5								AHEAD
	"	MO 4-8	36"X18"	1	5	5								
	"	M 3-2	36"X18"	1	5	5								
	"	M 1-6	36"X36"	1	5	5								23
	"	MO 6-1	30"X30"	1	5	5								AHEAD
39	US 151, N. OF US 45/CTH V, PLACE 250' N. OF US 45/CTH V OFF-RAMP	MO 4-8	36"X18"	1	5	5								
	"	M 3-3	36"X18"	1	5	5								
	"	M 1-4	36"X36"	1	5	5								45
	"	MO 6-2	30"X30"	1	5	5								TILT RIGHT
40	US 151, N. OF US 45/CTH V, PLACE 1000' N. OF US 45/CTH V OFF-RAMP	MO 4-8	36"X18"	1	5	5								
	"	M 3-4	36"X18"	1	5	5								
	"	M 1-6	36"X36"	1	5	5								23
	"	MO 6-1	30"X30"	1	5	5								AHEAD
	"	MO 4-8	36"X18"	1	5	5								
	"	M 3-3	36"X18"	1	5	5								
	"	M 1-4	36"X36"	1	5	5								45
	"	MO 5-2R	30"X30"	1	5	5								
41	US 151, S. OF CTH V/VIENZI RD, PLACE 250' S. OF CTH V INTERSECTION	MO 4-8	36"X18"	1	5	5								
	"	M 3-1	36"X18"	1	5	5								
	"	M 1-4	36"X36"	1	5	5								45
	"	MO 6-1	30"X30"	1	5	5								AHEAD
	"	MO 4-8	36"X18"	1	5	5								
	"	M 3-2	36"X18"	1	5	5								
	"	M 1-6	36"X36"	1	5	5								23
	"	MO 6-1	30"X30"	1	5	5								AHEAD
42	US 151, N. OF CTH V/VIENZI RD, PLACE 250' N. OF CTH V INTERSECTION	MO 4-8	36"X18"	1	5	5								
	"	M 3-3	36"X18"	1	5	5								
	"	M 1-4	36"X36"	1	5	5								45
	"	MO 6-1	30"X30"	1	5	5								AHEAD
	"	MO 4-8	36"X18"	1	5	5								
	"	M 3-4	36"X18"	1	5	5								
	"	M 1-6	36"X36"	1	5	5								23
	"	MO 6-1	30"X30"	1	5	5								AHEAD
	PAGE SUBTOTALS			40		200	0	0	0	0		0	0	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

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TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 5 DAYS	643.0900* TRAFFIC CONTROL SIGNS DAYS	643.0420* BARRICADES TYPE III DAYS	643.0705* LIGHTS TYPE A DAYS	643.1000 FIXED MESSAGE SIGN SF	643.1050* SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO OF CYCLES	643.0910 COVERING SIGNS TYPE I EACH	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
43	US 151, S. OF STH 23, PLACE LEFT OF EXISTING TYPE I GROUND MOUNT SIGN	M 4-8A	36"X24"	1	5	5								
	"	M 3-2	36"X18"	1	5	5								
	"	M 1-6	36"X36"	1	5	5								23
44	US 151, S. OF STH 23, MODIFY/COVER EXISTING TYPE I GROUND MOUNT SIGN AS SHOWN	SP	60"X18"	1					7.5		1	1		"EAST", COVER AS SHOWN
45	US 151, S. OF STH 23, PLACE 1000' S. OF STH 23 EXIT RAMP IN MEDIAN	MO 4-8	36"X18"	1	5	5								
	"	M 3-1	36"X18"	1	5	5								
	"	M 1-4	36"X36"	1	5	5								45
	"	MO 5-2R	30"X30"	1	5	5								
45A	US 151, S. OF STH 23, PLACE 1000' S. OF STH 23 EXIT RAMP ON RIGHT SHOULDER	MO 4-8	36"X18"	1	5	5								
	"	M 3-1	36"X18"	1	5	5								
	"	M 1-4	36"X36"	1	5	5								45
	"	MO 5-2R	30"X30"	1	5	5								
46	US 151, AT STH 23, PLACE LEFT OF EXISTING TYPE I GROUND MOUNT SIGN	MO 4-8	36"X18"	1	5	5								
		M 3-1	36"X18"	1	5	5								
		M 1-4	36"X36"	1	5	5								45
		MO 6-2	60"X18"	1	5	5								TILT RIGHT
46A	US 151, AT STH 23, MODIFY/COVER EXISTING TYPE I GROUND MOUNT SIGN AS SHOWN	SP	36"X12"	1					7.5		1	1		"EAST", COVER AS SHOWN
47	US 151 OFF-RAMP TO STH 23, PLACE LEFT OF EXISTING J2-2 SIGN ON RAMP	MO 4-8	36"X18"	1	5	5								
	"	M 3-1	36"X18"	1	5	5								
	"	M 1-4	36"X36"	1	5	5								45
	"	MO 6-1	30"X30"	1	5	5								LEFT
48	US 151 OFF-RAMP TO STH 23, COVER EXISTING J2-2 SIGN AS SHOWN										1		1	COVER "WEST 23 ADV LT"
49	STH 23, E. OF US 151, PLACE 750' E. OF US 151 NB RAMP INTERSECTION	M 3-4	24"X12"	1	5	5								
	"	M 1-6	24"X24"	1	5	5								23
	"	W 20-2A	48"X48"	1	5	5								
50	STH 23, AT US 151, PLACE IN BETWEEN US 151 RAMP INTERSECTIONS	MO 4-8	24"X12"	1	5	5								
	"	M 3-4	24"X12"	1	5	5								
	"	M 1-6	24"X24"	1	5	5								23
	"	MO 5-1L	21"X21"	1	5	5								
51	US 151, N. OF STH 23, MODIFY/COVER EXISTING TYPE I GROUND MOUNT SIGN AS SHOWN	SP	36"X12"	1					7.5		1	1		"EAST", COVER AS SHOWN
52	US 151, N. OF STH 23, PLACE LEFT OF EXISTING TYPE I GROUND MOUNT SIGN ON RIGHT SHOULDER	M 3-4	36"X18"	1	5	5								
	"	M 1-6	36"X36"	1	5	5								23
	"	W 20-2A	48"X48"	1	5	5								
53	US 151, N. OF STH 23, PLACE ACROSS FROM SIGN #52 IN MEDIAN	M 3-4	36"X18"	1	5	5								
	"	M 1-6	36"X36"	1	5	5								23
	"	W 20-2A	48"X48"	1	5	5								
54	US 151, AT STH 23, MODIFY/COVER EXISTING TYPE I GROUND MOUNT SIGN AS SHOWN	SP	36"X12"	1					7.5					"EAST", COVER AS SHOWN
55	US 151, AT STH 23, PLACE LEFT OF EXISTING TYPE I GROUND MOUNT SIGN	MO 4-8	36"X18"	1	5	5								
	"	M 3-4	36"X18"	1	5	5								
	"	M 1-6	36"X36"	1	5	5								23
	"	MO 6-1	30"X30"	1	5	5								AHEAD
	PAGE SUBTOTALS			40		180	0	0	30	0		3	1	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

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TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 5 DAYS	643.0900* TRAFFIC CONTROL SIGNS DAYS	643.0420* BARRICADES TYPE III DAYS	643.0705* LIGHTS TYPE A DAYS	643.1000 FIXED MESSAGE SIGN SF	643.1050* SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO OF CYCLES	643.0910 COVERING SIGNS TYPE I EACH	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
56	US 151, AT STH 23, PLACE ACROSS FROM SIGN #55 IN MEDIAN	MO 4-8	36"X18"	1	5	5								
	"	M 3-4	36"X18"	1	5	5								
	"	M 1-6	36"X36"	1	5	5								23
	"	MO 6-1	30"X30"	1	5	5								AHEAD
57	US 151 OFF-RAMP TO STH 23, COVER EXISTING J2-2 SIGN AS SHOWN													COVER "WEST 23 ADV RT"
58	US 151 OFF-RAMP TO STH 23, COVER EXISTING J3-1 SIGN AS SHOWN													COVER ENTIRE SIGN
59	STH 23, BETWEEN US 151 RAMPS, PLACE IN MEDIAN NEXT TO LIGHT POLE	MO 4-8	24"X12"	1	5	5								
	"	M 3-4	24"X12"	1	5	5								
	"	M 1-6	24"X24"	1	5	5								23
	"	MO 6-1	21"X21"	1	5	5								LEFT
60	STH 23, AT US 151 SB RAMP, PLACE ON RIGHT SHOULDER IN NW QUADRANT OF INTERSECTION	R 11-3	60"X30"	1	5	5	5	10						4 MILES AHEAD
	"	M 4-9L	30"X24"	1	5	5								
61	STH 23, W. OF US 151, PLACE 200' W. OF US 151 SB RAMP INTERSECTION	MO 4-8	24"X12"	1	5	5								
	"	M 3-3	24"X12"	1	5	5								
	"	M 1-4	24"X24"	1	5	5								45
	"	MO 6-1	21"X21"	1	5	5								RIGHT
	"	MO 4-8	24"X12"	1	5	5								
	"	M 3-4	24"X12"	1	5	5								
	"	M 1-6	24"X24"	1	5	5								23
	"	MO 6-1	21"X21"	1	5	5								RIGHT
62	STH 23, W. OF US 151, PLACE/COVER EXISTING J4-1 SIGN AS SHOWN										1		1	COVER ENTIRE SIGN
	"	MO 4-8	24"X12"	1	5	5								
	"	M 3-1	24"X24"	1	5	5								
	"	M 1-4	21"X21"	1	5	5								45
63	STH 23, W. OF US 151, PLACE 750' W. OF US 151 SB RAMP INTERSECTION	MO 4-8	24"X12"	1	5	5								
	"	M 3-3	24"X12"	1	5	5								
	"	M 1-4	24"X24"	1	5	5								45
	"	MO 5-1R	21"X21"	1	5	5								
	"	MO 4-8	24"X12"	1	5	5								
	"	M 3-4	24"X12"	1	5	5								
	"	M 1-6	24"X24"	1	5	5								23
	"	MO 5-1R	21"X21"	1	5	5								
64	US 151, S. OF STH 23, PLACE RIGHT OF EXISTING J4-1 SIGN	MO 4-8	36"X18"	1	5	5								
	"	M 3-3	36"X18"	1	5	5								
	"	M 1-4	36"X36"	1	5	5								45
	"	MO 4-8	36"X18"	1	5	5								
	"	M 3-4	36"X18"	1	5	5								
	"	M 1-6	36"X36"	1	5	5								23
	PAGE SUBTOTALS			35		175	5	10	0	0		0	1	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PLAN SHEET PRODUCED

BY WisDOT - NE REGION

3

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 5 DAYS	643.0900* TRAFFIC CONTROL SIGNS DAYS	643.0420* BARRICADES TYPE III DAYS	643.0705* LIGHTS TYPE A DAYS	643.1000 FIXED MESSAGE SIGN SF	643.1050* SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO OF CYCLES	643.0910 COVERING SIGNS TYPE I EACH	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
65	STH 23, E. OF NATIONAL AVE, PLACE 200' E. OF NATIONAL AVE INTERSECTION	MO 4-8	24"X12'	1	5	5								
	"	M 3-1	24"X12"	1	5	5								
	"	M 1-4	24"X24"	1	5	5								45
	"	MO 6-1	21"X21"	1	5	5								AHEAD
66	STH 23, W. OF NATIONAL AVE, PLACE 200' W. OF NATIONAL AVE INTERSECTION	MO 4-8	24"X12"	1	5	5								
	"	M 1-4	24"X24"	1	5	5								45
	"	M 1-6	24"X24"	1	5	5								23
	"	MO 6-1	21"X21"	1	5	5								AHEAD
67	STH 23, E. OF US 45, PLACE 200' E. OF US 45 INTERSECTION	M 4-8A	24"X18"	1	5	5								
	"	M 1-4	24"X24"	1	5	5								45
68	STH 23, AT US 45, PLACE ON RIGHT SHOULDER IN NW QUADRANT OF US 45 INTERSECTION	R 11-3	60"X30"	1	5	5	5	10						1 1/2 MILES AHEAD
69	US 45, N. OF STH 23, MODIFY EXISTING J3-1 SIGNS N. OF STH 23 INTERSECTION	MO 4-8	24"X12"	1	5	5								
	"	MO 6-1	21"X21"	1	5	5								LEFT
	"	MO 6-1	21"X21"	1	5	5								LEFT
70	US 45, N. OF STH 23, MODIFY EXISTING J2-1 SIGNS N. OF STH 23 INTERSECTION	MO 4-8	24"X12"	1	5	5								
	"	MO 5-1L	21'X21"	1	5	5								
	"	NO 5-1L	21"X21"	1	5	5								
71	US 45, N. OF STH 23, PLACE 1000' N. OF STH 23 INTERSECTION	M 1-4	24"X24"	1	5	5								45
	"	M 1-6	24"X24"	1	5	5								23
	"	W 20-2A	48"X48"	1	5	5								
	PAGE SUBTOTALS			20		100	5	10	0	0		0	0	
	PROJECT TOTALS			**304**		**1,450**	**20**	**40**	**258**	**14**		**5**	**5**	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PLAN SHEET PRODUCED

BY WisDOT - NE REGION

TRAFFIC SIGNAL REMOVALS

LOCATION / ITEM NUMBER	204.0195 REMOVING CONCRETE BASES EACH	653.0905 REMOVING PULL BOXES EACH
CATEGORY 0010 INTERSECTION		
SB3	1	--
SB4	1	--
SB5	1	--
SB6	1	--
SB7	1	--
PB3	--	1
PB4	--	1
PB5	--	1
PB6	--	1
PB7	--	1
PB11	--	1
PB12	--	1
PB13	--	1
PB14	--	1
CATEGORY 0010 TOTAL	**5**	**9**
CATEGORY 0030 INTERSECTION		
CB1	1	--
SB1	1	--
SB2	1	--
SB8	1	--
PB1	--	1
PB2	--	1
PB15	--	1
CATEGORY 0030 TOTAL	**4**	**3**
INTERSECTION TOTAL	**9**	**12**

TRAFFIC SIGNAL PULL BOXES

LOCATION / PULL BOX NUMBER	STATION	OFFSET	L/R	653.0154 PULL BOXES NON-CONDUCTIVE 24X36-INCH EACH	653.0164* PULL BOXES NON-CONDUCTIVE 24X42-INCH EACH
CATEGORY 0010 INTERSECTION					
PB8	106+61.2'EB'	6.6'	LT	--	1
PB9	106+20.2'WB'	4.7'	RT	--	1
PB10	106+52.1'WB'	46.9'	LT	--	1
PB11	106+79.6'WB'	81.2'	LT	--	1
PB12	107+04.6'WB'	38.5'	LT	--	1
PB13	107+75.6'WB'	83.1'	LT	--	1
PB14	108+18.3'WB'	65.4'	LT	--	1
PB15	108+18.6'WB'	39.1'	LT	--	1
PB16	107+99.3'WB'	40.3'	LT	1	--
PB17	108+18.3'WB'	5.2'	RT	--	1
PB18	108+49.6'EB'	4.6'	LT	--	1
CATEGORY 0010 TOTAL				**1**	**10**
CATEGORY 0030 INTERSECTION					
PB1	405+12.7'VV'	64.4'	RT	--	1
PB2	405+12.6'VV'	38.2'	RT	--	1
PB3	405+20.0'VV'	39.4'	RT	1	--
PB4	405+12.4'VV'	6.0'	LT	--	1
PB5	405+19.9'VV'	6.0'	LT	1	--
PB6	405+12.2'VV'	48.9'	LT	--	1
PB7	405+33.7'VV'	71.7'	LT	--	1
PB19	108+19.7'EB'	47.3'	RT	--	1
CATEGORY 0030 TOTAL				**2**	**6**
INTERSECTION TOTAL				**3**	**16**

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE.

TRAFFIC SIGNAL CONDUIT

LOCATION	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
CATEGORY 0010 INTERSECTION						
	CB1	-	PB1	--	115	--
	PB1	-	PB2	--	50	--
	PB2	-	PB3	--	10	--
	PB3	-	SB1	10	--	--
	PB3	-	SB2	--	15	--
	PB3	-	SB3	30	--	--
	PB2	-	PB4	--	90	--
	PB4	-	PB5	10	--	--
	PB4	-	PB6	--	90	--
	PB6	-	PB7	--	65	--
	PB7	-	SB4	--	10	--
	PB7	-	SB5	10	--	--
	PB7	-	PB8	--	--	120
	PB8	-	SB6	20	--	--
	PB8	-	PB9	50	--	--
	PB9	-	EXPB-1	210	--	--
	PB8	-	PB10	--	--	150
	PB10	-	SB7	--	20	--
	PB10	-	PB11	--	90	--
	PB11	-	PB12	--	--	50
	PB12	-	SB8	--	10	--
	PB11	-	PB13	--	--	200
	PB13	-	PB14	--	95	--
	PB14	-	PB15	--	50	--
	PB15	-	PB16	--	20	--
	PB16	-	SB9	25	--	--
	PB16	-	SB10	15	--	--
	PB16	-	SB11	--	10	--
	PB15	-	PB17	--	90	--
	PB17	-	SB12	30	--	--
	PB17	-	PB18	40	--	--
	PB18	-	EXISTING	150	--	--
	PB17	-	PB19	--	--	160
	PB19	-	CB1	--	60	--
INTERSECTION TOTAL				**600**	**890**	**680**

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE.

TRAFFIC SIGNAL LOOP DETECTORS

LOCATION / LOOP NO.	STATION **	OFFSET	L/R	SIZE FT		SIZE FT	NO. OF TURNS	INSTALLATION METHOD	652.0800 CONDUIT LOOP DETECTOR LF	655.0800 LOOP DETECTOR WIRE LF	655.0700* LOOP DETECTOR LEAD IN CABLE LF
CATEGORY 0010 INTERSECTION											
11	106+17.8'WB'	15.8'	RT	6	X	20	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	72	216	290
12	106+45.7'WB'	13.6'	RT	6	X	20	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	62	204	290
31	405+09.9'VV'	2.1'	RT	6	X	20	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	62	186	120
32	405+37.9'VV'	2.1'	RT	6	X	20	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	57	171	120
33	405+10.0'VV'	12.6'	RT	6	X	20	3	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW ASPHALT PAVEMENT)	72	196	120
34	405+37.9'VV'	12.6'	RT	6	X	20	3	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW ASPHALT PAVEMENT)	67	186	120
41	107+20.4'WB'	47.8'	LT	6	X	30	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	92	276	355
51	108+52.3'EB'	15.9'	LT	6	X	20	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	62	186	130
52	108+24.5'EB'	13.7'	LT	6	X	20	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	62	186	130
71	107+32.2'WB'	47.8'	LT	6	X	30	3	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW ASPHALT PAVEMENT)	102	276	355
81	405+10.0'VV'	23.6'	RT	6	X	20	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	67	201	75
82	405+38.0'VV'	23.7'	RT	6	X	20	3	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	67	201	75
INTERSECTION TOTAL									**844**	**2485**	**2180**

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE.

TRAFFIC SIGNAL STRUCTURES

LOCATION / BASE NUMBER	STATION	OFFSET	L/R	654.0101 CONCRETE BASES TYPE 1 EACH	654.0102 CONCRETE BASES TYPE 2 EACH	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0315 POLES TYPE 4 EACH	657.0405 TRAFFIC SIGNAL STANDARDS ALUMINUM 3.5-FT EACH	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	657.0609 LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH	659.1120 LUMINAIRES UTILITY LED B EACH
CATEGORY 0010 INTERSECTION														
SB6	106+77.9'EB'	7.5'	LT	--	1	--	1	1	--	--	--	--	2	2
SB8	107+10.0'WB'	47.8'	LT	1	--	1	--	--	--	--	1	--	--	--
SB9	107+76.5'WB'	45.8'	LT	1	--	1	--	--	--	1	--	--	--	--
SB10	107+86.8'WB'	39.7'	LT	1	--	1	--	--	--	--	--	1	--	--
SB12	107+87.3'WB'	6.3'	RT	--	1	--	1	1	--	--	--	--	2	2
CATEGORY 0010 TOTAL				**3**	**2**	**3**	**2**	**2**	**0**	**1**	**1**	**1**	**4**	**4**
CATEGORY 0030 INTERSECTION														
SB1	405+30.9'VV'	37.4'	RT	1	--	1	--	--	1	--	--	--	--	--
SB3	405+45.4'VV'	37.7'	RT	1	--	1	--	--	--	--	--	1	--	--
SB5	405+39.2'VV'	74.3'	LT	1	--	1	--	--	--	--	--	1	--	--
CATEGORY 0030 TOTAL				**3**	**0**	**3**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**0**
INTERSECTION TOTAL				**6**	**2**	**6**	**2**	**2**	**1**	**1**	**1**	**3**	**4**	**4**

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INTERCONNECT PULLBOXES AND VAULTS

ITEM NUMBER	STATION	OFFSET	L/R	653.0164* PULL BOXES NON-CONDUCTIVE 24X42-INCH EACH
CATEGORY 0010 INTERSECTION				
ICPB1	108+26.8'EB'	44.2'	RT	1
ICPB2	108+26.4'WB'	65.1'	LT	1
CATEGORY 0010 TOTAL				**2**
CATEGORY 0030 INTERSECTION				
ICPB3	405+01.1'VV'	61.3'	RT	1
CATEGORY 0030 TOTAL				**1**
INTERSECTION TOTAL				**3**

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE.

TRAFFIC SIGNAL STRUCTURES

LOCATION / BASE NUMBER	STATION	OFFSET	L/R	654.0113 CONCRETE BASES TYPE 13 EACH	657.0355 POLES TYPE 12 EACH	657.0356 POLES TYPE 12 - OVERHEIGHT EACH	657.0540 MONOTUBE ARMS 40-FT EACH	657.0550 MONOTUBE ARMS 50-FT EACH	657.0555 MONOTUBE ARMS 55-FT EACH
CATEGORY 0010 INTERSECTION									
SB2	405+35.3'VV'	41.3'	RT	1	--	1	--	1	--
SB7	106+41.1'WB'	44.5'	LT	1	--	1	1	--	--
SB11	107+91.3'WB'	40.4'	LT	1	1	--	--	--	1
CATEGORY 0010 TOTAL				**3**	**1**	**2**	**1**	**1**	**1**
CATEGORY 0030 INTERSECTION									
SB4	405+28.0'VV'	62.9'	LT	1	1	--	--	--	1
CATEGORY 0030 TOTAL				**1**	**1**	**0**	**0**	**0**	**1**
INTERSECTION TOTAL				**4**	**2**	**2**	**1**	**1**	**2**

TRAFFIC SIGNAL HEADS

LOCATION	SIGNAL BASE NO.	HEAD NO.	658.0173 TRAFFIC SIGNAL FACE 3S 12-INCH EACH	658.0174 TRAFFIC SIGNAL FACE 4S 12-INCH EACH	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH
CATEGORY 0010 INTERSECTION					
	SB6	6	--	1	--
	SB7	2	1	--	--
		3	1	--	--
		4	1	--	--
	SB8	18	1	--	--
		2A	--	--	1
	SB9	8A	--	--	1
	SB10	11	--	1	--
		15	1	--	--
		2B	--	--	1
	SB11	1	1	--	--
		14	1	--	--
		16	1	--	--
		17	1	--	--
	SB12	12	--	1	--
CATEGORY 0010 TOTAL			**9**	**3**	**3**
CATEGORY 0030 INTERSECTION					
	SB2	8	1	--	--
		9	1	--	--
		10	1	--	--
		13	1	--	--
	SB3	21	--	1	--
		8B	--	--	1
	SB4	19	1	--	--
		20	1	--	--
		22	--	1	--
	SB5	5	--	1	--
		7	1	--	--
CATEGORY 0030 TOTAL			**7**	**3**	**1**
INTERSECTION TOTAL			**16**	**6**	**4**

TRAFFIC SIGNAL CABLE AND WIRE - BELOW GROUND

LOCATION	FROM	-	TO	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG LF	655.0270 CABLE TRAFFIC SIGNAL 15-14 AWG LF	655.0305 CABLE TYPE UF 2-12 AWG GROUNDED LF	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF	655.0700* LOOP DETECTOR LEADIN CABLE LF
CATEGORY 0010 INTERSECTION								
	CB1	-	SB1	143	--	--	143	98
	CB1	-	SB2	148	--	--	--	--
	CB1	-	SB3	158	--	--	--	113
	CB1	-	SB4	283		--	--	--
	CB1	-	SB5	278	--	--	--	--
	CB1	-	SB6	368	--	368	--	--
	CB1	-	SB7	448	--	--	--	--
	CB1	-	SB8	483	--	--	--	378
	CB1	-	SB9	253	--	--	--	193
	CB1	-	SB10	--	243	--	--	183
	CB1	-	SB11	--	238	--	--	--
	CB1	-	SB12	168	--	168	168	--
	SB1	-	SB2	--	--	--	55	--
	SB2	-	SB3	--	--	--	70	--
	SB3	-	SB4	--	--	--	250	--
	SB4	-	SB5	--	--	--	45	--
	SB5	-	SB6	--	--	--	210	--
	SB6	-	SB7	--	--	--	145	--
	SB7	-	SB8	--	--	--	270	--
	SB8	-	SB9	--	--	--	370	--
	SB9	-	SB10	--	--	--	65	--
	SB10	-	SB11	--	--	--	50	--
	SB11	-	SB12	--	--	--	160	--
INTERSECTION TOTAL				**2730**	**481**	**536**	**2001**	**965**

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE.

TRAFFIC SIGNAL CABLE AND WIRE - ABOVE GROUND

LOCATION	FROM SIGNAL BASE	-	TO SIGNAL HEAD	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG LF	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF	655.0700* LOOP DETECTOR LEAD IN CABLE LF
CATEGORY 0010 INTERSECTION						
	SB1	-	BUTTON	--	--	6
	SB2	-	8	71	--	--
		-	9	60	--	--
		-	10	49	--	--
		-	13	19	--	--
	SB3	-	21	22	--	--
		-	8B	15	--	--
			BUTTON	--	--	6
	SB4	-	19	66	--	--
		-	20	51	--	--
		-	22	78	--	--
	SB5	-	5	22	--	--
		-	7	19	--	--
	SB6	-	6	22	--	--
		-	LUMINAIRE	--	234	--
	SB7	-	2	63	--	--
		-	3	51	--	--
		-	4	39	--	--
	SB8	-	18	19	--	--
		-	2A	15	--	--
		-	BUTTON	--	--	6
	SB9	-	8A	15	--	--
		-	BUTTON	--	--	6
	SB10	-	11	22	--	--
		-	15	19	--	--
		-	2B	15	--	--
		-	BUTTON	--	--	6
	SB11	-	1	19	--	--
		-	14	55	--	--
		-	16	76	--	--
		-	17	66	--	--
	SB12	-	12	22	--	--
		-	LUMINAIRE	--	234	--
INTERSECTION TOTAL				**990**	**468**	**30**

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE.

3

TRAFFIC SIGNAL MOUNTING HARDWARE

LOCATION	658.5069.001 SIGNAL MOUNTING HARDWARE (USH 45/STH 23 & CTH VV) LS
CATEGORY 0010	
USH 45/STH 23 & CTH VV	1
INTERSECTION TOTAL	**1**

CONSTRUCTION STAKING

LOCATION	650.8500.001 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (USH 45/STH 23 & CTH VV) LS
CATEGORY 0010	
USH 45/STH 23 & CTH VV	1
INTERSECTION TOTAL	**1**

3

TRAFFIC SIGNAL CONTROL

LOCATION	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH	656.0200.001 ELECTRICAL SERVICE METER BREAKER PEDESTAL (USH 45/STH 23 & CTH VV) LS
CATEGORY 0010		
USH 45/STH 23 & CTH VV	1	1
INTERSECTION TOTAL	**1**	**1**

SALVAGE TRAFFIC SIGNALS

LOCATION	SPV.0060.27 SALVAGE TRAFFIC SIGNALS (USH 45/STH 23 & CTH VV) EACH
CATEGORY 0010	
USH 45/STH 23 & CTH VV	1
INTERSECTION TOTAL	**1**

INTERSECTION CONTROL

LOCATION	SPV.0060.24 FURNISH & INSTALL TRAFFIC SIGNAL CABINET AND CONTROLLER BLACK EACH	SPV.0060.25 FURNISH & INSTALL APS SYSTEM (USH 45/STH 23 & CTH VV) EACH	SPV.0060.26 SALVAGE & REINSTALL GPS EVP SYSTEM (USH 45/STH 23 & CTH VV) EACH
CATEGORY 0010			
USH 45/STH 23 & CTH VV	1	1	1
INTERSECTION TOTAL	**1**	**1**	**1**

INTERCONNECT CONDUIT

FROM	-	TO	652.0225* CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0230 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2 1/2-INCH LF	652.0610 CONDUIT SPECIAL 2 1/2-INCH LF
CATEGORY 0010					
INTERSECTION					
CB1	-	ICPB1	20	--	--
ICPB1	-	ICPB2	--	--	145
ICPB1	-	ICPB3	55	--	--
ICPB2	-	EXISTING	--	30	--
INTERSECTION TOTAL			**75**	**30**	**145**

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE.

LIGHTING PULL BOXES

LOCATION / PULL BOX NUMBER	STATION	OFFSET	L/R	653.0164* PULL BOXES NON-CONDUCTIVE 24X42-INCH EACH
CATEGORY 0010 INTERSECTION				
LPB1	405+45.0'VV'	92.8'	RT	1
LPB2	108+30.8'WB'	4.9'	RT	1
LPB3	108+54.8'EB'	4.6'	LT	1
LPB4	405+17.0'VV'	65.3'	RT	1
LPB5	405+16.8'VV'	50.4'	LT	1
LPB6	405+33.6'VV'	67.3'	LT	1
LPB7	106+65.6'EB'	6.8'	LT	1
LPB8	106+24.8'WB'	4.7'	RT	1
LPB9	105+44.0'WB'	10.7'	RT	1
INTERSECTION TOTAL				**9**

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE.

LIGHTING CONDUIT

LOCATION	FROM	-	TO	652.0225* CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0605 CONDUIT SPECIAL 2-INCH LF
CATEGORY 0010 INTERSECTION					
	MB1	-	LPB1	20	--
	LPB1	-	LPB2	--	75
	LPB1	-	LPB4	40	--
	LPB2	-	LPB3	40	--
	LPB2	-	SB12	35	--
	LPB4	-	LPB5	120	--
	LPB5	-	LPB6	30	--
	LPB6	-	LPB7	--	65
	LPB7	-	SB6	15	--
	LPB7	-	LPB8	50	--
	LPB8	-	LPB9	85	--
INTERSECTION TOTAL				**435**	**140**

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE.

MISC LIGHTING

LOCATION	SPV.0060.28 TEMPORARY STREET LIGHTING FOR INTERSECTIONS (USH 45/STH 23 & CTH VV) EACH
CATEGORY 0010	
USH 45/STH 23 & CTH VV	1
INTERSECTION TOTAL	**1**

LIGHTING CONDUCTORS

LOCATION	FROM	-	TO	SPV.0090.10 FURNISH AND INSTALL EQUIVALENT LIGHTING CONDUCTORS LF
CATEGORY 0010 INTERSECTION				
	MB1	-	LPB1	100
	LPB1	-	LPB2	350
	LPB1	-	LPB4	225
	LPB2	-	LPB3	175
	LPB2	-	SB12	225
	LPB3	-	EXLB	500
	LPB4	-	LPB5	575
	LPB5	-	LPB6	125
	LPB6	-	LPB7	300
	LPB7	-	SB6	75
	LPB7	-	LPB8	225
	LPB8	-	LPB9	425
	LPB9	-	EXLB	325
INTERSECTION TOTAL				**3625**

MISC LIGHTING

LOCATION	SPV.0060.29 ELETRICAL SERVICE METER BREAKER PEDESTAL SPECIAL EACH
CATEGORY 0010	
MB1	1
INTERSECTION TOTAL	**1**

N

CTH VV
PIONEER ROAD

CONSTRUCTION LIMITS
STA 501'VV'+48.40
MATCH EXISTING
SAWCUT REQUIRED

EXISTING R/W

CITY OF FOND DU LAC

ALLIANT ENERGY

AT&T

SLOPE INTERCEPT, TYP

8' MULTI-USE PATH

RE-GRADE MEDIAN TO
DRAIN TO EXISTING INLET

CHARTER

USH 45 SB/ STH 23 WB
JOHNSON STREET

USH 45 NB / STH 23 EB
JOHNSON STREET

BEGIN PROJECT
STA 104'EB'+83.25
Y=388170.318
X=808101.254
MATCH EXISTING
SAWCUT REQUIRED

END PROJECT
STA 111'EB'+06.56
MATCH EXISTING
SAWCUT REQUIRED

ASPHALT PARKING LOT

TRAFFIC SIGNAL CONTROLER

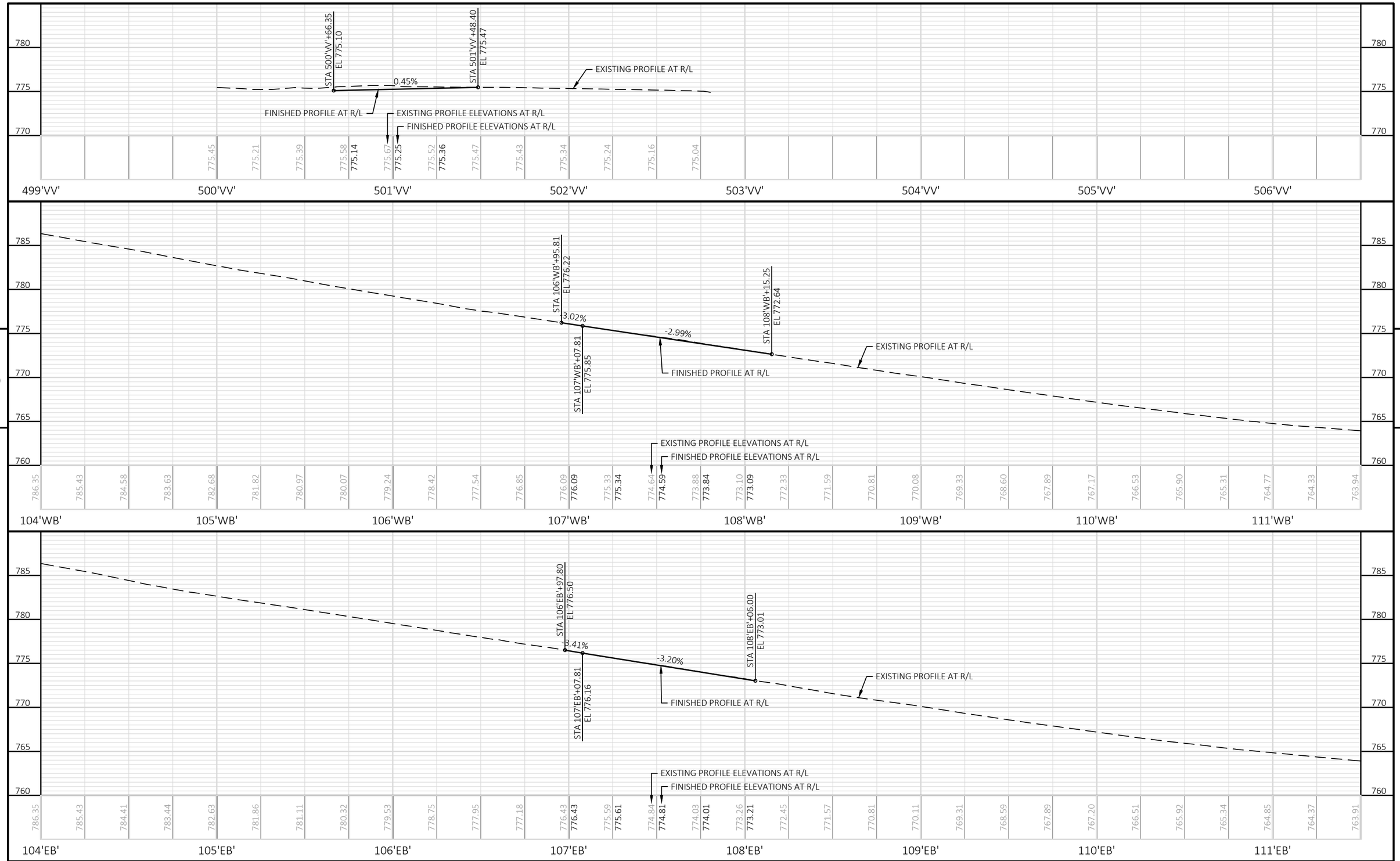
COLORED CONC

PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	PLAN: JOHNSON STREET	SHEET 75	E

FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-050101-PP.DWG
LAYOUT NAME - Sheet-01

PLOT DATE : 9/22/2021 9:45 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44



5

5

PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	PROFILES: JOHNSON STREET (EASTBOUND & WESTBOUND) AND PIONEER ROAD	SHEET 76	E

Standard Detail Drawing List

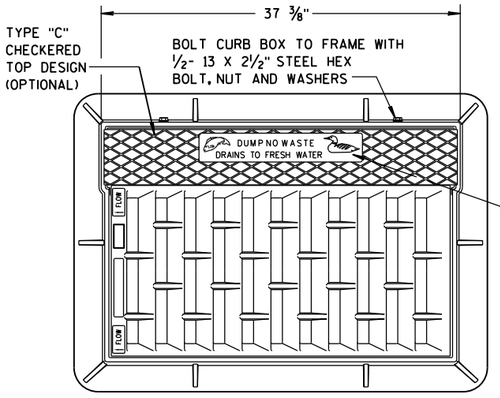
08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-02	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-22A	CONCRETE CURB & GUTTER
08D01-22B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
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
08E14-01	TRACKING PAD
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-10	CONDUIT
09B16-01	PULL BOX NON-CONDUCTIVE
09C02-09	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C06-07	CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL
09C12-09A	CONCRETE BASE TYPE 13
09C12-09B	CONCRETE BASE TYPE 13
09D01-05	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09E01-15C	POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 4
09E01-15G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-06	NON-FREEWAY LIGHTING UNIT POLE WIRING
09E06-05	TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.
09E08-09I	TYPE 12 POLE 35'-55' MONOTUBE ARM
09E08-09K	GENERAL NOTES,HARDWARE DETAILS FOR TYPE 9/10,9/10 SPECIAL,12 & 13 POLES W/MONOTUBE ARMS
09E12-01C	OVER HEIGHT TYPE 12 POLE 35'-55' MONOTUBE ARM
09E12-01E	GENERAL NOTES AND HARDWARE DETAILS FOR OVER HEIGHT TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS
09F08-04	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW ASPHALTIC PAVEMENT)
09F15-04B	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
11B02-02	CONCRETE MEDIAN NOSE
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C09-15A	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-15B	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-15C	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
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
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-08C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-15B	PAVEMENT MARKING WORDS
15C07-15C	PAVEMENT MARKING ARROWS
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C08-20B	PAVEMENT MARKING (TURN LANES)
15C08-20C	PAVEMENT MARKING (TURN LANES)
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C18-05	MEDIAN ISLAND MARKING
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D20-05A	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D30-06A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D40-02A	TRAFFIC CONTROL, FULL LANE SHIFT NON-FREEWAY OR MULTILANE DIVIDED 45 MPH AND UNDER
15D40-02C	TRAFFIC CONTROL, PARTIAL LANE SHIFT NON-FREEWAY OR MULTILANE DIVIDED 45 MPH AND UNDER

6

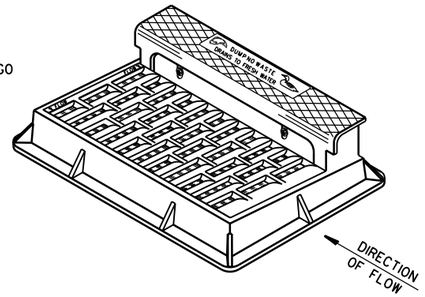
Standard Detail Drawing List

15D50-01A TRAFFIC CONTROL, ADDED LANE CLOSURE WITHOUT LANE SHIFT

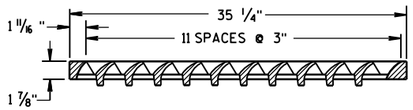
6

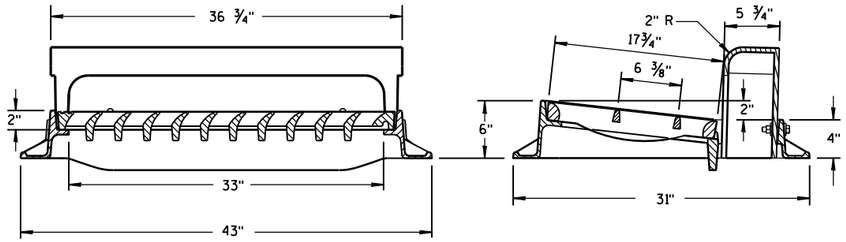


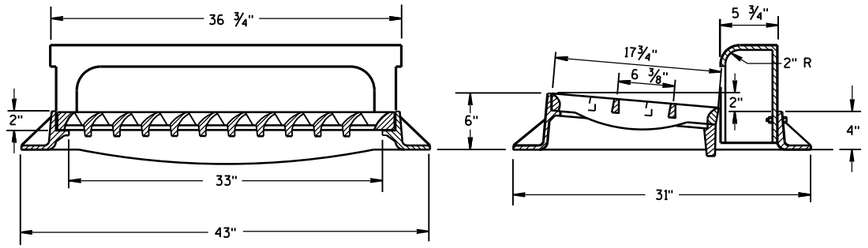
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

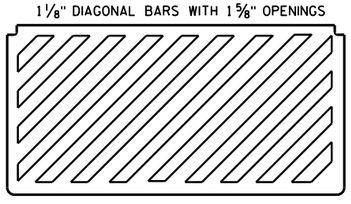






TYPE "H"

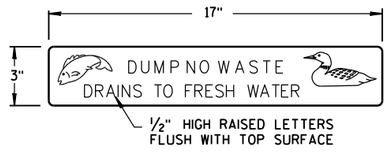
NOTE: EITHER CASTING IS ACCEPTABLE



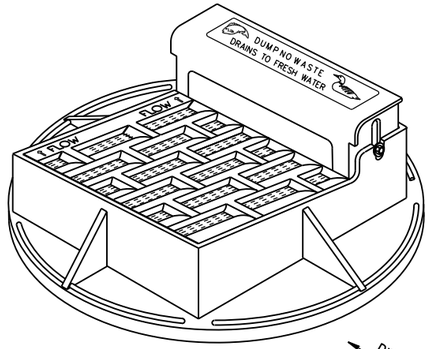
SPECIAL GRATE FOR TYPE "H" COVER

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

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

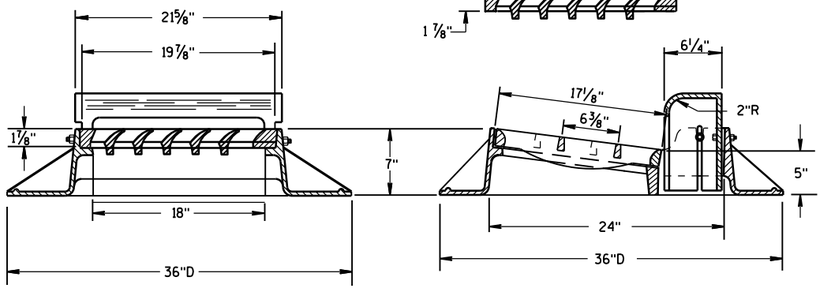


LOGO DETAIL



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

NOTE:
GRATE IS REVERSIBLE.



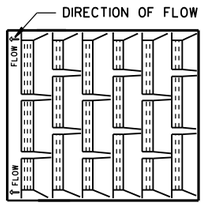
TYPE "A"

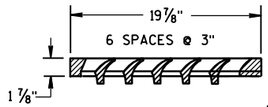
GENERAL NOTES

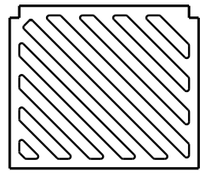
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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.



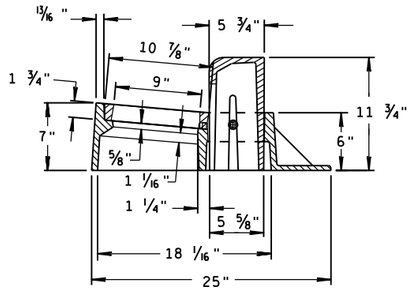


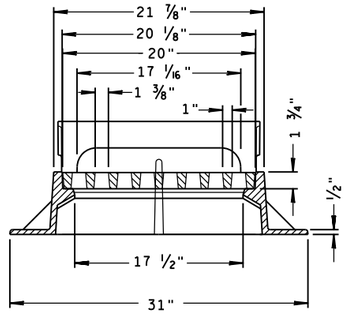


SPECIAL GRATE FOR TYPE "A" COVER

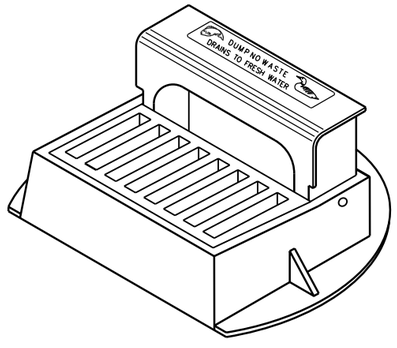
(MEASURES 19 3/4" X 17" X 1 7/8")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)





TYPE "Z"



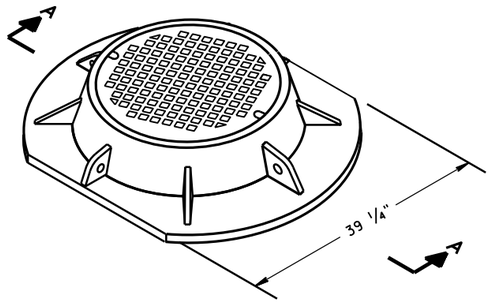
INLET COVERS
TYPE A, H, A-S, H-S & Z

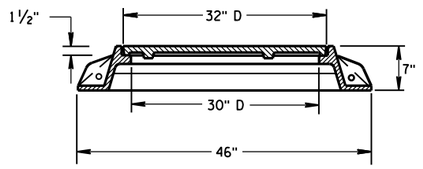
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

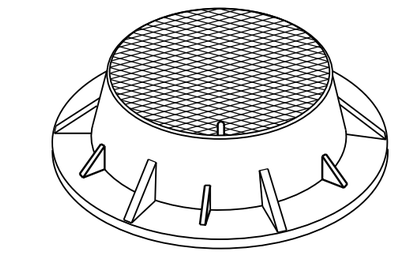
6

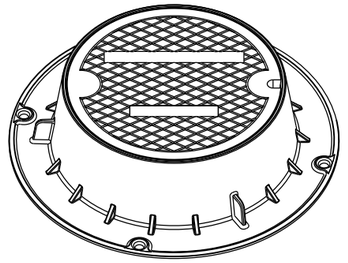
S.D.D. 8 A 5-19a

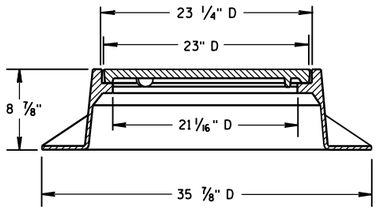


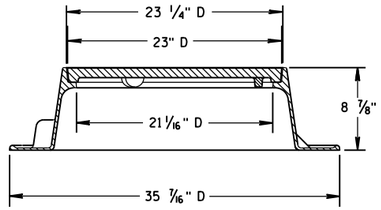


SECTION A-A
TYPE "K"









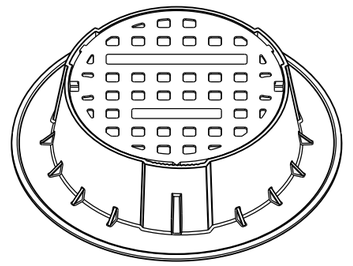
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

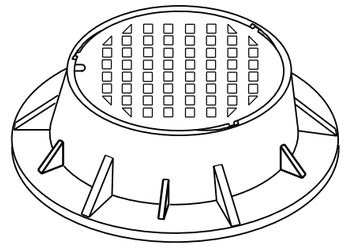
GENERAL NOTES

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.

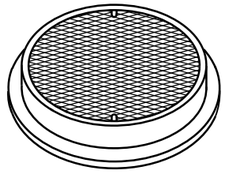
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

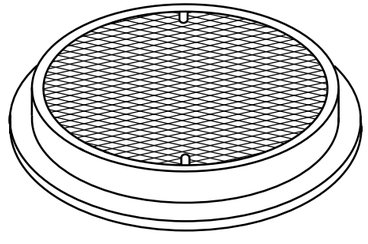
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

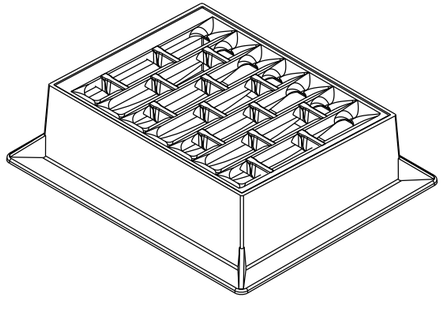


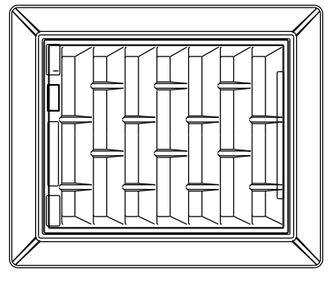


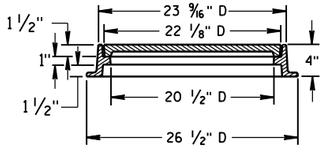
TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE



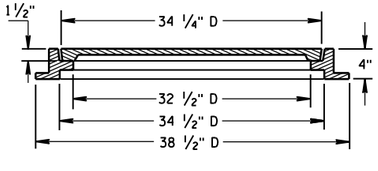




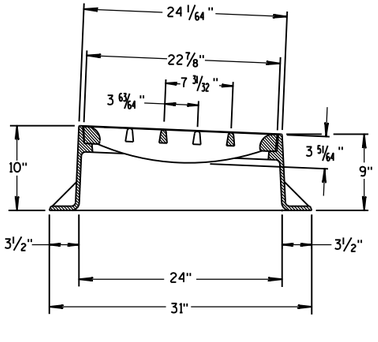


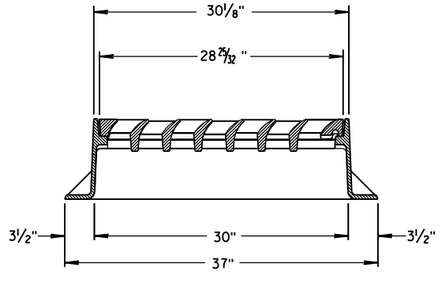


TYPE "L"



TYPE "M"





INLET COVER TYPE "BW"

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

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DEPARTMENT OF TRANSPORTATION

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

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

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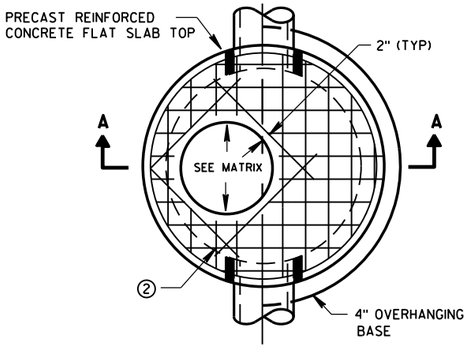
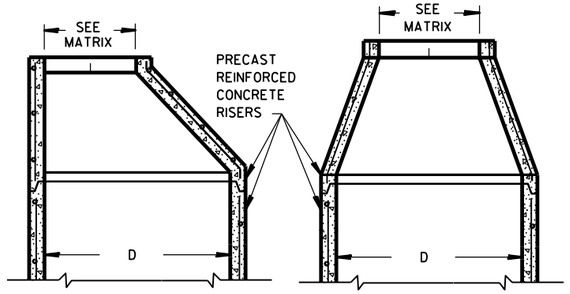
S.D.D. 8 A 5-19d

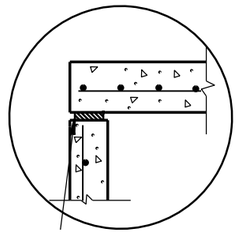


PLAN VIEW CIRCULAR OPENING

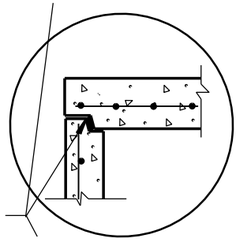


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

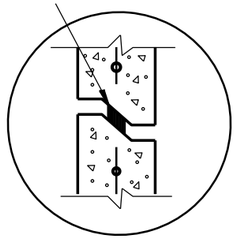


TOP WITH PLAIN END JOINT



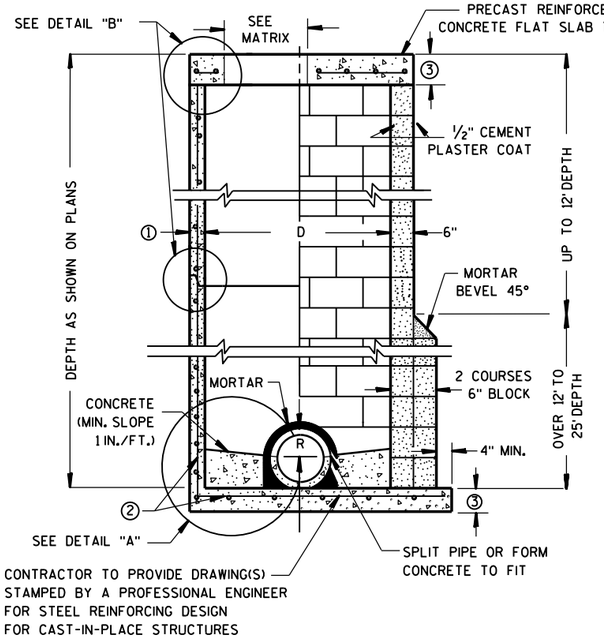
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



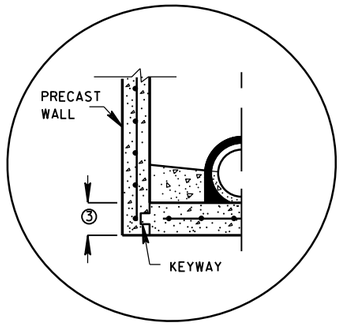
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

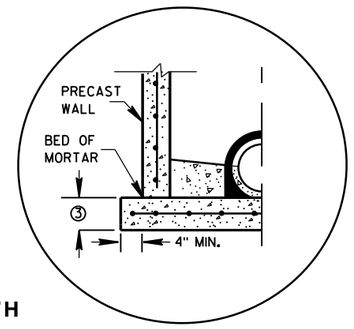


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

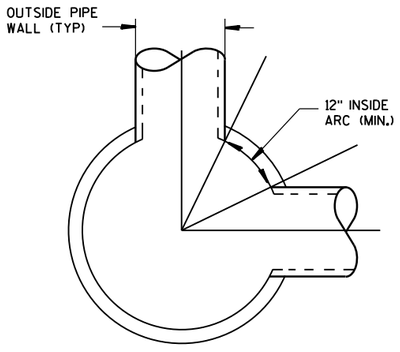


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

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

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND 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" 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.

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

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

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

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 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.

② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

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

PIPE MATRIX

MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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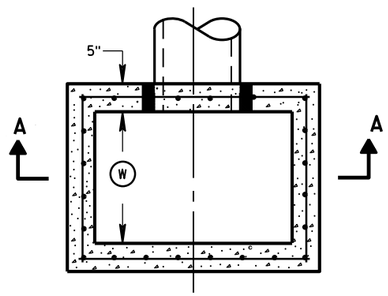
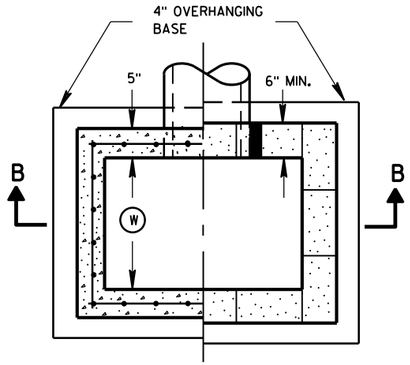
Sept., 2016
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERV
FHWA

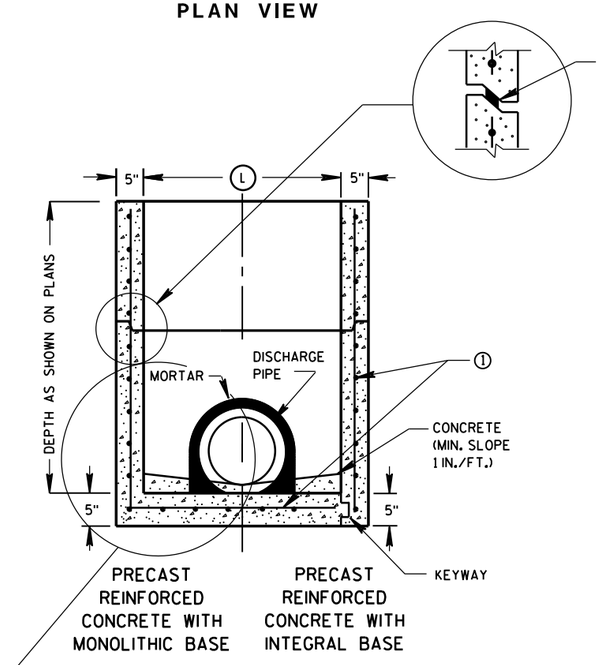
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER



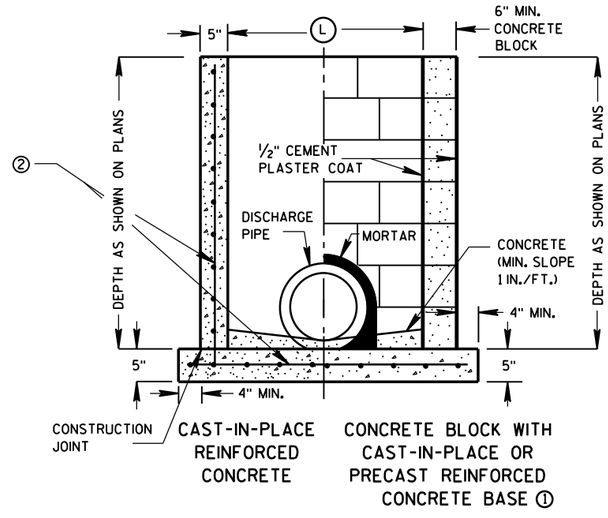
PLAN VIEW



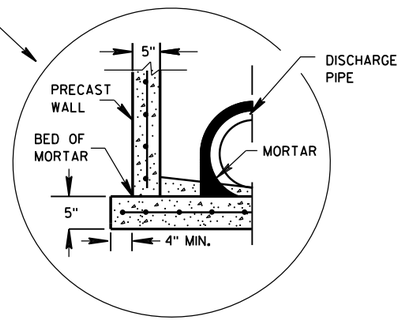
PLAN VIEW



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.

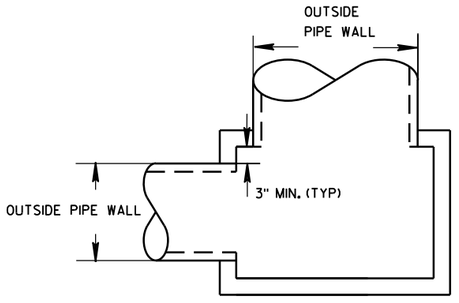
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

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

PIPE MATRIX

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



DETAIL "A"

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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Sept., 2016 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D IT
UNIT SUPERVIS
FHWA

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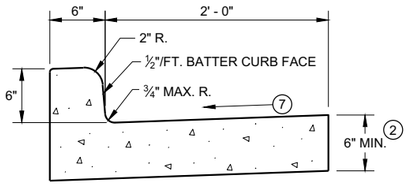
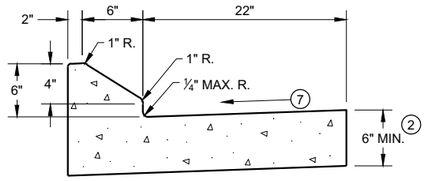
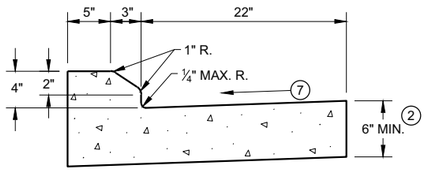
S.D.D. 8 C 7-2



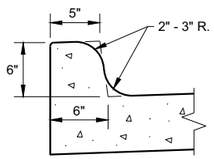
TYPES A (1) & D



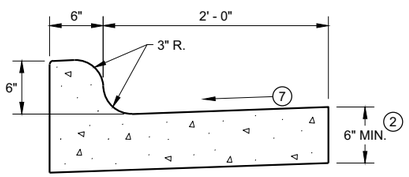
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

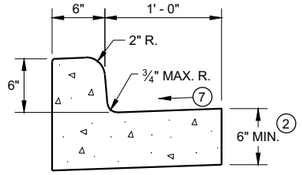


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



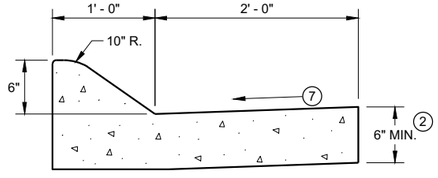
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"

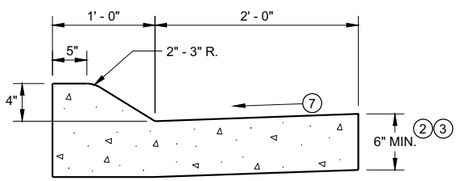


TYPES A (1) & D

CONCRETE CURB AND GUTTER 18"

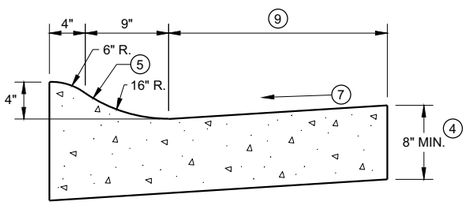


6" SLOPED CURB TYPES A (1) & D



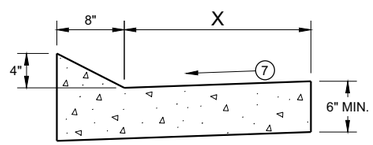
4" SLOPED CURB TYPES A (1) & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R (1) & T

TBT & TBTT	X
30"	22"
36"	28"

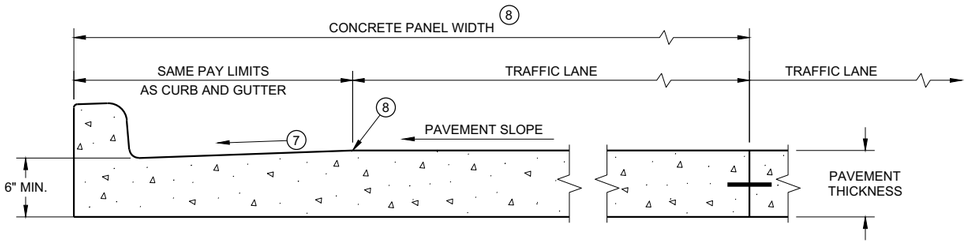


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

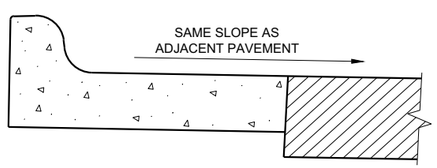
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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

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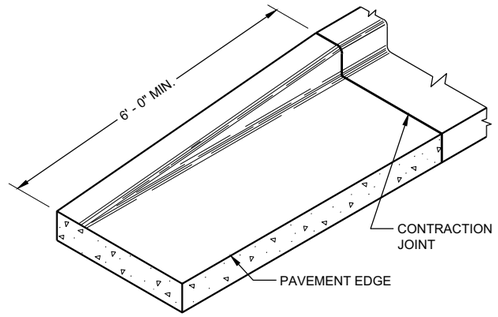
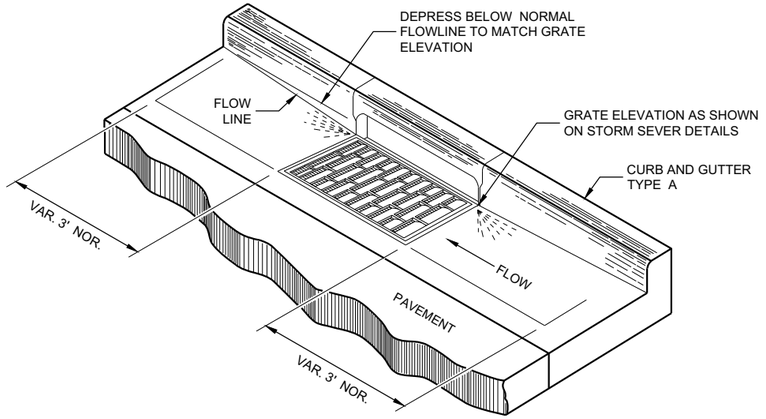
SDD 08D01 - 22a

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.

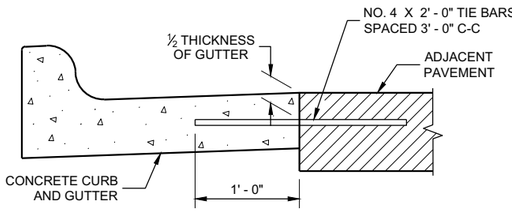
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

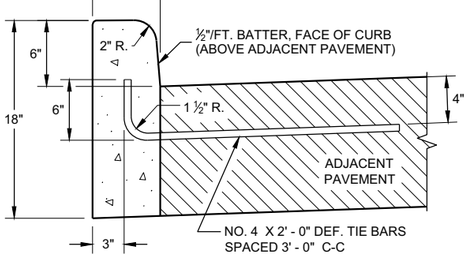
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

(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.

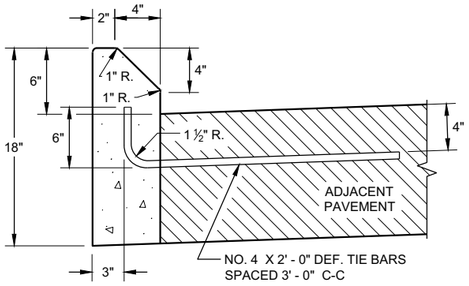
(9) REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.



TYPICAL TIE BAR LOCATION (1)

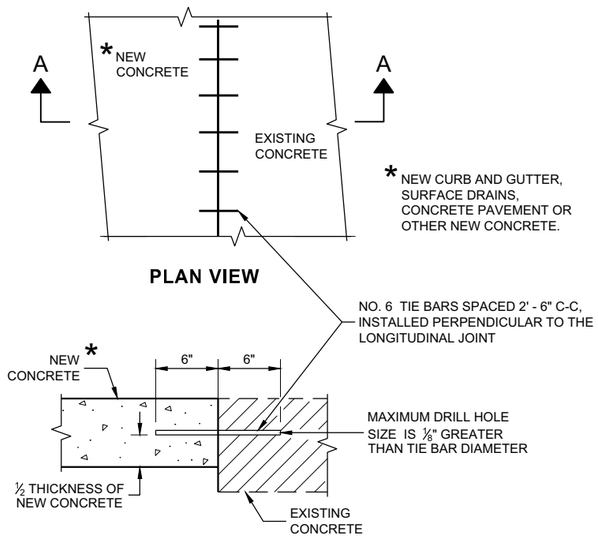


TYPES A (1) & D

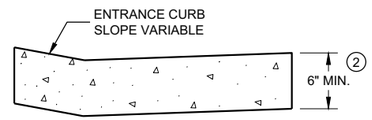


TYPES G (1) & J

CONCRETE CURB



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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SDD 08D01 - 22b

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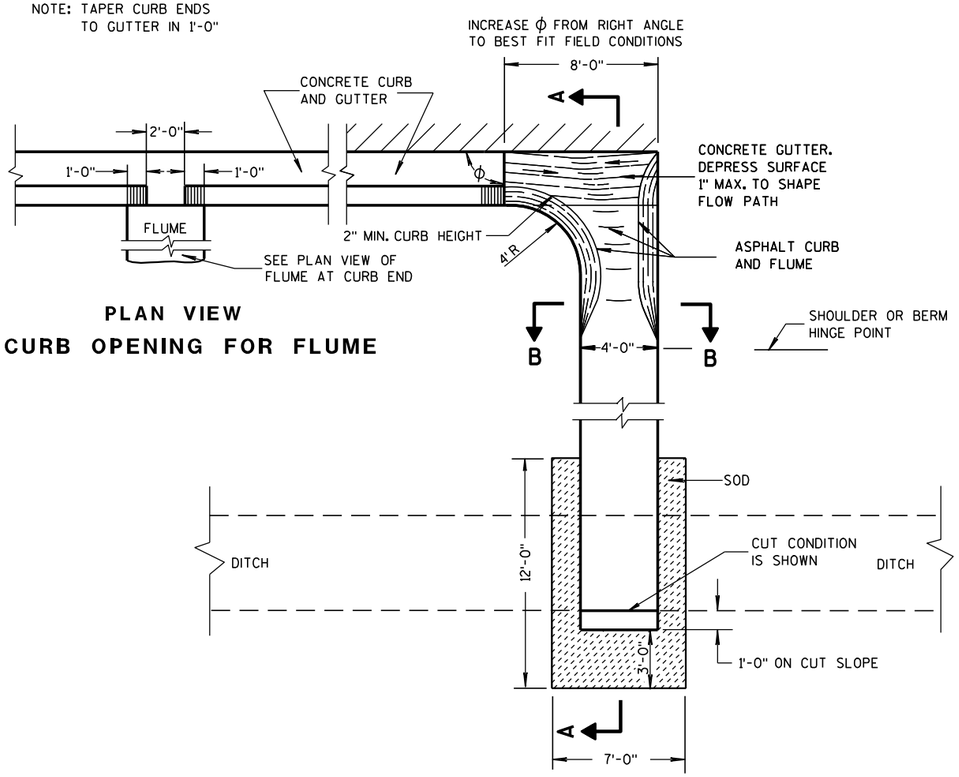
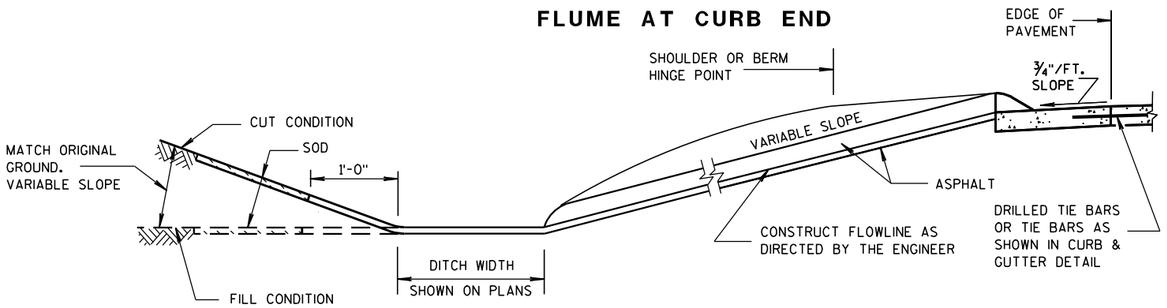
SDD 08D01 - 22b

ASPHALTIC FLUME

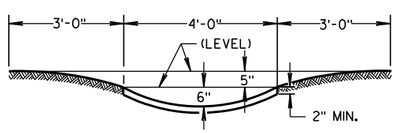


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

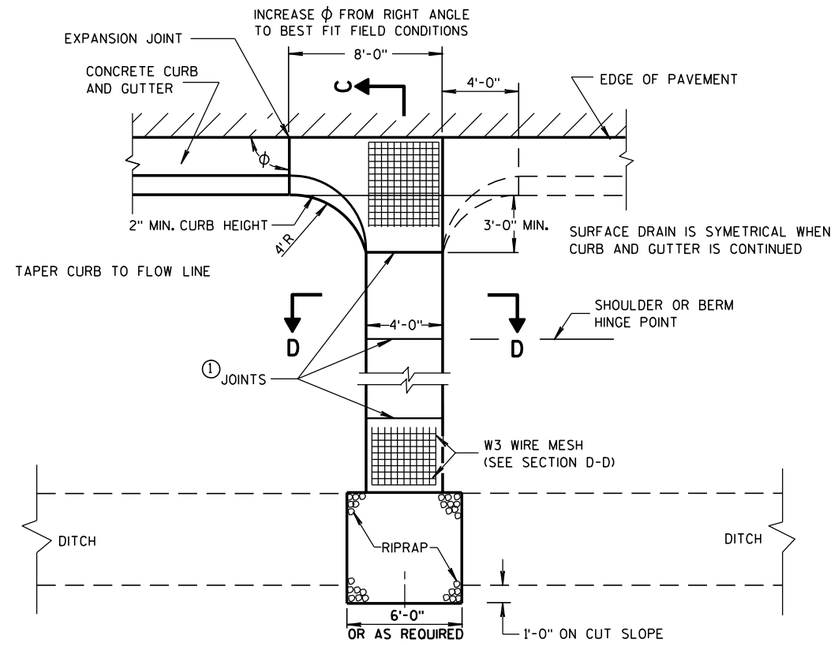
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE $\frac{1}{8}$ TO $\frac{1}{4}$ INCH WIDE BY $1\frac{1}{2}$ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

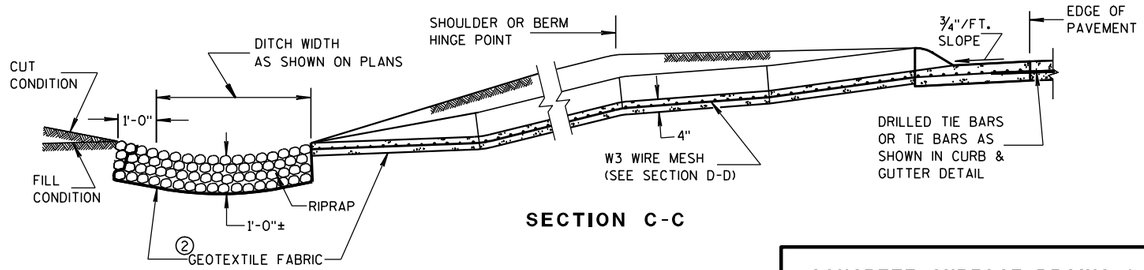
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

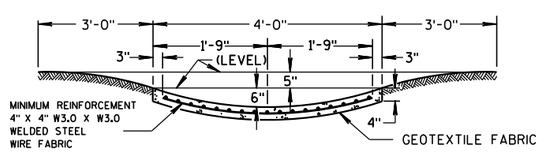
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9-4-08 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
85
MENT
FHWA

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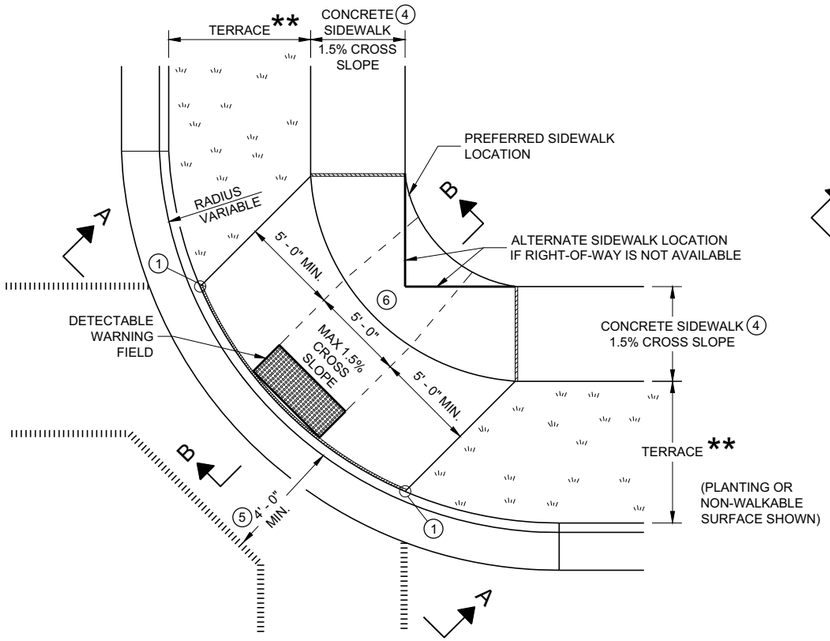
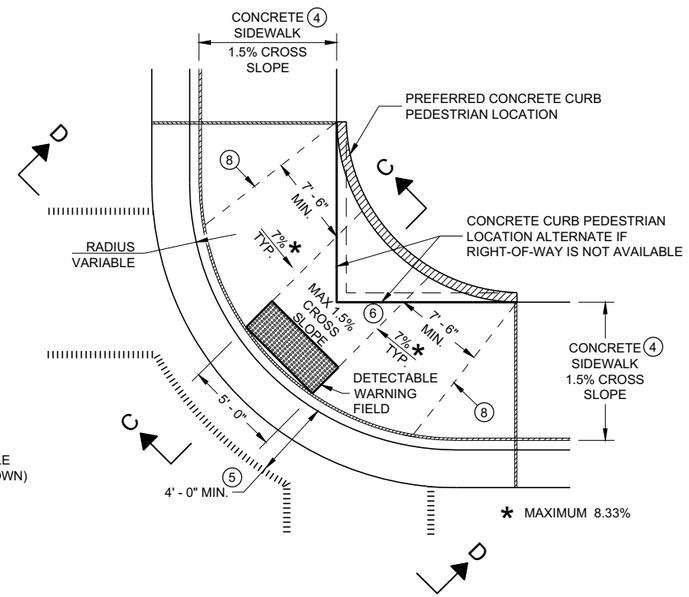
S.D.D. 8 D 4-5



PLAN VIEW

CURB RAMP TYPE 1

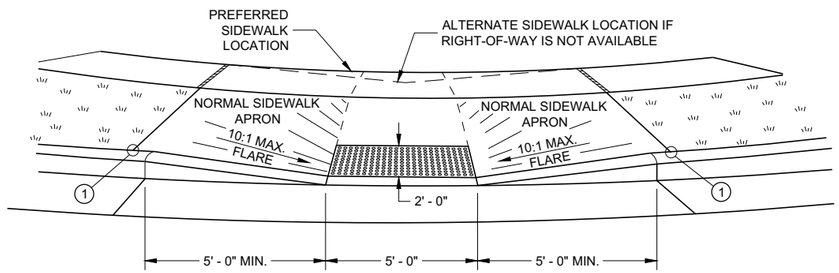
(CENTER OF CORNER RADIUS)



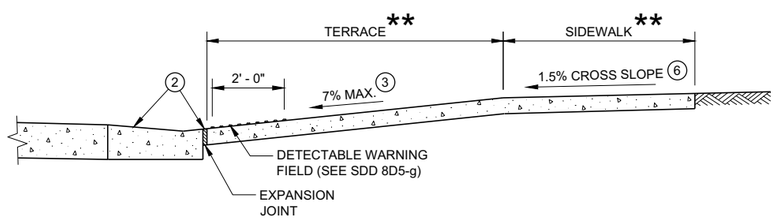
PLAN VIEW

CURB RAMP TYPE 1 - A

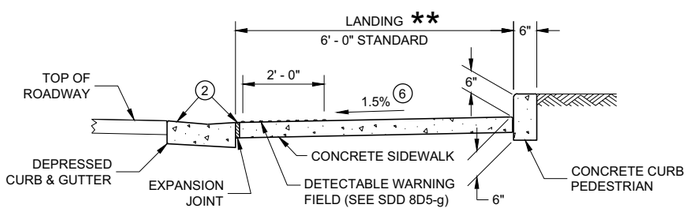
(NO TERRACE)



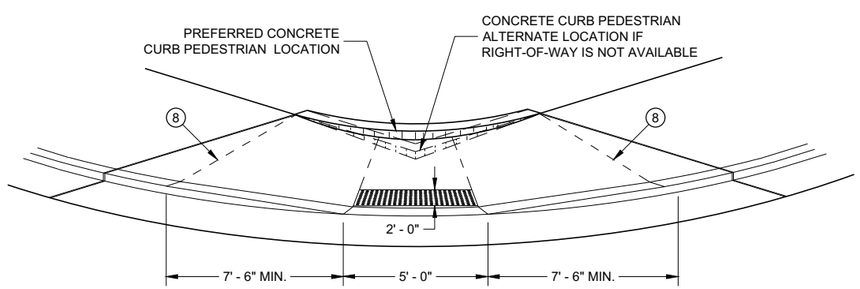
VIEW A - A FOR TYPE 1



SECTION B - B FOR TYPE 1



SECTION C - C FOR TYPE 1 - A



VIEW D - D FOR TYPE 1 - A

** WIDTH SHOWN ELSEWHERE IN THE PLANS

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

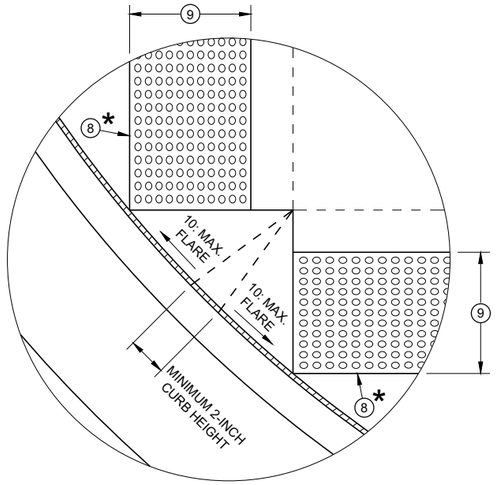
- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPE 1 AND 1-A

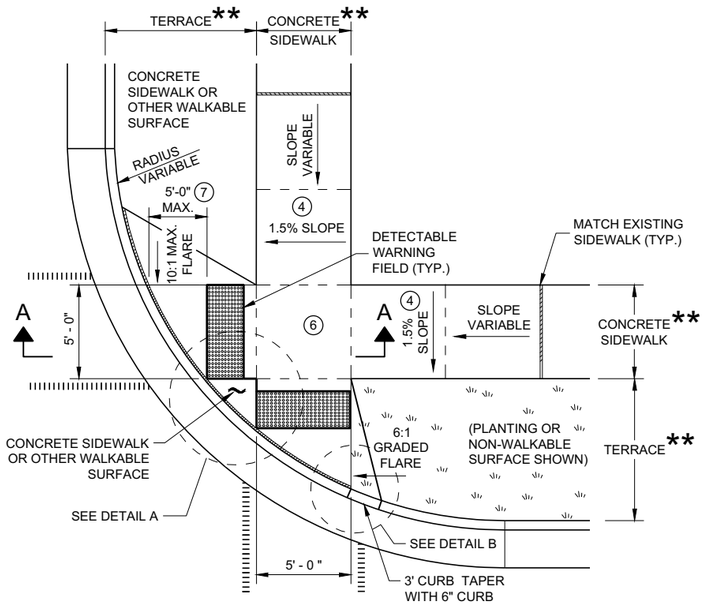
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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.

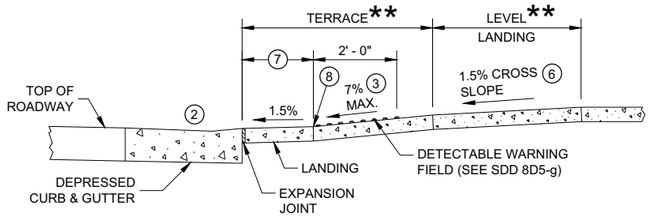
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(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.

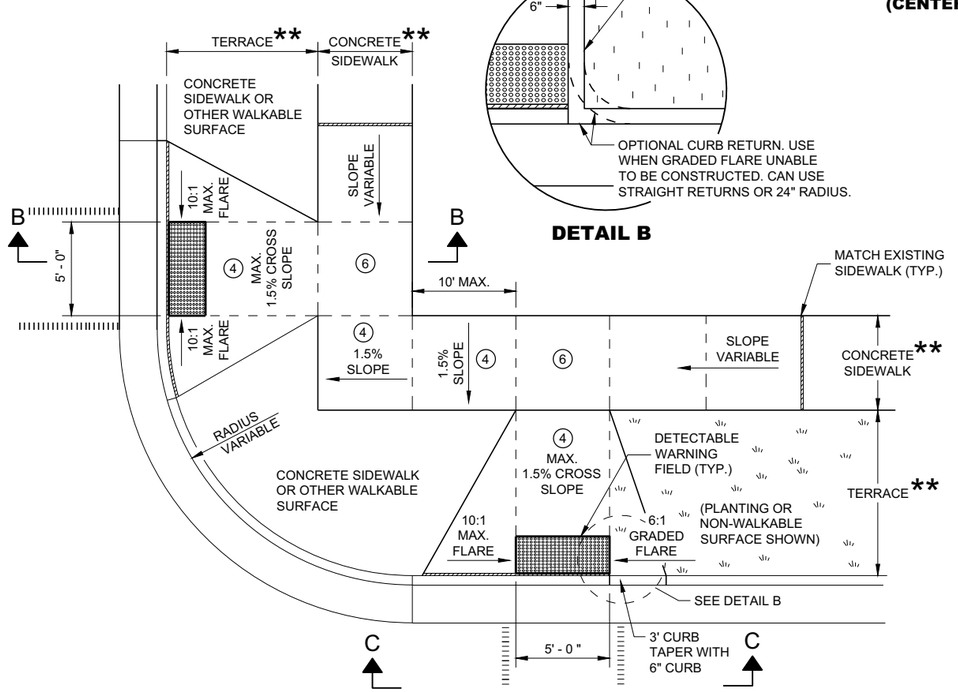
(9) WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.



SECTION A - A FOR TYPE 2

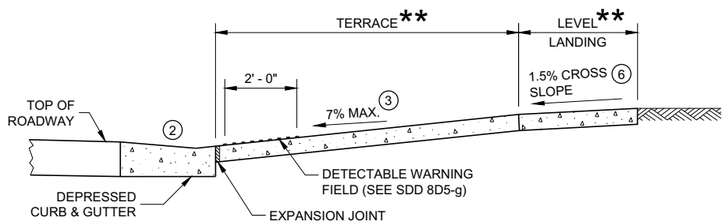
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** WIDTH SHOWN ELSEWHERE IN THE PLANS



DETAIL B

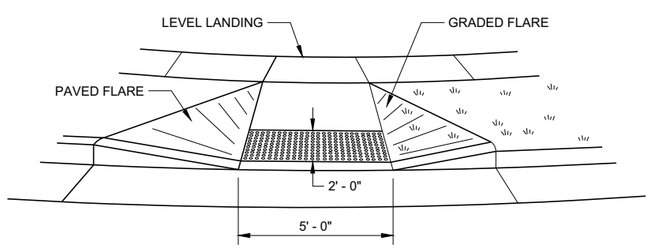
PLAN VIEW
CURB RAMP TYPE 3
(OUTSIDE OF CROSSWALK AREA)



SECTION B - B FOR TYPE 3

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)



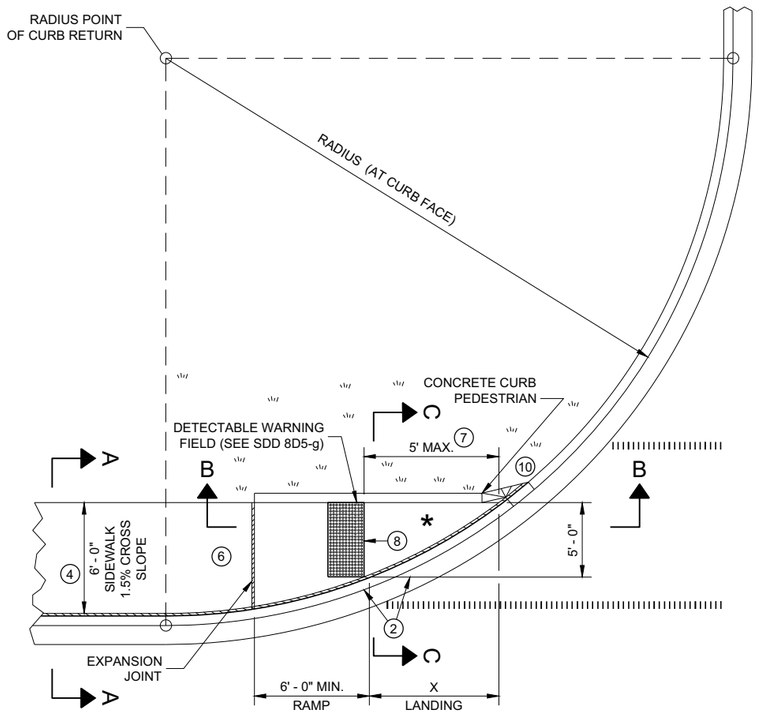
VIEW C - C FOR TYPE 3

CURB RAMPS TYPE 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05 - 20b

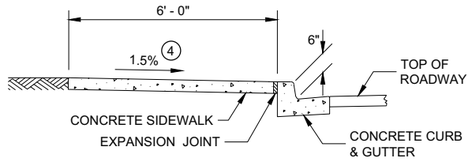


PLAN VIEW

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.

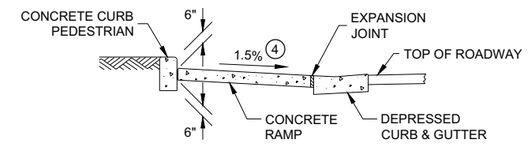
(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

LEGEND

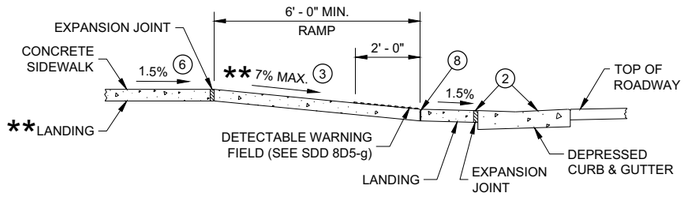
½" EXPANSION JOINT SIDEWALK

CONTRACTION JOINT SIDEWALK

PAVEMENT MARKING CROSSWALK (WHITE)



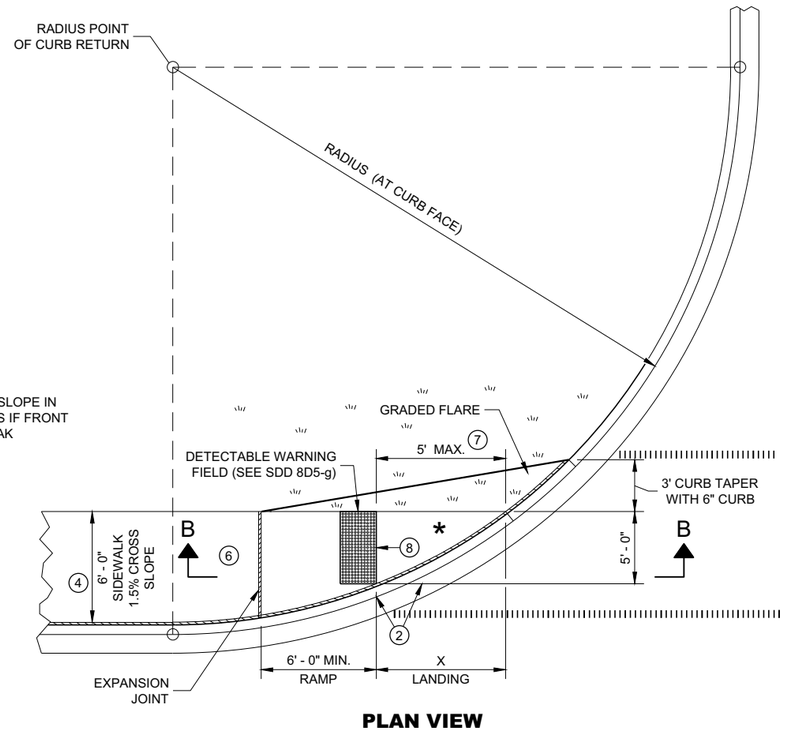
SECTION C - C FOR TYPE 4A



** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

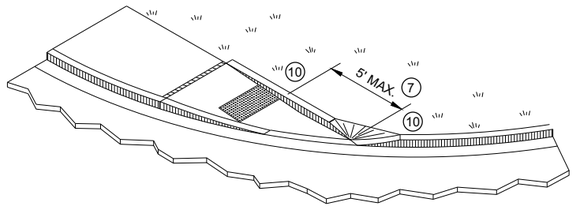
SECTION B - B FOR TYPE 4A AND TYPE 4A1

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

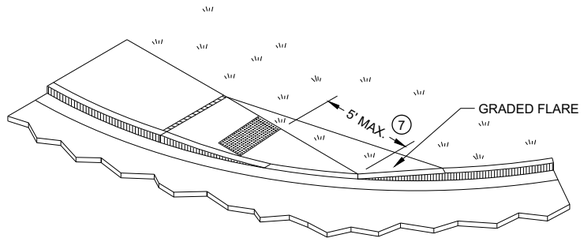


PLAN VIEW

CURB RAMP TYPE 4A1



ISOMETRIC VIEW FOR TYPE 4A



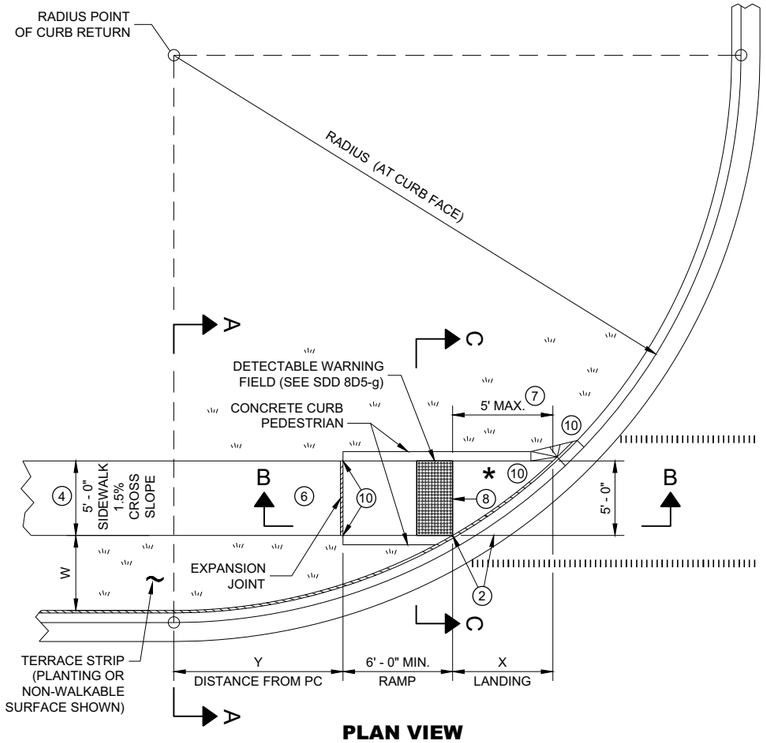
ISOMETRIC VIEW FOR TYPE 4A1

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

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.

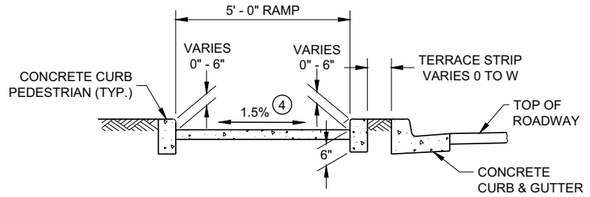
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

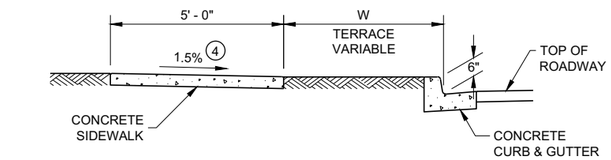
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

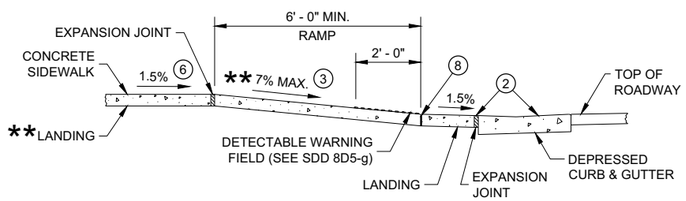
(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



SECTION C - C FOR TYPE 4B



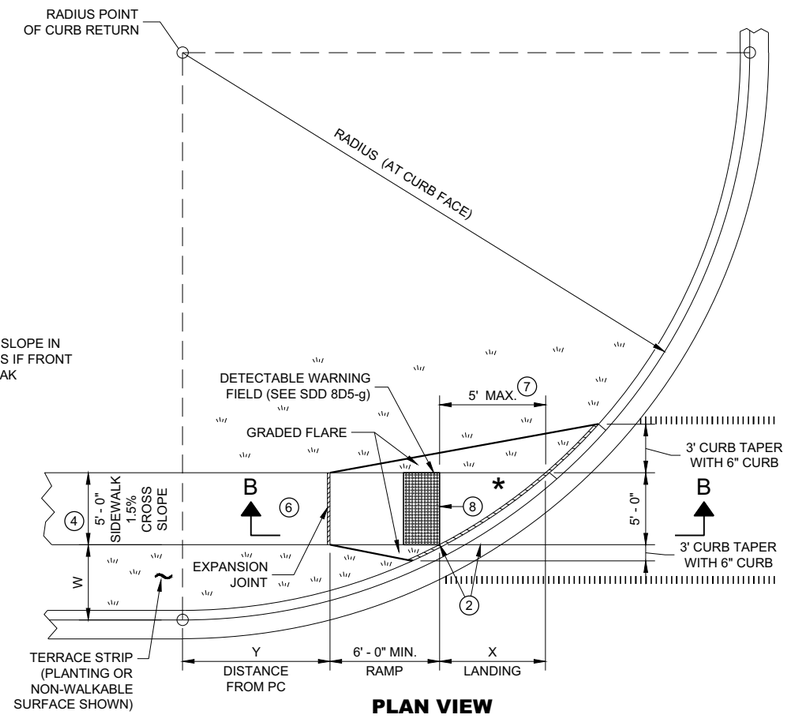
SECTION A - A FOR TYPE 4B



SECTION B - B FOR TYPE 4B AND TYPE 4B1

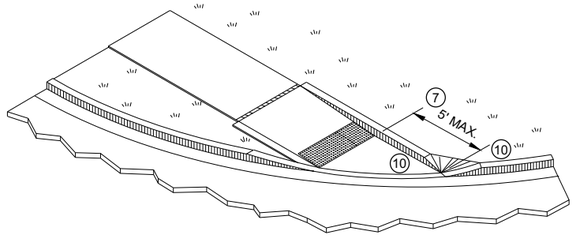
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

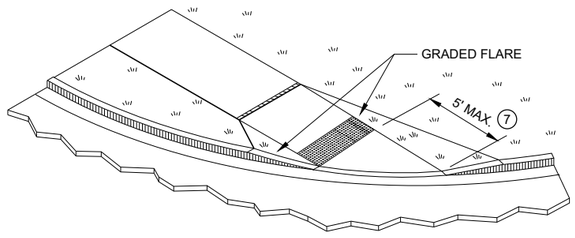


PLAN VIEW

CURB RAMP TYPE 4B1



ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS TYPE 4B AND 4B1

STATE OF WISCONSIN
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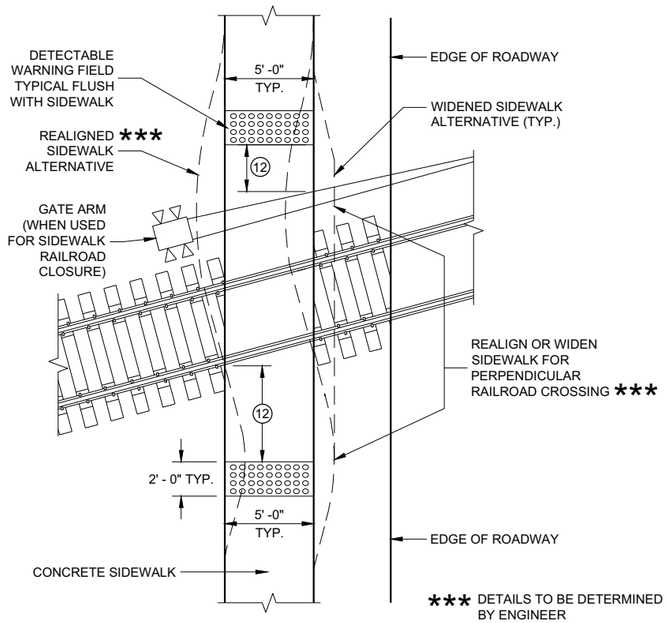
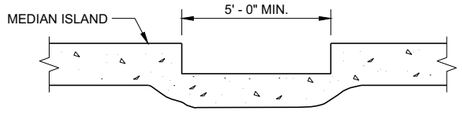
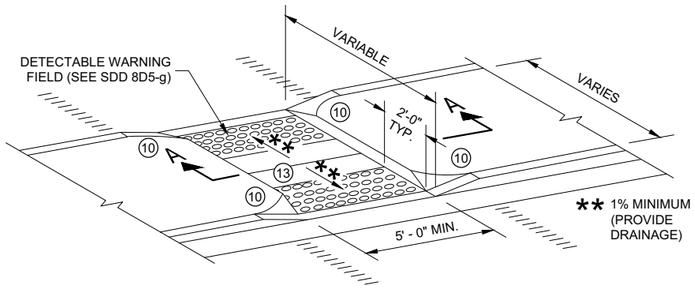


CURB RAMP TYPE 8

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.

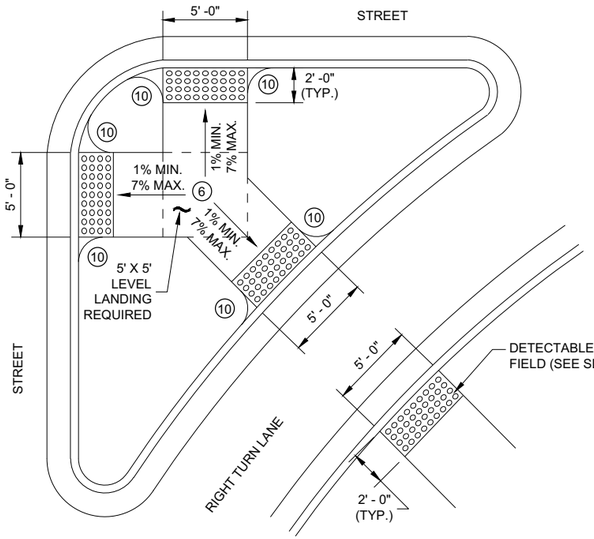
(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(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

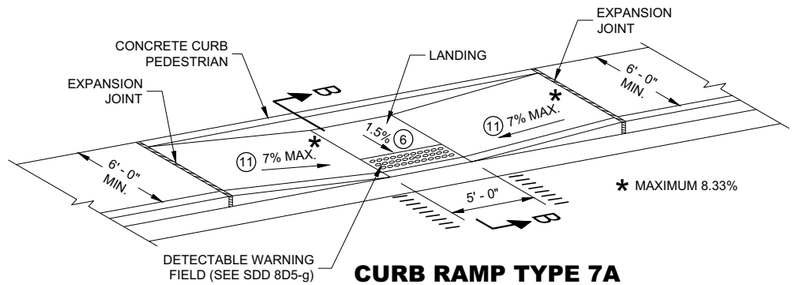
- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)



CURB RAMP TYPE 6

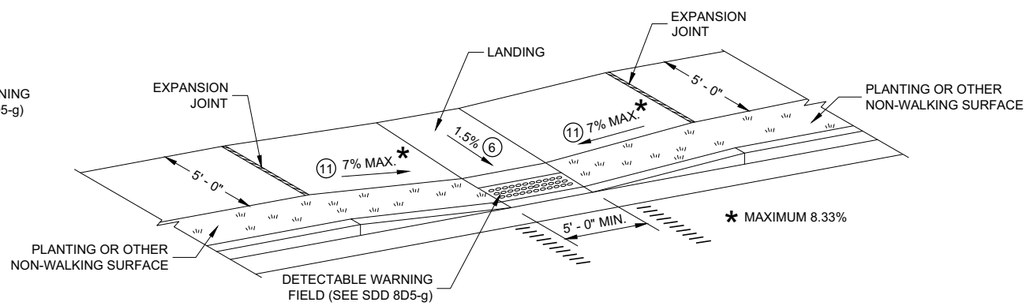
DETECTABLE WARNING AT ISLANDS

REFER TO GENERAL NOTES (2) AND (3) FOR ALL ISLAND CURB RAMPS



CURB RAMP TYPE 7A

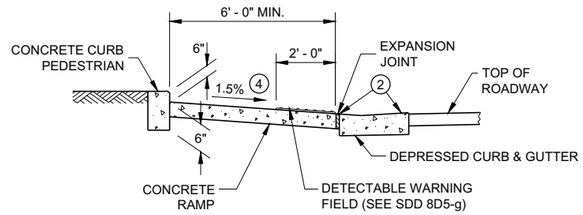
MID BLOCK CROSSING



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

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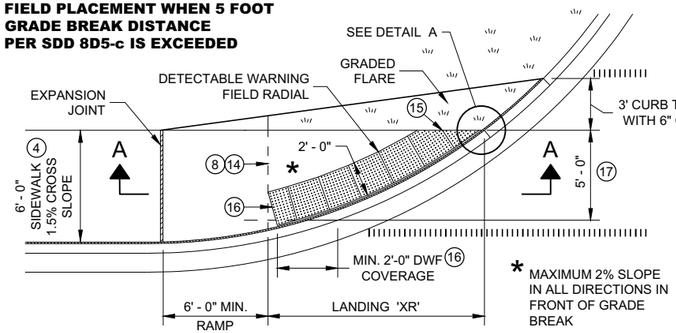
SDD 08D05 - 20e

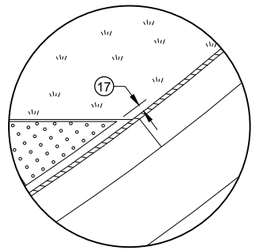
RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-c IS EXCEEDED



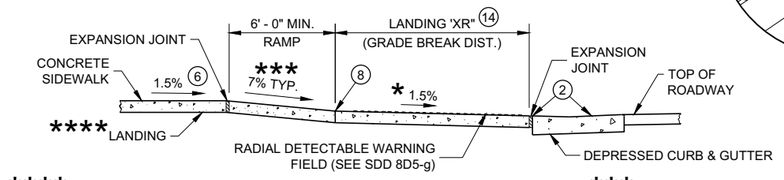
PLAN VIEW

CURB RAMP TYPE 4A1

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



DETAIL A

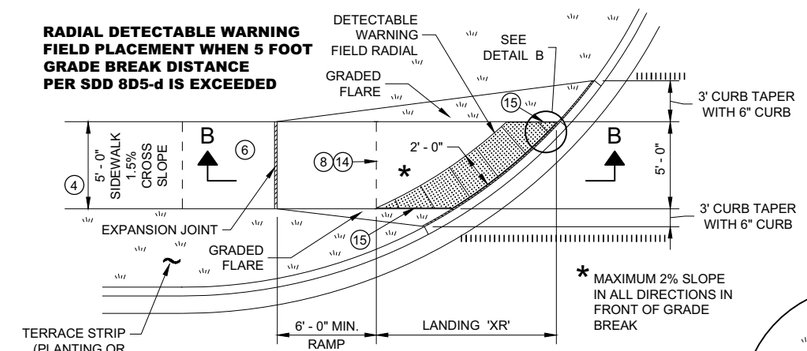


**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** MAXIMUM 8.33%

SECTION A - A FOR TYPE 4A1

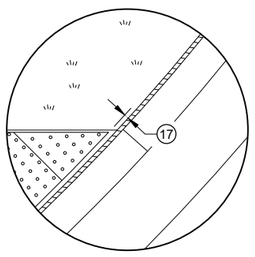
RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-d IS EXCEEDED



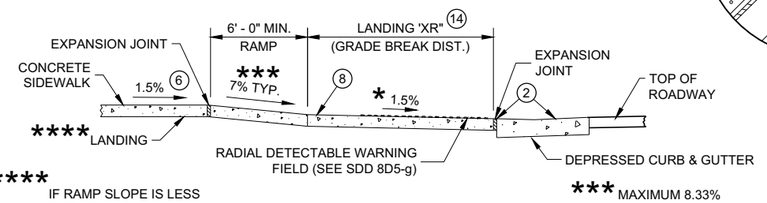
PLAN VIEW

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.

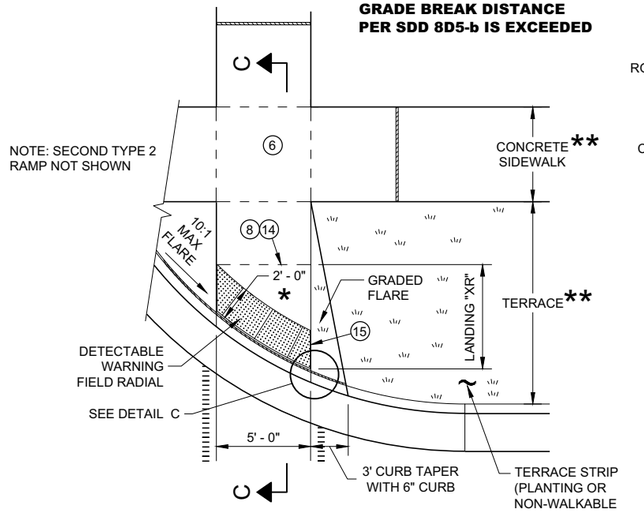
(14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.

(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

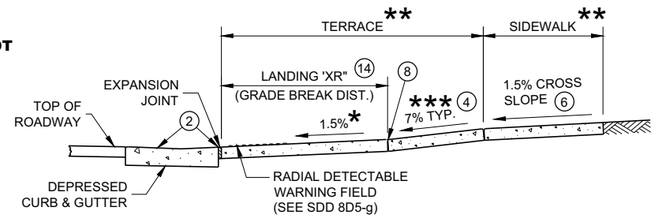


PLAN VIEW

CURB RAMP TYPE 2

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)

(ON LINE WITH SIDEWALK)

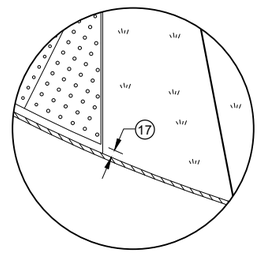


SECTION C - C FOR TYPE 2

* 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
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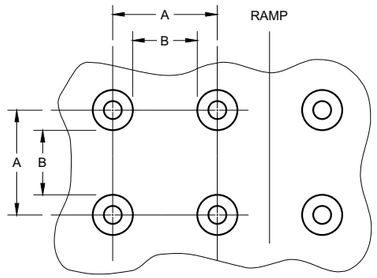
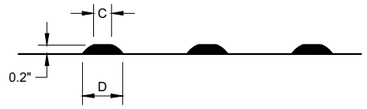
	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.

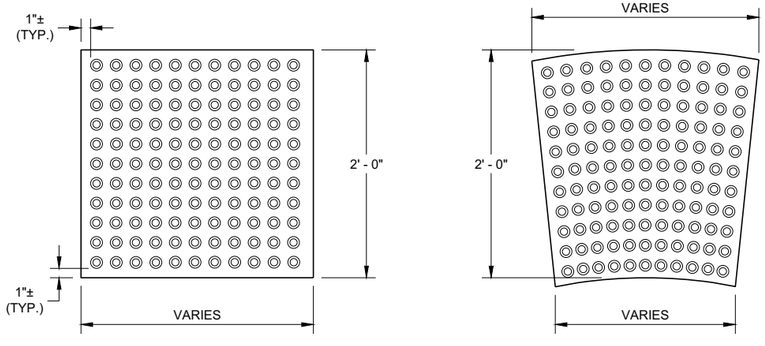


PLAN VIEW



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.

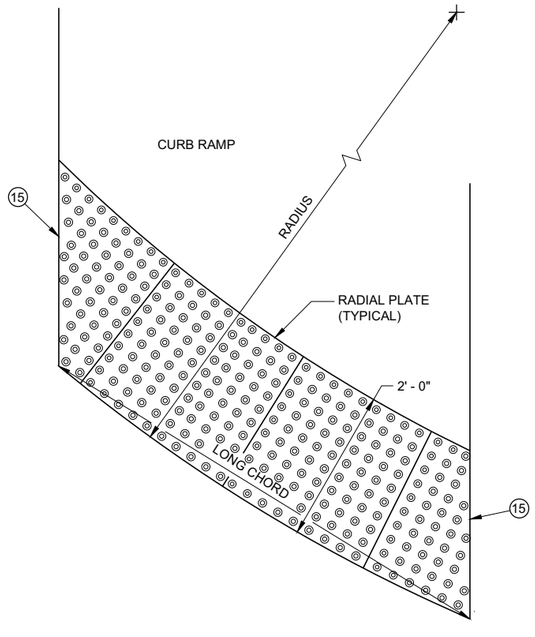
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

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.

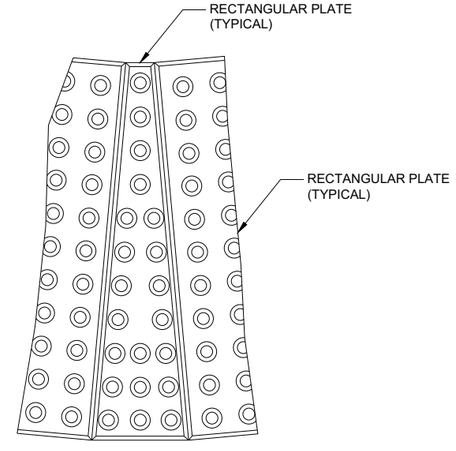
REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

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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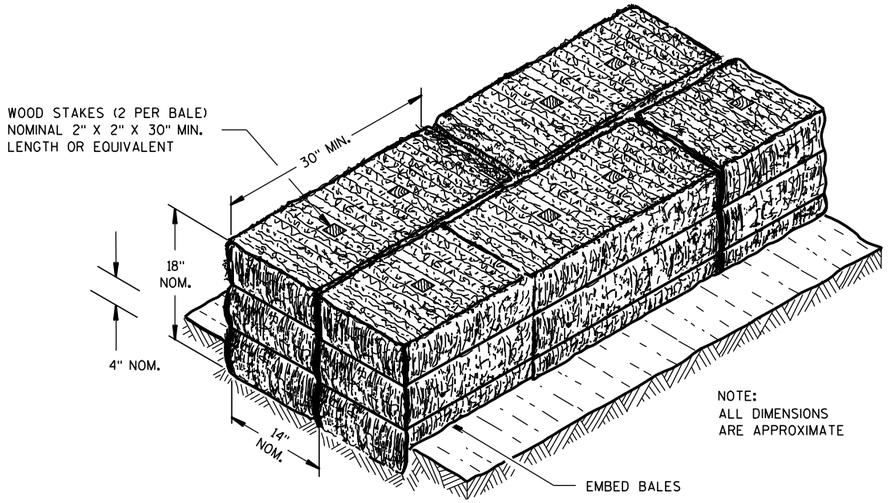
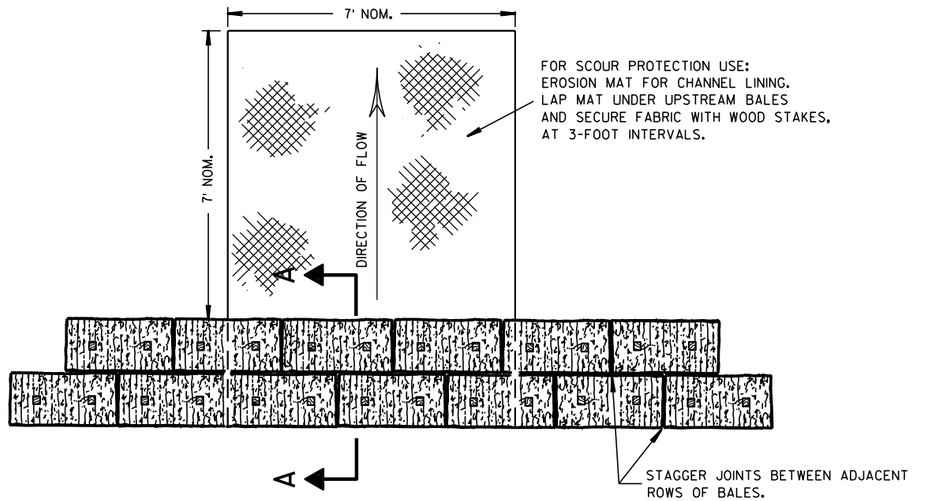
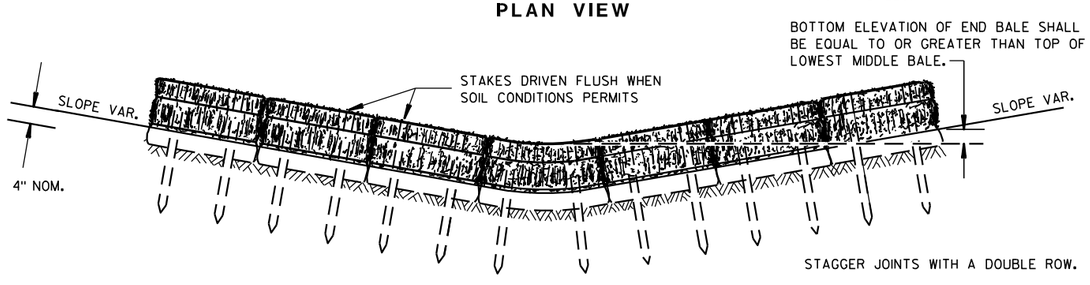
SDD 08D05 - 20g



SECTION A-A



PLAN VIEW



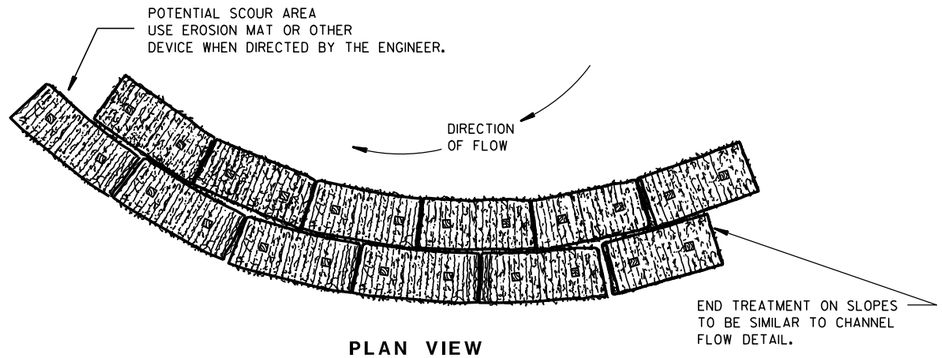
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

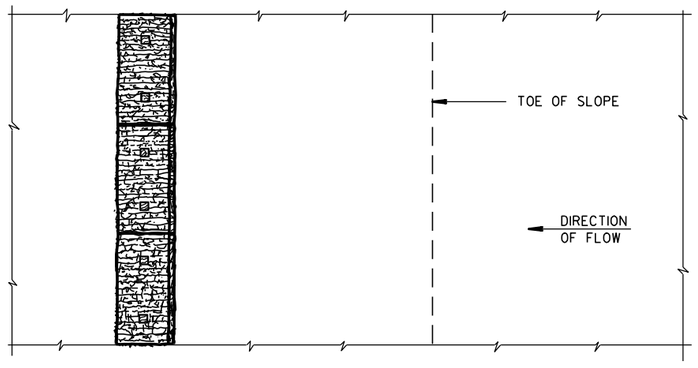
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

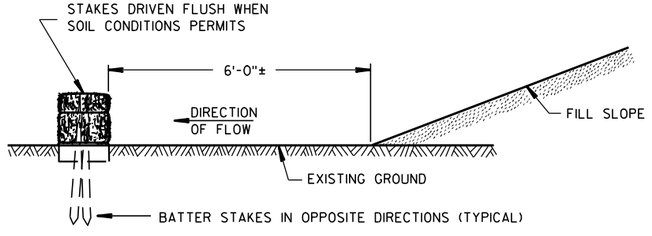


PLAN VIEW

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

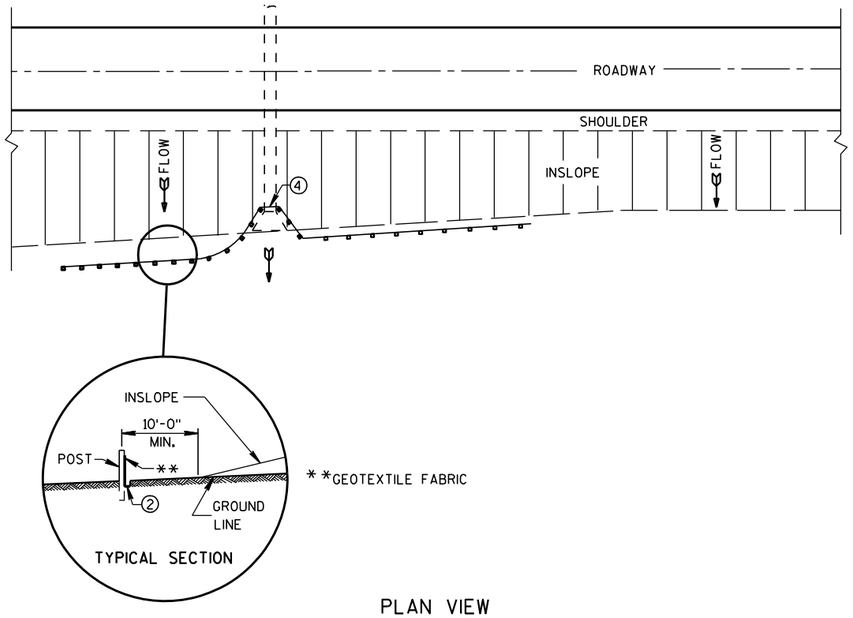
6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

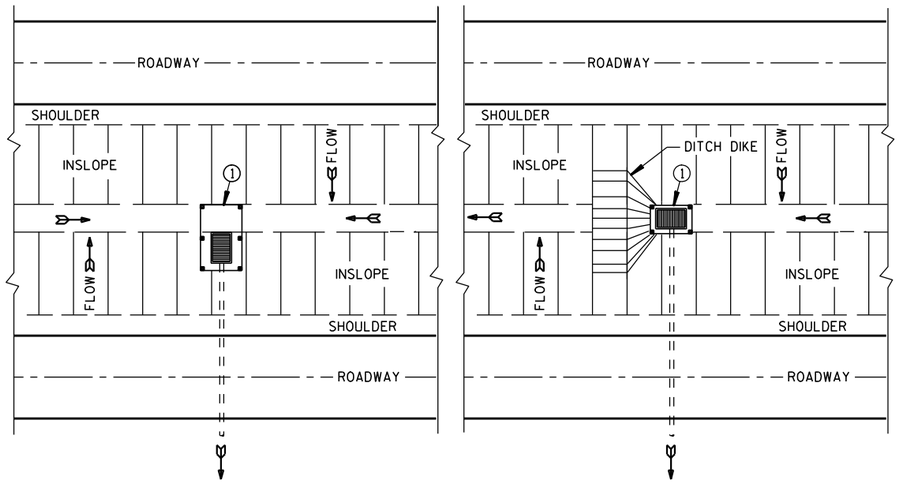
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



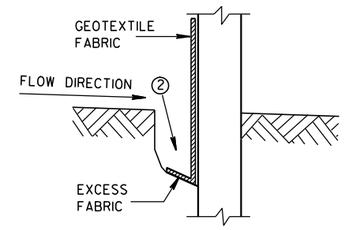
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

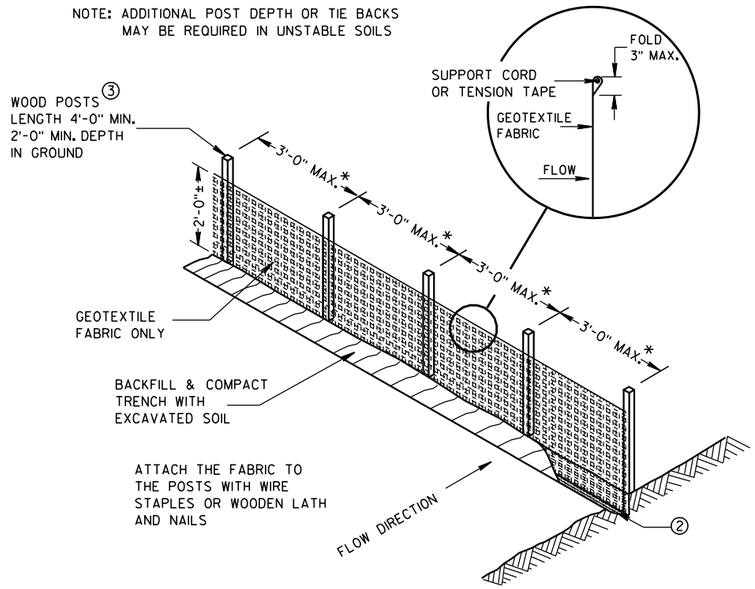
GENERAL NOTES

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.

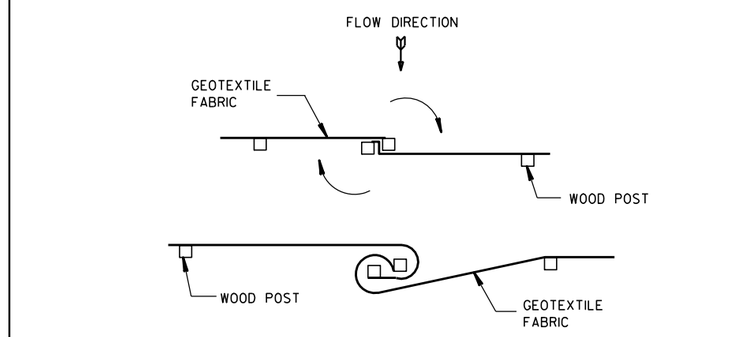


TRENCH DETAIL

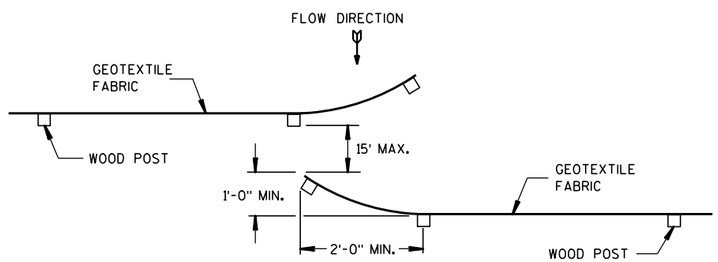


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

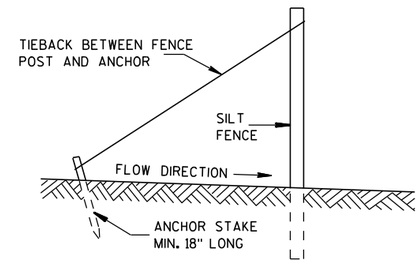


TWIST METHOD



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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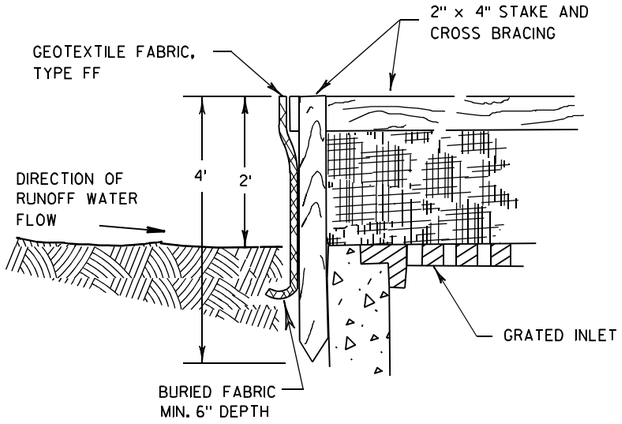
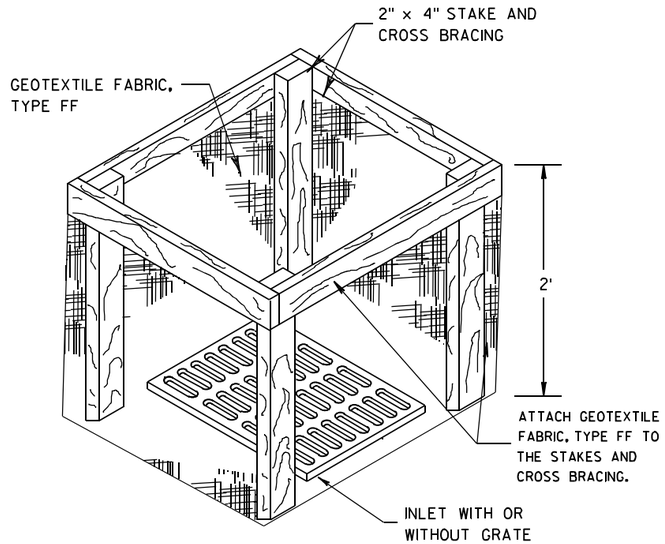
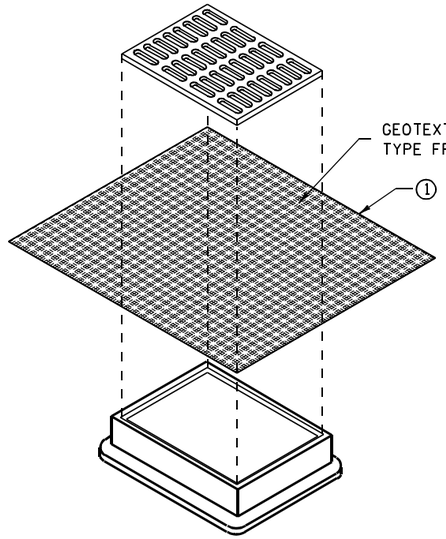
S.D.D. 8 E 9-6



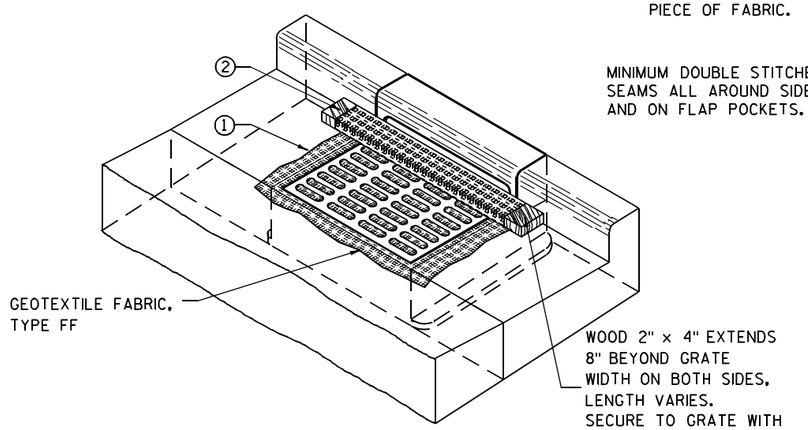


INLET PROTECTION, TYPE A

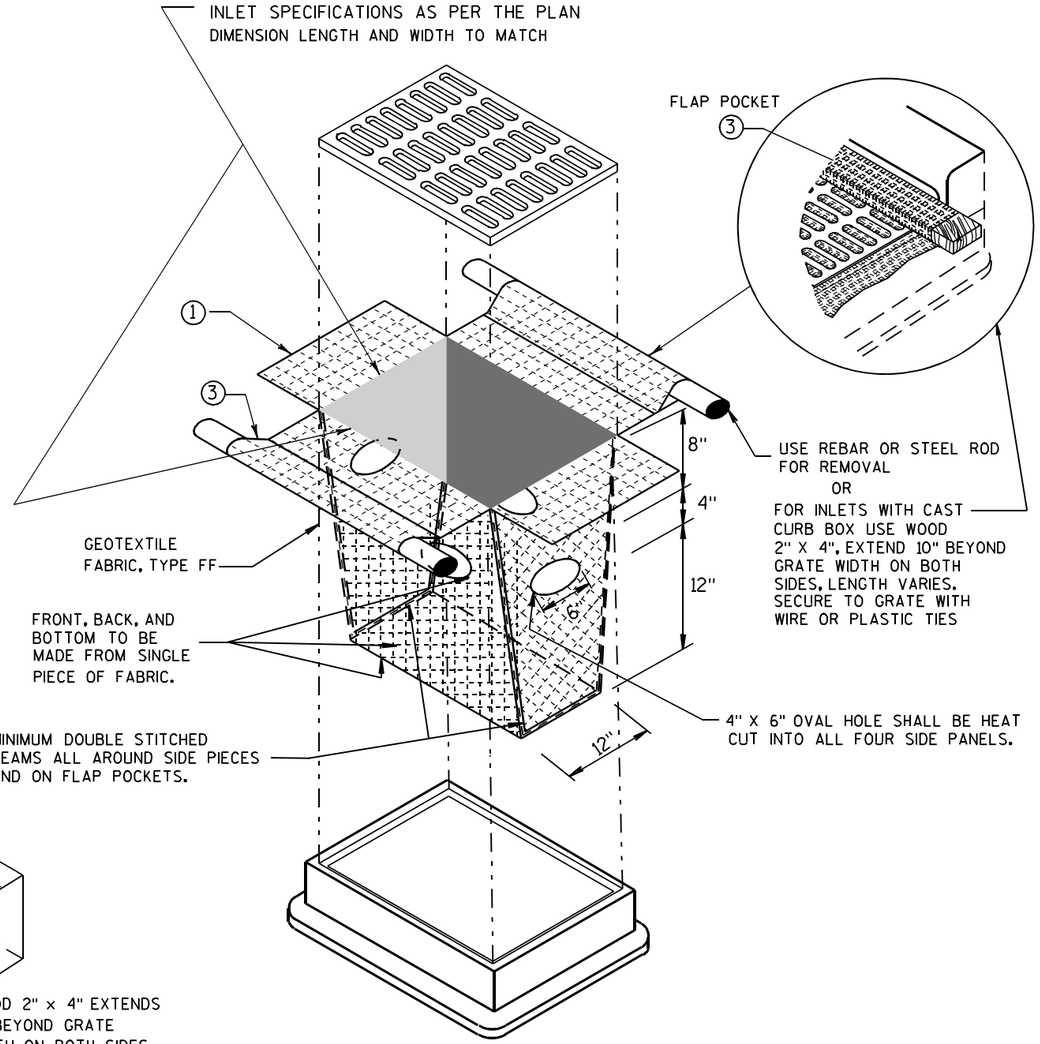


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(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

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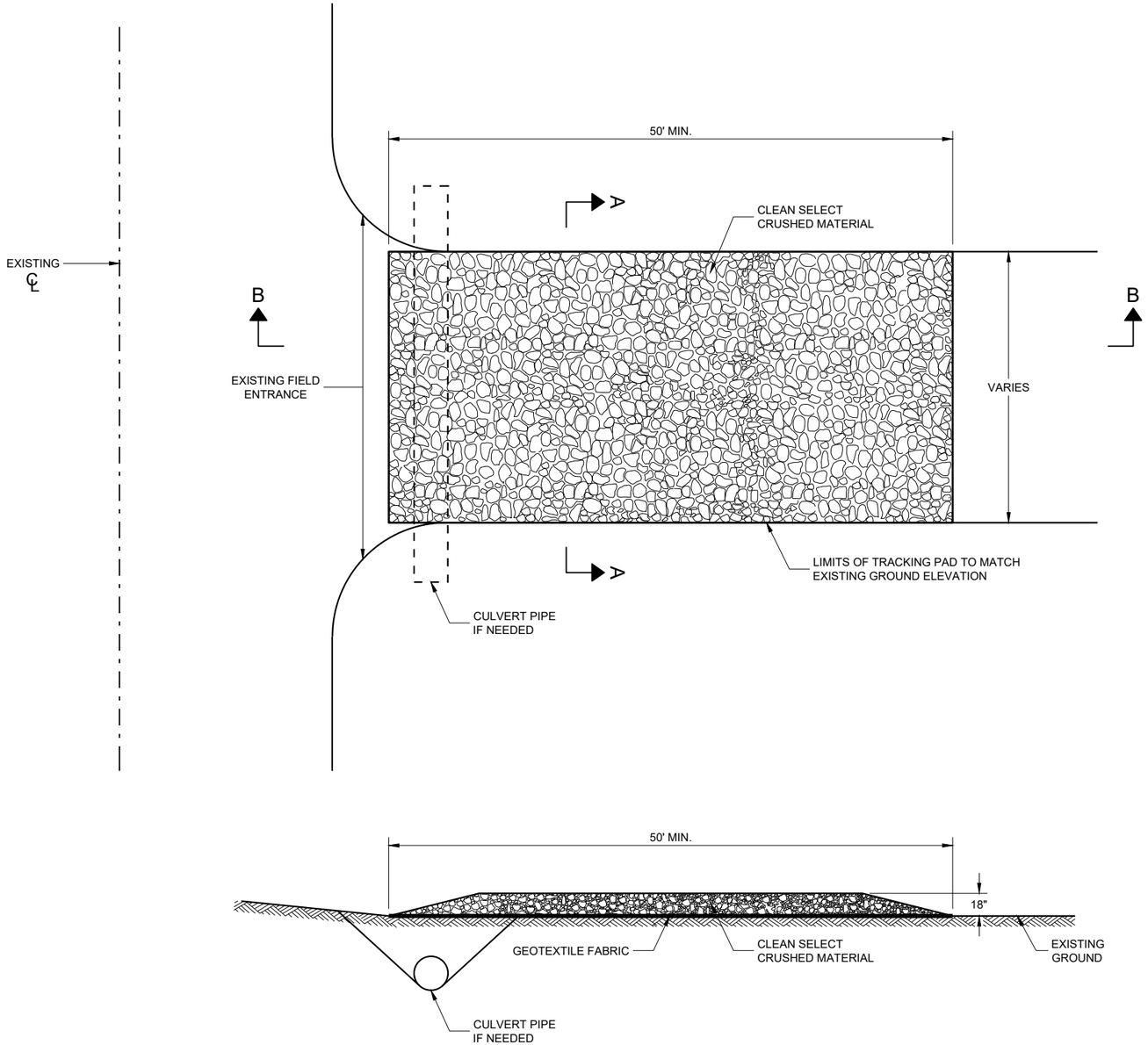
S.D.D. 8 E 10-2



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.

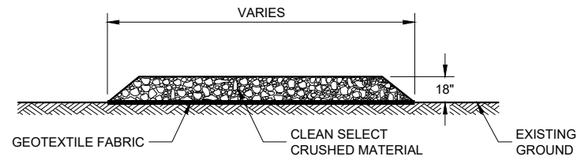
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

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

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

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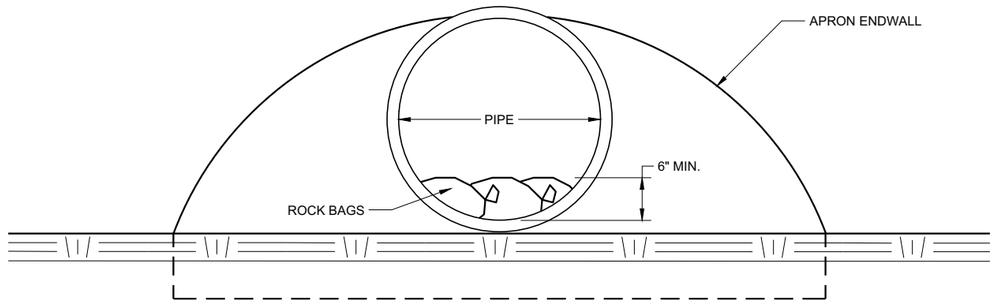
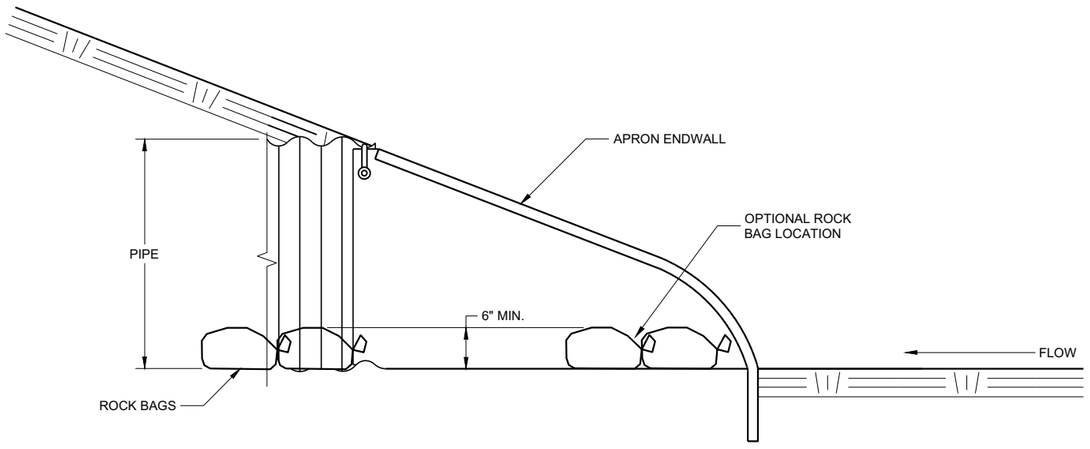
SDD 08E14 - 01



END VIEW



SIDE VIEW

CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE

/S/ Daniel Schave
EROSION CONTROL ENGI

FHWA

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SDD 08E15 - 01

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SDD 08E15 - 01

METAL APRON ENDWALLS

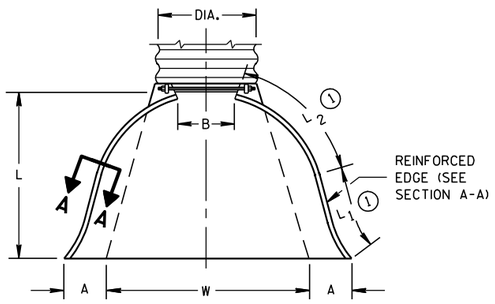
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

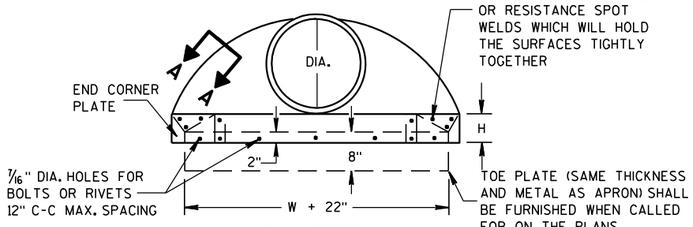
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

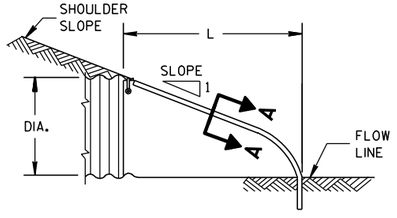
*MINIMUM
**MAXIMUM



PLAN VIEW

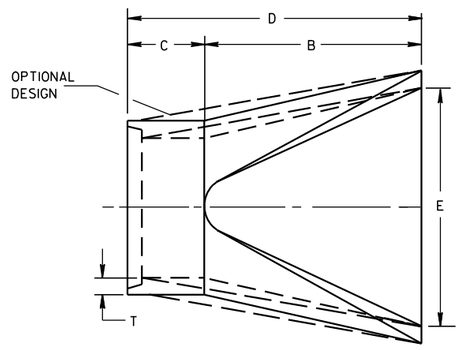


END VIEW

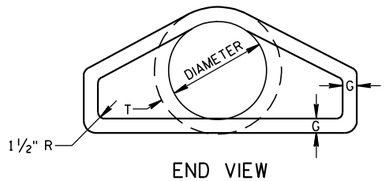


SIDE ELEVATION

METAL ENDWALLS



PLAN



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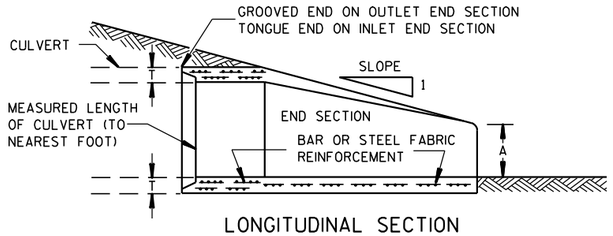
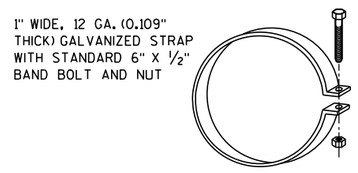


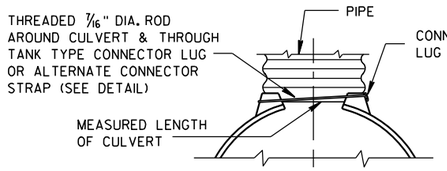
LONGITUDINAL SECTION

CONCRETE ENDWALLS

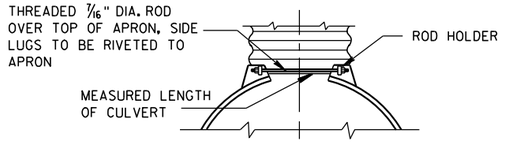


ALTERNATE FOR TYPE 1 CONNECTION

END SECTION CONNECTOR STRAP

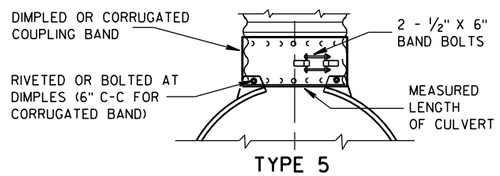


TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE

TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

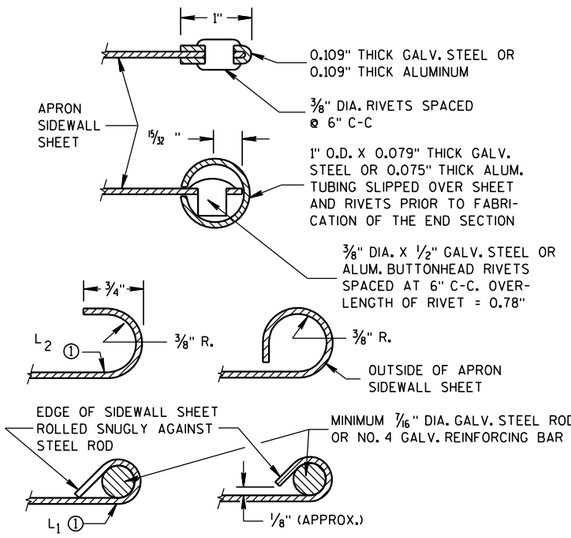
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

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.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

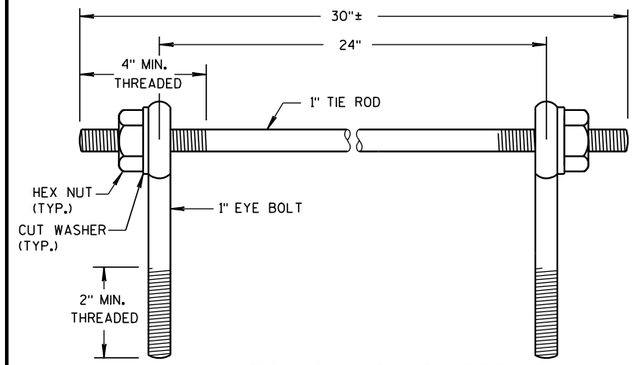
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

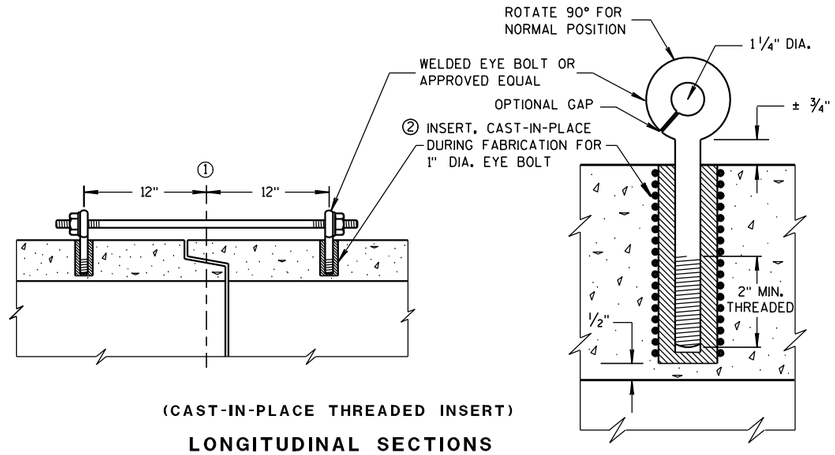
APPROVED
11/30/94 — DATE
/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 F 1-11



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 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 APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

① ℄ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

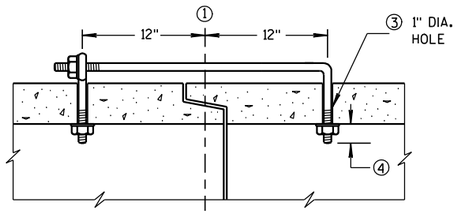
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ℄ OF TONGUE AND GROOVE.

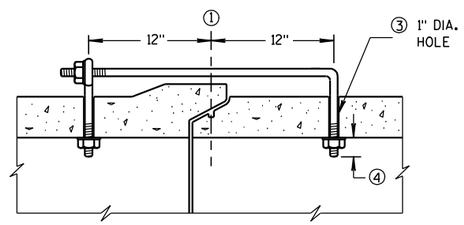
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



(TONGUE & GROOVE PIPE)

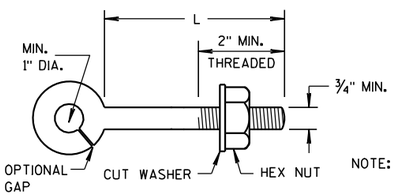


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

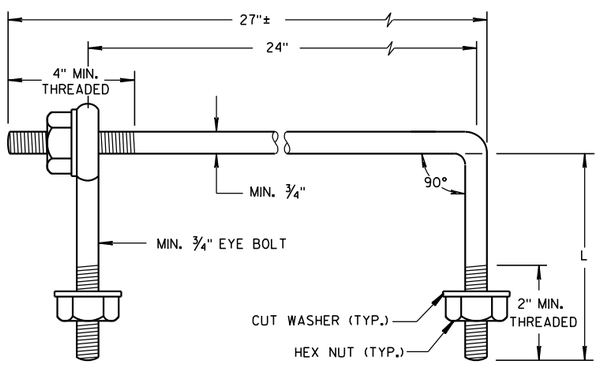
EYE BOLT DIMENSION TABLE

PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



EYE BOLT

NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD

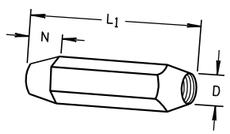
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/16

DIMENSIONS SHOWN ARE IN INCHES



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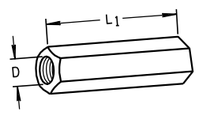
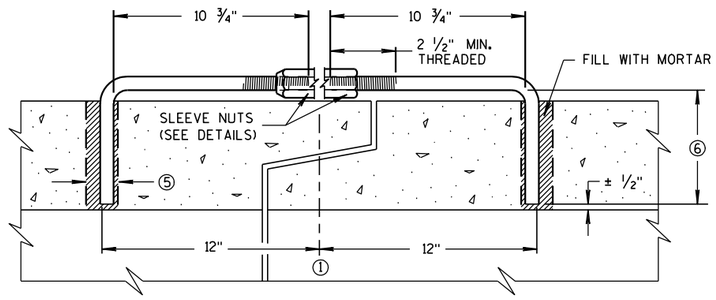


PLAIN

RIGHT AND LEFT THREADS

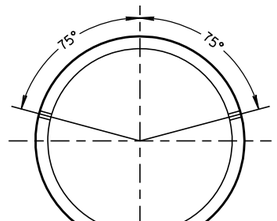
SLEEVE NUTS



LONGITUDINAL SECTION

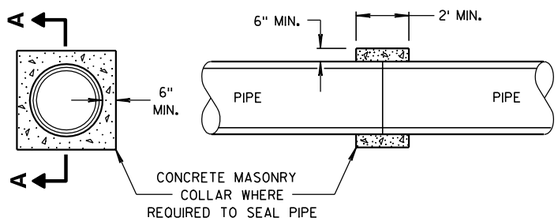
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS 99 ENGINEER
'MENT
FHWA

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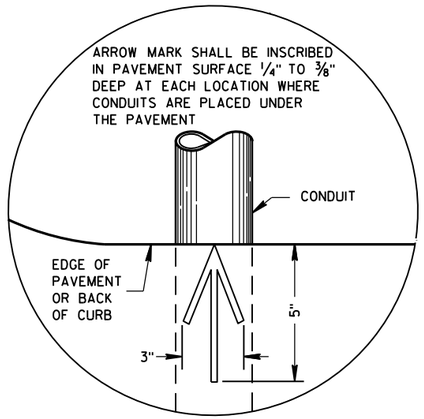
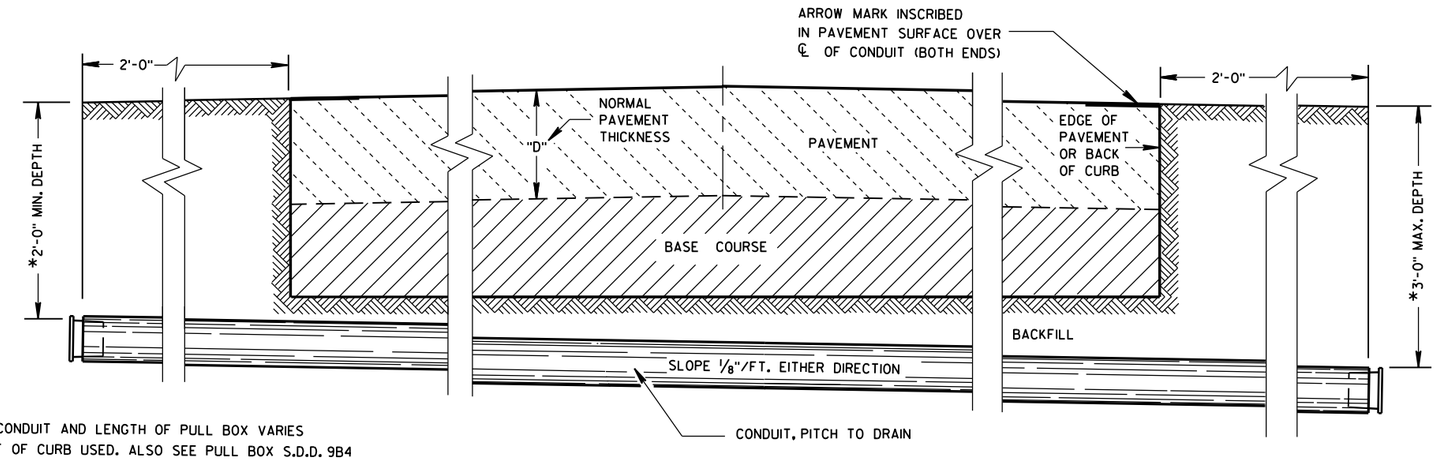
S.D.D. 8 F 4-7



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

6

S.D.D. 9 B 2-10

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

DIMENSION IN INCHES		NON-CONDUCTIVE PULL BOX	
BOX DIAMETER ** (INSIDE)	A	24	24
BOX OVERALL OUTSIDE DIAMETER	B	27	27
BOX LENGTH	C	36	42
FRAME OPENING	D	22 1/2	22 1/2
WEIGHT IN POUNDS *			
COVER		50	50
BOX ONLY		75	85

* THE ACTUAL WEIGHT OF THE COVER OR BOX ONLY MAY VARY NOT TO EXCEED 100 LBS INDIVIDUALLY.

** DIAMETER VARIES FROM TOP TO BOTTOM WITH THE DIAMETER LARGER AT THE BOTTOM TO PREVENT FROST HEAVE

GENERAL NOTES

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

ALL BOXES, FRAMES AND COVERS SHALL BE SUITABLE FOR TIER 15 LOADING AS SPECIFIED IN ANSI/SCTE 77.

PROVIDE AN OPENING FOR TOOL ASSISTED COVER REMOVAL NOT LARGE ENOUGH TO PERMIT PASSAGE OF A SPHERE MORE THAN 1/2" DIAMETER

ENSURE COVER SURFACE IS SKID RESISTANT WITH A COEFFICIENT OF FRICTION OF AT LEAST 0.5 AND VERTICAL SURFACE DICONTINUITIES LESS THAN 1/4".

COVER SHALL BE MAGNETICALLY LOCATABLE.

BOXES AND EXTENSIONS ARE TRIMMABLE FOR CUSTOM LENGTHS. TRIMMED PIECES SHALL MAINTAIN A UNIFORM LENGTH.

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 1/4".

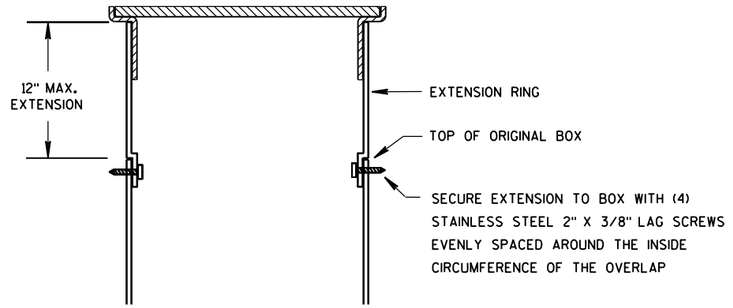
THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

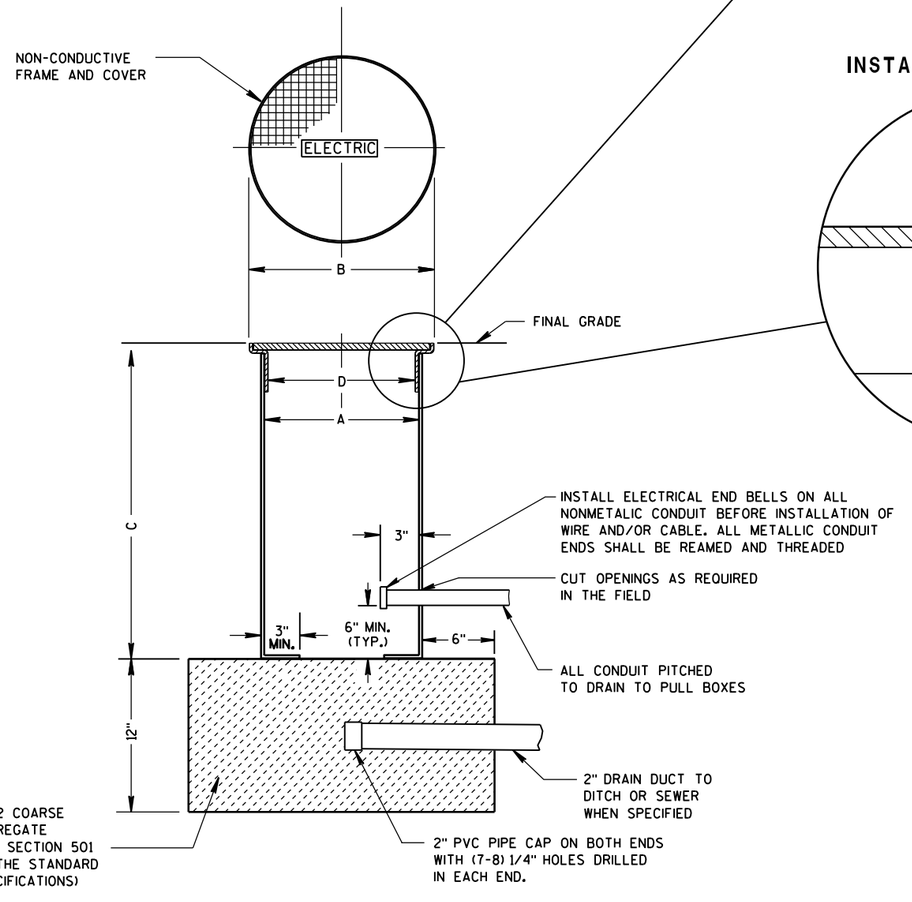
ENTIRE BOX MUST BE CONSTRUCTED OF NON-CONDUCTIVE MATERIALS WITH THE EXCEPTION OF STAINLESS STEEL FASTENERS AND MAGNETIC LOCATABLE DEVICE.

WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

LABEL ON COVER SHALL READ "ELECTRIC" FOR SIGNAL AND LIGHTING SYSTEMS, "WISDOT ITS" FOR COMMUNICATIONS AND ITS EQUIPMENT SYSTEMS.

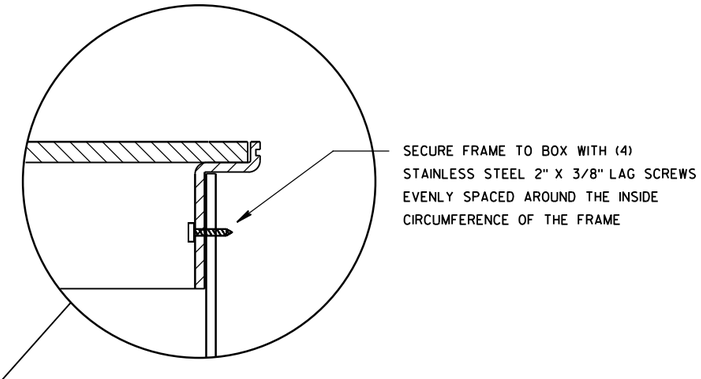


BOX EXTENSION

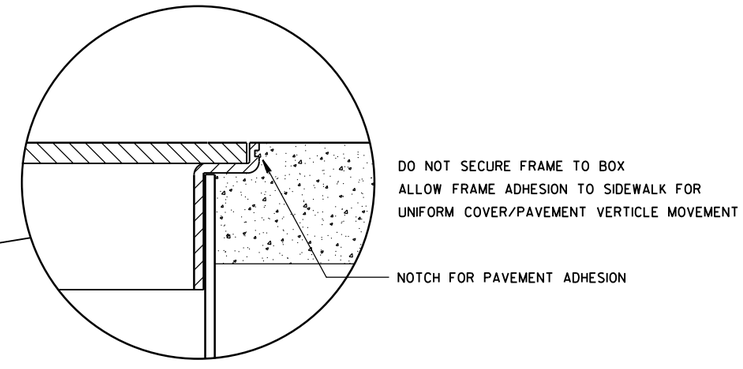


NON-CONDUCTIVE PULL BOX

INSTALLED IN SOD OR CRUSHED AGGREGATE



INSTALLED IN SIDEWALK



PULL BOX
NON-CONDUCTIVE

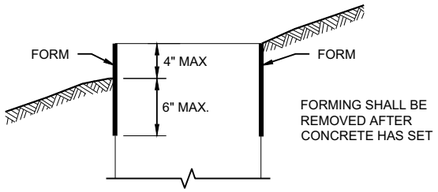
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2017
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL
FHWA

6

S.D.D. 9 B 16-1

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.

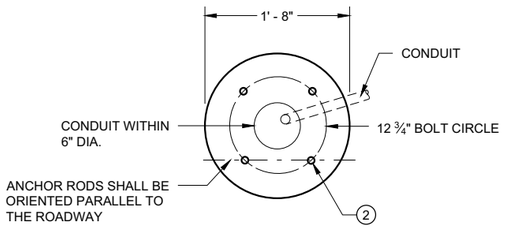
WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

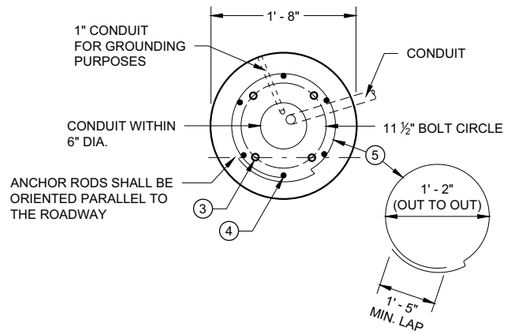
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH"L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

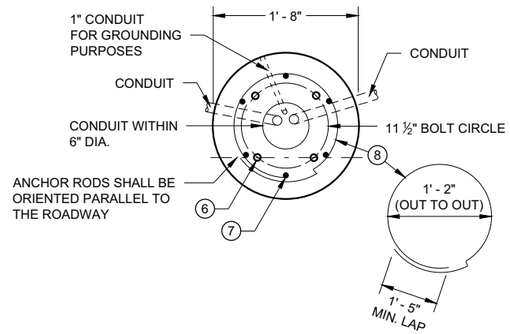
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

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

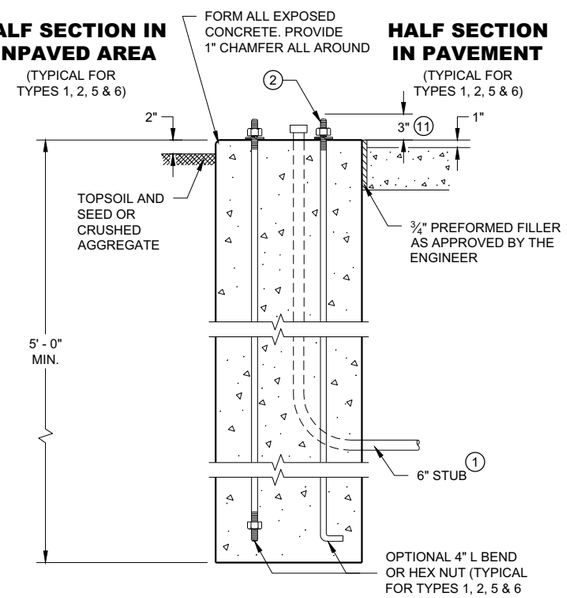
10 ⅝" DIA. X 8' -0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED

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.

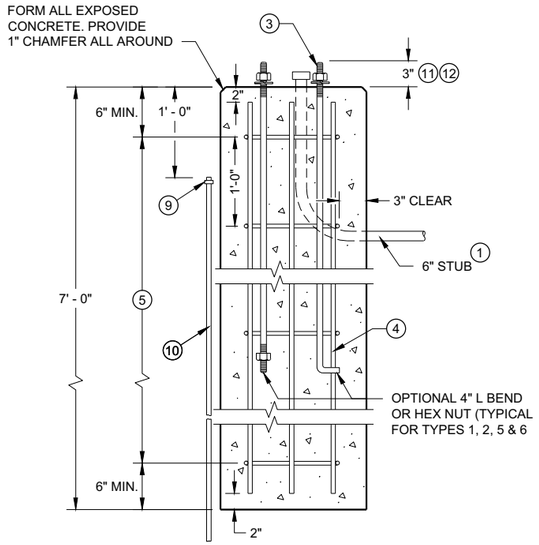
12 FOR NON - BREAKAWAY INSTALLATIONS, 4 ½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

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



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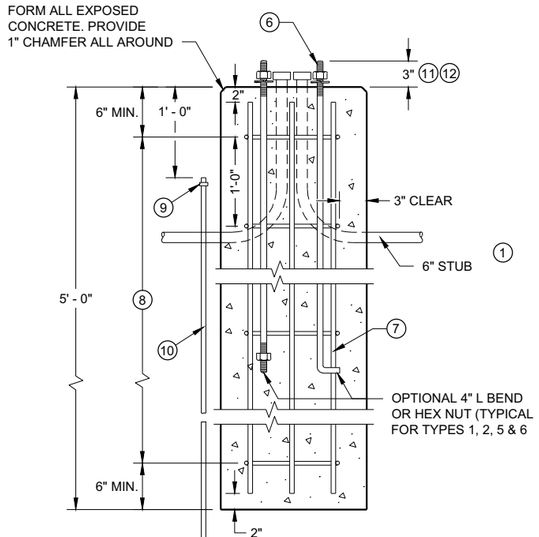


TYPE 5 & 6

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

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.

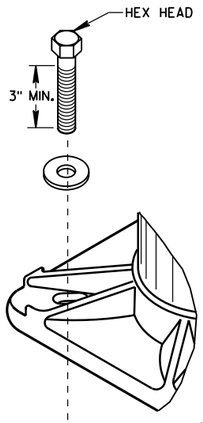
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

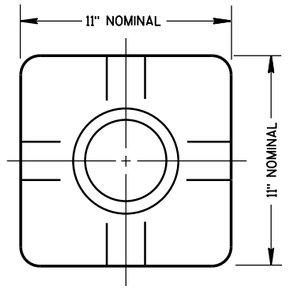
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

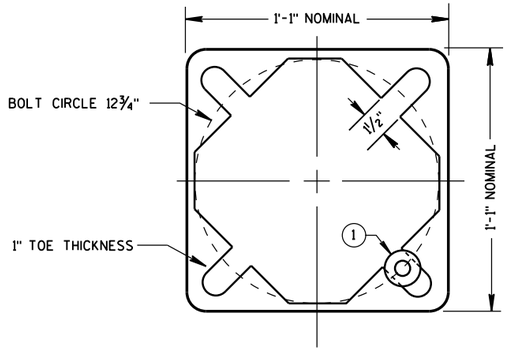
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

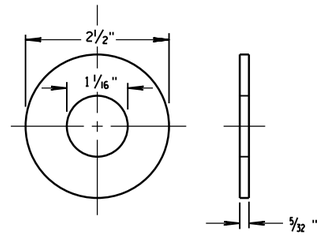




TOP VIEW
(PEDESTAL BASE)

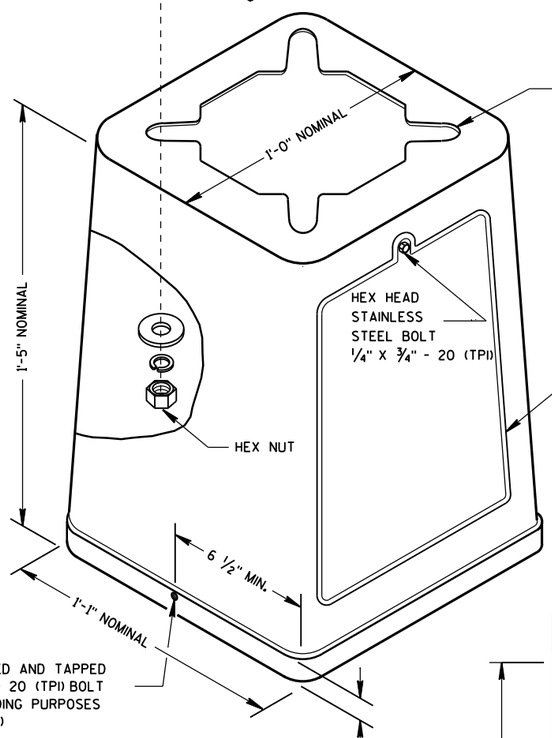


BOTTOM VIEW
(PEDESTAL BASE)

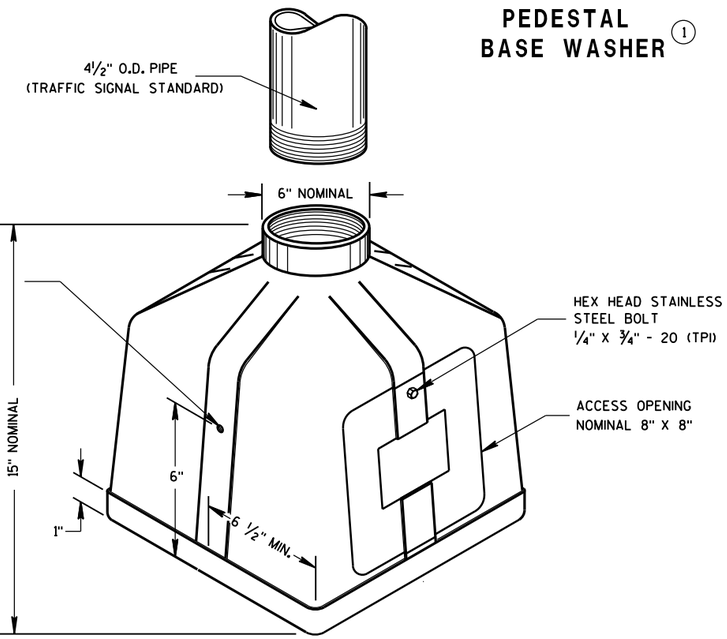


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

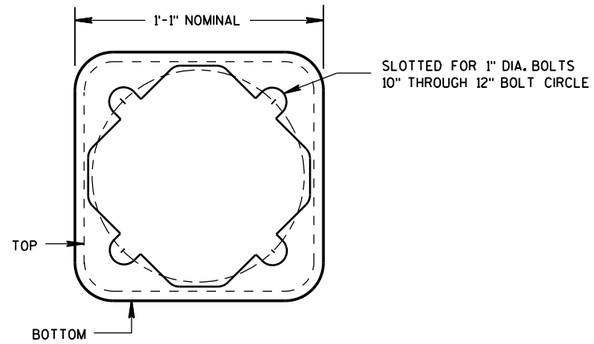


ISOMETRIC VIEW

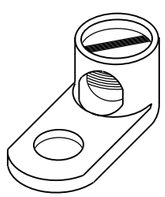


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

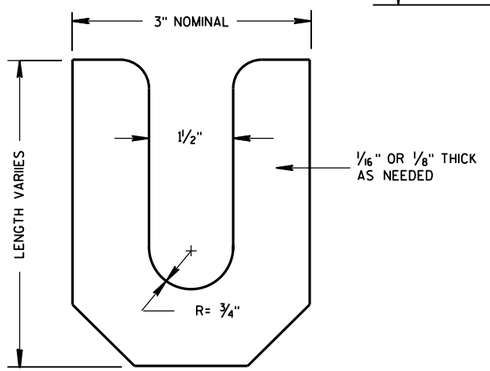


TYPICAL MECHANICAL CONNECTOR LUG

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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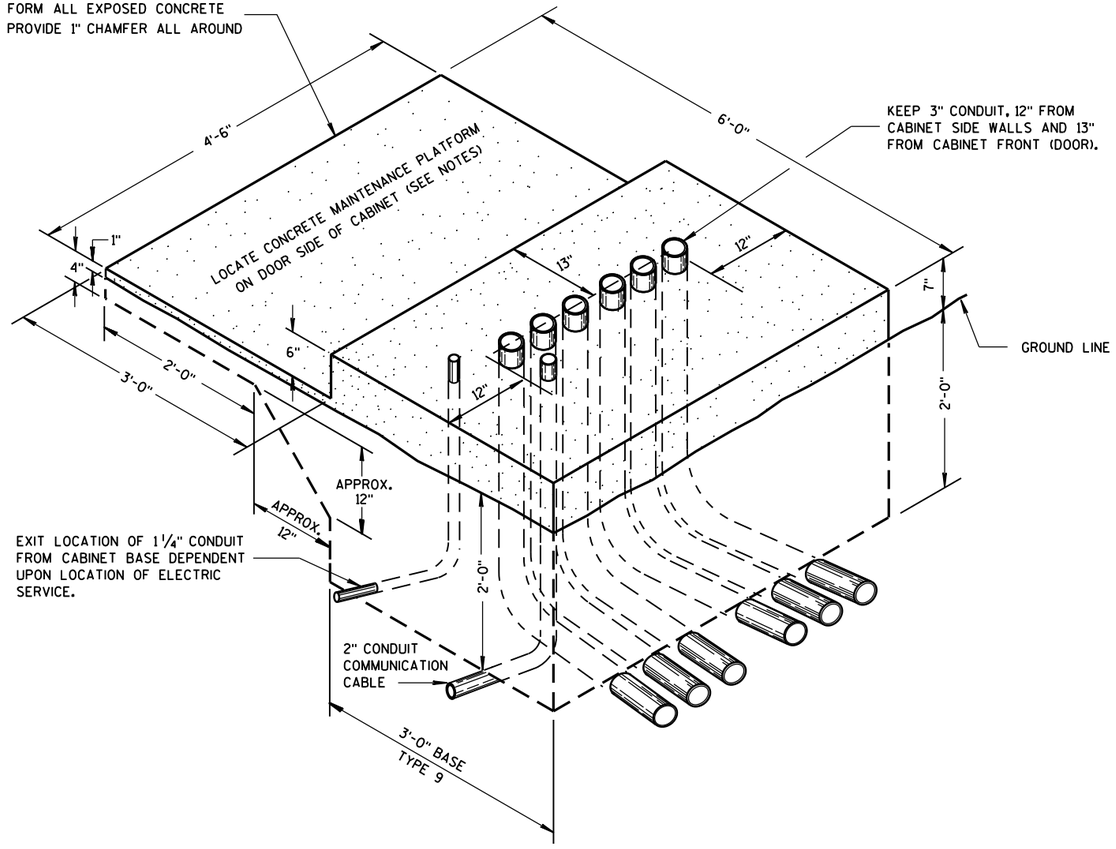
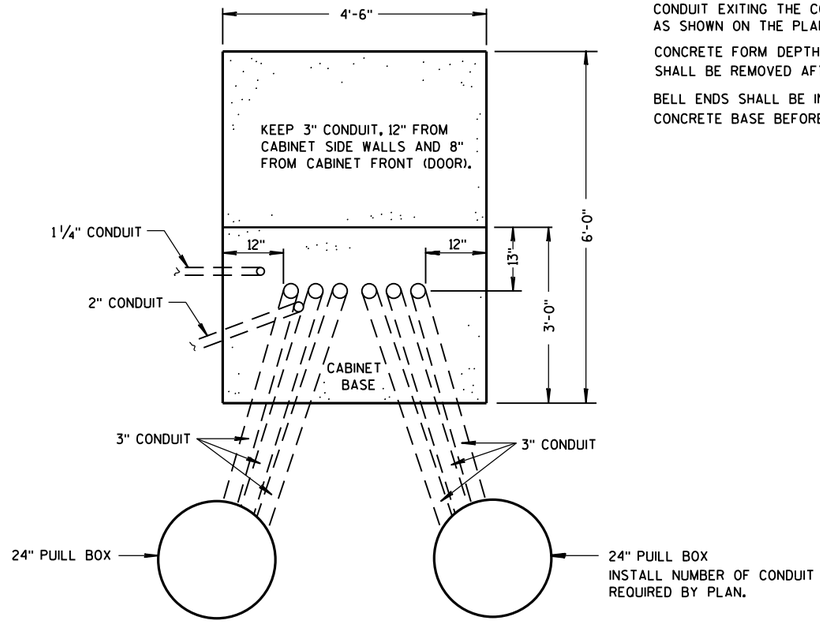
S.D.D. 9 C 3-4



ISOMETRIC VIEW

TYPE 9, SPECIAL

(C.Y. CONCRETE = APPROX. 1.56)



PLAN VIEW

CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL

GENERAL NOTES

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

INSTALL FOUR ½ INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS WITH A PULLOUT STRENGTH OF 9,000 LBS. TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

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.

CONTROL CABINET BASE TOP SURFACE SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND BE LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

PLUG ALL BELOW GRADE NONMETALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

CONDUIT EXITING THE CONCRETE BASE (SIX THREE INCH) SHALL TERMINATE IN PULL BOXES AS SHOWN ON THE PLANS.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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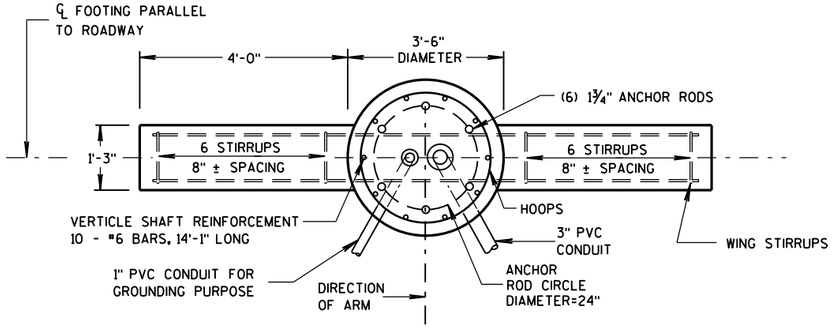
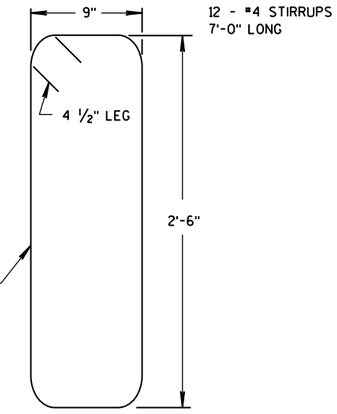
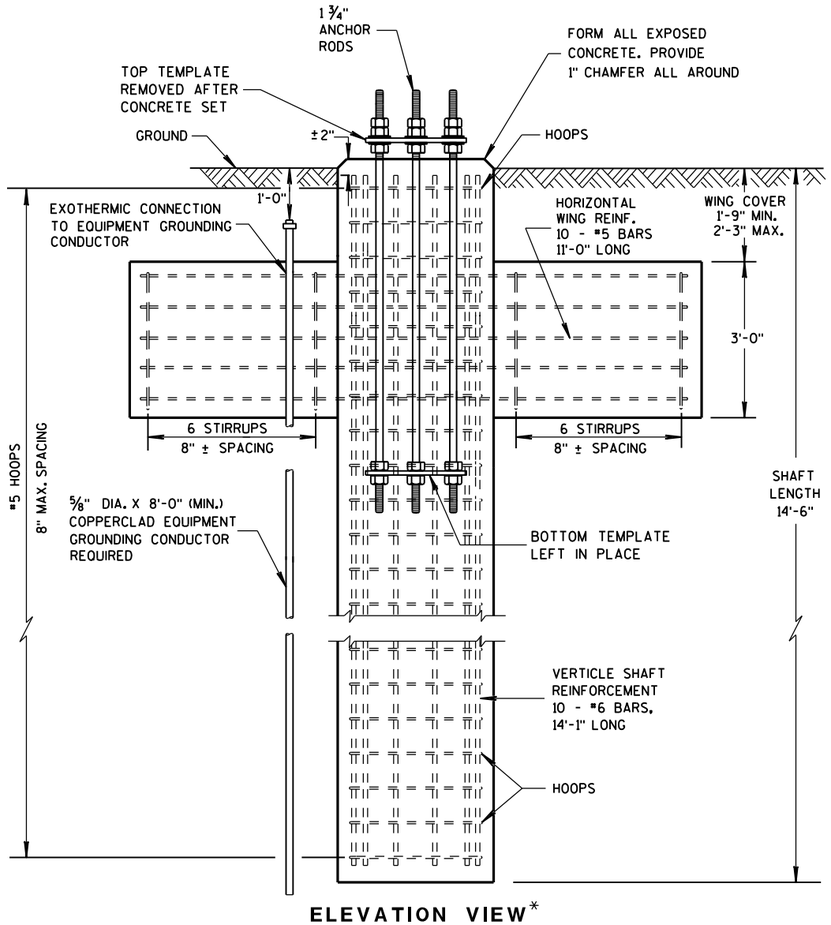
S.D.D. 9 C 6-7



PLAN VIEW

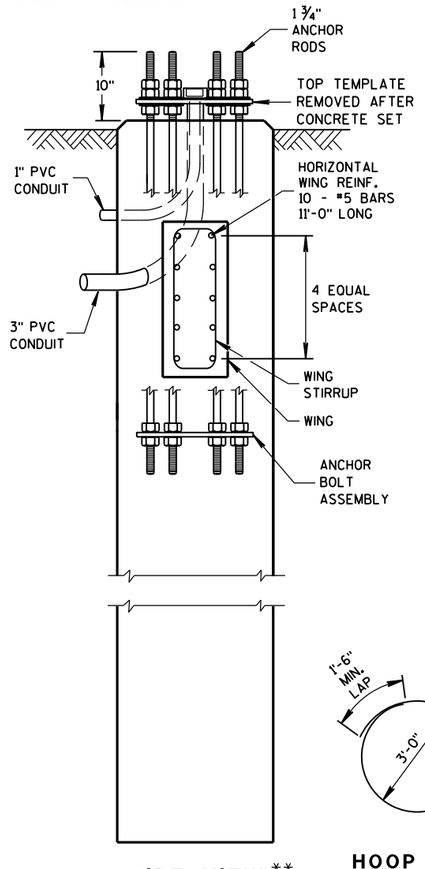


WING STIRRUP



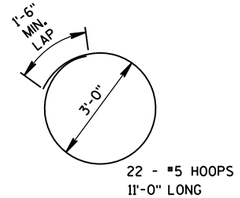
ELEVATION VIEW*

* CONDUITS ARE NOT SHOWN ON THIS VIEW FOR CLARITY



SIDE VIEW**

** HOOPS AND VERTICAL SHAFT REINFORCEMENT NOT SHOWN ON THIS VIEW FOR CLARITY



HOOP DETAIL

GENERAL NOTES

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

ORIENT ANCHOR RODS IN FOOTING AND PROVIDE ANCHOR ROD PROJECTION ABOVE TOP OF CONCRETE FOOTING BASE PER THIS SHEET.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

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

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

BASES (SHAFT), BELOW THE WING, SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUNG THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

TOP SURFACE OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

CONDUIT SIZE AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASE SHALL BE 4½" INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL ENDS INSTALLED. ALL CONDUIT SHALL SLOPE TO PULL BOX.

ALL CONDUIT ENDS AT THE TOP OF THE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC 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 OF CABLE OR WIRE.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTOR FITTINGS, UL LISTED FOR ELECTRICAL USE, SHALL BE USED.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE 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.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS.

THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVEL 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, (GREATER THAN 36-INCHES IF INSTALLED IN BREAKER-RUN), EXCEPT WITH THE WRITTEN APPROVAL OF THE ENGINEER.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, ASTM F1554 GRADE 55 (IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATIONS	fy=55,000 p.s.i.
TEMPLATES, ASTM A709 GRADE 36	fy=36,000 p.s.i.

(FOR TYPE 12 & 13 & OVER HEIGHT (OH) POLES)

CONCRETE = 6.3 C.Y.
H.S. REINFORCEMENT = 635 LBS.

TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION.
SEE S.D.D. 9C13-2 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.

CONCRETE BASE TYPE 13

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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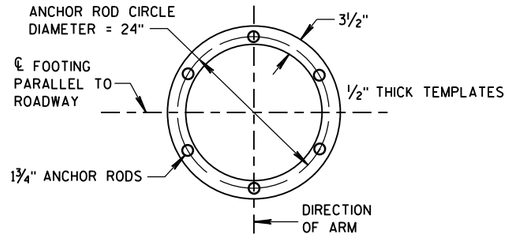
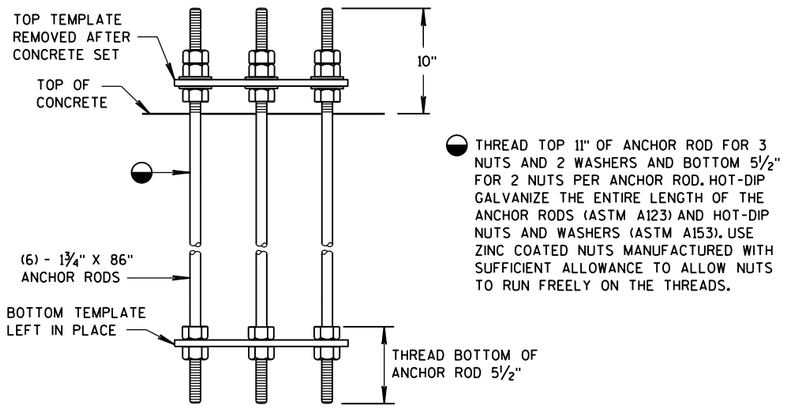
S.D.D. 9 C 12-9a

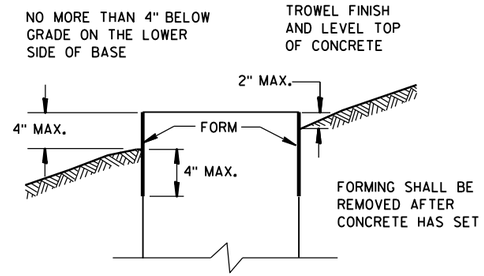


TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 13 ANCHOR ASSEMBLY



FORMING DETAIL

CONCRETE BASE TYPE 13

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2017 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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S.D.D. 9 C 12-9b

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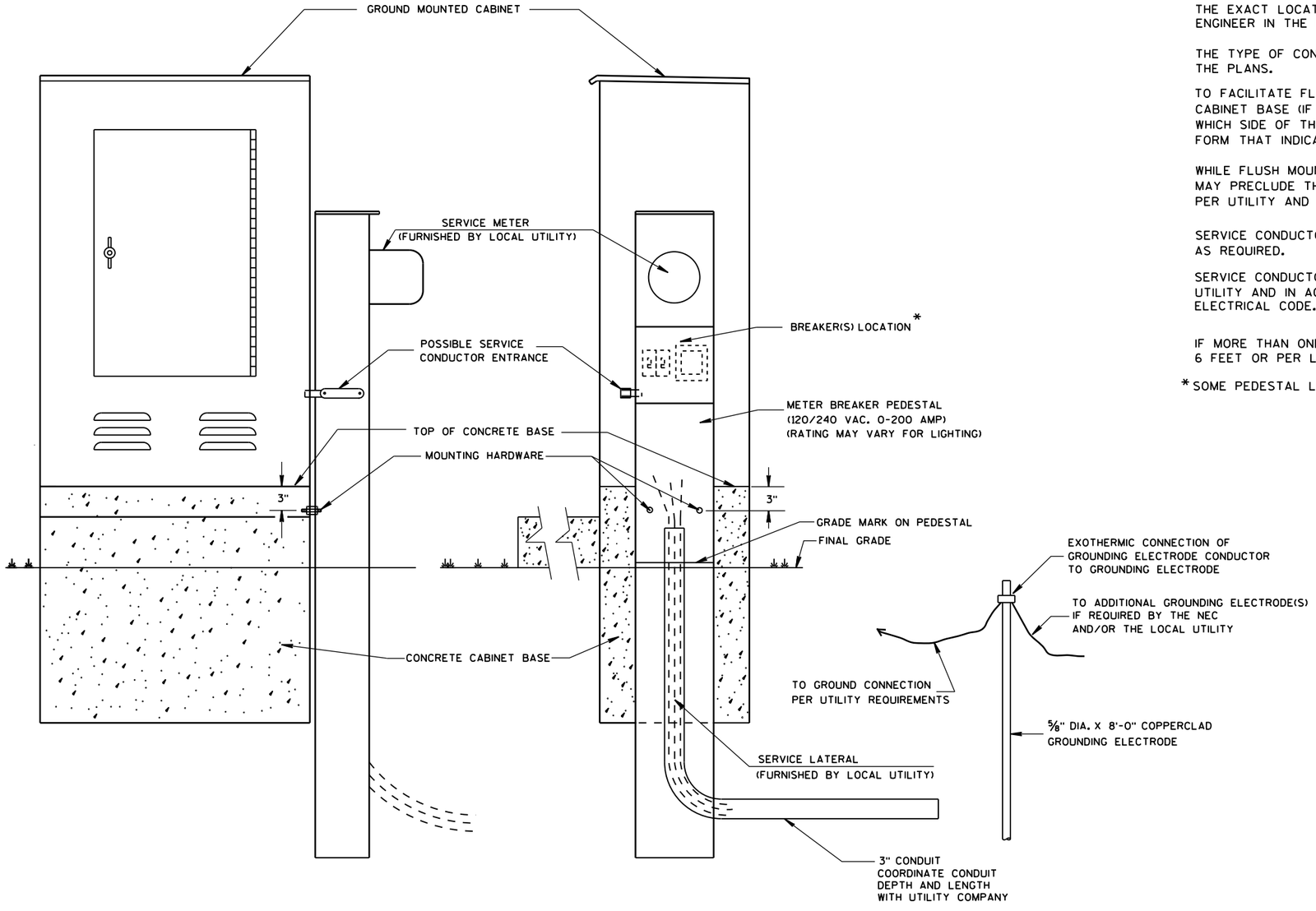
S.D.D. 9 C 12-9b



TYPICAL CABINET SERVICE INSTALLATION

GENERAL NOTES

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

THE EXACT LOCATION OF THE METER BREAKER PEDESTAL SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE TYPE OF CONCRETE CABINET BASE TO BE INSTALLED SHALL BE AS CALLED FOR IN THE PLANS.

TO FACILITATE FLUSH MOUNTING OF THE METER BREAKER PEDESTAL AGAINST THE SIDE OF THE CABINET BASE (IF FLUSH MOUNTING POSSIBLE. CONFER WITH THE LOCAL UTILITY TO DETERMINE WHICH SIDE OF THE CONCRETE BASE THE ELECTRICAL SERVICE LATERAL WILL APPROACH. THEN FORM THAT INDICATED SIDE FOR FULL SIDE DEPTH.

WHILE FLUSH MOUNTING IS THE MOST DESIRABLE MOUNTING CONFIGURATION UTILITY REQUIREMENTS MAY PRECLUDE THIS OPTION. CONTRACTOR MUST PROVIDE UTILITY APPROVED PEDESTAL AND INSTALL PER UTILITY AND MANUFACTURERS REQUIREMENTS.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AND LOCATED AS REQUIRED BY THE LOCAL UTILITY AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.

IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

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S.D.D. 9 D 1-5

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S.D.D. 9 D 1-5

CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL

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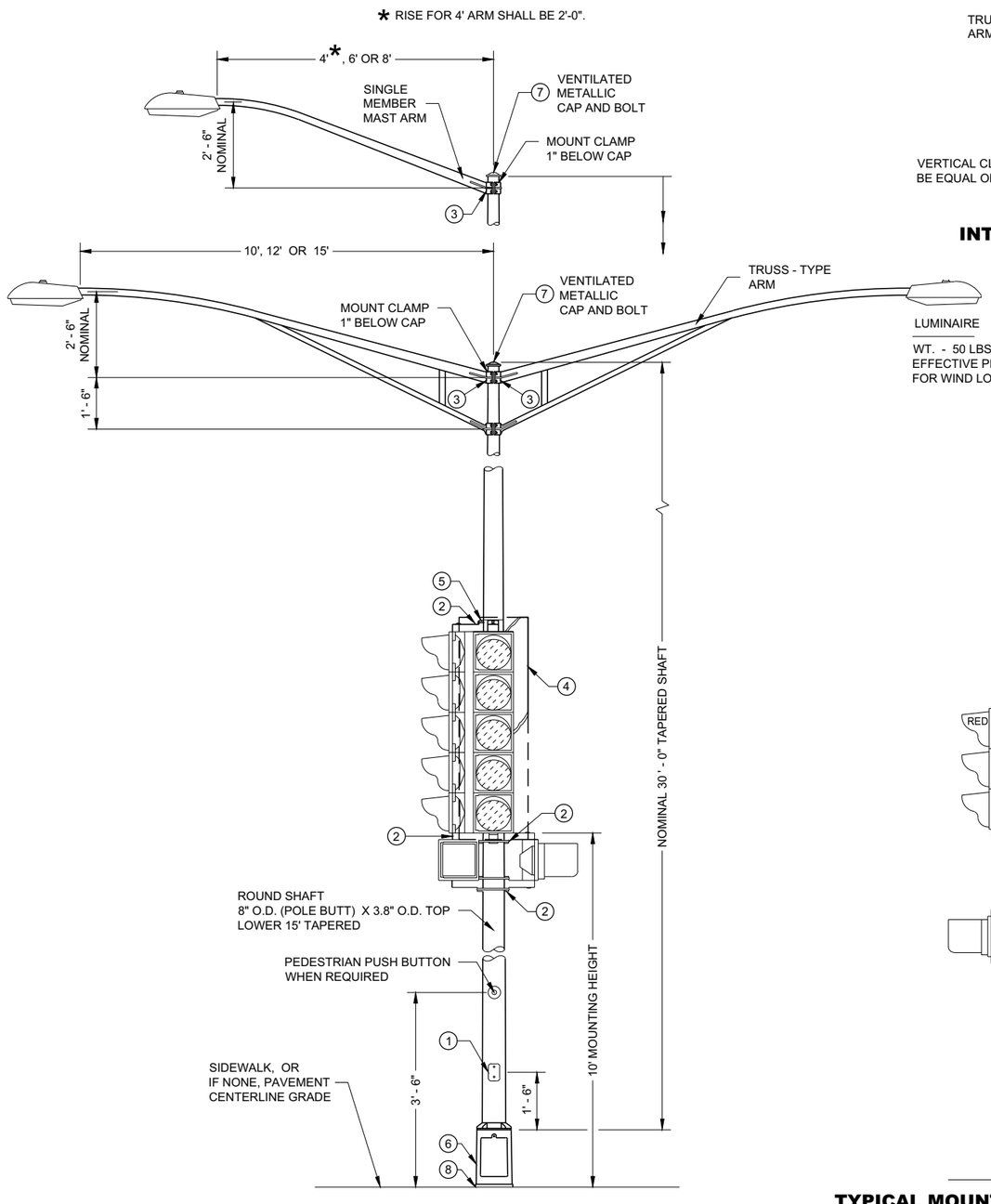
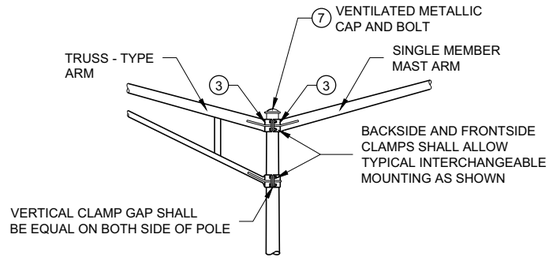


(MAXIMUM LOAD)



INTERCHANGEABLE MOUNTING DETAIL

GENERAL NOTES

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

ALL TYPE 4 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL WITH A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (.1196").

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

A PULL WIRE / ROPE SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.

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) SIGNAL FACE MOUNTING BRACKETS. MOUNT WITH CAP SCREWS AND BANDING.

(3) GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 ⅜" HOLE IN POLE SHAFT FOR WIRING.

(4) SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.

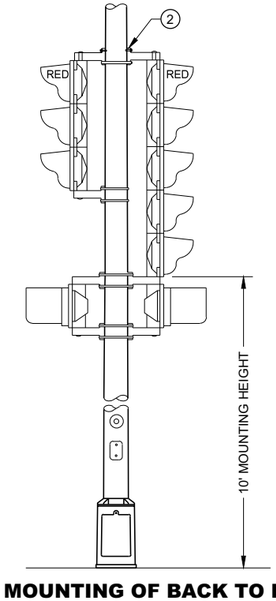
(5) POLE MOUNTED SIGNAL FACES SHALL REQUIRE ONE OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACE.

(6) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

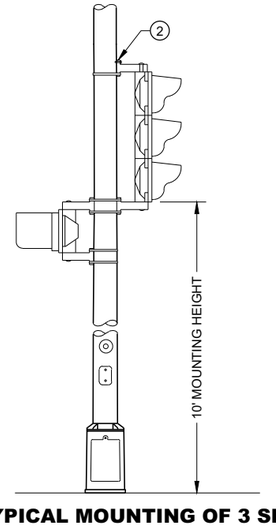
(7) FURNISH AND INSTALL VENTILATED, CAST METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

(8) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.

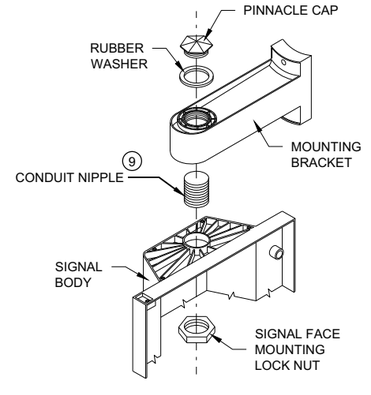
(9) USE 1 ½" ID NIPPLES ZINC-COATED RIGID METAL CONDUIT, LONG ENOUGH TO ACCOMMODATE FULL DEPTH THREADING INTO THE HEAD MOUNTING LOCK NUT IN ORDER TO TIGHTEN THE FACE, BUT THAT DO NOT INTERFERE WITH REFLECTOR CLOSURE. THREAD THE NIPPLE INTO THE MOUNTING BRACKET/ELBOW UNTIL TIGHT. USE APPROVED PINNACLE TYPE HARDWARE FROM A DEPARTMENT APPROVED MANUFACTURER TO CLOSE THE UNUSED 1 ½" OPENING IN SIGNAL FACES AND BRACKET ENDS.



TYPICAL MOUNTING OF BACK TO BACK 3 AND 5 SECTION SIGNAL FACES



TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE



SIGNAL FACE MOUNTING DETAIL
(BANDED)

TYPE 4 POLE MOUNTING CONFIGURATION

POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 4

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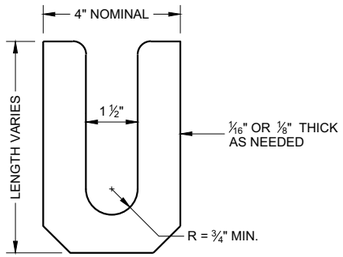
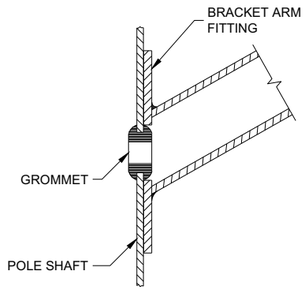
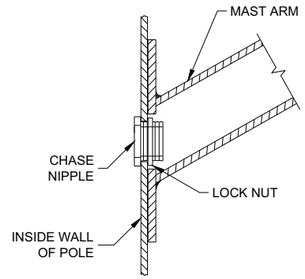


LEVELING SHIM (1)
SHALL BE ALUMINUM



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.

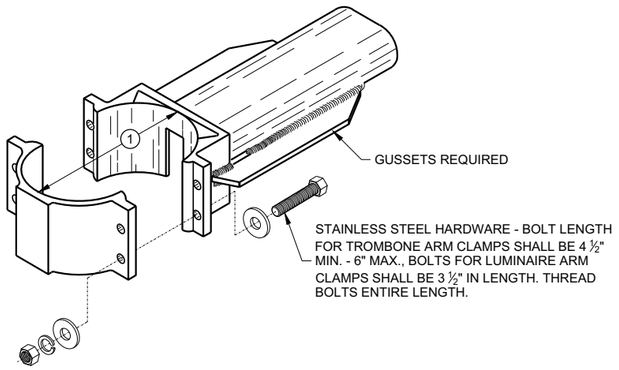
(1) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

(2) INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)

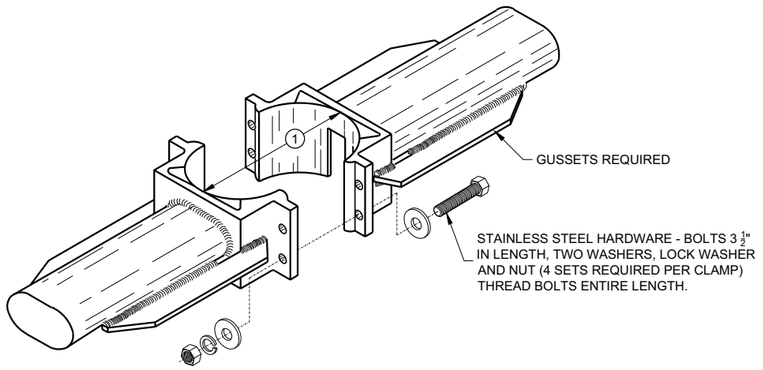
(3) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

(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.

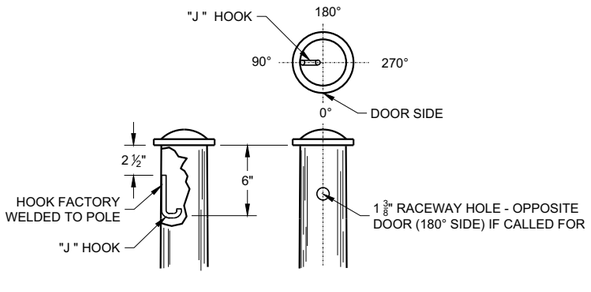
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



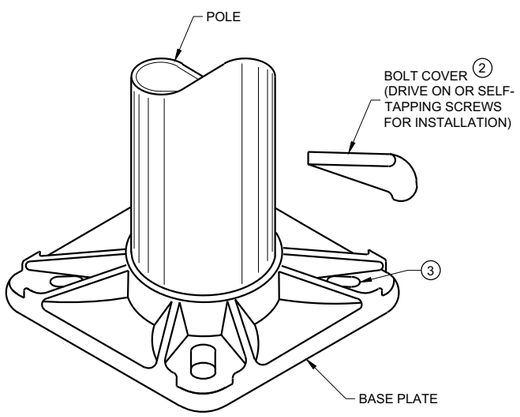
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



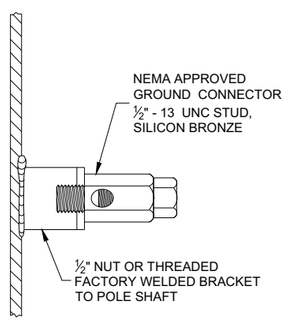
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

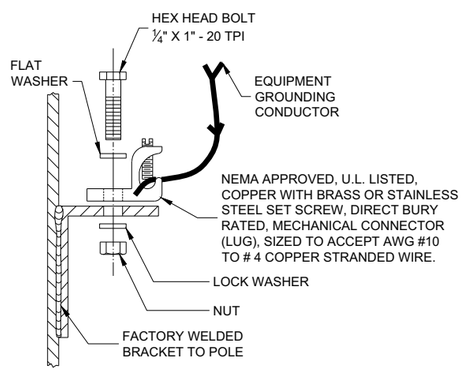


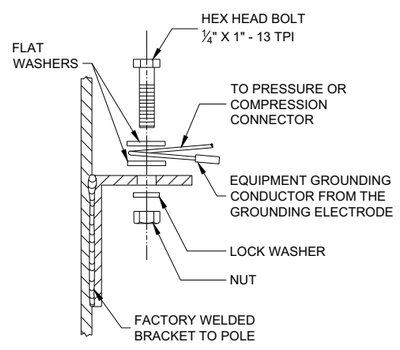
TYPICAL "J" HOOK LOCATION



BASE PLATE







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

HARDWARE DETAILS FOR POLE MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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November 2018
DATE
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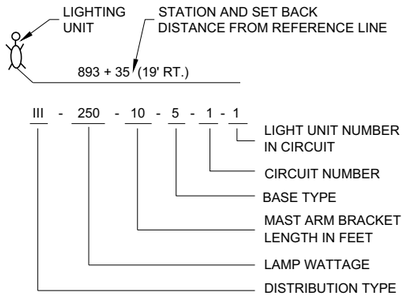
GENERAL NOTES

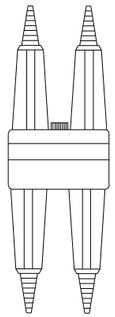
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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.

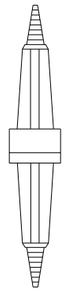
WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.



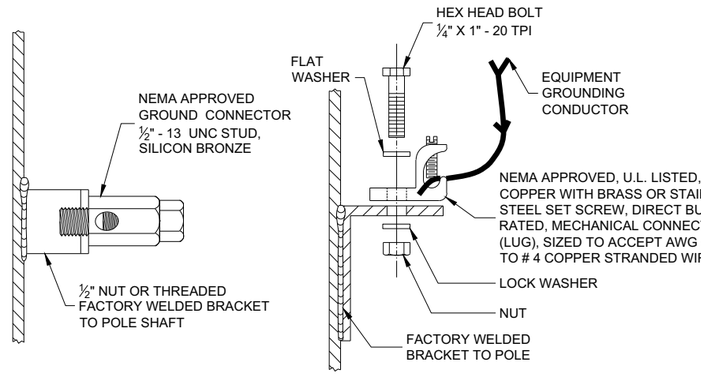
LIGHTING UNIT CODE
(TYPICAL)



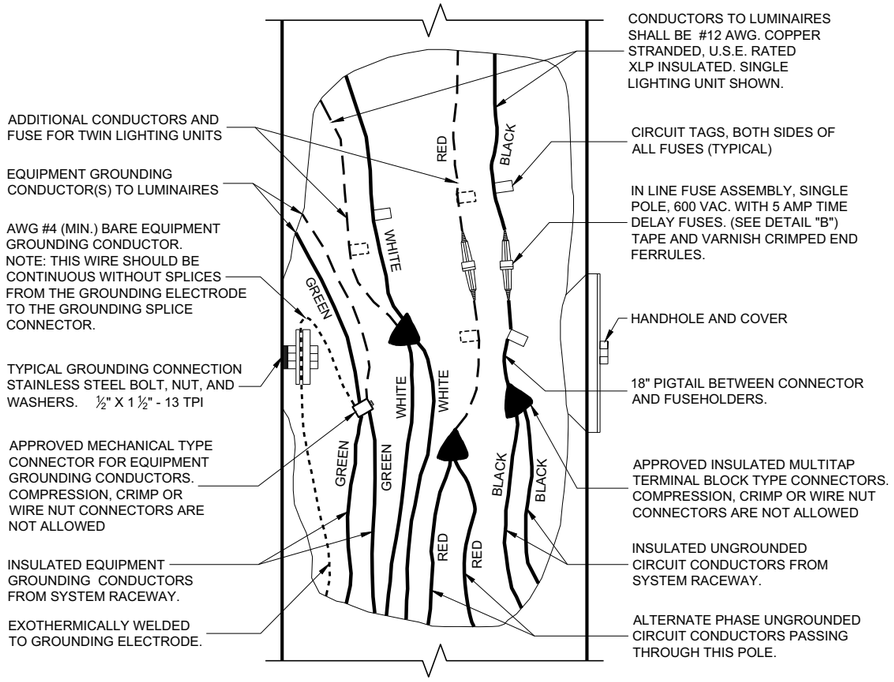
DETAIL "A"
BREAKAWAY DOUBLE POLE WITH WATERPROOF INSULATING BOOT



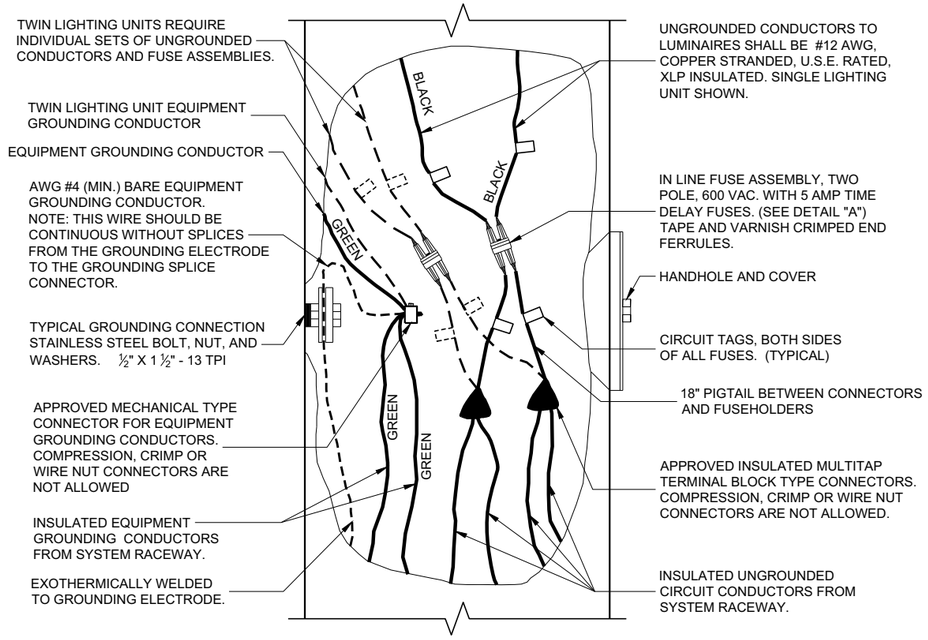
DETAIL "B"
BREAKAWAY SINGLE POLE WITH WATERPROOF INSULATING BOOT



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



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



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

NON - FREEWAY LIGHTING UNIT POLE WIRING

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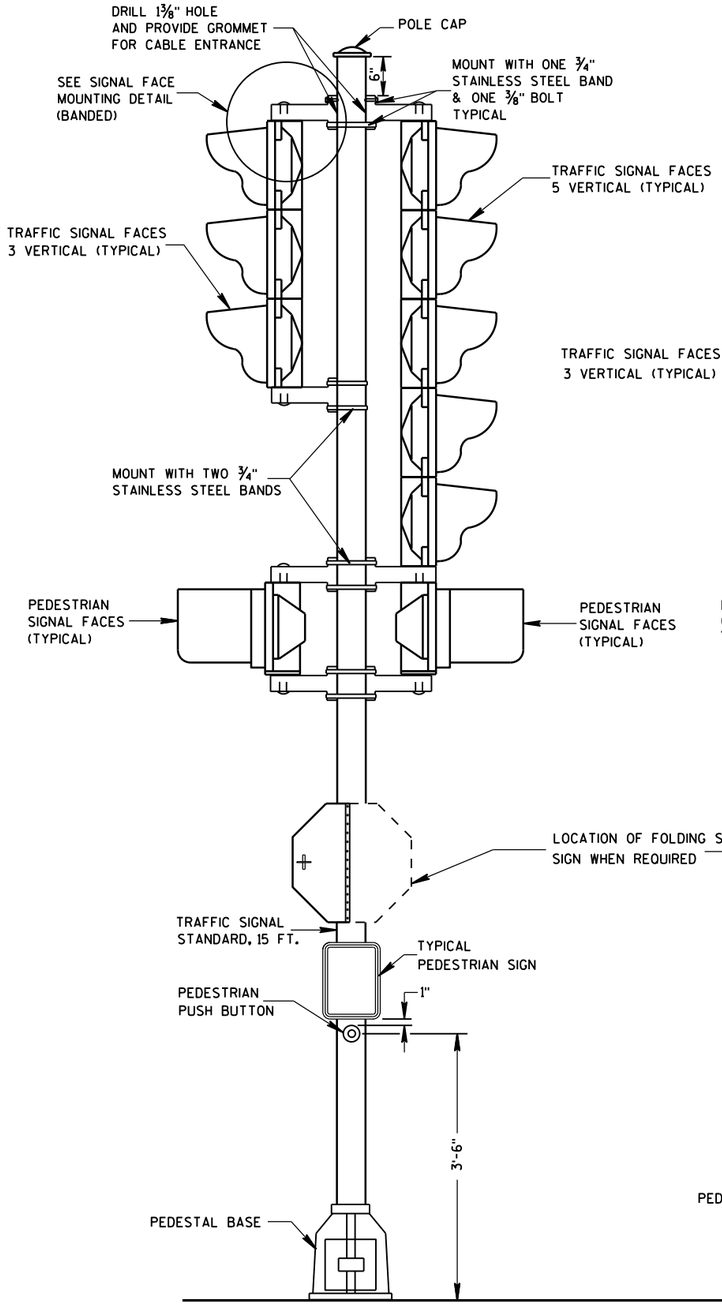
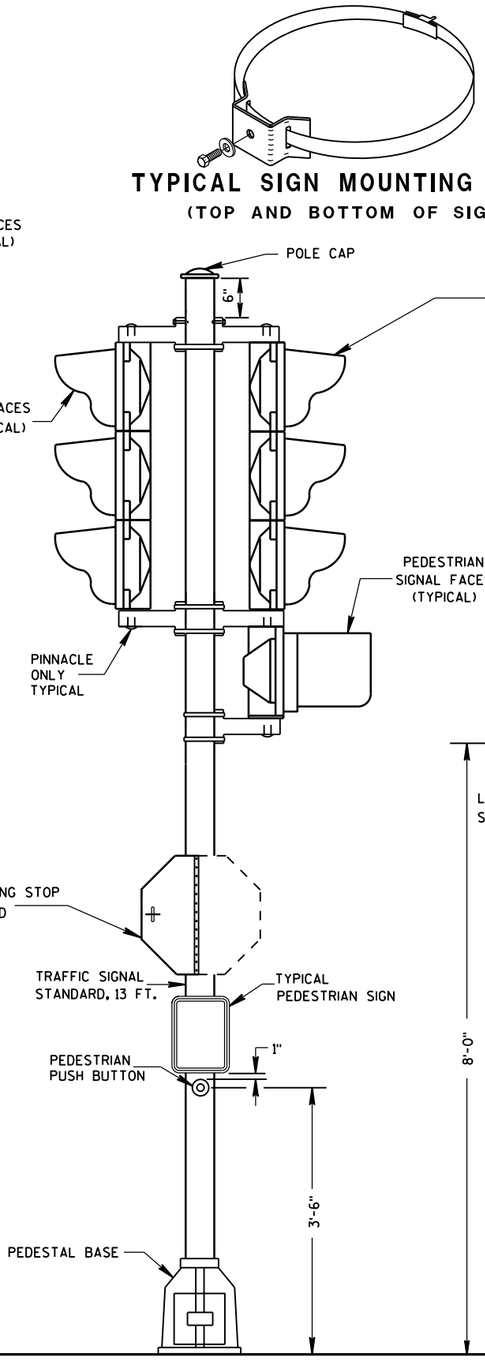
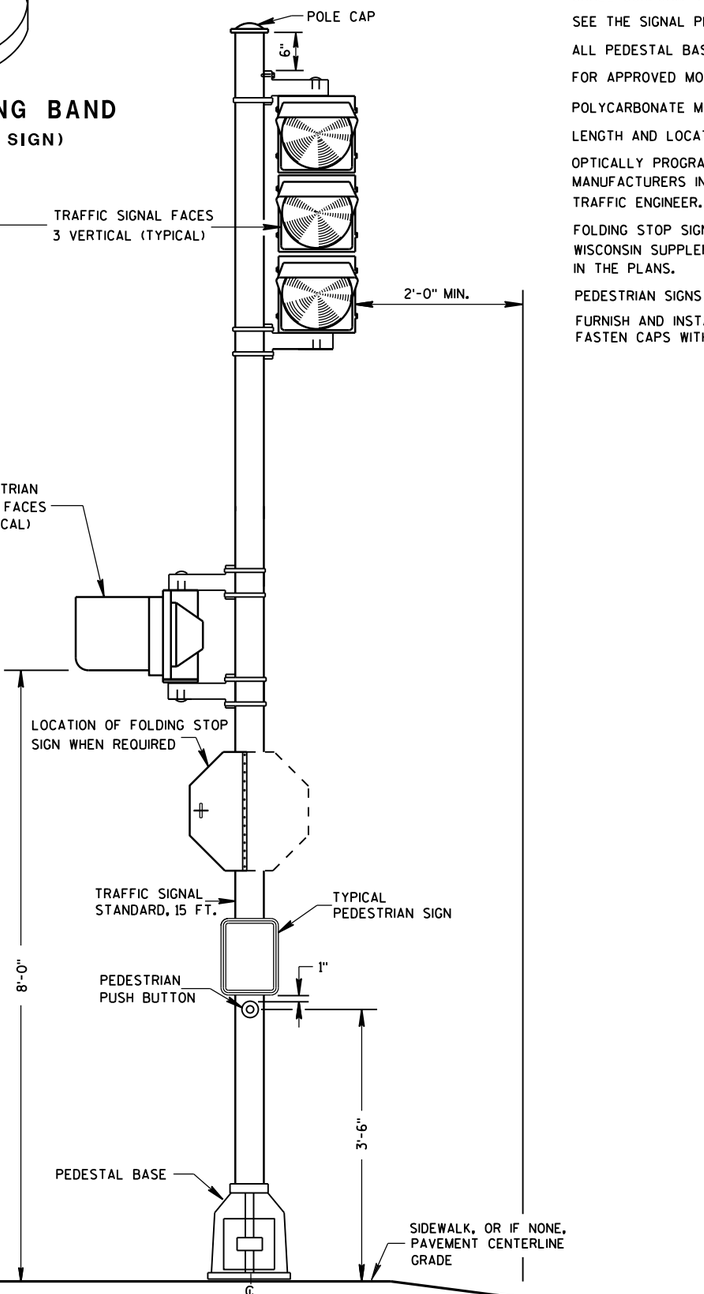


TRAFFIC SIGNAL STANDARD-15 FT.



TRAFFIC SIGNAL STANDARD-13 FT.

TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



TRAFFIC SIGNAL STANDARD-15 FT.
3M MOUNTING (TYPICAL)

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.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLYCARBONATE MOUNTING BRACKETS SHALL BE USED.

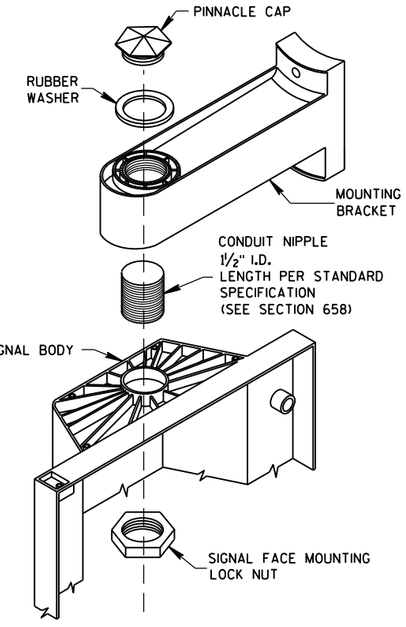
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

OPTICALLY PROGRAMMED SIGNAL FACES SHALL BE MASKED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS, AND UNDER THE DIRECTIONS OF THE REGION TRAFFIC ENGINEER.

FOLDING STOP SIGNS SHALL BE IN ACCORDANCE WITH THE MUTCD AND/OR THE LATEST WISCONSIN SUPPLEMENT. THE SIGNS SHALL BE SIZED AND LOCATED AS CALLED FOR IN IN THE PLANS.

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/4" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



SIGNAL FACE MOUNTING DETAIL
(BANDED)

TRAFFIC SIGNAL STANDARD
POLY BRACKET MOUNTINGS
(TYPICAL) 13 FT. OR 15 FT.

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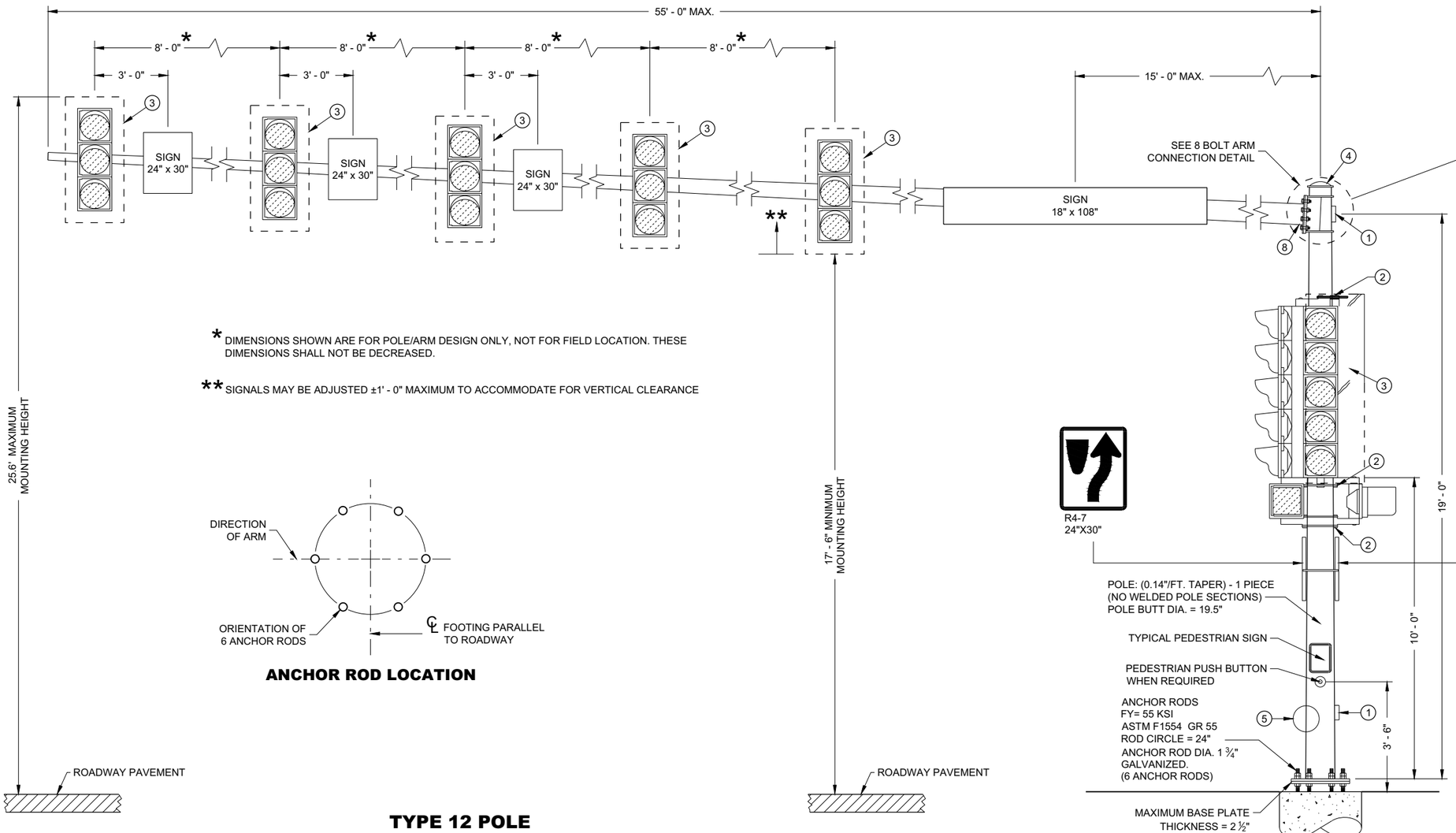
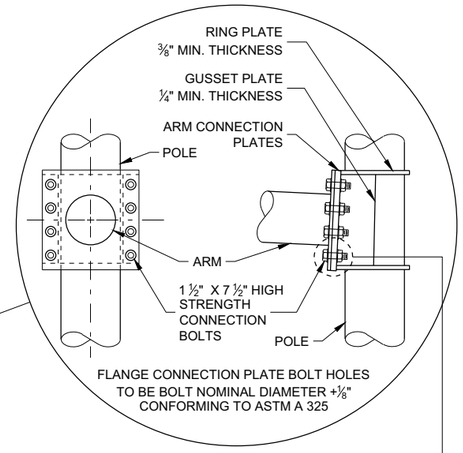


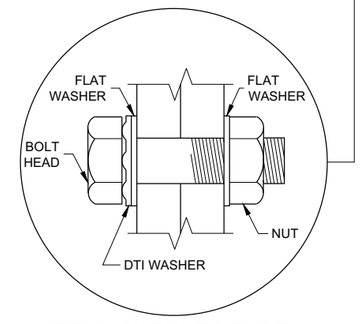
* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

** SIGNALS MAY BE ADJUSTED ±1' - 0" MAXIMUM TO ACCOMMODATE FOR VERTICAL CLEARANCE

ANCHOR ROD LOCATION



8 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL

TYPE 12 POLE
35' - 55' MONOTUBE ARM
(MAXIMUM LOAD)

TYPE 12 POLE
35' - 55' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

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GENERAL NOTES

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

POLE TYPES 9 AND 10 ARE FOR ARM LENGTHS 15 FOOT TO 30 FOOT.

POLE TYPES 9 SPECIAL AND 10 SPECIAL ARE FOR ARM LENGTHS 35 FOOT, 40 FOOT, AND 45 FOOT.

POLE TYPES 12 AND 13 ARE FOR ARM LENGTHS 35 FOOT TO 55 FOOT.

MONOTUBE POLES AND ARMS SHALL BE GALVANIZED STEEL.

RING STIFFENED BUILT UP BOX TYPE OF ATTACHMENT FOR TRAFFIC SIGNAL ARM.

ONE PIECE POLE CONSTRUCTION (NO WELDED POLE SECTIONS).

STANDARD STRAIGHT ARM DESIGN (3% ± RISE).

SECTION 657, POLES OF THE STANDARD SPECIFICATION SHALL APPLY TO THIS DRAWING.

PROVIDE WIREWAY THRU POLE WALL AND ARM CONNECTION PLATES. PROVIDE ROUND, SMOOTH INSIDE SURFACE.

MANUFACTURER'S SUBMITTED POLE DESIGNS AND DRAWINGS SHALL BE SIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER AND CERTIFIED AS BEING IN COMPLIANCE WITH THE AASHTO "LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNAL 2015 1ST EDITION (INCLUDING INTERIM REVISIONS)" AND ALL PERTINENT WISDOT SPECIFICATIONS AND DRAWINGS FOR THE LIGHTING STRUCTURES AS FOLLOWS:

CATEGORY III FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 AND TYPE 10 STRUCTURES.

CATEGORY II FATIGUE LOADS OF TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 SPECIAL AND TYPE 10 SPECIAL STRUCTURES. IN LIEU OF DESIGNING FOR GALLOPING, A VIBRATION DAMPER MITIGATION DEVICE IS REQUIRED TO BE SUPPLIED AND INSTALLED AT THE END OF THE MAST ARM.

CATEGORY II FATIGUE FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE12 AND TYPE 13 STRUCTURES.

115 MPH (700 YEAR MRI BASIC WIND SPEED).

SECURE THE OPENING BELOW THE BASE PLATE WITH STAINLESS STEEL OR GALVANIZED STEEL MESH AND SECURE THE MESH WITH ¾" STAINLESS STEEL BANDING AROUND THE LEVELING NUTS.

INDENT PRINT (NOMINAL ½" HIGH) THE POLE LENGTH AND FIRST TWO LETTERS OF THE MANUFACTURERS NAME ON TWO SIDES OF THE BASE PLATE 180 DEGREES APART, BEFORE GALVANIZING. THE ARM SHALL BE IDENTIFIED WITH THE SAME INFORMATION BY INDENT PRINT.

SIGNAL FACE SHALL BE MOUNTED 6 INCHES (NOMINAL) FROM THE END OF THE MONOTUBE ARM OR AS SHOWN ON THE PLAN CONSTRUCTION DETAIL OR A S DIRECTED BY THE PROJECT ENGINEER/ELECTRICAL OPERATIONS PERSONNEL. MOUNT ALL LIKE HEAD AT SAME ELEVATION.

SIGN MOUNTING BRACKETS SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 637 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

(1) DESIGN FOR MAXIMUM ALLOWABLE HAND HOLE WITH COVER ASSEMBLY WITH TWO ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.

(2) SIGNAL MOUNTING BRACKETS FOR POLE MOUNTING, MOUNT WITH CAP SCREW AND BANDING (SEE SPECIFICATION SECTION 658).

(3) SECURELY MOUNT BACK PLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURERS RECOMMENDATIONS.

(4) THE TOP OF THE POLE SHAFT AND THE MONOTUBE ARM SHALL BE EQUIPPED WITH A REMOVABLE, VENTILATED CAP HELD SECURELY IN PLACE WITH SET SCREWS.

(5) FACTORY WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HAND HOLD, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.

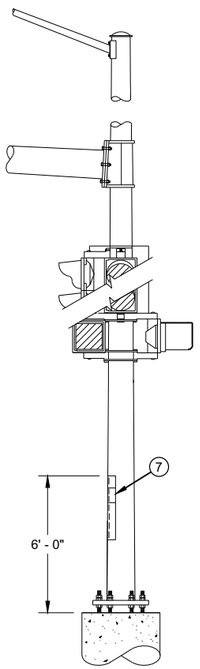
(6) FACTORY WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.

(7) INSTALL STRUCTURAL IDENTIFICATION PLAQUES.

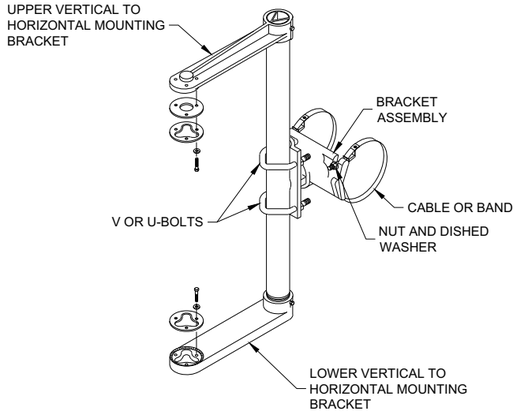
STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

MOUNTING HEIGHT SHALL BE 6' - 0" ABOVE THE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.

(8) FACTORY DRILLED ½" DRAIN HOLE 2" FROM FLANGE CONNECTION PLATE.

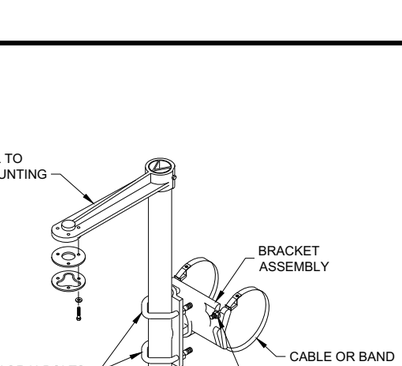


STRUCTURAL IDENTIFICATION PLAQUE PLACEMENT



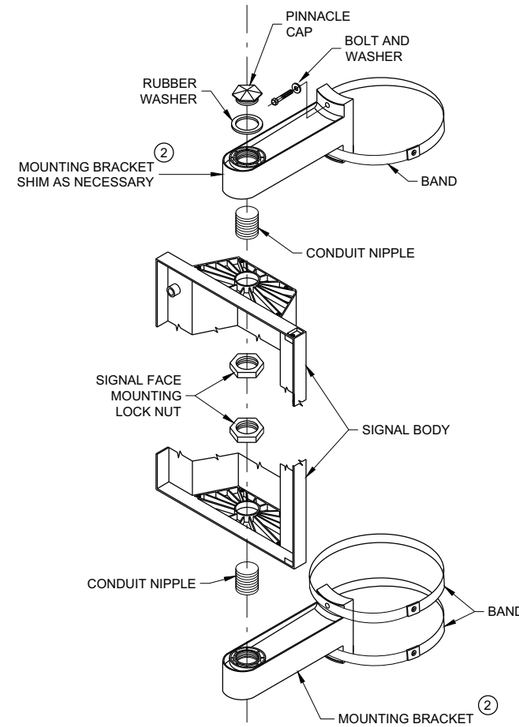
SIGNAL FACE MOUNTING BRACKET DETAIL FOR MONOTUBE ARM

(MOUNT PER MANFACTURER'S RECOMMENDATION)

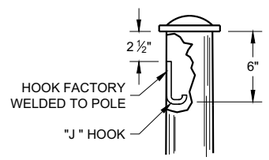


TYPICAL GROUNDING CONNECTIONS (5)

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



SIGNAL FACE VERTICAL MOUNTING DETAIL



TYPICAL "J" HOOK WIRE SUPPORT (6)

GENERAL NOTES AND HARDWARE FOR TYPES 9,10, 9/10 SPECIAL, 12 AND 13 POLES WITH MONOTUBE ARMS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER

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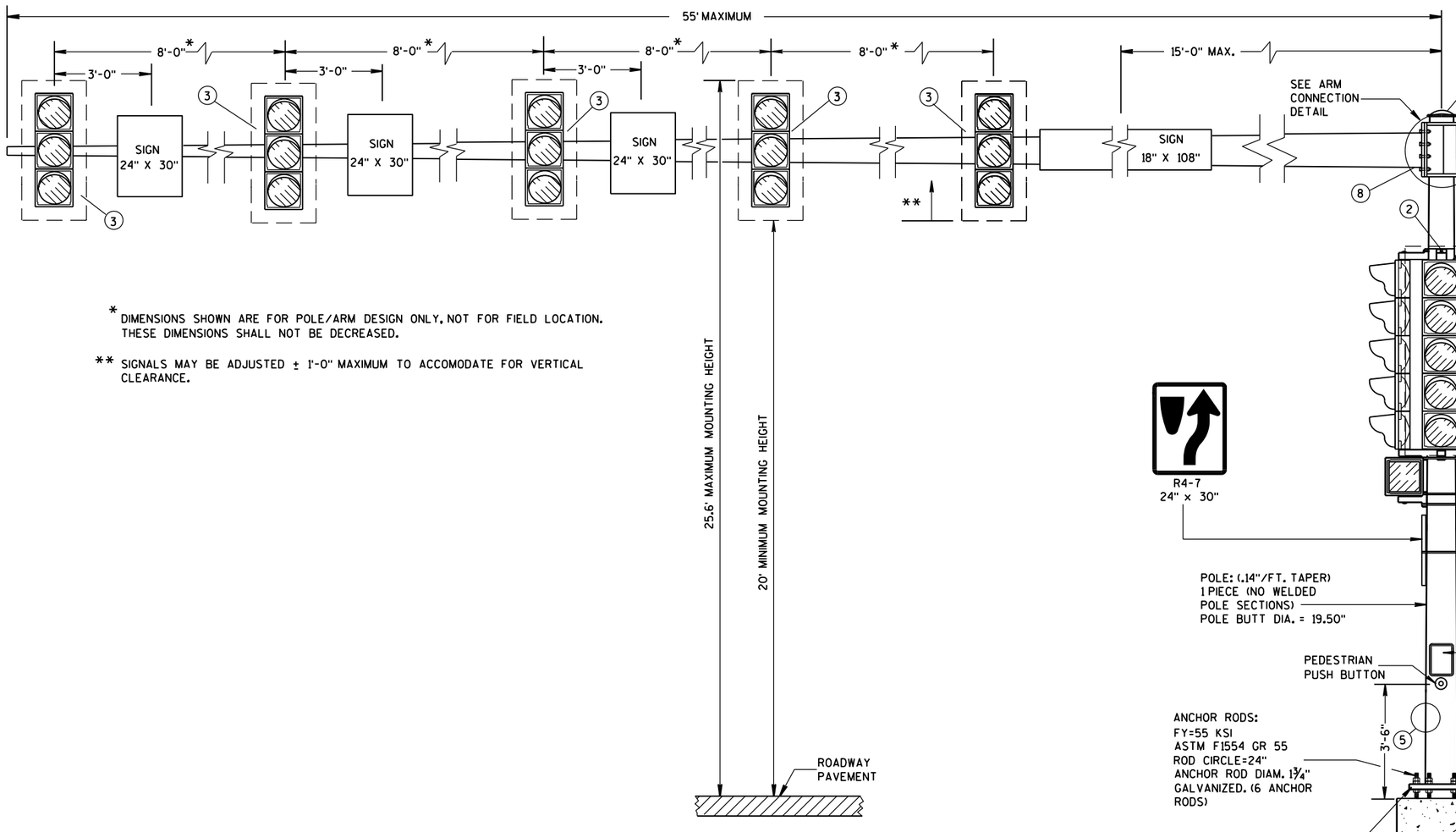

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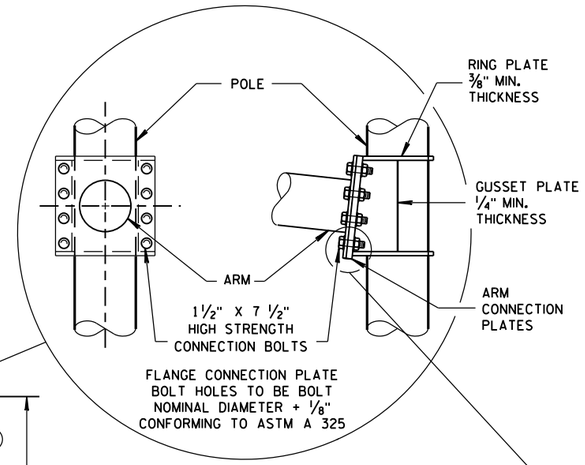
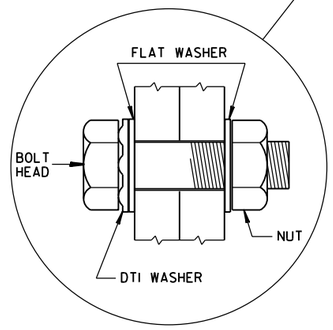
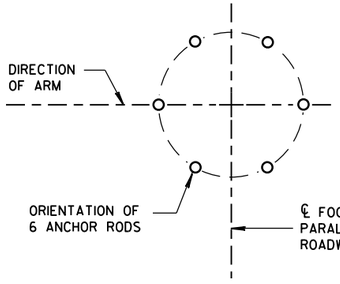
** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.



8 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL



ANCHOR ROD LOCATION

(MAXIMUM LOAD)

OVER HEIGHT TYPE 12 POLE 35'- 55' MONOTUBE ARM

OVER HEIGHT TYPE 12 POLE 35' - 55' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May, 2017 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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S.D.D. 9 E 12-1c

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S.D.D. 9 E 12-1c

GENERAL NOTES

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

OVER HEIGHT POLE TYPES 9 AND 10 ARE FOR ARM LENGTHS 15-FOOT TO 30-FOOT.

OVER HEIGHT POLE TYPES 12 AND 13 ARE FOR ARM LENGTHS 35-FOOT TO 55-FOOT.

MONOTUBE POLE AND ARM SHALL BE GALVANIZED STEEL.

RING-STIFFENED BUILT-UP BOX TYPE OF ATTACHMENT FOR TRAFFIC SIGNAL ARM.

ONE (1) PIECE POLE CONSTRUCTION (NO WELDED POLE SECTIONS).

STANDARD STRAIGHT ARM DESIGN (3 % ± RISE).

SECTION 657, POLES OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

PROVIDE WIREWAY THRU POLE WALL AND ARM CONNECTION PLATES. PROVIDE ROUND, SMOOTH INSIDE SURFACE.

MANUFACTURER'S SUBMITTED POLE DESIGNS AND DRAWINGS SHALL BE SIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER AND CERTIFIED AS BEING IN COMPLIANCE WITH THE AASHTO LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNAL 2015 1ST EDITION (INCLUDING 2017 INTERIM REVISIONS) AND ALL PERTINENT WISDOT SPECIFICATIONS AND DRAWINGS FOR TRAFFIC AND LIGHTING STRUCTURES AND AS FOLLOWS:

- CATEGORY III FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 AND TYPE 10 STRUCTURES.
- CATEGORY II FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 12 AND TYPE 13 STRUCTURES.
- 90 MPH (3-SECOND GUST) WIND SPEED AND A 50 YEAR DESIGN LIFE.

SECURE THE OPENING BELOW THE BASE PLATE WITH STAINLESS STEEL OR GALVANIZED STEEL MESH AND SECURE THE MESH WITH ¾" S.S. BANDING AROUND THE LEVELING NUTS.

INDENT PRINT (NOMINAL ½" HIGH) THE POLE LENGTH AND FIRST TWO LETTERS OF THE MANUFACTURERS NAME ON TWO SIDES OF THE BASE PLATE 180 DEGREES APART, BEFORE GALVANIZING. THE ARM SHALL BE IDENTIFIED WITH THE SAME INFORMATION BY INDENT PRINT.

SIGNAL FACE SHALL BE MOUNTED 6 INCHES (NOMINAL) FROM THE END OF THE MONOTUBE ARM OR AS SHOWN ON THE PLAN CONSTRUCTION DETAIL OR AS DIRECTED BY THE PROJECT ENGINEER/ELECTRICAL OPERATIONS PERSONNEL. MOUNT ALL LIKE HEADS AT SAME ELEVATION.

SIGN MOUNTING BRACKETS SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 637 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

(1) DESIGN FOR MAXIMUM ALLOWABLE HANDHOLE WITH COVER ASSEMBLY WITH TWO ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.

(2) SIGNAL MOUNTING BRACKETS FOR POLE MOUNTING, MOUNT WITH CAP SCREW AND BANDING, (SEE SPECIFICATIONS SEC. 658).

(3) SECURELY MOUNT BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURERS RECOMMENDATIONS.

(4) THE TOP OF THE POLE SHAFT AND THE END OF THE MONOTUBE ARM SHALL BE EQUIPPED WITH A REMOVABLE, VENTILATED CAP HELD SECURELY IN PLACE WITH SET SCREWS.

(5) FACTORY-WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HANDHOLE, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.

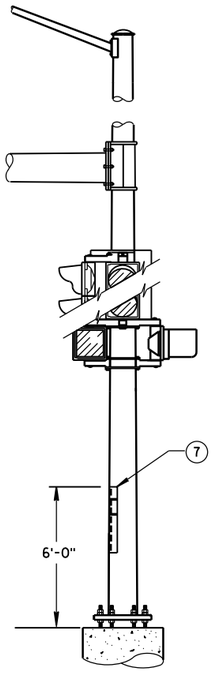
(6) FACTORY-WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.

(7) INSTALL STRUCTURAL IDENTIFICATION PLAQUES.

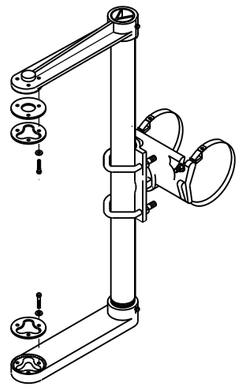
STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

MOUNTING HEIGHT SHALL BE 6'-0" ABOVE THE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.

(8) FACTORY DRILLED ½" DRAIN HOLE 2" FROM FLANGE CONNECTION PLATE.

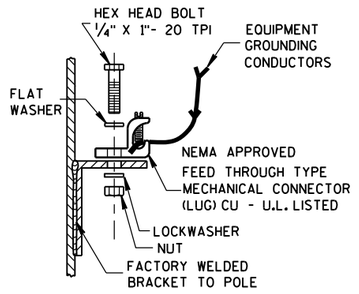


STRUCTURAL IDENTIFICATION PLAQUE PLACEMENT



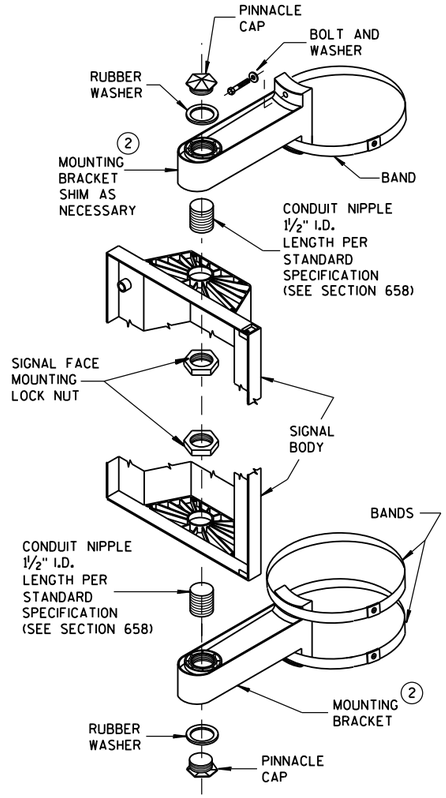
SIGNAL FACE MOUNTING BRACKET DETAIL FOR MONOTUBE ARM

(MOUNT PER MANUFACTURER'S RECOMMENDATION)

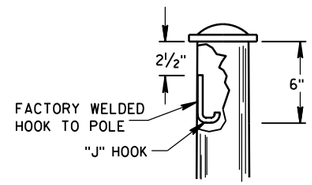


TYPICAL GROUNDING CONNECTIONS (5)

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



SIGNAL FACE VERTICAL MOUNTING DETAIL



"J" HOOK WIRE SUPPORT (6)

GENERAL NOTES AND HARDWARE DETAILS FOR OVER HEIGHT TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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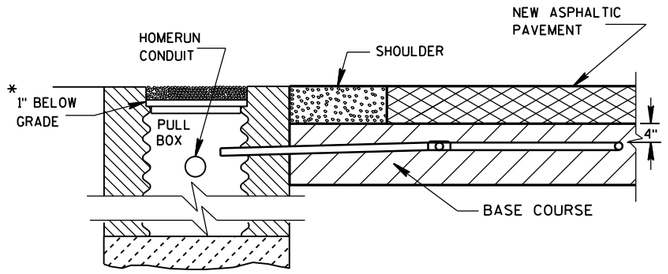
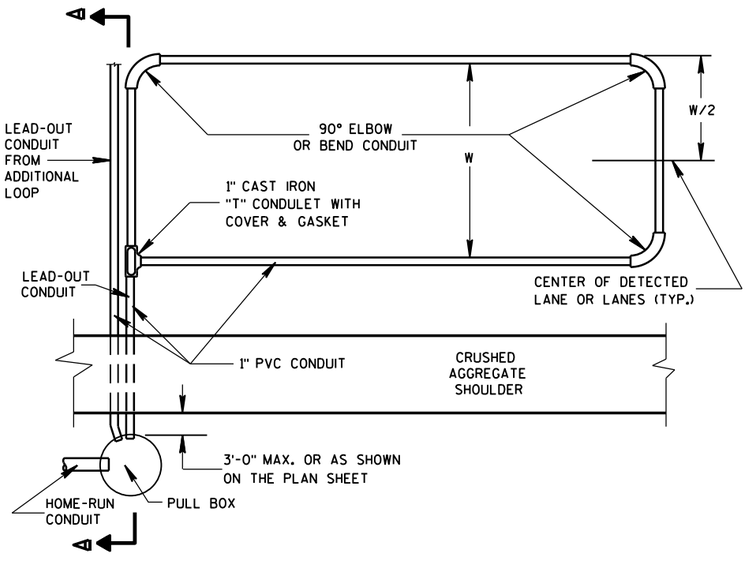


SECTION A-A
NO CURB & GUTTER

DETECTOR LOOP 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.



TYPICAL PLAN OF LOOP DETECTOR

GENERAL NOTES

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

LOOP SIZE, LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD-OUT CONDUIT TO DRAIN TO ROADSIDE PULL BOX.

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 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.

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.

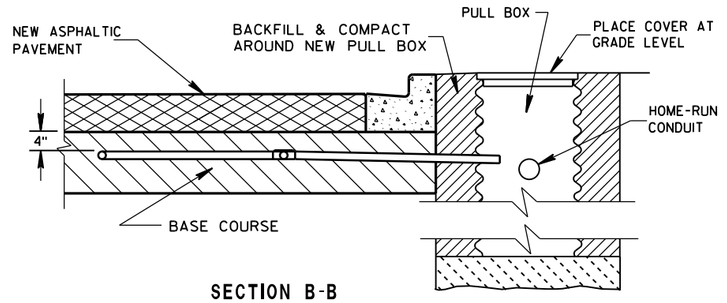
SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL BOXES AT THE SIDE OF THE ROAD.

THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL BOX, THROUGH THE LOOP DUCT, BACK TO THE ROADSIDE PULL BOX, AND BE INSTALLED IN ONE, NON-SPLICED, CONTINUOUS LENGTH.

PROTECTION OF THE CONDUIT AND CONDULET SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE THE ASPHALTIC PAVEMENT IS PLACED.

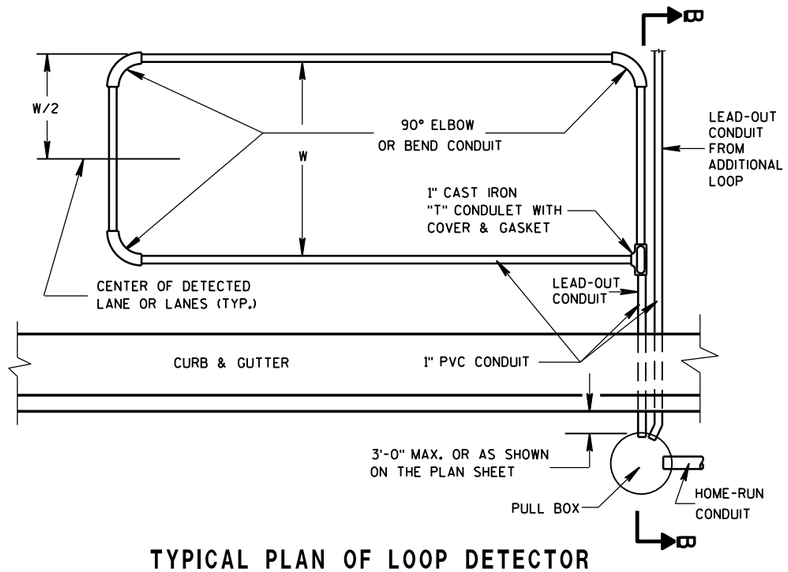
WHEN MULTIPLE LAYERS OF ASPHALTIC PAVEMENT ARE TO BE PLACED, LOOPS MAY BE INSTALLED BY SAWING A TWO INCH WIDE SLOT IN THE FIRST LAYER, DIG OUT THE ASPHALTIC MATERIAL AND BASE COURSE, PLACE THE LOOP, FILL THE SLOT WITH BASE COURSE MATERIAL AND NEW ASPHALTIC MATERIAL AND TAMP THE ASPHALTIC MATERIAL IN PLACE.

SHOULD TRAFFIC BE ALLOWED TO USE THE AREA OF ROADWAY WITH THE NEWLY INSTALLED LOOP BEFORE THE PLACEMENT OF THE NEXT LAYER OF ASPHALTIC PAVEMENT, THE SLOT/PAVEMENT OPENING SHALL BE SEALED WITH HOT POURED ELASTIC TYPE MATERIAL CONFORMING TO THE REQUIREMENTS OF THE "SPECIFICATION FOR JOINT SEALANTS, HOT POURED, FOR CONCRETE AND ASPHALT PAVEMENTS, ASTM DESIGNATION: D3405".



SECTION B-B
CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAIL



TYPICAL PLAN OF LOOP DETECTOR

LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW ASPHALTIC PAVEMENT)

STATE OF WISCONSIN
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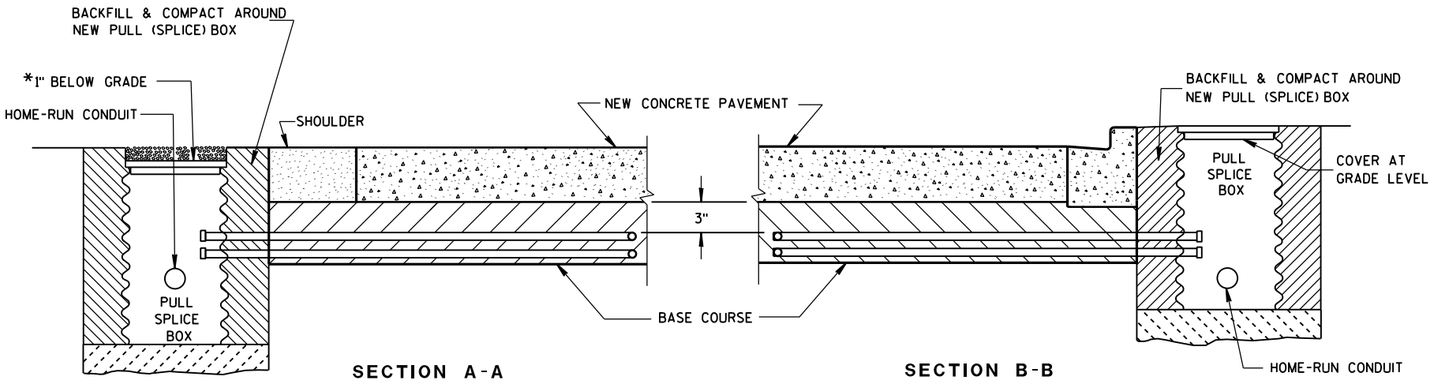


SECTION A-A
NO CURB & GUTTER

SECTION B-B
CURB & 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.

LOOP SIZE, CONFIGURATION LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL (SPLICE) BOX.

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 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.

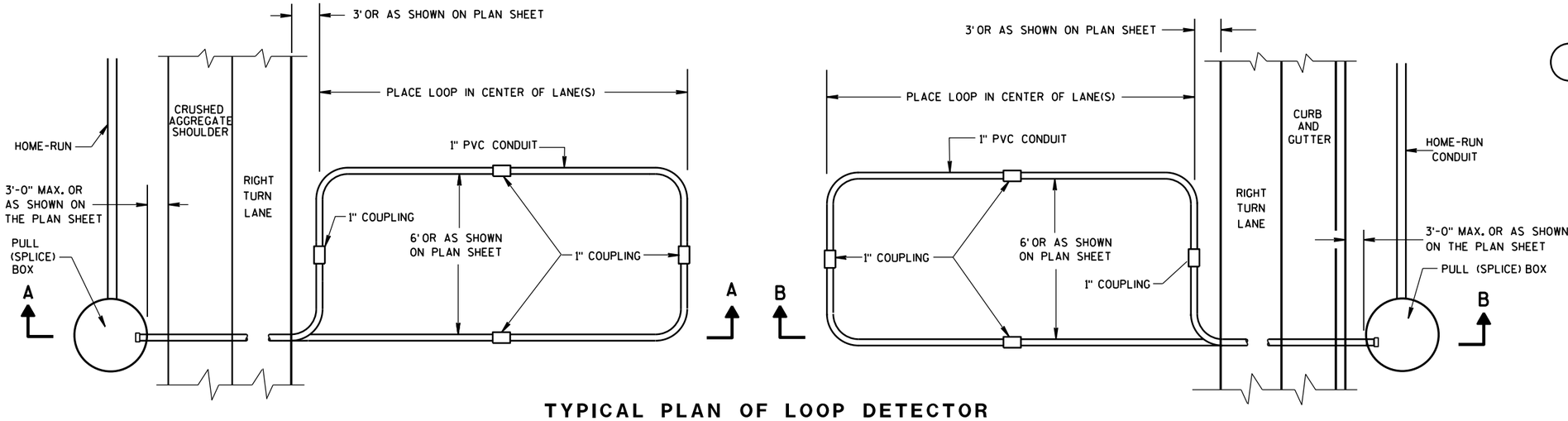
THE #12 AWG. LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL (SPLICE) BOXES AT THE SIDE OF THE ROAD.

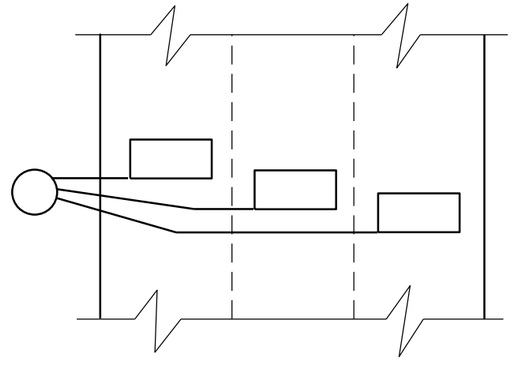
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPLICE) BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPLICE) BOX, AND BE INSTALLED IN ONE, NON-SPLICED CONTINUOUS LENGTH.

PROTECTION OF THE CONDUITS 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 OF 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

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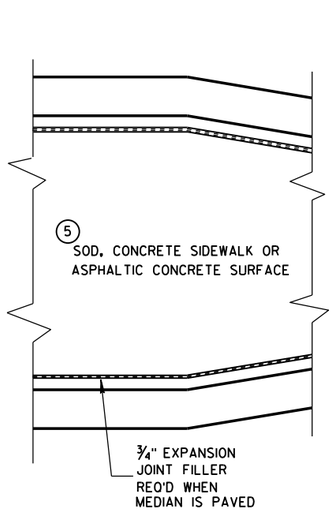
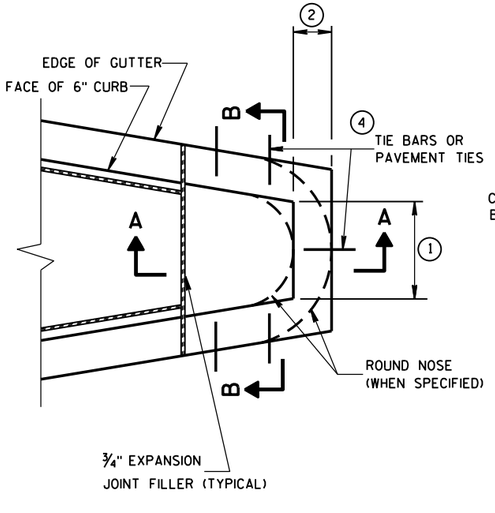
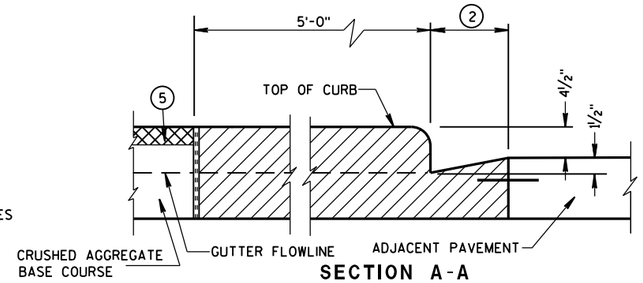
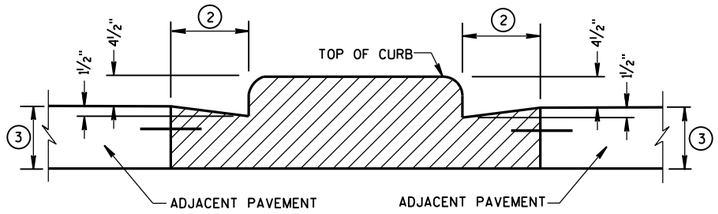






SECTION A-A



SECTION B-B

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.

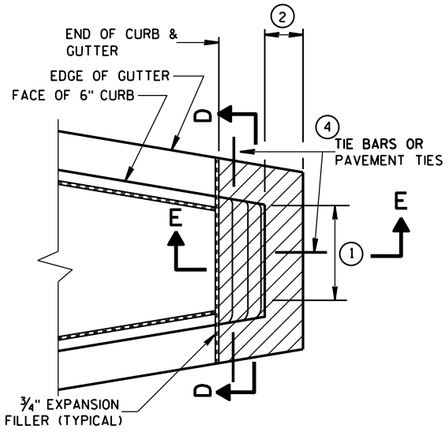
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

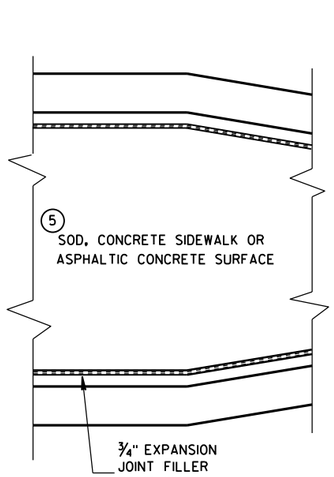
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

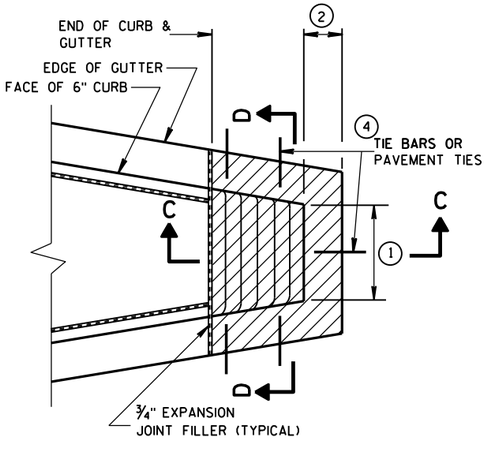
(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

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.

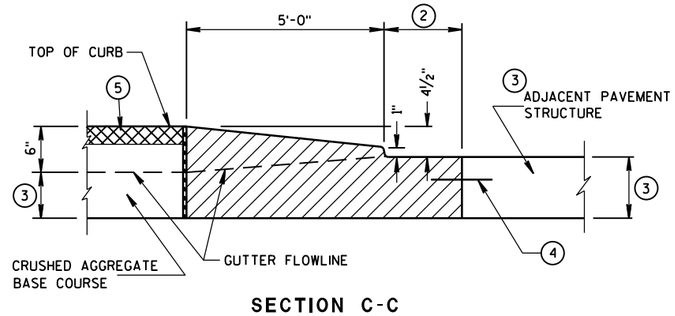
(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.



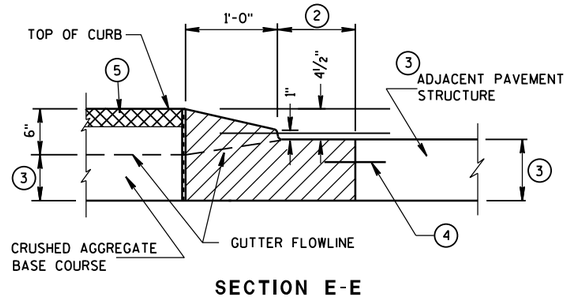




CONCRETE MEDIAN SLOPED NOSE TYPE 1

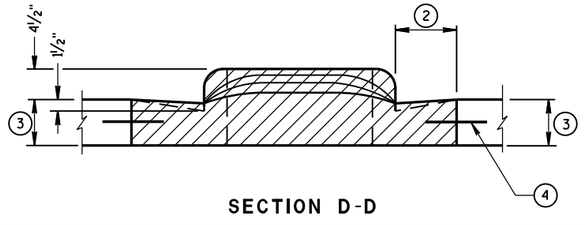


SECTION C-C



SECTION E-E

CONCRETE MEDIAN SLOPED NOSE TYPE 2



SECTION D-D

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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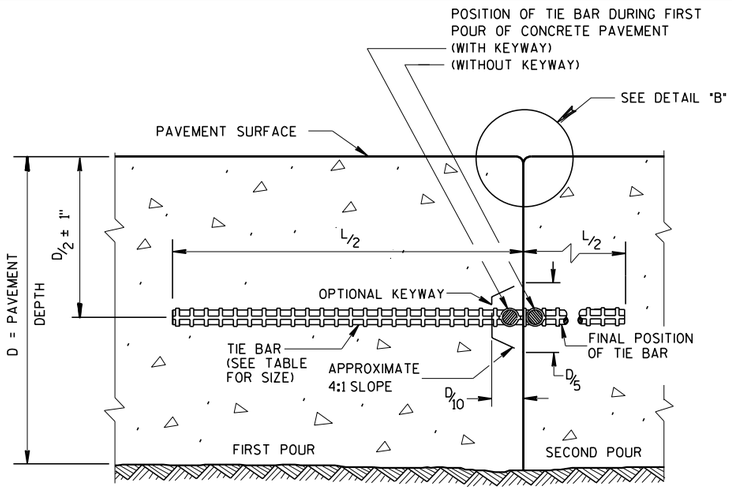
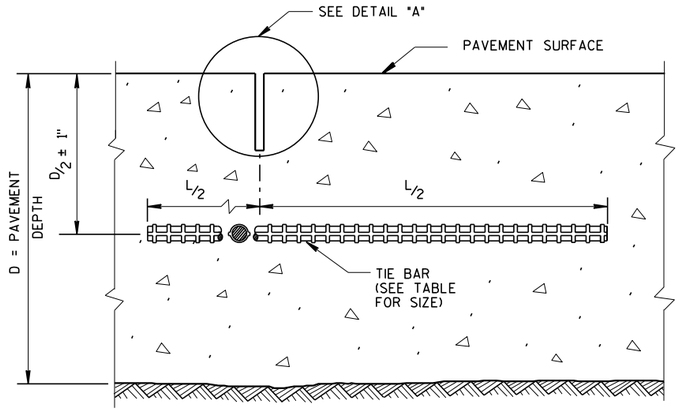
S.D.D. 11 B 2-2



CONSTRUCTION JOINT



SAWED JOINT

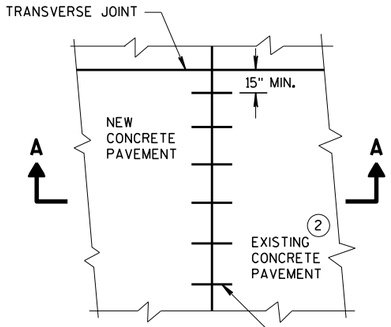
GENERAL NOTES

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

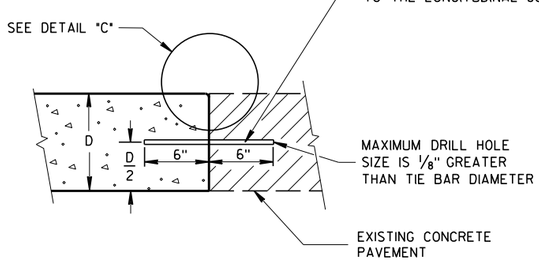
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

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

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

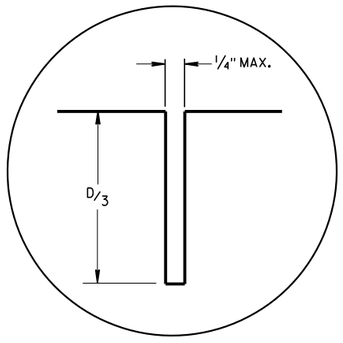


PLAN VIEW

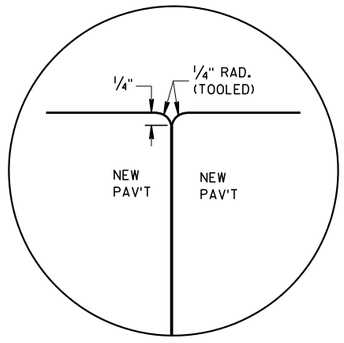


SECTION A-A

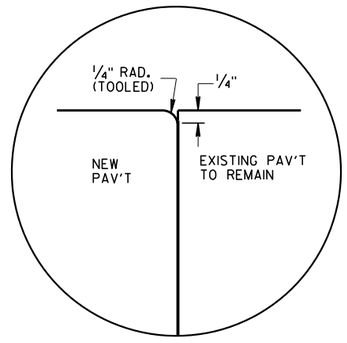
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT



DETAIL "A"



DETAIL "B"



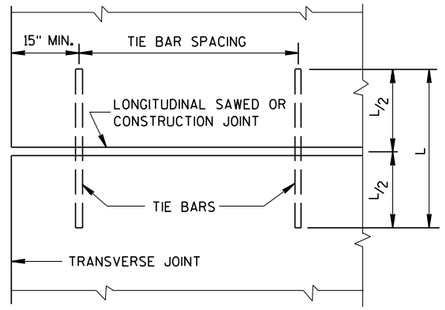
DETAIL "C"

TIE BAR TABLE

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

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

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



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT
LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Peter Kemp PE — PAVEMENT SUPE
FHWA

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

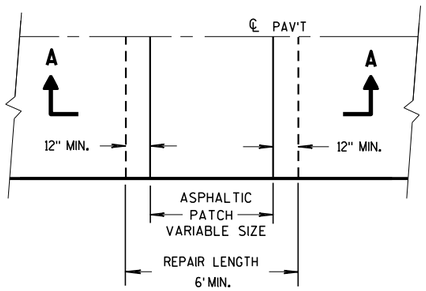
GENERAL NOTES

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.

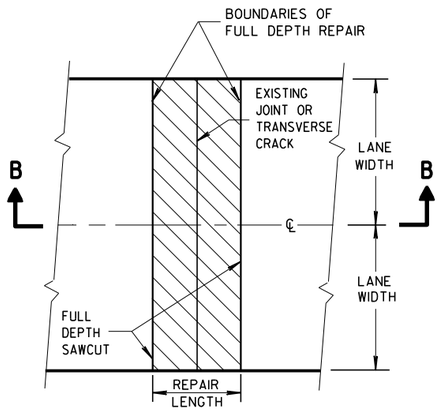
PROVIDE A 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK IN THE SAME LANE.

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

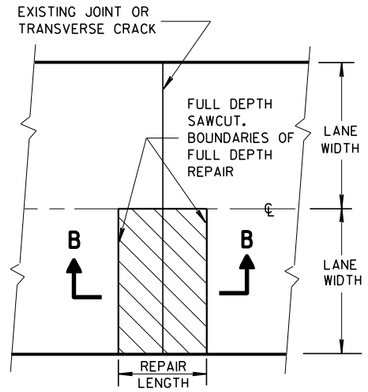
(1) DOWEL BARS MIGHT NOT EXIST.



PLAN VIEW

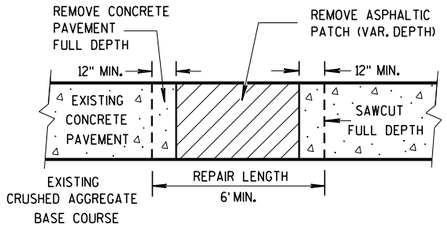


PLAN VIEW
(DOUBLE LANE REPAIR)



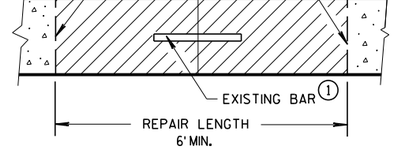
PLAN VIEW
(SINGLE LANE REPAIR)

FULL DEPTH CONCRETE PAVEMENT REMOVAL



SECTION A-A

HMA PATCH REMOVAL



SECTION B-B

CONCRETE REMOVAL

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 13 C 9-15a

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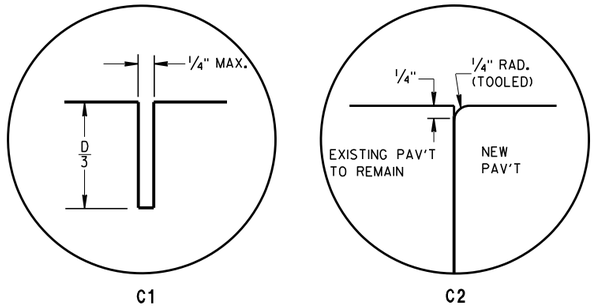
S.D.D. 13 C 9-15a



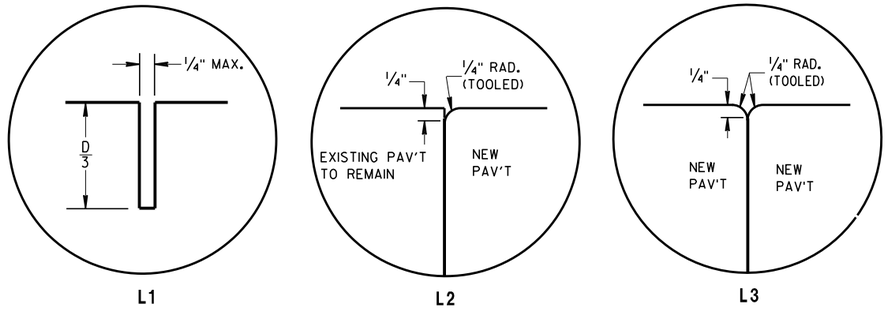
TRANSVERSE JOINTS

TIE BAR TABLE

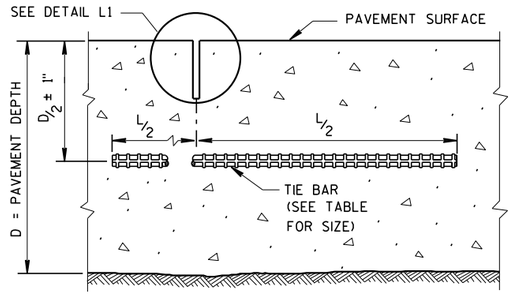
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24"**

* 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.



LONGITUDINAL JOINTS



SECTION C-C

SAWED LONGITUDINAL JOINT

GENERAL NOTES

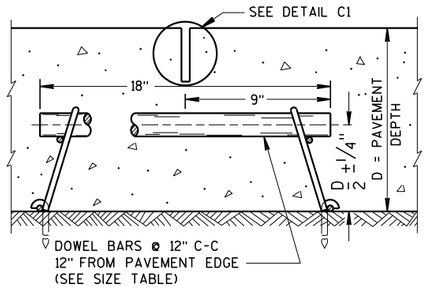
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

CONCRETE PAVEMENT REPAIRS OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

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

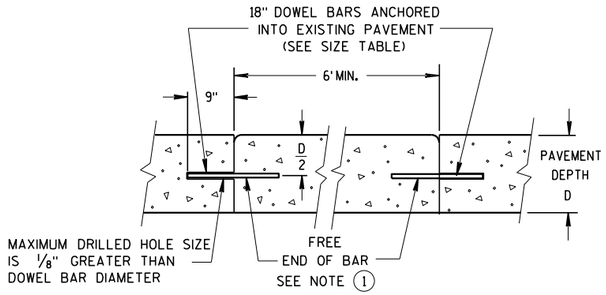
FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

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

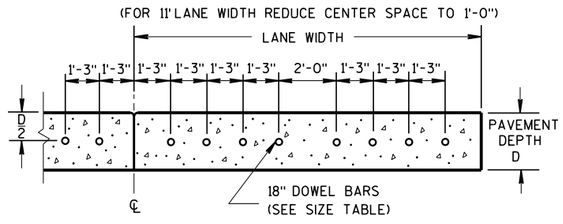


SECTION F-F

CONTRACTION JOINT



SECTION D-D

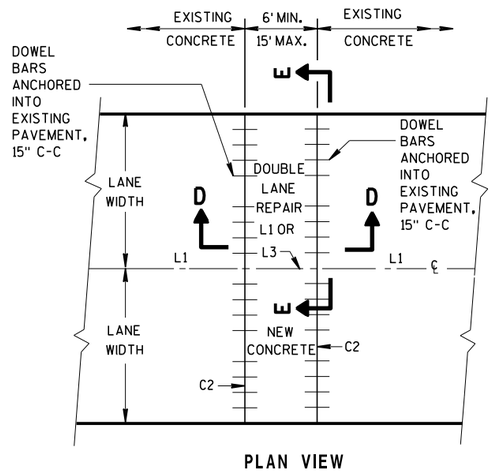


SECTION E-E

DRILLED DOWEL BAR CONSTRUCTION JOINT

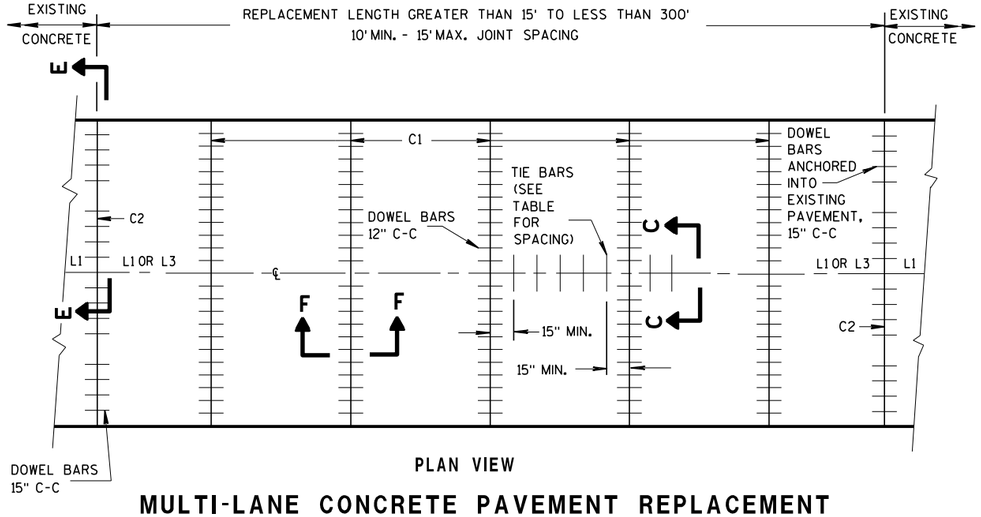
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

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



PLAN VIEW

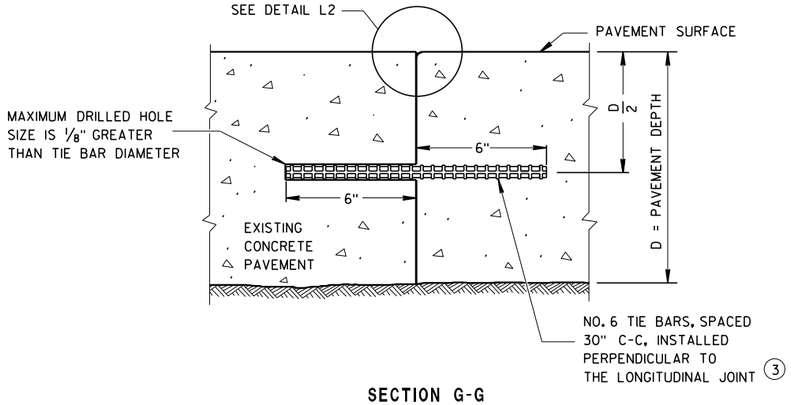
MULTI-LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT



SECTION G-G

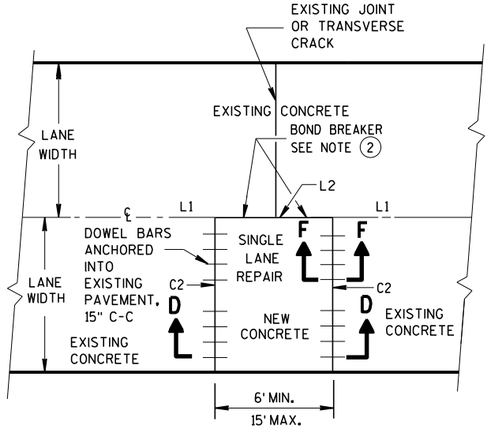
TIE BARS ANCHORED INTO EXISTING PAVEMENT

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.

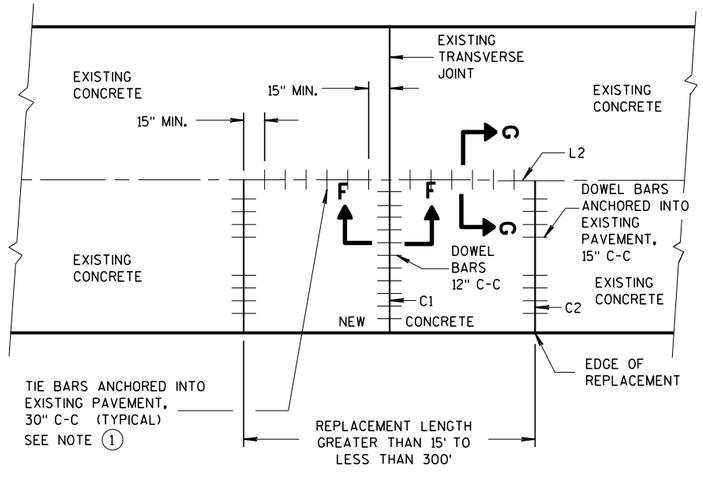
(2) USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.

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



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

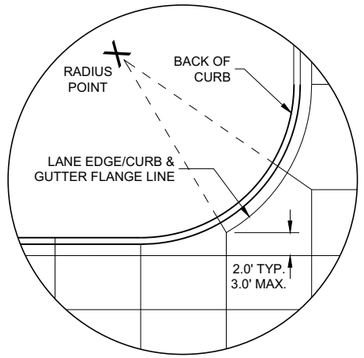
APPROVED

March 2018 — DATE

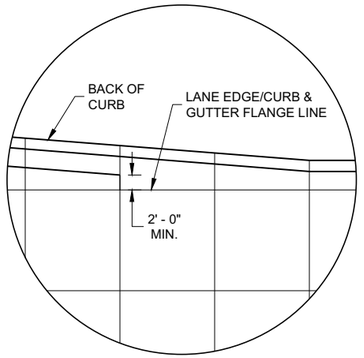
/S/ Peter Ken... — PAVEMENT SUPE...

FHWA

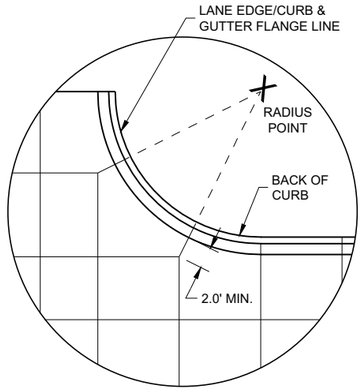
S.D.D. 13 C 9-15c



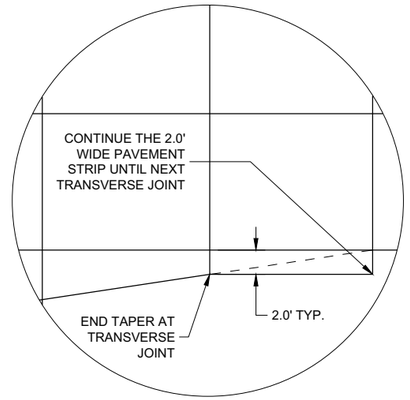
DETAIL "A"



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.

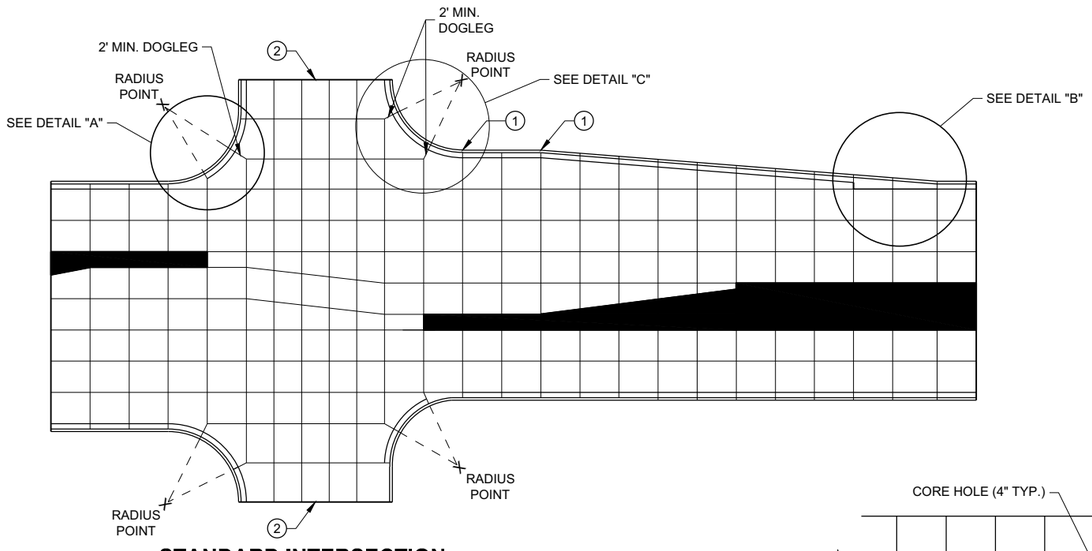
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

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.

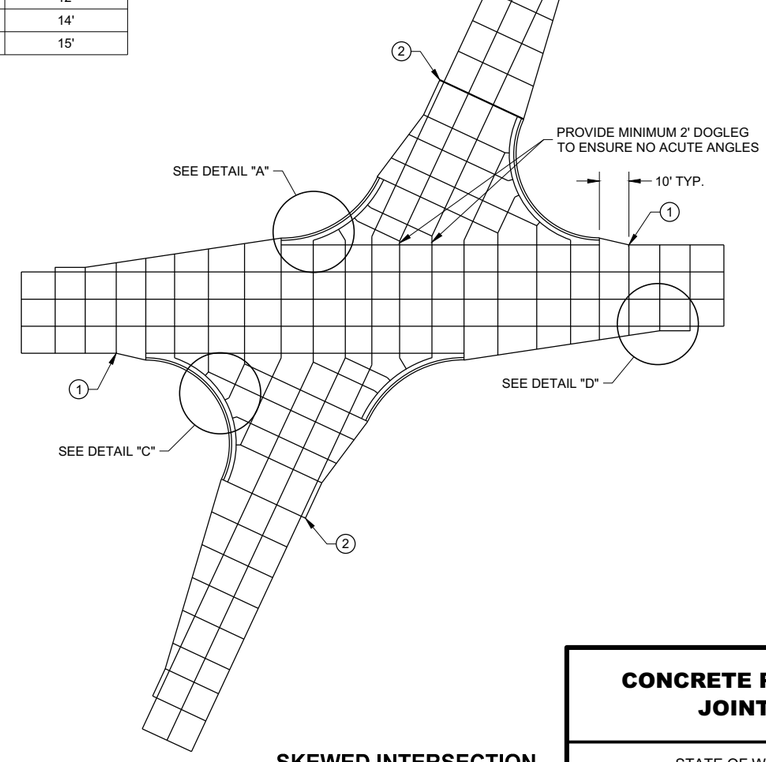
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITHEDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



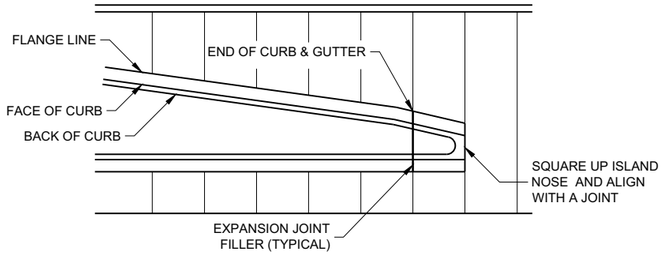
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

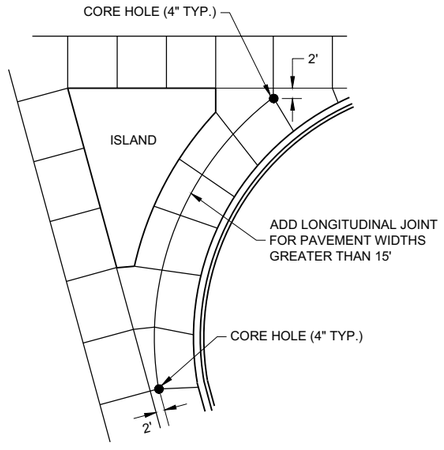
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 ½"	12'
7", 7 ½"	14'
8" & ABOVE	15'



SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 13C18 - 07a

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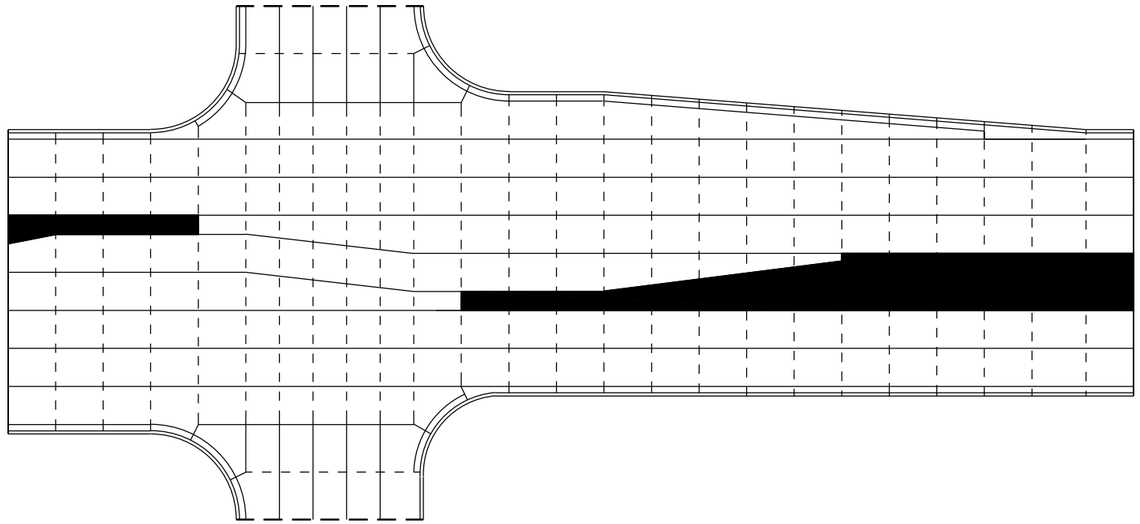
SDD 13C18 - 07a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

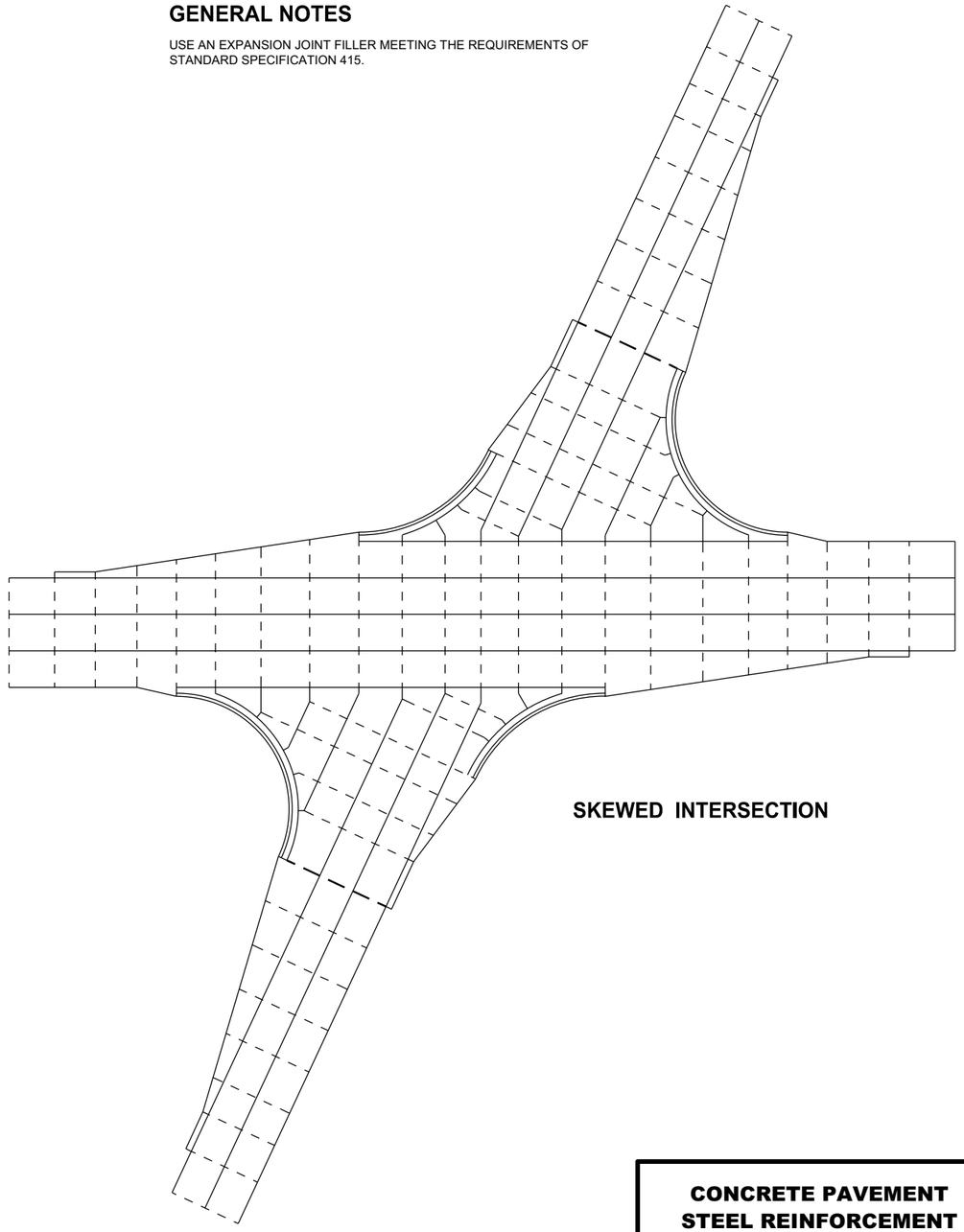
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



SKEWED INTERSECTION

6

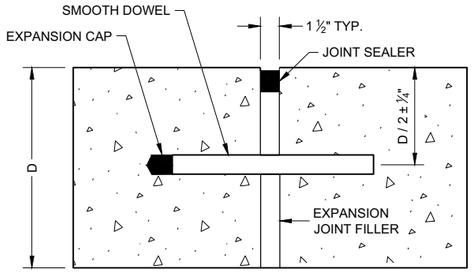
SDD 13C18 - 07b

CONCRETE PAVEMENT
STEEL REINFORCEMENT

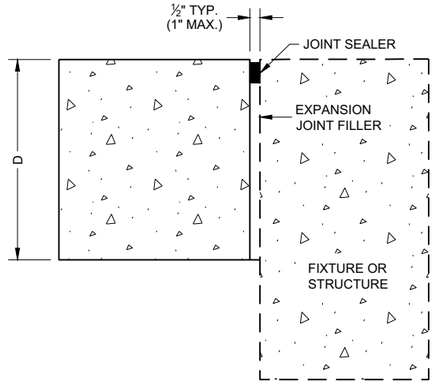
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 13C18 - 07b



DOWELED TRANSVERSE (1)



UNTIED - LONGITUDINAL

EXPANSION JOINTS

TIE BAR TABLE

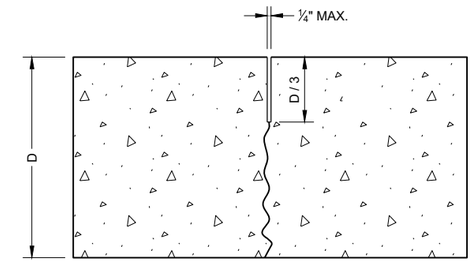
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

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

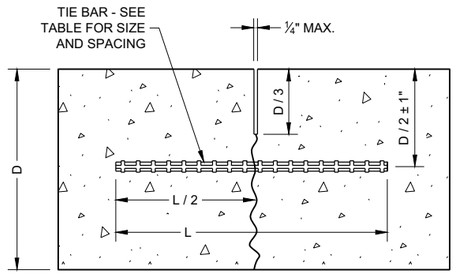
** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

GENERAL NOTES

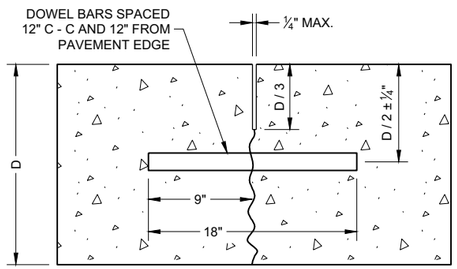
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATETHE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM 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

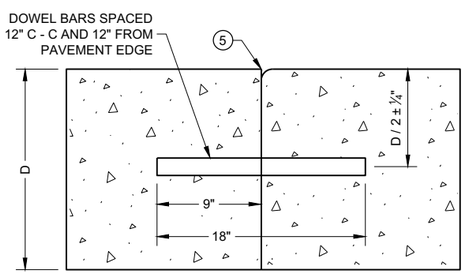


TIED LONGITUDINAL

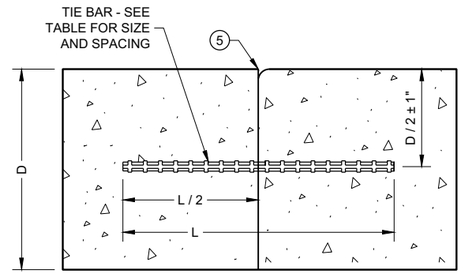


DOWELED TRANSVERSE

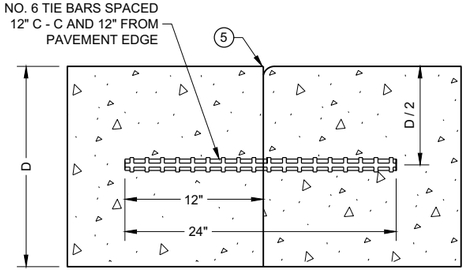
CONTRACTION JOINTS (2)



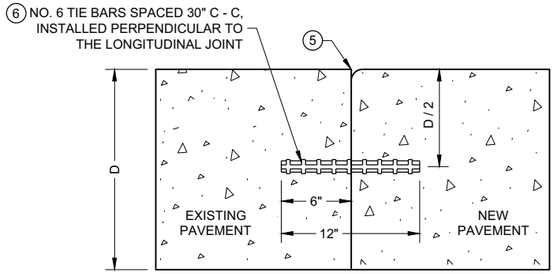
DOWELED TRANSVERSE (3)



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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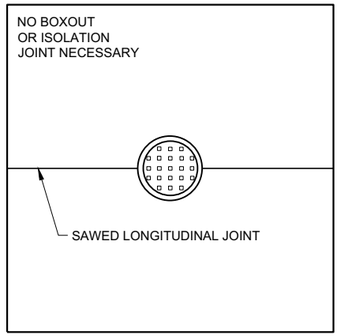
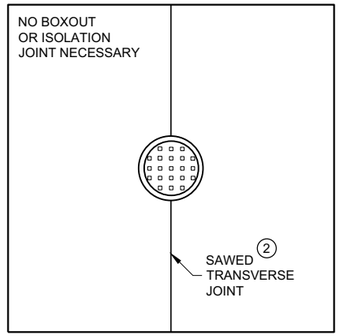
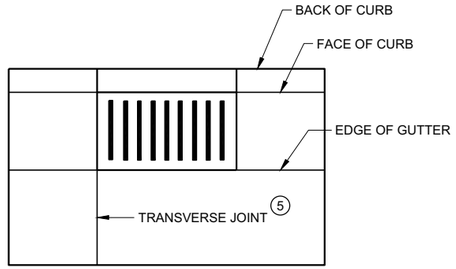
SDD 13C18 - 07c



MANHOLE WITH LONGITUDINAL JOINT



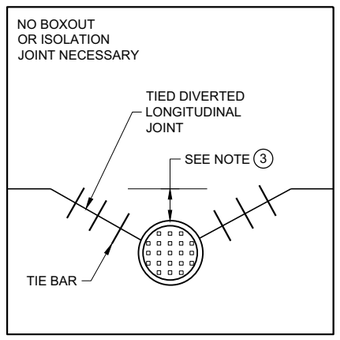
MANHOLE WITH TRANSVERSE JOINT



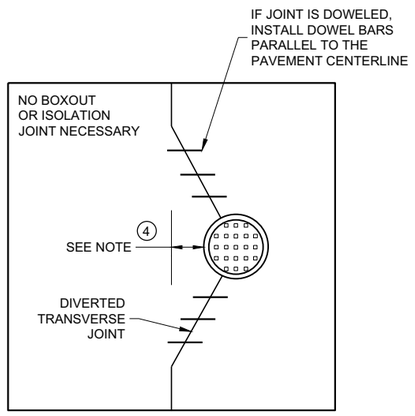
INLET WITH TRANSVERSE JOINT

GENERAL NOTES

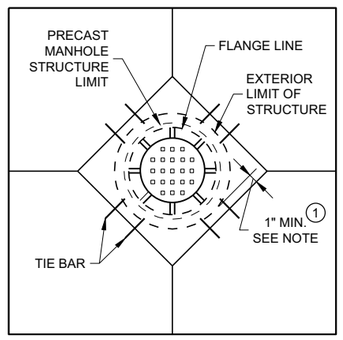
1. USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1 FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
2. ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
3. IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF 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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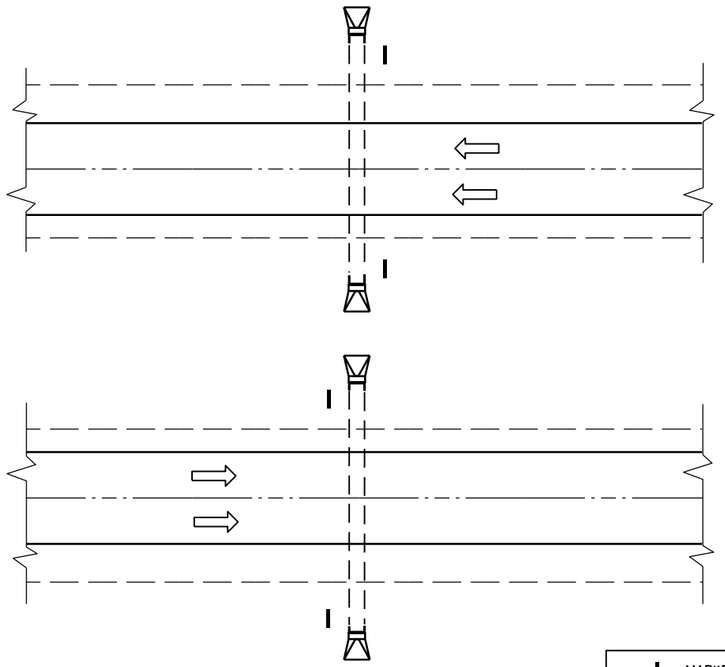
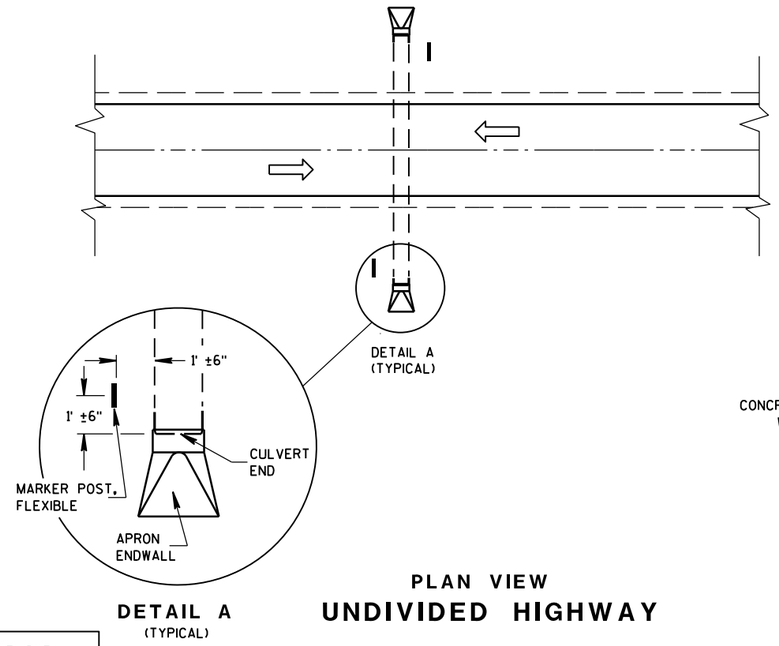
SDD 13C18 - 07d



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

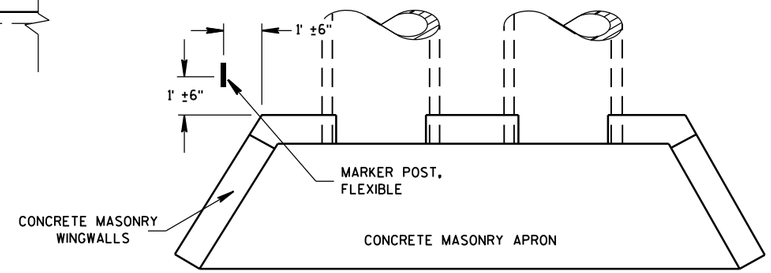
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

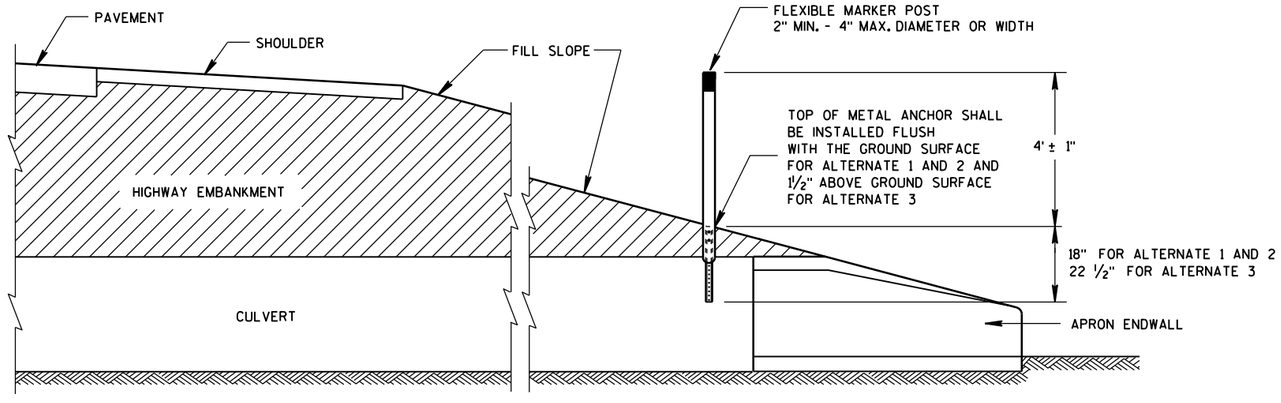
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 15 A 3-2a

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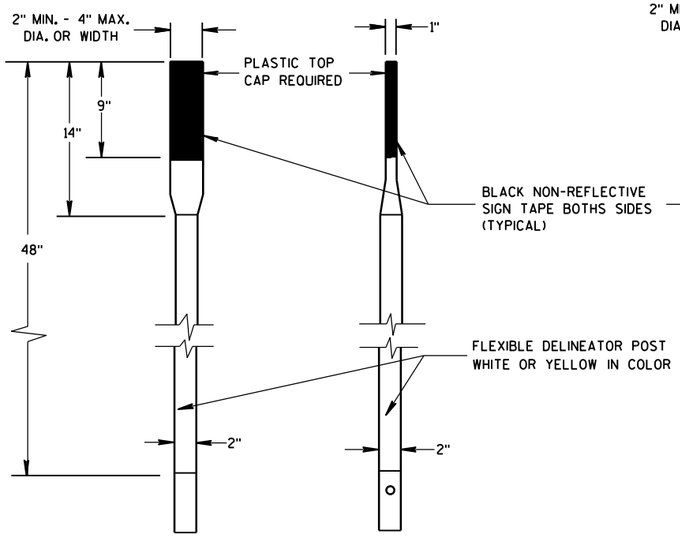
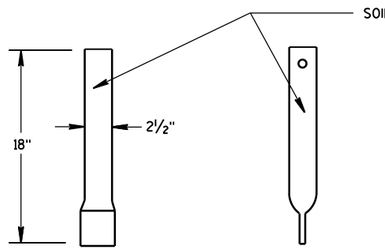
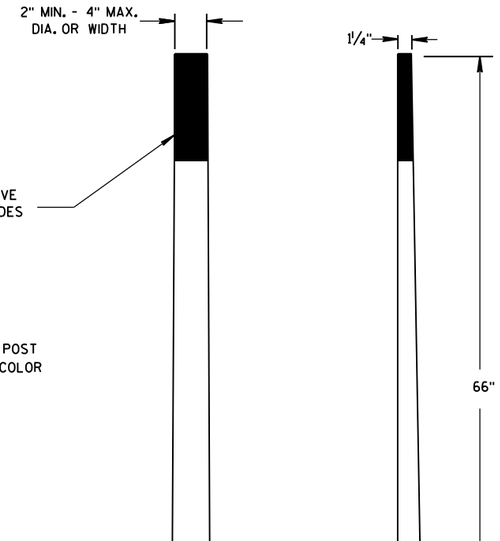
S.D.D. 15 A 3-2a





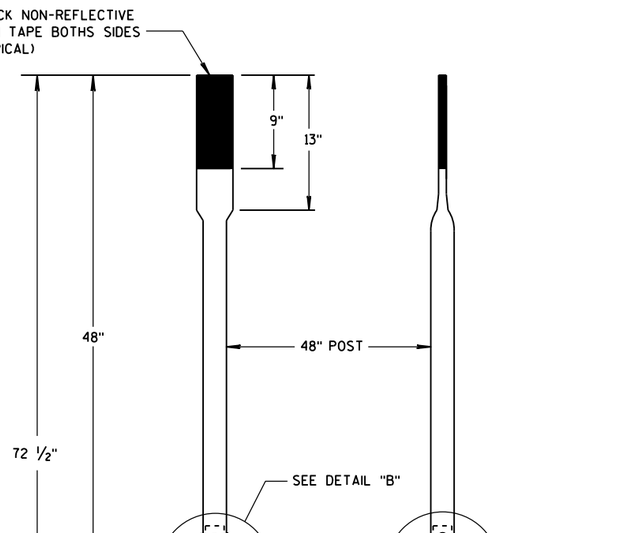
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

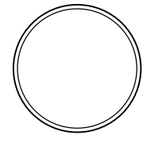
ALTERNATE 2



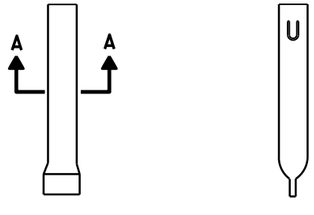
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POSTS

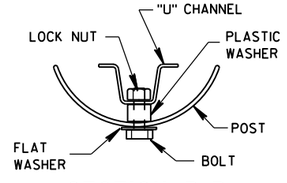


SECTION A-A

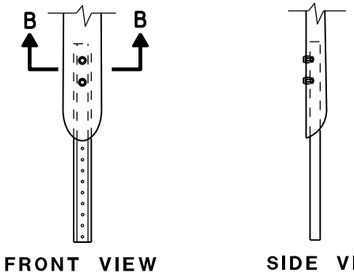


FRONT VIEW SIDE VIEW

ALTERNATE 1

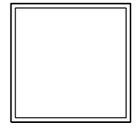


SECTION B-B

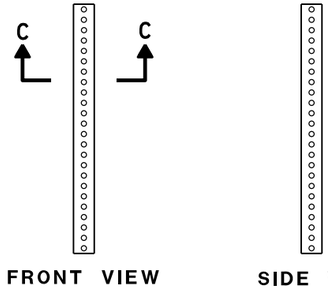


FRONT VIEW SIDE VIEW

ALTERNATE 2



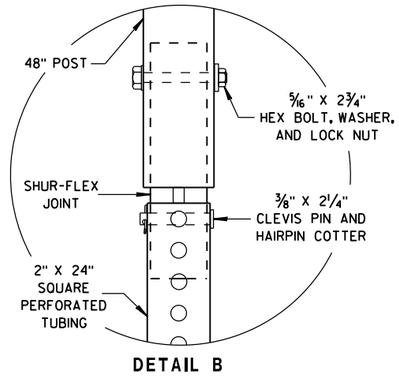
SECTION C-C



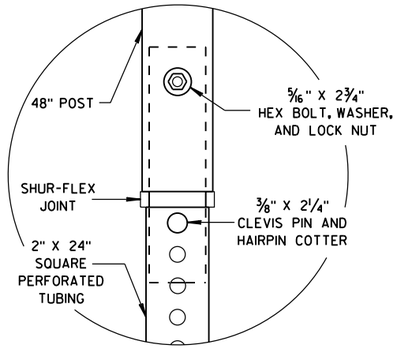
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

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S.D.D. 15 A 3-2b

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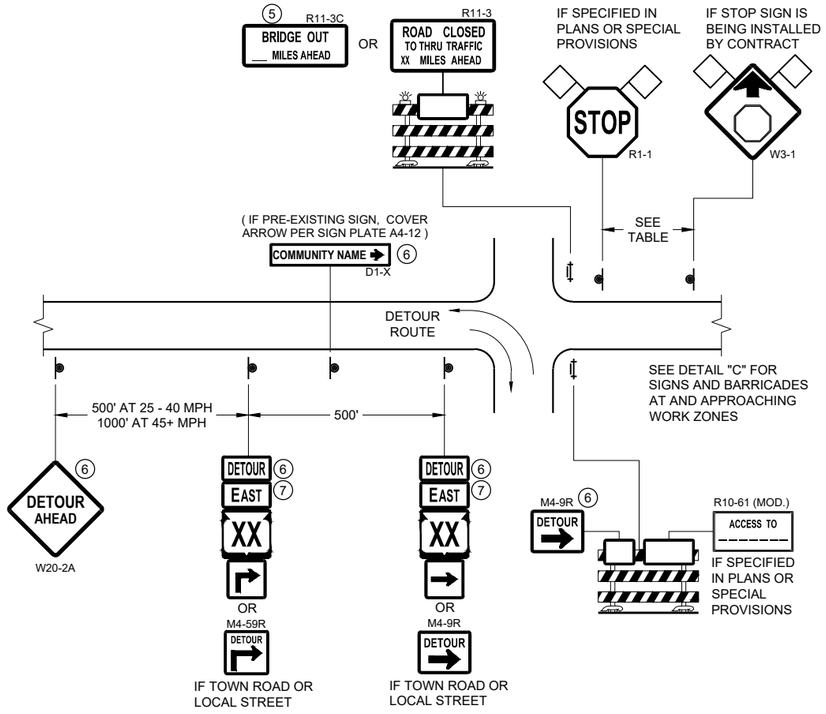
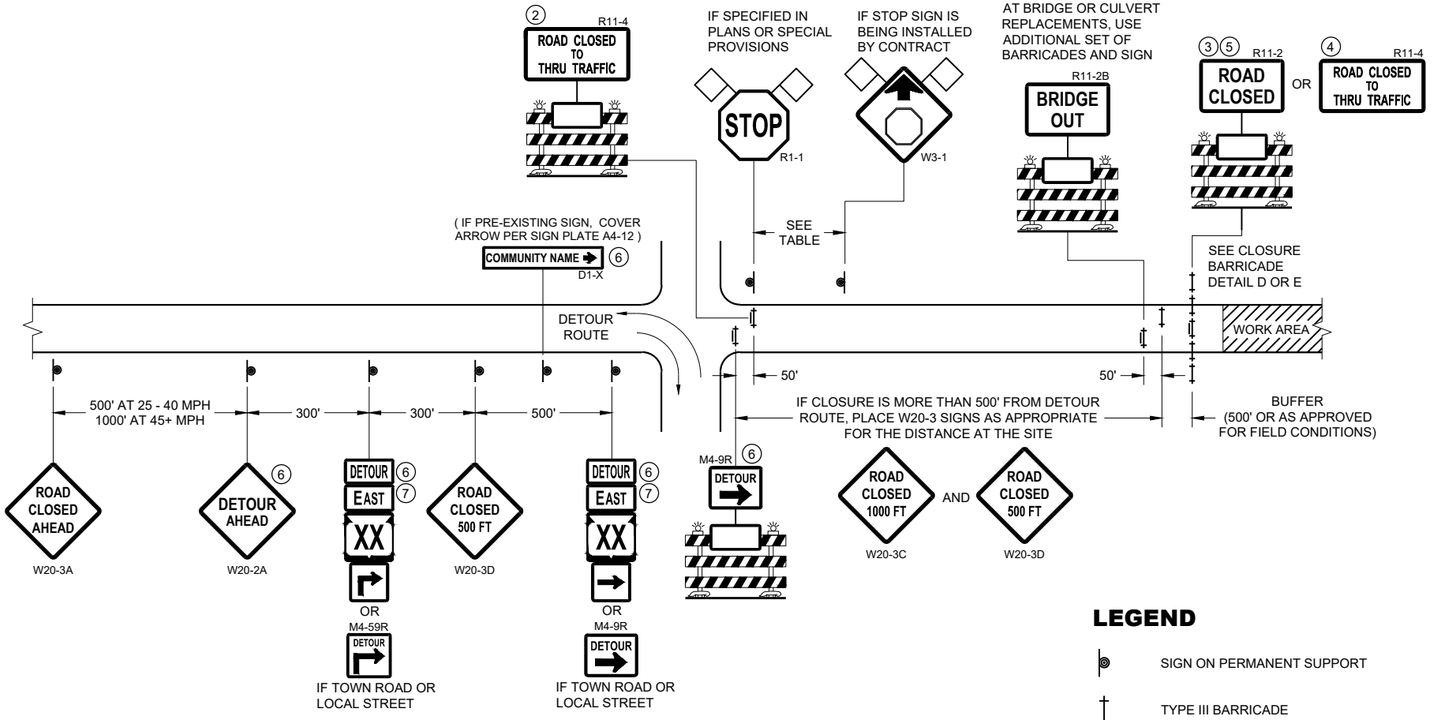
S.D.D. 15 A 3-2b



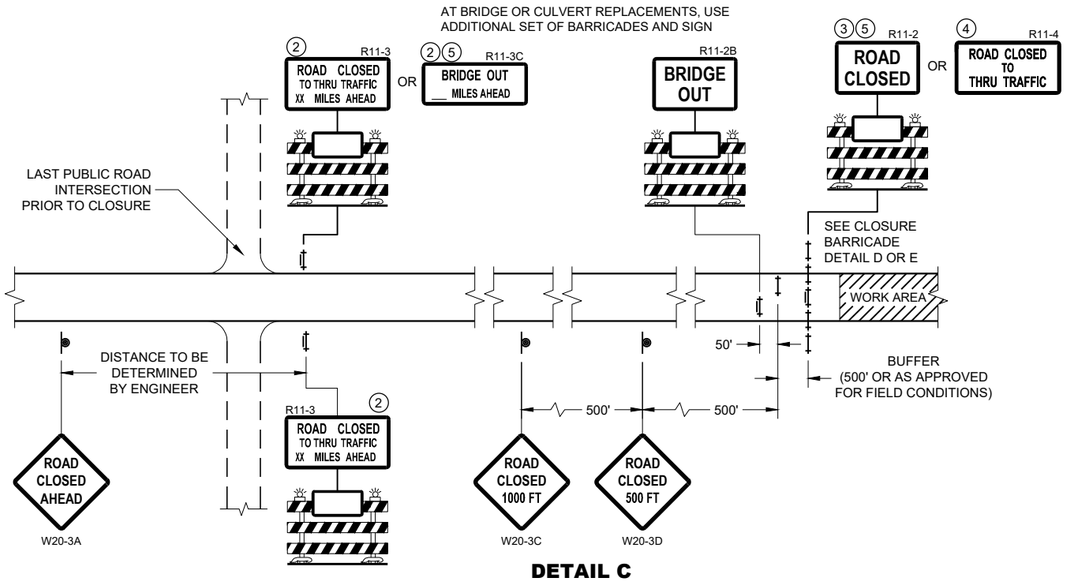
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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

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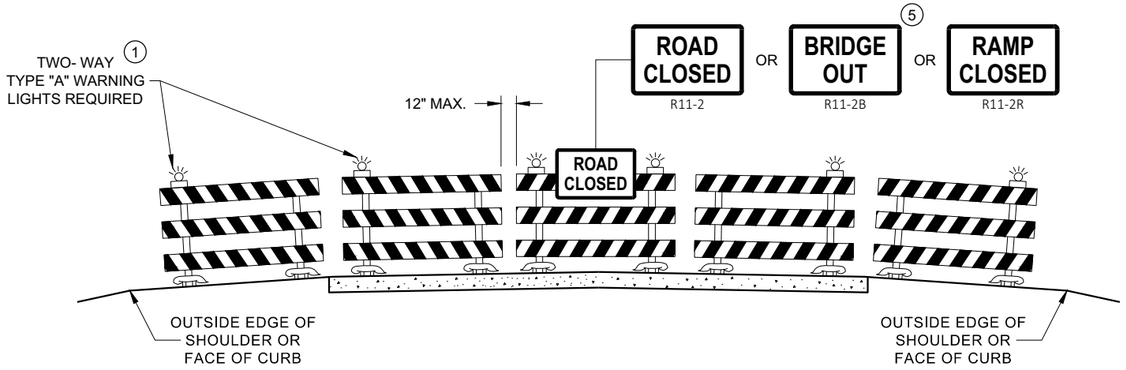
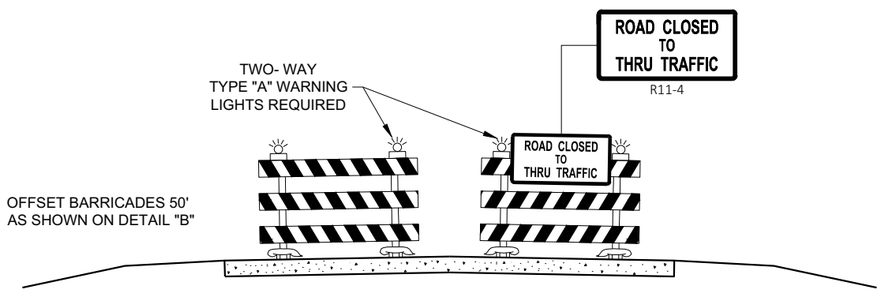
SDD 15C02 - 08a

SDD 15C02 - 08a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING.

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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SDD 15C02 - 08b

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SDD 15C02 - 08b

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 — M4 - 8
- EAST — M3 - X
- XX — M1 - 4 OR XX — M1 - 6 OR COUNTY X — M1 - 5A
- 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 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.

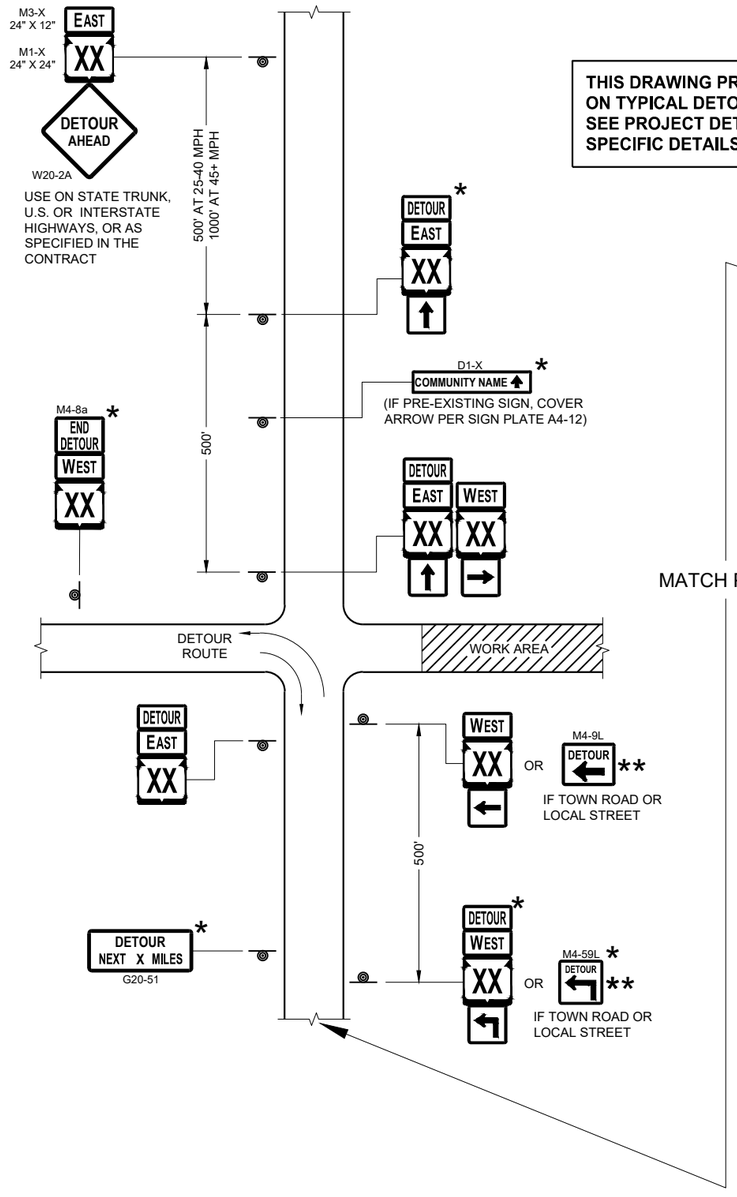
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

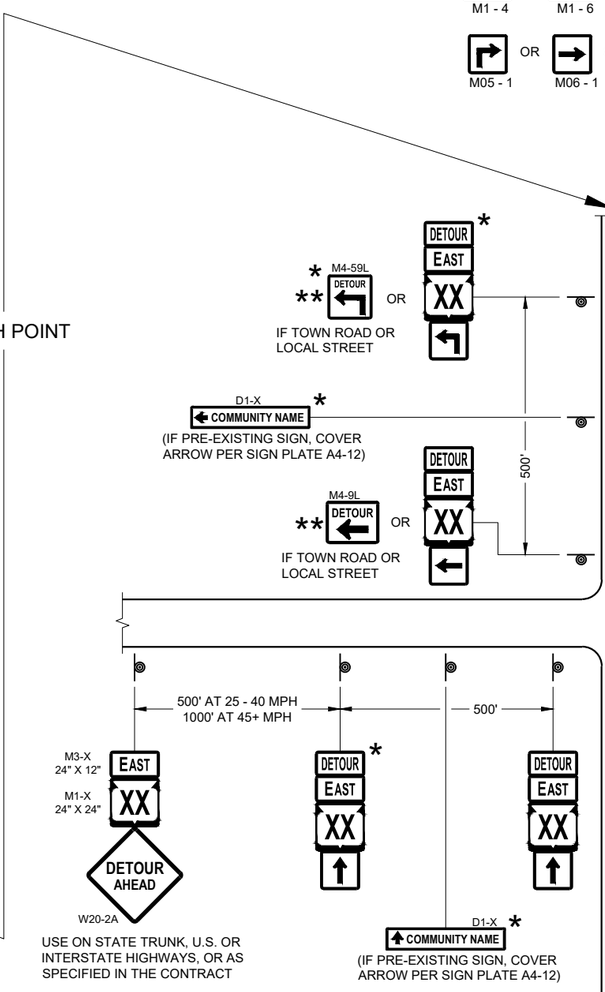
SIGN SIZES SHALL BE AS FOLLOWS:

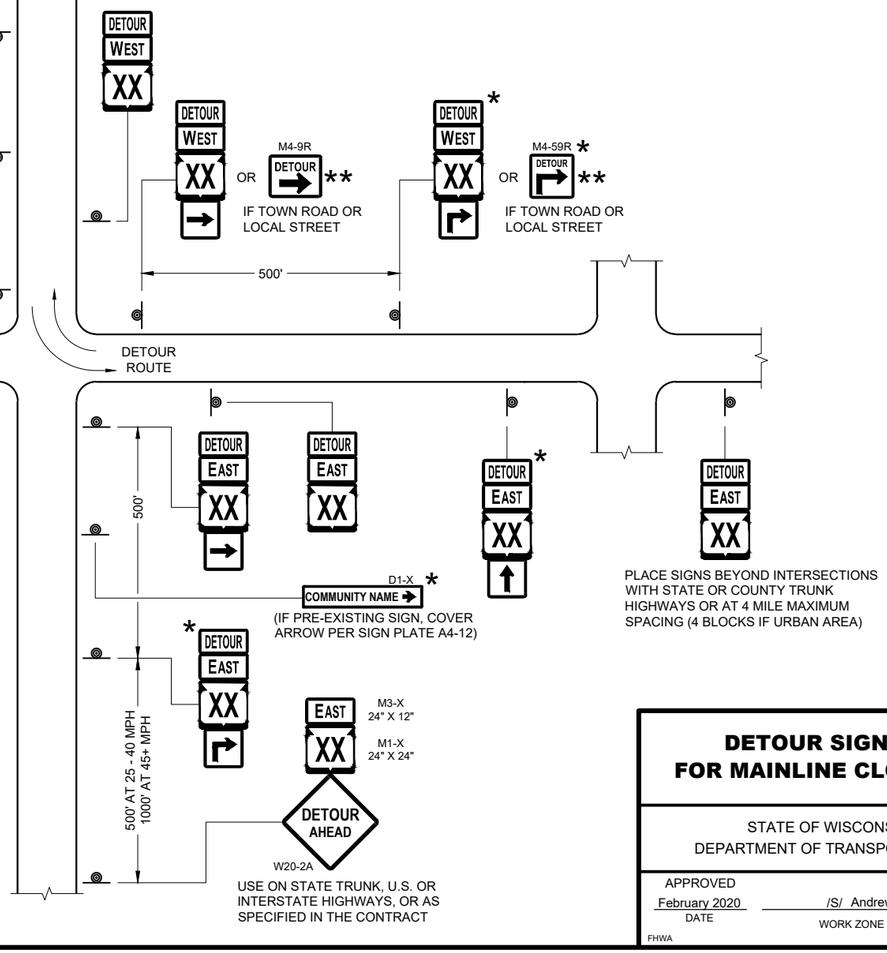
- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING 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.







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

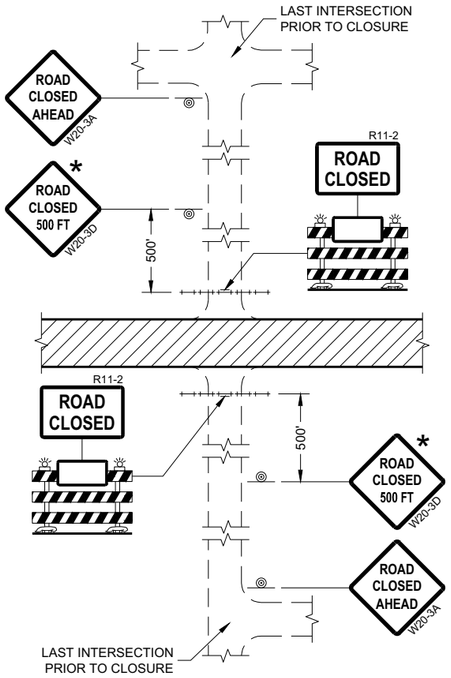
APPROVED
February 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

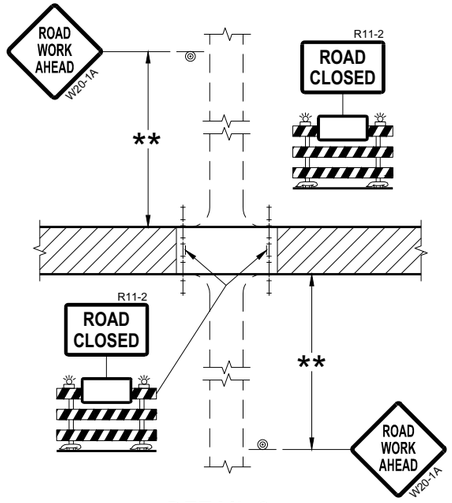
FHWA

SDD 15C02 - 08c

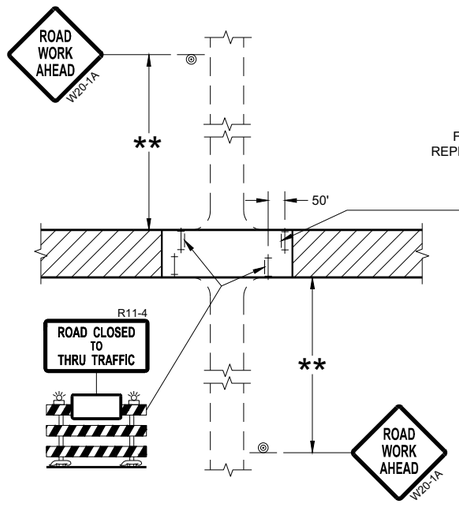
SDD 15C02 - 08c



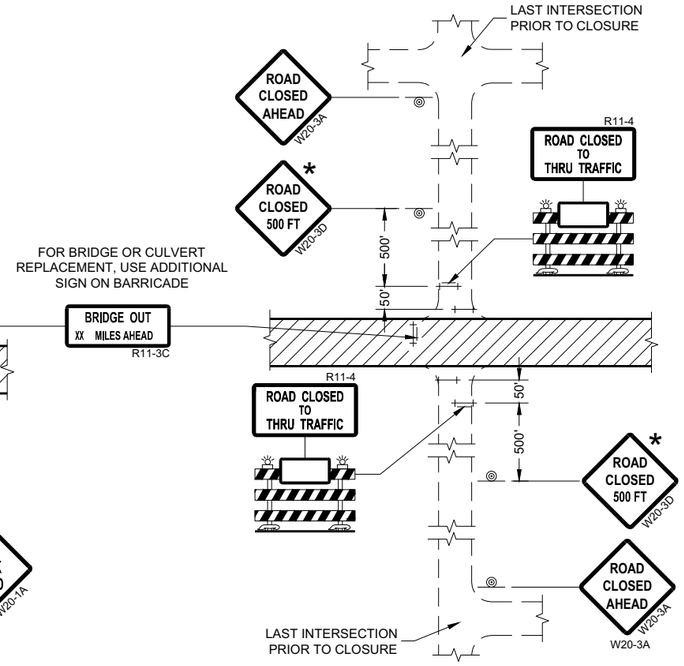
DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT)



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED.
CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT 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.

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

6

SDD 15C03 - 05

GENERAL NOTES

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

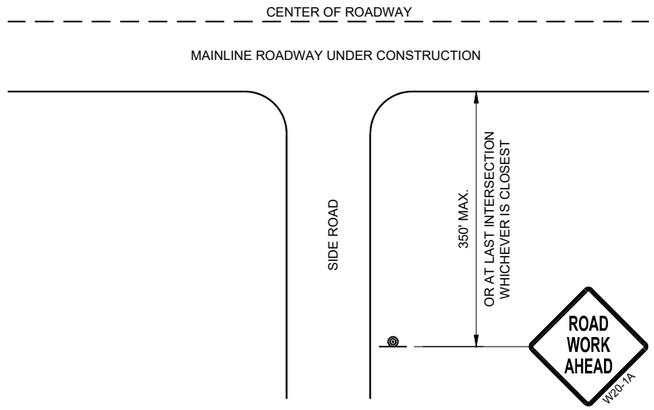
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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



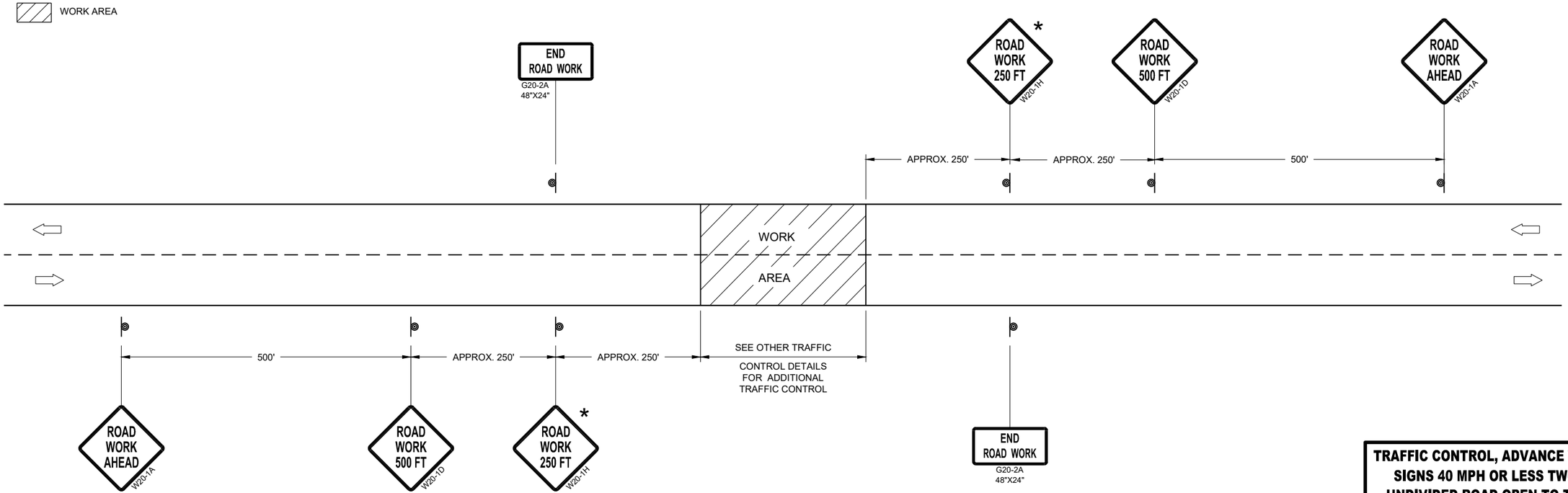
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

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

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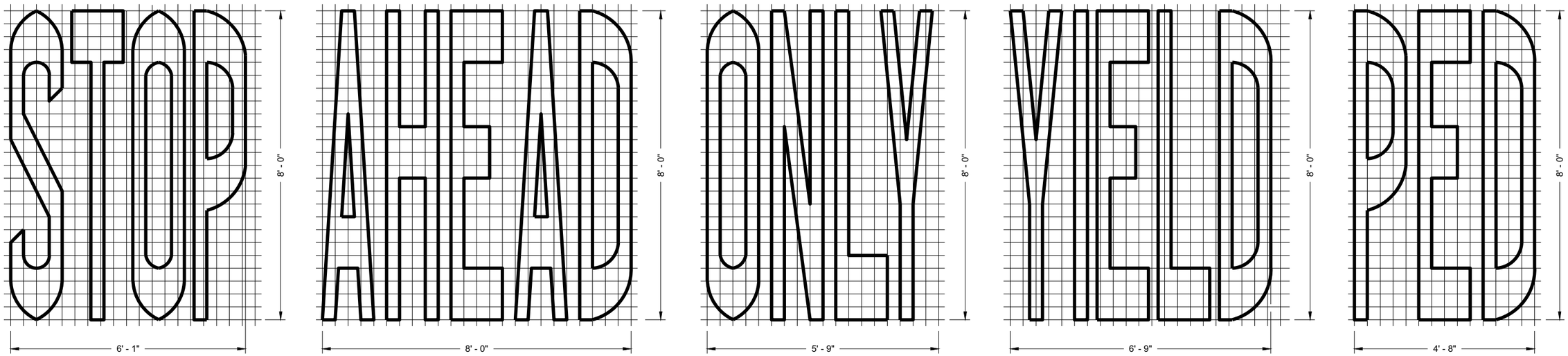
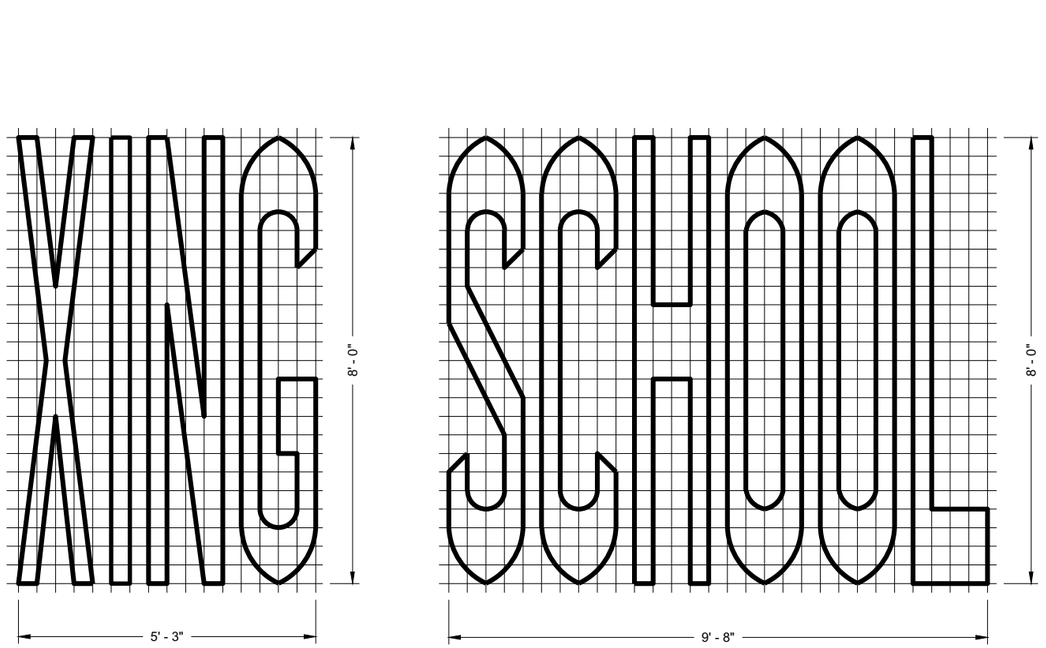
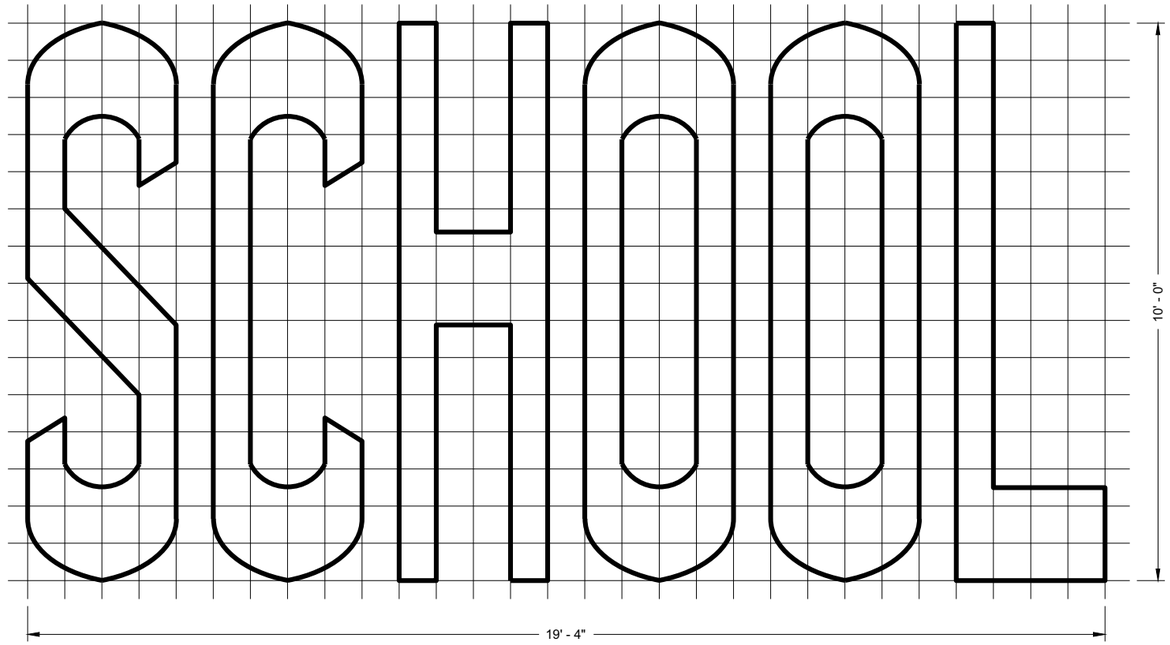
SDD 15C05 - 05





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

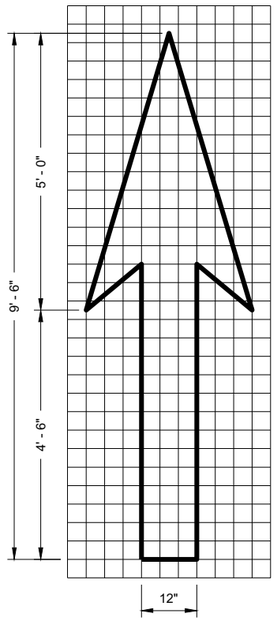
/S/ Matthew Rauch
STATE SIGNING AND MAF ENGINEER

FHWA

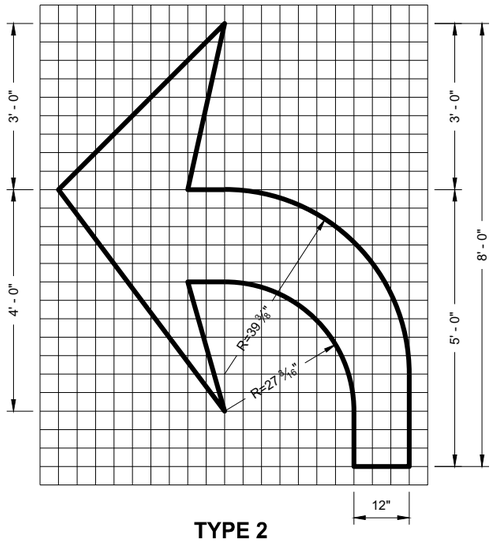
6

SDD 15C07 - 15b

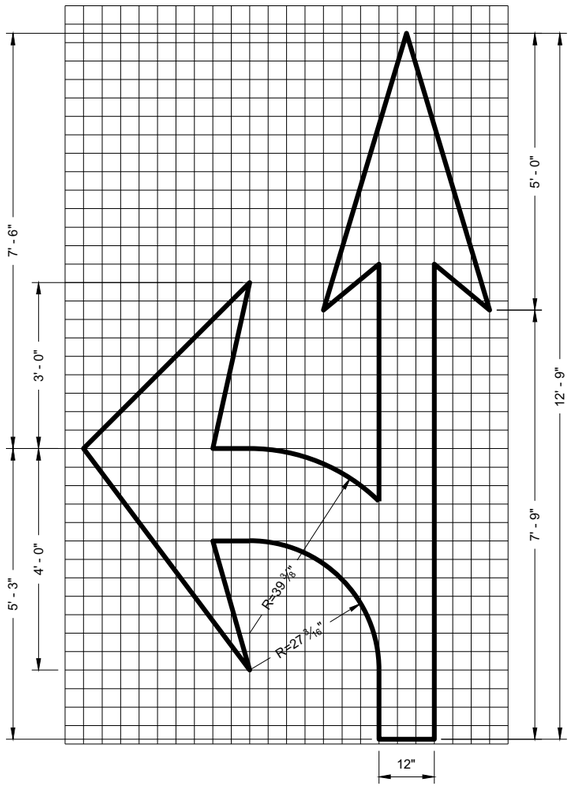
SDD 15C07 - 15b



TYPE 1



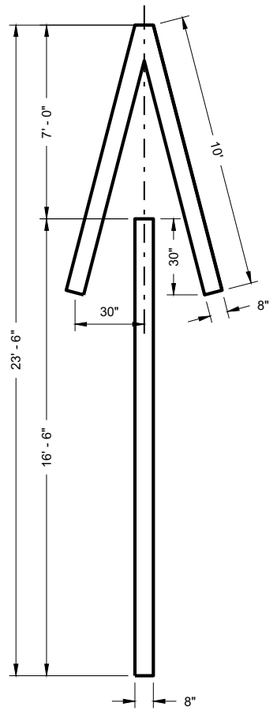
TYPE 2



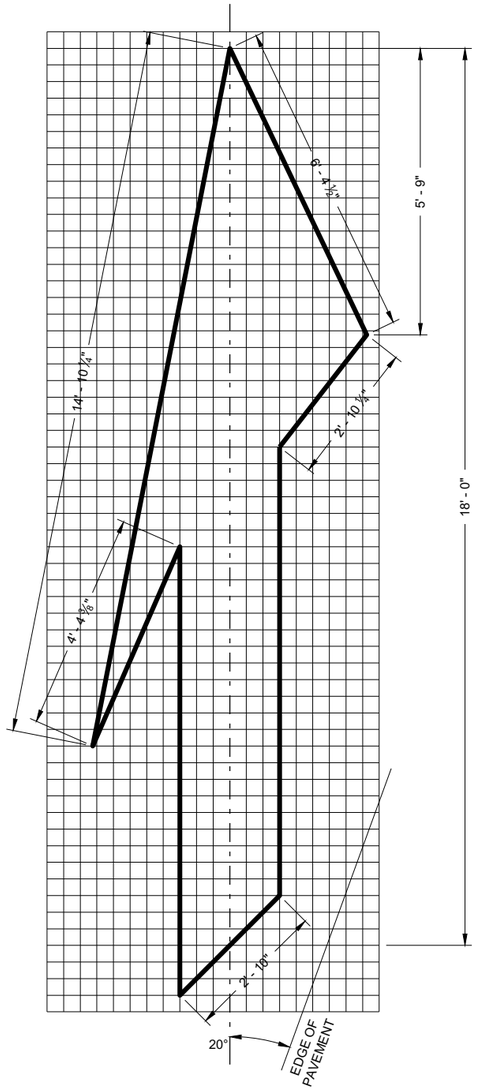
TYPE 3

GENERAL NOTES

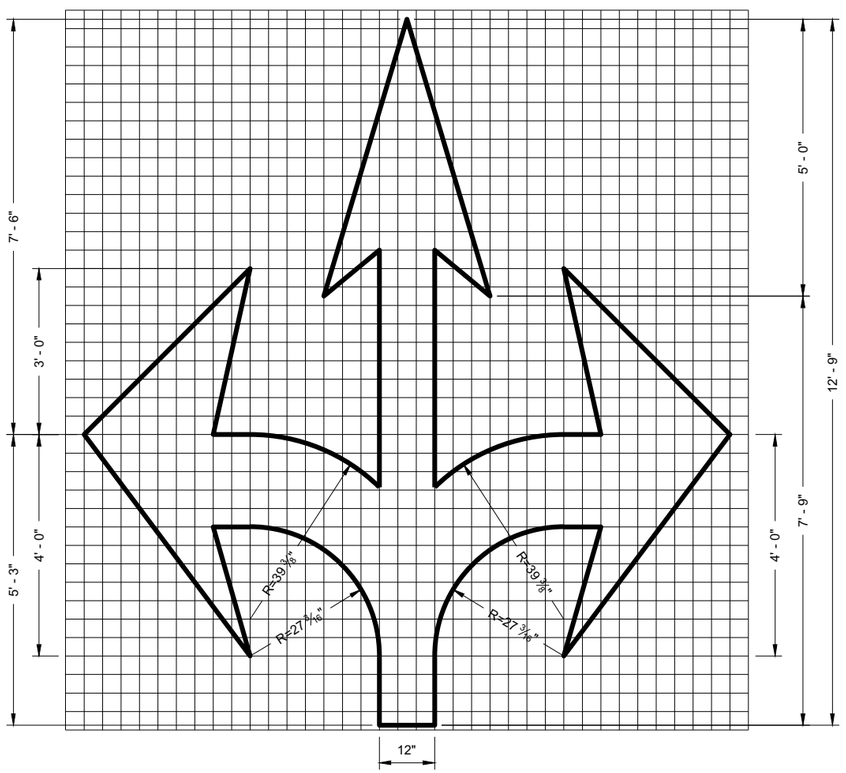
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



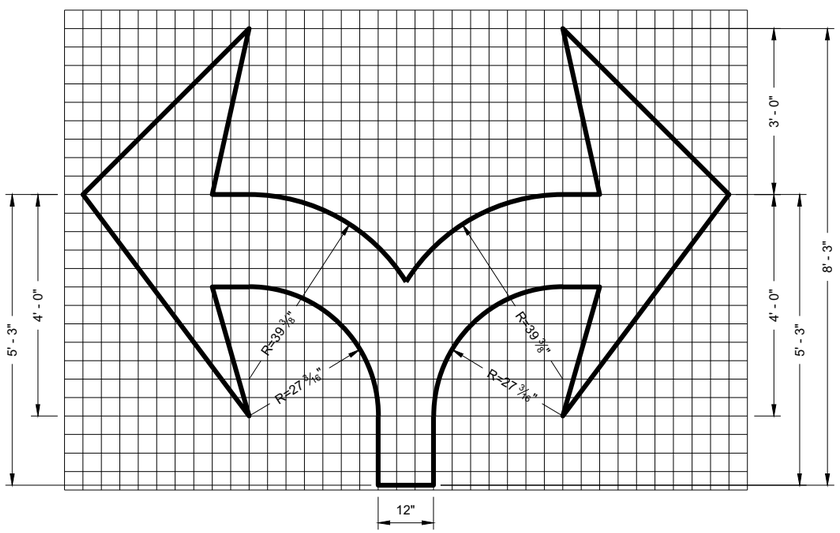
TYPE 4



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 MARKING ENGINEER

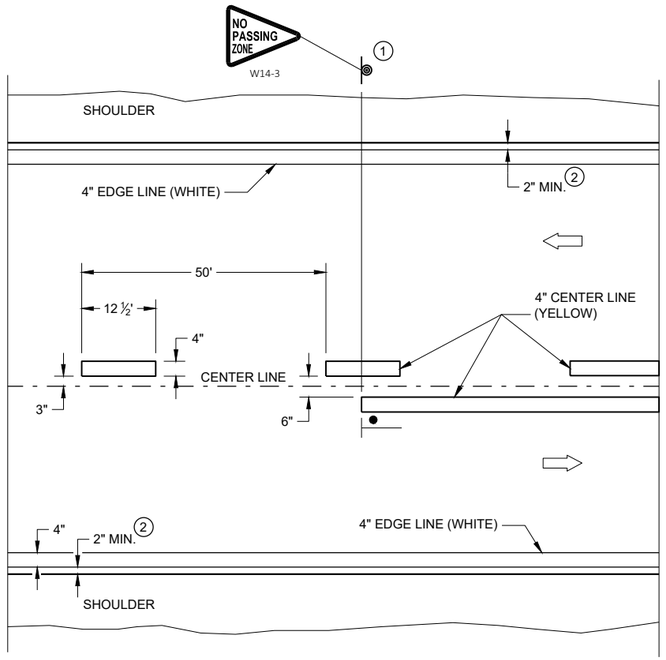
FHWA

6

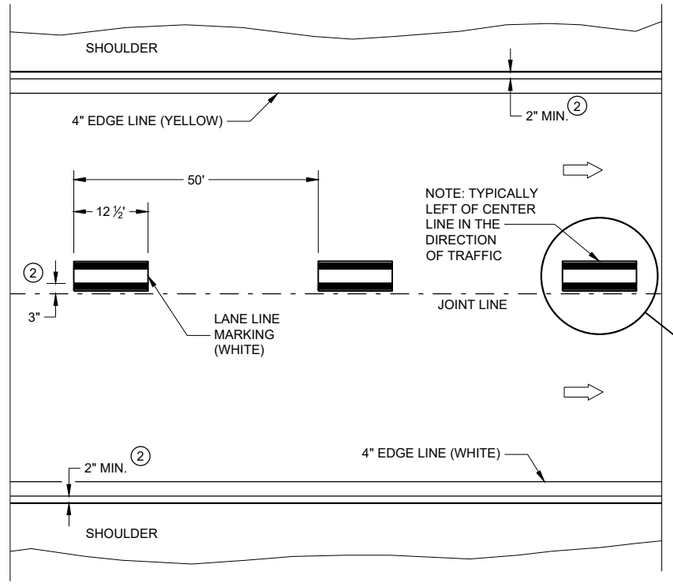
SDD 15C07 - 15c

6

SDD 15C07 - 15c

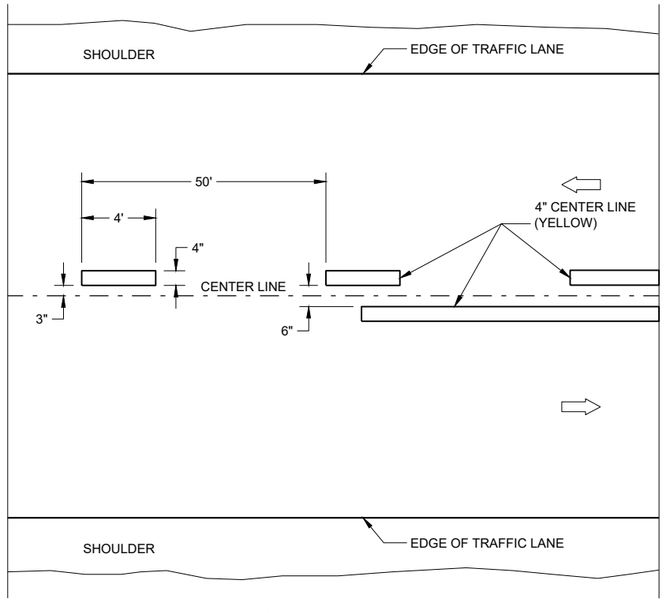


TWO WAY TRAFFIC

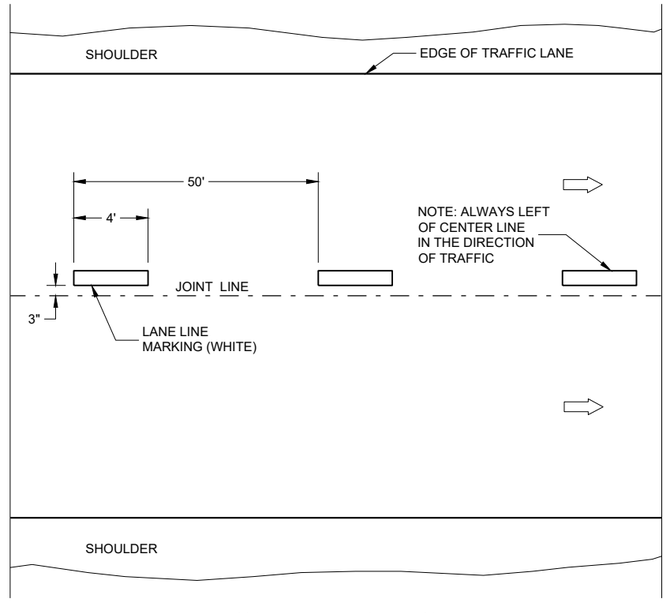


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

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

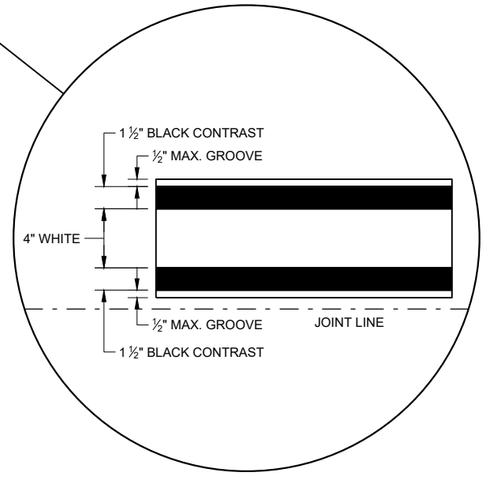
1. LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
2. MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

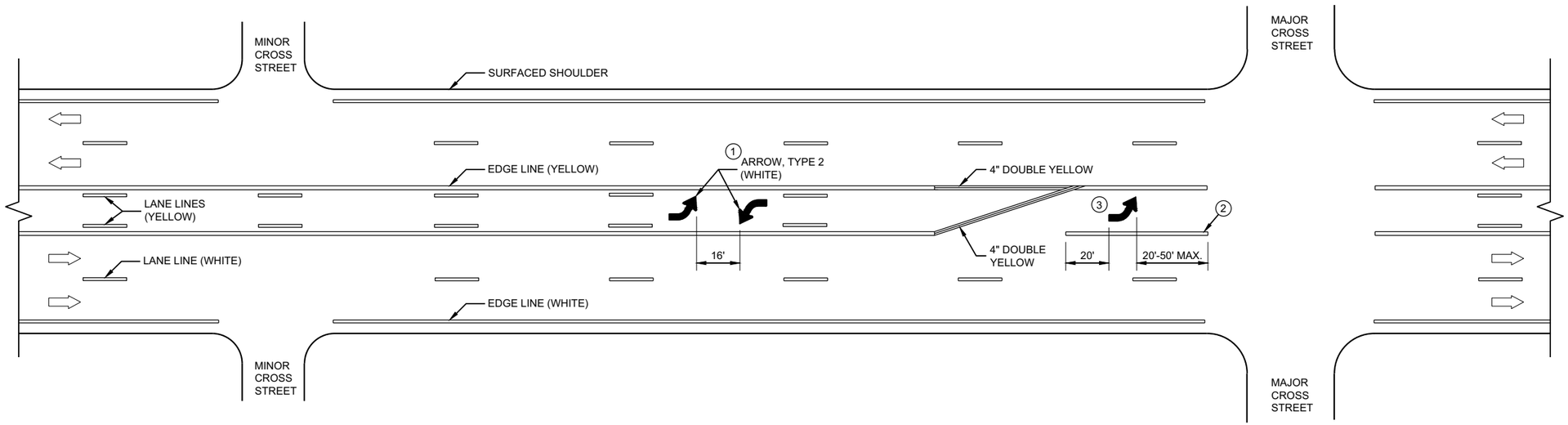
SDD 15C08 - 20a

SDD 15C08 - 20a

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

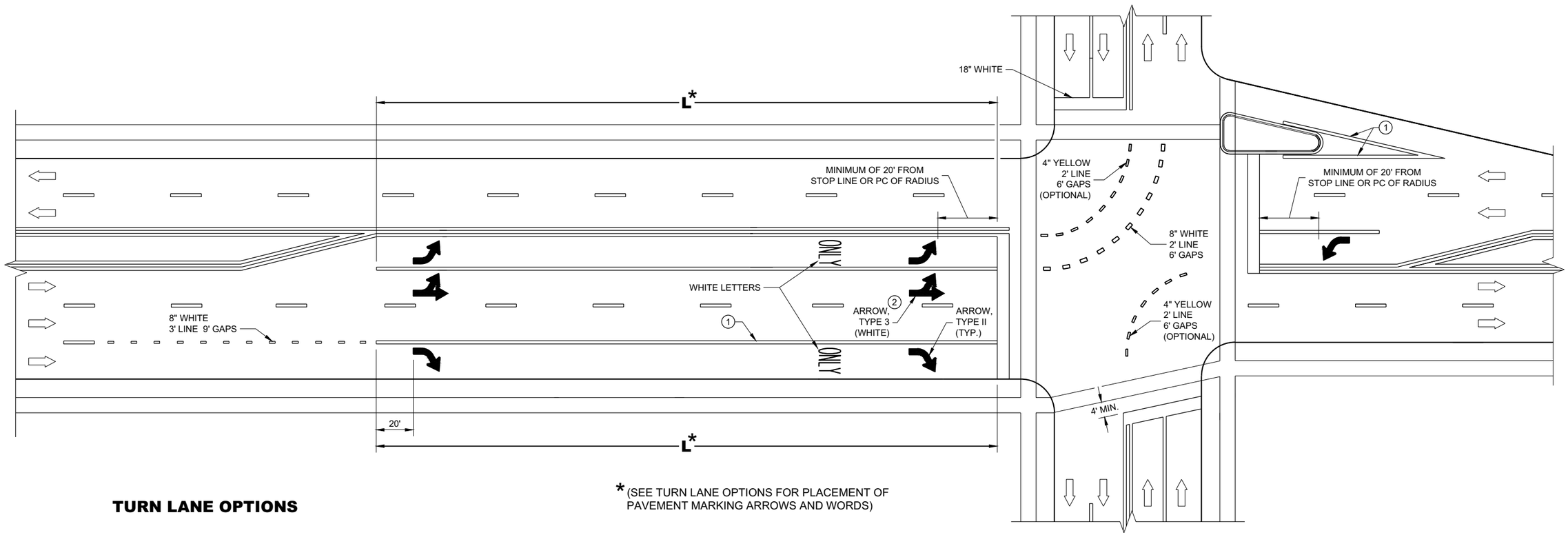
SDD 15C08 - 20b

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

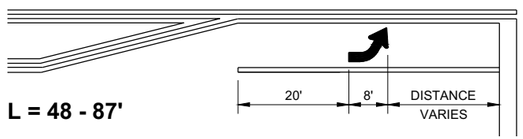
SDD 15C08 - 20b



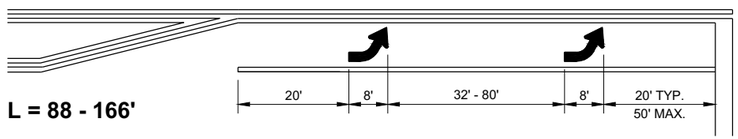
* (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

TURN LANE OPTIONS

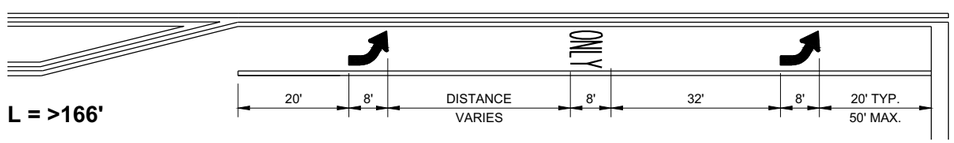
LENGTH OF TURN BAY (**L**) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



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

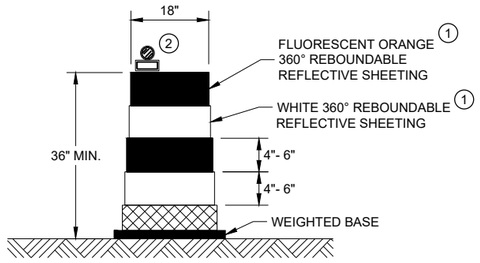
SDD 15C08 - 20c

6

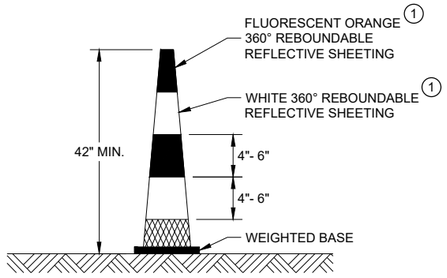
SDD 15C08 - 20c

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.

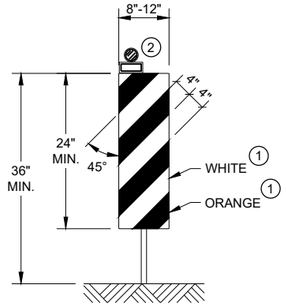


DRUM



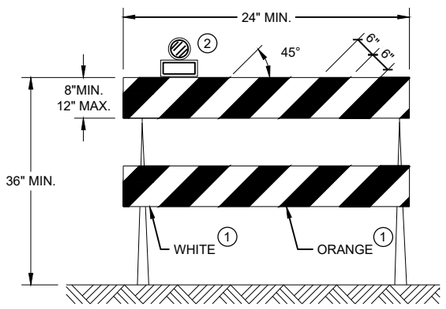
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



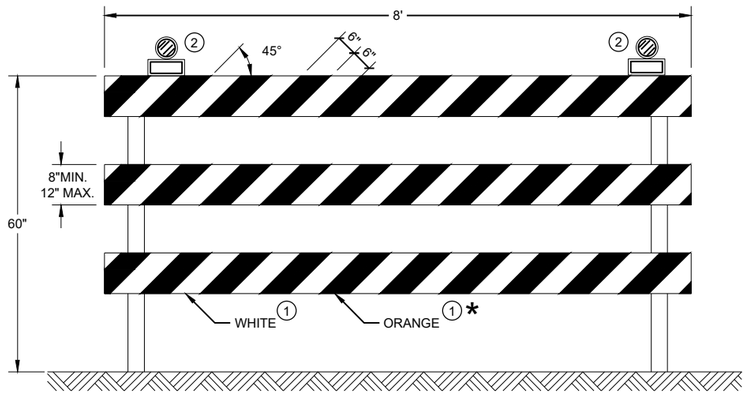
VERTICAL PANEL

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

6

SDD15C11 - 09b

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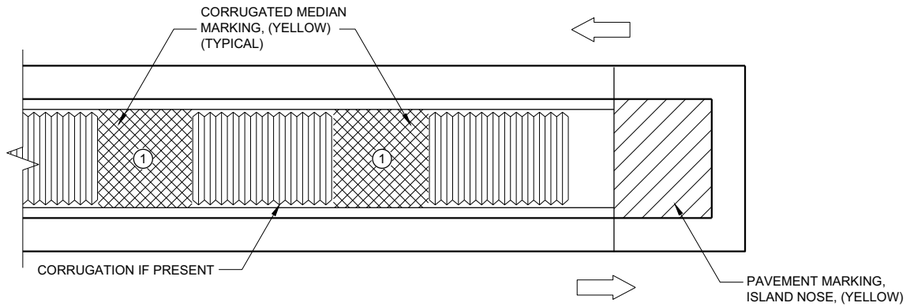
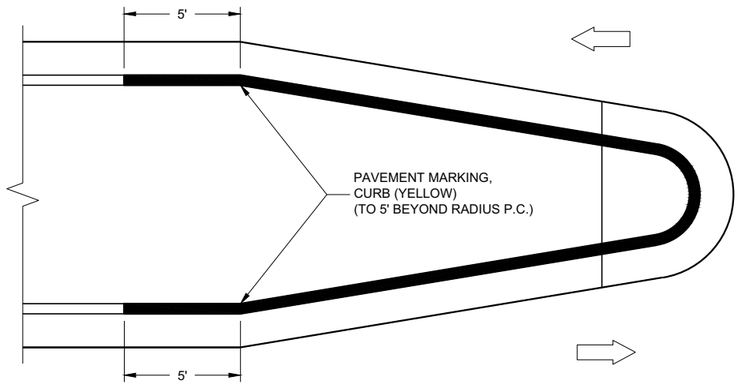
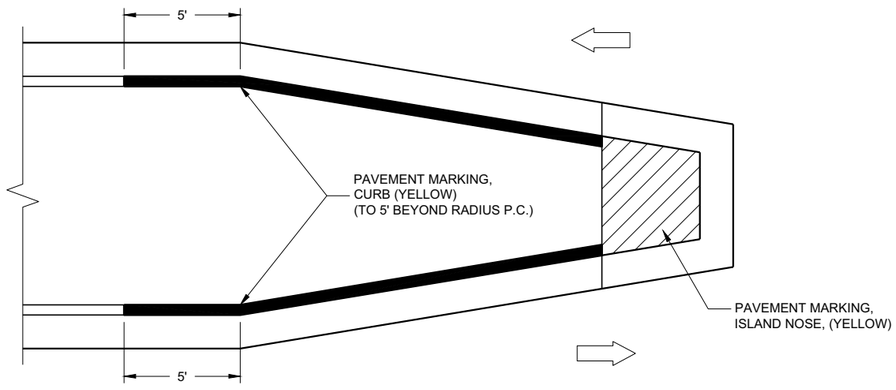
SDD15C11 - 09b



MEDIAN ISLAND WITH SQUARE BLUNT NOSE



MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

GENERAL NOTES

WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION, YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.

ISLAND NOSE MARKING

CURB MARKING

CORRUGATED MEDIAN MARKING

DIRECTION OF TRAVEL

**PAVEMENT MARKINGS,
MEDIAN ISLAND NOSE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

February 2021
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MAR
ENGINEER

FHWA

6

SDD 15C18 - 05b

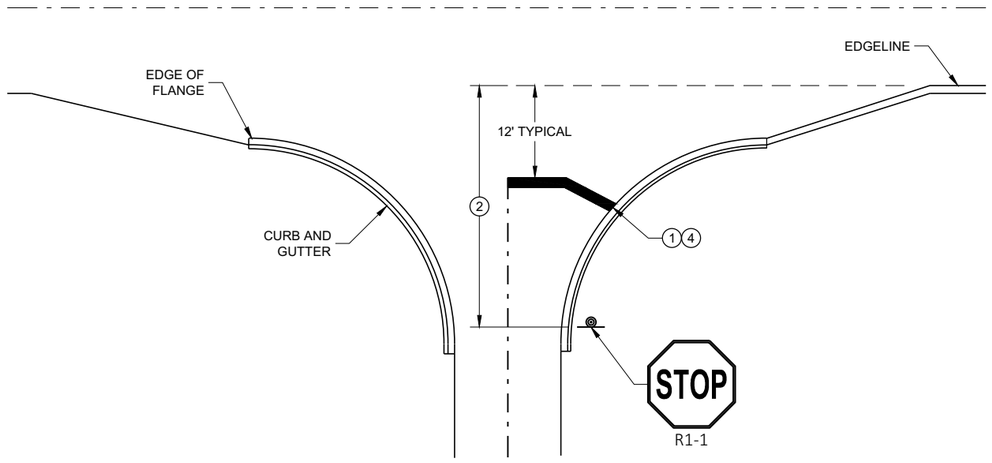
6

SDD15C18 - 05b

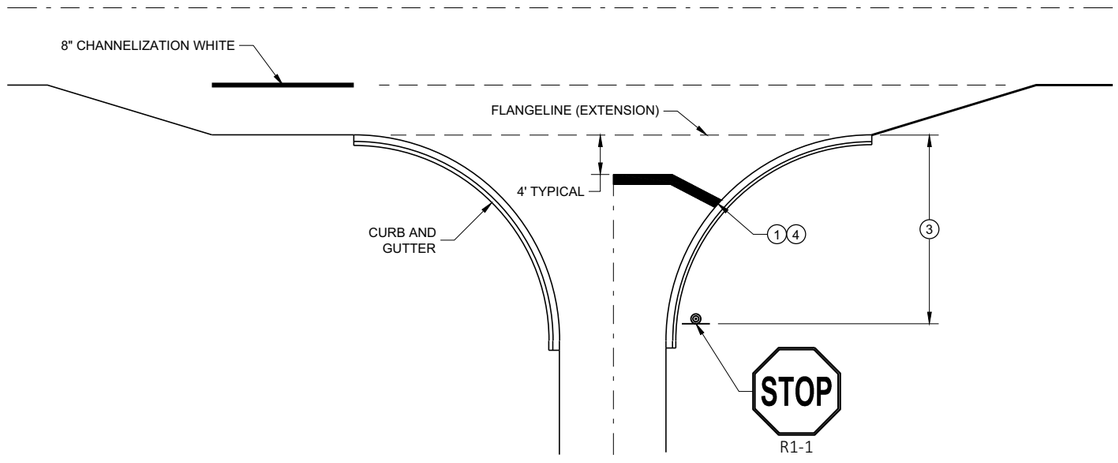
GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

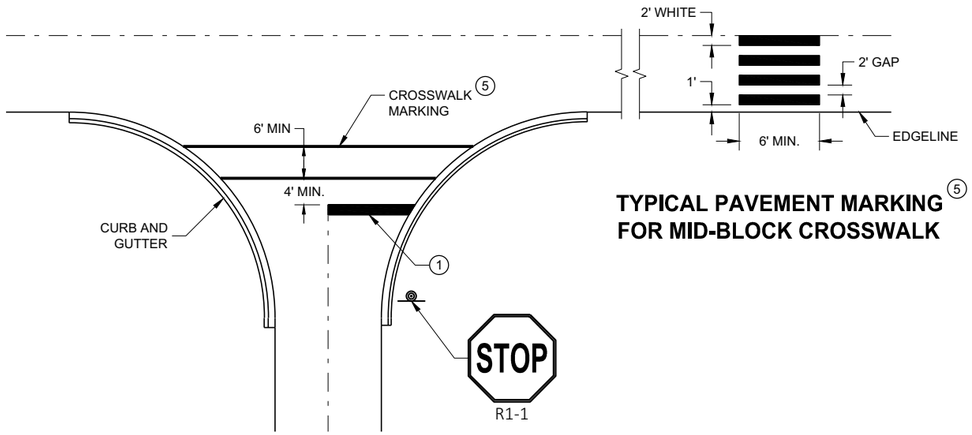
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE 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

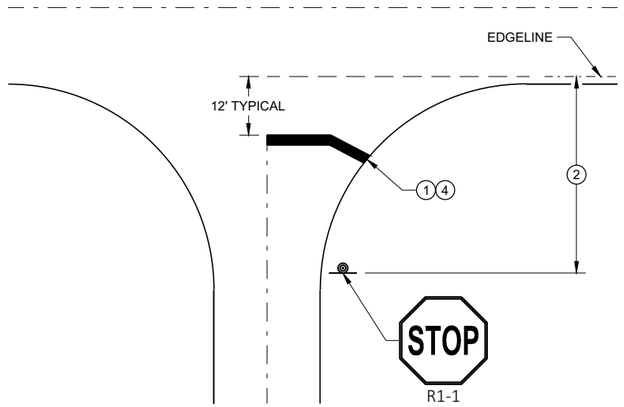


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



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

6

SDD 15C33 - 04

LEGEND

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

GENERAL NOTES

FOR WORK ON ROADWAYS WITH SPEEDS GREATER THAN 45MPH, USE SDD 15D12.

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

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

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

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

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

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

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

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

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

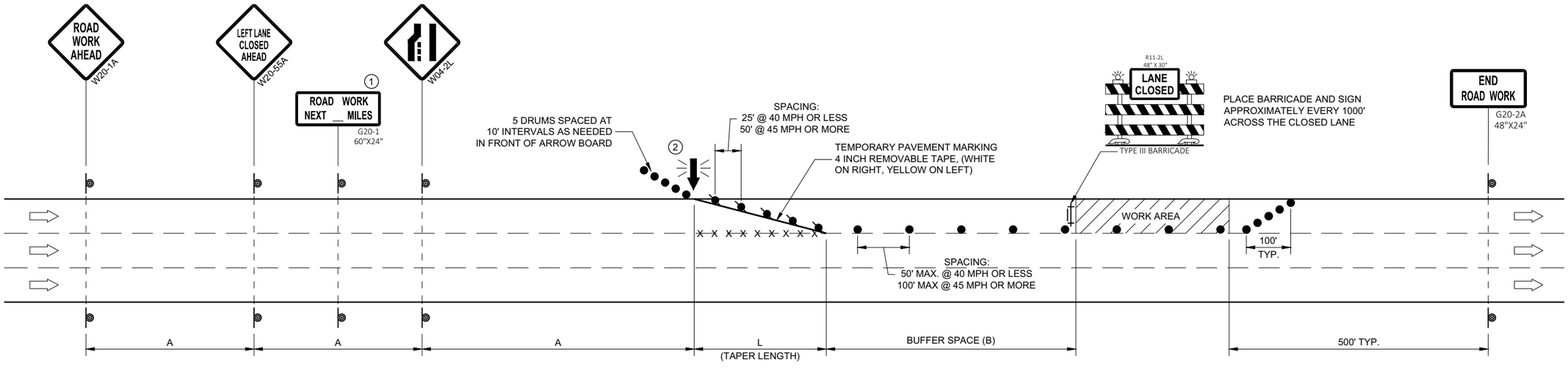
BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

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

(1) OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

(2) WHERE THE SHOULDER OR TERRACE HAS INSUFFICIENT SPACE TO PLACE THE ARROW BOARD AS SHOWN, PLACE THE ARROW BOARD AT THE END OF THE TAPER.



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'

TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY

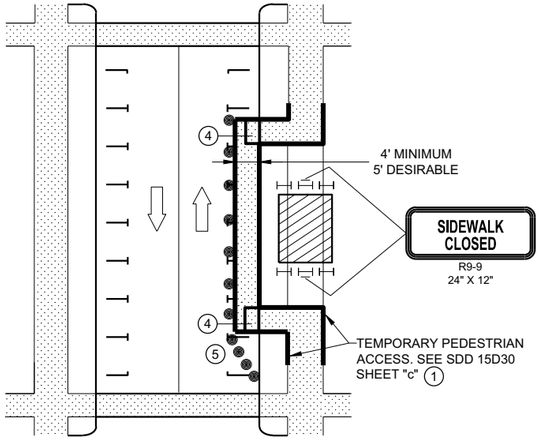
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020 — DATE
/S/ Andrew Heidtke — STATEWIDE WORK ZONE T SAFETY ENGINEER
FHWA

6

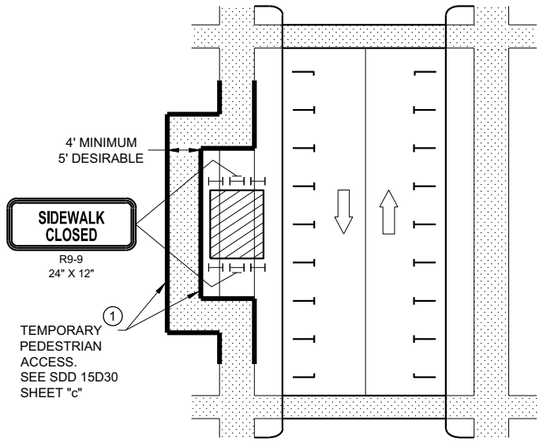
SDD15D20 - 05a

NOTE: MAY BE USED ON ROADWAY WITH POSTED SPEED OF LESS THAN 40 MPH.

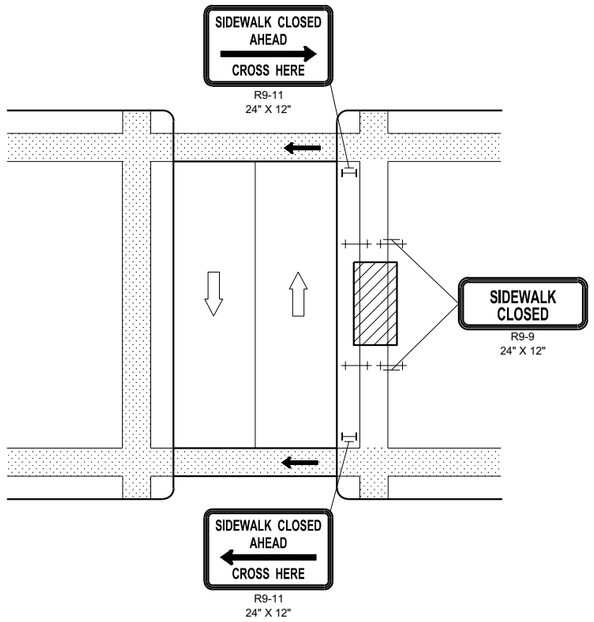


MID-BLOCK SIDEWALK CLOSURE IN PARKING LANE

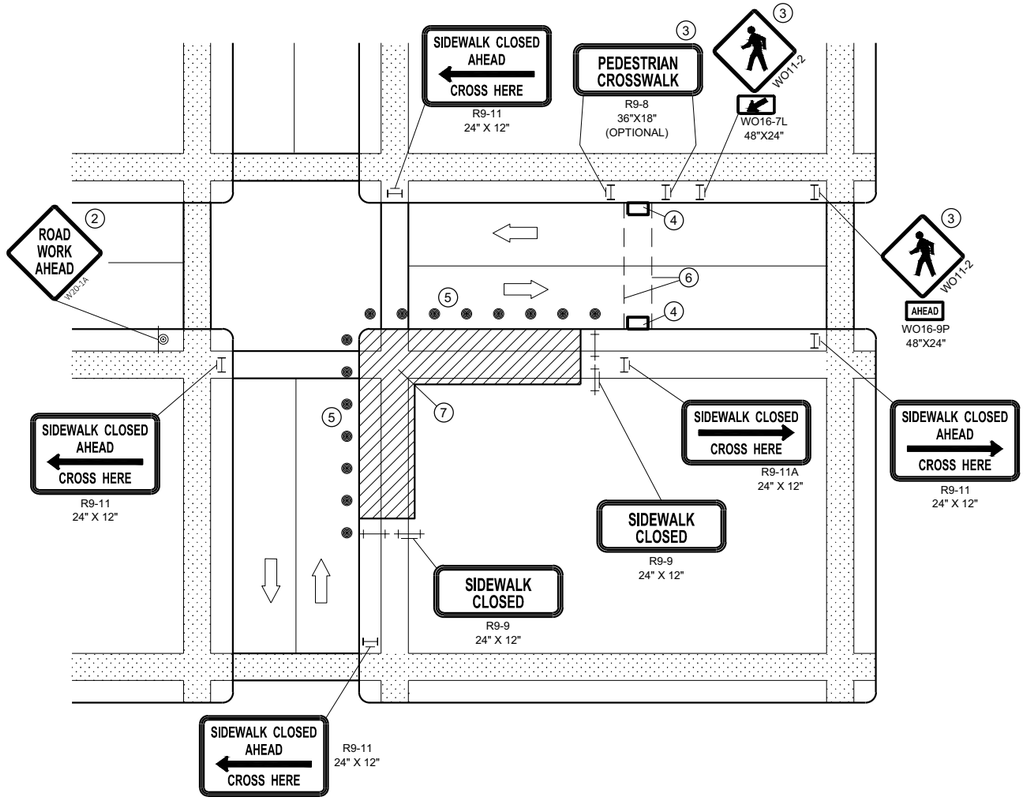
NOTE: LAYOUT SAME AS ABOVE.



SIDEWALK DIVERSION



MID-BLOCK SIDEWALK CLOSURE



CORNER SIDEWALK CLOSURE WITH TEMPORARY CROSSWALK

GENERAL NOTES

WHEN CLOSING OR RELOCATING CROSSWALKS OR SIDEWALKS, PROVIDE DETECABLE TEMPORARY FACILITIES AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES.

TEMPORARY TRAFFIC CONTROL DEVICES FOR PEDESTRIANS ARE SHOWN. OTHER DEVICES MAY BE NECESSARY TO CONTROL VEHICULAR TRAFFIC. STAGE WORK AS NECESSARY, TO PROVIDE A TEMPORARY PEDESTRIAN ACCESS ROUTE AT ALL TIMES. FOR ROADWAYS WITH NO AVAILABLE DETOURS, MAINTAIN ONE OPEN SIDEWALK AT ALL TIMES.

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

FOR NIGHTIME CLOSURE, USE TYPE "A" FLASHING WARNING LIGHTS ON BARRICADES, SUPPORTING SIGNS AND CLOSING SIDEWALK. USE TYPE "C" STEADY BURN LIGHTS ON CHANNELIZING DEVICES SEPARATING THE WORK AREA FROM VEHICULAR TRAFFIC.

PEDESTRIAN TRAFFIC SIGNAL DISPLAY CONTROLLING CLOSED CROSSWALK SHALL BE COVERED OR DEACTIVATED.

POST MOUNTED SIGNS LOCATED ADJACENT TO A SIDEWALK SHALL HAVE A 7 FOOT MINIMUM CLEARANCE FROM THE BOTTOM OF THE SIGN TO THE SIDEWALK SURFACE.

ALTERNATE SIDEWALK WORK BETWEEK LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

1. IF SIDEWALK CLOSURE AFFECTS AN ACCESSIBLE AND DETECTABLE FACILITY, MAINTAIN ACCESSIBILITY AND DETECTABILITY ALONG THE ALTERNATE PEDESTRIAN ROUTE
2. "ROAD WORK AHEAD" SIGNS ARE NOT REQUIRED IF THE SIDEWALK CLOSURE OCCURS WITHIN A LARGER WORK ZONE WHERE ADVANCE WARNING SIGNS ARE ALREADY PRESENT, OR IF THE WORK AREA AND EQUIPMENT ARE MORE THAN 2 FEET BEHIND THE CURB.
3. IF TEMPORARY PEDESTRIAN CROSSWALK IS NOT PROVIDED, OMIT R9-8 AND WO11-2 SIGN ASSEMBLIES. IF PROVIDED INCLUDE ON BOTH SIDES OF THE CROSSWALK.
4. TEMPORARY CURB RAMPS. SEE SDD 15D30 SHEET "b'.
5. DRUMS OR BARRICADES AT 25 FOOT SPACING. STREET PARKING SHALL BE PROHIBITED FOR AT LEAST 50 FEET IN ADVANCE OF THE MID-BLOCK CROSSWALK.
6. TEMPORARY PAVEMENT MARKING FOR CROSSWALK LINES.
7. LIMIT WORK TO ONE QUADRANT AT A TIME TO MINIMIZE PEDESTRIAN DISRUPTION.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW INTENSITY FLASHING)
- TYPE III BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW INTENSITY FLASHING)
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- PEDESTRIAN CHANNELIZATION DEVICE
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD15D30 - 06a

LEGEND

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

GENERAL NOTES

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

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

THIS LANE CLOSURE IS TYPICAL FOR LANE SHIFT RIGHT - REVERSE FOR SHIFTING LEFT.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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

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

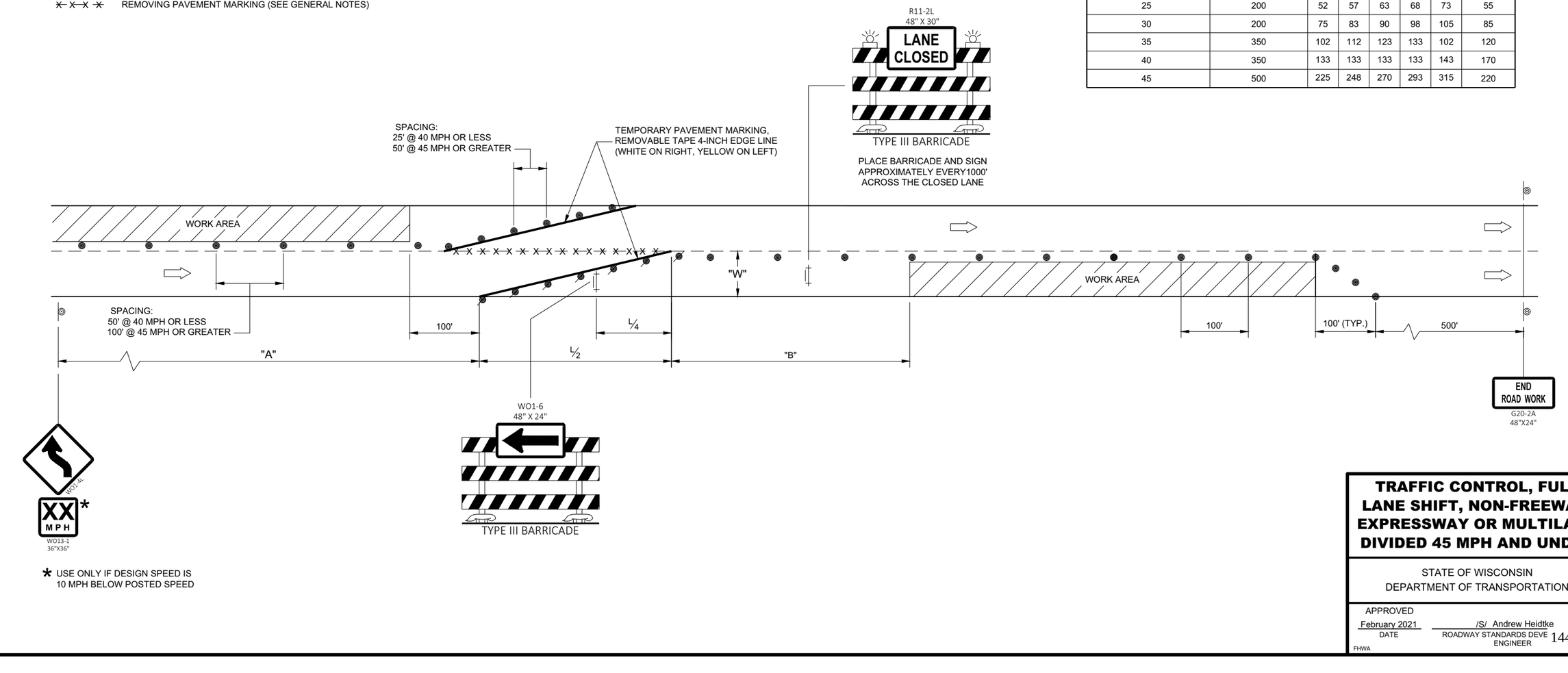
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

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

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

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

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHIFTING TAPER L/2 W, LATERAL OFFSET (FT)					BUFFER SPACE (B) FEET
		10	11	12	13	14	
25	200	52	57	63	68	73	55
30	200	75	83	90	98	105	85
35	350	102	112	123	133	102	120
40	350	133	133	133	133	143	170
45	500	225	248	270	293	315	220



* USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED

TRAFFIC CONTROL, FULL LANE SHIFT, NON-FREEWAY/ EXPRESSWAY OR MULTILANE DIVIDED 45 MPH AND UNDER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021
DATE
/S/ Andrew Heidtke
ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

SDD 15D40 - 02a

6

SDD 15D40 - 02a

LEGEND

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

GENERAL NOTES

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

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

THIS LANE CLOSURE IS TYPICAL FOR LANE SHIFT LEFT - REVERSE FOR SHIFTING RIGHT.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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

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

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

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

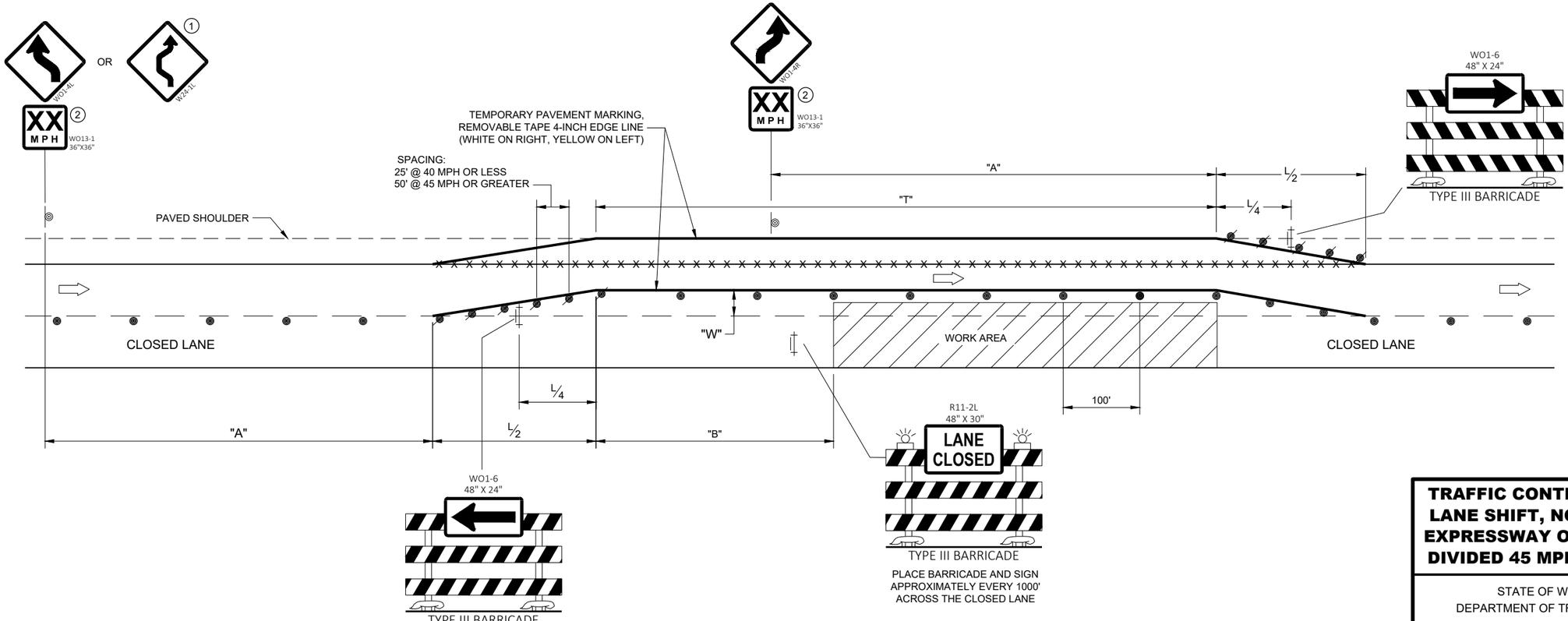
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

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

(1) USE ONLY WHEN T<600', OMIT WO1-4R.

(2) IF NEEDED, USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED.

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHIFTING TAPER L/2 W, LATERAL OFFSET (FT)									BUFFER SPACE (B) FEET
		1	2	3	4	5	6	7	8	9	
25	200	5	10	16	21	26	31	36	42	47	55
30	200	8	15	23	30	38	45	53	60	68	85
35	350	10	20	31	41	51	61	71	82	92	120
40	350	13	27	40	53	67	80	93	107	120	170
45	500	23	45	68	90	113	135	158	180	203	220



TRAFFIC CONTROL, PARTIAL LANE SHIFT, NON-FREEWAY/ EXPRESSWAY OR MULTILANE DIVIDED 45 MPH AND UNDER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 — DATE
/S/ Andrew Heidtke — ROADWAY STANDARDS DEVE ENGINEER

FHWA

SDD 15D40 - 02c

SDD 15D40 - 02c

LEGEND

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

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHIFTING TAPER L/2 W, LATERAL OFFSET (FT)					
		3	4	5	6	7	8
25	200	10	14	17	21	24	28
30	200	15	20	25	30	35	40
35	350	20	27	34	40	47	54
40	350	26	35	44	53	62	70
45	500	45	59	74	89	104	119
50	500	50	66	83	99	116	132
55	500	54	73	91	109	127	145

GENERAL NOTES

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"x36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

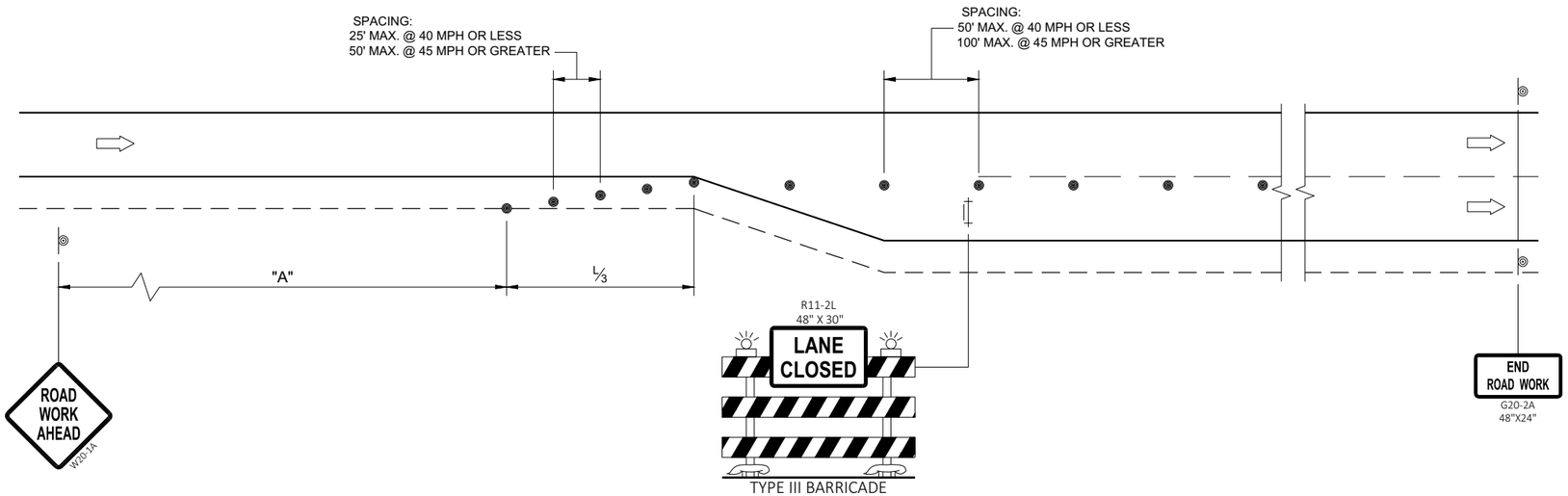
"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

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

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

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

W20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION WORK IS LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS.



PLACE BARRICADE AND SIGN APPROXIMATELY EVERY 1000' ACROSS THE CLOSED LANE

ADDED LANE CLOSURE WITHOUT LANE SHIFT

TRAFFIC CONTROL
ADDED LANE CLOSURE
WITHOUT LANE SHIFT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

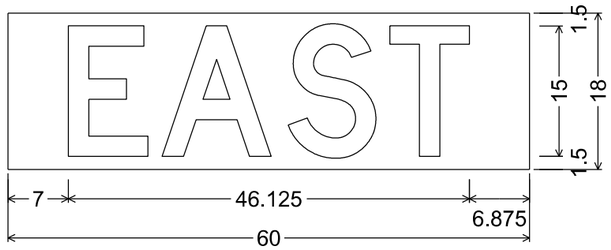
SDD 15D50 - 01a

6

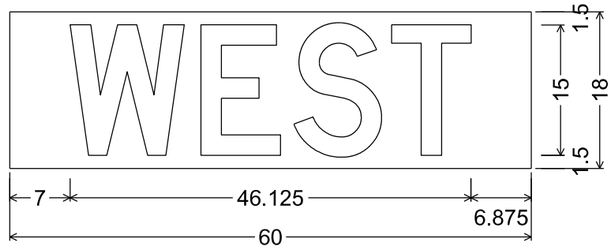
SDD 15D50 - 01a

NOTES

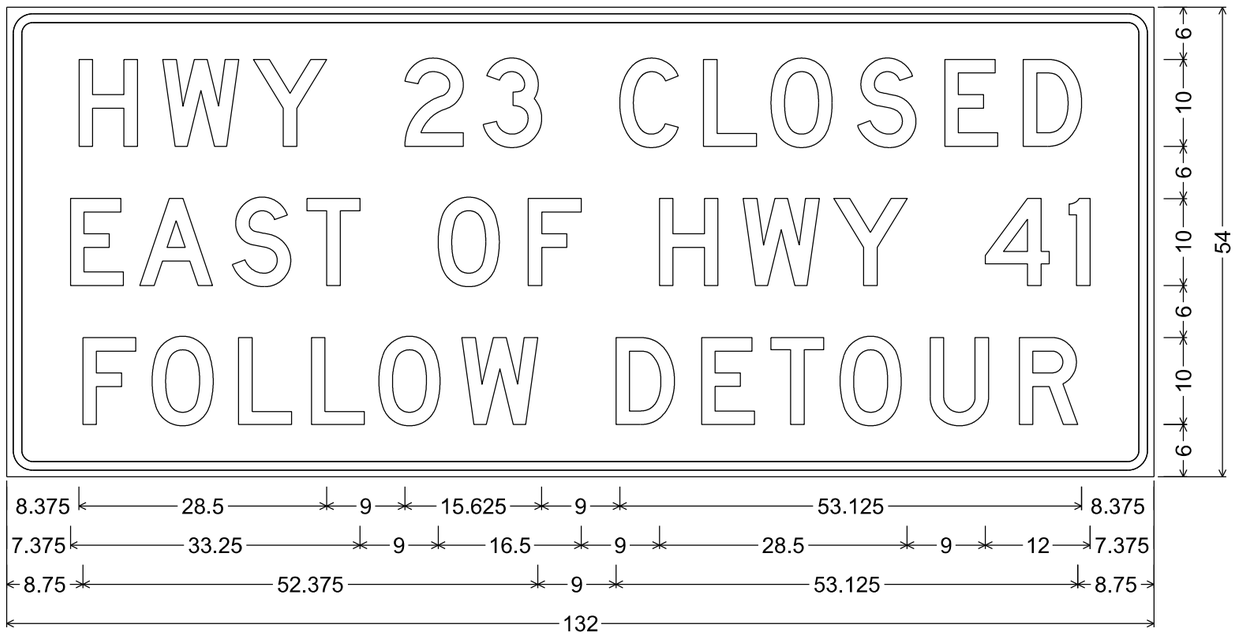
1. Fixed Message Signs Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D



No border, Black on, Fluorescent orange;
"EAST" Black, D

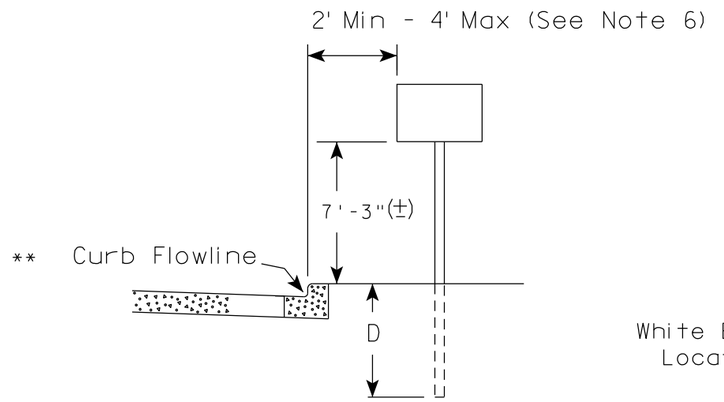


No border, Black on, Fluorescent orange;
"WEST" Black, D

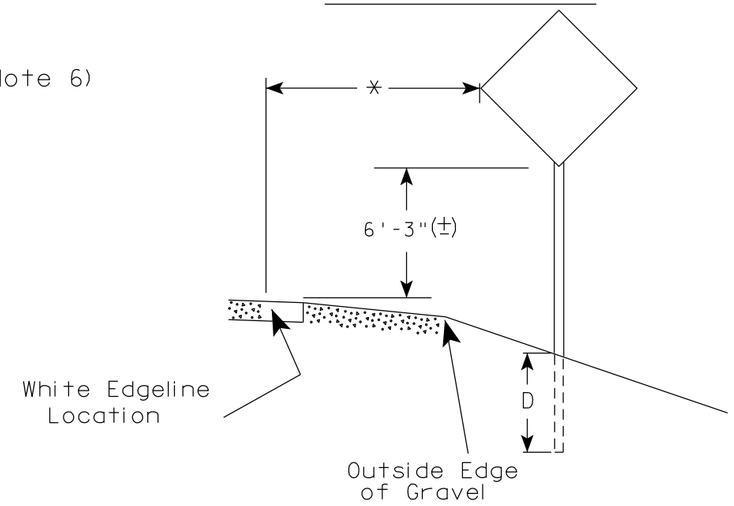


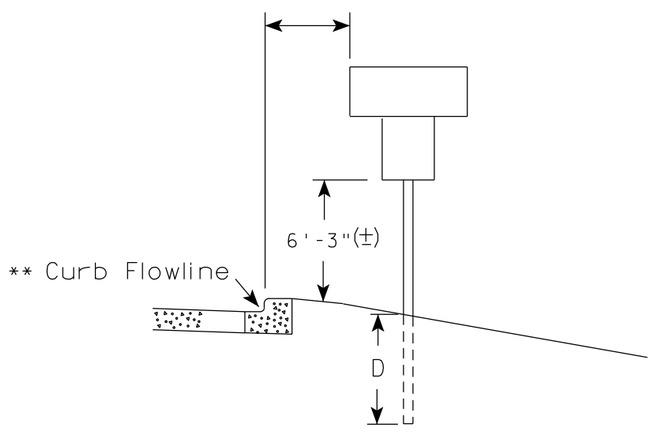
3.000" Radius, 1.000" Border, 0.750" Indent

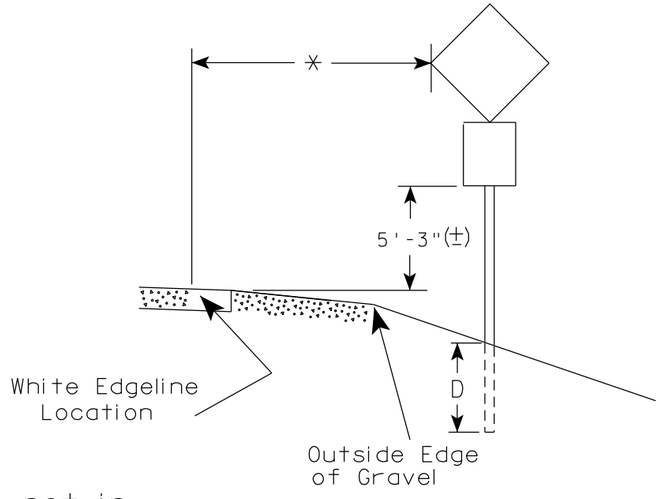
URBAN AREA



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.

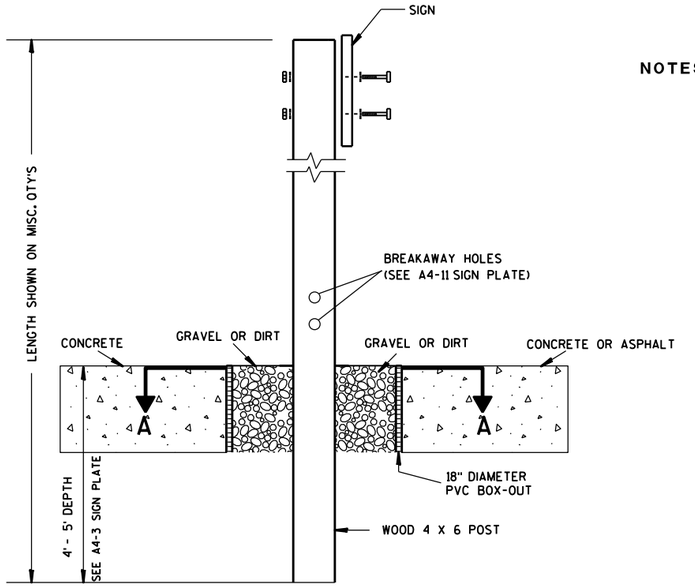
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

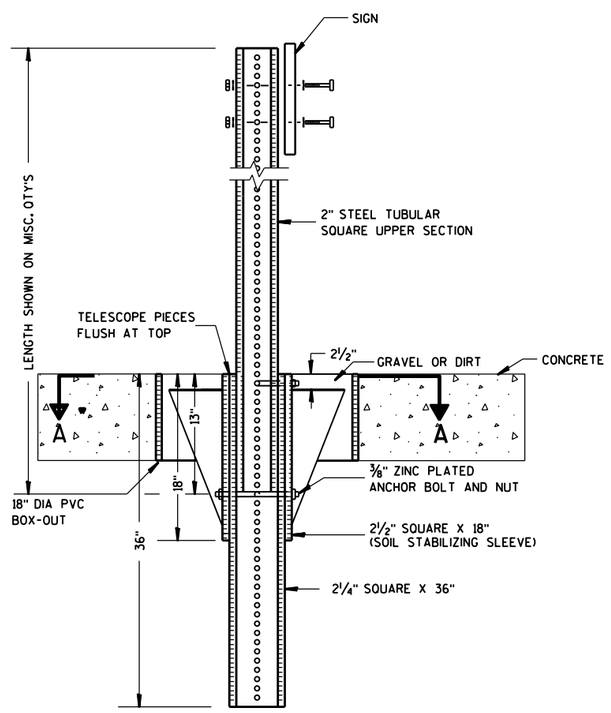
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 148	E



ELEVATION VIEW

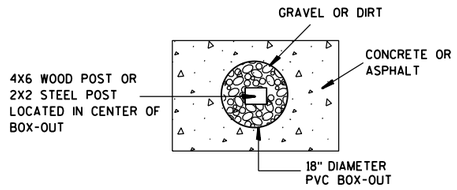
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

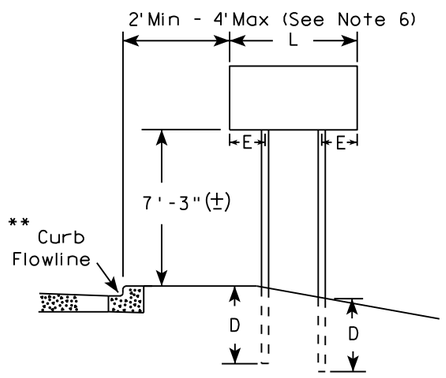
APPROVED Matthew R Rauch
for State Traffic Engineer

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

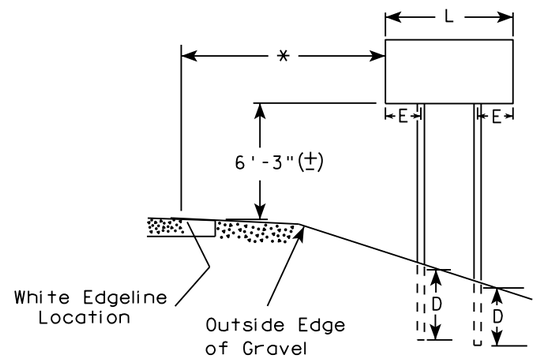
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

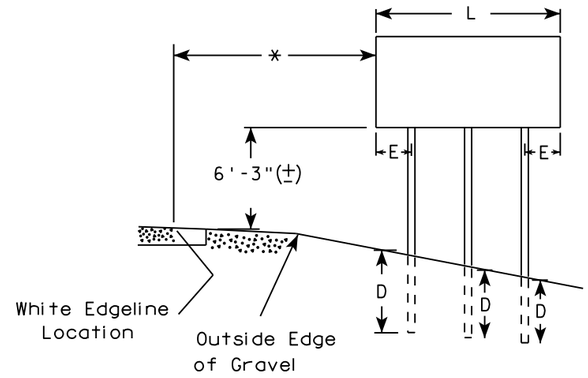
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

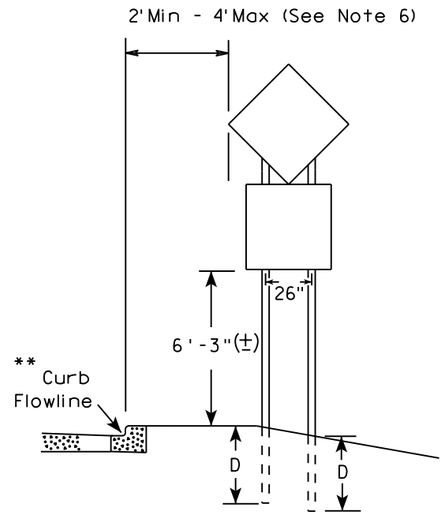
URBAN AREA



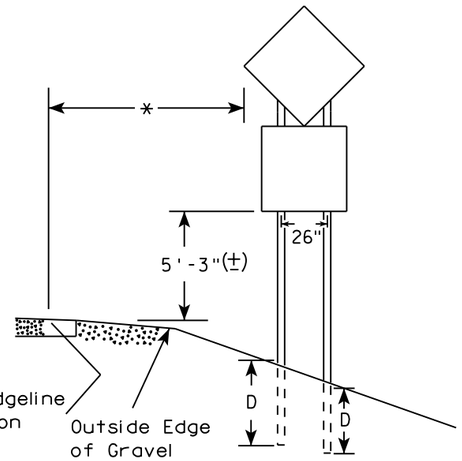
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

GENERAL NOTES

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

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

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

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

POST EMBEDMENT DEPTH

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

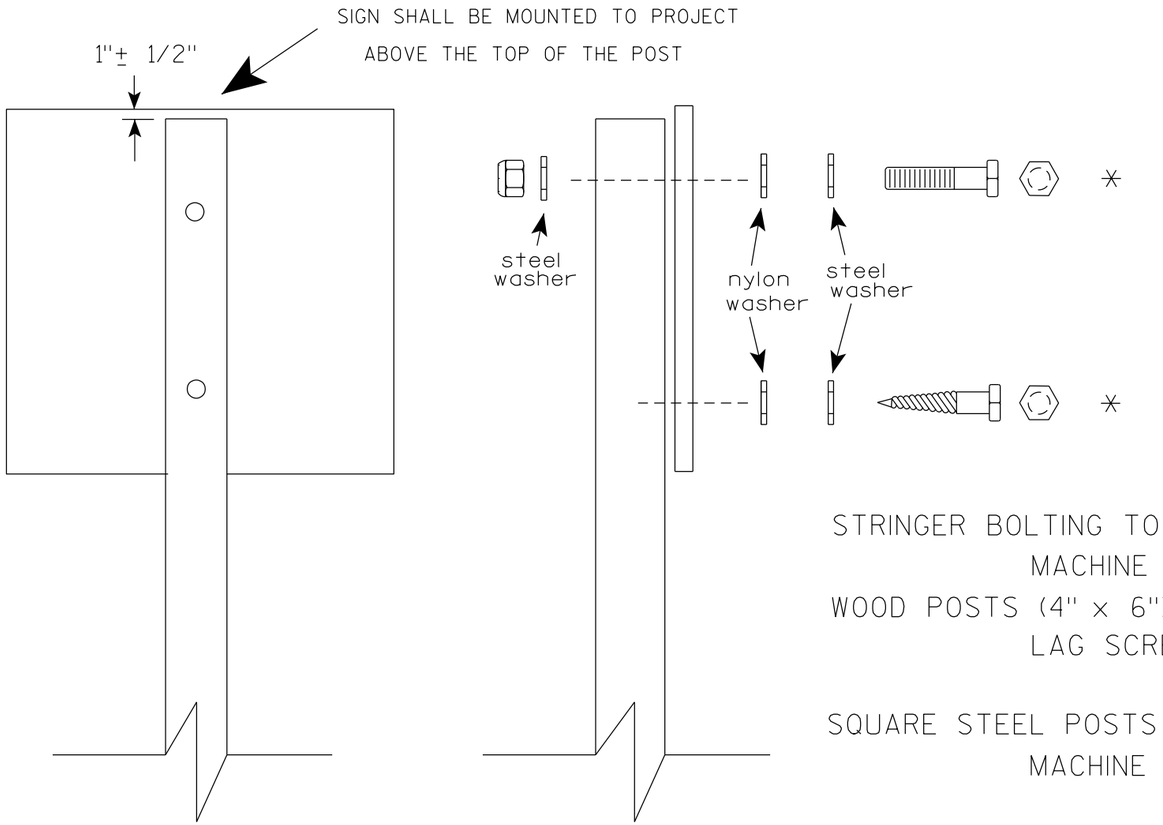
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 150	E



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

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

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

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

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

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

WOOD POSTS (4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

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

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

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

ATTACHMENT OF SIGNS TO POSTS

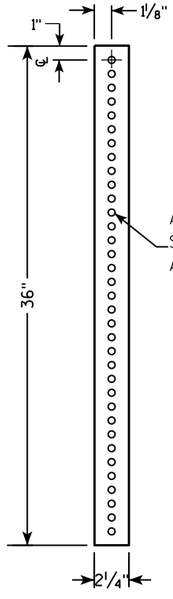
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

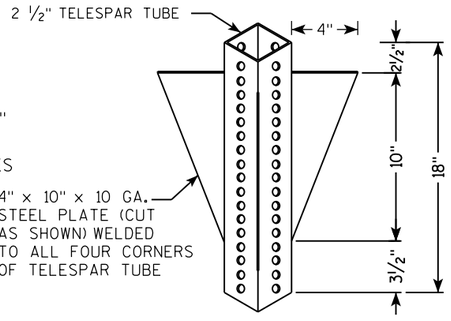
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

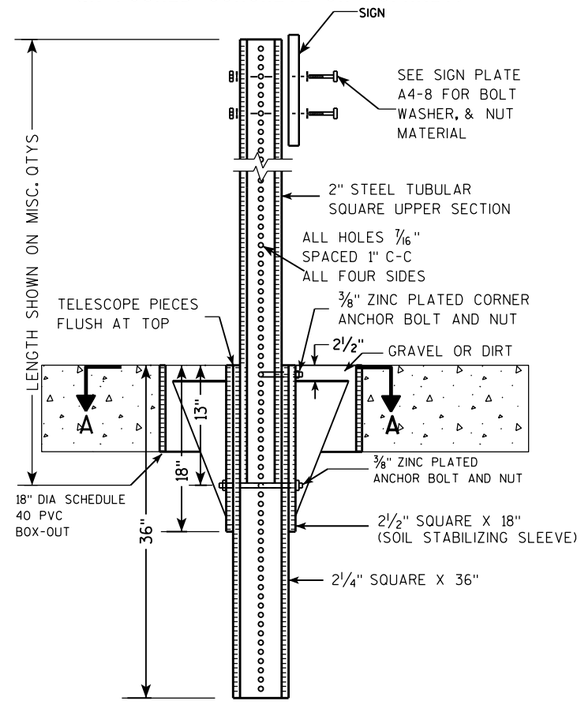
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



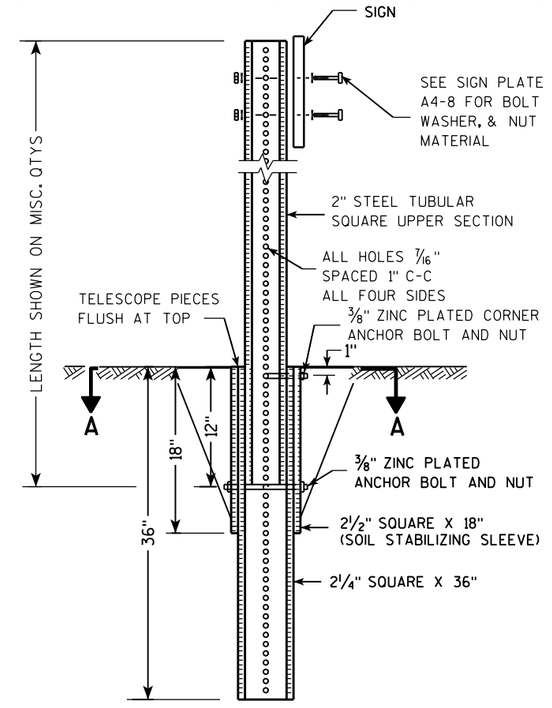
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

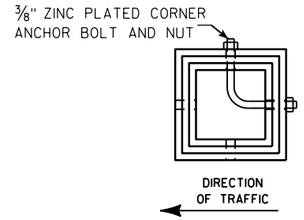


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

TUBULAR STEEL
SIGN POST
A4-9

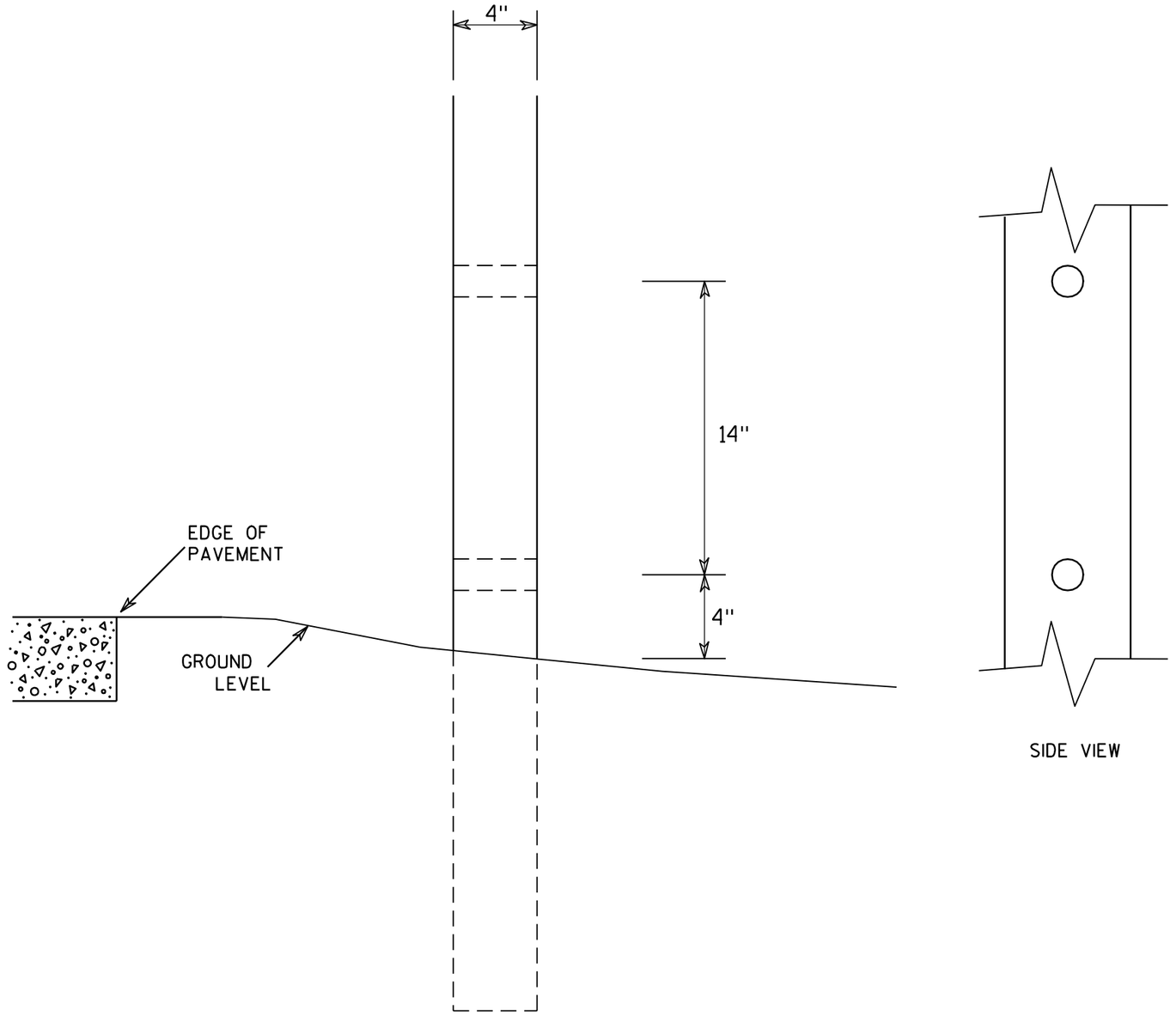
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE : 05-FEB-2015 17:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000
WISDOT/CADDS SHEET 42



SIDE VIEW

GENERAL NOTES

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

7

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

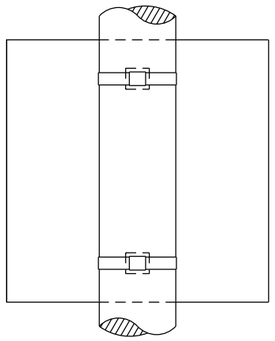
APPROVED Chester J Spang for State Traffic Engineer

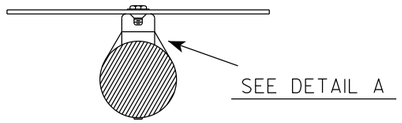
DATE 3/27/97 PLATE NO. A4-11.2

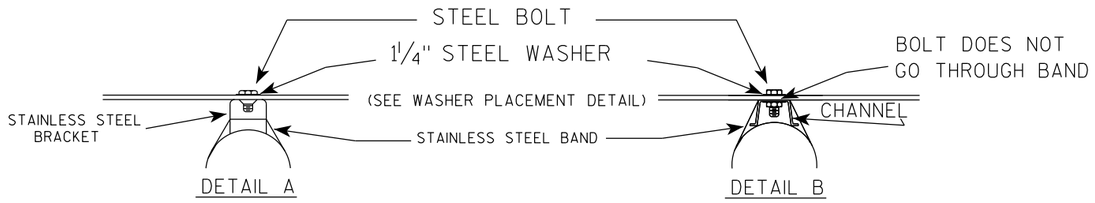
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 153	E

BANDING

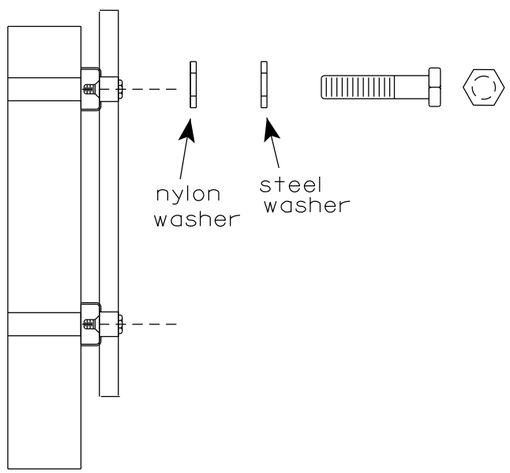
SINGLE SIGN







WASHER PLACEMENT

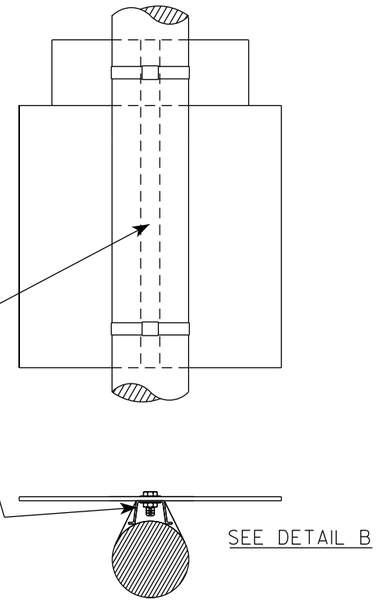


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

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



STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

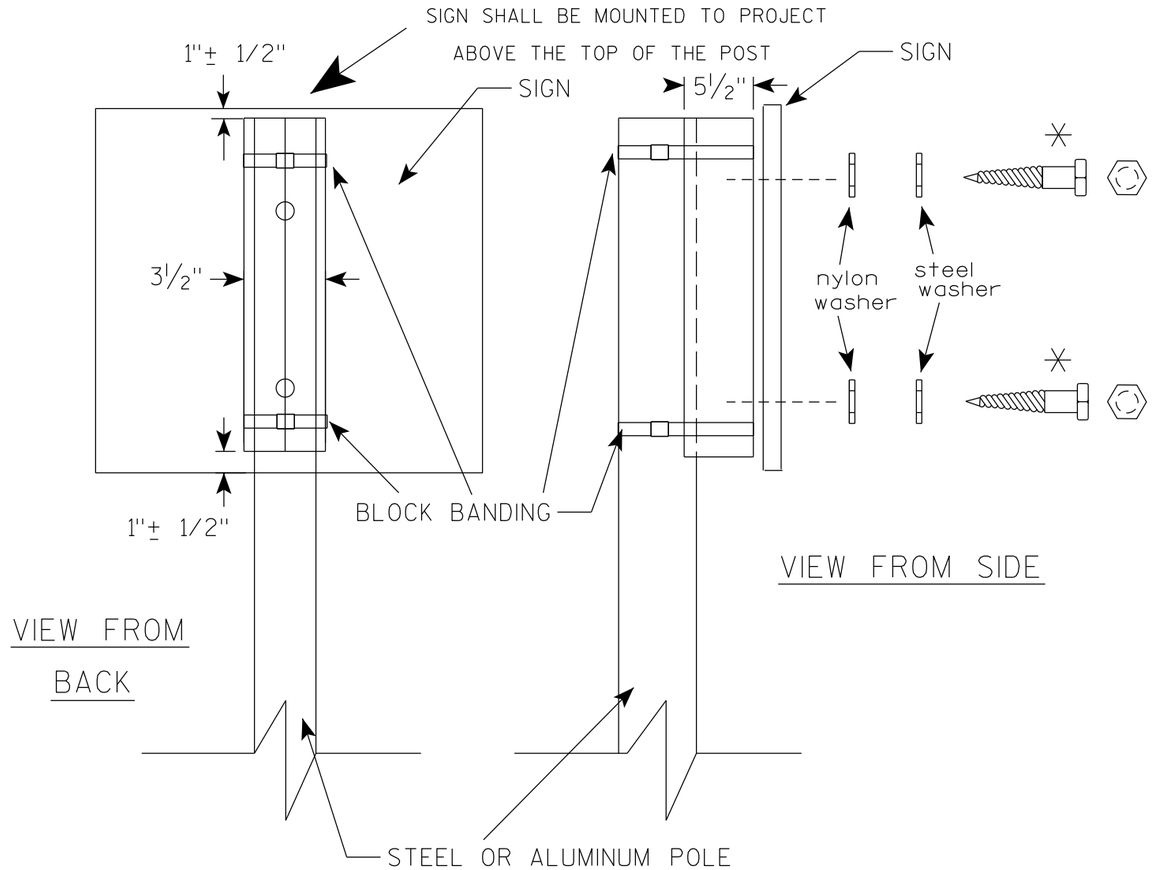
DATE 6/10/19 PLATE NO. A5-9.4

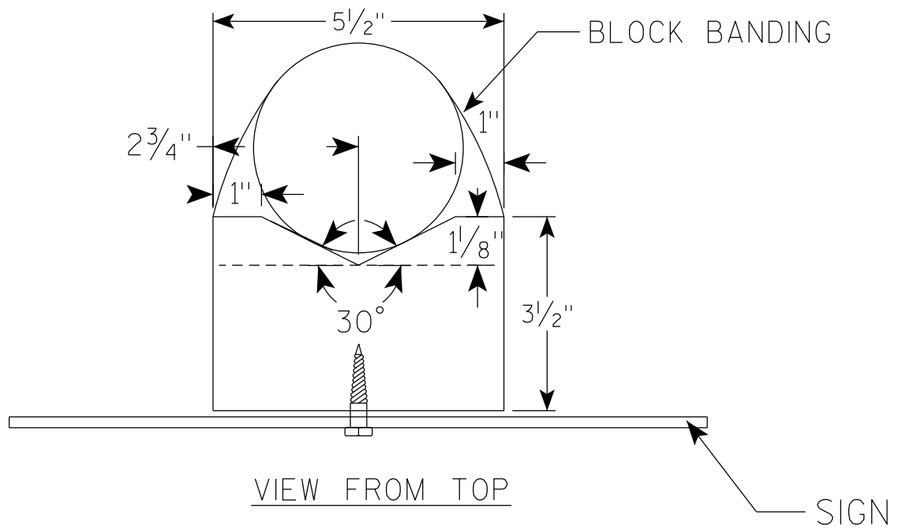
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 154	E

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

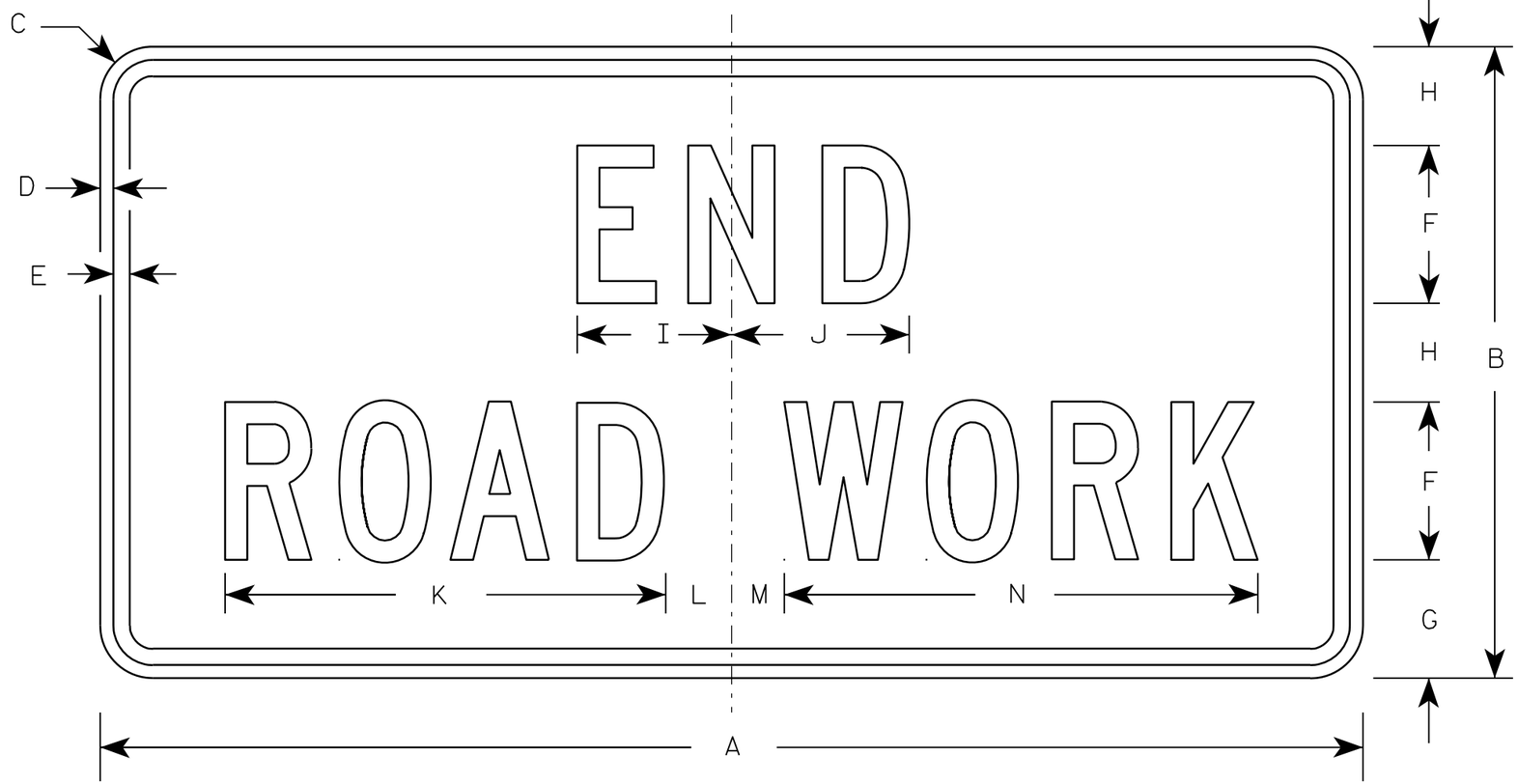
DATE 6/10/19 PLATE NO. A5-10.2

PROJECT NO: | SHEET NO: 155 | E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A510.dgn PLOT DATE : 10-JUN 2019 4:15 PLOT BY : mscj9h

WISDOT/CADDS SHEET 42

7 7



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

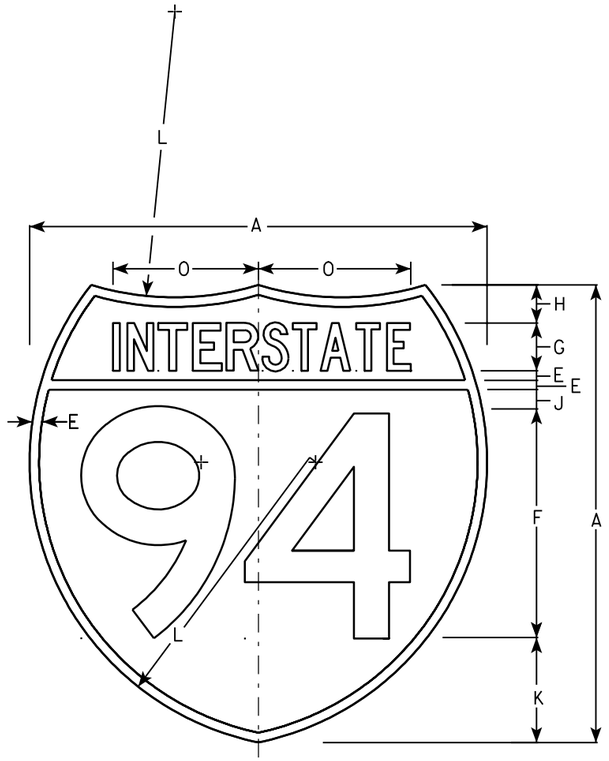
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

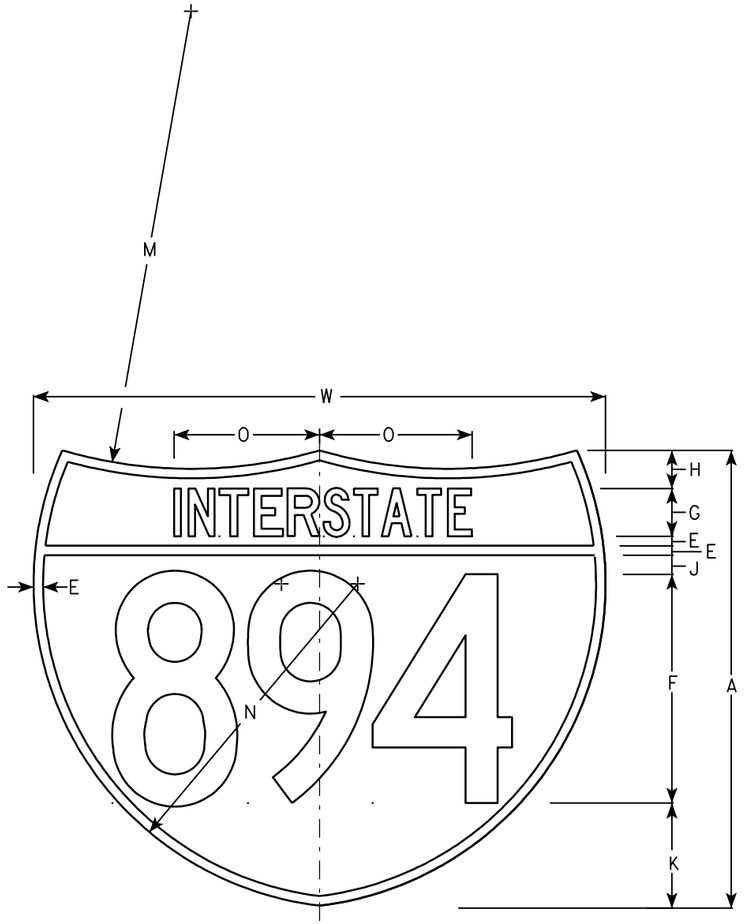
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 156	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

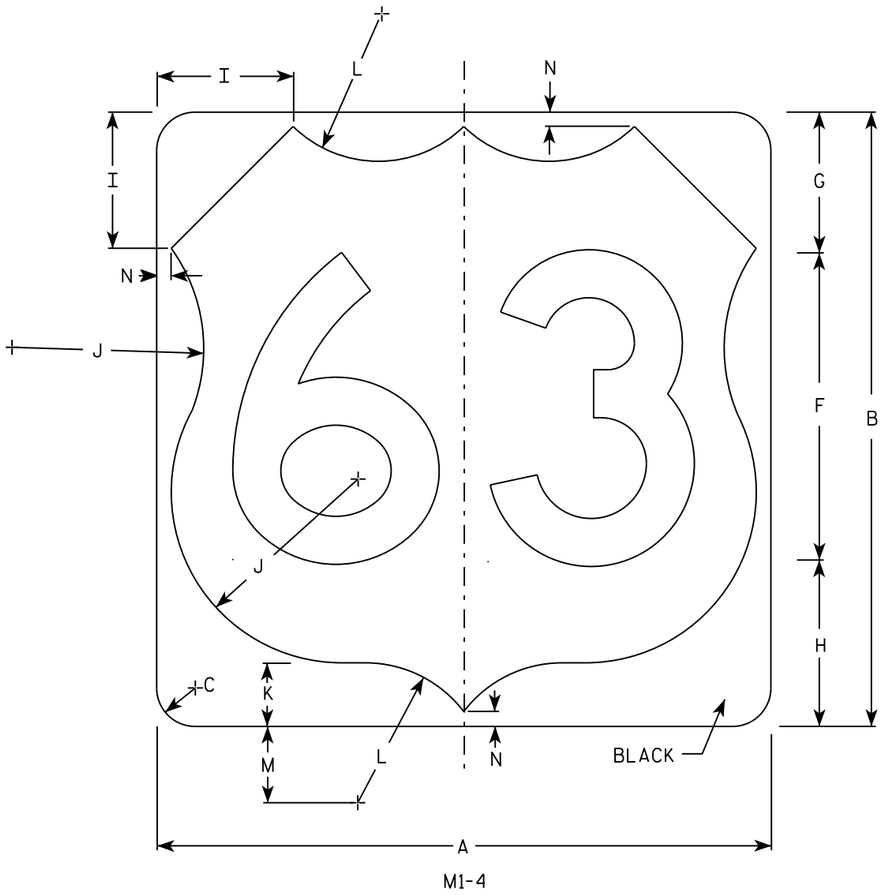
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/23/05 PLATE NO. M1-1.8

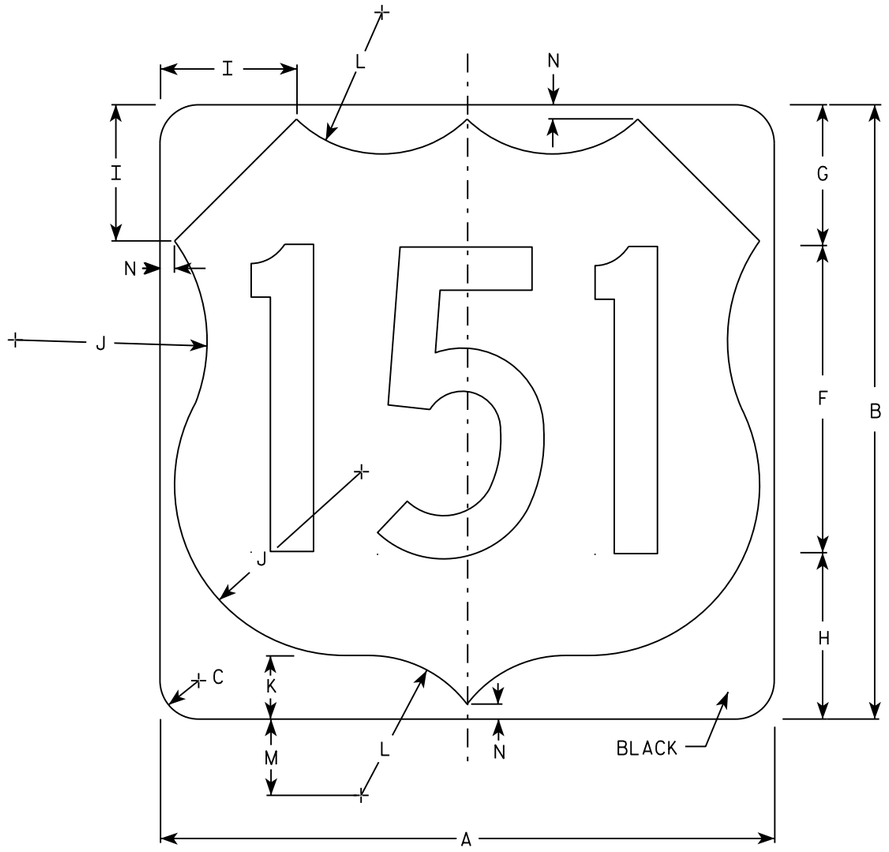
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 157	E

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.



M1-4



M1-4

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	24	1 1/2			12	5 1/2	6 1/2	5	7 1/2	2 1/2	5 1/2	3	1/2													4.0
3	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0
4	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0
5	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0

USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/18 PLATE NO. M1-4.10

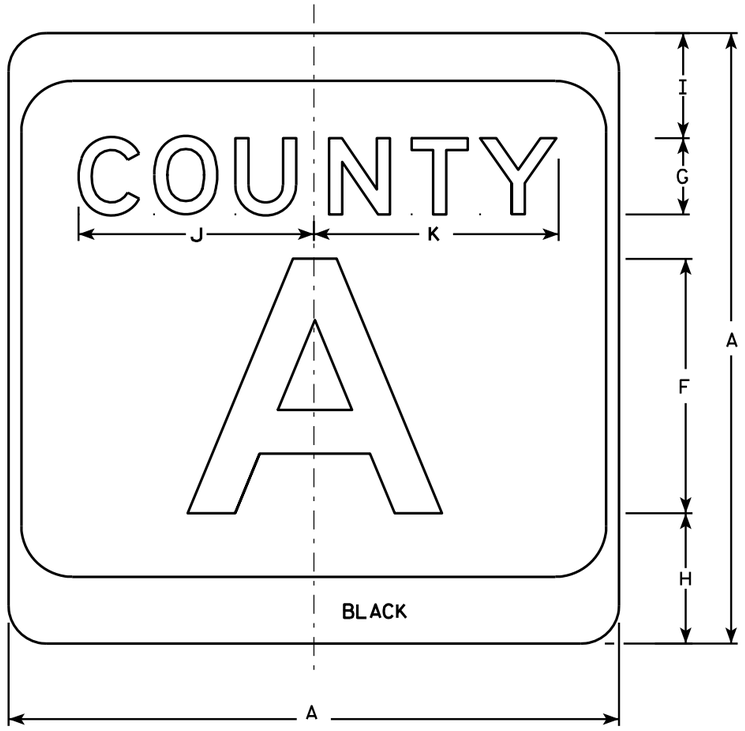
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 158	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M14.DGN PLOT DATE : 16-MAR-2018 14:06 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : 5.918903:1.000000

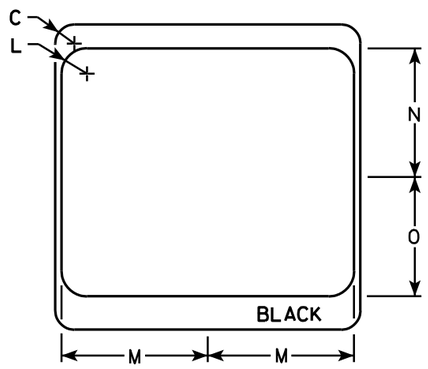
WISDOT/CADDS SHEET 42

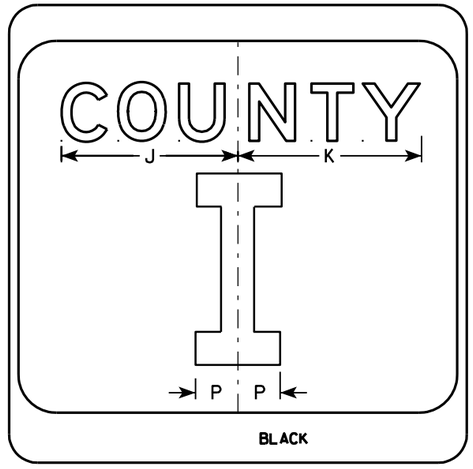
7

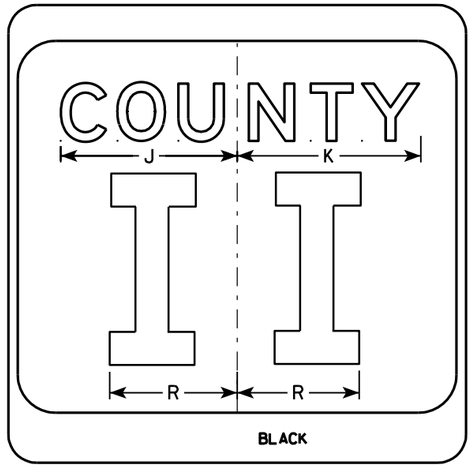
7



M1-5A







NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 7
   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. Message Series E for 1 letter.
   Message Series D for 2 letters unless message is too big then Series C.
   Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective

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			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

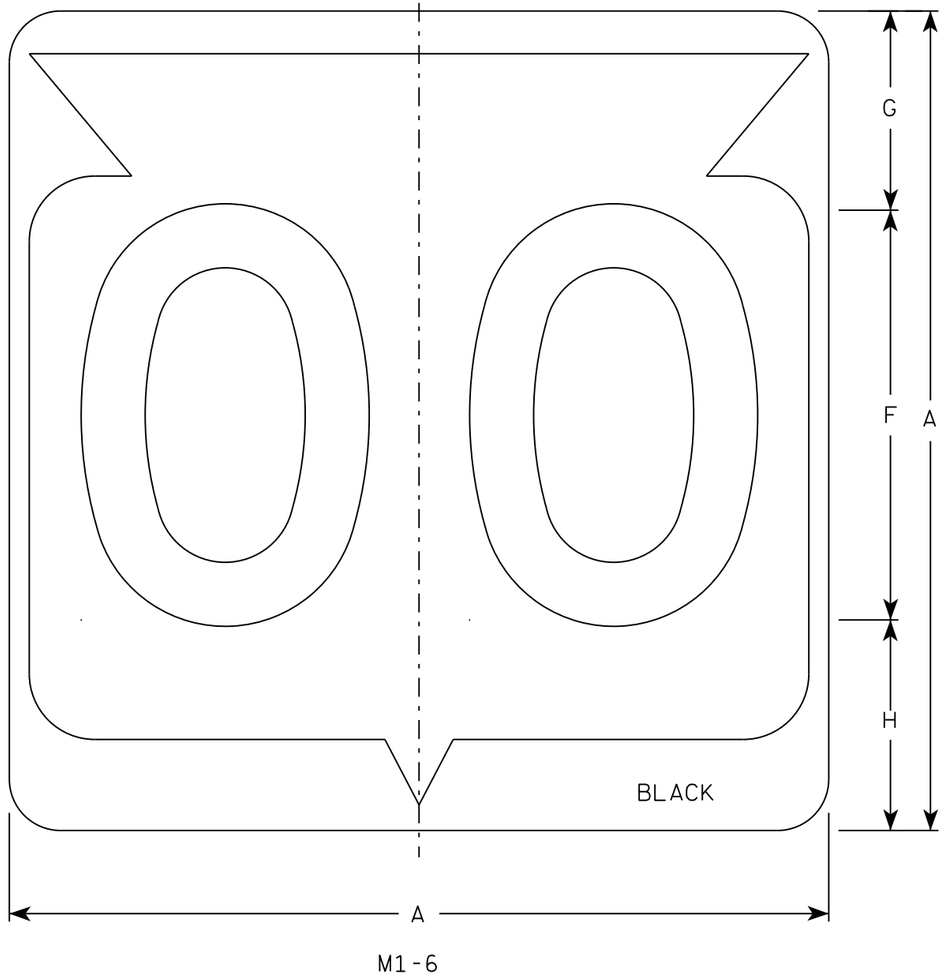
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8

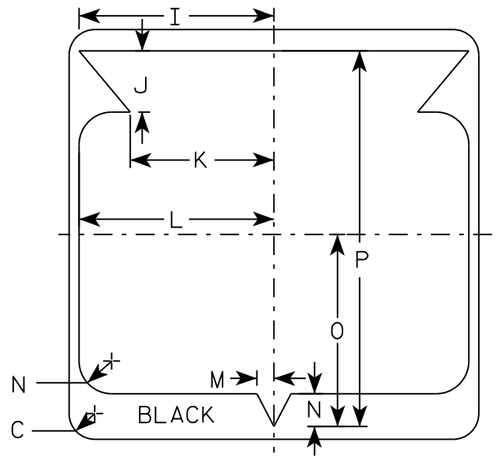
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 159 | E



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

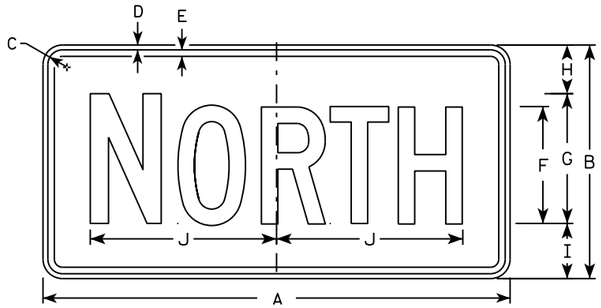
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

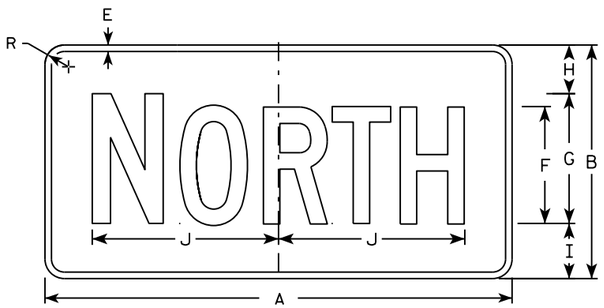
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/16/18 PLATE NO. M1-6.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 160	E



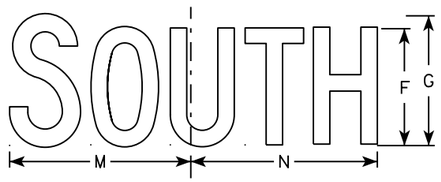
M3-1
MM3-1
MP3-1



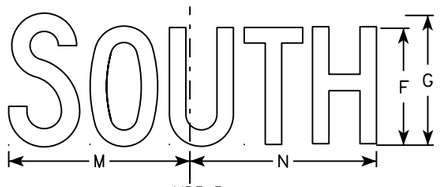
MB3-1
MK3-1
MN3-1

M3-2
MM3-2
MP3-2

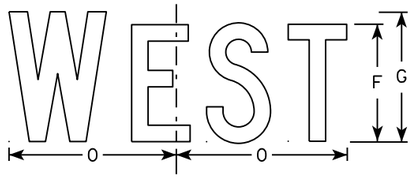
MB3-2
MK3-2
MN3-2



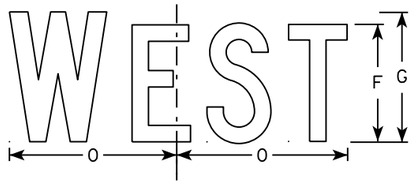
M3-3
MM3-3
MP3-3



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

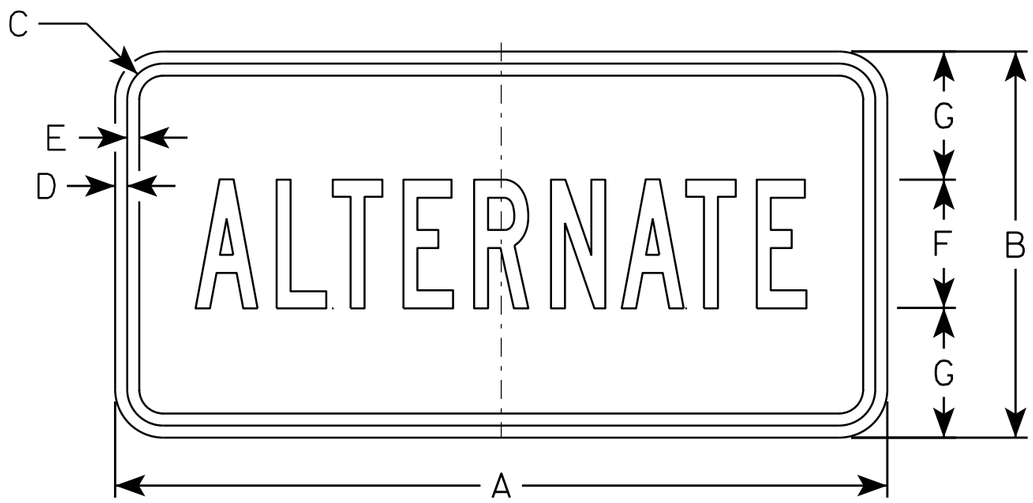
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

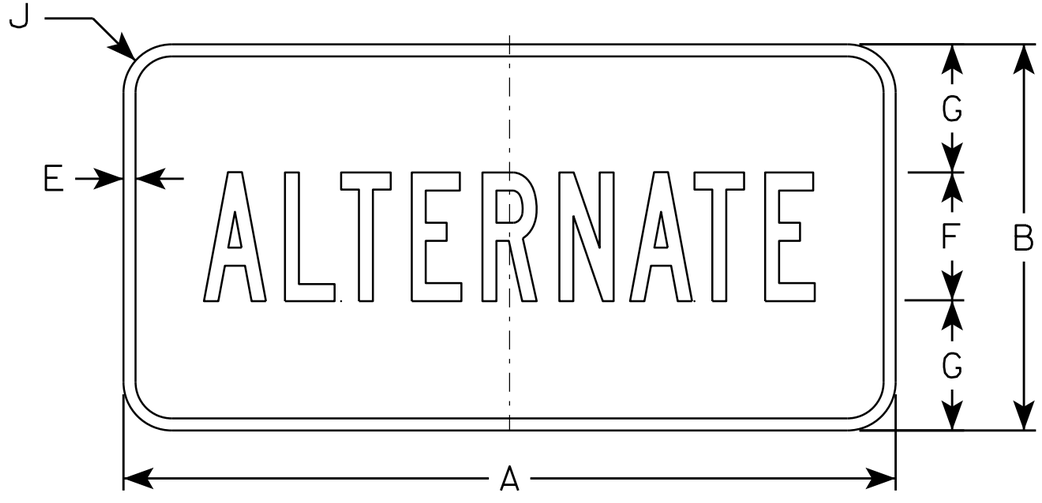
DATE 10/15/15 PLATE NO M3-1.14

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



M4-1
M04-1



MB4-1

NOTES

1. Sign is Type II - Type H except as Shown
2. Color:
   Background - See Note 5
   Message - See note 5
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.
5. M4-1 Background - White
   Message - Black

   MB4-1 Background - Blue
   Message - White

   M04-1 Background - Orange - Type F
   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	4	4	9 3/4	9 1/2	1 1/2																	2.00
3	36	18	1 1/8	3/8	1/2	7	5 1/2	16 3/8	16 1/2	1 1/2																	4.5
4	36	18	1 1/8	3/8	1/2	7	5 1/2	16 3/8	16 1/2	1 1/2																	4.5
5	36	18	1 1/8	3/8	1/2	7	5 1/2	16 3/8	16 1/2	1 1/2																	4.5

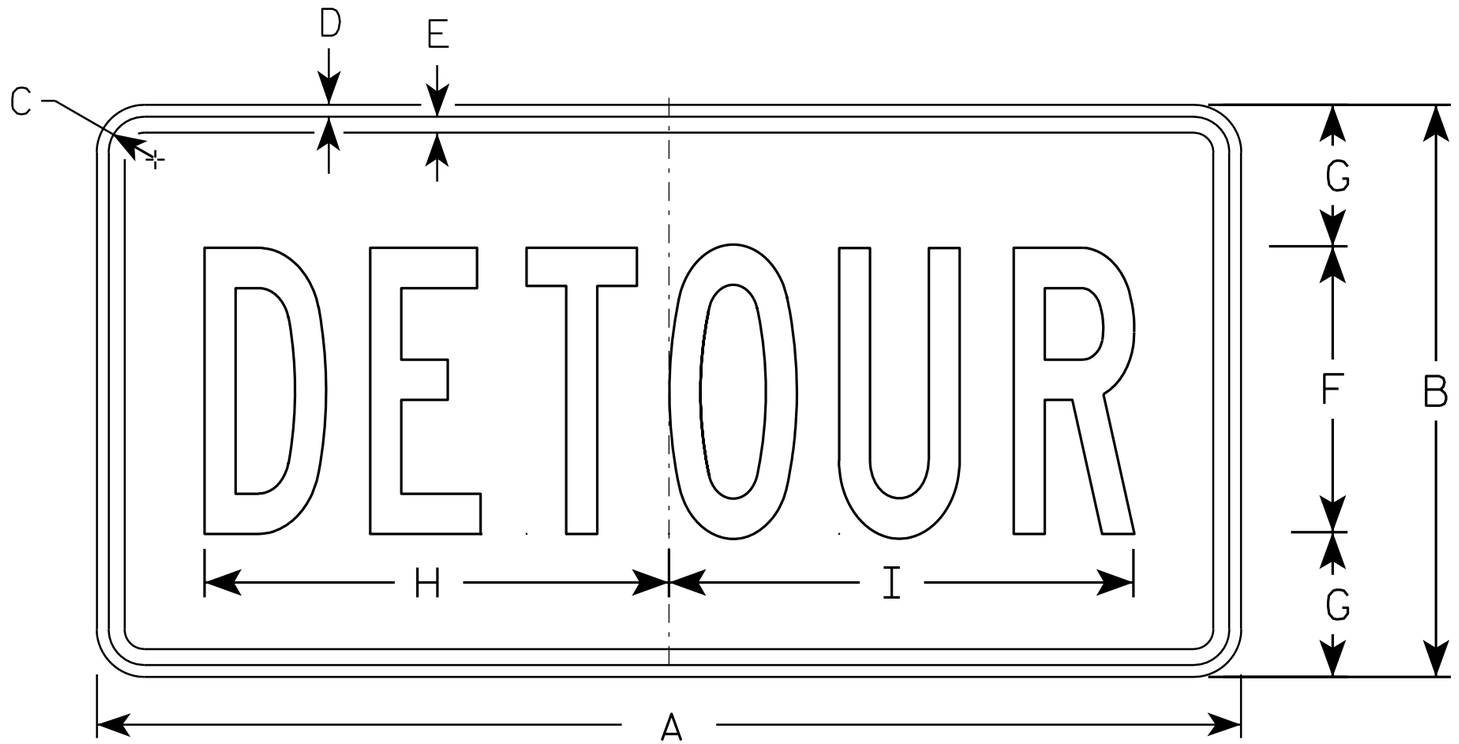
STANDARD SIGN
M4-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/30/14 PLATE 14-1.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



M4-8

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	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

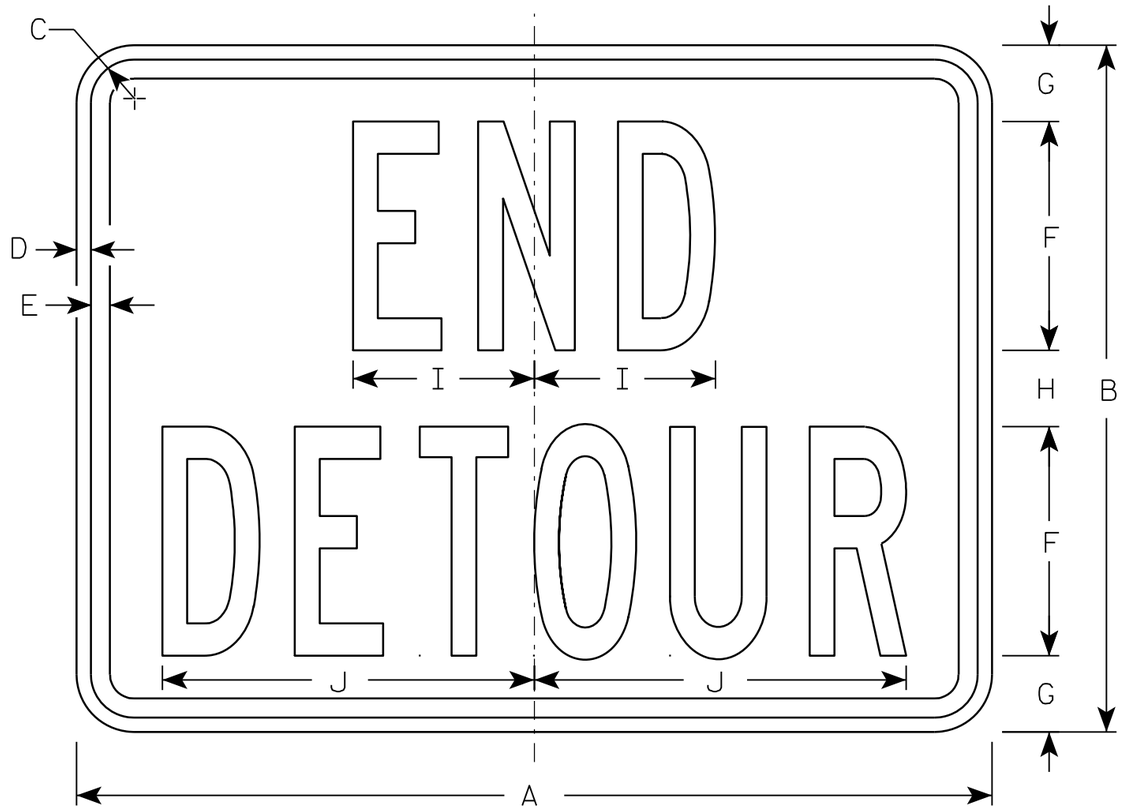
STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 163	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																											

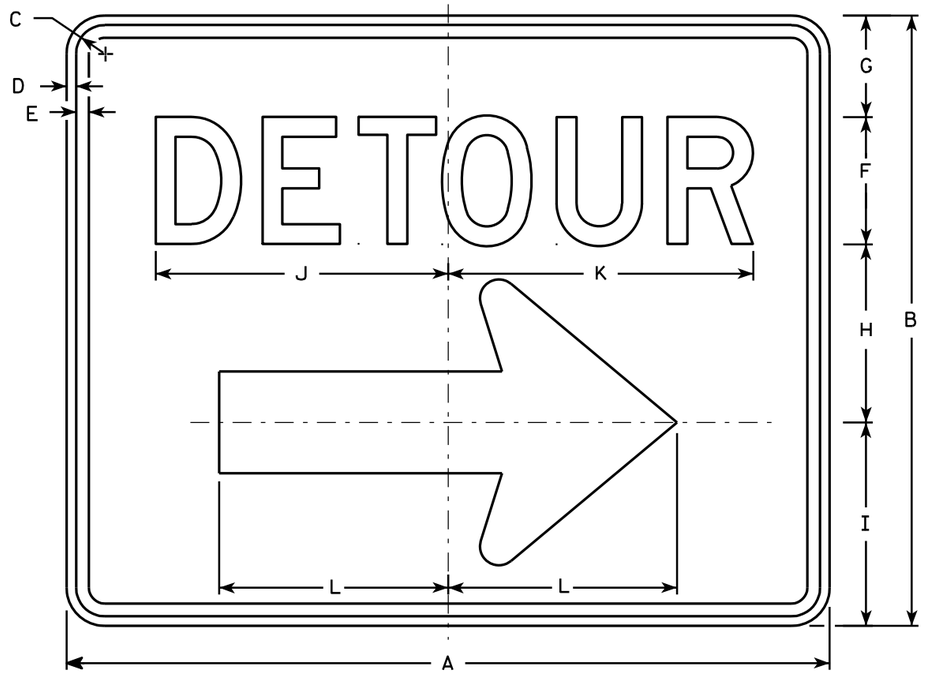
STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-8A.2

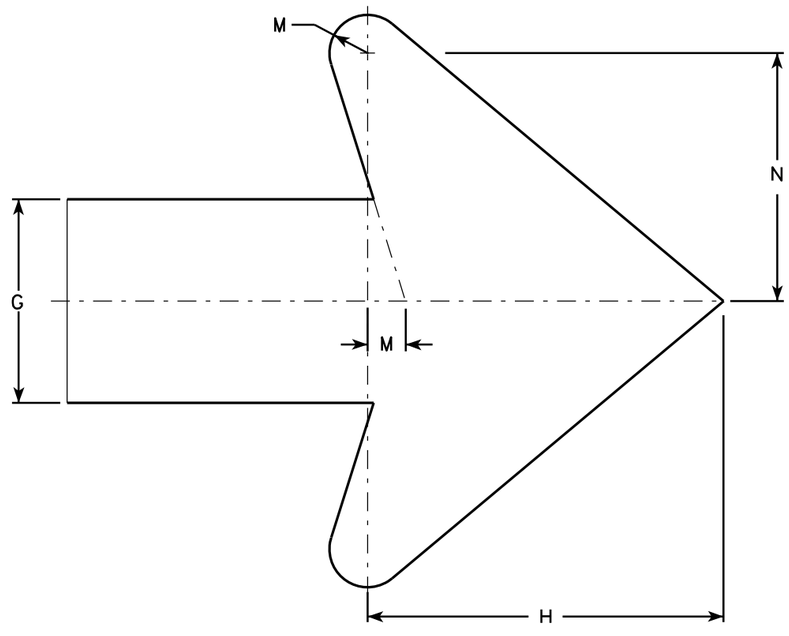
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 164	E



M4-9R

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 - 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. M4-9L is the same as M4-9R 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	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
3	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
4	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0
5	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0

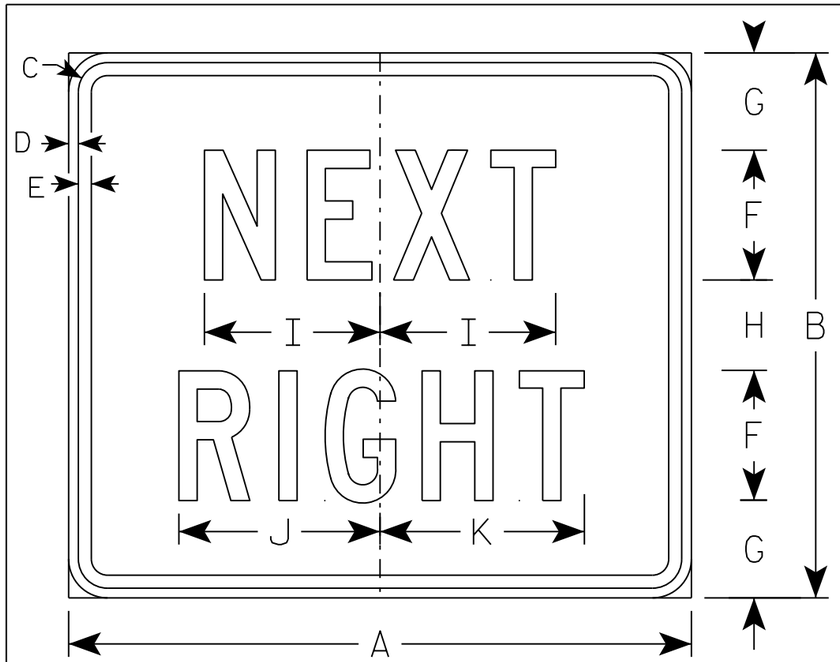
STANDARD SIGN
M4-9 R & L

WISCONSIN DEPT OF TRANSPORTATION

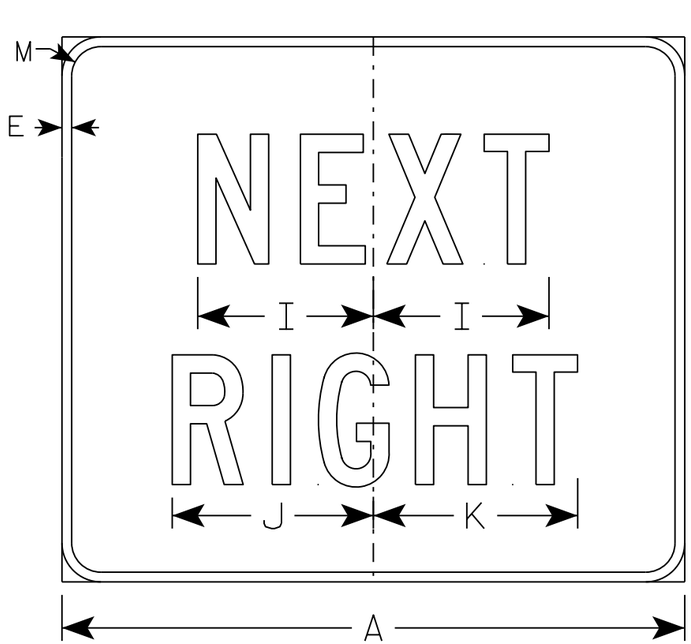
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-9R.4

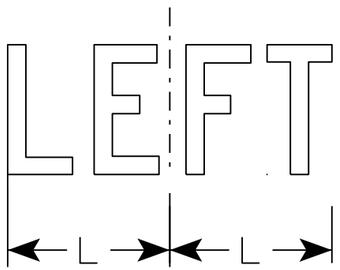
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 165	E



M4-21R
MM4-21R
MO4-21R
MP4-21R



MB4-21R
MK4-21R
MN4-21R
MR4-21R



M4-21L
MB4-21L
MK4-21L
MM4-21L
MN4-21L
MO4-21L
MP4-21L
MR4-21L

NOTES

1. Sign is Type II - Type H except as Shown
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. M4-21 Background - White
   Message - Black
   MB4-21 Background - Blue
   Message - White
   MK4-21 Background - Green
   Message - White
   MM4-21 Background - White
   Message - Green
   MN4-21 Background - Brown
   Message - White
   MO4-21 Background - Orange - Type F Reflective
   Message - Black
   MP4-21 Background - White
   Message - Blue
   MR4-21 Background - Brown
   Message - Yellow

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	21	1 1/8	3/8	1/2	5	3 3/4	3 1/2	6 3/4	7 3/4	7 7/8	6 1/4	1 1/2														3.5
3	36	30	1 5/8	5/8	3/4	8	4 3/4	4 1/2	10 7/8	12 5/8	12 1/2	10 1/8	1 7/8														7.5
4																											
5																											

STANDARD SIGN
M4-21

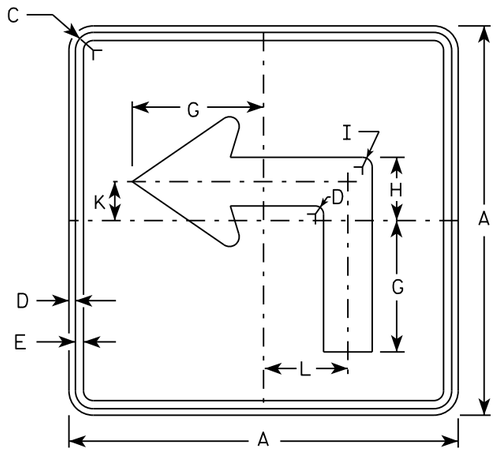
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

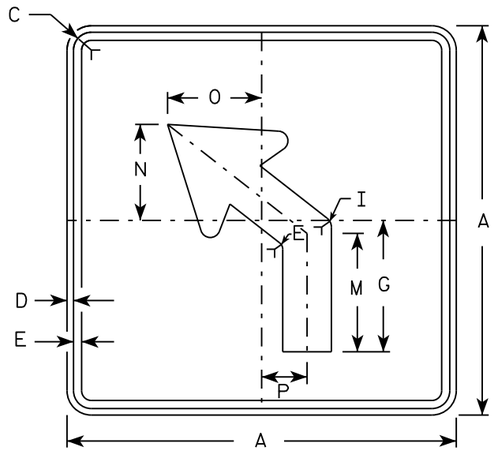
DATE 10/15/15 PLATE NO. M4-21.4

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

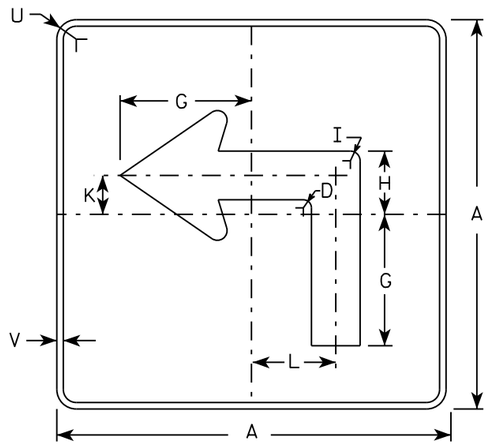
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M421.DGN PLOT DATE : 01-DEC-2015 18:03 PLOT BY : $$ platuser $$ PLOT NAME : PLOT SCALE : 5.837526:1.000000



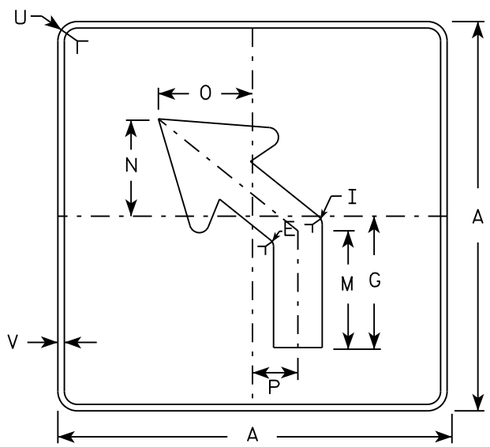
M5-1L
MM5-1L
MO5-1L
MP5-1L



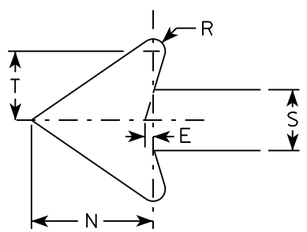
M5-2L
MM5-2L
MO5-2L
MP5-2L



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

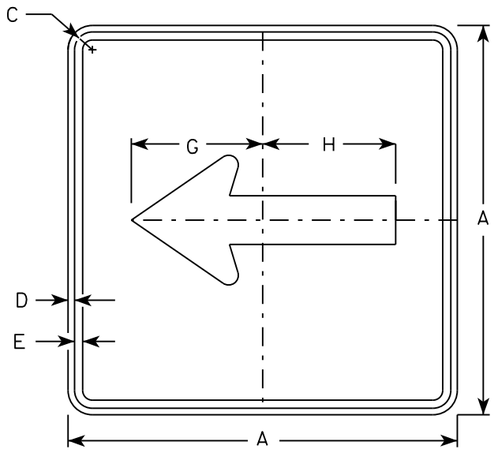
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

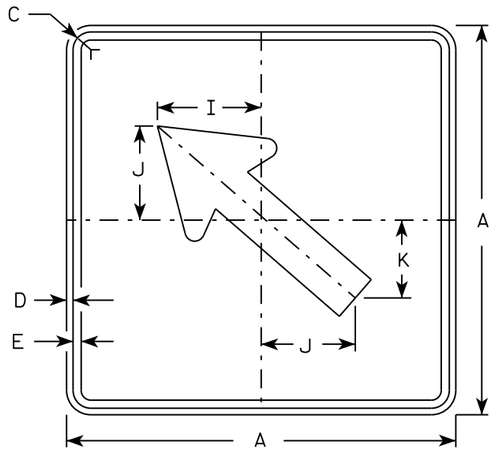
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M5-1.13

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



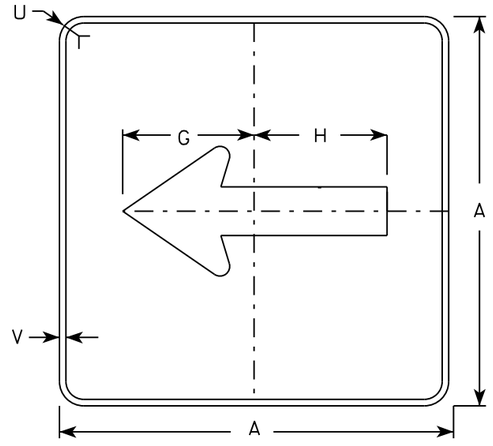
M6-1
MM6-1
MO6-1
MP6-1



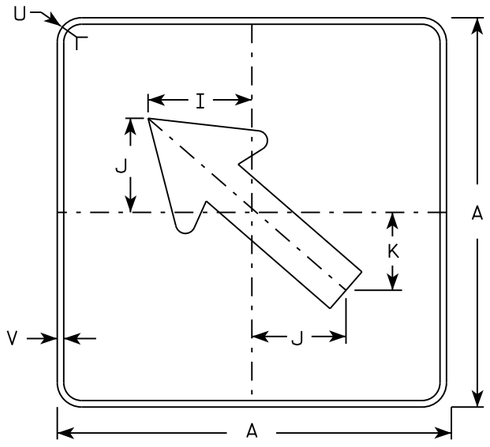
M6-2
MM6-2
MO6-2
MP6-2

NOTES

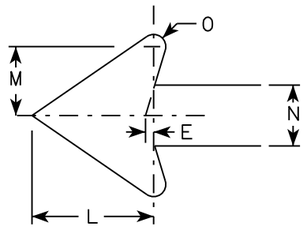
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - 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

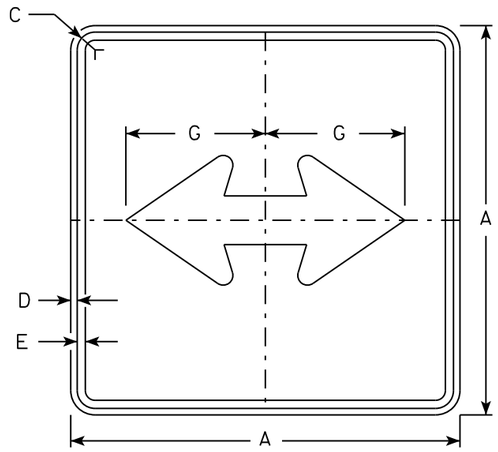
STANDARD SIGN
M6-1 & M6-2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

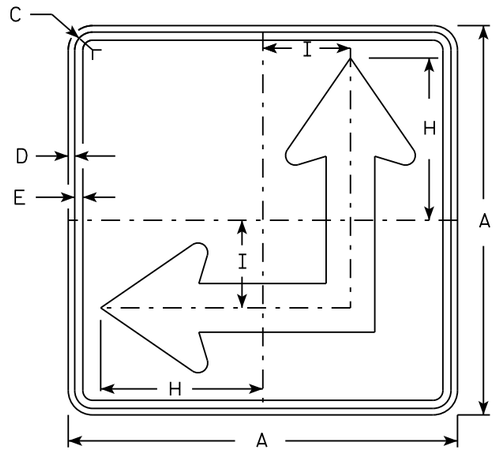
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 168 M6-1.15

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



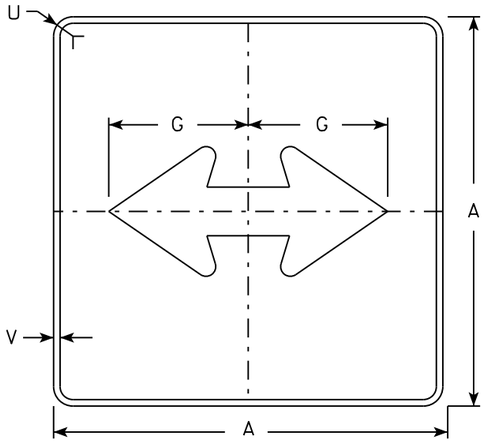
M6-4
MM6-4
MO6-4
MP6-4



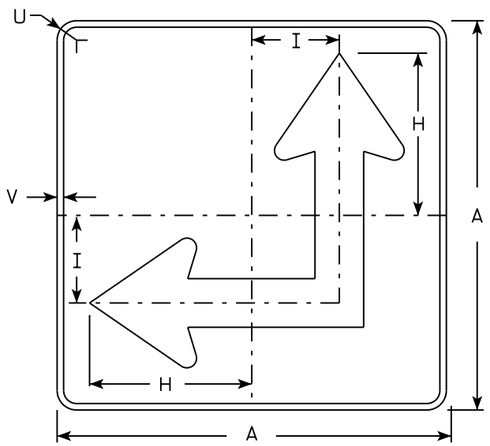
M6-6
MM6-6
MO6-6
MP6-6

NOTES

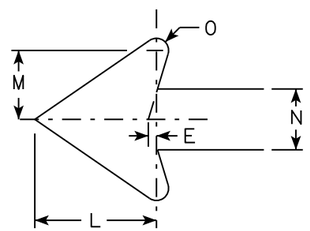
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See Note 4
   Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-4 and M6-6 Background - White
   Message - Black
   MB6-4 and MB6-6 Background - Blue
   Message - White
   MK6-4 and MK6-6 Background - Green
   Message - White
   MM6-4 and MM6-6 Background - White
   Message - Green
   MN6-4 and MN6-6 Background - Brown
   Message - White
   MO6-4 and MO6-6 Background - Orange - Type F Reflective
   Message - Black
   MP6-4 and MP6-6 Background - White
   Message - Blue
   MR6-4 and MR6-6 Background - Brown
   Message - Yellow
5. M6-6R same as M6-6L except arrow points ahead and right.



MB6-4
MK6-4
MN6-4
MR6-4



MB6-6
MK6-6
MN6-6
MR6-6



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	8 3/4	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	12 1/2	6 3/4			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	12 1/2	6 3/4			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	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

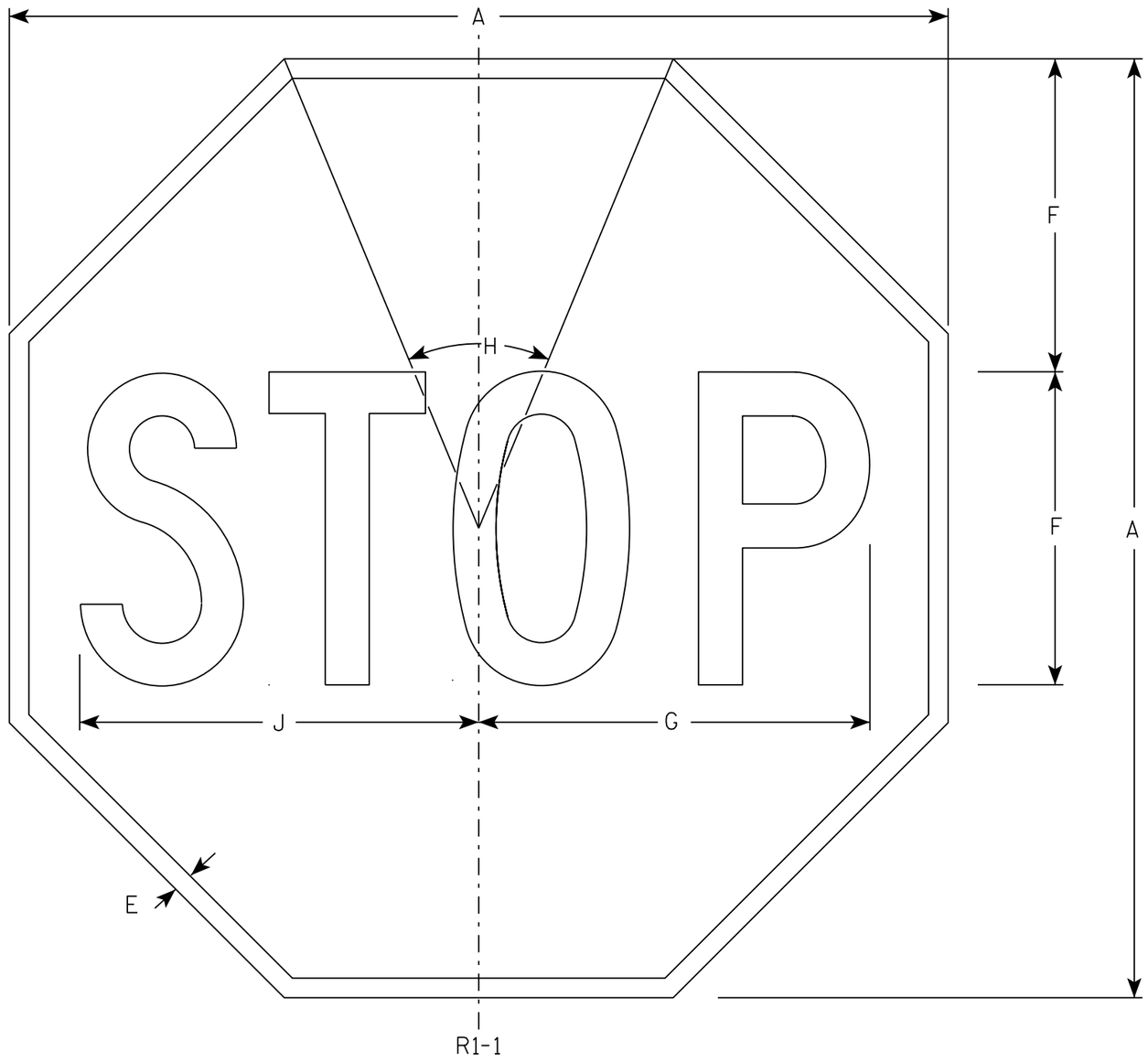
STANDARD SIGN
M6-4 & M6-6
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 169 M6-4.10

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



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

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				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

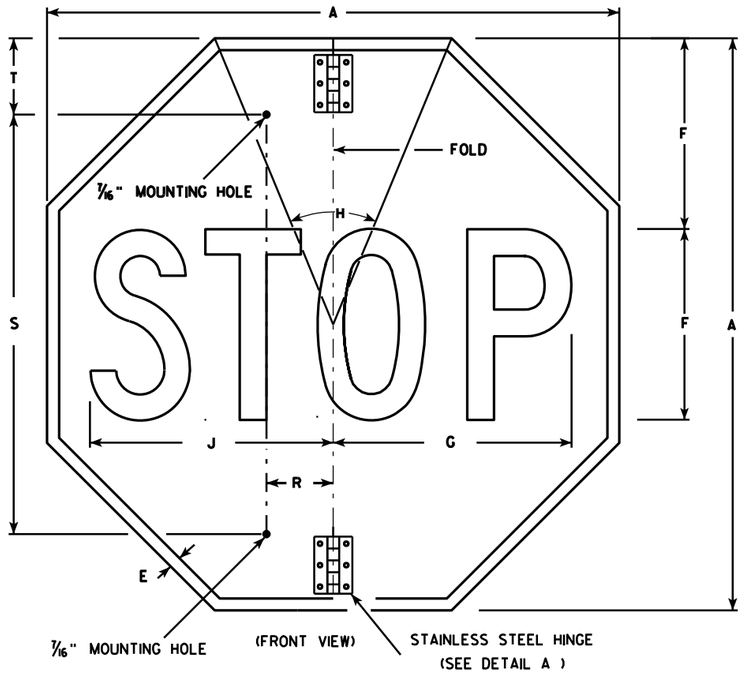
STANDARD SIGN
R1-1

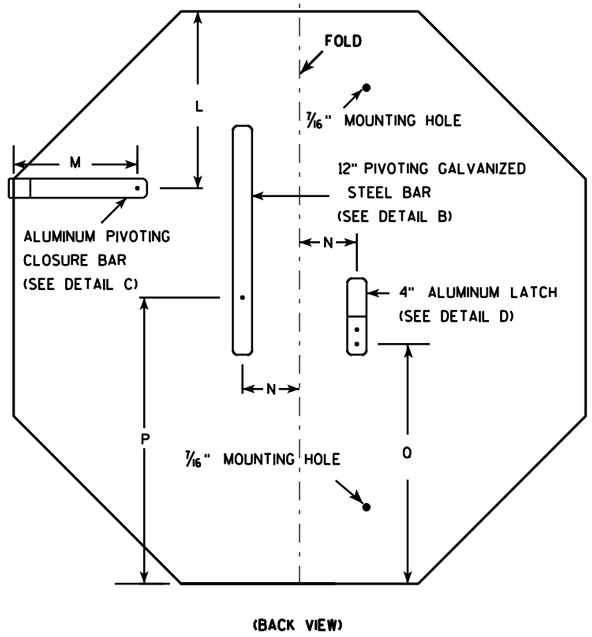
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13

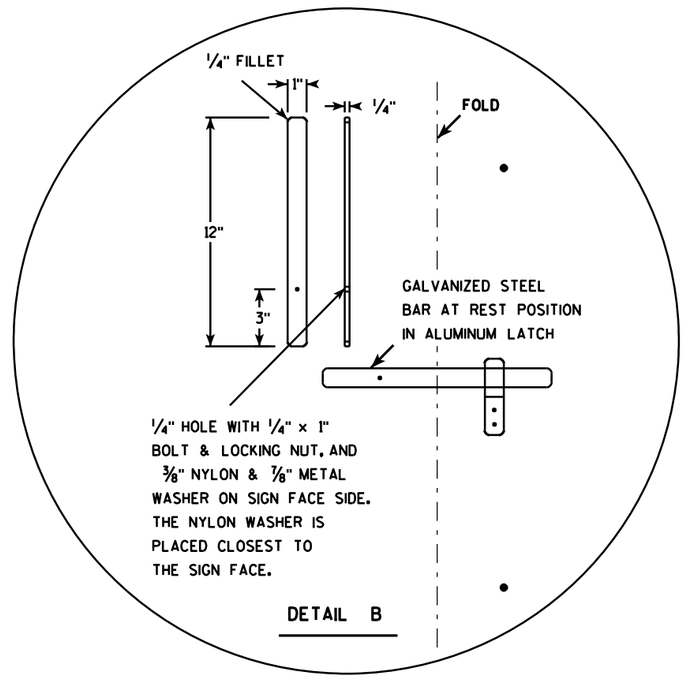
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 170	E

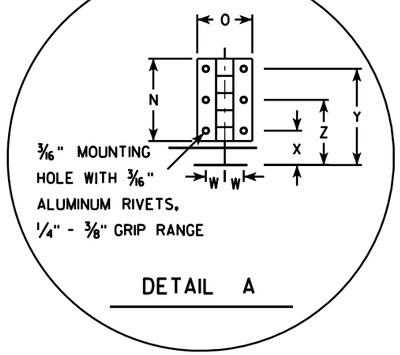


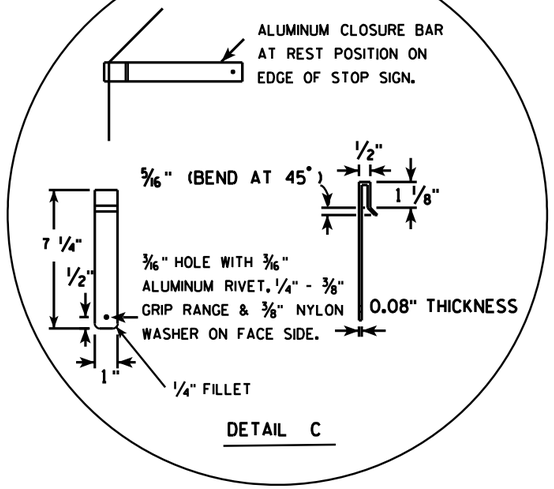


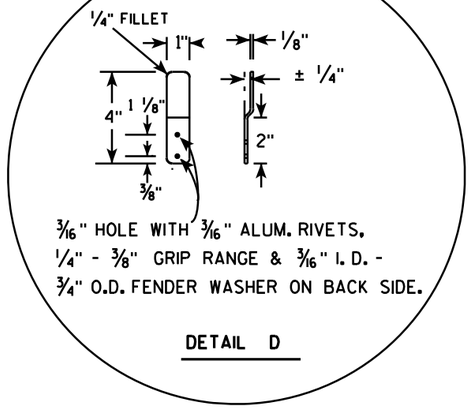
NOTES

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																											

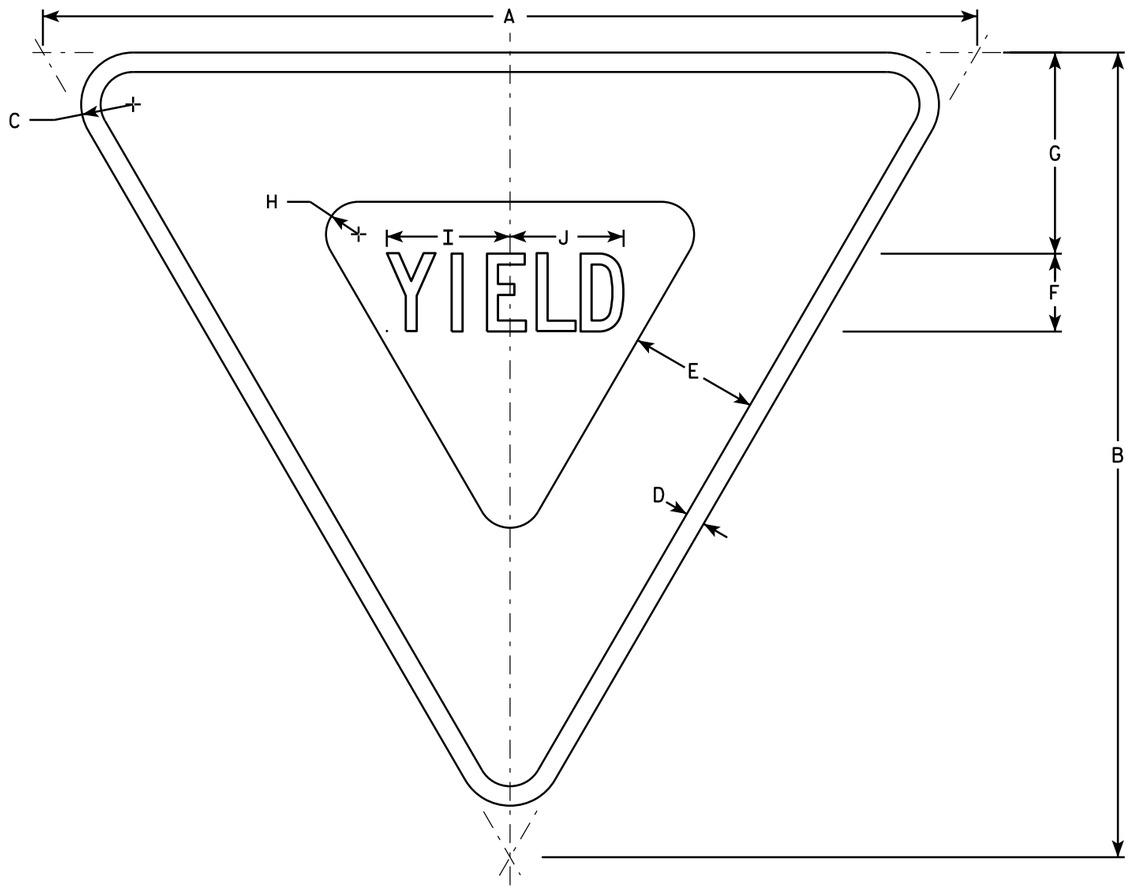
STANDARD SIGN
R1-1F

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: 171	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

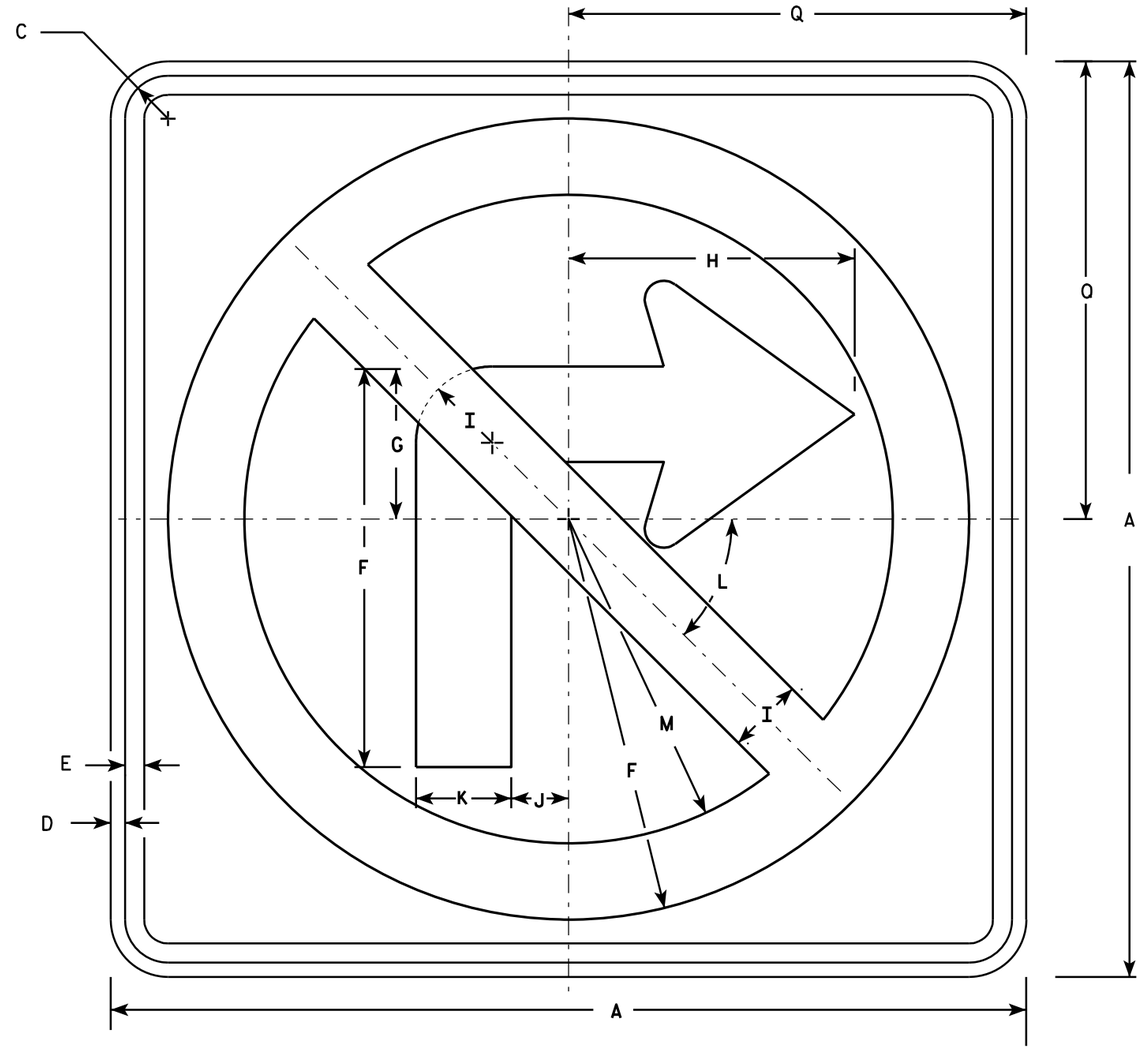
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/13/14 PLATE R1-2.12

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

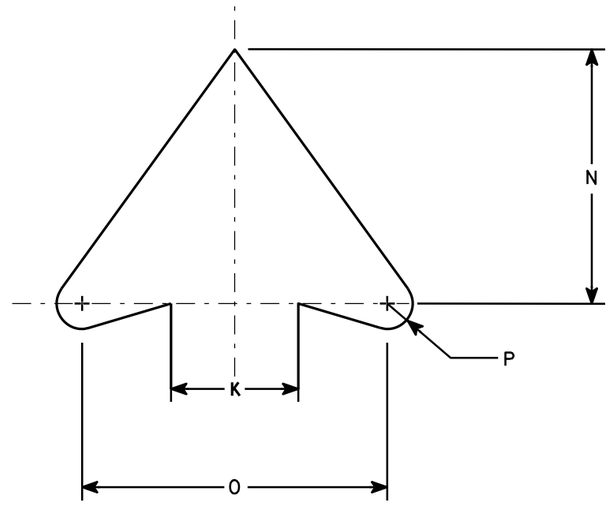
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R12.DGN PLOT DATE : 13-OCT-2014 15:12 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.837526:1.000000
WISDOT/CADDS SHEET 42



R3-1

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. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



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	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45	8 1/2	5	6	1/2	12										4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2	12										4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4	18										9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1	24										16.0

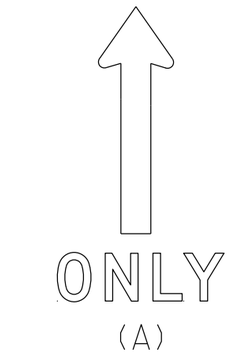
STANDARD SIGN
R3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

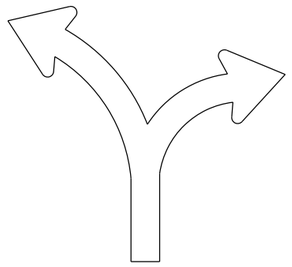
DATE 12/08/10 PLATE NO. R3-1.5

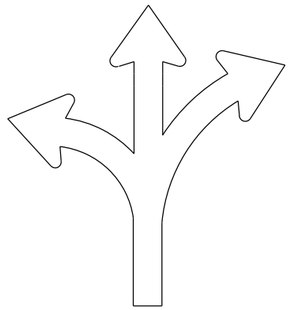
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 173	E

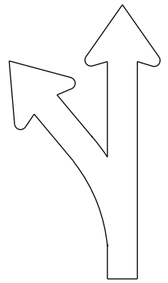


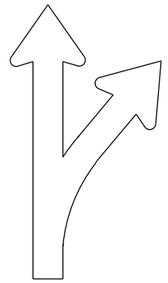
(A)

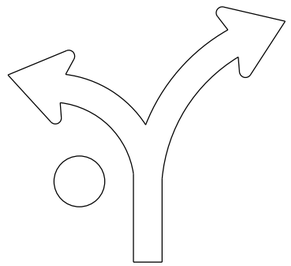
(B)

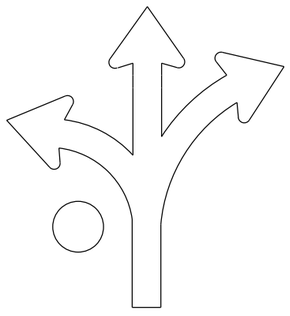

(C)

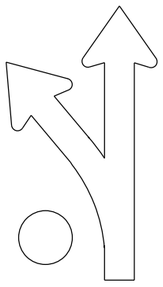

(D)


(E)

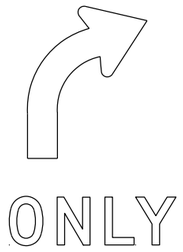

(F)


(G)

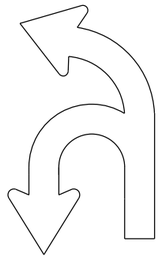

(H)


(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

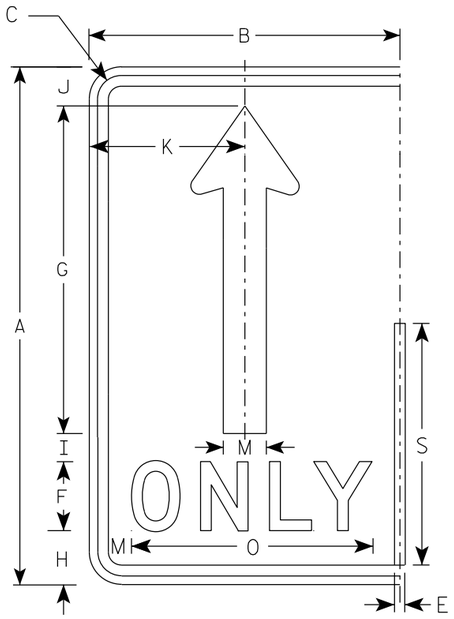
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

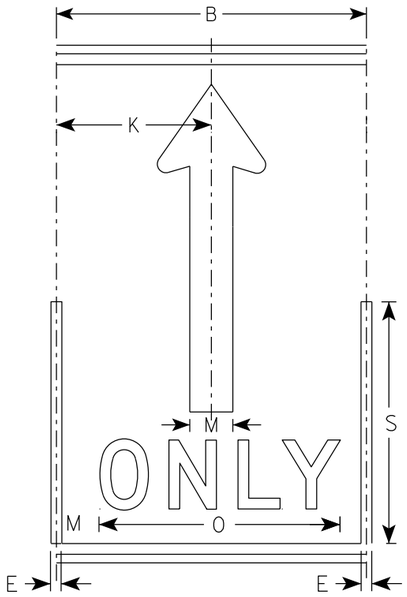
DATE 5/21/19 PLATE NO. R3-8.1

NOTES

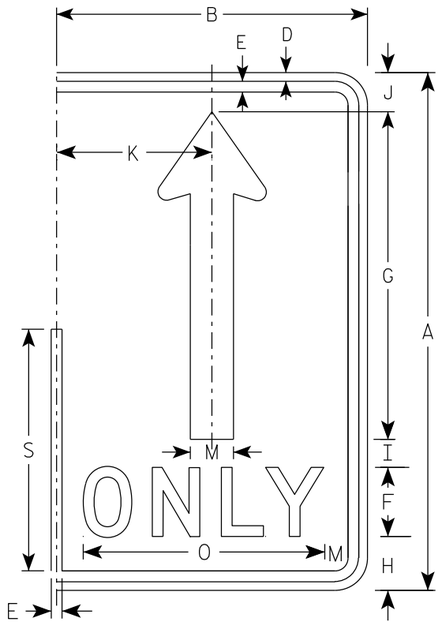
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



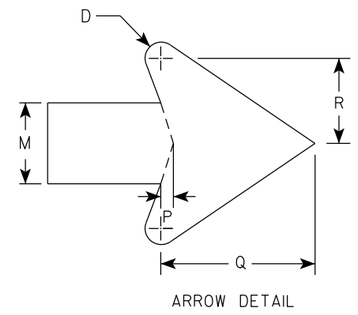
(A)



(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

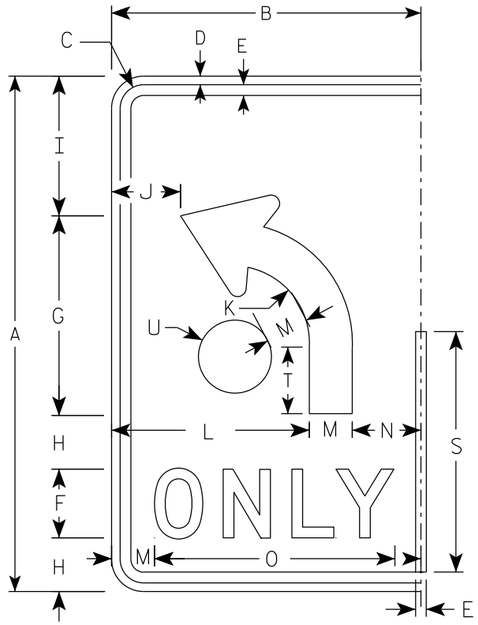
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

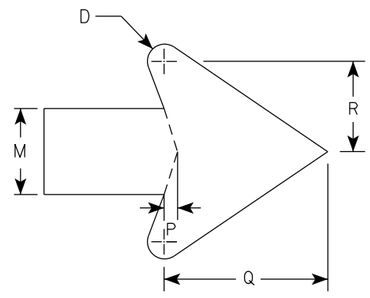
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 175 | E

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

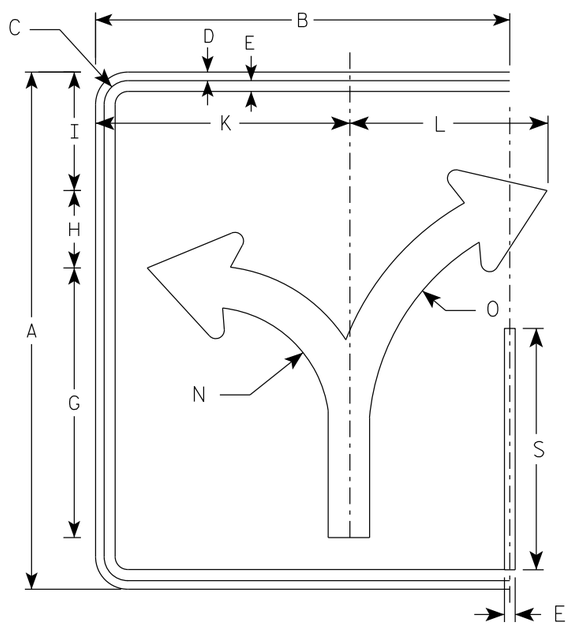
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

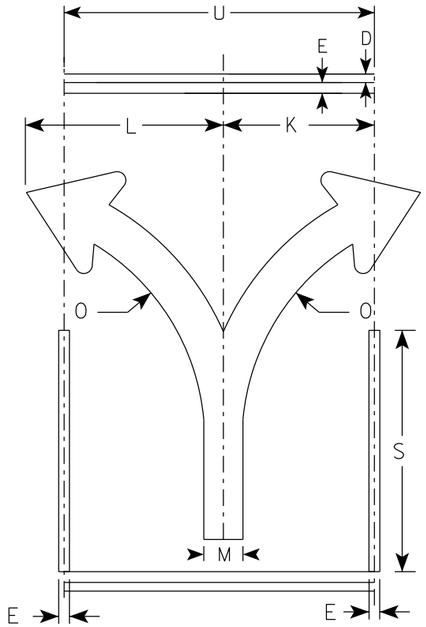
SHEET NO: 176 E

NOTES

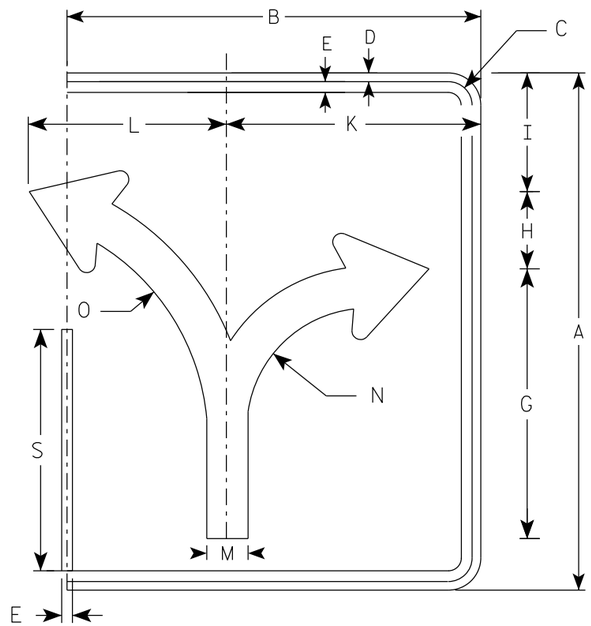
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



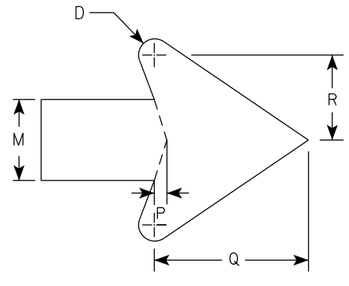
(C)



(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

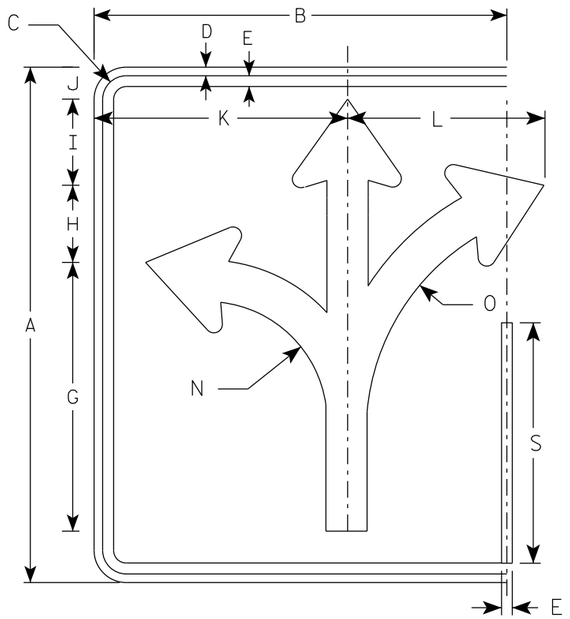
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

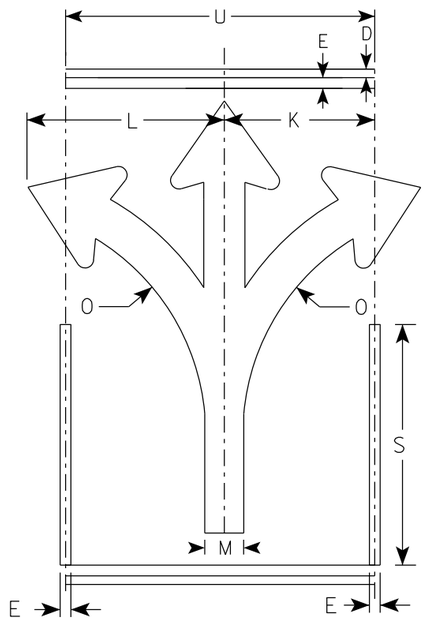
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 177 | E

NOTES

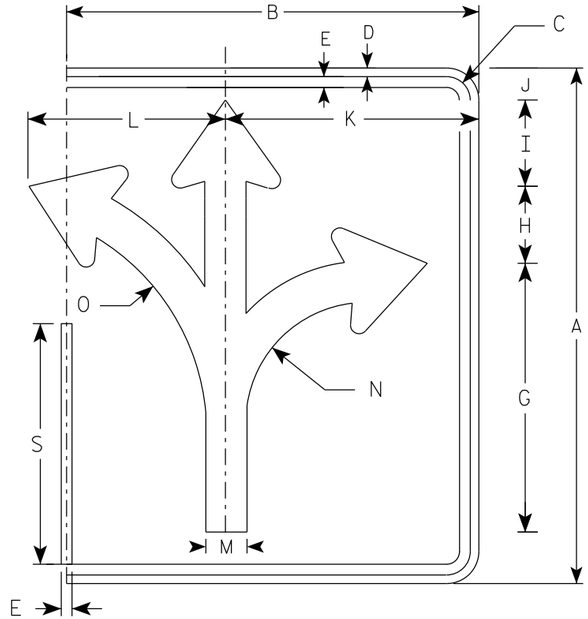
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



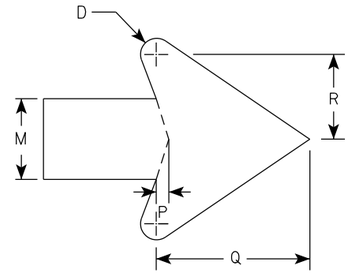
(D)



(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

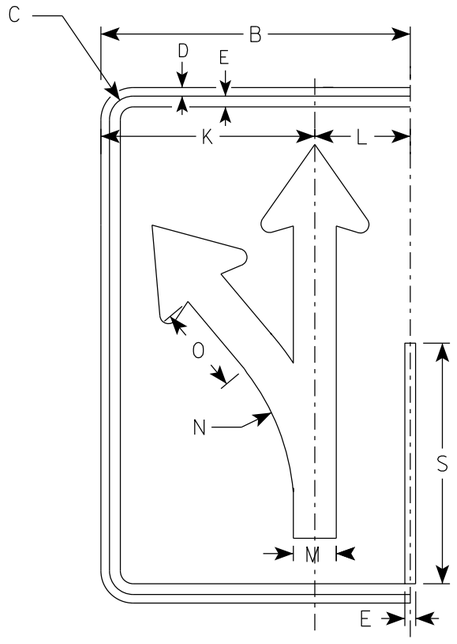
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

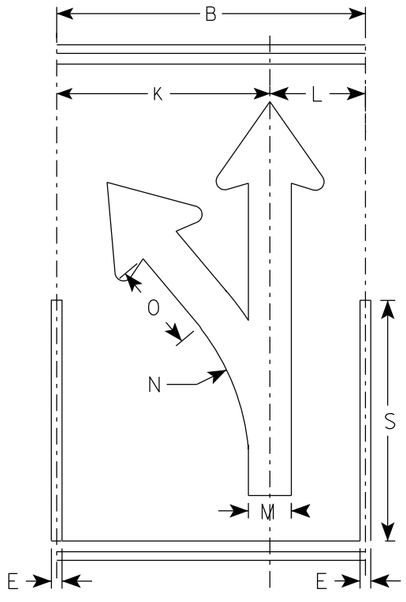
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 178 | E

NOTES

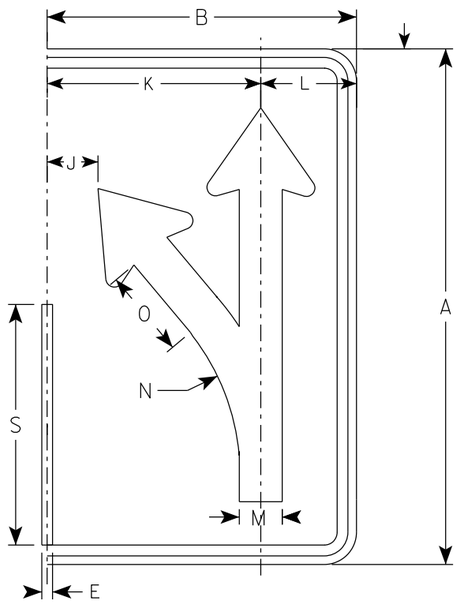
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



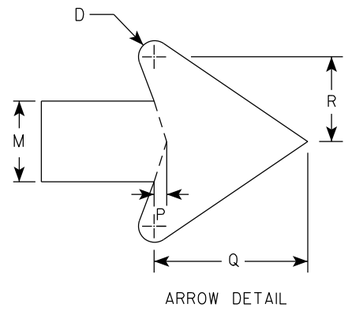
(E)



(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

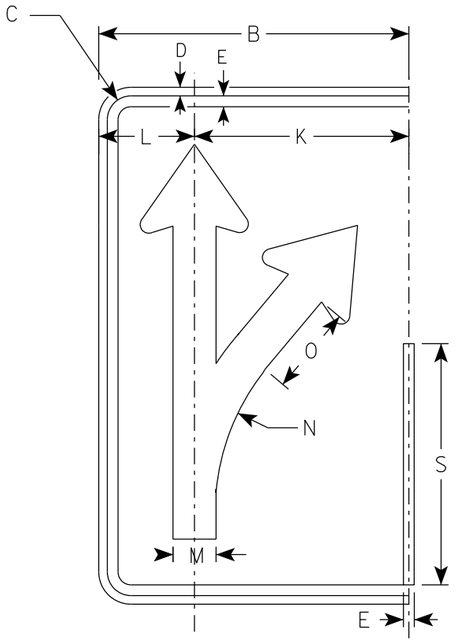
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

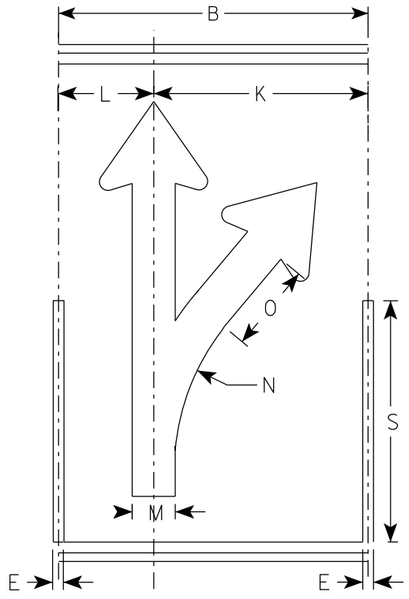
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 179 | E

NOTES

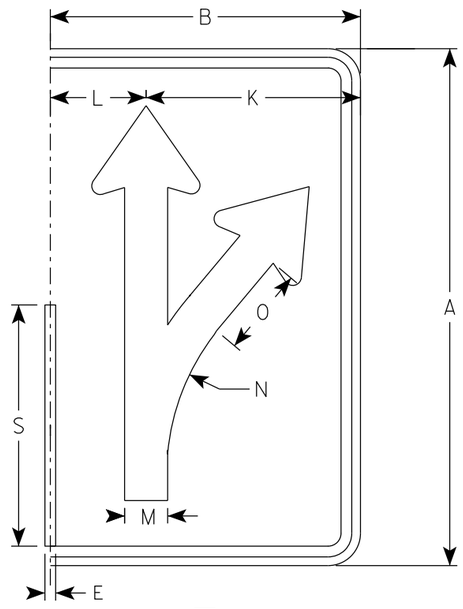
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



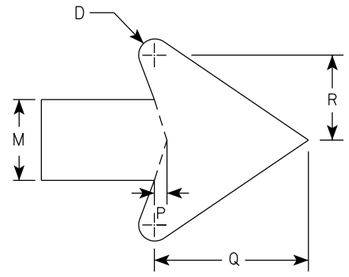
(F)



(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

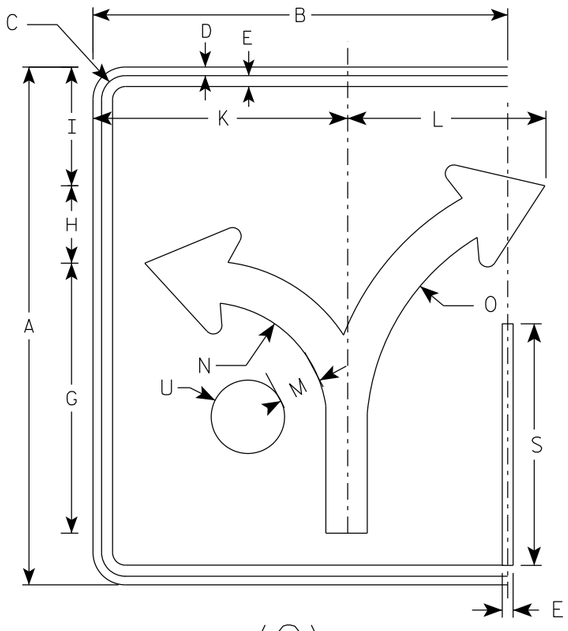
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

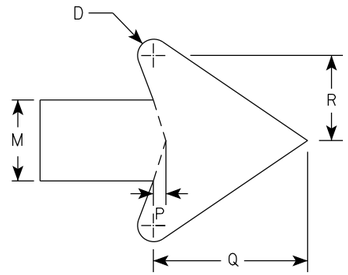
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 180 | E

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

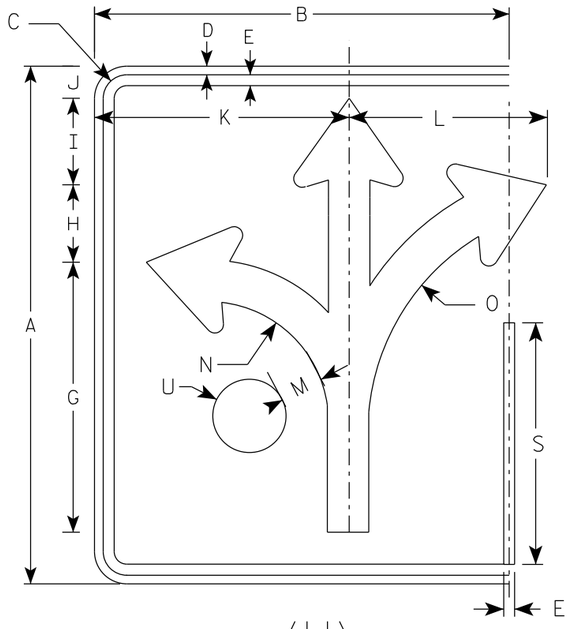
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 181 | E

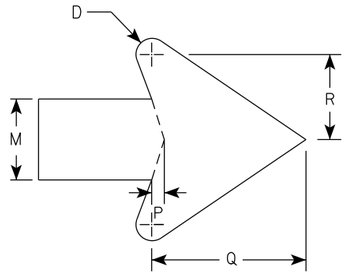
FILE NAME : C:\CAEfiles\Projects\stdplate_R38.dgn PLOT DATE : 21-MAY 2019 4:38 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

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

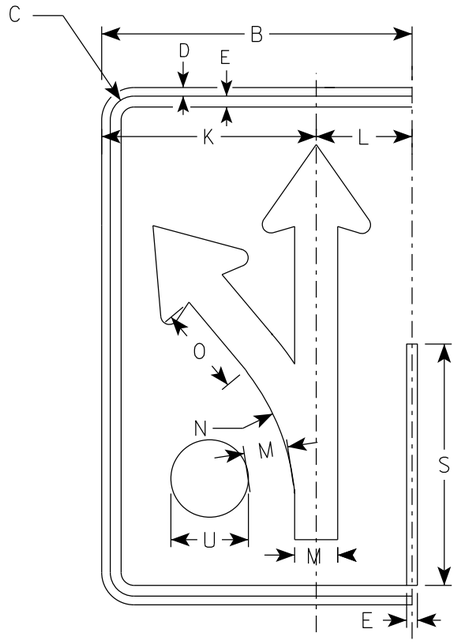
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

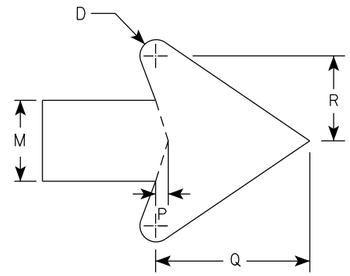
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 182	E

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

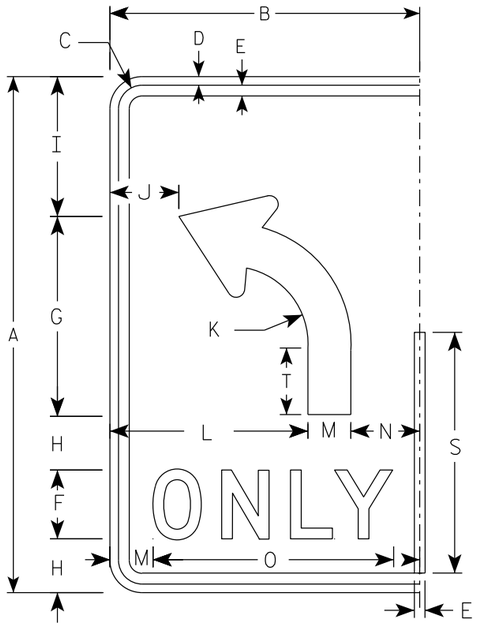
APPROVED Matthew R Rauch
For State Traffic Engineer

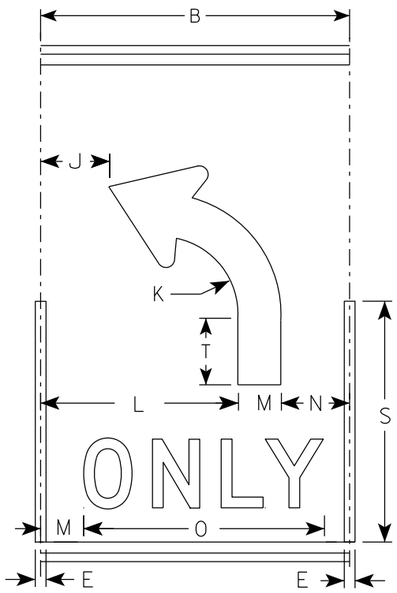
DATE 5/21/19 PLATE NO. R3-8.1

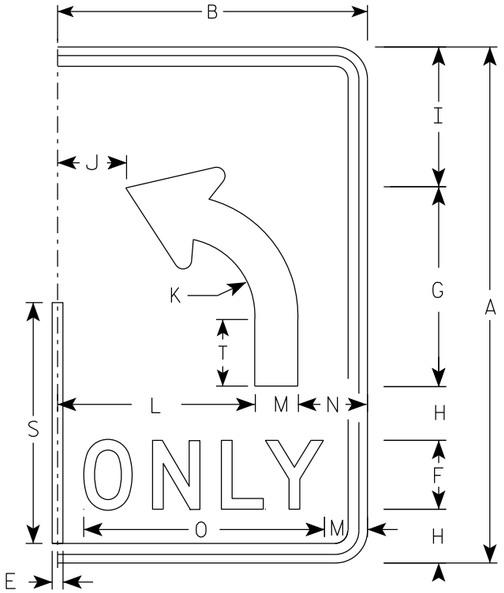
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 183 | E

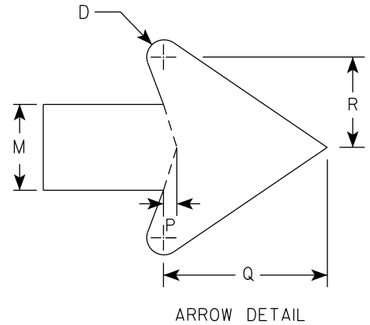
NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - 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	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

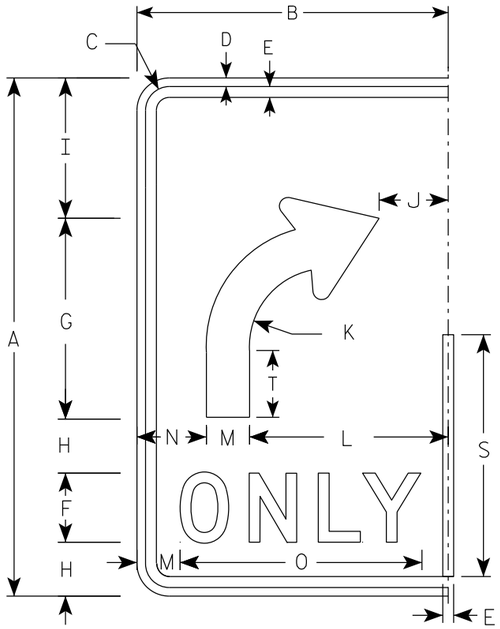
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

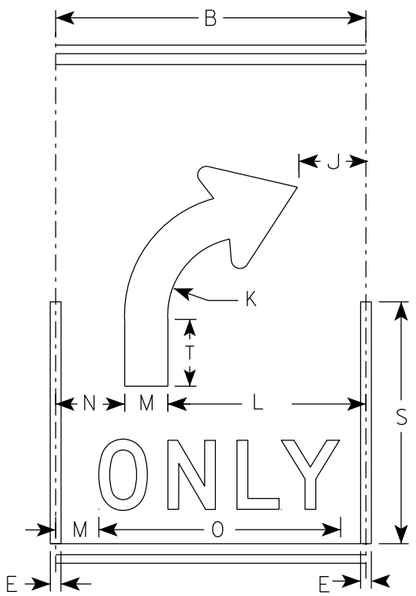
SHEET NO: 184 E

NOTES

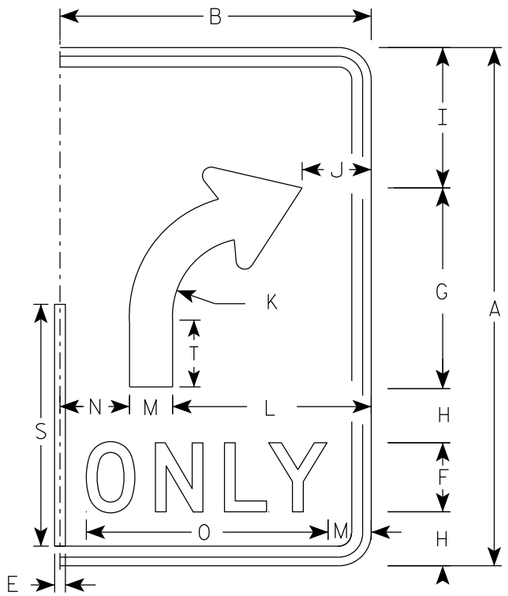
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



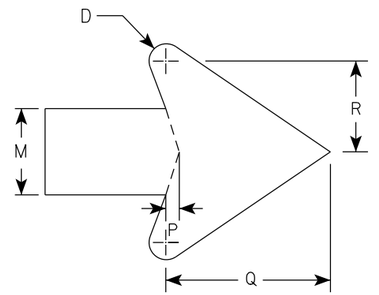
(R)



(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

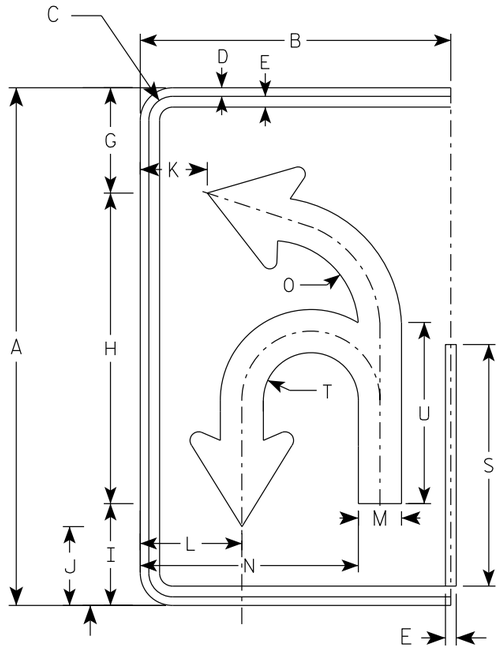
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

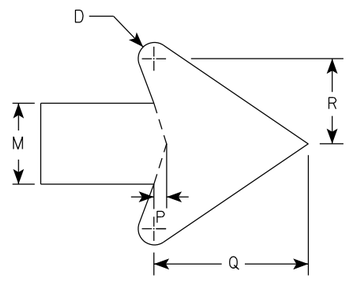
SHEET NO: 185 **E**

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

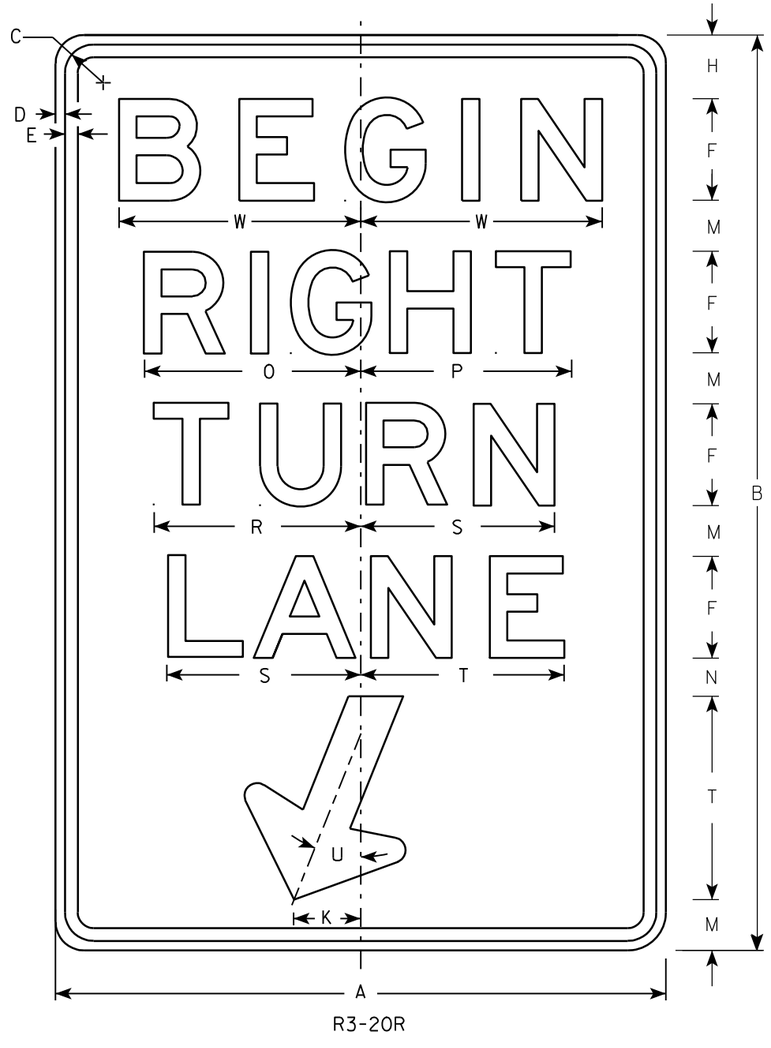
STANDARD SIGN
R3-8 (U) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

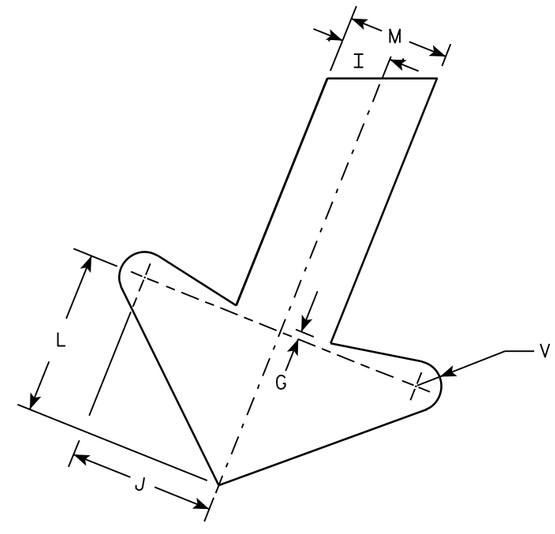
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 186 | E



R3-20R

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	8 1/2	8 1/4		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	8 1/2	8 1/4		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	12 3/4	12 1/2		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

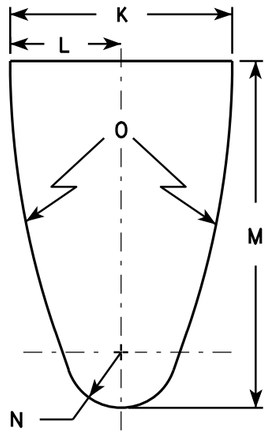
STANDARD SIGN
R3-20R

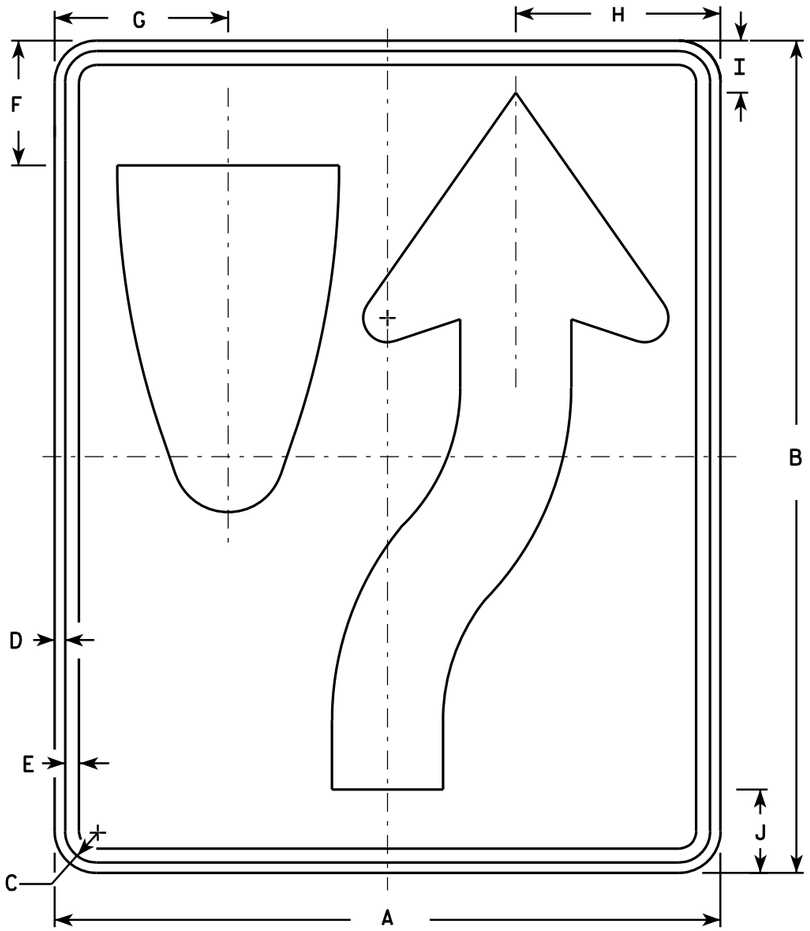
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20R.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 187 | E

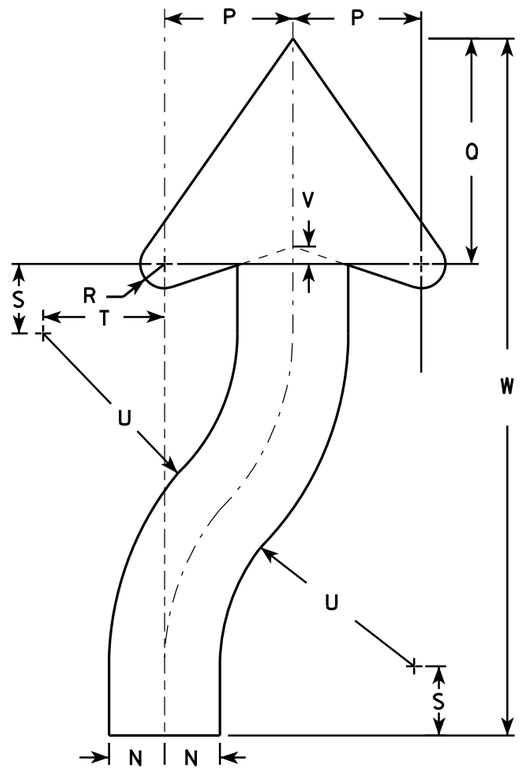




R4-7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:
   Background - White
   Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend 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	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

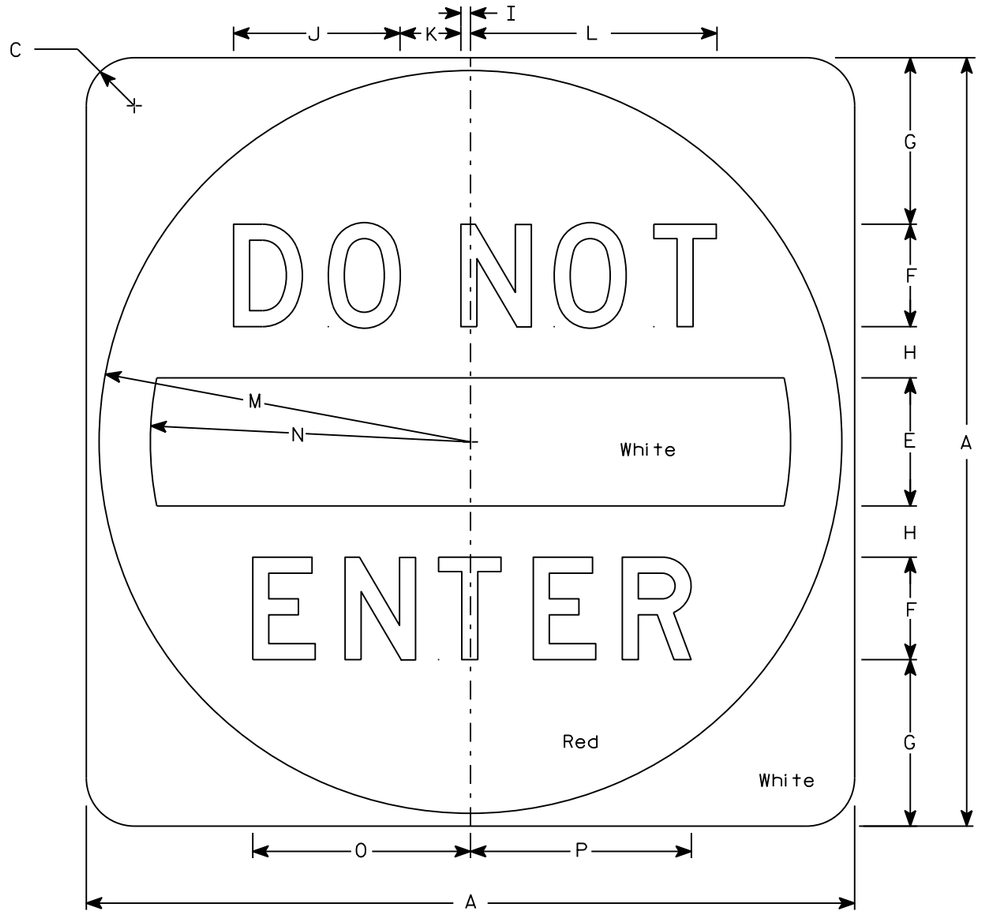
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 188	E



R5-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - See detail
   Message - White
3. Message Series - D

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		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8											6.25
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8											16.0

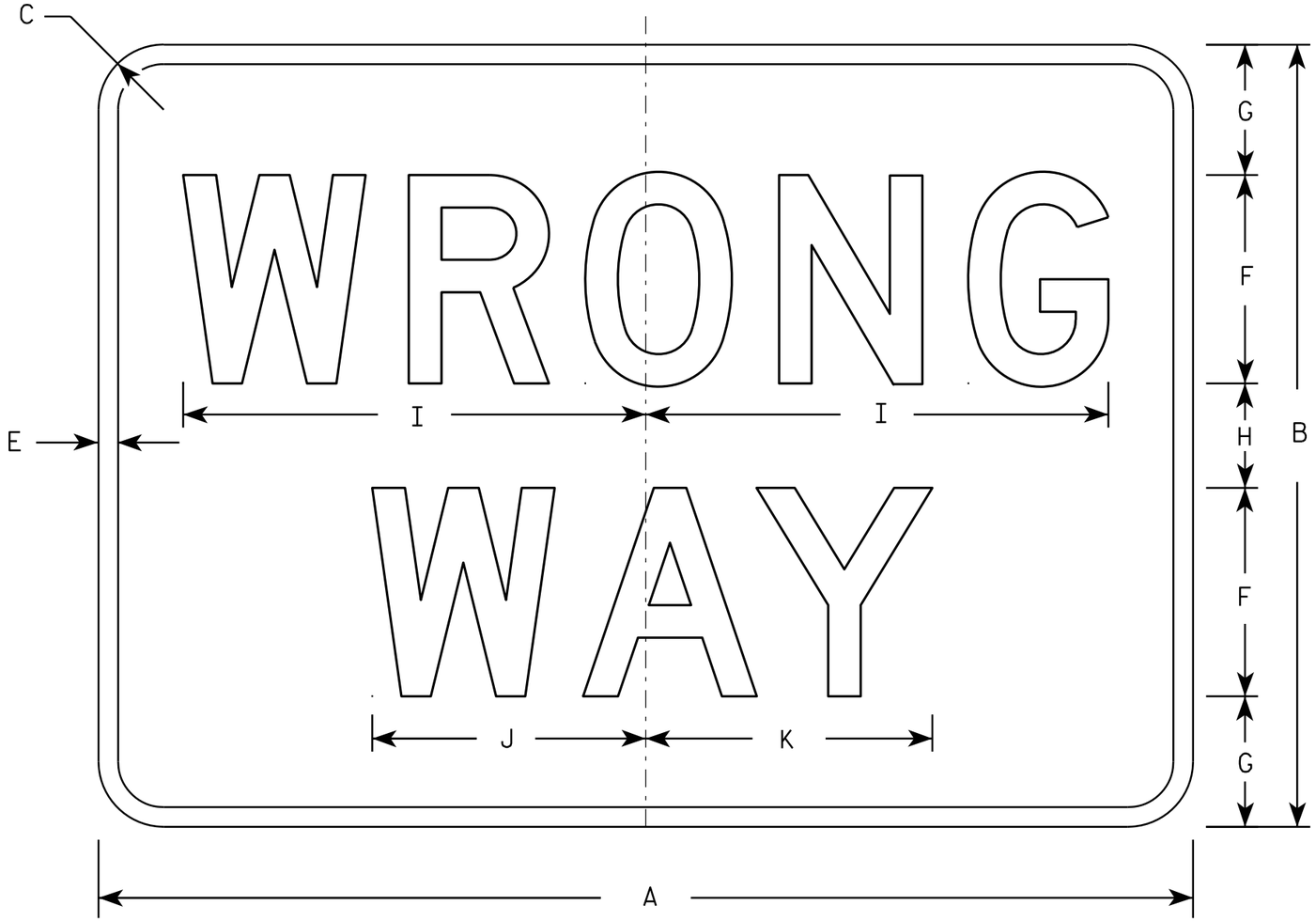
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/15/18 PLATE NO. R5-1.16

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 189 | E



R5-1A

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 - 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.

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	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

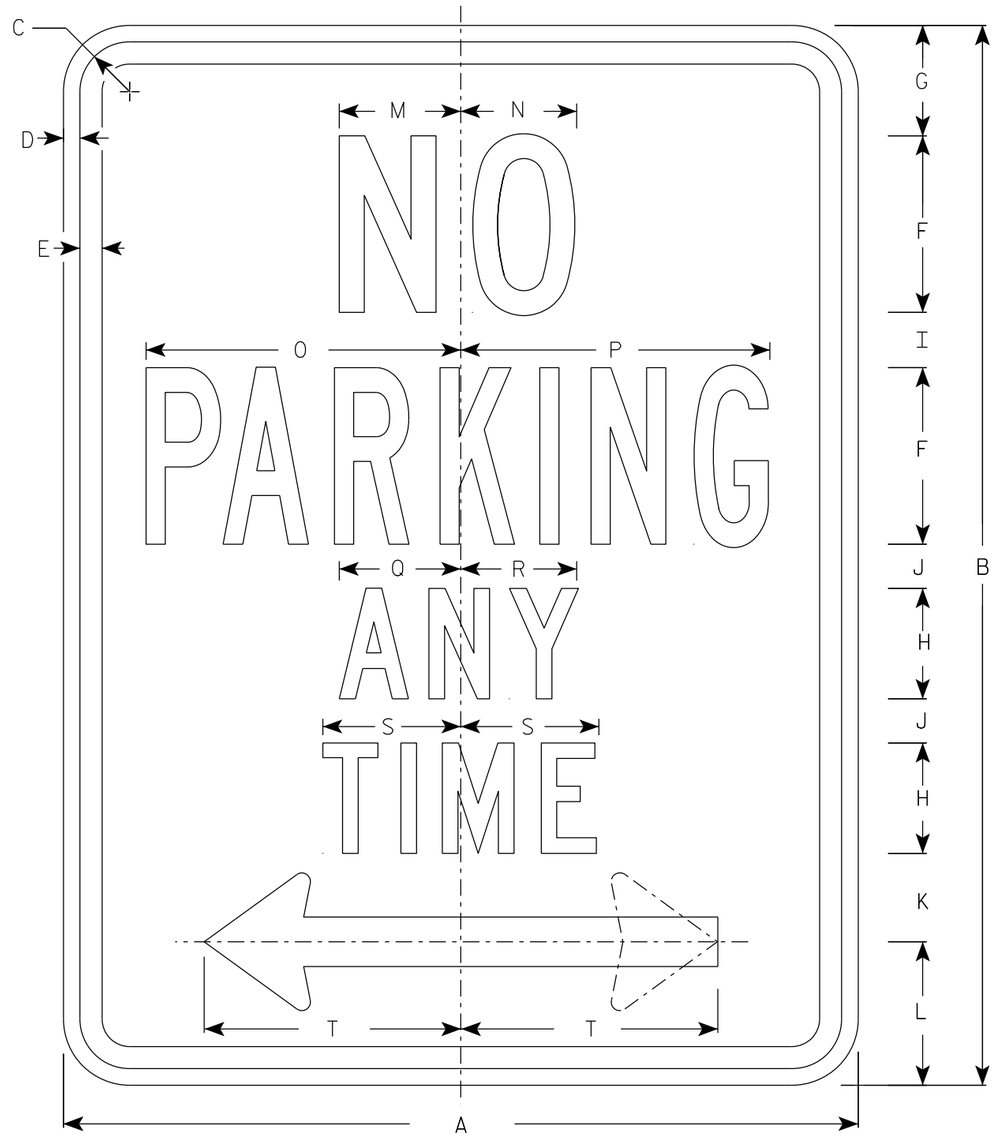
STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1A.2

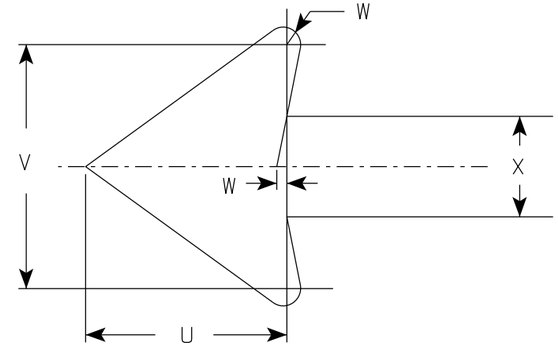
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 190 | E



R7-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Red
3. Message Series - See Note 5
4. Lines 1, 3 and 4 are series C, line 2 is series B.
5. R7-1D (double arrow)
   R7-1L (left arrow)
   R7-1R (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	12	18	1 1/8	3/8	3/8	3	1 7/8	2	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2 1/4	2 1/8	2 1/2	3 7/8	1 1/2	1 3/4	1/8	3/4			1.5
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 3/4	2 5/8	3 1/8	5 7/8	2 1/4	2 5/8	1/4	1 1/8			3.0
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
4																											
5																											

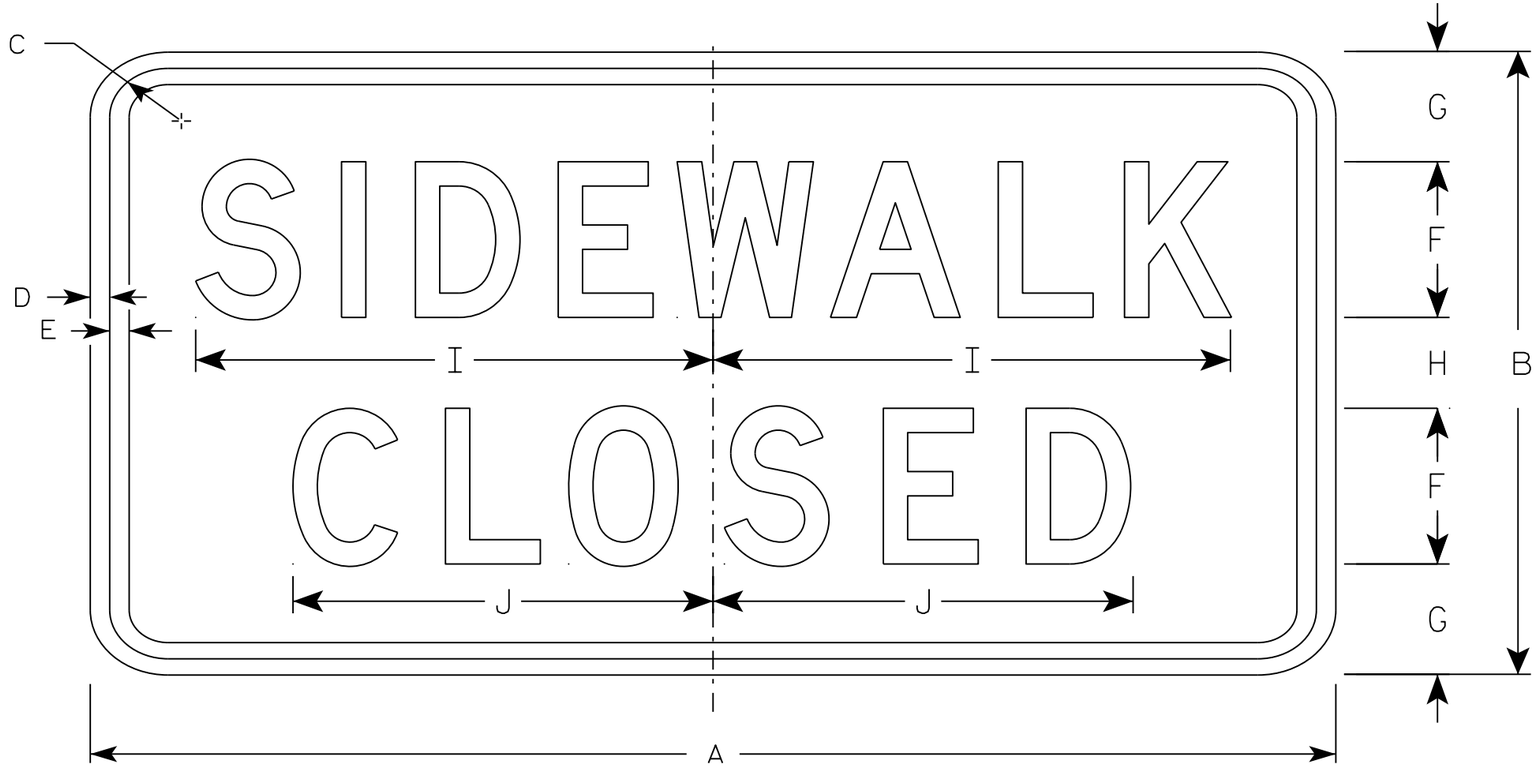
STANDARD SIGN
R7-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2021 PLATE NO. R7-1.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 191 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

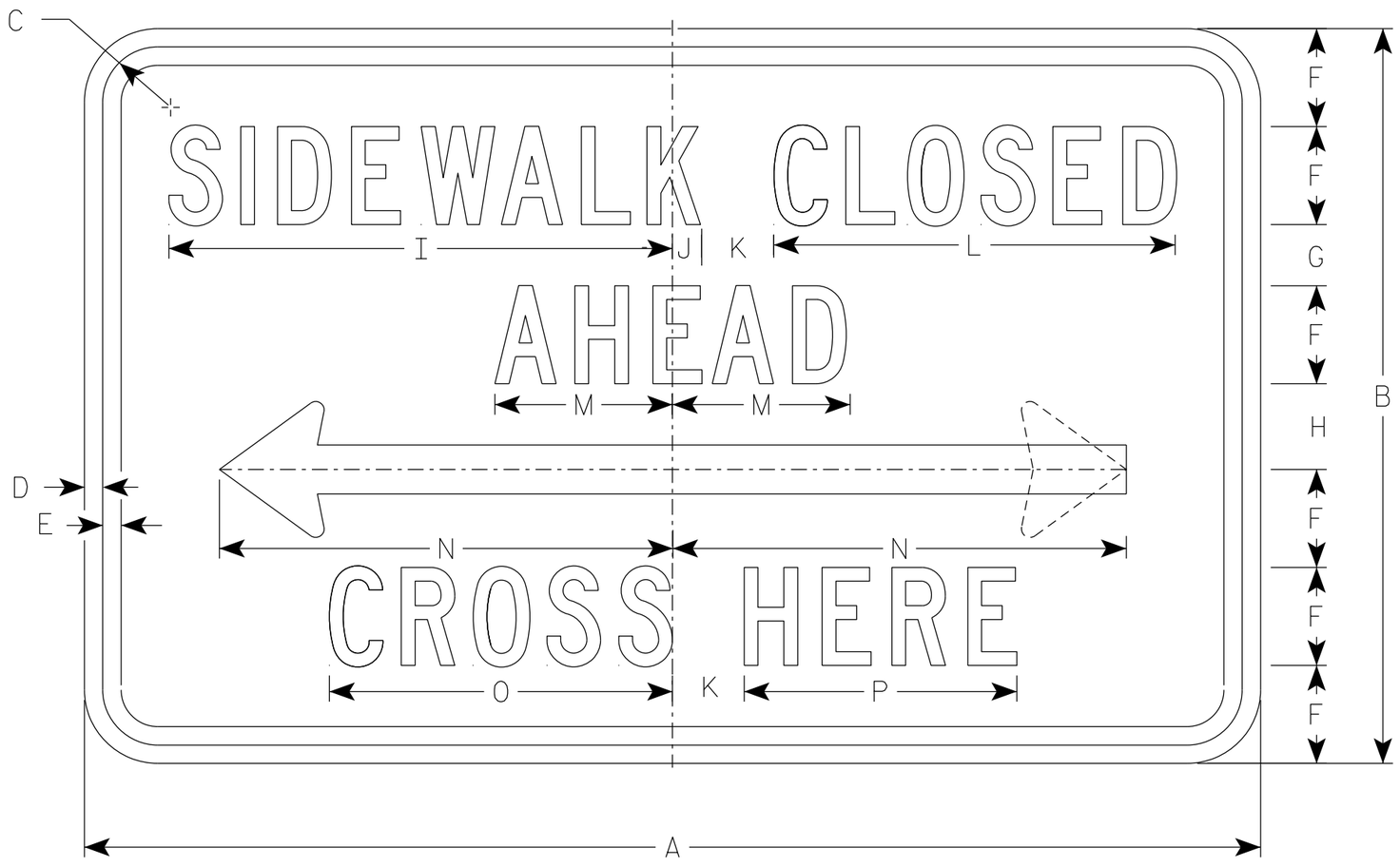
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

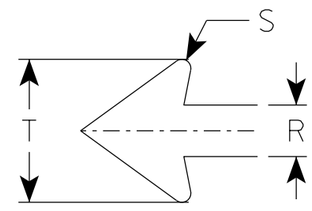
DATE 8/11/16 PLATE 192 R9-9.6

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																											

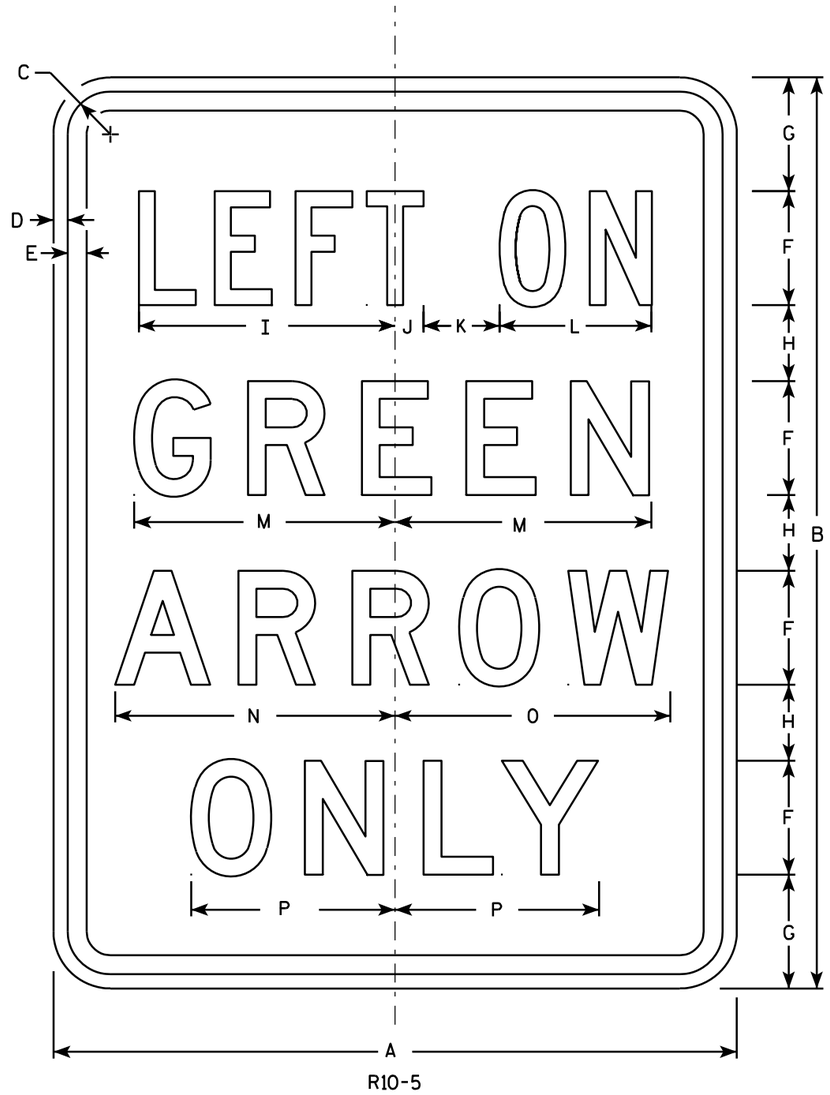
STANDARD SIGN
R9-11

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: 193 | E



R10-5

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. Lines 2, 3 and 4 are Series D.
   Line 1 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	24	30	1 1/8	3/8	1/2	4	3 1/4	2 1/2	9 1/4	3/4	3	5 3/8	8 5/8	9 1/2	9 5/8	7											5.0
2S	30	36	1 3/8	1/2	5/8	5	4 1/4	2 1/2	11 5/8	7/8	4	6 5/8	10 3/4	11 3/4	11 1/2	8 3/4											7.5
2M	30	36	1 3/8	1/2	5/8	5	4 1/4	2 1/2	11 5/8	7/8	4	6 5/8	10 3/4	11 3/4	11 1/2	8 3/4											7.5
3																											
4																											
5																											

STANDARD SIGN
R10-5

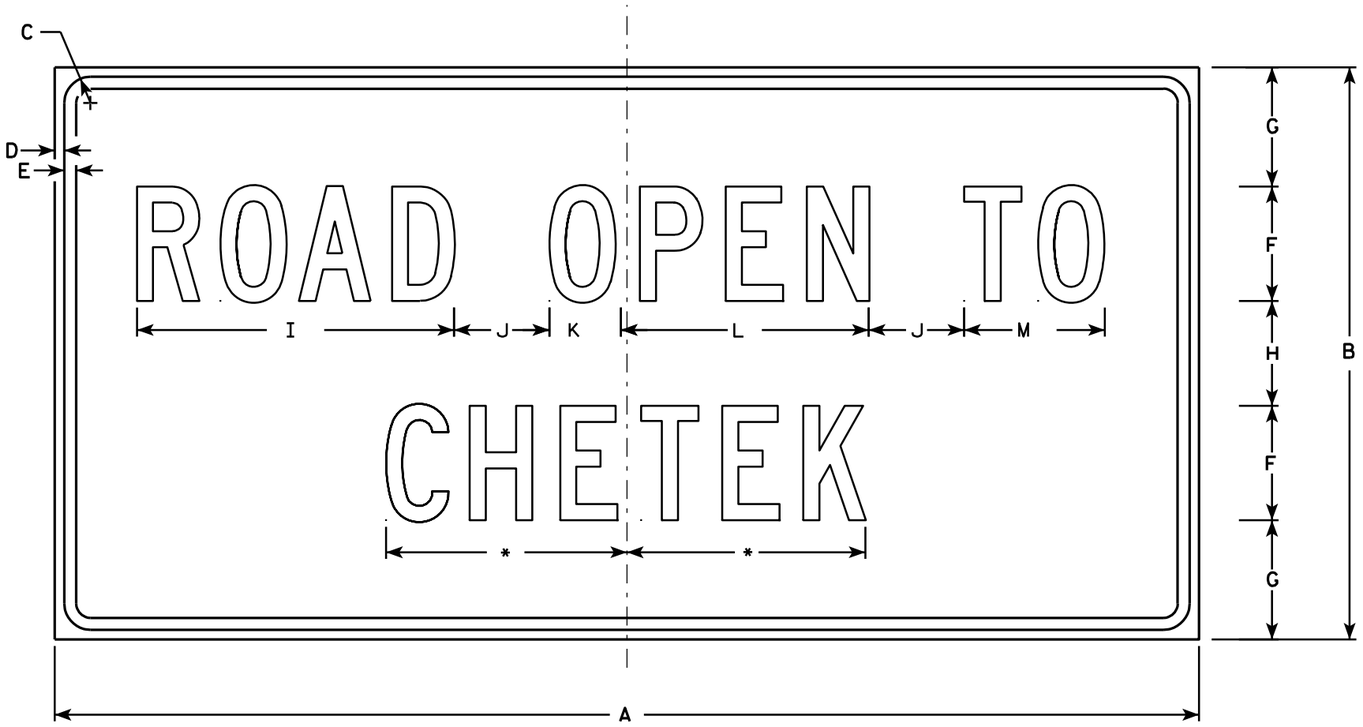
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/02/10 PLATE NO. R10-5.7

PROJECT NO:

SHEET NO: 194 E



R10-61

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. Substitute appropriate message and optically balance.

*See note 5

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	24	1 3/8	1/2	5/8	4	5 1/2	5	10 3/4	2	2 1/8	8 3/8	4 5/8														6.0
2S	60	30	1 3/8	1/2	5/8	6	6 1/4	5 1/2	16 5/8	5	3 3/4	13	7 3/8														12.5
2M	60	30	1 3/8	1/2	5/8	6	6 1/4	5 1/2	16 5/8	5	3 3/4	13	7 3/8														12.5
3																											
4																											
5																											

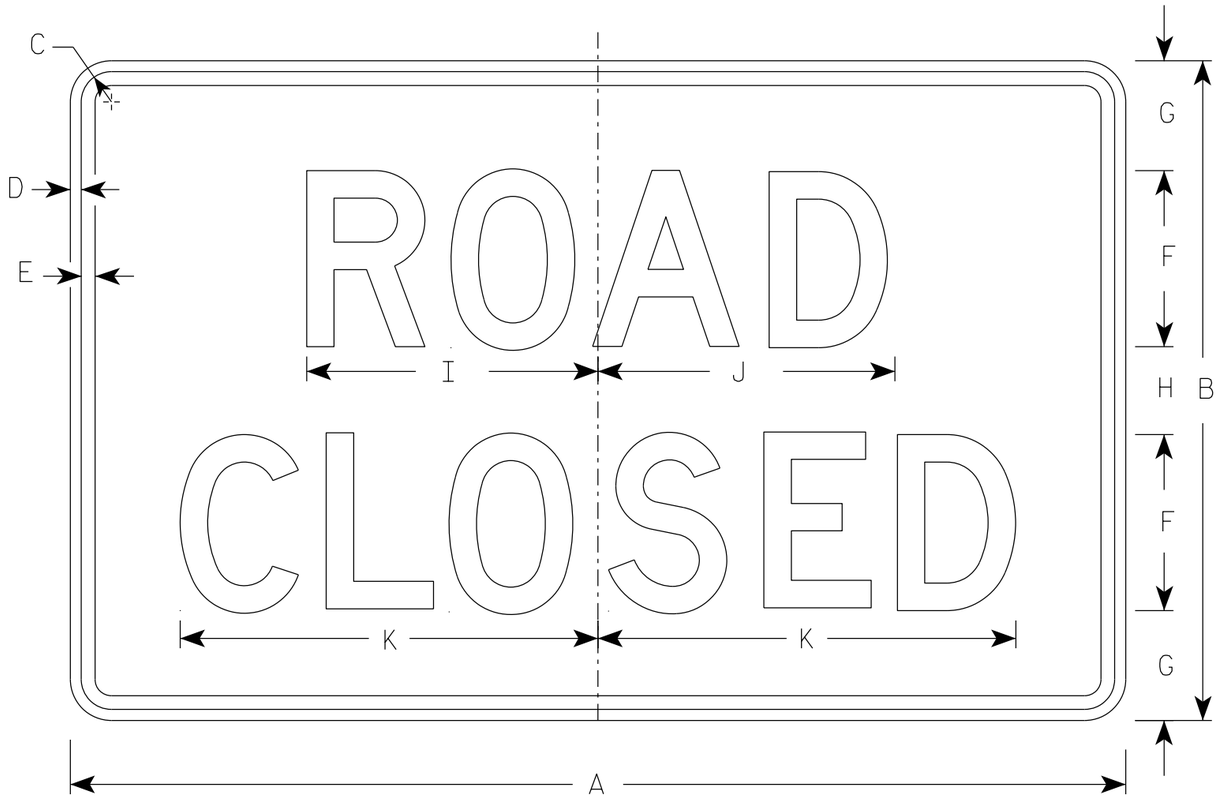
STANDARD SIGN
R10-61

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/4/11 PLATE NO. R10-61.5

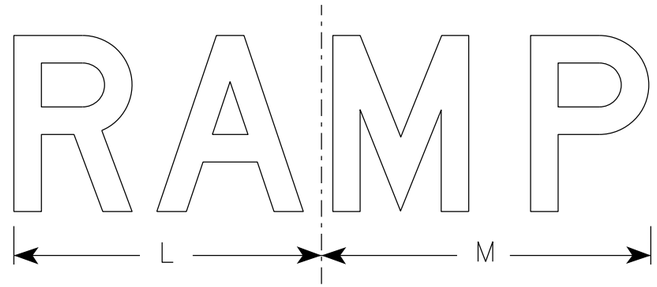
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 195	E



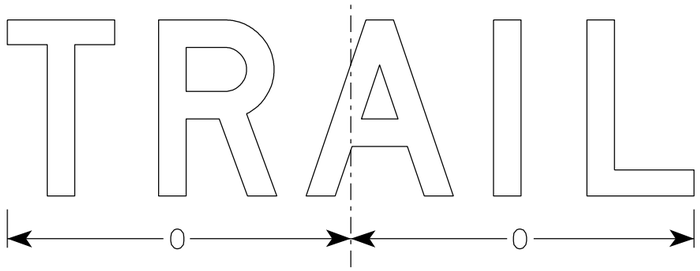
R11-2

NOTES

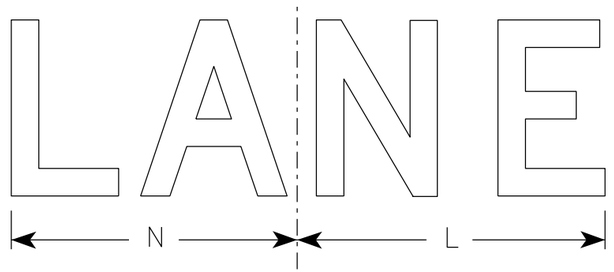
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the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

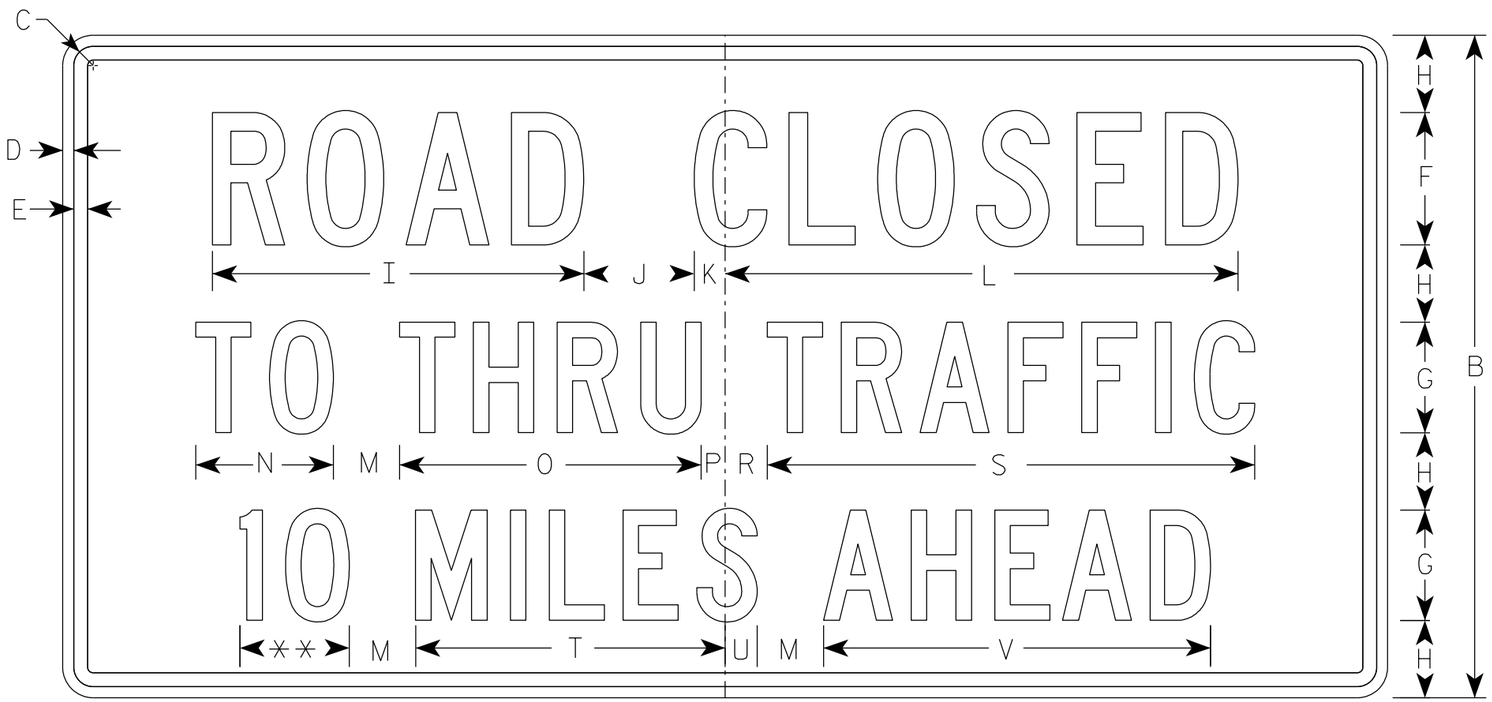
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R112.dgn PLOT DATE : 29-MAR 2021 8:15 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

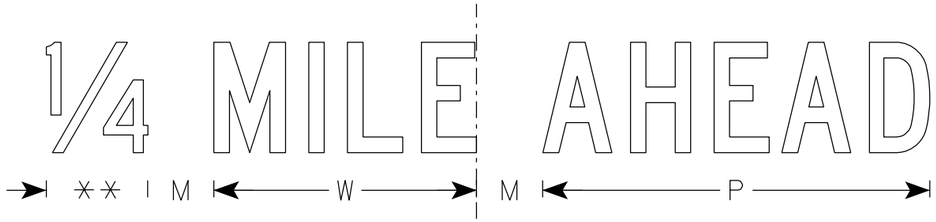
NOTES

1. Sign is Type II - Type H Reflective
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. Substitute appropriate numerals to nearest quarter mile and optically adjust spacing to achieve proper balance.



R11-3

** See Note 5



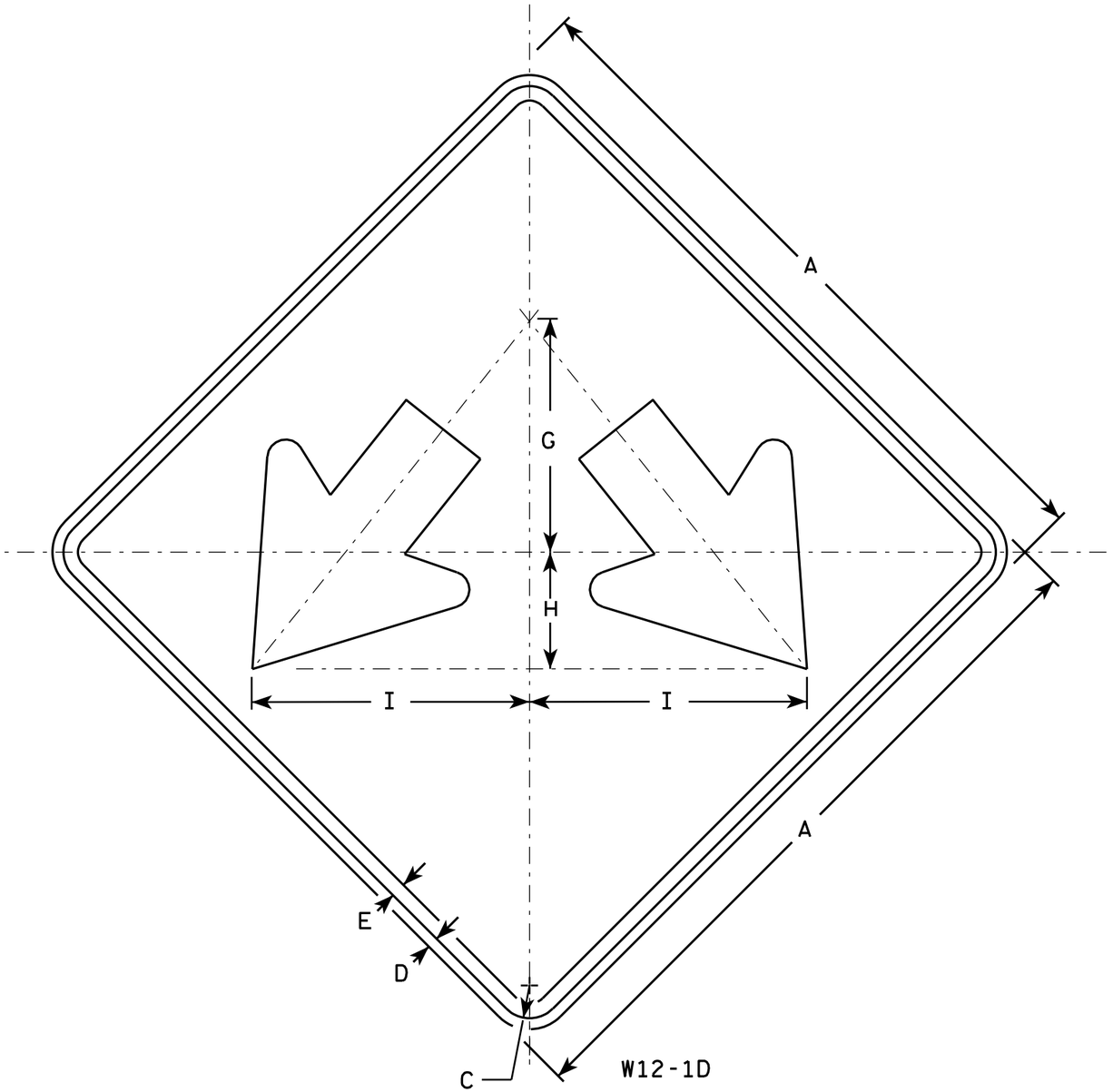
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/4	3/8	3/8	4	3	2	11 1/4	3	1 1/8	15 3/8	2	3 3/4	8 1/4	5/8		1 3/8	13 1/4	8 3/8	7/8	10 1/2	7 1/8				4.5
2S	60	30	1 3/8	1/2	5/8	6	5	3 1/2	16 7/8	5	1 3/8	23 1/4	3	6 1/4	13 5/8	1 1/8		1 7/8	22 1/8	14	1 1/2	17 1/2	11 7/8				12.5
2M	60	30	1 3/8	1/2	5/8	6	5	3 1/2	16 7/8	5	1 3/8	23 1/4	3	6 1/4	13 5/8	1 1/8		1 7/8	22 1/8	14	1 1/2	17 1/2	11 7/8				12.5
3																											
4																											
5																											

STANDARD SIGN
R11-3

WISCONSIN DEPT OF TRANSPORTATION

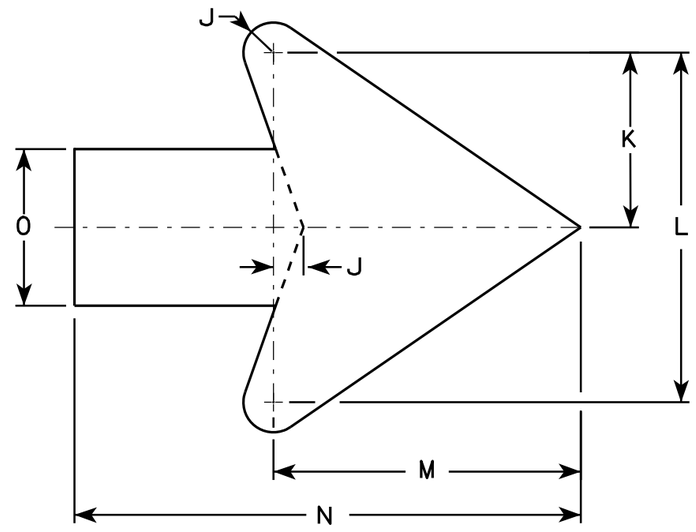
APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 6/14/2021 PLATE NO. R11-3.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 197	E



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. 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		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	48		2 1/4	3/4	1		16	8	19	1 1/4	7 1/4	14 1/2	12 3/4	21	6 1/4												16.0

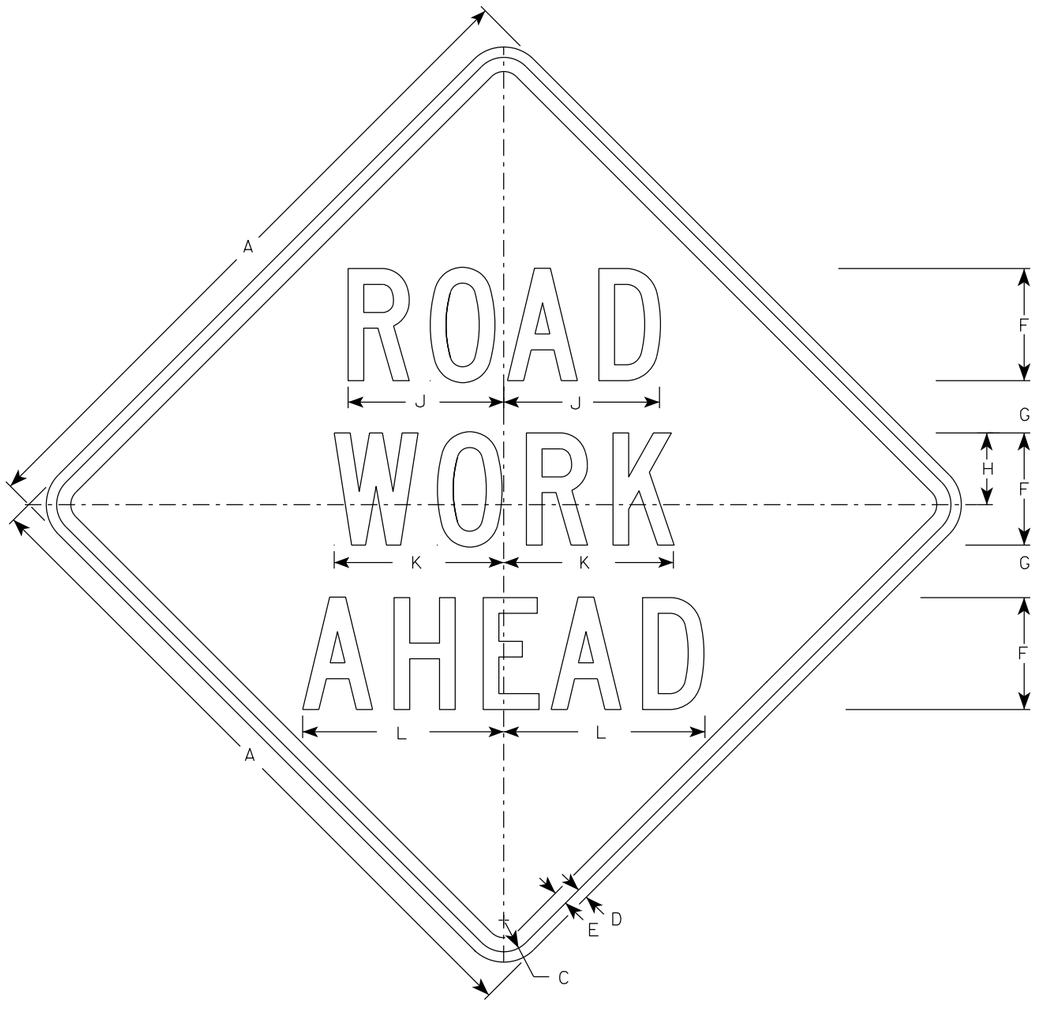
STANDARD SIGN
W12-1D

WISCONSIN DEPT OF TRANSPORTATION

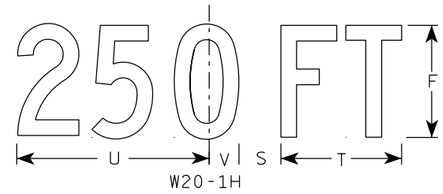
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W12-1D.15

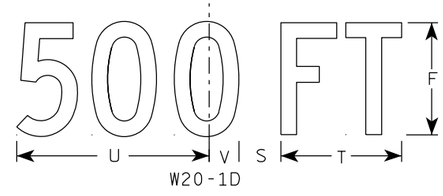
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 198	E



W20-1A

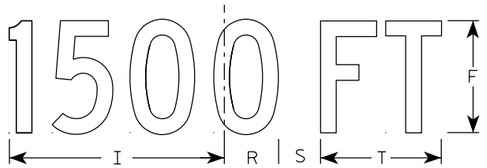


W20-1H



W20-1D

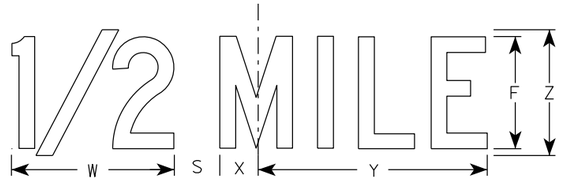
W20-1C



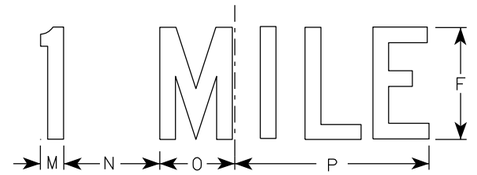
W20-1B

NOTES

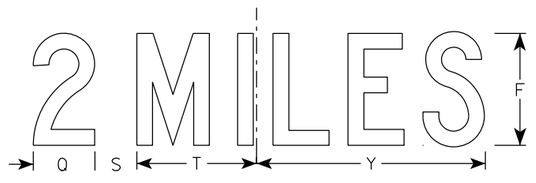
1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1G



W20-1F



W20-1E

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

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

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:

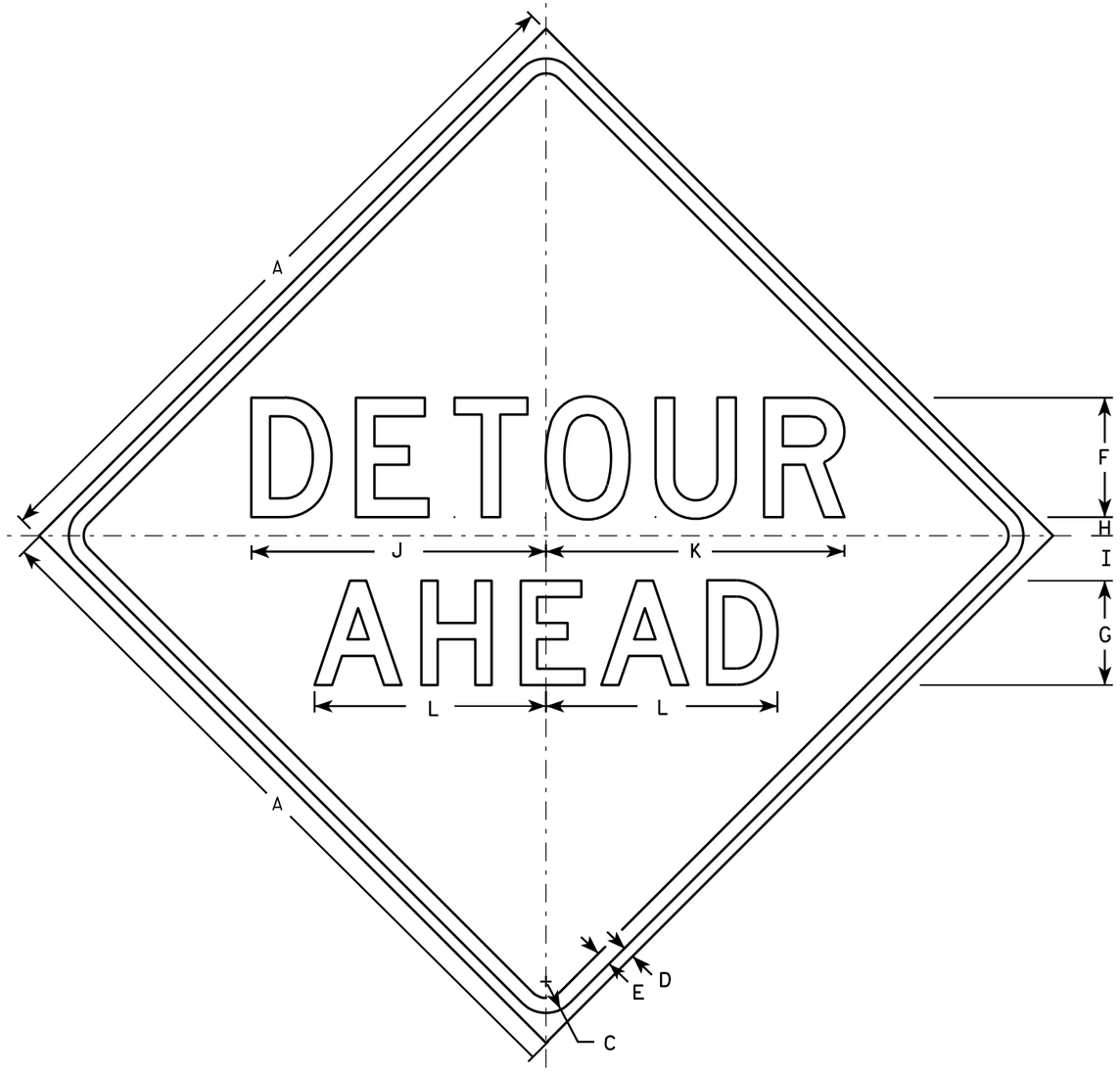
SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 25-MARCH-2020 PLOT BY : dotc4c

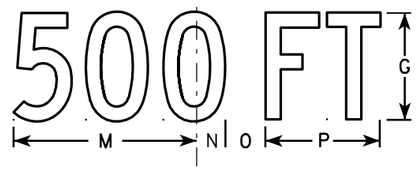
WISDOT/CADDS SHEET 42

7

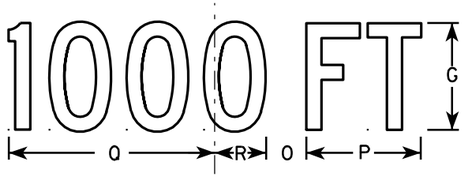
7



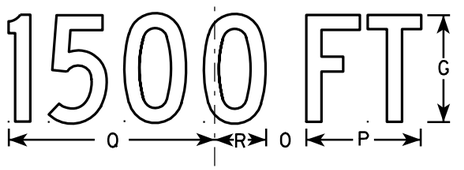
W20-2A



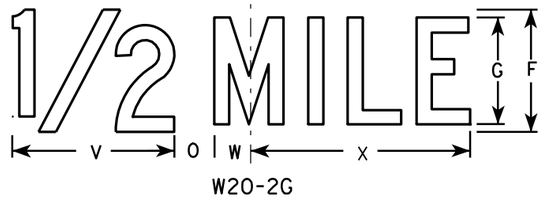
W20-2D



W20-2C



W20-2B



W20-2G

W20-2F

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. Line 1 is Series D.
   Line 2 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	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

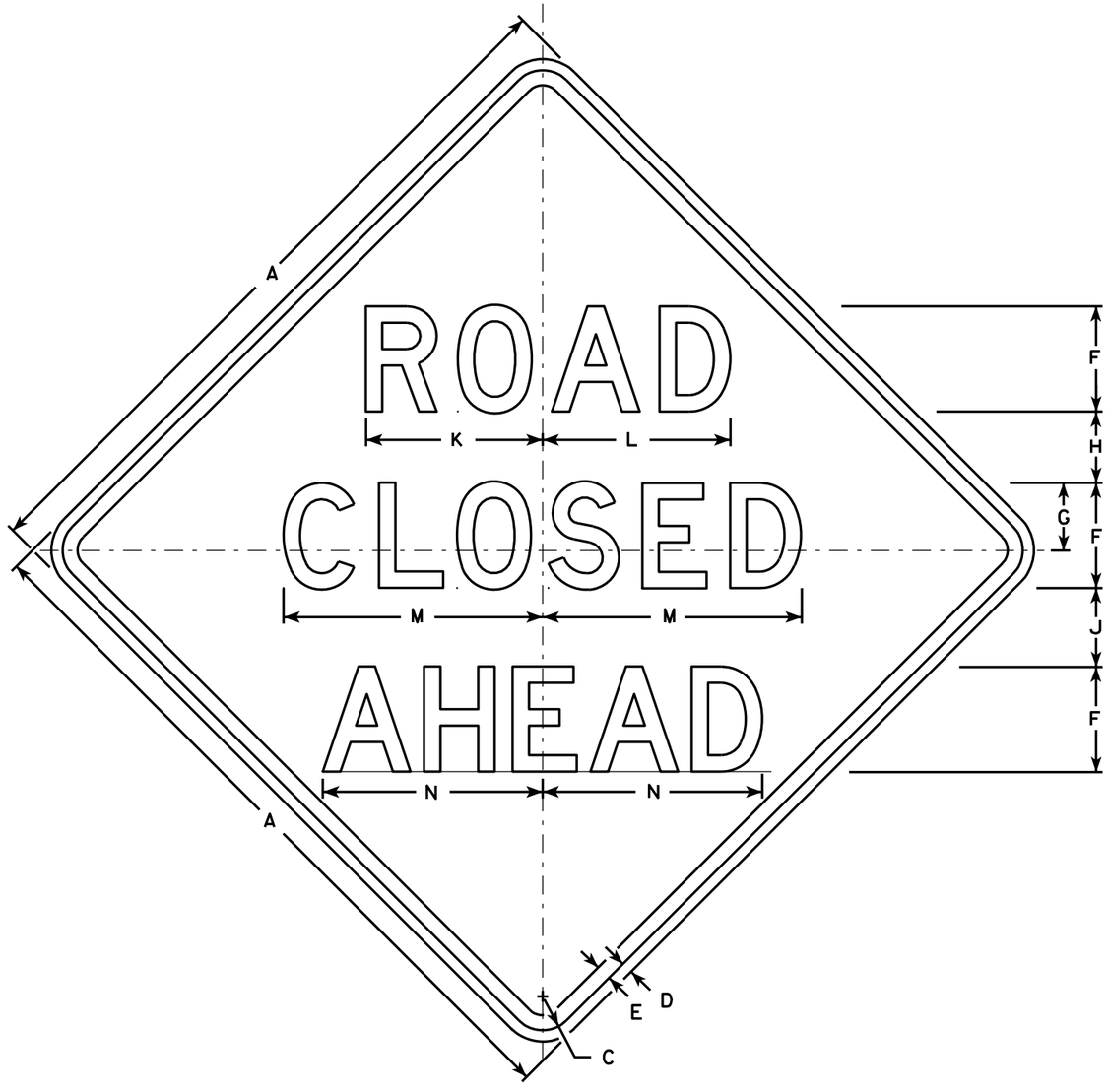
STANDARD SIGN
W20-2A,B,C,D,F & G

WISCONSIN DEPT OF TRANSPORTATION

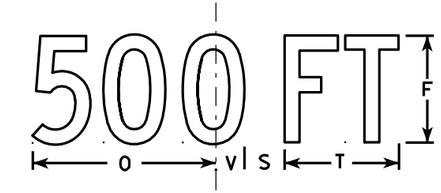
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-2.6

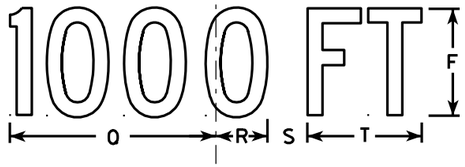
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 200	E



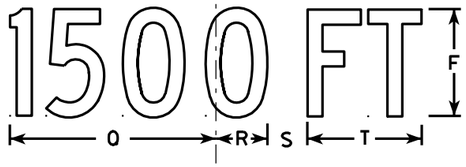
W20-3A



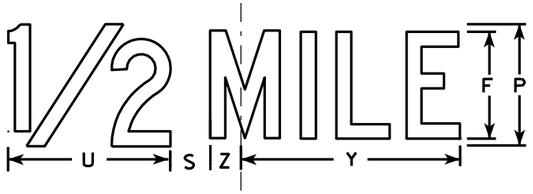
W20-3D



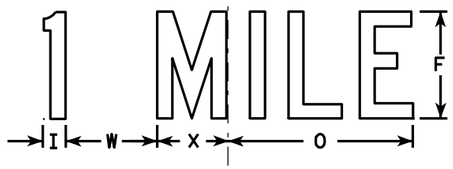
W20-3C



W20-3B



W20-3G



W20-3F

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	8 3/8	8 7/8	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	11 3/4	12 1/2	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	11 3/4	12 1/2	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	11 3/4	12 1/2	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	11 3/4	12 1/2	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	11 3/4	12 1/2	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
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

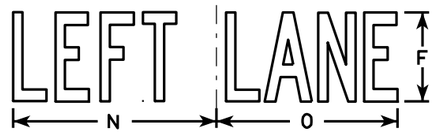
APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 3/18/11 PLATE NO. W20-3.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 201 | E

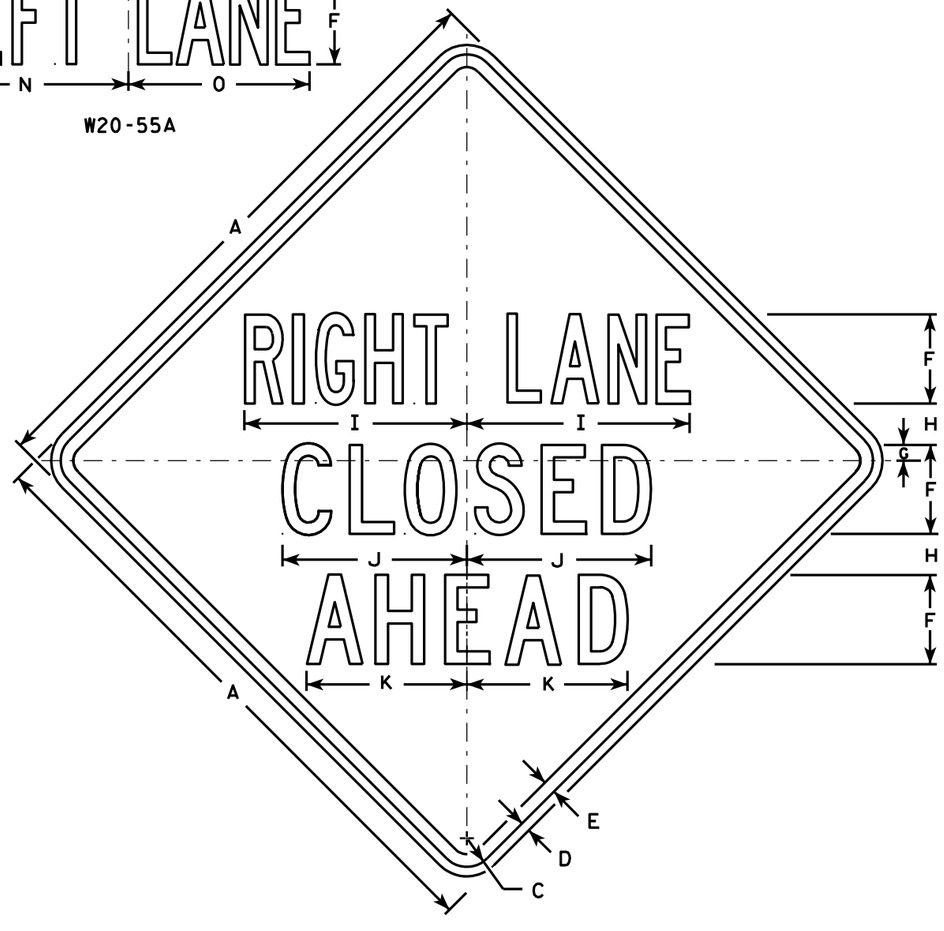
7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W203.DGN PLOT DATE : 18-MAR-2011 12:08 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.931739:1.000000
WISDOT/CADDS SHEET 42

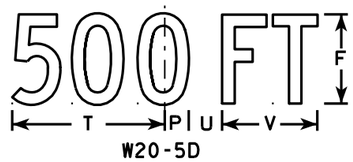
W20-56A



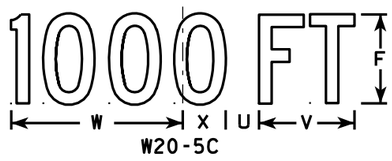
W20-55A



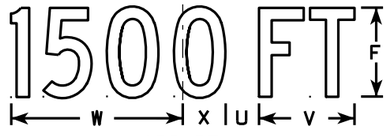
W20-5A



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

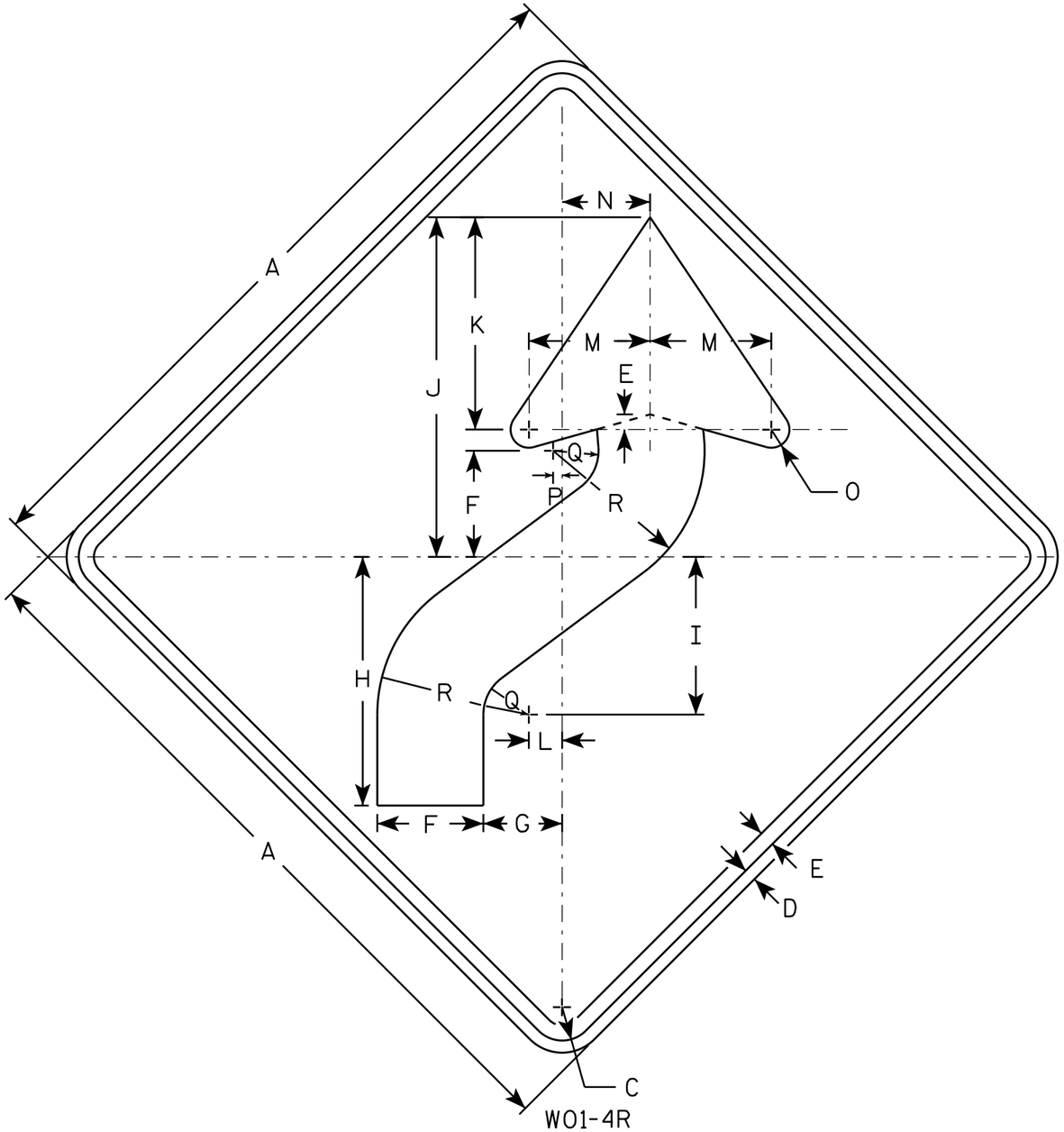
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-5.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 202 | 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



W01-4R

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. W01-4L is the same as W01-4R except the 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	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
2S	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
2M	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
3	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
4	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
5	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

STANDARD SIGN
W01-4

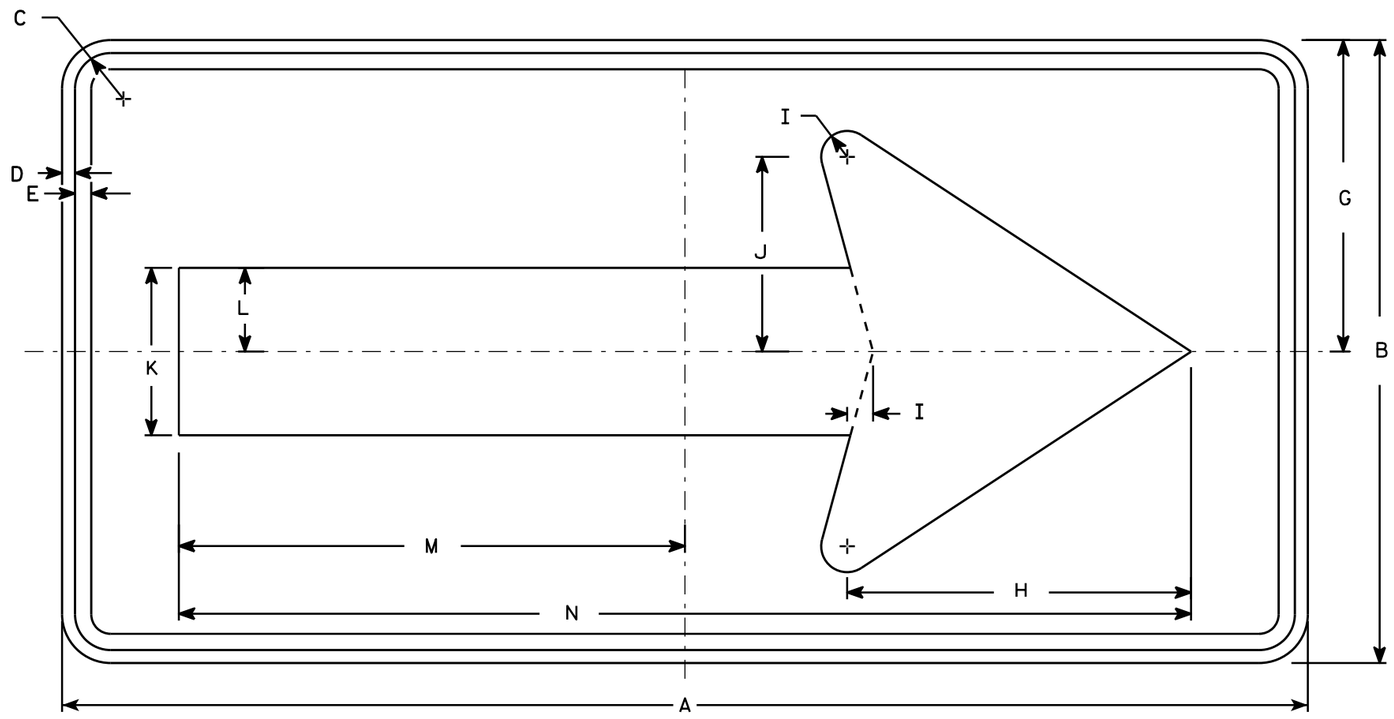
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO W01-4.1

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W014.DGN PLOT DATE : 28-FEB-2014 11:35 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.755110:1.000000
WISDOT/CADDS SHEET 42



W01-6

NOTES

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

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

STANDARD SIGN
W01-6

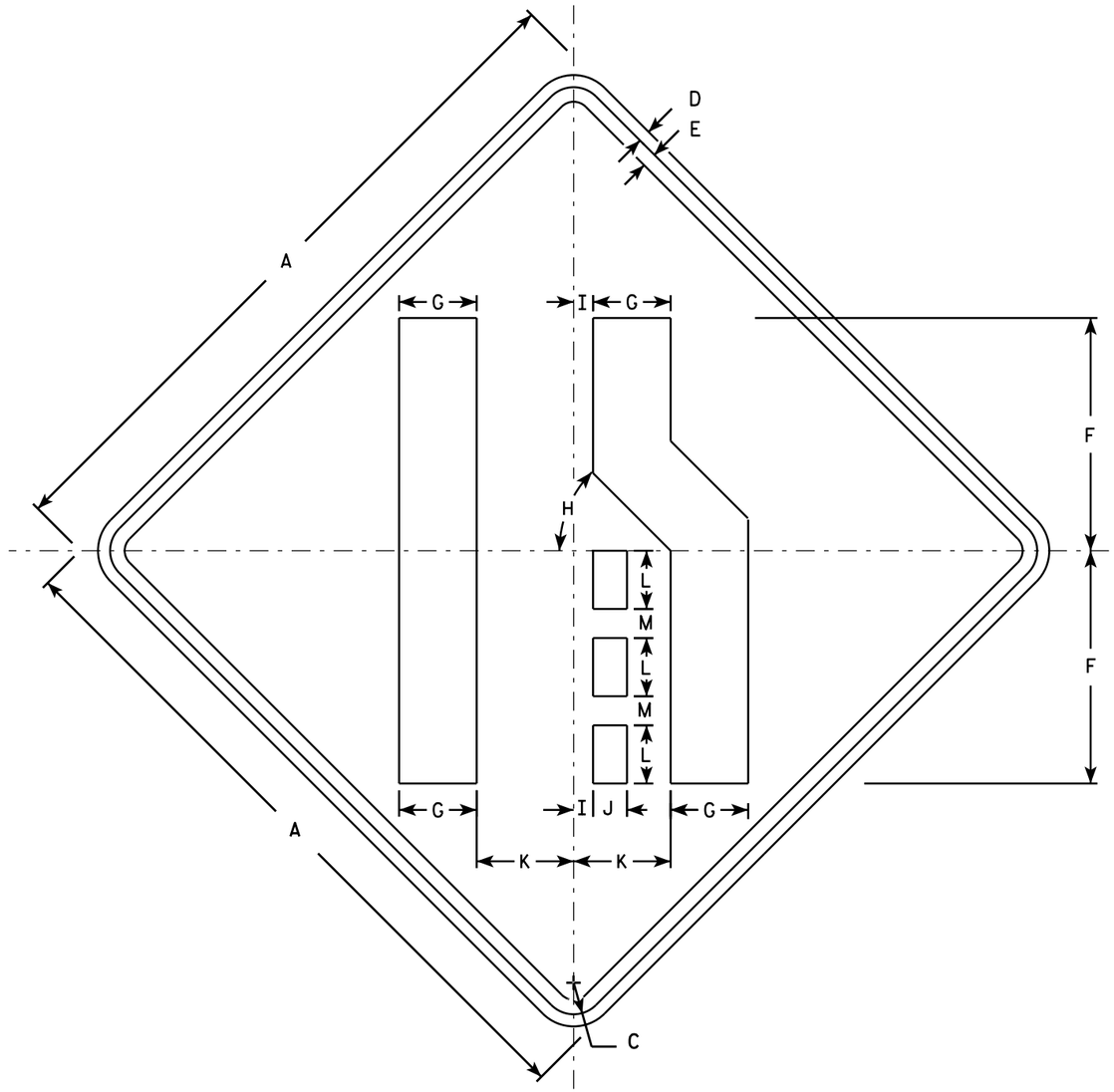
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE W01-6.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

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



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 205 W04-2.1

PROJECT NO:

SHEET NO: E

DIVISION 1 - 23EB

STATION	REAL STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		
			CUT	FILL	CUT	FILL	CUT	EXPANDED FILL	MASS ORDINATE
							1.00	1.30	
					NOTE 1	NOTE 3	NOTE 1		
104+83.251	10483.25	0.00	28.18	4.03	0	0	0	0	0
105+00	10500.00	16.75	29.17	3.74	18	2	18	3	15
105+50	10550.00	50.00	38.42	1.83	63	5	81	9	72
106+00	10600.00	50.00	44.81	0.41	77	2	158	12	146
106+50	10650.00	50.00	57.12	0.00	94	0	252	12	240
107+00	10700.00	50.00	55.51	0.00	104	0	356	12	344
107+50	10750.00	50.00	55.07	0.00	102	0	458	12	446
108+00	10800.00	50.00	60.45	0.00	107	0	565	12	553
108+50	10850.00	50.00	48.11	0.03	101	0	666	12	654
109+00	10900.00	50.00	40.06	0.04	82	0	748	12	736
109+50	10950.00	50.00	32.47	0.59	67	1	815	13	802
110+00	11000.00	50.00	26.98	0.00	55	1	870	14	856
110+14.137	11014.14	14.14	0.00	0.00	7	0	877	14	863

DIVISION 1 - 23WB

STATION	REAL STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		
			CUT	FILL	CUT	FILL	CUT	EXPANDED FILL	MASS ORDINATE
							1.00	1.30	
					NOTE 1	NOTE 3	NOTE 1		
107+64.738	10764.74	0.00	108.66	0.00	0	0	0	0	0
108+00	10800.00	35.26	53.78	183.73	106	120	106	156	-50
108+50	10850.00	50.00	49.71	150.26	96	309	202	558	-356
109+00	10900.00	50.00	46.54	103.81	89	235	291	863	-572
109+50	10950.00	50.00	41.13	64.53	81	156	372	1,066	-694
110+00	11000.00	50.00	32.92	33.61	69	91	441	1,184	-743
110+50	11050.00	50.00	26.79	14.76	55	45	496	1,243	-747
111+00	11100.00	50.00	20.75	9.20	44	22	540	1,271	-731
111+05.981	11105.98	5.98	0.00	0.00	2	1	542	1,273	-731

Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATER	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME

105'EB'+50

2.1%

781.32
-29.36

779.00
-21.30

779.10
-16.80

779.44
0.00

105'EB'+00

1.6%

783.05
-29.38

780.68
-17.30

780.76
-12.80

780.96
0.00

104'EB'+83

1.3%

783.69
-29.48

781.27
-16.50

781.33
-12.00

781.48
0.00

104'EB'+50

10 FT

10 FT

9

9

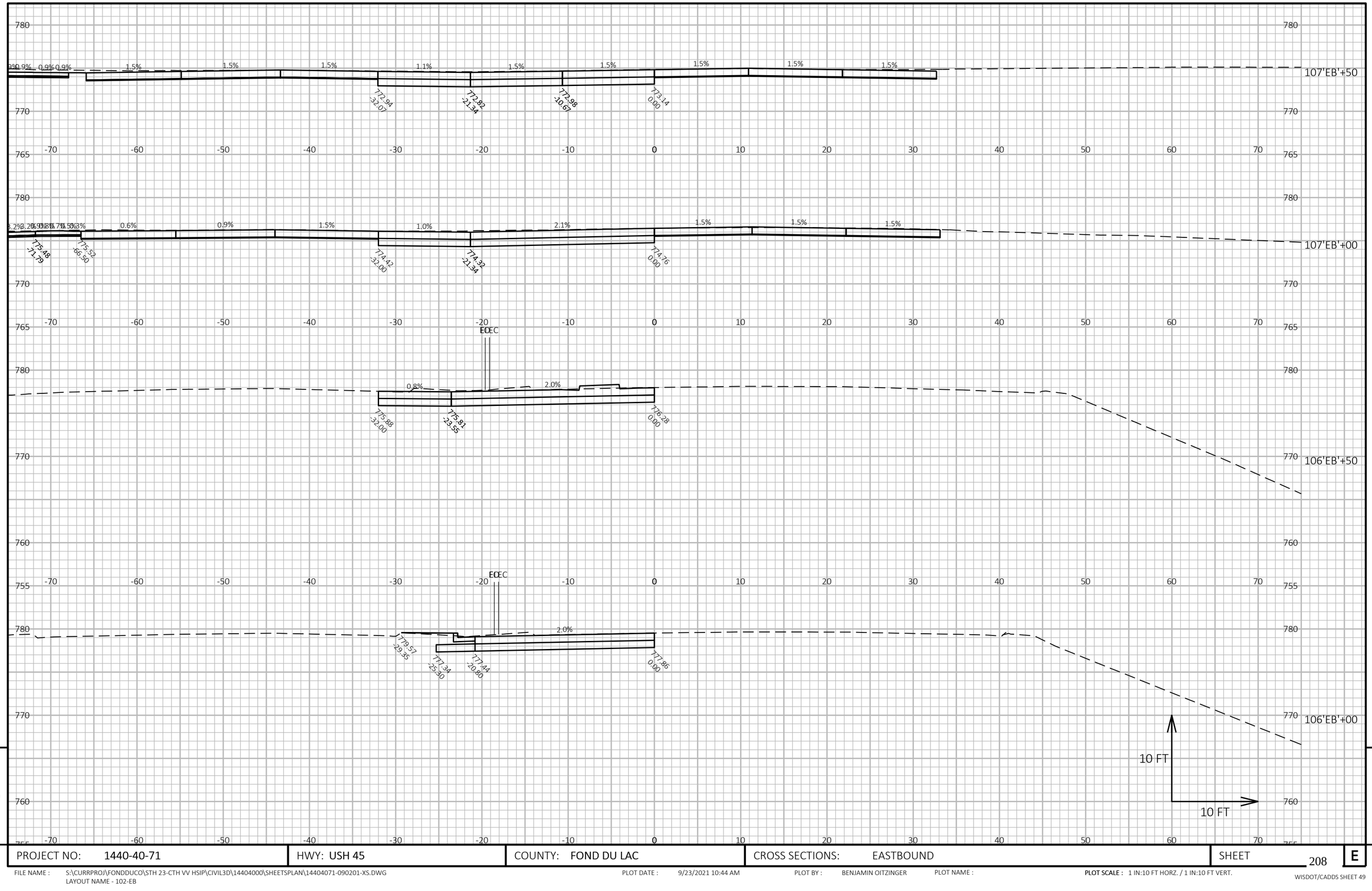
PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	CROSS SECTIONS: EASTBOUND	SHEET 207	E

FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-090201-XS.DWG
LAYOUT NAME - 101-EB

PLOT DATE : 9/23/2021 10:44 AM PLOT BY : BENJAMIN OITZINGER PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

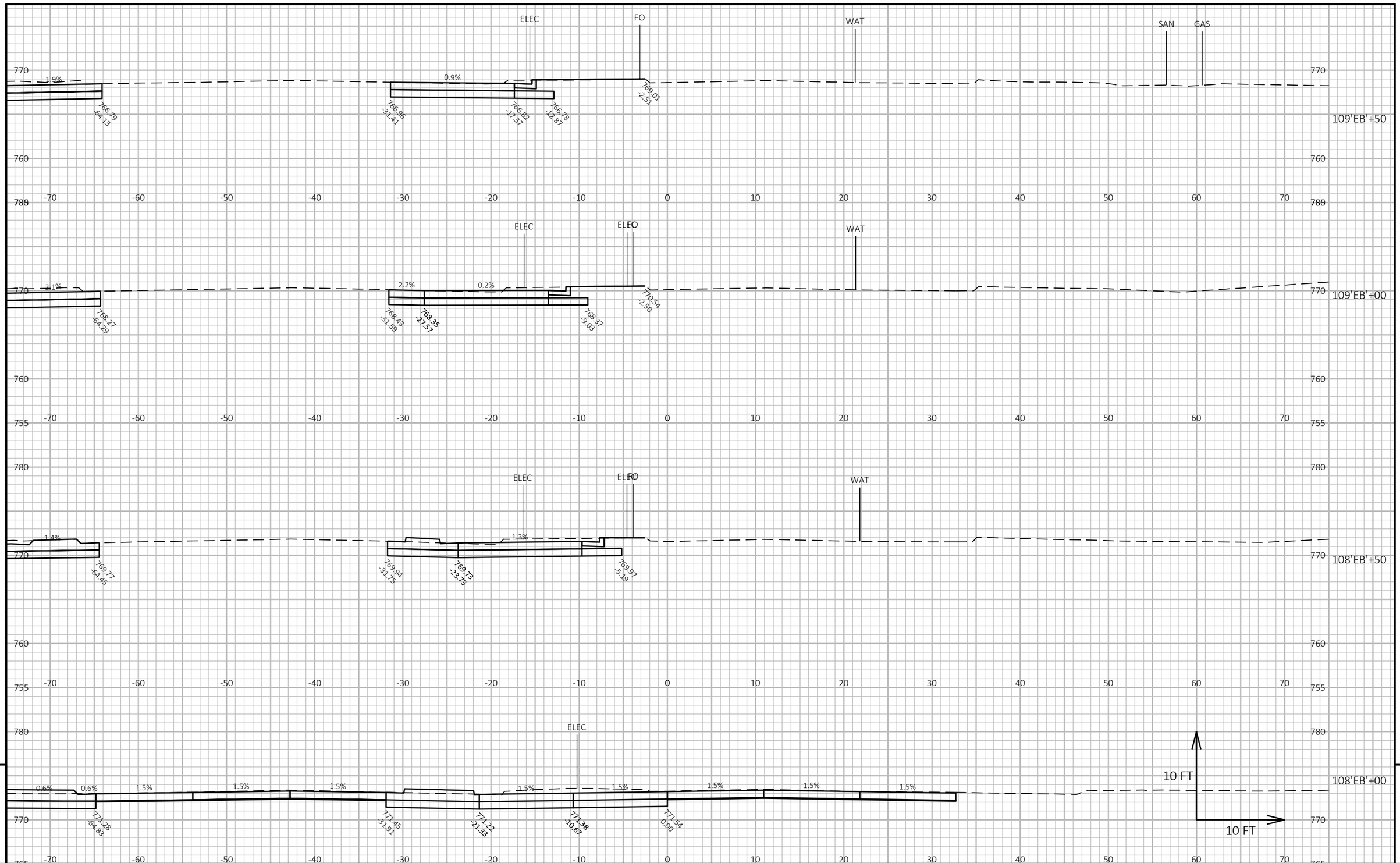
PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	CROSS SECTIONS: EASTBOUND	SHEET 208	E

FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-090201-XS.DWG
LAYOUT NAME - 102-EB

PLOT DATE : 9/23/2021 10:44 AM PLOT BY : BENJAMIN OITZINGER PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

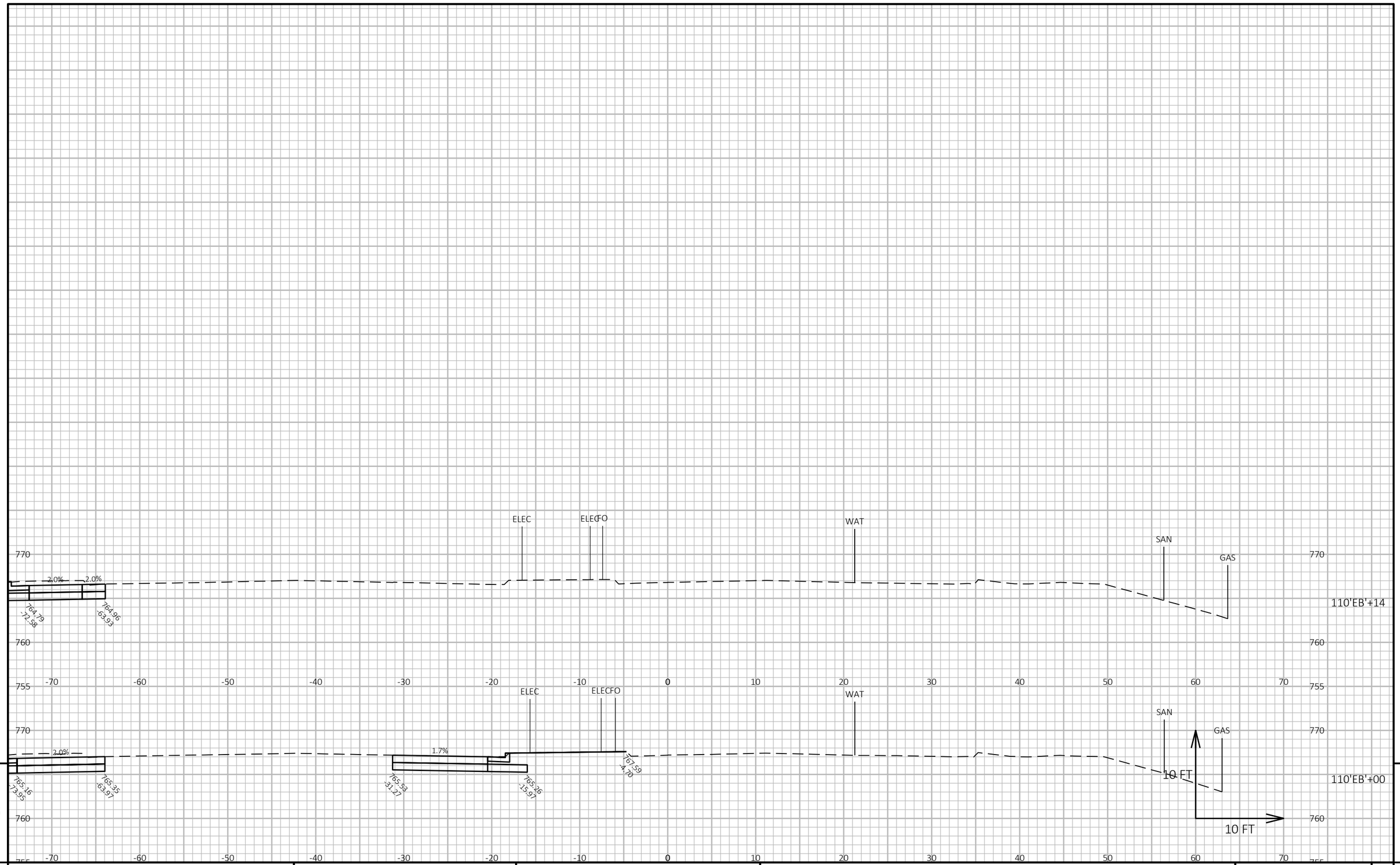
9

PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	CROSS SECTIONS: EASTBOUND	SHEET 209	E

FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-090201-XS.DWG
LAYOUT NAME - 103-EB

PLOT DATE : 9/23/2021 10:44 AM PLOT BY : BENJAMIN OITZINGER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

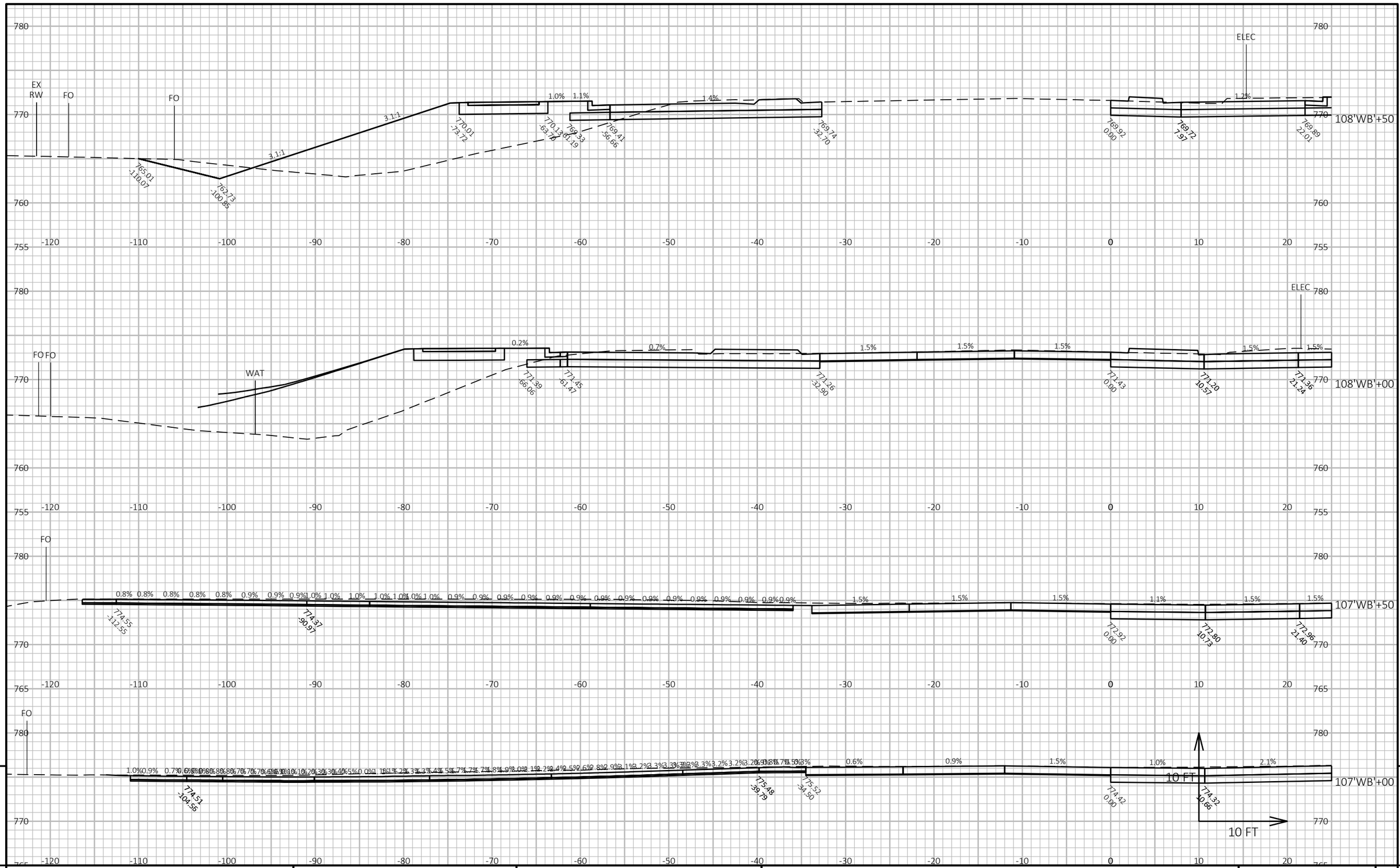
9

PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	CROSS SECTIONS: EASTBOUND	SHEET 210	E

FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-090201-XS.DWG
LAYOUT NAME - 104-EB

PLOT DATE : 9/23/2021 10:44 AM PLOT BY : BENJAMIN OITZINGER PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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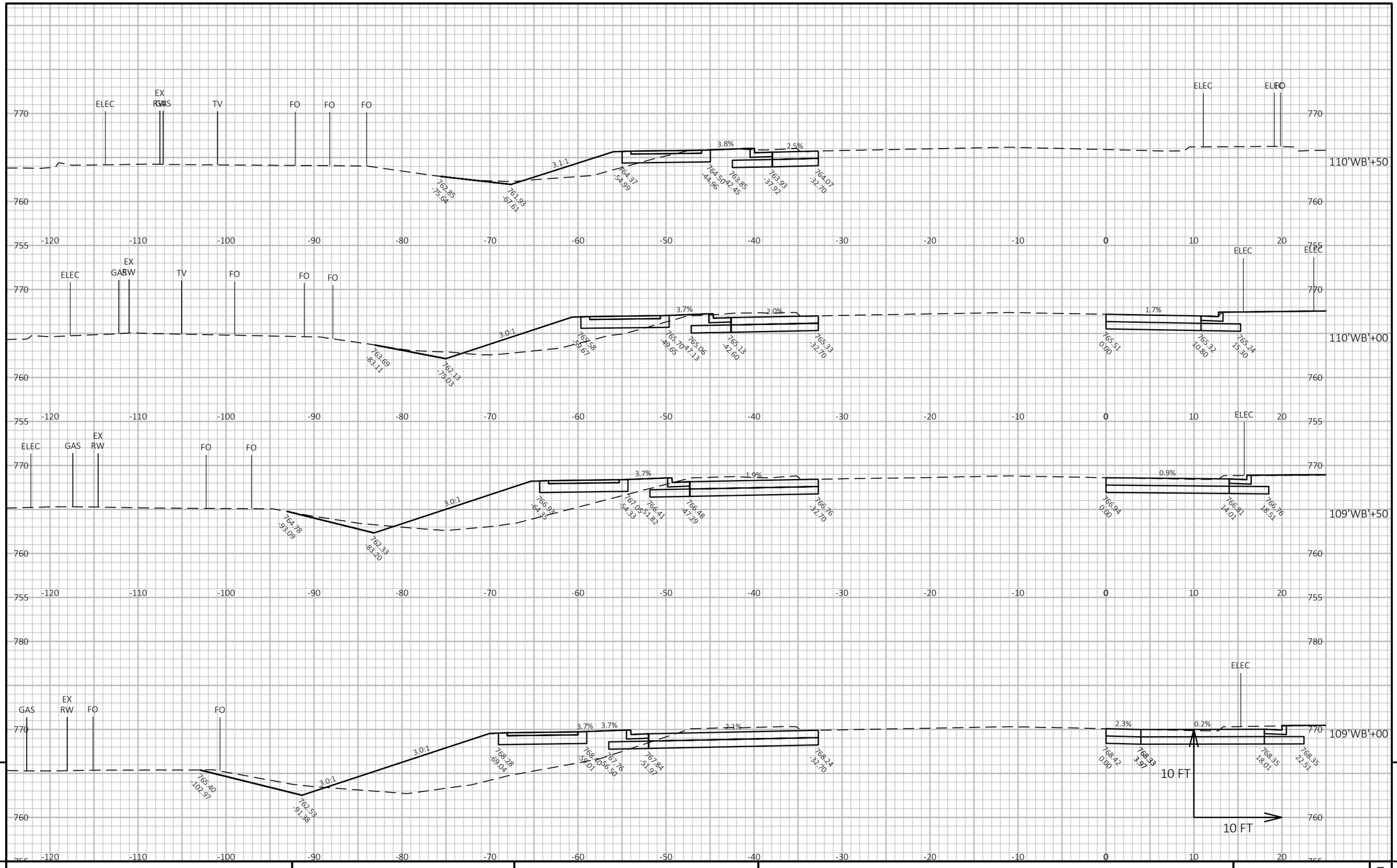
PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	CROSS SECTIONS: WESTBOUND	SHEET 211	E

FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-090201-XS.DWG
LAYOUT NAME - 201-WB

PLOT DATE : 9/23/2021 10:44 AM PLOT BY : BENJAMIN OITZINGER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

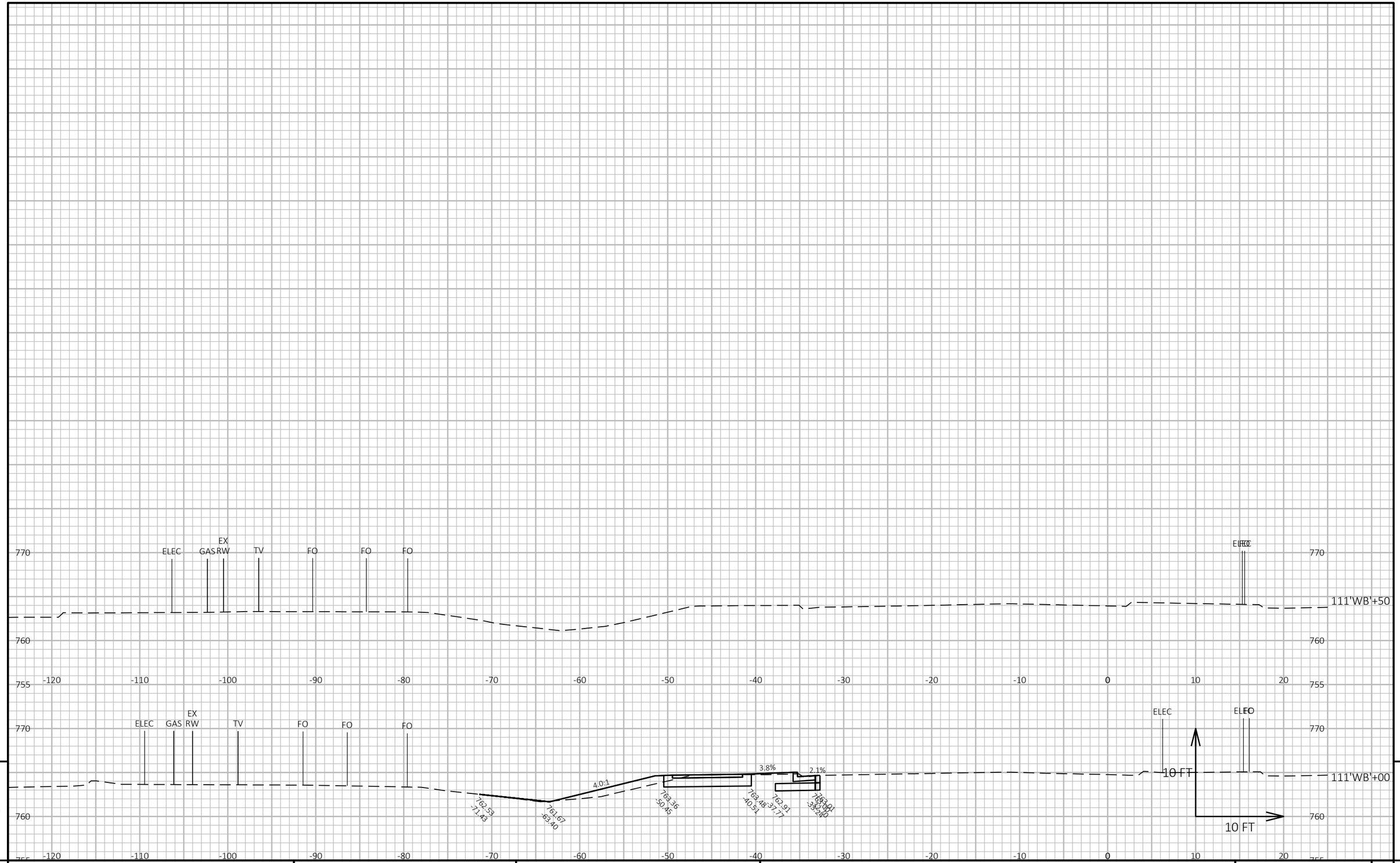


PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	CROSS SECTIONS: WESTBOUND	SHEET 212	E

FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-090201-XS.DWG
LAYOUT NAME - 202-WB

PLOT DATE : 9/23/2021 10:44 AM PLOT BY : BENJAMIN OITZINGER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 1440-40-71	HWY: USH 45	COUNTY: FOND DU LAC	CROSS SECTIONS: WESTBOUND	SHEET 213	E

FILE NAME : S:\CURRPROJ\FONDDUCO\STH 23-CTH VV HSIP\CIVIL3D\14404000\SHEETSPLAN\14404071-090201-XS.DWG
LAYOUT NAME - 203-WB

PLOT DATE : 9/23/2021 10:44 AM PLOT BY : BENJAMIN OITZINGER PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov