EAU

PROJECT ID: 3700-50-29
WITH: 3700-50-38

COUNTY: EAU CLAIRE & ST. CROIX

DECEMBER 2018

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 = 126

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
3700-50-29		
3700-50-38		

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

NWREGION, VAR SGNLIZED INTERSECTIONS

VAR HWY & LOCATION/ SGNL HEAD PER LN

VAR HWY

NORTHWEST REGION WIDE

C EAU CLAIRE, CLAIREMONT AVENUE

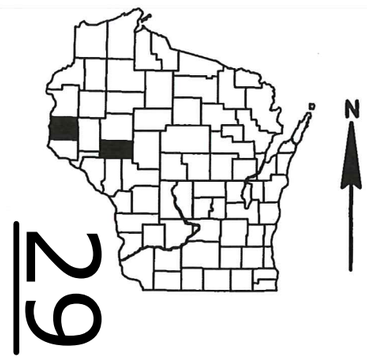
KEITH STREET TO BUS 53/HASTINGS WAY

USH 12

EAU CLAIRE COUNTY

STATE PROJECT NUMBER
3700-50-29

STATE PROJECT NUMBER
3700-50-38



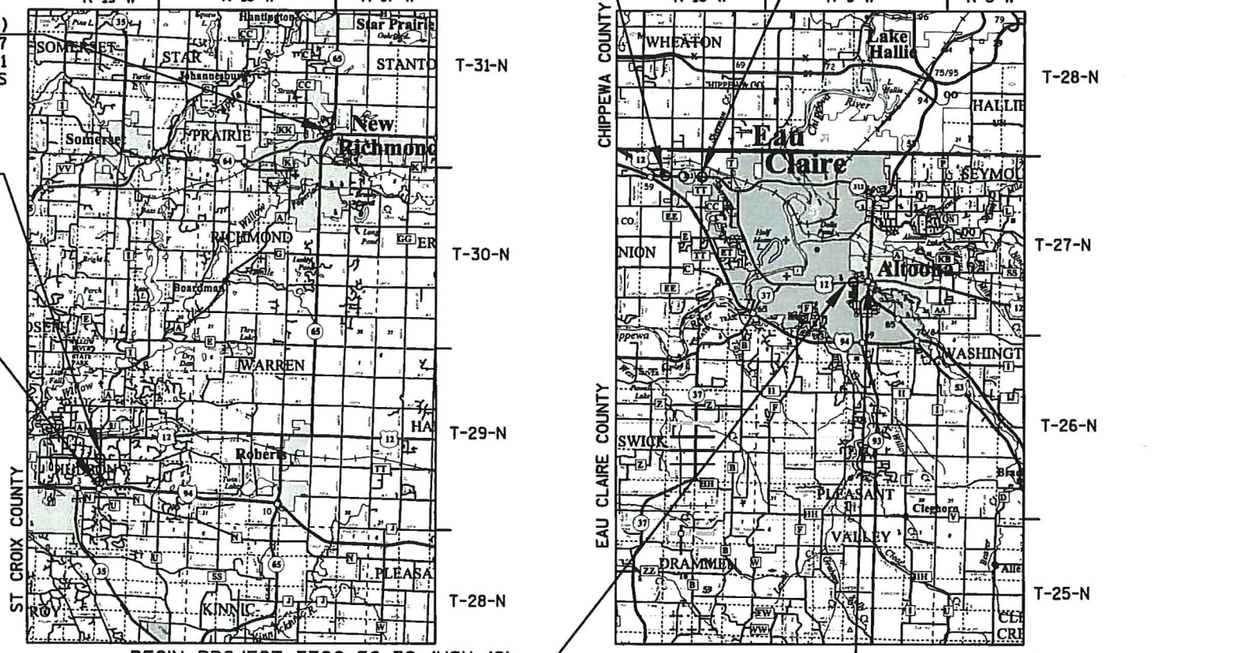
BEGIN PROJECT 3700-50-29 (STH 312)
Y = 290456.01
X = 314964.99
EAU CLAIRE COUNTY COORDINATES

END PROJECT 3700-50-29 (STH 312)
Y = 290454.04
X = 321334.08
EAU CLAIRE COUNTY COORDINATES

PROJECT 3700-50-29 (STH 64)
Y = 400955.97
X = 568733.61
ST. CROIX COUNTY COORDINATES

PROJECT 3700-50-29 (USH 12)
Y = 343462.41
X = 530960.94
ST. CROIX COUNTY COORDINATES

PROJECT 3700-50-29 (USH 12)
Y = 339427.14
X = 530819.83
ST. CROIX COUNTY COORDINATES



BEGIN PROJECT 3700-50-38 (USH 12)
Y = 272492.19
X = 347420.14
EAU CLAIRE COUNTY COORDINATES

END PROJECT 3700-50-38 (USH 12)
Y = 272644.37
X = 350416.03
EAU CLAIRE COUNTY COORDINATES

CONVENTIONAL SYMBOLS

PLAN		PROFILE	
CORPORATE LIMITS		GRADE LINE	
PROPERTY LINE		ORIGINAL GROUND	
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)	ROCK
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH	LABEL
EXISTING RIGHT OF WAY		GRADE ELEVATION	95.36
PROPOSED OR NEW R/W LINE		CULVERT (Profile View)	
SLOPE INTERCEPT		UTILITIES	
REFERENCE LINE		ELECTRIC	E
EXISTING CULVERT		FIBER OPTIC	FO
PROPOSED CULVERT (Box or Pipe)		GAS	G
COMBUSTIBLE FLUIDS	CAUTION	SANITARY SEWER	SAN
		STORM SEWER	SS
		TELEPHONE	T
MARSH AREA		WATER	W
		UTILITY PEDESTAL	
		POWER POLE	
WOODED OR SHRUB AREA		TELEPHONE POLE	

LAYOUT
SCALE 0 2.50

TOTAL NET LENGTH OF CENTERLINE = 0.00 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS); EAU CLAIRE AND ST. CROIX COUNTY

ORIGINAL PLANS PREPARED BY

AECOM

AECOM
1350 Deming Way, Suite 100, Middleton, WI 53562
T 608.836.9800 www.aecom.com

WISCONSIN
JEFFREY J. SANDBERG
E-39308
PRAIRIE DU SAC
WI
PROFESSIONAL ENGINEER

7/26/18 (Date)

(Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	AECOM
Designer	AECOM
Project Manager	DAVID KOEPP
Regional Examiner	JENNIFER OLDENBURG
Regional Supervisor	JIM KOENIG

APPROVED FOR THE DEPARTMENT

DATE: 7/31/2018 (Signature)

E

GENERAL NOTES

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

BE AWARE THAT ALL EXISTING UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES WITHIN THE SCOPE OF THIS PROJECT MAY NOT BE LOCATED IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR LOCATING AND AVOIDING ALL UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES.

ADJUST TRAFFIC CONTROL DEVICE LOCATIONS TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

LOCATE ELECTRICAL SERVICE METER BREAKER PEDESTALS AND WOOD POLES WITH METER SOCKETS ON HIGHWAY RIGHT-OF-WAY AND OUTSIDE OF FENCE, OR AS DIRECTED BY ENGINEER.

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

EROSION CONTROL BEST MANAGEMENT PRACTICES AND LOCATIONS ARE TO BE UTILIZED PER THE GUIDANCE AND APPROVAL OF THE ENGINEER. EROSION CONTROL BMP'S SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE BMP IS NO LONGER REQUIRED.

NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT APPROVAL OF THE ENGINEER. FINAL TREE AND SHRUBS CLEARING LOCATIONS WILL BE DETERMINED BASED ON INSTALLED CAMERA VIEWSHEDS AS DETERMINED BY ENGINEER IN FIELD AFTER CAMERAS ARE INSTALLED.

WETLANDS, WATERWAYS, AND OTHER ENVIRONMENTALLY SENSITIVE AREAS SHALL BE PROTECTED AT ALL TIMES. DO NOT STORE EQUIPMENT OR MATERIALS NEAR THESE SITES UNLESS APPROVED BY THE ENGINEER.

NOTIFY THE REGION ELECTRICAL UNIT BY CALLING (715) 577-5399 A MINIMUM OF TWO (2) WEEKS PRIOR TO STAKING ANY DEVICES.

NOTIFY THE REGION ELECTRICAL UNIT TO HAVE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING CABLE INTO SYSTEM. TO MAKE ARRANGEMENTS, CALL (715) 577-5399.

RESTORE DISTURBED AREAS WITHIN THE RIGHT OF WAY BY DIRECTION OF THE ENGINEER WITH THE FOLLOWING FINISH ITEMS: SALVAGED TOPSOIL, SEED, FERTILIZER, AND MULCH. APPLY FINISHING ITEMS ON DISTURBED AREAS WITHIN 5 WORKING DAYS AFTER GRADING WORK IS COMPLETED.

ORDER OF DETAIL SHEETS

PROJECT OVERVIEW

DMS STRUCTURE DETAILS

ITS PLANS

PERMANENT SIGNING

TRAFFIC SIGNAL PLANS

TRAFFIC CONTROL AND PAVEMENT MARKING

BEAM GUARD PLAN

ABBREVIATIONS

AP	ACCESS POINT/ DRIVEWAY CONNECTION
AR	ACCESS RIGHTS
AC.	ACRES
ET.AL.	AND OTHERS
℄ OR C/L	CENTERLINE
CMCP	CORRUGATED METAL CULVERT PIPE
CSM	CERTIFIED SURVEY MAP
COR.	CORNER
D	DEGREE OF CURVE
D.D.	DIRECTION DISTRIBUTION
D.H.V.	DESIGN HOUR VOLUME
DOC.	DOCUMENT
E.	EAST
EASE.	EASEMENT
EL OR ELEV	ELEVATION
E.S.A.L.	EQUIVALENT SINGLE AXLE LOAD
EXIST.	EXISTING
H.E.	HIGHWAY EASEMENT
HMA	HOT MIX ASPHALT
IP OR I.P.	IRON PIN
L	LENGTH OF CURVE
LN	LANE
LT. OR LT	LEFT
MAX.	MAXIMUM
MIN.	MINIMUM
MON.	MONUMENT
MP	ROADWAY MILEAGE
N.	NORTH
P.	PAGE
PLE	PERMANENT LIMITED EASEMENT
PL OR P.L.	PROPERTY LINE
RCCP	REINFORCED CONCRETE CULVERT PIPE
RD.	ROAD
(100')	RECORDED AS
R	RADIUS
R.L. OR R/L	REFERENCE LINE
ROR	RELEASE OF RIGHTS
REM.	REMAINING
RT OR RT.	RIGHT
R/W	RIGHT-OF-WAY
S.	SOUTH
S.E.	SUPEREVELVATION
SEC.	SECTION
SF	SQUARE FEET
STA.	STATION
T	TANGENT
TLE	TEMPORARY LIMITED EASEMENT
T. %	TRUCK (PERCENT OF)
V.	VOLUME
W.	WEST

WISDNR

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
(WEST CENTRAL REGION)
1300 W. CLAIRMONT STREET
EAU CLAIRE, WI 54702
AMY LESIK
(715) 836-6571
AmyL.Lesik@wisconsin.gov

WISDOT

WISCONSIN DEPARTMENT OF TRANSPORTATION
(NORTHWEST REGION)
718 WEST CLAIREMONT AVE
EAU CLAIRE WI 54701
DAVE KOEPP
(715) 836-2078
david.koepp@dot.wi.gov

STATE PATROL

WISCONSIN STATE PATROL EAU CLAIRE POST
5005 HIGHWAY 53 SOUTH
EAU CLAIRE WI 54701-8846
CAPTAIN NICK WANINK
(715) 839-3800

UTILITIES

AT&T WISCONSIN COMMUNICATION LINE

RICK PODOLAK
304 SOUTH DEWEY ST., 4TH FLOOR
EAU CLAIRE, WI 54701
715-839-5565 (OFFICE)
715-410-0656 (MOBILE)
RP4514@ATT.COM

BALDWIN TELECOM, INC. COMMUNICATION LINE

KEN CARLSRUD
930 MAPLE STREET
BALDWIN, WI 54002
715-684-3346 (OFFICE)
715-760-0966 (MOBILE)
KCARLSRUD@LSWI.NET

CINC (CCI SYSTEMS, INC) COMMUNICATION LINE

DAREN BAUER
UNIVERSITY OF WISCONSIN-EAU CLAIRE
105 GARFIELD AVENUE
EAU CLAIRE, WI 54701
715-836-5286
BAUERDP@UWEC.EDU

CENTURYLINK COMMUNICATIONS COMMUNICATION LINE

KIRK THOELKE
NATIONAL RIGHT OF WAY
CENTURYLINK COMM., LLC
11111 DORSETT RD
MARYLAND HEIGHTS, MO 63043
636-887-4752 (OFFICE)
636-887-4905 (FAX)
KIRK.THOELKE@CENTRYLINK.COM

CHARTER COMMUNICATIONS COMMUNICATION LINE

SHANE YODER
1201 MCCANN DRIVE
ALTOONA, WI 54720
715-831-8940 EXT 51113 (OFFICE)
715-370-7870 (MOBILE)
SHANE.YODER@CHARTER.COM

MOSAIC TELECOM COMMUNICATION LINE

DENNIS RUSSETT
401 S 1ST STREET
PO BOX 0664
CAMERON, WI 54822-0664
715-458-5400 (OFFICE)
715-458-5518 (MOBILE)
CTCDENNIS@MOSAICTELECOM.COM

PACKERLAND BROADBAND COMMUNCATION LINE

WAYNE CRETTON
105 KENT ST
P.O. BOX 190
IRON MOUNTAIN, MI 49801
906 282-3768 (MOBILE)
906-774-6621 (OFFICE)
WAYNE.CRETTON@PACKERLANDBROADBAND.US

WEST WISCONSIN TELCOM COOPERATIVE COMMUNICATION LINE

BRAD SCHMIDTKNECHT
5808 OLD MILL PLAZA
EAU CLAIRE, WI 54703
715-231-0504 (OFFICE)
715-308-1914 (MOBILE)
BRADS@WWT.COOP

DAIRYLAND POWER ELECTRIC

ROB MALY
3200 EAST AVENUE SOUTH
PO BOX 0817
LA CROSSE, WI 54602-0817
RAB.MALY@DAIRYLAND POWER.COM

CITY OF NEW RICHMOND ELECTRIC

TOM RICKARD
156 EAST FIRST STREET
NEW RICHMOND, WI 54017
715-243-0437
TRICKARD@NEWRICHMONDWI.GOV

CITY OF EAU CLARIE ELECTRIC/SEWER/WATER

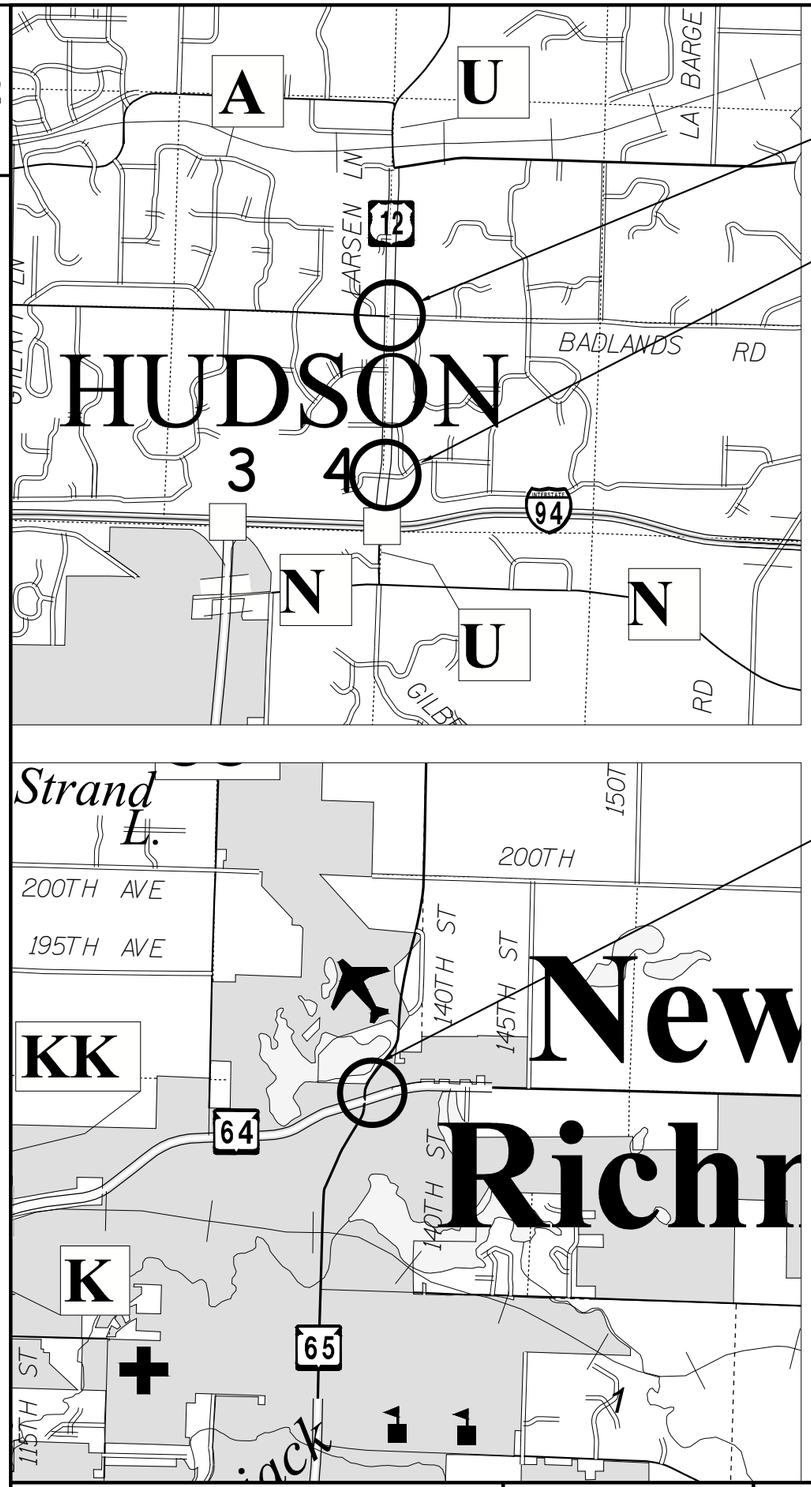
LANE BERG
910 FOREST ST
EAU CLAIRE, WI 54703
715-839-1876
715-828-6801
LANE.BERG@EAUCLAIREWI.GOV

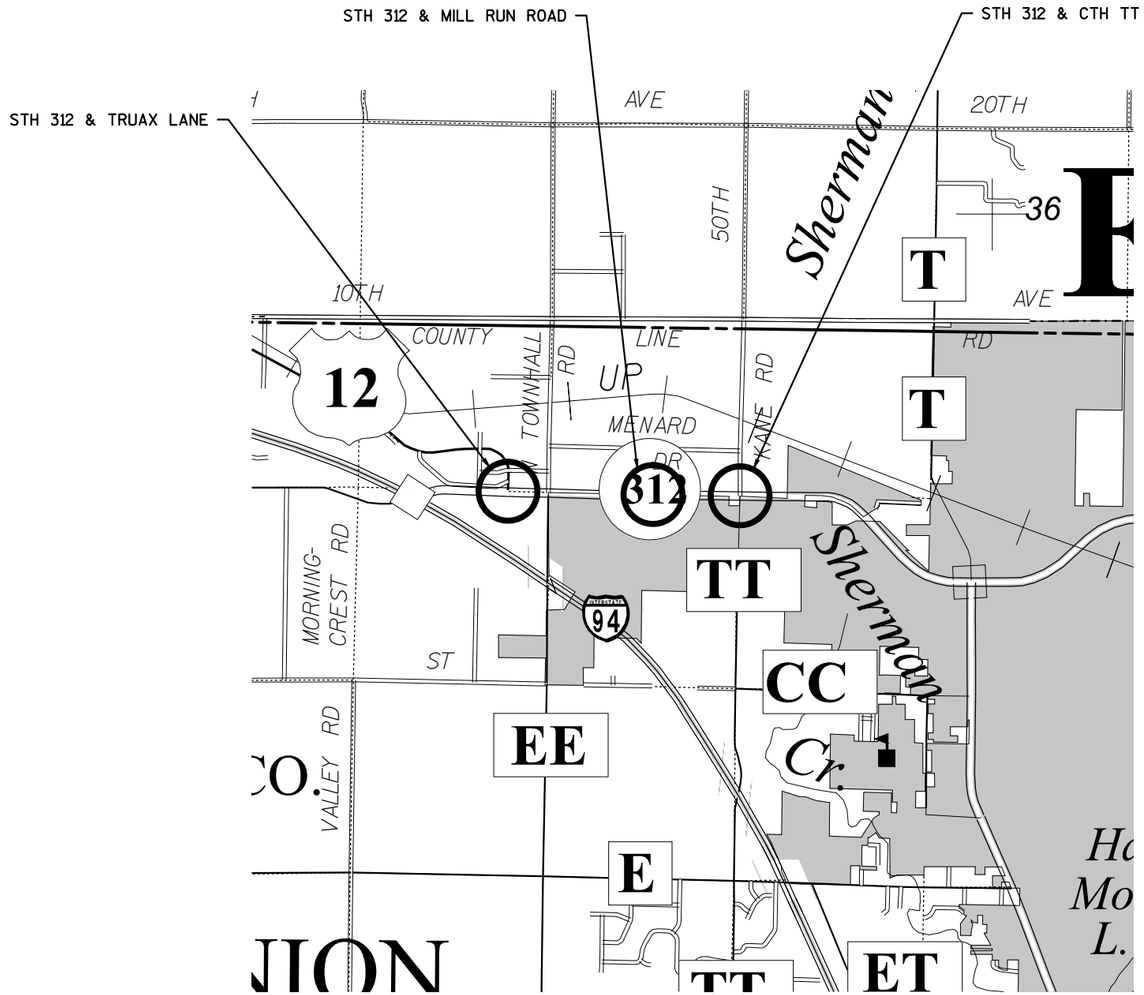
CITY OF NEW RICHMOND SEWER/WATER

BOB MEYER
156 EAST FIRST STREET
NEW RICHMOND, WI 54017
715-243-0436 (WATER SHOP)
715-246-4167 (UTILITY OFFICE)
NRUWATER@NEWRICHMONDWI.GOV

XCEL ENERGY ELECTRIC/GAS/PETROLEUM

BRUCE ZEMKE
414 NICOLLET MALL, 5TH FLOOR
MINNEAPOLIS, MN 55401
612-330-7815
BRUCE.M.ZEMKE@XCELENERGY.COM


USH 12 & CTH UU
USH 12 & BRAKKE DRIVE
HUDSON
A
U
N
N
U
3
4
12
94
BADLANDS
RD
LARSEN LN
LA BARGE
RD
STH 64 & STH 65
Strand
L.
200TH
200TH AVE
195TH AVE
150T
140TH ST
145TH ST
KK
K
64
65
115TH ST
New
Richr


STH 312 & MILL RUN ROAD
STH 312 & TRUAX LANE
STH 312 & CTH TT
AVE
20TH
50TH
Sherman
36
T
T
10TH
AVE
COUNTY
LINE
RD
12
TOWNHALL RD
UP
MENARD
DR
312
KANE RD
MORNING-CREST RD
ST
94
TT
Sherman
CC
Cr.
EE
VALLEY RD
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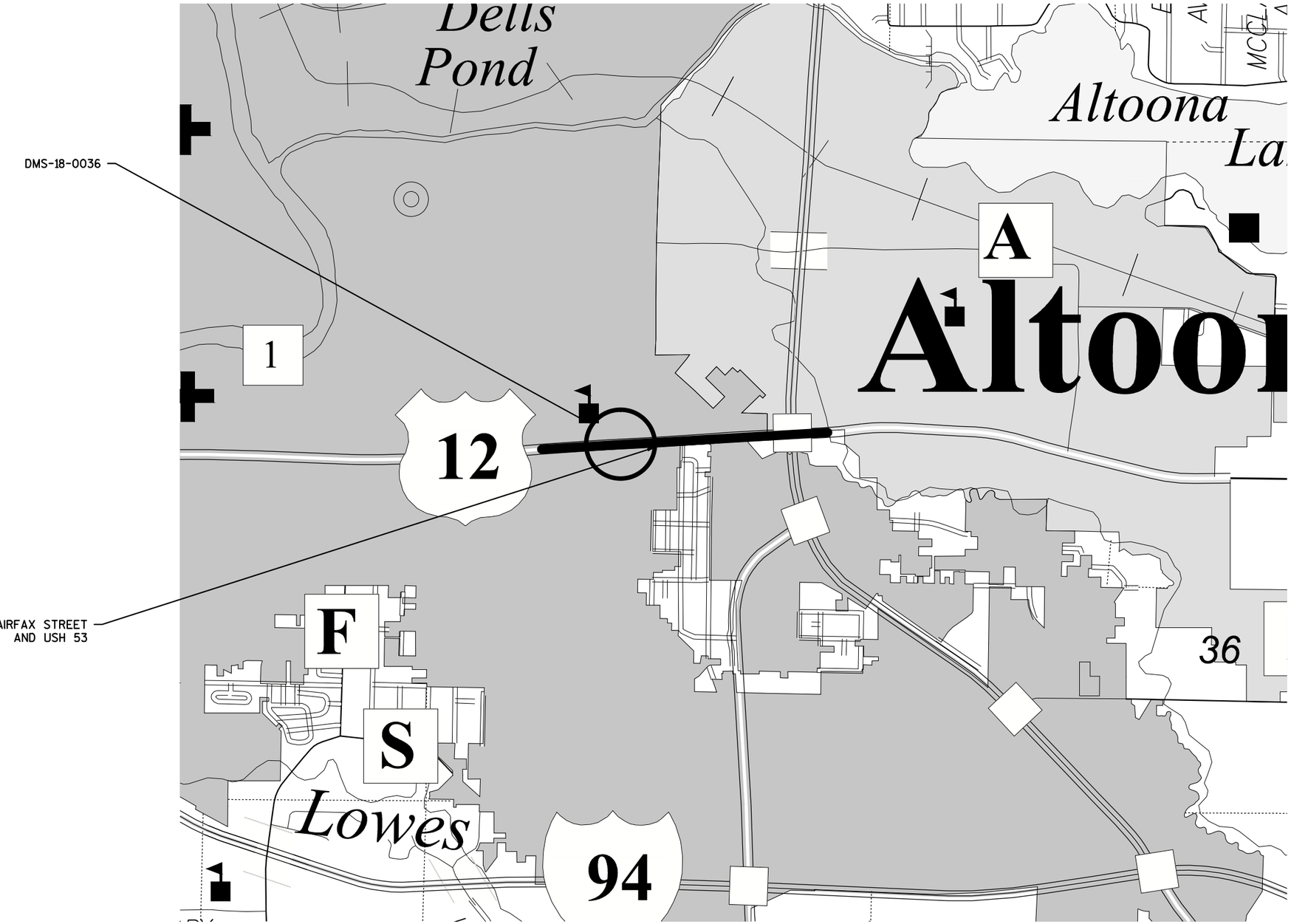
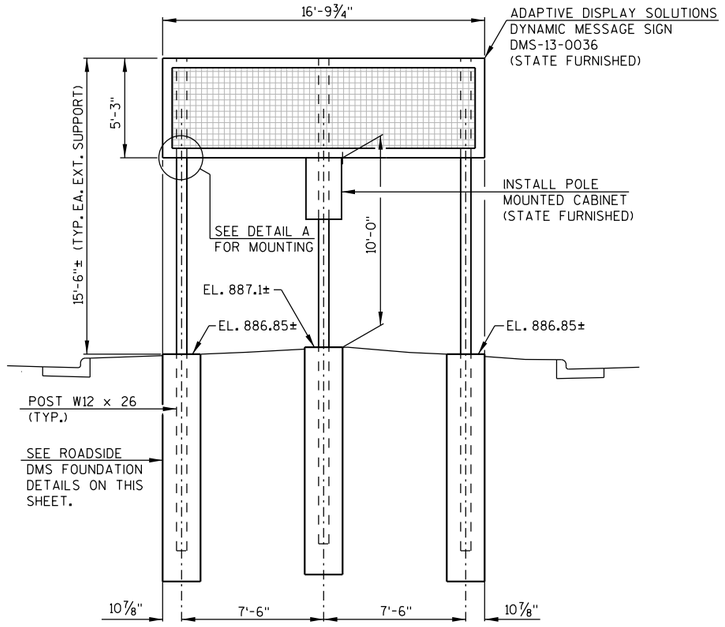
2

N

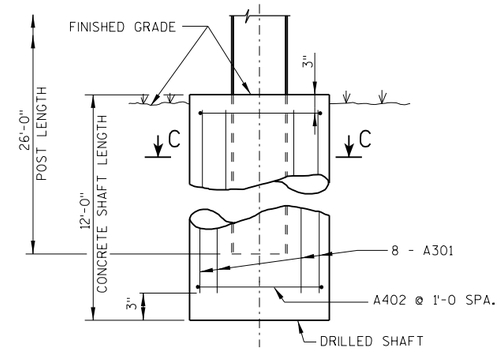


PROJECT NO:3700-50-38	HWY:USH 12	COUNTY: EAU CLAIRE	PROJECT OVERVIEW	SHEET 5	E

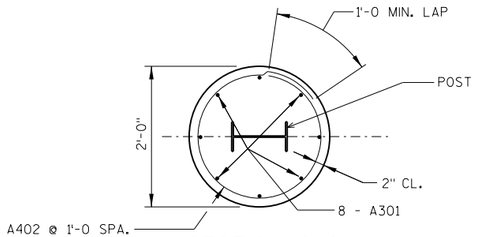


ELEVATION

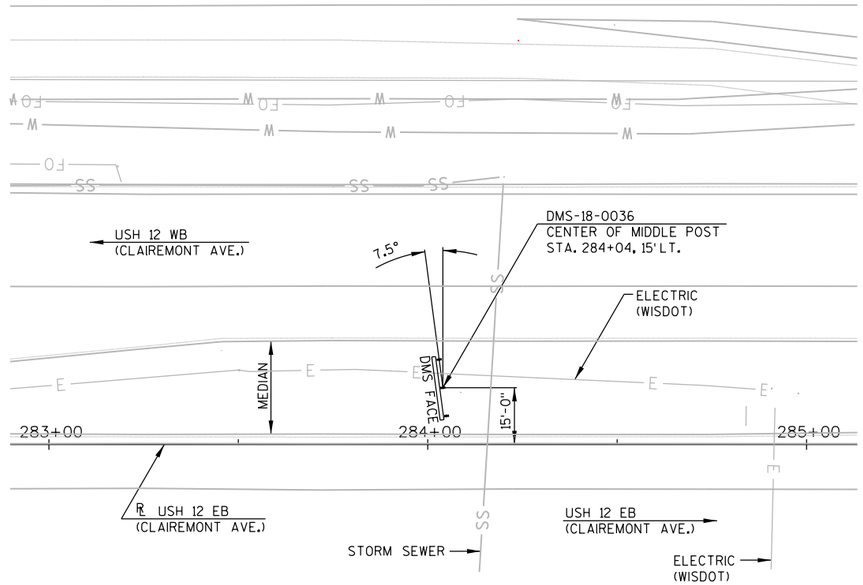
DMS-18-0036
USH 12 (CLAIREMONT AVE.)
STA. 284+04, 15'LT.
(LOOKING EAST)



FOUNDATION DETAIL

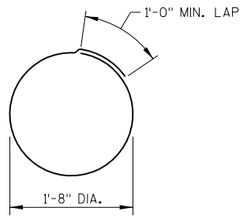


SECTION C-C



PLAN VIEW

DMS-18-0036
USH 12 (CLAIREMONT AVE.)
STA. 284+04, 15'LT.



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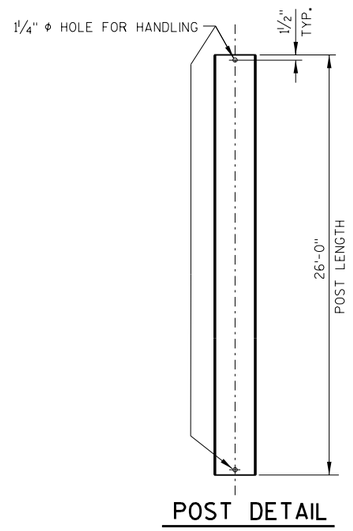
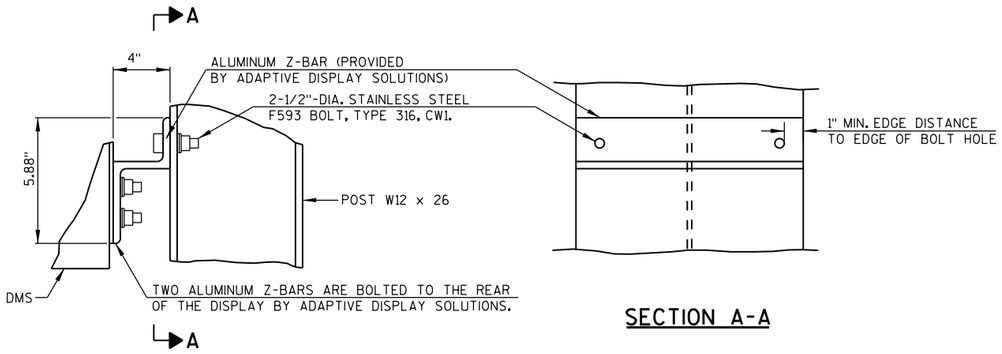


POST DETAIL



SECTION A-A

DETAIL A
SIGN ATTACHMENT

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

TIGHTEN STAINLESS STEEL BOLTS PER F3125, GRADE A325 BOLT.

ALL POSTS AND ATTACHMENTS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123.

DESIGN DATA

DESIGNED ACCORDING TO 6TH EDITION OF A.A.S.H.T.O. "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS".

DEAD LOAD - WEIGHT OF DMS SIGN (756 LBS), CABINET (200 LBS.) AND SUPPORTING STRUCTURE.
ICE LOAD - 3 PSF APPLIED TO ALL MEMBER SURFACE AREAS.
WIND PRESSURE - 90 MPH (3 SECOND GUST SPEED) TO SIGN AREA AND EXPOSED MEMBERS.

WIND COMPONENTS	NORMAL	TRANSVERSE
COMBINATION 1	1.0	0.2
COMBINATION 2	0.6	0.3

GROUP LOADS	% OF ALLOWABLE STRESS
1. DEAD	100
2. DEAD + WIND	133
3. DEAD + ICE + ½ (WIND)	133

NOTE: WIND LOAD FOR GROUP 3 LOADING SHALL NOT BE LESS THAN 25 P.S.F.

ALLOWABLE DESIGN STRESSES

POST, ASTM A709, GRADE 50	fy = 50,000 psi
CONCRETE MASONRY	f'c = 3,500 psi
BAR STEEL REINFORCEMENT, GRADE 60	fy = 60,000 psi
STAINLESS STEEL HEX BOLTS	ASTM F593, TYPE 316, CW1
HEX NUT	ASTM A594
WASHERS	ASTM A240

BILL OF BARS

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
NON-COATED BARS					TOTAL WEIGHT = 270 LBS
A301	24	11 - 7			VERTICAL
A402	39	6 - 2	X		STIRRUPS

DMS-18-0036
USH 12 (CLAIREMONT AVE.)

PROJECT NUMBER: 3700-50-38	HWY: USH 12	COUNTY: EAU CLAIRE	ROADSIDE DMS STRUCTURE DETAILS	SHEET 6	E

FILE NAME: \\usmsnlfs001\prod\Data\Projects\60546811_Eau Claire ITS Design WO 8\400_Technical\438_Struct\DMS dgn\DMS-18-0036.dgn
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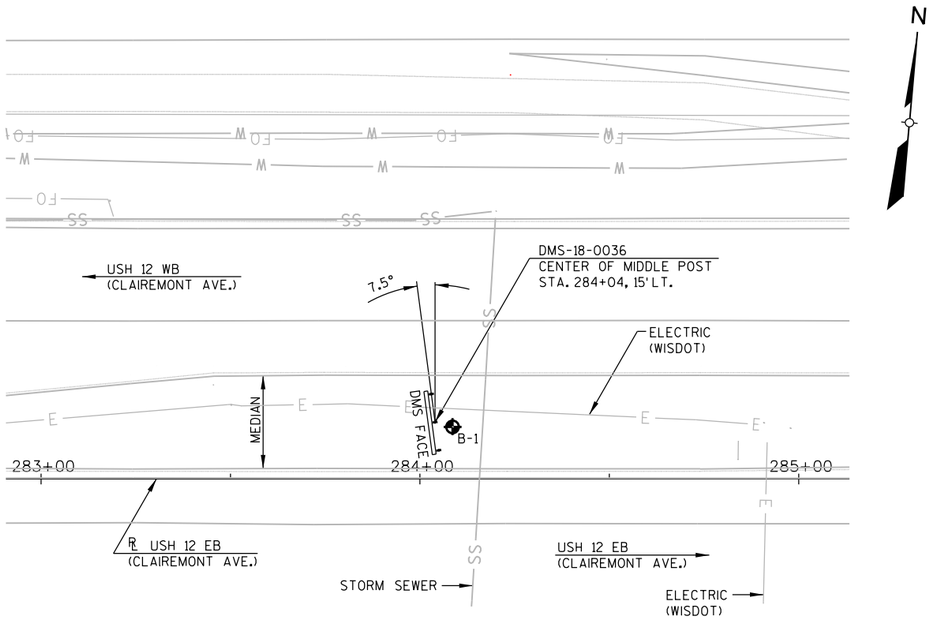
PLOT TIME: 9:20:40 AM
PLOT SCALE: 1:2
WISDOT/CADDS SHEET 42

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	11-07-2017	272525	347954

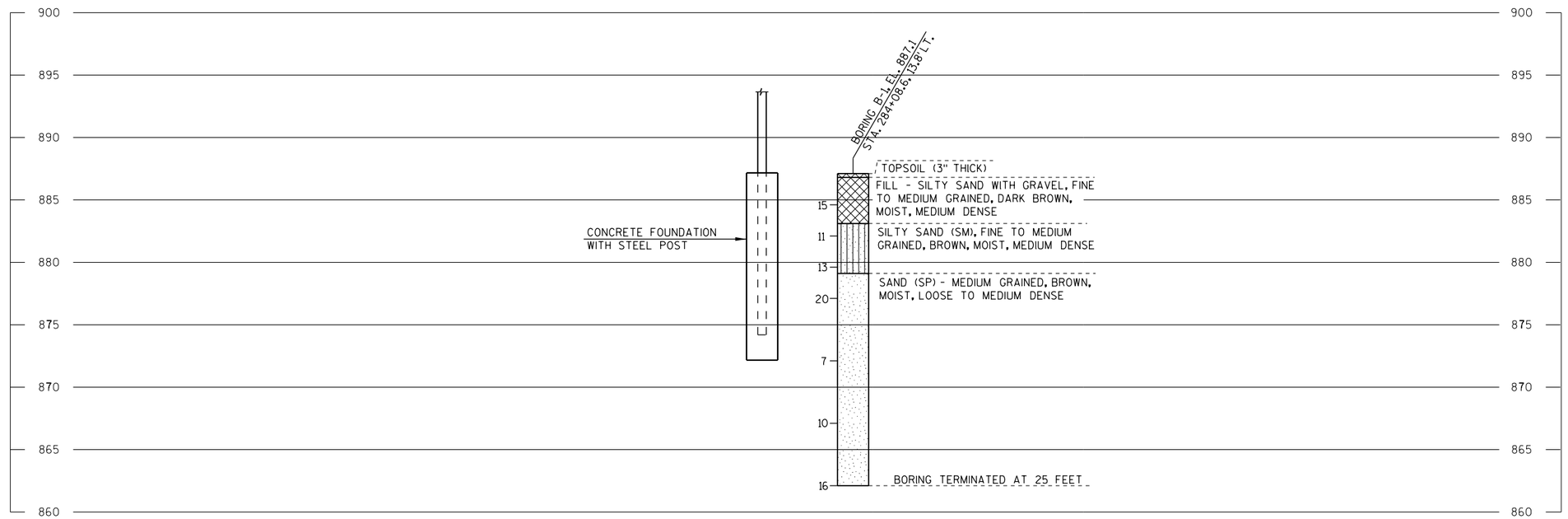
BORINGS COMPLETED BY: TERRACON CONSULTANTS, INC.

REPORT COMPLETED BY: TERRACON CONSULTANTS, INC.

ALL COORDINATES REFERENCED TO WCCS NAD 83(91) EAU CLAIRE COUNTY



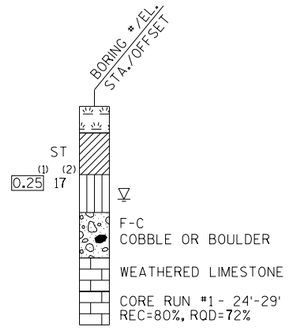
PLAN



MATERIAL SYMBOLS

ASPHALT · TOPSOIL · PEAT
CONCRETE · FILL · GRAVEL
SAND · CLAY · SILT
BOULDERS OR COBBLES · LIMESTONE · BEDROCK (UNKNOWN)
SHALE · SANDSTONE · IGNEOUS/META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

PROJECT NUMBER: 3700-50-38	HWY: USH 12	COUNTY: EAU CLAIRE	ROADSIDE DMS STRUCTURE DETAILS	SHEET 7	E

FILE NAME: P:\60546811_Eau Claire ITS Design WO 8\400_Technical\438_Struct\DMS dgn\DMS-18-0036_soils_2.dgn
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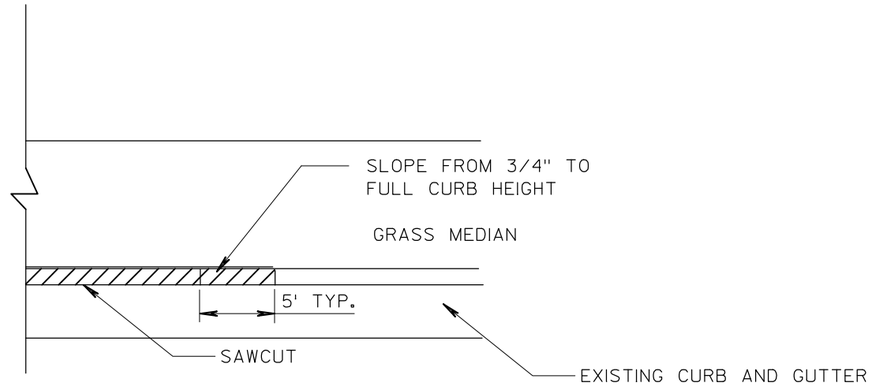
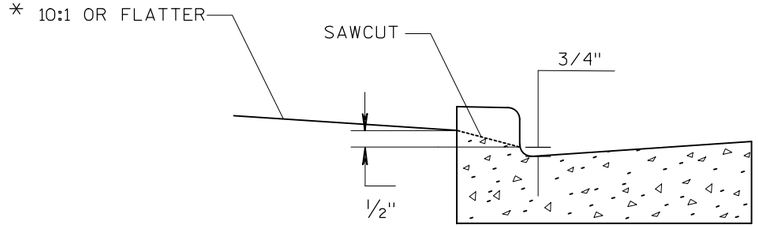
PLOT DATE: 4/20/2018
PLOT TIME: 10:11:52 AM
PLOT SCALE: 1:2
WISDOT/CADDS SHEET 42

2



PLAN SECTION



CURB SECTION

* = GRADING PAID FOR UNDER BID ITEM
"BARRIER SYSTEM GRADING SHAPING FINISHING"

SAWING CURB HEAD

2

GENERAL NOTES

THESE PLANS AND THE ASSOCIATED SPECIAL PROVISIONS REFLECT CONDITIONS KNOWN DURING THE DEVELOPMENT OF THE PLANS AND TECHNICAL SPECIAL PROVISIONS. ALL SCALES, DIMENSIONS AND LOCATIONS SHOWN IN THESE PLANS ARE APPROXIMATE. ACTUAL PHYSICAL FIELD CONDITIONS SHALL PROVIDE THE BASIS FOR THE APPLICATION OF WORK SHOWN IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE APPLICATION OF ALL WORK SHOWN IN THE PLANS TO THE ACTUAL PHYSICAL FIELD CONDITIONS TO PROVIDE A COMPLETE AND ACCEPTED PROJECT. IN THE EVENT THAT ACTUAL PHYSICAL FIELD CONDITIONS AFFECT OR PREVENT THE APPLICATION OR PROGRESSION OF ANY WORK SHOWN IN THE PLANS OR TECHNICAL SPECIAL PROVISIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY, AND PRIOR TO ANY FURTHER WORK ACTIVITY. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY LOCATION CHANGES OTHER THAN MINOR ADJUSTMENTS.

ALL EXISTING UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES WITHIN THE SCOPE OF THIS PROJECT MAY NOT BE LOCATED IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR LOCATING AND AVOIDING ALL UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS SHOWN ON THE PLANS IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

NO TEST BORINGS WERE MADE WHERE CONDUITS, PULL BOXES, COMMUNICATION VAULTS, POLES, FOUNDATIONS, OR OTHER EQUIPMENT ARE TO BE INSTALLED.

THE CONTRACTOR IS FULLY RESPONSIBLE FOR EXAMINING THE JOB SITE CONDITIONS BEFORE SUBMITTING BID PROPOSALS.

NO TREES (AND/OR SHRUBS) ARE TO BE REMOVED OR TRIMMED WITHOUT APPROVAL OF THE ENGINEER.

AREAS WITHIN RIGHT-OF-WAY DISTURBED SPECIFICALLY FOR ITS CONSTRUCTION ARE TO BE RESTORED TO THE ORIGINAL CONDITION WITH TOPSOIL, FERTILIZER, AND SEED AND MULCH. RESTORATION FOR AREAS DISTURBED FOR OTHER CONSTRUCTION OPERATIONS, BUT ALSO CONTAINING ITS CONSTRUCTION, WILL BE DONE ACCORDING TO REQUIREMENTS AND PAYMENT PROVISIONS FOR THE OTHER CONSTRUCTION OPERATIONS. NO PAYMENT WILL BE MADE FOR RESTORING AREAS DISTURBED FOR ITS CONSTRUCTION OPERATIONS.

DUE TO LANE AND SHOULDER CLOSURE RESTRICTIONS AND WORK UNDER OTHER CONTRACTS, SOME WORK MAY BE REQUIRED TO BE PERFORMED AT NIGHT.

THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING LANE OR SHOULDER CLOSURES WITH OTHER CONTRACTS IN THE AREA.

NOTIFY THE REGION ELECTRICAL FIELD UNIT (715-577-5399), A MINIMUM OF TWO (2) WEEKS PRIOR TO THE NEED TO STAKE THE FOLLOWING ITEMS: CCTV CAMERAS, COMMUNICATION VAULTS, DMS SIGN, AND PULL BOXES.

HAND DIG TRENCHES CROSSING EXISTING CONDUIT CONTAINING FIBER OPTIC CABLE.

VISUALLY VERIFY DEPTHS OF EXISTING CONDUITS CONTAINING FIBER OPTIC CABLE PRIOR TO CROSSING BY DIRECTIONAL BORE OR SPECIAL METHOD.

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

ITS LEGEND

DESCRIPTION	SYMBOL
CCTV CAMERA	
GROUND MOUNTED DYNAMIC MESSAGE SIGN	
POLE MOUNTED CABINET	
ITS CONDUIT	
POLE	
NON-CONDUCTIVE PULL BOX 24X42	
ELECTRICAL METER BREAKER PEDESTAL	
ELECTRICAL SERVICE BREAKER DISCONNECT BOX	

NOTE: EXISTING COMPONENTS AND EXISTING ROADWAY ARE SHOWN IN GRAY SHADE.

ITS STANDARD ABBREVIATIONS

PB	PULL BOX
CCTV	CLOSED CIRCUIT TELEVISION
DMS	DYNAMIC MESSAGE SIGN
MB	ELECTRICAL METER BREAKER PEDESTAL
CP	CAMERA POLE

CONTACTS

WISDOT NW REGION
718 W. CLAIREMONT AVE
EAU CLAIRE, WI 54701
NW REGION ELECTRICAL FIELD UNIT
(715) 577-5399

WISDOT STATEWIDE TRAFFIC OPERATIONS CENTER
433 W. ST. PAUL AVE, SUITE 300
MILWAUKEE, WI 53203
DEAN BEEKMAN
(414) 227-2154
dean.beekman@dot.wi.gov
DON SCHELL
donald.schell@dot.wi.gov
(414) 227-2148

AECOM
1350 DEMING WAY, SUITE 100
MIDDLETON, WI 53562
JEFF SANDBERG
(608) 828-8161
Jeff.sandberg@aecom.com

FILE NAME : P:\60546811_EAU CLAIRE ITS DESIGN WO 8\900_WORK\910_CAD\05-MODELS\ITS\GENERAL NOTES\021401_FM.DWG
LAYOUT NAME - 021401_FM - ITS GENERAL NOTES
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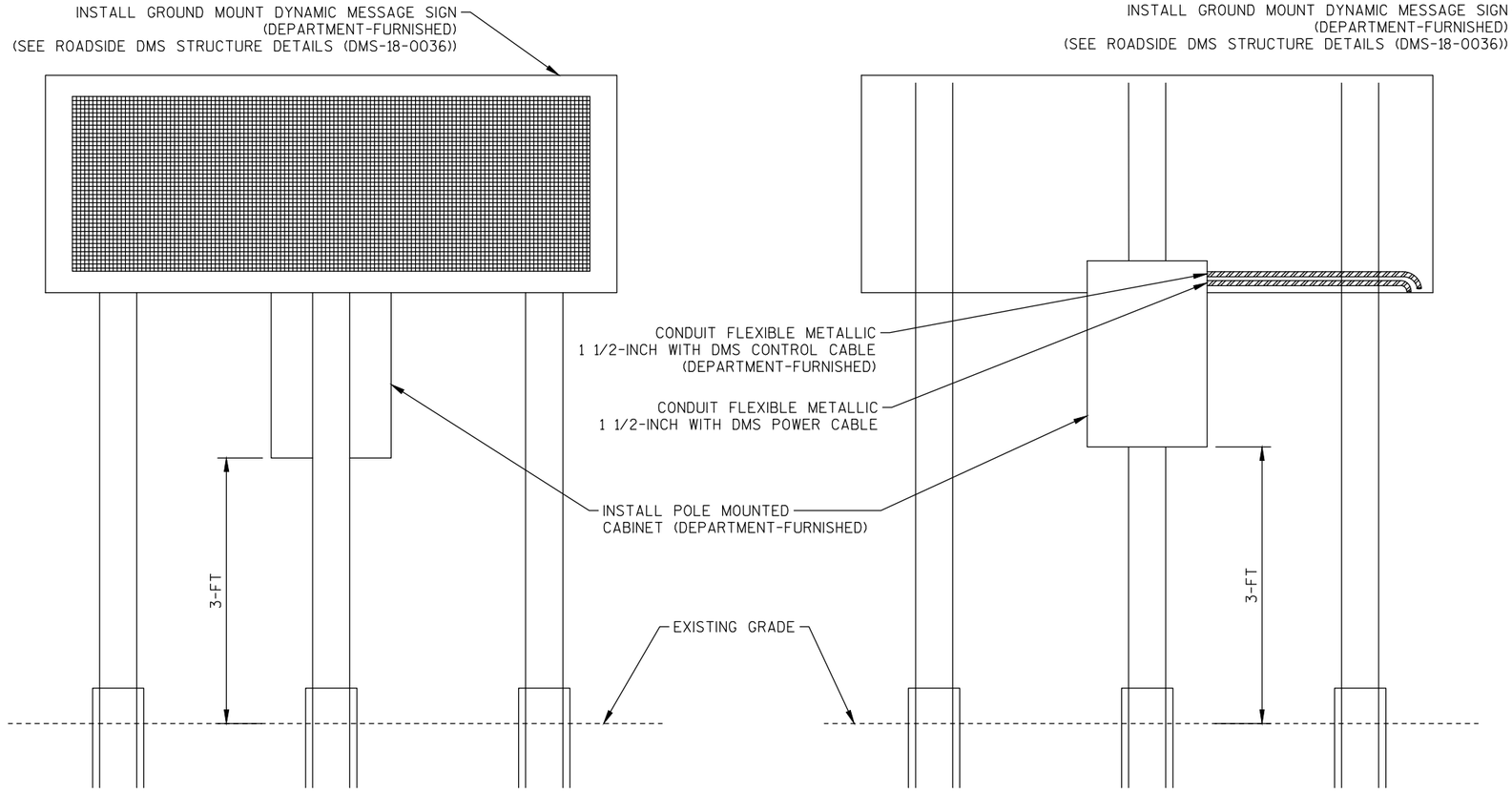
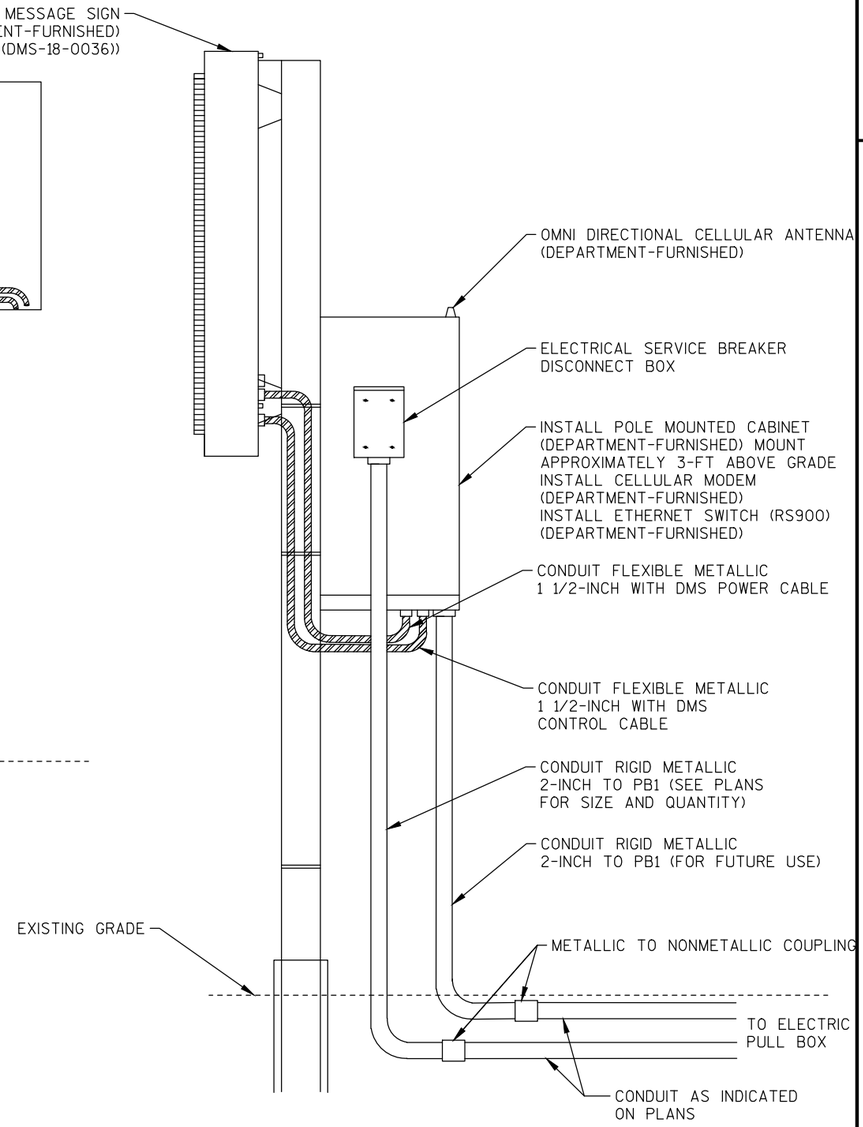
WISDOT/CADDS SHEET 42



ELEVATION VIEW



SECTION VIEW

USH 12 & BUX. 53
DMS-18-0036 (DMS1)

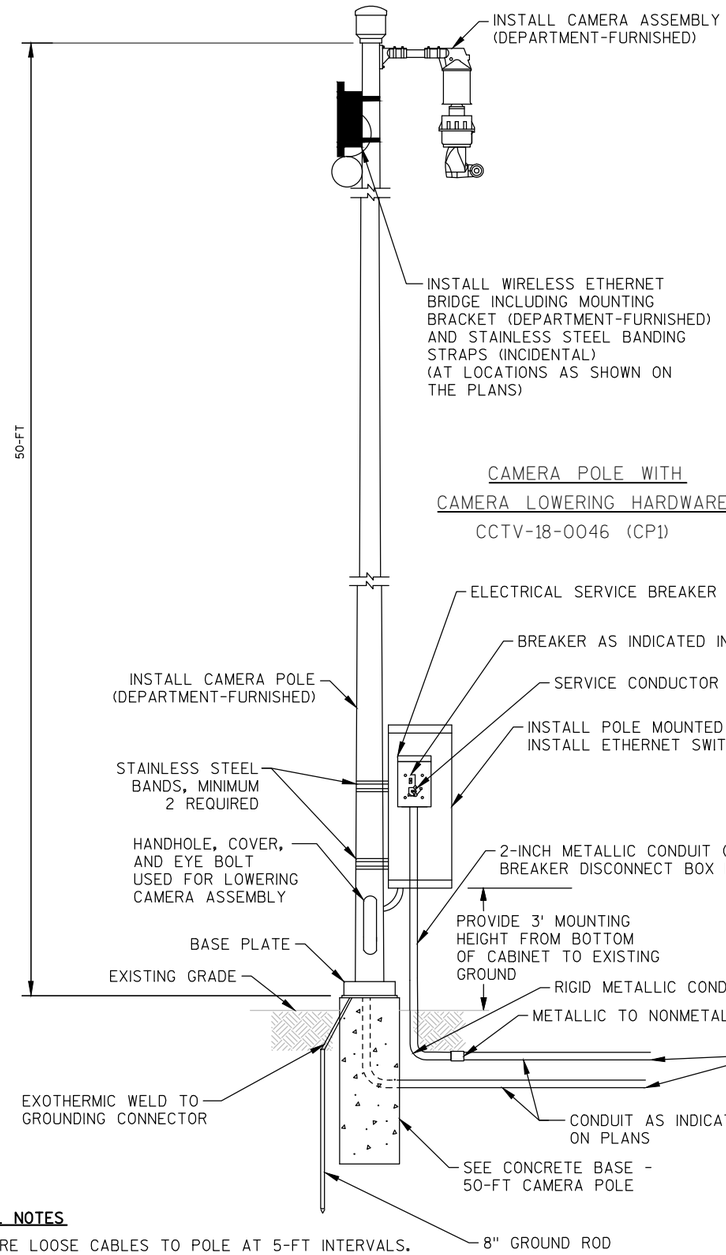
GENERAL NOTES

SECURE LOOSE CABLES TO POLE AT 5-FT INTERVALS.

INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

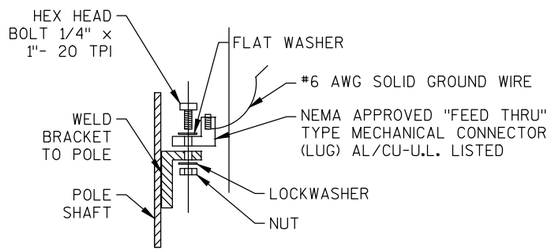
MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

CONDUIT FLEXIBLE METALLIC SHALL BE TIGHT AND SECURED TO DMS STRUCTURE AT 5-FT INTERVALS.

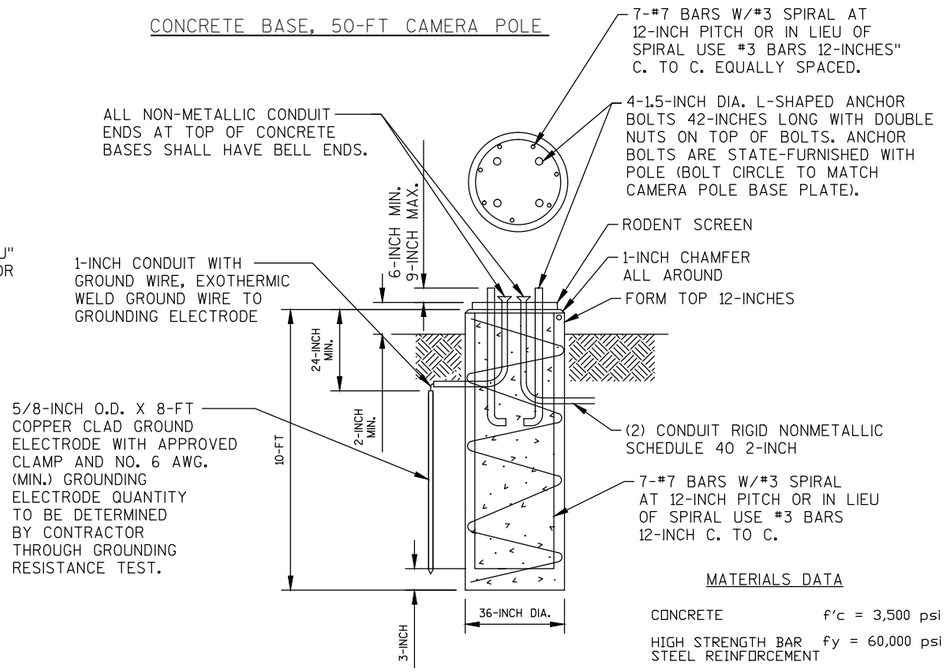


CAMERA POLE WITH
CAMERA LOWERING HARDWARE
CCTV-18-0046 (CP1)

FIELD INSTALLED GROUNDING LUG



CONCRETE BASE, 50-FT CAMERA POLE



MATERIALS DATA

CONCRETE	f'c = 3,500 psi
HIGH STRENGTH BAR STEEL REINFORCEMENT	fy = 60,000 psi

GENERAL NOTES

SECURE LOOSE CABLES TO POLE AT 5-FT INTERVALS.

INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

CONDUIT FLEXIBLE METALLIC SHALL BE LIQUID TIGHT.

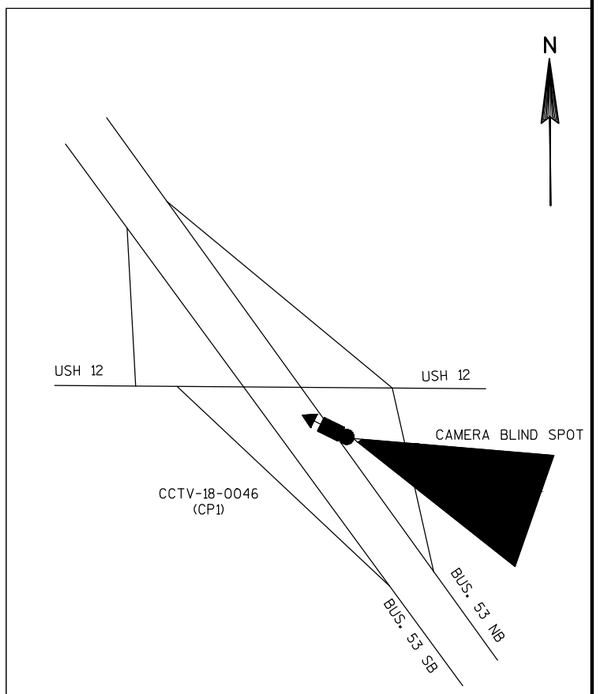
ORIENT ANTENNAS TO OPTIMIZE SIGNAL STRENGTH.

NOTES

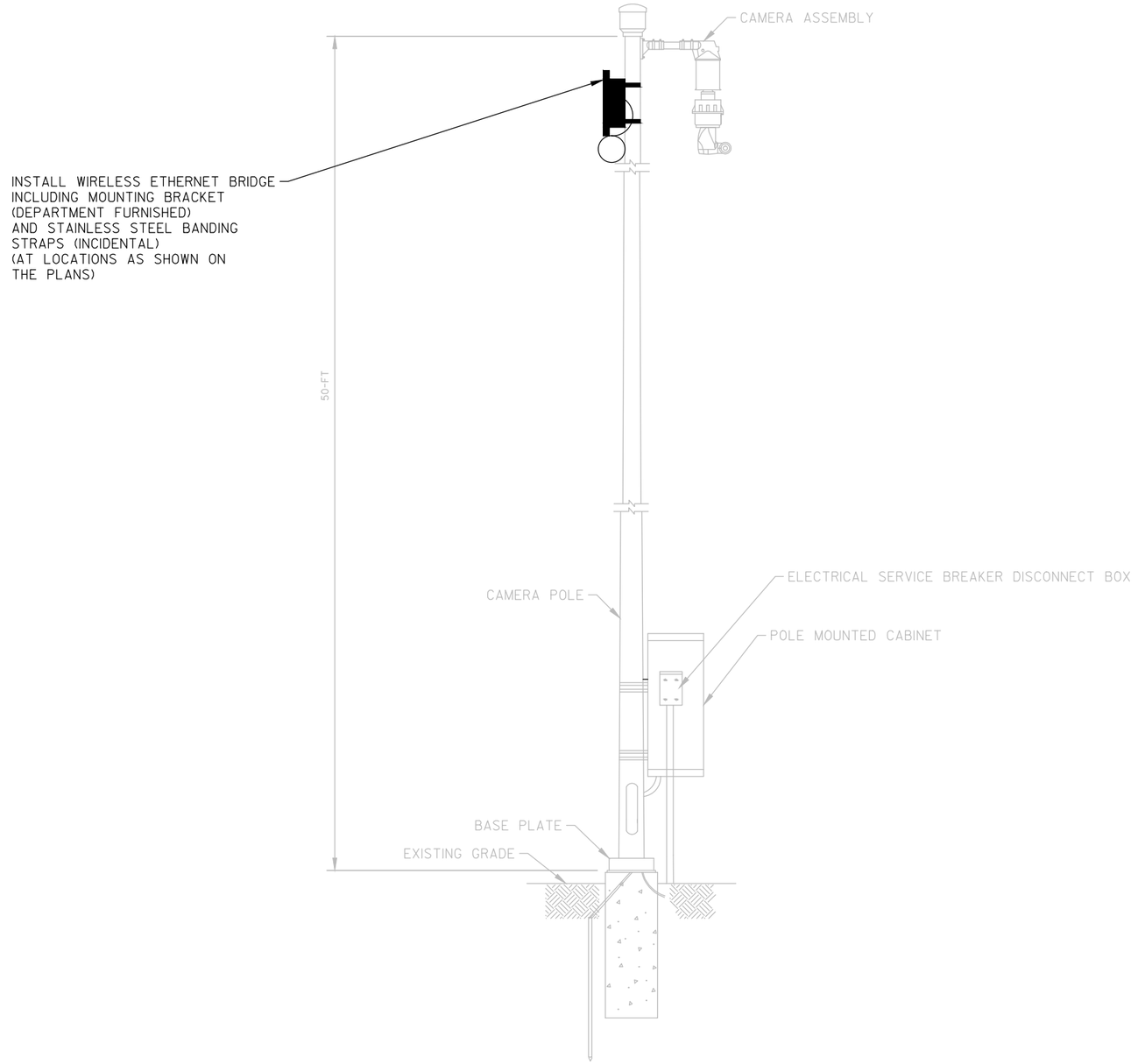
1) ALL HARDWARE AND FASTENERS SHALL BE STAINLESS STEEL.
2) POLE DRAWINGS SHOWN FOR BIDDING INFORMATION PURPOSES ONLY. POLES WILL BE DEPARTMENT-FURNISHED.
3) CONTRACTOR SHALL CONFIRM BOLT PATTERN OF CAMERA POLE PRIOR TO CONSTRUCTION OF CONCRETE BASE.
4) CONTRACTOR SHALL INSTALL GROUNDING LUG AS SHOWN.

TABLE 1
BREAKER SIZES BY LOCATION

LOCATION	ID	MAIN BREAKER SIZE	SUB BREAKER SIZE
USH 12 & BUS. 53	CCTV-18-0046 (CP1)	30 AMPS	30 AMPS (SPARE)



PROJECT NO: 3700-50-38	HWY: USH 12	COUNTY: EAU CLAIRE	ITS CONSTRUCTION DETAILS	SHEET 11	E



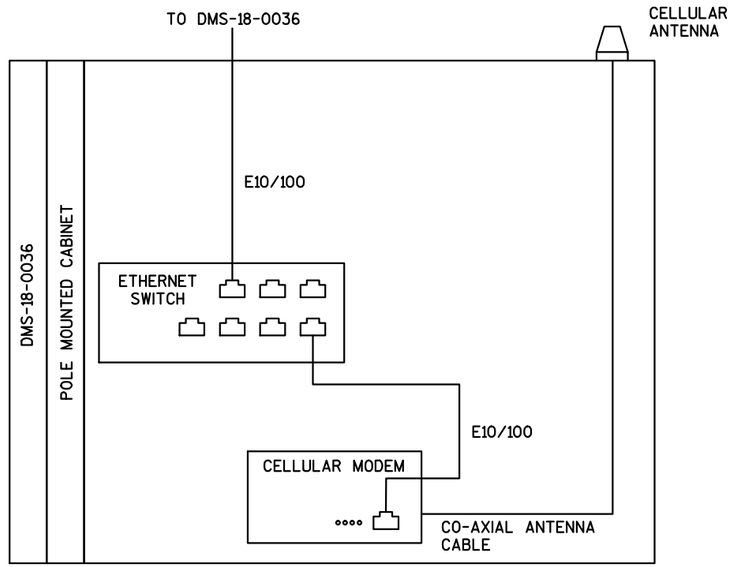
CAMERA POLE
CCTV-18-0010

GENERAL NOTES

MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

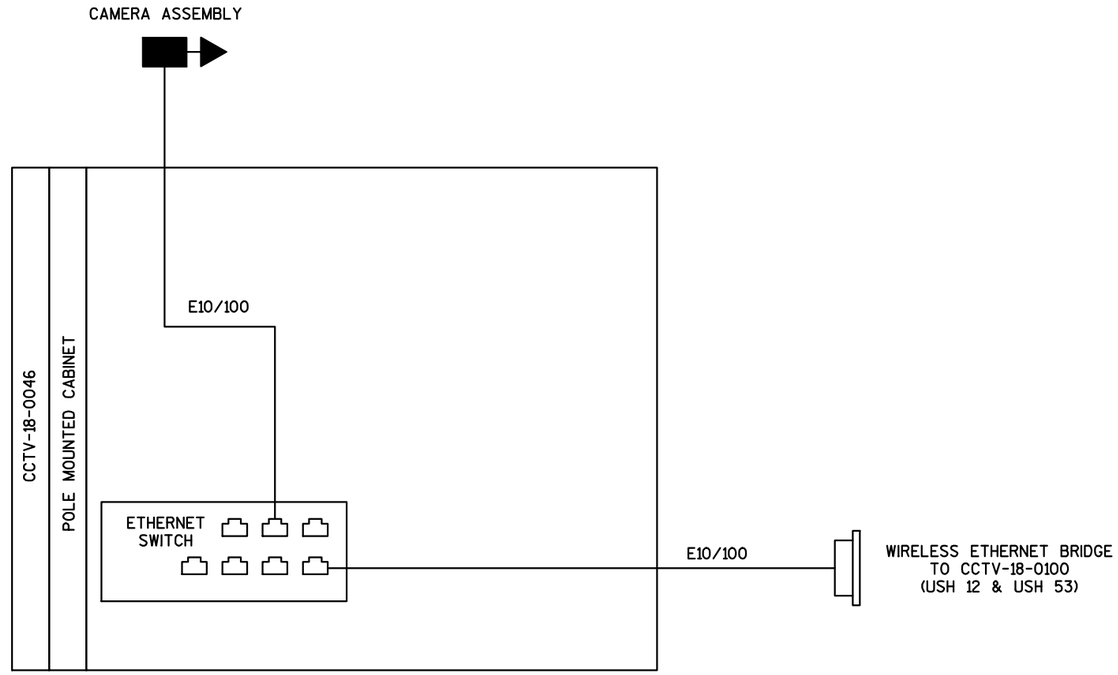
CONDUIT FLEXIBLE METALLIC SHALL BE LIQUID TIGHT.

ORIENT ANTENNAS TO OPTIMIZE SIGNAL STRENGTH.



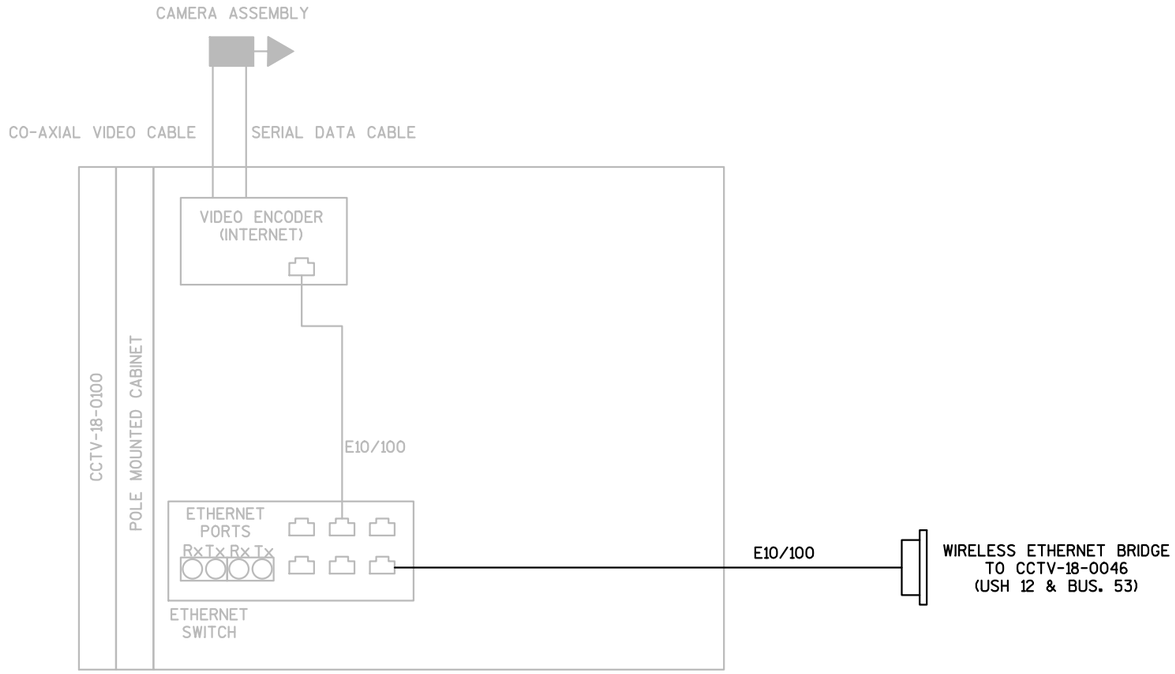
USH 12 - FAIRFAX ST TO BUS. 53

PROJECT NO: 3700-50-38	HWY: USH 12	COUNTY: EAU CLAIRE	ITS COMMUNICATIONS SCHEMATICS	SHEET 13	E



ITS COMMUNICATION SCHEMATIC
USH 12 & BUS. 53

PROJECT NO: 3700-50-38	HWY: USH 12	COUNTY: EAU CLAIRE	ITS COMMUNICATIONS SCHEMATICS	SHEET 14	E



ITS COMMUNICATION SCHEMATIC
USH 12 & USH 53

PROJECT NO: 3700-50-38	HWY: USH 12	COUNTY: EAU CLAIRE	ITS COMMUNICATIONS SCHEMATICS	SHEET 15	E

2

ITS LEGEND

DESCRIPTION	SYMBOL
NON-CONDUCTIVE PULL BOX	ⓟ
ITS CONDUIT	– – –
POLE MOUNTED CABINET	▣
GROUND MOUNTED DYNAMIC MESSAGE SIGN	▭
ELECTRICAL SERVICE METER BREAKER PEDESTAL	⊠
ELECTRICAL SERVICE BREAKER DISCONNECT BOX	⊞

ITS STANDARD ABBREVIATIONS

PB---------- PULL BOX
DMS--------- DYNAMIC MESSAGE SIGN
MB---------- ELECTRICAL METER BREAKER PEDESTAL

N

DMS-18-0036
INSTALL GROUND MOUNTED DMS FULL MATRIX (DEPARTMENT-FURNISHED)
(INSTALL DMS TO FACE EASTBOUND TRAFFIC)
(1) ELECTRICAL SERVICE BREAKER DISCONNECT BOX
(1) INSTALL POLE MOUNTED CABINET (DEPARTMENT-FURNISHED)
(2) PLAQUES SEQUENCE IDENTIFICATION
(1) INSTALL CELLULAR MODEM (DEPARTMENT-FURNISHED)
(1) INSTALL ETHERNET SWITCH (DEPARTMENT-FURNISHED)
(SEE CONSTRUCTION DETAILS FOR DMS MOUNTING DETAILS)

USH 12 (WB)

(1) CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
ELECTRICAL WIRE LIGHTING 12 AWG (TRACER)
(FOR FUTURE USE)

DMS1

PB1

PB2

282+00 283+00 284+00 285+00 286+00 287+00

(1) CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
(3) ELECTRICAL WIRE LIGHTING 6 AWG

USH 12 (EB)

(2) CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
1 WITH - (3) ELECTRICAL WIRE LIGHTING 6 AWG
1 WITH - ELECTRICAL WIRE LIGHTING 12 AWG (TRACER)

(2) CONDUIT SPECIAL 2-INCH
1 WITH - (3) ELECTRICAL WIRE LIGHTING 6 AWG
1 WITH - ELECTRICAL WIRE LIGHTING 12 AWG (TRACER)

PB3

MB1

(1) CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
(3) ELECTRICAL WIRE LIGHTING 6 AWG

FRONTAGE ROAD

NOTE: GRAYSHADE REPRESENTS
EXISTING UNLESS OTHERWISE NOTED

PROJECT NO:3700-50-38	HWY: USH 12	COUNTY:EAU CLAIRE	ITS PLANS	SHEET 16	E

2

ITS LEGEND

DESCRIPTION	SYMBOL
POLE MOUNTED CABINET	
NON-CONDUCTIVE PULL BOX	
ITS CONDUIT	
CCTV CAMERA	
POLE	

ITS STANDARD ABBREVIATIONS

PB---------- PULL BOX
CCTV --------- CLOSED CIRCUIT TV
MB---------- ELECTRICAL METER BREAKER PEDESTAL
CP---------- CAMERA POLE

N

2

USH 12

296+00 297+00 298+00 299+00 300+00 301+00

CAMERA ARM ALIGNMENT
ALIGN BOLT CIRCLE TO BE
SQUARE TO THIS LINE

(1) CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
(3) ELECTRICAL WIRE LIGHTING 6 AWG

(1) CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
(3) ELECTRICAL WIRE LIGHTING 6 AWG

CONNECT ELECTRICAL WIRE LIGHTING 6 AWG
TO EXISTING BREAKER PANEL AT
S 18-0159 SIGNAL CABINET

PB6

CCTV-18-0046
INSTALL ON BASE CAMERA POLE 50-FT
(1) INSTALL CAMERA POLE (DEPARTMENT-FURNISHED)
(1) INSTALL CAMERA ASSEMBLY (DEPARTMENT-FURNISHED)
(1) INSTALL POLE MOUNTED CABINET (DEPARTMENT-FURNISHED)
(1) ELECTRICAL SERVICE BREAKER DISCONNECT BOX
(1) INSTALL WIRELESS ETHERNET BRIDGE (DEPARTMENT-FURNISHED)
(1) INSTALL ETHERNET SWITCH (DEPARTMENT-FURNISHED)
(2) PLAQUE SEQUENCE IDENTIFICATION

CP1

PB4

PB5

BUS. 53 NB
OFF-RAMP

(2) CONDUIT SPECIAL 2-INCH
1 WITH - (3) ELECTRICAL WIRE LIGHTING 6 AWG
1 WITH - ELECTRICAL WIRE LIGHTING 12 AWG (TRACER)

NOTE: OTHER END OF WIRELESS ETHERNET
BRIDGE LOCATED AT CCTV-18-0010

(1) CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
ELECTRICAL WIRE LIGHTING 12 AWG (TRACER)
(FOR FUTURE USE)

(2) CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
1 WITH - (3) ELECTRICAL WIRE LIGHTING 6 AWG
1 WITH - ELECTRICAL WIRE LIGHTING 12 AWG (TRACER)

NOTE: GRAYSHADE REPRESENTS
EXISTING UNLESS OTHERWISE NOTED

PROJECT NO: 3700-50-38	HWY: USH 12	COUNTY: EAU CLAIRE	ITS PLANS	SHEET 17	E

2

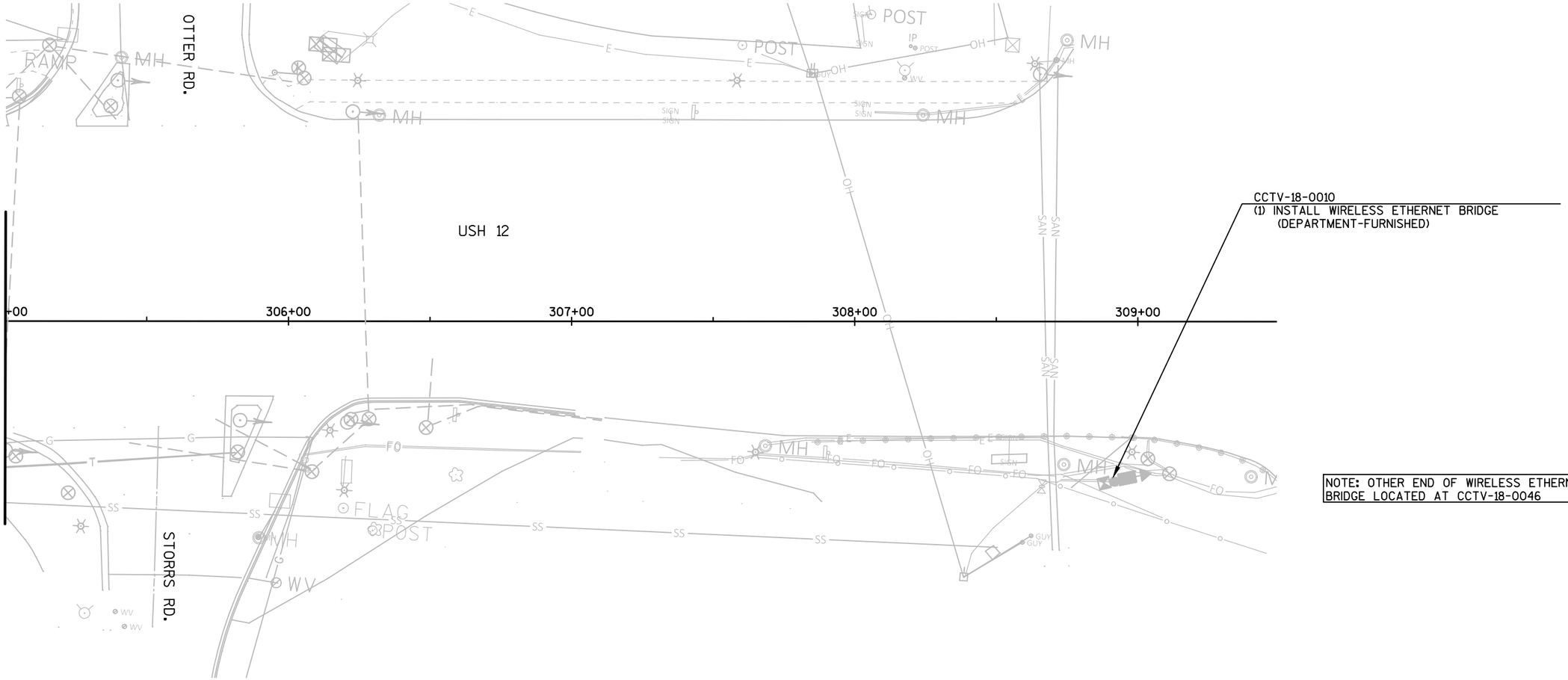
ITS LEGEND

DESCRIPTION	SYMBOL
POLE MOUNTED CABINET	
CCTV CAMERA	
POLE	

ITS STANDARD ABBREVIATIONS

CCTV--------- CLOSED CIRCUIT TV

N



NOTE: GRAYSHADE REPRESENTS EXISTING UNLESS OTHERWISE NOTED

2

PROJECT NO:3700-50-38	HWY: USH 12	COUNTY:EAU CLAIRE	ITS PLANS	SHEET 18	E

2

N

STOP
MOVE
1-02

Truax Ln
12 Texaco Dr
1-01
M1-94-H
84" X 30"
MOUNTED ON TRAFFIC SIGNAL ARM. SEE TRAFFIC SIGNAL PLANS FOR POLE LOCATIONS.

USH 12/ TEXACO DR.

1-03
RIGHT TURN OBEY THIS SIGN
MOVE

STH 312

USH 12/STH 312

TRUAX LANE

1-04
12 Texaco Dr
Truax Ln
M1-94-H
84" X 30"
MOUNTED ON TRAFFIC SIGNAL ARM. SEE TRAFFIC SIGNAL PLANS FOR POLE LOCATIONS.

SYMBOLS LEGEND

- EXISTING TRAFFIC SIGNAL POLE AND ARM
- TRAFFIC SIGNAL POLE AND ARM
- PROPOSED SIGN
- EXISTING SIGN
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE

PROJECT NO: 3700-50-29	HWY: STH 312 & USH 12/TEXACO DR./TRUAX LN.	COUNTY: EAU CLAIRE	PERMANENT SIGNING	SCALE, FEET 0 20 40	SHEET	E

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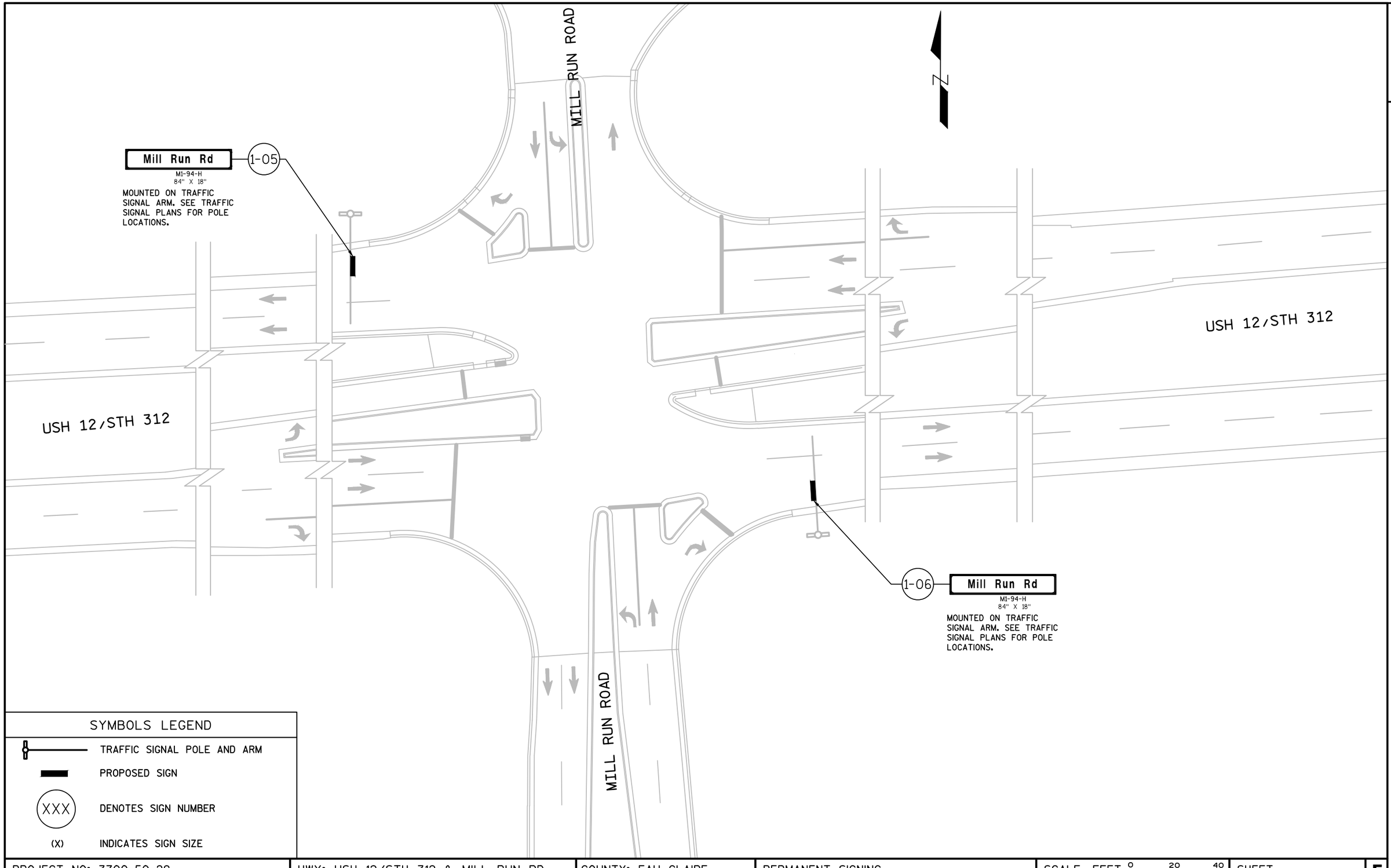
WISDOT/CADDS SHEET 42



SYMBOLS LEGEND

- TRAFFIC SIGNAL POLE AND ARM
- PROPOSED SIGN
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE

PROJECT NO: 3700-50-29	HWY: USH 12/STH 312 & MILL RUN RD.	COUNTY: EAU CLAIRE	PERMANENT SIGNING	SCALE, FEET 0 20 40	SHEET	E

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PLOT DATE : 7/25/2018 2:19 PM

WISDOT/CADD SHEET 42

2

2

KANE RD

USH 12/STH 312

USH 12/STH 312

CHT TT

N

1-07

Kane Rd

M1-94-H
78" X 18"

MOUNTED ON TRAFFIC SIGNAL ARM. SEE TRAFFIC SIGNAL PLANS FOR POLE LOCATIONS.

1-08

Kane Rd

M1-94-H
78" X 18"

MOUNTED ON TRAFFIC SIGNAL ARM. SEE TRAFFIC SIGNAL PLANS FOR POLE LOCATIONS.

SYMBOLS LEGEND

- TRAFFIC SIGNAL POLE AND ARM
- PROPOSED SIGN
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE

PROJECT NO: 3700-50-29	HWY: USH 12/STH 312 & KANE RD./CTH TT	COUNTY: EAU CLAIRE	PERMANENT SIGNING	SCALE, FEET 0 20 40	SHEET 21	E

FILE NAME : P:\60546811_Eau Claire ITS Design WO 8\900_Work\910_CAD\05-MODELS\Signing\024003_ps.dwg

PLOT DATE : 9/27/2018 8:32 AM

2

N

RODEO DR.

Brakke Dr
Rodeo Dr

1-09

M1-94-H
72" X 30"

MOUNTED ON TRAFFIC SIGNAL ARM. SEE TRAFFIC SIGNAL PLANS FOR POLE LOCATIONS.

USH 12

USH 12

BRAKKE DR.

1-10

Rodeo Dr
Brakke Dr

M1-94-H
72" X 30"

MOUNTED ON TRAFFIC SIGNAL ARM. SEE TRAFFIC SIGNAL PLANS FOR POLE LOCATIONS.

SYMBOLS LEGEND

	TRAFFIC SIGNAL POLE AND ARM
	PROPOSED SIGN
XXX	DENOTES SIGN NUMBER
(X)	INDICATES SIGN SIZE

PROJECT NO: 3700-50-29	HWY: USH 12 & BRAKKE DR./RODEO DR.	COUNTY: ST. CROIX	PERMANENT SIGNING	SCALE, FEET 0 20 40	SHEET: 22 E

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PLOT DATE : 9/27/2018 8:36 AM

2

2

CTH UU

COUNTY UU Badlands Rd

1-11

M1-94-H
108" X 18"

MOUNTED ON TRAFFIC SIGNAL ARM. SEE TRAFFIC SIGNAL PLANS FOR POLE LOCATIONS.

USH 12

USH 12

1-12

COUNTY UU Badlands Rd

M1-94-H
108" X 18"

MOUNTED ON TRAFFIC SIGNAL ARM. SEE TRAFFIC SIGNAL PLANS FOR POLE LOCATIONS.

BADLANDS RD.

SYMBOLS LEGEND

	TRAFFIC SIGNAL POLE AND ARM
	PROPOSED SIGN
XXX	DENOTES SIGN NUMBER
(X)	INDICATES SIGN SIZE

PROJECT No: 3700-50-29	HWY: USH 12 & CTH UU/BADLANDS ROAD	COUNTY: ST. CROIX	PERMANENT SIGNING	SCALE, FEET 0 20 40	SHEET: E

FILE NAME : P:\60546811_Eau Claire ITS Design WO 8\900_Work\910_CAD\05-MODELS\Signing\024005_ps.dwg

PLOT DATE : 9/27/2018 8:39 AM

2

N

STH 65

65 Knowles Ave — 1-13

M1-94-H
102" X 18"
MOUNTED ON TRAFFIC SIGNAL ARM. SEE TRAFFIC SIGNAL PLANS FOR POLE LOCATIONS.

STH 64

STH 64

1-14 — 65 Knowles Ave

M1-94-H
102" X 18"
MOUNTED ON TRAFFIC SIGNAL ARM. SEE TRAFFIC SIGNAL PLANS FOR POLE LOCATIONS.

STH 65

SYMBOLS LEGEND

	TRAFFIC SIGNAL POLE AND ARM
	PROPOSED SIGN
XXX	DENOTES SIGN NUMBER
(X)	INDICATES SIGN SIZE

PROJECT NO: 3700-50-29	HWY: STH 64 AND STH 65	COUNTY: ST. CROIX	PERMANENT SIGNING	SCALE, FEET 0 20 40	SHEET: E

LEGEND

- LUMINAIRE, 150W HPS, STATE-OWNED
- LUMINAIRE, 250W HPS, STATE-OWNED
- SIGNAL HEAD, PEDESTAL MOUNT
- SIGNAL HEAD, MAST-ARM MOUNT (XX)
- CONTROL CABINET
- PULL BOX, 24" X 36"
- STOP SIGN (S)
- CABLE-IN-DUCT
- LOOP DETECTOR
- CONDUIT
- JUNCTION BOX, 8x8x8-INCH

CONSTRUCTION NOTES:

1. RIGHT OF WAY IS APPROXIMATED FROM COUNTY ONLINE MAPPING.

USH 12/ TEXACO DR.

SPEED LIMIT 35

SPEED LIMIT 50

THE R/W IS OUTSIDE THE SHEET LIMITS IN THIS QUADRANT

STH 312

USH 12/STH 312

1-2" SIGNAL INTERCONNECT CONDUIT TO CTH EE

LOOP DETECTOR ± 220' BACK

LOOP DETECTOR ±420' BACK

LOOP DETECTOR ±420' BACK

LOOP DETECTOR ± 220' BACK

1-2" SIGNAL INTERCONNECT CONDUIT TO IH94/ TA VAULT

SPEED LIMIT 50

THE R/W IS OUTSIDE THE SHEET LIMITS IN THIS QUADRANT

THE R/W IS OUTSIDE THE SHEET LIMITS IN THIS QUADRANT

TRUAX LANE

SPEED LIMIT 25

TRAFFIC CONTROL SIGNAL
STH 312 & USH 12/TEXACO DR./TRUAX LN.
EAU CLAIRE COUNTY
SIGNAL NO. S 18-0560
REVISED BY: AECOM
PAGE 1 OF 1

PROJECT NO: 3700-50-29	HWY: STH 312 & USH 12/TEXACO DR./TRUAX LN.	COUNTY: EAU CLAIRE	TRAFFIC SIGNAL REMOVAL PLAN	SCALE, FEET 0 20 40	SHEET E

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PLOT DATE : 7/25/2018 2:23 PM

LEGEND

- LUMINAIRE, 150W HPS, STATE-OWNED
- LUMINAIRE, 250W HPS, STATE-OWNED
- SIGNAL HEAD, PEDESTAL MOUNT
- SIGNAL HEAD, MAST-ARM MOUNT
- MONOTUBE BASE, POLE, 35'-55' ARM
- CONTROL CABINET
- PULL BOX, 24" X 36"
- SIGNAL HEAD WITH REFLECTIVE BACKPLATES
- STOP SIGN
- CABLE-IN-DUCT
- LOOP DETECTOR
- CONDUIT
- JUNCTION BOX, 8x8x8-INCH
- EMERGENCY VEHICLE DETECTOR

THE R/W IS OUTSIDE THE SHEET LIMITS IN THIS QUADRANT

SPEED LIMIT 35

SPEED LIMIT 50

SPEED LIMIT 25

USH 12/ TEXACO DR.

STH 312

USH 12/STH 312

TRUAX LANE

R/W

MONOTUBE STRUCTURE NUMBER

SB6 = S-18-0560-02
SB12 = S-18-0560-01

DETAIL "A"

DETAIL "B"

1-2" SIGNAL INTERCONNECT CONDUIT TO CTH EE

1-2" SIGNAL INTERCONNECT CONDUIT TO IH94/ TA VAULT

LOOP DETECTOR ±420' BACK

LOOP DETECTOR ± 220' BACK

LOOP DETECTOR ±420' BACK

LOOP DETECTOR ± 220' BACK

THE R/W IS OUTSIDE THE SHEET LIMITS IN THIS QUADRANT

THE R/W IS OUTSIDE THE SHEET LIMITS IN THIS QUADRANT

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS BEFORE PLACING CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL FIELD UNIT AT (715) 577-5399.
2. THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
4. RIGHT OF WAY IS APPROXIMATED FROM COUNTY ONLINE MAPPING.
5. PROTECT OPEN EXCAVATIONS WITH SAFETY FENCE WHENEVER WORK ACTIVITIES ARE NOT BEING ACTIVELY PERFORMED.

Base Plan No.	Rev. No.	REVISIONS	Cont. Type
		CHANGE HEADS 1, 2, 6 AND 7 TO 4-SECTION FYA AND ADD HEADS 19 AND 20. REPLACE TROMBONE ARM POLES WITH MONOTUBE POLES AT SB6 AND SB12.	
1	2	12-8-11 CHANGED CONTROLLER TO EPAC 300 AND ADDED COMMUNICATION ON 12-8-11. CHANGED TO ALL RED FLASH AND SWITCHED SIDE STREET PHASING ON 2-22-07. REPLACED THE Ø1 & Ø5 3M INDICATIONS WITH ARROWS ON 1-13-97. (APPR. 1-12-11)	ASC/3 TS1

APPROVALS

REGION Date	REGION By	CENTRAL OFFICE Date	CENTRAL OFFICE By

TRAFFIC CONTROL SIGNAL

STH 312 & USH 12/TEXACO DR./TRUAX LN.

EAU CLAIRE COUNTY

SIGNAL NO. S 18-0560

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED

DATE 5-13-94 — WILLARD H. JOCHIMSEN, REGION TRAFFIC ENGINEER

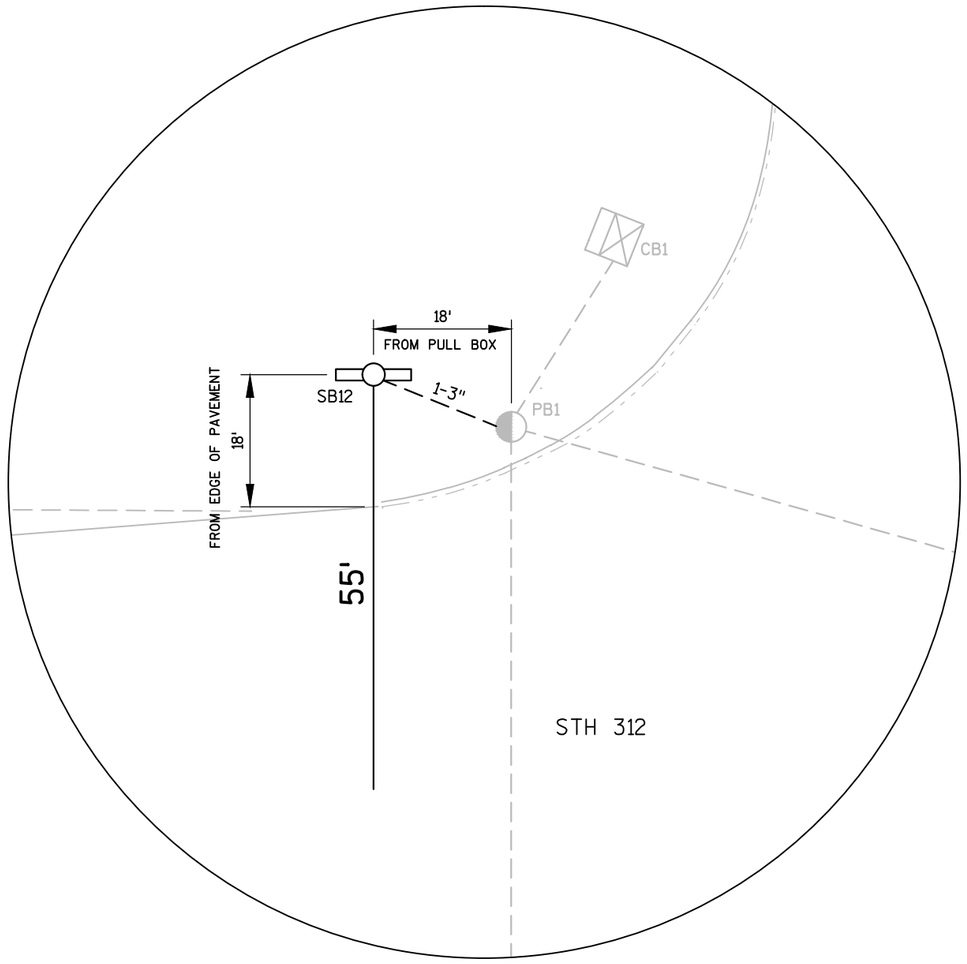
APPROVED

DATE 5-27-94 — R.J. MOE, STATE TRAFFIC ENGINEER

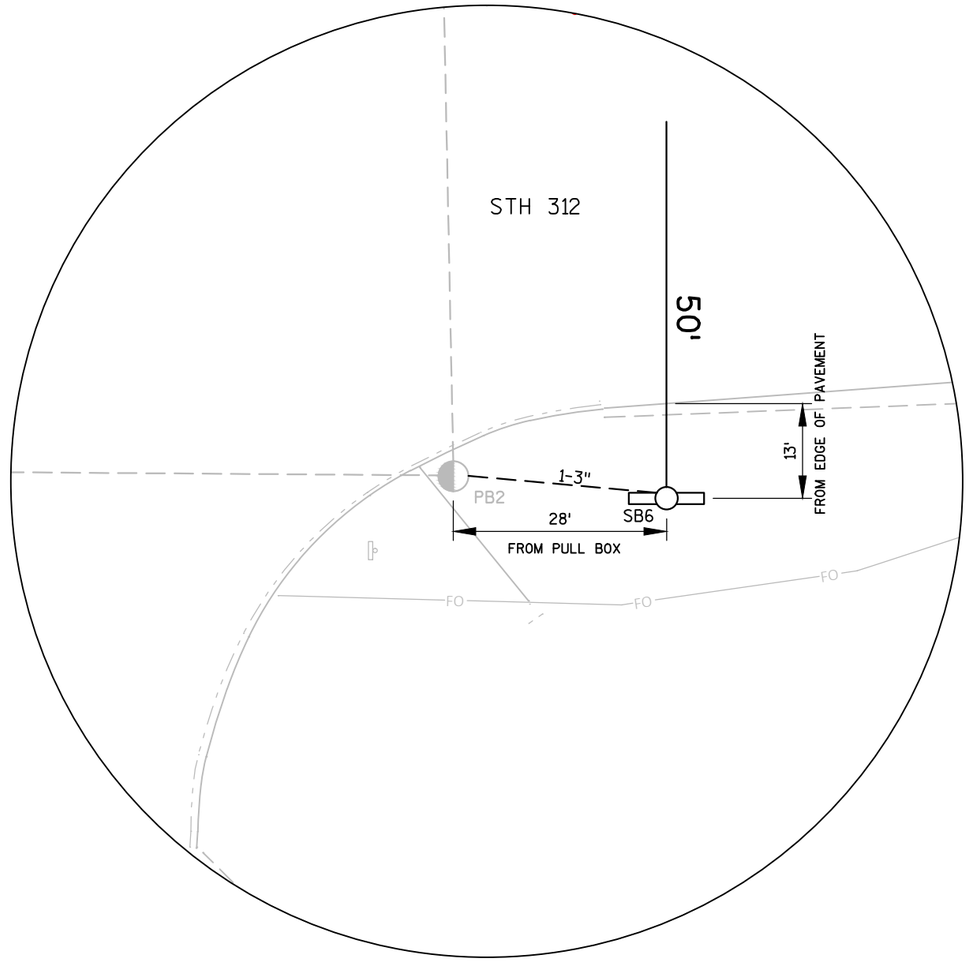
REVISED BY: AECOM

PROJECT NO: 3700-50-29	HWY: STH 312 & USH 12/TEXACO DR./TRUAX LN.	COUNTY: EAU CLAIRE	TRAFFIC SIGNAL PLAN	SCALE, FEET 0 20 40	SHEET E

2



DETAIL 'A'



DETAIL 'B'

TRAFFIC CONTROL SIGNAL

STH 312 & USH 12/TEXACO DR./TRUAX LN.

EAU CLAIRE COUNTY

SIGNAL NO. S 18-0560

PAGE 2 OF 2

REVISED BY: AECOM

PROJECT NO: 3700-50-29	HWY: STH 312 & USH 12/TEXACO DR./TRUAX LN.	COUNTY: EAU CLAIRE	TRAFFIC SIGNAL PLAN	SHEET E

FILE NAME : P:\60546811_EAU CLAIRE ITS DESIGN WO 8\900_WORK\910_CAD\05-MODELS\CONSTRUCTION DETAILS\EAU CLAIRE ITS 2017 TOPO-EX.DWG PLOT DATE : 8/1/2018 4:15 PM PLOT BY : SALOMONSEN, DEREK PLOT NAME :

PROJECT ID:	3700-50-29
INTERSECTION:	STH 312 & TEXACO DR

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

DATE: Mar-18

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

EQUIPMENT GROUNDING CONDUCTORS 10 AWG GRN XLP	
FROM	TO
SB5	SB6
SB6	SB7
SB11	SB12
SB12	CB1

EQUIPMENT GROUNDING CONDUCTORS 10 AWG GRN XLP	
FROM	TO
PB1	SB12
PB2	SB6

EMERGENCY VEHICLE PREEMPTION		
HEAD	FROM	TO
A	CB1	SB12
B	CB1	SB6
C	CB1	SB8
D	CB1	SB2

NOTES:
1. USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
2. ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
3. AT THE SIGNAL BASES, CONNECT ONE TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.
4. REESTABLISH THE EXISTING EQUIPMENT GROUNDING CONDUCTOR FROM BASE TO BASE FOR ALL SIGNAL BASES, IN ACCORDANCE WITH THE WISCONSIN ELECTRIC CODE.

STH 312 & USH12/TEXACO DR./TRUAX LN.
EAU CLAIRE COUNTY

CONTROLLER TYPE: ASC/3 TSC1

SIGNAL NO: S 18-0560 CABINET TYPE: TSC1

DATE: MAY 2018 PAGE NO. 1 OF 1

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, PEDESTAL MOUNT
- XX SIGNAL HEAD, MAST-ARM MOUNT
- LUMINAIRE, 150W HPS
- LUMINAIRE, 250W HPS
- LOOP DETECTOR WITH JUNCTION BOX (8X8X8)
- PULL BOX, 24" X 36"
- EMERGENCY VEHICLE DETECTOR
- S STOP SIGN
- JUNCTION BOX, 8x8x8-INCH

SPEED LIMIT 25

MILL RUN ROAD

THE R/W IS OUTSIDE THE SHEET LIMITS IN THIS QUADRANT

THE R/W IS OUTSIDE THE SHEET LIMITS IN THIS QUADRANT

SPEED LIMIT 50

1-2" SIGNAL INTERCONNECT CONDUIT TO KANE RD.

LOOP BACK +/- 220'

LOOP BACK +/- 420'

2-3" 3-2" 2-1" STUBS

1-2" SIGNAL INTERCONNECT CONDUIT TO CTH EE

USH 12/STH 312

Ø1 Ø2 Ø4 Ø5 Ø6 Ø8

SB1 SB2 SB3 SB4 SB5 SB6 SB7 SB8 SB9 SB10 SB11 SB12 SB13 SB14

SAW CUT LOOP

SPEED LIMIT 50

SPEED LIMIT 25

R/W

CONSTRUCTION NOTES:

1. RIGHT OF WAY IS APPROXIMATED FROM COUNTY ONLINE MAPPING.

TRAFFIC CONTROL SIGNAL
USH 12/STH 312 & MILL RUN RD.
EAU CLAIRE COUNTY

SIGNAL NO. S 18-0965

REVISED BY: AECOM

PAGE 1 OF 1

PROJECT NO: 3700-50-29	HWY: USH 12/STH 312 & MILL RUN RD.	COUNTY: EAU CLAIRE	TRAFFIC SIGNAL REMOVAL PLAN	SCALE, FEET 0 20 40	SHEET	E

FILE NAME : P:\60546811_Eau Claire ITS Design WO 8\900_Work\910_CAD\05-MODELS\Removals\024002_cd.dwg

PLOT DATE : 7/25/2018 2:26 PM

WISDOT/CADD SHEET 42

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, PEDESTAL MOUNT
- SIGNAL HEAD, MAST-ARM MOUNT
- MONOTUBE BASE, POLE, 35'-55' ARM
- LUMINAIRE, 150W HPS
- LUMINAIRE, 250W HPS
- LOOP DETECTOR WITH JUNCTION BOX (8X8X8)
- PULL BOX, 24" X 36"
- EMERGENCY VEHICLE DETECTOR
- STOP SIGN
- JUNCTION BOX, 8x8x8-INCH

SIGNAL HEAD WITH REFLECTIVE BACKPLATES

MONOTUBE STRUCTURE NUMBER
SB4 = S-18-0965-02
SB11 = S-18-0965-01

THE R/W IS OUTSIDE THE SHEET LIMITS IN THIS QUADRANT

SPEED LIMIT 25

SPEED LIMIT 50

MILL RUN ROAD

USH 12/STH 312

1-2" SIGNAL INTERCONNECT CONDUIT TO CTH EE

1-2" SIGNAL INTERCONNECT CONDUIT TO KANE RD.

LOOP BACK +/- 220'

LOOP BACK +/- 420'

2-3" 3-2" 2-1" STUBS

SAW CUT LOOP

DETAIL "A"

DETAIL "B"

Ø1 Ø2 Ø4 Ø5 Ø6 Ø8

SB1 SB2 SB3 SB4 SB5 SB6 SB7 SB8 SB9 SB10 SB11 SB12 SB13 SB14 PB1 PB2 CB1

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS BEFORE PLACING CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL FIELD UNIT AT (715) 577-5399.
2. THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
4. RIGHT OF WAY IS APPROXIMATED FROM COUNTY ONLINE MAPPING.
5. PROTECT OPEN EXCAVATIONS WITH SAFETY FENCE WHENEVER WORK ACTIVITIES ARE NOT BEING ACTIVELY PERFORMED.

Base Plan No.	Rev. No.	REVISIONS	Cont. Type
		REPLACE TROMBONE ARM POLES WITH MONOTUBE POLES AT SB4 AND SB11, CHANGE HEADS 2, 5, 8, & 11 TO 4-SECTION FYA, AND ADD HEADS 21 & 22. CHANGED TO MMU ON 2-2-15. CHANGED CONTROLLER ON 11-22-13. ADDED FIBER OPTIC COMMUNICATION ON 5-13-05.	
		APPROVALS	
		REGION: Date / By — CENTRAL OFFICE: Date / By	
1	1		ASC/3 TS1

TRAFFIC CONTROL SIGNAL

USH 12/STH 312 & MILL RUN RD.

EAU CLAIRE COUNTY

SIGNAL NO. S 18-0965

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED

DATE 3-23-04 — CREGORY P. HELGESON, REGION TRAFFIC ENGINEER

APPROVED

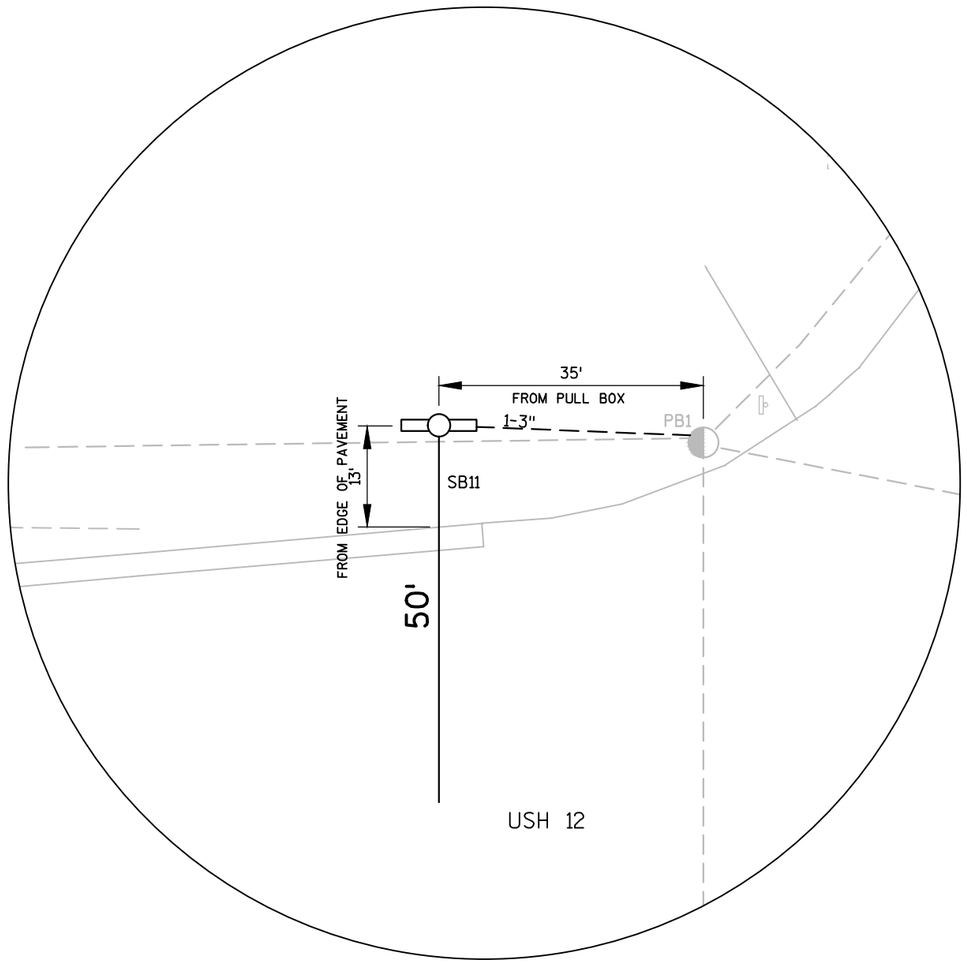
DATE 3-26-04 — WILLIAM C. GILDING, STATE TRAFFIC ENGINEER

PAGE 1 OF 2

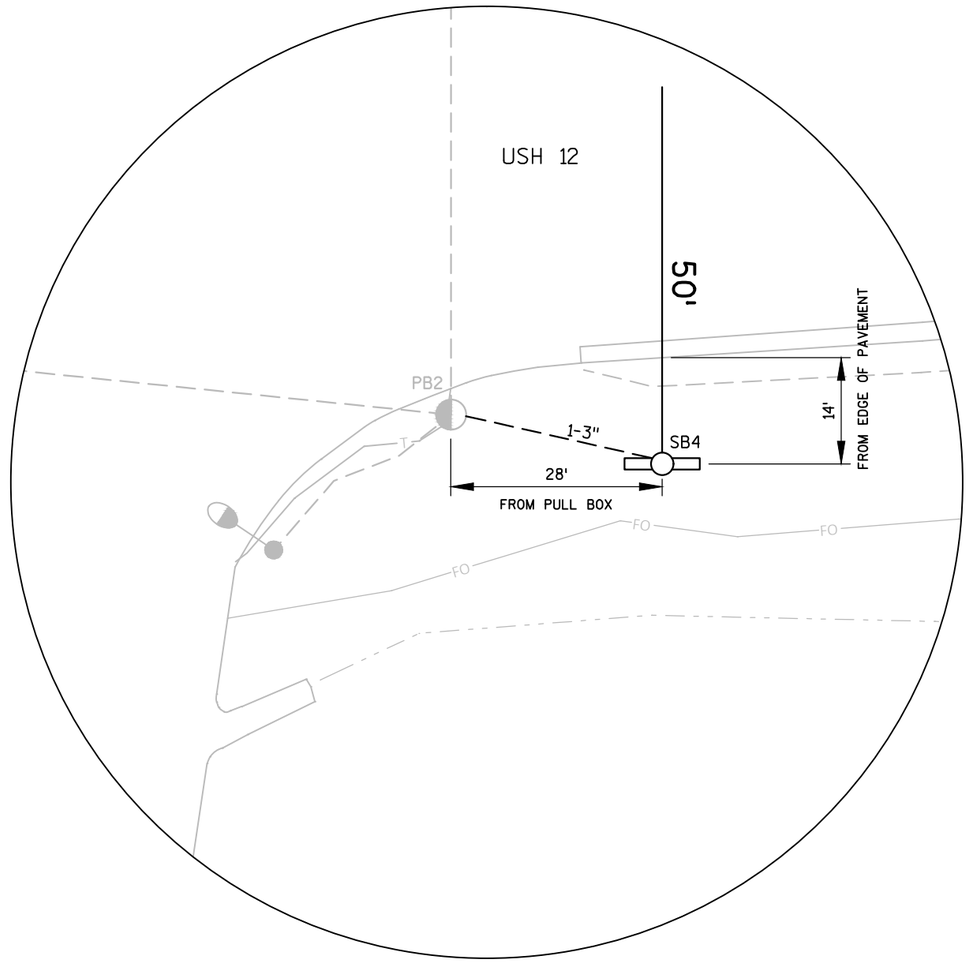
REVISED BY: AECOM

PROJECT NO: 3700-50-29	HWY: USH 12/STH 312 & MILL RUN RD.	COUNTY: EAU CLAIRE	TRAFFIC SIGNAL PLAN	SCALE, FEET 0 20 40	SHEET E

2



DETAIL 'A'



DETAIL 'B'

TRAFFIC CONTROL SIGNAL
USH 12/STH 312 & MILL RUN RD.
EAU CLAIRE COUNTY
SIGNAL NO. S 18-0965

PAGE 2 OF 2
REVISED BY: AECOM

PROJECT NO: 3700-50-29	HWY: USH 12/STH 312 & MILL RUN RD.	COUNTY: EAU CLAIRE	TRAFFIC SIGNAL PLAN	SHEET E

FILE NAME : P:\60546811_EAU CLAIRE ITS DESIGN WO 8\900_WORK\910_CAD\05-MODELS\CONSTRUCTION DETAILS\EAU CLAIRE ITS 2017 TOPO-EX.DWG PLOT DATE : 8/1/2018 4:15 PM PLOT BY : SALOMONSEN, DEREK PLOT NAME :
WISDOT/CADDS SHEET 42

PROJECT ID:	3700-50-29
INTERSECTION:	STH 312 & MILL RUN RD

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

DATE: Mar-18

CB1 TO	AWG 14 # OF COND.	HEAD NO.	SIGNAL INDICATION WIRE COLOR									PED BUTTON	OTHER
			RED	YELLOW	GREEN	<RED>	<YELLOW>	<FLASH YEL>	<GREEN>	D/WALK	WALK		
SB1	EXISTING	7	EXISTING										
		21	EXISTING										
SB2	EXISTING	2	EXISTING										
		12	EXISTING										
SB3	EXISTING	11	EXISTING										
SB4	5	3	RED	ORG	GRN								
		4	RED	ORG	GRN								
SB5	EXISTING	13	EXISTING										
SB6	EXISTING	16	EXISTING										
		18	EXISTING										
SB7	EXISTING	19	EXISTING										
SB8	EXISTING	1	EXISTING										
		22	EXISTING										
SB9	EXISTING	6	EXISTING										
		8	EXISTING										
SB10	EXISTING	5	EXISTING										
SB11	5	9	RED	ORG	GRN								
		10	RED	ORG	GRN								
SB12	EXISTING	17	EXISTING										
SB13	EXISTING	14	EXISTING										
		20	EXISTING										
SB14	EXISTING	15	EXISTING										

EQUIPMENT GROUNDING CONDUCTORS 10 AWG GRN XLP	
FROM	TO
SB3	SB4
SB4	SB5
SB10	SB11
SB11	SB12

EQUIPMENT GROUNDING CONDUCTORS 10 AWG GRN XLP	
FROM	TO
PB1	SB11
PB2	SB4

EMERGENCY VEHICLE PREEMPTION		
HEAD	FROM	TO
A	CB1	SB11
B	CB1	SB4

NOTES:
1. USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
2. ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
3. AT THE SIGNAL BASES, CONNECT ONE TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.
4. REESTABLISH THE EXISTING EQUIPMENT GROUNDING CONDUCTOR FROM BASE TO BASE FOR ALL SIGNAL BASES, IN ACCORDANCE WITH THE WISCONSIN ELECTRIC CODE.

USH 12/STH 312 & MILL RUN RD.
EAU CLAIRE COUNTY

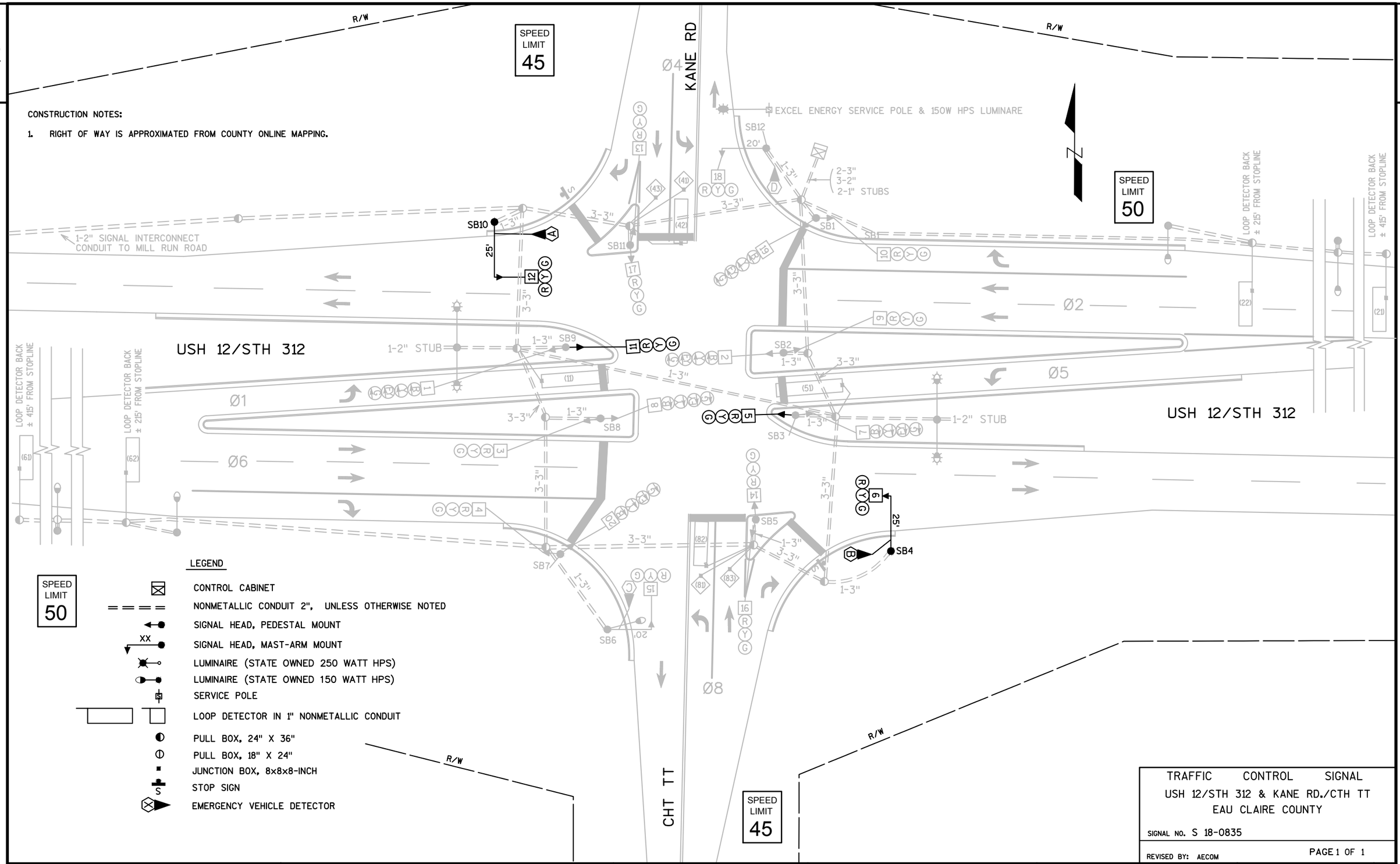
CONTROLLER TYPE: ASC/3 TS1

SIGNAL NO: S 18-0965 CABINET TYPE: TS1

DATE: MAY 2018 PAGE NO. 1 OF 1

CONSTRUCTION NOTES:

1. RIGHT OF WAY IS APPROXIMATED FROM COUNTY ONLINE MAPPING.



TRAFFIC CONTROL SIGNAL
USH 12/STH 312 & KANE RD./CTH TT
EAU CLAIRE COUNTY

SIGNAL NO. S 18-0835

REVISED BY: AECOM

PAGE 1 OF 1

PROJECT NO: 3700-50-29	HWY: USH 12/STH 312 & KANE RD./CTH TT	COUNTY: EAU CLAIRE	TRAFFIC SIGNAL REMOVAL PLAN	SCALE, FEET 0 20 40	SHEET 33	E

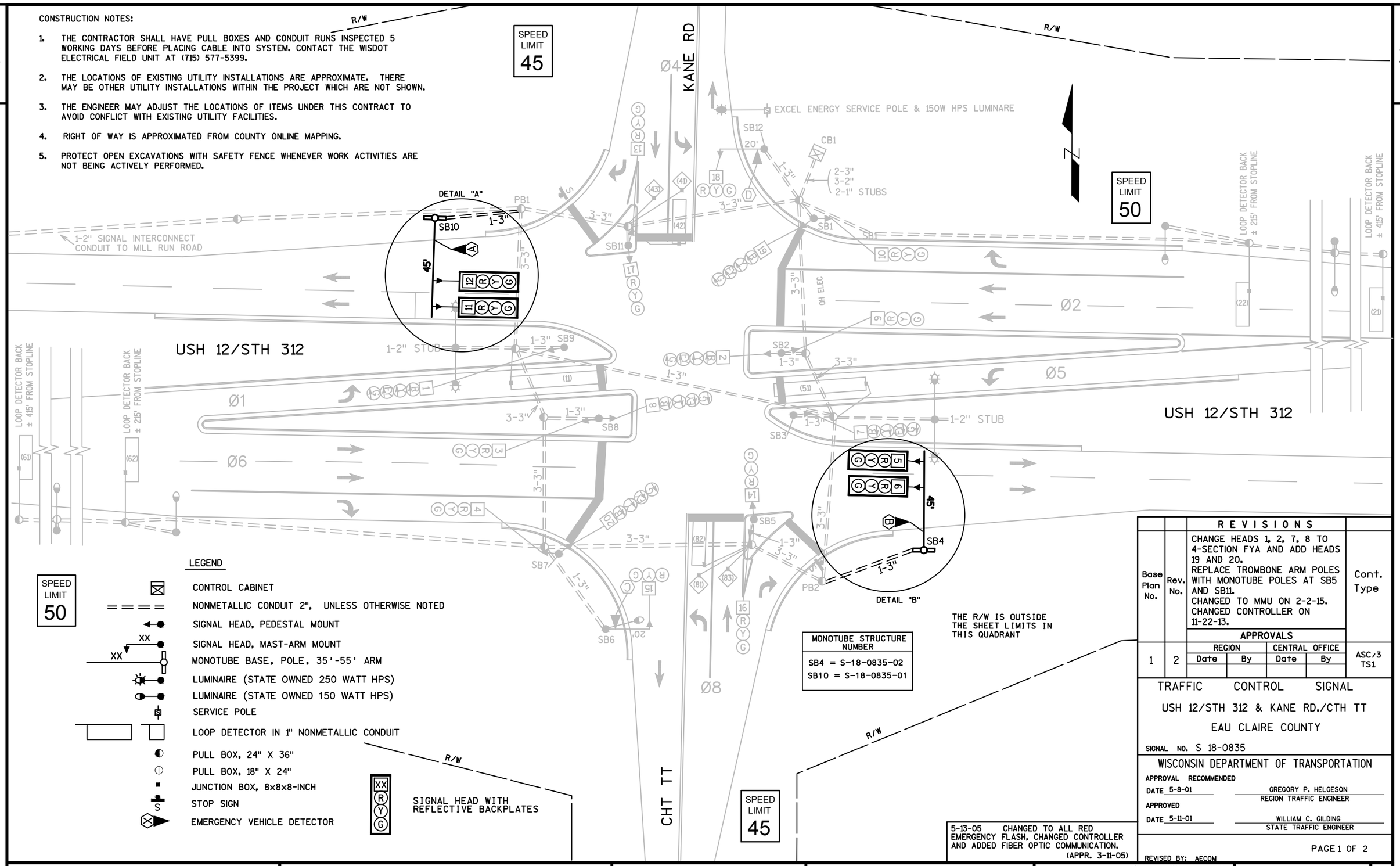
FILE NAME : P:\60546811_Eau Claire ITS Design WO 8\900_Work\910_CAD\05-MODELS\Removals\024003_cd.dwg

PLOT DATE : 7/25/2018 2:29 PM

WISDOT/CADDS SHEET 42

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS BEFORE PLACING CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL FIELD UNIT AT (715) 577-5399.
2. THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
4. RIGHT OF WAY IS APPROXIMATED FROM COUNTY ONLINE MAPPING.
5. PROTECT OPEN EXCAVATIONS WITH SAFETY FENCE WHENEVER WORK ACTIVITIES ARE NOT BEING ACTIVELY PERFORMED.



LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, PEDESTAL MOUNT
- SIGNAL HEAD, MAST-ARM MOUNT
- MONOTUBE BASE, POLE, 35'-55' ARM
- LUMINAIRE (STATE OWNED 250 WATT HPS)
- LUMINAIRE (STATE OWNED 150 WATT HPS)
- SERVICE POLE
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- PULL BOX, 24" X 36"
- PULL BOX, 18" X 24"
- JUNCTION BOX, 8x8x8-INCH
- STOP SIGN
- EMERGENCY VEHICLE DETECTOR
- SIGNAL HEAD WITH REFLECTIVE BACKPLATES

MONOTUBE STRUCTURE NUMBER
SB4 = S-18-0835-02
SB10 = S-18-0835-01

REVISIONS				
Base Plan No.	Rev. No.	CHANGE HEADS 1, 2, 7, 8 TO 4-SECTION FYA AND ADD HEADS 19 AND 20. REPLACE TROMBONE ARM POLES WITH MONOTUBE POLES AT SB5 AND SB11. CHANGED TO MMU ON 2-2-15. CHANGED CONTROLLER ON 11-22-13.		Cont. Type
		APPROVALS		
		REGION: Date / By	CENTRAL OFFICE: Date / By	
1	2			ASC/3 TS1

5-13-05 CHANGED TO ALL RED EMERGENCY FLASH, CHANGED CONTROLLER AND ADDED FIBER OPTIC COMMUNICATION. (APPR. 3-11-05)

TRAFFIC CONTROL SIGNAL

USH 12/STH 312 & KANE RD./CTH TT

EAU CLAIRE COUNTY

SIGNAL NO. S 18-0835

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED

DATE 5-8-01 — GREGORY P. HELGESON, REGION TRAFFIC ENGINEER

APPROVED

DATE 5-11-01 — WILLIAM C. GILDING, STATE TRAFFIC ENGINEER

PAGE 1 OF 2

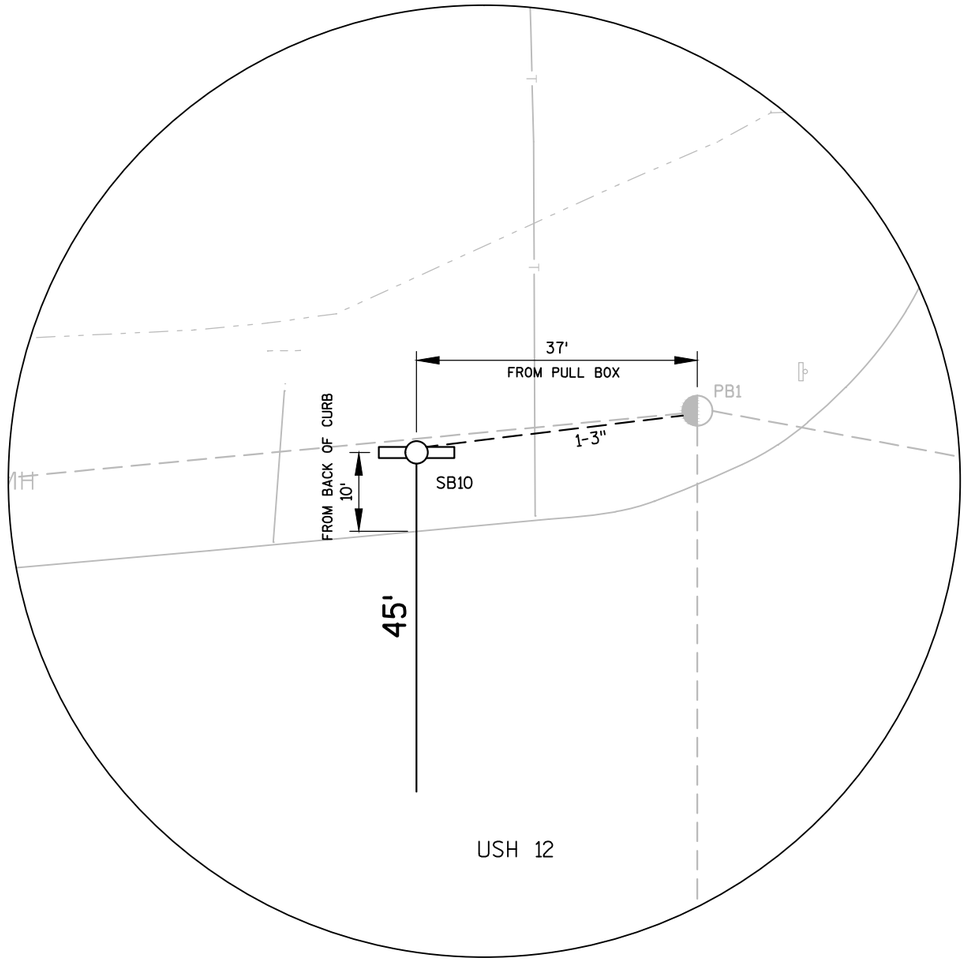
REVISED BY: AECOM

PROJECT NO: 3700-50-29	HWY: USH 12/STH 312 & KANE RD./CTH TT	COUNTY: EAU CLAIRE	TRAFFIC SIGNAL PLAN	SCALE, FEET 0 20 40	SHEET 34	E

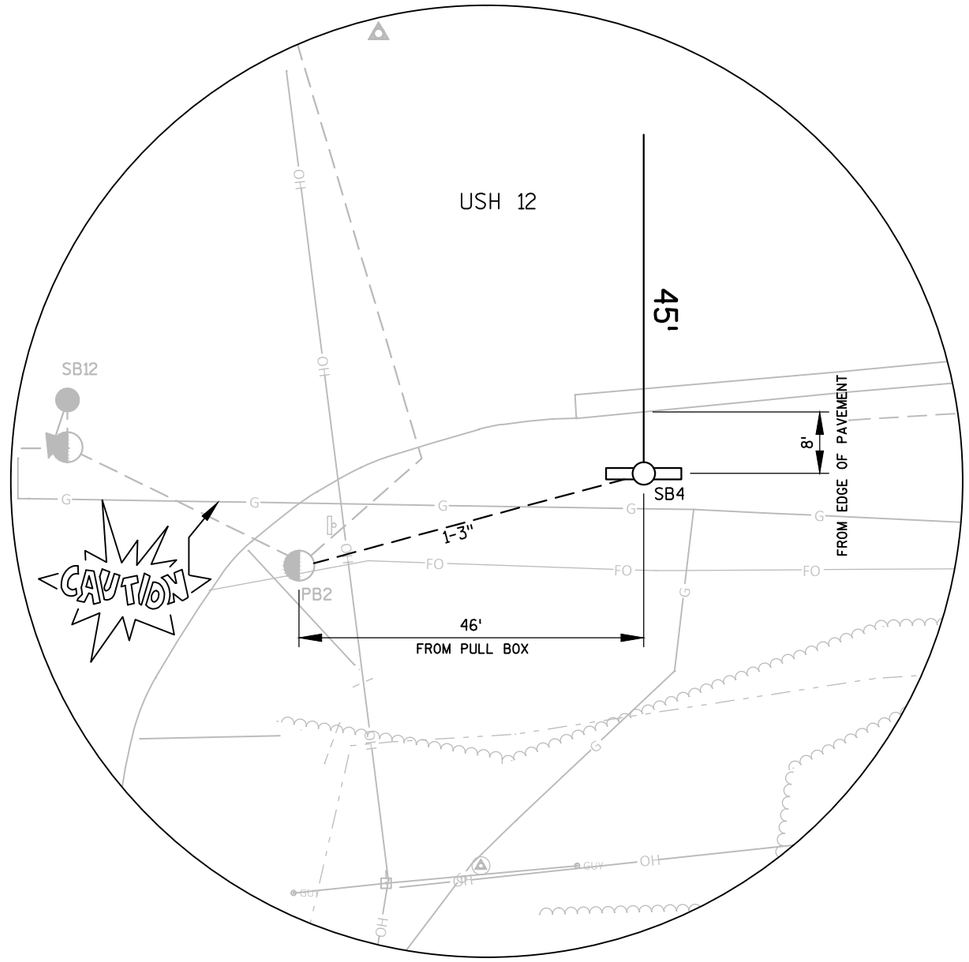
FILE NAME : P:\60546811_Eau Claire ITS Design WO 8\900_Work\910_CAD\05-MODELS\Proposed\024003_sp.dwg

PLOT DATE : 8/1/2018 2:33 PM

2



DETAIL 'A'



DETAIL 'B'

TRAFFIC CONTROL SIGNAL

USH 12/STH 312 & KANE RD./CTH TT

EAU CLAIRE COUNTY

SIGNAL NO. S 18-0835

PAGE 2 OF 2

REVISED BY: AECOM

PROJECT NO: 3700-50-29	HWY: USH 12/STH 312 & KANE RD./CTH TT	COUNTY: EAU CLAIRE	TRAFFIC SIGNAL PLAN	SHEET E

FILE NAME : P:\60546811_EAU CLAIRE ITS DESIGN WO 8\900_WORK\910_CAD\05-MODELS\CONSTRUCTION DETAILS\EAU CLAIRE ITS 2017 TOPO-EX.DWG PLOT DATE : 8/1/2018 4:16 PM PLOT BY : SALOMONSEN, DEREK PLOT NAME :

WISDOT/CADDS SHEET 42

PROJECT ID:	3700-50-29
INTERSECTION:	STH 312 & CTH TT

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

DATE: Mar-18

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

EQUIPMENT GROUNDING CONDUCTORS 10 AWG GRN XLP	
FROM	TO
SB3	SB4
SB4	SB5
SB9	SB10
SB10	SB11

EQUIPMENT GROUNDING CONDUCTORS 10 AWG GRN XLP	
FROM	TO
PB1	SB10
PB2	SB4

EMERGENCY VEHICLE PREEMPTION		
HEAD	FROM	TO
A	CB1	SB10
B	CB1	SB4

NOTES:
1. USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
2. ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
3. AT THE SIGNAL BASES, CONNECT ONE TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.
4. REESTABLISH THE EXISTING EQUIPMENT GROUNDING CONDUCTOR FROM BASE TO BASE FOR ALL SIGNAL BASES, IN ACCORDANCE WITH THE WISCONSIN ELECTRIC CODE.

USH 12/STH 312 & KANE RD./CTH TT
EAU CLAIRE COUNTY

CONTROLLER TYPE: ASC/3 TS1

SIGNAL NO: S 18-0835 CABINET TYPE: TS1

DATE: MAY 2018 PAGE NO. 1 OF 1

CONSTRUCTION NOTES:

1. RIGHT OF WAY IS APPROXIMATED FROM COUNTY ONLINE MAPPING.

LEGEND

- JUNCTION BOX, 8x8x8-INCH
- SIGNAL HEAD, PEDESTAL MOUNT
- CONTROL CABINET
- PULL BOX, STEEL, 24" X 36"
- PULL BOX, STEEL, 18" X 36"
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT
- LOOP DETECTOR
- LUMINAIRE, UTILITY, 200 WATTS (TYPE II, SEMI-CUTOFF), POLES, TYPE 6
- EMERGENCY VEHICLE DETECTOR
- STOP SIGN

RODEO DR.

BRAKKE DR.

USH 12

SPEED LIMIT 25

SPEED LIMIT 45

SPEED LIMIT 45

SPEED LIMIT 25

R/W

Ø1 Ø2 Ø3 Ø4 Ø5 Ø6

SB1 SB2 SB3 SB4 SB5 SB6 SB7 SB8 SB9 SB10 SB11 SB12

LOOP BACK ± 330'

LOOP BACK ± 130'

LOOPS BACK ± 130'

LOOP BACK ± 330'

1-2" SIGNAL INTERCONNECT CONDUIT TO I-94 S. RAMPS

1-2" SIGNAL INTERCONNECT CONDUIT TO CTH UU/BADLANDS RD.

TRAFFIC CONTROL SIGNAL
USH 12 & BRAKKE DR./RODEO DR.
ST. CROIX COUNTY

SIGNAL NO. S 55-0782

REVISED BY: AECOM

PAGE 1 OF 1

PROJECT NO: 3700-50-29	HWY: USH 12 & BRAKKE DR./RODEO DR.	COUNTY: ST. CROIX	TRAFFIC SIGNAL REMOVAL PLAN	SCALE, FEET 0 20 40	SHEET: 37	E

FILE NAME : P:\60546811_Eau Claire ITS Design WO 8\900_Work\910_CAD\05-MODELS\Removals\024004_cd.dwg

PLOT DATE : 7/25/2018 2:32 PM

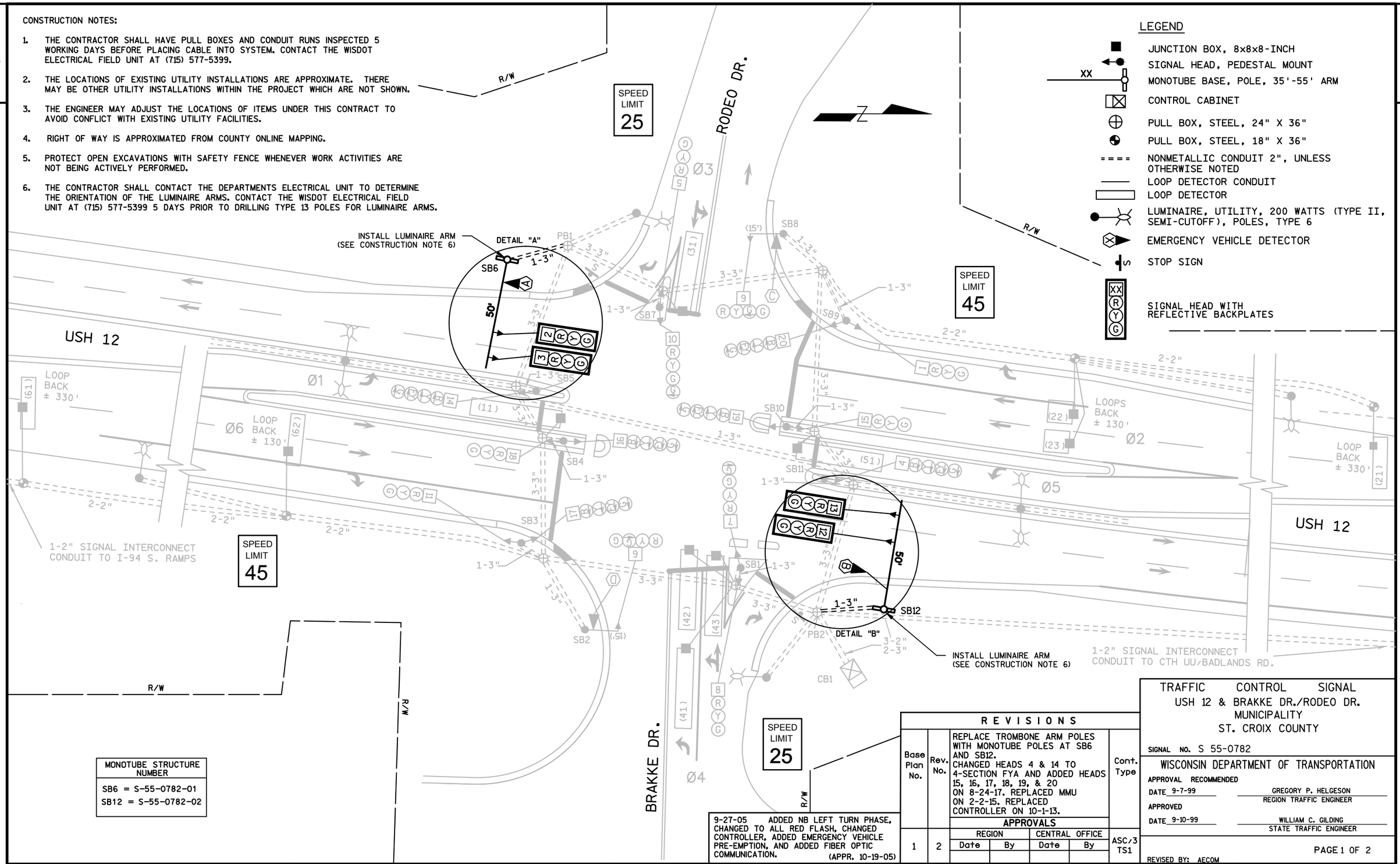
WISDOT/CADDS SHEET 42

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS BEFORE PLACING CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL FIELD UNIT AT (715) 577-5399.
2. THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
4. RIGHT OF WAY IS APPROXIMATED FROM COUNTY ONLINE MAPPING.
5. PROTECT OPEN EXCAVATIONS WITH SAFETY FENCE WHENEVER WORK ACTIVITIES ARE NOT BEING ACTIVELY PERFORMED.
6. THE CONTRACTOR SHALL CONTACT THE DEPARTMENTS ELECTRICAL UNIT TO DETERMINE THE ORIENTATION OF THE LUMINAIRE ARMS. CONTACT THE WISDOT ELECTRICAL FIELD UNIT AT (715) 577-5399 5 DAYS PRIOR TO DRILLING TYPE 13 POLES FOR LUMINAIRE ARMS.

LEGEND

- JUNCTION BOX, 8x8x8-INCH
- XX — SIGNAL HEAD, PEDESTAL MOUNT
- MONOTUBE BASE, POLE, 35'-55' ARM
- CONTROL CABINET
- PULL BOX, STEEL, 24" X 36"
- PULL BOX, STEEL, 18" X 36"
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT
- LOOP DETECTOR
- LUMINAIRE, UTILITY, 200 WATTS (TYPE II, SEMI-CUTOFF), POLES, TYPE 6
- EMERGENCY VEHICLE DETECTOR
- STOP SIGN
- XX R Y G — SIGNAL HEAD WITH REFLECTIVE BACKPLATES



MONOTUBE STRUCTURE NUMBER
SB6 = S-55-0782-01
SB12 = S-55-0782-02

9-27-05 ADDED NB LEFT TURN PHASE, CHANGED TO ALL RED FLASH, CHANGED CONTROLLER, ADDED EMERGENCY VEHICLE PRE-EMPTION, AND ADDED FIBER OPTIC COMMUNICATION. (APPR. 10-19-05)

REVISIONS

Base Plan No.	Rev. No.		Cont. Type
		REPLACE TROMBONE ARM POLES WITH MONOTUBE POLES AT SB6 AND SB12. CHANGED HEADS 4 & 14 TO 4-SECTION FYA AND ADDED HEADS 15, 16, 17, 18, 19, & 20 ON 8-24-17. REPLACED MMU ON 2-2-15. REPLACED CONTROLLER ON 10-1-13.	

APPROVALS

REGION		CENTRAL OFFICE		
Date	By	Date	By	
				ASC/3 TS1
1	2			

TRAFFIC CONTROL SIGNAL
USH 12 & BRAKKE DR./RODEO DR.
MUNICIPALITY
ST. CROIX COUNTY

SIGNAL NO. S 55-0782

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
DATE 9-7-99 — GREGORY P. HELGESON, REGION TRAFFIC ENGINEER

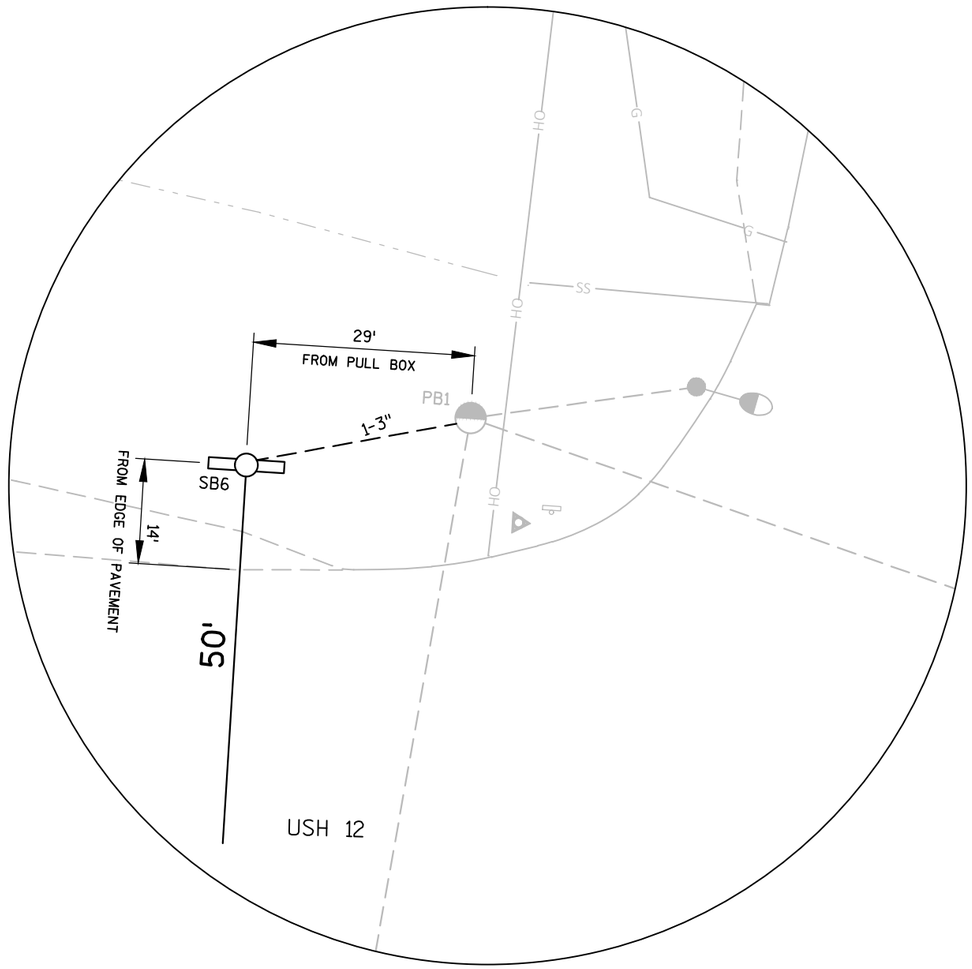
APPROVED
DATE 9-10-99 — WILLIAM C. GILDING, STATE TRAFFIC ENGINEER

PAGE 1 OF 2

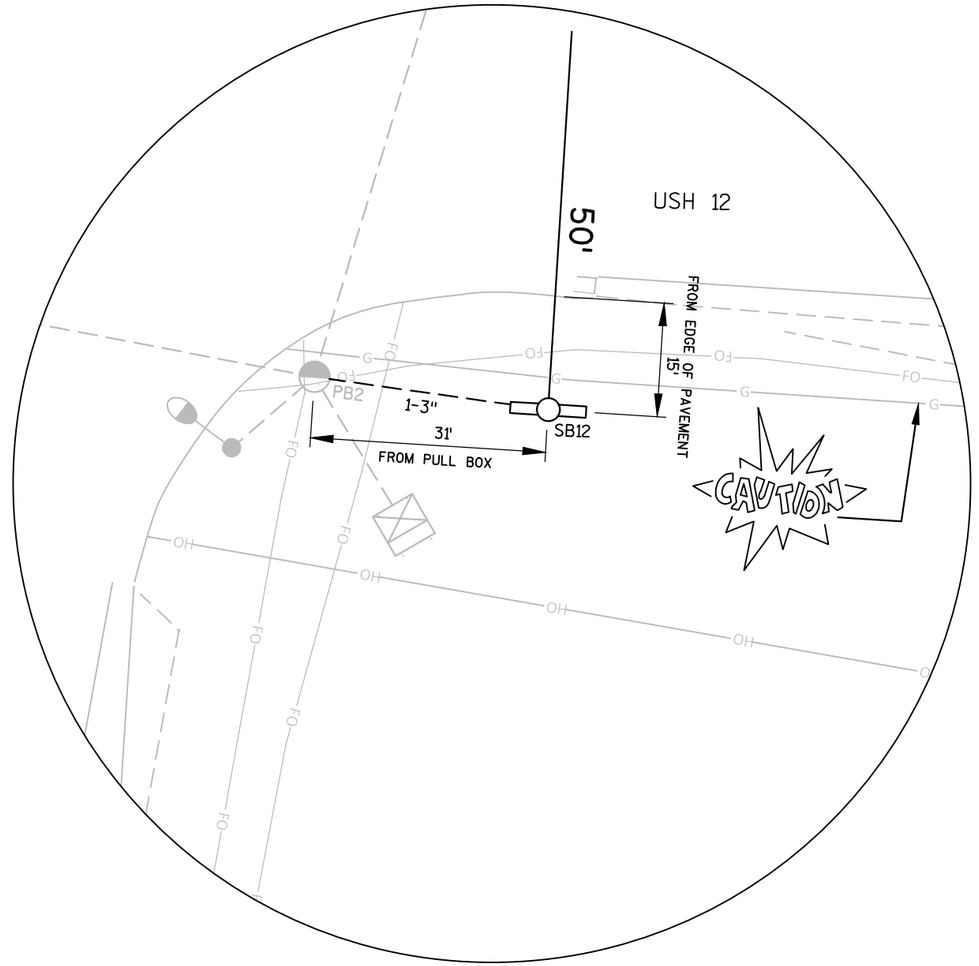
REVISED BY: AECOM

STATE PROJECT NUMBER: 3700-50-29	HWY: USH 12 & BRAKKE DR./RODEO DR.	COUNTY: ST. CROIX	TRAFFIC SIGNAL PLAN	SCALE, FEET 0 20 40	SHEET 38	E

2



DETAIL 'A'



DETAIL 'B'

TRAFFIC CONTROL SIGNAL
USH 12 & BRAKKE DR./RODEO DR.
ST. CROIX COUNTY
SIGNAL NO. S 55-0782

PAGE 2 OF 2
REVISED BY: AECOM

PROJECT NO: 3700-50-29	HWY: USH 12 & BRAKKE DR./RODEO DR.	COUNTY: ST. CROIX	TRAFFIC SIGNAL PLAN	SHEET 39	E

PROJECT ID:	3700-50-29
INTERSECTION:	USH 12 & BRAKKE DR

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

DATE: Mar-18

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

EQUIPMENT GROUNDING CONDUCTORS 10 AWG GRN XLP	
FROM	TO
SB5	SB6
SB6	SB7
SB11	SB12
SB12	CB1

EQUIPMENT GROUNDING CONDUCTORS 10 AWG GRN XLP	
FROM	TO
PB1	SB6
PB2	SB12

EMERGENCY VEHICLE PREEMPTION		
HEAD	FROM	TO
A	CB1	SB6
B	CB1	SB12

NOTES:
1. USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
2. ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
3. AT THE SIGNAL BASES, CONNECT ONE TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.
4. REESTABLISH THE EXISTING EQUIPMENT GROUNDING CONDUCTOR FROM BASE TO BASE FOR ALL SIGNAL BASES, IN ACCORDANCE WITH THE WISCONSIN ELECTRIC CODE.

USH 12 & BRAKKE DR./RODEO DR.
ST. CROIX COUNTY

CONTROLLER TYPE: ASC/3 TS1

SIGNAL NO: S 55-0782 CABINET TYPE: TS1

DATE: MAY 2018 PAGE NO. 1 OF 1

CONSTRUCTION NOTES:

1. RIGHT OF WAY IS APPROXIMATED FROM COUNTY ONLINE MAPPING.

NOTE: LOOPS 43 AND 83 NOT USED

SPEED LIMIT 45

SPEED LIMIT 50

SPEED LIMIT 50

SPEED LIMIT 45

CTH UU

USH 12

USH 12

BADLANDS RD.

R/W

R/W

R/W

Ø1 Ø2 Ø3 Ø4 Ø5 Ø6 Ø7 Ø8

25' LIGHT POLE

UNDERGROUND ELECTRICAL SERVICE FEED

(2) 3"
(3) 2"
(2) 1" STUBS

SB1 SB2 SB3 SB4 SB5 SB6 SB7 SB8 SB9 SB10 SB11 SB12

LOOP ± 200' BACK

LOOP ± 400' BACK

LOOP ± 400' BACK

LOOP ± 200' BACK

(1) 2" SIGNAL INTERCONNECT CONDUIT TO BRAKKE DRIVE

(1) 2" SIGNAL INTERCONNECT CONDUIT TO CTH "U"

LEGEND

- LOOP DETECTOR CONDUIT (1 In. NONMETALLIC).
- CONDUIT (2 In. NONMETALLIC, UNLESS OTHERWISE NOTED).
- SIGNAL HEAD, PEDESTAL MOUNT
- XX SIGNAL HEAD, MAST ARM MOUNT
- LUMINAIRE, STATE OWNED (150 WATT HPS)
- LOOP DETECTOR IN 1 In. NONMETALLIC CONDUIT
- TRAFFIC SIGNAL CONTROL CABINET
- PULL BOX, 24 In. X 36 In.
- PULL BOX, 12 In. X 24 In.
- STOP SIGN
- EMERGENCY VEHICLE DETECTOR

TRAFFIC CONTROL SIGNAL
USH 12 & CTH UU/BADLANDS ROAD
ST. CROIX COUNTY
SIGNAL NO. S 55-0848
REVISED BY: AECOM
PAGE 1 OF 1

PROJECT No: 3700-50-29	HWY: USH 12 & CTH UU/BADLANDS ROAD	COUNTY: ST. CROIX	TRAFFIC SIGNAL REMOVAL PLAN	SCALE, FEET 0 20 40	SHEET: E

FILE NAME : P:\60546811_Eau Claire ITS Design WO 8\900_Work\910_CAD\05-MODELS\Removals\024005_cd.dwg

PLOT DATE : 7/25/2018 2:35 PM

LEGEND

- LOOP DETECTOR CONDUIT (1 In. NONMETALLIC).
- CONDUIT (2 In. NONMETALLIC, UNLESS OTHERWISE NOTED).
- SIGNAL HEAD, PEDESTAL MOUNT
- XX SIGNAL HEAD, MAST ARM MOUNT
- LUMINAIRE, STATE OWNED (150 WATT HPS)
- LOOP DETECTOR IN 1 In. NONMETALLIC CONDUIT
- TRAFFIC SIGNAL CONTROL CABINET
- PULL BOX, 24 In. X 36 In.
- PULL BOX, 12 In. X 24 In.
- STOP SIGN
- EMERGENCY VEHICLE DETECTOR
- XX MONOTUBE BASE, POLE, 35'-55' ARM
- SIGNAL HEAD WITH REFLECTIVE BACKPLATES

SPEED LIMIT 45

MONOTUBE STRUCTURE NUMBER
SB4 = S-55-0848-02
SB10 = S-55-0848-01

NOTE: LOOPS 43 AND 83 NOT USED

SPEED LIMIT 50

SPEED LIMIT 45

USH 12

CTH UU

BADLANDS RD.

R/W

Ø1 Ø2 Ø3 Ø4 Ø5 Ø6 Ø7 Ø8

DETAIL "A"

DETAIL "B"

25' LIGHT POLE

UNDERGROUND ELECTRICAL SERVICE FEED

(2) 3"
(3) 2"
(2) 1" STUBS

LOOP ± 200' BACK

LOOP ± 400' BACK

(1) 2" SIGNAL INTERCONNECT CONDUIT TO BRAKKE DRIVE

(1) 2" SIGNAL INTERCONNECT CONDUIT TO CTH "U"

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS BEFORE PLACING CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL FIELD UNIT AT (715) 577-5399.
2. THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
4. RIGHT OF WAY IS APPROXIMATED FROM COUNTY ONLINE MAPPING.
5. PROTECT OPEN EXCAVATIONS WITH SAFETY FENCE WHENEVER WORK ACTIVITIES ARE NOT BEING ACTIVELY PERFORMED.

7-19-17 REPLACED CABINET, ADDED HEADS 15, 16, 17, 18, 19, & 20, AND CHANGED HEADS 5 & 12 TO 4-SECTION FYA. REPLACED MMU ON 2-2-15. REPLACED CONTROLLER ON 10-1-13. (APPR. 3-3-17)

REVISIONS

Base Plan No.	Rev. No.	REPLACE TROMBONE ARM POLES WITH MONOTUBE POLES AT SB4 AND SB10.				Cont. Type
		APPROVALS				
		REGION		CENTRAL OFFICE		
		Date	By	Date	By	
2	2					ASC/3 TS2

TRAFFIC CONTROL SIGNAL

USH 12 & CTH UU/BADLANDS ROAD

ST. CROIX COUNTY

SIGNAL NO. S 55-0848

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
DATE 7-14-04 — GREGORY P. HELGESON, REGION TRAFFIC ENGINEER

APPROVED
DATE 7-16-04 — WILLIAM C. GILDING, STATE TRAFFIC ENGINEER

PAGE 1 OF 2

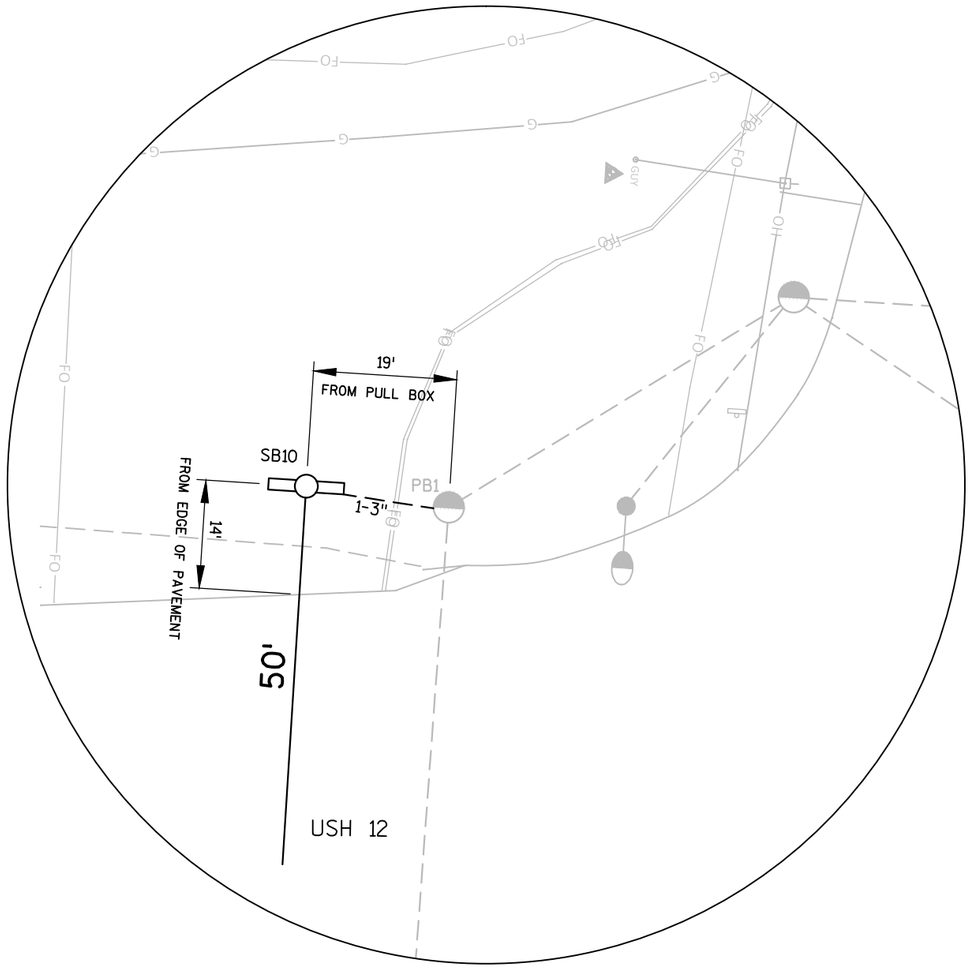
REVISED BY: AECOM

PROJECT NO: 3700-50-29	HWY: USH 12 & CTH UU/BADLANDS ROAD	COUNTY: ST. CROIX	TRAFFIC SIGNAL PLAN	SCALE, FEET 0 20 40	SHEET	E

FILE NAME : P:\60546811_Eau Claire ITS Design WO 8\900_Work\910_CAD\05-MODELS\Proposed\024005_sp.dwg

PLOT DATE : 8/1/2018 2:40 PM

2



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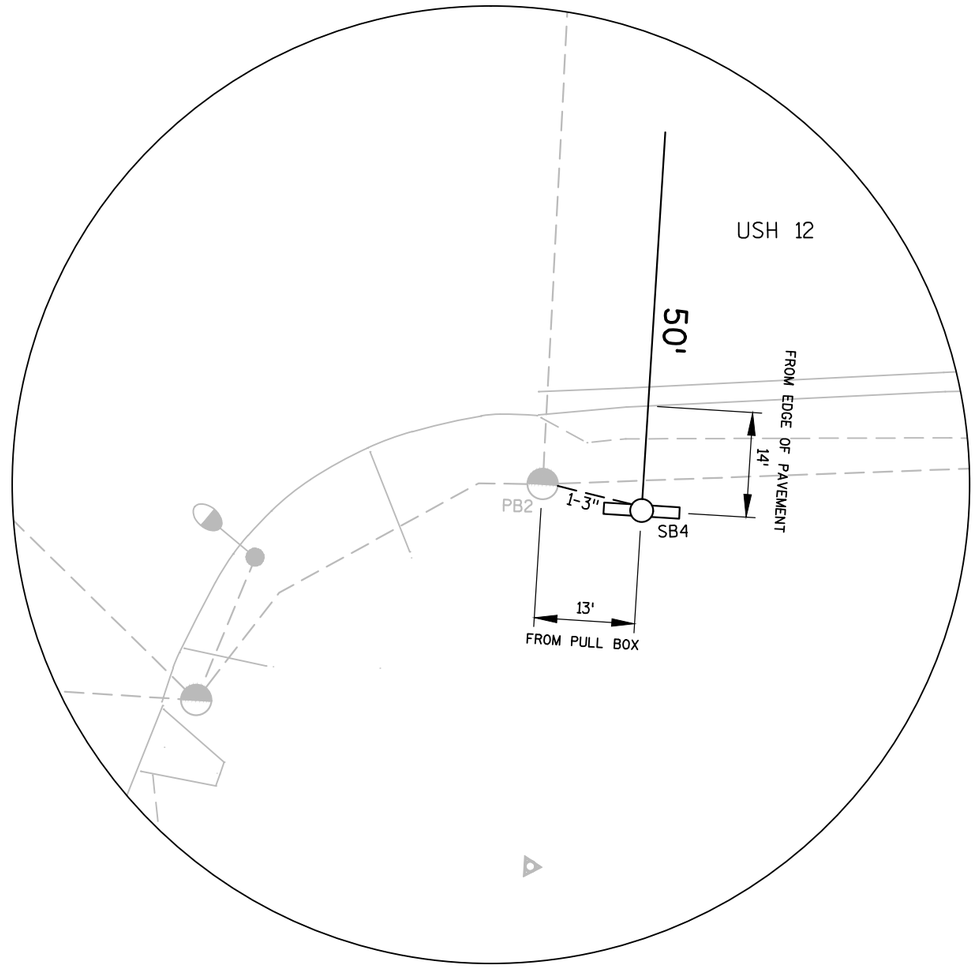


DETAIL 'B'

TRAFFIC CONTROL SIGNAL
USH 12 & CTH UU/BADLANDS ROAD
ST. CROIX COUNTY
SIGNAL NO. S 55-0848

PAGE 1 OF 1

REVISED BY: AECOM

PROJECT NO: 3700-50-29	HWY: USH 12 & CTH UU/BADLANDS ROAD	COUNTY: ST. CROIX	TRAFFIC SIGNAL PLAN	SHEET 43	E

PROJECT ID:	3700-50-29
INTERSECTION:	USH 12 & CTH UU

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

DATE: Jul-18

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

EQUIPMENT GROUNDING CONDUCTORS 10 AWG GRN XLP	
FROM	TO
SB3	SB4
SB4	SB5
SB9	SB10
SB10	SB11

EMERGENCY VEHICLE PREEMPTION		
HEAD	FROM	TO
A	CB1	SB10
B	CB1	SB4

NOTES:
1. USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
2. ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.

NOTES:
1. USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
2. ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
3. AT THE SIGNAL BASES, CONNECT ONE TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.
4. REESTABLISH THE EXISTING EQUIPMENT GROUNDING CONDUCTOR FROM BASE TO BASE FOR ALL SIGNAL BASES, IN ACCORDANCE WITH THE WISCONSIN ELECTRIC CODE.

USH 12 & CTH UU/BADLANDS ROAD
ST. CROIX COUNTY

CONTROLLER TYPE: ASC/3 TS2

SIGNAL NO: S 55-0848 CABINET TYPE: TS2

DATE: MAY 2018 PAGE NO. 1 OF 1

2

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 3", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, PEDESTAL MOUNT
- (XX) SIGNAL HEAD, MAST-ARM MOUNT
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- PULL BOX, 12" X 24"
- PULL BOX, 24" X 42"
- PULL BOX, 24" X 36"
- 30"X30" BOXOUT
- LUMINAIRE, CITY OWNED
- UTILITY POWER POLE

NOTE: LOOP 45 NOT USED

LEGEND

- X SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- Y YELLOW ARROW
- FY FLASHING YELLOW ARROW
- G GREEN ARROW
- Y YIELD SIGN
- S STOP SIGN
- EVP DETECTOR

STH 64

STH 65

SPEED LIMIT 45

SPEED LIMIT 25

Ø1 Ø2 Ø3 Ø4 Ø5 Ø6 Ø7 Ø8

SB1 SB2 SB3 SB4 SB5 SB6 SB7 SB8 T-2 SB9 SB10 SB11 SB12 SB13 SB14

R/W

OH

LOOP BACK 200'

LOOP BACK 400'

1-2" SIGNAL INTERCONNECT CONDUIT TO CTH K

1-2" SIGNAL INTERCONNECT CONDUIT TO 140TH AVENUE

1-2" SIGNAL INTERCONNECT CONDUIT TO INDUSTRIAL BLVD.

CITY-OWNED LIGHTING CABINET

2-3" 3-2" 2-1" STUBS

DOT SIGNAL CABINET

THE R/W IS OUTSIDE THE SHEET LIMITS IN THIS QUADRANT

THE R/W IS OUTSIDE THE SHEET LIMITS IN THIS QUADRANT

NOTE: LOOP 85 NOT USED

CONSTRUCTION NOTES:

1. RIGHT OF WAY IS APPROXIMATED FROM COUNTY ONLINE MAPPING.
2. CONCRETE BASES REMAIN IN PLACE AT SB3 AND SB9.

9-8-09 CHANGED CONTROLLER TO EPAC 300 (APPR. 8-21-09)

TRAFFIC CONTROL SIGNAL
STH 64 & STH 65
ST. CROIX COUNTY

SIGNAL NO. S 55-1009

REVISED BY: AECOM

PAGE 1 OF 1

PROJECT NO: 3700-50-29	HWY: STH 64 AND STH 65	COUNTY: ST. CROIX	TRAFFIC SIGNAL REMOVAL PLAN	SCALE, FEET 0 20 40	SHEET: E

FILE NAME : P:\60546811_Eau Claire ITS Design WO 8\900_Work\910_CAD\05-MODELS\Removals\024006_cd.dwg

PLOT DATE : 7/25/2018 2:39 PM

WISDOT/CADDS

2

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 3", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, PEDESTAL MOUNT
- SIGNAL HEAD, MAST-ARM MOUNT
- MONOTUBE BASE, POLE, 35'-55' ARM
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- PULL BOX, 12" X 24"
- PULL BOX, 24" X 42"
- PULL BOX, 24" X 36"
- 30"X30" BOXOUT
- LUMINAIRE, CITY OWNED
- UTILITY POWER POLE

SIGNAL HEAD WITH REFLECTIVE BACKPLATES

NOTE: LOOP 45 NOT USED

MONOTUBE STRUCTURE NUMBER
SB6 = S-55-1009-04
SB12 = S-55-1009-02
SB15 = S-55-1009-01
SB16 = S-55-1009-03

SPEED LIMIT 45

LEGEND

- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- YIELD SIGN
- STOP SIGN
- EVP DETECTOR

STH 64

STH 65

R/W

DETAIL "A"

DETAIL "B"

DETAIL "C"

DETAIL "D"

SPEED LIMIT 45

SPEED LIMIT 25

LOOP BACK 400'

LOOP BACK 200'

1-2" SIGNAL INTERCONNECT CONDUIT TO CTH K

1-2" SIGNAL INTERCONNECT CONDUIT TO 140TH AVENUE

1-2" SIGNAL INTERCONNECT CONDUIT TO INDUSTRIAL BLVD.

THE R/W IS OUTSIDE THE SHEET LIMITS IN THIS QUADRANT

THE R/W IS OUTSIDE THE SHEET LIMITS IN THIS QUADRANT

CITY-OWNED LIGHTING CABINET

CB1

DOT SIGNAL CABINET

2-3" 3-2" 2-1" STUBS

NOTE: LOOP 85 NOT USED

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS BEFORE PLACING CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL FIELD UNIT AT (715) 577-5399.
2. THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
4. RIGHT OF WAY IS APPROXIMATED FROM COUNTY ONLINE MAPPING.
5. PROTECT OPEN EXCAVATIONS WITH SAFETY FENCE WHENEVER WORK ACTIVITIES ARE NOT BEING ACTIVELY PERFORMED.

9-8-09 CHANGED CONTROLLER TO EPAC 300 (APPR. 8-21-09)

REVISIONS			
Base Plan No.	Rev. No.	REPLACE TROMBONE ARM POLES WITH MONOTUBE POLES AT SB6 AND SB12. REPLACE TROMBONE ARM POLES WITH 15' STANDARD POLES AT SB3 AND SB9. INSTALL MONOTUBE POLES AT SB15 AND SB16. REPLACED CABINET ON 5-10-17. CHANGED HEADS 12 & 16 TO 4-SECTION FYA AND ADDED HEADS 21, 22, 23, 24, 25, & 26 ON 11-30-16. CHANGED HEADS 2, 4, 6, & 8 TO 4-SECTION FYA AND ADDED HEADS 17, 18, 19, & 20 ON 11-28-16. REPLACED CONTROLLER AND MMU ON 2-12-15.	Cont. Type
1	2	APPROVALS: REGION Date / By; CENTRAL OFFICE Date / By	ASC/3 TS2

TRAFFIC CONTROL SIGNAL
STH 64 AND STH 65

ST. CROIX COUNTY

SIGNAL NO. S 55-1009

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
DATE 6-28-06 — GREGORY P. HELGESON, REGION TRAFFIC ENGINEER

APPROVED
DATE 7-16-06 — BALU ANANTHANARAYANAN, STATE TRAFFIC ENGINEER

PAGE 1 OF 3

REVISED BY: AECOM

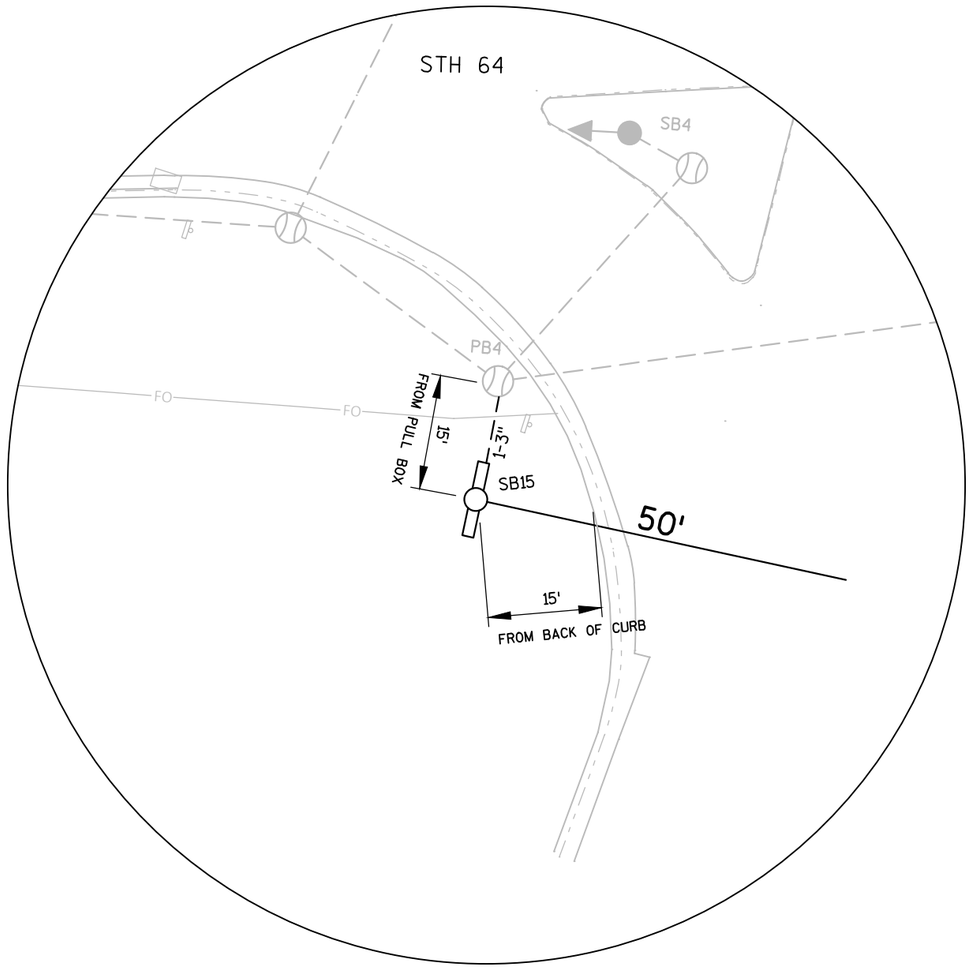
PROJECT NO: 3700-50-29	HWY: STH 64 AND STH 65	COUNTY: ST. CROIX	TRAFFIC SIGNAL PLAN	SCALE, FEET 0 20 40	SHEET E

FILE NAME : P:\60546811_Eau Claire ITS Design WO 8\900_Work\910_CAD\05-MODELS\Proposed\024006_sp.dwg

PLOT DATE : 8/1/2018 2:28 PM

WISDOT/CADD

2



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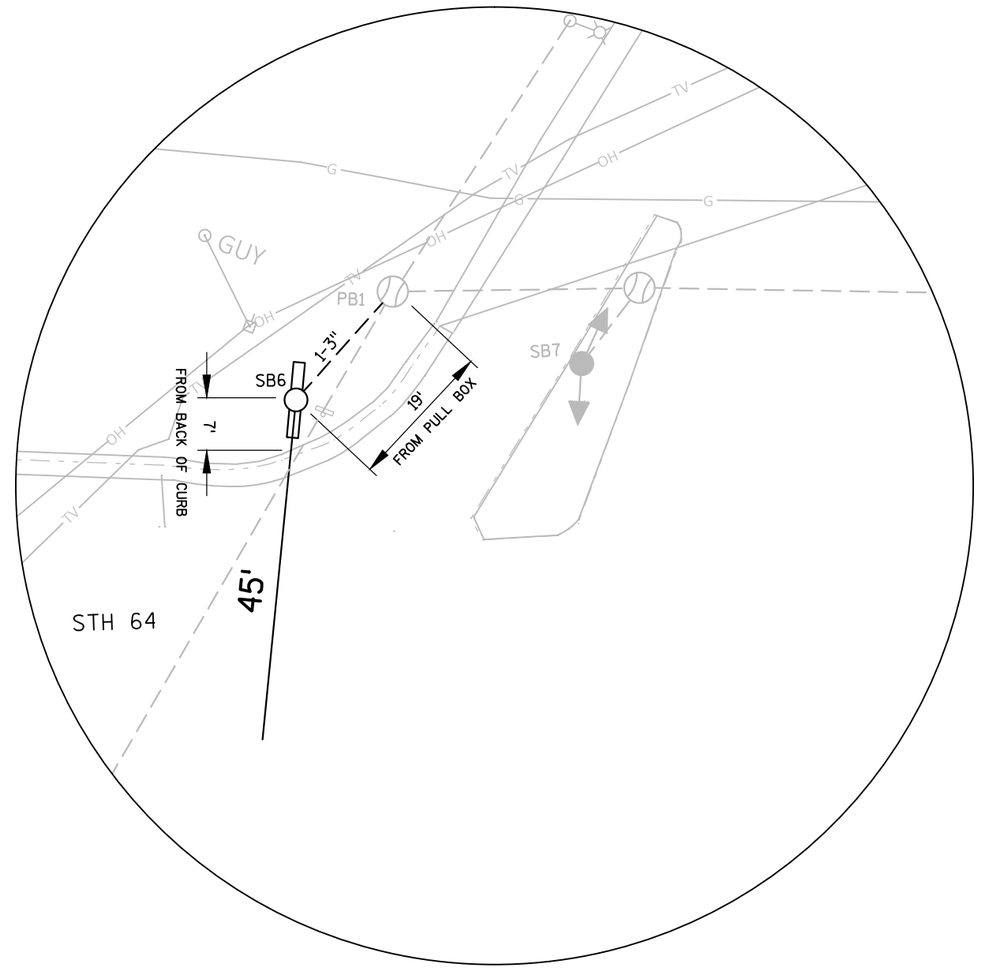


DETAIL 'B'

TRAFFIC CONTROL SIGNAL

STH 64 & STH 65

ST. CROIX COUNTY

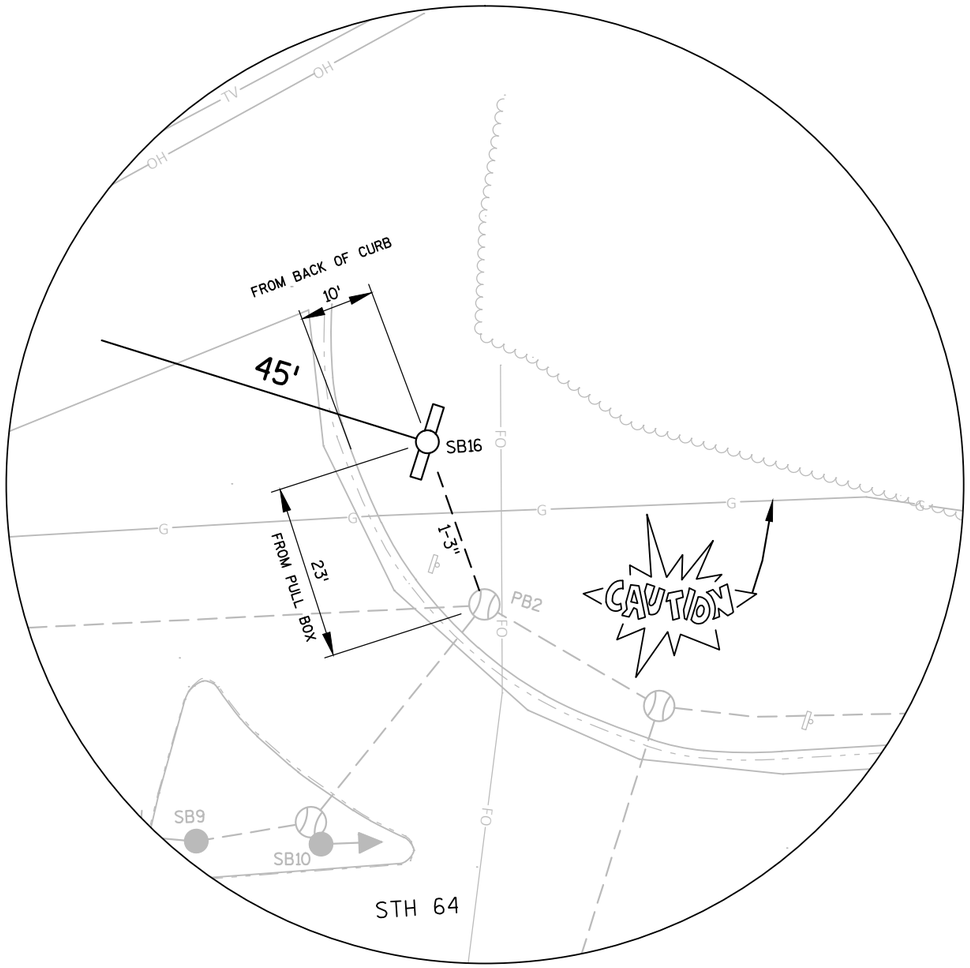
SIGNAL NO. S 55-1009

PAGE 2 OF 3

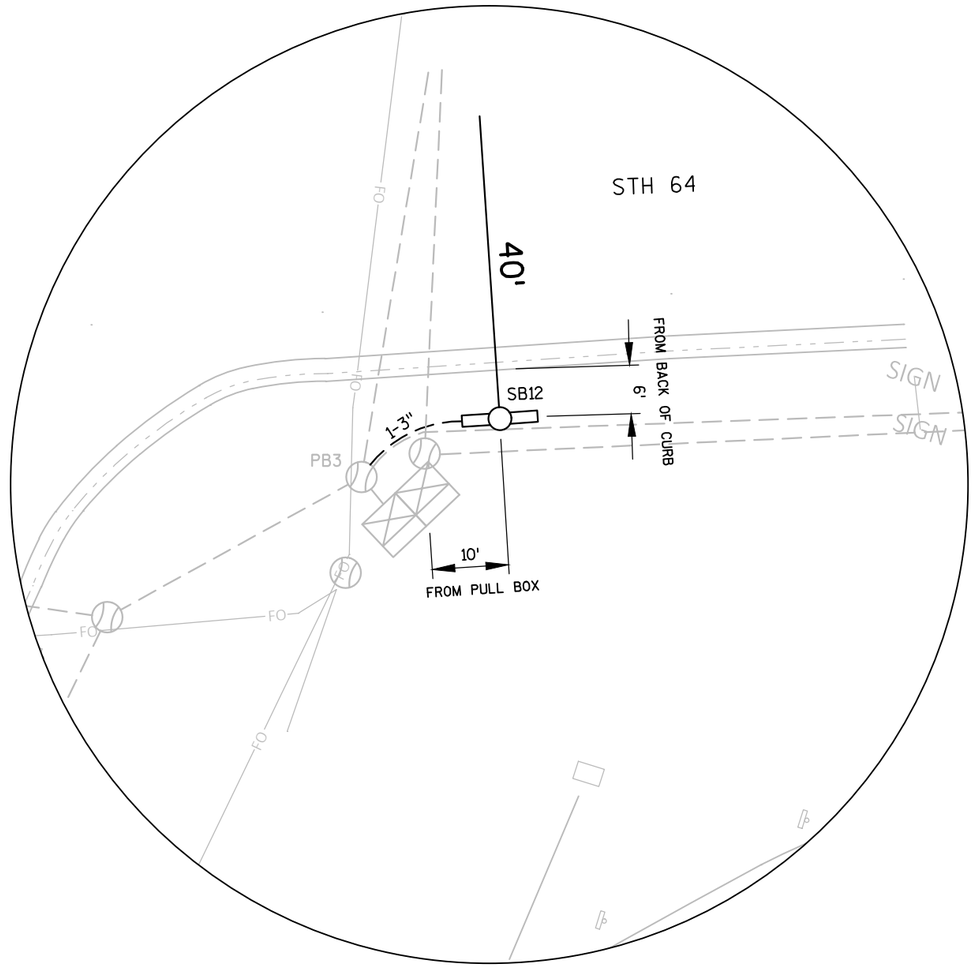
REVISED BY: AECOM

PROJECT NO: 3700-50-29	HWY: STH 64 AND STH 65	COUNTY: ST. CROIX	TRAFFIC SIGNAL PLAN	SHEET 47	E

2



DETAIL 'C'



DETAIL 'D'

TRAFFIC CONTROL SIGNAL

STH 64 & STH 65

ST. CROIX COUNTY

SIGNAL NO. S 55-1009

PAGE 3 OF 3

REVISED BY: AECOM

PROJECT NO: 3700-50-29	HWY: STH 64 & STH 65	COUNTY: ST. CROIX	TRAFFIC SIGNAL PLAN	SHEET 48	E

PROJECT ID:	3700-50-29
INTERSECTION:	STH 64 & STH 65

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

DATE: Apr-18

CB1 TO	AWG 14 # OF COND.	HEAD NO.	SIGNAL INDICATION WIRE COLOR									PED BUTTON	OTHER
			RED	YELLOW	GREEN	<RED>	<YELLOW>	<FLASH YEL>	<GREEN>	D/WALK	WALK		
SB1	EXISTING	9	EXISTING										
		25	EXISTING										
SB2	EXISTING	12	EXISTING										
SB3	EXISTING	20	EXISTING										
SB4	EXISTING	1	EXISTING										
SB5	EXISTING	4	EXISTING										
		6	EXISTING										
SB6	5	7	RED	ORG	GRN								
		19	RED	ORG	GRN								
SB7	EXISTING	13	EXISTING										
		22	EXISTING										
SB8	EXISTING	16	EXISTING										
SB9	EXISTING	18	EXISTING										
SB10	EXISTING	5	EXISTING										
SB11	EXISTING	2	EXISTING										
		8	EXISTING										
SB12	5	3	RED	ORG	GRN								
		17	RED	ORG	GRN								
SB13	EXISTING	21	EXISTING										
		26	EXISTING										
SB14	EXISTING	23	EXISTING										
		24	EXISTING										
SB15	5	14	RED	ORG	GRN								
		15	RED	ORG	GRN								
SB16	5	10	RED	ORG	GRN								
		11	RED	ORG	GRN								

EQUIPMENT GROUNDING CONDUCTORS 10 AWG GRN XLP	
FROM	TO
SB2	SB15
SB15	SB3
SB5	SB6
SB6	SB7
SB10	SB16
SB16	SB11
SB11	SB12
SB12	CB1

EQUIPMENT GROUNDING CONDUCTORS 10 AWG GRN XLP	
FROM	TO
PB1	SB6
PB3	SB12

EMERGENCY VEHICLE PREEMPTION		
HEAD	FROM	TO
A	CB1	SB6
B	CB1	SB12
C	CB1	SB3
D	CB1	SB9

NOTES:

1. USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
2. ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
3. AT THE SIGNAL BASES, CONNECT ONE TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.
4. REESTABLISH THE EXISTING EQUIPMENT GROUNDING CONDUCTOR FROM BASE TO BASE FOR ALL SIGNAL BASES, IN ACCORDANCE WITH THE WISCONSIN ELECTRIC CODE.

STH 64 & STH 65
ST. CROIX COUNTY

CONTROLLER TYPE: ASC/3 TS2

SIGNAL NO: S 55–1009 CABINET TYPE: TS2

DATE: MAY 2018 PAGE NO. 1 OF 1

TRAFFIC CONTROL GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

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

CONSIDER GEOMETRICS WHEN LOCATION SIGNS, ARROW BOARDS ANDS SIGN MESSAGE BOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS, SIGN MESSAGE BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM OF 1500 FEET IN FRONT OF THE DRUMS.

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

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

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

MAINTAIN ACCESS TO ALL CROSSWALKS AT ALL TIMES.

PROJECT 3700-50-29

SEE "TRAFFIC CONTROL - LEFT TURN LANE WITH NO TURN LANE MEDIAN" AND "TRAFFIC CONTROL - MEDIAN DIVIDED LEFT TURN LANE" DETAILS.

WHERE AN INTERSECTION OCCURS WITHIN THE REQUIRED LENGTHS THE LAYOUT WILL BEGIN AT THE INTERSECTION AND LENGTHS ADJUSTED PER ENGINEER.

SIDE ROAD TURN LANES USED FOR ACCESSING CLOSED ROADWAY SHALL BE CLOSED WITH TRAFFIC CONTROL DRUMS WITH TYPE C STEADY BURN LIGHTS DURING ACTIVE WORK HOURS.

PROVIDE MINIMUM OF 15' ROADWAY WIDTH DURING ALL LANE CLOSURES.

PROJECT 3700-50-38

SEE TRAFFIC CONTROL - KEITH ST. TO BUS. 53 DETAILS.

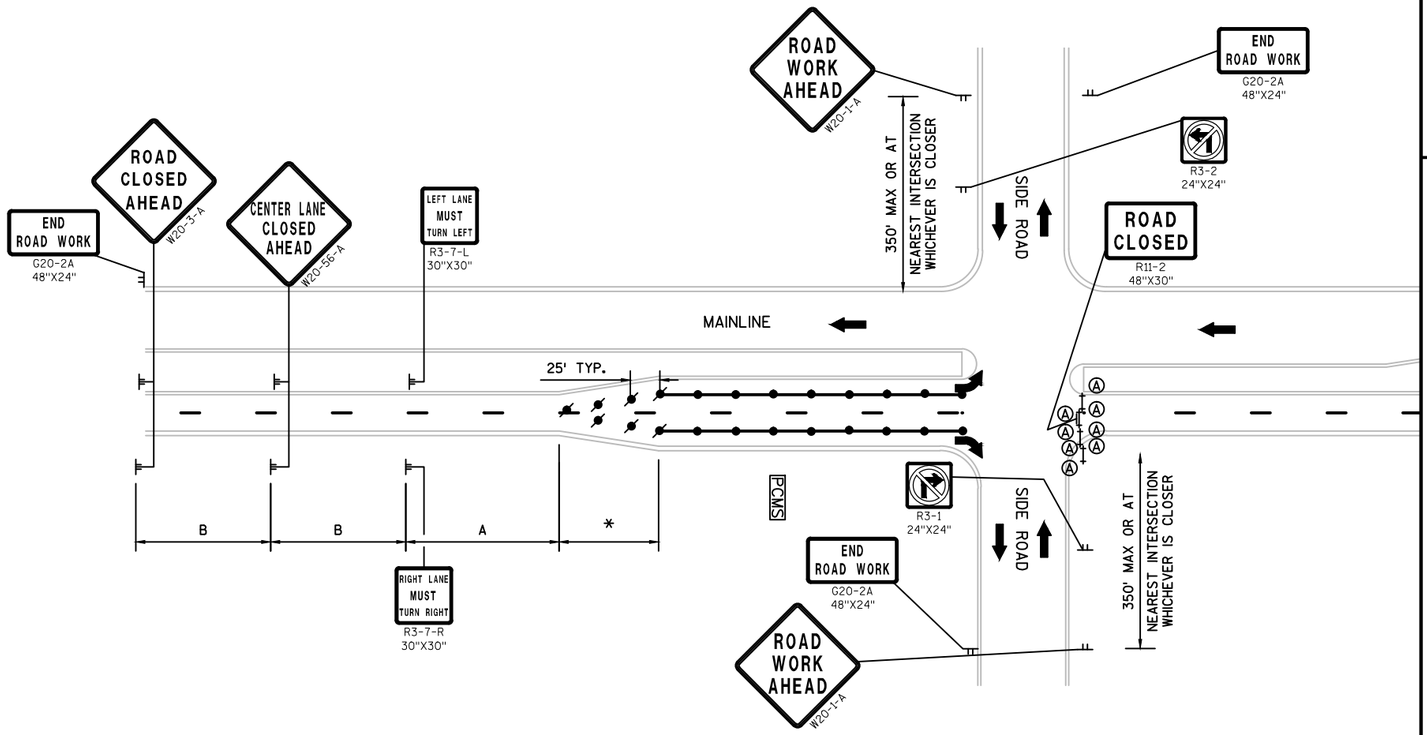
THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM DISTANCE OF 200 FEET (500 FEET DESIRABLE) TO EXISTING SIGNS.

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.

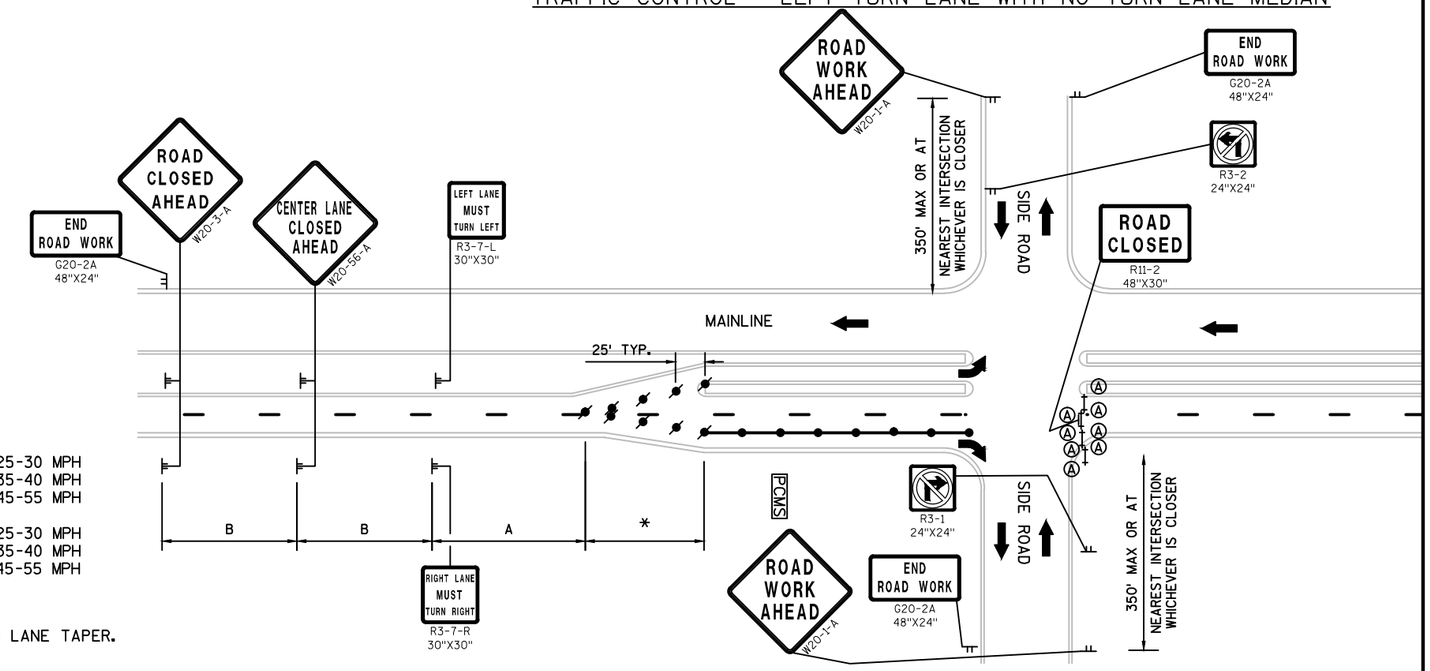
REMOVE PAVEMENT MARKINGS NOT APPROPRIATE FOR THE TRAVEL PATH IN USE AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

LEGEND

- TYPE III BARRICADE WTH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- (A) TYPE A WARNING LIGHT (FLASHING)
- TC TRAFFIC FLOW ARROW
- PCMS PORTABLE CHANGEABLE MESSAGE BOARD
- WORK AREA
- REMOVE PAVEMENT MARKINGS



TRAFFIC CONTROL - LEFT TURN LANE WITH NO TURN LANE MEDIAN



A = 200' @ 25-30 MPH
350' @ 35-40 MPH
500' @ 45-55 MPH

B = 400' @ 25-30 MPH
700' @ 35-40 MPH
1000' @ 45-55 MPH

* MATCH EXISTING TURN LANE TAPER.

TRAFFIC CONTROL - MEDIAN DIVIDED LEFT TURN LANE

PROJECT NO: 3700-50-29/3700-50-38	HWY: VARIOUS	COUNTY: EAU CLAIRE & ST. CROIX	TRAFFIC CONTROL - FULL CLOSURE	SHEET 50	E

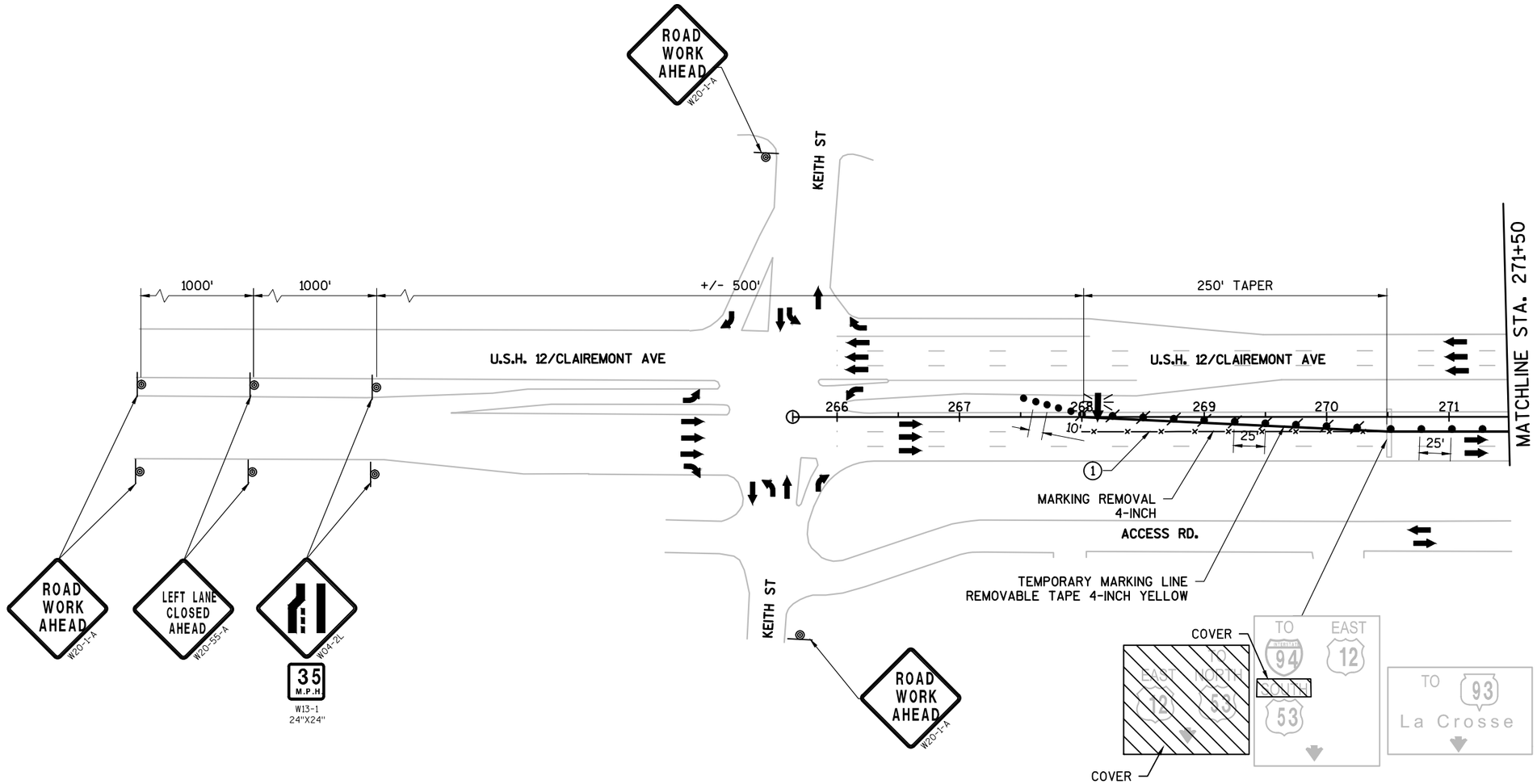
NOTE: LINEWORK OUTSIDE OF SURVEY LIMITS
AND EXISTING PAVEMENT MARKINGS
ARE APPROXIMATE ONLY

CONSTRUCTION NOTES:

REPLACE EXISTING PAVEMENT MARKINGS IN KIND PRIOR TO
OPENING TO TRAFFIC WITH THE BELOW PAVEMENT MARKING TYPE:

(1) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH

N



PROJECT NO: 3700-50-38	HWY: U.S.H. 12	COUNTY: EAU CLAIRE	TRAFFIC CONTROL AND PAVEMENT MARKING - KEITH ST. TO BUS. 53	SHEET 51	E

NOTE: LINEWORK OUTSIDE OF SURVEY LIMITS
AND EXISTING PAVEMENT MARKINGS
ARE APPROXIMATE ONLY

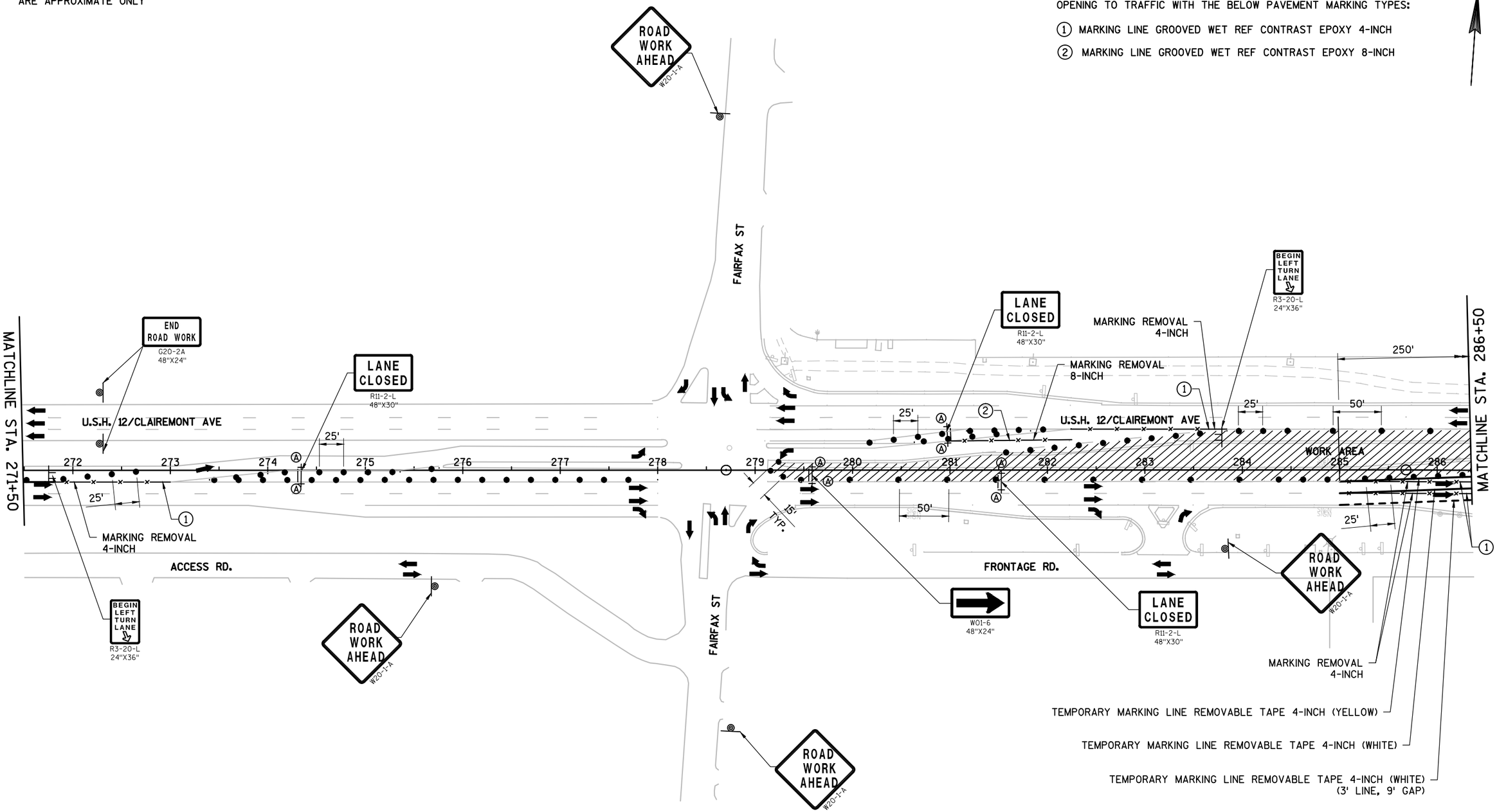
CONSTRUCTION NOTES:

REPLACE EXISTING PAVEMENT MARKINGS IN KIND PRIOR TO OPENING TO TRAFFIC WITH THE BELOW PAVEMENT MARKING TYPES:

(1) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH

(2) MARKING LINE GROOVED WET REF CONTRAST EPOXY 8-INCH

N



PROJECT NO: 3700-50-38	HWY: U.S.H. 12	COUNTY: EAU CLAIRE	TRAFFIC CONTROL AND PAVEMENT MARKING - KEITH ST. TO BUS. 53	SHEET 52	E

NOTE: LINEWORK OUTSIDE OF SURVEY LIMITS
AND EXISTING PAVEMENT MARKINGS
ARE APPROXIMATE ONLY

CONSTRUCTION NOTES:

REPLACE EXISTING PAVEMENT MARKINGS IN KIND PRIOR TO OPENING TO TRAFFIC WITH THE BELOW PAVEMENT MARKING TYPES:

1. MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH
2. MARKING LINE GROOVED WET REF CONTRAST EPOXY 8-INCH
3. MARKING LINE EPOXY 8-INCH

N

TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)

TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)

TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
(3' LINE, 9' GAP)

LANE CLOSED
R11-2-L
48"X30"

W01-6
48"X24"

MARKING REMOVAL 8-INCH

TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH
(WHITE)
(3' LINE, 6' GAP)

ROAD WORK AHEAD
W20-1-A

U.S.H. 53

250'

MARKING REMOVAL 4-INCH

50'

15'

25'

250' TAPER

MARKING REMOVAL 4-INCH

TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH YELLOW

250'

200'

200'

U.S.H. 12/CLAIREMONT AVE

WORK AREA

MATCHLINE STA. 286+50

287 288 289 290 291 292 293 294 295 296 297 298 299 300 301

U.S.H. 12/CLAIREMONT AVE

MARKING REMOVAL 8-INCH

FRONTAGE RD.

END ROAD WORK
G20-2A
48"X24"

U.S.H. 53

W04-2L

35 M.P.H.
W13-1
24"X24"

LEFT LANE CLOSED AHEAD
W20-5S-A

ROAD WORK AHEAD
W20-1-A

BUSINESS 53
Hastings Way
ONLY

EAST 12
TO NORTH 53

TO EAST 94 12
SOUTH 53

TO 93
La Crosse

London Rd
ONLY

COVER

LONDON RD

ONLY

ONLY

COVER

LANE CLOSED
R11-2-L
48"X30"

END ROAD WORK
G20-2A
48"X24"

ROAD WORK AHEAD
W20-1-A

ROAD WORK AHEAD
W20-1-A

PROJECT NO: 3700-50-38	HWY: U.S.H. 12	COUNTY: EAU CLAIRE	TRAFFIC CONTROL AND PAVEMENT MARKING - KEITH ST. TO BUS. 53	SHEET 53	E

2

FAIRFAX ST.

PI STA 278+70.45
Y = 272469.164
X = 347418.694

N

U.S.H. 12

TRANSITION SAWING CURB HEAD (TYP.)
SLOPE FROM ¾" TO FULL CURB HEIGHT

STA. 283+66.2, 28' LT
BEGIN MGS GUARDRAIL 3
1-MGS GUARDRAIL TERMINAL TYPE 2 REQ'D

PROPOSED DMS

STA. 284+11.5
END SAWING CURB HEAD

STA. 283+36.0
BEGIN SAWING CURB HEAD

STA. 281+86.8, 4.0' LT
1-MGS GUARDRAIL TERMINAL EAT REQ'D

POST *1
+80.9, 4.0' LT

3'

279 280 281 282 283 284

R/L=N85°32'48"E

STA. 280+77.9
BEGIN SAWING CURB HEAD

STA. 281+96.2
END SAWING CURB HEAD

POST *9
+30.8, 2.0' LT

POST *5
+05.8, 3.0' LT

STORM SEWER

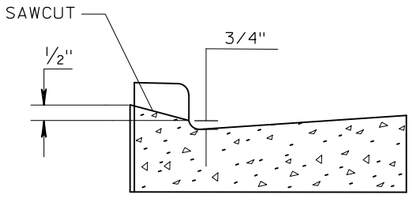
CITY OF EAU CLAIRE
(ELECTRIC)

MATCHLINE STA. 285+00.00

FAIRFAX ST.

FRONTAGE RD.

MGS GUARDRAIL 3
(MGS GUARDRAIL 3 HS AT DMS,
LIMITS TO BE DETERMINED)



SAWING CURB HEAD

PROJECT NO: 3700-50-38	HWY: U.S.H. 12	COUNTY: EAU CLAIRE	BEAM GUARD PLAN	SHEET 54	E

2

N

MGS GUARDRAIL 3
(MGS GUARDRAIL 3 HS AT DMS,
LIMITS TO BE DETERMINED)

EXISTING SIGN BRIDGE BASE

TRANSITION SAWING CURB HEAD (TYP.)
SLOPE FROM ¾" TO FULL CURB HEIGHT

POST #9
+44.1, 32.3' LT

POST #5
+69.2, 31.6' LT

POST #1
+94.2, 30.8' LT

WISDOT
(ELECTRIC)

REMOVE GUARDRAIL

MATCHLINE STA. 285+00.00

PC: 285+68.02

PI: 286+38.97

PRC: 287+09.92

PT: 290+23.05

PI: 288+66.49

3'

3'

3'

STA. 288+81.7
BEGIN SAWING CURB HEAD

STA. 289+97.5
END SAWING CURB HEAD

R/L=N85°32'48"E

R/L = N85°24'00"E

285

286

287

288

289

290

291

+09.01, -2.00' LT

REMOVE GUARDRAIL

+46.82, -13.00' LT

STA. 286+85.8
BEGIN SAWING CURB HEAD

STA. 287+61.3
END SAWING CURB HEAD

STA. 287+31.0, 13' LT
END MGS GUARDRAIL 3
1-MGS GUARDRAIL TERMINAL TYPE 2 REQ'D

STA. 288+94.2, 30.8' LT
1-MGS GUARDRAIL TERMINAL EAT REQ'D

U.S.H. 12

PI STA = 286+38.97
Y = 272528.839
X = 348184.896
DELTA = 1°25'08"
D = 1°00'00"
T = 70.96'
L = 141.90'
R = 5730.00'
PC STA = 285+68.02
Y = 272523.330
X = 348114.155
PT STA = 287+09.92
Y = 272532.595
X = 348255.752
BK = N85°32'48"E
AH = N86°57'56"E

PI STA = 288+66.49
Y = 272540.884
X = 348412.108
DELTA = 1°33'56"
D = 0°30'00"
T = 156.58'
L = 313.13'
R = 11460.79'
PC STA = 287+09.92
Y = 272532.595
X = 348255.752
PT STA = 290+23.05
Y = 272553.441
X = 348568.179
BK = N86°57'56"E
AH = N85°24'00"E

PROJECT NO: 3700-50-38	HWY: U.S.H. 12	COUNTY: EAU CLAIRE	BEAM GUARD PLAN	SHEET 55	E

FILE NAME : P:\60546811_EAU CLAIRE ITS DESIGN WO 8\900_WORK\910_CAD\20-SHEETS\050201_PN.DWG
LAYOUT NAME - 050201_PN - 02
PLOT DATE : 9/27/2018 12:51 PM PLOT BY : SALOMONSEN, DEREK PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

					3700-50-29	3700-50-38
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0002	204.0165	Removing Guardrail	LF	295.000		295.000
0004	204.0195	Removing Concrete Bases	EACH	12.000	12.000	
0006	213.0100	Finishing Roadway (project) 01. 3700-50-29	EACH	1.000	1.000	
0008	213.0100	Finishing Roadway (project) 02. 3700-50-38	EACH	1.000		1.000
0010	614.0010	Barrier System Grading Shaping Finishing	EACH	2.000		2.000
0012	614.2300	MGS Guardrail 3	LF	874.000		874.000
0014	614.2310	MGS Guardrail 3 HS	LF	100.000		100.000
0016	614.2610	MGS Guardrail Terminal EAT	EACH	2.000		2.000
0018	614.2620	MGS Guardrail Terminal Type 2	EACH	2.000		2.000
0020	616.0700.S	Fence Safety	LF	840.000	840.000	
0022	618.0100	Maintenance And Repair of Haul Roads (project) 01. 3700-50-29	EACH	1.000	1.000	
0024	618.0100	Maintenance And Repair of Haul Roads (project) 02. 3700-50-38	EACH	1.000		1.000
0026	619.1000	Mobilization	EACH	1.000	0.700	0.300
0028	625.0500	Salvaged Topsoil	SY	1,000.000	590.000	410.000
0030	627.0200	Mulching	SY	1,000.000	590.000	410.000
0032	628.1504	Silt Fence	LF	1,350.000	1,100.000	250.000
0034	628.1520	Silt Fence Maintenance	LF	1,350.000	1,100.000	250.000
0036	628.1905	Mobilizations Erosion Control	EACH	6.000	3.000	3.000
0038	628.1910	Mobilizations Emergency Erosion Control	EACH	5.000	2.000	3.000
0040	628.7010	Inlet Protection Type B	EACH	12.000	10.000	2.000
0042	628.7015	Inlet Protection Type C	EACH	15.000	13.000	2.000
0044	628.7020	Inlet Protection Type D	EACH	22.000	13.000	9.000
0046	628.7504	Temporary Ditch Checks	LF	120.000	20.000	100.000
0048	629.0210	Fertilizer Type B	CWT	1.000	0.500	0.500
0050	630.0130	Seeding Mixture No. 30	LB	21.000	11.000	10.000
0052	630.0200	Seeding Temporary	LB	30.000	17.000	13.000
0054	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	1.000	1.000	
0056	635.0200	Sign Supports Structural Steel HS	LB	2,028.000		2,028.000
0058	636.0100	Sign Supports Concrete Masonry	CY	5.000		5.000
0060	636.1000	Sign Supports Steel Reinforcement HS	LB	270.000		270.000
0062	637.2210	Signs Type II Reflective H	SF	158.000	158.000	
0064	638.2102	Moving Signs Type II	EACH	2.000	2.000	
0066	642.5001	Field Office Type B	EACH	1.000	0.500	0.500
0068	643.0300	Traffic Control Drums	DAY	5,850.000	3,000.000	2,850.000
0070	643.0420	Traffic Control Barricades Type III	DAY	475.000	350.000	125.000
0072	643.0705	Traffic Control Warning Lights Type A	DAY	940.000	700.000	240.000
0074	643.0715	Traffic Control Warning Lights Type C	DAY	1,430.000	1,150.000	280.000
0076	643.0800	Traffic Control Arrow Boards	DAY	40.000		40.000

					3700-50-29	3700-50-38
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0078	643.0900	Traffic Control Signs	DAY	1,630.000	790.000	840.000
0080	643.0910	Traffic Control Covering Signs Type I	EACH	4.000		4.000
0082	643.1050	Traffic Control Signs PCMS	DAY	190.000	125.000	65.000
0084	643.5000	Traffic Control	EACH	1.000	0.800	0.200
0086	646.1545	Marking Line Grooved Wet Ref Contrast Epoxy 4-Inch	LF	405.000		405.000
0088	646.3020	Marking Line Epoxy 8-Inch	LF	55.000		55.000
0090	646.3545	Marking Line Grooved Wet Ref Contrast Epoxy 8-Inch	LF	255.000		255.000
0092	646.9010	Marking Removal Line Water Blasting 4-Inch	LF	405.000		405.000
0094	646.9110	Marking Removal Line Water Blasting 8-Inch	LF	315.000		315.000
0096	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	1,590.000		1,590.000
0098	649.0250	Temporary Marking Line Removable Tape 8-Inch	LF	55.000		55.000
0100	650.6500	Construction Staking Structure Layout (structure) 01. DMS-18-0036	LS	1.000		1.000
0102	650.8500	Construction Staking Electrical Installations (project) 01. 3700-50-29	LS	1.000	1.000	
0104	650.8500	Construction Staking Electrical Installations (project) 02. 3700-50-38	LS	1.000		1.000
0106	650.9910	Construction Staking Supplemental Control (project) 01. 3700-50-29	LS	1.000	1.000	
0108	650.9910	Construction Staking Supplemental Control (project) 02. 3700-50-38	LS	1.000		1.000
0110	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	390.000		390.000
0112	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	373.000	373.000	
0114	652.0605	Conduit Special 2-Inch	LF	296.000		296.000
0116	652.0700.S	Install Conduit into Existing Item	EACH	15.000	14.000	1.000
0118	653.0164	Pull Boxes Non-Conductive 24x42-Inch	EACH	6.000		6.000
0120	654.0113	Concrete Bases Type 13	EACH	14.000	14.000	
0122	654.1150	Concrete Bases Camera Pole 50-FT	EACH	1.000		1.000
0124	655.0230	Cable Traffic Signal 5-14 AWG	LF	5,644.000	5,644.000	
0126	655.0240	Cable Traffic Signal 7-14 AWG	LF	44.000	44.000	
0128	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	4,209.000	4,209.000	
0130	655.0610	Electrical Wire Lighting 12 AWG	LF	432.000		432.000
0132	655.0625	Electrical Wire Lighting 6 AWG	LF	1,482.000		1,482.000
0134	655.0900	Traffic Signal EVP Detector Cable	LF	5,423.000	5,423.000	
0136	656.0200	Electrical Service Meter Breaker Pedestal (location) 01. DMS-18-0036	LS	1.000		1.000
0138	656.0500	Electrical Service Breaker Disconnect Box (location) 01. DMS-18-0036	LS	1.000		1.000
0140	656.0500	Electrical Service Breaker Disconnect Box (location) 02. CCTV-18-0046	LS	1.000		1.000
0142	657.0100	Pedestal Bases	EACH	2.000	2.000	

					3700-50-29	3700-50-38
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0144	657.0355	Poles Type 12	EACH	12.000	12.000	
0146	657.0360	Poles Type 13	EACH	2.000	2.000	
0148	657.0425	Traffic Signal Standards Aluminum 15-FT	EACH	2.000	2.000	
0150	657.0540	Monotube Arms 40-FT	EACH	1.000	1.000	
0152	657.0545	Monotube Arms 45-FT	EACH	4.000	4.000	
0154	657.0550	Monotube Arms 50-FT	EACH	8.000	8.000	
0156	657.0555	Monotube Arms 55-FT	EACH	1.000	1.000	
0158	658.0173	Traffic Signal Face 3S 12-Inch	EACH	28.000	28.000	
0160	658.0174	Traffic Signal Face 4S 12-Inch	EACH	2.000	2.000	
0162	658.5069	Signal Mounting Hardware (location) 01. STH 312 & Truax Ln	LS	1.000	1.000	
0164	658.5069	Signal Mounting Hardware (location) 02. STH 312 & Mill Run Rd	LS	1.000	1.000	
0166	658.5069	Signal Mounting Hardware (location) 03. STH 312 & CTH TT	LS	1.000	1.000	
0168	658.5069	Signal Mounting Hardware (location) 04. USH 12 & Brakke Dr	LS	1.000	1.000	
0170	658.5069	Signal Mounting Hardware (location) 05. USH 12 & CTH UU	LS	1.000	1.000	
0172	658.5069	Signal Mounting Hardware (location) 06. STH 64 & STH 65	LS	1.000	1.000	
0174	670.0100	Field System Integrator	LS	1.000		1.000
0176	670.0200	ITS Documentation	LS	1.000		1.000
0178	673.0225.S	Install Pole Mounted Cabinet	EACH	2.000		2.000
0180	677.0150	Install Camera Pole 50-FT	EACH	1.000		1.000
0182	677.0200	Install Camera Assembly	EACH	1.000		1.000
0184	678.0600	Install Ethernet Switches	EACH	2.000		2.000
0186	678.0800	Install Cellular Modems	EACH	1.000		1.000
0188	SPV.0060	Special 001. Install Ground Mounted DMS Full Matrix	EACH	1.000		1.000
0190	SPV.0060	Special 002. Install Wireless Ethernet Bridge	EACH	2.000		2.000
0192	SPV.0060	Special 003. Luminaire Arms Single Member 15 5/8-Inch Clamp 15-FT	EACH	2.000	2.000	
0194	SPV.0090	Special 001. Sawing Curb Head	LF	352.000		352.000
0196	SPV.0105	Special 001. Install State Furnished EVP Detector Heads STH 312 & Truax Ln	LS	1.000	1.000	
0198	SPV.0105	Special 002. Install State Furnished EVP Detector Heads STH 312 & Mill Run Rd	LS	1.000	1.000	
0200	SPV.0105	Special 003. Install State Furnished EVP Detector Heads STH 312 & CTH TT	LS	1.000	1.000	
0202	SPV.0105	Special 004. Install State Furnished EVP Detector Heads USH 12 & Brakke Dr	LS	1.000	1.000	
0204	SPV.0105	Special 005. Install State Furnished EVP Detector	LS	1.000	1.000	

					3700-50-29	3700-50-38
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
		Heads USH 12 & CTH UU				
0206	SPV.0105	Special 006. Install State Furnished EVP Detector Heads STH 64 & STH 65	LS	1.000	1.000	
0208	SPV.0105	Special 007. Remove Traffic Signals STH 312 & Truax Ln	LS	1.000	1.000	
0210	SPV.0105	Special 008. Remove Traffic Signals STH 312 & Mill Run Rd	LS	1.000	1.000	
0212	SPV.0105	Special 009. Remove Traffic Signals STH 312 & CTH TT	LS	1.000	1.000	
0214	SPV.0105	Special 010. Remove Traffic Signals USH 12 & Brakke Dr	LS	1.000	1.000	
0216	SPV.0105	Special 011. Remove Traffic Signals USH 12 & CTH UU	LS	1.000	1.000	
0218	SPV.0105	Special 012. Remove Traffic Signals STH 64 & STH 65	LS	1.000	1.000	

TRAFFIC CONTROL

LOCATION	DAYS IN SERVICE	643.0300 TRAFFIC CONTROL DRUMS NO.	643.0300 TRAFFIC CONTROL DRUMS (DAYS)	643.0420 TRAFFIC CONTROL BARRICADES TYPE III NO.	643.0420 TRAFFIC CONTROL BARRICADES TYPE III (DAYS)	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A NO.	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A (DAYS)	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C NO.	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C (DAYS)	643.0800 TRAFFIC CONTROL ARROW BOARDS NO.	643.0800 TRAFFIC CONTROL ARROW BOARDS (DAYS)	643.0900 TRAFFIC CONTROL SIGNS NO.	643.0900 TRAFFIC CONTROL SIGNS (DAYS)	643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I NO. SIGNS	643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I NO. CYCLES	643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I (EACH)	643.1050 TRAFFIC CONTROL SIGNS PCMS NO.	643.1050 TRAFFIC CONTROL SIGNS PCMS (DAYS)
3700-50-29																		
STH 312 & USH 12 / TEXACO DR / TRUAX LN	5	72	360	8	40	16	80	28	140	--	--	18	90	--	--	--	--	--
USH 12 / STH 312 & MILL RUN RD	5	64	320	8	40	16	80	24	120	--	--	18	90	--	--	--	--	--
USH 12 / STH 312 & KANE RD / CTH TT	5	64	320	8	40	16	80	24	120	--	--	18	90	--	--	--	--	--
USH 12 & BRAKKE DR / RODEO DR	5	64	320	8	40	16	80	24	120	--	--	18	90	--	--	--	--	--
USH 12 & CTH UU / BADLANDS RD	5	72	360	8	40	16	80	28	140	--	--	18	90	--	--	--	--	--
STH 64 & 65	10	72	720	8	80	16	160	28	280	--	--	18	180	--	--	--	--	--
STH 312 CORRIDOR (TEXACO DR TO CTH TT)	14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2	28
USH 12 CORRIDOR (RODEO DR TO CTH UU)	12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2	24
STH 64 & 65	12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	48
UNDISTRIBUTED		--	600	--	70	--	140	--	230	--	--	--	160	--	--	--	--	25
PROJECT 3700-50-29 TOTALS			3000		350		700		1150		0		790			0		125
3700-50-38																		
USH 12 - KEITH ST to BUS 53 (ADV. WARNING)	20	--	--	--	--	--	--	--	--	--	--	19	380	--	--	--	--	--
USH 12 - KEITH ST to BUS 53 (PCMS)	25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2	50
USH 12 - KEITH ST to BUS 53 (LANE CLOSURE)	14	162	2268	7	98	14	196	16	224	2	28	21	294	4	1	4	--	--
UNDISTRIBUTED		--	582	--	27	--	44	--	56	--	12	--	166	--	--	--	--	15
PROJECT 3700-50-38 TOTALS			2850		125		240		280		40		840			4		65
TOTALS			5850		475		940		1430		40		1630			4		190

PAVEMENT MARKINGS

STATION	646.1545 MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH (LF)	646.3020 MARKING LINE EPOXY 8-INCH (LF)	646.3545 MARKING LINE GROOVED WET REF CONTRAST EPOXY 8-INCH (LF)	646.9010 MARKING REMOVAL LINE WATER BLASTING 4-INCH (LF)	646.9110 MARKING REMOVAL LINE WATER BLASTING 8-INCH (LF)	649.0150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH YELLOW (LF)	649.0150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH WHITE (LF)	649.0250 TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH WHITE (LF)
268+00 - 273+00	95	--	--	95	--	380	--	--
281+00 - 284+00	40	--	130	40	130	--	--	--
285+00 - 288+00	125	--	75	125	75	250	315	--
LONDON RD INTERSECTION	--	45	--	--	45	--	--	45
292+50 - 296+00	65	--	--	65	--	325	--	
UNDISTRIBUTED	80	10	50	80	65	240	80	10
PROJECT 3700-50-38 TOTALS	405	55	255	405	315	1,590		55
TOTALS	405	55	255	405	315	1,590		55

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

TRAFFIC CONTROL, EROSION CONTROL, AND RESTORATION
VARIOUS HIGHWAYS
PAGE 1 OF 3

EROSION CONTROL - INLET PROTECTION, TEMPORARY DITCH CHECKS, SILT FENCE

PROJECT	628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)	628.1905 MOBILIZATIONS EROSION CONTROL (EACH)	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL (EACH)	628.7010 INLET PROTECTION TYPE B (EACH)	628.7015 INLET PROTECTION TYPE C (EACH)	628.7020 INLET PROTECTION TYPE D (EACH)	628.7504 TEMPORARY DITCH CHECKS (LF)
3700-50-29	900	900	2	1	8	10	10	--
UNDISTRIBUTED	200	200	1	1	2	3	3	20
PROJECT 3700-50-29 TOTALS	1,100	1,100	3	2	10	13	13	20
3700-50-38	200	200	2	2	1	1	7	80
UNDISTRIBUTED	50	50	1	1	1	1	2	20
PROJECT 3700-50-38 TOTALS	250	250	3	3	2	2	9	100
TOTALS	1,350	1,350	6	5	12	15	22	120

NOTE

- **PROTECT OPEN EXCAVATIONS WITH SAFETY FENCE WHENEVER WORK ACTIVITIES ARE NOT BEING ACTIVELY PERFORMED.**

SAFETY FENCE

LOCATION	616.0700.S FENCE SAFETY L.F.
S 18-0560	120
S 18-0965	120
S 18-0835	120
S 55-0782	120
S 55-0848	120
S 55-1009	240
PROJECT 3700-50-29 TOTAL	840

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

TRAFFIC CONTROL, EROSION CONTROL, AND RESTORATION
VARIOUS HIGHWAYS
PAGE 2 OF 3

RESTORATION

LOCATION	625.0500 SALVAGE TOPSOIL S.Y.	627.0200 MULCHING S.Y.	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO.30 LB	630.0200 SEEDING TEMPORARY LB
3700-50-29					
CONCRETE BASES TYPE 13	100	100	--	2	3
REMOVING CONCRETE BASES	10	10	--	1	1
TRENCHED CONDUIT	130	130	--	2	4
UNDISTRIBUTED	350	350	0.5	6	9
PROJECT 3700-50-29 TOTALS	590	590	0.5	11	17
3700-50-38					
DMS SIGN BASE	10	10	--	1	1
PULL BOXES	10	10	--	1	1
BASE CAMERA POLE	10	10	--	1	1
TRENCHED CONDUIT	130	130	--	2	4
UNDISTRIBUTED	250	250	0.5	5	7
PROJECT 3700-50-38 TOTALS	410	410	0.5	10	13
TOTALS	1,000	1,000	1.0	21	30

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

TRAFFIC CONTROL, EROSION CONTROL, AND RESTORATION
VARIOUS HIGHWAYS
PAGE 3 OF 3

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GUARDRAIL

STATION	-	STATION	LOCATION	204.0165 REMOVING GUARDRAIL (LF)	614.0010 BARRIER SYSTEM GRADING SHAPING FINISHING (EACH)	614.2300 MGS GUARDRAIL 3 (LF)	614.2310 MGS GUARDRAIL 3 HS (LF)	614.2610 MGS GUARDRAIL TERMINAL EAT (EACH)	614.2620 MGS GUARDRAIL TERMINAL TYPE 2 (EACH)	SPV.0090.001 SAWING CURB HEAD (LF)
280+80.9	-	286+88.8	EB (LT)	103.4	1	448.3	50.0	1	1	169.5
283+39.0	-	289+94.5	WB (LT)	191.7	1	425.7	50.0	1	1	182.3
PROJECT TOTALS				295	2	874	100	2	2	352

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

ROADSIDE DESIGN
USH 12
PAGE 1 OF 1

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CONCRETE BASES

SIGNAL BASE NO.	LOCATION	654.0113 CONCRETE BASE TYPE 13 EACH
SB6	S 18-0560	1
SB12	S 18-0560	1
SB4	S18-0965	1
SB11	S18-0965	1
SB4	S 18-0835	1
SB10	S 18-0835	1
SB6	S 55-0782	1
SB12	S 55-0782	1
SB5	S 55-0848	1
SB11	S 55-0848	1
SB6	S 55-1009	1
SB12	S 55-1009	1
SB15	S 55-1009	1
SB16	S 55-1009	1
	TOTAL	14

INSTALL CONDUIT INTO EXISTING ITEM

PULL BOX NO.	LOCATION	* 652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EACH
PB1	S 18-0560	1
PB2	S 18-0560	1
PB1	S18-0965	1
PB2	S18-0965	1
PB1	S 18-0835	1
PB2	S 18-0835	1
PB1	S 55-0782	1
PB2	S 55-0782	1
PB1	S 55-0848	1
PB2	S 55-0848	1
PB1	S 55-1009	1
PB2	S 55-1009	1
PB3	S 55-1009	1
PB4	S 55-1009	1
	TOTAL	14

PERMANENT SIGNING

LOCATION	SIGN ID	SIGN PLATE	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	637.2210 SIGNS TYPE II REFLECTIVE H S.F.	638.2102 MOVING SIGNS TYPE II EACH
S 18-0560	1-01	M1-94-H		17.50	
S 18-0560	1-02	R1-1	1		1
S 18-0560	1-03	R1-53			1
S 18-0560	1-04	M1-94-H		17.50	
S18-0965	1-05	M1-94-H		10.50	
S18-0965	1-06	M1-94-H		10.50	
S 18-0835	1-07	M1-94-H		9.75	
S 18-0835	1-08	M1-94-H		9.75	
S 55-0782	1-09	M1-94-H		15.00	
S 55-0782	1-10	M1-94-H		15.00	
S 55-0848	1-11	M1-94-H		13.50	
S 55-0848	1-12	M1-94-H		13.50	
S 55-1009	1-13	M1-94-H		12.75	
S 55-1009	1-14	M1-94-H		12.75	
	TOTAL		1	158	2

3

TRAFFIC SIGNAL EQUIPMENT

SIG. BASE NO.	LOCATION	657.0100 PEDESTAL BASES EACH	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	657.0355 POLES TYPE 12 EACH	657.0360 POLES TYPE 13 EACH	657.0540 MONOTUBE ARMS 40-FT EACH	657.0545 MONOTUBE ARMS 45-FT EACH	657.0550 MONOTUBE ARMS 50-FT EACH	657.0555 MONOTUBE ARMS 55-FT EACH	658.0173 TRAFFIC SIGNAL FACE 3S 12-INCH EACH	658.0174 TRAFFIC SIGNAL FACE 4S 12-INCH EACH	SPV.0060.003 LUMINAIRE ARMS SINGLE MEMBER 15 5/8-INCH CLAMP 15-FT EACH
SB6	S 18-0560			1				1		2		
SB12	S 18-0560			1					1	2		
SB4	S18-0965			1				1		2		
SB11	S18-0965			1				1		2		
SB4	S 18-0835			1			1			2		
SB10	S 18-0835			1			1			2		
SB6	S 55-0782				1			1		2		1
SB12	S 55-0782				1			1		2		1
SB4	S 55-0848			1				1		2		
SB10	S 55-0848			1				1		2		
SB3	S 55-1009	1	1								1	
SB6	S 55-1009			1			1			2		
SB9	S 55-1009	1	1								1	
SB12	S 55-1009			1		1				2		
SB15	S 55-1009			1				1		2		
SB16	S 55-1009			1			1			2		
	TOTAL	2	2	12	2	1	4	8	1	28	2	2

* ADDITIONAL ITEMS FOR QUANTITIES LISTED IN OTHER MISCELLANEOUS QUANTITIES SHEETS

REMOVING CONRETE BASES

SIGNAL BASE NO.	LOCATION	204.0195 REMOVING CONCRETE BASES EACH
SB6	S 18-0560	1
SB12	S 18-0560	1
SB4	S18-0965	1
SB11	S18-0965	1
SB4	S 18-0835	1
SB10	S 18-0835	1
SB6	S 55-0782	1
SB12	S 55-0782	1
SB4	S 55-0848	1
SB10	S 55-0848	1
SB6	S 55-1009	1
SB12	S 55-1009	1
	TOTAL	12

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

SIGNALIZED INTERSECTION IMPROVEMENTS
VARIOUS HIGHWAYS
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TRAFFIC SIGNAL CABLE AND ELECTRICAL WIRE

LOCATION	LOC.	TO	LOC.	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG L.F.	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG L.F.	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE L.F.
S 18-0560	CB1		SB6	436			504
S 18-0560	CB1		SB12	81		81	154
S 18-0560	CB1		SB2				271
S 18-0560	CB1		SB8				324
S 18-0560	SB5		SB6			137	
S 18-0560	SB6		SB7			121	
S 18-0560	SB11		SB12			144	
S 18-0560	PB1		SB12			36	
S 18-0560	PB2		SB6			44	
S 18-0560	SB6		HEAD 3	70			
S 18-0560	SB6		HEAD4	58			
S 18-0560	SB12		HEAD 8	80			
S 18-0560	SB12		HEAD 9	68			
S 18-0965	CB1		SB4	273			341
S 18-0965	CB1		SB11	269			342
S 18-0965	SB3		SB4			142	
S 18-0965	SB4		SB5			118	
S 18-0965	SB10		SB11			154	
S 18-0965	SB11		SB12			126	
S 18-0965	PB1		SB11			51	
S 18-0965	PB2		SB4			46	
S 18-0965	SB4		HEAD 3	72			
S 18-0965	SB4		HEAD 4	60			
S 18-0965	SB11		HEAD 9	72			
S 18-0965	SB11		HEAD 10	60			
S 18-0835	CB1		SB4	320			388
S 18-0835	CB1		SB10	247			315
S 18-0835	SB3		SB4			182	
S 18-0835	SB4		SB5			136	
S 18-0835	SB9		SB10			162	
S 18-0835	SB10		SB11			137	
S 18-0835	PB1		SB10			55	
S 18-0835	PB2		SB4			65	
S 18-0835	SB4		HEAD 5	66			
S 18-0835	SB4		HEAD 6	54			
S 18-0835	SB10		HEAD 11	66			
S 18-0835	SB10		HEAD 12	54			
S 55-0782	CB1		SB6	439			507
S 55-0782	CB1		SB12	89		89	162
S 55-0782	SB5		SB6			147	
S 55-0782	SB6		SB7			125	
S 55-0782	SB11		SB12			144	

(CONTINUED ON NEXT PAGE)

INSTALL STATE FURNISHED EVP SYSTEM

LOCATION	SPV.0105.001 INSTALL STATE FURNISHED EVP DETECTOR HEADS L.S.	SPV.0105.002 INSTALL STATE FURNISHED EVP DETECTOR HEADS L.S.	SPV.0105.003 INSTALL STATE FURNISHED EVP DETECTOR HEADS L.S.	SPV.0105.004 INSTALL STATE FURNISHED EVP DETECTOR HEADS L.S.	SPV.0105.005 INSTALL STATE FURNISHED EVP DETECTOR HEADS L.S.	SPV.0105.006 INSTALL STATE FURNISHED EVP DETECTOR HEADS L.S.
STH 312 & TRUAX LN	1					
STH 312 & MILL RUN RD		1				
STH 312 & CTH TT			1			
USH 12 & BRAKKE DR				1		
USH 12 & CTH UU					1	
STH 64 & STH 65						1
TOTAL	1	1	1	1	1	1

SIGNAL MOUNTING HARDWARE

LOCATION	658.5069.01 SIGNAL MOUNTING HARDWARE L.S.	658.5069.02 SIGNAL MOUNTING HARDWARE L.S.	658.5069.03 SIGNAL MOUNTING HARDWARE L.S.	658.5069.04 SIGNAL MOUNTING HARDWARE L.S.	658.5069.05 SIGNAL MOUNTING HARDWARE L.S.	658.5069.06 SIGNAL MOUNTING HARDWARE L.S.
STH 312 & TRUAX LN	1					
STH 312 & MILL RUN RD		1				
STH 312 & CTH TT			1			
USH 12 & BRAKKE DR				1		
USH 12 & CTH UU					1	
STH 64 & STH 65						1
TOTAL	1	1	1	1	1	1

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

SIGNALIZED INTERSECTION IMPROVEMENTS
VARIOUS HIGHWAYS
PAGE 2 OF 3

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TRAFFIC SIGNAL CABLE AND ELECTRICAL WIRE (CONTINUED)

LOCATION	LOC.	TO	LOC.	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG L.F.	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG L.F.	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE L.F.
S 55-0782	PB1		SB6			46	
S 55-0782	PB2		SB12			46	
S 55-0782	SB6		HEAD 2	59			
S 55-0782	SB6		HEAD 3	71			
S 55-0782	SB12		HEAD 12	57			
S 55-0782	SB12		HEAD 13	69			
S 55-0848	CB1		SB4	268			341
S 55-0848	CB1		SB10	281			349
S 55-0848	SB3		SB4			127	
S 55-0848	SB4		SB5			169	
S 55-0848	SB9		SB10			138	
S 55-0848	SB10		SB11			181	
S 55-0848	SB4		HEAD 13	73			
S 55-0848	SB4		HEAD 14	61			
S 55-0848	SB10		HEAD 6	71			
S 55-0848	SB10		HEAD 7	59			
S 55-1009	CB1		SB6	479			547
S 55-1009	CB1		SB12	70		70	138
S 55-1009	CB1		SB15	332			400
S 55-1009	CB1		SB16	272			340
S 55-1009	SB2		SB15			134	
S 55-1009	SB15		SB3			103	
S 55-1009	SB5		SB6			172	
S 55-1009	SB6		SB7			93	
S 55-1009	SB10		SB16			105	
S 55-1009	SB16		SB11			182	
S 55-1009	SB11		SB12			129	
S 55-1009	PB1		SB6			32	
S 55-1009	PB3		SB12			40	
S 55-1009	SB3		HEAD 20		22		
S 55-1009	SB6		HEAD 7	56			
S 55-1009	SB6		HEAD19	68			
S 55-1009	SB9		HEAD 18		22		
S 55-1009	SB12		HEAD3	49			
S 55-1009	SB12		HEAD 17	61			
S 55-1009	SB15		HEAD 14	71			
S 55-1009	SB15		HEAD 15	59			
S 55-1009	SB16		HEAD 10	68			
S 55-1009	SB16		HEAD 11	56			
			TOTAL	5644	44	4209	5423

NOTE: GROUNDING CONDUCTOR (10 AWG) TOTAL INCLUDES RING AND COVER BONDING QUANTITIES

REMOVE TRAFFIC SIGNALS

LOCATION	SPV.0105.007 REMOVE TRAFFIC SIGNALS L.S.	SPV.0105.008 REMOVE TRAFFIC SIGNALS L.S.	SPV.0105.009 REMOVE TRAFFIC SIGNALS L.S.	SPV.0105.010 REMOVE TRAFFIC SIGNALS L.S.	SPV.0105.011 REMOVE TRAFFIC SIGNALS L.S.	SPV.0105.012 REMOVE TRAFFIC SIGNALS L.S.
STH 312 & TRUAX LN	1					
STH 312 & MILL RUN RD		1				
STH 312 & CTH TT			1			
USH 12 & BRAKKE DR				1		
USH 12 & CTH UU					1	
STH 64 & STH 65						1
TOTAL	1	1	1	1	1	1

CONDUIT

LOCATION	LOC.	TO	LOC.	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH L.F.
S 18-0560	PB1		SB12	20
S 18-0560	PB2		SB6	28
S18-0965	PB1		SB11	36
S18-0965	PB2		SB4	30
S 18-0835	PB1		SB10	39
S 18-0835	PB2		SB4	48
S 55-0782	PB1		SB6	30
S 55-0782	PB2		SB12	30
S 55-0848	PB1		SB10	20
S 55-0848	PB2		SB4	14
S 55-1009	PB1		SB6	16
S 55-1009	PB2		SB16	23
S 55-1009	PB3		SB12	23
S 55-1009	PB4		SB15	16
			TOTAL	373

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

SIGNALIZED INTERSECTION IMPROVEMENTS
VARIOUS HIGHWAYS
PAGE 3 OF 3

ITS ITEMS

FROM	TO	LINEAR DISTANCE	WIRE SLACK LF	NUMBER OF CONDUITS	NUMBER OF ELECTRICAL WIRES LIGHTING 6 AWG	BORED?	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0605 CONDUIT SPECIAL 2-INCH LF	652.0700.S * INSTALL CONDUIT INTO EXISTING ITEM EA	655.0625 ELECTRICAL WIRE LIGHTING 12 AWG LF	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG LF
CATEGORY 0010											
PROJECT 3700-50-38											
DMS 1	PB1	13	25	2	3	NO	26	--	--	38	114
PB1	PB2	52	15	2	3	NO	104	--	--	67	201
PB2	PB3	64	15	2	3	YES	--	128	--	79	237
PB3	MB1	23	10	1	3	NO	23	--	--	--	99
CP1	PB4	8	25	2	3	NO	16	--	--	33	99
PB4	PB5	101	15	2	3	NO	202	--	--	116	348
PB5	PB6	84	15	2	3	YES	--	168	--	99	297
PB6	S 18-0159	19	10	1	3	NO	19	--	1	--	87
								--			
					PROJECT TOTALS		390	296	1	432	1482

ITS ITEMS

ITEM	LOCATION	656.0200.01 ELECTRICAL SERVICE METER BREAKER PEDESTAL LS	656.0500.01 ELECTRICAL SERVICE BREAKER DISCONNECT BOX LS	656.0500.02 ELECTRICAL SERVICE BREAKER DISCONNECT BOX LS	673.0225.S INSTALL POLE MOUNTED CABINET EA	677.0200 INSTALL CAMERA ASSEMBLY EA	678.0600 INSTALL ETHERNET SWITCHES EA	678.0800 INSTALL CELLULAR MODEMS EA	SPV.0060.001 INSTALL GROUND MOUNTED DMS FULL MATRIX EA	SPV.0060.002 INSTALL WIRELESS ETHERNET BRIDGE EA
CATEGORY 0010										
PROJECT 3700-50-38										
DMS-18-0036	284+08, 15' LT		1		1		1	1	1	
DMS-18-0036	284+84, 74' RT	1								
CCTV-18-0046	297+75, 94' RT			1	1	1	1			1
CCTV-18-0010	308+92, 57' RT									1
PROJECT TOTALS		1	1	1	2	1	2	1	1	2

* ADDITIONAL ITEMS FOR QUANTITIES LISTED IN OTHER MISCELLANEOUS QUANTITIES SHEETS

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

ITS IMPROVEMENTS
USH 12
PAGE 1 OF 2

3

ITS MISCELLANEOUS ITEMS

	670.0100 FIELD SYSTEM INTEGRATOR LS	670.0200 ITS DOCUMENTATION LS
CATEGORY 0010		
PROJECT 3700-50-38		
USH 12	1	1
PROJECT TOTALS	1	1

ITS PULL BOX

ITEM	LOCATION	653.0164 PULL BOX NON-CONDUCTIVE 24 X 42-INCH EA
CATEGORY 0010		
PROJECT 3700-50-38		
PB1	284+24, 15' LT	1
PB2	284+77, 12' LT	1
PB3	284+75, 52' RT	1
PB4	297+81, 104' RT	1
PB5	298+81, 87' RT	1
PB6	299+62, 61' RT	1
PROJECT TOTALS		6

3

ITS SIGN SUPPORTS

ITEM	LOCATION	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS LB	636.0100 SIGN SUPPORTS CONCRETE MASONRY CY	636.1000 SIGN SUPPORTS STEEL REINFORCEMENT HS LB
CATEGORY 0010				
PROJECT 3700-50-38				
DMS1	284+08, 15' LT	2028	5	270
PROJECT TOTALS		2028	5	270

ITS POLES AND BASES

ITEM	LOCATION	654.1150 CONCRETE BASES CAMERA POLE 50-FT EA	677.0150 INSTALL CAMERA POLE 50-FT EA
CATEGORY 0010			
PROJECT 3700-50-38			
CP1	297+75, 94' RT	1	1
PROJECT TOTALS		1	1

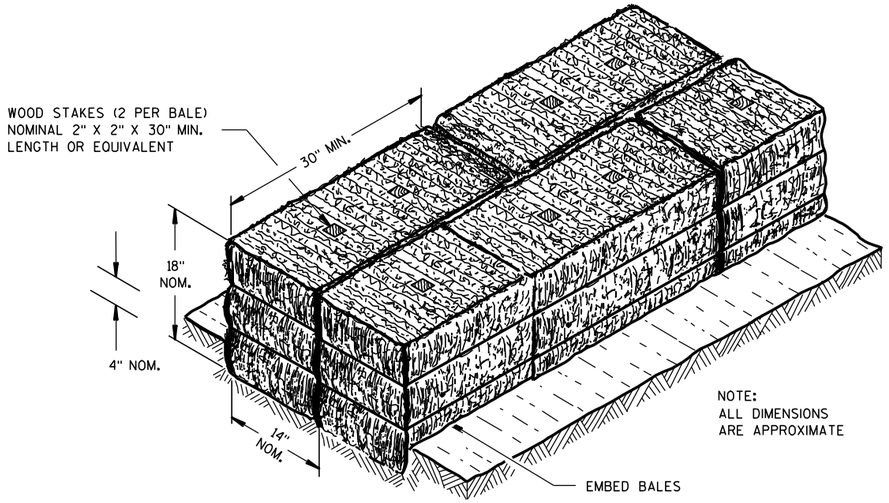
ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

ITS IMPROVEMENTS
USH 12
PAGE 2 OF 2

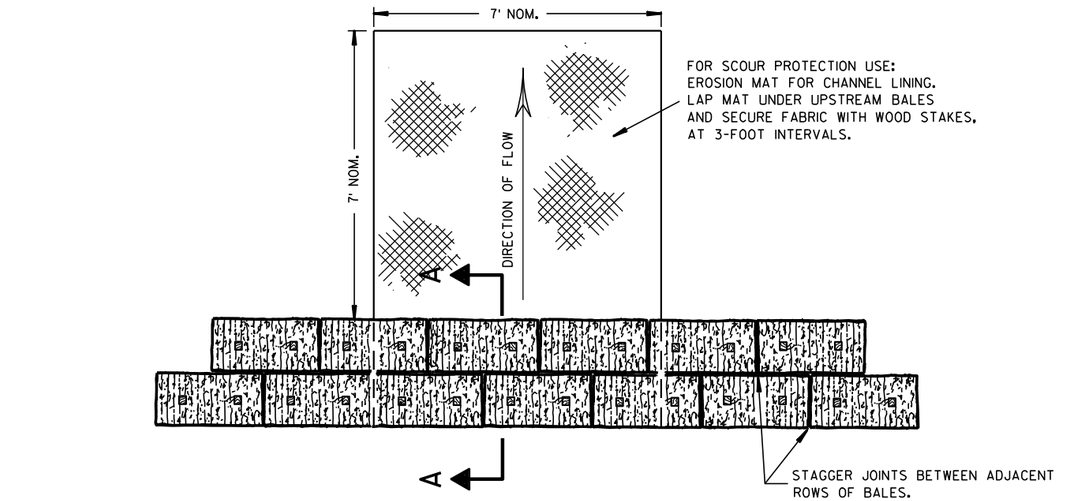
Standard Detail Drawing List

08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
09B02-10	CONDUIT
09B16-01	PULL BOX NON-CONDUCTIVE
09C02-07	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C12-09A	CONCRETE BASE TYPE 13
09C12-09B	CONCRETE BASE TYPE 13
09C13-02	CONCRETE BASE TYPE 10 & TYPE 13 EXTENSION
09E01-14G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E05-06	TRAFFIC SIGNAL STANDARD ORNAMENTAL BRACKET MOUNTINGS TYPICAL FOR 13 FT. OR 15 FT.
09E08-08C	TYPE 12 POLE 35'-55' MONOTUBE ARM
09E08-08D	TYPE 13 POLE 35'-55' MONOTBE ARM
09E08-08E	GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS
09H03-01	2 CIRCUIT METER BREAKER PEDESTAL
09H11-01	IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENTS
14B42-06A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B47-02A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15D12-06A	TRAFFIC CONTROL, LANE CLOSURE
15D21-06	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS

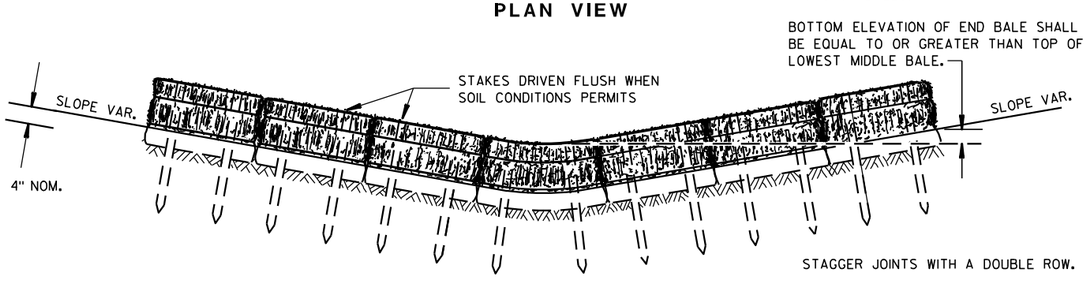
6



SECTION A-A



PLAN VIEW



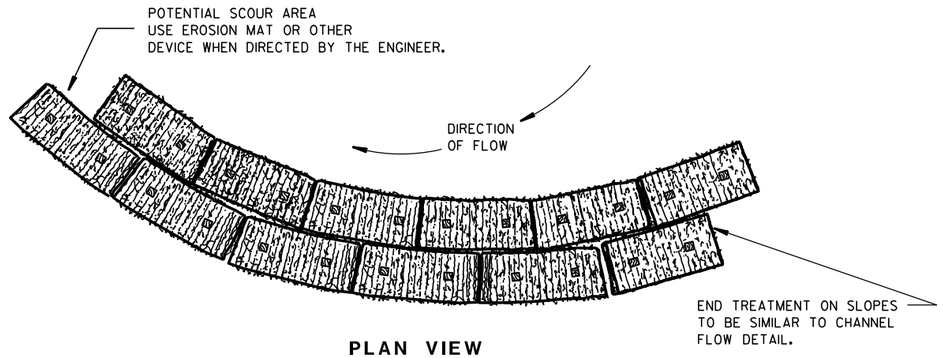
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

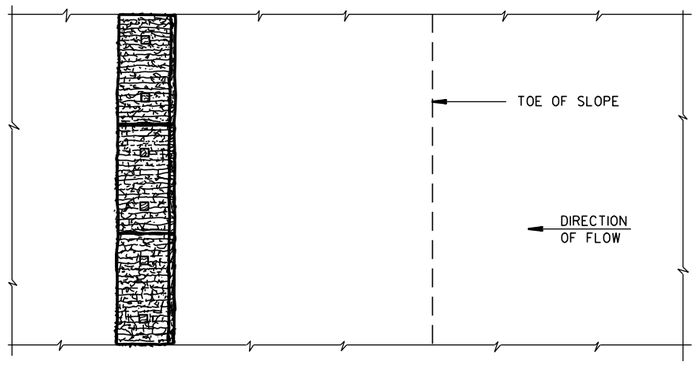
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

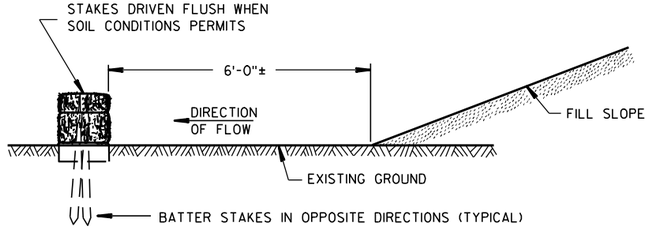


PLAN VIEW

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

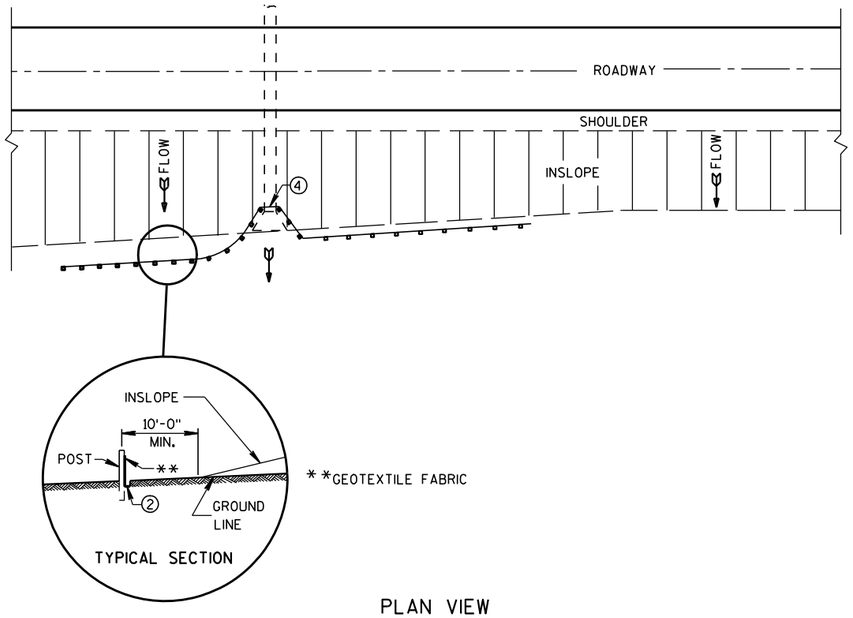
APPROVED

6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

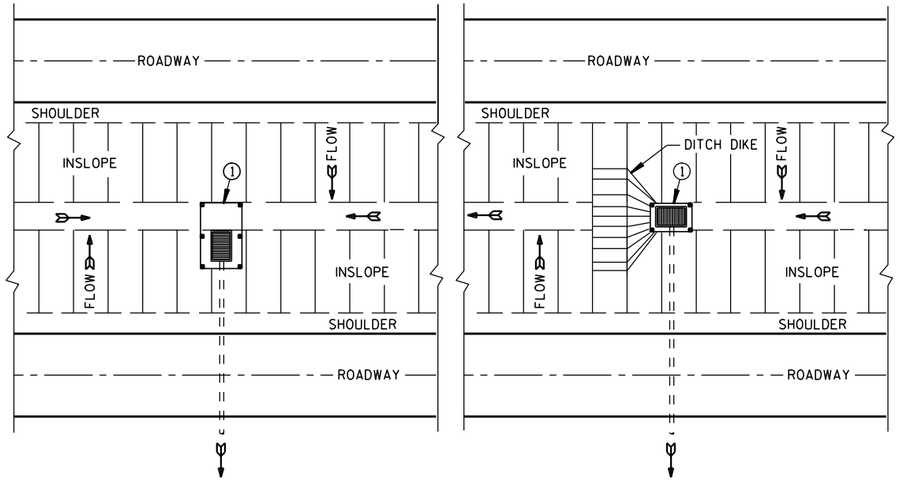
FHWA

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.

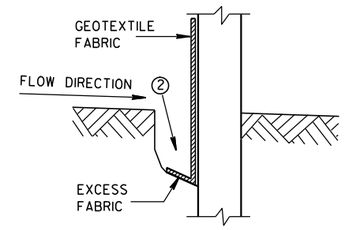
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

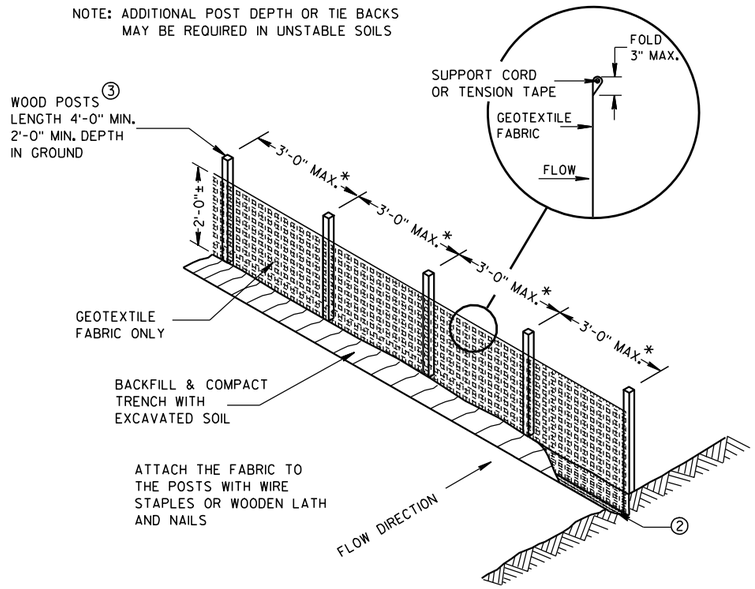
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

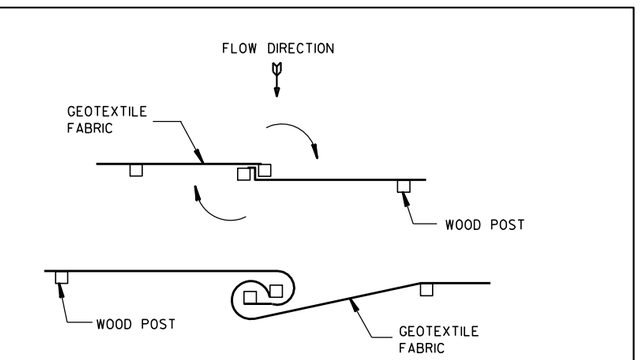
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



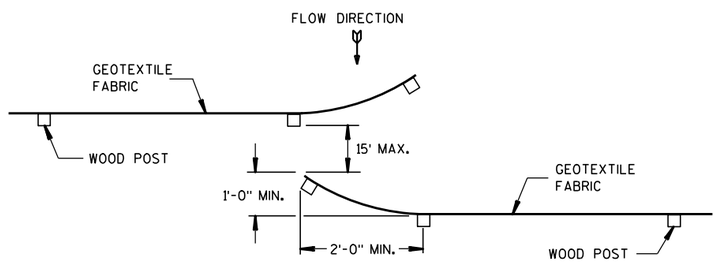
TRENCH DETAIL



SILT FENCE

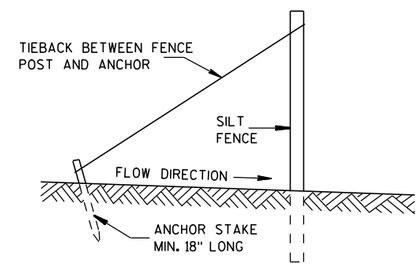


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

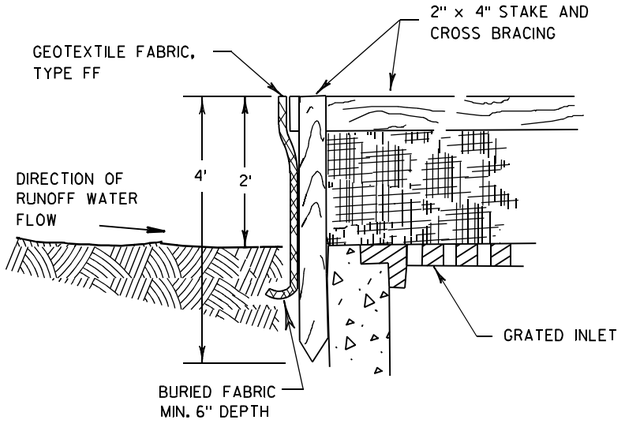
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

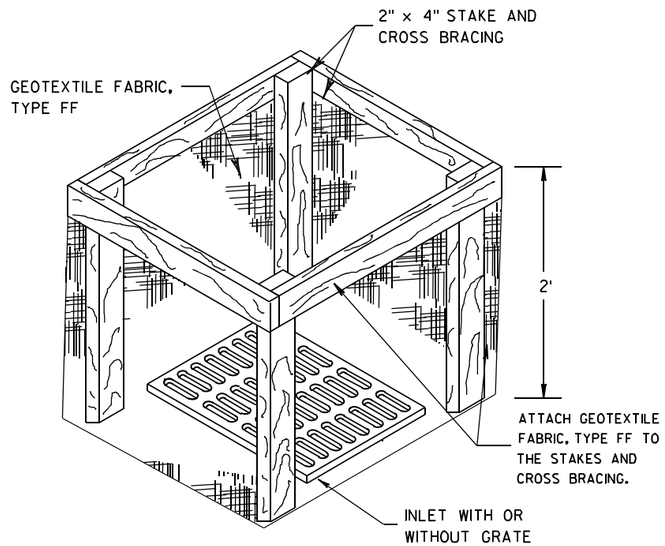
6

S.D.D. 8 E 9-6

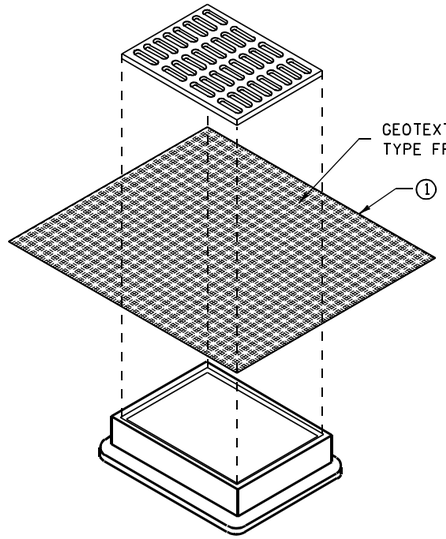
6

S.D.D. 8 E 9-6



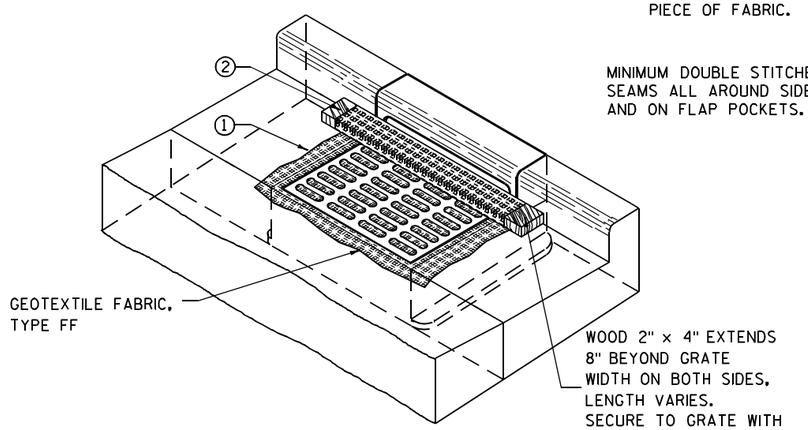


INLET PROTECTION, TYPE A

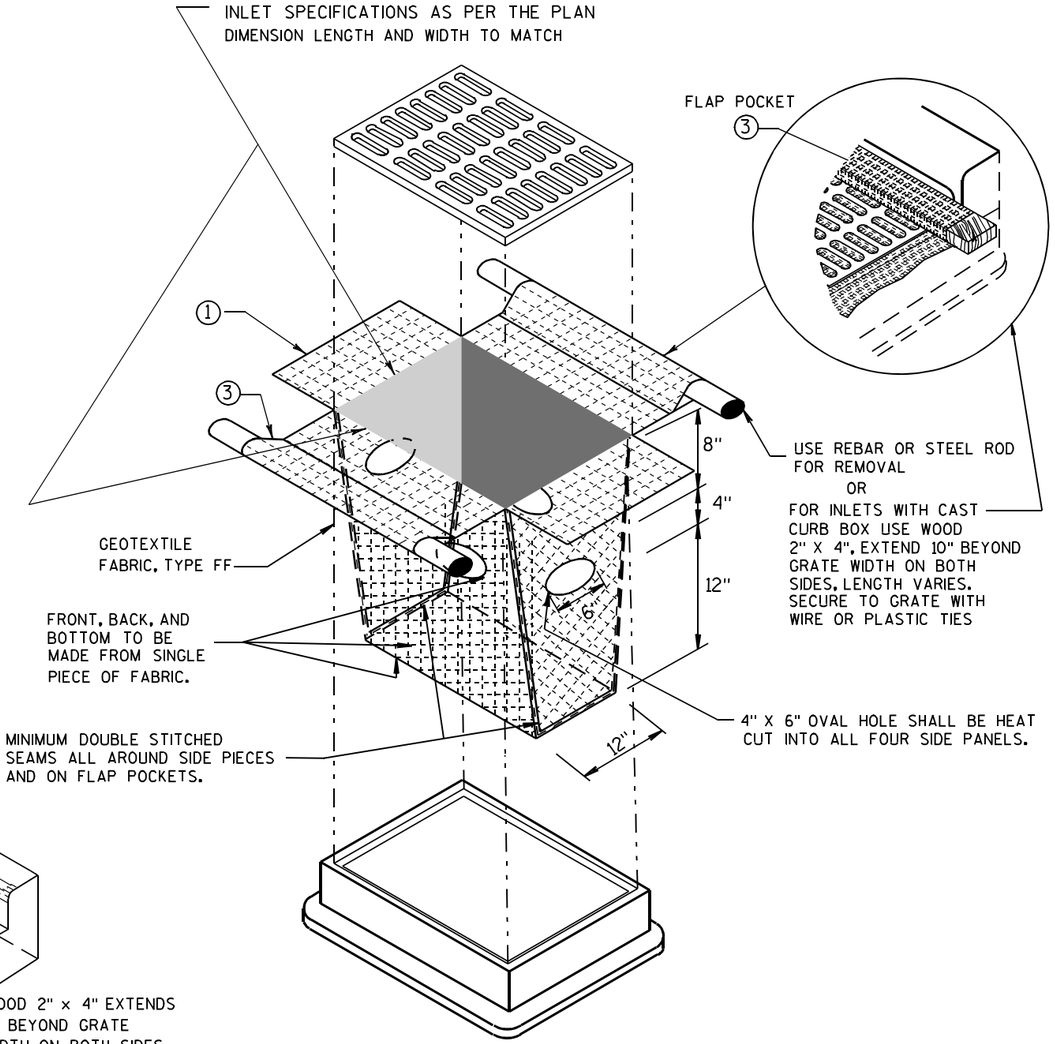


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE 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.

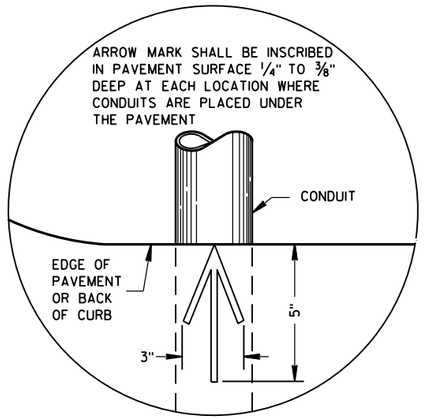
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

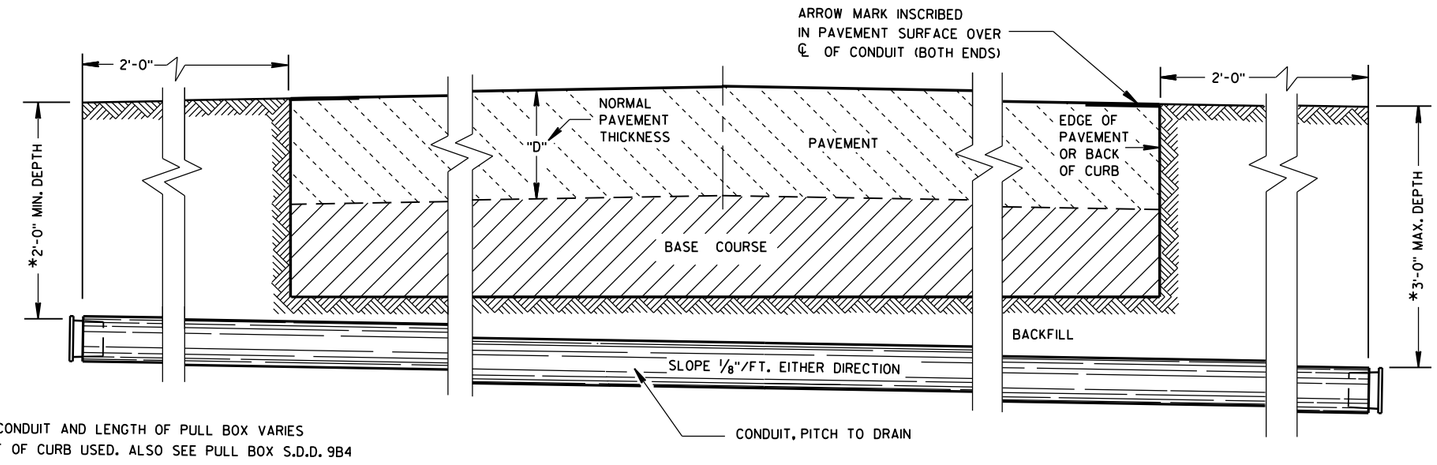
APPROVED
10/16/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 E 10-2



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".

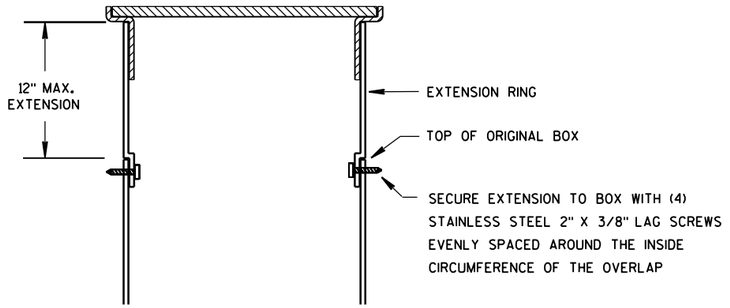
THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

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

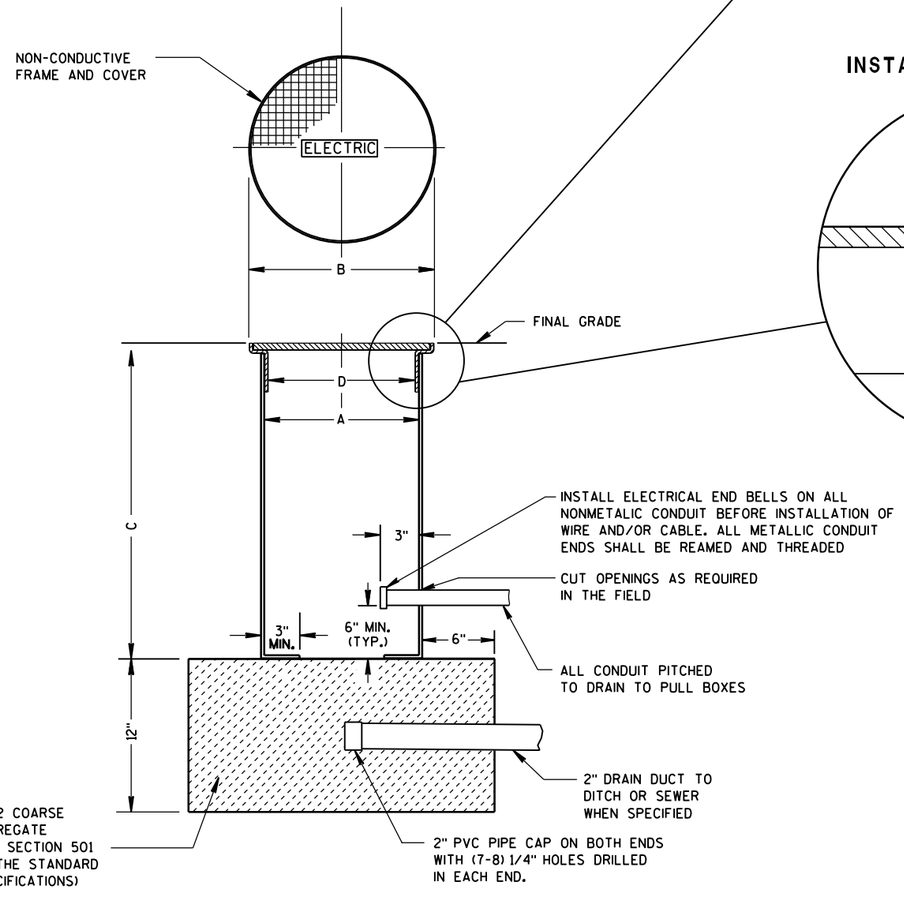
ENTIRE BOX MUST BE CONSTRUCTED OF NON-CONDUCTIVE MATERIALS WITH THE EXCEPTION OF STAINLESS STEEL FASTENERS AND MAGNETIC LOCATABLE DEVICE.

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.

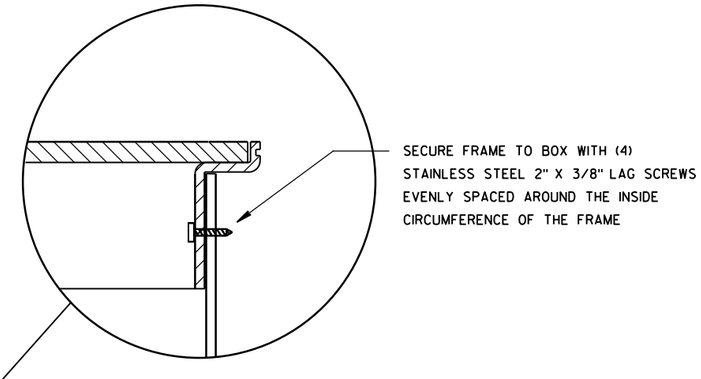


BOX EXTENSION

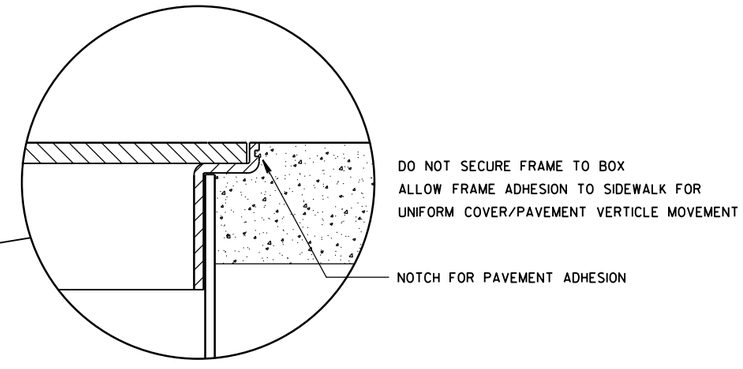


NON-CONDUCTIVE PULL BOX

INSTALLED IN SOD OR CRUSHED AGGREGATE



INSTALLED IN SIDEWALK



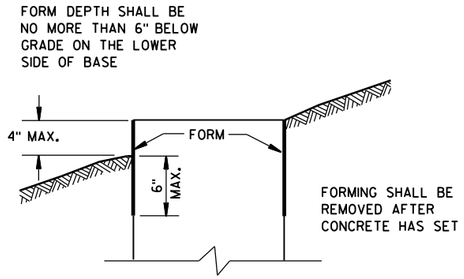
PULL BOX NON-CONDUCTIVE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 9 B 16-1



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 DRAWING SHALL 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 AS 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 AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X 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 NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

GENERAL NOTES (CONTINUED)

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

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

WHEN REQUIRED TO CONNECT NONMETALLIC 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 1, TYPE 2, TYPE 5, AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 2 AND TYPE 5 BASES 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" "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND END 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 BY THE ENGINEER.

(2) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(3) (4) 1" DIA. X 5'-0" ANCHOR RODS.

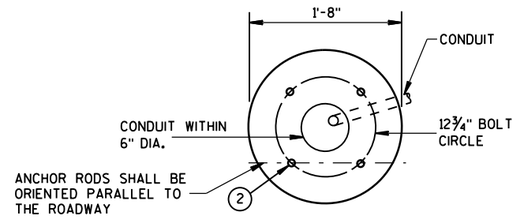
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

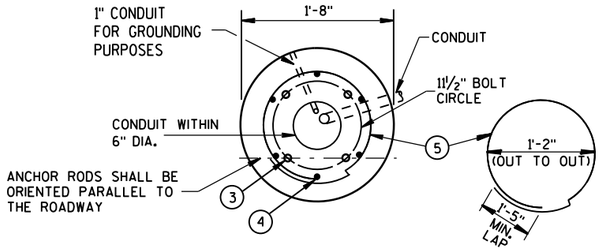
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

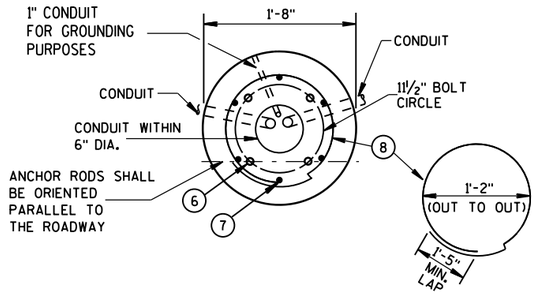
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(7) (6) NO.4 X 4'-8" BAR STEEL REINFORCEMENT.

(8) (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

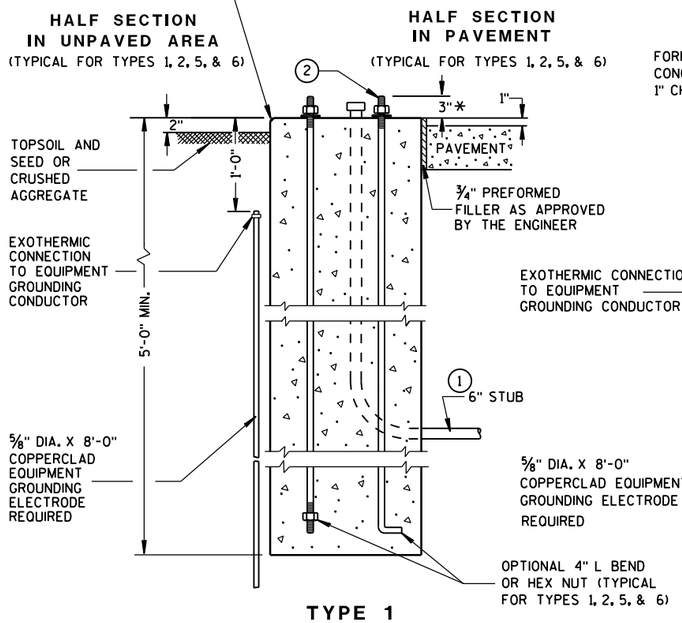




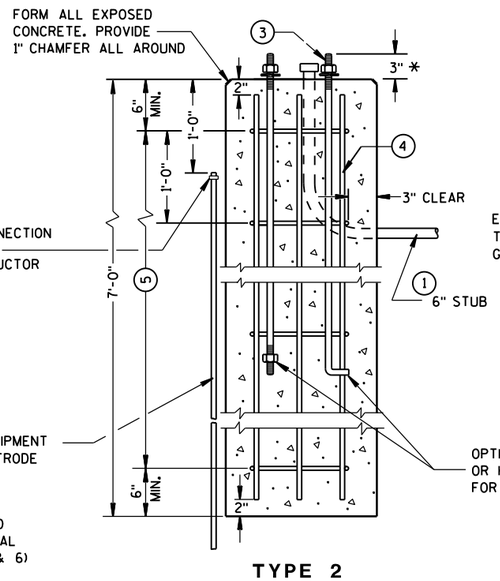


HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2, 5, & 6)

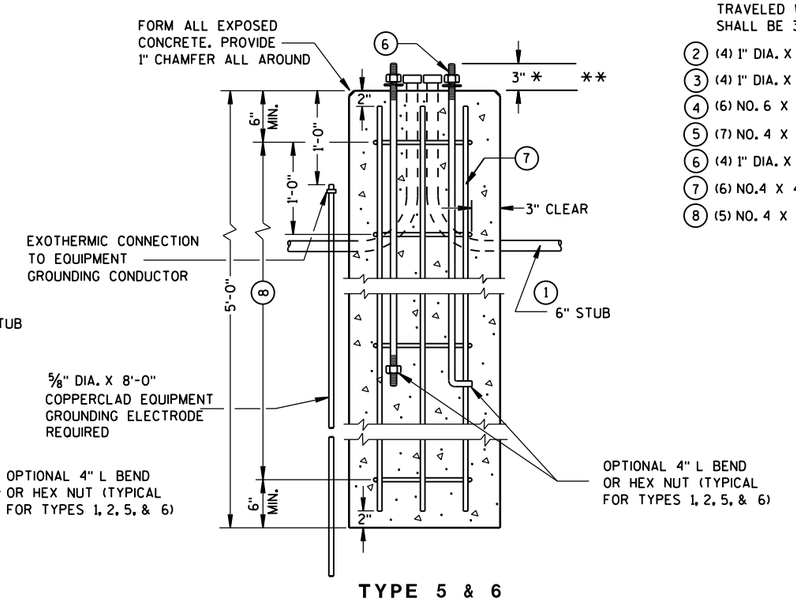
HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2, 5, & 6)



TYPE 1



TYPE 2



TYPE 5 & 6

CONCRETE BASES

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2¾" OR LONGER THAN 3¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

** FOR NONBREAKAWAY INSTALLATIONS, 4½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

CONCRETE BASES, TYPES 1, 2, 5, & 6

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL 75
FHWA

6

S.D.D. 9 C 2-7

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S.D.D. 9 C 2-7

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 641.2.2 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.

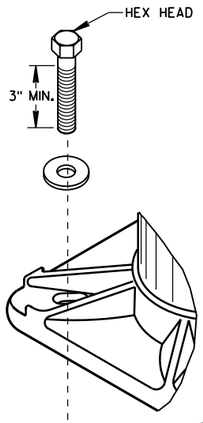
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

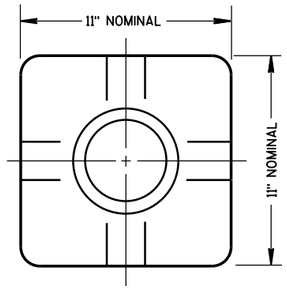
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

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

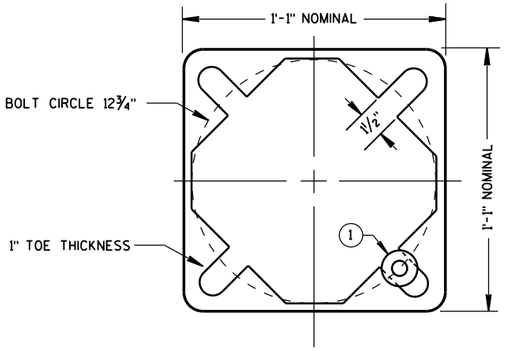
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

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

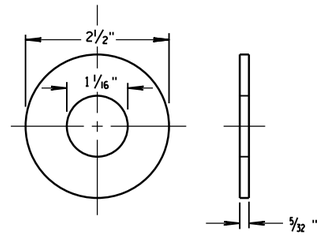




TOP VIEW
(PEDESTAL BASE)

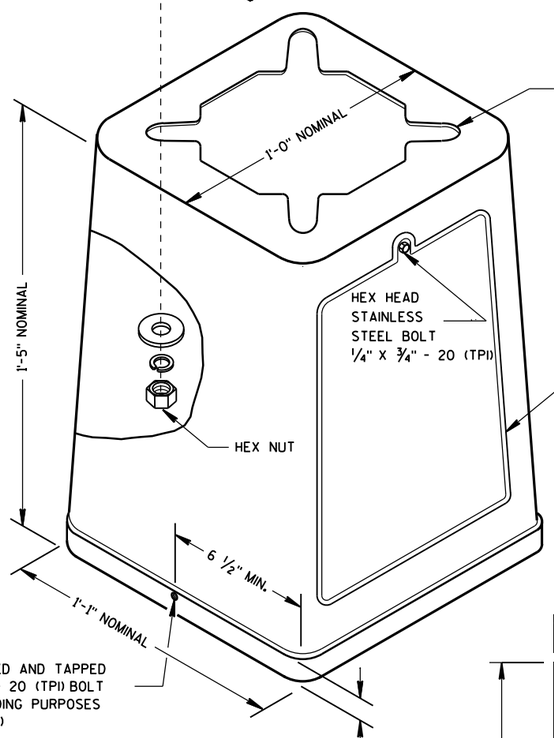


BOTTOM VIEW
(PEDESTAL BASE)

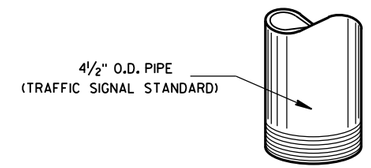


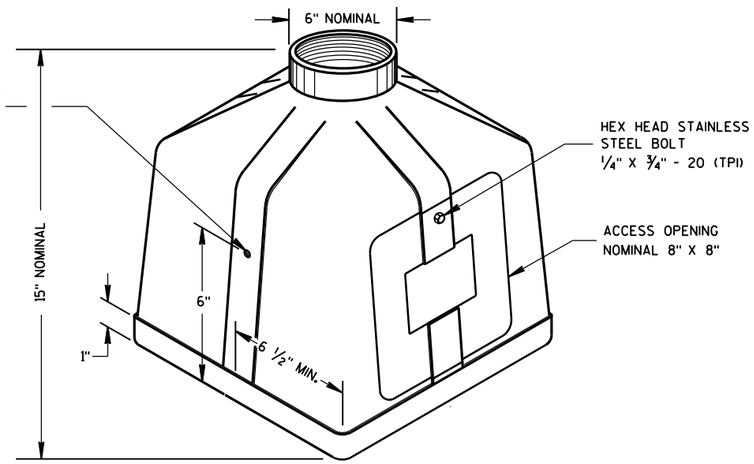
ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)



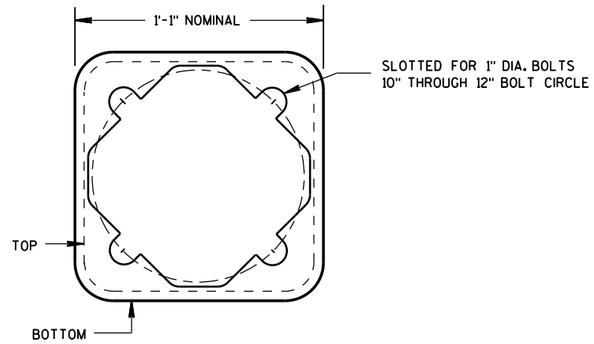
ISOMETRIC VIEW



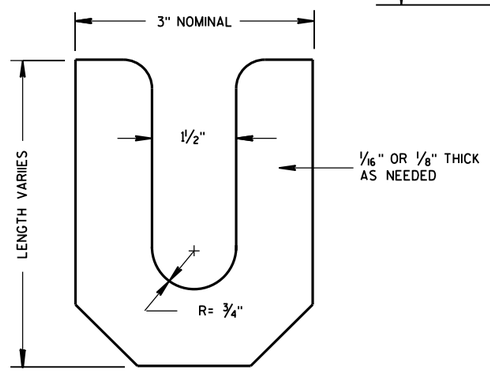


ISOMETRIC VIEW

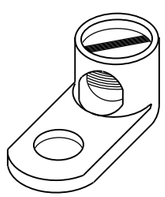
PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)



LEVELING SHIM



TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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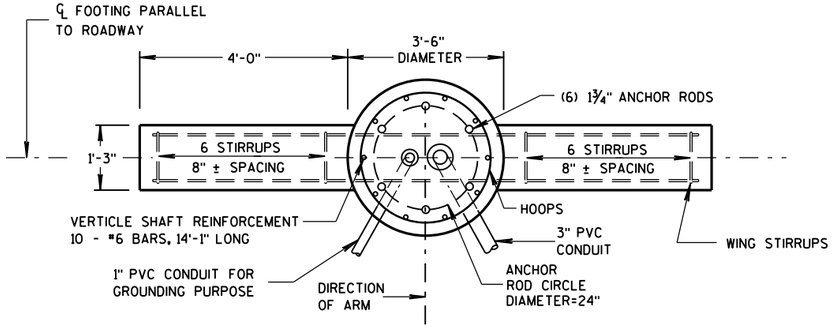
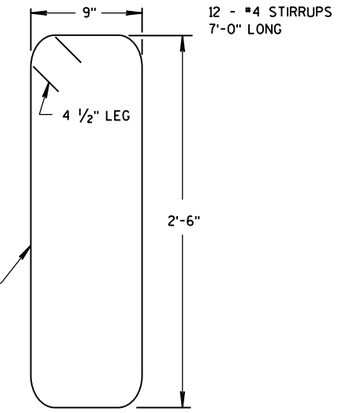
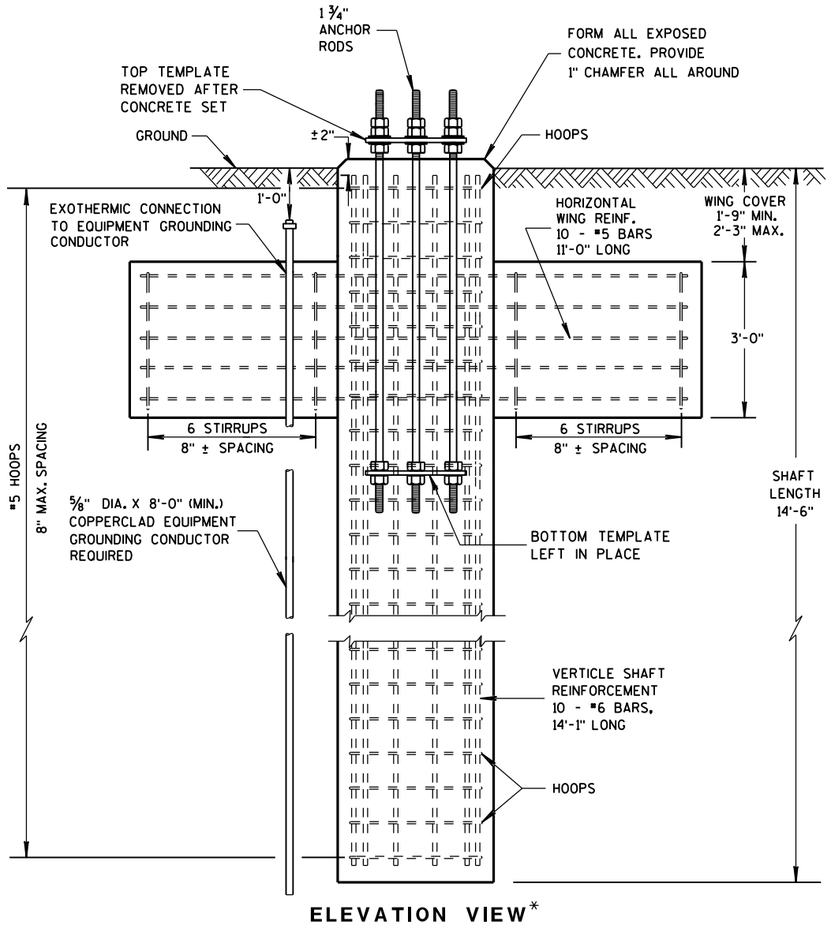


PLAN VIEW

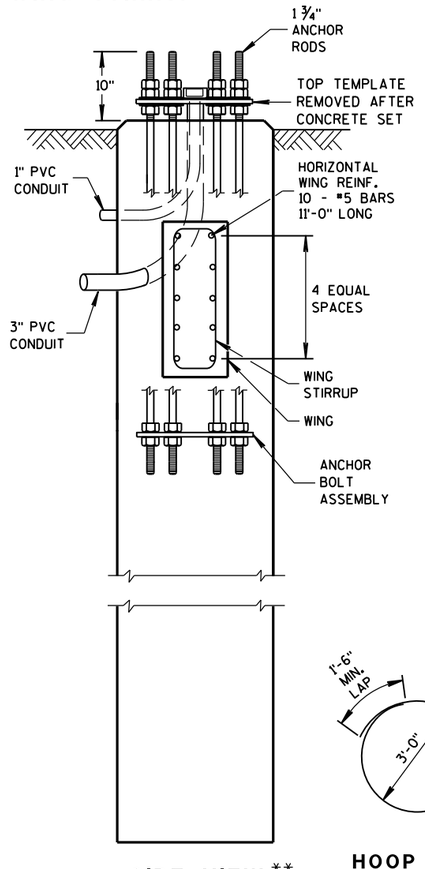


WING STIRRUP



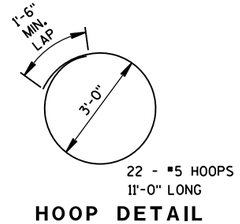
ELEVATION VIEW*

* 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 641.2.2.3 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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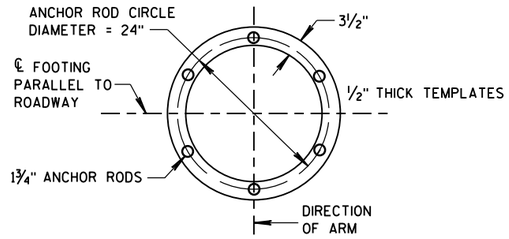
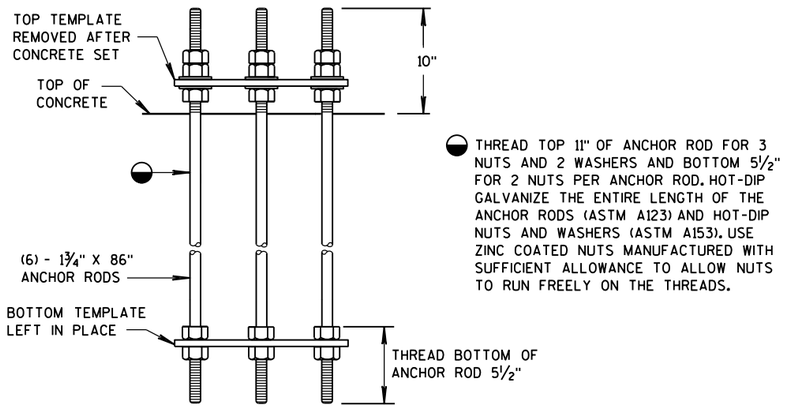
S.D.D. 9 C 12-9a

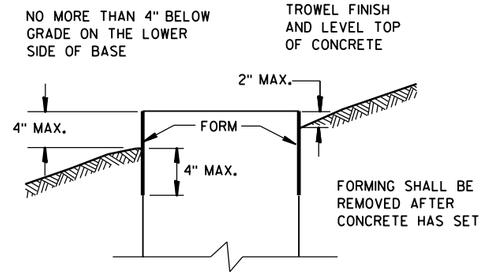


TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 13 ANCHOR ASSEMBLY



FORMING DETAIL

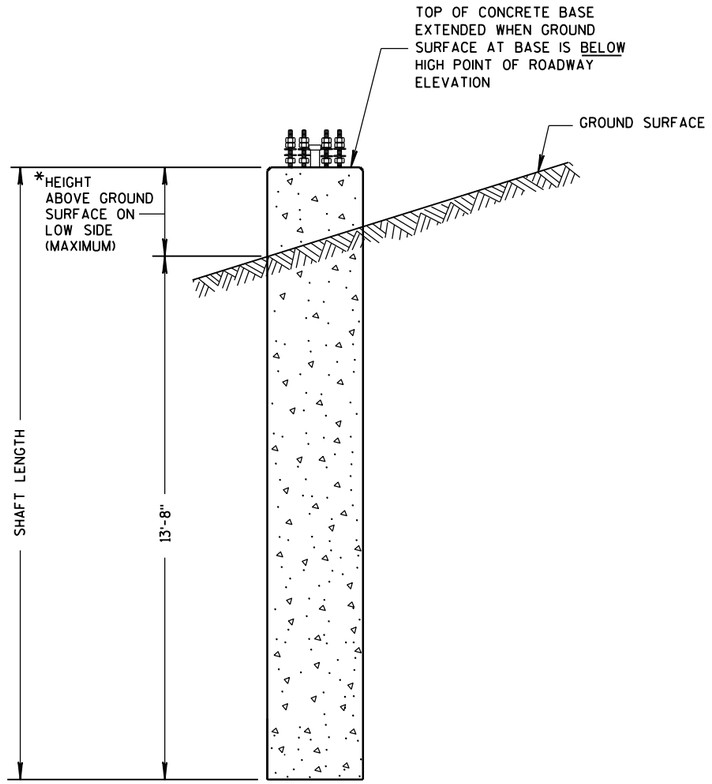
CONCRETE BASE TYPE 13	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2017 DATE FHWA	/S/ Ahmet Demirbilek STATE ELECTRICAL

6

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

REINFORCEMENT AND CONCRETE QUANTITIES
ADJUSTED FOR EXTENDED TYPE 10 CONCRETE BASE

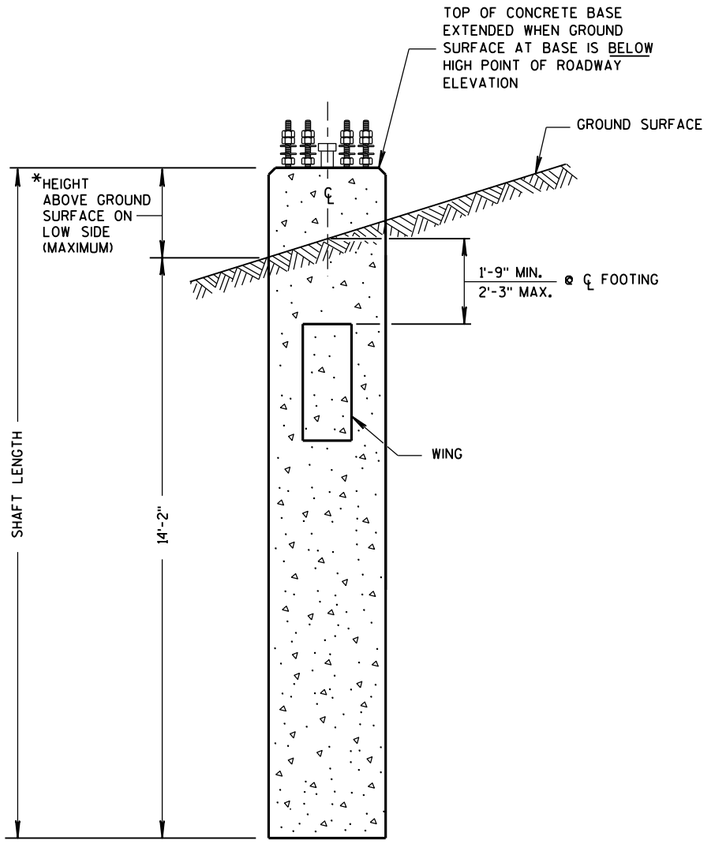
HEIGHT INCREASE REQUIRED	* HEIGHT ABOVE GROUND SURFACE ON LOW SIDE (MAXIMUM)	SHAFT LENGTH	LENGTH OF #6 VERTICAL REINF.	NO. OF #4 HOOPS	C.Y. OF CONCRETE	LBS. OF HOOP BAR STEEL	LBS. OF VERTICAL BAR STEEL
>0" TO 6"	10"	14'-6"	14'-1"	16	2.6	78	127
>6" TO 1'-0"	1'-4"	15'-0"	14'-7"	16	2.7	78	131
>1'-0" TO 1'-6"	1'-10"	15'-6"	15'-1"	17	2.8	83	136
>1'-6" TO 2'-0"	2'-4"	16'-0"	15'-7"	17	2.9	83	141



CONCRETE BASE TYPE 10 (EXTENDED)

REINFORCEMENT AND CONCRETE QUANTITIES
ADJUSTED FOR EXTENDED TYPE 13 CONCRETE BASE

HEIGHT INCREASE REQUIRED	* HEIGHT ABOVE GROUND SURFACE ON LOW SIDE (MAXIMUM)	SHAFT LENGTH	LENGTH OF #6 VERTICAL REINF.	NO. OF #4 HOOPS	C.Y. OF CONCRETE	LBS. OF H.S. BAR STEEL
>0" TO 6"	10"	15'-0"	14'-7"	16	6.5	447
>6" TO 1'-0"	1'-4"	15'-6"	15'-1"	16	6.6	454
>1'-0" TO 1'-6"	1'-10"	16'-0"	15'-7"	17	6.8	469
>1'-6" TO 2'-0"	2'-4"	16'-6"	16'-1"	17	7.0	476



CONCRETE BASE TYPE 13 (EXTENDED)

CONCRETE BASE
TYPE 10 & TYPE 13 EXTENSION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11-26-2013 DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL
FHWA

6

S.D.D. 9 C 13-2

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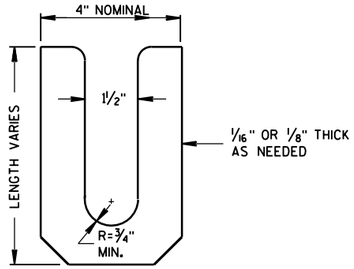
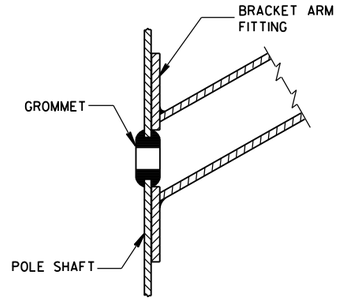
S.D.D. 9 C 13-2

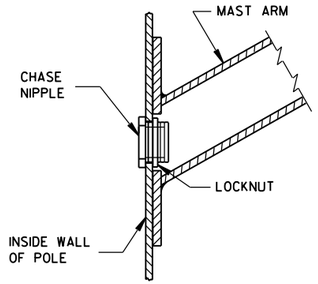


LEVELING SHIM (13)

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.

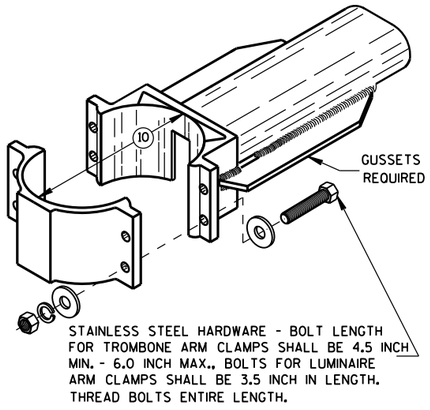
(10) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP.
6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

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

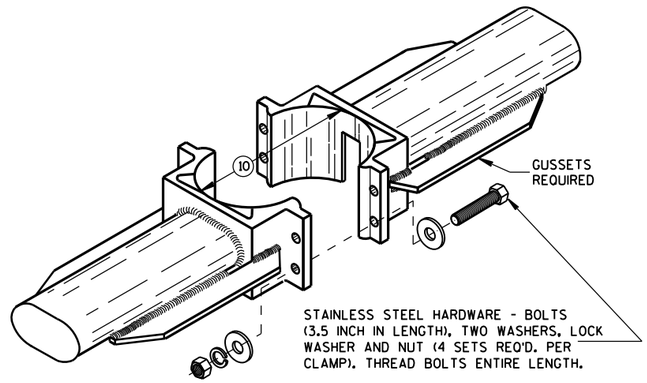
(12) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

(13) 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.

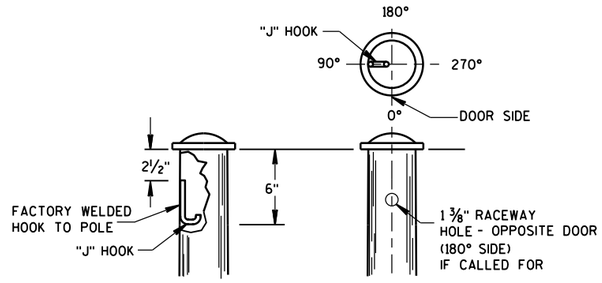
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



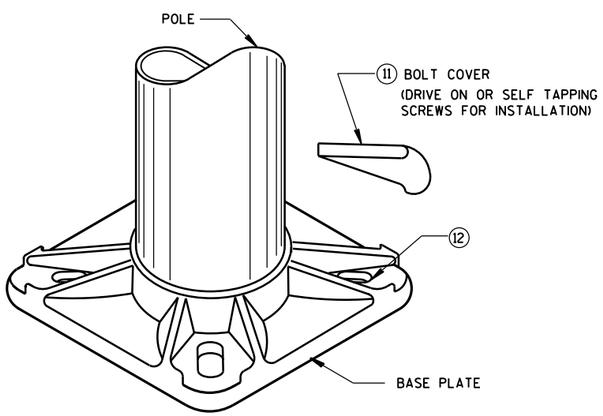
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



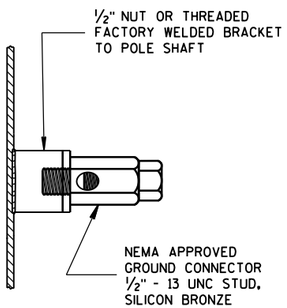
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

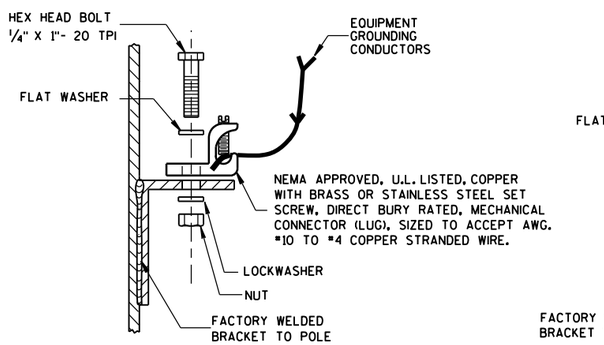


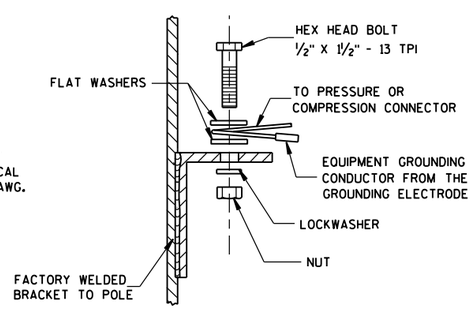
TYPICAL "J" HOOK LOCATION



BASE PLATE







TYPICAL GROUNDING CONNECTIONS

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

HARDWARE DETAILS FOR POLE MOUNTINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Feb. 2015 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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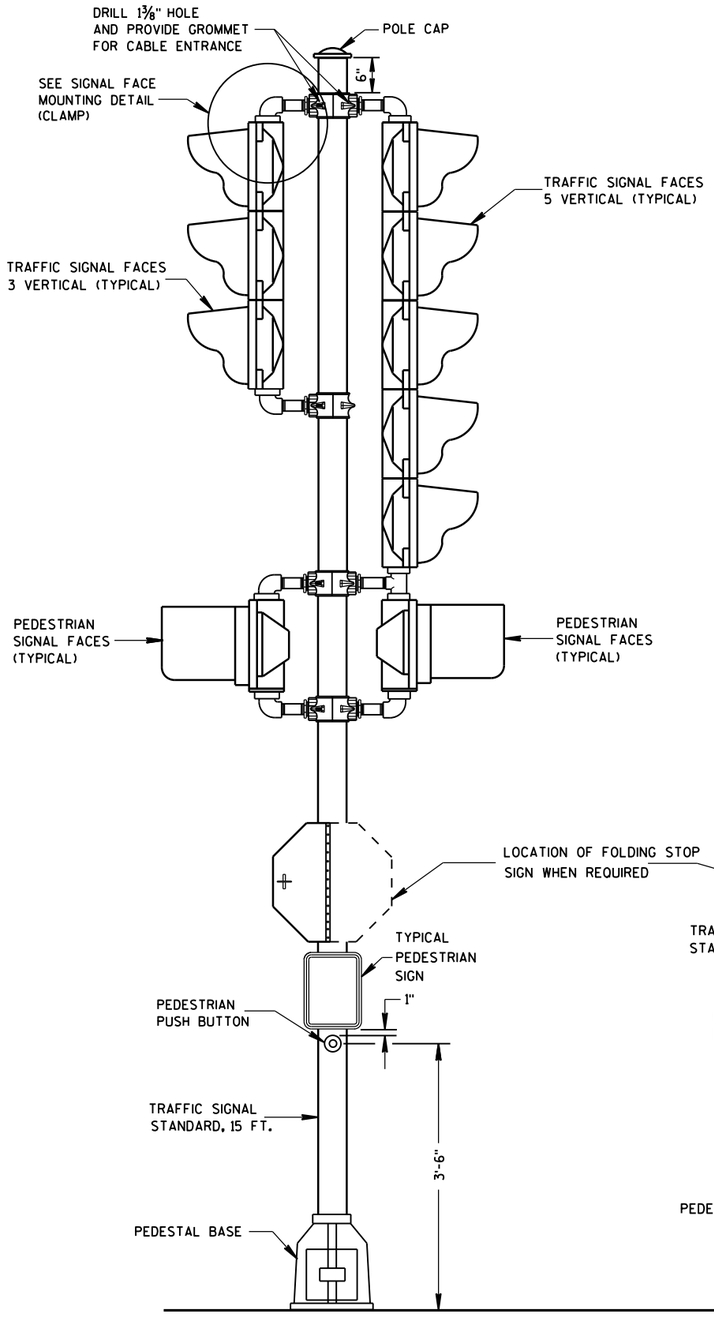
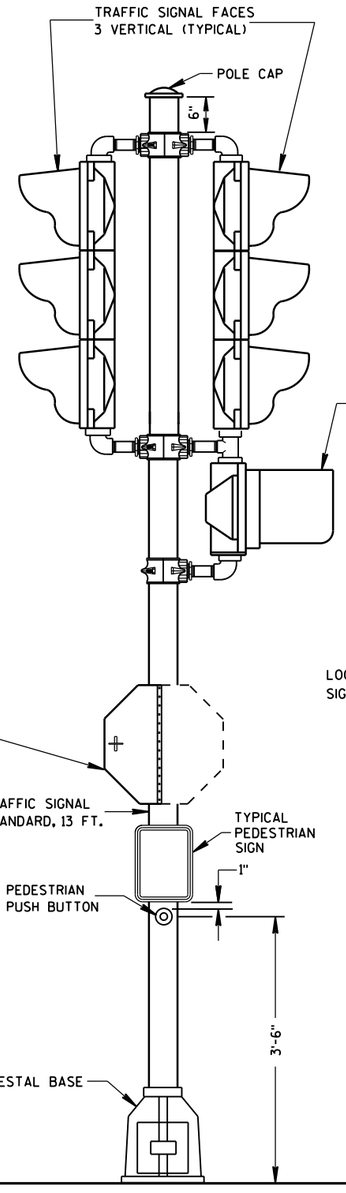
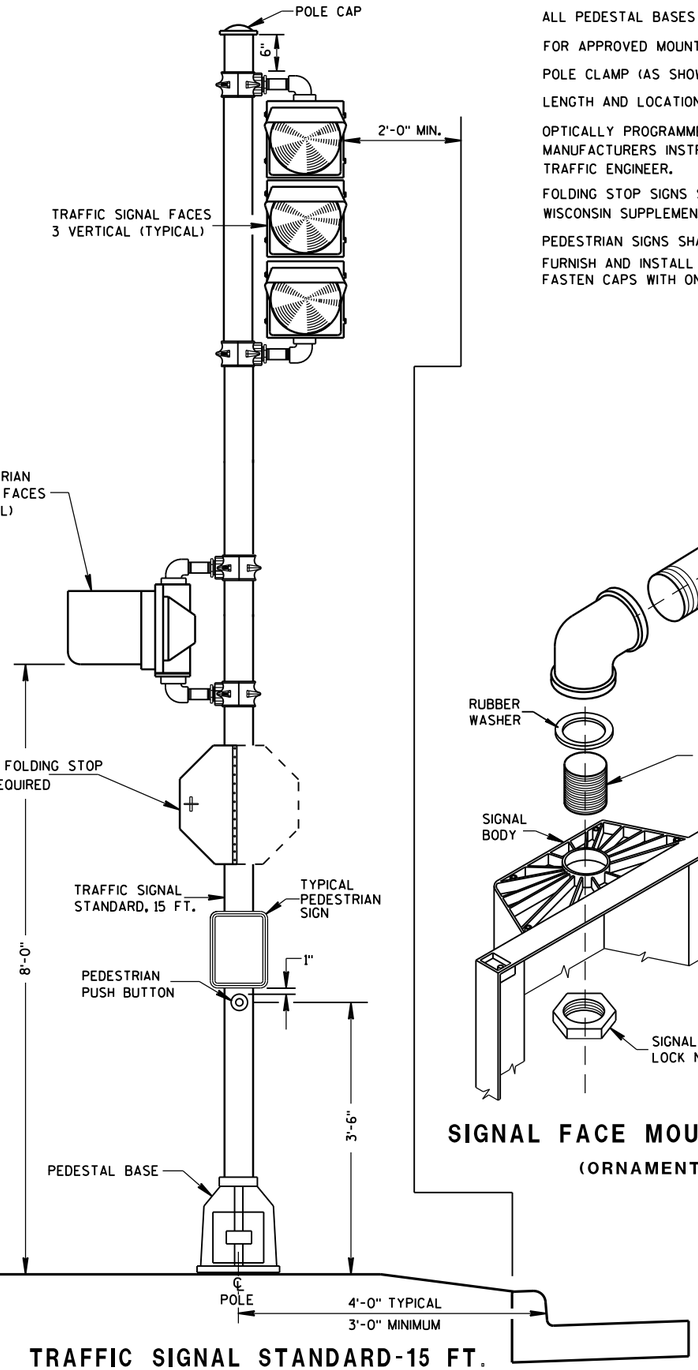
S.D.D. 9 E 1-14g



TRAFFIC SIGNAL STANDARD-15 FT.



TRAFFIC SIGNAL STANDARD-13 FT.



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.

POLE CLAMP (AS SHOWN) MOUNTING BRACKETS SHALL BE USED.

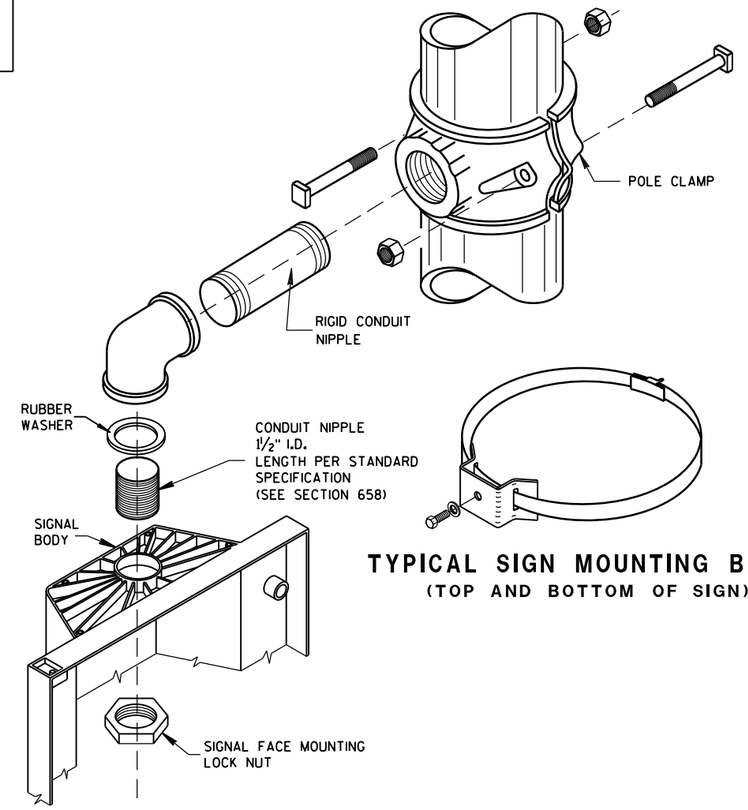
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

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 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
(ORNAMENTAL)

TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)

TRAFFIC SIGNAL STANDARD
ORNAMENTAL BRACKET MOUNTINGS
TYPICAL FOR 13 FT. OR 15 FT.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/28/2013 DATE
/S/ Ahmet Demirbilek STATE ELECTRICAL
FHWA

S.D.D. 9 E 5-6

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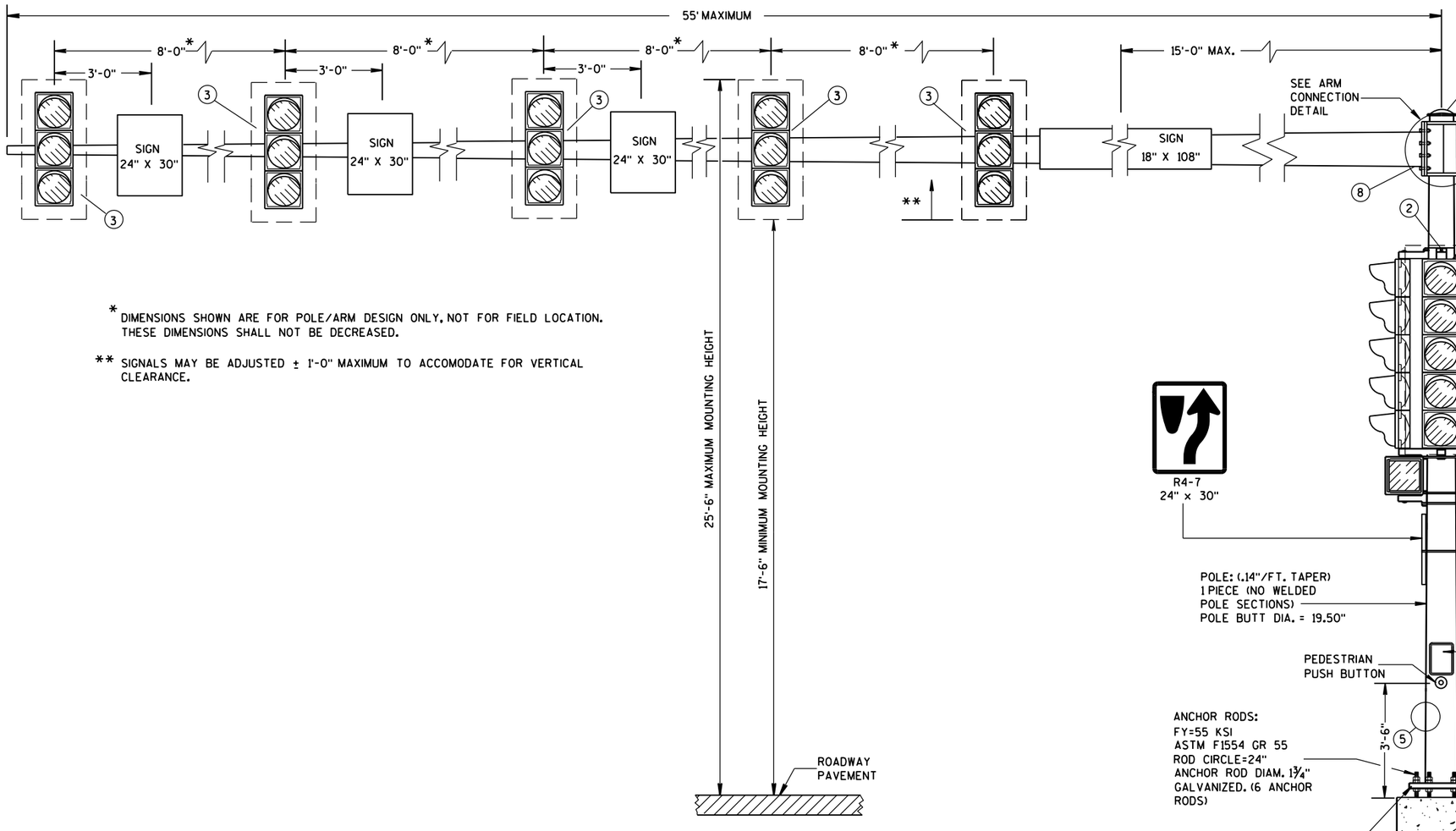
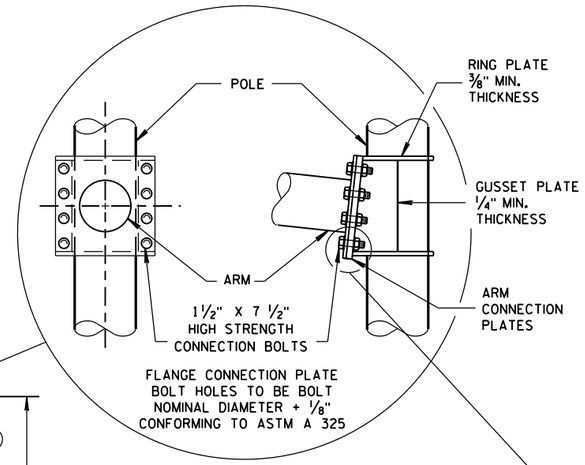
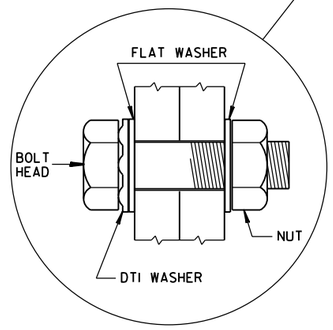


* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

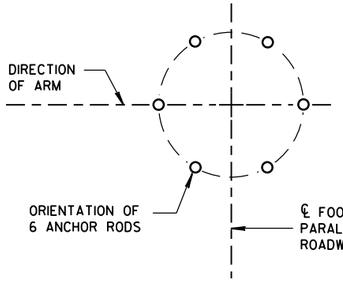
** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.



8 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL



ANCHOR ROD LOCATION

(MAXIMUM LOAD)

TYPE 12 POLE 35'- 55' MONOTUBE ARM

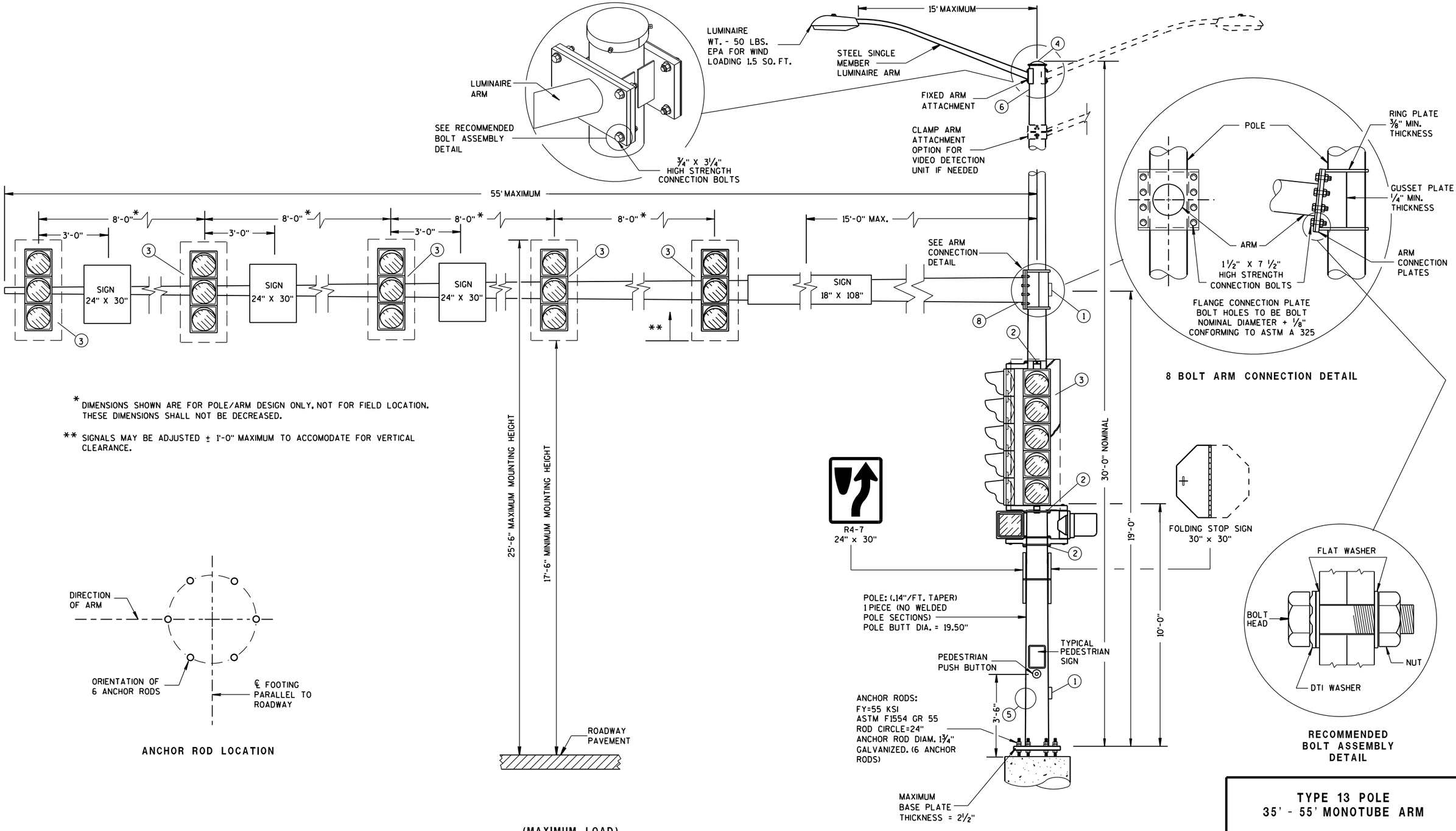
TYPE 12 POLE 35' - 55' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May, 2015 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 9 E 8-8c



* 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 ACCOMODATE FOR VERTICAL CLEARANCE.

8 BOLT ARM CONNECTION DETAIL

RECOMMENDED BOLT ASSEMBLY DETAIL

ANCHOR ROD LOCATION

(MAXIMUM LOAD)

TYPE 13 POLE 35'- 55' MONOTUBE ARM

TYPE 13 POLE
35' - 55' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2016 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

S.D.D. 9 E 8-8d

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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.

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

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 2013 6TH EDITION 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.

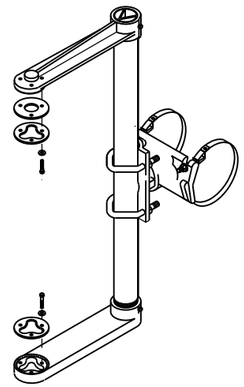
(6) FACTORY-WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.

(7) INSTALL STRUCTURAL IDENTIFICATION PLAQUES.

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

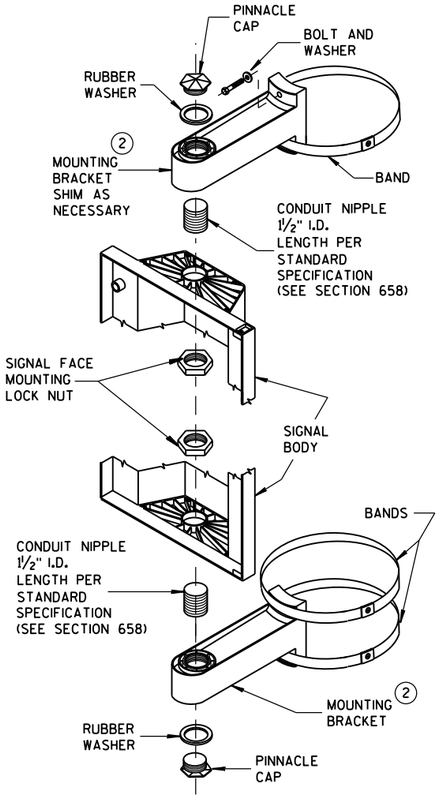
MOUNTING HEIGHT SHALL BE 6'-0" ABOVE THE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.

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

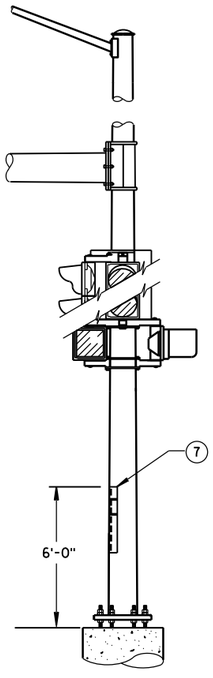


SIGNAL FACE MOUNTING BRACKET
DETAIL FOR MONOTUBE ARM

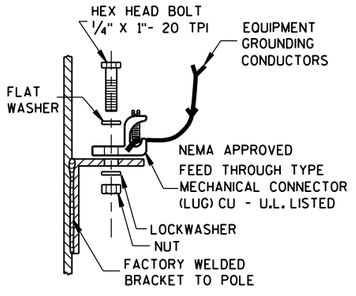
(MOUNT PER MANUFACTURER'S RECOMMENDATION)



SIGNAL FACE
VERTICAL MOUNTING DETAIL

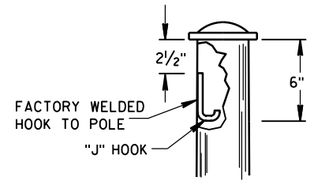


STRUCTURAL IDENTIFICATION
PLAQUE PLACEMENT



TYPICAL GROUNDING CONNECTIONS (5)

NUT, BOLT AND WASHERS SHALL
BE STAINLESS STEEL



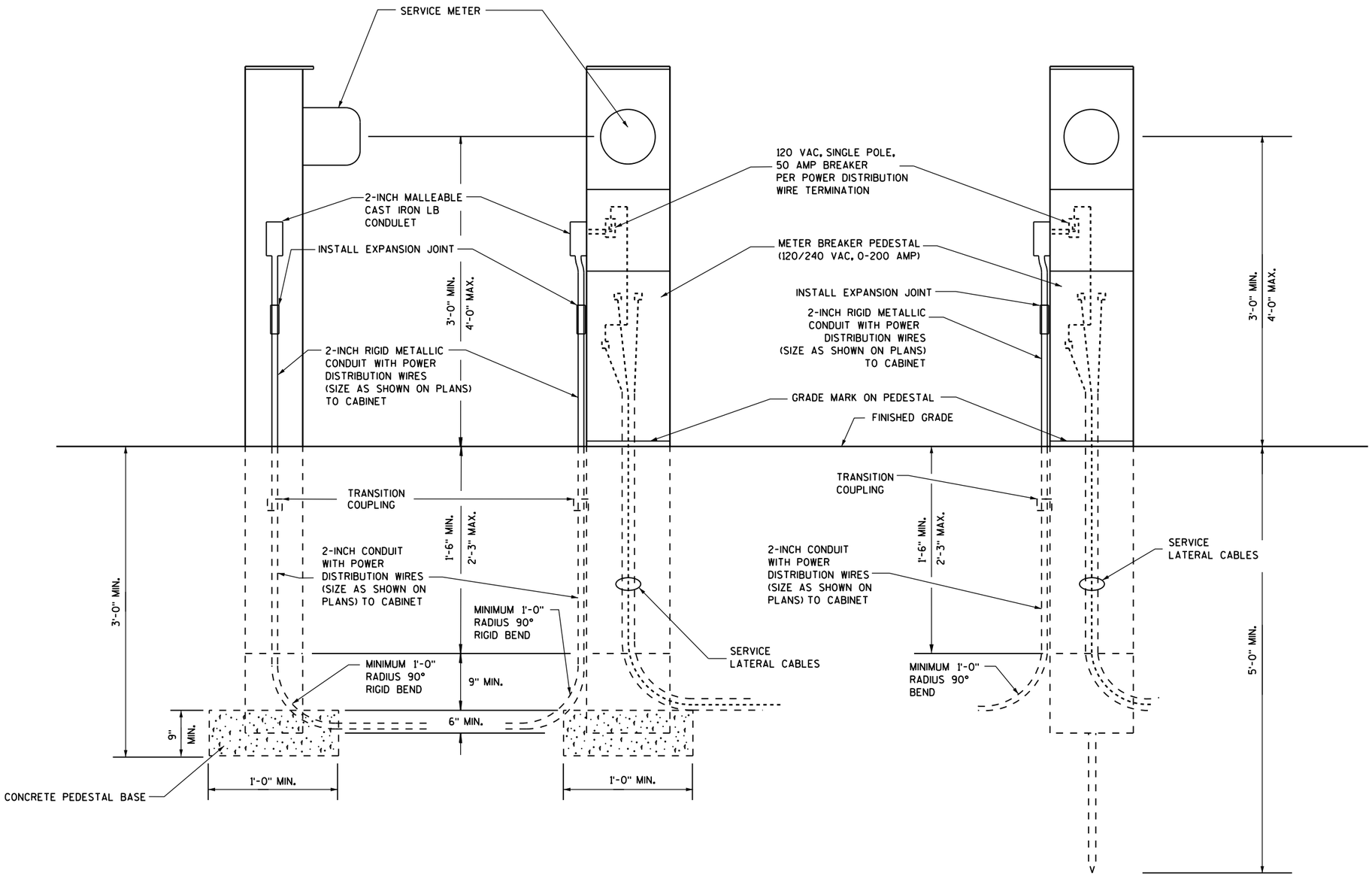
"J" HOOK WIRE SUPPORT (6)

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2016 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

S.D.D. 9 E 8-8e



2 CIRCUIT METER BREAKER PEDESTAL

ALTERNATE SUPPORTING STAKE

(IF APPROVED BY UTILITY)

2 CIRCUIT
METER BREAKER PEDESTAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL

FHWA

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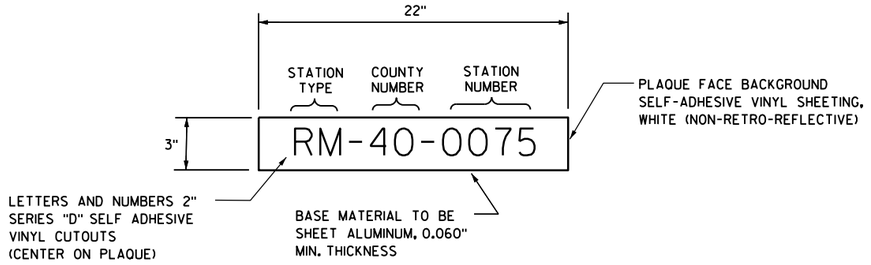
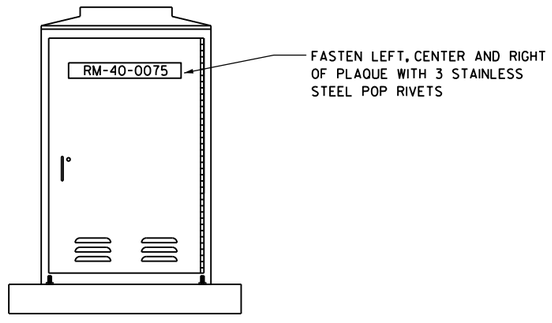
S.D.D. 9 H 3-1

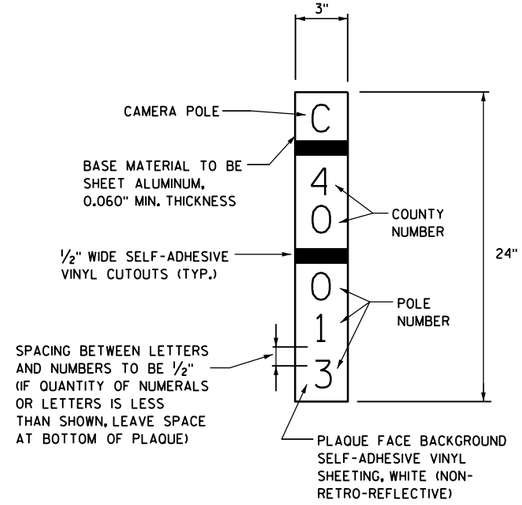


CONTROL CABINET IDENTIFICATION PLAQUE DETAIL

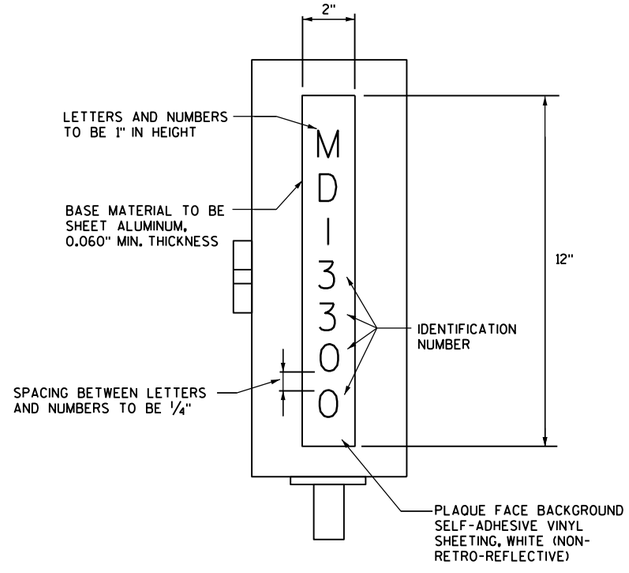


CONTROL CABINET IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENTS

(TYPICAL ALL CONTROL CABINETS)



POLE IDENTIFICATION PLAQUE DETAIL



MICROWAVE DETECTOR FIELD CABINET IDENTIFICATION PLAQUE DETAIL

GENERAL NOTES

1. TWO PLAQUES PER CABINET REQUIRED ON CONTROL CABINET.
2. FASTEN ONE PLAQUE ON FRONT DOOR, UPPER HALF.
3. FASTEN ONE PLAQUE ON SIDE FACING LOCAL STREET. IF NO LOCAL STREET NEARBY, OR IF SUCH LOCATION COINCIDES WITH LOCATION OF PLAQUE IN NOTE (2), FASTEN PLAQUE ON REAR OF CABINET, UPPER HALF.
4. COUNTY NUMBER NOT REQUIRED ON RAMP METER CABINETS.

LEGEND STATION TYPE

RM - RAMP METER
CCTV - CLOSED CIRCUIT TELEVISION
ATR - AUTOMATIC TRAFFIC RECORDER
SDS - SYSTEM DETECTOR STATION
MD - MICROWAVE DETECTOR

IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 9 H 11-1

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

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

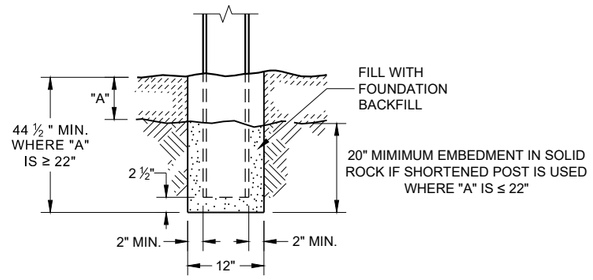
3. IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS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

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

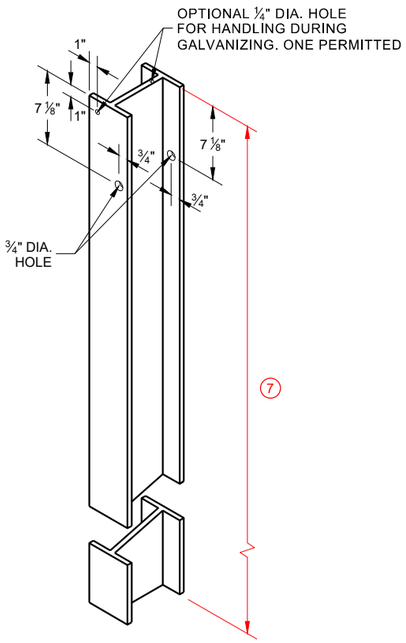
5. FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

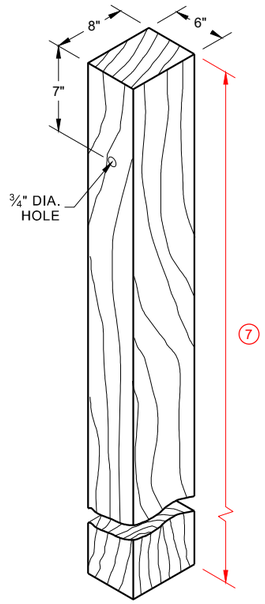
7. TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



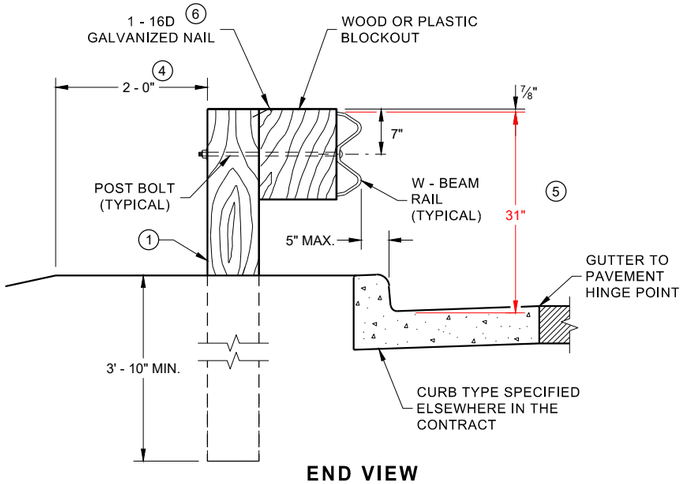
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



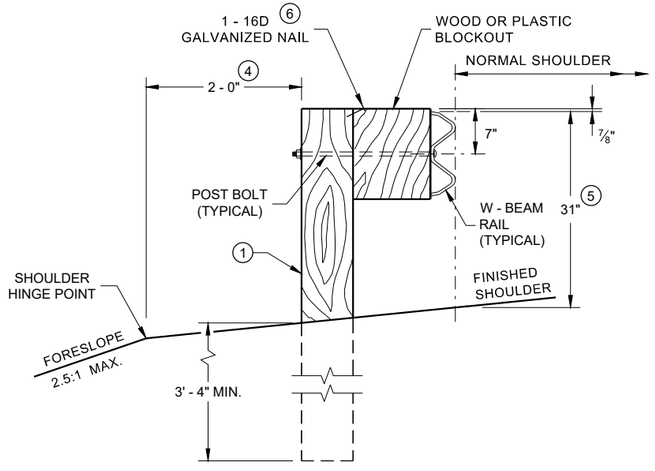
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



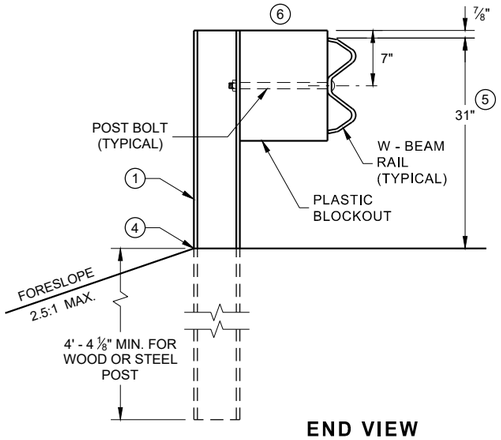
WOOD POST (6" X 8") NOMINAL (1)



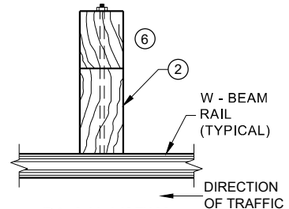
END VIEW
LOCATED ALONG A CURBED ROADWAY



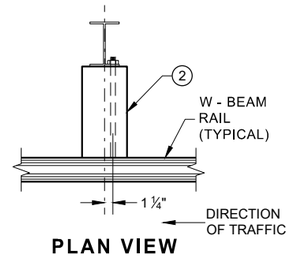
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



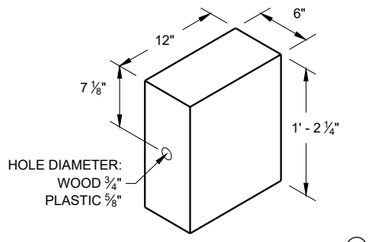
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



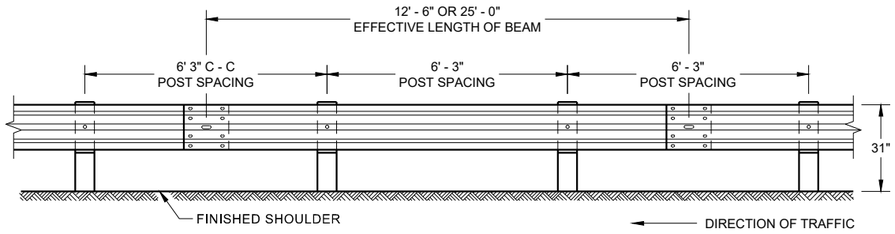
WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

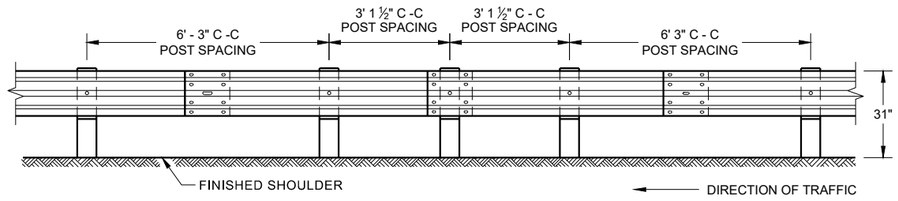
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B42 - 06a

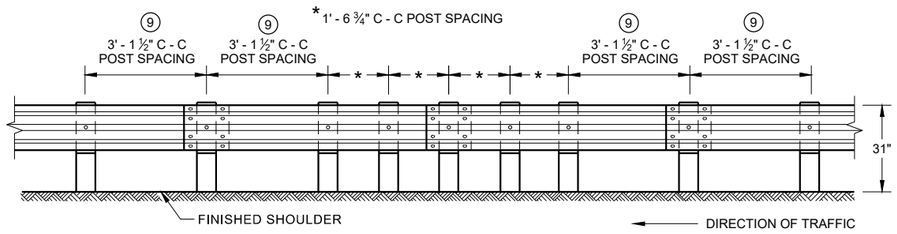
SDD 14B42 - 06a



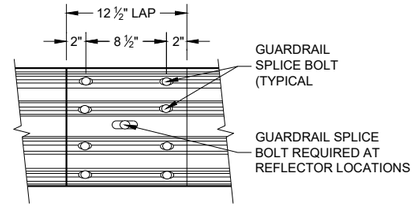
FRONT VIEW
POST SPACING STANDARD INSTALLATION



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



FRONT VIEW
QUARTER POST SPACING (QS)



FRONT VIEW
MID-SPAN BEAM SPLICE

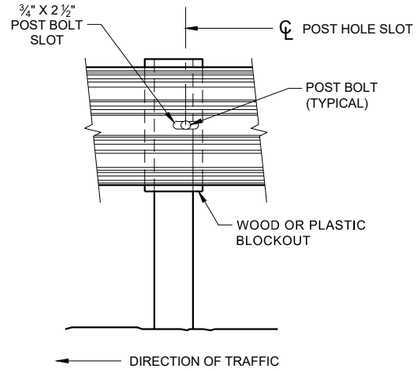
GENERAL NOTES

⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.

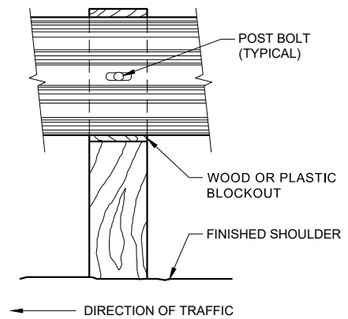
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A ¾" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

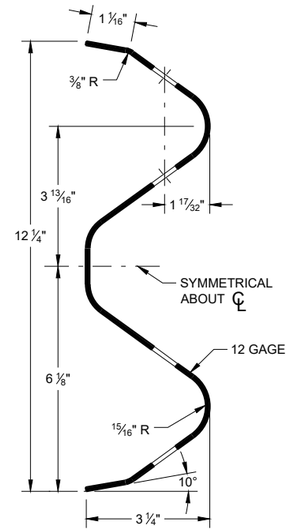
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



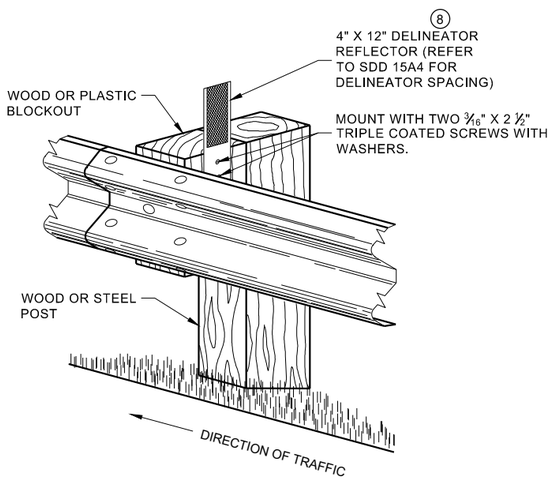
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL

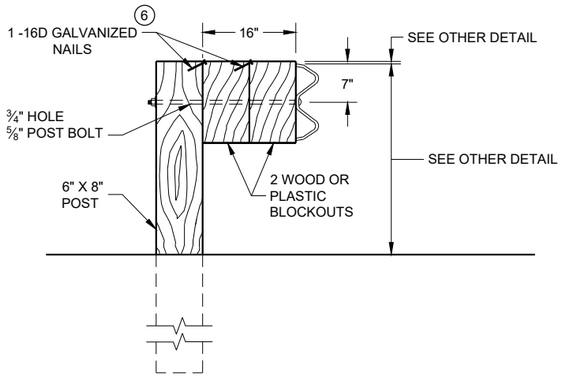


ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B42 - 06b

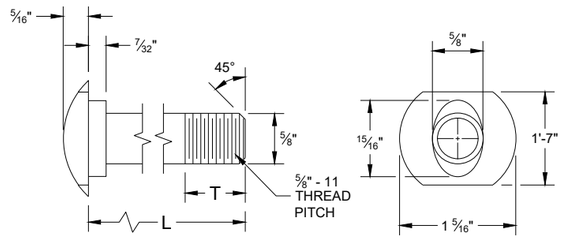


DETAIL FOR 16" BLOCKOUT DEPTH

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

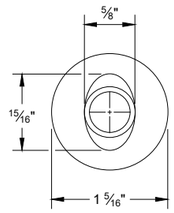
NOTE:

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

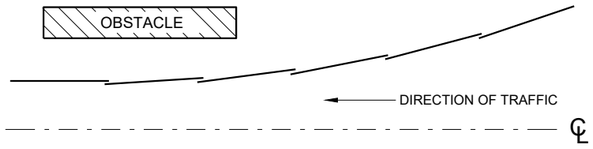


POST BOLT TABLE

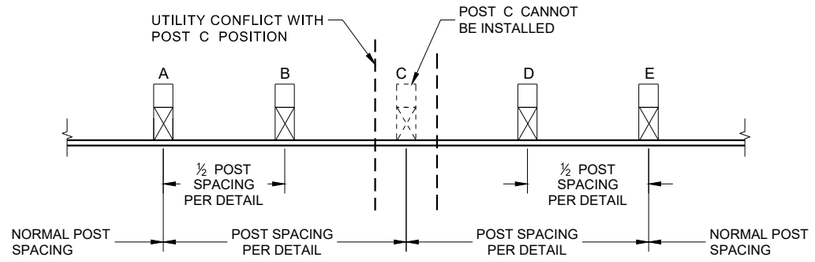
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



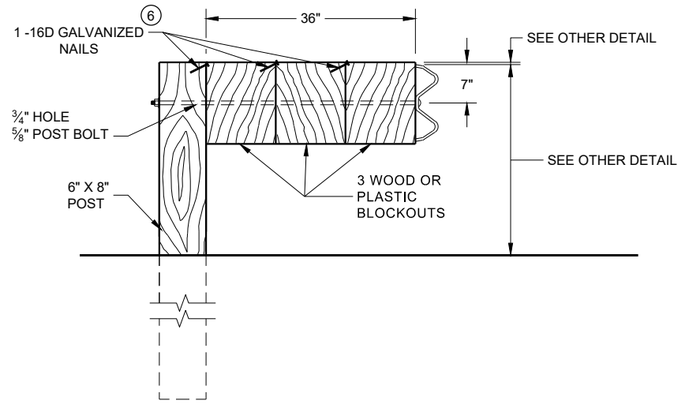
ALTERNATE BOLT HEAD



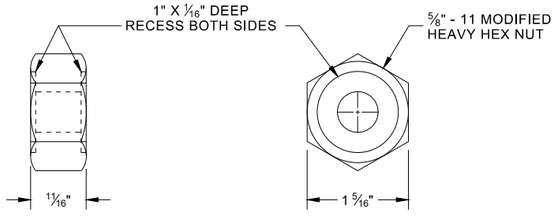
PLAN VIEW
BEAM LAPPING DETAIL



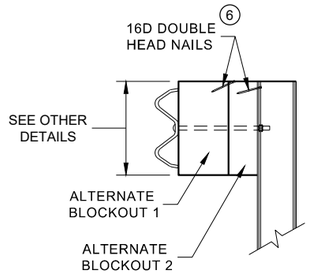
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



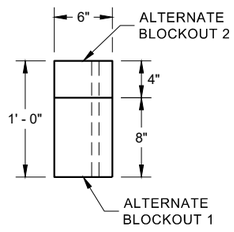
DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW



PLAN VIEW

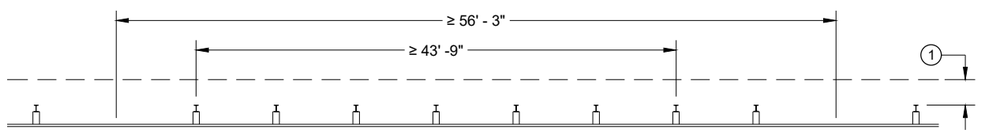
ALTERNATE WOOD BLOCKOUT DETAIL

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

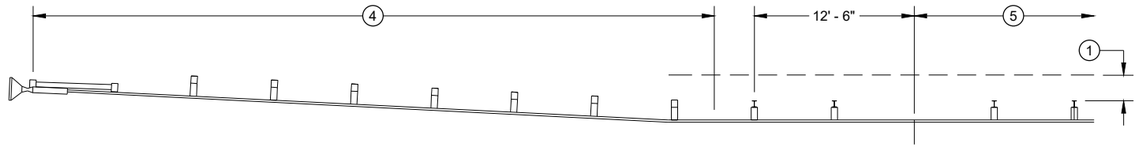
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

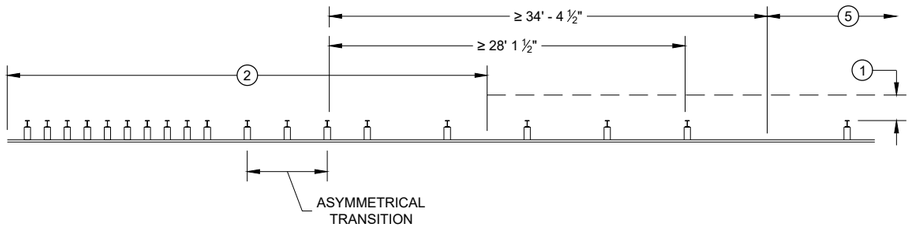
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL



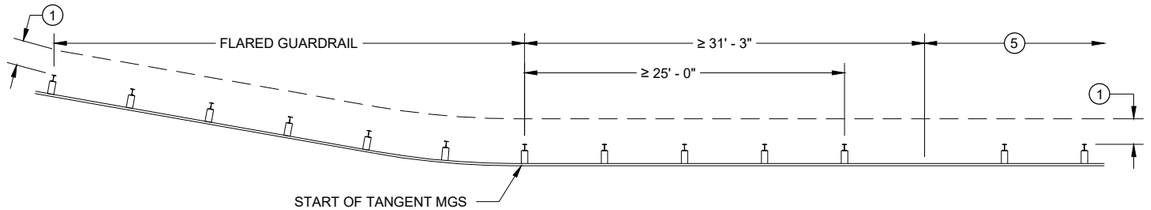
MISSING POST IN NORMAL BEAM GUARD RUN



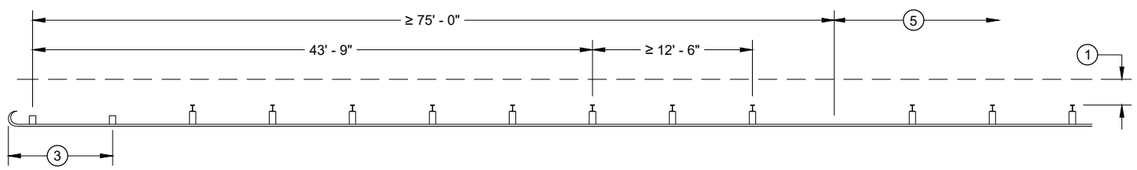
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



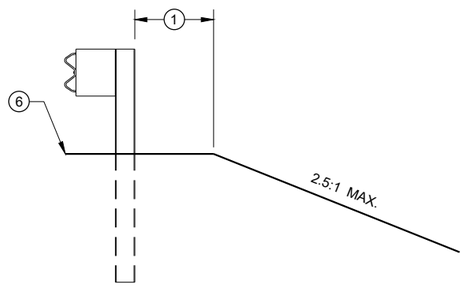
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



MISSING POST IN NORMAL BEAM GUARD RUN NEAR FLARED BEAM GUARD



MISSING POST IN NORMAL BEAM GUARD RUN NEAR TYPE 2 TERMINAL



CROSS SECTION VIEW

1. MINIMUM OF 2 FEET OF GRADING BEHIND POST.
2. SEE SDD 14B45 FOR MORE DETAILS.
3. SEE SDD 14B47 FOR MORE DETAILS.
4. SEE SDD 14B44 FOR MORE DETAILS.
5. SEE MISSING POST IN NORMAL BEAM GUARD RUN FOR DISTANCE TO NEXT MISSING POST AND AREA FOR WELL DRAINED, COMPACTED SOILS.
6. SEE PLAN FOR SHOULDER DESIGN.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

SDD 14B42 - 06d

SDD 14B42 - 06d

GENERAL NOTES

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

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

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

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

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

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

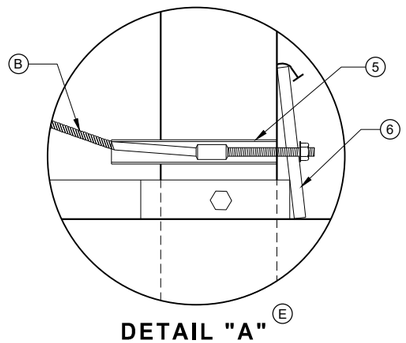
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

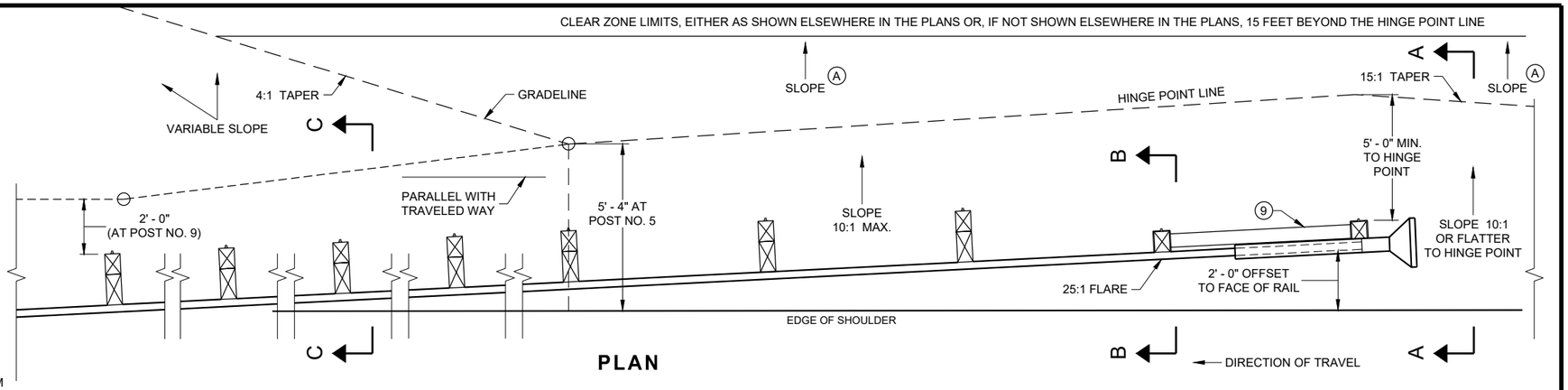
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

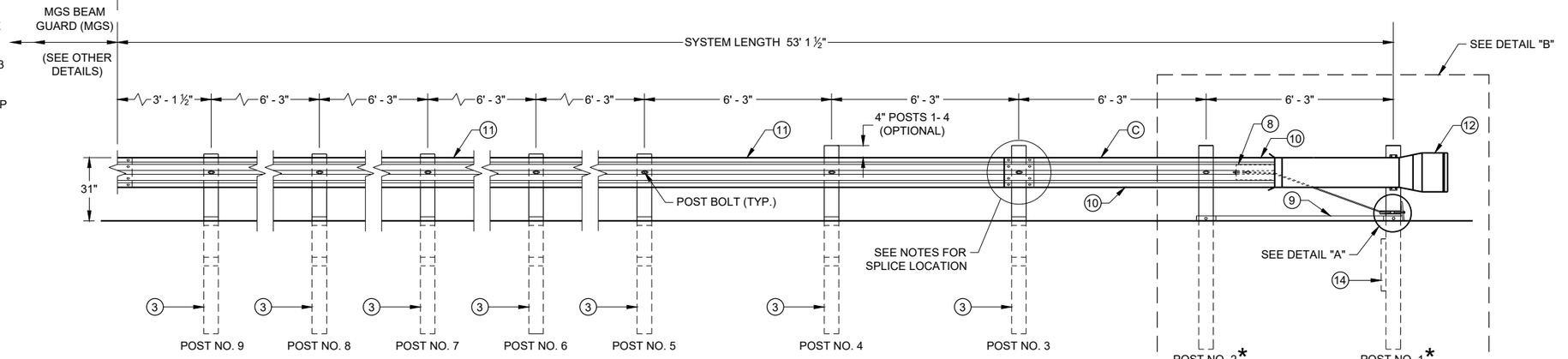
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



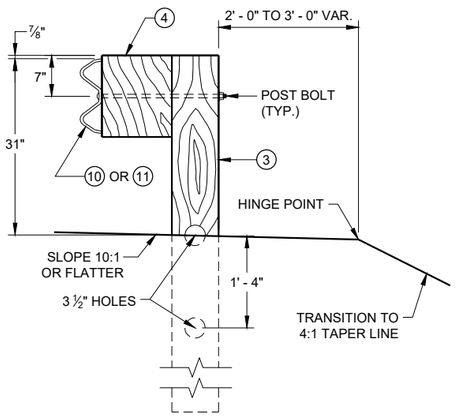
DETAIL "A" (E)



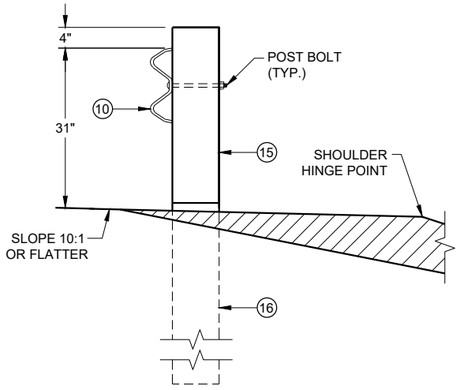
PLAN



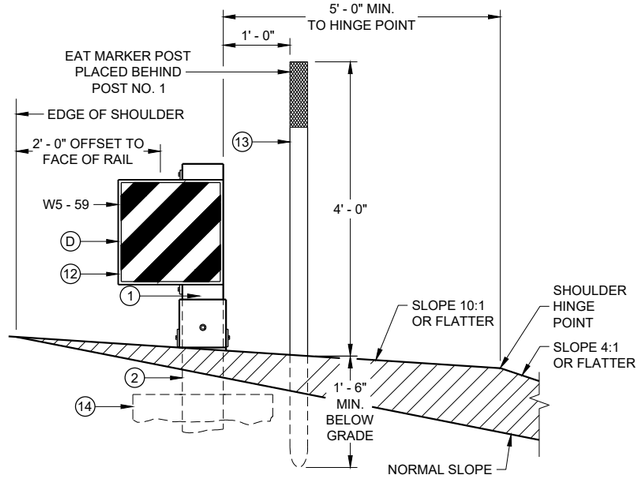
ELEVATION



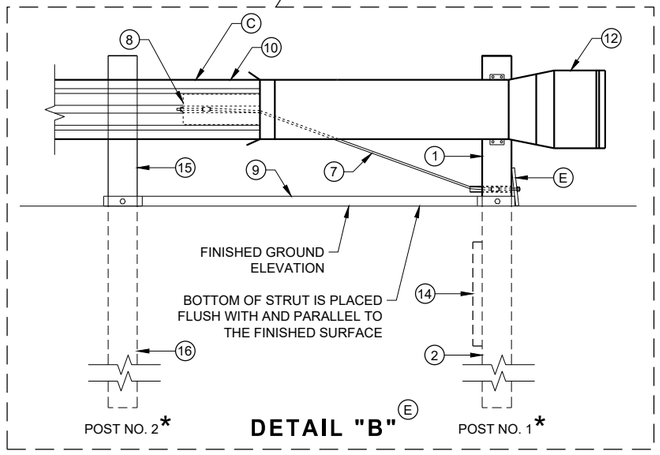
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



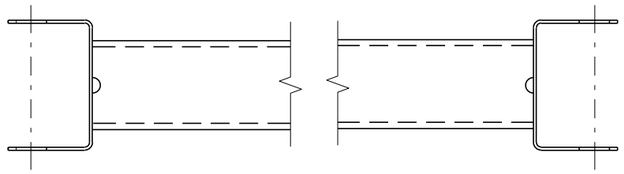
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

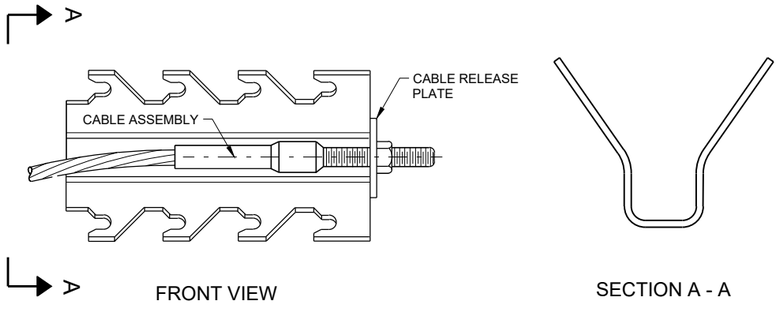
SDD 14B44 - 04a



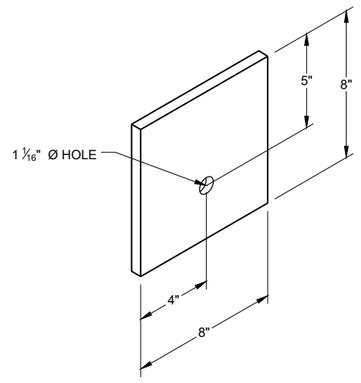
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

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



GENERIC ANCHOR CABLE BOX ⑨ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

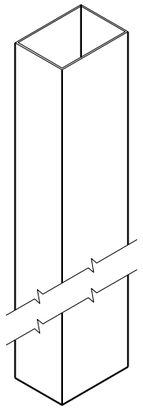
6

SDD 14B45 - 04b

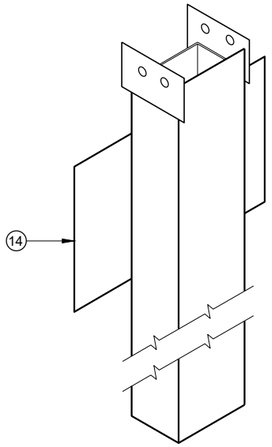
SDD 14B45 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

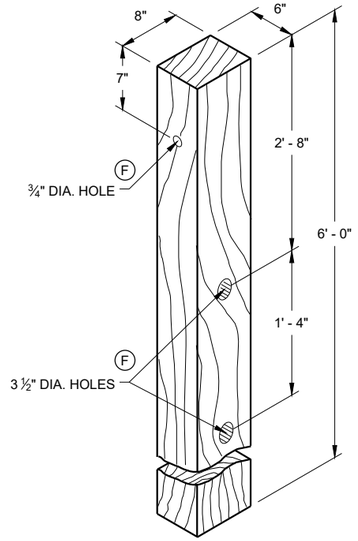
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



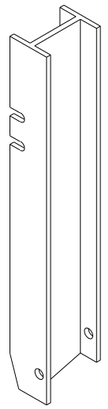
UPPER POST NO. 1 (1) (E)



LOWER POST NO. 1 (2) (E)



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



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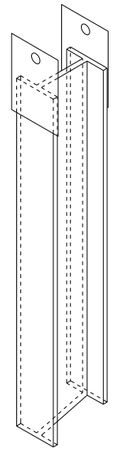

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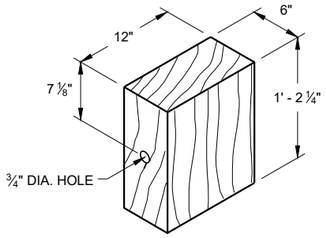
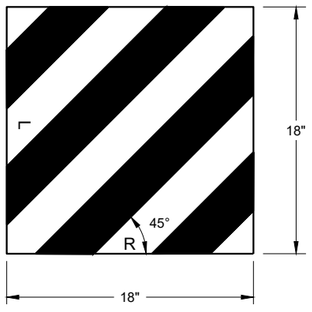
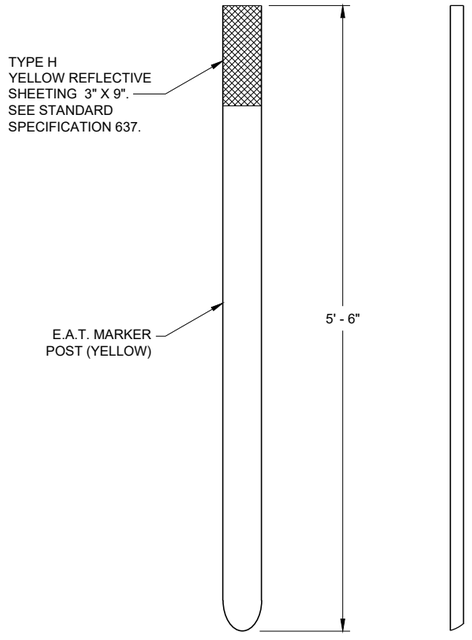


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



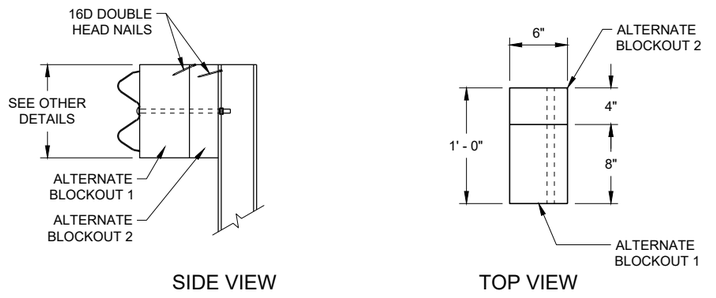
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

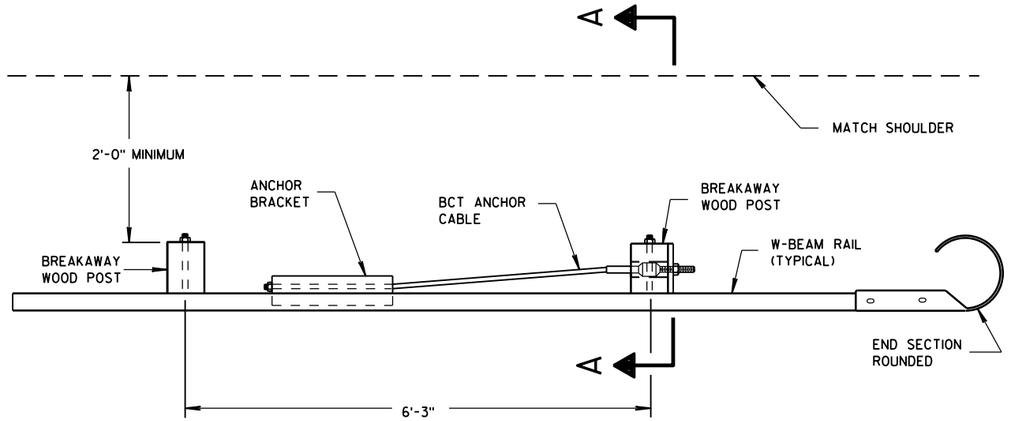
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

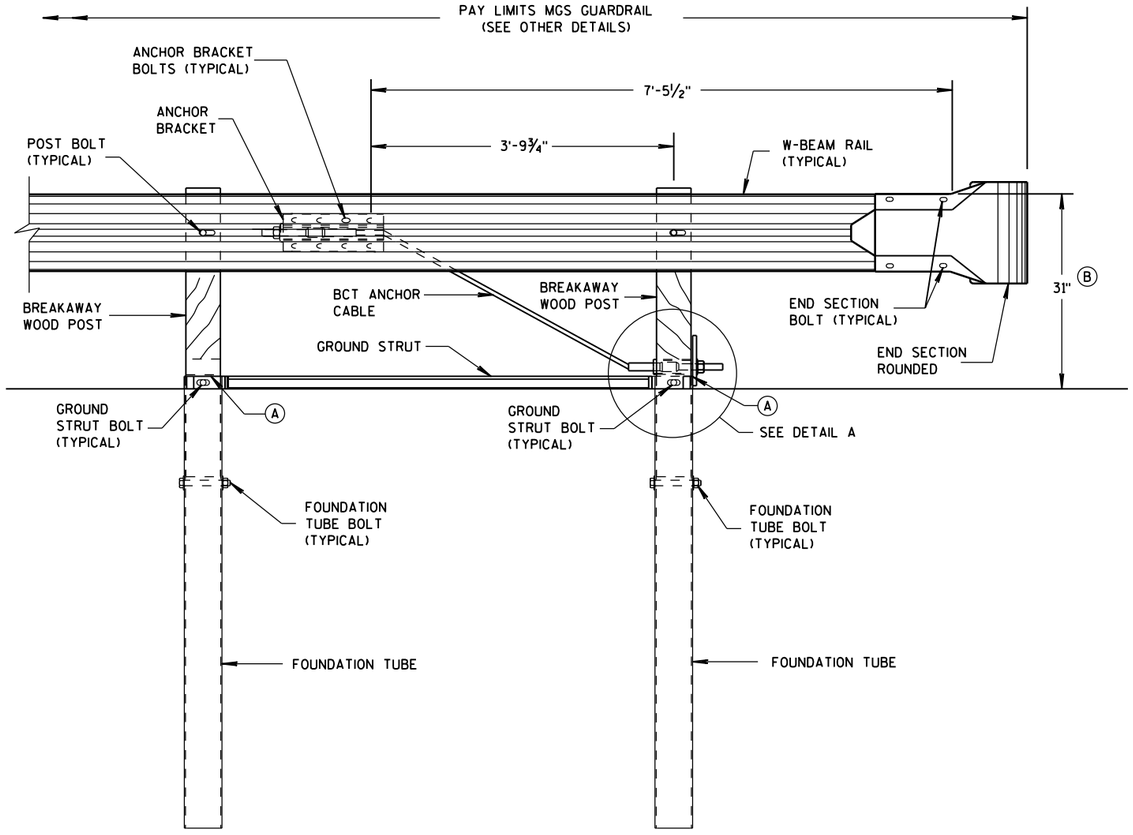
FHWA

6

SDD 14B44 - 04c

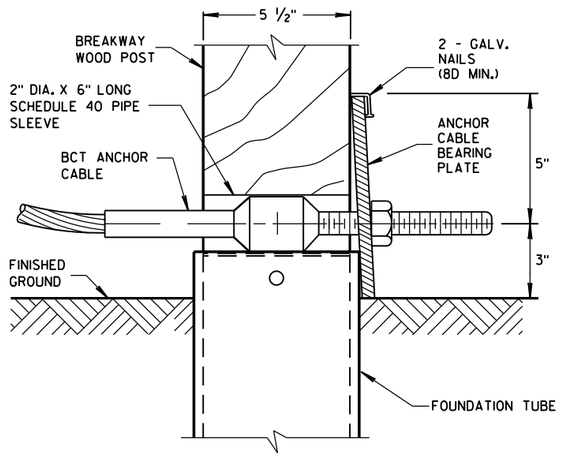


PLAN VIEW



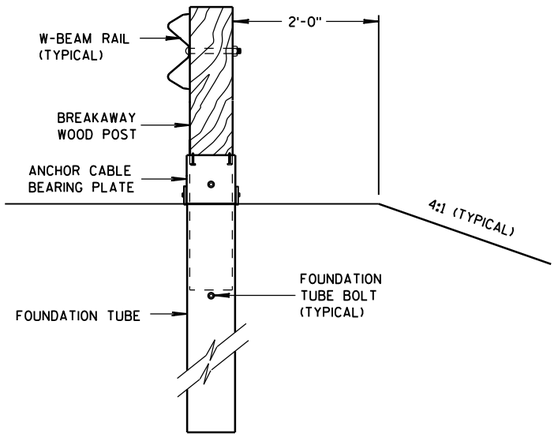
FRONT VIEW

END RAIL DETAIL



DETAIL A

POST NO. 1
GROUNG STRUT NOT SHOWN FOR CLARITY.



SECTION A-A

GENERAL NOTES

SEE SDD 14 B 42 FOR MORE INFORMATION.

END SECTION BOLTS AND NUTS HAVE THE SAME MATERIAL REQUIREMENTS AS SPLICE BOLTS.

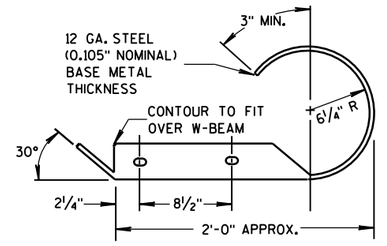
FOUNDATION TUBE BOLTS ARE ⅞" DIAMETER ASTM A307 HEX HEAD BOLT. FOUNDATION TUBE BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅞" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

ANCHOR BRACKET AND GROUND STRUT BOLTS ARE A ⅝" DIAMETER ASTM A307 HEX HEAD BOLT. ANCHOR BRACKET BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅝" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

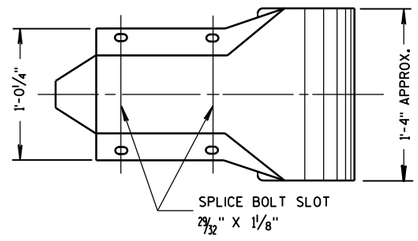
W-BEAM END SECTION ROUNDED HAS THE SAME MATERIAL PROPERTIES AS STANDARD STEEL RAIL.

(A) TOP OF FOUNDATION TUBE SHALL BE NO MORE THAN 3" ABOVE FINISHED GROUND.

(B) FOR NEW CONSTRUCTION TOP OF RAIL IS 31" ± 1".
FOR EXISTING INSTALLATIONS TOP OF RAIL IS BETWEEN 27¾" TO 32" ± 1".



PLAN VIEW



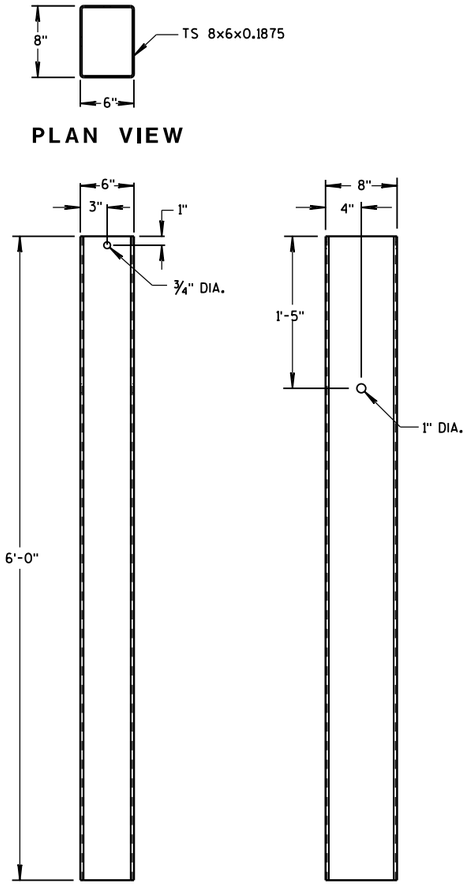
FRONT VIEW

W BEAM END SECTION ROUNDED

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

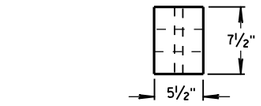
6
S.D.D. 14 B 47-2a



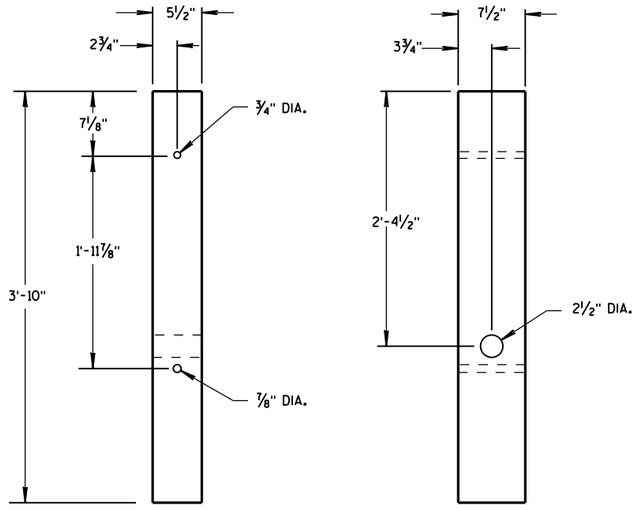
PLAN VIEW

FRONT VIEW SIDE VIEW

FOUNDATION TUBE



PLAN VIEW



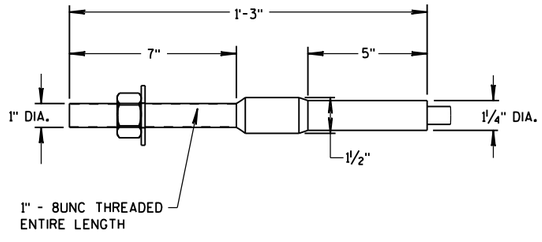
FRONT VIEW SIDE VIEW

BREAKAWAY WOOD POST

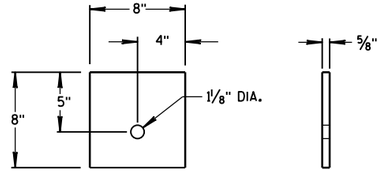
GENERAL NOTES

BCT ANCHOR CABLE IS A ¾" DIAMETER 6X19 IWRC IPS GALVANIZED WIRE ROPE. THE SWAGED FITTINGS AND STUD ARE REQUIRED. END FITTING SHALL BE MACHINED FROM HOT-ROLLED CARBON STEEL CONFORMING TO ASTM A576 GRADE 1035 AND GALVANIZED ACCORDING TO ASTM A123. TREADED STUD SHALL CONFORM TO ASTM A325 OR SAE GRADE 5. MINIMUM BREAKING STRENGTH OF WIRE ROPE IS 43,000 LB. WIRE ROPE IS TO BE TAUT.

BCT ANCHOR CABLE



DETAIL B



SIDE VIEW FRONT VIEW

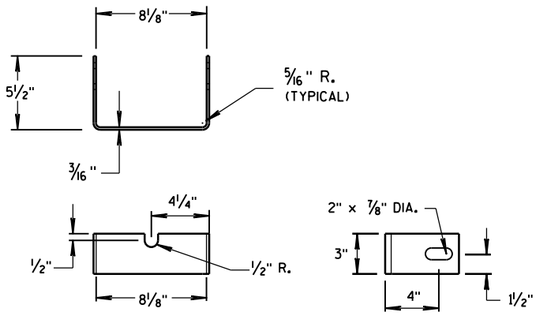
ANCHOR CABLE
BEARING PLATE

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

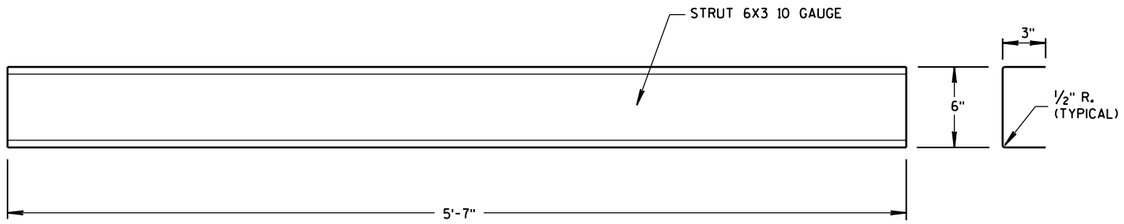
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

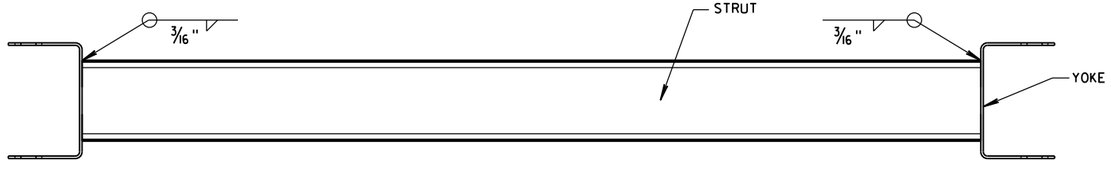
S.D.D. 14 B 47-2b



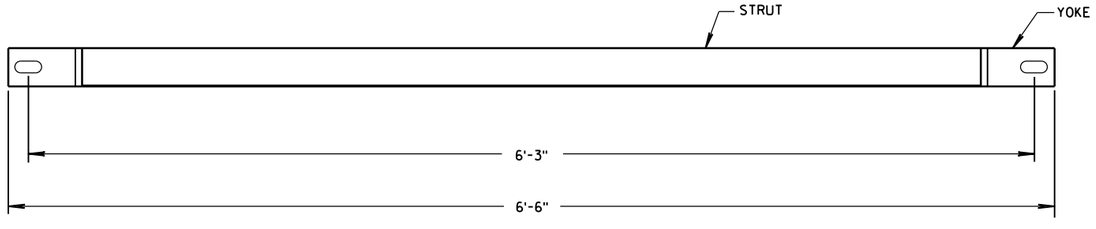
YOKE DETAIL



STRUT DETAIL

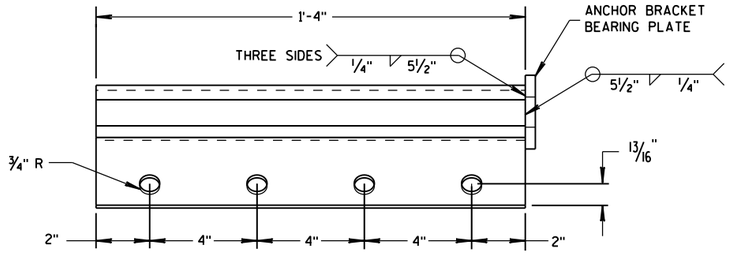


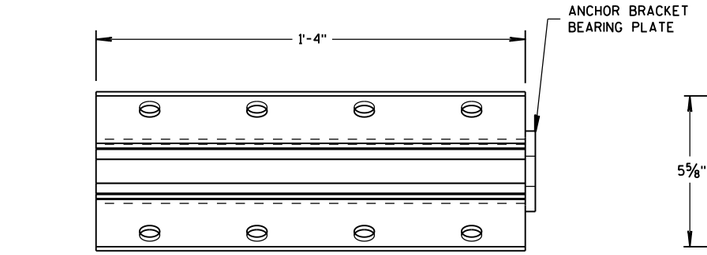
PLAN VIEW

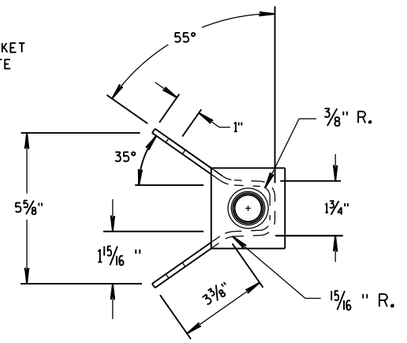


FRONT VIEW

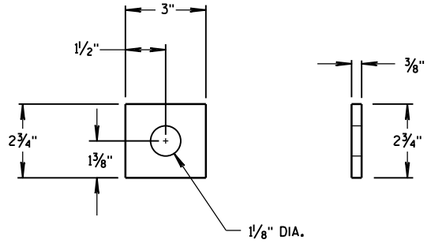
GROUND STRUT DETAIL







ANCHOR BRACKET



ANCHOR BRACKET BEARING PLATE

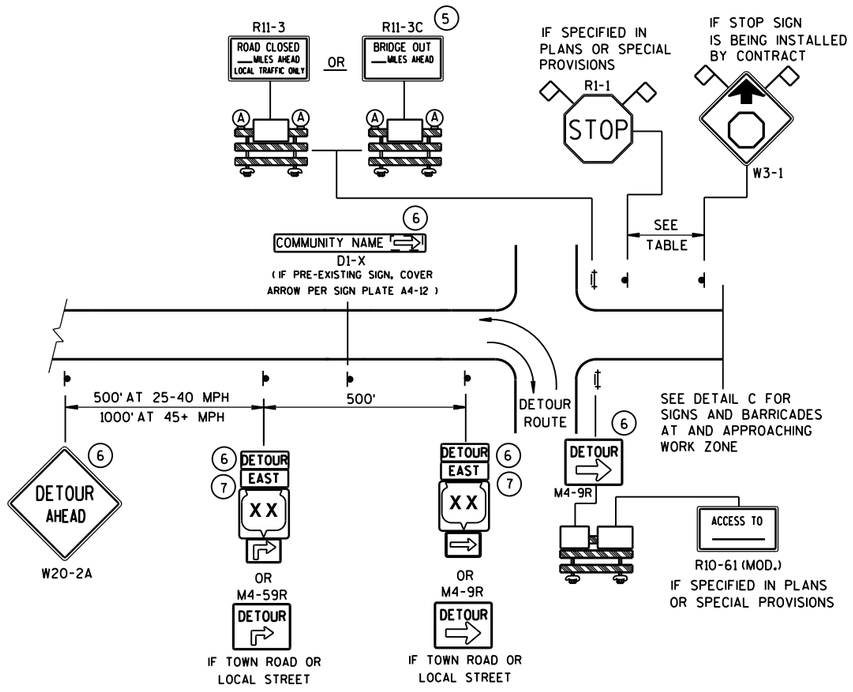
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

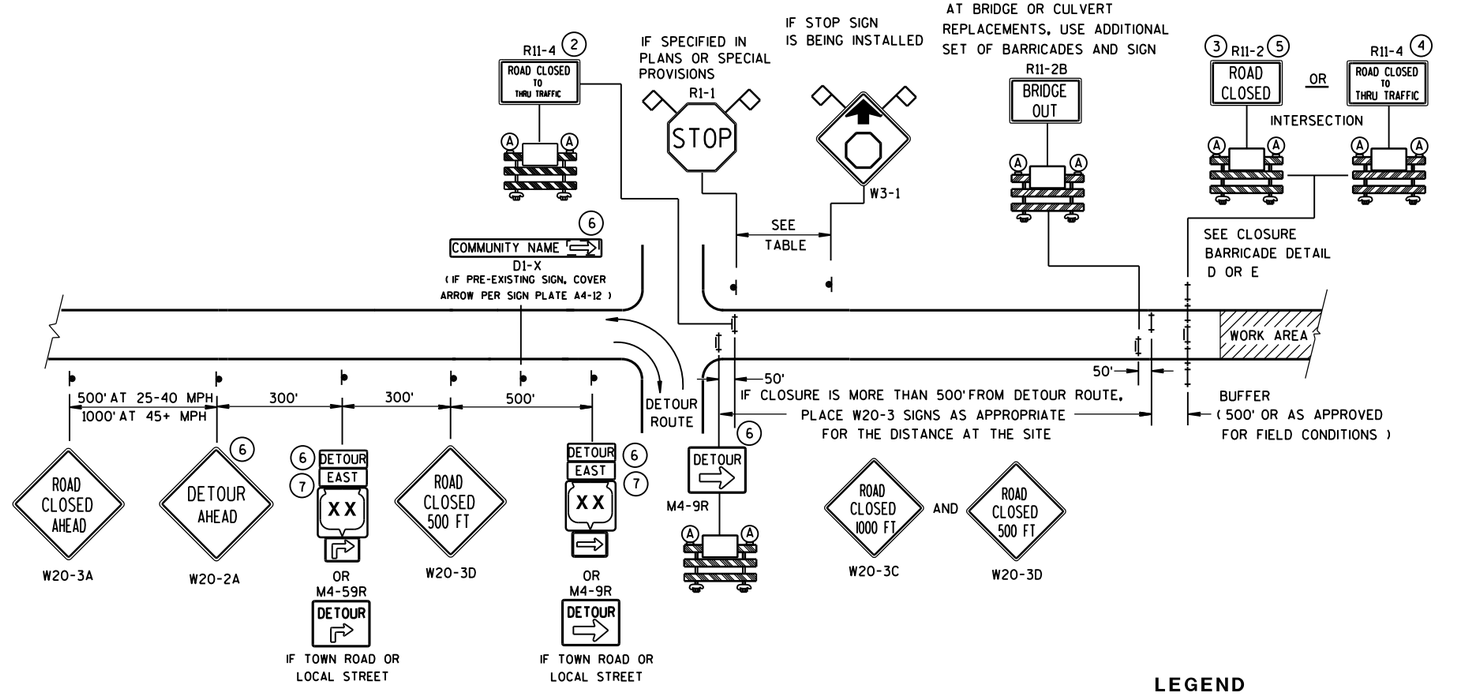
6

S.D.D. 14 B 47-2c



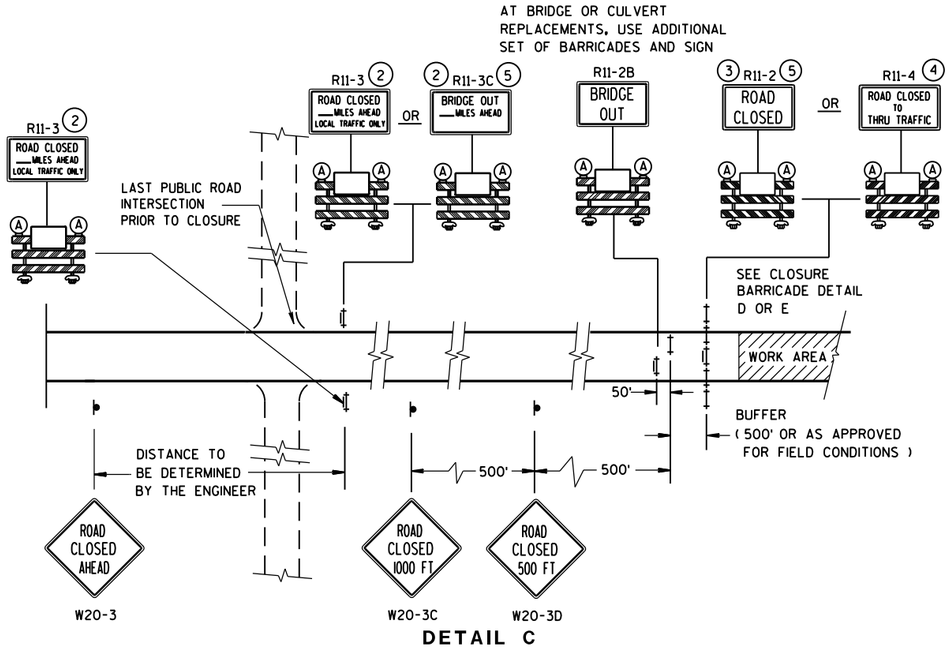
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN 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

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

SEE SDD 15C2-SHEET "**b**"
FOR GENERAL NOTES
AND FOOTNOTES (1) THROUGH (7)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

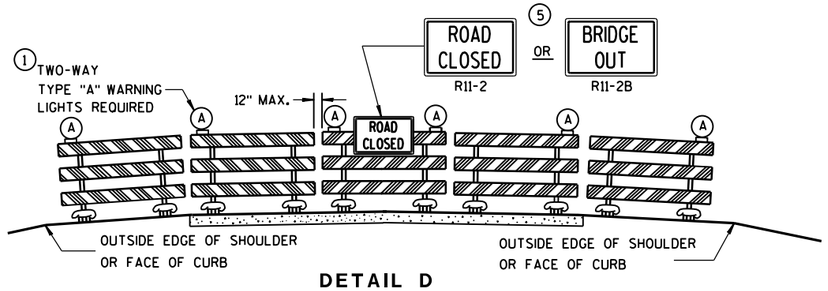
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

6

S.D.D. 15 C 2-6a

6

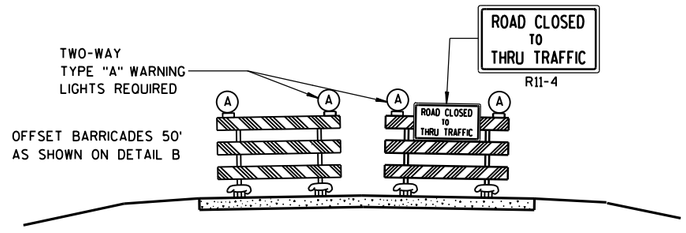
S.D.D. 15 C 2-6a



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 BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE 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, 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". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO SAFETY ENGI — FIC
FHWA

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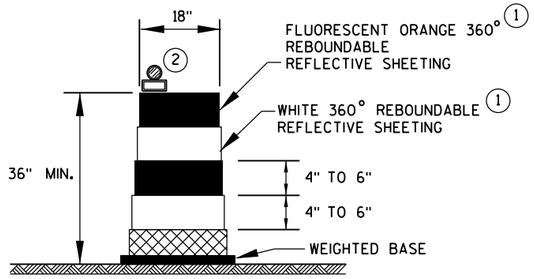
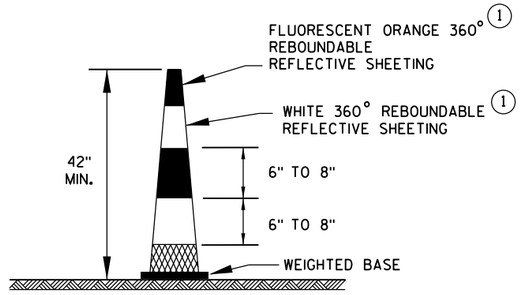
S.D.D. 15 C 2-6b



DRUM

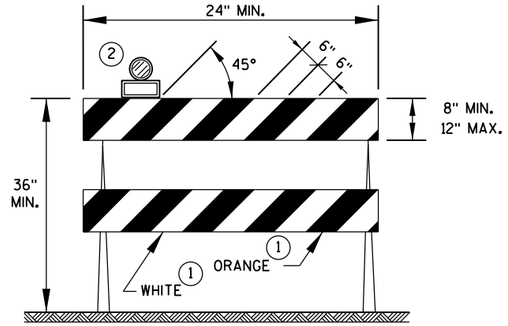


42" CONE

DO NOT USE IN TAPERS
1/2 SPACING OF DRUMS

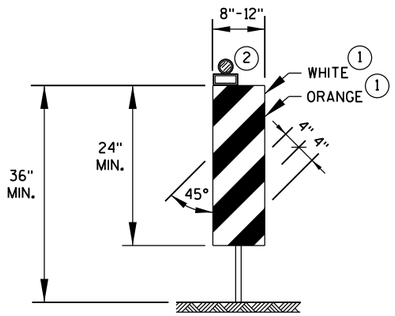
GENERAL NOTES

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.



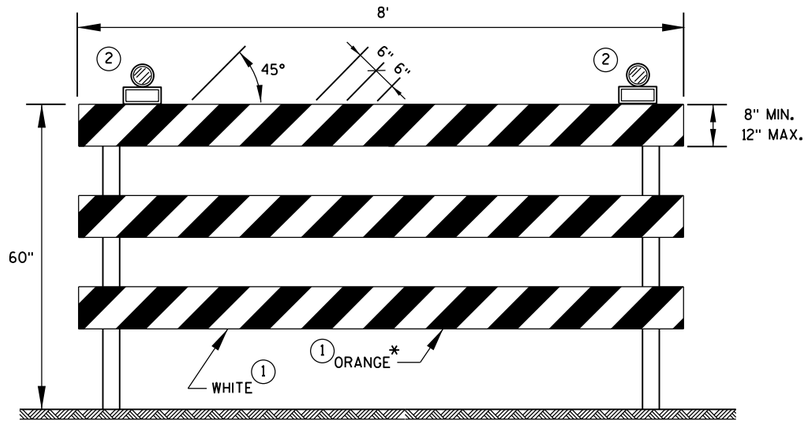
TYPE 2 BARRICADE

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



VERTICAL PANEL

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



TYPE 3 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

June 2017 — DATE

/S/ Andrew Heidtke — WORK ZONE ENG

FHWA

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S.D.D. 15 C 11-7b

LEGEND

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

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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

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

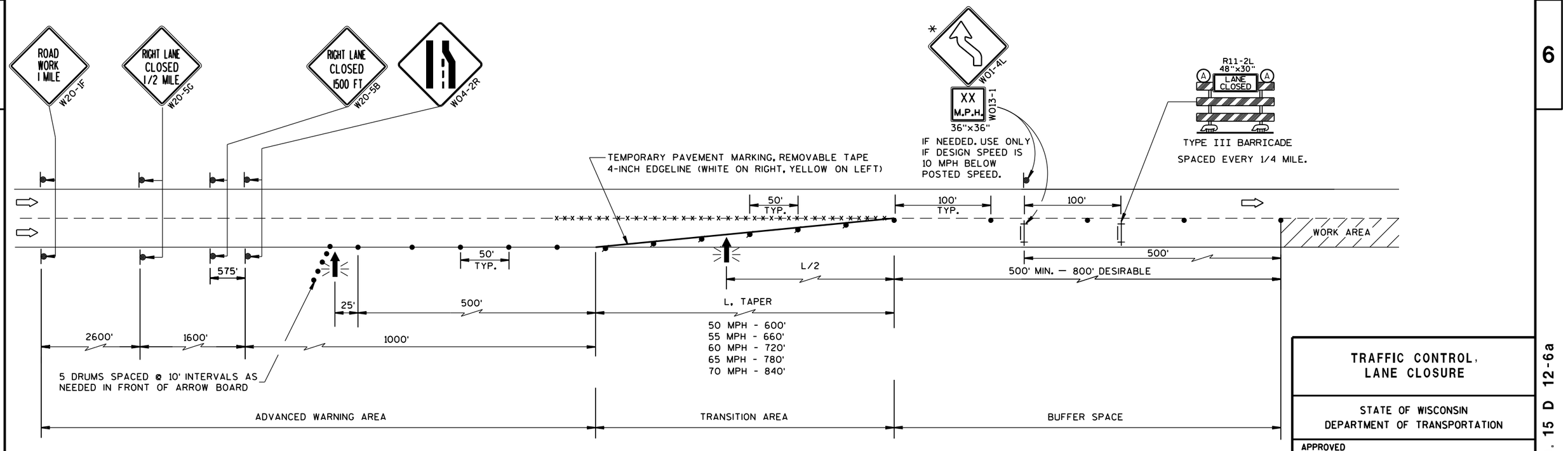
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

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

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

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

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



TRAFFIC CONTROL, LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

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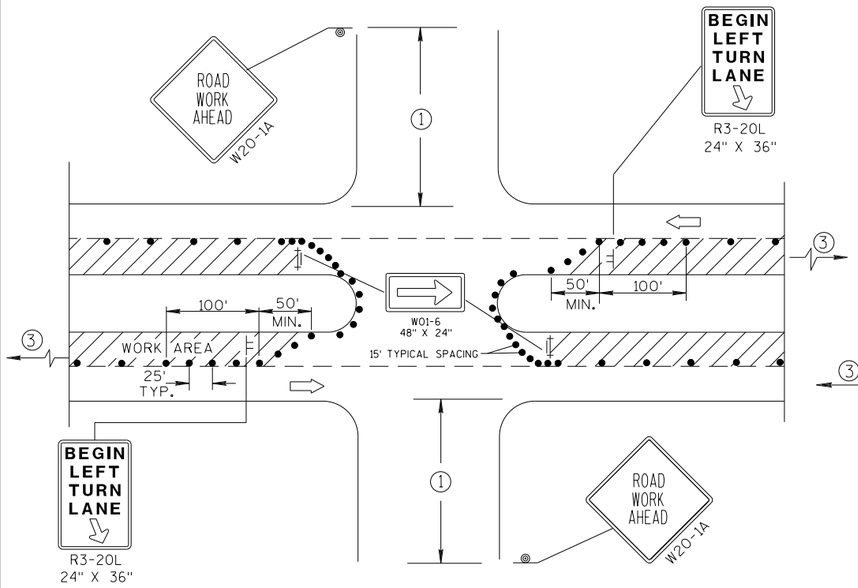
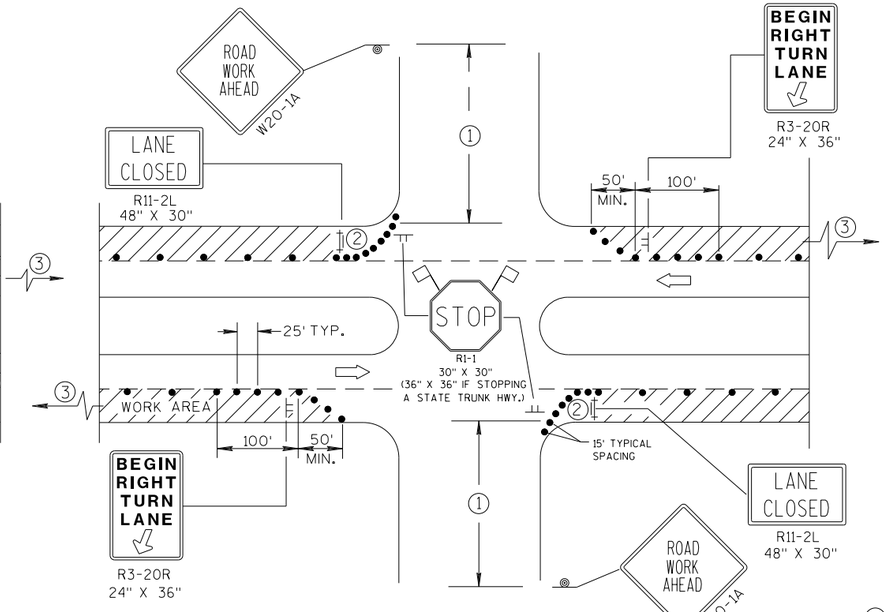
S.D.D. 15 D 12-6a



DETAIL A

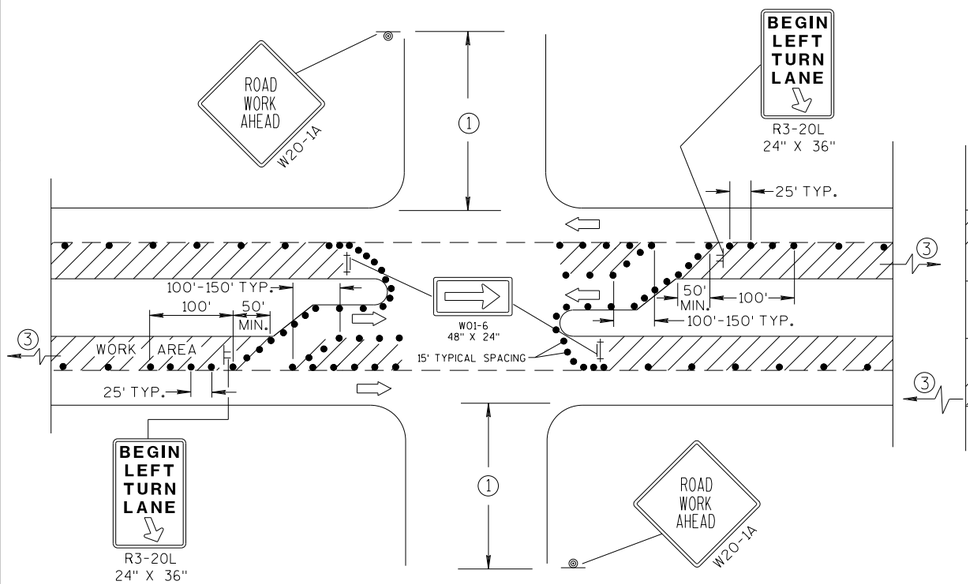
FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING



DETAIL B

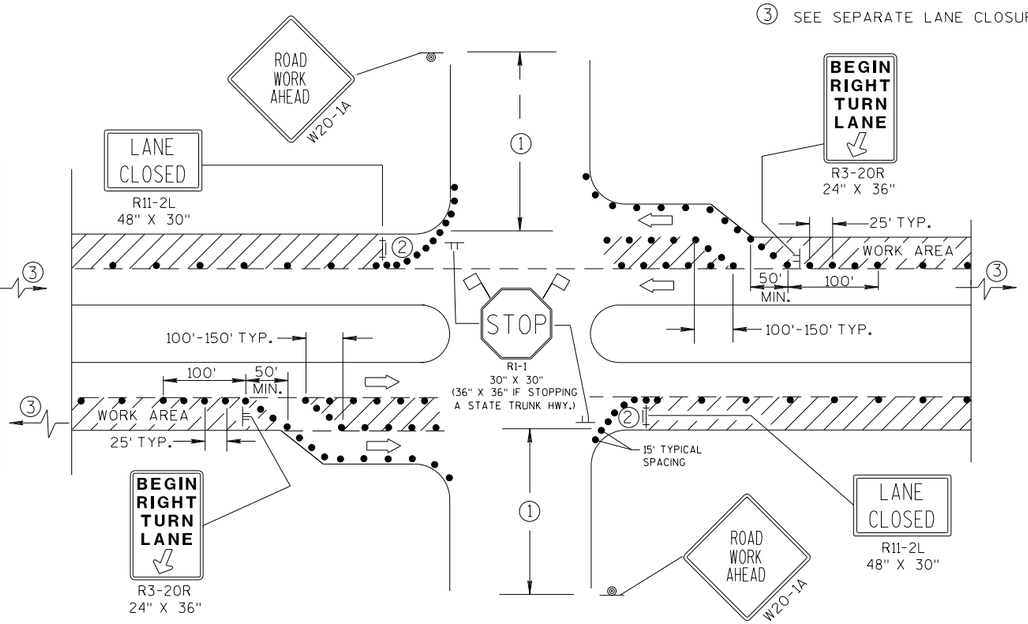
FOR RIGHT LANE CLOSURE AT INTERSECTION

PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.



DETAIL C

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING (WITH LEFT TURN BAY OPEN)



DETAIL D

FOR RIGHT LANE CLOSURE AT INTERSECTION (WITH RIGHT TURN BAY OPEN)

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 SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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 DISTRICT TRAFFIC UNIT.

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

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

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

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

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

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

① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35-40 MPH.
200' IF 25-30 MPH.

② ALSO USE BARRICADE AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.

③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT (5' MIN. MOUNTING HEIGHT)
- TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., (ORANGE)
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018
DATE

/S/ Andrew Heldtke
WORK ZONE ENG

FHWA

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S.D.D. 15 D 21-6

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW BOARD
- WORK AREA

GENERAL NOTES

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

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

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

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

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

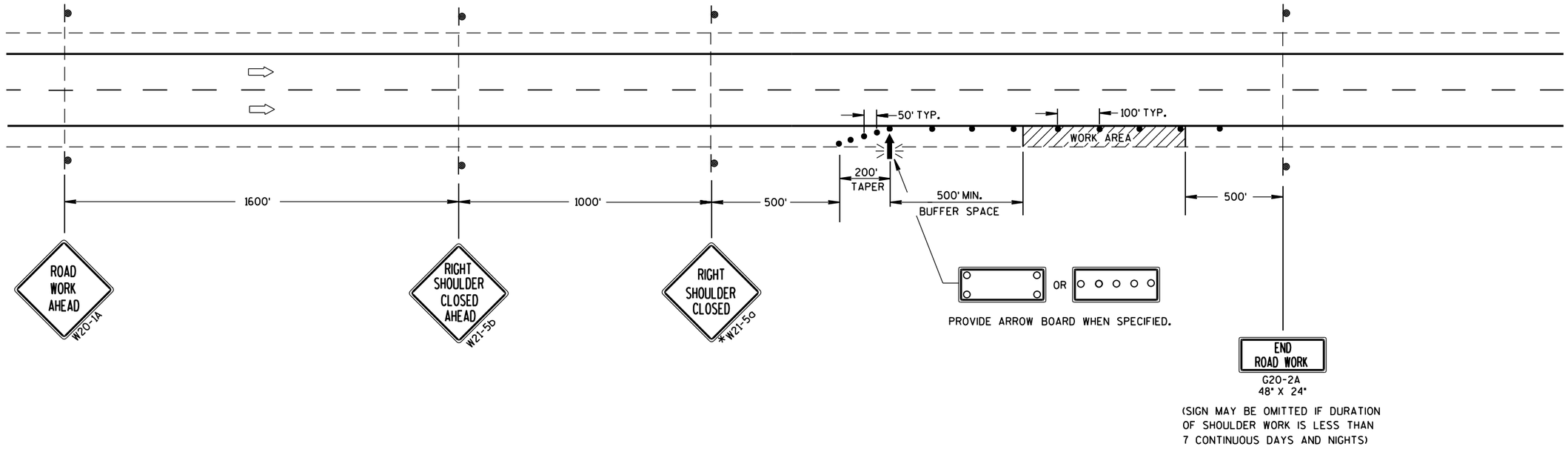
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

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

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



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2016 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO[illegible] TIC SAFETY ENGI[illegible]

FHWA

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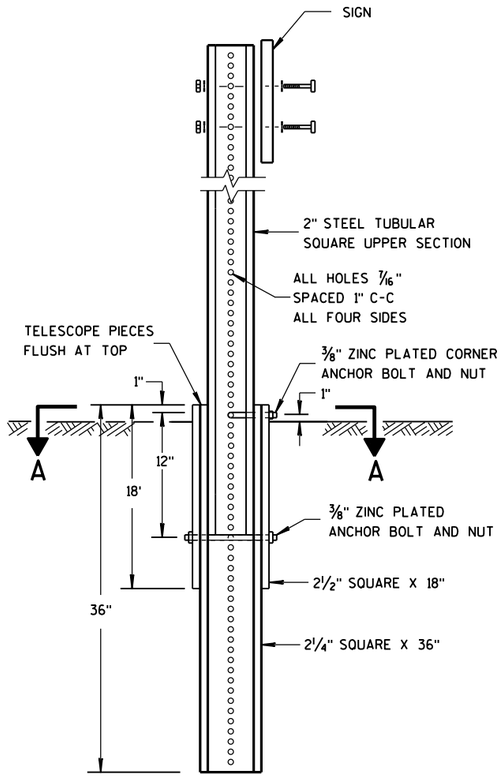
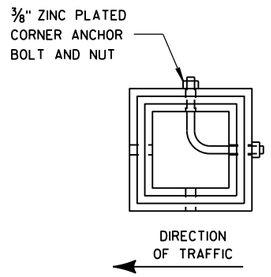
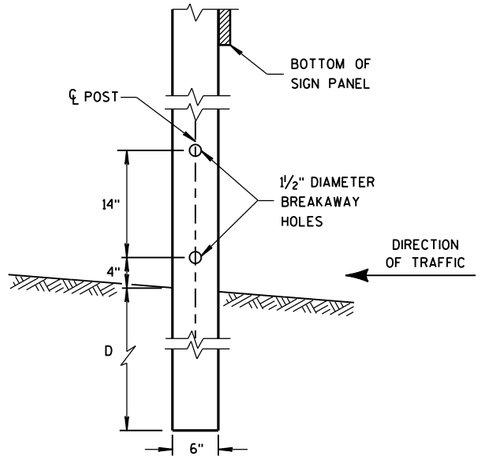
S.D.D. 15 D 27-3



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



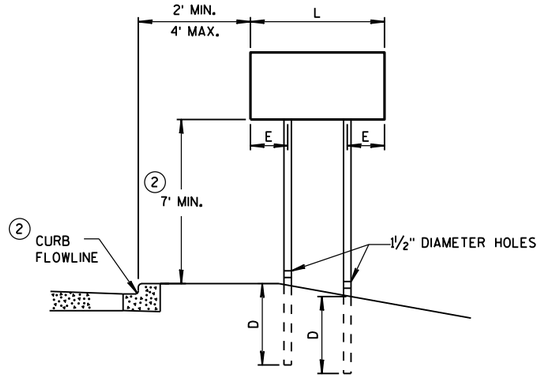
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

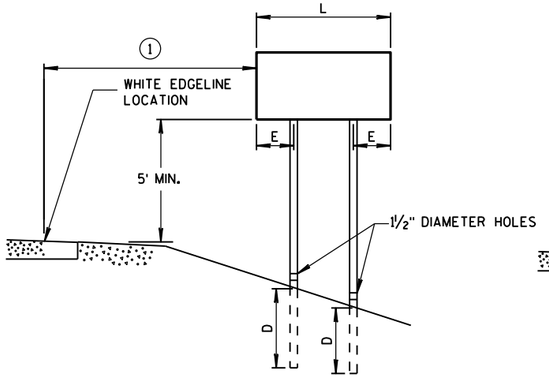
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

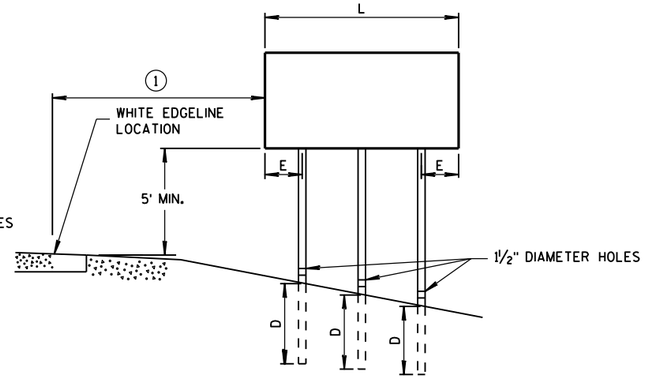
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK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

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



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

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

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

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

WOOD POST EMBEDMENT DEPTH

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

4" X 6" WOOD POST

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

SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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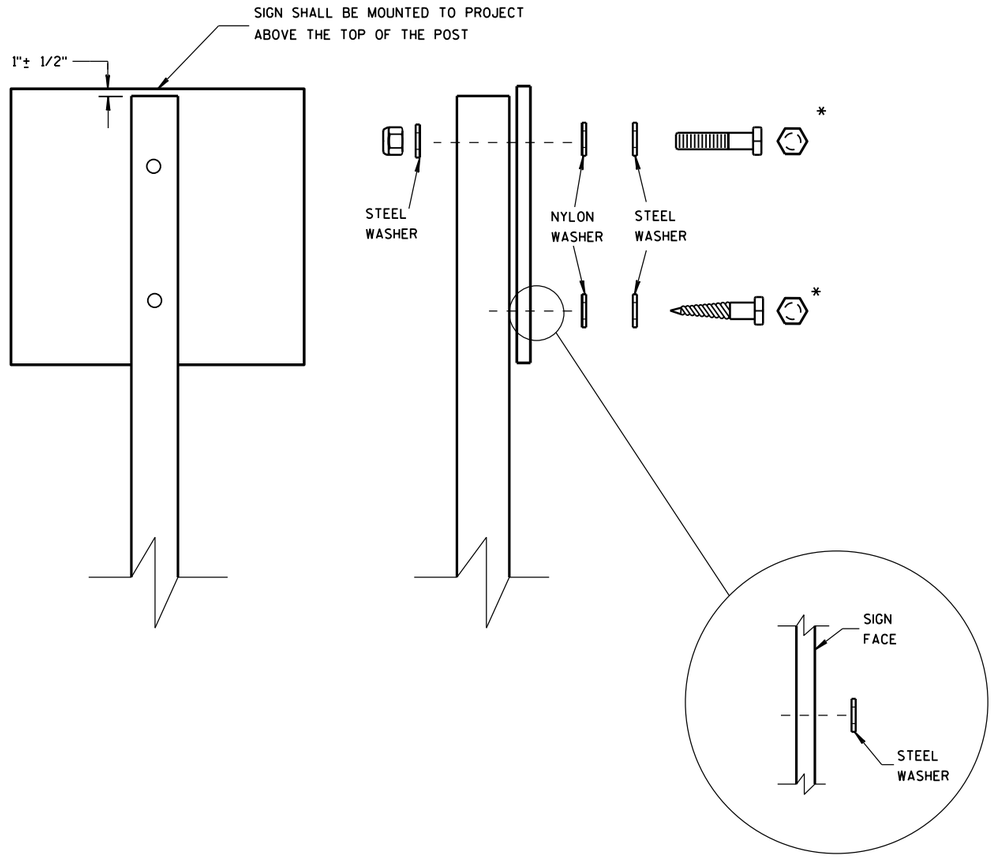
S.D.D. 15 D 38-2a



WASHER PLACEMENT WHEN SIGN HAS OTHER THAN TYPE H OR TYPE F FACE

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

A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3

B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

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

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3"

MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS

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 FOR ALL TYPE H SIGNS

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

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S.D.D. 15 D 38-2b

S.D.D. 15 D 38-2b

ATTACHMENT OF SIGNS TO POSTS

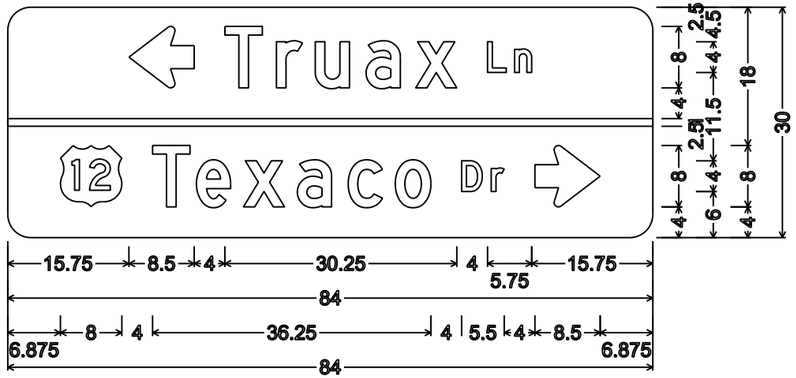
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

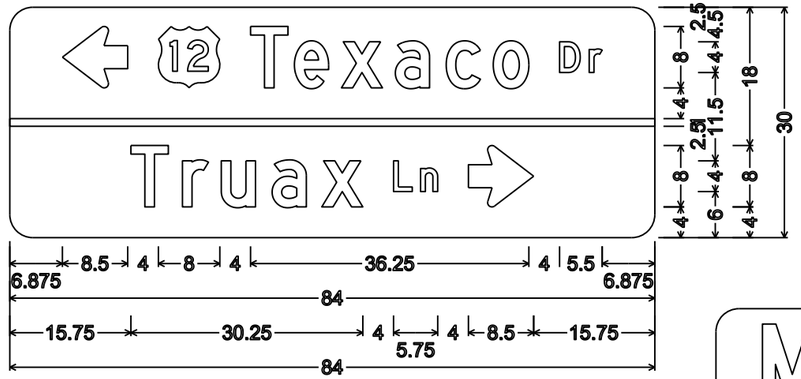
June 2017
DATE

/S/ Andrew Heldtke
WORK ZONE ENG

FHWA



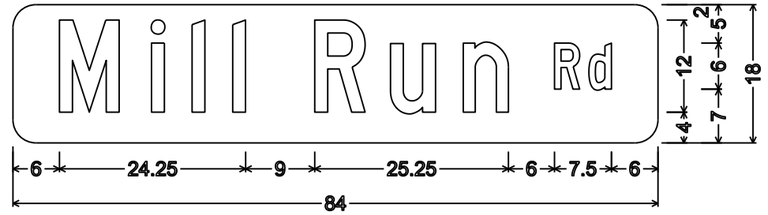
M1-94H; 3.000" Radius, No border



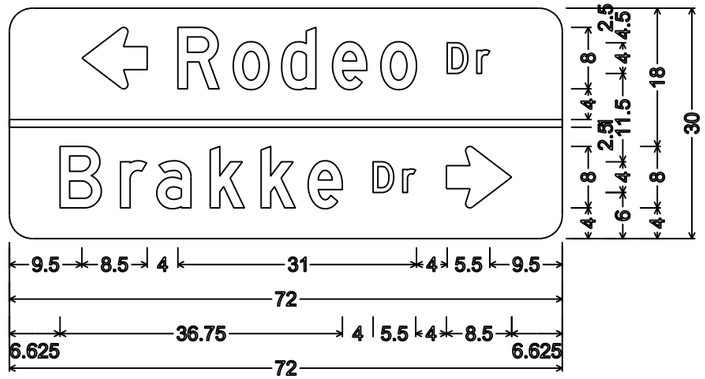
M1-94H; 3.000" Radius, No border

NOTES

1. All Signs Type II - Type H Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - D except as noted



M1-94H; 3.000" Radius, No border,
"Mill" C; "Run" C; "Rd" C



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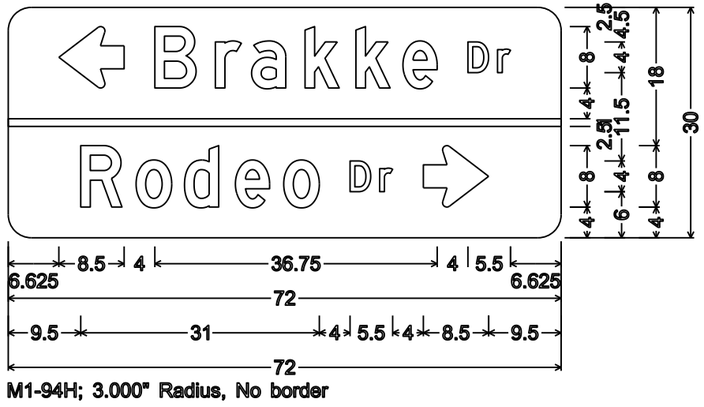
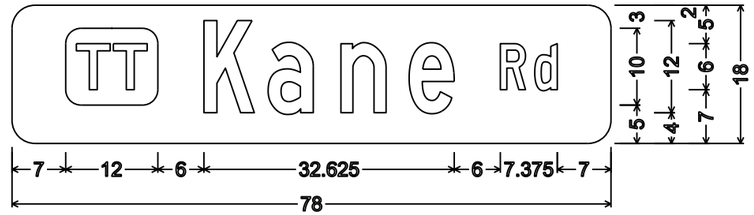
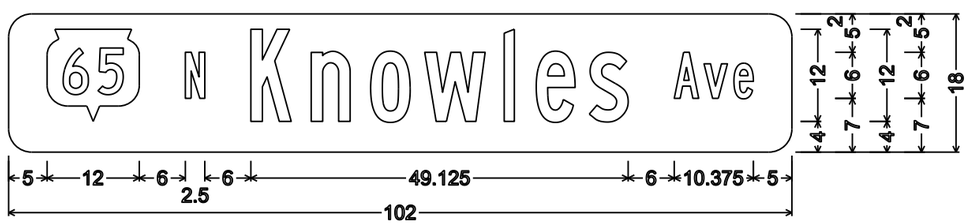


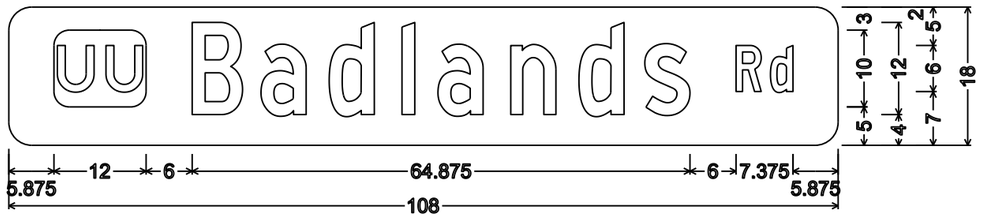
M1-94H; 3.000" Radius, No border



M1-94S; 3.000" Radius, No border,
"Kane" C; "Rd" C



M1-94S; 3.000" Radius, No border,
"N" B; "Knowles" B; "Ave" B



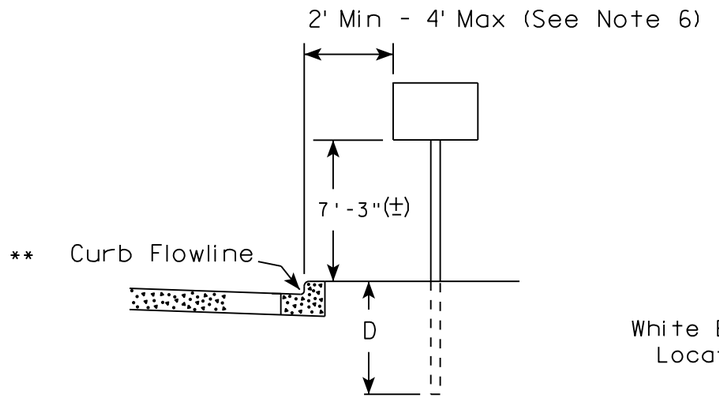
M1-94S; 3.000" Radius, No border,
"Badlands" C; "Rd" C

7

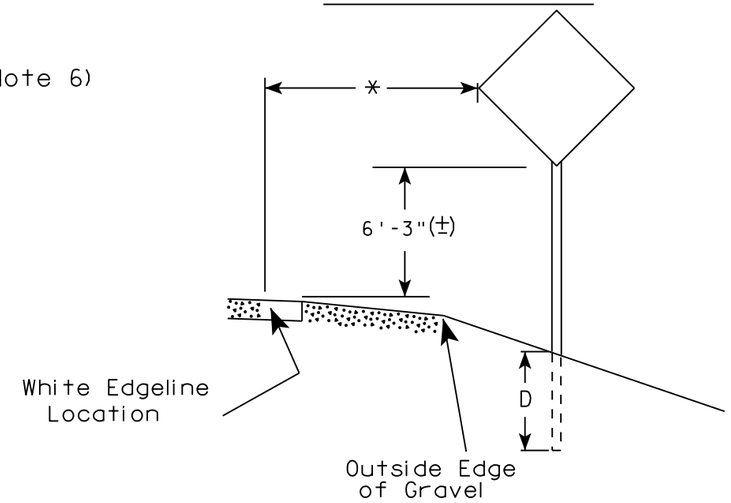
7

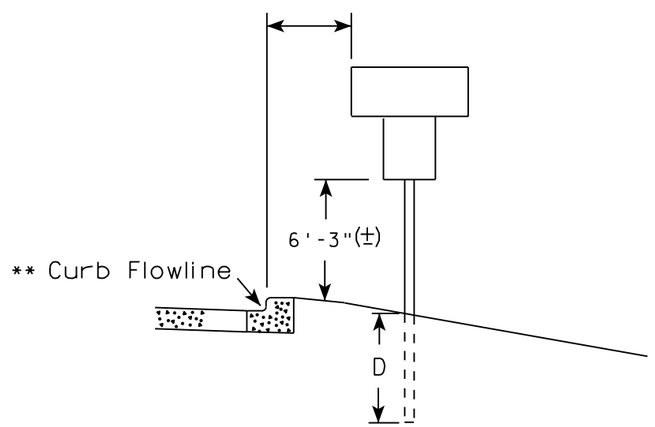
PROJECT NO: 3700-50-29	HWY: VARIOUS	COUNTY: VARIOUS	PERMANENT SIGNING	SHEET NO: 105	E

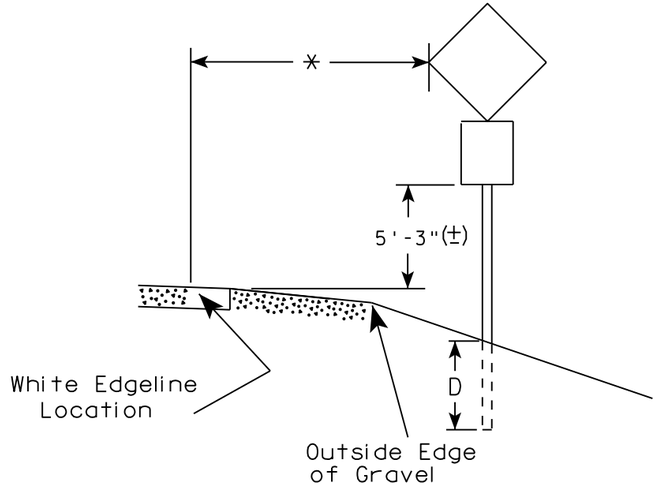
URBAN AREA



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 barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. J-Assemblies are considered to be one sign for mounting height.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.
9. 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), 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" (±).

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

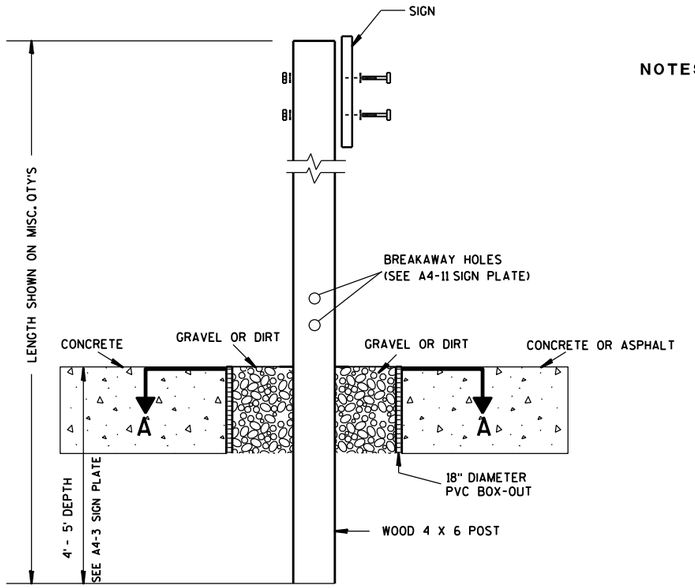
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-3.21

7

7

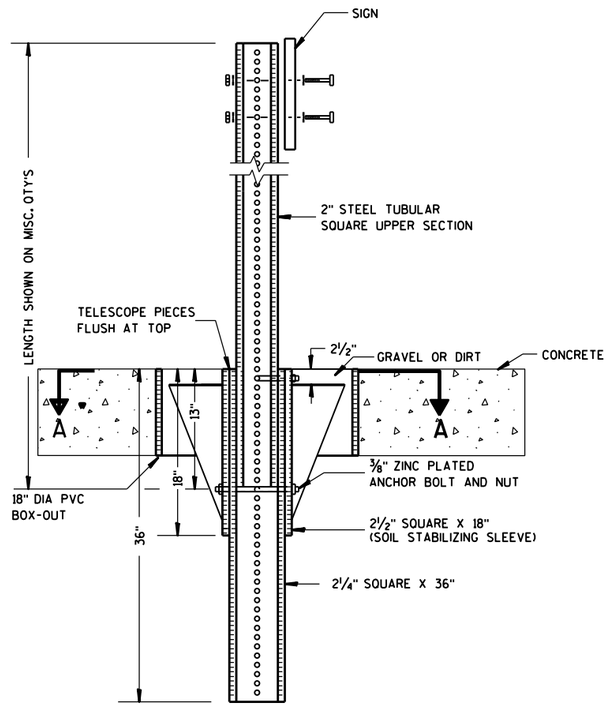
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 106	E



ELEVATION VIEW

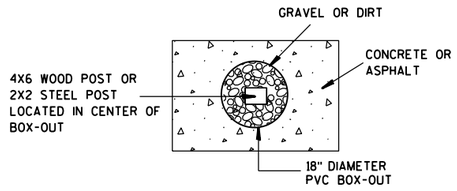
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

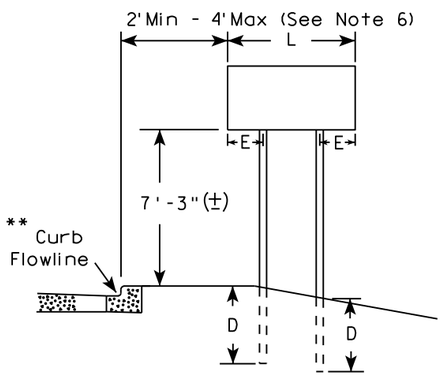
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

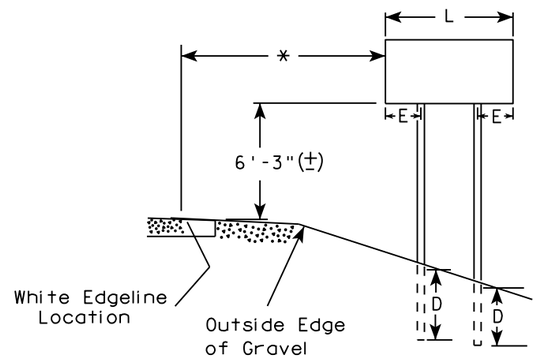
DATE 1/27/14 PLATE NO. A4-3B.1

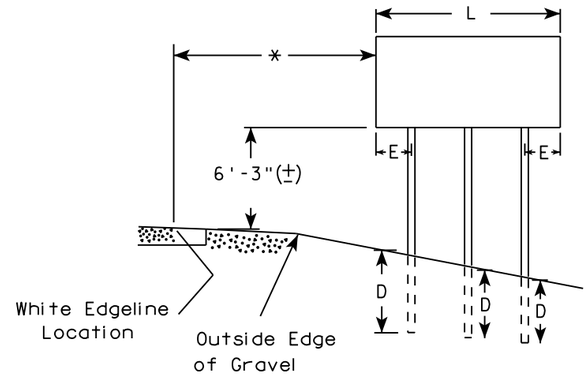
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

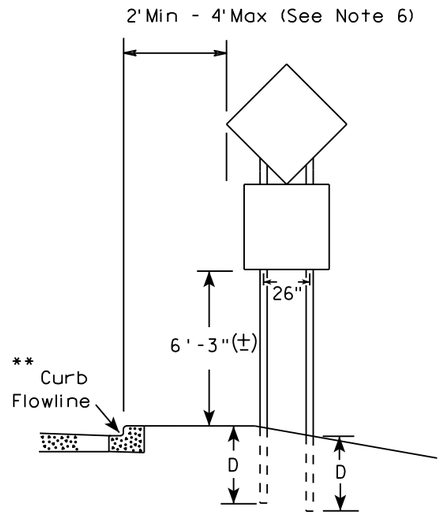
URBAN AREA



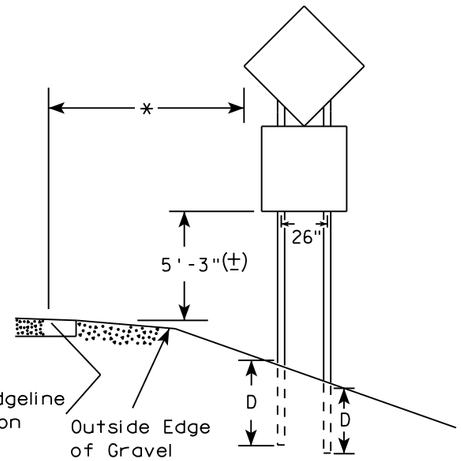
RURAL AREA (See Note 3)







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'

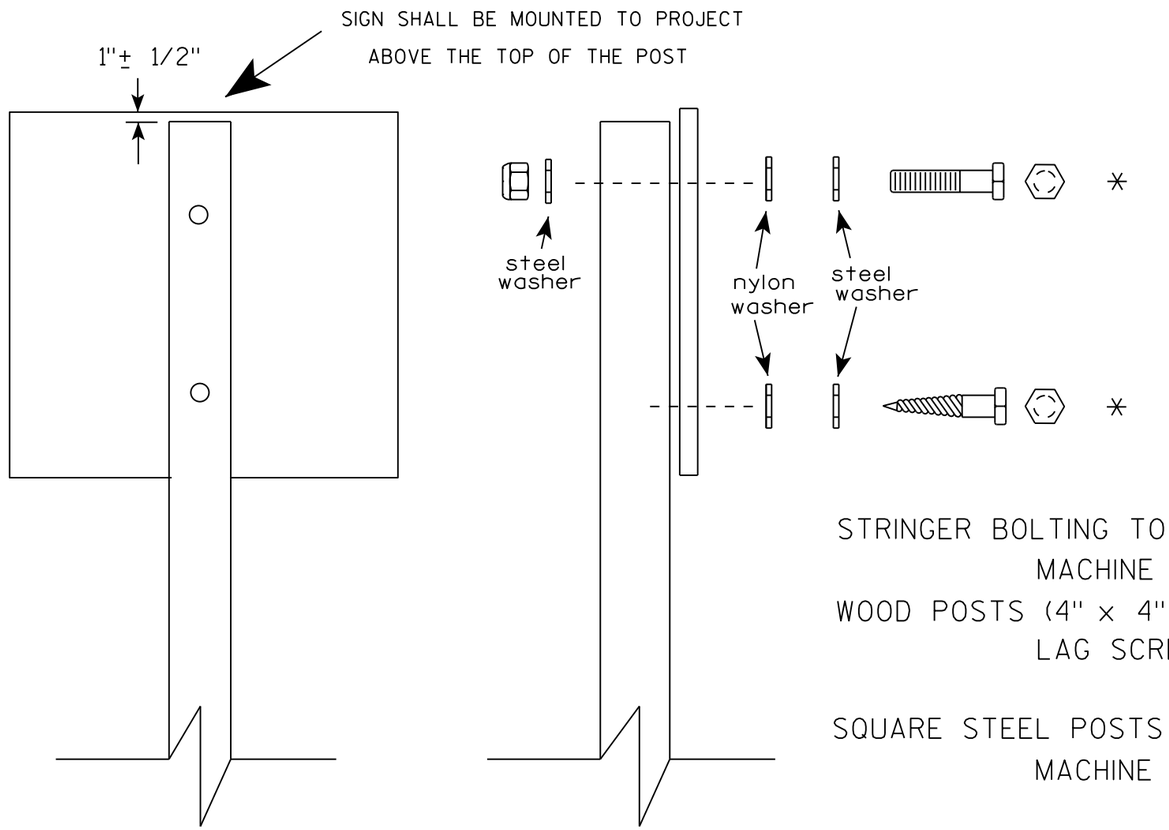
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

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: 108	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 4" or 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 8/11/16 PLATE NO. A4-8.8

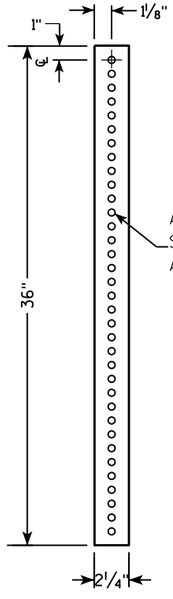
7

PROJECT NO: SHEET NO: E

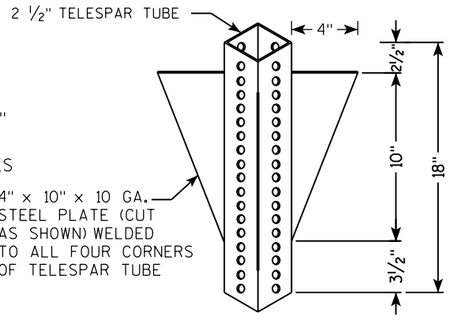
FILE NAME : C:\CADfiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 11-AUG-2016 11:35 PLOT BY : $$ plotuser $$

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

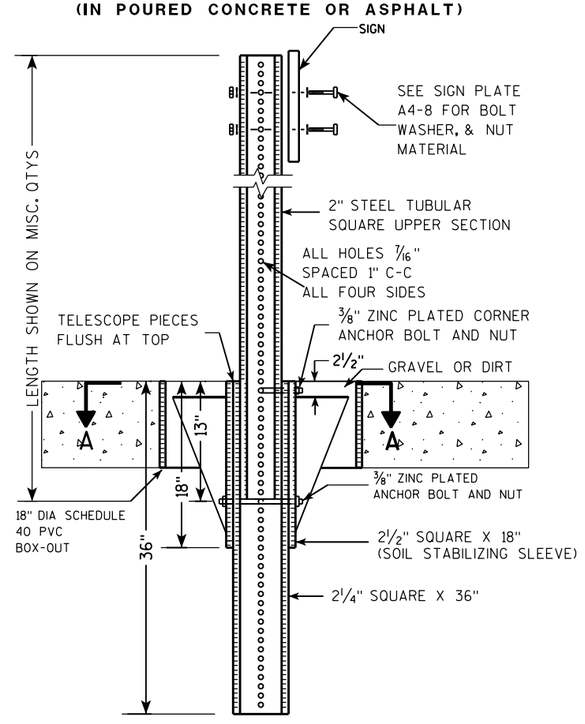
2 ¼ " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



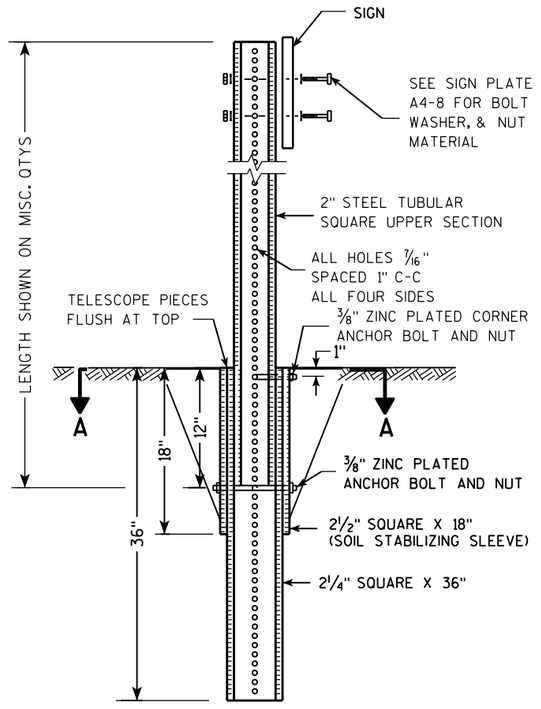
2 ½ " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

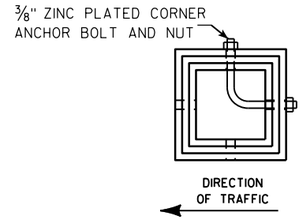


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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).

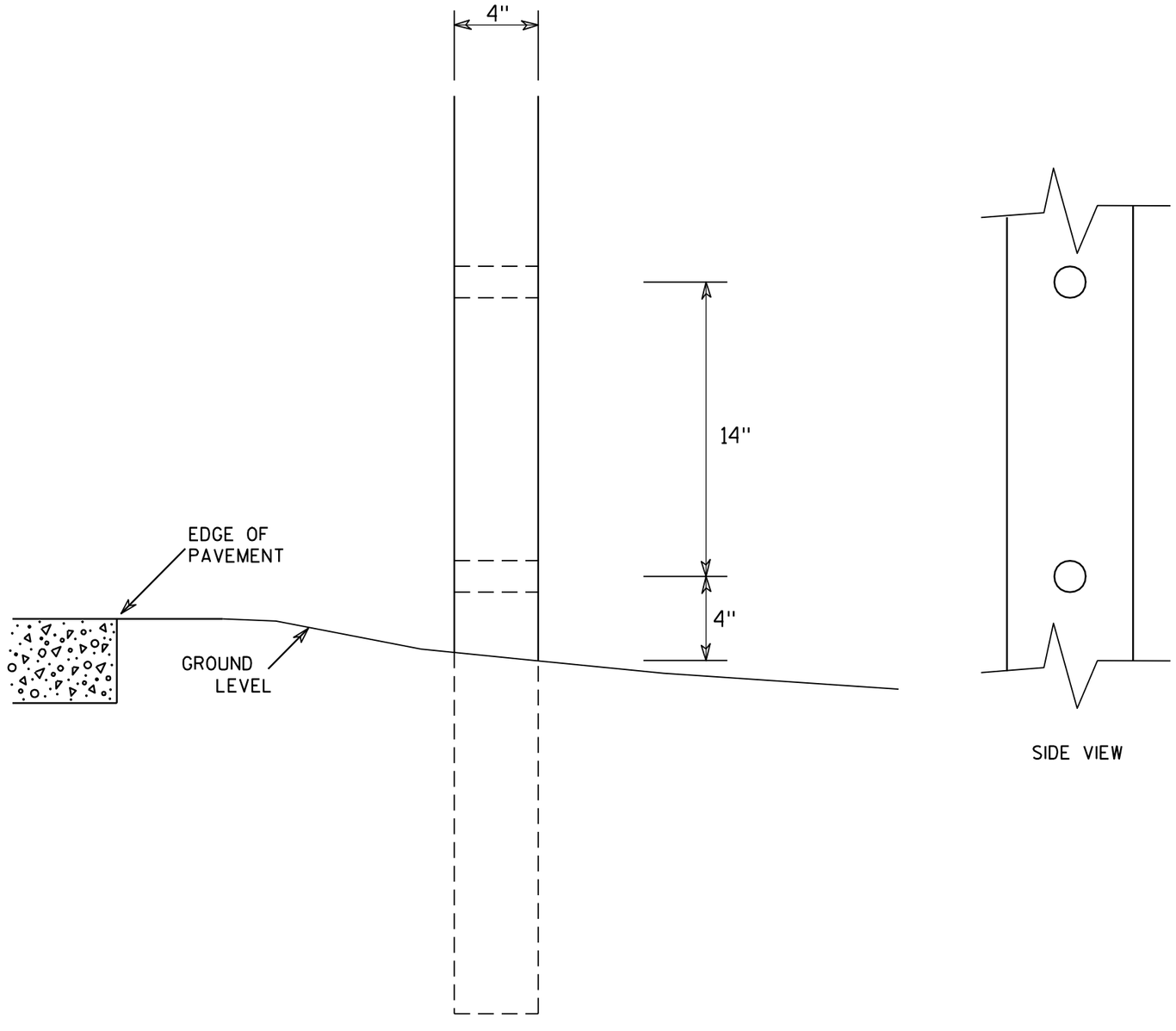
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 110 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

GENERAL NOTES

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

7

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

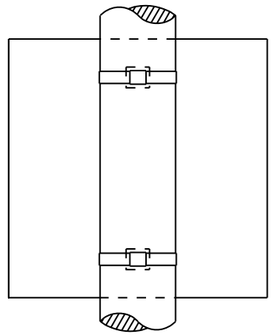
APPROVED Chester J Spang for State Traffic Engineer

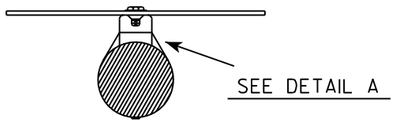
DATE 3/27/97 PLATE NO. A4-11.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 111	E

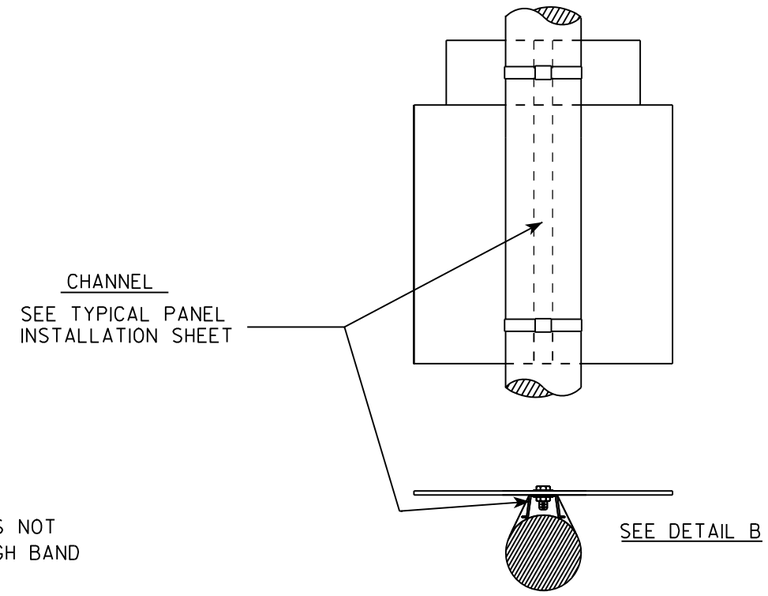
BANDING

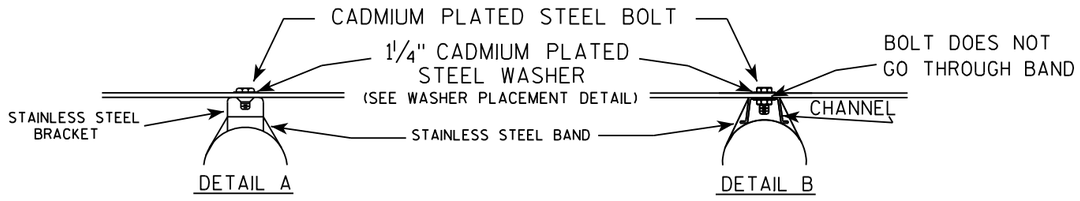
SINGLE SIGN



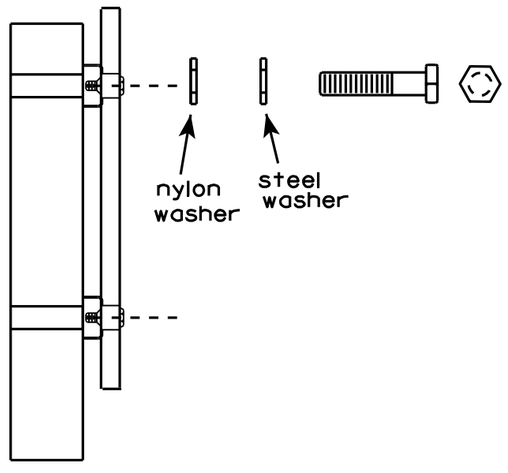


"J" ASSEMBLY





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.

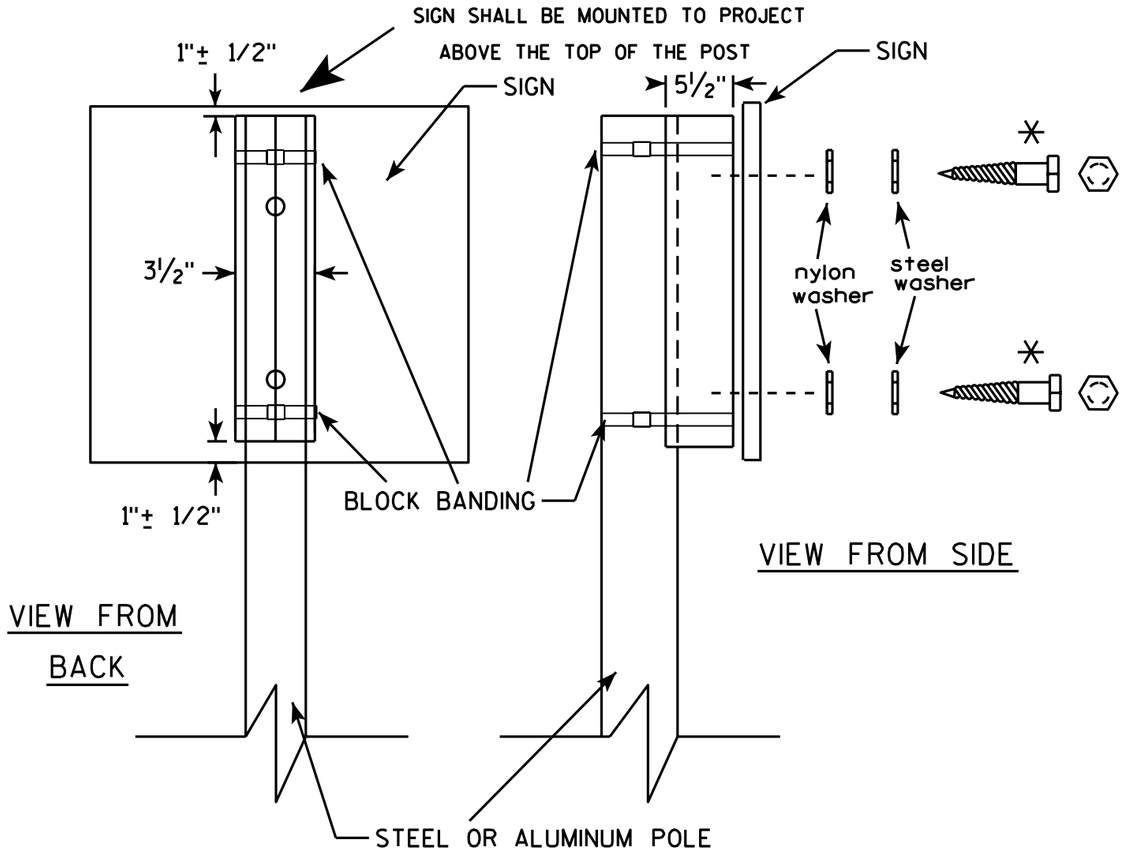
STANDARD SIGN
SIGN BANDING DETAILS

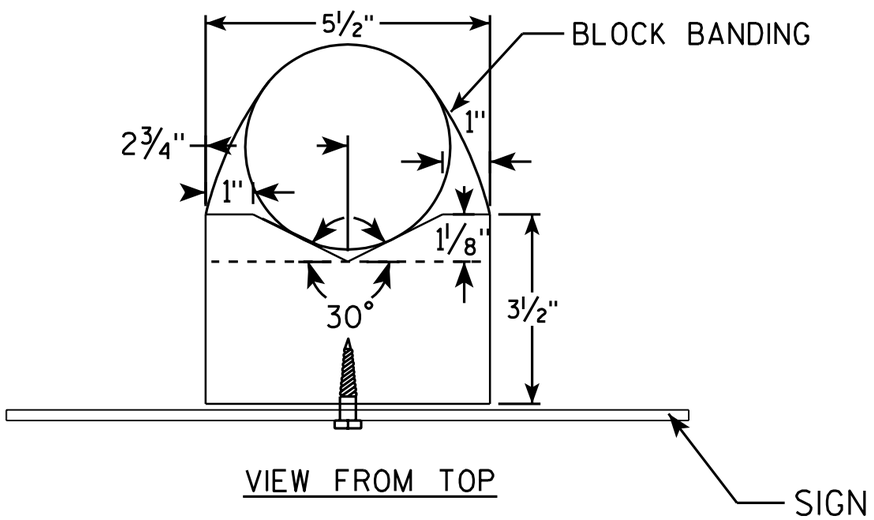
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 112	E





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, or
   b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
   c. 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

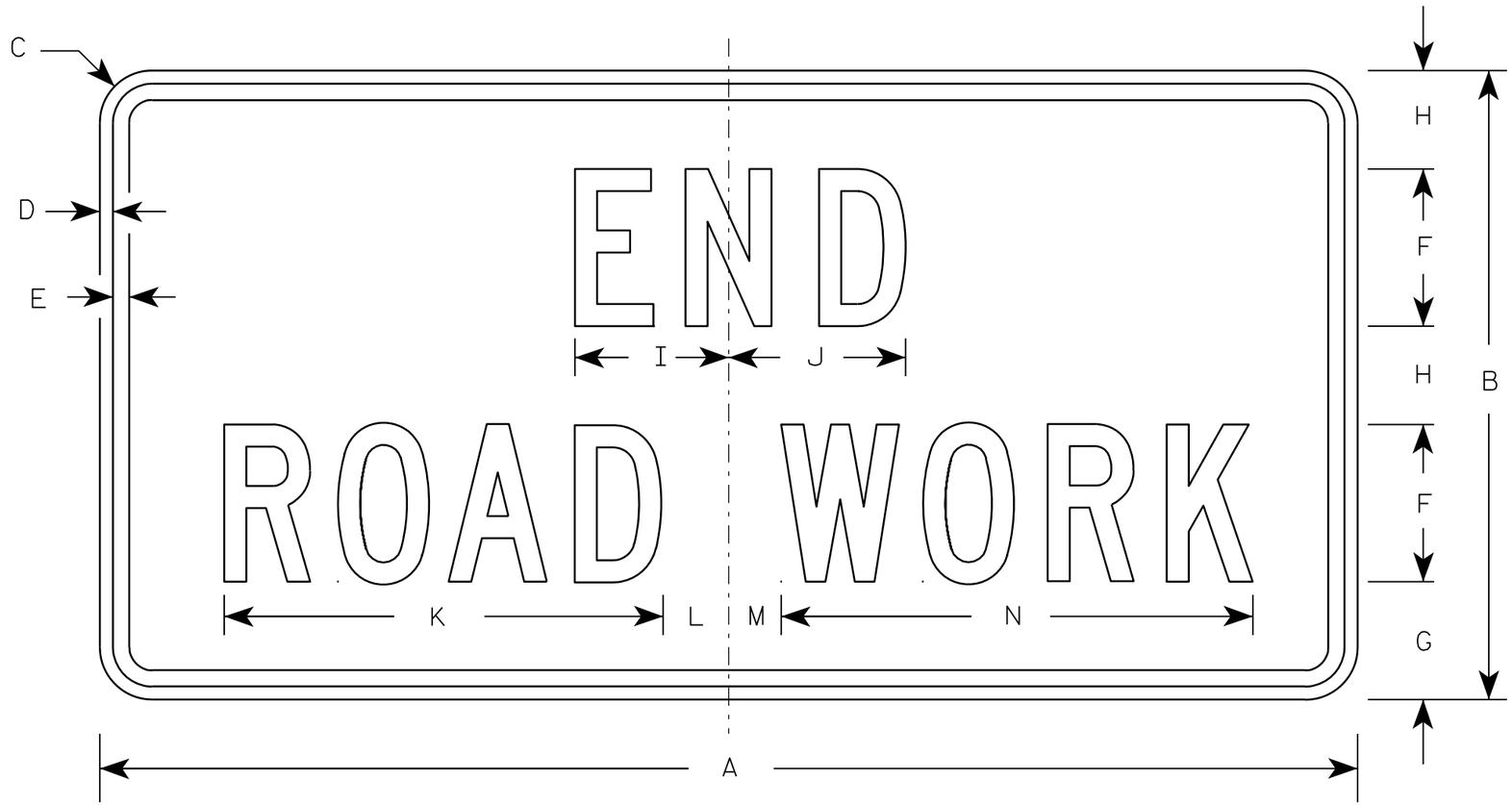
DATE 7/12/07 PLATE NO. A5-10.1

PROJECT NO:

SHEET NO: 113 E

FILE NAME : C:\Users\Projects\tr_stdplate\A510.dgn PLOT DATE : 06-AUG-2007 13:37 PLOT BY : ditjph

WISDOT/CADDS SHEET 42



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

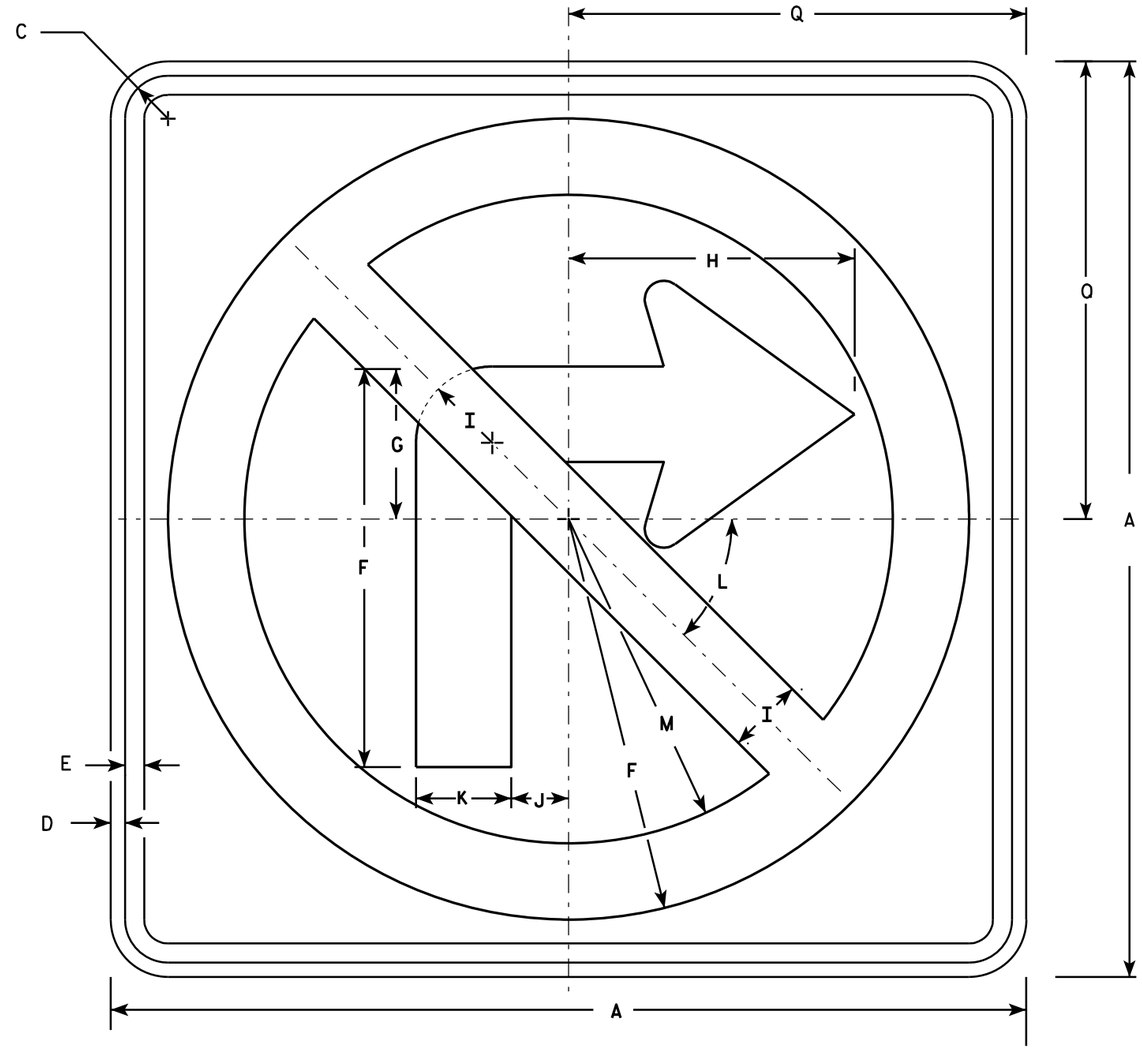
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

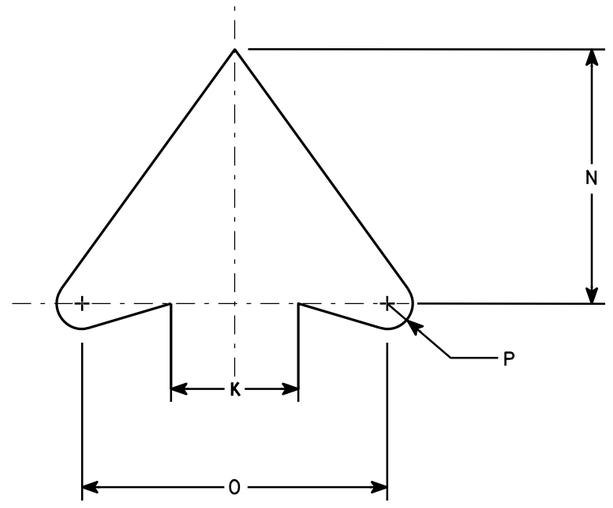
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 114	E



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

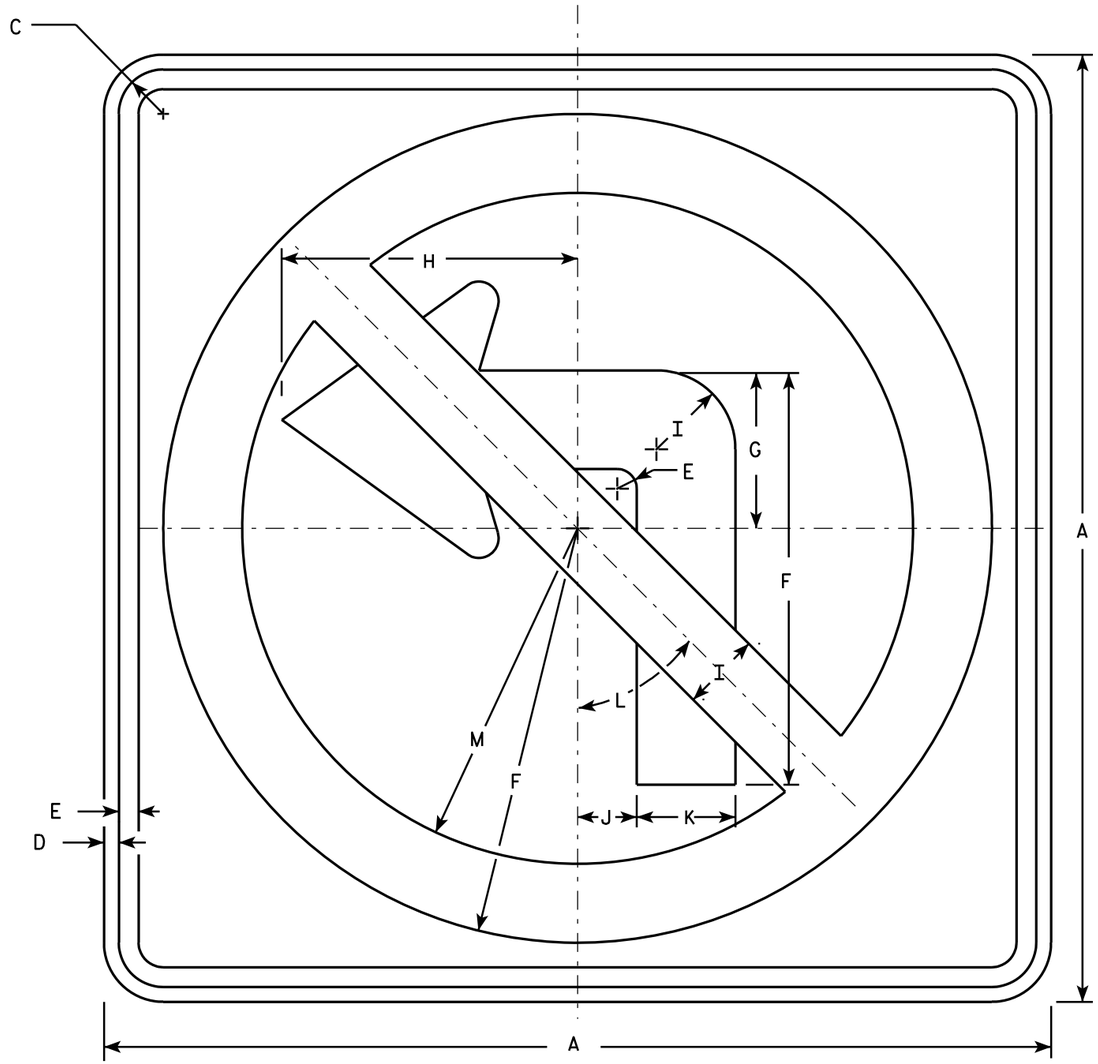
STANDARD SIGN
R3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-1.5

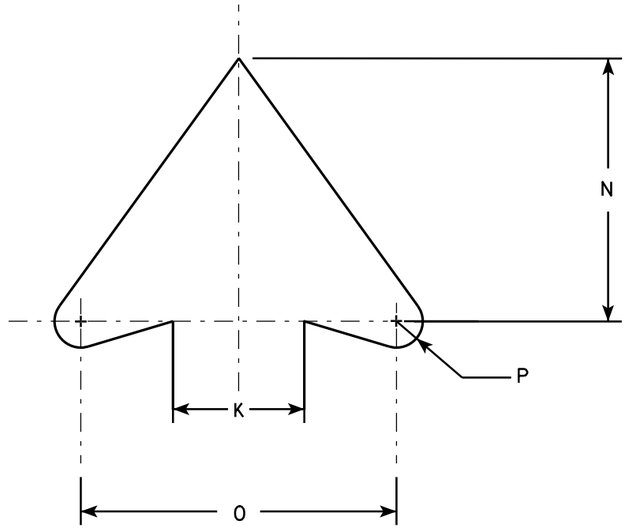
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 115	E



R3-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. 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											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											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											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											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											9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1											16.0

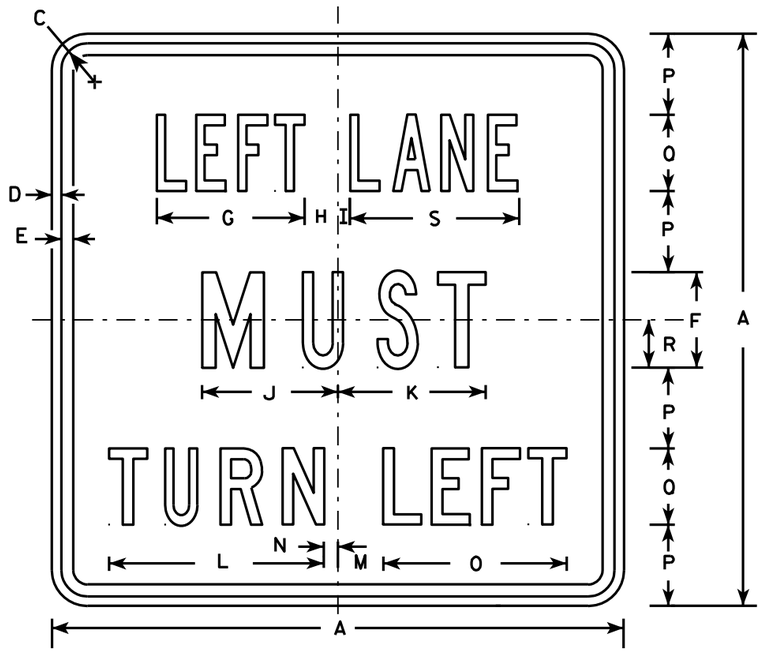
STANDARD SIGN
R3-2

WISCONSIN DEPT OF TRANSPORTATION

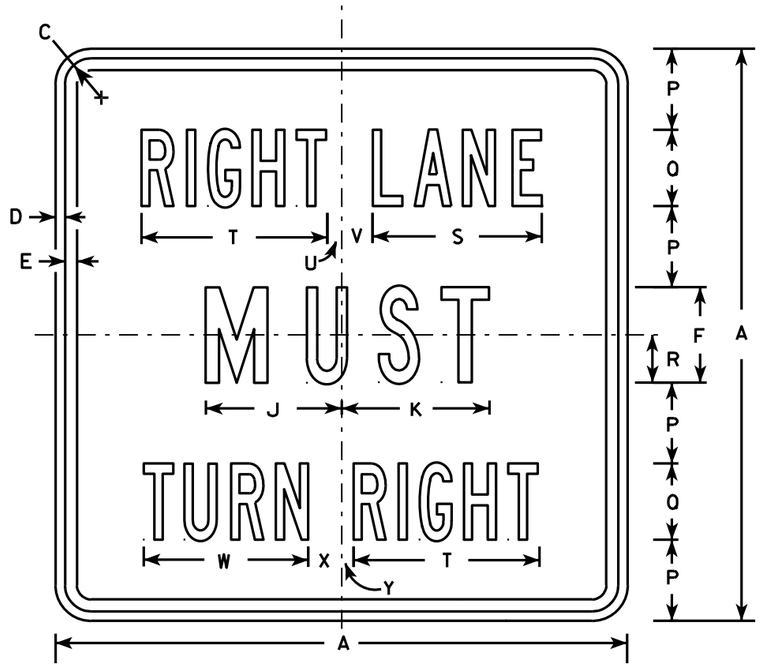
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 116	E



R3-7L



R3-7R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - Line 1 is Series B.
   Line 2 is Series C.
   Line 3 on plate R3-7R is Series B and Series C on plate R3-7L.
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2S	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2M	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
3	36		1 5/8	5/8	3/4	6	9 5/8	2	1 1/8	8 3/4	9	13 1/2	3 7/8	1 1/2	12 1/2	5	5	3	10 5/8	12	7/8	2 1/4	10 5/8	2 1/8	1		9.00
4	48		2 1/4	3/4	1	8	13 1/2	2 3/8	1 1/2	11 1/2	11 7/8	17 3/4	3 5/8	2 1/2	16 3/8	6 1/2	7	4	14 3/8	16 7/8	5/8	3 1/4	15 1/8	2 3/4	1 1/8		16.00
5																											

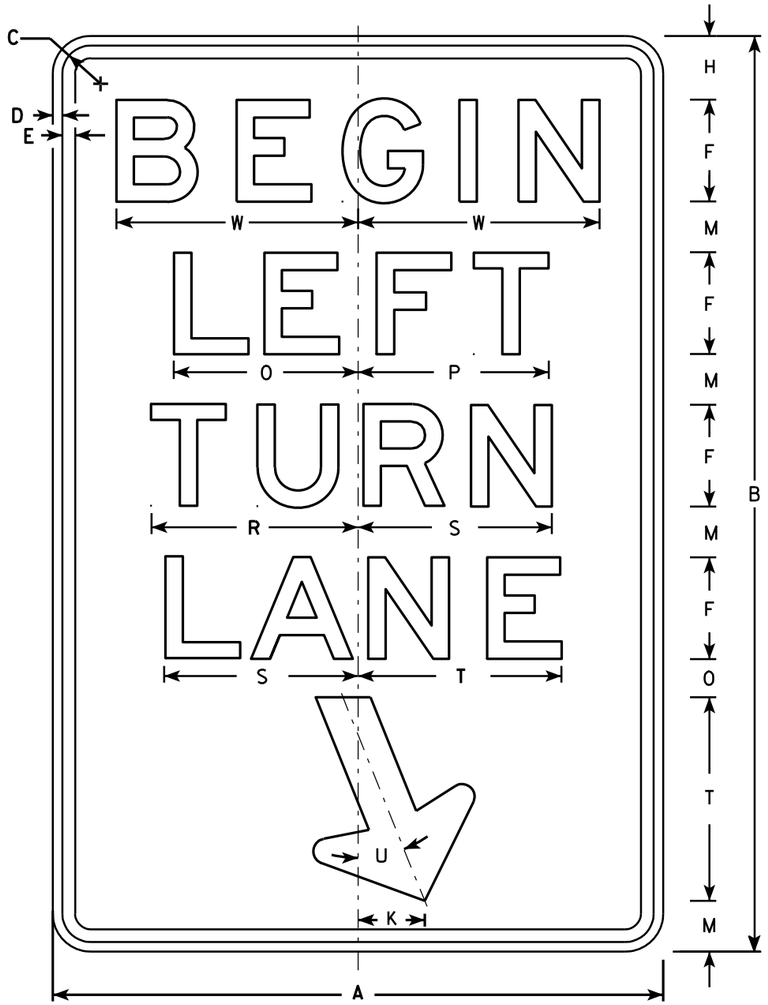
STANDARD SIGN
R3-7L & R3-7R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-7.3

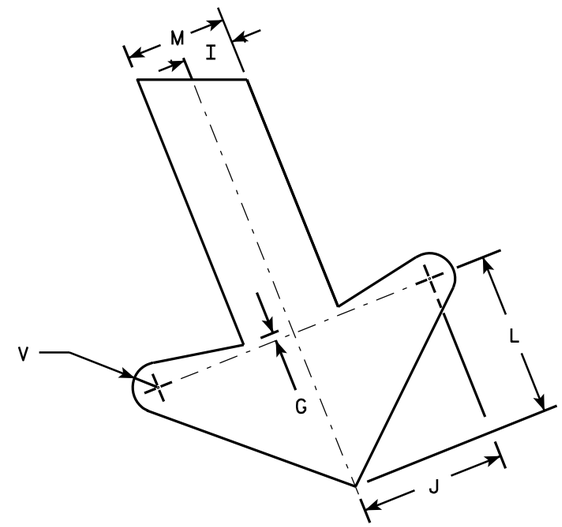
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 117 | E



R3-20L

NOTES

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



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
2M	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
3	36	54	1 3/4	1/2	5/8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 7/8	3	2 1/4	10 7/8	11 1/4		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

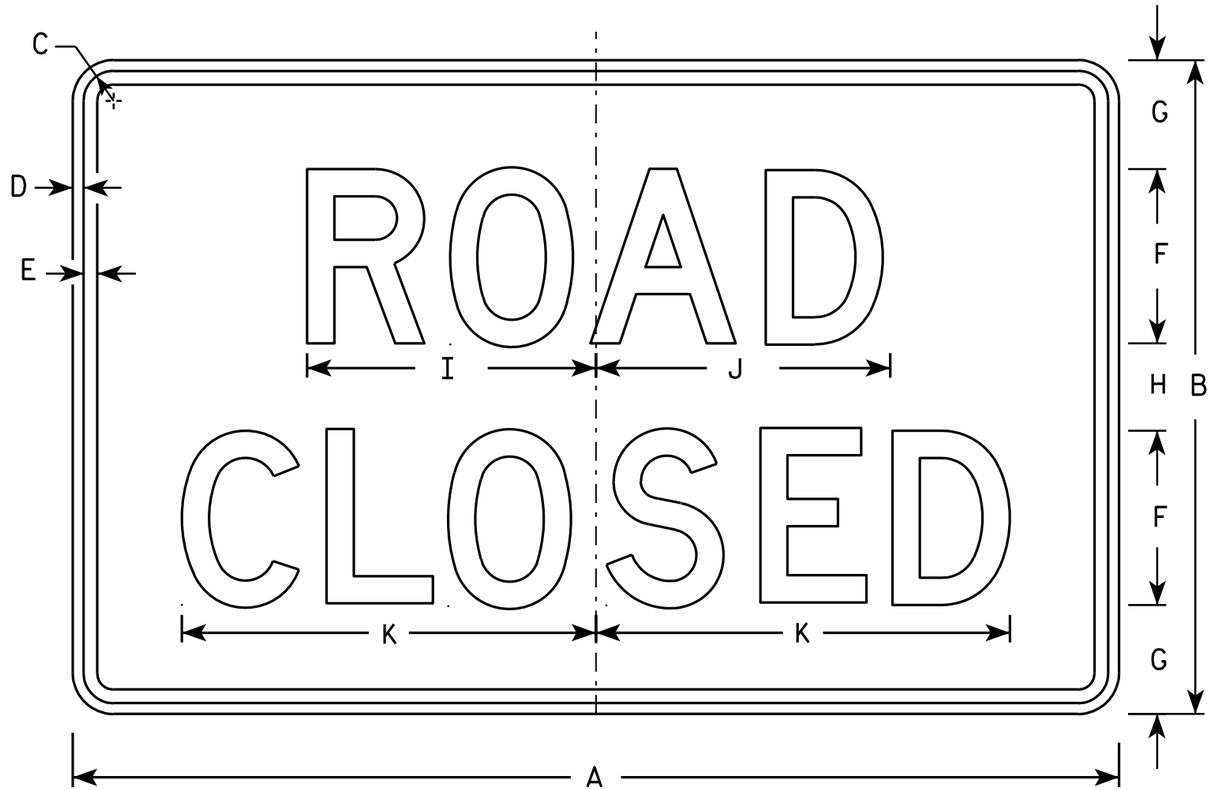
STANDARD SIGN
R3-20L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20L.7

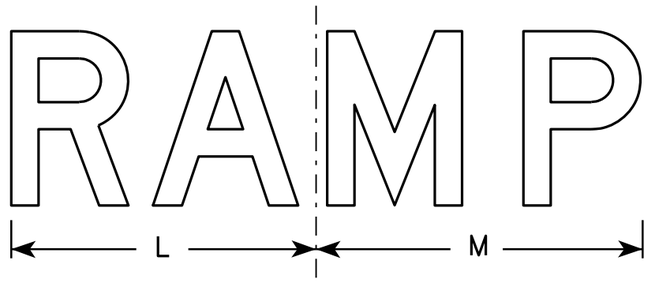
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 118 | E



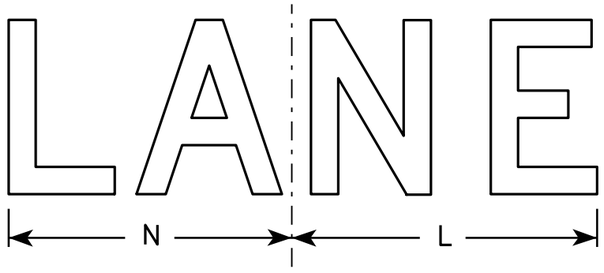
R11-2

NOTES

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



R11-2R



R11-2L

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

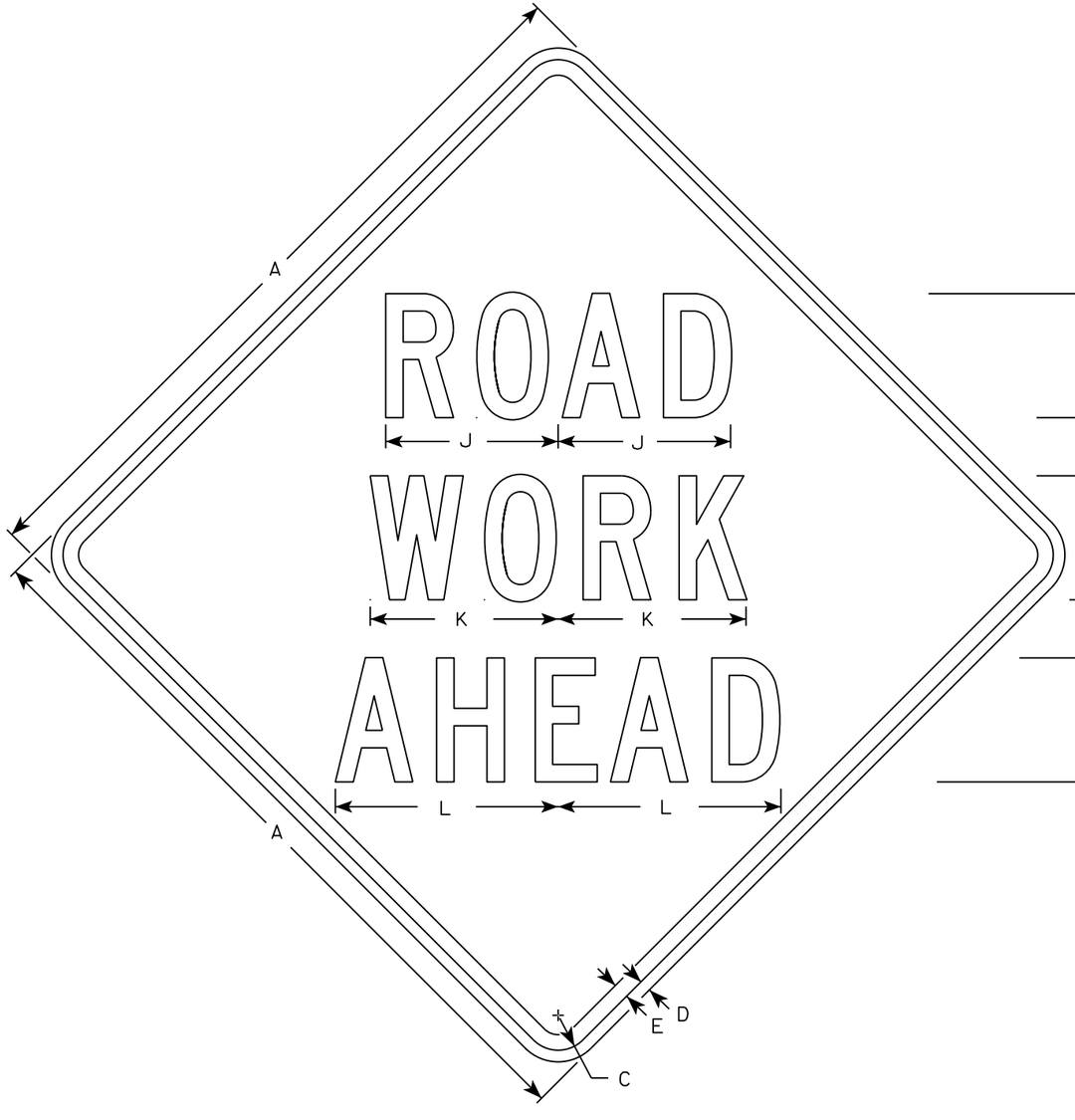
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

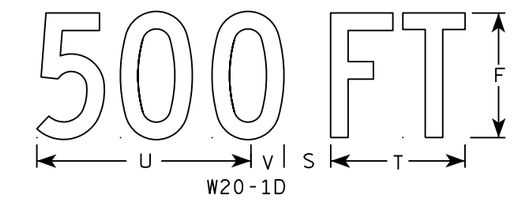
APPROVED Matthew R Rauch
for State Traffic Engineer

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

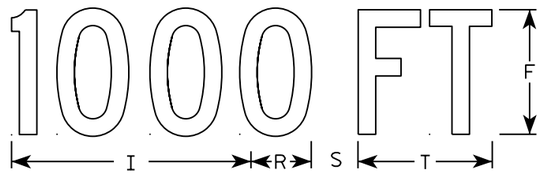
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 119	E



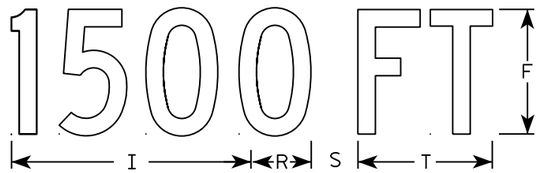
W20-1A



W20-1D

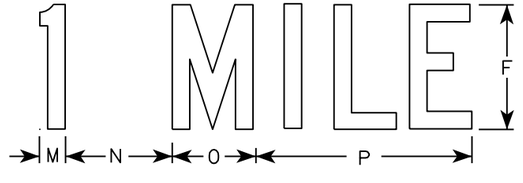


W20-1C

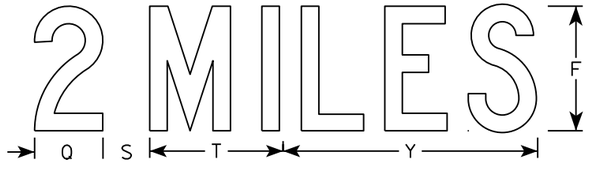


W20-1B

W20-1G



W20-1F



W20-1E

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.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	1/2	5/8	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		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, F & G

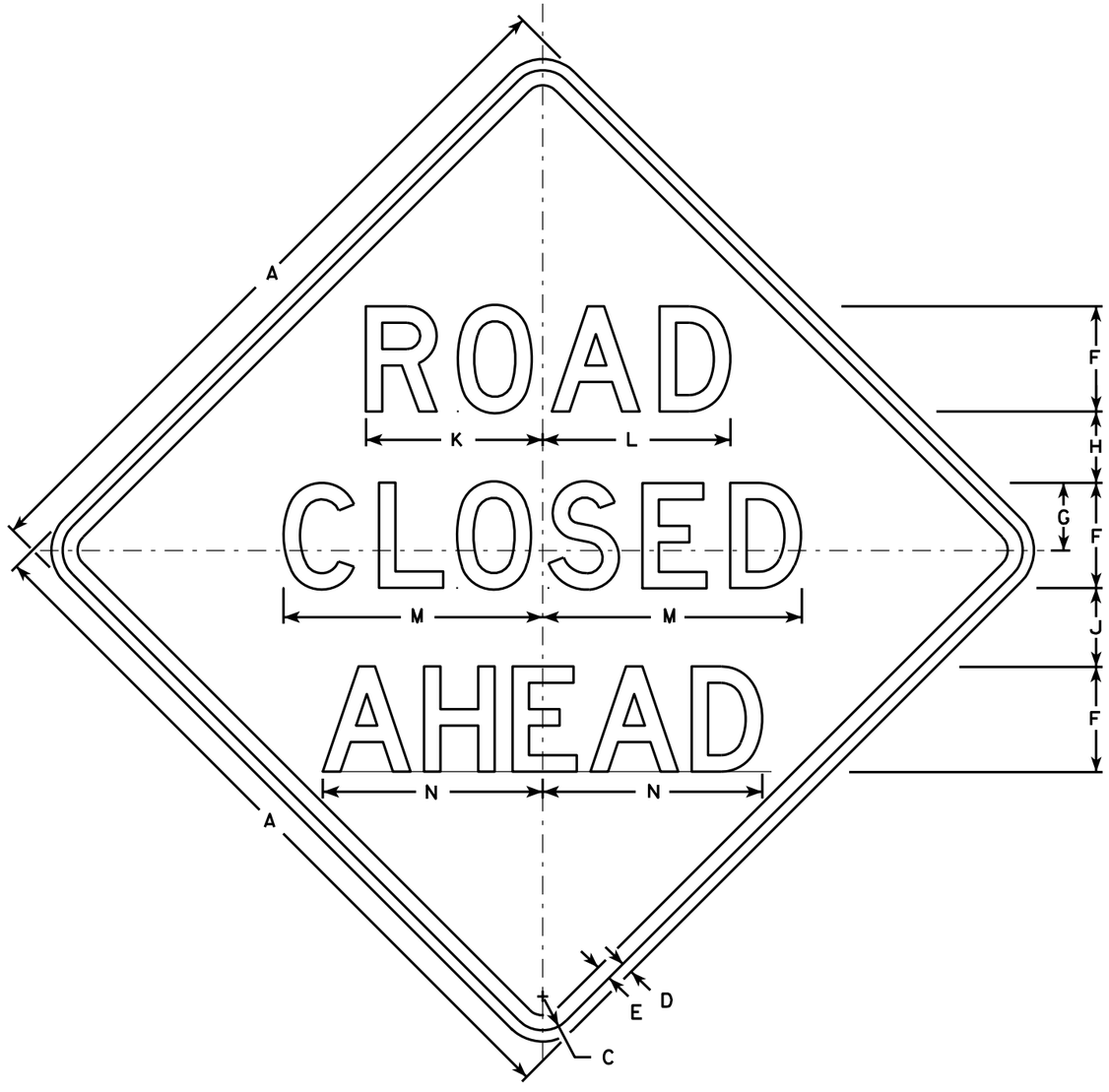
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

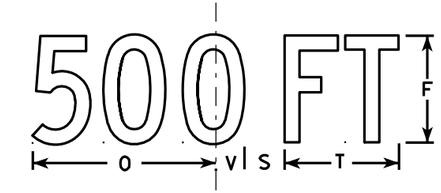
DATE 5/07/15 PLATE NO. W20-1.10

PROJECT NO:

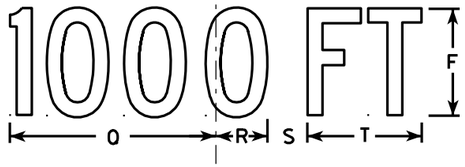
SHEET NO: E



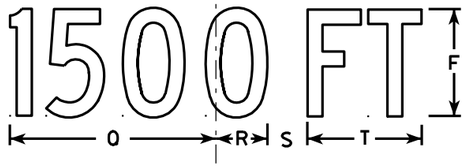
W20-3A



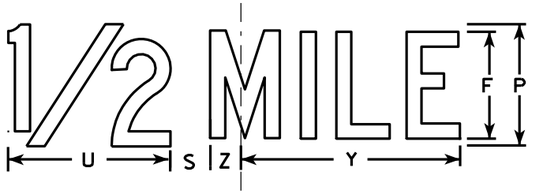
W20-3D



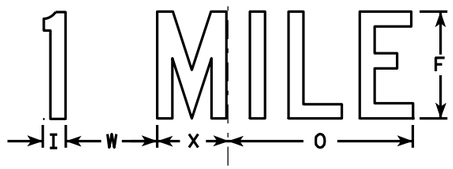
W20-3C



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

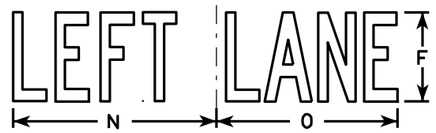
APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 3/18/11 PLATE NO. W20-3.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 121 | E

7

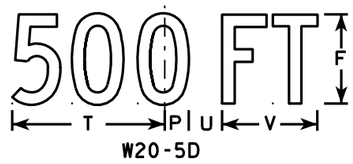
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W203.DGN PLOT DATE : 18-MAR-2011 12:08 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.931739:1.000000
WISDOT/CADDS SHEET 42

W20-56A

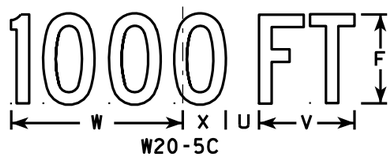


W20-55A

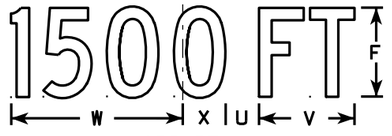
W20-5A



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

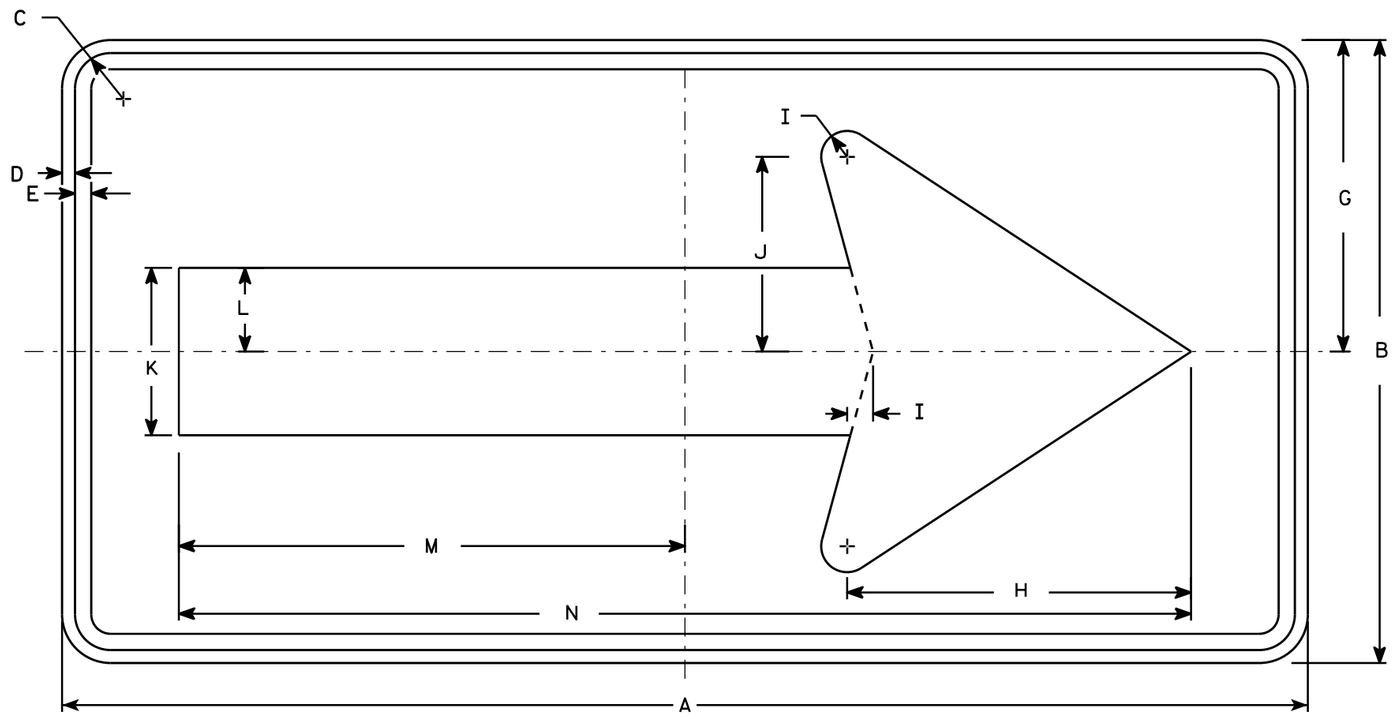
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-5.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 122 | 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



W01-6

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

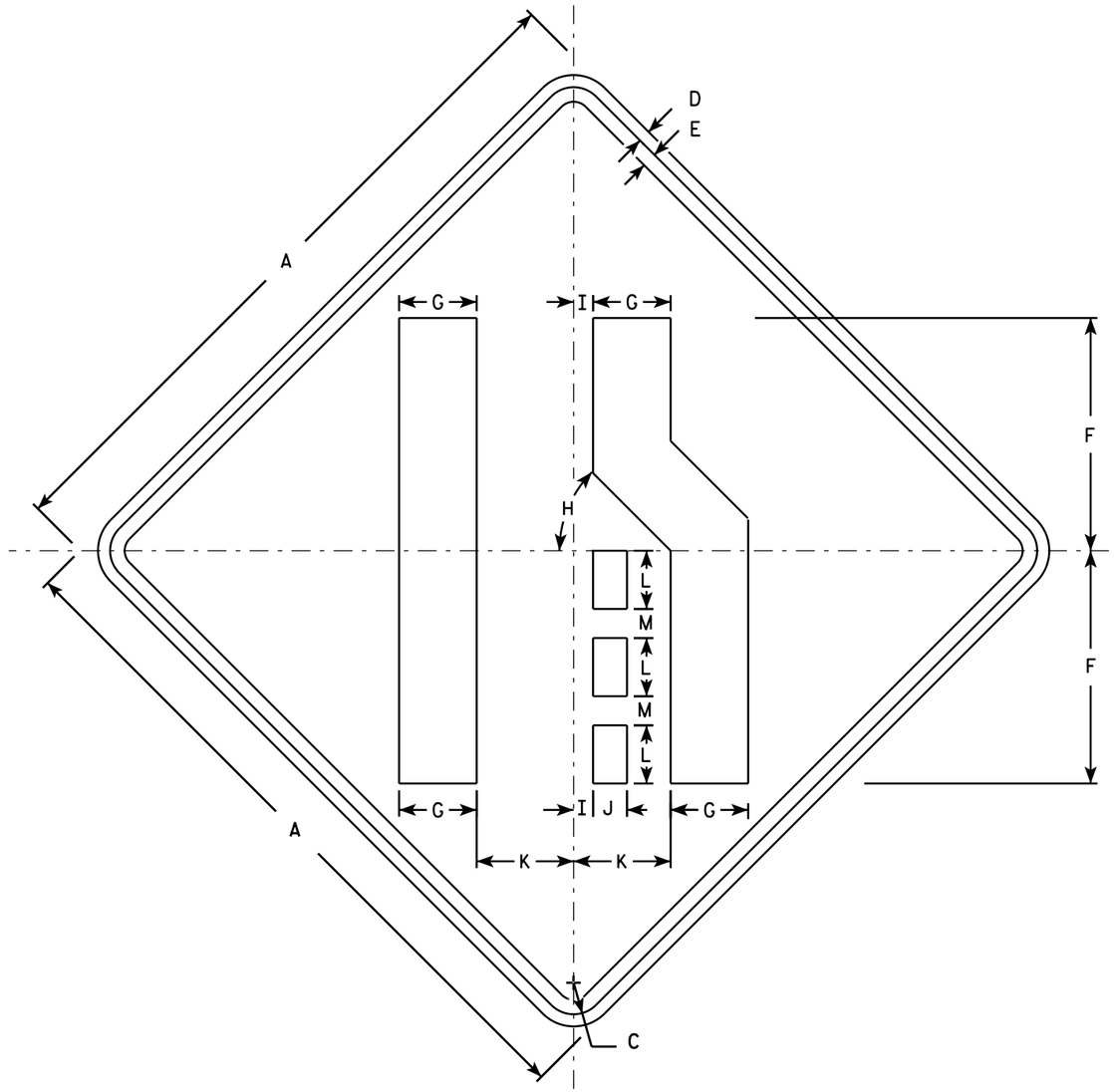
WISCONSIN DEPT OF TRANSPORTATION

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

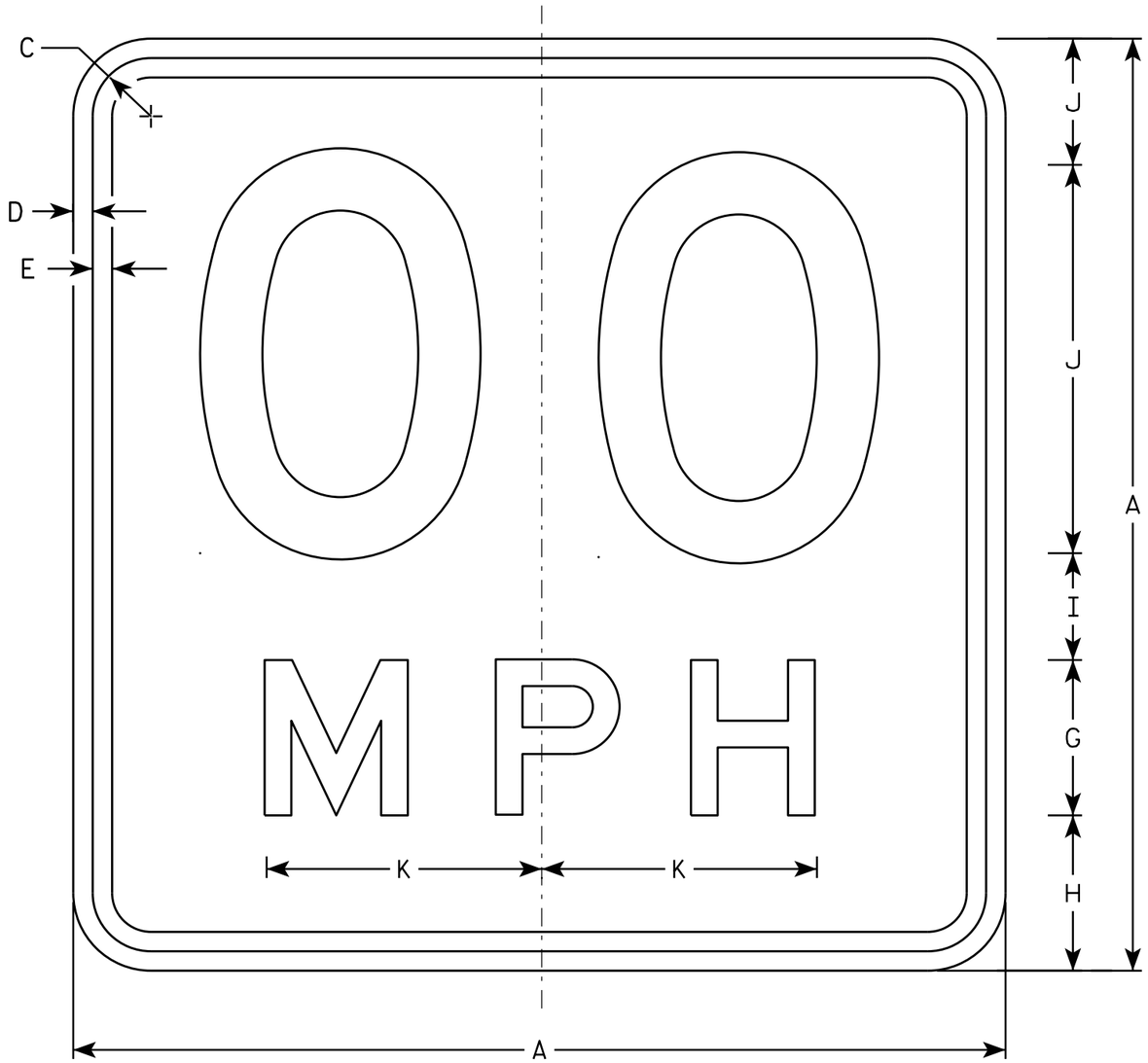
STANDARD SIGN
W04-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 124 W04-2.1

PROJECT NO: | SHEET NO: E



W013-1

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 6
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 and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
   Line 2 is Series E

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	4	4	2 3/4	3 1/4	7 1/8																4.00
2S	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
2M	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
3	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

STANDARD SIGN
W013-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/21/13 PLATE 125 W013-1.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

Wisconsin Department of Transportation

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through innovation and exceptional service.

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