WKE

APR 14, 2020

PROJECT ID: 2782-13-70

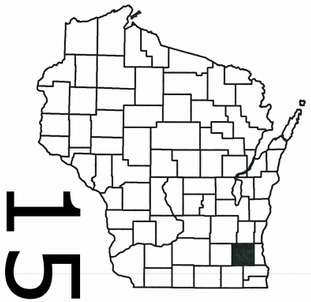
WITH: N/A

COUNTY: WAUKESHA

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 = 248



15

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STH 175

INT WITH PILGRIM RD & MENOMONEE AVE

STH 175

WAUKESHA COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
2782-13-70	WISC 2020139	1

STATE PROJECT NUMBER

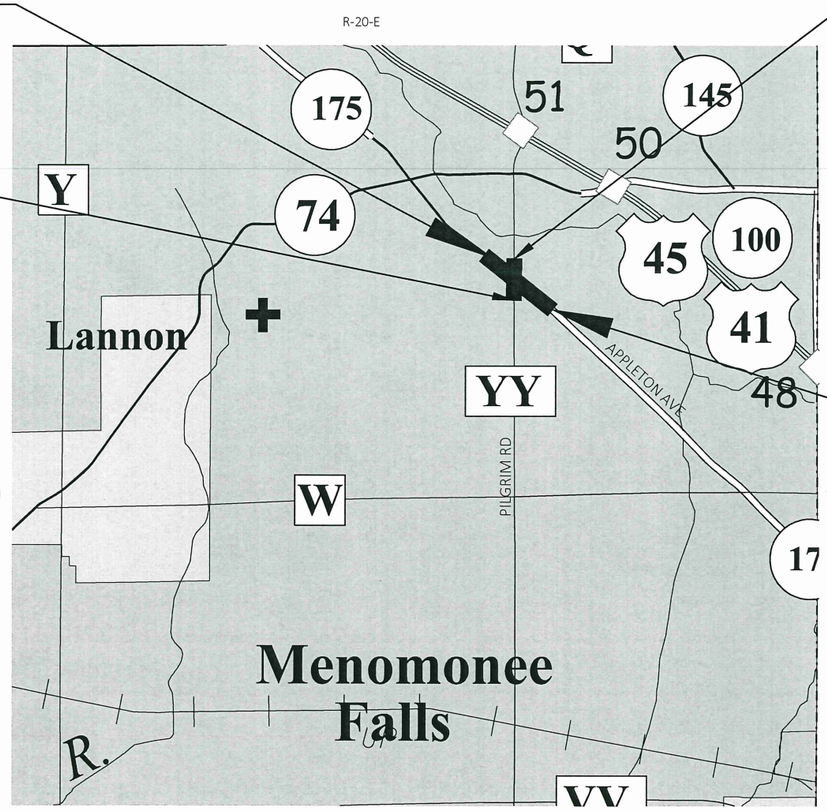
2782-13-70

BEGIN PROJECT 2782-13-70
STA 304+17.65
X = 716780.7022
Y = 219144.5346
MATCH EXISTING
SAW CUT REQ'D

BEGIN CONSTRUCTION
STA 103+18.30
MATCH EXISTING
SAW CUT REQ'D

END CONSTRUCTION
STA 108+87.50
MATCH EXISTING
SAW CUT REQ'D

END PROJECT 2782-13-70
STA 313+00.00
MATCH EXISTING
SAW CUT REQ'D



LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.167 MILES

DESIGN DESIGNATION 2782-13-70

A.A.D.T.	(2018)	=	19,400
A.A.D.T.	(2038)	=	23,700
D.H.V.		=	
D.D.		=	50/50
T.		=	5%
DESIGN SPEED		=	35 MPH
ESALS		=	N/A

CONVENTIONAL SYMBOLS

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

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

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

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WCCS), WAUKESHA COUNTY, NAD83 (11), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (11). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

ORIGINAL PLANS PREPARED BY

KAPUR & ASSOCIATES

WISCONSIN — NICHOLAS T DAMRO — E-40441 — FOX POINT WI. — PROFESSIONAL ENGINEER

DATE: 11-1-19 (Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	KAPUR & ASSOCIATES
Designer	KAPUR & ASSOCIATES, TADI
Project Manager	CHRISTINE HANNA
Regional Supervisor	REEM SHAHIN

APPROVED FOR THE DEPARTMENT

DATE: 11/1/19 Christine Hanna (Signature)

E

FILE NAME : S:\WAUK_CO\MEN_FALLS\GOV\160233 MENOMONEE AVENUE\SHEETS PLAN\010101_TI.DWG

PLOT DATE : 10/25/2019 1:22 PM

PLOT BY : WALTER A. WOLAK II

PLOT NAME :

2

GENERAL NOTES

ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES WILL BE FILLED WITH COMPACTED BACKFILL GRANULAR GRADE 1 UNLESS REGULATIONS REQUIRED OTHERWISE. BACKFILL GRANULAR GRADE 1 IS INCIDENTAL TO THE REMOVAL ITEM.

PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, THE CONTRACTOR SHALL VERIFY INVERT AND RIM ELEVATIONS IN THE PLAN WITH THE ENGINEER.

LOCATION AND ELEVATION OF STORM SEWER STRUCTURES IN CURB AND GUTTER SECTION REFER TO FLOW LINE OF CURB.

LOCATION AND ELEVATION OF STORM SEWER STRUCTURES NOT IN CURB AND GUTTER REFER TO CENTERLINE OF THE STRUCTURE.

CURB AND GUTTER GRADES ARE GIVEN TO THE FLANGE LINE, UNLESS NOTED OTHERWISE.

1/2-INCH FELT EXPANSION JOINT MATERIAL IS REQUIRED BETWEEN BACK OF CURB AND FRONT OF WALK OR DRIVEWAY APRON.

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

SIGNS TO BE MOVED SHALL BE STORED AND PROTECTED BY THE CONTRACTOR, FREE FROM DAMAGE, UNTIL SUCH TIME AS THEY ARE RE-INSTALLED.

EXISTING RIGHT-OF-WAY INFORMATION SHOWN IS APPROXIMATE AND SHALL NOT BE USED TO DISTINGUISH PROPERTY BOUNDARIES.

NO TREES/VEGETATION ARE TO BE REMOVED UNLESS INDICATED FOR REMOVAL BY THE ENGINEER.

REMOVE SIDEWALK AND CURB AND GUTTER TO NEAREST JOINT OR AS DIRECTED BY THE ENGINEER.

THE LOCATIONS OF KNOWN EXISTING UTILITIES IN THE VICINITY OF THE PROJECT ARE SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITIES IN THE AREA THAT ARE NOT SHOWN.

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

INLET PROTECTION SHALL BE INSTALLED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE ON THE SITE.

INLET PROTECTION REQUIRED AT ALL INLETS AS PER EROSION CONTROL PLANS OR AS DIRECTED BY THE ENGINEER.

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

TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

WIS. STATUTE 182.0175 (1974) REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE.

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

UTILITY CONTACTS

JEFF OLDENBURG
AT&T WISCONSIN – COMMUNICATION LINE
2005 PEWAUKEE RD
WAUKESHA, WI 53188-2443
(262)-896-7522
JO2376@ATT.COM

CHARLES BRASILE
CHARTER COMMUNICATIONS – COMMUNICATION LINE
1320 N DR MARTIN LUTHER KING DR
MILWAUKEE, WI 53212
(414)-430-5812
WIS.ENGINEERING@CHARTER.COM

MATTHEW JANECKE
ASST. DIRECTOR OF UTILITIES & PUBLIC WORKS
VILLAGE OF MENOMONEE FALLS
W156 N8480 PILGRIM ROAD
MENOMONEE FALLS, WI 53051-3140
(262)-532-4704

GREGORY BOERNER
WE ENERGIES – ELECTRICITY
333 W EVERETT ST
MILWAUKEE, WI 53203
(608)-409-5861
GREGORY.BOERNER@WECENERGYGROUP.COM
WE-UTILITY-RELOCATIONS@WE-ENERGIES.COM
WE ENERGIES ELECTRIC DISPATCH: (800)-662-4797

JACOB HULBERT
WE ENERGIES – GAS
333 W EVERETT ST
MILWAUKEE, WI 53203
(414)-955-5575
JACOB.HULBERT@WECENERGYGROUP.COM
WE ENERGIES GAS DISPATCH: (800)-261-5325

CAROLYNN GELLINGS
WAUKESHA COUNTY DEPARTMENT OF PUBLIC WORKS – ROAD FACILITY
1320 PEWAUKEE RD
WAUKESHA, WI 53188
(262)-548-7740
CGELLINGS@WAUKESHACOUNTY.GOV

WDNR CONTACT

CRAIG WEBSTER
ENVIRONMENTAL REVIEW SPECIALIST
BUREAU OF ENVIRONMENTAL ANALYSIS AND SUSTAINABILITY
WISCONSIN DEPARTMENT OF NATURAL RESOURCES
141 NW BARSTOW ST, ROOM 180
WAUKESHA WI 53188
(262)-574-2141
CRAIG.WEBSTER@WI.GOV

MILWAUKEE COUNTY TRANSIT SYSTEM (MCTS) CONTACTS

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

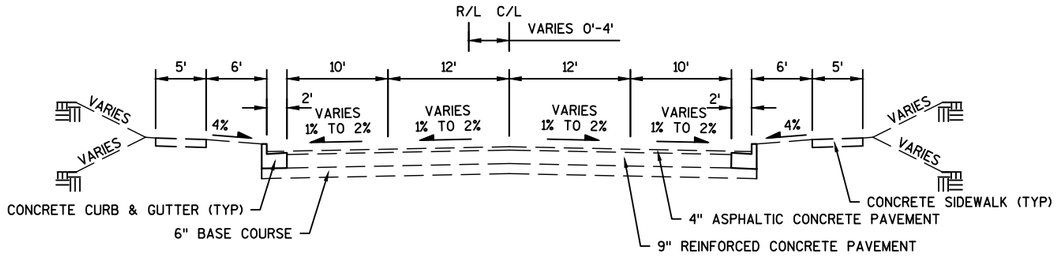
ANDY TILLMAN
TRANSIT PLANNER (STOPS)
MILWAUKEE COUNTY TRANSIT SYSTEM
1942 N 17TH STREET
MILWAUKEE, WI 53205
(414) 343-1728
ATILLMAN@MCTS.ORG

2

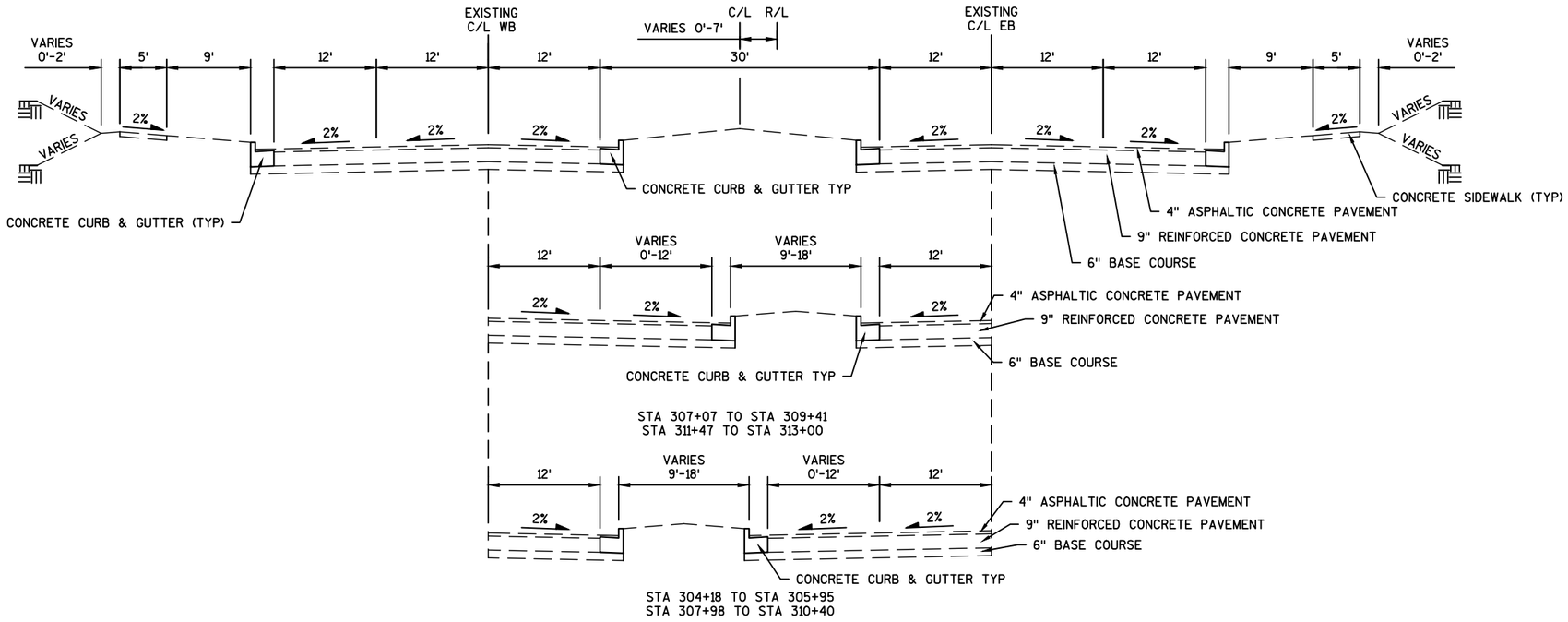
DESIGN INDEX

TITLE
GENERAL NOTES AND UTILITY CONTACTS
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
PLAN DETAILS
PAVING GRADES
EROSION CONTROL
STORM SEWER
SIGNING
LIGHTING
TRAFFIC SIGNALS
PAVEMENT MARKING
TRAFFIC CONTROL
ALIGNMENT PLAN

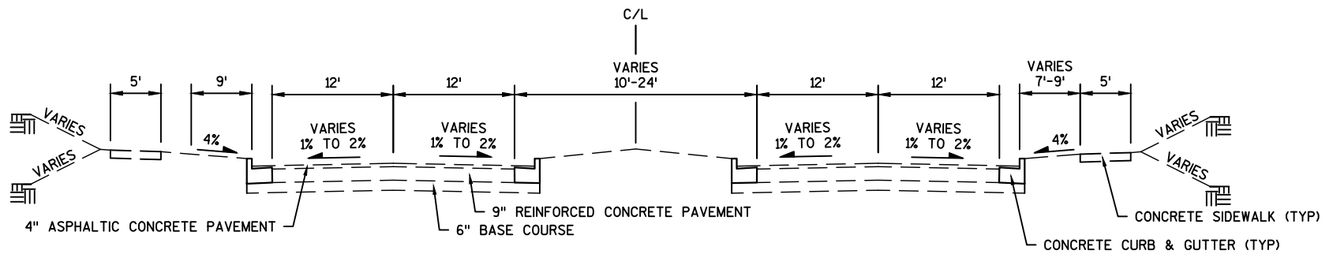
PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	PLAN: GENERAL NOTES AND UTILITY CONTACTS	SHEET 2	E



TYPICAL EXISTING SECTION
MENOMONEE AVENUE
STA 202+15 TO STA 209+02



TYPICAL EXISTING SECTION
APPLETON AVENUE
STA 304+18 TO STA 313+00



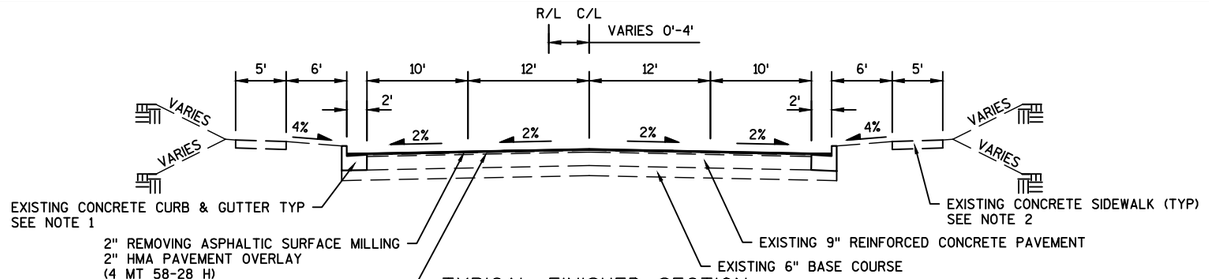
TYPICAL EXISTING SECTION
PILGRIM ROAD
STA 103+18 TO STA 108+87

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	PLAN: TYPICAL SECTIONS	SHEET 3 E

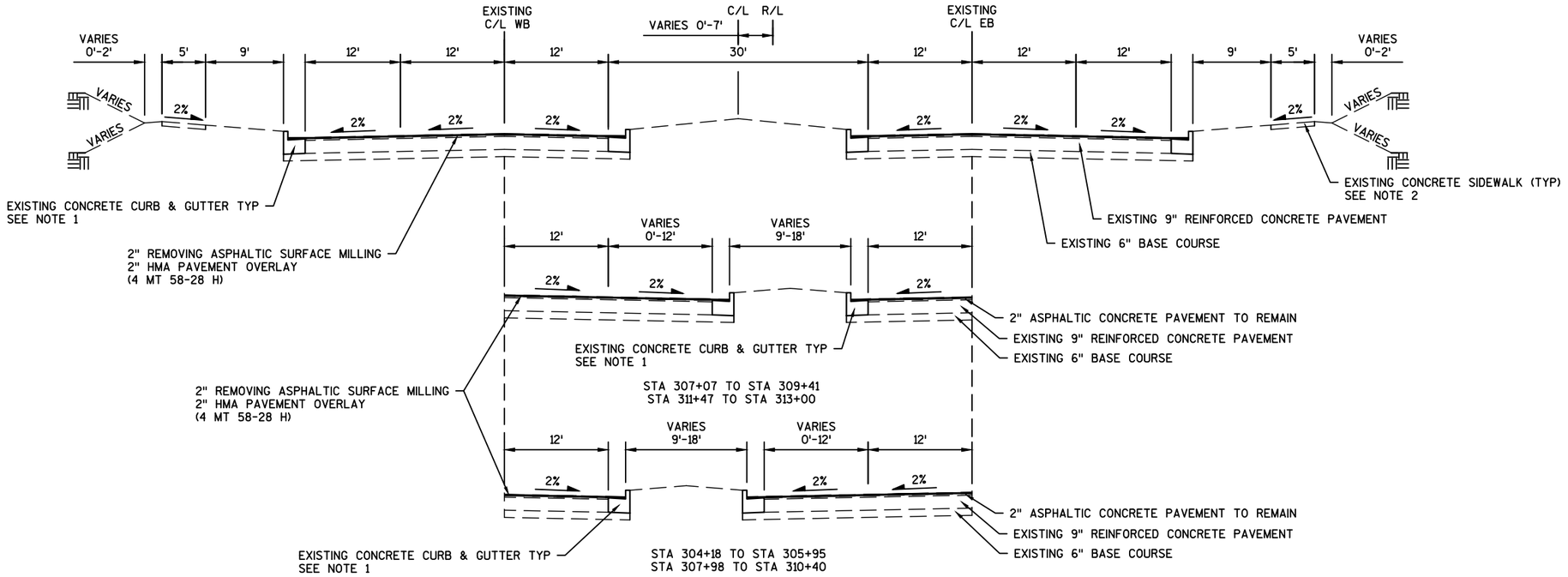
NOTE:

1) REFER TO PLAN DETAILS FOR LOCATIONS OF CURB AND GUTTER REPLACEMENT. DO NOT OVERLAY GUTTER PAN AT LOCATIONS OF NEW CURB AND GUTTER.

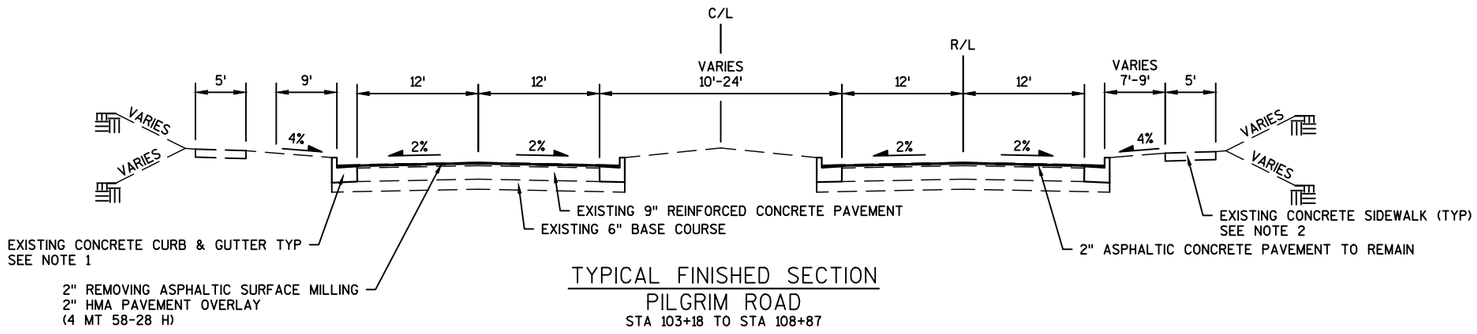
2) REFER TO PLAN DETAILS FOR LOCATIONS OF SIDEWALK REPLACEMENT.



TYPICAL FINISHED SECTION
MENOMONEE AVENUE
STA 202+15 TO STA 209+02

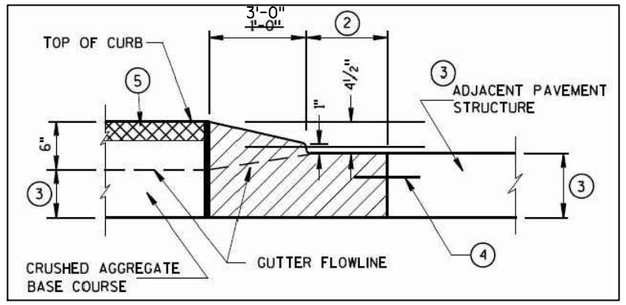


TYPICAL FINISHED SECTION
APPLETON AVENUE
STA 304+18 TO STA 313+00



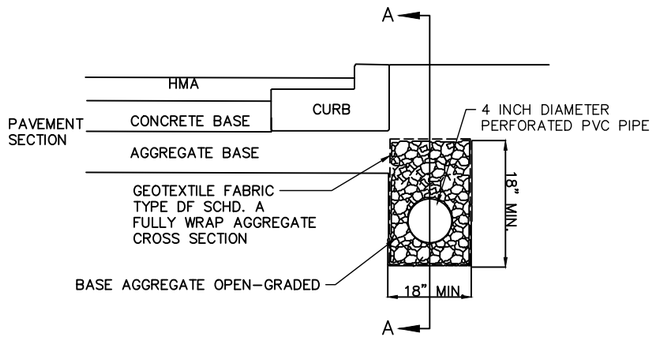
TYPICAL FINISHED SECTION
PILGRIM ROAD
STA 103+18 TO STA 108+87

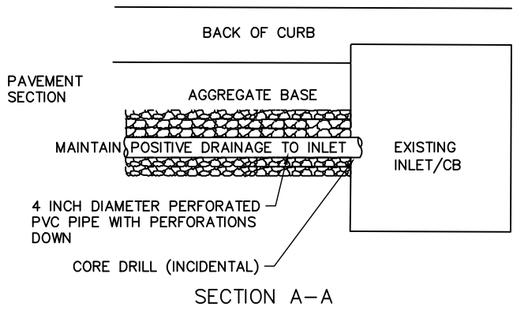
PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	PLAN: TYPICAL SECTIONS	SHEET 4	E



NOTE:
DETAIL IS AN EXCERPT FROM WISDOT SDD 11B2: CONCRETE MEDIAN NOSE.
MODIFICATION TO THIS DETAIL CHANGES THE 1'-0" MEDIAN NOSE LENGTH DIMENSION TO 3'-0". ALL OTHER INFORMATION FROM SDD 11B2 REMAINS UNCHANGED.

CONCRETE MEDIAN NOSE TYPE 2 (MODIFIED)





SECTION A–A

PIPE UNDERDAIN 4–INCH INSTALLATION DETAIL

NOTES

1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER ADJACENT TO NEW CONCRETE BASE.

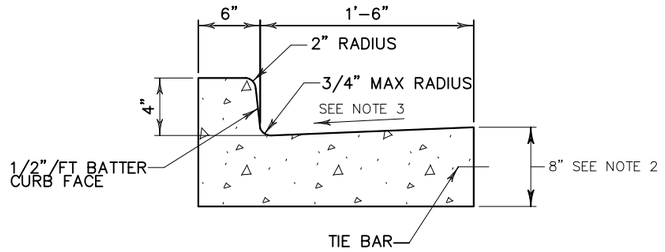
2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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

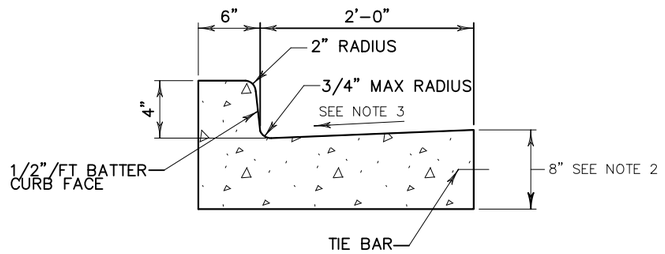
4) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATIONS WILL BE SHOWN ELSEWHERE ON THE PLAN.

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

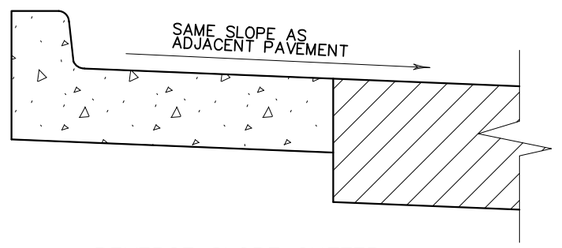
6) UNLESS OTHERWISE NOTED ON THE TYPICAL SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 1'–0" BEHIND THE BACK OF CURB.



CONCRETE CURB AND GUTTER 24–INCH SPECIAL TYPE A

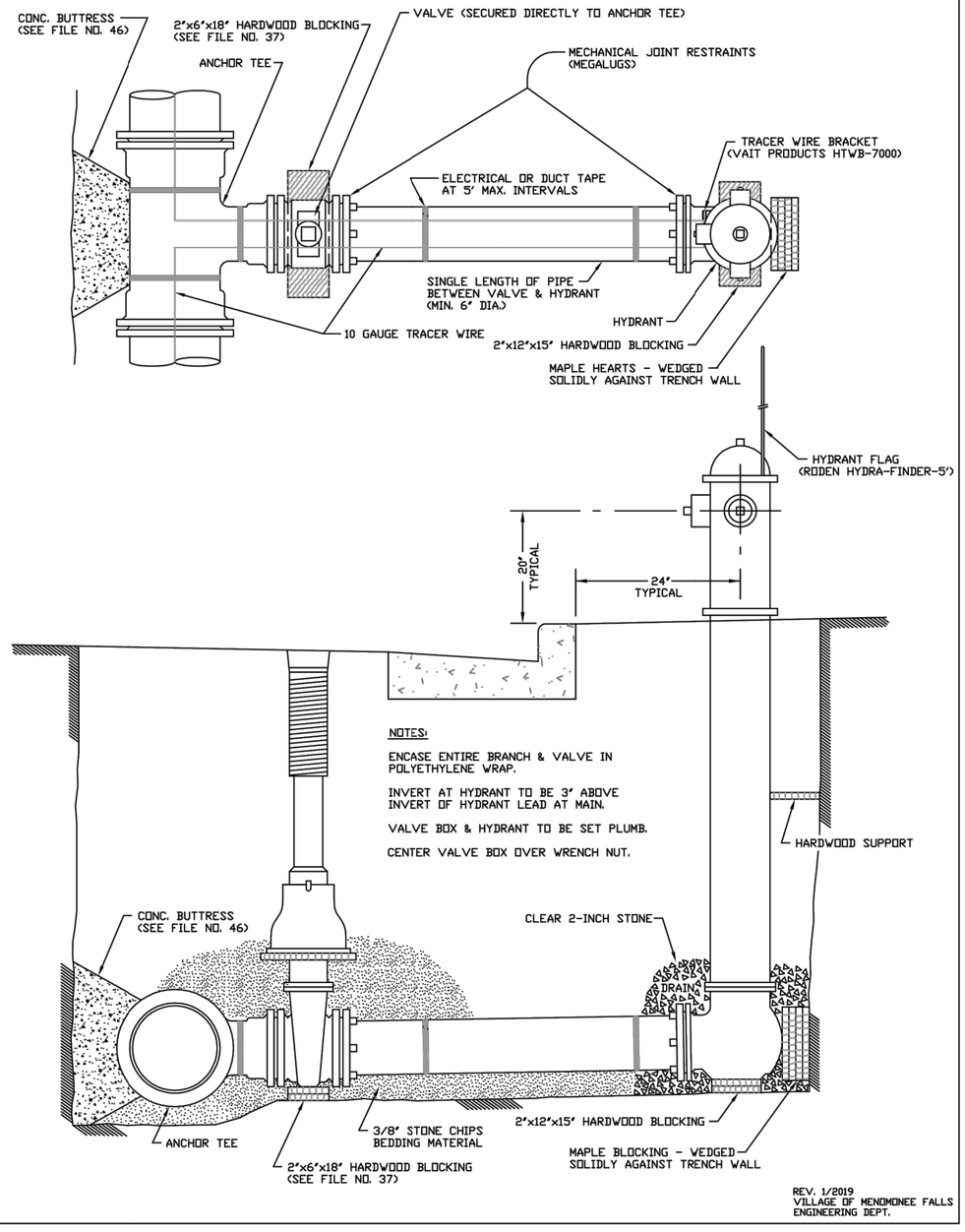


CONCRETE CURB AND GUTTER 30–INCH SPECIAL TYPE A



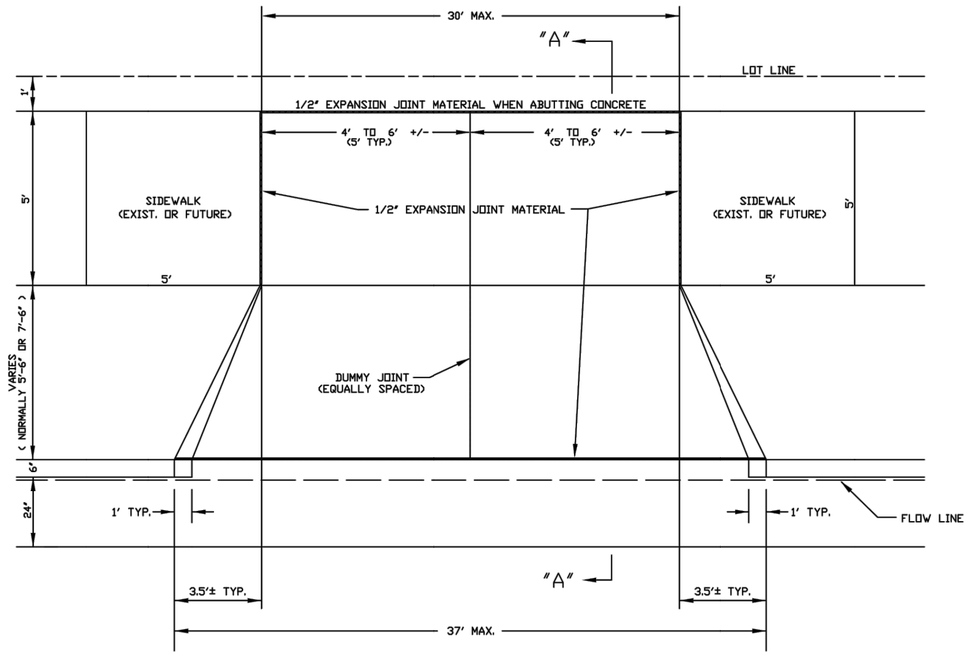
REVERSE SLOPE GUTTER
SEE NOTE 4

STANDARD HYDRANT DETAIL



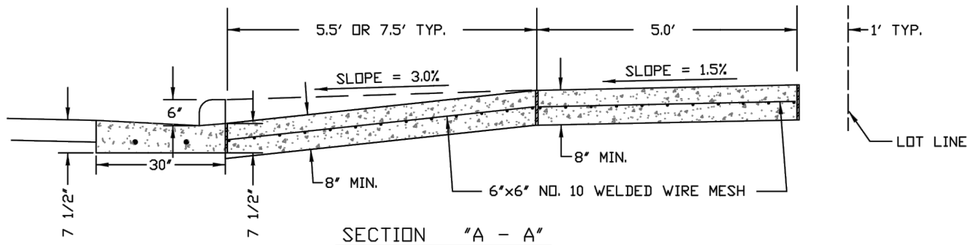
REV. 1/2019
VILLAGE OF MENOMONEE FALLS
ENGINEERING DEPT.

VILLAGE OF MENOMONEE FALLS
TYPICAL FLARED DRIVEWAY - COMMERCIAL, INDUSTRIAL, MULTI-FAMILY



NOTE: ADDITIONAL WIDTH MAY BE PERMITTED UPON DEMONSTRATION OF NECESSITY DUE TO SPECIAL CIRCUMSTANCES (SEC. 122-688 OF VILLAGE ZONING CODE)

NOTE: 4" MINIMUM THICKNESS OF WELL COMPACTED 3/4" CRUSHED LIMESTONE BASE COURSE REQUIRED UNDER DRIVEWAY APPROACH.



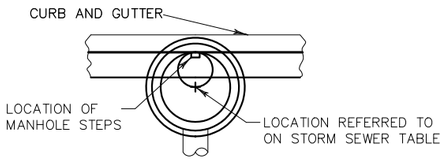
SECTION "A - A"

NOTE: DRIVEWAY DETAIL SHOWN FOR INFORMATION ONLY. ACTUAL PLAN VIEW DIMENSIONS MAY VARY.

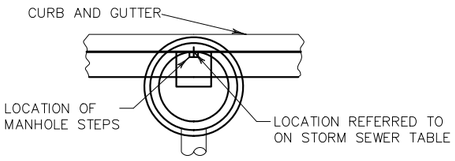
IF A CONCRETE OR ASPHALT DRIVEWAY IS TO BE INSTALLED IN THE AREA BETWEEN THE CURB AND GUTTER AND THE LOT LINE, A DRIVEWAY PERMIT IS REQUIRED AND SHALL BE OBTAINED AT THE VILLAGE HALL.

REV. 5/2018
VILLAGE OF MENOMONEE FALLS
ENGINEERING DEPT.

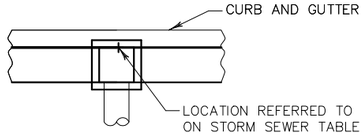
NOTE
1) LOCATION OF STRUCTURE MAY BE ADJUSTED
TO FIT FIELD CONDITIONS.
2) LOCATION AND SIZE OF STRUCTURE COVER OPENING DEPENDS ON TYPE OF CASTING. CASTING TYPES ARE SHOWN ON THE STORM SEWER TABLE.



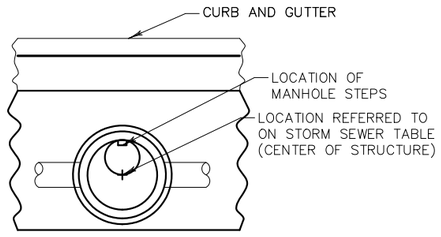
MANHOLE IN CURB AND GUTTER



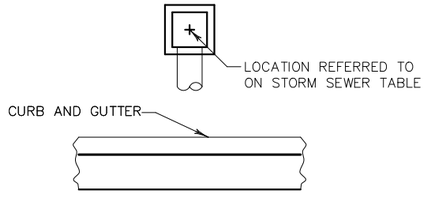
MANHOLE WITH INLET COVER IN CURB AND GUTTER



INLET IN CURB AND GUTTER

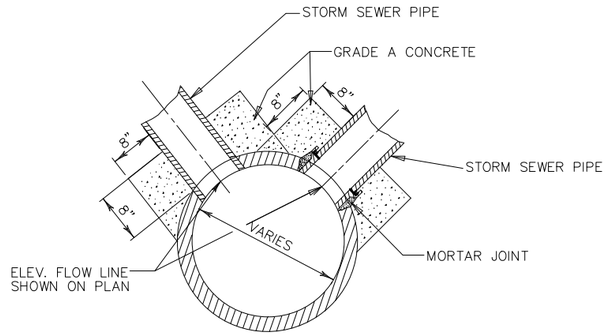


MANHOLE NOT IN CURB AND GUTTER

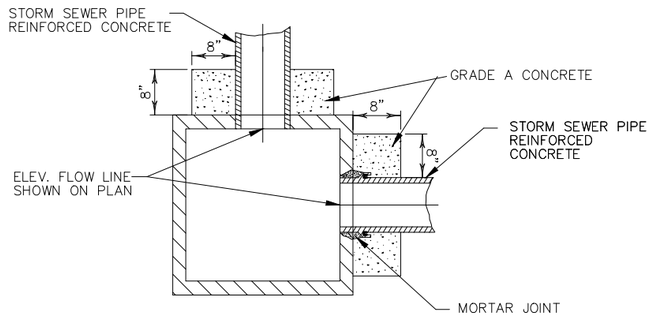


INLET NOT IN CURB AND GUTTER

STRUCTURE LOCATION DETAIL



AT MANHOLE
INCIDENTAL TO NEW STRUCTURE AND NEW PIPE ITEMS



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

STORM SEWER CONNECTION DETAIL

2

LEGEND

LIMITS OF MILL AND OVERLAY

LIMITS OF FULL DEPTH PAVEMENT

N

BEGIN PROJECT
STA 304+17.65

BEGIN WB MILL/OVERLAY
STA 305+25.76

END CONSTRUCTION
STA 108+87.50

BEGIN CONSTRUCTION
STA 202+14.68

END CONSTRUCTION
STA 209+02.36

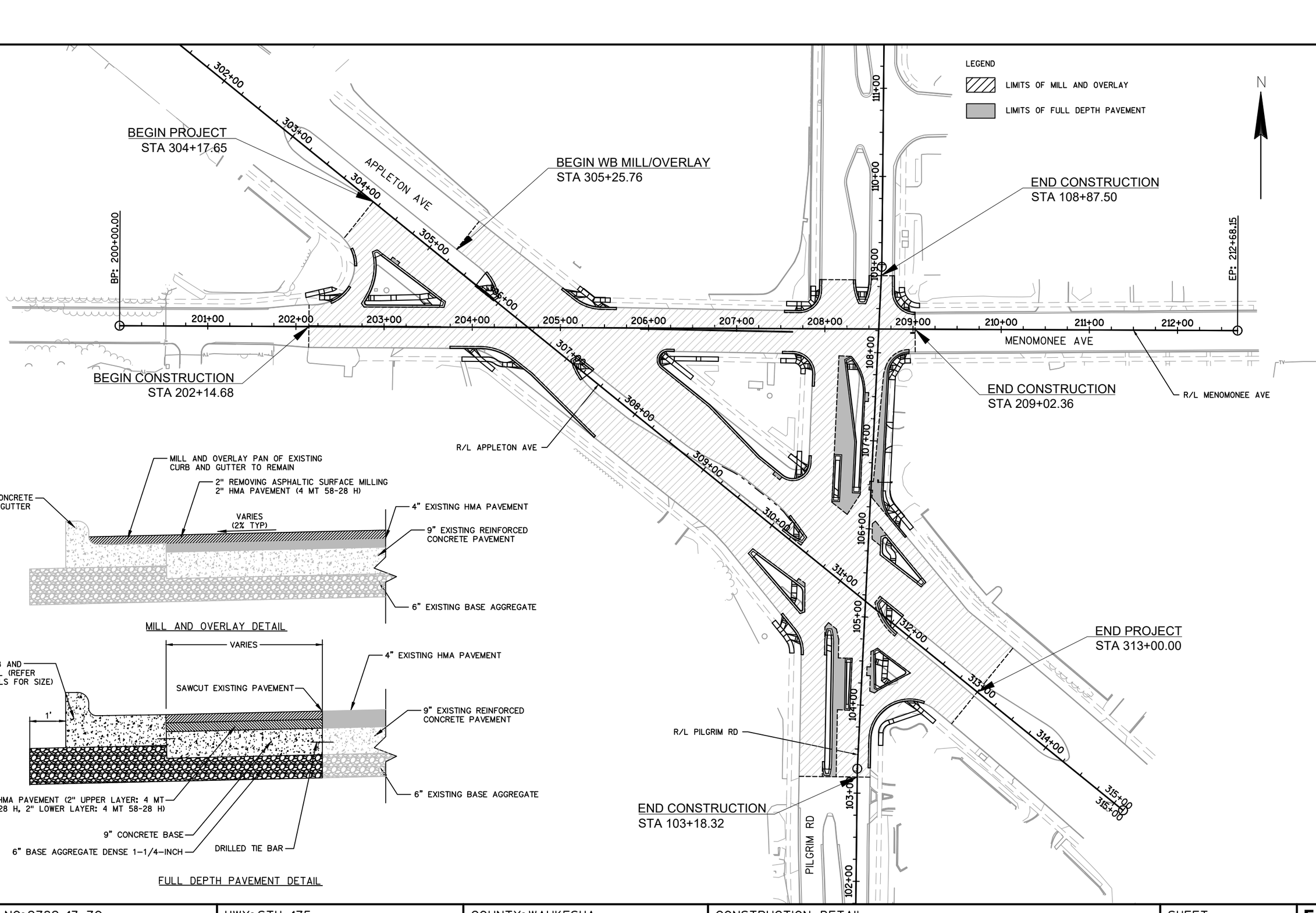
R/L MENOMONEE AVE

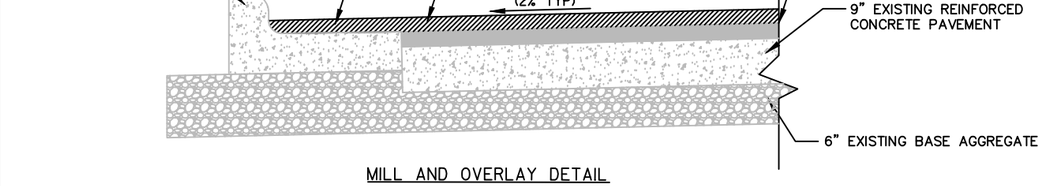
R/L APPLETON AVE

END PROJECT
STA 313+00.00

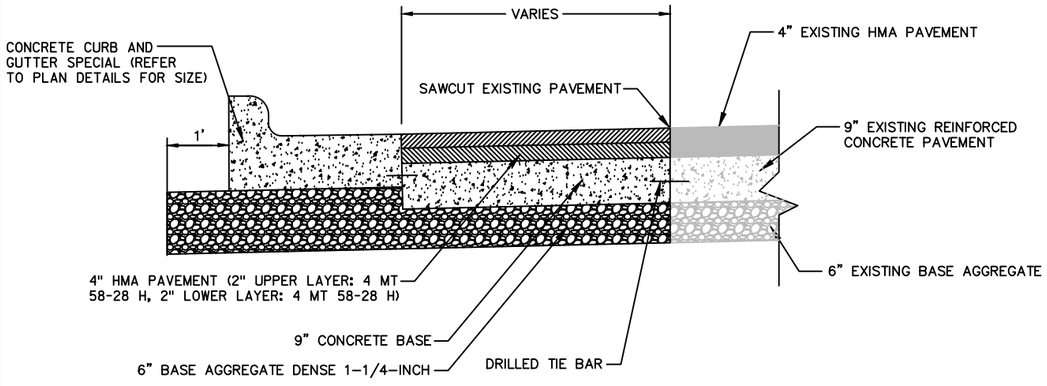
R/L PILGRIM RD

END CONSTRUCTION
STA 103+18.32





MILL AND OVERLAY DETAIL



FULL DEPTH PAVEMENT DETAIL

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	CONSTRUCTION DETAIL	SHEET 8	E

2

APPLETON AVE

PILGRIM RD

LEGEND
XXX.XX = SPOT ELEVATION
XXX.XXG = FLOWLINE OF CURB ELEVATION
XXX.XXT = TOP OF CURB ELEVATION
XXX.XXF = FLANGE OF CURB ELEVATION
= 6:1 GRADED FLARE SEE STANDARD DETAIL DRAWING

N

STA 104+59.64,24.34'
EL=794.95

STA 104+58.40,23.50'
EL=794.99

STA 104+54.13,23.12'
EL=795.06

STA 104+51.42,23.05'
EL=795.14

STA 104+53.00,16.23'
EL=795.54

STA 104+53.37,13.96'
EL=795.51

STA 104+53.28,12.46'
EL=795.36

STA 104+47.12,14.37'
EL=795.64

STA 104+47.02,12.88'
EL=795.72

STA 104+45.29,22.90'
EL=795.23

STA 104+36.93,22.69'
EL=795.77

STA 104+31.93,22.57'
EL=795.84

STA 104+28.88,22.49'
EL=795.92

STA 104+55.64,30.24'
EL=794.94

STA 104+54.39,29.40'
EL=794.98

STA 104+51.27,29.05'
EL=795.08

STA 104+45.14,28.90'
EL=795.17

STA 104+36.78,28.69'
EL=795.86

STA 104+31.78,28.57'
EL=795.93

STA 104+29.90,31.02'
EL=796.15

STA 104+28.01,33.18'
EL=796.11

STA 104+26.72,33.95'
EL=795.40

STA 104+23.42,28.39'
EL=796.34

STA 104+24.71,27.63'
EL=796.26

STA 104+09.23,51.86'
EL=795.76

STA 104+07.25,52.12'
EL=795.74

STA 104+01.20,67.65'
EL=796.29

STA 104+04.85,62.88'
EL=795.79

STA 104+09.59,60.10'
EL=795.50

STA 104+07.59,60.01'
EL=795.72

STA 104+00.88,59.84'
EL=795.88

STA 103+97.64,72.29'
EL=796.40

STA 103+87.00,86.17'
EL=796.08

STA 103+93.68,69.25'
EL=796.47

STA 103+83.04,83.13'
EL=796.21

STA 103+97.22,64.62'
EL=796.38

STA 103+86.35,37.19'
EL=798.84

STA 103+84.49,32.55'
EL=798.92

STA 103+81.68,39.04'
EL=798.92

STA 103+79.84,34.39'
EL=799.00

STA 103+69.66,22.13'
EL=799.98

STA 103+69.83,27.12'
EL=800.05

STA 103+55.52,27.60'
EL=801.24

STA 103+55.35,22.61'
EL=801.06

10+00

R/L PILGRIM ROAD

PLANTER

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	CONSTRUCTION DETAIL - CURB RAMPS	SHEET 9	E

2

LEGEND
XXX.XX = SPOT ELEVATION
XXX.XXG = FLOWLINE OF CURB ELEVATION
XXX.XXT = TOP OF CURB ELEVATION
XXX.XXF = FLANGE OF CURB ELEVATION
= 6:1 GRADED FLARE SEE STANDARD DETAIL DRAWING

N

STA 310+78.39,87.67'
EL=796.61
STA 310+69.96,85.89'
EL=797.04
STA 310+83.88,88.83'
EL=796.54
STA 310+71.00,80.99'
EL=796.93
STA 310+84.98,83.64'
EL=796.46
STA 310+79.44,82.71'
EL=796.54
STA 310+89.66,90.05'
EL=796.94
STA 310+77.28,75.89'
EL=796.19
STA 310+97.92,87.36'
EL=796.77
STA 310+76.52,72.65'
EL=796.14
STA 310+96.10,92.03'
EL=796.84
STA 310+76.95,70.70'
EL=796.10
STA 311+06.80,99.73'
EL=797.50
STA 310+82.16,73.89'
EL=796.14
STA 310+82.58,71.94'
EL=796.10
STA 310+75.30,55.27'
EL=794.63
STA 310+75.66,53.30'
EL=794.55
STA 311+04.61,84.49'
EL=796.49
STA 310+90.72,85.01'
EL=796.88
STA 311+02.86,79.44'
EL=796.41
STA 310+87.82,57.55'
EL=795.58
STA 311+03.71,77.64'
EL=796.28
STA 311+08.32,82.61'
EL=796.42
STA 311+09.46,80.97'
EL=796.50
STA 311+10.75,96.67'
EL=797.41
STA 310+68.62,54.06'
EL=795.67
STA 310+68.98,52.09'
EL=795.59
STA 310+68.43,49.59'
EL=795.69
STA 310+59.61,37.79'
EL=795.32
STA 310+65.44,45.58'
EL=795.62
STA 310+57.12,34.00'
EL=795.28
STA 310+57.04,32.00'
EL=795.36
STA 310+64.31,31.70'
EL=795.30
STA 310+64.39,33.70'
EL=795.22
STA 310+70.24,41.99'
EL=795.69
STA 310+73.84,46.81'
EL=795.78
STA 310+74.87,50.04'
EL=795.75
STA 310+26.77,-6.11'
EL=794.98
STA 310+26.84,-5.61'
EL=794.96
STA 310+27.10,-3.63'
EL=795.04
STA 310+33.94,-5.03'
EL=794.99
STA 310+33.40,-6.96'
EL=794.91
STA 310+33.27,-7.44'
EL=794.93
STA 310+31.57,-9.70'
EL=794.94
STA 310+27.70,-14.89'
EL=794.76
STA 310+27.83,-15.37'
EL=794.74
STA 310+28.36,-17.30'
EL=794.79
STA 310+18.40,-17.29'
EL=794.76
STA 310+18.52,-17.78'
EL=794.74
STA 310+19.00,-19.72'
EL=794.80
R/L APPLETON AVE
APPLETON AVE
310+00
311+00
STA 311+35.76,72.36'
EL=796.45
STA 311+37.34,71.13'
EL=793.37
STA 311+31.93,67.48'
EL=796.27
STA 311+33.51,66.24'
EL=796.31
PILGRIM RD
STA 311+39.05,63.59'
EL=796.03
STA 311+42.88,68.47'
EL=796.09
STA 311+40.62,62.34'
EL=796.11
STA 311+44.45,67.24'
EL=796.17

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	CONSTRUCTION DETAIL - CURB RAMPS	SHEET 10	E

2

N

108+00

209+00

PILGRIM RD

R/L PILGRIM RD

R/L MENOMONEE AVE

MENOMONEE AVE

EXIST R/W

EXIST R/W

PARKING LOT

STA 107+81.73,20.03'
EL=791.19

STA 107+76.17,17.08'
EL=791.39

STA 107+70.35,12.00'
EL=790.95

STA 107+70.35,13.50'
EL=790.87G,791.37T

STA 107+70.30,16.45'
EL=791.42 EXISTING

STA 107+70.35,21.50'
EL=791.51 EXISTING

STA 107+73.82,21.50'
EL=791.46

STA 107+79.39,24.45'
EL=791.26

STA 107+84.48,27.15'
EL=791.17

STA 107+88.40,29.23'
EL=790.81

STA 107+89.82,31.45'
EL=790.78

STA 107+93.44,26.24'
EL=790.70

STA 107+90.16,37.75'
EL=791.03

STA 107+95.15,37.49'
EL=790.72

STA 107+81.61,16.04'
EL=790.91

STA 107+81.91,12.39'
EL=790.93

STA 107+81.64,13.87'
EL=790.88

STA 107+87.40,14.04'
EL=790.85

STA 107+86.80,15.42'
EL=790.77

STA 107+86.82,22.73'
EL=791.10

STA 107+90.74,24.81'
EL=790.73

STA 107+99.46,25.06'
EL=790.72

STA 107+98.14,25.78'
EL=790.64

STA 108+01.61,30.39'
EL=790.62

STA 108+00.16,30.78'
EL=790.54

STA 107+97.97,31.01'
EL=790.57

STA 107+94.81,31.18'
EL=790.71

STA 108+68.59,13.51'
EL=791.45

STA 108+68.78,15.50'
EL=791.37

STA 108+63.08,14.65'
EL=791.35

STA 108+63.70,16.55'
EL=791.32

STA 108+68.85,16.88'
EL=791.39

STA 108+68.99,21.66'
EL=791.42

STA 108+64.05,23.63'
EL=791.35

STA 108+58.78,27.75'
EL=790.96

STA 108+75.02,20.96'
EL=791.70

STA 108+53.01,27.55'
EL=790.78

STA 108+48.84,26.24'
EL=790.76

STA 108+50.57,27.24'
EL=790.68

STA 108+75.24,26.96'
EL=791.73

STA 108+70.42,27.47'
EL=791.45

STA 108+46.50,31.74'
EL=790.55

STA 108+48.43,32.27'
EL=790.57

STA 108+50.84,32.48'
EL=790.61

STA 108+66.80,28.85'
EL=791.39

STA 108+62.86,31.77'
EL=791.05

STA 108+60.24,35.29'
EL=790.98

STA 108+55.41,32.64'
EL=790.87

STA 108+53.34,45.06'
EL=790.61

STA 108+58.33,44.79'
EL=790.76

LEGEND

XXX.XX = SPOT ELEVATION
XXX.XXG = FLOWLINE OF CURB ELEVATION
XXX.XXT = TOP OF CURB ELEVATION
XXX.XXF = FLANGE OF CURB ELEVATION

= 6:1 GRADED FLARE SEE STANDARD DETAIL DRAWING

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	CONSTRUCTION DETAIL - CURB RAMPS	SHEET 11	E

FILE NAME : S:\WAUK_CO\MEN_FALLS\GOV\160233 MENOMONEE AVENUE\SHEETS PLAN\021003_CD-CR.DWG
LAYOUT NAME - 021003_CD-CR - 021003_CD-CR3

PLOT DATE : 10/31/2019 2:21 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1:10_XREF

WISDOT/CADDS SHEET 42

2

LEGEND

XXX.XX = SPOT ELEVATION
XXX.XXG = FLOWLINE OF CURB ELEVATION
XXX.XXT = TOP OF CURB ELEVATION
XXX.XXF = FLANGE OF CURB ELEVATION

= 6:1 GRADED FLARE SEE STANDARD DETAIL DRAWING

N

STA 106+65.69,-85.26'
EL=794.47

STA 106+69.36,-85.29'
EL=794.56

STA 106+76.72,-95.53'
EL=795.06

STA 106+80.78,-92.61'
EL=794.98

STA 106+75.56,-85.35'
EL=794.62

STA 106+83.99,-85.43'
EL=794.44

STA 106+84.01,-80.59'
EL=794.39

STA 106+71.93,-80.32'
EL=794.53

STA 106+65.73,-80.26'
EL=794.47

STA 106+62.32,-75.52'
EL=794.07

STA 106+66.25,-72.11'
EL=793.96

STA 106+65.74,-70.18'
EL=793.89

STA 106+61.40,-74.17'
EL=794.03

STA 106+60.37,-72.46'
EL=794.07

STA 106+51.23,-84.47'
EL=794.53

STA 106+53.16,-85.01'
EL=794.45

STA 106+55.85,-85.17'
EL=794.48

STA 106+55.48,-79.90'
EL=794.41

STA 106+53.80,-78.80'
EL=794.38

PILGRIM RD

STA 107+88.20,-109.50'
EL=792.99

STA 107+83.16,-109.25'
EL=793.17

STA 107+96.31,-91.16'
EL=792.11

STA 107+94.34,-91.49'
EL=792.03

STA 107+92.14,-91.50'
EL=792.06

STA 107+88.41,-91.34'
EL=792.32

STA 107+83.51,-92.35'
EL=792.40

STA 107+82.11,-89.21'
EL=792.45

STA 107+80.49,-87.57'
EL=792.34

STA 107+77.46,-86.16'
EL=792.29

STA 107+71.98,-85.94'
EL=792.49

STA 107+72.00,-80.94'
EL=792.47

STA 107+78.57,-81.28'
EL=792.21

STA 107+83.50,-83.58'
EL=792.29

STA 107+78.74,-76.05'
EL=791.97

STA 107+78.97,-73.31'
EL=791.93

STA 107+79.64,-71.42'
EL=791.89

STA 107+84.01,-75.79'
EL=791.94

STA 107+85.10,-74.12'
EL=791.90

STA 107+86.14,-86.24'
EL=792.40

STA 107+92.81,-86.31'
EL=792.09

STA 107+94.66,-85.53'
EL=792.03

STA 107+85.21,-35.98'
EL=791.56

STA 107+85.47,-34.50'
EL=791.50

STA 107+85.58,-33.17'
EL=791.51

STA 107+79.24,-34.95'
EL=791.58

STA 107+79.49,-33.47'
EL=791.52

STA 107+79.83,-24.81'
EL=791.43

STA 107+87.00,-23.38'
EL=791.34

STA 107+86.12,-24.59'
EL=791.40

STA 107+80.91,-19.51'
EL=791.32

STA 107+80.19,-20.82'
EL=791.38

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	CONSTRUCTION DETAIL - CURB RAMPS	SHEET 12	E

2

2

N

LEGEND
XXX.XX = SPOT ELEVATION
XXX.XXG = FLOWLINE OF CURB ELEVATION
XXX.XXT = TOP OF CURB ELEVATION
XXX.XXF = FLANGE OF CURB ELEVATION
= 6:1 GRADED FLARE SEE STANDARD DETAIL DRAWING

R/L APPLETON AVE
APPLETON AVE
31+00
R/L PILGRIM RD
PILGRIM RD
105+00
106+00

STA 104+96.82,22.15' EL=794.40
STA 104+97.94,23.81' EL=794.32
STA 105+03.22,24.35' EL=794.25
STA 105+10.72,24.53' EL=793.70
STA 105+16.92,26.12' EL=793.72
STA 105+15.31,24.93' EL=793.67
STA 105+12.58,32.01' EL=793.57
STA 105+10.97,30.83' EL=793.59
STA 105+03.07,30.34' EL=794.16
STA 104+90.61,29.68' EL=794.35
STA 104+89.24,28.22' EL=794.43
1.5% 7.3% 0.7% 1.5% 1.5% 1.0% 1.6% 7.6%

STA 105+89.04,22.26' EL=792.54
STA 105+85.44,20.83' EL=792.59
STA 105+71.19,14.00' EL=793.01
STA 105+65.46,25.62' EL=793.01
STA 105+63.83,24.47' EL=793.07
STA 105+59.68,30.37' EL=793.09
STA 105+61.31,31.52' EL=793.03
STA 105+65.72,31.91' EL=793.09
1.3% 0.5% 1.5% 1.4% 0.8% 1.5%

STA 106+44.62,-43.50' EL=793.54
STA 106+44.62,-42.00' EL=793.48
STA 106+37.23,-43.50' EL=793.60
STA 106+37.23,-42.00' EL=793.54
3.6% 2.8%
STA 106+35.34,-36.50' EL=793.33
STA 106+35.34,-35.00' EL=793.27
STA 106+41.38,-36.50' EL=793.30
STA 106+41.38,-35.00' EL=793.24

STA 106+43.80,12.00' EL=791.95
STA 106+27.61,14.69' EL=792.10
STA 106+43.80,13.50' EL=791.89G,792.39T
STA 106+28.10,16.11' EL=792.04
STA 106+45.51,21.50' EL=792.51
STA 106+22.34,18.51' EL=792.16
STA 106+43.93,16.54' EL=792.43
STA 106+21.67,17.16' EL=792.10
STA 106+45.51,22.00' EL=792.55
STA 106+20.22,28.81' EL=792.43
STA 106+17.14,31.63' EL=792.72
STA 106+08.50,28.56' EL=792.26
STA 106+07.49,27.45' EL=792.32
STA 105+90.38,23.74' EL=792.60
STA 105+83.97,26.87' EL=792.56
STA 105+85.28,28.39' EL=792.66
STA 106+03.24,31.35' EL=792.34
STA 106+04.25,32.45' EL=792.28
STA 106+12.91,35.52' EL=792.66
1.5% 0.7% 0.8% 7.0% 4.3% 1.5% 1.5% 1.5% 1.5% 5.1% 1.5% 1.5% 7.0% 1.6% 5.7% 1.5% 6.9% 1.0% 6.0% 1.4% 1.5% 2.2%
STA 106+27.42,20.11' EL=792.10
STA 106+26.75,22.95' EL=792.30
STA 106+29.82,26.89' EL=792.38
STA 106+30.13,27.29' EL=792.78
CONCRETE CURB PEDESTRIAN
EXIST R/W
STA 106+23.89,32.90' EL=792.76
STA 106+23.55,32.53' EL=792.51
STA 106+20.86,35.69' EL=792.80
STA 106+20.52,35.32' EL=792.80
STA 106+16.29,39.20' EL=792.73

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	CONSTRUCTION DETAIL - CURB RAMPS	SHEET 13	E

LEGEND

XXX.XX = SPOT ELEVATION
XXX.XXG = FLOWLINE OF CURB ELEVATION
XXX.XXT = TOP OF CURB ELEVATION
XXX.XXF = FLANGE OF CURB ELEVATION

= 6:1 GRADED FLARE SEE STANDARD DETAIL DRAWING

EXIST R/W

PILGRIM RD

N

109+00

STA 207+89.34,-48.30'
EL=791.82

STA 207+84.13,-48.32'
EL=791.90

STA 207+83.63,-48.32'
EL=792.00

CONCRETE CURB PEDESTRIAN

STA 207+84.11,-42.53'
EL=791.55

STA 207+83.61,-42.53'
EL=791.97

STA 207+84.09,-37.53'
EL=791.62

STA 207+83.59,-37.53'
EL=791.95

STA 207+84.08,-32.71'
EL=791.95

STA 207+83.58,-33.12'
EL=791.97

STA 207+81.27,-30.53'
EL=792.01

STA 207+89.30,-42.51'
EL=791.47

STA 207+94.02,-42.42'
EL=791.23

STA 207+96.02,-42.31'
EL=791.25

STA 207+93.16,-37.32'
EL=791.29

STA 207+95.09,-36.78'
EL=791.37

STA 207+89.28,-37.51'
EL=791.54

STA 207+90.31,-27.62'
EL=791.49

STA 207+88.76,-28.89'
EL=791.41G,791.91T

STA 207+86.61,-23.94'
EL=791.50

STA 207+85.35,-25.49'
EL=791.42G,791.92T

STA 207+73.31,-30.65'
EL=792.17

STA 207+68.30,-30.73'
EL=792.24

STA 207+56.58,-30.90'
EL=792.82

STA 207+56.51,-25.89'
EL=792.62

STA 207+68.23,-25.73'
EL=792.17

STA 207+68.22,-20.26'
EL=791.83

STA 207+68.21,-18.26'
EL=791.91

STA 207+73.28,-20.41'
EL=791.76

STA 207+73.51,-18.42'
EL=791.81

STA 207+73.23,-25.65'
EL=792.10

STA 208+46.59,-42.16'
EL=791.34

STA 208+38.12,-42.28'
EL=791.21

STA 208+35.76,-42.20'
EL=791.18

STA 208+33.82,-41.73'
EL=791.26

STA 208+37.56,-36.12'
EL=791.23

STA 208+35.67,-35.45'
EL=791.31

STA 208+48.72,-42.02'
EL=791.31

STA 208+50.67,-41.56'
EL=791.39

STA 208+48.86,-35.33'
EL=791.42

STA 208+46.97,-35.99'
EL=791.34

STA 208+46.10,-28.72'
EL=791.45

R/L PILGRIM RD

MENOMONEE AVE

R/L MENOMONEE AVE

208+00

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	CONSTRUCTION DETAIL - CURB RAMPS	SHEET 14	E

FILE NAME : S:\WAUK_CO\MEN_FALLS\GOV\160233 MENOMONEE AVENUE\SHEETS PLAN\021003_CD-CR.DWG
LAYOUT NAME - 021003_CD-CR - 021003_CD-CR6

PLOT DATE : 10/31/2019 2:21 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1:10_XREF

WISDOT/CADDS SHEET 42

LEGEND

XXX.XX = SPOT ELEVATION
XXX.XXG = FLOWLINE OF CURB ELEVATION
XXX.XXT = TOP OF CURB ELEVATION
XXX.XXF = FLANGE OF CURB ELEVATION

= 6:1 GRADED FLARE SEE STANDARD DETAIL DRAWING

EXIST R/W

STA 205+26.27,-44.67'
EL=801.67T

STA 205+25.92,-44.22'
EL=801.62

STA 205+22.22,-47.13'
EL=801.76

STA 205+22.83,-40.29'
EL=801.54

STA 205+19.13,-43.20'
EL=801.77

STA 205+18.46,-40.58'
EL=801.43

STA 205+07.34,-40.89'
EL=801.33

STA 205+06.10,-39.31'
EL=801.41

STA 205+14.29,-35.42'
EL=801.29

STA 205+13.06,-33.85'
EL=801.31

STA 205+18.13,-35.59'
EL=801.35

STA 205+29.78,-34.83'
EL=801.42

STA 205+38.72,-34.16'
EL=800.97

STA 205+35.63,-30.23'
EL=800.92

STA 205+45.29,-34.62'
EL=801.14T

STA 205+45.28,-34.06'
EL=800.87

STA 205+38.92,-34.72'
EL=801.35

STA 205+32.87,-38.76'
EL=800.49

STA 205+50.79,-34.54'
EL=801.00
CONCRETE CURB PEDESTRIAN

STA 205+56.49,-33.89'
EL=800.80

STA 205+56.42,-28.89'
EL=800.70

STA 205+50.78,-33.98'
EL=800.84

STA 205+52.37,-20.91'
EL=800.50

STA 205+52.40,-22.91'
EL=800.43

STA 205+48.47,-26.50'
EL=800.51

STA 205+43.94,-21.07'
EL=800.67

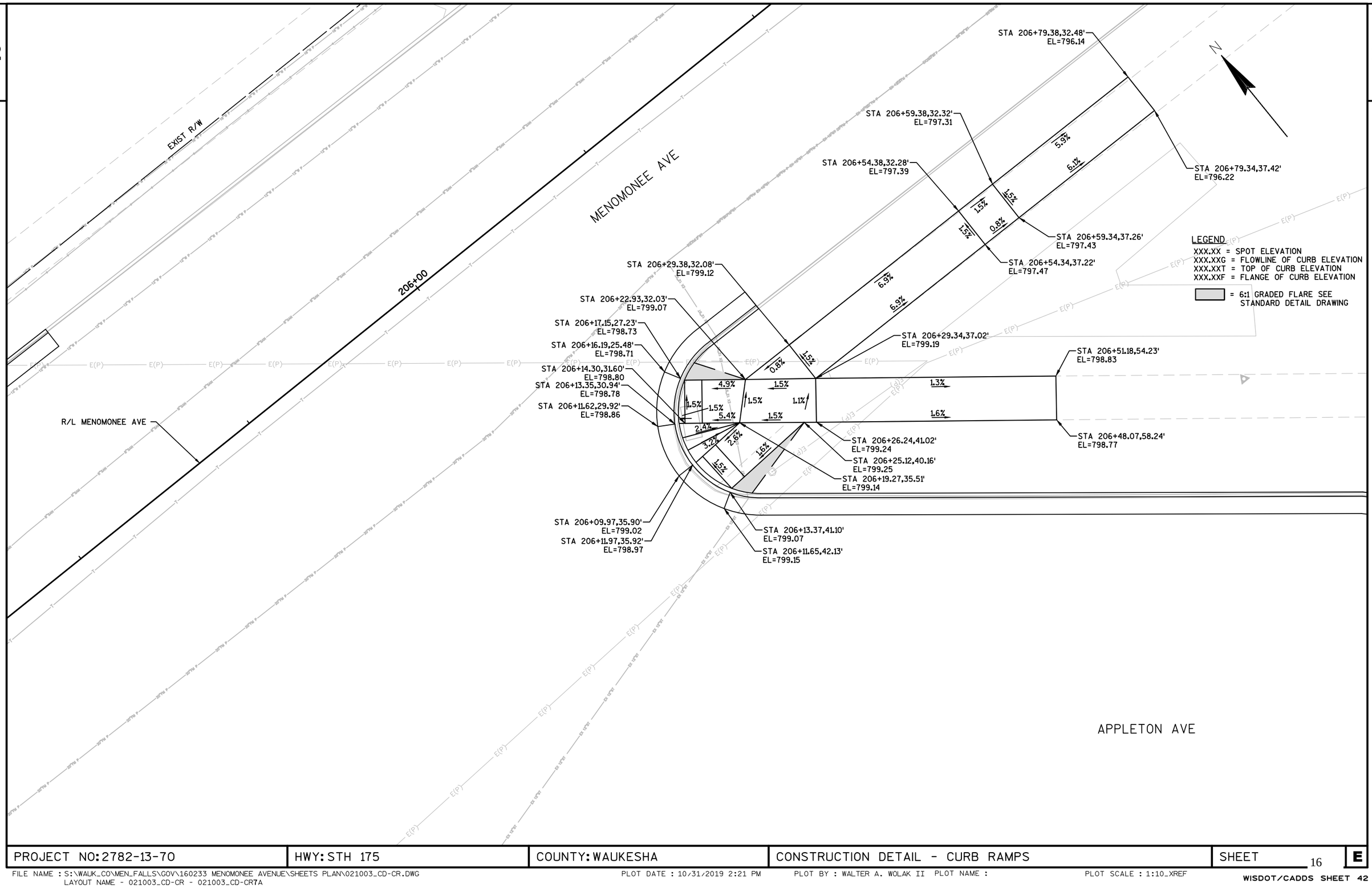
STA 205+44.08,-23.07'
EL=800.59

STA 205+45.21,-29.06'
EL=800.80

STA 205+36.96,-29.19'
EL=800.89

3.0% 1.5% 1.5% 7.0% 5.0% 1.4% 6.8% 1.5% 1.4% 6.9% 3.2% 2.5% 0.6% 0.9% 1.5% 1.5% 0.9% 1.5% 1.5% 1.5

2



PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	CONSTRUCTION DETAIL - CURB RAMPS	SHEET 16	E

2

LEGEND
XXX.XX = SPOT ELEVATION
XXX.XXG = FLOWLINE OF CURB ELEVATION
XXX.XXT = TOP OF CURB ELEVATION
XXX.XXF = FLANGE OF CURB ELEVATION

= 6:1 GRADED FLARE SEE STANDARD DETAIL DRAWING

STA 305+84.35,-14.03'
EL=802.11

STA 305+83.43,-12.26'
EL=802.04

STA 305+77.33,-7.35'
EL=802.08

STA 305+90.24,-10.49'
EL=802.15

STA 305+89.10,-8.84'
EL=802.07

0.5%
0.8%
0.6%
1.0%
0.8%
0.8%

306+00

STA 305+86.64,-6.91'
EL=802.09

STA 305+71.47,-0.62'
EL=802.13

STA 305+81.70,-3.24'
EL=802.14

STA 305+71.49,1.38'
EL=802.21

STA 305+79.80,-0.72'
EL=802.16

STA 305+79.82,1.28'
EL=802.24

N

R/L APPLETON AVE

APPLETON AVE

R/L MENOMONEE AVE

CURB RAMP INFORMATION SHOWN ON ANOTHER SHEET

204+00

STA 204+57.28,43.14'
EL=802.35

STA 204+56.05,44.71'
EL=802.27

STA 204+39.87,39.76'
EL=802.65

STA 204+50.74,37.99'
EL=802.44

STA 204+49.50,39.57'
EL=802.45

STA 204+45.87,39.89'
EL=802.47

1.5%
1.5%
3.0%
1.0%
5.0%

STA 204+10.24,33.77'
EL=802.90

STA 204+01.22,23.88'
EL=802.67

STA 204+34.87,39.57'
EL=802.69

STA 204+45.76,44.89'
EL=802.42

0.8%
1.5%
1.5%
1.0%

STA 204+01.23,21.88'
EL=802.62

STA 204+39.76,44.76'
EL=802.72

1.8%

STA 204+34.23,44.53'
EL=802.77

2.5%

MENOMONEE AVE

STA 203+94.29,21.85'
EL=802.74

STA 203+94.28,23.85'
EL=802.66

1.5%
1.5%
1.8%
0.5%
1.5%
2.0%
1.5%
0.5%

STA 204+25.91,46.29'
EL=802.76

STA 203+97.61,27.85'
EL=802.74

2.3%
1.5%
1.1%

EXIST R/W

STA 204+03.33,33.80'
EL=802.93

3.6%
2.3%

STA 204+22.75,50.15'
EL=802.84

STA 203+88.47,33.69'
EL=803.46

STA 204+16.48,38.74'
EL=803.00

STA 203+88.50,38.67'
EL=803.50

STA 204+08.62,38.79'
EL=803.04

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	CONSTRUCTION DETAIL - CURB RAMPS	SHEET 17	E

2

2

APPLETON AVE

LEGEND
XXX.XX = SPOT ELEVATION
XXX.XXG = FLOWLINE OF CURB ELEVATION
XXX.XXT = TOP OF CURB ELEVATION
XXX.XXF = FLANGE OF CURB ELEVATION
= 6:1 GRADED FLARE SEE STANDARD DETAIL DRAWING

N

STA 202+40.31,-44.97'
EL=807.26 EXISTING
STA 202+41.47,-40.10'
EL=807.19
STA 202+46.21,-42.84'
EL=806.85 EXISTING
STA 202+31.16,-42.79'
EL=807.70
STA 202+32.31,-37.93'
EL=807.60
STA 202+25.55,-41.46'
EL=807.82
STA 202+26.70,-36.60'
EL=807.72
STA 202+10.65,-37.96'
EL=809.30
STA 202+32.32,-35.25'
EL=807.49
STA 202+38.50,-35.27'
EL=806.98
STA 202+11.18,-32.91'
EL=809.28
STA 202+26.64,-35.23'
EL=807.60
STA 202+26.74,-30.23'
EL=807.66
STA 202+32.34,-30.25'
EL=807.55
STA 202+38.49,-30.27'
EL=807.08
STA 202+42.78,-29.84'
EL=807.23
STA 202+43.69,-28.06'
EL=807.31
STA 202+51.84,-33.39'
EL=806.60
STA 202+50.58,-34.94'
EL=806.75
STA 202+82.11,-35.86'
EL=805.68
STA 202+80.35,-36.82'
EL=805.27
STA 202+76.91,-30.91'
EL=805.84
STA 202+78.64,-29.89'
EL=805.76
STA 202+82.53,-29.62'
EL=805.80
STA 203+13.58,-36.10'
EL=804.40
STA 203+07.58,-35.92'
EL=804.49
STA 202+88.55,-35.60'
EL=805.61
STA 203+07.76,-29.92'
EL=804.55
STA 203+13.76,-30.10'
EL=804.46
STA 202+88.53,-29.60'
EL=805.73
STA 203+60.74,-35.44'
EL=802.39
STA 203+59.53,-33.85'
EL=802.31
STA 203+54.02,-40.56'
EL=802.31
STA 203+52.81,-38.97'
EL=802.37
STA 203+49.71,-38.18'
EL=802.40
STA 203+40.47,-36.89'
EL=802.52
STA 203+40.70,-30.89'
EL=802.59
STA 203+50.54,-32.24'
EL=802.44
STA 203+46.33,-24.51'
EL=802.82
STA 203+46.33,-22.51'
EL=802.90
STA 203+52.71,-27.01'
EL=802.73
STA 203+54.63,-24.51'
EL=802.65
STA 203+54.63,-22.51'
EL=802.73

MENOMONEE AVE
203+00
R/L MENOMONEE AVE

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	CONSTRUCTION DETAIL - CURB RAMPS	SHEET 18	E

AP01 REMOVING ASPHALTIC SURFACE MILLING - 2", 2" HMA PAVEMENT 4 MT 58-28 H
AP02 HMA PAVEMENT OVER CONCRETE BASE, SEE DETAIL
CG01 CONCRETE CURB PEDESTRIAN
CG24 CONCRETE CURB & GUTTER 24-INCH SPECIAL
CG30 CONCRETE CURB & GUTTER 30-INCH SPECIAL
CM01 CONCRETE MEDIAN SLOPED NOSE TYPE 1
CM02 CONCRETE MEDIAN SLOPED NOSE TYPE 2 (MODIFIED)
CM03 CONCRETE SIDEWALK 5-INCH
CM04 STAMPED COLORED CONCRETE SIDEWALK 5-INCH
CM05 COLORED CONCRETE SIDEWALK 5-INCH
CR02 CURB RAMP TYPE 2
CR03 CURB RAMP TYPE 3
CR04 CURB RAMP TYPE 4 B1
CR05 CURB RAMP TYPE 5 (CONSTRUCT TO RAMP WIDTH DIMENSION ON THIS SHEET)
CR06 CURB RAMP TYPE 6 (CONSTRUCT TO RAMP WIDTH DIMENSION ON THIS SHEET)
DR01 CONCRETE DRIVEWAY HES 8-INCH REINFORCED
LS01 LAWN SOD
SW01 SAWING CONCRETE (ASPHALT OVERLAY ON CONCRETE BASE)
SW02 SAWING ASPHALT
PROPOSED INLET
EXISTING DRAINAGE STRUCTURE TO BE REPLACED

R/L APPLETON AVE
APPLETON AVE
LS01 DUE TO UNDERDRAIN INSTALLATION
EXIST R/W
R/L PILGRIM RD
PILGRIM RD
PI: 103+27.69
PI: 108+97.45
104+00
105+00
106+00
107+00
108+00
109+00
207+00
208+00
209+00
210+00
310+00
311+00
312+00
313+00
R/L MENOMONEE AVE
MENOMONEE AVE
RESTORE DISTURBED LANDSCAPE AREA IN KIND. (CONSIDERED INCIDENTAL TO THE CONTRACT'S CONCRETE SIDEWALK ITEM)
APPROXIMATE LIMITS OF CONTAMINATED SOIL. SEE SPECIAL PROVISIONS FOR MANAGEMENT OF CONTAMINATED MATERIALS.
EXISTING BUS STOP. MAINTAIN ACCESS TO BUS STOP AND SHELTER AT ALL TIMES.

NOTE:
1. DO NOT USE STAMPED COLORED CONCRETE PAVEMENT FOR CURB RAMPS.

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	PLAN DETAILS	SHEET 19 E

FILE NAME : S:\WAUK_CO\MEN_FALLS\GOV\160233 MENOMONEE AVENUE\SHEETS PLAN\021201_PD.DWG
LAYOUT NAME - 021201_PD - 021201_PD
PLOT DATE : 1/31/2020 3:39 PM PLOT BY : NICHOLAS DAMRO, PE PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

NOTE:
1 DO NOT USE STAMPED COLORED CONCRETE SIDEWALK FOR CURB RAMPS.

LEGEND

AP01	REMOVING ASPHALTIC SURFACE MILLING - 2", 2" HMA PAVEMENT 4 MT 58-28 H
AP02	HMA PAVEMENT OVER CONCRETE BASE, SEE DETAIL
CG01	CONCRETE CURB PEDESTRIAN
CG24	CONCRETE CURB & GUTTER 24-INCH SPECIAL
CG30	CONCRETE CURB & GUTTER 30-INCH SPECIAL
CM01	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CM02	CONCRETE MEDIAN SLOPED NOSE TYPE 2 (MODIFIED)
CM03	CONCRETE SIDEWALK 5-INCH
CM04	STAMPED COLORED CONCRETE SIDEWALK 5-INCH
CM05	COLORED CONCRETE SIDEWALK 5-INCH
CR02	CURB RAMP TYPE 2
CR03	CURB RAMP TYPE 3
CR04	CURB RAMP TYPE 4 B1
CR05	CURB RAMP TYPE 5 (CONSTRUCT TO RAMP WIDTH DIMENSION ON THIS SHEET)
CR06	CURB RAMP TYPE 6 (CONSTRUCT TO RAMP WIDTH DIMENSION ON THIS SHEET)
DR01	CONCRETE DRIVEWAY HES 8-INCH REINFORCED
LS01	LAWN SOD
SW01	SAWING CONCRETE (ASPHALT OVERLAY ON CONCRETE BASE)
SW02	SAWING ASPHALT
■	PROPOSED INLET
●	EXISTING DRAINAGE STRUCTURE TO BE REPLACED

N

APPLETON AVE
R/L APPLETON AVE
MENOMONEE AVE
R/L MENOMONEE AVE
EXIST R/W
304+00
305+00
306+00
307+00
308+00
309+00
202+00
203+00
204+00
205+00
206+00
207+00
22'
5'
6'

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	PLAN DETAILS	SHEET 20	E

FILE NAME : S:\WAUK_CO\MEN_FALLS\GOV\160233 MENOMONEE AVENUE\SHEETS PLAN\021201_PD.DWG
LAYOUT NAME - 021201_PD - 021202_PD
PLOT DATE : 1/31/2020 3:39 PM PLOT BY : NICHOLAS DAMRO, PE PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

NOTE:
1) SEE PAVING GRADES - PILGRIM ROAD FOR ADDITIONAL INFORMATION.
2) GRADES GIVEN TO GUTTER FLANGE UNLESS NOTED OTHERWISE
3) RADII MEASURED TO CURB + GUTTER FLANGE LINE

ME = MATCH EXISTING
FIELD VERIFY ALL 'ME' GRADES

REVERSE SLOPE GUTTER

CP 111 MAG
STA 309+82, 61.4'
EL=796.98

EXIST R/W

STA 310+71.00,80.99'
ME SIDEWALK

STA 310+72.40,69.70'
EL=796.08 ME

STA 309+99.35,41.49'
EL=796.12

STA 309+99.94,34.40'
EL=795.13

STA 310+86.35,114.22'
CENTER RAD 40'

5' TYP

STA 310+95.02,74.66'
EL=796.15 END RAD

STA 311+10.75,96.67'
ME SIDEWALK

STA 311+19.98,91.48'
EL=796.84 END RAD ME

STA 311+07.90,79.93'
EL=796.46 MID PT

STA 310+87.82,57.55'
EL=795.58

STA 310+90.66,52.78'
EL=795.57

R/L APPLETON AVE

STA 310+39.45,-6.91'
EL=794.94

RAD=50'

STA 310+12.71,-3.12'
EL=795.35 ME

310+00

STA 310+68.62,42.03'
CENTER RAD 9'

STA 310+73.50,31.31'
EL=795.19

STA 310+85.81,53.11'
CENTER RAD 2'

311+00

STA 310+39.14,-14.23'
EL=794.77

STA 309+91.88,-61.09'
EL=794.45 MID PT

STA 309+89.99,-82.51'
EL=793.75 END RAD

CP 102 MAG
STA 308+46, -75'
EL=798.36

STA 310+09.35,-21.99'
EL=794.87 ME

309+00

APPLETON AVE

STA 308+59.61,-59.47'
EL=797.57

STA 309+39.63,-49.68'
EL=795.81

STA 309+73.55,-49.56'
EL=794.99 END RAD

STA 309+65.69,-71.62'
ME SIDEWALK

STA 309+73.55,-70.26'
CENTER RAD 21'

STA 309+73.43,-86.34'
ME SIDEWALK

STA 309+84.90,-89.34'
EL=793.52 END RAD

PILGRIM ROAD

STA 207+52.01,25.85'
EL=792.40 ME

STA 207+50.05,33.82'
SIDEWALK ME

STA 207+63.51,25.95'
EL=792.16 END RAD

STA 207+63.30,51.44'
CENTER RAD 25'

STA 207+77.86,51.26'
SIDEWALK ME

STA 207+88.29,65.21'
EL=792.05 ME

STA 207+88.78,52.41'
EL=791.92 END RAD

STA 207+81.38,34.18'
EL=791.95 MID PT

207+00

208+00

N

STA 207+54.07,-18.34'
EL=792.28 ME

STA 207+56.51,-25.89'
SIDEWALK ME

STA 207+70.43,-18.25'
EL=791.87 END RAD

STA 207+70.56,-43.75'
CENTER RAD 25'

STA 207+89.34,-48.30'
SIDEWALK ME

EXIST R/W

STA 207+96.06,-43.35'
EL=791.22 END RAD

STA 207+96.25,-55.77'
EL=791.25 ME

STA 207+88.40,-25.54'
EL=791.49 MID PT

STA 108+54.70,-23.93'
EL=791.38

RAD=60'

STA 108+81.31,-31.40'
EL=791.19 ME

STA 108+54.92,-16.31'
EL=791.45 HP

RAD=60'

STA 108+87.04,-11.54'
EL=791.45 ME

R/L PILGRIM ROAD

104+00

105+00

106+00

107+00

108+00

109+00

PI: 103+27.69

STA 311+66.76,3.74'
EL=794.40 HP

RAD=61'

STA 311+48.72,-6.58'
EL=794.27

STA 311+48.73,-14.74'
EL=793.80

312+00

STA 311+87.24,7.34'
EL=794.31 ME

STA 311+80.21,-14.69'
EL=793.40 ME

EXIST R/W

END PROJECT
STA 313+00.00

313+00

APPROXIMATE LIMITS OF CONTAMINATED SOIL.
SEE SPECIAL PROVISIONS FOR MANAGEMENT
OF CONTAMINATED MATERIALS.

R/L MENOMONEE AVE

MENOMONEE AVE

STA 108+87.99,12.45'
EL=791.49 ME

STA 108+69.61,13.43'
EL=791.45 END RAD

209+00

PI: 108+97.45

EXIST R/W

STA 108+75.02,20.96'
SIDEWALK ME

STA 108+70.98,38.90'
CENTER RAD 26'

STA 108+52.01,21.86'
EL=790.89 MID PT

STA 108+53.34,45.06'
SIDEWALK ME

STA 108+45.51,40.26'
EL=790.11 END RAD ME

210+00

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	PAVING GRADES	SHEET 21	E

NOTE:
1) SEE PAVING GRADES FOR ADDITIONAL INFORMATION.
2) GRADES GIVEN TO GUTTER FLANGE UNLESS OTHERWISE NOTED.

ME = MATCH EXISTING
FIELD VERIFY ALL 'ME' GRADES

REVERSE SLOPE GUTTER

PILGRIM ROAD

APPLETON AVE

R/L PILGRIM ROAD

STA 104+25.00,-32.43'
EL=797.32

STA 104+25.00,-18.92'
EL=797.59

STA 104+25.00,-12.00'
EL=797.56

STA 103+50.02,-30.01'
EL=800.81

STA 104+00.00,-31.62'
EL=798.50

STA 104+67.86,-43.82'
EL=796.23

STA 103+50.00,-12.00'
EL=801.17

STA 104+00.00,-18.11'
EL=798.78

STA 104+54.72,-43.39'
EL=796.61 ME

STA 103+33.85,-39.82'
EL=801.71 ME

STA 104+00.00,-12.00'
EL=798.80

STA 104+48.42,-33.18'
EL=796.28

RAD=61'

STA 103+93.55,-17.90'
EL=799.08

STA 104+76.20,-43.49'
EL=795.96

STA 103+34.10,-29.49'
EL=801.54

STA 103+93.55,-12.00'
EL=799.13

RAD=60'

STA 103+19.90,-37.64'
EL=802.26

STA 103+75.00,-30.81'
EL=799.67

STA 104+84.42,-42.27'
EL=795.54

5'

STA 103+19.79,-31.16'
EL=802.20

STA 104+84.61,-36.43'
EL=795.55

RAD=61'

STA 104+76.49,-34.67'
EL=795.57

STA 103+29.27,-11.81'
EL=802.11

STA 103+75.00,-12.00'
EL=800.05

2%

13.5'

STA 104+48.85,-19.69'
EL=796.55

RAD=60'

STA 104+52.20,-19.80'
EL=796.41

STA 104+68.18,-33.82'
EL=795.84

STA 104+25.00,0.00'
EL=797.32

2.25%

12'

2.5%

STA 104+52.35,-12.07'
EL=796.30

STA 104+45.46,-12.00'
EL=796.60

STA 104+45.57,0.00'
EL=796.31

103+00

104+00

105+00

311+00

312+00

STA 103+29.27,0.00'
EL=802.11

STA 103+50.00,0.00'
EL=801.15

11.5'

PI: 103+27.69

STA 103+50.01,11.69'
EL=800.96

STA 103+56.85,11.50'
EL=800.61

STA 103+63.14,11.50'
EL=800.27

STA 103+29.25,12.27'
EL=801.92 ME

STA 103+55.52,27.60'
SIDEWALK ME

STA 103+75.00,0.00'
EL=799.80

STA 103+75.00,13.04'
EL=799.54

20.5'

STA 104+62.69,11.84'
EL=795.14

STA 104+65.18,16.18'
EL=794.96

STA 104+45.57,13.04'
EL=795.97

STA 104+31.75,13.88'
EL=796.66

STA 104+25.00,14.33'
EL=797.03

STA 104+19.49,14.69'
EL=797.36

STA 104+17.44,18.89'
EL=797.07

STA 104+39.05,54.69'
EL=794.95

STA 104+00.00,0.00'
EL=798.53

STA 103+63.14,58.00'
CENTER RAD 46'

STA 104+00.00,12.00'
EL=798.26 PAVT GRADE

STA 104+00.72,30.63'
EL=797.39

STA 103+86.93,86.12'
EL=795.98 ME

STA 104+07.39,72.27'
EL=795.25 ME

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	PAVING GRADES - PILGRIM ROAD	SHEET 22	E

NOTE:
1) SEE PAVING GRADES FOR ADDITIONAL INFORMATION.
2) GRADES GIVEN TO GUTTER FLANGE UNLESS OTHERWISE NOTED.

ME = MATCH EXISTING
FIELD VERIFY ALL 'ME' GRADES

REVERSE SLOPE GUTTER

APPLETON AVE

PILGRIM ROAD

STA 106+29.18,-43.50'
EL=793.64
STA 106+29.18,-35.00'
EL=793.28
STA 106+45.83,-35.00'
EL=793.25
STA 106+82.43,-43.50'
EL=793.13
STA 106+97.90,-43.56'
EL=792.84 SAWCUT ME
STA 107+25.00,-43.42'
EL=792.53 SAWCUT ME
STA 107+49.98,-43.29'
EL=792.10 SAWCUT ME
STA 107+75.00,-43.60'
EL=791.75 SAWCUT ME
STA 107+75.00,-34.22'
EL=791.61
STA 107+94.37,-43.58'
EL=791.65 SAWCUT ME
STA 105+71.19,14.00'
EL=793.00
STA 105+75.87,23.00'
CENTER RAD 7'
STA 105+82.87,17.21'
EL=792.78
STA 106+82.43,-35.00'
EL=792.85
STA 106+82.43,-21.00'
EL=792.57
STA 107+50.00,-29.94'
EL=791.90
STA 107+25.00,-25.65'
EL=792.26
STA 106+97.90,-21.00'
EL=792.50
STA 105+88.15,14.50'
EL=792.71
STA 106+39.87,-21.00'
EL=793.00
STA 106+33.68,-14.74'
EL=792.75
STA 107+90.44,-36.87'
EL=791.53
STA 107+94.40,-29.70'
EL=791.49
STA 106+50.00,-12.00'
EL=792.55
STA 106+75.00,-12.00'
EL=792.20
STA 107+00.00,-12.00'
EL=792.09
STA 107+25.00,-12.00'
EL=791.74
STA 107+50.00,-12.00'
EL=791.59
STA 105+91.84,14.00'
EL=792.65
STA 106+39.87,-12.00'
EL=792.58
RAD=60'
STA 106+50.00,0.00'
EL=792.31
STA 107+00.00,0.00'
EL=791.91
STA 106+33.68,0.00'
EL=792.45
STA 107+25.00,0.00'
EL=791.58
STA 107+75.00,-16.65'
EL=791.45
STA 106+75.00,0.00'
EL=792.02
STA 107+50.00,0.00'
EL=791.41
STA 106+33.68,13.03'
EL=792.12
STA 107+75.00,0.00'
EL=791.21
STA 107+00.00,12.00'
EL=791.73
STA 107+25.00,12.00'
EL=791.40
R/L PILGRIM ROAD
STA 107+75.00,12.00'
EL=791.03
STA 105+88.16,19.00'
CENTER RAD 3'
STA 107+00.00,21.50'
EL=792.03
STA 105+94.25,20.22'
EL=792.58
STA 107+94.67,18.83'
EL=790.73 MID PT
STA 106+10.03,25.12'
EL=792.28
STA 106+50.00,21.50'
EL=792.49
STA 106+50.00,12.00'
EL=792.07
STA 106+28.27,28.21'
EL=792.79
STA 106+75.00,21.50'
EL=792.34
STA 106+94.76,21.50'
EL=792.06
STA 106+87.69,21.50'
EL=792.09
STA 107+25.00,21.50'
EL=791.79
STA 107+21.83,21.50'
EL=791.82
STA 107+14.76,21.50'
EL=791.89
STA 107+73.82,21.50'
EL=791.46
STA 107+50.00,12.00'
EL=791.23
STA 107+50.00,21.50'
EL=791.62
STA 108+02.46,35.58'
EL=790.43 END RAD ME
STA 107+95.15,37.49'
EL=790.72 ME
STA 107+90.16,37.75'
EL=791.03 ME
STA 105+77.61,34.70'
EL=792.72
STA 106+04.34,50.16'
EL=792.93 ME
STA 105+92.32,41.34'
EL=792.42 ME
STA 106+43.80,62.00'
CENTER RAD 50'
STA 106+75.00,12.00'
EL=791.84
STA 107+77.50,37.00'
CENTER RAD 25'
STA 107+89.82,31.45'
EL=790.78
R/L MENOMONEE AVE
EXIST R/W
EXIST R/W
EXIST R/W
MENOMONEE AVE
106+00
107+00
108+00
208+00
209+00
GV
1.75%
2%
1.5%
14'
12'
7.5'
20'
5'

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	PAVING GRADES - PILGRIM ROAD	SHEET 23 E

FILE NAME : S:\WAUK_CO\MEN_FALLS\GOV\160233 MENOMONEE AVENUE\SHEETS PLAN\021221_PG.DWG
LAYOUT NAME - 021221_PG - 021222_PG
PLOT DATE : 10/31/2019 2:42 PM PLOT BY : WALTER A. WOLAK II PLOT NAME :
PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 42

2

NOTE:
1) SEE PAVING GRADES - PILGRIM ROAD FOR ADDITIONAL INFORMATION.
2) GRADES GIVEN TO GUTTER FLANGE UNLESS NOTED OTHERWISE
3) RADII MEASURED TO CURB + GUTTER FLANGE

ME = MATCH EXISTING
FIELD VERIFY ALL 'ME' GRADES

REVERSE SLOPE GUTTER

N

BEGIN PROJECT
STA 304+17.65

CP 114 MAG
STA 302+45, 63.28"
EL=795.61

R/L APPLETON AVE

APPLETON AVE

EXIST R/W

STA 202+91.80,-87.23'
EL=801.34

STA 202+86.53,-84.95'
EL=801.25

STA 202+63.96,-89.09'
EL=800.98 ME

STA 202+68.60,-69.05'
EL=802.60 ME

STA 202+23.10,-69.07'
CENTER RAD 45'

STA 202+23.00,-68.58'
CENTER RAD 46'

STA 202+61.81,-44.82'
EL=805.15 ME

STA 202+40.25,-26.48'
EL=807.49 ME

STA 202+87.41,-57.26'
EL=802.99 MID PT

STA 202+74.28,-26.45'
EL=806.27

STA 202+77.20,-22.48'
EL=806.32

MENOMONEE AVE

STA 203+69.42,-28.84'
EL=802.47

STA 203+67.94,-22.52'
EL=802.60

R/L MENOMONEE AVE

STA 203+74.85,21.74'
EL=803.11 ME

STA 204+09.71,21.93'
EL=802.58 END RAD

STA 204+46.76,34.87'
EL=802.50 END RAD

STA 204+68.42,51.90'
EL=802.20

STA 203+88.47,33.69'
SIDEWALK ME

STA 204+25.91,46.29'
SIDEWALK ME

STA 204+09.37,82.43'
CENTER RAD 61'

EXIST R/W

STA 305+67.74,1.42'
EL=802.20 ME

STA 305+67.94,-19.52'
EL=801.78 ME

STA 305+83.25,-14.59'
EL=802.02 MID PT

RAD=55'

STA 305+96.50,-5.46'
EL=802.22 END RAD

STA 305+90.74,-3.85'
CENTER RAD 5'

STA 305+94.34,1.11'
EL=802.33

STA 205+01.15,-43.21'
EL=801.44 ME

STA 205+15.70,-31.77'
EL=801.27 END RAD

STA 205+30.08,-23.87'
EL=800.90 MID PT

STA 205+46.22,-20.99'
EL=800.62 END RAD

STA 205+49.36,-78.43'
CENTER RAD 57'

STA 205+19.13,-43.18'
SIDEWALK ME

STA 205+56.42,-28.91'
SIDEWALK ME

STA 205+63.42,-20.76'
EL=800.12 ME

EXIST R/W

STA 307+04.62,-2.67'
EL=801.49

STA 307+06.80,-9.72'
EL=801.19

RAD=74'

STA 307+31.53,-10.23'
EL=800.58

STA 307+27.54,8.71'
EL=801.52 ME

STA 205+40.30,122.61'
EL=800.61 ME

STA 206+10.67,31.95'
EL=798.92 MID PT

STA 206+22.13,24.00'
EL=798.39 END RAD

STA 206+29.24,24.11'
EL=798.09 ME

STA 206+79.38,32.48'
SIDEWALK ME

STA 206+21.97,36.00'
CENTER RAD 11.5'

STA 206+14.47,45.37'
EL=798.97 END RAD

STA 206+48.07,58.24'
SIDEWALK ME

CP 102 MAG
STA 308+46, -75'
EL=798.36

STA 308+59.62,-59.47'
EL=797.57

304+00
305+00
306+00
307+00
308+00
309+00
202+00
203+00
204+00
205+00
206+00
207+00

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	PAVING GRADES	SHEET 24	E

FILE NAME : S:\WAUK_CO\MEN_FALLS\GOV\160233 MENOMONEE AVENUE\SHEETS PLAN\021211_PG.DWG
LAYOUT NAME - 021211_PG - 021212_PG
PLOT DATE : 10/31/2019 2:42 PM
PLOT BY : WALTER A. WOLAK II PLOT NAME :
PLOT SCALE : 1:40_XREF
WISDOT/CADDS SHEET 42

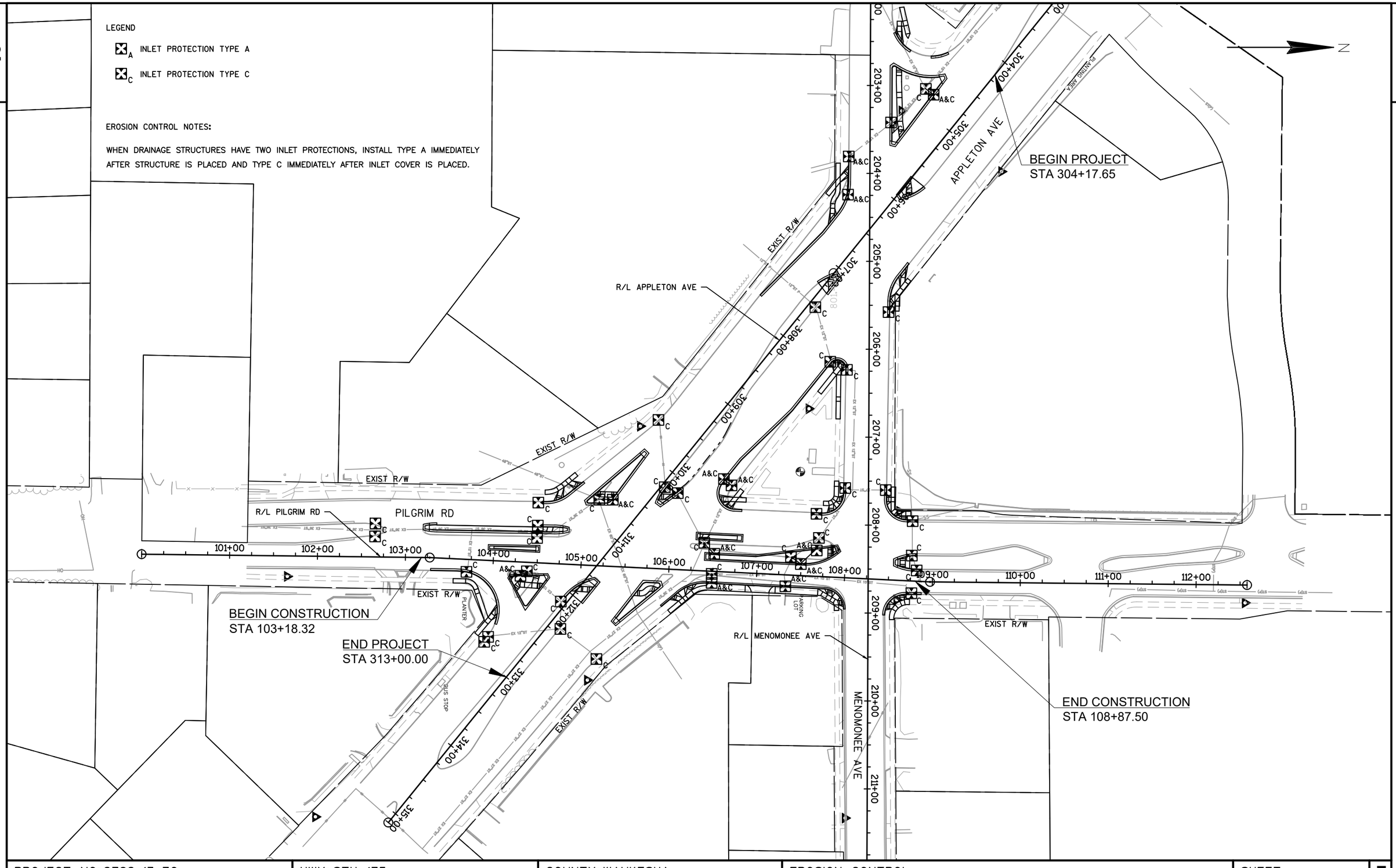
LEGEND

A INLET PROTECTION TYPE A

C INLET PROTECTION TYPE C

EROSION CONTROL NOTES:

WHEN DRAINAGE STRUCTURES HAVE TWO INLET PROTECTIONS, INSTALL TYPE A IMMEDIATELY AFTER STRUCTURE IS PLACED AND TYPE C IMMEDIATELY AFTER INLET COVER IS PLACED.



PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	EROSION CONTROL	SHEET 25 E

LEGEND

(EXXX) EXISTING STRUCTURE NUMBER

(XXX) PROPOSED STRUCTURE NUMBER

1. REMOVE INLET / MANHOLE
2. CONNECT EXISTING PIPES TO PROPOSED STRUCTURE (CONCRETE COLLAR)
3. PIPE CONNECTION TO EXISTING STRUCTURE
4. CONNECT TO EXISTING PIPE(S) (CONCRETE COLLAR)
5. REMOVE STORM SEWER, PLUG HOLE IN MANHOLE WITH BRICK OR CONCRETE BLOCK, AND MORTOR (PLUG IS INCIDENTAL TO PIPE REMOVAL)
6. REPLACE COVER (SEE TABLE), RECONSTRUCT INLET/MANHOLE
7. STRUCTURE TO REMAIN
8. ADJUST MANHOLE COVER
9. ADJUST INLET COVER
10. PIPE UNDERDRAIN 4-INCH
11. ADJUST WATER VALVE BOX
12. ADJUST WATER MANHOLE

N

EXIST R/W

R/L APPLETON AVE

APPLETON AVE

END CONSTRUCTION
STA 103+18.32

R/L PILGRIM RD

PILGRIM RD

CAUTION

EXIST R/W

PROPOSED HYDRANT LOCATION
SEE HYDRANT RELOCATION SHEET

END PROJECT
STA 313+00.00

APPROXIMATE LIMITS OF CONTAMINATED SOIL.
SEE SPECIAL PROVISIONS FOR MANAGEMENT
OF CONTAMINATED MATERIALS.

R/L MENOMONEE AVE

MENOMONEE AVE

EXIST R/W

END CONSTRUCTION
STA 108+87.50

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	STORM SEWER PLAN	SHEET	E

FILE NAME : S:\WAUK_CO\MEN_FALLS\GOV\160233 MENOMONEE AVENUE\SHEETS PLAN\022501_SS.DWG
LAYOUT NAME - 022501_SS - 022501_SS
PLOT DATE : 10/31/2019 2:44 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1:40_XREF
WISDOT/CADDS SHEET 42

LEGEND

- (EXXX) EXISTING STRUCTURE NUMBER
- (XXX) PROPOSED STRUCTURE NUMBER
- (1) REMOVE INLET / MANHOLE
- (2) CONNECT EXISTING PIPES TO PROPOSED STRUCTURE (CONCRETE COLLAR)
- (3) PIPE CONNECTION TO EXISTING STRUCTURE
- (4) CONNECT TO EXISTING PIPE(S) (CONCRETE COLLAR)
- (5) REMOVE STORM SEWER, PLUG HOLE IN MANHOLE WITH BRICK OR CONCRETE BLOCK, AND MORTOR (PLUG IS INCIDENTAL TO PIPE REMOVAL)
- (6) REPLACE COVER (SEE TABLE), RECONSTRUCT INLET/MANHOLE
- (7) STRUCTURE TO REMAIN
- (8) ADJUST MANHOLE COVER
- (9) ADJUST INLET COVER
- (10) PIPE UNDERDRAIN 4-INCH
- (11) ADJUST WATER VALVE BOX
- (12) ADJUST WATER MANHOLE

N

APPLETON AVE

BEGIN PROJECT
STA 304+17.65

304+00

305+00

306+00

307+00

308+00

309+00

R/L APPLETON AVE

EXIST R/W

112

E210 3 6 7

9

11

8

MENOMONEE AVE

202+00

203+00

204+00

205+00

206+00

207+00

R/L MENOMONEE AVE

E211 1

114 2

115

10

R/L APPLETON AVE

APPLETON AVE

EX 12"ST

EX 12"ST

EX 12"ST

PILGRIM RD

R/L MENOMONEE AVE

208+00

R/L PILGRIM RD

106+00

107+00

108+00

PROPSOSED MANHOLE

EXISTING 6" CAST IRON HYDRANT LEAD

GV

REMOVE EXISTING HYDRANT
STA 106+53.33, 7.70' RT

EXIST R/W

INSTALL 6" HYDRANT GATE VALVE WITH VALVE BOX
STA 106+53.33, 7.70' RT

PROPOSED CATCH BASIN

15' - 6" PVC C-900 DR18

INSTALL NEW HYDRANT
STA 106+53.84, 22.93' RT

INSTALL RIGID INSULATION AS REQUIRED
PER VILLAGE WATER UTILITY STANDARDS
(INCIDENTAL TO HYDRANT INSTALLATION)

209+00

MENOMONEE AVE

NOTE:
1. REFER TO HYDRANT INSTALLATION DETAIL
2. ALL MATERIALS FURNISHED BY THE CONTRACTOR MUST COMPLY WITH THE VILLAGE OF MENOMONEE FALLS WATER UTILITY MATERIAL SPECIFICATION LIST

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	HYDRANT RELOCATION	SHEET 28	E

FILE NAME : S:\WAUK_CO\MEN_FALLS\GOV\160233 MENOMONEE AVENUE\SHEETS PLAN\023001_UP.DWG
LAYOUT NAME - 023001_UP - 023001_UP

PLOT DATE : 10/28/2019 8:17 AM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 42

2

Signing notes

Type II aluminum signs removed under the contract shall be delivered to the County sign shop. Contact the following individual at the sign shop for distribution county location.

Signing Coordinator County(s) Phone #

- Dennis Newton Milwaukee 414-750-0257
- Dennis Newton Racine 414-750-0257
- Jenny Buckett Kenosha, Washington, Ozaukee 414-750-2427
- Chuck Saldivar Walworth, Waukesha 414-750-1682

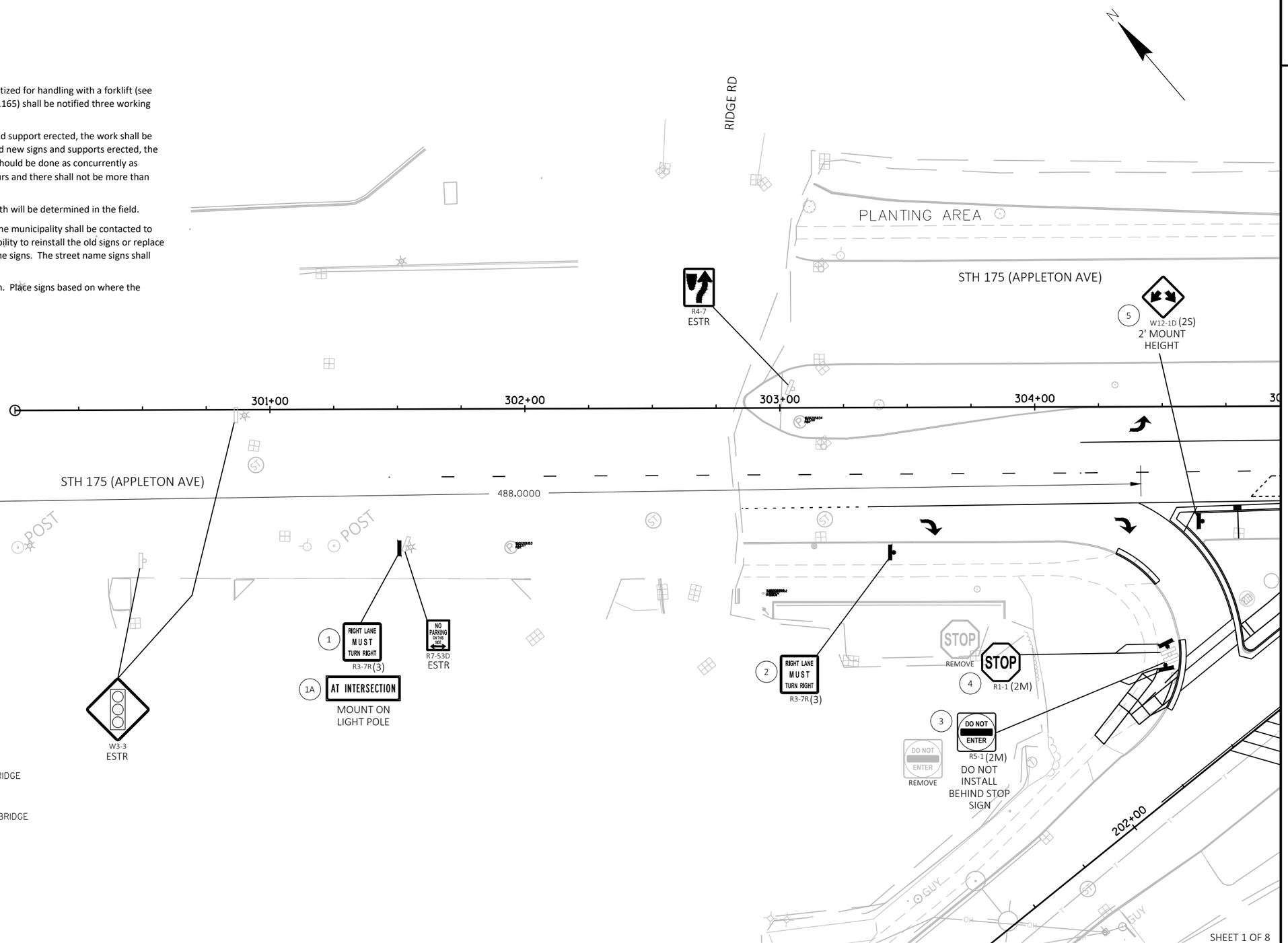
Signs shall be carefully removed from sign supports. The signs shall be palletized for handling with a forklift (see standard spec 638.3.4). The Regional sign shop (General phone # 414-266-1165) shall be notified three working days prior to delivery of the signs.

When an existing stop sign support is to be removed and a new stop sign and support erected, the work shall be done concurrently. For other signs and supports that are to be removed and new signs and supports erected, the removal of the existing sign/support and erection of the new sign/support should be done as concurrently as possible. In no case shall a new sign/support be down for more than 24 hours and there shall not be more than one sign of the same legend missing in a row.

Wood posts sizes, for type II signs are estimated lengths and the actual length will be determined in the field.

Street name signs are property of the municipality (city, village or town). The municipality shall be contacted to remove their street name signs prior to construction and it is their responsibility to reinstall the old signs or replace them following construction. WisDOT does not furnish or install street name signs. The street name signs shall not be placed on top of the STOP signs.

Locate no passing pennants based on establishing no passing zones pay item. Place signs based on where the pavement marking for no passing zones begin



LEGEND

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

SHEET 1 OF 8

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 29 E

FILE NAME : N:\PDS\C3D\CAD\27821300\SIGN\023201_PS_18.DWG
LAYOUT NAME - 023201_PS
PLOT DATE : 10/10/2019 4:03 PM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

LEGEND

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

STH 175 (APPLETION AVE)

MENOMONEE AVE

PILGRIM ROAD

93 LEFT TURN YIELD ON FLASHING YELLOW ARROW R10-50L (2M) MOUNT HIGH ON SIGNAL POLE

8 R4-7 (2M) MOUNT ON SIGNAL POLE

9 APPLETON N84 AVE REMOVE

Appleton Ave M1-94S MOUNT ON MAST ARM

10 ONE WAY R6-2L (2M) MOUNT ON SIGNAL POLE

11 NORTH 175 REMOVE

NORTH 175 J4-1 (2S) MOUNT ON SIGNAL POLE

12 MENOMONEE N84 AVE REMOVE

Menomonee Ave M1-94H MOUNT ON MAST ARM

13 DIVIDED HIGHWAY R6-3 (2M)

14 STOP R1-1F (2M) MOUNT ON SIGNAL POLE

REMOVE

15 DO NOT ENTER R5-1 (2M) MOUNT ON SIGNAL POLE

ONE WAY R6-2R ESTR

SPEED LIMIT 30 R2-1 ESTR

REMOVE

6 R3-4 (2S)

7 STOP R1-1F (2M) MOUNT ON SIGNAL POLE

17 STOP R1-1F (2M) MOUNT ON SIGNAL POLE

18 ANY TIME MOVE

NORTH 175 REMOVE

19 NORTH 175 J4-1 (2S) MOUNT ON SIGNAL POLE

20 ONE WAY R6-2L (2M) MOUNT ON SIGNAL POLE

APPLETON N84 AVE REMOVE

16 Appleton Ave M1-94S MOUNT ON MAST ARM

STREET NAME SIGNS PROPERTY OF VILLAGE

PILGRIM W156 RD REMOVE

Pilgrim Rd 21 M1-94H MOUNT ON MAST ARM

REMOVE 22 R3-4 (2S)

STREET NAME SIGNS PROPERTY OF VILLAGE

23 DO NOT ENTER R5-1 (2M) MOUNT ON SIGNAL POLE

305+00 306+00 307+00 308+00 309+00 310+00

205+00 206+00 207+00

STREET NAME SIGNS PROPERTY OF VILLAGE

41 DO NOT ENTER R5-1 (2M) MOUNT ON SIGNAL POLE

204+00

203+00

MENOMONEE AVE

40 STOP R1-1F (2M) MOUNT ON SIGNAL POLE

42 DO NOT ENTER R5-1 (2M)

DO NOT ENTER REMOVE

38 DIVIDED HIGHWAY R6-3 (2M)

39 STOP R1-1F (2M) MOUNT ON SIGNAL POLE

37 SOUTH 175 J4-1 (2S) MOUNT ON SIGNAL POLE

SOUTH 175 REMOVE

36 ONE WAY R6-2L (2M) MOUNT ON SIGNAL POLE

35 Menomonee Ave M1-94H MOUNT ON MAST ARM

MENOMONEE N84 AVE REMOVE

94 LEFT TURN YIELD ON FLASHING YELLOW ARROW R10-50L (2M) MOUNT HIGH ON SIGNAL POLE

34 ANY TIME REMOVE

33 R4-7 (2M) MOUNT ON SIGNAL POLE

REMOVE 31 R3-4 (2S)

32 STOP R1-1F (2M) MOUNT ON SIGNAL POLE

29 RIGHT LANE MUST TURN RIGHT R3-7R (3)

30 NO PARKING ANY TIME R7-1D (2S)

27 DIVIDED HIGHWAY R6-3 (2M)

28 STOP R1-1F (2M) MOUNT ON SIGNAL POLE

26 W12-1D (2S) 2' MOUNT HEIGHT

25 R4-7 (2M) MOUNT ON SIGNAL POLE

REMOVE

95 LEFT TURN YIELD ON FLASHING YELLOW ARROW R10-50L (2M) MOUNT HIGH ON SIGNAL POLE

24 STOP R1-1F (2M) MOUNT ON SIGNAL POLE

SHEET 2 OF 8

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 30	E

FILE NAME : N:\PDS\C3D\CAD\27821300\SIGN\023201_PS_18.DWG
LAYOUT NAME - 023202_PS

PLOT DATE : 10/10/2019 4:03 PM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

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

PILGRIM ROAD

43 STOP R1-1 (2M)

REMOVE

44 DO NOT ENTER R5-1 (2M) MOUNT ON SIGNAL POLE

OLD FALLS VILLAGE REMOVE BY VILLAGE

45 DIVIDED HIGHWAY R6-3 (2M)

46 STOP R1-1F (2M) MOUNT ON SIGNAL POLE

BUS STOP ESTR

47 W12-1D (2S) 2' MOUNT HEIGHT

48 R3-4 (2S) REMOVE

49 STOP R1-1F (2M) MOUNT ON SIGNAL POLE

HISTORIC VILLAGE CENTRE ↑

ANY TIME ESTR

101 102 RIGHT LANE MUST TURN RIGHT R3-7R (3)

W3-3 ESTR

100'

STH 175 (APPLETION AVE)

APPLETON N83 AVE REMOVE

50 Appleton Ave M1-94S MOUNT ON MAST ARM

51 R4-7 (2M) MOUNT ON SIGNAL POLE

REMOVE

APPLETON N83 AVE REMOVE

52 Appleton Ave M1-94S MOUNT ON MAST ARM

PILGRIM W156 RD REMOVE

53 Pilgrim Rd M1-94H MOUNT ON MAST ARM

96 LEFT TURN YIELD ON FLASHING YELLOW ARROW R10-50L (2M) MOUNT HIGH ON SIGNAL POLE

55 ONE WAY R6-2L (2M) MOUNT ON SIGNAL POLE

BUS STOP ESTR

SOUTH 175 J4-1

ANY TIME ESTR

R4-7 ESTR

54 STOP R1-1 (2M)

STOP REMOVE

311+00 312+00 313+00 314+00 315+00

105+00 104+00 103+00

20'

POST

SHEET 3 OF 8

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 31	E

FILE NAME : N:\PDS\C3D\CAD\27821300\SIGN\023201_PS_18.DWG
LAYOUT NAME - 023203_PS

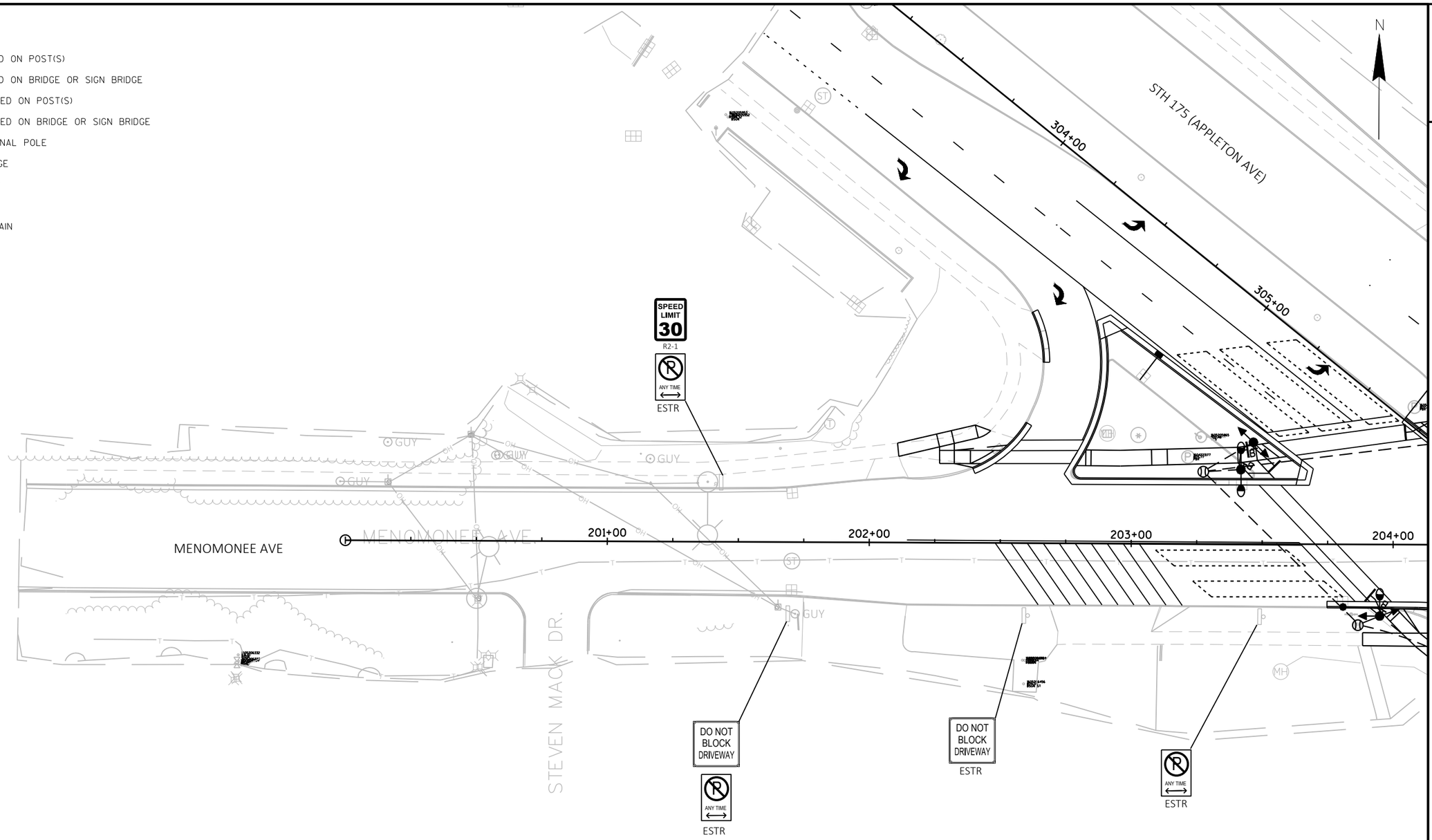
PLOT DATE : 10/10/2019 4:04 PM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

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



SHEET 4 OF 8

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 32	E

FILE NAME : N:\PDS\C3D\CAD\27821300\SIGN\023201_PS_18.DWG
LAYOUT NAME - 023205_PS

PLOT DATE : 10/10/2019 4:04 PM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE

PROPOSED SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE

EXISTING LIGHT OR SIGNAL POLE

CANTILEVER SIGN BRIDGE

XXX DENOTES SIGN NUMBER

(X) INDICATES SIGN SIZE

ESTR EXISTING SIGN TO REMAIN

N

MENOMONEE AVE

PILGRIM RD.

110+00

109+00

108+00

107+00

206+00

207+00

208+00

209+00

210+00

211+00

212+00

NO PARKING ANY TIME
R7-1D
ESTR

60
R3-4 (2S)
REMOVE

61
STOP
R1-1F (2M)
MOUNT ON
SIGNAL POLE

ANY TIME
ESTR

ANY TIME
ESTR

MENOMONEE N84 AVE
REMOVE

58 59 Menomonee Ave
M1-94H
MOUNT ON
MAST ARM

MENOMONEE AVE

NO PARKING ANY TIME
R7-1D
ESTR

56
R3-4 (2S)
REMOVE

57
STOP
R1-1F (2M)
MOUNT ON
SIGNAL POLE

PILGRIM RD.

PARKING LOT

STH 175 (APPLETON AVE)

309+00

SPEED LIMIT 25
R2-1

ANY TIME
ESTR

SHEET 5 OF 8

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 33	E

FILE NAME : N:\PDS\C3D\CAD\27821300\SIGN\023201_PS_18.DWG
LAYOUT NAME - 023206_PS

PLOT DATE : 10/10/2019 4:04 PM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

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

N

PILGRIM ROAD

PILGRIM ROAD
101+00

W3-3
ESTR

JCT
175
END
COUNTY
YY
ESTR

SHEET 6 OF 8

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 34	E

FILE NAME : N:\PDS\C3D\CAD\27821300\SIGN\023201_PS_18.DWG
LAYOUT NAME - 023208_PS

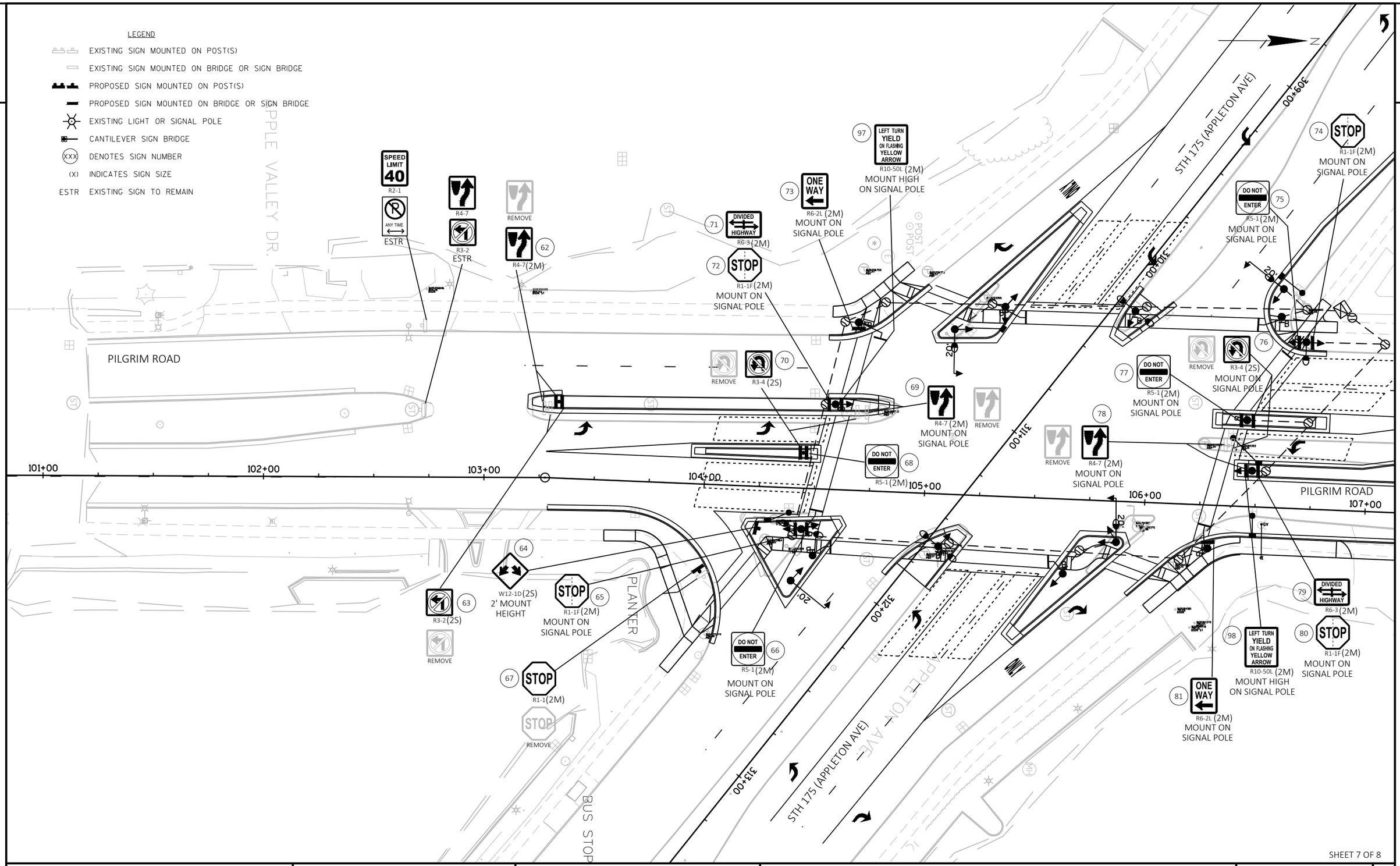
PLOT DATE : 10/10/2019 4:04 PM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

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



SHEET 7 OF 8

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 35	E

FILE NAME : N:\PDS\C3D\CAD\27821300\SIGN\023201_PS_18.DWG
LAYOUT NAME - 023209_PS

PLOT DATE : 10/10/2019 4:04 PM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

LEGEND

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

N

MENOMONEE AVE

PILGRIM ROAD

PILGRIM RD.

LIBRARY LN.

PARKING LOT

GUY

ST

MENOMONEE AVE.

209+00
207+00
208+00
210+00
107+00
108+00
109+00
110+00
111+00
112+00

82 REMOVE
R3-4 (2S) MOUNT ON SIGNAL POLE

83 REMOVE
84 R4-7 (2M) MOUNT ON SIGNAL POLE

89 DO NOT ENTER
R5-1 (2M) MOUNT ON SIGNAL POLE

90 91 STOP
R1-1F (2M) MOUNT ON SIGNAL POLE

92 R3-4 (2S) MOUNT ON SIGNAL POLE
REMOVE

R7-1D ESTR

LIBRARY ESTR

W3-3 ESTR

R4-7 ESTR

85 86 STOP
R1-1F (2M) MOUNT ON SIGNAL POLE

87 NO PARKING ANY TIME
R7-1D (2S)
NO PARKING ANY TIME REMOVE

88 DO NOT ENTER
R5-1 (2M) MOUNT ON SIGNAL POLE

STREET NAME SIGNS PROPERTY OF VILLAGE

99 LEFT TURN YIELD ON FLASHING YELLOW ARROW
R10-50L (2M) MOUNT HIGH ON SIGNAL POLE

R7-1D ESTR

SPEED LIMIT 30
R2-1
LIBRARY
ESTR

SPEED LIMIT 30
R2-1 ESTR

SHEET 8 OF 8

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 36	E

FILE NAME : N:\PDS\C3D\CAD\27821300\SIGN\023201_PS_18.DWG
LAYOUT NAME - 023210_PS

PLOT DATE : 10/10/2019 4:04 PM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

LEGEND

- EXISTING 150-FT HIGH MAST TOWER WITH EIGHT LUMINAIRES
- EXISTING TWIN SHOEBOX LIGHTING UNIT
- EXISTING PULL BOX
- EXISTING UNDERGROUND CONDUCTORS/CONDUIT
- EXISTING UNDERGROUND CONDUCTORS/CONDUIT TO BE REMOVED
- REM — REMOVE
- ---A--- TEMPORARY AERIAL CABLE TRIPLEX 6AWG
- TEMPORARY WOOD POLE

NOTES

1. REFER TO TRAFFIC SIGNAL PLANS FOR ADDITIONAL INFORMATION.
2. EXISTING LIGHTING SHALL REMAIN OPERATIONAL TILL NEW LIGHTING IS INSTALLED AND OPERATIONAL.
3. RECONNECT EXISTING TRAFFIC SIGNAL POWER CIRCUITS TO AERIAL CABLE FOR TEMPORARY TRAFFIC SIGNAL CABINETS AS NECESSARY. WOOD POLES SHOWN AT TEMPORARY TRAFFIC SIGNAL CONTROL CABINET LOCATIONS ARE ASSOCIATED WITH THE TEMPORARY SIGNAL INSTALLATION.

EXISTING POWER DISTRIBUTION FOR TRAFFIC SIGNALS AND LIGHTING, AND LIGHTING CONTROL CABINET TO BE REMOVED. COORDINATE PRIMARY ELECTRIC SERVICE DISCONNECTION/REMOVAL WITH UTILITY.

DEMOLISH, REMOVE AND BACKFILL EXISTING 8-FT X 16-FT X 5.5-FT DEEP REINFORCED CONCRETE VAULT BELOW TRAFFIC SIGNAL AND POWER DISTRIBUTION CABINETS

TEMPORARY TRAFFIC CONTROL CABINET 'TCB1'

(3) TRAFFIC SIGNAL CABINETS TO BE REMOVED – REFER TO TRAFFIC SIGNAL PLANS

TEMPORARY WOOD POLE 'WP1' TO BE LOCATED ADJACENT TO VAULT

TEMPORARY TRAFFIC CONTROL CABINET 'TCB2'

TEMPORARY TRAFFIC CONTROL CABINET 'TCB3'

STH 175/APPLETON AVE

MENOMONEE AVE

PILGRIM RD

LIBRARY LN

PARKING LOT

REM EPB3 T2 REM

EPB2 REM

T1 REM

REM EPB4 LP1 REM

MATCHLINE: A

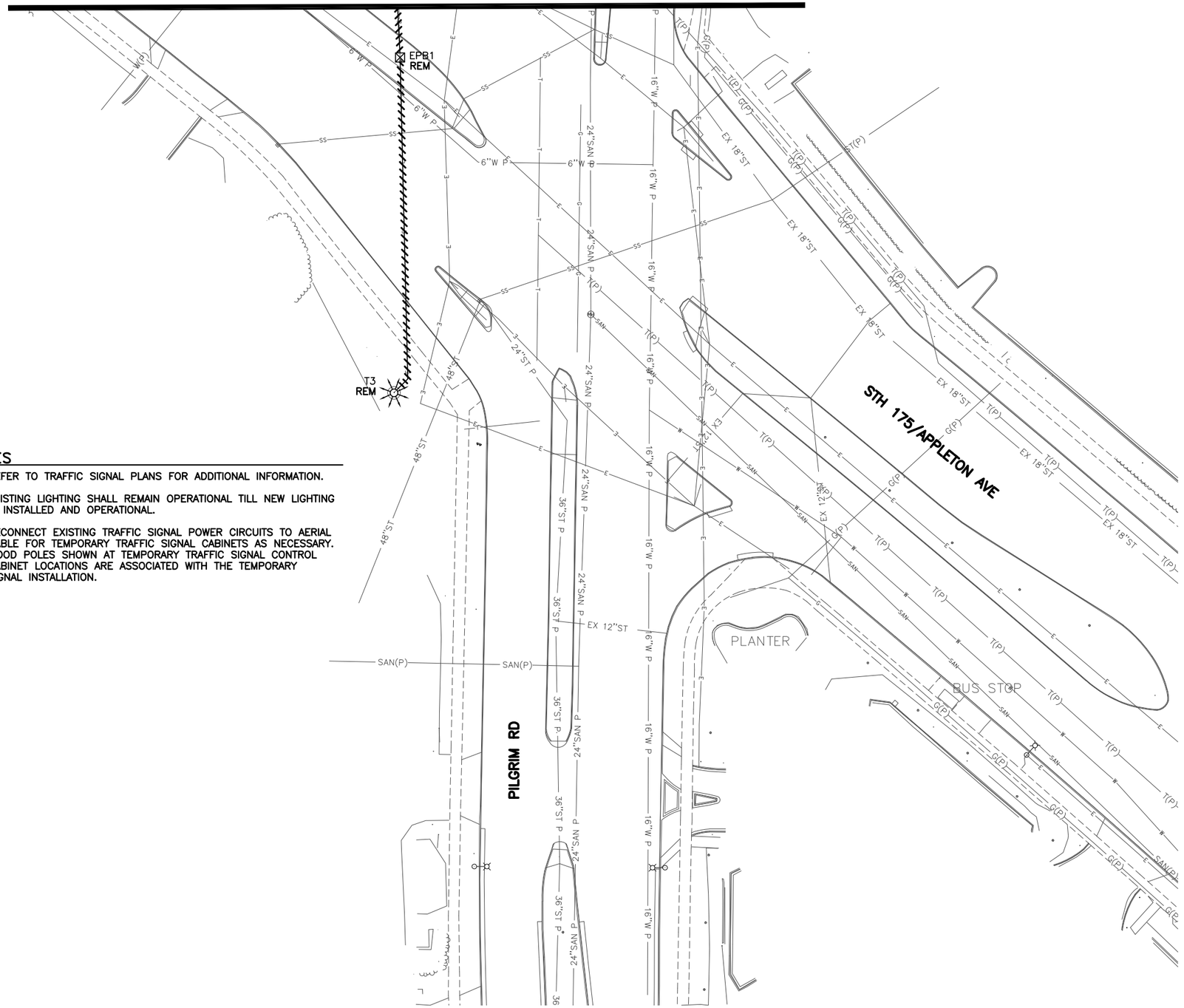
ROADWAY LIGHTING PLANS PREPARED BY

DESIGNED BY: POWRTEK ENGINEERING, INC. SHEET 1 OF 7

PROJECT NO: 2782-13-00	HWY: STH 175	COUNTY: WAUKESHA	EXISTING AND TEMPORARY LIGHTING PLAN	SHEET NO: 37 E

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MATCHLINE: A



LEGEND

- EXISTING 150–FT HIGH MAST TOWER WITH EIGHT LUMINAIRES
- EXISTING TWIN SHOEBOX LIGHTING UNIT
- EXISTING PULL BOX
- EXISTING UNDERGROUND CONDUCTORS/CONDUIT
- EXISTING UNDERGROUND CONDUCTORS/CONDUIT TO BE REMOVED
- REM — REMOVE
- ---A--- TEMPORARY AERIAL CABLE TRIPLEX 6AWG
- TEMPORARY WOOD POLE

NOTES

1. REFER TO TRAFFIC SIGNAL PLANS FOR ADDITIONAL INFORMATION.
2. EXISTING LIGHTING SHALL REMAIN OPERATIONAL TILL NEW LIGHTING IS INSTALLED AND OPERATIONAL.
3. RECONNECT EXISTING TRAFFIC SIGNAL POWER CIRCUITS TO AERIAL CABLE FOR TEMPORARY TRAFFIC SIGNAL CABINETS AS NECESSARY. WOOD POLES SHOWN AT TEMPORARY TRAFFIC SIGNAL CONTROL CABINET LOCATIONS ARE ASSOCIATED WITH THE TEMPORARY SIGNAL INSTALLATION.

2

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DESIGNED BY: POWRTEK ENGINEERING, INC. SHEET 2 OF 7

PROJECT NO: 2782-13-00	HWY: STH 175	COUNTY: WAUKESHA	EXISTING AND TEMPORARY LIGHTING PLAN	SHEET NO: 38 E

LEGEND

- EXISTING TWIN SHOEBOX LIGHTING UNIT
- EXISTING PULL BOX
- EXISTING UNDERGROUND CONDUCTORS/CONDUIT
- NEW LED LUMINAIRE(S) 15,228 LUMENS, 124W, T3R DIST. (TYPE 1) ON TRAFFIC SIGNAL POLE (6-FT ARM(S), UNLESS NOTED)
- NEW LED LUMINAIRE 15,228 LUMENS, 124W, T3R DIST. (TYPE 1) ON 30-FT POLE, TRANSFORMER BASE, 6-FT ARM
- NEW 2-8AWG & 1-8AWG GND IN 2-INCH SCH. 40 NONMETALLIC CONDUIT
- NEW 4-8AWG & 1-8AWG GND IN 2-INCH SCH. 40 NONMETALLIC CONDUIT
- NEW CONDUCTORS AS NOTED IN 2-INCH SCH. 40 NONMETALLIC CONDUIT
- NEW 24 X 42-INCH STEEL PULL BOX
- NEW 2-INCH SCHEDULE 40 NONMETALLIC CONDUIT STUB CAPPED

STA. 100+00.0, 00.00'RT — STATION/OFFSET (LOCATION TO CENTER OF BASE/PULL BOX)
MAP-1,3-1 OR LPB-MAP-1
- NUMBER
- CABINET (SOURCE)
- LIGHTING PULL BOX
- POLE NUMBER
- LUMINAIRE CIRCUIT NUMBER(S)
- CONTROL CABINET (SOURCE)

STA. 303+13.6, 60.41'LT
MAP-6,8-4

STA. 304+50.9, 60.59'LT
MAP-5,7-3

STA. 303+05.0, 55.67'RT
MAP-5,7-5

STA. 305+88.5, 61.74'LT
MAP-6,8-2

STA. 304+21.4, 57.06'RT
MAP-6,8-6

STA. 202+56.5, 46.83'LT
MAP-5,7-7

STA. 206+86.4, 24.13'LT
MAP-5,7-1

STA. 202+25.0 26.39'RT
MAP-6,8-8

STA. 307+55.3, 52.58'RT
MAP-2,4-6

STA. 308+65.7, 64.43'LT
MAP-1,3-5

STA. 107+25.7, 88.74'LT
LPB-1

STA. 106+86.4, 16.50'RT
MAP-1,3-1

STA. 207+27.2, 47.50'RT
PROPOSED FREE STANDING METER BREAKER PEDESTAL

STA. 207+27.2, 55.27'RT
LIGHTING CONTROL CABINET 'MAP' (120/240V)

INSTALL 1-INCH X 12-INCH METAL PIPE VERTICALLY FLUSH WITH GRADE AT END OF CONDUIT (INCIDENTAL)

PROPOSED TRAFFIC SIGNAL CABINET CB1 - REFER TO TRAFFIC SIGNAL PLANS

PROPOSED UTILITY PAD MOUNTED TRANSFORMER

PROPOSED TRAFFIC SIGNAL CABINET CB2 - REFER TO TRAFFIC SIGNAL PLANS

PROPOSED TRAFFIC SIGNAL CABINET CB3 - REFER TO TRAFFIC SIGNAL PLANS

2-4AWG & 1-8AWG GND

2-8AWG & 1-8AWG GND

15-FT

PLANTING AREA

STH 175/APPLETON AVE

MENOMONEE AVE

LIBRARY LN

PILGRIM RD

PARKING LOT

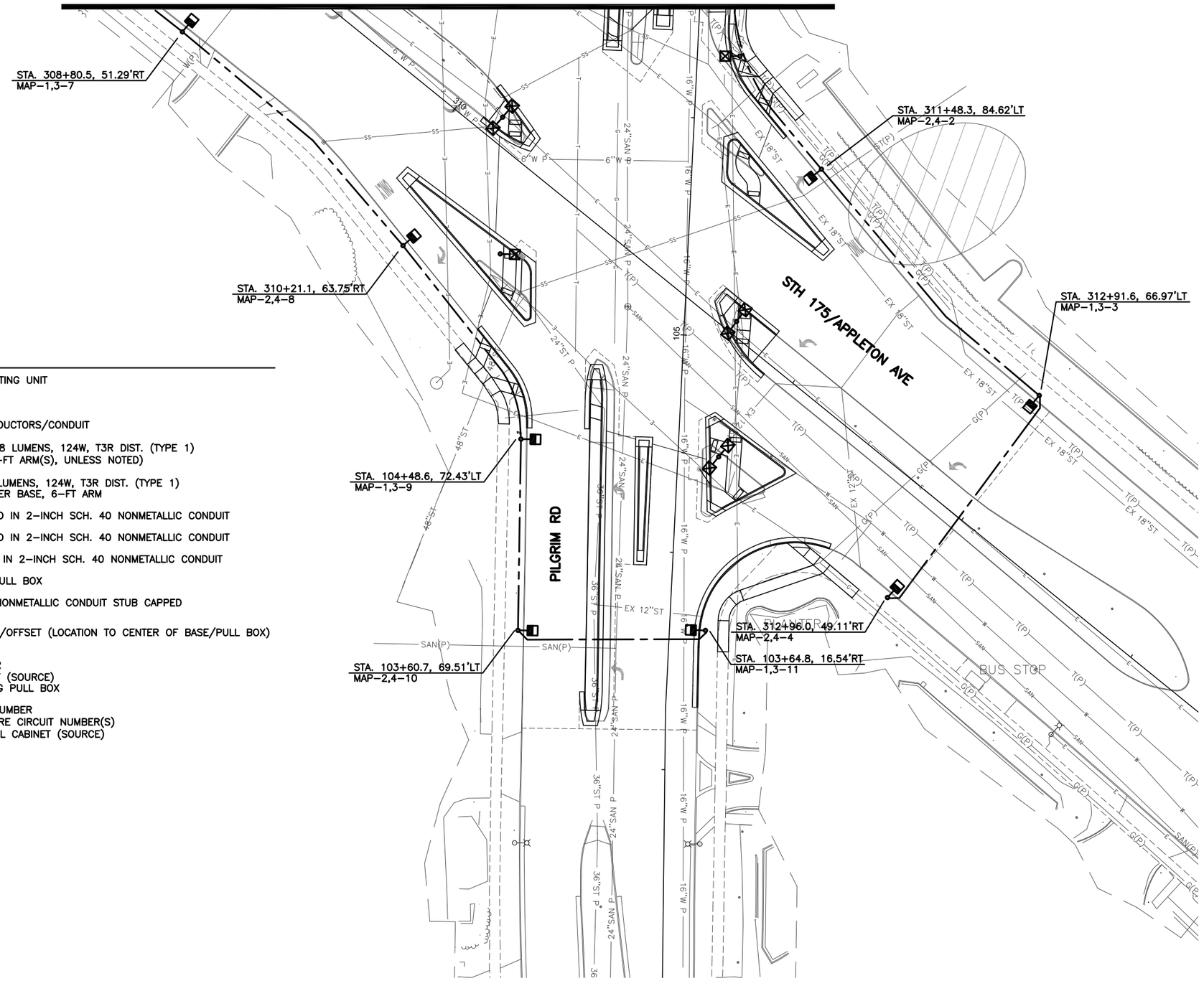
MATCHLINE: A

DESIGNED BY: POWRTEK ENGINEERING, INC. SHEET 3 OF 7

PROJECT NO: 2782-13-00	HWY: STH 175	COUNTY: WAUKESHA	PROPOSED LIGHTING PLAN	SHEET NO: 39	E

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MATCHLINE: A



LEGEND

- EXISTING TWIN SHOEBOX LIGHTING UNIT
- EXISTING PULL BOX
- EXISTING UNDERGROUND CONDUCTORS/CONDUIT
- NEW LED LUMINAIRE(S) 15,228 LUMENS, 124W, T3R DIST. (TYPE 1) ON TRAFFIC SIGNAL POLE (6-FT ARM(S), UNLESS NOTED)
- NEW LED LUMINAIRE 15,228 LUMENS, 124W, T3R DIST. (TYPE 1) ON 30-FT POLE, TRANSFORMER BASE, 6-FT ARM
- NEW 2-8AWG & 1-8AWG GND IN 2-INCH SCH. 40 NONMETALLIC CONDUIT
- NEW 4-8AWG & 1-8AWG GND IN 2-INCH SCH. 40 NONMETALLIC CONDUIT
- NEW CONDUCTORS AS NOTED IN 2-INCH SCH. 40 NONMETALLIC CONDUIT
- NEW 24 X 42-INCH STEEL PULL BOX
- NEW 2-INCH SCHEDULE 40 NONMETALLIC CONDUIT STUB CAPPED

STA. 100+00.0, 00.00'RT — STATION/OFFSET (LOCATION TO CENTER OF BASE/PULL BOX)
MAP-1,3-1 OR LPB-MAP-1

- NUMBER
- CABINET (SOURCE)
- LIGHTING PULL BOX
- POLE NUMBER
- LUMINAIRE CIRCUIT NUMBER(S)
- CONTROL CABINET (SOURCE)

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DESIGNED BY: POWRTEK ENGINEERING, INC. SHEET 4 OF 7

PROJECT NO: 2782-13-00	HWY: STH 175	COUNTY: WAUKESHA	PROPOSED LIGHTING PLAN	SHEET NO: 40	E

2

N

MAP–6,8–4

MAP–5,7–3

MAP–5,7–5

MAP–6,8–6

MAP–5,7–7

MAP–6,8–8

MAP–6,8–2

MAP–5,7–1

MENOMONEE AVE ℄

CONTROL CABINET
'MAP' (120/240V)
5768 1324
BRBR BRBR

MAP–1,3–5

MAP–2,4–6

LPB–1

MAP–1,3–1

MAP–1,3–7

MAP–2,4–2

MAP–2,4–8

MAP–1,3–3

MAP–1,3–9

MAP–2,4–4

MAP–1,3–11

MAP–2,4–10

PILGRIM RD ℄

℄ STH 175/APPLETON AVE

COLOR CODE:

B–BLACK
R–RED

LEGEND:

◑ 124W LED LUMINAIRE

• SPLICE

NOTES:

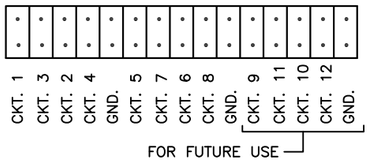
1. GROUNDING CONDUCTOR NOT SHOWN, BUT REQUIRED.
2. NO SPLICES ALLOWED IN PULL BOXES, UNLESS NOTED.

DESIGNED BY: POWRTEK ENGINEERING, INC. SHEET 5 OF 7

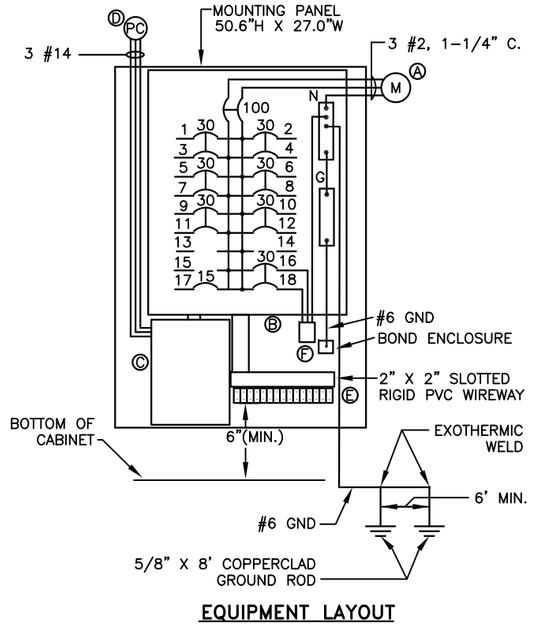
PROJECT NO: 2782-13-00	HWY: STH 175	COUNTY: WAUKESHA	FIELD WIRING DIAGRAM	SHEET NO: 41	E

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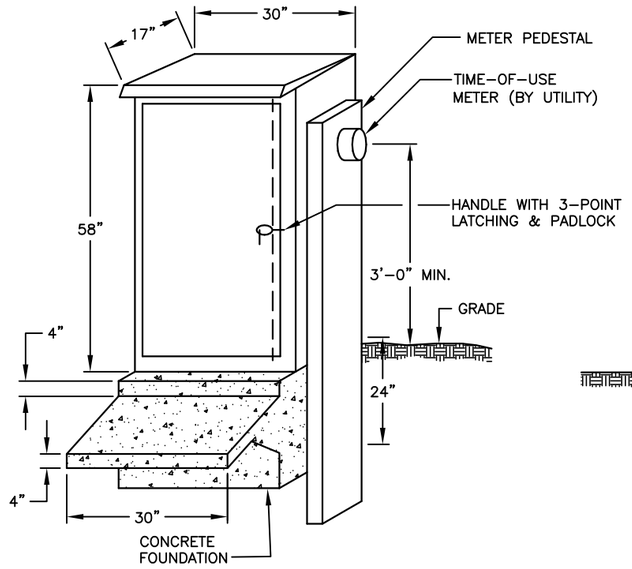
2



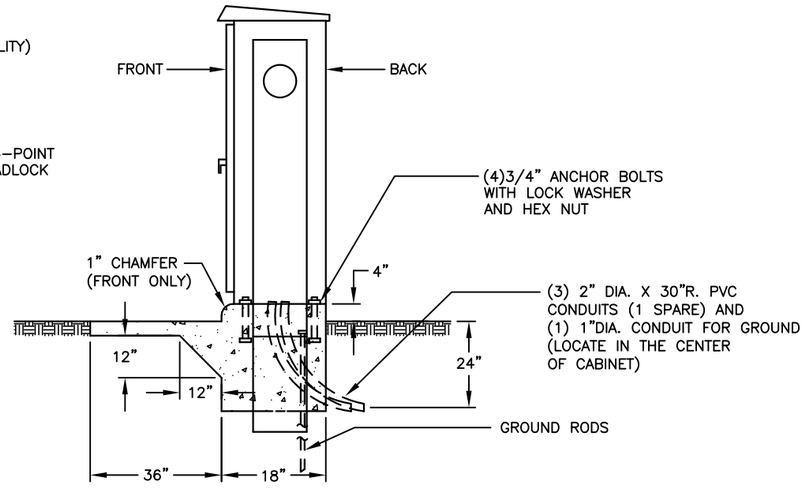
TERMINAL BLOCK LAYOUT



EQUIPMENT LAYOUT



CABINET VIEW



SIDE VIEW

EQUIPMENT LAYOUT NOTES:

Ⓐ UTILITY APPROVED 0-200A, 1PH, 3W, 120/240V METER PEDESTAL

Ⓑ 100A MCB, 120/240V, 1PH, 3W, 18CKT. PANELBOARD WITH (6)30A/2P (LTG), (1)30A/2P (SURGE PROTECTION DEVICE) & (1)15A/1P (CONTROL) BOLT-ON BRANCH CIRCUIT BREAKERS, RATED 22K AIC (MIN.). LEAVE CIRCUIT BREAKERS ASSOCIATED WITH CIRCUITS FOR FUTURE USE IN THE 'OFF' POSITION.

Ⓒ 30A, 12P, 600V MECHANICALLY HELD CONTACTOR, WITH 120V CONTROL COIL, 2-WIRE INTERFACE RELAY AND HAND-OFF-AUTO SWITCH IN FACTORY ASSEMBLED NEMA 1 ENCLOSURE.

Ⓓ PHOTOCELL INSTALLED IN OVERHANG OF CABINET ABOVE DOOR (FACING DOWN).

Ⓔ FIELD WIRING TERMINATION STRIP (15 BLOCKS). REFER TO LAYOUT.

Ⓕ SURGE PROTECTION DEVICE.

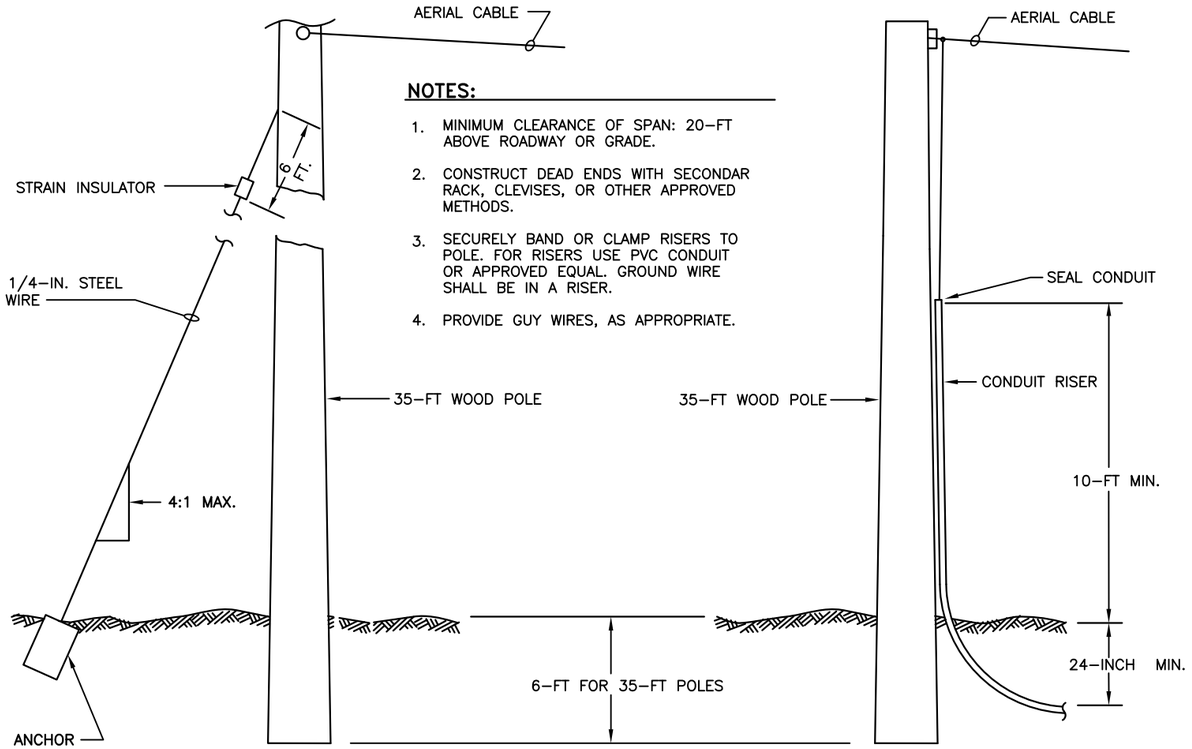
LIGHTING CONTROL CABINET NOTES:

1. ALL CONTROL WIRING SHALL BE COLOR CODED #14 AWG, XLP UNLESS OTHERWISE NOTED.
2. ALL POWER AND CONTROL WIRING SHALL BE NEATLY ROUTED, LABELED AND SUPPORTED.
3. THE LIGHTING CONTROL CABINET SHALL BE COMPLETELY WIRED UP TO THE FIELD WIRING TERMINATION STRIP IN THE CONTRACTORS SHOP AND TESTED PRIOR TO INSTALLATION AT THE SITE.
4. A COPY OF THIS SET OF PLANS WITH AS-BUILT (RECORD) CONDITIONS SHALL BE PUT IN A PLASTIC PROTECTOR IN THE CABINET.
5. THE CONTRACTOR SHALL COMPLY WITH UTILITY INSTALLATION REQUIREMENTS.
6. USE #10 AWG XLP CONDUCTORS FROM THE 30A CB'S (THROUGH CONTACTOR) TO THE FIELD WIRING TERMINATION STRIP, AND GROUND WIRES TO FIELD WIRING TERMINATION STRIP FROM PANELBOARD FOR EACH UNDERGROUND CABLE RUN (INCLUDING FUTURE) TO LIGHTING UNITS AS REQUIRED.

LIGHTING CONTROL CABINET
NOT TO SCALE

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2



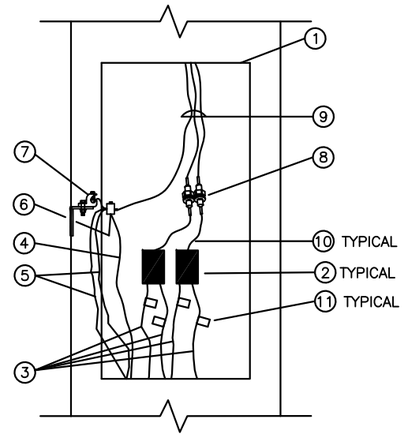
NOTES:

1. MINIMUM CLEARANCE OF SPAN: 20–FT ABOVE ROADWAY OR GRADE.
2. CONSTRUCT DEAD ENDS WITH SECONDAR RACK, CLEVISES, OR OTHER APPROVED METHODS.
3. SECURELY BAND OR CLAMP RISERS TO POLE. FOR RISERS USE PVC CONDUIT OR APPROVED EQUAL. GROUND WIRE SHALL BE IN A RISER.
4. PROVIDE GUY WIRES, AS APPROPRIATE.

TYPICAL TEMPORARY LIGHTING UNIT
TYPICAL WOOD LINE POLE
TYPICAL DOWN GUY

TYPICAL RISER POLE

TEMPORARY AERIAL CABLE & WOOD POLE DETAIL
NOT TO SCALE



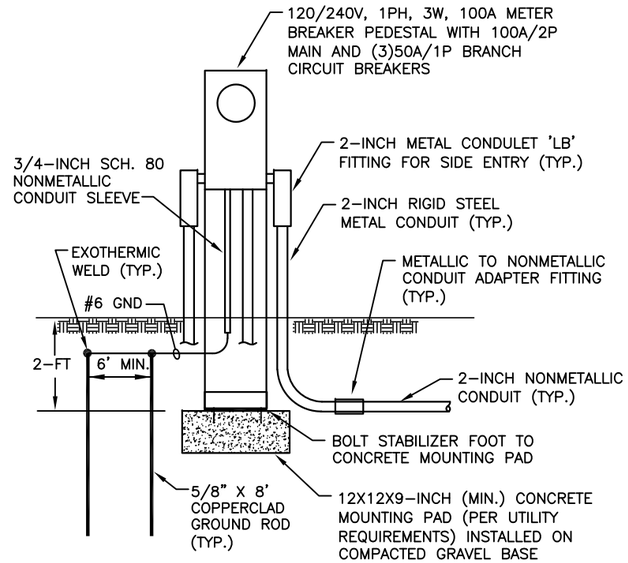
POLE WIRING LEGEND:

1. TRANSFORMER BASE HANDHOLE AND COVER
2. INSULATED SPLICE
3. UNGROUNDED CONDUCTORS
4. #8 CONDUCTOR TO GROUND ROD
5. SYSTEM GROUNDING CONDUCTORS
6. REVERSIBLE PRESSURE OR COMPRESSION GROUNDING CONNECTION (NOT INSULATED)
7. HANDHOLE GROUNDING LUG
8. INLINE BREAKAWAY 2–POLE FUSE ASSEMBLY AND 5A KTK OR EQUAL FUSES. WEATHERPROOF BOOTS.
9. 3#12 RHW/USE (XLP) TO LUMINAIRE
10. 12" PIGTAIL BETWEEN SPLICE AND FUSE ASSEMBLY
11. CIRCUIT TAG

POLE WIRING DETAIL
NO SCALE

NOTES:

1. SCH. 80 NONMETALLIC CONDUIT, RIGID STEEL METAL CONDUIT, FITTINGS, CONCRETE PAD, GROUNDING, CIRCUIT BREAKERS, ETC. ARE INCLUDED IN METER BREAKER PEDESTAL PAY ITEM.
2. PROVIDE CONDUIT RUNS TO EACH TRAFFIC SIGNAL CABINET AS REQUIRED.
3. BOND METALLIC CONDUIT AS APPROPRIATE INSIDE PEDESTAL ENCLOSURE.



METER BREAKER PEDESTAL DETAIL
NO SCALE

DESIGNED BY: POWRTEK ENGINEERING, INC. SHEET 7 OF 7

PROJECT NO: 2782-13-00	HWY: STH 175	COUNTY: WAUKESHA	ELECTRICAL DETAILS	SHEET NO: 43	E

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LEGEND

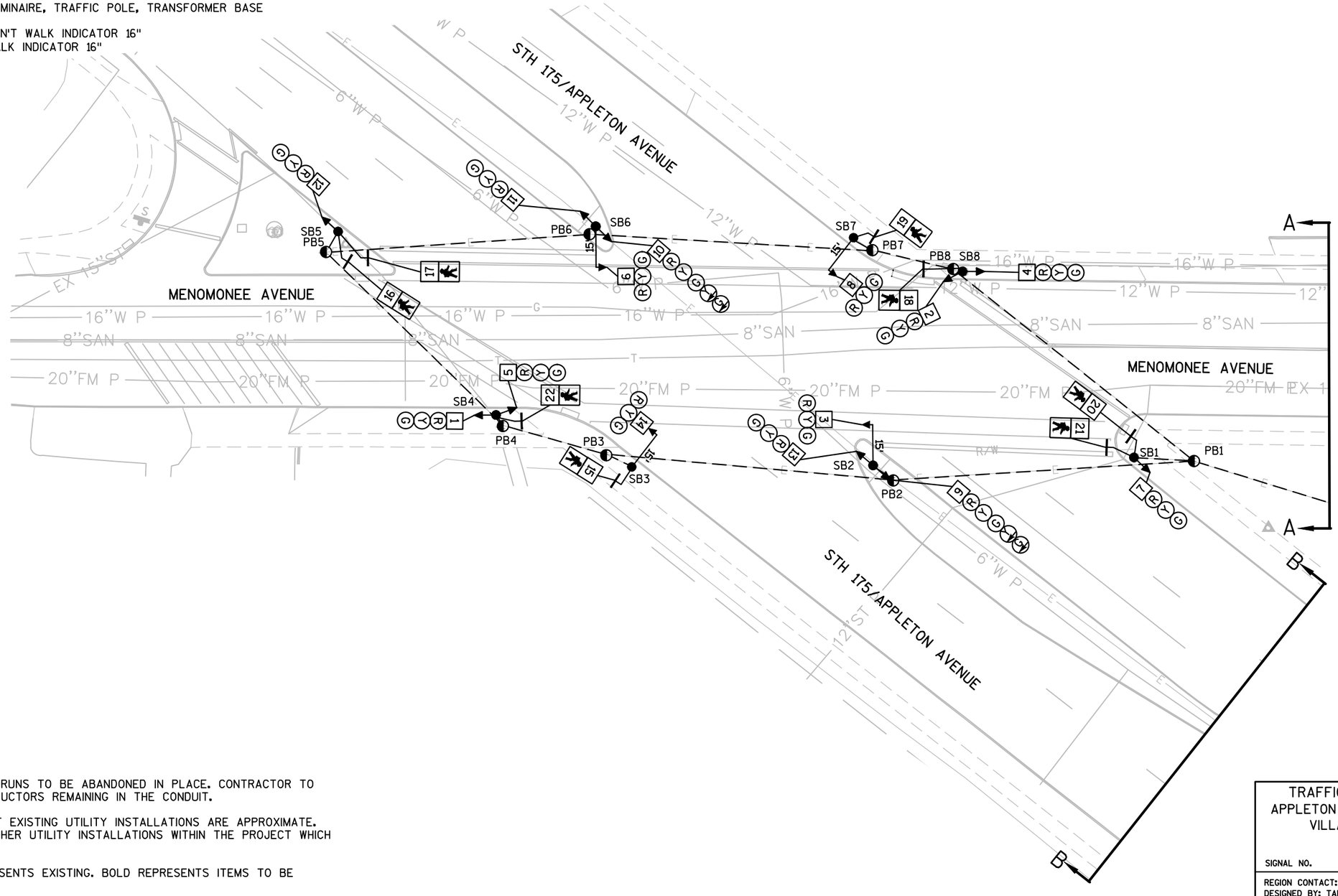
- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- PEDESTRIAN HEAD
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- DON'T WALK INDICATOR 16"
  WALK INDICATOR 16"

LEGEND CONTINUED

- PULL BOX, 24" X 36"
- XX SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- S STOP SIGN

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

N



CONSTRUCTION NOTES:

1. EXISTING CONDUIT RUNS TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS REMAINING IN THE CONDUIT.
2. THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. GRAYSHADE REPRESENTS EXISTING. BOLD REPRESENTS ITEMS TO BE REMOVED.

TRAFFIC CONTROL SIGNAL
APPLETON AVENUE & MENOMONEE AVENUE
VILLAGE OF MENOMONEE FALLS
WAUKESHA COUNTY

SIGNAL NO.

REGION CONTACT:
DESIGNED BY: TADI
REVISED BY:

PAGE 1 OF 3

PROJECT NO: 2782-13-00	HWY: STH 175	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 44	E

LEGEND

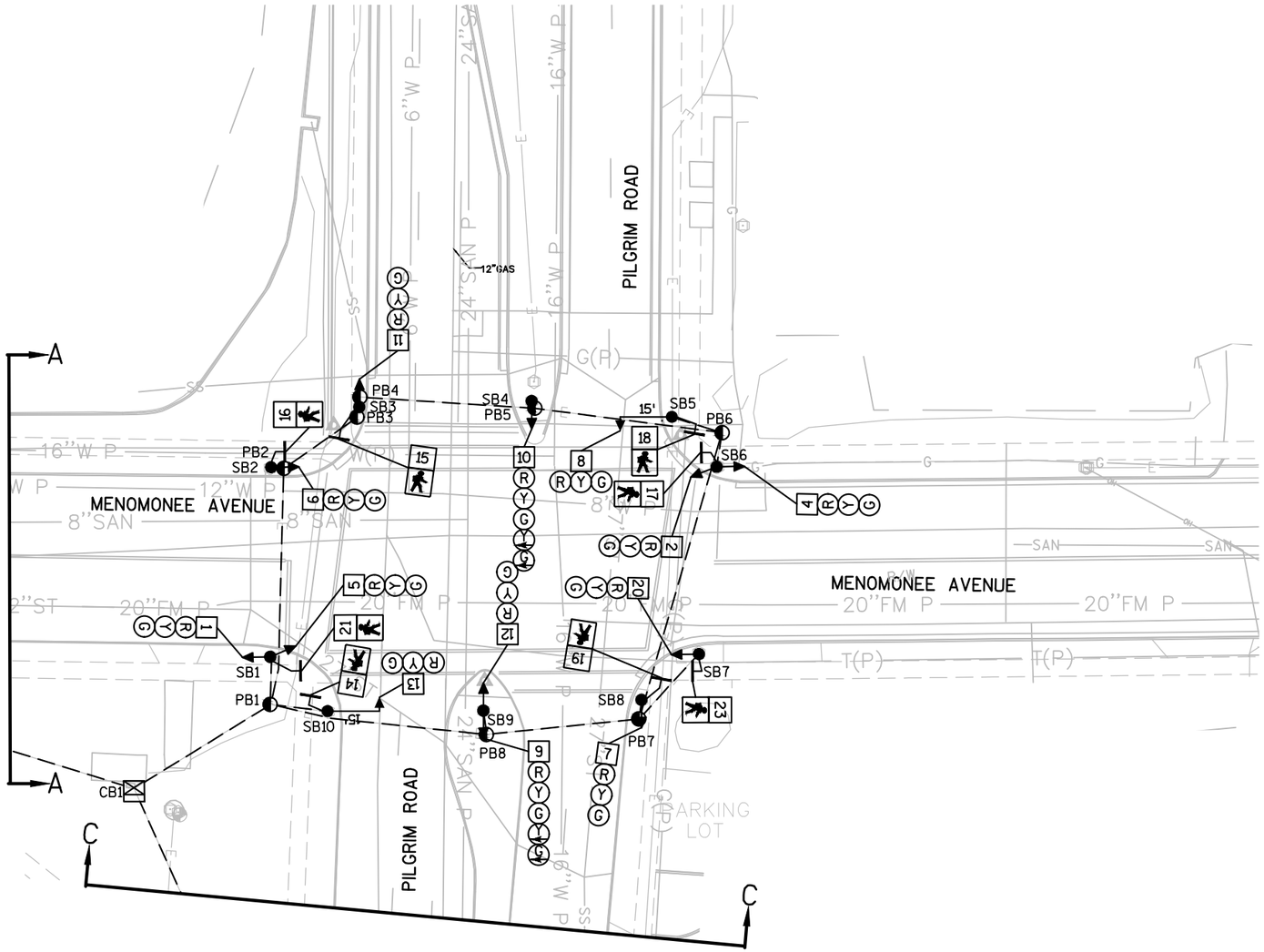
- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- PEDESTRIAN HEAD
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- DON'T WALK INDICATOR 16"
  WALK INDICATOR 16"

LEGEND CONTINUED

- PULL BOX, 24" X 36"
- XX SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- YELLOW ARROW
- GREEN ARROW

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

N



CONSTRUCTION NOTES:

1. EXISTING CONDUIT RUNS TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS REMAINING IN THE CONDUIT.
2. THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. GRAYSHADE REPRESENTS EXISTING. BOLD REPRESENTS ITEMS TO BE REMOVED.

TRAFFIC CONTROL SIGNAL
PILGRIM ROAD & MENOMONEE AVENUE
VILLAGE OF MENOMONEE FALLS
WAUKESHA COUNTY

SIGNAL NO.

REGION CONTACT:
DESIGNED BY: TADI
REVISED BY:

PAGE 2 OF 3

PROJECT NO: 2782-13-00	HWY: STH 175	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 45	E

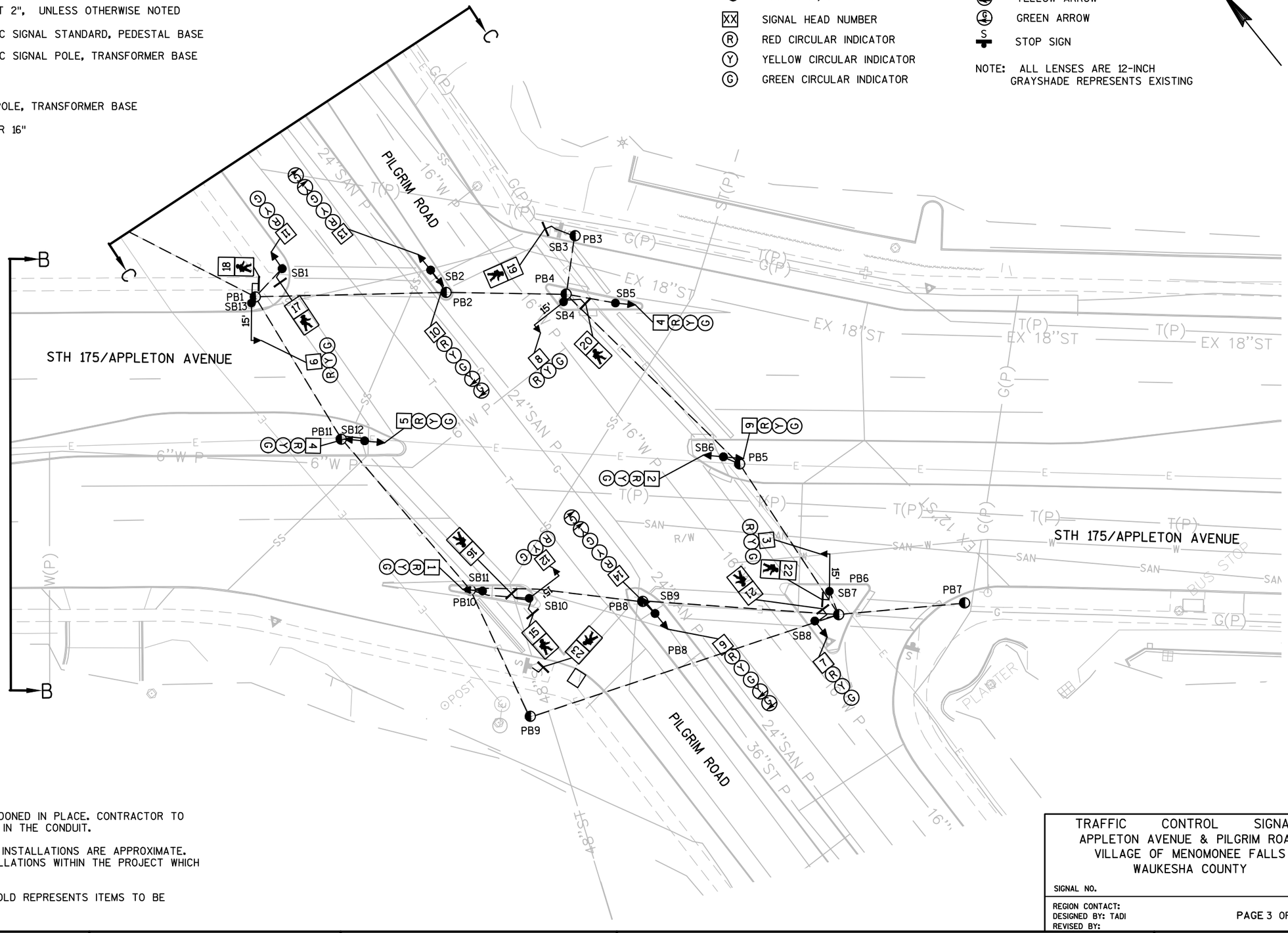
LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- PEDESTRIAN HEAD
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- DON'T WALK INDICATOR 16"
  WALK INDICATOR 16"

LEGEND CONTINUED

- PULL BOX, 24" X 36"
- XX SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- S STOP SIGN

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



CONSTRUCTION NOTES:

1. EXISTING CONDUIT RUNS TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS REMAINING IN THE CONDUIT.
2. THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. GRAYSHADE REPRESENTS EXISTING. BOLD REPRESENTS ITEMS TO BE REMOVED.

TRAFFIC CONTROL SIGNAL
APPLETON AVENUE & PILGRIM ROAD
VILLAGE OF MENOMONEE FALLS
WAUKESHA COUNTY

SIGNAL NO.

REGION CONTACT:
DESIGNED BY: TADI
REVISED BY:

PAGE 3 OF 3

PROJECT NO: 2782-13-00	HWY: STH 175	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 46	E

FILE NAME : C:\EGNYTE\SHARED\WI\1942 MENOMONEE FALLS TRIANGLE SIGNALS\CAD\27821300_TRAFFIC SIGNAL REMOVAL PLAN.DWG
LAYOUT NAME - 024201_sp
PLOT DATE : 10/22/2019 2:54 PM PLOT BY : ALICIA DOUGHERTY PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

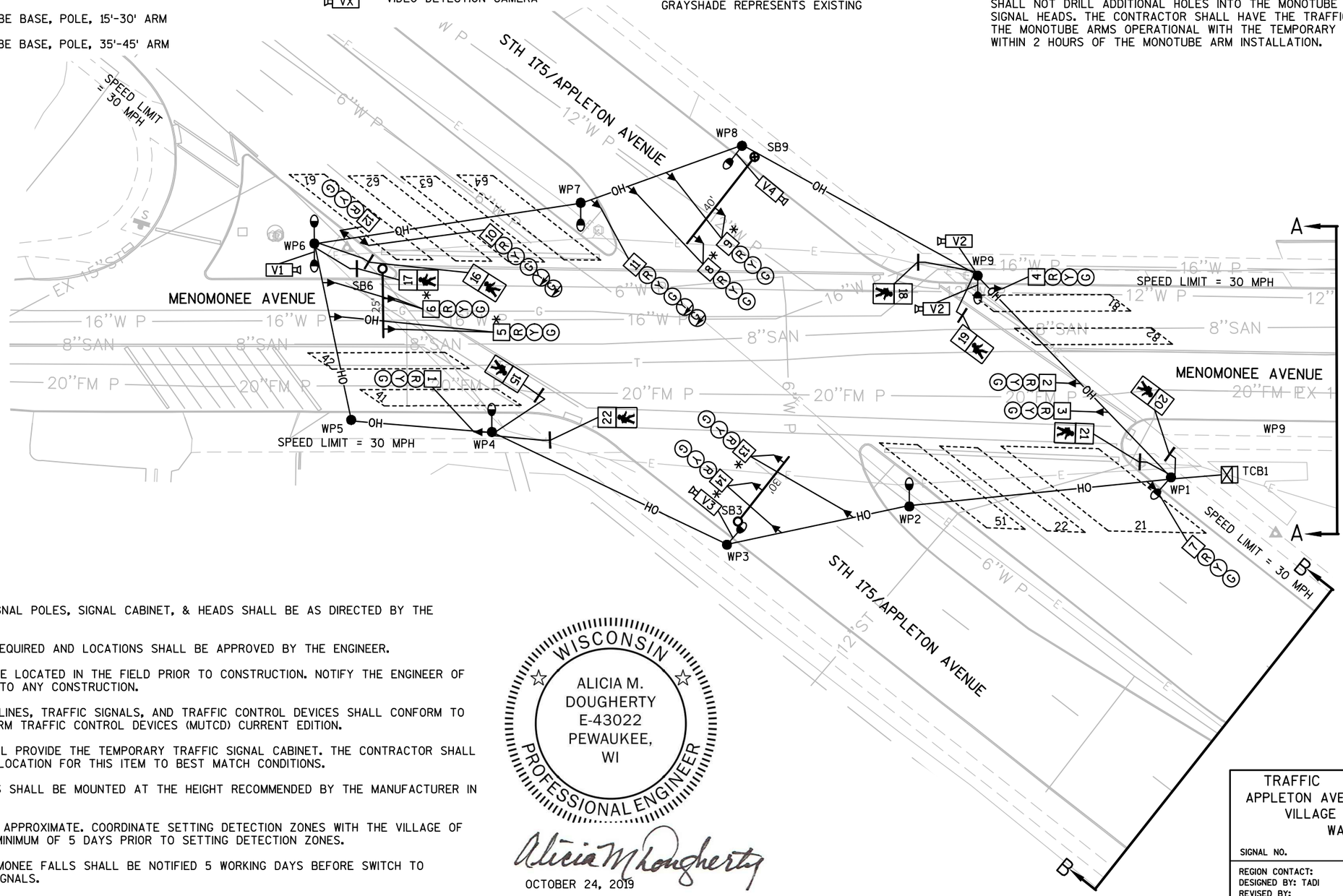
LEGEND

- CONTROL CABINET
- OH — CABLE - OVERHEAD
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- PEDESTRIAN HEAD
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM
- (XX) MONOTUBE BASE, POLE, 35'-45' ARM
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- VIDEO DETECTION AREA
- VX VIDEO DETECTION CAMERA
- Y YELLOW ARROW
- G GREEN ARROW
- S STOP SIGN
- DON'T WALK INDICATOR 16"
  WALK INDICATOR 16"

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

CONSTRUCTION NOTES CONTINUED:

* THE TEMPORARY TRAFFIC SIGNAL HEADS INSTALLED ON THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE SHALL BE ACTIVE UNTIL THE MONOTUBE ARM IN FRONT OF THE TRAFFIC SIGNAL SPAN WIRE IS INSTALLED. THE CONTRACTOR SHALL OPERATE THE PERMANENT TRAFFIC SIGNAL HEADS ON THE MONOTUBE ARMS WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLED ONCE THE MONOTUBE ARM IS INSTALLED IN FRONT OF THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE MOST APPROPRIATE METHOD TO FEED THE PERMANENT TRAFFIC SIGNAL HEADS BEING USED WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION. THE CONTRACTOR SHALL NOT DRILL ADDITIONAL HOLES INTO THE MONOTUBE ARMS TO FEED THE SIGNAL HEADS. THE CONTRACTOR SHALL HAVE THE TRAFFIC SIGNAL HEADS ON THE MONOTUBE ARMS OPERATIONAL WITH THE TEMPORARY TRAFFIC SIGNAL WITHIN 2 HOURS OF THE MONOTUBE ARM INSTALLATION.



CONSTRUCTION NOTES:

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET, & HEADS SHALL BE AS DIRECTED BY THE ENGINEER.
2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
3. ALL UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY CONFLICTS PRIOR TO ANY CONSTRUCTION.
4. ALL SIGNING, MARKING LINES, TRAFFIC SIGNALS, AND TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) CURRENT EDITION.
5. THE CONTRACTOR SHALL PROVIDE THE TEMPORARY TRAFFIC SIGNAL CABINET. THE CONTRACTOR SHALL DETERMINE THE FIELD LOCATION FOR THIS ITEM TO BEST MATCH CONDITIONS.
5. TEMPORARY DETECTORS SHALL BE MOUNTED AT THE HEIGHT RECOMMENDED BY THE MANUFACTURER IN THE SPECIFICATIONS.
6. DETECTION ZONES ARE APPROXIMATE. COORDINATE SETTING DETECTION ZONES WITH THE VILLAGE OF MENOMONEE FALLS A MINIMUM OF 5 DAYS PRIOR TO SETTING DETECTION ZONES.
7. THE VILLAGE OF MENOMONEE FALLS SHALL BE NOTIFIED 5 WORKING DAYS BEFORE SWITCH TO TEMPORARY TRAFFIC SIGNALS.

WISCONSIN
ALICIA M. DOUGHERTY
E-43022
PEWAUKEE, WI
PROFESSIONAL ENGINEER

Alicia M Dougherty
OCTOBER 24, 2019

TRAFFIC CONTROL SIGNAL
APPLETON AVENUE & MENOMONEE AVENUE
VILLAGE OF MENOMONEE FALLS
WAUKESHA COUNTY

SIGNAL NO.

REGION CONTACT:
DESIGNED BY: TADI
REVISED BY:

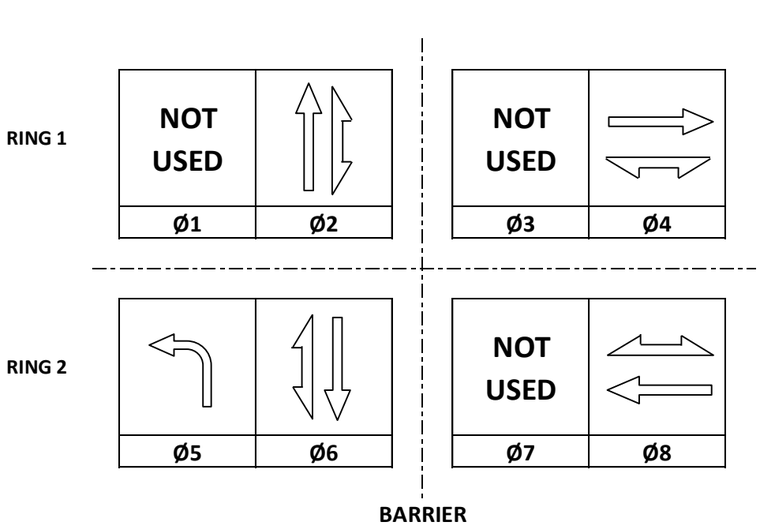
PAGE 1 OF 2

PROJECT NO: 2782-13-00	HWY: STH 175	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL	SHEET 47	E

FILE NAME : C:\EGNYTE\SHARED\WI\1942 MENOMONEE FALLS TRIANGLE SIGNALS\CAD\27821300_TEMPORARY TRAFFIC SIGNAL LAYOUT.DWG
LAYOUT NAME - 024111_tmp
PLOT DATE : 10/24/2019 7:56 PM PLOT BY : ALICIA DOUGHERTY PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

	HEAD NUMBERS	FLASH
Ø1		
Ø2	7,8,9,10,11	R
Ø3		
Ø4	1,2,3	R
Ø5	10,11	-
Ø6	12,13,14	R
Ø7		
Ø8	4,5,6	R
Ø2P	19,20	
Ø4P	21,22	
Ø6P	15,16	
Ø8P	17,18	
OLA		
OLB		
OLC		
OLD		



CONTROLLER LOGIC

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

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

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

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

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

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR*(S)	21	41	51	62	64	82		
ASSIGNED PHASE	2	4	5	6	6	8		
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH								
EXTEND								
DELAY	X	X						

19	17	23	21	27	25	31	29	DETECTOR INPUT
								PLAN LOOP DETECTOR*(S)
								ASSIGNED PHASE
VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OPERATION MODE
								SWITCH
								EXTEND
								DELAY

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR*(S)	22	42	61	63	81			
ASSIGNED PHASE	2	4	6	6	8			
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH								
EXTEND								
DELAY					X			

20	18	24	22	28	26	32	30	DETECTOR INPUT
								PLAN LOOP DETECTOR*(S)
								ASSIGNED PHASE
VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OPERATION MODE
								SWITCH
								EXTEND
								DELAY

APPLETON AVENUE & MENOMONEE AVENUE
VILLAGE OF MENOMONEE FALLS
WAUKESHA COUNTY

SIGNAL NO: CABINET TYPE:
CONTROLLER TYPE: TEMP
DATE: 11/19 PAGE NO. 2 OF 2

LEGEND

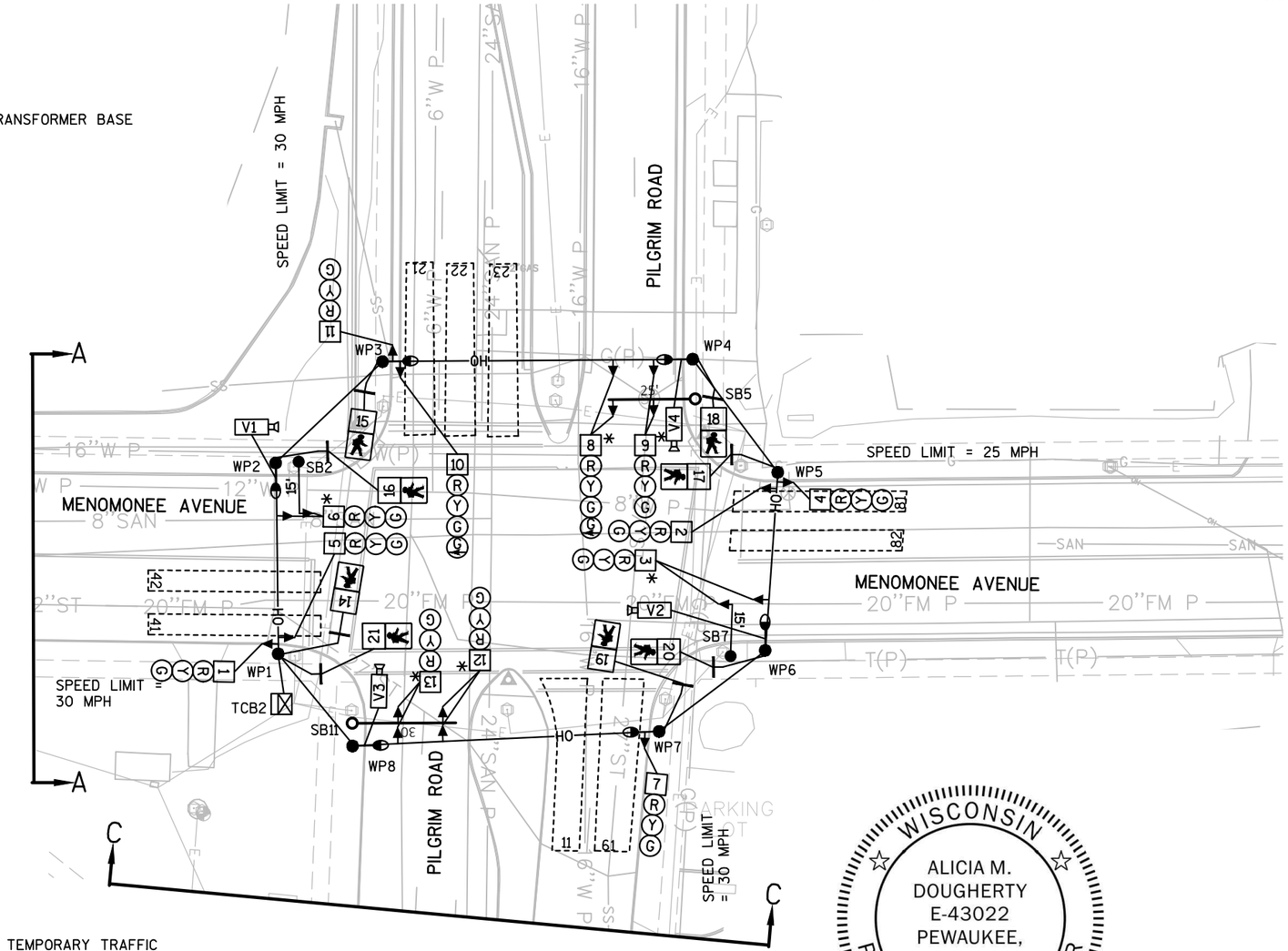
- CONTROL CABINET
- OH — CABLE - OVERHEAD
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- PEDESTRIAN HEAD
- LUMINAIRE, MOUNTED ON WOOD POLE
- DON'T WALK INDICATOR 16"
  WALK INDICATOR 16"
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM

LEGEND CONTINUED

- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- G ARROW GREEN ARROW
- VIDEO DETECTION AREA
- VX VIDEO DETECTION CAMERA

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

N



CONSTRUCTION NOTES CONTINUED:

* THE TEMPORARY TRAFFIC SIGNAL HEADS INSTALLED ON THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE SHALL BE ACTIVE UNTIL THE MONOTUBE OR TROMOBONE ARM IN FRONT OF THE TRAFFIC SIGNAL SPAN WIRE IS INSTALLED. THE CONTRACTOR SHALL OPERATE THE PERMANENT TRAFFIC SIGNAL HEADS ON THE MONOTUBE OR TROMOBONE ARMS WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLED ONCE THE MONOTUBE OR TROMOBONE ARM IS INSTALLED IN FRONT OF THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE MOST APPROPRIATE METHOD TO FEED THE PERMANENT TRAFFIC SIGNAL HEADS BEING USED WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION. THE CONTRACTOR SHALL NOT DRILL ADDITIONAL HOLES INTO THE MONOTUBE OR TROMOBONE ARMS TO FEED THE SIGNAL HEADS. THE CONTRACTOR SHALL HAVE THE TRAFFIC SIGNAL HEADS ON THE MONOTUBE OR TROMOBONE ARMS OPERATIONAL WITH THE TEMPORARY TRAFFIC SIGNAL WITHIN 2 HOURS OF THE MONOTUBE ARM INSTALLATION.

WISCONSIN
ALICIA M. DOUGHERTY
E-43022
PEWAUKEE, WI
PROFESSIONAL ENGINEER

Alicia M Dougherty

OCTOBER 24, 2019

TRAFFIC CONTROL SIGNAL
PILGRIM ROAD & MENOMONEE AVENUE
VILLAGE OF MENOMONEE FALLS
WAUKESHA COUNTY

SIGNAL NO.

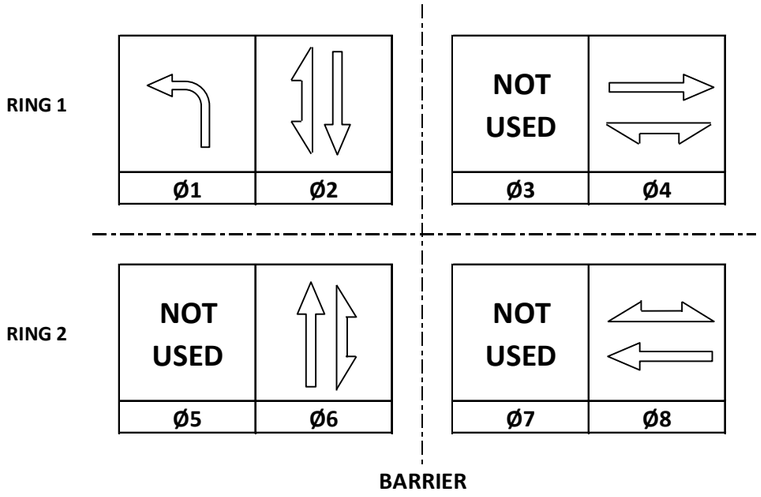
REGION CONTACT:
DESIGNED BY: TADI
REVISED BY:

PAGE 1 OF 2

PROJECT NO: 2782-13-00	HWY: STH 175	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL	SHEET 49	E

FILE NAME : C:\EGNYTE\SHARED\WI\1942 MENOMONEE FALLS TRIANGLE SIGNALS\CAD\27821300_TEMPORARY TRAFFIC SIGNAL LAYOUT.DWG
LAYOUT NAME - 024112_tmp
PLOT DATE : 10/24/2019 7:56 PM PLOT BY : ALICIA DOUGHERTY PLOT NAME : PLOT SCALE : 1:40

	HEAD NUMBERS	FLASH
Ø1	8,10	-
Ø2	11,12,13	R
Ø3		
Ø4	1,2,3	R
Ø5		
Ø6	7,8,9,10	R
Ø7		
Ø8	4,5,6	R
Ø2P	14,15	
Ø4P	20,21	
Ø6P	18,19	
Ø8P	16,17	
OLA		
OLB		
OLC		
OLD		



CONTROLLER LOGIC

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

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

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

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

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

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13	19	17	23	21	27	25	31	29	DETECTOR INPUT
PLAN LOOP DETECTOR*(S)	11	22	41	61	82												PLAN LOOP DETECTOR*(S)
ASSIGNED PHASE	1	2	4	6	8												ASSIGNED PHASE
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OPERATION MODE
SWITCH	6																SWITCH
EXTEND																	EXTEND
DELAY			X														DELAY

DETECTOR INPUT	4	2	8	6	12	10	16	14	20	18	24	22	28	26	32	30	DETECTOR INPUT
PLAN LOOP DETECTOR*(S)	21	23	42	81													PLAN LOOP DETECTOR*(S)
ASSIGNED PHASE	2	2	4	8													ASSIGNED PHASE
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OPERATION MODE
SWITCH																	SWITCH
EXTEND																	EXTEND
DELAY				X													DELAY

PILGRIM ROAD & MENOMONEE AVENUE
VILLAGE OF MENOMONEE FALLS
WAUKESHA COUNTY

SIGNAL NO: CABINET TYPE:
CONTROLLER TYPE: TEMP
DATE: 11/19 PAGE NO. 2 OF 2

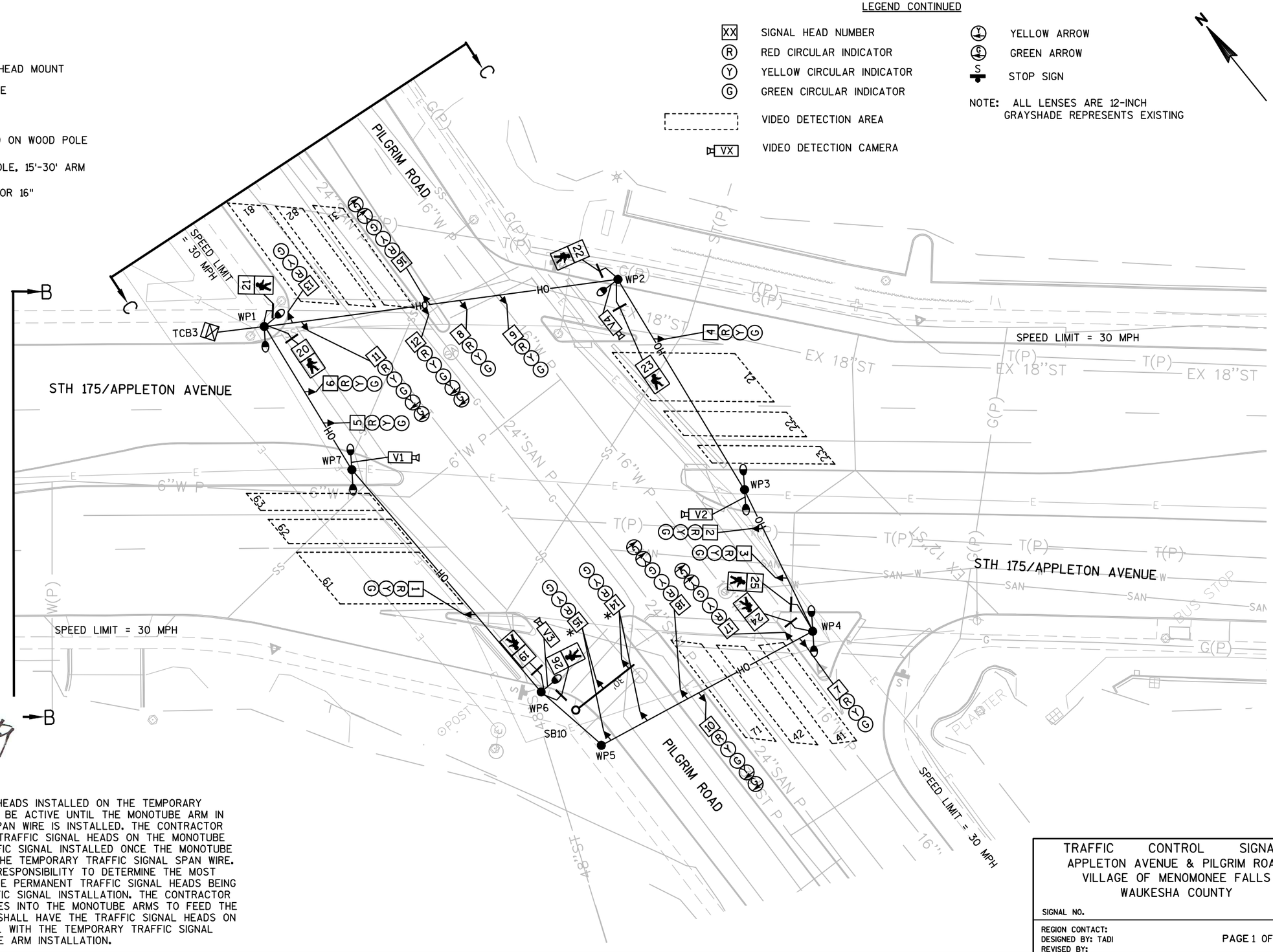
LEGEND

- CONTROL CABINET
- OH — CABLE - OVERHEAD
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- PEDESTRIAN HEAD
- LUMINAIRE, MOUNTED ON WOOD POLE
- (XX) — MONOTUBE BASE, POLE, 15'-30' ARM
- DON'T WALK INDICATOR 16"
  WALK INDICATOR 16"

LEGEND CONTINUED

- XX — SIGNAL HEAD NUMBER
- R — RED CIRCULAR INDICATOR
- Y — YELLOW CIRCULAR INDICATOR
- G — GREEN CIRCULAR INDICATOR
- VIDEO DETECTION AREA
- VX — VIDEO DETECTION CAMERA
- Y — YELLOW ARROW
- G — GREEN ARROW
- S — STOP SIGN

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



WISCONSIN
ALICIA M. DOUGHERTY
E-43022
PEWAUKEE, WI
PROFESSIONAL ENGINEER

Alicia M Dougherty
OCTOBER 24, 2019

CONSTRUCTION NOTES CONTINUED:

* THE TEMPORARY TRAFFIC SIGNAL HEADS INSTALLED ON THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE SHALL BE ACTIVE UNTIL THE MONOTUBE ARM IN FRONT OF THE TRAFFIC SIGNAL SPAN WIRE IS INSTALLED. THE CONTRACTOR SHALL OPERATE THE PERMANENT TRAFFIC SIGNAL HEADS ON THE MONOTUBE ARMS WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLED ONCE THE MONOTUBE ARM IS INSTALLED IN FRONT OF THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE MOST APPROPRIATE METHOD TO FEED THE PERMANENT TRAFFIC SIGNAL HEADS BEING USED WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION. THE CONTRACTOR SHALL NOT DRILL ADDITIONAL HOLES INTO THE MONOTUBE ARMS TO FEED THE SIGNAL HEADS. THE CONTRACTOR SHALL HAVE THE TRAFFIC SIGNAL HEADS ON THE MONOTUBE ARMS OPERATIONAL WITH THE TEMPORARY TRAFFIC SIGNAL WITHIN 2 HOURS OF THE MONOTUBE ARM INSTALLATION.

TRAFFIC CONTROL SIGNAL
APPLETON AVENUE & PILGRIM ROAD
VILLAGE OF MENOMONEE FALLS
WAUKESHA COUNTY

SIGNAL NO.

REGION CONTACT:
DESIGNED BY: TADI
REVISED BY:

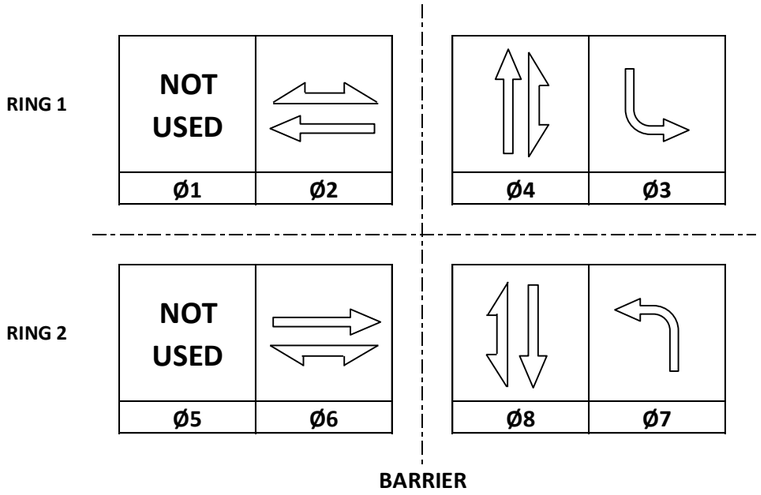
PAGE 1 OF 2

PROJECT NO: 2782-13-00	HWY: STH 175	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL	SHEET 51	E

FILE NAME : C:\EGNYTE\SHARED\WI\1942 MENOMONEE FALLS TRIANGLE SIGNALS\CAD\27821300_TEMPORARY TRAFFIC SIGNAL LAYOUT.DWG
LAYOUT NAME - 024113_tmp
PLOT DATE : 10/24/2019 7:56 PM PLOT BY : ALICIA DOUGHERTY PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

	HEAD NUMBERS	FLASH
Ø1		
Ø2	4,5,6	R
Ø3	16,17,18	-
Ø4	7,8,9,10,11,12	R
Ø5		
Ø6	1,2,3	R
Ø7	10,11,12	-
Ø8	13,14,15,16,17,18	R
Ø2P	21,22	
Ø4P	23,24	
Ø6P	25,26	
Ø8P	19,20	
OLA		
OLB		
OLC		
OLD		



CONTROLLER LOGIC

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

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

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

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

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

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR*(S)	21	23	41	61	63	81		
ASSIGNED PHASE	2	2	4	6	6	8		
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH								
EXTEND								
DELAY						X		

19	17	23	21	27	25	31	29	DETECTOR INPUT
								PLAN LOOP DETECTOR*(S)
								ASSIGNED PHASE
VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OPERATION MODE
								SWITCH
								EXTEND
								DELAY

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR*(S)	22	31	42	62	71	82		
ASSIGNED PHASE	2	3	4	6	7	8		
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH								
EXTEND								
DELAY								

20	18	24	22	28	26	32	30	DETECTOR INPUT
								PLAN LOOP DETECTOR*(S)
								ASSIGNED PHASE
VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OPERATION MODE
								SWITCH
								EXTEND
								DELAY

APPLETON AVENUE & PILGRIM ROAD
VILLAGE OF MENOMONEE FALLS
WAUKESHA COUNTY

SIGNAL NO: CABINET TYPE:
CONTROLLER TYPE: TEMP
DATE: 11/19 PAGE NO. 2 OF 2

LEGEND

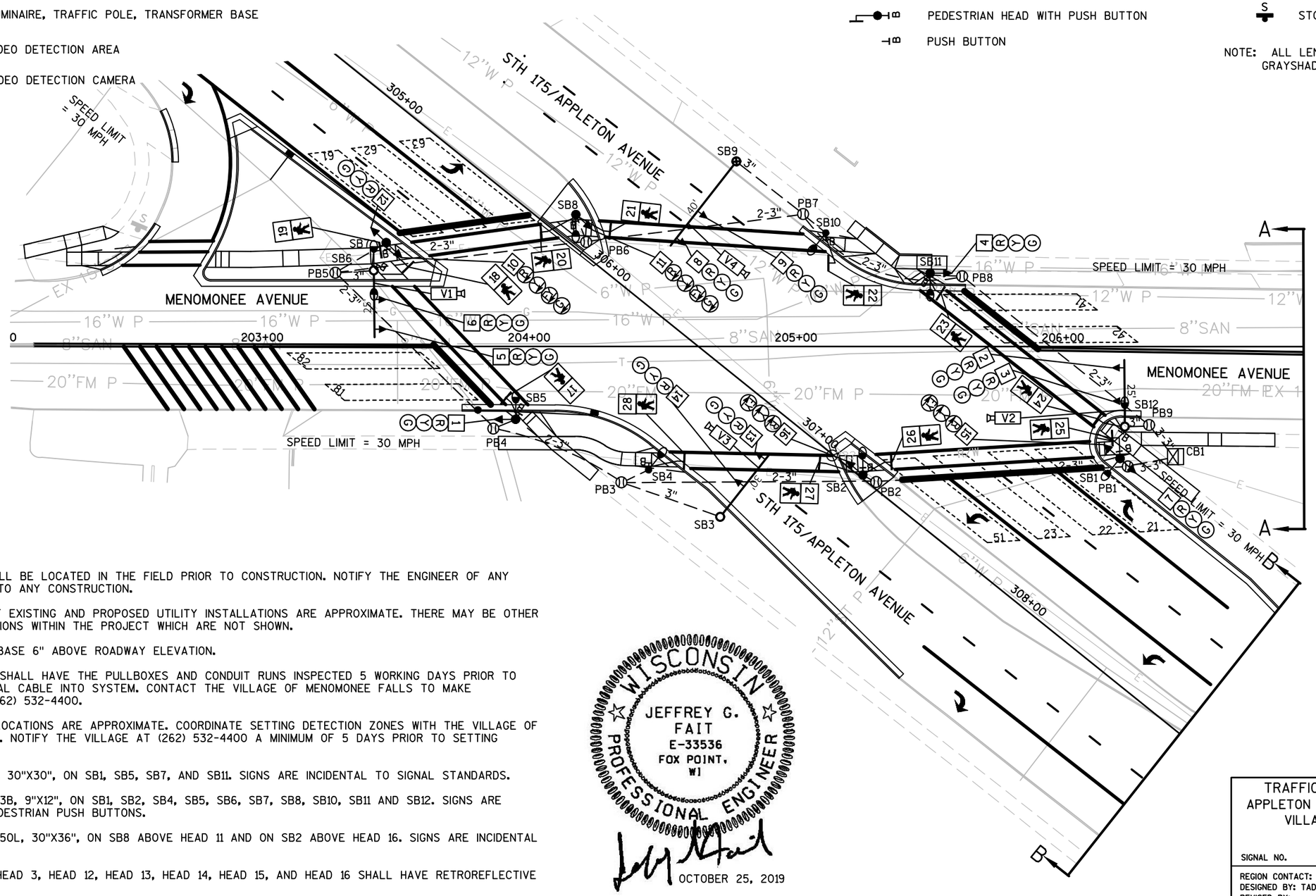
- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM
- (XX) MONOTUBE BASE, POLE, 35'-45' ARM
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- VIDEO DETECTION AREA
- VX VIDEO DETECTION CAMERA

LEGEND CONTINUED

- PULL BOX, 24" X 42"
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- R RED ARROW
- FY Y YELLOW ARROW
- G GREEN ARROW
- DON'T WALK INDICATOR 16"
  WALK INDICATOR 16"
- S STOP SIGN

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

N



CONSTRUCTION NOTES:

1. ALL UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY CONFLICTS PRIOR TO ANY CONSTRUCTION.
2. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. INSTALL CABINET BASE 6" ABOVE ROADWAY ELEVATION.
4. THE CONTRACTOR SHALL HAVE THE PULLBOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING THE SIGNAL CABLE INTO SYSTEM. CONTACT THE VILLAGE OF MENOMONEE FALLS TO MAKE ARRANGEMENTS. (262) 532-4400.
5. DETECTION ZONE LOCATIONS ARE APPROXIMATE. COORDINATE SETTING DETECTION ZONES WITH THE VILLAGE OF MENOMONEE FALLS. NOTIFY THE VILLAGE AT (262) 532-4400 A MINIMUM OF 5 DAYS PRIOR TO SETTING DETECTION ZONES.
6. INSTALL SIGN R1-1, 30"X30", ON SB1, SB5, SB7, AND SB11. SIGNS ARE INCIDENTAL TO SIGNAL STANDARDS.
7. INSTALL SIGN R10-3B, 9"X12", ON SB1, SB2, SB4, SB5, SB6, SB7, SB8, SB10, SB11 AND SB12. SIGNS ARE INCIDENTAL TO PEDESTRIAN PUSH BUTTONS.
8. INSTALL SIGN R10-50L, 30"X36", ON SB8 ABOVE HEAD 11 AND ON SB2 ABOVE HEAD 16. SIGNS ARE INCIDENTAL TO POLES.
9. HEAD 1, HEAD 2, HEAD 3, HEAD 12, HEAD 13, HEAD 14, HEAD 15, AND HEAD 16 SHALL HAVE RETROREFLECTIVE BACKPLATES.

WISCONSIN
JEFFREY G. FAIT
E-33536
FOX POINT, WI
PROFESSIONAL ENGINEER

OCTOBER 25, 2019

TRAFFIC CONTROL SIGNAL
APPLETON AVENUE & MENOMONEE AVENUE
VILLAGE OF MENOMONEE FALLS
WAUKESHA COUNTY

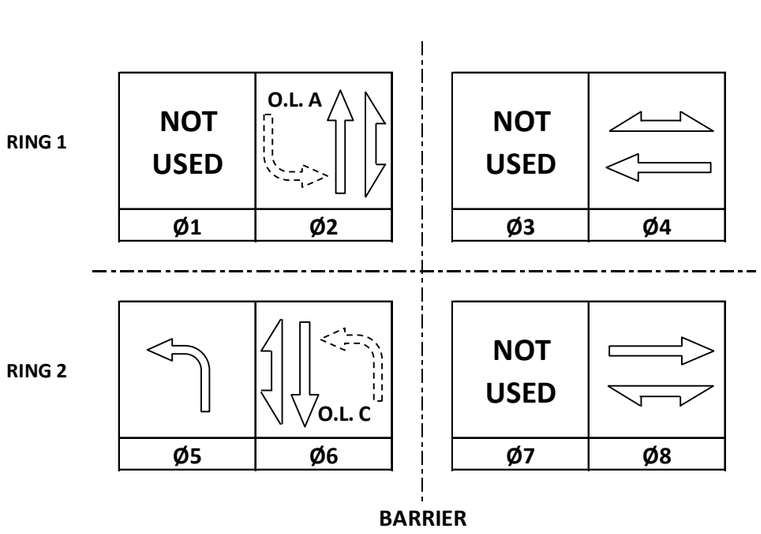
SIGNAL NO.

REGION CONTACT:
DESIGNED BY: TADI
REVISED BY:

PAGE 1 OF 2

PROJECT NO: 2782-13-00	HWY: STH 175	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 53	E

	HEAD NUMBERS	FLASH
Ø1		
Ø2	7,8,9	R
Ø3		
Ø4	4,5,6	R
Ø5	10,11	-
Ø6	12,13,14	R
Ø7		
Ø8	1,2,3	R
Ø2P	23,24	
Ø4P	19,20,21,22	
Ø6P	17,18	
Ø8P	25,26,27,28	
OLA	15,16	R ←
OLB		
OLC	10,11	R ←
OLD		



CONTROLLER LOGIC

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

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

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

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

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

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13	19	17	23	21	27	25	31	29	DETECTOR INPUT
PLAN LOOP DETECTOR*(S)	21	23	42	61	63	82											PLAN LOOP DETECTOR*(S)
ASSIGNED PHASE	2	2	4	6	6	8											ASSIGNED PHASE
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OPERATION MODE
SWITCH																	SWITCH
EXTEND																	EXTEND
DELAY	X																DELAY

DETECTOR INPUT	4	2	8	6	12	10	16	14	20	18	24	22	28	26	32	30	DETECTOR INPUT
PLAN LOOP DETECTOR*(S)	22	41	51	62	81												PLAN LOOP DETECTOR*(S)
ASSIGNED PHASE	2	4	5	6	8												ASSIGNED PHASE
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OPERATION MODE
SWITCH			6														SWITCH
EXTEND																	EXTEND
DELAY		X			X												DELAY

APPLETON AVENUE & MENOMONEE AVENUE
VILLAGE OF MENOMONEE FALLS
WAUKESHA COUNTY

SIGNAL NO:	CABINET TYPE: TS2
	CONTROLLER TYPE: EPAC
DATE: 11/19	PAGE NO. 2 OF 2

PROJECT ID:	2782-13-00
INTERSECTION:	APPLETON AVENUE & MENOMONEE AVENUE

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

CB1 TO	JUMPER	# OF COND. AWG 14	HEAD NO.	SIGNAL INDICATION WIRE COLOR									PED BUTTON	OTHER
				RED	YELLOW	GREEN	<RED	<YELLOW>	<FL YELLOW>	<GREEN>	D/WALK	WALK		
SB1		12	7	RED	ORG	GRN								
			15				RED/BLK	ORG/BLK	GRN/BLK					
			25								BLK	BLU		
			B										WHT/BLK	
SB2		12	16				RED	ORG	GRN					
			26								BLK	BLU		
			27								BLK	BLU		
			B										WHT/BLK	
SB3		7	13	RED	ORG	GRN								
			14	RED	ORG	GRN								
SB4		7	28								BLK	BLU		
			B										WHT/BLK	
SB5		12	1	RED	ORG	GRN								
			17								BLK	BLU		
			B										WHT/BLK	
SB6		12	5	RED	ORG	GRN								
			6	RED	ORG	GRN								
			19								BLK	BLU		
			B										WHT/BLK	
SB7		12	10				RED	ORG	BLK/WHT	GRN				
			12	RED/BLK	ORG/BLK	GRN/BLK								
			18								BLK	BLU		
			B										WHT/BLK	
SB8		12	11				RED	ORG	BLK/WHT	GRN				
			20								BLK	BLU		
			21								BLK	BLU		
			B										WHT/BLK	
SB9		7	8	RED	ORG	GRN								
			9	RED	ORG	GRN								
SB10		7	22								BLK	BLU		
			B										WHT/BLK	
SB11		12	4	RED	ORG	GRN								
			23								BLK	BLU		
			B										WHT/BLK	
SB12		12	2	RED	ORG	GRN								
			3	RED	ORG	GRN								
			24								BLK	BLU		
			B										WHT/BLK	

PROJECT NO: 2782-13-00	HWY: STH 175	COUNTY: WAUKESHA	CABLE ROUTING	SHEET:	E

CABLE ROUTING CONTINUED

2

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

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
CB1	PB1
SB2	PB2
SB4	PB3
SB5	PB4
SB6	PB5
SB8	PB6
SB10	PB7
SB11	PB8
SB12	PB9

VIDEO DETECTION CABLE	
FROM	TO
CB1	SB6 (V1)
CB1	SB12 (V2)
CB1	SB3 (V3)
CB1	SB9 (V4)

LIGHTING UF 10 AWG W/GROUND	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB4
SB4	SB5
SB5	SB6
CB1	SB12
SB12	SB11
SB11	SB10
SB10	SB8

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. "OTHER" COLUMN MAY INCLUDE SHADOW BOX (BLANK OUT) SIGN.

LEGEND

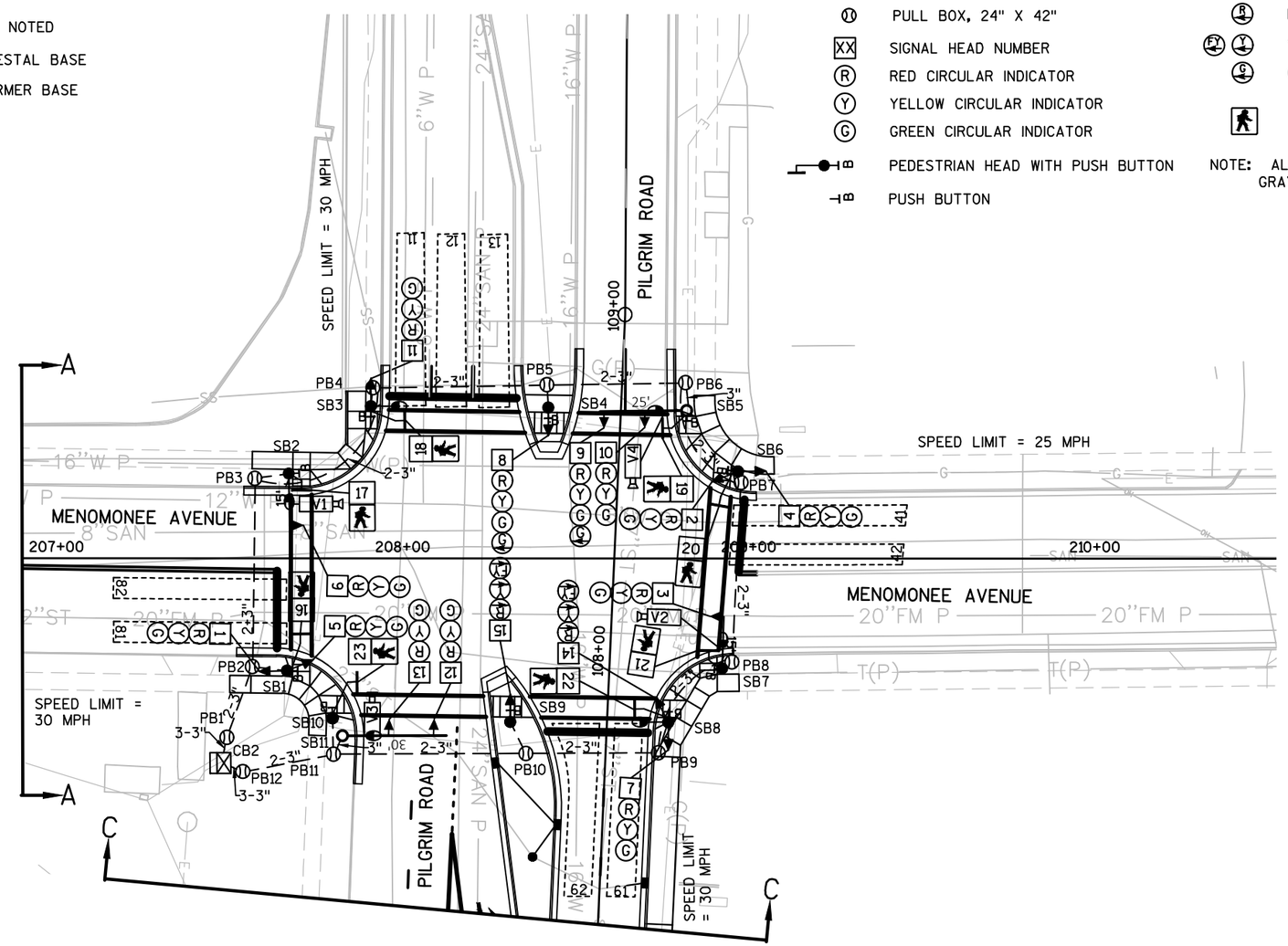
- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM
- VIDEO DETECTION AREA
- VX VIDEO DETECTION CAMERA
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE

LEGEND CONTINUED

- PULL BOX, 24" X 42"
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- R RED ARROW
- Y YELLOW ARROW
- G GREEN ARROW
- DON'T WALK INDICATOR 16" WALK INDICATOR 16"

NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING

N



WISCONSIN
JEFFREY G. FAIT
E-33536
FOX POINT, WI
PROFESSIONAL ENGINEER
OCTOBER 25, 2019

CONSTRUCTION NOTES:

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2. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. INSTALL CABINET BASE 6" ABOVE ROADWAY ELEVATION.
4. THE CONTRACTOR SHALL HAVE THE PULLBOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING THE SIGNAL CABLE INTO SYSTEM. CONTACT THE VILLAGE OF MENOMONEE FALLS TO MAKE ARRANGEMENTS. (262) 532-4400.
5. DETECTION ZONE LOCATIONS ARE APPROXIMATE. COORDINATE SETTING DETECTION ZONES WITH THE VILLAGE OF MENOMONEE FALLS. NOTIFY THE VILLAGE AT (262) 532-4400 A MINIMUM OF 5 DAYS PRIOR TO SETTING DETECTION ZONES.
6. INSTALL SIGN R1-1, 30"X30", ON SB1, SB3, SB6 AND SB8. SIGNS ARE INCIDENTAL TO SIGNAL STANDARDS.
7. INSTALL SIGN R10-3B, 9"X12", ON SB1, SB2, SB3, SB4, SB5, SB6, SB7, SB8, SB9 AND SB10. SIGNS ARE INCIDENTAL TO PEDESTRIAN PUSH BUTTONS.
8. INSTALL SIGN R10-50L, 30"X36", ON SB9 ABOVE HEAD 15. SIGNS ARE INCIDENTAL TO POLES.
9. HEAD 4, HEAD 5, HEAD 6, HEAD 11, HEAD 12, HEAD 13, HEAD 14, AND HEAD 15 SHALL HAVE RETROREFLECTIVE BACKPLATES.

TRAFFIC CONTROL SIGNAL
PILGRIM ROAD & MENOMONEE AVENUE
VILLAGE OF MENOMONEE FALLS
WAUKESHA COUNTY

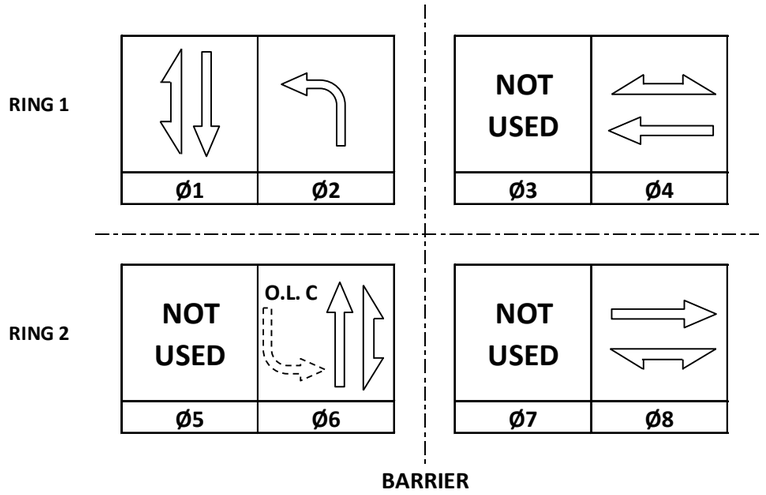
SIGNAL NO.

REGION CONTACT:
DESIGNED BY: TADI
REVISED BY:

PROJECT NO: 2782-13-00	HWY: STH 175	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 57	E

FILE NAME : F:\USERS\JFAIT\TADI JOBS\SHARED\WI\1942 MENOMONEE FALLS TRIANGLE SIGNALS\CAD\27821300_TRAFFIC SIGNAL PLAN.DWG
LAYOUT NAME - 024201_sp
PLOT DATE : 10/25/2019 2:56 PM PLOT BY : JEFF FAIT PLOT NAME : PLOT SCALE : 1:40

	HEAD NUMBERS	FLASH
Ø1	11,12,13	R
Ø2	8,9	-
Ø3		
Ø4	4,5,6	R
Ø5		
Ø6	7,8,9,10	R
Ø7		
Ø8	1,2,3	R
Ø1P	16,17	
Ø4P	18,19	
Ø6P	20,21	
Ø8P	22,23	
OLA		
OLB		
OLC	14,15	R ←
OLD		



N

CONTROLLER LOGIC

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

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

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

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

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

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13	19	17	23	21	27	25	31	29	DETECTOR INPUT
PLAN LOOP DETECTOR*(S)	11	13	42	62	82												PLAN LOOP DETECTOR*(S)
ASSIGNED PHASE	1	1	4	6	8												ASSIGNED PHASE
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OPERATION MODE
SWITCH		6															SWITCH
EXTEND																	EXTEND
DELAY																	DELAY

DETECTOR INPUT	4	2	8	6	12	10	16	14	20	18	24	22	28	26	32	30	DETECTOR INPUT
PLAN LOOP DETECTOR*(S)	12	41	61	81													PLAN LOOP DETECTOR*(S)
ASSIGNED PHASE	1	4	6	8													ASSIGNED PHASE
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OPERATION MODE
SWITCH																	SWITCH
EXTEND																	EXTEND
DELAY		X		X													DELAY

PILGRIM ROAD & MENOMONEE AVENUE
VILLAGE OF MENOMONEE FALLS
WAUKESHA COUNTY

SIGNAL NO: CABINET TYPE: TS2
CONTROLLER TYPE: EPAC
DATE: 11/19 PAGE NO. 2 OF 2

PROJECT ID:	2782-13-00
INTERSECTION:	PILGRIM ROAD & MENOMONEE AVENUE

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

CB2 TO	JUMPER	# OF COND. AWG 14	HEAD NO.	SIGNAL INDICATION WIRE COLOR									PED BUTTON	OTHER
				RED	YELLOW	GREEN	<RED	<YELLOW>	<FL YELLOW>	<GREEN>	D/WALK	WALK		
SB1		12	1	RED	ORG	GRN								
			5	RED/BLK	ORG/BLK	GRN/BLK								
			16								BLK	BLU		
			B										WHT/BLK	
SB2		12	6	RED	ORG	GRN								
			17								BLK	BLU		
			B										WHT/BLK	
SB3		12	11	RED	ORG	GRN								
			18								BLK	BLU		
			B										WHT/BLK	
SB4		7	8	RED	ORG	GRN				BLU				
			B										WHT/BLK	
SB5		12	9	RED	ORG	GRN				GRN/BLK				
			10	RED	ORG	GRN								
			19								BLK	BLU		
			B										WHT/BLK	
SB6		12	2	RED	ORG	GRN								
			4	RED/BLK	ORG/BLK	GRN/BLK								
			20								BLK	BLU		
			B										WHT/BLK	
SB7		12	3	RED	ORG	GRN								
			21								BLK	BLU		
			B										WHT/BLK	
SB8		12	7	RED	ORG	GRN								
			14				RED/BLK	ORG/BLK	BLK/WHT					
			22								BLK	BLU		
			B										WHT/BLK	
SB9		7	15				RED	ORG	GRN					
			B										WHT/BLK	
SB10		7	23								BLK	BLU		
			B										WHT/BLK	
SB11		7	12	RED	ORG	GRN								
			13	RED	ORG	GRN								

PROJECT NO: 2782-13-00	HWY: STH 175	COUNTY: WAUKESHA	CABLE ROUTING	SHEET: E

CABLE ROUTING CONTINUED

2

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
CB2	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	SB9
SB9	SB10
SB10	SB11
SB11	CB2

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
CB2	PB1
SB1	PB2
SB2	PB3
SB3	PB4
SB4	PB5
SB5	PB6
SB6	PB7
SB7	PB8
SB8	PB9
SB9	PB10
SB11	PB11
CB2	PB12

VIDEO DETECTION CABLE	
FROM	TO
CB2	SB2 (V1)
CB2	SB7 (V2)
CB2	SB11 (V3)
CB2	SB5 (V4)

LIGHTING UF 10 AWG W/GROUND	
FROM	TO
CB2	SB2
SB2	SB3
SB3	SB5
CB2	SB11
SB11	SB8
SB8	SB7

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. "OTHER" COLUMN MAY INCLUDE SHADOW BOX (BLANK OUT) SIGN.

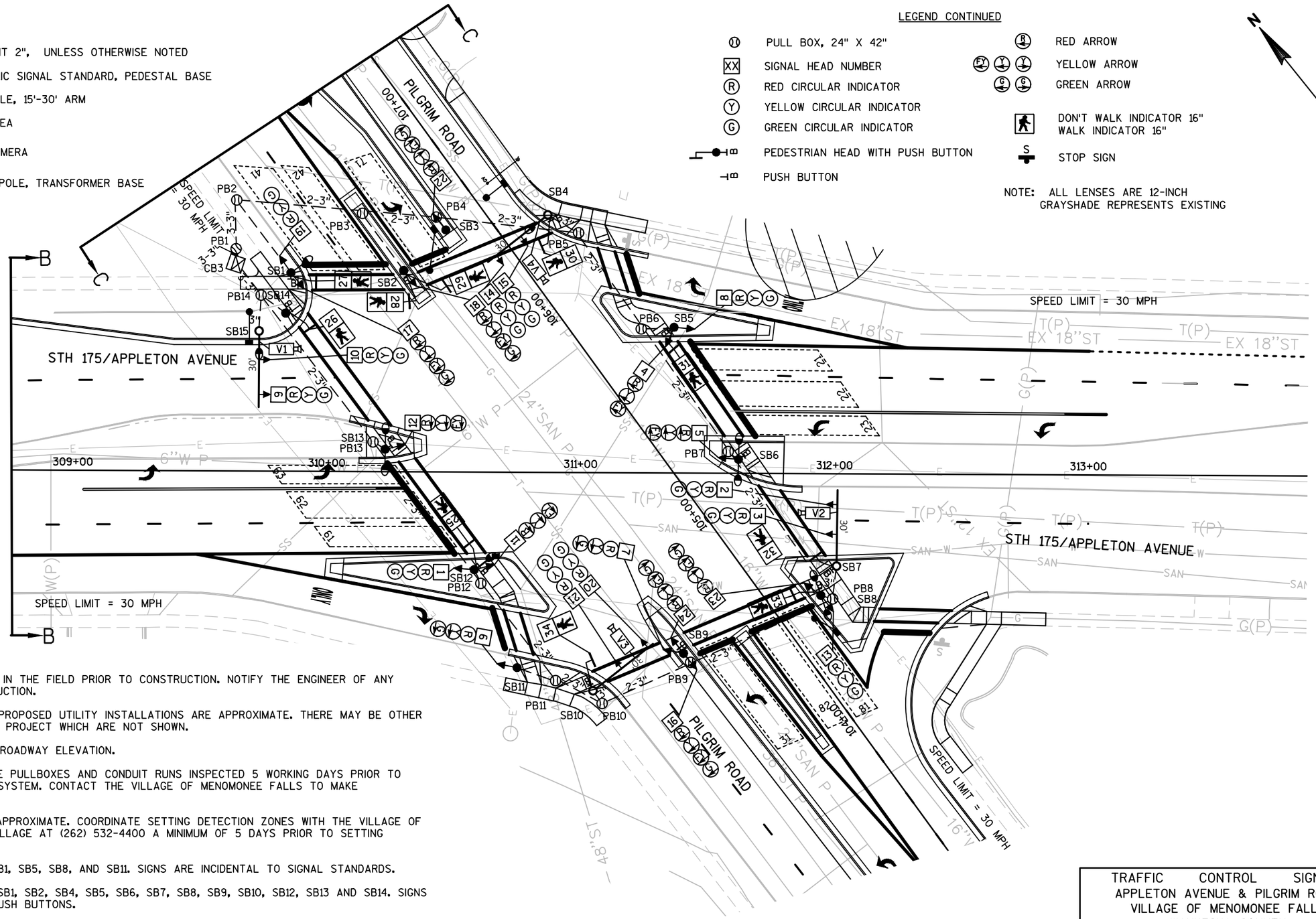
LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM
- VIDEO DETECTION AREA
- VX VIDEO DETECTION CAMERA
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE

LEGEND CONTINUED

- PULL BOX, 24" X 42"
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- PB PEDESTRIAN HEAD WITH PUSH BUTTON
- PB PUSH BUTTON
- R RED ARROW
- Y YELLOW ARROW
- G GREEN ARROW
- DON'T WALK INDICATOR 16"
  WALK INDICATOR 16"
- S STOP SIGN

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



CONSTRUCTION NOTES:

1. ALL UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY CONFLICTS PRIOR TO ANY CONSTRUCTION.
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7. INSTALL SIGN R10-3B, 9"X12", ON SB1, SB2, SB4, SB5, SB6, SB7, SB8, SB9, SB10, SB12, SB13 AND SB14. SIGNS ARE INCIDENTAL TO PEDESTRIAN PUSH BUTTONS.
8. INSTALL SIGN R10-5OL, 30"X36", ON SB2 ABOVE HEAD 18, ON SB6 ABOVE HEAD 5, ON SB9 ABOVE HEAD 24 AND ON SB13 ABOVE HEAD 12. SIGNS ARE INCIDENTAL TO POLES.
9. HEAD 8, HEAD 9, HEAD 10, HEAD 11, HEAD 12, HEAD 13, HEAD 14, HEAD 15, HEAD 17, AND HEAD 18 SHALL HAVE RETROREFLECTIVE BACKPLATES.

WISCONSIN
JEFFREY G. FAIT
E-33536
FOX POINT, WI
PROFESSIONAL ENGINEER
OCTOBER 25, 2019

TRAFFIC CONTROL SIGNAL
APPLETON AVENUE & PILGRIM ROAD
VILLAGE OF MENOMONEE FALLS
WAUKESHA COUNTY

SIGNAL NO.

REGION CONTACT:
DESIGNED BY: TADI
REVISED BY:

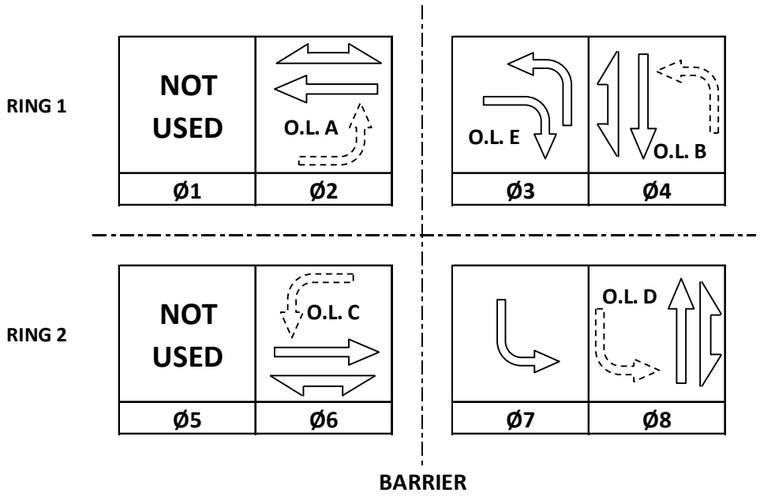
PAGE 1 OF 2

PROJECT NO: 2782-13-00	HWY: STH 175	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 61 E

FILE NAME : F:\USERS\JFAIT\TADI JOBS\SHARED\WI\1942 MENOMONEE FALLS TRIANGLE SIGNALS\CAD\27821300_TRAFFIC SIGNAL PLAN.DWG
LAYOUT NAME - 024201_sp
PLOT DATE : 10/25/2019 3:40 PM PLOT BY : JEFF FAIT PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

	HEAD NUMBERS	FLASH
Ø1		
Ø2	8,9,10	R
Ø3	16,17,18	-
Ø4	19,20,21	R
Ø5		
Ø6	1,2,3	R
Ø7	22,23,24	-
Ø8	13,14,15	R
Ø2P	27,28,29,30	
Ø4P	25,26	
Ø6P	33,34	
Ø8P	31,32	
OLA	4,5	R ←
OLB	16,17,18	R ←
OLC	11,12	R ←
OLD	22,23,24	R ←
OLE	6,7	R



CONTROLLER LOGIC

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

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

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

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

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

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13	19	17	23	21	27	25	31	29	DETECTOR INPUT
PLAN LOOP DETECTOR*(S)	21	23	41	61	63	81											PLAN LOOP DETECTOR*(S)
ASSIGNED PHASE	2	2	4	6	6	8											ASSIGNED PHASE
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OPERATION MODE
SWITCH																	SWITCH
EXTEND																	EXTEND
DELAY																	DELAY

DETECTOR INPUT	4	2	8	6	12	10	16	14	20	18	24	22	28	26	32	30	DETECTOR INPUT
PLAN LOOP DETECTOR*(S)	22	31	42	62	71	82											PLAN LOOP DETECTOR*(S)
ASSIGNED PHASE	2	3	4	6	7	8											ASSIGNED PHASE
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OPERATION MODE
SWITCH		4			8												SWITCH
EXTEND																	EXTEND
DELAY																	DELAY

APPLETON AVENUE & PILGRIM ROAD
VILLAGE OF MENOMONEE FALLS
WAUKESHA COUNTY

SIGNAL NO: CABINET TYPE: TS2
CONTROLLER TYPE: EPAC
DATE: 11/19 PAGE NO. 2 OF 2

PROJECT ID:	2782-13-00
INTERSECTION:	APPLETON AVENUE & PILGRIM ROAD

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

CB3 TO	JUMPER	# OF COND. AWG 14	HEAD NO.	SIGNAL INDICATION WIRE COLOR									PED BUTTON	OTHER
				RED	YELLOW	GREEN	<RED	<YELLOW>	<FL YELLOW>	<GREEN>	D/WALK	WALK		
SB1		12	17				RED	ORG	BLK/WHT	GRN				
			19	RED/BLK	ORG/BLK	GRN/BLK								
			27								BLK	BLU		
			B										WHT/BLK	
SB2		12	18				RED	ORG	BLK/WHT	GRN				
			28								BLK	BLU		
			29								BLK	BLU		
			B										WHT/BLK	
SB3		7	22				RED	ORG	BLU	GRN				
SB4		12	14	RED	ORG	GRN								
			15	RED	ORG	GRN								
			30								BLK	BLU		
			B										WHT/BLK	
SB5		12	4				RED	ORG	BLK/WHT					
			8	RED/BLK	ORG/BLK	GRN/BLK								
			31								BLK	BLU		
			B										WHT/BLK	
SB6		7	5				RED	ORG	BLK/WHT					
			B										WHT/BLK	
SB7		12	2	RED	ORG	GRN								
			3	RED	ORG	GRN								
			32								BLK	BLU		
			B										WHT/BLK	
SB8		12	13	RED	ORG	GRN								
			23				RED/BLK	ORG/BLK	BLK/WHT	GRN/BLK				
			33								BLK	BLU		
			B										WHT/BLK	
SB9		15	7	RED/WHT				BLU/WHT		GRN/WHT				
			16				RED	ORG	BLK/WHT	GRN				
			24				RED/BLK	ORG/BLK	BLK	GRN/BLK				
			B										WHT/BLK	
SB10		12	20	RED	ORG	GRN								
			21	RED	ORG	GRN								
			34								BLK	BLU		
			B										WHT/BLK	
SB11		7	6	RED				ORG		GRN				
SB12		12	1	RED	ORG	GRN								
			11				RED/BLK	ORG/BLK	BLK/WHT					
			25								BLK	BLU		
			B										WHT/BLK	
SB13		7	12				RED	ORG	GRN					
			B										WHT/BLK	
SB14		7	26								BLK	BLU		
			B										WHT/BLK	
SB15		7	9	RED	ORG	GRN								
			10	RED	ORG	GRN								

PROJECT NO: 2782-13-00	HWY: STH 175	COUNTY: WAUKESHA	CABLE ROUTING	SHEET: E

CABLE ROUTING CONTINUED

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
CB3	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	SB9
SB9	SB10
SB10	SB11
SB11	SB12
SB12	SB13
SB13	SB14
SB14	SB15
SB15	CB3

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
CB3	PB1
CB3	PB2
SB2	PB3
SB3	PB4
SB4	PB5
SB5	PB6
SB6	PB7
SB8	PB8
SB9	PB9
SB10	PB10
SB11	PB11
SB12	PB12
SB13	PB13
CB3	PB14

VIDEO DETECTION CABLE	
FROM	TO
CB3	SB15 (V1)
CB3	SB7 (V2)
CB3	SB10 (V3)
CB3	SB4 (V4)

LIGHTING UF 10 AWG W/GROUND	
FROM	TO
CB3	SB1
SB1	SB4
SB4	SB6
SB6	SB8
CB3	SB15
SB15	SB13
SB13	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. "OTHER" COLUMN MAY INCLUDE SHADOW BOX (BLANK OUT) SIGN.

2

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 THIER 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) 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).

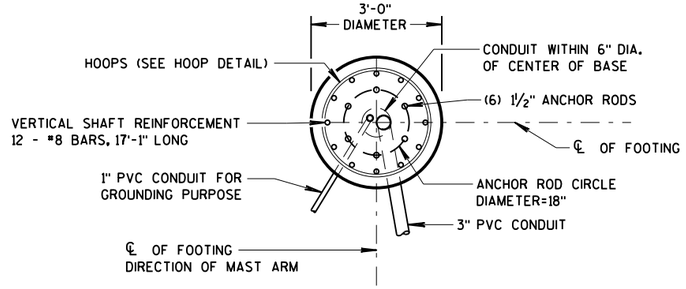
THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE THROUGH A 1-INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4-FOOT COIL OF WIRE ABOVE THE CONCRETE BASE, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

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

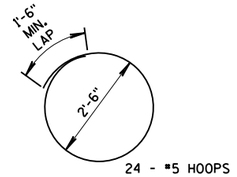
THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVEL WAY SHALL BE 24-INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18-INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36-INCHES, (GREATER THAN 36-INCHES 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.

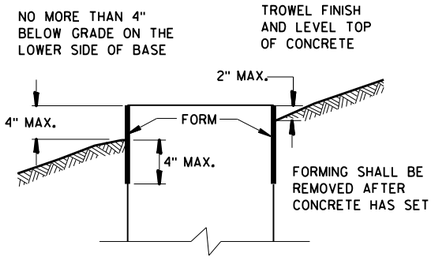
CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, ASTM F1554 GRADE 55 (IN ACCORDANCE WITH SECTION 641.2.2.3 OF THE STANDARD SPECIFICATIONS	fy=55,000 p.s.i.
TEMPLATES, ASTM A709 GRADE 36	fy=36,000 p.s.i.



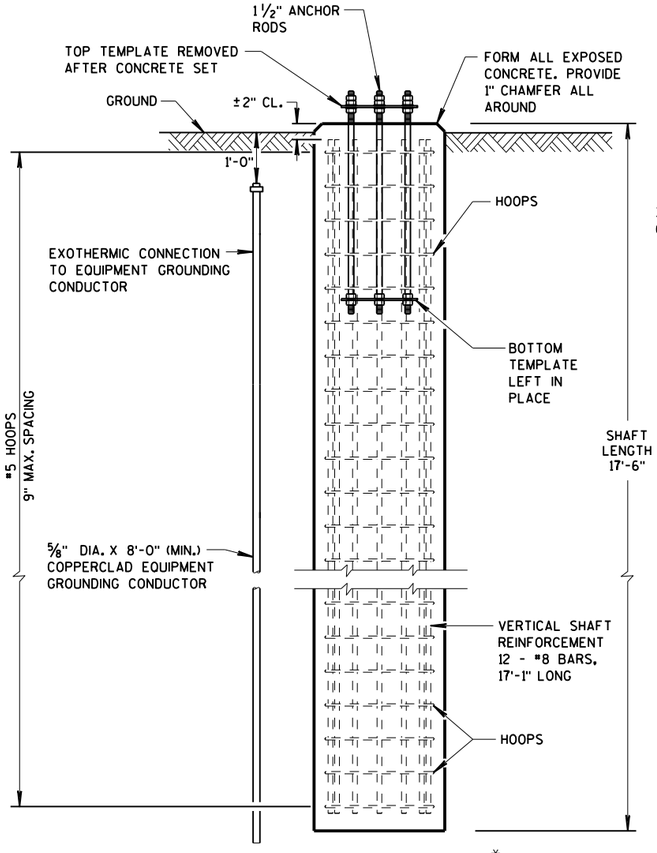
PLAN VIEW



HOOP DETAIL

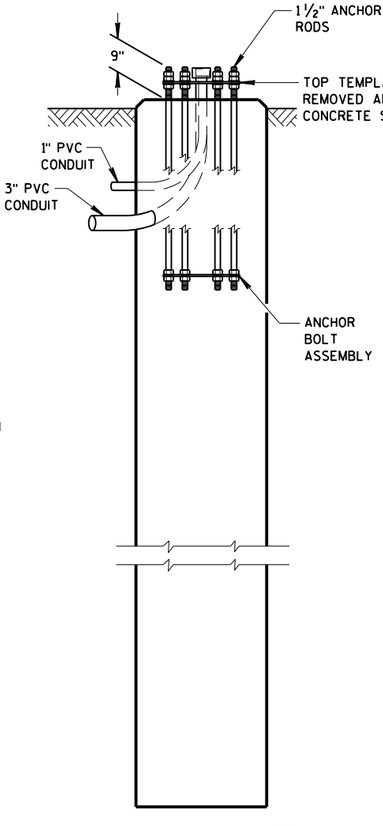


FORMING DETAIL



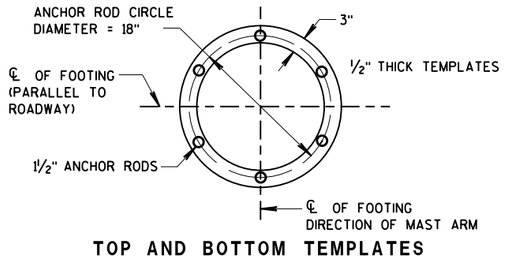
ELEVATION VIEW*

* CONDUITS ARE NOT SHOWN ON THIS VIEW FOR CLARITY

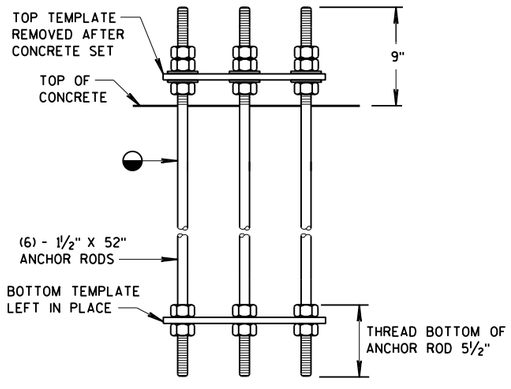


SIDE VIEW**

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



TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE ANCHOR ASSEMBLY

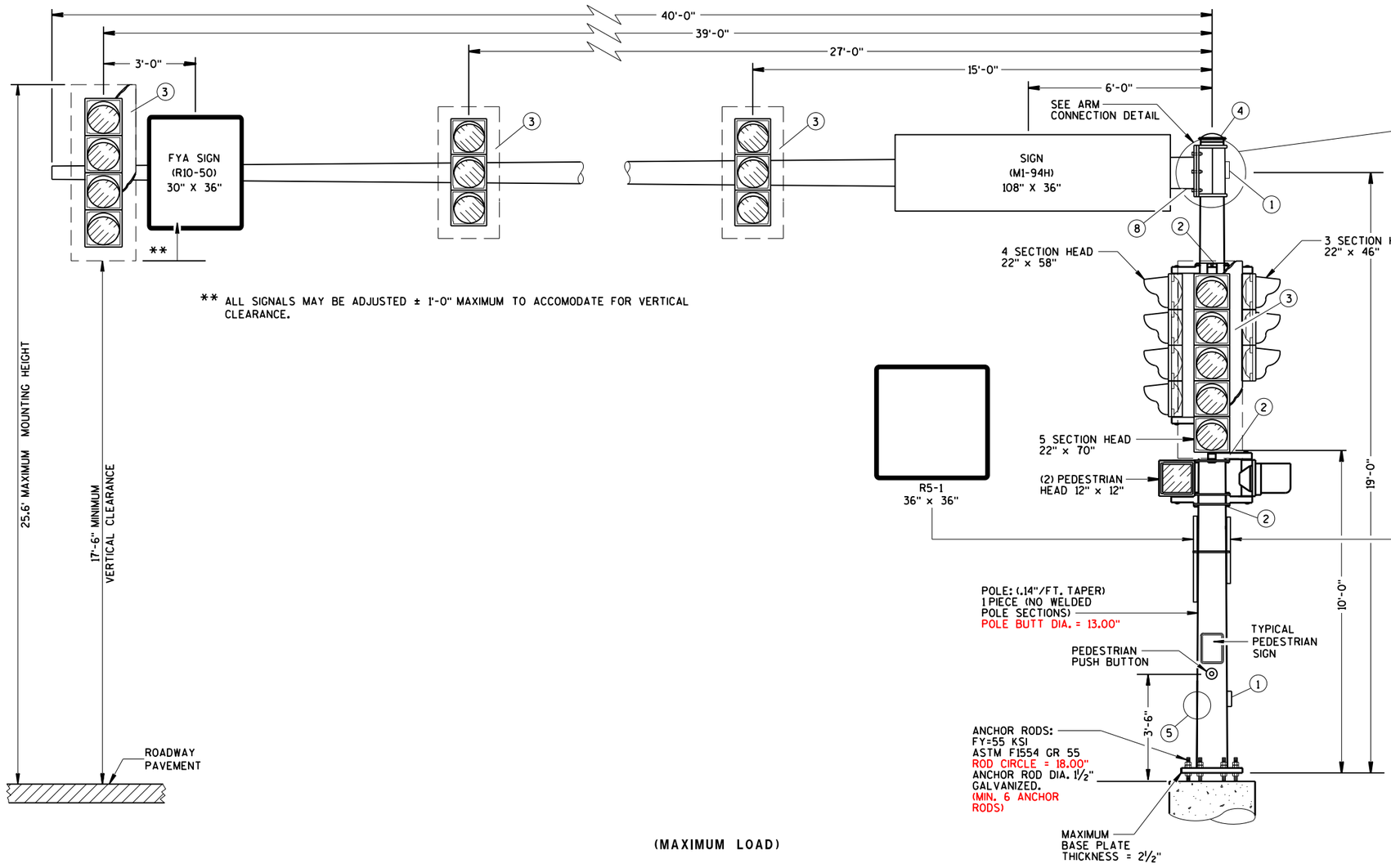
◒ THREAD TOP 9" OF ANCHOR ROD FOR 3 NUTS AND 2 WASHERS AND BOTTOM 5½" FOR 2 NUTS PER ANCHOR ROD. HOT-DIP GALVANIZE THE ENTIRE LENGTH OF THE ANCHOR RODS (ASTM A123) AND HOT-DIP NUTS AND WASHERS (ASTM A153). USE ZINC COATED NUTS MANUFACTURED WITH SUFFICIENT ALLOWANCE TO ALLOW NUTS TO RUN FREELY ON THE THREADS.

(FOR TYPE 9 & 10 SPECIAL POLES)

CONCRETE = 4.6 C.Y.
H.S. REINFORCEMENT = 779 LBS.

TO BE USED WHEN GROUND ELEVATION, AT BASE, EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION.

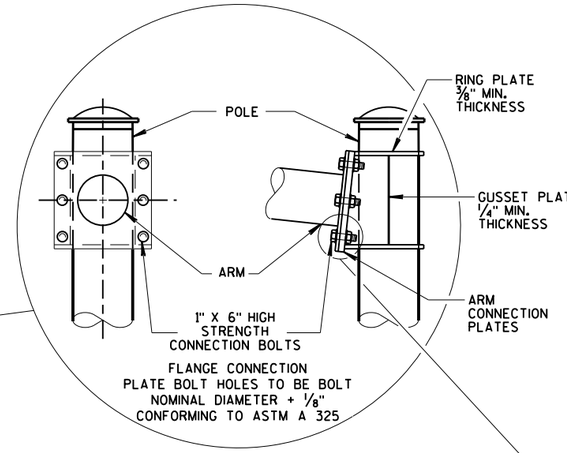
2



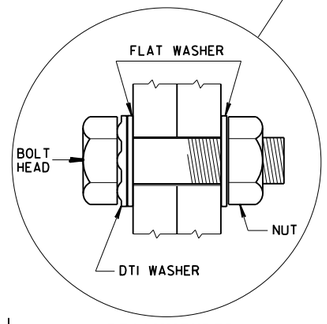
** ALL SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.

(MAXIMUM LOAD)

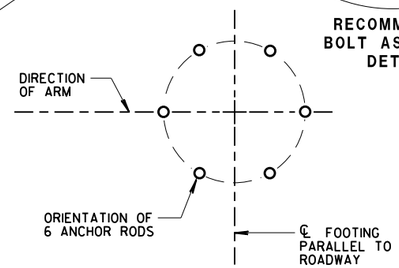
TYPE 9 SPECIAL POLE 40' MONOTUBE ARM



6 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL



ANCHOR ROD LOCATION

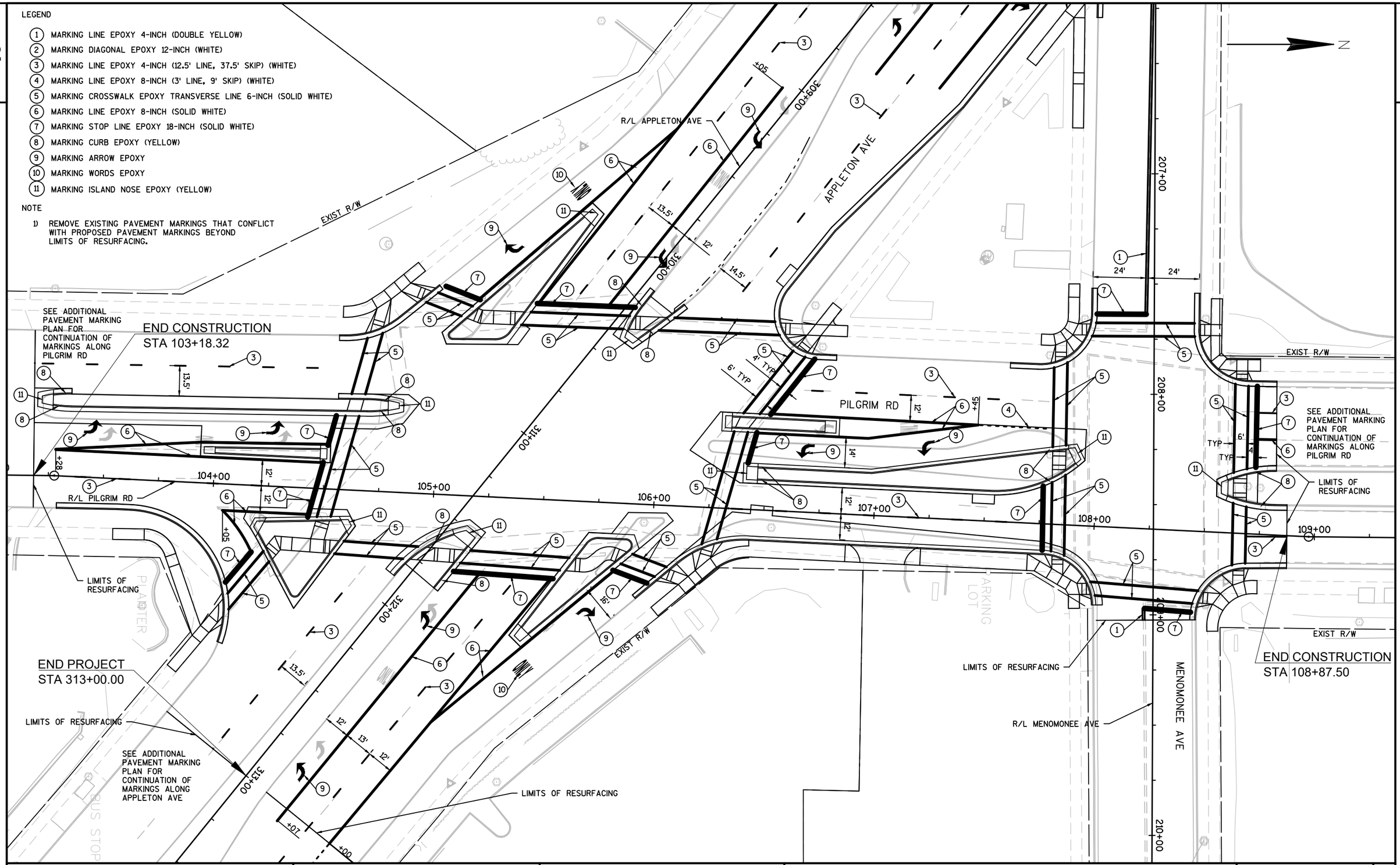
PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	TYPE 9 & 10 SPECIAL TRAFFIC SIGNAL BASE CONSTRUCTION DETAILS	SHEET 66	E

LEGEND

1. MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)
2. MARKING DIAGONAL EPOXY 12-INCH (WHITE)
3. MARKING LINE EPOXY 4-INCH (12.5' LINE, 37.5' SKIP) (WHITE)
4. MARKING LINE EPOXY 8-INCH (3' LINE, 9' SKIP) (WHITE)
5. MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (SOLID WHITE)
6. MARKING LINE EPOXY 8-INCH (SOLID WHITE)
7. MARKING STOP LINE EPOXY 18-INCH (SOLID WHITE)
8. MARKING CURB EPOXY (YELLOW)
9. MARKING ARROW EPOXY
10. MARKING WORDS EPOXY
11. MARKING ISLAND NOSE EPOXY (YELLOW)

NOTE

1) REMOVE EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH PROPOSED PAVEMENT MARKINGS BEYOND LIMITS OF RESURFACING.



PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	PAVEMENT MARKING PLAN	SHEET 67	E

LEGEND

1. MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)
2. MARKING DIAGONAL EPOXY 12-INCH (WHITE)
3. MARKING LINE EPOXY 4-INCH (12.5' LINE, 37.5' SKIP) (WHITE)
4. MARKING LINE EPOXY 8-INCH (3' LINE, 9' SKIP) (WHITE)
5. MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (SOLID WHITE)
6. MARKING LINE EPOXY 8-INCH (SOLID WHITE)
7. MARKING STOP LINE EPOXY 18-INCH (SOLID WHITE)
8. MARKING CURB EPOXY (YELLOW)
9. MARKING ARROW EPOXY
10. MARKING WORDS EPOXY
11. MARKING ISLAND NOSE EPOXY (YELLOW)

NOTE

1) REMOVE EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH PROPOSED PAVEMENT MARKINGS BEYOND LIMITS OF RESURFACING.

N

BEGIN PROJECT
STA 304+17.65

R/L APPLETON AVE

LIMITS OF RESURFACING

APPLETON AVE

SEE ADDITIONAL PAVEMENT MARKING PLAN FOR CONTINUATION OF MARKINGS ALONG APPLETON AVE

EXIST R/W

304+00

305+00

306+00

307+00

308+00

309+00

+35

+18

13.5

12.5

14'

12'

13.5'

LIMITS OF RESURFACING

MENOMONEE AVE

R/L MENOMONEE AVE

202+00

203+00

204+00

205+00

206+00

207+00

22'

24'

15' TYP

4' TYP

6' TYP

+65

+20

+80

+60

+73

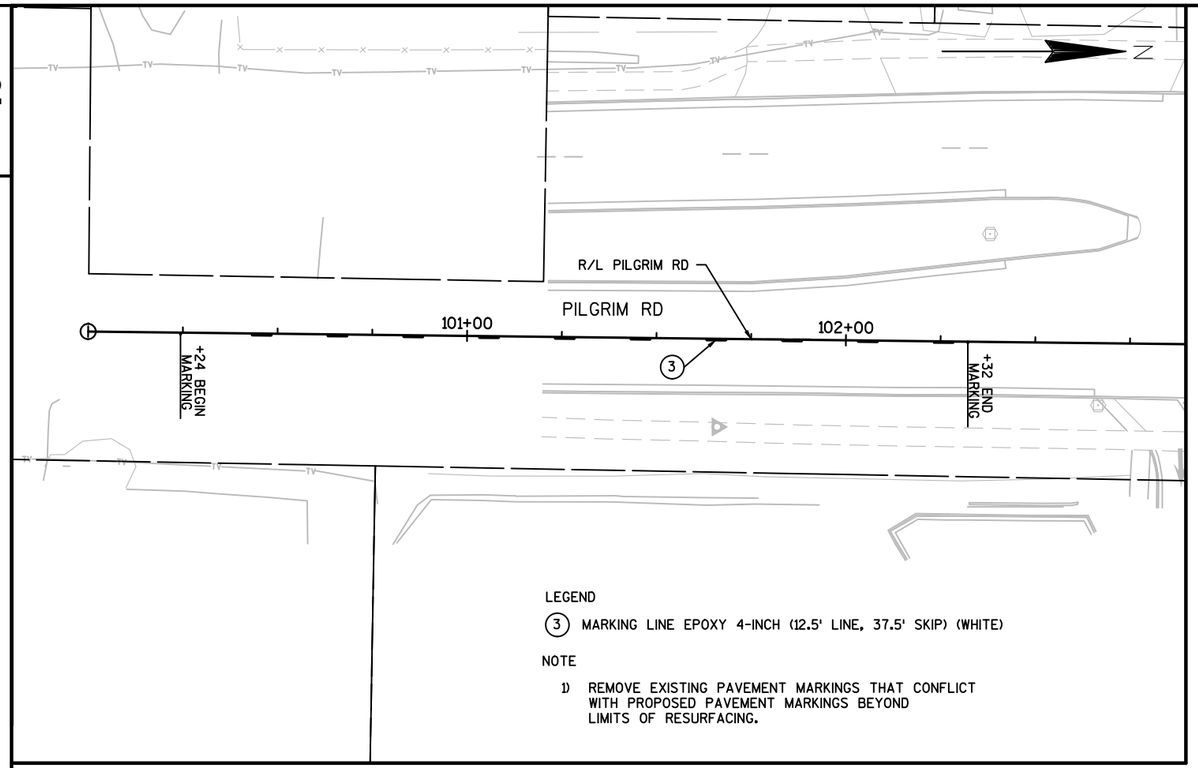
SEE ADDITIONAL PAVEMENT MARKING PLAN FOR CONTINUATION OF MARKINGS ALONG APPLETON AVE

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	PAVEMENT MARKING PLAN	SHEET 68	E

FILE NAME : S:\WAUK_CO\MEN_FALLS\GOV\160233 MENOMONEE AVENUE\SHEETS PLAN\024501_PM.DWG
LAYOUT NAME - 024501_PM - 024502_PM

PLOT DATE : 10/31/2019 2:48 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

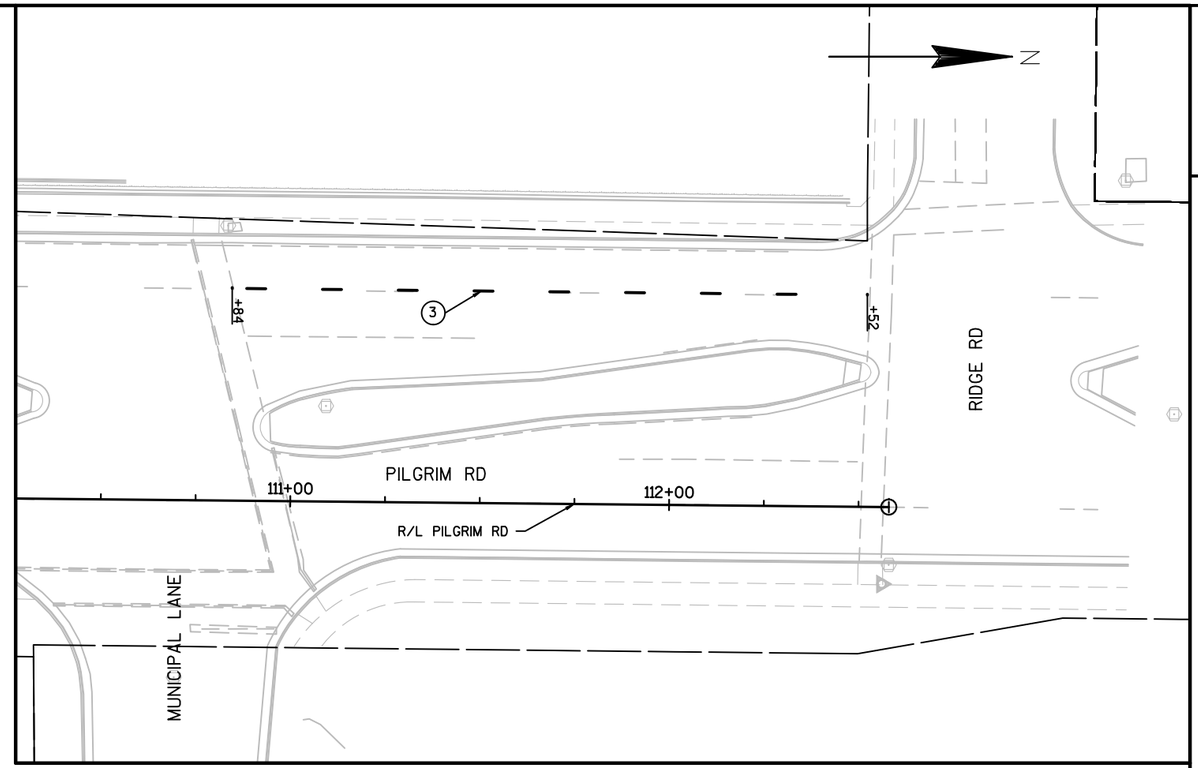


LEGEND

(3) MARKING LINE EPOXY 4-INCH (12.5' LINE, 37.5' SKIP) (WHITE)

NOTE

1) REMOVE EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH PROPOSED PAVEMENT MARKINGS BEYOND LIMITS OF RESURFACING.



2

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	ADDITIONAL PAVEMENT MARKING PLAN	SHEET 69	E

FILE NAME : S:\WAUK_CO\MEN_FALLS\GOV\160233 MENOMONEE AVENUE\SHEETS PLAN\024501_PM.DWG
LAYOUT NAME - 024501_PM - 024503_PM
PLOT DATE : 10/28/2019 8:18 AM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : *********
WISDOT/CADDS SHEET 42

2

GENERAL NOTES FOR TRAFFIC CONTROL

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

2) CONFLICTING TRAFFIC SIGNS SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER. CONFLICTING SIGNS WILL BE COVERED USING THE STANDARD BID ITEM, TRAFFIC CONTROL COVERING SIGNS, TYPE II.

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

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

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

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

7) BARRICADE STRIPES ARE TO BE SLOPED DOWNWARD IN THE DIRECTION OF TRAFFIC FLOW.

8) SEE STANDARD DETAIL DRAWINGS FOR ADDITIONAL INFORMATION.

9) PLACE PCMS SIGNS FOR 5 DAYS PRIOR TO TRAFFIC SHIFTS.

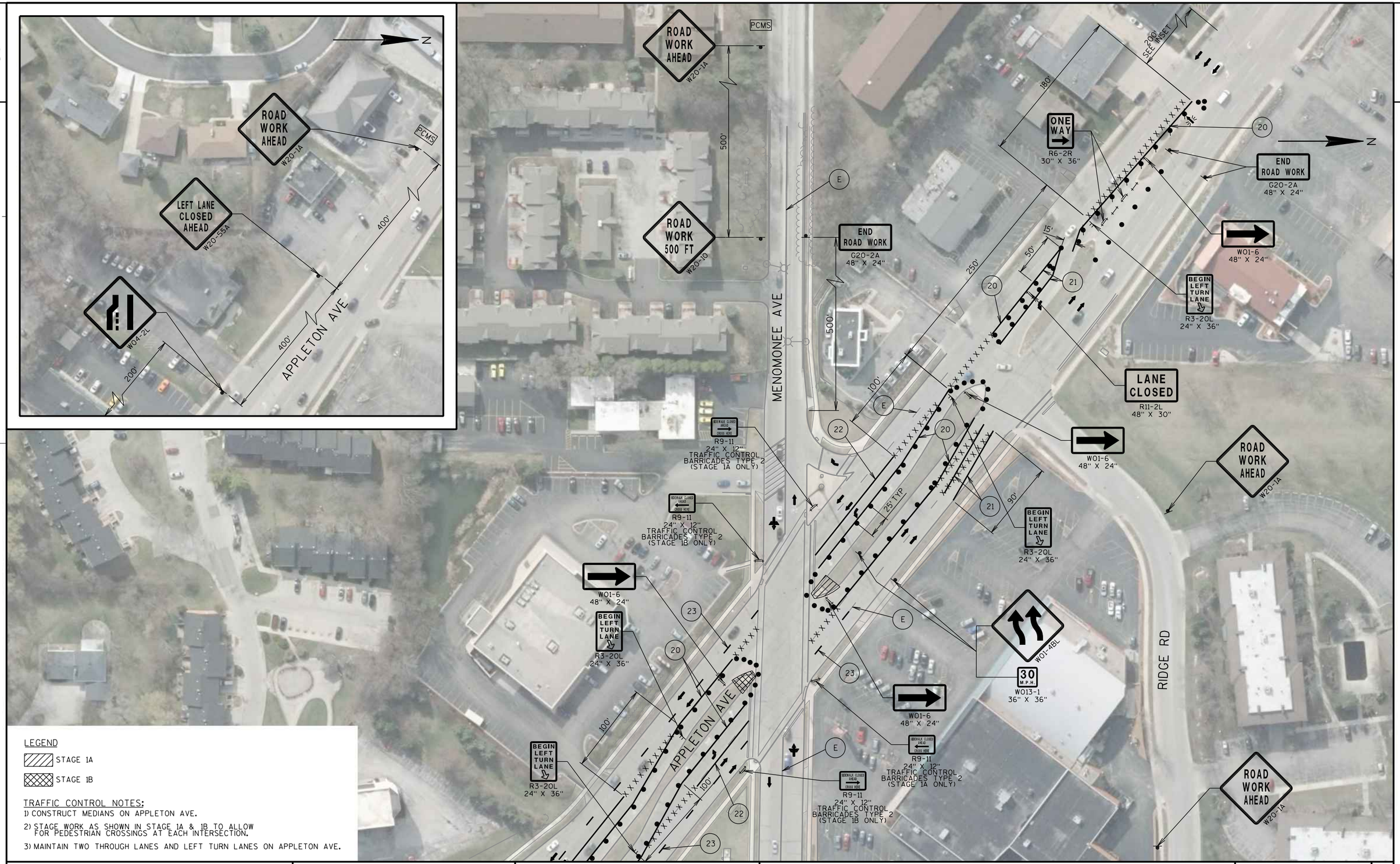
10) CONFLICTING PAVEMENT MARKING SHALL BE REMOVED USING THE MARKING REMOVAL LINE BID ITEM AND REPLACED USING THE TEMPORARY MARKING LINE ITEMS AS DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL LEGEND

- TRAFFIC CONTROL BARRICADES TYPE 2 WITH WARNING LIGHT TYPE A AND ATTACHED SIGN (AS NOTED ON TRAFFIC CONTROL PLANS)
- TRAFFIC CONTROL BARRICADES TYPE 3 WITH WARNING LIGHTS TYPE A
- TRAFFIC CONTROL BARRICADES TYPE 3 WITH WARNING LIGHTS TYPE A AND ATTACHED SIGN
- TRAFFIC CONTROL DRUMS
- TRAFFIC CONTROL DRUMS WITH WARNING LIGHTS TYPE C
- TRAFFIC CONTROL ARROW BOARDS
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC FLOW ARROW
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- MARKING REMOVAL LINE 4-INCH

TEMPORARY PAVEMENT MARKING LEGEND

- (10) TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW)
- (11) TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
- (12) TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
- (13) TEMPORARY MARKING LINE PAINT 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
- (14) TEMPORARY MARKING STOP LINE PAINT 18-INCH
- (20) TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
- (21) TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
- (22) TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE)
- (23) TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
- (E) EXISTING PAVEMENT MARKINGS
- ——— TEMPORARY PAVEMENT MARKING IN PLACE FROM PREVIOUS STAGE



LEGEND

STAGE 1A

STAGE 1B

TRAFFIC CONTROL NOTES:

1) CONSTRUCT MEDIANS ON APPLETON AVE.

2) STAGE WORK AS SHOWN IN STAGE 1A & 1B TO ALLOW FOR PEDESTRIAN CROSSINGS AT EACH INTERSECTION.

3) MAINTAIN TWO THROUGH LANES AND LEFT TURN LANES ON APPLETON AVE.

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	TRAFFIC CONTROL STAGE 1	SHEET 71	E

FILE NAME : S:\Wauk_Co\Men_Falls\Gov\160233 Menomonee Avenue\Sheets Plan\Traffic Control\025011_TC.dgn PLOT DATE : 11/8/2019 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:100

2

END ROAD WORK
G20-2A
48" X 24"

500'

R9-11
24" X 12"
TRAFFIC CONTROL
BARRICADES TYPE 2
(STAGE 1A ONLY)

SIDEWALK CLOSED AHEAD
CROSS HERE

R9-11
24" X 12"
TRAFFIC CONTROL
BARRICADES TYPE 2
(STAGE 1B ONLY)

W01-6
48" X 24"

ROAD WORK 500 FT
W20-1D

ROAD WORK AHEAD
W20-1A

PCMS

500'

500'

W01-4BL

30 M.P.H.
W013-1
36" X 36"

APPLETON AVE

25' TYP

100'

BEGIN LEFT TURN LANE
R3-20L
24" X 36"

90'

500'

21

20

50'

15'

50'

W01-6
48" X 24"

LANE CLOSED
R11-2L
48" X 30"

590'

BEGIN LEFT TURN LANE
R3-20L
24" X 36"

1000'
SEE INSET

90'

22

23

E

PILGRIM RD

500'

500'

500'

MENOMONEE AVE

500'

500'

END ROAD WORK
G20-2A
48" X 24"

ROAD WORK 500 FT
W20-1D

ROAD WORK AHEAD
W20-1A

PCMS

N

500'

END ROAD WORK
G20-2A
48" X 24"

1000'

APPLETON AVE

W01-4BR

30 M.P.H.
W013-1
36" X 36"

PCMS

ROAD WORK AHEAD
W20-1A

LEGEND

STAGE 1A

STAGE 1B

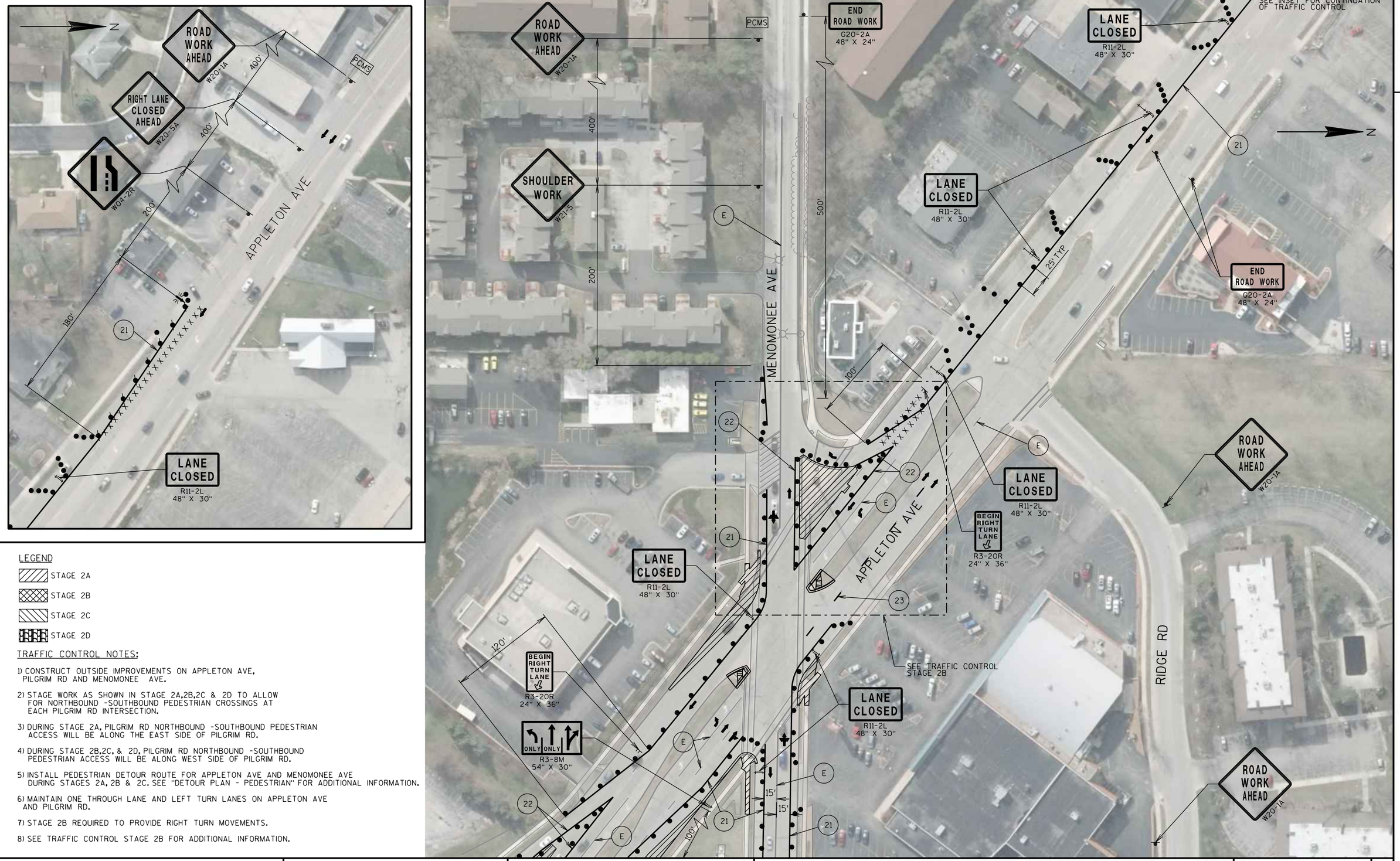
TRAFFIC CONTROL NOTES:

1) CONSTRUCT MEDIANS ON APPLETON AVE.

2) STAGE WORK AS SHOWN IN STAGE 1A & 1B TO ALLOW FOR PEDESTRIAN CROSSINGS AT EACH INTERSECTION.

3) MAINTAIN TWO THROUGH LANES AND LEFT TURN LANES ON APPLETON AVE.

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	TRAFFIC CONTROL STAGE 1	SHEET 72	E



LEGEND

- STAGE 2A
- STAGE 2B
- STAGE 2C
- STAGE 2D

TRAFFIC CONTROL NOTES:

1) CONSTRUCT OUTSIDE IMPROVEMENTS ON APPLETON AVE, PILGRIM RD AND MENOMONEE AVE.

2) STAGE WORK AS SHOWN IN STAGE 2A,2B,2C & 2D TO ALLOW FOR NORTHBOUND -SOUTHBOUND PEDESTRIAN CROSSINGS AT EACH PILGRIM RD INTERSECTION.

3) DURING STAGE 2A, PILGRIM RD NORTHBOUND -SOUTHBOUND PEDESTRIAN ACCESS WILL BE ALONG THE EAST SIDE OF PILGRIM RD.

4) DURING STAGE 2B,2C, & 2D, PILGRIM RD NORTHBOUND -SOUTHBOUND PEDESTRIAN ACCESS WILL BE ALONG WEST SIDE OF PILGRIM RD.

5) INSTALL PEDESTRIAN DETOUR ROUTE FOR APPLETON AVE AND MENOMONEE AVE DURING STAGES 2A, 2B & 2C. SEE "DETOUR PLAN - PEDESTRIAN" FOR ADDITIONAL INFORMATION.

6) MAINTAIN ONE THROUGH LANE AND LEFT TURN LANES ON APPLETON AVE AND PILGRIM RD.

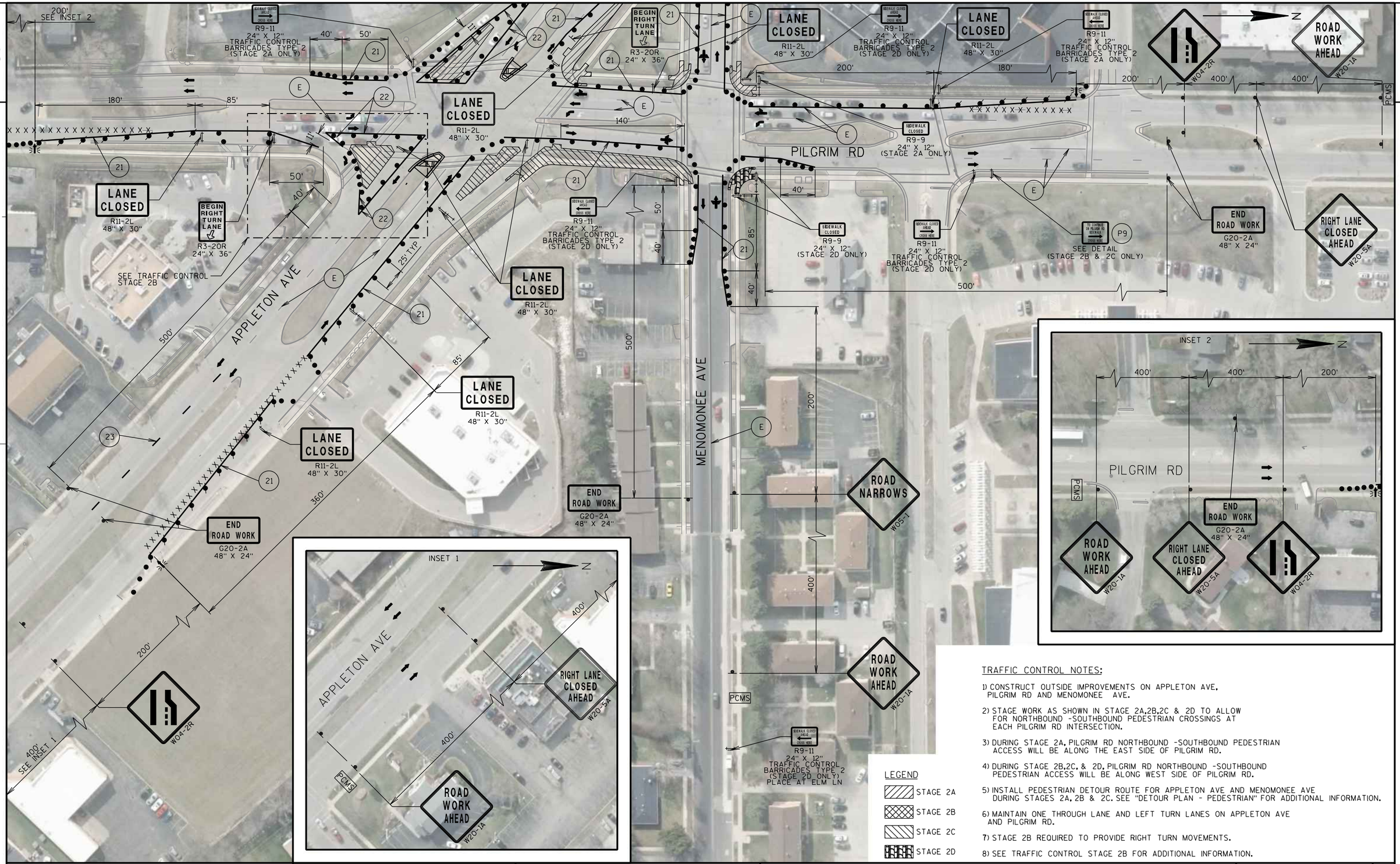
7) STAGE 2B REQUIRED TO PROVIDE RIGHT TURN MOVEMENTS.

8) SEE TRAFFIC CONTROL STAGE 2B FOR ADDITIONAL INFORMATION.

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	TRAFFIC CONTROL STAGE 2	SHEET 73	E

FILE NAME : S:\Wauk_Co\Men_Falls\Gov\160233 Menomonee Avenue\Sheets Plan\Traffic Control\025021_TC.dgn PLOT DATE : 11/8/2019 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42



LEGEND

- STAGE 2A
- STAGE 2B
- STAGE 2C
- STAGE 2D

TRAFFIC CONTROL NOTES:

1) CONSTRUCT OUTSIDE IMPROVEMENTS ON APPLETON AVE, PILGRIM RD AND MENOMONEE AVE.

2) STAGE WORK AS SHOWN IN STAGE 2A,2B,2C & 2D TO ALLOW FOR NORTHBOUND -SOUTHBOUND PEDESTRIAN CROSSINGS AT EACH PILGRIM RD INTERSECTION.

3) DURING STAGE 2A, PILGRIM RD NORTHBOUND -SOUTHBOUND PEDESTRIAN ACCESS WILL BE ALONG THE EAST SIDE OF PILGRIM RD.

4) DURING STAGE 2B,2C, & 2D, PILGRIM RD NORTHBOUND -SOUTHBOUND PEDESTRIAN ACCESS WILL BE ALONG WEST SIDE OF PILGRIM RD.

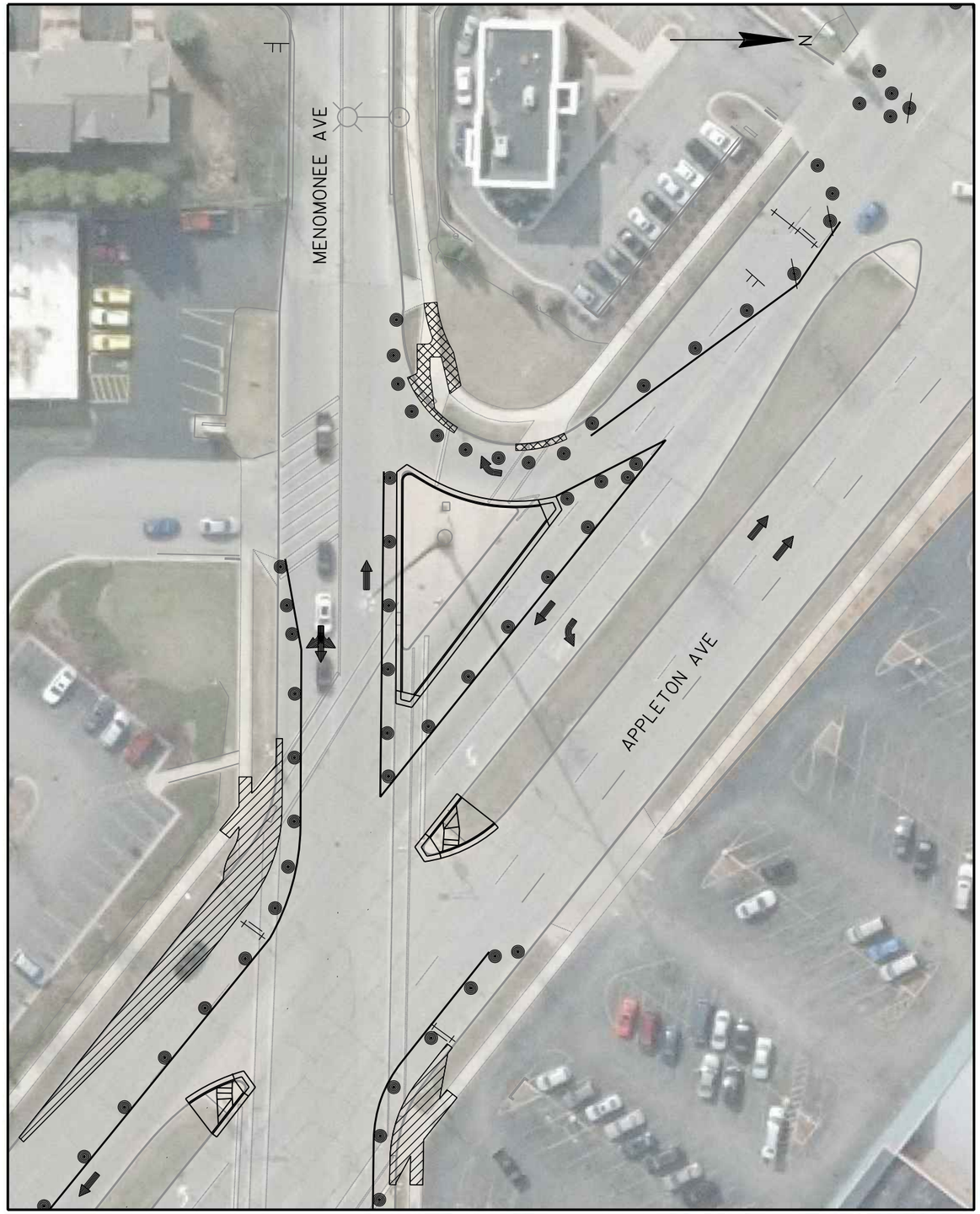
5) INSTALL PEDESTRIAN DETOUR ROUTE FOR APPLETON AVE AND MENOMONEE AVE DURING STAGES 2A, 2B & 2C. SEE "DETOUR PLAN - PEDESTRIAN" FOR ADDITIONAL INFORMATION.

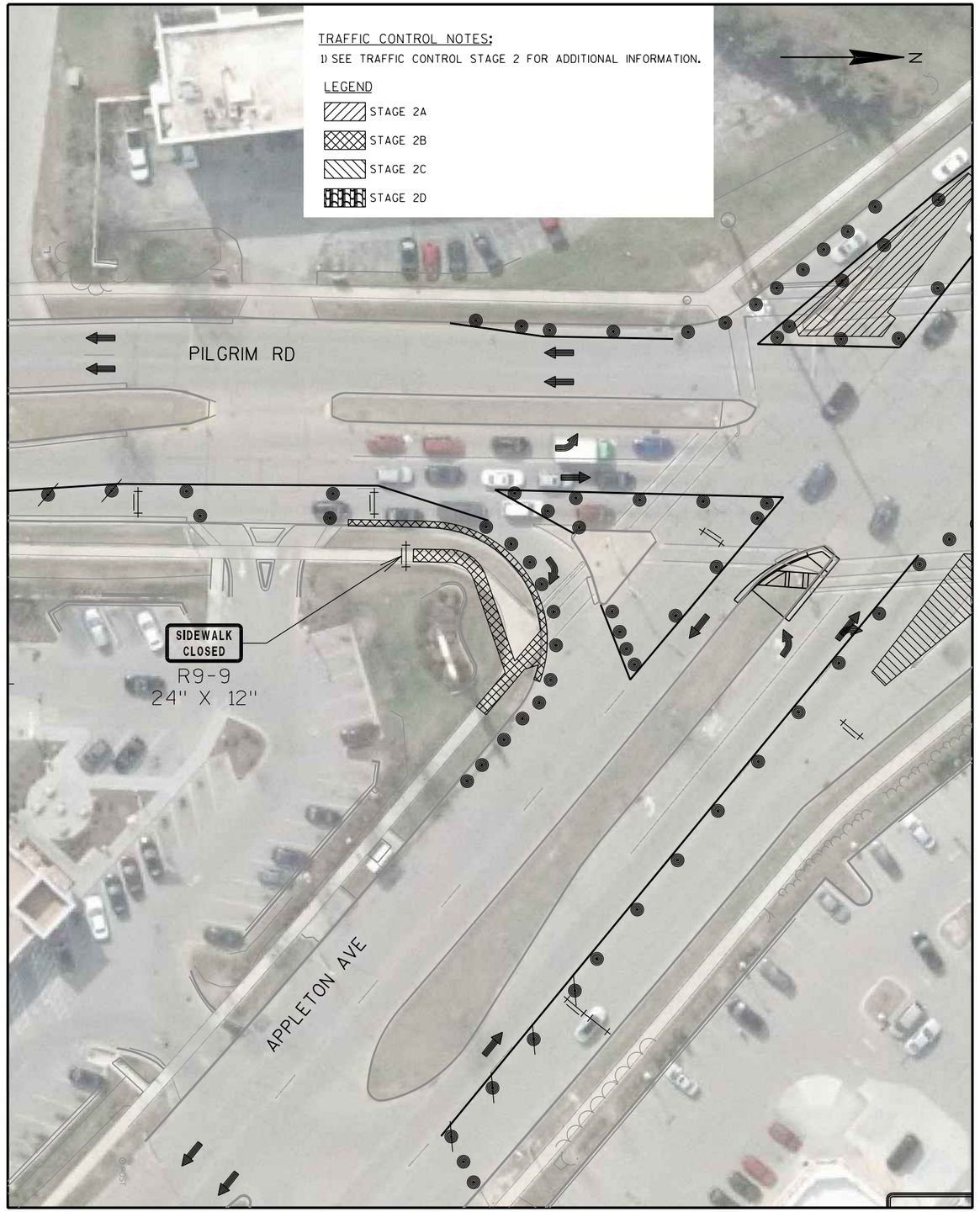
6) MAINTAIN ONE THROUGH LANE AND LEFT TURN LANES ON APPLETON AVE AND PILGRIM RD.

7) STAGE 2B REQUIRED TO PROVIDE RIGHT TURN MOVEMENTS.

8) SEE TRAFFIC CONTROL STAGE 2B FOR ADDITIONAL INFORMATION.

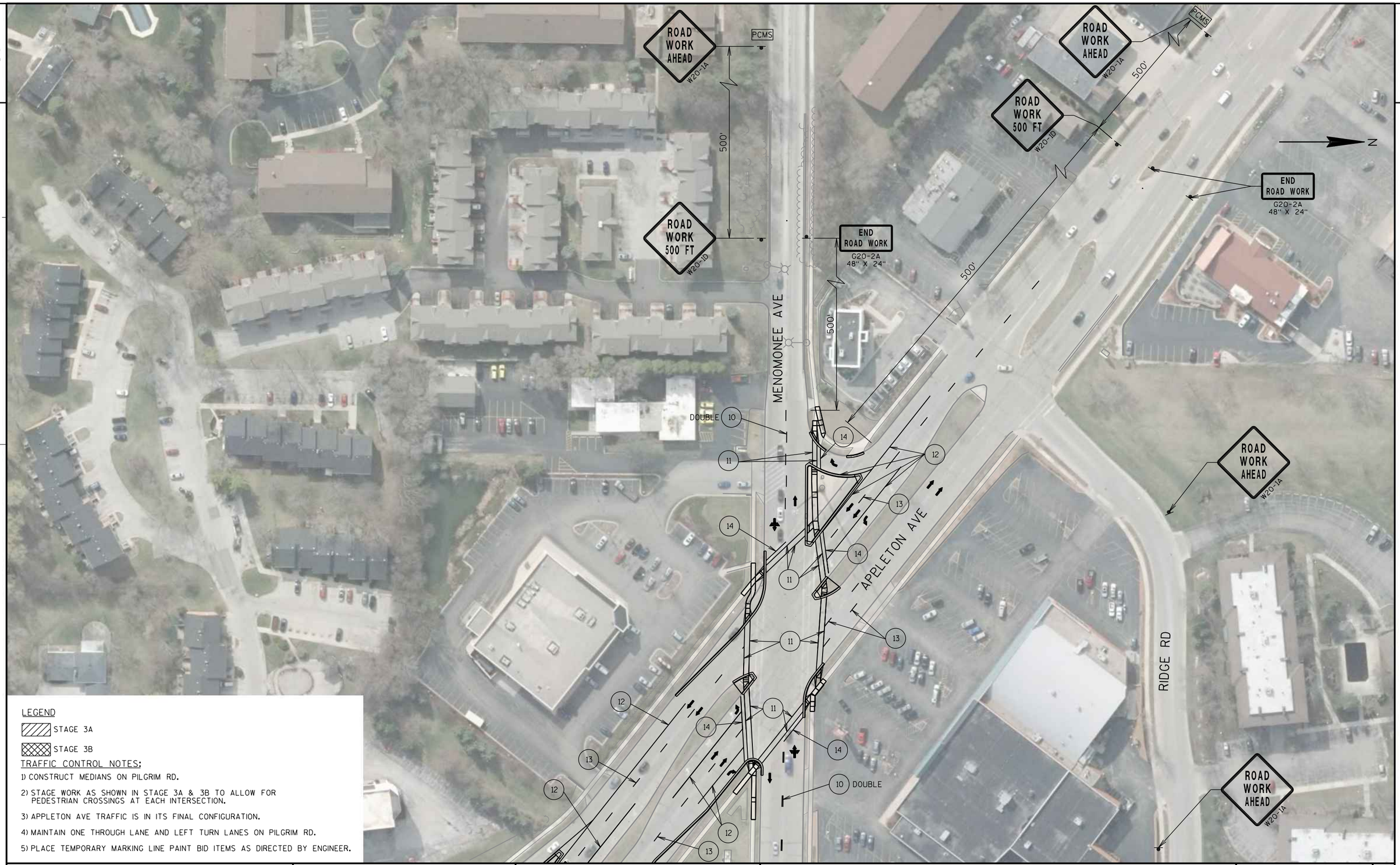
PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	TRAFFIC CONTROL STAGE 2	SHEET 74	E





2

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	TRAFFIC CONTROL STAGE 2B	SHEET 75	E



LEGEND

STAGE 3A

STAGE 3B

TRAFFIC CONTROL NOTES:

1) CONSTRUCT MEDIANS ON PILGRIM RD.

2) STAGE WORK AS SHOWN IN STAGE 3A & 3B TO ALLOW FOR PEDESTRIAN CROSSINGS AT EACH INTERSECTION.

3) APPLETON AVE TRAFFIC IS IN ITS FINAL CONFIGURATION.

4) MAINTAIN ONE THROUGH LANE AND LEFT TURN LANES ON PILGRIM RD.

5) PLACE TEMPORARY MARKING LINE PAINT BID ITEMS AS DIRECTED BY ENGINEER.

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	TRAFFIC CONTROL STAGE 3	SHEET 76	E

FILE NAME : S:\Wauk_Co\Men_Falls\Gov\160233 Menomonee Avenue\Sheets Plan\Traffic Control\025031_TC.dgn PLOT DATE : 11/8/2019 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

END ROAD WORK
G20-2A
48" X 24"

500'

85'

W01-6
48" X 24"

R9-11
24" X 12"
TRAFFIC CONTROL
BARRICADES TYPE 2
(STAGE 3B ONLY)

10' MIN

LANE CLOSED
R11-2L
48" X 30"

180'

200'
SEE INSET

APPLETON AVE

R9-11
24" X 12"
TRAFFIC CONTROL
BARRICADES TYPE 2
(STAGE 3A ONLY)

W01-6
48" X 24"

R9-11
24" X 12"
TRAFFIC CONTROL
BARRICADES TYPE 2
(STAGE 3B ONLY)

R9-11
24" X 12"
TRAFFIC CONTROL
BARRICADES TYPE 2
(STAGE 3A ONLY)

W01-6
48" X 24"

R9-11
24" X 12"
TRAFFIC CONTROL
BARRICADES TYPE 2
(STAGE 3A ONLY)

10 DOUBLE

R9-11
24" X 12"
TRAFFIC CONTROL
BARRICADES TYPE 2
(STAGE 3B ONLY)

BEGIN LEFT TURN LANE
R3-20L
24" X 36"

125'

25' TYP

ROAD WORK AHEAD
W20-1A

RIDGE RD

W04-2L

LEFT LANE CLOSED AHEAD
W20-55A

ROAD WORK AHEAD
W20-1A

180'

200'

400'

400'

PCMS

PILGRIM RD

ONE WAY
R6-2R
30" X 36"

LANE CLOSED
R11-2L
48" X 30"

500'

END ROAD WORK
G20-2A
48" X 24"

50'

100'

10 DOUBLE

500'

MENOMONEE AVE

ROAD WORK 500 FT
W20-1D

END ROAD WORK
G20-2A
48" X 24"

500'

PCMS

ROAD WORK AHEAD
W20-1A

END ROAD WORK
G20-2A
48" X 24"

ROAD WORK 500 FT
W20-1D

500'

500'

PCMS

ROAD WORK AHEAD
W20-1A

LEGEND

STAGE 3A

STAGE 3B

TRAFFIC CONTROL NOTES:

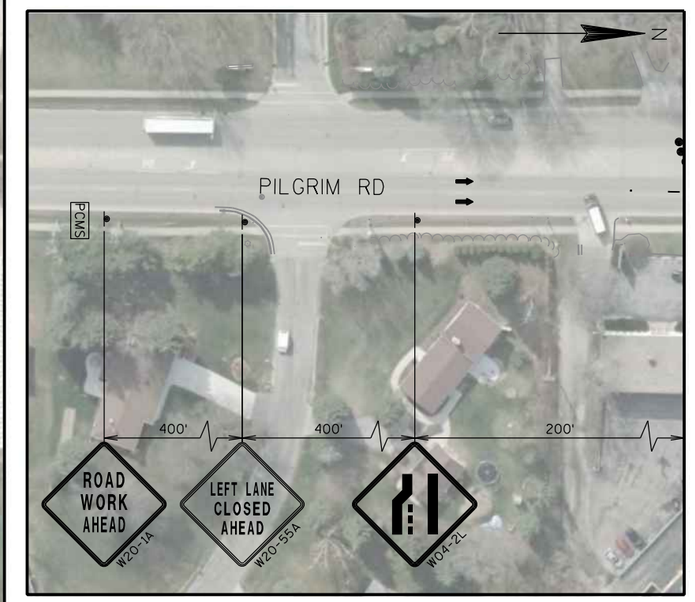
1) CONSTRUCT MEDIANS ON PILGRIM RD.

2) STAGE WORK AS SHOWN IN STAGE 3A & 3B TO ALLOW FOR PEDESTRIAN CROSSINGS AT EACH INTERSECTION.

3) APPLETON AVE TRAFFIC IS IN ITS FINAL CONFIGURATION.

4) MAINTAIN ONE THROUGH LANE AND LEFT TURN LANES ON PILGRIM RD.

5) PLACE TEMPORARY MARKING LINE PAINT BID ITEMS AS DIRECTED BY ENGINEER.



PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	TRAFFIC CONTROL STAGE 3	SHEET 77	E

LEGEND

WORKZONE

TRAFFIC CONTROL NOTES:

1) MILL AND OVERLAY WORK AND FINAL PAVEMENT MARKINGS TO BE DONE WITH FULL CLOSURES DURING NIGHT TIME HOURS.

2) PLACE TEMPORARY MARKING LINE PAINT BID ITEMS BETWEEN MILLING OPERATIONS AND FINAL ASPHALT PAVING AS DIRECTED BY ENGINEER.

ROAD WORK AHEAD W20-1A
PCMS
500'
ROAD WORK 500 FT W20-1D
350'
BUMP W08-1
W016-7L 30" X 18"
DOUBLE
GROOVED PAVEMENT W08-52
30 M.P.H. W013-1 24" X 24"
END ROAD WORK G20-2A 48" X 24"
MENOMONEE AVE
APPLETON AVE
RIDGE RD
W016-7R 30" X 18"
N
11
12
13
14

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	TRAFFIC CONTROL STAGE 4	SHEET 78 E

FILE NAME : S:\Wauk_Co\Men_Falls\Gov\160233 Menomonee Avenue\Sheets Plan\Traffic Control\025041_TC.dgn PLOT DATE : 11/8/2019 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

END ROAD WORK
G20-2A
48" X 24"

500'

ROAD WORK AHEAD
W20-1A

ROAD WORK 500 FT
W20-1D

GROOVED PAVEMENT
W08-52

30 M.P.H.
W013-1
24" X 24"

350'

500'

PCMS

APPLETON AVE

BUMP
W08-1

W016-7L
30" X 18"

W016-7R
30" X 18"

END ROAD WORK
G20-2A
48" X 24"

ROAD WORK 500 FT
W20-1D

ROAD WORK AHEAD
W20-1A

DOUBLE

MENOMONEE AVE

RIDGE RD

PILGRIM RD

N

25 M.P.H.
W013-1
24" X 24"

LEGEND

WORKZONE

TRAFFIC CONTROL NOTES:

1) MILL AND OVERLAY WORK AND FINAL PAVEMENT MARKINGS TO BE DONE WITH FULL CLOSURES DURING NIGHT TIME HOURS.

2) PLACE TEMPORARY MARKING LINE PAINT BID ITEMS BETWEEN MILLING OPERATIONS AND FINAL ASPHALT PAVING AS DIRECTED BY ENGINEER.

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	TRAFFIC CONTROL STAGE 4	SHEET 79	E

FILE NAME : S:\Wauk_Co\Men_Falls\Gov\160233 Menomonee Avenue\Sheets Plan\Traffic Control\025042_TC.dgn PLOT DATE : 11/8/2019 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:100

2



NOTE

1) SEE TRAFFIC CONTROL PLAN STAGE 2 FOR ADDITIONAL SIGNING.

LEGEND

PEDESTRIAN DETOUR ROUTE
STAGES 2A, 2B, & 2C

WORK ZONE

SIGN ON PERMANENT SUPPORT

TYPE III BARRICADE WITH TWO TYPE "A" FLASHERS AND SIGN

P1 — SIDEWALK CLOSED — R9-9 — 24" X 12"

P2 — Sidewalk Closed at Appleton Ave — SEE DETAIL

P3 — DETOUR — M4-9 — 30" X 24"

P4 — DETOUR — M4-9 — 30" X 24"

P5 — DETOUR — M4-9 (MOD) — 30" X 24"

P6 — DETOUR — M4-9 (MOD) — 30" X 24"

P7 — Sidewalk Closed at Menomonee Ave — SEE DETAIL

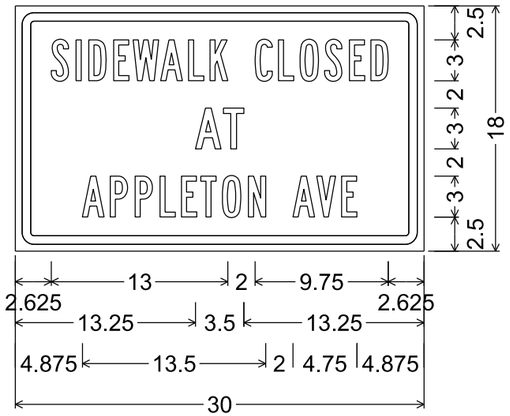
P8 — Sidewalk Closed at Pilgrim Rd — SEE DETAIL

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	DETOUR PLAN - PEDESTRIAN (APPLETON AVE & MENOMONEE AVE)	SHEET 80	E

FILE NAME : S:\Wauk_Co\Men_Falls\Gov\160233 Menomonee Avenue\Sheets Plan\Traffic Control\027001_DT.dgn PLOT DATE : 11/8/2019 PLOT BY : wwolak PLOT NAME : PLOT SCALE : 1:500

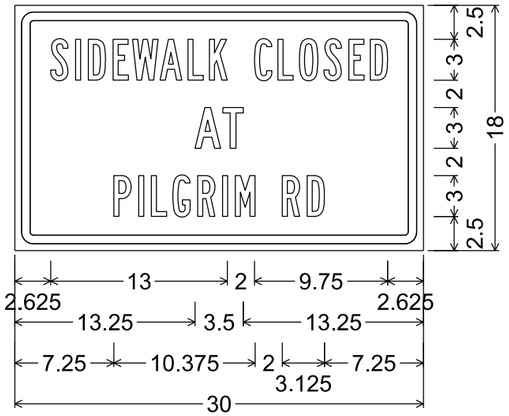
NOTES

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

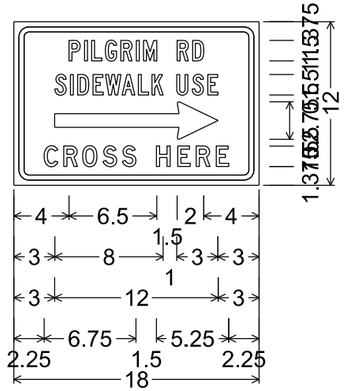


1.375" Radius, 0.625" Border, 0.500" Indent

1.375" Radius, 0.625" Border, 0.500" Indent



1.375" Radius, 0.625" Border, 0.500" Indent



1.125" Radius, 0.375" Border, 0.375" Indent,
"PILGRIM", C; "RD", C; "SIDEWALK", C;
"USE", C; "CROSS", D; "HERE", D

7

7

2

N

BP: 200+00.00
N=219004.430
E=716493.350

BP: 300+00.00
N=219408.080
E=716456.700

BEGIN CONSTRUCTION
STA 304+17.65
N = 219218.836
E = 716840.979

R/L APPLETON AVE

S89° 45' 00"E
1268.15'

S50° 56' 58"E
1512.91'

BP: 100+00.00
N=218174.381
E=717326.447

N0° 39' 30"E
327.69'

PI: 103+27.69
N=218502.050
E=717330.211

N2° 47' 17"E
569.76'

R/L PILGRIM RD

BEGIN CONSTRUCTION
STA 103+18.32
N = 218492.681
E = 717330.103

PI: 108+97.45
N=219071.133
E=717357.925

N0° 34' 00"E
360.56'

EP: 112+58.00
N=219431.672
E=717361.491

END CONSTRUCTION
STA 108+87.50
N = 219061.192
E = 717357.441

R/L MENOMONEE AVE

END CONSTRUCTION
STA 313+00.00
N = 218510.682
E = 717402.674

EP: 315+12.91
N=218454.937
E=717631.615

EP: 212+68.15
N=218998.894
E=717761.487

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	ALIGNMENT DIAGRAM	SHEET 82	E

2782-13-70

Line	Item	Item Description	Unit	Total	Qty
0002	108.4400	CPM Progress Schedule	EACH	1.000	1.000
0004	204.0100	Removing Pavement	SY	1,364.000	1,364.000
0006	204.0120	Removing Asphaltic Surface Milling	SY	14,900.000	14,900.000
0008	204.0150	Removing Curb & Gutter	LF	1,314.000	1,314.000
0010	204.0155	Removing Concrete Sidewalk	SY	905.000	905.000
0012	204.0195	Removing Concrete Bases	EACH	33.000	33.000
0014	204.0210	Removing Manholes	EACH	3.000	3.000
0016	204.0220	Removing Inlets	EACH	5.000	5.000
0018	204.0245	Removing Storm Sewer (size) 001. 12-Inch	LF	16.000	16.000
0020	204.9060.S	Removing (item description) 001. Removing and Salvaging Twin Lighting Units	EACH	1.000	1.000
0022	204.9060.S	Removing (item description) 002. High Mast Light Towers	EACH	3.000	3.000
0024	204.9060.S	Removing (item description) 003. High Mast Tower Foundations	EACH	3.000	3.000
0026	204.9105.S	Removing (item description) 001. Traffic Signals Appleton Ave & Menomonee Ave	LS	1.000	1.000
0028	204.9105.S	Removing (item description) 002. Traffic Signals Pilgrim Rd & Menomonee Ave	LS	1.000	1.000
0030	204.9105.S	Removing (item description) 003. Traffic Signals Appleton Ave & Pilgrim Rd	LS	1.000	1.000
0032	204.9105.S	Removing (item description) 004. Distribution Cabinet and Vault	LS	1.000	1.000
0034	205.0100	Excavation Common	CY	1,037.000	1,037.000
0036	213.0100	Finishing Roadway (project) 001. 2782-13-70	EACH	1.000	1.000
0038	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,334.000	1,334.000
0040	310.0110	Base Aggregate Open-Graded	TON	20.000	20.000
0042	320.0155	Concrete Base 9-Inch	SY	727.000	727.000
0044	405.0200	Coloring Concrete Custom	CY	31.000	31.000
0046	405.1000	Stamping Colored Concrete	CY	110.000	110.000
0048	416.0610	Drilled Tie Bars	EACH	1,096.000	1,096.000
0050	416.0620	Drilled Dowel Bars	EACH	138.000	138.000
0052	455.0605	Tack Coat	GAL	1,084.000	1,084.000
0054	460.2000	Incentive Density HMA Pavement	DOL	1,200.000	1,200.000
0056	460.6424	HMA Pavement 4 MT 58-28 H	TON	2,014.000	2,014.000
0058	520.8000	Concrete Collars for Pipe	EACH	11.000	11.000
0060	601.0600	Concrete Curb Pedestrian	LF	78.000	78.000
0062	602.0410	Concrete Sidewalk 5-Inch	SF	13,779.000	13,779.000
0064	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	551.000	551.000
0066	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	159.000	159.000

2782-13-70

Line	Item	Item Description	Unit	Total	Qty
0068	611.0420	Reconstructing Manholes	EACH	4.000	4.000
0070	611.0535	Manhole Covers Type J-Special	EACH	7.000	7.000
0072	611.0612	Inlet Covers Type C	EACH	1.000	1.000
0074	611.0624	Inlet Covers Type H	EACH	12.000	12.000
0076	611.1004	Catch Basins 4-FT Diameter	EACH	4.000	4.000
0078	611.1230	Catch Basins 2x3-FT	EACH	6.000	6.000
0080	611.2004	Manholes 4-FT Diameter	EACH	3.000	3.000
0082	611.2005	Manholes 5-FT Diameter	EACH	1.000	1.000
0084	611.2006	Manholes 6-FT Diameter	EACH	2.000	2.000
0086	611.8110	Adjusting Manhole Covers	EACH	16.000	16.000
0088	611.8115	Adjusting Inlet Covers	EACH	14.000	14.000
0090	612.0104	Pipe Underdrain 4-Inch	LF	105.000	105.000
0092	618.0100	Maintenance And Repair of Haul Roads (project) 001. 2782-13-70	EACH	1.000	1.000
0094	619.1000	Mobilization	EACH	1.000	1.000
0096	620.0300	Concrete Median Sloped Nose	SF	927.000	927.000
0098	623.0200	Dust Control Surface Treatment	SY	1,650.000	1,650.000
0100	624.0100	Water	MGAL	3.000	3.000
0102	625.0100	Topsoil	SY	1,042.000	1,042.000
0104	628.7005	Inlet Protection Type A	EACH	12.000	12.000
0106	628.7015	Inlet Protection Type C	EACH	45.000	45.000
0108	631.0300	Sod Water	MGAL	25.000	25.000
0110	631.1000	Sod Lawn	SY	1,042.000	1,042.000
0112	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	1.000	1.000
0114	634.0814	Posts Tubular Steel 2x2-Inch X 14-FT	EACH	19.000	19.000
0116	637.2210	Signs Type II Reflective H	SF	561.090	561.090
0118	637.2215	Signs Type II Reflective H Folding	SF	149.200	149.200
0120	637.2230	Signs Type II Reflective F	SF	16.000	16.000
0122	638.2102	Moving Signs Type II	EACH	1.000	1.000
0124	638.2602	Removing Signs Type II	EACH	37.000	37.000
0126	638.3000	Removing Small Sign Supports	EACH	7.000	7.000
0128	642.5201	Field Office Type C	EACH	1.000	1.000
0130	643.0300	Traffic Control Drums	DAY	24,467.000	24,467.000
0132	643.0410	Traffic Control Barricades Type II	DAY	743.000	743.000
0134	643.0420	Traffic Control Barricades Type III	DAY	2,977.000	2,977.000
0136	643.0705	Traffic Control Warning Lights Type A	DAY	6,698.000	6,698.000
0138	643.0715	Traffic Control Warning Lights Type C	DAY	2,481.000	2,481.000
0140	643.0800	Traffic Control Arrow Boards	DAY	288.000	288.000
0142	643.0900	Traffic Control Signs	DAY	9,098.000	9,098.000
0144	643.0920	Traffic Control Covering Signs Type II	EACH	10.000	10.000

2782-13-70

Line	Item	Item Description	Unit	Total	Qty
0146	643.1000	Traffic Control Signs Fixed Message	SF	84.000	84.000
0148	643.1050	Traffic Control Signs PCMS	DAY	130.000	130.000
0150	643.5000	Traffic Control	EACH	1.000	1.000
0152	645.0111	Geotextile Type DF Schedule A	SY	75.000	75.000
0154	646.1020	Marking Line Epoxy 4-Inch	LF	1,171.000	1,171.000
0156	646.3020	Marking Line Epoxy 8-Inch	LF	2,241.000	2,241.000
0158	646.5020	Marking Arrow Epoxy	EACH	20.000	20.000
0160	646.5120	Marking Word Epoxy	EACH	5.000	5.000
0162	646.6120	Marking Stop Line Epoxy 18-Inch	LF	557.000	557.000
0164	646.7120	Marking Diagonal Epoxy 12-Inch	LF	290.000	290.000
0166	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	2,131.000	2,131.000
0168	646.8120	Marking Curb Epoxy	LF	180.000	180.000
0170	646.8220	Marking Island Nose Epoxy	EACH	14.000	14.000
0172	646.9000	Marking Removal Line 4-Inch	LF	888.000	888.000
0174	649.0105	Temporary Marking Line Paint 4-Inch	LF	8,798.000	8,798.000
0176	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	10,121.000	10,121.000
0178	649.0205	Temporary Marking Line Paint 8-Inch	LF	4,140.000	4,140.000
0180	649.0250	Temporary Marking Line Removable Tape 8-Inch	LF	2,208.000	2,208.000
0182	649.0805	Temporary Marking Stop Line Paint 18-Inch	LF	1,150.000	1,150.000
0184	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	405.000	405.000
0186	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	1,000.000	1,000.000
0188	652.0605	Conduit Special 2-Inch	LF	2,616.000	2,616.000
0190	652.0615	Conduit Special 3-Inch	LF	3,105.000	3,105.000
0192	653.0140	Pull Boxes Steel 24x42-Inch	EACH	36.000	36.000
0194	653.0905	Removing Pull Boxes	EACH	31.000	31.000
0196	654.0101	Concrete Bases Type 1	EACH	12.000	12.000
0198	654.0102	Concrete Bases Type 2	EACH	16.000	16.000
0200	654.0105	Concrete Bases Type 5	EACH	19.000	19.000
0202	654.0110	Concrete Bases Type 10	EACH	9.000	9.000
0204	655.0230	Cable Traffic Signal 5-14 AWG	LF	2,095.000	2,095.000
0206	655.0240	Cable Traffic Signal 7-14 AWG	LF	3,055.000	3,055.000
0208	655.0260	Cable Traffic Signal 12-14 AWG	LF	5,505.000	5,505.000
0210	655.0270	Cable Traffic Signal 15-14 AWG	LF	330.000	330.000
0212	655.0320	Cable Type UF 2-10 AWG Grounded	LF	3,030.000	3,030.000
0214	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	4,620.000	4,620.000
0216	655.0610	Electrical Wire Lighting 12 AWG	LF	2,280.000	2,280.000
0218	655.0615	Electrical Wire Lighting 10 AWG	LF	3,170.000	3,170.000
0220	655.0620	Electrical Wire Lighting 8 AWG	LF	12,702.000	12,702.000
0222	655.0630	Electrical Wire Lighting 4 AWG	LF	434.000	434.000
0224	657.0100	Pedestal Bases	EACH	12.000	12.000

2782-13-70

Line	Item	Item Description	Unit	Total	Qty
0226	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	32.000	32.000
0228	657.0310	Poles Type 3	EACH	2.000	2.000
0230	657.0315	Poles Type 4	EACH	14.000	14.000
0232	657.0322	Poles Type 5-Aluminum	EACH	19.000	19.000
0234	657.0345	Poles Type 9	EACH	3.000	3.000
0236	657.0350	Poles Type 10	EACH	6.000	6.000
0238	657.0420	Traffic Signal Standards Aluminum 13-FT	EACH	4.000	4.000
0240	657.0425	Traffic Signal Standards Aluminum 15-FT	EACH	6.000	6.000
0242	657.0430	Traffic Signal Standards Aluminum 10-FT	EACH	2.000	2.000
0244	657.0525	Monotube Arms 25-FT	EACH	3.000	3.000
0246	657.0530	Monotube Arms 30-FT	EACH	6.000	6.000
0248	657.0540	Monotube Arms 40-FT	EACH	1.000	1.000
0250	657.0609	Luminaire Arms Single Member 4-Inch Clamp 6-FT	EACH	20.000	20.000
0252	657.0610	Luminaire Arms Single Member 4 1/2-Inch Clamp 6-FT	EACH	19.000	19.000
0254	657.0806	Luminaire Arms Steel 6-FT	EACH	7.000	7.000
0256	658.0173	Traffic Signal Face 3S 12-Inch	EACH	45.000	45.000
0258	658.0174	Traffic Signal Face 4S 12-Inch	EACH	10.000	10.000
0260	658.0416	Pedestrian Signal Face 16-Inch	EACH	30.000	30.000
0262	658.0500	Pedestrian Push Buttons	EACH	32.000	32.000
0264	658.5069	Signal Mounting Hardware (location) 001. Appleton Avenue & Menomonee Avenue	LS	1.000	1.000
0266	658.5069	Signal Mounting Hardware (location) 002. Pilgrim Rd & Menomonee Ave	LS	1.000	1.000
0268	658.5069	Signal Mounting Hardware (location) 003. Appleton Ave & Pilgrim Road	LS	1.000	1.000
0270	659.1125	Luminaires Utility LED C	EACH	45.000	45.000
0272	661.0200	Temporary Traffic Signals for Intersections (location) 001. Appleton Avenue & Menomonee Avenue	LS	1.000	1.000
0274	661.0200	Temporary Traffic Signals for Intersections (location) 002. Pilgrim Rd & Menomonee Ave	LS	1.000	1.000
0276	661.0200	Temporary Traffic Signals for Intersections (location) 003. Appleton Ave & Pilgrim Road	LS	1.000	1.000
0278	690.0150	Sawing Asphalt	LF	488.000	488.000
0280	690.0250	Sawing Concrete	LF	3,183.000	3,183.000
0282	SPV.0060	Special 001. Type 9 & 10 Special Traffic Signal Base	EACH	1.000	1.000
0284	SPV.0060	Special 002. Furnish & Install Poles Type 9 Special	EACH	1.000	1.000
0286	SPV.0060	Special 003. Furn & Inst Traf Sig Cab Ctrlr & Batt Bkup Sys Appleton Ave & Menomonee Ave	EACH	1.000	1.000
0288	SPV.0060	Special 004. Furn & Inst Traf Sig Cab Ctrlr & Batt Bkup Sys Pilgrim Rd & Menomonee Ave	EACH	1.000	1.000
0290	SPV.0060	Special 005. Furn & Inst Traf Sig Cab Ctrlr & Batt Bkup Sys Appleton Ave & Pilgrim Rd	EACH	1.000	1.000

2782-13-70

Line	Item	Item Description	Unit	Total	Qty
0292	SPV.0060	Special 006. Removing Wood Poles	EACH	1.000	1.000
0294	SPV.0060	Special 007. Municipal Lighting Control Cabinet	EACH	1.000	1.000
0296	SPV.0060	Special 008. Temporary Wood Poles	EACH	1.000	1.000
0298	SPV.0060	Special 009. Furnish and Install GPS Device with GPS Receiver	EACH	3.000	3.000
0300	SPV.0060	Special 010. Concrete Control Cabinet Bases Type 9 Special (Mod.)	EACH	3.000	3.000
0302	SPV.0060	Special 100. Adjusting Water Valve Boxes	EACH	9.000	9.000
0304	SPV.0060	Special 101. Adjusting Water Manholes	EACH	2.000	2.000
0306	SPV.0060	Special 102. Remove Existing Hydrant	EACH	1.000	1.000
0308	SPV.0060	Special 103. 6-Inch Hydrant Gate Valve with Valve Box	EACH	1.000	1.000
0310	SPV.0060	Special 104. Hydrant	EACH	1.000	1.000
0312	SPV.0060	Special 105. Pipe Connection to Existing Structures	EACH	2.000	2.000
0314	SPV.0060	Special 106. Sanitary Manhole Seal	EACH	6.000	6.000
0316	SPV.0060	Special 400. Traffic Control Local Road Lane Closures	EACH	10.000	10.000
0318	SPV.0075	Special 400. Pavement Cleanup Project 2782-13-70	HRS	100.000	100.000
0320	SPV.0090	Special 001. Temporary Aerial Cable Triplex 6 AWG	LF	480.000	480.000
0322	SPV.0090	Special 002. Removing Aerial Cable	LF	480.000	480.000
0324	SPV.0090	Special 100. 6-Inch PVC Hydrant Lead with Granular Backfill	LF	16.000	16.000
0326	SPV.0090	Special 101. Concrete Curb & Gutter 24-Inch Special Type A	LF	822.000	822.000
0328	SPV.0090	Special 102. Concrete Curb & Gutter 30-Inch Special Type A	LF	1,945.000	1,945.000
0330	SPV.0105	Special 001. Video Vehicle Detection System, Appleton Ave & Menomonee Ave	LS	1.000	1.000
0332	SPV.0105	Special 002. Video Vehicle Detection System, Pilgrim Rd & Menomonee Ave	LS	1.000	1.000
0334	SPV.0105	Special 003. Video Vehicle Detection System, Appleton Ave & Pilgrim Rd	LS	1.000	1.000
0336	SPV.0105	Special 004. Temp Non-Intrusive Veh Det Sys for Int, Appleton Ave & Menomonee Ave	LS	1.000	1.000
0338	SPV.0105	Special 005. Temp Non-Intrusive Veh Det Sys for Intersec, Pilgrim Rd & Menomonee Ave	LS	1.000	1.000
0340	SPV.0105	Special 006. Temp Non-Intrusive Veh Det Sys for Int, Appleton Ave & Pilgrim Rd	LS	1.000	1.000
0342	SPV.0105	Special 007. Free Standing Meter Breaker Pedestal	LS	1.000	1.000
0344	SPV.0105	Special 100. Survey Project 2782-13-70	LS	1.000	1.000
0346	SPV.0180	Special 100. Concrete Driveway HES 8-Inch Reinforced	SY	20.000	20.000
0348	SPV.0195	Special 100. Management of Solid Waste	TON	8.500	8.500

3

CPM PROGRESS SCHEDULE

LOCATION	108.4400 CPM PROGRESS SCHEDULE EACH
PROJECT 2782-13-70	1
PROJECT 2782-13-70 TOTAL	1

REMOVING PAVEMENT

CATEGORY	STATION			OFFSET	LOCATION	204.0100 REMOVING PAVEMENT SY
0010	103+40	-	104+56	LT	PILGRIM RD	123
0010	104+15	-	104+65	RT	PILGRIM RD	85
0010	104+80	-	105+25	RT	PILGRIM RD	22
0010	105+10	-	105+75	LT	PILGRIM RD	128
0010	105+75	-	106+10	LT	PILGRIM RD	21
0010	105+40	-	106+10	RT	PILGRIM RD	111
0010	106+15	-	107+94	LT	PILGRIM RD	345
0010	106+15	-	106+54	RT	PILGRIM RD	17
0010	304+25	-	305+60	RT	APPLETON AVE	153
0010	306+05	-	307+80	RT	APPLETON AVE	175
0010	308+85	-	309+95	LT	APPLETON AVE	161
CATEGORY 0010 TOTAL						1341
0020	107+80	-	107+97	LT	PILGRIM RD	23
CATEGORY 0020 TOTAL						23
PROJECT 2782-13-70 TOTAL						1364

REMOVING ASPHALTIC SURFACE MILLING

LOCATION	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY
CATEGORY 0010 TOTAL	13560
CATEGORY 0020 TOTAL	1340
PROJECT 2782-13-70 TOTAL	14,900

REMOVING CONCRETE SIDEWALK

CATEGORY	STATION	OFFSET	LOCATION	204.0155 REMOVING CONCRETE SIDEWALK SY
STAGE 1				
0010	305+85	5' LT	APPLETON	12
0010	307+15	5' LT	APPLETON	12
0010	105+13	18' RT	PILGRIM	12
0010	105+91	80' LT	PILGRIM	13
STAGE 1 SUBTOTAL				49
STAGE 2				
0010	103+55	53' RT	PILGRIM	75
0010	104+20	20' RT	PILGRIM	57
0010	104+70	85' LT	PILGRIM	34
0010	105+13	78' LT	PILGRIM	17
0010	105+91	15' RT	PILGRIM	23
0010	106+10 - 107+80	23' RT	PILGRIM	121
0010	106+70	83' LT	PILGRIM	23
0010	202+10 - 202+65	35' LT	MENOMONEE	42
0010	203+00	33' LT	MENOMONEE	174
0010	204+10	34' RT	MENOMONEE	48
0010	205+35	30' LT	MENOMONEE	38
0010	206+20	35' RT	MENOMONEE	62
STAGE 2 SUBTOTAL				714
STAGE 3				
0010	104+80	35' LT	PILGRIM	12
0010	106+28	28' LT	PILGRIM	6
STAGE 3 SUBTOTAL				18
CATEGORY 0010 TOTAL				781
STAGE 2				
0020	107+80 - 107+95	23' RT	PILGRIM	25
0020	107+85	85' LT	PILGRIM	29
0020	108+53	78' LT	PILGRIM	30
0020	108+60	26' RT	PILGRIM	25
STAGE 2 SUBTOTAL				109
STAGE 3				
0020	107+85	32' LT	PILGRIM	8
0020	108+60	20' LT	PILGRIM	7
STAGE 3 SUBTOTAL				15
CATEGORY 0020 TOTAL				124
PROJECT 2782-13-70 TOTAL				905

REMOVING CURB & GUTTER

CATEGORY	STATION		STATION	OFFSET	LOCATION	204.0150 REMOVING CURB & GUTTER LF
STAGE 1						
0010	204+05	-	204+35	LT	MENOMONEE AVE	59
0010	205+15	-	205+35	RT	MENOMONEE AVE	49
0010	105+80	-	106+15	LT	PILGRIM	53
STAGE 1 SUBTOTAL						161
STAGE 2						
0010	202+35	-	202+65	LT	MENOMONEE AVE	48
0010	202+75	-	203+50	LT	MENOMONEE AVE	115
0010	203+75	-	203+95	RT	MENOMONEE AVE	19
0010	205+00	-	205+65	LT	MENOMONEE AVE	68
0010	206+05	-	206+30	RT	MENOMONEE AVE	102
0010	106+54	-	107+78	RT	PILGRIM	124
0010	104+53	-	105+00	LT	PILGRIM	53
0010	105+00	-	105+28	LT	PILGRIM	34
0010	103+27	-	104+10	RT	PILGRIM	118
0010	103+20	-	103+95	LT	PILGRIM	95
0010	104+18	-	104+28	RT	PILGRIM	27
STAGE 2 SUBTOTAL						803
STAGE 3						
0010	104+50	-	104+80	LT	PILGRIM	72
STAGE 3 SUBTOTAL						72
CATEGORY 0010 TOTAL						1036
STAGE 2						
0020	207+50	-	207+95	LT	MENOMONEE AVE	66
0020	207+50	-	207+85	RT	MENOMONEE AVE	62
0020	208+30	-	208+48	LT	MENOMONEE AVE	54
0020	208+75	-	209+00	LT	MENOMONEE AVE	55
0020	208+65	-	208+95	RT	MENOMONEE AVE	41
STAGE 2 SUBTOTAL						278
CATEGORY 0020 TOTAL						278
PROJECT 2782-13-70 TOTAL						1314

ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

REMOVING STORM SEWER

CATEGORY	STATION	OFFSET	LOCATION	204.0210 REMOVING MANHOLES EACH	204.0220 REMOVING INLETS EACH	204.0245.001 REMOVING STORM SEWER (12-INCH) LF
0010	104+39	11' RT	PILGRIM	-	1	-
0010	104+50	29' LT	PILGRIM	-	1	-
0010	104+60	32' LT	PILGRIM	-	-	16
0010	106+39	31' LT	PILGRIM	1	-	-
0010	106+49	4' RT	PILGRIM	1	-	-
0010	106+66	99' LT	PILGRIM	-	1	-
0010	107+32	8' RT	PILGRIM	-	1	-
0010	107+40	20' LT	PILGRIM	1	-	-
0010	203+80	24' RT	MENOMONEE AVE	-	1	-
CATEGORY 0010 TOTAL				3	5	16
PROJECT 2782-13-70 TOTAL				3	5	16

FINISHING ROADWAY

LOCATION	213.0100.001 FINISHING ROADWAY PROJECT ID 2782-13-70 EACH
PROJECT 2782-13-70	1
PROJECT 2782-13-70 TOTAL	1

EXCAVATION COMMON

CATEGORY	STATION	OFFSET	LOCATION	205.0100 EXCAVATION COMMON CY
0010	103+18 - 104+91	LT	PILGRIM RD	198
0010	104+15 - 104+65	RT	PILGRIM RD	45
0010	104+80 - 105+25	RT	PILGRIM RD	12
0010	105+10 - 105+75	LT	PILGRIM RD	68
0010	105+75 - 106+10	LT	PILGRIM RD	11
0010	105+40 - 106+10	RT	PILGRIM RD	59
0010	106+15 - 107+60	LT	PILGRIM RD	282
0010	106+15 - 107+60	RT	PILGRIM RD	91
0010	304+25 - 305+60	RT	APPLETON AVE	81
0010	306+05 - 307+80	RT	APPLETON AVE	93
0010	308+85 - 309+95	LT	APPLETON AVE	85
CATEGORY 0010 TOTAL				1025
0020	107+60 - 107+97	LT	PILGRIM RD	12
CATEGORY 0020 TOTAL				12
PROJECT 2782-13-70 TOTAL				1037

ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

CONCRETE BASE

CATEGORY	STATION	OFFSET	LOCATION	320.0155 CONCRETE BASE 9-INCH SY	416.0610 DRILLED TIE BARS EA	416.0620 DRILLED DOWEL BARS EA
STAGE 1						
0010	104+80 - 105+25	RT	PILGRIM RD	16	30	-
0010	305+65 - 306+00	MED	APPLETON AVE	0	23	0
0010	307+05 - 307+35	MED	APPLETON AVE	0	20	0
0010	105+75 - 105+85	LT	PILGRIM RD	3	24	-
STAGE 1 SUBTOTAL				19	97	0
STAGE 2						
0010	103+28 - 104+12	RT	PILGRIM RD	0	41	0
0010	104+11 - 104+65	RT	PILGRIM RD	27	49	13
0010	104+53 - 105+00	LT	PILGRIM RD	0	19	0
0010	105+00 - 105+50	LT	PILGRIM RD	5	69	6
0010	105+40 - 106+10	RT	PILGRIM RD	28	59	21
0010	105+90 - 107+60	RT	PILGRIM RD	139	57	13
0010	106+50 - 106+60	RT	PILGRIM RD	5	4	6
0010	202+35 - 202+70	LT	MENOMONEE AVE	0	18	0
0010	202+75 - 203+75	LT	MENOMONEE AVE	0	90	6
0010	205+00 - 205+65	LT	MENOMONEE AVE	0	24	0
0010	305+75 - 307+80	RT	APPLETON AVE	0	68	0
0010	307+80 - 310+00	LT	APPLETON AVE	0	93	6
0010	304+75 - 304+80	RT	APPLETON AVE	5	-	-
STAGE 2 SUBTOTAL				209	591	71
STAGE 3						
0010	103+18 - 104+91	LT	PILGRIM RD	166	84	12
0010	107+45 - 107+55	LT	PILGRIM RD	5	4	6
0010	106+15 - 107+60	LT	PILGRIM RD	295	94	30
STAGE 3 SUBTOTAL				466	182	48
UNDISTRIBUTED				0	87	12
CATEGORY 0010 TOTAL				694	957	131
STAGE 2						
0020	207+52 - 207+90	RT	MENOMONEE AVE	0	22	0
0020	207+53 - 207+95	LT	MENOMONEE AVE	0	24	0
0020	208+28 - 208+80	LT	MENOMONEE AVE	0	24	0
0020	208+75 - 209+03	LT	MENOMONEE AVE	0	20	0
0020	208+65 - 208+92	RT	MENOMONEE AVE	14	16	2
STAGE 2 SUBTOTAL				14	106	2
STAGE 3						
0020	107+80 - 107+97	LT	PILGRIM RD	19	20	4
STAGE 3 SUBTOTAL				19	20	4
UNDISTRIBUTED				0	13	1
CATEGORY 0020 TOTAL				33	139	7
PROJECT 2782-13-70 TOTAL				727	1,096	138

ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

BASE AGGREGATE DENSE 1 1/4-INCH

CATEGORY	STATION		STATION	LOCATION	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON
STAGE 1					
0010	305+65	-	305+95	APPLETON AVE	9
0010	307+05	-	307+35	APPLETON AVE	7
0010	310+10	-	310+40	APPLETON AVE	7
0010	311+45	-	311+85	APPLETON AVE	11
STAGE 1 SUBTOTAL					34
STAGE 2					
0010	202+05	-	202+65	MENOMONEE AVE	15
0010	202+75	-	203+65	MENOMONEE AVE	66
0010	203+75	-	204+75	MENOMONEE AVE	46
0010	205+00	-	205+65	MENOMONEE AVE	22
0010	206+05	-	206+30	MENOMONEE AVE	11
0010	307+85	-	309+80	APPLETON AVE	51
0010	106+45	-	106+80	PILGRIM RD	7
0010	310+00	-	310+80	APPLETON AVE	29
0010	104+78	-	104+90	PILGRIM RD	18
0010	103+55	-	104+10	PILGRIM RD	33
0010	104+15	-	104+65	PILGRIM RD	26
0010	310+85	-	311+75	APPLETON AVE	31
0010	106+00	-	107+75	PILGRIM RD	53
STAGE 2 SUBTOTAL					408
STAGE 3					
0010	103+20	-	104+95	PILGRIM RD	139
0010	106+15		107+75	PILGRIM RD	196
STAGE 3 SUBTOTAL					335
UNDISTRIBUTED (SEE NOTE BELOW)					155
CATEGORY 0010 TOTAL					932
STAGE 2					
0020	207+50	-	207+85	PILGRIM RD	15
0020	208+70	-	208+95	PILGRIM RD	18
0020	207+80	-	207+95	PILGRIM RD	20
0020	208+80	-	209+10	PILGRIM RD	18
STAGE 2 SUBTOTAL					71
STAGE 3					
0020	208+15	-	208+32	PILGRIM RD	147
0020	208+30	-	208+50	PILGRIM RD	117
STAGE 3 SUBTOTAL					264
UNDISTRIBUTED (SEE NOTE BELOW)					67
CATEGORY 0020 TOTAL					402
PROJECT 2782-13-70 TOTAL					1334

NOTE: Undistributed quantity to be used for creating 3:1 slope for pavement dropoff protection, as directed by the engineer.

CONCRETE COLLARS FOR PIPE

CATEGORY	STATION	OFFSET	LOCATION	STRUCTURE ID / PIPE ID	PIPE SIZE	520.8000 CONCRETE COLLARS FOR PIPE EA
0010	104+38	11' RT	PILGRIM	101	12"	1
0010	106+39	30' LT	PILGRIM	100	12" / 12" / 12"	3
0010	106+49	4' RT	PILGRIM	108	36" / 36"	2
0010	106+67	97' LT	PILGRIM	113	12"	1
0010	107+32	7' RT	PILGRIM	P105	12"	1
0010	107+40	18' LT	PILGRIM	109	27" / 27"	2
0010	203+80	24' RT	MENOMONEE AVE	114	12"	1
CATEGORY 0010						11
PROJECT 2782-13-70 TOTAL						11

CONCRETE CURB PEDESTRIAN

CATEGORY	STATION	OFFSET	LOCATION	601.0600 CONCRETE CURB PEDESTRIAN LF
0010	106+15 - 106+44	RT	PILGRIM	34
0010	205+26 - 205+51	LT	MENOMONEE	28
CATEGORY 0010 TOTAL				62
0020	108+56 - 108+72	LT	PILGRIM	16
CATGEORY 0020 TOTAL				16
PROJECT 2782-13-70 TOTAL				78

ASPHALT

CATEGORY	460.6424 HMA PAVEMENT 4 MT 58-28 H TON	455.0605 TACK COAT GAL
STAGE 1		
0010	5	1
STAGE 2		
0010	56	16
STAGE 3		
0010	118	33
STAGE 4		
0010	1671	944
CATEGORY 0010 TOTAL	1850	994
STAGE 3		
0020	8	2
STAGE 4		
0020	156	88
CATEGORY 0020 TOTAL	164	90
PROJECT 2782-13-70 TOTAL	2,014	1,084

ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

CONCRETE SIDEWALK 5-INCH

CATEGORY	STATION	OFFSET	LOCATION	602.0410 CONCRETE SIDEWALK 5-INCH SF	405.0200 COLORING CONCRETE CUSTOM CY	405.1000 STAMPING COLORED CONCRETE CY	REMARK
STAGE 1							
0010	305+65 - 306+00	LT	APPLETON	265	2	3	MEDIAN
0010	307+00 - 307+35	MED	APPLETON	209	2	3	MEDIAN
0010	310+10 - 310+40	MED	APPLETON	177	2	2	MEDIAN
0010	311+50 - 311+80	MED	APPLETON	320	2	4	MEDIAN
STAGE 1 SUBTOTAL				971	8	12	
STAGE 2							
0010	103+55 - 104+07	RT	PILGRIM	515	--	--	SE QUADRANT
0010	104+55 - 104+96	LT	PILGRIM	323	--	--	SW QUADRANT
0010	106+03 - 107+80	RT	PILGRIM	1,391	--	--	NE QUADRANT TO MENOMONEE AVE
0010	106+63 - 106+84	LT	PILGRIM	277	--	--	NW QUADRANT
0010	202+15 - 202+50	LT	MENOMONEE AVE	281	--	--	NW QUADRANT
0010	203+85 - 204+55	RT	MENOMONEE AVE	466	--	--	SW QUADRANT
0010	205+10 - 205+60	LT	MENOMONEE AVE	460	--	--	NE QUADRANT
0010	206+10 - 207+80	RT	MENOMONEE AVE	547	--	--	SE QUADRANT
0010	304+50 - 305+65	RT	APPLETON	2,559	8	32	ISLAND
0010	310+00 - 310+85	RT	APPLETON	874	2	12	ISLAND
0010	104+20 - 104+65	RT	PILGRIM	786	4	9	ISLAND
0010	311+00 - 311+80	LT	APPLETON	580	3	7	ISLAND
STAGE 2 SUBTOTAL				9,059	17	60	
STAGE 3							
0010	103+25 - 104+85	LT	PILGRIM	775	1	12	MEDIAN
0010	104+00 - 104+45	LT	PILGRIM	138	0	3	ISLAND
0010	105+30 - 105+75	LT	PILGRIM	191	1	3	ISLAND
0010	105+45 - 107+80	LT	PILGRIM	1,125	0	18	MEDIAN
STAGE 3 SUBTOTAL				2,229	2	36	
CATEGORY 0010 TOTAL				12,259	27	108	
STAGE 2							
0020	107+72 - 107+94	LT	PILGRIM	293	--	--	SW QUADRANT
0020	107+80 - 108+00	RT	PILGRIM	277	--	--	SE QUADRANT
0020	108+44 - 108+72	LT	PILGRIM	342	--	--	NW QUADRANT
0020	108+48 - 108+75	RT	PILGRIM	325	--	--	NE QUADRANT
STAGE 2 SUBTOTAL				1,237	--	--	
STAGE 3							
0020	107+80 - 107+90	LT	PILGRIM	137	2	1	MEDIAN
0020	108+60 - 108+70	LT	PILGRIM	146	2	1	MEDIAN
STAGE 3 SUBTOTAL				283	4	2	
CATEGORY 0020 TOTAL				1,520	4	2	
PROJECT 2782-13-70 TOTAL				13,779	31	110	

ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

3

ADJUSTING MANHOLE / INLET COVERS

CATEGORY	STATION	OFFSET	LOCATION	611.0420 RECONSTRUCTING MANHOLES EA	611.8110 ADJUSTING MANHOLE COVERS EA	611.8115 ADJUSTING INLET COVERS EA	SPV.0060.106 SANITARY MANHOLE SEAL EA
0010	103+55	22' LT	PILGRIM	-	1	-	1
0010	103+70	14' RT	PILGRIM	-	-	1	-
0010	103+75	34' LT	PILGRIM	-	1	-	-
0010	104+65	33' LT	PILGRIM	1	-	-	-
0010	104+75	29' RT	PILGRIM	-	1	-	-
0010	105+12	26' LT	PILGRIM	-	1	-	1
0010	105+15	74' LT	PILGRIM	1	-	-	-
0010	105+15	96' RT	PILGRIM	-	1	-	-
0010	105+66	52' RT	PILGRIM	-	1	-	-
0010	105+90	92' LT	PILGRIM	-	-	1	-
0010	106+06	87' LT	PILGRIM	-	-	1	-
0010	106+15	30' LT	PILGRIM	-	1	-	1
0010	106+21	45' LT	PILGRIM	-	1	-	-
0010	106+25	4' RT	PILGRIM	-	1	-	-
0010	107+31	0' LT	PILGRIM	-	1	-	-
0010	107+68	43' LT	PILGRIM	1	-	-	-
0010	203+04	63' LT	MENOMONEE	1	-	-	-
0010	203+42	23' LT	MENOMONEE	-	-	1	-
0010	204+21	1' LT	MENOMONEE	-	1	-	1
0010	205+47	5' LT	MENOMONEE	-	1	-	1
0010	205+58	21' LT	MENOMONEE	-	-	1	-
0010	206+14	44' RT	MENOMONEE	-	-	1	-
0010	206+23	25' RT	MENOMONEE	-	-	1	-
0010	206+25	14' RT	MENOMONEE	-	1	-	-
CATEGORY 0010 TOTAL				4	13	7	5
0020	107+64	71' LT	PILGRIM	-	-	1	-
0020	108+33	38' LT	PILGRIM	-	1	-	1
0020	108+70	5' RT	PILGRIM	-	1	-	-
0020	108+74	67' LT	PILGRIM	-	-	1	-
0020	108+75	29' LT	PILGRIM	-	-	1	-
0020	108+77	13' RT	PILGRIM	-	-	1	-
0020	108+81	11' LT	PILGRIM	-	-	1	-
0020	207+58	27' RT	MENOMONEE	-	-	1	-
0020	207+60	18' RT	MENOMONEE	-	1	-	-
0020	207+60	20' LT	MENOMONEE	-	-	1	-
CATEGORY 0020 TOTAL				0	3	7	1
PROJECT 2782-13-70 TOTAL				4	16	14	6

PIPE UNDERDRAIN ITEMS

STATION	OFFSET	LOCATION	310.0110 BASE AGGREGATE OPEN GRADED TON	612.0104 PIPE UNDERDRAIN 4-INCH LF	645.0111 GEOTEXTILE FABRIC TYPE DF SCHEDULE A SY
309+15 - 310+15	LT	APPLETON AVE	20	105	75
PROJECT 2782-13-70 TOTAL			20	105	75

CURB RAMP DETECTABLE WARNING FIELD

CATEGORY	LOCATION	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF	NOTES
STAGE 1			
0010	APPLETON / MENOMONEE NORTH MEDIAN	29	RECTANGULAR
0010	APPLETON / MENOMONEE SOUTH MEDIAN	31	RECTANGULAR
0010	APPLETON / PILGRIM EAST MEDIAN	31	RECTANGULAR
0010	APPLETON / PILGRIM WEST MEDIAN	32	RECTANGULAR
STAGE 1 SUBTOTAL		123	
STAGE 2			
0010	APPLETON / MENOMONEE NW QUAD	17	RADIAL
0010	APPLETON / MENOMONEE NW QUAD PORKCHOP	46	RECTANGULAR & RADIAL
0010	APPLETON / MENOMONEE SW QUAD	27	RECTANGULAR
0010	APPLETON / MENOMONEE NE QUAD	29	RECTANGULAR
0010	APPLETON / MENOMONEE SE QUAD	20	RECTANGULAR
0010	APPLETON / PILGRIM SE QUAD	17	RADIAL
0010	APPLETON / PILGRIM SE QUAD PORKCHOP	36	RECTANGULAR
0010	APPLETON / PILGRIM SW QUAD	20	RECTANGULAR
0010	APPLETON / PILGRIM SW QUAD PORKCHOP	24	RECTANGULAR
0010	APPLETON / PILGRIM NE QUAD	20	RECTANGULAR
0010	APPLETON / PILGRIM NE QUAD PORKCHOP	24	RECTANGULAR
0010	APPLETON / PILGRIM NW QUAD	20	RECTANGULAR
STAGE 2 SUBTOTAL		300	
CATEGORY 0010 TOTAL		423	
STAGE 2			
0020	PILGRIM / MENOMONEE SW QUAD	20	RECTANGULAR
0020	PILGRIM / MENOMONEE SE QUAD	20	RECTANGULAR
0020	PILGRIM / MENOMONEE NW QUAD	20	RECTANGULAR
0020	PILGRIM / MENOMONEE NE QUAD	20	RECTANGULAR
STAGE 2 SUBTOTAL		80	
STAGE 3			
0020	PILGRIM / MENOMONEE SOUTH MEDIAN	24	RECTANGULAR
0020	PILGRIM / MENOMONEE NORTH MEDIAN	24	RECTANGULAR
STAGE 3 SUBTOTAL		48	
CATEGORY 0020 TOTAL		128	
PROJECT 2782-13-70 TOTAL		551	

MAINTENANCE AND REPAIR OF HAUL ROADS

LOCATION	618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS 2782-13-70 EACH
PROJECT 2782-13-70	1
PROJECT 2782-13-70 TOTAL	1

ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

STORM SEWER STRUCTURES

STRUCTURE NUMBER	STATION	OFFSET	RIM ELEVATION	INVERT ELEVATION	STRUCTURE DEPTH	MANHOLE COVERS TYPE J-S	INLET COVERS TYPE C	INLET COVERS TYPE H	MANHOLES 4-FT DIAMETER	MANHOLES 5-FT DIAMETER	MANHOLES 6-FT DIAMETER	CATCH BASINS 4-FT DIA	CATCH BASINS 2x3-FT	NOTES
						611.0535	611.0612	611.0624	611.2004	611.2005	611.2006	611.1004	611.1230	
						EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	
100	106+38.89	30.88' LT	793.25	788.20	5.05	1	-	-	-	-	1	-	-	A
E200	104+48.85	29.43' LT	796.40	793.20	-	-	-	-	-	-	-	-	-	-
E201	104+64.00	34.59' LT	796.00	790.66	-	-	-	1	-	-	-	-	-	B
101	104+38.85	11.29' RT	796.35	792.01	4.34	1	-	-	1	-	-	-	-	A
102	104+29.23	15.56' RT	796.60	792.21	6.39	-	-	1	-	-	-	1	-	-
E202	104+38.85	11.29' RT	795.91	792.01	-	-	-	-	-	-	-	-	-	-
103	106+49.40	13.50' RT	792.06	788.12	5.94	-	-	1	-	-	-	-	1	-
E203	106+49.00	4.00' RT	791.80	784.60	7.20	-	-	-	-	-	-	-	-	-
104	106+50.94	19.50' LT	792.91	788.99	5.92	-	-	1	-	-	-	1	-	-
E204	106+38.89	30.90' LT	793.05	788.20	-	-	-	-	-	-	-	-	-	-
105	107+33.65	13.50' RT	791.28	787.72	5.56	-	-	1	-	-	-	-	1	A
E205	107+32.66	7.79' RT	790.92	787.62	-	-	-	-	-	-	-	-	-	-
106	107+49.21	13.50' LT	791.53	787.65	5.88	-	-	1	-	-	-	1	-	-
E206	107+39.65	19.76' LT	791.03	786.03	-	-	-	-	-	-	-	-	-	-
107	107+66.36	31.22' LT	791.60	788.00	5.60	-	-	1	-	-	-	1	-	-
E207	107+68.41	42.46' LT	791.82	787.07	-	1	-	-	-	-	-	-	-	B
108	106+49.00	4.00' RT	792.23	784.60	7.63	1	-	-	-	1	-	-	-	A
109	107+39.65	19.76' LT	792.15	786.03	6.12	1	-	-	-	-	1	-	-	-
110	105+31.92	33.58' RT	795.20	788.16	7.04	-	-	1	-	-	-	-	1	-
E208	105+16.18	75.75' LT	796.33	781.82	-	1	-	-	-	-	-	-	-	B
111	106+58.57	104.39' LT	795.03	792.03	3.00	-	-	1	-	-	-	-	1	-
E209	106+67.40	97.95' LT	794.76	790.00	-	-	-	-	-	-	-	-	-	-
112	304+49.50	40.75' RT	801.62	797.90	3.72	-	-	1	-	-	-	-	1	-
E210	304+79.81	51.80' RT	801.56	791.54	-	1	-	-	-	-	-	-	-	B
113	106+67.39	97.96' LT	794.80	788.75	6.05	-	1	-	1	-	-	-	-	A
114	203+80.78	23.83' RT	802.90	798.45	4.45	-	-	1	1	-	-	-	-	A
E211	203+80.78	23.69' RT	802.81	798.45	-	-	-	-	-	-	-	-	-	-
115	204+24.19	25.83' RT	802.51	799.50	3.01	-	-	1	-	-	-	-	1	-
					TOTALS	**7**	**1**	**12**	**3**	**1**	**2**	**4**	**6**	

STORM SEWER PIPE

PIPE NUMBER	FROM	TO	INLET ELEVATION	DISCHARGE ELEVATION	PIPE SLOPE	NOTES	STORM SEWER PIPE CONCRETE CLASS III 12-INCH 608.0312 LF
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
P102	102	101	792.21	792.11	1.00%	-	10
-	-	-	-	-	-	-	-
P103	103	108	788.12	788.03	1.00%	-	9
-	-	-	-	-	-	-	-
P104	104	100	788.99	788.83	1.00%	-	16
-	-	-	-	-	-	-	-
P105	105	EX PIPE	787.72	FIELD VERIFY	FIELD VERIFY	A	6
-	-	-	-	-	-	-	-
P106	106	109	787.65	787.54	1.00%	-	11
-	-	-	-	-	-	-	-
P107	107	106	788.00	787.75	1.00%	-	25
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
P110	110	E208	788.16	788.00	1.00%	-	16
-	-	-	-	-	-	-	-
P111	111	113	792.03	791.92	1.00%	-	11
-	-	-	-	-	-	-	-
P112	112	E210	797.90	797.79	1.00%	-	11
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
P115	115	114	799.50	799.06	1.00%	-	44
					TOTALS		**159**

ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED OTHERWISE

NOTES

A. CONNECT TO EXISTING PIPE, VERIFY INVERT/S IN THE FIELD.

B. REMOVE EXISTING COVER, REPLACE WITH COVER SHOWN IN TABLE.

MOBILIZATION

LOCATION	619.1000 MOBILIZATION EACH
PROJECT 2782-13-70	1.0
PROJECT 2782-13-70 TOTAL	1.0

DUST CONTROL

LOCATION	623.0200 DUST CONTROL SURFACE TREATMENT SY
UNDISTRIBUTED	1650
PROJECT 2782-13-70 TOTAL	1650

WATER

LOCATION	624.0100 WATER MGAL	631.0300 SOD WATER MGAL
AGGREGATE COMPACTION	3	--
SODDED AREAS	--	25
PROJECT 2782-13-70 TOTAL	3	25

CONCRETE MEDIAN SLOPED NOSE

CATEGORY	STATION	OFFSET	LOCATION	620.0300 CONCRETE MEDIAN SLOPED NOSE SF	NOTES
STAGE 1					
0010	105+14	18' RT	PILGRIM	74	TYPE 1
0010	105+87	75' LT	PILGRIM	45	TYPE 2 (MOD)
0010	305+90	5' LT	APPLETON	65	TYPE 1
0010	307+10	5' LT	APPLETON	46	TYPE 2 (MOD)
STAGE 1 SUBTOTAL				230	
STAGE 2					
0010	104+22	19' RT	PILGRIM	33	TYPE 2 (MOD)
0010	104+60	16' RT	PILGRIM	33	TYPE 2 (MOD)
0010	105+40	62' RT	PILGRIM	53	TYPE 1
0010	105+60	130' LT	PILGRIM	53	TYPE 2 (MOD)
0010	304+55	44' RT	APPLETON	60	TYPE 1
0010	305+80	41' RT	APPLETON	41	TYPE 2 (MOD)
STAGE 2 SUBTOTAL				273	
STAGE 3					
0010	103+25	34' LT	PILGRIM	56	TYPE 1
0010	103+97	15' LT	PILGRIM	39	TYPE 1
0010	104+50	17' LT	PILGRIM	35	TYPE 2 (MOD)
0010	104+80	39' LT	PILGRIM	50	TYPE 1
0010	106+32	40' LT	PILGRIM	39	TYPE 2 (MOD)
0010	106+44	16' LT	PILGRIM	59	TYPE 1
0010	106+78	40' LT	PILGRIM	56	TYPE 1
STAGE 3 SUBTOTAL				334	
CATEGORY 0010 TOTAL				837	
STAGE 3					
0020	107+90	32' LT	PILGRIM	42	TYPE 2 (MOD)
0020	108+60	20' LT	PILGRIM	48	TYPE 2 (MOD)
STAGE 3 SUBTOTAL				90	
CATEGORY 0020 TOTAL				90	
PROJECT 2782-13-70 TOTAL				927	

RESTORATION

CATEGORY	STATION	ALIGNMENT	OFFSET	GENERAL LOCATION	625.0100 TOPSOIL SY	631.1000 SOD LAWN SY
0010	304+30	APPLETON	60' RT	MENO/APPL - NW CORNER	27	27
0010	304+65	APPLETON	105' RT	MENO/APPL - NW CORNER	45	45
0010	305+66	APPLETON	5' LT	MENO/APPL - NORTH MEDIAN	5	5
0010	306+75	APPLETON	65' LT	MENO/APPL - NE CORNER	28	28
0010	305+95 - 307+80	APPLETON	50' RT	MENO/APPL - SW CORNER	189	189
0010	307+30	APPLETON	0' RT	MENO/APPL - SOUTH MEDIAN	5	5
0010	308+00	APPLETON	65' LT	MENO/APPL - SE CORNER	67	67
0010	308+24 - 309+66	APPLETON	60' LT	APPLETON AVENUE	112	112
0010	309+12 - 310+15	APPLETON	20' LT	APPLETON MEDIAN	56	56
0010	309+75	APPLETON	70' LT	APPL/PILG - NW CORNER	56	56
0010	310+95	APPLETON	80' RT	APPL/PILG - SW CORNER	45	45
0010	311+20	APPLETON	90' RT	APPL/PILG - NE CORNER	50	50
0010	312+50	APPLETON	70' RT	APPL/PILG - SE CORNER	123	123
0010	311+85	APPLETON	0' RT	APPL/PILG - SOUTH MEDIAN	17	17
0010	107+20	PILGRIM	22' RT	PILGRIM ROAD - EAST	6	6
SUBTOTAL CATEGORY 0010					831	831
UNDISTRIBUTED					83	83
CATEGORY 0010 TOTAL					914	914
0020	207+65	MENOMONEE	30' RT	MENO/PILG - SW CORNER	28	28
0020	207+65	MENOMONEE	20' LT	MENO/PILG - NW CORNER	23	23
0020	208+95	MENOMONEE	30' RT	MENO/PILG - SE CORNER	14	14
0020	209+00	MENOMONEE	20' LT	MENO/PILG - NE CORNER	28	28
0020	208+45	MENOMONEE	50' LT	MENOMONEE AVE NORTH MEDIAN	23	23
SUBTOTAL CATEGORY 0020					116	116
UNDISTRIBUTED					12	12
CATEGORY 0020 TOTAL					128	128
PROJECT 2782-13-70 TOTAL					1,042	1,042

ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	H [IN.]	637.2210 SIGNS TYPE II REFLC H [SF]	637.2230 SIGNS TYPE II REFLC F [SF]	637.2215 SIGNS TYPE II REFLC H FOLDING [SF]	638.2602 REMOVING SIGNS TYPE II [EA]	638.3000 REMOVING SMALL SIGN SUPPORTS [EA]	634.0618 WOOD POSTS 4"X 6"x18' [EA]	634.0814 TUBULAR STEEL POSTS 2"X2"X14' [EA]	638.2102 MOVE SIGNS TYPE II [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
1	R3-7R(3)	--	36	x	36	9.000	--	--	--	--	--	--	--	--	MOUNT ON LIGHT POLE
1A	--	AT INTERSECTION	36	x	12	3.000	--	--	--	--	--	--	--	#1	--
2	R3-7R(3)	--	36	x	36	9.000	--	--	--	--	--	1	--	--	--
3	R5-1(2M)	--	36	x	36	9.000	--	--	--	--	--	1	--	--	DO NOT INSTALL BEHIND STOP SIGN
4	R1-1(2M)	--	36	x	36	7.460	--	--	1	1	--	1	--	--	ALSO REMOVE R5-1
5	W12-1D(2S)	--	24	x	24	--	4.000	--	--	--	--	1	--	--	2' MOUNT HEIGHT
6	R3-4(2S)	--	24	x	24	4.000	--	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE
7	R1-1F(2M)	--	36	x	36	--	--	7.460	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
8	R4-7(2M)	--	24	x	30	5.000	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
9	M1-94S	[175] APPLETON AVE	102	x	18	12.750	--	--	--	--	--	--	--	--	MOUNT ON MAST ARM
10	R6-2L(2M)	--	30	x	36	7.500	--	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE
11	J4-1(2S)	--	24	x	36	6.000	--	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE
	M3-1	NORTH	24	x	12										
	M1-6	STH 175	24	x	24										
12	M1-94H	MENOMONEE AVE	102	x	18	12.750	--	--	1	--	--	--	--	--	MOUNT ON MAST ARM
13	R6-3(2M)	--	30	x	24	5.000	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
14	R1-1F(2M)	--	36	x	36	--	--	7.460	1	--	--	--	--	--	REMOVE R3-4; MOUNT ON SIGNAL POLE
15	R5-1(2M)	--	36	x	36	9.000	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
16	M1-94S	[175] APPLETON AVE	102	x	18	12.750	--	--	1	--	--	--	--	--	MOUNT ON MAST ARM
17	R1-1F(2M)	--	36	x	36	--	--	7.460	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
18	--	NO PARKING ANY TIME	--	x	--	--	--	--	--	1	--	1	1	--	--
19	J4-1(2S)	--	24	x	36	6.000	--	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE
	M3-1	NORTH	24	x	12										
	M1-6	STH 175	24	x	24										
20	R6-2L(2M)	--	30	x	36	7.500	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
21	M1-94H	PILGRIM RD	78	x	18	9.750	--	--	1	--	--	--	--	--	MOUNT ON MAST ARM
22	R3-4(2S)	--	24	x	24	4.000	--	--	1	--	--	1	--	--	--
23	R5-1(2M)	--	36	x	36	9.000	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
24	R1-1F(2M)	--	36	x	36	--	--	7.460	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
25	R4-7(2M)	--	24	x	30	5.000	--	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE
26	W12-1D(2S)	--	24	x	24	--	4.000	--	--	--	--	1	--	--	2' MOUNT HEIGHT
27	R6-3(2M)	--	30	x	24	5.000	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
28	R1-1F(2M)	--	36	x	36	--	--	7.460	--	--	--	--	--	--	MOUNT ON SIGNAL POLE

ALL SIGNING ITEMS ON THIS PAGE
CATEGORY 0010

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	H [IN.]	637.2210 SIGNS TYPE II REFLC H [SF]	637.2230 SIGNS TYPE II REFLC F [SF]	637.2215 SIGNS TYPE II REFLC H FOLDING [SF]	638.2602 REMOVING SIGNS TYPE II [EA]	638.3000 REMOVING SMALL SIGN SUPPORTS [EA]	634.0618 WOOD POSTS 4"X 6"x18' [EA]	634.0814 TUBULAR STEEL POSTS 2"X2"X14' [EA]	638.2102 MOVE SIGNS TYPE II [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
29	R3-7R(3)	--	36	x	36	9.000	--	--	--	--	1	--	--	--	--
30	R7-1D(2S)	--	18	x	24	3.000	--	--	--	--	--	--	--	#29	--
31	R3-4(2S)	--	24	x	24	4.000	--	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE
32	R1-1F(2M)	--	36	x	36	--	--	7.460	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
33	R4-7(2M)	--	24	x	30	5.000	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
34	--	NO PARKING ANY TIME	--	x	--	--	--	--	1	1	--	--	--	--	--
35	M1-94H	MENOMONEE AVE	108	x	18	13.500	--	--	1	--	--	--	--	--	MOUNT ON MAST ARM
36	R6-2L(2M)	--	30	x	36	7.500	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
37	J4-1(2S)	--	24	x	36	6.000	--	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE
	M3-3	SOUTH	24	x	12										
	M1-6	STH 175	24	x	24										
38	R6-3(2M)	--	30	x	24	5.000	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
39	R1-1F(2M)	--	36	x	36	--	--	7.460	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
40	R1-1F(2M)	--	36	x	36	--	--	7.460	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
41	R5-1(2M)	--	36	x	36	9.000	--	--	--	--	--	--	--	--	--
42	R5-1(2M)	--	36	x	36	9.000	--	--	1	1	--	1	--	--	--
43	R1-1(2M)	--	36	x	36	7.460	--	--	1	--	--	1	--	--	--
44	R5-1(2M)	--	36	x	36	9.000	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
45	R6-3(2M)	--	30	x	24	5.000	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
46	R1-1F(2M)	--	36	x	36	--	--	7.460	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
47	W12-1D(2S)	--	24	x	24	--	4.000	--	--	--	--	1	--	--	2' MOUNT HEIGHT
48	R3-4(2S)	--	24	x	24	4.000	--	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE
49	R1-1F(2M)	--	36	x	36	--	--	7.460	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
50	M1-94S	[175] APPLETON AVE	108	x	18	13.500	--	--	1	--	--	--	--	--	MOUNT ON MAST ARM
51	R4-7(2M)	--	24	x	30	5.000	--	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE
52	M1-94S	[175] APPLETON AVE	108	x	18	13.500	--	--	1	--	--	--	--	--	MOUNT ON MAST ARM
53	M1-94H	PILGRIM RD	78	x	18	9.750	--	--	1	--	--	--	--	--	MOUNT ON MAST ARM
54	R1-1(2M)	--	36	x	36	7.460	--	--	1	--	--	1	--	--	--
55	R6-2L(2M)	--	24	x	30	5.000	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
56	R3-4(2S)	--	24	x	24	4.000	--	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE
57	R1-1F(2M)	--	36	x	36	--	--	7.460	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
58	M1-94H	MENOMONEE AVE	108	x	18	13.500	--	--	1	--	--	--	--	--	MOUNT ON MAST ARM
59	M1-94H	MENOMONEE AVE	108	x	18	13.500	--	--	1	--	--	--	--	--	MOUNT ON MAST ARM
60	R3-4(2S)	--	24	x	24	4.000	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
61	R1-1F(2M)	--	36	x	36	--	--	7.460	--	--	--	--	--	--	MOUNT ON SIGNAL POLE

ALL SIGNING ITEMS ON THIS PAGE
CATEGORY 0010
SHEET 2 OF 4

3

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	H [IN.]	637.2210 SIGNS TYPE II REFLC H [SF]	637.2230 SIGNS TYPE II REFLC F [SF]	637.2215 SIGNS TYPE II REFLC H FOLDING [SF]	638.2602 REMOVING SIGNS TYPE II [EA]	638.3000 REMOVING SMALL SIGN SUPPORTS [EA]	634.0618 WOOD POSTS 4"X 6"x18' [EA]	634.0814 TUBULAR STEEL POSTS 2"X2"X14' [EA]	638.2102 MOVE SIGNS TYPE II [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
62	R4-7(2M)	--	24	x	30	5.000	--	--	1	1	--	1	--	--	ALSO REMOVE R3-2
63	R3-2(2S)	--	24	x	24	4.000	--	--	--	--	--	--	--	#63	--
64	W12-1D(2S)	--	24	x	24	--	4.000	--	--	--	--	1	--	--	2' MOUNT HEIGHT
65	R1-1F(2M)	--	36	x	36	--	--	7.460	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
66	R5-1(2M)	--	36	x	36	9.000	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
67	R1-1(2M)	--	36	x	36	7.460	--	--	1	1	--	1	--	--	--
68	R5-1(2M)	--	36	x	36	9.000	--	--	--	--	--	1	--	--	--
69	R4-7(2M)	--	24	x	30	5.000	--	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE
70	R3-4(2S)	--	24	x	24	4.000	--	--	1	--	--	--	--	#68	BACK OF SIGN #68
71	R6-3(2M)	--	30	x	24	5.000	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
72	R1-1F(2M)	--	36	x	36	--	--	7.460	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
73	R6-2L(2M)	--	30	x	36	7.500	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
74	R1-1F(2M)	--	36	x	36	--	--	7.460	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
75	R5-1(2M)	--	36	x	36	9.000	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
76	R3-4(2S)	--	24	x	24	4.000	--	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE
77	R5-1(2M)	--	36	x	36	9.000	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
78	R4-7(2M)	--	24	x	30	5.000	--	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE
79	R6-3(2M)	--	30	x	24	5.000	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
80	R1-1F(2M)	--	36	x	36	--	--	7.460	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
81	R6-2L(2M)	--	30	x	36	7.500	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
82	R3-4(2S)	--	24	x	24	4.000	--	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE
83	R4-7(2M)	--	24	x	30	5.000	--	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE
84	R4-7(2M)	--	24	x	30	5.000	--	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE
85	R1-1F(2M)	--	36	x	36	--	--	7.460	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
86	R1-1F(2M)	--	36	x	36	--	--	7.460	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
87	R7-1D(2S)	--	18	x	24	3.000	--	--	1	1	--	1	--	--	--
88	R5-1(2M)	--	36	x	36	9.000	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
89	R5-1(2M)	--	36	x	36	9.000	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
90	R1-1F(2M)	--	36	x	36	--	--	7.460	--	--	--	--	--	--	MOUNT ON SIGNAL POLE
91	R1-1F(2M)	--	36	x	36	--	--	7.460	--	--	--	--	--	--	MOUNT ON SIGNAL POLE

ALL SIGNING ITEMS ON THIS PAGE
CATEGORY 0010

SHEET 3 OF 4

3

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	H [IN.]	637.2210 SIGNS TYPE II REFLC H [SF]	637.2230 SIGNS TYPE II REFLC F [SF]	637.2215 SIGNS TYPE II REFLC H FOLDING [SF]	638.2602 REMOVING SIGNS TYPE II [EA]	638.3000 REMOVING SMALL SIGN SUPPORTS [EA]	634.0618 WOOD POSTS 4"X 6"x18' [EA]	634.0814 TUBULAR STEEL POSTS 2"X2"X14' [EA]	638.2102 MOVE SIGNS TYPE II [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
92	R3-4(2S)	--	24	x	24	4.000	--	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE
93	R10-50L(2M)	--	30	x	36	7.500	--	--	--	--	--	--	--	--	MOUNT HIGH ON SIGNAL POLE-SHEET 2
94	R10-50L(2M)	--	30	x	36	7.500	--	--	--	--	--	--	--	--	MOUNT HIGH ON SIGNAL POLE-SHEET 2
95	R10-50L(2M)	--	30	x	36	7.500	--	--	--	--	--	--	--	--	MOUNT HIGH ON SIGNAL POLE-SHEET 2
96	R10-50L(2M)	--	30	x	36	7.500	--	--	--	--	--	--	--	--	MOUNT HIGH ON SIGNAL POLE-SHEET 3
97	R10-50L(2M)	--	30	x	36	7.500	--	--	--	--	--	--	--	--	MOUNT HIGH ON SIGNAL POLE-SHEET 7
98	R10-50L(2M)	--	30	x	36	7.500	--	--	--	--	--	--	--	--	MOUNT HIGH ON SIGNAL POLE-SHEET 7
99	R10-50L(2M)	--	30	x	36	7.500	--	--	--	--	--	--	--	--	MOUNT HIGH ON SIGNAL POLE-SHEET 8
100	R3-7R(3)	--	36	x	36	9.000	--	--	--	--	--	1	--	--	SHEET 1
100A	--	AT INTERSECTION	36	x	12	3.000	--	--	--	--	--	--	--	#100	SHEET 1
101	R3-7R(3)		36	X	36	9.000		--				1			SHEET 3
102	R3-7R(3)		36	X	36	9.000		--				1			SHEET 3
	TOTALS					561.090	16.000	149.200	37	7	1	19	1		

3

ALL SIGNING ITEMS ON THIS PAGE
CATEGORY 0010

SHEET 4 OF 4

3

INLET PROTECTION

CATEGORY	INTERSECTION	628.7005 INLET PROTECTION TYPE A EA	628.7015 INLET PROTECTION TYPE C EA
0010	APPLETON AVE / PILGRIM RD	6	24
0010	APPLETON AVE / MENOMONEE AVE	3	9
0010	NEAR PILGRIM RD / MENOMONEE AVE	2	3
CATEGORY 0010 TOTAL		11	36
0020	PILGRIM RD / MENOMONEE AVE	1	9
CATEGORY 0020 TOTAL		1	9
PROJECT 2782-13-70 TOTAL		12	45

FIELD OFFICE

LOCATION	642.5201 FIELD OFFICE TYPE C EACH
PROJECT 2782-13-70	1.0
PROJECT 2782-13-70 TOTAL	1.0

TRAFFIC CONTROL

LOCATION	643.5000 TRAFFIC CONTROL EACH
PROJECT 2782-13-70	1.0
PROJECT 2782-13-70 TOTAL	1.0

3

PAVEMENT MARKINGS

CATEGORY	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH WHITE LF	646.1020 MARKING LINE EPOXY 4-INCH YELLOW LF	646.3020 MARKING LINE EPOXY 8-INCH SKIP - WHITE LF	646.3020 MARKING LINE EPOXY 8-INCH SOLID - WHITE LF	646.5020 MARKING ARROW EPOXY EA	646.5120 MARKING WORD EPOXY EA	646.7120 MARKING DIAGONAL EPOXY 12-INCH WHITE LF	646.7420 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH WHITE LF	646.6120 MARKING STOP LINE EPOXY 18-INCH WHITE LF	646.8120 MARKING CURB EPOXY YELLOW LF	646.8220 MARKING ISLAND NOSE EPOXY EA
0010	PILGRIM / APPLETON (SOUTH APPROACH)	85	--	--	308	2	--	--	206	58	40	3
0010	MENOMONEE TO PILGRIM	149	--	--	725	7	1	--	500	137	46	3
0010	PILGRIM / APPLETON (EAST APPROACH)	168	--	133	410	5	2	--	191	63	28	2
0010	APPLETON TO MENOMONEE (NORTH TO 107+80)	66	--	9	196	2	--	--	175	47	10	1
0010	MENOMONEE / APPLETON (WEST APPROACH)	--	150	--	--	--	--	290	124	31	--	--
0010	MENOMONEE / APPLETON (NORTH APPROACH)	148	--	59	392	4	2	--	313	73	15	3
0010	MENOMONEE / APPLETON (EAST APPROACH)	--	346	--	--	--	--	--	159	36	--	--
CATEGORY 0010 TOTAL		616	496	201	2,031	20	5	290	1,668	445	139	12
0020	MENOMONEE / PILGRIM	49	10	--	9	--	--	--	463	112	41	2
CATEGORY 0020 TOTAL		49	10	--	9	--	--	--	463	112	41	2
PROJECT 2782-13-70 TOTAL		1,171		2,241		20	5	290	2,131	557	180	14

ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

3

TRAFFIC CONTROL

STAGE	DURATION	643.0300 TRAFFIC CONTROL DRUMS		643.0410 TRAFFIC CONTROL BARRICADES TYPE II		643.0420 TRAFFIC CONTROL BARRICADES TYPE III		643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A		643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C		643.0800 TRAFFIC CONTROL ARROW BOARDS		643.0900 TRAFFIC CONTROL SIGNS		643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II		643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF	643.1050 TRAFFIC CONTROL SIGNS PCMS		646.9000 MARKING REMOVAL LINE 4-INCH	649.0105 TEMPORARY MARKING LINE PAINT 4-INCH		649.0150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH		649.0205 TEMPORARY MARKING LINE PAINT 8-INCH	649.0250 TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH	649.0805 TEMPORARY MARKING STOP LINE PAINT 18-INCH
		EACH**	DAY	EACH**	DAY	EACH**	DAY	EACH**	DAY	EACH**	DAY	EACH**	DAY	EACH**	DAY	CYCLES	EACH		EACH**	DAY*	EACH	WHITE LF	YELLOW LF	WHITE LF	YELLOW LF	LF	LF	LF
1	24	170	4,080	8	192	12	288	32	768	8	192	1	24	59	1,416	1	2	--	6	30	400	450	--	1,000	2,600	--	520	--
2	45	330	14,850	6	270	45	2,025	96	4,320	36	1,620	4	180	96	4,320	1	2	74	6	30	150	--	--	3,950	--	--	1,100	--
3	23	102	2,346	8	184	12	276	32	736	15	345	2	46	48	1,104	1	2	--	6	30	160	3,000	600	--	1,250	1,800	300	500
4	17	--	--	--	--	--	--	--	--	--	--	--	--	63	1,071	1	2	--	6	30	--	3,000	600	--	--	1,800	--	500
UNDISTRIBUTED			3,191		97		388		874		324		38		1,187		2	10		10	178	968	180	743	578	540	288	150
PROJECT 2782-13-70 TOTAL			24,467		743		2,977		6,698		2,481		288		9,098		10	84		130	888	8,798		10,121		4,140	2,208	1,150

* PCMS SIGNS IN OPERATION FOR FIVE DAYS PRIOR TO THE COMMENCEMENT OF EACH STAGE
**FOR INFORMATION ONLY

ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

REMOVE CONCRETE BASES

SIGNAL BASE NO.	204.0195* REMOVING CONCRETE BASES EACH
SB1	1
SB2	1
SB3	1
SB4	1
SB5	1
SB6	1
SB7	1
SB8	1
TOTAL	8

CONDUIT

FROM	TO	652.0225* CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	652.0235* CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH L.F.	652.0615* CONDUIT SPECIAL 3-INCH L.F.
CB1	PB1	--	60	--
PB1	SB1	5	--	--
PB1	PB2	--	--	190
PB2	SB2	10	--	--
PB2	PB3	--	--	200
PB3	SB3	--	40	--
PB3	SB4	15	--	--
PB3	PB4	--	110	--
PB4	SB5	10	--	--
PB4	PB5	--	--	170
PB5	SB6	--	15	--
PB5	SB7	25	--	--
PB5	PB6	--	--	190
PB6	SB8	15	--	--
PB6	PB7	--	--	170
PB7	SB9	--	35	--
PB7	SB10	15	--	--
PB7	PB8	--	140	--
PB8	SB11	15	--	--
PB8	PB9	--	--	180
PB9	SB12	10	--	--
PB9	CB1	--	--	45
TOTAL		120	400	1145

*QUANTITY SHOWN ELSEWHERE ON PLAN

APPLETON AVENUE & MENOMONEE AVENUE

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

REMOVING TRAFFIC SIGNALS

LOCATION	204.9105.S.001 REMOVING TRAFFIC SIGNALS L.S.
APPLETON AVENUE & MENOMONEE AVENUE	1
TOTAL	1

REMOVE PULL BOXES

PULL BOX NO.	653.0905* REMOVING PULL BOXES EACH
PB1	1
PB2	1
PB3	1
PB4	1
PB5	1
PB6	1
PB7	1
PB8	1
TOTAL	8

3

PULL BOXES

PULL BOX NO.	LOCATION STA	LOCATION OFFSET	653.0140* PULL BOXES STEEL 24x42-INCH EACH
PB1	307+97.5	65.8' LT	1
PB2	307+27.6	02.2' LT	1
PB3	306+53.4	57.7' RT	1
PB4	203+86.6	30.8' RT	1
PB5	203+27.4	27.5' LT	1
PB6	305+86.6	04.1' LT	1
PB7	306+43.4	63.1' LT	1
PB8	205+62.2	26.3' LT	1
PB9	206+32.3	29.4' RT	1
		TOTAL	9

CONCRETE BASES

SIGNAL BASE NO.	LOCATION STA	LOCATION OFFSET	654.0101* CONCRETE BASES TYPE 1 EACH	654.0102* CONCRETE BASES TYPE 2 EACH	654.0110* CONCRETE BASES TYPE 10 EACH	SPV.0060.010 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL (MOD.) EACH	SPV.0060.001 TYPE 9 & 10 SPECIAL TRAFFIC SIGNAL BASE EACH
CB1	206+41.4	41.3' LT	--	--	--	1	--
SB1	307+93.3	66.3' LT	--	1	--	--	--
SB2	307+22.1	01.1' LT	--	1	--	--	--
SB3	306+90.3	44.5' RT	--	--	1	--	--
SB4	306+58.4	47.5' RT	--	1	--	--	--
SB5	203+95.0	27.2' RT	--	1	--	--	--
SB6	203+41.8	28.4' LT	--	--	1	--	--
SB7	305+15.9	54.4' RT	1	--	--	--	--
SB8	305+77.1	09.7' LT	--	1	--	--	--
SB9	306+11.5	62.9' LT	--	--	--	--	1
SB10	306+54.4	63.0' LT	--	1	--	--	--
SB11	205+50.2	27.5' LT	--	1	--	--	--
SB12	206+23.2	29.9' RT	--	--	1	--	--
		TOTAL	1	7	3	1	1

*QUANTITY SHOWN ELSEWHERE ON PLAN

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0240* CABLE TRAFFIC SIGNAL 7-14 AWG L.F.	655.0260* CABLE TRAFFIC SIGNAL 12-14 AWG L.F.
CB1	SB1	--	70
CB1	SB2	--	170
CB1	SB3	300	--
CB1	SB4	275	--
CB1	SB5	--	325
CB1	SB6	--	415
CB1	SB7	--	425
CB1	SB8	--	320
CB1	SB9	255	--
CB1	SB10	235	--
CB1	SB11	--	165
CB1	SB12	--	70
	TOTAL	1065	1960

3

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0230* CABLE TRAFFIC SIGNAL 5-14 AWG L.F.	655.0240* CABLE TRAFFIC SIGNAL 7-14 AWG L.F.
SB1	HEAD 7	20	--
SB1	HEAD 15	20	--
SB1	HEAD 25	20	--
SB2	HEAD 16	20	--
SB2	HEAD 26	20	--
SB2	HEAD 27	20	--
SB3	HEAD 13	60	--
SB3	HEAD 14	45	--
SB4	HEAD 28	20	--
SB5	HEAD 1	20	--
SB5	HEAD 17	20	--
SB6	HEAD 5	50	--
SB6	HEAD 6	40	--
SB6	HEAD 19	20	--
SB7	HEAD 10	--	25
SB7	HEAD 12	20	--
SB7	HEAD 18	20	--
SB8	HEAD 11	--	25
SB8	HEAD 20	20	--
SB8	HEAD 21	20	--
SB9	HEAD 8	65	--
SB9	HEAD 9	55	--
SB10	HEAD 22	20	--
SB11	HEAD 4	20	--
SB11	HEAD 23	20	--
SB12	HEAD 2	50	--
SB12	HEAD 3	40	--
SB12	HEAD 24	20	--
	TOTAL	765	50

*** QUANTITY SHOWN ELSEWHERE ON PLAN**

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0515* ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.
CB1	SB1	40
SB1	SB2	125
SB2	SB3	165
SB3	SB4	70
SB4	SB5	95
SB5	SB6	125
SB6	SB7	55
SB7	SB8	150
SB8	SB9	150
SB9	SB10	65
SB10	SB11	115
SB11	SB12	130
SB12	CB1	40
CB1	PB1	35
SB2	PB2	25
SB4	PB3	30
SB5	PB4	25
SB6	PB5	30
SB8	PB6	30
SB10	PB7	30
SB11	PB8	30
SB12	PB9	25
	TOTAL	1585

*QUANTITY SHOWN ELSEWHERE ON PLAN

3

3

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0320* CABLE TYPE UF 2-10 AWG GROUNDED L.F.	655.0615* ELECTRICAL WIRE LIGHTING 10 AWG L.F.
CB1	SB1	70	--
SB1	LUMIN 1	--	120
SB1	SB2	155	--
SB2	LUMIN 2	--	120
SB2	SB4	170	--
SB4	LUMIN 3	--	120
SB4	SB5	125	--
SB5	LUMIN 4	--	120
SB5	SB6	155	--
SB6	LUMIN 5	--	120
SB6	LUMIN 6	--	120
CB1	SB12	70	--
SB12	LUMIN 7	--	120
SB12	SB11	160	--
SB11	LUMIN 8	--	120
SB11	SB10	145	--
SB10	LUMIN 9	--	120
SB10	SB8	160	--
SB8	LUMIN 10	--	120
	TOTAL	1210	1200

*** QUANTITY SHOWN ELSEWHERE ON PLAN**

3

3

	POLES													
	657.0100*	657.0255*	657.0315*	657.0345*	657.0350*	657.0425*	657.0525*	657.0530*	657.0540*	657.0609*	657.0806*	658.0500*	659.1125*	SPV.0060.002
SIGNAL BASE NO.	PEDESTAL BASES EACH	TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	POLES TYPE 4 EACH	POLES TYPE 9 EACH	POLES TYPE 10 EACH	TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	MONOTUBE ARMS 25-FT EACH	MONOTUBE ARMS 30-FT EACH	MONOTUBE ARMS 40-FT EACH	LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH	LUMINAIRE ARMS STEEL 6-FT EACH	PEDESTRIAN PUSH BUTTONS EACH	LUMINAIRES UTILITY LED C EACH	FURNISH AND INSTALL POLES TYPE 9 SPECIAL EACH
SB1	--	1	1	--	--	--	--	--	--	1	--	1	1	--
SB2	--	1	1	--	--	--	--	--	--	1	--	1	1	--
SB3	--	--	--	1	--	--	--	1	--	--	--	--	--	--
SB4	--	1	1	--	--	--	--	--	--	1	--	1	1	--
SB5	--	1	1	--	--	--	--	--	--	1	--	1	1	--
SB6	--	--	--	--	1	--	1	--	--	--	2	1	2	--
SB7	1	--	--	--	--	1	--	--	--	--	--	1	--	--
SB8	--	--	1	--	--	--	--	--	--	1	--	1	1	--
SB9	--	--	--	--	--	--	--	--	1	--	--	--	--	1
SB10	--	1	1	--	--	--	--	--	--	1	--	1	1	--
SB11	--	1	1	--	--	--	--	--	--	1	--	1	1	--
SB12	--	--	--	--	1	--	1	--	--	--	1	1	1	--
TOTAL	1	6	7	1	2	1	2	1	1	7	3	10	10	1

*** QUANTITY SHOWN ELSEWHERE ON PLAN**

APPLETON AVENUE & MENOMONEE AVENUE

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

		FACES			
		658.0173* TRAFFIC SIGNAL FACE	658.0174* TRAFFIC SIGNAL FACE	658.0416* PEDESTRIAN SIGNAL FACE	INCIDENTAL ITEM**
SIGNAL BASE NO.	SIGNAL HEAD NO.	3S 12-INCH EACH	4S 12-INCH EACH	16-INCH EACH	RETROREFLECTIVE BACKPLATE EACH
SB5	HEAD 1	1	--	--	1
SB12	HEAD 2	1	--	--	1
SB12	HEAD 3	1	--	--	1
SB11	HEAD 4	1	--	--	--
SB6	HEAD 5	1	--	--	--
SB6	HEAD 6	1	--	--	--
SB1	HEAD 7	1	--	--	--
SB9	HEAD 8	1	--	--	--
SB9	HEAD 9	1	--	--	--
SB7	HEAD 10	--	1	--	--
SB8	HEAD 11	--	1	--	--
SB7	HEAD 12	1	--	--	1
SB3	HEAD 13	1	--	--	1
SB3	HEAD 14	1	--	--	1
SB1	HEAD 15	1	--	--	1
SB2	HEAD 16	1	--	--	1
SB5	HEAD 17	--	--	1	--
SB7	HEAD 18	--	--	1	--
SB6	HEAD 19	--	--	1	--
SB8	HEAD 20	--	--	1	--
SB8	HEAD 21	--	--	1	--
SB10	HEAD 22	--	--	1	--
SB11	HEAD 23	--	--	1	--
SB12	HEAD 24	--	--	1	--
SB1	HEAD 25	--	--	1	--
SB2	HEAD 26	--	--	1	--
SB2	HEAD 27	--	--	1	--
SB4	HEAD 28	--	--	1	--
	TOTAL	14	2	12	8

* QUANTITY SHOWN ELSEWHERE ON PLAN

** ITEM INCIDENTAL TO SIGNAL FACE

TRAFFIC SIGNAL MOUNTING HARDWARE

LOCATION	658.5069.001 SIGNAL MOUNTING HARDWARE L.S.
APPLETON AVENUE & MENOMONEE AVENUE	1
TOTAL	1

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS

LOCATION	661.0200.001 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS L.S.
APPLETON AVENUE & MENOMONEE AVENUE	1
TOTAL	1

3

APPLETON AVENUE & MENOMONEE AVENUE

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

TRAFFIC SIGNAL CABINET

	SPV.0060.003 FURNISH AND INSTALL TRAFFIC SIGNAL CABINET, CONTROLLER, AND BATTERY BACKUP SYSTEM
LOCATION	EACH
APPLETON AVENUE & MENOMONEE AVENUE	1
TOTAL	1

GPS DEVICE AND RECEIVER

	SPV.0060.009 FURNISH AND INSTALL GPS DEVICE AND GPS RECEIVER
LOCATION	EACH
APPLETON AVENUE & MENOMONEE AVENUE	1
TOTAL	1

3

VIDEO DETECTION SYSTEM

	SPV.0105.001 VIDEO VEHICLE DETECTION SYSTEM
LOCATION	L.S.
APPLETON AVENUE & MENOMONEE AVENUE	1
TOTAL	1

TEMPORARY NON-INTRUSIVE VEHICLE DETECTION SYSTEM FOR INTERSECTIONS

	SPV.0105.004 TEMPORARY NON-INTRUSIVE VEHICLE DETECTION SYSTEM FOR INTERSECTIONS
LOCATION	L.S.
APPLETON AVENUE & MENOMONEE AVENUE	1
TOTAL	1

PILGRIM ROAD & MENOMONEE AVENUE

ALL ITEMS ARE CATEGORY 0020 UNLESS OTHERWISE NOTED

3

3

REMOVE CONCRETE BASES

SIGNAL BASE NO.	204.0195* REMOVING CONCRETE BASES EACH
CB1	1
SB1	1
SB2	1
SB3	1
SB4	1
SB5	1
SB6	1
SB7	1
SB8	1
SB9	1
SB10	1
TOTAL	11

REMOVING TRAFFIC SIGNALS

LOCATION	204.9105.S.002 REMOVING TRAFFIC SIGNALS L.S.
PILGRIM ROAD & MENOMONEE AVENUE	1
TOTAL	1

CONDUIT

FROM	TO	652.0225* CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	652.0235* CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH L.F.	652.0615* CONDUIT SPECIAL 3-INCH L.F.
CB2	PB1	--	30	--
PB1	PB2	--	50	--
PB2	SB1	15	--	--
PB2	PB3	--	--	110
PB3	SB2	10	--	--
PB3	PB4	--	110	--
PB4	SB3	10	--	--
PB4	PB5	--	--	110
PB5	SB4	10	--	--
PB5	PB6	--	--	90
PB6	SB5	10	--	--
PB6	PB7	--	--	80
PB7	SB6	5	--	--
PB7	PB8	--	--	110
PB8	SB7	5	--	--
PB8	PB9	--	80	--
PB9	SB8	10	--	--
PB9	PB10	--	--	80
PB10	SB9	15	--	--
PB10	PB11	--	--	120
PB11	SB10	15	--	--
PB11	SB11	10	--	--
PB11	PB12	--	60	--
PB12	CB2	--	30	--
TOTAL		115	360	700

*QUANTITY SHOWN ELSEWHERE ON PLAN

PULL BOXES

PULL BOX NO.	LOCATION STA	LOCATION OFFSET	653.0140* PULL BOXES STEEL 24x42-INCH EACH
PB1	207+49.2	51.7' RT	1
PB2	207+56.6	31.3' RT	1
PB3	207+57.3	23.1' LT	1
PB4	207+91.4	49.4' LT	1
PB5	108+76.2	21.7' LT	1
PB6	108+78.6	18.3' RT	1
PB7	208+97.8	21.9' LT	1
PB8	208+95.2	29.9' RT	1
PB9	107+71.3	15.3' RT	1
PB10	107+69.4	23.0' LT	1
PB11	207+80.1	56.6' RT	1
PB12	207+53.9	61.7' RT	1
		TOTAL	12

REMOVE PULL BOXES

PULL BOX NO.	653.0905* REMOVING PULL BOXES EACH
PB1	1
PB2	1
PB3	1
PB4	1
PB5	1
PB6	1
PB7	1
PB8	1
TOTAL	8

CONCRETE BASES

SIGNAL BASE NO.	LOCATION STA	OFFSET	654.0101* CONCRETE BASES TYPE 1 EACH	654.0102* CONCRETE BASES TYPE 2 EACH	654.0110* CONCRETE BASES TYPE 10 EACH	SPV.0060.010 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL (MOD.) EACH
CB2	207+48.4	59.2' RT	--	--	--	1
SB1	207+66.6	31.3' RT	1	--	--	--
SB2	207+67.1	24.5' LT	--	1	--	--
SB3	207+90.8	44.0' LT	--	1	--	--
SB4	108+69.6	21.0' LT	1	--	--	--
SB5	108+74.4	19.0' RT	--	--	1	--
SB6	208+96.8	25.1' LT	1	--	--	--
SB7	208+92.3	31.8' RT	--	1	--	--
SB8	107+80.3	17.6' RT	--	1	--	--
SB9	107+78.3	27.9' LT	1	--	--	--
SB10	207+79.8	46.1' RT	1	--	--	--
SB11	207+82.6	56.6' RT	--	--	1	--
		TOTAL	5	4	2	1

*QUANTITY SHOWN ELSEWHERE ON PLAN

PILGRIM ROAD & MENOMONEE AVENUE

ALL ITEMS ARE CATEGORY 0020 UNLESS OTHERWISE NOTED

3

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0240* CABLE TRAFFIC SIGNAL 7-14 AWG L.F.	655.0260* CABLE TRAFFIC SIGNAL 12-14 AWG L.F.
CB2	SB1	--	95
CB2	SB2	--	145
CB2	SB3	--	200
CB2	SB4	255	--
CB2	SB5	--	300
CB2	SB6	--	285
CB2	SB7	--	230
CB2	SB8	--	195
CB2	SB9	160	--
CB2	SB10	100	--
CB2	SB11	95	--
	TOTAL	610	1450

PILGRIM ROAD & MENOMONEE AVENUE

ALL ITEMS ARE CATEGORY 0020 UNLESS OTHERWISE NOTED

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0230* CABLE TRAFFIC SIGNAL 5-14 AWG L.F.	655.0240* CABLE TRAFFIC SIGNAL 7-14 AWG L.F.
SB1	HEAD 1	20	--
SB1	HEAD 5	20	--
SB1	HEAD 16	20	--
SB2	HEAD 6	45	--
SB2	HEAD 17	20	--
SB3	HEAD 11	--	25
SB3	HEAD 18	20	--
SB4	HEAD 8	--	25
SB5	HEAD 9	--	55
SB5	HEAD 10	40	--
SB5	HEAD 19	20	--
SB6	HEAD 2	20	--
SB6	HEAD 4	20	--
SB6	HEAD 20	20	--
SB7	HEAD 3	45	--
SB7	HEAD 21	20	--
SB8	HEAD 7	20	--
SB8	HEAD 14	20	--
SB8	HEAD 22	20	--
SB9	HEAD 15	20	--
SB10	HEAD 23	20	--
SB11	HEAD 12	55	--
SB11	HEAD 13	45	--
	TOTAL	530	105

*QUANTITY SHOWN ELSEWHERE ON PLAN

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0515* ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.
CB2	SB1	65
SB1	SB2	95
SB2	SB3	90
SB3	SB4	90
SB4	SB5	80
SB5	SB6	70
SB6	SB7	80
SB7	SB8	70
SB8	SB9	80
SB9	SB10	105
SB10	SB11	40
SB11	CB2	65
CB2	PB1	25
SB1	PB2	30
SB2	PB3	25
SB3	PB4	25
SB4	PB5	25
SB5	PB6	25
SB6	PB7	20
SB7	PB8	20
SB8	PB9	25
SB9	PB10	30
SB11	PB11	25
CB2	PB12	25
	TOTAL	1230

PILGRIM ROAD & MENOMONEE AVENUE

ALL ITEMS ARE CATEGORY 0020 UNLESS OTHERWISE NOTED

3

3

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0320* CABLE TYPE UF 2-10 AWG GROUNDED L.F.	655.0615* ELECTRICAL WIRE LIGHTING 10 AWG L.F.
CB2	SB2	145	--
SB2	LUMIN 1	--	145
SB2	SB3	120	--
SB3	LUMIN 2	--	120
SB3	SB5	165	--
SB5	LUMIN 3	--	120
CB2	SB11	95	--
SB11	LUMIN 4	--	120
SB11	SB8	165	--
SB8	LUMIN 5	--	120
SB8	SB7	100	--
SB7	LUMIN 6	--	145
	TOTAL	790	770

POLES

SIGNAL BASE NO.	657.0100* PEDESTAL BASES EACH	657.0255* TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0310* POLES TYPE 3 EACH	657.0315* POLES TYPE 4 EACH	657.0350* POLES TYPE 10 EACH	657.0430* TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	657.0420* TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	657.0425* TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH
SB1	1	--	--	--	--	--	1	--
SB2	--	--	1	--	--	--	--	--
SB3	--	1	--	1	--	--	--	--
SB4	1	--	--	--	--	--	--	1
SB5	--	--	--	--	1	--	--	--
SB6	1	--	--	--	--	--	1	--
SB7	--	--	1	--	--	--	--	--
SB8	--	1	--	1	--	--	--	--
SB9	1	--	--	--	--	--	--	1
SB10	1	--	--	--	--	1	--	--
SB11	--	--	--	--	1	--	--	--
TOTAL	5	2	2	2	2	1	2	2

*QUANTITY SHOWN ELSEWHERE ON PLAN

(CONTINUED ON THE NEXT PAGE)

3

3

POLES CONTINUED

SIGNAL BASE NO.	657.0609* LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH	657.0525* MONOTUBE ARMS 25-FT EACH	657.0530* MONOTUBE ARMS 30-FT EACH	657.0806* LUMINAIRE ARMS STEEL 6-FT EACH	658.0500* PEDESTRIAN PUSH BUTTONS EACH	659.1125* LUMINAIRES UTILITY LED C EACH
SB1	--	--	--	--	1	--
SB2	1	--	--	--	1	1
SB3	1	--	--	--	1	1
SB4	--	--	--	--	1	--
SB5	--	1	--	1	1	1
SB6	--	--	--	--	1	--
SB7	1	--	--	--	1	1
SB8	1	--	--	--	1	1
SB9	--	--	--	--	1	--
SB10	--	--	--	--	1	--
SB11	1	--	1	1	--	1
TOTAL	5	1	1	2	10	6

*QUANTITY SHOWN ELSEWHERE ON PLAN

PILGRIM ROAD & MENOMONEE AVENUE

ALL ITEMS ARE CATEGORY 0020 UNLESS OTHERWISE NOTED

		FACES			
		658.0173* TRAFFIC SIGNAL FACE	658.0174* TRAFFIC SIGNAL FACE	658.0416* PEDESTRIAN SIGNAL FACE	INCIDENTAL ITEM** RETROREFLECTIVE BACKPLATE
SIGNAL BASE NO.	SIGNAL HEAD NO.	3S 12-INCH EACH	4S 12-INCH EACH	16-INCH EACH	EACH
SB1	HEAD 1	1	--	--	--
SB6	HEAD 2	1	--	--	--
SB7	HEAD 3	1	--	--	--
SB6	HEAD 4	1	--	--	1
SB1	HEAD 5	1	--	--	1
SB2	HEAD 6	1	--	--	1
SB8	HEAD 7	1	--	--	--
SB4	HEAD 8	--	1	--	--
SB5	HEAD 9	--	1	--	--
SB5	HEAD 10	1	--	--	--
SB3	HEAD 11	1	--	--	1
SB11	HEAD 12	1	--	--	1
SB11	HEAD 13	1	--	--	1
SB8	HEAD 14	1	--	--	1
SB9	HEAD 15	1	--	--	1
SB1	HEAD 16	--	--	1	--
SB2	HEAD 17	--	--	1	--
SB3	HEAD 18	--	--	1	--
SB5	HEAD 19	--	--	1	--
SB6	HEAD 20	--	--	1	--
SB7	HEAD 21	--	--	1	--
SB8	HEAD 22	--	--	1	--
SB10	HEAD 23	--	--	1	--
	TOTAL	13	2	8	8

*QUANTITY SHOWN ELSEWHERE ON PLAN

** ITEM INCIDENTAL TO SIGNAL FACE

TRAFFIC SIGNAL MOUNTING HARDWARE

LOCATION	658.5069.002 SIGNAL MOUNTING HARDWARE L.S.
PILGRIM ROAD & MENOMONEE AVENUE	1
TOTAL	1

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS

LOCATION	661.0200.002 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS L.S.
PILGRIM ROAD & MENOMONEE AVENUE	1
TOTAL	1

PILGRIM ROAD & MENOMONEE AVENUE

ALL ITEMS ARE CATEGORY 0020 UNLESS OTHERWISE NOTED

3

TRAFFIC SIGNAL CABINET

LOCATION	SPV.0060.004 FURNISH AND INSTALL TRAFFIC SIGNAL CABINET, CONTROLER, AND BATTERY BACKUP SYSTEM EACH
PILGRIM ROAD & MENOMONEE AVENUE	1
TOTAL	1

GPS DEVICE AND RECEIVER

LOCATION	SPV.0060.009 FURNISH AND INSTALL GPS DEVICE AND GPS RECEIVER EACH
PILGRIM ROAD & MENOMONEE AVENUE	1
TOTAL	1

3

VIDEO DETECTION SYSTEM

LOCATION	SPV.0105.002 VIDEO VEHICLE DETECTION SYSTEM L.S.
PILGRIM ROAD & MENOMONEE AVENUE	1
TOTAL	1

TEMPORARY NON-INTRUSIVE VEHICLE DETECTION SYSTEM FOR INTERSECTIONS

LOCATION	SPV.0105.005 TEMPORARY NON-INTRUSIVE VEHICLE DETECTION SYSTEM FOR INTERSECTIONS L.S.
PILGRIM ROAD & MENOMONEE AVENUE	1
TOTAL	1

3

REMOVE CONCRETE BASES

SIGNAL BASE NO.		204.0195* REMOVING CONCRETE BASES EACH
SB1		1
SB2		1
SB3		1
SB4		1
SB5		1
SB6		1
SB7		1
SB8		1
SB9		1
SB10		1
SB11		1
SB12		1
SB13		1
	TOTAL	13

REMOVING TRAFFIC SIGNALS

LOCATION	204.9105.S.003 REMOVING TRAFFIC SIGNALS L.S.
APPLETON AVENUE & PILGRIM ROAD	1
TOTAL	1

*QUANTITY SHOWN ELSEWHERE ON PLAN

APPLETON AVENUE & PILGRIM ROAD

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

CONDUIT

FROM	TO	652.0225* CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	652.0235* CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH L.F.	652.0615* CONDUIT SPECIAL 3-INCH L.F.
CB3	PB1	--	30	--
PB1	PB2	--	60	--
PB2	SB1	40	--	--
PB2	PB3	--	--	100
PB3	SB2	30	--	--
PB3	PB4	--	--	60
PB4	SB3	10	--	--
PB4	PB5	--	--	120
PB5	SB4	--	15	--
PB5	PB6	--	--	100
PB6	SB5	15	--	--
PB6	PB7	--	--	120
PB7	SB6	10	--	--
PB7	PB8	--	--	150
PB8	SB7	--	15	--
PB8	SB8	5	--	--
PB8	PB9	--	--	130
PB9	SB9	5	--	--
PB9	PB10	--	--	80
PB10	SB10	--	10	--
PB10	PB11	--	50	--
PB11	SB11	20	--	--
PB11	PB12	--	--	100
PB12	SB12	10	--	--
PB12	PB13	--	--	150
PB13	SB13	10	--	--
PB13	PB14	--	--	150
PB14	SB14	15	--	--
PB14	SB15	--	15	--
PB14	CB3	--	45	--
	TOTAL	170	240	1260

3

APPLETON AVENUE & PILGRIM ROAD

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

PULL BOXES

PULL BOX NO.	LOCATION STA	LOCATION OFFSET	653.0140* PULL BOXES STEEL 24x42-INCH EACH
PB1	106+90.6	87.5' LT	1
PB2	107+06.0	76.0' LT	1
PB3	106+72.6	39.0' LT	1
PB4	106+54.3	16.5' LT	1
PB5	106+16.4	25.2' RT	1
PB6	105+71.2	23.0' RT	1
PB7	311+58.2	08.5' LT	1
PB8	104+40.8	21.5' RT	1
PB9	104+53.4	38.4' LT	1
PB10	104+60.9	76.2' LT	1
PB11	104+78.9	85.8' LT	1
PB12	310+60.9	43.9' RT	1
PB13	310+18.2	11.6' LT	1
PB14	309+73.9	69.3' LT	1
		TOTAL	14

REMOVE PULL BOXES

PULL BOX NO.	653.0905* REMOVING PULL BOXES EACH
PB1	1
PB2	1
PB3	1
PB4	1
PB5	1
PB6	1
PB7	1
PB8	1
PB9	1
PB10	1
PB11	1
TOTAL	11

*QUANTITY SHOWN ELSEWHERE ON PLAN

CONCRETE BASES

SIGNAL BASE NO.	LOCATION STA	LOCATION OFFSET	654.0101* CONCRETE BASES TYPE 1 EACH	654.0102* CONCRETE BASES TYPE 2 EACH	654.0110* CONCRETE BASES TYPE 10 EACH	SPV.0060.010 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL (MOD.) EACH
CB3	106+85.2	90.5' LT	--	--	--	1
SB1	106+70.3	75.7' LT	--	1	--	--
SB2	106+44.7	39.2' LT	1	--	--	--
SB3	106+48.0	16.4' LT	1	--	--	--
SB4	106+29.2	19.6' RT	--	--	1	--
SB5	105+64.2	33.7' RT	1	--	--	--
SB6	311+62.2	05.5' LT	--	1	--	--
SB7	104+50.4	30.3' RT	--	--	1	--
SB8	104+44.6	18.7' RT	--	1	--	--
SB9	104+58.0	38.6' LT	1	--	--	--
SB10	104+67.0	76.2' LT	--	--	1	--
SB11	104+91.9	95.0' LT	1	--	--	--
SB12	310+58.3	38.5' RT	--	1	--	--
SB13	310+23.0	08.8' LT	--	1	--	--
SB14	309+83.6	62.1' LT	1	--	--	--
SB15	309+73.2	55.1' LT	--	--	1	--
		TOTAL	6	5	4	1

3

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0230* CABLE TRAFFIC SIGNAL 5-14 AWG L.F.	655.0240* CABLE TRAFFIC SIGNAL 7-14 AWG L.F.
SB1	HEAD 17	--	25
SB1	HEAD 19	20	--
SB1	HEAD 27	20	--
SB2	HEAD 18	--	25
SB2	HEAD 28	20	--
SB2	HEAD 29	20	--
SB3	HEAD 22	--	25
SB4	HEAD 14	55	--
SB4	HEAD 15	45	--
SB4	HEAD 30	20	--
SB5	HEAD 4	20	--
SB5	HEAD 8	20	--
SB5	HEAD 31	20	--
SB6	HEAD 5	20	--
SB7	HEAD 2	55	--
SB7	HEAD 3	45	--
SB7	HEAD 32	20	--
SB8	HEAD 13	20	--
SB8	HEAD 23	--	25
SB8	HEAD 33	20	--
SB9	HEAD 7	20	--
SB9	HEAD 16	--	25
SB9	HEAD 24	--	25
SB10	HEAD 20	60	--
SB10	HEAD 21	45	--
SB10	HEAD 34	20	--
SB11	HEAD 6	20	--
SB12	HEAD 1	20	--
SB12	HEAD 11	20	--
SB12	HEAD 25	20	--
SB13	HEAD 12	20	--
SB14	HEAD 26	20	--
SB15	HEAD 9	55	--
SB15	HEAD 10	40	--
	TOTAL	800	150

*QUANTITY SHOWN ELSEWHERE ON PLAN

APPLETON AVENUE & PILGRIM ROAD

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0240* CABLE TRAFFIC SIGNAL 7-14 AWG L.F.	655.0260* CABLE TRAFFIC SIGNAL 12-14 AWG L.F.	655.0270 CABLE TRAFFIC SIGNAL 15-14 AWG L.F.
CB3	SB1	--	115	--
CB3	SB2	--	155	--
CB3	SB3	165	--	--
CB3	SB4	--	230	--
CB3	SB5	--	280	--
CB3	SB6	335	--	--
CB3	SB7	--	405	--
CB3	SB8	--	395	--
CB3	SB9	--	--	330
CB3	SB10	--	295	--
CB3	SB11	280	--	--
CB3	SB12	--	220	--
CB3	SB13	145	--	--
CB3	SB14	75	--	--
CB3	SB15	75	--	--
	TOTAL	1075	2095	330

3

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0515* ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.
CB3	SB1	85
SB1	SB2	135
SB2	SB3	85
SB3	SB4	100
SB4	SB5	95
SB5	SB6	100
SB6	SB7	115
SB7	SB8	35
SB8	SB9	90
SB9	SB10	70
SB10	SB11	70
SB11	SB12	95
SB12	SB13	110
SB13	SB14	115
SB14	SB15	45
SB15	CB3	45
CB3	PB1	25
CB3	PB2	45
SB2	PB3	45
SB3	PB4	25
SB4	PB5	30
SB5	PB6	30
SB6	PB7	25
SB8	PB8	30
SB9	PB9	20
SB10	PB10	25
SB11	PB11	35
SB12	PB12	25
SB13	PB13	25
CB3	PB14	30
	TOTAL	1805

*QUANTITY SHOWN ELSEWHERE ON PLAN

APPLETON AVENUE & PILGRIM ROAD

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0320* CABLE TYPE UF 2-10 AWG GROUNDED L.F.	655.0615* ELECTRICAL WIRE LIGHTING 10 AWG L.F.
CB3	SB1	115	--
SB1	LUMIN 1	--	120
SB1	SB4	240	--
SB4	LUMIN 2	--	120
SB4	SB6	180	--
SB6	LUMIN 3	--	120
SB6	LUMIN 4	--	120
SB6	SB8	135	--
SB8	LUMIN 5	--	120
SB8	LUMIN 6	--	120
CB3	SB15	75	--
SB15	LUMIN 7	--	120
SB15	SB13	145	--
SB13	LUMIN 8	--	120
SB13	LUMIN 9	--	120
SB13	SB12	140	--
SB12	LUMIN 9	--	120
	TOTAL	1030	1200

APPLETON AVENUE & PILGRIM ROAD

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

3

	POLES												
	657.0100*	657.0255*	657.0315*	657.0345*	657.0350*	657.0420*	657.0425*	657.0430*	657.0530*	657.0609*	657.0806*	658.0500*	659.1125*
SIGNAL BASE NO.	PEDESTAL BASES EACH	TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	POLES TYPE 4 EACH	POLES TYPE 9 EACH	POLES TYPE 10 EACH	TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	MONOTUBE ARMS 30-FT EACH	LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH	LUMINAIRE ARMS STEEL 6-FT EACH	PEDESTRIAN PUSH BUTTONS EACH	LUMINAIRES UTILITY LED C EACH
SB1	--	1	1	--	--	--	--	--	--	1	--	1	1
SB2	1	--	--	--	--	--	1	--	--	--	--	1	--
SB3	1	--	--	--	--	--	1	--	--	--	--	--	--
SB4	--	--	--	--	1	--	--	--	1	--	1	1	1
SB5	1	--	--	--	--	1	--	--	--	--	--	1	--
SB6	--	1	1	--	--	--	--	--	--	2	--	1	2
SB7	--	--	--	1	--	--	--	--	1	--	--	1	--
SB8	--	1	1	--	--	--	--	--	--	2	--	1	2
SB9	1	--	--	--	--	--	1	--	--	--	--	1	--
SB10	--	--	--	1	--	--	--	--	1	--	--	1	--
SB11	1	--	--	--	--	1	--	--	--	--	--	--	--
SB12	--	1	1	--	--	--	--	--	--	1	--	1	1
SB13	--	1	1	--	--	--	--	--	--	2	--	1	2
SB14	1	--	--	--	--	--	--	1	--	--	--	1	--
SB15	--	--	--	--	1	--	--	--	1	--	1	--	1
TOTAL	6	5	5	2	2	2	3	1	4	8	2	12	10

*QUANTITY SHOWN ELSEWHERE ON PLAN

APPLETON AVENUE & PILGRIM ROAD

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

		FACES			
		658.0173* TRAFFIC SIGNAL FACE 3S 12-INCH	658.0174* TRAFFIC SIGNAL FACE 4S 12-INCH	658.0416* PEDESTRIAN SIGNAL FACE 16-INCH	INCIDENTAL ITEM** RETROREFLECTIVE BACKPLATE
SIGNAL BASE NO.	SIGNAL HEAD NO.	EACH	EACH	EACH	EACH
SB12	HEAD 1	1	--	--	--
SB7	HEAD 2	1	--	--	--
SB7	HEAD 3	1	--	--	--
SB5	HEAD 4	1	--	--	--
SB6	HEAD 5	1	--	--	--
SB11	HEAD 6	1	--	--	--
SB9	HEAD 7	1	--	--	--
SB5	HEAD 8	1	--	--	1
SB15	HEAD 9	1	--	--	1
SB15	HEAD 10	1	--	--	1
SB12	HEAD 11	1	--	--	1
SB13	HEAD 12	1	--	--	1
SB8	HEAD 13	1	--	--	--
SB4	HEAD 14	1	--	--	1
SB4	HEAD 15	1	--	--	1
SB9	HEAD 16	--	1	--	--
SB1	HEAD 17	--	1	--	1
SB2	HEAD 18	--	1	--	1
SB1	HEAD 19	1	--	--	--
SB10	HEAD 20	1	--	--	--
SB10	HEAD 21	1	--	--	--
SB3	HEAD 22	--	1	--	--
SB8	HEAD 23	--	1	--	--
SB9	HEAD 24	--	1	--	--
SB12	HEAD 25	--	--	1	--
SB14	HEAD 26	--	--	1	--
SB1	HEAD 27	--	--	1	--
SB2	HEAD 28	--	--	1	--
SB2	HEAD 29	--	--	1	--
SB4	HEAD 30	--	--	1	--
SB5	HEAD 31	--	--	1	--
SB7	HEAD 32	--	--	1	--
SB8	HEAD 33	--	--	1	--
SB10	HEAD 34	--	--	1	--
	TOTAL	18	6	10	9

*QUANTITY SHOWN ELSEWHERE ON PLAN

** ITEM INCIDENTAL TO SIGNAL FACE

TRAFFIC SIGNAL MOUNTING HARDWARE

LOCATION	658.5069.003 SIGNAL MOUNTING HARDWARE L.S.
APPLETON AVENUE & PILGRIM ROAD	1
TOTAL	1

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS

LOCATION	661.0200.003 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS L.S.
APPLETON AVENUE & PILGRIM ROAD	1
TOTAL	1

APPLETON AVENUE & PILGRIM ROAD

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

TRAFFIC SIGNAL CABINET

LOCATION	SPV.0060.005 FURNISH AND INSTALL TRAFFIC SIGNAL CABINET, CONTROLER, AND BATTERY BACKUP SYSTEM EACH
APPLETON AVENUE & PILGRIM ROAD	1
TOTAL	1

GPS DEVICE AND RECEIVER

LOCATION	SPV.0060.009 FURNISH AND INSTALL GPS DEVICE AND GPS RECEIVER EACH
APPLETON AVENUE & PILGRIM ROAD	1
TOTAL	1

3

VIDEO DETECTION SYSTEM

LOCATION	SPV.0105.003 VIDEO VEHICLE DETECTION SYSTEM L.S.
APPLETON AVENUE & PILGRIM ROAD	1
TOTAL	1

TEMPORARY NON-INTRUSIVE VEHICLE DETECTION SYSTEM FOR INTERSECTIONS

LOCATION	SPV.0105.006 TEMPORARY NON-INTRUSIVE VEHICLE DETECTION SYSTEM FOR INTERSECTIONS L.S.
APPLETON AVENUE & PILGRIM ROAD	1
TOTAL	1

LIGHTING UNIT QUANTITIES

NO.	654.0105 CONCRETE BASES TYPE 5 EACH	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF	657.0255* TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0322 POLES TYPE 5-ALUMINUM EACH	657.0610 LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 6-FT EACH	659.1125* LUMINAIRES UTILITY TYPE C EACH
MAP-1,3-1	1	120	1	1	1	1
MAP-2,4-2	1	120	1	1	1	1
MAP-1,3-3	1	120	1	1	1	1
MAP-2,4-4	1	120	1	1	1	1
MAP-1,3-5	1	120	1	1	1	1
MAP-2,4-6	1	120	1	1	1	1
MAP-1,3-7	1	120	1	1	1	1
MAP-2,4-8	1	120	1	1	1	1
MAP-1,3-9	1	120	1	1	1	1
MAP-2,4-10	1	120	1	1	1	1
MAP-1,3-11	1	120	1	1	1	1
MAP-5,7-1	1	120	1	1	1	1
MAP-6,8-2	1	120	1	1	1	1
MAP-5,7-3	1	120	1	1	1	1
MAP-6,8-4	1	120	1	1	1	1
MAP-5,7-5	1	120	1	1	1	1
MAP-6,8-6	1	120	1	1	1	1
MAP-5,7-7	1	120	1	1	1	1
MAP-6,8-8	1	120	1	1	1	1
TOTALS	19	2280	19	19	19	19

* ADDTIIONAL QUANTITIES SHOWN ELESEWHERE

LIGHTING REMOVAL QUANTITIES

NO	204.0195 REMOVING CONCRETE BASES EACH	204.9060.S.001 REMOVING AND SALVAGING TWIN LIGHTING UNITS EACH	204.9060.S.002 REMOVING HIGH MAST LIGHT TOWERS EACH	204.9060.S.003 REMOVING HIGH MAST TOWER FOUNDATIONS EACH	204.9105.S.004 REMOVING DISTRIBUTION CABINET AND VAULT LS	653.0905 REMOVING PULL BOXES EACH
EXISTING EQUIP					1	
EPB1						1
EPB2						1
EPB3						1
EPB4						1
LP1	1	1				
T1			1	1		
T2			1	1		
T3			1	1		
TOTALS	1	1	3	3	1	4

LIGHTING BRANCH CIRCUIT WIRE AND CONDUIT QUANTITIES

FROM	TO	652.0605* CONDUIT SPECIAL 2-INCH** LF	655.0620 ELECTRICAL WIRE LIGHTING 8 AWG LF	655.0630 ELECTRICAL WIRE LIGHTING 4 AWG LF
CABINET 'MAP'	LPB-1	60	355	
LPB-1	MAP-1,3-1	115	630	
MAP-1,3-1	MAP-2,4-2	125	675	
MAP-2,4-2	MAP-1,3-3	145	775	
MAP-1,3-3	MAP-2,4-4	118	384	
LPB-1	MAP-1,3-5	90	505	
MAP-1,3-5	MAP-2,4-6	165	875	
MAP-2,4-6	MAP-1,3-7	125	675	
MAP-1,3-7	MAP-2,4-8	140	750	
MAP-2,4-8	MAP-1,3-9	105	575	
MAP-1,3-9	MAP-2,4-10	98	540	
MAP-2,4-10	MAP-1,3-11	88	294	
CABINET 'MAP'	CONDUIT STUB	25		
CABINET 'MAP'	LPB-2	40	255	
LPB-2	MAP-5,7-1	65	380	
MAP-5,7-1	MAP-6,8-2	250	1300	
MAP-6,8-2	MAP-5,7-3	138	740	
MAP-5,7-3	MAP-6,8-4	138	740	
MAP-6,8-4	MAP-5,7-5	120	650	
MAP-5,7-5	MAP-6,8-6	118	640	
MAP-6,8-6	MAP-5,7-7	50	300	
MAP-5,7-7	MAP-6,8-8	78	264	
METER PEDESTAL	CB1	85	96	192
METER PEDESTAL	CB2	25	183	
METER PEDESTAL	CB3	110	121	242
	TOTALS	2616	12702	434

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE
** NONMETALLIC SCHEDULE 40 CONDUIT

LIGHTING CONTROL QUANTITIES

LOCATION	SPV.0060.007 MUNICIPAL LIGHTING CONTROL CABINET EACH	SPV.0105.007 FREE STANDING METER BREAKER PEDESTAL LS
PROJECT		
CABINET 'MAP'	1	
METER BREAKER PEDESTAL		1
TOTALS	1	1

LIGHTING PULL BOX QUANTITIES

NO.	653.0140* PULL BOXES STEEL 24X42-INCH EACH
LPB-1	1
TOTAL	1

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TEMPORARY WOOD POLE QUANTITIES

NO	SPV.0060.006 REMOVING WOOD POLES EACH	SPV.0060.008 TEMPORARY WOOD POLES EACH
WP1	1	1
TOTALS	1	1

TEMPORARY AERIAL CABLE QUANTITIES

FROM	TO	SPV.0090.001 TEMPORARY AERIAL CABLE TRIPLEX 6 AWG LF	SPV.0090.002 REMOVING AERIAL CABLE LF
EXISTING CAB.	WP1	150	150
WP1	TCB1	115	115
WP1	TCB2	90	90
WP1	TCB3	125	125
	TOTALS	480	480

3

SAWCUTS

CATEGORY	STATION	OFFSET	LOCATION	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF
STAGE 1					
0010	103+18	RT/LT	PILGRIM RD SOUTH LIMIT	81	--
0010	104+80 - 105+25	RT	APPLETON AVE MEDIAN	--	95
0010	105+76 - 106+06	LT	APPLETON AVE MEDIAN	--	75
0010	202+15	RT/LT	MENOMONEE AVE WEST LIMIT	50	--
0010	304+17	RT	APPLETON AVE NORTH LIMIT	55	--
0010	305+25	LT	APPLETON AVE NORTH LIMIT	40	--
0010	305+67 - 305+99	RT/LT	APPLETON AVE MEDIAN	--	75
0010	307+00 - 307+31	RT/LT	APPLETON AVE MEDIAN	--	65
0010	313+00	RT	APPLETON AVE EAST LIMIT	41	--
0010	313+00	LT	APPLETON AVE EAST LIMIT	53	--
STAGE 1 SUBTOTAL				320	310
STAGE 2					
0010	103+29 - 104+07	RT	PILGRIM RD	--	130
0010	104+11 - 104+56	RT	PILGRIM RD	--	161
0010	104+54 - 105+00	LT	APPLETON AVE	--	60
0010	104+95 - 105+65	LT	APPLETON AVE	--	211
0010	105+68 - 106+10	RT	APPLETON AVE	--	201
0010	105+90 - 108+05	RT	PILGRIM RD	--	210
0010	106+59 - 106+79	LT	PILGRIM RD	--	56
0010	106+93 - 107+15	RT	PILGRIM RD - DRIVEWAY	22	--
0010	107+34 - 107+74	RT	PILGRIM RD - PARKING LOT	40	--
0010	202+35 - 202+85	LT	MENOMONEE AVE	--	60
0010	202+73 - 203+75	LT	MENOMONEE AVE	--	276
0010	203+75 - 205+25	RT	MENOMONEE AVE	--	209
0010	205+06 - 205+56	LT	MENOMONEE AVE	--	74
0010	206+07 - 206+22	RT	MENOMONEE AVE	--	40
0010	307+90 - 309+75	LT	APPLETON AVE	--	193
STAGE 2 SUBTOTAL				62	1,881
STAGE 3					
0010	103+18 - 104+91	LT	PILGRIM RD	--	270
0010	106+15 - 107+97	LT	PILGRIM RD	--	331
STAGE 3 SUBTOTAL				--	601
CATEGORY 0010 TOTAL				382	2,792

SAWCUTS CONT.

CATEGORY	STATION	OFFSET	LOCATION	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF
STAGE 1					
0020	209+02	RT/LT	MENOMONEE AVE EAST LIMIT	45	--
0020	108+90	RT	PILGRIM RD NORTH LIMIT	25	--
0020	108+80	LT	PILGRIM RD NORTH LIMIT	36	--
STAGE 1 SUBTOTAL				106	--
STAGE 2					
0020	107+60 - 108+00	LT	PILGRIM RD	--	71
0020	107+80 - 108+05	RT	PILGRIM RD	--	50
0020	108+38 - 108+72	LT	PILGRIM RD	--	75
0020	108+51 - 108+80	LT	PILGRIM RD MEDIAN	--	75
STAGE 2 SUBTOTAL				--	271
STAGE 3					
0020	107+66 - 107+99	LT	PILGRIM RD	--	60
0020	108+80	RT/LT	PILGRIM RD	--	60
STAGE 3 SUBTOTAL				--	120
CATEGORY 0020 TOTAL				106	391
PROJECT 2782-13-70 TOTAL				488	3,183

MANAGEMENT OF SOLID WASTE

SPV.0195.100
MANAGEMENT OF SOLID WASTE

CATEGORY	ROADWAY	STATION	TON
0010	APPLETON AVE	311+90 LT	8.5
CATEGORY 0010 TOTAL			8.5
PROJECT 2782-13-70 TOTAL			8.5

ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

3

ADJUSTING WATER COVERS

CATEGORY	STATION	OFFSET	LOCATION	SPV.0060.100 ADJUSTING WATER VALVE BOXES EA	SPV.0060.101 ADJUSTING WATER MANHOLES EA
0010	312+69	RT	APPLETON	1	-
0010	104+70	RT	PILGRIM	-	1
0010	105+77	LT	PILGRIM	1	-
0010	203+50	RT	MENOMONEE	1	-
0010	204+89	LT	MENOMONEE	1	-
CATEGORY 0010 TOTAL				4	1
0020	108+39	RT	PILGRIM	1	-
0020	108+49	LT	PILGRIM	-	1
0020	108+50	LT	PILGRIM	2	-
0020	108+54	LT	PILGRIM	1	-
0020	108+56	LT	PILGRIM	1	-
CATEGORY 0020 TOTAL				5	1
PROJECT 2782-13-70 TOTAL				9	2

PIPE CONNECTION TO EXISTING STRUCTURE

CATEGORY	STATION	OFFSET	LOCATION	SPV.0060.105 PIPE CONNECTION TO EXISTING STRUCTURE EA
0010	304+80	52' RT	APPLETON	1
0010	310+77	46' RT	APPLETON	1
CATEGORY 0010 TOTAL				2
PROJECT 2782-13-70 TOTAL				2

CONCRETE CURB & GUTTER SPECIAL

CATEGORY	STATION		STATION	OFFSET	LOCATION	SPV.0090.101 CONCRETE CURB & GUTTER 24-INCH SPECIAL TYPE A LF	SPV.0090.102 CONCRETE CURB & GUTTER 30-INCH SPECIAL TYPE A LF
STAGE 1							
0010	305+65	-	305+95	LT	APPLETON MEDIAN	--	46
0010	307+10	-	307+35	RT	APPLETON MEDIAN	--	42
0010	310+15	-	310+30	LT	APPLETON AVE MEDIAN	--	48
0010	311+50	-	311+85	LT	APPLETON AVE MEDIAN	--	60
STAGE 1 SUBTOTAL						--	196
STAGE 2							
0010	103+29	-	104+05	RT	PILGRIM RT LANE	--	122
0010	104+22	-	104+47	RT	PILGRIM RT PORK CHOP	108	--
0010	104+54	-	104+98	LT	APPLETON AVE RT RAD	--	55
0010	105+03	-	105+65	LT	APPLETON AVE RT PORK CHOP	--	180
0010	105+76	-	105+93	RT	APPLETON AVE RT PORK CHOP	--	137
0010	105+93	-	107+80	RT	PILGRIM RD NB	195	--
0010	106+61	-	106+80	LT	PILGRIM RD RT RAD	--	50
0010	202+35	-	202+65	LT	MENOMONEE AVE NW	--	48
0010	202+77	-	203+85	LT	PORK CHOP ISLAND	--	146
0010	203+00	-	203+85	LT	PORK CHOP ISLAND	--	87
0010	205+05	-	205+65	LT	APPLETON / MENOMONEE NE QUAD RAD	--	69
0010	305+90	-	307+80	RT	APPLETON / MENOMONEE SW QUAD RAD	--	203
0010	307+75	-	307+90	LT	APPLETON / MENOMONEE SE QUAD RAD	--	33
0010	307+90	-	309+75	LT	APPLETON AVE	--	185
STAGE 2 SUBTOTAL						303	1,315
STAGE 3							
0010	103+34	-	104+80	LT	PILGRIM MEDIAN	--	190
0010	104+00	-	104+48	LT	PILGRIM LT ISLAND	100	--
0010	106+33	-	106+76	LT	PILGRIM RD SB LT ISLAND	90	--
0010	106+46	-	107+90	LT	PILGRIM RD MEDIAN	261	--
STAGE 3 SUBTOTAL						451	190
CATEGORY 0010 TOTAL						754	1,701
STAGE 2							
0020	107+66	-	107+95	LT	PILGRIM / MENOMONEE SW QUAD RAD	--	65
0020	108+42	-	108+72	LT	PILGRIM / MENOMONEE NW QUAD RAD	--	69
0020	108+48	-	108+75	RT	PILGRIM / MENOMONEE NE QUAD RAD	--	58
0020	107+80	-	108+05	RT	PILGRIM / MENOMONEE SE QUAD RAD	38	--
STAGE 2 SUBTOTAL						38	192
STAGE 3							
0020	107+80	-	107+98	LT	PILGRIM RD MEDIAN	30	--
0020	108+60	-	108+80	LT	PILGRIM RD MEDIAN	--	52
STAGE 3 SUBTOTAL						30	52
CATEGORY 0020 TOTAL						68	244
PROJECT 2782-13-70 TOTAL						822	1,945

ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

3

HYDRANT REPLACEMENT

STATION	SPV.0060.102 REMOVE EXISTING HYDRANT EA	SPV.0060.103 6-INCH HYDRANT GATE VALVE WITH VALVE BOX EA	SPV.0060.104 HYDRANT EA	SPV.0090.100 6-INCH PVC HYDRANT LEAD WITH GRANULAR BACKFILL LF
106+54 RT	1	1	1	16
PROJECT 2782-13-70 TOTAL	1	1	1	16

TRAFFIC CONTROL
LOCAL ROAD LANE CLOSURES

LOCATION	SPV.0060.400 TRAFFIC CONTROL LOCAL ROAD LANE CLOSURES EA
PROJECT-WIDE	10
PROJECT 2782-13-70 TOTAL	10

CONCRETE DRIVEWAY HES REINFORCED

STATION	OFFSET	LOCATION	SPV.0180.100 CONCRETE DRIVEWAY HES 8-INCH REINFORCED SY
107+00	RT	PILGRIM	20
PROJECT 2782-13-70 TOTAL			20

3

PAVEMENT CLEANUP

LOCATION	SPV.0075.400 PAVEMENT CLEANUP PROJECT 2782-13-70 HR
PROJECT-WIDE	100
PROJECT 2782-13-70 TOTAL	100

SURVEY PROJECT

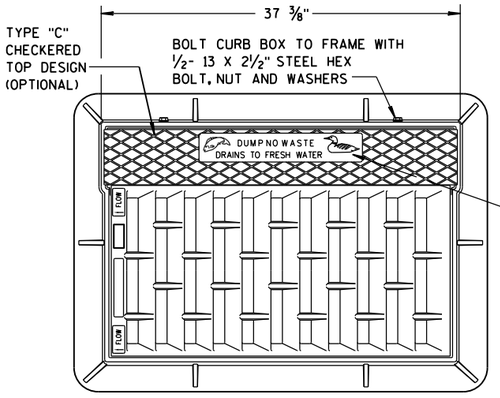
LOCATION	SPV.0105.100 SURVEY PROJECT 2782-13-70 LS
PROJECT-WIDE	1
PROJECT 2782-13-70 TOTAL	1

ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

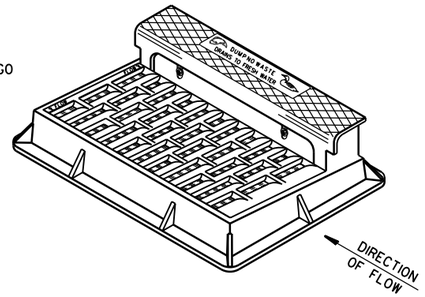
Standard Detail Drawing List

08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08A08-02	CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER
08A09-02	CATCH BASINS 2X3-FT AND 2.5X3-FT
08B09-02	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D05-20A	CURB RAMPS TYPES 1 AND 1-A
08D05-20B	CURB RAMPS TYPES 2 AND 3
08D05-20C	CURB RAMPS TYPES 4A AND 4A1
08D05-20D	CURB RAMPS TYPE 4B AND 4B1
08D05-20E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-20F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-20G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-10	CONDUIT
09B04-11	PULL BOX
09C02-09	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C06-07	CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL
09C11-10	CONCRETE BASE TYPE 10
09D01-05	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D02-03	SIGNAL CONTROL CABINET
09E01-15B	POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 3 (HEAVY DUTY)
09E01-15C	POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 4
09E01-15D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E01-15G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-06	NON-FREEWAY LIGHTING UNIT POLE WIRING
09E06-05	TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.
09E07-06	TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS
09E08-08A	TYPE 9 POLE 15'-30' MONOTUBE ARM
09E08-08B	TYPE 10 POLE 15'-30' MONOTUBE ARM
09E08-08E	GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS
09G01-04A	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04B	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04C	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04D	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04E	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04F	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04G	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
11B02-02	CONCRETE MEDIAN NOSE
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C15-06A	CONCRETE BASE
13C15-06B	CONCRETE BASE
13C19-01	HMA LONGITUDINAL JOINTS
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-14B	PAVEMENT MARKING WORDS
15C07-14C	PAVEMENT MARKING ARROWS
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15C08-19C	PAVEMENT MARKING (TURN LANES)
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C27-03A	DOUBLE ARROW WARNING SIGN PLACEMENT
15C27-03B	PAVEMENT MARKING (ISLANDS)
15C33-03	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D20-04	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D21-06	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D22-03	TRAFFIC CONTROL, TWO LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D23-06	TRAFFIC CONTROL, INTERSECTION WITHIN TWO LANE CLOSURE
15D28-03	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D30-05A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS
15D40-01	TRAFFIC CONTROL, LANE SHIFT, MULTILANE DIVIDED OR ONE WAY ROAD
15D41-01	TRAFFIC CONTROL, MULTIPLE LANE SHIFT, MULTILANE DIVIDED ROAD
15D44-01	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES

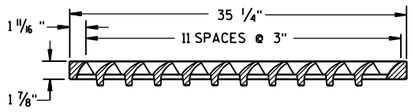
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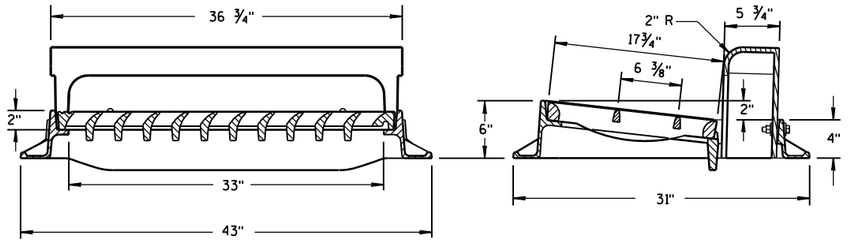


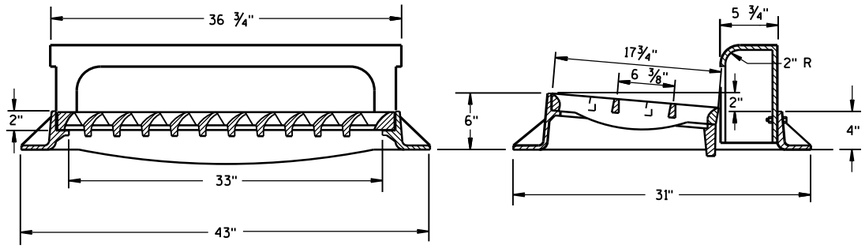
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

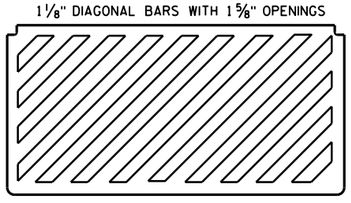






TYPE "H"

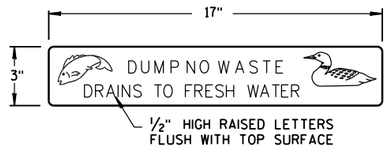
NOTE: EITHER CASTING IS ACCEPTABLE



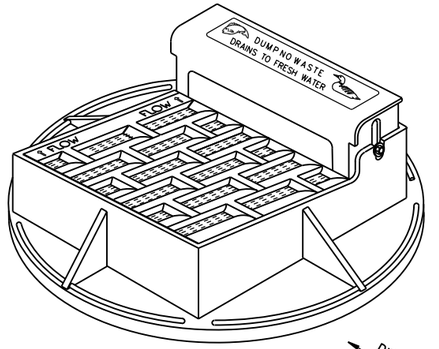
SPECIAL GRATE FOR TYPE "H" COVER

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

(NOTED AS TYPE H-S ON DRAINAGE TABLE)



LOGO DETAIL



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

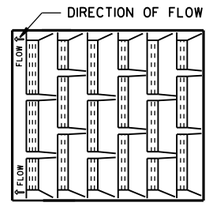
NOTE:
GRATE IS REVERSIBLE.

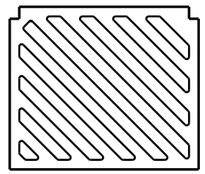
GENERAL NOTES

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

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

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

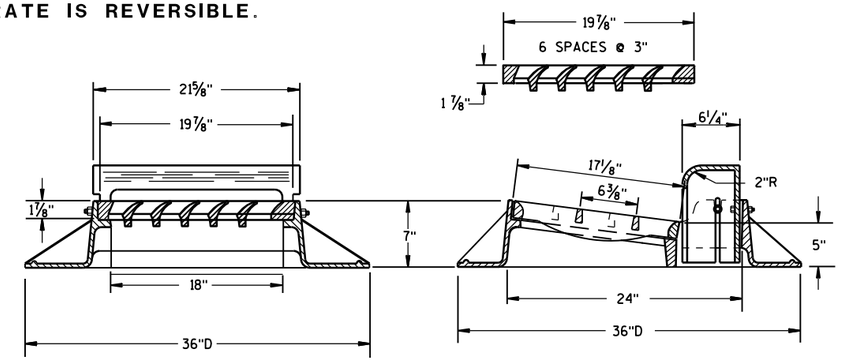




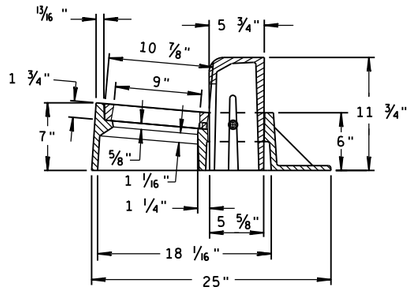
SPECIAL GRATE FOR TYPE "A" COVER

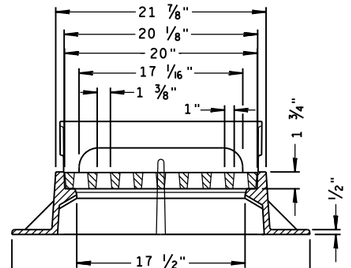
(MEASURES 19 3/4" X 17" X 1 7/8")

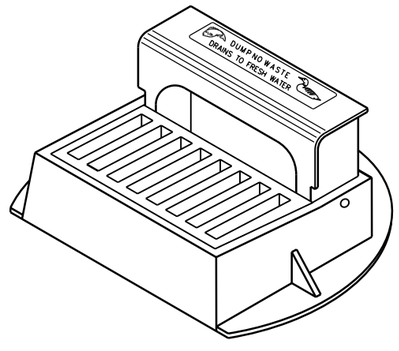
(NOTED AS TYPE A-S ON DRAINAGE TABLE)



TYPE "A"







TYPE "Z"

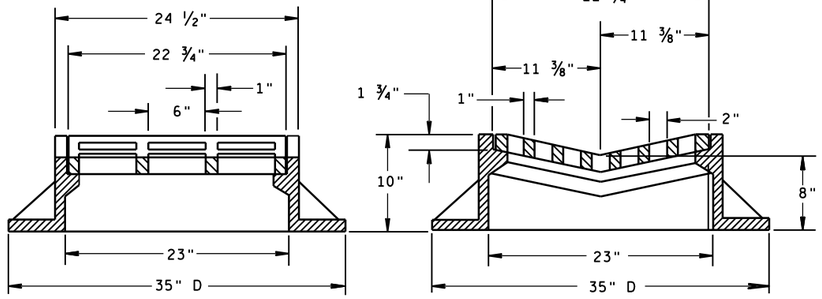
INLET COVERS
TYPE A, H, A-S, H-S & Z

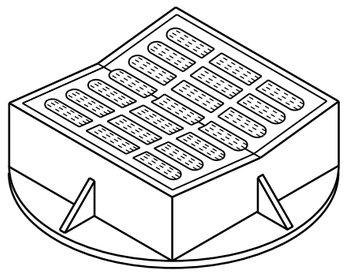
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

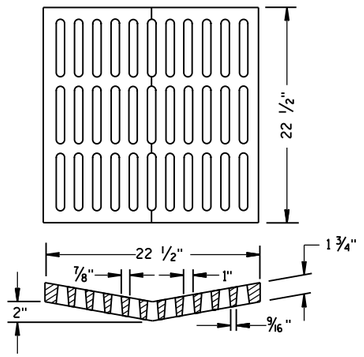
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S.D.D. 8 A 5-19a



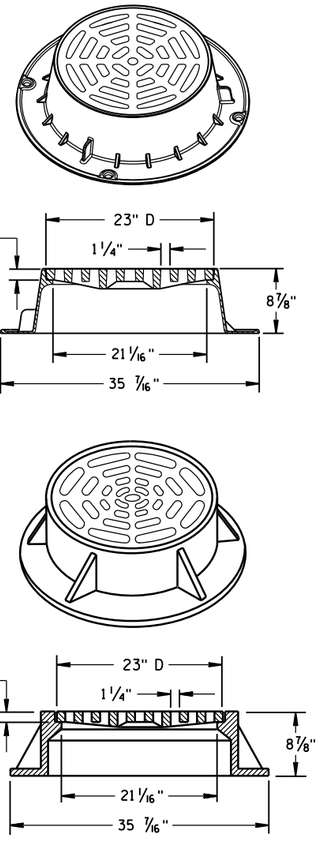


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

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



TYPE "C"

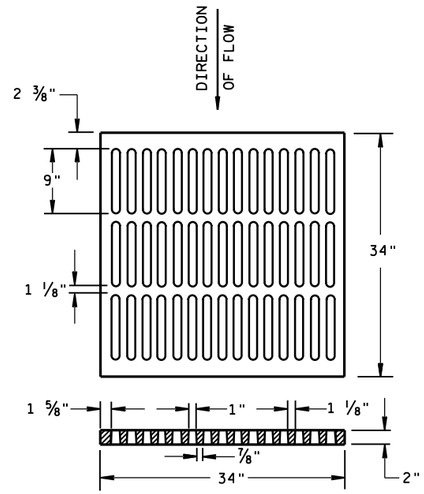
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

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

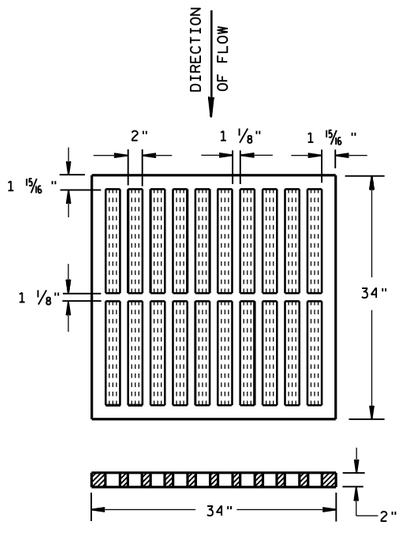
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



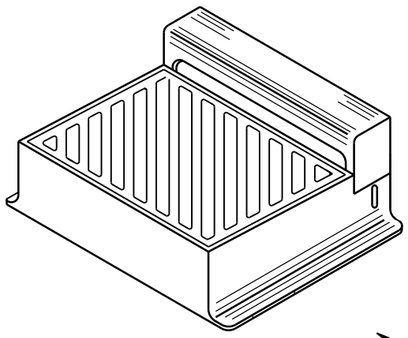
ALTERNATIVE TYPE "MS"

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

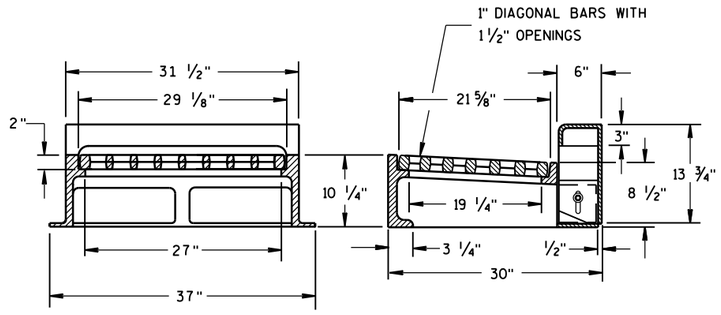


TYPE "MS"

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



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



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

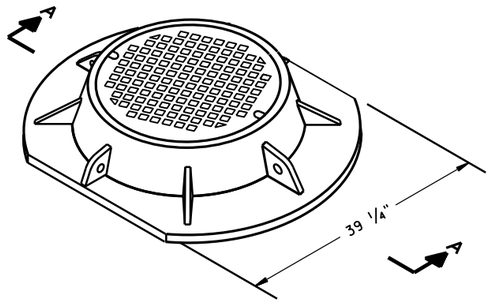
INLET COVERS
TYPE B, B-A, C, MS, MS-A, & WM

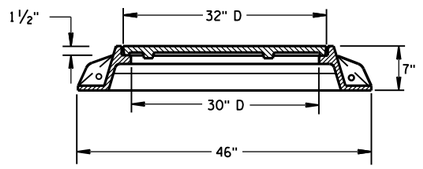
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

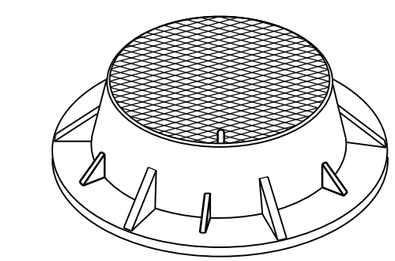
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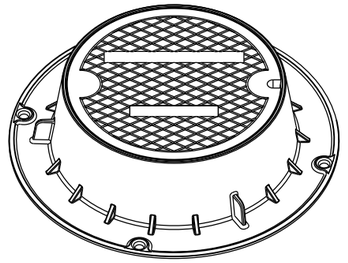
S.D.D. 8 A 5-19b

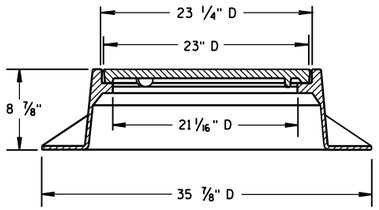


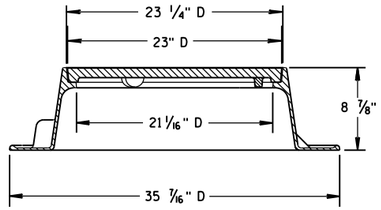


SECTION A-A
TYPE "K"









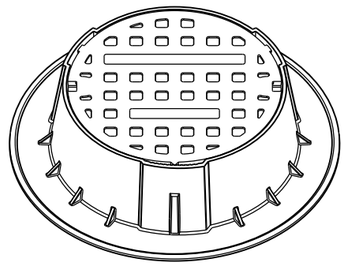
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

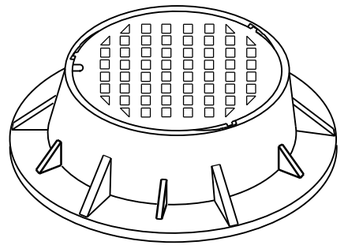
GENERAL NOTES

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

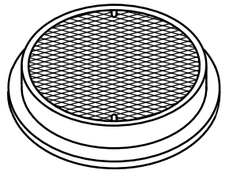
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

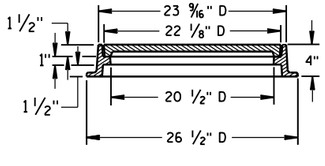
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



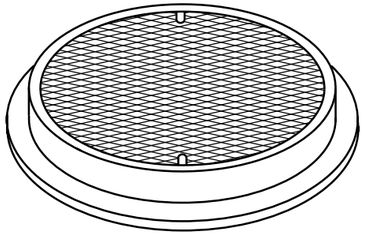


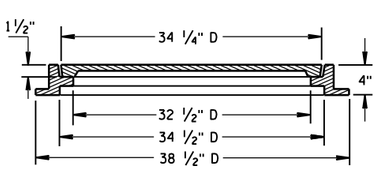
TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE



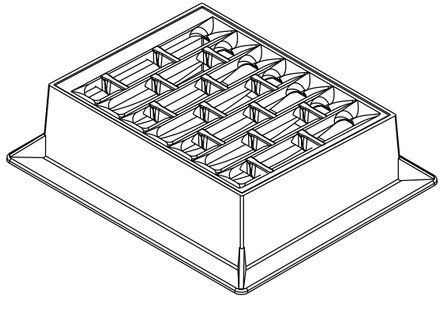


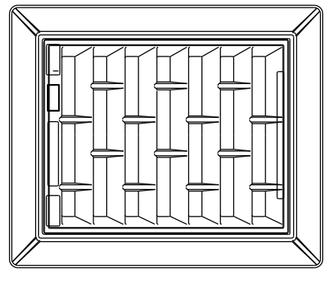
TYPE "L"

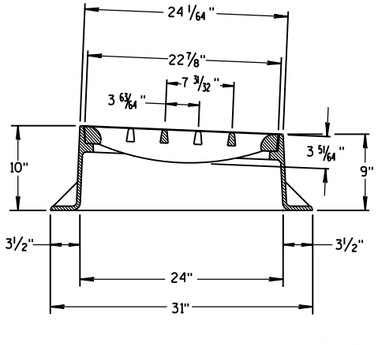


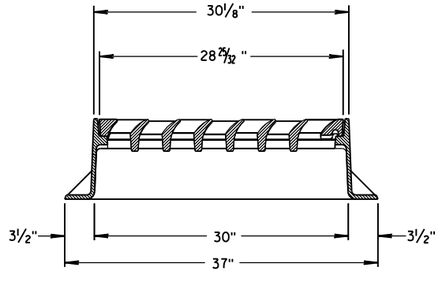


TYPE "M"









INLET COVER TYPE "BW"

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
FHWA

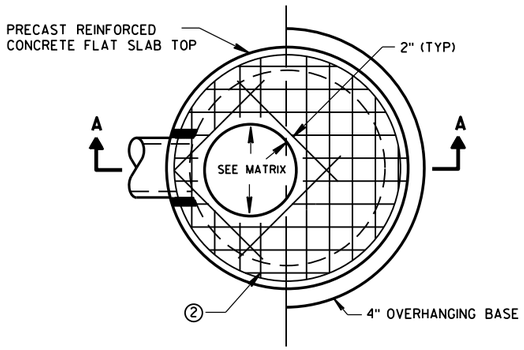
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

6

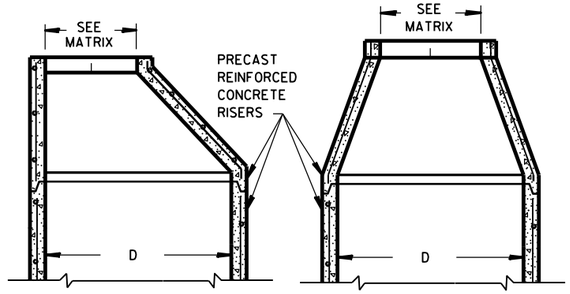
S.D.D. 8 A 5-19d

6

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

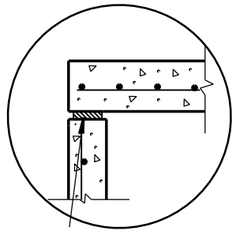


PLAN VIEW CIRCULAR OPENING

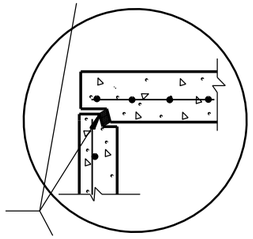


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

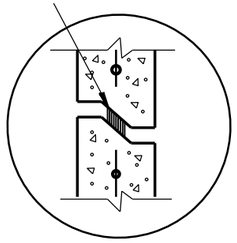


TOP WITH PLAIN END JOINT



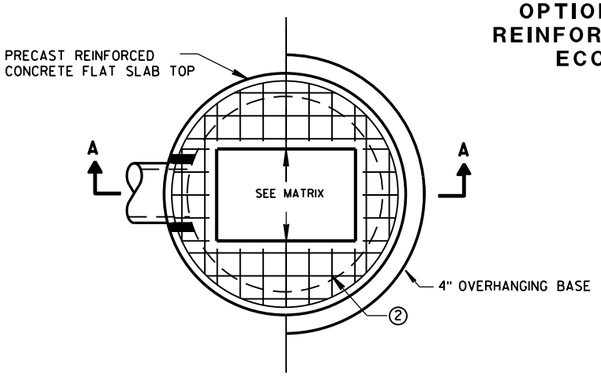
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT

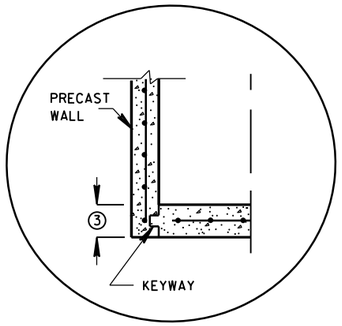


RISER WITH TONGUE AND GROOVE JOINT

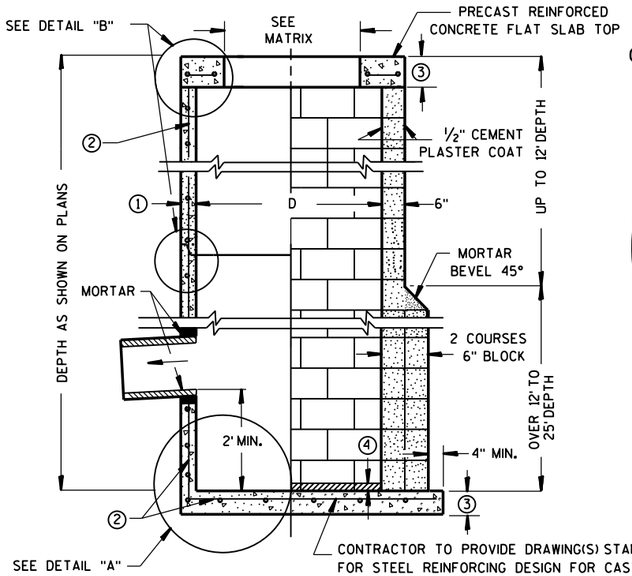
DETAIL "B"



PLAN VIEW RECTANGULAR OPENING



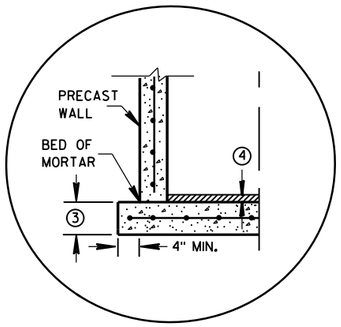
PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SECTION A-A

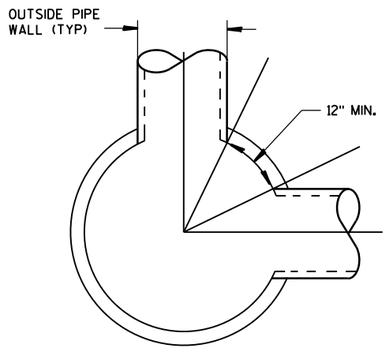
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT AND 7 INCHES FOR 6-FT DIAMETER PRECAST CATCH BASINS.

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

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

④ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2' SUMP MEASURED FROM TOP OF KEY.

CATCH BASIN COVER OPENING MATRIX

CATCH BASIN SIZE	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
	OPENING SIZE (FT)											
3-FT	2X2	X	X					X		X		
	2 DIA.				X							X
4-FT-6-FT	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2 DIA.				X							X
	2X3						X					
	2.5X3					X						

PIPE MATRIX

CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	30

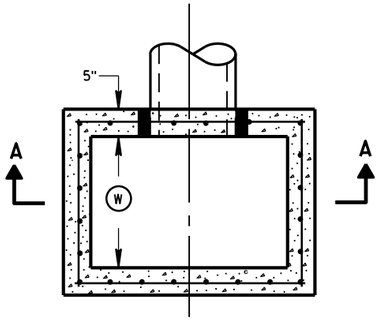
CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

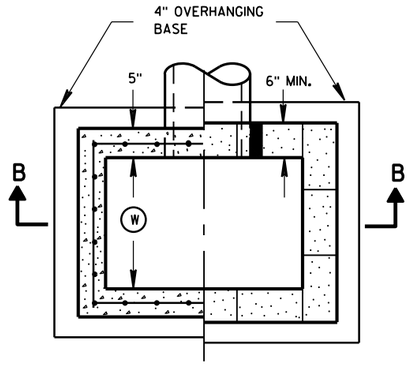
APPROVED
Sept., 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVISOR
FHWA

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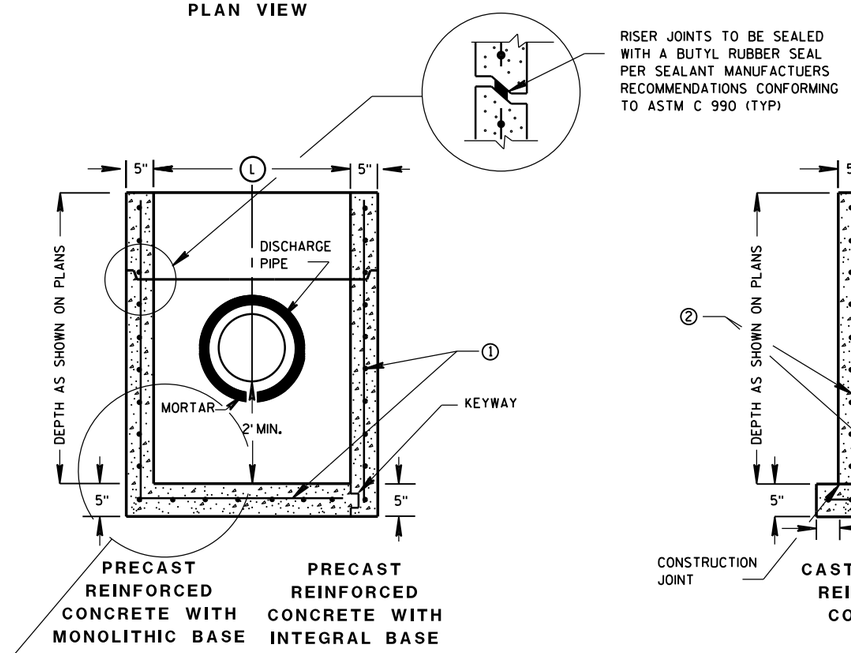
S.D.D. 8 A 8-2



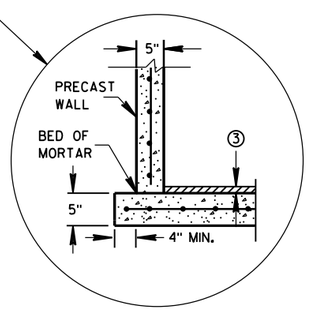
PLAN VIEW



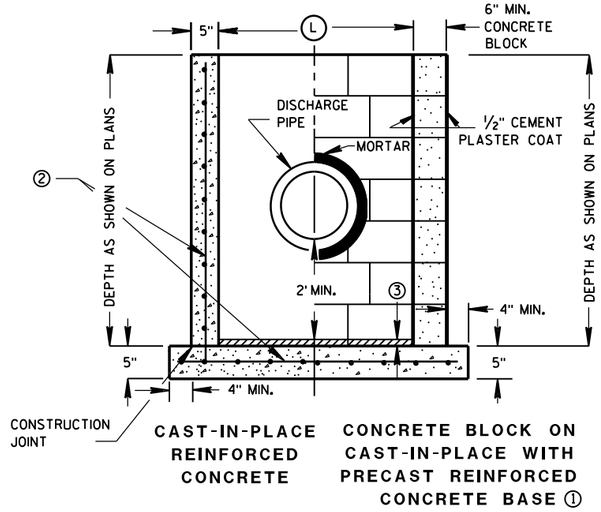
PLAN VIEW



SECTION A-A



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION



SECTION B-B

GENERAL NOTES

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

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

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

ALL PRECAST CATCH BASIN UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

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

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

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

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

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS.
4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED.
OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

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

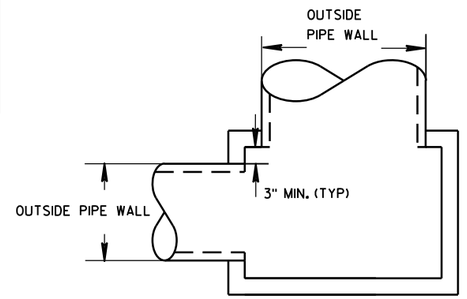
③ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2' SUMP MEASURED FROM TOP OF KEY.

CATCH BASIN COVER MATRIX

CATCH BASIN SIZE		INLET COVER TYPE	F	ALL H'S
	WIDTH (W) (FT)	LENGTH (L) (FT)		
2X3-FT	2	3		X
2.5X3-FT	2.5	3	X	

PIPE MATRIX

CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	WIDTH (IN)	LENGTH (IN)
2X3-FT	12	24
2.5X3-FT	18	24



DETAIL "A"

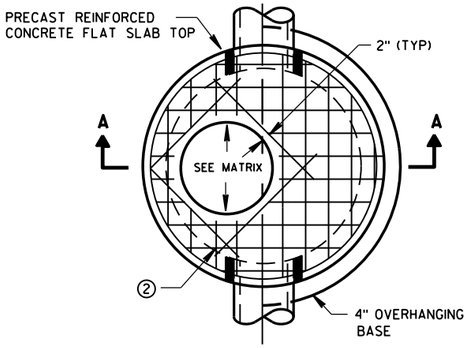
CATCH BASINS 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

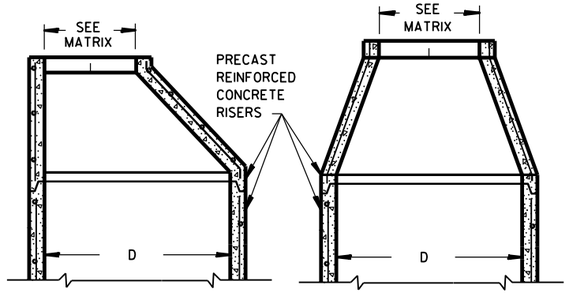
APPROVED
Sept., 2016 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERVISOR
FHWA

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S.D.D. 8 A 9-2

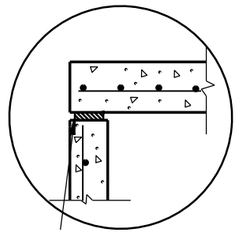


PLAN VIEW CIRCULAR OPENING

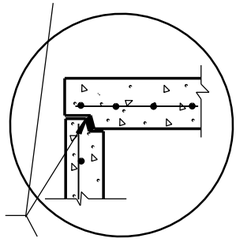


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

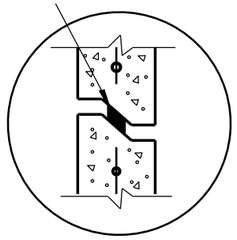


TOP WITH PLAIN END JOINT



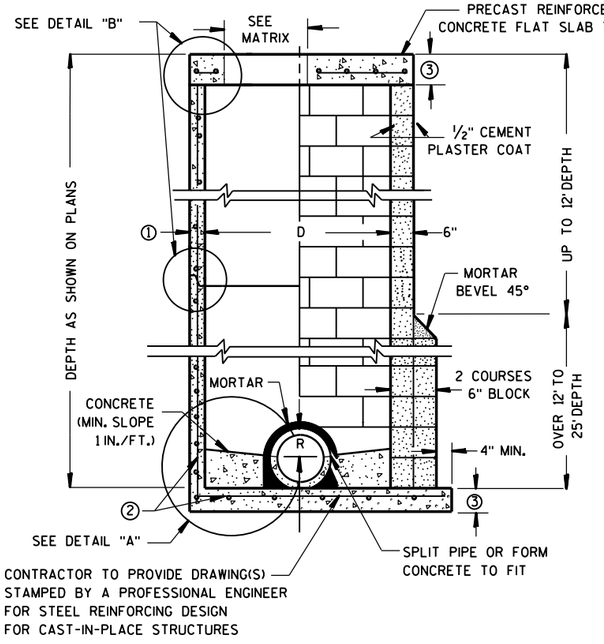
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



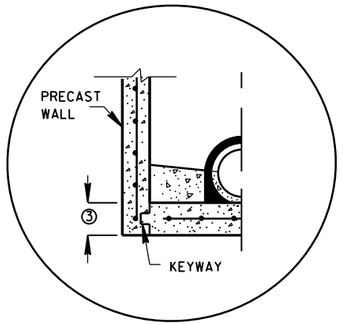
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

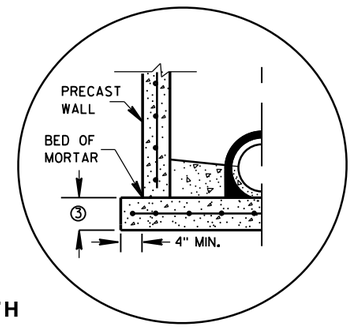


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

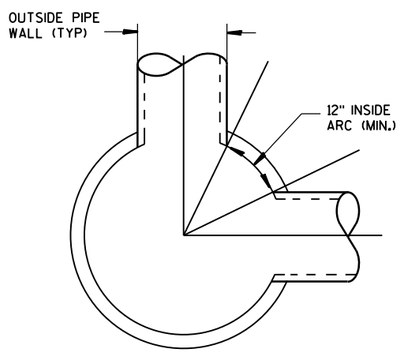


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.

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

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

MANHOLE COVER OPENING MATRIX

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

PIPE MATRIX

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

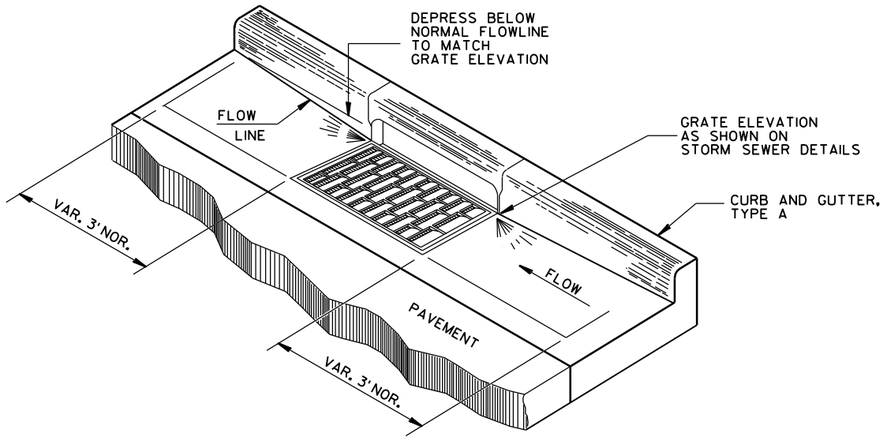
APPROVED

Sept., 2016
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERV

FHWA

6
S.D.D. 8 B 9-2



DETAIL OF CURB AND GUTTER AT INLETS

(TYPE H INLET COVER SHOWN)

GENERAL NOTES

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

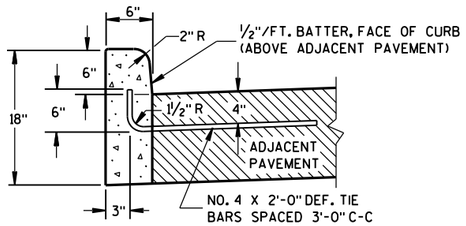
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

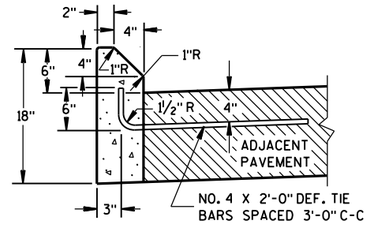
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.

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

(9) REFER TO SDD 8D18 AND SDD 8D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

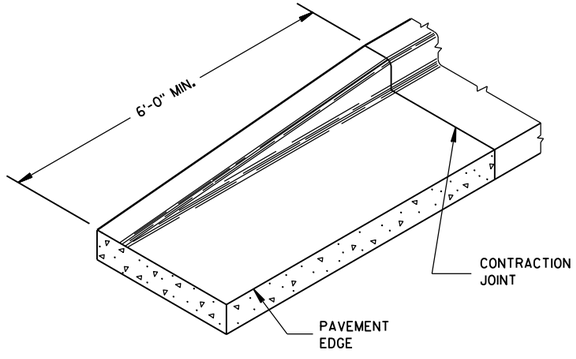


TYPES A(1) & D

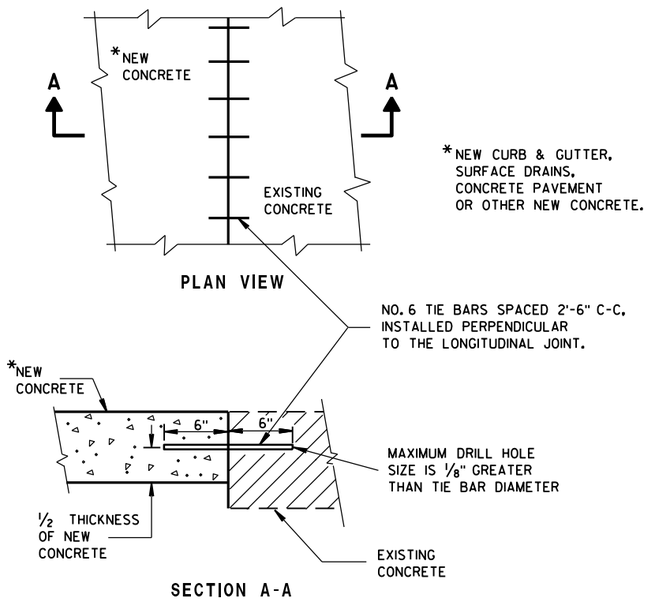


TYPES G(1) & J

CONCRETE CURB



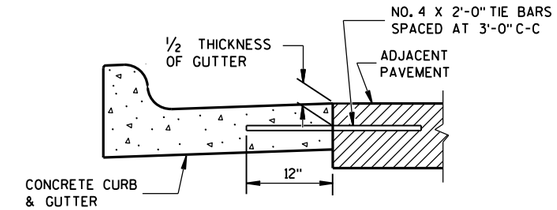
END SECTION CURB & GUTTER



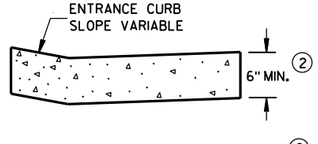
PLAN VIEW

SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (9)

(WHEN DIRECTED BY THE ENGINEER)

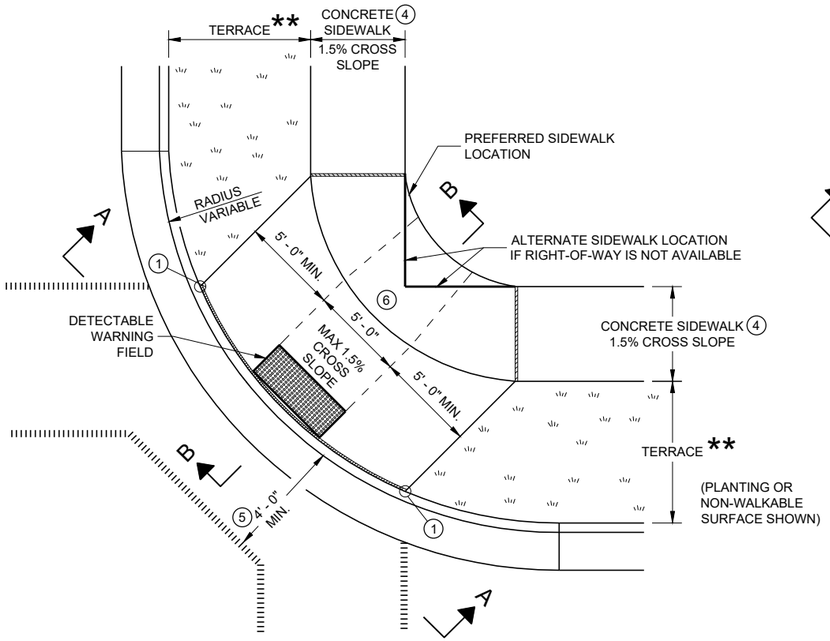
CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2017 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVISOR
FHWA
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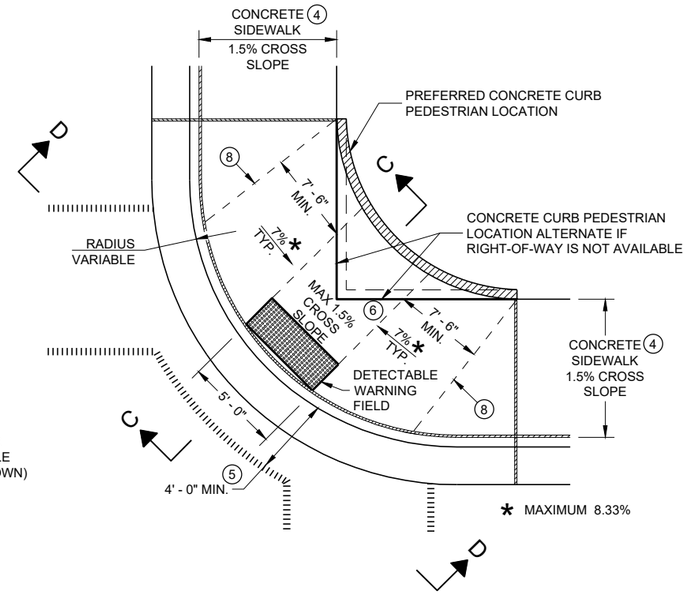
S.D.D. 8 D 1-20b



PLAN VIEW

CURB RAMP TYPE 1

(CENTER OF CORNER RADIUS)



PLAN VIEW

CURB RAMP TYPE 1 - A

(NO TERRACE)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 CURB RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FILED SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAR FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD"

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

(1) THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

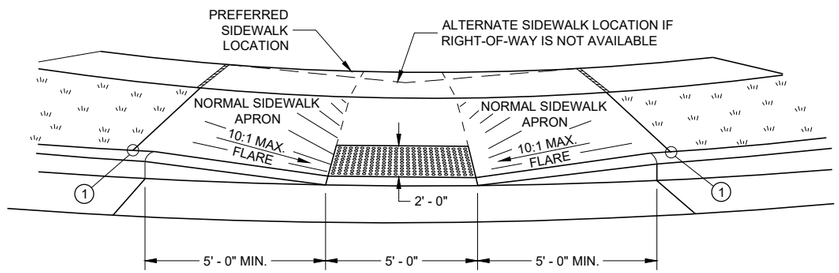
(3) MAXIMUM 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

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

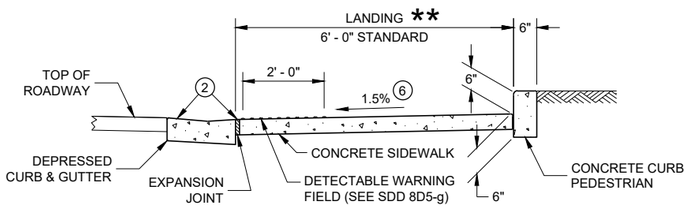
(5) PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.

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

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



VIEW A - A FOR TYPE 1

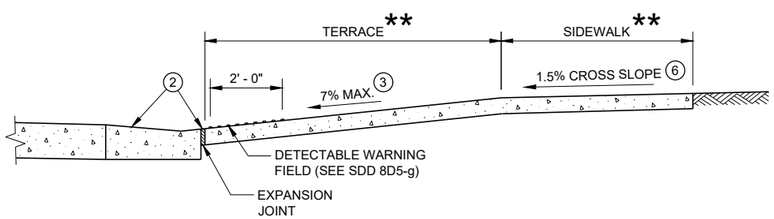


SECTION C - C FOR TYPE 1 - A

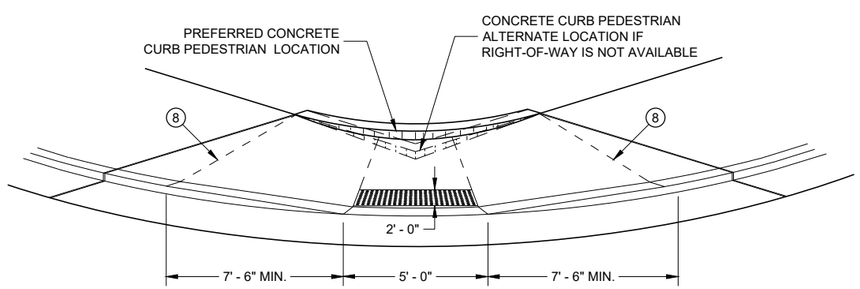
LEGEND

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

** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B - B FOR TYPE 1



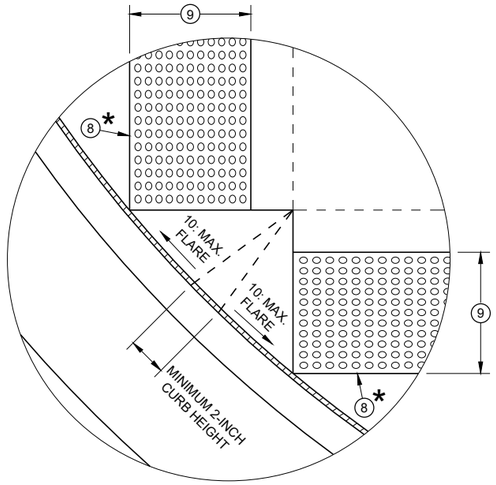
VIEW D - D FOR TYPE 1 - A

CURB RAMPS
TYPE 1 AND 1-A

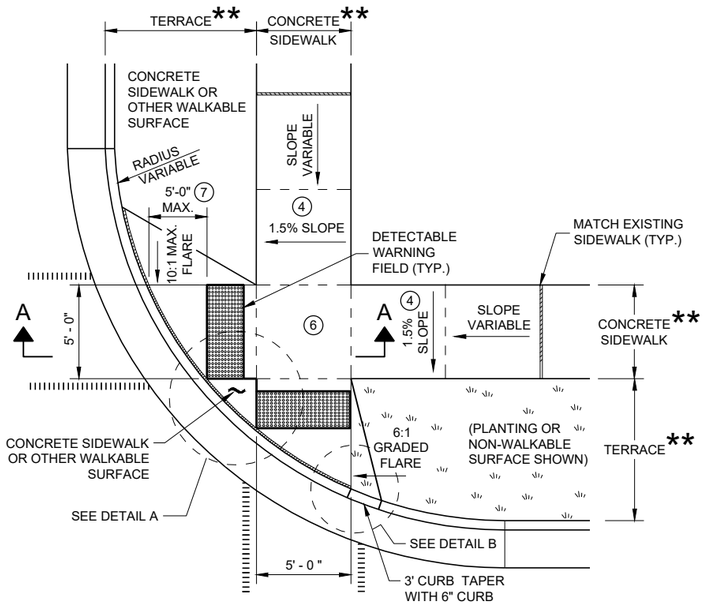
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D05 - 20a

SDD 08D05 - 20a



DETAIL A



PLAN VIEW
CURB RAMP TYPE 2
(CENTER OF CORNER RADIUS)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE (2.67% OR LESS) AND NOT TO EXCEED 11% GRADE CHANGE.

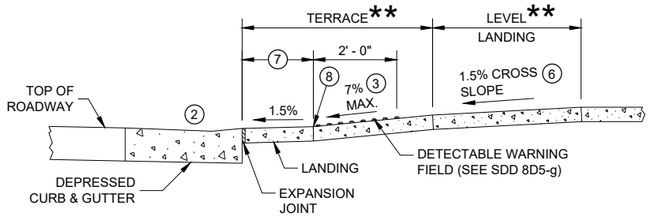
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

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

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

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

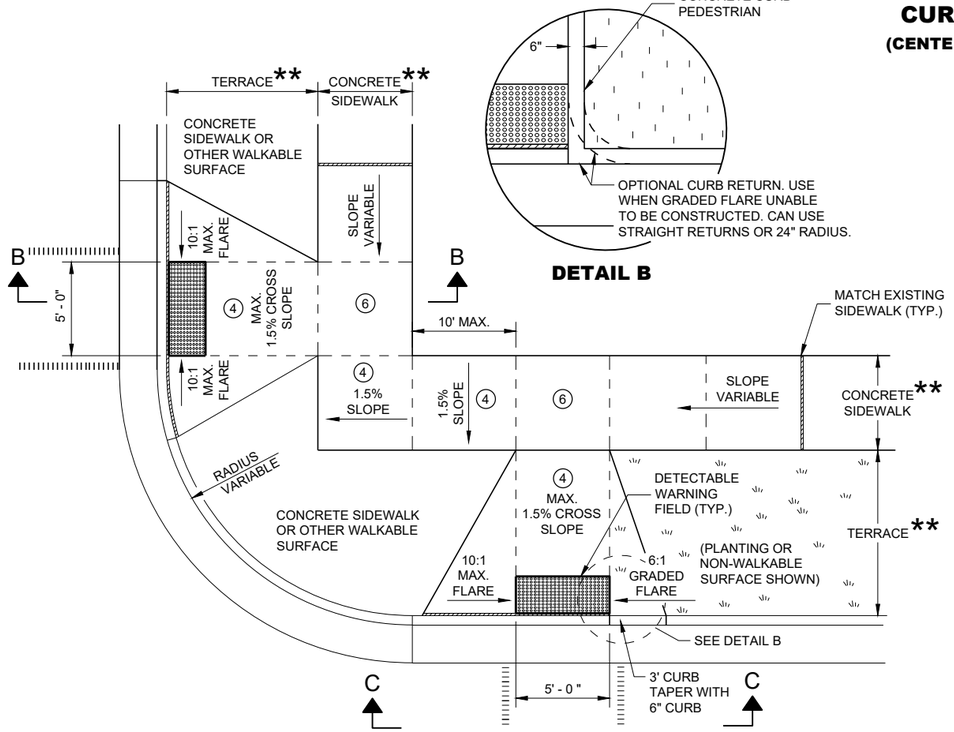
(9) WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.



SECTION A - A FOR TYPE 2

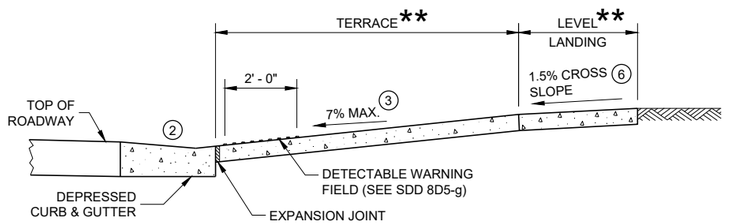
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** WIDTH SHOWN ELSEWHERE IN THE PLANS

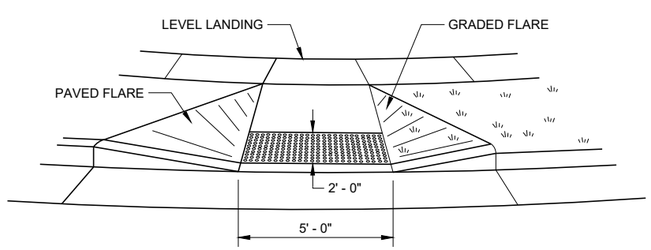


DETAIL B

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



SECTION B - B FOR TYPE 3



VIEW C - C FOR TYPE 3

LEGEND

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

CURB RAMPS TYPE 2 AND 3

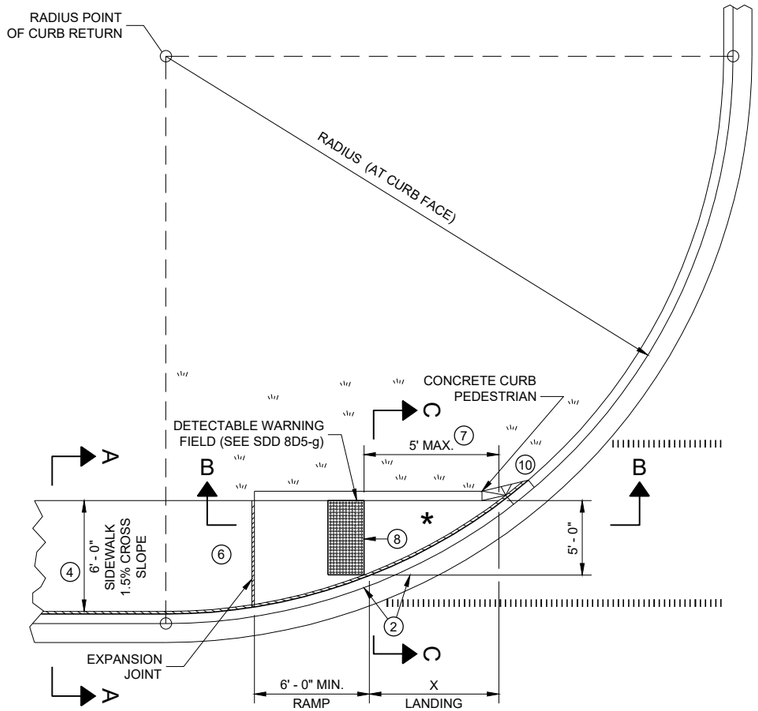
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 08D05 - 20b

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SDD 08D05 - 20b

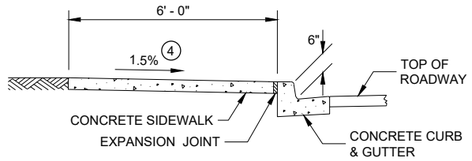


PLAN VIEW

CURB RAMP TYPE 4A

RADIUS (AT CURB FACE)	X
10 FEET	4' - 7"
15 FEET	6' - 5½"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A - A FOR TYPE 4A

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

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

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

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

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

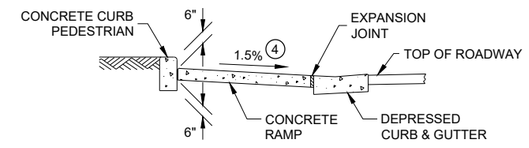
(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

LEGEND

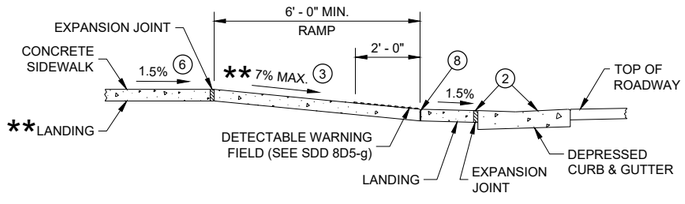
½" EXPANSION JOINT SIDEWALK

CONTRACTION JOINT SIDEWALK

PAVEMENT MARKING CROSSWALK (WHITE)



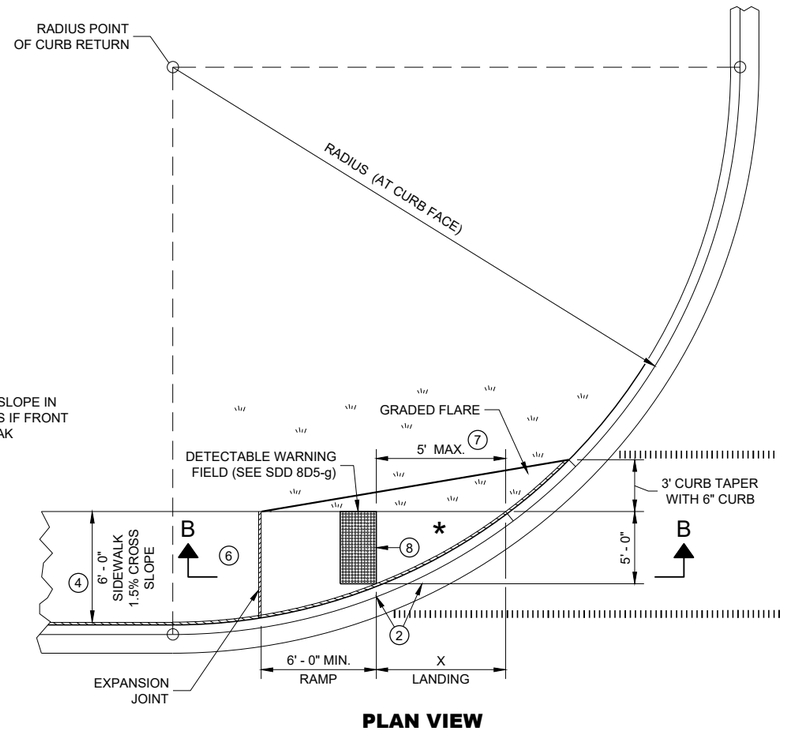
SECTION C - C FOR TYPE 4A



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

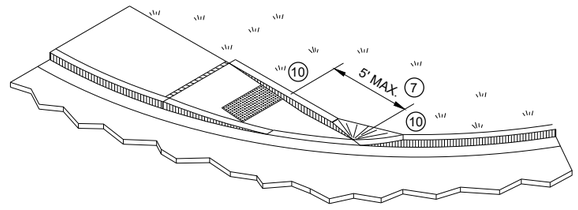
SECTION B - B FOR TYPE 4A AND TYPE 4A1

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

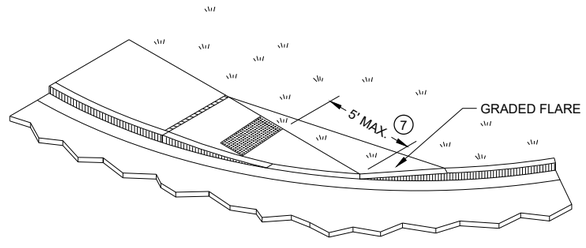


PLAN VIEW

CURB RAMP TYPE 4A1



ISOMETRIC VIEW FOR TYPE 4A



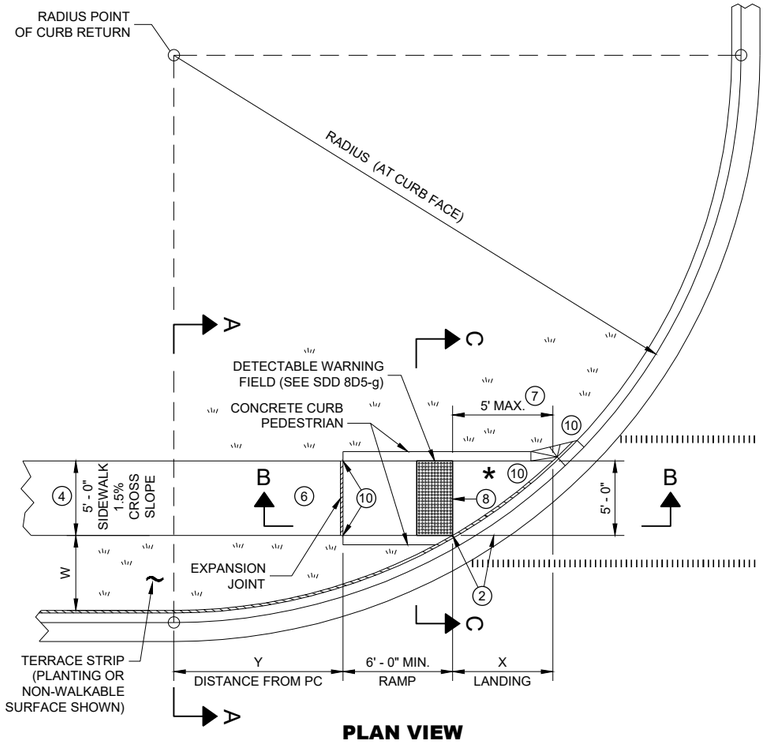
ISOMETRIC VIEW FOR TYPE 4A1

CURB RAMPS
TYPE 4A AND 4A1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05 - 20c



PLAN VIEW

CURB RAMP TYPE 4B

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"		W = 8' - 0"		W = 9' - 0"		W = 10' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2' - 10 ¼"	0' - 5"	2' - 1"	1' - 4 ½"	1' - 5"	2' - 1"	0' - 10"	2' - 7 ½"	0' - 3 ¼"	3' - 0 ¼"						
15 FEET	4' - 6 ¾"	2' - 1 ¾"	3' - 9"	3' - 5 ¾"	3' - 1 ¼"	4' - 6"	2' - 6 ¾"	5' - 4 ½"	2' - 1"	6' - 1"	1' - 8"	6' - 8 ½"	1' - 3 ¼"	7' - 2 ½"	0' - 10 ¾"	7' - 7 ¼"
20 FEET	5' - 9 ¾"	3' - 6 ½"	4' - 11 ½"	5' - 1 ¾"	4' - 3 ¼"	6' - 5 ½"	3' - 8 ¾"	7' - 7"	3' - 3"	8' - 6 ½"	2' - 10"	9' - 4 ½"	2' - 5 ½"	10' - 1 ¼"	2' - 1 ¼"	10' - 9"
30 FEET			6' - 9 ¼"	7' - 11 ¼"	6' - 0 ¼"	9' - 8"	5' - 5"	11' - 1 ¾"	4' - 10 ¾"	12' - 5 ¾"	4' - 5 ½"	13' - 7 ¾"	4' - 0 ¾"	14' - 8 ½"	3' - 8 ½"	15' - 8 ¼"
40 FEET									6' - 1 ¾"	15' - 8 ½"	5' - 8"	17' - 2"	5' - 3"	18' - 5 ¾"	4' - 10 ¾"	19' - 8 ¼"
50 FEET															5' - 10 ¼"	23' - 2"

INTERMEDIATE RADII CAN BE INTERPOLATED
DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH
DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH

SECTION C - C FOR TYPE 4B

LEGEND

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

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

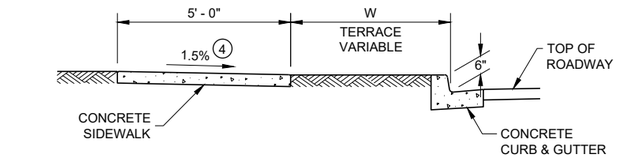
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

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

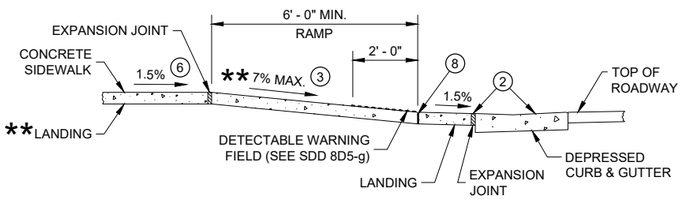
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

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

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

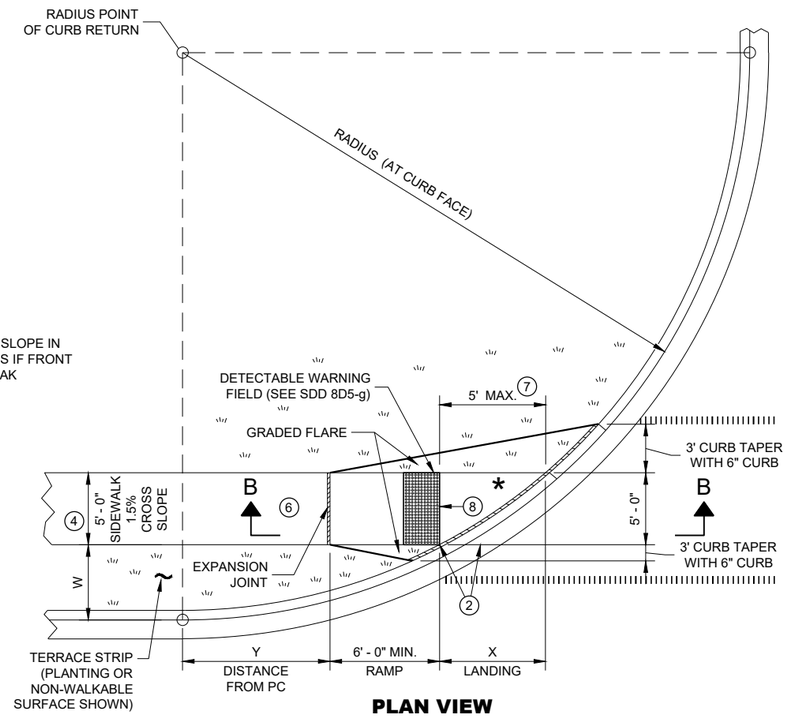


SECTION A - A FOR TYPE 4B



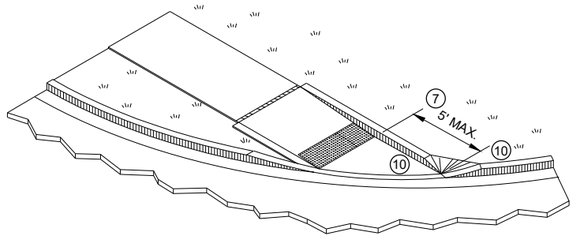
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

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

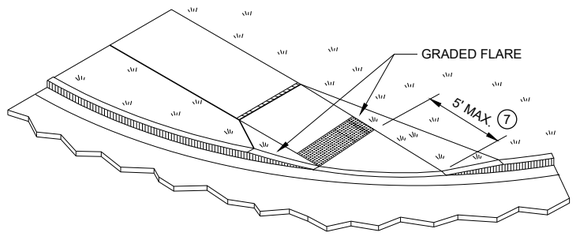


PLAN VIEW

CURB RAMP TYPE 4B1



ISOMETRIC VIEW FOR TYPE 4B



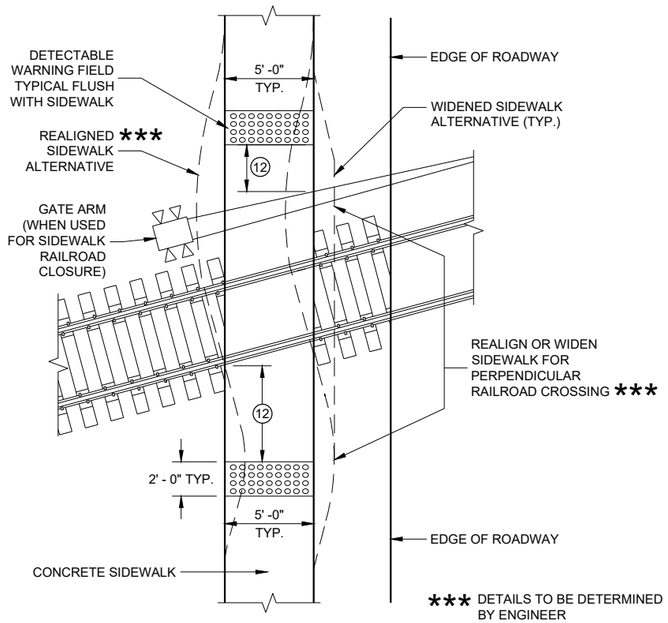
ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

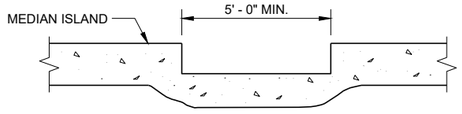
6

SDD 08D05 - 20d

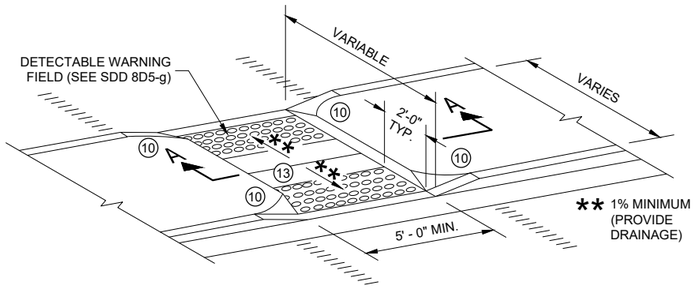


CURB RAMP TYPE 8

DETECTABLE WARNINGS AT RAILROAD CROSSING



SECTION A - A FOR TYPE 5



CURB RAMP TYPE 5

MEDIAN ISLAND NON-ELEVATED PEDESTRIAN CROSSING

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ½ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

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

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

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

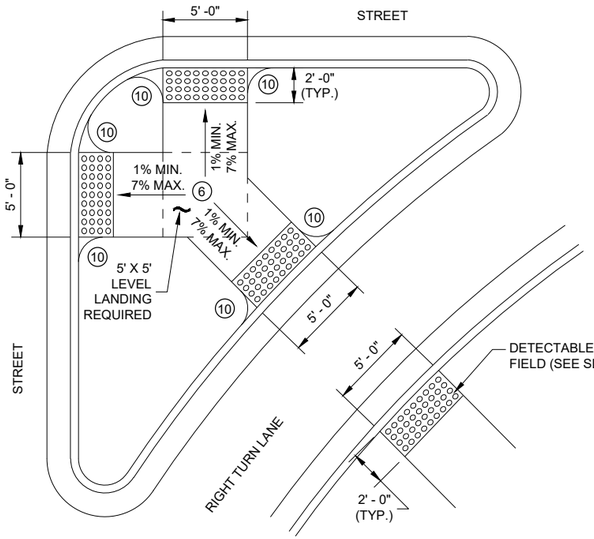
(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(12) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ±0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.

(13) DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STEET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2 FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.

LEGEND

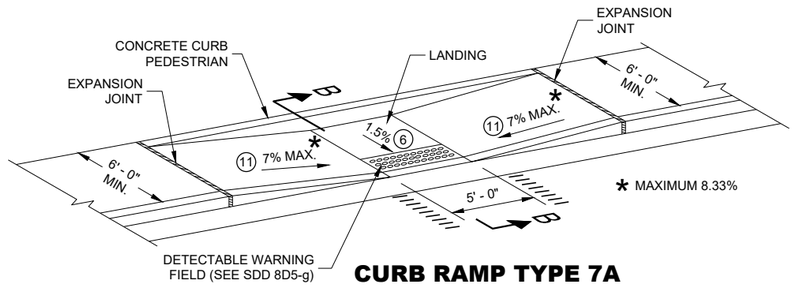
- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)



CURB RAMP TYPE 6

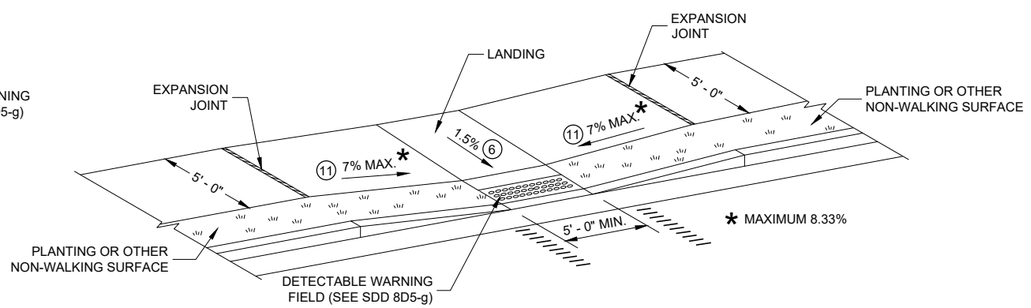
DETECTABLE WARNING AT ISLANDS

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



CURB RAMP TYPE 7A

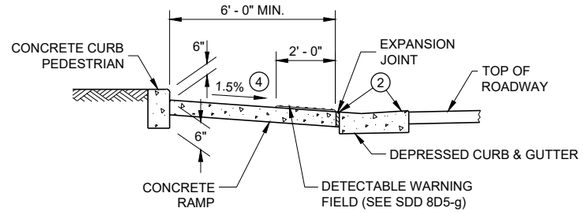
MID BLOCK CROSSING



CURB RAMP TYPE 7B

MID BLOCK CROSSING

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.



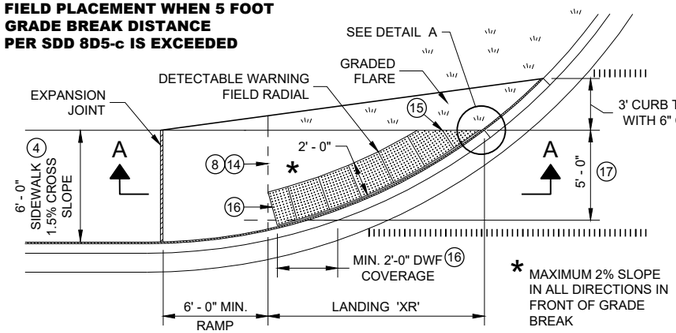
SECTION B - B FOR TYPE 7A

CURB RAMPS TYPE 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 08D05 - 20e

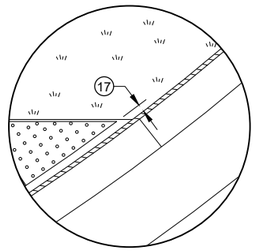
RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-c IS EXCEEDED



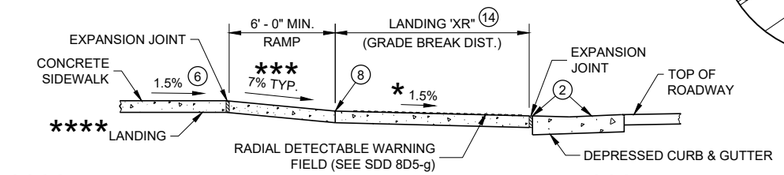
PLAN VIEW

CURB RAMP TYPE 4A1

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



DETAIL A

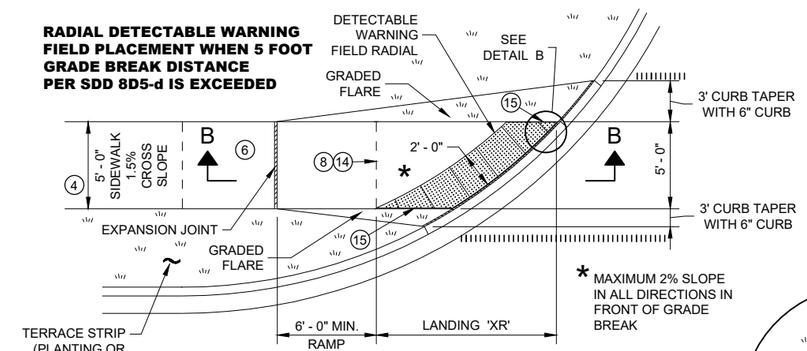


**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** MAXIMUM 8.33%

SECTION A - A FOR TYPE 4A1

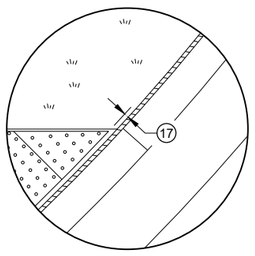
RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-d IS EXCEEDED



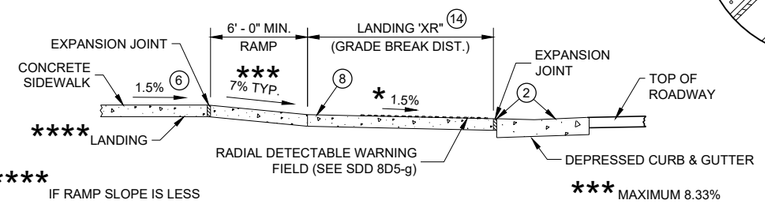
PLAN VIEW

CURB RAMP TYPE 4B1

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



DETAIL B



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

*** MAXIMUM 8.33%

SECTION B - B FOR TYPE 4B1

LEGEND

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

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B CURB RAMPS ARE NOT SHOWN.

REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

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

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

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

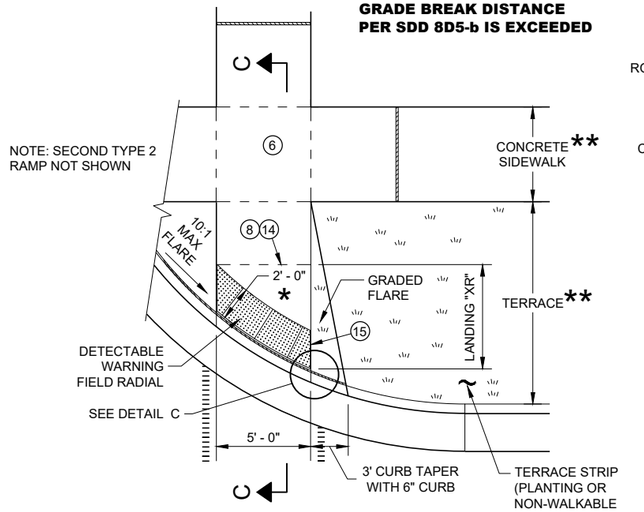
(14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.

(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN ⅛" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

(16) USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.

(17) A MAXIMUM 3 INCH CONCRETE BORDER WITH IS ALLOWABLE IN FROM OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

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

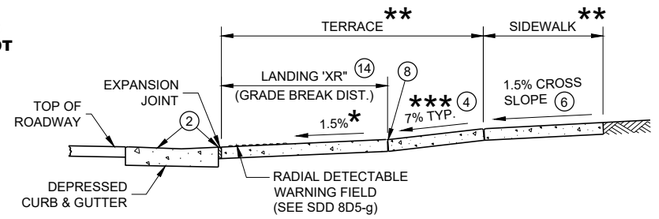


PLAN VIEW

CURB RAMP TYPE 2

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)

(ON LINE WITH SIDEWALK)

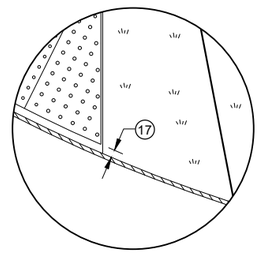


SECTION C - C FOR TYPE 2

* MAXIMUM 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** WIDTH SHOWN ELSEWHERE IN THE PLANS

*** MAXIMUM 8.33%



DETAIL C

CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS

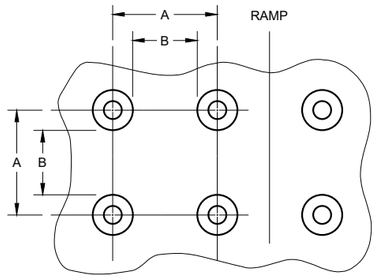
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D05 - 20f

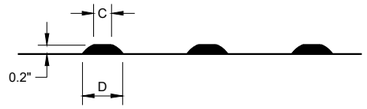
SDD 08D05 - 20f

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

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

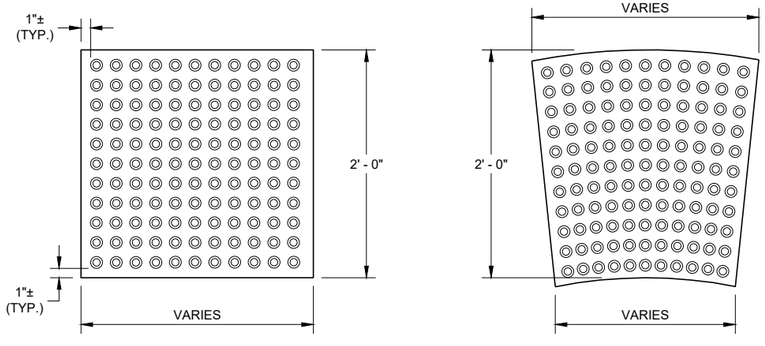


PLAN VIEW



ELEVATION VIEW

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



RECTANGULAR PLATES

RADIAL PLATES

PLAN VIEW
DETECTABLE WARNING FIELDS (TYPICAL)

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AT A CURB RAMP SHALL BE FROM THE SAME MANUFACTURER.

PLACE ALL DETECTABLE WARNING FIELD SYSTEMS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

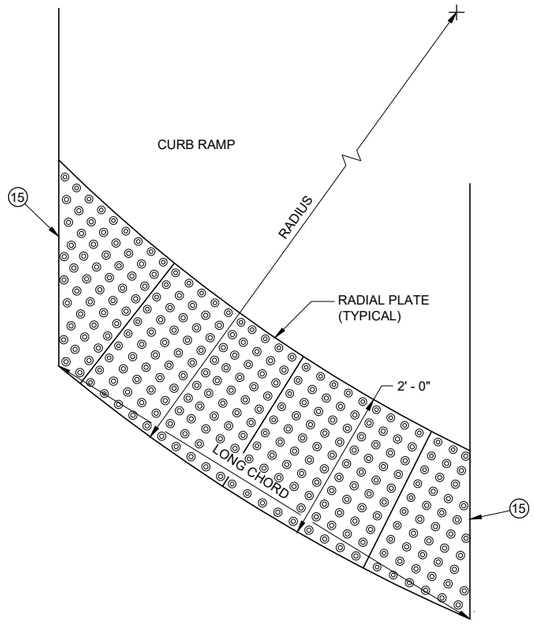
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.

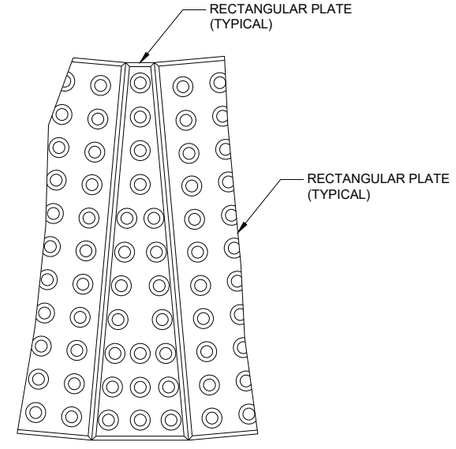
REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN ⅛" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.



PLAN VIEW
RADIAL DETECTABLE WARNING FIELD ATTRIBUTES



PLAN VIEW
RADIAL WEDGE PLATE CONNECTION DETAIL

CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

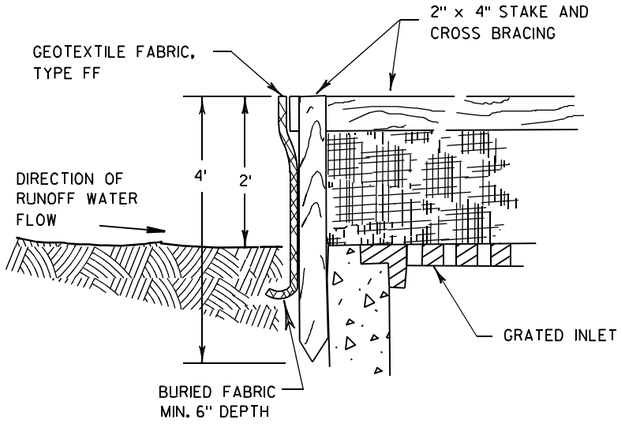
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

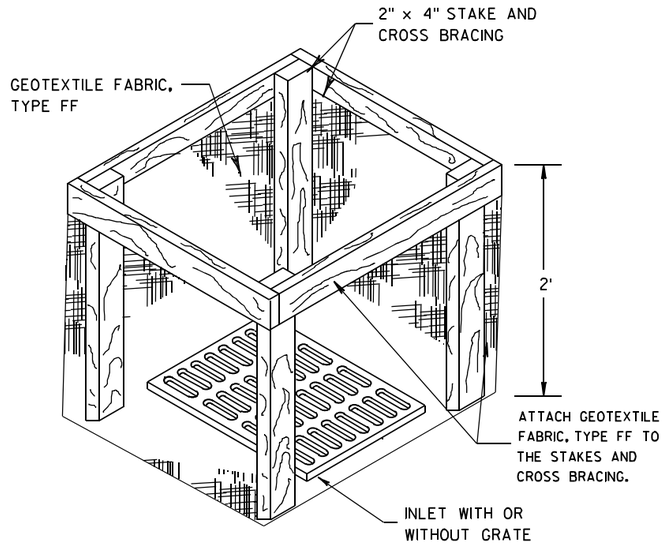
APPROVED
May 2019
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE UNIT SUPERVISOR

FHWA

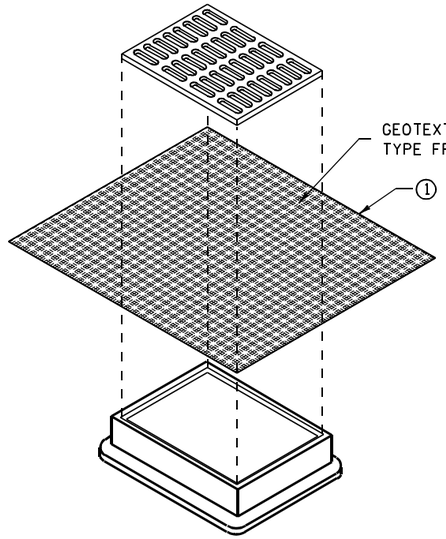
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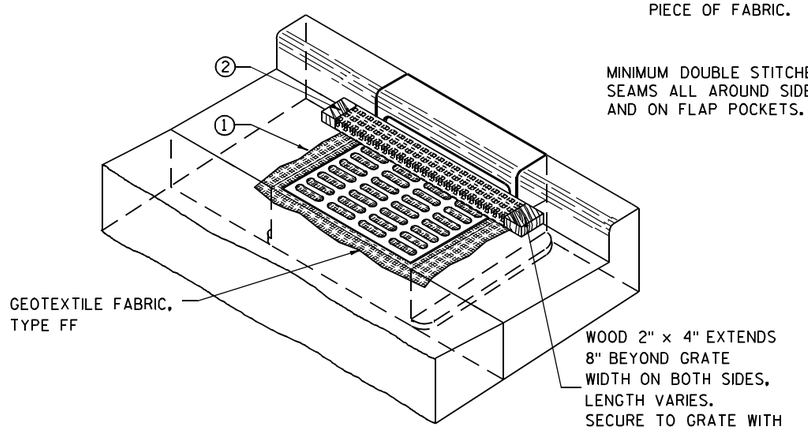


INLET PROTECTION, TYPE A

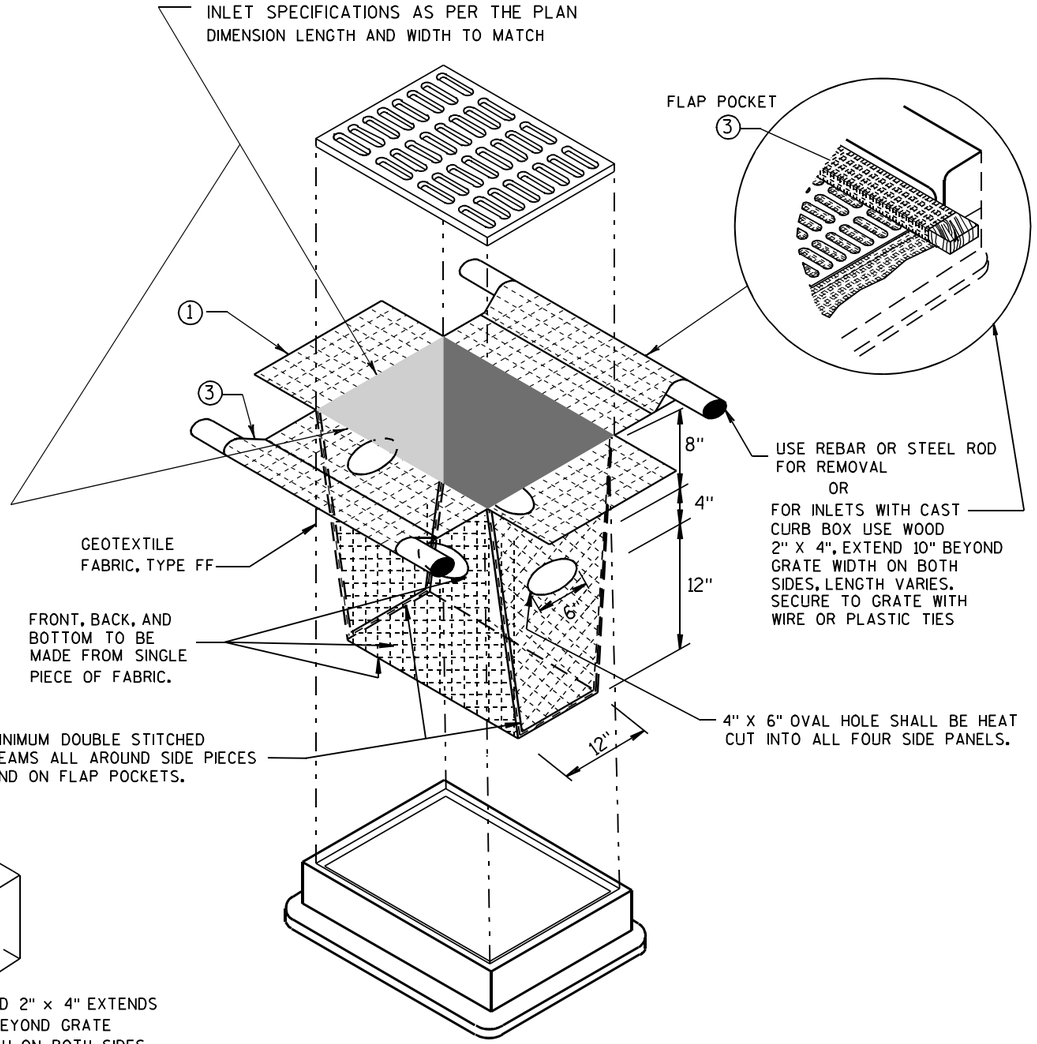


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(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

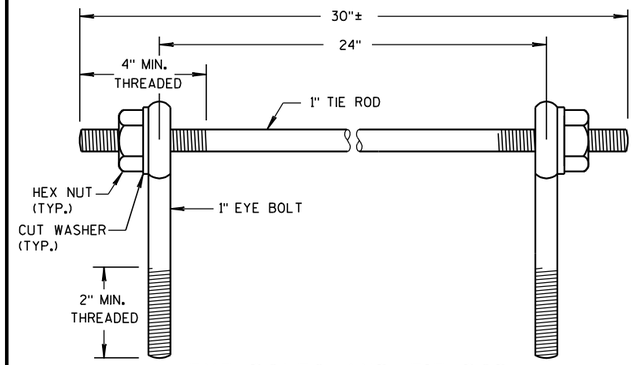
APPROVED

10/16/02
DATE

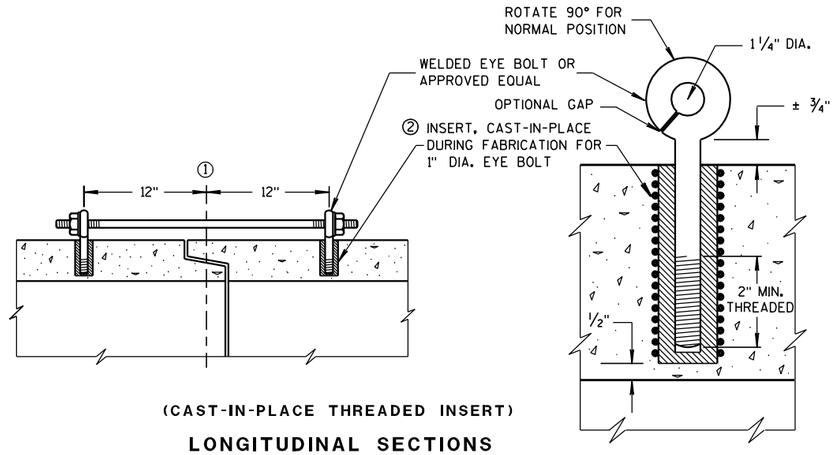
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

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



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)

GENERAL NOTES

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

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

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

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

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

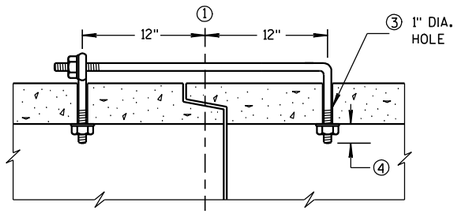
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

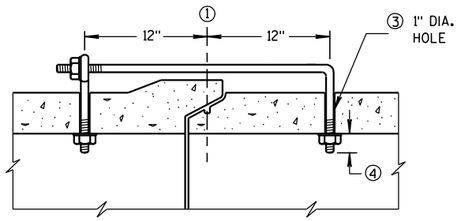
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

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



(TONGUE & GROOVE PIPE)

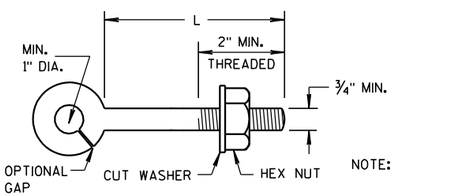


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

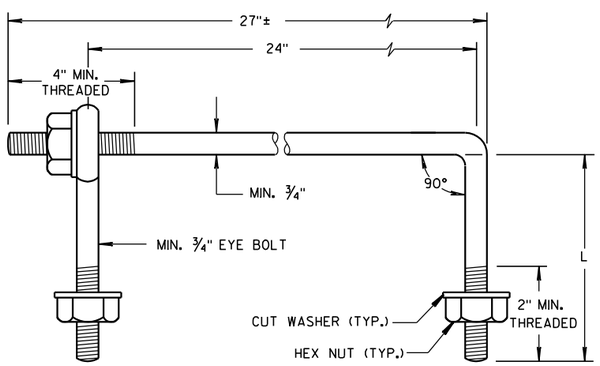
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

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



EYE BOLT AND TIE ROD

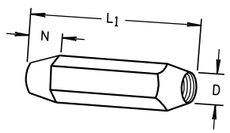
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

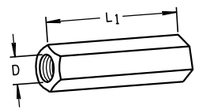
ADJUSTABLE TIE ROD TABLE

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

DIMENSIONS SHOWN ARE IN INCHES



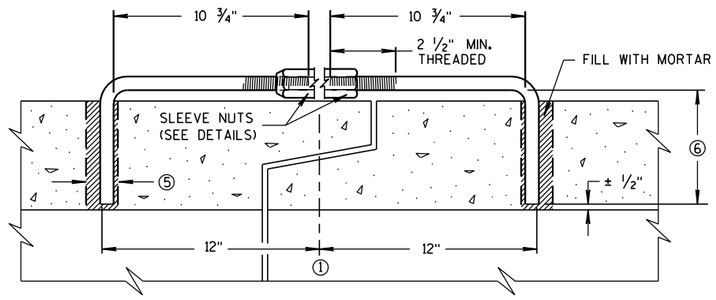
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PLAIN

RIGHT AND LEFT THREADS

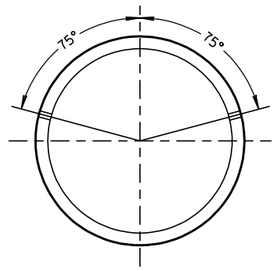
SLEEVE NUTS



LONGITUDINAL SECTION

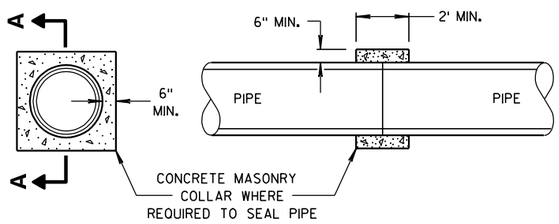
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

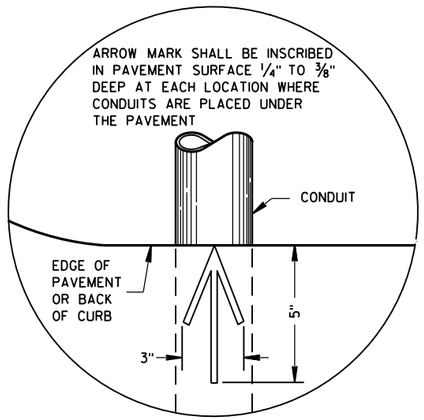
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
144
FHWA

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S.D.D. 8 F 4-7

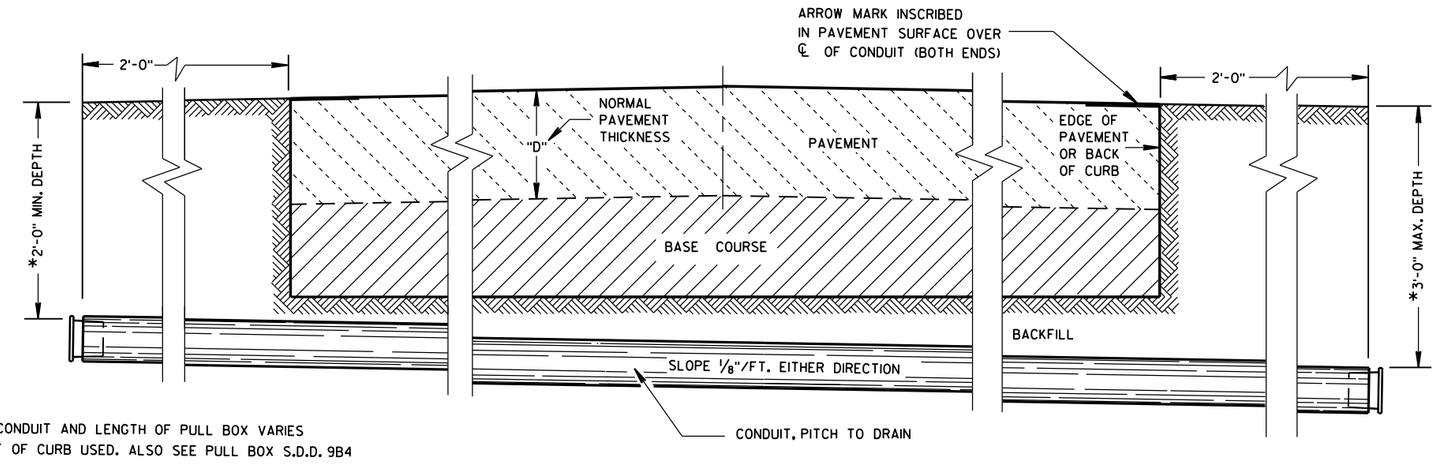
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S.D.D. 8 F 4-7



PLAN VIEW

ARROW MARK



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

GENERAL NOTES

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

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

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

PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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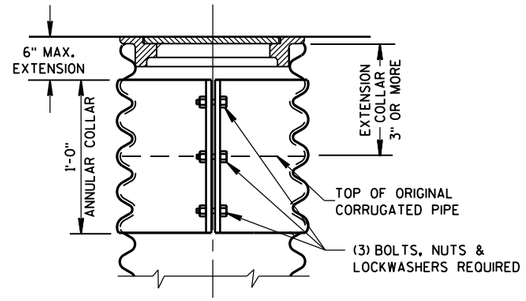
S.D.D. 9 B 2-10

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

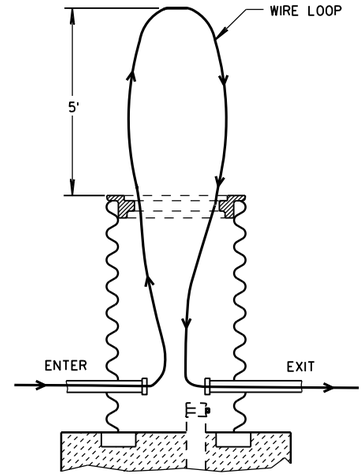
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2	26 1/2	26 1/2	26 1/2
FRAME	F	8 1/2	8 1/2	8 1/2	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2
FRAME	G	11 1/2	11 1/2	11 1/2	17 1/2	17 1/2	17 1/2	23 1/2	23 1/2	23 1/2
WEIGHT IN POUNDS *										
FRAME AND COVER		60	60	60	110	110	110	155	155	155

* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

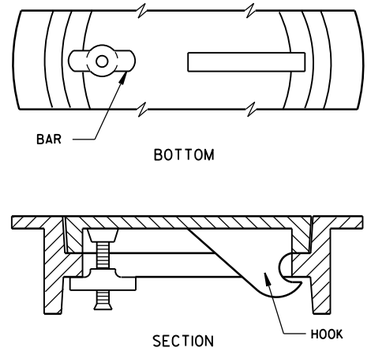
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

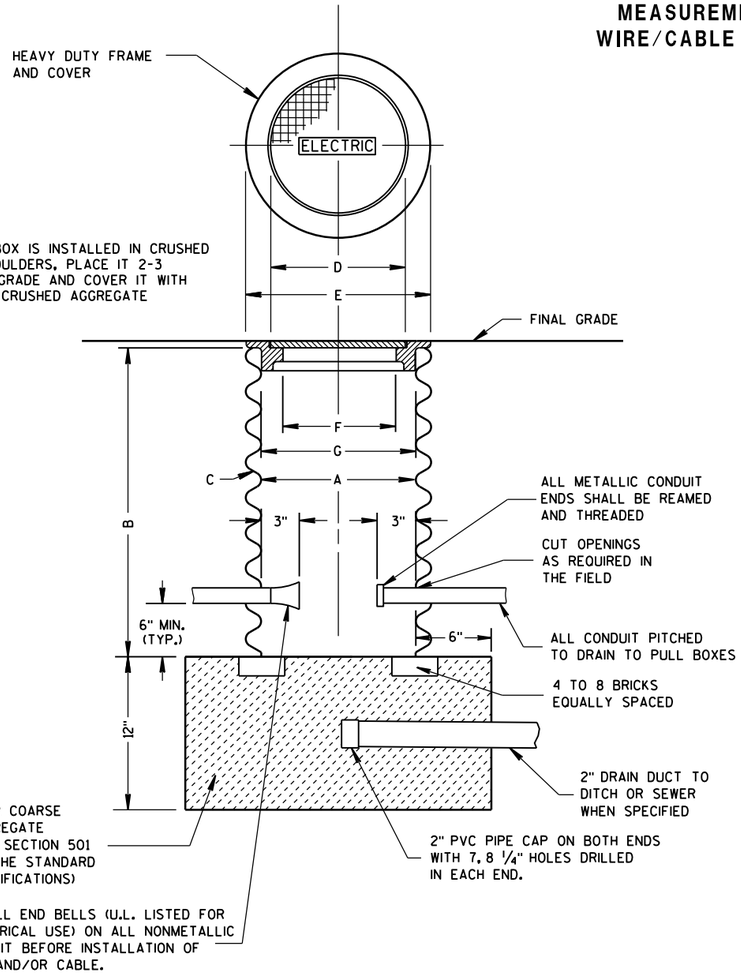


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



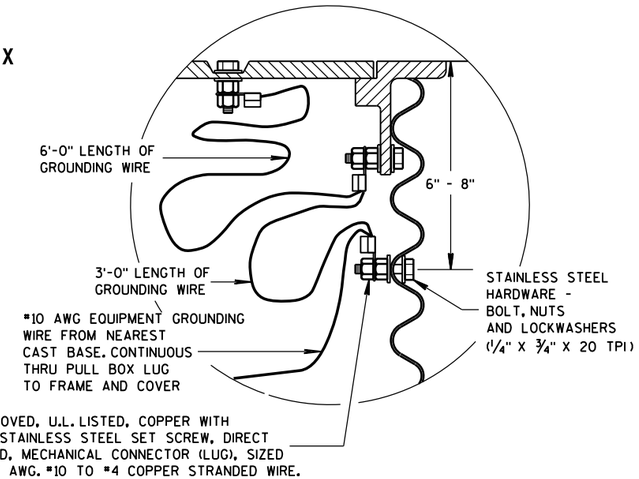
ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE

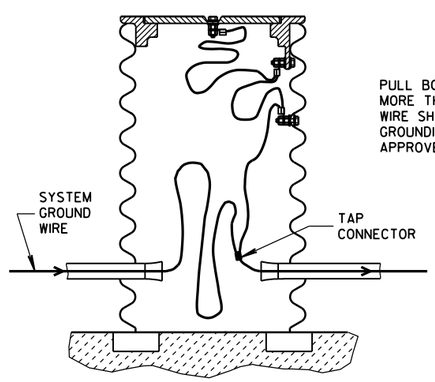


WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

PULL BOX



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



PULL BOX TO NEAREST BASE DISTANCE MORE THAN 20 FEET. PULL BOX GROUND WIRE SHALL CONNECT AT SYSTEM GROUNDING WIRE. USE DEPARTMENT APPROVED TAP CONNECTOR.

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

GENERAL NOTES

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

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

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

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

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

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.

PULL BOX

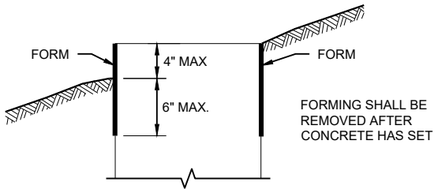
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
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6

S.D.D. 9 B 4-11

FORM DEPTH SHALL BE NO MORE THAN 6" BELOW GRADE ON THE LOWER SIDE OF BASE



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN A THE ENTRANCE OF THE BASE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FRO FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC.

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

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

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

BELL BENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION.

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

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 2, TYPE 5 AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER ALL BASE TYPES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

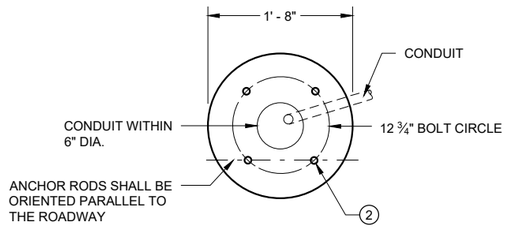
WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

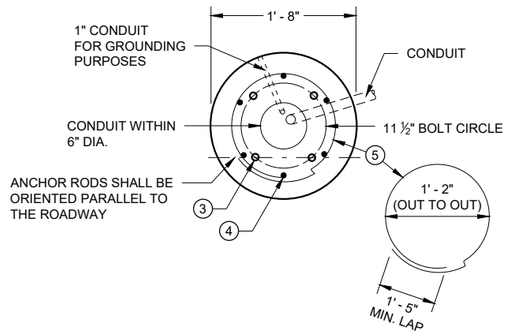
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH"L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

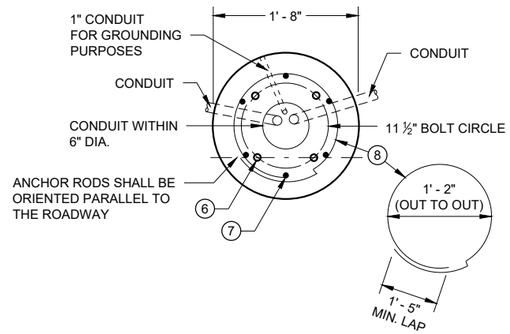
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

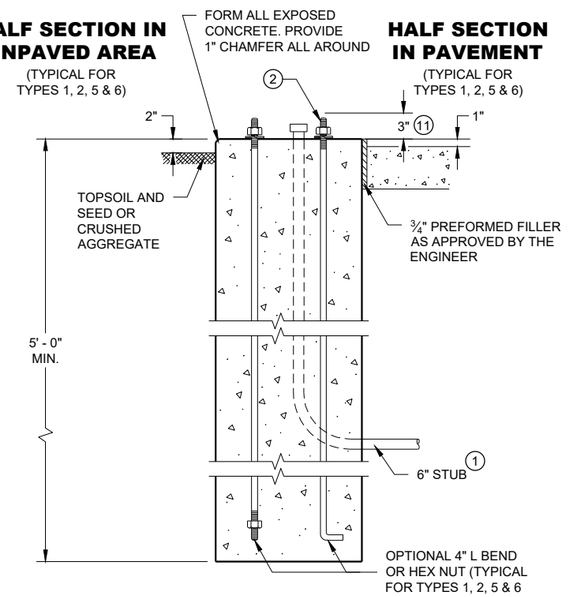
WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

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

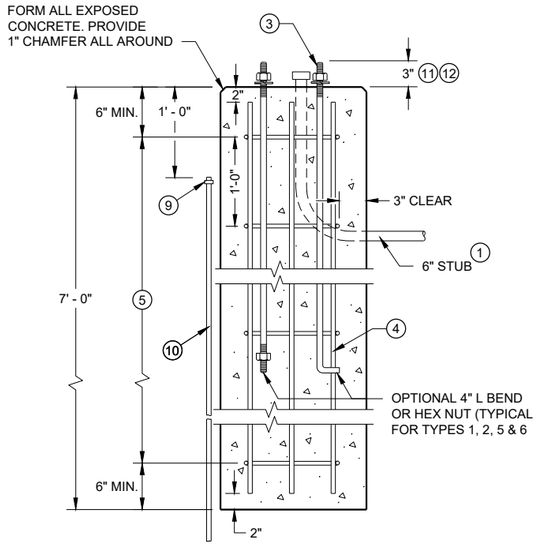




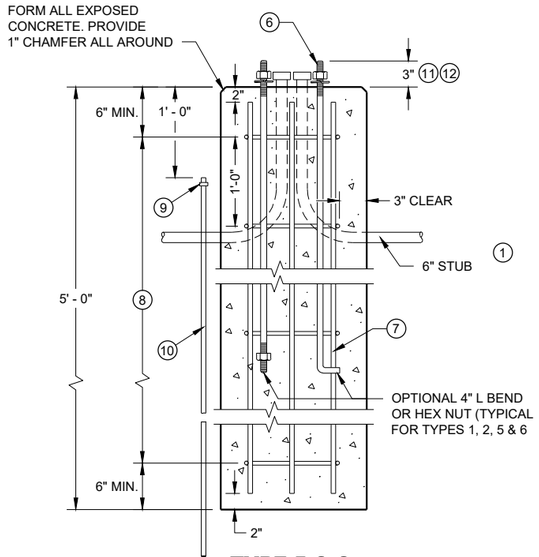




TYPE 1



TYPE 2



TYPE 5 & 6

1 THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.

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

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

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

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

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

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

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

9 EXOTHERMIC CONNECTION TO EUIPMENT GROUNDING CONDUCTOR

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

11 ANY ANCHOR ROD PROJECTION SHORTER THAN 2 ¾" OR LONGER THAN 3 ¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

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

CONCRETE BASES

CONCRETE BASES TYPES 1, 2, 5, & 6

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

FHWA

GENERAL NOTES

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

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 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.

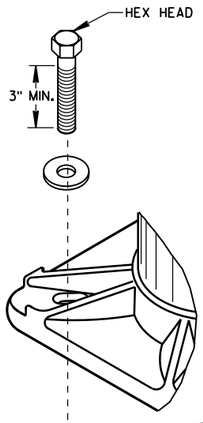
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

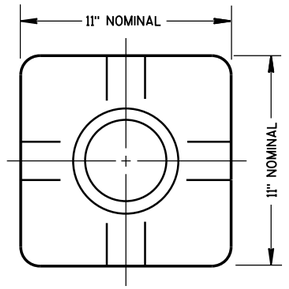
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

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

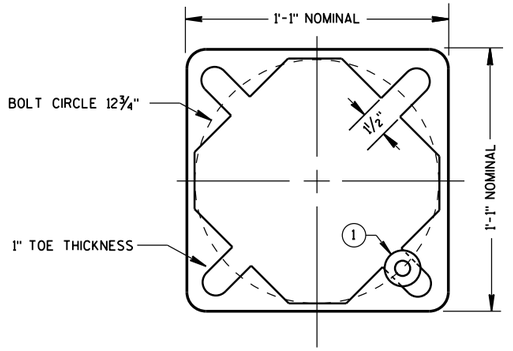
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

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

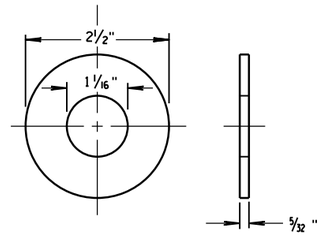




TOP VIEW
(PEDESTAL BASE)

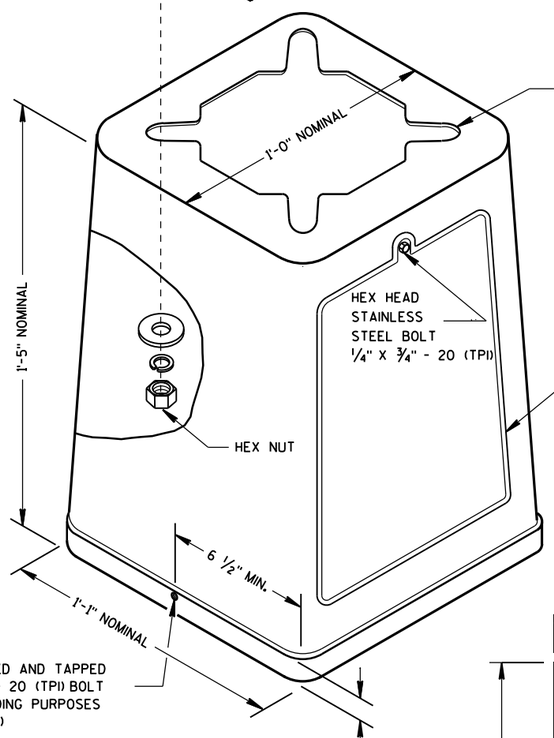


BOTTOM VIEW
(PEDESTAL BASE)

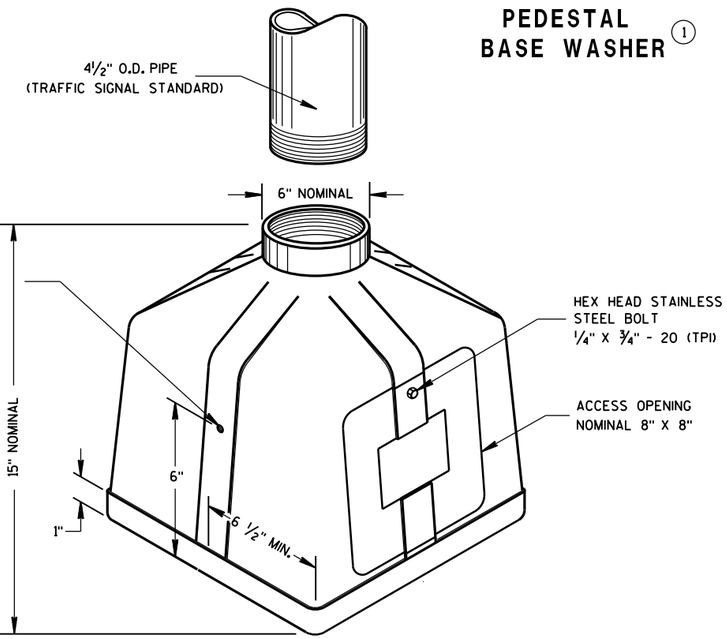


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

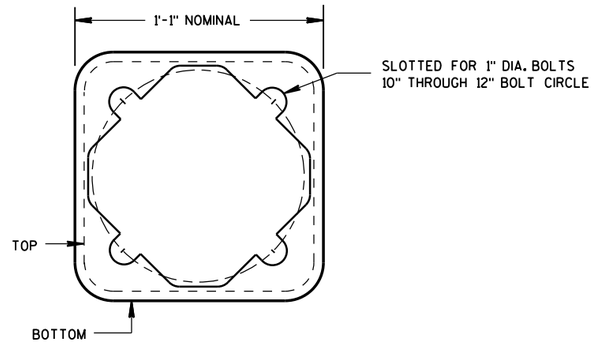


ISOMETRIC VIEW

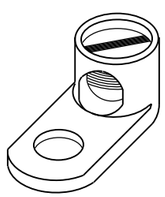


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

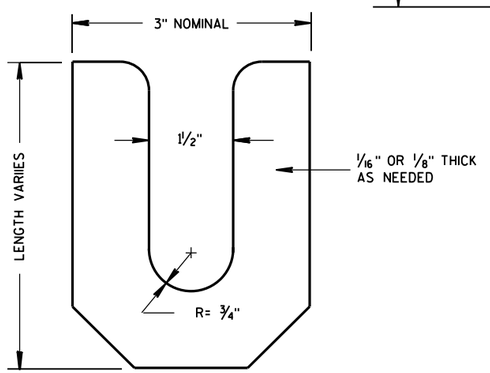


TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

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



LEVELING SHIM

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

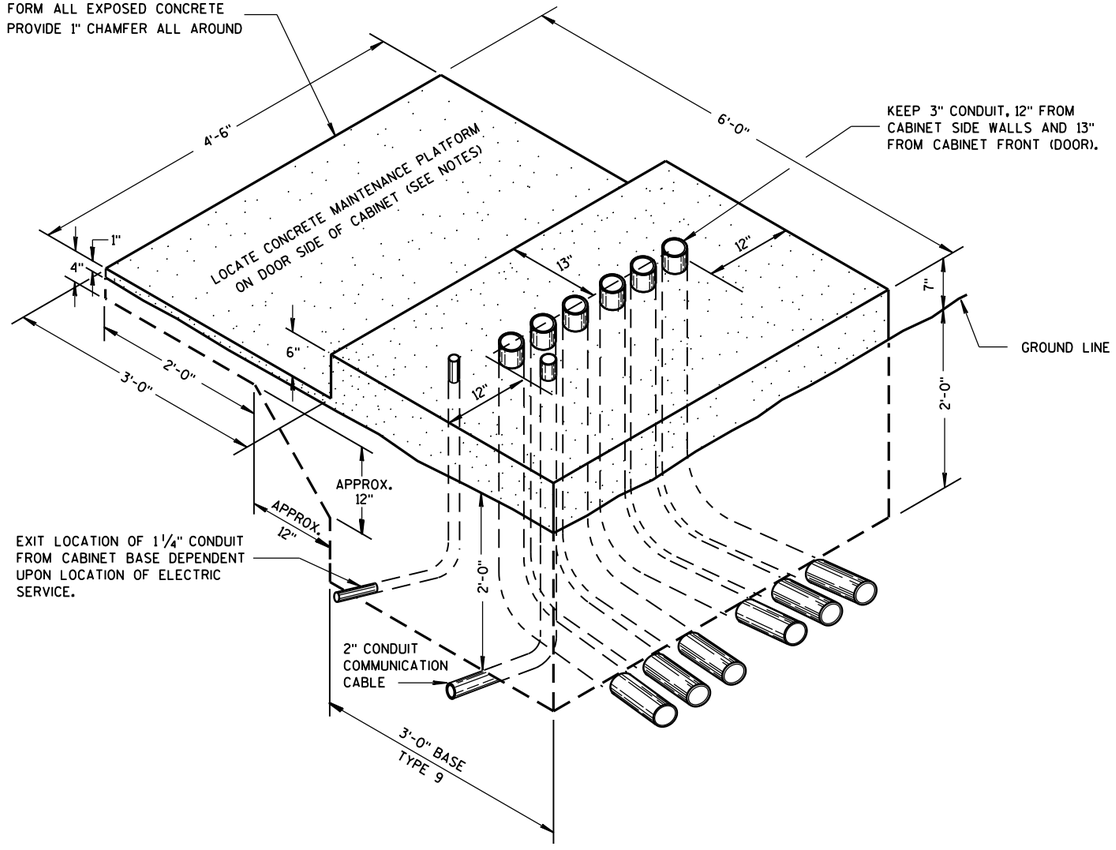
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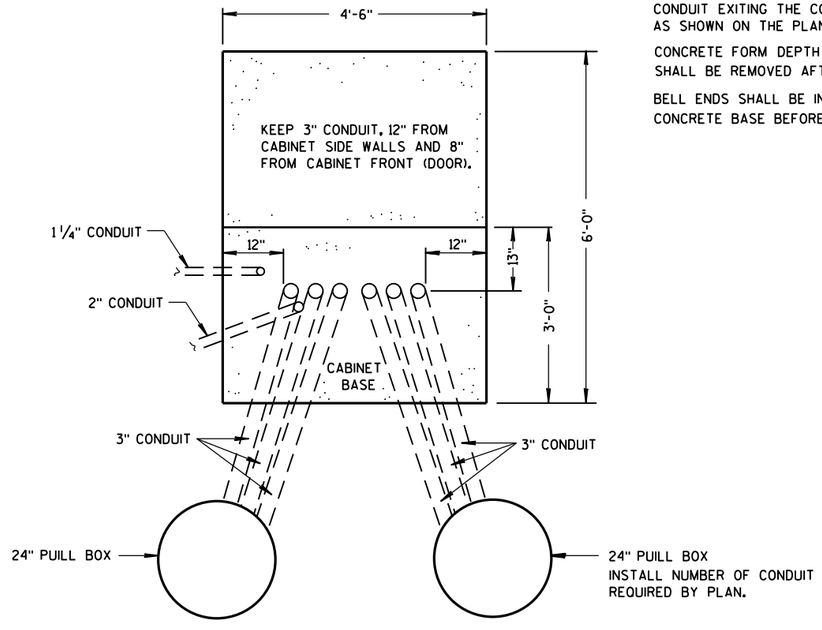
S.D.D. 9 C 3-4



ISOMETRIC VIEW

TYPE 9, SPECIAL

(C.Y. CONCRETE = APPROX. 1.56)



PLAN VIEW

CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL

GENERAL NOTES

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

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

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

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

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

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

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

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

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

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

CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 9 C 6-7

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 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 4 INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL END INSTALLED. ALL CONDUIT SHALL BE SLOPED TO PULL BOX.

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. CONDUIT 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.

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).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL 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.

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

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

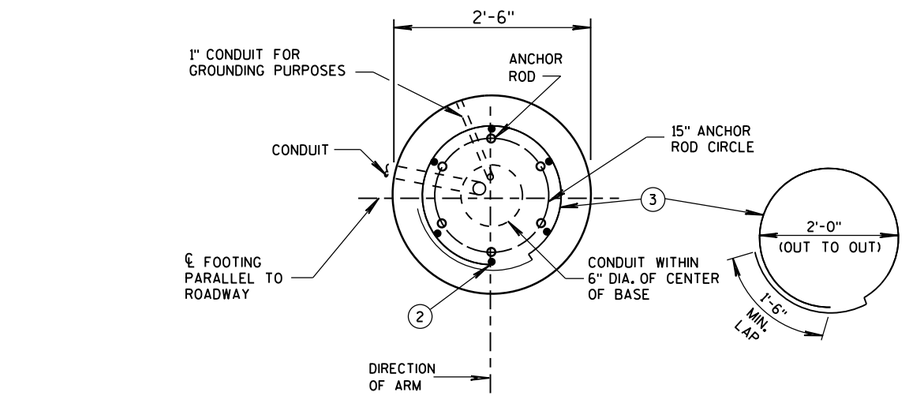
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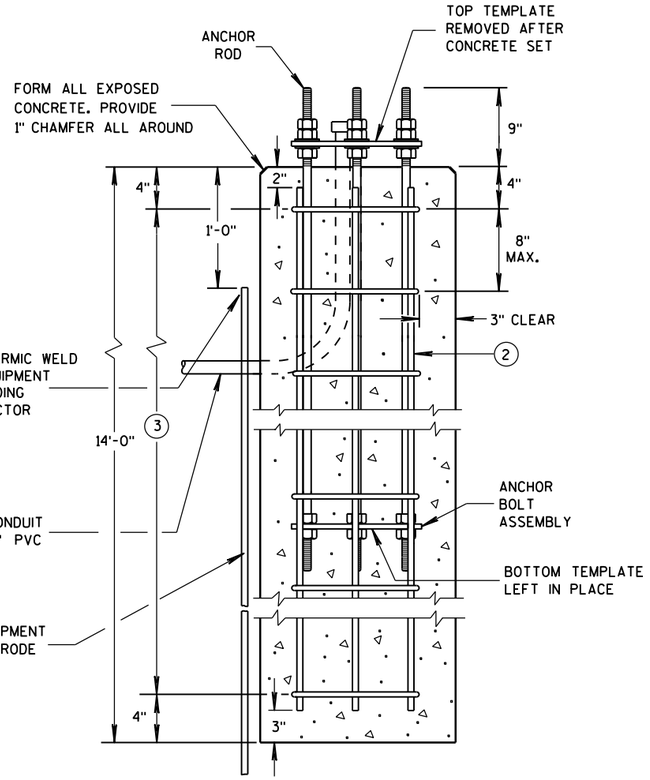
(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES. (GREATER THAN 36 INCHES IF INSTALLED IN BREAKER-RUN), EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

(2) (6) NO. 6 X 13'-7" BAR STEEL REINFORCEMENT.

(3) (21) NO. 5 X 7'-10" BAR STEEL REINFORCEMENT @ 8" MAX. C-C.

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 SPECIFICATION)	fy=55,000 p.s.i.
TEMPLATES, ASTM, A709 GRADE 36	fy=36,000 p.s.i.

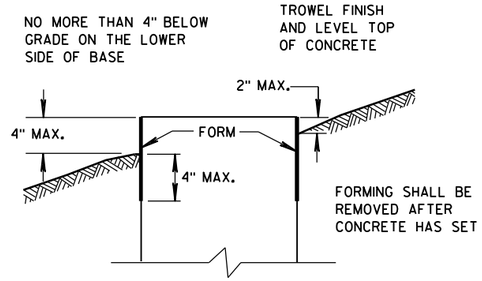




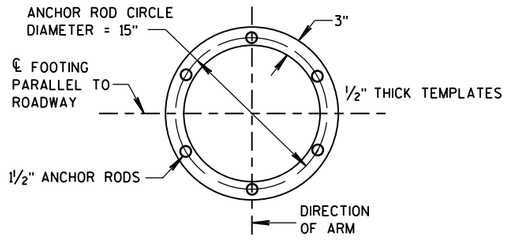
CONCRETE BASE TYPE 10

(FOR TYPE 9 & 10 & OVER HEIGHT (OH) POLES)

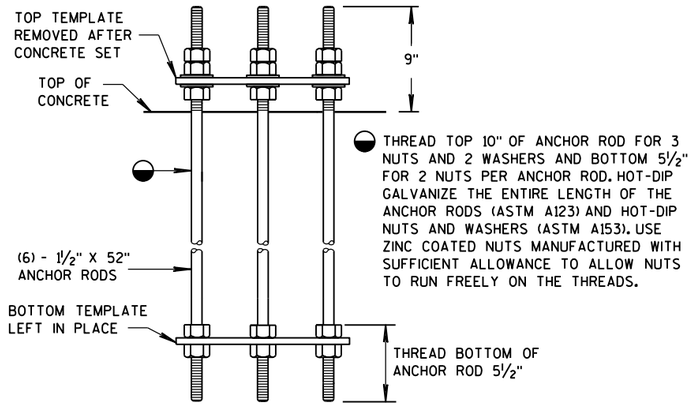
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION. SEE S.D.D. 9C13-2 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.



FORMING DETAIL



TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 10 ANCHOR ASSEMBLY

QUANTITY REQUIREMENTS	
APPROX. CUBIC YARDS OF CONCRETE	2.5
LBS. OF HOOP BAR STEEL	172
LBS. OF VERTICAL BAR STEEL	122

CONCRETE BASE TYPE 10

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2017 — DATE

/S/ Ahmet Demirbilek — STATE ELECTRICAL

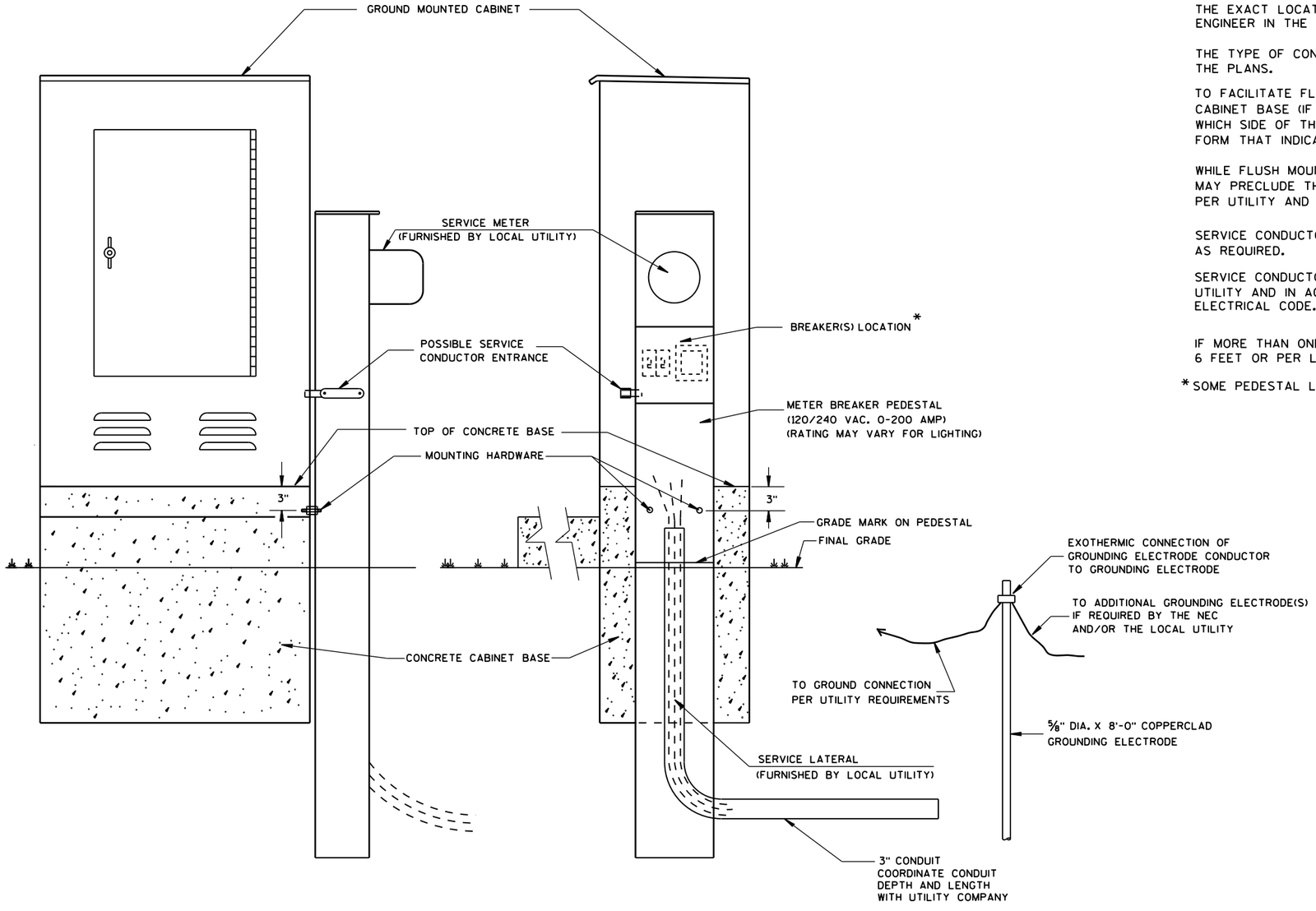
FHWA

6

S.D.D. 9 C 11-10

6

S.D.D. 9 C 11-10



TYPICAL CABINET SERVICE INSTALLATION

GENERAL NOTES

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

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

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

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

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

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

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

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

* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

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S.D.D. 9 D 1-5

6

S.D.D. 9 D 1-5

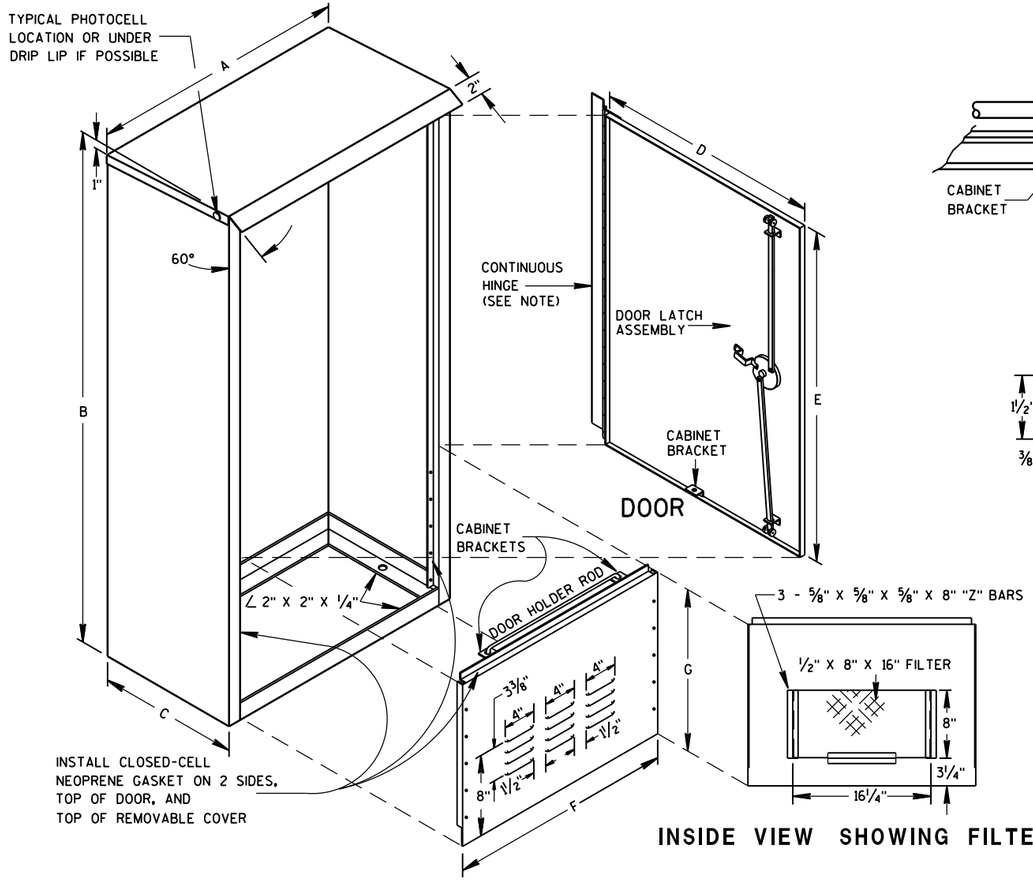
CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE

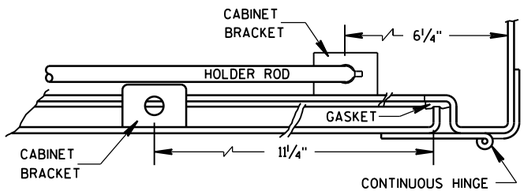
/S/ Ahmet Demirbilek
STATE ELECTRICAL

FHWA

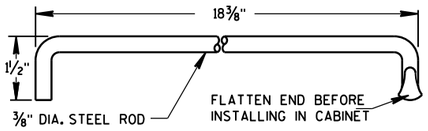


REMOVABLE COVER

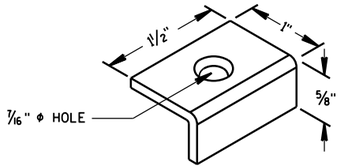
INSIDE VIEW SHOWING FILTER



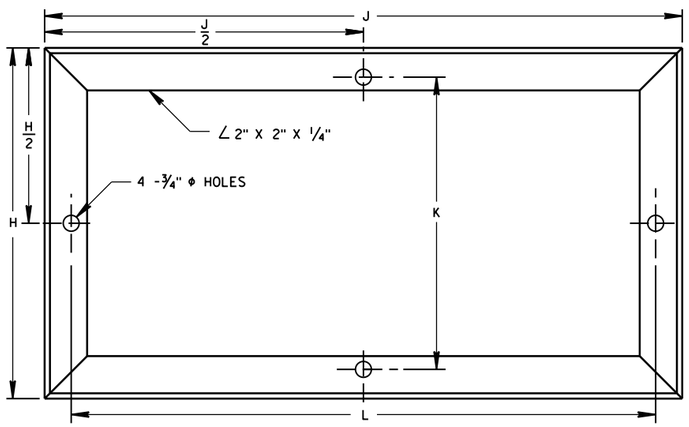
HINGE & DOOR HOLDER



HOLDER ROD



CABINET BRACKET



MOUNTING BASE

TABLE OF DIMENSIONS (INCHES)

MARK	CABINET TYPE		
	3060	3860	3866
A	30	38	38
B	60	60	66
C	16 1/2	16 1/2	24
D	26 1/2	34 3/4	33 3/4
E	38 3/4	38 3/4	38 3/4
F	26 1/2	34 3/4	33 3/4
G	19	19	25
H	16 1/2	16 1/2	24
H/2	8 1/4	8 1/4	12
J	30	38	38
J/2	15	19	19
K	13 3/4	13 3/4	21 1/4
L	27 1/2	35 1/2	35 1/2

GENERAL NOTES

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

PRIME WITH PHOSPHATE TREATMENT AND PRIMER.

FINISH EXTERIOR SURFACES WITH RUSTOLEUM #906 SILVER GRAY OR APPROVED EQUAL.

FINISH INTERIOR WITH RUSTOLEUM #2766 HIGH GLOSS WHITE ENAMEL OR APPROVED EQUAL.

ALL SHEET METAL PARTS SHALL BE .125 INCH THICK ALUMINUM.

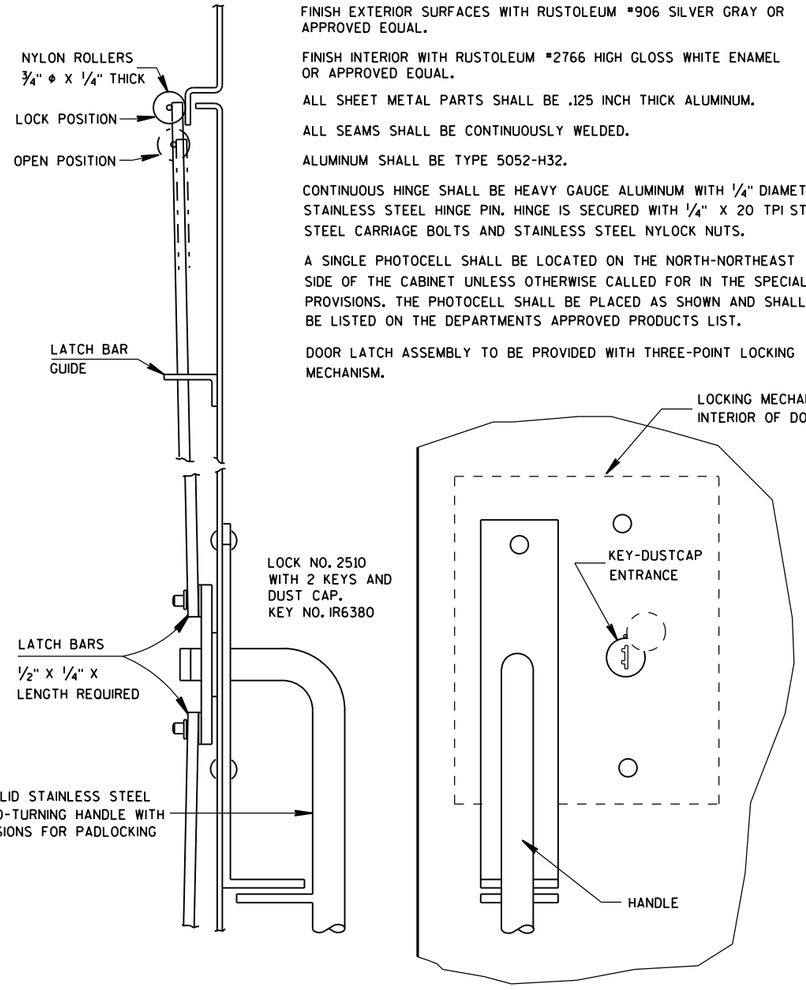
ALL SEAMS SHALL BE CONTINUOUSLY WELDED.

ALUMINUM SHALL BE TYPE 5052-H32.

CONTINUOUS HINGE SHALL BE HEAVY GAUGE ALUMINUM WITH 1/4" DIAMETER STAINLESS STEEL HINGE PIN. HINGE IS SECURED WITH 1/4" X 20 TPI STAINLESS STEEL CARRIAGE BOLTS AND STAINLESS STEEL NYLOCK NUTS.

A SINGLE PHOTOCELL SHALL BE LOCATED ON THE NORTH-NORTHEAST SIDE OF THE CABINET UNLESS OTHERWISE CALLED FOR IN THE SPECIAL PROVISIONS. THE PHOTOCELL SHALL BE PLACED AS SHOWN AND SHALL BE LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST.

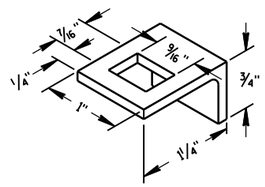
DOOR LATCH ASSEMBLY TO BE PROVIDED WITH THREE-POINT LOCKING MECHANISM.



SIDE VIEW

FRONT VIEW

LATCH ASSEMBLY



LATCH BAR GUIDE

SIGNAL CONTROL CABINET

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL

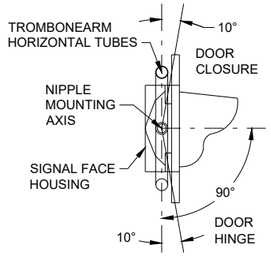
FHWA

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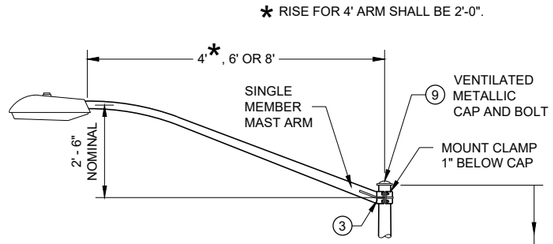
S.D.D. 9 D 2-3

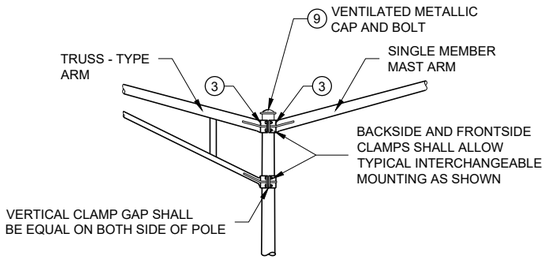
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S.D.D. 9 D 2-3

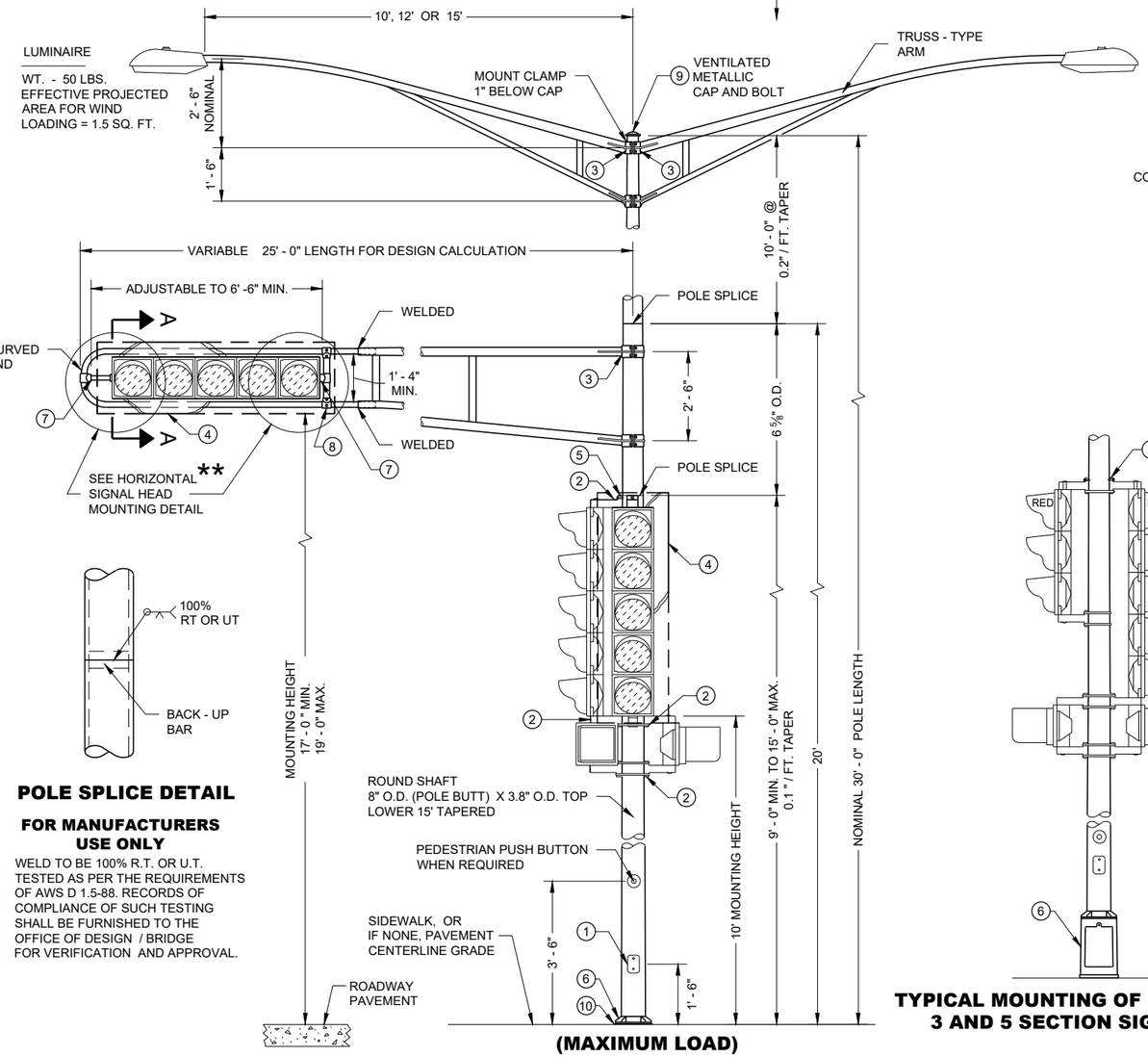


SECTION A-A

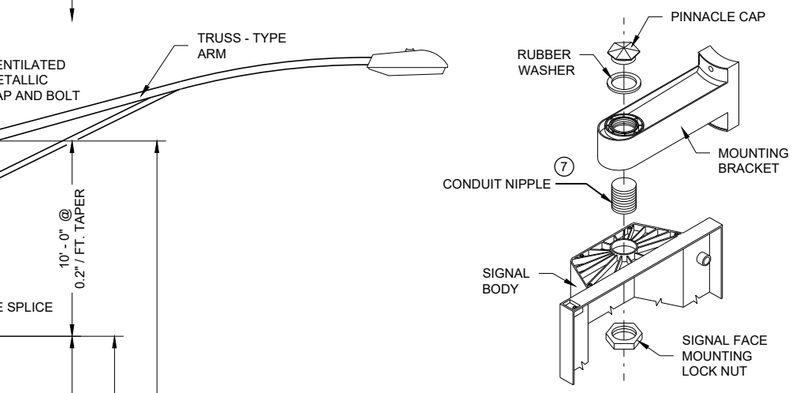




INTERCHANGEABLE MOUNTING DETAIL



(MAXIMUM LOAD)



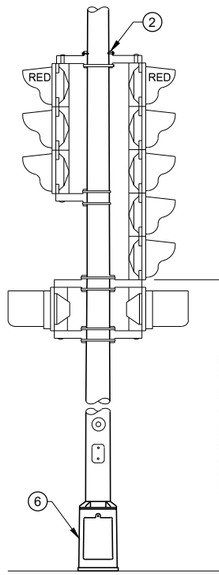
SIGNAL FACE MOUNTING DETAIL

(BANDED)

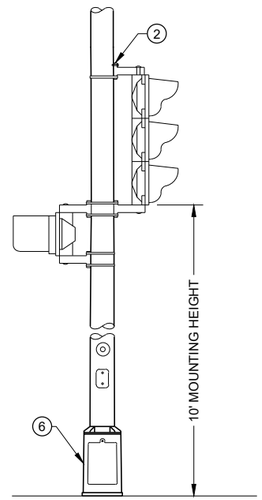
POLE SPLICE DETAIL

FOR MANUFACTURERS USE ONLY

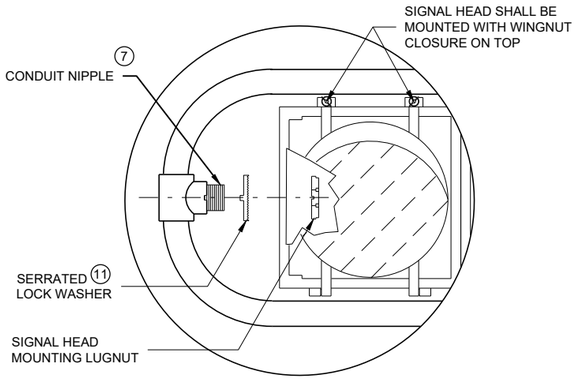
WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN / BRIDGE FOR VERIFICATION AND APPROVAL.



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



TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE



HORIZONTAL SIGNAL HEAD ** MOUNTING DETAIL

** SIGNAL HEAD ATTACHMENT ALSO APPLIES TO MOUNTING AT CROSS BAR

TYPE 3 POLE MOUNTING CONFIGURATION

GENERAL NOTES

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

ALL TYPE 3 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL.

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

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

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 3/8 INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) ¼" X ¾" - 20 TPI , STAINLESS STEEL, HEX HEAD BOLTS.

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

(3) GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 3/8" HOLE IN POLE SHAFT FOR WIRING.

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

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

(6) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED. UNDER MAX LOADING, TYPE 3 POLE SHALL BE MOUNTED DIRECTLY TO ITS CONCRETE BASE.

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

(8) VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW (¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUT IS THE SLIDING TYPE.

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

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

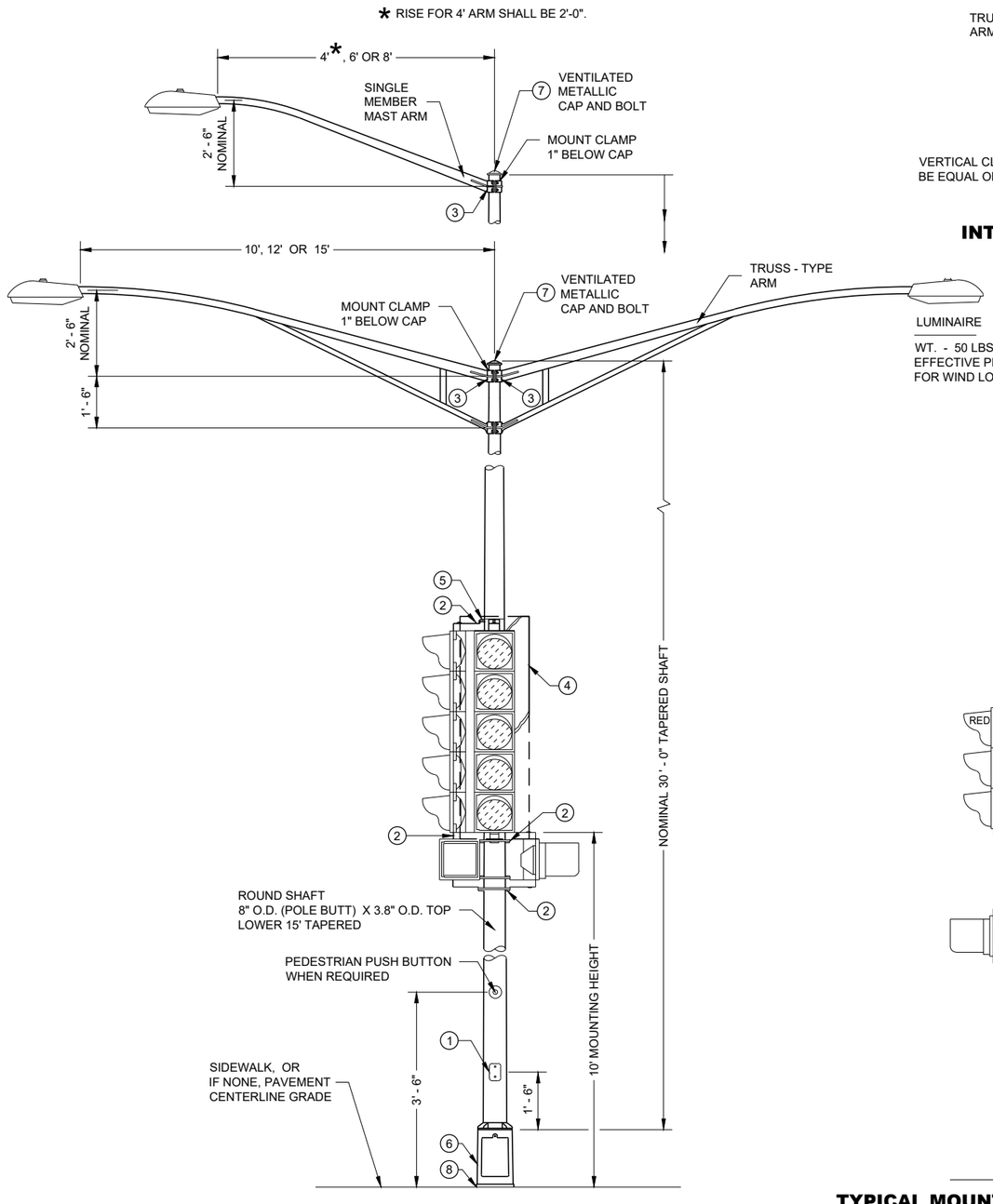
(11) USE SERRATED LOCK WASHERS WITH NOTCHES BETWEEN END TEE AND SIGNAL HEAD.

POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS TYPE 3 (HEAVY DUTY)

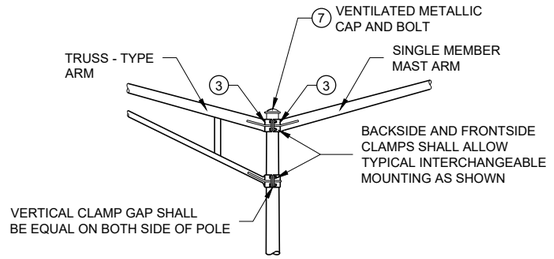
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 09E01 - 15b
SDD 09E01 - 15b



(MAXIMUM LOAD)



INTERCHANGEABLE MOUNTING DETAIL

GENERAL NOTES

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

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

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

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

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

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 ⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) ¼" X ¾" - 20 TPI , STAINLESS STEEL, HEX HEAD BOLTS.

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

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

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

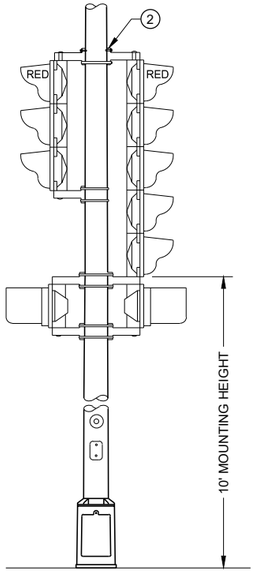
(5) POLE MOUNTED SIGNAL FACES SHALL REQUIRE ONE OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACE.

(6) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

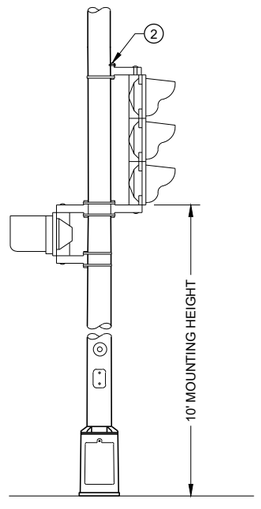
(7) FURNISH AND INSTALL VENTILATED, CAST METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

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

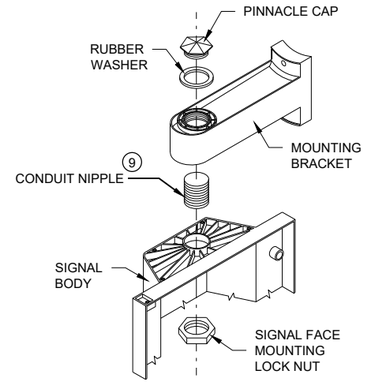
(9) USE 1 ½" ID NIPPLES ZINC-COATED RIGID METAL CONDUIT, LONG ENOUGH TO ACCOMMODATE FULL DEPTH THREADING INTO THE HEAD MOUNTING LOCK NUT IN ORDER TO TIGHTEN THE FACE, BUT THAT DO NOT INTERFERE WITH REFLECTOR CLOSURE. THREAD THE NIPPLE INTO THE MOUNTING BRACKET/ELBOW UNTIL TIGHT. USE APPROVED PINNACLE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



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



TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE



SIGNAL FACE MOUNTING DETAIL
(BANDED)

TYPE 4 POLE MOUNTING CONFIGURATION

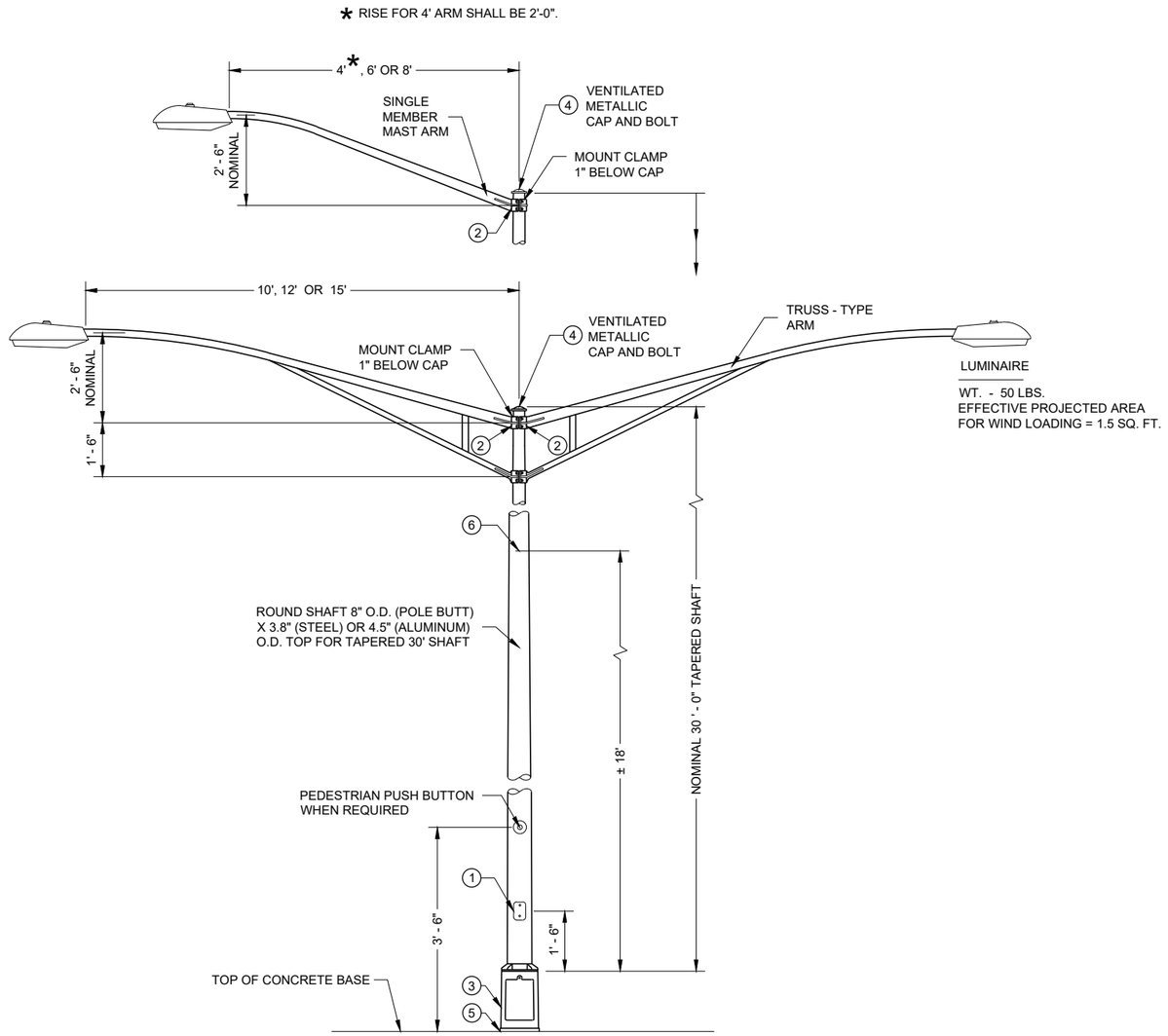
POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 4

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 09E01 - 15c

SDD 09E01 - 15c



TYPE 5 POLE MOUNTING CONFIGURATION
(MAXIMUM LOAD)
LIGHTING ONLY

GENERAL NOTES

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

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

ALL TYPE 5 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL OR ALUMINUM, AS CALLED FOR IN THE CONTRACT.

TYPE 5 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063 - T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

TYPE 5 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.1888".

TYPE 5 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (0.1196").

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 ⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) ¼" X ¾" - 20 TPI , STAINLESS STEEL, HEX HEAD BOLTS.

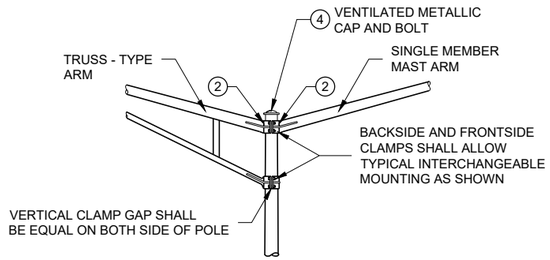
(2) GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 ⅜" HOLE IN POLE SHAFT FOR WIRING.

(3) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

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

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

(6) INTERNAL DUMBBELL - TYPE VIBRATION DAMPER.



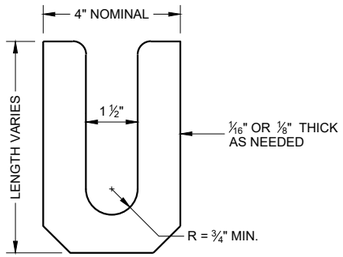
INTERCHANGEABLE MOUNTING DETAIL

POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)

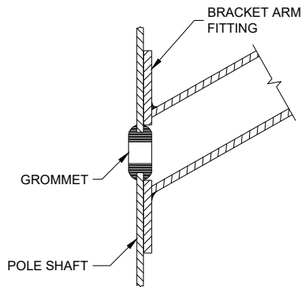
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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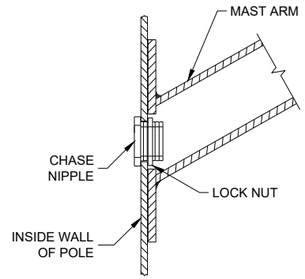
SDD 09E01 - 15d



LEVELING SHIM (1)
SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

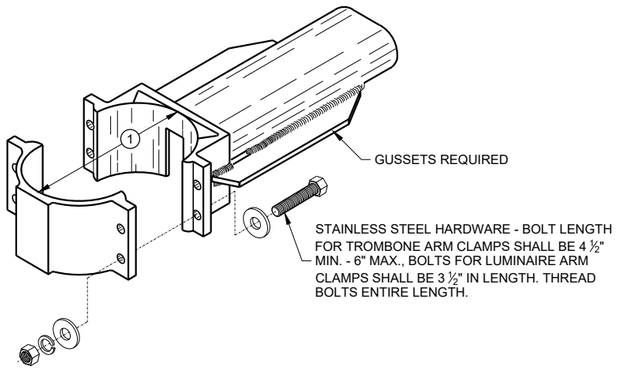
(1) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

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

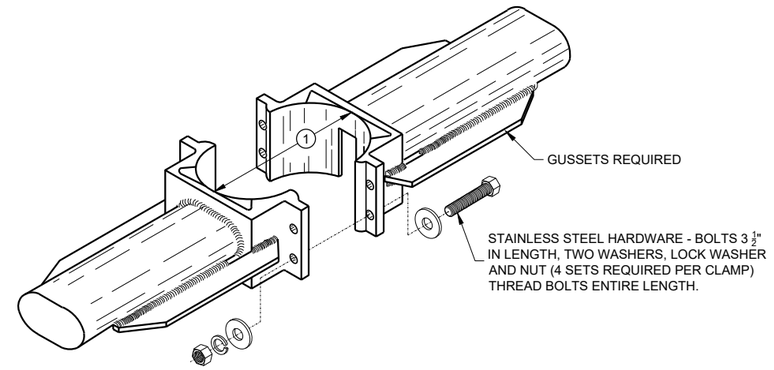
(3) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

(4) LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

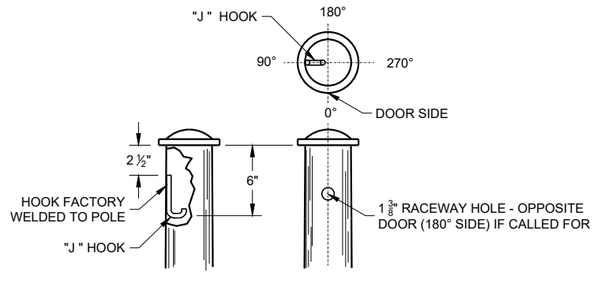
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



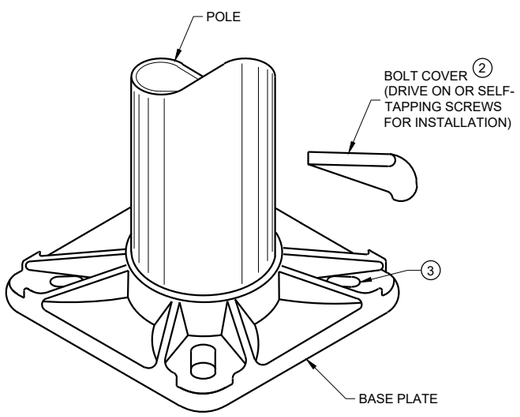
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



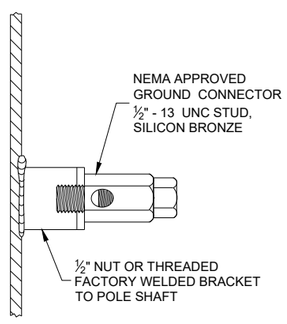
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

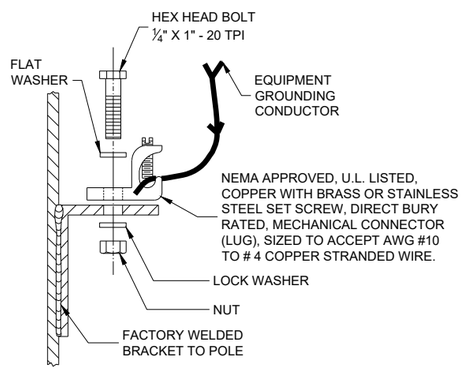


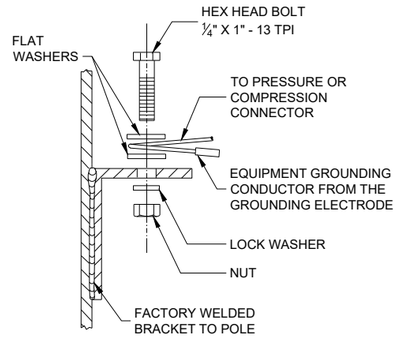
TYPICAL "J" HOOK LOCATION



BASE PLATE







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

HARDWARE DETAILS FOR POLE MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

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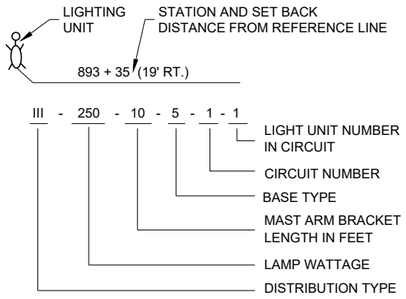
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SDD 09A01 - 15g

GENERAL NOTES

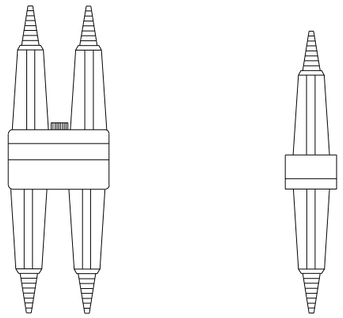
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EQUIPMENT GROUND CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

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

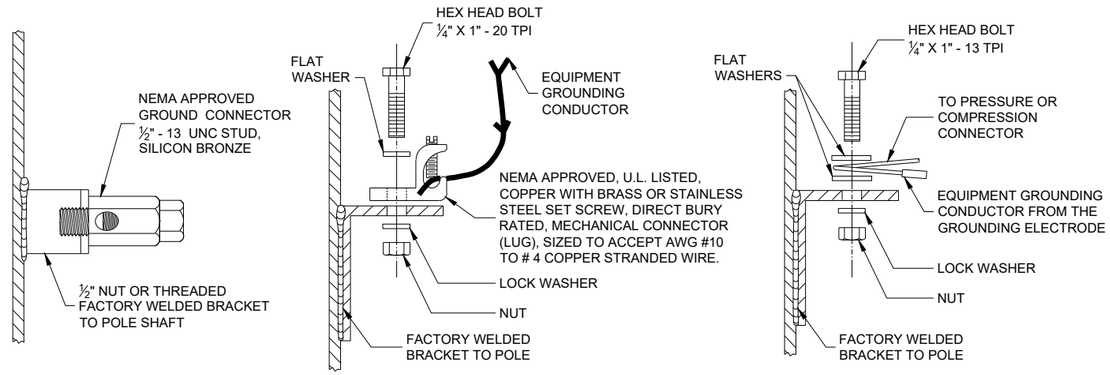


LIGHTING UNIT CODE
(TYPICAL)

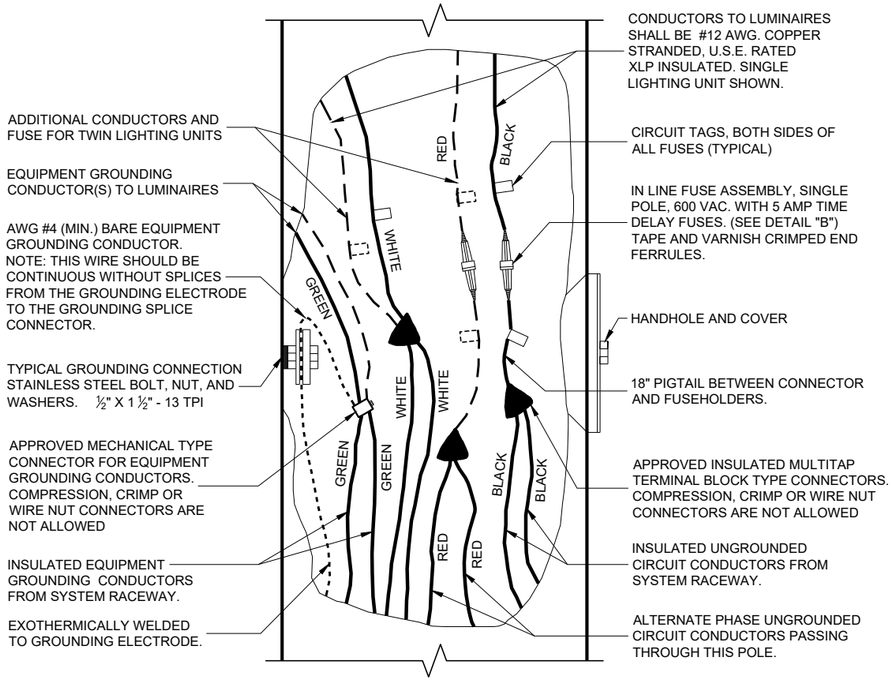


DETAIL "A"
BREAKAWAY DOUBLE POLE WITH WATERPROOF INSULATING BOOT

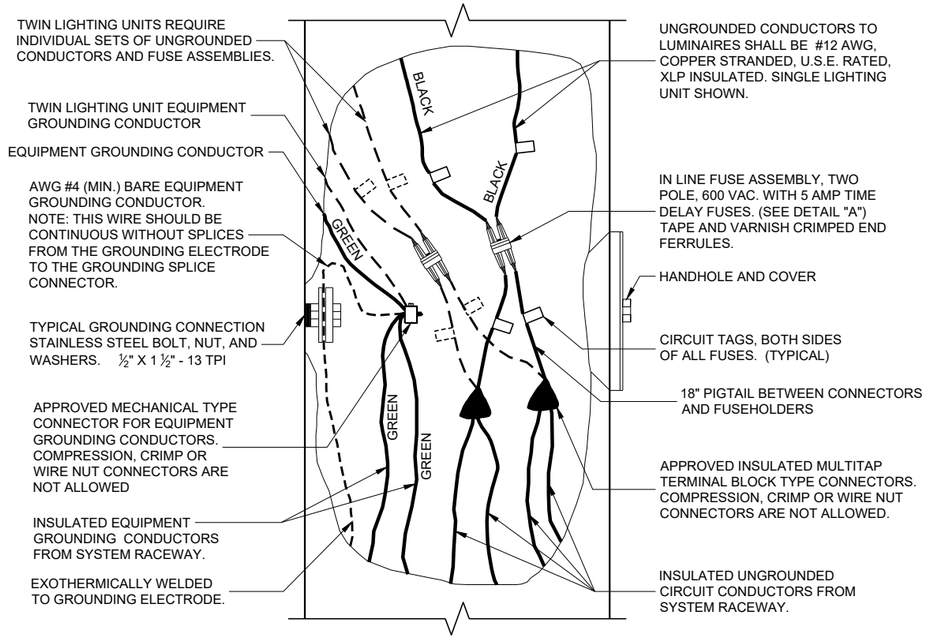
DETAIL "B"
BREAKAWAY SINGLE POLE WITH WATERPROOF INSULATING BOOT



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



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



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

NON - FREEWAY LIGHTING UNIT POLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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November 2018
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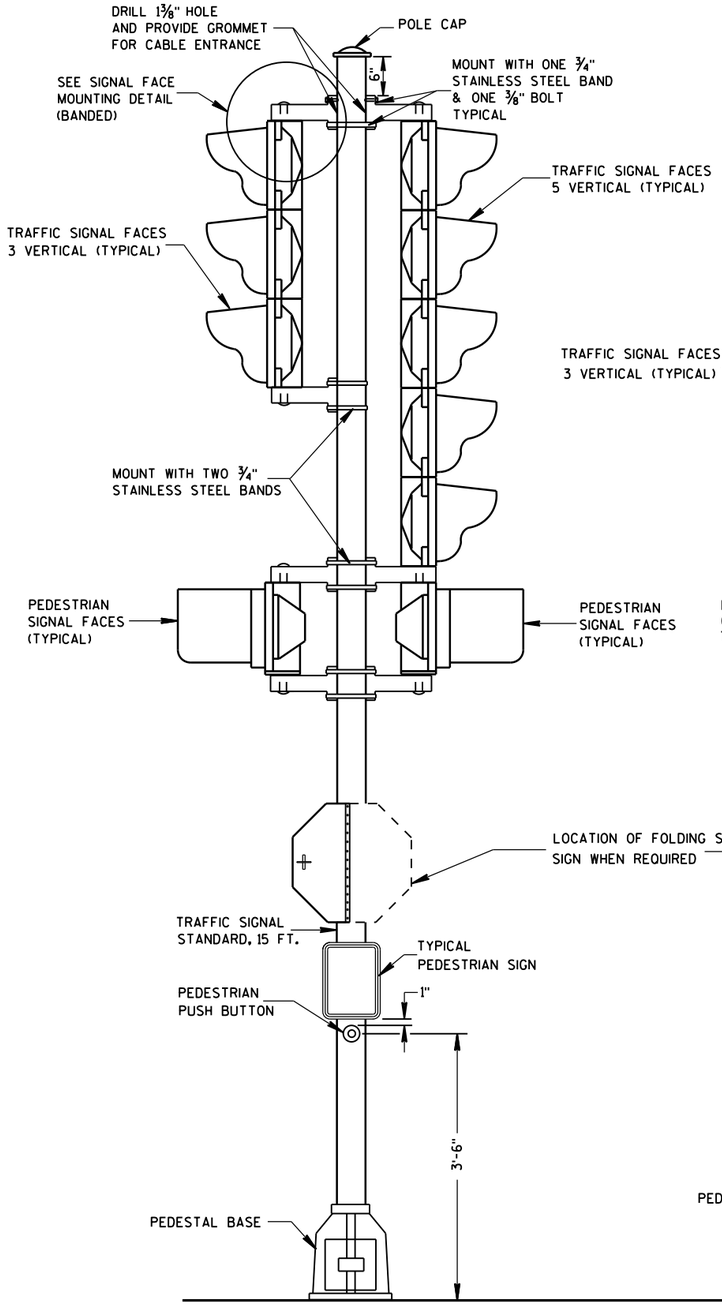
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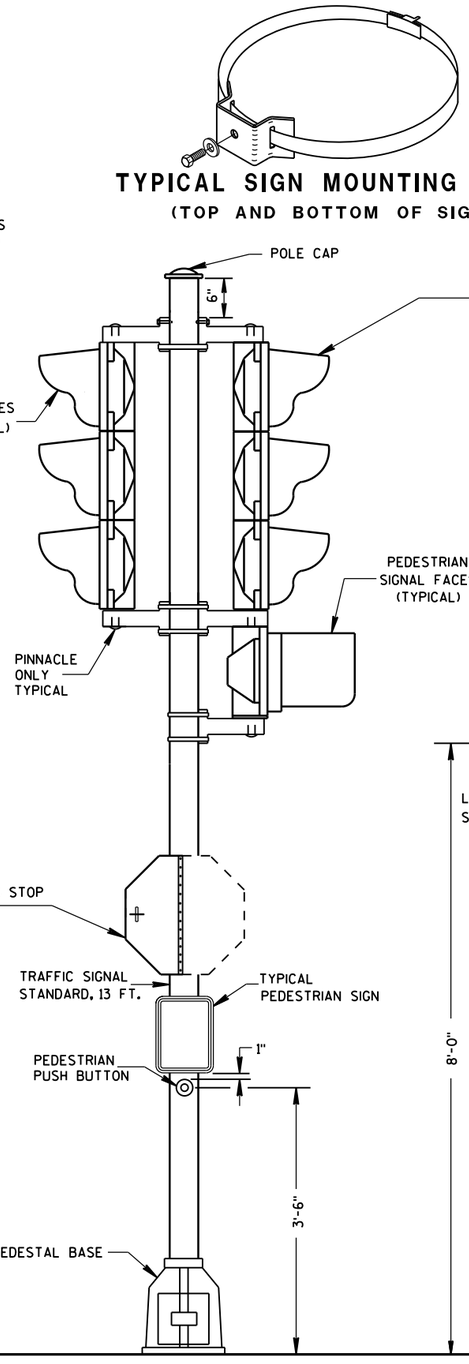
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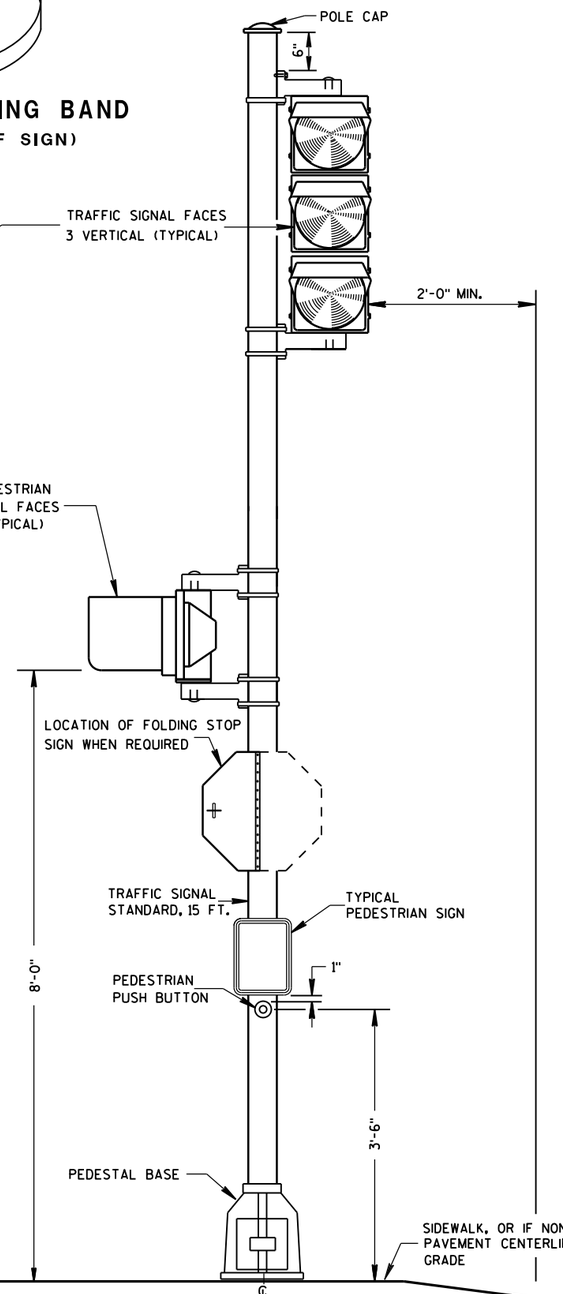


TRAFFIC SIGNAL STANDARD-15 FT.



TRAFFIC SIGNAL STANDARD-13 FT.

TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



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

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

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

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLYCARBONATE MOUNTING BRACKETS SHALL BE USED.

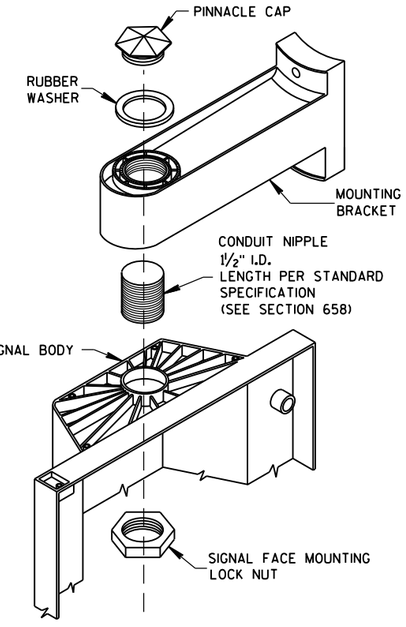
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

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

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

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

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



SIGNAL FACE MOUNTING DETAIL
(BANDED)

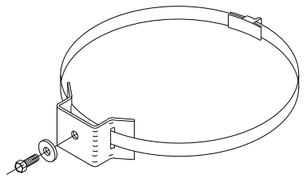
TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

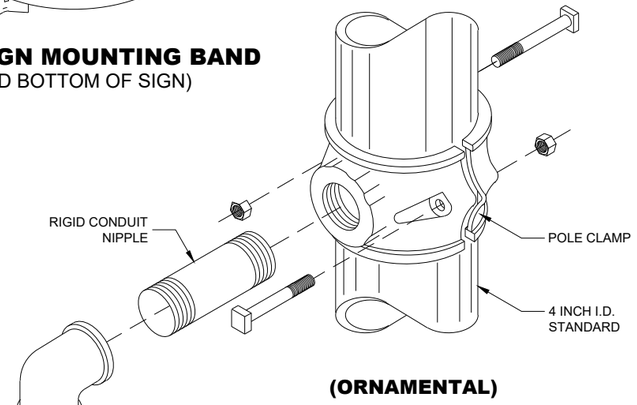
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2/28/2013 — DATE
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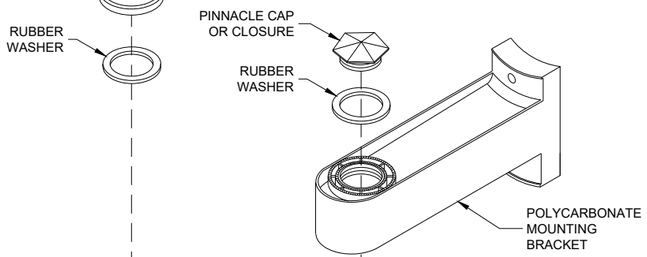
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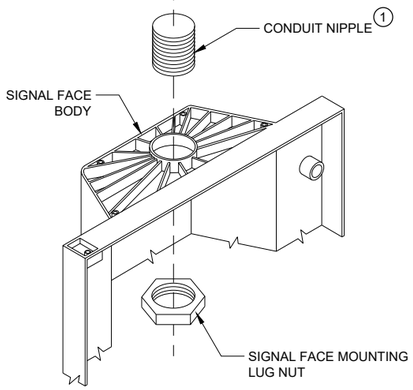
TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



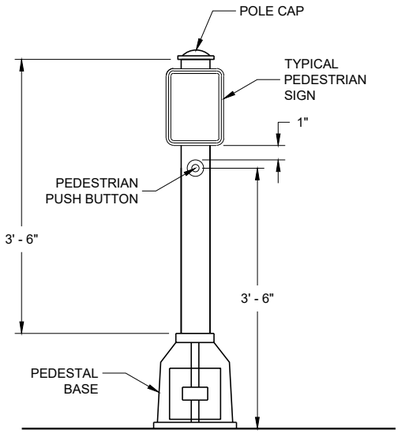
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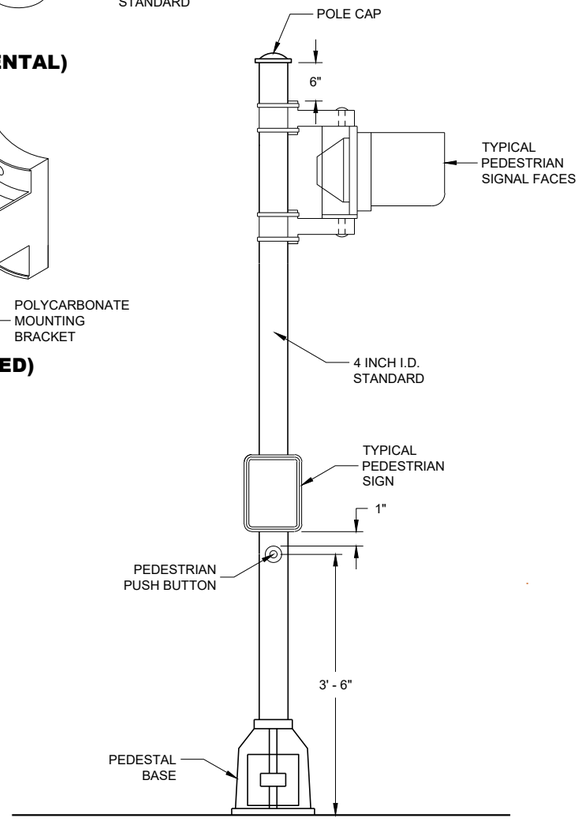
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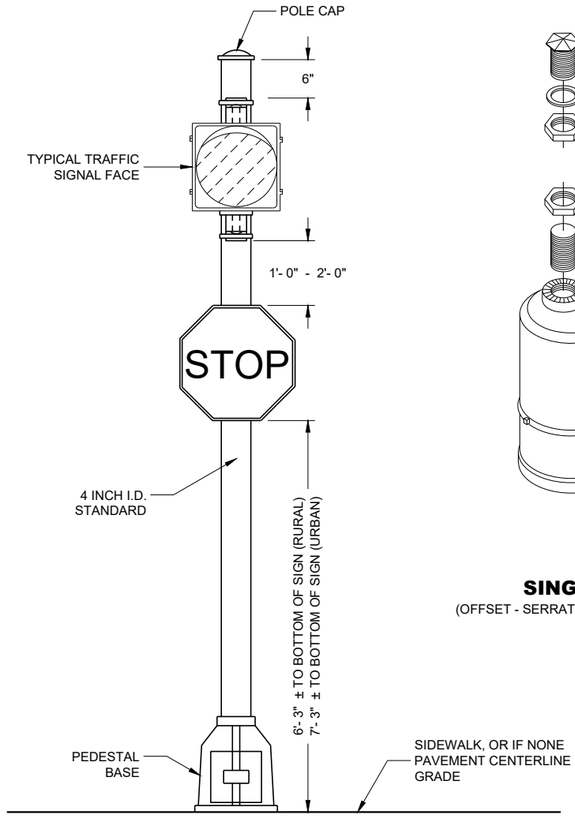
SIGNAL FACE MOUNTING DETAILS



PEDESTRIAN PUSH BUTTON TYPICAL MOUNTING



PEDESTRIAN FACE STANDARD - 10 FT.
(WALK - DON'T WALK)



STANDARD FLASHER
10 FOOT, 13 FOOT OR 15 FOOT AS REQUIRED

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

LOCATIONS SHALL BE AS SHOWN ON THE PLANS, UNLESS APPROVED BY THE ENGINEER IN THE FIELD.

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

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIFICATIONS.

POLYCARBONATE SIGNAL FACE MOUNTING BRACKETS SHALL BE USED UNLESS ORNAMENTAL POLE CLAMPS ARE SPECIFIED.

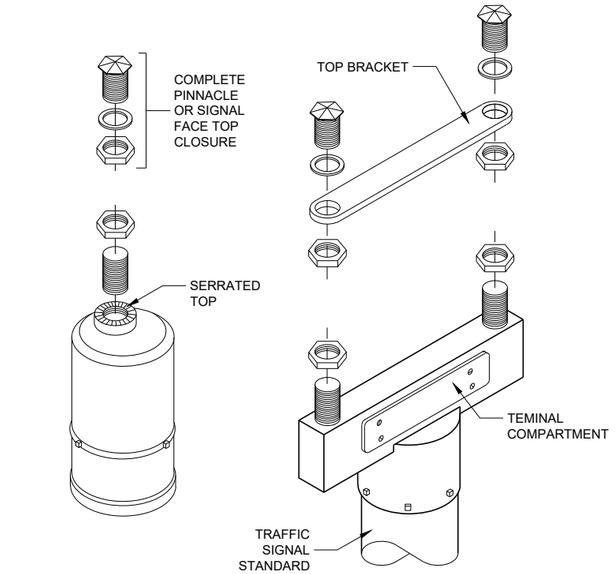
LENGTH OF TRAFFIC STANDARDS SHALL BE AS SHOWN ON THE PLANS.

MOUNTINGS AND BRACKETS SHALL BE AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIAL PROVISIONS (BY THE REGION TRAFFIC ENGINEER).

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

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

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



SINGLE
(OFFSET - SERRATED MOUNTING)

DOUBLE
(SERRATED MOUNTING)

SLIPFITTERS

TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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November 2018
DATE

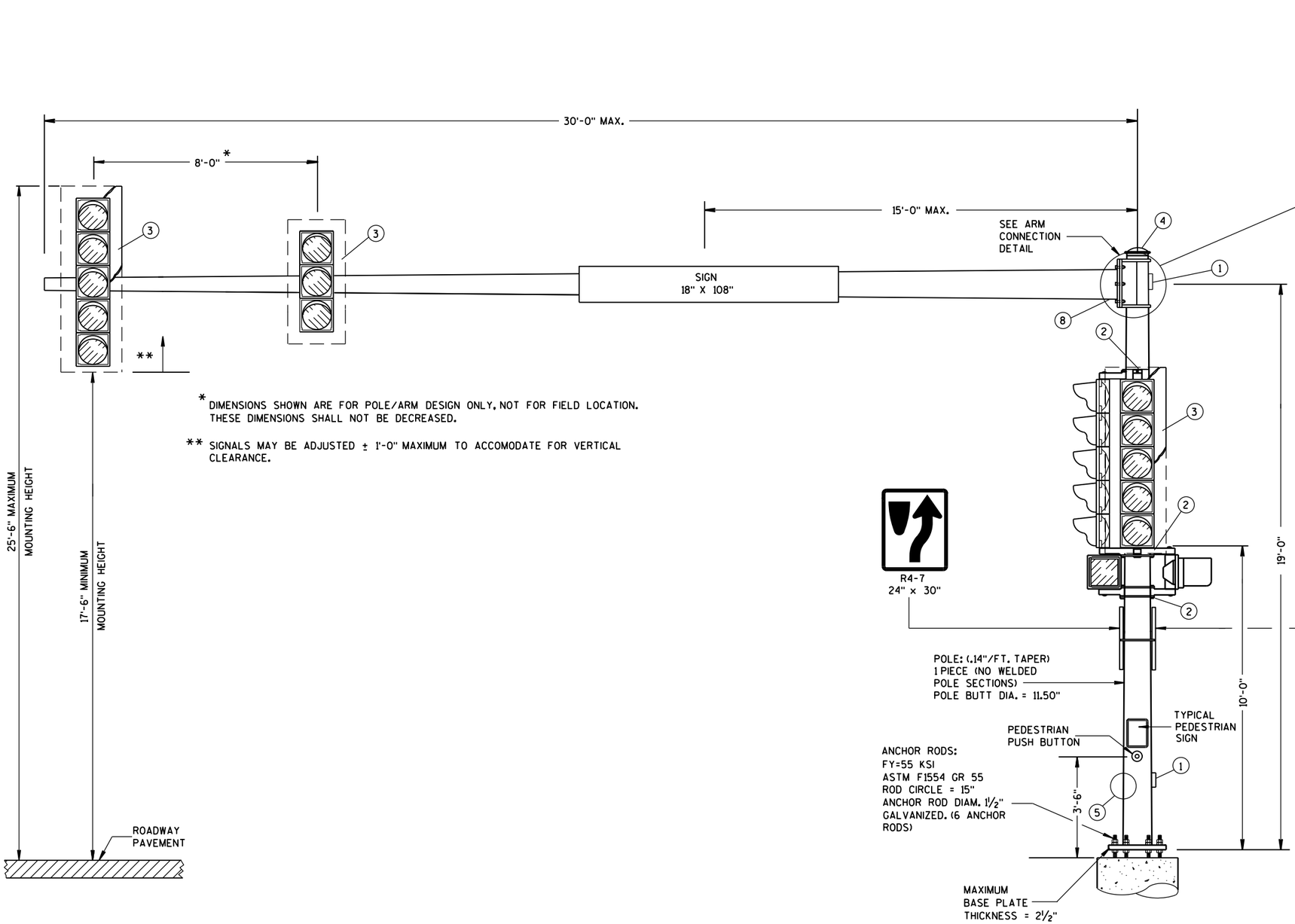
/S/ Ahmet Demirbilek
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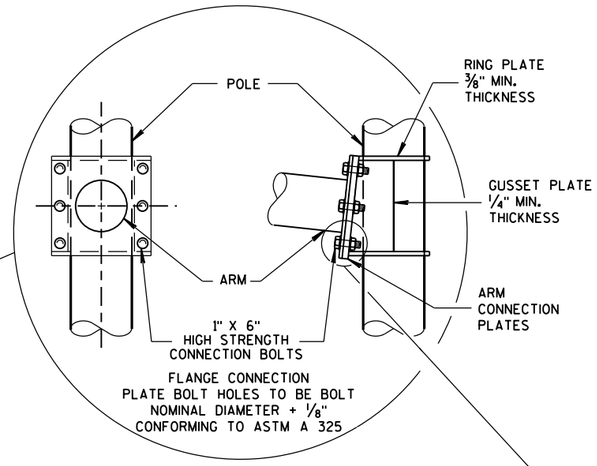
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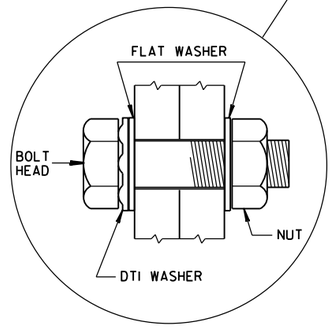


* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

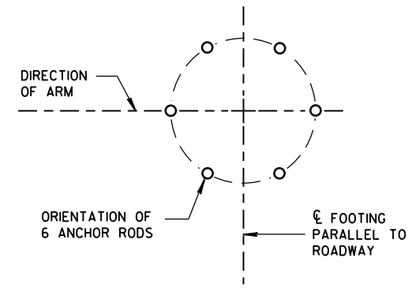
** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.



6 BOLT ARM CONNECTION DETAIL



RECOMMENDED
BOLT ASSEMBLY
DETAIL



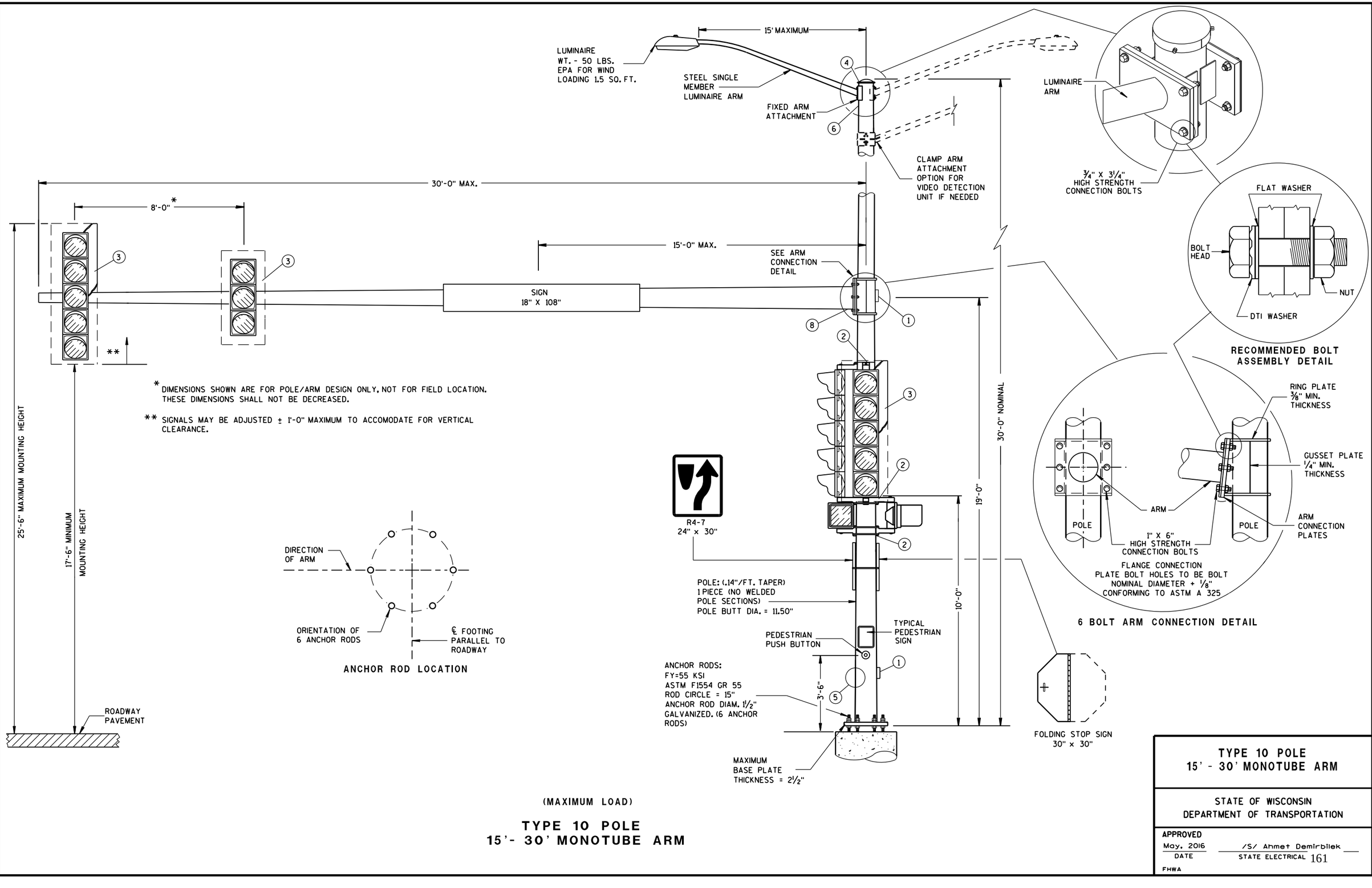
ANCHOR ROD LOCATION

(MAXIMUM LOAD)

TYPE 9 POLE 15'- 30' MONOTUBE ARM

TYPE 9 POLE 15' - 30' MONOTUBE ARM	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May, 2016 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL
FHWA	

S.D.D. 9 E 8-8a



* 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.

(MAXIMUM LOAD)

TYPE 10 POLE
15'- 30' MONOTUBE ARM

TYPE 10 POLE
15' - 30' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6
S.D.D. 9 E 8-8b

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.

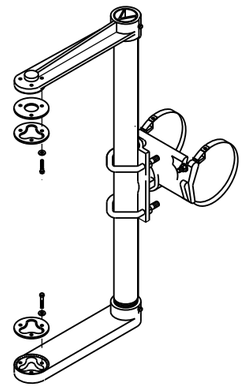
(6) FACTORY-WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.

(7) INSTALL STRUCTURAL IDENTIFICATION PLAQUES.

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

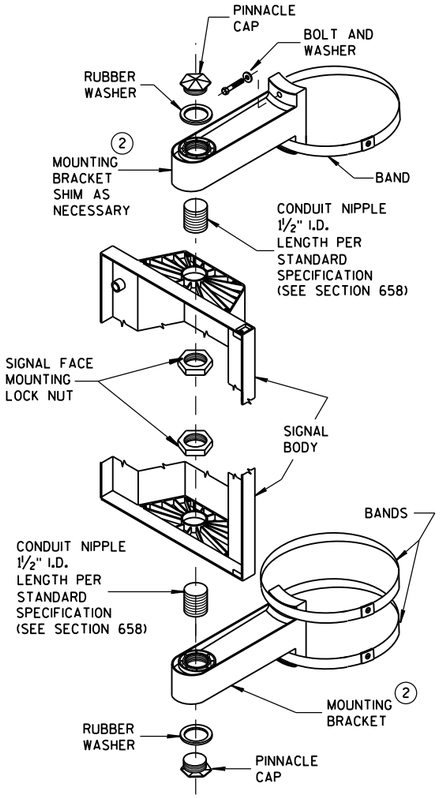
MOUNTING HEIGHT SHALL BE 6'-0" ABOVE THE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.

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

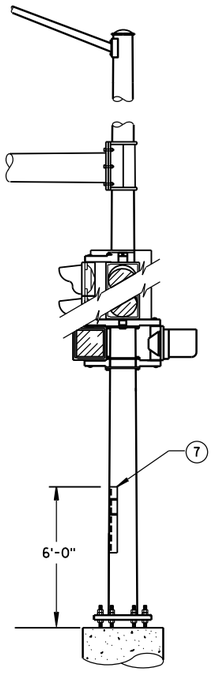


SIGNAL FACE MOUNTING BRACKET
DETAIL FOR MONOTUBE ARM

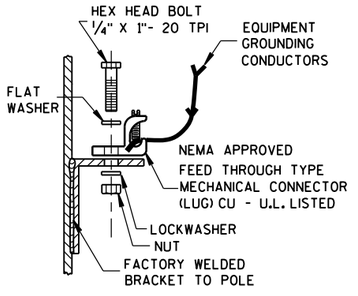
(MOUNT PER MANUFACTURER'S RECOMMENDATION)



SIGNAL FACE
VERTICAL MOUNTING DETAIL

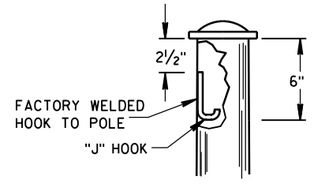


STRUCTURAL IDENTIFICATION
PLAQUE PLACEMENT



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
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May 2016
DATE

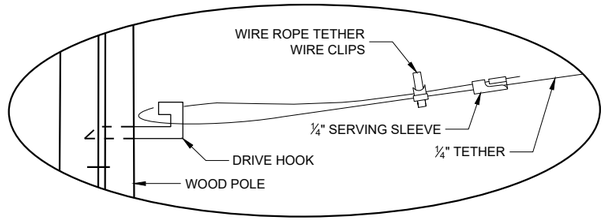
/S/ Ahmet Demirbilek
STATE ELECTRICAL

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

MINIMUM POLE LENGTHS	POLE BURIAL DEPTHS
25'	5'
30'	6'
35'	7'
40'	8'
45'	9'



DETAIL "A"

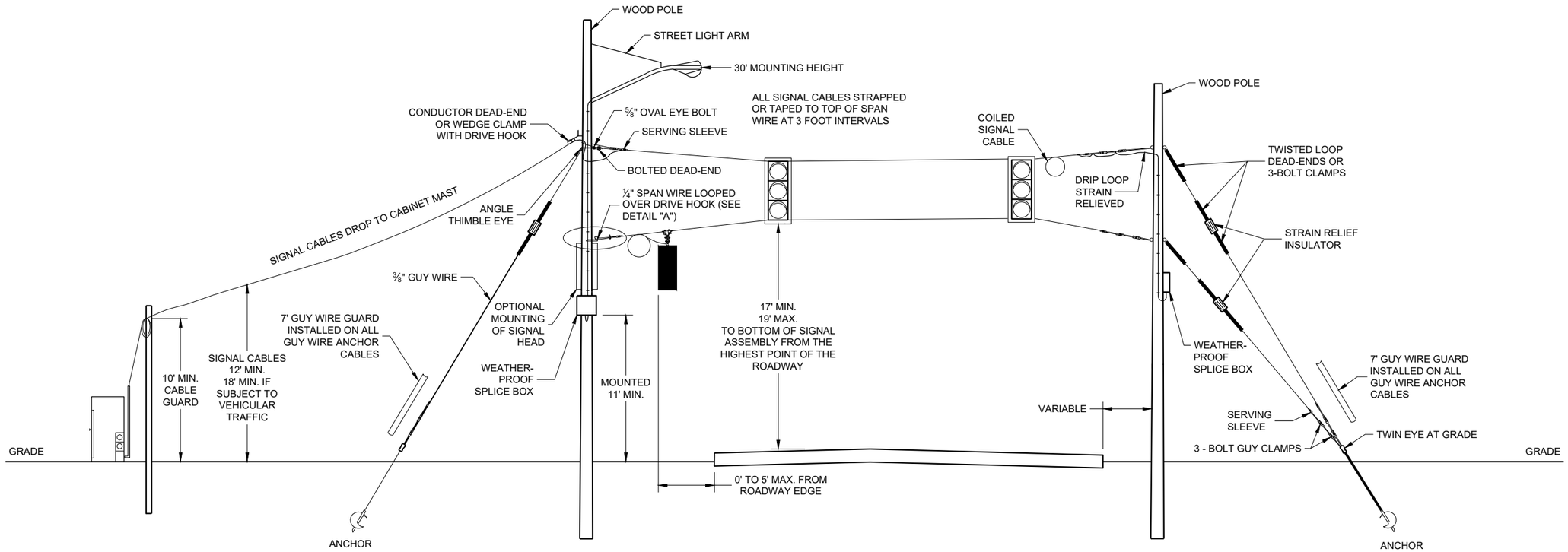
GENERAL NOTES

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

1. WOOD POLES SHALL BE CLASS 4. LENGTH DETERMINED BY SIGNAL PLAN.

2. SIGNAL FACES:
   - A. ALL SECTIONS SHALL BE 12" AND POLYCARBONATE.
   - B. EACH SHALL CONTAIN A 5" WIDE DULL BLACK POLYCARBONATE BACKPLATE.
   - C. EACH SHALL BE WIRED FROM THE TOP SIGNAL MOUNTING BRACKET.
   - D. NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.

3. SPAN WIRE:
   - A. EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED
   - B. SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
   - C. THE SIGNAL ASSEMBLY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.



SPAN WIRE
TEMPORARY SIGNALS

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2015
DATE

/S/ Ahmet Demerbilek
STATE ELECTRICAL ENGI

FHWA

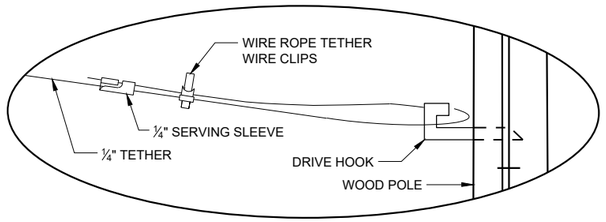
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MINIMUM POLE LENGTHS	CLASS	POLE BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

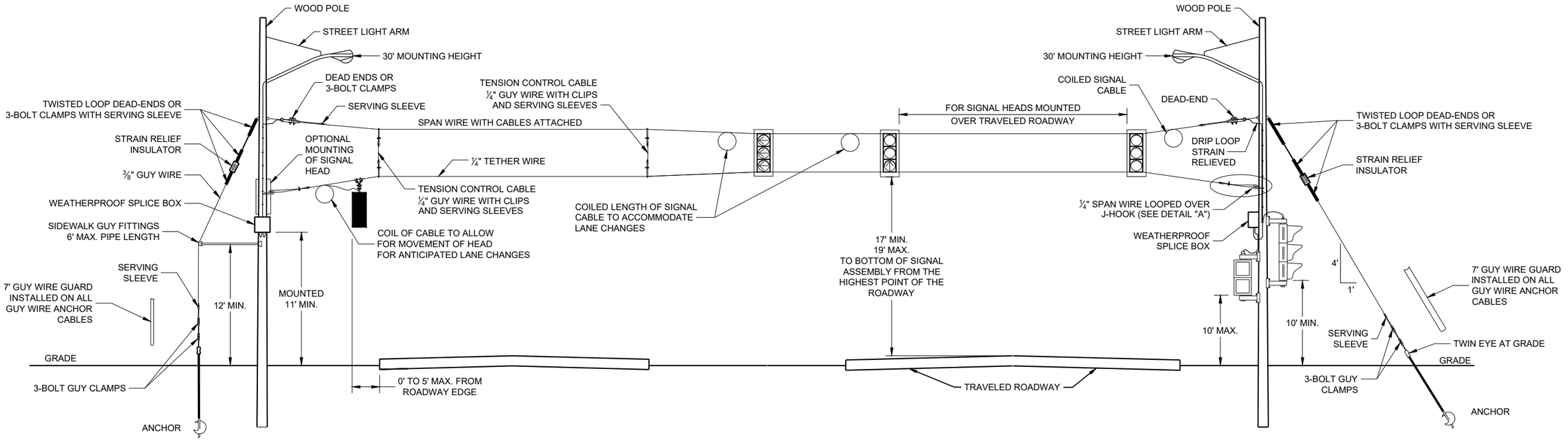


DETAIL "A"

GENERAL NOTES

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   E. FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.
3. SPAN WIRE:
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SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

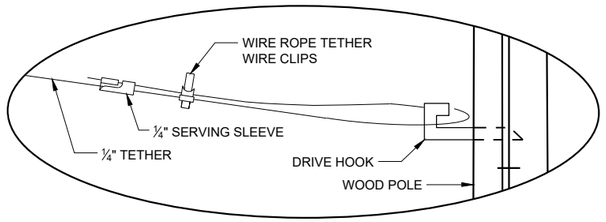
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2015
DATE
/S/ Ahmet Demerbilek
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SDD09G01 - 04b

MINIMUM POLE LENGTHS	CLASS	POLE BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

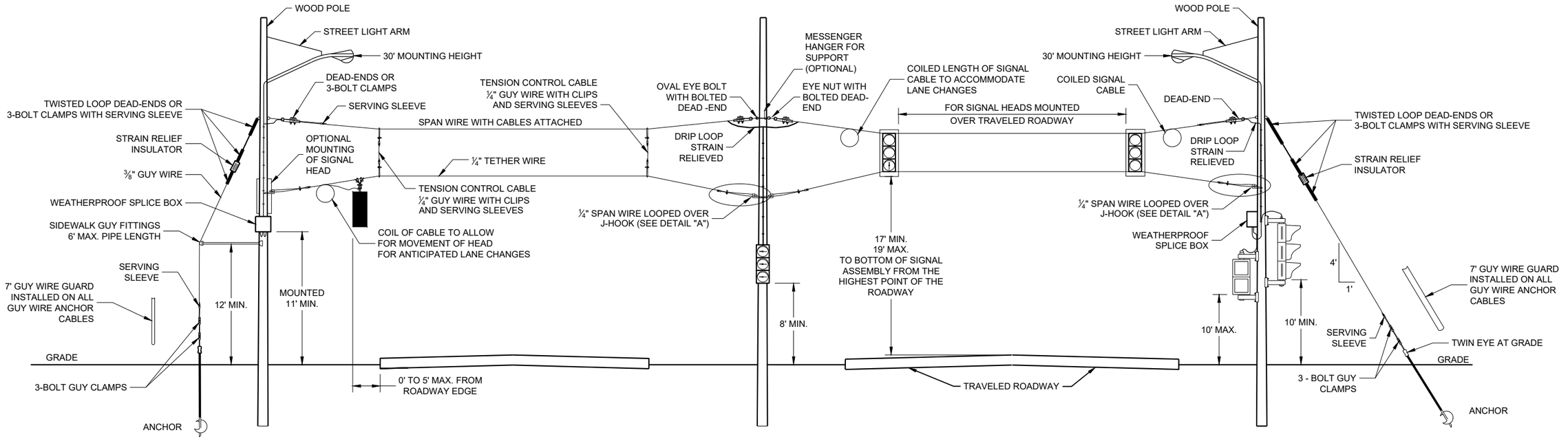


DETAIL "A"

GENERAL NOTES

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SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

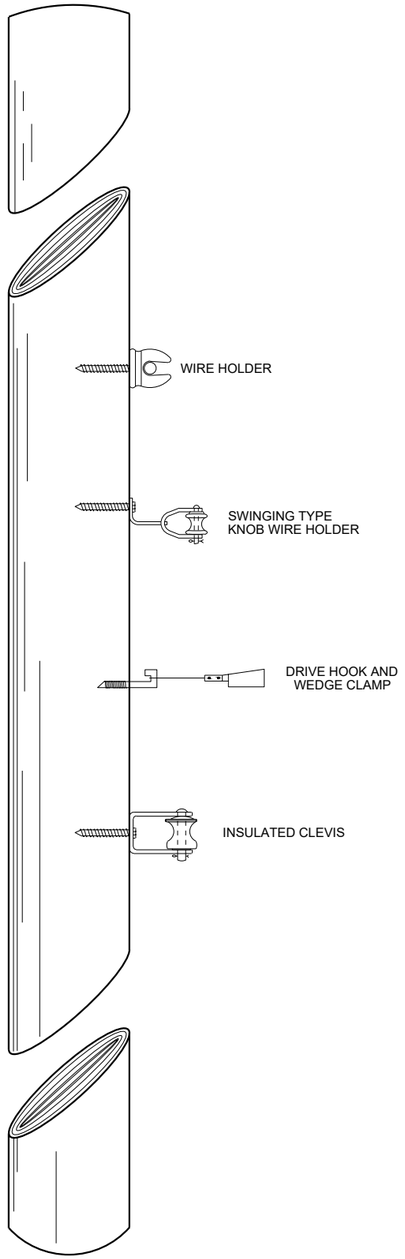
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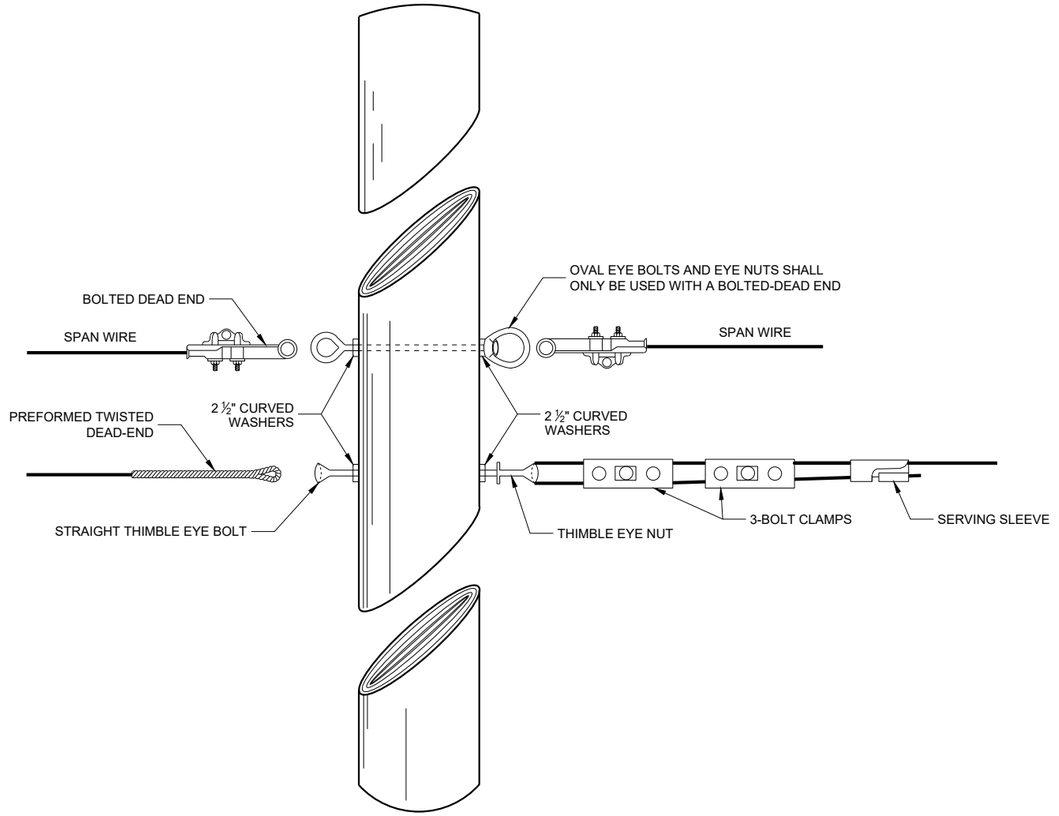
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SPAN WIRE TEMPORARY TRAFFIC SIGNAL

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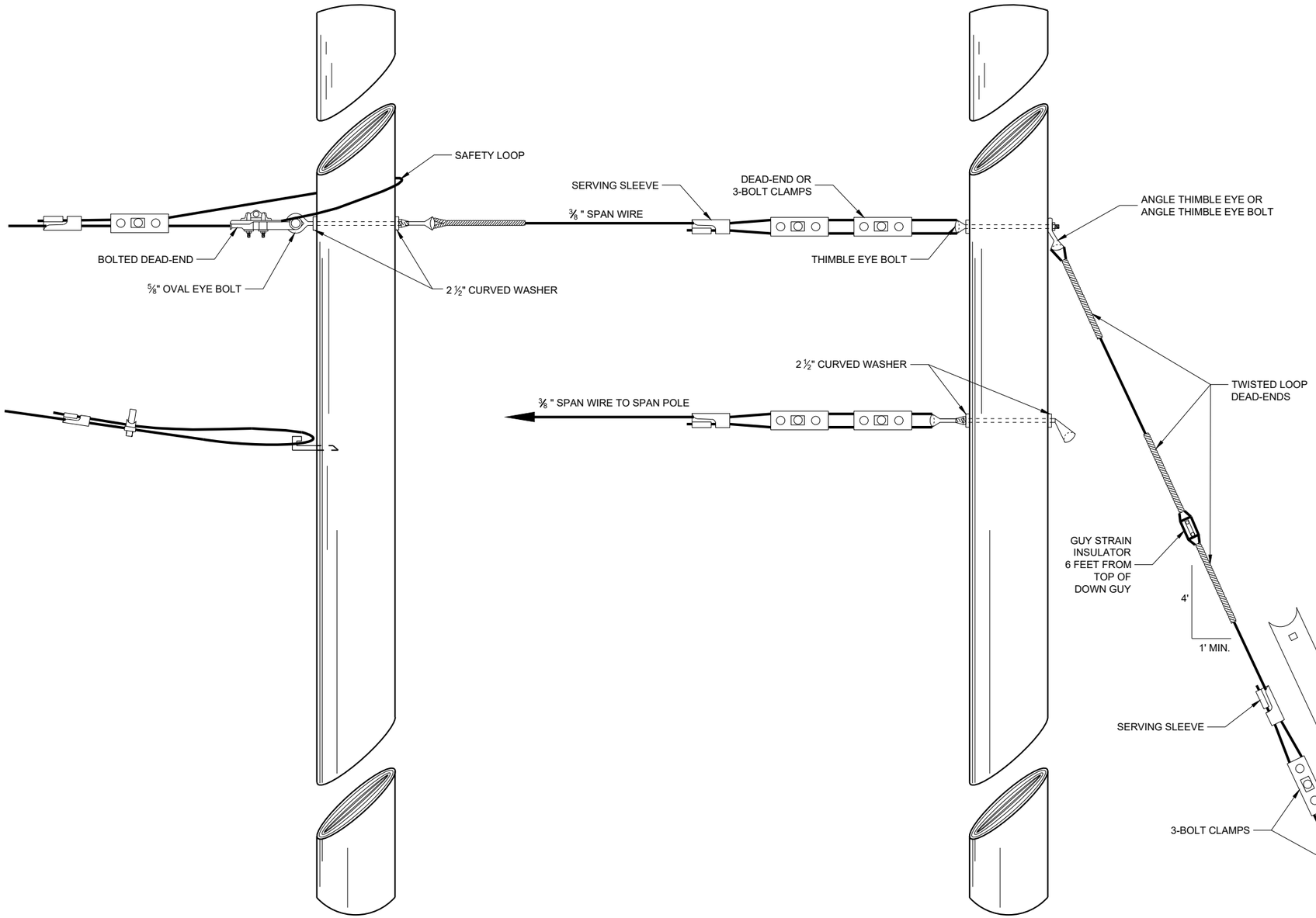
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SDD 09G01 - 4d

GENERAL NOTES

1. USE ¾" DRILL IN WOOD POLE TO PROVIDE FOR ⅝" BOLTS.
2. SAFETY LOOP REQUIRED ON EACH END OF ALL SPAN WIRES.



SPAN WIRE POLE **GUY POLE**

TYPICAL DEAD-ENDINGS OR GUYING

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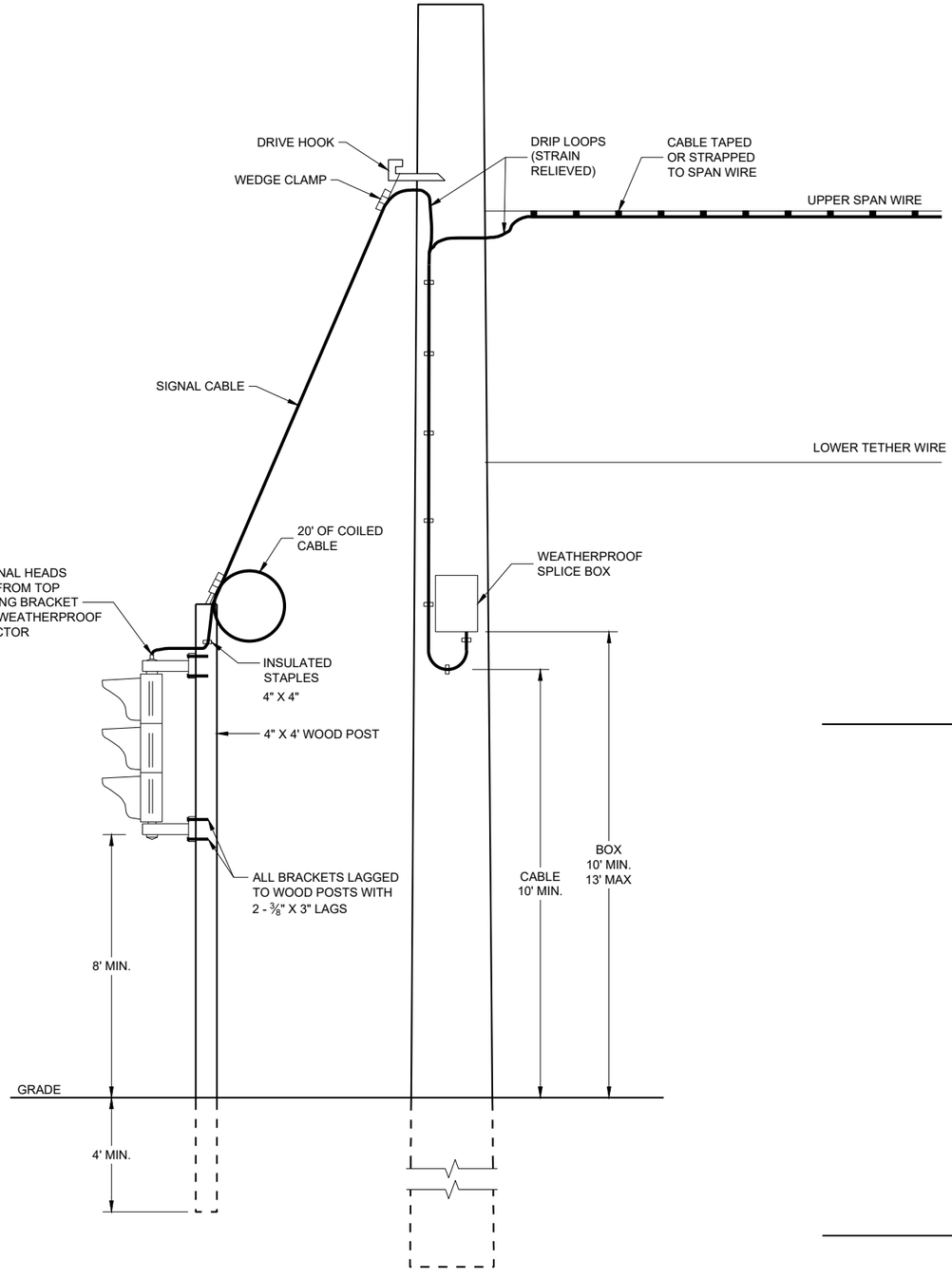
SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

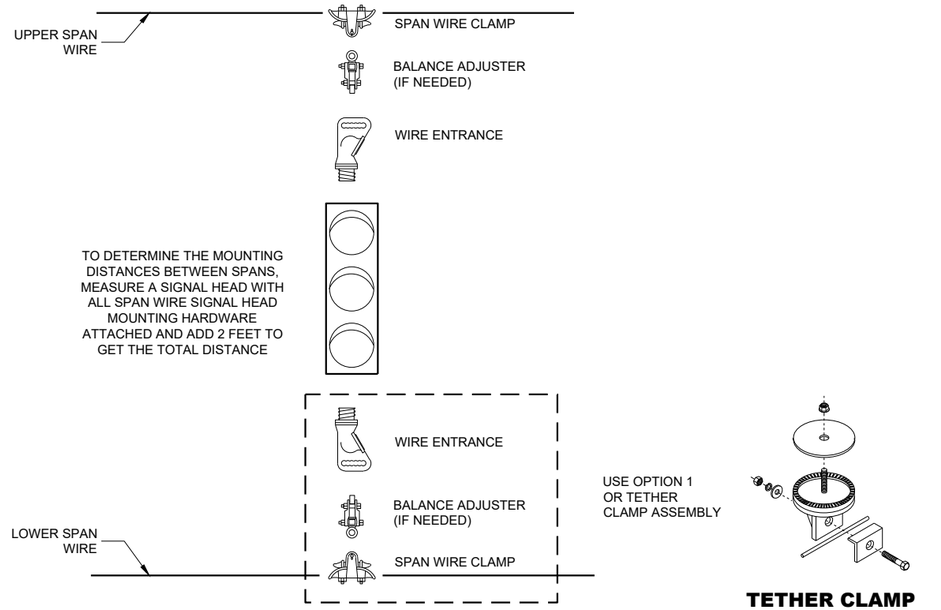
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June 2015
DATE

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ROADWAY STANDARDS DEVE ENGINEER

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TYPICAL DROP TO TEMPORARY MOVEABLE SIGNAL

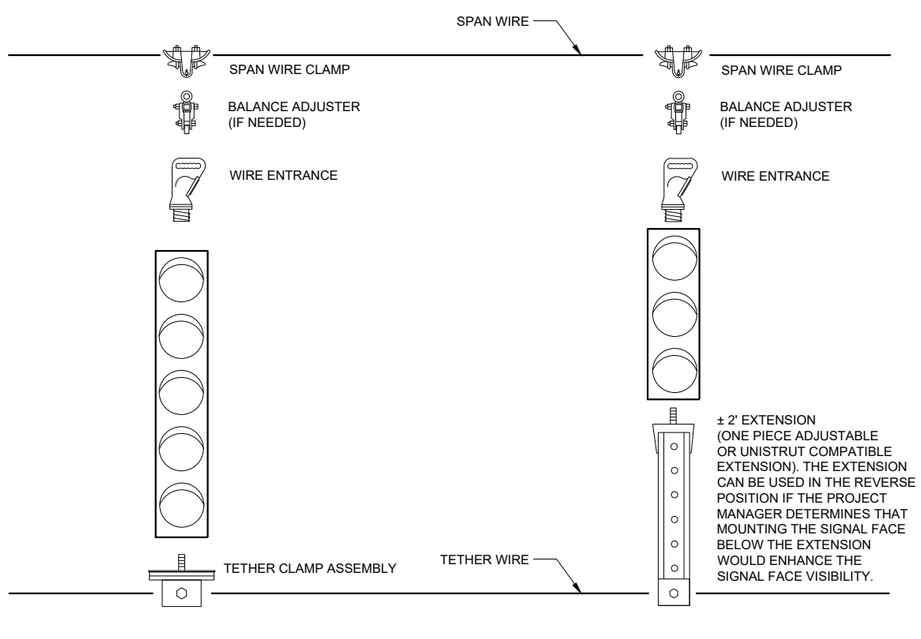


OPTION 1

USE OPTION 1 OR TETHER CLAMP ASSEMBLY

TETHER CLAMP ASSEMBLY OPTION

TYPICAL SPAN WIRE MOUNTING HARDWARE



5 SECTION VERTICAL WITH 3 SECTION VERTICAL ON ONE SPAN WIRE

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

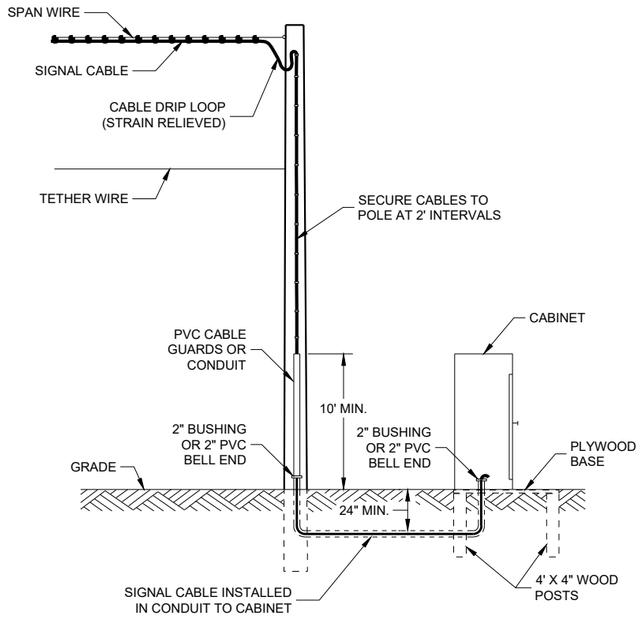
APPROVED
June 2015
DATE

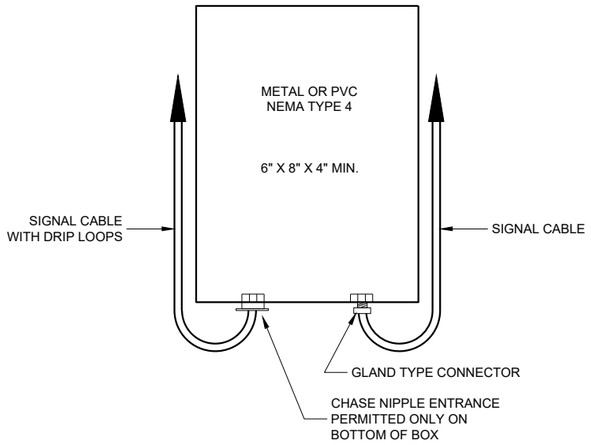
/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

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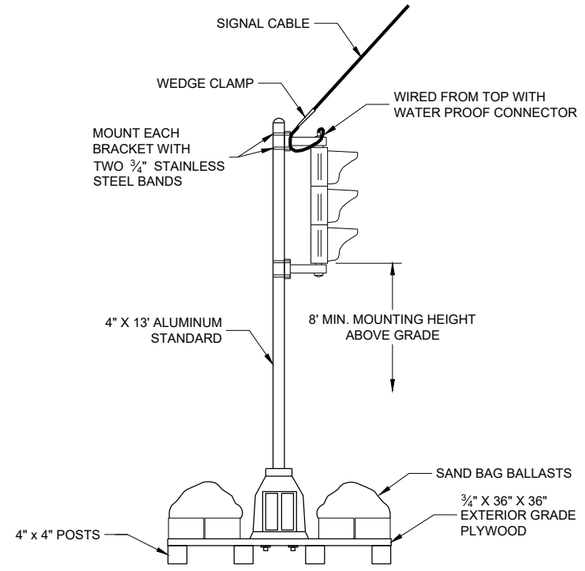
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SDD 09G01 - 4f

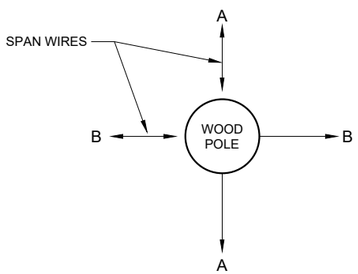




SPLICE BOX

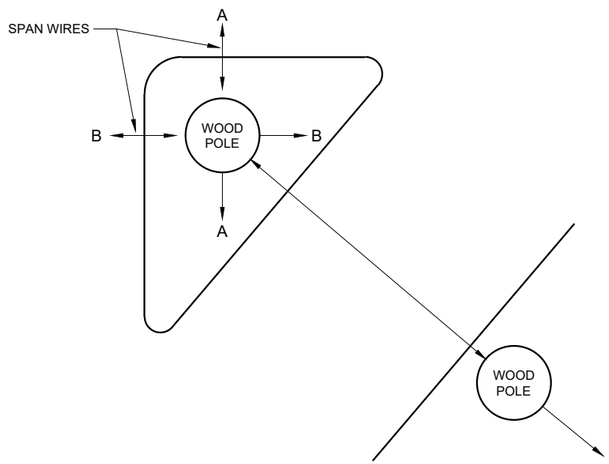


TYPICAL SKID TYPE TEMPORARY

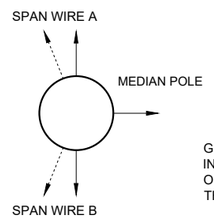


ALL DOWN OR SIDEWALK GUYS SHALL BE INSTALLED IN THE OPOSITE DIRECTION OF THE STRAIN OF THE SPAN WIRE

CORNER POLES



ISLAND POLES



GUY AWAY FROM INTERSECTION OR IN OPPOSITE DIRECTION OF THE SPAN LOADING

MEDIAN POLES

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

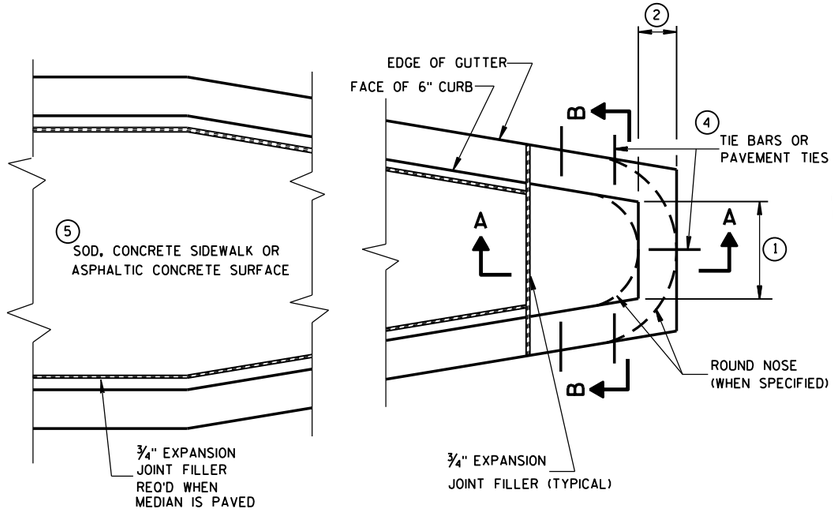
APPROVED
June 2015
DATE

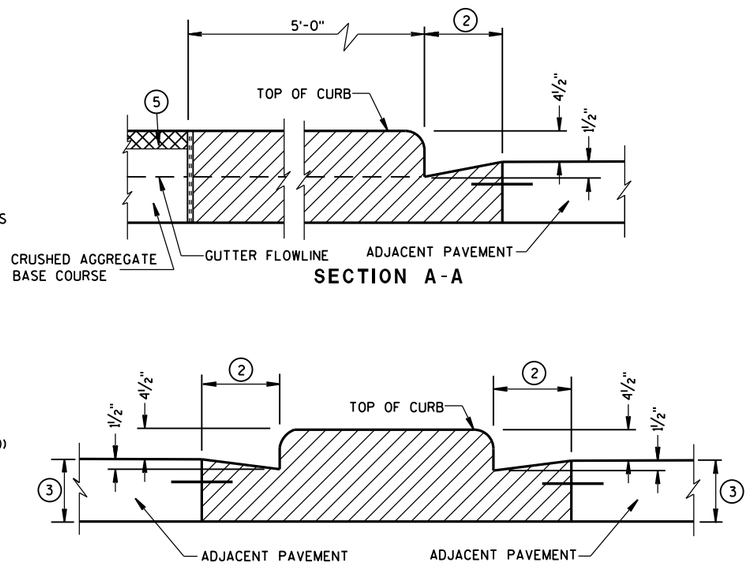
/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

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CONCRETE MEDIAN BLUNT NOSE DETAIL

GENERAL NOTES

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

(1) SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).

(2) WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.

(3) DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:

(1) NEW OR EXISTING CONCRETE PAVEMENT.

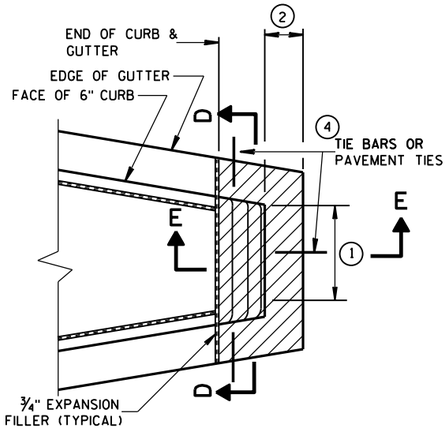
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

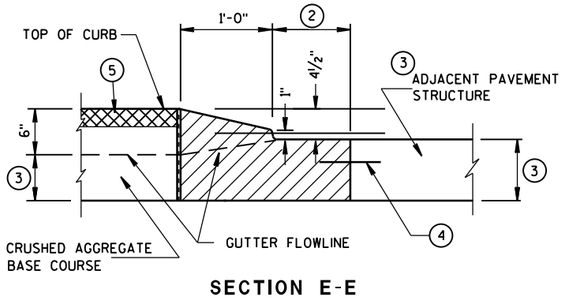
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

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

PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

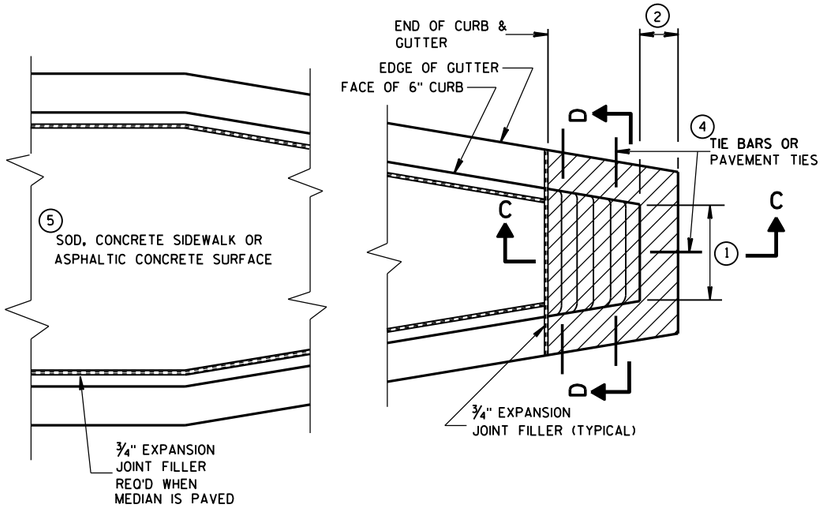
(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

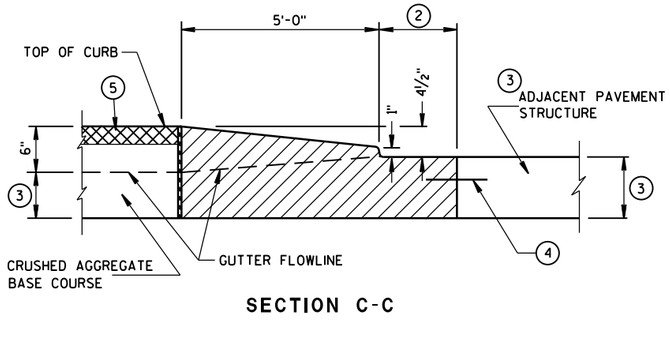




SECTION E-E

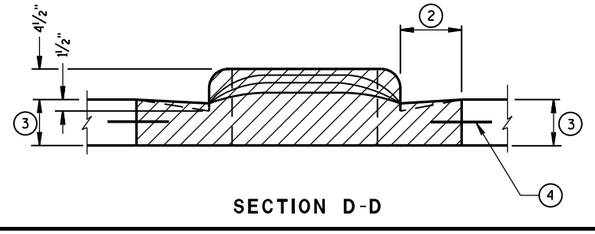
CONCRETE MEDIAN SLOPED NOSE TYPE 2





SECTION C-C

CONCRETE MEDIAN SLOPED NOSE TYPE 1



SECTION D-D

CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/8/2006
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS D ENGINEER

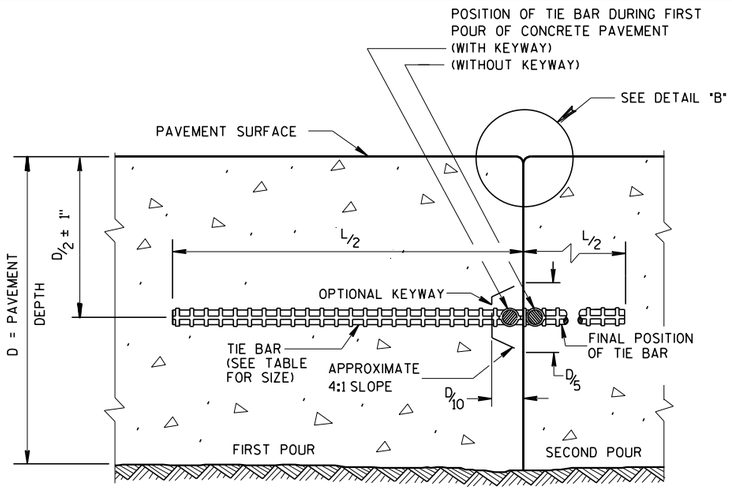
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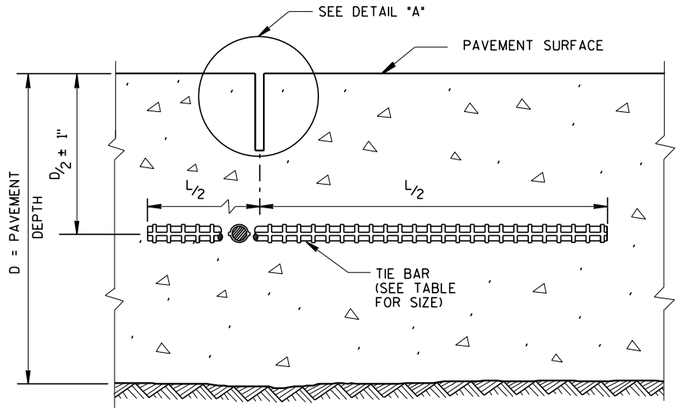
S.D.D. 11 B 2-2

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S.D.D. 11 B 2-2



CONSTRUCTION JOINT



SAWED JOINT

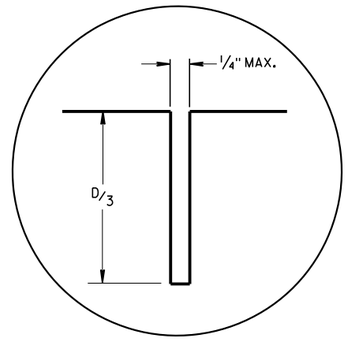
GENERAL NOTES

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

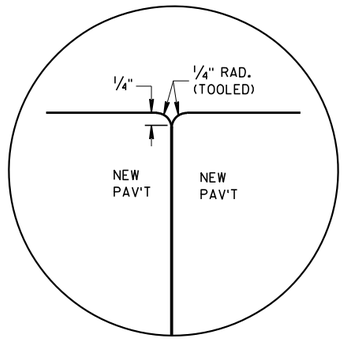
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

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

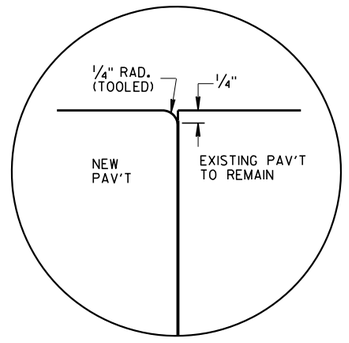
(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.



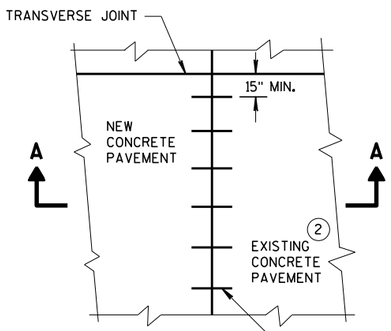
DETAIL "A"



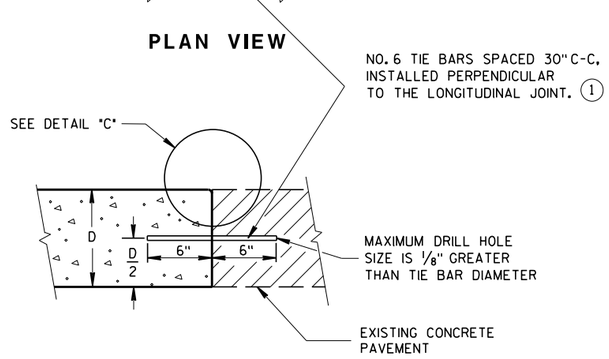
DETAIL "B"



DETAIL "C"



PLAN VIEW



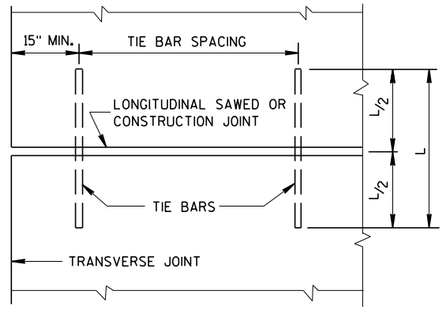
SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT

TIE BAR TABLE

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

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

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



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

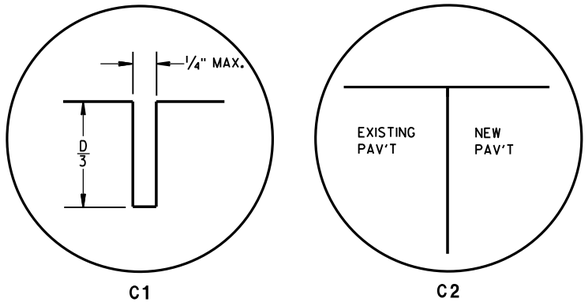
APPROVED
March 2018 — DATE
/S/ Peter Kemp PE — PAVEMENT SUPE
FHWA

6

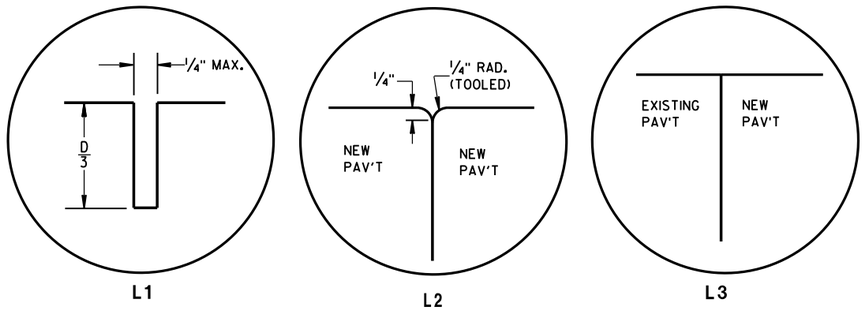
S.D.D. 13 C 1-19

6

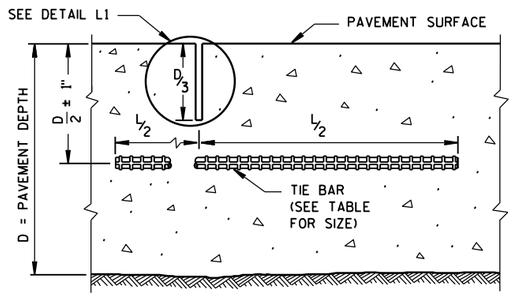
S.D.D. 13 C 1-19



TRANSVERSE JOINTS

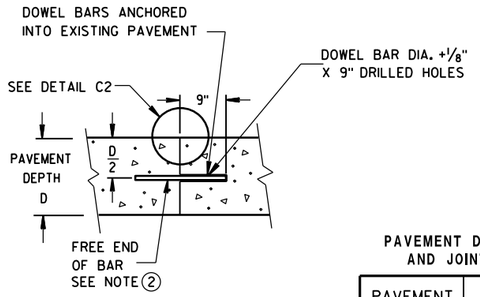


LONGITUDINAL JOINTS



SECTION C-C

SAWED JOINT



SECTION D-D

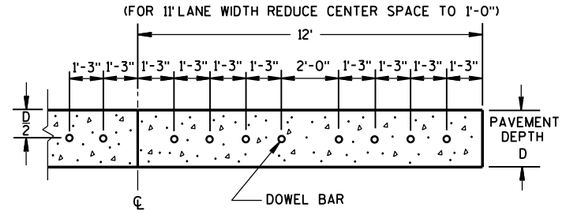
GENERAL NOTES

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

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

(1) INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

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



SECTION E-E

SPACING OF DOWEL BARS ANCHORED INTO EXISTING PAVEMENT

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

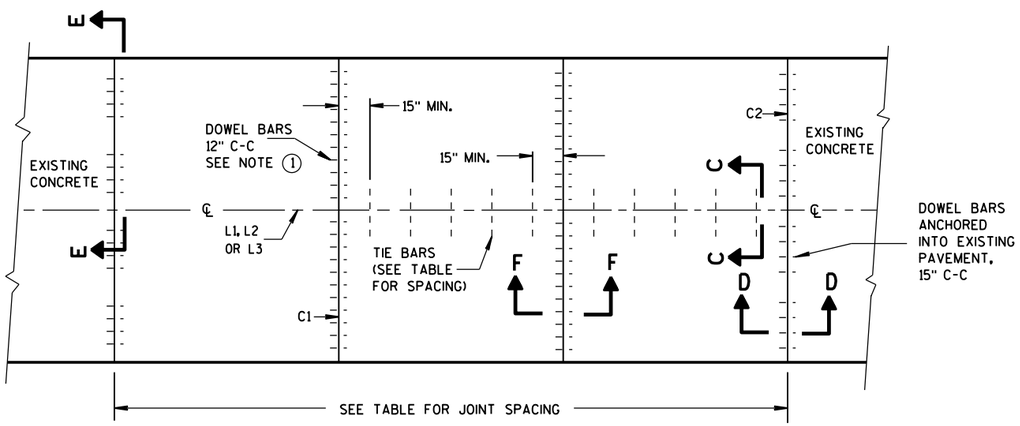
PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5½", 6, 6 ½"	NONE	12'
7, 7 ½"	1"	14'
8, 8 ½"	1 ¼"	15'
9, 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'

TIE BAR TABLE

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

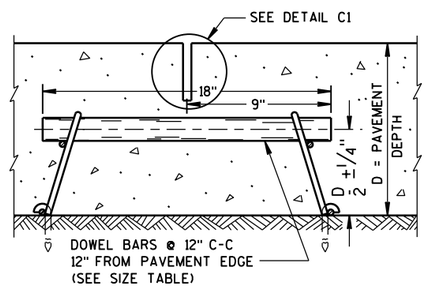
* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

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



PLAN VIEW

CONCRETE BASE CONTRACTION JOINT LOCATIONS



SECTION F-F

CONTRACTION JOINT

CONCRETE BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

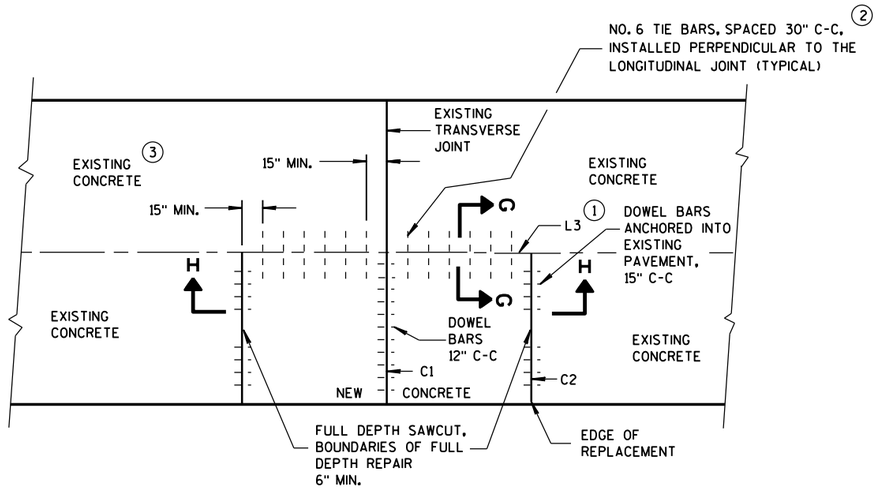
6
S.D.D. 13 C 15-6a

GENERAL NOTES

(1) USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) AT THE LONGITUDINAL JOINT IN LIEU OF TIE BARS FOR SINGLE LANE CONCRETE BASE REPAIRS UP TO 15 FEET IN LENGTH.

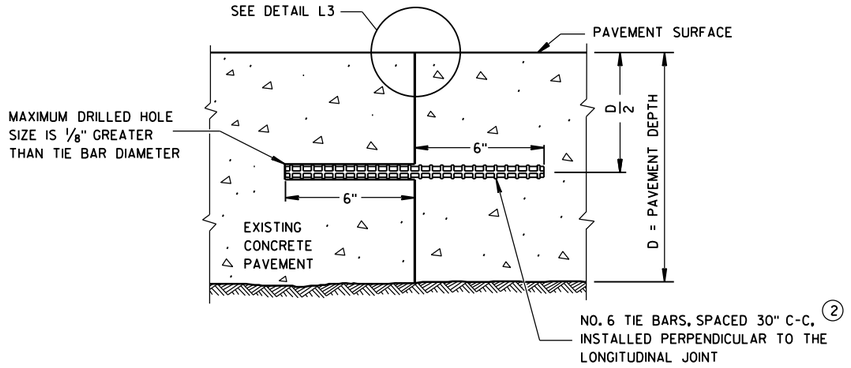
(2) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

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



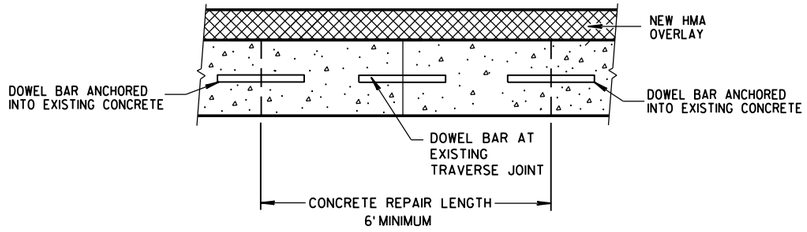
PLAN VIEW

SINGLE LANE CONCRETE BASE REPAIR



SECTION G-G

TIE BARS ANCHORED INTO EXISTING PAVEMENT



SECTION H-H

CONCRETE BASE

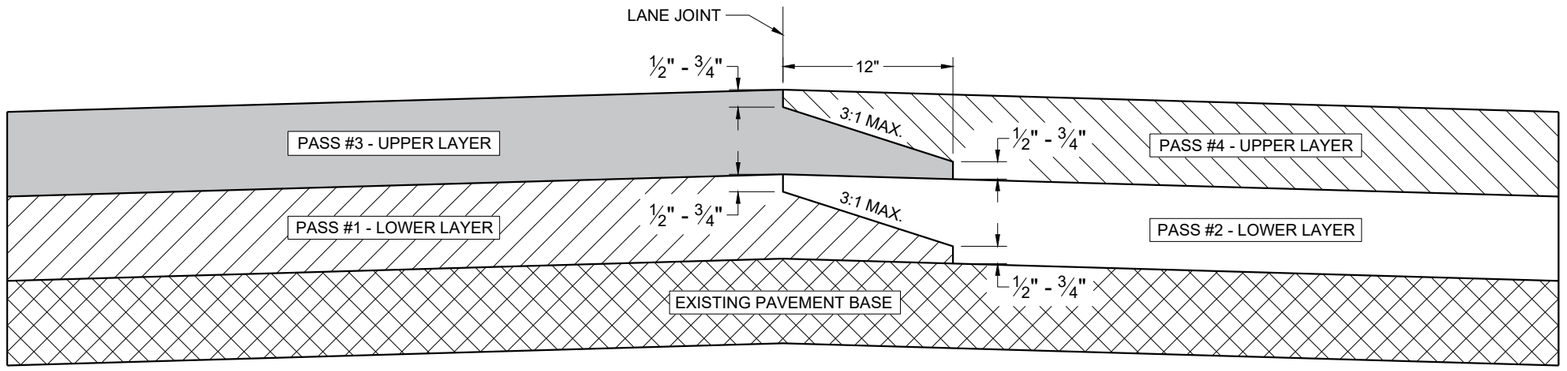
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 13 C 15-6b

GENERAL NOTES

CONFORM TO STANDARD SPECIFICATION 450.3.2.8



TYPICAL PAVEMENT CROSS SECTION
OF NOTCHED WEDGE LONGITUDINAL JOINTS

6

6

SDD 13C19 - 01

SDD 13C19 - 01

HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE

/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA

GENERAL NOTES

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

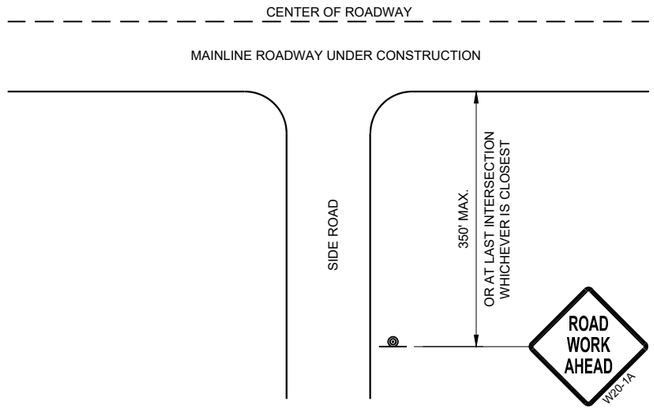
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"X36" SIGNS MAY BE USED INSTEAD OF 48" X 48" SIGNS.

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

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.



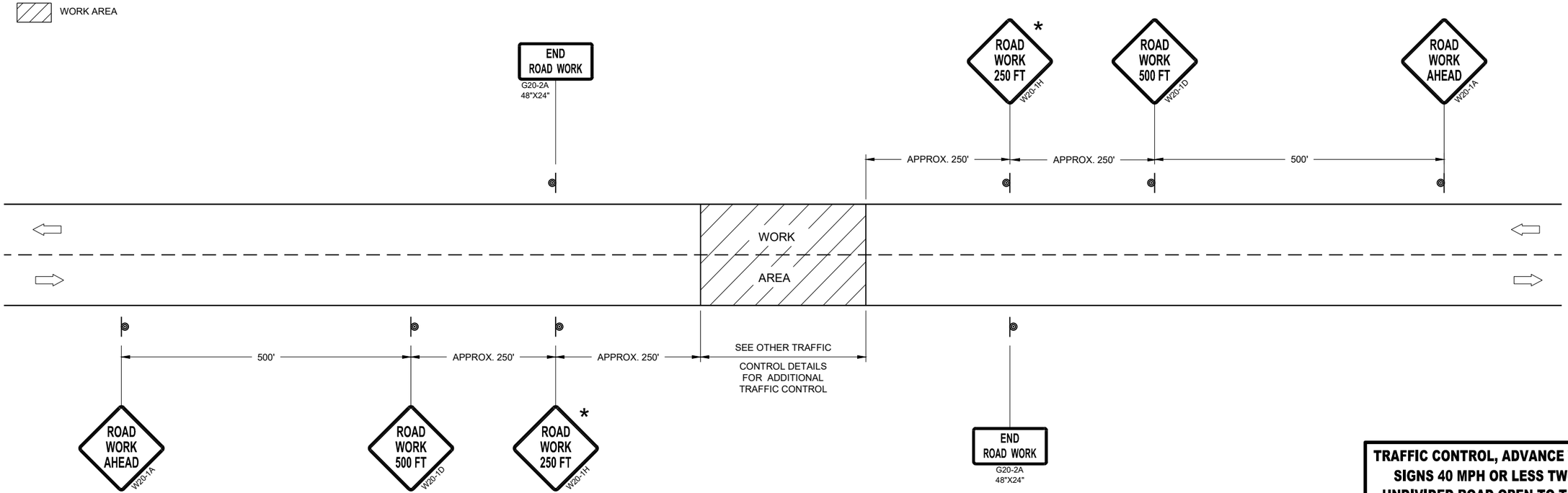
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 MPH OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFICE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

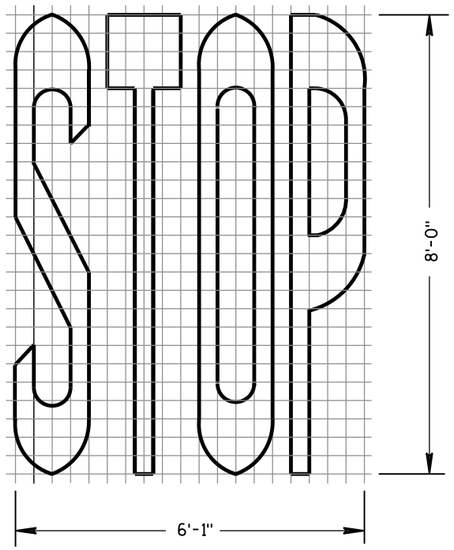
FHWA

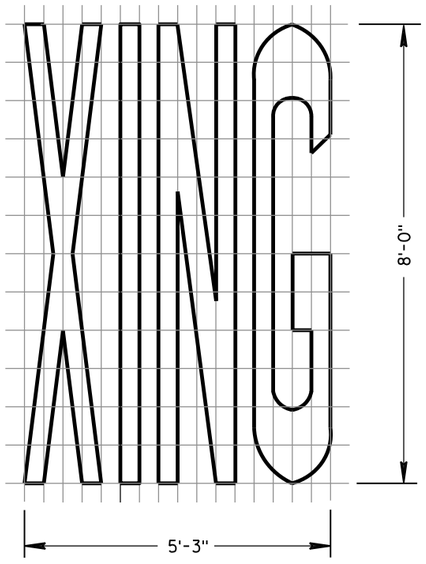
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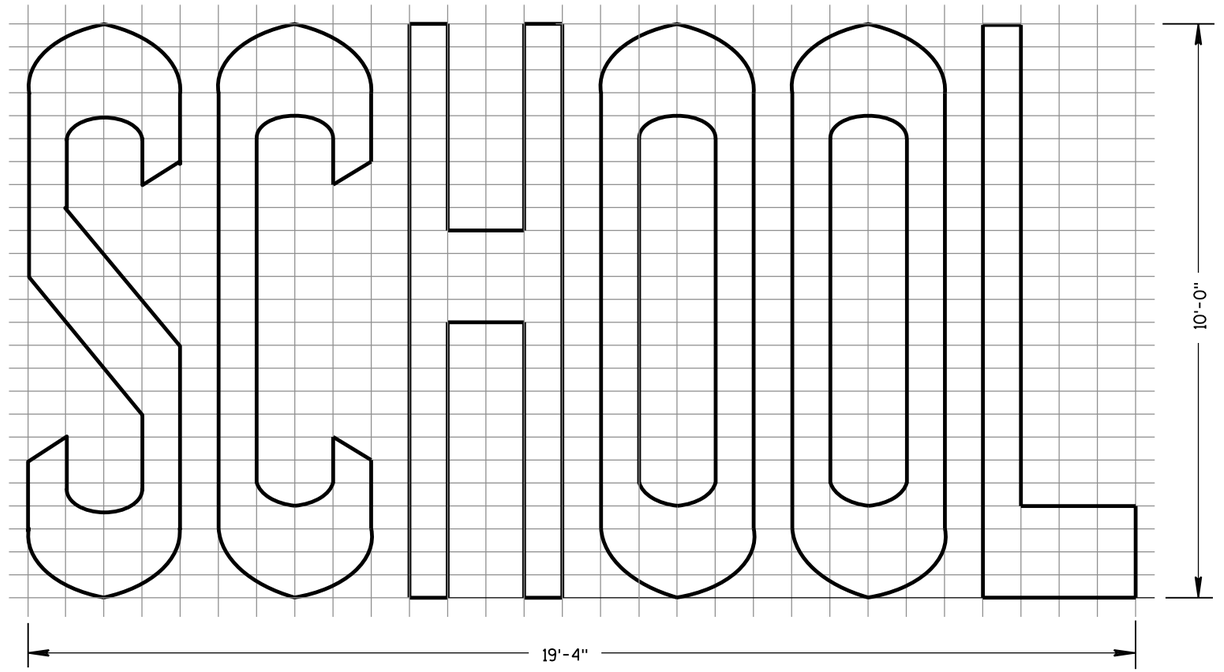
SDD 15C05 - 05

GENERAL NOTES

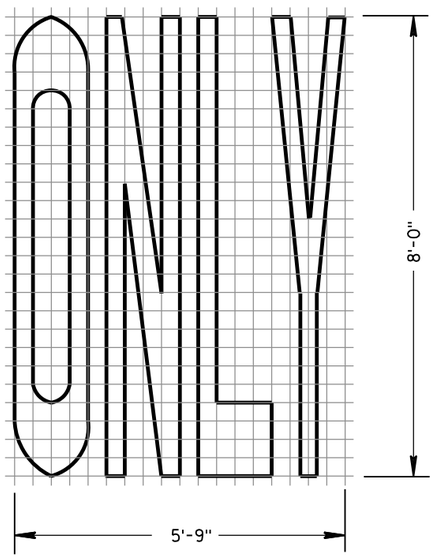
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

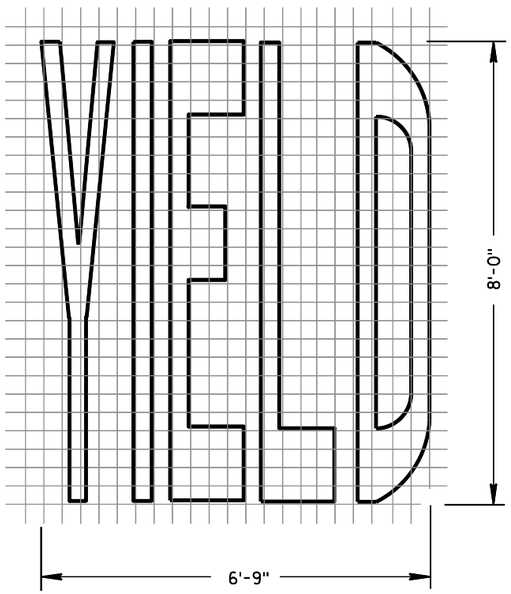


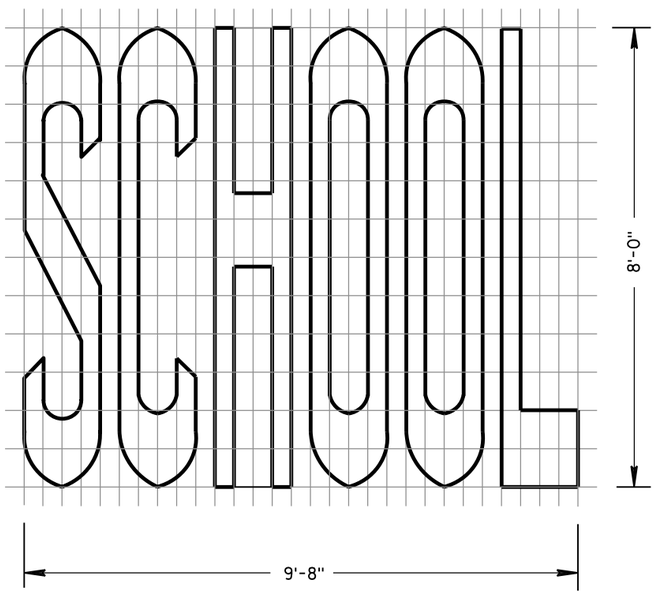




TWO-LANE







SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MARK
EER
FHWA

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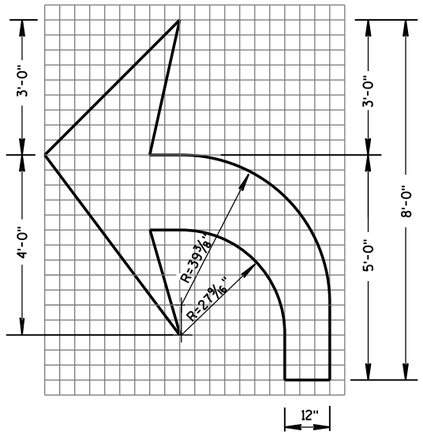
S.D.D. 15 C 7-14b

6

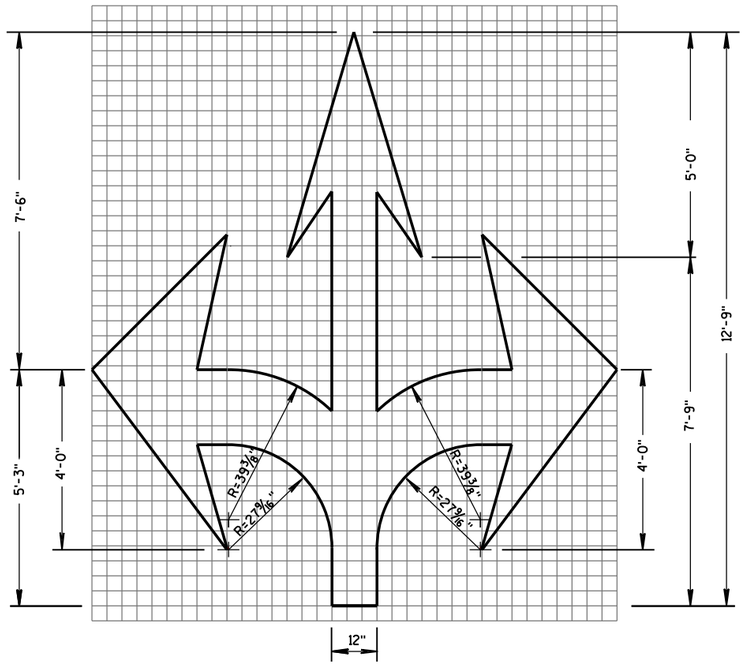
S.D.D. 15 C 7-14b

GENERAL NOTES

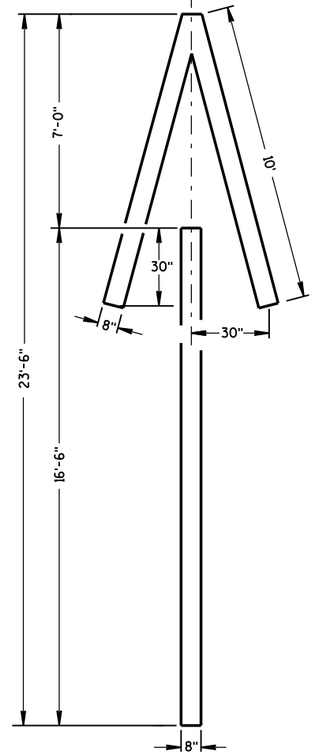
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



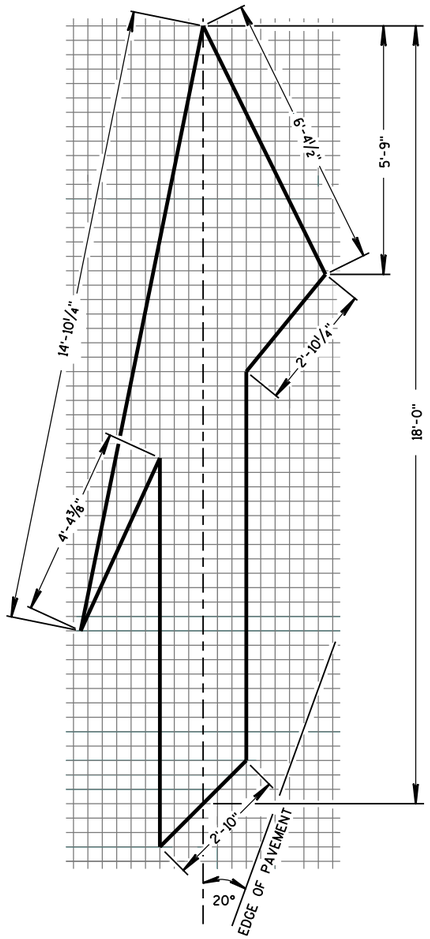
TYPE 2



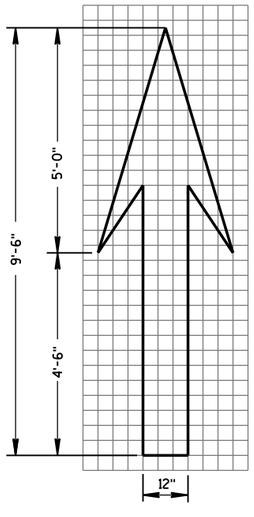
TYPE 6



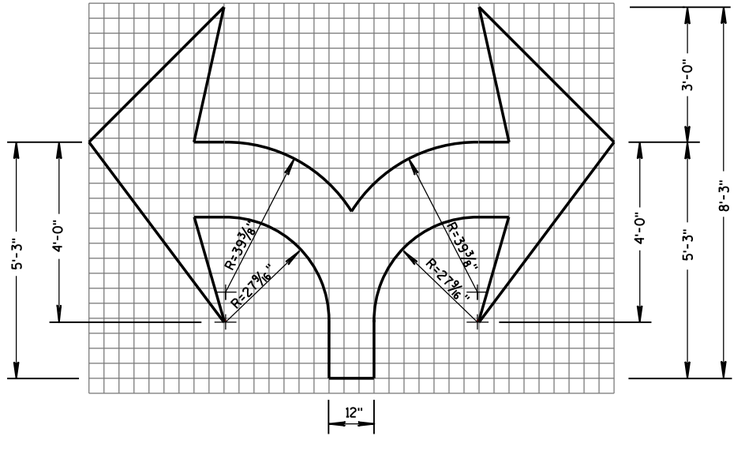
TYPE 4



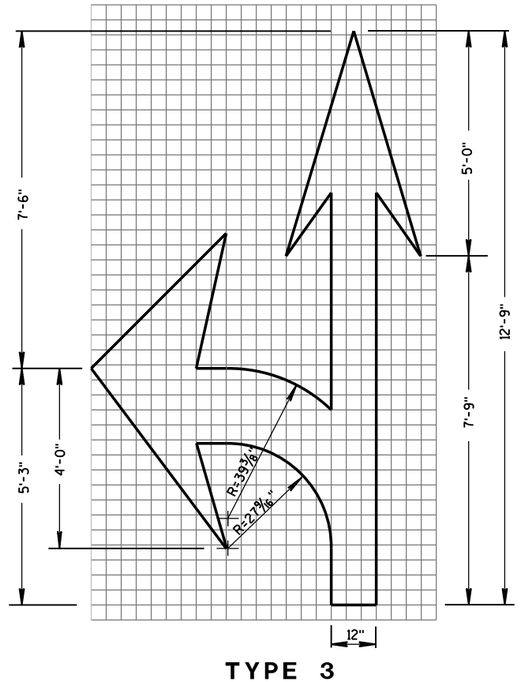
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

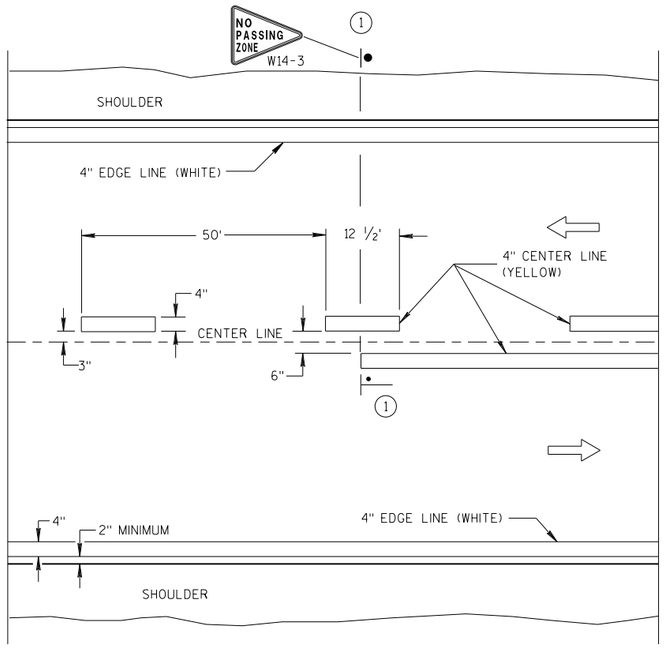
APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MAR
FHWA

6

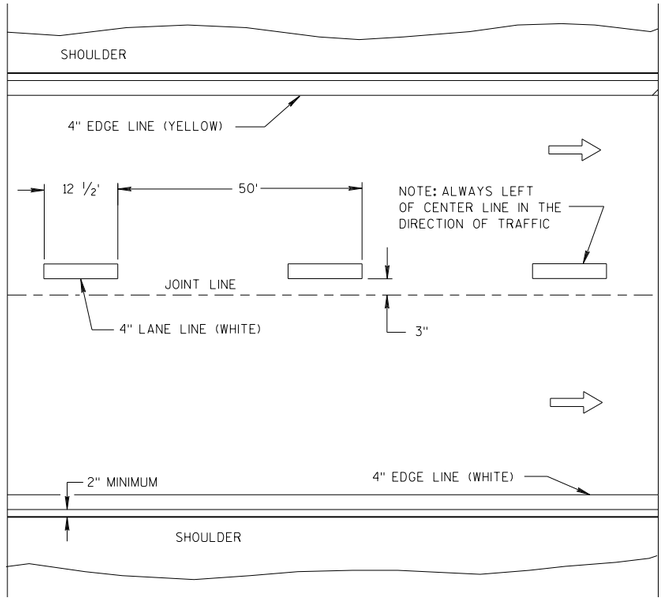
S.D.D. 15 C 7-14c

6

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



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

GENERAL NOTES

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

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

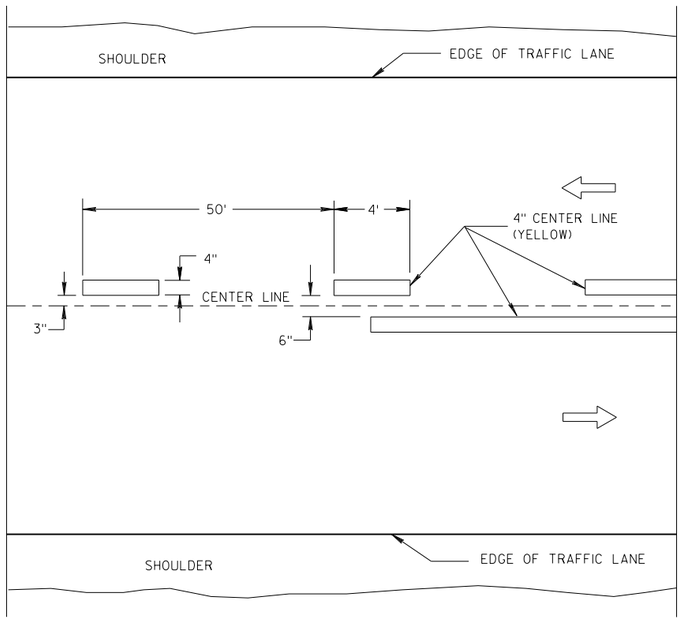
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

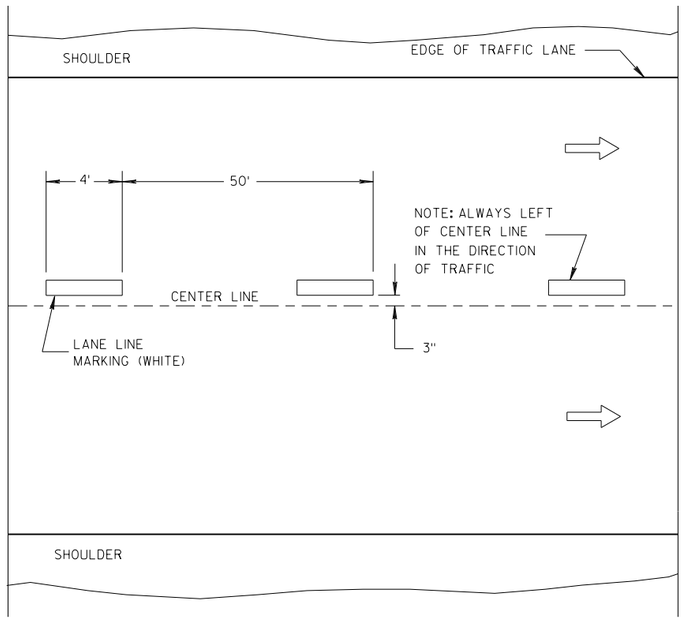
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018 DATE

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

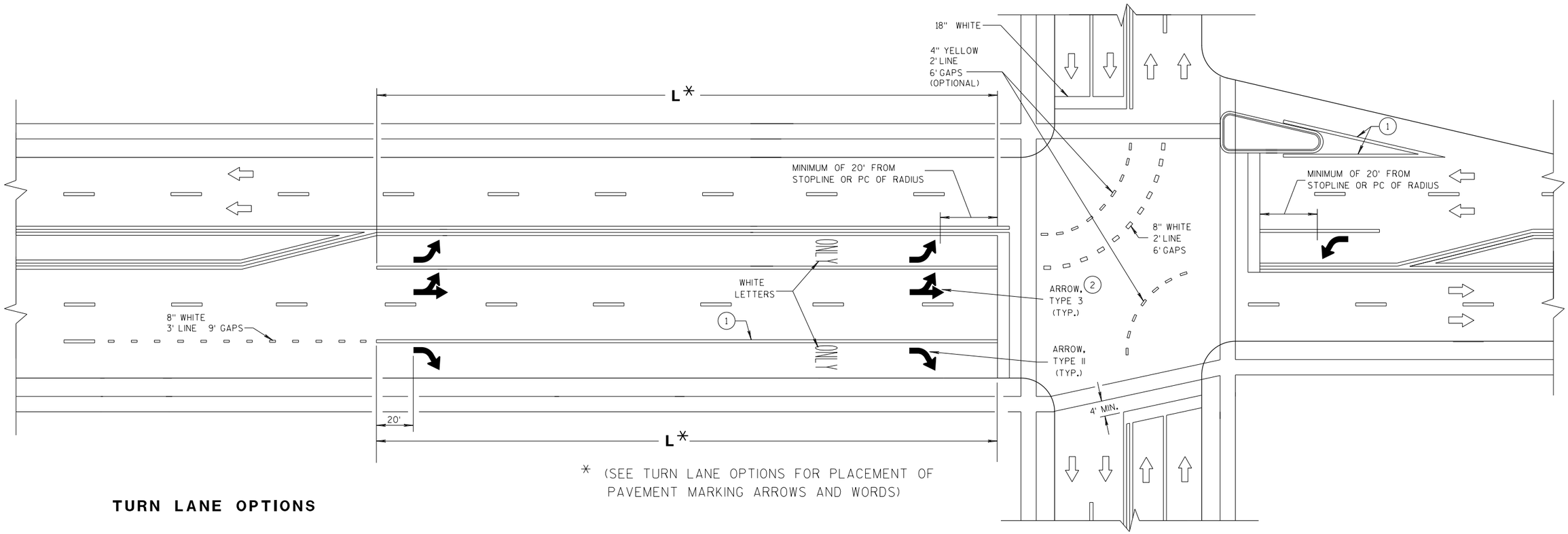
FHWA

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S.D.D. 15 C 8-19a

6

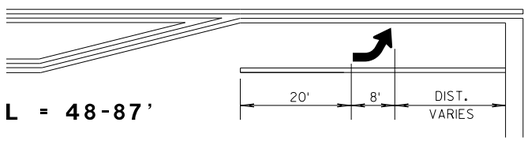
S.D.D. 15 C 8-19a



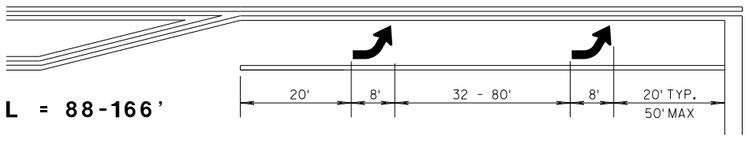
* (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

TURN LANE OPTIONS

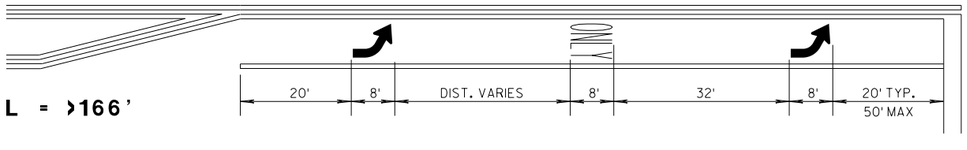
LENGTH OF TURN BAY (**L**) OF 0-47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



L = 48-87'



L = 88-166'



L = >166'

GENERAL NOTES

1. 8" WHITE
2. QUANTITY AND LOCATION OF TYPE 3 ARROW ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION, THE ARROWS AND ONLY MARKING ARE ELIMINATED.

⇨ DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

PAVEMENT MARKING (TURN LANES)

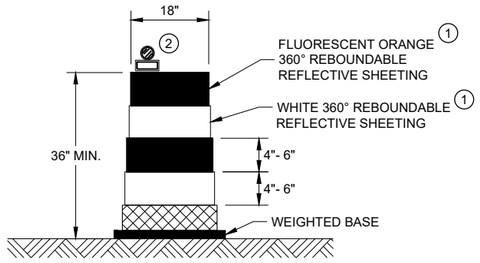
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORT

6

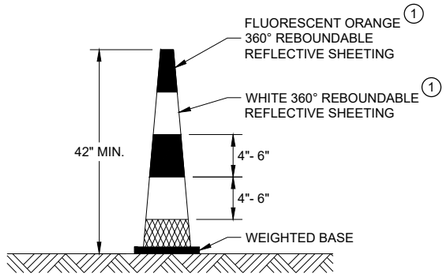
S.D.D. 15 C 8-19c

GENERAL NOTES

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

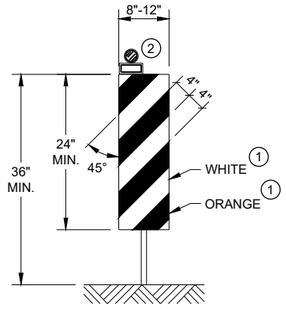


DRUM



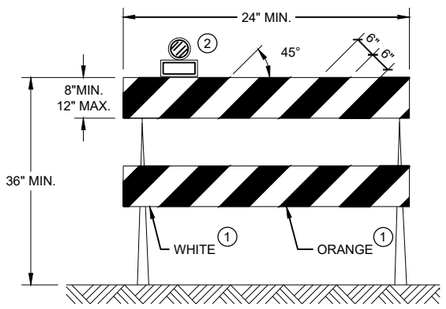
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



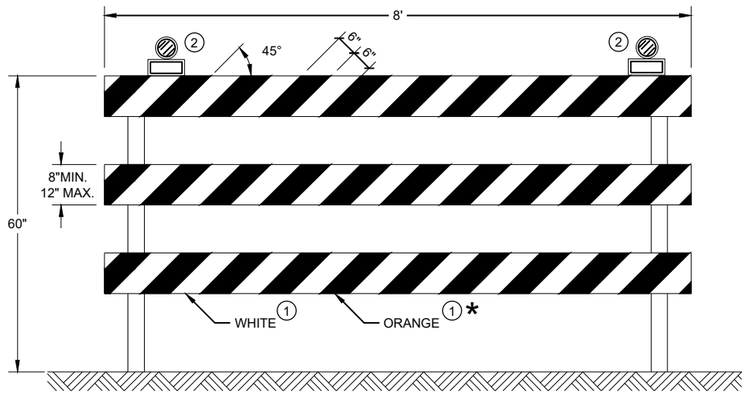
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

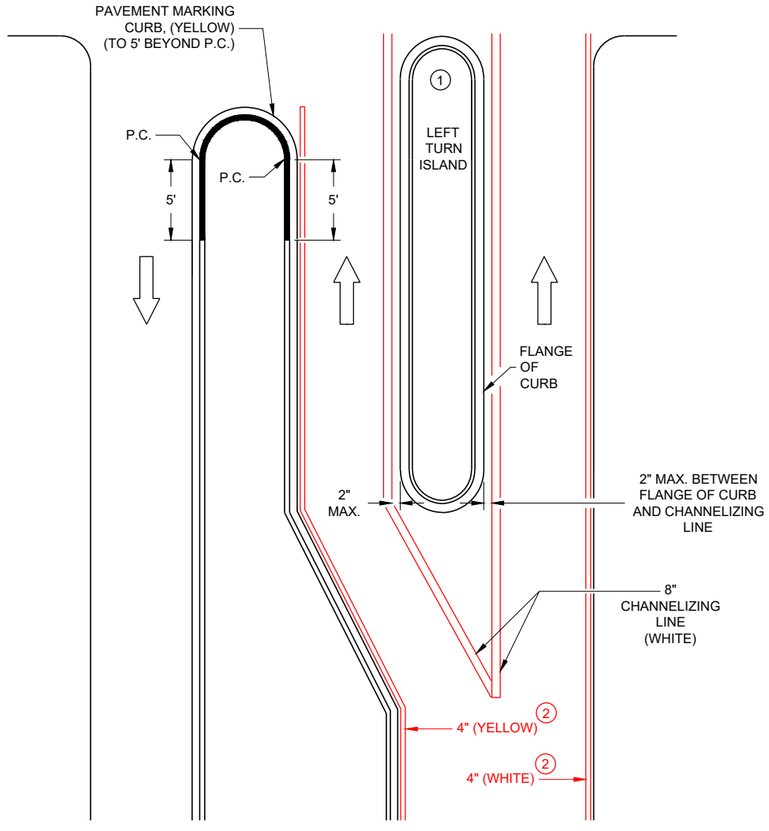
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SDD 15C11 - 07b

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SDD 15C11 - 07b

REQUIREMENTS FOR EDGE LINES		
POSTED SPEED	IS THERE CONTINUOUS LIGHTING?	
	YES	NO
≤ 30 MPH	NO	OPTIONAL
35 OR 40 MPH	OPTIONAL	RECOMMENDED
≥ 45 MPH	RECOMMENDED	REQUIRED



LEFT TURN & MEDIAN ISLAND

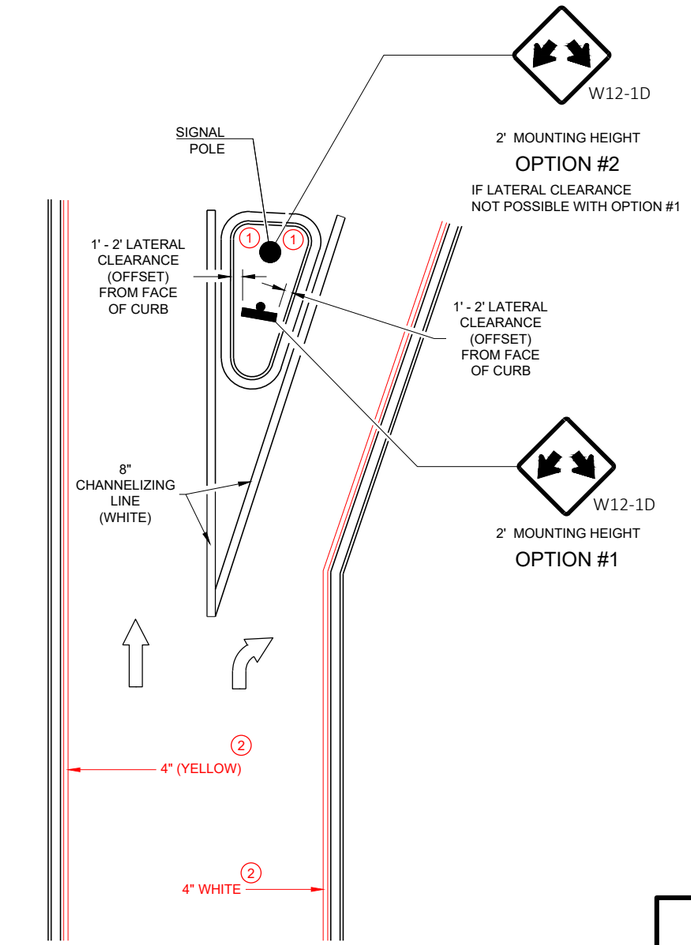
GENERAL NOTES

APPLIES TO ISLANDS AT LEFT TURNS AT ONE WAY ROADWAYS AS WELL.

SEE MISCELLANEOUS QUANTITIES FOR SIGN SIZE.

1. MARK CURB NOSES YELLOW.
2. MARK ACCORDING TO TABLE.

DIRECTION OF TRAVEL



RIGHT TURN ISLAND

DOUBLE ARROW
WARNING SIGN PLACEMENT

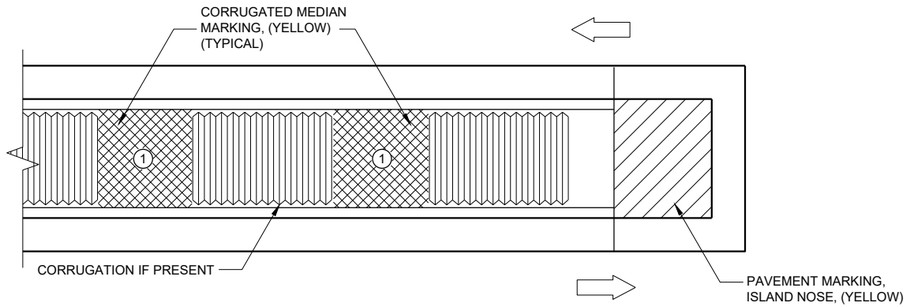
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
/S/ Matthew R. Rauch
STATE SIGNING AND MAF ENGINEER

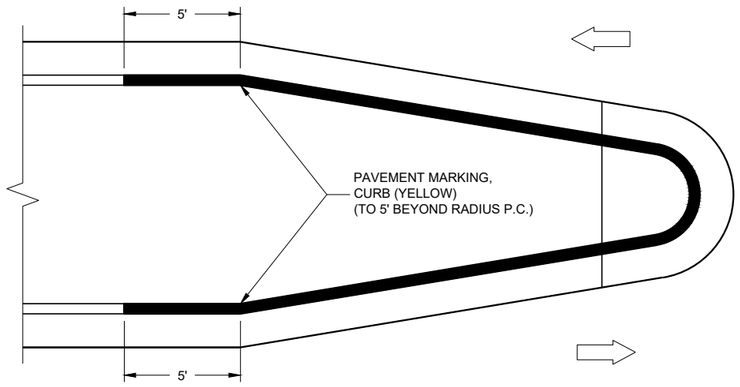
FHWA

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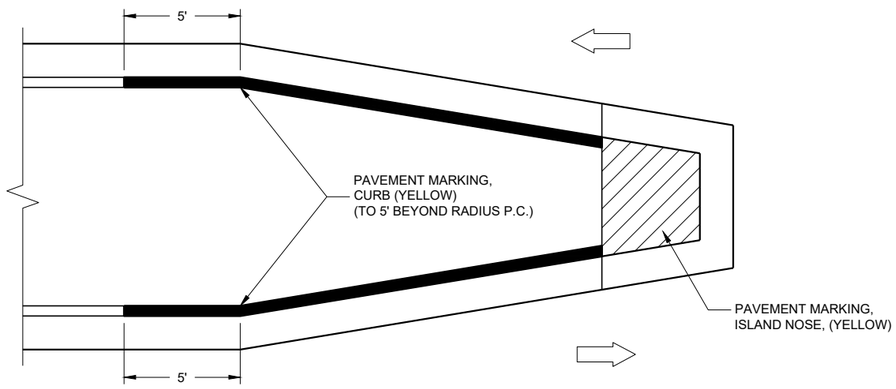
SDD 15C27 - 03a



MEDIAN ISLAND WITH SQUARE BLUNT NOSE



MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF
PAVEMENT MARKING ON MEDIAN ISLANDS

GENERAL NOTES

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

ISLAND NOSE MARKING

CURB MARKING

CORRUGATED MEDIAN MARKING

DIRECTION OF TRAVEL

PAVEMENT MARKINGS
(ISLANDS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018
DATE

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

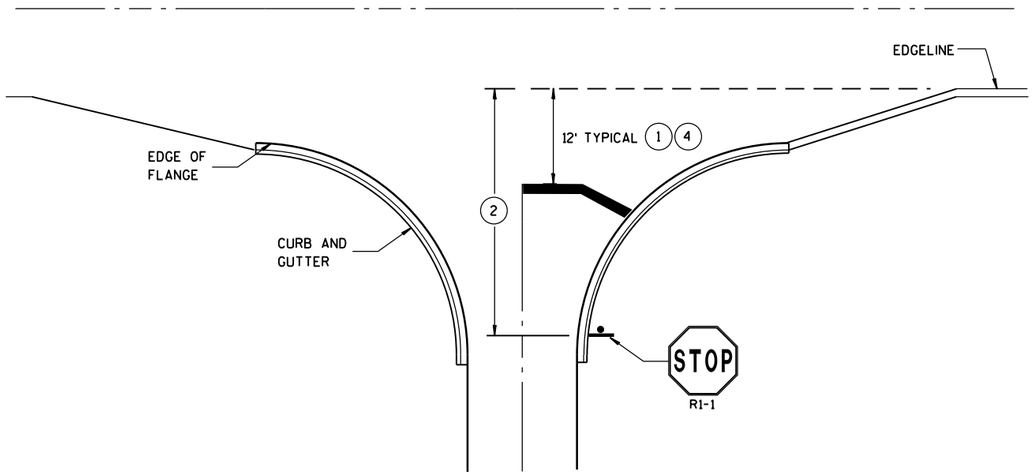
FHWA

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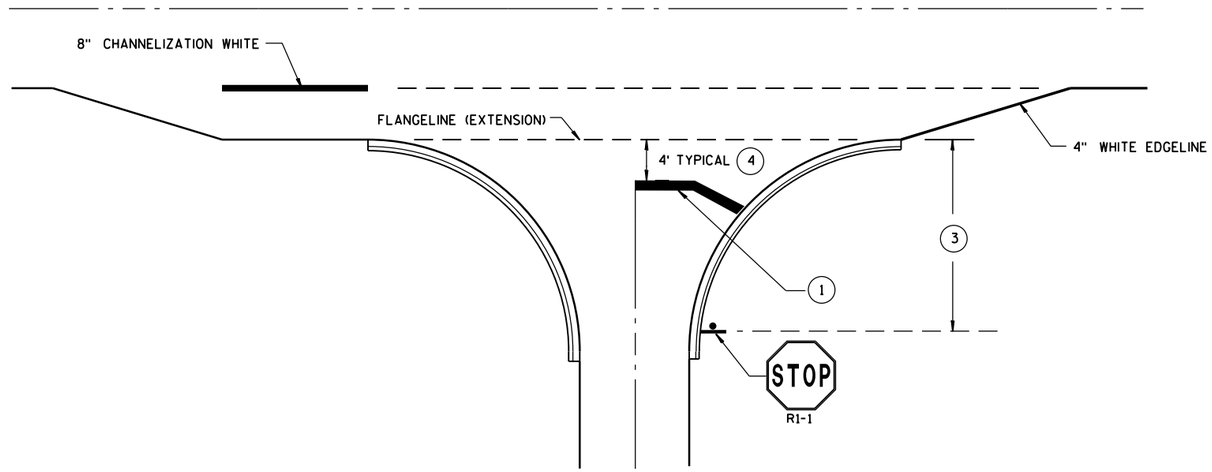
SDD 15C27 - 03b

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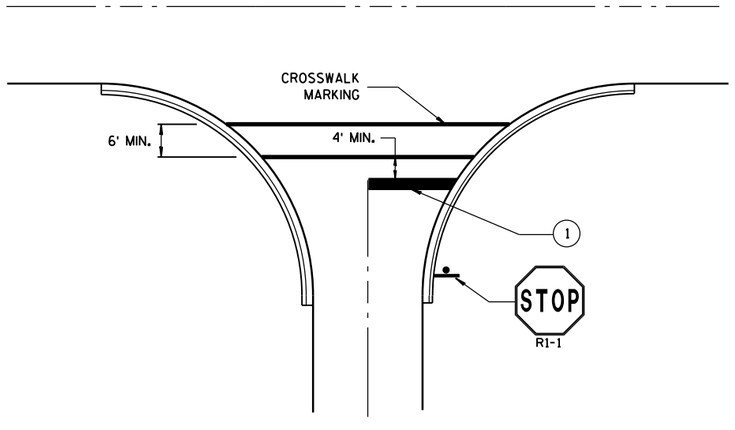
SDD 15C27 - 03b



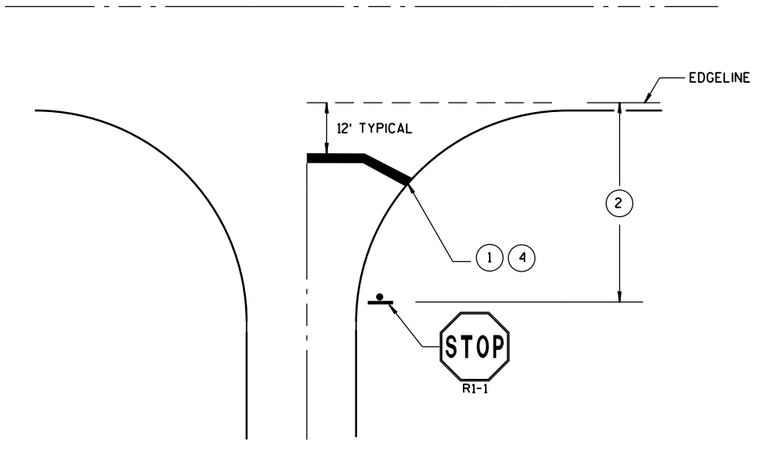
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

GENERAL NOTES

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

(1) 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.

(2) IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE THAN NO STOP LINE IS REQUIRED.

(3) IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.

(4) MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES. (NO CLOSER THAN 4 FEET).

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

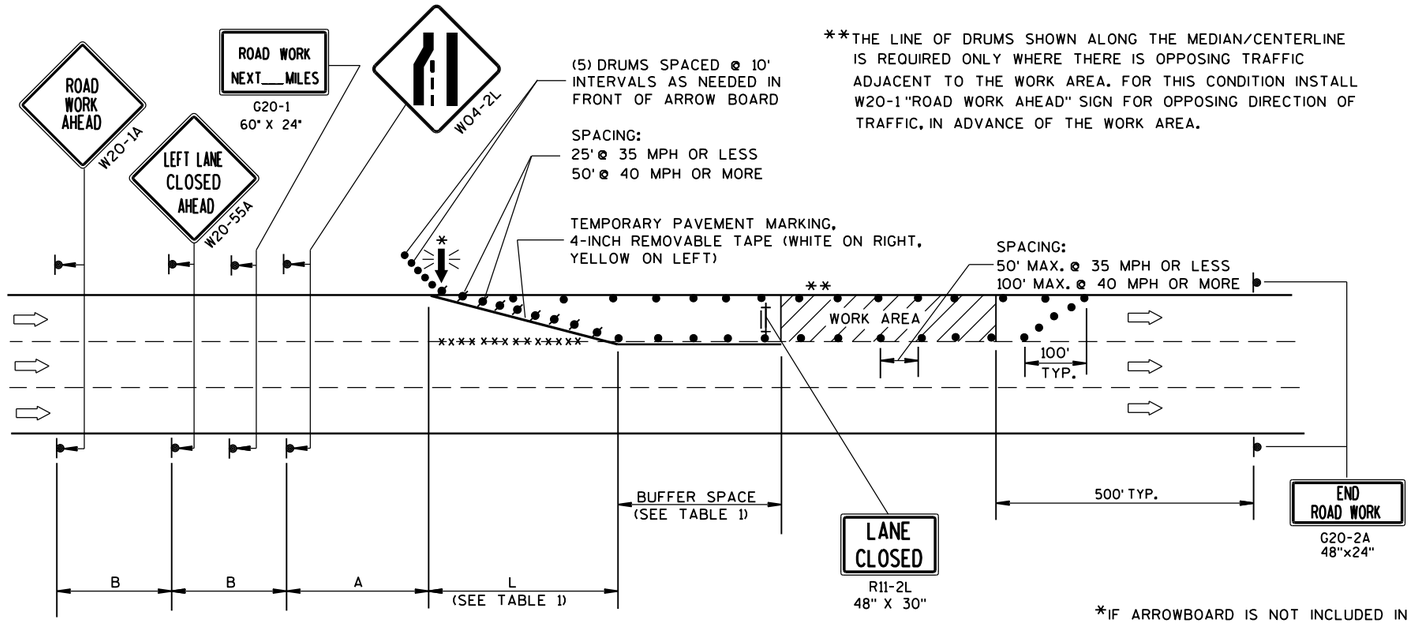
Sept., 2017
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MAR[illegible]NEER

FHWA

6

S.D.D. 15 C 33-3



**THE LINE OF DRUMS SHOWN ALONG THE MEDIAN/CENTERLINE IS REQUIRED ONLY WHERE THERE IS OPPOSING TRAFFIC ADJACENT TO THE WORK AREA. FOR THIS CONDITION INSTALL W20-1 "ROAD WORK AHEAD" SIGN FOR OPPOSING DIRECTION OF TRAFFIC, IN ADVANCE OF THE WORK AREA.

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

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

(PLACE BARRICADE AND SIGN APPROX. EVERY 1000' ACROSS THE CLOSED LANE)

*IF ARROWBOARD IS NOT INCLUDED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE A TYPE III BARRICADE WITH W01-6 SIGN IN THE LANE CLOSURE TAPER.

W01-6
48"x24"

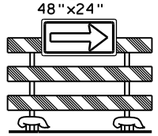


TABLE 1
TAPER AND BUFFER SPACE FOR 12' LANE WIDTH

S	L	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	540'	220'
50	600'	280'
55	660'	335'

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

LEGEND

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

GENERAL NOTES

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

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

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A 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.

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.

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

ON UNDIVIDED ROADWAYS, OMIT THE SIGNS SHOWN ON LEFT SIDE OF ROAD.

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

OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

PLACE THE ARROWBOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

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.

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

TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

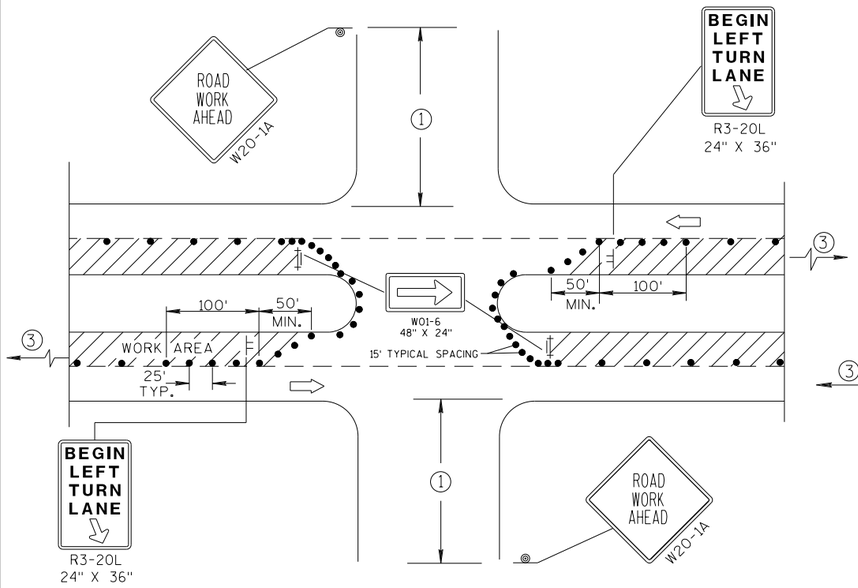
APPROVED
June 2016 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

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S.D.D. 15 D 20-4

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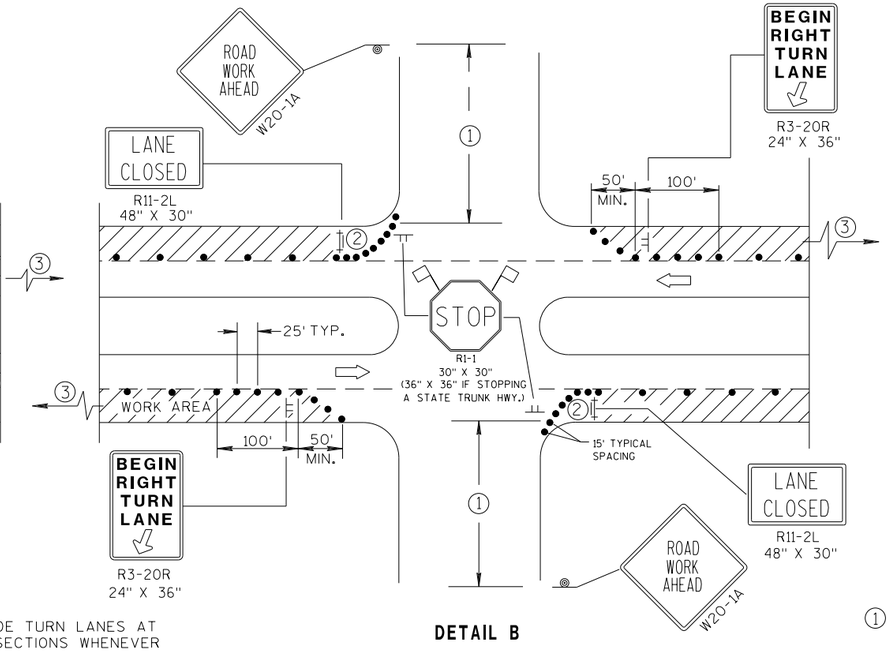
S.D.D. 15 D 20-4



DETAIL A

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

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 B

FOR RIGHT LANE CLOSURE AT INTERSECTION

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.

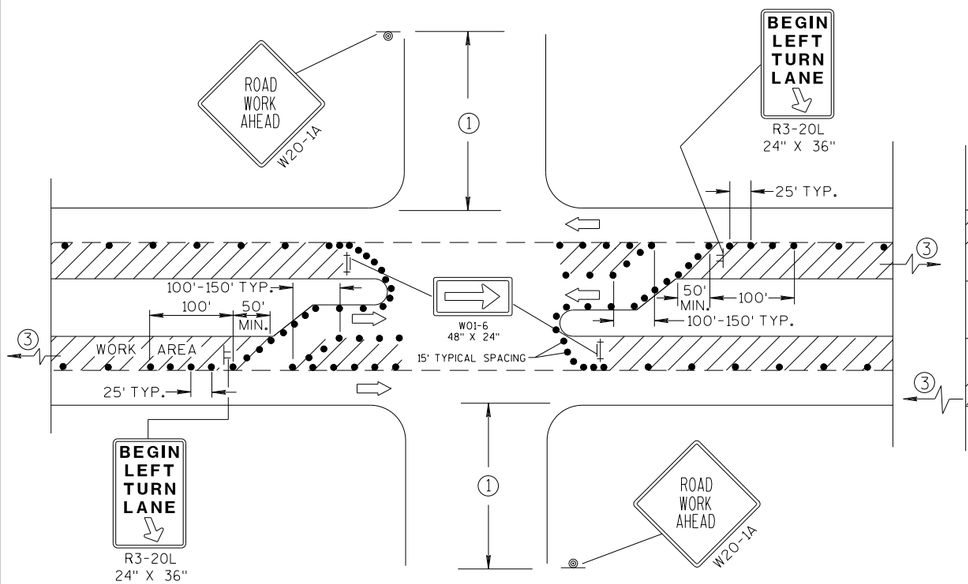
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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.

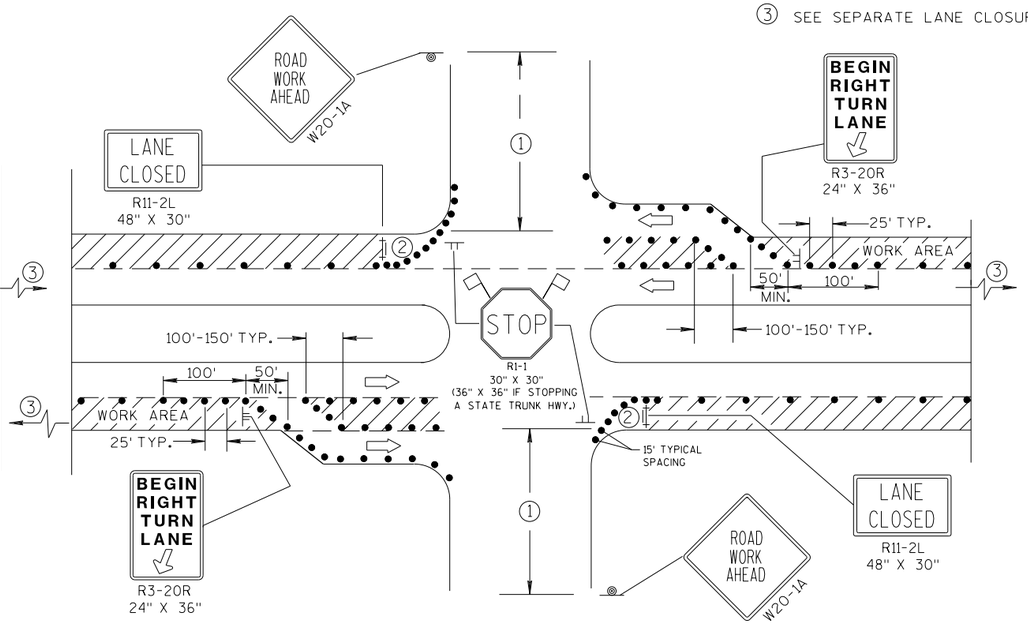
(2) ALSO USE BARRICADE AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.

(3) SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.



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)

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

TABLE 1
TAPER AND BUFFER SPACE
FOR 12' LANE WIDTH

S	L	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	540'	220'
50	600'	280'
55	660'	335'

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

LEGEND

TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT

TRAFFIC CONTROL DRUM

FLASHING ARROW BOARD

DIRECTION OF TRAFFIC

REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)

WORK AREA

GENERAL NOTES

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

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

THE SPACING BETWEEN 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 THE DISTRICT TRAFFIC UNIT.

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

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.

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

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

OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

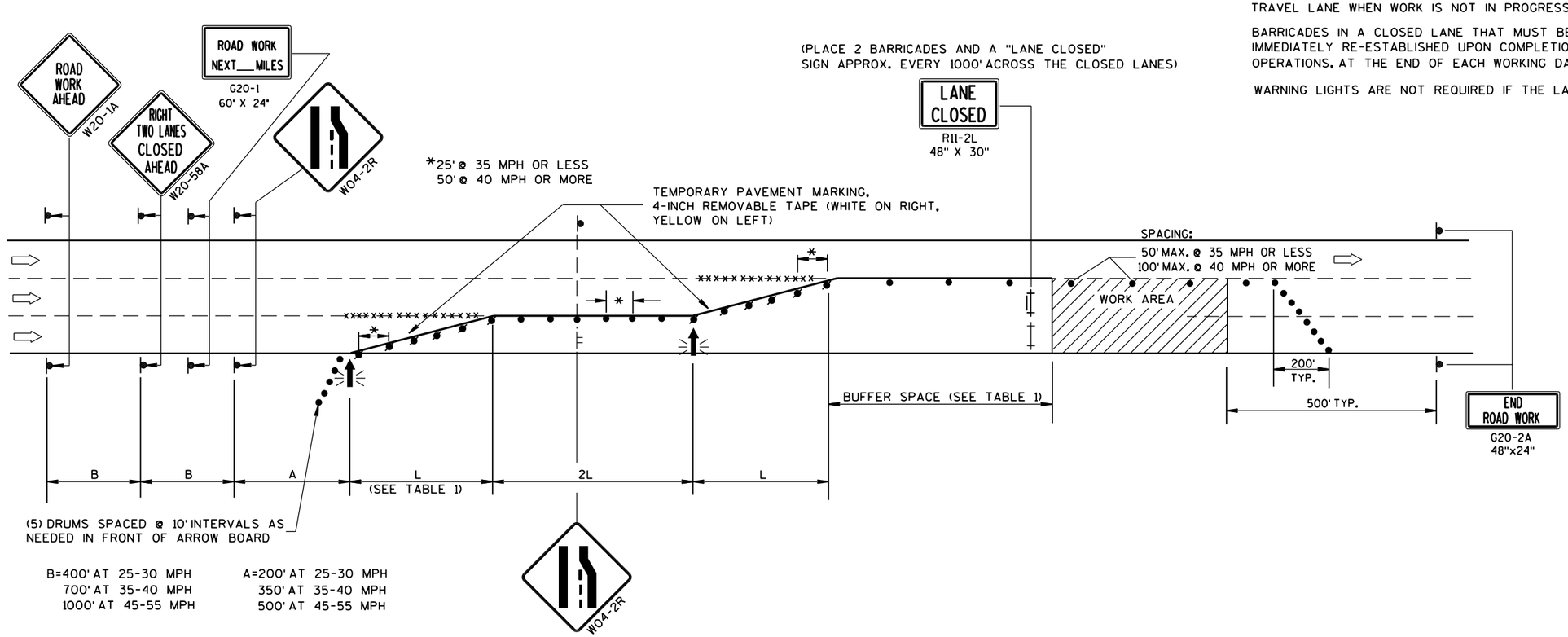
CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

WHERE THE SHOULDER OR TERRACE HAS INSUFFICIENT SPACE TO LOCATE THE ARROWBOARD AS SHOWN, PLACE THE ARROWBOARD IN THE LANE CLOSURE TAPER AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE TAPER.

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.

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



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

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

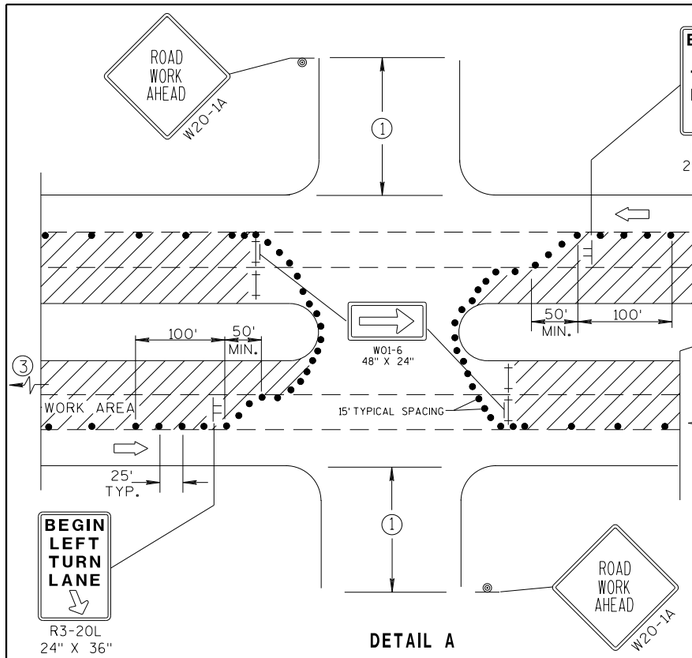
TRAFFIC CONTROL, TWO LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

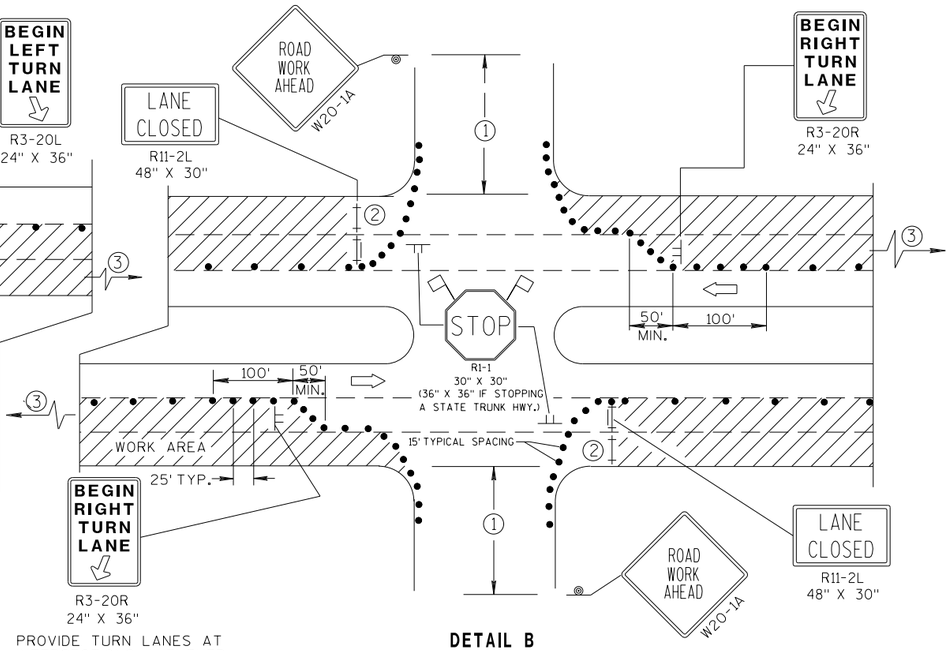
S.D.D. 15 D 22-3

S.D.D. 15 D 22-3



DETAIL A

FOR LEFT TWO LANES CLOSED AT INTERSECTION OR MEDIAN BREAK



DETAIL B

FOR RIGHT TWO LANES CLOSED 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.

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.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD 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.

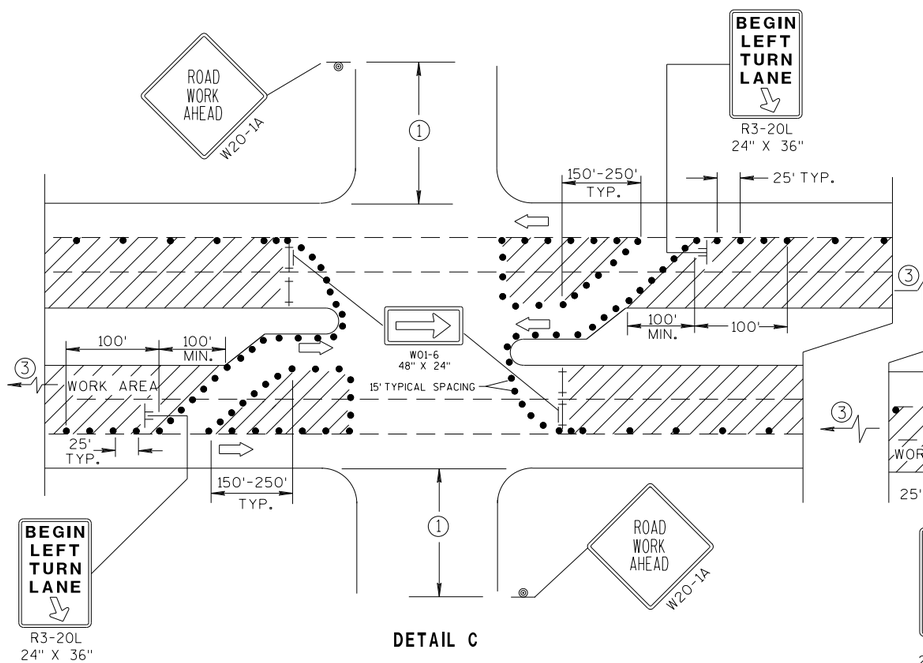
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

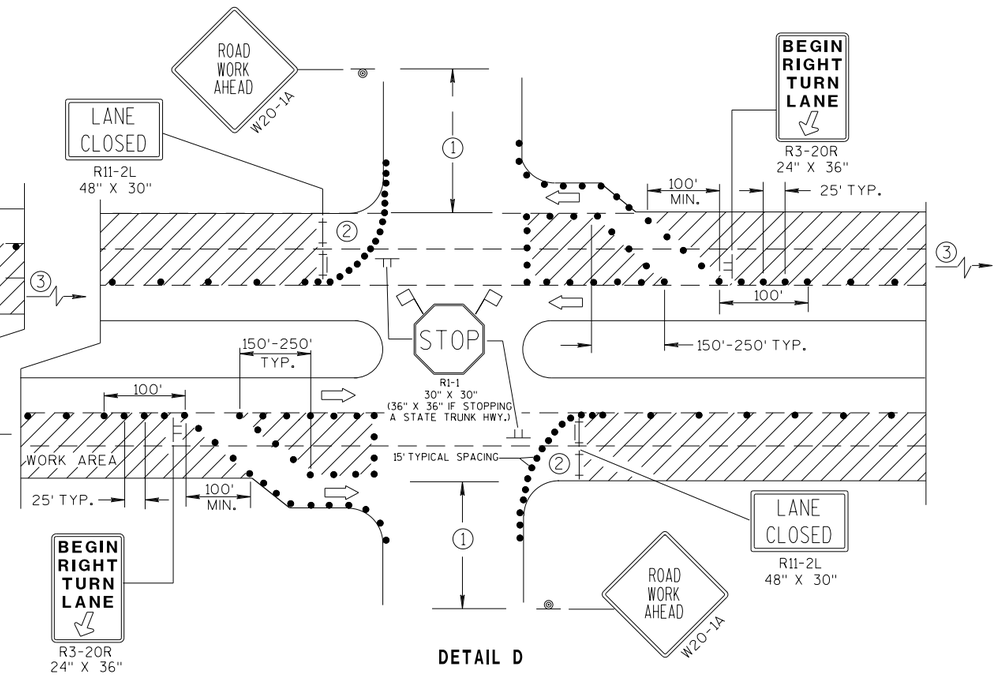
② ALSO USE BARRICADES AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.

③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.



DETAIL C

FOR LEFT TWO LANES CLOSED AT INTERSECTION OR MEDIAN BREAK (WITH LEFT TURN BAY OPEN)



DETAIL D

FOR RIGHT TWO LANES CLOSED AT INTERSECTION (WITH RIGHT TURN BAY OPEN)

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT (5' MIN. MOUNTING HEIGHT)
- TYPE III BARRICADE
- 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 TWO LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 DATE
/S/ Andrew Heidtke
WORK ZONE ENG
FHWA

6

S.D.D. 15 D 23-6

6

S.D.D. 15 D 23-6

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- DIRECTION OF TRAFFIC
- WORK ZONE

TABLE A

S \ W	4	6	8	10	BUFFER SPACE (FEET)
	SHOULDER TAPER LENGTH (FEET)				
30	20	30	40	50	200
35	30	45	55	70	250
40	40	55	75	90	305
45	60	90	120	150	360
50	70	100	135	170	425
55	75	110	150	185	495

W = SHOULDER WIDTH (FEET
S = NON-CONSTRUCTION SPEED LIMIT (MPH)

TAPER LENGTH

L= WS AT 45 MPH OR GREATER
L = WS² / 60 AT 40 MPH OR LESS

SHOULDER TAPER LENGTH = 1/3L

GENERAL NOTES

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 THE REGIONAL TRAFFIC UNIT.

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

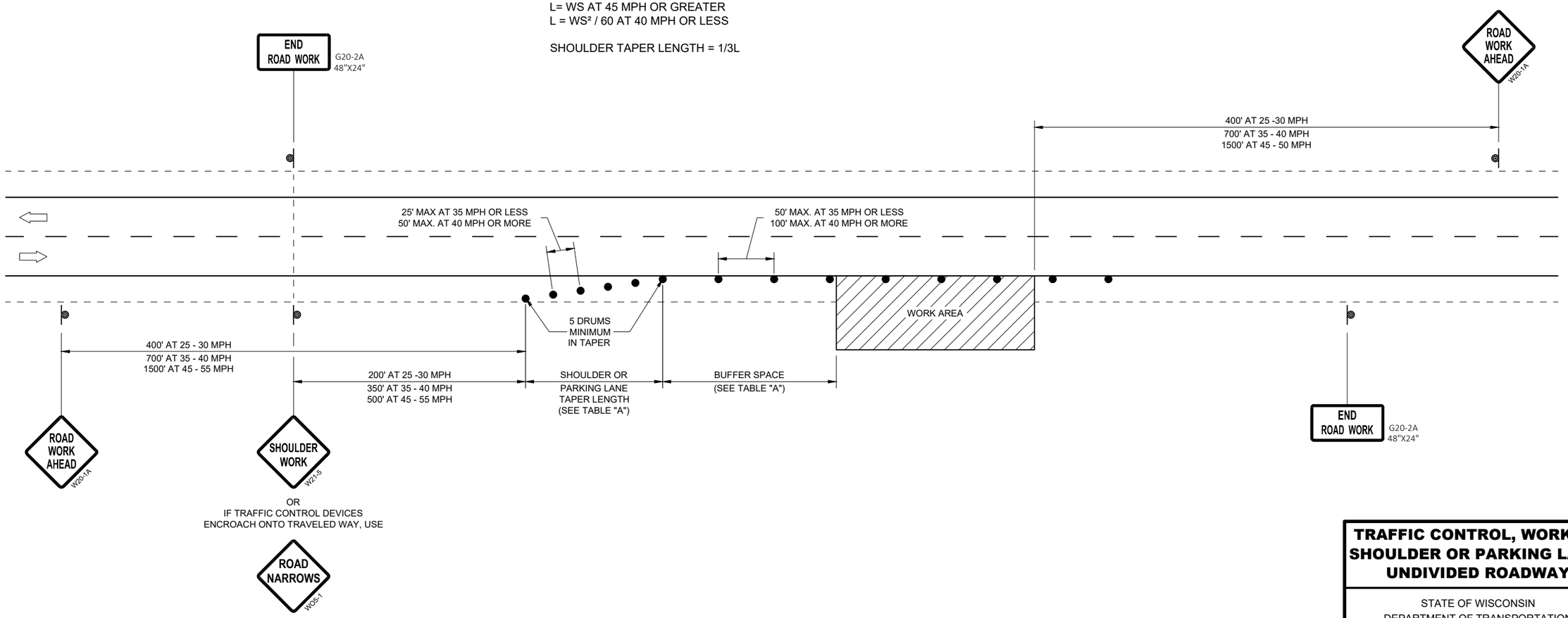
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

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

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

W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY RESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.



TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2019
DATE

/S/ Andrew Heidtke
STATEWIDE WORK ZONE T SAFETY ENGINEER

FHWA

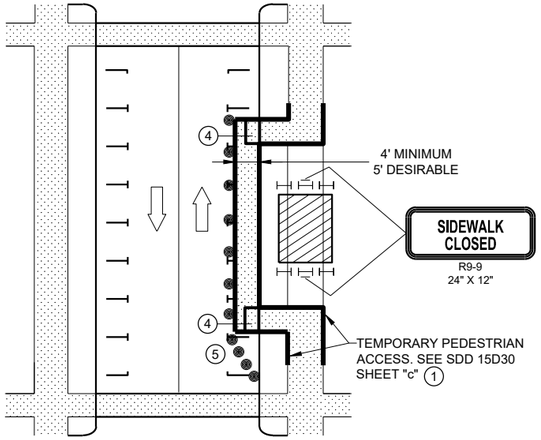
6

SDD 15D28 - 03

6

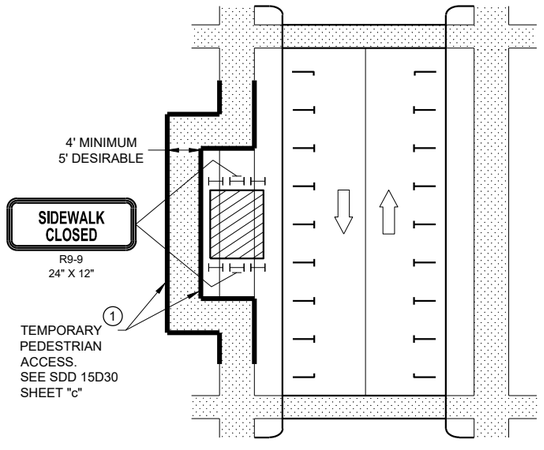
SDD 15D28 - 03

NOTE: MAY BE USED ON ROADWAY WITH POSTED SPEED OF LESS THAN 40 MPH.

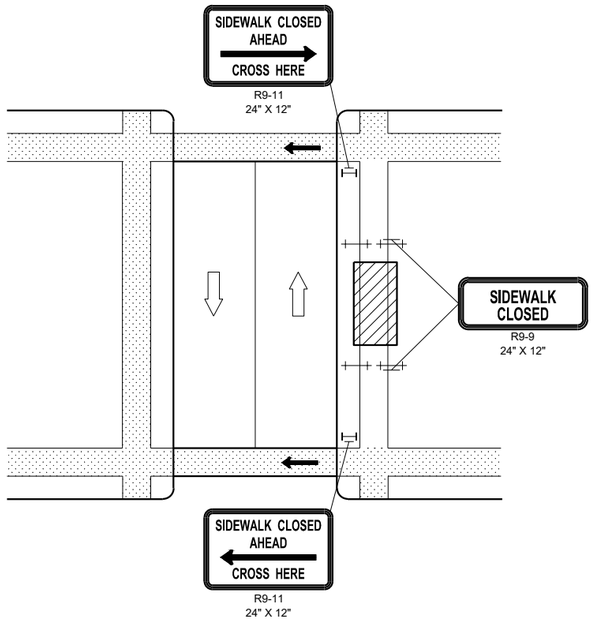


MID-BLOCK SIDEWALK SIDEWALK CLOSURE IN PARKING LANE

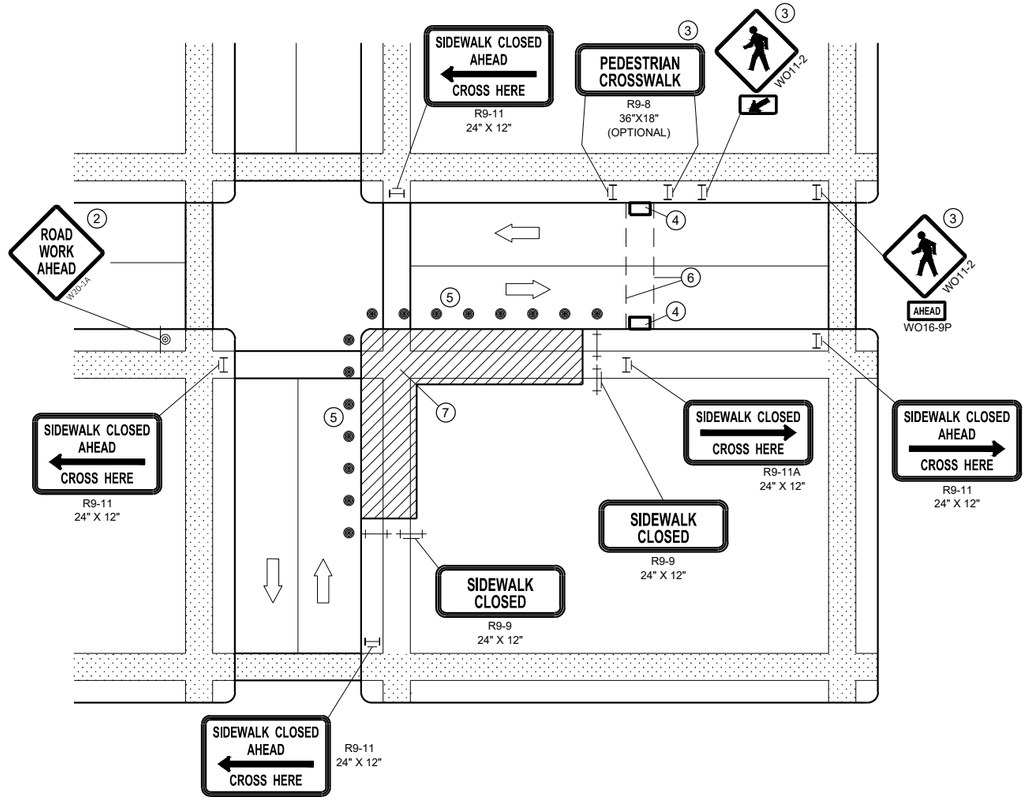
NOTE: LAYOUT SAME AS ABOVE.



SIDEWALK DIVERSION



MID-BLOCK SIDEWALK CLOSURE



CORNER SIDEWALK CLOSURE WITH TEMPORARY CROSSWALK

GENERAL NOTES

WHEN CLOSING OR RELOCATING CROSSWALKS OR SIDEWALKS, PROVIDE DETECABLE TEMPORARY FACILITIES AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES.

TEMPORARY TRAFFIC CONTROL DEVICES FOR PEDESTRIANS ARE SHOWN. OTHER DEVICES MAY BE NECESSARY TO CONTROL VEHICULAR TRAFFIC. STAGE WORK AS NECESSARY, TO PROVIDE A TEMPORARY PEDESTRIAN ACCESS ROUTE AT ALL TIMES. FOR ROADWAYS WITH NO AVAILABLE DETOURS, MAINTAIN ONE OPEN SIDEWALK AT ALL TIMES.

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

FOR NIGHTIME CLOSURE, USE TYPE "A" FLASHING WARNING LIGHTS ON BARRICADES, SUPPORTING SIGNS AND CLOSING SIDEWALK. USE TYPE "C" STEADY BURN LIGHTS ON CHANNELIZING DEVICES SEPARATING THE WORK AREA FROM VEHICULAR TRAFFIC.

PEDESTRIAN TRAFFIC SIGNAL DISPLAY CONTROLLING CLOSED CROSSWALK SHALL BE COVERED OR DEACTIVATED.

POST MOUNTED SIGNS LOCATED ADJACENT TO A SIDEWALK SHALL HAVE A 7 FOOT MINIMUM CLEARANCE FROM THE BOTTOM OF THE SIGN TO THE SIDEWALK SURFACE.

ALTERNATE SIDEWALK WORK BETWEEK LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

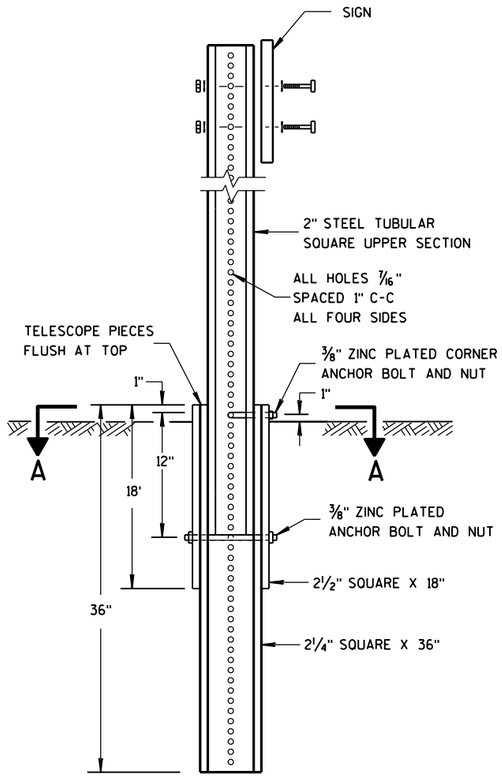
1. IF SIDEWALK CLOSURE AFFECTS AN ACCESSIBLE AND DETECTABLE FACILITY, MAINTAIN ACCESSIBILITY AND DETECTABILITY ALONG THE ALTERNATE PEDESTRIAN ROUTE
2. "ROAD WORK AHEAD" SIGNS ARE NOT REQUIRED IF THE SIDEWALK CLOSURE OCCURS WITHIN A LARGER WORK ZONE WHERE ADVANCE WARNING SIGNS ARE ALREADY PRESENT, OR IF THE WORK AREA AND EQUIPMENT ARE MORE THAN 2 FEET BEHIND THE CURB.
3. IF TEMPORARY PEDESTRIAN CROSSWALK IS NOT PROVIDED, OMIT R9-8 AND WO11-2 SIGN ASSEMBLIES. IF PROVIDED INCLUDE ON BOTH SIDES OF THE CROSSWALK.
4. TEMPORARY CURB RAMPS. SEE SDD 15D30 SHEET "b'.
5. DRUMS OR BARRICADES AT 25 FOOT SPACING. STREET PARKING SHALL BE PROHIBITED FOR AT LEAST 50 FEET IN ADVANCE OF THE MID-BLOCK CROSSWALK.
6. TEMPORARY PAVEMENT MARKING FOR CROSSWALK LINES.
7. LIMIT WORK TO ONE QUADRANT AT A TIME TO MINIMIZE PEDESTRIAN DISRUPTION.

LEGEND

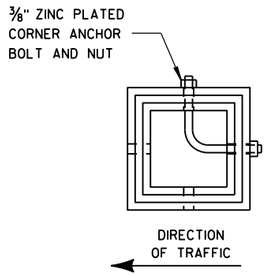
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW INTENSITY FLASHING)
- TYPE III BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW INTENSITY FLASHING)
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- PEDESTRIAN CHANNELIZATION DEVICE
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

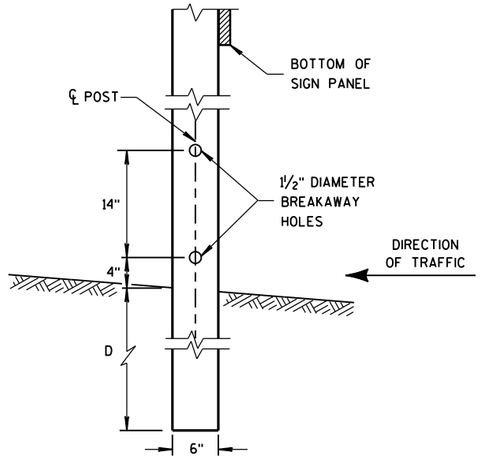
SDD 15D30 - 05a
6



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



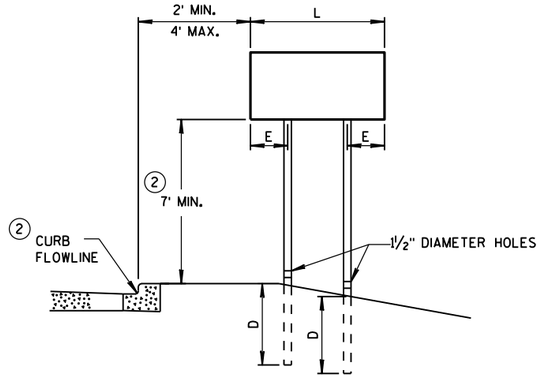
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

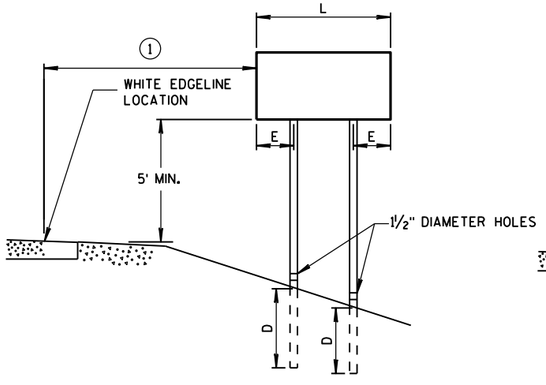
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

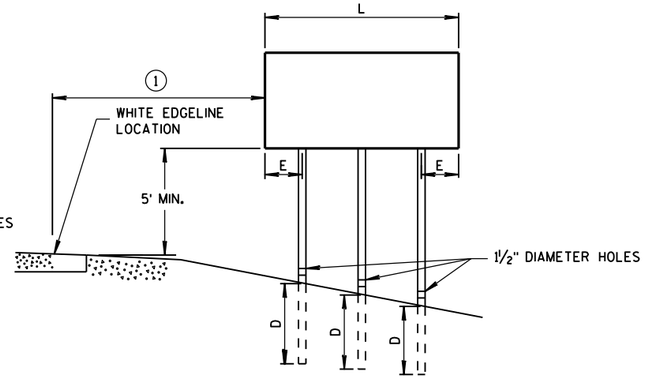
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK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

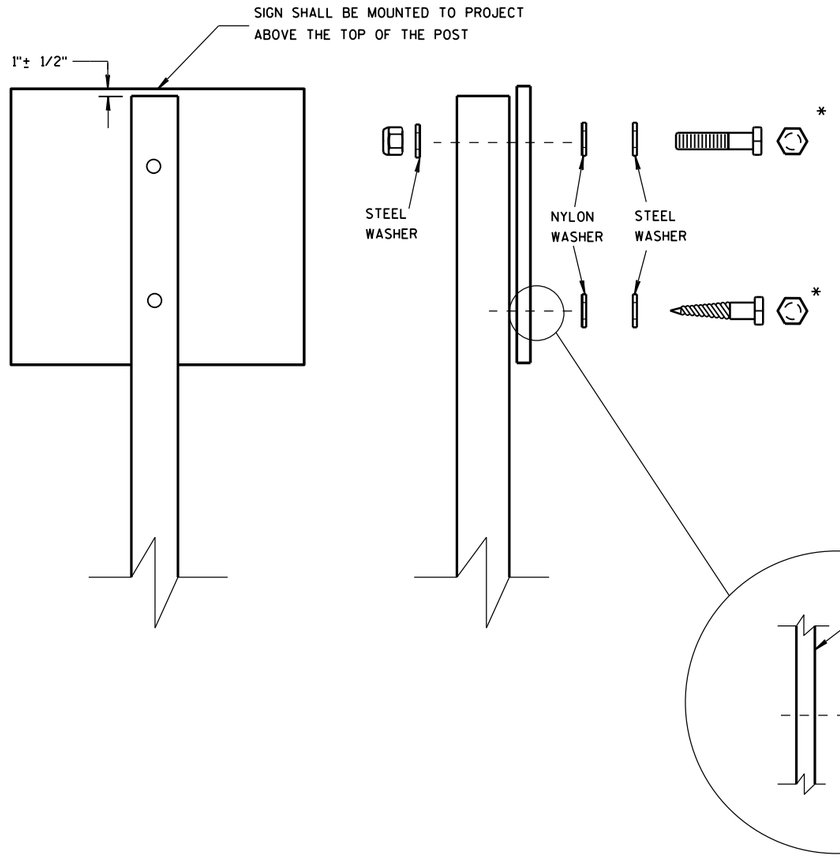
SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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.

6

6

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

LEGEND

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

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"×48" 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.

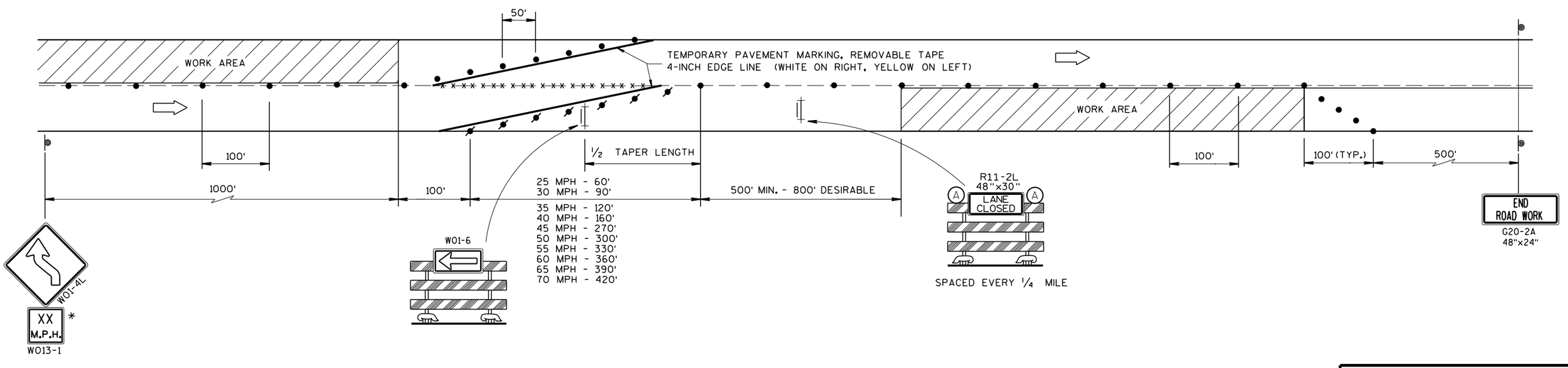
FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.



* USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED

LANE SHIFT MULTI-LANE DIVIDED OR ONE WAY ROAD

TRAFFIC CONTROL, LANE SHIFT, MULTI-LANE DIVIDED OR ONE WAY ROAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018
DATE
/S/ Andrew I
WORK ZONE E
FHWA

6

S.D.D. 15 D 40-1

LEGEND

TYPE III BARRICADE WITH ATTACHED SIGN

SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL DRUM

DIRECTION OF TRAFFIC

CONCRETE BARRIER TEMPORARY PRECAST

TYPE "A" WARNING LIGHT (FLASHING)

WORK AREA

L, TAPER LENGTH (MPH)							
SPEED (MPH)	W, LATERAL OFFSET (FT)						
	10	11	12	13	14	15	16
45	450	495	540	585	630	675	720
50	500	550	600	650	700	750	800
55	550	605	660	715	770	825	880
60	600	660	720	780	840	900	960
65	650	715	780	845	910	975	1040
70	700	770	840	910	980	1050	1120



OR



LOCATED 3000 FEET BEYOND THE "ROAD WORK 1 MILE" (W20-1F) SIGN



R2-1
48"X60"

OR



R2-1
48"X60"

(BLACK AND WHITE) LOCATED 700 FEET BEYOND THE W03-5 SIGN

IF THE REGULATORY SPEED HAS BEEN REDUCED, A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. PLACE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 3 MILES.

GENERAL NOTES

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

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

THIS LANE CLOSURE IS TYPICAL FOR LANE SHIFT RIGHT - REVERSE FOR SHIFTING LEFT.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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.

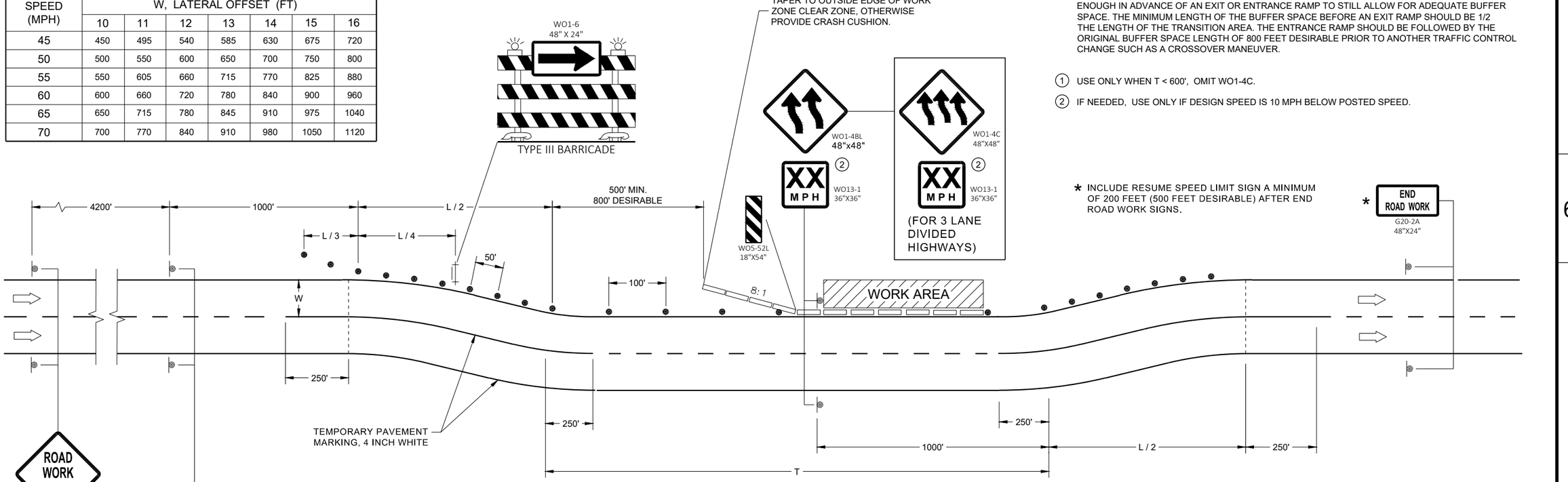
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

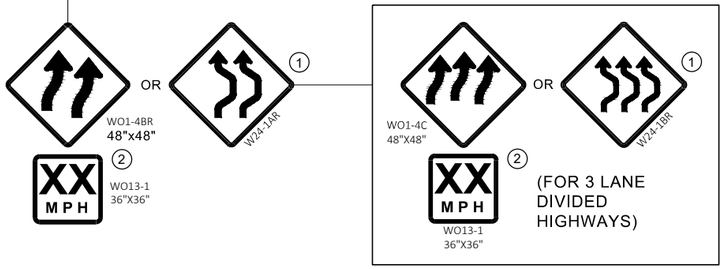
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

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

(1) USE ONLY WHEN T < 600', OMIT WO1-4C.

(2) IF NEEDED, USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED.





MULTIPLE LANE SHIFT MULTILANE DIVIDED ROAD

TRAFFIC CONTROL
MULTIPLE LANE SHIFT
MULTILANE DIVIDED ROAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA

6

SDD 15D41 - 01

6

SDD 15D41 - 01

GENERAL NOTES

DRAWING NOT TO SCALE. ALL SIGNS AND POSTS ON THIS SHEET SHALL BE PAID FOR WITH 'TRAFFIC CONTROL SIGNS' BID ITEM. ALL SIDE ROADS WHICH ARE UNDER CONSTRUCTION OF CURB AND GUTTER AND/OR GRADING SHALL BE ADEQUATELY SIGNED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

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

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

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

ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

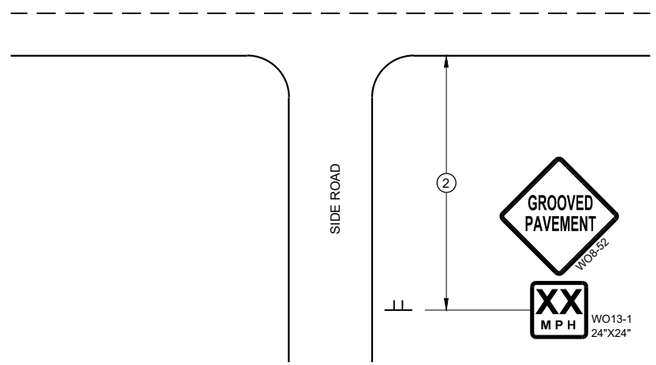
(1) PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.

(2) PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

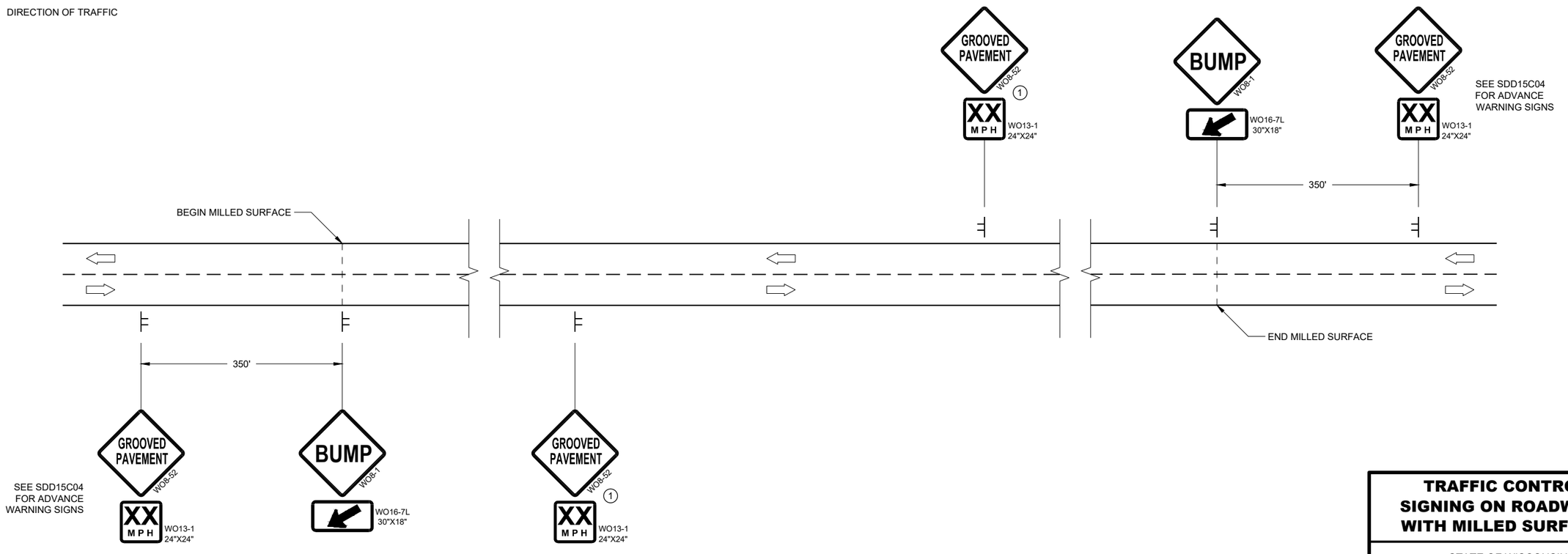
LEGEND

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON MILLED SURFACES

TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15D44 - 01

6

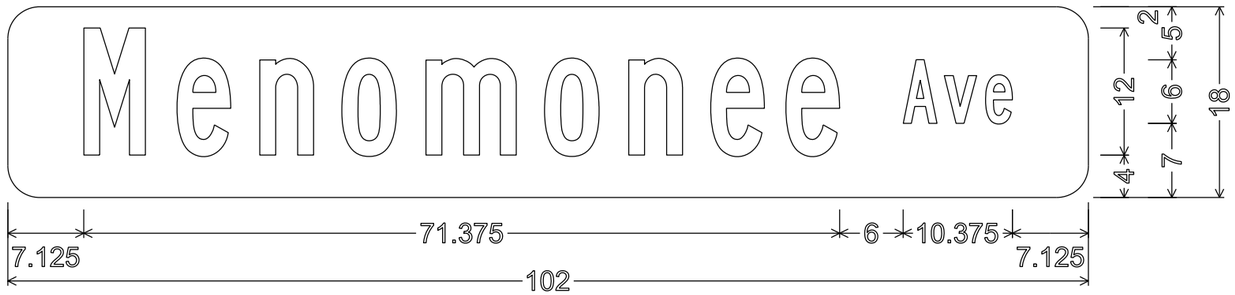
SDD 15D44 - 01

NOTES

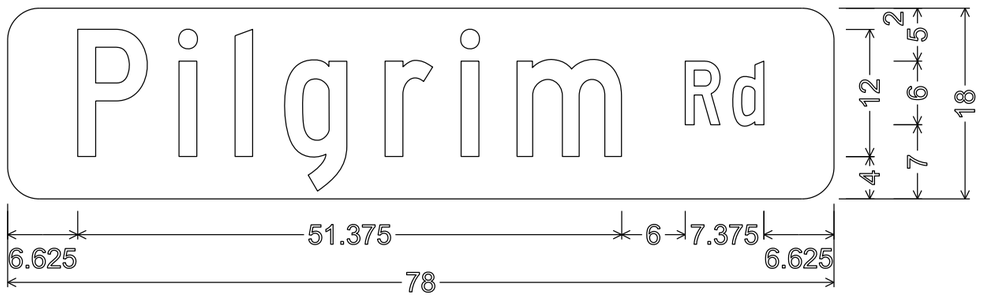
1. All Signs Type II - Type H Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - As noted
4. M1-94S and M1-94H base material is .125" aluminum



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

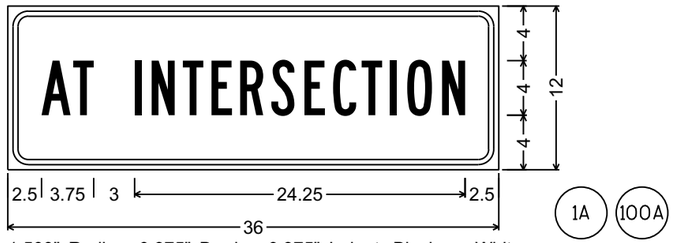


M1-94H ; 3.000" Radius, No border,
"Menomonee" B; "Ave" B



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

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET NO: 195	E



1.500" Radius, 0.375" Border, 0.375" Indent, Black on White;
[AT] B; [INTERSECTION] B;

TYPE II SIGN

GENERAL NOTES:

1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.
2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE II".
3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE "TYPE SH REFLECTIVE SHEETING".
4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.
5. TYPE II SIGNS ALL UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E". ALL LOWERCASE MESSAGE WITH AN INITIAL UPPERCASE LETTER SHALL BE "SERIES E".
6. TYPE I SIGNS ALL UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E MODIFIED". ALL LOWER CASE MESSAGE WITH AN INITIAL UPPERCASE LETTER SHALL BE "SERIES E MODIFIED". ALL CAP WORDS ARE "SERIES E".
7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.
8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.
10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE "SERIES E" PER PLATES A11-7 AND A11-10.

7

7

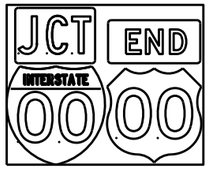
SHEET 1 OF 1

PROJECT NO: 2782-13-70	HWY: STH 175	COUNTY: WAUKESHA	SIGNING DETAIL - TYPE II SIGNS	SHEET 196	E

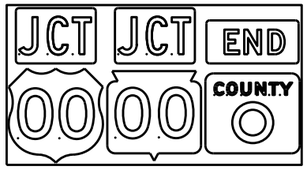
TYPICAL ASSEMBLIES



J1-1



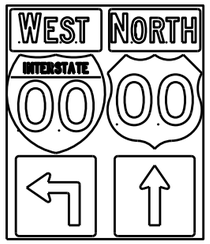
J1-2



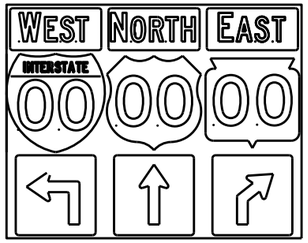
J1-3



J2-1



J2-2

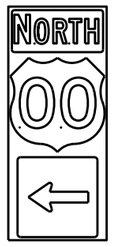


J2-3

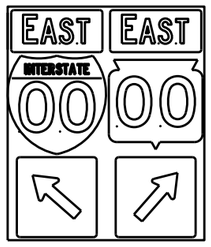


JV

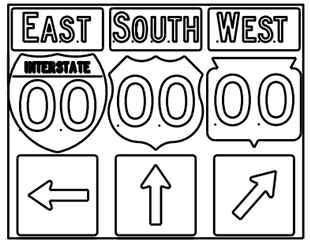
(Typical Vertical J-Assembly
See Note 10 and 11)



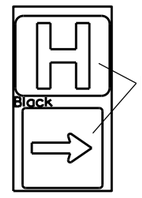
J3-1



J3-2



J3-3

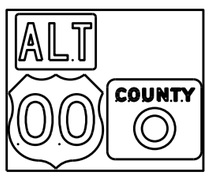


Blue Background

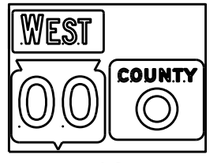
JH-1



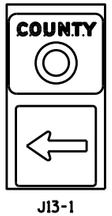
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1

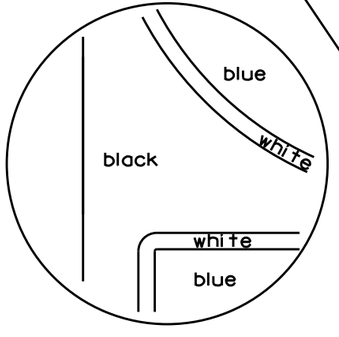


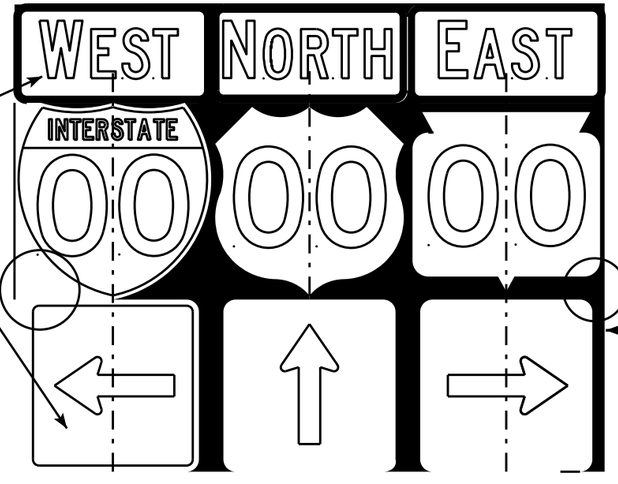
J23-1

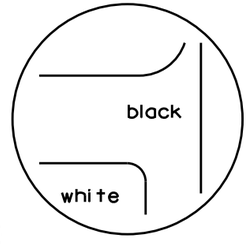


J22-1

blue background
with interstate







black background

NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Black Non-reflective
   Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inchs (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

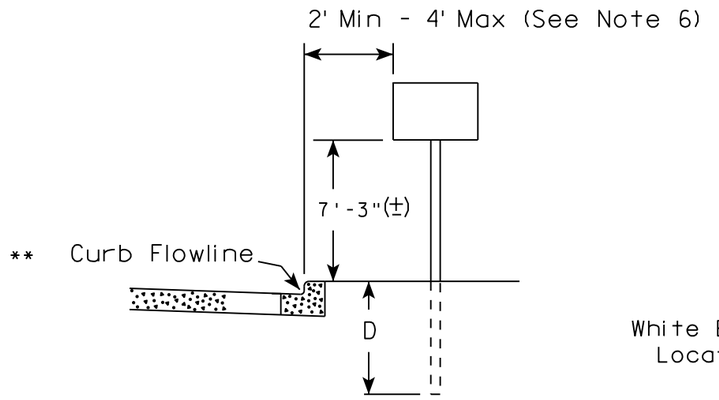
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/06/14 PL... A2-1S.8

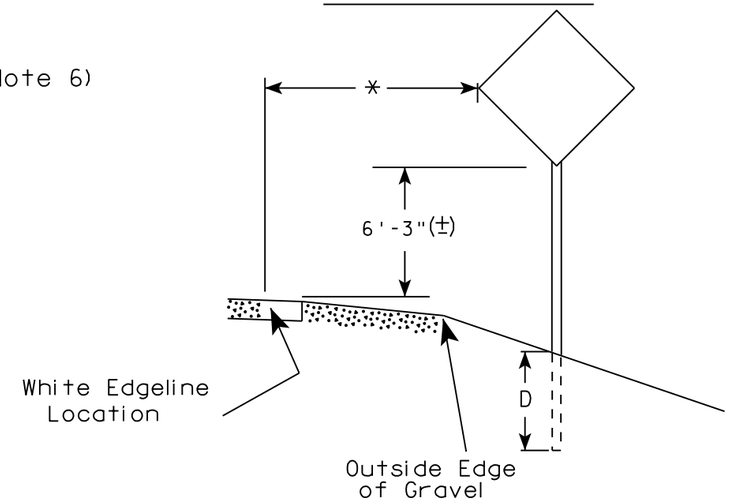
PROJECT NO: SHEET NO: E

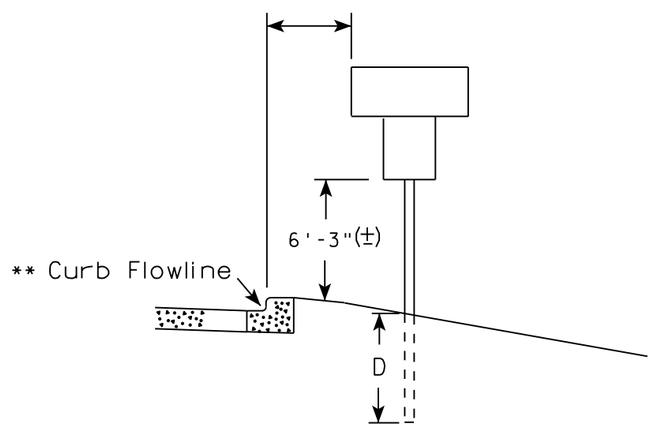
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :
WISDOT/CADDS SHEET 42

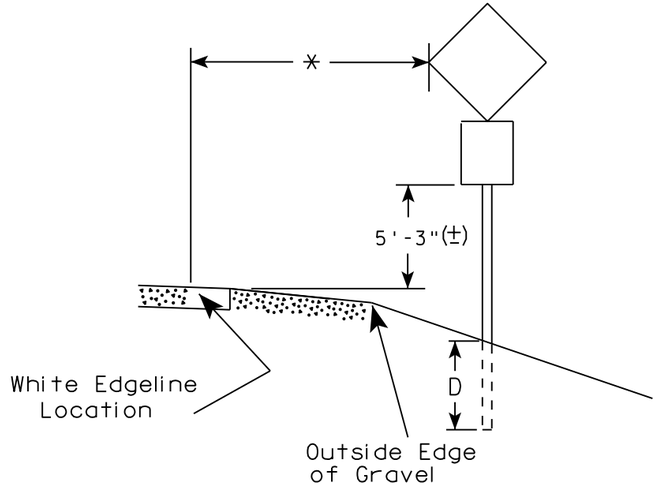
URBAN AREA



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

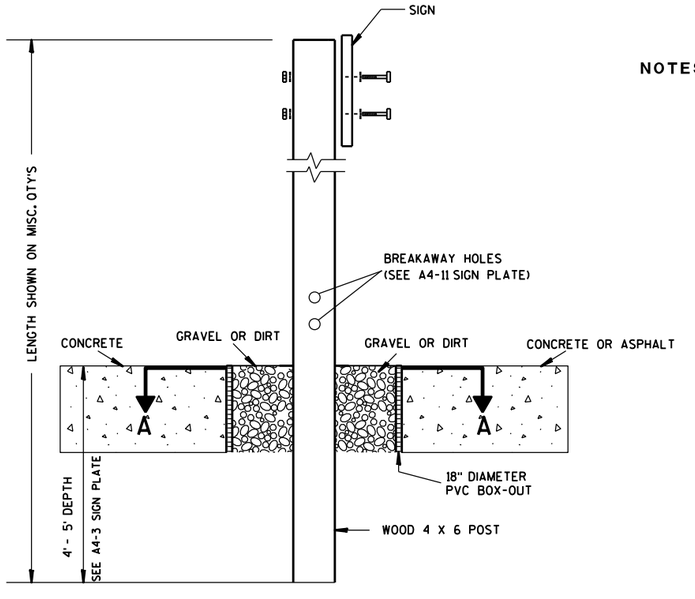
APPROVED Matthew R Rauch
for State Traffic Engineer

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

7

7

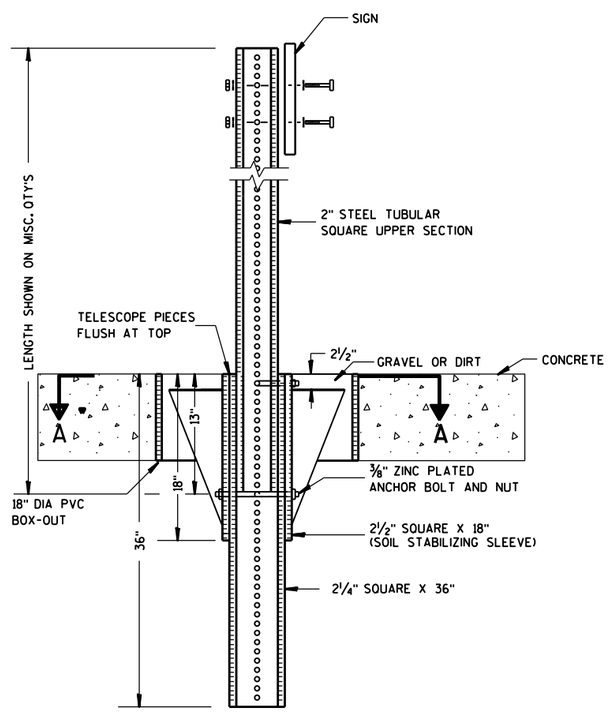
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 198	E



ELEVATION VIEW

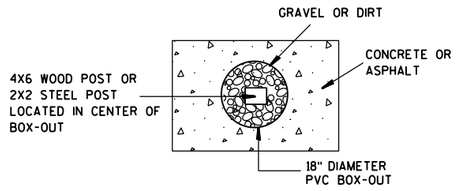
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

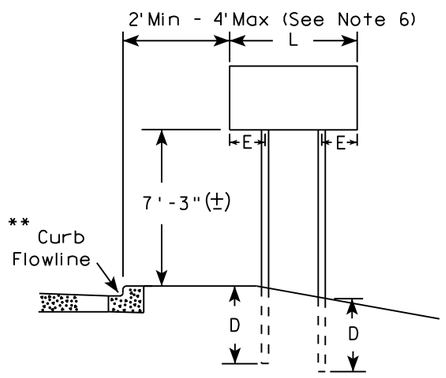
APPROVED Matthew R Rauch
for State Traffic Engineer

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

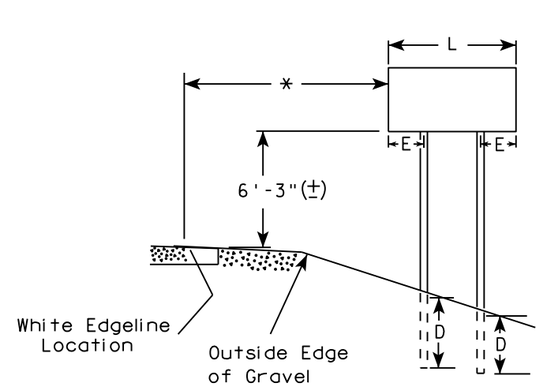
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

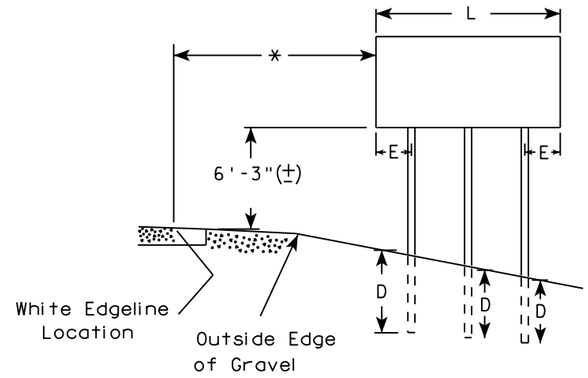
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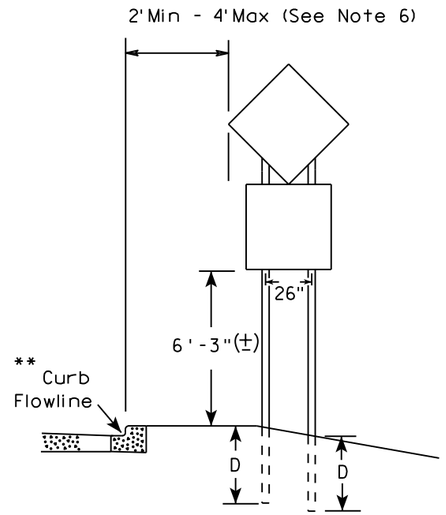
URBAN AREA



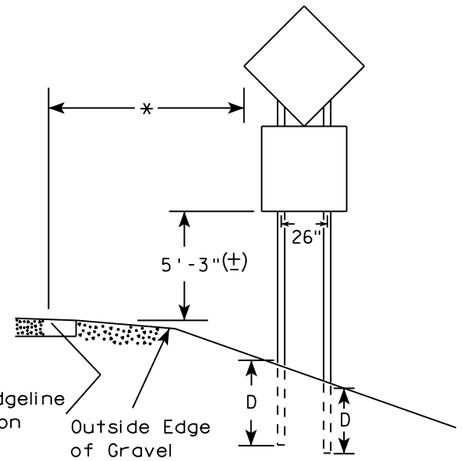
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

GENERAL NOTES

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

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

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

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

POST EMBEDMENT DEPTH

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

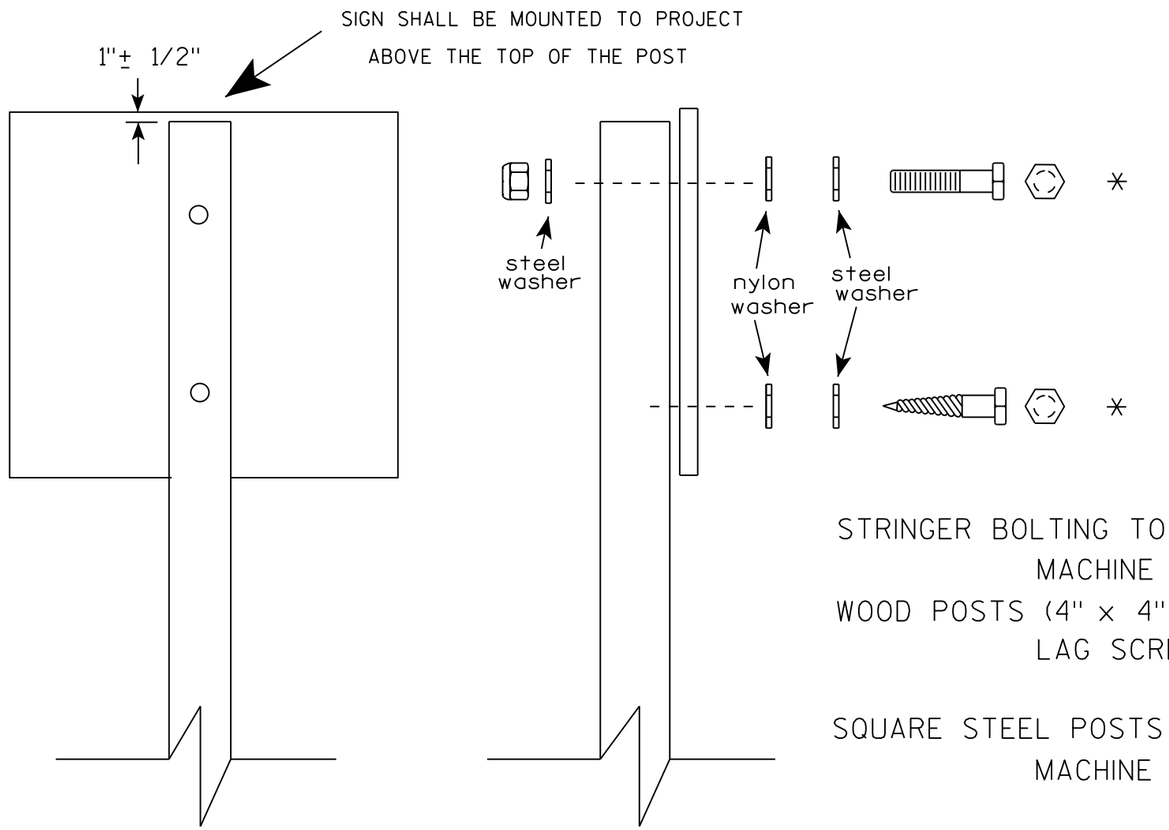
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 200	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

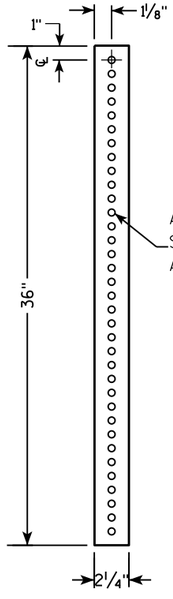
DATE 8/11/16 PLATE NO. A4-8.8

PROJECT NO: SHEET NO: E

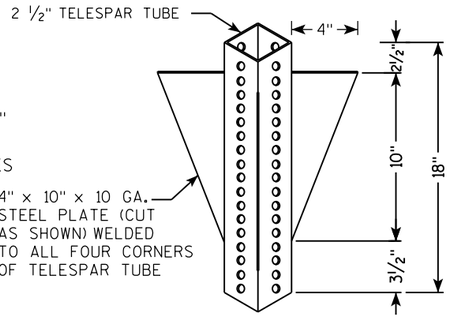
FILE NAME : C:\CADfiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 11-AUG-2016 11:35 PLOT BY : $$ plotuser $$

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

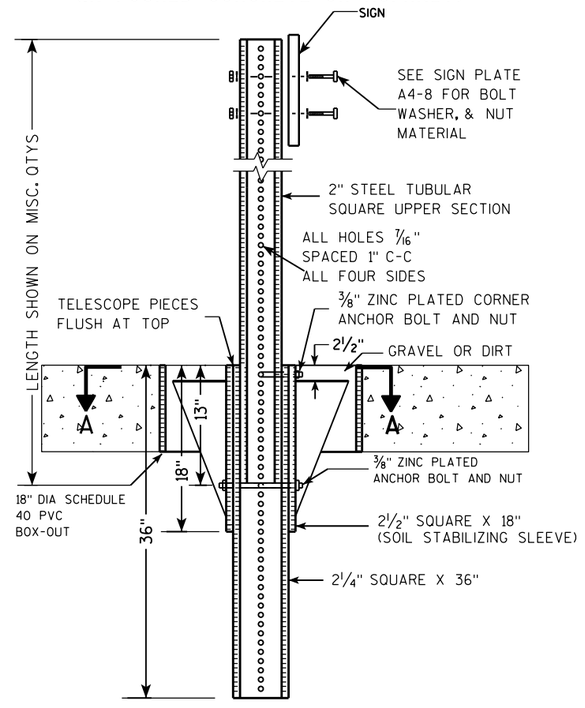
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



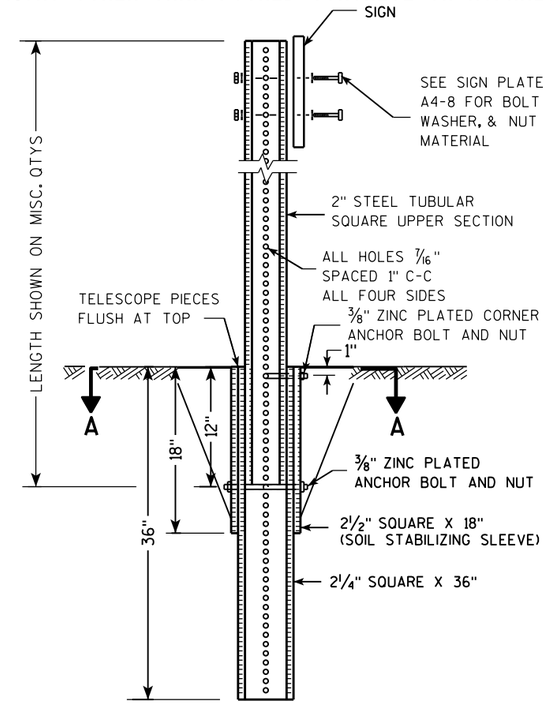
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

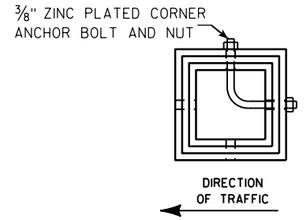


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

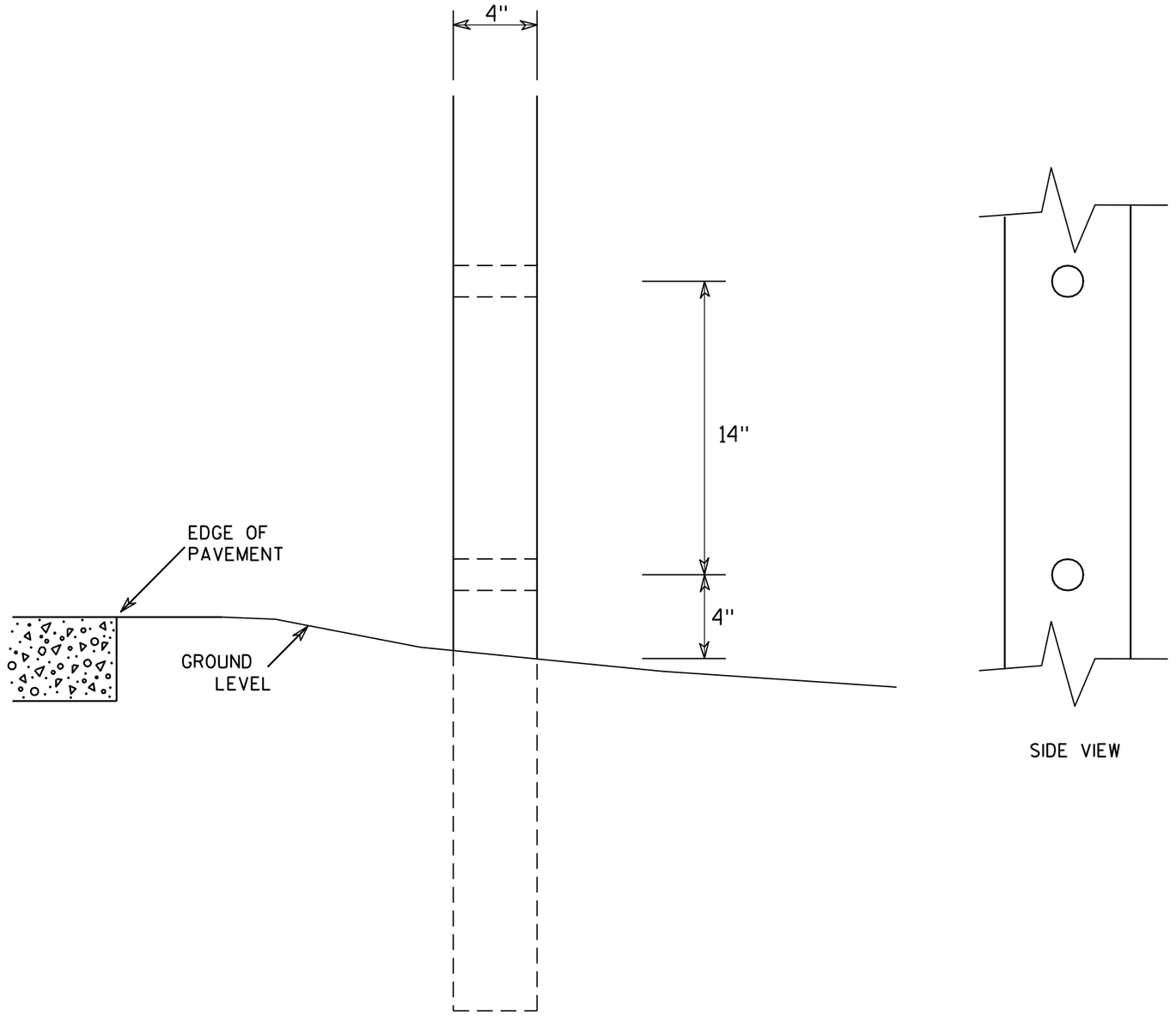
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 202 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.

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

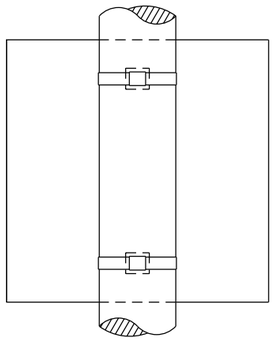
APPROVED Chester J Spang for State Traffic Engineer

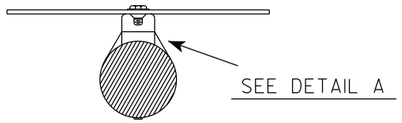
DATE 3/27/97 PLATE NO. A4-11.2

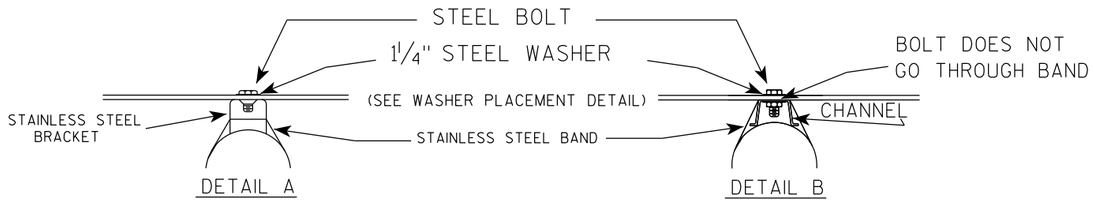
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 203	E

BANDING

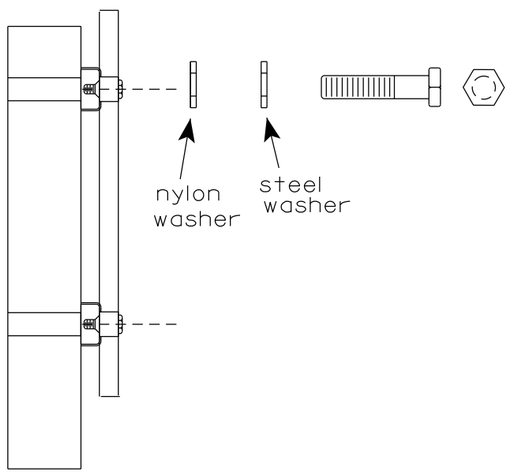
SINGLE SIGN







WASHER PLACEMENT

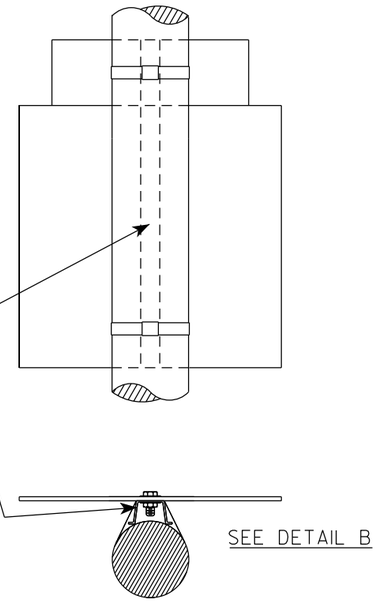


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

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

"J" ASSEMBLY



STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

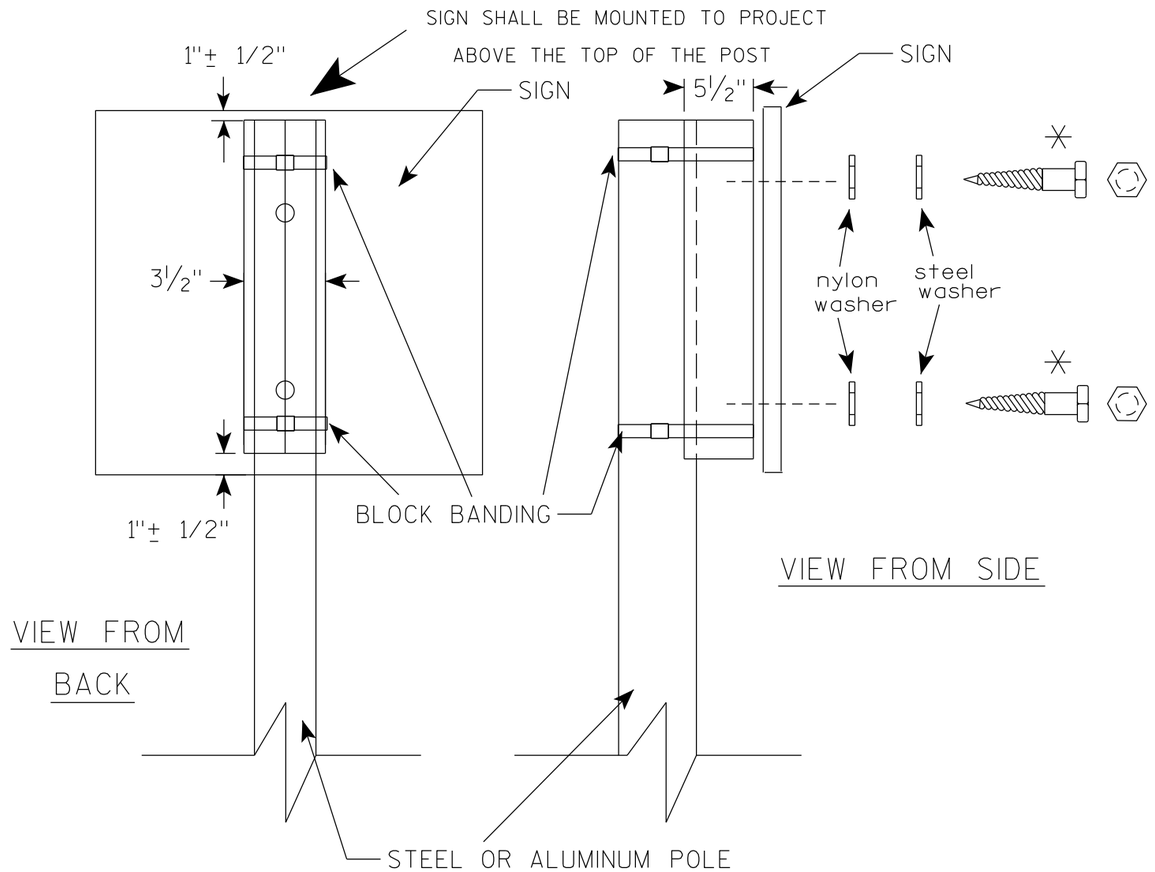
DATE 6/10/19 PLATE NO. A5-9.4

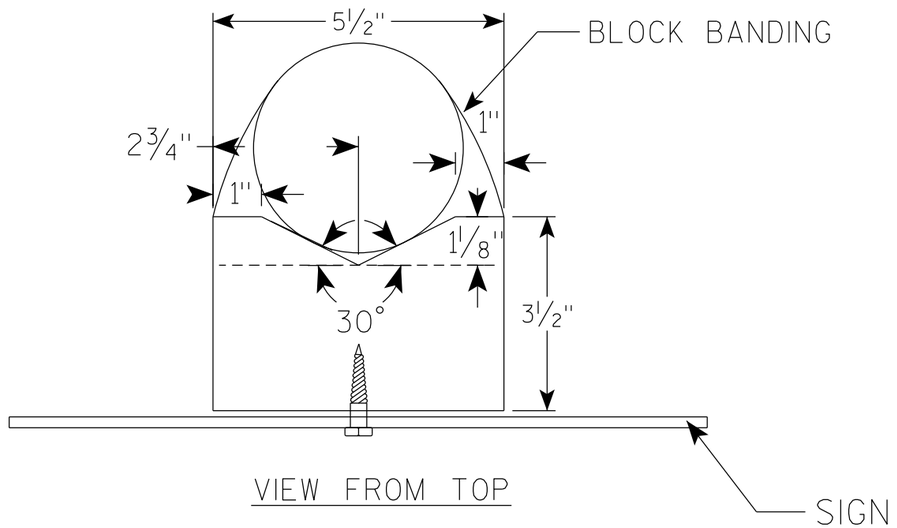
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 204	E

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

7

7





GENERAL NOTES

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

✳ LAG BOLTS SHALL BE ⅜" X 2½"

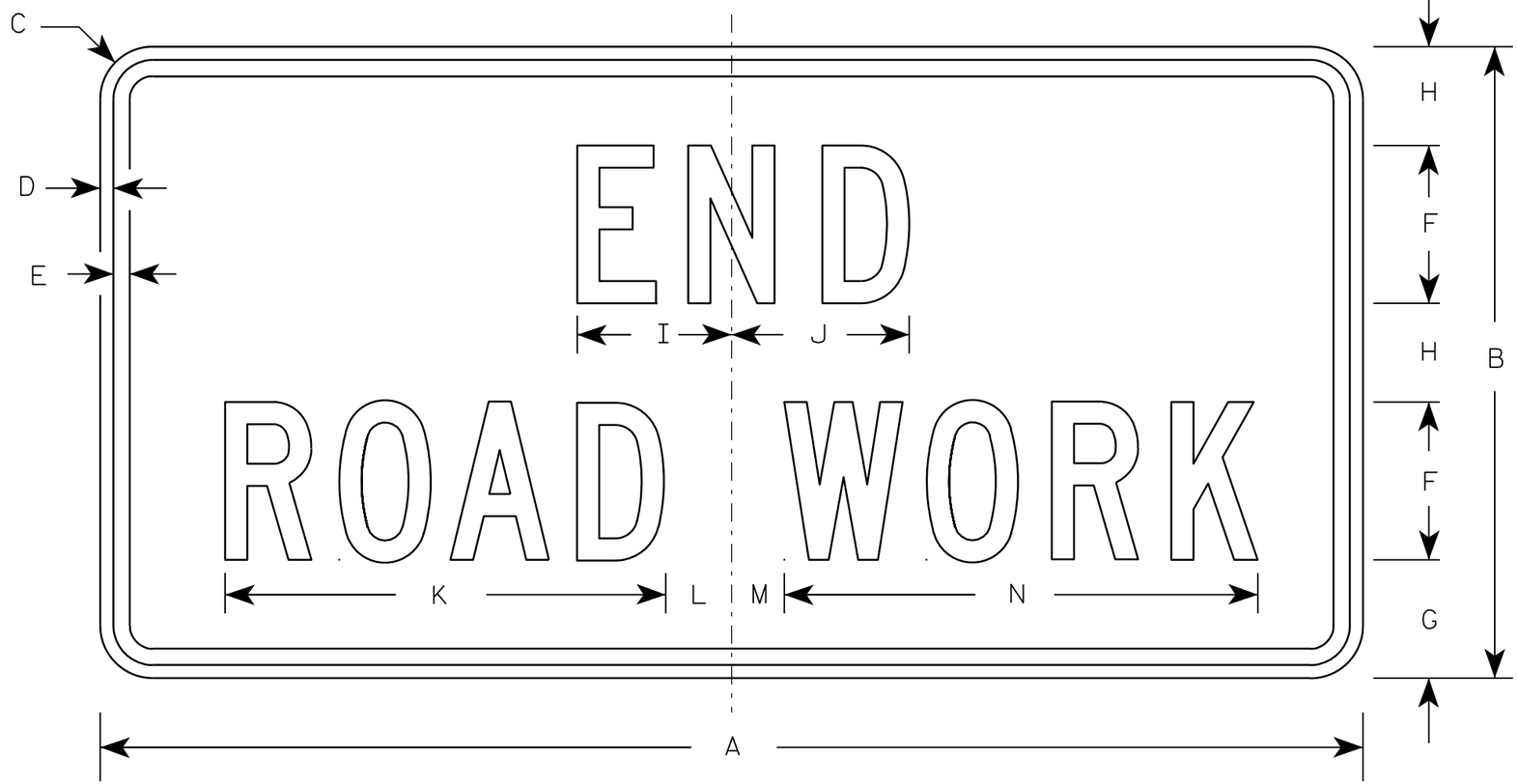
BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

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

PROJECT NO:				SHEET NO: 205	E



G20-2A

NOTES

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

Metric equivalent for this sign is:

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

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

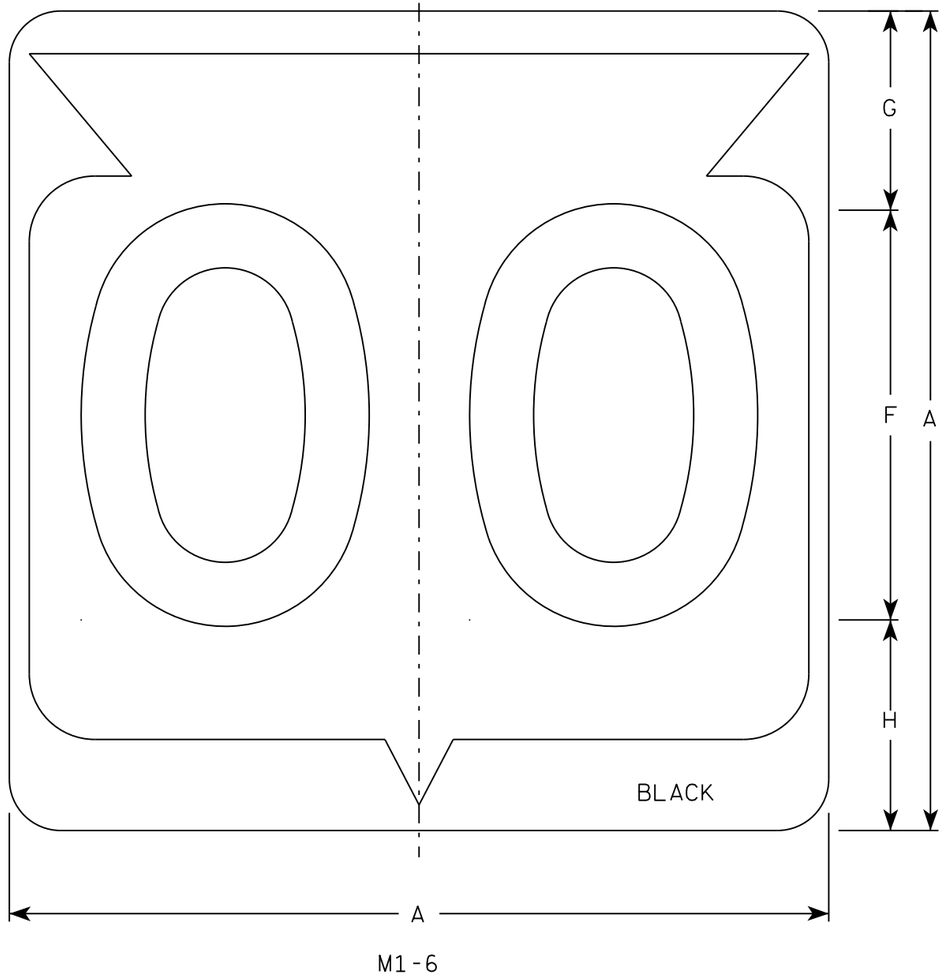
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

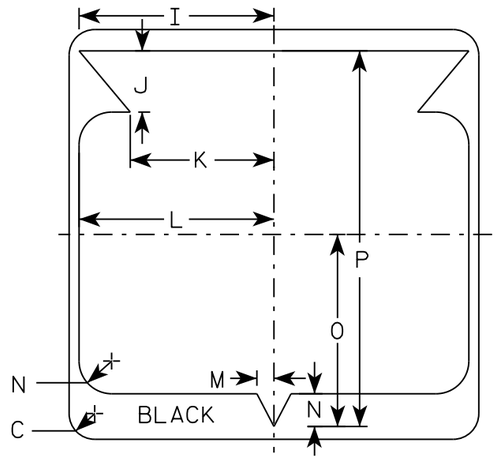
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 206	E



M1-6

NOTES

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



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0

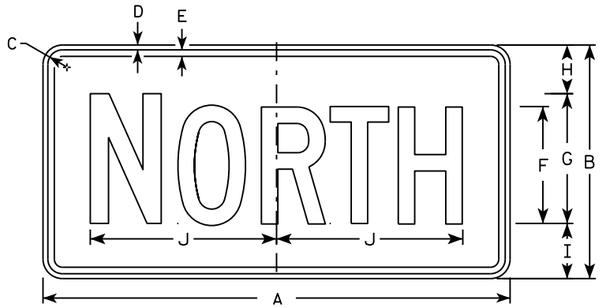
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

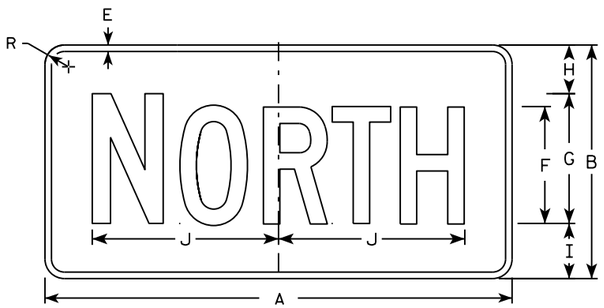
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/16/18 PLATE NO. M1-6.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 207 | E



M3-1
MM3-1
MP3-1



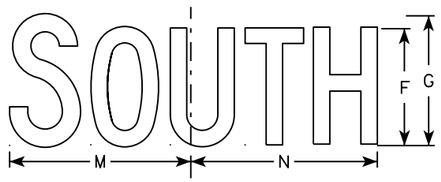
MB3-1
MK3-1
MN3-1



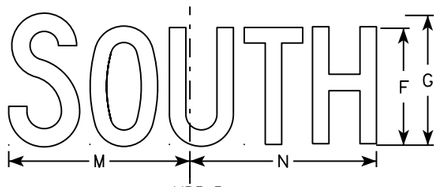
M3-2
MM3-2
MP3-2



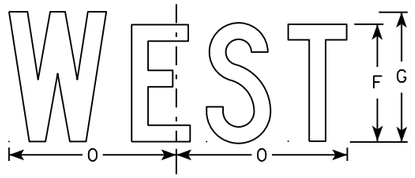
MB3-2
MK3-2
MN3-2



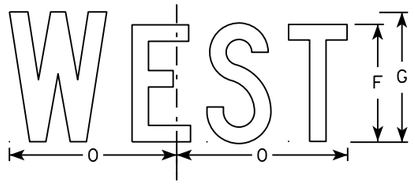
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

1. All Signs Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White
   MK3-1 thru MK3-4 Background - Green
   Message - White
   MM3-1 thru MM3-4 Background - White
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White
   MP3-1 thru MP3-4 Background - White
   Message - Blue
6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS
M3-1 thur M3-4
SERIES

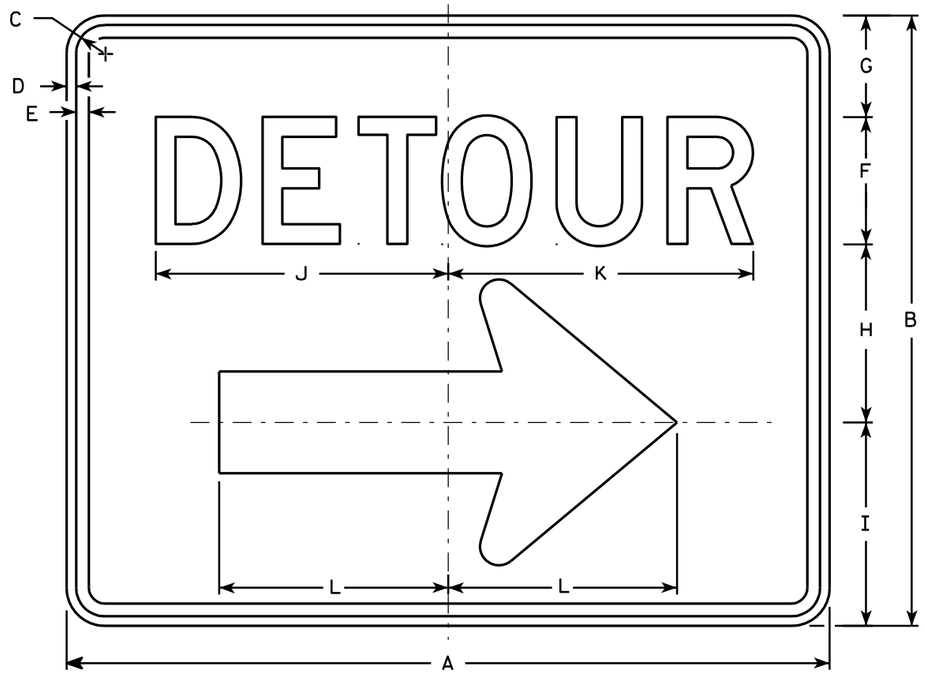
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

DATE 10/15/15 PLATE NO M3-1.14

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

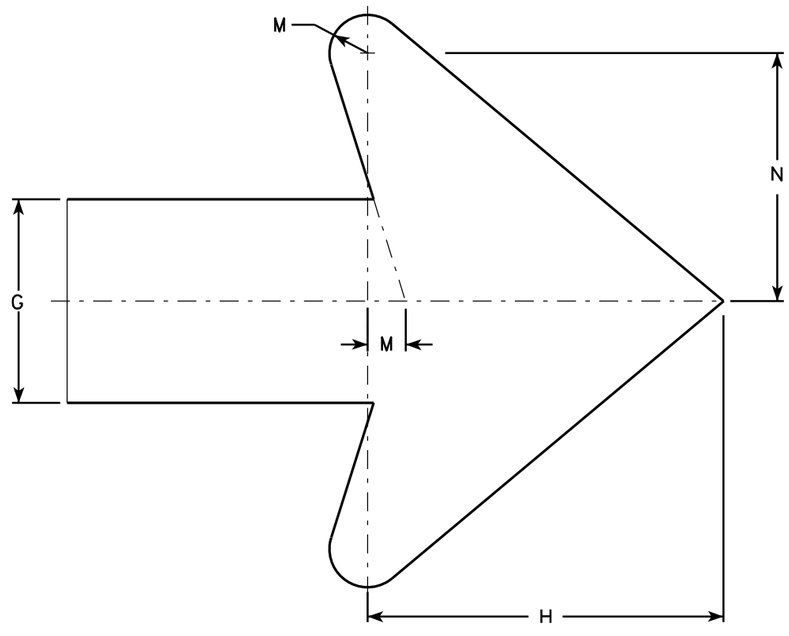
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M31.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



M4-9R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-9L is the same as M4-9R except the arrow is reversed.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
3	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
4	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0
5	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0

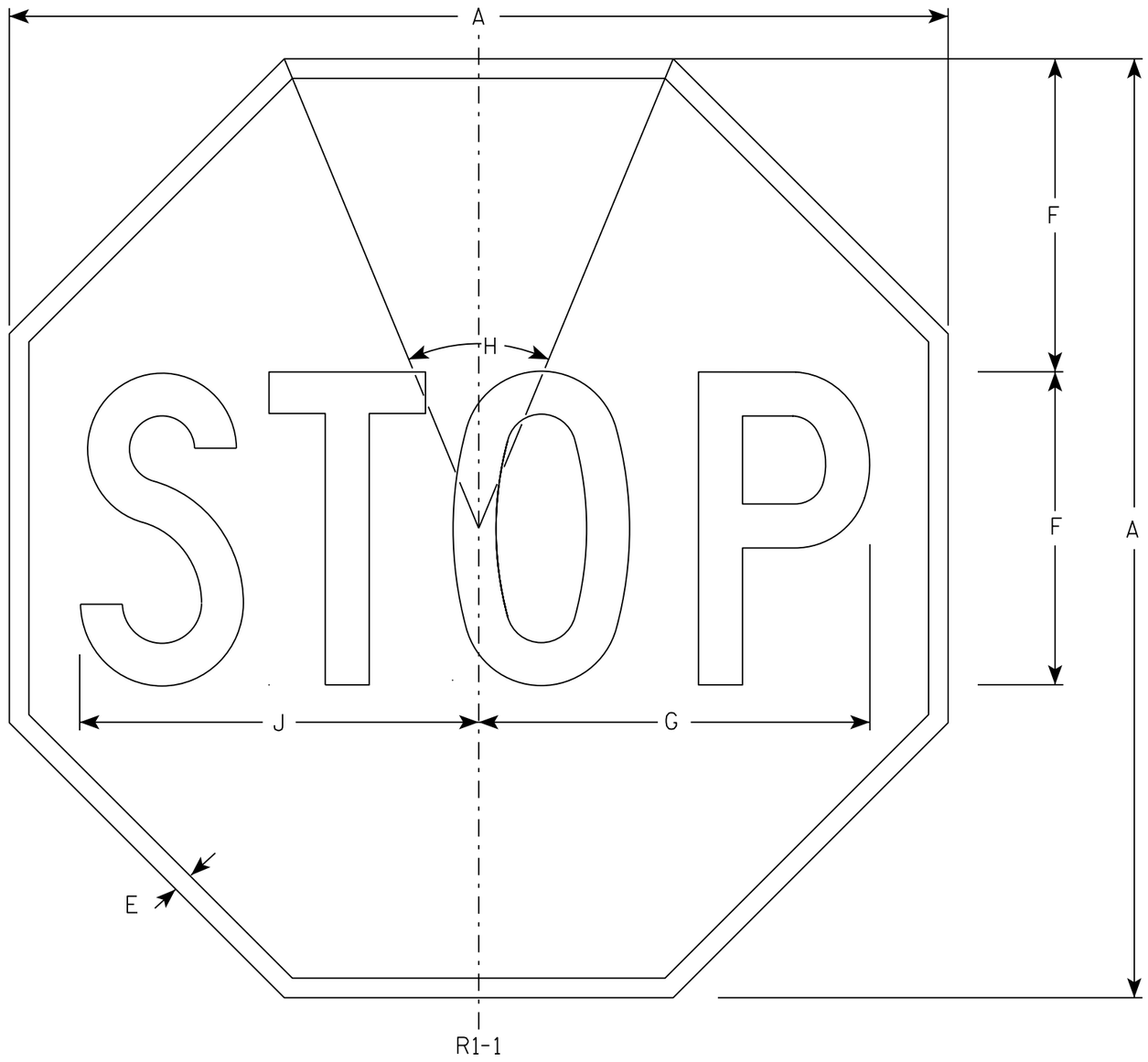
STANDARD SIGN
M4-9 R & L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-9R.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 209 | E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

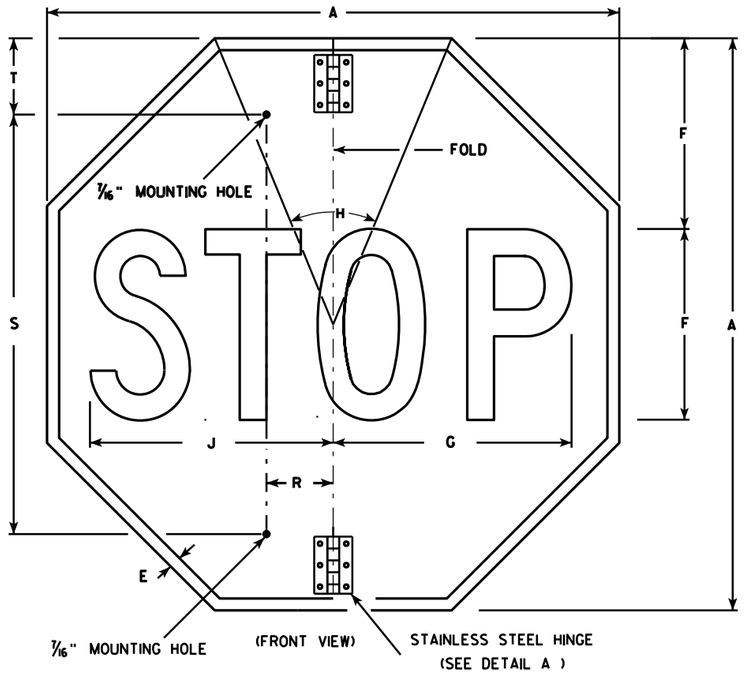
STANDARD SIGN
R1-1

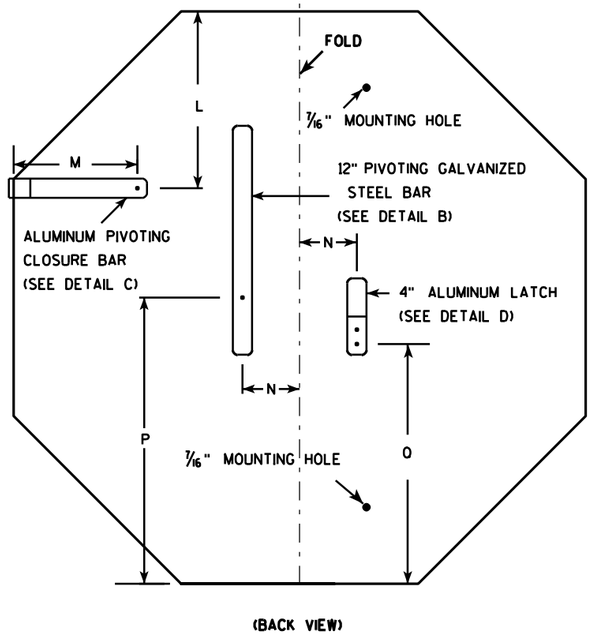
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13

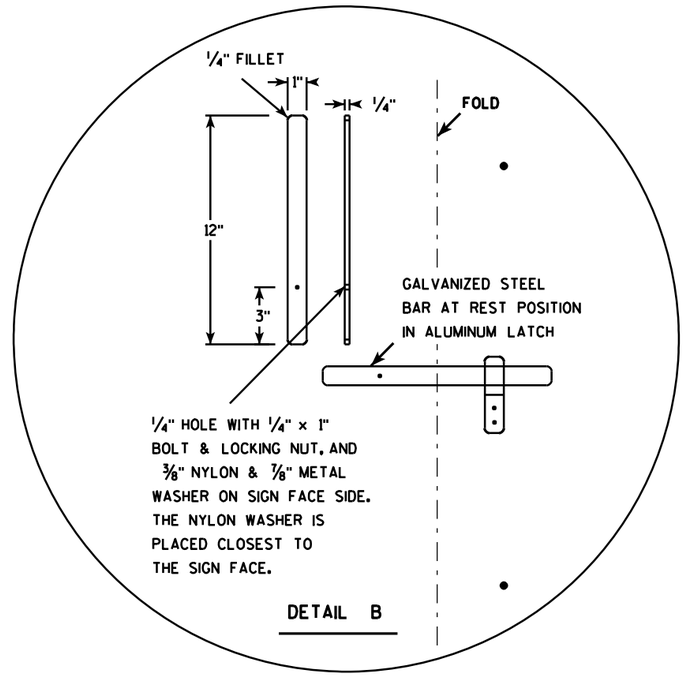
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 210	E



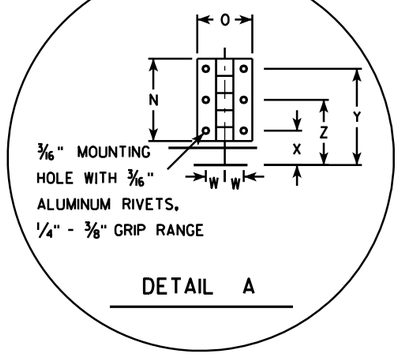


NOTES

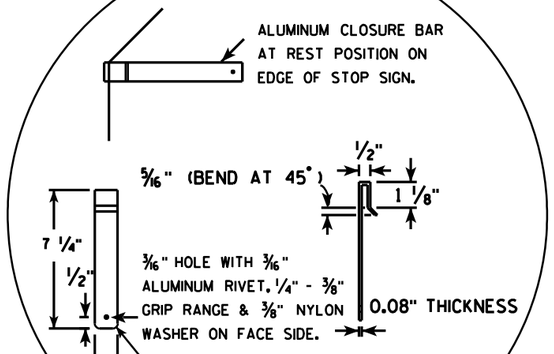
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C
4. All hardware used on the folding STOP sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.



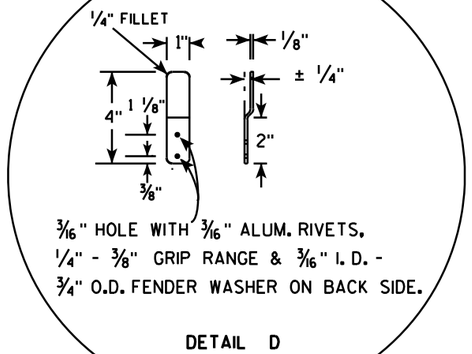
DETAIL B



DETAIL A



DETAIL C



DETAIL D

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30				5/8	10	12 1/2	45		12 3/4		9 1/4	6 1/2	3	2	15	12 3/8	2 1/2	22	5			11/16	1 1/4	3 1/2	2 3/8	5.18
2M	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
3	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
4																											
5																											

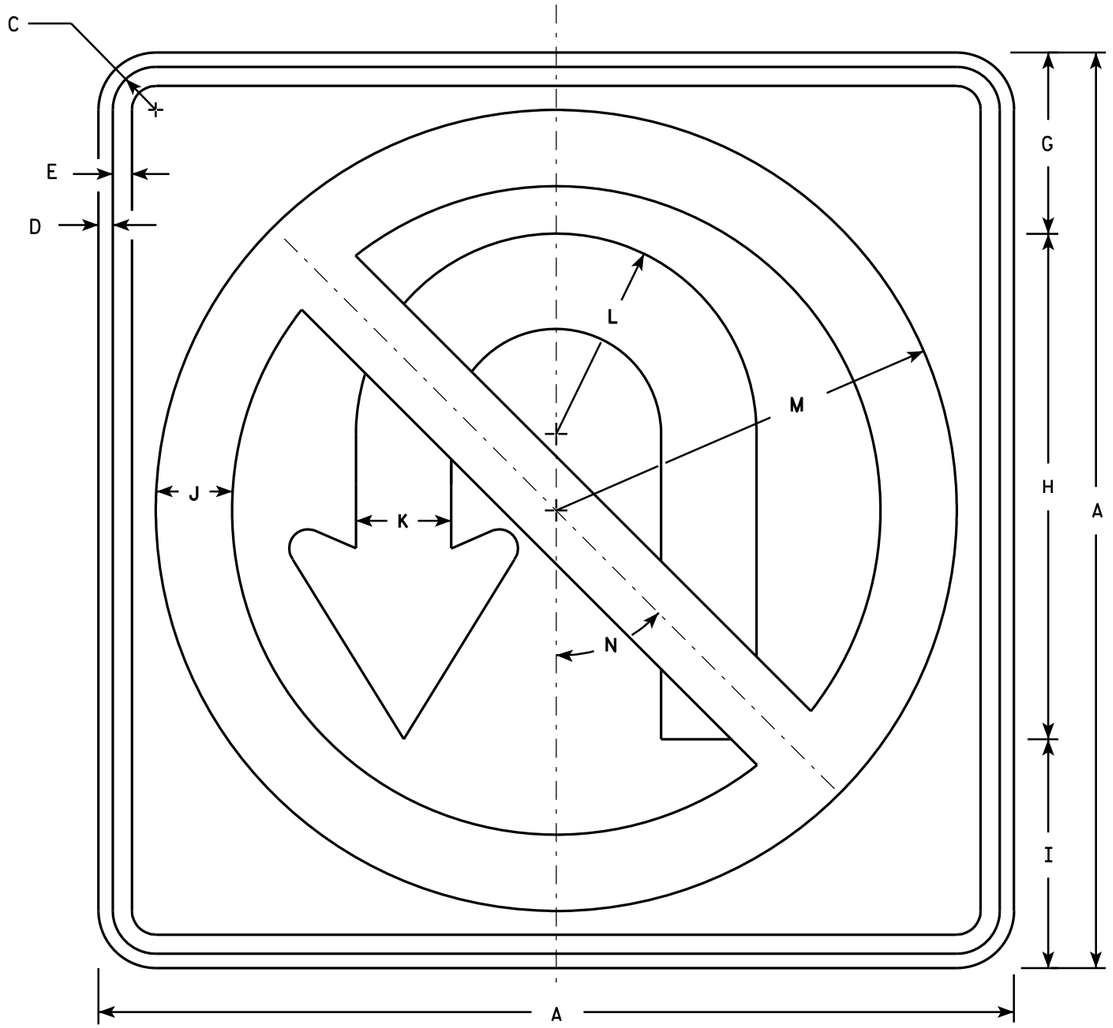
STANDARD SIGN
R1-1F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1F.3

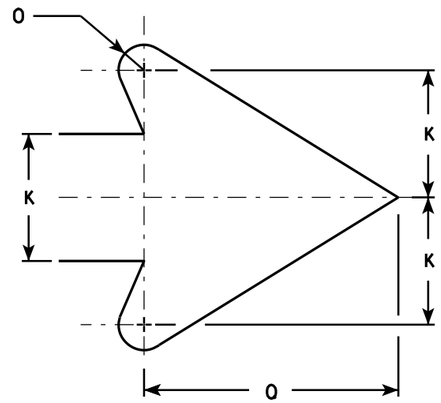
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 211	E



R3-4

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	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	3/8	1/2		4 3/4	13 1/4	6	2	2 1/2	5 1/4	10 1/2	45°	1/2		5										4.0
2M	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0
3	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0
4	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0
5	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0

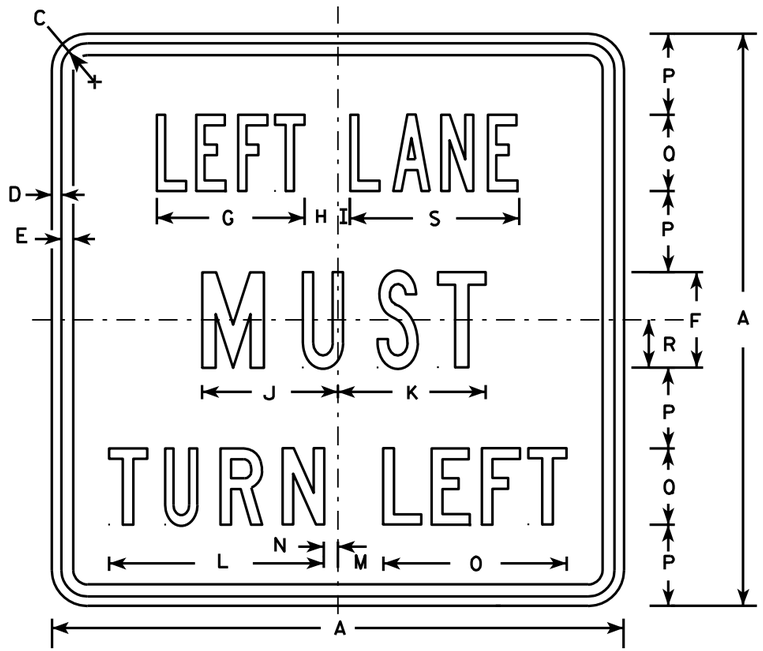
STANDARD SIGN
R3-4

WISCONSIN DEPT OF TRANSPORTATION

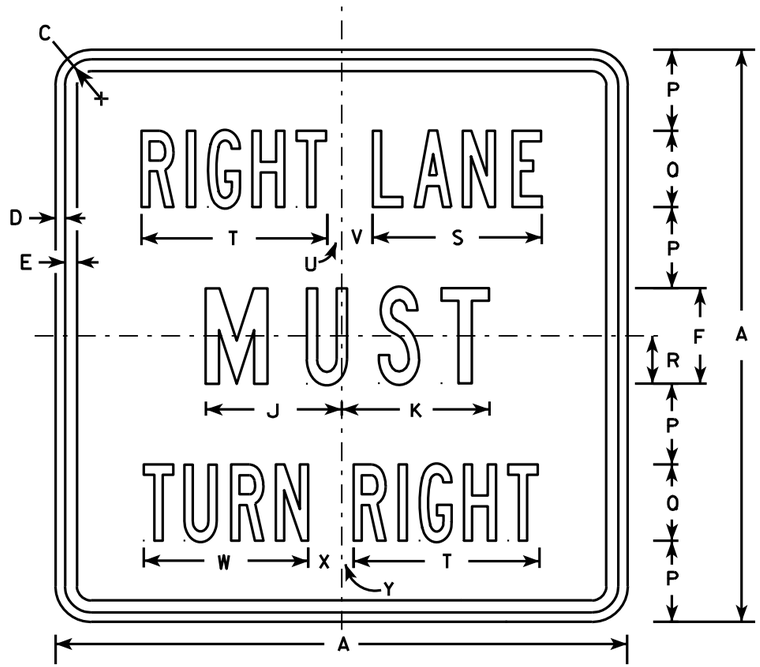
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-4.11

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 212	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																											

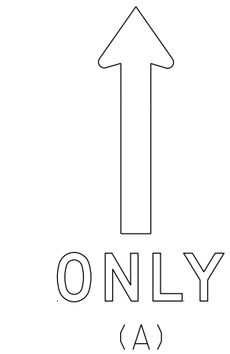
STANDARD SIGN
R3-7L & R3-7R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

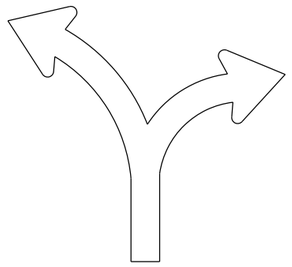
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 213 | E

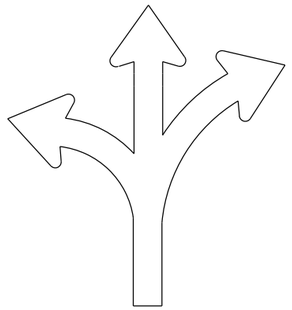


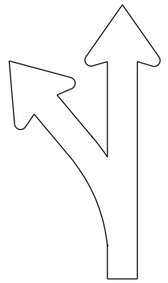
(A)

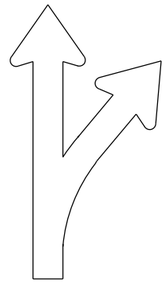


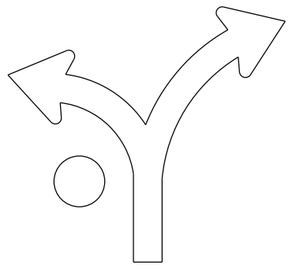
(B)

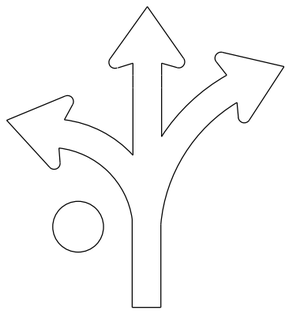

(C)

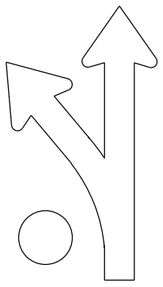

(D)


(E)


(F)

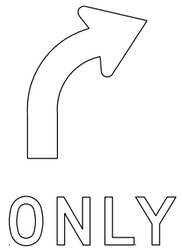

(G)


(H)

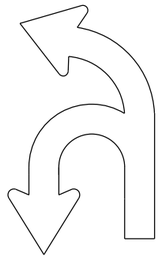

(I)



(L)



(R)


(U)

NOTES

1. Sigs are Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Use appropriate Letter for Sign Code
   Each letter added makes sign wider. Example R3-8EAR
5. Square footage of sign varies by letters

1	Letter =	3.75 sq ft for Size 2
		6.0 sq ft for Size 3
		10.0 sq ft for Size 4 or 5
2	Letters =	7.5 sq ft for Size 2
		12.0 sq ft for Size 3
		20.0 sq ft for Size 4 or 5
3	Letters =	11.25 sq ft for Size 2
		18.0 sq ft for Size 3
		30.0 sq ft for Size 4 or 5
4	Letters =	15.0 sq ft for Size 2
		24.0 sq ft for Size 3
		40.0 sq ft for Size 4 or 5
5	Letters =	18.75 sq ft for Size 2
		30.0 sq ft for Size 3
		50.0 sq ft for Size 4 or 5
6	Letters =	22.5 sq ft for Size 2
		36.0 sq ft for Size 3
		60.0 sq ft for Size 4 or 5

6. When letters C,D,G,H are used on the Left or Right end of the sign the Sq. Ft. changes.
   Add the amounts when these letters are used:
   1.25 sq ft for Size 2
   1.5 sq ft for Size 3
   2.0 sq ft for Size 4 or 5

STANDARD SIGN
R3-8 Series

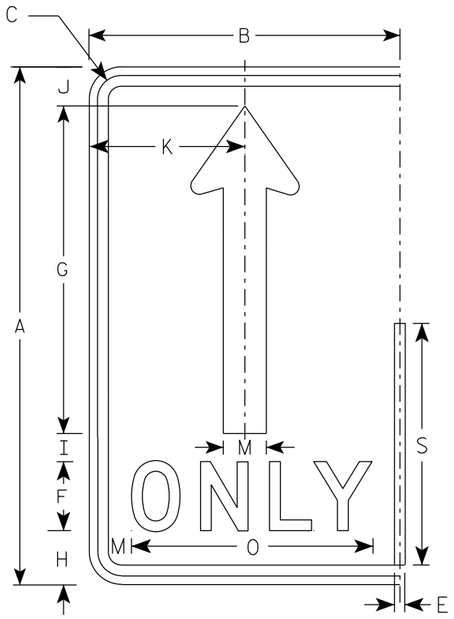
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

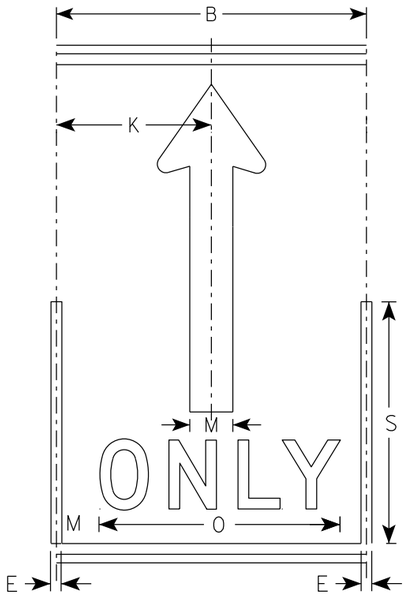
DATE 5/21/19 PLATE NO. R3-8.1

NOTES

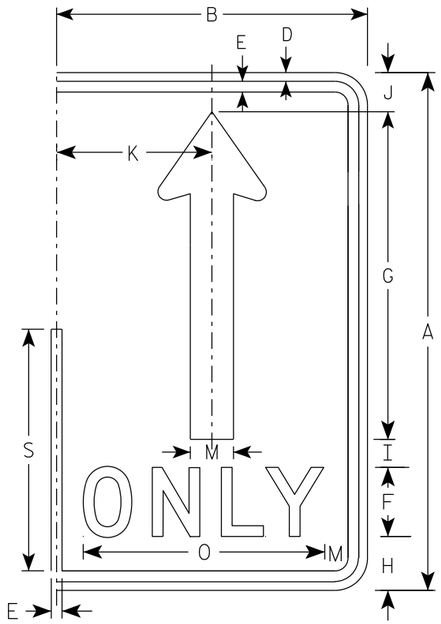
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



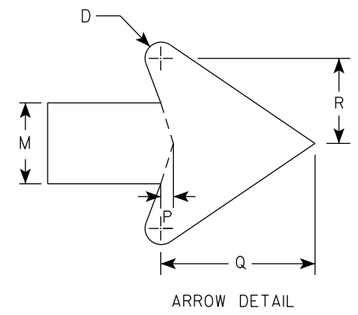
(A)



(A)



(A)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8	4	19	3 1/8	1 5/8	2 1/4	9		2 1/2		14	3/8	4 3/4	2 5/8	14								3.75
2M	30	18	1 3/8	1/2	5/8	4	19	3 1/8	1 5/8	2 1/4	9		2 1/2		14	3/8	4 3/4	2 5/8	14								3.75
3	36	24	1 3/8	1/2	5/8	5	22 3/4	3 3/4	1 3/4	2 3/4	12		3		17 5/8	1/2	5 3/4	3 1/8	16 3/4								6.0
4	48	30	2 1/4	3/4	1	6	30 3/8	5 1/8	2 7/8	3 5/8	15		4		21 3/4	5/8	7 5/8	4 1/4	22 3/8								10.0
5	48	30	2 1/4	3/4	1	6	30 3/8	5 1/8	2 7/8	3 5/8	15		4		21 3/4	5/8	7 5/8	4 1/4	22 3/8								10.0

STANDARD SIGN
R3-8 (A) Arrow

WISCONSIN DEPT OF TRANSPORTATION

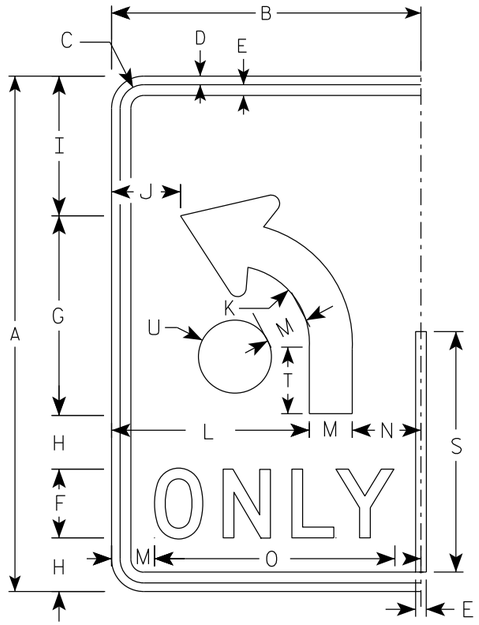
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

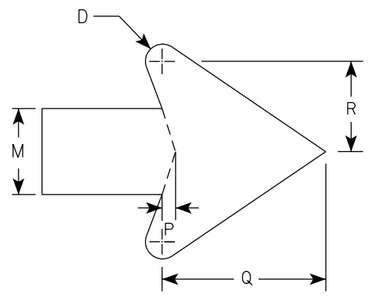
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 215 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
   Message Series - D



(B)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8	2 1/8						3.75
2M	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8	2 1/8						3.75
3	36	24	1 3/8	1/2	5/8	5	14	3 1/2	9 3/4	6	5 3/8	15	3	6	17 5/8	1/2	5 3/4	3 1/8	16 3/4	4 5/8	2 1/2						6.0
4	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4	3 3/8						10.0
5	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4	3 3/8						10.0

STANDARD SIGN

R3-8 (B) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

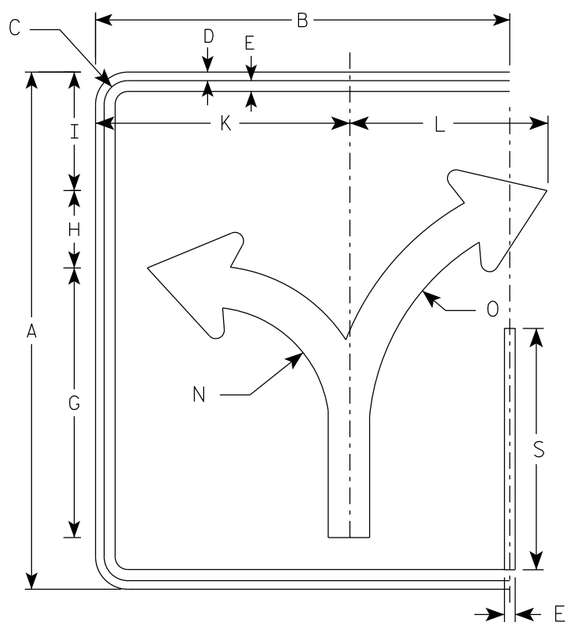
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

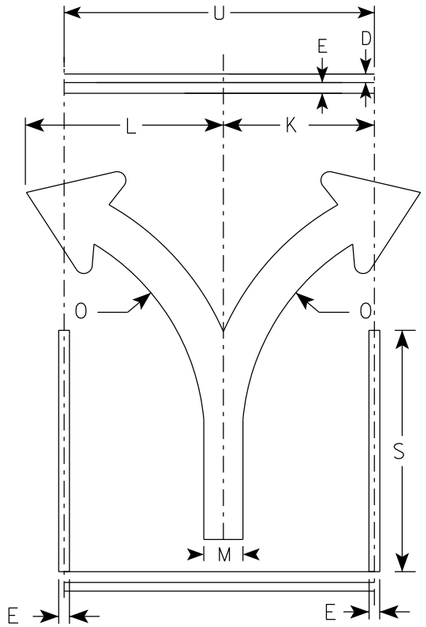
SHEET NO: 216 E

NOTES

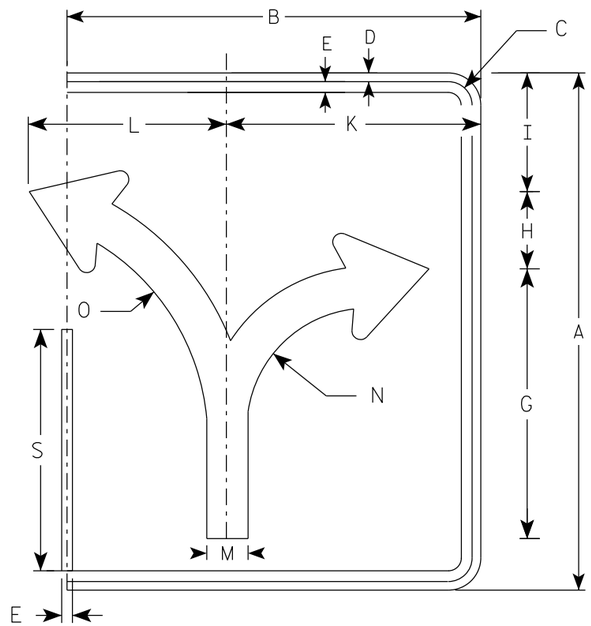
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



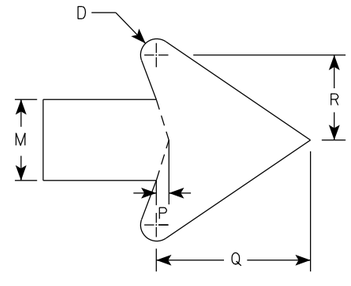
(C)



(C)



(C)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	ENDS Area sq. ft.	MIDDLE Area sq. ft.
1																												
2S	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
2M	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
3	36	30	1 3/8	1/2	5/8		18 3/4	5 1/2	8 1/4		17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		24						7.5	6.0
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0

STANDARD SIGN
R3-8 (C) Arrow

WISCONSIN DEPT OF TRANSPORTATION

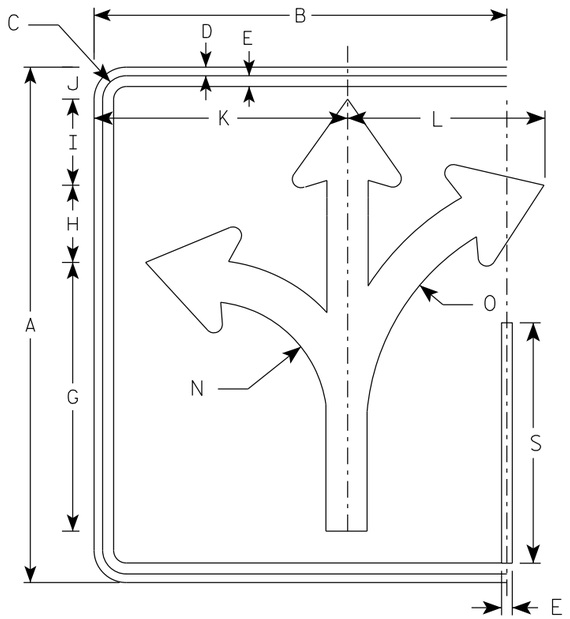
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

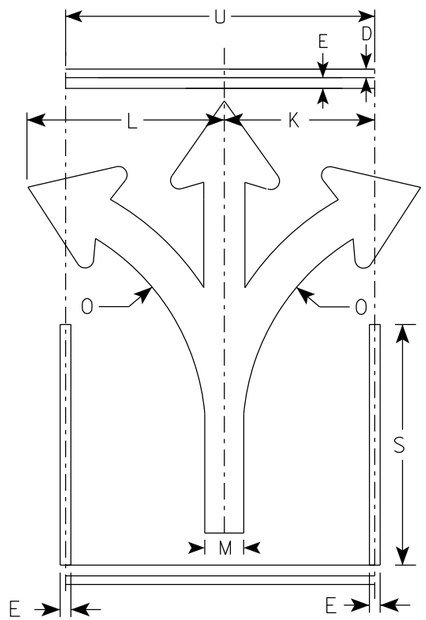
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 217 | E

NOTES

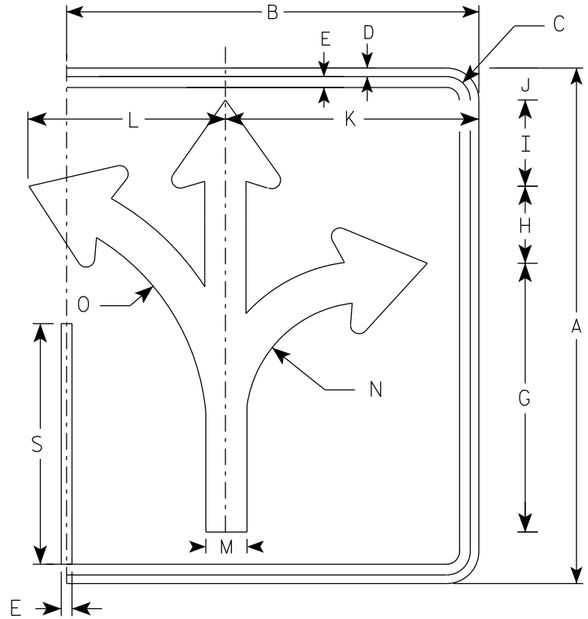
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



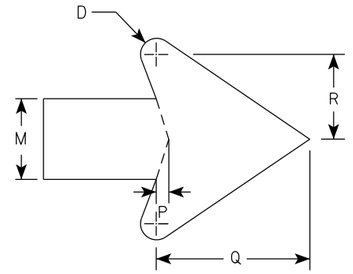
(D)



(D)



(D)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	ENDS Area sq. ft.	MIDDLE Area sq. ft.
1																												
2S	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
2M	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
3	36	30	1 3/8	1/2	5/8		18 3/4	5 1/2	6	2 1/4	17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		24						7.5	6.0
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0

STANDARD SIGN
R3-8 (D) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

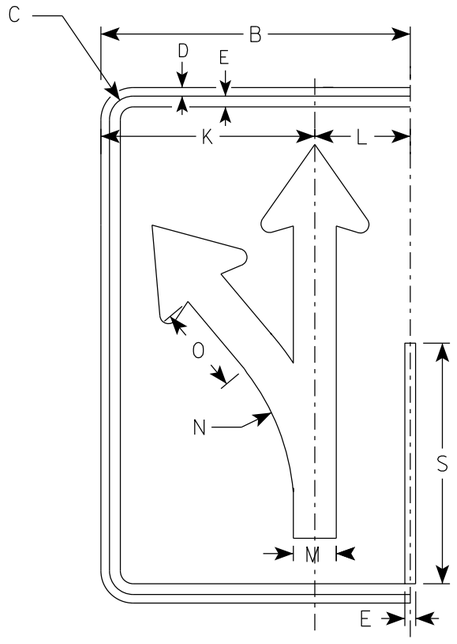
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 218 | E

7

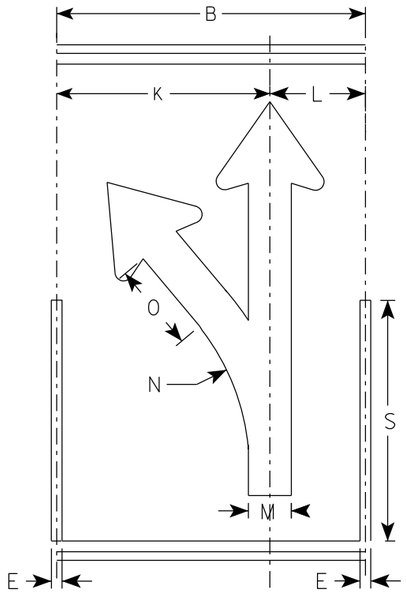
7

NOTES

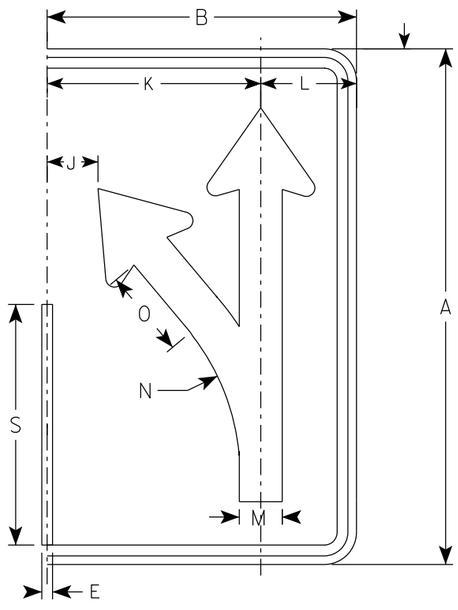
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



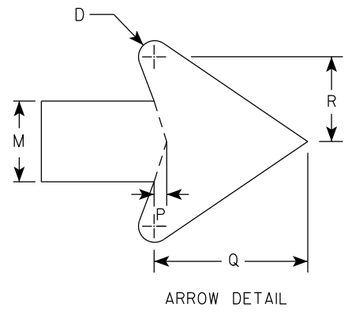
(E)



(E)



(E)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
2M	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
3	36	24	1 3/8	1/2	5/8		21 7/8	5 5/8	4	4 7/8	16 1/8	7 3/4	3	15 7/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4								6.0
4	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0
5	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0

STANDARD SIGN
R3-8 (E) Arrow

WISCONSIN DEPT OF TRANSPORTATION

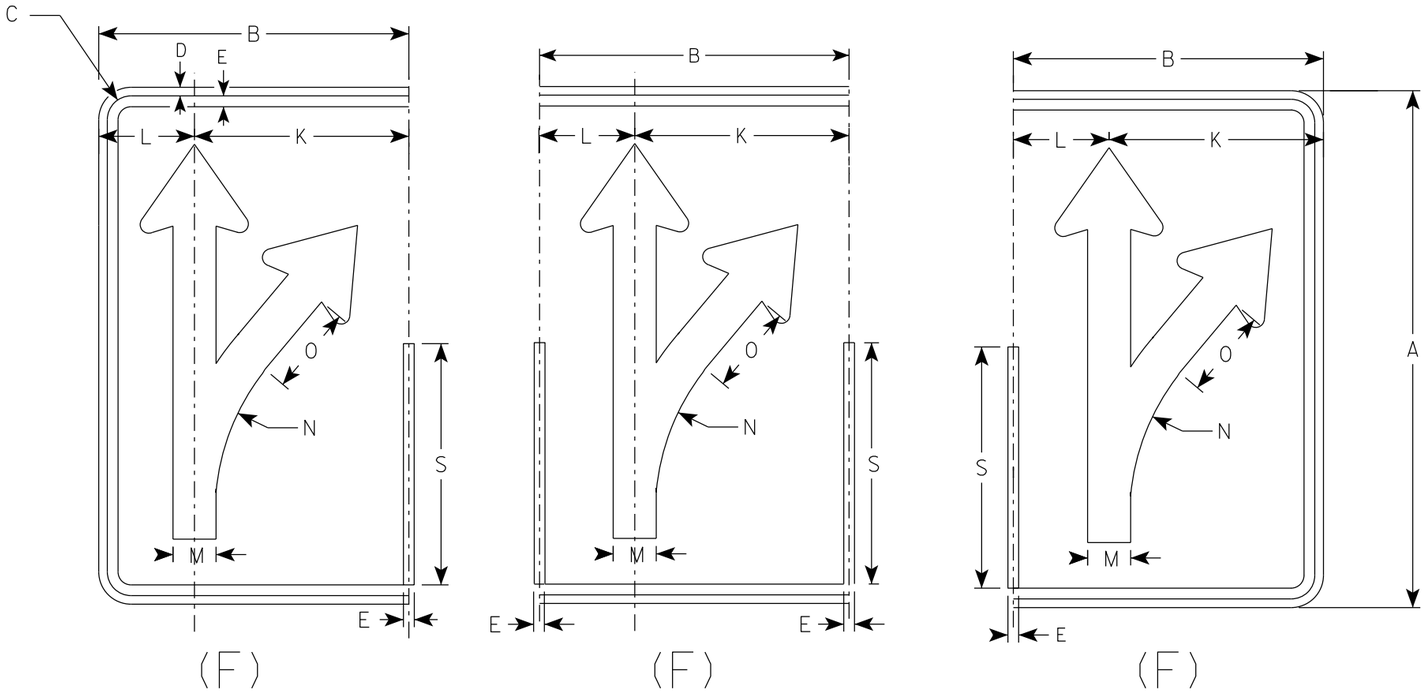
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

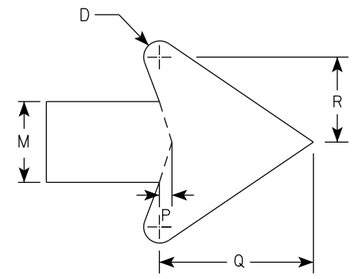
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 219 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(F) (F) (F)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
2M	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
3	36	24	1 3/8	1/2	5/8		21 7/8	5 5/8	4	4 7/8	16 1/8	7 3/4	3	15 7/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4								6.0
4	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0
5	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0

STANDARD SIGN
R3-8 (F) Arrow

WISCONSIN DEPT OF TRANSPORTATION

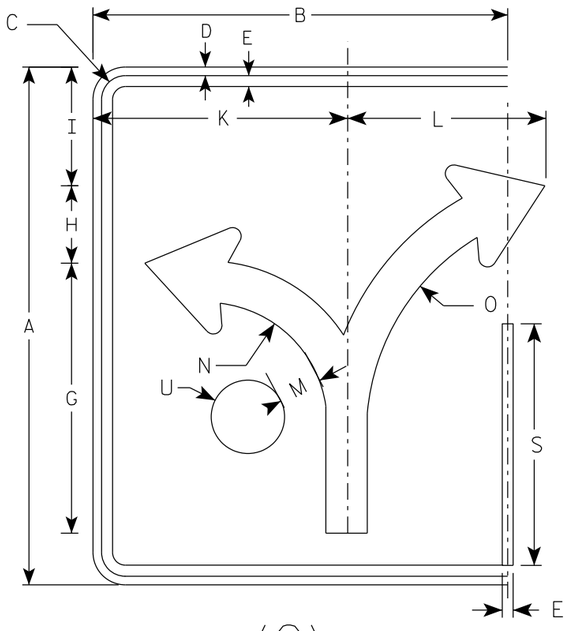
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

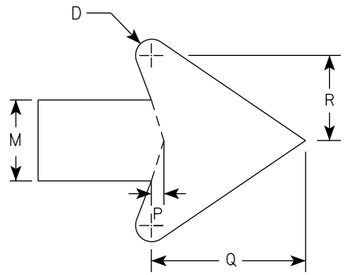
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 220 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(G)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
2M	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
3	36	30	1 3/8	1/2	5/8		18 3/4	5 1/2	8 1/4		17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		2 1/2						7.5
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0

STANDARD SIGN
R3-8 (G) Arrow

WISCONSIN DEPT OF TRANSPORTATION

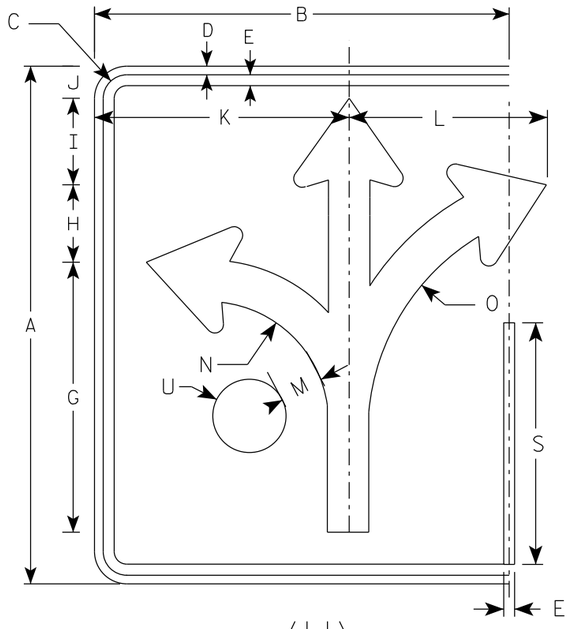
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

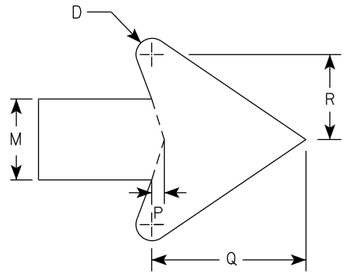
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 221 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(H)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
2M	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
3	36	30	1 3/8	1/2	5/8		18 3/4	5 1/2	6	3 1/8	17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		2 1/2						7.5
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0

STANDARD SIGN
R3-8 (H) Arrow

WISCONSIN DEPT OF TRANSPORTATION

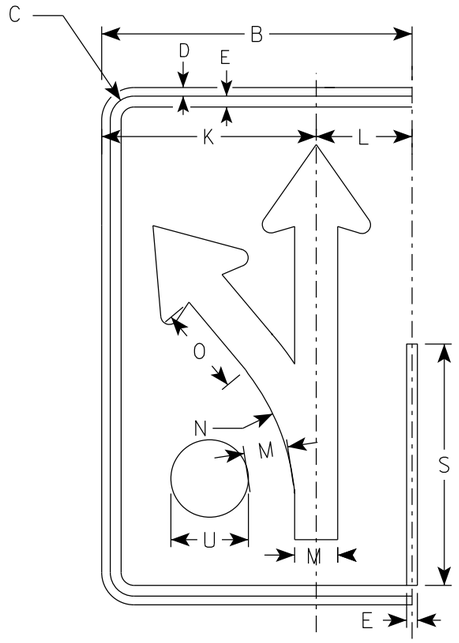
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

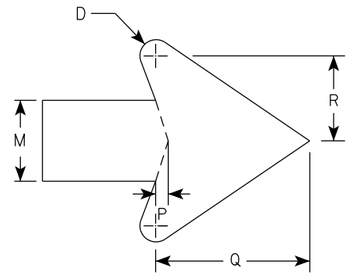
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 222	E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(I)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14		2 1/8						3.75
2M	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14		2 1/8						3.75
3	36	24	1 3/8	1/2	5/8		21 7/8	5 5/8	4	4 7/8	16 1/8	7 3/4	3	15 7/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4		2 1/2						6.0
4	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8		3 3/8						10.0
5	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8		3 3/8						10.0

STANDARD SIGN
R3-8 (I) Arrow

WISCONSIN DEPT OF TRANSPORTATION

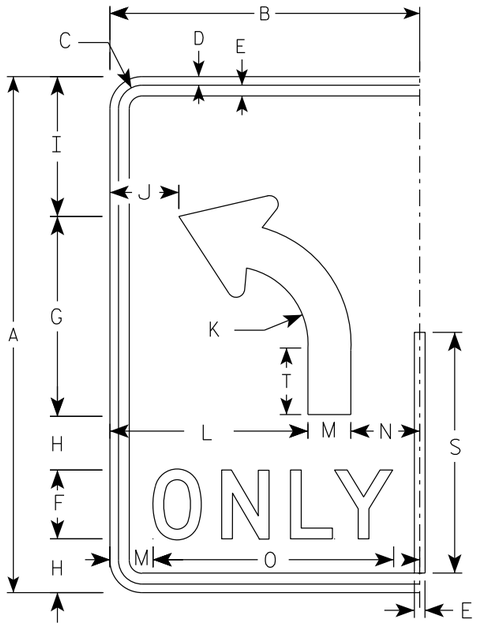
APPROVED Matthew R Rauch
For State Traffic Engineer

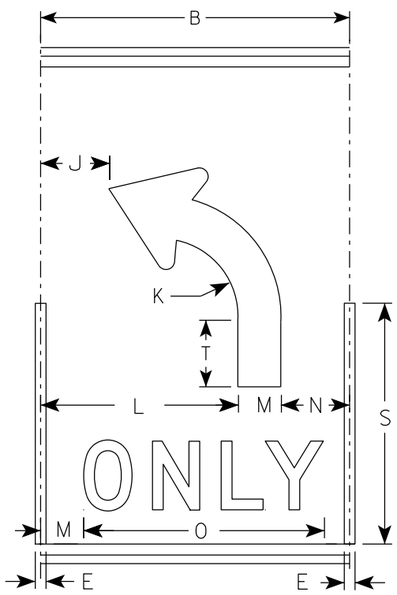
DATE 5/21/19 PLATE NO. R3-8.1

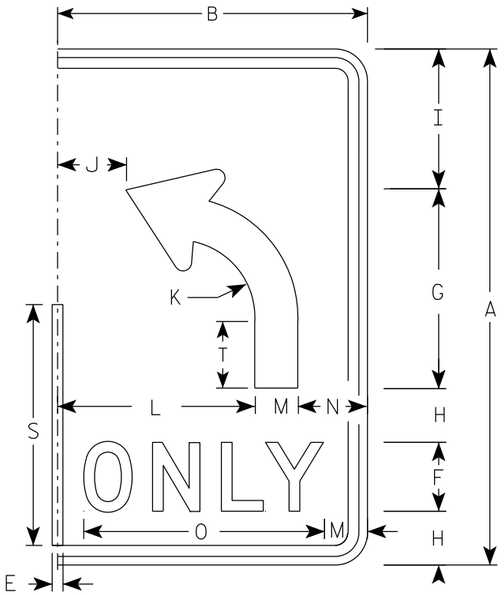
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 223 | E

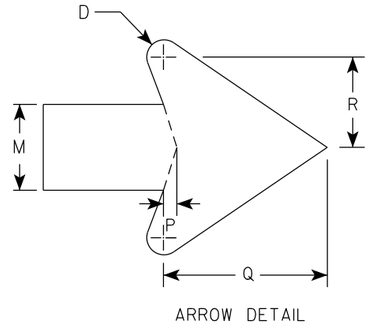
NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D









ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
2M	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
3	36	24	1 3/8	1/2	5/8	5	14	3 1/2	9 3/4		5 3/8	15	3	6	17 5/8	1/2	5 3/4	3 1/8	16 3/4	4 5/8							6.0
4	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0
5	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0

STANDARD SIGN

R3-8 (L) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

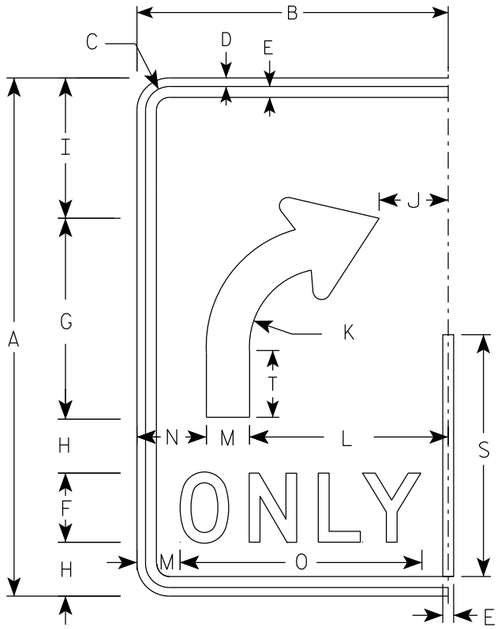
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

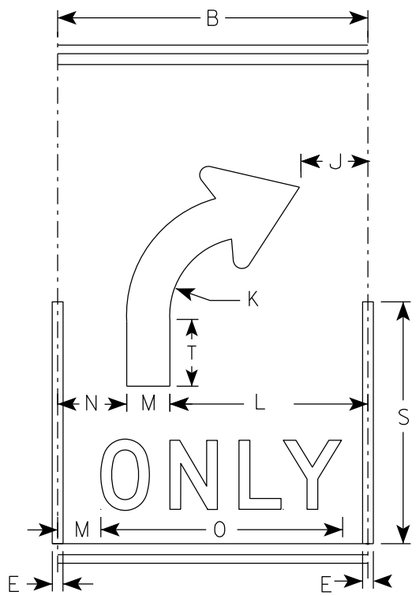
SHEET NO: 224 E

NOTES

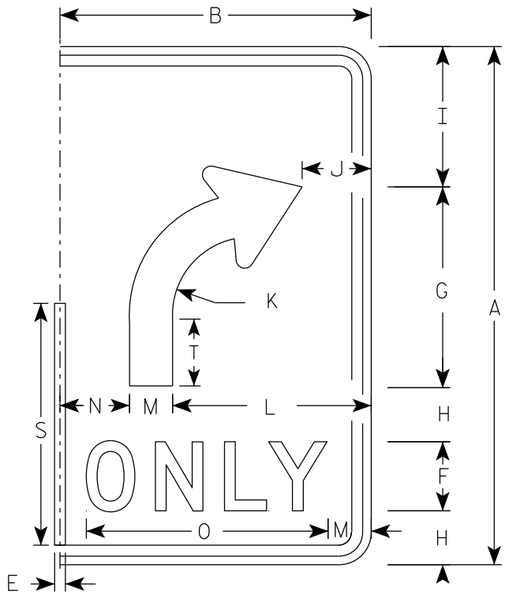
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



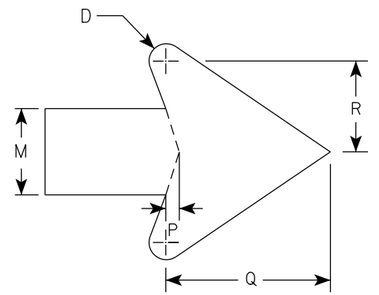
(R)



(R)



(R)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
2M	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
3	36	24	1 3/8	1/2	5/8	5	14	3 1/2	9 3/4	6	5 3/8	15	3	6	17 5/8	1/2	5 3/4	3 1/8	16 3/4	4 5/8							6.0
4	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0
5	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0

STANDARD SIGN

R3-8 (R) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

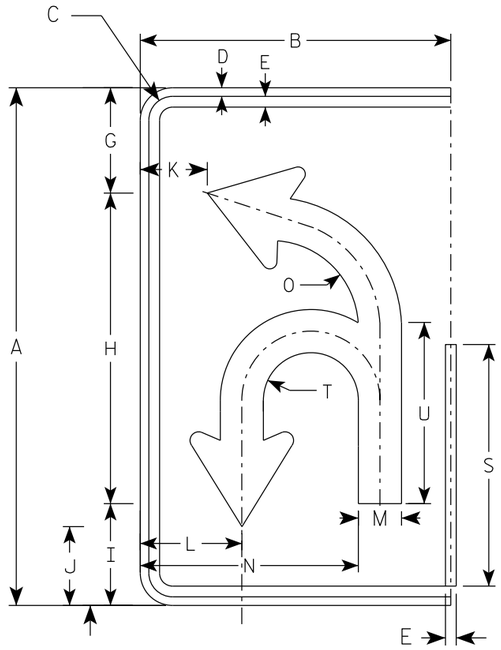
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

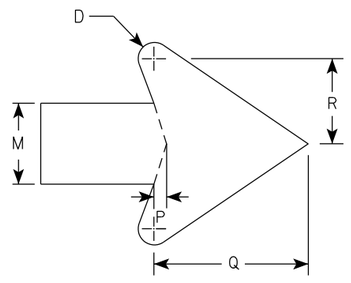
SHEET NO: 225 **E**

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(U)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8		6 1/8	18	5 7/8	4 5/8	3 7/8	5 7/8	2 1/2	12 5/8	5 1/8	3/8	4 3/4	2 5/8	14	2 3/4	10 1/2						3.75
2M	30	18	1 3/8	1/2	5/8		6 1/8	18	5 7/8	4 5/8	3 7/8	5 7/8	2 1/2	12 5/8	5 1/8	3/8	4 3/4	2 5/8	14	2 3/4	10 1/2						3.75
3	36	24	1 3/8	1/2	5/8		21 7/8	21 5/8	7 1/8	5 1/2	5 7/8	8 1/4	3	16 3/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4	3 1/4	12 5/8						6.0
4	48	30	2 1/4	3/4	1		29 1/8	28 3/4	9 3/8	7 1/4	6 7/8	10	4	20 7/8	8 1/8	5/8	7 5/8	4 1/4	22 3/8	4 3/8	16 3/4						10.0
5	48	30	2 1/4	3/4	1		29 1/8	28 3/4	9 3/8	7 1/4	6 7/8	10	4	20 7/8	8 1/8	5/8	7 5/8	4 1/4	22 3/8	4 3/8	16 3/4						10.0

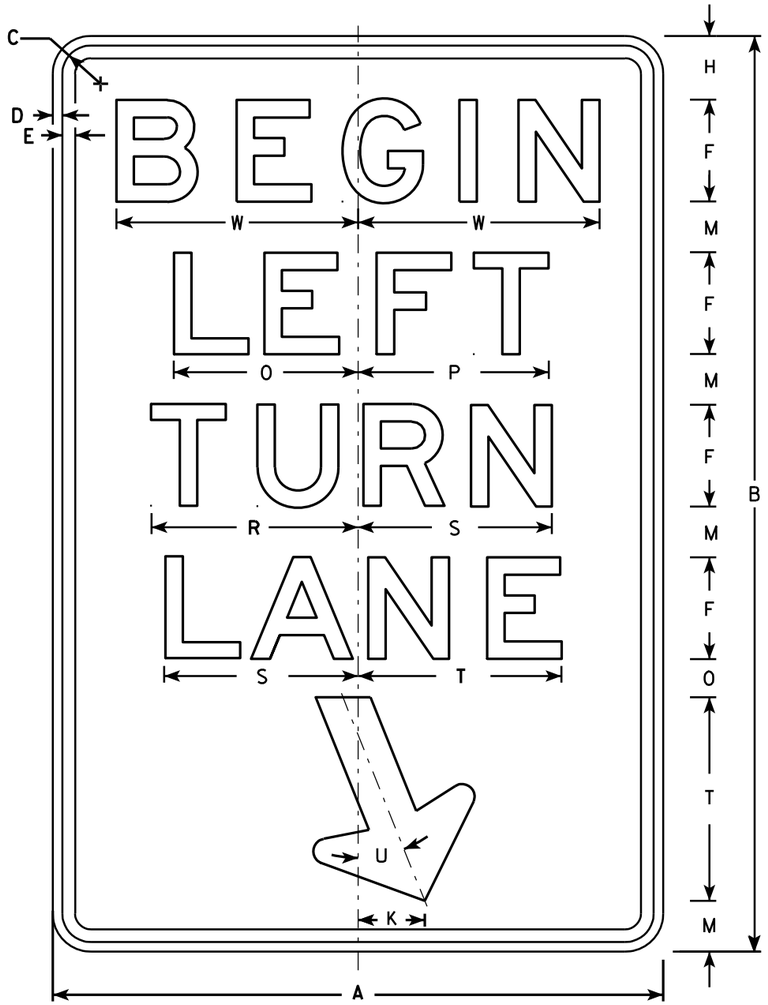
STANDARD SIGN
R3-8 (U) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

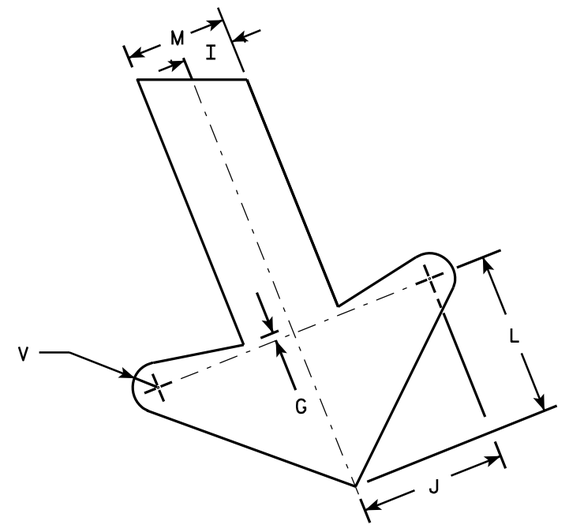
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 226 | E



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																											

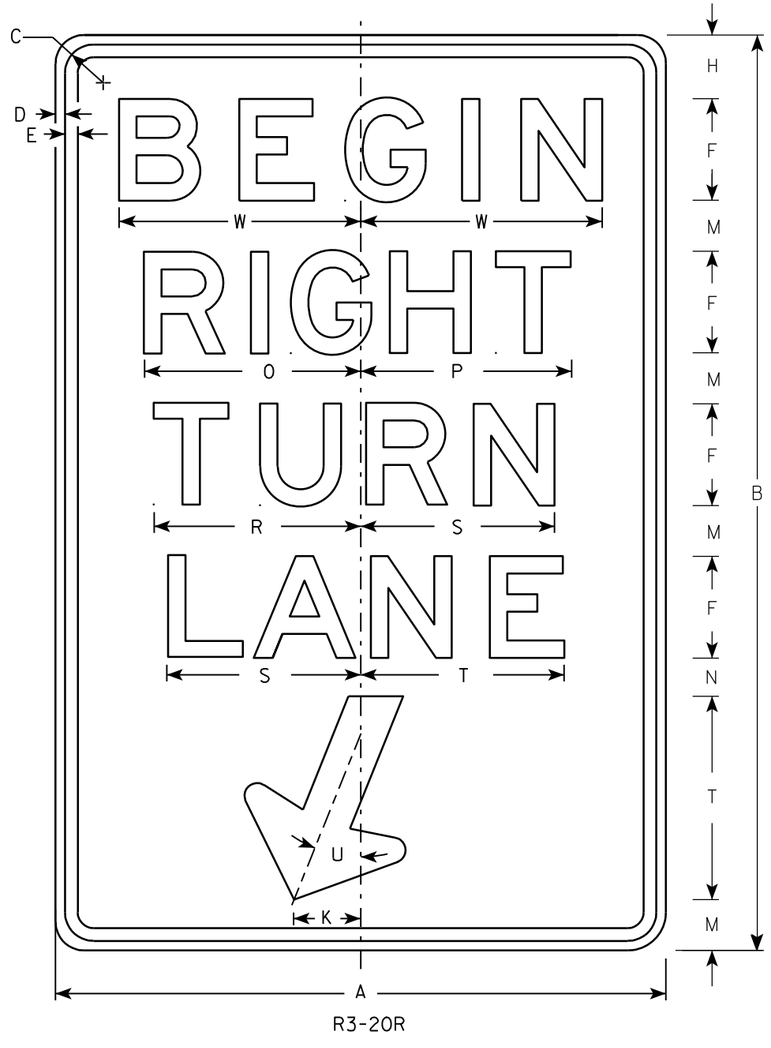
STANDARD SIGN
R3-20L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

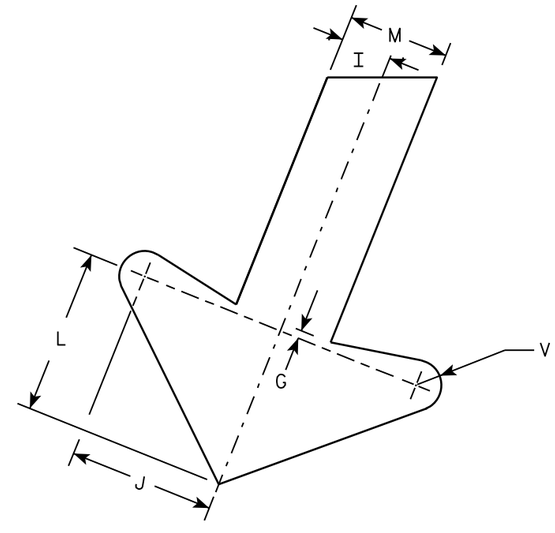
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 227 | E



R3-20R

NOTES

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



ARROW DETAIL

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

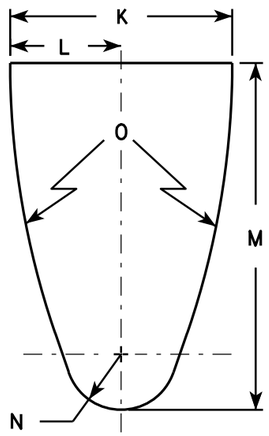
STANDARD SIGN
R3-20R

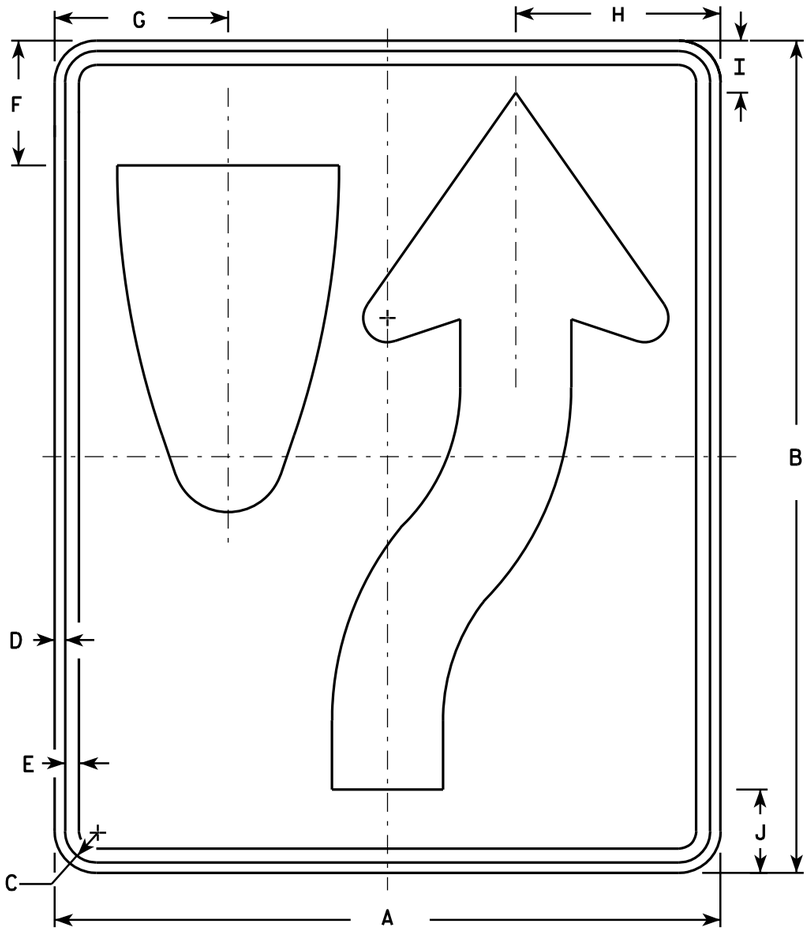
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20R.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 228 | E

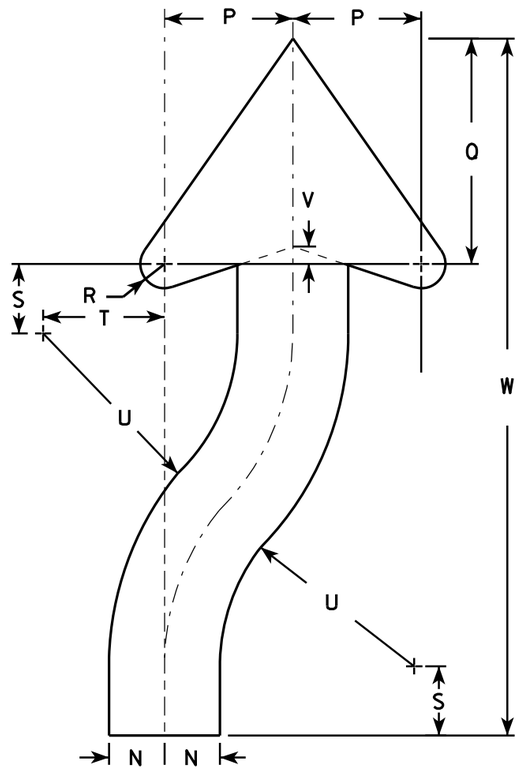




R4-7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:
   Background - White
   Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend is reversed.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

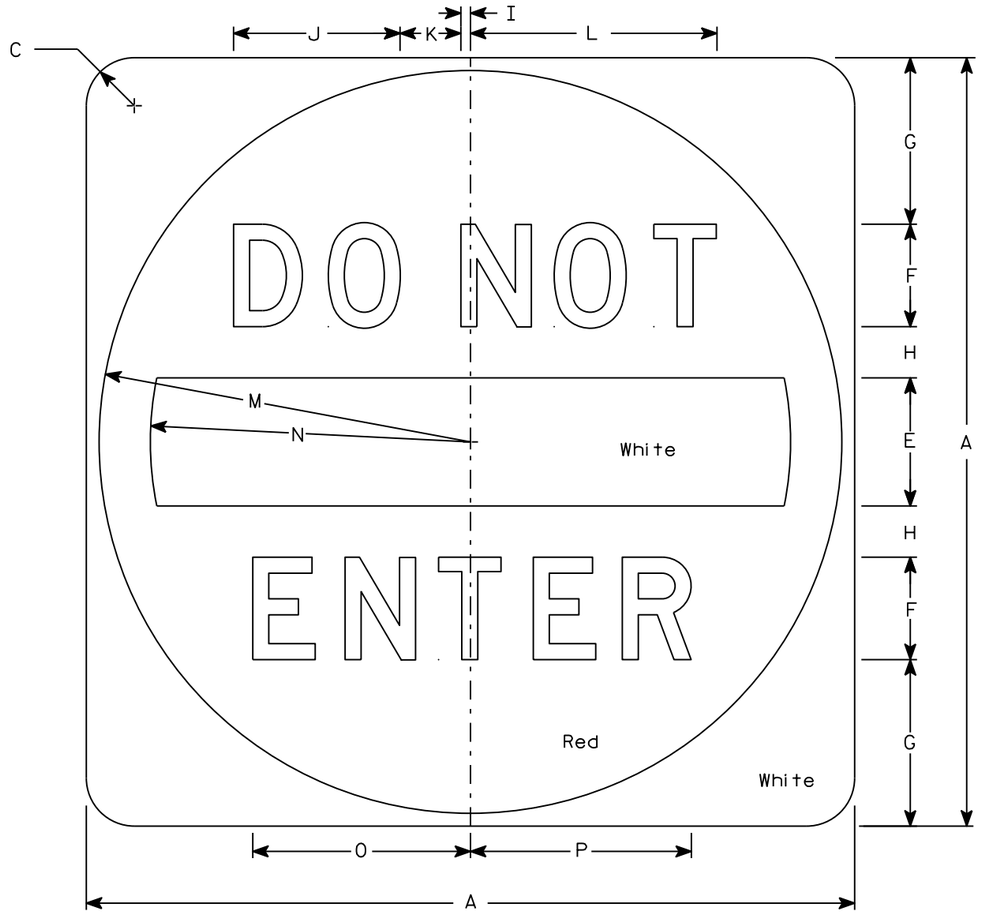
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 229	E



R5-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - See detail
   Message - White
3. Message Series - D

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8											6.25
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8											16.0

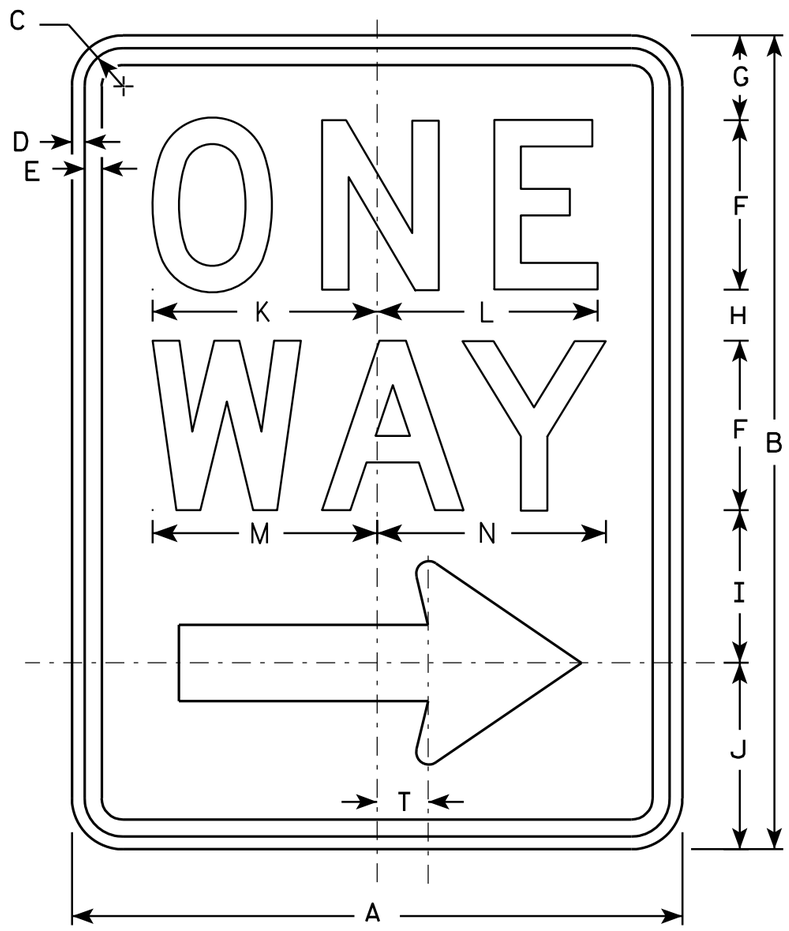
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/15/18 PLATE NO. R5-1.16

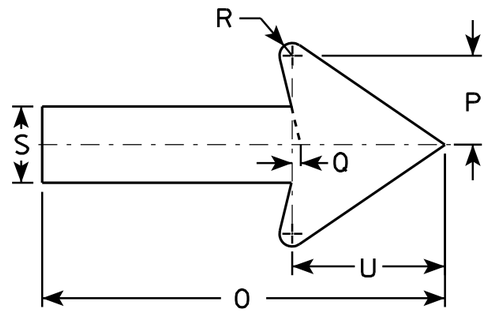
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 230 | E



R6-2R

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. R6-2L same as R6-2R except arrow points to the left.



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
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

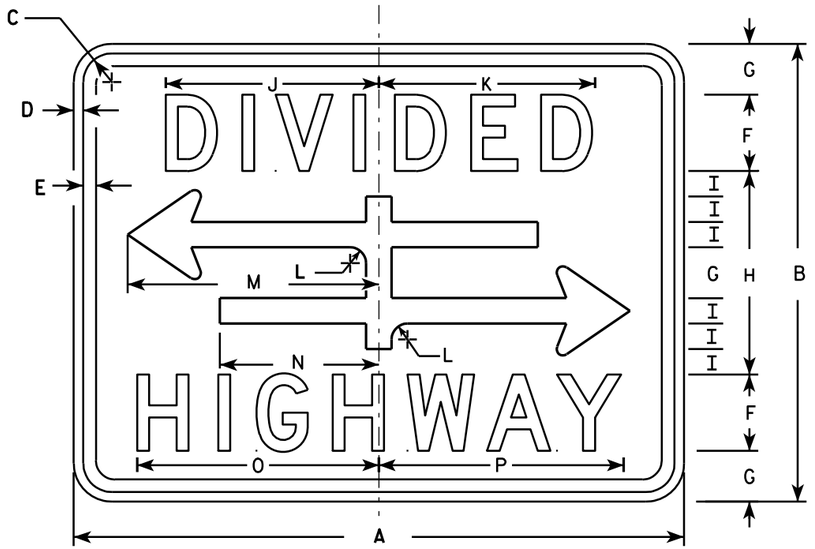
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

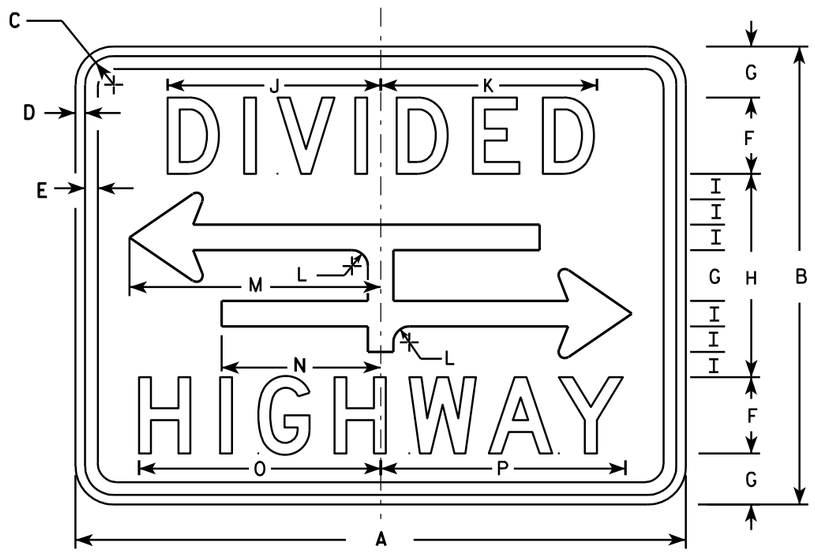
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 231	E



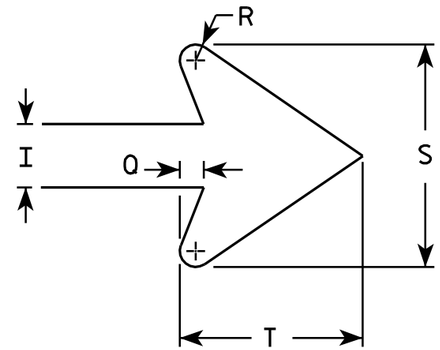
R6-3

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.



R6-3A



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	18	1 1/8	3/8	3/8	3	2	8	1	8 3/8	8 1/2	5/8	9 7/8	6 1/4	9 1/2	9 5/8	3/8	1/4	3 1/2	2 3/4							3.0
2S	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
2M	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
3																											
4																											
5																											

STANDARD SIGN
R6-3 & R6-3A

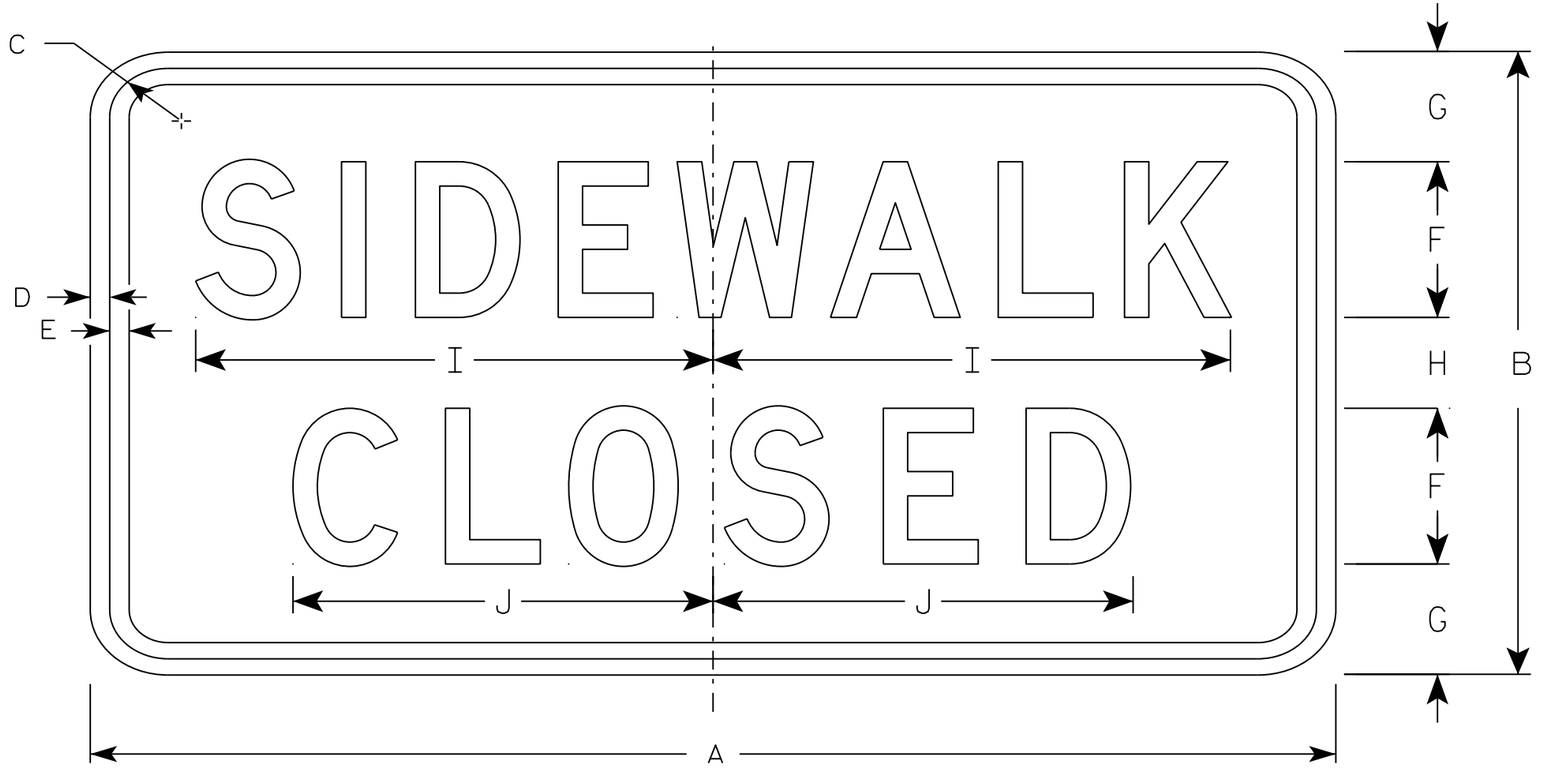
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R6-3.5

PROJECT NO:

SHEET NO: 232 E



R9-9

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 3/4	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
2M	24	12	1 3/4	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
3	30	18	1 3/4	1/2	1/2	4	3 1/2	3	12 1/2	10 1/4																	3.75
4																											
5																											

STANDARD SIGN
R9-9

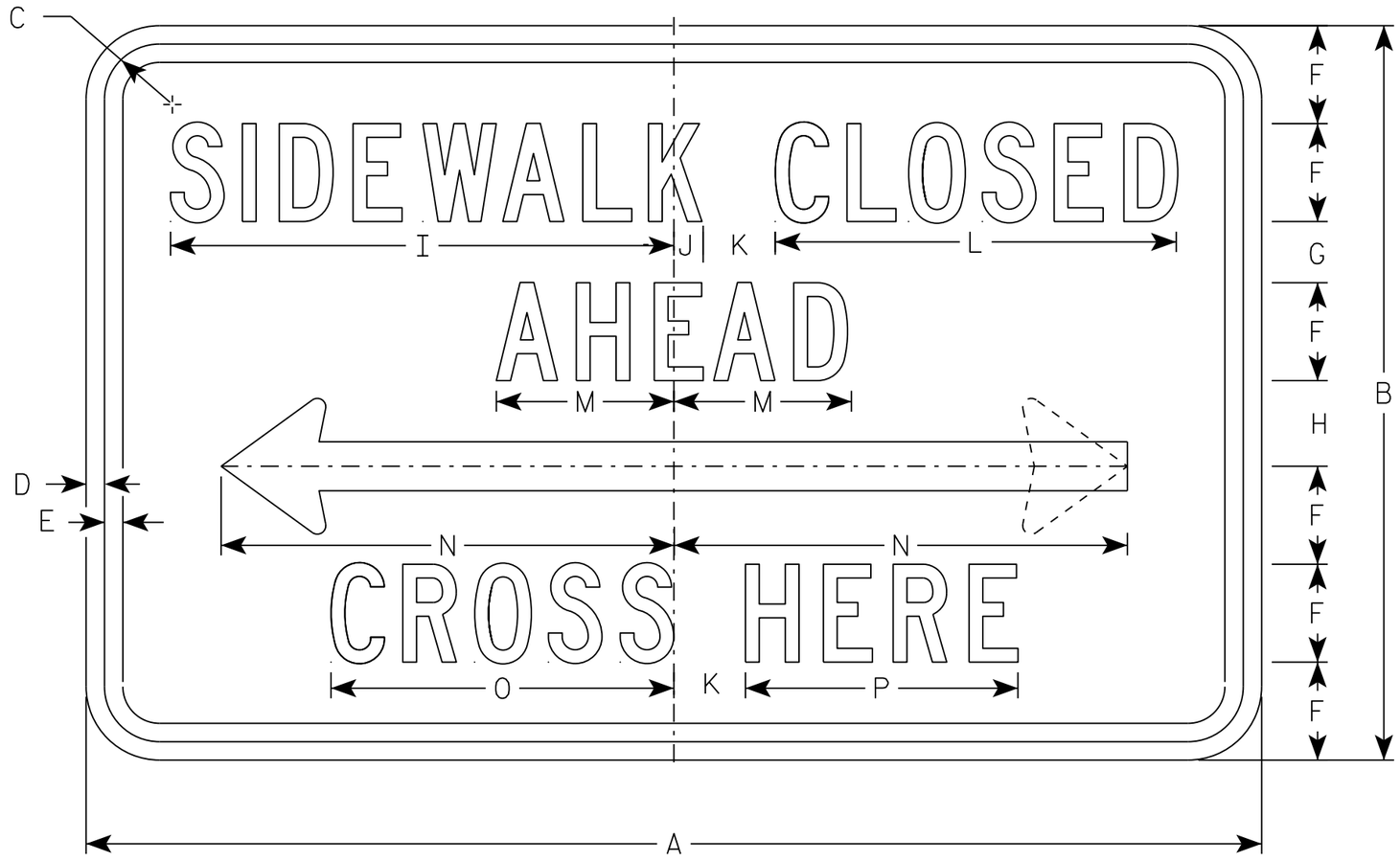
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

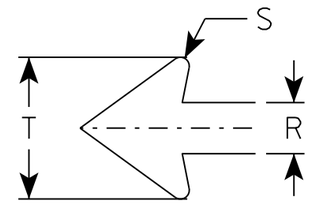
DATE 8/11/16 PLATE 233 R9-9.6

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\R99.DGN PLOT DATE : 11-AUG-2016 11:33 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 2.918761:1.000000



R9-11



NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C except Size 1 is Series D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Use Size 2 for Sidewalks. Use Size 3 for Paths and Trails.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/8	3/8	3/8	1 1/2	1 1/2	1 1/2	9 3/4	5/8	1 1/2	7 5/8	3 1/2	9 1/4	6 5/8	5 1/8		1	1/8	2 3/4							2.0
2M	24	12	1 1/8	3/8	3/8	1 1/2	1 1/2	1 1/2	9 3/4	5/8	1 1/2	7 5/8	3 1/2	9 1/4	6 5/8	5 1/8		1	1/8	2 3/4							2.0
3	30	15	1 1/8	3/8	1/2	2	1 1/2	1 1/2	13	3/4	2	10 1/4	4 5/8	12 3/8	8 7/8	6 7/8		1 1/4	1/4	3 5/8							3.125
4																											
5																											

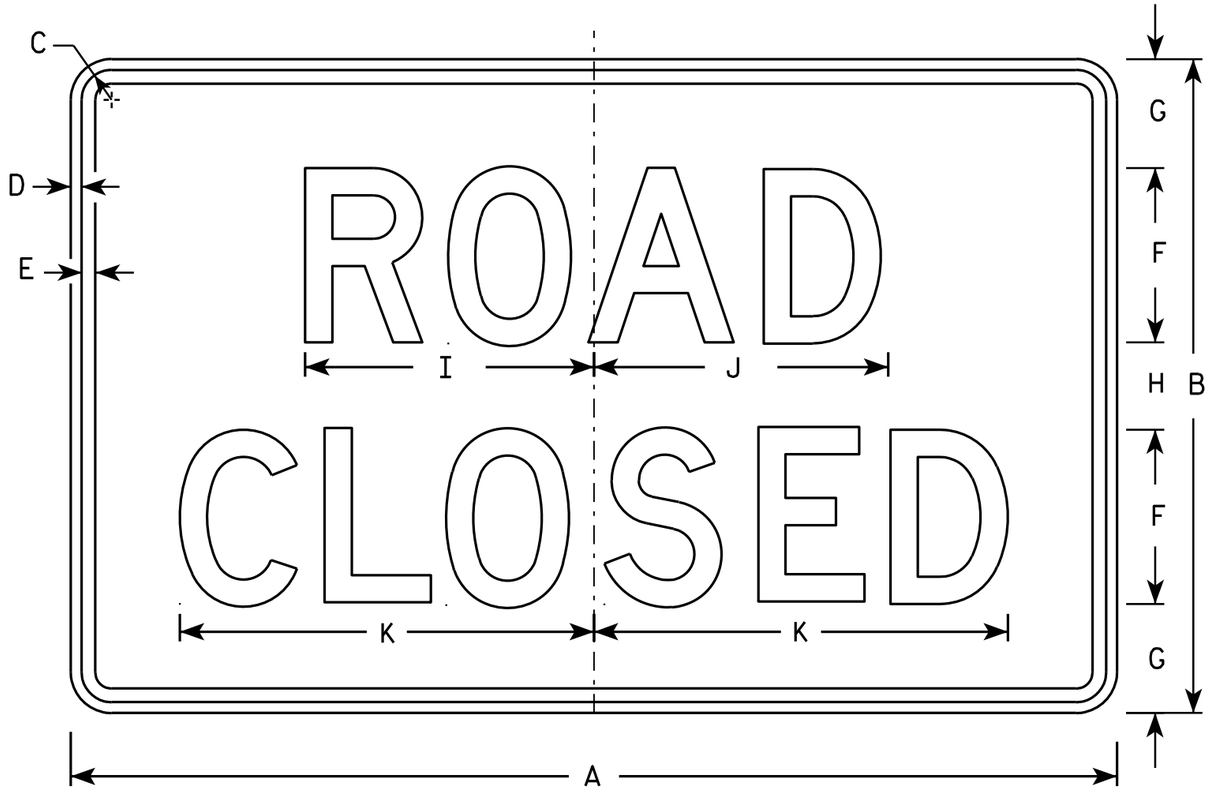
STANDARD SIGN
R9-11

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/29/16 PLATE NO. R9-11.3

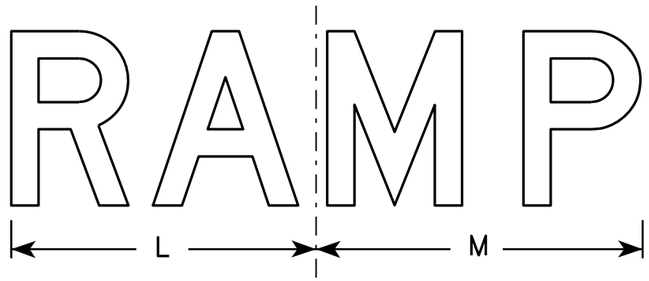
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 234	E



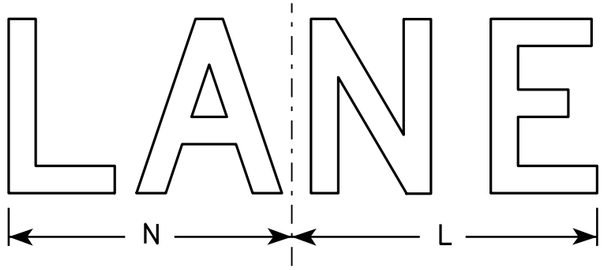
R11-2

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

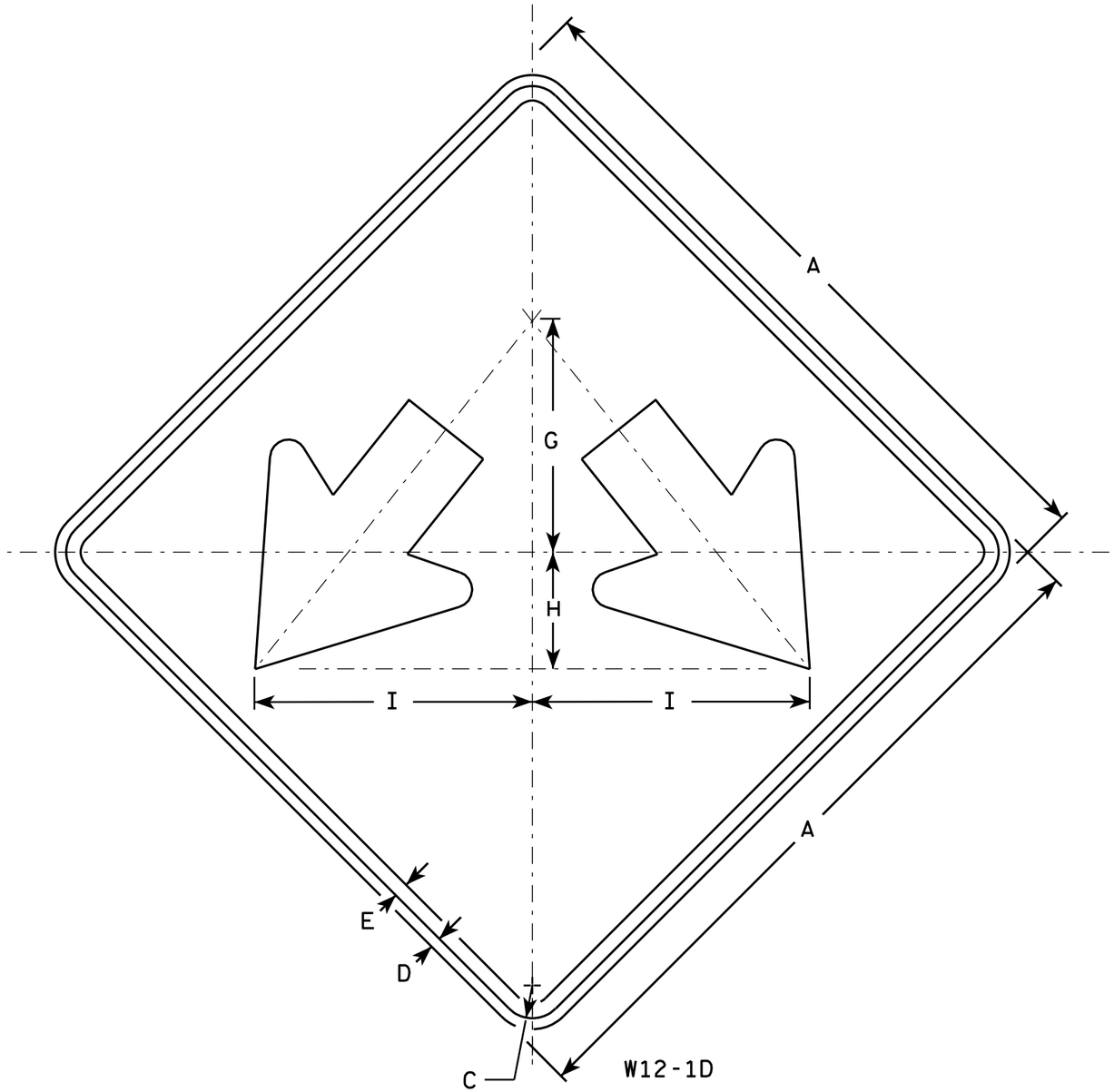
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

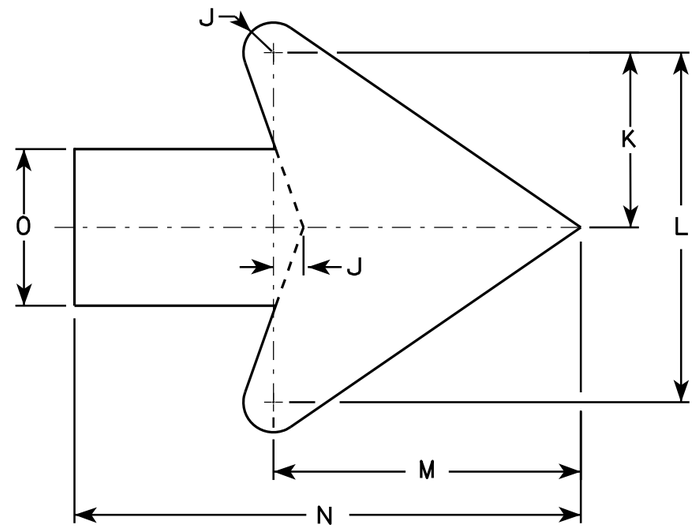
DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 235	E



NOTES

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



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2M	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
3	30		1 3/8	1/2	5/8		10	5	11 7/8	3/4	4 1/2	9	7 7/8	13	4												6.25
4	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0
5	48		2 1/4	3/4	1		16	8	19	1 1/4	7 1/4	14 1/2	12 3/4	21	6 1/4												16.0

STANDARD SIGN
W12-1D

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W12-1D.15

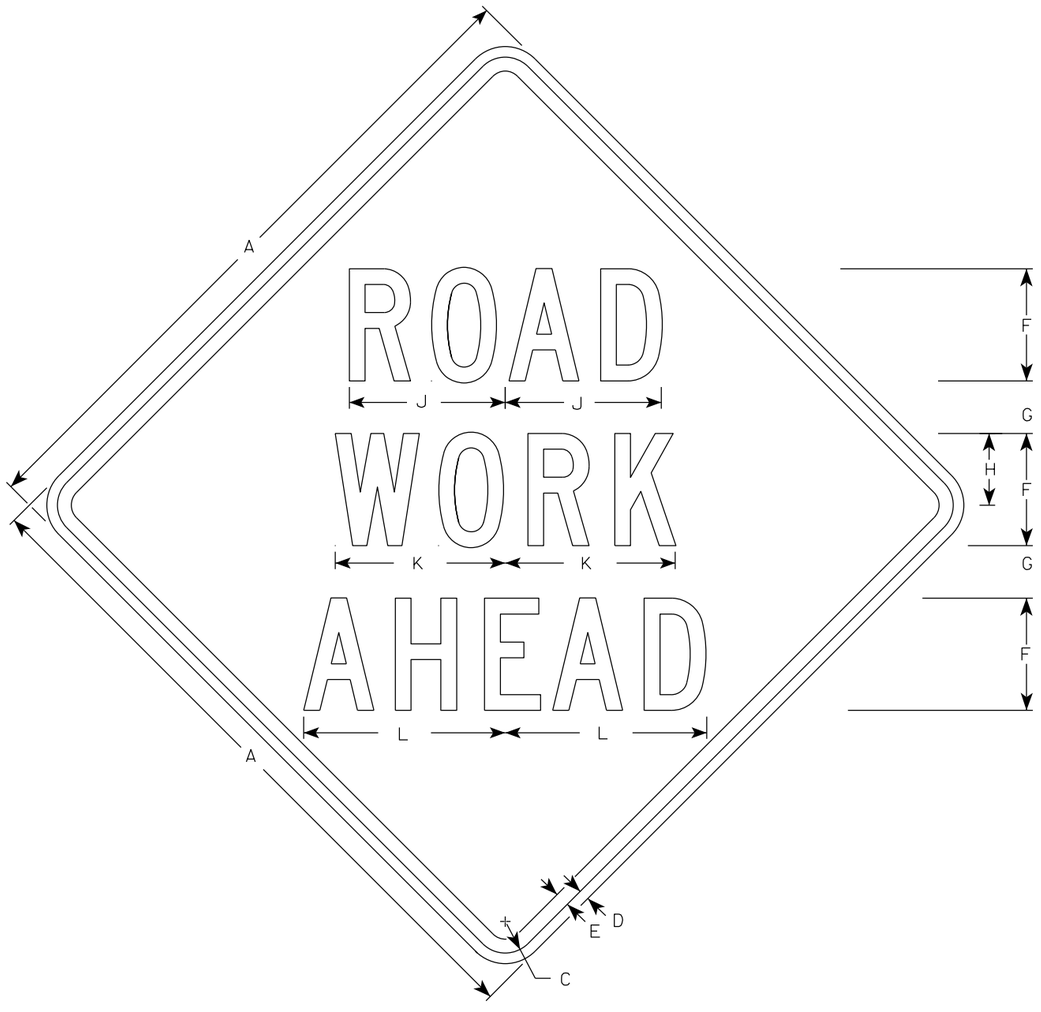
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 236	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W121D.DGN PLOT DATE : 13-MAR-2013 13:26 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 4.713802:1.000000

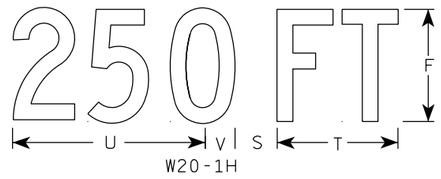
WISDOT/CADDS SHEET 42

7

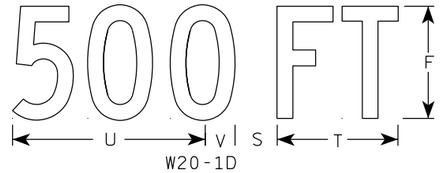
7



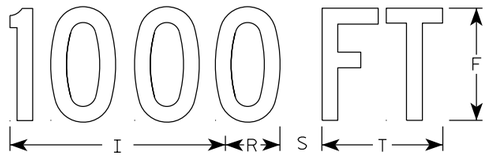
W20-1A



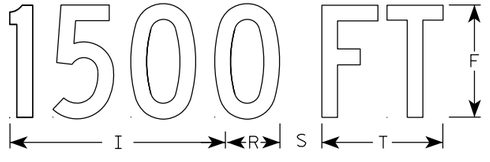
W20-1H



W20-1D



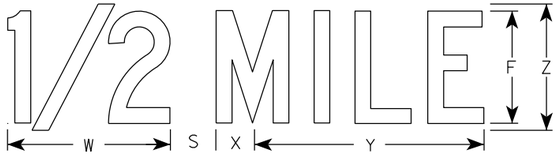
W20-1C



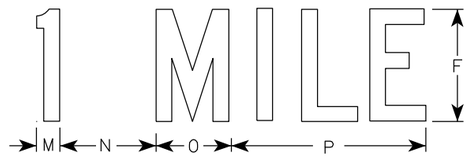
W20-1B

NOTES

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



W20-1G



W20-1F



W20-1E

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

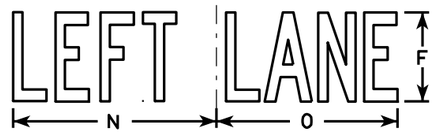
DATE 9/25/19 PLATE NO. W20-1.11

PROJECT NO:

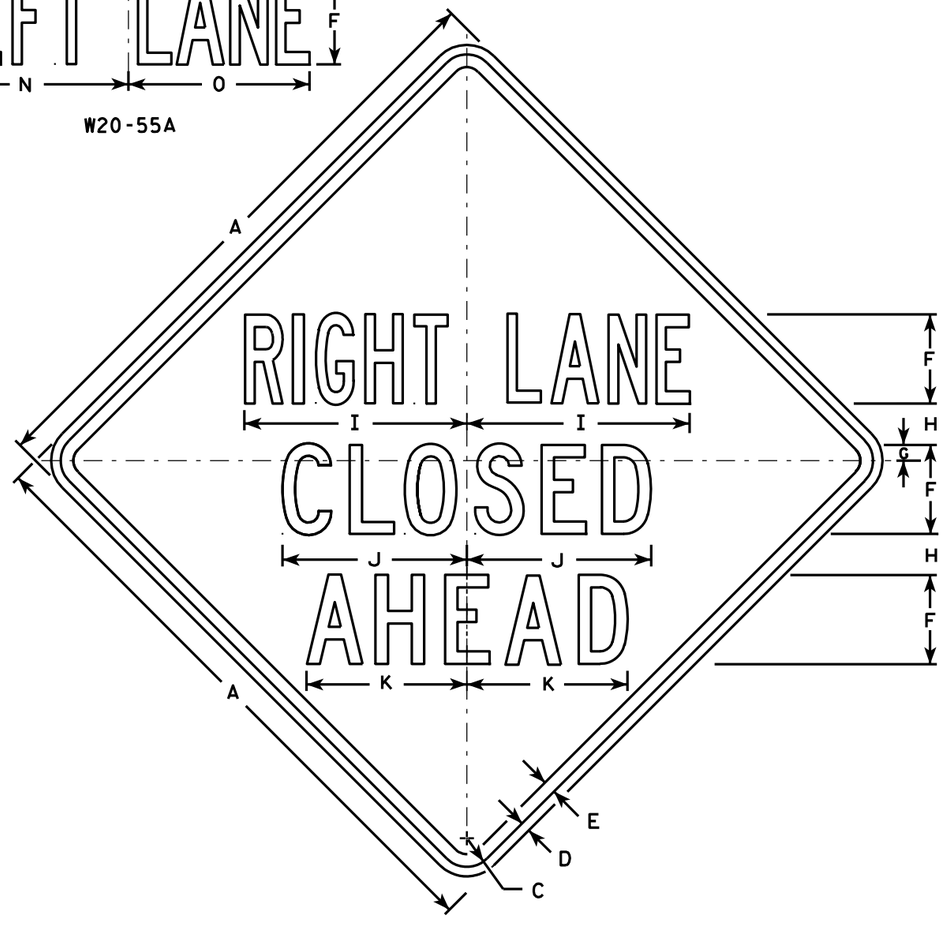
SHEET NO: 237 E



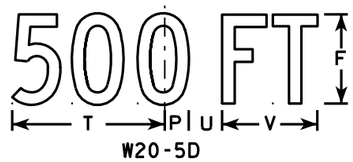
W20-56A



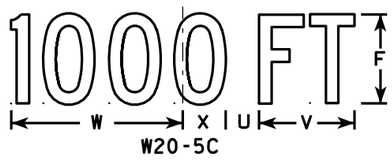
W20-55A



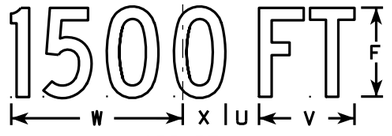
W20-5A



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

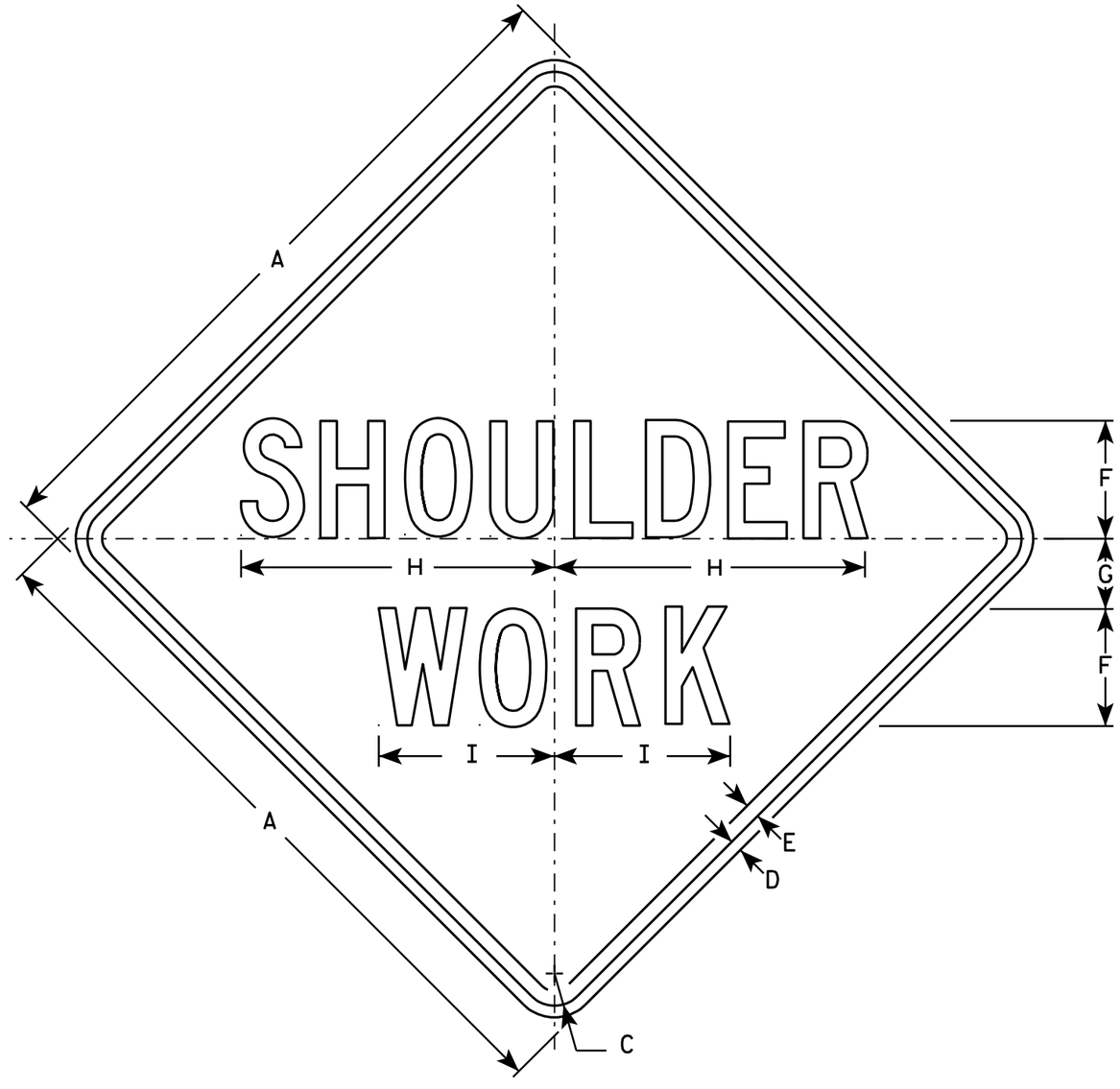
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 238 | E

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



W21-5

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.

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	4	2 1/2	10 3/4	6																		4.0
2S	30		1 3/8	1/2	5/8	5	3	13 3/8	7 1/2																		6.25
2M	30		1 3/8	1/2	5/8	5	3	13 3/8	7 1/2																		6.25
3	36		1 5/8	5/8	3/4	6	3 1/2	16	9																		9.0
4	48		2 1/4	3/4	1	8	5	21 3/8	11 1/4																		16.0
5	48		2 1/4	3/4	1	8	5	21 3/8	11 1/4																		16.0

STANDARD SIGN
W21-5

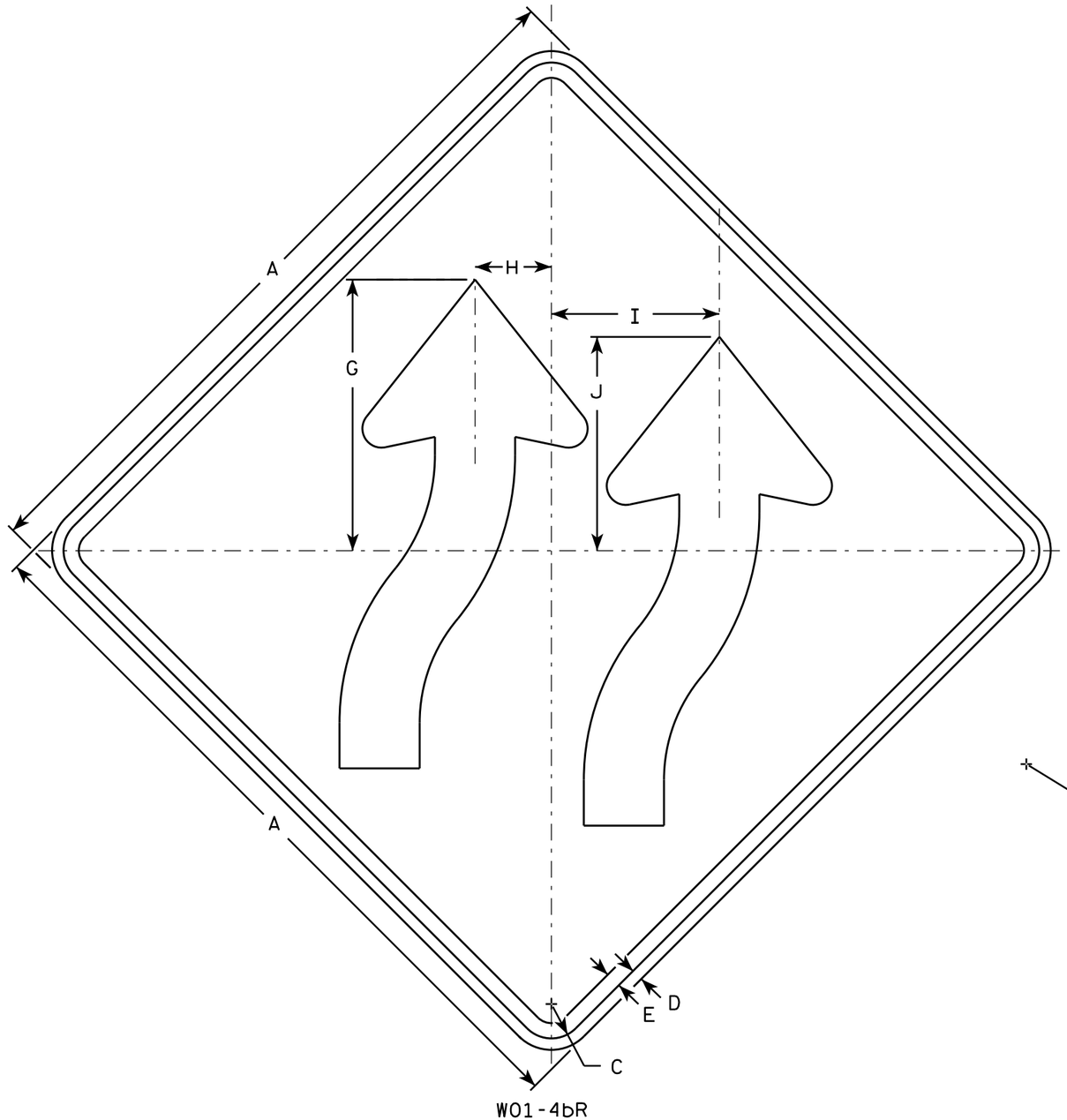
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-5.5

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 239 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W215.DGN PLOT DATE : 21-MAR-2011 08:01 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.207338:1.000000
WISDOT/CADDS SHEET 42



W01-4bR

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-4bL is the same as W014-bR exept arrows are 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		13 3/8	3 3/4	8 1/4	10 1/2	4 5/8	7 3/8	12 7/8	3 7/8	7 7/8	2 3/4	2 1/4	7/8	24								9.0
2S	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
2M	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
3	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
4	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
5	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0

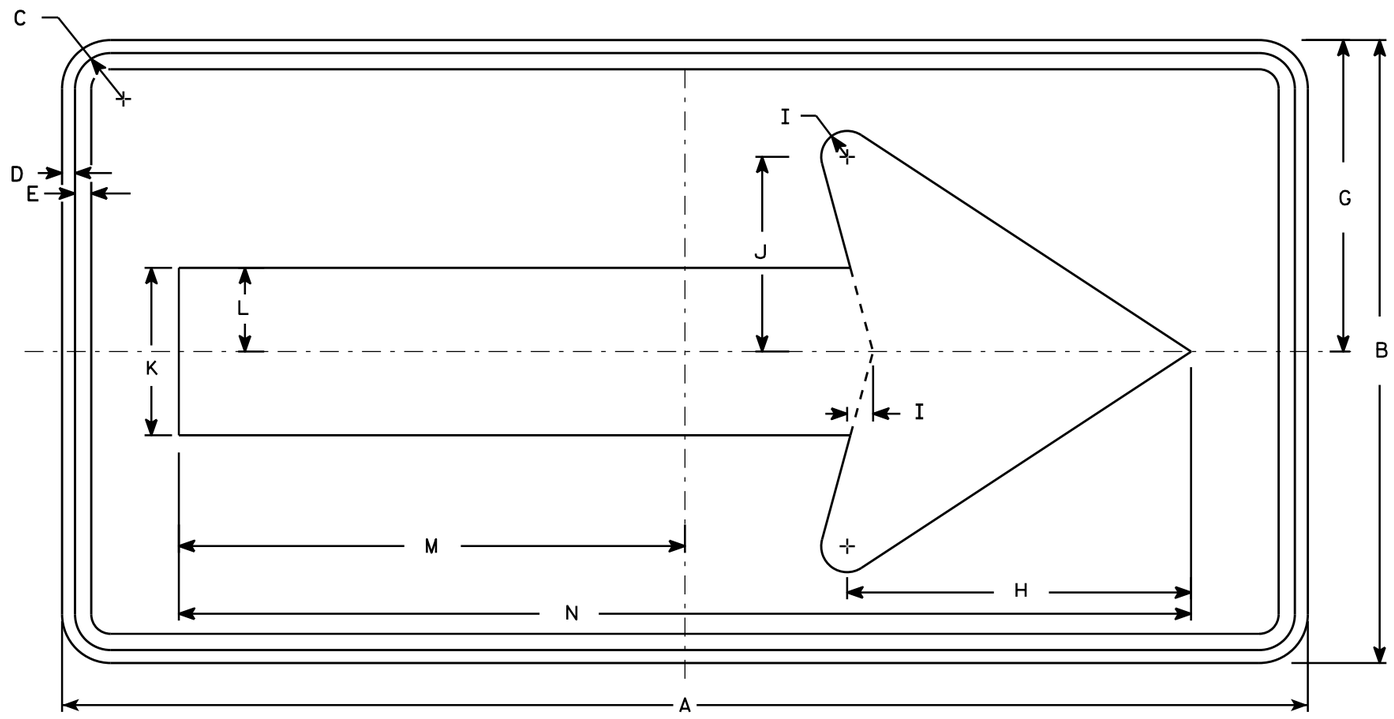
STANDARD SIGN
W01-4b

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-4b.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W01-6

NOTES

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

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

STANDARD SIGN
W01-6

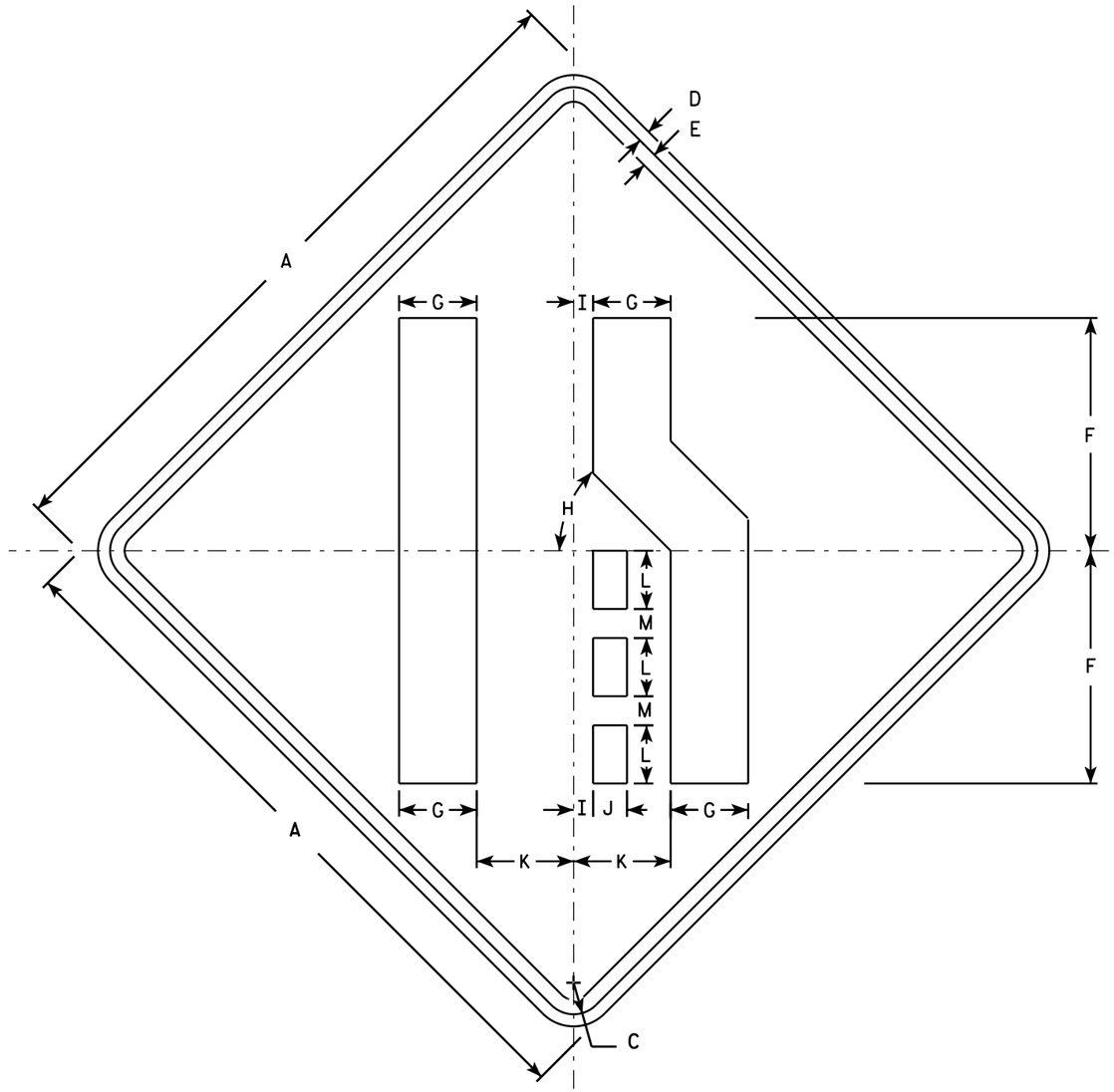
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

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

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



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

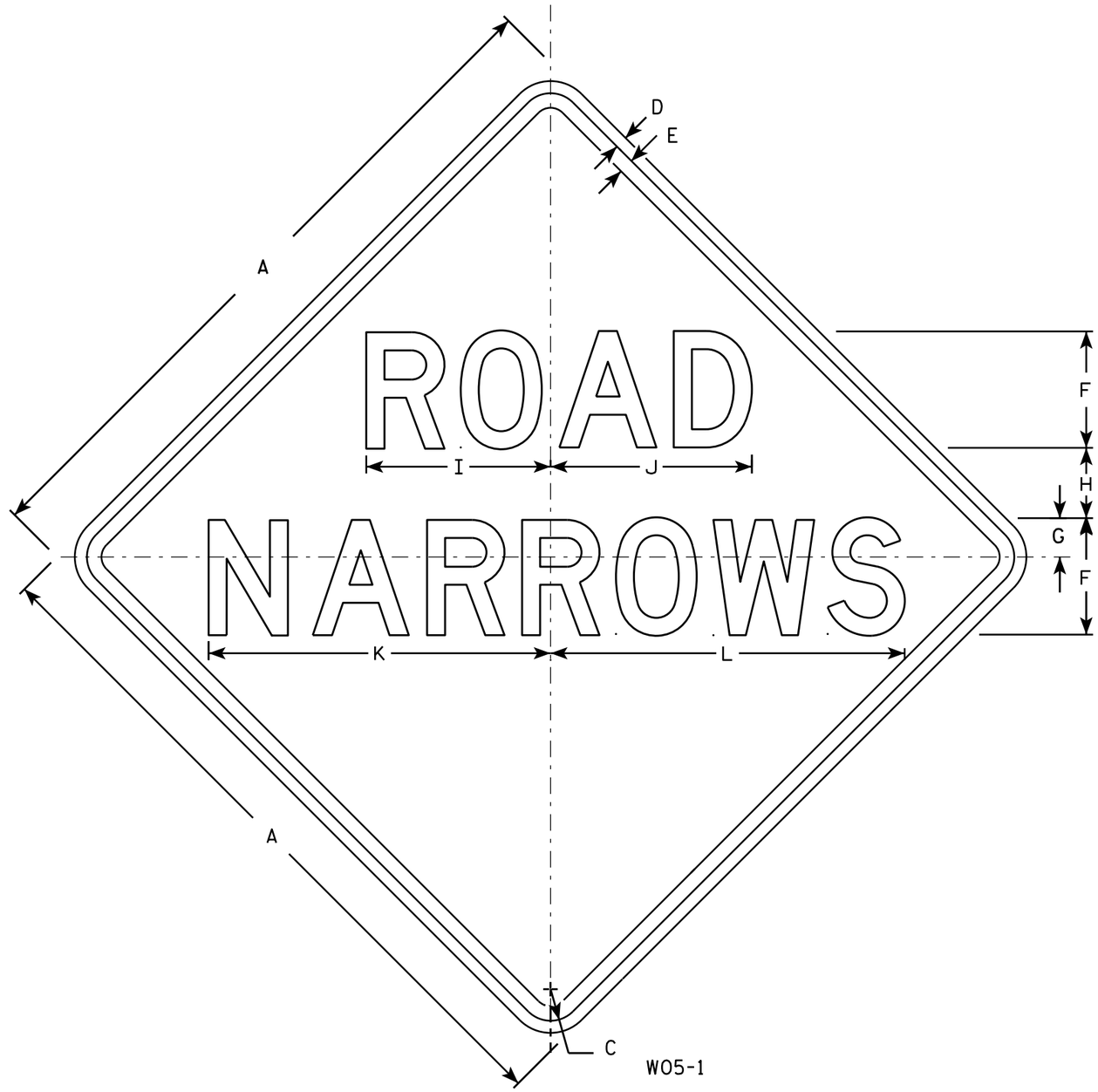
STANDARD SIGN
W04-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 242 W04-2.1

PROJECT NO: | SHEET NO: E



NOTES

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

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	6	2	3 1/2	9 1/2	10 3/8	17 5/8	18 1/4															9.0
2S	48		2 1/4	3/4	1	8	3	4	12 3/4	13 3/4	23 1/2	24 3/8															16.0
2M	48		2 1/4	3/4	1	8	3	4	12 3/4	13 3/4	23 1/2	24 3/8															16.0
3	48		2 1/4	3/4	1	8	3	4	12 3/4	13 3/4	23 1/2	24 3/8															16.0
4	48		2 1/4	3/4	1	8	3	4	12 3/4	13 3/4	23 1/2	24 3/8															16.0
5	48		2 1/4	3/4	1	8	3	4	12 3/4	13 3/4	23 1/2	24 3/8															16.0

STANDARD SIGN
W05-1

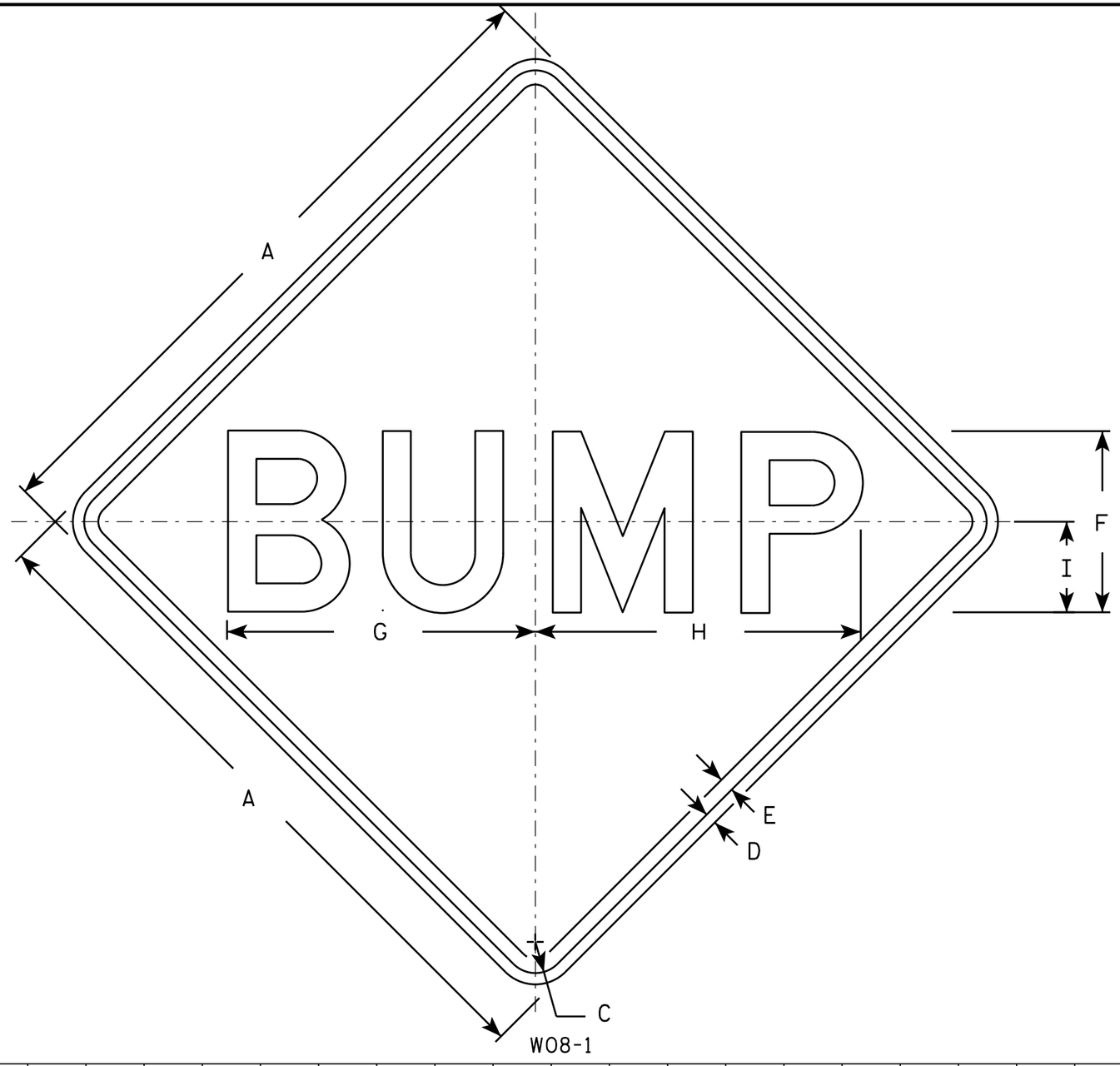
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE NO. W05-1.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W051.DGN PLOT DATE : 20-NOV-2013 11:56 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 6.810445:1.000000
WISDOT/CADDS SHEET 42



NOTES

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

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	10	16 7/8	17 7/8	5																		9.0
2S	48		2 1/4	3/4	1	12	20 3/8	21 5/8	6																		16.0
2M	48		2 1/4	3/4	1	12	20 3/8	21 5/8	6																		16.0
3	48		2 1/4	3/4	1	12	20 3/8	21 5/8	6																		16.0
4	48		2 1/4	3/4	1	12	20 3/8	21 5/8	6																		16.0
5	48		2 1/4	3/4	1	12	20 3/8	21 5/8	6																		16.0

STANDARD SIGN
W08-1

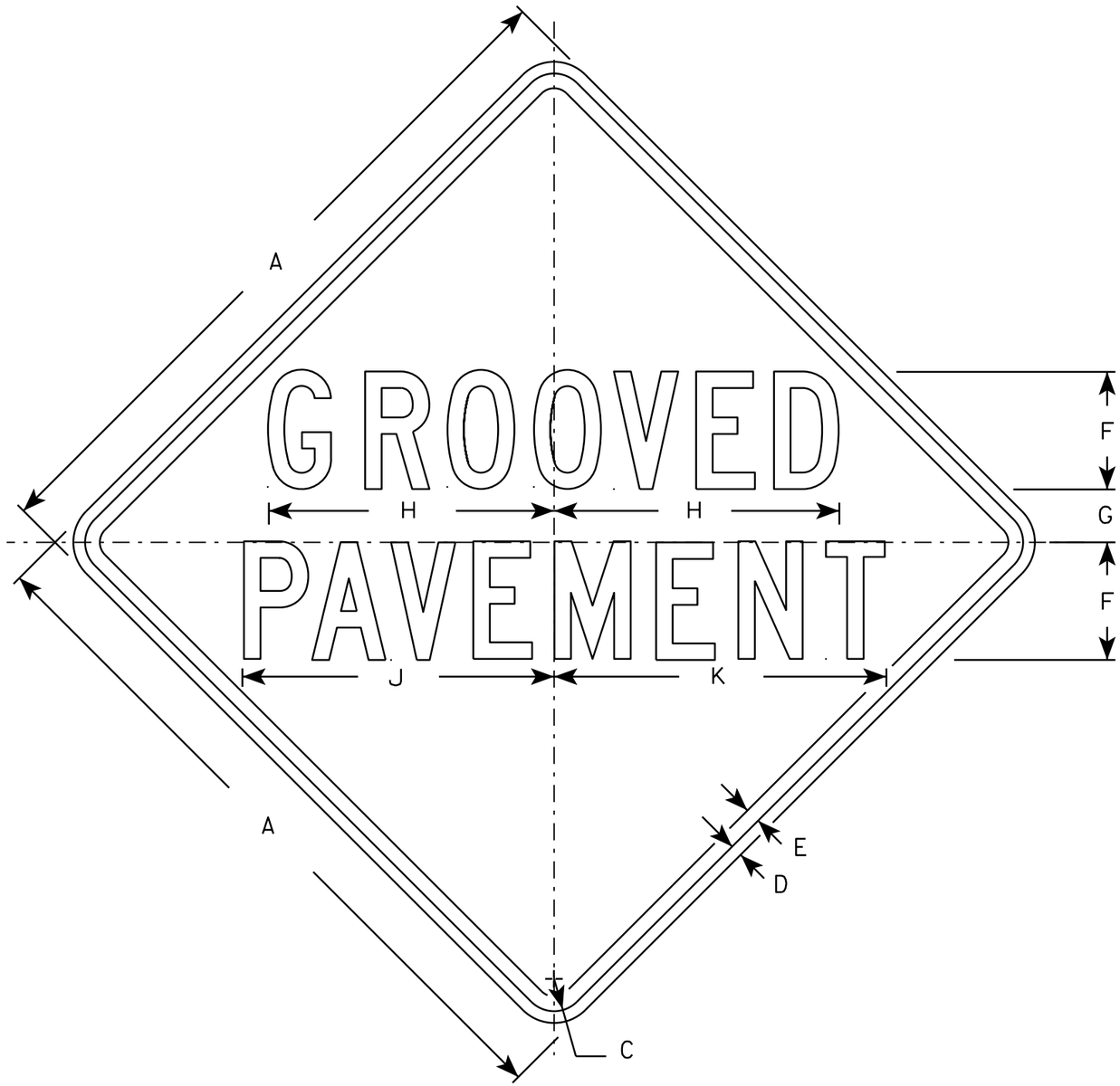
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 1 of 244 W08-1.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W081.DGN PLOT DATE : 20-NOV-2013 12:24 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 6.688833:1.000000 WISDOT/CADDS SHEET 42



W08-52

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.

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	6	2 5/8	14 1/2		15 7/8	17																9.0
2S	48		2 1/4	3/4	1	8	3 1/2	19 3/8		21 1/4	22 5/8																16.0
2M	48		2 1/4	3/4	1	8	3 1/2	19 3/8		21 1/4	22 5/8																16.0
3	48		2 1/4	3/4	1	8	3 1/2	19 3/8		21 1/4	22 5/8																16.0
4	48		2 1/4	3/4	1	8	3 1/2	19 3/8		21 1/4	22 5/8																16.0
5	48		2 1/4	3/4	1	8	3 1/2	19 3/8		21 1/4	22 5/8																16.0

STANDARD SIGN
W08-52

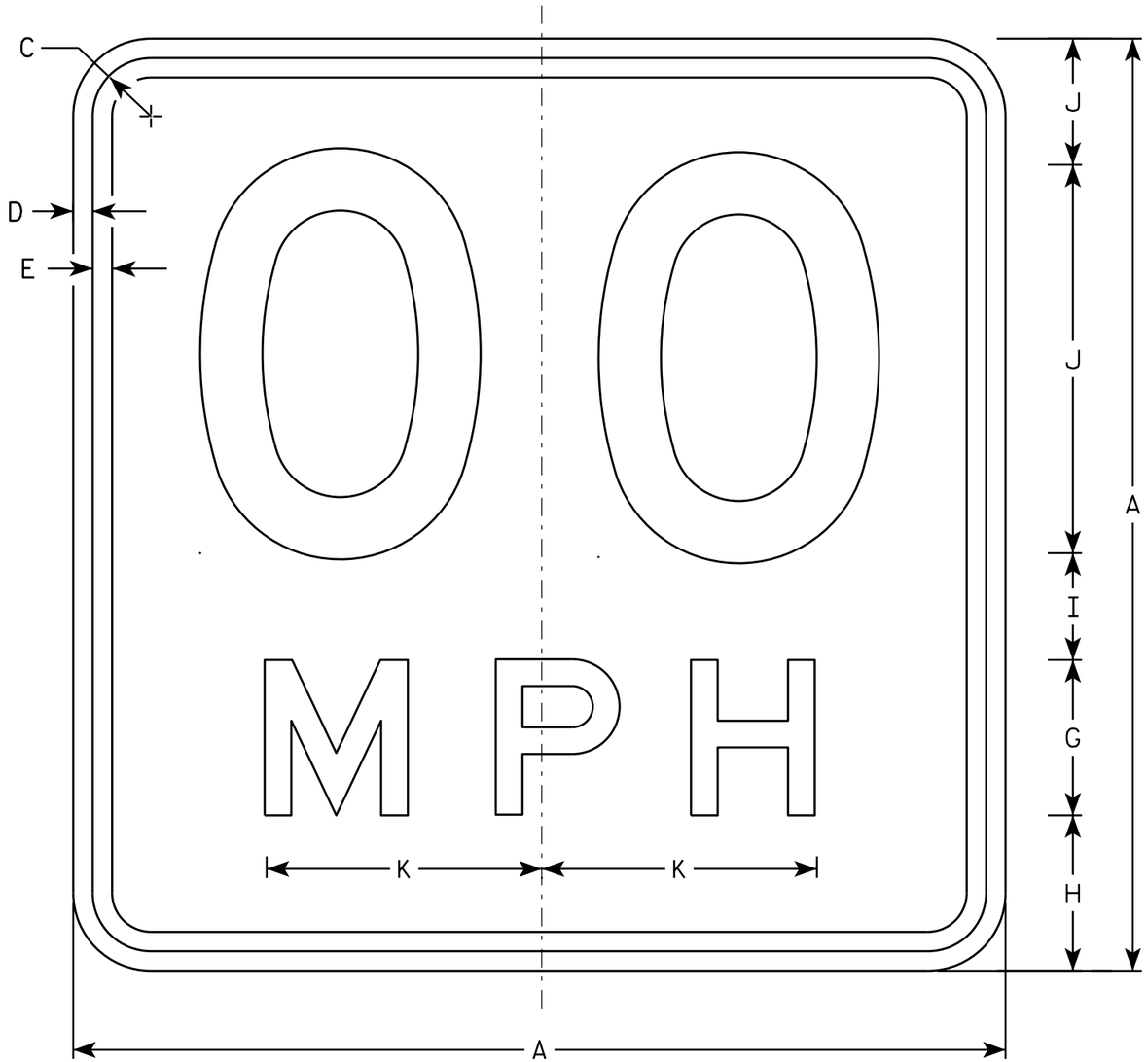
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 11/20/13 PLATE NO W08-52.1

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W0852.DGN PLOT DATE : 28-FEB-2014 11:41 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.997243:1.000000
WISDOT/CADDS SHEET 42



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

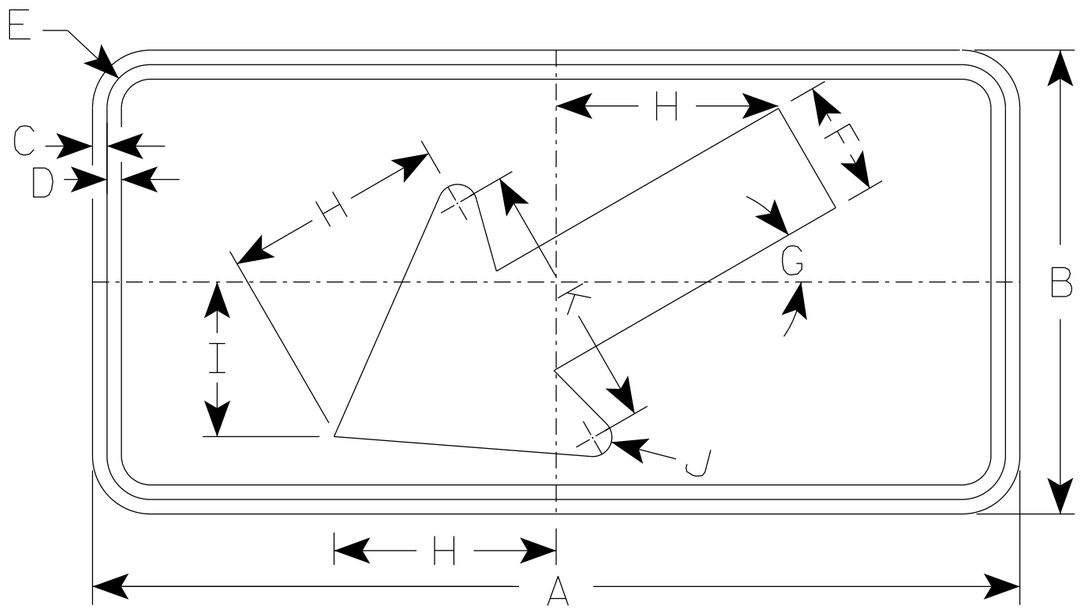
STANDARD SIGN
W013-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/21/13 PLATE 246 W013-1.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W016-7L

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded but corners shall be rounded when base material is metal.
4. W016-7R is the same as W016-L except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
2S	48	24	1/2	5/8	1 3/8	6	30°	11 1/2	8	1	14																8.0
2M	48	24	1/2	5/8	1 3/8	6	30°	11 1/2	8	1	14																8.0
3	48	24	1/2	5/8	1 3/8	6	30°	11 1/2	8	1	14																8.0
4	48	24	1/2	5/8	1 3/8	6	30°	11 1/2	8	1	14																8.0
5	48	24	1/2	5/8	1 3/8	6	30°	11 1/2	8	1	14																8.0

STANDARD SIGN
W016-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/11/18 PLATE NO. W016-7.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 247 | E

Wisconsin Department of Transportation

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