MAD MAY 2014

PROJECT ID: WITH: 5657-00-70 **5310-02-74**

COUNTY: **DANE**

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details (Includes Erosion Control Plans)
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 = 200

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5310-02-74	———	—
5657-00-70	WISC 2014187	1

SPRING GREEN - MADISON PINE BLUFF - V CROSS PLAINS

CTH KP - WESTVIEW CT, VILLAGE OF CROSS PLAINS

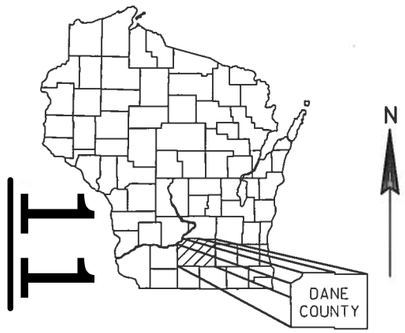
USH 14
DANE COUNTY

STATE PROJECT NUMBER
5310-02-74

BLACK EARTH CREEK BR B-13-0646

CTH P
DANE COUNTY

STATE PROJECT NUMBER
5657-00-70



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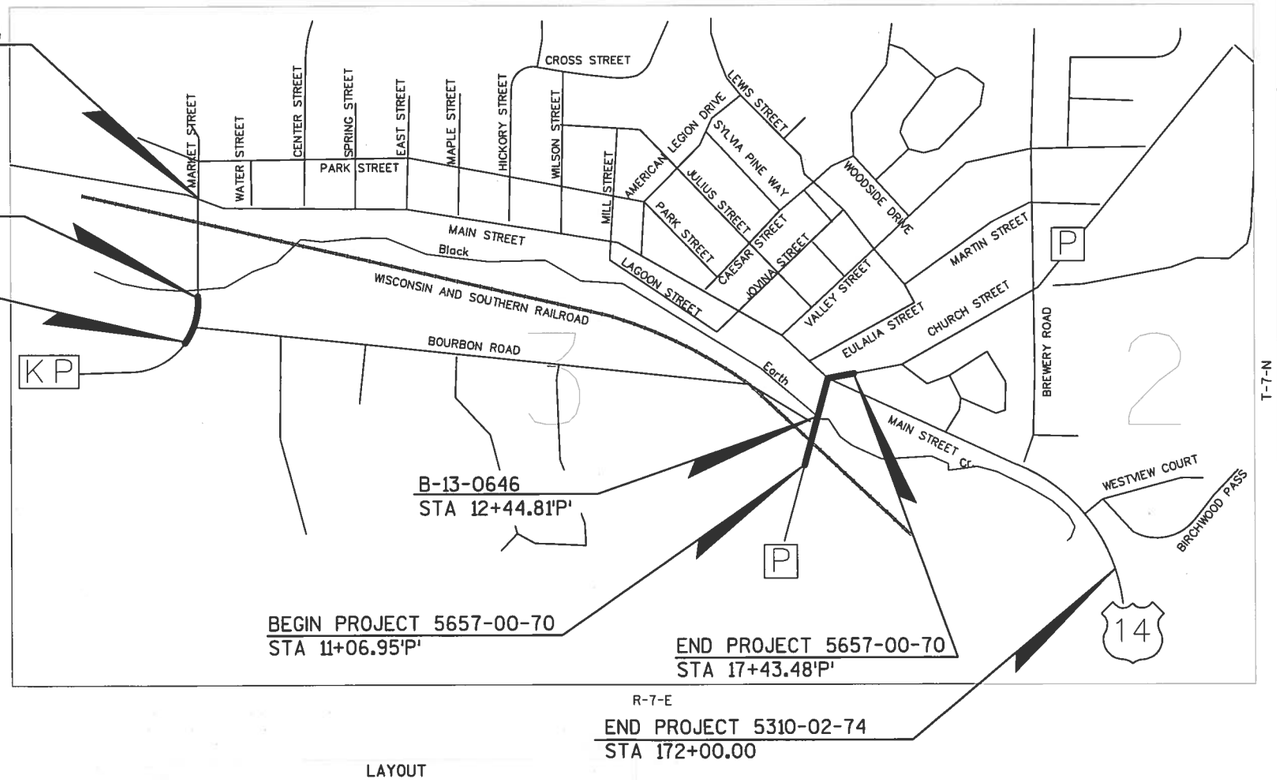

LAYOUT
SCALE 0 0.1 MI.

TOTAL NET LENGTH OF CENTERLINE = 1.271 MI. (5310-02-74)
0.121 MI. (5657-00-70)
TOTAL = 1.392 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), DANE COUNTY. NAD 83 (2007)

DESIGN DESIGNATION

		USH 14	CTH P
A.A.D.T.	2014	= 12,350	= 4,550
A.A.D.T.	2034	= 17,600	= 5,800
D.H.V.	2034	= 1,760	= 580
D.D.		= 60/40	
T.		= 7.2%	
DESIGN SPEED		= 35 M.P.H.	= 30 M.P.H.
ESALS		= 2,533,100	= 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
- 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

ACCEPTED FOR
COUNTY of DANE
2-11-14 (Date) (COMMISSIONER)

ORIGINAL PLANS PREPARED BY
Mead & Hunt
Mead & Hunt, Inc.
6501 Watts Road
Madison, WI 53719
608.273.6380
fax: 608.273.6391
www.meadhunt.com

WISCONSIN PROFESSIONAL ENGINEER
SCOTT A. HASBURGH
E-33329
BARNEVELD, WI
2/5/2014

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
- Surveyor: MEAD & HUNT, INC.
- Designer: MEAD & HUNT, INC.
- Project Manager: LALITHA BALACHANDRAN
- Regional Examiner:
- Regional Supervisor: WILLIAM STROBEL
- C.O. Examiner: JANE ENGLEBRETSEN

APPROVED FOR THE DEPARTMENT
DATE: 2/21/14 William Strobel (Signature)

E

STANDARD ABBREVIATIONS

ABUT	ABUTMENT
AP	ACCESS POINT
AR	ACCESS RIGHTS
AC	ACRE
AGG	AGGREGATE
AH	AHEAD
ET AL	AND OTHERS
∠	ANGLE
ASPH	ASPHALTIC
APM	ASPHALTIC PLANT MIX
AVG	AVERAGE
AADT	ANNUAL AVERAGE DAILY TRAFFIC
B & B	BALLED AND BURLAPPED
B & P	BALLED AND POTTED
BK	BACK
BF	BACK FACE
BR	BARE ROOT
BRP	BARE ROOT POTTED
BL or B/L	BASE LINE
BM	BENCH MARK
BLK	BLOCK
BR	BRIDGE
C	CELSIUS
CB	CATCH BASIN
CL or C/L	CENTER LINE
CC	CENTER TO CENTER
Δ	CENTRAL ANGLE OR DELTA
CH	CHORD
CH BRG	CHORD BEARING
CE	COMMERCIAL ENTRANCE
CONC	CONCRETE
CB#	CONTROL BASE
CORR	CORRUGATED
CACP	CORRUGATED ALUMINUM CULVERT PIPE
CAPA	CORRUGATED ALUMINUM PIPE ARCH
CSCP	CORRUGATED STEEL CULVERT PIPE
CSPA	CORRUGATED STEEL PIPE ARCH
CSPCP	CORRUGATED STEEL PIPE CATTLE PASS
CO	COUNTY
CTH	COUNTY TRUNK HIGHWAY
CR	CREEK
CR	CRUSHED
CABC	CRUSHED AGGREGATE BASE COURSE
m3 -	CUBIC METER
CY or CUYD	CUBIC YARD
CULT	CULTIVATED
CULV	CULVERT
CP	CULVERT PIPE
C & G Curb and Gutter	C & G CURB AND GUTTER
(D) Deed	(D) DEED
DEF	DEFORMED
D	DEGREE OF CURVE
DHV	DESIGN HOUR VOLUME
DIA	DIAMETER
DD	DIRECTIONAL DISTRIBUTION
DISCH	DISCHARGE
DIST	DISTRICT
DG	DITCH GRADE
DOC	DOCUMENT
DWY	DRIVEWAY
E	EAST
X	EAST GRID COORDINATE
EB	EASTBOUND
ELEC	ELECTRIC (AL)
EL or ELEV	ELEVATION
EMB	EMBANKMENT
EOR	END OF RADIUS
EVP	EMERGENCY VEHICLE PREEMPT
EVPR	EMERGENCY VEHICLE PREEMPT RECEIVER
EW	ENDWALL
ENT	ENTRANCE
ESALS	EQUIVALENT SINGLE AXLE LOADS
EST	ESTATE
EXC	EXCAVATION
EBS	EXCAVATION BELOW SUBGRADE
EX or EXIST	EXISTING
EXP	EXPANSION
FF	FACE TO FACE OR FRONT FACE
FP	FENCE POST
FERT	FERTILIZE
FE	FIELD ENTRANCE
F	FILL
FG	FINISH GRADE
FAB	FLASHING ARROW BOARD
FL or F/L Flow	FLOW LINE
FT	FOOT
FTG	FOOTING
FDN	FOUNDATION
FTMS	FREEWAY TRAFFIC MANAGEMENT SYSTEM
G	GARAGE
GN	GRID NORTH
ha	HECTARE
HR	HANDICAP RAMP
HT	HEIGHT
HES	HIGH EARLY STRENGTH
H	HOUSE
CWT	HUNDREDWEIGHT
HYD	HYDRANT
IN DIA	INCH DIAMETER
INTERS	INTERSECTION
I	INTERSECTION ANGLE
INV	INVERT
IP	IRON PIPE OR PIN
JT	JOINT
JCT	JUNCTION
JB#	JUNCTION BOX
kg	KILOGRAM
km	KILOMETER
kPa	KILOPASCAL
LC	LAND CONTRACT
LT	LEFT
LHF	LEFT-HAND FORWARD
L	LENGTH OF CURVE
LIN FT or LF	LINEAR FOOT
L	LITER
LC	LONG CHORD OF CURVE
LS	LUMP SUM
MAINT	MAINTENANCE
MGR	MANAGER
MH	MANHOLE
MP	MARKER POST
M	MARSH
ML or M/L	MATCH LINE
MATL	MATERIAL
Mg	MEGAGRAM
MB	MESSAGE BOARD
m	METER
mm	MILLIMETER
MOR	MIDDLE OF RADIUS
NOM	NOMINAL
NRCPSS	NON REINFORCED CONCRETE PIPE STORM SEWER
NC	NORMAL CROWN
NW or N/W	NORMAL WATER
N	N
Y	NORTH GRID COORDINATE
NB	NORTHBOUND
NO	NUMBER
OBLIT	OBLITERATE
OL	OUT LOT
OD	OUTSIDE DIAMETER
PSD	PASSING SIGHT DISTANCE
PAVT	PAVEMENT
B	PEDESTRIAN PUSH BUTTON
PERM	PERMANENT
PLE	PERMANENT LIMITED EASEMENT
PCP	PIPE CATTLE PASS
PU	PIPE UNDERDRAIN
PUDT	PIPE UNDERDRAIN DRAIN
Tile	TILE
PUU	PIPE UNDERDRAIN UNPERFORATED
PT	POINT
PCC	POINT OF COMPOUND CURVE
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
POC	POC
POT	POINT ON TANGENT
PVC	POLYVINYL CHLORIDE
PCC	PORTLAND CEMENT CONCRETE
LB Pound	LB POUND
PSI	POUNDS PER SQUARE INCH
PE	PRIVATE ENTRANCE
PROJ	PROJECT
PL	PROPERTY LINE
PB#	PULL BOX
QCD	QUITCLAIM DEED
R	RADIUS
RP	RADIUS POINT
RR	RAILROAD
RY	RAILWAY
RM	RAMP METER
R	RANGE
RECY	RECYCLED
RL or R/L	REFERENCE LINE
RP	REFERENCE POINT
RCCP	REINFORCED CONCRETE CULVERT PIPE
Culvert Pipe	CULVERT PIPE
RCHECP	REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CULVERT PIPE
RCPA	REINFORCED CONCRETE PIPE ARCH
RCPCP	REINFORCED CONCRETE PIPE CATTLE PASS
RCPSS	REINFORCED CONCRETE PIPE STORM SEWER
REBAR	REINFORCEMENT BAR
REINF	REINFORCING OR REINFORCEMENT
REL	RELOCATE (D)
REM	REMAINING
REP	REPRESENTATIVE
REQD	REQUIRED
RES	RESIDENCE OR RESIDENTIAL
RW	RETAINING WALL
RT	RIGHT
RHF	RIGHT-HAND FORWARD
R/W	RIGHT-OF-WAY
R	RIVER
RD	ROAD
RDWY	ROADWAY
SALV	SALVAGED
SSS	SANITARY AND STORM SEWER
SAN S	SANITARY SEWER
SEC	SECTION
SHLDR	SHOULDER
SHR	SHRINKAGE
SW	SIDEWALK
SB#	SIGNAL BASE
S	SOUTH
SB	SOUTHBOUND
SP	SPECIAL
SC	SPECIAL CROSSING
SPECS	SPECIFICATIONS
SQ	SQUARE
SF or SQ FT	SQUARE FEET
m2	SQUARE METER
SY or SQ YD	SQUARE YARD
STD	STANDARD
SDD	STANDARD DETAIL DRAWINGS
STH	STATE TRUNK HIGHWAYS
STA	STATION
SSD	STOPPING SIGHT DISTANCE
SS	STORM SEWER
SPP	STRUCTURAL PLATE PIPE
SPPA	STRUCTURAL PLATE PIPE ARCH
STR	STRUCTURE OR STRUCTURAL
SUBD	SUBDIVISION
SE	SUPERELEVATION
SURF	SURFACE
SL or S/L	SURVEY LINE
T	TANGENT
TEL	TELEPHONE
TEMP	TEMPORARY
TI	TEMPORARY INTEREST
TLE	TEMPORARY LIMITED EASEMENT
TPM	TEMPORARY PAVEMENT MARKING
TPMRT	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE
MBM	THOUSAND FEET BOARD
Measure	MEASURE
t	TON
TC	TOP OF CURB
T or TN	TOWN
TRANS	TRANSITION
TL or T/L	TRANSIT LINE
T	TRUCKS (PERCENT OF)
TYP	TYPICAL
UG	UNDERGROUND
USH	UNITED STATES HIGHWAY
VAR	VARIABLE
V	VELOCITY OR DESIGN SPEED
VERT	VERTICAL
VC	VERTICAL CURVE
VPCC	VERTICAL POINT OF COMPOUND
Curve	CURVE
VPC	VERTICAL POINT OF CURVE
VPI	VERTICAL POINT OF INTERSECTION
VPRC	VERTICAL POINT OF REVERSE CURVE
VPT	VERTICAL POINT OF TANGENCY
VIT	VITRIFIED
VOL	VOLUME
W	WATER
WM	WATER MAIN
WV	WATER VALVE
W	WELL
W	WEST
WB	WESTBOUND
YD	YARD

ORDER OF SECTION 2 SHEETS

PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
REMOVAL PLAN
INTERSECTION DETAILS
EROSION CONTROL PLAN
STORM SEWER
SIGNING DETAILS
TRAFFIC SIGNAL DETAILS
PAVEMENT MARKING DETAILS
TRAFFIC CONTROL DETAILS
DETOUR PLAN
ALIGNMENT DETAILS

2

CONSULTANT CONTACT

MEAD & HUNT, INC.
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MADISON, WI 53719-2700

ATTN: MR. SCOTT HASBURGH, P.E.
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E-MAIL: scott.hasburgh@meadhunt.com

DNR LIAISON

DEPARTMENT OF NATURAL RESOURCES
SOUTH CENTRAL DISTRICT
3911 SOUTH FISH HATCHERY ROAD
FITCHBURG, WI 53711

ATTN: MR. ERIC HEGGELUND
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E-MAIL: Eric.Heggelund@wisconsin.gov

DANE COUNTY HIGHWAY DEPARTMENT

DANE COUNTY HIGHWAY DEPARTMENT
2302 FISH HATCHERY ROAD
MADISON, WI 53713

ATTN: MS. PAM DUNPHY, P.E.
TELEPHONE: 608-266-4036
E-MAIL: dunphy@countyofdane.com

UTILITY CONTACTS

TDS TELECOM (MID PLAINS)

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MADISON, WI

TELEPHONE: 608-279-7104
E-MAIL: Jerry.Myers@tdstelecom.com

MADISON GAS & ELECTRIC

GAS
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MADISON, WI 53788

TELEPHONE: 608-444-9620
E-MAIL: Sbeversdorf@mge.com

CHARTER

COMMUNICATION
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2701 DANIELS ST
MADISON, WI 53718

TELEPHONE: 608-575-6415
E-MAIL: Randall.Lettman@charter.com

MADISON GAS & ELECTRIC

ELECTRIC
ATTN: MR RICH PARKER
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TELEPHONE: 608-444-9619
E-MAIL: Rparker@mge.com

EPIC

ATTN: MR. RANDY REINTS
1390 GATEWAY BLVD.
BELOIT, WI 53511-9799

TELEPHONE 608-856-7285
CELL: 815-378-9098
E-MAIL: RReints@themorsegroup.com

VILLAGE OF CROSS PLAINS

WATER & SEWER
ATTN: MR. JERRY GRAY
2107 JULIUS STREET
CROSS PLAINS, WI 53528

TELEPHONE: 608-798-3241 x109
E-MAIL: jerry@cross-plains.wi.us

WISCONSIN AND SOUTHERN RAILROAD

MADISON TERMINAL
ATTN: MR.ROGER SCHAALMA
1890 E JOHNSON STREETMADISON, WI
53704-4745TELEPHONE: 414-438-8820
E-MAIL: Rschmaalma@watcocompanies.com

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

GENERAL NOTES

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO NAVD 88 (2007).

WHEN THE QUANTITY OF BASE AGGREGATE OR ASPHALTIC SURFACE IS MEASURED FOR PAYMENT BY THE TON OR CUBIC YARD, THE DEPTH OR THICKNESS OF THE LAYER SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

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

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

CURVE DATA IS BASED ON THE ARC DEFINITION.

THE EXACT LOCATION OF THE EROSION CONTROL DEVICES SHALL BE DETERMINED IN THE FIELD.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, ARE TO BE 4-INCH TOPSOILED, FERTILIZED, SEEDED AND MULCHED OR MATTED. FINISHED SODDED/AND/SEEDED SURFACE SHALL BE 1-INCH BELOW THE TOP OF ADJACENT CONCRETE.

BEARINGS SHOWN ON THE PLANS ARE TRUE BEARINGS TO THE NEAREST SECOND.

THE LOCATION OF ALL DRIVEWAYS WILL BE DETERMINED BY THE ENGINEER.

ALL CURB AND GUTTER RADII, PAVEMENT DIMENSIONS AND STATIONS ARE SHOWN TO THE EDGE OF PAVEMENT UNLESS NOTED OTHERWISE.

CONSTRUCT INSIDE EDGE OF SIDEWALK ¼ INCH HIGHER THAN THE TOP OF CURB, WHEN THEY ARE ADJACENT TO EACH OTHER.

A VERTICAL SAWCUT SHALL BE MADE THROUGH EXISTING DRIVEWAYS AND PAVEMENTS AT REMOVAL LIMITS.

TOP OF CASTING ELEVATIONS SHOWN FOR INLETS REFER TO THE CASTING ELEVATION AT THE FRONT EDGE OF CASTING.

CONSTRUCTION PERMITS FOR SIDEWALK AND/OR DRIVEWAY CONSTRUCTION HAVE BEEN OBTAINED AND SUCH RIGHTS WILL BE EXTENDED TO THE CONTRACTOR.

ALL STORM SEWER INVERTS, ELEVATIONS, PIPE LENGTHS, AND GRADES ARE COMPUTED CENTER-TO-CENTER OF STRUCTURES.

THE CONTRACTOR'S PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, PASSING OR PARKING LANE.

ASPHALTIC SURFACE/HMA PAVEMENT SHALL BE CONSTRUCTED WITH THE FOLLOWING LAYER THICKNESSES:

PAVEMENT THICKNESS (INCH)	LOWER (INCH)	NOM AGG SIZE (mm)	LOWER (INCH)	NOM AGG SIZE (mm)	UPPER (INCH)	NOM AGG SIZE (mm)
5.75	2.25	12.5	1.75	12.5	1.75	12.5
2.50	---	---	---	---	2.50	12.5
6.00	2.75	12.5	2.00	12.5	1.75	12.5

CURB RAMP TYPES ARE SHOWN ON PLAN SHEETS.

SILT FENCE IS TO BE PLACED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER, AND IN PLACE PRIOR TO BRIDGE REMOVAL.

EXISTING PIPE CULVERT AND/OR CONCRETE BOX CULVERT SIZES SHOWN ARE APPROXIMATE AND THE CONTRACTOR SHALL BASE ITS BID ON ACTUAL FIELD CONDITIONS.

HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN.

THE EROSION CONTROL ITEMS SHOWN ON THE PLANS ARE AT SUGGESTED LOCATIONS. THE ENGINEER SHALL CONFIM THE LOCATION OF EROSION CONTROL ITEMS. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY. AT THAT TIME, THE CONTRACTOR SHALL REMOVE THE TEMPORARY EROSION CONTROL ITEM INCIDENTAL TO THE COST OF THE RESPECTIVE BID ITEM

NO EQUIPMENT OF MATERIALS SHALL BE STORED OR IMPACT ANY WETLANDS OR WATERWAYS.

2

N

BEGIN PROJECT 5310-02-74
STA 104+89.00

BEGIN CONSTRUCTION
STA 199+91.92'KP'

END CONSTRUCTION
STA 202+40.11'KP'

END PROJECT 5657-00-70
STA 17+43.48'P'

BEGIN PROJECT 5657-00-70
STA 11+06.95'P'

END PROJECT 5310-02-74
STA 172+00.00

B-13-0646

USH 14

CTH KP

CTH P

BOURBON RD

CHURCH STREET

BREWERY ROAD

MAIN STREET

WATER STREET

CENTER STREET

SPRING STREET

EAST STREET

MAPLE STREET

HICKORY STREET

WILSON STREET

MILL STREET

AMERICAN LEGION DRIVE

CAESAR STREET

JOVINA STREET

VALLEY STREET

EULALIA STREET

LUDDEN DR

CONTINENTAL DR

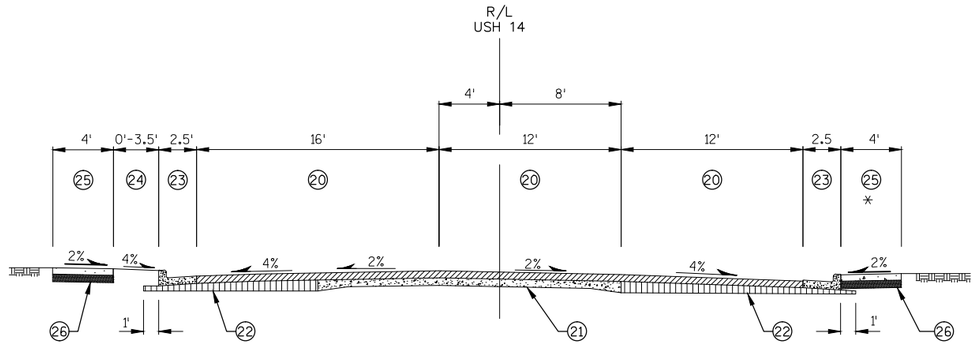
HILLEBRAND

WESTVIEW COURT

PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	PROJECT OVERVIEW	SHEET 4	E

FILE NAME : X:\3230900\113688.02\TECH\CAD\53100200\SHEETSPLAN\CTH P\020201_PO.DWG PLOT DATE : 2/20/2014 1:29 PM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1 IN:400 FT

2



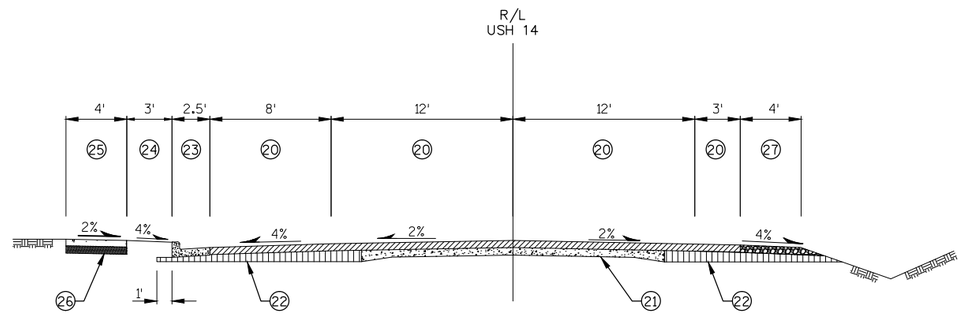
EXISTING TYPICAL SECTION

USH 14

STA 142+54 TO STA 147+34

VALLEY STREET TO CTH P

* END SIDEWALK RIGHT STA 144+55 TO STA 147+34



EXISTING TYPICAL SECTION

USH 14

STA 147+34 TO STA 159+99

CTH P TO BREWERY ROAD

KEY

20 EXISTING 2½" - 7¼" RECYCLED SURFACE

21 EXISTING 6½" - 9" CONCRETE PAVEMENT

22 EXISTING CRUSHED AGGREGATE

23 EXISTING CONCRETE CURB & GUTTER

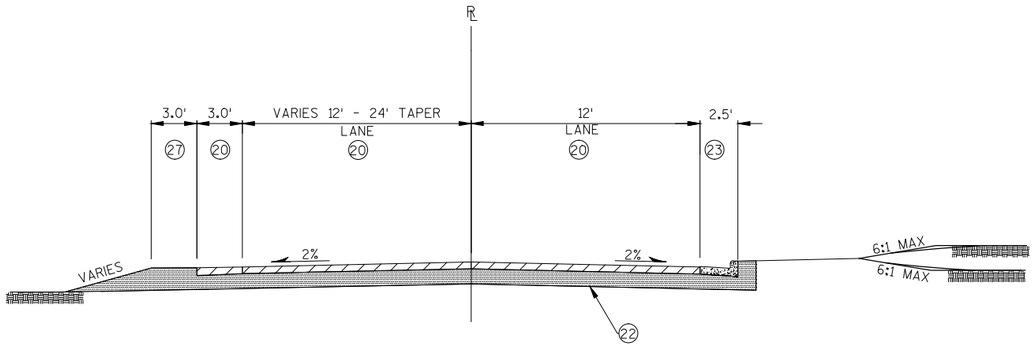
24 EXISTING TERRACE

25 EXISTING 3" - 6" CONCRETE SIDEWALK

26 EXISTING 3" AGGREGATE BASE

27 EXISTING SHOULDER CRUSHED AGGREGATE

PROJECT NO:5310-02-74/5657-00-70	HWY:USH 14	COUNTY:DANE	EXISTING TYPICAL SECTIONS	SHEET 5	E

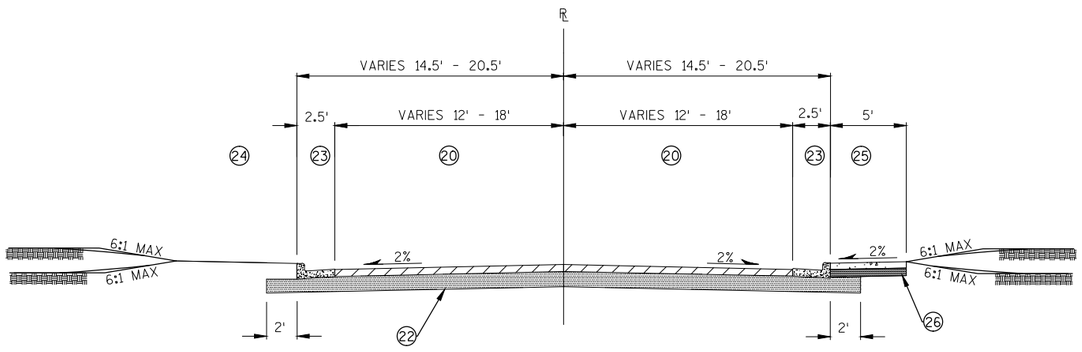


EXISTING TYPICAL SECTION

CTH KP

BOURBON ROAD TO BLACK EARTH CREEK BRIDGE

STA 199+91.92'KP' TO STA 202+40.11'KP'



EXISTING TYPICAL SECTION

CTH KP

BLACK EARTH CREEK TO USH 14

KEY

20 EXISTING 4" - 6" RECYCLED SURFACE

21 EXISTING 6½" - 9" CONCRETE PAVEMENT

22 EXISTING CRUSHED AGGREGATE

23 EXISTING CONCRETE CURB & GUTTER

24 EXISTING TERRACE

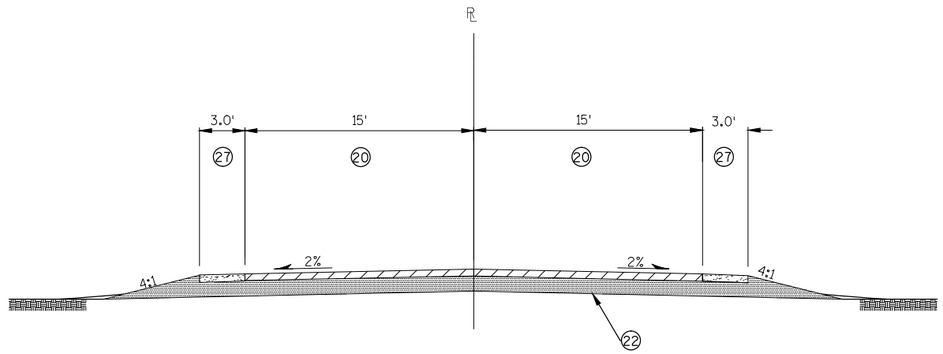
25 EXISTING 3" - 6" CONCRETE SIDEWALK

26 EXISTING 3" AGGREGATE BASE

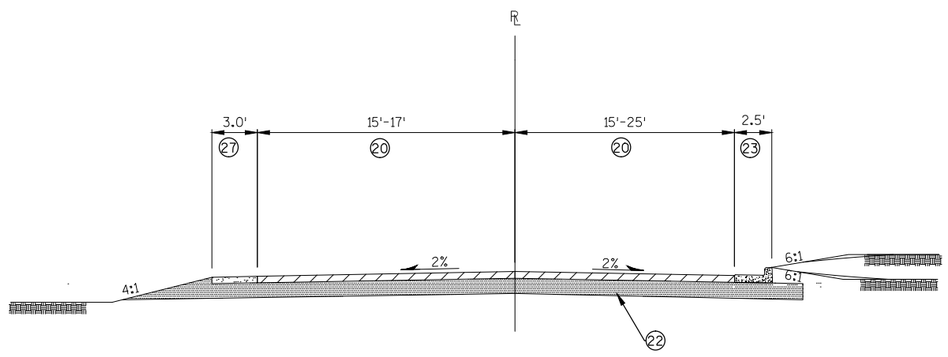
27 EXISTING SHOULDER CRUSHED AGGREGATE

PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	EXISTING TYPICAL SECTIONS	SHEET 6	E

2



EXISTING TYPICAL SECTION
CTH P
STA 11+06.95'P' TO STA 13+39.00'P'

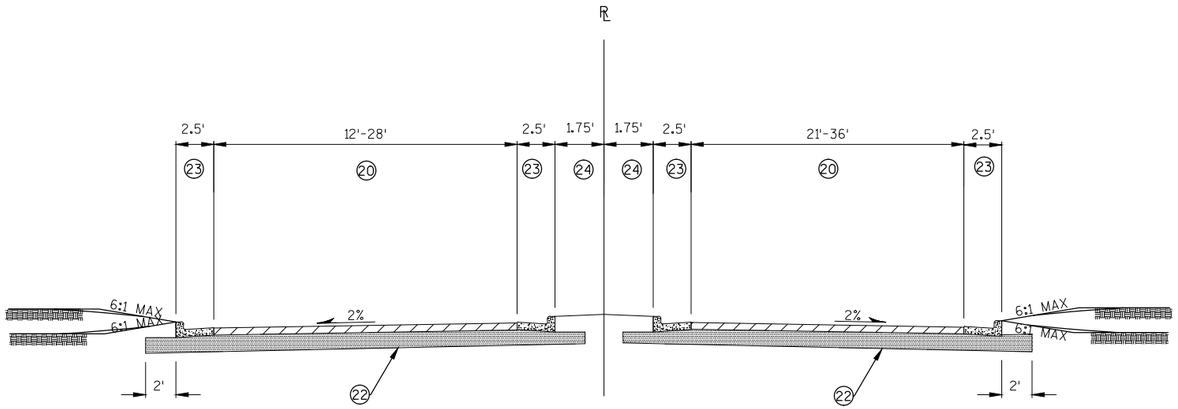


EXISTING TYPICAL SECTION
CTH P
STA 13+39'P' TO STA 14+34'P'

KEY

20 EXISTING 2½" - 7¼" RECYCLED SURFACE
21 EXISTING 6½" - 9" CONCRETE PAVEMENT
22 EXISTING CRUSHED AGGREGATE
23 EXISTING CONCRETE CURB & GUTTER
24 EXISTING TERRACE
25 EXISTING 3" - 6" CONCRETE SIDEWALK
26 EXISTING 3" AGGREGATE BASE
27 EXISTING SHOULDER CRUSHED AGGREGATE

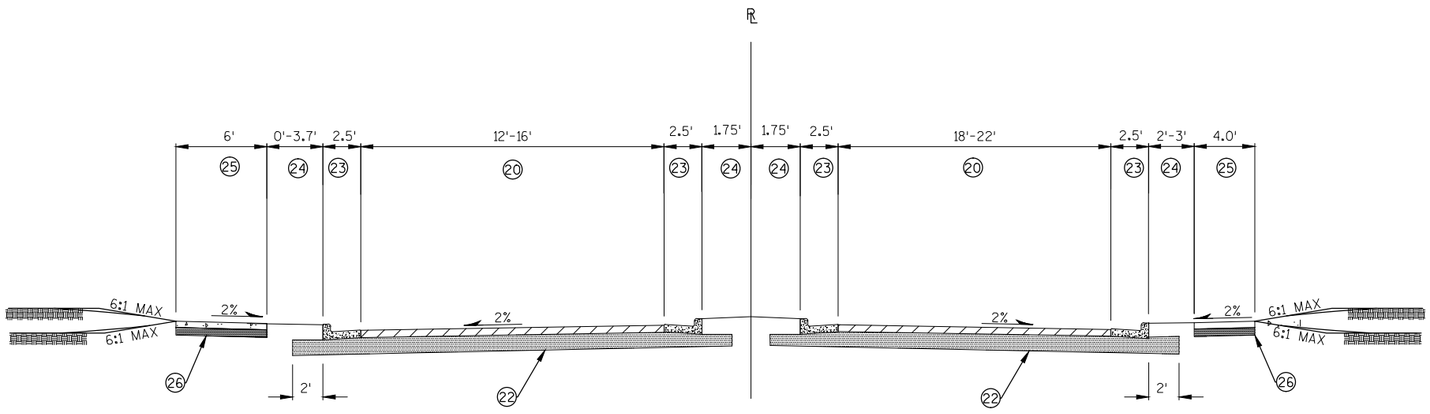
PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	EXISTING TYPICAL SECTIONS	SHEET 7	E



EXISTING TYPICAL SECTION

CTH P

STA 14+34'P' TO STA 14+73'P'



EXISTING TYPICAL SECTION

CTH P

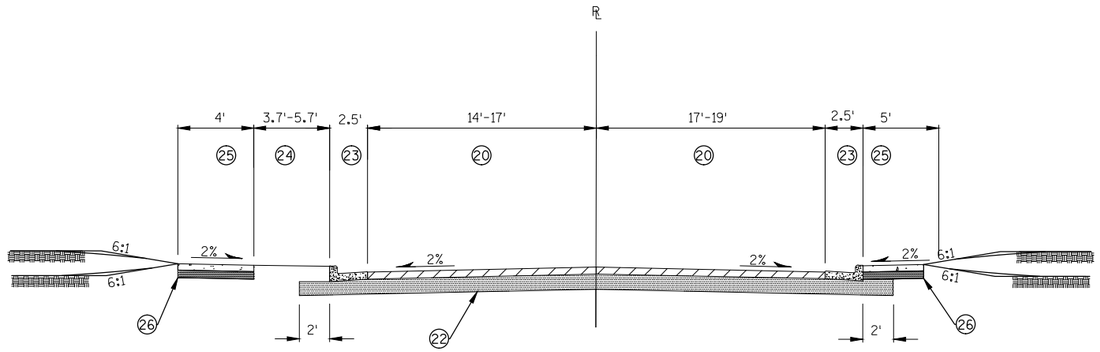
STA 15+41'P' TO STA 16+76'P'

KEY

- (20) EXISTING 2½" - 7¼" RECYCLED SURFACE
- (21) EXISTING 6½" - 9" CONCRETE PAVEMENT
- (22) EXISTING CRUSHED AGGREGATE
- (23) EXISTING CONCRETE CURB & GUTTER
- (24) EXISTING TERRACE
- (25) EXISTING 3" - 6" CONCRETE SIDEWALK
- (26) EXISTING 3" AGGREGATE BASE
- (27) EXISTING SHOULDER CRUSHED AGGREGATE

PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	EXISTING TYPICAL SECTIONS	SHEET 8	E

2

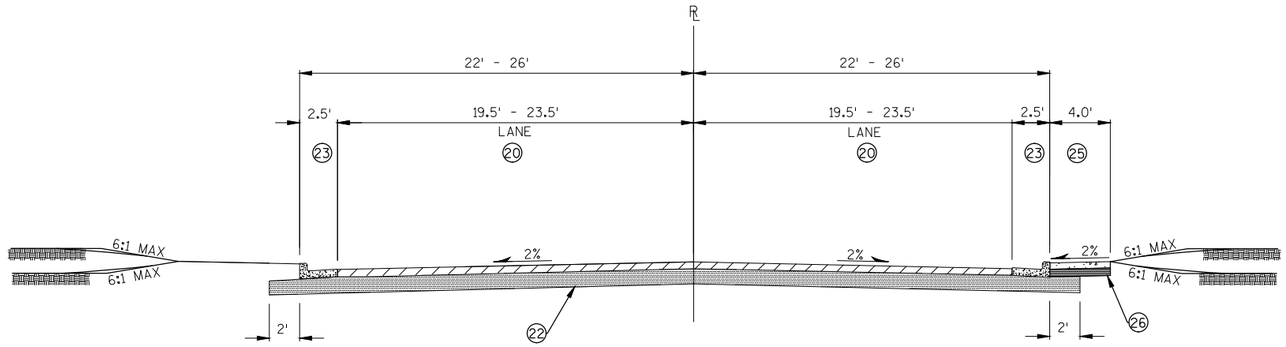


EXISTING TYPICAL SECTION
STA 16+76'P' TO STA 17+43'P'

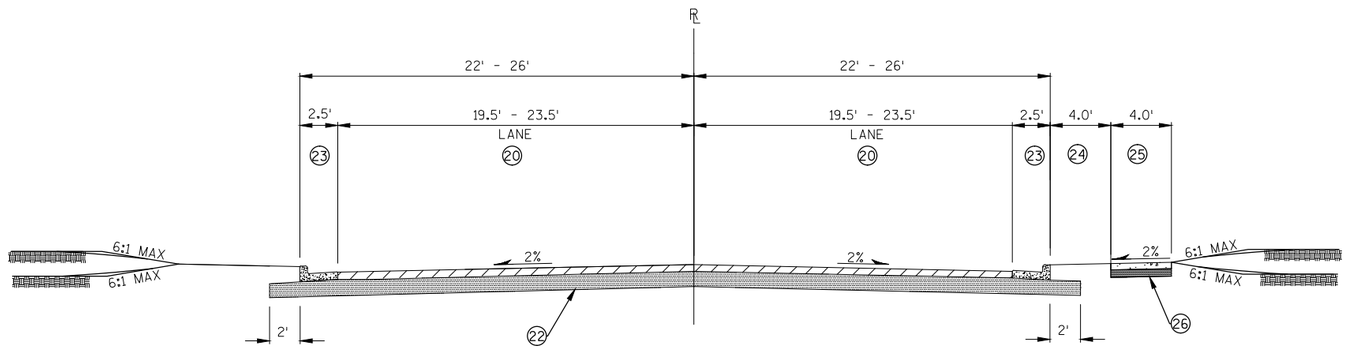
KEY

(20) EXISTING 2½" - 7¼" RECYCLED SURFACE
(21) EXISTING 6½" - 9" CONCRETE PAVEMENT
(22) EXISTING CRUSHED AGGREGATE
(23) EXISTING CONCRETE CURB & GUTTER
(24) EXISTING TERRACE
(25) EXISTING 3" - 6" CONCRETE SIDEWALK
(26) EXISTING 3" AGGREGATE BASE
(27) EXISTING SHOULDER CRUSHED AGGREGATE

PROJECT NO:5310-02-74/5657-00-70	HWY:USH 14	COUNTY:DANE	EXISTING TYPICAL SECTIONS	SHEET 9	E



EXISTING TYPICAL SECTION
BOURBON ROAD
CTH KP - LUDDEN DRIVE
STA 72+91'0" TO STA 79+00'0"

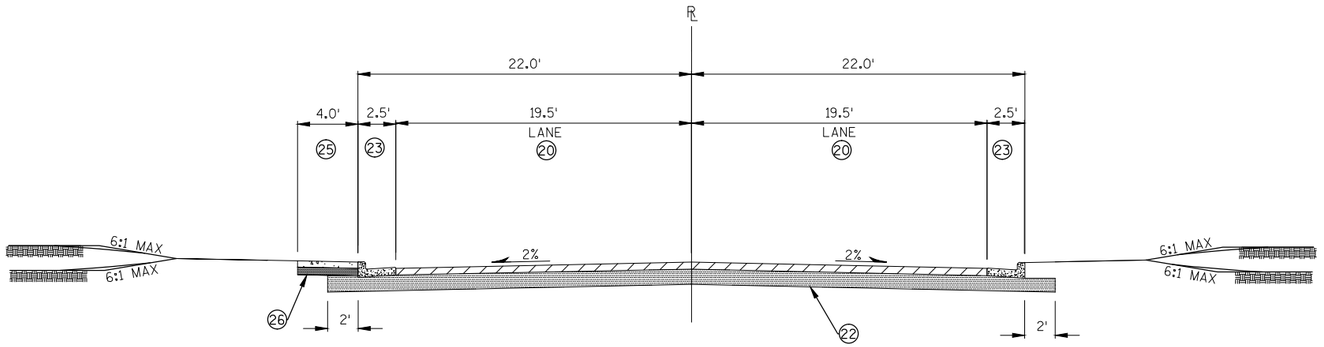


EXISTING TYPICAL SECTION
BOURBON ROAD
LUDDEN DRIVE TO HILLEBRAND DRIVE
STA 79+00'0" TO STA 96+00'0"

KEY

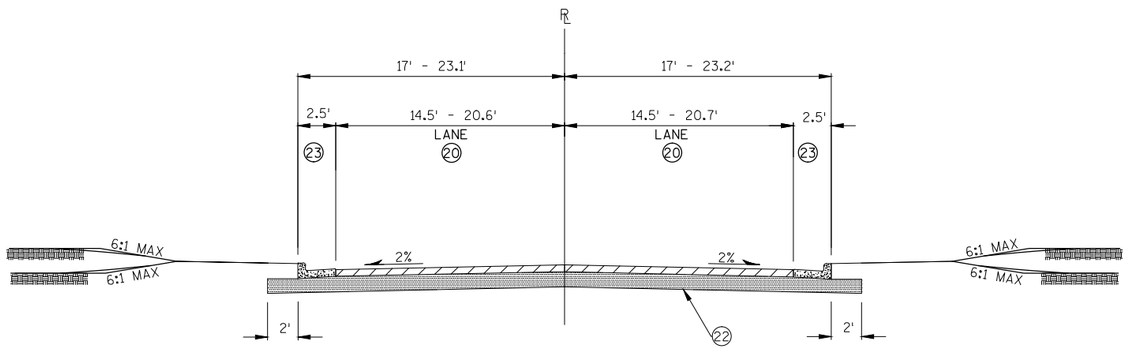
20 EXISTING 4½" ASPHALTIC PAVEMENT
21 MILL AND OVERLAY - 2" HMA
22 EXISTING CRUSHED AGGREGATE - 18"
23 EXISTING CONCRETE CURB & GUTTER - 30"
24 EXISTING TERRACE
25 EXISTING 3" - 6" CONCRETE SIDEWALK
26 EXISTING 3" AGGREGATE BASE
27 EXISTING SHOULDER CRUSHED AGGREGATE

PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	EXISTING TYPICAL SECTIONS	SHEET 10	E



EXISTING TYPICAL SECTION

BOURBON ROAD
HILLEBRAND DRIVE TO WSOR
STA 96+00'0' TO STA 107+85'0'



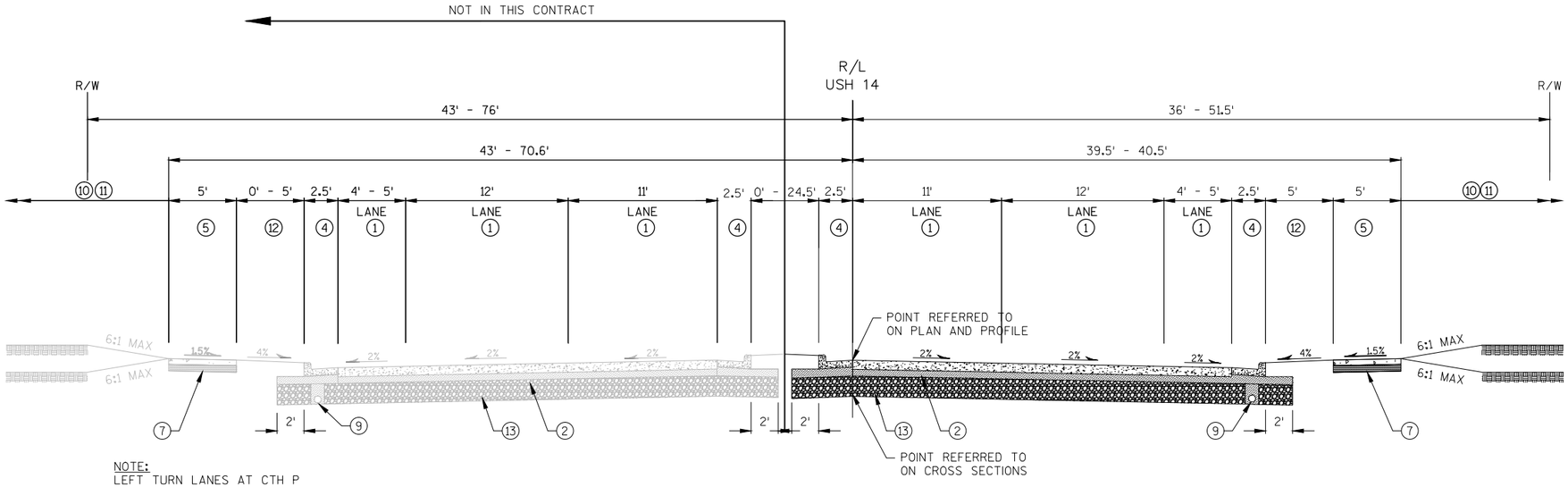
EXISTING TYPICAL SECTION

BOURBON ROAD
WSOR TO CTH P
STA 107+85'0' TO STA 111+50'0'

KEY

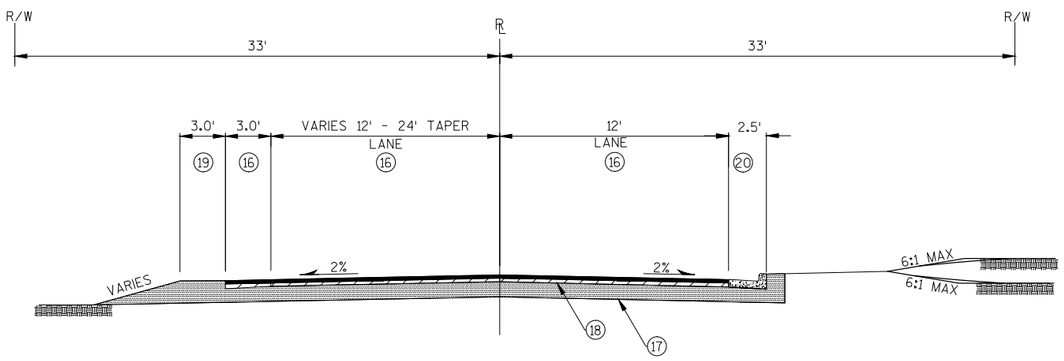
20 EXISTING 4½" ASPHALTIC PAVEMENT
21 MILL AND OVERLAY - 2" HMA
22 EXISTING CRUSHED AGGREGATE - 18"
23 EXISTING CONCRETE CURB & GUTTER - 30"
24 EXISTING TERRACE
25 EXISTING 3" - 6" CONCRETE SIDEWALK
26 EXISTING 3" AGGREGATE BASE
27 EXISTING SHOULDER CRUSHED AGGREGATE

PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	EXISTING TYPICAL SECTIONS	SHEET 11	E



NOTE:
LEFT TURN LANES AT CTH P INTERSECTION AND LEFT TURN LANE AT GLACIER'S EDGE INTERSECTION NOT SHOWN FOR CLARITY.

FINISHED TYPICAL SECTION
USH 14
STA 147+89 TO STA 149+00
VALLEY STREET TO GLACIER'S EDGE SQUARE

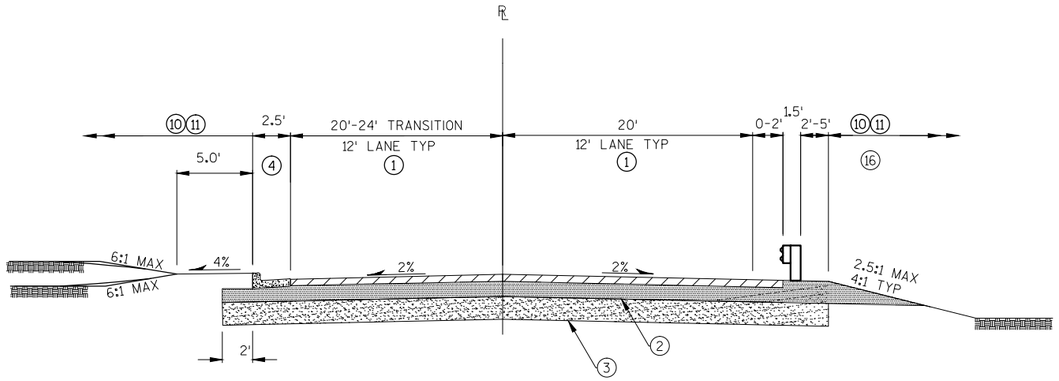


FINISHED TYPICAL SECTION
CTH KP
BOURBON ROAD TO BLACK EARTH CREEK BRIDGE
STA 199+91.92'KP' TO STA 202+40.11'KP'

KEY

1. CONCRETE PAVEMENT 8–INCH
2. 6" BASE AGGREGATE DENSE 1¼-INCH
3. 12" SELECT CRUSHED MATERIAL ON GEOGRID
4. CONCRETE CURB & GUTTER 30-INCH TYPE A
5. CONCRETE SIDEWALK 4-INCH
6. 6" BASE AGGREGATE DENSE 1¼-INCH
7. 4" BASE AGGREGATE DENSE 1¼-INCH
9. EDGEDRAIN
10. TOPSOIL
11. SEEDING MIXTURE NO 40, SEEDING TEMPORARY AND FERTILIZER TYPE B
12. SOD LAWN
13. 18" SELECT CRUSHED MATERIAL ON GEOGRID
14. 4" HMA PAVEMENT
15. 4" BASE AGGREGATE DENSE ¾-INCH
16. 2½" MILL AND OVERLAY, HMA PAVEMENT TYPE E-3
17. EXISTING BASE
18. EXISTING ASPHALTIC PAVEMENT
19. 2½" BASE AGGREGATE DENSE ¾-INCH
20. CURB AND GUTTER TO REMAIN

PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	FINISHED TYPICAL SECTIONS	SHEET 12	E

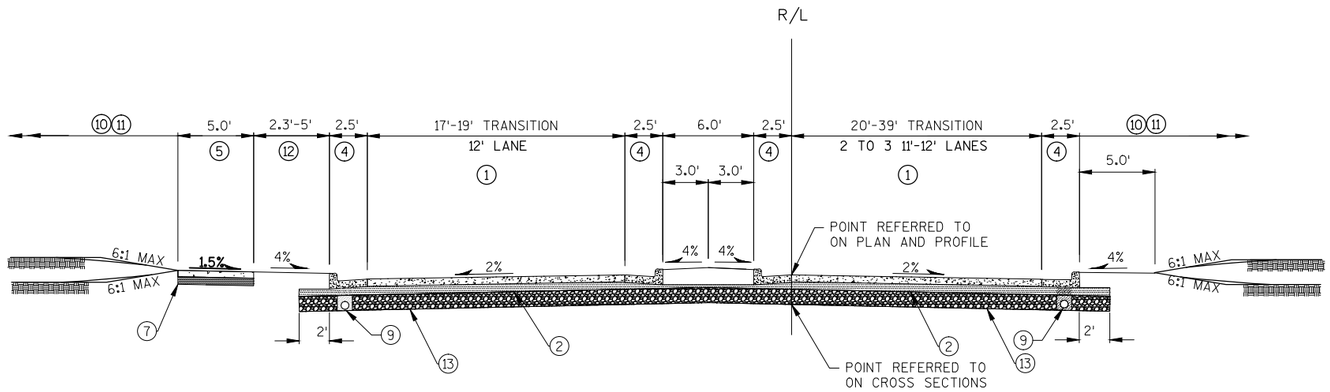


FINISHED TYPICAL SECTION
CTH P
STA 11+43.11'P' TO STA 12+44.81'P'

KEY

① 5¾" HMA PAVEMENT
② 12" BASE AGGREGATE DENSE 1¼-INCH
③ 12" SELECT CRUSHED MATERIAL ON GEOGRID
④ CONCRETE CURB & GUTTER 30-INCH TYPE D
⑤ CONCRETE SIDEWALK 4-INCH
⑥ 6" BASE AGGREGATE DENSE 1¼-INCH
⑦ 4" BASE AGGREGATE DENSE 1¼-INCH
⑨ EDGEDRAIN
⑩ TOPSOIL
⑪ SEEDING MIXTURE NO 40, SEEDING TEMPORARY AND FERTILIZER TYPE B
⑫ SOD LAWN
⑬ 18" SELECT CRUSHED MATERIAL ON GEOGRID
⑭ 4" HMA PAVEMENT
⑮ 4" BASE AGGREGATE DENSE ¾-INCH
⑯ EROSION MAT CLASS I, TYPE A URBAN

2



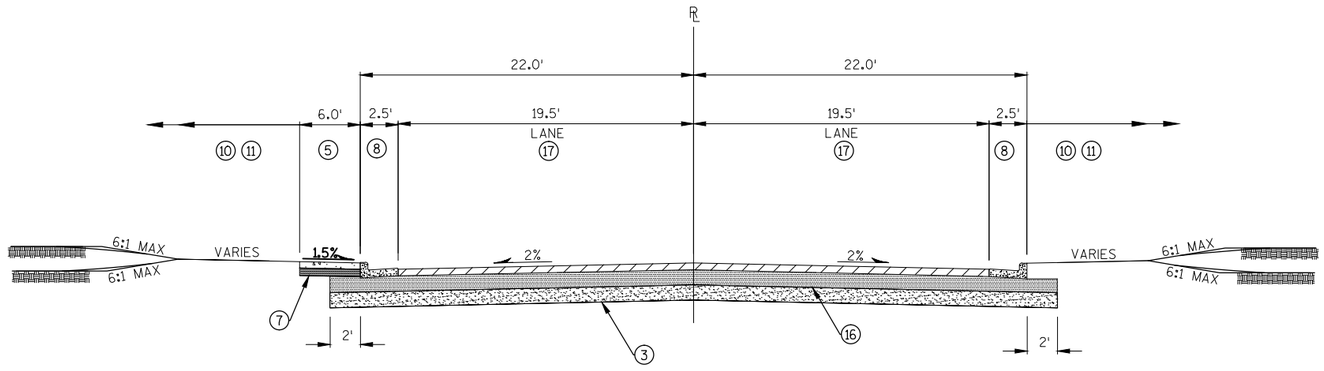
FINISHED TYPICAL SECTION

CTH P

STA 13+37.10'P' TO STA 14+45.91'P'

KEY

1. CONCRETE PAVEMENT 8–INCH
2. 6" BASE AGGREGATE DENSE 1¼-INCH
3. 12" SELECT CRUSHED MATERIAL ON GEOGRID
4. CONCRETE CURB & GUTTER 30-INCH TYPE A
5. CONCRETE SIDEWALK 4-INCH
6. 6" BASE AGGREGATE DENSE 1¼-INCH
7. 4" BASE AGGREGATE DENSE 1¼-INCH
8. CONCRETE CURB & GUTTER 30-INCH TYPE D
9. EDGEDRAIN
10. TOPSOIL
11. SEEDING MIXTURE NO 30, SEEDING TEMPORARY AND FERTILIZER TYPE B
12. SOD LAWN
13. 18" SELECT CRUSHED MATERIAL ON GEOGRID
14. 4" HMA PAVEMENT
15. 4" BASE AGGREGATE DENSE ¾-INCH
16. 12" BASE AGGREGATE DENSE 1¼-INCH
17. 5¾" HMA PAVEMENT

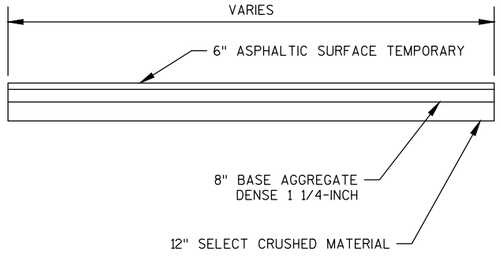


FINISHED TYPICAL SECTION

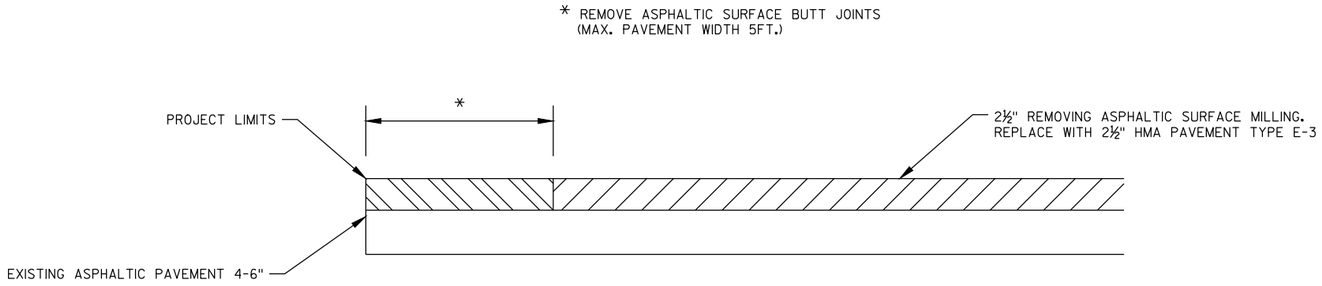
BOURBON ROAD

STA 111+50'0' TO STA 113+00'0'

PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	FINISHED TYPICAL SECTIONS	SHEET 14	E



TEMPORARY PAVEMENT

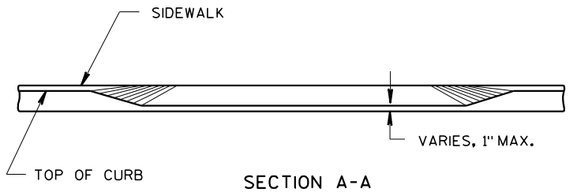


REMOVING ASPHALTIC SURFACE BUTT JOINTS

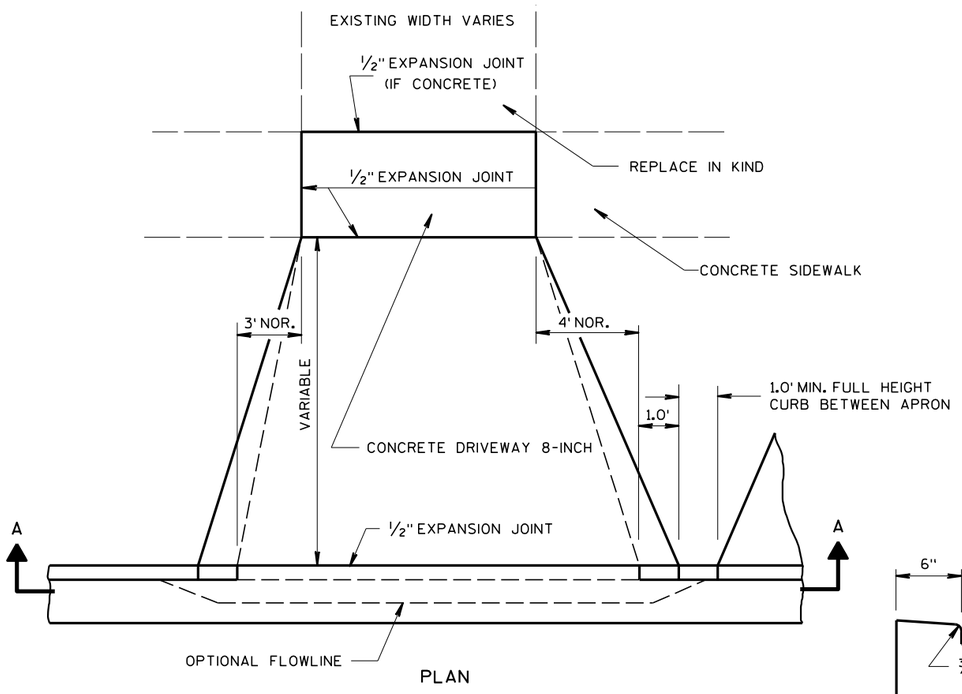
RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP- TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE- TURF			.25 .32			.27 .34			.28 .36			.30 .38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

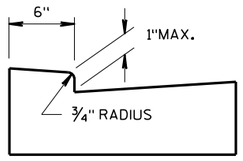
TOTAL PROJECT AREA = 7 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 1 ACRE



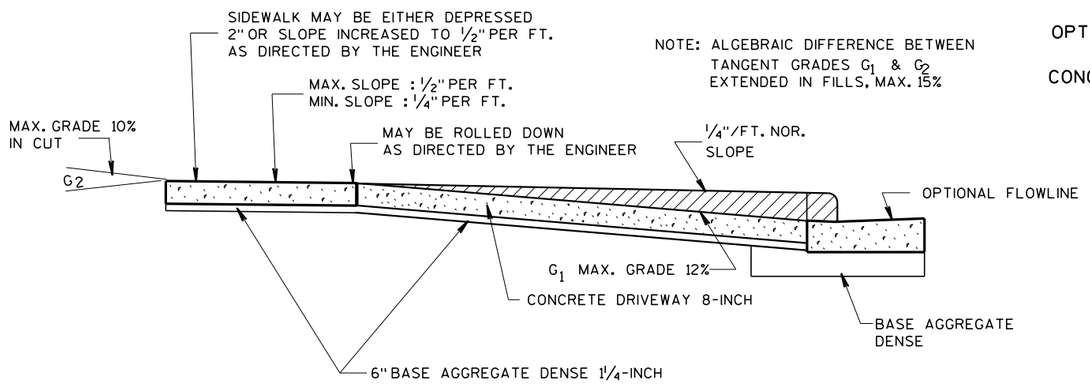
SECTION A-A



PLAN



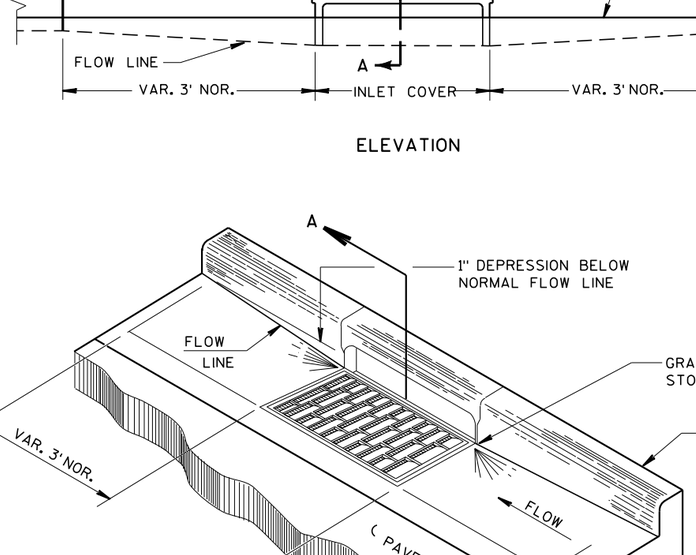
OPTIONAL METHOD FOR CONCRETE GUTTER



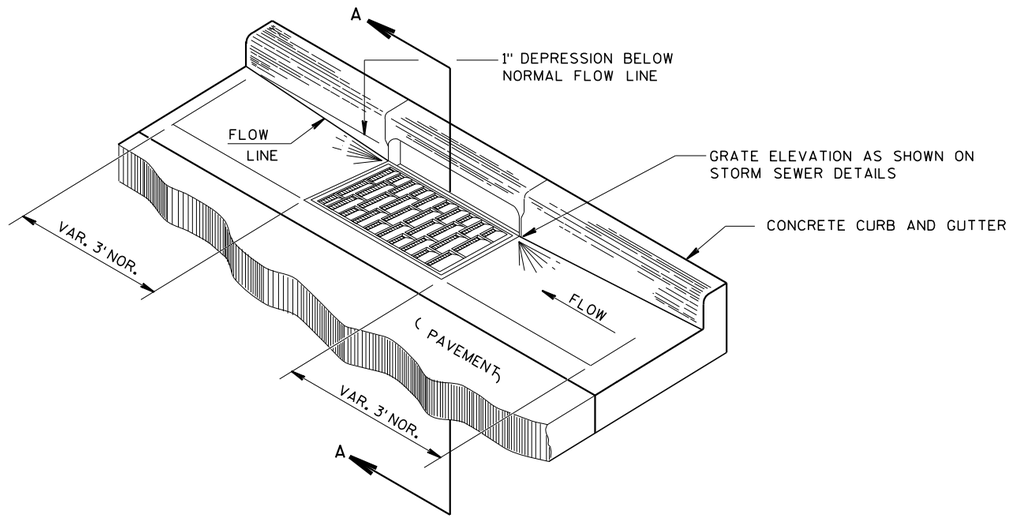
NOTE: ALGEBRAIC DIFFERENCE BETWEEN TANGENT GRADES G_1 & G_2 EXTENDED IN FILLS, MAX. 15%

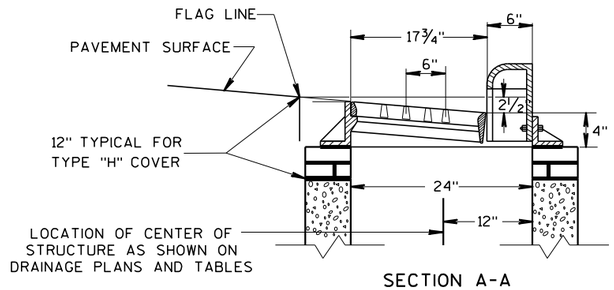
PROFILE

URBAN DRIVEWAY DETAIL



ELEVATION

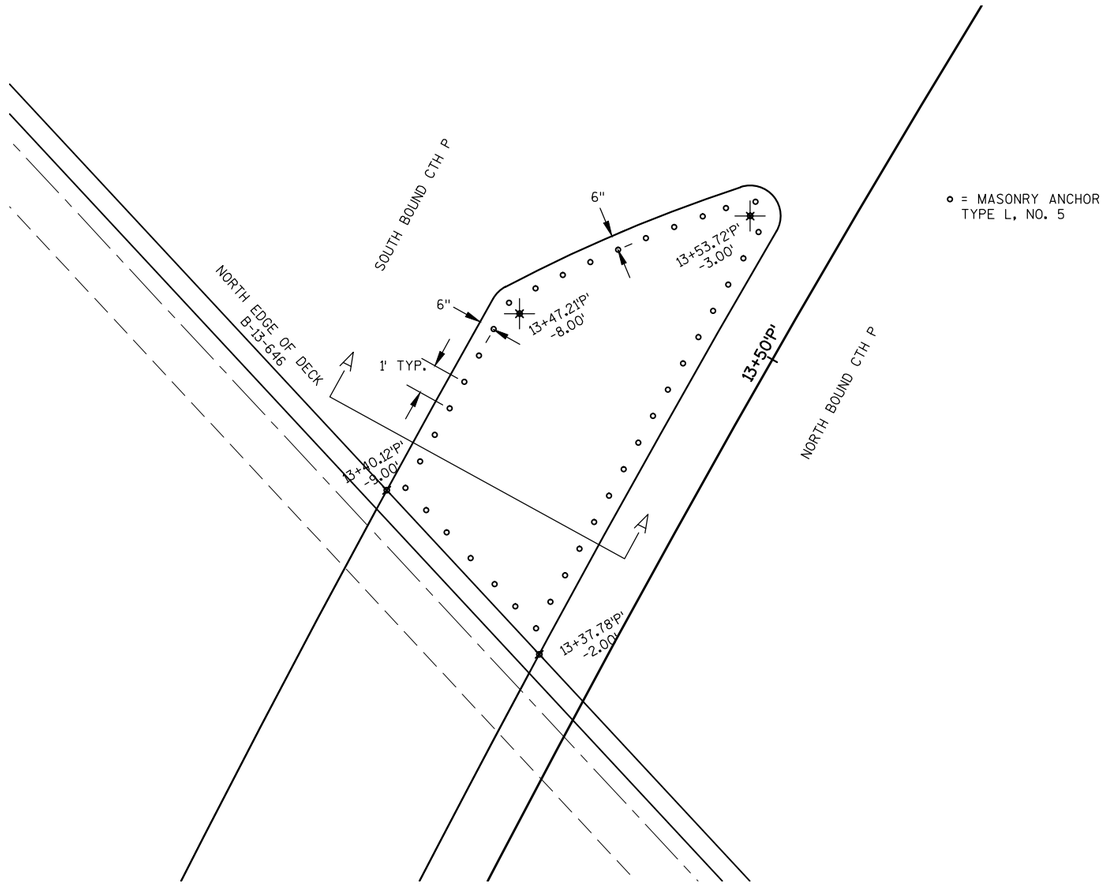


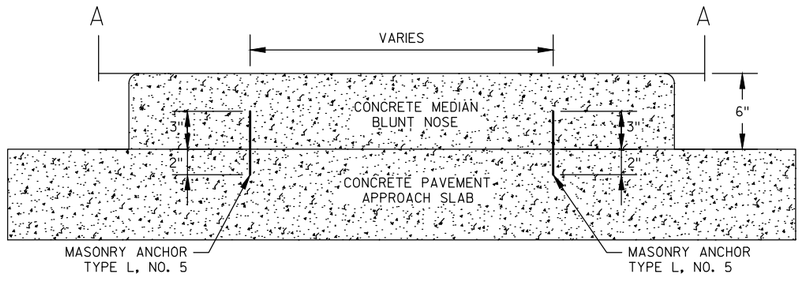


SECTION A-A

DETAIL OF CURB AND GUTTER AT INLETS

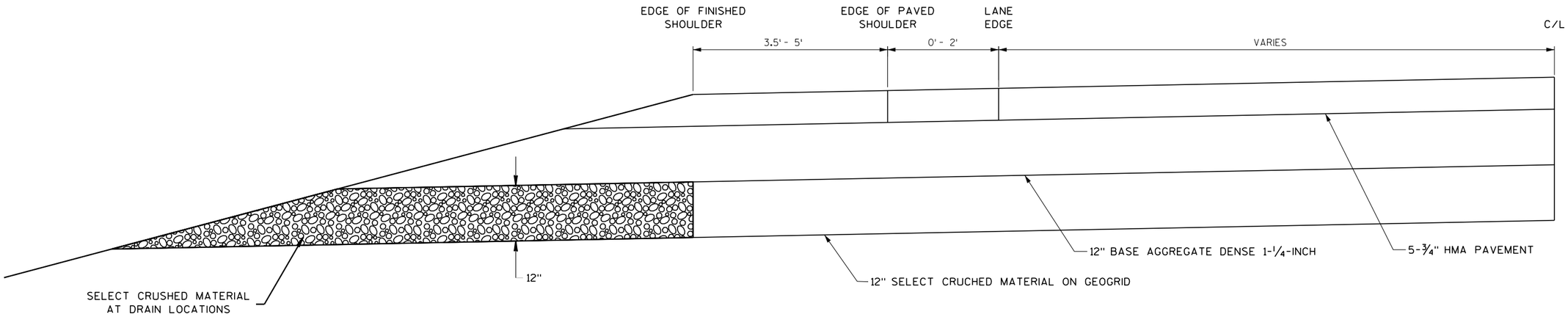
(TYPE 2X3-FT INLET H COVER SHOWN)



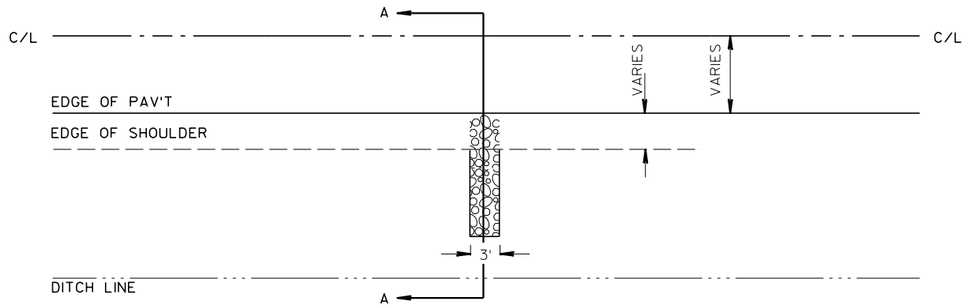


CONCRETE MEDIAN BLUNT NOSE

2



SECTION A-A



PLAN VIEW

SELECT CRUSHED MATERIAL DRAIN DETAIL

(LOCATIONS TO BE DETERMINED IN THE FIELD BY THE ENGINEER, 200' NOR SPACING)

2

N

BLACK EARTH CREEK

CLEAR AND GRUB
STA 12+00'P' TO
STA 14+00'P'

MG&E

R/W

VILLAGE OF CROSS PLAINS UTILITIES

VILLAGE OF CROSS PLAINS

MG&E

WISCONSIN AND SOUTHERN RAILROAD

BOURBON ROAD

112+00

ARCHAEOLOGICAL SITE

R/W

BEGIN PROJECT 5657-00-70
STA 11+06.95'P'

11+00'P'

CTH P

12+00'P'

113+00

EP: 113+00.00

13+00'P'

14+00'P'

CTH P

15+00'P'

MG&E/MID-PLAINS TELEPHONE CO

MID-PLAINS TELEPHONE CO

STREAM MONITORING STATION WDNR

MG&E

R/W

KWIK TRIP

146+00

147+00

148+00

149+00

USH 14

16+00'P'

CHURCH STREET
CTH P

END PROJECT 5657-00-70
STA 17+43.48'P'

2523 MAIN ST
CULVER'S

1	REMOVE SIDEWALK
2	REMOVE STRUCTURAL STEEL SIGN SUPPORT AND CONCRETE BASE
3	REMOVE TYPE 2 SIGNS AND SMALL SIGN SUPPORT
4	REMOVE TRAFFIC SIGNS AND POLES
5	REMOVE PULL BOX
6	REMOVE LIGHT POLE AND LIGHT
7	REMOVE TYPE 2 SIGNS
11	REMOVE PAVEMENT MARKING WORDS
12	REMOVE PAVEMENT MARKING ARROWS
13	REMOVE PAVEMENT MARKING

PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	REMOVAL PLAN	SHEET 19	E

2

N

2404 MAIN ST

SIGN

BLACK EARTH CREEK

CAUTION

MG&E

R/W

112+00

VILLAGE OF CROSS PLAINS

WISCONSIN AND SOUTHERN RAILROAD

BOURBON ROAD

VILLAGE OF CROSS PLAINS UTILITIES

INL

146+00

147+00

BEGIN PROJECT 5657-00-70
STA 11+06.95'P'

ARCHAEOLOGICAL SITE

R/W

11+00'P'

12+00'P'

13+00'P'

14+00'P'

15+00'P'

16+00'P'

131+00

EP: 113+00.00

CTH P

MG&E/MID-PLAINS TELEPHONE CO

CHURCH STREET / CTH P

MID-PLAINS TELEPHONE CO

STREAM MONITORING STATION WDNR

MG&E

KWIK TRIP

148+00

USH 14

149+00

END PROJECT 5657-00-70
STA 17+43.48'P'

REMOVE CURB AND GUTTER

REMOVE CONCRETE MEDIAN

XXXXXXXXXXXXXXX SAWCUT

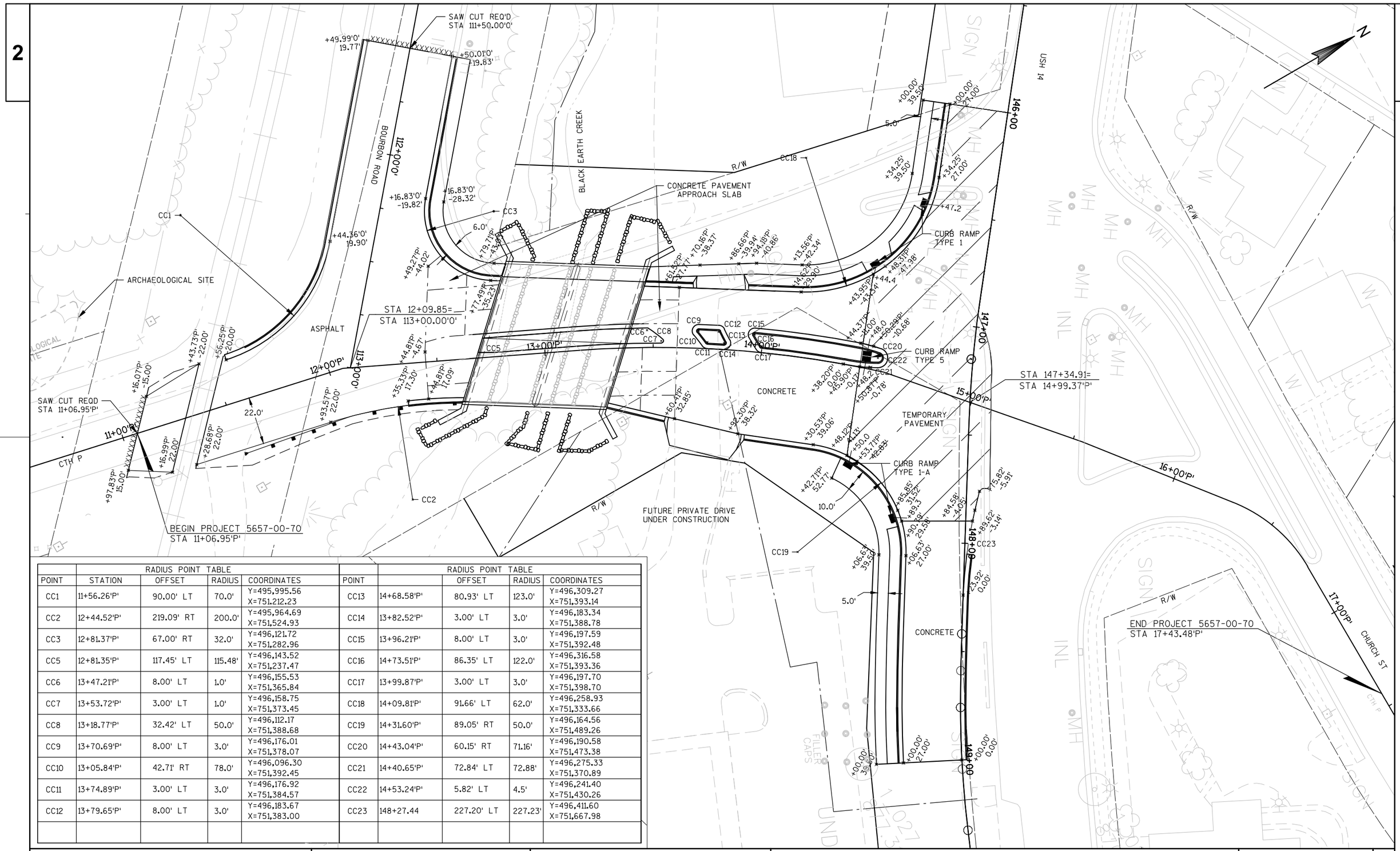
(8) REMOVE MANHOLE

(9) REMOVE STORM SEWER

(10) REMOVE INLETS

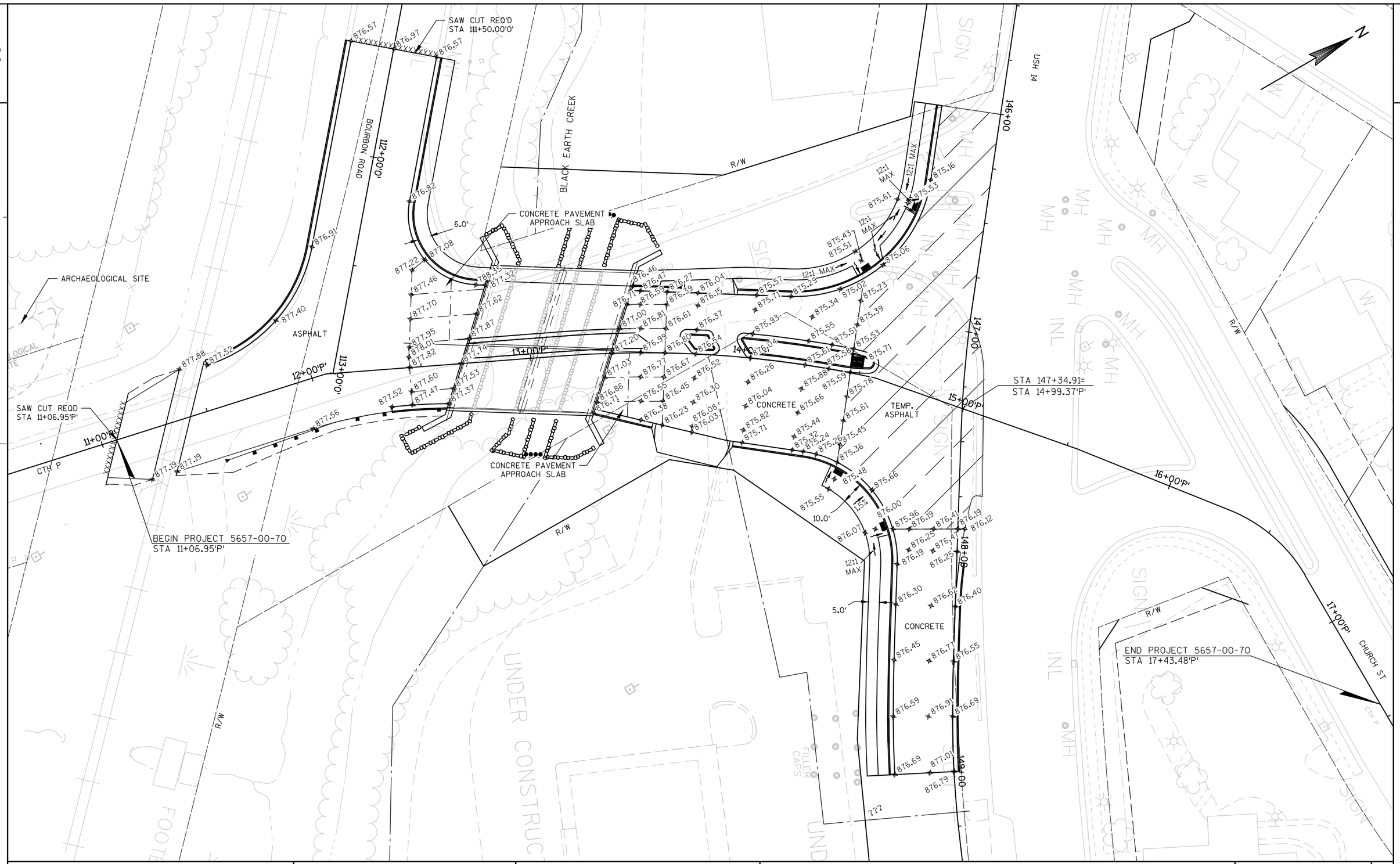
PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	REMOVAL PLAN	SHEET 20	E

FILE NAME : X:\3230900\113688.02\TECH\CAD\53100200\SHEETSPLAN\CTH P\021002_CD.DWG PLOT DATE : 2/20/2014 1:31 PM PLOT BY : DAVID YAHNKE PLOT NAME : _____ PLOT SCALE : 1:40_XREF



RADIUS POINT TABLE					RADIUS POINT TABLE				
POINT	STATION	OFFSET	RADIUS	COORDINATES	POINT		OFFSET	RADIUS	COORDINATES
CC1	11+56.26'P'	90.00' LT	70.0'	Y=495,995.56 X=751,212.23	CC13	14+68.58'P'	80.93' LT	123.0'	Y=496,309.27 X=751,393.14
CC2	12+44.52'P'	219.09' RT	200.0'	Y=495,964.69 X=751,524.93	CC14	13+82.52'P'	3.00' LT	3.0'	Y=496,183.34 X=751,388.78
CC3	12+81.37'P'	67.00' RT	32.0'	Y=496,121.72 X=751,282.96	CC15	13+96.21'P'	8.00' LT	3.0'	Y=496,197.59 X=751,392.48
CC5	12+81.35'P'	117.45' LT	115.48'	Y=496,143.52 X=751,237.47	CC16	14+73.51'P'	86.35' LT	122.0'	Y=496,316.58 X=751,393.36
CC6	13+47.21'P'	8.00' LT	1.0'	Y=496,155.53 X=751,365.84	CC17	13+99.87'P'	3.00' LT	3.0'	Y=496,197.70 X=751,398.70
CC7	13+53.72'P'	3.00' LT	1.0'	Y=496,158.75 X=751,373.45	CC18	14+09.81'P'	91.66' LT	62.0'	Y=496,258.93 X=751,333.66
CC8	13+18.77'P'	32.42' LT	50.0'	Y=496,112.17 X=751,388.68	CC19	14+31.60'P'	89.05' RT	50.0'	Y=496,164.56 X=751,489.26
CC9	13+70.69'P'	8.00' LT	3.0'	Y=496,176.01 X=751,378.07	CC20	14+43.04'P'	60.15' RT	71.16'	Y=496,190.58 X=751,473.38
CC10	13+05.84'P'	42.71' RT	78.0'	Y=496,096.30 X=751,392.45	CC21	14+40.65'P'	72.84' LT	72.88'	Y=496,275.33 X=751,370.89
CC11	13+74.89'P'	3.00' LT	3.0'	Y=496,176.92 X=751,384.57	CC22	14+53.24'P'	5.82' LT	4.5'	Y=496,241.40 X=751,430.26
CC12	13+79.65'P'	8.00' LT	3.0'	Y=496,183.67 X=751,383.00	CC23	148+27.44	227.20' LT	227.23'	Y=496,411.60 X=751,667.98

PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	INTERSECTION DETAIL - SOUTH CTH P	SHEET 21	E



PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	INTERSECTION DETAIL - SOUTH CTH P	SHEET 22	E

LEGEND

- EROSION MAT CLASS I, TYPE A URBAN
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION
- SURFACE WATER FLOW

MG&E
111+00.00
INLET PROTECTION TYPE D
BLACK EARTH CREEK
PAUL L. KALSCHEUR AND PATRICIA KALSCHEUR
SLOPE INTERCEPT
146+00
JANET L. BUCHANAN
112+00.00
BOURBON ROAD
RIPRAP HEAVY
MG&E
INLET PROTECTION TYPE D
INLET PROTECTION TYPE B
TEMPORARY PAVEMENT
147+00
INLET PROTECTION TYPE C
INLET PROTECTION TYPE D
SLOPE INTERCEPT
14+00P
13+00P
15+00P
MID-PLAINS TELEPHONE COMPANY
113+00.00
12+00P
16+00P
INLET PROTECTION TYPE D
INLET PROTECTION TYPE B
VILLAGE OF CROSS PLAINS
CTH P
BEGIN PROJECT 5657-00-70
STA 11+06.95'P'
ARCHAEOLOGICAL SITE
11+00P
CTH P
END PROJECT 5657-00-70
STA 17+43.48'P'
148+00
SLOPE INTERCEPT
SEE STRUCTURE PLANS FOR RIPRAP PLACEMENT
INLET PROTECTION TYPE C
R/W
MG&E
MID-PLAINS TELEPHONE COMPANY
10+00P
WISCONSIN & SOUTHERN RAILROAD
USH 14
INLET PROTECTION TYPE D
SLOPE INTERCEPT
KWIK TRIP
JAMES AND JUDITH NONN
149+00
R/W
R/W

PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	EROSION CONTROL	SHEET 23	E

2.0 STA 146+75.10, 23' RT
MANHOLE 6'X6'-FT, INLET COVER TYPE C
(REMOVE EXISTING MANHOLE-CONNECT
EXISTING PIPES FROM THE NORTH)

2.1 STA 14'P'+35.33, 38.50' LT
INLET 2X3-FT, INLET COVER TYPE H-S

2.2 STA 14'P'+36.54, 9.50' LT
INLET 2X3-FT, INLET COVER TYPE H-S

2.3 STA 14'P'+36.94, 1.5' LT
INLET 2X3-FT, INLET COVER TYPE H-S

2.4 STA 14'P'+38.02, 40.87' RT
INLET 2X3-FT, INLET COVER TYPE H-S

2.5 STA 13+54, 55.81' LT
APRON ENDWALLS FOR CULVERT PIPE
REINFORCED CONCRETE 24-INCH

3.0 STA 147+96.21, 17.66' RT
MANHOLE 5-FT DIAMETER, INLET COVER C

3.1 STA 147+94.97, 3.82' LT
INLET 2X3-FT, INLET COVER TYPE H

3.2 STA 148+14.77, 28.5' RT
INLET 2X3-FT, INLET COVER TYPE H

VILLAGE OF CROSS PLAINS

USH 14

PI: 15+54.44

FUTURE PIPE
BY OTHERS

PLUG PIPE 64' FROM
STRUCTURE 2.0

EDGEDRAIN D-2

CONNECT PIPE UNDERDRAIN
TO INLET

MG&E

EDGEDRAIN D-1

PT: 14+57.28

CTH P

EDGEDRAIN D-4

EDGEDRAIN D-5

CONNECT PIPE UNDERDRAIN
TO INLET

EDGEDRAIN D-3

PLACE PIPE UNDERDRAIN WRAPPED 6-INCH
75' FROM EACH INLET.

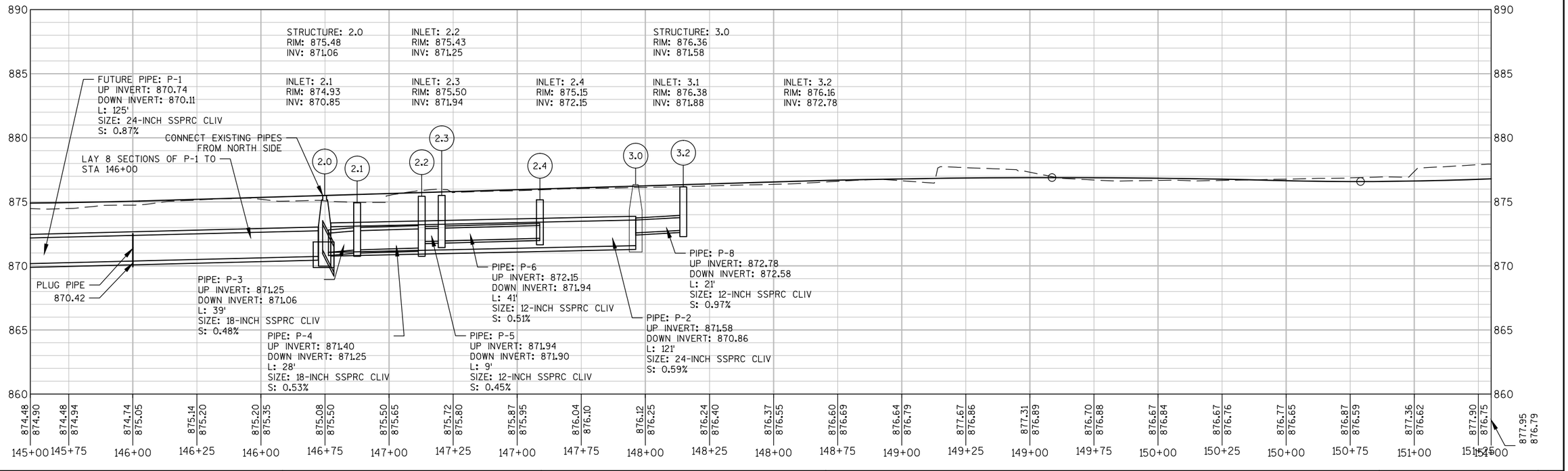
FILLER
CAPS

UNDER CONSTRUCTION

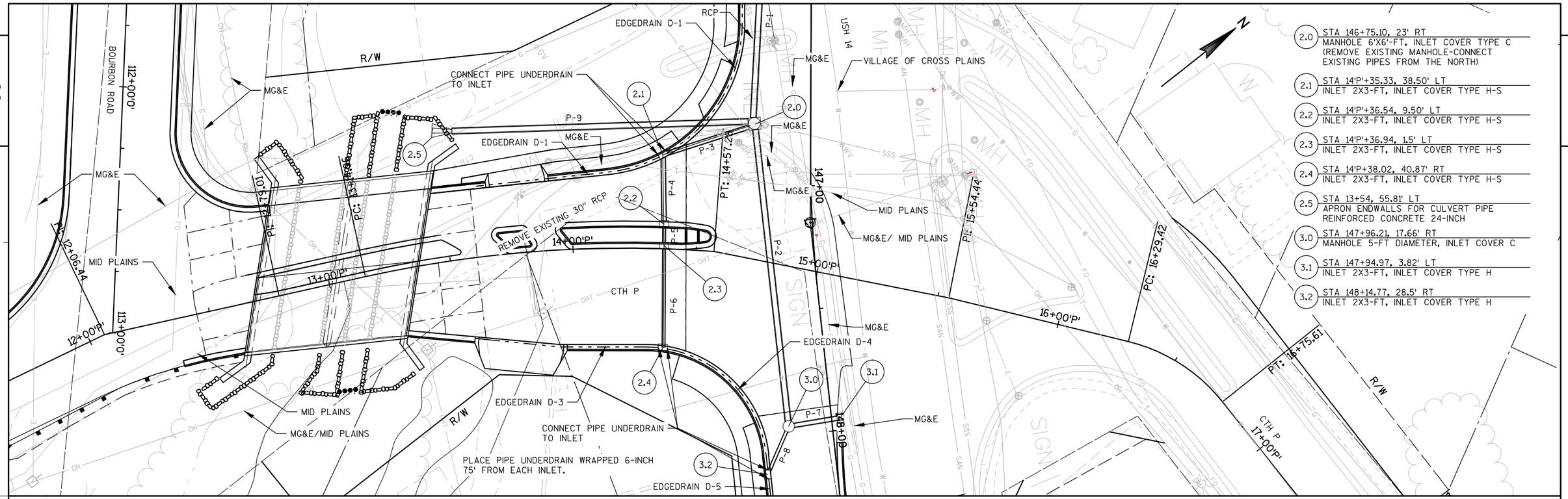
146+00 147+00 148+00 149+00 150+00 151+00

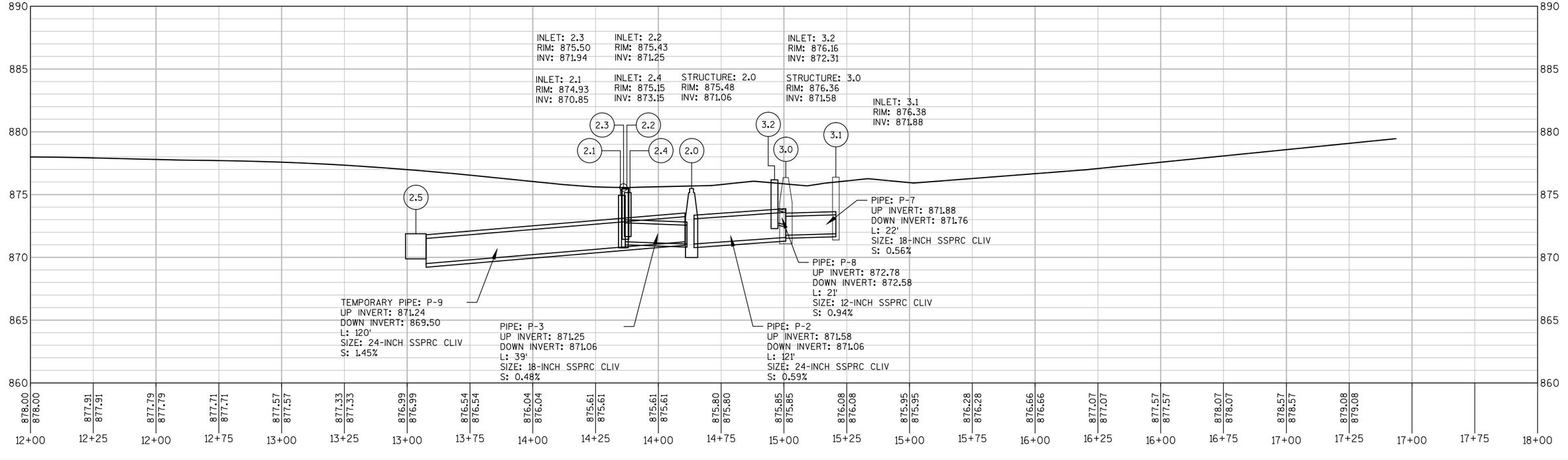
15+00P 16+00P

P-1 P-2 P-3 P-4 P-5 P-6 P-7 P-8



PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	STORM SEWER PLAN USH 14	SHEET 24	E





PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	STORM SEWER PLAN USH 14	SHEET 25	E

FILE NAME : X:\3230900\113688.02\TECH\CAD\53100200\DESIGN\UTILITY\J_022501_SS CTH P.DWG PLOT DATE : 2/20/2014 1:35 PM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1" = 40'_XREF

2

SIGNING LEGEND

- SIGN MOUNTED ON POST(S)
- SIGN MOUNTED ON BRIDGE / SIGN BRIDGE / POLE
- [R] REMOVE EXISTING SIGN AND SUPPORT
- (X-XX) DENOTES SIGN NUMBER
- TYPE 1 SIGN MOUNTED ON STEEL POST(S)

ALL ROUTE MARKER ASSEMBLIES SHALL BE ONE PIECE OF PLYWOOD AS IN SIGN PLATE A2-1S.

PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	PERMANENT SIGNING	SHEET 26	E

2

2

WSOR

N

W11-8
36" X 36"
"LED"
2-01

R1-6
12"X36"
2-02

STOP
R1-1
30" X 30"
2-03
2-15

STOP
R1-1
30" X 30"
"LED"
2-04

S1-1
36"X36"
2-05

WF16-7L
24" X 12"
2-06

W3-1
36" X 36"
2-07

W11-2
30" X 30"
2-08

90+00'0"

BOURBON ROAD

95+00'0"

100+00'0"

STREET NAME SIGNS TO BE REMOVED AND INSTALLED BY LOCAL MUNICIPALITIES (ALL)

STOP
R1-1
30" X 30"
2-09

W11-2
30" X 30"
2-10

W3-1
36" X 36"
2-11

S1-1
36"X36"
2-12

WF16-7L
24" X 12"
2-13

STOP
R1-1
30" X 30"
"LED"
2-14

STREET NAME SIGNS TO BE REMOVED AND INSTALLED BY LOCAL MUNICIPALITIES (ALL)

HILLEBRAND DRIVE

CONTINENTAL LANE

SIGNING LEGEND

- SIGN MOUNTED ON POST(S)
- SIGN MOUNTED ON BRIDGE / SIGN BRIDGE / POLE
- R — REMOVE EXISTING SIGN AND SUPPORT
- X-XX — DENOTES SIGN NUMBER
- TYPE 1 SIGN MOUNTED ON STEEL POST(S)

ALL ROUTE MARKER ASSEMBLIES SHALL BE ONE PIECE OF PLYWOOD AS IN SIGN PLATE A2-1S.

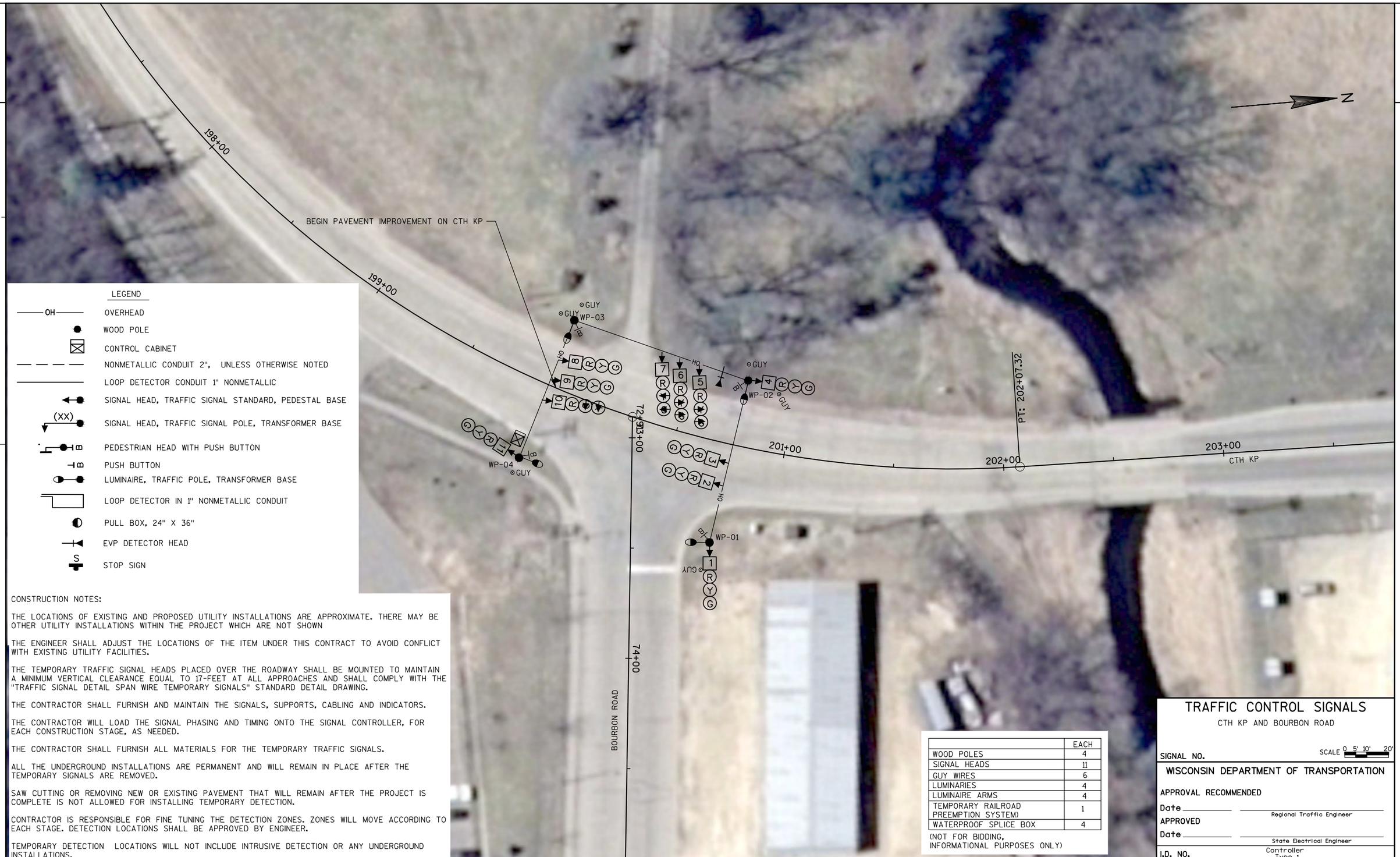
PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	PERMANENT SIGNING	SHEET 27	E

FILE NAME : X:\3230900\113688.02\TECH\CAD\53100200\SHEETSPLAN\CTH P\023201_PS.DWG PLOT DATE : 2/20/2014 1:35 PM PLOT BY : DAVID YAHNKE PLOT NAME : _____ PLOT SCALE : 1" = 100'_XREF

2

PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	PERMANENT SIGNING	SHEET 28	E

2



CONSTRUCTION NOTES:

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

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

THE TEMPORARY TRAFFIC SIGNAL HEADS PLACED OVER THE ROADWAY SHALL BE MOUNTED TO MAINTAIN A MINIMUM VERTICAL CLEARANCE EQUAL TO 17-FEET AT ALL APPROACHES AND SHALL COMPLY WITH THE "TRAFFIC SIGNAL DETAIL SPAN WIRE TEMPORARY SIGNALS" STANDARD DETAIL DRAWING.

THE CONTRACTOR SHALL FURNISH AND MAINTAIN THE SIGNALS, SUPPORTS, CABLING AND INDICATORS.

THE CONTRACTOR WILL LOAD THE SIGNAL PHASING AND TIMING ONTO THE SIGNAL CONTROLLER, FOR EACH CONSTRUCTION STAGE, AS NEEDED.

THE CONTRACTOR SHALL FURNISH ALL MATERIALS FOR THE TEMPORARY TRAFFIC SIGNALS.

ALL THE UNDERGROUND INSTALLATIONS ARE PERMANENT AND WILL REMAIN IN PLACE AFTER THE TEMPORARY SIGNALS ARE REMOVED.

SAW CUTTING OR REMOVING NEW OR EXISTING PAVEMENT THAT WILL REMAIN AFTER THE PROJECT IS COMPLETE IS NOT ALLOWED FOR INSTALLING TEMPORARY DETECTION.

CONTRACTOR IS RESPONSIBLE FOR FINE TUNING THE DETECTION ZONES. ZONES WILL MOVE ACCORDING TO EACH STAGE. DETECTION LOCATIONS SHALL BE APPROVED BY ENGINEER.

TEMPORARY DETECTION LOCATIONS WILL NOT INCLUDE INTRUSIVE DETECTION OR ANY UNDERGROUND INSTALLATIONS.

	EACH
WOOD POLES	4
SIGNAL HEADS	11
GUY WIRES	6
LUMINARIES	4
LUMINAIRE ARMS	4
TEMPORARY RAILROAD PREEMPTION SYSTEM)	1
WATERPROOF SPLICE BOX	4

(NOT FOR BIDDING, INFORMATIONAL PURPOSES ONLY)

TRAFFIC CONTROL SIGNALS

CTH KP AND BOURBON ROAD

SIGNAL NO.

SCALE 0 5' 10' 20'

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED

Date _____ Regional Traffic Engineer

APPROVED

Date _____ State Electrical Engineer

I.D. NO. Controller Type :

PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	TEMPORARY SIGNAL PLAN	SHEET 29	E

LEGEND

- OH — OVERHEAD
- WOOD POLE
- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- PULL BOX, 24" X 36"
- EVP DETECTOR HEAD
- S STOP SIGN
- TRAFFIC CONTROL DRUM

BEGIN PROJECT 5657-00-70
STA 11+06.95'P'

BOURBON ROAD

CTH P

ARCHAEOLOGICAL SITE

MG&E

VILLAGE OF CROSS PLAINS

R/W

USH 14

MID PLAINS TELEPHONE CO

MG&E/MID PLAINS TELEPHONE CO

GUY

WP

OH

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 111+00 112+00 146+00

CONSTRUCTION NOTES:

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

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

THE TEMPORARY TRAFFIC SIGNAL HEADS PLACED OVER THE ROADWAY SHALL BE MOUNTED TO MAINTAIN A MINIMUM VERTICAL CLEARANCE EQUAL TO 17-FEET AT ALL APPROACHES AND SHALL COMPLY WITH THE "TRAFFIC SIGNAL DETAIL SPAN WIRE TEMPORARY SIGNALS" STANDARD DETAIL DRAWING.

THE CONTRACTOR SHALL FURNISH AND MAINTAIN THE SIGNALS, SUPPORTS, CABLING AND INDICATORS.

THE CONTRACTOR WILL LOAD THE SIGNAL PHASING AND TIMING ONTO THE SIGNAL CONTROLLER, FOR EACH CONSTRUCTION STAGE, AS NEEDED.

THE CONTRACTOR SHALL FURNISH ALL MATERIALS FOR THE TEMPORARY TRAFFIC SIGNALS.

ALL THE UNDERGROUND INSTALLATIONS ARE PERMANENT AND WILL REMAIN IN PLACE AFTER THE TEMPORARY SIGNALS ARE REMOVED.

SAW CUTTING OR REMOVING NEW OR EXISTING PAVEMENT THAT WILL REMAIN AFTER THE PROJECT IS COMPLETE IS NOT ALLOWED FOR INSTALLING TEMPORARY DETECTION.

CONTRACTOR IS RESPONSIBLE FOR FINE TUNING THE DETECTION ZONES. ZONES WILL MOVE ACCORDING TO EACH STAGE. DETECTION LOCATIONS SHALL BE APPROVED BY ENGINEER.

TEMPORARY DETECTION LOCATIONS WILL NOT INCLUDE INTRUSIVE DETECTION OR ANY UNDERGROUND INSTALLATIONS.

	EACH
WOOD POLES	5
SIGNAL HEADS	12
GUY WIRES	8
LUMINARIES	3
LUMINAIRE ARMS	3
TEMPORARY SIGNAL PREEMPTION SYSTEM (EXISTING)	1
WATERPROOF SPLICE BOX	5
TEMPORARY RAILROAD PREEMPTION SYSTEM	1

(NOT FOR BIDDING, INFORMATIONAL PURPOSES ONLY)

TRAFFIC CONTROL SIGNALS

CTH P AND BOURBON ROAD

SIGNAL NO.

SCALE 0 5' 10' 20'

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED

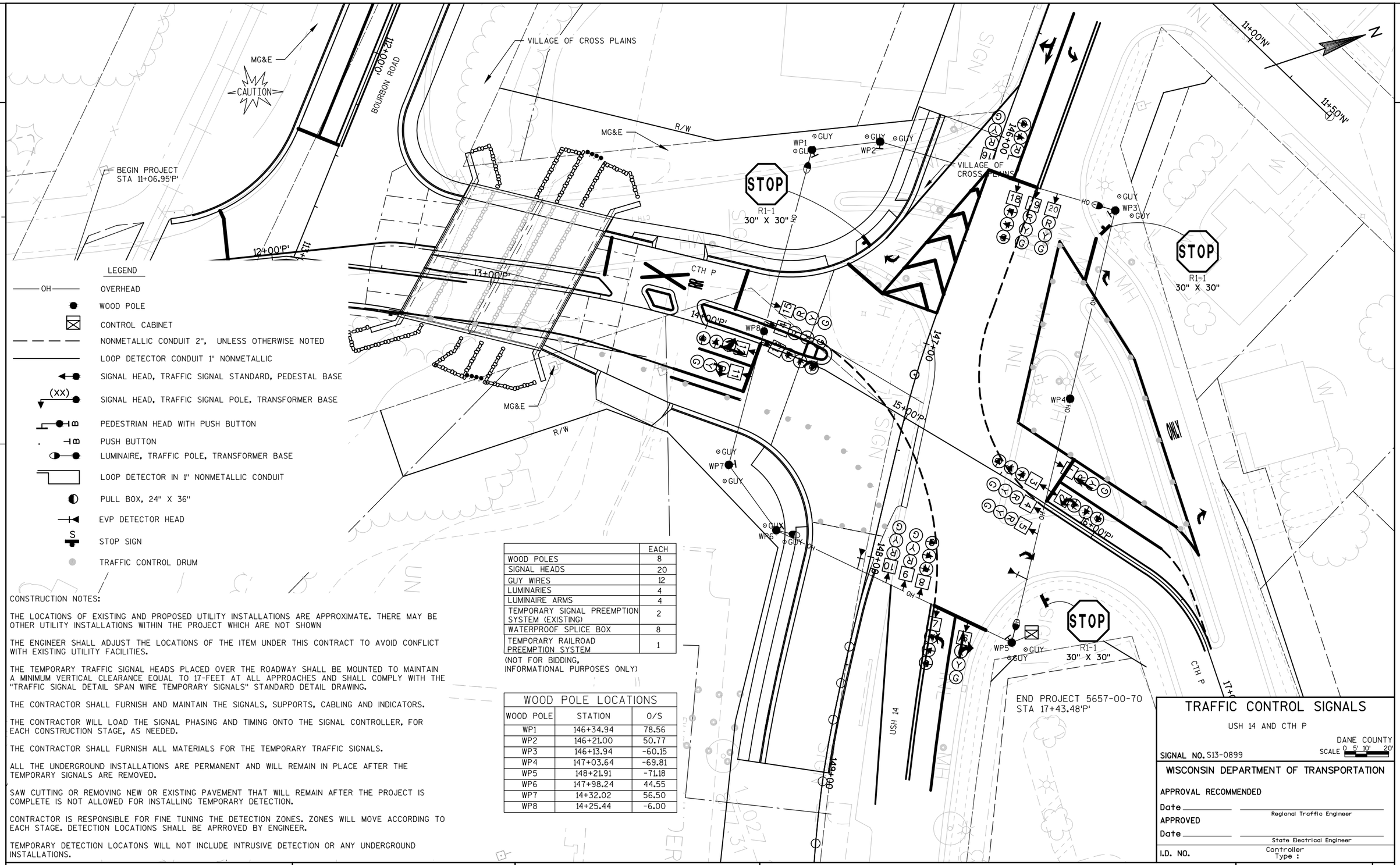
Date _____ Regional Traffic Engineer

APPROVED

Date _____ State Electrical Engineer

I.D. NO. Controller Type :

PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	TEMPORARY SIGNAL PLAN	SHEET 30	E



LEGEND

- OH — OVERHEAD
- WOOD POLE
- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- PULL BOX, 24" X 36"
- EVP DETECTOR HEAD
- S STOP SIGN
- TRAFFIC CONTROL DRUM

CONSTRUCTION NOTES:

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

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

THE TEMPORARY TRAFFIC SIGNAL HEADS PLACED OVER THE ROADWAY SHALL BE MOUNTED TO MAINTAIN A MINIMUM VERTICAL CLEARANCE EQUAL TO 17-FEET AT ALL APPROACHES AND SHALL COMPLY WITH THE "TRAFFIC SIGNAL DETAIL SPAN WIRE TEMPORARY SIGNALS" STANDARD DETAIL DRAWING.

THE CONTRACTOR SHALL FURNISH AND MAINTAIN THE SIGNALS, SUPPORTS, CABLING AND INDICATORS.

THE CONTRACTOR WILL LOAD THE SIGNAL PHASING AND TIMING ONTO THE SIGNAL CONTROLLER, FOR EACH CONSTRUCTION STAGE, AS NEEDED.

THE CONTRACTOR SHALL FURNISH ALL MATERIALS FOR THE TEMPORARY TRAFFIC SIGNALS.

ALL THE UNDERGROUND INSTALLATIONS ARE PERMANENT AND WILL REMAIN IN PLACE AFTER THE TEMPORARY SIGNALS ARE REMOVED.

SAW CUTTING OR REMOVING NEW OR EXISTING PAVEMENT THAT WILL REMAIN AFTER THE PROJECT IS COMPLETE IS NOT ALLOWED FOR INSTALLING TEMPORARY DETECTION.

CONTRACTOR IS RESPONSIBLE FOR FINE TUNING THE DETECTION ZONES. ZONES WILL MOVE ACCORDING TO EACH STAGE. DETECTION LOCATIONS SHALL BE APRROVED BY ENGINEER.

TEMPORARY DETECTION LOCATONS WILL NOT INCLUDE INTRUSIVE DETECTION OR ANY UNDERGROUND INSTALLATIONS.

	EACH
WOOD POLES	8
SIGNAL HEADS	20
GUY WIRES	12
LUMINARIES	4
LUMINAIRE ARMS	4
TEMPORARY SIGNAL PREEMPTION SYSTEM (EXISTING)	2
WATERPROOF SPLICE BOX	8
TEMPORARY RAILROAD PREEMPTION SYSTEM	1

(NOT FOR BIDDING, INFORMATIONAL PURPOSES ONLY)

WOOD POLE LOCATIONS

WOOD POLE	STATION	O/S
WP1	146+34.94	78.56
WP2	146+21.00	50.77
WP3	146+13.94	-60.15
WP4	147+03.64	-69.81
WP5	148+21.91	-71.18
WP6	147+98.24	44.55
WP7	14+32.02	56.50
WP8	14+25.44	-6.00

TRAFFIC CONTROL SIGNALS

USH 14 AND CTH P

DANE COUNTY

SCALE 0 5' 10' 20'

SIGNAL NO. S13-0899

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED

Date _____ Regional Traffic Engineer

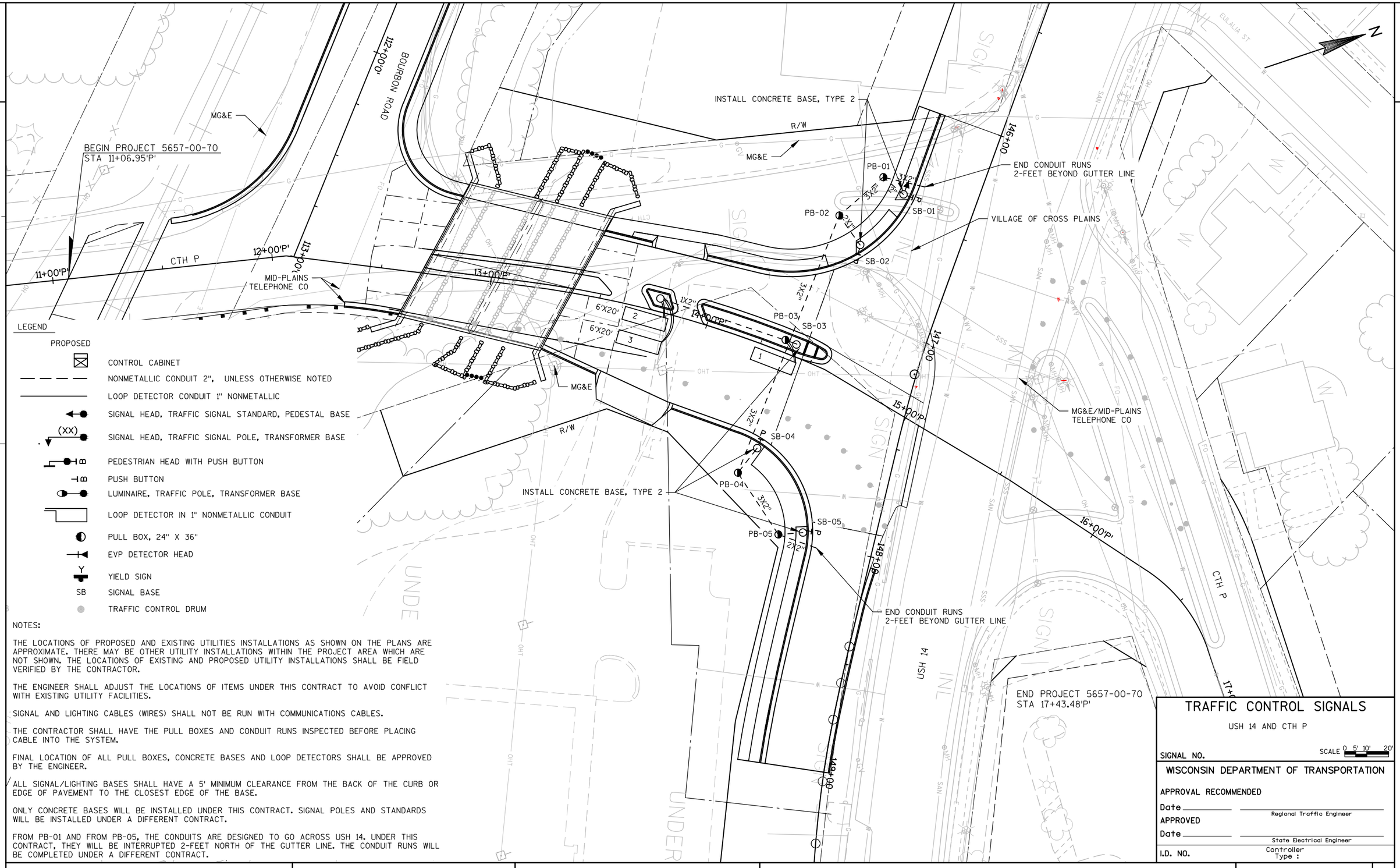
APPROVED

Date _____ State Electrical Engineer

I.D. NO. Controller Type :

PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	TEMPORARY SIGNAL PLAN	SHEET 31	E

2



LEGEND

PROPOSED

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- PULL BOX, 24" X 36"
- EVP DETECTOR HEAD
- Y YIELD SIGN
- SB SIGNAL BASE
- TRAFFIC CONTROL DRUM

NOTES:

THE LOCATIONS OF PROPOSED AND EXISTING UTILITIES INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.

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

SIGNAL AND LIGHTING CABLES (WIRES) SHALL NOT BE RUN WITH COMMUNICATIONS CABLES.

THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED BEFORE PLACING CABLE INTO THE SYSTEM.

FINAL LOCATION OF ALL PULL BOXES, CONCRETE BASES AND LOOP DETECTORS SHALL BE APPROVED BY THE ENGINEER.

ALL SIGNAL/LIGHTING BASES SHALL HAVE A 5' MINIMUM CLEARANCE FROM THE BACK OF THE CURB OR EDGE OF PAVEMENT TO THE CLOSEST EDGE OF THE BASE.

ONLY CONCRETE BASES WILL BE INSTALLED UNDER THIS CONTRACT. SIGNAL POLES AND STANDARDS WILL BE INSTALLED UNDER A DIFFERENT CONTRACT.

FROM PB-01 AND FROM PB-05, THE CONDUITS ARE DESIGNED TO GO ACROSS USH 14. UNDER THIS CONTRACT, THEY WILL BE INTERRUPTED 2-FEET NORTH OF THE GUTTER LINE. THE CONDUIT RUNS WILL BE COMPLETED UNDER A DIFFERENT CONTRACT.

TRAFFIC CONTROL SIGNALS

USH 14 AND CTH P

SIGNAL NO.

SCALE 0 5' 10' 20'

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED

Date _____ Regional Traffic Engineer

APPROVED

Date _____ State Electrical Engineer

I.D. NO. Controller Type :

PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	PERMANENT SIGNAL PLAN	SHEET 32	E

2

2

PAVEMENT MARKING LEGEND

1	PAVEMENT MARKING EPOXY 4-INCH (WHITE)
2	PAVEMENT MARKING EPOXY 4-INCH (WHITE SKIPS, 12.5' SEG., 37.5' GAP)
3	PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
4	PAVEMENT MARKING EPOXY 4-INCH (DOUBLE YELLOW)
5	PAVEMENT MARKING EPOXY 8-INCH (WHITE)
6	PAVEMENT MARKING RAILROAD CROSSING EPOXY
7	PAVEMENT MARKING ARROWS EPOXY TYPE 1 (WHITE)
8	PAVEMENT MARKING ARROWS EPOXY TYPE 2 (WHITE)
9	PAVEMENT MARKING ARROWS EPOXY TYPE 3 (WHITE)
10	PAVEMENT MARKING WORDS EPOXY (WHITE)
11	PAVEMENT MARKING CURB EPOXY (YELLOW)
12	PAVEMENT MARKING EPOXY STOP LINE 18-INCH (WHITE)
13	PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
14	PAVEMENT MARKING CROSSWALK EPOXY 6-INCH (WHITE)
15	PAVEMENT MARKING EPOXY 4-INCH (WHITE SKIPS, 3' SEG., 9' GAP)
16	PAVEMENT MARKING EPOXY 4-INCH (YELLOW SKIPS, 3' SEG., 9' GAP)
17	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)
R	REMOVE PAVEMENT MARKING

205+00
CTH KP
195+00
200+00
72+00'10'
75+00'0'
BOURBON ROAD
80+00'0'
LUDDEN DRIVE
MH
VLV
INL
N

PROJECT NO:5310-02-74/5657-00-70	HWY: USH 14	COUNTY:DANE	PAVEMENT MARKING	SHEET 33 E

FILE NAME : X:\3230900\113688.02\TECH\CAD\53100200\SHEETSPLAN\CTH P\024501_PM.DWG PLOT DATE : 2/20/2014 1:38 PM PLOT BY : DAVID YAHNKE PLOT NAME : _____ PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

2

PAVEMENT MARKING LEGEND

1	PAVEMENT MARKING EPOXY 4-INCH (WHITE)
2	PAVEMENT MARKING EPOXY 4-INCH (WHITE SKIPS, 12.5' SEG., 37.5' GAP)
3	PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
4	PAVEMENT MARKING EPOXY 4-INCH (DOUBLE YELLOW)
5	PAVEMENT MARKING EPOXY 8-INCH (WHITE)
6	PAVEMENT MARKING RAILROAD CROSSING EPOXY
7	PAVEMENT MARKING ARROWS EPOXY TYPE 1 (WHITE)
8	PAVEMENT MARKING ARROWS EPOXY TYPE 2 (WHITE)
9	PAVEMENT MARKING ARROWS EPOXY TYPE 3 (WHITE)
10	PAVEMENT MARKING WORDS EPOXY (WHITE)
11	PAVEMENT MARKING CURB EPOXY (YELLOW)
12	PAVEMENT MARKING EPOXY STOP LINE 18-INCH (WHITE)
13	PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
14	PAVEMENT MARKING CROSSWALK EPOXY 6-INCH (WHITE)
15	PAVEMENT MARKING EPOXY 4-INCH (WHITE SKIPS, 3' SEG., 9' GAP)
16	PAVEMENT MARKING EPOXY 4-INCH (YELLOW SKIPS, 3' SEG., 9' GAP)
17	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)
R	REMOVE PAVEMENT MARKING

N

85+00'0'

90+00'0'

95+00'0'

BOURBON ROAD

CONTINENTAL LANE

HILLEBRAND DRIVE

PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	PAVEMENT MARKING	SHEET 34	E

FILE NAME : X:\3230900\113688.02\TECH\CAD\53100200\SHEETSPLAN\CTH P\024501_PM.DWG PLOT DATE : 2/20/2014 1:38 PM PLOT BY : DAVID YAHNKE PLOT NAME : _____ PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

PAVEMENT MARKING LEGEND

1	PAVEMENT MARKING EPOXY 4-INCH (WHITE)
2	PAVEMENT MARKING EPOXY 4-INCH (WHITE SKIPS, 12.5' SEG., 37.5' GAP)
3	PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
4	PAVEMENT MARKING EPOXY 4-INCH (DOUBLE YELLOW)
5	PAVEMENT MARKING EPOXY 8-INCH (WHITE)
6	PAVEMENT MARKING RAILROAD CROSSING EPOXY
7	PAVEMENT MARKING ARROWS EPOXY TYPE 1 (WHITE)
8	PAVEMENT MARKING ARROWS EPOXY TYPE 2 (WHITE)
9	PAVEMENT MARKING ARROWS EPOXY TYPE 3 (WHITE)
10	PAVEMENT MARKING WORDS EPOXY (WHITE)
11	PAVEMENT MARKING CURB EPOXY (YELLOW)
12	PAVEMENT MARKING EPOXY STOP LINE 18-INCH (WHITE)
13	PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
14	PAVEMENT MARKING CROSSWALK EPOXY 6-INCH (WHITE)
15	PAVEMENT MARKING EPOXY 4-INCH (WHITE SKIPS, 3' SEG., 9' GAP)
16	PAVEMENT MARKING EPOXY 4-INCH (YELLOW SKIPS, 3' SEG., 9' GAP)
17	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)
R	REMOVE PAVEMENT MARKING

PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	PAVEMENT MARKING	SHEET 35	E

FILE NAME : X:\3230900\113688.02\TECH\CAD\53100200\SHEETSPLAN\CTH P\024501_PM.DWG PLOT DATE : 2/20/2014 1:38 PM PLOT BY : DAVID YAHNKE PLOT NAME : _____ PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

BEGIN PROJECT 5657-00-70
STA 11+06.95'P'

CTH P

BOURBON ROAD

USH 14

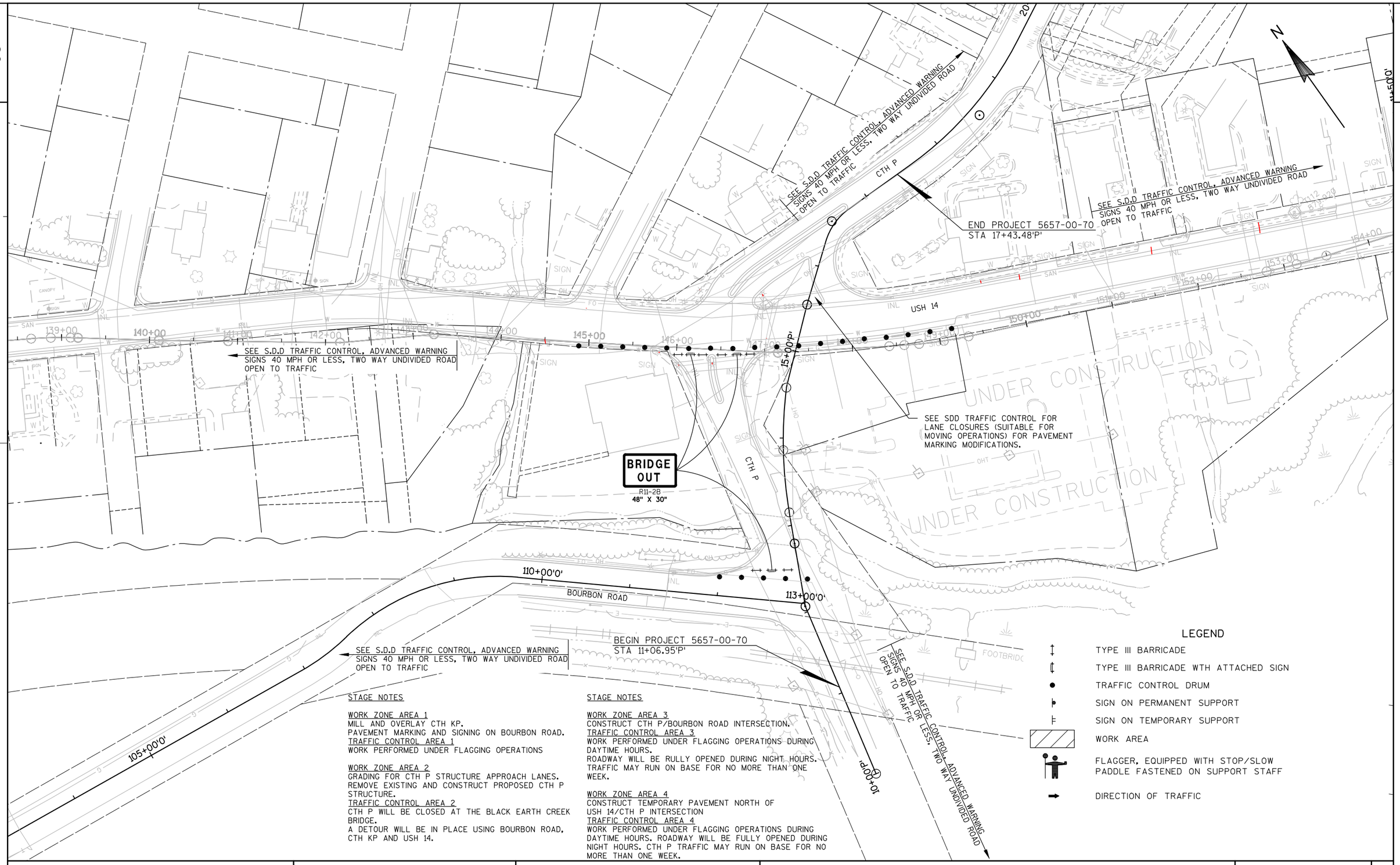
CHURCH STREET

END PROJECT 5657-00-70
STA 17+43.48'P'

PAVEMENT MARKING LEGEND

1	PAVEMENT MARKING EPOXY 4-INCH (WHITE)
2	PAVEMENT MARKING EPOXY 4-INCH (WHITE SKIPS, 12.5' SEG., 37.5' GAP)
3	PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
4	PAVEMENT MARKING EPOXY 4-INCH (DOUBLE YELLOW)
5	PAVEMENT MARKING EPOXY 8-INCH (WHITE)
6	PAVEMENT MARKING RAILROAD CROSSING EPOXY
7	PAVEMENT MARKING ARROWS EPOXY TYPE 1 (WHITE)
8	PAVEMENT MARKING ARROWS EPOXY TYPE 2 (WHITE)
9	PAVEMENT MARKING ARROWS EPOXY TYPE 3 (WHITE)
10	PAVEMENT MARKING WORDS EPOXY (WHITE)
11	PAVEMENT MARKING CURB EPOXY (YELLOW)
12	PAVEMENT MARKING EPOXY STOP LINE 18-INCH (WHITE)
13	PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
14	PAVEMENT MARKING CROSSWALK EPOXY 6-INCH (WHITE)
15	PAVEMENT MARKING EPOXY 4-INCH (WHITE SKIPS, 3' SEG., 9' GAP)
16	PAVEMENT MARKING EPOXY 4-INCH (YELLOW SKIPS, 3' SEG., 9' GAP)
17	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)
R	REMOVE PAVEMENT MARKING

PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	PAVEMENT MARKING	SHEET 36 E



STAGE NOTES

WORK ZONE AREA 1
MILL AND OVERLAY CTH KP.
PAVEMENT MARKING AND SIGNING ON BOURBON ROAD.
TRAFFIC CONTROL AREA 1
WORK PERFORMED UNDER FLAGGING OPERATIONS

WORK ZONE AREA 2
GRADING FOR CTH P STRUCTURE APPROACH LANES.
REMOVE EXISTING AND CONSTRUCT PROPOSED CTH P STRUCTURE.
TRAFFIC CONTROL AREA 2
CTH P WILL BE CLOSED AT THE BLACK EARTH CREEK BRIDGE.
A DETOUR WILL BE IN PLACE USING BOURBON ROAD, CTH KP AND USH 14.

STAGE NOTES

WORK ZONE AREA 3
CONSTRUCT CTH P/BOURBON ROAD INTERSECTION.
TRAFFIC CONTROL AREA 3
WORK PERFORMED UNDER FLAGGING OPERATIONS DURING DAYTIME HOURS.
ROADWAY WILL BE RULLY OPENED DURING NIGHT HOURS.
TRAFFIC MAY RUN ON BASE FOR NO MORE THAN ONE WEEK.

WORK ZONE AREA 4
CONSTRUCT TEMPORARY PAVEMENT NORTH OF USH 14/CTH P INTERSECTION
TRAFFIC CONTROL AREA 4
WORK PERFORMED UNDER FLAGGING OPERATIONS DURING DAYTIME HOURS. ROADWAY WILL BE FULLY OPENED DURING NIGHT HOURS. CTH P TRAFFIC MAY RUN ON BASE FOR NO MORE THAN ONE WEEK.

PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	PROJECT TRAFFIC CONTROL	SHEET 37	E

2

PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	TRAFFIC CONTROL	SHEET 38	E

2

N

BOURBON ROAD

109+00

110+00

111+00

112+00

113+00

PC: 13+14.96

PK: 12+79.01

BRIDGE OUT
R11-2B
48" X 30"

W01-6
48" X 24"

W01-6
48" X 24"

WISCONSIN AND SOUTHERN RAILROAD

SEE SDD TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATION)

CTH P

BP: 10+00.00

ECHNEOLOGICAL SITE

UNDER CONSTRUCTION

R/W

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC

PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	TRAFFIC CONTROL - DAYTIME WORK ZONE	SHEET 39	E

FILE NAME : X:\3230900\113688.02\TECH\CAD\53100200\SHEETSPLAN\CTH P\025003_TC.DWG PLOT DATE : 2/20/2014 1:40 PM PLOT BY : DAVID YAHNKE PLOT NAME : _____ PLOT SCALE : *********

2

2

N

BRIDGE OUT
R11-2B
48" X 30"

TRAFFIC ON BASE AGGREGATE UNTIL PAVED

BLACK EARTH CREEK

BOURBON ROAD

109+00

110+00

111+00

112+00

113+00

12+00

PC: 13+14.96

PK: 12+79.01

R/W

W01-6
48" X 24"

W01-6
48" X 24"

COVER STOP SIGN

WISCONSIN AND SOUTHERN RAILROAD

R/W

10+00

CTH P

BP: 10+00.00

R/W

ARCHAEOLOGICAL SITE

UNDER CONSTRUCTION

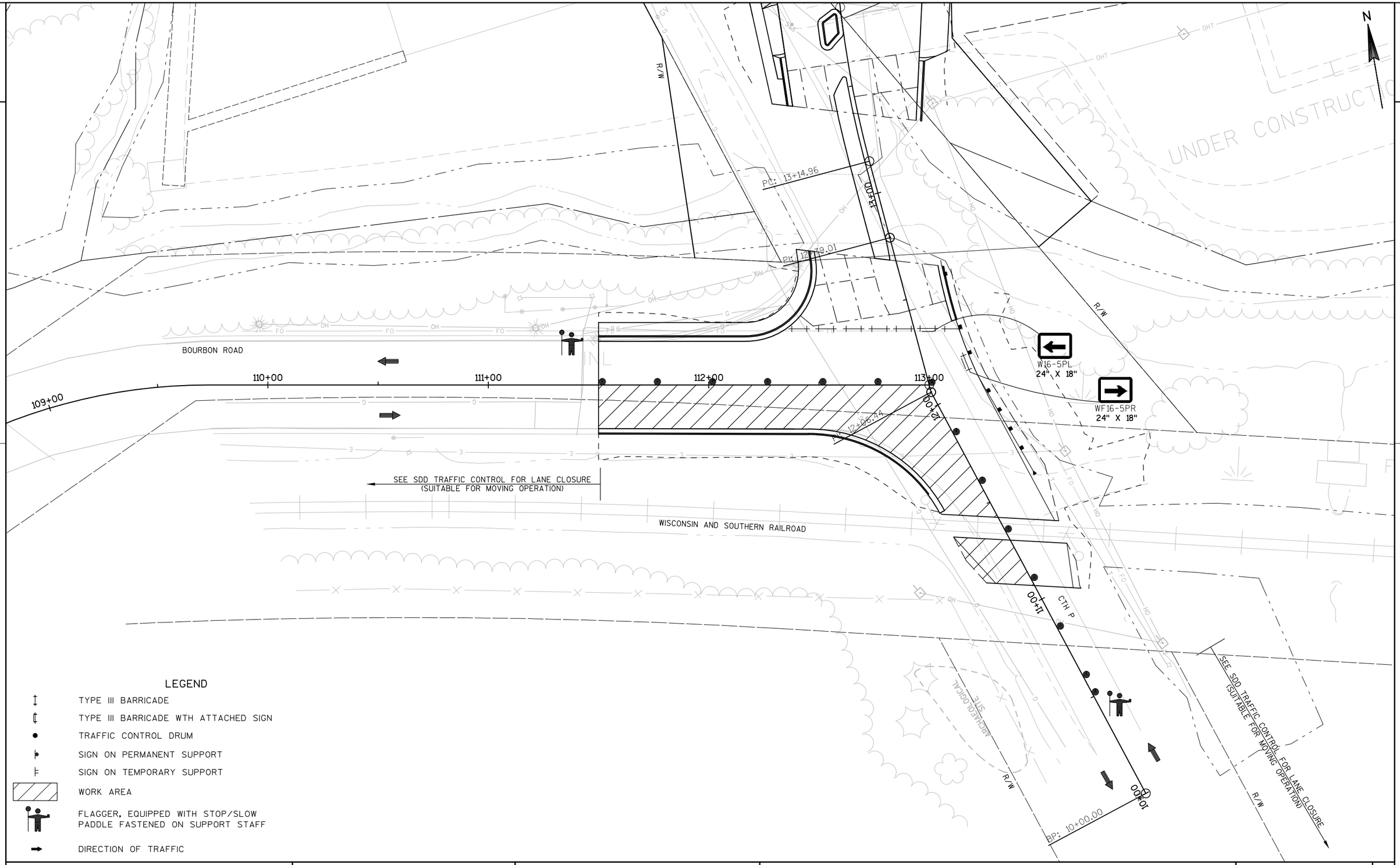
LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC

PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	TRAFFIC CONTROL - NIGHT - ROAD OPEN	SHEET 40	E

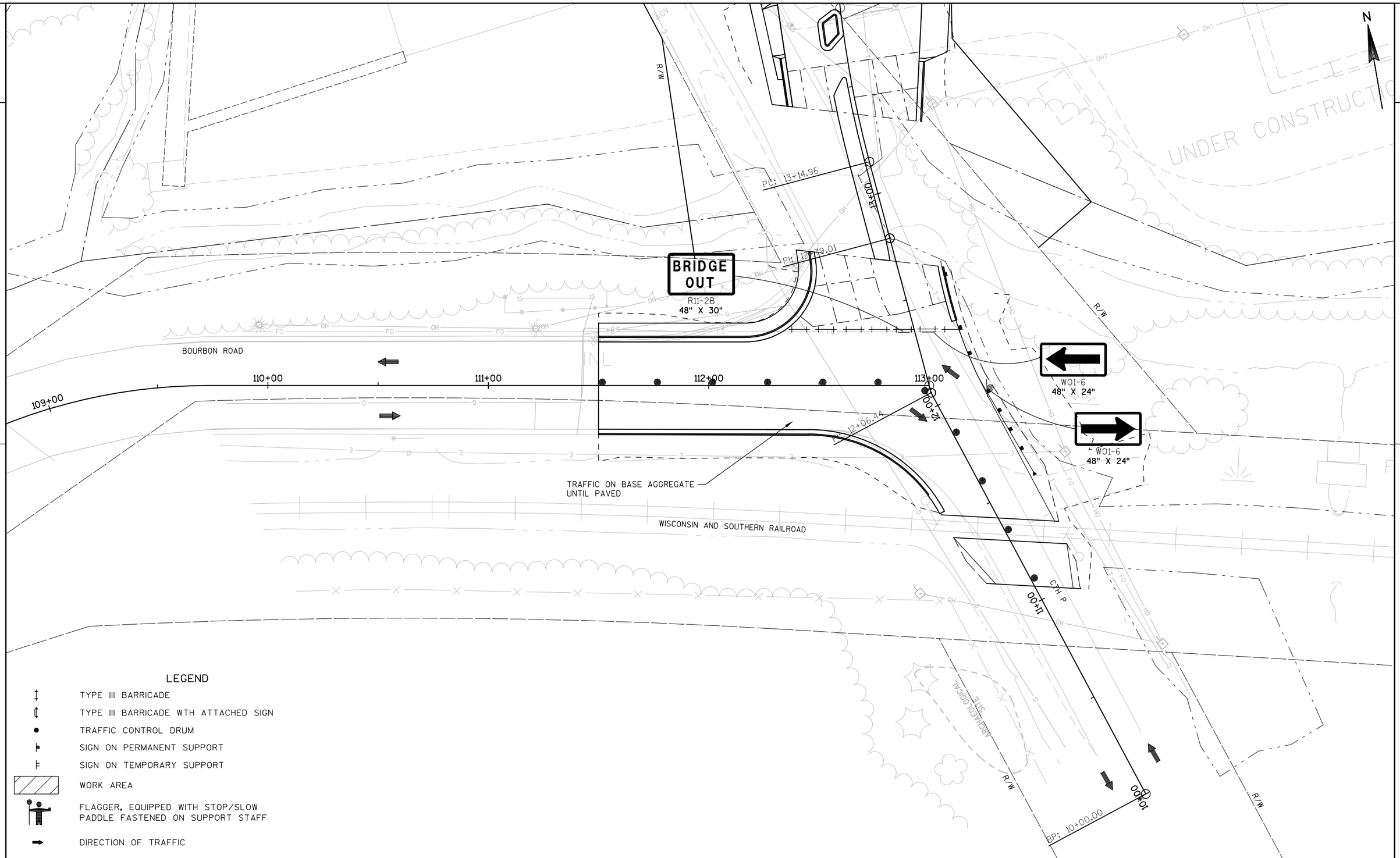
FILE NAME : X:\3230900\113688.02\TECH\CAD\53100200\SHEETSPLAN\CTH P\025003_TC - NIGHT.DWG PLOT DATE : 2/20/2014 1:41 PM PLOT BY : DAVID YAHNKE PLOT NAME : _____ PLOT SCALE : *********

2



PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	TRAFFIC CONTROL - DAYTIME WORK ZONE	SHEET 41	E

2

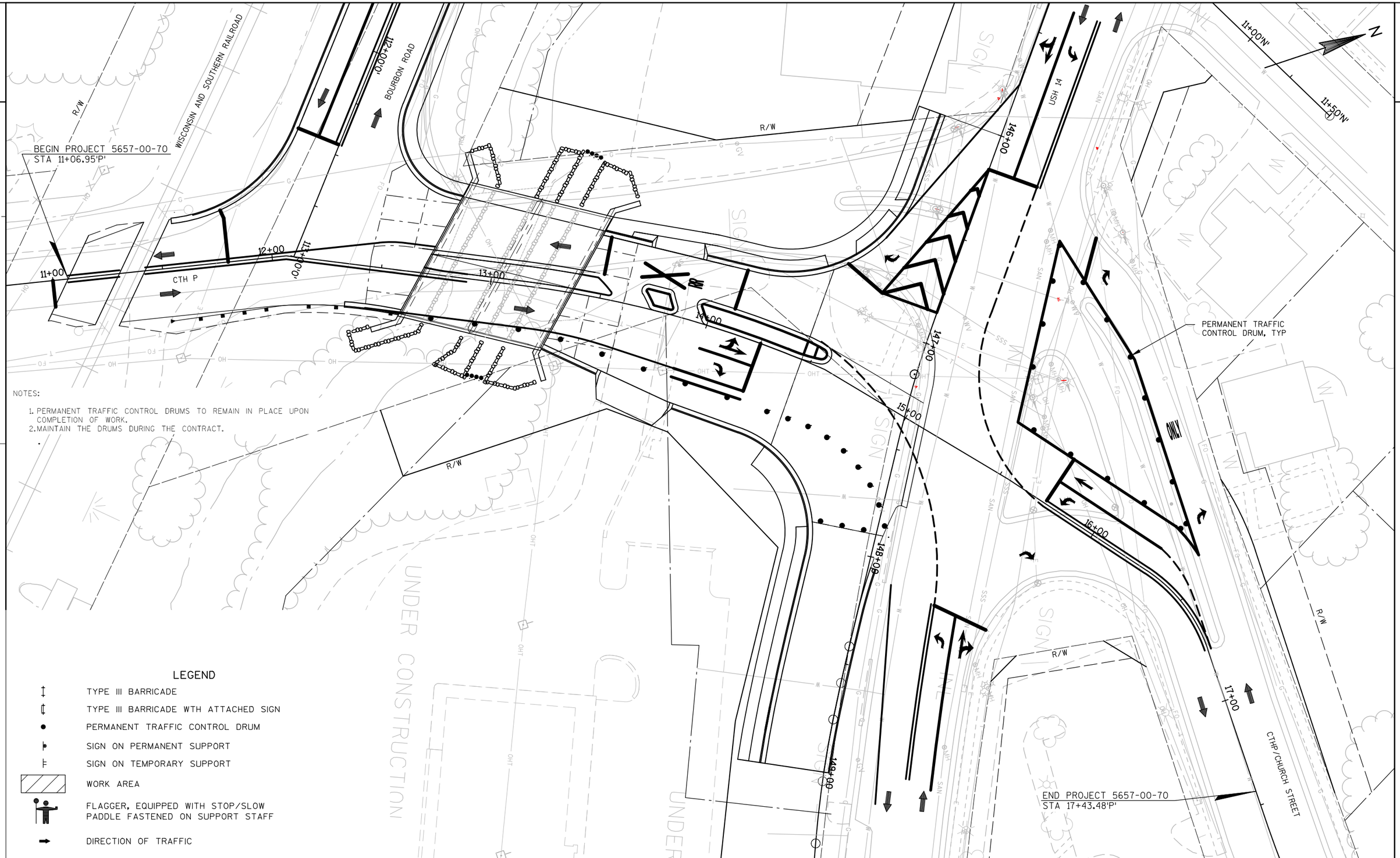


LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC

PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	TRAFFIC CONTROL - NIGHT - ROAD OPEN	SHEET 42	E

2



NOTES:

1. PERMANENT TRAFFIC CONTROL DRUMS TO REMAIN IN PLACE UPON COMPLETION OF WORK.
2. MAINTAIN THE DRUMS DURING THE CONTRACT.

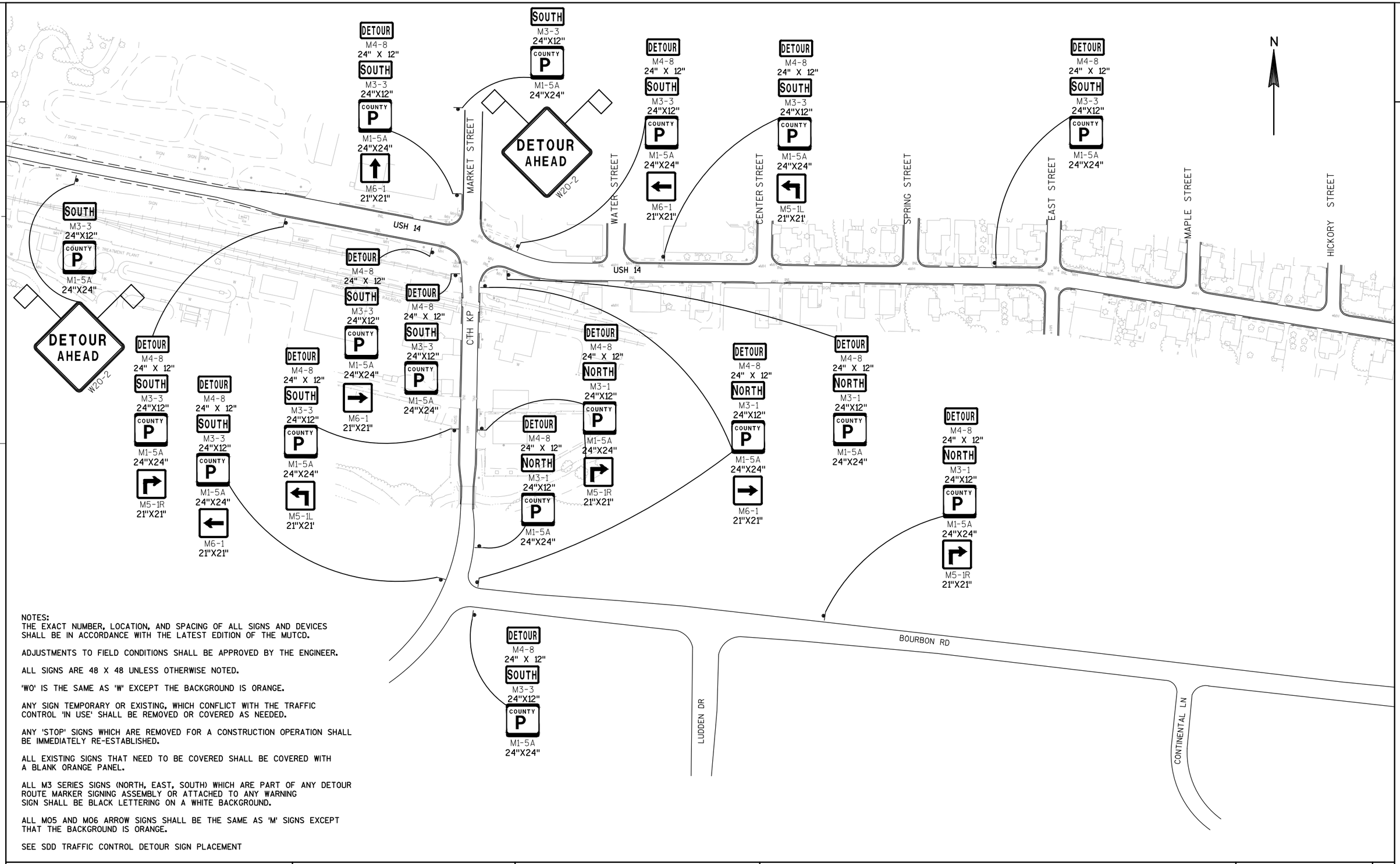
LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- PERMANENT TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC

PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	TRAFFIC CONTROL - PROJECT COMPLETION	SHEET 43	E

FILE NAME : X:\3230900\113688.02\TECH\CAD\53100200\SHEETSPLAN\CTH P\025002_TC.DWG
PLOT DATE : 2/20/2014 1:43 PM
PLOT BY : DAVID YAHNKE
PLOT NAME : ----------
PLOT SCALE : 1" = 40'_XREF

2



NOTES:
THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MUTCD.

ADJUSTMENTS TO FIELD CONDITIONS SHALL BE APPROVED BY THE ENGINEER.

ALL SIGNS ARE 48 X 48 UNLESS OTHERWISE NOTED.

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

ANY SIGN TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL 'IN USE' SHALL BE REMOVED OR COVERED AS NEEDED.

ANY 'STOP' SIGNS WHICH ARE REMOVED FOR A CONSTRUCTION OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED.

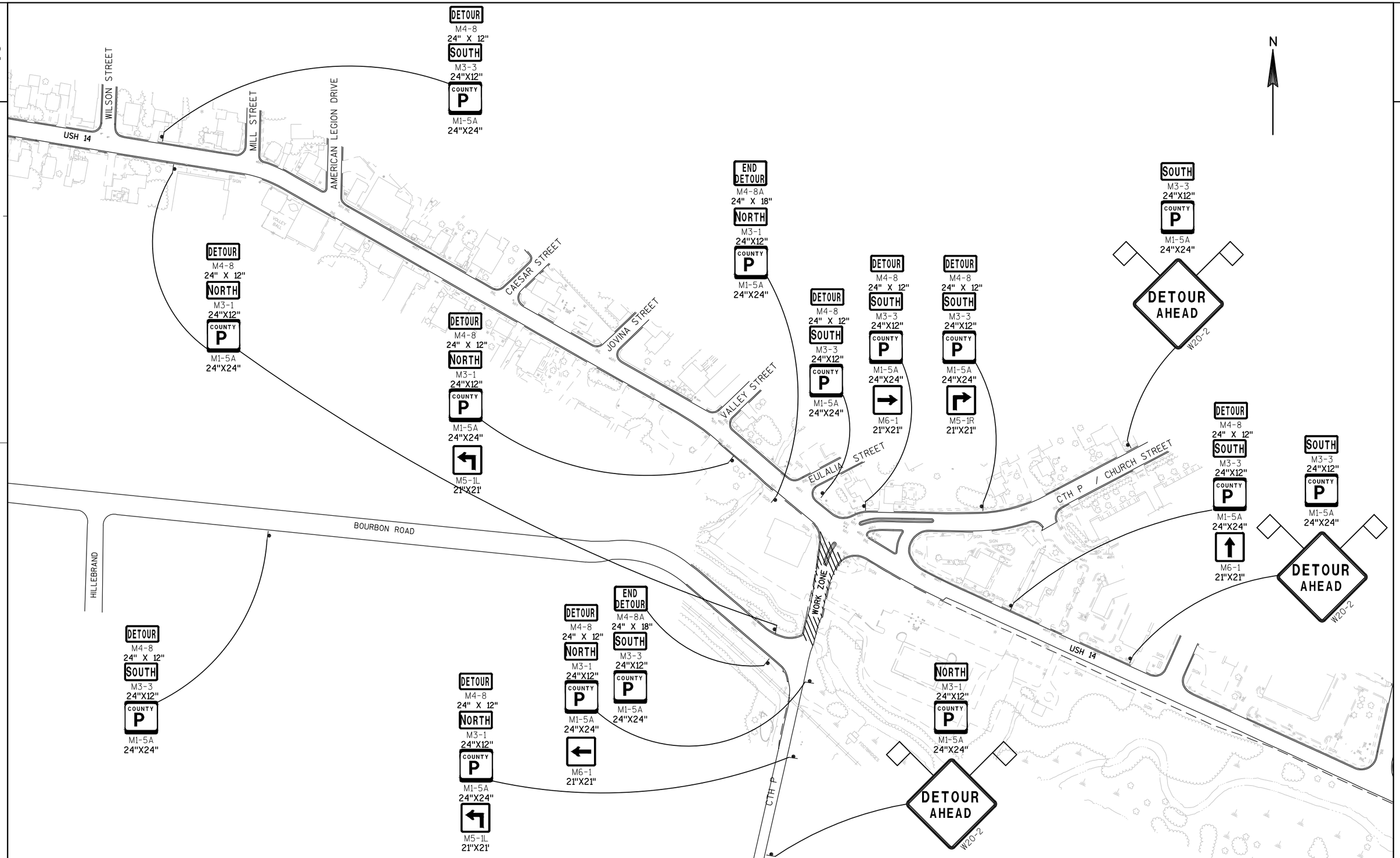
ALL EXISTING SIGNS THAT NEED TO BE COVERED SHALL BE COVERED WITH A BLANK ORANGE PANEL.

ALL M3 SERIES SIGNS (NORTH, EAST, SOUTH) WHICH ARE PART OF ANY DETOUR ROUTE MARKER SIGNING ASSEMBLY OR ATTACHED TO ANY WARNING SIGN SHALL BE BLACK LETTERING ON A WHITE BACKGROUND.

ALL M05 AND M06 ARROW SIGNS SHALL BE THE SAME AS 'M' SIGNS EXCEPT THAT THE BACKGROUND IS ORANGE.

SEE SDD TRAFFIC CONTROL DETOUR SIGN PLACEMENT

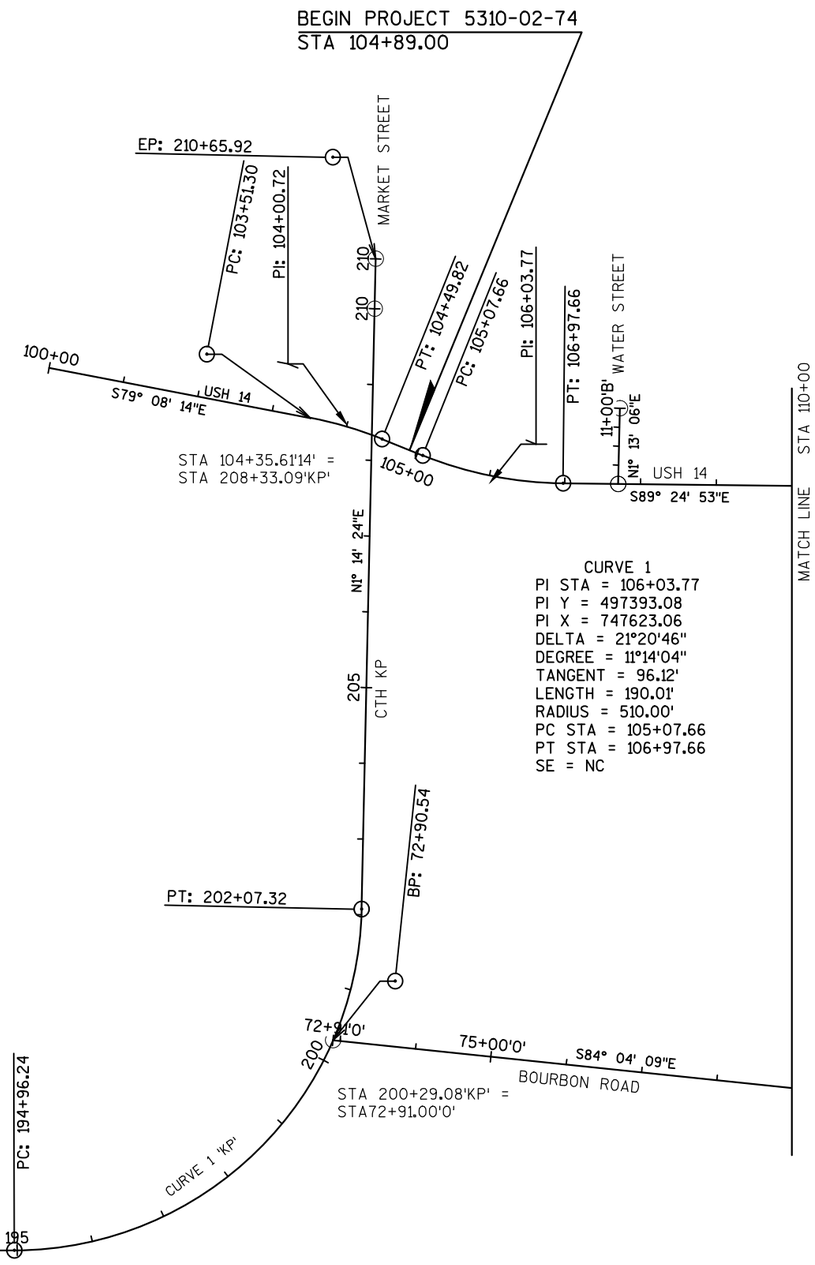
PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	DETOUR PLAN	SHEET 44	E



PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	DETOUR PLAN	SHEET 45	E

FILE NAME : X:\3230900\113688.02\TECH\CAD\53100200\SHEETSPLAN\CTH P\027001_DT.DWG PLOT DATE : 2/20/2014 1:43 PM PLOT BY : DAVID YAHNKE PLOT NAME : _____ PLOT SCALE : 1" = 200'_XREF

2



PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	ALIGNMENT DETAIL	SHEET 46	E

2

CURVE 2
PI STA = 117+71.19
PI Y = 497381.14
PI X = 748792.65
DELTA = 8°36'24"
DEGREE = 7°09'43"
TANGENT = 60.20'
LENGTH = 120.17'
RADIUS = 800.00'
PC STA = 117+11.00
PT STA = 118+31.17
SE = NC

CURVE 3
PI STA = 131+03.01
PI Y = 497161.77
PI X = 750106.45
DELTA = 20°22'36"
DEGREE = 14°28'07"
TANGENT = 71.17'
LENGTH = 140.83'
RADIUS = 396.00'
PC STA = 130+31.84
PT STA = 131+72.68
SE = NC

PI STA 125+95.26
Y = 497249.46
X = 749606.36

PI STA 128+95.26
Y = 497195.07
X = 749901.39

N

MATCH LINE STA 110+00

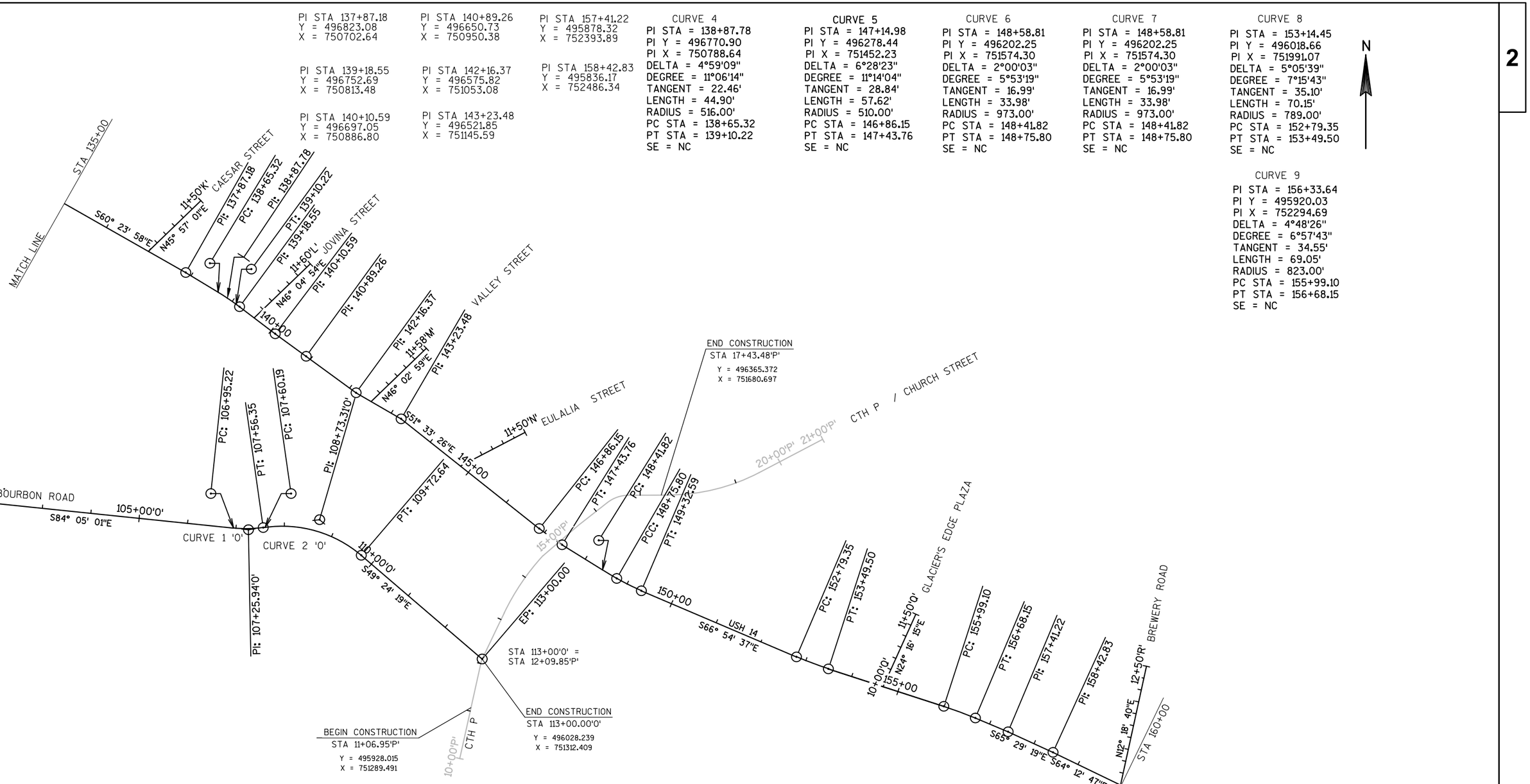
11+00'C' CENTER STREET
N1° 08' 44"E
S89° 24' 53"E
11+00'D' SPRING STREET
N1° 23' 29"E
115+00
PC: 117+11.00
11+00'E' EAST STREET
N1° 27' 35"E
PI: 117+71.19
9+00'E'
PT: 118+31.17
120+00
11+00'F' MAPLE STREET
N1° 46' 28"E
S80° 48' 29"E
11+00'G' HICKORY STREET
N1° 25' 55"E
125+00
PI: 125+95.26
USH 14
11+50'H' WILSON STREET
N2° 05' 34"E
S79° 33' 17"E
PI: 128+95.26
PC: 130+31.84
130+00
S80° 46' 33"E
11+50'I' MILL STREET
N1° 14' 43"E
PI: 131+03.01
PT: 131+72.68
11+50'J' AMERICAN LEGION DRIVE
N1° 22' 30"E
S60° 23' 58"E
STA 135+00
MATCH LINE

Δ = 0°30'57"
PI: 83+80.78
80+00'0'
S84° 04' 09"E
85+00'0'
S83° 33' 12"E
90+00'0'
BOURBON ROAD
Δ = 0°31'49"
PI: 93+15.29
95+00'0'
S84° 05' 01"E
100+0

PI STA 83+80.78
Y = 496544.39
X = 748500.00

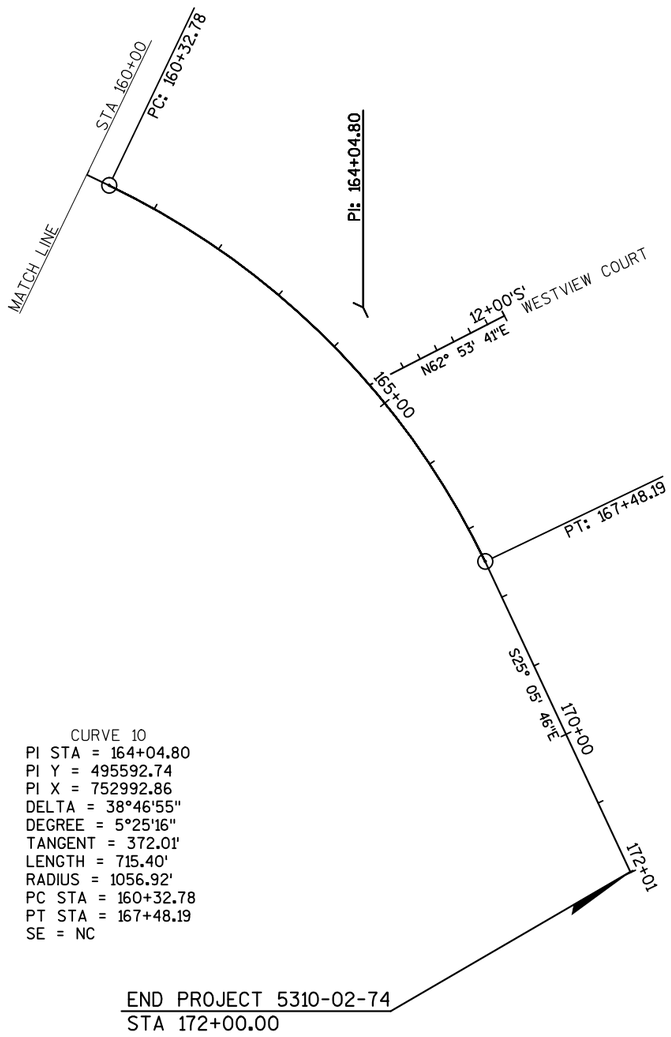
PI STA 93+15.29
Y = 496439.47
X = 749428.61

PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	ALIGNMENT DETAIL	SHEET 47	E



PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	ALIGNMENT DETAIL	SHEET 48	E

2



CURVE 10
PI STA = 164+04.80
PI Y = 495592.74
PI X = 752992.86
DELTA = 38°46'55"
DEGREE = 5°25'16"
TANGENT = 372.01'
LENGTH = 715.40'
RADIUS = 1056.92'
PC STA = 160+32.78
PT STA = 167+48.19
SE = NC

2

N

S53° 53' 36"E

S59° 44' 12"E

USH 14

145+00

S51° 33' 26"E

PT: 14+57.28

PI: 15+54.44

PC: 16+29.42

PI: 16+53.39

PT: 16+75.61

END CONSTRUCTION
STA 17+43.48'P'
Y = 496365.372
X = 751680.697

PC: 17+60.73

PT: 19+51.87

PI: 18+58.16

20+00'P'

N62° 18' 34"E

21+00'P'

CTH P / CHURCH STREET

N89° 41' 16"E

N51° 52' 56"E

15+00'P'

N49° 41' 02"E

S58° 01' 49"E

150+00

S66° 54' 37"E

USH 14

S72° 00' 16"E 155+00

S67° 11' 50"E

110+00'0'

BOURBON ROAD

PI: 13+86.64

PC: 13+14.96

PI: 12+79.01

PI: 12+06.44

N25° 38' 29"E

N25° 38' 29"E

END PROJECT 5657-00-70
STA 13+61.05'P'

BEGIN PROJECT 5657-00-70
STA 12+44.81'P'

STA 113+00'0' =
STA 12+09.85'P'

N12° 26' 51"E

BEGIN CONSTRUCTION
STA 11+06.95'P'
Y = 495928.016
X = 751289.491

CTH P

10+00'P'

CURVE 11
PI STA = 13+86.64
PI Y = 496187.62
PI X = 751388.91
DELTA = 16°48'46"
DEGREE = 11°48'49"
TANGENT = 71.67'
LENGTH = 142.32'
RADIUS = 485.00'
PC STA = 13+14.96
PT STA = 14+57.28
SE = NC

CURVE 12
PI STA = 16+53.39
PI Y = 496364.87
PI X = 751588.85
DELTA = 37°48'20"
DEGREE = 81°51'04"
TANGENT = 23.97'
LENGTH = 46.19'
RADIUS = 70.00'
PC STA = 16+29.42
PT STA = 16+75.61
SE = NC

CURVE 13
PI STA = 18+58.16
PI Y = 496366.00
PI X = 751795.38
DELTA = 27°22'42"
DEGREE = 14°19'26"
TANGENT = 97.43'
LENGTH = 191.14'
RADIUS = 400.00'
PC STA = 17+60.73
PT STA = 19+51.87
SE = NC

PI STA 12+06.44
Y = 496025.17
X = 751310.94

PI STA 12+79.01
Y = 496090.59
X = 751342.34

PI STA 15+54.44
Y = 496303.79
X = 751511.01

PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	ALIGNMENT DETAIL	SHEET 50	E

DATE 14MAR14 — E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	5310-02-74 QUANTITY	5657-00-70 QUANTITY
0010	201.0105	CLEARING	STA	2.000		2.000
0020	201.0205	GRUBBING	STA	2.000		2.000
0030	203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS (STATION) 01. 13+00 'P'	LS	1.000		1.000
0040	204.0115	REMOVING ASPHALTIC SURFACE BUTT JOINTS	SY	166.000	44.000	122.000
0050	204.0120	REMOVING ASPHALTIC SURFACE MILLING	SY	1,480.000	1,480.000	
0060	204.0150	REMOVING CURB & GUTTER	LF	620.000		620.000
0070	204.0155	REMOVING CONCRETE SIDEWALK	SY	48.000		48.000
0080	204.0195	REMOVING CONCRETE BASES	EACH	5.000		5.000
0090	204.0210	REMOVING MANHOLES	EACH	2.000		2.000
0100	204.0220	REMOVING INLETS	EACH	2.000		2.000
0110	204.0245	REMOVING STORM SEWER (SIZE) 01. 12-INCH	LF	60.000		60.000
0120	204.0245	REMOVING STORM SEWER (SIZE) 02. 30-INCH	LF	160.000		160.000
0130	204.9060.S	REMOVING (ITEM DESCRIPTION) 01. TYPE II SIGN STRUCTURES	EACH	2.000		2.000
0140	204.9090.S	REMOVING (ITEM DESCRIPTION) 02. CONCRETE MEDIAN	LF	145.000		145.000
0150	205.0100	EXCAVATION COMMON	CY	3,432.000		3,432.000
0160	205.0501.S	EXCAVATION, HAULING, AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL	TON	300.000		300.000
0170	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 01. B-13-0646	LS	1.000		1.000
0180	206.5000	COFFERDAMS (STRUCTURE) 01. B-13-0646	LS	1.000		1.000
0190	210.0100	BACKFILL STRUCTURE	CY	410.000		410.000
0200	213.0100	FINISHING ROADWAY (PROJECT) 01. 5310-02-74	EACH	1.000	1.000	
0210	213.0100	FINISHING ROADWAY (PROJECT) 02. 5657-00-70	EACH	1.000		1.000
0220	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	35.000		35.000
0230	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	1,835.000		1,835.000
0240	311.0115	BREAKER RUN	CY	20.000		20.000
0250	312.0110	SELECT CRUSHED MATERIAL	TON	3,025.000		3,025.000
0260	415.0080	CONCRETE PAVEMENT 8-INCH	SY	905.000		905.000
0270	415.0410	CONCRETE PAVEMENT APPROACH SLAB	SY	325.000		325.000
0280	416.0180	CONCRETE DRIVEWAY 8-INCH	SY	53.000		53.000
0290	455.0105	ASPHALTIC MATERIAL PG58-28	TON	32.000	12.000	20.000
0300	455.0605	TACK COAT	GAL	70.000	40.000	30.000
0310	460.1103	HMA PAVEMENT TYPE E-3	TON	585.000	220.000	365.000
0320	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	380.000		380.000
0330	465.0125	ASPHALTIC SURFACE TEMPORARY	TON	290.000		290.000
0340	502.0100	CONCRETE MASONRY BRIDGES	CY	505.000		505.000
0350	502.3200	PROTECTIVE SURFACE TREATMENT	SY	163.000		163.000
0360	502.5005	MASONRY ANCHORS TYPE L NO. 5 BARS	EACH	32.000		32.000
0370	505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	12,500.000		12,500.000
0380	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	64,520.000		64,520.000
0390	509.5100.S	POLYMER OVERLAY	SY	370.000		370.000
0400	513.7015	RAILING STEEL TYPE C3 (STRUCTURE) 01. B-13-0646	LS	1.000		1.000
0410	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	28.000		28.000
0420	517.1010.S	CONCRETE STAINING (STRUCTURE) 01. B-13-0646	SF	256.000		256.000
0430	517.1050.S	ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 01. B-13-0646	SF	256.000		256.000

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DATE 14MAR14 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	5310-02-74 QUANTITY	5657-00-70 QUANTITY
0440	522.1024	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH	EACH	1.000		1.000
0450	550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	2,605.000		2,605.000
0460	601.0409	CONCRETE CURB & GUTTER 30-INCH TYPE A	LF	790.000		790.000
0470	601.0411	CONCRETE CURB & GUTTER 30-INCH TYPE D	LF	270.000		270.000
0480	602.0405	CONCRETE SIDEWALK 4-INCH	SF	2,705.000		2,705.000
0490	602.0515	CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA	SF	48.000		48.000
0500	606.0300	RIPRAP HEAVY	CY	425.000		425.000
0510	608.0412	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH	LF	71.000		71.000
0520	608.0418	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 18-INCH	LF	89.000		89.000
0530	608.0424	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 24-INCH	LF	185.000		185.000
0540	611.0612	INLET COVERS TYPE C	EACH	2.000		2.000
0550	611.0624	INLET COVERS TYPE H	EACH	2.000		2.000
0560	611.0639	INLET COVERS TYPE H-S	EACH	4.000		4.000
0570	611.2005	MANHOLES 5-FT DIAMETER	EACH	1.000		1.000
0580	611.2066	MANHOLES 6X6-FT	EACH	1.000		1.000
0590	611.3230	INLETS 2X3-FT	EACH	6.000		6.000
0600	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	593.000		593.000
0610	614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	1.000		1.000
0620	614.2300	MGS GUARDRAIL 3	LF	12.500		12.500
0630	614.2500	MGS THRIE BEAM TRANSITION	LF	39.000		39.000
0640	614.2610	MGS GUARDRAIL TERMINAL EAT	EACH	1.000		1.000
0650	618.0100	MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 01. 5657-00-70	EACH	1.000		1.000
0660	619.1000	MOBILIZATION	EACH	1.000	0.140	0.860
0670	620.0200	CONCRETE MEDIAN BLUNT NOSE	SF	72.000		72.000
0680	624.0100	WATER	MGAL	5.000		5.000
0690	625.0100	TOPSOIL	SY	1,435.000		1,435.000
0700	628.1504	SILT FENCE	LF	810.000		810.000
0710	628.1520	SILT FENCE MAINTENANCE	LF	810.000		810.000
0720	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	3.000		3.000
0730	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	5.000		5.000
0740	628.2006	EROSION MAT URBAN CLASS I TYPE A	SY	1,735.000		1,735.000
0750	628.7010	INLET PROTECTION TYPE B	EACH	1.000		1.000
0760	628.7015	INLET PROTECTION TYPE C	EACH	6.000		6.000
0770	628.7020	INLET PROTECTION TYPE D	EACH	1.000		1.000
0780	628.7560	TRACKING PADS	EACH	1.000		1.000
0790	629.0210	FERTILIZER TYPE B	CWT	1.000		1.000
0800	630.0140	SEEDING MIXTURE NO. 40	LB	27.000		27.000
0810	630.0200	SEEDING TEMPORARY	LB	25.000		25.000
0820	634.0614	POSTS WOOD 4X6-INCH X 14-FT	EACH	24.000	24.000	
0830	634.0616	POSTS WOOD 4X6-INCH X 16-FT	EACH	19.000	19.000	
0840	634.0814	POSTS TUBULAR STEEL 2X2-INCH X 14-FT	EACH	4.000	4.000	
0850	634.0816	POSTS TUBULAR STEEL 2X2-INCH X 16-FT	EACH	5.000	5.000	
0860	637.2220	SIGNS TYPE II REFLECTIVE SH	SF	184.980	184.980	
0870	637.2230	SIGNS TYPE II REFLECTIVE F	SF	135.080	135.080	
0880	638.2102	MOVING SIGNS TYPE II	EACH	2.000	2.000	
0890	638.2602	REMOVING SIGNS TYPE II	EACH	50.000	50.000	
0900	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	38.000	38.000	

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	5310-02-74 QUANTITY	5657-00-70 QUANTITY
0910	638.4000	MOVING SMALL SIGN SUPPORTS	EACH	1.000	1.000	
0920	642.5201	FIELD OFFICE TYPE C	EACH	1.000		1.000
0930	643.0100	TRAFFIC CONTROL (PROJECT) 01. 5310-02-74	EACH	1.000	1.000	
0940	643.0100	TRAFFIC CONTROL (PROJECT) 02. 5657-00-70	EACH	1.000		1.000
0950	643.0300	TRAFFIC CONTROL DRUMS	DAY	3,320.000		3,320.000
0960	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	1,000.000		1,000.000
0970	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	2,000.000		2,000.000
0980	643.0900	TRAFFIC CONTROL SIGNS	DAY	5,375.000		5,375.000
0990	643.2000	TRAFFIC CONTROL DETOUR (PROJECT) 01. 5657-00-70	EACH	1.000		1.000
1000	643.3000	TRAFFIC CONTROL DETOUR SIGNS	DAY	15,500.000		15,500.000
1010	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	760.000		760.000
1020	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	9,900.000	9,900.000	
1030	646.0126	PAVEMENT MARKING EPOXY 8-INCH	LF	926.000	926.000	
1040	646.0600	REMOVING PAVEMENT MARKINGS	LF	490.000		490.000
1050	647.0110	PAVEMENT MARKING RAILROAD CROSSINGS EPOXY	EACH	4.000	4.000	
1060	647.0156	PAVEMENT MARKING ARROWS EPOXY TYPE 1	EACH	1.000	1.000	
1070	647.0166	PAVEMENT MARKING ARROWS EPOXY TYPE 2	EACH	8.000	8.000	
1080	647.0176	PAVEMENT MARKING ARROWS EPOXY TYPE 3	EACH	3.000	3.000	
1090	647.0356	PAVEMENT MARKING WORDS EPOXY	EACH	1.000	1.000	
1100	647.0456	PAVEMENT MARKING CURB EPOXY	LF	220.000	220.000	
1110	647.0566	PAVEMENT MARKING STOP LINE EPOXY 18-INCH	LF	295.000	295.000	
1120	647.0606	PAVEMENT MARKING ISLAND NOSE EPOXY	EACH	2.000	2.000	
1130	647.0726	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH	LF	105.000	105.000	
1140	647.0766	PAVEMENT MARKING CROSSWALK EPOXY 6-INCH	LF	312.000	312.000	
1150	647.0955	REMOVING PAVEMENT MARKINGS ARROWS	EACH	9.000		9.000
1160	647.0965	REMOVING PAVEMENT MARKINGS WORDS	EACH	5.000		5.000
1170	650.4000	CONSTRUCTION STAKING STORM SEWER	EACH	9.000		9.000
1180	650.4500	CONSTRUCTION STAKING SUBGRADE	LF	751.000		751.000
1190	650.5000	CONSTRUCTION STAKING BASE	LF	527.000		527.000
1200	650.5500	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER	LF	365.000		365.000
1210	650.7000	CONSTRUCTION STAKING CONCRETE PAVEMENT	LF	224.000		224.000
1220	650.8000	CONSTRUCTION STAKING RESURFACING REFERENCE	LF	306.000	306.000	
1230	650.8500	CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (PROJECT) 01. 5657-00-70	LS	1.000		1.000
1240	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 5657-00-70	LS	1.000		1.000
1250	650.9920	CONSTRUCTION STAKING SLOPE STAKES	LF	751.000		751.000
1260	652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	795.000		795.000
1270	652.0325	CONDUIT RIGID NONMETALLIC SCHEDULE 80 2-INCH	LF	188.000		188.000
1280	652.0800	CONDUIT LOOP DETECTOR	LF	272.000		272.000
1290	653.0135	PULL BOXES STEEL 24X36-INCH	EACH	6.000		6.000
1300	653.0140	PULL BOXES STEEL 24X42-INCH	EACH	4.000		4.000
1310	653.0905	REMOVING PULL BOXES	EACH	5.000		5.000
1320	654.0102	CONCRETE BASES TYPE 2	EACH	5.000		5.000
1330	655.0800	LOOP DETECTOR WIRE	LF	688.000		688.000
1340	661.0200	TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) 01. USH 14 & CTH P	LS	1.000	1.000	

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	5310-02-74 QUANTITY	5657-00-70 QUANTITY
1350	661.0200	TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) 02. CTH P & BOURBON ROAD	LS	1.000	1.000	
1360	661.0200	TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) 03. CTH KP & BOURBON ROAD	LS	1.000	1.000	
1370	690.0150	SAWING ASPHALT	LF	818.000		818.000
1380	690.0250	SAWING CONCRETE	LF	10.000		10.000
1390	715.0415	INCENTIVE STRENGTH CONCRETE PAVEMENT	DOL	500.000		500.000
1400	715.0502	INCENTIVE STRENGTH CONCRETE STRUCTURES	DOL	5,050.000		5,050.000
1410	999.1000.S	SEISMOGRAPH	LS	1.000		1.000
1420	999.1500.S	CRACK AND DAMAGE SURVEY	LS	1.000		1.000
1430	ASP.1T0A	ON-THE-JOB TRAINING APPRENTICE AT $5.00/HR	HRS	350.000		350.000
1440	ASP.1T0G	ON-THE-JOB TRAINING GRADUATE AT $5.00/HR	HRS	225.000		225.000
1450	SPV.0060	SPECIAL 01. REMOVING TRAFFIC SIGNAL CONTROLLER CABINET	EACH	1.000		1.000
1460	SPV.0060	SPECIAL 02. TEMPORARY OPTICOM SIGNAL PREEMPT	EACH	4.000	4.000	
1470	SPV.0060	SPECIAL 03. REMOVING ELECTRICAL SERVICE METER BREAKER PEDESTAL	EACH	1.000		1.000
1480	SPV.0060	SPECIAL 04. PERMANENT TRAFFIC CONTROL DRUM	EACH	45.000	45.000	
1490	SPV.0060	SPECIAL 05. SIGNS FLASHING LED, STOP	EACH	2.000	2.000	
1500	SPV.0060	SPECIAL 06. SIGNS FLASHING LED, VEHICLE ENTRANCE	EACH	2.000	2.000	
1510	SPV.0105	SPECIAL 01. REMOVING TRAFFIC SIGNALS CTH P & USH 14 INTERSECTION	LS	1.000		1.000
1520	SPV.0105	SPECIAL 02. TEMPORARY VEHICLE DETECTION USH 14 & CTH P	LS	1.000	1.000	
1530	SPV.0105	SPECIAL 03. TEMPORARY VEHICLE DETECTION CTH P & BOURBON ROAD	LS	1.000	1.000	
1540	SPV.0105	SPECIAL 04. TEMPORARY VEHICLE DETECTION CTH KP & BOURBON ROAD	LS	1.000	1.000	
1550	SPV.0105	SPECIAL 05. TEMPORARY CROSSWALK ACCESS CTH P & USH 14	LS	1.000	1.000	
1560	SPV.0105	SPECIAL 06. CONCRETE PAVEMENT JOINT LAYOUT	LS	1.000		1.000
1570	SPV.0180	SPECIAL 01. GEOGRID REINFORCEMENT	SY	2,835.000		2,835.000

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CLEARING AND GRUBBING

PROJECT NUMBER	STATION	-	STATION	LOCATION	201.0105 CLEARING (STA)	201.0205 GRUBBING (STA)
5657-00-70	12+00 'P'	-	14+00 'P'	LT/RT	2	2
PROJECT				TOTAL	2	2

REMOVING CONCRETE

PROJECT NUMBER	STATION	LOCATION	204.0155 REMOVING CONCRETE SIDEWALK (SY)	204.0195 REMOVING CONCRETE BASES (EACH)
5657-00-70	14+05 'P'	LT 32'		1
	14+65 'P'	LT 50'		1
	14+75 'P'	LT 125'		1
	14+78 'P'	LT	14	
	14+80 'P'	LT	12	
	14+80 'P'	LT 87'		1
	14+95 'P'	LT 40'		1
	15+60 'P'	LT & RT	22	
PROJECT		TOTAL	48	5

REMOVING CONCRETE MEDIAN

PROJECT NUMBER	STATION	-	STATION	LOCATION	204.9090.S.02 REMOVING CONCRETE MEDIAN (LF)
5657-00-70	14+45 'P'	-	14+90 'P'	LT	60
	16+10 'P'	-	16+75 'P'	LT	85
PROJECT				TOTAL	145

EXCAVATION HAULING AND DISPOSAL

PROJECT NUMBER	STATION	-	STATION	LOCATION	205.0501.S EXCAVATION HAULING AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL (TON)
5657-00-70	147+00	-	148+75	LT	300
PROJECT					300

REMOVING ASPHALTIC SURFACE

PROJECT NUMBER	STATION	-	STATION	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS (SY)	204.0120 REMOVING ASPHALTIC SURFACE MILLING (SY)
5310-02-74	199 'KP'	-	199+97 'KP'	27	
	199+97 'KP'	-	202+35 'KP'		1,480
	202+35 'KP'	-	202+40 'KP'	17	
5657-00-70	11+07 'P'	-	11+31 'P'	100	
	73+43 'O'	-	73+48 'O'	22	
5310-02-74			TOTAL	44	1,480
5657-00-70			TOTAL	122	0
PROJECT			TOTAL	166	1,480

REMOVING STORM SEWER

PROJECT NUMBER	STATION	-	STATION	LOCATION	204.0210 REMOVING MANHOLES (EACH)	204.0220 REMOVING INLETS (EACH)	204.0245.01 REMOVING STORM SEWER 12-INCH (LF)	204.0245.02 REMOVING STORM SEWER 30-INCH (LF)
5657-00-70	13+95 'P'			LT 37'	1			
	14+75 'P'			LT 55'	1			
	14+75 'P'			LT 46'		1		
	14+80 'P'			LT 120'		1		
	13+42 'P'	-	13+95 'P'					70
	13+95 'P'	-	14+75 'P'					90
	14+75 'P'	-	14+80 'P'				60	
PROJECT				TOTAL	2	2	60	160

EXCAVATION

PROJECT NUMBER	STATION	-	STATION	LOCATION	205.0100 EXCAVATION COMMON (1) CUT FROM EW DATA (CY)	(2) EXPANDED FILL FROM EW DATA (CY)	(3) EXPANDED FILL (CY)	(4) MASS ORDINATE (CY)	WASTE (CY)	REMARKS
5657-00-70	11+06.95'P'	-	14+50.00'P'	CTH P	1,593	364	364	1,229	1,229	
	15+50.00'P'	-	16+00.00'P'	CTH P	150			150	150	TEMP. ASPHALT
	111+50.00'O'	-	112+56.89'O'	BOURBON ROAD	597	28	28	569	569	
	146+00.00	-	147+89.73	USH 14	700			700	700	TEMP. ASPHALT
	147+89.73	-	149+00.00	USH 14	392			392	392	
			PROJECT	TOTAL	3,432	392	392	3,040	3,040	

(1) COMMON FROM COMPUTER EARTHWORK DATA, INCLUDES PAVEMENT REMOVAL(CONTAINS SALVAGED/UNUSABLE PAVEMENT MATERIAL)
(2) EXPANDED FILL FROM COMPUTER EARTHWORK DATA
(3) EXPANDED FILL FACTOR = 1.3
(4) MASS ORDINATE IS + OR - FOR STAGE. PLUS IS EXCESS, MINUS IS SHORTAGE.

REMOVING CURB & GUTTER

PROJECT NUMBER	STATION	-	STATION	LOCATION	204.0150 REMOVING CURB & GUTTER (LF)
5657-00-70	13+45 'P'	-	15+10 'P'	LT	120
	14+45 'P'	-	14+90 'P'	LT	80
	15+53 'P'	-	16+10 'P'	LT	155
	111+50 'B'	-	111+75 'P'	LT	150
	111+50 'B'	-	112+75 'P'	LT	115
PROJECT				TOTAL	620

REMOVING TYPE II SIGN STRUCTURES

PROJECT NUMBER	STATION	LOCATION	204.9060.S.01 REMOVING TYPE II SIGN STRUCTURES (EACH)
5657-00-70	14+05 'P'	LT 32'	1
	14+65 'P'	LT 50'	1
PROJECT		TOTAL	2

FINISHING ROADWAY

PROJECT NUMBER	LOCATION	213.0100 FINISHING ROADWAY (LS)
5310-02-74	PROJECT LIMITS	1
PROJECT		1

***All quantities shown are associated with Category 0010 unless otherwise noted**

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BASE AGGREGATE

PROJECT NUMBER	STATION	-	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH (TON)	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON)	312.0110 SELECT CRUSHED MATERIAL (TON)
5657-00-70	11+30 'P'	-	12+63 'P'	RT	35		
	11+43 'P'	-	12+69 'P'	RT		235	310
	111+50 'O'	-	112+57 'O'	LT		240	315
	112+57 'O'	-	113+00 'O'	LT		195	250
	111+50 'O'	-	113+00 'O'	RT		315	305
	13+36 'P'	-	114+45 'P'	LT/RT		315	790
	147+90	-	149+00	RT		160	400
	15+50 'P'	-	16+00 'P'	LT		70	120
	146+00	-	147+90	RT		305	535
PROJECT				TOTAL	35	1,835	3,025

APRON ENDWALL FOR CULVERT

PROJECT NUMBER	STRUCT	STATION	LOCATION	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORNCED CONCRETE 24-INCH
5657-00-70	2.5	13+54	56' LT	1
PROJECT			TOTAL	1

CONCRETE

PROJECT NUMBER	STATION	-	STATION	LOCATION	416.0180 CONCRETE DRIVEWAY 8-INCH (SY)	602.0405 CONCRETE SIDEWALK 4-INCH (SF)	650.7000 CONSTRUCTION STAKING CONCRETE PAVEMENT (LF)
5657-00-70	12+35 'P'	-	12+50 'P'			250	
	13+36 'P'	-	14+50 'P'				114
	13+80 'P'	-		LT	15		
	13+75 'P'	-		RT	38		
	13+45 'P'	-	146+00			1,050	
	13+65 'P'	-	13+85 'P'			60	
	13+95 'P'	-	14+55 'P'			420	
	147+60	-	147+92			380	
	147+92	-	149+00			545	110
PROJECT				TOTAL	53	2,705	224

ASPHALTIC SURFACE TEMPORARY

PROJECT NUMBER	STATION	-	STATION	LOCATION	465.0125 ASPHALTIC SURFACE TEMPORARY (TON)
5657-00-70	146+00	-	147+90	RT	205
	15+50 'P'	-	16+00 'P'	LT	50
	15+50 'P'	-	16+75 'P'	LT	35
PROJECT				TOTAL	290

CONCRETE PAVEMENT 8-INCH

PROJECT NUMBER	STATION	-	STATION	LOCATION	415.0080 CONCRETE PAVEMENT 8-INCH (SY)
5657-00-70	13+60 'P'	-	14+45 'P'	LT/RT	565
	147+90	-	149+00	RT	340
PROJECT					905

HMA PAVEMENT

PROJECT NUMBER	STATION	-	STATION	LOCATION	455.0105 ASPHALTIC MATERIAL PG58-28 (TON)	455.0605 TACK COAT (GAL)	460.1103 HMA PAVEMENT TYPE E-3 (TON)	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE (LF)
5310-02-74	72+90 'O'	-	73+47 'O'					57
	199+91 'KP'	-	202+40 'KP'	LT/RT	12.00		220	249
	CTH KP					40		
5657-00-70	11+43 'P'	-	12+45 'P'	RT	4.25		75	
	112+57 'O'	-	113+00 'O'	LT	2.25		35	
	115+50 'O'	-	112+57 'O'	LT	4.50		85	
	11+50 'O'	-	11+42 'P'	RT/LT	8.50		155	
	11+07 'P'	-	11+31 'P'	RT/LT	0.50		15	
	CTH P - BOURBON RD INTERSECTION					30		
5310-02-74			TOTAL		12.00	40	220	306
5657-00-70			TOTAL		20.0	30	365	0
PROJECT			TOTAL		32	70	585	306

MASONRY ANCHORS AND CONCRETE MEDIAN BLUNT NOSE

PROJECT NUMBER	STATION	-	STATION	LOCATION	502.5005 MASONRY ANCHORS TYPE L NO. 5 BARS (EACH)	620.0200 CONCRETE MEDIAN BLUNT NOSE (SF)
5657-00-70	12+69 'P'		12+57 'P'	LT		72
	12+69 'P'		12+57 'P'		32	
PROJECT				TOTAL	32	72

CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA

PROJECT NUMBER	STATION	LOCATION	602.0515 CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA (SF)
5657-00-70	14+50 'P'	LT 50'	8
	14+50 'P'	RT 30'	8
	14+47 'P'	LT 5'	16
	146+40	RT 30'	8
	147+83	RT 26'	8
PROJECT		TOTAL	48

CONCRETE PAVEMENT APPROACH SLAB

PROJECT NUMBER	STATION	-	STATION	415.0410 CONCRETE PAVEMENT APPROACH SLAB (SY)
5657-00-70	14+45 'P'	-	12+69 'P'	170
	13+37 'P'	-	13+60 'P'	155
PROJECT				325

CONCRETE CURB & GUTTER

PROJECT NUMBER	STATION	-	STATION	LOCATION	601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A (LF)	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D (LF)	650.5500 CONSTRUCTION STAKING GUTTER AND CURB AND GUTTER (LF)
5657-00-70	111+50 'O'	-	112+40 'O'	LT		90	60
	111+50 'O'	-	113+00 'O'	RT		170	170
	12+35 'P'	-	12+60 'P'	RT	15	10	10
	12+48 'P'	-	12+80 'P'	LT	35		
	13+30 'P'	-	149+00	RT	265		
	13+45 'P'	-	146+00	LT	200		95
	13+70 'P'	-	13+85 'P'	LT	50		
	13+95 'P'	-	14+55 'P'	LT	130		
	148+05	-	149+00	LT	95		30
PROJECT				TOTAL	790	270	365

***All quantities shown are associated with Category 0010 unless otherwise noted**

STORM SEWER PIPE

PROJECT NUMBER	PIPE RUN	STRUCT	-	STRUCT	INLET ELEVATION	DISCHARGE ELEVATION	608.0412 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH (LF)	608.0418 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 18-INCH (LF)	608.0424 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 24-INCH (LF)	612.0406 PIPE UNDERDRAIN WRAPPED 6-INCH (LF)
5657-00-70	P-1	2.0	-	PLUG	870.74	870.54			64	
	P-2	3.0	-	2.0	871.58	870.74			121	
	P-3	2.1	-	2.0	870.85	870.74		39		
	P-4	2.2	-	2.1	870.93	870.85		28		
	P-5	2.3	-	2.2	871.47	871.43	9			
	P-6	2.4	-	2.3	871.65	871.47	41			
	P-7	3.1	-	3.0	871.88	871.76		22		
	P-8	3.2	-	3.0	872.31	872.26	21			
	DRAIN-1	PLUG	-	2.1	872.50	872.00				75
	DRAIN-2	PLUG	-	2.10	872.50	872.00				75
	DRAIN-3	PLUG	-	2.40	872.50	872.00				75
	DRAIN-4	3.2	-	2.4	873.20	872.50				68
	DRAIN-5	PLUG	-	3.2	873.80	873.20				75
PROJECT						TOTAL	71	89	185	368

STRUCTURES, MANHOLES, AND INLETS

PROJECT NUMBER	STRUCT. NO.	STATION	OFFSET	CASTING ELEVATION	INVERT	611.0624 INLET COVERS TYPE H (EACH)	611.0639 INLET COVERS TYPE H-S (EACH)	611.0612 INLET COVERS TYPE C (EACH)	611.2005 MANHOLES 5-FT DIAMETER (EACH)	611.2066 MANHOLES 6X6-FT (EACH)	611.3230 INLETS 2X3-FT (EACH)	650.4000 CONSTRUCTION STAKING STORM SEWER (EACH)
5657-00-70	2.0	146+75.10	23' RT	875.48	871.06			1		1		1
	2.1	14'P'+35.33	9.50' LT	874.93	870.85		1				1	1
	2.2	14'P'36.54	1.5' LT	875.43	871.25		1				1	1
	2.3	14'P'+36.94	36' LT	875.50	871.94		1				1	1
	2.4	14'P'+38.02	40.7' RT	875.15	872.15		1				1	1
	2.5	13'P'+54	55.81' LT	873.88	869.50							1
	3.0	147+96.21	17.66' RT	876.36	871.58			1	1			1
	3.1	147+94.97	3.82' LT	876.38	871.88	1					1	1
	3.2	148+14.77	28.5' RT	876.16	872.31	1					1	1
PROJECT					TOTAL	2	4	2	1	1	6	9

RAILING

PROJECT NUMBER	STATION	-	STATION	LOCATION	614.2300 MGS GUARDRAIL 3 (LF)	614.2500 MGS THRIE BEAM TRANSITION (LF)	614.2610 MGS GUARDRAIL TERMINAL EAT (EACH)
5657-00-70	11+53.30'P'	-	12+11.48'P'	RT			1
	12+11.48'P'	-	12+23.85'P'	RT	12.5		
	12+23.85'P'	-	12+63.19'P'	RT		39	
PROJECT				TOTAL	12.5	39	1

WATER

PROJECT NUMBER	LOCATION	624.0100 WATER (MGAL)
5657-00-70	UNDISTRIBUTED	5
PROJECT	TOTAL	5

EROSION CONTROL

PROJECT NUMBER	STATION	-	STATION	LOCATION	625.0100 TOPSOIL (SY)	628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)	628.2006 EROSION MAT URBAN CLASS I TYPE A (SY)	628.7010 INLET PROTECTION TYPE B (EACH)	628.7015 INLET PROTECTION TYPE C (EACH)	628.7020 INLET PROTECTION TYPE D (EACH)	629.0210 FERTILIZER TYPE B (CWT)	630.0140 SEEDING MIXTURE No. 40 (LB)	630.0200 SEEDING TEMPORARY (LB)
5657-00-70	11+00 'P'	-	12+50 'P'	RT		195	195							
	11+50 'P'	-	13+50 'P'	RT	415			415				0.26	8	
	12+40 'P'	-	12+65 'P'	LT	100			100				0.06	2	
	12+85 'P'													
	12+93 'P'													
	13+30 'P'	-	14+75 'P'	RT		125	125							
	13+35 'P'	-	13+65 'P'	RT	50			50				0.03	1	
	13+50 'P'	-	13+60 'P'	LT		60	60							
	13+85 'P'	-	14+70 'P'	RT	90			90				0.06	2	
	14+35 'P'			9.2' LT						1				
	14+37 'P'			1.5' LT						1				
	14+37 'P'			36' LT						1				
	14+38 'P'			40.7' RT						1				
	14+55 'P'	-	13+55 'P'	LT	550			550				0.34	10	
	11+50 'O'	-	12+40 'O'	LT		100	100							
	11+50 'O'	-	12+75 'O'	RT	230			230				0.14	4	
	11+50 'O'	-	13+00 'O'	RT		170	170							
	146+75			23' RT					1					
	147+95			3.8' LT						1				
	147+96	-	17+66	RT							1			
	148+15			38.5' RT						1				
	UNDISTRIBUTED					160	160	300						25
PROJECT				TOTAL	1,435	810	810	1,735	1	6	1	1	27	25

***All quantities shown are associated with Category 0010 unless otherwise noted**

PERMANENT SIGNING TYPE II

PROJECT NUMBER	SIGN #	SIGN CODE	SIGN SIZE IN	637.2220 SIGNS TYPE II REFLECTIVE SH (SF)	637.2230 SIGNS TYPE II REFLECTIVE F (SF)	634.0614 POSTS WOOD 4X6-INCH 14-FT (EACH)	634.0616 POSTS WOOD 4X6-INCH 16-FT (EACH)	634.0814 POSTS TUBULAR STEEL 2X2-INCH 14-FT (EACH)	634.0816 POSTS TUBULAR STEEL 2X2-INCH 16-FT (EACH)	SPV.0060.05 SIGNS FLASHING LED, STOP (EACH)	SPV.0060.06 SIGNS FLASHING LED, VEHICLE ENTRANCE (EACH)	SIGN MOUNTED ON SAME POST AS	REMARKS
5310-02-74	1-01	R9-3A	24X24	4.00		1							NO PEDESTRIAN
	1-02	W5-52R	12X36		3.00		1						CLEARANCE
	1-03	W5-52L	12X36		3.00		1						CLEARANCE
	1-04	W5-52L	12X36		3.00	1							CLEARANCE
	1-05	W5-52R	12X36		3.00		1						CLEARANCE
	1-06	W3-3	36X36		9.00		1						SIGNAL AHEAD
	1-07	W10-1	36X36		7.07		1						RAILROAD CROSSING
	1-08	R2-1	24X30	5.00		1							SPEED LIMIT 25
	1-09	R9-3A	24X24	4.00		1							NO PEDESTRIAN
	1-10	W1-6	48X24		8.00	1							ARROW
	1-11	R9-3	12X18	1.50		1							NO PEDESTRIAN CROSSING
	1-12	R9-3	12X18	1.50								1-11	NO PEDESTRIAN CROSSING
	1-13	R1-1	30X30	5.18		1							STOP
	1-14	R2-1	24X30	5.00		1							SPEED LIMIT 25
	1-15	R4-7	24X30	5.00		1							MEDIAN LEFT
	1-16	R1-1	30X30	5.18		1							STOP
	1-17	R1-1	30X30	5.18		1							STOP
	1-18	R5-1C	30X30	5.18								1-17	DO NOT ENTER
	1-19	R2-1	24X30	5.00		1							SPEED LIMIT 25
	1-20	R2-1	24X30	5.00		1							SPEED LIMIT 25
	1-21	W11-8	36X36				1				1		VEHICLE ENTRANCE (LED)
	2-01	W11-8	36X36				1				1		VEHICLE ENTRANCE (LED)
	2-02	R1-6	12X36	3.00									YIELD TO PEDESTRIAN WITHIN CROSSWALK
	2-03	R1-1	30x30	5.18				1					STOP
	2-04	R1-1	30X30			1				1			STOP (LED)
	2-05	S1-1	36X36		6.75		1						SCHOOL CROSSING
	2-06	WF16-7L	24X12		2.00							2-05	DIAGONAL ARROW
	2-07	W3-1	36X36		9.00		1						STOP AHEAD
	2-08	W11-2	30x30		6.25	1							PEDESTRAN WARNING
	2-09	R1-1	30x30	5.18								EXISTING	STOP
	2-10	W11-2	30x30		6.25	1							PEDESTRAN WARNING
	2-11	W3-1	36X36		9.00		1						STOP AHEAD
	2-12	S1-1	36X36		6.75		1						SCHOOL CROSSING
	2-13	WF16-7L	24X12		2.00							2-12	DIAGONAL ARROW
	2-14	R1-1	30X30			1				1			STOP (LED)
	2-15	R1-1	30X30	5.18								EXISTING	STOP
	3-01	W10-1	36X36		7.07				1				RAILROAD CROSSING
	3-02	W16-9P	24X8		1.33							3-01	AHEAD
	3-03	W10-1	36X36		7.07				1				RAILROAD CROSSING
	3-04	R2-1	24X30	5.00		1							SPEED LIMIT 25
	3-05	W10-1	36X36		7.07				1				RAILROAD CROSSING
	3-06	W10-1	36X36		7.07				1				RAILROAD CROSSING
	3-07	W16-9P	24X8		1.33							3-06	AHEAD
	3-08	W1-3L	36X36		9.00		1						JOG LEFT
	3-09	R1-1	30X30	5.18			1						STOP
	3-10	I55-56	30X36	7.50			1						ADOPT A HIGHWAY
	3-11		24X30						1				CRIME STOPPERS
	3-12	R10-7	24X30	5.00		1							DO NOT BLOCK INTERSECTION
	3-13	R3-8	36X30	7.50		1							LEFT AND STRAIGHT/RIGHT ONLY
	3-14	M1-5A	24X24	4.00			1						COUNTY P
	3-15	R2-1	24X30	5.00								3-14	SPEED LIMIT 25
	3-16	W10-1	36X36		7.07	1	1						RAILROAD CROSSING
	3-17	R9-9	30X18	3.75		1							SIDEWALK CLOSED
	3-18	R1-1	30X30	5.18				1					STOP
	3-19	R1-1	30X30	5.18				1					STOP
	3-20	R1-1	30X30	5.18				1					STOP
	3-21	R9-9	30X18	3.75		1							SIDEWALK CLOSED
	3-22	J3-2	48X57	19.00			1						EAST USH 14 LT, CTH P STRAIGHT
	3-23	J3-1	24X57	9.50			1						WEST USH 14 STRAIGHT
	3-24	J3-2	48X57	19.00			1						EAST USH 14 BEND LT, CTH P BEND LT
	3-25	W012-1D	24X24		4.00	1							DOUBLE SPLIT ARROWS
PROJECT			TOTAL	184.98	135.08	24	19	4	5	2	2		

***All quantities shown are associated with Category 0010 unless otherwise noted**

PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	MISCELLANEOUS QUANTITIES	SHEET	E

3

SIGN REMOVALS

PROJECT NUMBER	STATION	LOCATION	638.2102 MOVING SIGNS TYPE II (EACH)	638.2602 REMOVING SIGNS TYPE II (EACH)	638.3000 REMOVING SMALL SIGN SUPPORTS (EACH)	638.4000 MOVING SMALL SIGN SUPPORTS (EACH)
5310-02-74	199+71'KP'	30' RT		1	1	
	199+93'KP'	35' RT		1	1	
	201+51'KP'	28' RT		1	1	
	202+32'KP'	39' RT		1	1	
	202+43'KP'	20' LT		1	1	
	202+43'KP'	20' RT		1	1	
	202+82'KP'	20' LT		1	1	
	202+82'KP'	20' RT		1	1	
	73+59'O'	34' LT		1	1	
	73+84'O'	33' RT		1	1	
	74+98'O'	35' RT		1	1	
	78+76'O'	38'RT		2	1	
	79+36'O'	44' RT		2	1	
	82+15'O'	33' RT		1	1	
	82+15'O'	35 'LT		1	1	
	90+00'O'	35' RT		1		
	94+20'O'	30' RT		1	1	
	95+59'O'	26' RT		1	1	
	95+62'O'	0' RT		1	1	
	95+81'O'	30' LT		1	1	
	96+27'O'	40' RT		1		
	96+28'O'	30' RT		1	1	
	98+02'O'	35' LT		1	1	
	104+78'O'	30' RT		2	1	
	106+20'O'	25' RT		1	1	
	108+20'O'	30' LT		1	1	
	109+47'O'	30' LT		1	1	
	110+41'O'	27' LT		1	1	
	111+50'O'	30' LT		1	1	
	111+82'O'	32' LT		1	1	
	11+65'P'	13' RT	1			1
	12+00'P'	55' LT		1	1	
	12+05'P'	15' RT	1		1	
	12+80'P'	4' LT		1	1	
	12+85'P'	40' LT		1	1	
	13+12'P'	12' LT		1	1	
	13+23'P'	50' LT		1	1	
	13+28'P'	50' LT		1	1	
	13+70'P'	70' LT		2	1	
	13+72'P'	65' LT		1	1	
	14+05'P'	32' LT		2		
	14+65'P'	92' LT		2		
	14+57'P'	47' LT		3	1	
	14+59'P'	50' LT		1		
PROJECT		TOTAL	2	50	38	1

MOBILIZATIONS EROSION CONTROL

PROJECT NUMBER	LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL (EACH)	628.1910 MOBILIZATIONS EMERGENCY EROSION (EACH)
5657-00-70	PROJECT	3	5
PROJECT	TOTAL	3	5

TRACKING PADS

PROJECT NUMBER	LOCATION	628.7560 TRACKING PADS (EACH)
5657-00-70	UNDISTRIBUTED	1
PROJECT	TOTAL	1

TRAFFIC CONTROL

PROJECT NUMBER	LOCATION	643.0300 TRAFFIC CONTROL DRUMS (DAY)	643.0420 TRAFFIC CONTROL BARRICADES TYPE III (DAY)	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A (DAY)	643.0900 TRAFFIC CONTROL SIGNS (DAY)	643.3000 TRAFFIC CONTROL DETOUR SIGNS (DAY)
5657-00-70	CTH P CLOSURE	3,125	1,000	2,000	5,375	
	BOURBON RD / CTH P WORK	120				
	NORTH CTH P WORK	75				
	PROJECT DETOUR					15,500
PROJECT	TOTAL	3,320	1,000	2,000	5,375	15,500

TRAFFIC CONTROL PROJECT

PROJECT NUMBER	LOCATION	643.0100 TRAFFIC CONTROL (EACH)
5310-02-74	PROJECT LIMITS	1
5657-00-70	PROJECT LIMITS	1
PROJECT		2

***All quantities shown are associated with Category 0010 unless otherwise noted**

PAVEMENT MARKING

PROJECT NUMBER	STATION		STATION	LOCATION	DESCRIPTION	646.0106 PAVEMENT MARKING EPOXY 4-INCH YELLOW (LF)	646.0106 PAVEMENT MARKING EPOXY 4-INCH WHITE (LF)	646.0126 PAVEMENT MARKING EPOXY 8-INCH WHITE (LF)	647.0110 PAVEMENT MARKING RAILROAD CROSSINGS EPOXY (EACH)	647.0156 PAVEMENT MARKING ARROWS EPOXY TYPE 1 WHITE (EACH)	647.0166 PAVEMENT MARKING ARROWS EPOXY TYPE 2 WHITE (EACH)	647.0176 PAVEMENT MARKING ARROWS EPOXY TYPE 3 WHITE (EACH)	647.0356 PAVEMENT MARKING WORDS EPOXY (EACH)	647.0456 PAVEMENT MARKING CURB EPOXY (LF)	647.0566 PAVEMENT MARKING STOP LINE EPOXY 18-INCH (LF)	647.0606 PAVEMENT MARKING ISLAND NOSE EPOXY (EACH)	647.0726 PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (LF)	647.0766 PAVEMENT MARKING CROSSWALK EPOXY 6-INCH (LF)
5310-02-74	4+50 'P'			RT					1									
	11+07 'P'	-	11+30 'P'	LT/RT	DOUBLE YELLOW	50												
	11+42 'P'	-	12+06 'P'	LT/RT	DOUBLE YELLOW	130												
	12+06 'P'	-	12+89 'P'	RT	LANE EDGE MEDIAN	82												
	12+06 'P'	-	12+73 'P'	LT	LANE EDGE MEDIAN	68												
	12+45 'P'	-	13+77 'P'	RT	LANE EDGE		130											
	12+75 'P'	-	12+89 'P'	LT										20				
	13+38 'P'	-	13+55 'P'	LT										35				
	13+54 'P'			3' LT												1		
	13+70 'P'	-	13+84 'P'	LT										36				
	13+76 'P'			LT					1									
	13+91 'P'	-	14+26 'P'	23' RT				35										
	13+91 'P'	-	14+26 'P'	27' RT				35										
	13+95 'P'	-	14+56 'P'	LT										129				
	14+00 'P'	-	14+26 'P'	11' RT				26										
	14+12 'P'			6' RT								1						
	14+12 'P'			17' RT							1							
	14+26 'P'			RT											23			
	14+47 'P'			LT														11
	14+53 'P'			6' LT												1		
	15+19 'P'	-	16+37 'P'	24'-105' LT	TEMP ISLAND BOUNDARY			345										
	15+35 'P'			105' LT											20			
	15+45 'P'			100' LT							1							
	15+74 'P'	-	16+30 'P'	12' LT				55										
	15+74 'P'	-	16+75 'P'	LT/RT	DOUBLE YELLOW	205												
	15+74 'P'			LT											24			
	15+80 'P'			24' RT							1							
	15+82 'P'			18' LT						1								
	15+82 'P'			6' LT							1							
	16+05 'P'			60' LT	"ONLY"								1					
	16+35 'P'			35' LT							1							
	16+30 'P'	-	16+75 'P'	0'-12' LT	LANE EXTENSION SKIPS		15											
	199+70 'KP	-	202+43 'KP	12'-22' LT	LANE EDGE		263											
	199+70 'KP	-	200+80 'KP	11' LT	SKIPS		40											
	199+70 'KP	-	202+43 'KP	LT/RT	DOUBLE YELLOW	545												
	72+59 'O'			LT											22			
	73+59 'O'	-	107+77 'O'	LT/RT	DOUBLE YELLOW	6,840												
	95+62 'O'			RT											20			
	95+70 'O'			LT/RT														91
	96+29 'O'			LT											20			
	106+44 'O'			RT					1									
	107+94 'O'	-	112+45 'O'	LT/RT	DOUBLE YELLOW	905												
	109+24 O'			LT					1									
	111+45 'O'	-	112+45 'O'	10' RT				100										
	112+46 'O'			RT											20			
	145+36	-	145+75		OUTSIDE LANE EDGE		40											
	145+36	-	146+16	12' LT				80										
	145+36	-	146+16	24' LT	DOUBLE YELLOW	160												
	145+55			6' LT								1						
	145+55			12' LT							1							
	145+75	-	146+61	0'-33' RT	LANE EDGE		92											
	146+16			LT											24			
	146+16	-	146+85	0'-26' RT	TEMP ISLAND BOUNDARY			170										
	146+16	-	146+85	0'-26' RT	CHEVRONS												105	

***All quantities shown are associated with Category 0010 unless otherwise noted**

- CONTINUED ON NEXT PAGE

PAVEMENT MARKING - CONTINUED

PROJECT NUMBER	STATION	-	STATION	LOCATION	DESCRIPTION	646.0106 PAVEMENT MARKING EPOXY 4-INCH YELLOW (LF)	646.0106 PAVEMENT MARKING EPOXY 4-INCH WHITE (LF)	646.0126 PAVEMENT MARKING EPOXY 8-INCH WHITE (LF)	647.0110 PAVEMENT MARKING RAILROAD CROSSINGS EPOXY (EACH)	647.0156 PAVEMENT MARKING ARROWS EPOXY TYPE 1 WHITE (EACH)	647.0166 PAVEMENT MARKING ARROWS EPOXY TYPE 2 WHITE (EACH)	647.0176 PAVEMENT MARKING ARROWS EPOXY TYPE 3 WHITE (EACH)	647.0356 PAVEMENT MARKING WORDS EPOXY (EACH)	647.0456 PAVEMENT MARKING CURB EPOXY (LF)	647.0566 PAVEMENT MARKING STOP LINE EPOXY 18-INCH (LF)	647.0606 PAVEMENT MARKING ISLAND NOSE EPOXY (EACH)	647.0726 PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (LF)	647.0766 PAVEMENT MARKING CROSSWALK EPOXY 6-INCH (LF)
5310-02-74	146+16	-	147+59	LT	LANE EXTENTION SKIPS	39												
	146+70			28' RT							1							
	146+82			36' RT											20			
	147+13	-	148+15	LT/RT	LANE EXTENTION SKIPS	36												
	148+10	-	149+12	12'-25' LT	LANE EDGE		100											
	148+15		148+97	33'-39' LT	DOUBLE YELLOW	160												
	148+17			LT											26			
	146+17	-	149+01	43.5'-49' LT				80										
	148+30			40' LT							1							
	148+30			52' LT								1						
	LUDDEN DR			RT											38			
	CONTINENTAL LN			RT											20			
	HILLEBRAND DR			RT											18			
	LUDDEN DR			LT														64
	LUDDEN DR			RT														52
	CONTINENTAL LN			LT/RT														94
PROJECT				TOTAL		9,220	680	926	4	1	8	3	1	220	295	2	105	312
						9,900												

CONSTRUCTION STAKING

PROJECT NUMBER	STATION	-	STATION	650.4500 CONSTRUCTION STAKING SUBGRADE (LF)	650.5000 CONSTRUCTION STAKING BASE (LF)	650.9920 CONSTRUCTION STAKING SLOPE STAKES (LF)	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (LS)
5657-00-70	11+42 'P'	-	12+69 'P'	127	127	127	
	111+50 'O'	-	113+00 'O'	150	150	150	
	13+36 'P'	-	14+50 'P'	114		114	
	146+00	-	149+00	300	190	300	
	15+50 'P'	-	16+10 'P'	60	60	60	
							1
PROJECT			TOTAL	751	527	751	1

REMOVING PAVEMENT MARKING

PROJECT NUMBER	STATION	-	STATION	LOCATION	646.0600 REMOVING PAVEMENT MARKINGS (LF)	647.0955 REMOVING PAVEMENT MARKINGS ARROWS (EACH)	647.0965 REMOVING PAVEMENT MARKINGS WORDS (EACH)
5657-00-70	145+05			16' LT			1
	145+26			6' LT		1	
	145+26			16' LT		1	
	145+57			16' LT			1
	145+72			16' LT		1	
	145+84			STOP BAR	30		
	146+42			78' LT		1	
	146+52			76' LT		1	
	146+63			98' LT			1
	146+90			CROSSWALK	156		
	146+95			STOP BAR	24		
	147+12			34' LT		1	
	147+28			35' LT			1
	146+93	-	148+98	CENTERLINE	250		
	147+58			36' LT		1	
	147+76			36' LT			1
	147+76			48' LT		1	
	16+00 'P'			1' RT		1	
	16+14 'P'			STOP BAR	30		
PROJECT				TOTAL	490	9	5

***All quantities shown are associated with Category 0010 unless otherwise noted**

STREET LIGHTING CONDUIT

PROJECT NUMBER	PULL BOX	-	PULL BOX	652.0325 CONDUIT RIGID NONMETALLIC SCHEDULE 80 2-INCH (LF)
5657-00-70	1	-	CRB	40
	2	-	3	48
	3	-	4	100
PROJECT			TOTAL	188

SIGNAL CONDUIT

PROJECT NUMBER	FROM	TO	# OF CONDUITS	LENGTH LF	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH (LF)	COMMENT
5657-00-70	C&G	PB-01	3	20	60	
	PB-01	PB-02	3	25	75	
	PB-02	PB-03	3	60	180	
	PB-03	PB-04	3	65	195	
	PB-04	PB-05	3	35	105	
	PB-05	C&G	3	20	60	
	PB-01	SB-01	1	15	15	
	PB-02	SB-02	1	15	15	
	PB-03	PB-06	1	60	60	
	PB-03	SB-03	1	5	5	
	PB-04	SB-04	1	15	15	
	PB-05	SB-05	1	10	10	
PROJECT		TOTAL			795	

ELECTRICAL STAKING

LOCATION	650.8500 CONSTRUCTION STAKING ELECTRICAL (LS)
5657-00-70	1
TOTAL	1

3

SIGNAL DETECTOR LOOPS

PROJECT NUMBER	LOOP NO.	STATION	OFFSET	SIZE	NO. TURNS	652.0800 CONDUIT LOOP DETECTOR (LF)	655.0800 LOOP DETECTOR WIRE (LF)	COMMENT
5657-00-70	1	147+31'	53' RT	6 X 20	3	62	166	
	2	147+43'	55' RT	6 X 20	3	74	178	
	3	147+29'	125' RT	6 X 20	3	62	166	
	4	147+41'	127' RT	6 X 20	3	74	178	
PROJECT					TOTAL	272	688	

OFFSET IS TO FRONT CENTER OF LOOP
ALIGNMENT IS TO NEARER EDGE OF LOOP

SIGNAL PULLBOX

PROJECT NUMBER	STRUCTURE	STATION	OFFSET	653.0135 PULL BOXES STEEL 24X36-INCH (EACH)	COMMENTS
5657-00-70	PB-01	146+34'	43' RT	1	
	PB-02	146+55'	55' RT	1	
	PB-03	147+19'	58' RT	1	
	PB-04	147+80'	66' RT	1	
	PB-05	148+00'	43' RT	1	
	PB-06	147+17'	118'RT	1	
PROJECT			TOTAL	6	

PULL BOX

PROJECT NUMBER	STATION	-	LOCATION	653.0140 PULL BOXES STEEL 24X42-INCH (EACH)
5657-00-70	14+35	-	47' LT	1
	14+42	-	5' LT	1
	14+47	-	63' LT	1
	147+95		6' LT	1
PROJECT			TOTAL	4

REMOVING PULL BOXES

PROJECT NUMBER	STATION	LOCATION	653.0905 REMOVING PULL BOXES (EACH)
5657-00-70	14+65 'P'	LT 45'	1
	14+73 'P'	LT 125'	1
	14+83 'P'	LT 87'	1
	14+98 'P'	LT 40'	1
	16+10 'P'	LT 18'	1
PROJECT		TOTAL	5

SIGNAL CONCRETE BASE

PROJECT NUMBER	BASE NUMBER	STATION	OFFSET	654.0102 CONCRETE BASES TYPE 2 (EACH)	COMMENTS
5657-00-70	SB-01	146+38.30'	32' RT	1	
	SB-02	146+63.25'	43' RT	1	
	SB-03	147+18.10'	53' RT	1	
	SB-04	147+64.90'	60' RT	1	
	SB-05	147+95.95'	32' RT	1	
PROJECT	TOTAL			5	

***All quantities shown are associated with Category 0010 unless otherwise noted**

TEMPORARY TRAFFIC SIGNALS

5310-02-74	661.0200.01 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LS)	661.0200.02 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LS)	661.0200.03 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LS)
LOCATION			
USH 14 & CTH P	1		
CTH P & BOURBON ROAD		1	
CTH KP & BOURBON ROAD			1
TOTAL	1	1	1

SAWING PAVEMENT

PROJECT NUMBER	STATION	-	STATION	LOCATION	690.0150 SAWING ASPHALT (LF)	690.0250 SAWING CONCRETE (LF)
5657-00-70	111+50 'O'	-		LT/RT	40	5
	111+50 'O'	-	113+00 'O'	CL	140	
	11+42 'P'	-	12+12 'P'	CL	70	
	11+42 'P'	-		LT/RT	68	
	15+50 'P'	-	16+75 'P'	LT/RT	310	
	15+50 'P'	-		LT		2.5
	15+90 'P'	-		LT		2.5
	145+50	-	147+40	RT	190	
PROJECT				TOTAL	818	10

TEMP SIGNAL PREEMPT

PROJECT NUMBER	LOCATION	SPV.0060.02 TEMPORARY OPTICOM SIGNAL PREEMPT (EACH)
5310-02-74	USH 14 & CTH P	2
	CTH P & BOURBON ROAD	1
	CTH KP & BOURBON ROAD	1
	PROJECT TOTAl	4

TRAFFIC SIGNALS

PROJECT NUMBER	LOCATION	SPV.0060.01 REMOVING TRAFFIC SIGNAL CONTROLLER CABINET (EACH)	SPV.0060.03 REMOVING ELECTRICAL SERVICE METER BREAKER PEDESTAL (EACH)
5657-00-70	USH 14 & CTH P	1	1
	TOTAL	1	1

PERMANENT TRAFFIC CONTROL DRUM

PROJECT NUMBER	LOCATION	SPV.0060.04 PERMANENT TRAFFIC CONTROL DRUM (EACH)
5310-02-74	USH 14 & CTH P	45
PROJECT	TOTAL	45

REMOVING TRAFFIC SIGNALS

PROJECT NUMBER	LOCATION	SPV.0105.01 REMOVING TRAFFIC SIGNALS CTH P & USH 14 INTERSECTION (LS)
5657-00-70	INTERSECTION OF CTH P WITH USH 14	1

TEMPORARY VEHICLE DETECTION

PROJECT NUMBER	LOCATION	SPV.0105.02 TEMPORARY VEHICLE DETECTION (LS)	SPV.0105.03 TEMPORARY VEHICLE DETECTION (LS)	SPV.0105.04 TEMPORARY VEHICLE DETECTION (LS)
5310-02-74	USH 14 & CTH P	1		
	CTH P & BOURBON ROAD		1	
	CTH KP & BOURBON ROAD			1
	TOTAL	1	1	1

TEMPORARY CROSSWALK ACCESS

PROJECT NUMBER	LOCATION	SPV.0105.05 TEMPORARY CROSSWALK ACCESS (LS)
5310-02-74	CTH P & USH 14	1
PROJECT	TOTAL	1

GEOGRID REINFORCEMENT

PROJECT NUMBER	STATION	-	STATION	LOCATION	SPV.0180.01 GEOGRID REINFORCEMENT (SY)
5657-00-70	11+48 'P'	-	12+69 'P'	RT	355
	13+36 'P'	-	14+45 'P'	LT/RT	905
	111+50 'O'	-	112+37 'O'	LT	360
	112+57 'O'	-	113+00 'O'	LT	290
	111+50 'O'	-	113+00 'O'	RT	470
	147+90	-	149+00	RT	455
PROJECT					2,835

CONCRETE PAVEMENT JOINT LAYOUT

PROJECT NUMBER	SPV.0105.06 CONCRETE PAVEMENT JOINT LAYOUT (LS)
5657-00-70	1
PROJECT	1

***All quantities shown are associated with Category 0010 unless otherwise noted**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

TRANSPORTATION PROJECT PLAT TITLE SHEET

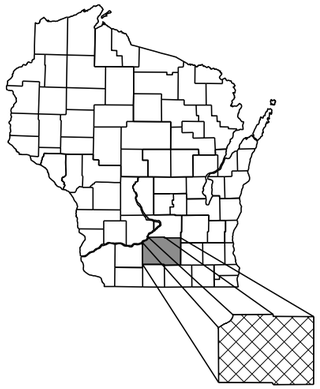
PROJECT NO. 5310-02-20

SPRING GREEN - MADISON ROAD

(JOVINA STREET - WESTVIEW COURT, VILLAGE OF CROSS PLAINS)

USH 14

DANE COUNTY



THE NOTES, CONVENTIONAL SIGNS, AND ABBREVIATIONS ARE ASSOCIATED WITH EACH TRANSPORTATION PROJECT PLAT FOR PROJECT 5310-02-20.

NOTES:

COORDINATES AND BEARINGS SHOWN ON THIS PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, DANE COUNTY ZONE, NAD83 (2007) ADJUSTMENT. THE COORDINATES SHOWN ARE GRID COORDINATES AND ARE TO BE USED AS GRID OR GROUND VALUES ON THIS PLAT.

ALL NEW RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICALLY ¾" x 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".

ALL RIGHT-OF-WAY LINES DEPICTED IN NON ACQUISITION AREAS ARE INTENDED TO RE-ESTABLISH EXISTING RIGHT-OF-WAY LINES AS DETERMINED FROM PREVIOUS PROJECTS, OTHER RECORDED DOCUMENTS, OR FROM CENTERLINE OR EXISTING PAVEMENTS.

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE: EXISTING HIGHWAY RIGHT-OF-WAY FOR USH 14 ESTABLISHED FROM PREVIOUS PROJECT DIVISION JOB NO. 1300 AND EXISTING HIGHWAY RIGHT-OF-WAY FOR CTH P ESTABLISHED FROM PREVIOUS PROJECT DIVISION JOB NO. DANE COUNTY RIGHT-OF-WAY PROJECT 1211 PLAT DATED APRIL 27, 1959, REVISED JUNE 16, 1959 FROM CENTERLINE OF EXISTING PAVEMENTS.

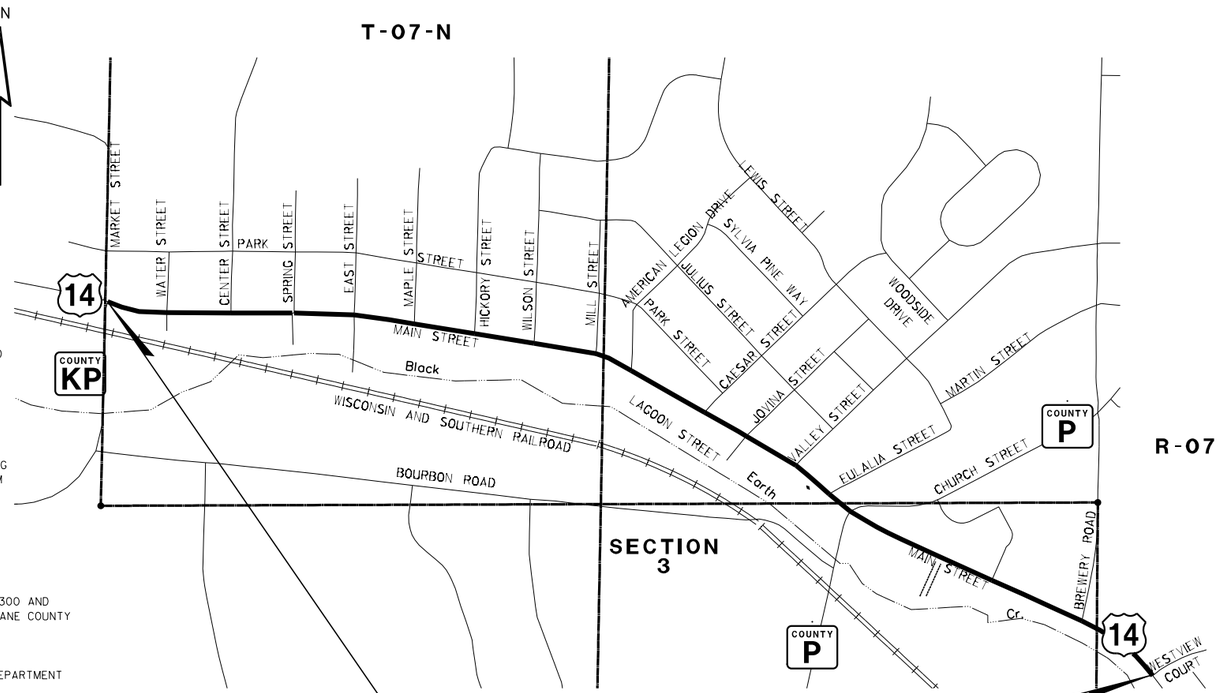
FOR THE LATEST ACCESS / DRIVEWAY INFORMATION CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION REGIONAL OFFICE IN MADISON, WISCONSIN.

A **TEMPORARY LIMITED EASEMENT** (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE. ALL TLES EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

A **PERMANENT LIMITED EASEMENT** (PLE) IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE. BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHT TO MAKE OR CONSTRUCT IMPROVEMENT ON SAID LANDS OR TO FLATTEN THE SLOPES, PROVIDING SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES.

A **HIGHWAY EASEMENT** (HE) IS AN EASEMENT FOR HIGHWAY PURPOSES, AS LONG AS SO USED, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE.

DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO NEW REFERENCE LINES.



LAYOUT

SCALE 0 0.25 MI.

TOTAL NET LENGTH OF CENTERLINE = 1.271 MI.

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	REFERENCE LINE	R/L
ACCESS RIGHTS	AR	RELEASE OF RIGHTS	ROR
ACRES	AC.	REMAINING	REM.
AND OTHERS	ET.AL.	RIGHT-OF-WAY	R/W
CENTERLINE	C/L	SECTION	SEC.
CERTIFIED SURVEY MAP	CSM	STATION	STA.
CORNER	COR.	TEMPORARY LIMITED EASEMENT	TLE
DOCUMENT	DOC.	VOLUME	V.
EASEMENT	EASE.		
HIGHWAY EASEMENT	HE		
LAND CONTRACT	LC		
MONUMENT	MON.		
PAGE	P.		
PERMANENT LIMITED EASEMENT	PLE		
PROPERTY LINE	PL		
RECORDED AS	(100')		

CURVE DATA

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE OR DELTA	Δ
LENGTH OF CURVE	L
TANGENT	TAN

CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN	⌀ (1" UNLESS NOTED)	PROPOSED R/W LINE	
R/W MONUMENT	●(SET)	EXISTING H.E. LINE	
R/W STANDARD	▲(SET)	PROPERTY LINE	
SIGN	ISIGN	LOT & TIE LINES	
SECTION CORNER MONUMENT	●	SLOPE INTERCEPTS	
SECTION CORNER SYMBOL	CORNER MON. SYMBOL	CORPORATE LIMITS	
FEE (HATCH VARIES)		ACCESS RESTRICED (BY PREVIOUS PROJECT/CONTROL)	
TEMPORARY LIMITED EASEMENT		ACCESS CONTROLLED (BY PARCEL ACQUISITION)	
PERMANENT LIMITED EASEMENT		NO ACCESS (BY STATUTORY AUTHORITY)	
HIGHWAY EASEMENT		SECTION LINE	
R/W BOUNDARY POINT	200	QUARTER LINE	
PARCEL NUMBER	102	SIXTEENTH LINE	
UTILITY PARCEL NUMBER	92	EXISTING CENTERLINE	
SIGN NUMBER (OFF PREMISE)	21-1	PROPOSED REFERENCE LINE	
BUILDING		PARALLEL OFFSET	
BUILDING TO RAZED		NATIONAL GEODETIC SURVEY MONUMENT	NGS

CONVENTIONAL UTILITY SYMBOLS

WATER	W	
GAS	G	
TELEPHONE	T	
OVERHEAD	OH	
TRANSMISSION LINES ELECTRIC	E	
CABLE TELEVISION	TV	
FIBER OPTIC	FO	
SANITARY SEWER	SAN	
STORM SEWER	SS	
	NON COMPENSABLE	COMPENSABLE
POWER POLE		
TELEPHONE POLE		
TELEPHONE PEDESTAL		
FIRE HYDRANT		
ELECTRIC TOWER	⊠	

TPP 5310-02-20 - 4.01
SHEET 2 OF 2

FILE NAME : X:\3230900\113688.02\TECH\CAD\53100200\RW\MSta_TPP_Plats\040101_tpp.dgn
PLOT DATE : 8/27/2012
PLOT BY : 1533day
PLOT NAME :
PLOT SCALE : 800.0000 sf / in.

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNERS NAMES ARE SHOWN FOR REFERENCE ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	RIGHT OF WAY SF REQUIRED NEW	EXISTING	TOTAL	HIGHWAY EASEMENT SF	TLE SF
1	MARK C. MIELKE AND BETTY ANDREAS MIELKE	FEE / TLE	9,534.22	63.62	9,597.84	---	3,407.85
2	MARK T. ACKER	FEE / TLE	7,036.05	1,374.78	8,410.83	---	2,660.60
3	PAUL L. KALSCHEUR AND PATRICIA C. KALSCHEUR TRUSTEES OF THE PAUL AND PATRICIA KALSCHEUR TRUST	HE/TLE	---	---	---	6,204.80	3,924.86

TRANSPORTATION PROJECT PLAT NO: 5310-02-20 - 4.01

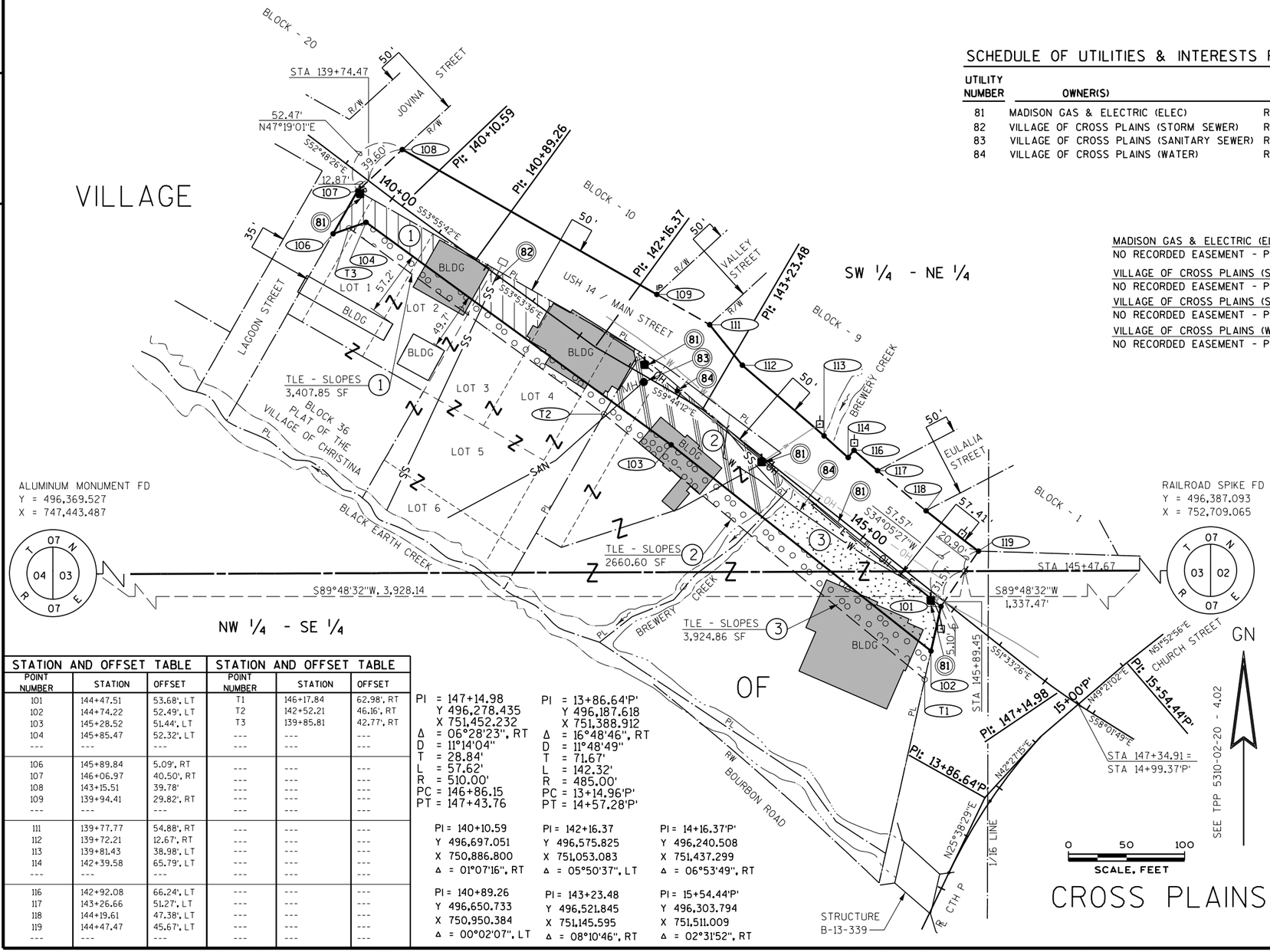
THAT PART OF LOTS 1, 2, 3, 4 OF BLOCK 36, PLAT OF THE VILLAGE OF CHRISTINA, LOCATED IN AND INCLUDING PART OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER AND PART OF THE NORTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 3, TOWN 7 NORTH, RANGE 7 EAST VILLAGE OF CROSS PLAINS, DANE COUNTY, WISCONSIN

RELOCATION ORDER USH 14 SPRING GREEN - MADISON ROAD (JOVINA STREET - WESTVIEW COURT) DANE COUNTY, WISCONSIN

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3) AND 84.09, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 5310-02-20 4.01
SHEET 1 OF 2
AMENDMENT NO:



SCHEDULE OF UTILITIES & INTERESTS REQUIRED

UTILITY NUMBER	OWNER(S)	INTEREST REQUIRED
81	MADISON GAS & ELECTRIC (ELEC)	RELEASE OF RIGHTS
82	VILLAGE OF CROSS PLAINS (STORM SEWER)	RELEASE OF RIGHTS
83	VILLAGE OF CROSS PLAINS (SANITARY SEWER)	RELEASE OF RIGHTS
84	VILLAGE OF CROSS PLAINS (WATER)	RELEASE OF RIGHTS

MADISON GAS & ELECTRIC (ELEC)
NO RECORDED EASEMENT - PARCEL 2, 3

VILLAGE OF CROSS PLAINS (STORM SEWER)
NO RECORDED EASEMENT - PARCEL 1, 2

VILLAGE OF CROSS PLAINS (SANITARY SEWER)
NO RECORDED EASEMENT - PARCEL 2

VILLAGE OF CROSS PLAINS (WATER)
NO RECORDED EASEMENT - PARCEL 2, 3

PNT 113 - PNT 114
L = 27.91'
LCH = 27.91'
LCB = S48°02'39"E
R = 1,612.10'
Δ = 00°59'24"

PNT 116 - PNT 117
L = 26.74'
LCH = 26.74'
LCB = S49°00'15"E
R = 1,604.10'
Δ = 00°57'19"

PNT 118 - PNT 119
L = 56.96'
LCH = 56.95'
LCB = S52°26'20"E
R = 1604.10'
Δ = 02°02'04"

COURSE TABLE		
POINT - POINT	COURSE	DISTANCE
101 - 102	S12°37'35"W	39.34'
102 - 103	N51°33'30"W	285.72'
103 - 104	N53°54'24"W	325.20'
104 - 106	S70°45'49"W	30.08'
---	---	---
106 - 107	N29°41'11"E	42.57'
107 - 108	N47°19'01"E	52.47'
108 - 109	S60°20'40"E	252.18'
109 - 111	S60°13'37"E	52.50'
---	---	---
111 - 112	S38°52'18"E	44.78'
112 - 113	S49°09'45"E	93.03'
113 - 114	SEE CURVE DATA	---
114 - 116	N38°42'16"E	8.01'
---	---	---
116 - 117	SEE CURVE DATA	---
117 - 118	S50°27'06"E	54.31'
118 - 119	SEE CURVE DATA	---
119 - 101	S34°05'26"W	57.57'
---	---	---

NOTES:

EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE:
EXISTING HIGHWAY RIGHT-OF-WAY FOR USH 14 ESTABLISHED FROM DIVISION JOB 1300
EXISTING HIGHWAY RIGHT-OF-WAY FOR LAGOON STREET AND JOVINA STREET FROM PLAT OF VILLAGE OF CHRISTINA

FOR THE LATEST ACCESS / DRIVEWAY INFORMATION CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION REGIONAL OFFICE IN MADISON, WISCONSIN.

PARCEL IDENTIFICATION NUMBERS MAY NOT POINT TO ALL AREAS OF ACQUISITION, AS NOTED ON THE SCHEDULE OF LANDS AND INTERESTS REQUIRED.

COORDINATES AND BEARINGS SHOWN ON THIS PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, DANE COUNTY ZONE, NAD83 (2007) ADJUSTMENT. THE COORDINATES SHOWN ARE GRID COORDINATES AND ARE TO BE USED AS GRID OR GROUND VALUES ON THIS PLAT.

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STATION AND OFFSET TABLE			STATION AND OFFSET TABLE		
POINT NUMBER	STATION	OFFSET	POINT NUMBER	STATION	OFFSET
101	144+47.51	53.68', LT	T1	146+17.84	62.98', RT
102	144+74.22	52.49', LT	T2	142+52.21	46.16', RT
103	145+28.52	51.44', LT	T3	139+85.81	42.77', RT
104	145+85.47	52.32', LT	---	---	---
---	---	---	---	---	---
106	145+89.84	5.09', RT	---	---	---
107	146+06.97	40.50', RT	---	---	---
108	143+15.51	39.78'	---	---	---
109	139+94.41	29.82', RT	---	---	---
---	---	---	---	---	---
111	139+77.77	54.88', RT	---	---	---
112	139+72.21	12.67', RT	---	---	---
113	139+81.43	38.98', LT	---	---	---
114	142+39.58	65.79', LT	---	---	---
---	---	---	---	---	---
116	142+92.08	66.24', LT	---	---	---
117	143+26.66	51.27', LT	---	---	---
118	144+19.61	47.38', LT	---	---	---
119	144+47.47	45.67', LT	---	---	---
---	---	---	---	---	---

PI = 147+14.98
Y 496,278.435
X 751,452.232
Δ = 06°28'23", RT
D = 11°14'04"
T = 28.84'
L = 57.62'
R = 510.00'
PC = 146+86.15
PT = 147+43.76

PI = 13+86.64'P'
Y 496,187.618
X 751,388.912
Δ = 16°48'46", RT
D = 11°48'49"
T = 71.67'
L = 142.32'
R = 485.00'
PC = 13+14.96'P'
PT = 14+57.28'P'

PI = 140+10.59
Y 496,697.051
X 750,886.800
Δ = 01°07'16", RT

PI = 142+16.37
Y 496,575.825
X 751,053.083
Δ = 05°50'37", LT

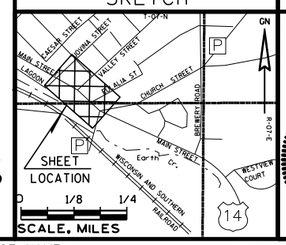
PI = 14+16.37'P'
Y 496,240.508
X 751,437.299
Δ = 06°53'49", RT

PI = 140+89.26
Y 496,650.733
X 750,950.384
Δ = 00°02'07", LT

PI = 143+23.48
Y 496,521.845
X 751,145.595
Δ = 08°10'46", RT

PI = 15+54.44'P'
Y 496,303.794
X 751,511.009
Δ = 02°31'52", RT

PROJECT LOCATION SKETCH



Mead & Hunt, Inc.
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Madison, WI 53719
phone: 608-273-6380
meadhunt.com

I, SEAN M WALSH REGISTERED LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER DIRECTION OF THE DEPARTMENT, I HAVE SURVEYED TRANSPORTATION PROJECT PLAT 5310-02-20-4.01 AND THAT SUCH PLAT REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

WISCONSIN SEAN M. WALSH S-2016 SAUK CITY, WI LAND SURVEYOR

DATE: 08-16-2012 _____ RLS
Name

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION

DATE: _____ _____
Name

FILE NAME : X:\3230900\113688.02\TECH\CAD\53100200\RW\MSta_TPP_Plats\040102_tpp.dgn
APPRAISAL PLAT DATE : 07-31-2012
PLOT DATE : 8/27/2012 PLOT BY : 1533day PLOT NAME : PLOT SCALE : 100.00 sf / in.

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNERS NAMES ARE SHOWN FOR REFERENCE ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	RIGHT OF WAY SF NEW	RIGHT OF WAY SF EXISTING	RIGHT OF WAY SF TOTAL	HIGHWAY EASEMENT SF	TLE SF
3	PAUL L. KALSCHEUR AND PATRICIA C. KALSCHEUR TRUSTEES OF THE PAUL AND PATRICIA KALSCHEUR TRUST	HE	---	---	---	1,248.37	---
4	VILLAGE OF CROSS PLAINS	FEE	692.89	---	692.89	---	---
6	HRZ	HE / TLE	---	---	---	13,817.90	1189.17
7	HI-WAY SERVICE GARAGE, INC.	HE / TLE	---	---	---	9,947.09	1,348.86
8	ISADORE A & ADELINE H BUECHNER REVOCABLE TRUST	FEE	15,027.36	---	15,027.36	---	---
9	WISCONSIN DEPARTMENT OF NATURAL RESOURCES	FEE	8,764.20	---	8,764.20	---	---

TRANSPORTATION PROJECT PLAT 5310-02-20 4.02 AMENDMENT NO. 3 AMENDS PARCEL 8 OF TRANSPORTATION PROJECT PLAT 5310-02-20-4.02 RECORDED AS DOCUMENT NUMBER 4904244.

THAT PART OF THE NORTHWEST QUARTER OF THE SOUTHEAST QUARTER AND THAT PART OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER LOCATED IN SECTION 3, TOWN 7 NORTH, RANGE 7 EAST VILLAGE OF CROSS PLAINS, DANE COUNTY WISCONSIN

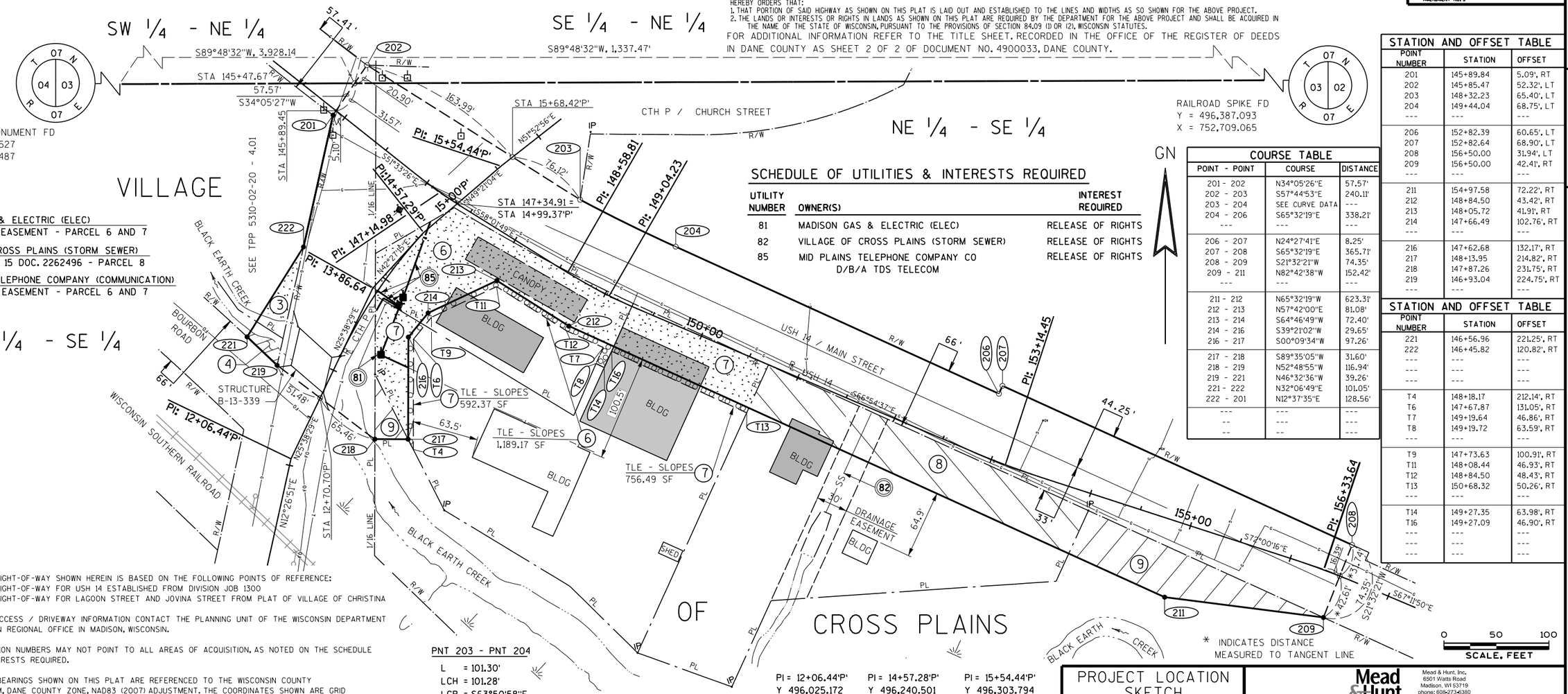
RELOCATION ORDER USH 14 SPRING GREEN - MADISON ROAD (JOVINA STREET - WESTVIEW COURT) DANE COUNTY, WISCONSIN

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3) AND 84.09, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

FOR ADDITIONAL INFORMATION REFER TO THE TITLE SHEET. RECORDED IN THE OFFICE OF THE REGISTER OF DEEDS IN DANE COUNTY AS SHEET 2 OF 2 OF DOCUMENT NO. 4900033, DANE COUNTY.

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 5130-02-20 4.02
SHEET 1 OF 1
AMENDMENT NO: 3



SCHEDULE OF UTILITIES & INTERESTS REQUIRED

UTILITY NUMBER	OWNER(S)	INTEREST REQUIRED
81	MADISON GAS & ELECTRIC (ELEC)	RELEASE OF RIGHTS
82	VILLAGE OF CROSS PLAINS (STORM SEWER)	RELEASE OF RIGHTS
85	MID PLAINS TELEPHONE COMPANY CO D/B/A TDS TELECOM	RELEASE OF RIGHTS

MADISON GAS & ELECTRIC (ELEC)
NO RECORDED EASEMENT - PARCEL 6 AND 7

VILLAGE OF CROSS PLAINS (STORM SEWER)
VOL. 15895, PG 15 DOC. 2262496 - PARCEL 8

MID PLAINS TELEPHONE COMPANY (COMMUNICATION)
NO RECORDED EASEMENT - PARCEL 6 AND 7

COURSE TABLE

POINT - POINT	COURSE	DISTANCE
201 - 202	N34°05'26"E	57.57'
202 - 203	S57°44'53"E	240.11'
203 - 204	SEE CURVE DATA	---
204 - 206	S65°32'19"E	338.21'
---	---	---
206 - 207	N24°27'41"E	8.25'
207 - 208	S65°32'19"E	365.71'
208 - 209	S21°32'21"W	74.35'
209 - 211	N82°42'38"W	152.42'
---	---	---
211 - 212	N65°32'19"W	623.31'
212 - 213	N57°42'00"E	81.08'
213 - 214	S64°46'49"W	72.40'
214 - 216	S39°21'02"W	29.65'
216 - 217	S00°09'34"W	97.26'
217 - 218	S89°35'05"W	31.60'
218 - 219	N52°48'55"W	116.94'
219 - 221	N46°32'36"W	39.26'
221 - 222	N32°06'49"E	101.05'
222 - 201	N12°37'35"E	128.56'
---	---	---
--	---	---
--	--	---

STATION AND OFFSET TABLE

POINT NUMBER	STATION	OFFSET
201	145+89.84	5.09', RT
202	145+85.47	52.32', LT
203	148+32.23	65.40', LT
204	149+44.04	68.75', LT
---	---	---
206	152+82.39	60.65', LT
207	152+82.64	68.90', LT
208	156+50.00	31.94', LT
209	156+50.00	42.41', RT
---	---	---
211	154+97.58	72.22', RT
212	148+84.50	43.42', RT
213	148+05.72	41.91', RT
214	147+66.49	102.76', RT
---	---	---
216	147+62.68	132.17', RT
217	148+13.95	214.82', RT
218	147+87.26	231.75', RT
219	146+93.04	224.75', RT
---	---	---

STATION AND OFFSET TABLE

POINT NUMBER	STATION	OFFSET
221	146+56.96	221.25', RT
222	146+45.82	120.82', RT
---	---	---
---	---	---
---	---	---
T4	148+18.17	212.14', RT
T6	147+67.87	131.05', RT
T7	149+19.64	46.86', RT
T8	149+19.72	63.59', RT
---	---	---
T9	147+73.63	100.91', RT
T11	148+08.44	46.93', RT
T12	148+84.50	48.43', RT
T13	150+68.32	50.26', RT
---	---	---
T14	149+27.35	63.98', RT
T16	149+27.09	46.90', RT
---	---	---
---	---	---
---	---	---

NOTES:

EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE:
EXISTING HIGHWAY RIGHT-OF-WAY FOR USH 14 ESTABLISHED FROM DIVISION JOB 1300
EXISTING HIGHWAY RIGHT-OF-WAY FOR LAGOON STREET AND JOVINA STREET FROM PLAT OF VILLAGE OF CHRISTINA

FOR THE LATEST ACCESS / DRIVEWAY INFORMATION CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION REGIONAL OFFICE IN MADISON, WISCONSIN.

PARCEL IDENTIFICATION NUMBERS MAY NOT POINT TO ALL AREAS OF ACQUISITION, AS NOTED ON THE SCHEDULE OF LANDS AND INTERESTS REQUIRED.

COORDINATES AND BEARINGS SHOWN ON THIS PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, DANE COUNTY ZONE, NAD83 (2007) ADJUSTMENT. THE COORDINATES SHOWN ARE GRID COORDINATES AND ARE TO BE USED AS GRID OR GROUND VALUES ON THIS PLAT.

ALL RIGHT-OF-WAY LINES DEPICTED IN NON ACQUISITION AREAS ARE INTENDED TO RE-ESTABLISH EXISTING RIGHT-OF-WAY LINES AS DETERMINED FROM PREVIOUS PROJECTS, OTHER RECORDED DOCUMENTS, OR FROM CENTERLINE OR EXISTING PAVEMENTS.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICALLY ¾" x 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

PNT 203 - PNT 204
L = 101.30'
LCH = 101.28'
LCB = S63°50'58"E
R = 1,604.10'
Δ = 03°37'06"

PI = 147+14.98
Y 496,278.435
X 751,452.232
Δ = 06°28'23", RT
D = 11°14'04"
T = 28.84'
L = 57.62'
R = 510.00'
PC = 146+86.15
PT = 147+43.76

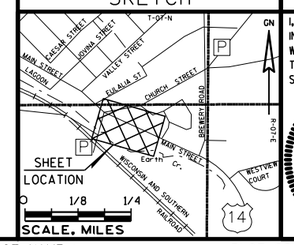
PI = 148+58.81
Y 496,202.251
X 751,574.295
Δ = 02°00'03", RT
D = 05°53'19"
T = 16.99'
L = 33.98'
R = 973.00'
PC = 148+41.82
PT = 148+75.80

PI = 149+04.23
Y 496,179.562
X 751,613.642
Δ = 06°52'45", LT
D = 12°06'48"
T = 28.43'
L = 56.79'
R = 473.00'
PC = 148+75.80
PT = 149+32.59

PI = 153+14.45
Y 496,018.656
X 751,991.068
Δ = 05°05'39", LT
D = 07°15'43"
T = 35.10'
L = 70.15'
R = 789.00'
PC = 152+79.35
PT = 153+49.50

PI = 156+33.64
Y 495,920.029
X 752,294.689
Δ = 04°48'26", RT
D = 06°57'43"
T = 34.55'
L = 69.05'
R = 823.00'
PC = 155+99.10
PT = 156+68.15

PROJECT LOCATION SKETCH



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I, SEAN M WALSH REGISTERED LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER DIRECTION OF THE DEPARTMENT, I HAVE SURVEYED TRANSPORTATION PROJECT PLAT 5310-02-20-4.02 AMENDMENT NO. 3 AND THAT SUCH PLAT REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

WISCONSIN SEAN M. WALSH S-2016 SAUK CITY, WI LAND SURVEYOR

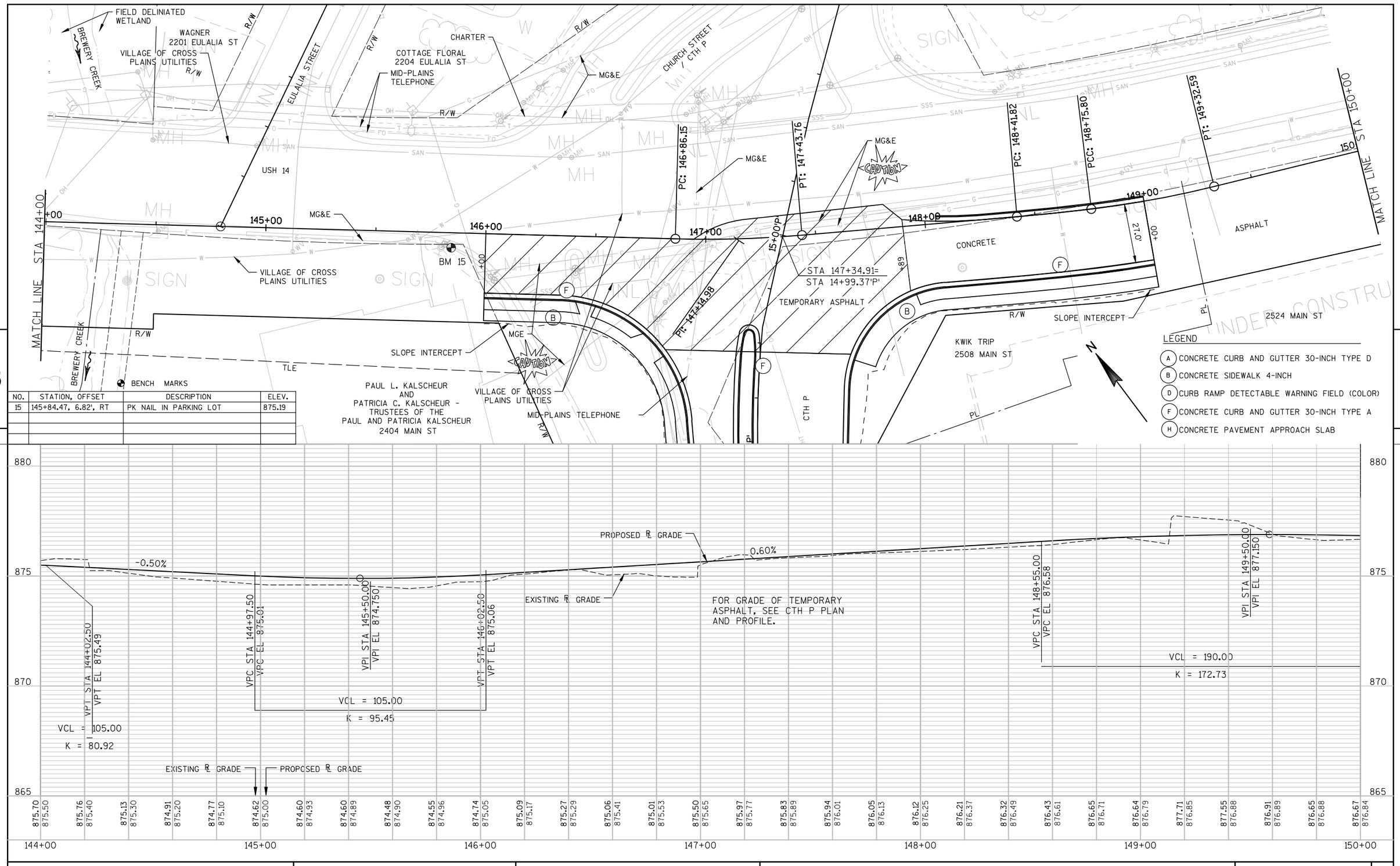
DATE: 09-25-2013 _____ RLS
Name

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION

DATE: _____
Name

FILE NAME : X:\3230900\113688.02\TECH\CAD\53100200\RW\MSta_TPP_Plats\040103_tpp_Ammendment_3.dgn
PLOT DATE : 12/23/2013
PLOT BY : 1533day
PLOT NAME :
PLOT SCALE : 100.00 sf / in.
APPRAISAL PLAT DATE : 09-25-2013

4.02



BENCH MARKS			
NO.	STATION, OFFSET	DESCRIPTION	ELEV.
15	145+84.47, 6.82', RT	PK NAIL IN PARKING LOT	875.19

PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	PLAN & PROFILE: USH 14	SHEET 67	E

FILE NAME : X:\3230900\113688.02\TECH\CAD\53100200\SHEETSPLAN\CTH P\050101_PP_USH14.DWG PLOT DATE : 2/20/2014 1:44 PM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 45

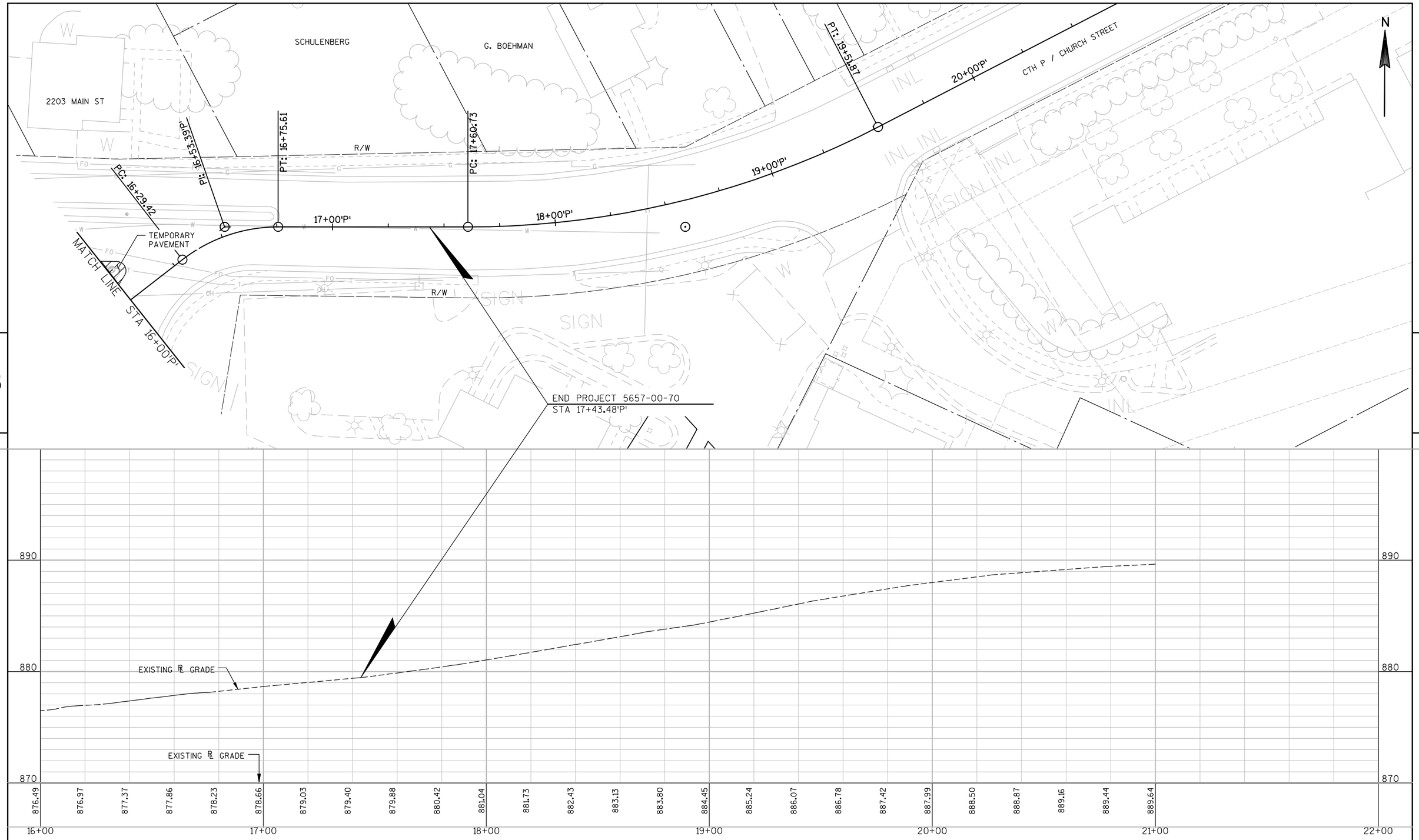
LEGEND

- (A) CONCRETE CURB AND GUTTER 30-INCH TYPE D
- (B) CONCRETE SIDEWALK 4-INCH
- (D) CURB RAMP DETECTABLE WARNING FIELD (COLOR)
- (F) CONCRETE CURB AND GUTTER 30-INCH TYPE A
- (G) CONCRETE MEDIAN BLUNT NOSE
- (H) CONCRETE PAVEMENT APPROACH SLAB

BEGIN PROJECT 5657-00-70
STA 11+06.95'P'
MATCH EXISTING
SAWCUT REQD

MATCH LINE STA 16+00'P'

PROJECT NO: 5310-02-74/5657-00-70	HWY: IH 39	COUNTY: MARATHON	PLAN & PROFILE: CTH P	SHEET 68	E



5

5

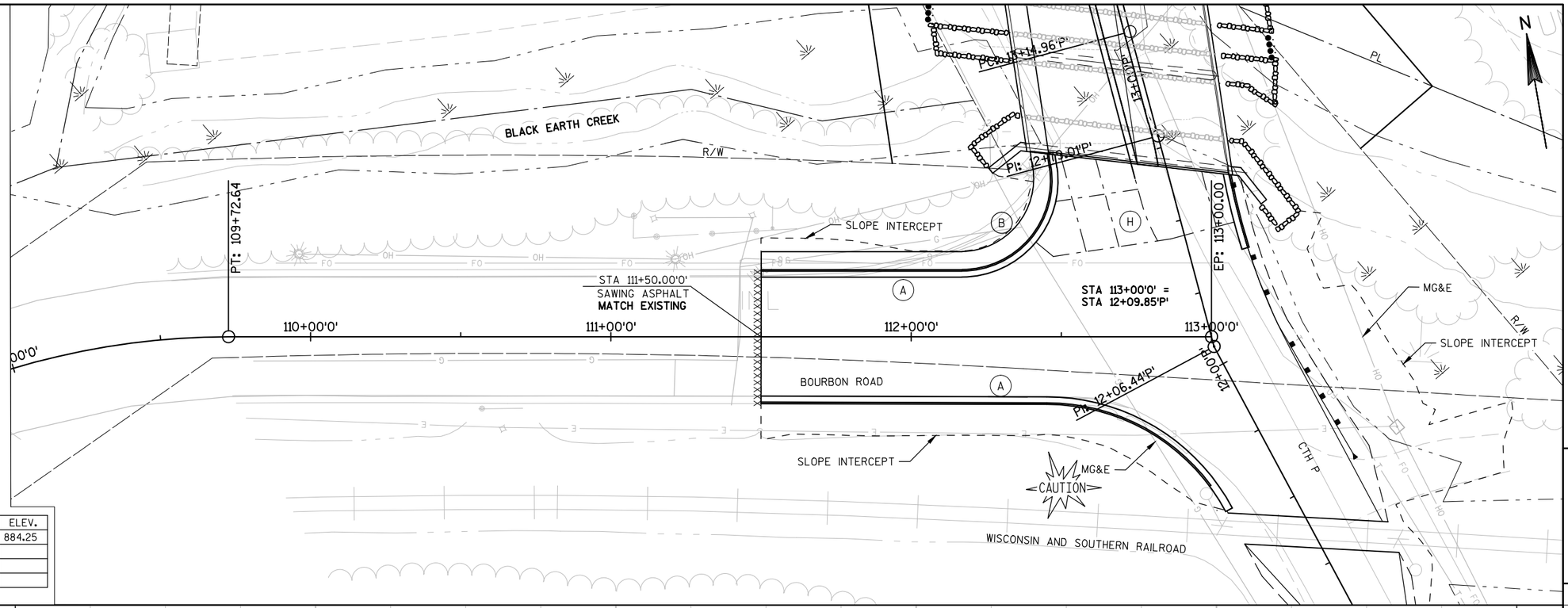
PROJECT NO: 5310-02-74/5657-00-70	HWY: IH 39	COUNTY: MARATHON	PLAN & PROFILE: CTH P	SHEET 69	E

LEGEND

- (A) CONCRETE CURB AND GUTTER 30-INCH TYPE D
- (B) CONCRETE SIDEWALK 4-INCH
- (D) CURB RAMP DETECTABLE WARNING FIELD (COLOR)
- (F) CONCRETE CURB AND GUTTER 30-INCH TYPE A
- (H) CONCRETE PAVEMENT APPROACH SLAB

BENCH MARKS

NO.	STATION, OFFSET	DESCRIPTION	ELEV.
18	165+29.51, 20.65' LT	PK NAIL IN CURB	884.25



PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	PLAN & PROFILE: BOURBON ROAD	SHEET 70	E

FILE NAME : X:\3230900\113688.02\TECH\CAD\53100200\SHEETSPLAN\CTH P\050103_PP.DWG PLOT DATE : 2/20/2014 1:46 PM PLOT BY : DAVID YAHNKE PLOT NAME : _____ PLOT SCALE : *********

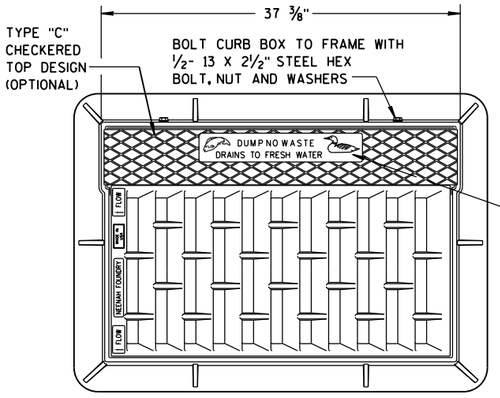
PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	PLAN: CTH KP	SHEET	E

FILE NAME : X:\3230900\113688.02\TECH\CAD\53100200\SHEETSPLAN\CTH P\050201_PN.DWG PLOT DATE : 2/20/2014 1:46 PM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1" = 40'_XREF

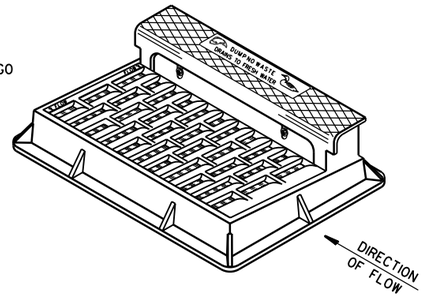
Standard Detail Drawing List

08A05-19A	INLET COVERS TYPE A, H, A-S, & H-S
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08B09-01	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08B10-01	MANHOLES 3X3-FT, 4X4-FT, 5X5-FT AND 6X6-FT
08C07-01	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D05-15A	CURB RAMPS TYPES 1 AND 1-A
08D05-15B	CURB RAMPS TYPES 2 AND 3
08D05-15C	CURB RAMPS TYPES 4A AND 4A1
08D05-15D	CURB RAMPS TYPE 4B AND 4B1
08D05-15E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
09B02-07	CONDUIT
09B04-10	PULL BOX
09C02-06	CONCRETE BASES, TYPES 1, 2 & 5
09F15-03A	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)
09G01-03A	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03B	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03C	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03D	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03E	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03F	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03G	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
11B02-02	CONCRETE MEDIAN NOSE
12A03-10	NAME PLATE (STRUCTURES)
13A03-05	CONCRETE PAVEMENT SHOULDERS
13B01-10	PAVEMENT DETAILS FOR RAILROAD APPROACH
13B02-06	CONCRETE PAVEMENT APPROACH SLAB
13C01-16	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C13-08	URBAN DOWELED CONCRETE PAVEMENT
13C18-02A	CONCRETE PAVEMENT JOINTING
13C18-02B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-02C	CONCRETE PAVEMENT JOINT TIES
13C18-02D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
14B42-02A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-01A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-03A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C04-02	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-02	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-12B	PAVEMENT MARKING WORDS
15C07-12C	PAVEMENT MARKING ARROWS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C09-09A	SIGNING AND PAVEMENT MARKING DETAILS FOR RAILROAD-HIGHWAY GRADE CROSSINGS
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C18-03	MEDIAN ISLAND MARKING
15C19-02A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C33-01	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D30-01	TRAFFIC CONTROL, SIDEWALK CLOSURE

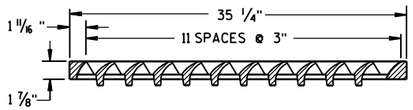
6

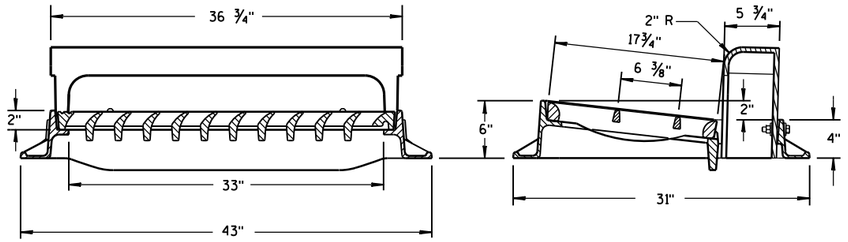


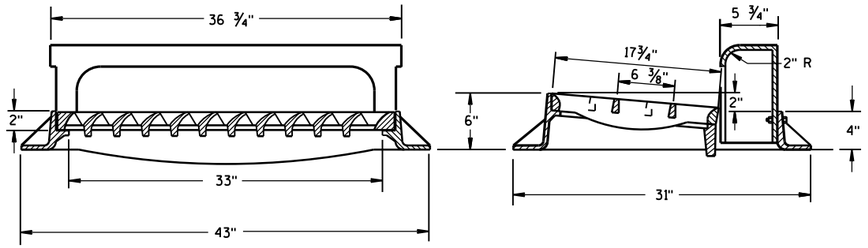
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

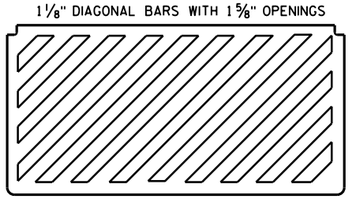






TYPE "H"

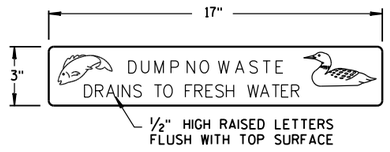
NOTE: EITHER CASTING IS ACCEPTABLE



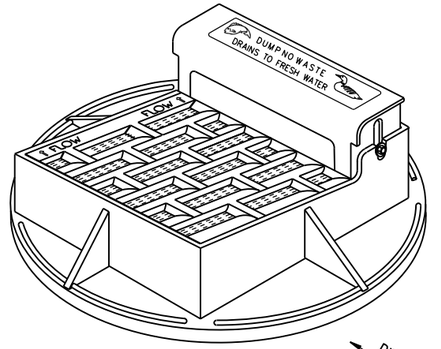
SPECIAL GRATE FOR TYPE "H" COVER

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

(NOTED AS TYPE H-S ON DRAINAGE TABLE)



LOGO DETAIL



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

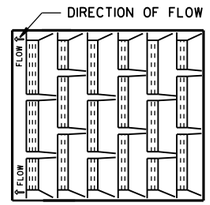
NOTE:
GRATE IS REVERSIBLE.

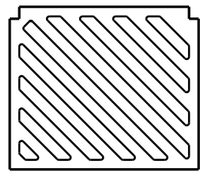
GENERAL NOTES

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.

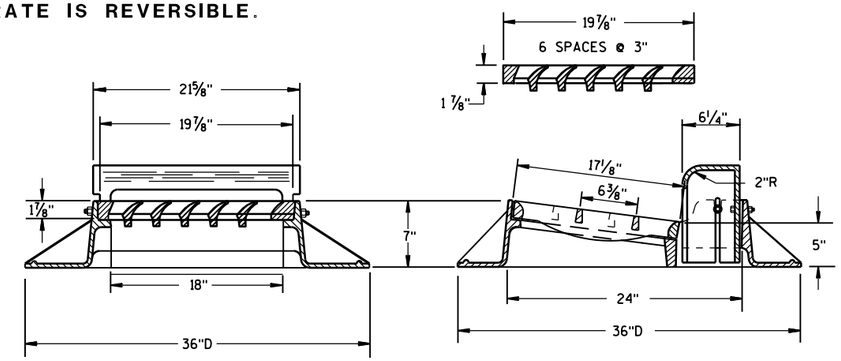




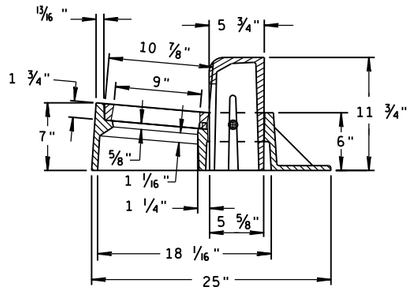
SPECIAL GRATE FOR TYPE "A" COVER

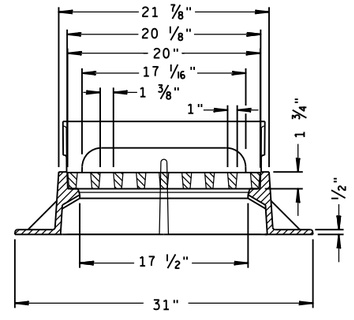
(MEASURES 19 3/4" X 17" X 1 7/8")

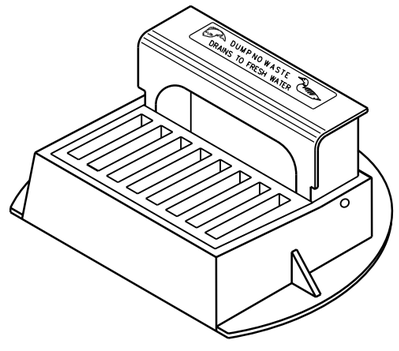
(NOTED AS TYPE A-S ON DRAINAGE TABLE)



TYPE "A"







TYPE "Z"

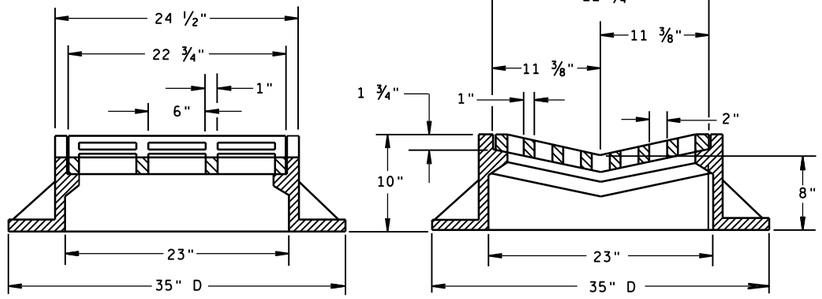
INLET COVERS
TYPE A, H, A-S, H-S & Z

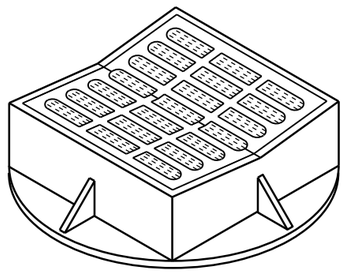
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

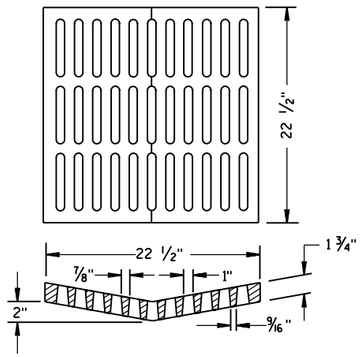
6

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



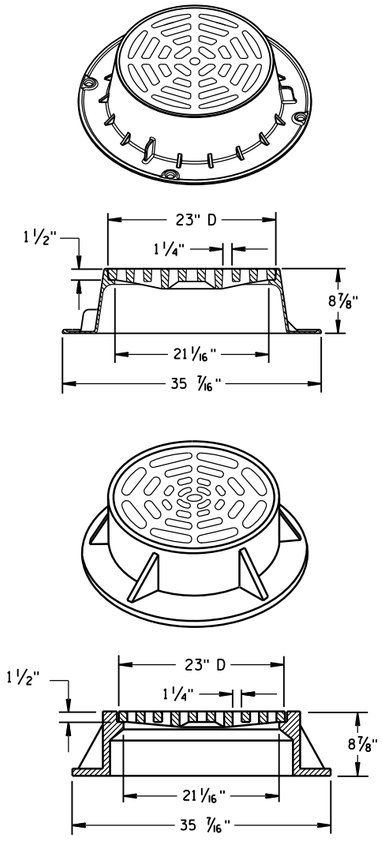


TYPE "B"



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

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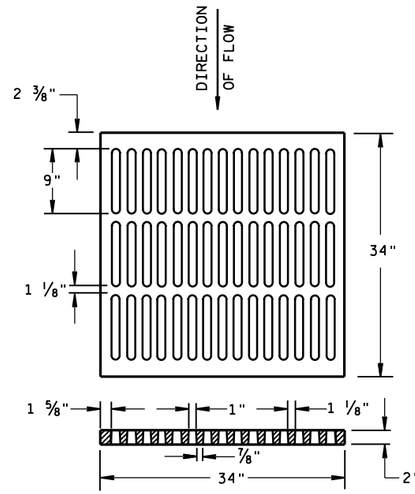
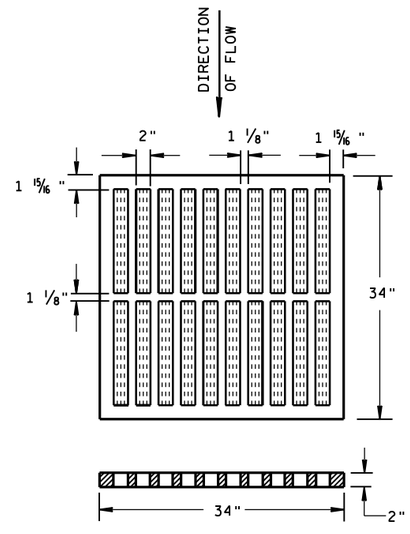


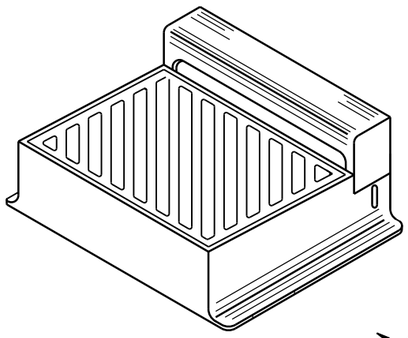
ALTERNATIVE TYPE "MS"

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

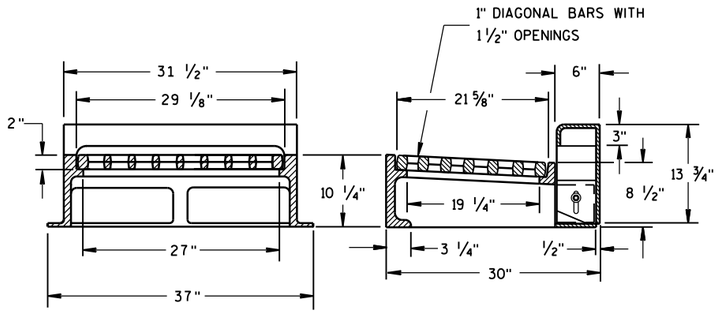


TYPE "MS"

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"

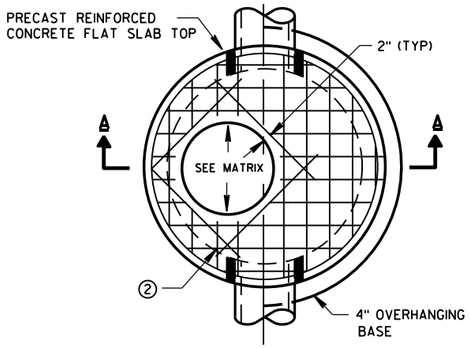
INLET COVERS
TYPE B, B-A, C,
MS, MS-A, & WM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

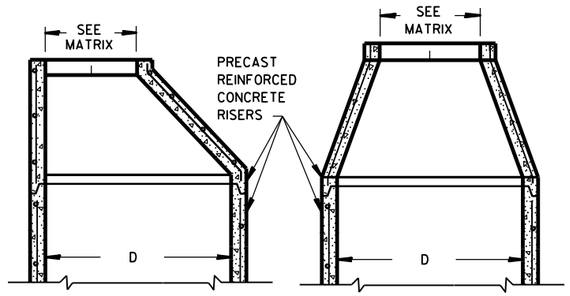
APPROVED
11/27/2013 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

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

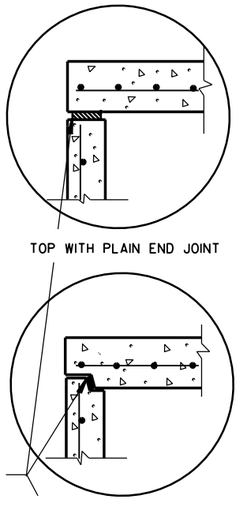


PLAN VIEW CIRCULAR OPENING



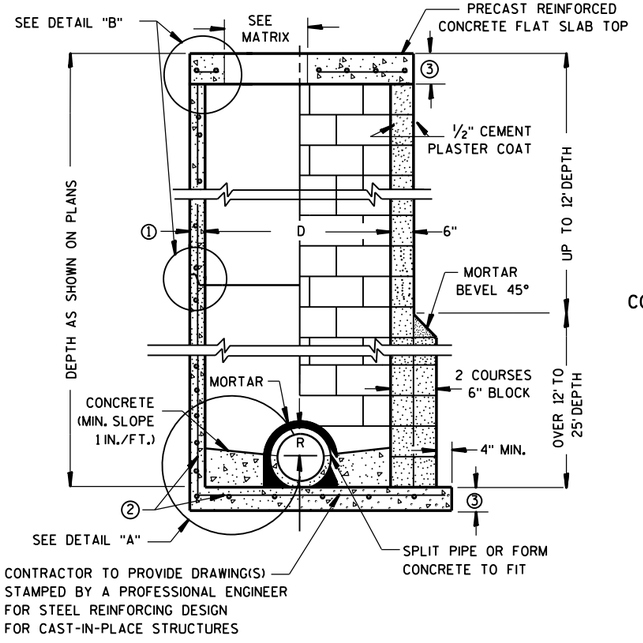
OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



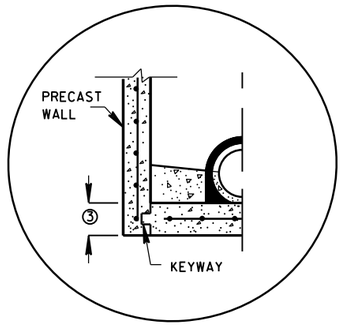
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

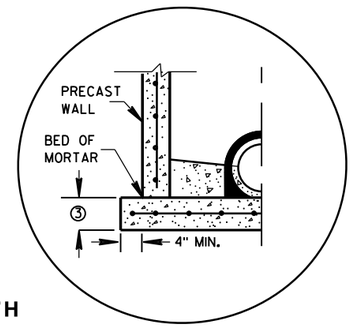


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

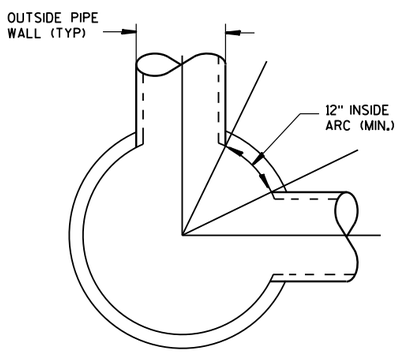


PRECAST REINFORCED
CONCRETE WITH INTEGRAL BASE OPTION



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 GRANULAR 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. THE CONE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

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

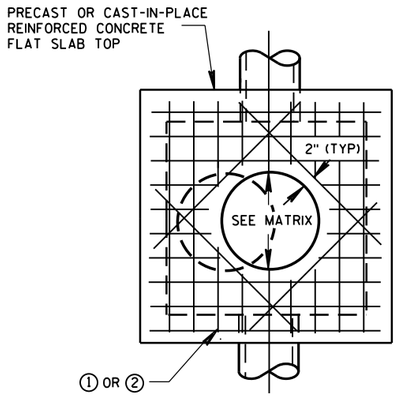
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

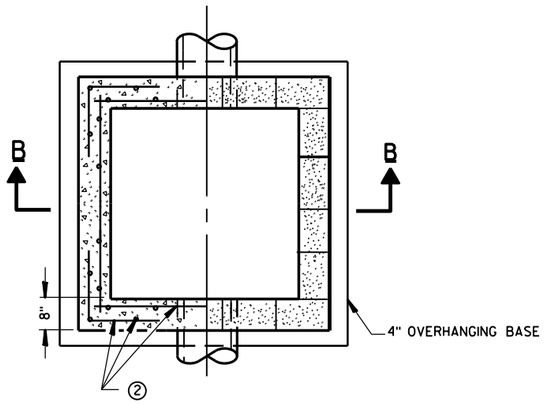
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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

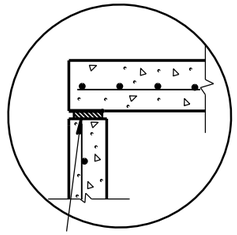
6
S.D.D. 8 B 9-1



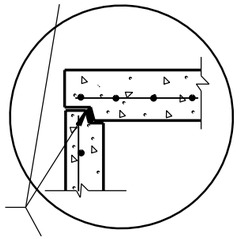
PLAN VIEW
CIRCULAR OPENING



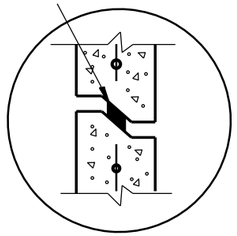
SECTION A-A
PLAN VIEW



TOP WITH PLAIN END JOINT

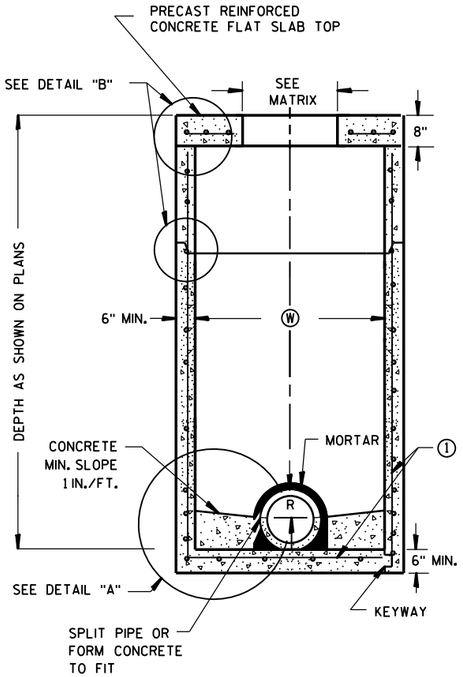


TOP WITH TONGUE AND GROOVE JOINT

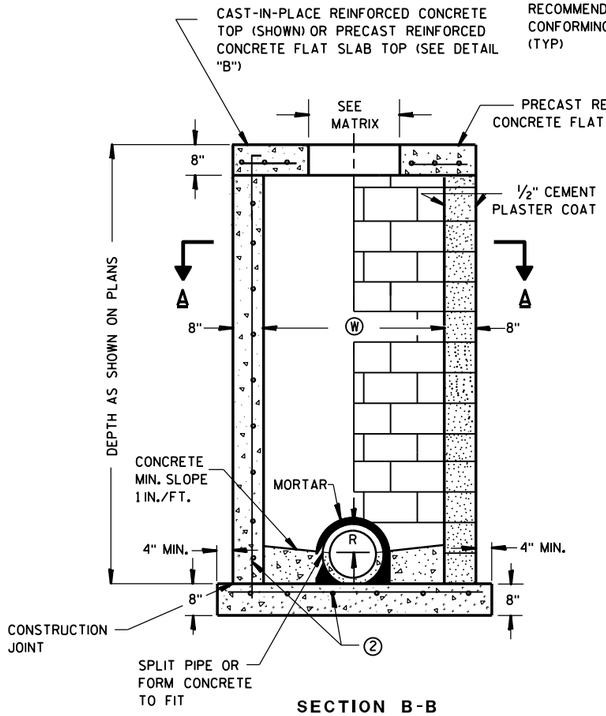


RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"



PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

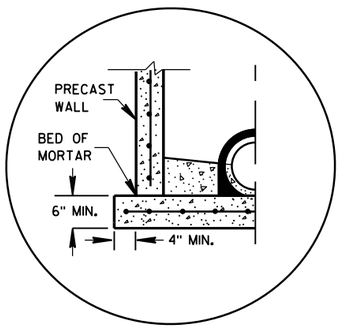


SECTION B-B

PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE

CAST-IN-PLACE REINFORCED CONCRETE

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



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"

GENERAL NOTES

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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 GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES. THE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

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.

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

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 ASTM C 913.

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.

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

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

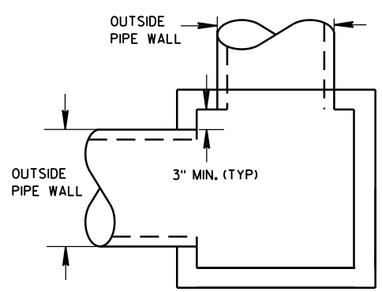
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

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	
	WIDTH (W) (IN)	LENGTH (L) (IN)
3X3-FT	24	24
4X4-FT	30	30
5X5-FT	42	42
6X6-FT	54	54



DETAIL "C"

SQUARE MANHOLES W/ FLAT TOP

MANHOLES 3X3-FT, 4X4-FT, 5X5-FT AND 6X6-FT

MANHOLES 3X3-FT, 4X4-FT
5X5-FT AND 6X6-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

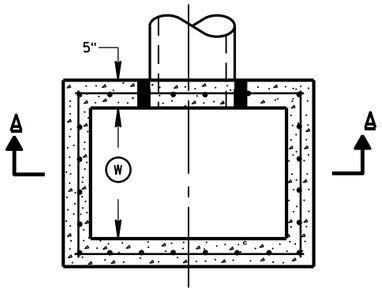
APPROVED
6/5/2012
DATE
/S/ Jerry H. Zoda
ROADWAY STANDARDS ENGINEER
FHWA

6

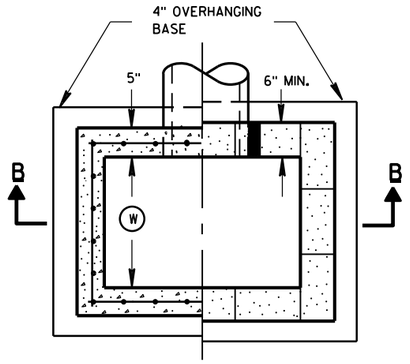
S.D.D. 8 B 10-1

6

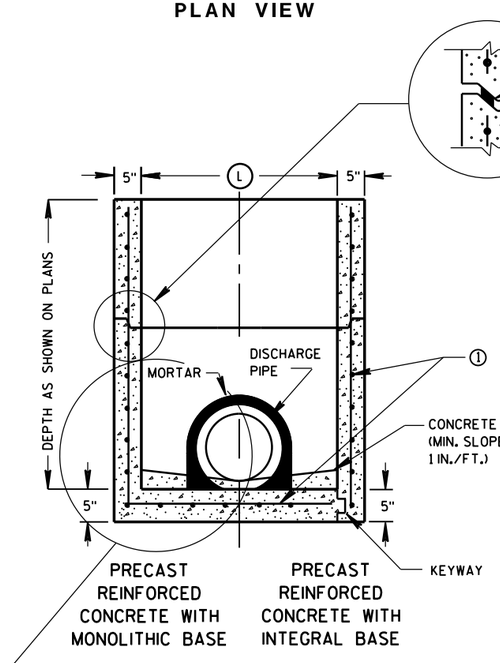
S.D.D. 8 B 10-1



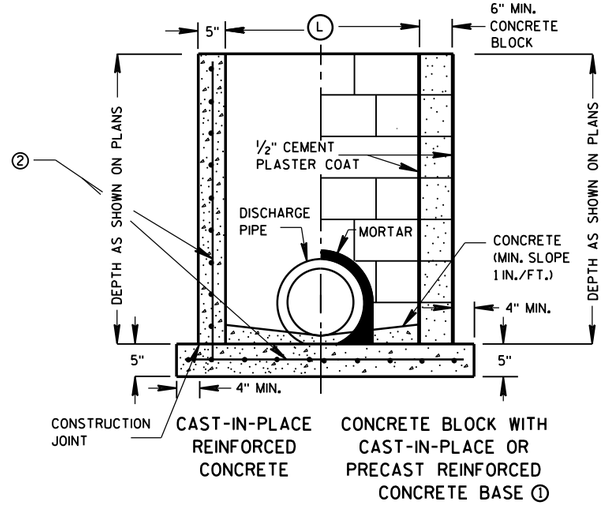
PLAN VIEW



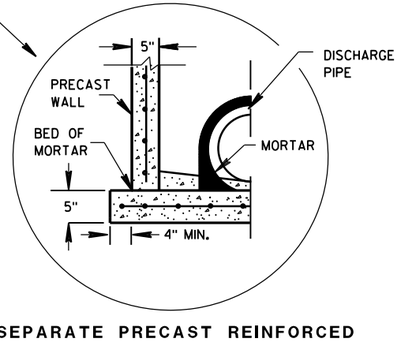
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

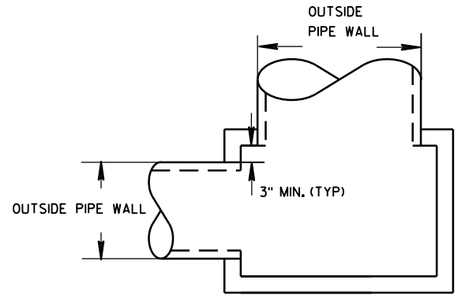
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

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

PIPE MATRIX

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



DETAIL "A"

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

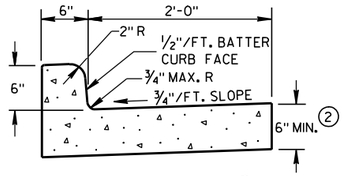
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012
DATE
FHWA

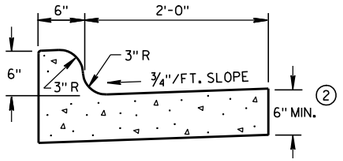
/S/ Jerry H. Zogg
ROADWAY STANDARDS DE
ENGINEER

6

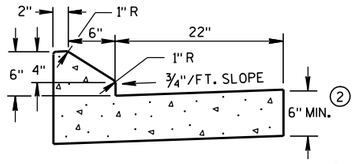
S.D.D. 8 C 7-1



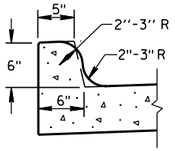
TYPES A & D (1)



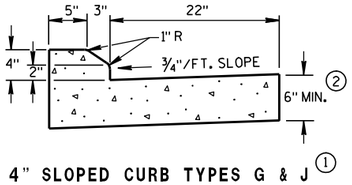
TYPES K & L (1)



6" SLOPED CURB TYPES G & J (1)

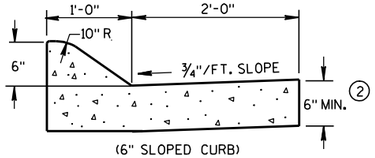


OPTIONAL CURB SHAPE FOR TYPES K & L (1)

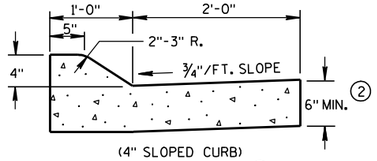


4" SLOPED CURB TYPES G & J (1)

CONCRETE CURB & GUTTER 30"

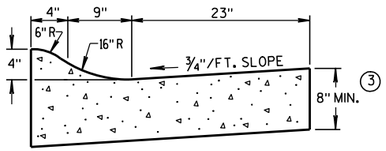


(6" SLOPED CURB)



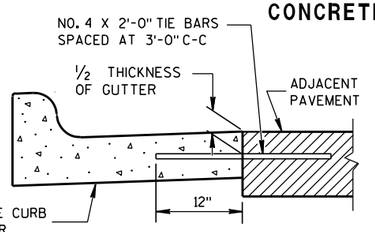
(4" SLOPED CURB)

TYPES A & D (1)



4" SLOPED CURB TYPES R & T (1) (4)

CONCRETE CURB & GUTTER 36"



TYPICAL TIE BAR LOCATION (1)

REVERSE SLOPE GUTTER (5)
(TYPICAL FOR ALL CURB & GUTTER TYPES)

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.

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

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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

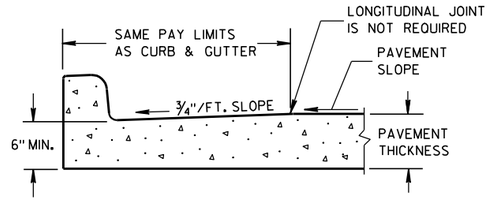
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.

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

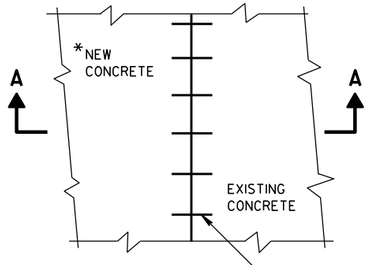
(3) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(4) THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

(5) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

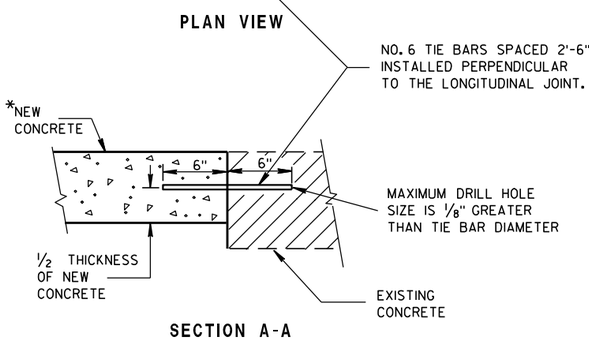


PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



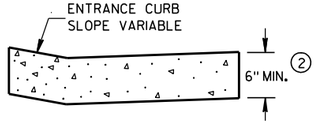
PLAN VIEW

*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

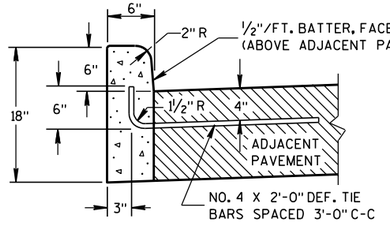


SECTION A-A

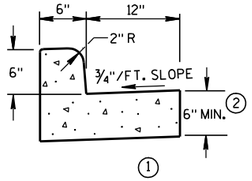
TIE BARS DRILLED INTO EXISTING PAVEMENT



DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

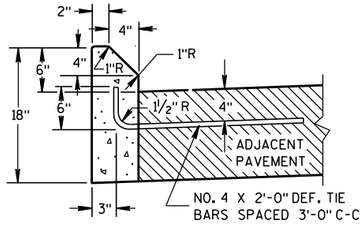


(1) TYPES A & D

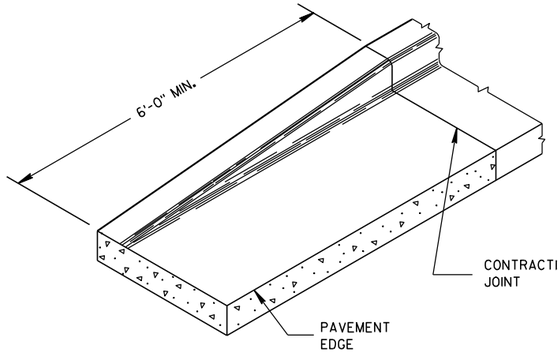


(1) TYPES A & D

CONCRETE CURB & GUTTER 18"



(1) TYPES G & J



END SECTION CURB & GUTTER

CONCRETE CURB

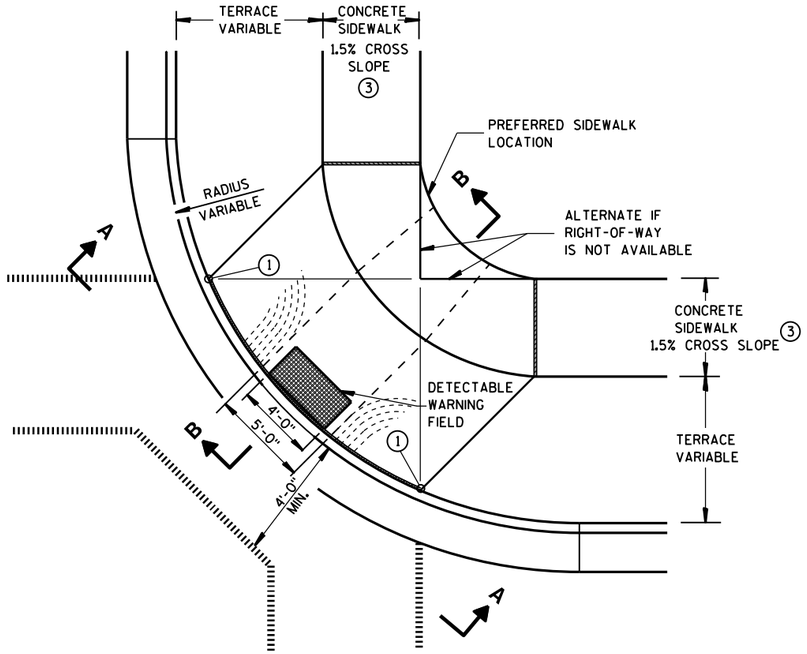
CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/4/08 DATE
/S/ Jerry H. [illegible] ROADWAY STANDARDS ENGINEER
FHWA

6

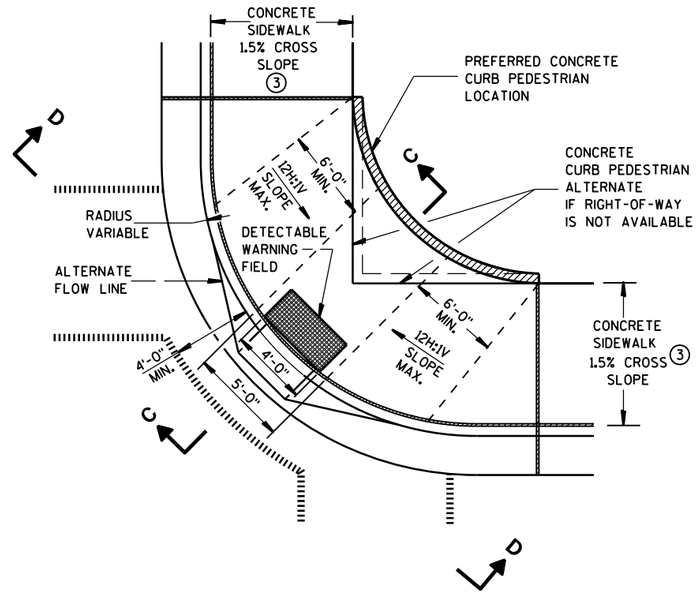
S.D.D. 8 D 1-17



PLAN VIEW

TYPE 1 RAMP

(CENTER OF CORNER RADIUS)



PLAN VIEW

TYPE 1-A RAMP

(NO TERRACE)

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.

RAMPS SHALL BE BUILT AT 12H:1V OR FLATTER. WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FIELD 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 LINEAL 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.

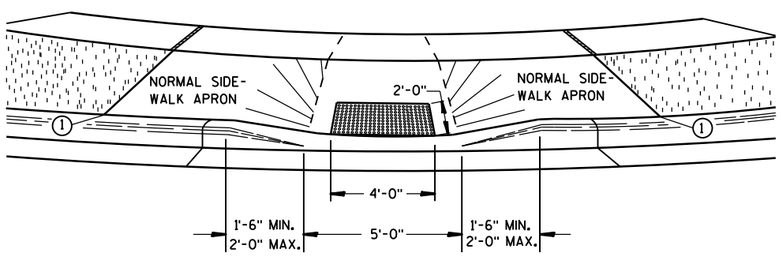
① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.

② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.

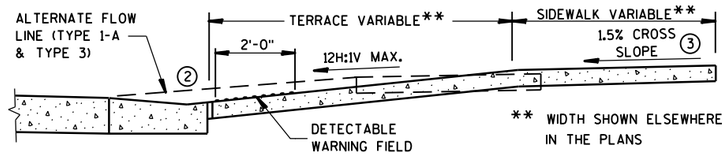
③ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

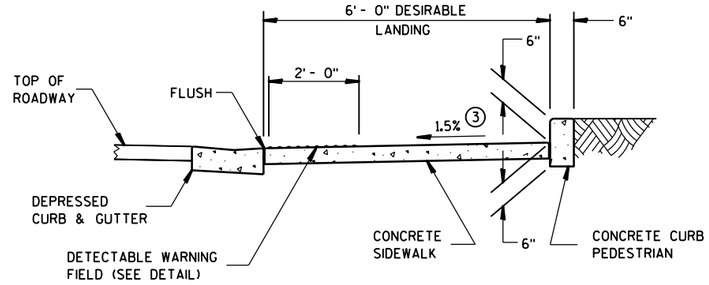
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



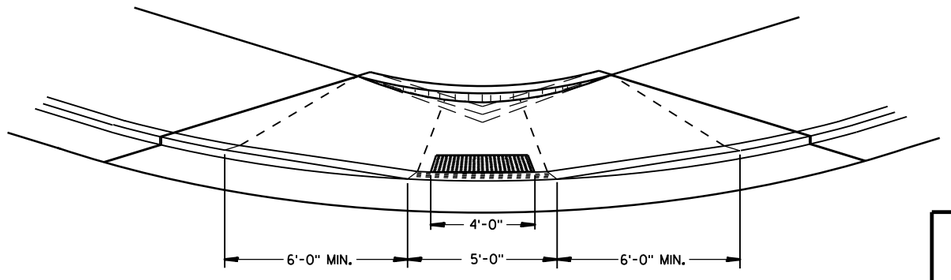
VIEW A-A



SECTION B-B



SECTION C-C



VIEW D-D

CURB RAMPS TYPES 1 AND 1-A

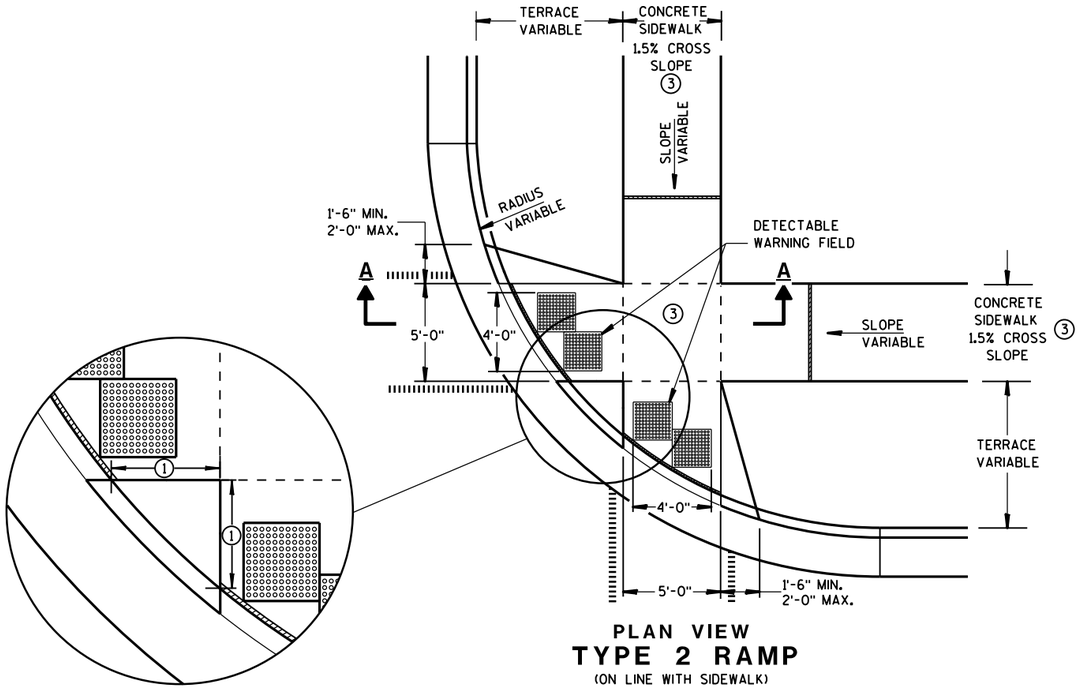
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 79

6

S.D.D. 8 D 5-15a

6

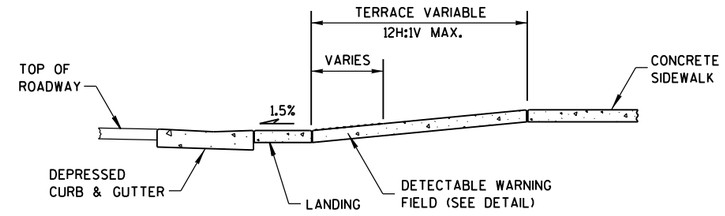
S.D.D. 8 D 5-15a



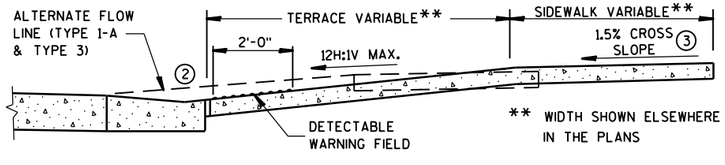
PLAN VIEW

TYPE 2 RAMP

(ON LINE WITH SIDEWALK)



SECTION A-A



SECTION B-B

GENERAL NOTES

USE THE TYPE 3 RAMP ONLY WHEN A TYPE 1 OR TYPE 2 CANNOT BE ACHIEVED BECAUSE OF FIELD CONDITIONS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

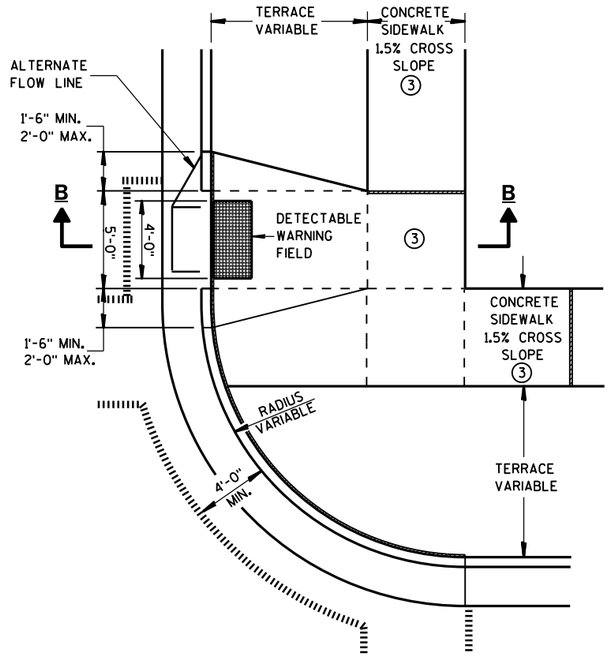
① WHEN THIS DISTANCE IS LESS THAN 6'-0" IT MAY BE DIFFICULT TO ACHIEVE A 12H:1V SLOPE, OR FLATTER, ON THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 12H:1V SLOPE, OR FLATTER, ON RAMP. 2" MINIMUM CURB HEIGHT.

② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.

③ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

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



PLAN VIEW

TYPE 3 RAMP

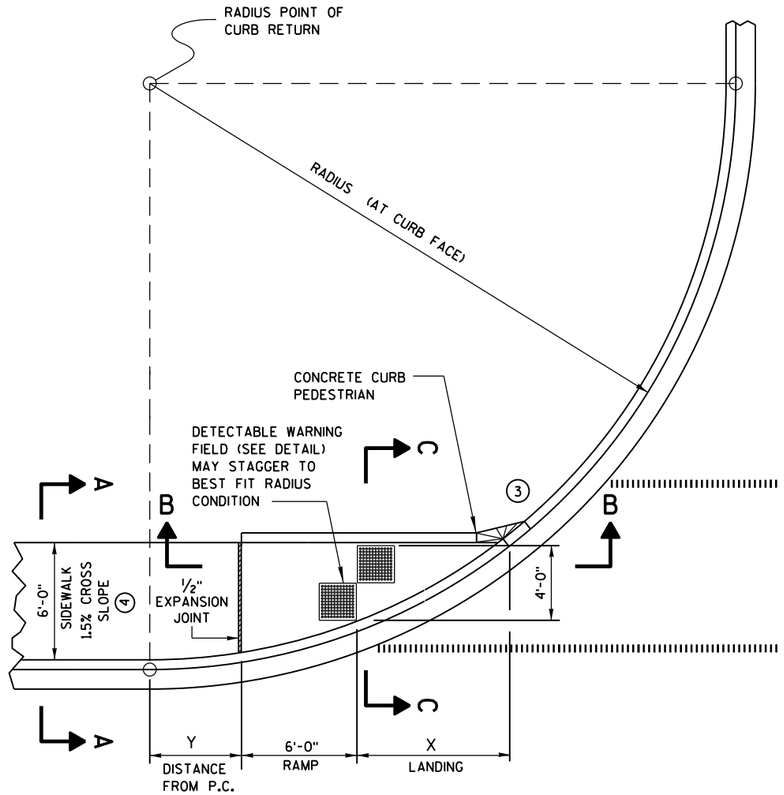
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS TYPES 2 AND 3

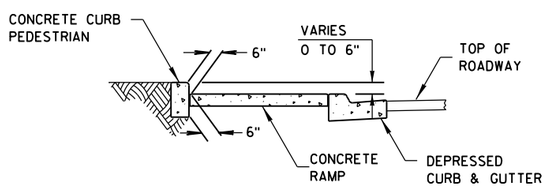
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

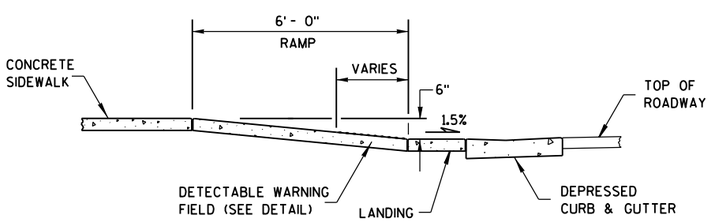
S.D.D. 8 D 5-15b



CURB RAMP TYPE 4A
PLAN VIEW



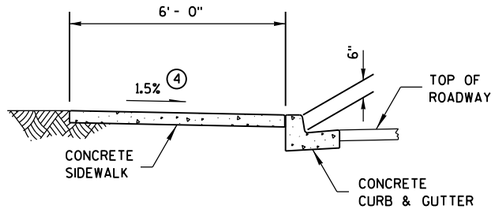
SECTION C-C FOR TYPE 4A



SECTION B-B FOR TYPE 4A

RADIUS (AT CURB FACE)	X	Y
20 FEET	6'-1¾"	2'-7¼"
30 FEET	7'-11¾"	4'-8¼"
40 FEET	9'-5¼"	6'-5"
50 FEET	10'-8¾"	7'-11¼"
60 FEET	11'-10¼"	9'-3½"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A

GENERAL NOTES

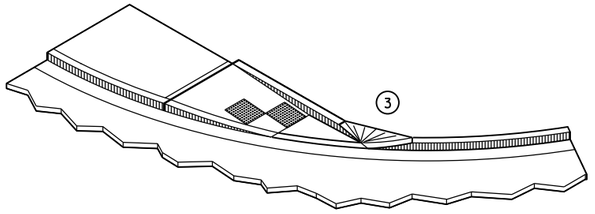
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

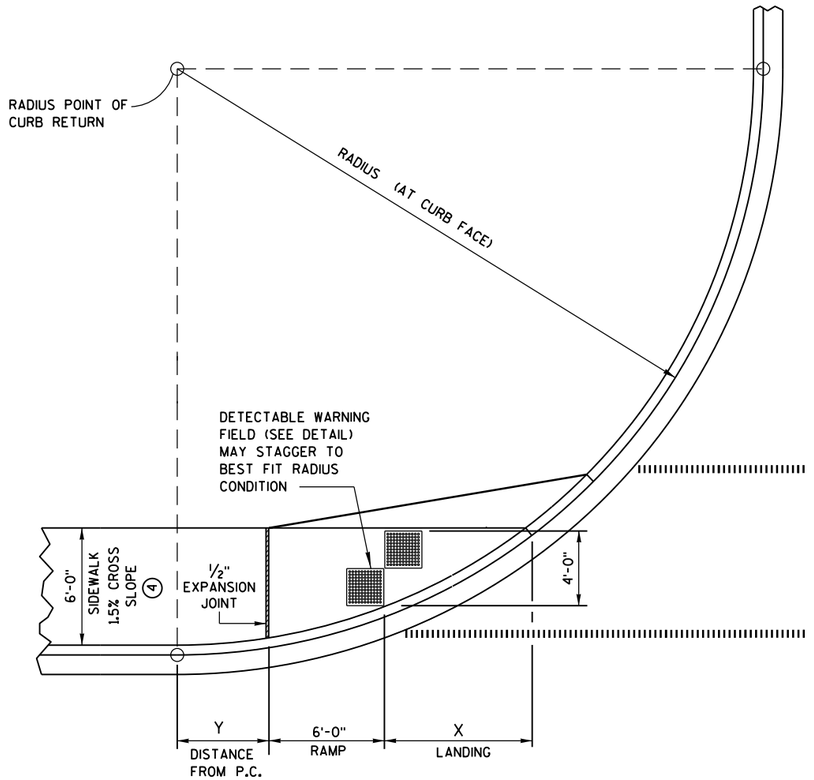
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

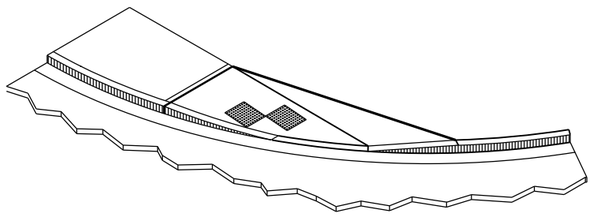
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



ISOMETRIC VIEW FOR TYPE 4A



CURB RAMP TYPE 4A1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

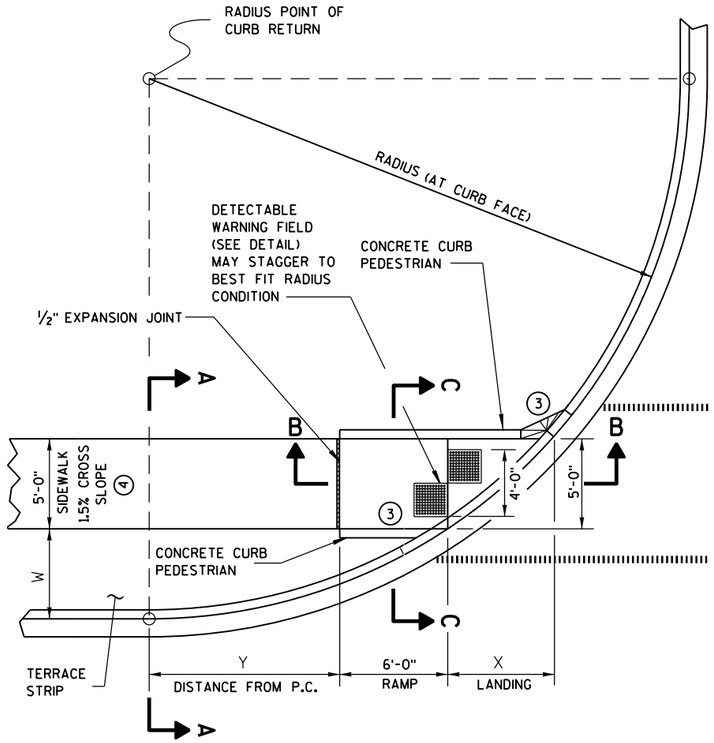
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

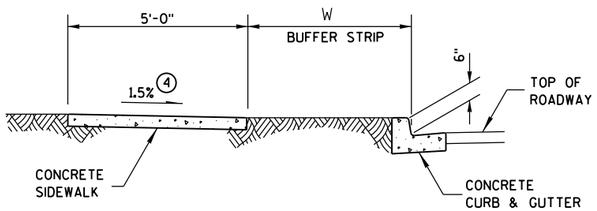
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

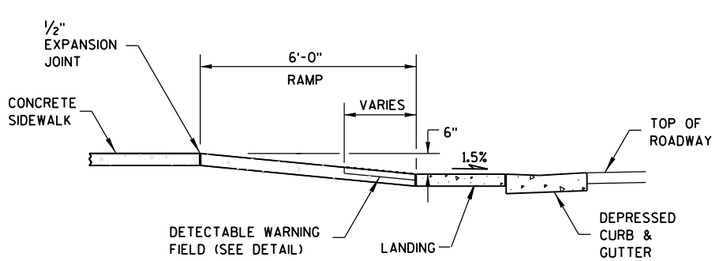
S.D.D. 8 D 5-15c



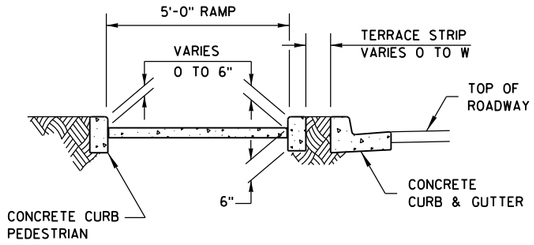
CURB RAMP TYPE 4B
PLAN VIEW



SECTION A-A FOR TYPE 4B



SECTION B-B FOR TYPE 4B



SECTION C-C FOR TYPE 4B

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

PAVEMENT MARKING CROSSWALK (WHITE)

RADIUS (AT CURB FACE)	W = 3'-0"		W = 4'-0"		W = 5'-0"		W = 6'-0"		W = 7'-0"	
	X	Y	X	Y	X	Y	X	Y	X	Y
20 FEET	5'-5½"	4'-6½"	4'-8½"	6'-0"	4'-1"	7'-2¾"	3'-7"	8'-3½"	3'-1½"	9'-2½"
30 FEET	7'-3¾"	7'-1"	6'-5½"	8'-11½"	5'-9¼"	10'-7"	5'-2½"	12'-0"	4'-8¾"	13'-3¼"
40 FEET	8'-9½"	9'-2½"	7'-10"	11'-5¼"	7'-1"	13'-4½"	6'-5¾"	15'-¾"	5'-11½"	16'-7¼"
50 FEET	10'-¾"	11'-¾"	9'-¼"	13'-7¼"	8'-2½"	15'-9½"	7'-6½"	17'-9"	6'-11¾"	19'-6¼"
60 FEET	11'-2½"	12'-8¾"	10'-¾"	15'-6½"	9'-2¼"	17'-11¾"	8'-5¾"	20'-1¾"	7'-10½"	22'-1½"

INTERMEDIATE RADII CAN BE INTERPOLATED

GENERAL NOTES

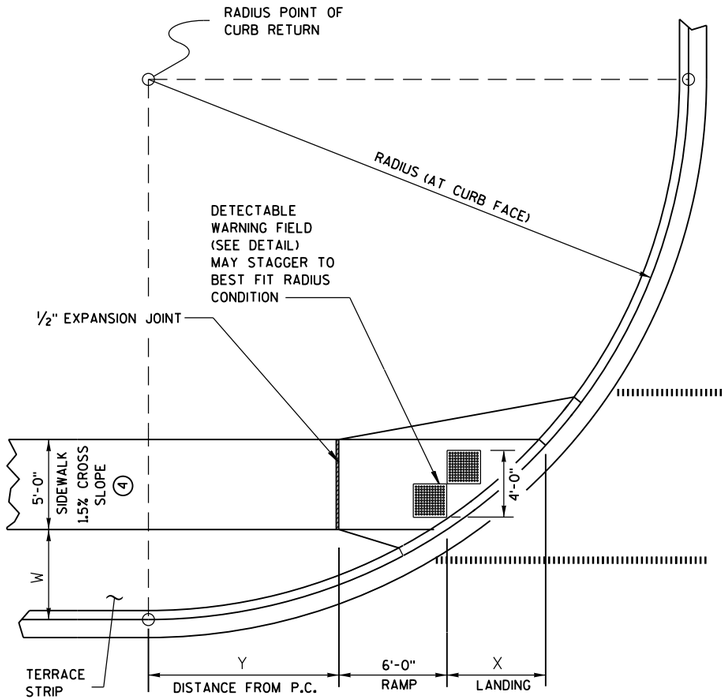
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

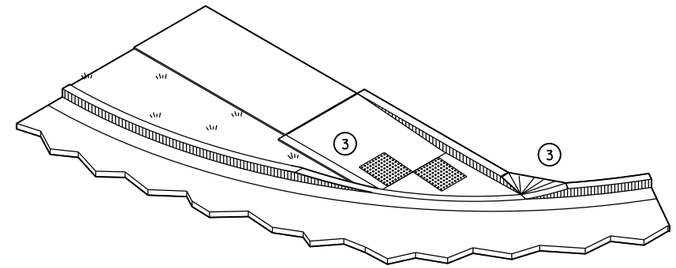
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

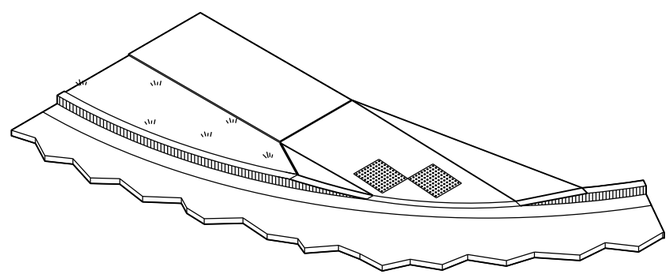
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



CURB RAMP TYPE 4B1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4B



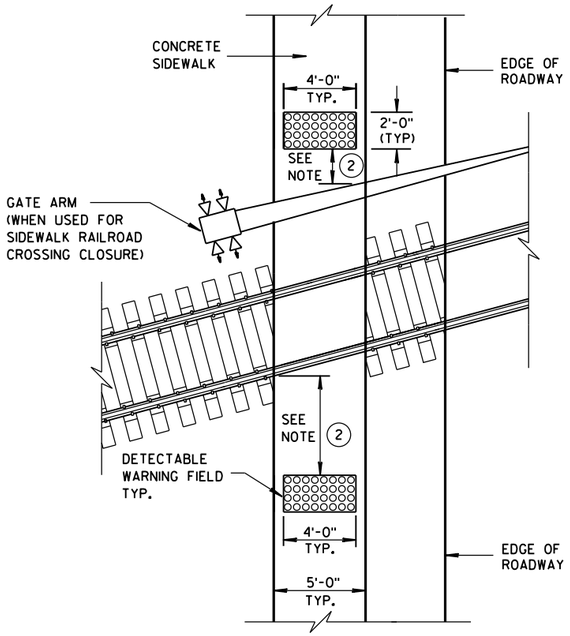
ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS TYPE 4B AND 4B1

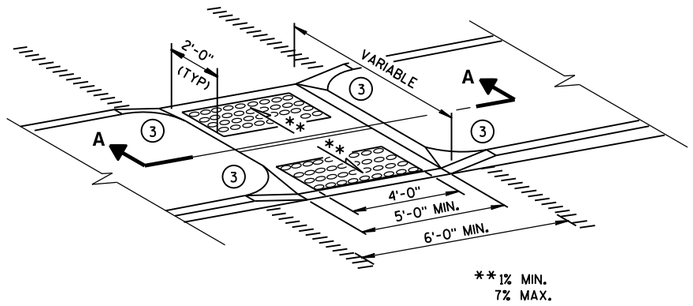
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 8 D 5-15d



TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING



MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5

GENERAL NOTES

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

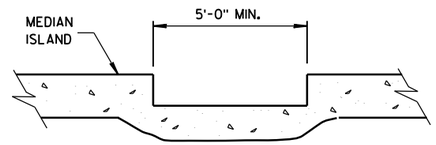
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

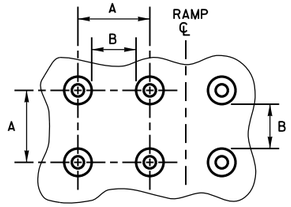
(2) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.

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

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



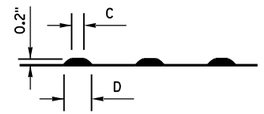
SECTION A-A



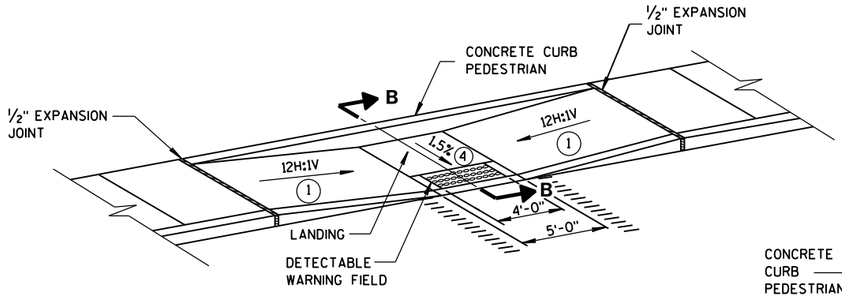
PLAN VIEW

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

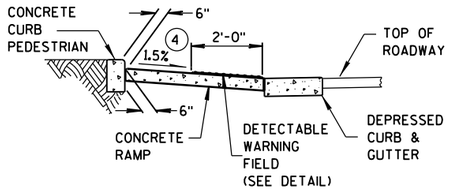
* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



ELEVATION VIEW

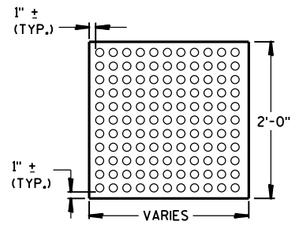


MID-BLOCK CROSSING
TYPE 7A



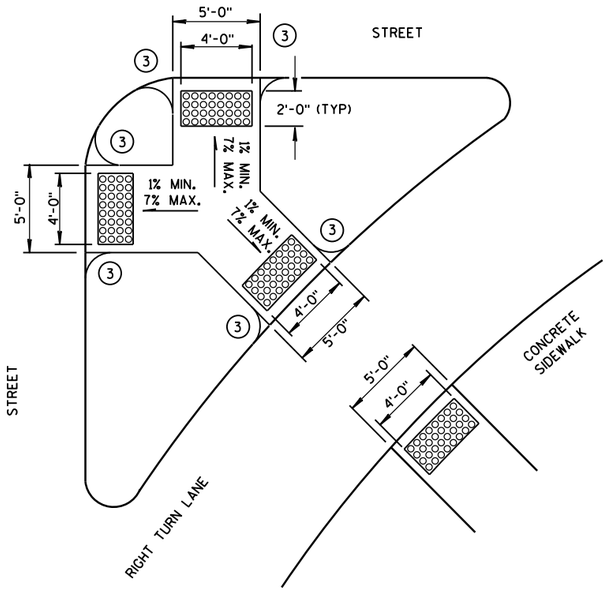
SECTION B-B

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL

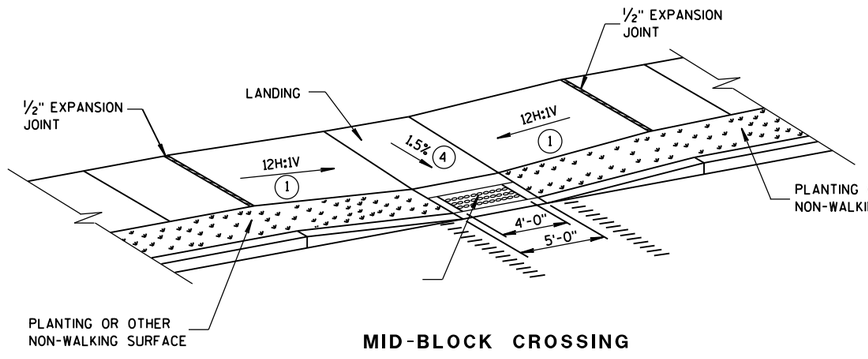


PLAN VIEW

DETECTABLE WARNING FIELD (TYPICAL)



TYPE 6
DETECTABLE WARNING AT ISLANDS



MID-BLOCK CROSSING
TYPE 7B

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

LEGEND

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

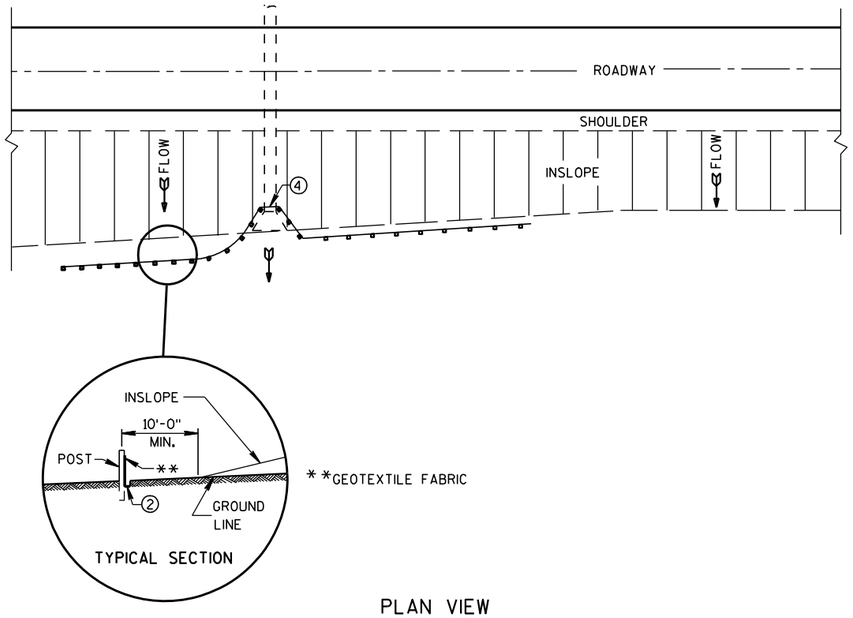
CURB RAMPS
TYPES 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2-6-2013 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

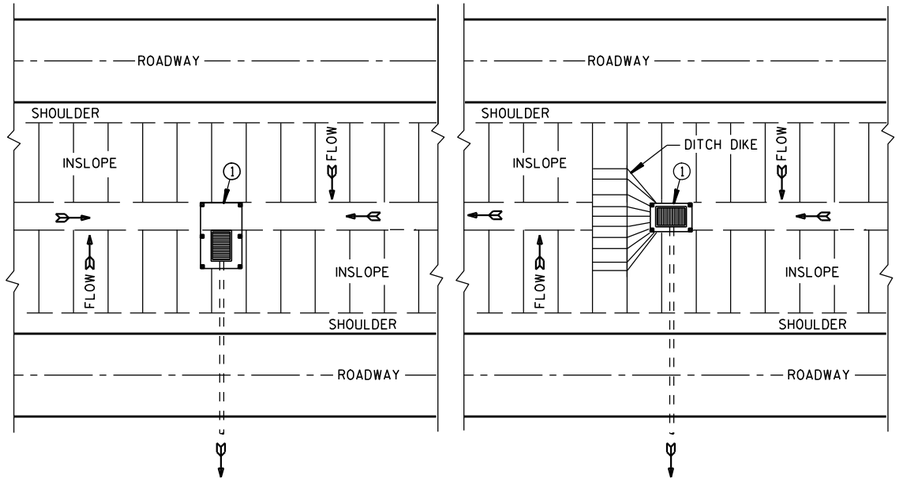
6

S.D.D. 8 D 5-15e



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

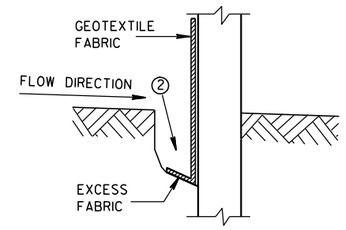
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

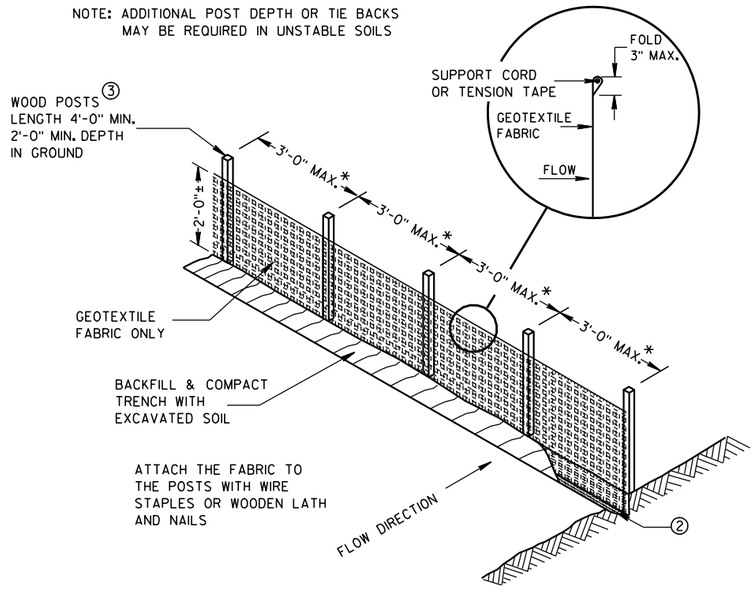
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

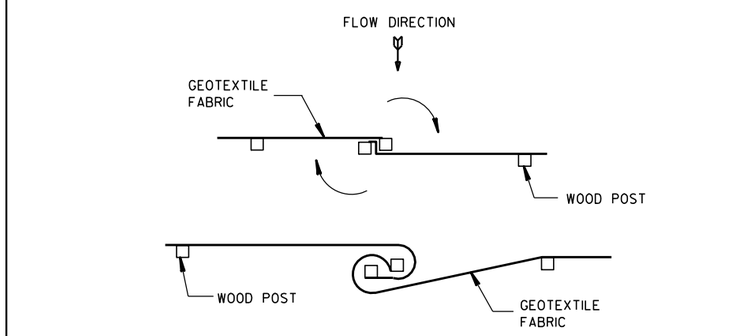
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



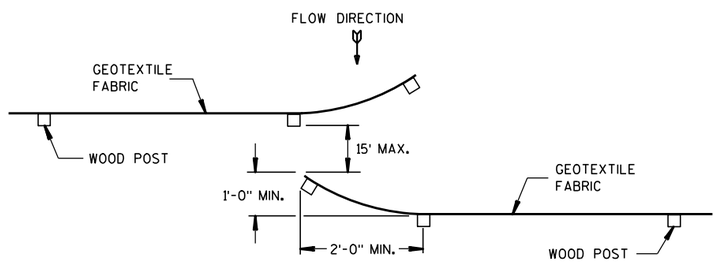
TRENCH DETAIL



SILT FENCE

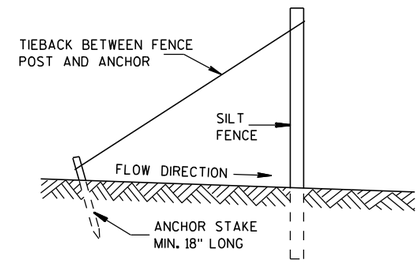


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

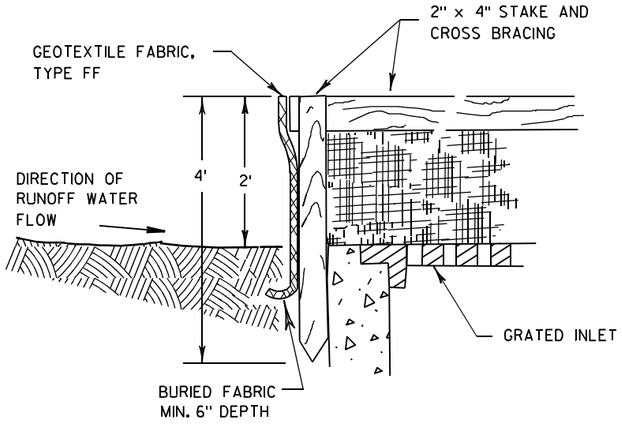
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

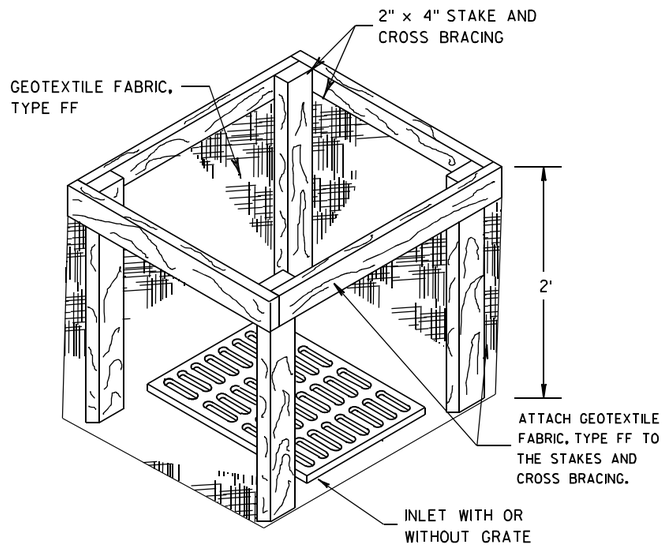
6

S.D.D. 8 E 9-6

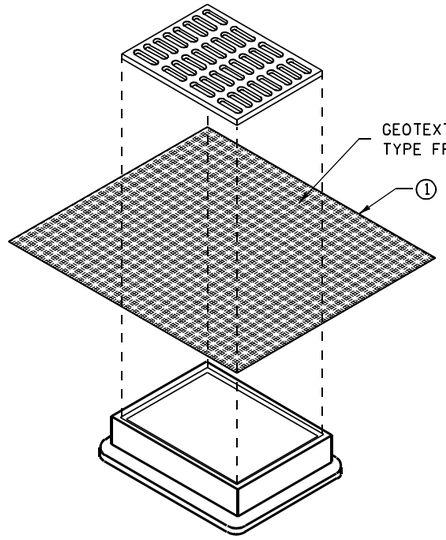
6

S.D.D. 8 E 9-6



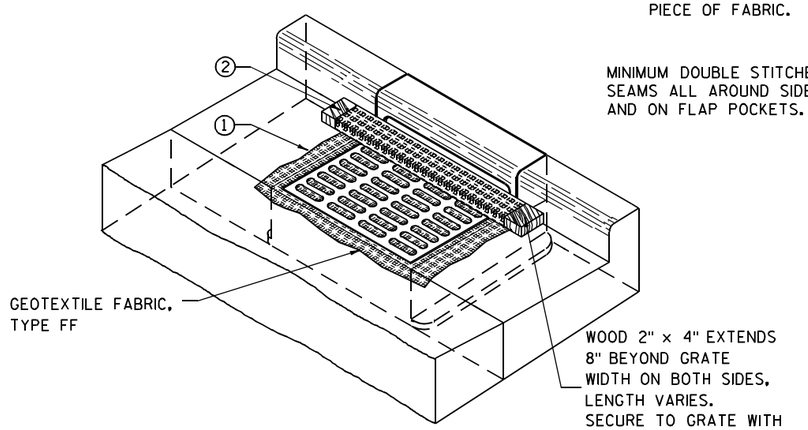


INLET PROTECTION, TYPE A

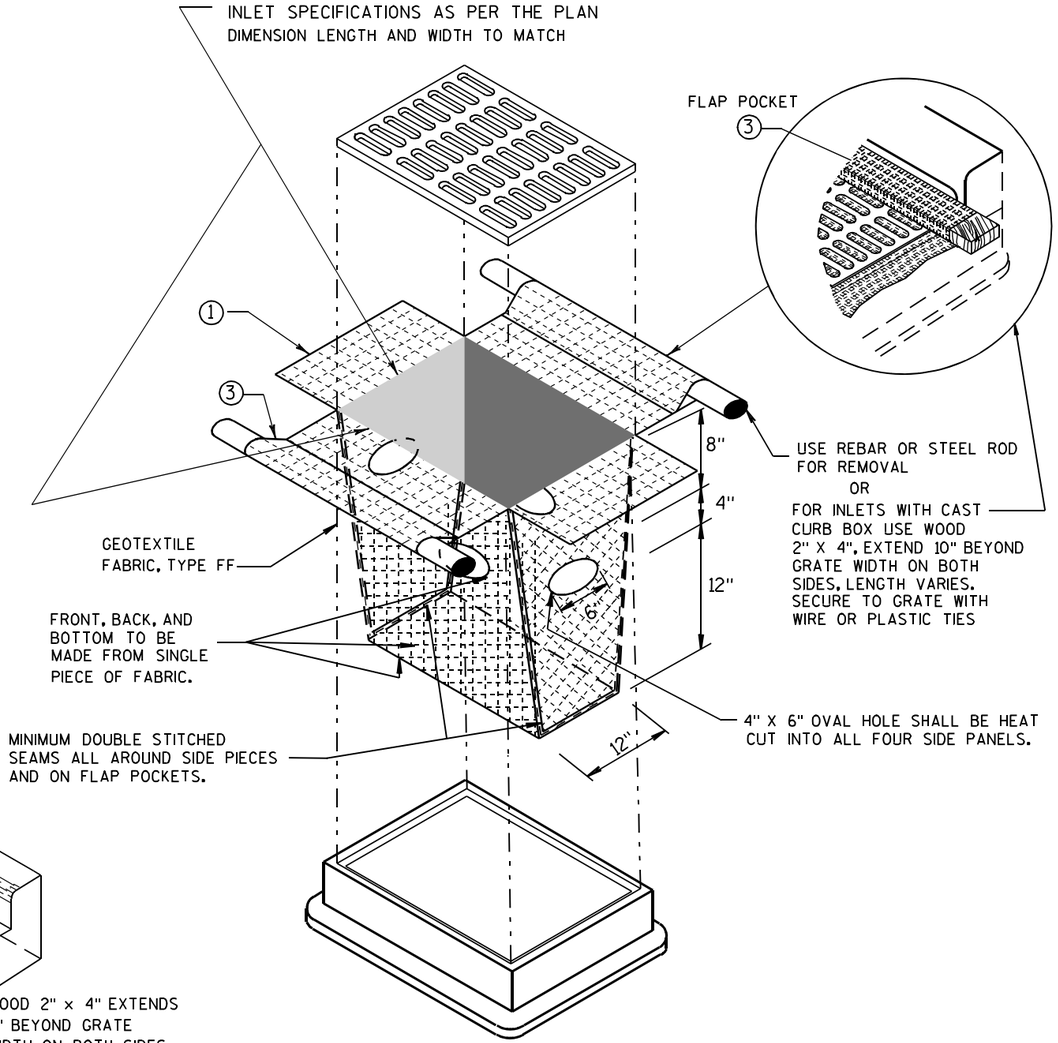


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

GENERAL NOTES

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

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

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

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

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

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

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

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S.D.D. 8 E 10-2

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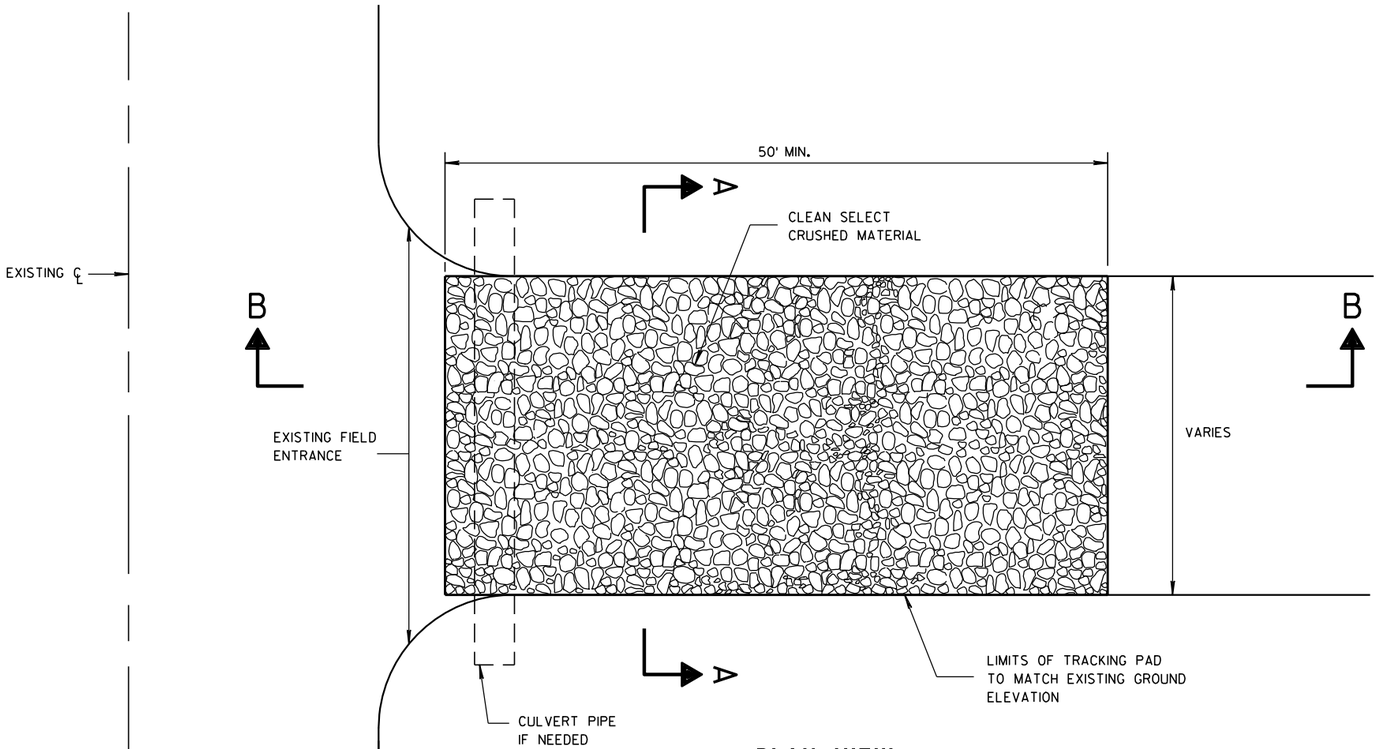
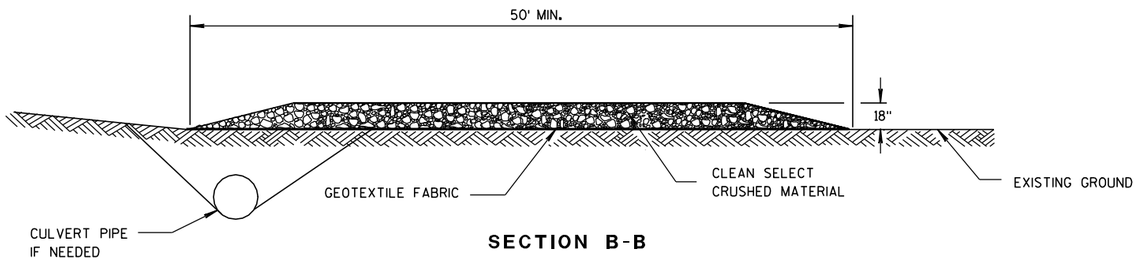
S.D.D. 8 E 10-2



PLAN VIEW



SECTION B-B

GENERAL NOTES

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

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

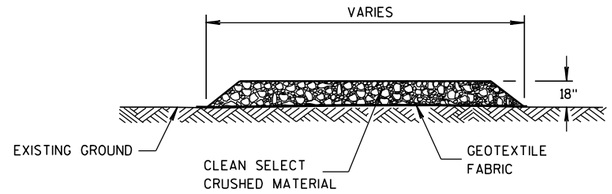
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



SECTION A-A

TRACKING PAD

TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/24/2011	/S/ Jerry H. Zona	
DATE	ROADWAY STANDARDS ENGINEER 86	ENT

FHWA

6

S.D.D. 8 E 14-1

METAL APRON ENDWALLS

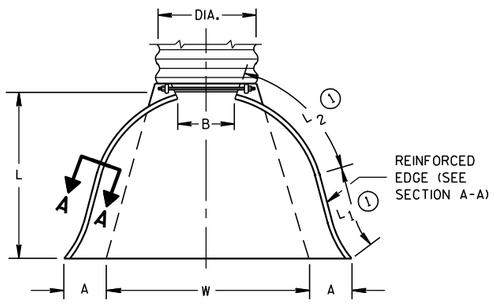
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")		
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to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

× EXCEPT CENTER PANEL SEE GENERAL NOTES

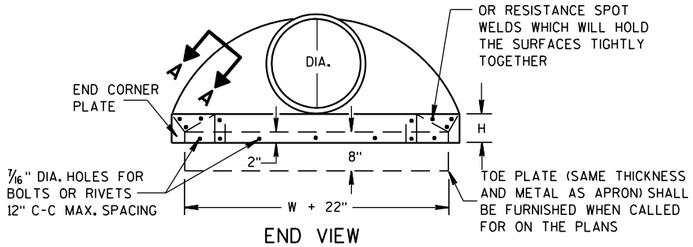
REINFORCED CONCRETE APRON ENDWALLS

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

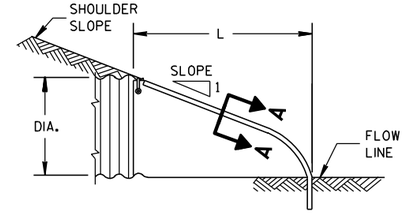
* MINIMUM
** MAXIMUM



PLAN VIEW

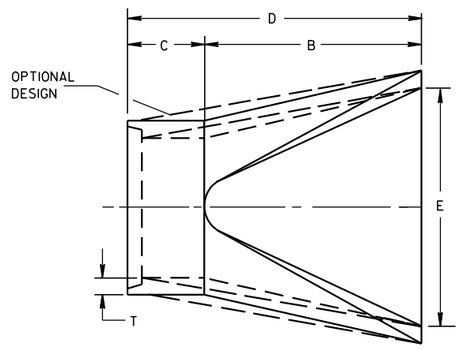


END VIEW

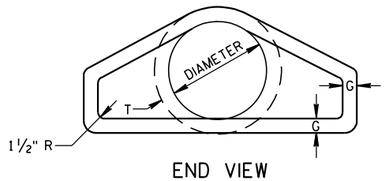


SIDE ELEVATION

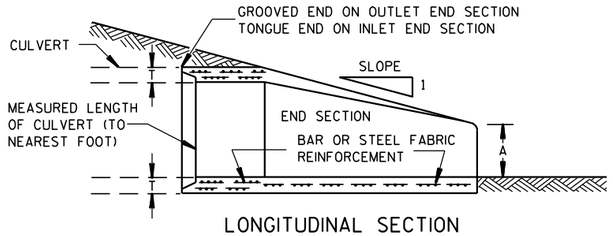
METAL ENDWALLS



PLAN

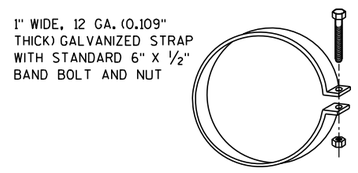


END VIEW



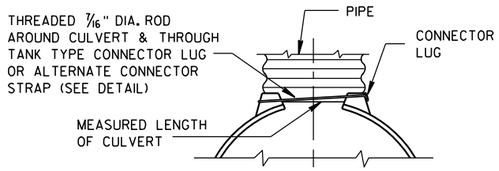
LONGITUDINAL SECTION

CONCRETE ENDWALLS

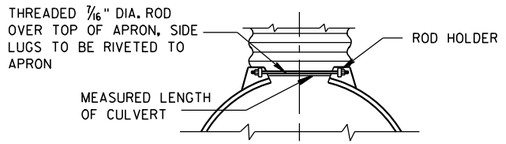


ALTERNATE FOR TYPE 1 CONNECTION

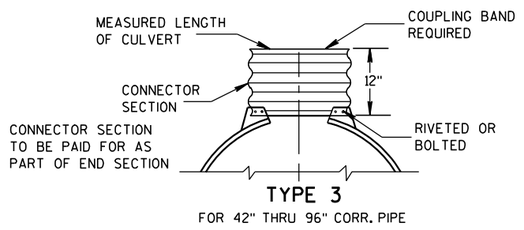
END SECTION CONNECTOR STRAP



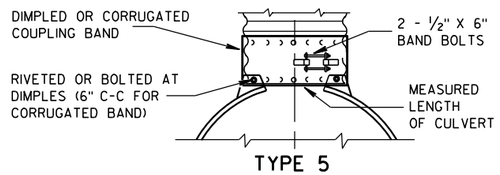
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

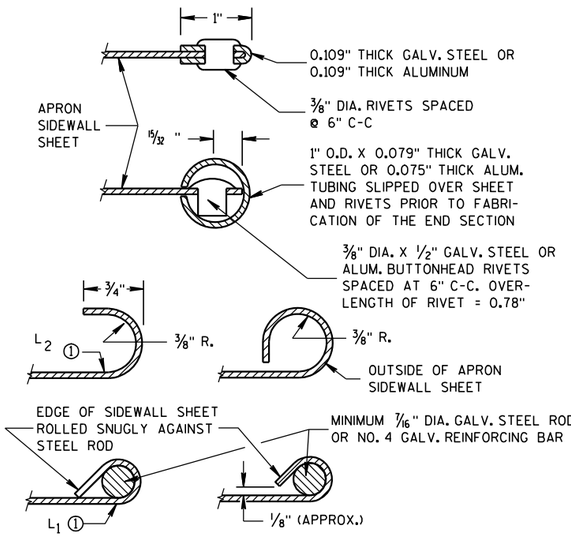
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

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

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

APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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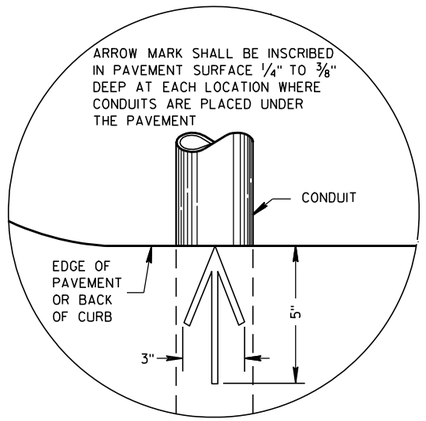
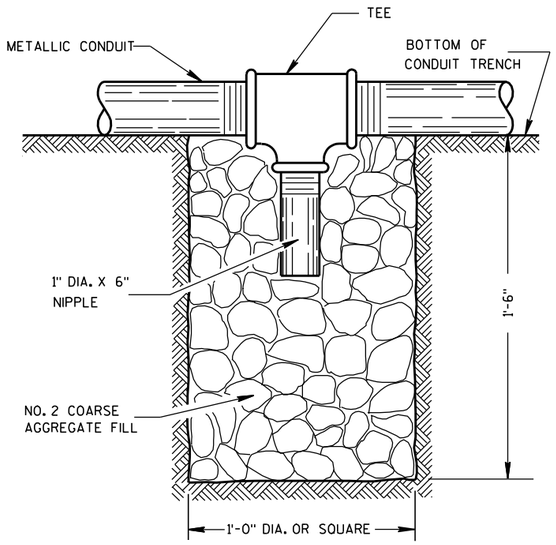
S.D.D. 8 F 1-11



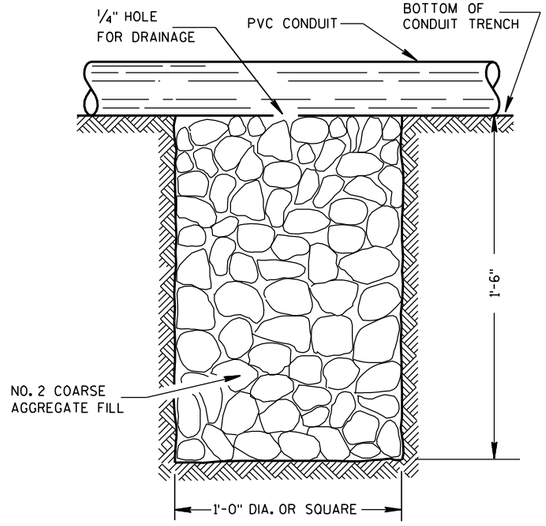
PLAN VIEW

ARROW MARK



NOTE: INSTALL AT LOCATIONS WHERE METALLIC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR METALLIC CONDUIT



NOTE: INSTALL AT LOCATIONS WHERE PVC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR PVC CONDUIT

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.

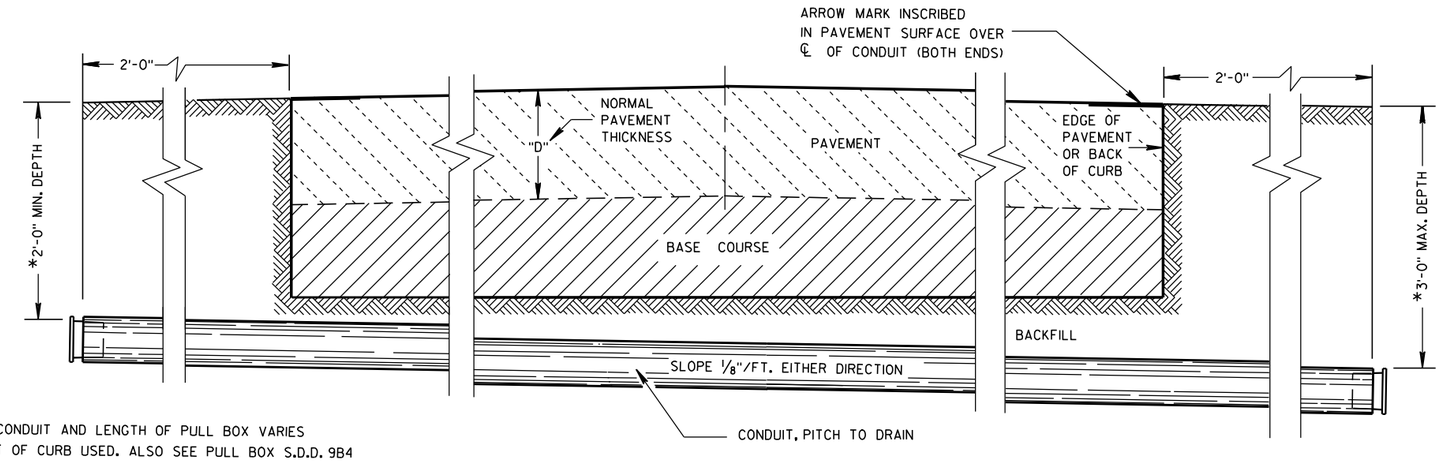
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

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.).

POLY ROPE OR A PULL 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.



*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

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/23/03 — DATE

/S/ Balu Ananthanarayanan — STATE ELECTRICAL ENGI

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HWYS

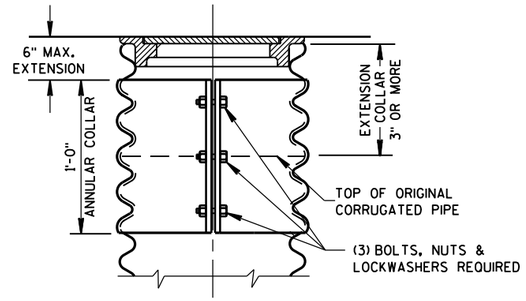
FHWA

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

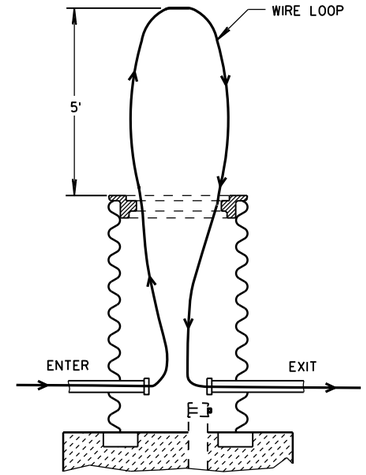
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	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.

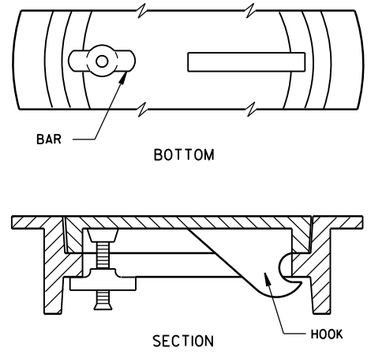
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

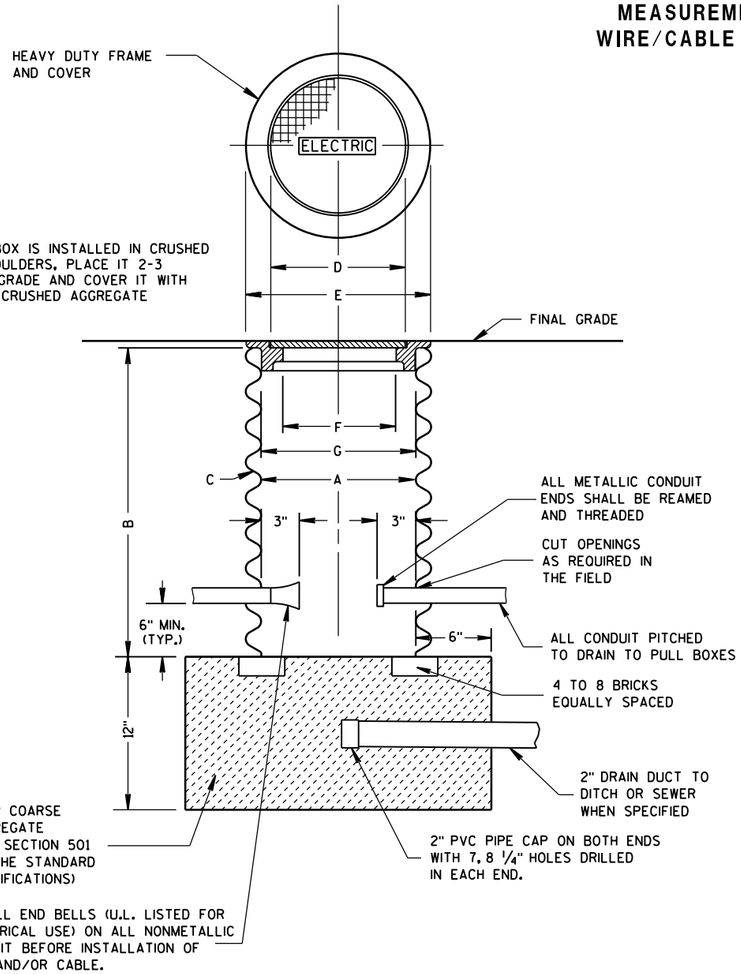


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



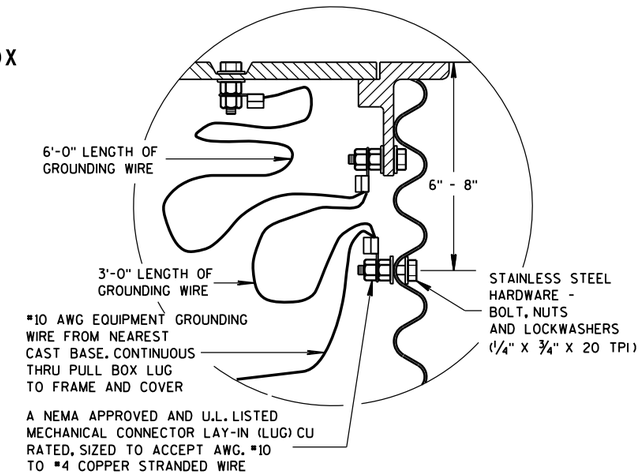
ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE

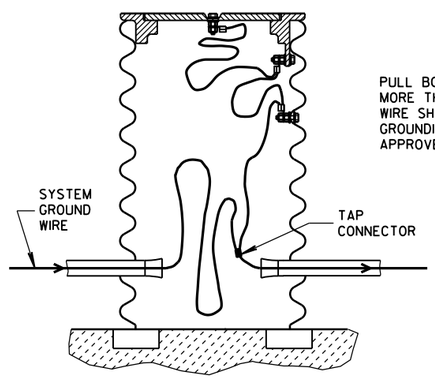


WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

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.

GROUNDING LUGS ARE NOT REQUIRED IN PULL BOXES WHEN VOLTAGES OF LESS THAN 50 VOLTS AC ARE THE ONLY VOLTAGES ENCOUNTERED IN THE BOXES.

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

S.D.D. 9B2, "CONDUIT", APPLIES TO THIS DRAWING.

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	
2-7-2013 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL
FHWA	

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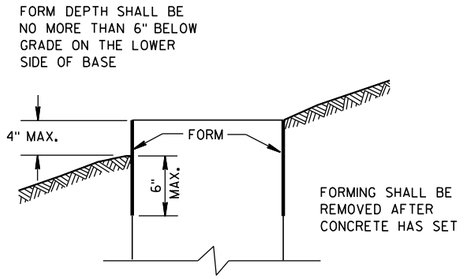


FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

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

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

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

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

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

GENERAL NOTES (CONTINUED)

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

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

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

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 2 AND TYPE 5 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 2 AND TYPE 5 BASES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 AND 641.2.2 OF THE STANDARD SPECIFICATIONS, ASTM A-449, OR ASTM A-687 (GRADE 105).

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

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

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

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

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

(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

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

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

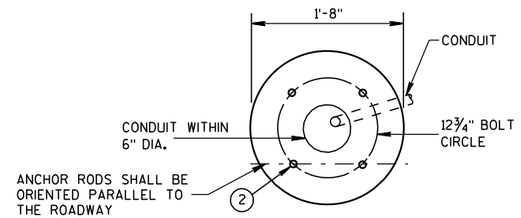
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

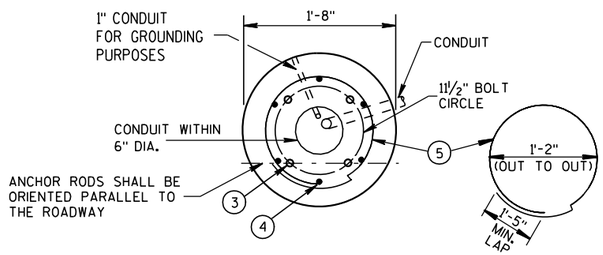
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

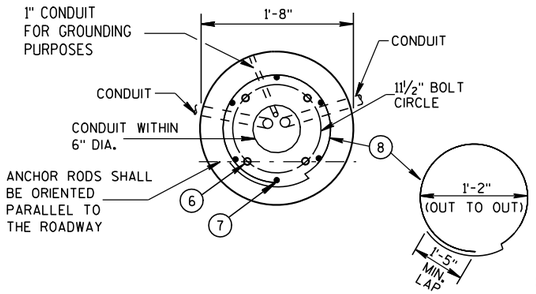
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

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

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

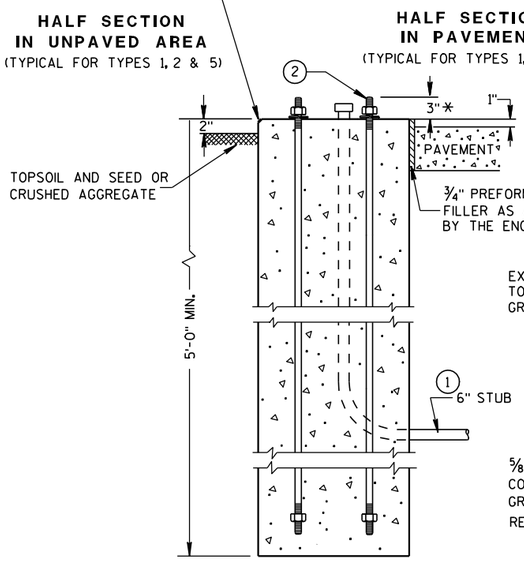






FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND

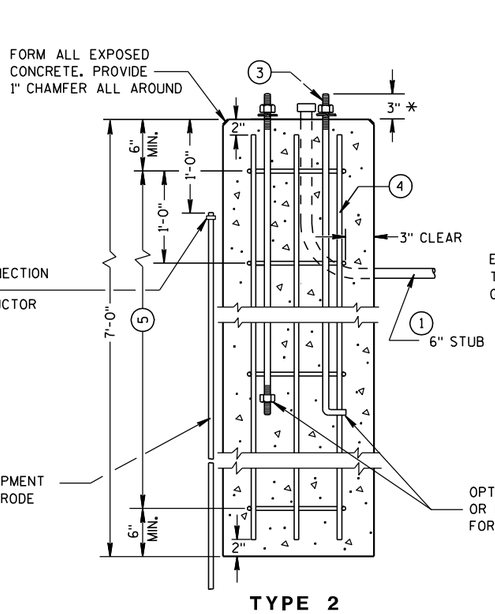
HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2 & 5)



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

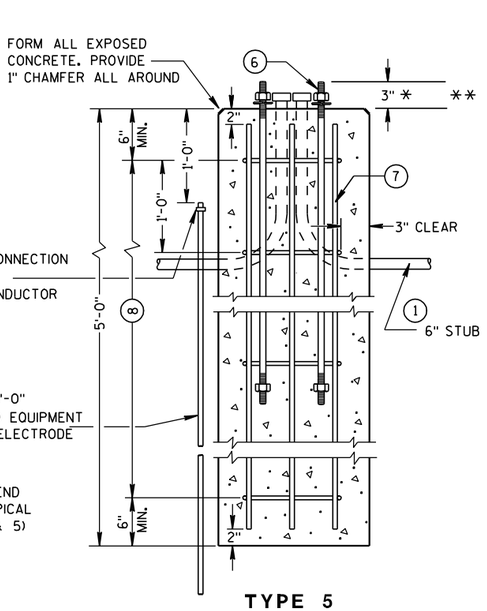
TYPE 1

FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND



TYPE 2

FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND



TYPE 5

CONCRETE BASES

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

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

CONCRETE BASES, TYPES 1, 2 & 5

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/3/10 — DATE

/S/ Joanna L. Rush — STATE ELECTRICAL ENGI

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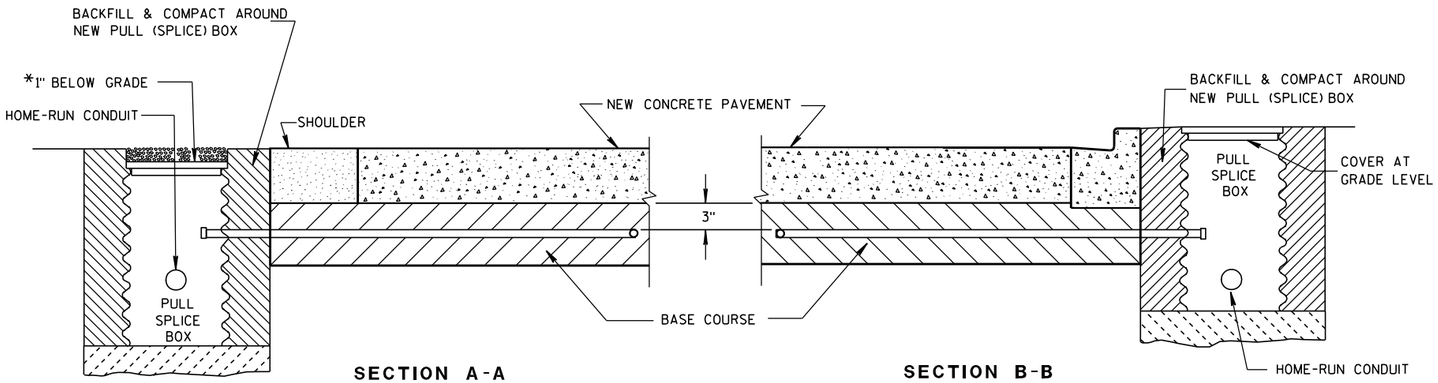


SECTION A-A
NO CURB & GUTTER

SECTION B-B
CURB & GUTTER

*RECESS PULL (SPLICE) BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

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

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

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

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS SUCH AS 3M TYPE 82A1 OR APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

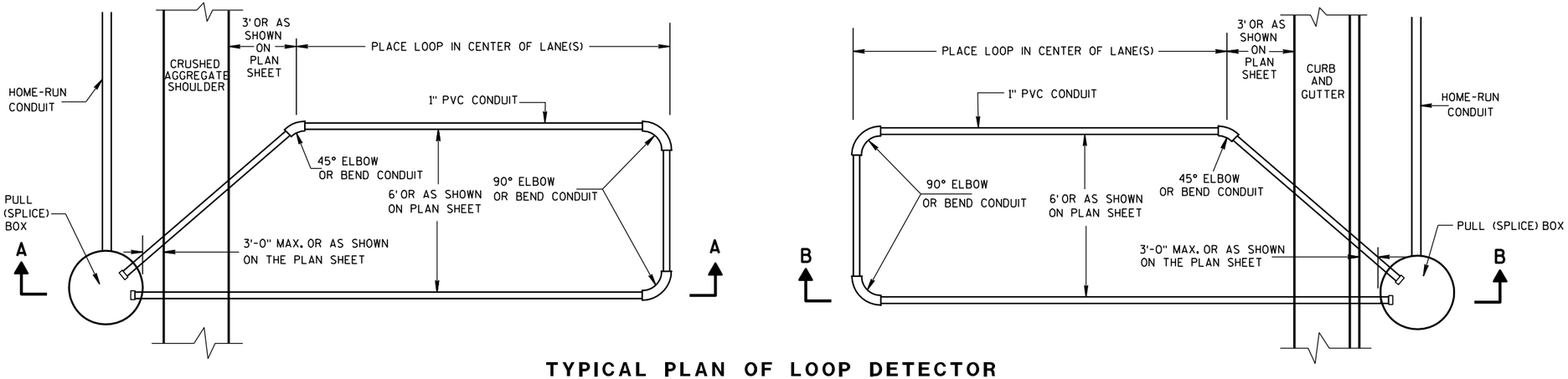
THE #12 AWG. LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

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

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

PROTECTION OF THE CONDUIT IN THE BASE COURSE, SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW PAVEMENT IS INSTALLED.

SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE DONE UNDER THE DIRECTION OF THE PROJECT ENGINEER.



TYPICAL PLAN OF LOOP DETECTOR WITH 18" OR 24" PULL (SPLICE) BOX

LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/7/06 — DATE
/S/ Balu Aganthangarayangan — STATE ELECTRICAL ENGI — HWYS
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S.D.D. 9 F 15-3a

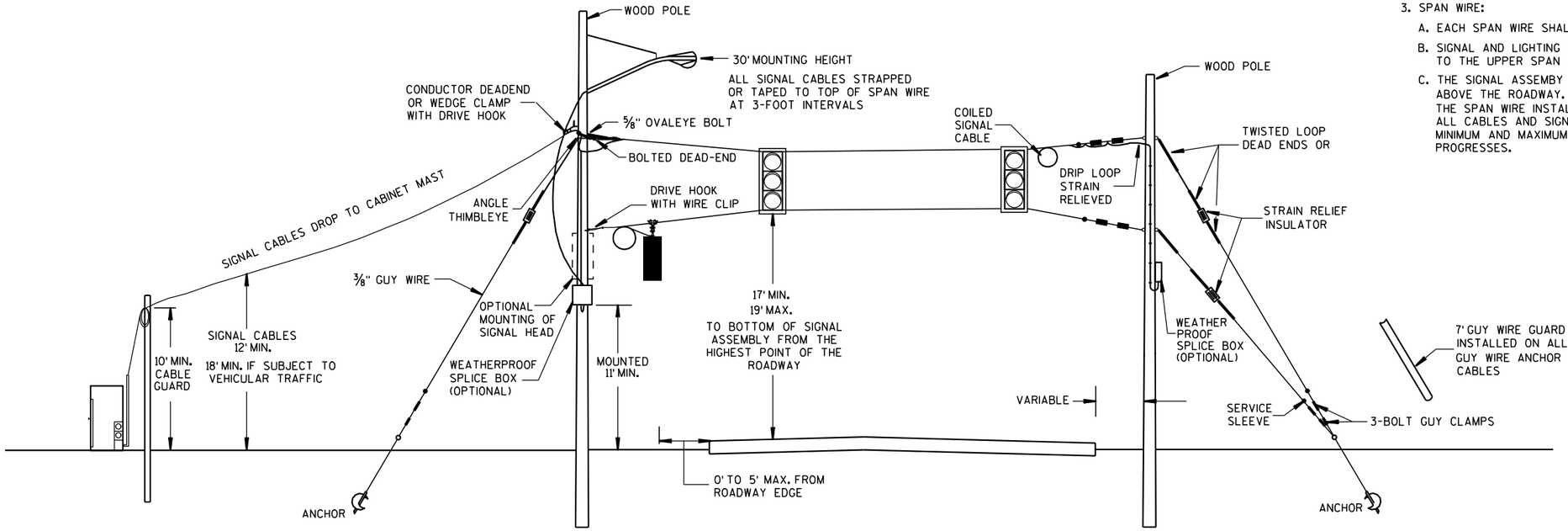
GENERAL NOTES

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 ASSEMBY 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

MINIMUM POLE LENGTHS	POLE BURIEL DEPTHS
25'	5'
30'	6'
35'	7'
40'	8'
45'	9'

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-14-08 DATE

/S/ Balu Ananthar [illegible] n
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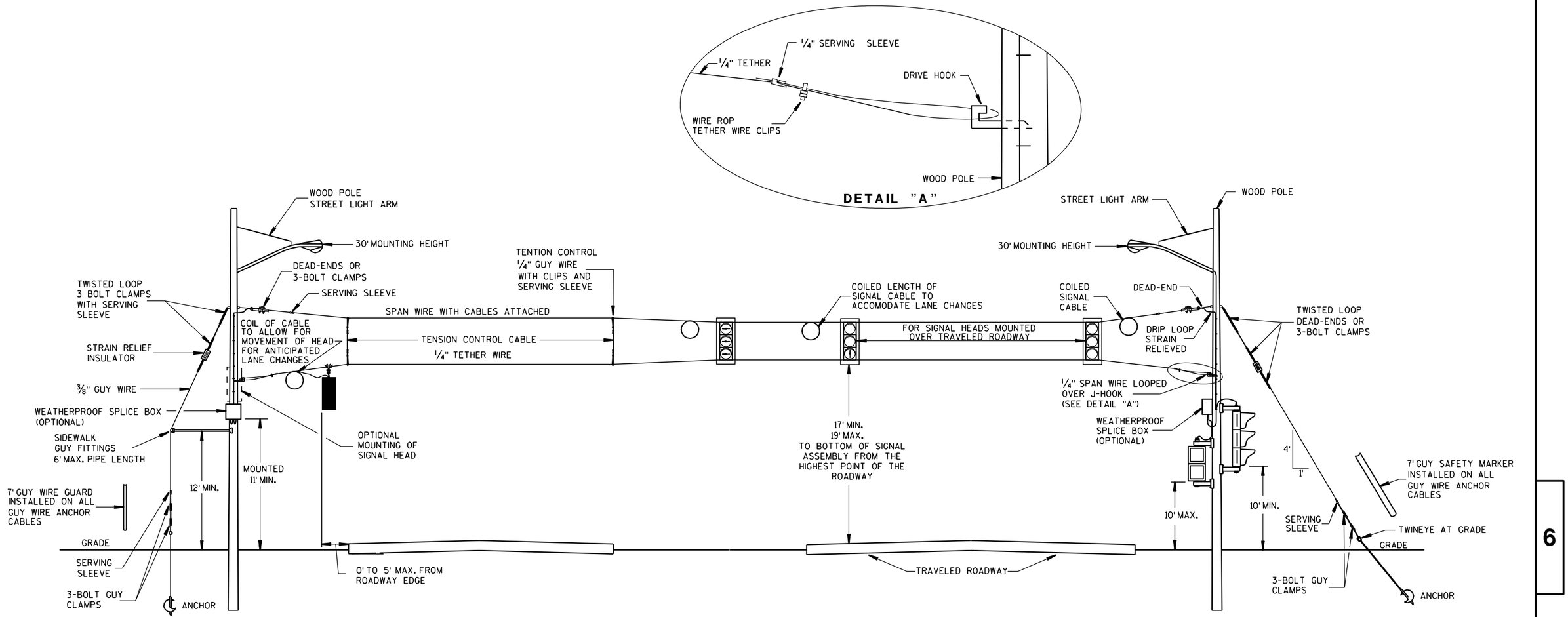

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   E. FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.
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SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

MINIMUM POLE LENGTHS	CLASS	MIN. BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-14-08 DATE — /S/ Balu Ananthanarayanan STATE ELECTRICAL ENGI

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S.D.D. 9 G 1-3b

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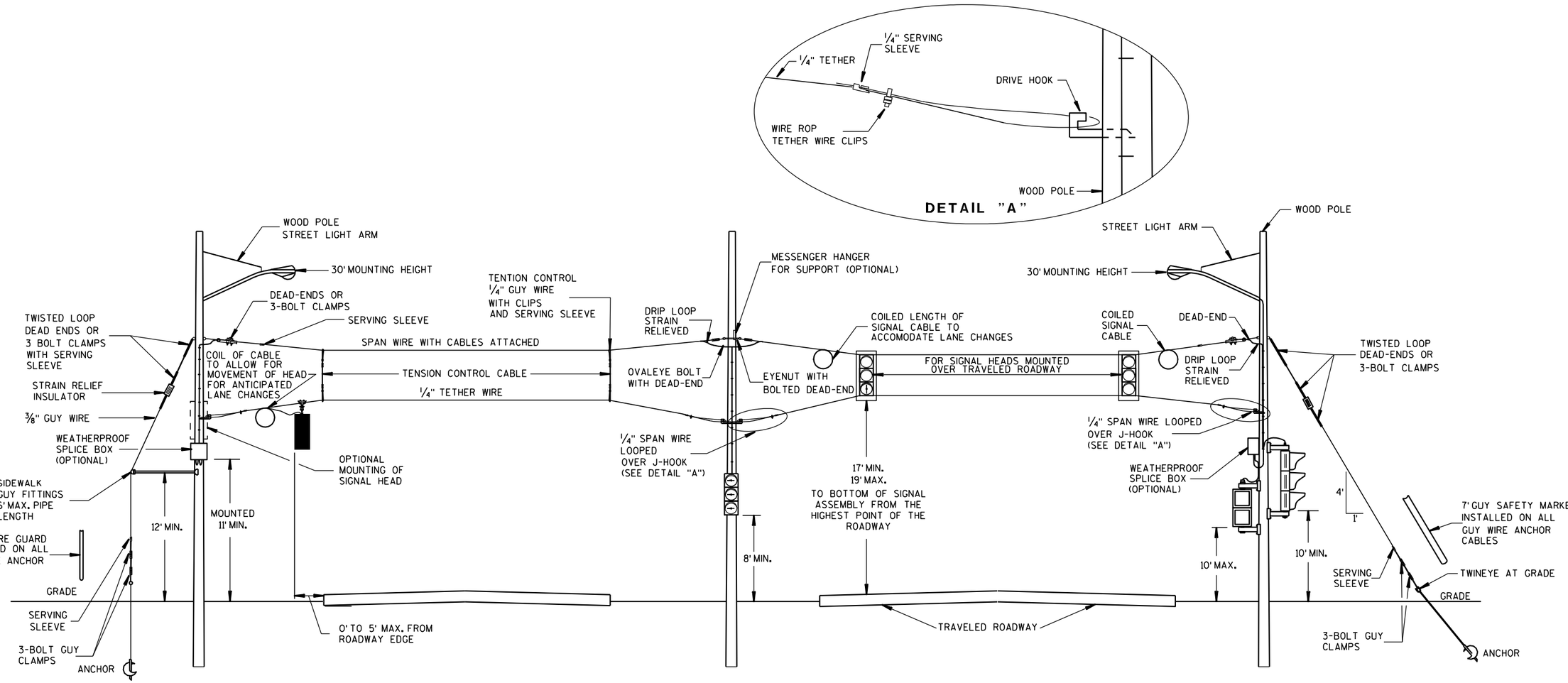
S.D.D. 9 G 1-3b



SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

GENERAL NOTES

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   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 ASSEMBY 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.

MINIMUM POLE LENGTHS	CLASS	MIN. BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-14-08 DATE

/S/ Balu Aganthanarayanan
STATE ELECTRICAL ENGI

94 HWYS

FHWA

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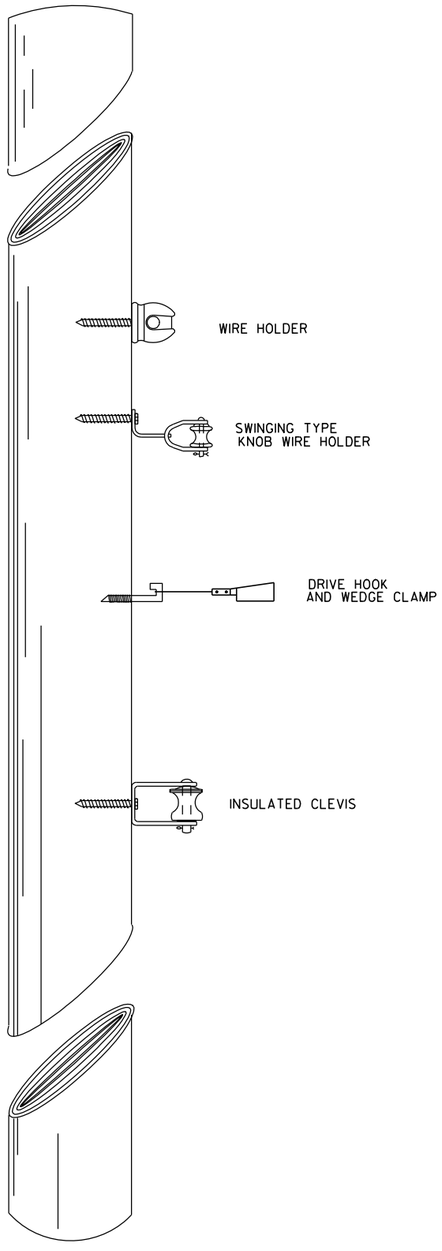
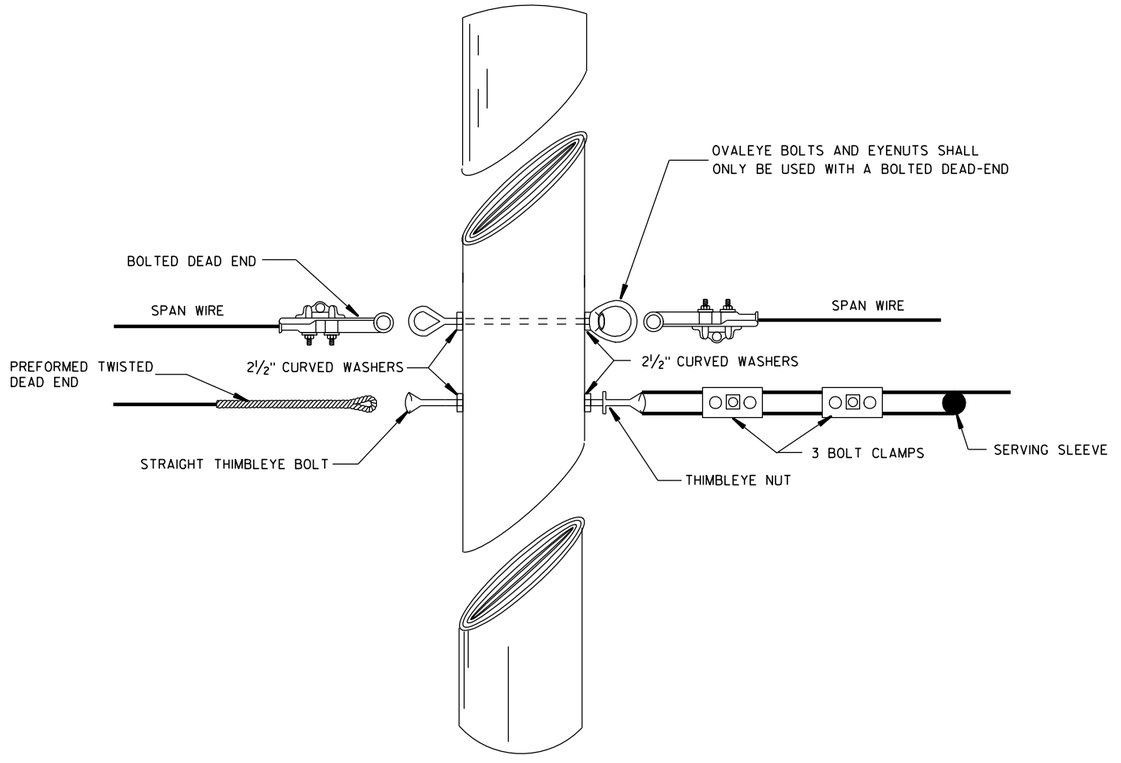
S.D.D. 9 G 1-3c



TYPICAL CABLE HANGERS



TYPICAL DEAD-ENDING

6

6

S.D.D. 9 G 1-3d

S.D.D. 9 G 1-3d

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

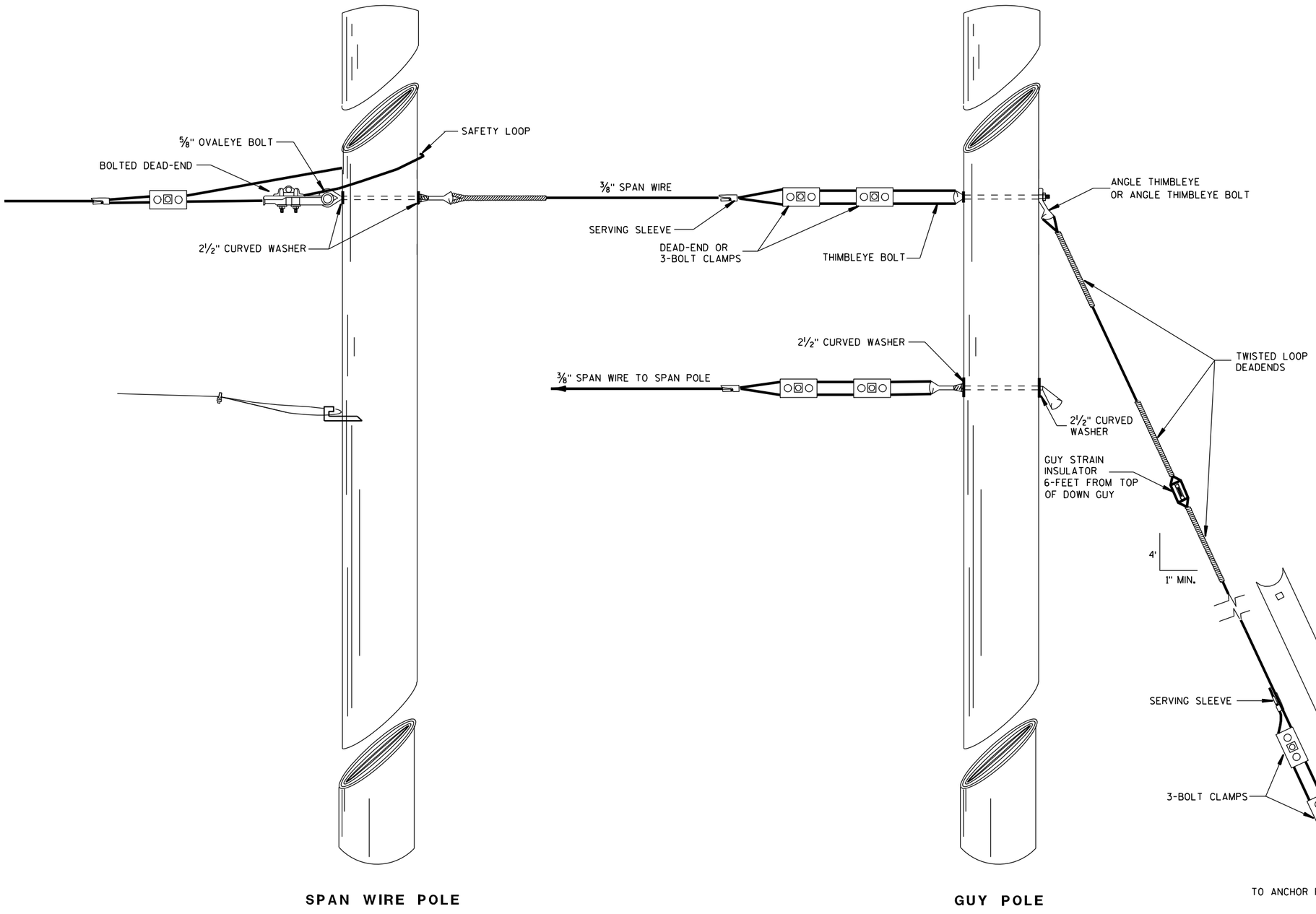
7-14-08
DATE

/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI 95 HWYS

FHWA

GENERAL NOTES

1. USE ¾" DRILL IN WOOD POLE TO PROVIDE HOLE FOR ⅝" BOLTS.
2. SAFTY LOOP REQUIRED ON EACH END OF ALL SPAN WIRES.



SPAN WIRE POLE

GUY POLE

TYPICAL DEAD-ENDINGS OR GUYING

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7-14-08 DATE
/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI HWYS
FHWA

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S.D.D. 9 G 1-3e

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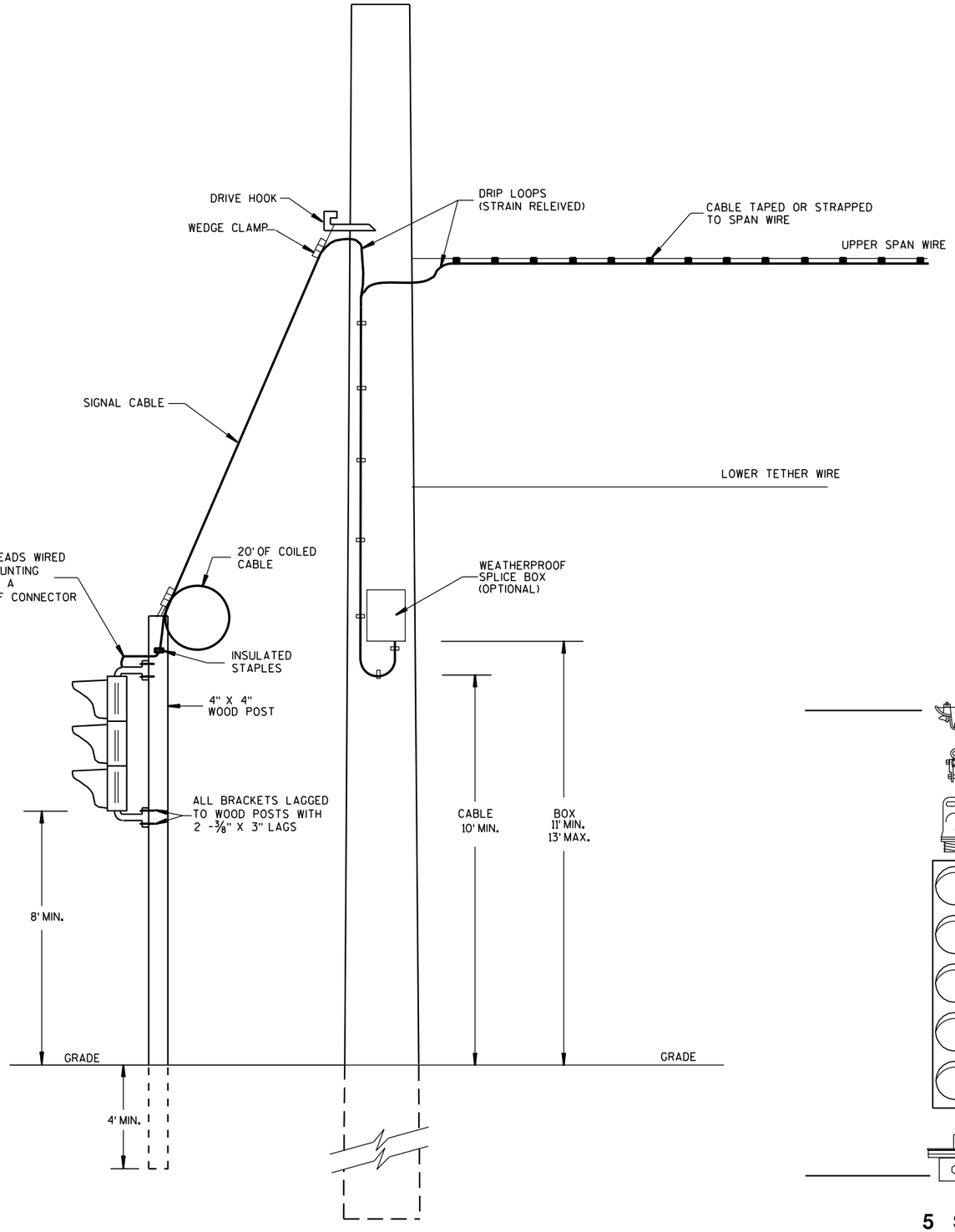
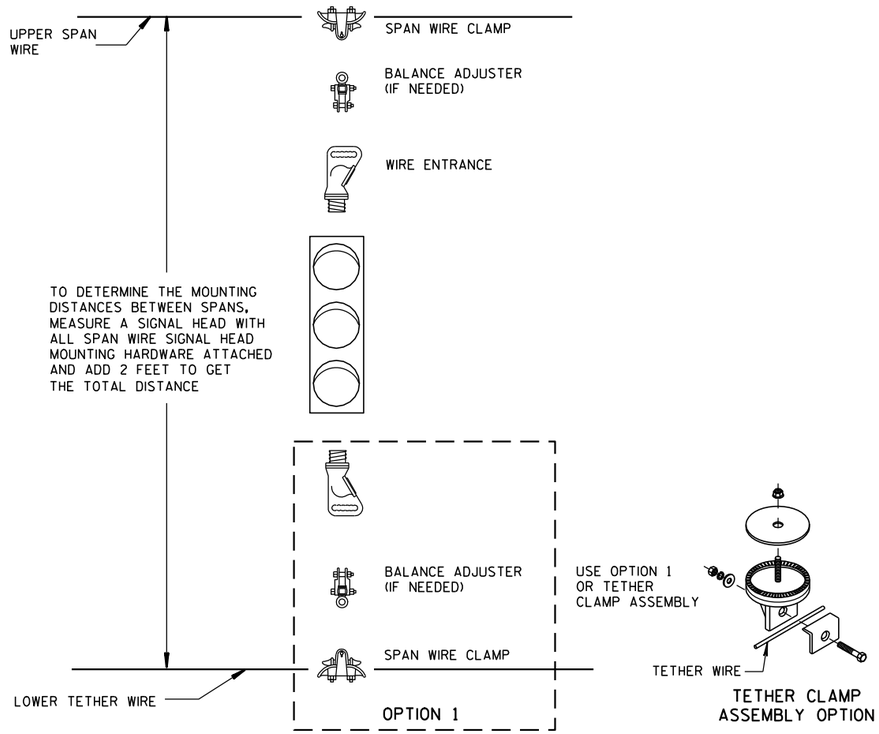
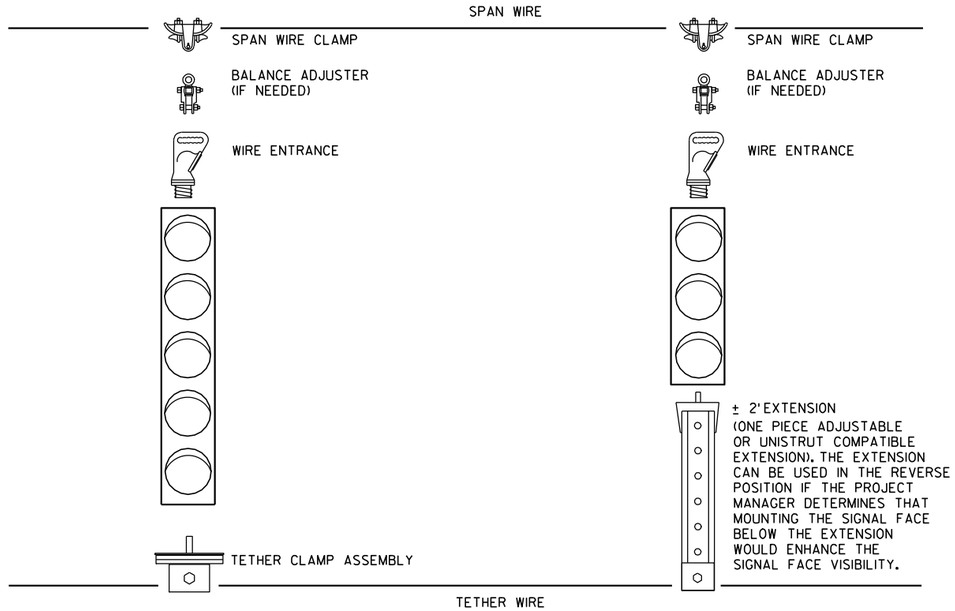
S.D.D. 9 G 1-3e



TYPICAL DROP TO TEMPORARY MOVEABLE SIGNAL



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
7-14-08 DATE
/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI 97 HWYS
FHWA

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S.D.D. 9 G 1-3f

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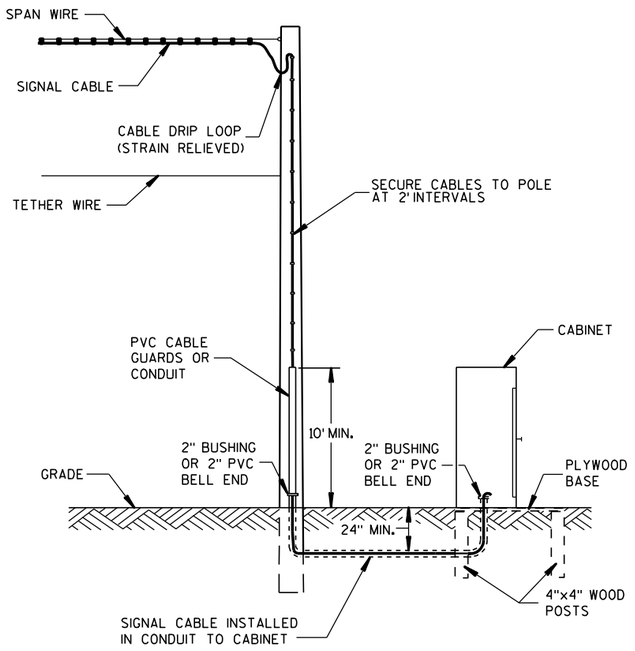
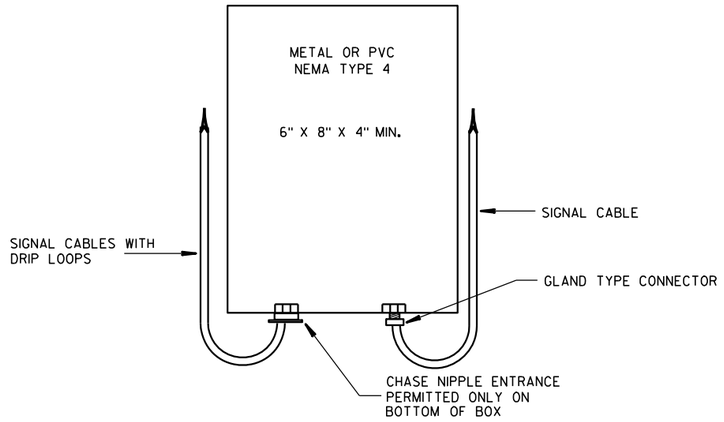
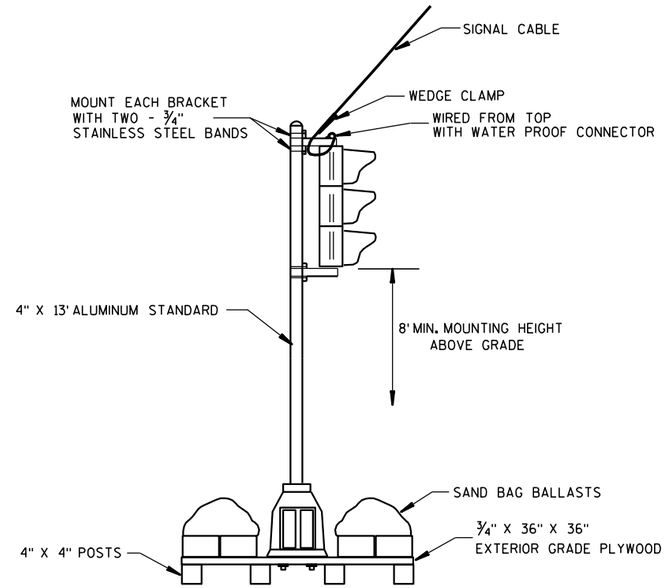
S.D.D. 9 G 1-3f

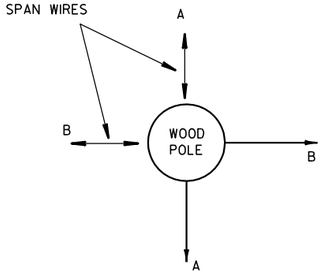




SPLICE BOX

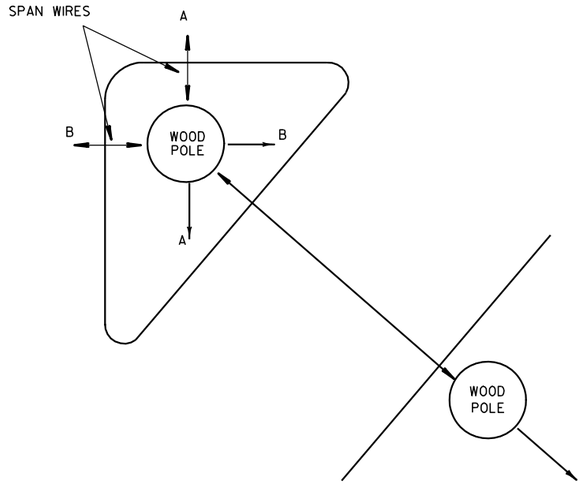


TYPICAL SKID TYPE TEMPORARY

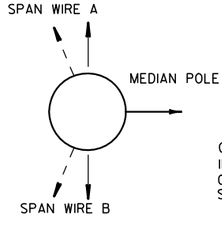


ALL DOWN OR SIDEWALK GUYS SHALL BE INSTALLED IN THE OPPOSITE DIRECTION OF THE STRAIN OF THE SPAN WIRE

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

7-14-08 DATE

/S/ Balu Aganthangayanan
STATE ELECTRICAL ENGI

98

HWYS

FHWA

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S.D.D. 9 G 1-3g

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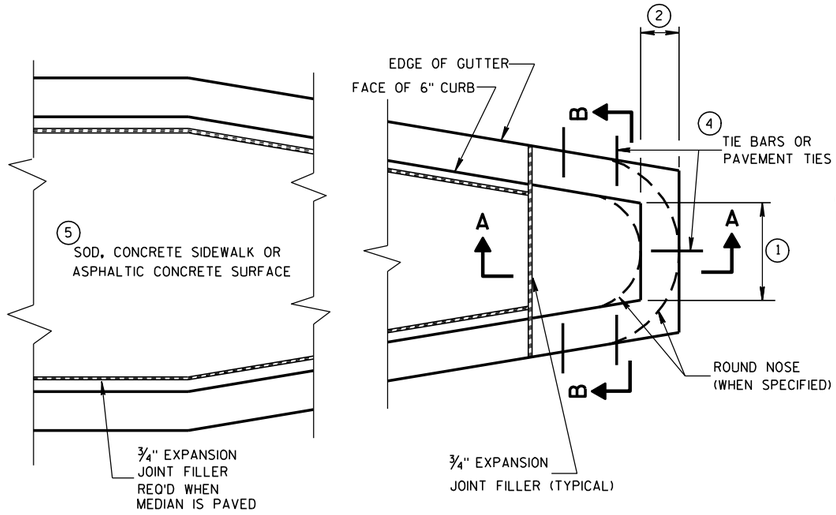
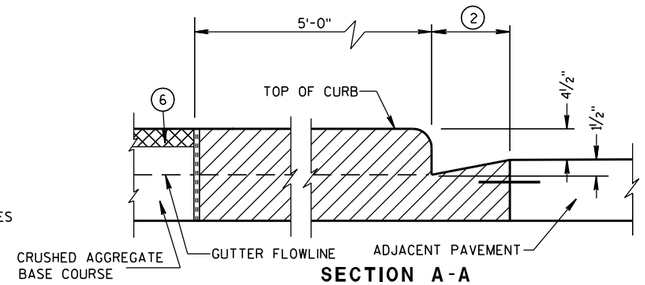
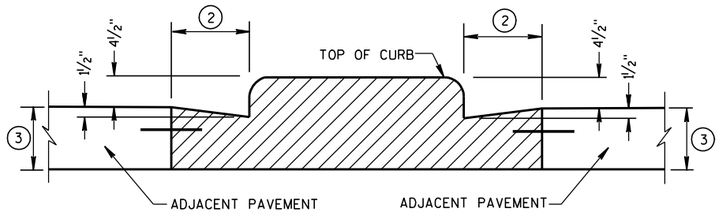
S.D.D. 9 G 1-3g





SECTION A-A



SECTION B-B

CONCRETE MEDIAN BLUNT NOSE DETAIL

GENERAL NOTES

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

(1) SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).

(2) WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.

(3) DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:

(1) NEW OR EXISTING CONCRETE PAVEMENT.

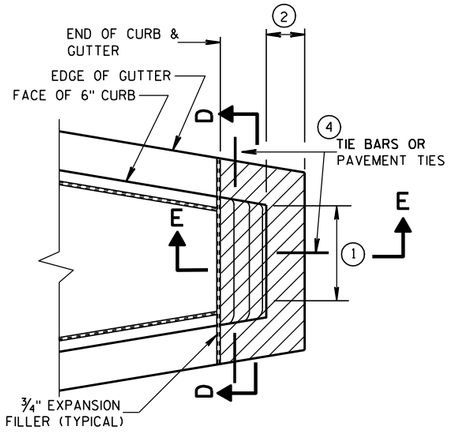
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

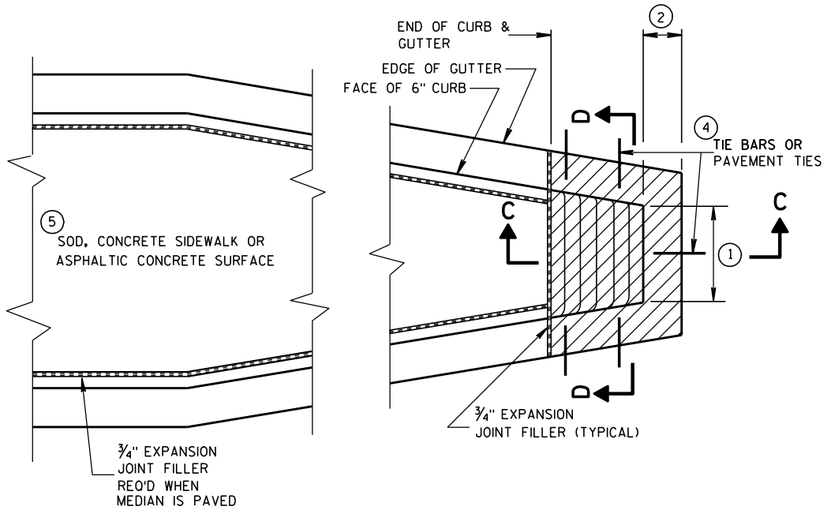
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

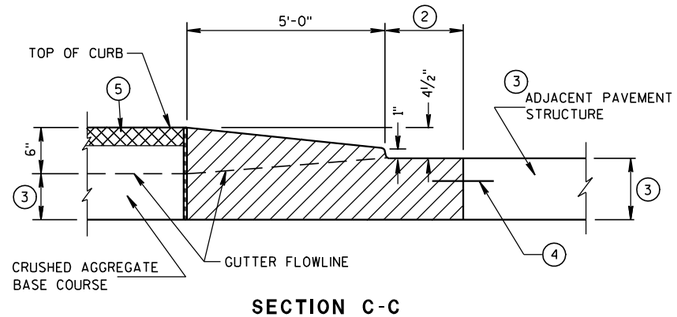
(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

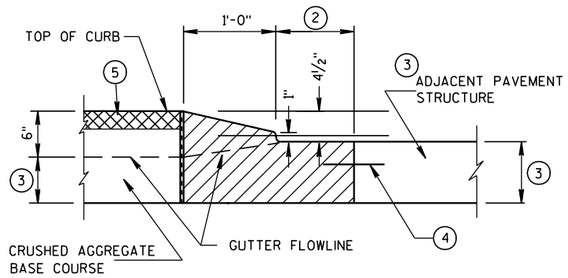
(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.







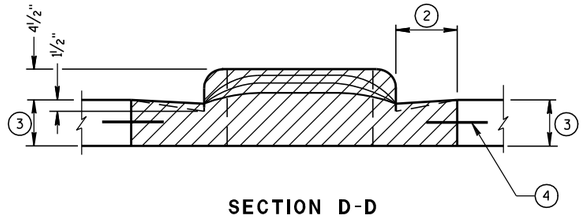
SECTION C-C



SECTION E-E

CONCRETE MEDIAN SLOPED NOSE TYPE 1

CONCRETE MEDIAN SLOPED NOSE TYPE 2



SECTION D-D

CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/8/2006
DATE

/S/ Jerry H. [illegible]
ROADWAY STANDARDS | 99
ENGINEER

NT

FHWA

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S.D.D. 11 B 2-2

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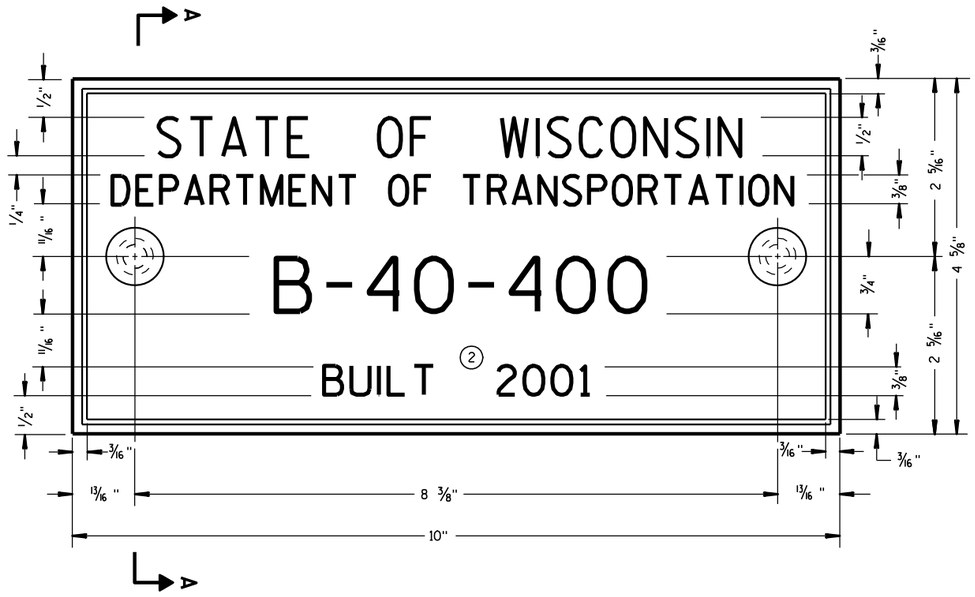
S.D.D. 11 B 2-2



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)

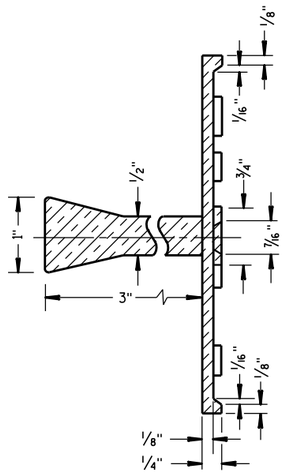
GENERAL NOTES

NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

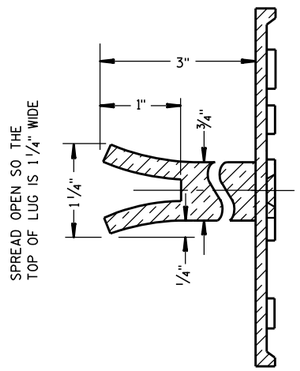
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(1) EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG

FOR MULTI-UNIT STRUCTURES LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

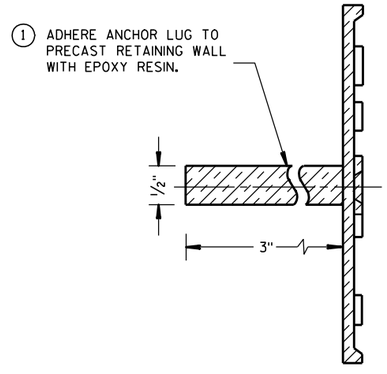
COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION MULTI-UNIT STRUCTURES



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOPMENT ENGINEER

FHWA

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S.D.D. 12 A 3-10

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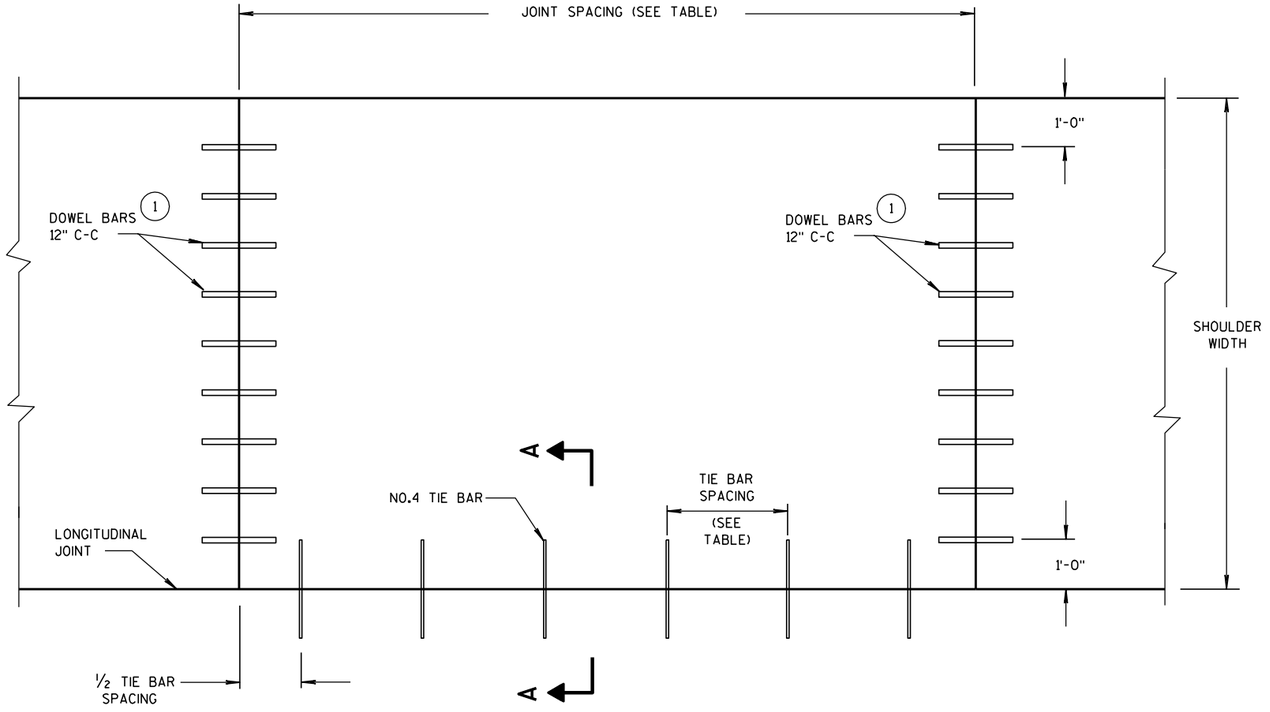
S.D.D. 12 A 3-10



PLAN VIEW

CONCRETE PAVEMENT SHOULDER

PAVEMENT TYPE OF TRAFFIC LANES	TIE BAR SPACING	SHOULDER JOINT SPACING
NON-REINFORCED	30"	MATCH JOINT SPACING OF ADJACENT TRAFFIC LANE
CONTINUOUSLY REINFORCED	30"	15' FOR 6' TO 10' WIDE SHOULDERS
CONTINUOUSLY REINFORCED	36"	12' FOR 3' WIDE SHOULDERS

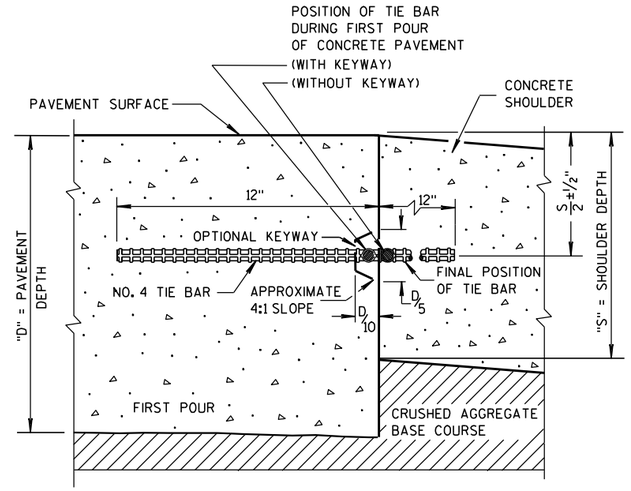
GENERAL NOTES

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

TRANSVERSE JOINT DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

FINISH THE SHOULDER PAVEMENT CONFORMING TO SUBSECTION 415.3.8 OF THE STANDARD SPECIFICATIONS.

TIE BARS SHALL CONFORM TO SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.



SECTION A-A

LONGITUDINAL CONSTRUCTION JOINT

(1)

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'

FOR DOWELED CONCRETE SHOULDERS WITH TRAPEZOIDAL CROSS SECTIONS, CHOSE THE APPROPRIATE DOWEL BAR DIAMETER BASED ON THE SMALLER PAVEMENT DEPTH (LIKELY THE OUTSIDE EDGE OF THE SHOULDER). IF USING BASKETS, USE BASKETS FOR THE AVERAGE THICKNESS OF THE CROSS SECTION.

CONCRETE PAVEMENT SHOULDERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/15/2011 — DATE
/S/ Deb Bischoff — PAVEMENT POLICY & D — ENGINEER
FHWA

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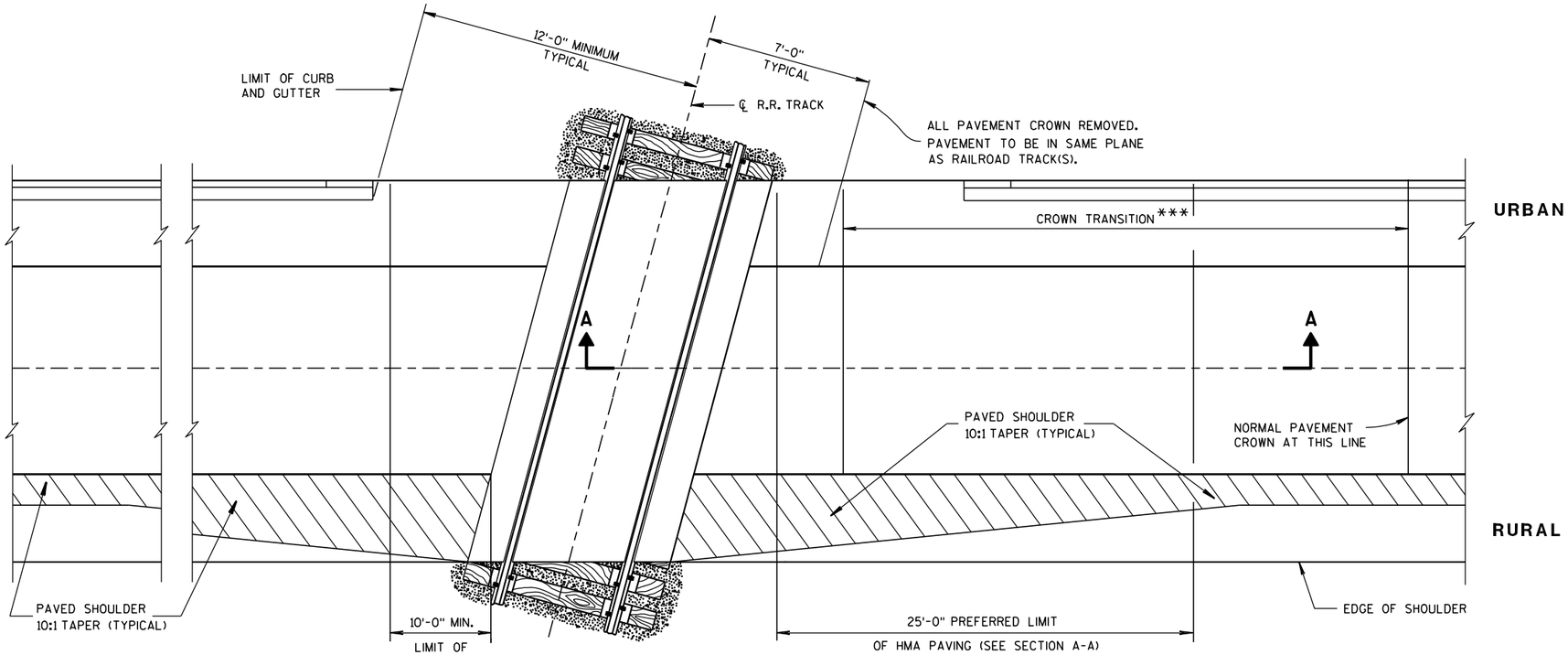
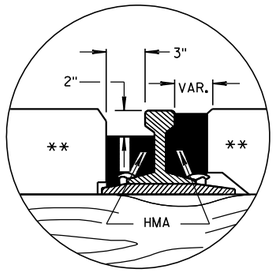
S.D.D. 13 A 3-5





DETAIL B

HMA FLANGEWAY AND FIELD FILLERS

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.

TIMBER, CONCRETE OR RUBBER CROSSING SURFACE MATERIAL, RAILS, TIES, BALLAST, GEOTEXTILE FABRIC AND CROSSING DRAINAGE SYSTEM BY OTHERS UNLESS OTHERWISE PROVIDED.

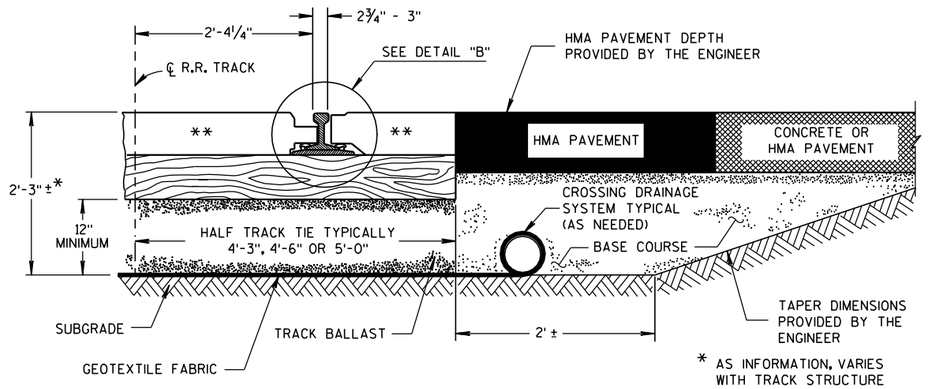
HMA PAVEMENT APPROACHES AND HMA PAVEMET CROSSING SURFACES TO BE PLACED BY CONTRACTOR UNLESS OTHERWISE PROVIDED.

HMA FLANGEWAY AND FIELD FILLERS TO BE PLACED AND THOROUGHLY HAND COMPACTED BY THE CONTRACTOR WHEN NOT PROVIDED BY OTHERS. SEE DETAIL B. HMA FILLERS NOT REQUIRED WHEN RUBBER FILLERS ARE PROVIDED.

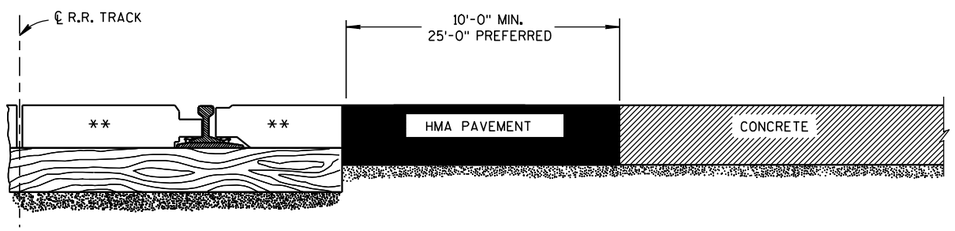
HMA PAVEMENT SHALL BE ROLLED PARALLEL TO THE TRACK.

** CROSSING SURFACE MAY BE TIMBER, RUBBER, CONCRETE, HMA PAVEMENT OR A COMBINATION OF SUCH MATERIALS.

*** CROWN TRANSITION LENGTH SHOWN ELSEWHERE IN THE PLAN.

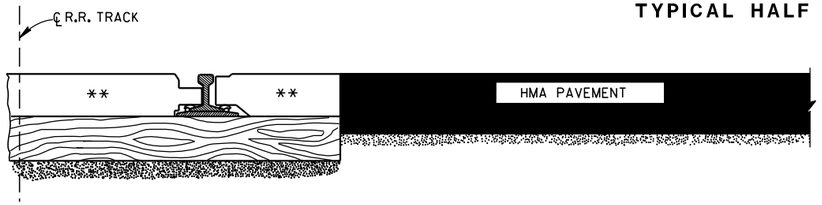


TYPICAL HALF SECTION



SECTION A-A

CONCRETE PAVEMENT APPROACH



SECTION A-A

HMA PAVEMENT APPROACH

EXAMPLES OF PAVEMENT APPROACHES

PAVEMENT DETAILS FOR RAILROAD APPROACH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8-28-09 DATE
/S/ Ronald E. Adams
CHIEF, RAILROADS & HAI[illegible] 102 CTION
FHWA

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S.D.D. 13 B 1-10

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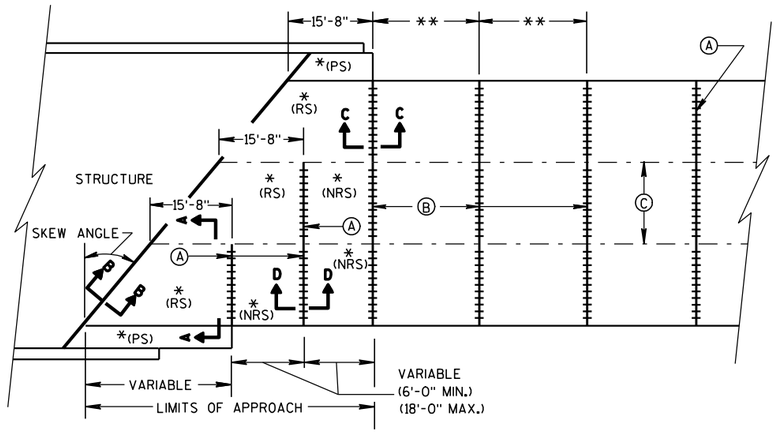
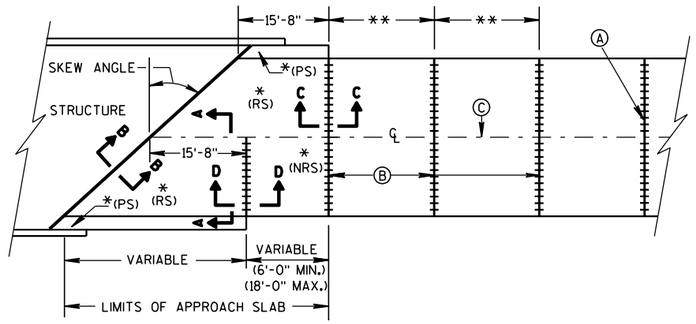
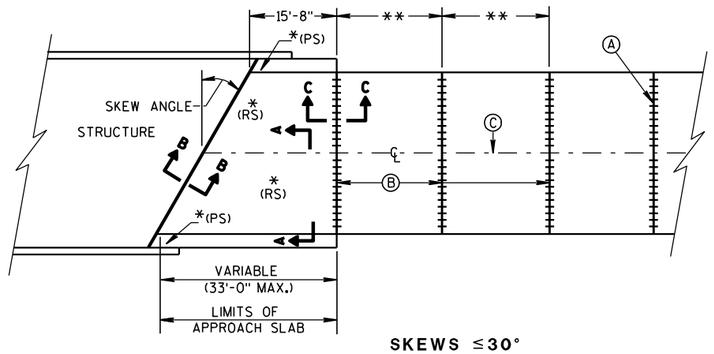
S.D.D. 13 B 1-10



SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >30°
(PAVEMENT WIDTH ≤30')



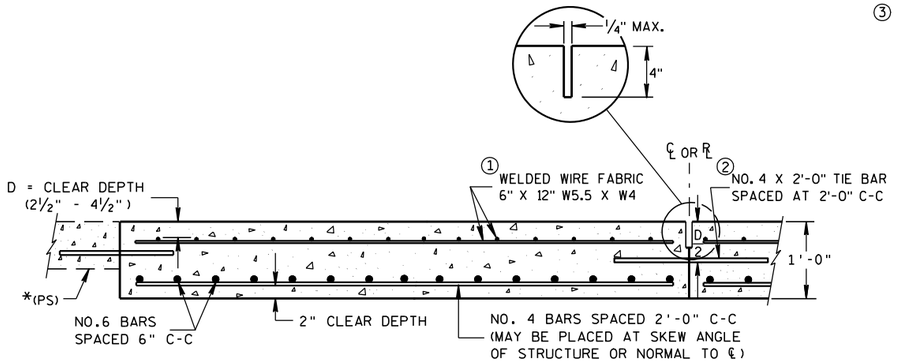
SKEWS ≤30°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

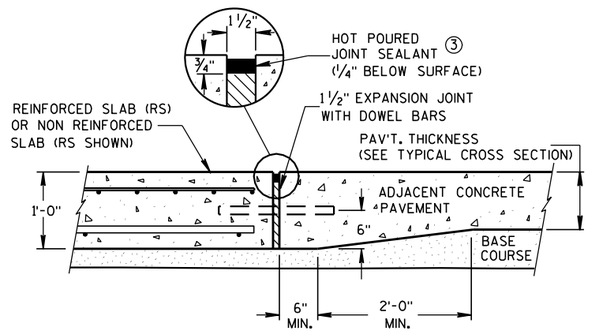
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER: CONCRETE PAVEMENT, OR CONCRETE SURFACE DRAIN
(SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

**STANDARD TRANSVERSE JOINT SPACING
(SEE SDD 13C4, SDD 13C11, & SDD 13C13)

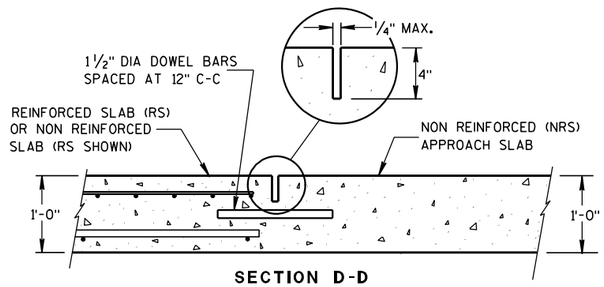
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄
(B) 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄
(C) STANDARD LONGITUDINAL JOINT AND TIE BARS.



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



SECTION D-D
CONTRACTION JOINT

GENERAL NOTES

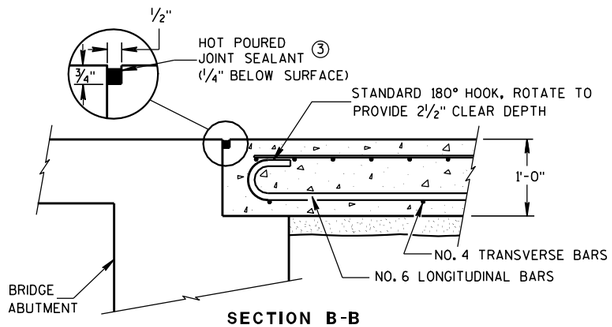
APPROACH SLABS ABUTTING AN HMA PAVEMENT OVER BASE COURSE DO NOT NEED TO BE DOWELED.

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

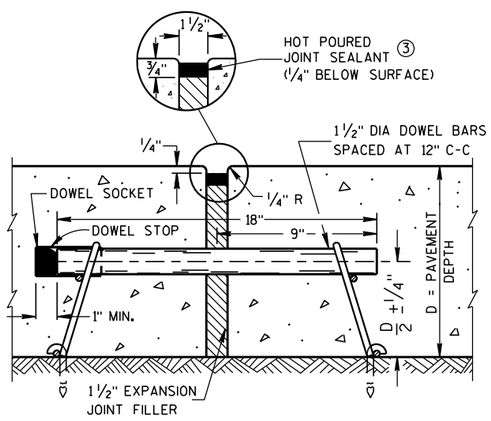
① THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

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

③ USE A JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM D6690.



SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT



EXPANSION JOINT

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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12/11/2009 — DATE
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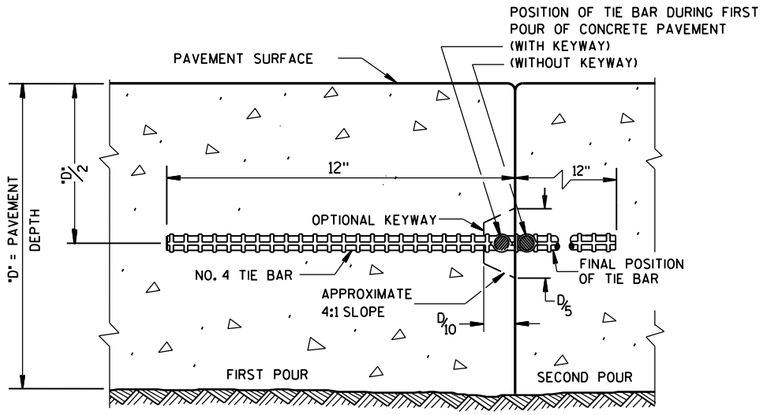
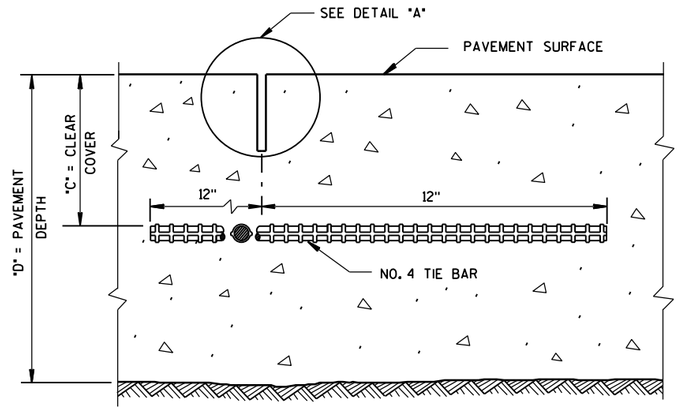


CONSTRUCTION JOINT



SAWED JOINT

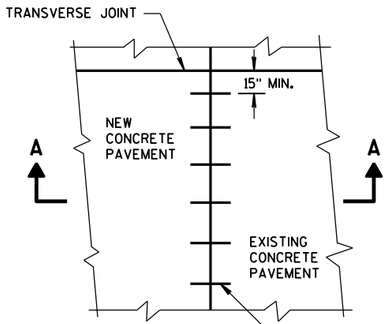
GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

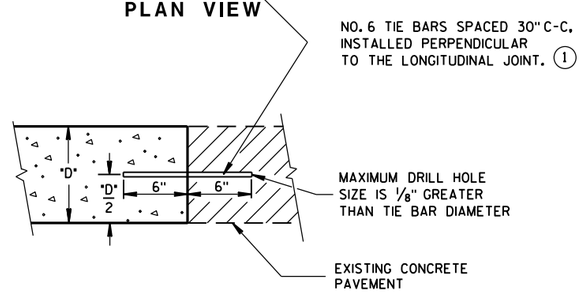
CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

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

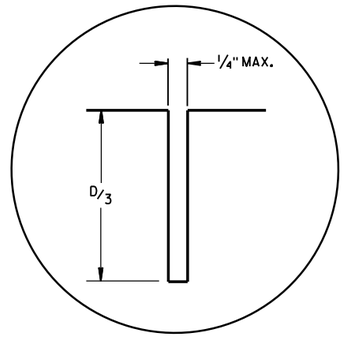


PLAN VIEW



SECTION A-A

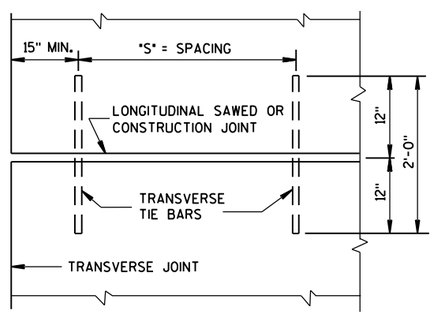
LONGITUDINAL CONSTRUCTION JOINT
TIE BARS ANCHORED
INTO EXISTING PAVEMENT



DETAIL "A"

TIE BAR TABLE

PAVEMENT DEPTH "D"	CLEAR COVER "C"	MAXIMUM TIE BAR SPACING "S"	
		PAVEMENT WIDTH	
		24' OR 26'	≥ 30'
6, 6 1/2"	3"±1/2"	48"	42"
7, 7 1/2"	3 1/4"±1"	45"	36"
8, 8 1/2"	3 3/4"±1"	39"	30"
9, 9 1/2"	4 1/4"±1"	33"	27"
10, 10 1/2"	4 3/4"±1"	30"	24"
11, 11 1/2"	5 1/4"±1"	27"	21"
12"	5 3/4"±1"	24"	21"



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT
LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5-3-2013 DATE
/S/ Deb Bischoff PAVEMENT POLICY & DE ...NEER
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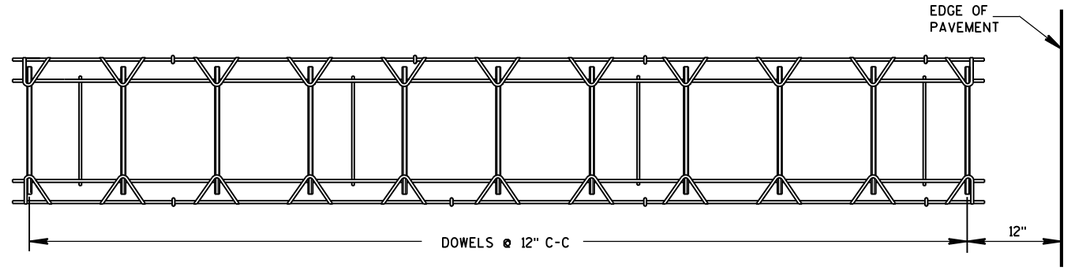
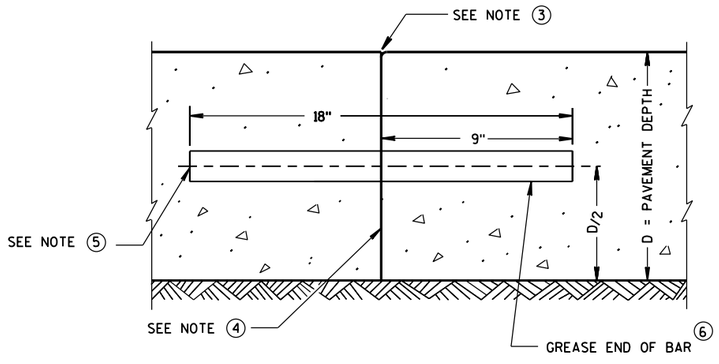


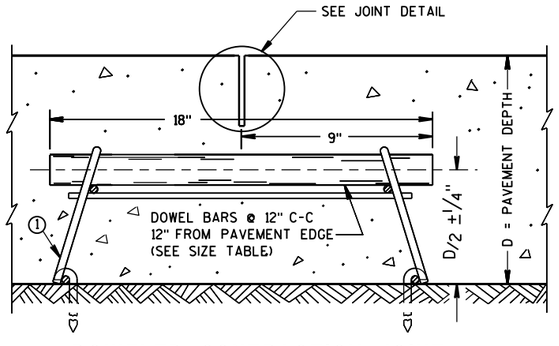
PLAN VIEW

SIDE VIEW

CONTRACTION JOINT DOWEL ASSEMBLY ①



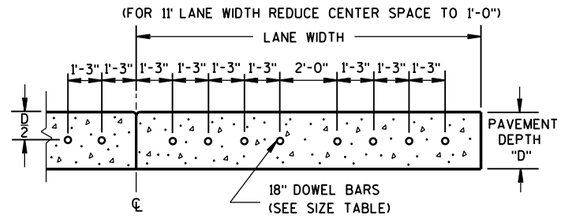
TRANSVERSE CONSTRUCTION JOINT



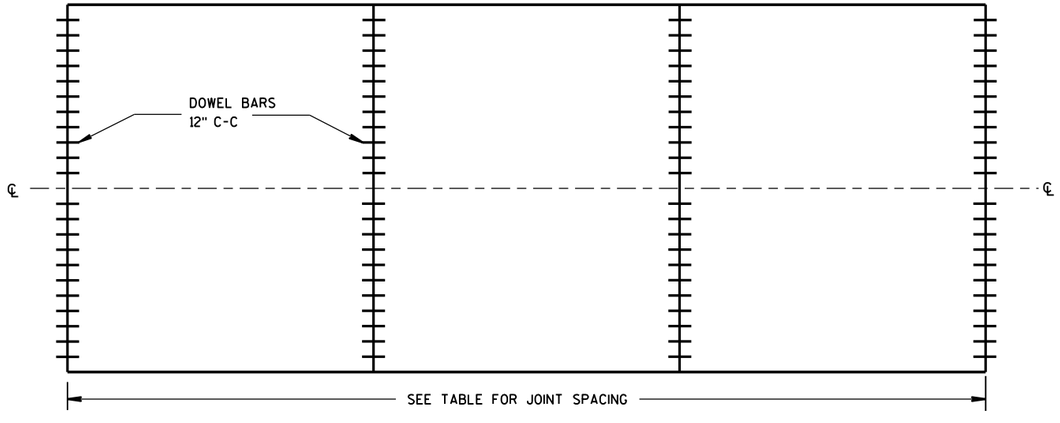
DOWELED CONTRACTION JOINT

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'



DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦



CONTRACTION JOINT LOCATIONS

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT SEAL OR FILL CONTRACTION JOINTS.

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

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES AND A MAXIMUM OF 18 INCHES FROM THE LONGITUDINAL JOINT AND THE FREE EDGE OF PAVEMENT.

CONSTRUCTION JOINTS

LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

① **OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.**

② SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.

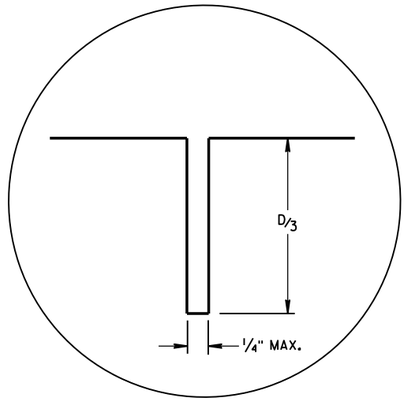
③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A ¼-INCH RADIUS AT FORMED JOINTS.

④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.

⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL BAR CONSTRUCTION JOINT* DETAIL.

⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

⑦ ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS ⅛-INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



JOINT DETAIL

URBAN DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/3/2013 DATE
/S/ Deb Bischoff
PAVEMENT POLICY & DE ENGINEER
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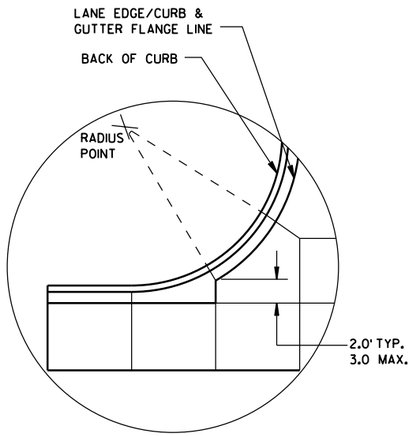
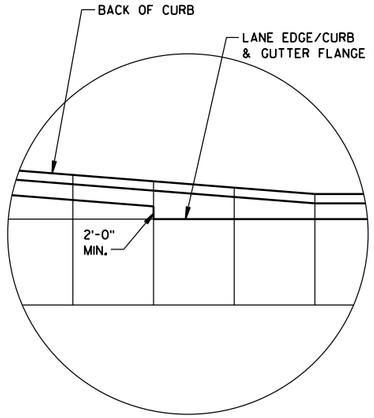
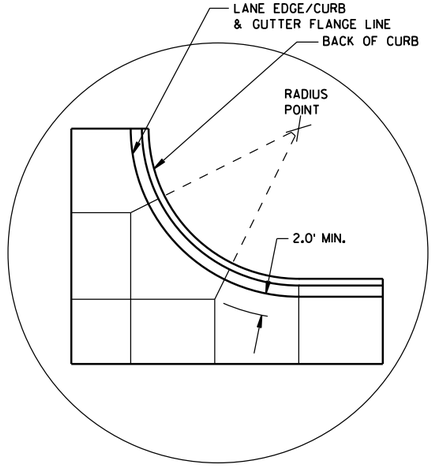


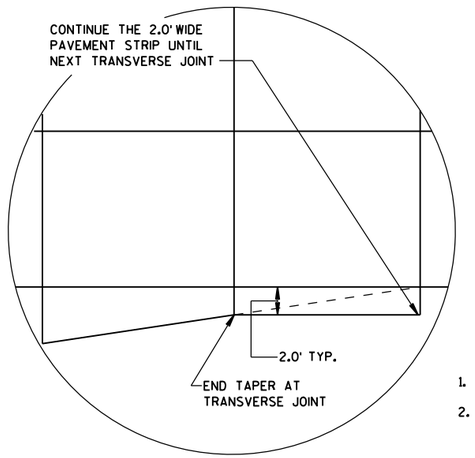
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G. MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.

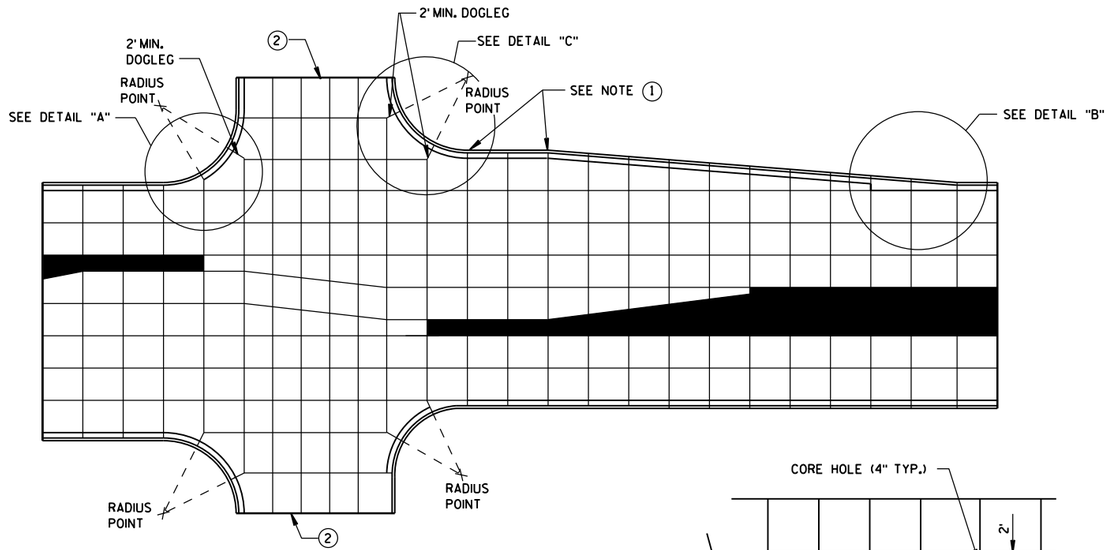
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.

AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

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

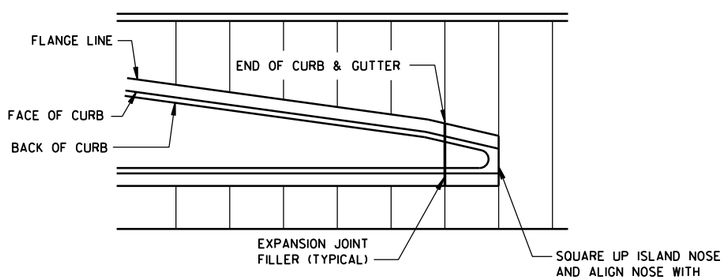


STANDARD INTERSECTION

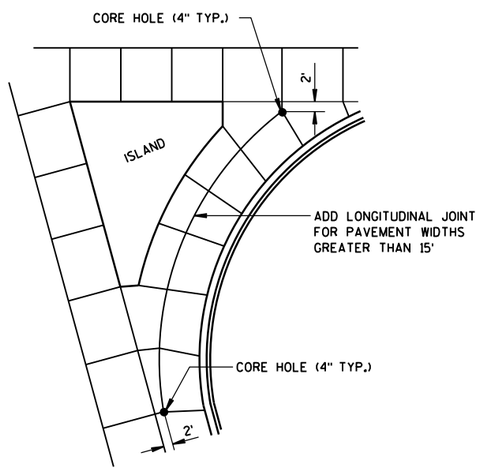
PAVEMENT DEPTH AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6½"	12'
7", 7½"	14'
8" & ABOVE	15'

SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

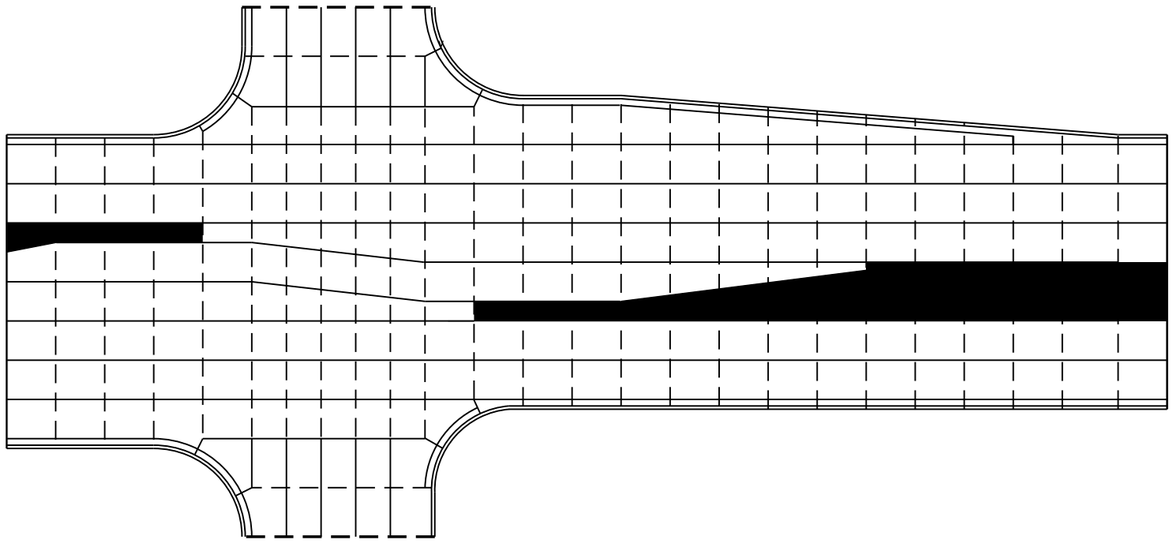
6
S.D.D. 13 C 18-2a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

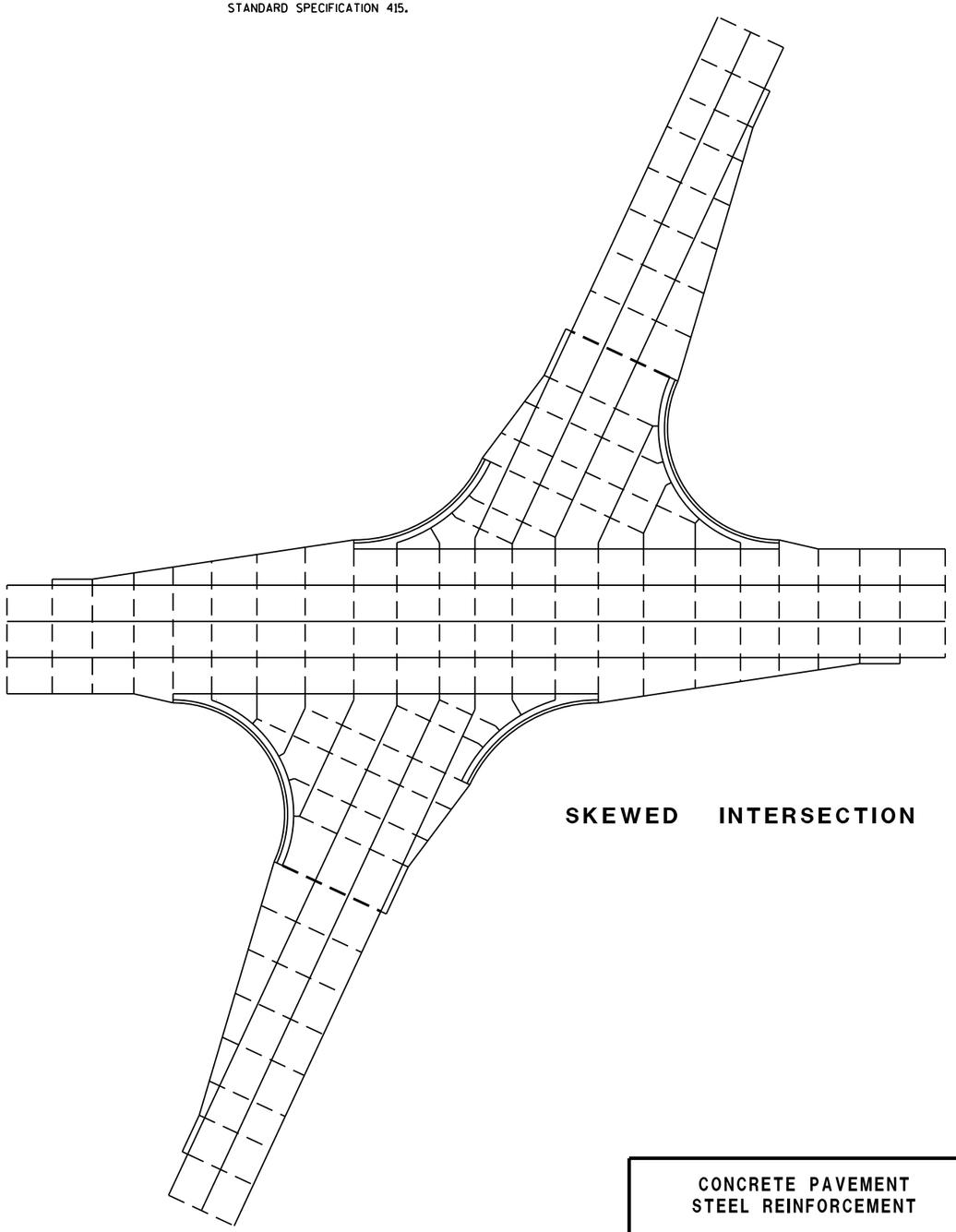
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

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



SKEWED INTERSECTION

CONCRETE PAVEMENT
STEEL REINFORCEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 13 C 18-2b

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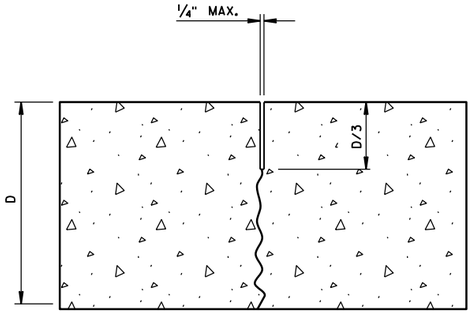
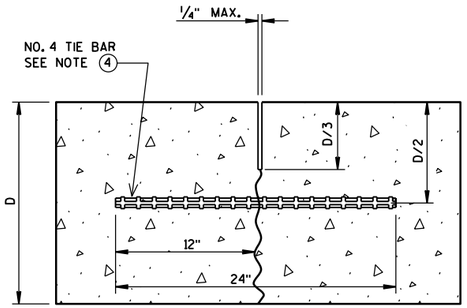
S.D.D. 13 C 18-2b



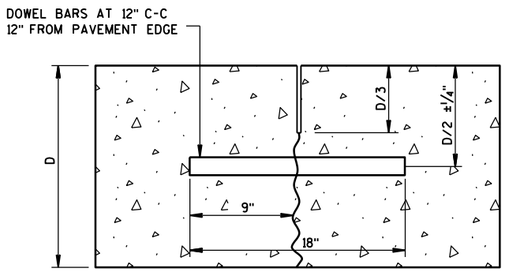
UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

GENERAL NOTES

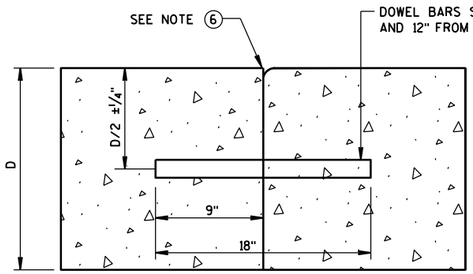
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
4. SPACE TIE BARS AT LONGITUDINAL CONSTRUCTION OR CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C1.
5. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
6. IF JOINT IS FORMED, PROVIDE A 1/4-INCH RADIUS.



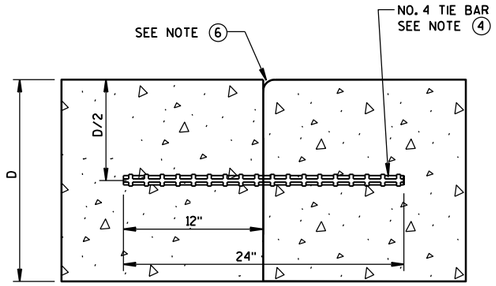
DOWELED-TRANSVERSE

CONTRACTION JOINTS

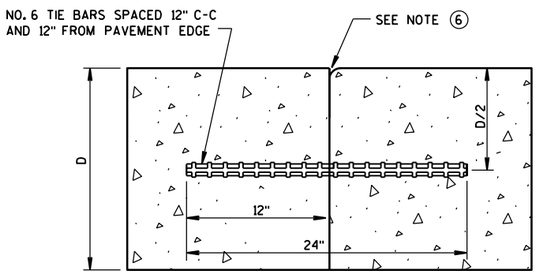
SEE NOTE (2)



DOWELED TRANSVERSE

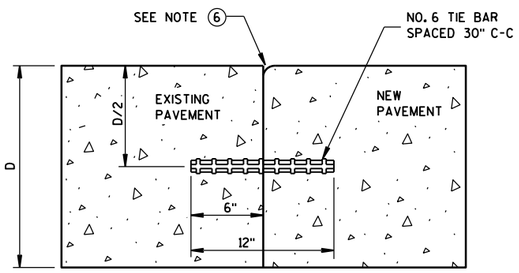


TIED LONGITUDINAL



TIED TRANSVERSE

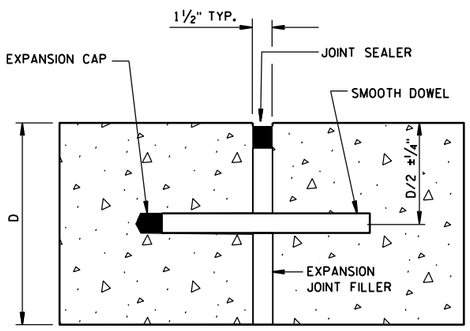
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



TIED LONGITUDINAL TO EXISTING

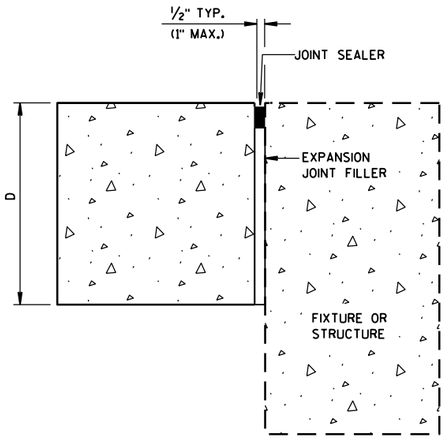
CONSTRUCTION JOINTS

SEE NOTE (5)



DOWELED-TRANSVERSE

SEE NOTE (1)



UNTIED-LONGITUDINAL

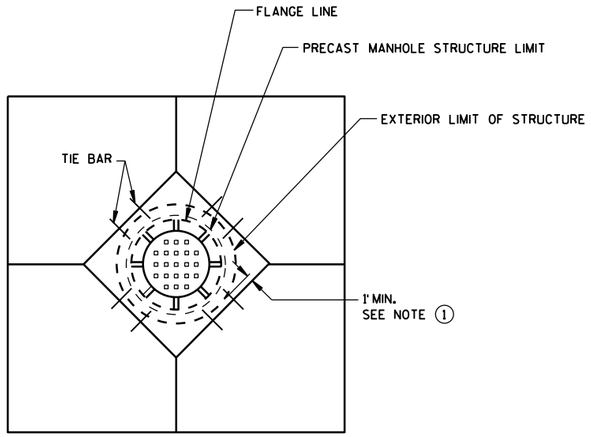
EXPANSION JOINTS

CONCRETE PAVEMENT
JOINT TYPES

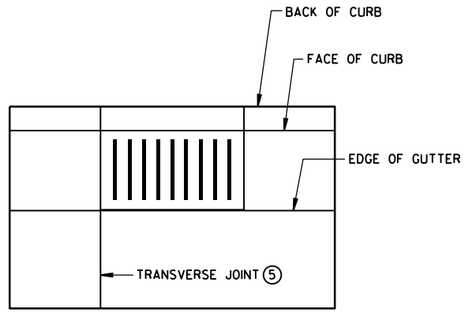
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

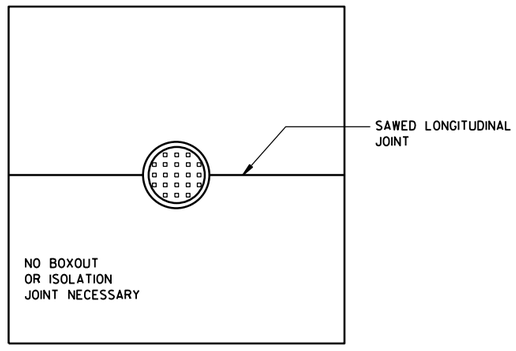
S.D.D. 13 C 18-2c



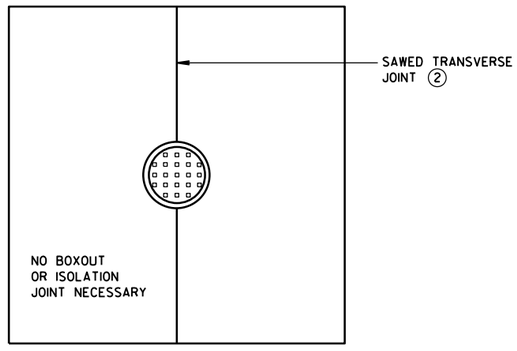
DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS



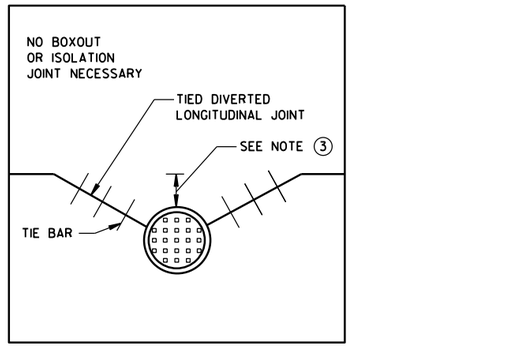
INLET WITH TRANSVERSE JOINT



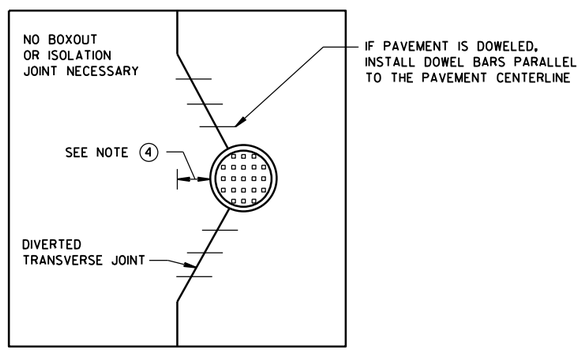
MANHOLE WITH LONGITUDINAL JOINT



MANHOLE WITH TRANSVERSE JOINT



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT

GENERAL NOTES

(1) USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1-FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.

(2) ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.

(3) IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS, DIVERT THE LONGITUDIAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.

(4) IF DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.

(5) ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.

CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-3-2013
DATE

/S/ Deb Bischoff
PAVEMENT POLICY & DE

NEER

FHWA

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S.D.D. 13 C 18-2d

GENERAL NOTES

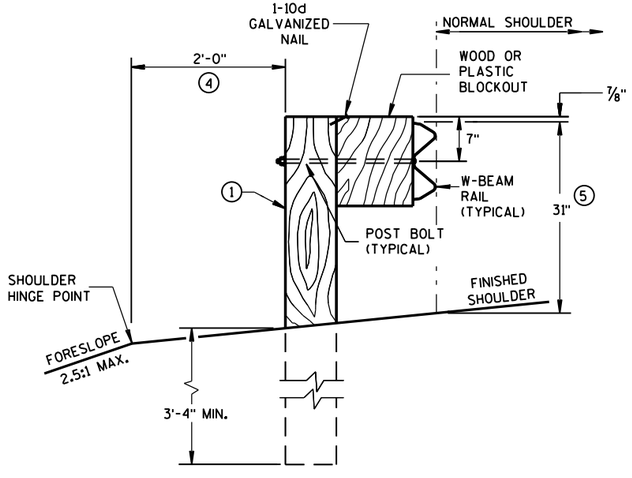
1. WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

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

3. IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

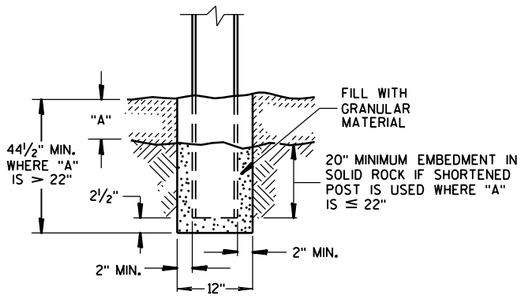
4. WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

5. FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".



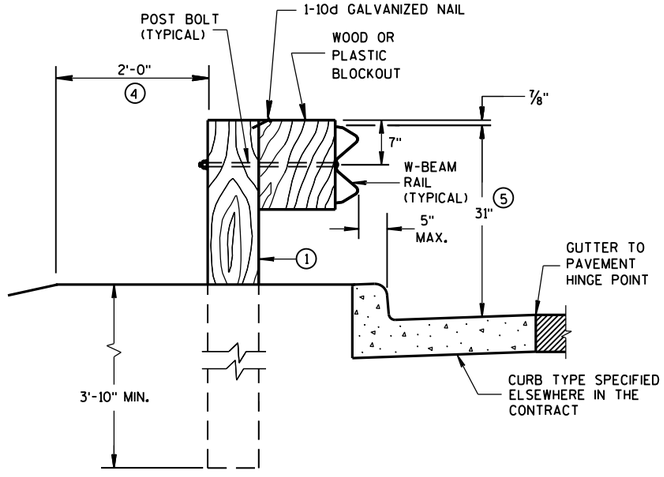
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



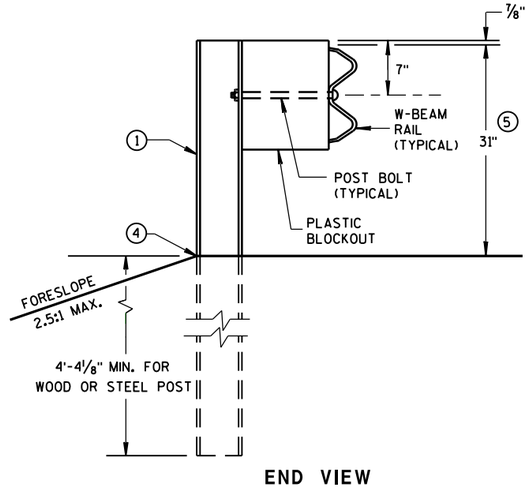
END VIEW

SETTING STEEL OR WOOD POST IN ROCK ③



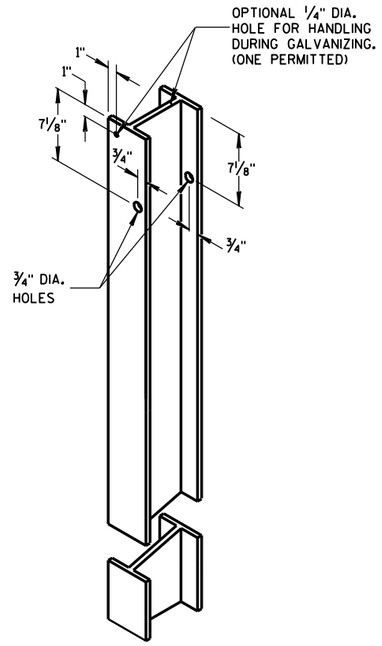
END VIEW

LOCATED ALONG A CURBED ROADWAY

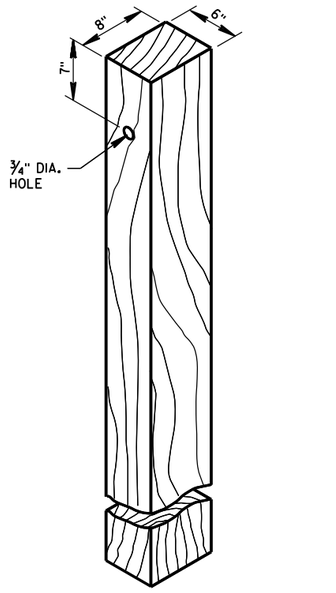


END VIEW

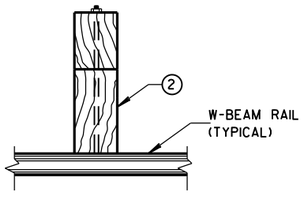
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



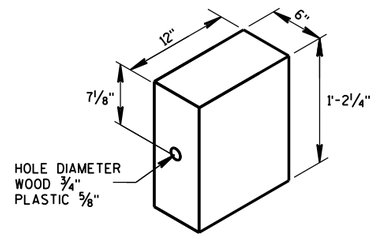
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



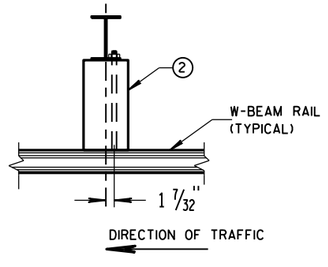
WOOD POST
(6" X 8") NOMINAL ①



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT ②



PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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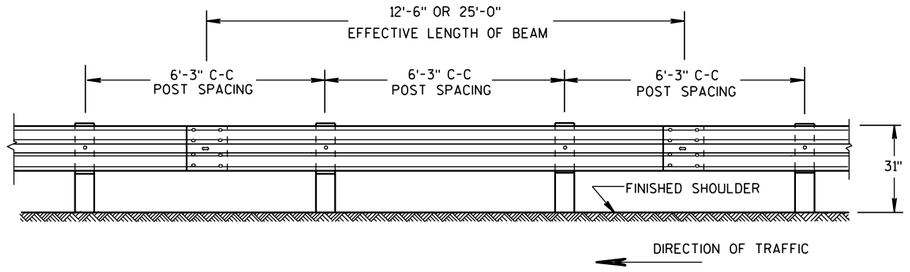
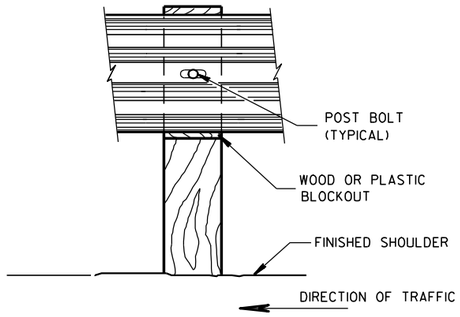
S.D.D. 14 B 42-2a



FRONT VIEW

POST SPACING STANDARD INSTALLATION



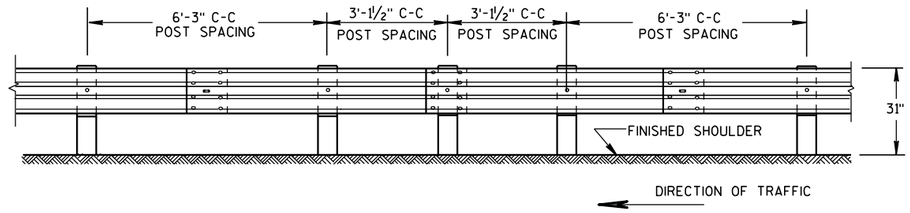
FRONT VIEW AT WOOD POST

GENERAL NOTES

1. PROVIDE TYPE "H" SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH TYPE "H" YELLOW REFLECTIVE SHEETING.
2. DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.
3. REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
4. PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.
5. 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

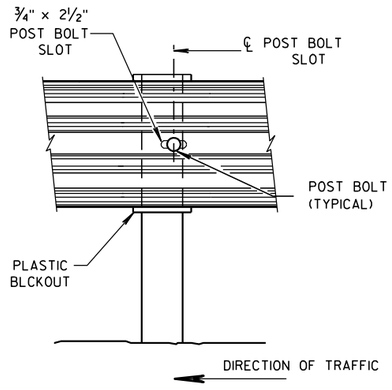
POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

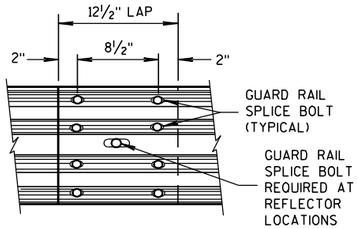


FRONT VIEW

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

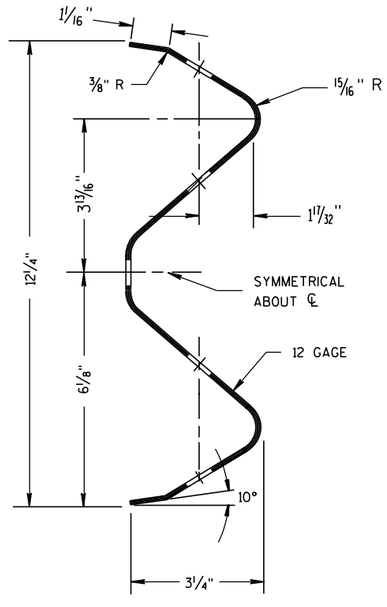


FRONT VIEW AT STEEL POST

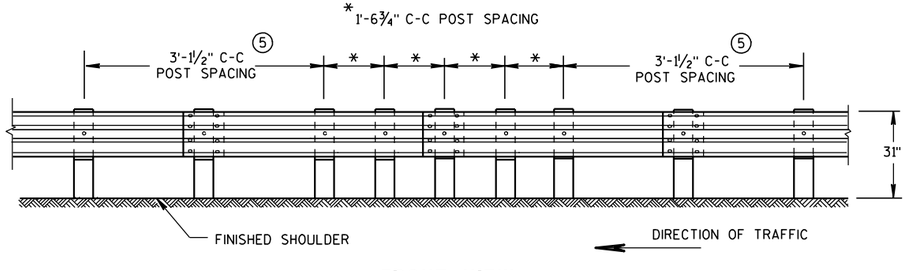


FRONT VIEW

MID-SPAN BEAM SPLICE

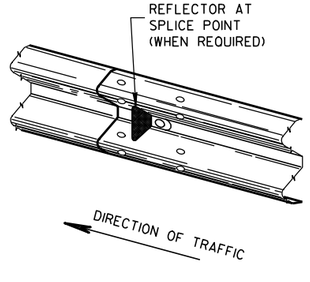


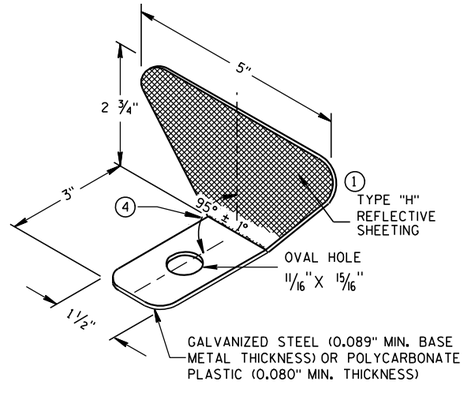
SECTION THRU W-BEAM RAIL



FRONT VIEW

QUARTER POST SPACING (QS)





ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION ①

REFLECTOR SPACING ②

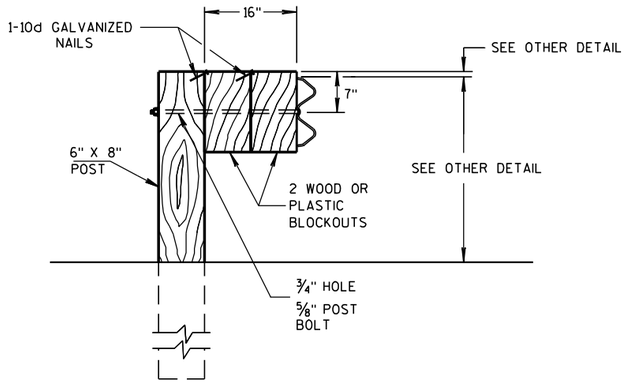
	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	1 1	3
TWO WAY TRAFFIC	< 200' > 200'	25' C-C 50' C-C	1 ③ 1	6
TWO WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	2 ④ 2	3

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

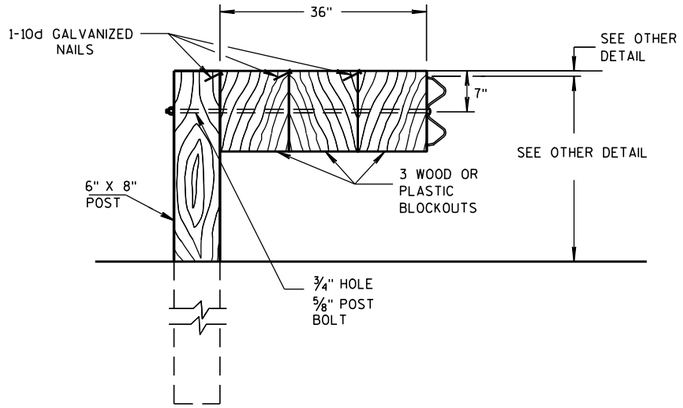
S.D.D. 14 B 42-2b

S.D.D. 14 B 42-2b



DETAIL FOR 16" BLOCKOUT DEPTH

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

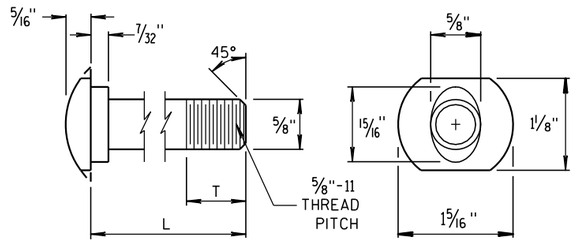


DETAIL FOR 36" BLOCKOUT DEPTH

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

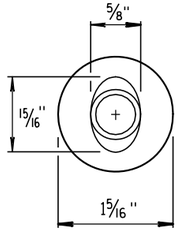
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

NOTE: 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 1/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

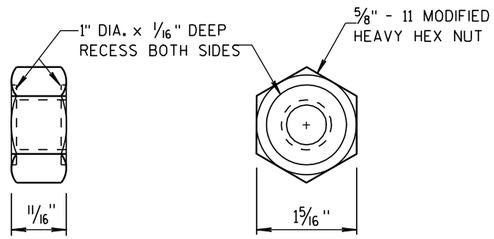


POST BOLT TABLE

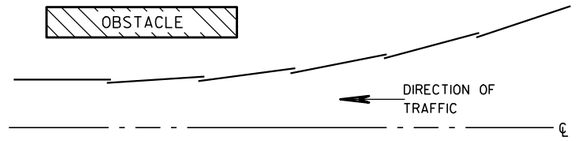
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

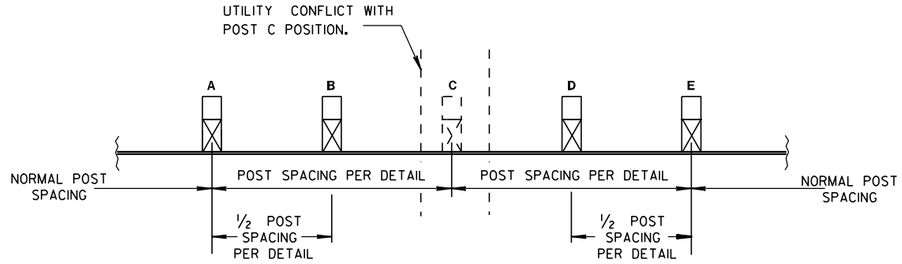


POST BOLT AND RECESS NUT

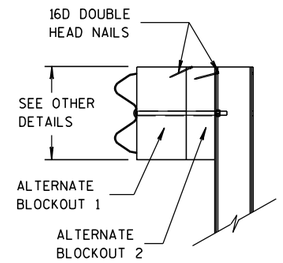


PLAN VIEW

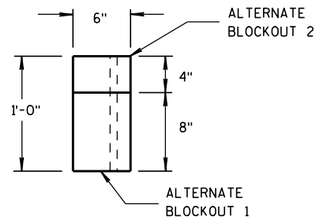
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/15/2011
DATE

/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

FHWA

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S.D.D. 14 B 42-2c

GENERAL NOTES

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

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

(C) DIFFERENT MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.

(D) THE TOP OF THE STEEL TUBE ON POST 1 AND POST 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

(F) SHEETING IS ATTACHED TO 0.040 ALUMINUM SHEET AND ATTACHED TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER OF E.A.T.

(G) ½" DIAMETER X 3" LONG LAG BOLT AND WASHER.

(H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.

(I) DIMENSIONS MAY VARY. SEE MANUFACTURE'S INFORMATION.

SEE SDD 14B42 FOR MORE INFORMATION.

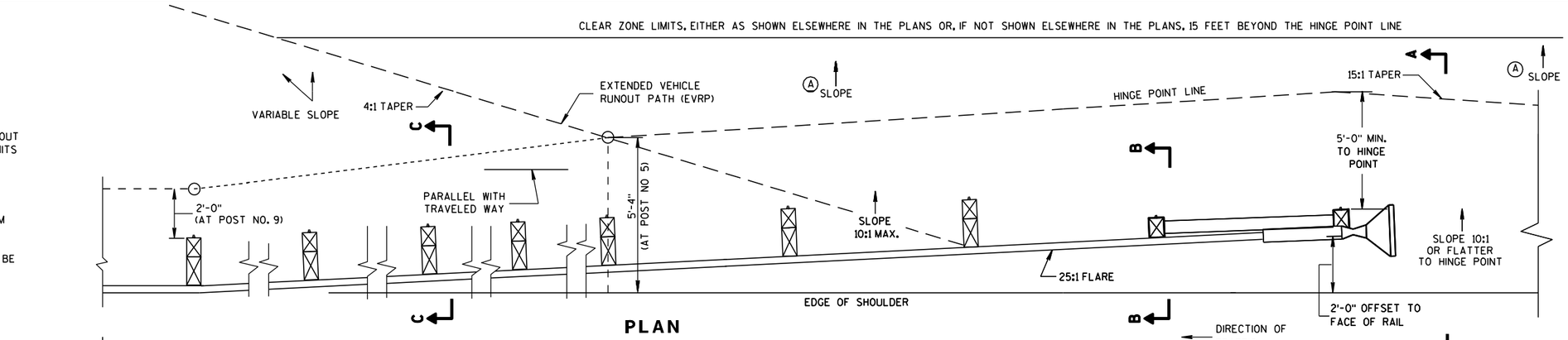
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

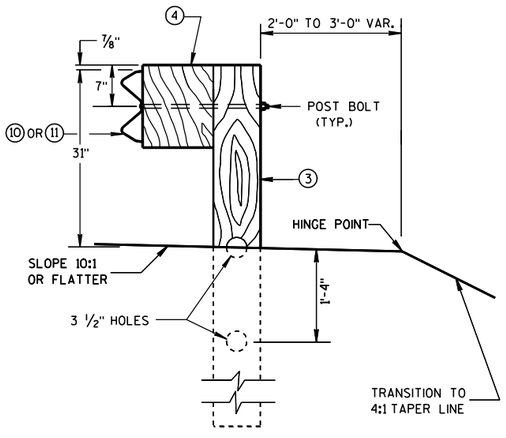
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

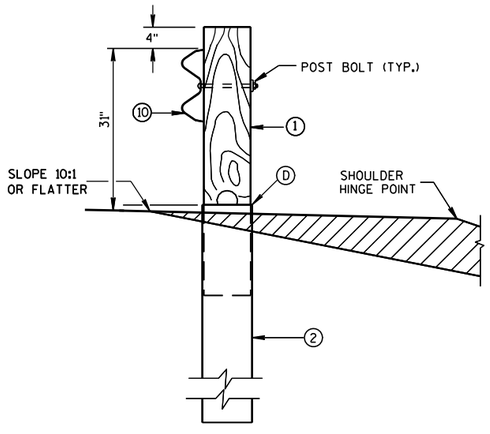
PATTERN AND COLORS ON REFLECTIVE SHEETING TYPE H ARE TO CONFORM TO OM3-L OR OM3-R OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE (± ¾")

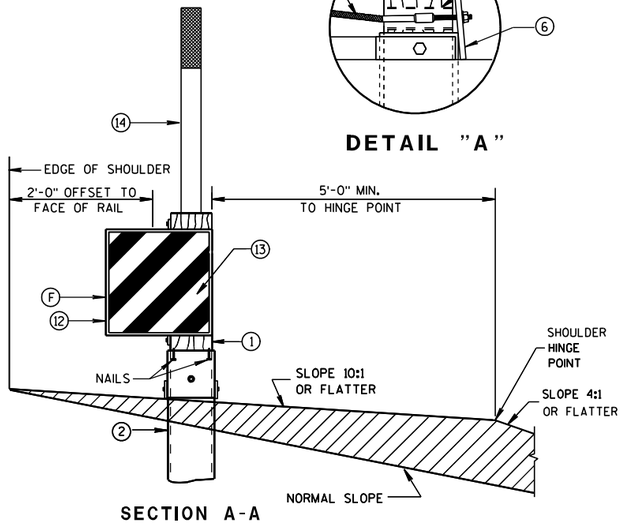




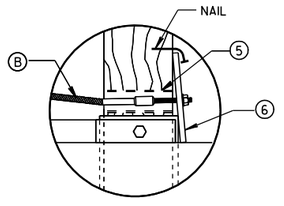
SECTION C-C
TYPICAL AT POST NOS. 3-9



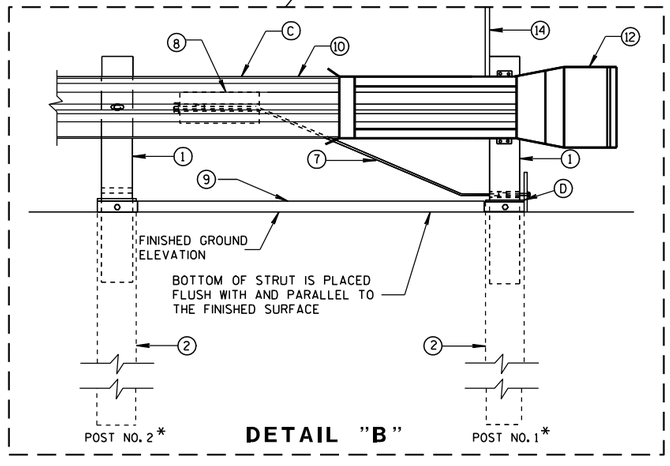
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"

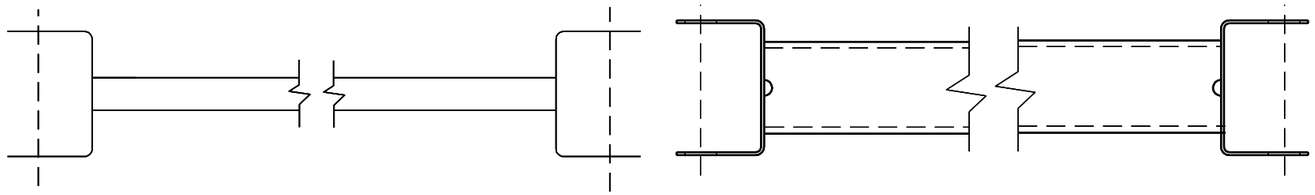


DETAIL "B"

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

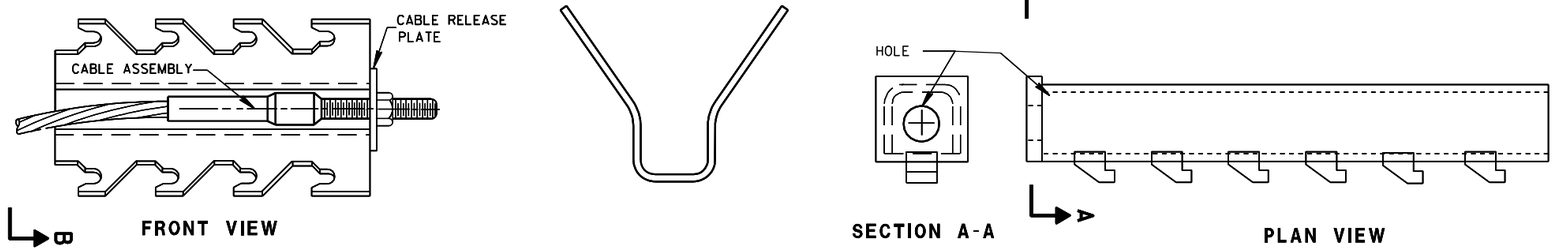
6
S.D.D. 14 B 44-1a



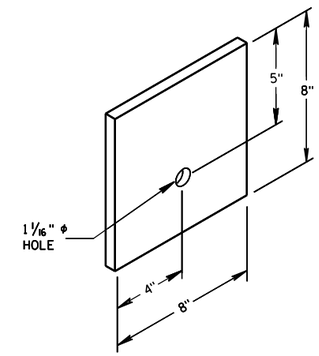
GENERIC GROUND STRUT (9) (H)

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	WOOD BREAKAWAY POST
(2)	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR CABLE BOX
(9)	GROUND STRUT
(10)	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
(11)	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
(12)	END SECTION EAT
(13)	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE H (ONLY THE SHEETING IS SUPPLIED BY THE MANUFACTURER)
(14)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



GENERIC ANCHOR CABLE BOX (8) (H)



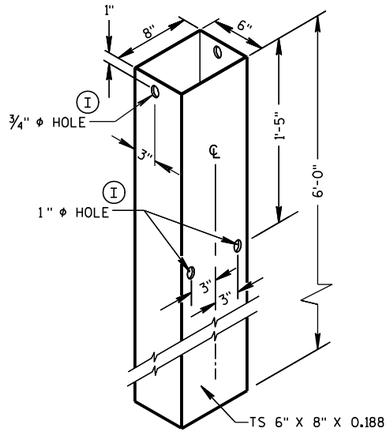
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

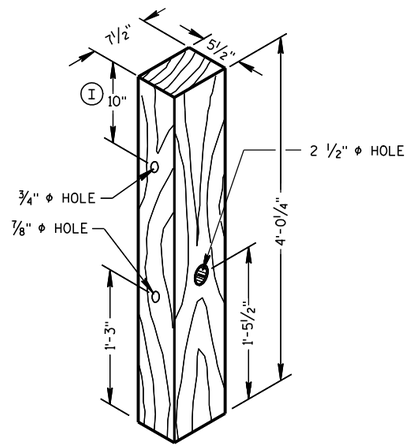
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 44-1b

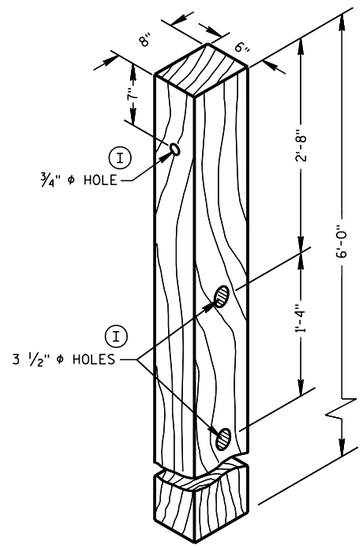


FOUNDATION TUBE (2)



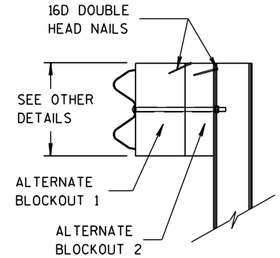
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

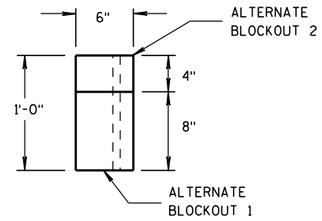


POSTS NUMBER 3-9

WOOD CRT POST (3)

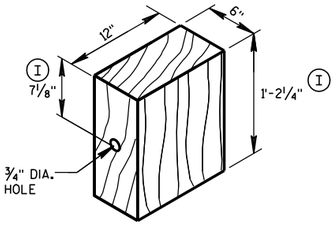


SIDE VIEW



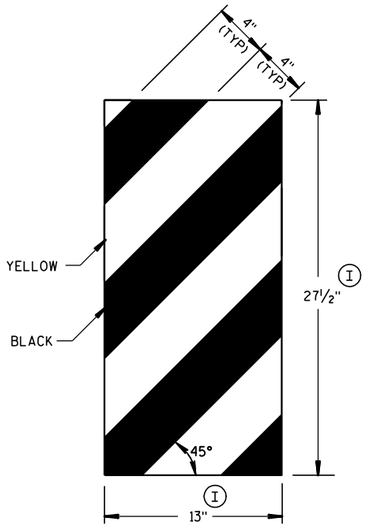
TOP VIEW

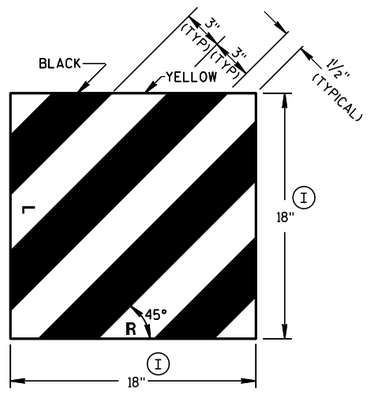
ALTERNATE WOOD BLOCKOUT DETAIL



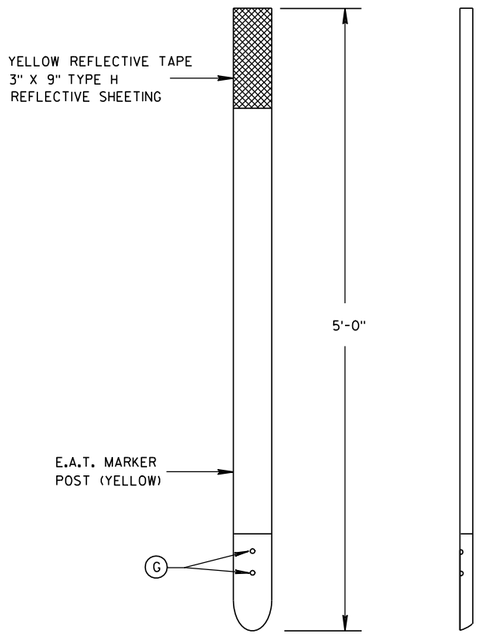
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2





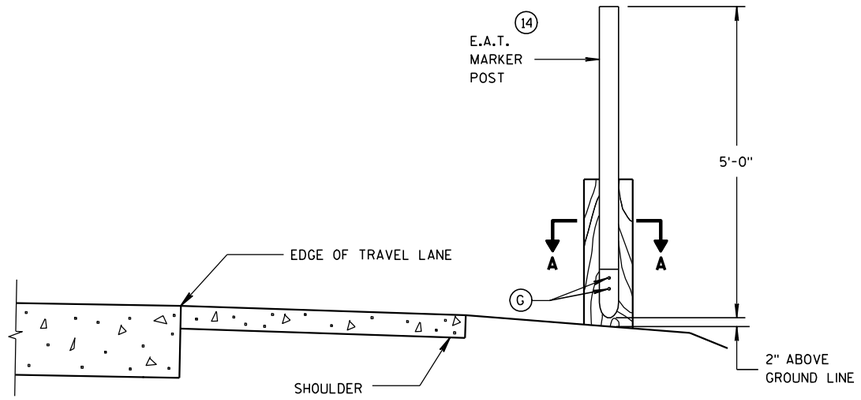
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

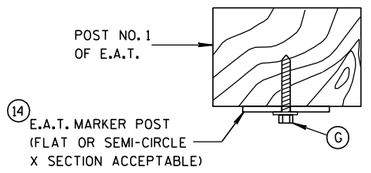
SIDE VIEW

E.A.T. MARKER POST (14)



TYPICAL INSTALLATION OF E.A.T. MARKER POST BACKSIDE OF POST NO. 1

(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

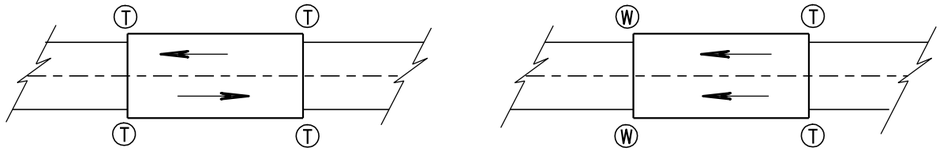
5/23/2011
DATE

/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

FHWA

6

S.D.D. 14 B 44-1c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

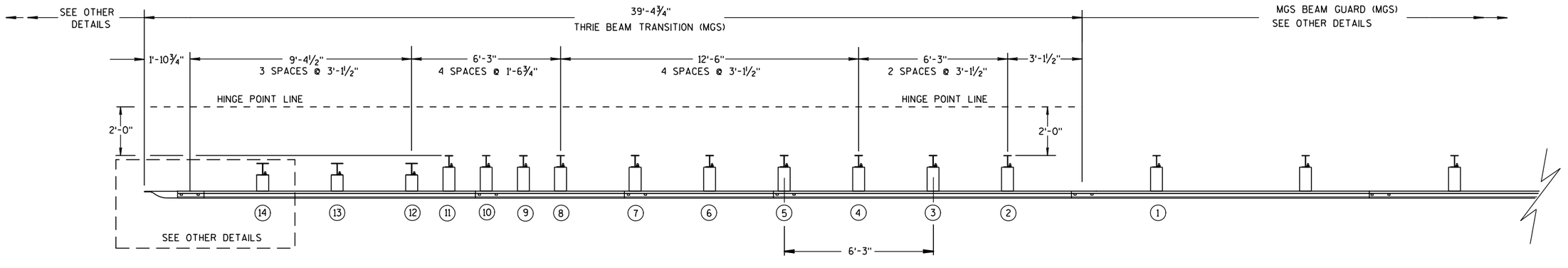
BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3.

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

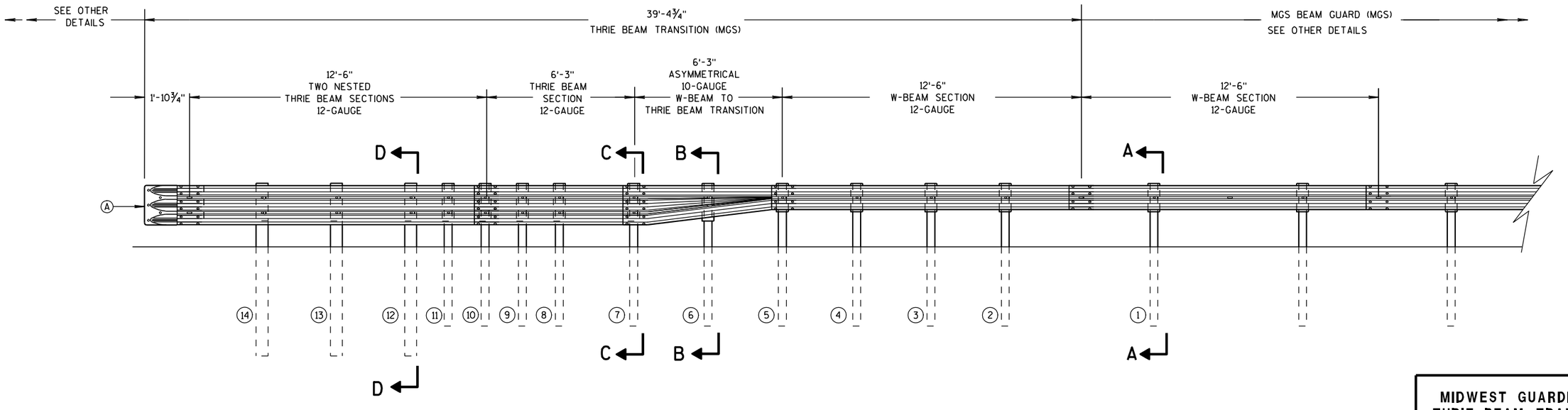
TRANSITION USES STEEL POSTS ONLY.

SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

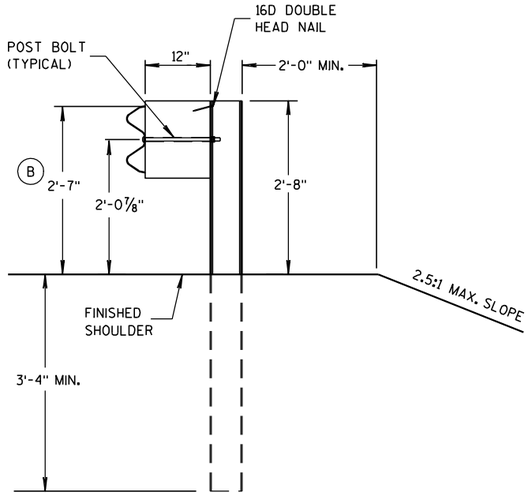
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 45-3a

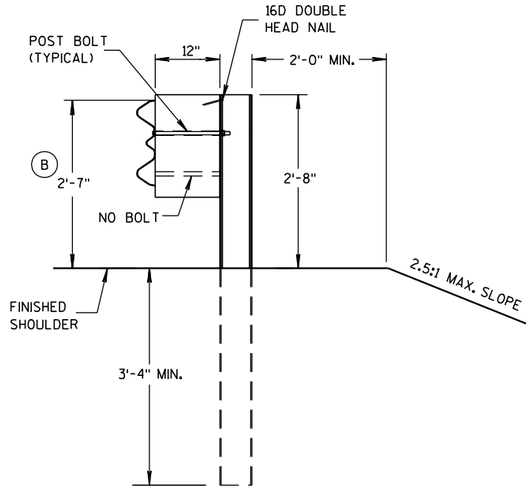
GENERAL NOTES

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



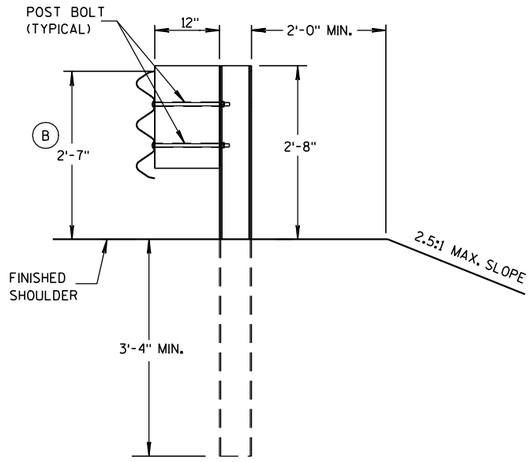
SECTION A-A

POSTS 1-5



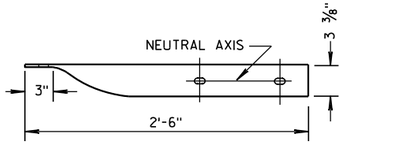
SECTION B-B

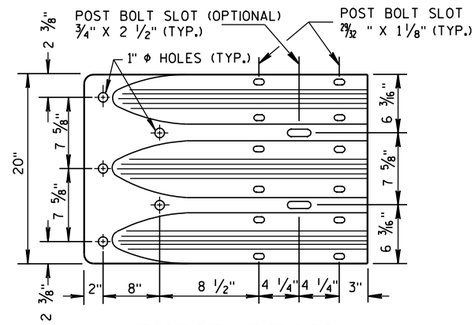
POST 6



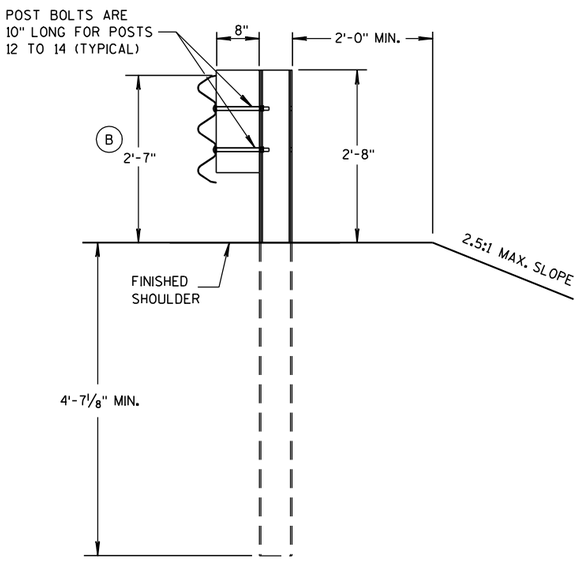
SECTION C-C

POSTS 7-11





THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-14

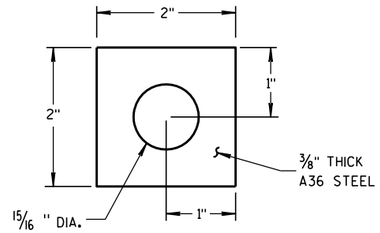
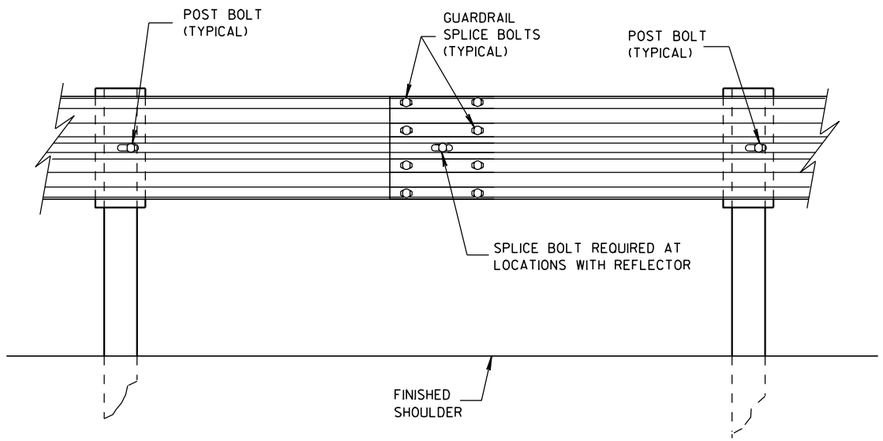
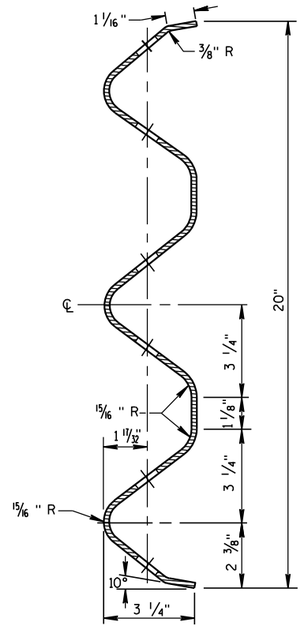


PLATE WASHER DETAIL



SPLICE DETAIL



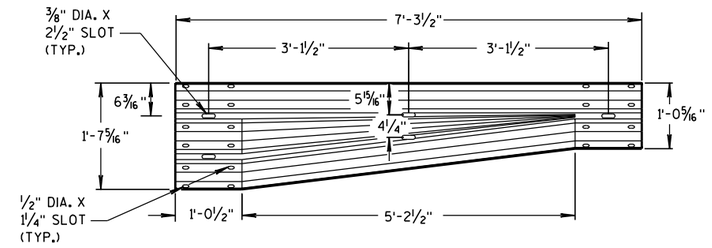
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

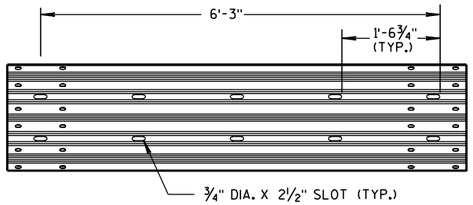
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

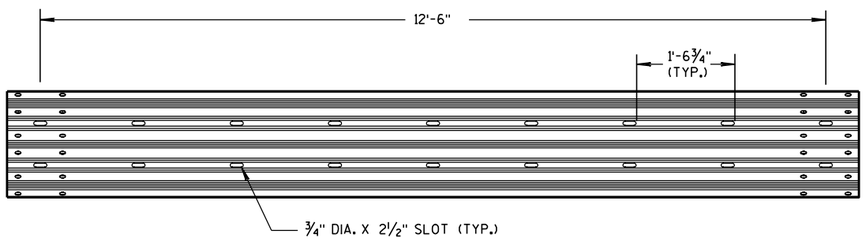
S.D.D. 14 B 45-3b



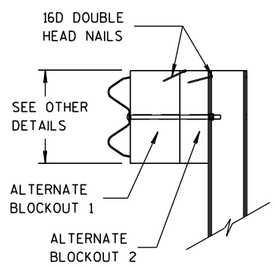
W-BEAM TO THRIE BEAM TRANSITION SECTION



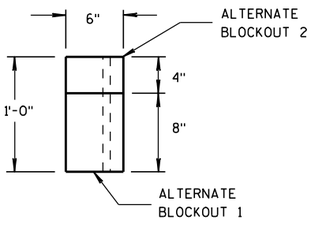
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

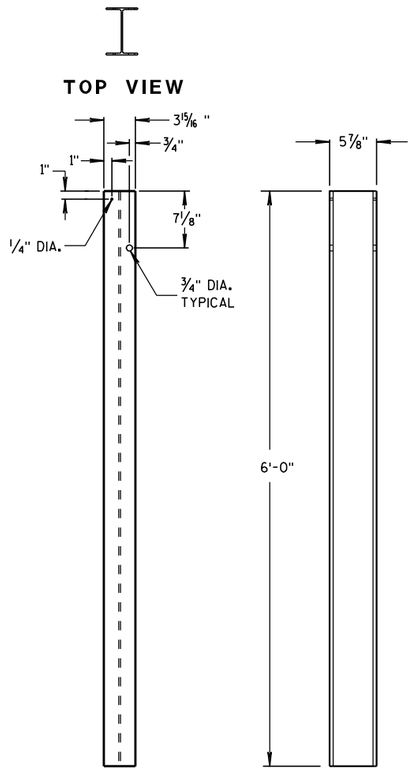


SIDE VIEW

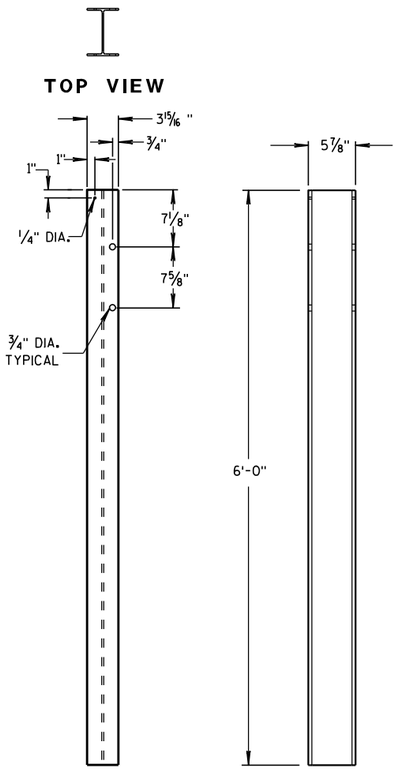


TOP VIEW

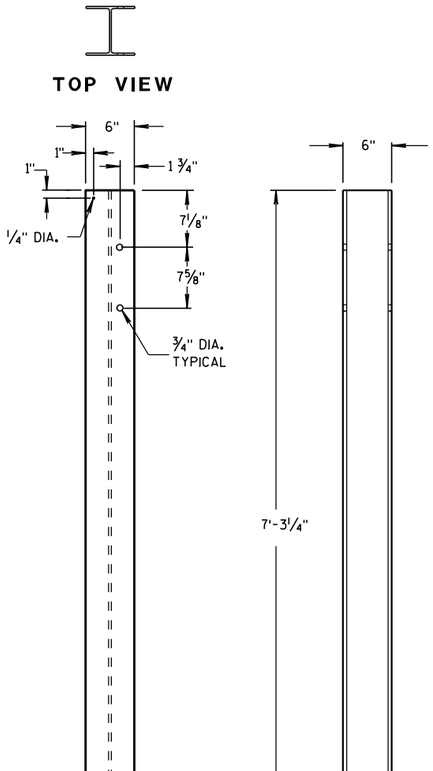
ALTERNATE WOOD BLOCKOUT DETAIL



STEEL POSTS 1-5

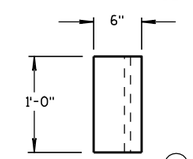


STEEL POSTS 6-11

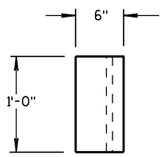


STEEL POSTS 12-14

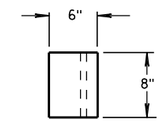
(1) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.



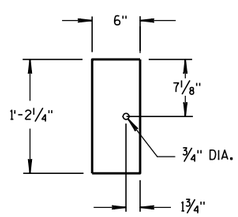
TOP VIEW (1)



TOP VIEW (1)

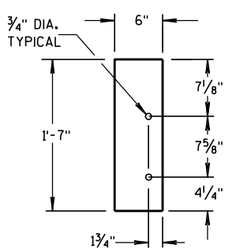


TOP VIEW



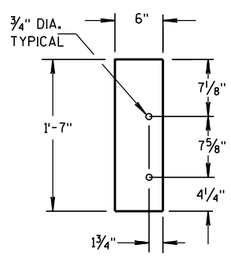
FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-11



FRONT VIEW

BLOCKOUT POSTS 12-14

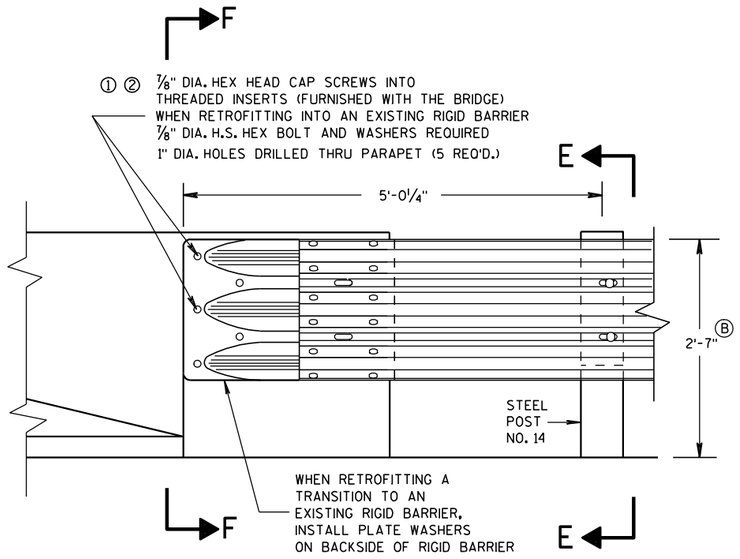
STEEL POST SIZES

POST NUMBER	SECTION TYPE	LENGTH
1	W6x9	72"
2	W6x9	72"
3	W6x9	72"
4	W6x9	72"
5	W6x9	72"
6	W6x9	72"
7	W6x9	72"
8	W6x9	72"
9	W6x9	72"
10	W6x9	72"
11	W6x9	72"
12	W6x15	87 1/8"
13	W6x15	87 1/8"
14	W6x15	87 1/8"

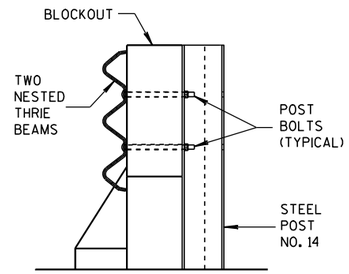
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 45-3c



FRONT VIEW



SECTION E-E

GENERAL NOTES

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

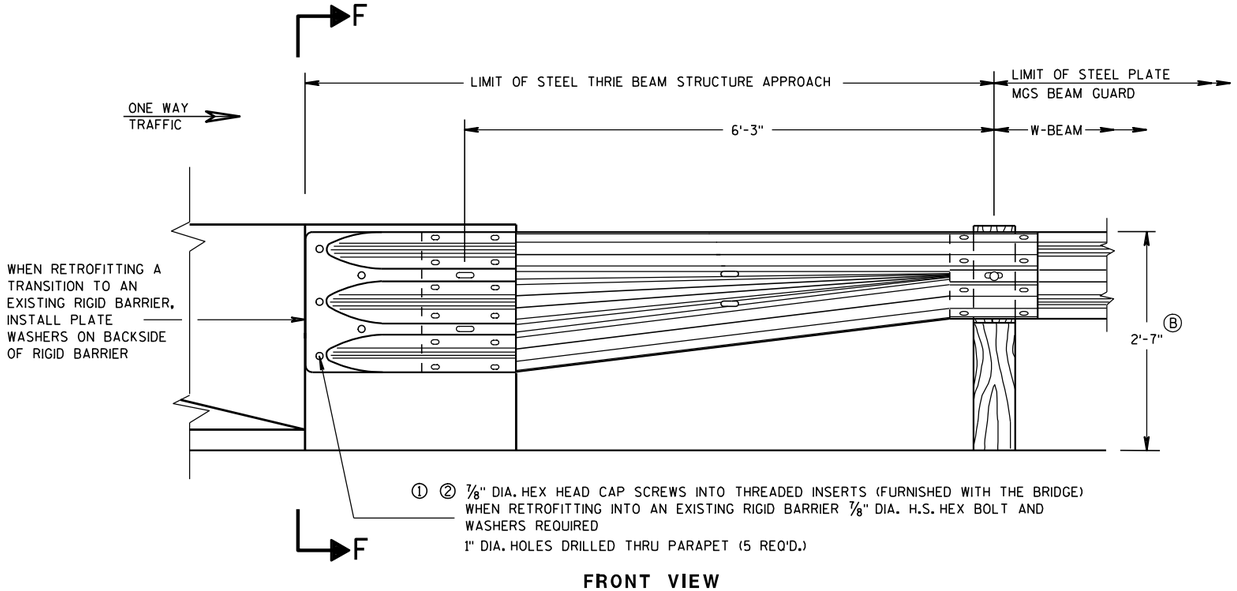
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

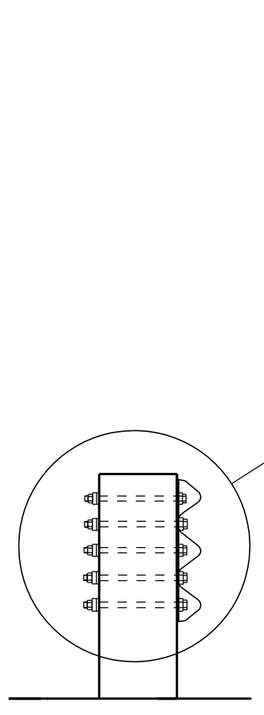
③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".

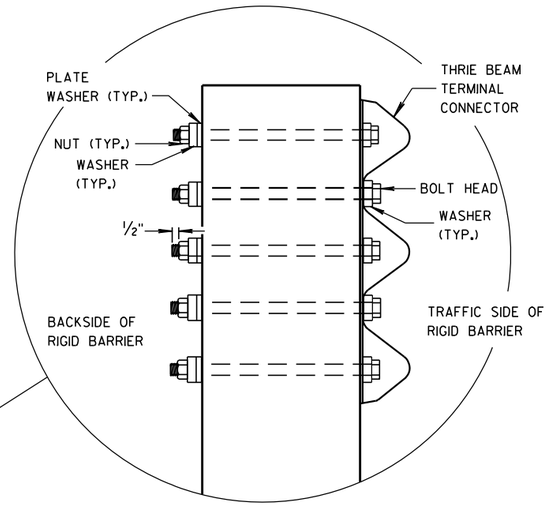
THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS



FRONT VIEW



SECTION F-F



W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012 — DATE

/S/ Jerry H. [illegible] — ROADWAY STANDARDS ENGINEER

FHWA

6

S.D.D. 14 B 45-3d

6

S.D.D. 14 B 45-3d

GENERAL NOTES

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

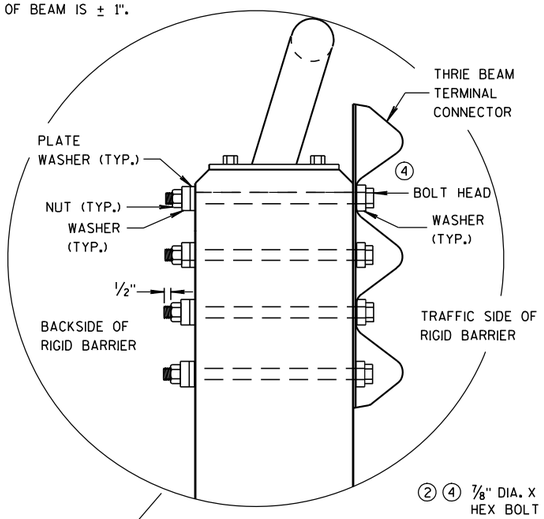
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

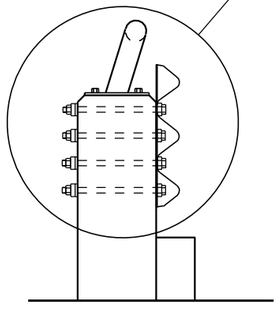
② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

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

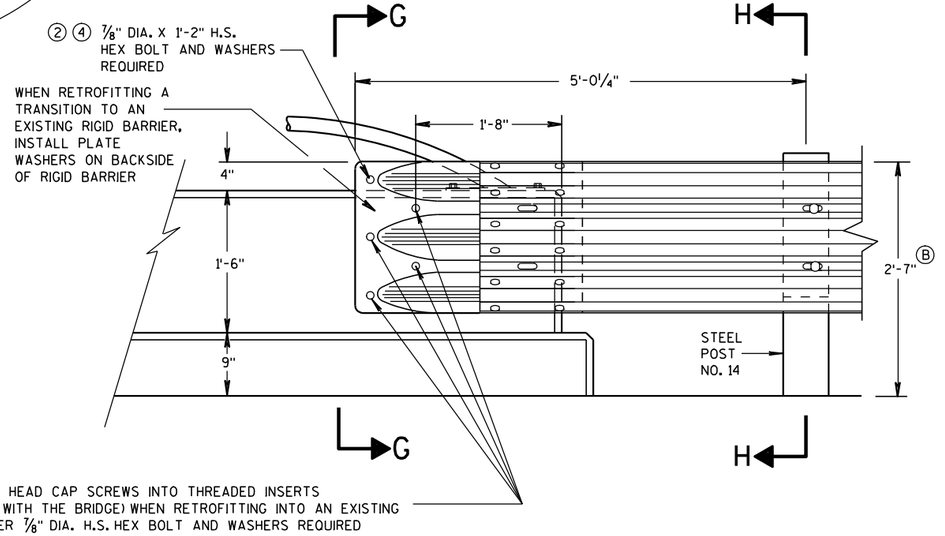
④ BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.

Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".

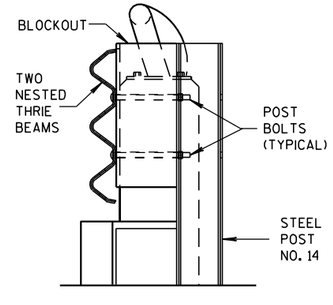




SECTION G-G

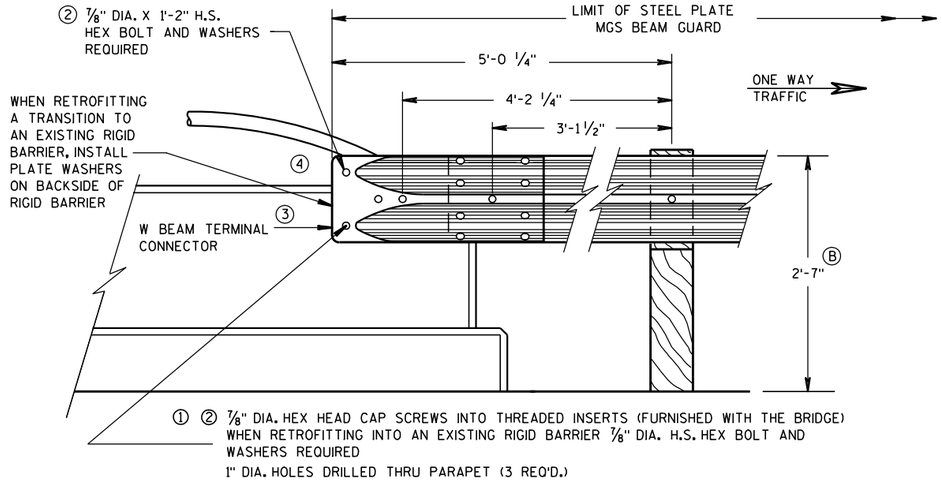


FRONT VIEW



SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8-31-2012 — DATE

/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

6

S.D.D. 14 B 45-3e

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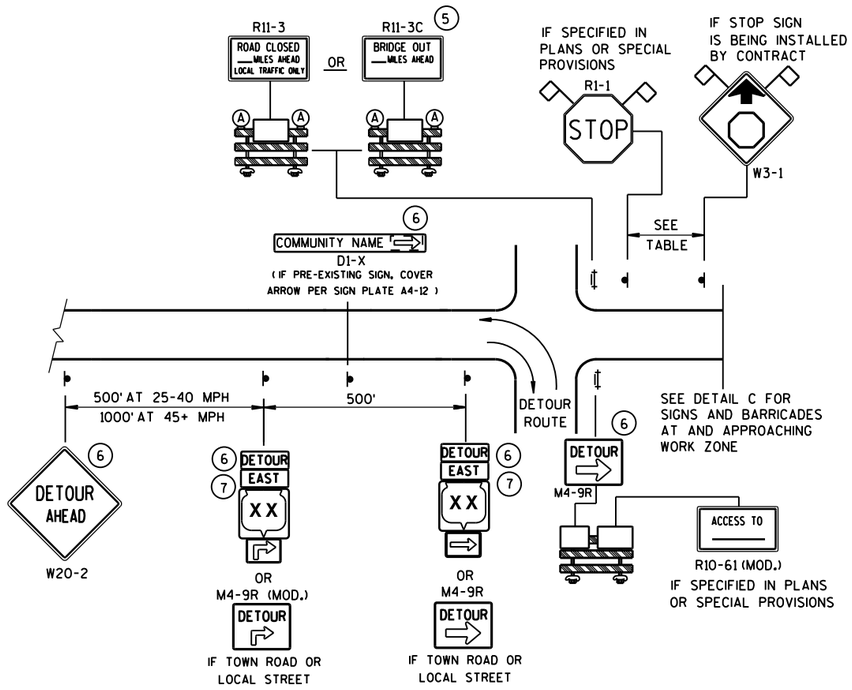
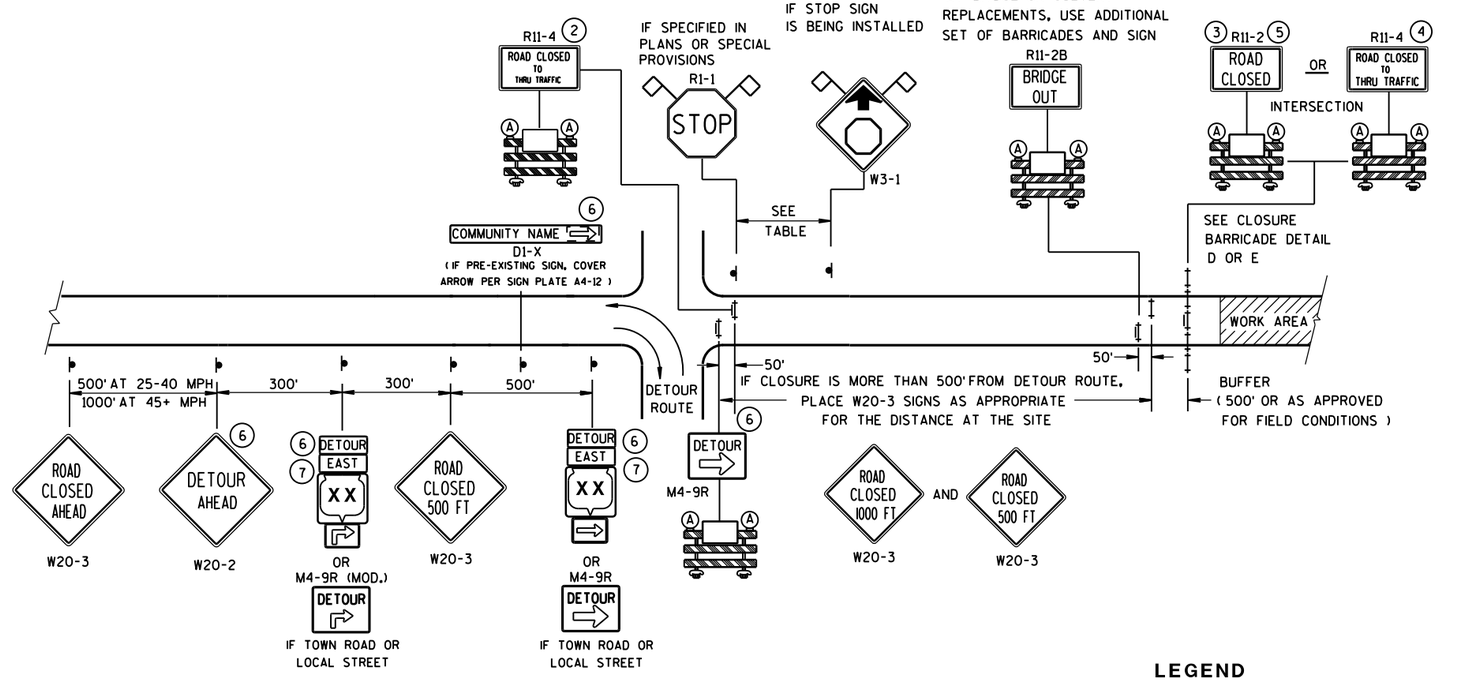
S.D.D. 14 B 45-3e



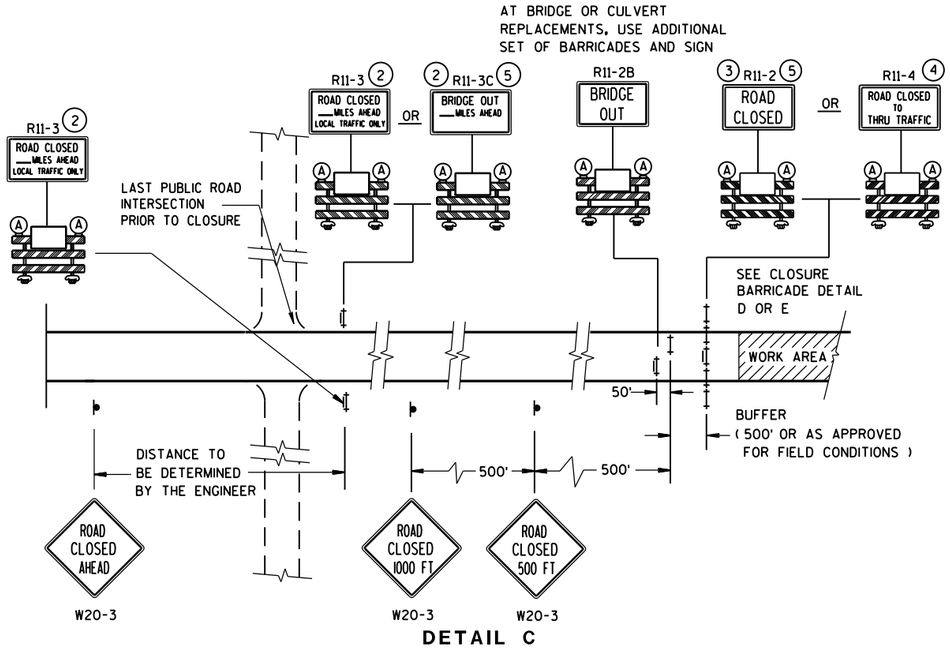
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

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

LEGEND

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

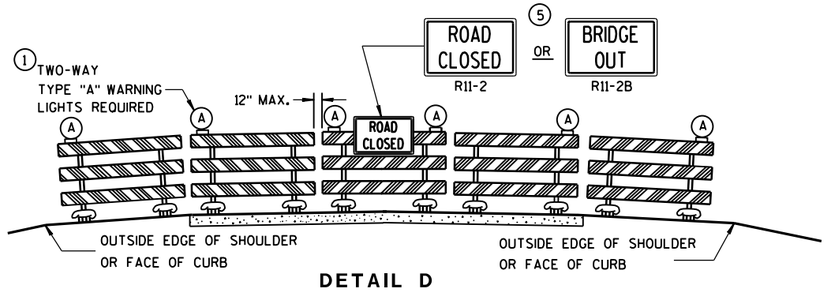
8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

6

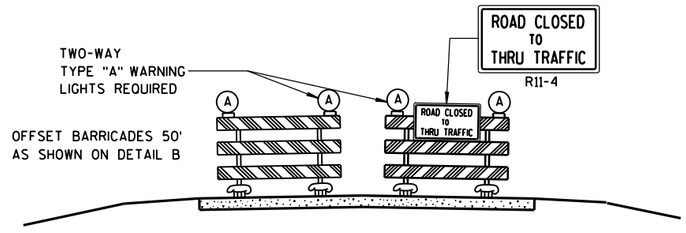
S.D.D. 15 C 2-5a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-SHEET "**a**" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

8/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

FHWA

6

S.D.D. 15 C 2-5b

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

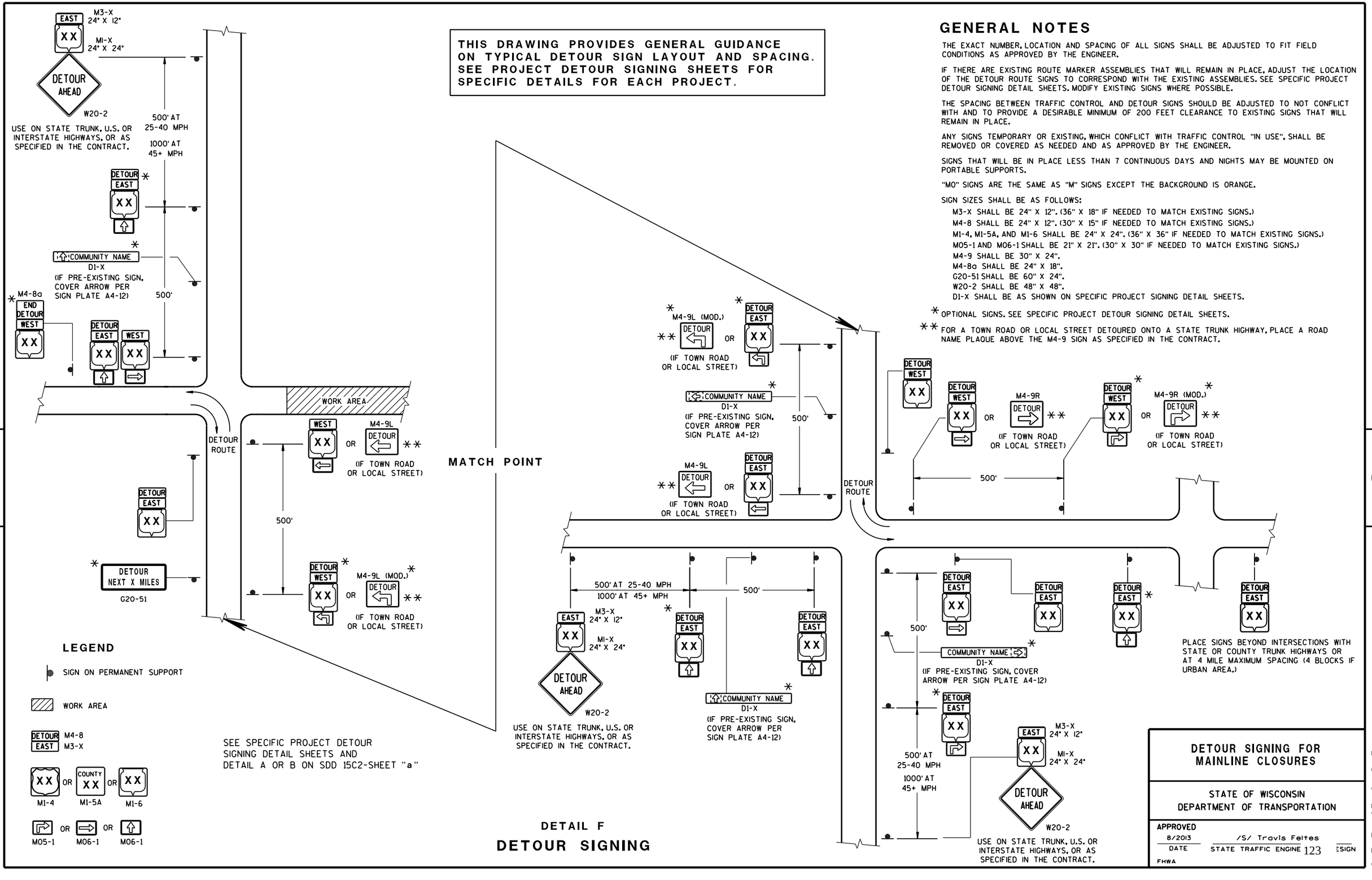
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 SHALL BE 48" X 48".
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.



DETAIL F

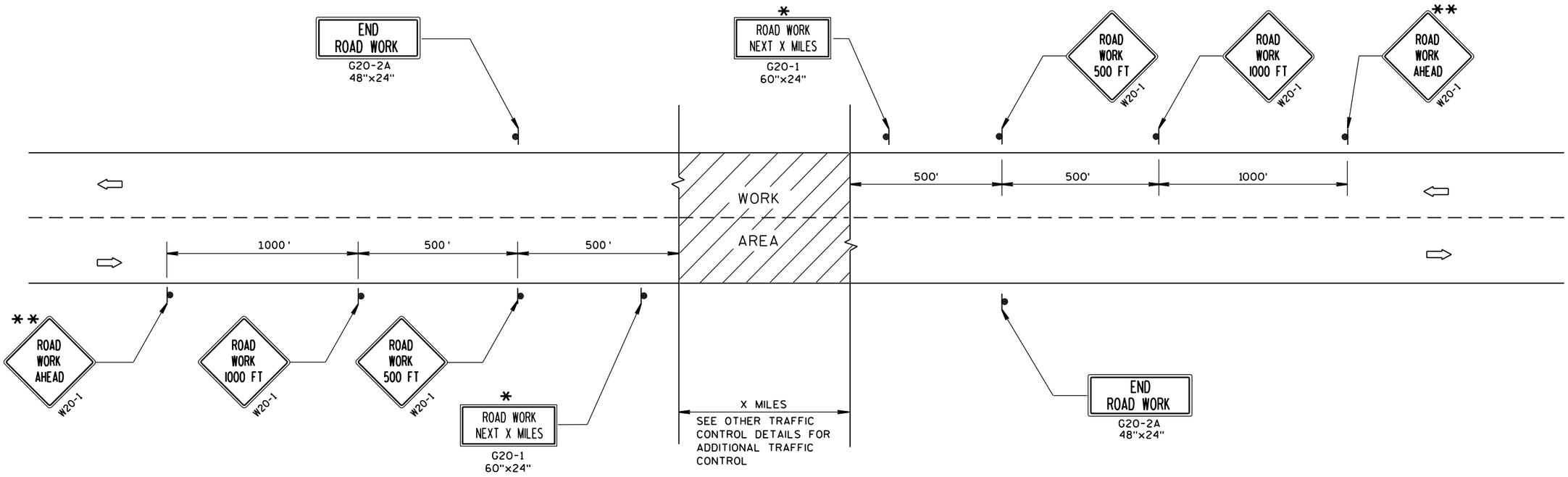
DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6 S.D.D. 15 C 2-5c



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

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.

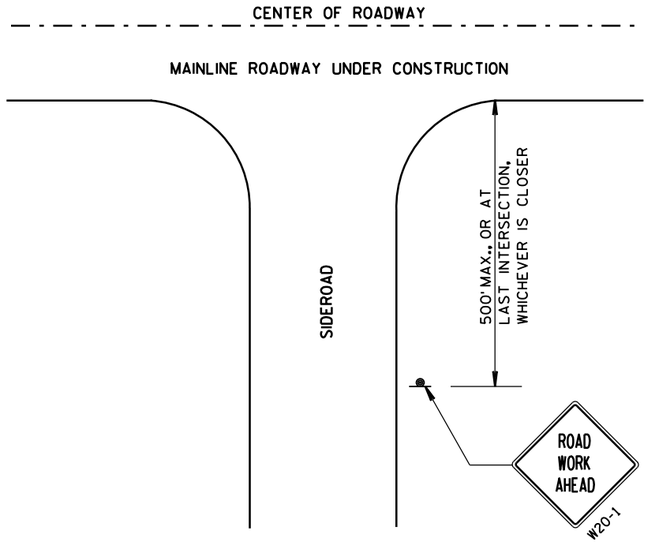
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 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 RE-ESTABLISHED.

* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

** PLACE ADDITIONAL W20-1 "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

SIGN

FHWA

6

S.D.D. 15 C 4-2

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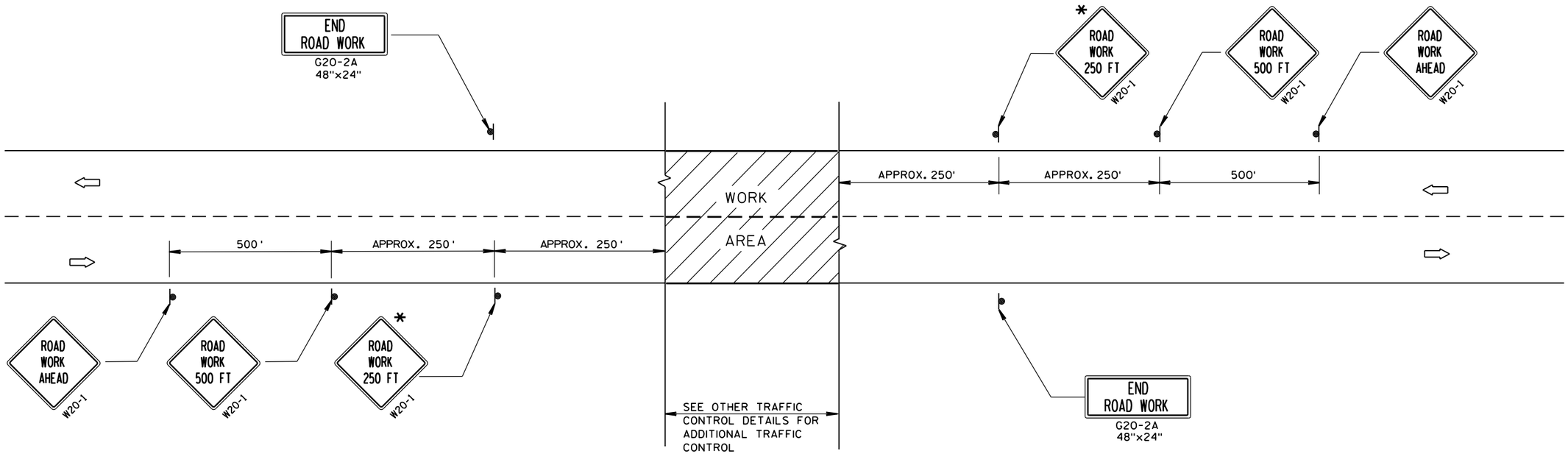
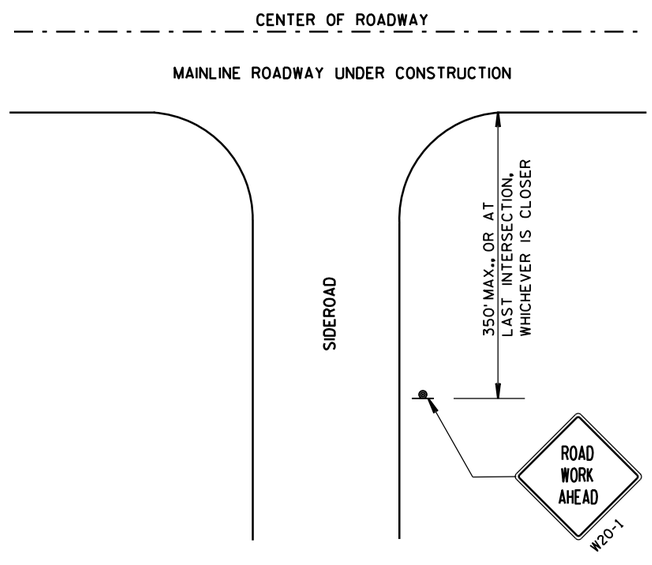
S.D.D. 15 C 4-2



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



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 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, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 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 RE-ESTABLISHED.

* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FT" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.

LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

FHWA

SIGN

6

S.D.D. 15 C 5-2

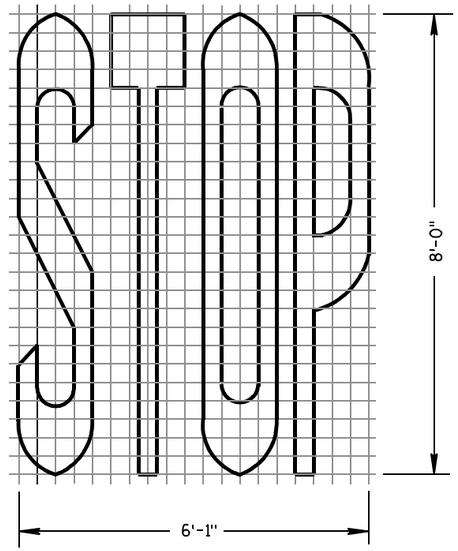
6

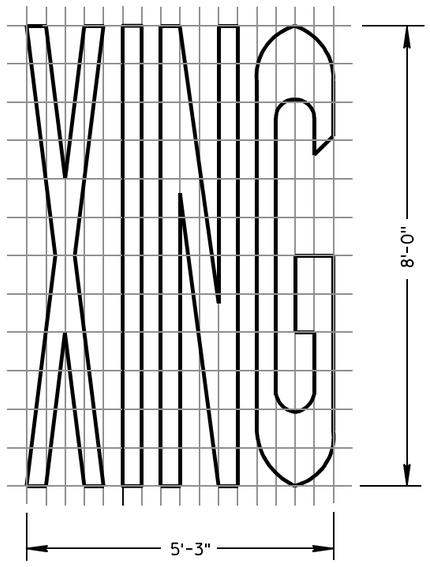
S.D.D. 15 C 5-2

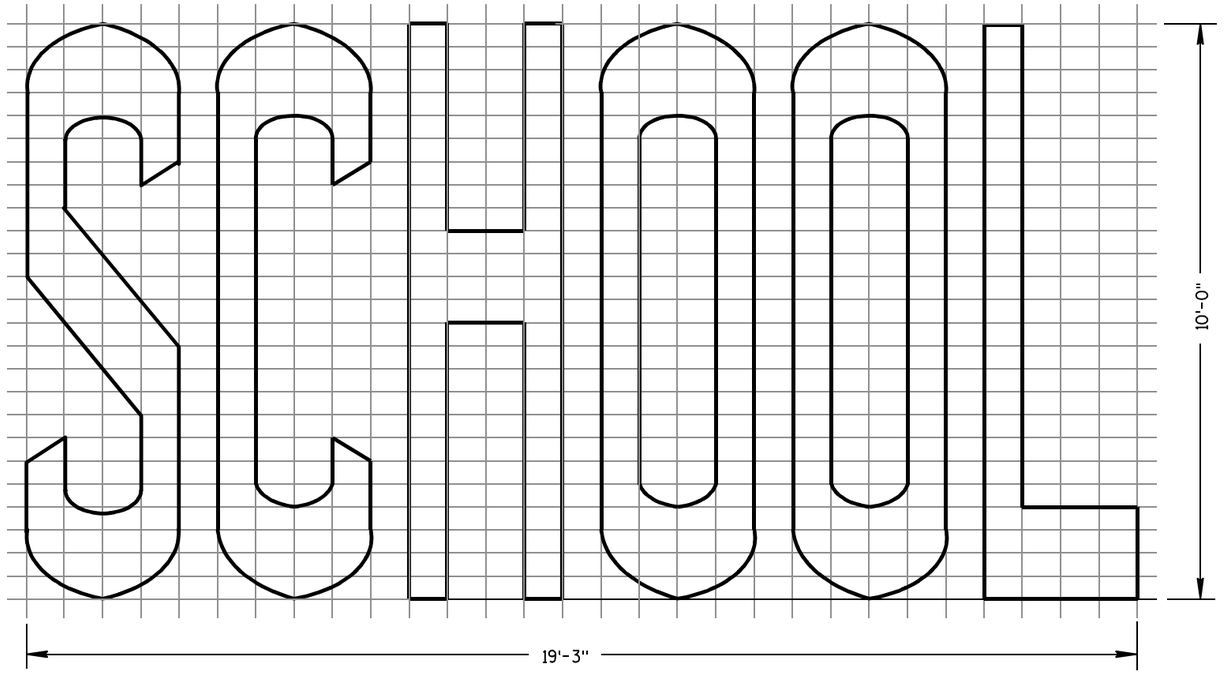
GENERAL NOTES

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.

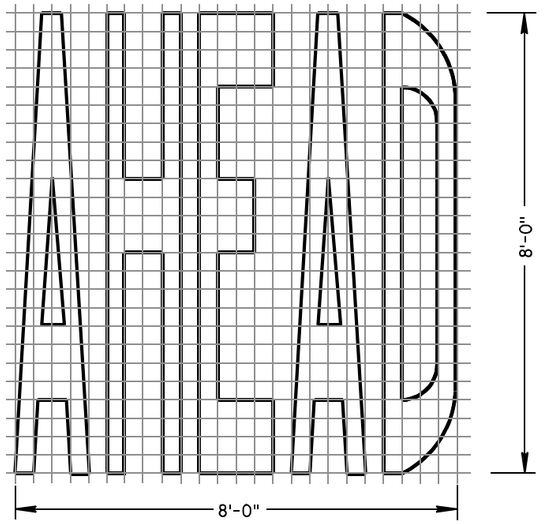
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.

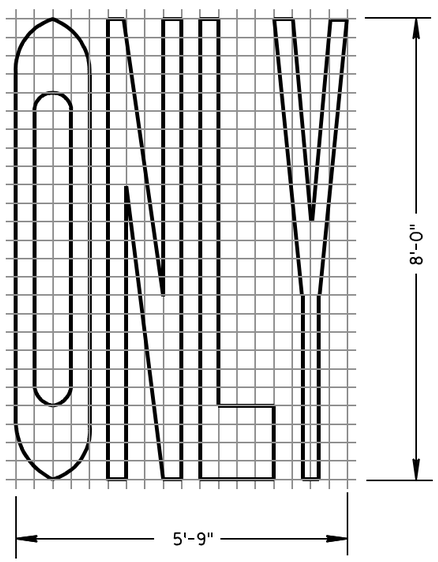


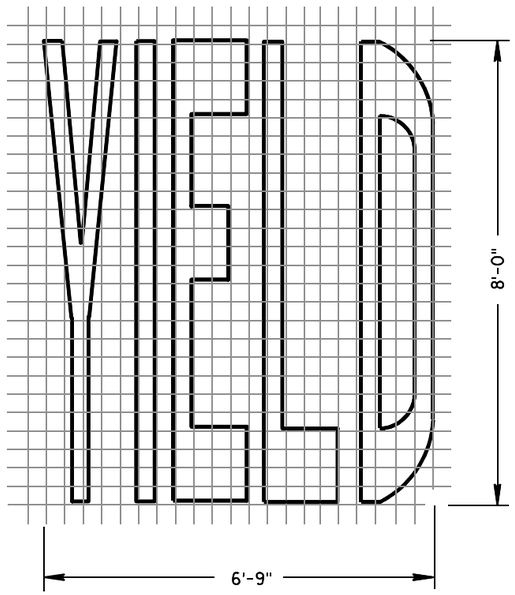


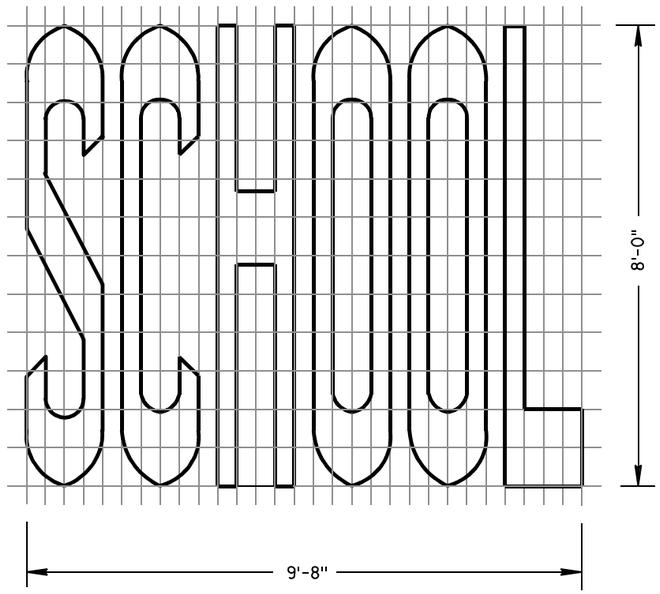


TWO-LANE









SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-1-11 DATE — /S/ Thomas N. Nothohm STATE TRAFFIC ENGINEER — IGN

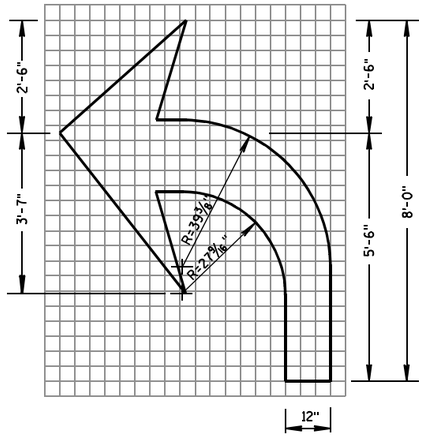
FHWA

6

S.D.D. 15 C 7-12b

6

S.D.D. 15 C 7-12b



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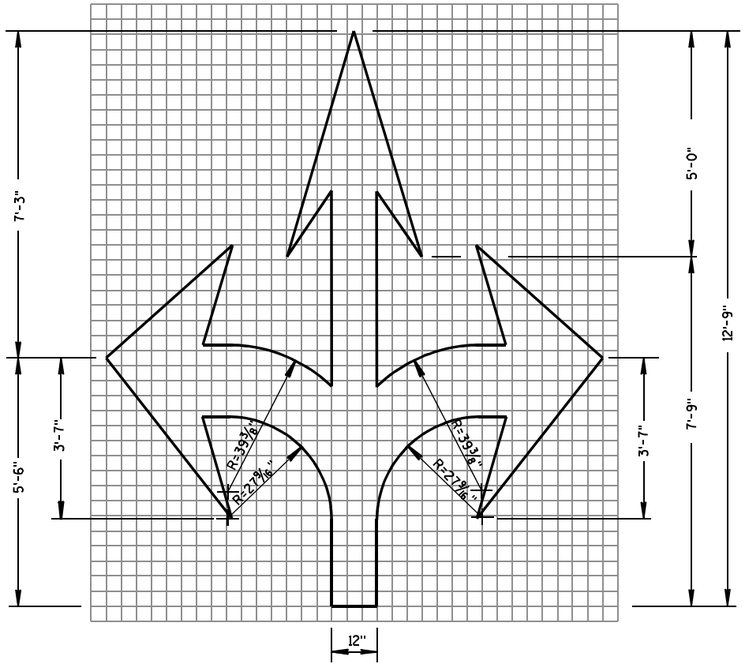

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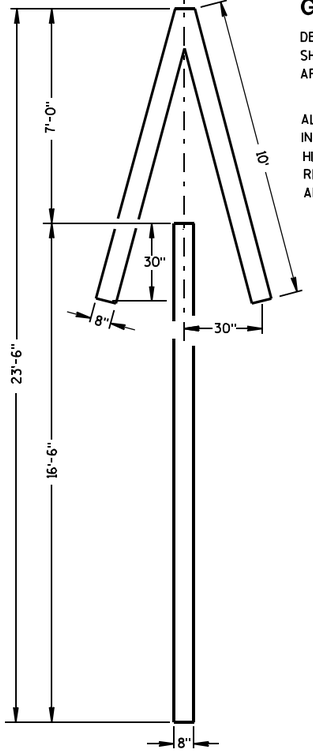
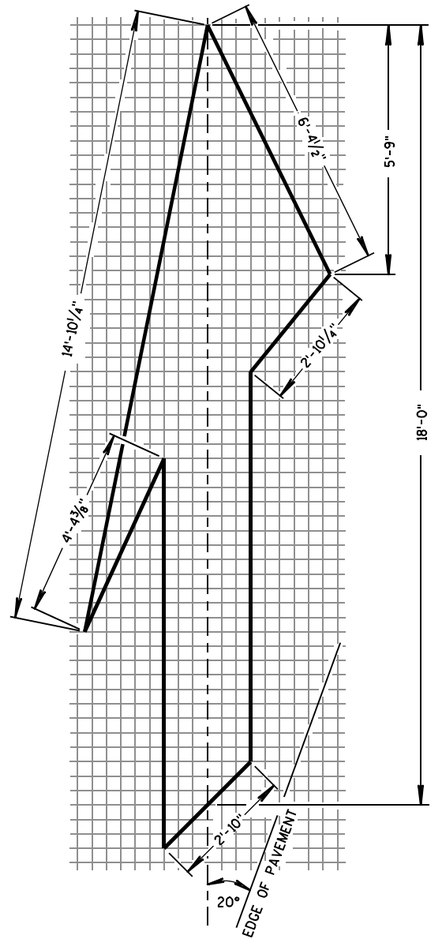


TYPE 4

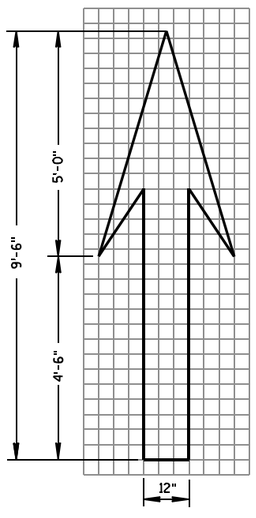
GENERAL NOTES

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.

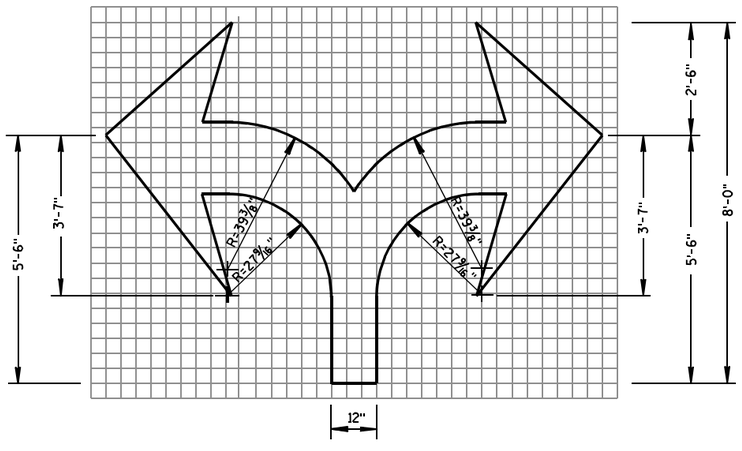
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.



TYPE 5 LANE DROP ARROW



TYPE 1



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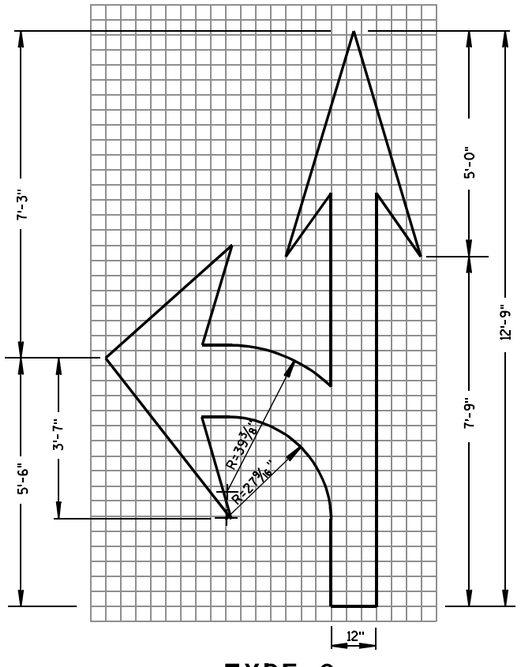


TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/1/11 — DATE

/S/ Thomas N. Nothdurft — STATE TRAFFIC ENGINEER

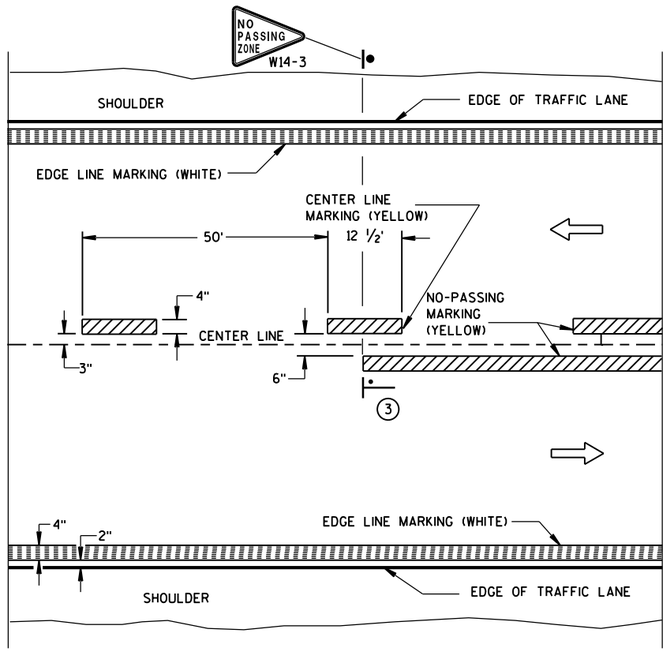
FHWA

6

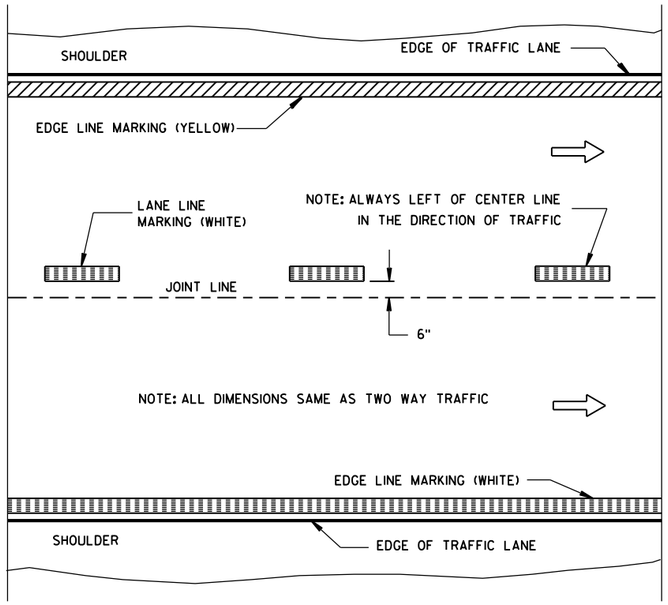
S.D.D. 15 C 7-12c

6

S.D.D. 15 C 7-12c

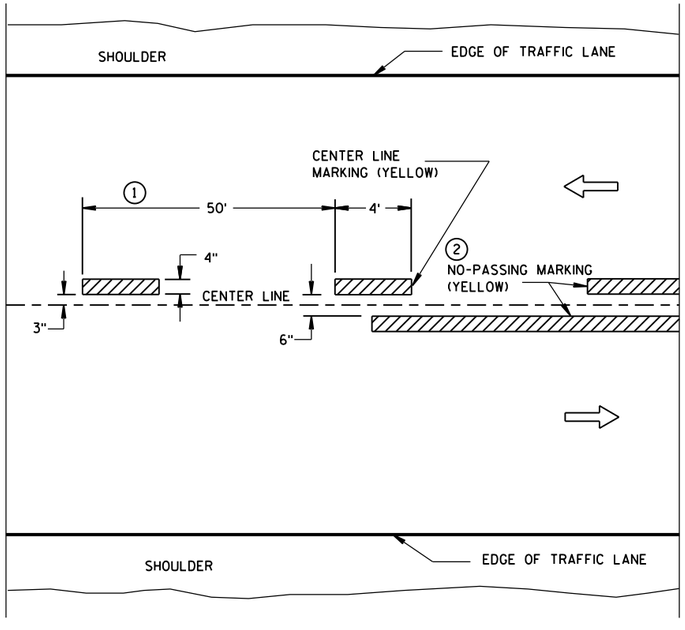


TWO WAY TRAFFIC

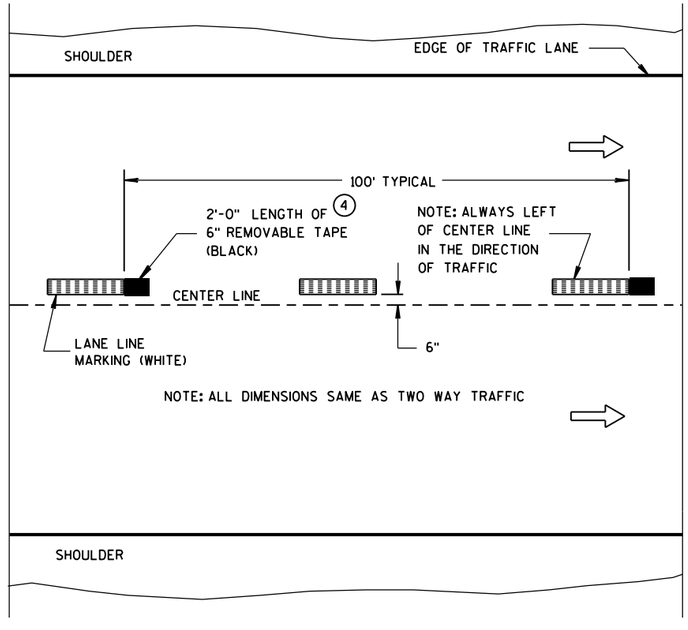


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

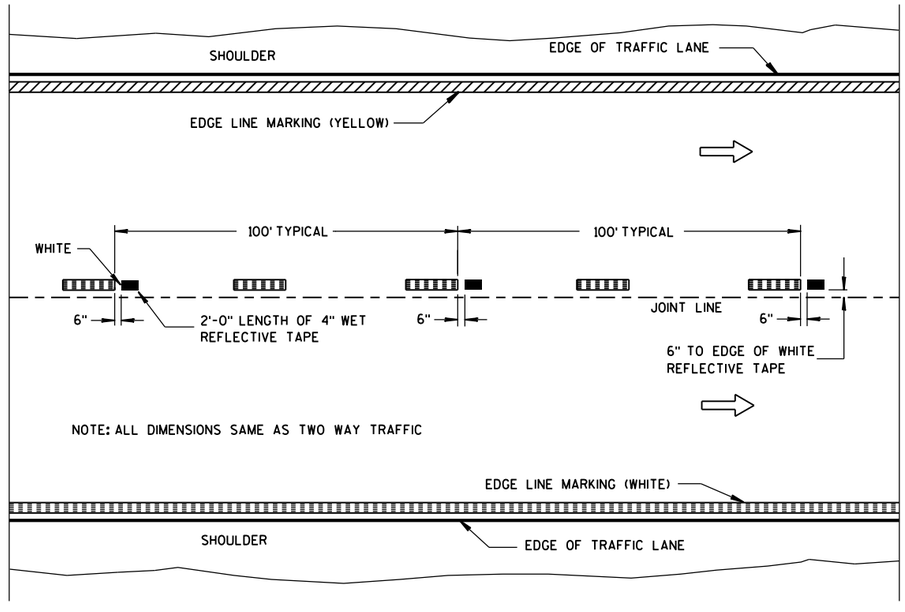
GENERAL NOTES

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

1. HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
2. NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
3. NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
4. CONCRETE ONLY.

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-13-2013
DATE

/S/ Travis Feltes
STATE TRAFFIC E

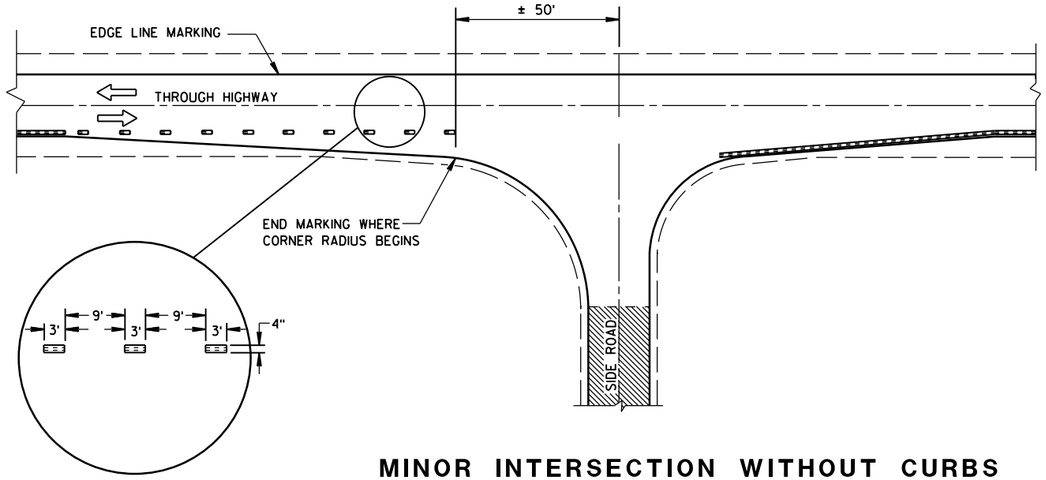
FHWA

6

S.D.D. 15 C 8-16a

6

S.D.D. 15 C 8-16a



MINOR INTERSECTION WITHOUT CURBS

GENERAL NOTES

EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.

(1) WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.

(2) WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.

(3) ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.

(4) THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.

(5) BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.

(6) BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

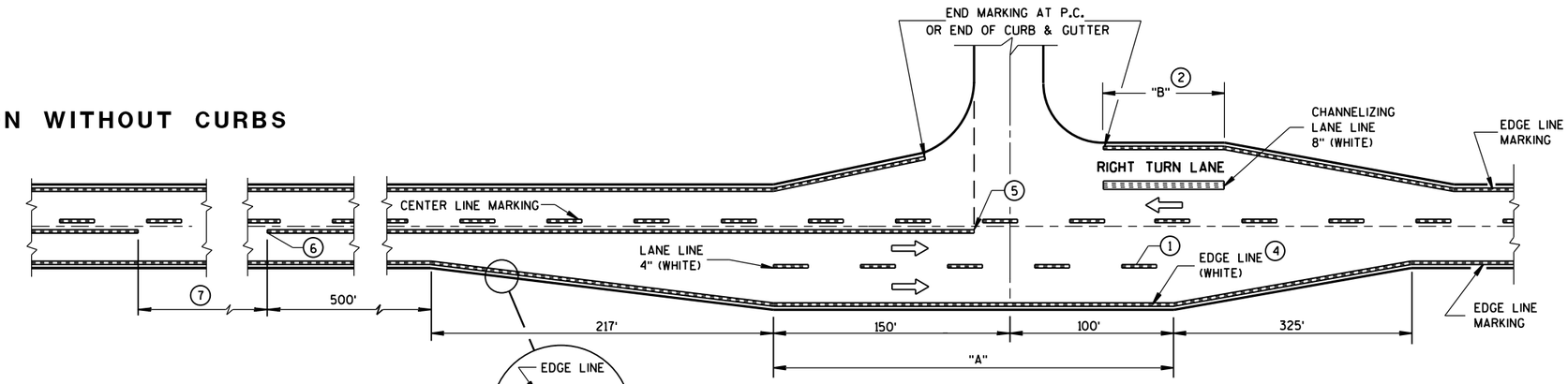
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

(8) 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

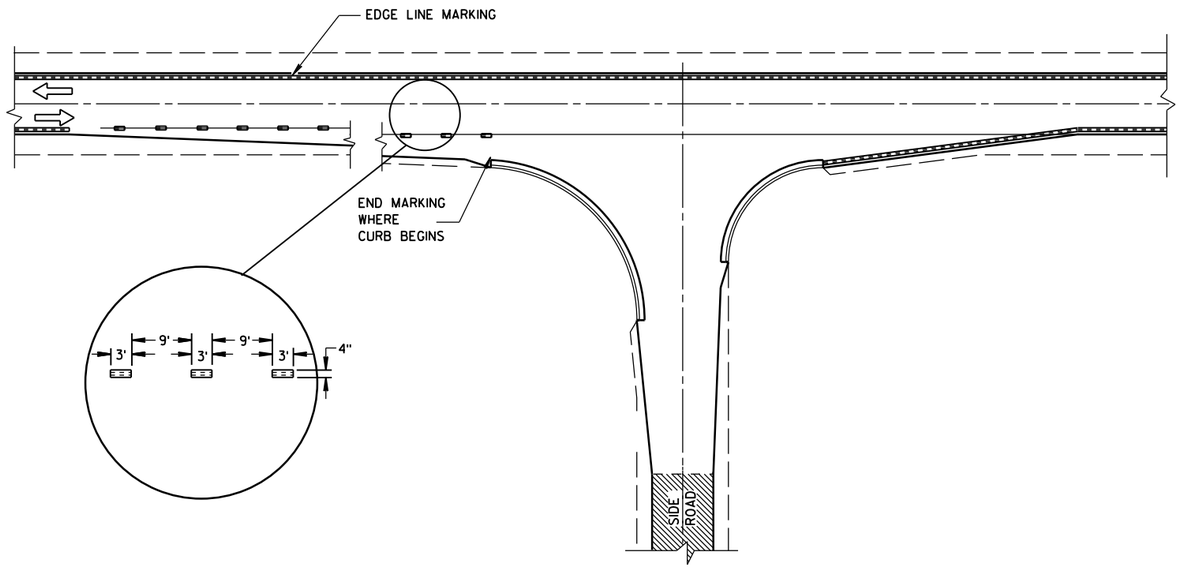
(7)

POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792



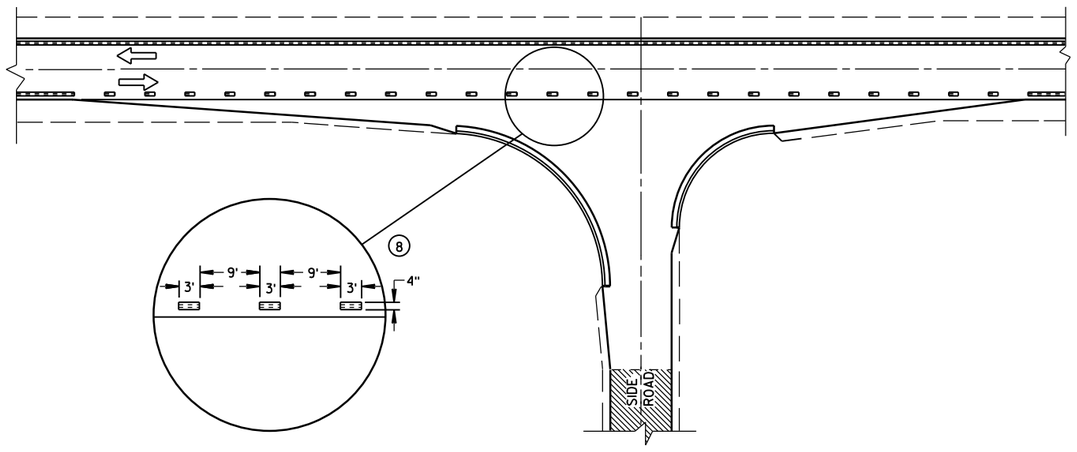
MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



MINOR INTERSECTION WITH CURBS

(TYPICAL MARKING)



MINOR INTERSECTION WITH CURBS

(3) (FOR SPECIAL CONDITIONS AS SPECIFIED)

PAVEMENT MARKING
(INTERSECTIONS)

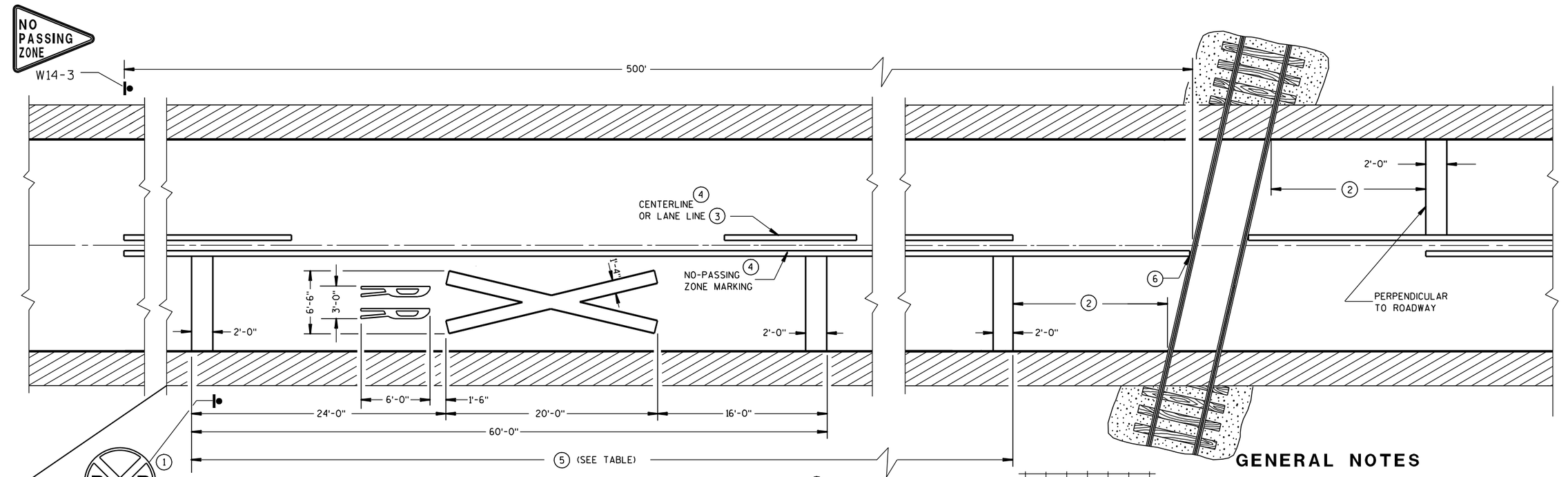
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

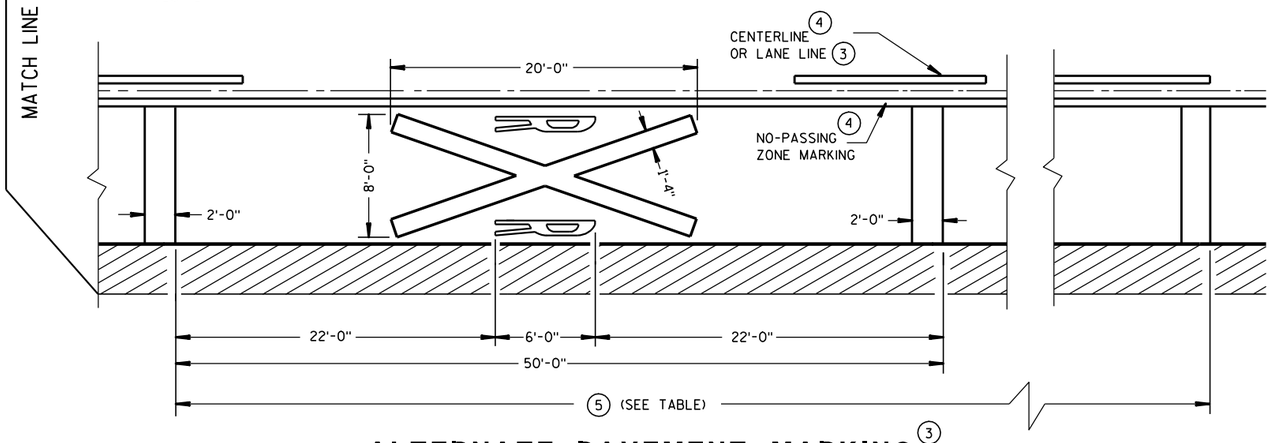
S.D.D. 15 C 8-16b

6

S.D.D. 15 C 8-16b



PREFERRED PAVEMENT MARKING 3

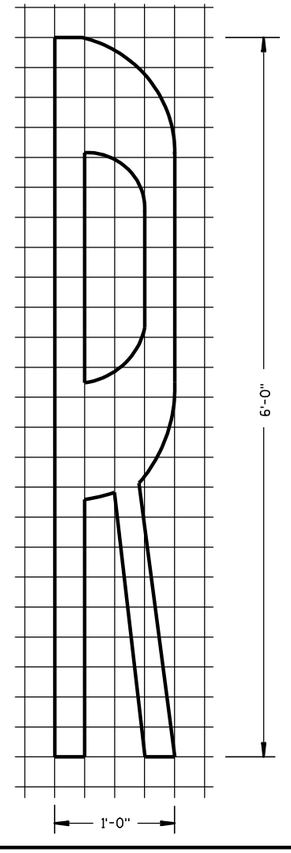


ALTERNATE PAVEMENT MARKING 3

5

Posted Speed (M.P.H.)	Dimension Range (Feet)
25	150*- 250
30	200*- 300
35	250*- 450
40	300*- 500
45	400*- 650
50	550*- 800
55	750*- 1000
60	1000*- 1250
65	1000*- 1250

* THE MINIMUM DISTANCES IN THE TABLE ARE DESIRABLE AND SHOULD BE USED. THE DISTANCES MAY BE INCREASED UP TO THE MAXIMUM TO ALLOW FOR FIELD CONDITIONS SUCH AS THE CLOSE PROXIMITY OF DRIVEWAYS, BRIDGES, SIDEROADS OR OTHER FEATURES THAT WOULD PROHIBIT THE MINIMUM DISTANCES FROM BEING USED.



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.

A THREE-LANE ROADWAY SHOULD BE MARKED WITH A CENTERLINE FOR TWO-LANE APPROACH OPERATION ON THE APPROACH TO A CROSSING.

ON MULTI-LANE ROADS THE TRANSVERSE BANDS SHOULD EXTEND ACROSS ALL APPROACH LANES, AND INDIVIDUAL R X R SYMBOLS SHOULD BE USED IN EACH APPROACH LANE. ALL LETTERS AND SYMBOLS SHALL BE IN CONFORMANCE WITH THE "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS" (ADOPTED BY THE FEDERAL HIGHWAY ADMINISTRATION).

CENTER OR LANE LINES AND NO-PASSING ZONE MARKINGS SHOWN ON THIS DRAWING ARE REQUIRED AND PAID FOR UNDER OTHER ITEMS IN THE CONTRACT.

1. A PORTION OF THE PAVEMENT MARKING SYMBOL SHOULD BE DIRECTLY OPPOSITE THE ADVANCE WARNING SIGN (W10-1).
2. MINIMUM 8' FROM ANY RAILROAD WARNING DEVICES (SIGNALS, GATES, ETC.) OR 25' FROM THE NEAREST RAIL, WHICHEVER DISTANCE IS GREATER.
3. REFLECTIVE WHITE.
4. REFLECTIVE YELLOW 500' MINIMUM. MARKING LIMITS MAY BE EXTENDED AS DIRECTED BY THE ENGINEER TO MEET ADJACENT NO-PASSING ZONE MARKINGS.
5. TABLE BASED UPON 2C-4 WISCONSIN SUPPLEMENT OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
6. FOR MULTIPLE TRACK CROSSINGS, THE BARRIER LINE SHALL EXTEND TO THE NEAR RAIL OF THE FURTHEST TRACK IN THE DIRECTION OF HIGHWAY TRAVEL.

SIGNING AND PAVEMENT MARKING DETAILS FOR RAILROAD-HIGHWAY GRADE CROSSINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

1-9-2012
DATE

/S/ Thomas N. [illegible]
STATE TRAFFIC ENGINEER

FHWA

6

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

6

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

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA

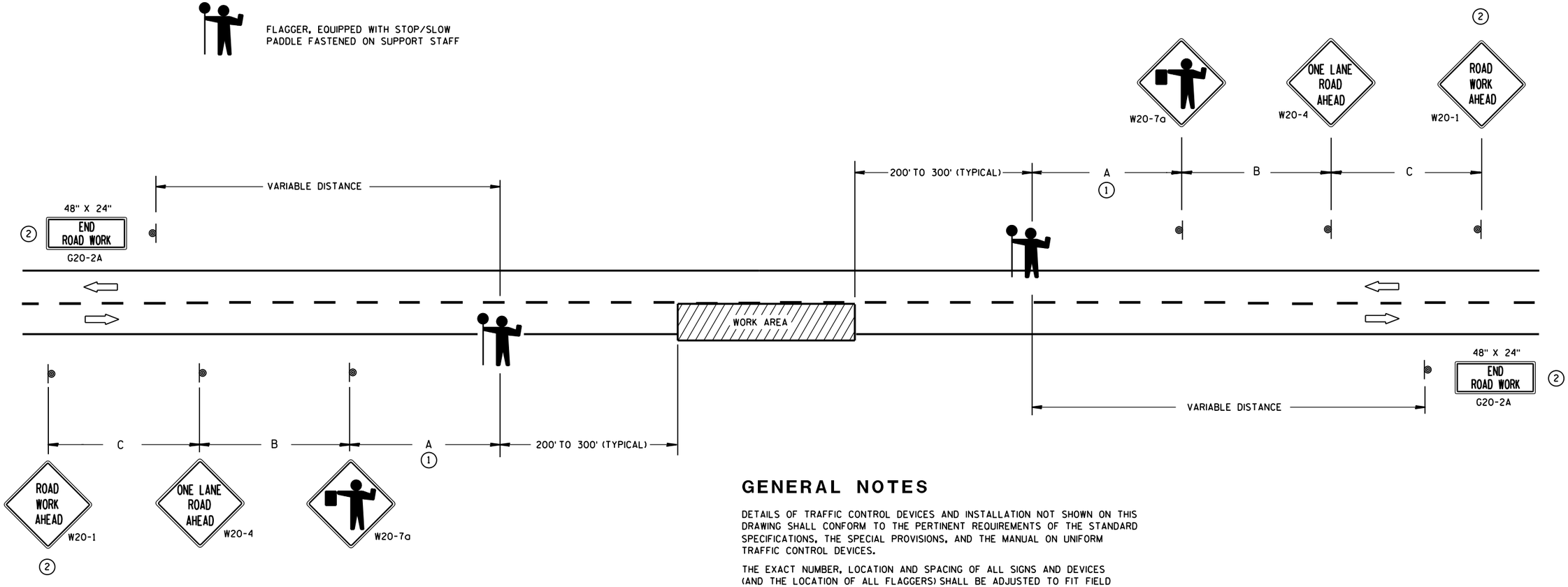
FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN SPACING TABLE

SPEED LIMIT	SIGN SPACING A,B,C
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'

W3-4

USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



(1) FOR A MOVING WORK OPERATION,
SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

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

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.

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

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

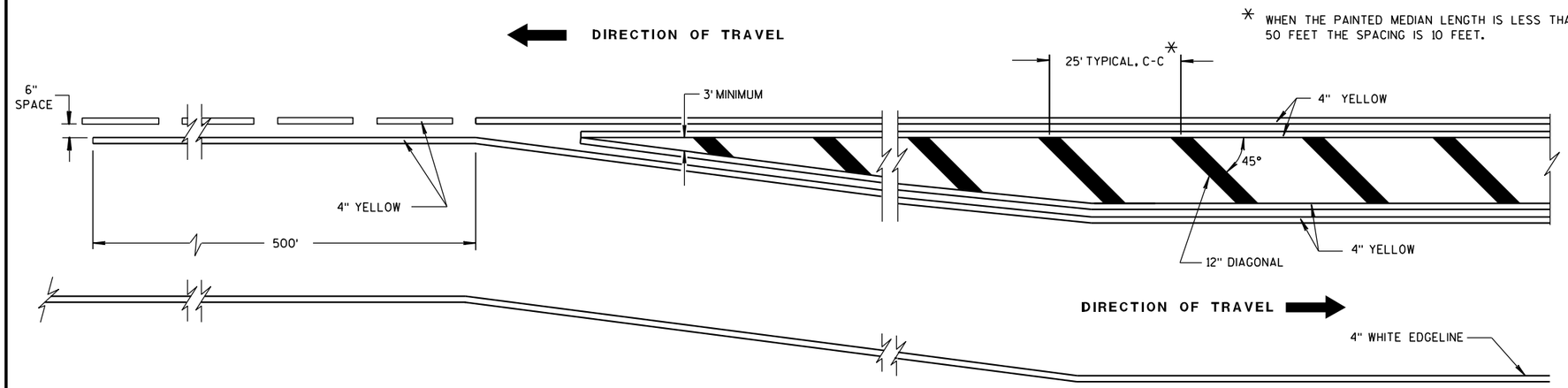
APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 C 12-4

6

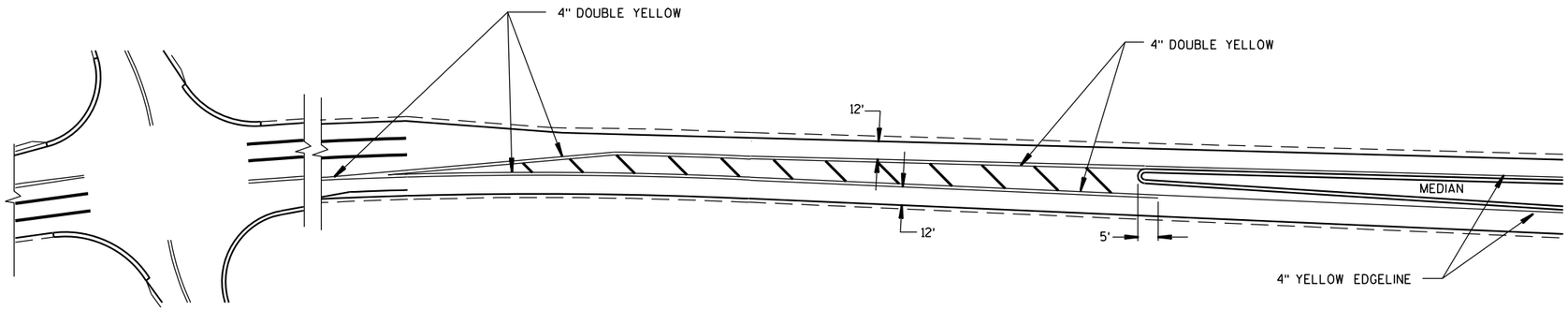
S.D.D. 15 C 12-4



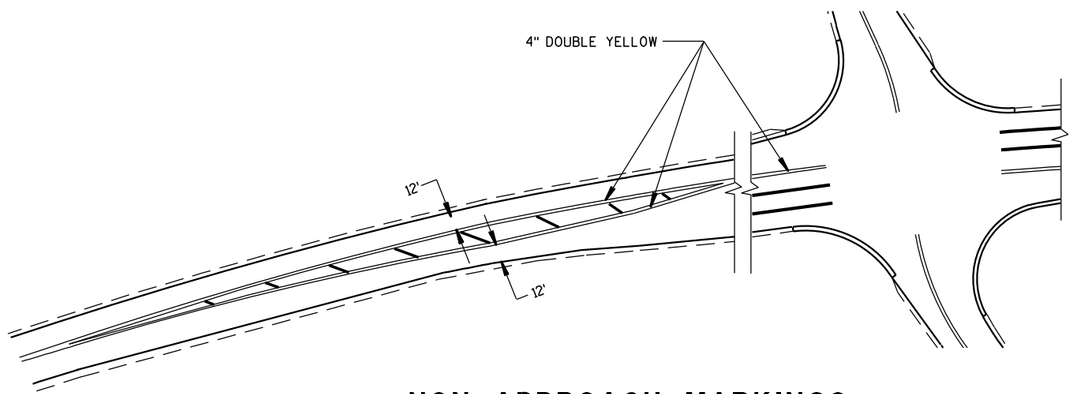
MEDIAN ISLAND DETAIL

GENERAL NOTE

DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT WIDEST POINT.



APPROACH MARKINGS FOR OTHER MEDIAN TYPES

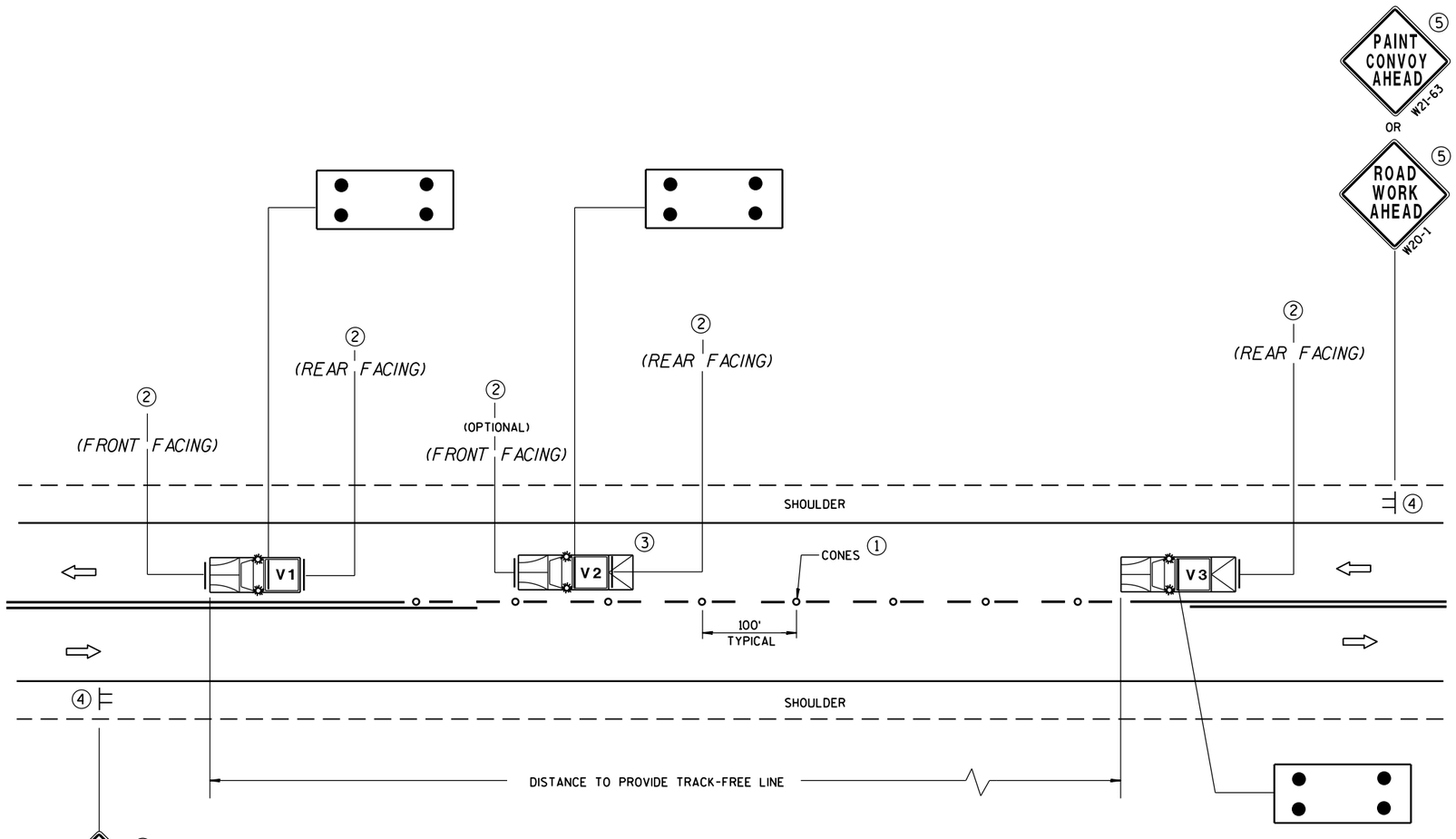


NON APPROACH MARKINGS

MEDIAN ISLAND MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 2-5-09 DATE	/S/ Thomas N. Nothohm STATE TRAFFIC ENGINEER
FHWA	

6

S.D.D. 15 C 18-3



MOVING PAVEMENT MARKING OPERATIONS
TWO-LANE TWO-WAY ROADWAY

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE MARKING.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

(1) CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

(2) USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.

WET PAINT W21-64 OR WET PAINT W21-64

(3) OPTIONAL TRUCK-MOUNTED ATTENUATOR.

(4) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

(5) IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

LEGEND

- **V1** LEAD VEHICLE
- **V2** SHADOW VEHICLE
- **V3** TRAIL VEHICLE WITH TMA
- **TMA** TRUCK-MOUNTED ATTENUATOR
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- CONES
- FLASHING ARROW PANEL (CAUTION)

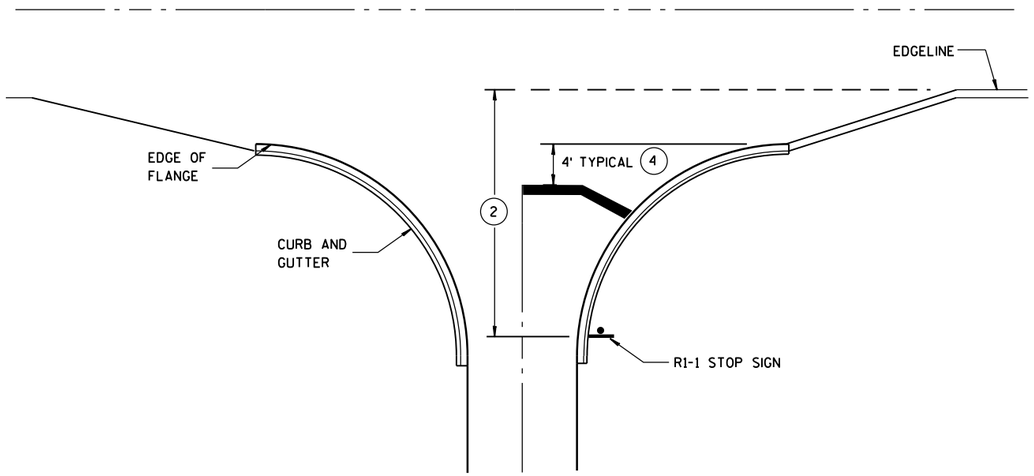
MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 5/3/2013 DATE	/S/ Travis Feltes STATE TRAFFIC E
FHWA	

6

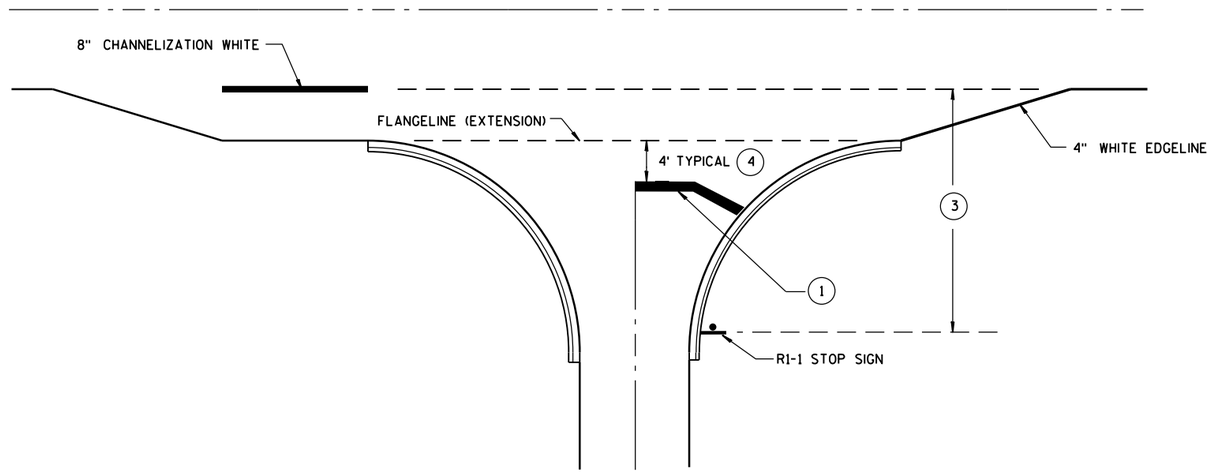
S.D.D. 15 C 19-2a

6

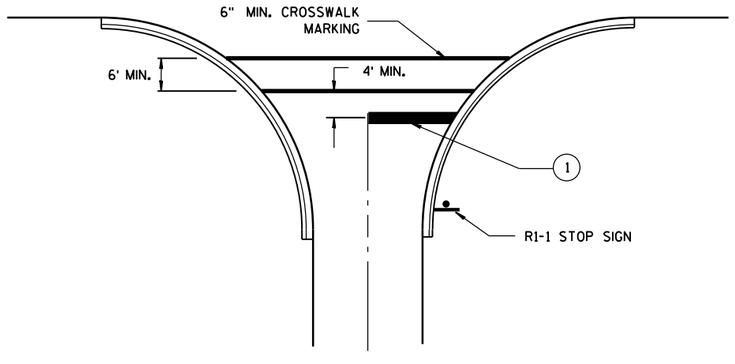
S.D.D. 15 C 19-2a



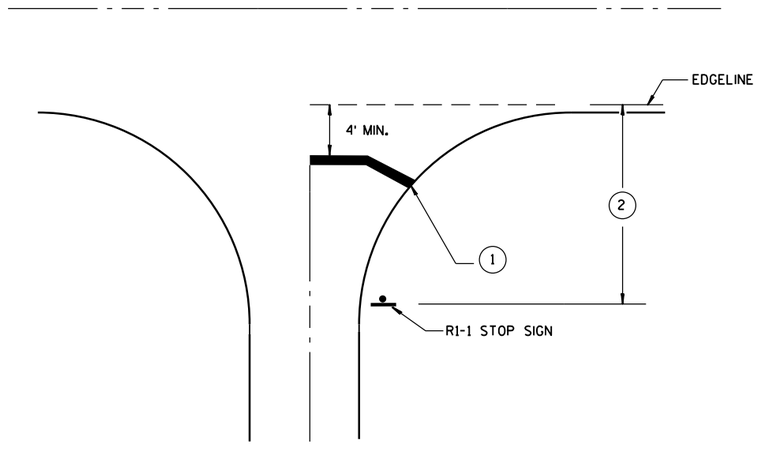
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



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

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.

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4/30/2013
DATE

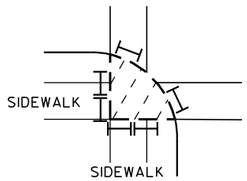
/S/ Travis Feltes
STATE TRAFFIC E

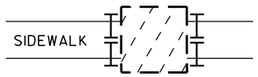
FHWA

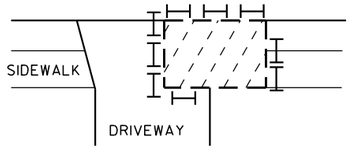
6

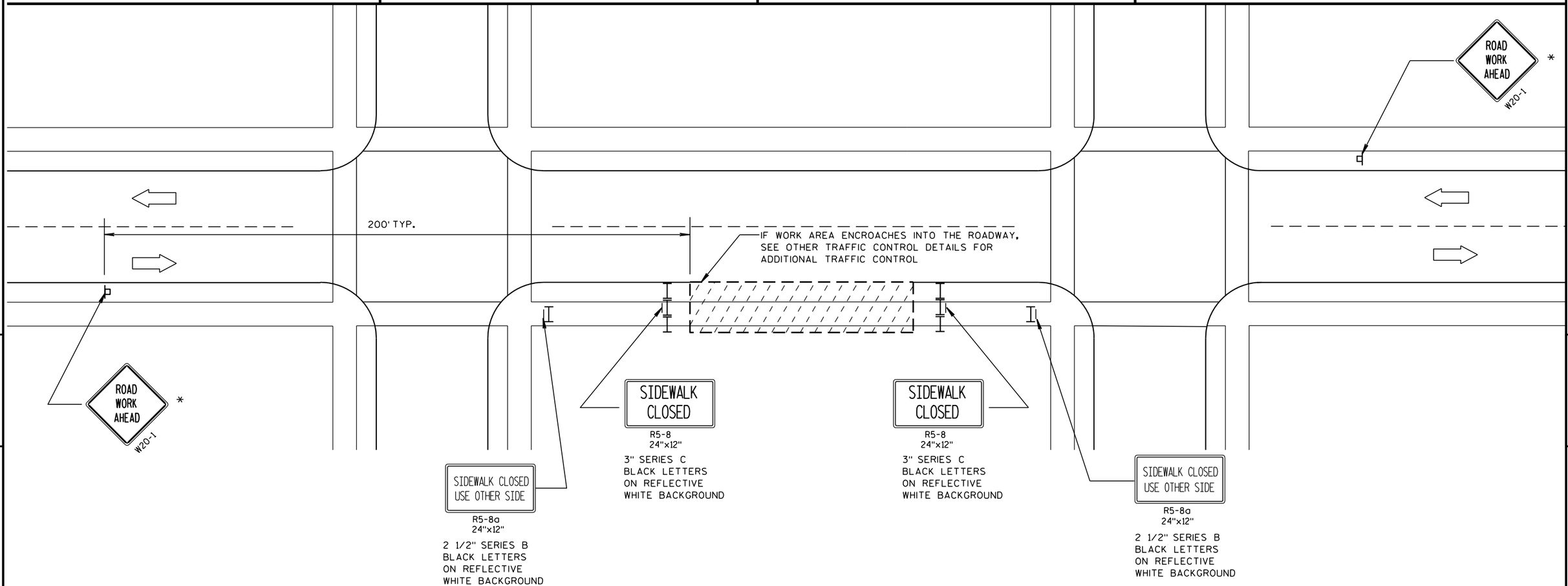
S.D.D. 15 C 33-1

WARNING OF LOCALIZED SIDEWALK WORK AREAS









LEGEND

- POST MOUNTED SIGN
- TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC FLOW

GENERAL NOTES :

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS, IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

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

* "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.

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

TRAFFIC CONTROL, SIDEWALK CLOSURE

TRAFFIC CONTROL, SIDEWALK CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

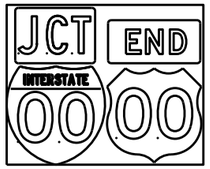
APPROVED
5/23/2000 DATE
/S/ Chester J. [illegible]
CHIEF SIGNS AND MARK[illegible]NEER
FHWA

6

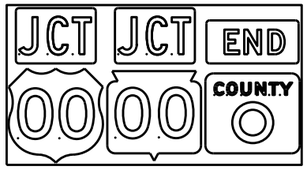
S.D.D. 15 D 30-1

TYPICAL ASSEMBLIES

J1-1

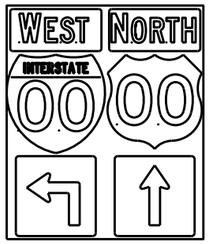


J1-2

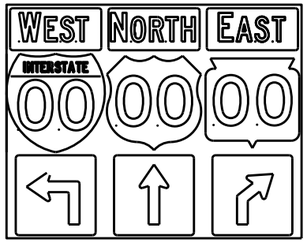


J1-3

J2-1



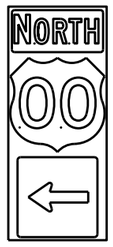
J2-2



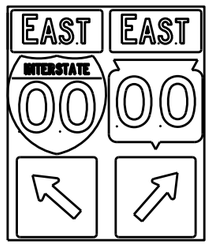
J2-3

JV

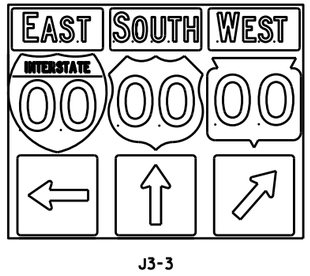
(Typical Vertical J-Assembly
See Note 10 and 11)



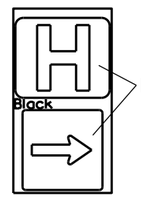
J3-1



J3-2

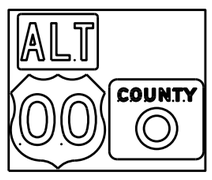


J3-3

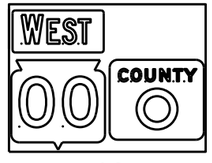


JH-1

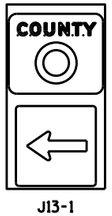
J4-1



J4-2



J4-2



J13-1

J12-1

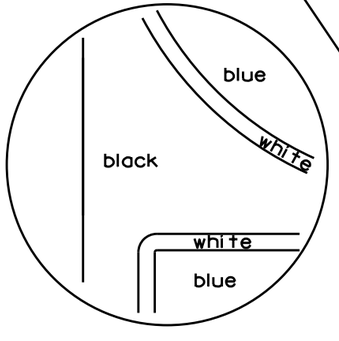
J32-1

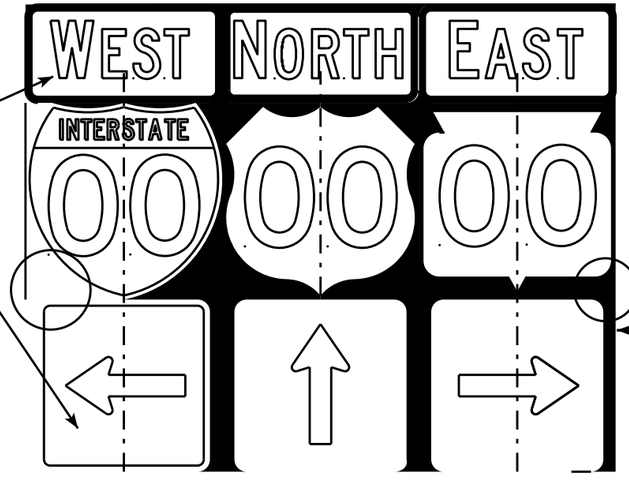
J33-1

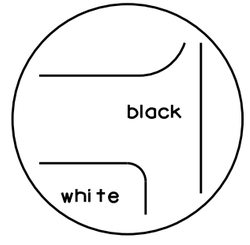
J23-1

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.

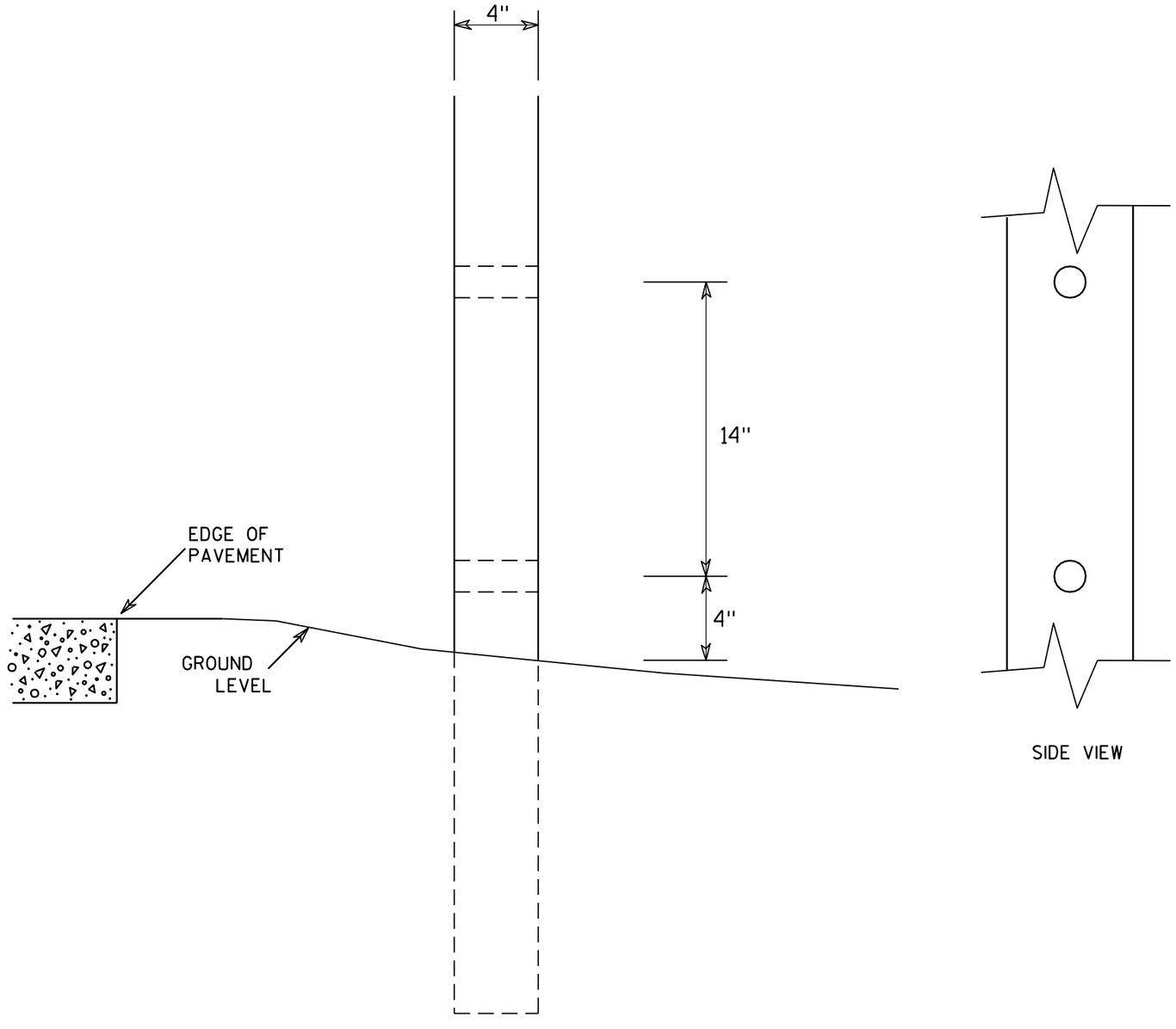
ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

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



SIDE VIEW

GENERAL NOTES

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

7

7

4 X 6 WOOD POST MODIFICATIONS

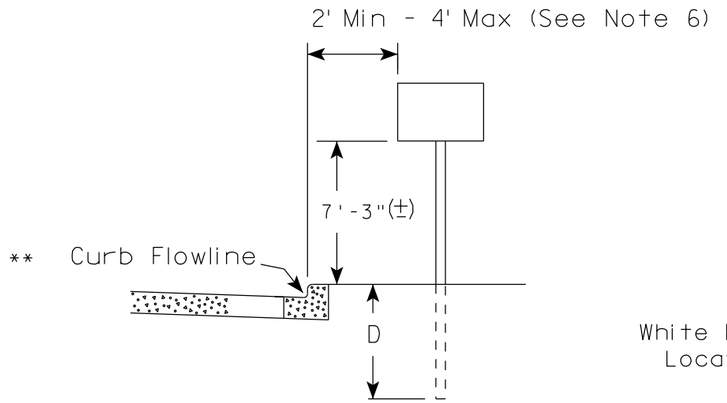
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

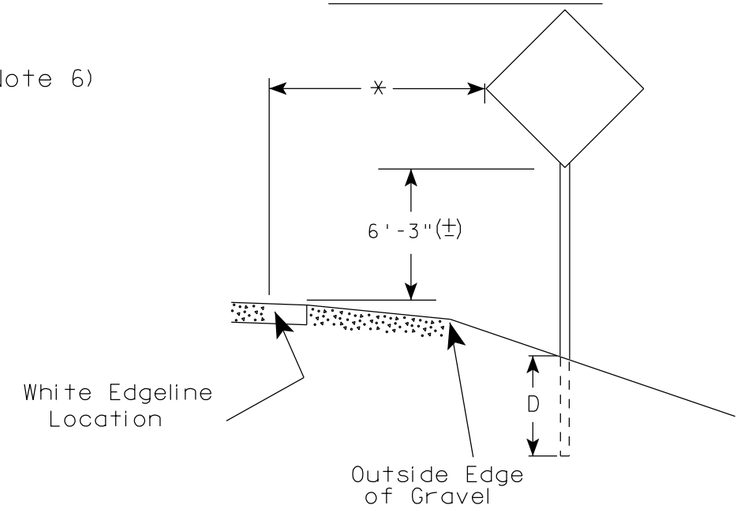
DATE 3/27/97 PLATE NO. A4-11.2

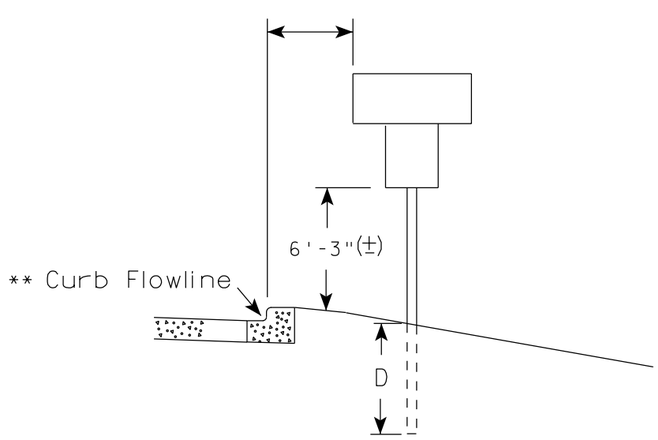
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 137	E

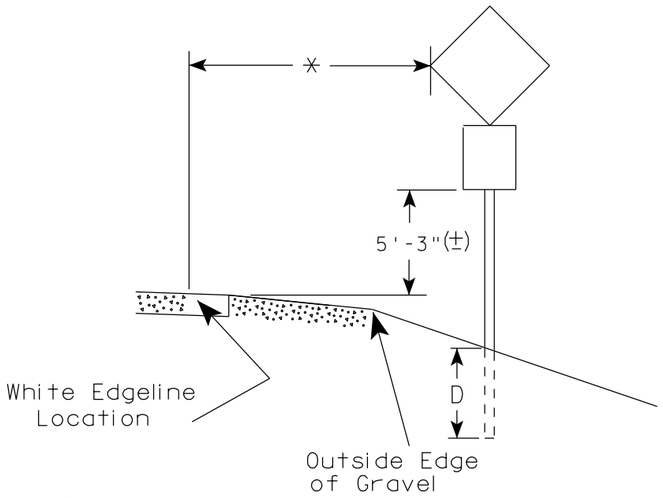
URBAN AREA



RURAL AREA (See Note 2)







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

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

GENERAL NOTES

1. Signs wider than 4 feet, 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. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
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 stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed 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) & End of Rod Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (+).

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

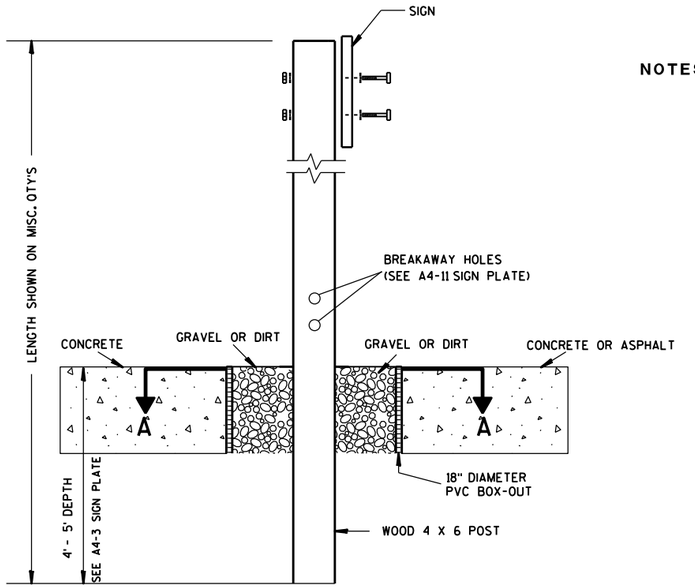
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/13 PLATE NO. A4-3.18

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

7

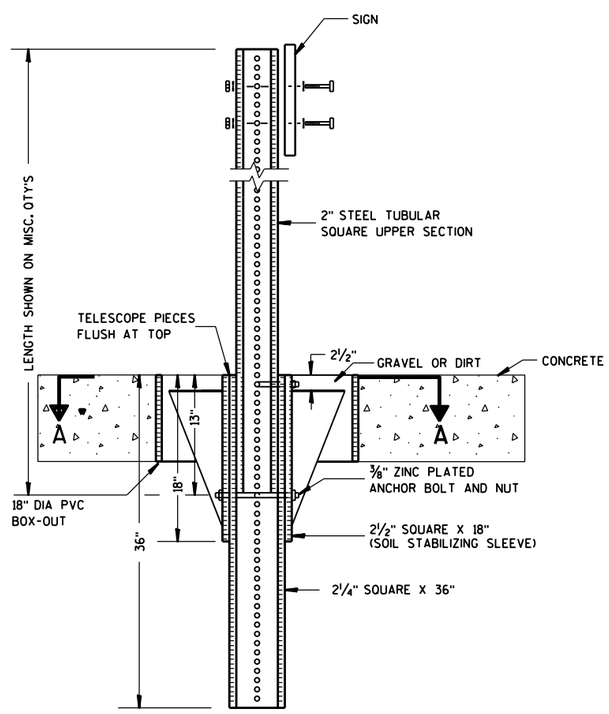
7



ELEVATION VIEW

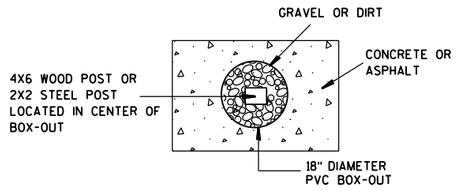
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

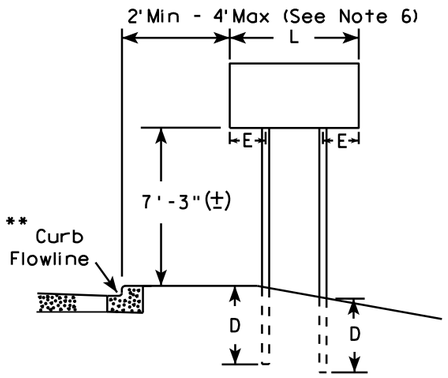
APPROVED Matthew R Rauch
for State Traffic Engineer

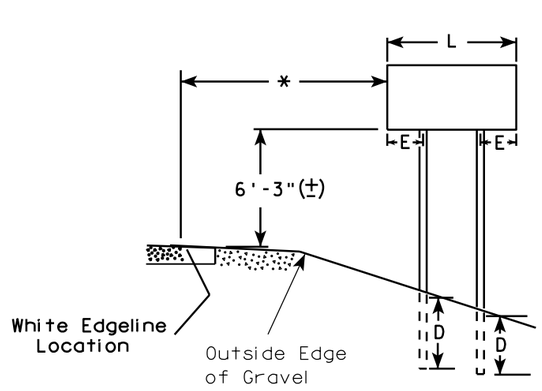
DATE 1/27/14 PLATE NO. A4-3B.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

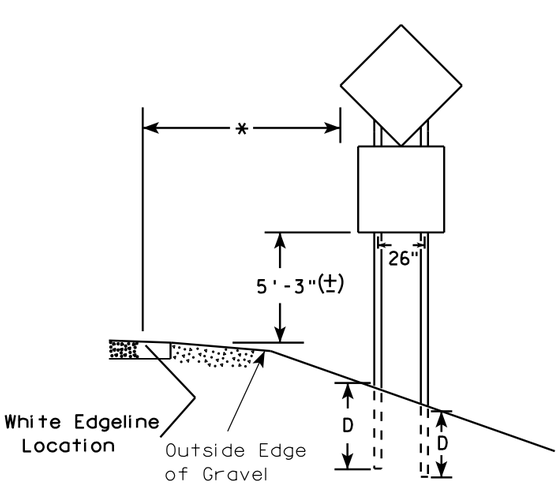
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

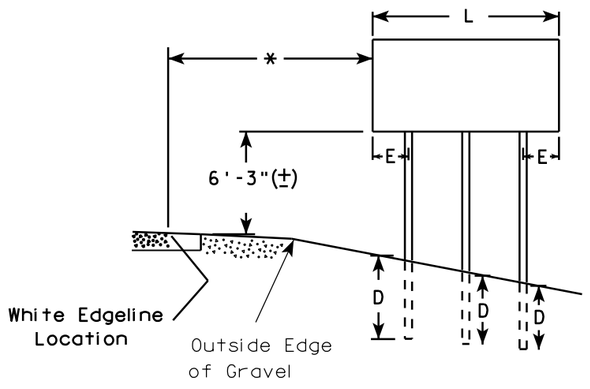
URBAN AREA





RURAL AREA (See Note 3)





48" DIAMOND WARNING SIGN

48" DIAMOND WARNING SIGN

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. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding stop signs (R1-1F) 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) & End of Road Markers (W5-56 & W5-56A) 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 or 20 S.F. or less in area.

***

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 120"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

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 9/30/13 PLATE NO. A4-4 12

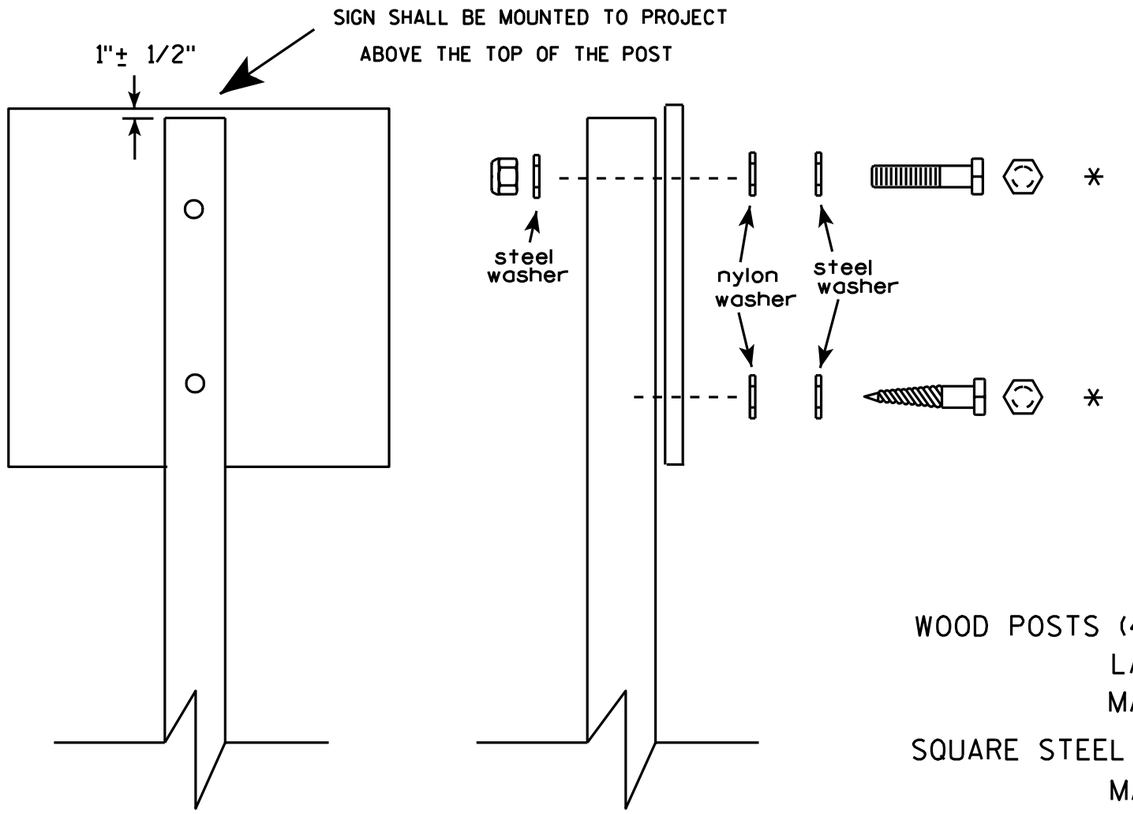
140

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A44.DGN PLOT DATE : 30-SEP-2013 13:27 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 107.021305:1.000000

WISDOT/CADDS SHEET 42

7 7



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

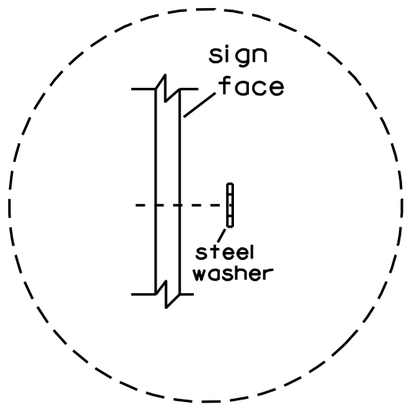
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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.



Washer Placement when Sign Has Other Than Type H or Type F Face

* 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

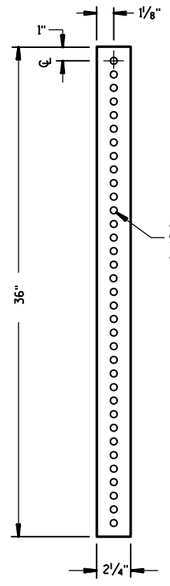
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

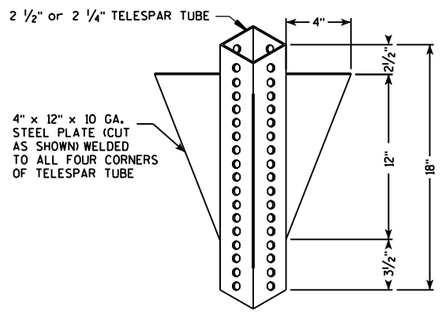
DATE 3/23/10 PLATE NO. A4-8.7

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

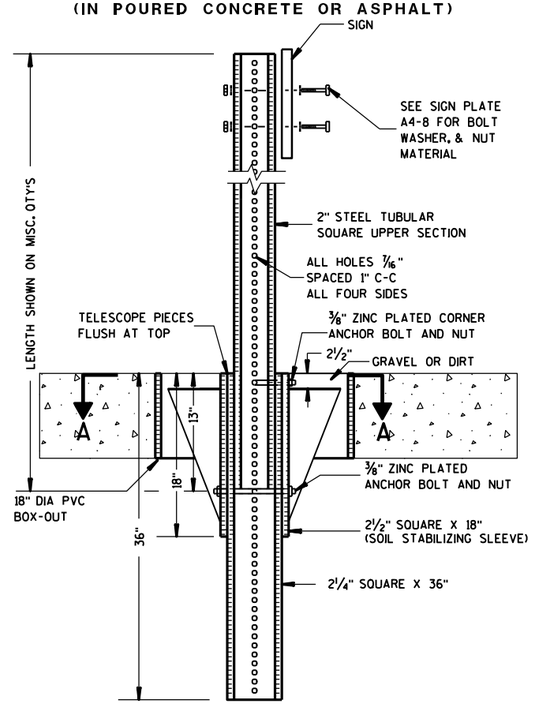
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



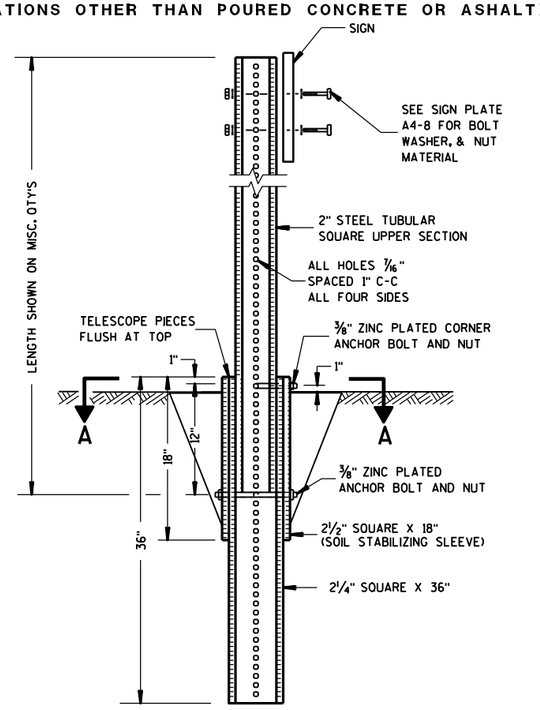
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

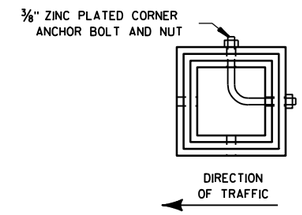


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





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

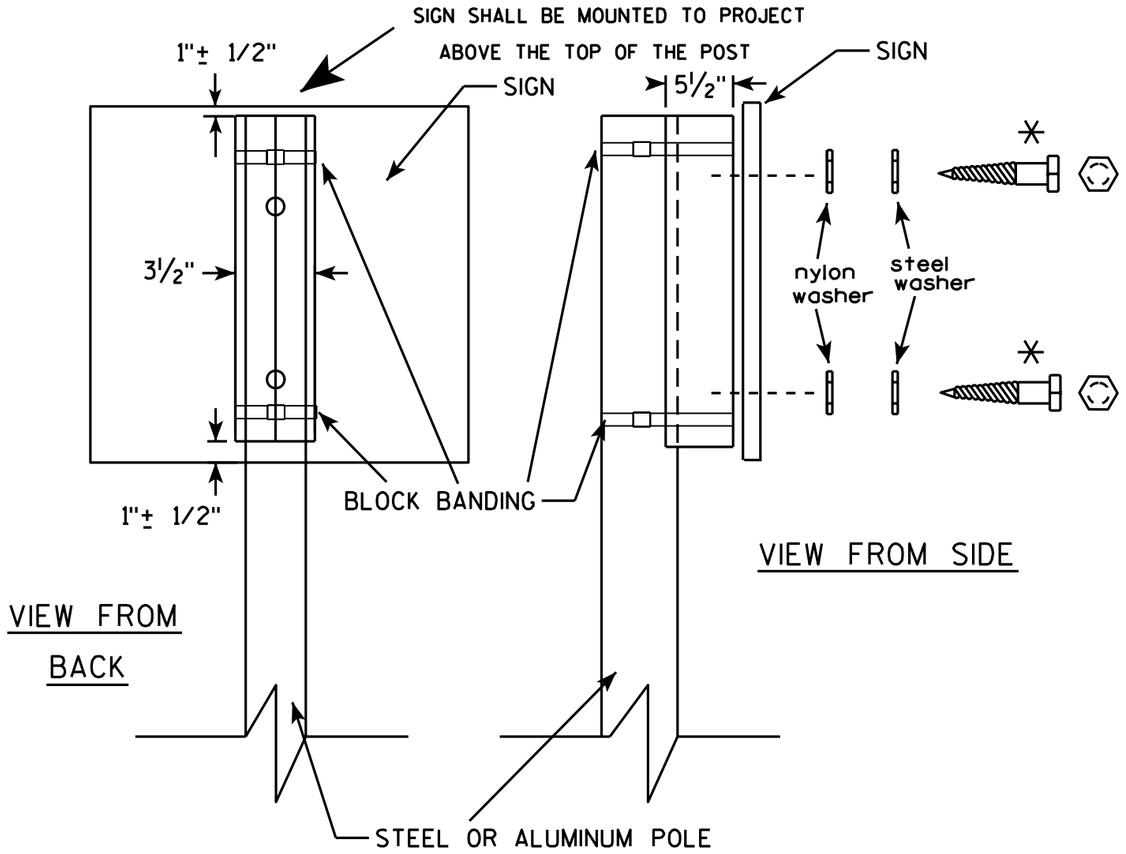
Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

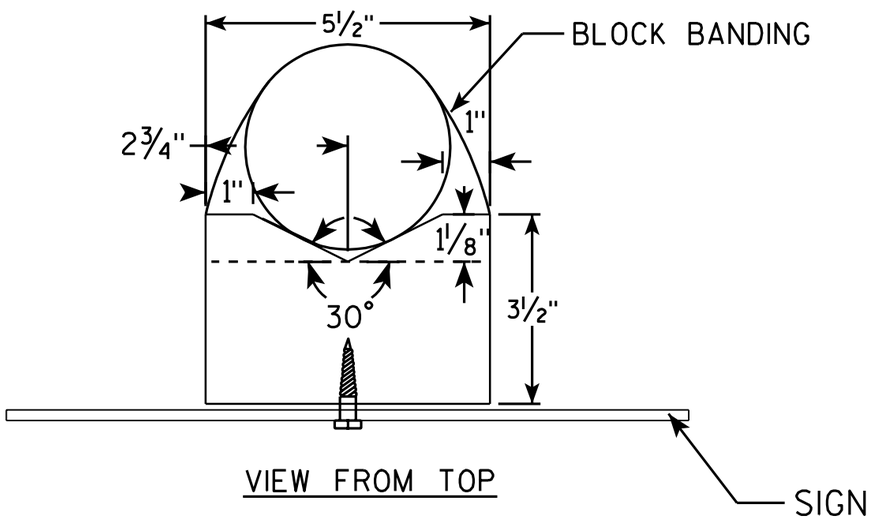
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 5/30/12 PLATE NO. A4-9.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 142	E





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D, or
   b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
   c. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:

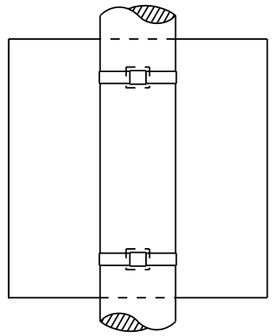
SHEET NO: 143 E

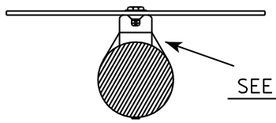
FILE NAME : C:\Users\Projects\tr_stdplate\A510.dgn PLOT DATE : 06-AUG-2007 13:37 PLOT BY : ditjph

WISDOT/CADDS SHEET 42

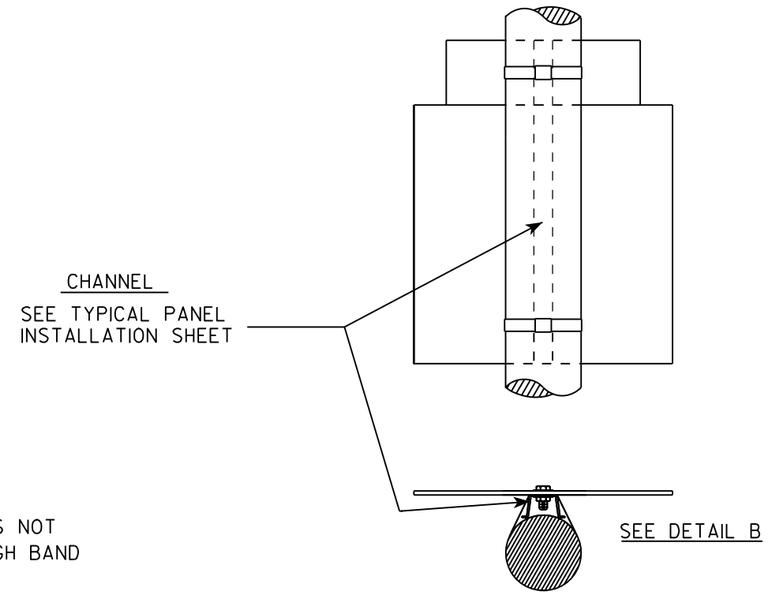
BANDING

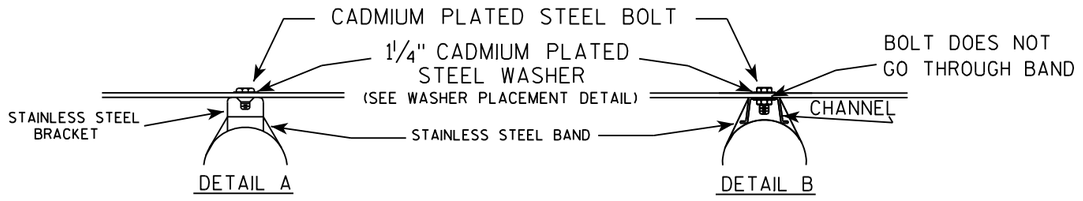
SINGLE SIGN



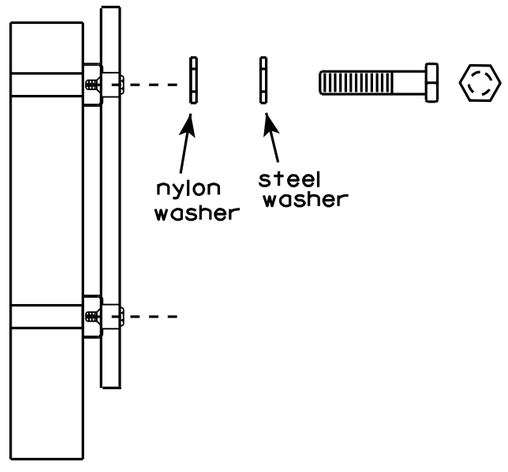


"J" ASSEMBLY





WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

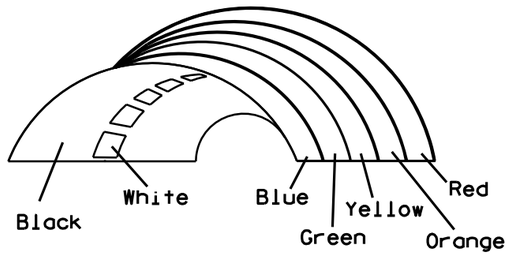
DATE 8/16/13 PLATE NO. A5-9.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 144	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 - White
   Message - (See Note 5)
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. Border - Blue
   Line 1 - Red
   Line 2 - Black
   Line 3-5 - Blue
6. Line 1 - Dutch 8011L
   Line 2 - Series E
   Line 3-5 - Series C
7. Contractor shall provide and install a new post bracket in accordance with the I55-56B sign detail.

Background Colors of Symbol*



*1/4" Black Border between each color of rainbow and border of rainbow

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	36	1 1/2	1/2	5/8	3	2	3 1/2	2 7/8	1	8	2 1/8	11 1/4	11 1/8	9 3/8	1 1/4		3/4	12 5/8	7 1/2							7.5
3																											
4																											
5																											

STANDARD SIGN
I55-56

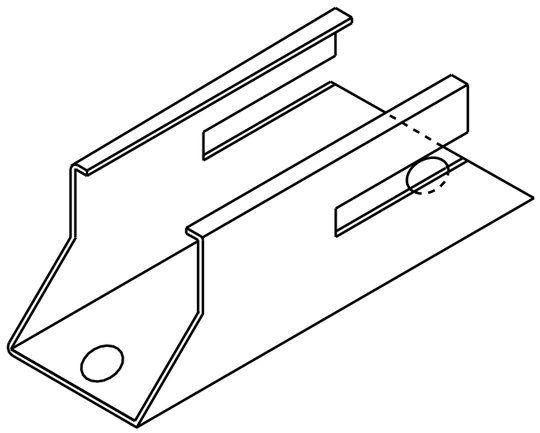
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/27/11 PLATE NO. 155-56.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 145

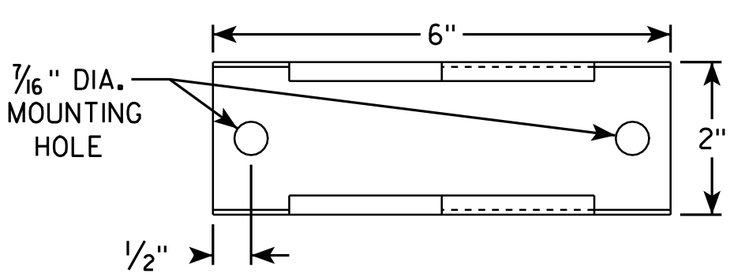
ISOMETRIC VIEW



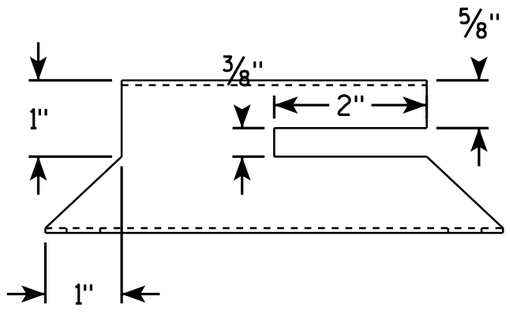
NOTES

1. Must be capable of permanent attachment to a wood or steel channel sign post utilizing the fastening hardware specified on the A4-8 sign plate.
2. Shall be entirely primed and painted with two coats of a black powder coated enamel paint.
3. Shall be made with 12 gauge steel, and incorporate no welds, no hinged components, no threaded lock-type components, and no parts which are loose or can be separated from the main body.
4. Shall have rounded edges with at least 1/8" radii.
5. Shall not have unrounded and uncoated metal edges which can contact the back surface of the roll-up sign.
6. Top of bracket shall be mounted 2' below the bottom of the I55-56 sign.
7. Cost of bracket and fastening hardware shall be incidental to the I55-56 sign.

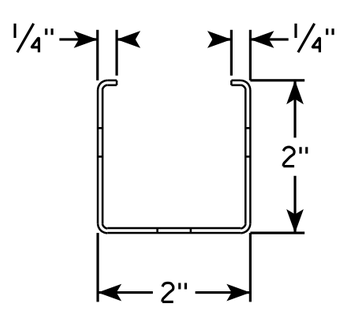
TOP VIEW



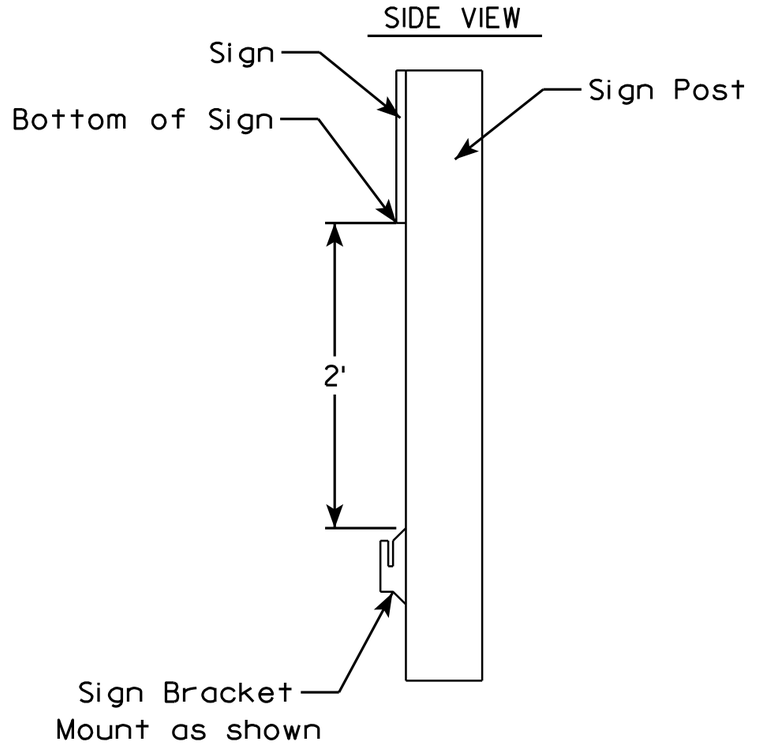
SIDE VIEW



END VIEW



SIDE VIEW



7

7

ROLLUP SIGN BRACKET I55-56B

WISCONSIN DEPT OF TRANSPORTATION

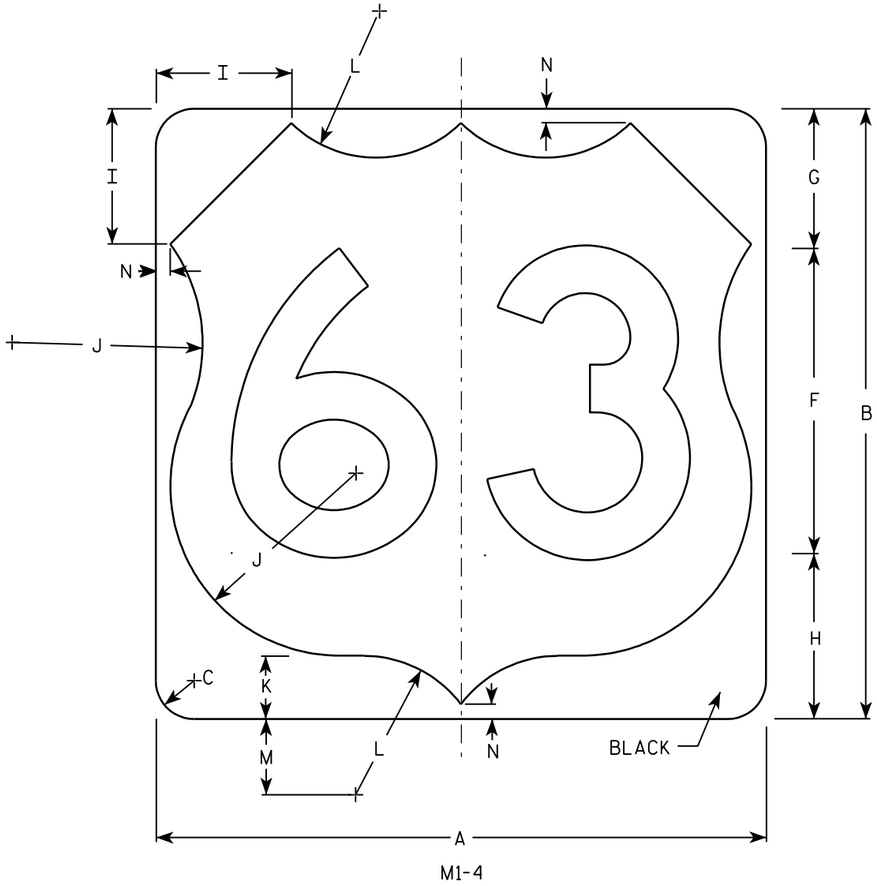
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 2/5/10 PLATE NO. I55-56B.1

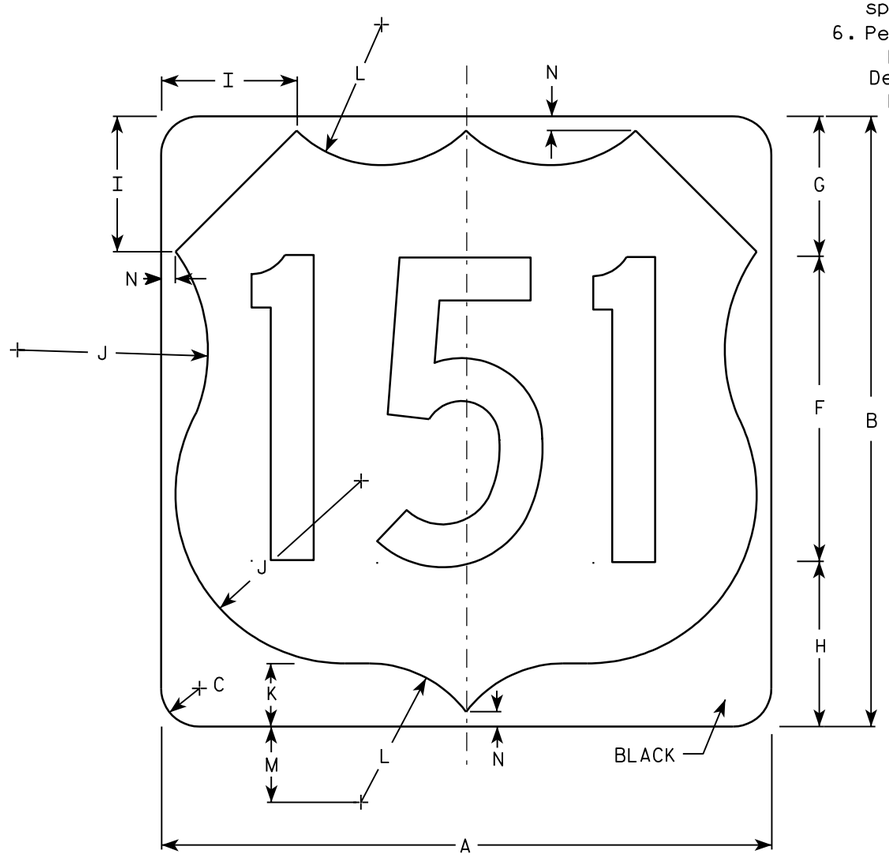
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 146	E

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 6
   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. Substitute appropriate numerals and adjust spacing as per Plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or other temporary signs
   Background - Reflective



M1-4



M1-4

Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 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																												
2	24	24	1 1/2			12	5 1/2	6 1/2	5	7 1/2	2 1/2	5 1/2	3	1/2													4.0	.36
3	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
4	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
5	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81

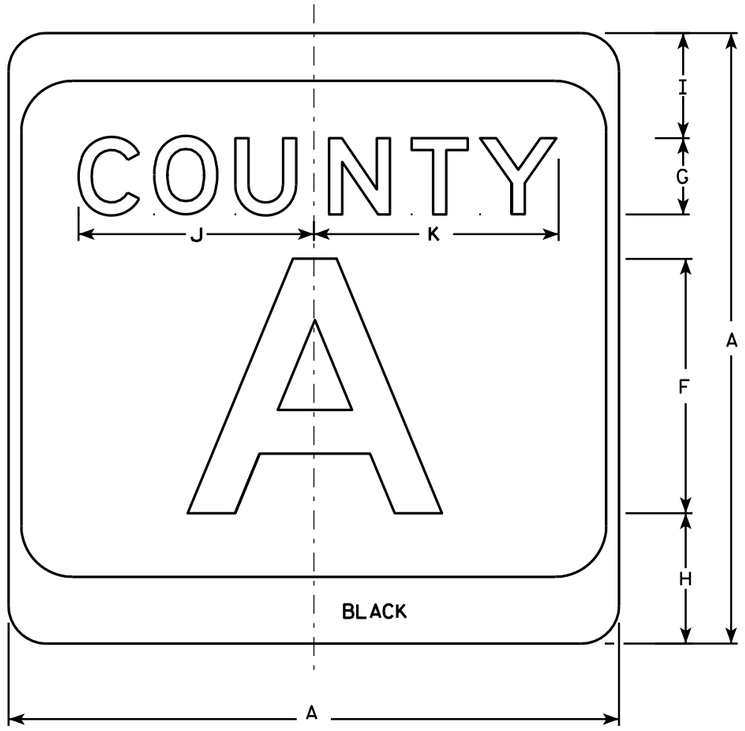
USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

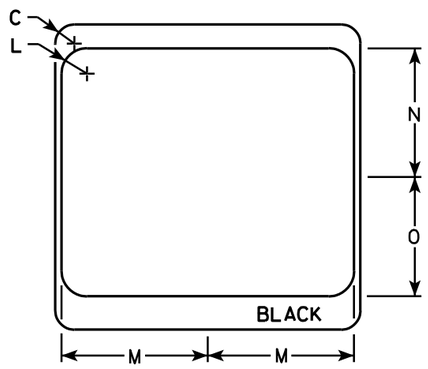
APPROVED Matthew R Rauch
for State Traffic Engineer

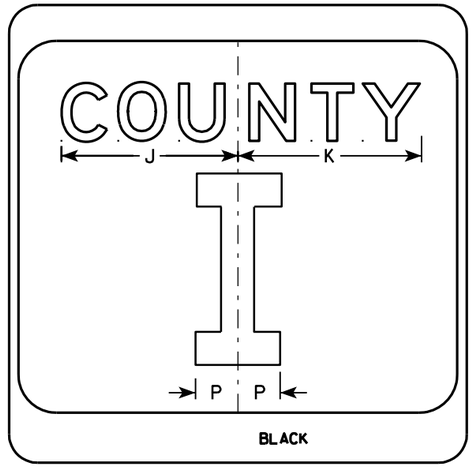
DATE 08/25/05 PLATE NO. M1-4.9

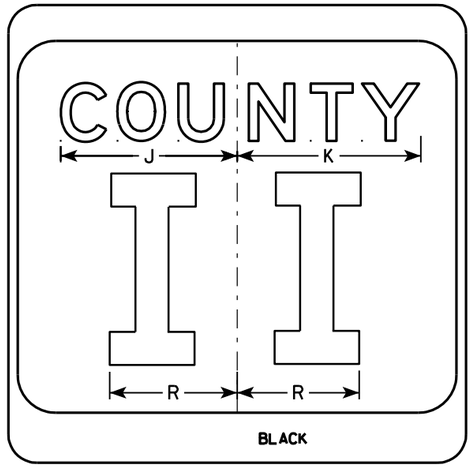
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 147 | E



M1-5A







NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 7
   Message - Black
3. Message Series - see Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Message Series E for 1 letter.
   Message Series D for 2 letters unless message is too big then Series C.
   Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

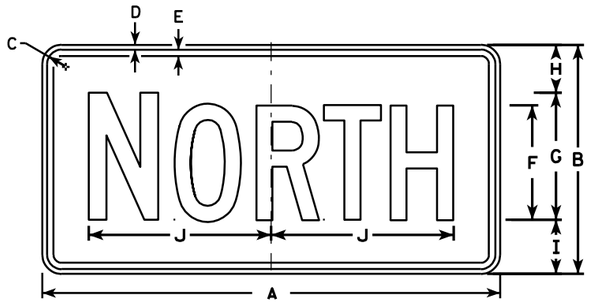
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

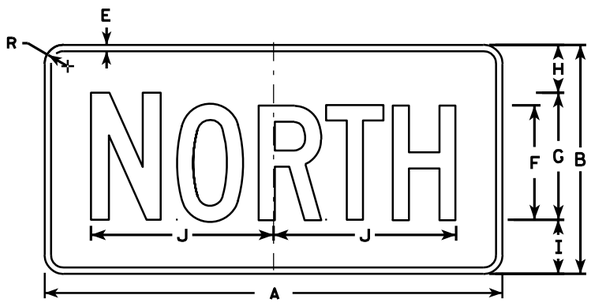
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 148	E



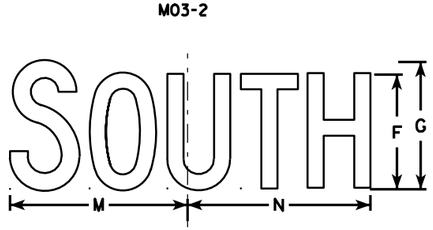
M3-1
MK3-1
MO3-1



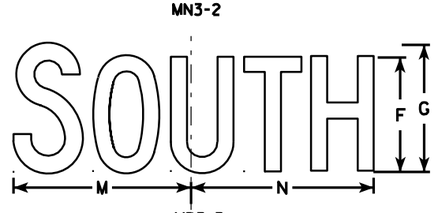
MB3-1
MG3-1
MM3-1
MN3-1

M3-2
MK3-2
MO3-2

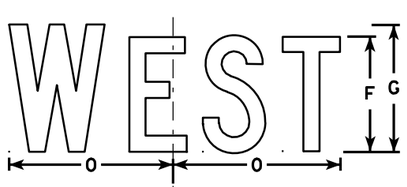
MB3-2
MG3-2
MM3-2
MN3-2



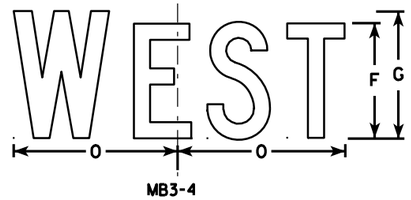
M3-3
MK3-3
MO3-3



MB3-3
MG3-3
MM3-3
MN3-3



M3-4
MK3-4
MO3-4



MB3-4
MG3-4
MM3-4
MN3-4

NOTES

1. All Signs Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
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 - Type H Reflective
   (Detour or temporary signs - Reflective)
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White - Type H Reflective
   (Detour or temporary signs - Reflective)
   MG3-1 thru MG3-4 Background - Green
   Message - White - Type H Reflective
   MK3-1 thru MK3-4 Background - Green
   Message - White - Type H Reflective
   MM3-1 thru MM3-4 Background - White - Type H Reflective
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White - Type H Reflective
   M03-1 thru M03-4 Background - Orange - Reflective
   Message - Black
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

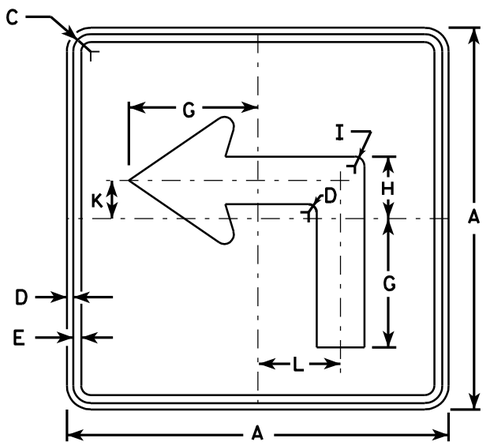
STANDARD SIGNS
M3-1 thur M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

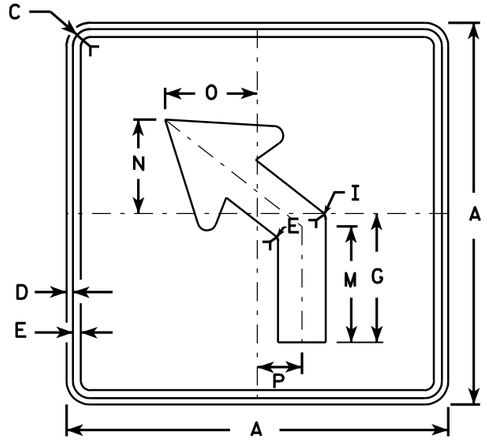
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 11/10/10 PLATE NO. M3-1.12

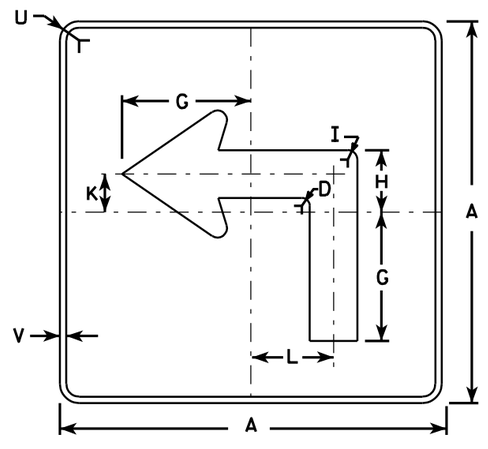
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 149	E



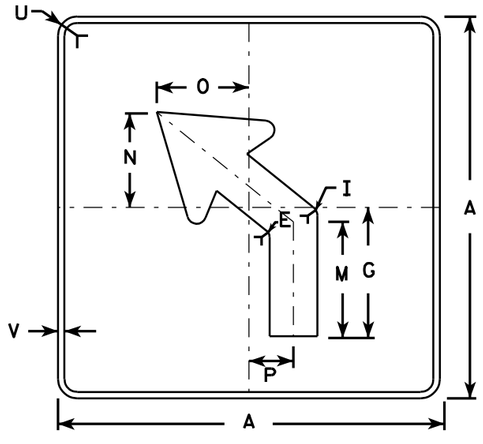
M5-1L
MK5-1L
MM5-1L
MO5-1L
MP5-1L
MR5-1L



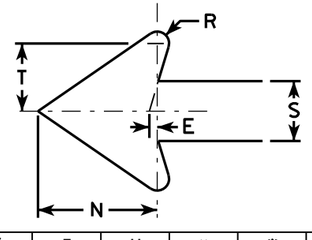
M5-2L
MK5-2L
MM5-2L
MO5-2L
MP5-2L
MR5-2L



MB5-1L
MG5-1L
MN5-1L



MB5-2L
MG5-2L
MN5-2L



NOTES

1. Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M5-1 and M5-2 Background - White - Type H Reflective
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White - Type H Reflective
   MG5-1 and MG5-2 Background - Green
   Message - White - Type H Reflective
   MK5-1 and MK5-2 Background - Green
   Message - White Type H Reflective
   MM5-1 and MM5-2 Background - White - Type H Reflective
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White - Type H Reflective
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White - Type H Reflective
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow - Type H Reflective
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 1/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 1/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 1/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

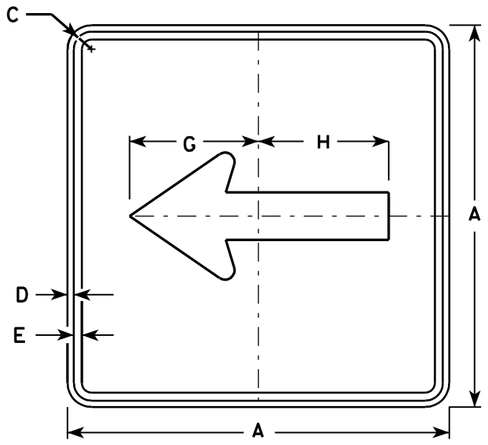
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/29/13 PLATE NO. M5-1.12

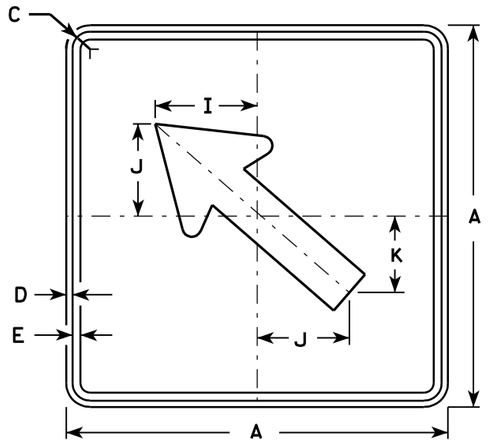
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 150	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\M51.DGN PLOT DATE : 29-JUL-2013 13:34 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 11.908552:1.000000

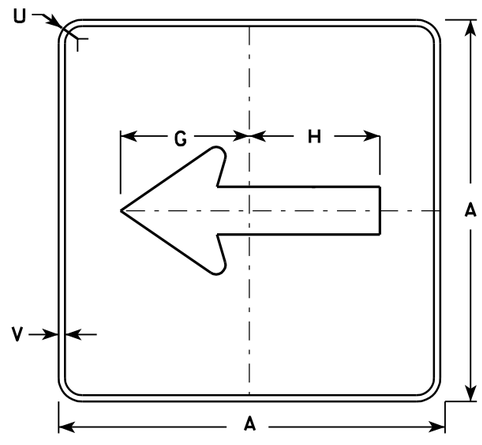
WISDOT/CADDS SHEET 42



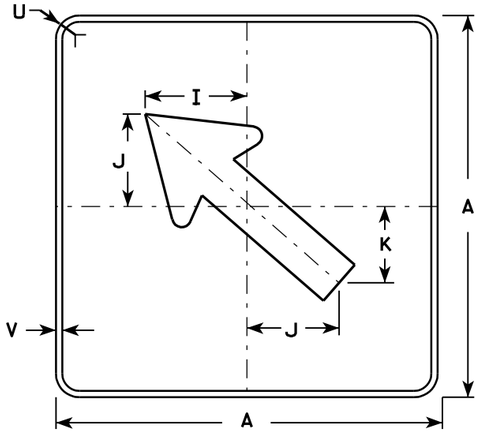
M6-1
MK6-1
MM6-1
MO6-1
MP6-1
MR6-1



M6-2
MK6-2
MM6-2
MO6-2
MP6-2
MR6-2



MB6-1
MG6-1
MN6-1



MB6-2
MG6-2
MN6-2

NOTES

1. Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White - Type H Reflective
   Message - Black

   MB6-1 and MB6-2 Background - Blue
   Message - White - Type H Reflective

   MG6-1 and MG6-2 Background - Green
   Message - White - Type H Reflective

   MK6-1 and MK6-2 Background - Green
   Message - White - Type H Reflective

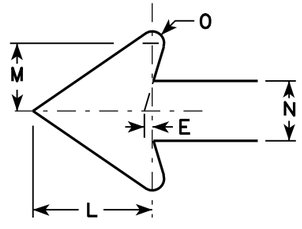
   MM6-1 and MM6-2 Background - White - Type H Reflective
   Message - Green

   MN6-1 and MN6-2 Background - Brown
   Message - White - Type H Reflective

   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black

   MP6-1 and MP6-2 Background - White - Type H Reflective
   Message - Blue

   MR6-1 and MR6-2 Background - Brown
   Message - White - Type H Reflective



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2						3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25

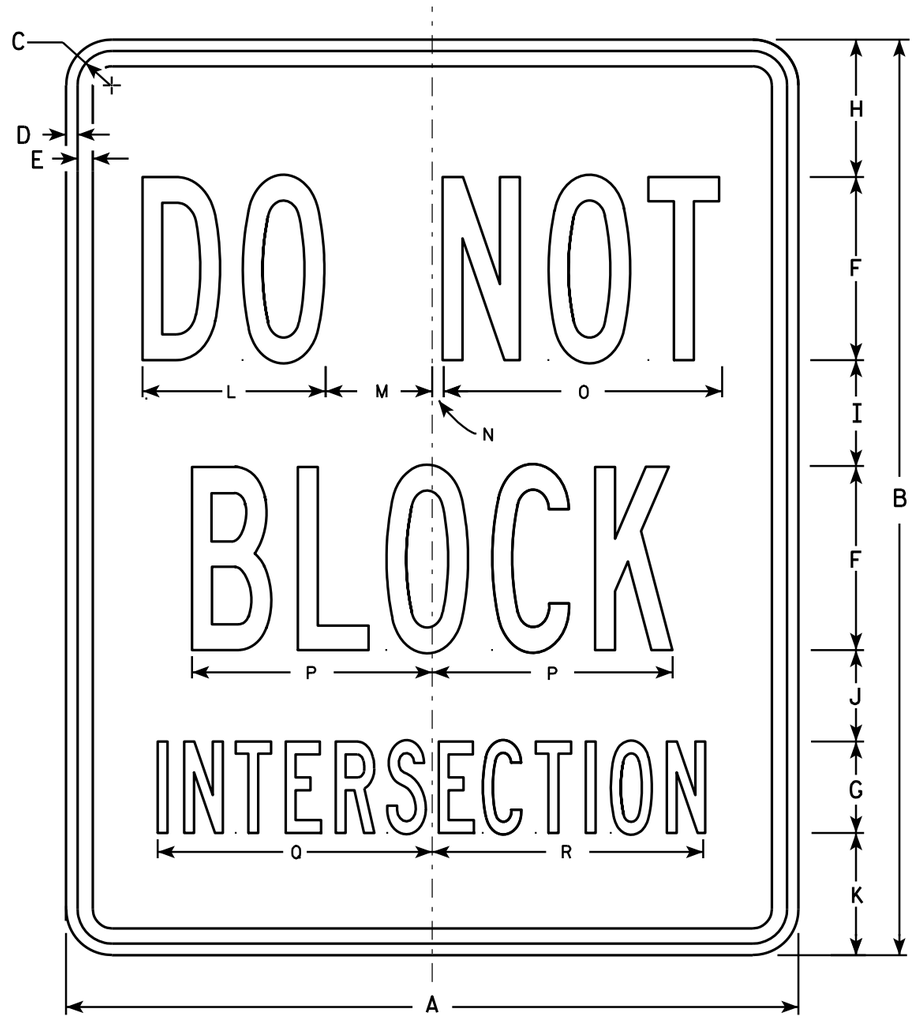
STANDARD SIGN M6-1 & M6-2 SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/29/13 PLATE NO. M6-1.13

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 151	E



R10-7

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 - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	30	1 1/8	3/8	1/2	6	3	4 1/2	3 1/2	3	4	6	3 1/2	3/8	9 1/8	7 7/8	9	8 7/8									5.0
2M	24	30	1 1/8	3/8	1/2	6	3	4 1/2	3 1/2	3	4	6	3 1/2	3/8	9 1/8	7 7/8	9	8 7/8									5.0
3	36	48	1 3/8	1/2	5/8	10	5	7	5 1/4	4 1/2	6 1/4	10	5 5/8	1/2	15 1/8	13 1/8	15	14 7/8									12.0
4																											
5																											

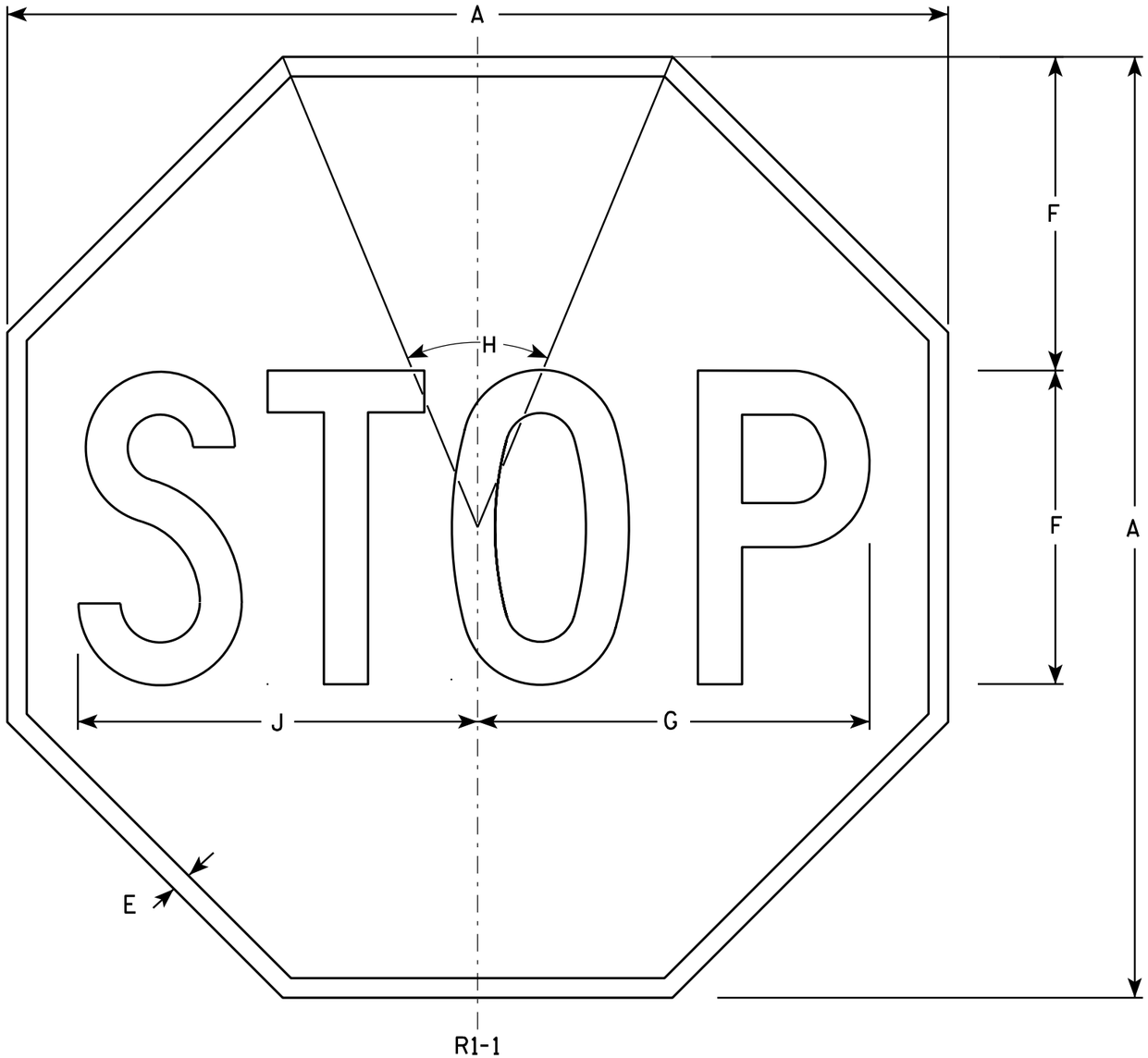
STANDARD SIGN
R10-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/5/11 PLATE NO. R10-7.5

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 152 | 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	24				3/8	8	10	45°		10 1/4																	3.31
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

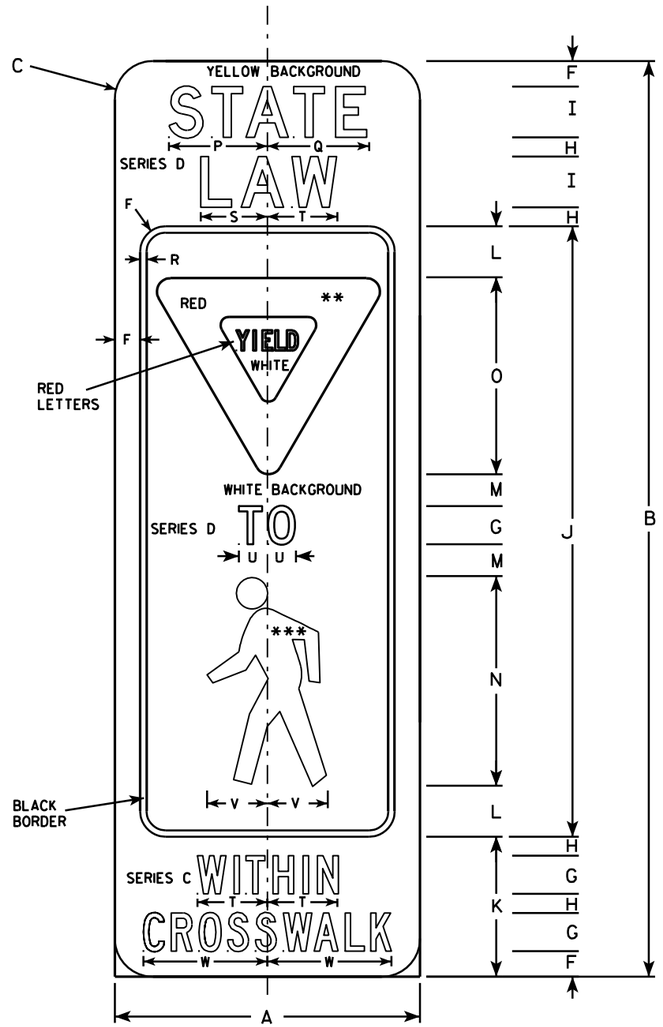
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 153	E



R1-6

** INSERT R1-2 AND SIZE TO FIT

*** INSERT W11-2 AND SIZE TO FIT

NOTES

1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - YELLOW
   Message - BLACK
   YIELD SYMBOL - RED ON WHITE
   PED SYMBOL - BLACK ON WHITE
3. Message Series - AS SHOWN AND IN TABLE
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36	1 1/2			1	1 1/2C	3/4	2 D	24	5 1/2	2	1 1/4	8 1/4	7 3/4	3 7/8	4	1/4	2 5/8	2 3/4	1 1/8	2 3/8	4 7/8				3.0
2M	12	36	1 1/2			1	1 1/2C	3/4	2 D	24	5 1/2	2	1 1/4	8 1/4	7 3/4	3 7/8	4	1/4	2 5/8	2 3/4	1 1/8	2 3/8	4 7/8				3.0
3																											
4																											
5																											

STANDARD SIGN
R1-6

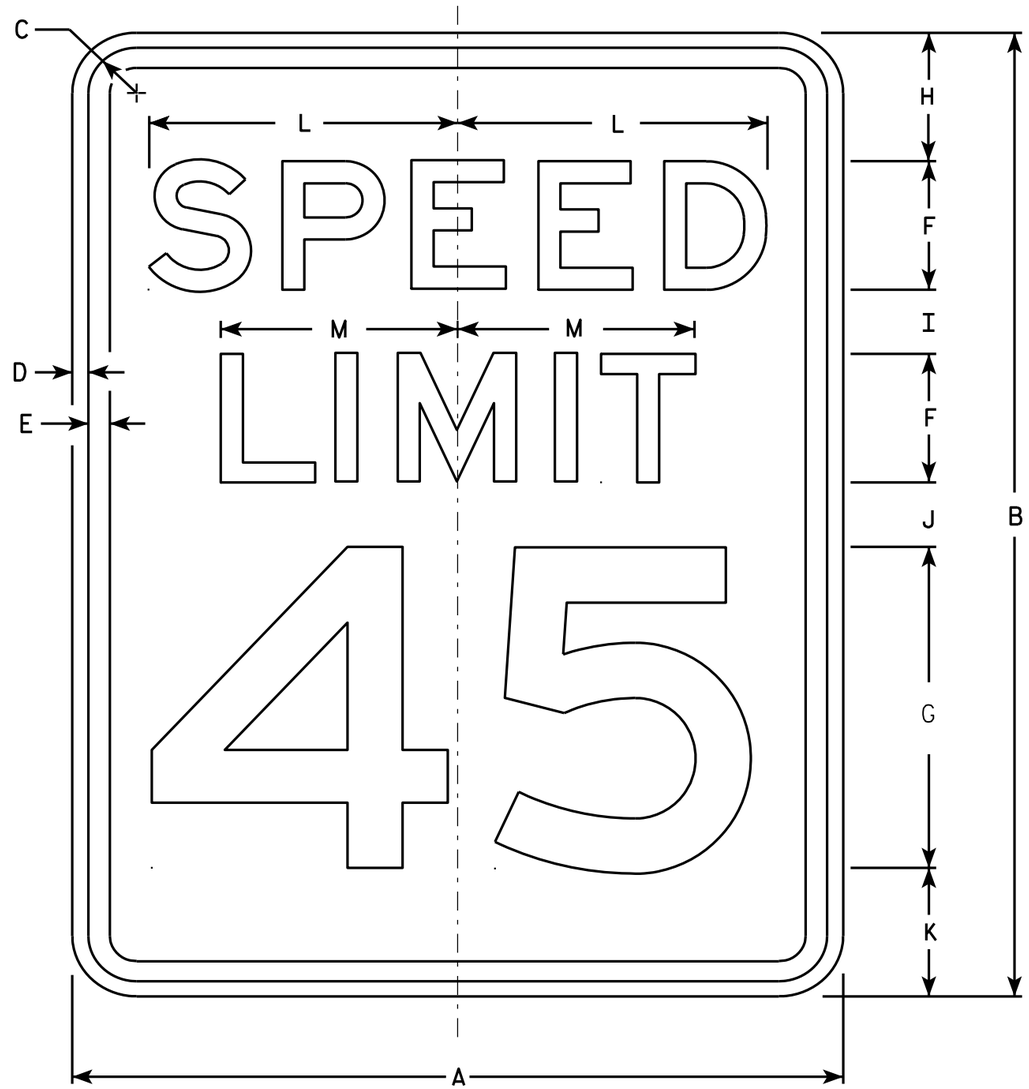
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-6.2

PROJECT NO:

SHEET NO: 154 E



R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - 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.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

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	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

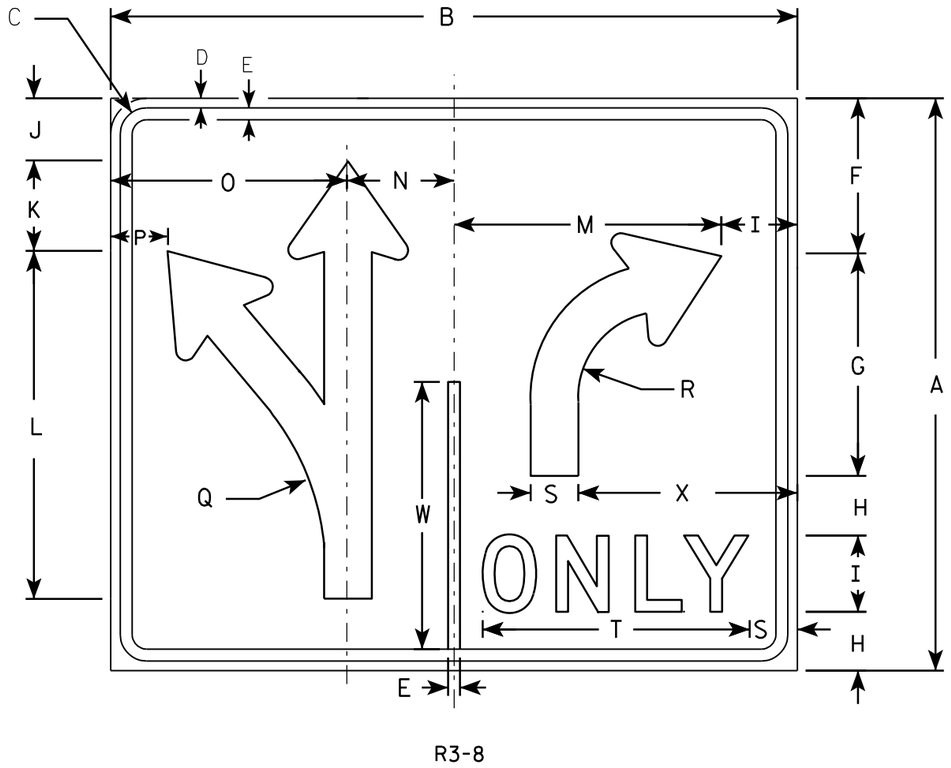
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

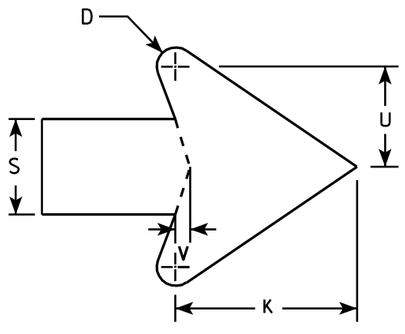
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 155	E



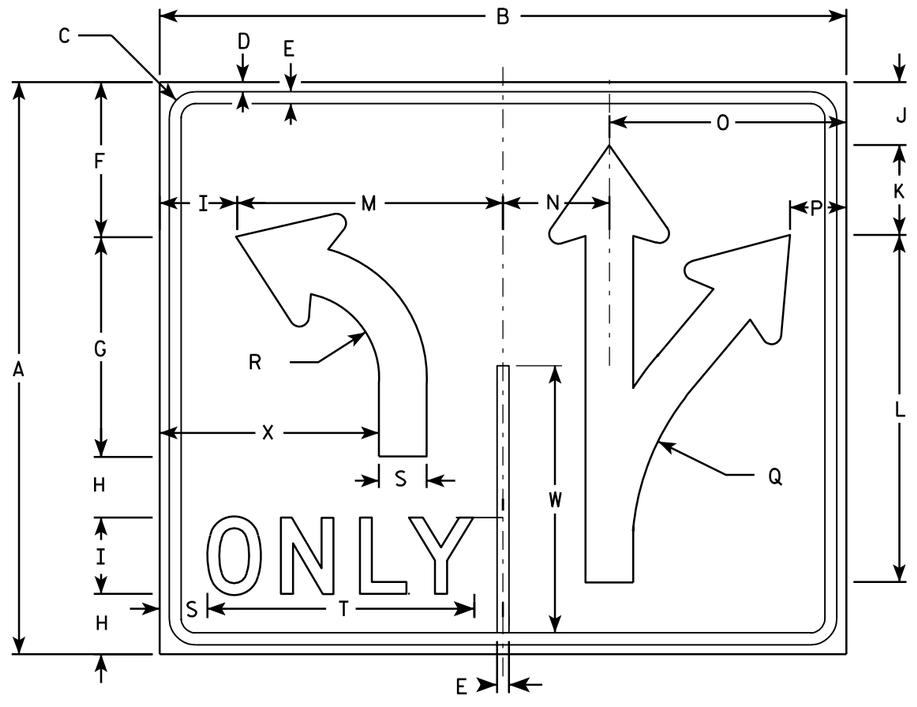
R3-8



ARROW DETAIL

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.



R3-8A

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	36	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	3 1/4	4 3/4	18 1/4	14	5 5/8	12 3/8	3	13 1/4	4 1/2	2 1/2	14	2 5/8	3/8	14	11 1/2			7.5
2M	30	36	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	3 1/4	4 3/4	18 1/4	14	5 5/8	12 3/8	3	13 1/4	4 1/2	2 1/2	14	2 5/8	3/8	14	11 1/2			7.5
3																											
4	48	54	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	5 1/4	7 1/8	29 1/8	21	8 3/8	18 5/8	4 3/8	21 7/8	7 1/4	3 3/4	20 5/8	4	5/8	22 3/8	17 1/4			18.0
5	48	54	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	5 1/4	7 1/8	29 1/8	21	8 3/8	18 5/8	4 3/8	21 7/8	7 1/4	3 3/4	20 5/8	4	5/8	22 3/8	17 1/4			18.0

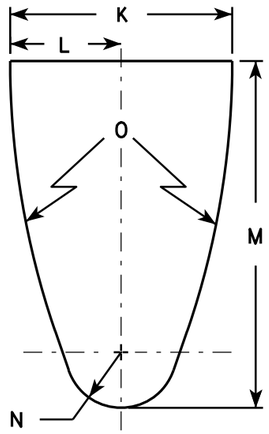
STANDARD SIGN
R3-8 & R3-8A

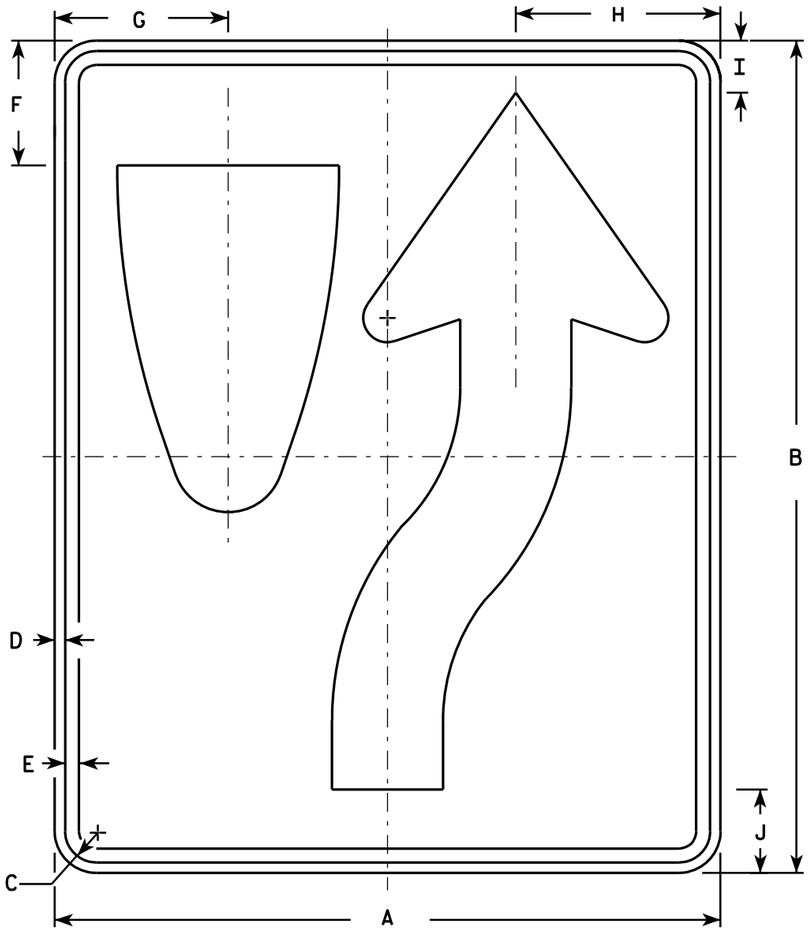
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-8.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 156	E

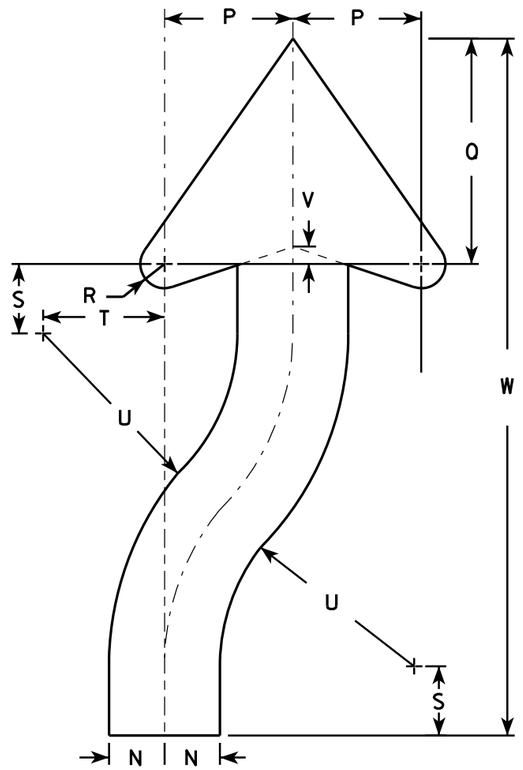




R4-7

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

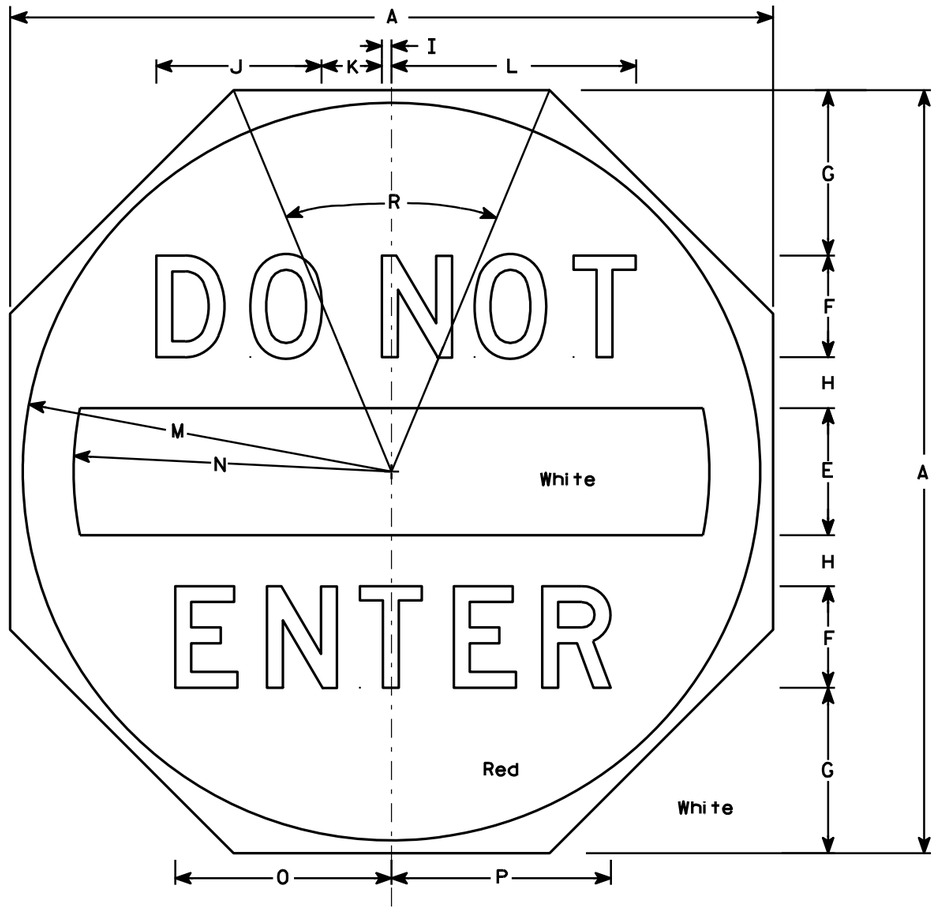
STANDARD SIGN
R4-7 & R4-8

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: 157	E



R5-1C

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See detail
   Message - White - Type H Reflective
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but when base material is metal, the cornors 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	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		45°									5.18
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		45°									7.46
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		45°									7.46
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		45°									13.25
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		45°									13.25

STANDARD SIGN
R5-1C

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

State Traffic Engineer

DATE 3/23/11 PLATE NO. R5-1C.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 158 | E

R9-3

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 - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 & 3 are Series C
   Line 2 is Series B

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	18	1 1/8	3/8	3/8	3	2	2 1/4	3 1/2	4 7/8																	1.5
2M	12	18	1 1/8	3/8	3/8	3	2	2 1/4	3 1/2	4 7/8																	1.5
3																											
4																											
5																											

STANDARD SIGN
R9-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/2011 PLATE NO. R9-3.6

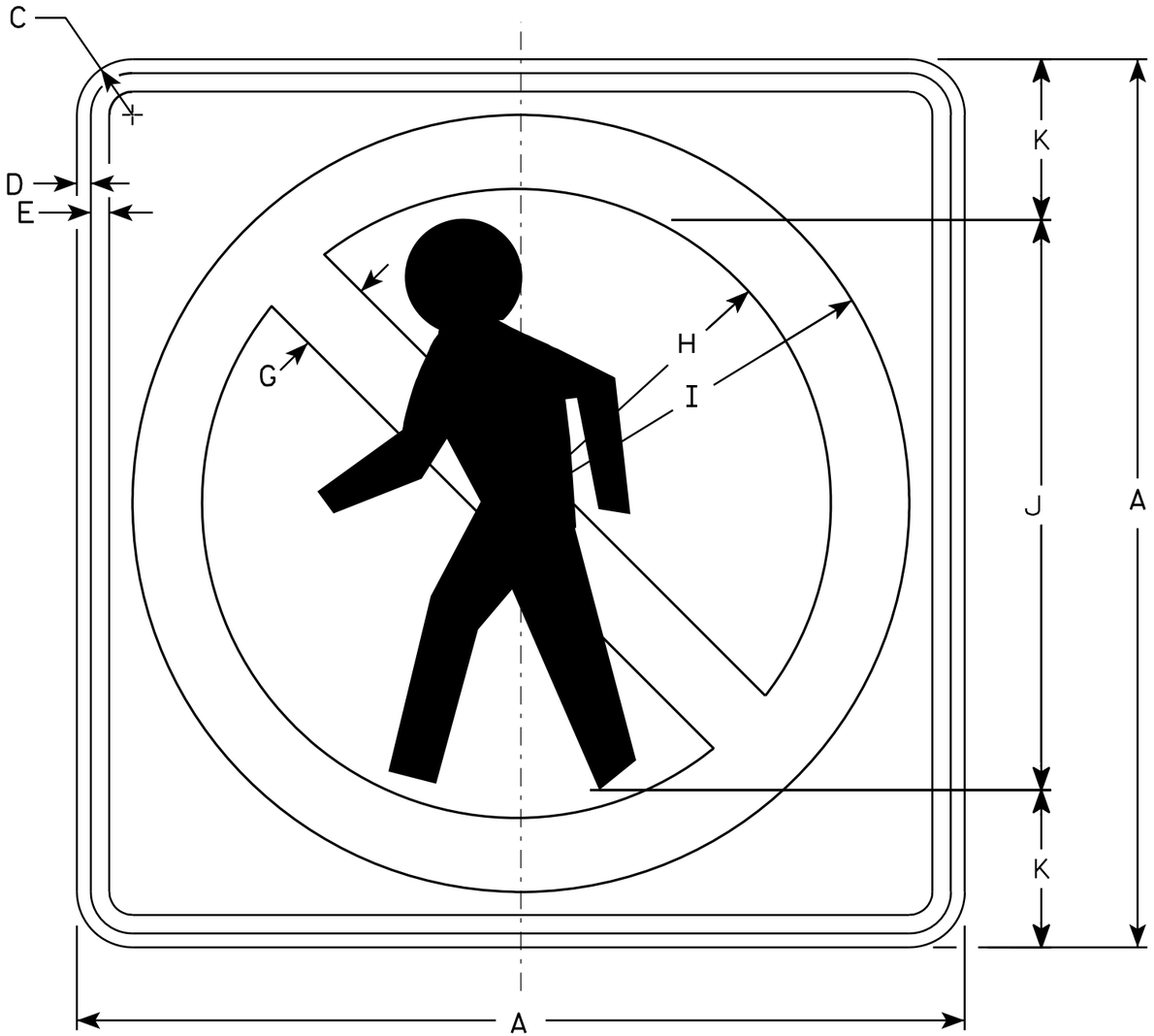
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 159	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R93.DGN PLOT DATE : 01-APR-2011 10:44 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 2.731229:1.000000

WISDOT/CADDS SHEET 42

7

7



R9-3A

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 & Pedistrian are non-reflective black. Circle with diagonal bar is reflective red.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	18		1 1/8	3/8	3/8		1 1/2	6 1/4	7 7/8	12	3																2.25
2M	18		1 1/8	3/8	3/8		1 1/2	6 1/4	7 7/8	12	3																2.25
3																											
4	24		1 1/8	3/8	1/2		2	8 1/2	10 1/2	15	4																4.00
5																											

STANDARD SIGN
R9-3A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/4/10 PLATE NO. R9-3A.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 160	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.

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 3/4	1/2	1/2	4	3 1/2	3	10 3/4	8 1/8																	3.75
2M	30	18	1 3/4	1/2	1/2	4	3 1/2	3	10 3/4	8 1/8																	3.75
3																											
4																											
5																											

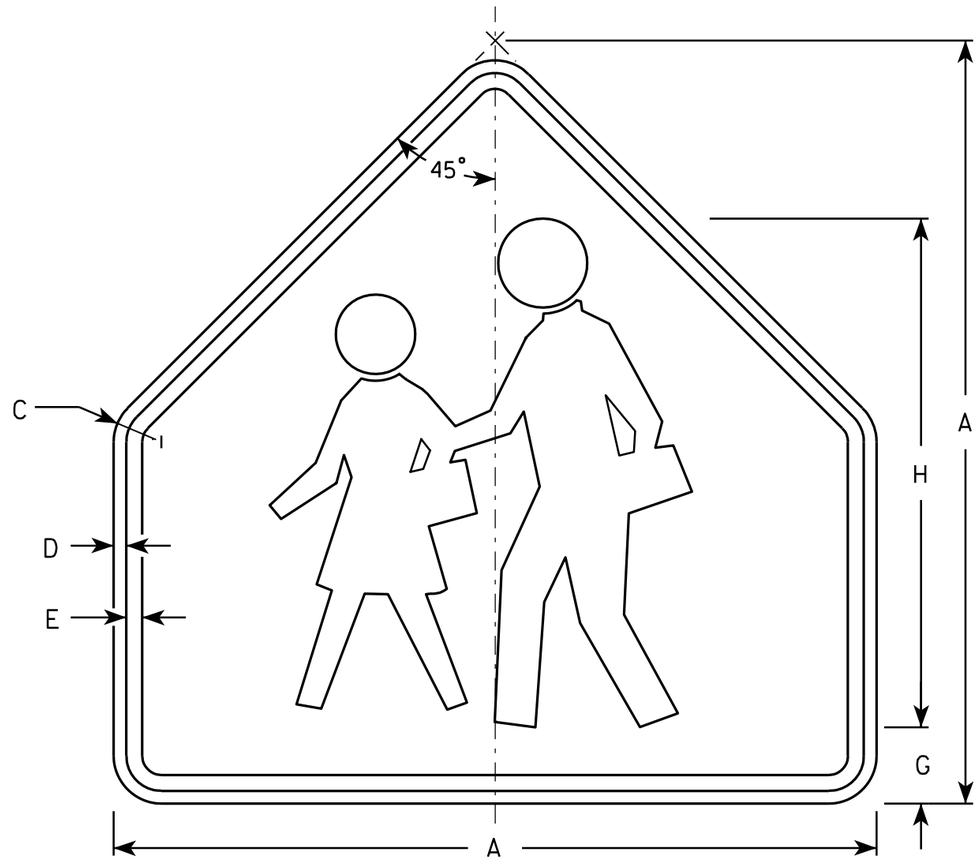
STANDARD SIGN
R9-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/2011 PLATE NO. R9-9.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 161	E



S1-1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow-Green
   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	30		1 3/8	1/2	5/8		3	20																			4.69
2	36		1 5/8	5/8	3/4		3 1/2	24																			6.75
3	36		1 5/8	5/8	3/4		3 1/2	24																			6.75
4	48		2 1/4	3/4	1		4 3/4	32																			12
5																											

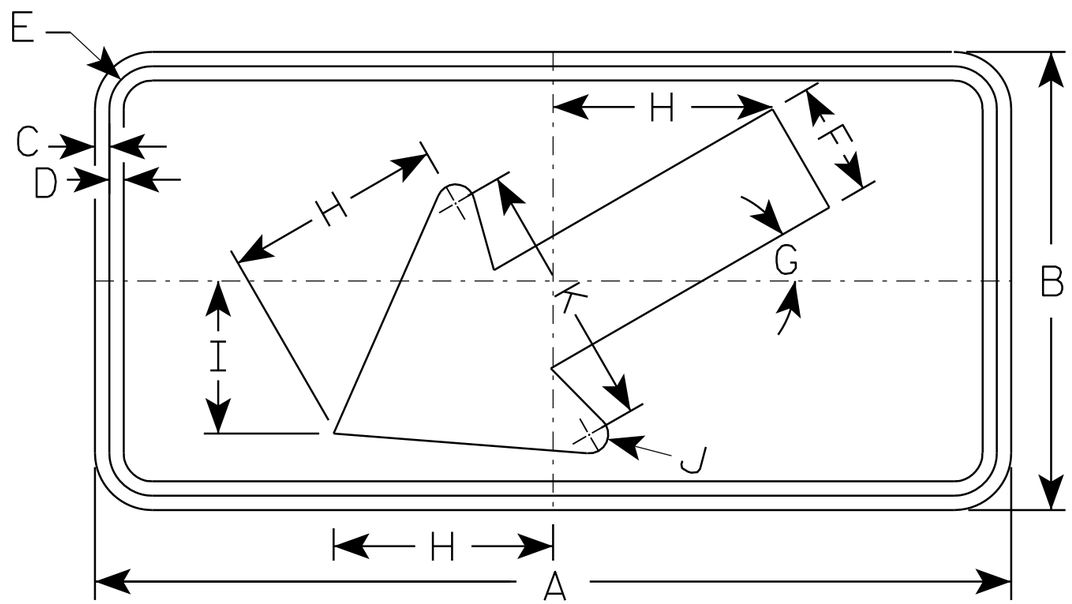
STANDARD SIGN
S1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/30/05 PLATE NO. S1-1.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 162	E



S16-7L

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-Green
   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. S16-7R are the same as S16-7L 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	24	12	3/8	3/8	1 1/8	3	30°	5 3/4	4	1/2	7																2.0
2S	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
2M	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
3	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
4	48	24	1/2	5/8	1 3/8	6	30°	11 1/2	8	1	14																8.0
5																											

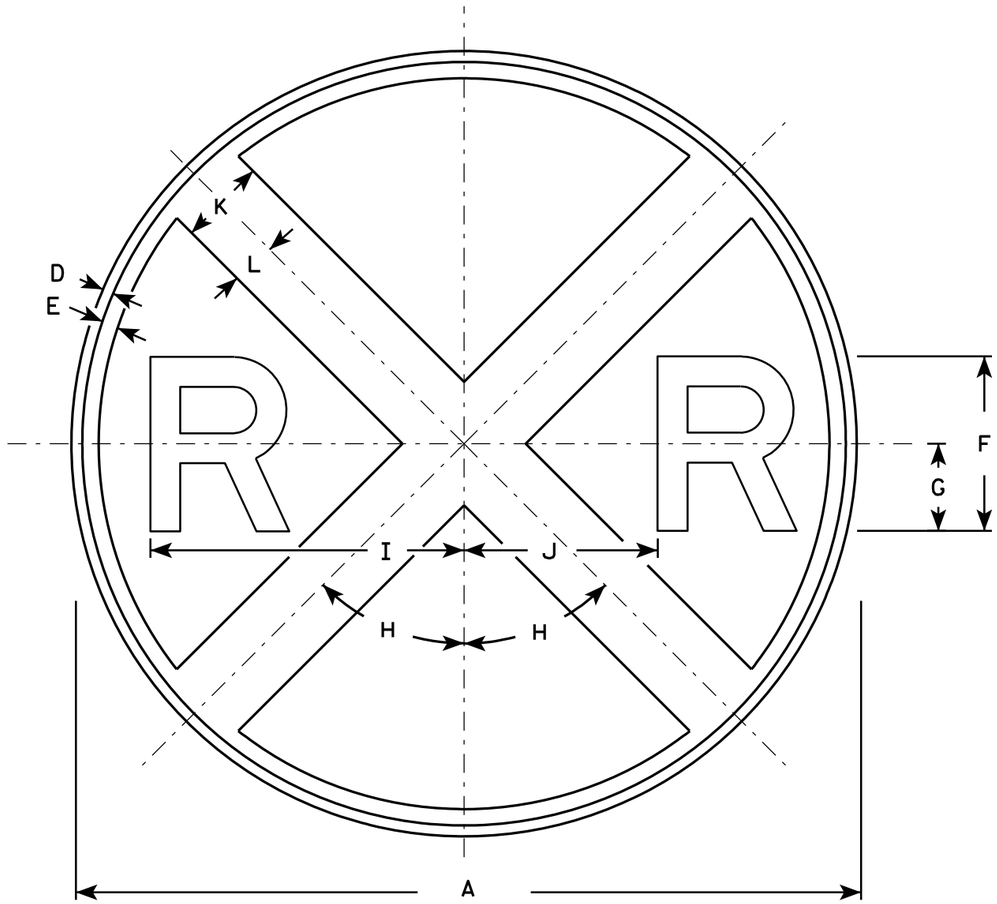
STANDARD SIGN
S16-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/22/13 PLATE NO. S16-7.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 163 | E



W10-1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message 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	30			3/8	5/8	7	3 1/2	45°	12 3/8	7 1/8	3	1 1/2															4.91
2S	36			5/8	3/4	8	4	45°	14 3/8	8 5/8	4	2															7.07
2M	36			5/8	3/4	8	4	45°	14 3/8	8 5/8	4	2															7.07
3																											
4	48			3/4	1 1/4	10	5	45°	18 3/8	11 5/8	5	2 1/2															12.57
5																											

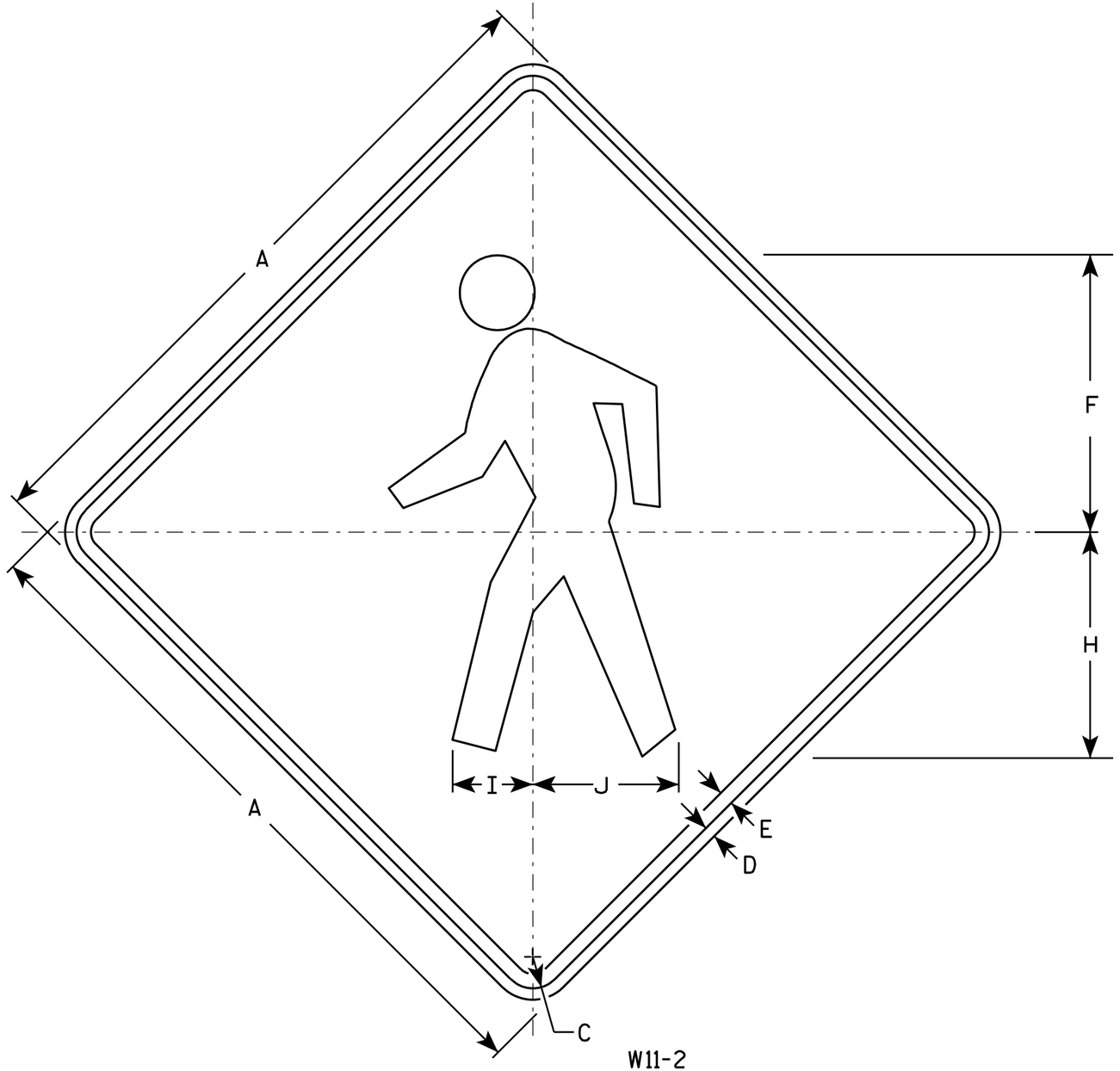
STANDARD SIGN
W10-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/13/13 PLATE NO. W10-1.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 164	E



W11-2

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.

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	9 3/4		7 7/8	2 7/8	5 1/8																	4.0
2S	30		1 3/8	1/2	5/8	12 1/8		9 7/8	3 1/2	6 3/8																	6.25
2M	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
3	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
4	48		2 1/4	3/4	1	19 3/8		15 3/4	5 5/8	10 1/4																	16.0
5																											

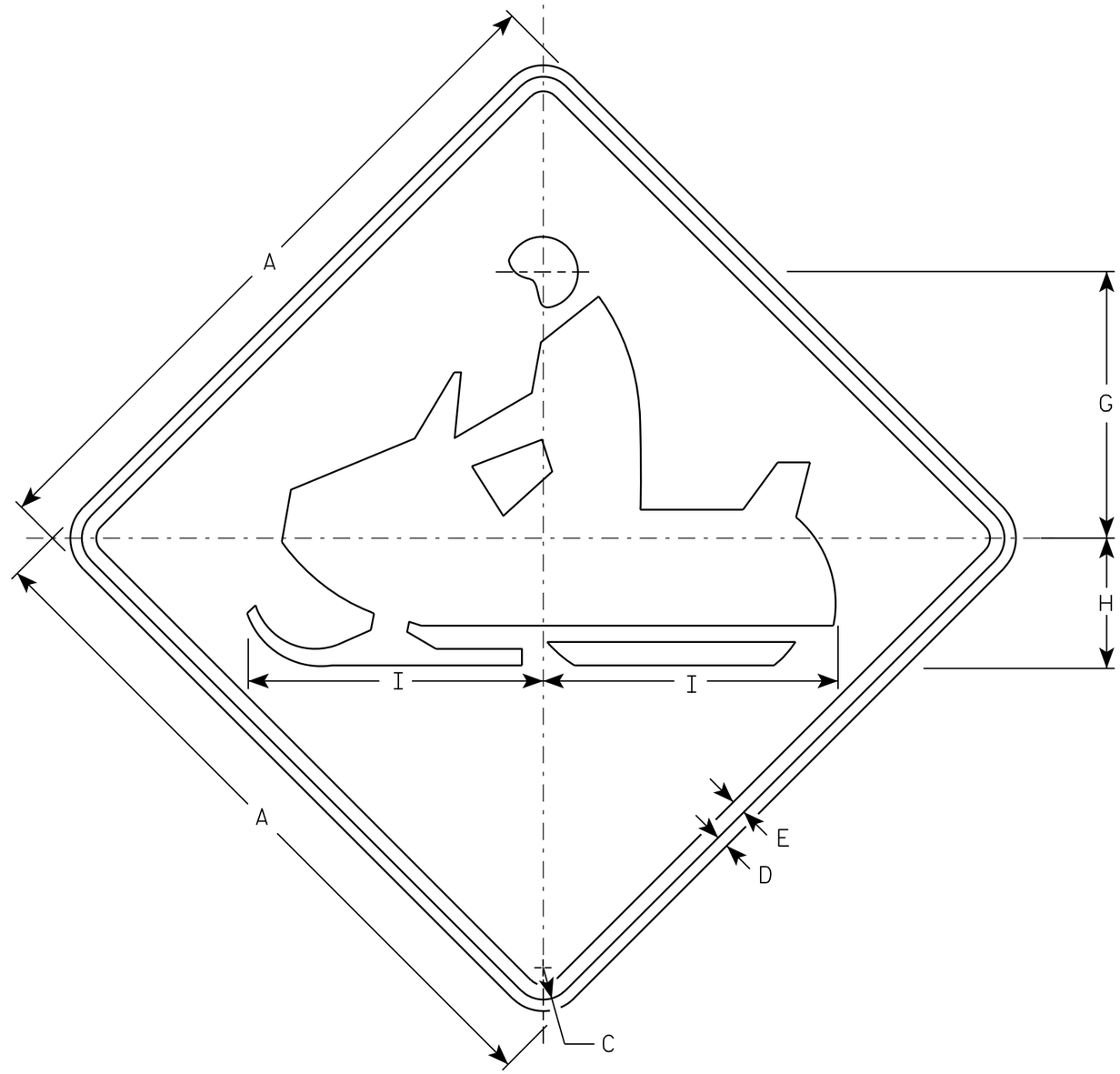
STANDARD SIGN
W11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W11-2.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 165	E



W11-6

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - 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.

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		9 1/2	4 1/2	10 1/4																		4.0
2S	30		1 3/8	1/2	5/8		11 1/2	5 5/8	12 3/4																		6.25
2M	30		1 3/8	1/2	5/8		11 1/2	5 5/8	12 3/4																		6.25
3	36		1 5/8	5/8	3/4		14 1/8	6 3/4	15 1/4																		9.0
4	48		2 1/4	3/4	1		19	9	20 1/2																		16.0
5																											

STANDARD SIGN
W11-6

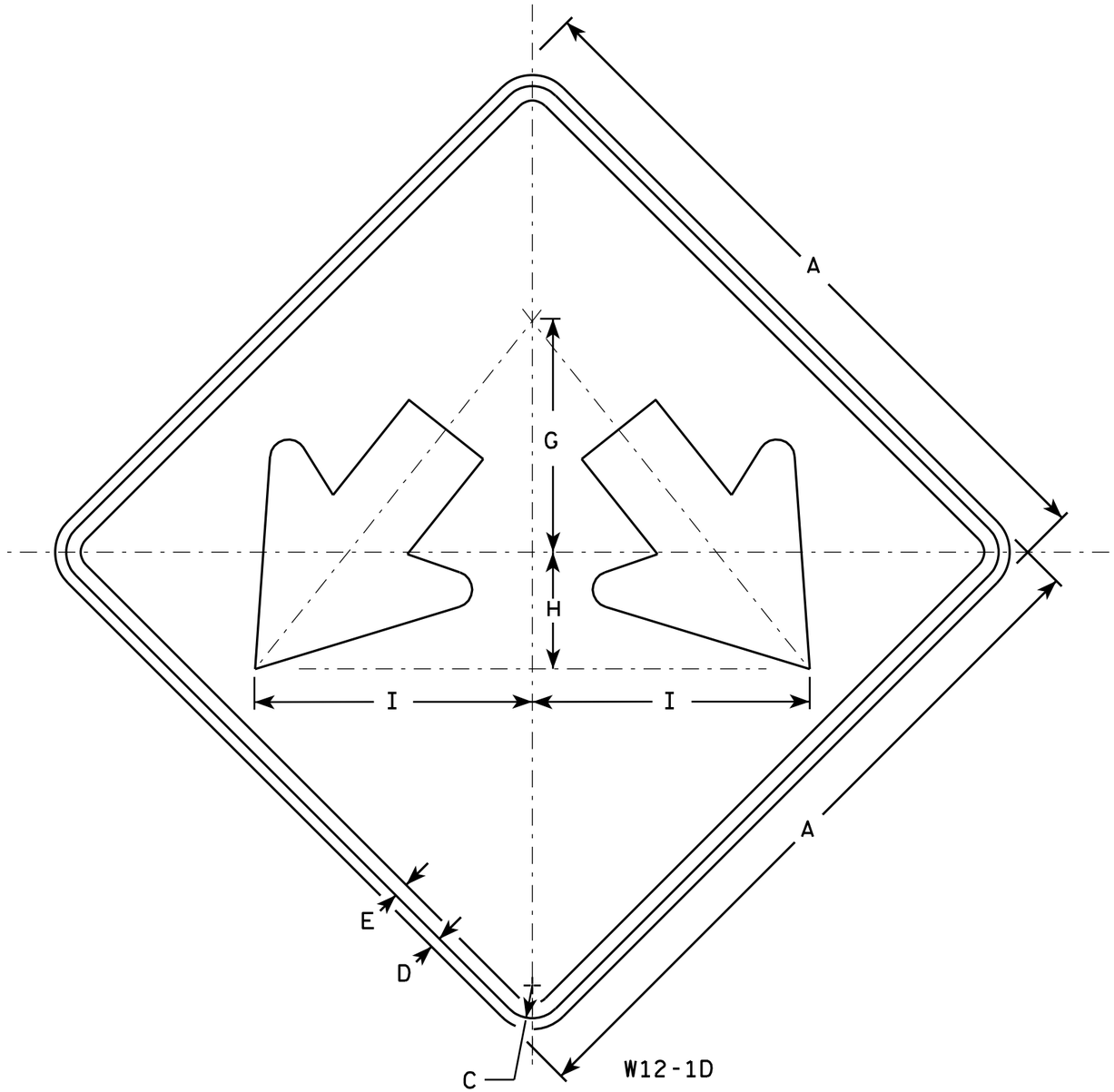
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W11-6.8

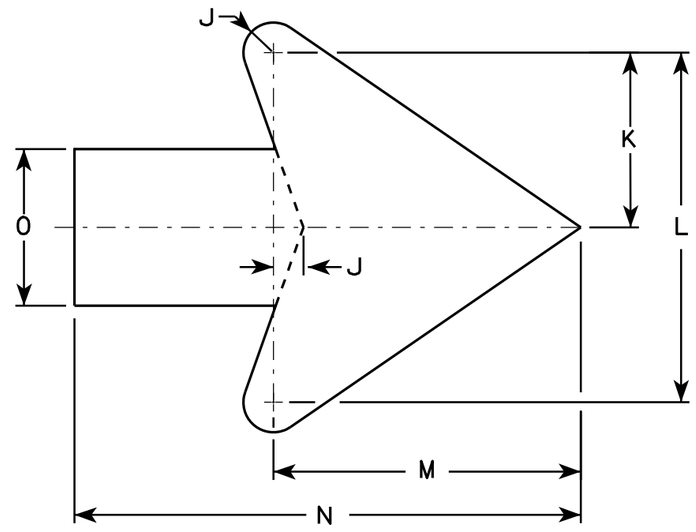
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 166 | E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W116.DGN PLOT DATE : 13-MAR-2013 12:57 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.954276:1.000000
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 - 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

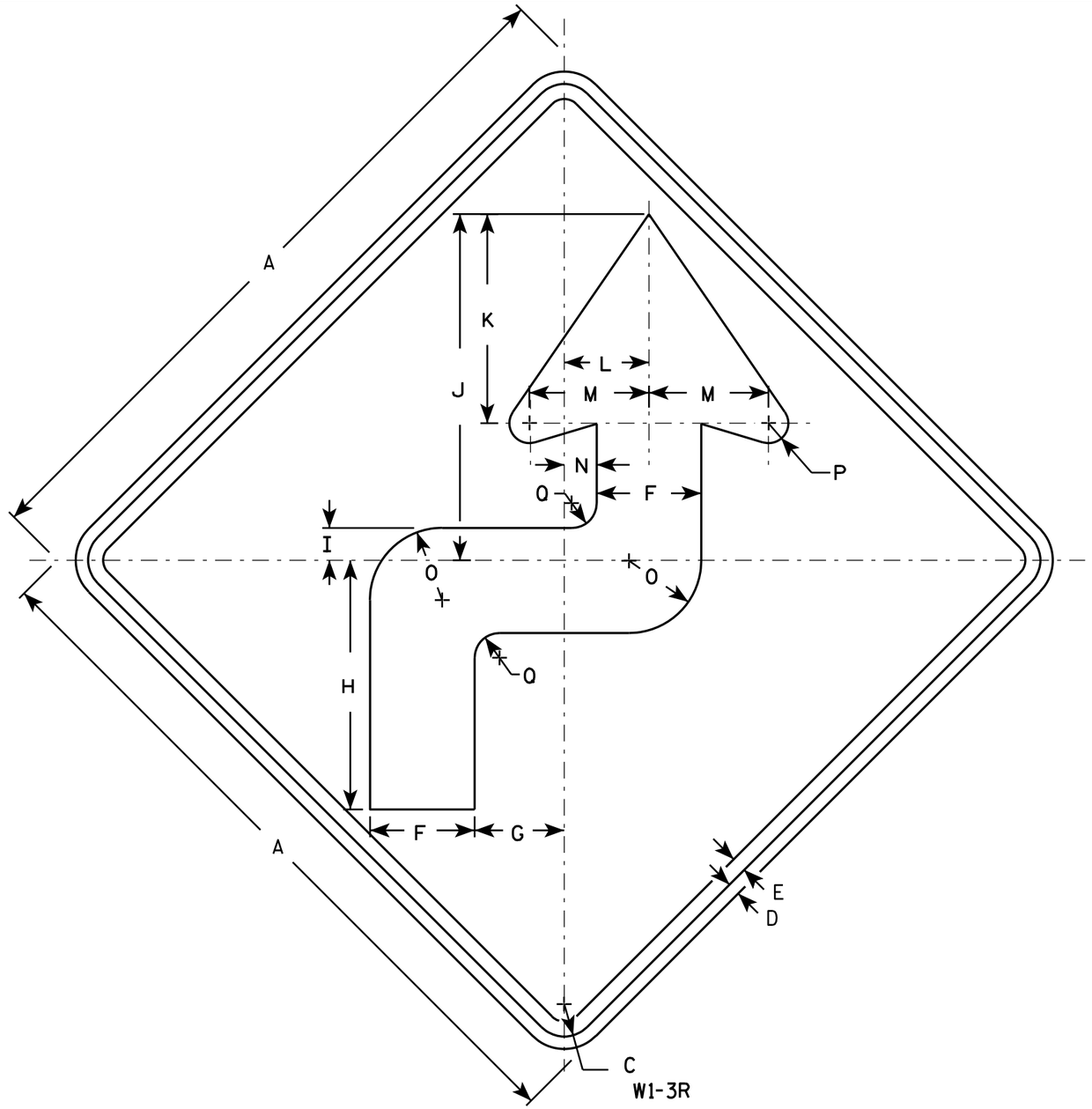
STANDARD SIGN
W12-1D

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: 167	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.
4. W1-3L is the same as W1-3R 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	24		1 1/8	3/8	1/2	3 1/2	3	8 3/8	1 1/8	11 5/8	7	2 3/4	4	1 1/8	2 1/2	5/8	7/8										4.0
2S	36		1 5/8	5/8	3/4	5 1/4	4 1/2	12 1/2	1 5/8	17 3/8	10 1/2	4 1/4	6	1 5/8	3 5/8	1	1 1/4										9.0
2M	36		1 5/8	5/8	3/4	5 1/4	4 1/2	12 1/2	1 5/8	17 3/8	10 1/2	4 1/4	6	1 5/8	3 5/8	1	1 1/4										9.0
3	36		1 5/8	5/8	3/4	5 1/4	4 1/2	12 1/2	1 5/8	17 3/8	10 1/2	4 1/4	6	1 5/8	3 5/8	1	1 1/4										9.0
4	36		1 5/8	5/8	3/4	5 1/4	6	12 1/2	1 5/8	17 3/8	10 1/2	4 1/4	6	1 5/8	3 5/8	1	1 1/4										9.0
5	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0

STANDARD SIGN
W1-3

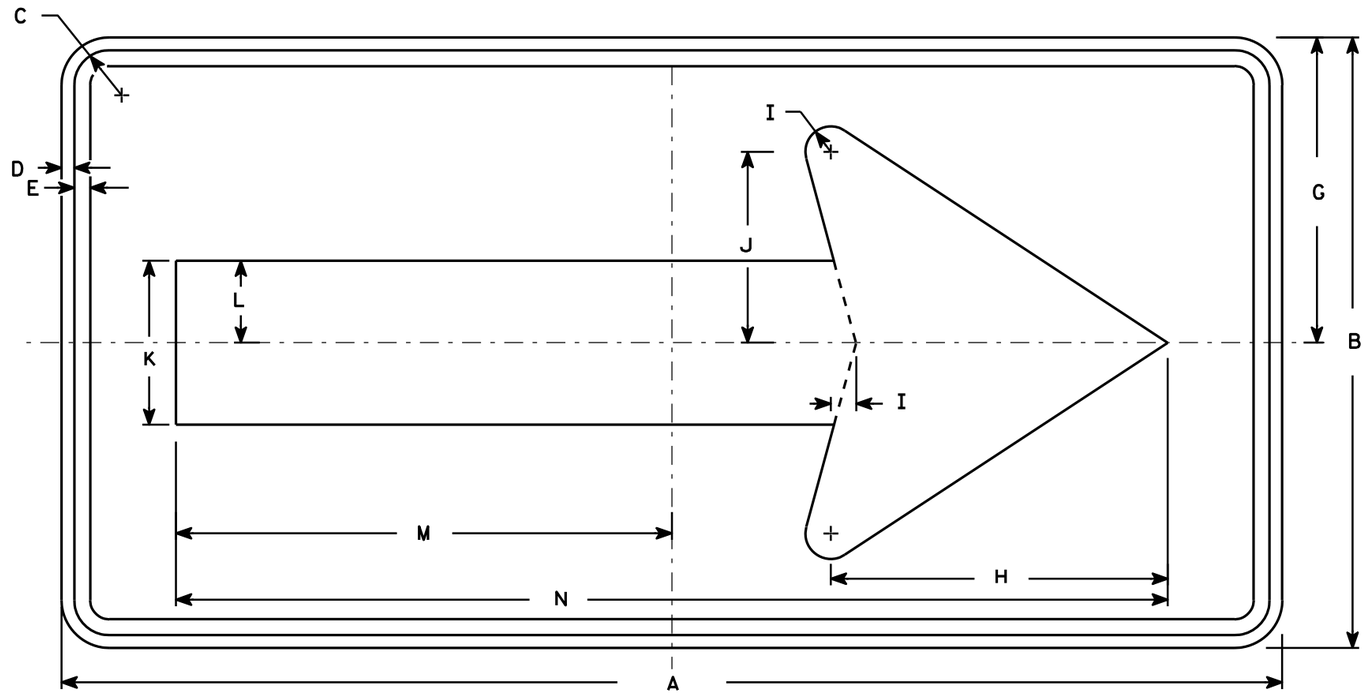
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/17/12 PLATE NO. W1-3.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 168 | E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W13.DGN PLOT DATE : 17-MAY-2012 13:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 6.698561:1.000000 WISDOT/CADDS SHEET 42



W1-6

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - 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.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/8	3/8	3/8		9	10	3/4	5 5/8	4 3/4	2 3/8	14 5/8	29 1/4													4.5
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	96	48	2 1/4	3/4	1		24	26 1/2	2	15	13	6 1/2	39	78													32.0

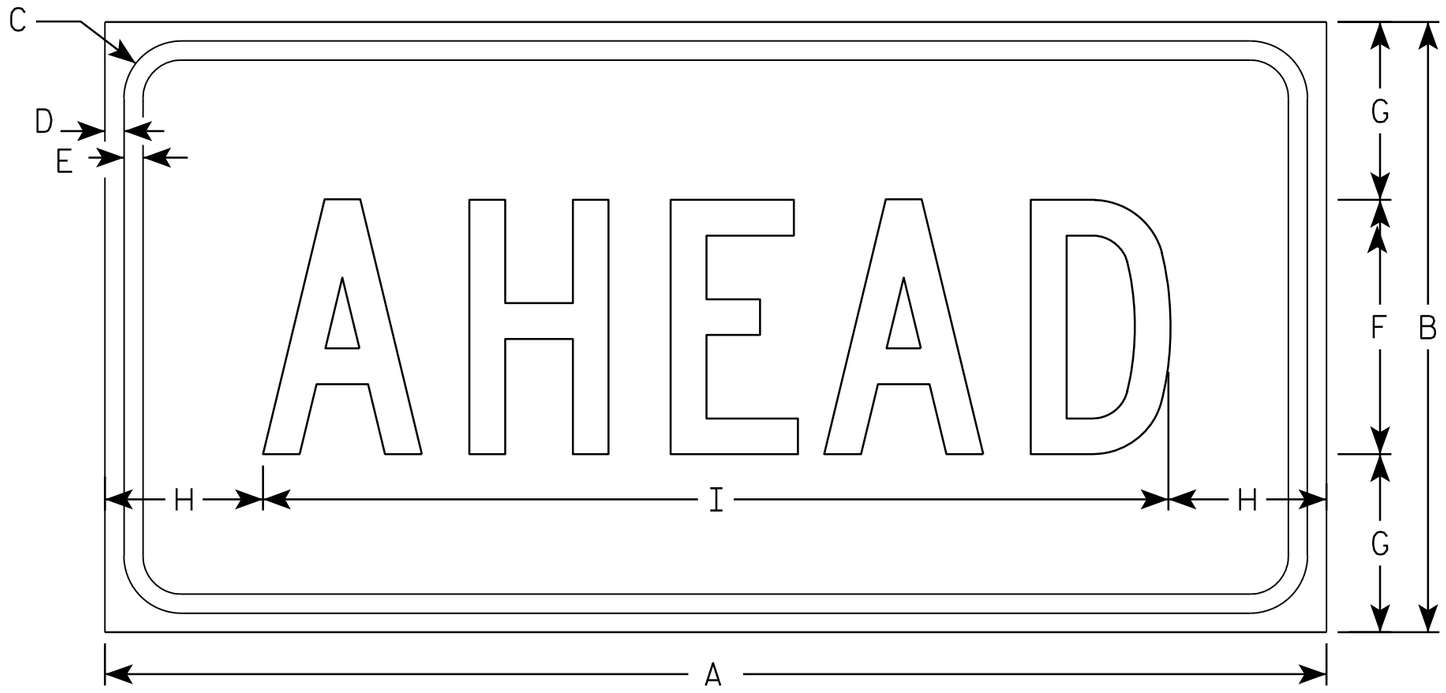
STANDARD SIGN
W1-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-6.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 169



W16-9P

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/8	3/8	3/8	5	3 1/2	3 1/8	17 3/4																		2.0
2M	30	18	1 1/8	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
3	30	18	1 1/8	3/8	1/2	7	3 1/2	2 3/4	24 1/2																		3.75
4	48	24	1 3/8	1/2	5/8	10	7	6 1/8	35 3/4																		8.0
5																											

STANDARD SIGN
W16-9P

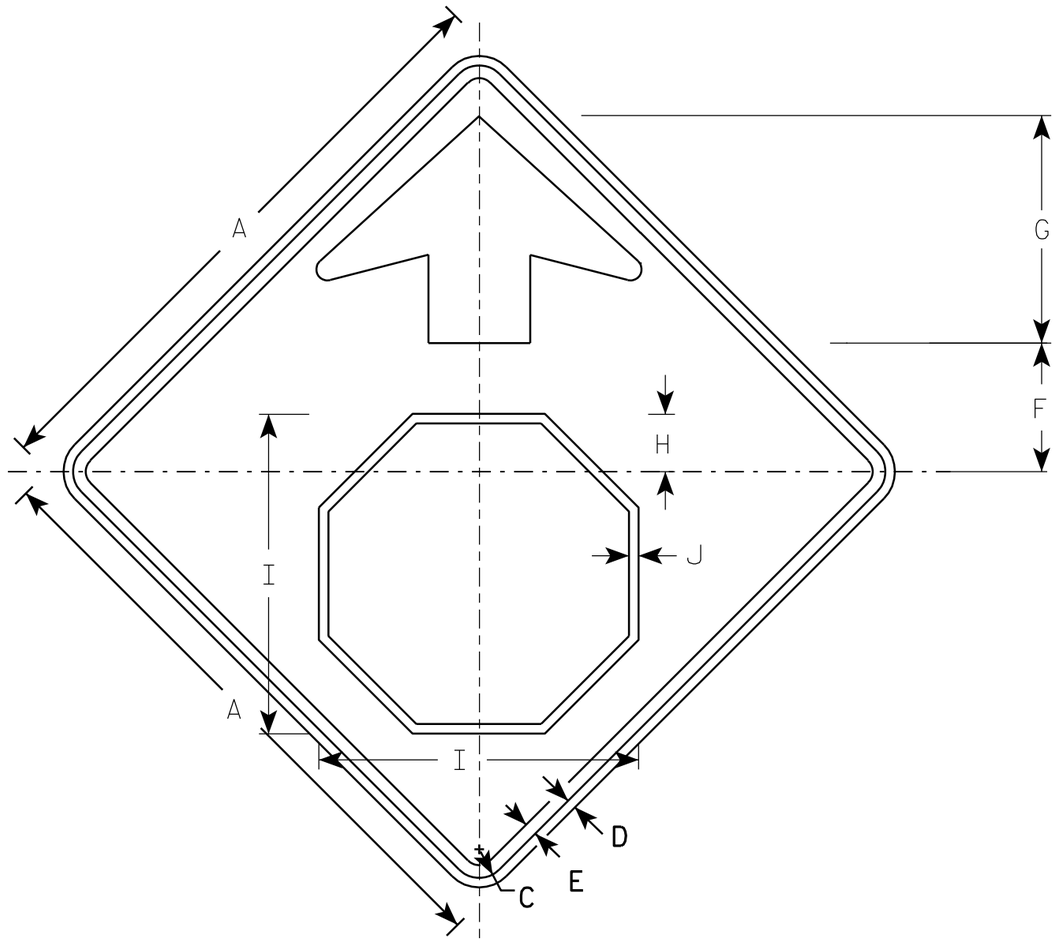
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/28/10 PLATE NO. W16-9P.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 170 | E

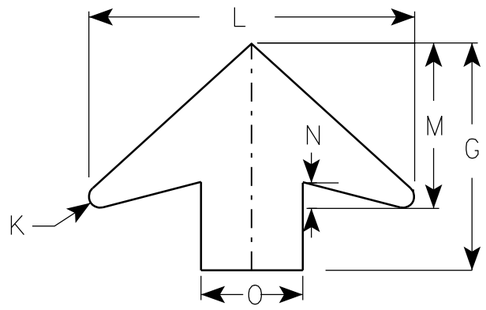
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W169P.DGN PLOT DATE : 28-DEC-2010 13:39 PLOT BY : dotsja PLOT NAME : PLOT SCALE : 2.979524:1.000000
WISDOT/CADDS SHEET 42



W3-1

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - YELLOW
   Arrow & Border - BLACK
   Stop Symbol - WHITE BORDER ON RED BACKGROUND



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	30		1 3/8	1/2	5/8	6 1/4	11 1/4	2 7/8	15 3/4	1/2	1/2	16	8	1 1/4	5												6.25
2S	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
2M	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
3	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0

STANDARD SIGN
W3-1

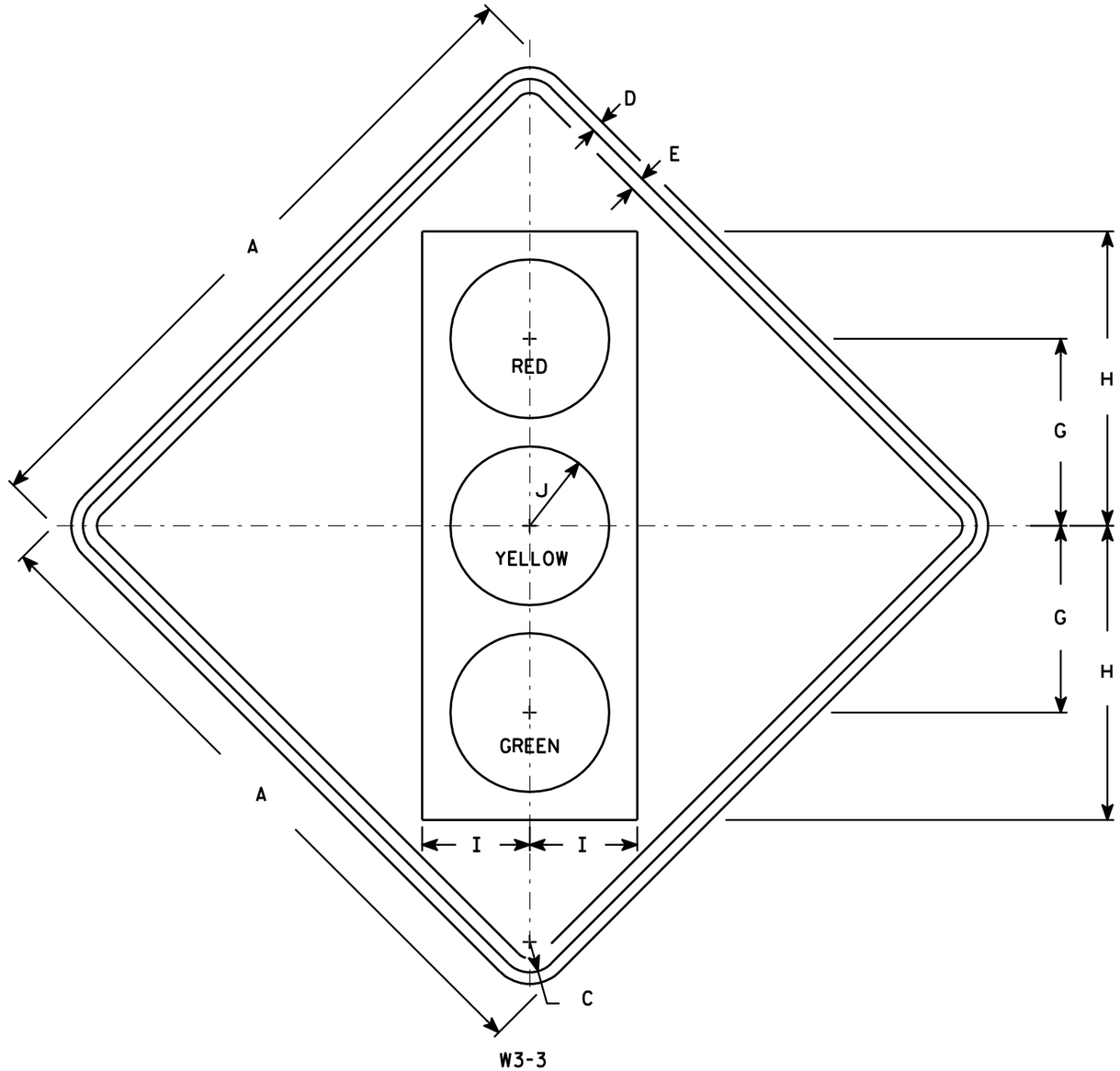
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-1.12

PROJECT NO:

SHEET NO: 171 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 - 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. Symbol and border are non-reflective black.
   Top circle - Type H Reflectorized Red
   Center circle - Same as background
   Bottom circle - Type H Reflectorized Green

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		8 3/4	13 3/4	5	3 3/4																	6.25
2S	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
2M	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
3	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
4	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
5	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0

STANDARD SIGN
W3-3

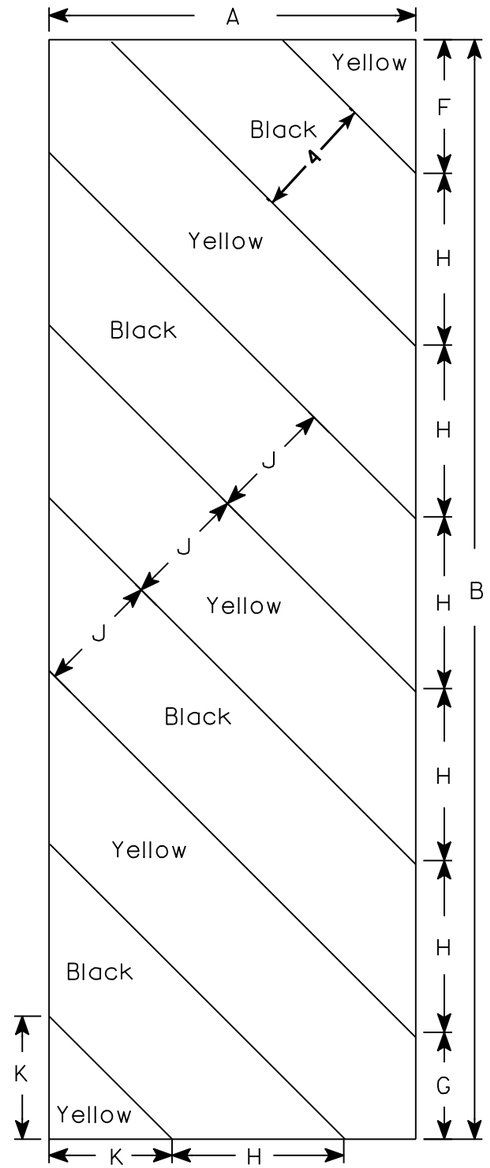
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

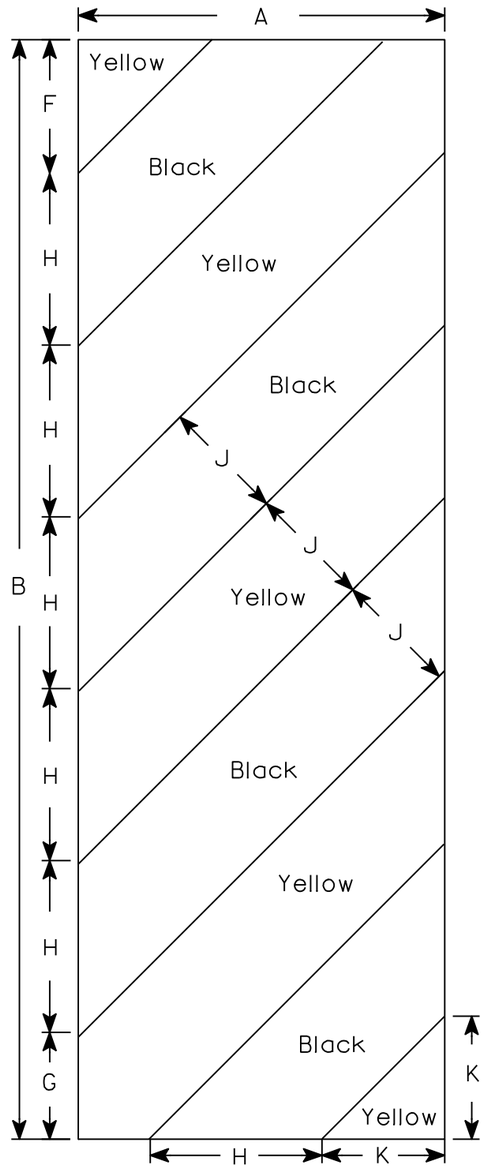
DATE 6/7/10 PLATE NO. W3-3.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 172 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W33.DGN PLOT DATE : 07-JUN-2010 13:07 PLOT BY : ditjph PLOT NAME : PLOT SCALE : 7.448805:1.000000



W5-52L



W5-52R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - 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.
4. Alternate colors of stripes as shown.

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

STANDARD SIGN

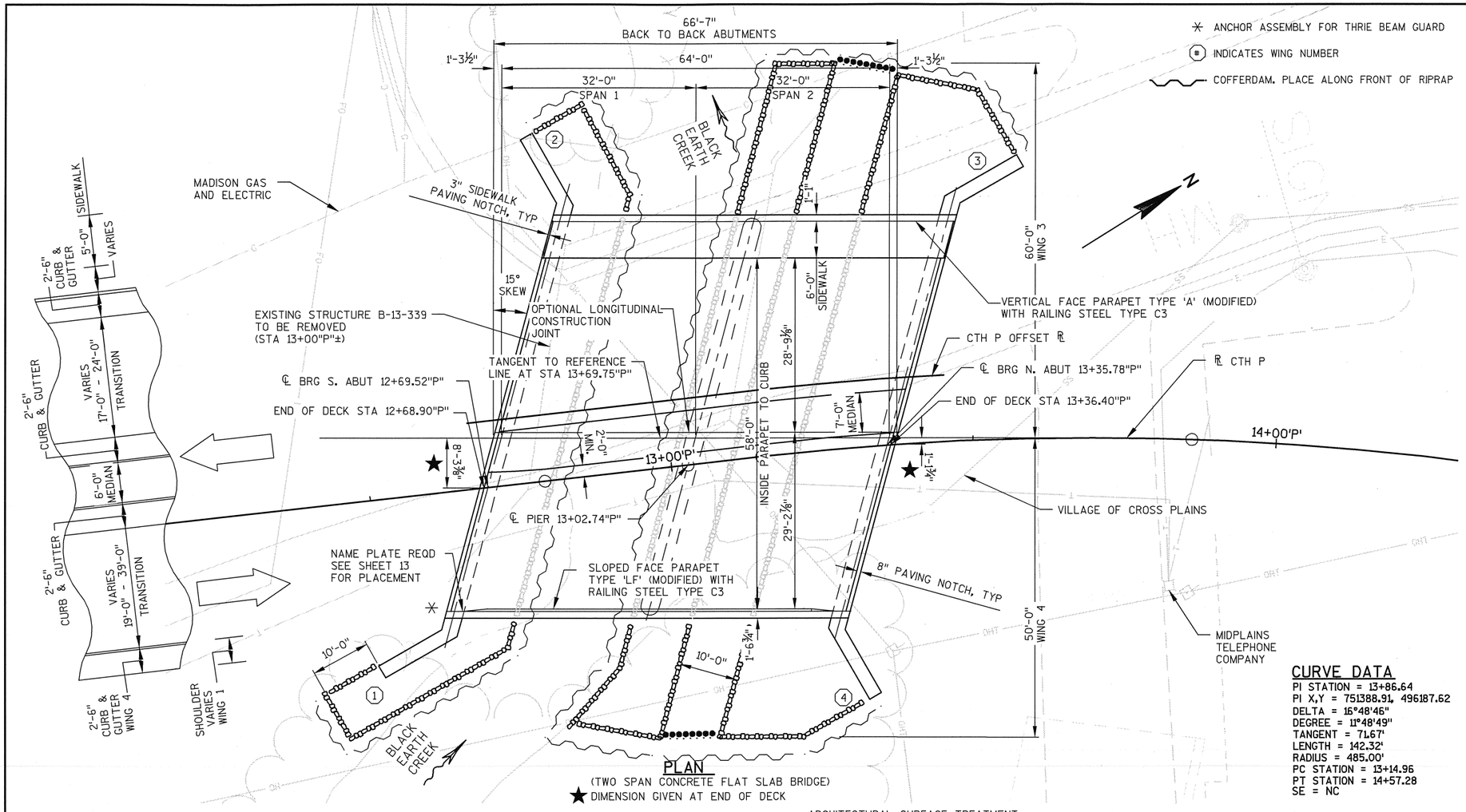
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

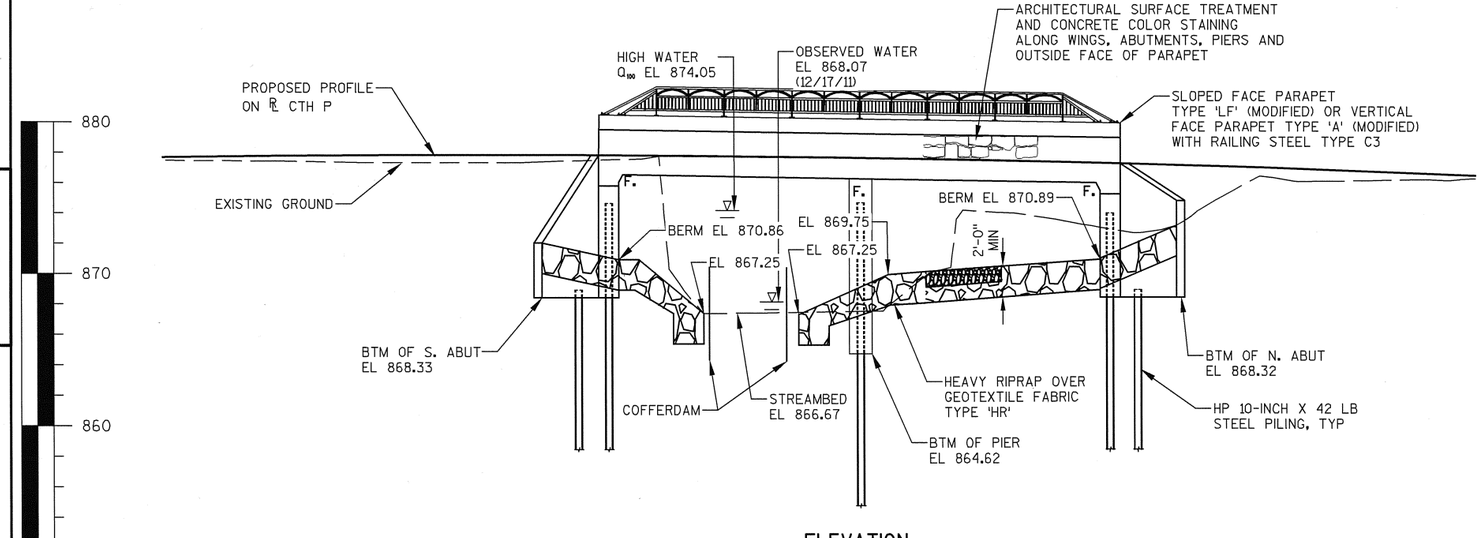
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 173 | E



PLAN

(TWO SPAN CONCRETE FLAT SLAB BRIDGE)

★ DIMENSION GIVEN AT END OF DECK



ELEVATION

SEE SHEET 2 FOR SLOPE PROTECTION DETAIL UNDER BRIDGE

DESIGN DATA:

DESIGN LOADING	HL-93
INVENTORY RATING FACTOR	1.60
OPERATIONAL RATING FACTOR	2.08
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV)	250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY, SLAB	f'c = 4000 psi
ALL OTHER	f'c = 3500 psi
HIGH STRENGTH BAR STEEL REINFORCEMENT	fy = 60,000 psi

TRAFFIC DATA:

ADT (2014) = 4550

ADT (2034) = 5800

DESIGN SPEED = 30 MPH

FOUNDATION DATA:

ABUTMENTS AND PIER SUPPORTED ON HP 10-INCH X 42 LB STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 105* TONS PER PILE AT THE ABUTMENTS AND 180* TONS PER PILE AT THE PIER AS REQUIRED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED 60' LONG AT THE SOUTH ABUTMENT, 65' LONG AT THE NORTH ABUTMENT AND 85' LONG AT THE PIER.

* THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES DYNAMIC EQUATION TO DETERMINE DRIVEN PILE CAPACITY.

HYDRAULIC DATA:

100 YEAR FREQUENCY

Q_{100}	700 cfs
STREAM VELOCITY	2.56 fps
HIGH WATER	EL. 874.05
WATERWAY AREA	273 ft²
DRAINAGE AREA	14.6 mi²
SCOUR CRITICAL CODE	5
OVERTOPPING FREQUENCY	N/A

2 YEAR FREQUENCY

Q_2	125 cfs
HIGH WATER	EL. 870.50

CURVE DATA

PI STATION = 13+86.64
PI X,Y = 751388.91, 496187.62
DELTA = 16°48'46"
DEGREE = 11°48'49"
TANGENT = 71.67'
LENGTH = 142.32'
RADIUS = 485.00'
PC STATION = 13+14.96
PT STATION = 14+57.28
SE = NC

LIST OF DRAWINGS:

GENERAL PLAN	1
TYPICAL SECTION, GENERAL NOTES & QUANTITIES	2
TYPICAL DETAILS	3
SUBSURFACE EXPLORATION	4
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SOUTH ABUTMENT DETAILS	6
NORTH ABUTMENT	7
NORTH ABUTMENT DETAILS	8
PIER	9
SUPERSTRUCTURE	10
SUPERSTRUCTURE DETAILS 1	11
SUPERSTRUCTURE DETAILS 2	12
SLOPED FACE PARAPET TYPE 'LF' (MODIFIED)	13
VERTCAL FACE PARAPET TYPE 'A' (MODIFIED)	14
MEDIAN DETAILS	15
RAILING STEEL TYPE C3	16
AESTHETIC DETAILS	17

BRIDGE OFFICE CONTACT
WILLIAM DREHER, P.E.
TELEPHONE: (608) 266-8489
CONSULTANT CONTACT
GARY RUCHTI, P.E.
TELEPHONE: (608) 273-6380

WISCONSIN
GARY A. RUCHTI
E-30936
MADISON
WI
PROFESSIONAL ENGINEER
2/3/14

STATE PROJECT NUMBER

5657-00-70

NO.	DATE	REVISION	BY

Mead & Hunt, Inc.
6501 Watts Road
Madison, WI 53719
608.273.6380
www.meadhunt.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher DVR 2/10/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-13-646

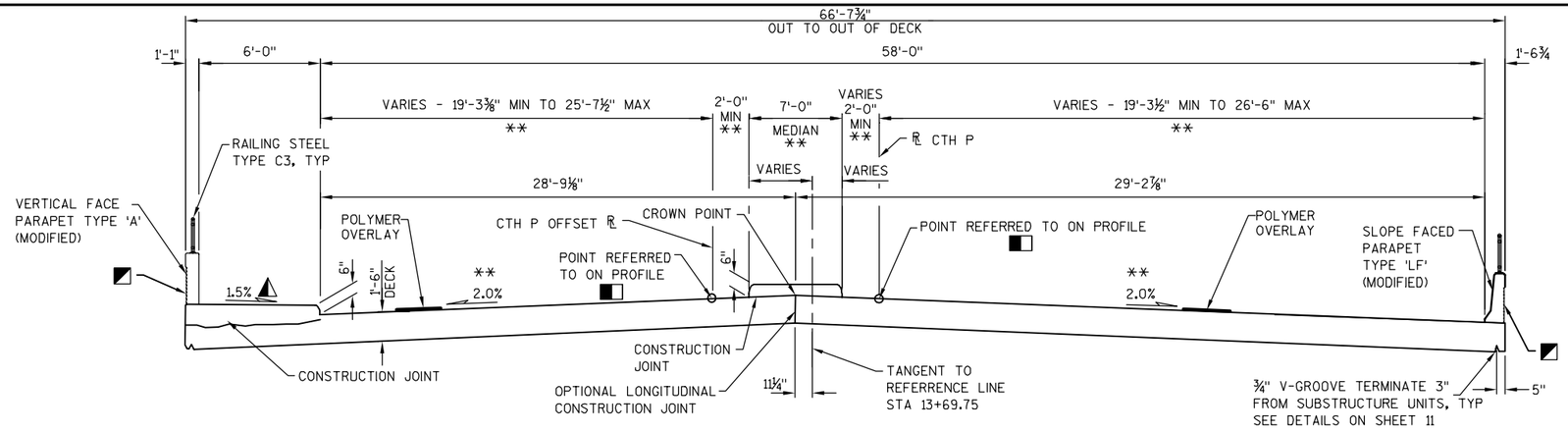
CTH P OVER BLACK EARTH CREEK

COUNTY: DANE	~~TOWN/CITY/~~VILLAGE: CROSS PLAINS
DESIGN SPEC.: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS	
DESIGNED BY: RCP	DESIGN CK'D.: MJB
DRAWN BY: TAV	PLANS CK'D.: GAR

GENERAL PLAN

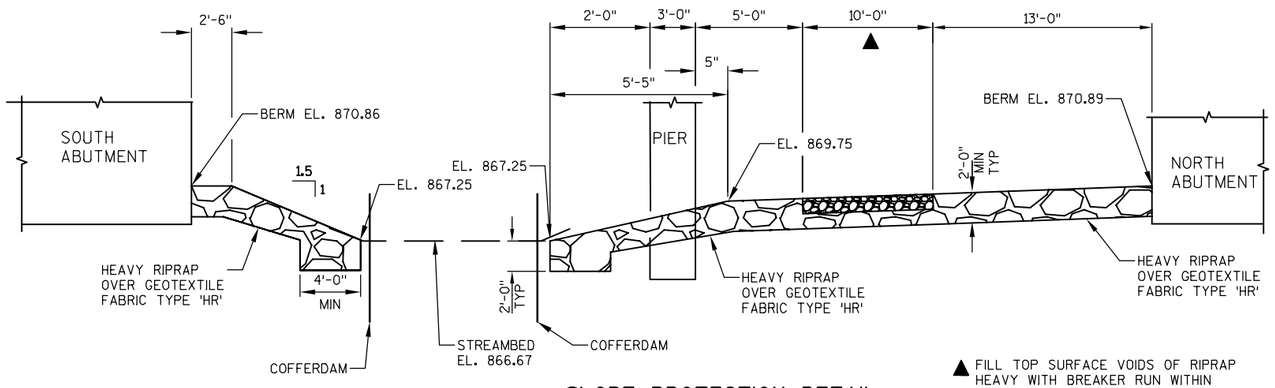
SHEET 1 OF 17
174

FILE NAME: X:\3230900\113688.02\TECH\CAD\53100200\DESIGN\STRUCTURE\080101_GP.DWG PLOT DATE: 2/3/2014 PLOT BY: ---- PLOT SCALE: 1" = 20' XREF



TYPICAL SECTION
(LOOKING NORTH)

** DIM PERPENDICULAR TO REFERENCE LINE



SLOPE PROTECTION DETAIL
DIMENSIONS GIVEN PERPENDICULAR TO SUBSTRUCTURE FACES

▲ FILL TOP SURFACE VOIDS OF RIPRAP HEAVY WITH BREAKER RUN WITHIN THESE LIMITS.

TOTAL ESTIMATED QUANTITIES

BID ITEM NO.	BID ITEMS	UNIT	S ABUT	PIER	N ABUT	SUPER	TOTALS
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 13+00'P'	LS	---	---	---	---	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-13-0646	LS	---	---	---	---	1
206.5000	COFFERDAMS B-13-0646	LS	---	---	---	---	1
210.0100	BACKFILL STRUCTURE	CY	220	---	190	---	410
311.0115	BREAKER RUN	CY	---	---	20	---	20
502.0100	CONCRETE MASONRY BRIDGES	CY	70	82	65	288	505
502.3200	PROTECTIVE SURFACE TREATMENT	SY	---	---	---	163	163
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	4760	3100	4640	---	12500
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	1900	---	1890	60730	64520
509.5100.S	POLYMER OVERLAY	SY	---	---	---	370	370
513.7015	RAILING STEEL TYPE C3 B-13-0646	LS	---	---	---	---	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	14	---	14	---	28
517.1010.S	CONCRETE STAINING B-13-0646	SF	50	134	44	28	256
517.1050.S	ARCHITECTURAL SURFACE TREATMENT B-13-0646	SF	50	134	44	28	256
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	720	1105	780	---	2605
606.0300	RIPRAP HEAVY	CY	100	---	325	---	425
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	110	---	115	---	225
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EA	---	---	---	1	1
645.0120	GEOTEXTILE FABRIC TYPE "HR"	SY	210	---	550	---	760
	NON BID ITEMS						
	FILLER	SIZE					1/2" & 3/4"

STATE PROJECT NUMBER

5657-00-70

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY TO THE EXTENT SHOWN ON SHEET 1 AND ON THIS SHEET.

THE EXISTING GROUND LINE SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES.

AT THE BACKFACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

THE EXISTING STRUCTURE TO BE REMOVED IS A 35.6' LONG BY 30.2" CLEAR ROADWAY WIDTH, STEEL GIRDER BRIDGE (B-13-339).

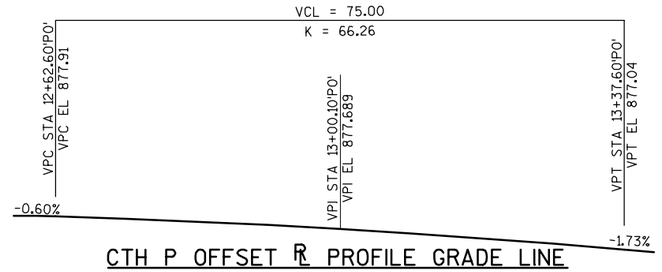
ALL STATIONS AND ELEVATIONS ARE IN FEET.

◓ ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO NAVD88 (2007).

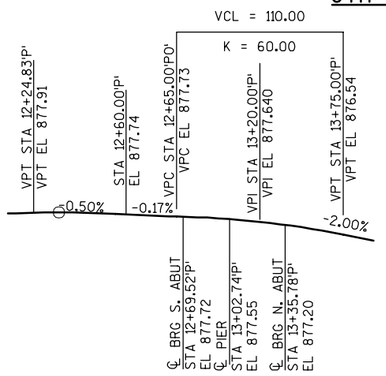
◪ SEE SHEET 17 FOR ARCHITECTURAL SURFACE TREATMENT AND FINISH DETAILS ON THE OUTSIDE FACES OF THE CONCRETE PARAPETS, PIERS, WINGS AND ABUTMENT FACE.

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

◧ PROFILE IS GIVEN TO THE TOP OF THE CONCRETE SLAB. DOES NOT INCLUDE POLYMER OVERLAY THICKNESS.



CTH P OFFSET ℄ PROFILE GRADE LINE



℄ CTH P PROFILE GRADE LINE

BENCH MARKS ◓

NO.	STATION	OFFSET	DESCRIPTION	ELEV.
15	145+84.47	6.82' RT	PK NAIL IN PARKING LOT	875.19
18	165+29.51	20.65' LT	PK NAIL IN CURB	884.25

BENCHMARK STATIONING BASED ON USH 14 ALIGNMENT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-646

DRAWN BY TAV | PLANS CK'D. GAR

TYPICAL SECTION, GENERAL NOTES & QUANTITIES

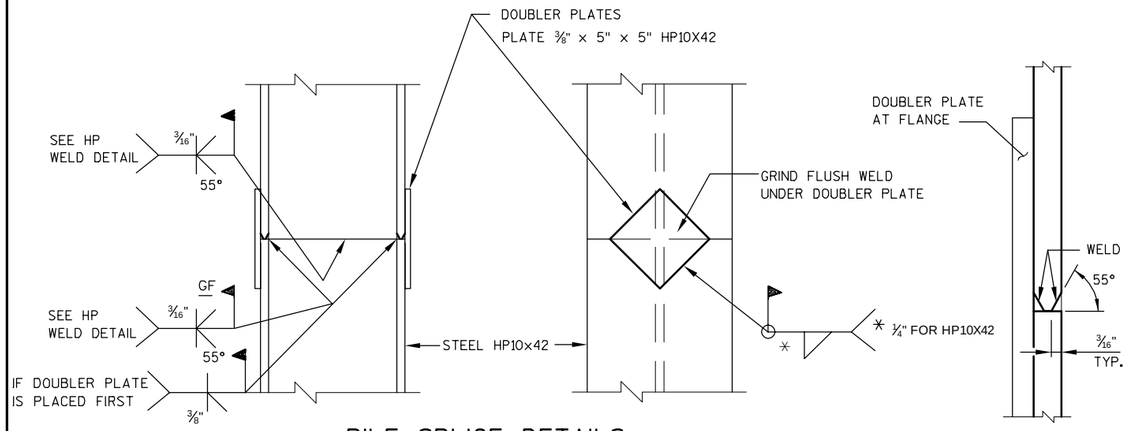
SHEET 2 OF 17
175

8

8

STATE PROJECT NUMBER

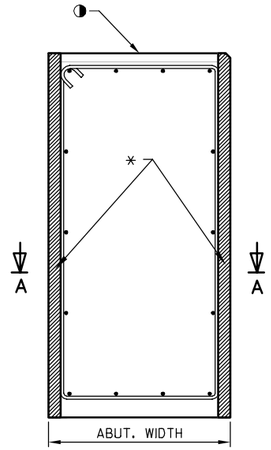
5657-00-70



PILE SPLICE DETAILS

HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR



SECTION THRU ABUTMENT BODY

NOTES

PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

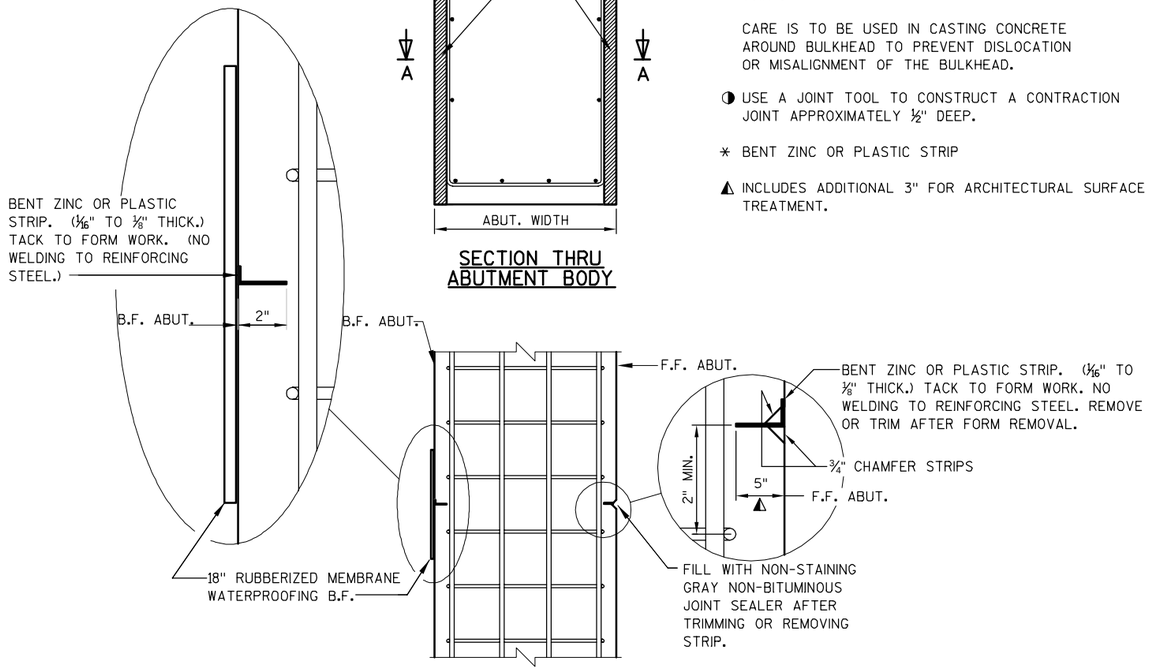
VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.

CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.

◑ USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY ½" DEEP.

* BENT ZINC OR PLASTIC STRIP

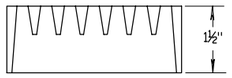
◭ INCLUDES ADDITIONAL 3" FOR ARCHITECTURAL SURFACE TREATMENT.



SECTION A-A

ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

NOTE: ORIENT SHIELD SO SLOTS ARE VERTICAL.

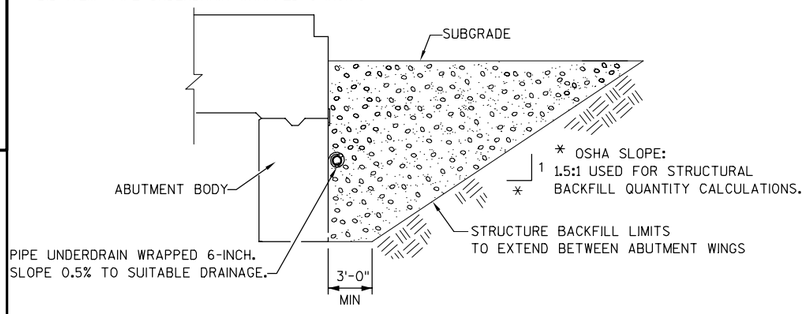


SECTION B-B

② RODENT SHIELD

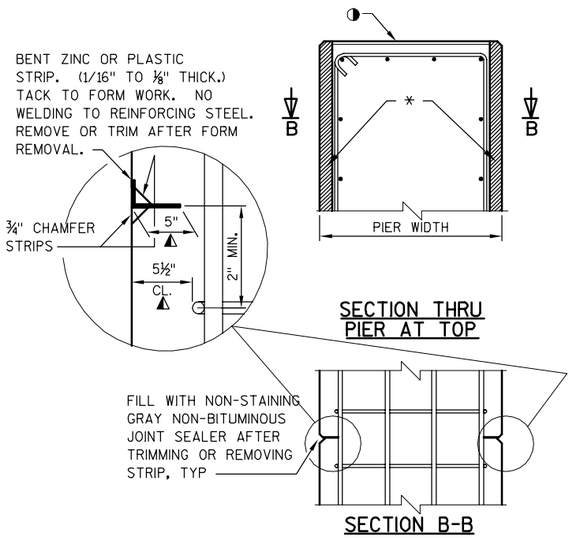
*NOTE: DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

② THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE OUTFALL PIPE. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS. THE RODENT SHIELD SHALL BE INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".



STRUCTURE BACKFILL & PIPE UNDERDRAIN DETAIL

(TYPICAL AT BOTH ABUTMENTS)



ALTERNATE CONSTRUCTION JOINT AT PIER

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STRUCTURE B-13-646

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TYPICAL DETAILS

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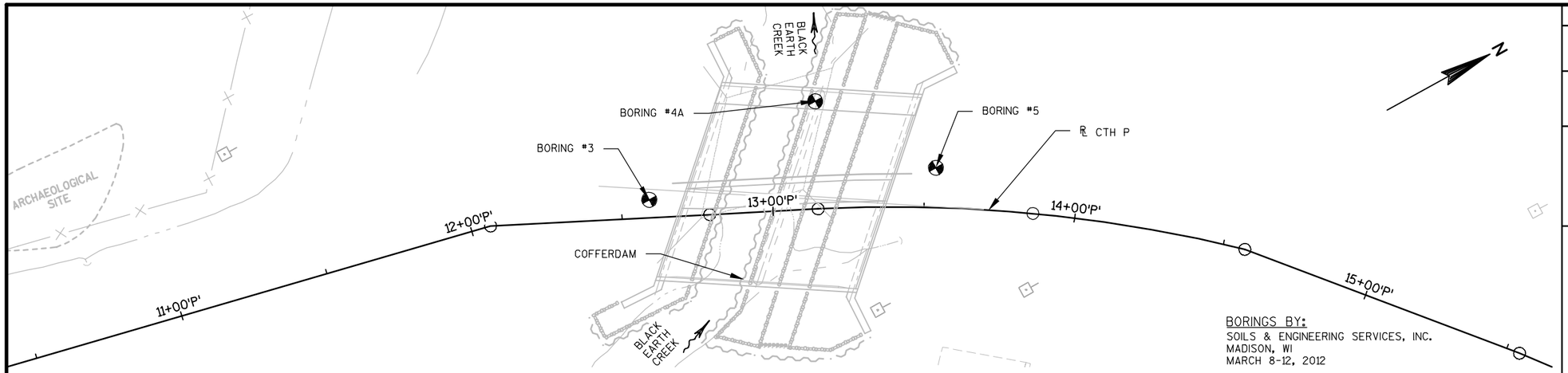
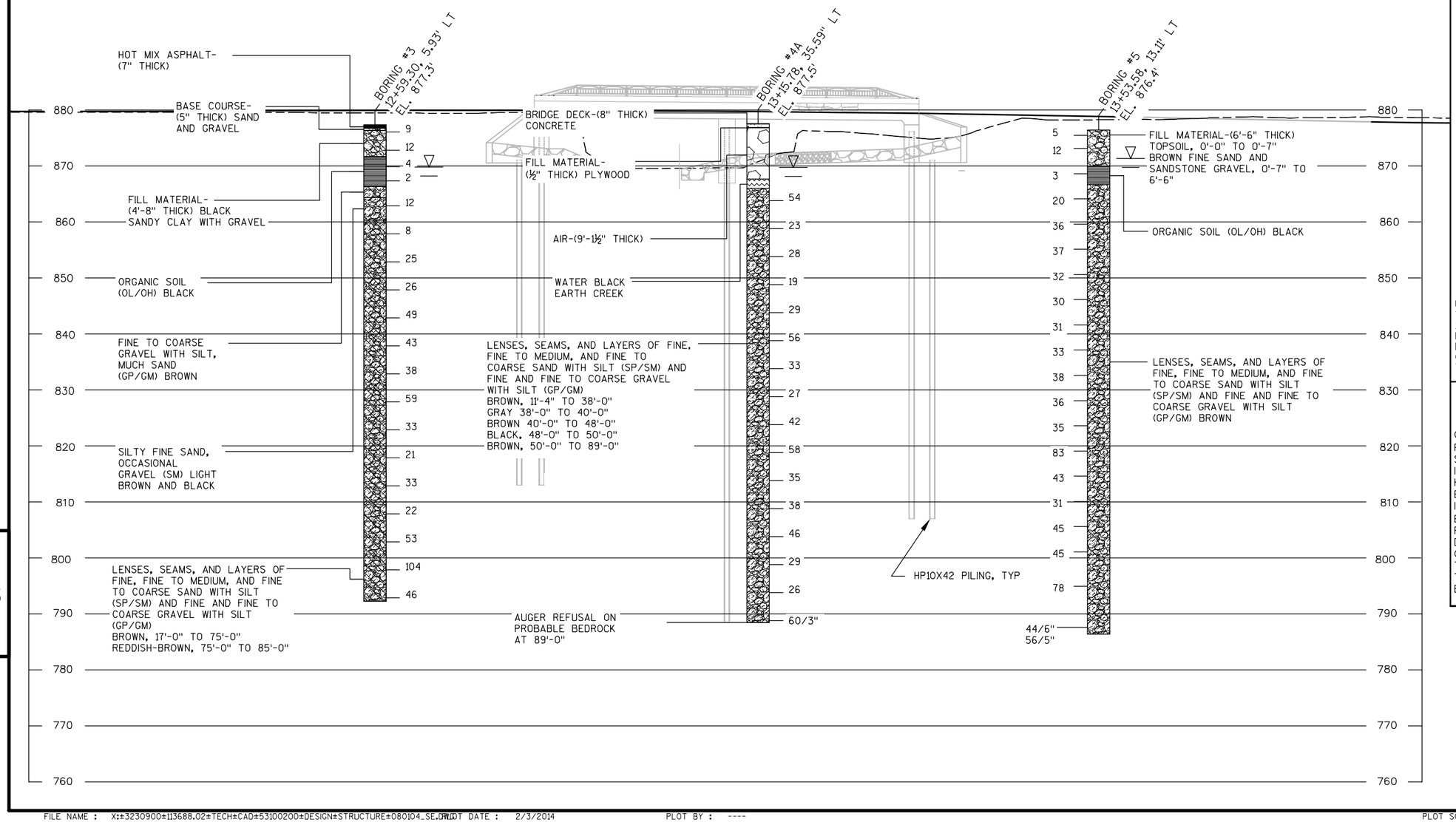


BORINGS BY:
SOILS & ENGINEERING SERVICES, INC.
MADISON, WI
MARCH 8-12, 2012



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STATE PROJECT NUMBER

5657-00-70

ABBREVIATIONS

F— Fine M—Medium C— Coarse
Ws— Weathered So —Sound

MATERIAL SYMBOLS

Asphalt, Silt, Sand, Concrete, Organic Soil, Air, Gravel, Clay, Water

LEGEND OF PROBING

95/6=95 BLOWS FOR 6" PENETRATION. PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

Probing No.
Sta.
Elevation
7 Average Blows Per Foot
Refusal 95/6

LEGEND OF BORING

Boring No.
Elev.
Sta.
Unconfined STRENGTH → 7. 7
Blows Per Ft. USING 140# WT. FALLING 30"
Wash Sample
Shelby Tube — S.T.
Ground Water
No Ground Water OBSERVED ABOVE THIS ELEVATION
Sandy Gravel
F. Boulders or COBBLES
Sand
Silty Clay
So Limestone

UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-646

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SUBSURFACE EXPLORATION

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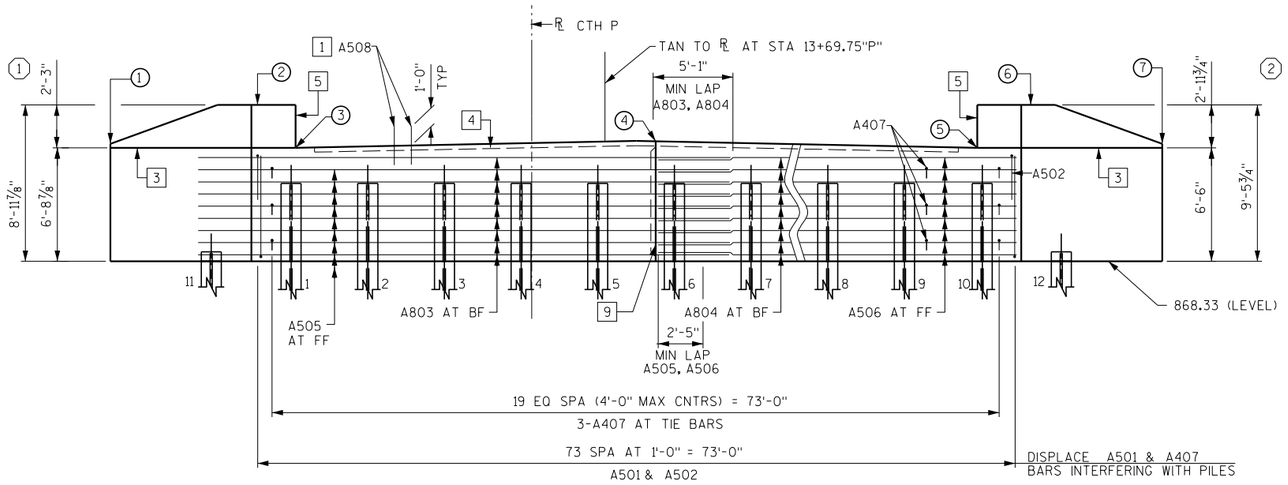
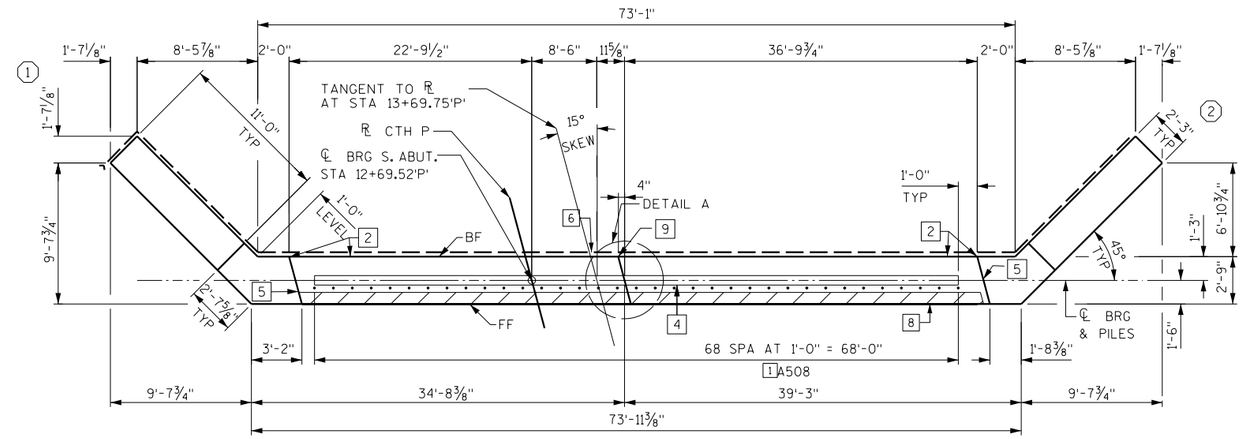
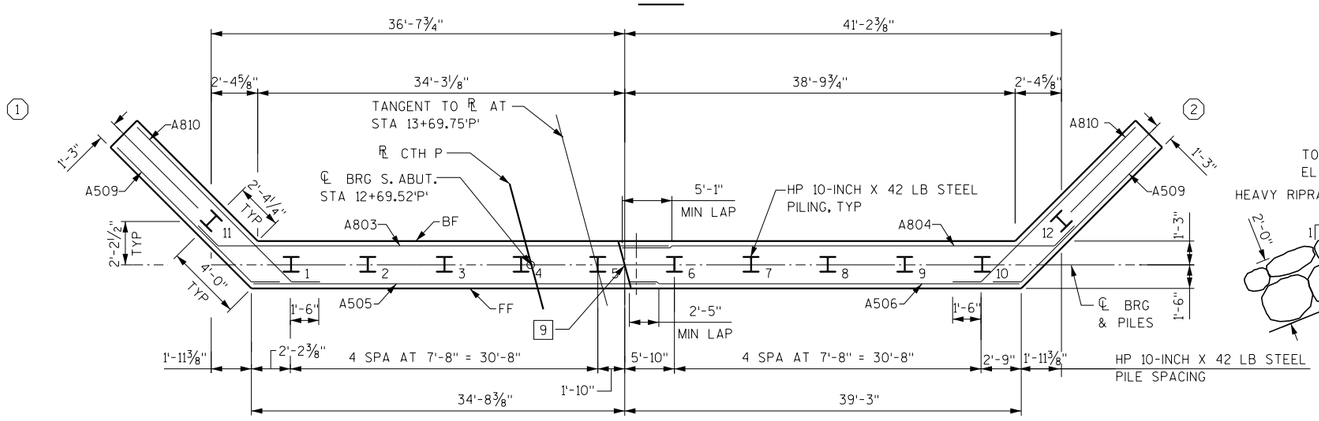


ELEVATION

SOUTH ABUTMENT LOOKING SOUTH



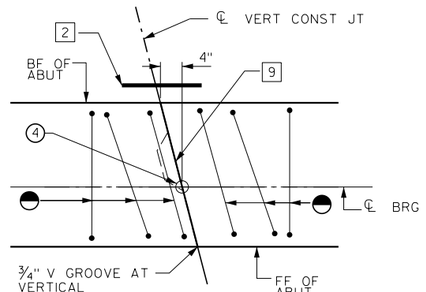
PLAN



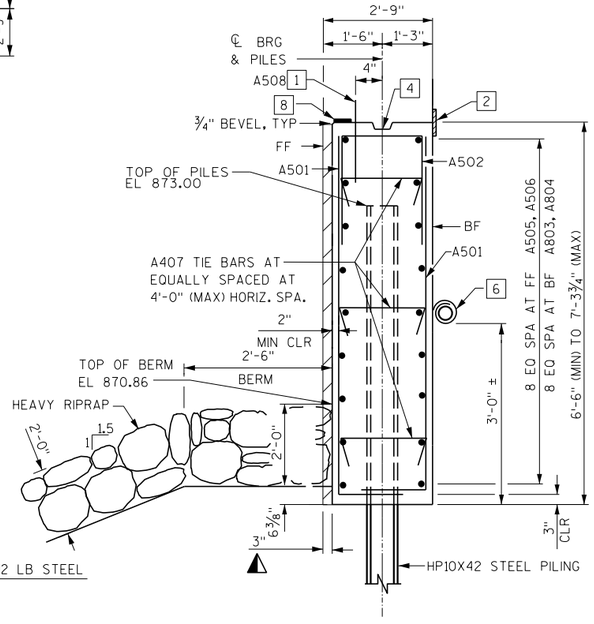
PILE PLAN

ELEVATION TABLE

1. EL 875.39 AT WING 1 WT
2. EL 877.32 AT WING 1 BF
3. EL 875.07 AT S ABUT
4. EL 875.64 AT S ABUT
5. EL 874.83 AT S ABUT
6. EL 877.81 AT WING 2 BF
7. EL 875.08 AT WING 2 WT



DETAIL A



SECTION THRU ABUTMENT BODY

NOTES

FOR PILE SPLICE DETAILS SEE SHEET 3.

FOR STRUCTURE BACKFILL AND PIPE UNDERDRAIN DETAIL SEE SHEET 3.

FILL / EXCAVATE TO BOTTOM OF ABUTMENT EL 868.33 SOUTH ABUTMENT BEFORE DRIVING PILING.

DO NOT PLACE FILL ABOVE ELEVATION 871.33 UNTIL SUPERSTRUCTURE IS IN PLACE.

ABUTMENTS TO BE SUPPORTED ON HP 10-INCH X 42 LB STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 105 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED 60'-0" LONG.

△ ARCHITECTURAL SURFACE TREATMENT. SEE DETAILS SHEET 17. 3" DEPTH BASED ON 2" MAXIMUM RELIEF WITH 1" DEEP PLAIN CAP.

◒ SKEW A501 AND A502 BARS AS SHOWN. NO SKEW IS NEEDED IF ALTERNATE CONSTRUCTION JOINT IS USED.

[1] A508 BARS MAY BE PLACED AFTER CONCRETE IS POURED, BUT BEFORE INTIAL SET HAS TAKEN PLACE.

[2] 18" RUBBERIZED MEMBRANE WATERPROOFING (RMW) TO EXTEND FROM BRIDGE SEAT TO TOP OF WING AND BETWEEN INSIDE FACES OF WINGS. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE. EXTEND RMW FULL HEIGHT OF BODY AT ABUTMENT VERTICAL CONSTRUCTION JOINT.

[3] OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2"×6" KEYWAY. PROVIDE RMW ON BF IF CONST. JOINT IS USED (COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES".

[4] KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2"×6" KEYWAY, TERMINATE 1'-0" FROM WINGS.

[5] ½" FILLER - EXTEND FROM BRIDGE SEAT TO TOP OF WING. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

[6] PIPE UNDERDRAIN WRAPPED (6-INCH) SLOPE 0.5% MIN TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 3.

[8] 4" × ¾" FILLER LENGTH OF ABUTMENT.

[9] VERTICAL CONSTRUCTION JOINT KEYWAY FORMED BY BEVELED 2" X 8". DEFINE BY ¾" "V" GROOVE ON FF. SEAL WITH 18" RMW ON BACK FACE. AN ALTERNATE CONSTRUCTION JOINT MAY BE USED. SEE DETAIL ON SHEET 3.

(X) INDICATES WING NUMBER

FF - FRONT FACE
BF - BACK FACE
WT - WING TIP

STATE PROJECT NUMBER

5657-00-70

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-646

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SOUTH ABUTMENT

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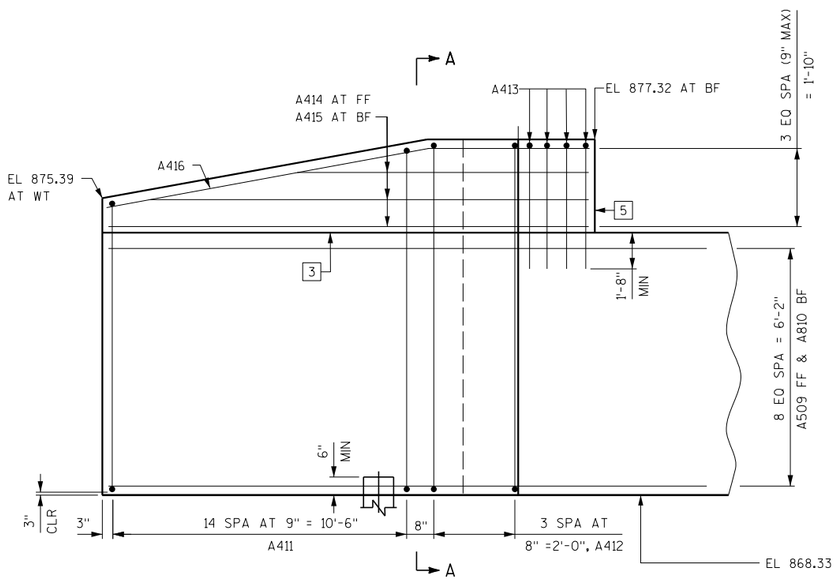
FILE NAME : X:±3230900±113688.02±TECH±CAD±53100200±Design±Structure±080105_sa.dgn PLOT DATE : 2/3/2014

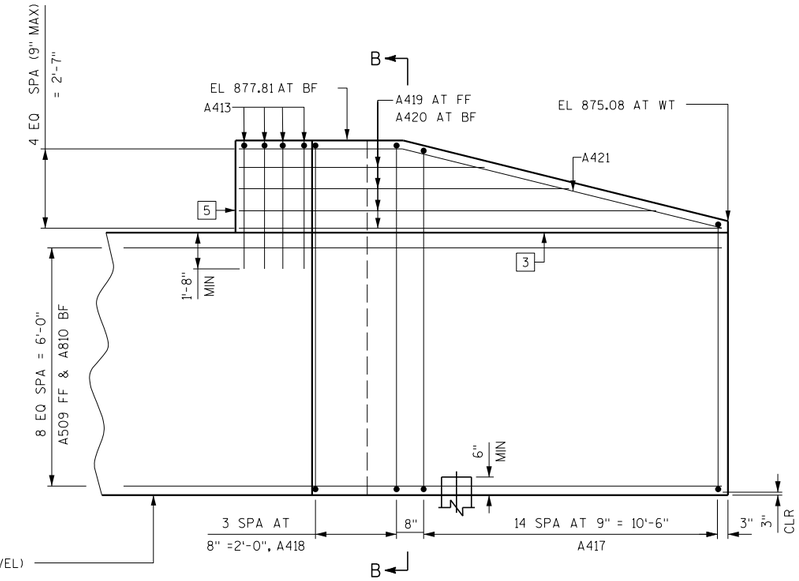
PLOT SCALE : 8.0000 sf / in.

STATE PROJECT NUMBER

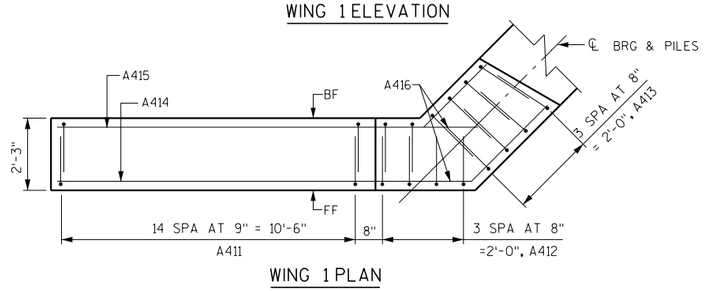
5657-00-70



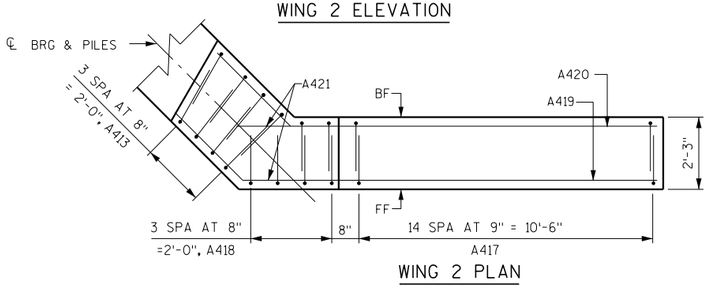
WING 1 ELEVATION



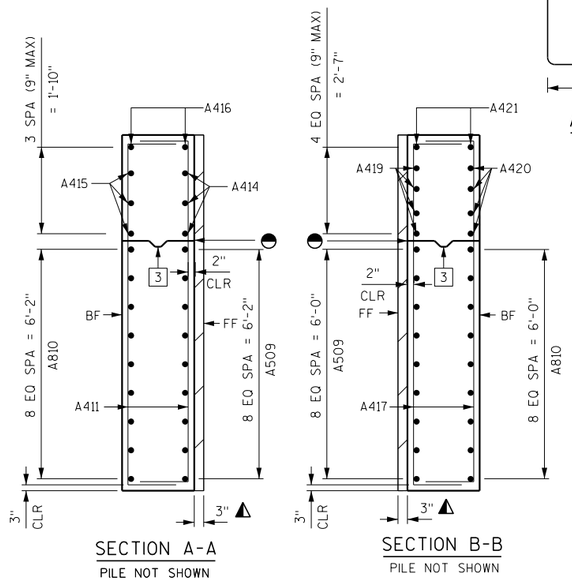
WING 2 ELEVATION

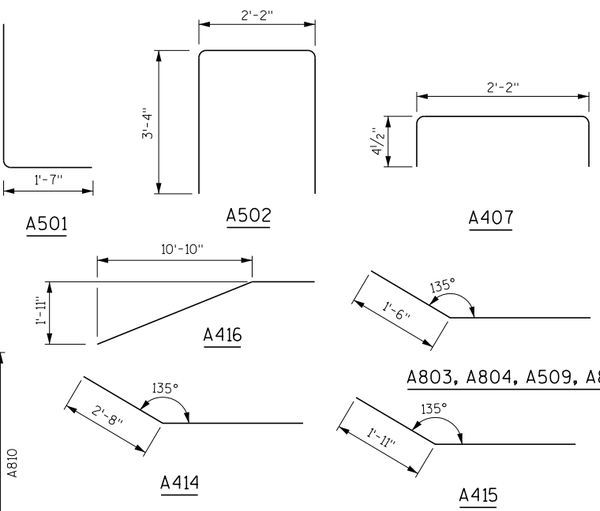


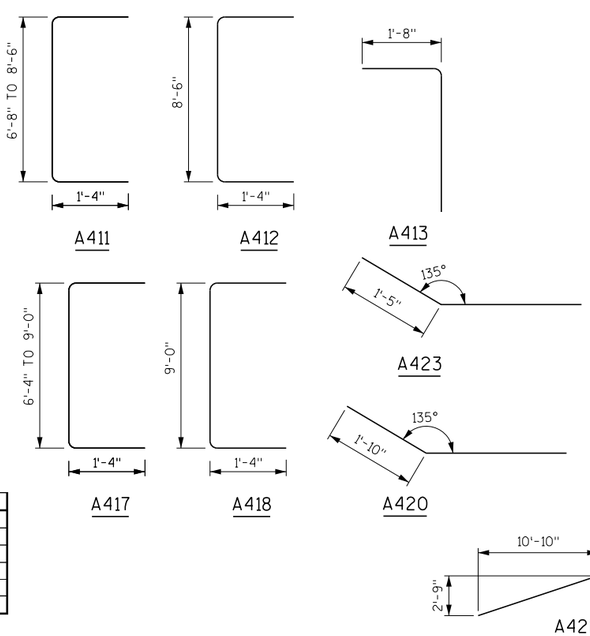
WING 1 PLAN



WING 2 PLAN







BAR SERIES TABLE ◩

MARK	NO. REQUIRED	LENGTH
A411	2 SERIES OF 15	9'-2" TO 11'-0"
A414	1 SERIES OF 3	8'-11" TO 15'-9"
A415	1 SERIES OF 3	6'-8" TO 13'-8"
A417	2 SERIES OF 15	8'-10" TO 11'-6"
A419	1 SERIES OF 4	6'-5" TO 14'-3"
A420	1 SERIES OF 4	5'-6" TO 13'-4"

BUNDLE AND TAG EACH SERIES SEPARATELY

BILL OF BARS
SOUTH ABUTMENT

COATED= 1900 LBS.
UNCOATED= 4760 LBS.

MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH FT - IN	BENT	BAR SERIES	LOCATION	
A 5 01		148	7 - 6	X		ABUTMENT BODY	VERT
A 5 02		74	8 - 7	X		ABUTMENT BODY - TOP	VERT
A 8 03		9	44 - 7	X		ABUTMENT BODY - BF	HORIZ
A 8 04		9	43 - 1	X		ABUTMENT BODY - BF	HORIZ
A 5 05		9	37 - 5			ABUTMENT BODY - FF	HORIZ
A 5 06		9	38 - 8			ABUTMENT BODY - FF	HORIZ
A 4 07		60	2 - 9	X		ABUTMENT BODY	TIES
A 5 08	69		2 - 0			ABUTMENT BODY - DOWELS	VERT
A 5 09	18		14 - 8	X		WINGS - FF	HORIZ
A 8 10	18		16 - 3	X		WINGS - BF	HORIZ
◩ A 4 11	30		10 - 1	X	X	WINGS - 1	VERT
A 4 12	6		11 - 0	X		WINGS - 1	VERT
A 4 13	16		6 - 1	X		WINGS - TOP	VERT
◩ A 4 14	3		12 - 4	X	X	WING 1 - TOP FF	HORIZ
◩ A 4 15	3		10 - 2	X	X	WING 1 - TOP BF	HORIZ
A 4 16	2		13 - 6	X		WING 1 - TOP	HORIZ
◩ A 4 17	30		10 - 2	X	X	WINGS - 2	VERT
A 4 18	6		11 - 6	X		WINGS - 2	VERT
◩ A 4 19	4		10 - 4	X	X	WING 2 - TOP FF	HORIZ
◩ A 4 20	4		9 - 5	X	X	WING 2 - TOP BF	HORIZ
A 4 21	2		13 - 8	X		WING 2 - TOP	HORIZ

BAR DIMENSIONS IN BENDING ARE OUT TO OUT OF BARS.
ALL REINFORCING BARS ARE ENGLISH.
THE FIRST DIGIT FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

◭ ARCHITECTURAL SURFACE TREATMENT. SEE DETAILS SHEET 17. 3" DEPTH BASED ON 2" MAXIMUM RELIEF WITH 1" DEEP PLAIN CAP.

◩ LENGTH SHOWN IS AN AVERAGE LENGTH USED FOR CALCULATING BAR WEIGHT ONLY. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

◓ ¾" "V" GROOVE ON FF.

[3] OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6" KEYWAY, PROVIDE RUBBERIZED MEMBRANE WATERPROOFING RMW ON BF IF OPTIONAL CONST. JOINT IS USED (COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES".

[5] ½" FILLER - EXTEND FROM BRIDGE SEAT TO TOP OF WING. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF " FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

FF - FRONT FACE
BF - BACK FACE
WT - WING TIP

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-646

DRAWN BY TAV | PLANS CK'D. GAR

SOUTH ABUTMENT DETAILS

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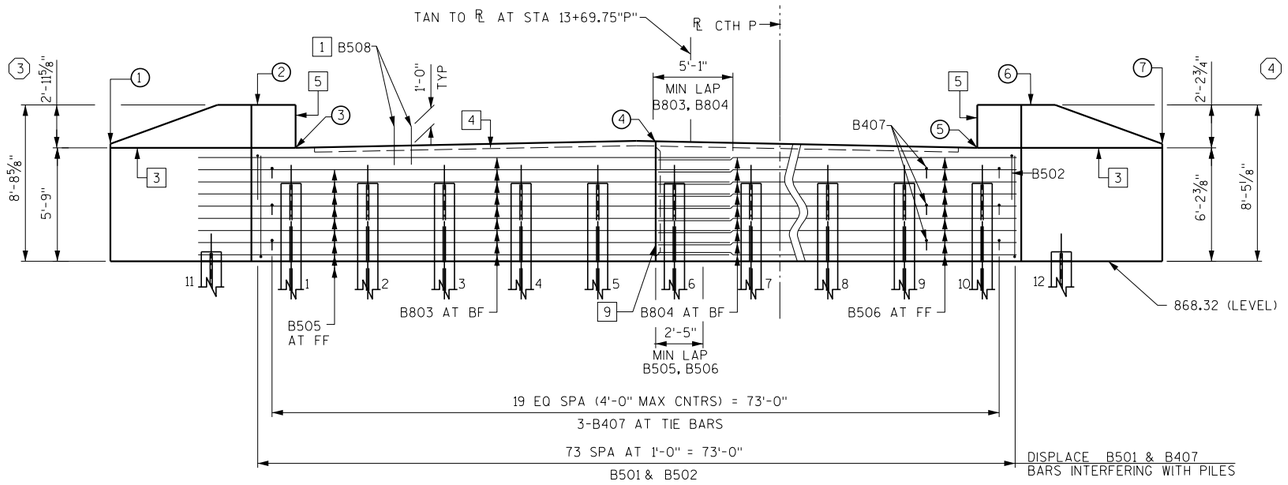
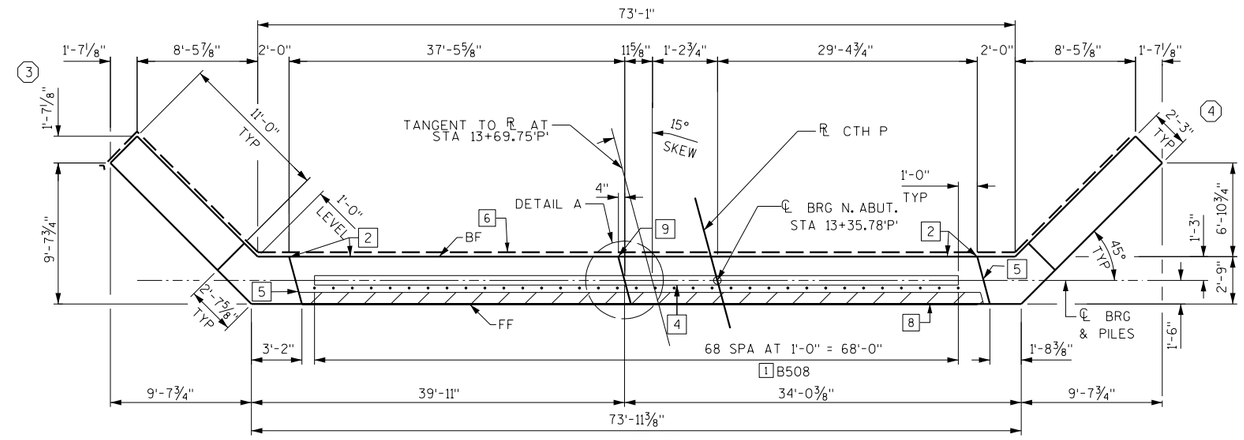
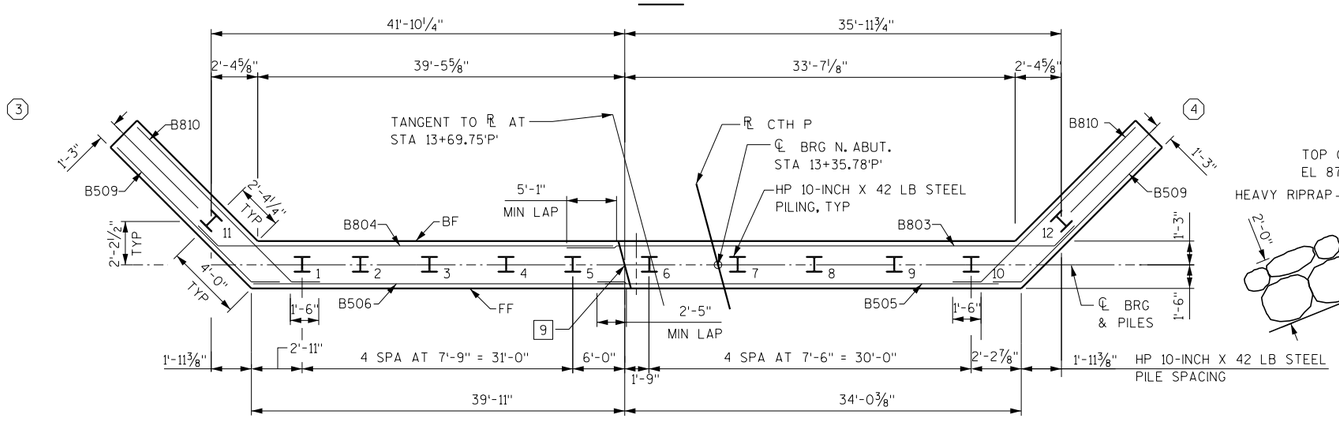


ELEVATION

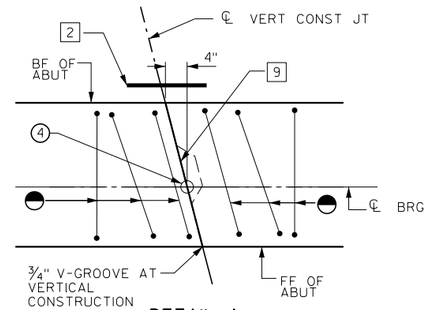
NORTH ABUTMENT LOOKING NORTH



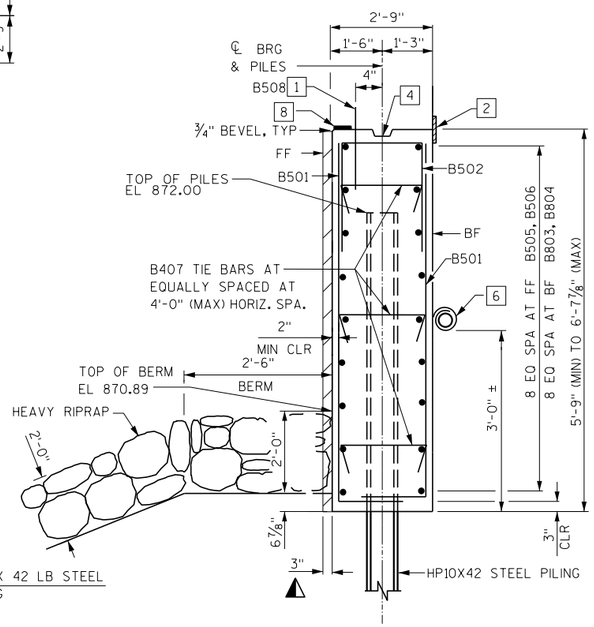
PLAN



PILE PLAN



DETAIL A



SECTION THRU ABUTMENT BODY

ELEVATION TABLE

1. EL 875.04 AT WING 3 WT
2. EL 877.04 AT WING 3 BF
3. EL 874.07 AT N ABUT
4. EL 874.98 AT N ABUT
5. EL 874.52 AT N ABUT
6. EL 876.75 AT WING 4 BF
7. EL 875.02 AT WING 4 WT

NOTES

FOR PILE SPLICE DETAILS SEE SHEET 3.

FOR STRUCTURE BACKFILL AND PIPE UNDERDRAIN DETAIL SEE SHEET 3.

FILL / EXCAVATE TO BOTTOM OF ABUTMENT EL 868.32 NORTH ABUTMENT BEFORE DRIVING PILING.

DO NOT PLACE FILL ABOVE ELEVATION 871.32 UNTIL SUPERSTRUCTURE IS IN PLACE.

ABUTMENTS TO BE SUPPORTED ON HP 10-INCH X 42 LB STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 105 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED 65'-0" LONG.

△ ARCHITECTURAL SURFACE TREATMENT. SEE DETAILS SHEET 17. 3" DEPTH BASED ON 2" MAXIMUM RELIEF WITH 1" DEEP PLAIN CAP.

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[3] OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2"x6" KEYWAY. PROVIDE RMW ON BF IF CONST. JOINT IS USED (COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES".

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[6] PIPE UNDERDRAIN WRAPPED (6-INCH) SLOPE 0.5% MIN TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 3.

[8] 4" x ¾" FILLER LENGTH OF ABUTMENT.

[9] VERTICAL CONSTRUCTION JOINT KEYWAY FORMED BY BEVELED 2" X 8". DEFINE BY ¾" "V" GROOVE ON FF. SEAL WITH 18" RMW ON BACK FACE. AN ALTERNATE CONSTRUCTION JOINT MAY BE USED. SEE DETAIL ON SHEET 3.

(X) INDICATES WING NUMBER

FF - FRONT FACE
BF - BACK FACE
WT - WING TIP

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-646

DRAWN BY TAV | PLANS CK'D. GAR

NORTH ABUTMENT

SHEET 7 OF 17
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STATE PROJECT NUMBER

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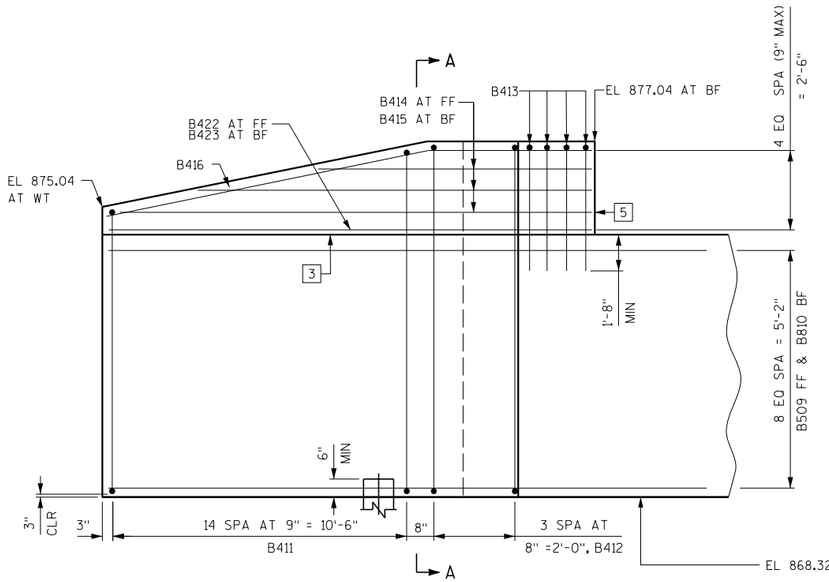
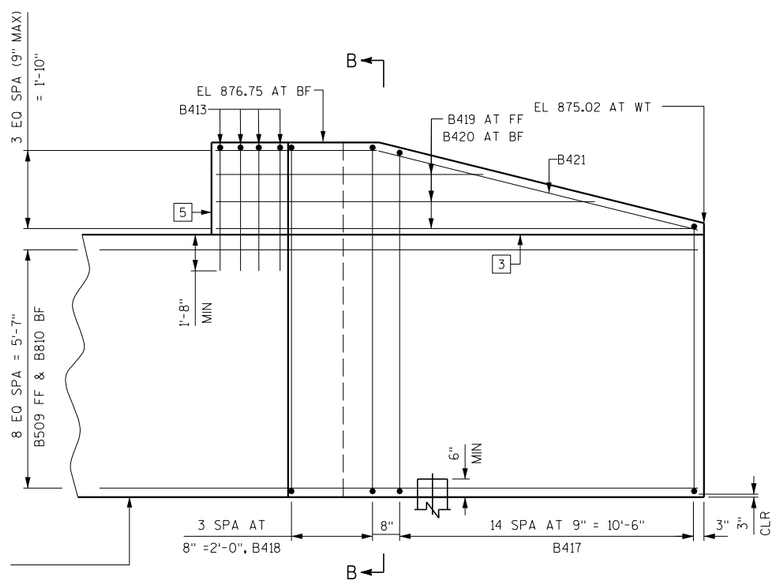
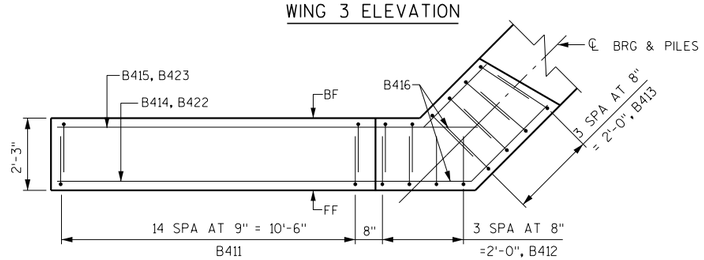


WING 3 ELEVATION

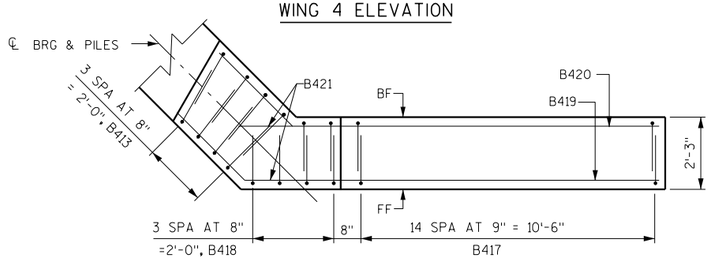


WING 4 ELEVATION

EL 868.32 (LEVEL)



WING 3 PLAN



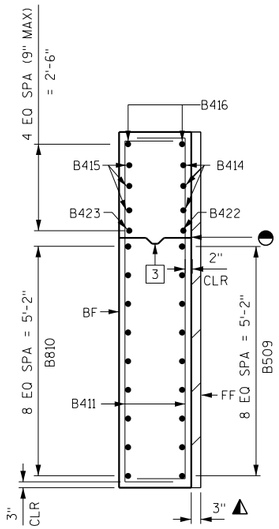
WING 4 PLAN

BILL OF BARS
NORTH ABUTMENT

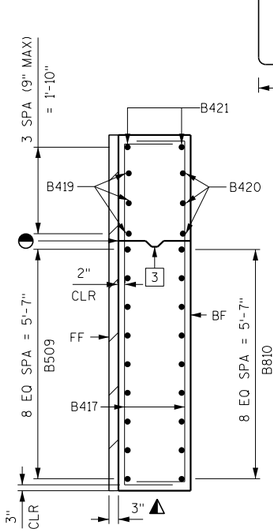
COATED= 1890 LBS
UNCOATED= 4640 LBS

MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH FT - IN	BENT	BAR SERIES	LOCATION	
B 5 01		148	6 - 9	X		ABUTMENT BODY	VERT
B 5 02		74	9 - 3	X		ABUTMENT BODY - TOP	VERT
B 8 03		9	42 - 9	X		ABUTMENT BODY - BF	HORIZ
B 8 04		9	42 - 8	X		ABUTMENT BODY - BF	HORIZ
B 5 05		9	36 - 2			ABUTMENT BODY - FF	HORIZ
B 5 06		9	39 - 9			ABUTMENT BODY - FF	HORIZ
B 4 07		60	2 - 9	X		ABUTMENT BODY	TIES
B 5 08	69		2 - 0			ABUTMENT BODY - DOWELS	VERT
B 5 09	18		14 - 8	X		WINGS - FF	HORIZ
B 8 10	18		16 - 3	X		WINGS - BF	HORIZ
◪ B 4 11	30		9 - 10	X	X	WINGS - 3	VERT
B 4 12	6		10 - 9	X		WINGS - 3	VERT
B 4 13	16		6 - 1	X		WINGS - TOP	VERT
◪ B 4 14	3		12 - 2	X	X	WING 3 - TOP FF	HORIZ
◪ B 4 15	3		10 - 1	X	X	WING 3 - TOP BF	HORIZ
B 4 16	2		13 - 5	X		WING 3 - TOP	HORIZ
B 4 17	30		9 - 8	X	X	WINGS - 4	VERT
B 4 18	6		10 - 6	X		WINGS - 4	VERT
◪ B 4 19	3		11 - 4	X	X	WING 4 - TOP FF	HORIZ
◪ B 4 20	3		10 - 4	X	X	WING 4 - TOP BF	HORIZ
B 4 21	2		13 - 4	X		WING 4 - TOP	HORIZ
B 4 22	1		15 - 10	X		WING 3 - TOP FF	HORIZ
B 4 23	1		13 - 9	X		WING 3 - TOP BF	HORIZ

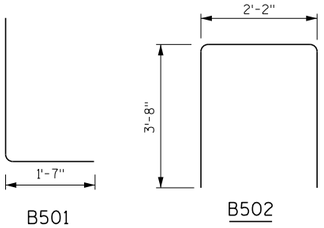
BAR DIMENSIONS IN BENDING ARE OUT TO OUT OF BARS.
ALL REINFORCING BARS ARE ENGLISH.
THE FIRST DIGIT FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.



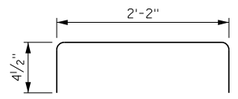
SECTION A-A
PILE NOT SHOWN



SECTION B-B
PILE NOT SHOWN



B501 B502



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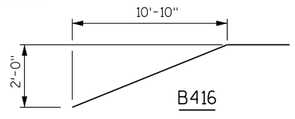

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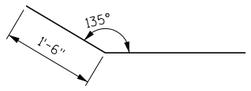
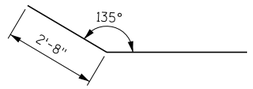
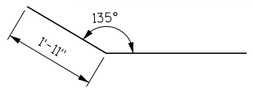


B803, B804, B509, B810



B414, B422



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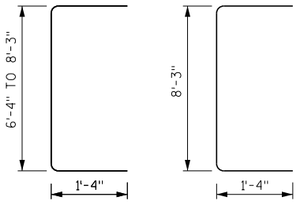

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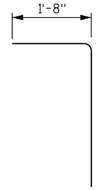

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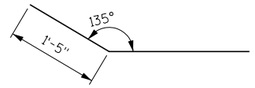

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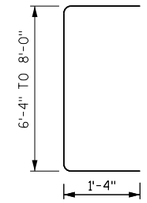

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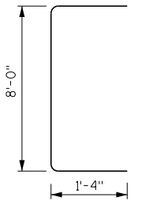

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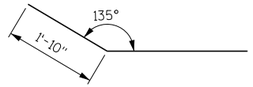

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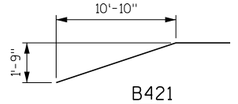

B421

BAR SERIES TABLE ◪

MARK	NO. REQUIRED	LENGTH
B411	2 SERIES OF 15	8'-10" TO 10'-9"
B414	1 SERIES OF 3	8'-9" TO 15'-7"
B415	1 SERIES OF 3	6'-7" TO 13'-6"
B417	2 SERIES OF 15	8'-10" TO 10'-6"
B419	1 SERIES OF 3	8'-0" TO 14'-7"
B420	1 SERIES OF 3	7'-0" TO 13'-7"

BUNDLE AND TAG EACH SERIES SEPARATELY

▲ ARCHITECTURAL SURFACE TREATMENT. SEE DETAILS SHEET 17. 3" DEPTH BASED ON 2" MAXIMUM RELIEF WITH 1" DEEP PLAIN CAP.

◪ LENGTH SHOWN IS AN AVERAGE LENGTH USED FOR CALCULATING BAR WEIGHT ONLY. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

◓ ¾" "V" GROOVE ON FF.

[3] OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6" KEYWAY, PROVIDE RUBBERIZED MEMBRANE RMW ON BF IF OPTIONAL CONST. JOINT IS USED (COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES".

[5] ½" FILLER - EXTEND FROM BRIDGE SEAT TO TOP OF WING. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF " FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

FF - FRONT FACE
BF - BACK FACE
WT - WING TIP

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-646

DRAWN BY TAV | PLANS CK'D. GAR

NORTH ABUTMENT DETAILS

SHEET 8 OF 17
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8

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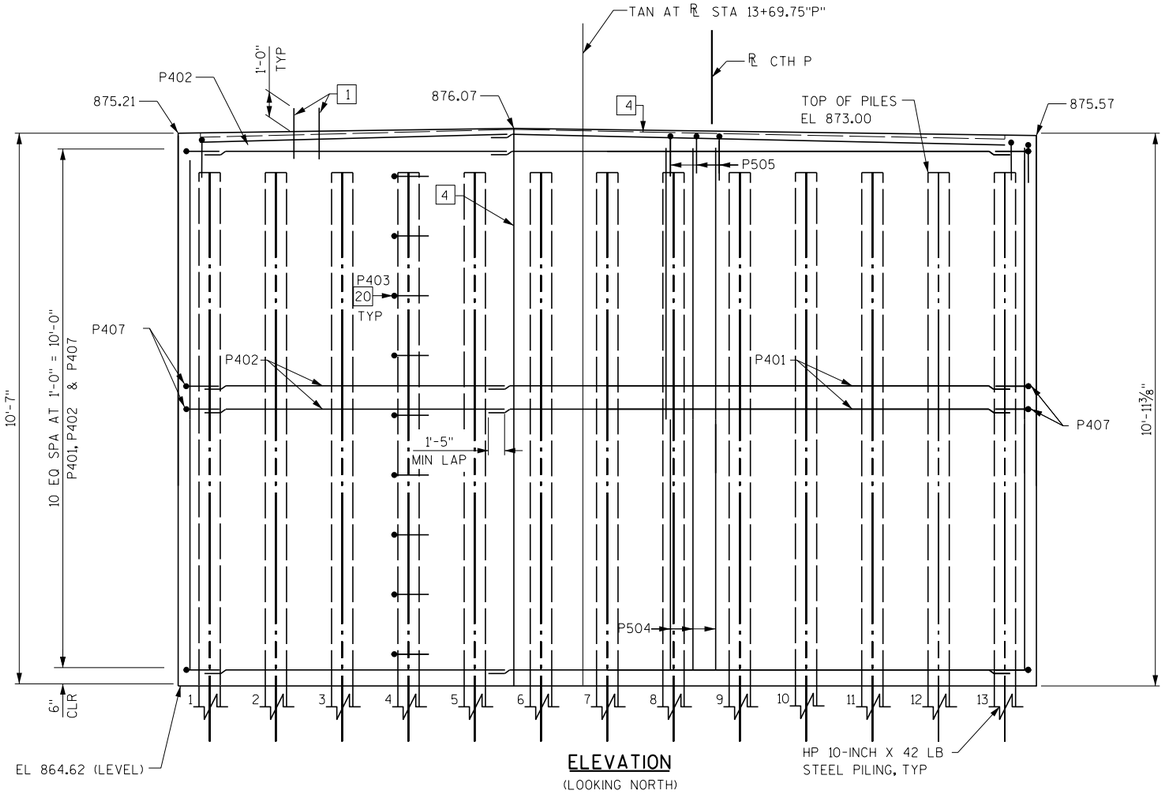
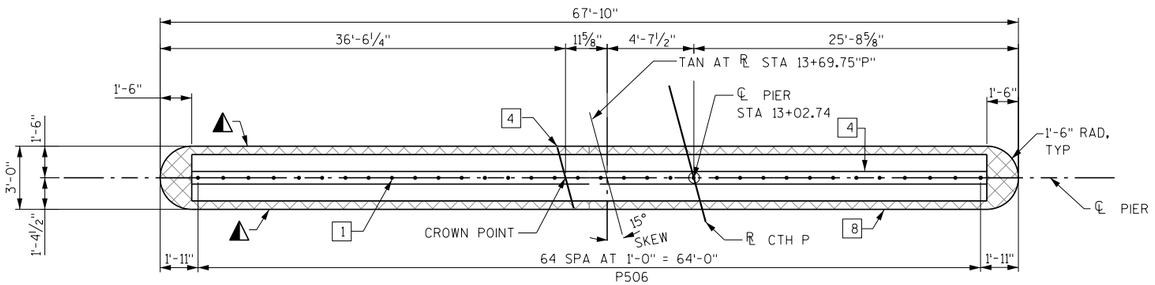
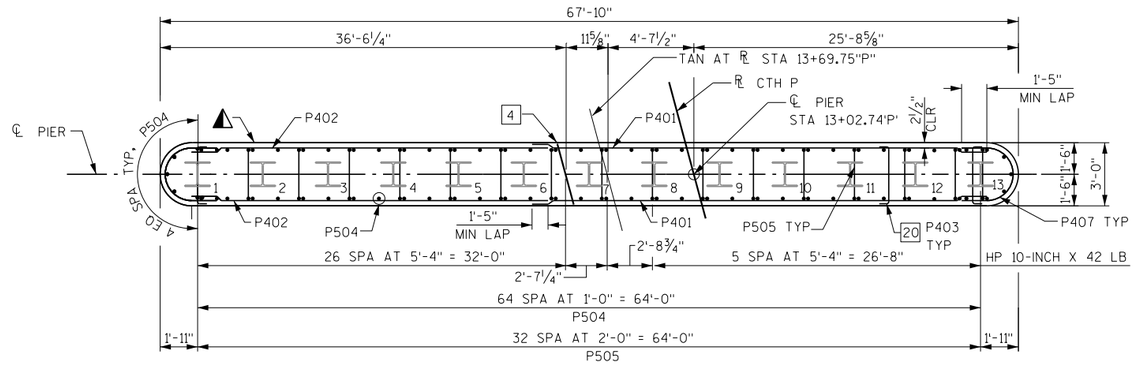
STATE PROJECT NUMBER
5657-00-70



ELEVATION
(LOOKING NORTH)



PLAN



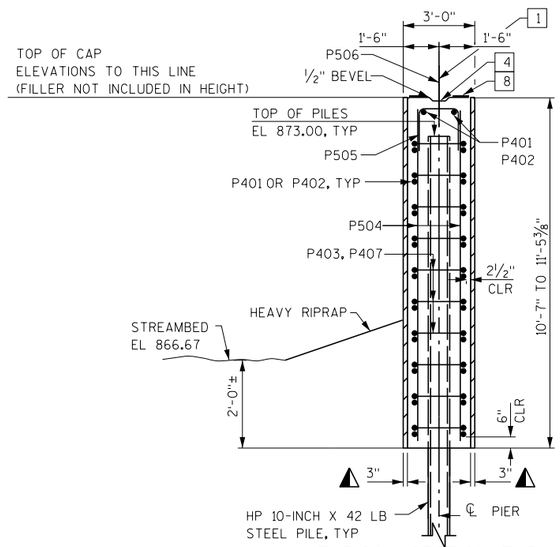
PILE AND REINFORCEMENT PLAN

BILL OF BARS
PIER

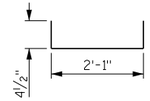
COATED= 0 LBS
UNCOATED= 3100 LBS

MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH FT - IN	BENT	LOCATION	
P 4 01		24	31 - 8		SHAFT	HORIZ
P 4 02		24	34 - 7		SHAFT	HORIZ
P 4 03		117	2 - 8	X	SHAFT - TIES	HORIZ
P 5 04		136	9 - 11		SHAFT	VERT
P 5 05		33	5 - 7	X	SHAFT AT TOP	VERT
P 5 06		65	2 - 0		SHAFT DOWELS	VERT
P 4 07		22	6 - 1	X	SHAFT AT ENDS	HORIZ

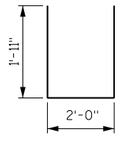
BAR DIMENSIONS IN BENDING ARE OUT TO OUT OF BARS.
ALL REINFORCING BARS ARE ENGLISH.
THE FIRST DIGIT FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.



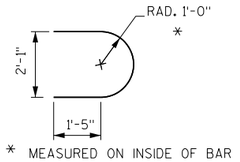
TYPICAL SECTION THRU PIER
(LOOKING WEST)



P403

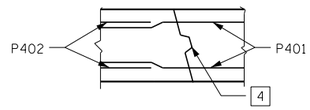


P505



* MEASURED ON INSIDE OF BAR

P407



VERTICAL CONSTRUCTION JOINT DETAIL

NOTES

PIER TO BE SUPPORTED ON HP 10-INCH x 42 LB STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE AS REQUIRED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED 85'-0" LONG.

FOR PILE SPLICE DETAILS SEE SHEET 3.

◭ ARCHITECTURAL SURFACE TREATMENT ON PIER FACES. SEE SHEET 17 FOR DETAILS. 3" DEPTH BASED ON 2" MAXIMUM RELIEF AND 1" DEEP PLAIN CAP.

[1] P506 BARS MAY BE PLACED AFTER CONCRETE IS PLACED, BUT BEFORE INTIAL SET HAS TAKEN PLACE.

[4] KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2"x6" KEYWAY, TERMINATE 1'-3" FROM PIER ENDS. AN ALTERNATE CONSTRUCTION JOINT MAY BE USED. SEE DETAIL ON SHEET 3.

[8] 4" x ¾" FILLER LENGTH OF PIER.

[20] P403 PLACED ADJACENT TO EACH PILE AT 1'-0" VERTICAL CENTERS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-646

DRAWN BY	TAV	PLANS CK'D.	GAR

PIER

8

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NOTES

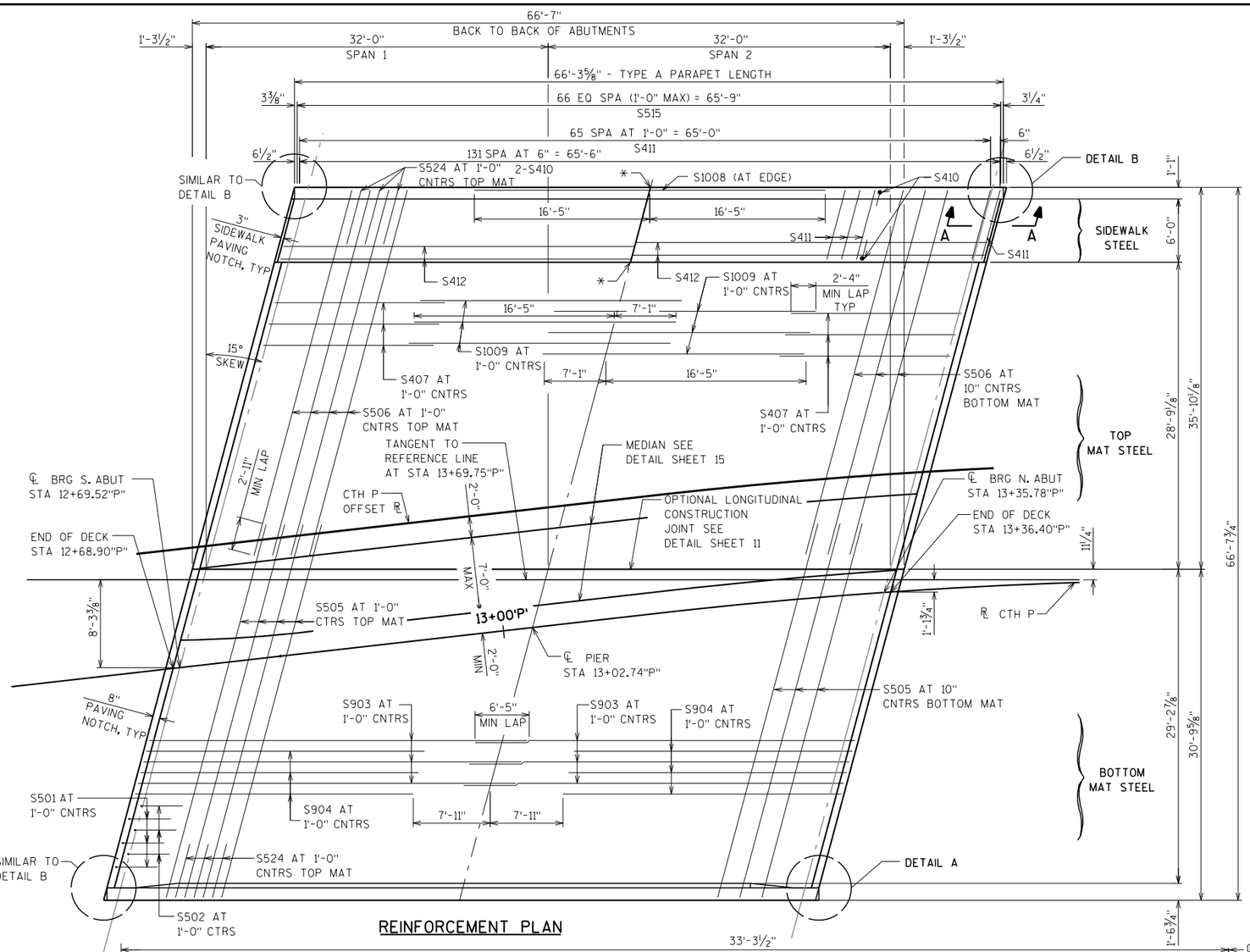
2 18" RUBBERIZED MEMBRANE WATERPROOFING (RMW) TO EXTEND FROM BRIDGE SEAT TO TOP OF WING AND BETWEEN INSIDE FACES OF WINGS. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.

8 4" x ¾" FILLER LENGTH OF ABUTMENT & PIER.

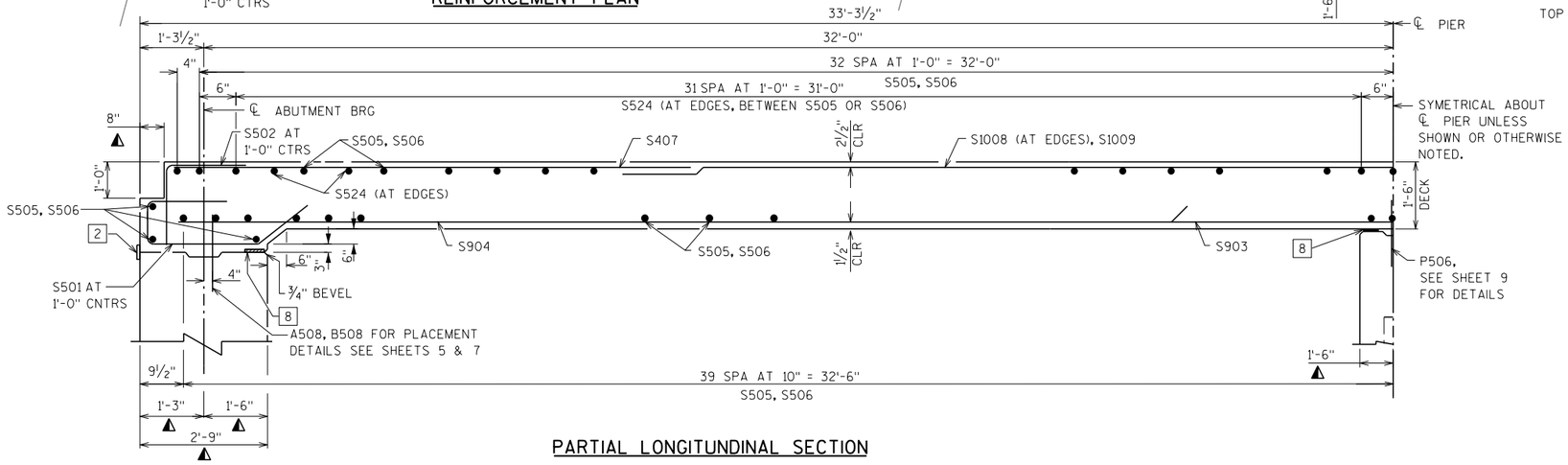
▲ DIMENSION GIVEN NORMAL TO SUBSTRUCTURE UNIT.

✳ SIDEWALK DEFLECTION JOINT. SEE DETAIL SHEET 14.

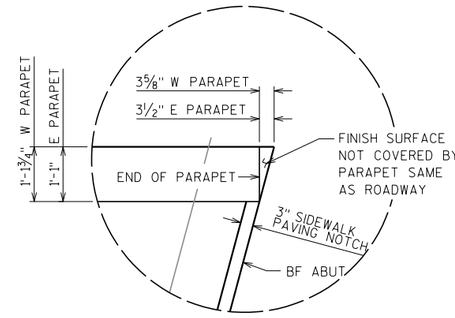
FF - FRONT FACE
BF - BACK FACE



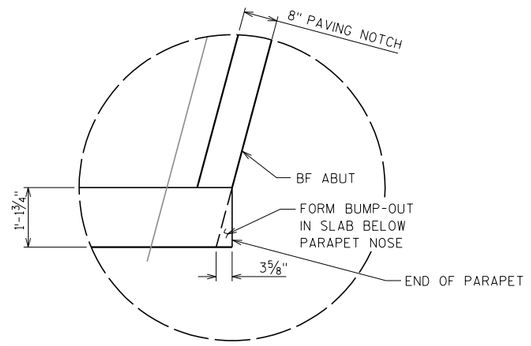
REINFORCEMENT PLAN



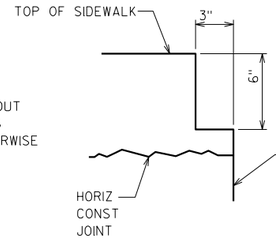
PARTIAL LONGITUNDINAL SECTION



DETAIL B



DETAIL A



SECTION A-A

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-646

DRAWN BY TAV | PLANS CK'D. GAR

SUPERSTRUCTURE

SHEET 10 OF 17
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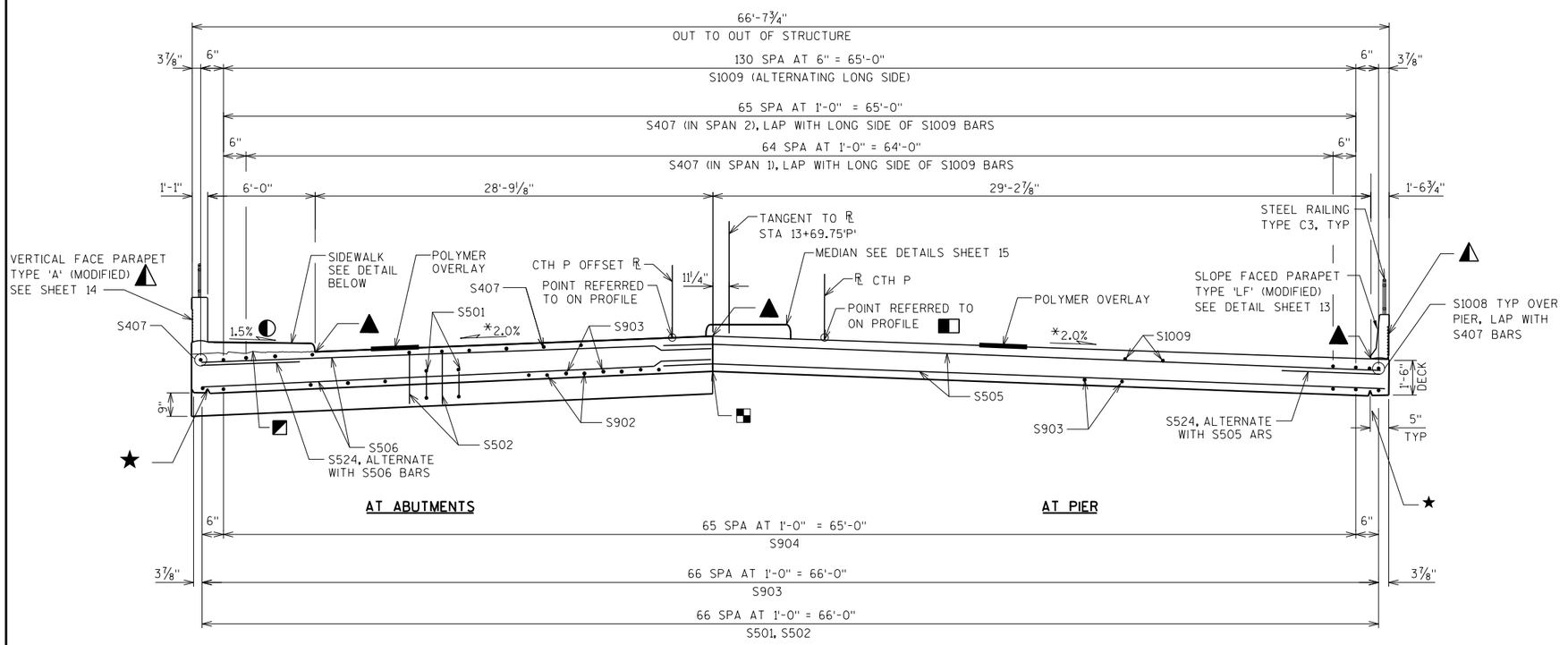
5657-00-70



CROSS SECTION THRU ROADWAY

(LOOKING NORTH)

* SLOPE NORMAL TO REFERENCE LINE

NOTES

SEE SHEET 13 FOR LF PARAPET DETAILS.

SEE SHEET 14 FOR A PARAPET DETAILS.

SEE SHEET 15 FOR MEDIAN DETAILS.

◪ HORIZ. CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH. FOR DECK POUR, MATCH BRIDGE X-SLOPE. DO NOT APPLY PROTECTIVE SURFACE TREATMENT TO THIS AREA.

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

▲ POINTS REFERRED TO ON ELEVATION TABLE SEE SHEET 12. ◧

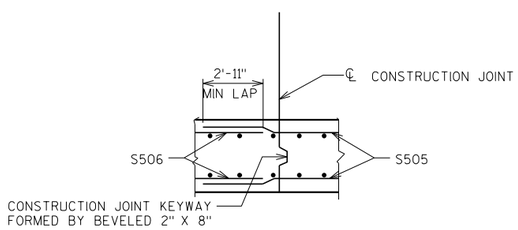
◭ ARCHITECTURAL SURFACE TREATMENT. SEE SHEET 17 FOR DETAILS.

★ ¾" V-GROOVE. TERMINATE 3" CHAMFER AT ABUTMENTS. SEE DETAIL ON THIS SHEET.

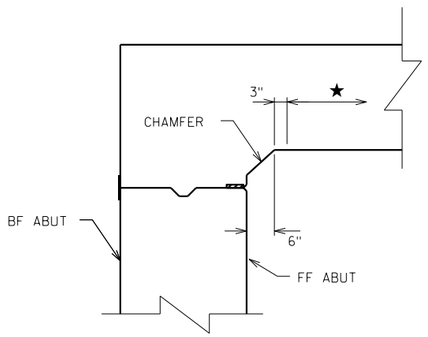
* ALL SLOPES PERPENDICULAR TO REFENCE LINE.

◪ OPTIONAL LONGITUDINAL CONSTRUCTION JOINT. SEE DETAIL THIS SHEET.

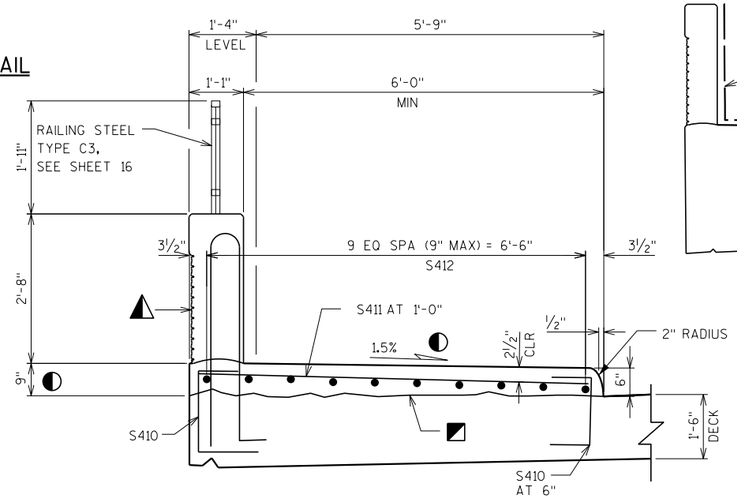
◧ PROFILE POINTS ARE GIVEN TO THE TOP OF CONCRETE SLAB. DOES NOT INCLUDE POLYMER OVERLAY THICKNESS.



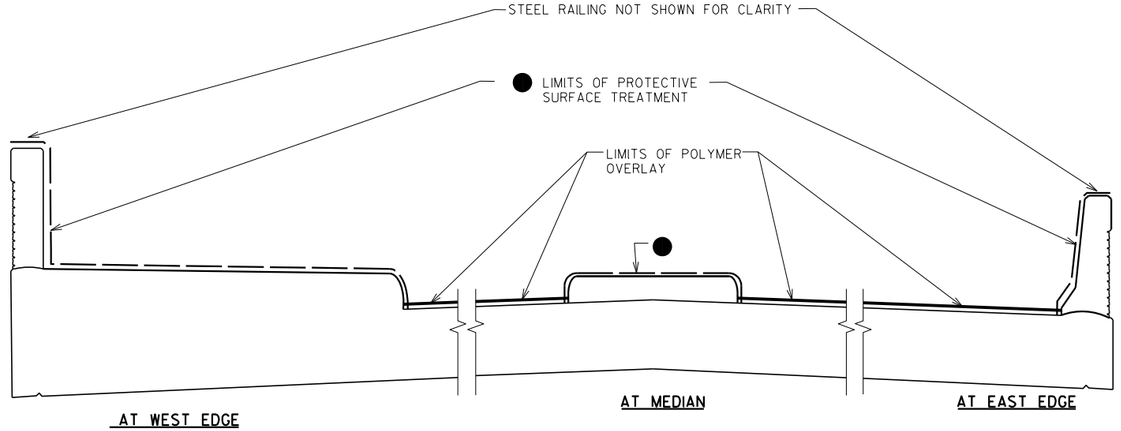
LONGITUDINAL CONSTRUCTION JOINT DETAIL



DRIP GROOVE DETAIL AT ABUTMENT



SECTION THRU SIDEWALK



LIMITS OF PROTECTIVE SURFACE TREATMENT

● PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE SIDEWALK, MEDIAN, CURB FACES, TOP & INSIDE FACES OF PARAPETS AS SHOWN.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-646

DRAWN BY TAV | PLANS CK'D. GAR

SUPERSTRUCTURE DETAILS 1

SHEET 11 OF 17
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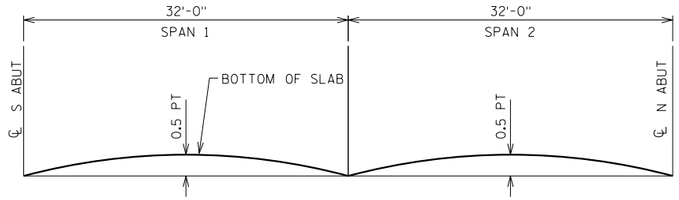
8

8



CAMBER DIAGRAM

CAMBER SPAN AS SHOWN (USING VALUES IN TABLE) TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

SPAN PT.	CAMBER (IN)
S ABUT	0
0.1	1/8
0.2	1/4
0.3	3/8
0.4	3/8
0.5	3/8
0.6	3/8
0.7	1/4
0.8	1/8
0.9	0
PIER	0
0.1	0
0.2	1/8
0.3	1/4
0.4	3/8
0.5	3/8
0.6	3/8
0.7	3/8
0.8	1/4
0.9	1/8
N ABUT	0

CAMBER

BILL OF BARS **COATED= 60730 LBS**
SUPERSTRUCTURE **UNCOATED= 0 LBS**

MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH FT - IN	BENT	LOCATION	
S 5 01	134		7 - 7	X	SLAB - ABUTMENT TIES	LONGIT
S 5 02	134		3 - 3	X	SLAB - PAVING NOTCH BARS	LONGIT
S 9 03	134		36 - 4		SLAB - BOTTOM	LONGIT
S 9 04	132		25 - 2		SLAB - BOTTOM	LONGIT
S 5 05	152		34 - 10		SLAB - TOP & BOTTOM	TRANS
S 5 06	152		36 - 9		SLAB - TOP & BOTTOM	TRANS
S 4 07	135		19 - 0		SLAB - TOP AT ABUTMENTS	LONGIT
S 10 08	2		32 - 10		SLAB - TOP OVER PIER AT DECK EDGES	LONGIT
S 10 09	131		23 - 6		SLAB - TOP OVER PIER	LONGIT
S 4 10	264		3 - 6	X	SLAB - SIDEWALK TIES	VERT
S 4 11	67		6 - 11		SIDEWALK	TRANS
S 4 12	20		32 - 8		SIDEWALK	LONGIT
S 4 13	12		34 - 6		MEDIAN	LONGIT
S 4 14	48		6 - 7		MEDIAN	TRANS
S 5 15	67		8 - 2	X	TYPE A PARAPET ANCHOR	VERT
S 4 16	6		32 - 11		TYPE A PARAPET - SPAN 2	LONGIT
S 5 17	28		4 - 5	X	TYPE LF PARAPET ANCHOR AT ENDS	VERT
S 5 18	16		2 - 4	X	TYPE LF PARAPET ANCHOR AT ENDS	VERT
S 5 19	80		4 - 2	X	TYPE LF PARAPET ANCHOR	VERT
S 5 20	8		34 - 1		TYPE LF PARAPET	LONGIT
S 5 21	108		4 - 10	X	TYPE LF PARAPET STIRRUPS	VERT
S 5 22	2		34 - 1	X	TYPE LF PARAPET	LONGIT
S 4 23	6		32 - 7		TYPE A PARAPET - SPAN 1	LONGIT
S 5 24	128		5 - 0		SLAB - TOP AT EDGES	TRANS

BAR DIMENSIONS IN BENDING ARE OUT TO OUT OF BARS.

ALL REINFORCING BARS ARE ENGLISH.

THE FIRST DIGIT FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

NOTES

ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE ℄ OF ABUTMENTS AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE OF DECK AND AT ℄.

PARAPETS, SIDEWALKS AND MEDIANS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

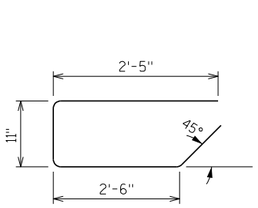
ELEVATION TABLE

SPAN POINT	WEST FACE OF SIDEWALK CURB		LONGITUDINAL CONSTRUCTION JOINT ◒			INSIDE FACE OF EAST LF PARAPET	
	STATION ◆	ELEVATION	STATION	OFFSET	ELEVATION	STATION	ELEVATION
S ABUT	12+83.89 'P'	877.24	12+72.99 'P'	8.816 ft	877.89	12+61.91 'P'	877.35 ◪
0.1	12+87.07 'P'	877.22	12+76.17 'P'	8.455 ft	877.87	12+65.09 'P'	877.34 ◪
0.2	12+90.25 'P'	877.19	12+79.35 'P'	8.095 ft	877.85	12+68.27 'P'	877.32
0.3	12+93.43 'P'	877.17	12+82.53 'P'	7.734 ft	877.83	12+71.45 'P'	877.31
0.4	12+96.61 'P'	877.14	12+85.71 'P'	7.373 ft	877.81	12+74.63 'P'	877.29
0.5	12+99.79 'P'	877.11	12+88.89 'P'	7.013 ft	877.78	12+77.81 'P'	877.27
0.6	13+02.97 'P'	877.08	12+92.07 'P'	6.652 ft	877.76	12+80.99 'P'	877.25
0.7	13+06.15 'P'	877.05	12+95.25 'P'	6.291 ft	877.73	12+84.17 'P'	877.23
0.8	13+09.33 'P'	877.02	12+98.43 'P'	5.930 ft	877.70	12+87.35 'P'	877.21
0.9	13+12.50 'P'	876.98	13+01.61 'P'	5.570 ft	877.67	12+90.52 'P'	877.18
PIER	13+15.64 'P'	876.94	13+04.79 'P'	5.209 ft	877.64	12+93.70 'P'	877.15
0.1	13+18.62 'P'	876.91	13+07.97 'P'	4.848 ft	877.60	12+96.88 'P'	877.13
0.2	13+21.60 'P'	876.87	13+11.15 'P'	4.488 ft	877.57	13+00.06 'P'	877.10
0.3	13+24.59 'P'	876.83	13+14.33 'P'	4.127 ft	877.53	13+03.24 'P'	877.06
0.4	13+27.58 'P'	876.79	13+17.49 'P'	3.773 ft	877.49	13+06.42 'P'	877.03
0.5	13+30.58 'P'	876.74	13+20.64 'P'	3.439 ft	877.45	13+09.60 'P'	877.00
0.6	13+33.57 'P'	876.70	13+23.81 'P'	3.126 ft	877.41	13+12.78 'P'	876.96
0.7	13+36.57 'P'	876.65	13+26.98 'P'	2.834 ft	877.36	13+16.02 'P'	876.92
0.8	13+39.57 'P'	876.60	13+30.15 'P'	2.562 ft	877.32	13+19.38 'P'	876.88
0.9	13+42.58 'P'	876.55	13+33.32 'P'	2.312 ft	877.27	13+22.74 'P'	876.83 ◪
N ABUT	13+45.59 'P'	876.50	13+36.50 'P'	2.082 ft	877.23	13+26.11 'P'	876.79 ◪

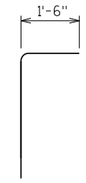
ALL ELEVATIONS ARE GIVEN TO THE TOP OF THE CONCRETE SLAB. DOES NOT INCLUDE POLYMER OVERLAY THICKNESS.

◆STATIONS ALONG WEST FACE OF SIDWALK CURB ARE GIVEN ALONG THE CTH P REFERENCE LINE.

◪A STRAIGHT LINE PROJECTION OF THE PARAPET TOE WAS USED TO



S501



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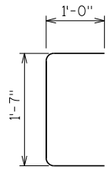

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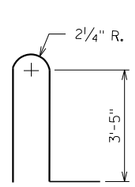

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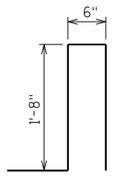

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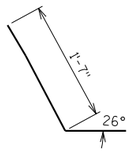

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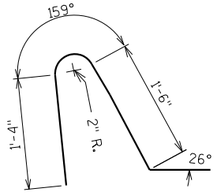

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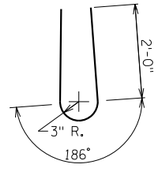

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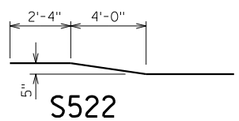

S522

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-646

DRAWN BY TAV | PLANS CK'D. GAR

SUPERSTRUCTURE DETAILS 2

SHEET 12 OF 17
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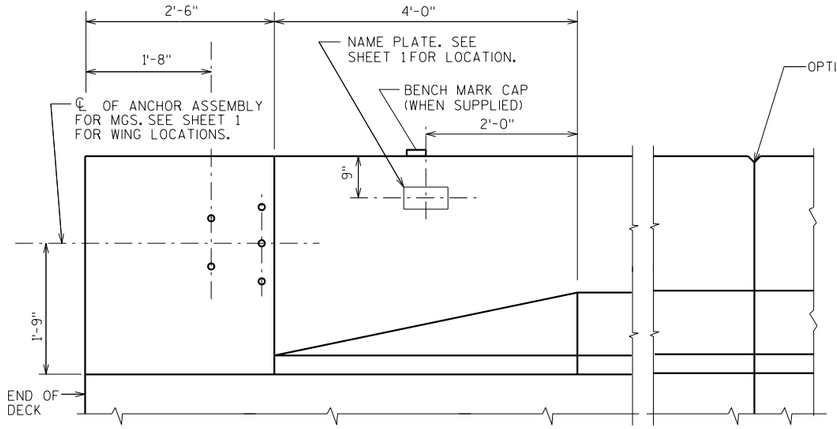
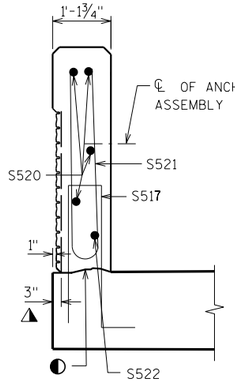
STATE PROJECT NUMBER

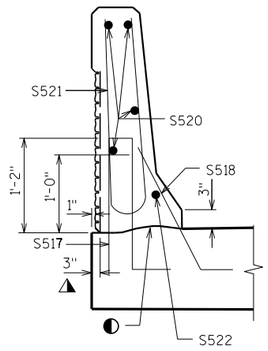
5657-00-70



INSIDE ELEVATION



SECTION A



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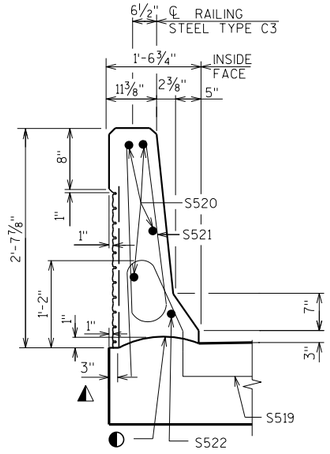

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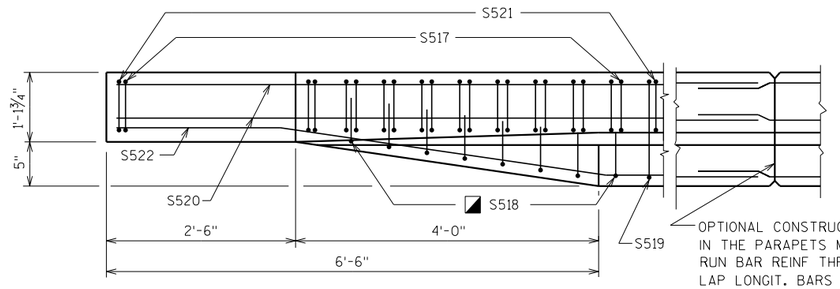
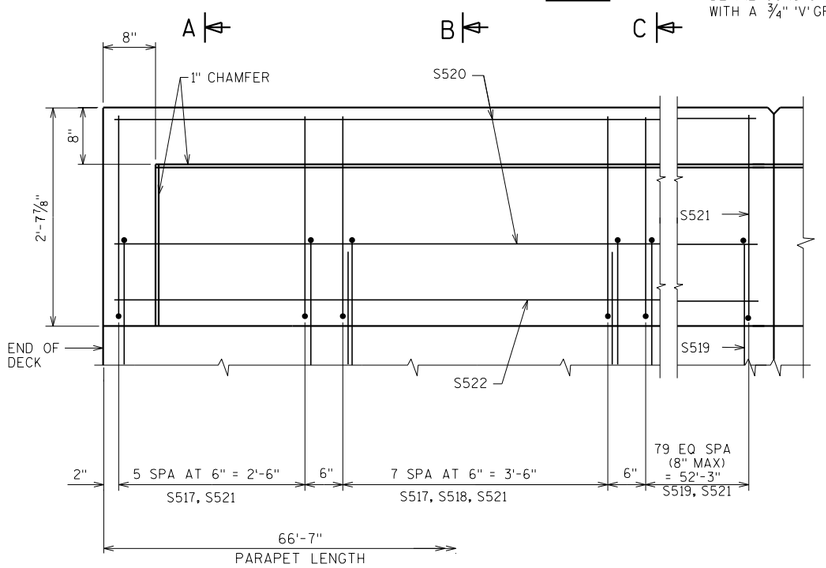
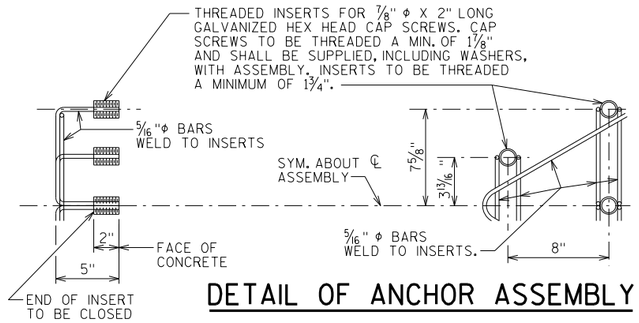


PLAN

OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9" MIN. JOINT SPACING OF 80'-0" DEFINE CONST. JOINT WITH A ¾" 'V' GROOVE.



OUTSIDE ELEVATION



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

◪ S518 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE S518 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

◭ "ARCHITECTURAL SURFACE TREATMENT" SEE SHEET 17 FOR DETAILS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-646

DRAWN BY TAV | PLANS CK'D. GAR

SLOPED FACE PARAPET TYPE 'LF' (MODIFIED)

SHEET 13 OF 17
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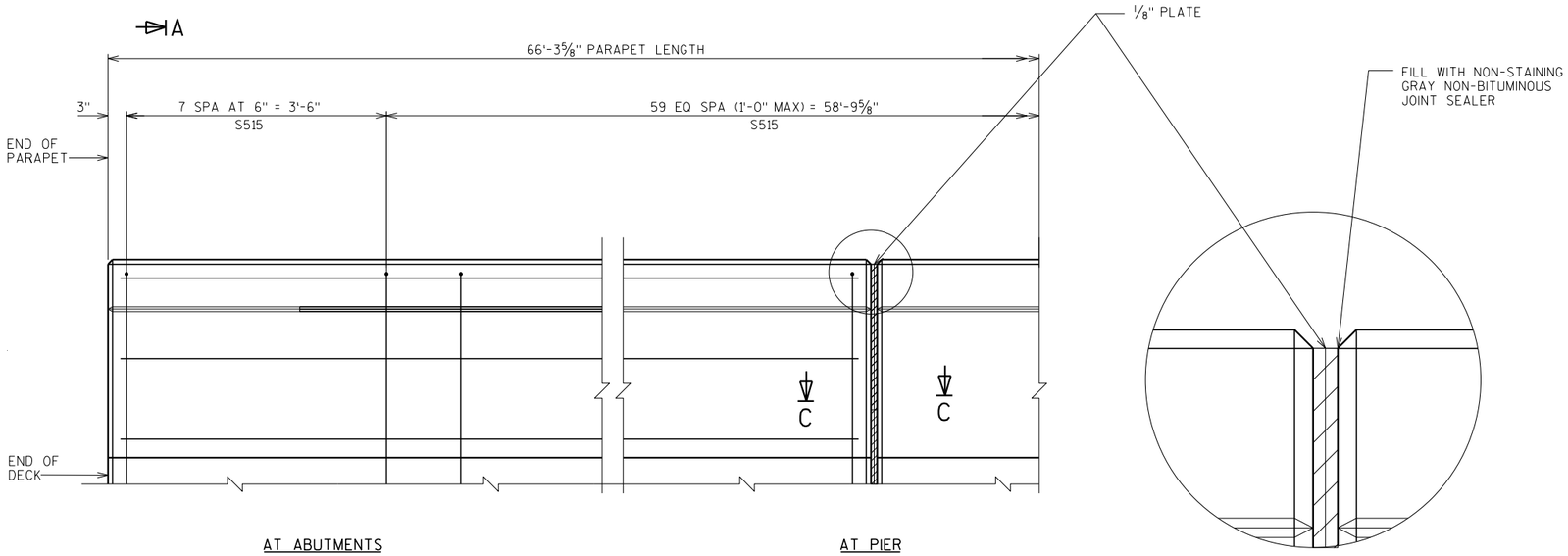
FILE NAME : X:±3230900±113688.02±TECH±CAD±53100200±Design±Structure±080113_parLF03.dgn DATE : 2/3/2014 PLOT BY : MJB PLOT SCALE : 8:0 ':" / in.

STATE PROJECT NUMBER

5657-00-70

NOTES

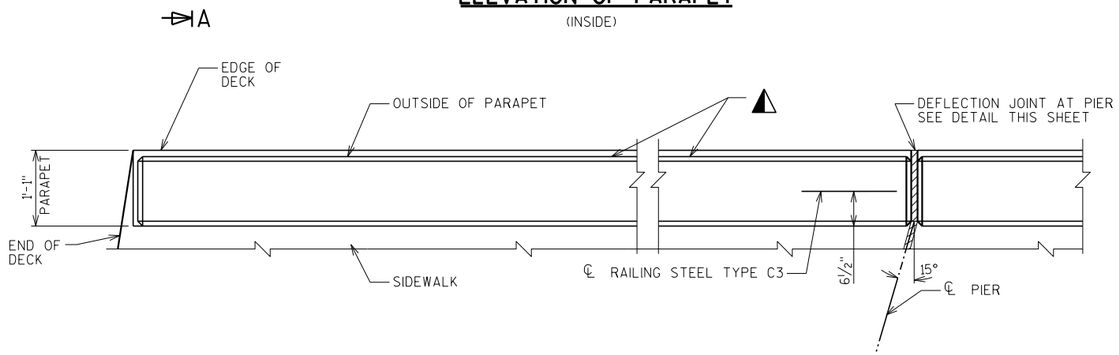
- CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH. FOR DECK POUR, MATCH BRIDGE X-SLOPE.
- ARCHITECTURAL PANEL AND CONCRETE STAINING, SEE SHEET 17 FOR DETAILS.



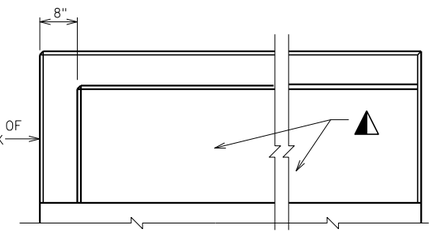
AT ABUTMENTS AT PIER

ELEVATION OF PARAPET

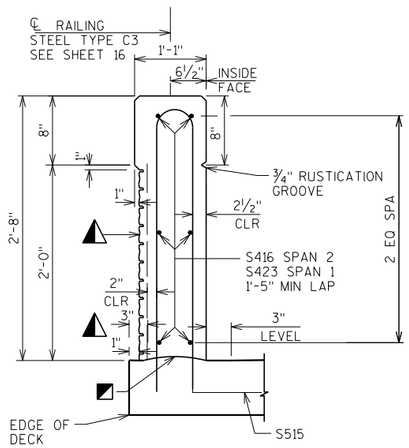
(INSIDE)



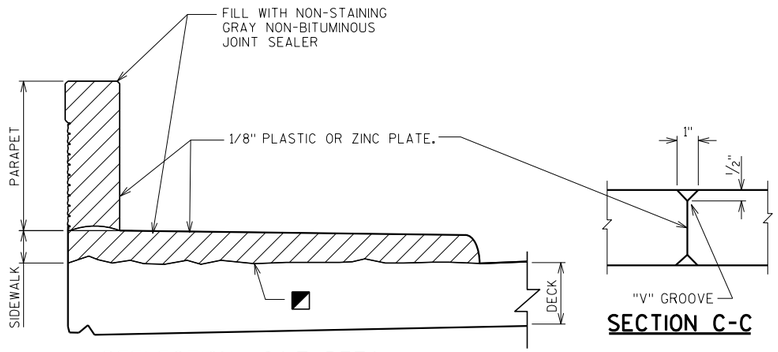
PLAN OF PARAPET



OUTSIDE ELEVATION



PARAPET 'A' SECTION



DEFLECTION JOINT DETAIL

SECTION C-C

SHOWING DEFLECTION JOINT IN PARAPET OR SIDEWALK

WHEN PARAPETS ARE POURED CONTINUOUSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF ⅛" ZINC OR PLASTIC PLATE CUT AS SHOWN IN THE "DEFLECTION JOINT DETAIL". IF CONSTRUCTION JOINTS IN PARAPETS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH AN APPROVED LIQUID BOND BREAKER AND PLATE SEPARATORS MAY BE OMITTED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-646

DRAWN BY TAV | PLANS CK'D. GAR

VERTICAL FACE PARAPET TYPE 'A' (MODIFIED)

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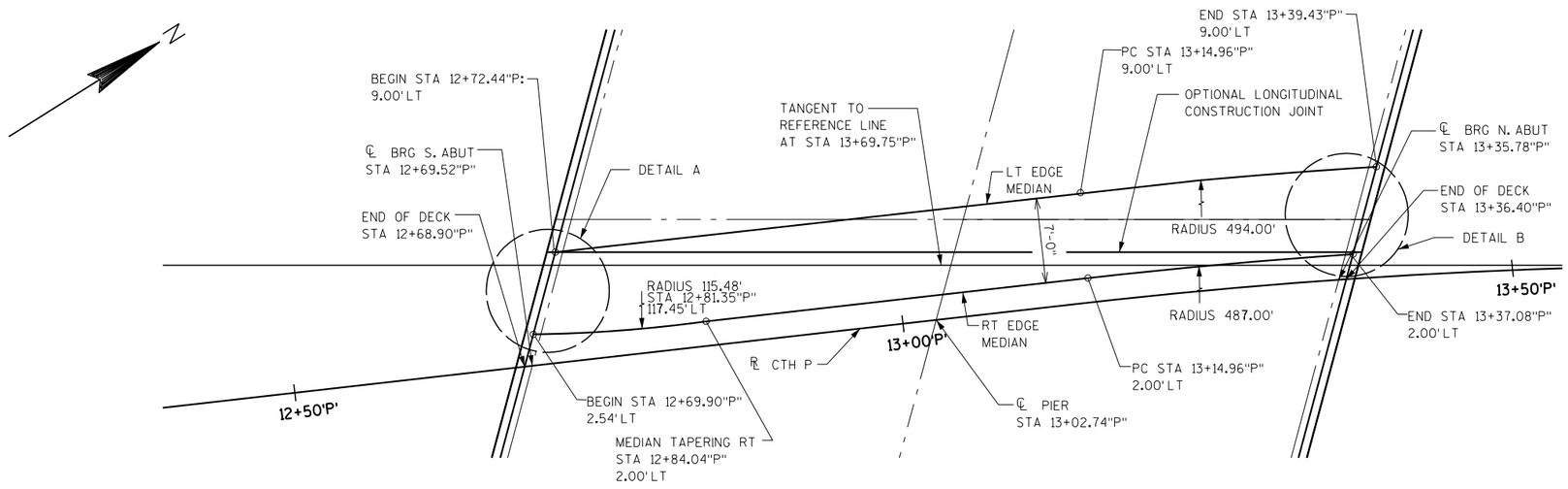
STATE PROJECT NUMBER

5657-00-70

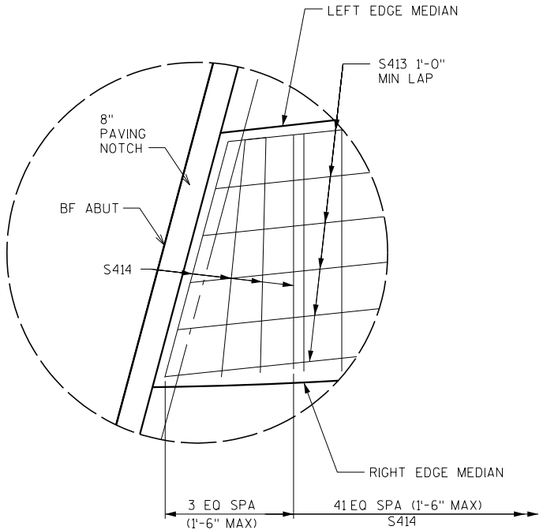
NOTES

▲ ROUGH FLOAT SURFACE OR SAME FINISH AS EXPOSED DECK. DO NOT APPLY PROTECTIVE SURFACE TREATMENT TO THIS AREA.

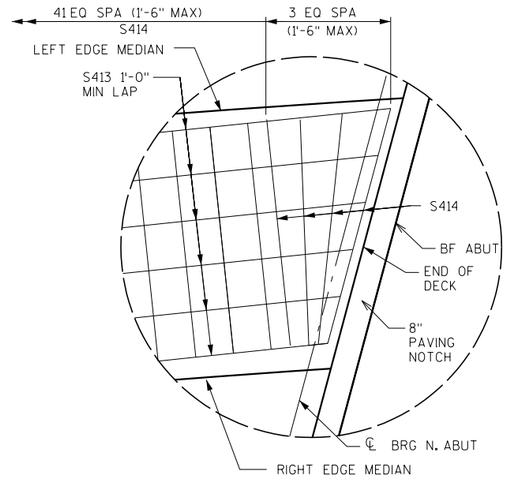
◓ CLEAN ALL LOOSE MATERIAL ON THE DECK AT THE MEDIAN LOCATION PRIOR TO MEDIAN PLACEMENT USING HIGH PRESSURE WATER OR AIR, ENSURING ALL FREE-STANDING WATER IS REMOVED PRIOR TO MEDIAN PLACEMENT. NEAT CEMENT IS REQUIRED AS PER 509.3.9.2 OF THE STANDARD SPECIFICATIONS UNLESS THE MEDIAN IS POURED WITHIN 45 DAYS OF COMPLETING THE DECK POUR.



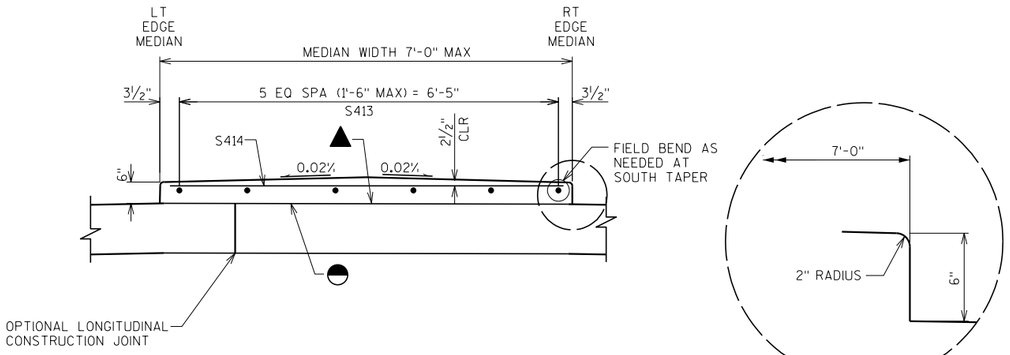
PLAN
(SHOWING MEDIAN)



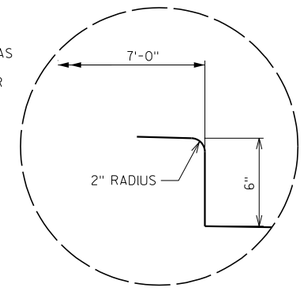
DETAIL A



DETAIL B



SECTION THRU MEDIAN
(LOOKING NORTH)



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-646

DRAWN BY TAV | PLANS CK'D. GAR

MEDIAN DETAILS

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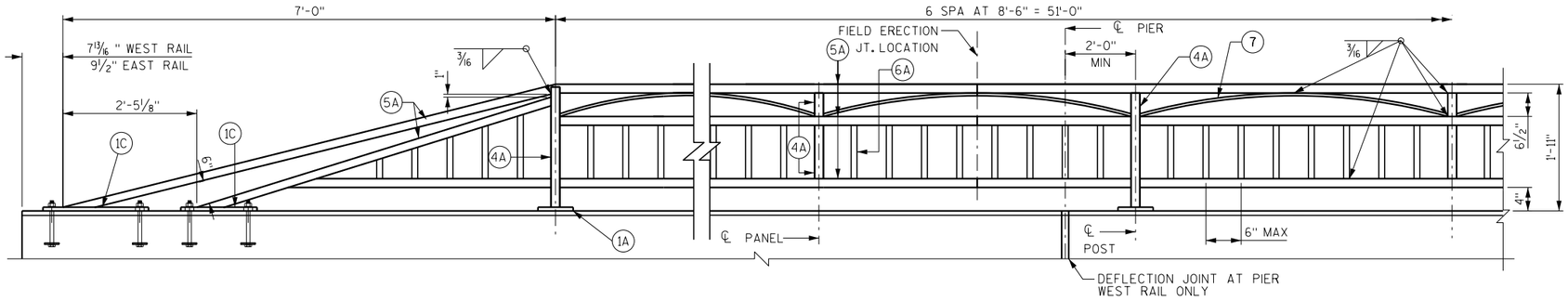
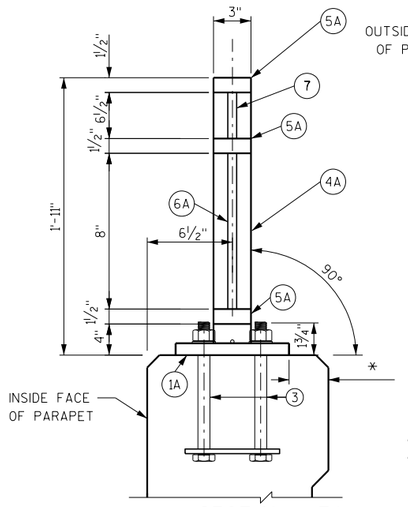
5657-00-70

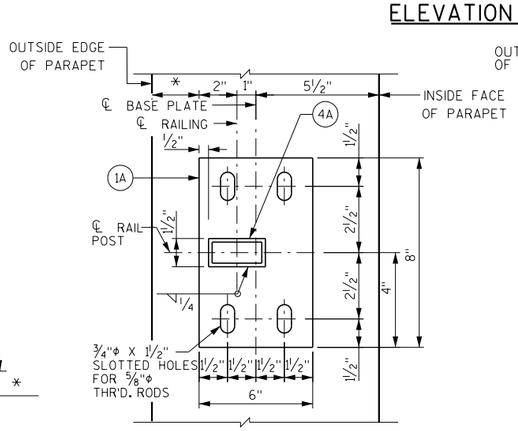


ELEVATION OF PARAPET



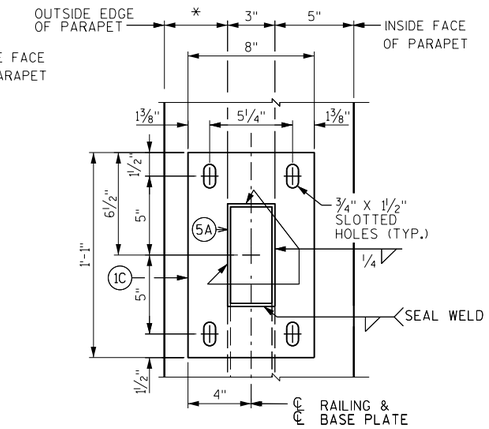
SECTION VIEW

* 4 1/2" WEST RAIL
2 7/8" EAST RAIL



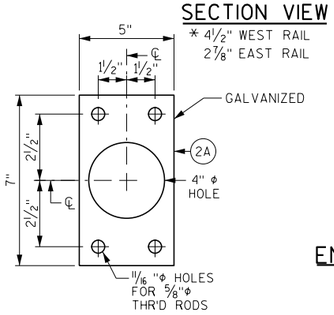
TYPICAL RAIL POST BASE PLATE

FOR 3" X 1 1/2" X 3/16" POSTS (4A)
* 4 1/2" WEST RAIL
2 7/8" EAST RAIL



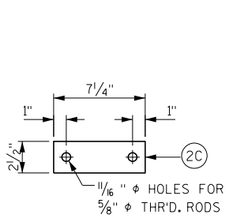
END RAIL BASE PLATE

FOR 3" X 1 1/2" X 3/16" RAIL (5A)
* 5" WEST RAIL
3 3/8" EAST RAIL



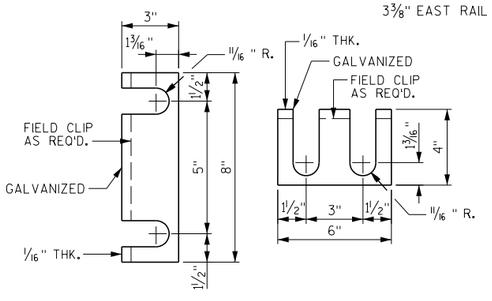
ANCHOR PLATE

FOR 3" X 1 1/2" X 3/16" POSTS (4A)



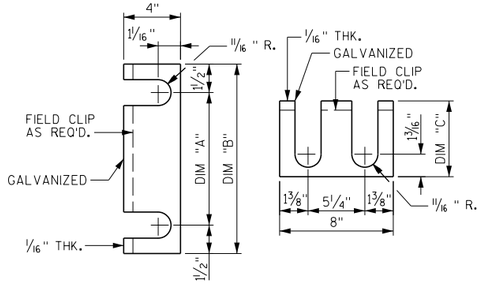
END RAIL ANCHOR PLATE

FOR END RAIL BASE PLATES (1C)
2 REQ'D. PER END RAIL BASE PLATE



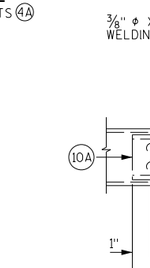
RAIL POST SHIM DETAIL

(2 SETS PER POST)



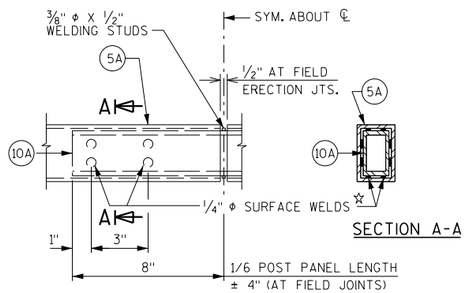
END RAIL SHIM DETAIL

8" X 1'-1" BASE PLATE (1C) DIM "A" = 10", DIM "B" = 1'-1", DIM "C" = 6 1/2"



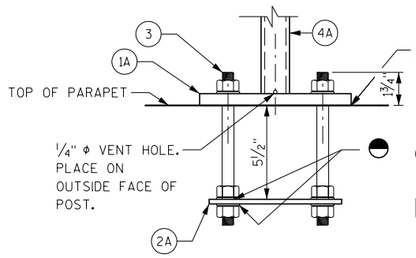
SHOP RAIL SPLICE DETAIL

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



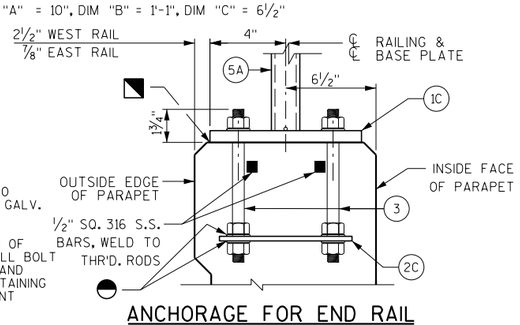
FIELD ERECTION JOINT DETAIL

☆MIN. 5/8" FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.



ANCHORAGE FOR RAIL POSTS

NOTE: ANCHOR PLATE NOT REQUIRED WHEN TYPE S ANCHORS ARE USED.



ANCHORAGE FOR END RAIL

NOTE: ANCHOR PLATE NOT REQUIRED WHEN TYPE S ANCHORS ARE USED.

NOTES

BID ITEM SHALL BE "RAILING STEEL TYPE C3 (B-13-0646)", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL PLATES BARS AND RECTANGULAR SLEEVES SHALL CONFORM TO ASTM A709 GRADE 36. STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTION.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT, AND SHALL BE GALVANIZED.

FILL BOLT SLOT OPENINGS IN SHIMS AND PLATE NO. 1 AND CAULK AROUND PERIMETER OF PLATES NO. 1 & 4 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

VENT HOLES SHALL BE DRILLED IN RAIL MEMBERS AND POSTS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS.

ALL MATERIAL (EXCEPT NO. 3) SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS. PAINT OVER GALVANIZING WITH APPROVED TIE COAT AND TOP COAT AS SPECIFIED IN THE "BRIDGE SPECIAL PROVISIONS". THE RAILING SHALL BE PAINTED FEDERAL COLOR NO. 27038.

TOUCH-UP PAINTING TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.

LEGEND

(1A) PLATE 5/8" X 6" X 8" WITH 3/4" X 1 1/2" SLOTTED HOLES.

(1C) PLATE 5/8" X 8" X 1'-1" WITH 3/4" X 1 1/2" SLOTTED HOLES.

(2A) 1/4" X 5" X 7" ANCHOR PLATE WITH 11/16 " Φ HOLES FOR THR'D RODS NO. 3.

(2C) 1/4" X 2 1/2" X 7 1/4" ANCHOR PLATE WITH 11/16 " Φ HOLES FOR THR'D. RODS NO. 3.

(3) 5/8" DIA. X 9" LONG, TYPE 316 STAINLESS STEEL THREADED RODS (MIN. TENSILE STRENGTH = 70 KSI) WITH NUT AND WASHERS OF SAME ALLOY GROUP. (ALTERNATE RAIL POST ANCHORAGE - 4 EQUIV. STAINLESS STEEL CONCRETE MASONRY ANCHORS, TYPE S (EPOXY), 5/8" Φ, MINIMUM PULLOUT CAPACITY OF 13 KIPS. EMBED A MIN. OF 7" FOR RAIL POSTS.)

(4A) STRUCTURAL TUBING 3" X 1 1/2" X 3/16" POSTS. PLACE VERTICAL. WELD TO NO. 1 & NO. 5.

(5A) STRUCTURAL TUBING 3" X 1 1/2" X 3/16" RAILS. WELD TO NO. 1 & NO. 4. INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION AND EXPANSION JOINTS.

(6A) BAR 1" X 1" PICKETS. WELD TO NO. 5. SPACE AT 6" MAX. ℄ TO ℄ SPACING. PLACE VERTICAL.

(7) BAR 1" X 1", BEND TO REQUIRED RADIUS. WELD TO NO. 4 & 5.

(9A) RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. PROVIDE "SLIDING FIT".

(10A) RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. (1'-4" @ FIELD ERECTION JTS.)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-646

DRAWN BY TAV | PLANS CK'D. GAR

RAILING STEEL TYPE C3

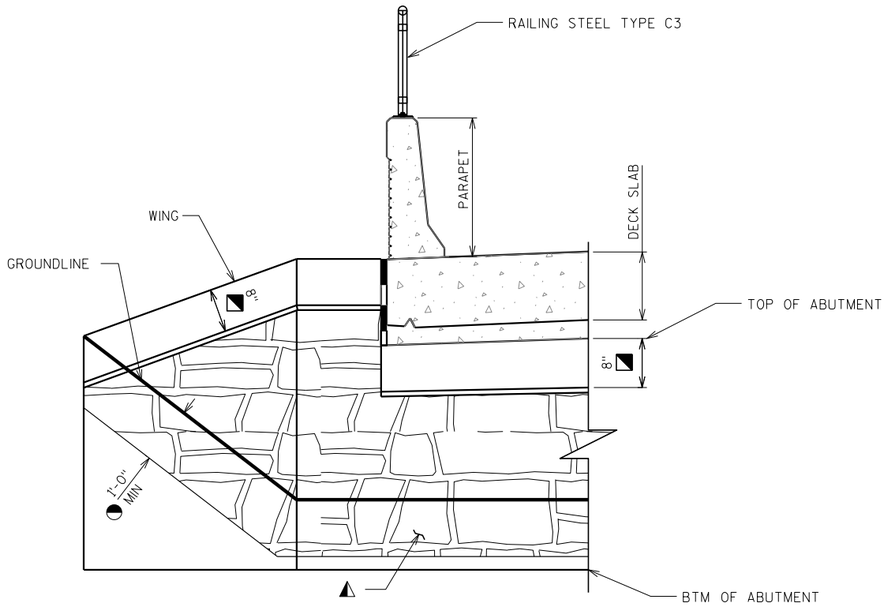
SHEET 16 OF 17
189

8

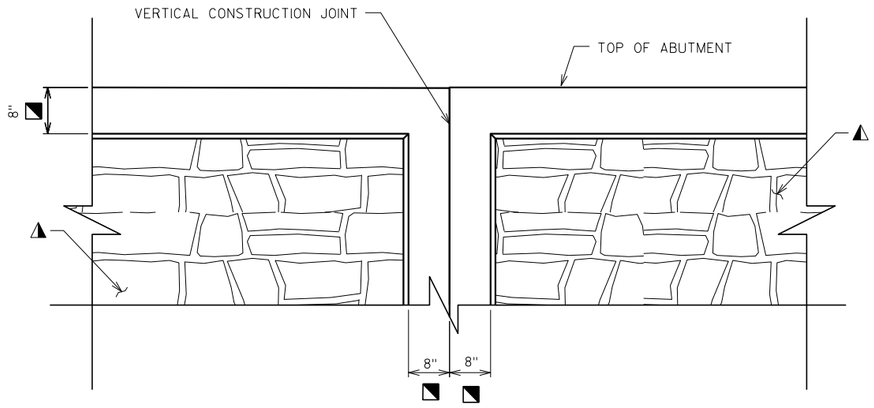
8

STATE PROJECT NUMBER

5657-00-70



PART ELEVATION AT ABUTMENT WINGS



PART ELEVATION AT ABUTMENT CONSTRUCTION JOINT

NOTES

1. BOTTOM OF "ARCHITECTURAL SURFACE TREATMENT" AND CONCRETE STAINING TO EXTEND 1'-0" MIN BELOW PROPOSED GROUNDLINE.
2. ARCHITECTURAL SURFACE TREAMENT, RUSTIC ASHLAR PATTERN WITH 2" MAXIMUM RELIEF AND 1" PLAIN CONCRETE BORDER. STAIN ALL SURFACES RECEIVING ARCHITECTURAL SURFACE TREATMENT MEDIUM TAN (FEDERAL COLOR #33446).

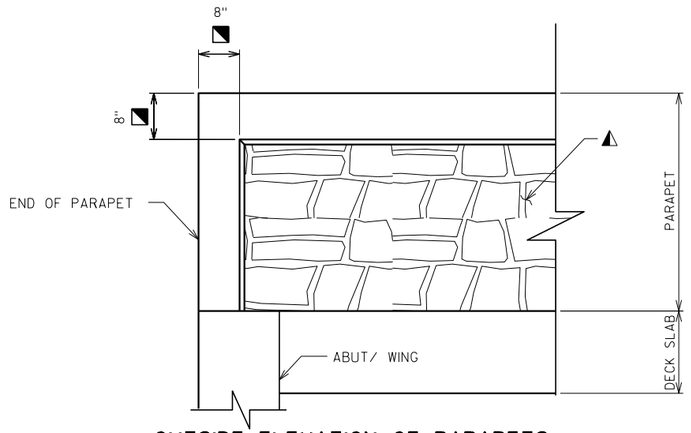
   FORMLINER COURSING ON ABUTMENTS, WINGS AND PIER SHALL BE LEVEL.

   THE FORMLINER COURSING ON THE WINGS SHALL BE VERTICALLY ALIGNED WITH THE FORMLINER COURSING ON THE FRONT OF THE ABUTMENT.

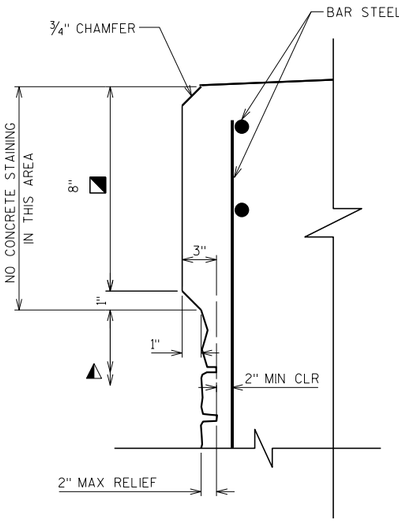
   THE FORMLINER PATTERN SHALL BE CONTINUOUS ACROSS CONSTRUCTION JOINTS.

   WRAPAROUND/ MATCH FORMLINER PATTERN AT CORNERS.

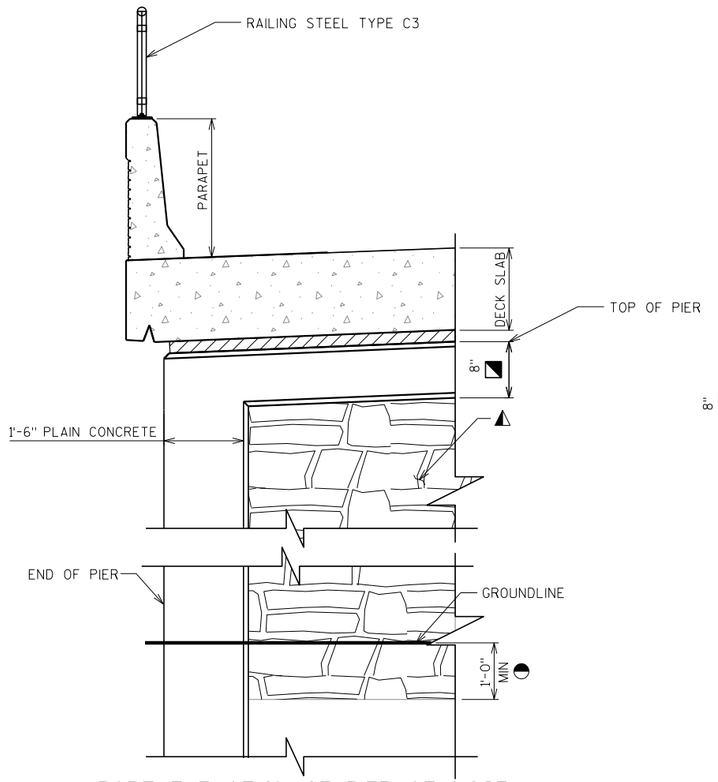
   FORMLINER COURSING ON PARAPETS SHALL BE PARALLEL TO TOP OF PARAPETS.
3. PLAIN CONCRETE BORDER.



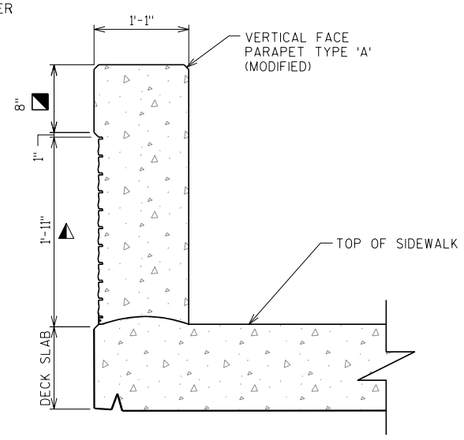
OUTSIDE ELEVATION OF PARAPETS



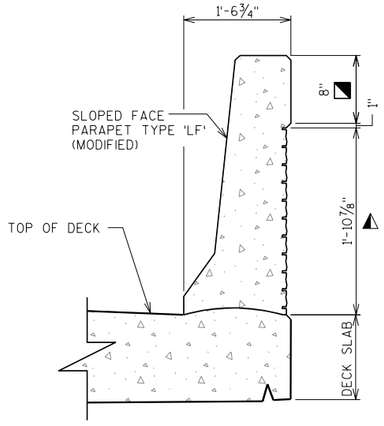
SECTION THRU FORMLINER



PART ELEVATION OF PIER AT NOSE



WEST EDGE OF DECK



EAST EDGE OF DECK

SECTION THRU PARAPETS

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-646

DRAWN BY TAV | PLANS CK'D. GAR

AESTHETIC DETAILS

SHEET 17 OF 17
190

FILE NAME : X:±3230900±113688.02±TECH±CAD±53100200±Design±Structure±080117_ad.dgn PLOT DATE : 2/3/2014 PLOT BY : MJB PLOT SCALE : 8:0 sf:in / in.

EARTHWORK TABULATION - CTH P EXPANSION FACTOR = 1.3

STATION	END AREA CUT (SF)	END AREA FILL (SF)	INCREMENTAL VOLUME CUT (CY)	INCREMENTAL VOLUME EXP FILL (CY)	CUMMULATIVE VOLUME CUT (CY)	CUMMULATIVE VOLUME EXP FILL (CY)	MASS ORDINATE (CY)
11+06.95	10.00	0.02	0	0	0	0	0
11+18.29	24.80	0.19	7	0	7	0	7
11+50.00	109.93	22.03	79	17	86	17	69
11+56.25	114.20	10.40	26	5	112	22	90
12+00.00	126.70	99.52	195	116	308	138	170
12+20.97	148.72	30.35	107	66	414	203	211
12+50.00	132.79	75.60	151	74	566	277	289
12+60.58	113.87	22.56	48	25	614	302	312
12+81.84	0.00	0.00	45	12	659	314	345
13+28.27	0.00	0.00	0	0	659	314	345
13+46.21	91.74	64.09	30	28	689	342	348
13+50.00	103.16	4.31	14	6	703	348	355
14+00.00	257.73	7.30	334	14	1037	362	676
14+14.41	283.25	0.00	144	3	1182	364	817
14+30.53	304.11	0.11	175	0	1357	364	993
14+50.00	351.29	0.22	236	0	1593	364	1229
		TOTAL	1593	364			

EARTHWORK TABULATION - BOURBON ROAD EXPANSION FACTOR = 1.3

STATION	END AREA CUT (SF)	END AREA FILL (SF)	INCREMENTAL VOLUME CUT (CY)	INCREMENTAL VOLUME EXP FILL (CY)	CUMMULATIVE VOLUME CUT (CY)	CUMMULATIVE VOLUME EXP FILL (CY)	MASS ORDINATE (CY)
111+50.00	142.63	6.37	0	0	0	0	0
112+00.00	144.59	4.84	266	13	266	13	252
112+16.83	140.63	5.11	89	4	355	18	337
112+50.00	198.93	5.78	209	9	563	26	537
112+56.89	61.71	6.23	33	2	597	28	568
		TOTAL	597	28			

EARTHWORK TABULATION - USH 14 EXPANSION FACTOR = 1.3

STATION	END AREA CUT (SF)	END AREA FILL (SF)	INCREMENTAL VOLUME CUT (CY)	INCREMENTAL VOLUME EXP FILL (CY)	CUMMULATIVE VOLUME CUT (CY)	CUMMULATIVE VOLUME EXP FILL (CY)	MASS ORDINATE (CY)
147+89.73	123.86	0.00	0	0	0	0	0
148+00.00	94.46	0.00	42	0	42	0	42
148+06.63	68.12	0.02	20	0	61	0	61
148+50.00	99.73	0.09	135	0	196	0	196
149+00.00	111.40	0.03	195	0	392	0	392
		TOTAL	392	0			

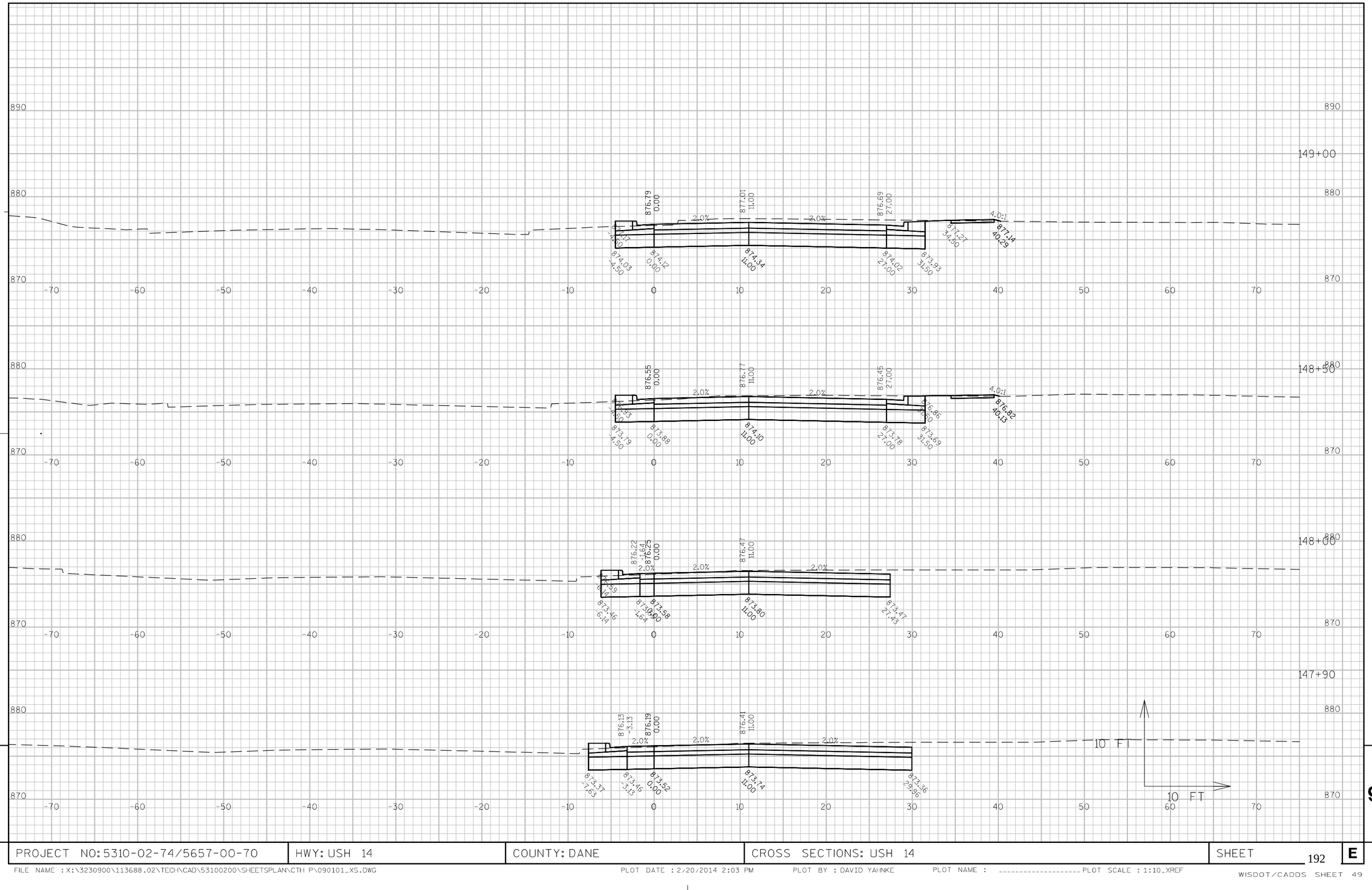
9

9

PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	EARTHWORK TABULATION	SHEET: 191	E

FILE NAME : Entp\32304-00\113690.01\TECH\Misc. Quantities

PLOT SCALE : 1:1

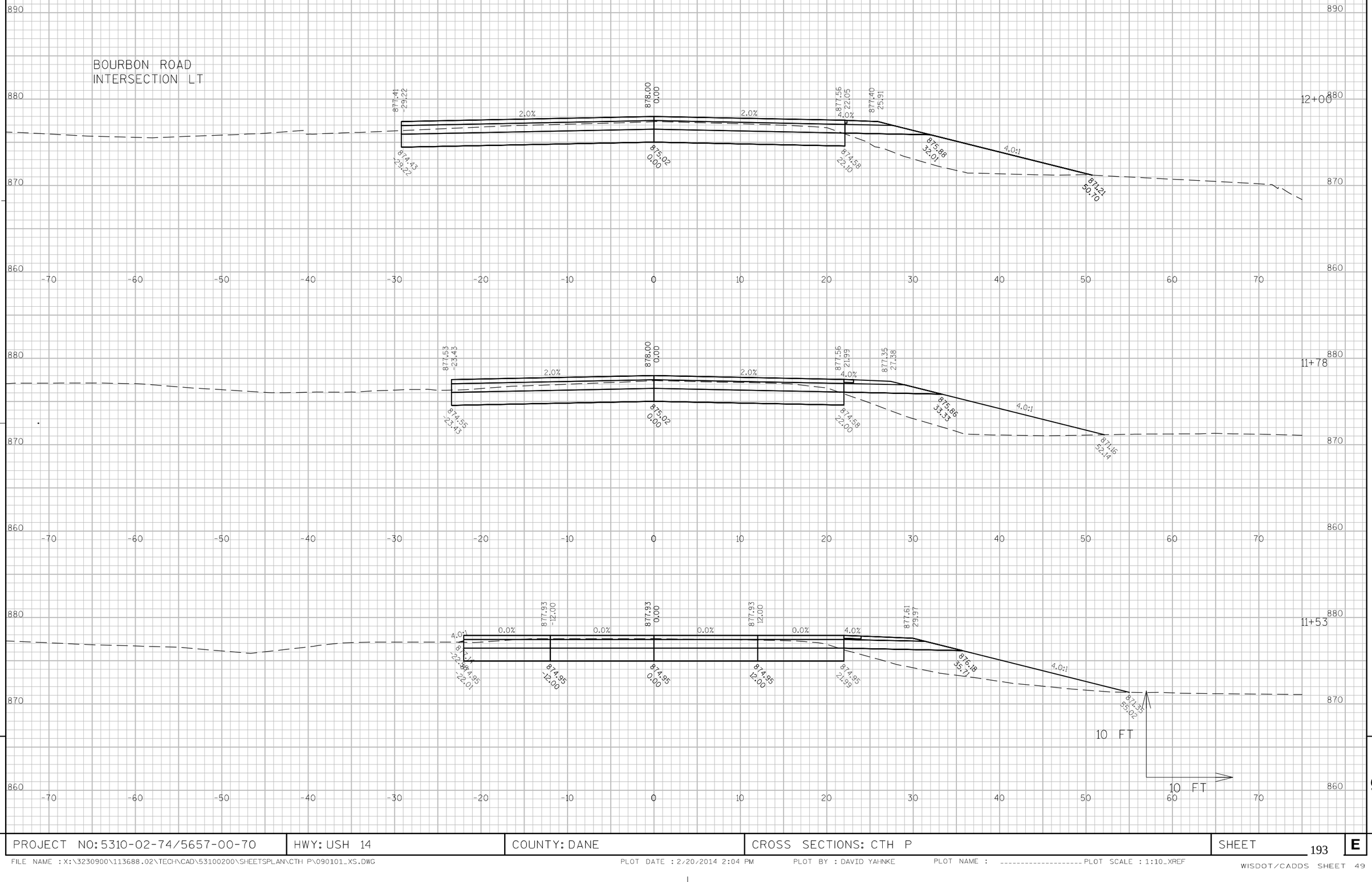


PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	CROSS SECTIONS: USH 14	SHEET 192	E

FILE NAME : X:\3230900\113688.02\TECH\CAD\53100200\SHEETSPLAN\CTH P\090101_XS.DWG PLOT DATE : 2/20/2014 2:03 PM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:10_XREF

WISDOT/CADDS SHEET 49

BOURBON ROAD
INTERSECTION LT



PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	CROSS SECTIONS: CTH P	SHEET 193	E

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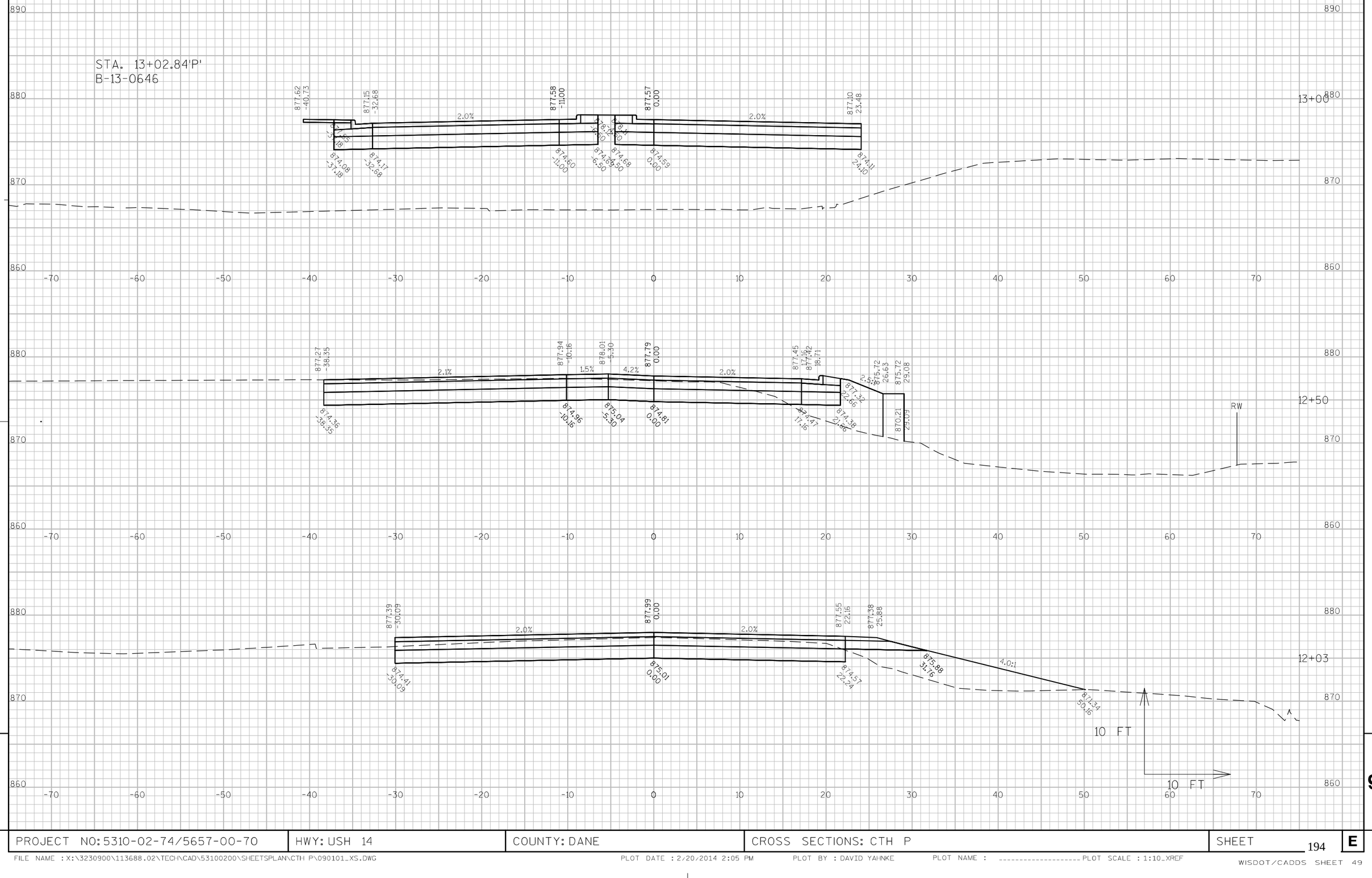
WISDOT/CADDS SHEET 49

STA. 13+02.84'P'
B-13-0646



PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	CROSS SECTIONS: CTH P	SHEET 194	E

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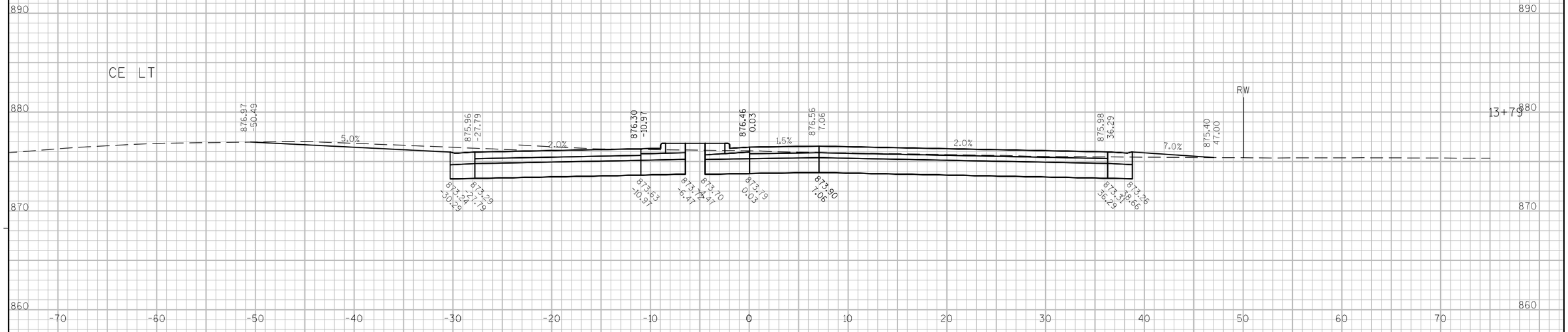
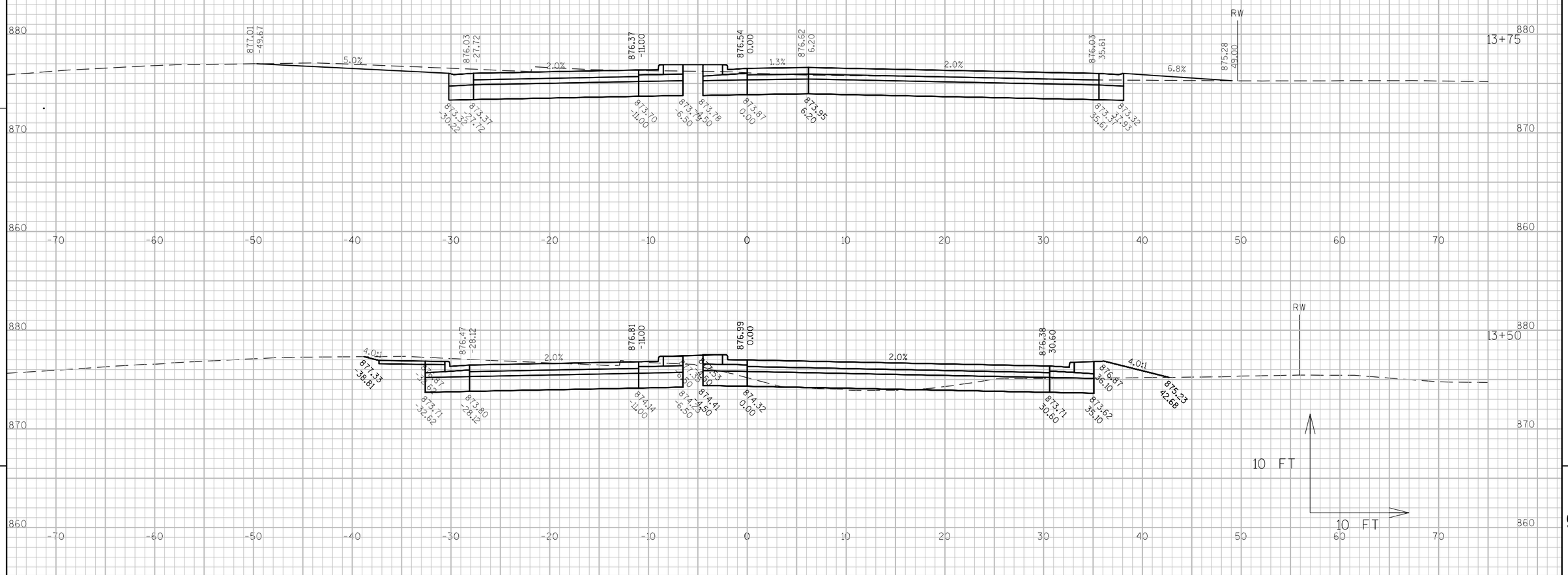
WISDOT/CADDS SHEET 49

CE LT



CE RT



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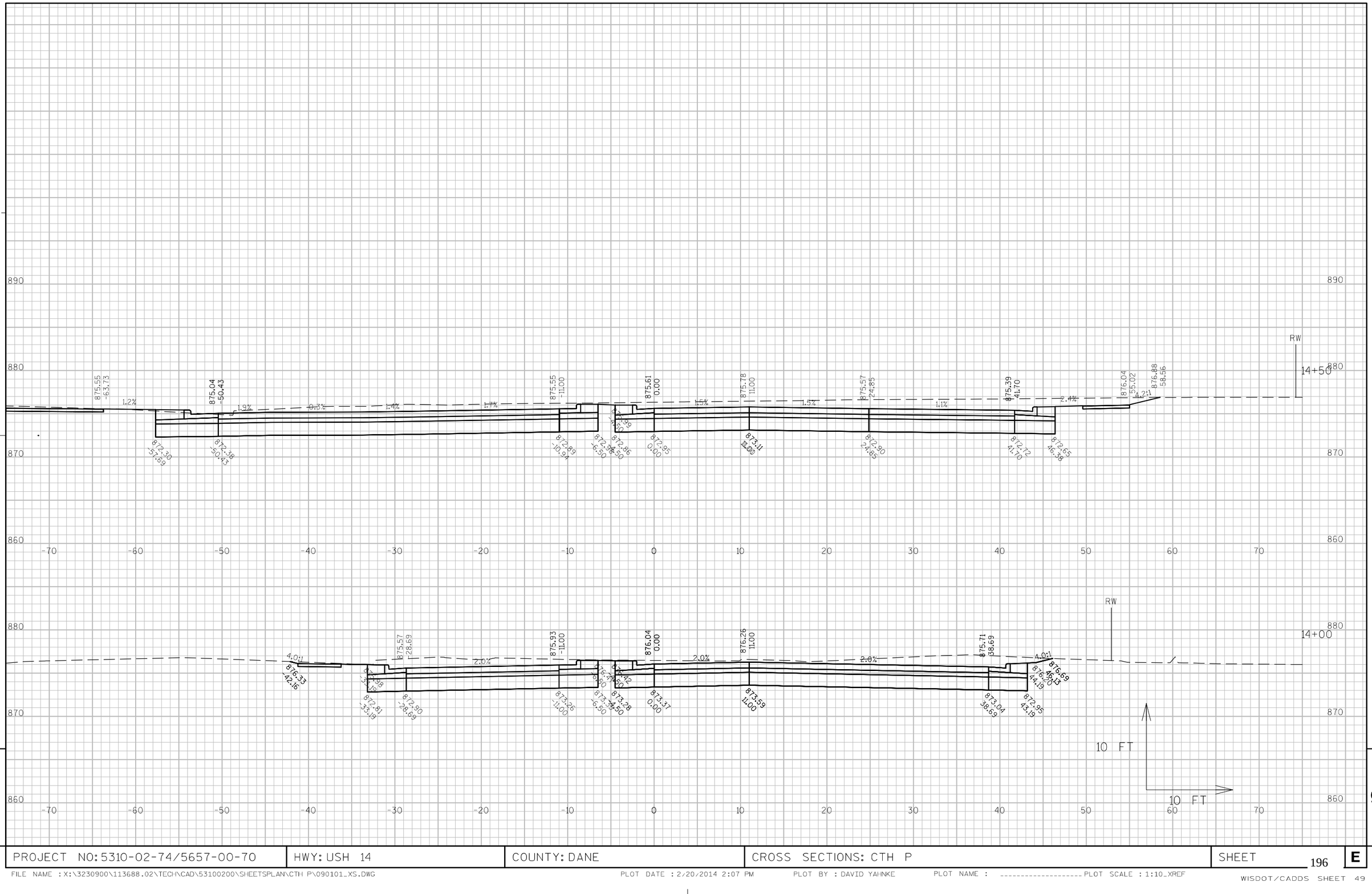
9

PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	CROSS SECTIONS: CTH P	SHEET 195	E



PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	CROSS SECTIONS: CTH P	SHEET 196	E

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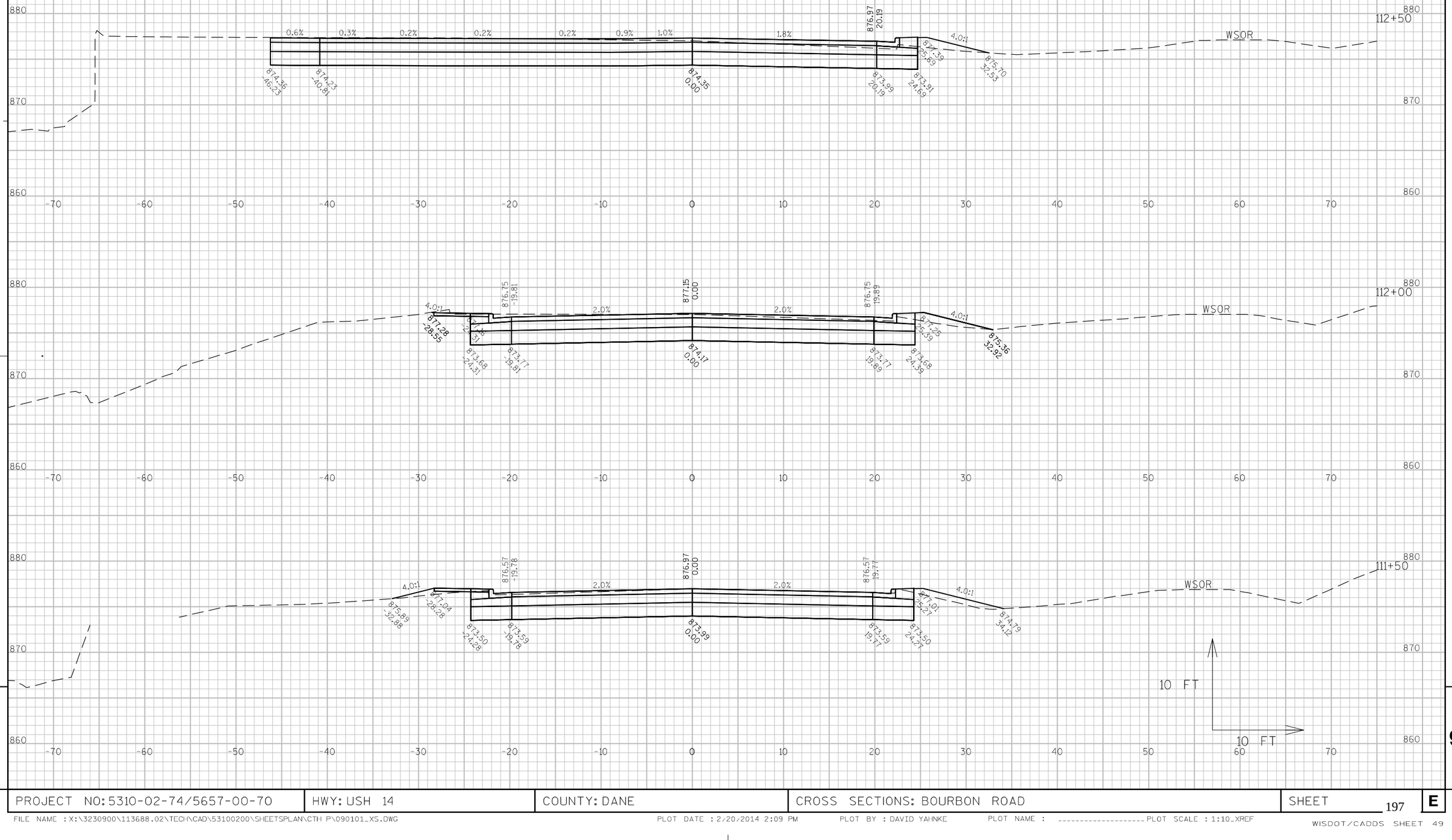
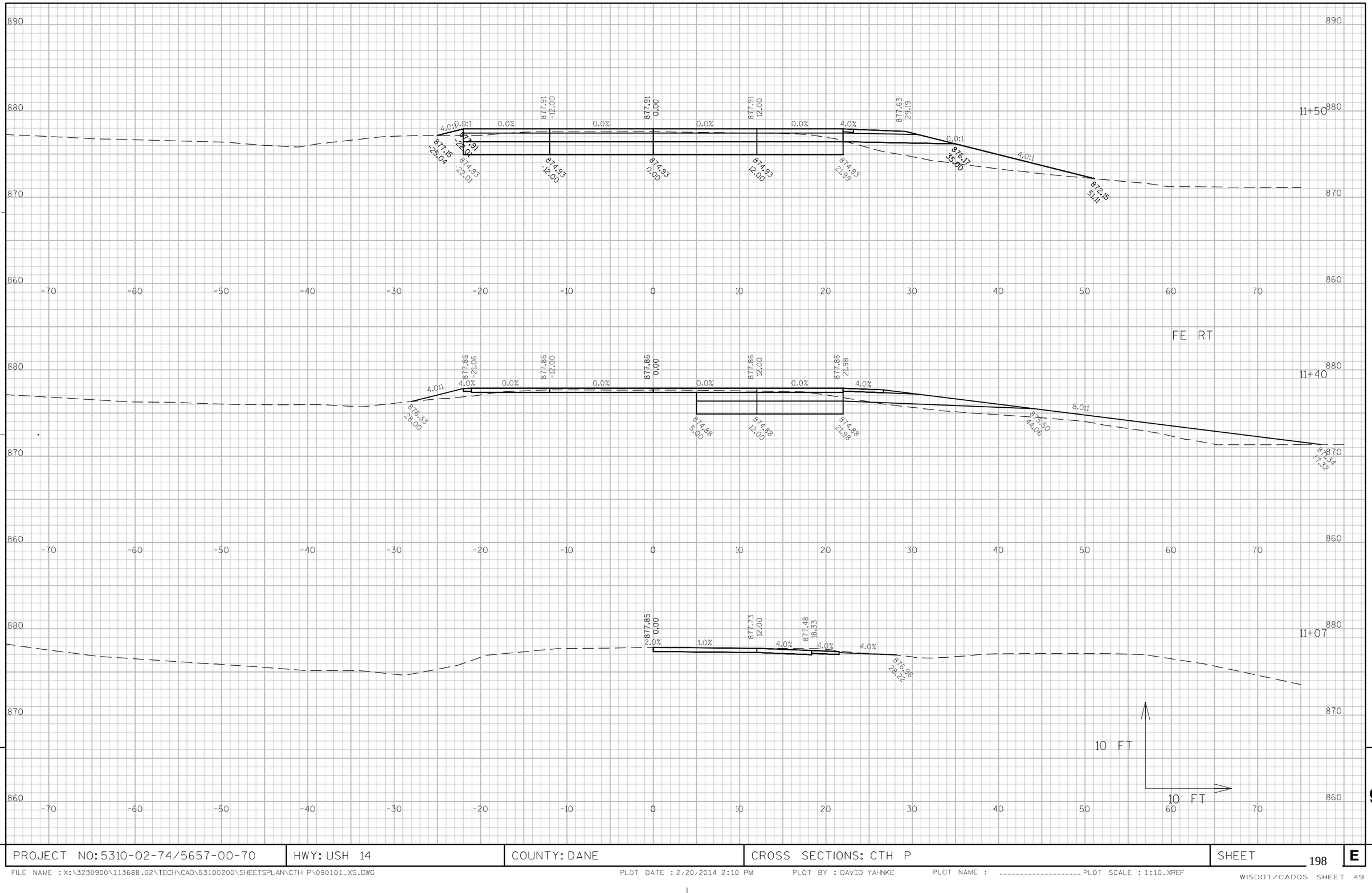
WISDOT/CADDS SHEET 49

CTH P INTERSECTION



PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	CROSS SECTIONS: BOURBON ROAD	SHEET 197 E



9	PROJECT NO: 5310-02-74/5657-00-70	HWY: USH 14	COUNTY: DANE	CROSS SECTIONS: CTH P	SHEET 198 E

Notes

Wisconsin Department of Transportation

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