SUP

PROJECT ID: 8570-03-70
WITH: 8570-03-72

COUNTY: BARRON

DEC 2014

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
~~Section No.~~	~~4~~	~~Right of Way Plat~~
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
Section No.	8	Structure Plans
Section No.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 150

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
8570-03-70	WISC 2014454	1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

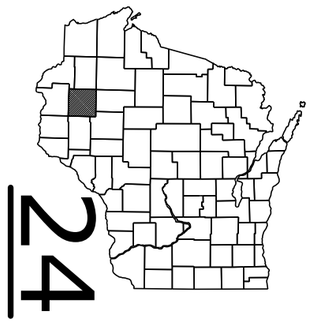
RICE LAKE - BIRCHWOOD

NORTH STREET TO CTH NN

STH 48

BARRON COUNTY

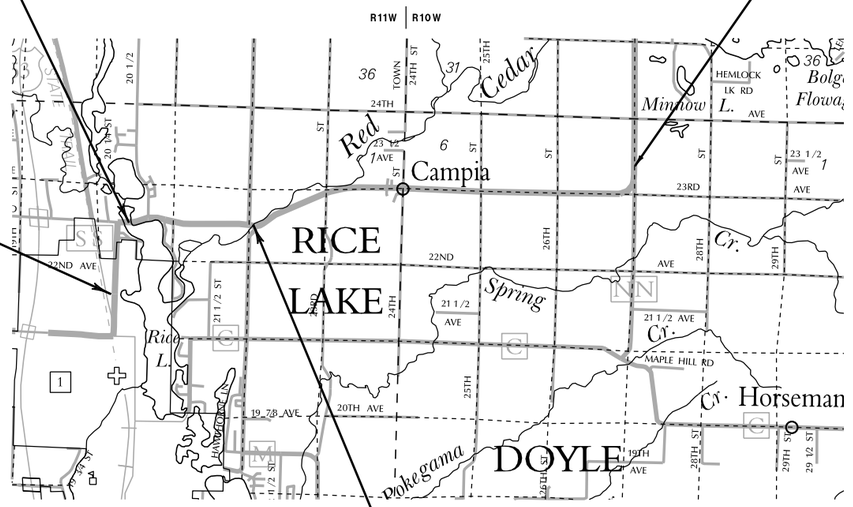
STATE PROJECT NUMBER
8570-03-70





EXCEPTION TO NET ℄ LENGTH
STA. 84+60 - 85+26 (B-03-115)

END PROJECT 8570-03-70
STA. 458+00
Y = 149613.038
X = 369428.504



BEGIN PROJECT 8570-03-70
STA. 28+56.32
Y = 139660.249
X = 333947.419

EXCEPTION TO NET ℄ LENGTH
STA. 172+86 - 173+84 (B-03-079)

DESIGN DESIGNATION

A.A.D.T.	2008	=	3600
A.A.D.T.	2028	=	4350
D.H.V.	2029	=	697
D.D.		=	59/41
T. (DHV)		=	7.5%
DESIGN SPEED		=	55 MPH
ESALS		=	

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

LAYOUT
SCALE 0 1.0 MI.

TOTAL NET LENGTH OF CENTERLINE = 8.10 MI.

-"Coordinates on this plan are referenced to the Wisconsin County Coordinate System (WCCS), Burnett County."

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	C.O. SURVEY & MAPPING
Designer	MATT DICKENSON P.E.
Project Manager	MATT DICKENSON P.E.
Regional Examiner	DAN OJIBWAY
Regional Supervisor	DAVID OSTROWSKI P.E.
C.O. Examiner	

APPROVED FOR THE DEPARTMENT
DATE: 5/27/14 (Signature)

E

LIST OF STANDARD ABBREVIATIONS

ABUT.	ABUTMENT
AGG.	AGGREGATE
AH.	AHEAD
APPROX.	APPROXIMATE
A.E.W.	APRON ENDWALL
ASPH.	ASPHALTIC
A.D.T.	AVERAGE DAILY TRAFFIC
AZ.	AZIMUTH
BK.	BACK
BEG.	BEGIN
B.M.	BENCH MARK
C/L	CENTER LINE
CONC.	CONCRETE
CONST.	CONSTRUCTION
CO.	COUNTY
C.T.H.	COUNTY TRUNK HIGHWAY
X-SEC.	CROSS SECTION
CR.	CRUSHED
CFS	CUBIC FEET/SECOND
C.Y., CU. YD.	CUBIC YARD
CULV.	CULVERT
C.P.	CULVERT PIPE
D.O.T.	DEPARTMENT OF TRANSPORTATION
D.H.V.	DESIGN HOUR VOLUME
DIA.	DIAMETER
D.	DIRECTIONAL DISTRIBUTION
DISCH. OR DIS.	DISCHARGE
EA.	EACH
ELECT.	ELECTRIC
EL. OR ELEV.	ELEVATION
EMB.	EMBANKMENT
E.B.S.	EXCAVATION BELOW SUBGRADE
EXIST.	EXISTING
FERT.	FERTILIZE
F.E.	FIELD ENTRANCE
FIN.	FINISHED
FT.	FOOT
F.L.	FLOW LINE
GA.	GAUGE
HORIZ.	HORIZONTAL
CWT.	HUNDREDWEIGHT
INL.	INLET
LT.	LEFT
L.H.F.	LEFT-HAND FORWARD
LIN.	LINEAR
LIN. FT.	LINEAR FOOT
L.S.	LUMP SUM
MAX.	MAXIMUM
MI.	MILE
MISC.	MISCELLANEOUS
N.E.	NORTH EAST
N.W.	NORTH WEST
PAV'T	PAVEMENT
P.C.	POINT OF CURVATURE
P.I.	POINT OF INTERSECTION
P.T.	POINT OF TANGENCY
P.O.T.	POINT ON TANGENT
LB.	POUND
P.E.	PRIVATE ENTRANCE
PROJ.	PROJECT
R.	RANGE
REQ'D	REQUIRED
RT.	RIGHT
R.H.F.	RIGHT-HAND FORWARD
R/W	RIGHT OF WAY
RD.	ROAD
SHR.	SHRINKAGE
SL.	SLOPE
STD.	STANDARD
S.D.D.	STANDARD DETAIL DRAWINGS
S.T.H.	STATE TRUNK HIGHWAY
STA.	STATION
S.P.P.A.	STRUCTURAL PLATE PIPE ARCH
STRUCT.	STRUCTURE
SURF.	SURFACE
TEL.	TELEPHONE
TN.	TOWN
T.	TRUCKS (PERCENT OF)
UNCL.	UNCLASSIFIED
U.G.	UNDERGROUND
V.	VELOCITY OR DESIGN SPEED
V.C.	VERTICAL CURVE

GENERAL NOTES

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

WHEN THE QUANTITY OF BASE AGGREGATE DENSE AND ASPHALTIC PAVEMENT ARE MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS AS SHOWN ON THE PLAN IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND UPON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER IN THE FIELD.

ALL RADII ARE MEASURED TO EDGE OF PAVEMENT UNLESS OTHERWISE SHOWN OR NOTED ON THE PLAN.

CURB HEIGHTS AT THE END OF CURB AND GUTTER SHALL BE TAPERED FROM 0 TO 6 INCHES IN 6 FEET.

CURVE DATA SHOWN ON THE PLAN IS "ARC DEFINITION".

CONTROL POINTS ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM BARRON COUNTY. BENCHMARK ELEVATIONS ARE REFERENCED TO NGVD 29.

PRIOR TO THE PLACEMENT OF STEEL PLATE BEAM GUARD, THE SHOULDERS SHALL BE IN PLACE, SHAPED AND COMPACTED UNLESS SHOWN OTHERWISE.

AREA CONTACTS

COUNTY

BARRON CTY HWY COMMISSIONER
MARK SERVI
260 N 7TH ST
BARRON, WI 54812
PHONE: (715) 637-3755

BARRON CTY SHERIFF'S DEPARTMENT
CHRIS FITZGERALD, SHERIFF
BARRON COUNTY JUSTICE CENTER
1420 STH 25 NORTH
BARRON, WI 54812
PHONE: (715) 537-3106

TOWNS

TOWN OF RICE LAKE
THOMAS FANKHAUSER
TOWN CHAIR
2193 20 1/4 AVE
RICE LAKE, WI 54868
PHONE: (715) 296-6258

TOWN OF DOYLE
JEFF WILL
TOWN CHAIR
1826 25TH ST
RICE LAKE, WI 54868
PHONE: (715) 234-0009

CITY OF RICE LAKE
JIM ANDERSON
STREET DIRECTOR
326 SOUTH MAIN STREET
RICE LAKE, WI 54868
PHONE: (715) 234-7402

WISDOT

DESIGN CONTACT
MATT DICKENSON
WISDOT NWR SUPERIOR
1701 N. 4TH STREET
SUPERIOR WI, 54880
PHONE: (715) 398-3022

UTILITIES

BARRON ELECTRIC COOPERATIVE
JEFF NELSON
1434 N. STH 25
P.O. BOX 40
BARRON, WI 54812
(800) 322-1008

CHARTER COMMUNICATIONS
THOMAS HOASE
2304 S MAIN ST
RICE LAKE, WI 54868
(715) 234-5341 x252

CENTURY LINK
REED LECHNIR
20 S WILSON AVE
RICE LAKE, WI 54868
(715) 234-5526
(715) 418-0029

XCEL ENERGY - TRANSMISSION
PAM TAYLOR
1414 WEST HAMILTON AVNUE
P.O. BOX 8
EAU CLAIRE, WI 54702-0008

XCEL ENERGY - ELECTRIC
STACEY HAUGEN
2911 S. PIONEER AVE.
RICE LAKE, WI 54868
P: (715) 236-5721
C: (715) 579-9710

CITY OF RICE LAKE STREET DEPT
GARY NEUMAN
324 S MAIN ST
RICE LAKE, WI 54868
(715) 234-7402

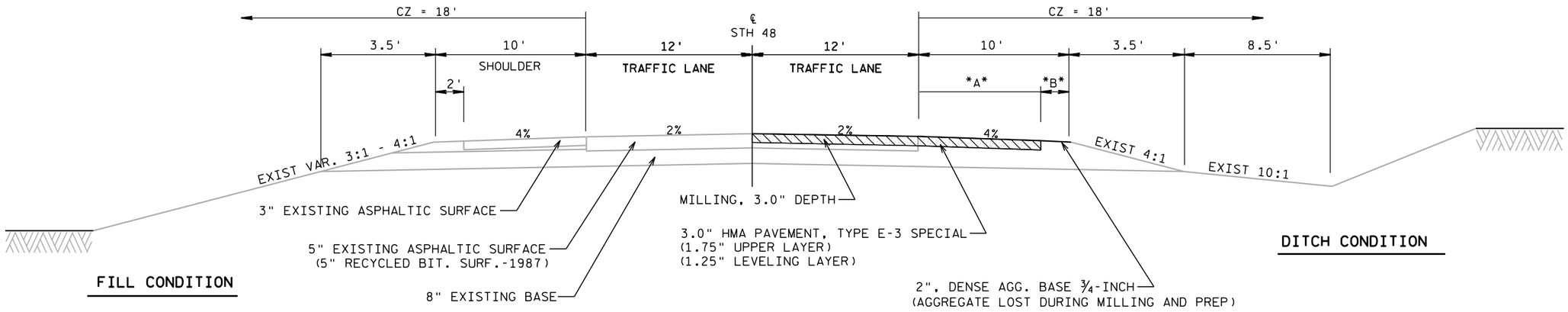
WE ENERGIES RLGO
LEWIS KNAPP
104 W SOUTH STREET
RICE LAKE, WI 54868
(715) 234-9605

WISDNR

DNR LIAISON
AMY CRONK
WDNR - NORTHWEST DISTRICT HEADQUARTERS
810 WEST MAPLE STREET
SPOONER, WI 54801
PHONE: (715) 635-4229

DIGGERS HOTLINE
Toll Free (800) 242-8511
Milwaukee Area (414) 259-1181
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

FILE NAME : N:\PDS\Design\Projects\85700301(70)_48_active design_Barron\Dgn files\020101_gn.dgn PLOT DATE : 19-MAY-2014 14:21 PLOT BY : dotk4b PLOT NAME : PLOT SCALE : 2:1
WISDOT/CADDS SHEET 42

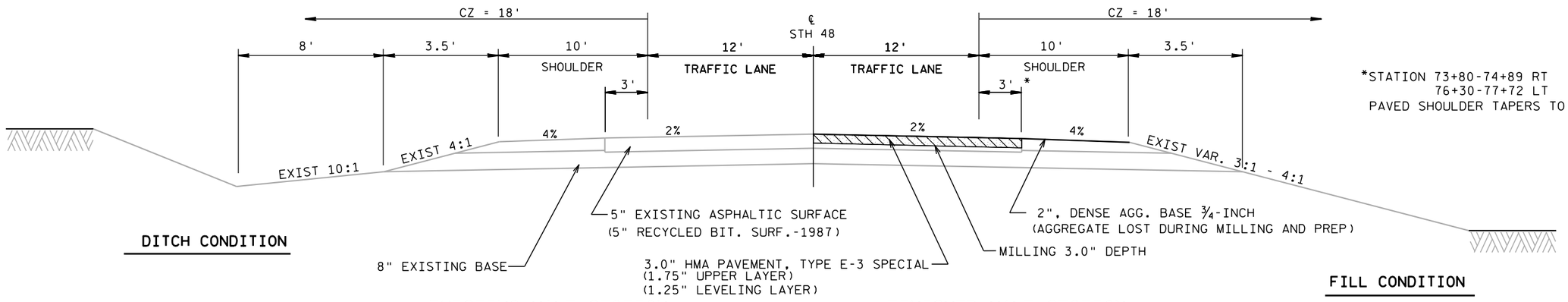


EXISTING HALF SECTION

FINISHED HALF SECTION

STATIONS
28+56.3 - 54+00
82+26 - 84+41
85+46 - 91+81

A = 8'PAVED *B* = 2'CABC (SHOULDER)
A = 10'PAVED *B* = 0'CABC (SHOULDER)
A = 10'PAVED *B* = 0'CABC (SHOULDER)



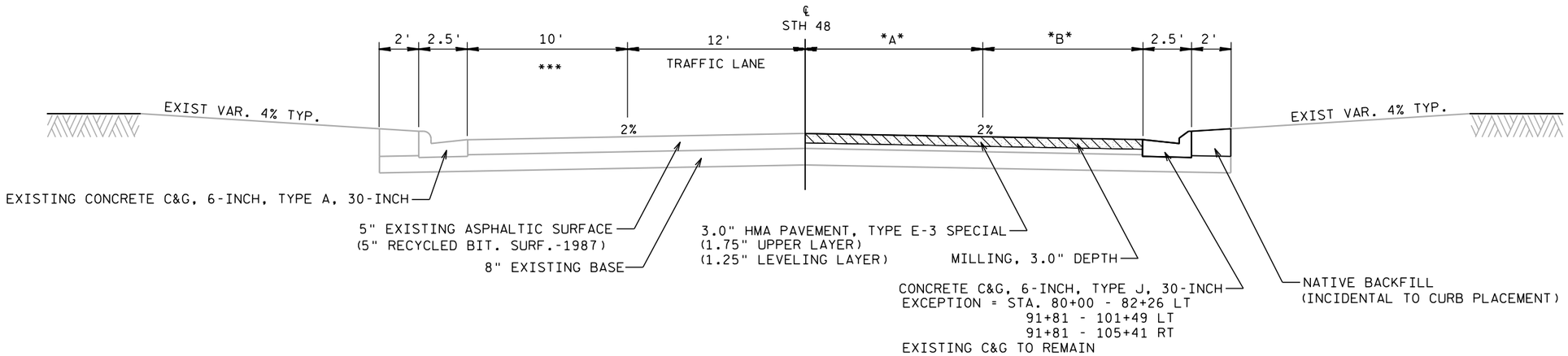
*STATION 73+80-74+89 RT
76+30-77+72 LT
PAVED SHOULDER TAPERS TO FULL WIDTH

EXISTING HALF SECTION

FINISHED HALF SECTION

STATIONS
54+00 - 74+89 RT
54+00 - 77+72 LT

PROJECT NO:8570-03-70	HWY:STH 48	COUNTY:BARRON	TYPICAL SECTIONS	SHEET 3	E

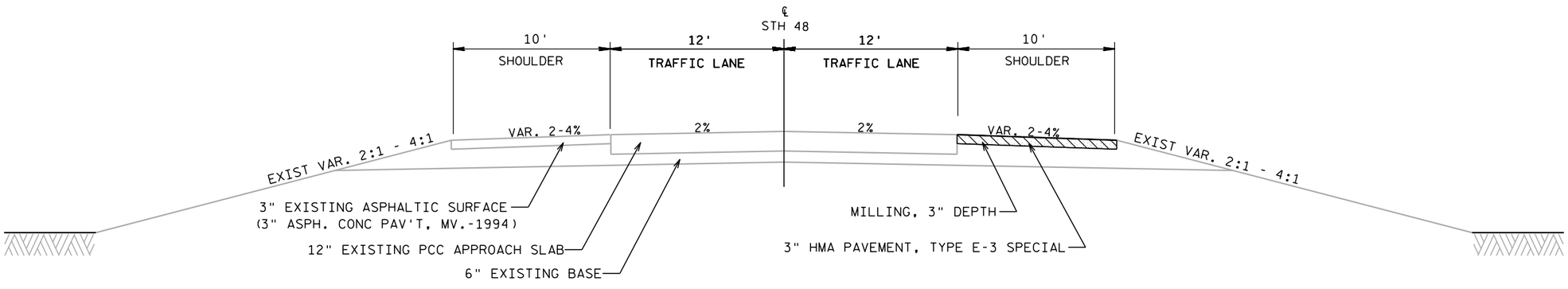


EXISTING HALF SECTION

FINISHED HALF SECTION

STATION

74+89 - 82+26 RT	*A* = 10'LT TURN LN	*B* = 12'RT TURN LN
77+72 - 82+26 LT	*A* = 12'TRAFFIC LN	*B* = 10'SHOULDER
91+81 - 101+49 LT	*A* = 12'TRAFFIC LN	*B* = 10'SHOULDER
91+81 - 105+41 RT	*A* = 12'TRAFFIC LN	*B* = 10'SHOULDER

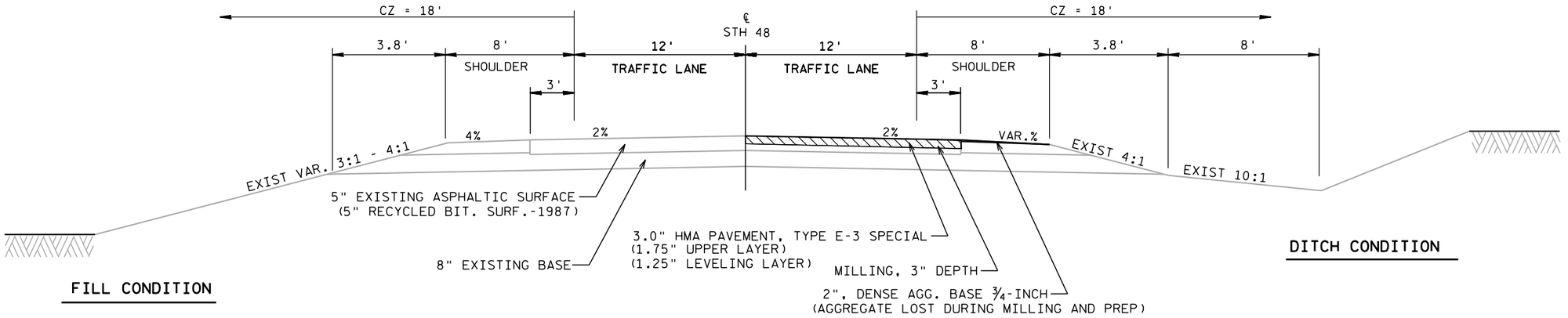


EXISTING HALF SECTION

FINISHED HALF SECTION

STATIONS

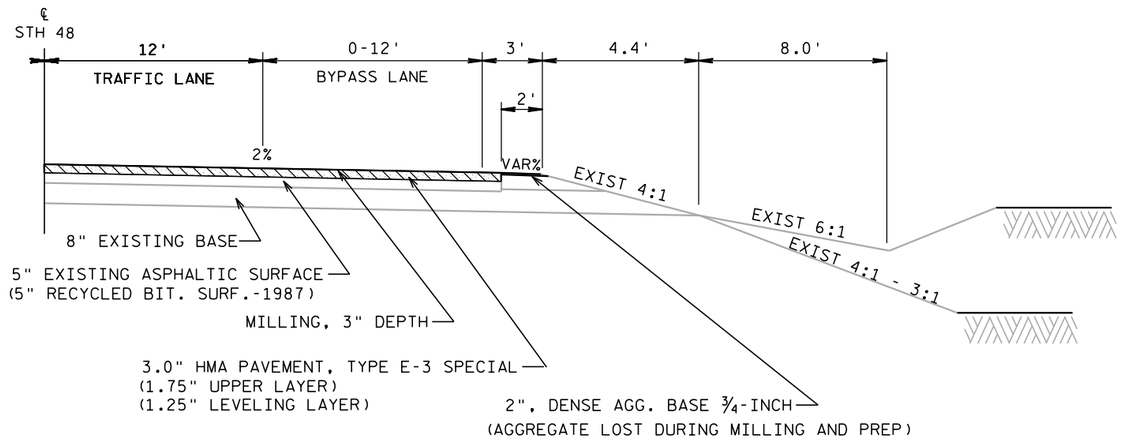
84+41 - 84+60
85+26 - 85+46



EXISTING HALF SECTION

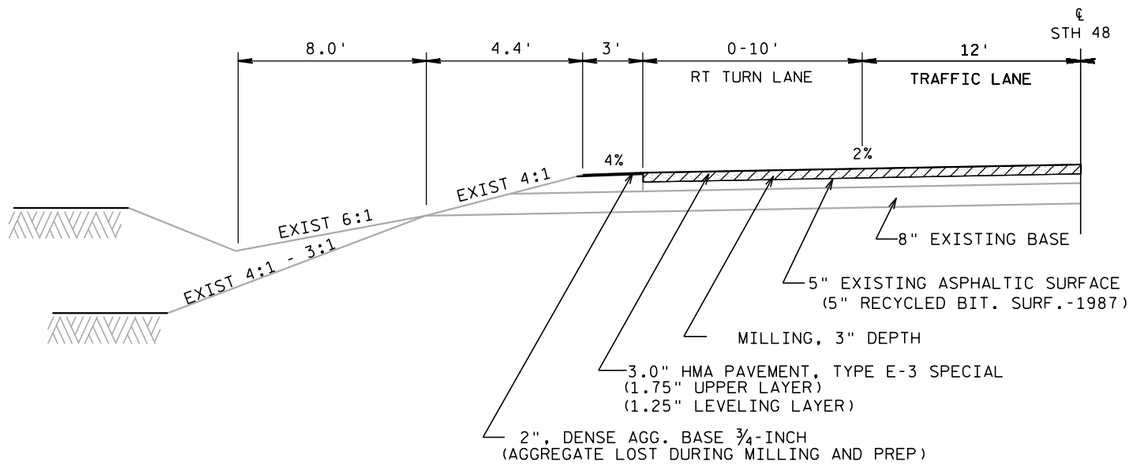
FINISHED HALF SECTION

STATIONS
101+49 - 126+00 LT
105+41 - 126+00 RT
EXCEPT RT TURN AND BYPASS LANES NOTED BELOW



FINISHED TYPICAL SECTION FOR BYPASS LANE

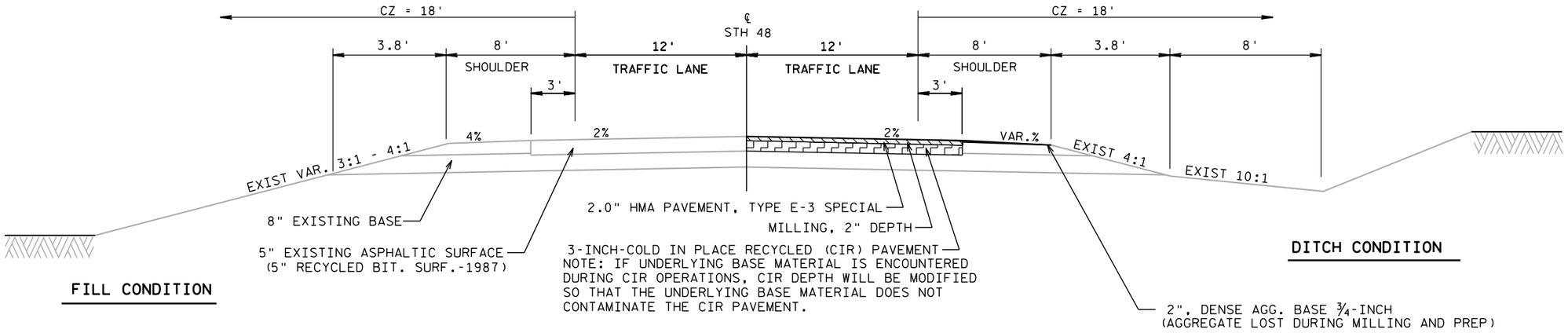
STATIONS
118+40 - 125+27 RT



FINISHED TYPICAL SECTION FOR RT TURN LANE

STATIONS
110+96 - 114+51 RT
122+22 - 125+30 LT

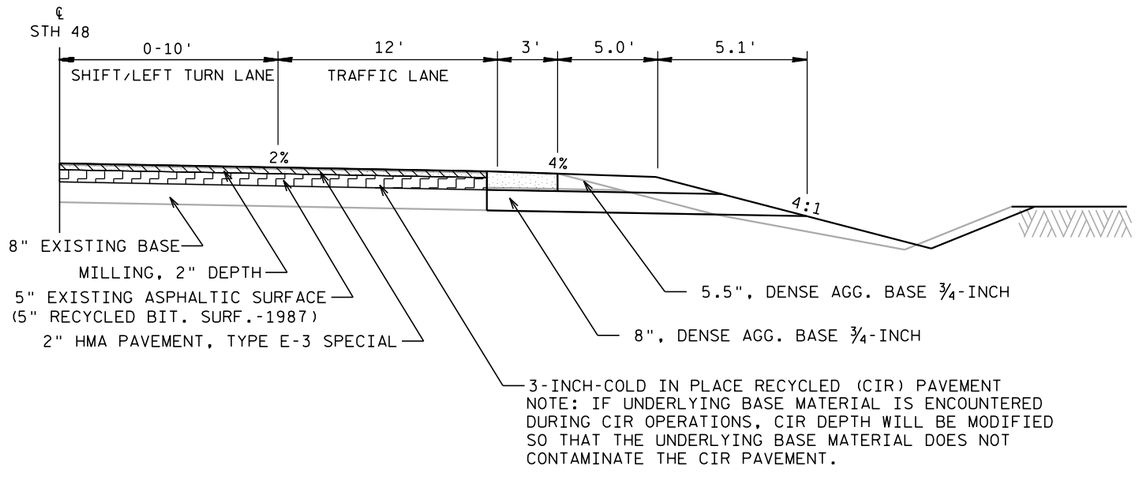
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EXISTING HALF SECTION

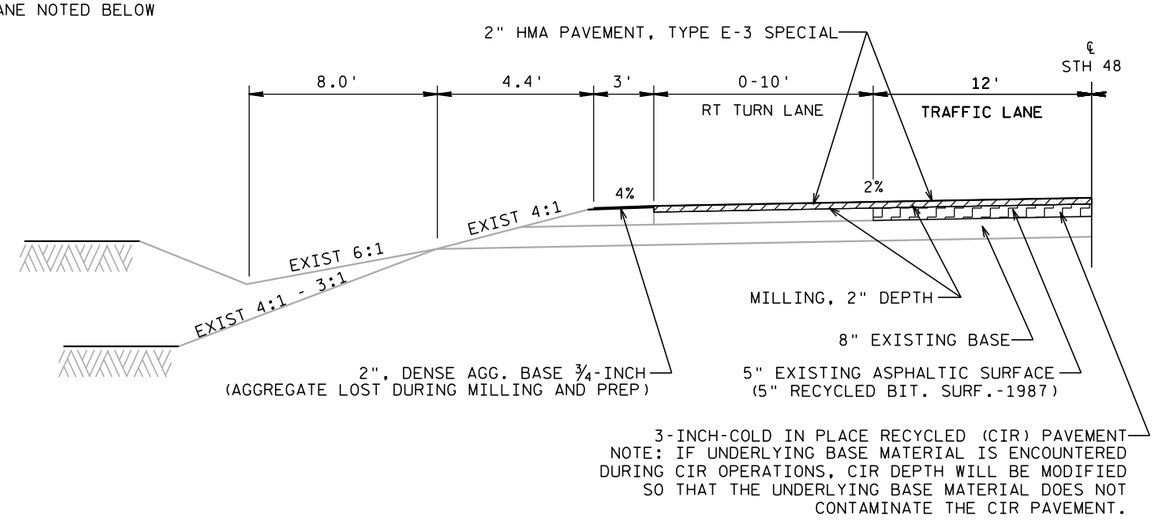
FINISHED HALF SECTION

STATIONS
126+00 - 163+00 RT
126+00 - 170+62 LT
175+75 - 268+47 RT
181+35 - 268+47 LT
283+00 - 458+00
EXCEPT RT TURN LANE NOTED BELOW



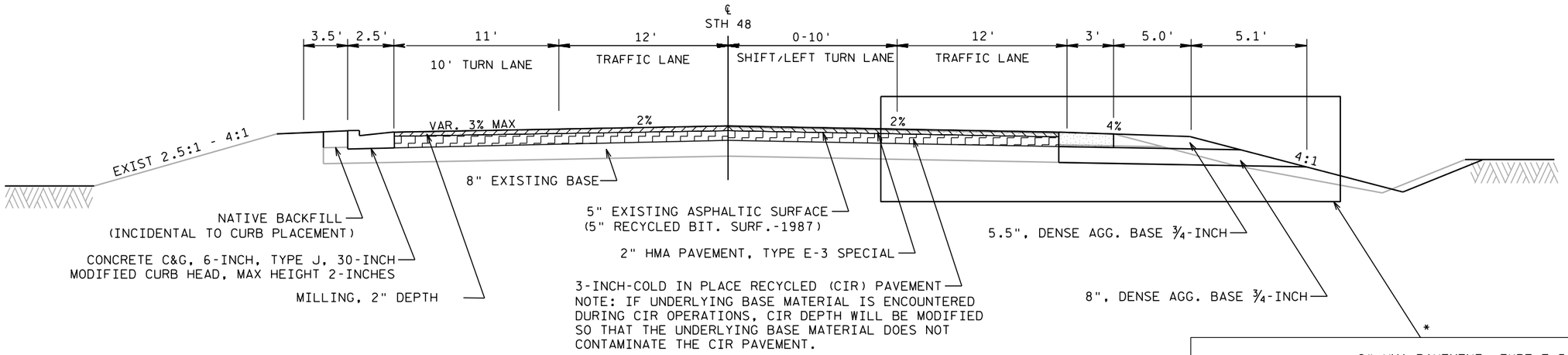
FINISHED TYPICAL SECTION FOR LEFT TURN LANE

STATIONS
163+00 - 170+62 RT
175+75 - 181+35 LT
SEE PLAN CROSS SECTIONS



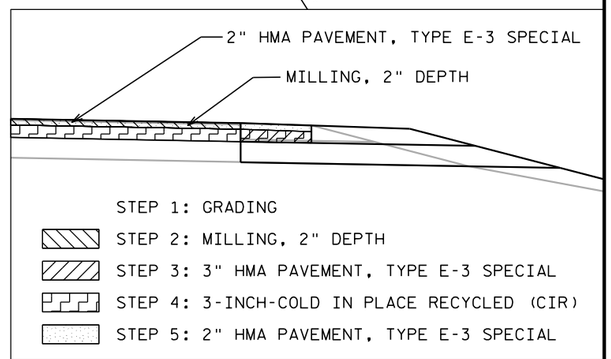
FINISHED TYPICAL SECTION FOR RT TURN LANE

STATIONS
227+00 - 229+04 RT

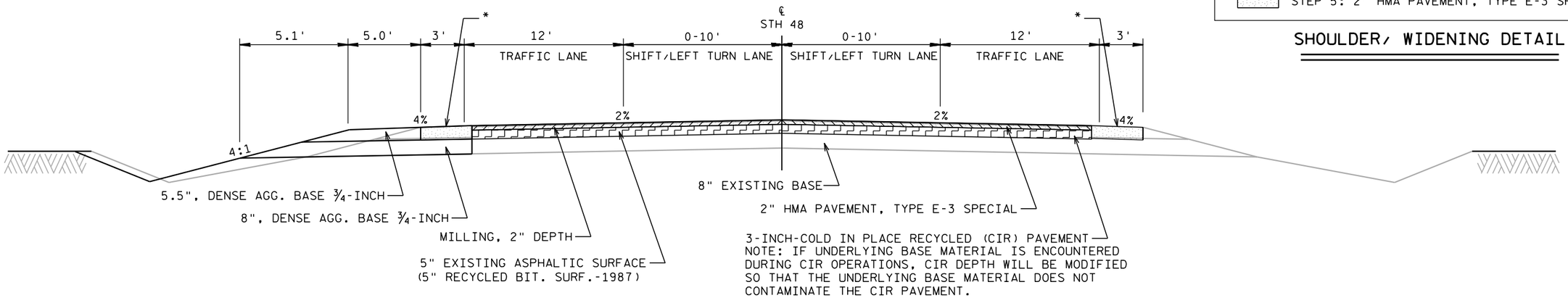


FINISHED TYPICAL SECTION

STATIONS
170+62 - 172+64
SEE PLAN CROSS SECTIONS



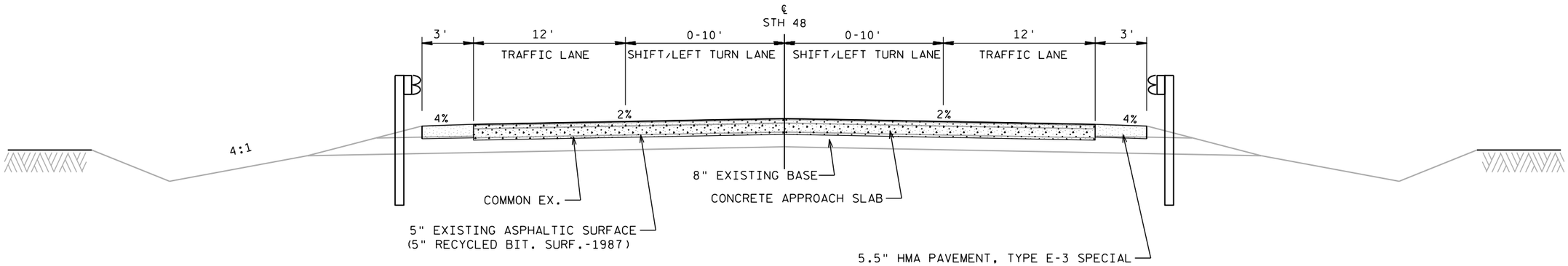
SHOULDER/ WIDENING DETAIL



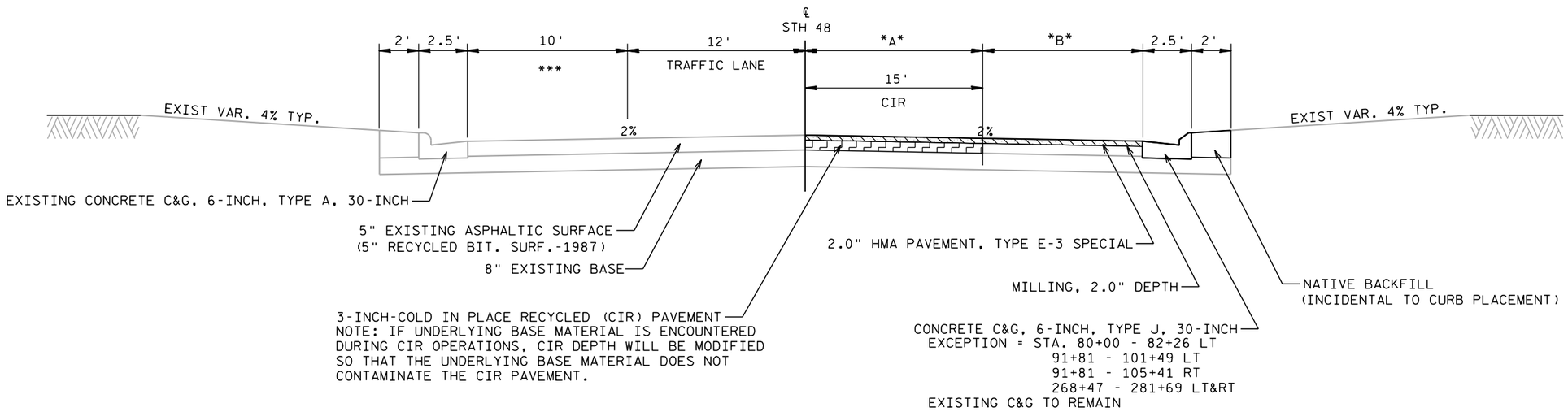
FINISHED TYPICAL SECTION FOR LEFT TURN LANE

STATIONS
174+09 - 175+75
SEE PLAN CROSS SECTIONS

2

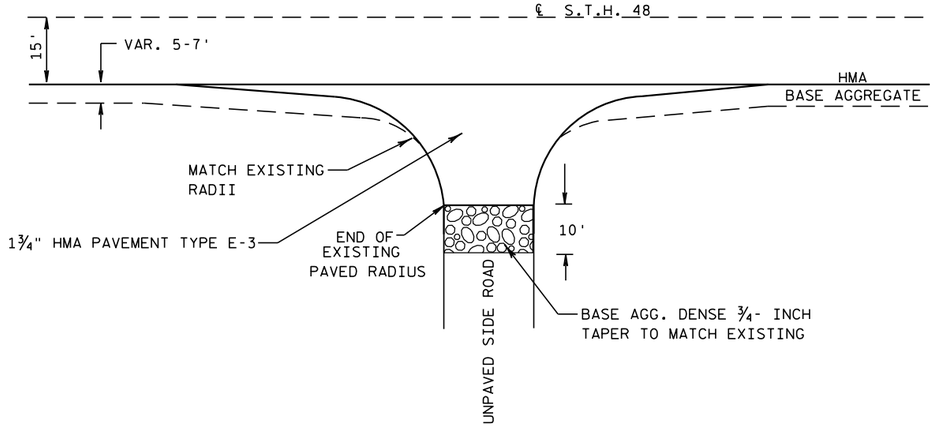


FINISHED TYPICAL SECTION FOR CONCRETE APPROACH SLAB

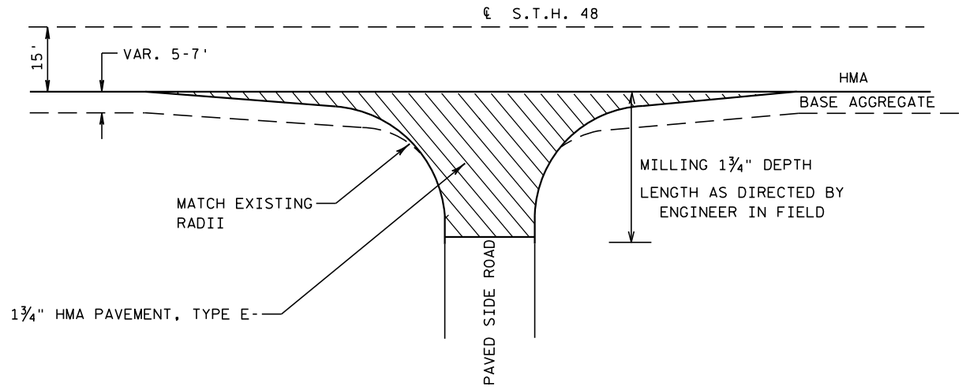


FINISHED TYPICAL SECTION

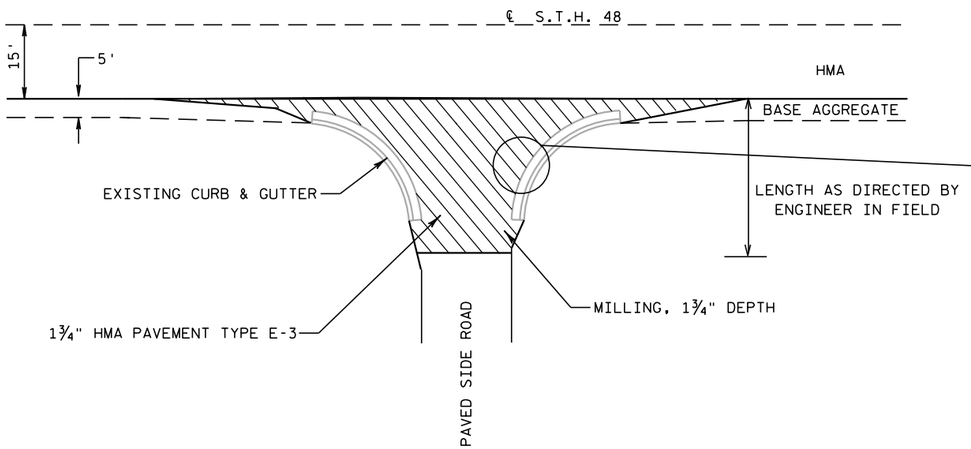
STATION
268+47 - 283+00 *A* = 12'TRAFFIC LN *B* = 10'SHOULDER



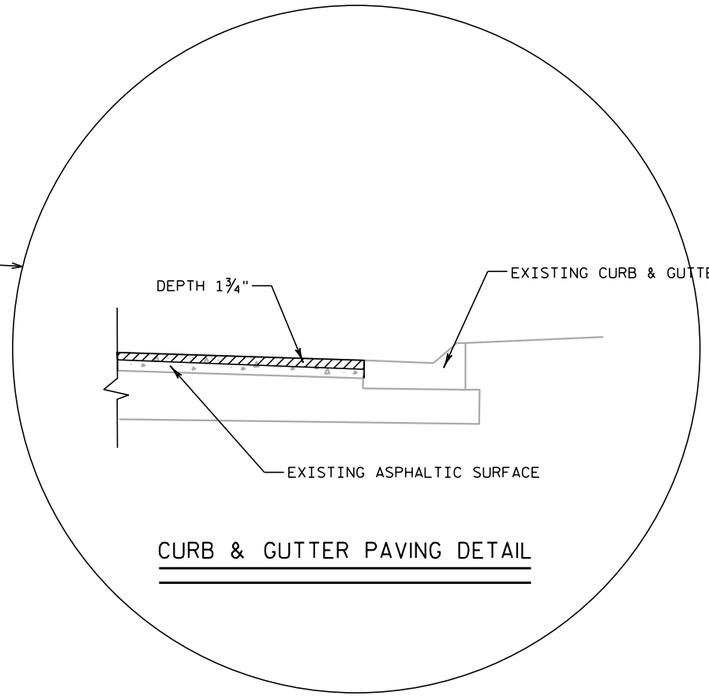
PAVING DETAIL
UNPAVED SIDEROAD



PAVING DETAIL
SIDEROADS WITH PAVED SURFACE WITHOUT CURB & GUTTER

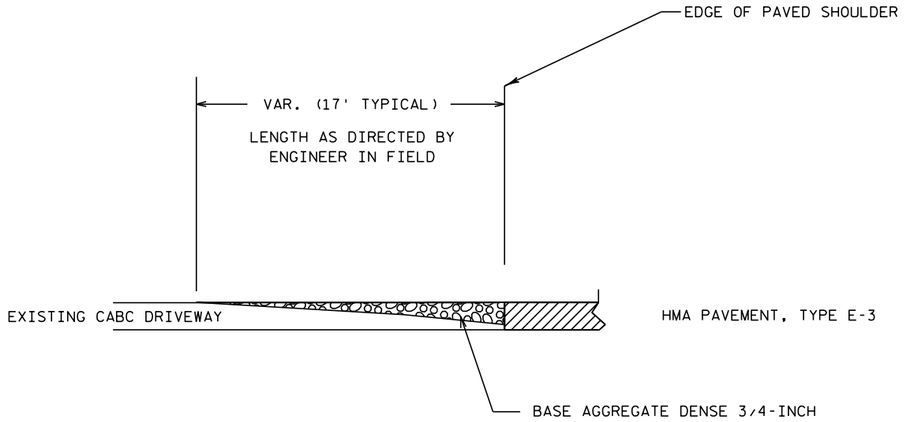


PAVING DETAIL
SIDEROADS WITH EXISTING CURB & GUTTER

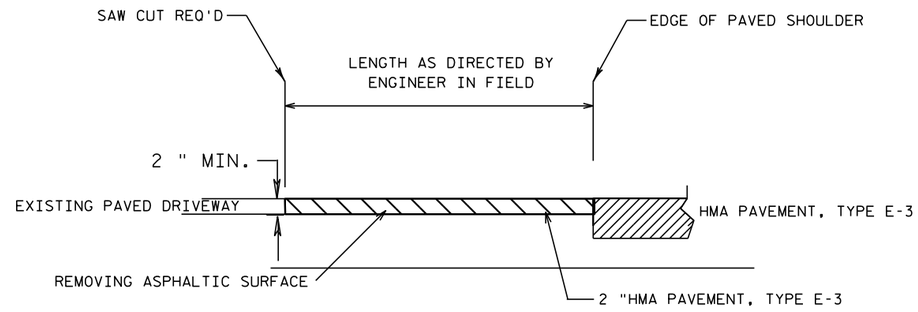


CURB & GUTTER PAVING DETAIL

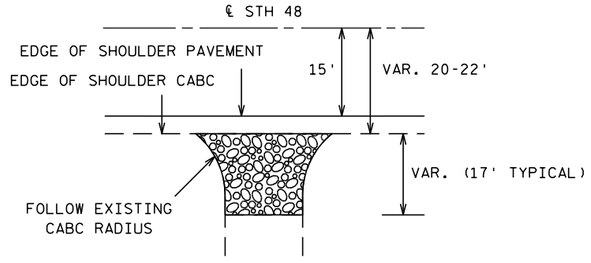
* NOTE: CURB & GUTTER TO BE REPLACED AT CTH M NORTH



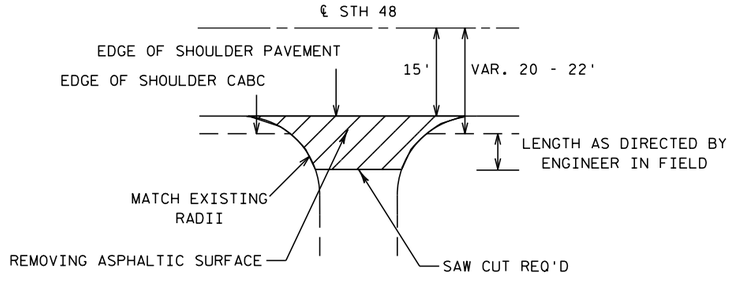
BASE AGGREGATE PRIVATE ENTRANCE DETAIL
PROFILE VIEW



PAVED PRIVATE ENTRANCE DETAIL
PROFILE VIEW



BASE AGGREGATE PRIVATE ENTRANCE DETAIL
PLAN VIEW

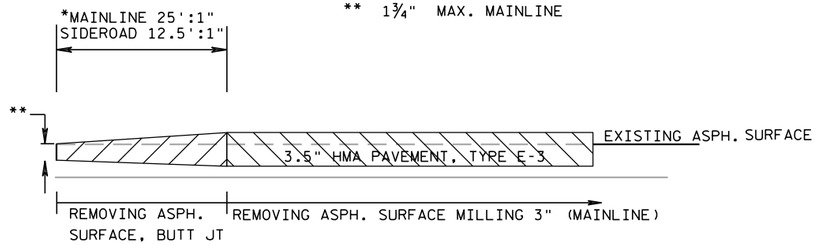


PAVED PRIVATE ENTRANCE DETAIL
PLAN VIEW

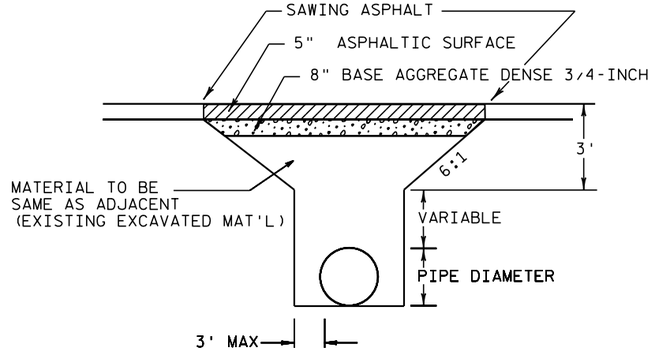
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* EXACT LENGTH TO BE DETERMINED BY ENGINEER IN FIELD

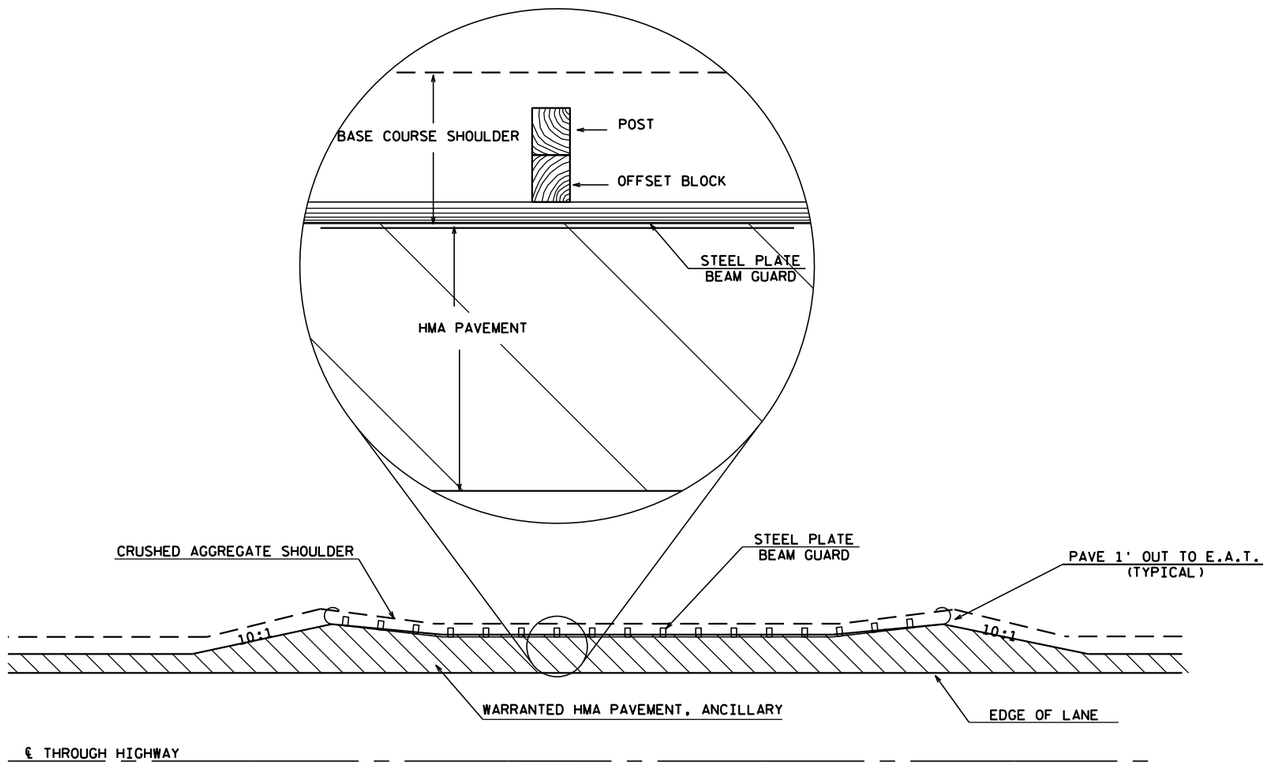
** 1¾" MAX. MAINLINE



MAINLINE BUTTED JOINT

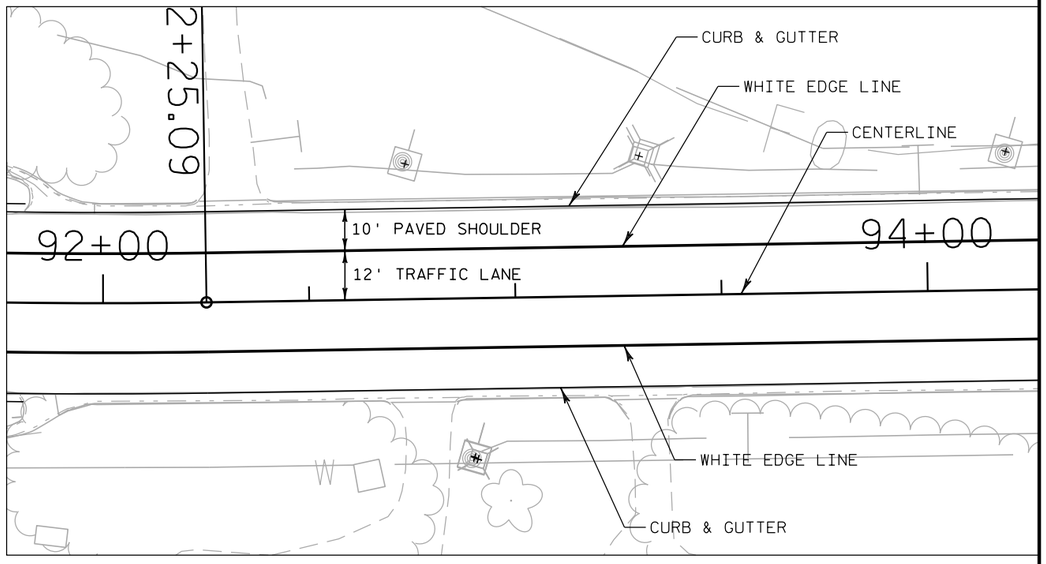


DETAIL FOR CULVERT PIPE REMOVAL, REPLACEMENT AND BASE PATCHING DETAIL



ASPHALTIC PAVING ALONG BEAMGUARD

SEE PLAN SHEETS FOR LOCATIONS.

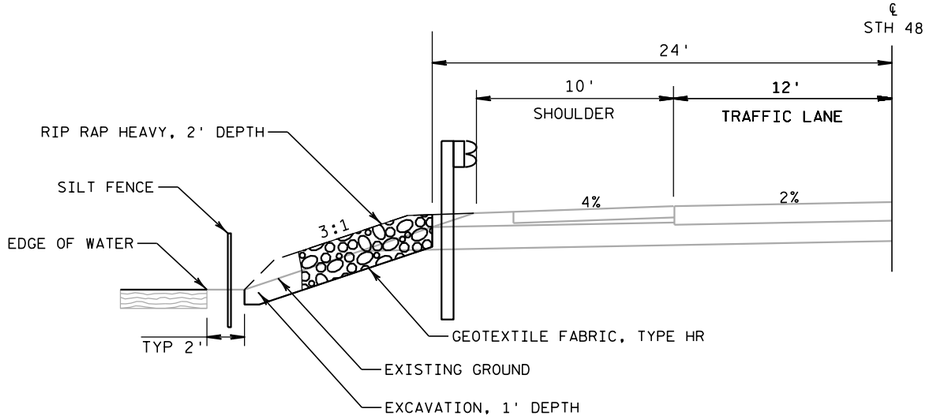


PAVEMENT MARKING DETAIL FOR URBAN AREAS 91+81 - 105+41 268+47 - 281+69

PROJECT NO:8570-03-70	HWY:STH 48	COUNTY:BARRON	CONSTRUCTION DETAILS	SHEET 11	E

2

PAVEMENT FIELD CORE LOG							
PROJECT: 8570-03-01			ROAD: STH 48			RICE LAKE - BIRCHWOOD	
COUNTY: BARRON			DISTRICT: NW REGION			NORTH STREET - CTH NN	
CORE NO.	STATION	OFFSET	CORE IN INCHES	CORE DIAMETER	BASE (IN)	PAVEMENT TYPE	DATE
1	37+00	7.5 - L	4.5	4 3/4	BASE	HMA	7/6/2011
2	55+00	4 - R	4.5	4 3/4	BASE	HMA	7/6/2011
3	73+00	9.5 - L	5	4 3/4	BASE	HMA	7/6/2011
4	91+00	8 - R	5	4 3/4	BASE	HMA	7/7/2011
5	109+00	4.5 - L	5.5	4 3/4	BASE	HMA	7/7/2011
6	126+00	6 - R	5.5	4 3/4	BASE	HMA	7/7/2011
7	144+00	5 - L	5	4 3/4	BASE	HMA	7/7/2011
8	163+00	3 - R	4.5	4 3/4	BASE	HMA	7/7/2011
9	180+00	9.5 - L	6	4 3/4	BASE	HMA	7/7/2011
10	198+00	5 - R	4.75	4 3/4	BASE	HMA	7/7/2011
11	216+00	4 - L	4.5	4 3/4	BASE	HMA	7/7/2011
12	235+00	9.5 - R	5	4 3/4	BASE	HMA	7/7/2011
13	253+00	7 - L	5	4 3/4	BASE	HMA	7/7/2011
14	271+00	8 - R	4.75	4 3/4	BASE	HMA	7/7/2011
15	289+00	9.5 - L	4.5	4 3/4	BASE	HMA	7/7/2011
16	306+50	4.5 - R	4.5	4 3/4	BASE	HMA	7/7/2011
17	324+50	5 - L	5	4 3/4	BASE	HMA	7/7/2011
18	342+00	9.5 - R	4	4 3/4	BASE	HMA	7/7/2011
19	361+00	9 - L	5	4 3/4	BASE	HMA	7/7/2011
20	378+00	4 - R	4.25	4 3/4	BASE	HMA	7/7/2011
21	396+00	4 - L	4.5	4 3/4	BASE	HMA	7/7/2011
22	414+50	6.5 - R	5	4 3/4	BASE	HMA	7/7/2011
23	432+00	9 - L	7	4 3/4	BASE	HMA	7/7/2011
24	451+00	4.5 - R	4.25	4 3/4	BASE	HMA	7/7/2011



RIP RAP DETAIL

STA 85+50 - 87+00

2

N

4_056_20
1143.16

4_056_20
1146.50

4_056_20
1148.20

STA. 77+72

BEGIN NEW C&G LT
6-INCH SLOPED, 30-INCH TYPE J

STA. 79+59 23.5'LT
1-4FT CB, HM-GJ
REMOVE EXISTING SS
INLET AND COVER

79+61.4
39.0' LT

76+00

78+00

80+00

82+00

STA. 78+73

CONC. SIDEWALK
4-INCH

CONCRETE C&G
6-INCH SLOPED, 30-INCH TYPE J

12" RCCP SS

STA. 80+76 37'RT
1-4FT CB, HM-GJ

STA. 80+76 15.5'RT
1-4FT CB, HM-GJ

STA. 80+63.5 22.5'RT
1-4FT CB, HM-GJ

EXISTING C&G TO REMAIN

STA. 81+26

EXISTING 18" RCCP SS

END NEW C&G
MATCH EXISTING

STA. 82+27

SIGN

SEPTIC

SS

FO

W

79+61.4
39.0' LT

R 17'0"

51'

22'

12'

R 4'6"

R 3'6"

79+27.8
15.5' RT

79+78.8
16.5' RT

80+63.9
18.5' RT

16'

14'

22'

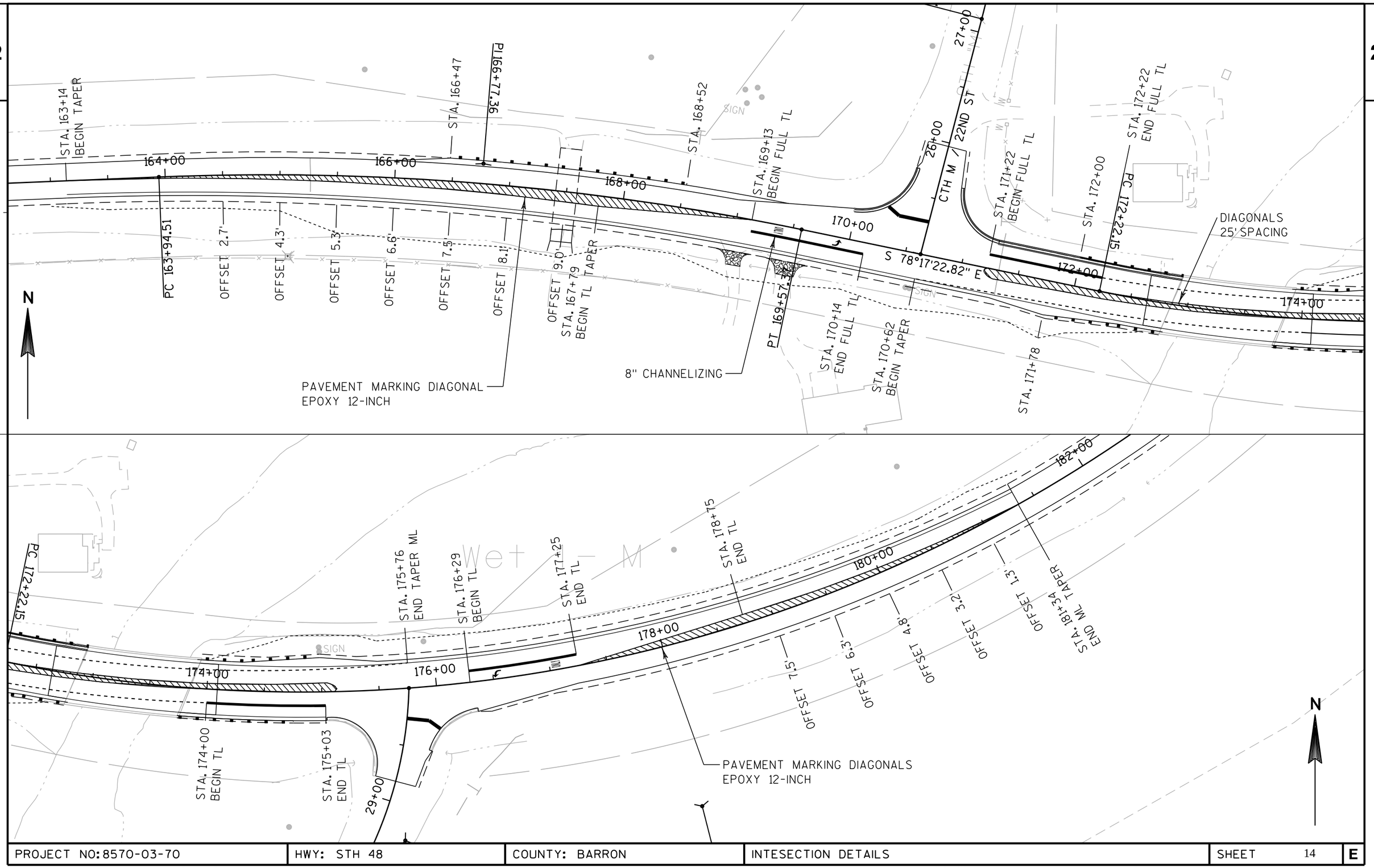
R 100'

R 4'6"

PROJECT NO: 8570-03-70	HWY: STH 48	COUNTY: BARRON	INTERSECTION DETAILS	SHEET 13	E

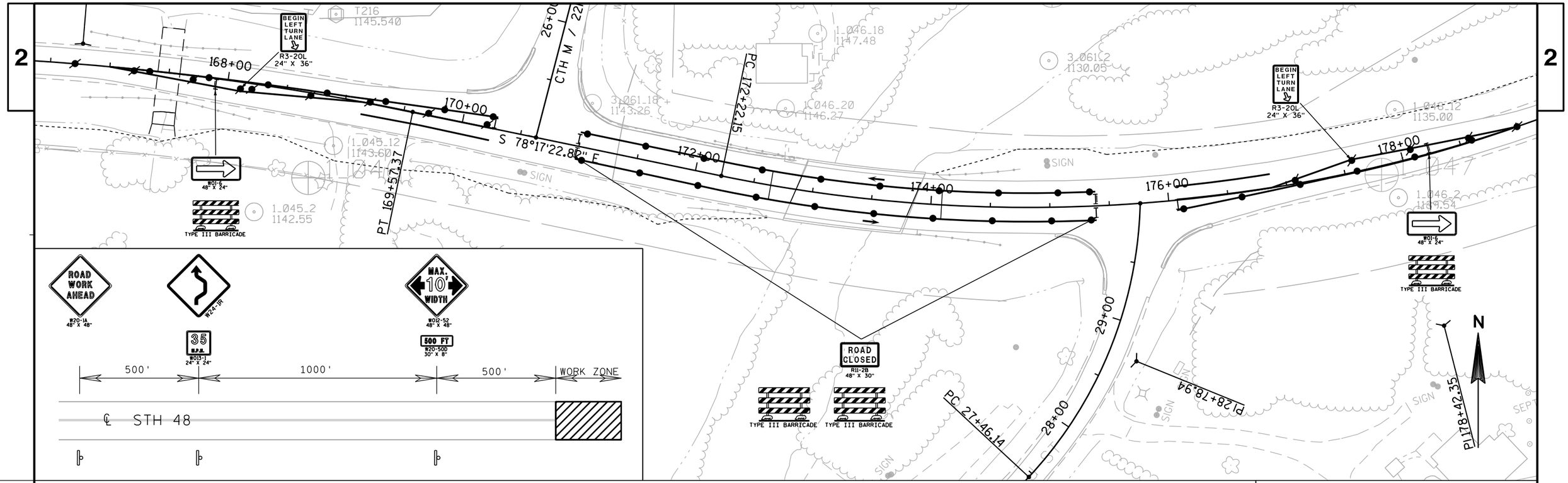
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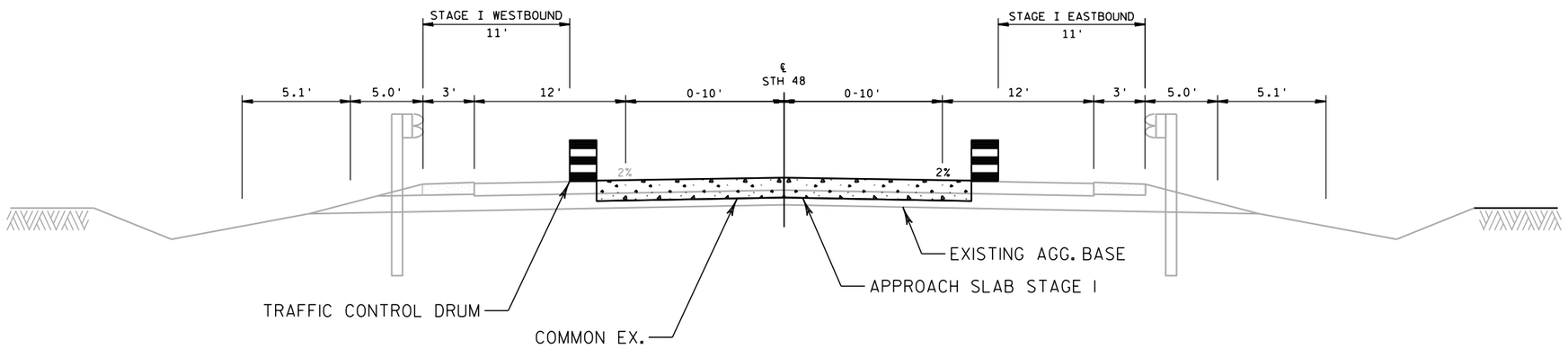
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PROJECT NO: 8570-03-70	HWY: STH 48	COUNTY: BARRON	INTESECTION DETAILS	SHEET 14	E

FILE NAME : N:\PDS\Design\Projects\85700301(70)_48_active design_Barron\Dgn files\021102_id.dgn PLOT DATE : 19-MAY-2014 14:21 PLOT BY : dotk4b PLOT NAME : PLOT SCALE : 75:1





STAGE I TYPICAL FINISHED SECTION

STATION
168+00 - 172+85

LEGEND

- POST MOUNTED SIGN
- TRAFFIC CONTROL DRUM
- DRUM WITH TYPE "C" WARNING LIGHT
- ORANGE FLAGS ATTACHED TO SIGN (INCIDENTAL TO SIGN)
- TYPE III BARRICADE WITH SIGN

MAX. 10' WIDTH
W012-52
48" X 48"

X MILES AHEAD
W057-52
3' x 2'

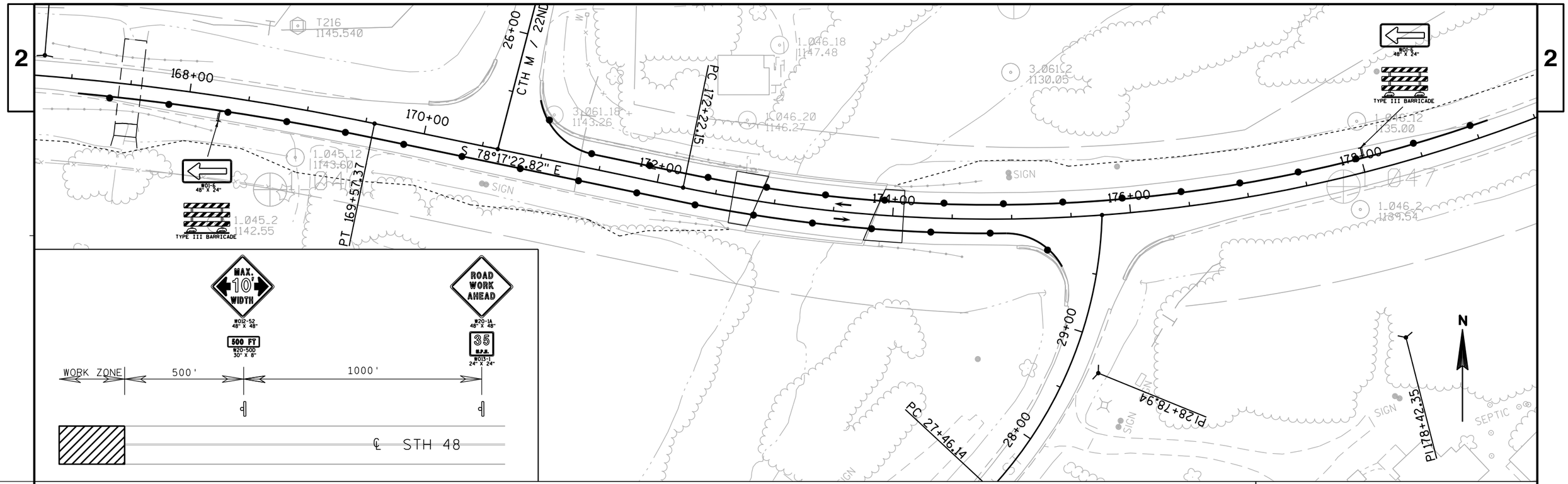
THESE SIGNS SHALL BE PLACED AT THE FOLLOWING LOCATIONS (FOR PHASE I & II CONSTRUCTION):

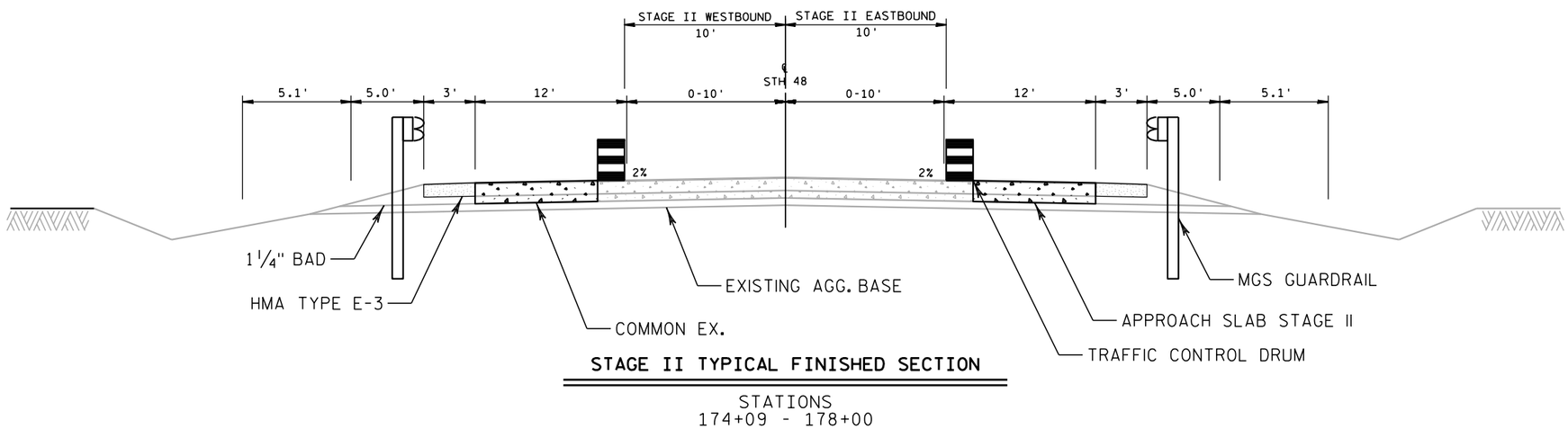
LOCATION	CAPTION FOR W057-52
STH 48 AND 22 1/2 AVE (EAST)	1.7 MILES AHEAD
STH 48 AND KNAPP ST (EAST)	3 MILES AHEAD
STH 48 AND CTH NN (SOUTH)	5 MILES AHEAD

APPROACH SLAB CONSTRUCTION

PROJECT NO: 8570-03-70	HWY: STH 48	COUNTY: BARRON	TRAFFIC CONTROL, STAGE I	SHEET 15	E

FILE NAME : N:\PDS\Design\Projects\85700301(70)_48_active design_Barron\Dgn files\025001_tc.dgn PLOT DATE : 19-MAY-2014 14:21 PLOT BY : dotk4b PLOT NAME : PLOT SCALE : 80.178587:1





STAGE II TYPICAL FINISHED SECTION

STATIONS
174+09 - 178+00

LEGEND

- POST MOUNTED SIGN
- TRAFFIC CONTROL DRUM
- ORANGE FLAGS ATTACHED TO SIGN (INCIDENTAL TO SIGN)
- TYPE III BARRICADE WITH SIGN

MAX. 10' WIDTH
W012-52
48" X 48"

X MILES AHEAD
W057-52
3' x 2'

THESE SIGNS SHALL BE PLACED AT THE FOLLOWING LOCATIONS (FOR PHASE I & II CONSTRUCTION):

LOCATION	CAPTION FOR W057-52
STH 48 AND 22 1/2 AVE (EAST)	1.7 MILES AHEAD
STH 48 AND KNAPP ST (EAST)	3 MILES AHEAD
STH 48 AND CTH NN (SOUTH)	5 MILES AHEAD

APPROACH SLAB CONSTRUCTION

PROJECT NO: 8570-03-70	HWY: STH 48	COUNTY: BARRON	TRAFFIC CONTROL, STAGE II	SHEET 16	E

DATE 16SEP14 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	8570-03-70 QUANTITY
0010	201.0105	CLEARING	STA	2.000	2.000
0020	201.0205	GRUBBING	STA	2.000	2.000
0030	203.0100	REMOVING SMALL PIPE CULVERTS	EACH	1.000	1.000
0040	203.0500.S	REMOVING OLD STRUCTURE OVER WATERWAY (STATION) 01. 167+50	LS	1.000	1.000
0060	204.0110	REMOVING ASPHALTIC SURFACE	SY	1,072.000	1,072.000
0070	204.0115	REMOVING ASPHALTIC SURFACE BUTT JOINTS	SY	194.000	194.000
0080	204.0120	REMOVING ASPHALTIC SURFACE MILLING	SY	157,823.000	157,823.000
0090	204.0150	REMOVING CURB & GUTTER	LF	1,174.000	1,174.000
0120	204.0220	REMOVING INLETS	EACH	1.000	1.000
0150	205.0100	EXCAVATION COMMON	CY	528.000	528.000
0160	206.2000	EXCAVATION FOR STRUCTURES CULVERTS (STRUCTURE) 01. C-03-0007	LS	1.000	1.000
0170	210.0100	BACKFILL STRUCTURE	CY	80.000	80.000
0180	211.0100	PREPARE FOUNDATION FOR ASPHALTIC PAVING (PROJECT) 01. 8570-03-70	LS	1.000	1.000
0200	211.0400	PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS	STA	30.000	30.000
0210	213.0100	FINISHING ROADWAY (PROJECT) 01. 8570-03-70	EACH	1.000	1.000
0230	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	5,044.000	5,044.000
0240	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	1,018.300	1,018.300
0250	415.0410	CONCRETE PAVEMENT APPROACH SLAB	SY	224.000	224.000
0270	440.4410.S	INCENTIVE IRI RIDE	DOL	32,400.000	32,400.000
0280	455.0605	TACK COAT	GAL	4,993.000	4,993.000
0290	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	17,090.000	17,090.000
0310	465.0110	ASPHALTIC SURFACE PATCHING	TON	1,500.000	1,500.000
0320	465.0120	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	TON	126.000	126.000
0350	465.0475	ASPHALT CENTER LINE RUMBLE STRIPS 2-LANE RURAL	LF	27,709.000	27,709.000
0360	502.5005	MASONRY ANCHORS TYPE L NO. 5 BARS	EACH	66.000	66.000
0370	504.0100	CONCRETE MASONRY CULVERTS	CY	28.000	28.000
0380	505.0410	BAR STEEL REINFORCEMENT HS CULVERTS	LB	3,410.000	3,410.000
0390	509.1500	CONCRETE SURFACE REPAIR	SF	10.000	10.000
0400	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	13.000	13.000
0410	521.0118	CULVERT PIPE CORRUGATED STEEL 18-INCH	LF	74.000	74.000
0420	521.1018	APRON ENDWALLS FOR CULVERT PIPE STEEL 18-INCH	EACH	4.000	4.000
0430	522.0148	CULVERT PIPE REINFORCED CONCRETE CLASS III 48-INCH	LF	70.000	70.000
0440	522.1048	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 48-INCH	EACH	2.000	2.000
0450	601.0411	CONCRETE CURB & GUTTER 30-INCH TYPE D	LF	163.000	163.000
0460	601.0415	CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE J	LF	1,071.000	1,071.000
0480	602.0405	CONCRETE SIDEWALK 4-INCH	SF	1,259.000	1,259.000
0510	606.0300	RIPRAP HEAVY	CY	153.000	153.000
0520	608.0312	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH	LF	27.000	27.000
0580	611.0630	INLET COVERS TYPE HM-GJ	EACH	3.000	3.000
0600	611.1004	CATCH BASINS 4-FT DIAMETER	EACH	1.000	1.000
0680	614.0305	STEEL PLATE BEAM GUARD CLASS A	LF	87.500	87.500
0690	614.0345	STEEL PLATE BEAM GUARD SHORT RADIUS	LF	37.000	37.000
0700	614.0370	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL	EACH	1.000	1.000

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DATE 16SEP14 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	8570-03-70 QUANTITY
0710	614.0390	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL	EACH	1.000	1.000
0720	614.0920	SALVAGED RAIL	LF	2,455.000	2,455.000
0730	614.2300	MGS GUARDRAIL 3	LF	388.000	388.000
0740	614.2330	MGS GUARDRAIL 3 K	LF	800.000	800.000
0750	614.2500	MGS THRIE BEAM TRANSITION	LF	320.000	320.000
0760	614.2610	MGS GUARDRAIL TERMINAL EAT	EACH	14.000	14.000
0810	618.0100	MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 01. 8570-03-70	EACH	1.000	1.000
0820	619.1000	MOBILIZATION	EACH	0.600	0.600
0830	620.0300	CONCRETE MEDIAN SLOPED NOSE	SF	76.000	76.000
0840	625.0500	SALVAGED TOPSOIL	SY	2,018.000	2,018.000
0850	627.0200	MULCHING	SY	2,993.000	2,993.000
0860	628.1104	EROSION BALES	EACH	1.000	1.000
0870	628.1504	SILT FENCE	LF	500.000	500.000
0880	628.1520	SILT FENCE MAINTENANCE	LF	500.000	500.000
0890	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	1.000	1.000
0900	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	1.000	1.000
0960	629.0205	FERTILIZER TYPE A	CWT	1.880	1.880
0980	630.0120	SEEDING MIXTURE NO. 20	LB	80.900	80.900
0990	630.0200	SEEDING TEMPORARY	LB	40.400	40.400
1010	633.5200	MARKERS CULVERT END	EACH	50.000	50.000
1030	634.0616	POSTS WOOD 4X6-INCH X 16-FT	EACH	142.000	142.000
1040	637.2210	SIGNS TYPE II REFLECTIVE H	SF	620.000	620.000
1050	637.2230	SIGNS TYPE II REFLECTIVE F	SF	213.000	213.000
1060	638.2102	MOVING SIGNS TYPE II	EACH	6.000	6.000
1070	638.2602	REMOVING SIGNS TYPE II	EACH	157.000	157.000
1080	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	136.000	136.000
1090	642.5001	FIELD OFFICE TYPE B	EACH	1.000	1.000
1100	643.0100	TRAFFIC CONTROL (PROJECT) 01. 8570-03-70	EACH	1.000	1.000
1120	643.0300	TRAFFIC CONTROL DRUMS	DAY	13,515.000	13,515.000
1140	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	100.000	100.000
1150	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	160.000	160.000
1160	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	140.000	140.000
1170	643.0900	TRAFFIC CONTROL SIGNS	DAY	2,420.000	2,420.000
1180	645.0105	GEOTEXTILE FABRIC TYPE C	SY	55.000	55.000
1190	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	244.000	244.000
1200	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	130,622.000	130,622.000
1210	646.0126	PAVEMENT MARKING EPOXY 8-INCH	LF	993.000	993.000
1220	646.0406	PAVEMENT MARKING SAME DAY EPOXY 4-INCH	LF	64,416.000	64,416.000
1230	646.0600	REMOVING PAVEMENT MARKINGS	LF	450.000	450.000
1240	647.0166	PAVEMENT MARKING ARROWS EPOXY TYPE 2	EACH	4.000	4.000
1250	647.0356	PAVEMENT MARKING WORDS EPOXY	EACH	4.000	4.000
1260	647.0556	PAVEMENT MARKING STOP LINE EPOXY 12-INCH	LF	81.000	81.000
1270	647.0606	PAVEMENT MARKING ISLAND NOSE EPOXY	EACH	2.000	2.000
1280	647.0726	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH	LF	259.000	259.000
1300	648.0100	LOCATING NO-PASSING ZONES	MI	8.100	8.100
1320	649.0200	TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH	LF	81,432.000	81,432.000
1340	650.4000	CONSTRUCTION STAKING STORM SEWER	EACH	4.000	4.000
1350	650.4500	CONSTRUCTION STAKING SUBGRADE	LF	1,676.000	1,676.000
1360	650.5000	CONSTRUCTION STAKING BASE	LF	1,676.000	1,676.000
1370	650.5500	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER	LF	1,234.000	1,234.000

3

DATE 16SEP14 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	8570-03-70 QUANTITY
1380	650.6000	CONSTRUCTION STAKING PIPE CULVERTS	EACH	1.000	1.000
1390	650.6500	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 01. C-03-0007	LS	1.000	1.000
1400	650.8000	CONSTRUCTION STAKING RESURFACING REFERENCE	LF	41,150.000	41,150.000
1410	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 8570-03-70	LS	1.000	1.000
1430	650.9920	CONSTRUCTION STAKING SLOPE STAKES	LF	1,676.000	1,676.000
1440	690.0150	SAWING ASPHALT	LF	397.000	397.000
1460	ASP.1T0A	ON-THE-JOB TRAINING APPRENTICE AT $5. 00/HR	HRS	2,000.000	2,000.000
1470	ASP.1T0G	ON-THE-JOB TRAINING GRADUATE AT $5.00/HR	HRS	630.000	630.000
1480	SPV.0035	SPECIAL 01. BASE REPAIR FOR CIR PAVEMENT	CY	30.000	30.000
1490	SPV.0090	SPECIAL 01. CURE-IN-PLACE PIPE LINING	LF	1,326.000	1,326.000
1500	SPV.0090	SPECIAL 02. CONCRETE CURB AND GUTTER CURE AND SEAL TREATMENT	LF	1,234.000	1,234.000
1510	SPV.0090	SPECIAL 03. TEMPORARY PAVEMENT MARKING SAME DAY EPOXY, 4-INCH	LF	49,800.000	49,800.000
1520	SPV.0105	SPECIAL 01. PREPARE FOUNDATION FOR CIR PAVEMENT 8570-03-70	LS	1.000	1.000
1530	SPV.0105	SPECIAL 02. PREPARE FOUNDATION FOR HMA UPPER LAYTER 8570-03-70	LS	1.000	1.000
1540	SPV.0165	SPECIAL 01. CONCRETE SIDEWALK CURE AND SEAL TREATMENT	SF	1,259.000	1,259.000
1550	SPV.0170	SPECIAL 01. REHEATING HMA PAVEMENT LONGITUDINAL JOINTS SPECIAL	STA	558.000	558.000
1560	SPV.0180	SPECIAL 01. COLD-IN-PLACE RECYCLING (CIR) PAVEMENT PARTIAL DEPTH	SY	110,935.000	110,935.000
1570	SPV.0195	SPECIAL 01. ASPHALT STABILIZING AGENT	TON	466.000	466.000
1580	SPV.0195	SPECIAL 02. HMA PAVEMENT TYPE E-3 SPECIAL	TON	19,962.000	19,962.000

3

CLEARING & GRUBBING

STATION TO	STATION	LOCATION	CLEARING 201.0105 STA	GRUBBING 201.0205 STA
170+00	172+00	RT	2	2
		TOTAL	**2**	**2**

REMOVING CURB & GUTTER

STATION	TO	STATION	LOCATION	204.0150 LF
74+89	-	82+27	RT	647
77+72	-	79+78	LT	186
79+34	-	79+84	LT	178
171+28	-	172+80	LT	163
			TOTAL	**1174**

SALVAGED RAIL

STATION	TO	STATION	LOCATION	614.0920 LF
47+63	-	48+79	LT	116
47+73	-	49+12	RT	139
57+55	-	58+69	LT	131
57+18	-	58+61	RT	143
83+83	-	84+49	RT	66
83+95	-	84+53	LT	58
85+32	-	89+05	RT	373
85+34	-	89+79	LT	445
166+81	-	168+16	LT	135
166+77	-	168+23	RT	146
172+00	-	172+67	RT	67
172+10	-	172+86	LT	76
173+89	-	174+60	RT	71
173+99	-	174+74	LT	75
395+74	-	399+88	LT	414
			TOTAL	**2455**

EARTHWORK SUMMARY

DIVISION	STATION	TO STATION	LOCATION	205.0100 COMMON EXC. CUT C.Y.	AVAILABLE MATERIAL C.Y.	TOTAL EXPANDED FILL(15%) C.Y.	CUT-EXPFILL MASS HAUL C.Y.	WASTE C.Y.
1	163+50	- 181+50	ML STH 48	528	528	397	131	131
TOTALS				528	528	397	131	131
		BID ITEM TOTAL		**528**				

BASE COURSE SUMMARY

STATION TO	STATION	LOCATION	BASE AGG. DENS 3/4-INCH 305.0110 TON	BASE AGG. DENSE 1 1/4-INCH 305.0120 TON	BASE REPAIR CIR PAVT. SPV.0035.01 CY	REMARKS
28+56 -	49+00	LT	50.6			
		PE LT	4.1			
28+56 -	54+00	RT	62.9			
37+90		SR RT	5.2			LAKESHORE DR
49+00 -	77+72	LT	248.9			
		PE LT	15.4			
49+11		SR LT	2.8			RICHTER ST
53+96		SR LT	1.6			
54+00 -	74+89	RT	181.0			
		PE RT	1.9			
54+11		SR RT	5.0			22ND AVE
68+64		SR RT	3.9			22 1/4 AVE
72+09		SR RT	3.9			22 3/8 AVE
90+03		PE RT	1.2			
101+49 -	122+22	LT	127.9			
		PE LT	1.5			
105+41 -	110+96	RT	34.2			
110+96 -	114+51	RT	13.1			
114+51 -	118+40	RT	24.0			
118+40 -	125+27	RT	16.9			
122+22 -	125+30	LT	11.4			
125+27 -	163+00	RT	232.8			
125+30 -	172+64	LT	292.1			
		PE LT	8.9			
170+63		SR LT	2.1			CTH M
163+00 -	172+64	RT	145.9	583.5		
174+09 -	182+00	LT	159.0	434.8		
175+04 -	227+00	RT	320.6			
		PE RT	6.1			
175+76		SR RT	1.3			CTH M
227+00 -	229+04	RT	7.6			
229+04 -	268+47	RT	243.3			
		PE RT	5.1			
229+99		SR RT	1.3			23RD ST
181+35 -	268+47	LT	537.6			
		PE LT	7.9			
230+05		SR LT	1.4			23RD ST
283+00 -	458+00	ML	2164.8			
		PE RT & L	49.0			
283+01		SR RT	6.2			24TH ST
283+07		SR LT	5.1			24TH ST
337+31		SR LT	3.6			25TH ST
337+33		SR RT	4.7			25TH ST
389+42		SR RT	4.9			26TH ST
389+44		SR LT	4.9			26TH ST
434+46		SR RT	4.1			23RD AVE
443+54		SR RT	6.4			CTH NN
28+56 -	458+00				30.0	UNDISTRIBUTED
		TOTAL	**5044**	1018.3	**30**	

NOTE: ALL QUANTITIES ARE CATEGORY 0010 UNLESS SPECIFIED OTHERWISE.

REMOVING ASPHALTIC SURFACE SUMMARY

STATION	TO STATION	LOCATION	MILL DEPTH IN	REMOVING ASPH SURFACE **204.0110** SY	REMOVING ASPH SURFACE BUTT JOINT **204.0115** SY	REMOVING ASPH SURFACE MILLING **204.0120** SY	SAWING ASPHALTIC **690.0150** LF	REMARKS
28+56		ML LT & RT			111			
28+56	- 49+00	ML LT	2.50			4556		
28+56	- 54+00	ML RT	2.50			5667		
37+90		SR RT	1.75			200		LAKESHORE DR
39+60		PE RT		50			24	
41+43		PE RT		71			33	
49+00	- 77+72	ML LT	2.50			4837		
49+11		SR LT	1.75			202		RICHTER ST
53+96		SR LT	1.75			60		
66+08		PE LT		37			13	
54+00	- 74+89	ML RT	2.50			3497		
54+11		SR RT	1.75			37		22ND AVE
68+64		SR RT	1.75			212		22 1/4 AVE
72+09		SR RT	1.75			205		22 3/8 AVE
74+89	- 78+50	ML RT	2.50			802		
77+72	- 80+00	ML LT	2.50			756		
78+50	- 82+26	ML RT	2.50			921		
80+00	- 82+26	ML LT	2.50			502		
82+26	- 84+41	ML LT & RT	2.50			1051		
84+41	- 84+60	ML LT & RT	3.00			41		
85+26	- 85+46	ML LT & RT	3.00			41		
85+46	- 91+95	ML LT & RT	2.50			2223		
91+95	- 101+49	ML LT	2.50			2332		
91+95	- 105+41	ML RT	2.50			3290		
101+49	- 126+00	ML LT	2.00			4504		
101+70		SR LT	1.75			253		20 1/2 ST
104+66		PE LT		33			11	
121+52		SR LT	1.75			314		21ST ST
105+41	- 110+96	ML RT	2.50			90		
110+40		PE RT		71			28	
110+96	- 126+00	ML RT	2.00			3231		
112+46		PE RT		172			51	
115+17		SR RT	1.75			282		MONROE AVE
126+00	- 163+00	ML RT	2.00			6167		

REMOVING ASPHALTIC SURFACE SUMMARY (CONTINUED)

STATION	TO STATION	LOCATION	MILL DEPTH IN	REMOVING ASPH SURFACE **204.0110** SY	REMOVING ASPH SURFACE BUTT JOINT **204.0115** SY	REMOVING ASPH SURFACE MILLING **204.0120** SY	SAWING ASPHALTIC **690.0150** LF	REMARKS
163+00	- 170+62	ML RT	2.00			1506		
168+50	- 175+76	ML LT	2.00			1400		
170+63		SR LT	1.75			406		CTH M
170+62	- 177+50	ML RT	2.00			1146		
175+76		SR RT	1.75			377		CTH M
175+76	- 181+35	ML LT	2.00			1096		
177+50	- 227+00	ML RT	2.00			8250		
181+35	- 268+47	ML LT	2.00			14746		
204+17		PE LT		53			20	
205+47		PE LT		34			11	
207+19		PE LT		44			12	
207+88		PE LT		41			11	
210+39		PE LT		117			44	
230+05		SR LT	1.75			380		23RD ST
227+00	- 233+50	ML RT	2.00			1407		
229+99		SR RT	1.75			383		23RD ST
233+50	- 268+47	ML RT	2.00			5850		
268+47	- 281+69	ML LT & RT	2.00			6463		
271+95		SR RT	1.75			101		23 5/8 ST
272+00		SR LT	1.75			50		23 5/8 ST
274+95		PE LT		48			35	
281+69	- 283+00	ML LT & RT	2.00			582		
283+00	- 458+00	ML LT & RT	2.00			58333		
283+01		SR RT	1.75			262		24TH ST
283+07		SR LT	1.75			228		24TH ST
337+31		SR LT	1.75			176		25TH ST
337+33		SR RT	1.75			216		25TH ST
339+60		PE LT		52			20	
340+62		PE LT		56			28	
381+77		PE LT		127			41	
389+42		SR RT	1.75			235		26TH ST
389+44		SR LT	1.75			237		26TH ST
394+64		PE RT		66			15	
434+46		SR RT	1.75			225		23RD AVE
443+54		SR RT	1.75			411		CTH NN
458+00		ML LT & RT			83			
		TOTAL		**1072**	**194**	**157823**	**397**	

NOTE: ALL QUANTITIES ARE CATEGORY 0010 UNLESS SPECIFIED OTHERWISE.

PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS

STATION	TO	STATION	LOCATION	211.0400 STA
47+00	-	48+66	LT	2
47+20	-	49+67	RT	2
55+95	-	59+64	RT	4
83+42	-	84+60	LT	1
83+58	-	84+60	RT	1
85+46	-	91+05	LT	6
85+46	-	89+87	RT	5
166+00	-	169+42	LT	3
171+28	-	172+80	RT	2
172+00	-	172+92	LT	1
173+76	-	175+04	RT	1
173+93	-	175+50	LT	2
			TOTAL	**30**

ASPHALT CENTER LINE RUMBLE STRIP 2-LANE RURAL

STATION	TO	STATION	LOCATION	465.0475 LF
123+52	-	162+89	ML	3937
181+65	-	227+99	ML	4634
232+05	-	266+50	ML	3445
285+07	-	335+31	ML	5024
339+33	-	387+44	ML	4811
391+42	-	432+46	ML	4104
436+46	-	441+54	ML	508
445+54	-	458+00	ML	1246
			TOTAL	**27709**

CONCRETE PAVEMENT APPROACH SLAB

STATION	TO	STATION	LOCATION	415.0410 SY
172+64	-	172+85	ML	105
173+85	-	174+09	ML	119
			TOTAL	**224**

BEAM GUARD SUMMARY

STATION	TO	STATION	LOCATION	STEEL PLATE BG SHORT RAD. TERM. 614.0390 EACH	BEAM GUARD CLASS A 614.0305 LF	BEAM GUARD SHRT RAD 614.0345 LF	BEAM GUARD EAT 614.0370 EACH	MGS GUARDRAIL 3 614.2300 LF	MGS THRIE BEAM TRANS 614.2500 LF	MGS GRDRAIL 3 K 614.2330 LF	MGS GRDRAIL TERM EAT 614.2610 EACH
47+19	-	48+79	LT	1	87.5	37	1				
47+40	-	49+48	RT					113			2
56+66	-	58+94	RT					125			2
83+62	-	84+60	LT						40		1
83+78	-	84+60	RT						40		1
85+26	-	90+86	LT						40	450	1
85+26	-	89+70	RT						40	350	1
166+47	-	168+52	LT					113			2
172+00	-	172+92	LT						40		1
171+78	-	172+83	RT					13	40		1
173+75	-	174+75	RT					13	40		1
173+90	-	175+00	LT					13	40		1
			TOTAL	**1**	**87.5**	**37**	**1**	**388**	**320**	**800**	**14**

ANCILLARY CONCRETE SUMMARY

STATION	TO	STATION	LOCATION	C&G 30-INCH TYPE D 601.0411 LF	C&G 6-INCH TYPE J 601.0415 LF	C&G CURE AND SEAL SPV.0090.02 LF	CONC SDWALK 4-INCH 602.0405 SF	CURE AND SEAL CONC SIDEWALK SPV.0165.01 SF	CONC MEDIAN SLOPED NOSE 620.03 SF	REMARKS
74+89	-	82+27	RT		647	647				
77+72	-	79+79	LT		228	228				
79+24	-	79+84	RT		196	196				ISLAND
79+28			RT						17	
79+79			RT						35	
80+64			RT						24	
79+28	-	80+64	RT				1259	1259		ISLAND
171+28	-	172+91	LT	163		163				
			TOTAL	**163**	**1071**	**1234**	**1259**	**1259**	**76**	

NOTE: ALL QUANTITIES ARE CATEGORY 0010 UNLESS SPECIFIED OTHERWISE.

HMA PAVEMENT SUMMARY

STATION	TO STATION	LOCATION	DEPTH (IN)	AREA (SY)	TACK COAT **455.0605** GAL	HMA PAVT TYPE E-3 SPECIAL **SPV.0195.02** TON	ASPH SURF. DRIVE & FE'S **465.0120** TON	ASPH. SURF. PATCHING **465.0110** TON	CIR PAVT. PARTIAL DEPTH **SPV.0180.01** SY	REHEATING HMA PAVEMENT LONGT. JOINTS SPECIAL **SPV.0170.01** LF	ASPHALT STABILIZING AGENT **SPV.0195.01** TON	REMARKS
28+56		ML LT & RT	3.50	111	6	22						
28+56	- 47+19	ML LT	3.00	4153	208	698						
47+19	- 49+00	ML LT	3.00	402	20	68						
28+50	- 47+40	ML RT	3.00	4200	210	706				19		
47+40	- 49+48	ML RT	3.00	508	25	85				42		
49+48	- 54+00	ML RT	3.00	1004	50	169				5		
37+90		SR RT	1.75	200	5	20						LAKESHORE DR
39+60		PE RT	2.00	50	1		6					
41+43		PE RT	2.00	71	2		8					
49+00	- 77+72	ML LT	3.00	4962	248	834						
49+11		SR LT	1.75	167	4	16						RICHTER ST
53+96		SR LT	1.75	60	2	6						
66+08		PE LT	2.00	37	1		4					
54+00	- 56+66	ML RT	3.00	443	22	74				3		
56+66	- 58+94	ML RT	3.00	431	22	72				2		
58+94	- 74+89	ML RT	3.00	2658	133	447				16		
54+11		SR RT	1.75	37	1	4						22ND AVE/ LINDY ST
68+64		SR RT	1.75	212	5	21						22 1/4 AVE
72+09		SR RT	1.75	205	5	20						22 3/8 AVE
74+89	- 78+50	ML RT	3.00	802	40	135				4		
77+72	- 80+00	ML LT	3.00	756	38	127				1		
78+50	- 82+26	ML RT	3.00	921	46	155				5		
80+00	- 82+26	ML LT	3.00	502	25	84						
82+26	- 84+41	ML LT & RT	3.00	1091	55	183				2		
84+41	- 84+60	ML LT & RT	3.00	41	2	7						
85+26	- 85+46	ML LT & RT	3.00	41	2	7						
85+46	- 91+95	ML RT	3.00	1399	70	235				6		
85+46	- 91+95	ML LT	3.00	1502	75	252						
91+95	- 101+49	ML LT	3.00	2332	117	392				10		
91+95	- 105+41	ML RT	3.00	3290	165	553				26		
101+49	- 126+00	ML LT	3.00	4504	225	757				3		
101+70		SR LT	1.75	253	6	25						20 1/2 ST
104+66		PE LT	2.00	33	1		4					
121+52		SR LT	1.75	314	8	31						21ST ST
105+41	- 110+96	ML RT	3.00	90	5	15				6		
110+40		PE RT	2.00	71	2		8					
110+96	- 126+00	ML RT	3.00	3231	162	543				25		
112+46		PE RT	2.00	172	4		19					
115+17		SR RT	1.75	282	7	28						MONROE AVE
126+00	- 163+00	ML RT	2.00	6167	154	691		6167		38	26	

NOTE: ALL QUANTITIES ARE CATEGORY 0010 UNLESS SPECIFIED OTHERWISE.

HMA PAVEMENT SUMMARY (CONTINUED)

STATION	TO STATION	LOCATION	DEPTH (IN)	AREA (SY)	TACK COAT **455.0605** GAL	HMA PAVT TYPE E-3 SPECIAL **SPV.0195.02** TON	ASPH SURF. DRIVE & FE'S **465.0120** TON	ASPH. SURF. PATCHING **465.0110** TON	CIR PAVT. PARTIAL DEPTH **SPV.0180.01** SY	REHEATING HMA PAVEMENT LONGT. JOINTS SPECIAL **SPV.0170.01** LF	ASPHALT STABILIZING AGENT **SPV.0195.01** TON	REMARKS
126+00	- 166+47	ML LT	2.00	6745	169	755			6754		28	
166+47	- 168+52	ML LT	2.00	456	11	51			456		2	
163+00	- 170+62	ML RT	2.00	1506	38	169			1506	16	6	
168+52	- 175+76	ML LT	2.00	1440	36	161			1440	4	6	
170+63		SR LT	1.75	406	10	40						CTH M
170+62	- 177+50	ML RT	2.00	1215	30	136			1215	10	5	
175+76		SR RT	1.75	377	9	37						CTH M
175+76	- 181+35	ML LT	2.00	1096	27	123			1096	6	5	
177+50	- 227+00	ML RT	2.00	8250	206	924			8250	50	35	
181+35	- 268+47	ML LT	2.00	14746	369	1652			14746		62	
204+17		PE LT	2.00	53	1		6					
205+47		PE LT	2.00	34	1		4					
207+19		PE LT	2.00	44	1		5					
207+88		PE LT	2.00	41	1		5					
210+39		PE LT	2.00	117	3		13					
230+05		SR LT	1.75	380	10	37						23RD ST
227+00	- 233+50	ML RT	2.00	1407	35	158			1015	9	4	
229+99		SR RT	1.75	383	10	38						23RD ST
233+50	- 268+47	ML RT	2.00	5850	146	655			5850	35	25	
268+47	- 281+69	ML LT & RT	2.00	6463	162	724			3525	39	15	
271+95		SR RT	1.75	101	3	10						23 5/8 ST
272+00		SR LT	1.75	50	1	5						23 5/8 ST
274+95		PE LT	2.00	48	1		5					
281+69	- 283+00	ML LT & RT	2.00	582	15	65			582	1	2	
283+00	- 458+00	ML LT & RT	2.00	58333	1458	6533			58333	175	245	
283+01		SR RT	1.75	262	7	26						24TH ST
283+07		SR LT	1.75	228	6	22						24TH ST
337+31		SR LT	1.75	176	4	17						25TH ST
337+33		SR RT	1.75	216	5	21						25TH ST
339+60		PE LT	2.00	52	1		6					
340+62		PE LT	2.00	56	1		6					
379+70		PE RT	2.00	52	1		6					
381+77		PE LT	2.00	127	3		14					
389+42		SR RT	1.75	235	6	23						26TH ST
389+44		SR LT	1.75	237	6	23						26TH ST
394+64		PE RT	2.00	66	2		7					
434+46		SR RT	1.75	225	6	22						23RD AVE
443+54		SR RT	1.8	411	10	40						CTH NN
458+00		ML LT & RT	3.50	83	4	16						
*UNDISTRIBUTED								1500				
TOTAL					**4993**	**19962**	**126**	**1500**	**110935**	**558**	**466**	

* WEDGING, PROFILE ADJUSTMENTS, AND SPOT REPAIR.

NOTE: ALL QUANTITIES ARE CATEGORY 0010 UNLESS SPECIFIED OTHERWISE.

CULVERT SUMMARY

STATION	TO STATION	LOCATION	REM PIPE CULV SMALL 203.0100 EACH	REM INLETS 204.0220 EACH	RCCP CL III 48-INCH 522.0148 LF	AEW RCCP 48-INCH 522.1048 EACH	CPCS 18-INCH 521.012 LF	AEW CPCS 18-INCH 521.102 EACH	STORM SWR III 12-INCH 608.0312 LF	INLET COVER HM-GJ 611.0630 EACH	CATCH BASIN 4-FT DIA 611.1004 EACH	MARKERS CULVERT END 633.5200 EACH	CURE-IN-PLACE LINING SPV.0090.01 LF	REMARKS
33+70		ML										2		EXIST 126"X96' STRUCTURAL PLATE PIPE
48+40		ML										2		EXIST 132"X70' STRUCTURAL PLATE PIPE ARCH
58+10		ML										2		EXIST 130"X78' STRUCTURAL PLATE PIPE ARCH
79+60		LT		1										
80+58	80+76								27	3	1			
111+50		ML										2		EXIST 48"X102' CSCP
123+20		ML										2		EXIST 24"X74' CSCP
147+10		ML										2	106	EXIST 60"X106' CSCP
167+50		ML										2		EXIST BOX CULVERT
169+03		RT					36	2						
169+49		RT					38	2						
186+10		ML										2	80	EXIST 24"X80' CSCP
200+80		ML										2		EXIST 18"X68' CMCP
217+60		ML	1		70	2						2	70	EXIST 48"X70' CSCP
227+50		ML										2	70	EXIST 24"X70' CSCP
235+60		ML										2	94	EXIST 24"X94' CSCP
247+40		ML										2	94	EXIST 42"X94' CSCP
283+60		ML										2	118	EXIST 36"X118' CMCP
314+70		ML										2	104	EXIST 24"X104' CSCP
327+50		ML										2	76	EXIST 24"X76' CMCP
350+25		ML										2	88	EXIST 24"X88' CSCP
360+25		ML										2		EXIST 72"X64' CMCP - CATTLE PASS
362+00		ML										2		EXIST 24"X90' CSCP
383+50		ML										2	70	EXIST 24"X70' CSCP
388+95		ML										2	52	EXIST 24"X52' CSCP
390+00		ML										2	58	EXIST 24"X58' CSCP
397+75		ML										2	88	EXIST 30"X88' CSCP
321+50		ML										2	76	EXIST 24"X76' CSCP
441+50		ML										2	82	EXIST 24"X82' CSCP
		TOTAL	**1**	**1**	**70**	**2**	**74**	**4**	**27**	**3**	**1**	**50**	**1326**	

PAVEMENT MARKING SUMMARY

STATION	TO	STATION	LOCATION	PM EPOXY 4-INCH 646.0106 LF	PM EPOXY 8-INCH 646.0126 LF	PM SAME DAY EPOXY 4-INCH 646.0406 LF	TEMP PM SAME DAY EPOXY 4-INCH SPV.0090.03 LF	REM PAVT MARKING 646.0600 LF	PM ARROWS EPOXY TYP 2 647.0166 EACH	PM WORDS EPOXY 647.0356 EACH	PM STOP LINE EPOXY 18-INCH 647.0566 LF	PM ISLAND NOSE EPOXY 647.0606 EACH	PM DIAGONAL EPOXY 12-INCH 647.0726 LF	LOC NO-PASSING ZONES 648.0100 MI	TEMP PM REF PAINT 4-INCH 649.0200 LF	REMARKS
28+56	-	458+00	ML RT LT	80488										8.1		WHITE EDGELINE
28+56	-	123+52	ML RT LT			64416										YELLOW CENTERLINE
73+86	-	79+30	RT	70					2	2						WHITE TAPER
73+86	-	79+30	RT		266											WHITE CHANNELIZING
79+76			RT								11					
86+00	-	163+00	ML RT LT		227											WHITE CHANNELIZING
123+52	-	458+00	ML	49800			49800									YELLOW CENTERLINE
163+00	-	182+00	ML RT LT		400				2	2		2	259			
167+00	-	179+00	ML												2400	
172+85	-	173+85	ML					450								BRIDGE ONLY
25+28	-	26+00	SR LT	144							38					CTH M NORTH
29+15	-	29+75	SR RT	120							32					CTH M SOUTH
228+00	-	229+00	ML RT LT		100											WHITE CHANNELIZING
28+56	-	126+00	ML												29232	MILLED SURFACE & LOWER HMA
126+00	-	458+00	ML												49800	CIR SURFACE
			TOTAL	**130622**	**993**	**64416**	**49800**	**450**	**4**	**4**	**81**	**2**	**259**	**8.1**	**81432**	

NOTE: ALL QUANTITIES ARE CATEGORY 0010 UNLESS SPECIFIED OTHERWISE.

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EROSION CONTROL SUMMARY

STATION	TO	STATION	LOCATION	EROSION BALES 628.1104 EACH	SILT FENCE 628.1504 LF	SILT FENCE MAINTENANCE 628.1520 LF
85+50	-	87+00	LT		170	170
172+00	-	172+80	RT		85	85
172+50			RT	1		
174+00	-	176+50	LT		245	245
			TOTAL	**1**	**500**	**500**

RIPRAP & GEO. FABRIC

STATION	TO	STATION	LOCATION	RIPRAP HEAVY 606.0300 CY	GEOTEXTILE FAB TYP HR 645.0120 SY
85+50	-	87+00	LT	123	184
			TOTAL	**123**	**184**

GARDENING SUMMARY

STATION	TO	STATION	LOCATION	SALVAGED TOPSOIL 625.0500 SY	MULCHING 627.0200 SY	FERTILIZER TYPE A 629.0205 CWT	SEEDING MIX NO. 20 630.0120 LB	SEEDING TEMPORARY 630.0200 LB
74+89	-	82+27	RT	277	277	0.17	7.5	3.7
163+00	-	172+68	RT	1158	1696	1.07	45.8	22.9
171+28	-	172+91	LT	72	72	0.05	2.0	1.0
174+03	-	181+90	LT	459	896	0.56	24.2	12.1
217+66			ML	52	52	0.03	1.4	0.7
			TOTAL	**2018**	**2993**	**1.88**	**80.9**	**40.4**

TRAFFIC CONTROL

STATION	TO	STATION	LOCATION	TC DRUMS 643.0300 DAY	TC BARR TYPE III 643.0420 DAY	TC WRNG LIGHTS TYPE A 643.0705 DAY	TC WRNG LIGHTS TYPE C 643.0715 DAY	TC SIGNS 643.0900 DAY	REMARKS
166+50	-	179+00	ML	810	100	160	140	260	
28+56	-	458+00	ML	12705					
			ML					40	MAX LANE WIDTH: KNAPP ST
78+73			ML					40	AX LANE WIDTH: 22 1/2 AVE
446+00			ML					40	MAX LANE WIDTH: CTH NN
37+90			SR RT					85	LAKESHORE DR
49+11			SR LT					85	RICHTER ST
54+00			SR RT & LT					170	22ND AVE/ LINDY ST
68+64			SR RT					85	22 1/4 AVE
72+09			SR RT					85	22 3/8 AVE
101+70			SR LT					85	20 1/2 ST
115+17			SR RT					85	MONROE AVE
121+52			SR LT					85	21ST ST
170+63			SR LT					85	CTH M
175+76			SR RT					85	CTH M
230+00			SR RT & LT					170	23RD ST
272+00			SR RT & LT					170	23 5/8 ST
283+00			SR RT & LT					170	24TH ST
337+75			SR RT & LT					170	25TH ST
389+50			SR RT & LT					170	26TH ST
434+46			SR RT					85	23RD AVE
443+54			SR RT					85	CTH NN
458+00			ML					85	
			TOTAL	**13515**	**100**	**160**	**140**	**2420**	

CONSTRUCTION STAKING SUMMARY

STATION	TO	STATION	LOCATION	CON STAKE STORM SEWER 650.4000 EACH	CON STAKE SUBGRADE 650.4500 LF	CON STAKE BASE 650.5000 LF	CON STAKE CG AND C&G 650.5500 LF	CON STAKE PIPE CULV 650.6000 EACH	CON STAKE STCT LAYOUT 650.6500 LS	CON STAKE RESURF REF 650.8000 LF	CON STAKE SLOPE STAKES 650.9920 LF	REMARKS
79+59			LT	1								23.5' LT
80+58			RT	1								15.5' RT
80+64			RT	1								22.5' RT
80+75			RT	1								37' RT
163+50	-	172+85	ML		935	935					935	
174+09	-	181+50	ML		741	741					741	
74+89	-	82+27	RT				647					
77+72	-	79+79	LT				228					
79+24	-	79+84	RT				196					
171+28	-	172+91	LT				163					
217+60			ML					1				
167+50			RT						1			CULVERT EXTENSION
28+50	-	163+50	ML							13500		
181+50	-	458+00	ML							27650		
			TOTAL	**4**	**1676**	**1676**	**1234**	**1**	**1**	**41150**	**1676**	

NOTE: ALL QUANTITIES ARE CATEGORY 0010 UNLESS SPECIFIED OTHERWISE.

PERMANENT SIGNING SUMMARY

NOTE: ALL QUANTITIES ARE CATEGORY 0010 UNLESS SPECIFIED OTHERWISE.

STATION	LOC.	REM. SIGNS TYPE II **638.2602** EACH	REM. SMALL SIGN SUPPORTS **638.3000** EACH	MOVING SIGNS TYPE II **638.2102** EACH	POSTS WOOD 4X6 X 16-FT **634.0616** EACH	SIGNS TYPE II REFL. F **637.2230** SF	SIGNS TYPE II REFL. H **637.2210** SF	SIGN CODE	MESSAGE	SIZE	REMARKS
29+50	RT	1	1		1		5.00	R2-1	SPEED LIMIT 45	24" X 30"	
35+50	LT	1	1		1	9.00		W3-5	RED. SPEED AHD. 35MPH	36" X 36"	
38+25	SR RT	1	1		1		5.18	R1-1	STOP	30" X 30"	LAKESHORE DR
39+75	RT	1	1		1	6.00		W14-3	NO PASSING ZONE	48" X 36"	
43+00	RT	1	1		1		5.00	R2-1	SPEED LIMIT 45	24" X 30"	
45+00	LT	1	1		1		5.00	R2-1	SPEED LIMIT 45	24" X 30"	
48+75	SR LT	1	1		1		5.18	R1-1	STOP	30" X 30"	RICHTER ST
53+75	LT	1	1		1		5.18	R1-1	STOP	30" X 30"	
54+50	SR RT	1	1		1		5.18	R1-1	STOP	30' X 30"	22ND AVE/ LINDY ST
54+75	RT			1	1			I55-56	ADOPT A HIGHWAY	30" X 36"	REUSE EXISTING SIGN
55+00	LT	1	2		2		10.00	I2-3	RICE LAKE POPULATION	60" X 24"	
55+00	LT	1	2					I2-3	RICE LAKE-SISTER CITIES	60" X 24"	RETURN TO RICE LAKE
59+50	RT	1	1		1		5.00	R2-1	SPEED LIMIT 45	24" X 30"	
69+00	SR RT	1	1		1		5.18	R1-1	STOP	30" X 30"	22 1/4 AVE
70+20	LT	1	1		1		5.00	R2-1	SPEED LIMIT 45	24" X 30"	
70+50	RT	1	1		1	9.00		W3-5	(STOP AHEAD)	36" X 36"	
72+50	SR RT	1	1		1		5.18	R1-1	STOP	30" X 30"	22 3/8 AVE
72+75	LT & RT	4	2		2	18.00		W1-1R	(ADV ARROW RT)	36" X 36"	
						8.00		W13-1	10 MPH	24" X 24"	
73+00	LT	1	1		1	6.00		W14-3	NO PASSING ZONE	48" X 36"	
73+75	RT	3	1		1		9.50	J2-1	EAST STH48 (RT ARROW)	24" X 57"	
77+00	RT	1	1		1		3.00	R7-1D	NO PARKING ANY TIME	18" X 24"	
78+00	LT				1		6.00	J4-1	WEST STH48	24" X 36"	
78+50	RT	1	1		1		3.00	R7-1D	NO PARKING ANY TIME	18" X 24"	
79+50	RT	1	1		1	4.00		W12-1D		24" X 24"	
79+50	LT	1	1		1		3.00	R7-1D	NO PARKING ANY TIME	18" X 24"	
79+75	SR LT	1	1		1		5.18	R1-1	STOP	30" X 30"	22 1/2 AVE
							2.50	W4-4-B	ONCOMING TRAFFIC DOES NOT STOP	30" X 12"	22 1/2 AVE
79+75	RT	1	1		1		5.18	R1-1	STOP	30" X 30"	
							2.50	W4-4-AR	TRAFFIC FROM RIGHT DOES NOT STO	30" X 12"	
80+25	LT	1	1		1		3.00	R7-1D	NO PARKING ANY TIME	18" X 24"	
80+25	LT	3	1		1		9.50	J3-1	EAST STH48 (LT ARROW)	24" X 57"	
80+50	RT	1	1		1		5.00	R4-7		24" X 30"	
80+75	RT	1	1		1		7.75	R1-2	YIELD	36" X 31"	
81+00	LT	1	1		1		3.00	R7-1D	NO PARKING ANY TIME	18" X 24"	
81+50	RT	2	1		1		6.00	J4-1	EAST STH48	24" X 36"	
82+00	LT	1	1		1		3.00	R7-1D	NO PARKING ANY TIME	18" X 24"	
83+00	LT				1		9.50	J3-1	EAST STH48 (ADV LT ARROW)	24" X 57"	
84+00	RT	1	1		1		5.00	R2-1	SPEED LIMIT 45	24" X 30"	
87+50	LT & RT	4	2		2	18.00		W1-1L	(ADV ARROW LT)	36" X 36"	
						8.00		W13-1	10 MPH	24" X 24"	
91+75	LT	1	1		1		3.00	R7-1R	NO PARKIGN ANY TIME	18" X 24"	
92+00	RT	1	1		1	9.00		S3-1	(SCHOOL BUS STOP AHD)	36" X 36"	
92+25	RT	1	1		1		3.00	R7-1L	NO PARKING ANY TIME	18" X 24"	
92+50	LT	1	1		1		5.00	R2-1	SPEED LIMIT 45	24" X 30"	
93+75	RT	1	1		1		3.00	R7-1D	NO PARKING ANY TIME	18" X 24"	
93+75	LT	1	1		1		3.00	R7-1D	NO PARKING ANY TIME	18" X 24"	
95+25	RT	1	1		1		5.00	R2-1	SPEED LIMIT 45	24" X 30"	
95+75	RT	1	1		1		3.00	R7-1D	NO PARKING ANY TIME	18" X 24"	
96+75	LT	1	1		1		3.00	R7-1D	NO PARKING ANY TIME	18" X 24"	
97+50	LT	1	1		1		3.00	R7-1D	NO PARKING ANY TIME	18" X 24"	
97+75	SR LT	1	1		1		5.18	R1-1	STOP	30" X 30"	20 7/16 ST
97+75	RT	1	1		1		3.00	R7-1D	NO PARKING ANY TIME	18" X 24"	
99+50	LT	1	1		1		3.00	R7-1D	NO PARKING ANY TIME	18" X 24"	
100+50	RT	1	1		1		3.00	R7-1D	NO PARKING ANY TIME	18" X 24"	

PERMANENT SIGNING SUMMARY (CONTINUED)

STATION	LOC.	REM. SIGNS TYPE II **638.2602** EACH	REM. SMALL SIGN SUPPORTS **638.3000** EACH	MOVING SIGNS TYPE II **638.2102** EACH	POSTS WOOD 4X6 X 16-FT **634.0616** EACH	SIGNS TYPE II REFL. F **637.2230** SF	SIGNS TYPE II REFL. H **637.2210** SF	SIGN CODE	MESSAGE	SIZE	REMARKS
101+25	LT	1	1		1		3.00	R7-1L	NO PARKING ANY TIME	18" X 24"	
101+25	SR LT	1	1		1		5.18	R1-1	STOP	30" X 30"	20 1/2 ST
103+50	RT	1	1		1		3.00	R7-1D	NO PARKING ANY TIME	18" X 24"	
103+75	LT	1	1		1		5.00	R2-1	SPEED LIMIT 45	24" X 30"	
105+50	RT	1	1		1		3.00	R7-1R	NO PARKIGN ANY TIME	18" X 24"	
112+00	RT	1	1		1	6.00		W14-3	NO PASSING ZONE	48" X 36"	
114+50	RT	1	1		1		15.00	D7-68R	HIAWATHA CITY PARK	60" X 36"	
115+00	LT	1	1		1		5.00	R2-1	SPEED LIMIT 45	24" X 30"	
115+75	SR RT	1	1		1		5.18	R1-1	STOP	30" X 30"	MONROE AVE/ 21ST ST
116+00	RT	1	1		1		5.00	R2-1	SPEED LIMIT 55	24" X 30"	
116+00	LT	1	1		1		15.00	D7-68L	HIAWATHA CITY PARK	60" X 36"	
121+00	SR LT	1	1		1		5.18	R1-1	STOP	30" X 30"	21ST ST
123+50	LT	1	1		1	9.00		W3-5	RED. SPEED AHD. 45MPH	36" X 36"	
158+00	LT	1	1		1	6.00		W14-3	NO PASSING ZONE	48" X 36"	
163+50	RT	2	1		1		6.50	J1-1	JCT CTH M	24" X 39"	
168+00	LT				1		6.00	J4-1	WEST STH48	24" X 36"	
170+25	SR LT	1	1		1		7.46	R1-1	STOP	36" X 36"	CTH M
					1		15.00	J13-2	STH 48 (RT & LT ARROW) & CTH M (LT ARROW)	48" X 45"	CTH M
170+50	RT	2	1		1		7.50	J13-1	CTH M (LT/AHD ARROW)	24" X 45"	
170+50	RT	2	2		2	8.00		W1-7	(NIGHT ARROW DOUBLE)	48" X 24"	
171+00	SR LT	1	1		1		7.46	R1-1	STOP	36" X 36"	CTH M
171+50	LT	2	1		1		7.50	J13-1	CTH M (RIGHT ARROW)	24" X 45"	
172+75	RT	1	1		1	3.00		W5-52R		12" X 36"	BRIDGE MARKER
172+75	LT	1	1		1	3.00		W5-52L		12" X 36"	BRIDGE MARKER
174+00	RT	1	1		1	3.00		W5-52R		12" X 36"	BRIDGE MARKER
174+00	LT	1	1		1	3.00		W5-52L		12" X 36"	BRIDGE MARKER
175+00	LT			1	1			I55-56	ADOPT A HIGHWAY	30" X 36"	REUSE EXISTING SIGN
175+00	RT	2	1		1		7.50	J13-1	CTH M (RIGHT ARROW)	24" X 45"	
176+00	LT	2	1		1		7.50	J13-1	CTH M (LT/AHD ARROW)	24" X 45"	
176+25	SR RT	1	1		1		7.46	R1-1	STOP	36" X 36"	CTH M
					1		15.00	J13-2	STH 48 (RT & LT ARROW) & CTH (LT ARROW)	48" X 45"	CTH M
176+50	RT			1	1			I55-56	ADOPT A HIGHWAY	30" X 36"	REUSE EXISTING SIGN
178+00	RT				1		6.00	J4-1	EAST STH 48	24" X 36"	
186+00	LT	2	1		1		6.50	J1-1	JCT CTH M	24" X 39"	
198+25	RT	1	1		1	6.00		W14-3	NO PASSING ZONE	48" X 36"	
201+00	RT	1	1		1		15.00	D5-63	HISTORICAL MARKER 1/2 MILE	60" X 36"	
221+00	LT	1	1		1	6.00		W14-3	NO PASSING ZONE	48" X 36"	
229+00	RT	1	1		1		15.00	D5-64R	HISTORICAL MARKER	60" X 36"	
229+75	SR LT	1	1		1		5.18	R1-1	STOP	30" X 30"	23RD ST (SOUTH)
230+25	SR RT	1	1		1		5.18	R1-1	STOP	30" X 30"	23RD ST (NORTH)
231+00	LT	1	1		1		15.00	D5-64L	HISTORICAL MARKER	60" X 36"	
239+00	RT	1	1		1	6.00		W14-3	NO PASSING ZONE	48" X 36"	
256+50	LT	1	1		1		15.00	D5-63	HISTORICAL MARKER 1/2 MILE	60" X 36"	
257+50	RT	1	1		1	9.00		W3-5	RED. SPEED AHD. 40MPH	36" X 36"	
264+00							6.00	J4-1	WEST STH48	24" X 36"	
266+00	RT	1	1						CAMPIA UNINCORPORATED	54" X 24"	REMOVE ONLY
266+50	RT	1	1		1		5.00	R2-1	SPEED LIMIT 40	24" X 30"	
266+50	LT	1	1		1		5.00	R2-1	SPEED LIMIT 55	24" X 30"	

NOTE: ALL QUANTITIES ARE CATEGORY 0010 UNLESS SPECIFIED OTHERWISE.

PERMANENT SIGNING SUMMARY (CONTINUED)

STATION	LOC.	REM. SIGNS TYPE II 638.2602 EACH	REM. SMALL SIGN SUPPORTS 638.3000 EACH	MOVING SIGNS TYPE II 638.2102 EACH	POSTS WOOD 4X6 X 16-FT 634.0616 EACH	SIGNS TYPE II REFL. F 637.2230 SF	SIGNS TYPE II REFL. H 637.2210 SF	SIGN CODE	MESSAGE	SIZE	REMARKS
266+50	LT	2	1						WEST STH48	24" X 36"	REMOVE ONLY
268+50	RT	1	1		1		3.00	R7-1L	NO PARKING ANY TIME	18" X 24"	
268+50	LT	1	1		1		3.00	R7-1R	NO PARKING ANY TIME	18" X 24"	
271+50	RT	1	1		1		3.00	R7-1D	NO PARKING ANY TIME	18" X 24"	
271+50	LT	1	1		1		3.00	R7-1D	NO PARKING ANY TIME	18" X 24"	
271+75	SR RT	1	1		1		5.18	R1-1	STOP	30" X 30"	23 5/8 ST (SOUTH)
271+75	SR LT	1	1		1		5.18	R1-1	STOP	30" X 30"	23 5/8 ST (NORTH)
273+00	RT	1	1		1		3.00	R7-1D	NO PARKING ANY TIME	18" X 24"	
274+50	LT	1	1		1		3.00	R7-1L	NO PARKING ANY TIME	18" X 24"	
275+00	RT	1	1		1		5.00	R2-1	SPEED LIMIT 40	24" X 30"	
275+25	LT	1	1		1		5.00	R2-1	SPEED LIMIT 40	24" X 30"	
276+00	RT	1	1		1		3.00	R7-1D	NO PARKING ANY TIME	18" X 24"	
277+00	LT	1	1		1		3.00	R7-1D	NO PARKING ANY TIME	18" X 24"	
279+00	LT	1	1		1		3.00	R7-1D	NO PARKING ANY TIME	18" X 24"	
279+50	RT	1	1		1		3.00	R7-1D	NO PARKING ANY TIME	18" X 24"	
281+00	RT	1	1		1		3.00	R7-1R	NO PARKING ANY TIME	18" X 24"	
282+00	RT	1	1		1		5.00	R2-1	SPEED LIMIT 55	24" X 30"	
281+00	LT	1	1		1		3.00	R7-1L	NO PARKING ANY TIME	18" X 24"	
282+00	LT	1	1		1		5.00	R2-1	SPEED LIMIT 40	24" X 30"	
282+75	SR LT	1	1		1		5.18	R1-1	STOP	30" X 30"	24TH ST (NORTH)
283+25	SR RT	1	1		1		5.18	R1-1	STOP	30" X 30"	24TH ST (SOUTH)
284+50	RT	2	1						WEST STH48	24" X 36"	REMOVE ONLY
284+50	RT			1	1			I55-56	ADOPT A HIGHWAY	30" X 36"	REUSE EXISTING SIGN
285+50	LT	1	1						CAMPIA UNINCORPORATED	54" X 24"	REMOVE ONLY
287+50							6.00	J4-1	WEST STH48	24" X 36"	
289+00	LT	1	1		1	9.00		W3-5	RED. SPEED AHD. 40MPH	36" X 36"	
337+00	SR LT	1	1		1		5.18	R1-1	STOP	30" X 30"	25TH ST (NORTH)
337+75	SR RT	1	1		1		5.18	R1-1	STOP	30" X 30"	25TH ST (SOUTH)
388+25	LT			1	1			I55-56	ADOPT A HIGHWAY	30" X 36"	REUSE EXISTING SIGN
389+25	SR LT	1	1		1		5.18	R1-1	STOP	30" X 30"	26TH ST (NORTH)
389+75	SR RT	1	1		1		5.18	R1-1	STOP	30" X 30"	26TH ST (SOUTH)
390+50	RT			1	1			I55-56	ADOPT A HIGHWAY	30" X 36"	REUSE EXISTING SIGN
426+00	RT	1	1		1	6.25		W1-2L	(LEFT CURVE ARROW)	30" X 30"	
426+00	LT	1	1		1	6.00		W14-3	NO PASSING ZONE	48" X 36"	
432+50	RT	1	1		1	8.00		W1-6	(LEFT ARROW)	48" X 24"	
434+75	SR RT	1	1		1		5.18	R1-1	STOP	30" X 30"	23RD AVE
435+25	RT	2	1		1		6.50	J1-1	JCT CTH NN	24" X 39"	
442+75	LT	2	1		1		6.00	J4-1	WEST STH48	24" X 36"	
443+00	RT	2	1		1		7.50	J13-1	CTH NN (RIGHT ARROW)	24" X 45"	
443+75	SR RT	1	1		1		5.18	R1-1	STOP	30" X 30"	CTH NN
444+00	LT	2	1		1		7.50	J13-1	CTH NN (LEFT ARROW)	24" X 45"	
445+00	RT	2	1		1		6.00	J4-1	EAST STH48	24" X 36"	
445+50	RT	1	1		1	8.00		W1-6	(RIGHT ARROW)	48" X 24"	
452+25	LT	2	1		1		6.50	J1-1	JCT CTH NN	24" X 39"	
453+00	LT	1	1		1	6.25		W1-2R	(RIGHT CURVE ARROW)	30" X 30"	
455+50	RT	1	1		1	6.00		W14-3	NO PASSING ZONE	48" X 36"	
	TOTAL	**157**	**136**	**6**	**142**	**213**	**620**				

NOTES: STATIONING SHOWN FOR ALL SIGNS IS APPROXIMATE.
LAYOUT AND ACTUAL PLACEMENT SHALL BE DONE BY THE CONTRACTOR IN ACCORDANCE WITH THE MUTCD.

NOTE: ALL QUANTITIES ARE CATEGORY 0010 UNLESS SPECIFIED OTHERWISE.

BEGIN PROJECT 8570-03-70
STA. 28+56.32
Y = 139660.249
X = 333947.419

NORTH ST

STA. 33+69
126"x96' STRUCTURAL PLATE PIPE
TO REMAIN AS IS

SPEED LIMIT 35
W3-5
36" X 36"

SPEED LIMIT 45
R2-1
24" X 30"

PI 27+99.71

LAKESHORE DR

STA. 40+36
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

STA. 43+36 & 43+74
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

SPEED LIMIT 45
R2-1
24" X 30"

STA. 47+19

STOP
R1-1
30" X 30"

RICHTER ST

STA. 49+11
MAINTAIN ASPHALTIC TN RD INTERSECTION LT
SEE SIDE ROAD DETAIL

STA. 50+24 & 50+86
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

STA. 51+58 & 52+30
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

N 1°11'37.47" E

STOP
R1-1
30" X 30"

STA. 39+60
MAINTAIN ASPHALTIC P.E. RT
SEE ENTRANCE DETAIL

NO PASSING ZONE
W14-3
48" X 36"

STA. 41+43
MAINTAIN ASPHALTIC P.E. RT
SEE ENTRANCE DETAIL

SPEED LIMIT 45
R2-1
24" X 30"

STA. 47+40

STA. 48+35
132"x70' STRUCTURAL PLATE PIPE ARCH
TO REMAIN AS IS

STA. 49+48

STA. 91+90
MAINTAIN ASPHALTIC TN RD INTERSECTION RT
SEE SIDE ROAD DETAIL

PROJECT NO: 8570-03-70	HWY: STH 48	COUNTY: BARRON	PLAN	SHEET 30	E

FILE NAME : N:\PDS\Design\Projects\85700301(70)_48_active design_Barron\Dgn files\050101_pp.dgn
PLOT DATE : 19-MAY-2014 14:21 PLOT BY : dotk4b PLOT NAME : PLOT SCALE : 100:1

STA. 53+96
MAINTAIN ASPHALTIC TN RD INTERSECTION LT
SEE SIDE ROAD DETAIL

RICE LAKE
POPULATION 8,438

STOP
R1-1
30" X 30"

I2-3
66" X 24"

PI 54+09.01

STA. 56+57
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

STA. 58+82
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

STA. 64+11
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

STA. 66+08
MAINTAIN ASPHALTIC P.E. LT
SEE ENTRANCE DETAIL

54+00 56+00 58+00 60+00 62+00 64+00 66+00 68+0

N 1°07'52.06" E

STH 48

N 1°07'52.06" E

STOP
R1-1
30" X 30"

I55-56
30" X 36"

22nd AVE / LINDY ST

81+00

82+00

STA. 54+11
MAINTAIN ASPHALTIC TN RD INTERSECTION RT
SEE SIDE ROAD DETAIL

STA 56+66

STA. 58+08
130"X78" STRUCTUAL PLATE PIPE ARCH
TO REMAIN AS IS

STA 58+94

SPEED LIMIT 45
R2-1
24" X 30"

CP7
Y = 334054.05
X = 142657.67
Z = 1129.340
REBAR
STA. = 58+55.26
OFF. = 44.65'

STA. 64+95
MAINTAIN AGGREGATE P.E. RT
SEE ENTRANCE DETAIL

5

5

NOTE: NO PASSING ZONE SIGNS AND POSTS TO BE INSTALLED AFTER SPOTTING IS COMPLETED. THE NUMBER AND LOCATION TO BE DETETMINED BY THE ENGINEER.

STA. 72+35
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

W1-1R
36" X 36"

NO PARKING ANY TIME
R7-1D
18" X 24"
①

WEST 48
J4-1
24" X 36"

STOP
R1-1
30" X 30"
ONCOMING TRAFFIC DOES NOT STOP
W4-4B
30" X 12"

STOP
R1-1
30" X 30"
TRAFFIC FROM RIGHT DOES NOT STOP
W4-4AR
42" X 15"

STA. 77+72

W12-1D
24" X 24"

STA. 68+77
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

SPEED LIMIT 45
R2-1
24" X 30"

10 M.P.H.
W13-1
24" X 24"

NO PASSING ZONE
W14-3
48" X 36"

REPLACE EXISTING C&G
CONCRETE C&G 6-INCH SLOPED, 30-INCH TYPE J REQ'D

PI 79+99.60

WEST 48
J3-1
24" X 57"

68+00 70+00 72+00 74+00 76+00 78+00

N 1°07'52.06" E

STH 48

STOP
R1-1
30" X 30"

W3-1
36" X 36"

22/4AVE

76+00

77+00

STA. 68+64
MAINTAIN ASPHALTIC TN RD INTERSECTION RT
SEE SIDE ROAD DETAIL

STA. 72+09
MAINTAIN ASPHALTIC TN RD INTERSECTION RT
SEE SIDE ROAD DETAIL

22 3/4AVE / RIDGE ST

71+00

72+00

STOP
R1-1
30" X 30"

EAST 48
J2-1
24" X 57"

STA 74+89

STA. 75+95 & 77+88
MAINTAIN ASPHALTIC P.E. RT
SAW CUT REQUIRED
SEE ENTRANCE DETAILS

R4-7
24" X 30"

YIELD
R1-2
36" X 31"

EAST 48
J4-1
24" X 36"

S 87°42'44.37" E

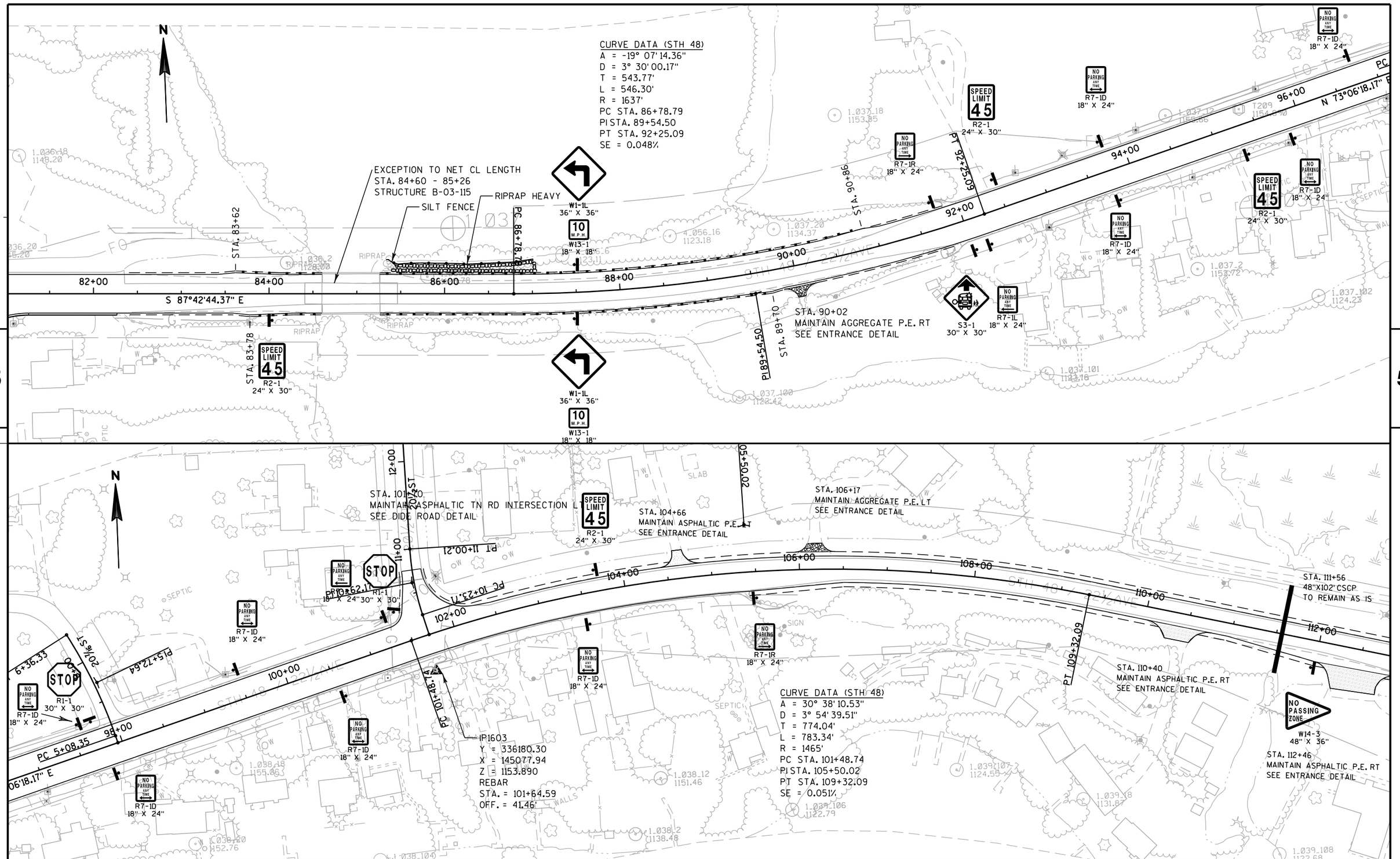
80+00

82+00

EXISTING C&G TO REMAIN

SEE DETAIL SHEET

PROJECT NO: 8570-03-70	HWY: STH 48	COUNTY: BARRON	PLAN	SHEET 31 E



PROJECT NO: 8570-03-70	HWY: STH 48	COUNTY: BARRON	PLAN	SHEET 32	E

FILE NAME : N:\PDS\Design\Projects\85700301(70)_48_active design_Barron\Dgn files\050103_pp.dgn PLOT DATE : 19-MAY-2014 14:22 PLOT BY : dotk4b PLOT NAME : PLOT SCALE : 100:1

STA. 121+52
MAINTAIN ASPHALTIC TN RD INTERSECTION LT
SEE SIDE ROAD DETAIL

IP1600
Y = 338078.75
X = 144936.38
Z = 1144.894
REBAR
STA. = 120+97.69
OFF. = -81.07

IP1601
Y = 338162.27
X = 144916.03
Z = 1143.950
REBAR
STA. = 121+83.65
OFF. = -81.14

CURVE DATA (STH 48)
A = -16° 06' 05.36"
D = 1° 59' 59.47"
T = 802.49'
L = 805.13'
R = 2865'
PC STA. 122+64.07
PI STA. 126+69.31
PT STA. 130+69.20
SE = 0.045%

SPEED LIMIT 45
R2-1
24" X 30"

HIAWATHA CITY Park
D7-68L
60" X 36"

STOP
R1-1
30" X 30"

SPEED LIMIT 45
W3-5
36" X 36"

PC 122+64.07

PI 126+69.31

114+00 116+00 118+00 120+00 122+00 124+00 126+00

STH 48 / 22½ AVE

S 76°15'31.30" E

PI 14+62.83

21ST ST

HIAWATHA CITY Park
D7-68R
60" X 36"

PC 14+29.16

STOP
R1-1
30" X 30"

SPEED LIMIT 55
R2-1
24" X 30"

14+00

MONROE AVE

STA. 115+17
MAINTAIN ASPHALTIC TN RD INTERSECTION RT
SEE SIDE ROAD DETAIL

STA. 123+17
24"X74' CSCP
TO REMAIN AS IS

CP10
Y = 338089.54
X = 144754.67
Z = 1151.034
REBAR
STA. = 121+51.34
OFF. = 92.87

PT 130+69.20

STA. 132+44
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

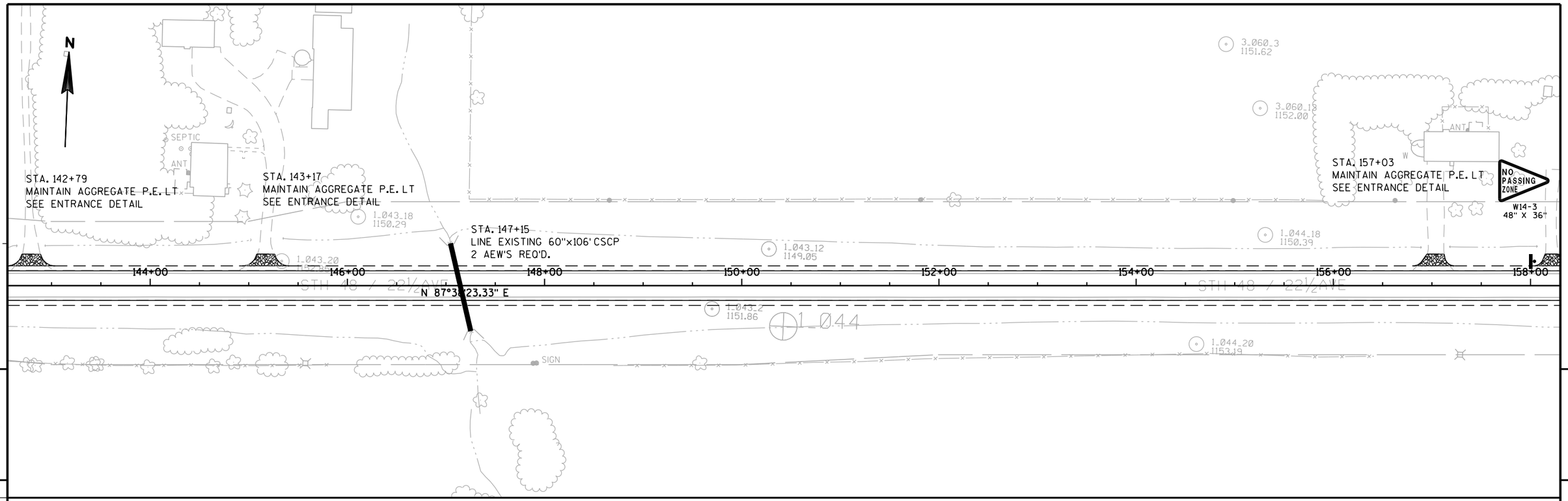
STA. 132+40
MAINTAIN AGGREGATE P.E. RT
SEE ENTRANCE DETAIL

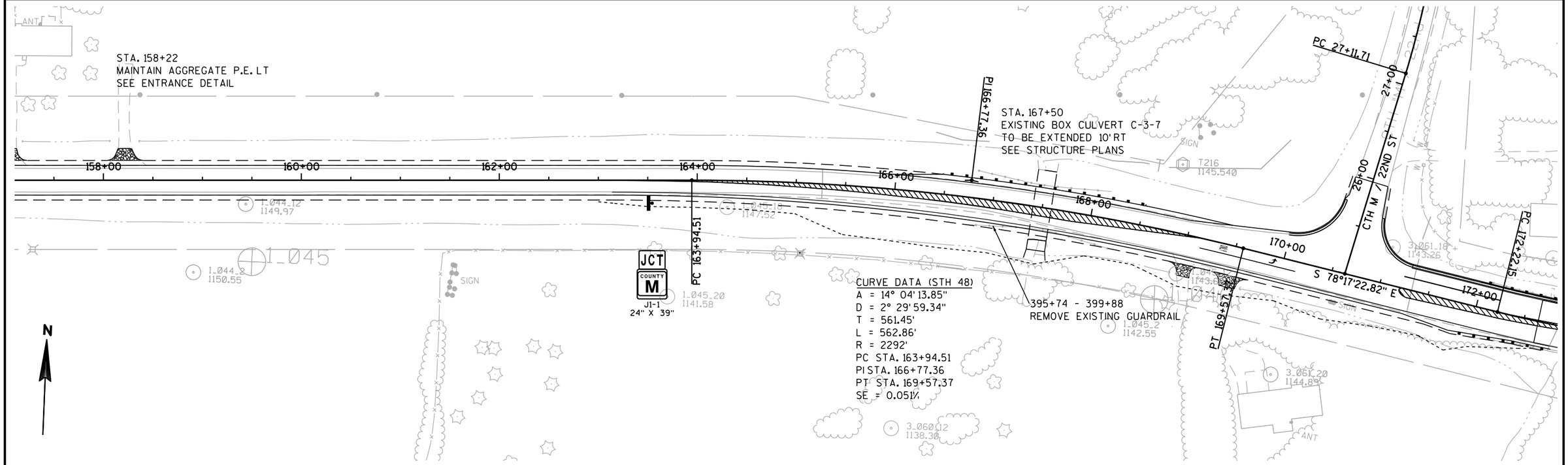
STA. 142+79
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

128+00 130+00 132+00 134+00 136+00 138+00 140+00 142+00

STH 48 / 22½ AVE

PROJECT NO: 8570-03-70	HWY: STH 48	COUNTY: BARRON	PLAN	SHEET 33	E





PROJECT NO: 8570-03-70	HWY: STH 48	COUNTY: BARRON	PLAN	SHEET 34	E

PT 29+30.94

N 12°

29+00

28+00

PI 28+21.81

STA. 170+63
MAINTAIN ASPHALTIC CTY RD INTERSECTION LT
SEE ENTRANCE DETAIL

PC 27+11.71

27+00

CTH M / 22ND ST

26+00

PI 166+71.36

STA. 166+47

STA. 168+52

166+00

168+00

170+00

S 78°17'22.82" E

PT 169+57.1

SEE DETAIL SHEET FOR LAYOUT

STA. 169+03
MAINTAIN AGGREGATE P.E. RT
SEE ENTRANCE DETAIL
1 - 18" X 36' CPCS
2 - 18" AEW'S

STA. 169+49
MAINTAIN AGGREGATE P.E. RT
SEE ENTRANCE DETAIL
1 - 18" X 38' CSCP
2 - 18" AEW'S

STOP
R1-1
36" X 36"

COUNTY M
J13-1
24" X 45"

48
M1-6
24" X 24"

W1-7
48" X 24"

REMOVE EXISTING C&G
NEW C&G 30 INCH, TYPE D, 6-INCH, MODIFIED

STA. 172+00

PC 172+22.15

W5-52R
12" X 36"

I55-56
30" X 36"

STA. 174+99

SILT FENCE

EROSION BALE

STA. 171+78

W5-52L
12" X 36"

STA. 174+75

CURVE DATA (STH 48)
A = -51° 57' 01.46"
D = 4° 30' 03.05"
T = 1115.10'
L = 1154.24'
R = 1273'
PC STA. 172+22.15
PI STA. 178+42.35
PT STA. 183+76.39
SE = 0.06%

SEE DETAIL SHEET FOR LAYOUT

174+00

176+00

178+00

180+00

29+00

PI 28+18.94

PI 28+42.35

PC 27+46.14

28+00

STA. 175+76
MAINTAIN ASPHALTIC CTY RD INTERSECTION RT
SEE ENTRANCE DETAIL

27+00

CTH M / 22ND ST

26+00

PI 25+26.58

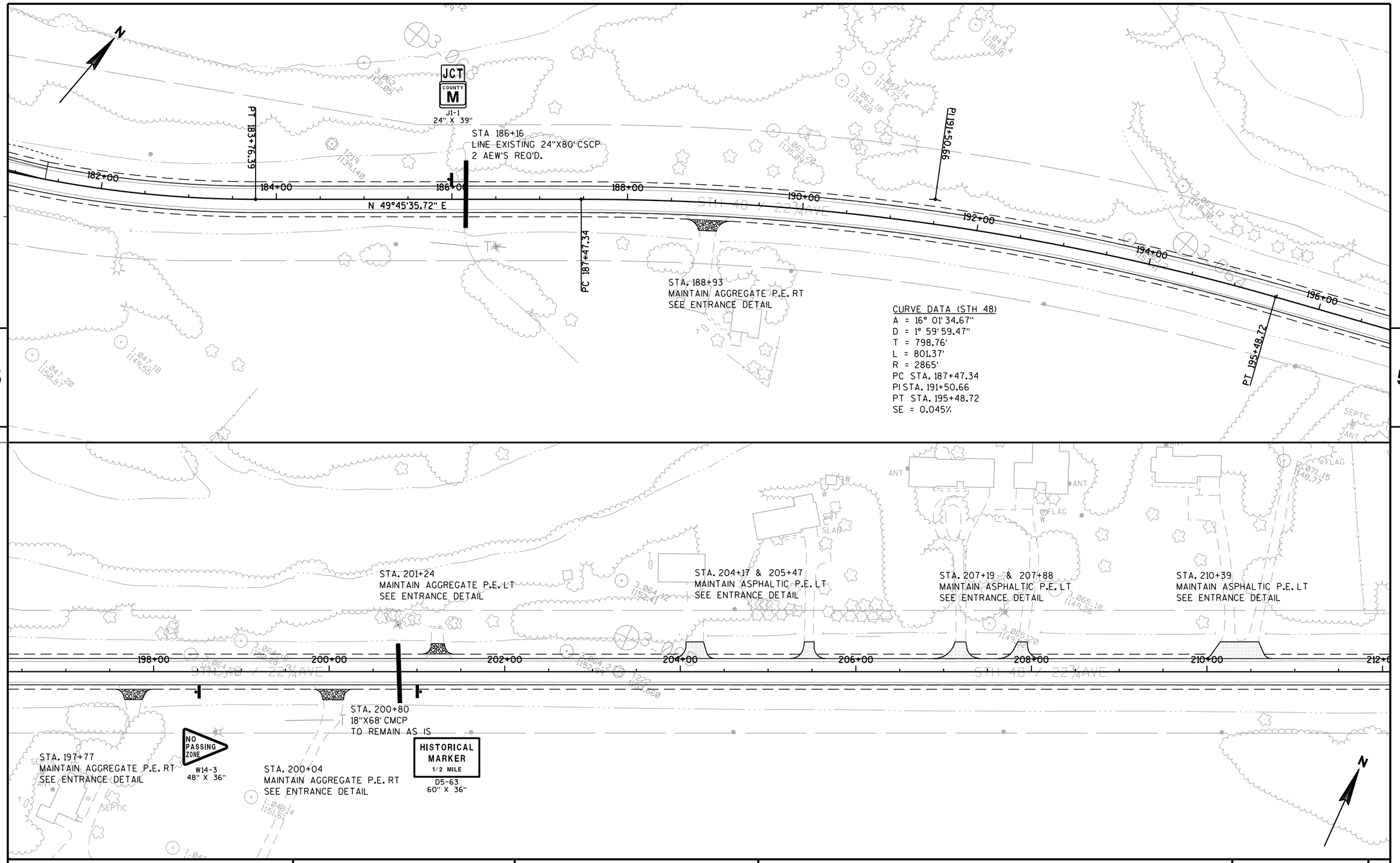
N

Compiled By: Woolpert
Date: 1/2011
Photography Date: 4/7/10

PROJECT NO: 8570-03-70	HWY: STH 48	COUNTY: BARRON	PLAN	SHEET 35	E

FILE NAME : N:\PDS\Design\Projects\85700301(70)_48_active design_Barron\Dgn files\050106_pp.dgn PLOT DATE : 19-MAY-2014 14:22 PLOT BY : dotk4b PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 44



PROJECT NO: 8570-03-70	HWY: STH 48	COUNTY: BARRON	PLAN	SHEET 36	E

STA. 212+43
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

STA. 217+66
REMOVE EXISTING 48"X70' CSCP
1 - 48"x70' RCCP CL III REQ'D
2 AEW'S REQ'D.

NO PASSING ZONE
W14-3
48" X 36"

STA. 227+47
LINE EXISTING 24"X70' CSCP
2 AEW'S REQ'D.

STA. 230+05
MAINTAIN ASPHALTIC TN RD INTERSECTION LT
SEE SIDE ROAD DETAIL

STOP
R1-1
30" X 30"

HISTORICAL MARKER
D5-64L
60" X 36"

HISTORICAL MARKER
D5-64R
60" X 36"

STOP
R1-1
30" X 30"

STA. 229+99
MAINTAIN ASPHALTIC TN RD INTERSECTION RT
SEE SIDE ROAD DETAIL

STA. 235+63
LINE EXISTING 24"X94' CSCP
2 AEW'S REQ'D.

PC 231+62.88

PI 238+02.13

CURVE DATA (STH 48)
A = 19° 00' 00.00"
D = 1° 29' 59.60"
T = 1260.96'
L = 1266.76'
R = 3820'
PC STA. 231+62.88
PI STA. 238+02.13
PT STA. 244+29.64
SE = 0.037%

NO PASSING ZONE
W14-3
48" X 36"

PROJECT NO: 8570-03-70	HWY: STH 48	COUNTY: BARRON	PLAN	SHEET 37	E

FILE NAME : N:\PDS\Design\Projects\85700301(70)_48_active design_Barron\Dgn files\050108_pp.dgn PLOT DATE : 19-MAY-2014 14:22 PLOT BY : dotk4b PLOT NAME : PLOT SCALE : 100:1

N

3_069_20
1137.07

2_074_18
1137.38

2_074_20
1142.62

STA. 247+32
LINE EXISTING 42"X94' CSCP
2 AEW'S REQ'D.

T234
1141.630

2_074_12
1146.83

PI 251+70.23

2_075_18
1144.84

HISTORICAL MARKER
1/2 MILE
D5-63
60" X 36"

244+00 246+00 248+00 250+00 252+00 254+00 256+00 258+00

STH 48 / 23rd AVE

2_075

2_075_20
1145.59

2_074_2
1143.41

SPEED LIMIT 40
W3-5
36" X 36"

PT 244+29.64
PC 244+29.64

STA. 243+20
MAINTAIN AGGREGATE P.E. RT
SEE ENTRANCE DETAIL

CURVE DATA (STH 48)
A = 5° 29' 43.51"
D = 0° 22' 16.69"
T = 1479.47'
L = 1480.04'
R = 15431'
PC STA. 244+29.64
PI STA. 251+70.23
PT STA. 259+09.68
SE = NC

5

5

FEEDER C

SEPTIC

STA. 262+73
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

NO PASSING ZONE
W14-3
48" X 36"

SPEED LIMIT 55
R2-1
24" X 30"

WEST 48
J4-1
24" X 36"

STA. 267+62
MAINTAIN AGGREGATE P.E. LT
SEE DETAIL

NO PARKING ANY TIME
R7-1R
18" X 24"

STA. 268+37
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

STA. 272+00
MAINTAIN ASPHALTIC TN RD INTERSECTION LT
SEE SIDE ROAD DETAIL

PI 41+66.50

NO PARKING ANY TIME
R7-1D
18" X 24"

STOP
R1-1
30" X 30"

41+00

23⅝ ST

260+00 262+00 264+00 266+00 268+00 270+00 272+00

STH 48 / 23rd AVE

S 89°43'05.39" E

2_075_12
1161.98

PT 259+09.68

2_076

2_076_18
1169.55

STA. 260+89
MAINTAIN AGGREGATE P.E. RT
SEE ENTRANCE DETAIL

Campia
UNINCORPORATED
I2-3
54" X 24"

SPEED LIMIT 40
R2-1
24" X 30"

2_077

2_077_18
1171.

NO PARKING ANY TIME
R7-1L
18" X 24"

NO PARKING ANY TIME
R7-1D
18" X 24"

STOP
R1-1
30" X 30"

39+00

2_077_20
1172.12

2_076_20
1168.07

RUINS

SEPTIC

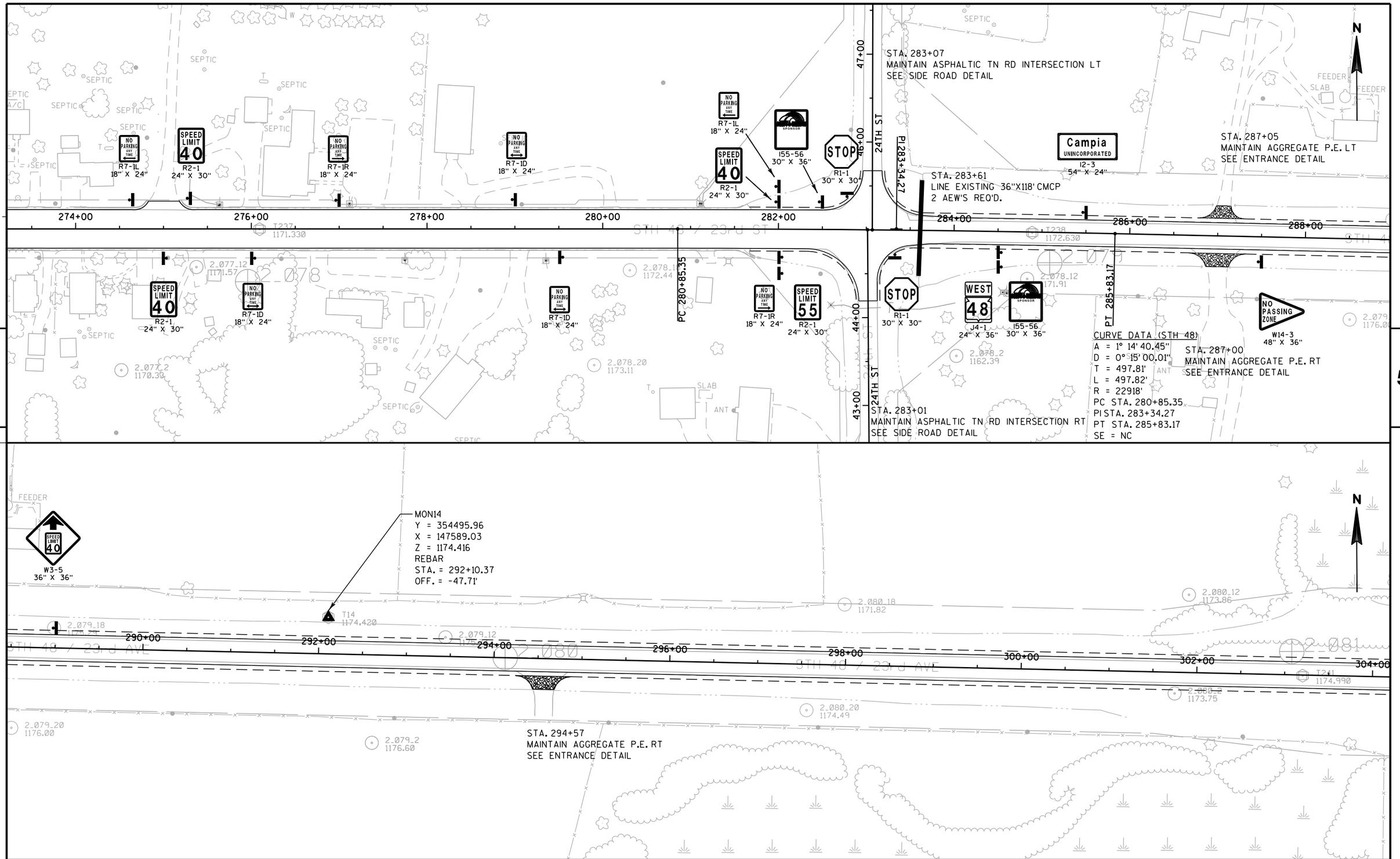
2_076_2
1172.47

N

STA. 271+95
MAINTAIN ASPHALTIC TN RD INTERSECTION RT
SEE SIDE ROAD DETAIL

PROJECT NO: 8570-03-70	HWY: STH 48	COUNTY: BARRON	PLAN	SHEET 38	E

FILE NAME : N:\PDS\Design\Projects\85700301(70)_48_active design_Barron\Dgn files\050109_pp.dgn PLOT DATE : 19-MAY-2014 14:22 PLOT BY : dotk4b PLOT NAME : PLOT SCALE : 100:1



PROJECT NO: 8570-03-70	HWY: STH 48	COUNTY: BARRON	PLAN	SHEET 39	E

N

SEPTIC

ANT

SEPTIC

2_081_18
1170.31

2_081_12
1177.63

2_081_2
1167.82

2_082

2_082_18
1169.18

2_082_20
1168.86

STA. 312+27
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

STA. 318+69
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

STA. 314+70
LINE EXISTING 24"X104' CSCP
2 AEW'S REQ'D.

2_081_20
1175.23

304+00 306+00 308+00 310+00 312+00 314+00 316+00 318+00

STH 48 / 23rd AVE

S 88°28'25.65" E

STH 48 / 23rd AVE

STA. 306+67
MAINTAIN AGGREGATE P.E. RT
SEE ENTRANCE DETAIL

STA. 310+07
MAINTAIN AGGREGATE P.E. RT
SEE ENTRANCE DETAIL

FLAG

5

5

SEPTIC
ANT

2_082_12
1183.33

2_083_18
1180.93

2_083_12
1178.17

SEPTIC

STA. 320+96
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

2_082_2
1182.02

2_083_20
1180.59

2_084

2_083.2
1177.95

PC 333+46.77

STA. 327+53
LINE EXISTING 24"X76' CMCP
2 AEW'S REQ'D.

320+00 322+00 324+00 326+00 328+00 330+00 332+00 334+00

STH 48 / 23rd AVE

T244
1182.720

STA. 324+02
MAINTAIN AGGREGATE P.E. RT
SEE ENTRANCE DETAIL

N

PROJECT NO: 8570-03-70	HWY: STH 48	COUNTY: BARRON	PLAN	SHEET 40	E

CURVE DATA (STH 48)
A = -1° 55' 17.64"
D = 0° 15' 00.01"
T = 768.58'
L = 768.62'
R = 22918'
PC STA. 333+46.77
PI STA. 337+31.12
PT STA. 341+15.39
SE = NC

STOP
R1-1
30" X 30"

STA. 337+31
MAINTAIN ASPHALTIC TN RD INTERSECTION LT
SEE SIDE ROAD DETAIL

STA. 339+60 & 340+62
MAINTAIN ASPHALT P.E. LT
SEE ENTRANCE DETAIL

STA. 346+00
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

STA. 335+50
MAINTAIN AGGREGATE P.E. RT
SEE ENTRANCE DETAIL

STOP
R1-1
30" X 30"

STA. 339+30
MAINTAIN AGGREGATE P.E. RT
SEE ENTRANCE DETAIL

STA. 340+62
MAINTAIN AGGREGATE P.E. RT
SEE ENTRANCE DETAIL

STA. 337+33
MAINTAIN ASPHALTIC TN RD INTERSECTION RT
SEE SIDE ROAD DETAIL

STA. 350+28
LINE EXISTING 24"X88' CSCP
2 AEW'S REQUIRED

STA. 355+87
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

STA. 360+25
72"X64' CMCP - CATTLE PASS
TO REMAIN AS IS

STA. 362+00
24"X90' CSCP
TO REMAIN AS IS

STA. 363+22
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

STA. 355+89
MAINTAIN AGGREGATE P.E. RT
SEE ENTRANCE DETAIL

STA. 359+32
MAINTAIN AGGREGATE P.E. RT
SEE ENTRANCE DETAIL

PROJECT NO: 8570-03-70	HWY: STH 48	COUNTY: BARRON	PLAN	SHEET 41	E

N

2_088_12
1163.52

2_088_18
1163.08

2_087_12
1160.01

2_089_18
1165.49

2_088

2_089

2_089_20
1175.24

2_087_2
1164.15

2_088_20
1168.52

2_088_2
1174.52

366+00 368+00 370+00 372+00 374+00 376+00 378+00 380+00

9°36'16.71" E

STH 48 / 23rd AVE

STA. 366+57
MAINTAIN AGGREGATE P.E. RT
SEE ENTRANCE DETAIL

STA. 379+70
REPLACE EXISTING AGGREGATE P.E. RT
WITH ASPHALTIC PAVEMENT
SEE ENTRANCE DETAIL

5

5

W

T

SCALE

QUA

2_089_12
1168.35

STA. 381+77
MAINTAIN ASPHALT P.E. LT
SEE ENTRANCE DETAIL

STA. 383+50
LINE EXISTING 24"X70' CSCP
2 AEW'S REQ'D.

2_089_2
1167.35

2_090

I25I
1174.520

382+00 384+00 386+00 388+00

57+00

56+00

54+00

53+00

26TH ST

T139+41.46

2_090_18
1172.26

SPONSOR

I55-56
30" X 36"

STOP

R1-1
30" X 30"

STA. 389+44
MAINTAIN ASPHALTIC TN RD INTERSECTION LT
SEE SIDE ROAD DETAIL

2_090_12
1176.60

STA. 390+03
LINE EXISTING 24"X58' CSCP
2 AEW'S REQ'D.

2_090_2
1175.98

2_091

390+00 392+00 394+00

STA. 388+90
LINE EXISTING 24"X52' CSCP
2 AEW'S REQ'D.

STA. 394+64
MAINTAIN ASPHALT P.E. RT
SEE ENTRANCE DETAIL

STA. 389+42
MAINTAIN ASPHALTIC TN RD INTERSECTION RT
SEE SIDE ROAD DETAIL

N

QUARRY

QUARRY

PROJECT NO: 8570-03-70	HWY: STH 48	COUNTY: BARRON	PLAN	SHEET 42	E

N

395+74 - 399+88
REMOVE EXISTING GUARDRAIL

STA 397+72
LINE EXISTING 30'X88' CSCP
2 AEW'S REQUIRED

STA. 402+62
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

2_091_18
1167.04

2_091_20
1179.45

2_091_12
1177.38

2_091_2
1182.36

2_092_18
1184.16

2_092_20
1185.53

2_092

396+00 | 398+00 | 400+00 | 402+00 | 404+00 | 406+00 | 408+00 | 410+00

STH 48 / 23rd AVE

N 89°39'54.60" E

2_091_19
1189.95

5

5

2_092_12
1188.16

2_093_18
1190.60

2_093_12
1189.14

2_094_18
1191.54

NO PASSING ZONE
W14-3
48" X 36"

412+00 | 414+00 | 416+00 | 418+00 | 420+00 | 422+00 | 424+00 | 426+00

2_093
T254
1191.410

STH 48 / 23rd AVE

2_093_20
1192.00

2_093_2
1193.20

2_094

2_094_20
1194.81

STH 48 / 23rd AVE

STA. 411+10
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

STA 421+49
LINE EXISTING 24"X76' CSCP
2 AEW'S REQ'D.

STA. 422+92
MAINTAIN AGGREGATE P.E. LT
SEE DETAIL

W1-2L
30" X 30"

N

PROJECT NO: 8570-03-70	HWY: STH 48	COUNTY: BARRON	PLAN	SHEET 43	E

N

CURVE DATA (STH 48)
A = -90° 49' 30.44"
D = 4° 59' 58.67"
T = 1632.32'
L = 1816.64'
R = 1146'
PC STA. 430+26.06
PI STA. 441+88.68
PT STA. 448+42.70
SE = 0.06%

STA 441+51
LINE EXISTING 24"X82' CSP
2 AEW'S REQ'D.

PC 62

STA. 429+56
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

STOP
R1-1
30" X 30"

JCT
COUNTY
NN
J1-1
24" X 39"

W1-6
48" X 24"

STA. 434+46
MAINTAIN ASPHALTIC TN RD INTERSECTION RT
SEE SIDE ROAD DETAIL

426+00 428+00 430+00 432+00 434+00 436+00 440+00 442+00
PC 430+26.06
PC 58+60.66
PI 59+39.41
PI 55+36.98
59+00 58+00 57+00 56+00
23RD AVE
STH 48

PROJECT NO: 8570-03-70	HWY: STH 48	COUNTY: BARRON	PLAN	SHEET 44	E

N

WEST 48
J4-1
24" X 36"

COUNTY NN
J13-1
24" X 45"

COUNTY NN
J13-1
24" X 45"

2_095.14
1203.05

5_101.2
1197.50

2_095.4
1199.02

5_101.2
1203.88

5_102

5_102.18
1205.05

5_102.20
1200.07

5_102.2
1212.48

FEEDER

SLAB

5_102.2
1208.64

5_103

END PROJECT 8570-03-70
STA. 458+00
Y = 149613.038
X = 369428.504

JCT
COUNTY NN
J1-1
24" X 39"

W1-2R
30" X 30"

PT 448+42.70

PI 456+61.22

64+00
444+00
446+00
448+00
450+00
452+00
454+00
456+00
458+00

STH 48 / 27th ST

N 1°09'35.84" W

N 1°09'30

STOP
R1-1
36" X 36"

PI 64+05.06

EAST 48
J4-1
24" X 36"

W1-6
48" X 24"

1258
1196.300

1267
1193.480

NO PASSING ZONE
W14-3
48" X 36"

STA. 443+54
MAINTAIN ASPHALTIC CTY RD INTERSECTION RT
SEE SIDE ROAD DETAIL

STA. 451+82
MAINTAIN AGGREGATE P.E. RT
SEE ENTRANCE DETAIL

ANT

SLAB

SLAB

5

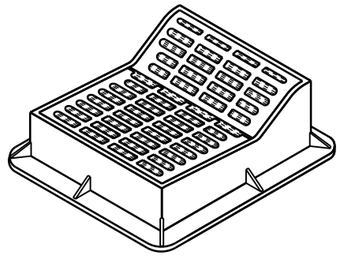
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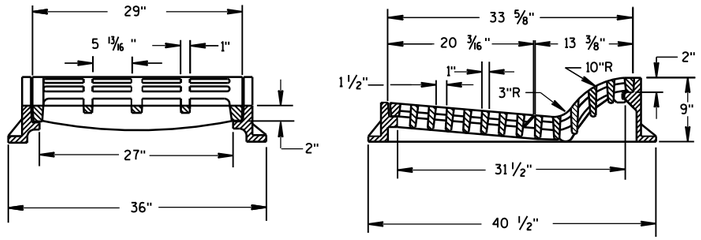
PROJECT NO: 8570-03-70	HWY: STH 48	COUNTY: BARRON	PLAN	SHEET 45	E

Standard Detail Drawing List

08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08A08-01	CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09A01-13A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
13A10-01A	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-01B	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13B02-06	CONCRETE PAVEMENT APPROACH SLAB
14B15-07A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-07B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-07C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B18-06A	STEEL PLATE BEAM GUARD, CLASS "A" (AT BRIDGES, OBSTACLES AND SIDEROADS/DRIVEWAYS)
14B24-07A	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-07B	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-07C	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B27-01A	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
14B27-01B	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
14B27-01C	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
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)
14B45-03F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C04-02	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C07-12B	PAVEMENT MARKING WORDS
15C07-12C	PAVEMENT MARKING ARROWS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C08-16E	PAVEMENT MARKING (LEFT TURN LANE)
15C08-16F	PAVEMENT MARKING (ISLANDS)
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C33-01	STOP LINE AND CROSSWALK PAVEMENT MARKING

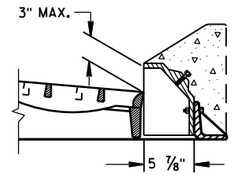
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TYPE "F"

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



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

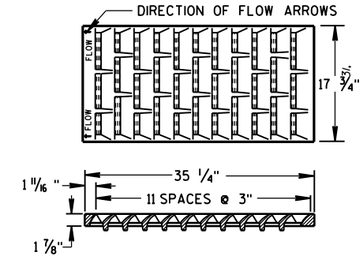
USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

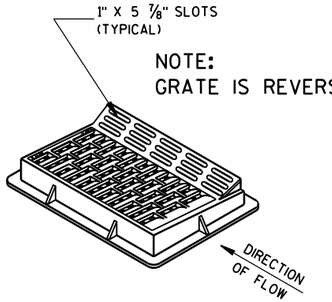
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

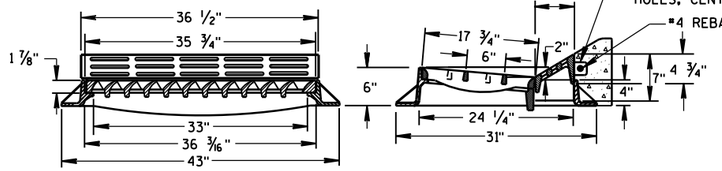
GENERAL NOTES

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

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



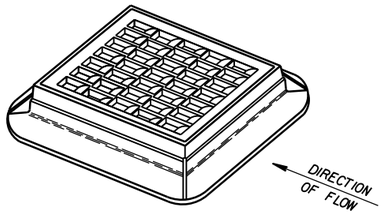


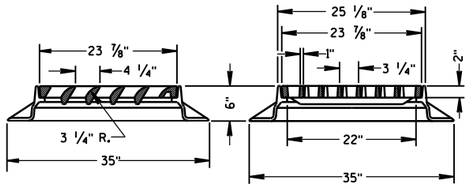


TYPE "HM"

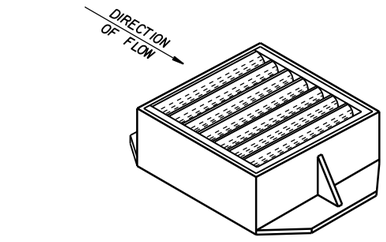
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

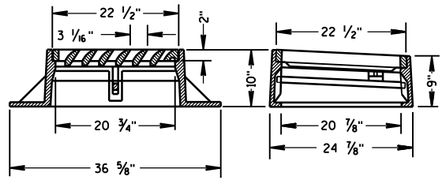
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



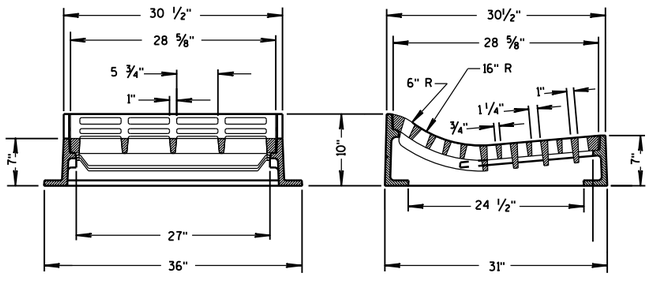


TYPE "S"



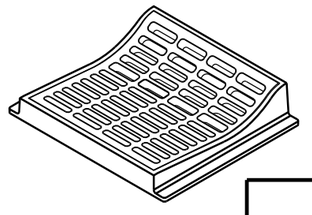


TYPE "V"



TYPE "T"

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



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

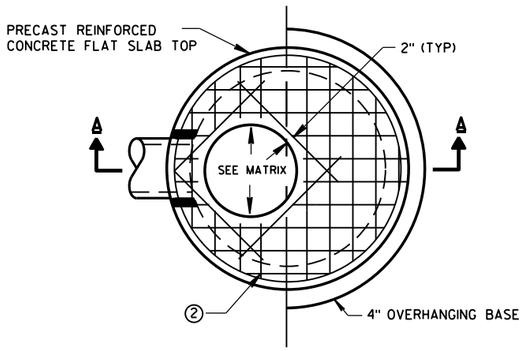
APPROVED
11/27/2013
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

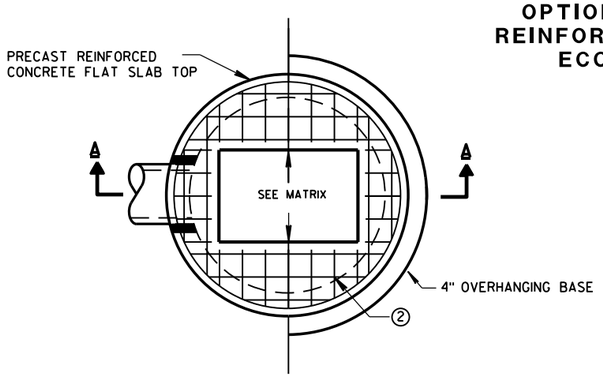
FHWA

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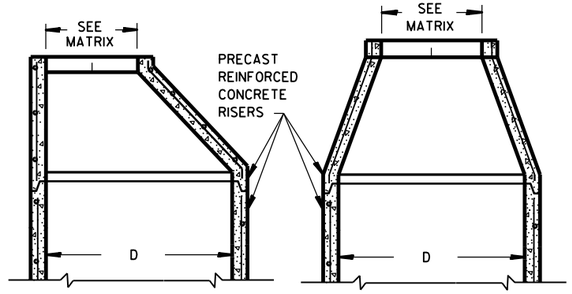
S.D.D. 8 A 5-19c



PLAN VIEW CIRCULAR OPENING

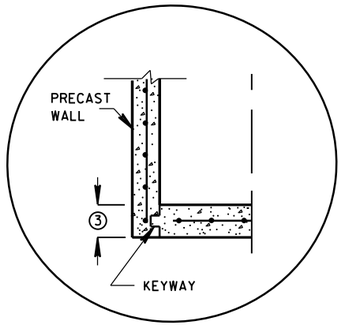


PLAN VIEW RECTANGULAR OPENING

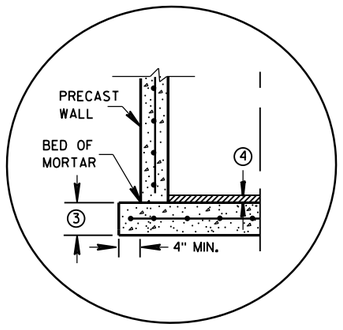


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

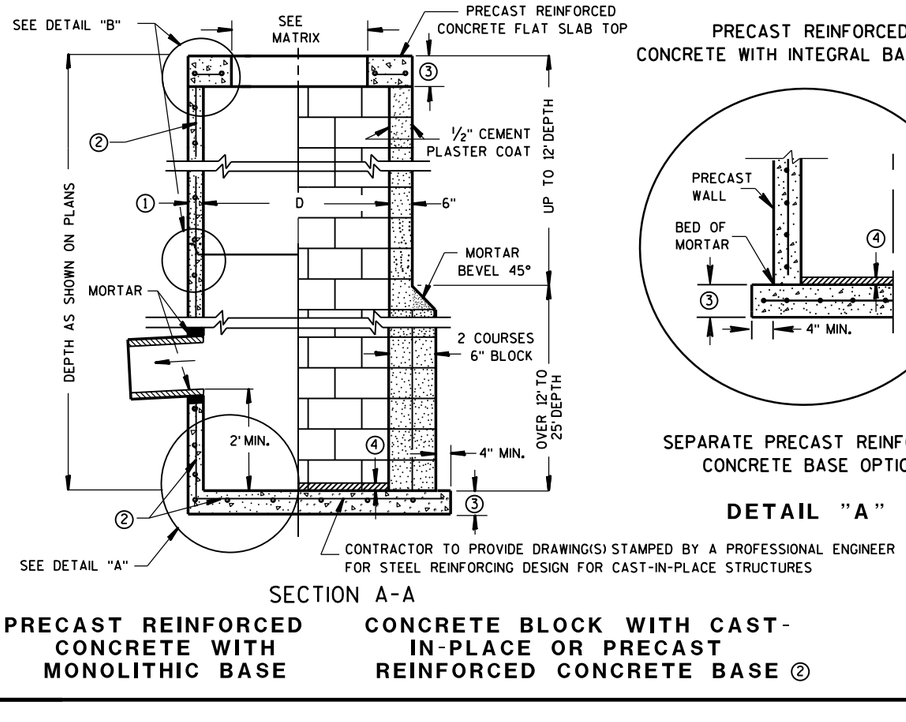


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"

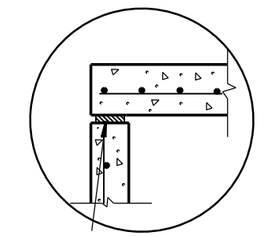


CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES

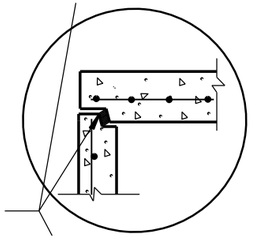
SECTION A-A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

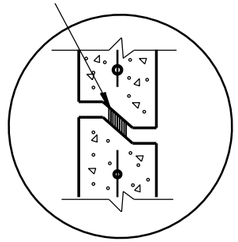


TOP WITH PLAIN END JOINT



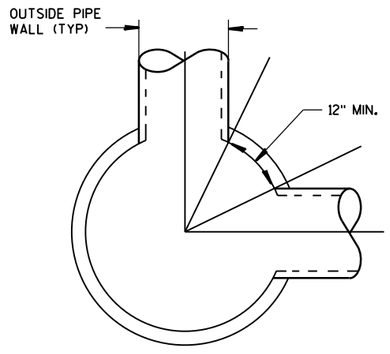
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"



DETAIL "C"

GENERAL NOTES

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

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

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

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

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

PRECAST REINFORCED CONCRETE CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES. THE 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 1/2 INCH AND MEET THE REQUIREMENTS OF ASTM A615.

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

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

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

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

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

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

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

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

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

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

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

CATCH BASIN COVER OPENING MATRIX

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

PIPE MATRIX

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

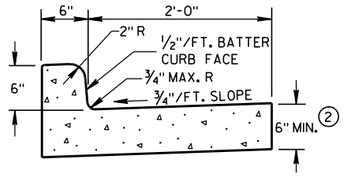
CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

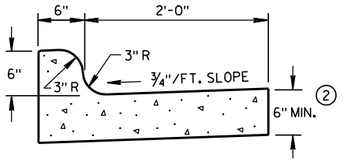
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

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

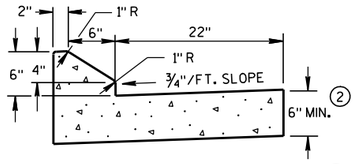
6
S.D.D. 8 A 8-1



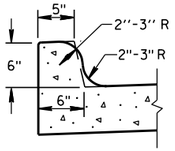
TYPES A & D (1)



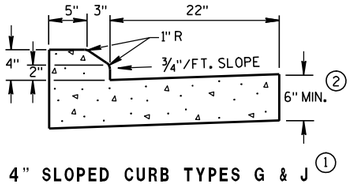
TYPES K & L (1)



6" SLOPED CURB TYPES G & J (1)

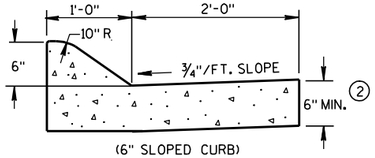


OPTIONAL CURB SHAPE FOR TYPES K & L (1)

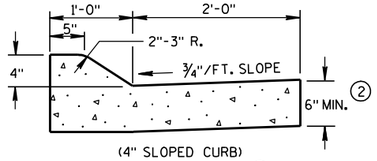


4" SLOPED CURB TYPES G & J (1)

CONCRETE CURB & GUTTER 30"

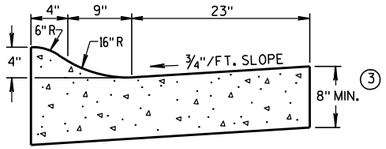


(6" SLOPED CURB)



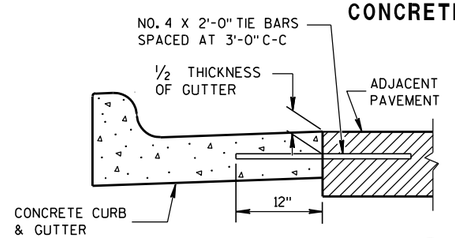
(4" SLOPED CURB)

TYPES A & D (1)

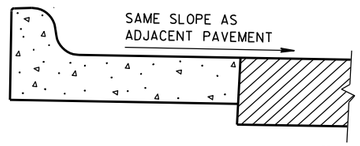


4" SLOPED CURB TYPES R & T (1) (4)

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.

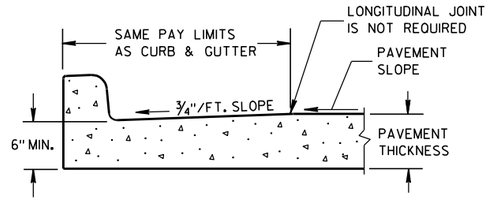
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.

(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.

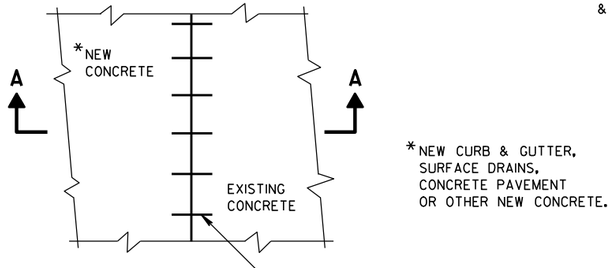
(3) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(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.



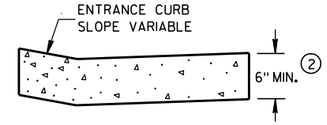
PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



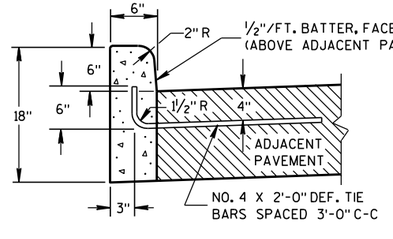
PLAN VIEW

SECTION A-A

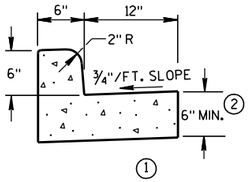
TIE BARS DRILLED INTO EXISTING PAVEMENT



DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

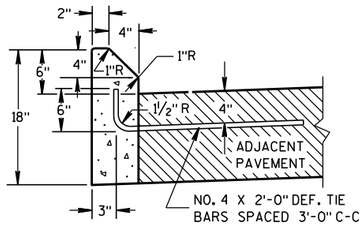


(1) TYPES A & D

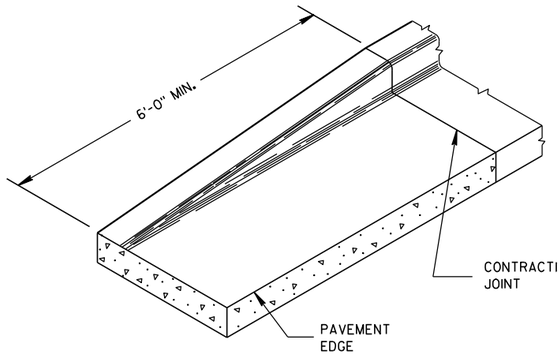


(1) TYPES A & D

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

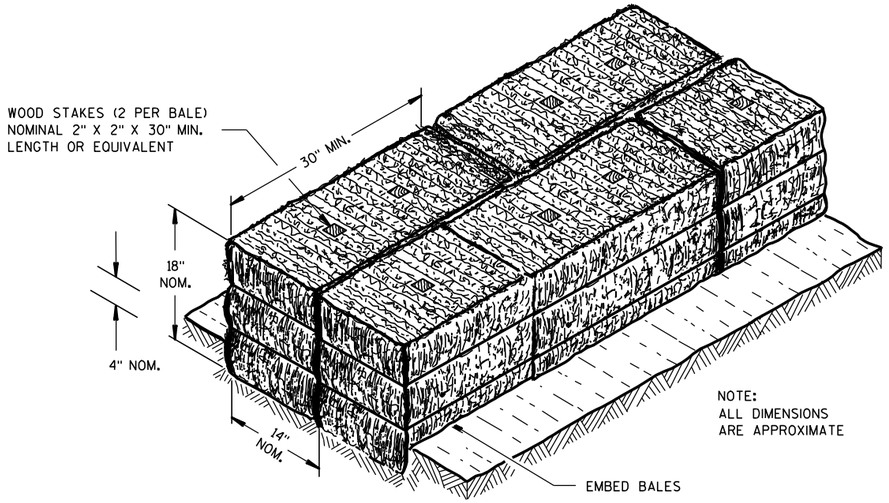
APPROVED
9/4/08 DATE
/S/ Jerry H. [illegible] ROADWAY STANDARDS ENGINEER
FHWA

6

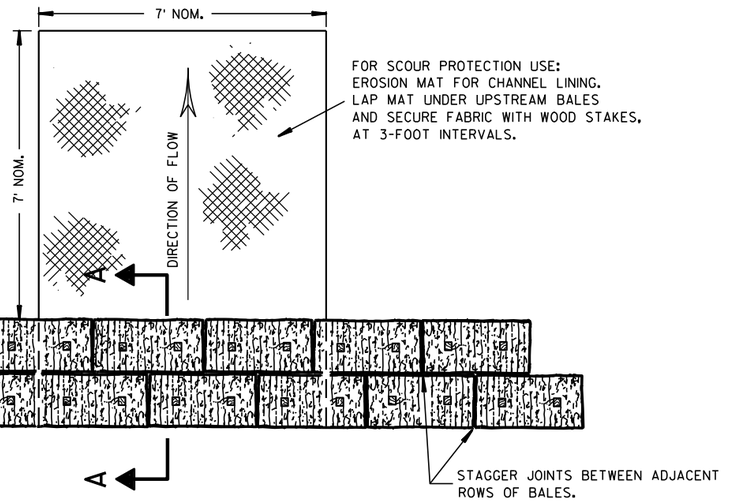
S.D.D. 8 D 1-17

6

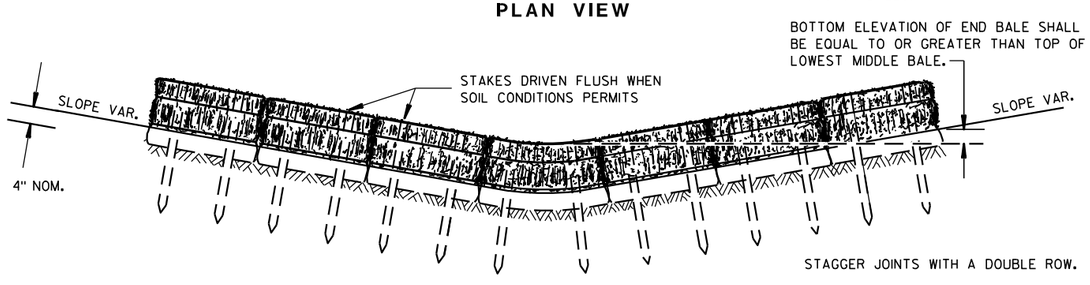
S.D.D. 8 D 1-17



SECTION A-A



PLAN VIEW



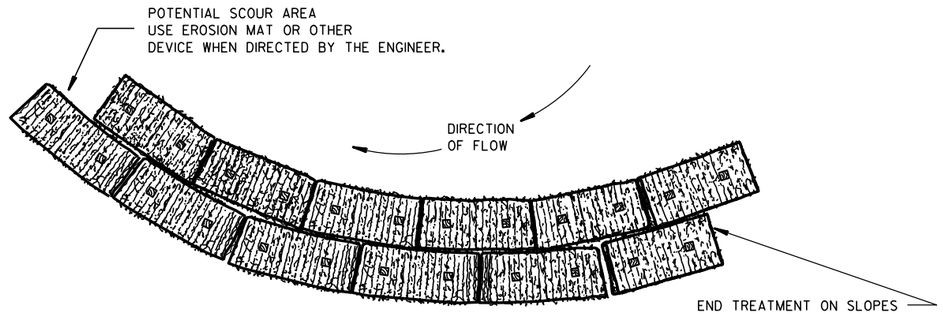
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

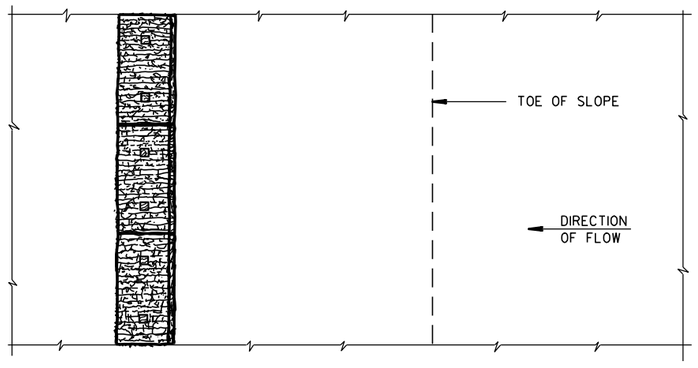
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(1) TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

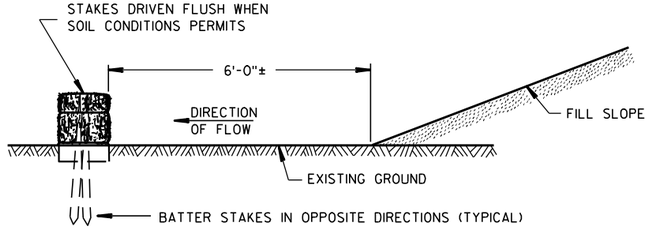


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

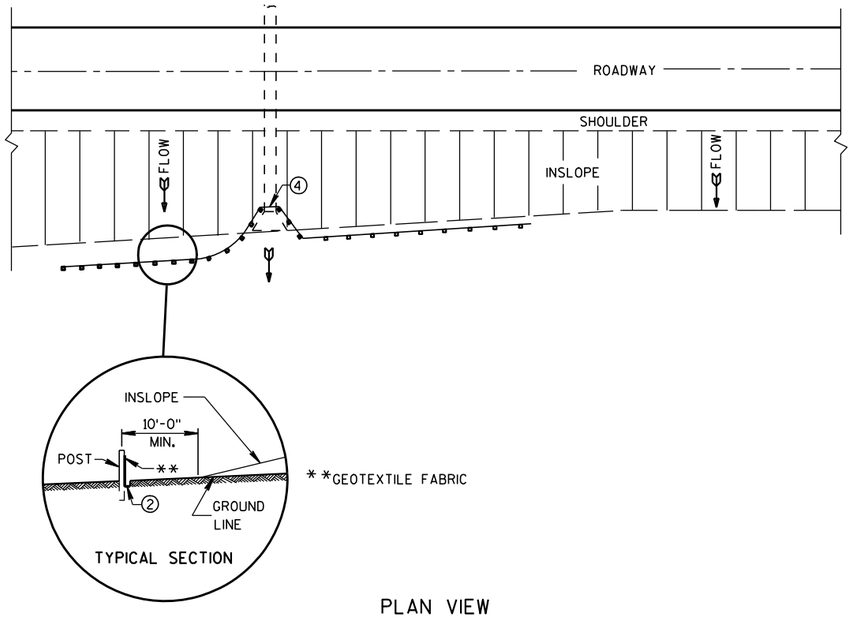
6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

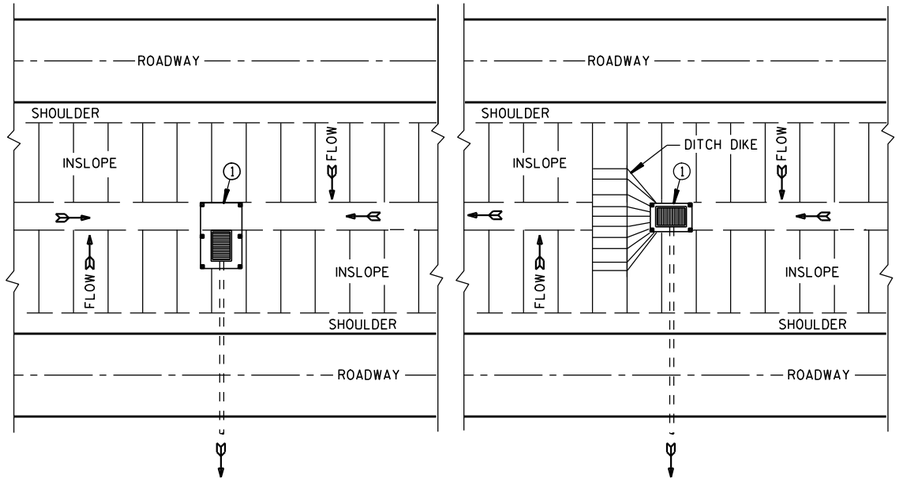
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S.D.D. 8 E 8-3



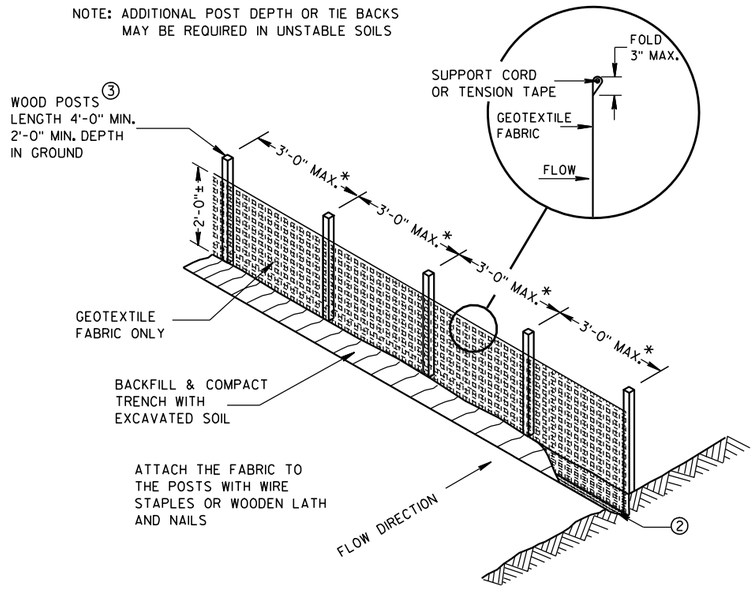
PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



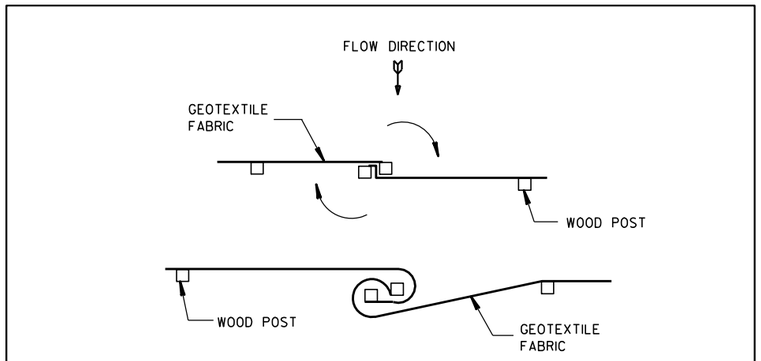
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS



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

SILT FENCE

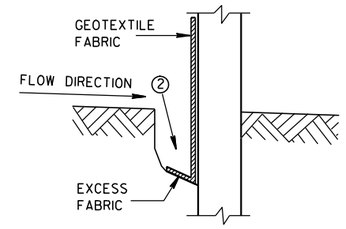


JOINING TWO LENGTHS OF SILT FENCE 5

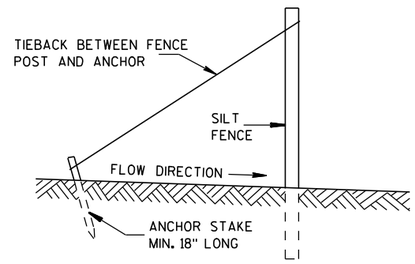
GENERAL NOTES

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 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

METAL APRON ENDWALLS

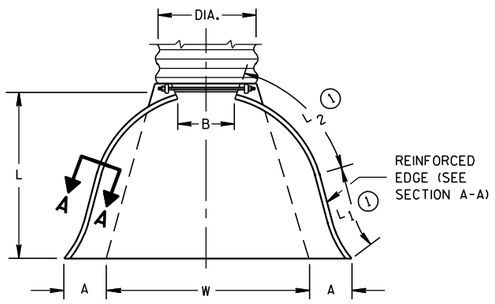
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")		
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 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

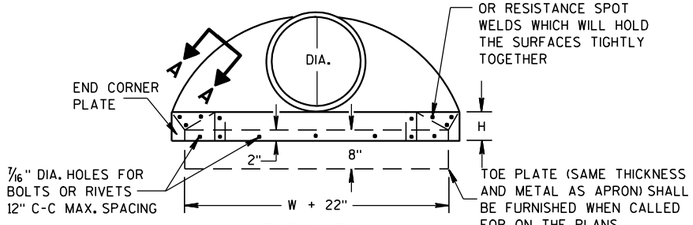
REINFORCED CONCRETE APRON ENDWALLS

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

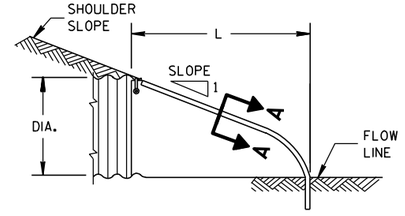
* MINIMUM
** MAXIMUM



PLAN VIEW

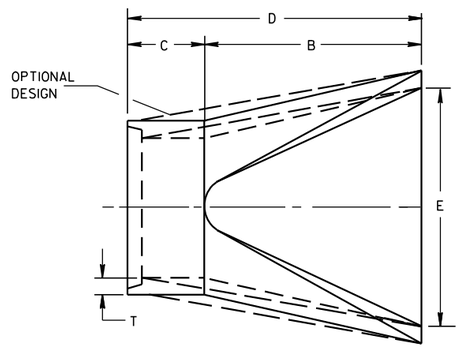


END VIEW

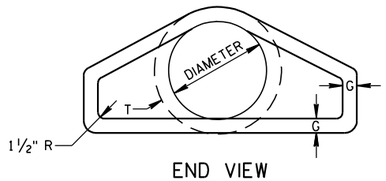


SIDE ELEVATION

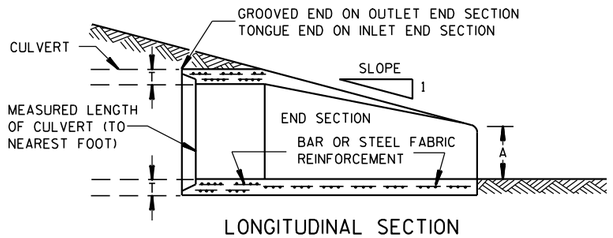
METAL ENDWALLS



PLAN

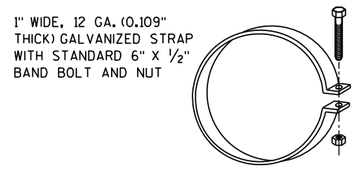


END VIEW



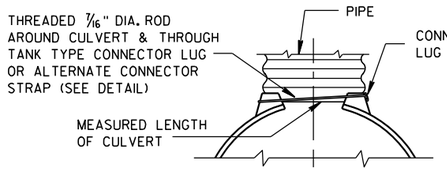
LONGITUDINAL SECTION

CONCRETE ENDWALLS

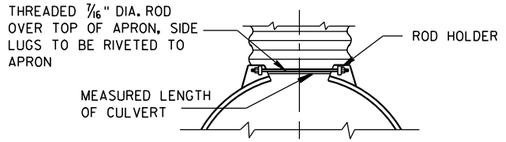


ALTERNATE FOR TYPE 1 CONNECTION

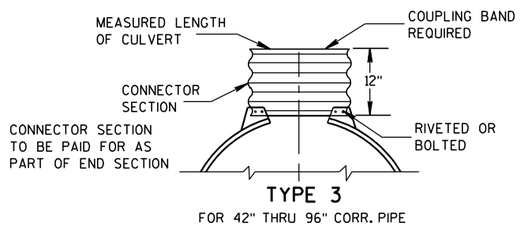
END SECTION CONNECTOR STRAP



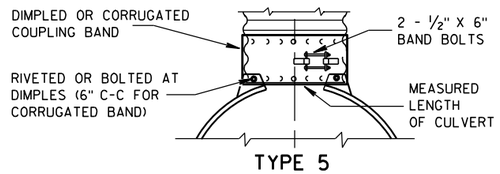
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

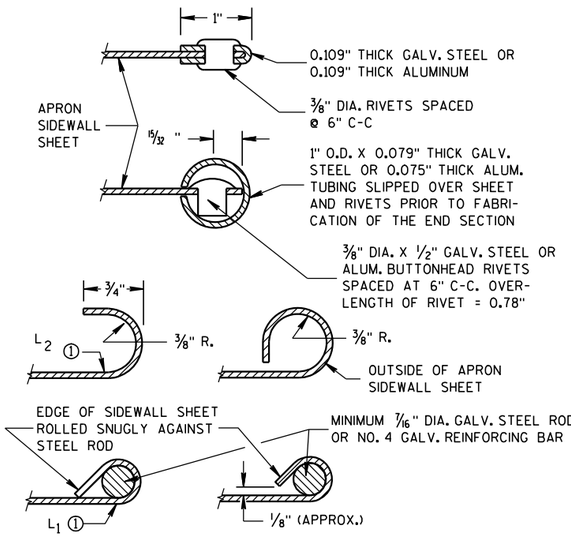
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

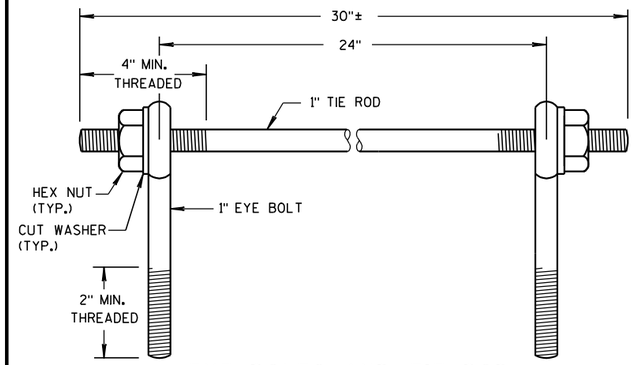
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

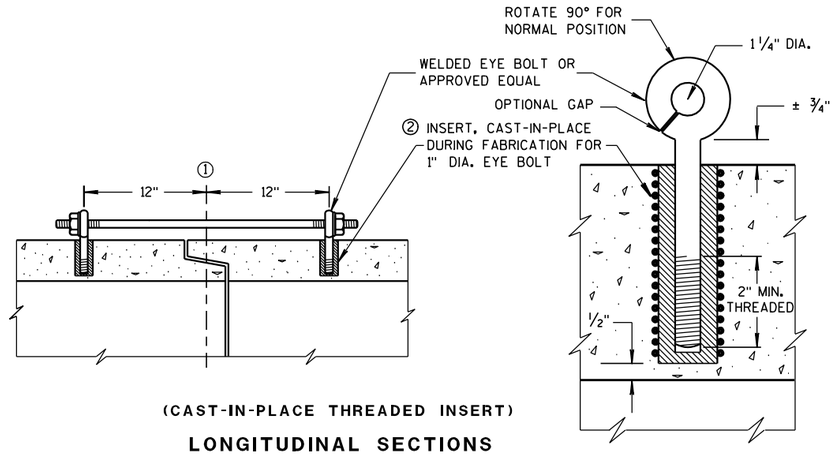
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6
S.D.D. 8 F 1-11



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)

GENERAL NOTES

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

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

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

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

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

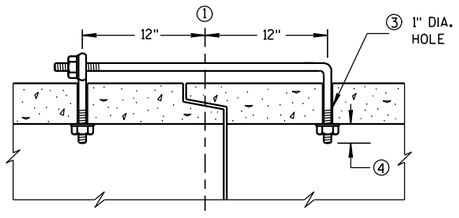
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

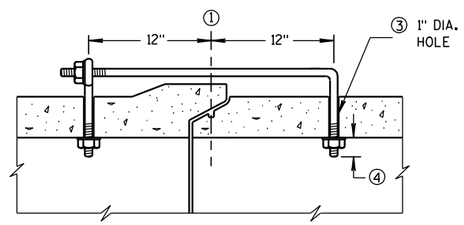
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

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



(TONGUE & GROOVE PIPE)

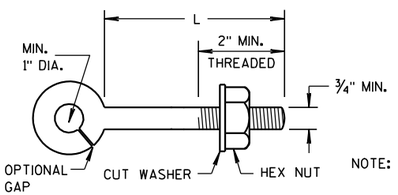


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

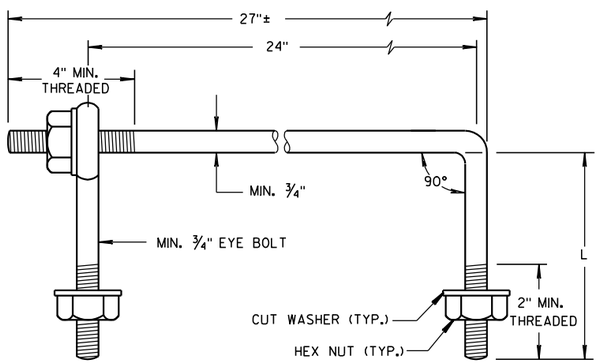
EYE BOLT DIMENSION TABLE

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



EYE BOLT

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



EYE BOLT AND TIE ROD

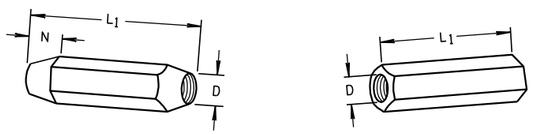
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

ADJUSTABLE TIE ROD TABLE

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

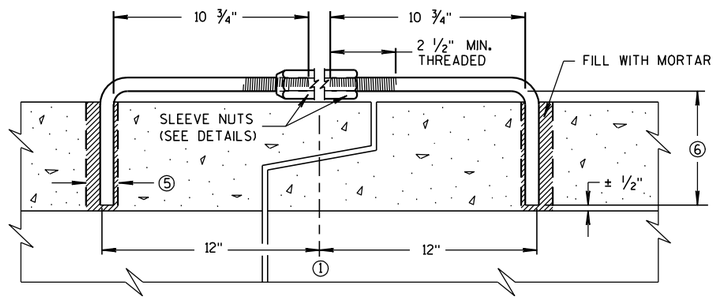
DIMENSIONS SHOWN ARE IN INCHES



TAPERED PLAIN

RIGHT AND LEFT THREADS

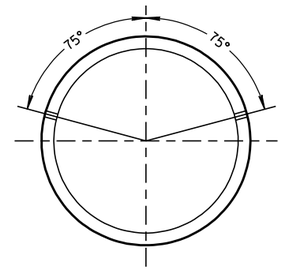
SLEEVE NUTS



LONGITUDINAL SECTION

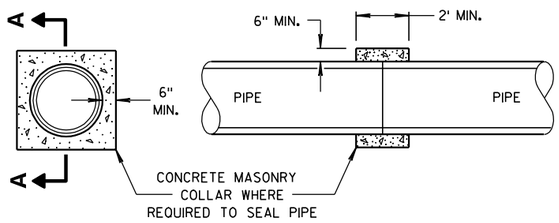
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

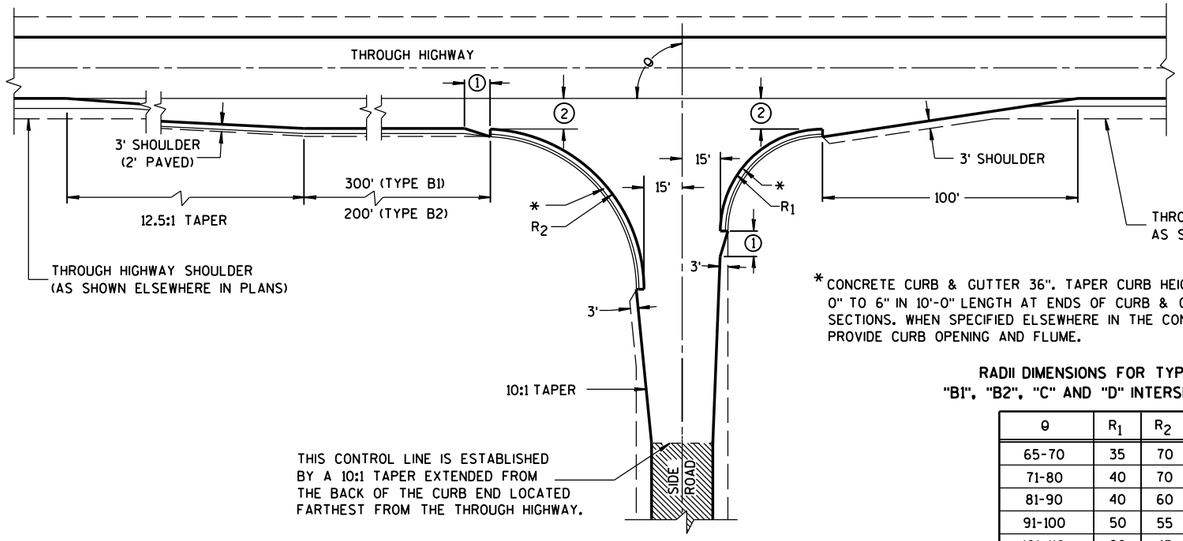
APPROVED
6/5/2012 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 8 F 4-7

6

S.D.D. 8 F 4-7

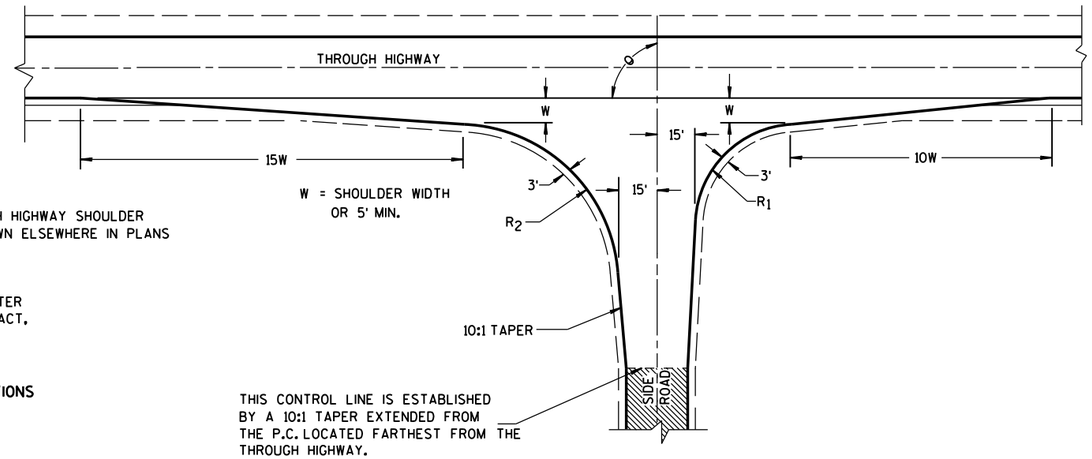


TYPE "B1" AND "B2"

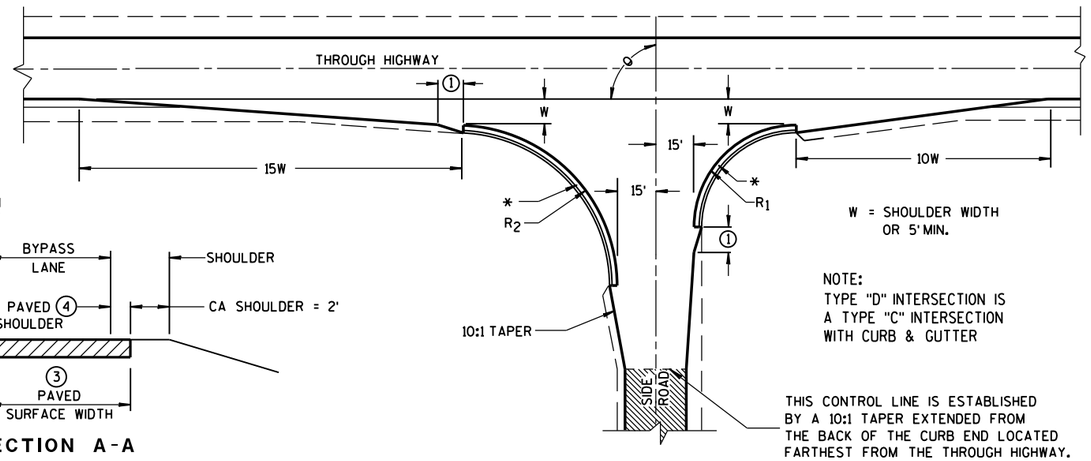
*CONCRETE CURB & GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10'-0" LENGTH AT ENDS OF CURB & GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME.

RADII DIMENSIONS FOR TYPES "B1", "B2", "C" AND "D" INTERSECTIONS

θ	R_1	R_2
65-70	35	70
71-80	40	70
81-90	40	60
91-100	50	55
101-110	60	45



TYPE "C"



TYPE "D"

GENERAL NOTES

DESIGNS MAY BE USED INTERCHANGEABLY IN COMBINATION OR SEPARATELY FOR ANY ONE COMPLETE INTERSECTION DEPENDING UPON INTERSECTION ANGLE AND SURFACING OF EACH APPROACH ROADWAY.

SIDE ROAD SURFACING NOTE

WHEN THE SIDE ROAD IS NOT PRESENTLY PAVED, PAVEMENT SHALL BE PLACED TO THE LIMITS SHOWN UNLESS OTHERWISE PROVIDED IN THE CONTRACT. WHERE THE CONSTRUCTION LIMITS ARE BEYOND THE PAVING LIMITS, CRUSHED AGGREGATE SURFACING SHALL BE PLACED BETWEEN THE PAVING LIMITS AND CONSTRUCTION LIMITS.

WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

WHEN THE SIDE ROAD IS THE CONSTRUCTION PROJECT, THE INTERSECTION SURFACING SHALL BE THE SAME AS FOR THE PROJECT.

EXISTING PAVED SURFACE

BYPASS LANE

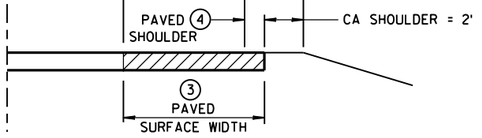
(1) 10-FT TYPICAL.

(2) 12-FT** PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLAN.

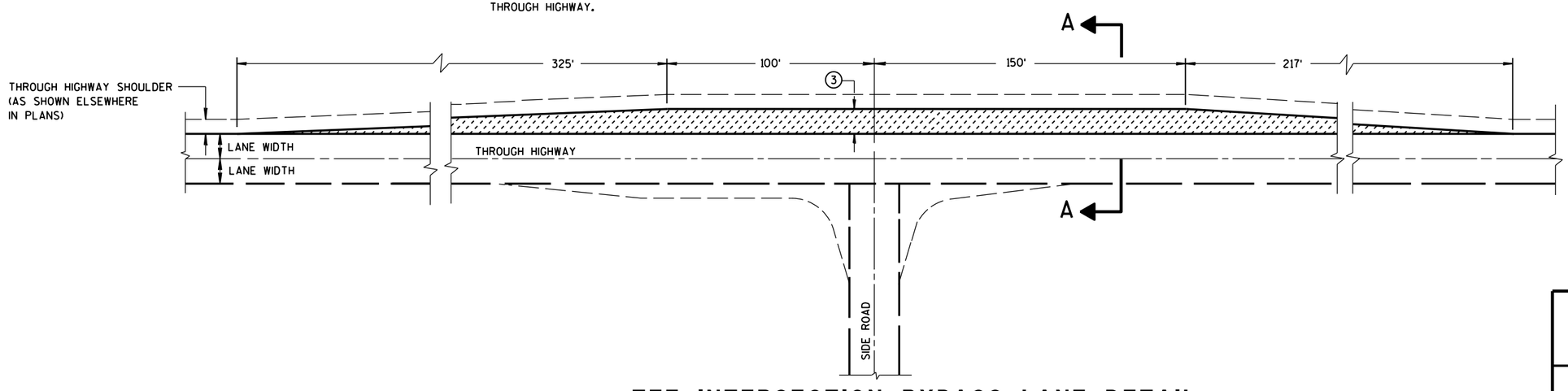
**10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.

(3) BYPASS LANE PAVED SURFACE WIDTH OUTSIDE OF TRAVEL LANE
-ASPHALT = 12-FT PLUS PAVED SHOULDER WIDTH.
-PC CPNCRETE = 13-FT PLUS PAVED SHOULDER WIDTH.

(4) BYPASS LANE PAVED SHOULDER WIDTH = THE GREATER OF 1-FT OR THE PAVED SHOULDER WIDTH OF THE THROUGH HIGHWAY.



SECTION A-A
(SHOWING BYPASS LANE AND SHOULDER)



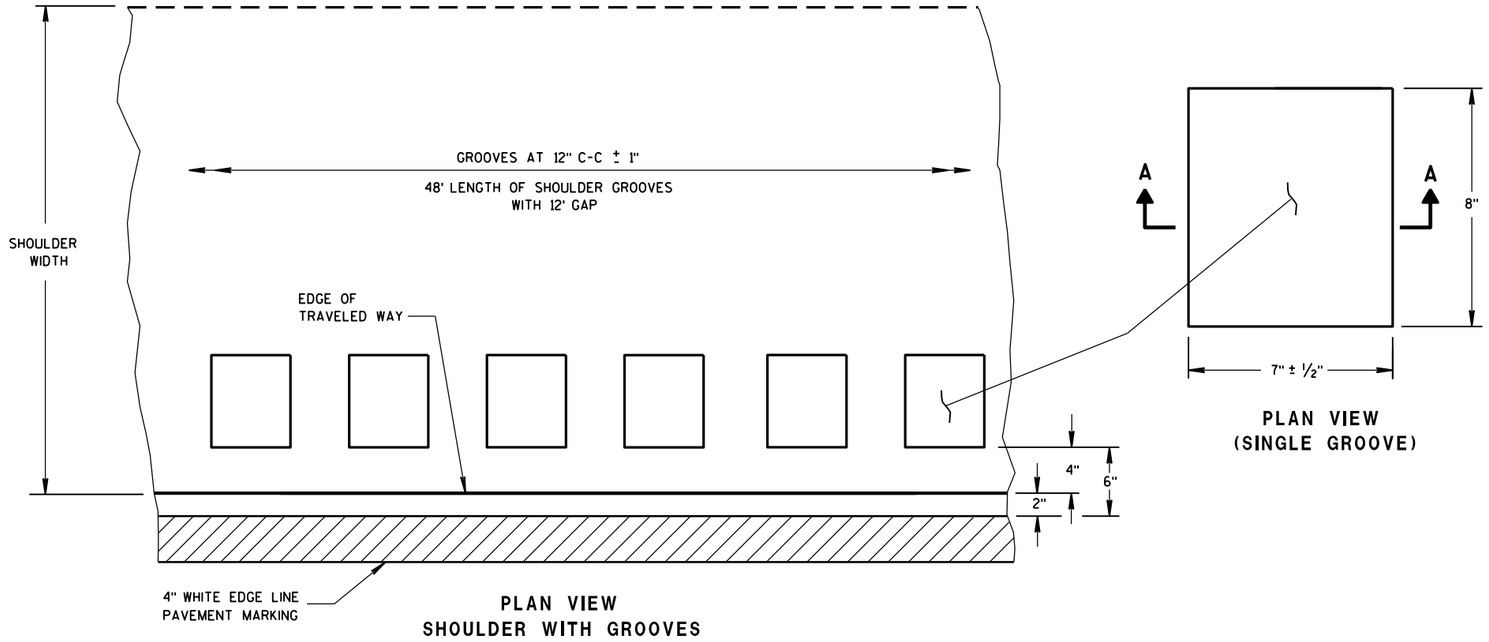
TEE INTERSECTION BYPASS LANE DETAIL

AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND "D" AND TEE INTERSECTION BYPASS LANE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 9 A 1-13a



PLAN VIEW
SHOULDER WITH GROOVES

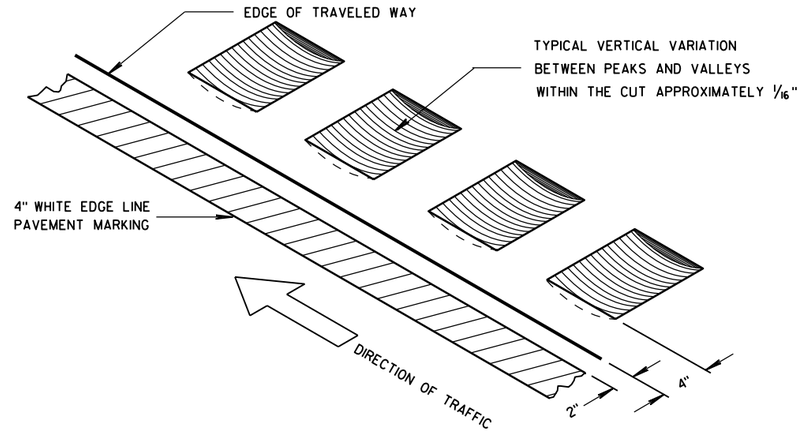
PLAN VIEW
(SINGLE GROOVE)

GENERAL NOTES

DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

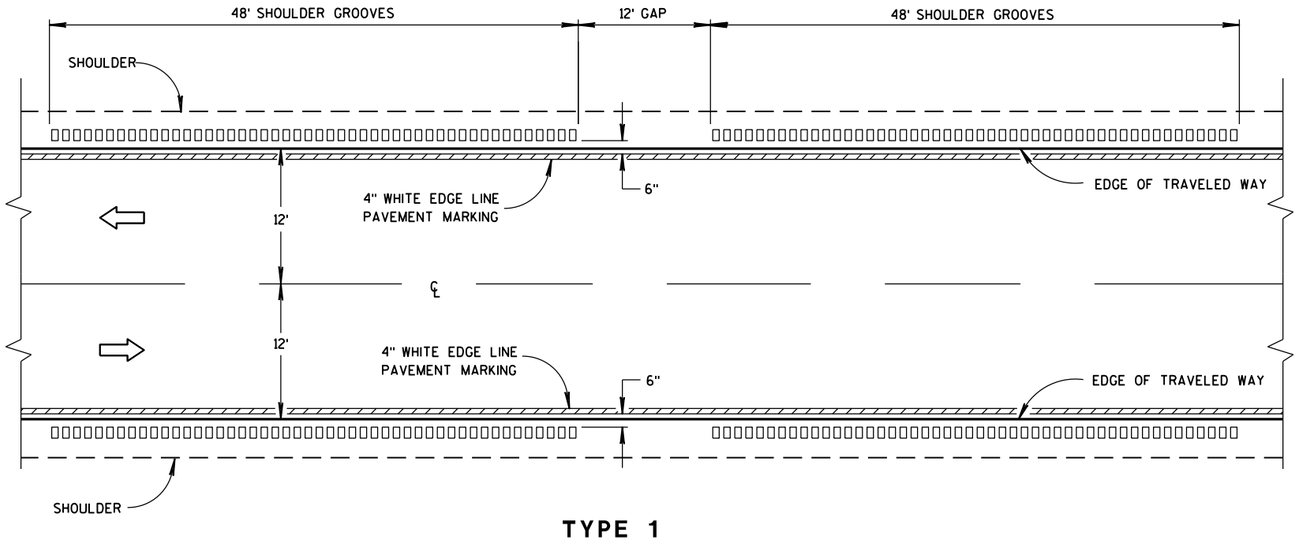
DO NOT MILL SHOULDER GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

(1) SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.

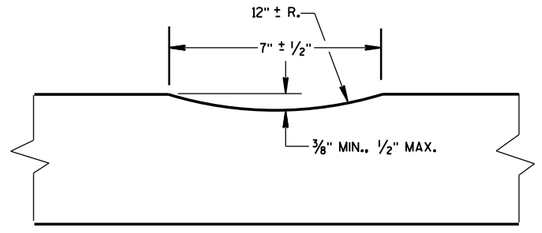


ISOMETRIC

PLACEMENT DETAIL FOR TYPE 1 MILLED RUMBLE STRIP



TYPE 1
2-LANE SHOULDER RUMBLE STRIP



SECTION A-A

2-LANE RURAL
SHOULDER RUMBLE STRIP, MILLING

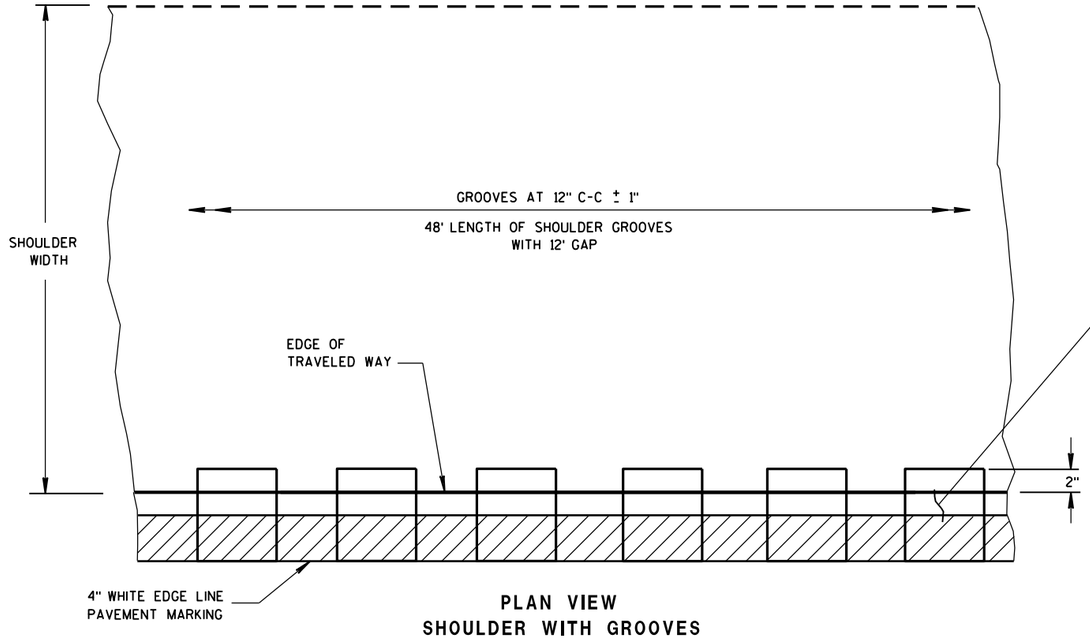
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

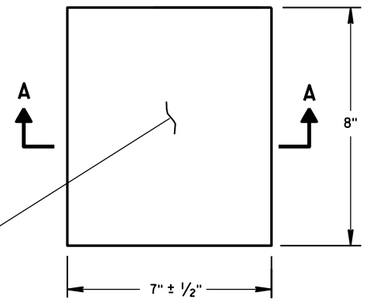
S.D.D. 13 A 10-1a

6

S.D.D. 13 A 10-1a



PLAN VIEW
SHOULDER WITH GROOVES



PLAN VIEW
(SINGLE GROOVE)

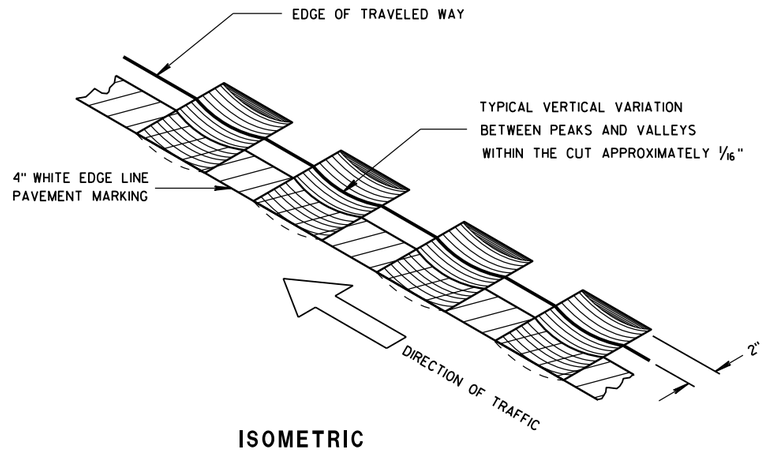
PLACEMENT DETAIL FOR TYPE 2 MILLED RUMBLE STRIP

GENERAL NOTES

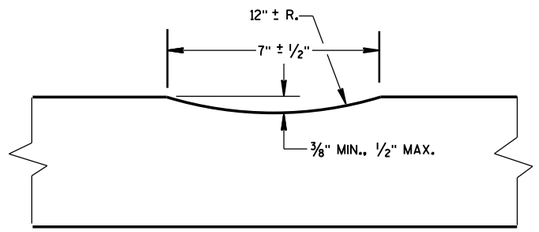
DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

DO NOT MILL SHOULDER GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

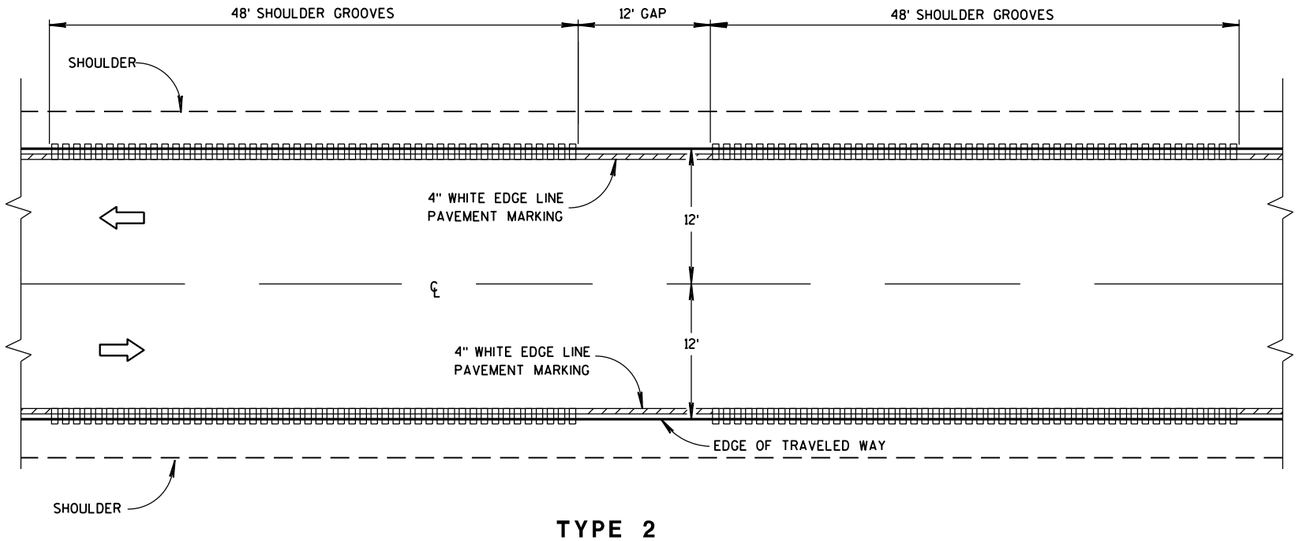
(1) SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



ISOMETRIC



SECTION A-A



TYPE 2
2-LANE SHOULDER RUMBLE STRIP

2-LANE RURAL
SHOULDER RUMBLE STRIP, MILLING

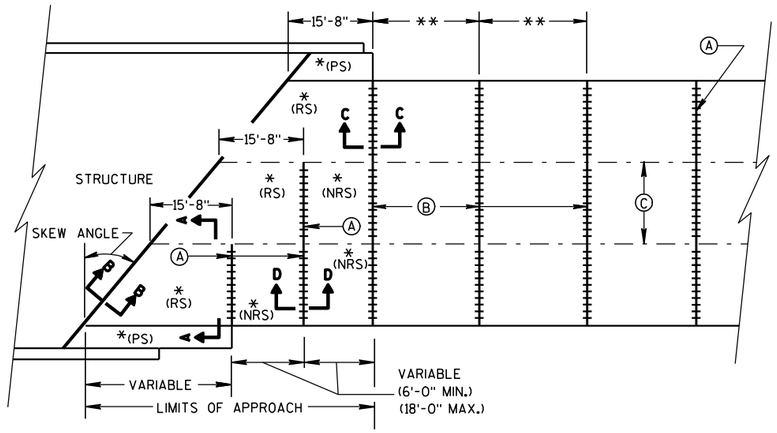
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

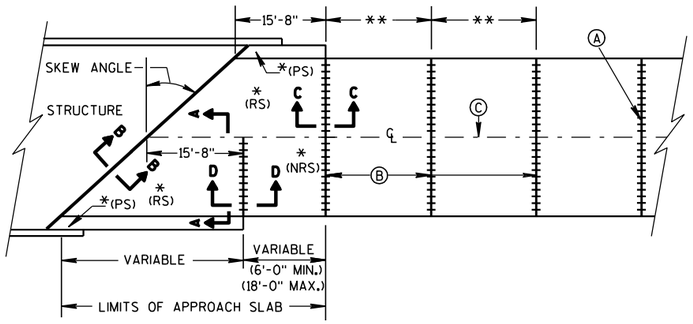
S.D.D. 13 A 10-1b

6

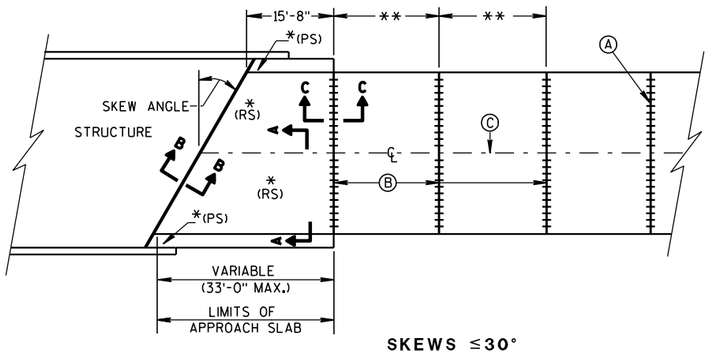
S.D.D. 13 A 10-1b



SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >30°
(PAVEMENT WIDTH ≤30')



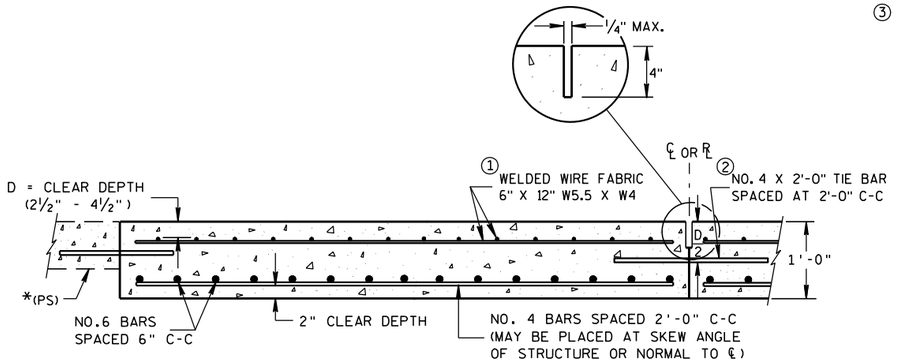
SKEWS ≤30°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

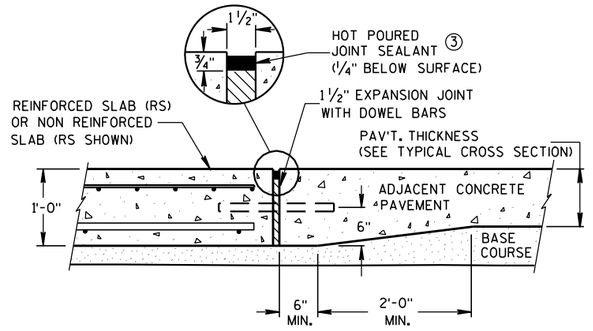
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER: CONCRETE PAVEMENT, OR CONCRETE SURFACE DRAIN
(SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

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

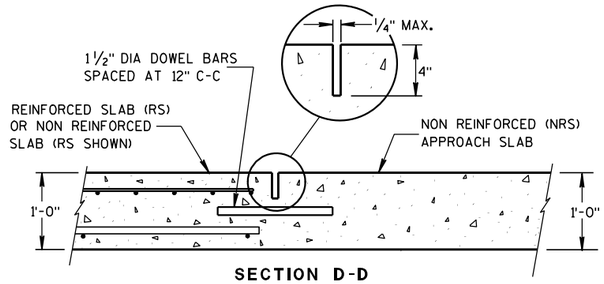
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄
(B) 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄
(C) STANDARD LONGITUDINAL JOINT AND TIE BARS.



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



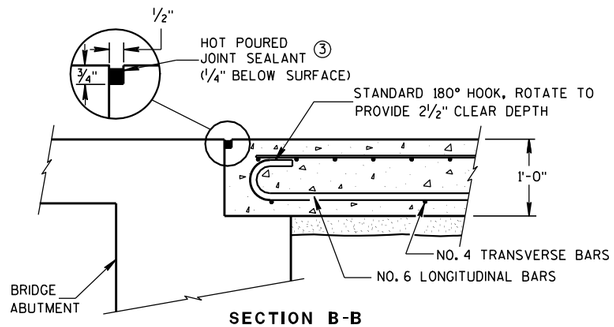
SECTION D-D
CONTRACTION JOINT

GENERAL NOTES

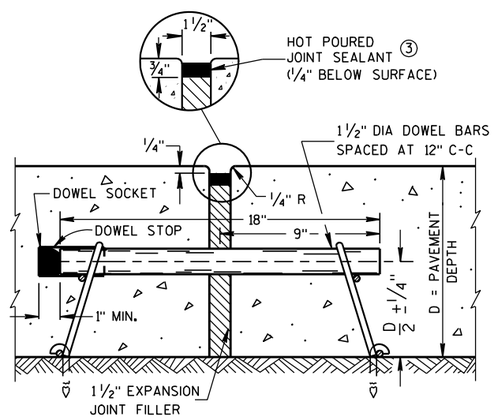
APPROACH SLABS ABUTTING AN HMA PAVEMENT OVER BASE COURSE DO NOT NEED TO BE DOWELED.

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

APPROVED
12/11/2009 — DATE
/S/ Deb Bischoff — PAVEMENT POLICY & DESIGN ENGINEER
FHWA

GENERAL NOTES

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

(1) W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. APPROVED PLASTIC BLOCKOUT DESIGNS MAY VARY FROM THIS TYPICAL DETAIL WHEN USED IN CONJUNCTION WITH STEEL POSTS.

DO NOT MIX STEEL POSTS AND WOOD POSTS IN A SINGLE INSTALLATION.

(2) USE STRUCTURAL STEEL POSTS CONFORMING TO ASTM A 36. GALVANIZED POSTS ACCORDING TO AASHTO M 111. EITHER SET THE POSTS IN DRILLED HOLES OR DRIVE TO GRADE. REMOVE MUSHROOMING CAUSED BY DRIVING AND REPAIR DAMAGED SPELTER COATING ON GALVANIZED POSTS.

(3) INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

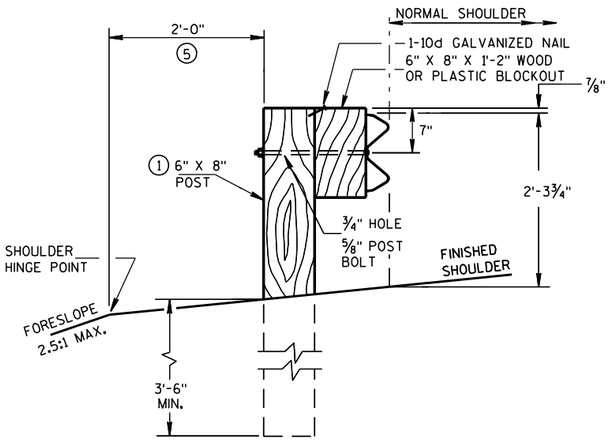
(4) USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.

(5) IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).

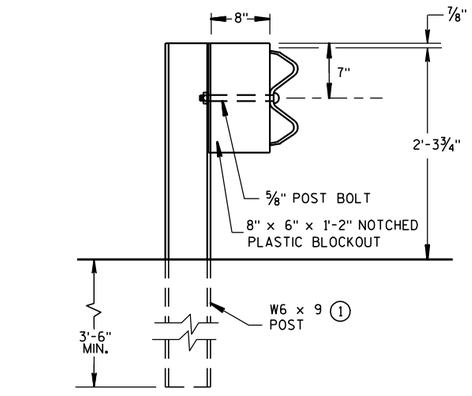
(6) IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2½ INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN YHE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATEY.

INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS.

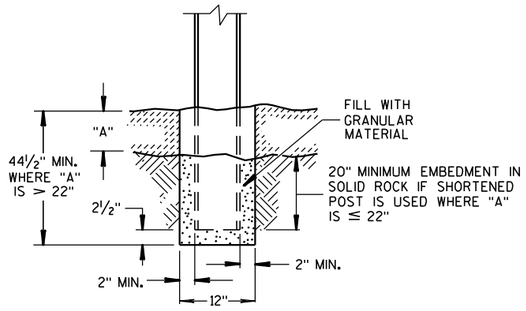
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



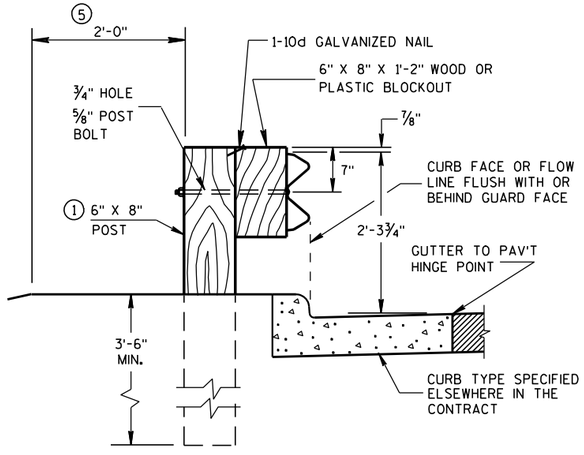
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



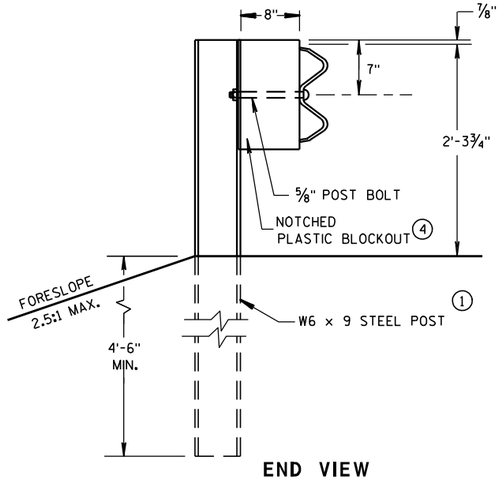
END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION



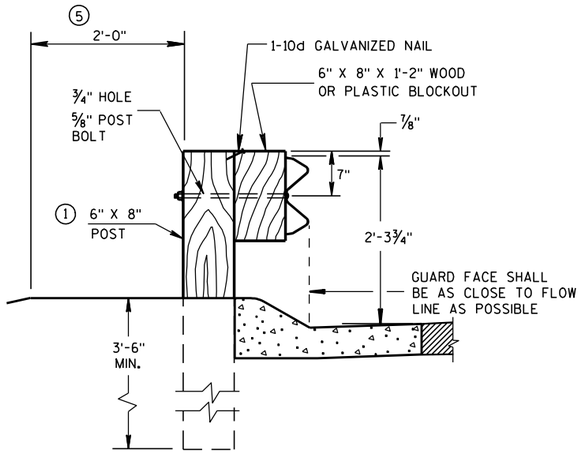
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (6)



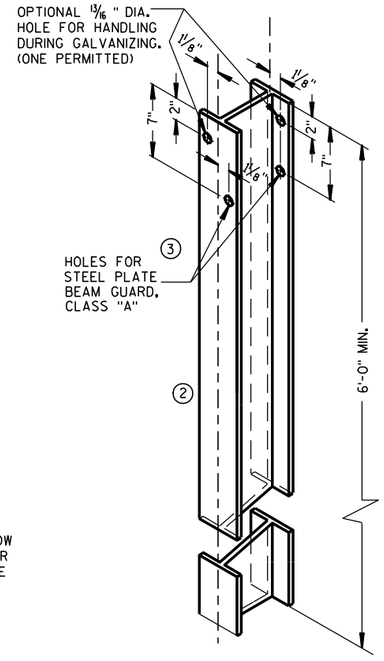
END VIEW
LOCATED ALONG A CURBED ROADWAY



END VIEW
LONGER POST AT HALF
POST SPACING W BEAM
(LHW)

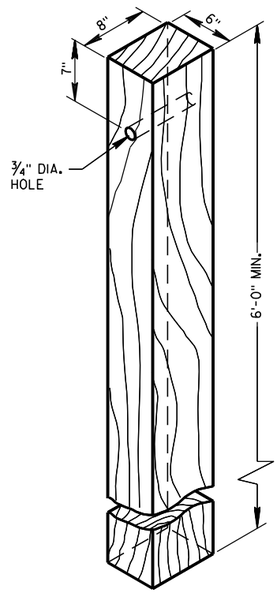


END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY

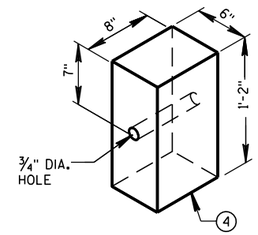


STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) (1)

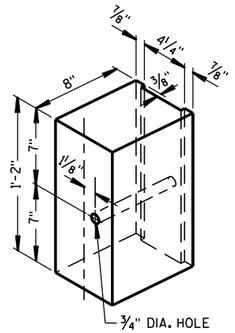
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



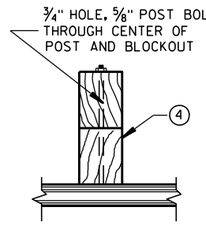
WOOD POST
(6"X8") NOMINAL



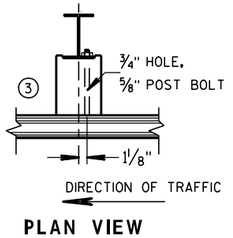
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



TYPICAL NOTCHED (1)
PLASTIC BLOCKOUT
FOR STEEL POSTS



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



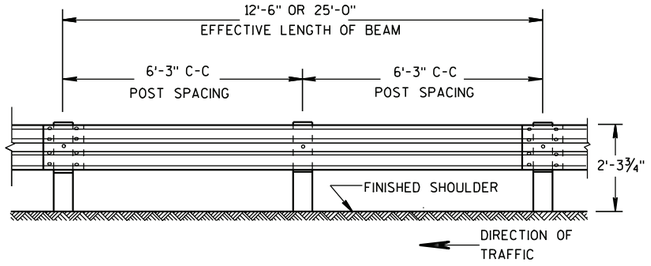
PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

STEEL PLATE BEAM GUARD,
CLASS "A"
INSTALLATION & ELEMENTS

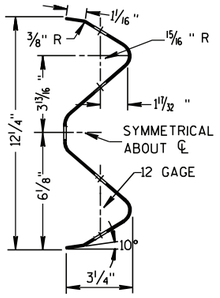
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 15-7a

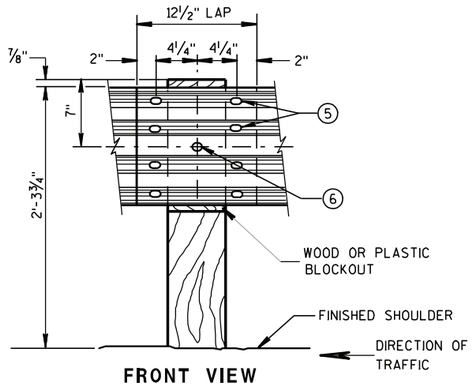


FRONT VIEW

POST SPACING STANDARD INSTALLATION



SECTION THRU W BEAM

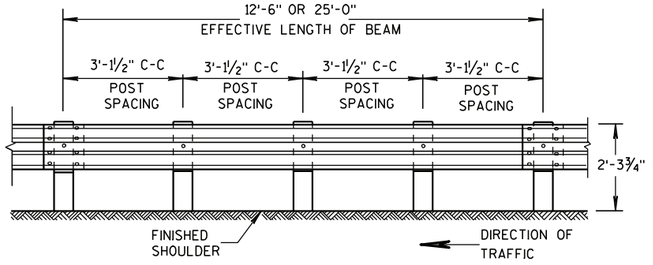


FRONT VIEW

BEAM SPLICE AT WOOD POST AND POST MOUNTING DETAIL

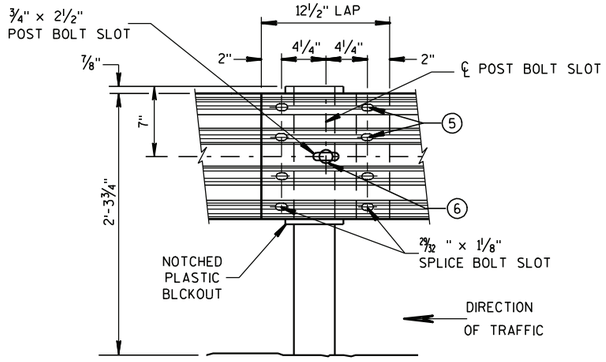
GENERAL NOTES

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.
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. 8 - 5/8" ϕ X 2 " BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.
6. 5/8" ϕ X 1'-6" BUTTON HEAD BOLT AND AND RECESS NUT WITH ROUND WASHER UNDER NUT.



FRONT VIEW

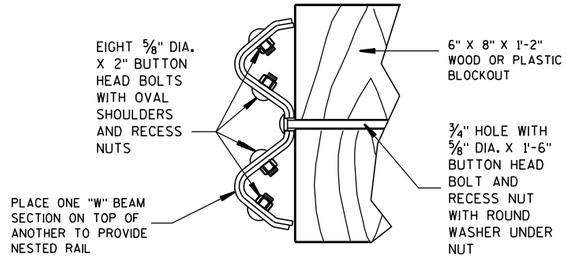
POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)



FRONT VIEW

BEAM SPLICE AT STEEL POST

TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD

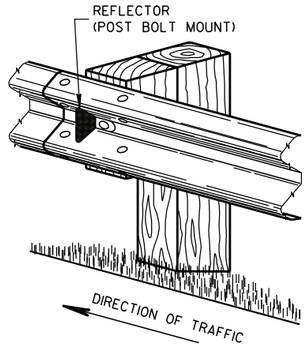


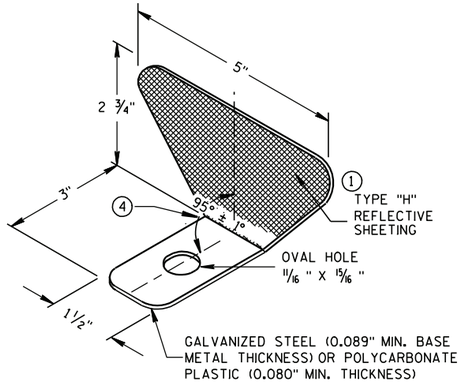
NESTED W BEAM (NW)

USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR CONSTRUCTING NESTED W BEAM (NW)

REFLECTOR SPACING (2)

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



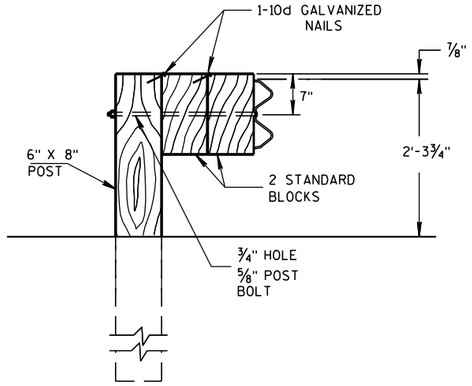


ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION (1)

STEEL PLATE BEAM GUARD,
CLASS "A",
INSTALLATION & ELEMENTS

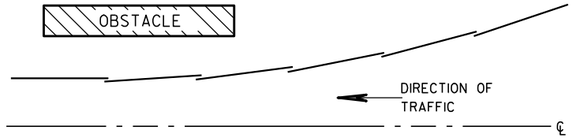
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 15-7b

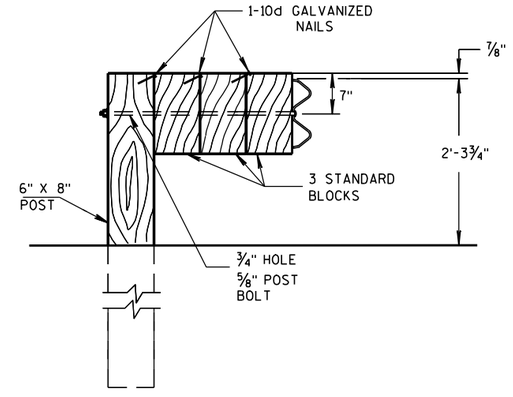


DETAIL FOR DOUBLE BLOCKS

THE NUMBER OF DOUBLE BLOCK POSTS WITHIN A BARRIER RUN IS UNLIMITED

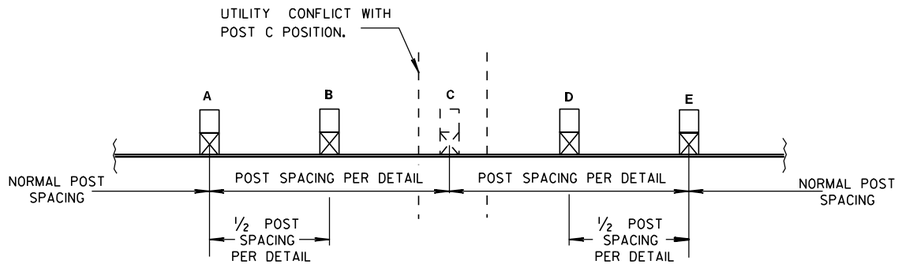


PLAN VIEW
BEAM LAPPING DETAIL



DETAIL FOR TRIPLE BLOCKS

TRIPLE BLOCK DETAIL IS LIMITED TO ONE LOCATION WITHIN A BEAM GUARD RUN.



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

NOTES: USE DOUBLE OR TRIPLE BLOCKS WHEN UNDERGROUND OBSTACLES PREVENT THE POST FROM BEING INSTALLED.

DO NOT USE EXTRA 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.

STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

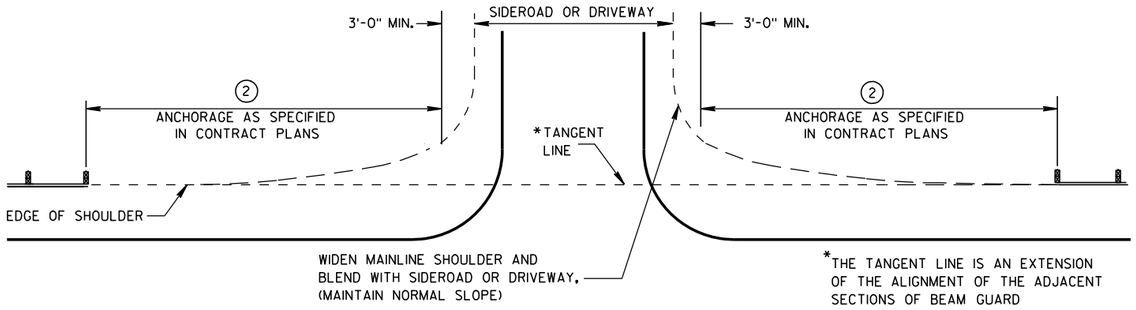
APPROVED

5/23/11 — DATE

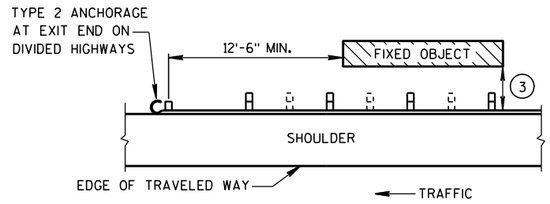
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER

FHWA

6
S.D.D. 14 B 15-7c



BEAM GUARD AT SIDEROADS OR DRIVEWAYS



BEAM GUARD AT OBSTACLES EXIT END - ONE WAY TRAFFIC

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE PERTINENT STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

W6 X 9 OR W6 X 8.5 STEEL POSTS WITH NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

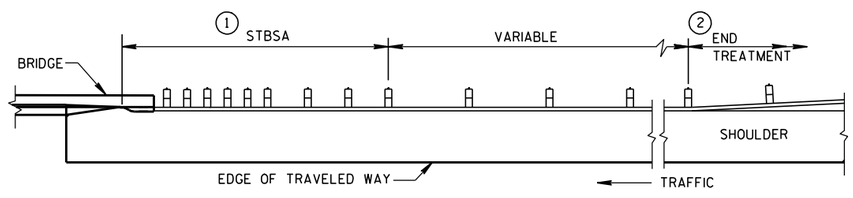
THE LOCATIONS AND LENGTHS OF BEAM GUARD ARE SHOWN ELSEWHERE IN THE PLAN.

(1) STEEL THRIE BEAM STRUCTURAL APPROACH (STBSA) - SEE CURRENT SDD 14B20.

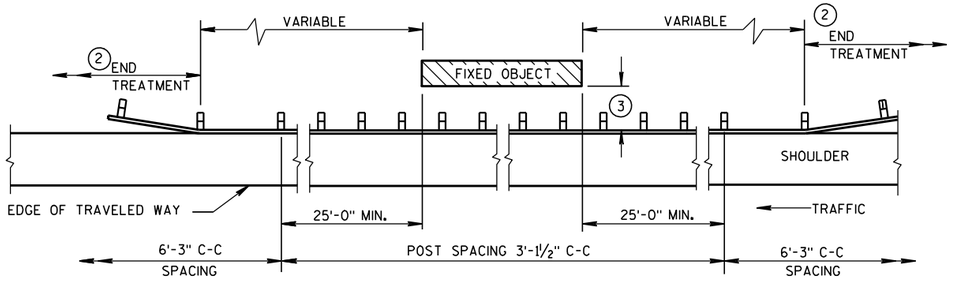
(2) USE AN APPROVED END TREATMENT FOR THE TRAFFIC APPROACH SIDE OF BRIDGE/OBSTACLES. USE TYPE 2 ANCHORAGE ONLY AT THE DOWNSTREAM ENDS OF BEAM GUARD LOCATED ALONG ROADWAYS WITH ONE WAY TRAFFIC.

(3)

MINIMUM LATERAL DISTANCE FROM FACE OF BEAM GUARD TO FIXED OBJECT	POST SPACING
3'-6"	3' - 1½"
4'-6"	6' - 3"

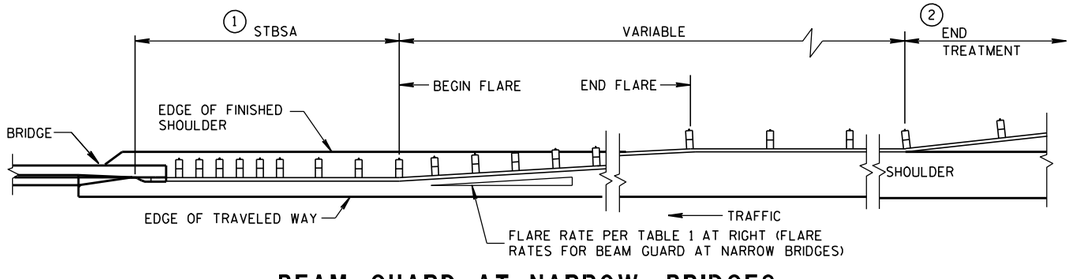


BEAM GUARD AT FULL WIDTH BRIDGES



BEAM GUARD AT OBSTACLES - TWO WAY TRAFFIC

(RAIL TO OBSTACLE CLEARANCE 3'-6" TO 4'-6")



BEAM GUARD AT NARROW BRIDGES
(FLARED TO SHOULDER EDGE, THEN PARALLEL TO ROADWAY)

TABLE 1
FLARE RATES FOR BEAM GUARD AT NARROW BRIDGES

POSTED SPEED (MPH)	FLARE RATE
25	13:1
30	15:1
35	16:1
40	18:1
45	21:1
50	24:1
55	26:1
65	30:1

STEEL PLATE BEAM GUARD CLASS "A" AT BRIDGES, OBSTACLES AND SIDEROADS/DRIVEWAYS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8-21-07 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 14 B 18-6a

BILL OF MATERIALS

NOTE NO.	QTY.	DESCRIPTION
(1)	4	WOOD BREAKAWAY TERMINAL POST: 5½" X 7½" X 3'-9"
(2)	**	STEEL TUBE: OPTION 1 - QUANITY OF 4 TS 8" X 6" X 0.188", 4'-6" LONG OR OPTION 2 - QUANITY OF 2 TS 8" X 6" X 0.188", 6'-0" AND 2 TS 8" X 6" X 0.188", 4'-6" LONG
(3)	2	SOIL PLATE: 2'-0" X 1'-6" X ¼" **
(4)	4	WOOD BREAKAWAY CRT POST: 6" X 8" X 6'-0"
(5)	6	WOOD OFFSET BLOCKS: 6' X 8" X 1'-2"
(6)	1	PIPE SLEEVE: 2" X 5 ½" STANDARD PIPE
(7)	1	BEARING PLATE
(8)	1	BCT CABLE ASSEMBLY
(9)	1	CABLE ANCHOR BOX
(10)	1	STRUT & YOKE
(11)	1	STEEL PLATE BEAM, END PANEL 12 GA. 13'-6½" LONG FOR SKT-350, ET-2000 AND ET-2000 PLUS
(12)	3	STEEL PLATE BEAM: 12 GA. 13'-6½"
(13)	1	ET-2000/ET-2000 PLUS GUARDRAIL EXTRUDER OR SKT-350 IMPACT HEAD: AS FURNISHED BY MANUFACTURER
(14)	1	REFLECTIVE SHEETING TYPE H: 18" X 18"
(15)	1	E.A.T. MARKER POST

GENERAL NOTES

FOLLOW MANUFACTURE'S BOLTING RECOMMENDATIONS. IF NONE ARE AVAILABLE, INSTALL ⅝" ϕ X 1'-6" BUTTON HEAD BOLTS AT ALL POSTS EXCEPT FOR POST 1.

(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) THE 13 SLOT FIRST RAIL PANEL MAY BE USED IN LIEU OF THE 3 SLOT RAIL PANEL ON SKT-350 ONLY.

(D) THE TOP OF THE STEEL TUBE ON POSTS 1 THROUGH 4 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

(E) THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST 5 THROUGH 8 SHALL BE ¾" ABOVE THE FINISHED GROUND LINE.

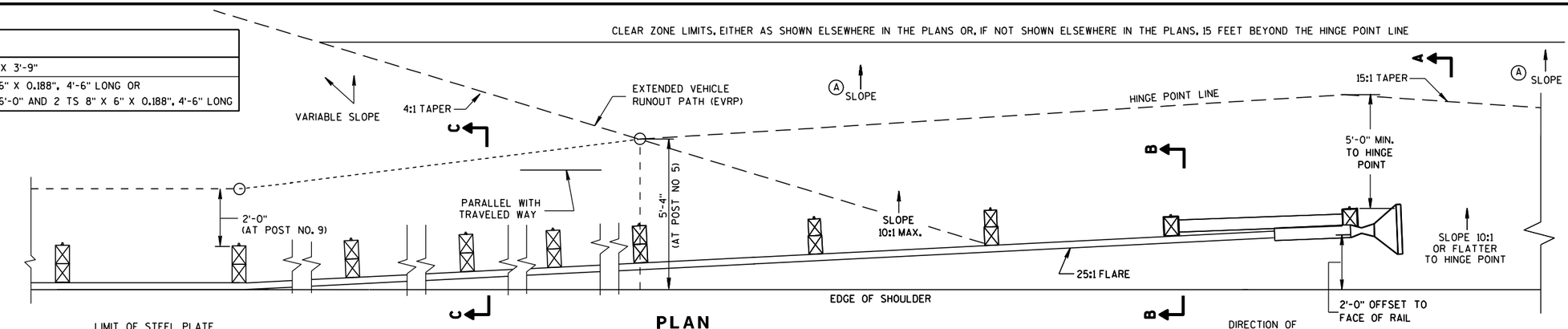
(F) SHEETING IS ATTACHED TO 0.040 ALUMINUM SHEET AND ATTACHED TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER OF E.A.T.

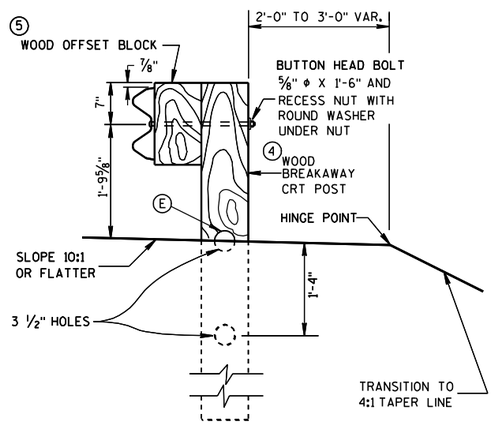
STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.

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

* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

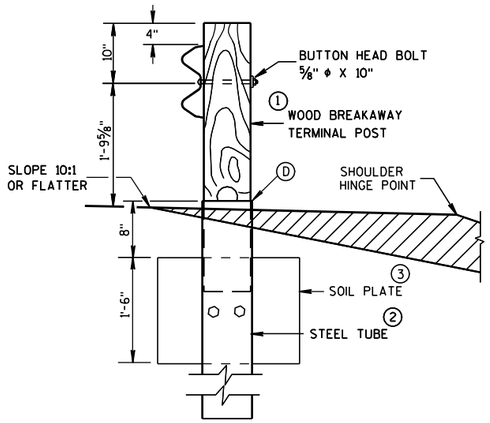
** SDD SHOWS 4 - 54 INCH STEEL TUBES WITH SOIL PLATES INSTALLED ON POST 1 AND POST 2. POST 3 AND 4 DO NOT NEED SOIL PLATES. AN ALTERNATIVE INSTALLATION WOULD CONSIST OF 2 - 72 INCH STEEL TUBES ON POST 1 AND POST 2 AND 54 INCH SOIL TUBES ON POSTS 3 AND 4. THE ALTERNATIVE INSTALLATION DOES NOT REQUIRE SOIL PLATES.





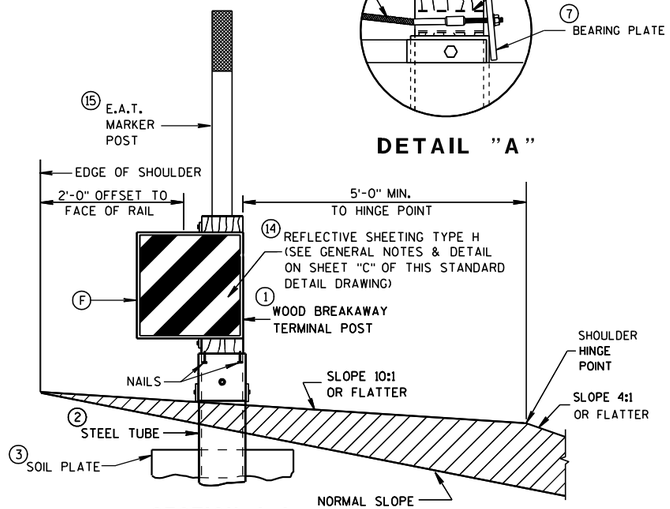
SECTION C-C

TYPICAL AT POST NOS. 6, 8



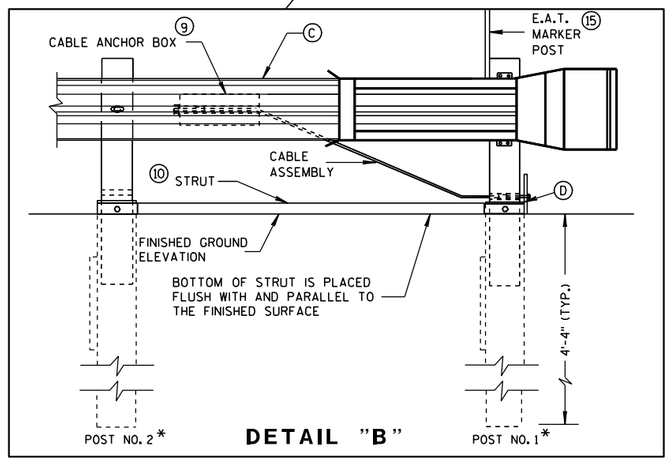
SECTION B-B

TYPICAL AT POST NO. 2*



SECTION A-A

TYPICAL AT POST NO. 1*

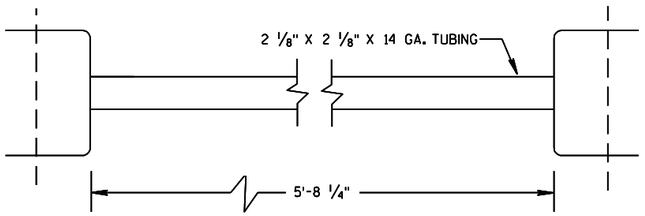


STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL

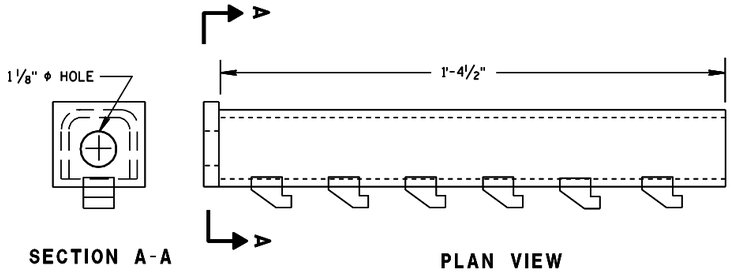
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

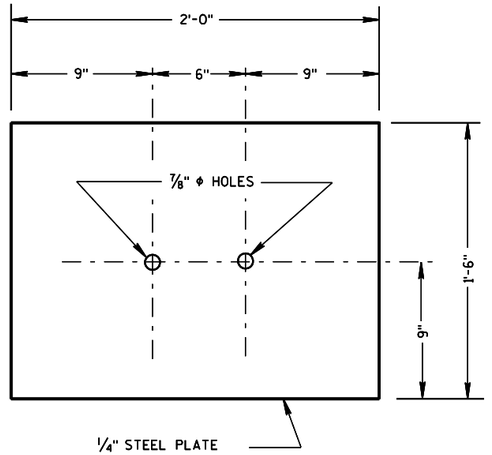
S.D.D. 14 B 24-7a



⑩ STRUT DETAIL (SKT-350)

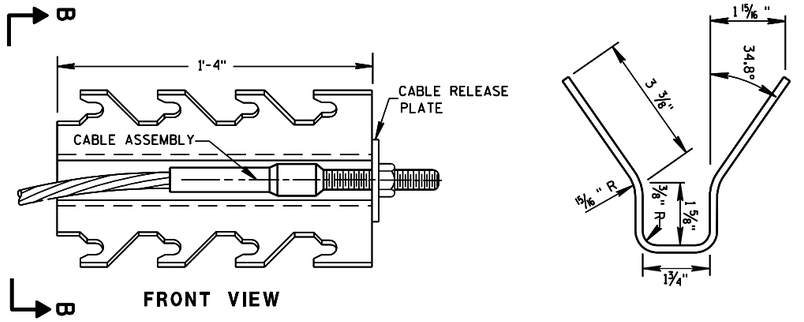


⑨ CABLE ANCHOR BOX (ET-2000/ET-2000 PLUS)



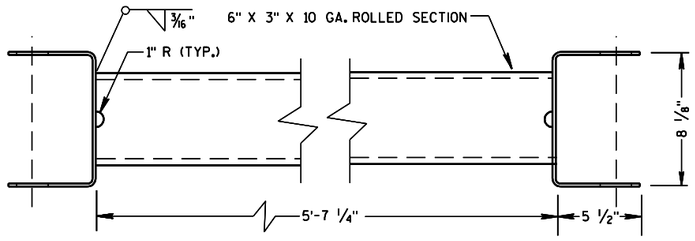
③ SOIL PLATE

(SKT-350, ET-2000/ET-2000 PLUS)



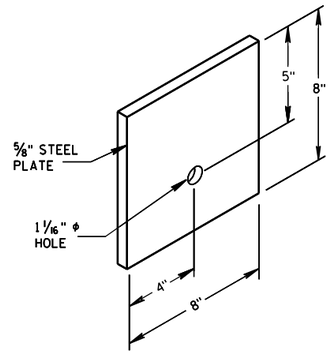
⑨ CABLE ANCHOR BOX (SKT-350)

(SKT-350)



⑩ STRUT DETAIL (ET-2000/ET-2000 PLUS)

(ET-2000/ET-2000 PLUS)



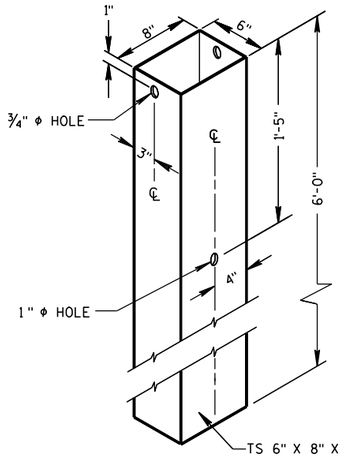
⑦ STEEL BEARING PLATE

(SKT-350, ET-2000/ET-2000 PLUS)

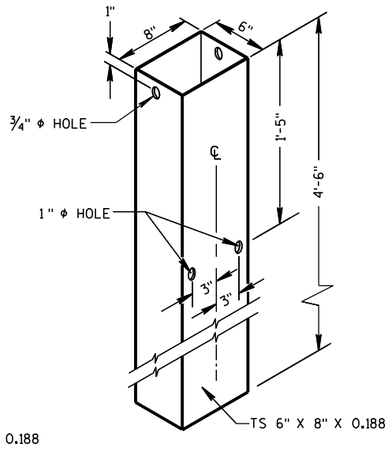
STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

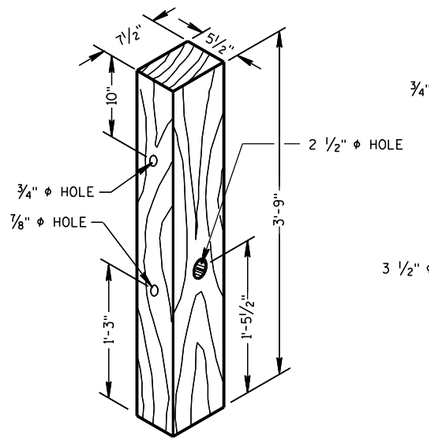
6
S.D.D. 14 B 24-7b



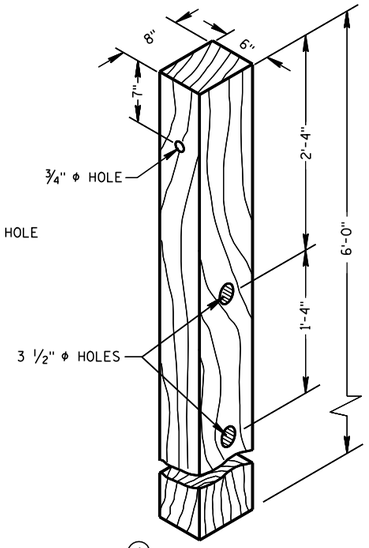
(2) 72" STEEL TUBE
(POSTS NO. 1-4



(2) 54" STEEL TUBE
(POSTS NO. 1-4



(1) TERMINAL POST
(POSTS NO. 1-4



(4) CRT POST
(POSTS NO'S 5-8

WOOD BREAKAWAY POSTS

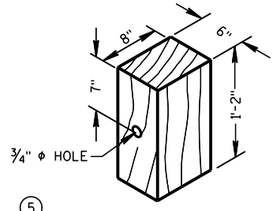
GENERAL NOTES

STEEL PLATE BEAM GUARD, ENERGY ABSORBING TERMINAL SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH, WHICH SHALL INCLUDE HARDWARE, STEEL PLATE BEAM GUARD, POSTS, REFLECTIVE SHEETING AND INSTALLATION AS SHOWN.

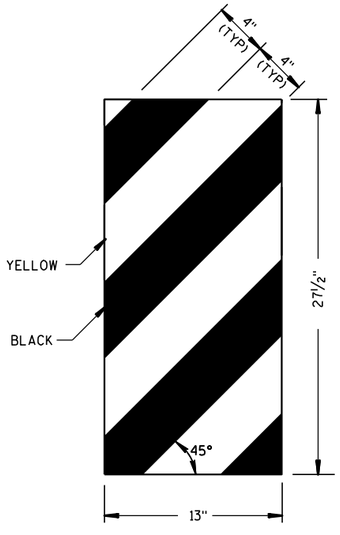
WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 ½" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH ADEQUATELY COMPACTED MATERIAL EXCAVATED FROM THE HOLE.

SEE APPROVED PRODUCTS LIST FOR ACCEPTABLE E. A. T. MARKER POST.

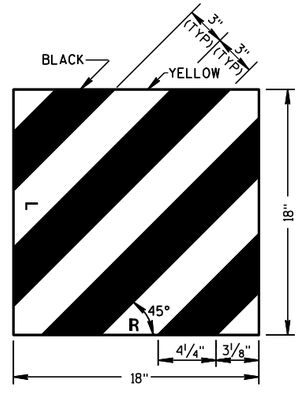
(G) ½" DIA. X 3" LAG BOLT WITH WASHER.



(5) WOOD OFFSET BLOCK
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2

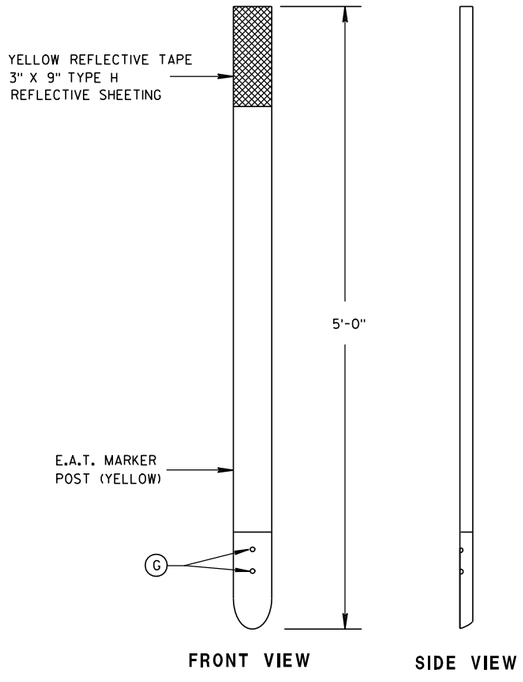


ET-2000 PLUS ONLY

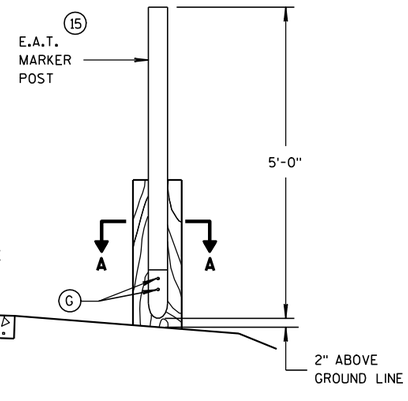


ET-2000 AND SKT-350

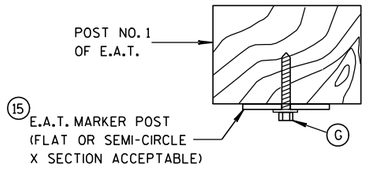
(14) REFLECTIVE SHEETING DETAILS



(15) E.A.T. MARKER POST



TYPICAL INSTALLATION OF E.A.T.
MARKER POST BACKSIDE OF POST NO. 1
(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

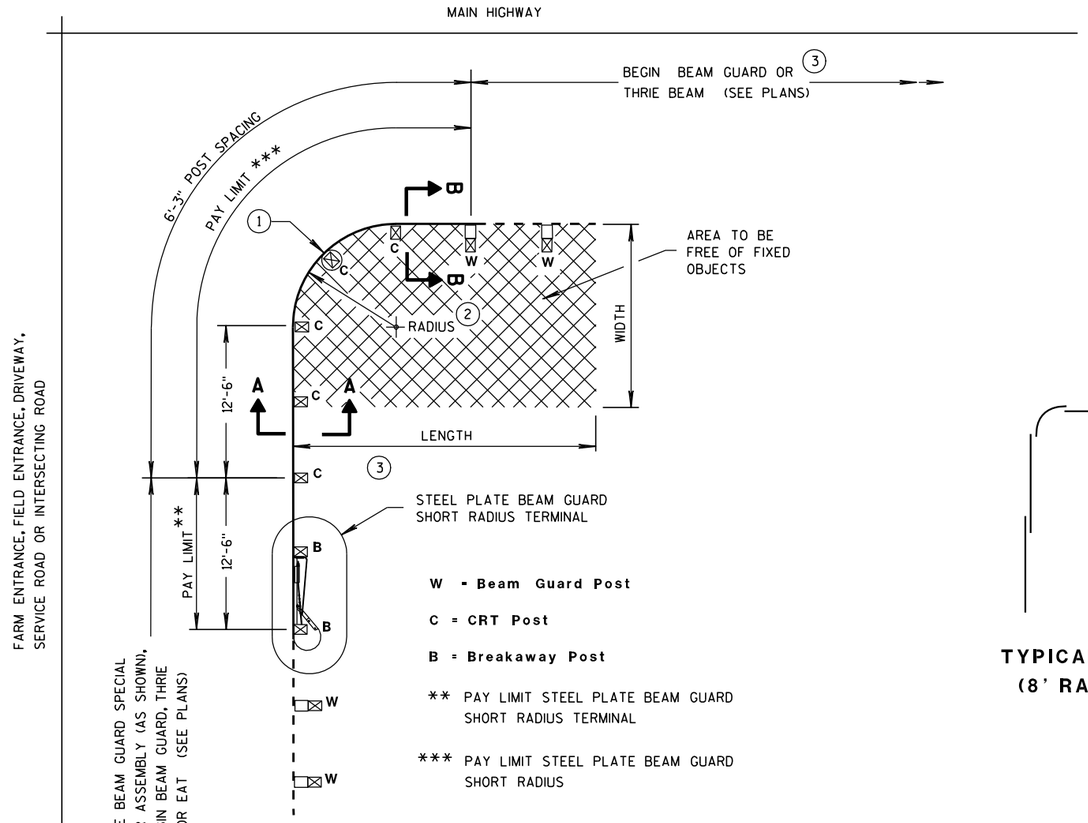
APPROVED
4-12-10
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
64
FHWA

6

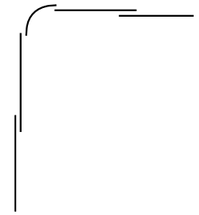
S.D.D. 14 B 24-7c

6

S.D.D. 14 B 24-7c



TYPICAL LAYOUT
(8' RADIUS SHOWN)



TYPICAL LAP SPLICES
(8' RADIUS SHOWN)

GENERAL NOTES

ALL ANGLES, CHANNELS, AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36 AND THE STRUCTURAL TUBING SHALL CONFORM TO ASTM A 500. WELDING SHALL MEET THE CURRENT REQUIREMENTS OF THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE ANSI/AWS D1.1. ALL STRUCTURAL STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 123. PUNCHING, DRILLING, CUTTING, OR WELDING WILL NOT BE PERMITTED AFTER GALVANIZING. FURNISH AND INSTALL HARDWARE PER STANDARD SPECIFICATION 614.2. UNLESS NOTED OTHERWISE.

SHOP BEND CURVED RAIL SECTIONS.

SEE STANDARD DETAIL DRAWING 14 B 15 FOR OTHER DETAIL.

(1) ON THE 8 FOOT RADIUS INSTALLATION, DO NOT INSTALL BUTTON HEAD BOLT AT CENTER CRT POST.

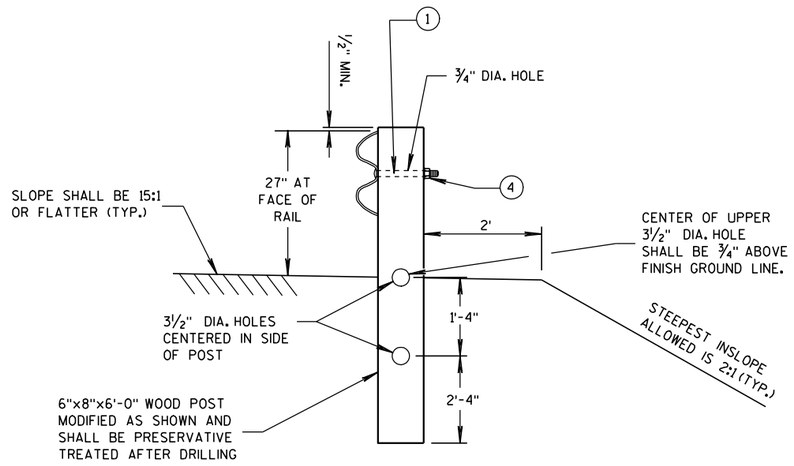
(2) RADIUS FROM 8' - 36'. SEE PLAN.

(3) HEIGHT TRANSITION MAY BE REQUIRED. SEE PLAN OR PROJECT ENGINEER.

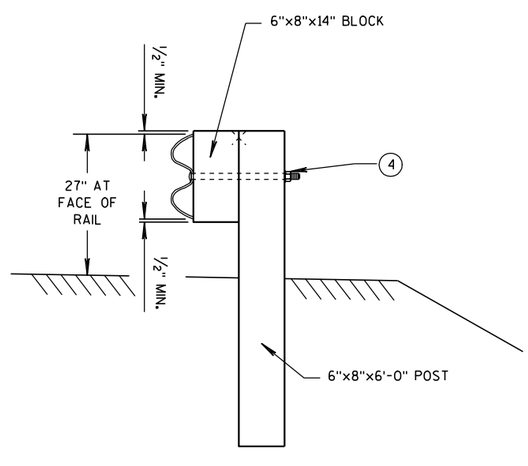
(4) 5/8" ø X 1'-6" BUTTON HEAD BOLT AND RECESS NUT WITH ROUND WASHER UNDER NUT.

RADIUS	NUMBER OF CRT POSTS	*NUMBER AND LENGTH OF CURVED RAILS	REQUIRED AREA FREE OF FIXED OBJECTS (LENGTH x WIDTH)
8'	5	1 at 12.5'	25' x 15'
16'	7	1 at 25'	30' x 15'
24'	9	1 at 25' and 1 at 12.5'	40' x 20'
32'	11	2 at 25'	50' x 20'

* THE NUMBER OF RAILS IS BASED ON A 90° INTERSECTION. SEE PLAN FOR NON 90° INSTALLATIONS.



SECTION A-A
(CRT POST)



SECTION B-B
(BEAM GUARD POST)

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

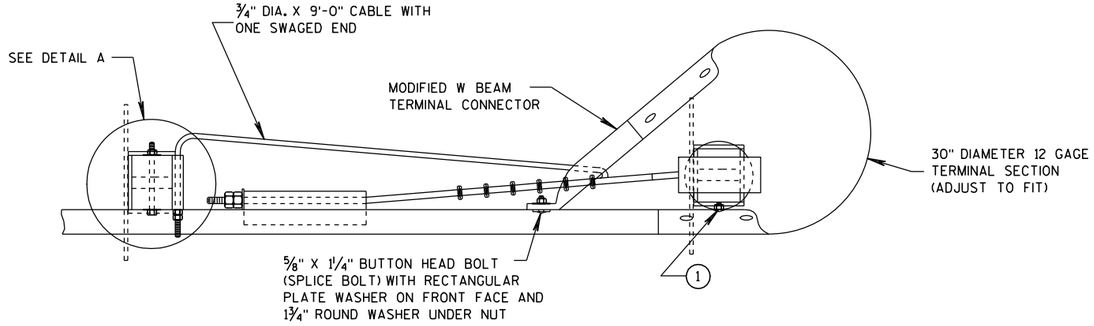
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

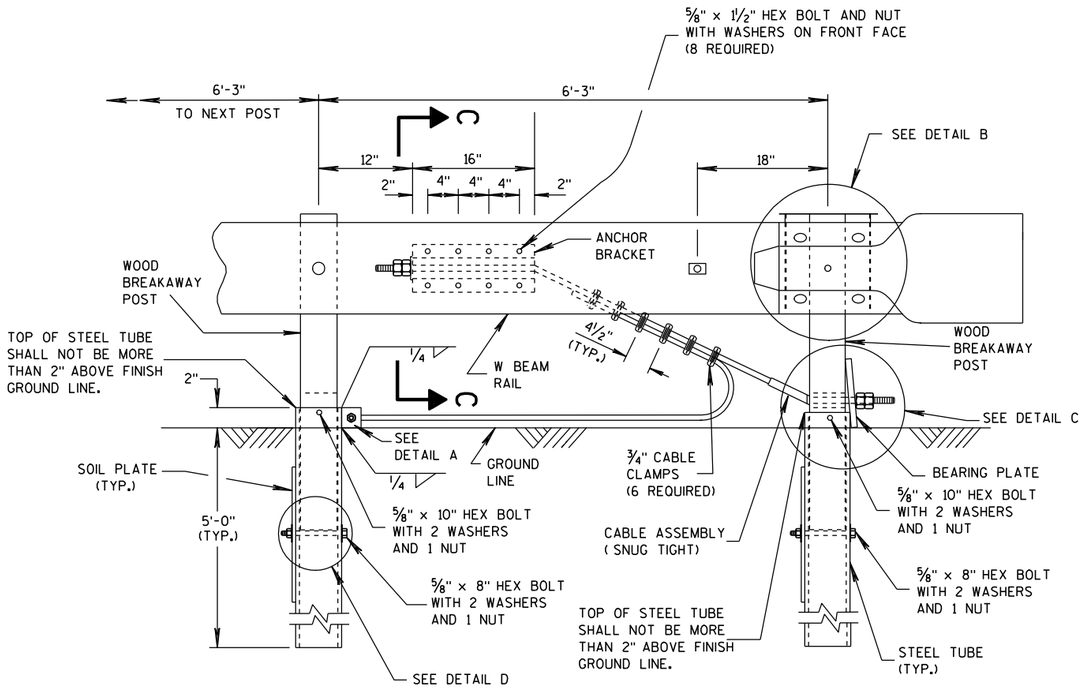
S.D.D. 14 B 27-1a

6

S.D.D. 14 B 27-1a



PLAN VIEW



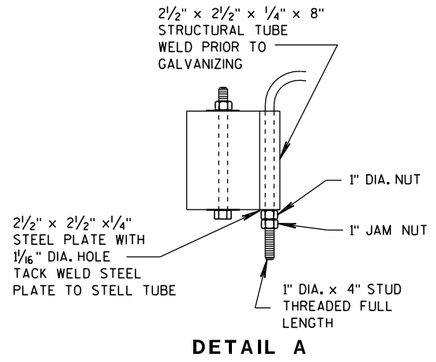
ELEVATION VIEW

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

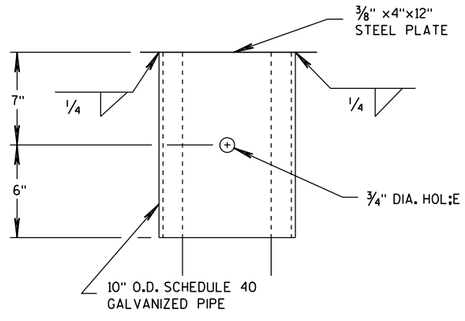
GENERAL NOTES

(1) ATTACH W BEAM RAIL TO THE STEEL PIPE WITH A ⅝" X 2" BUTTON HEAD BOLT WITH NO WASHER. CONNECTION TO THE POST IS NOT REQUIRED.

INSTALL GALVANIZED ¾" (6X19) PREFORMED WIRE OR INDEPENDENT WIRE ROPE CORE CONFORMING TO AASHTO M 30. MANUFACTURE WIRE ROPE OUT OF IMPROVED PLOW STEEL WITH A MINIMUM BREAKING STRENGTH OF 42,800 PSI.



DETAIL A



DETAIL B

(BEAM GUARD AND TERMINAL SECTION NOT SHOWN)

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

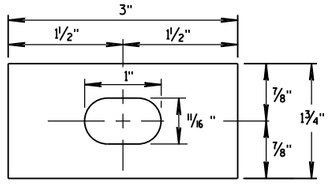
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

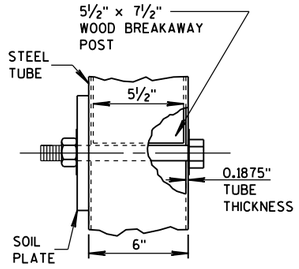
S.D.D. 14 B 27-1b

6

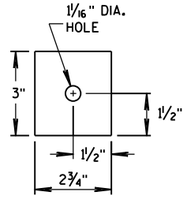
S.D.D. 14 B 27-1b



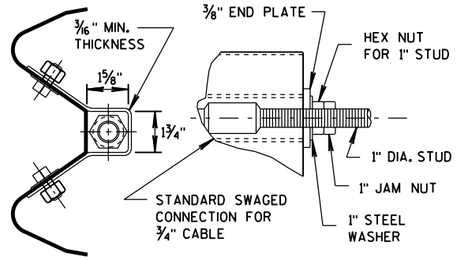
RECTANGULAR PLATE WASHER



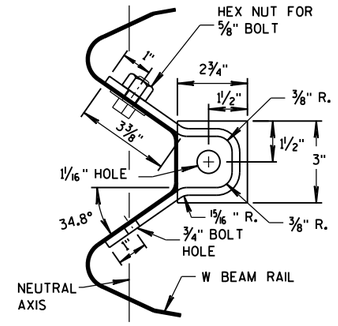
DETAIL D



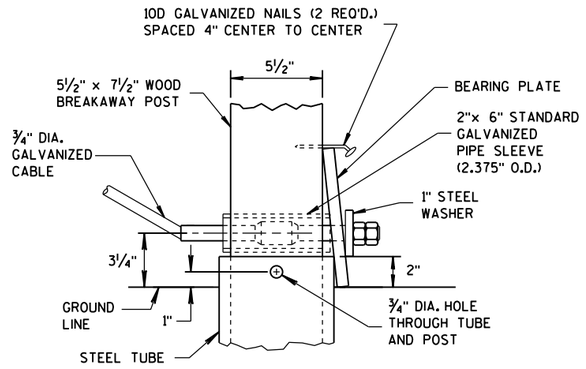
END PLATE



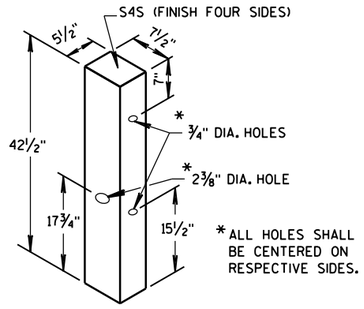
SECTION C-C
(END PLATE REMOVED)



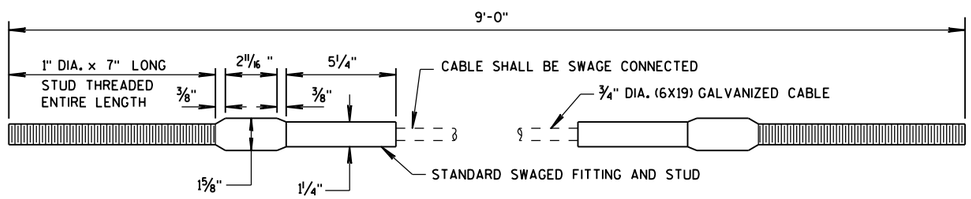
ANCHOR BRACKET



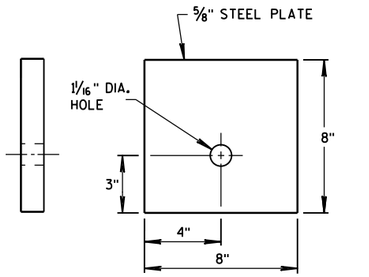
DETAIL C



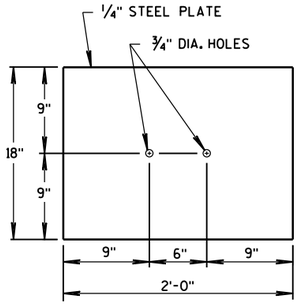
WOOD BREAKAWAY POST



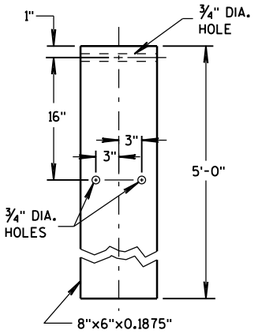
CABLE ASSEMBLY



BEARING PLATE



SOIL PLATE



STEEL TUBE

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/18/08 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 14 B 27-1c

6

S.D.D. 14 B 27-1c

GENERAL NOTES

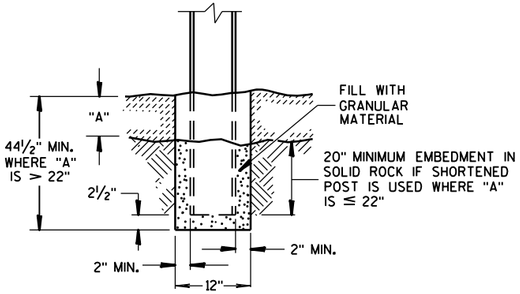
1. WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

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.

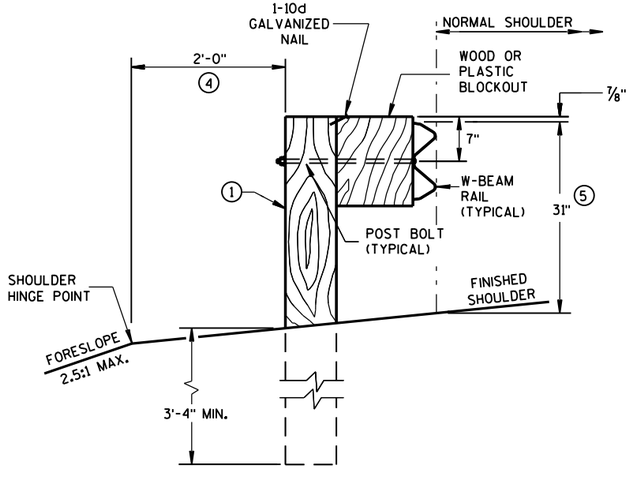
3. IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½ INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO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

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

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

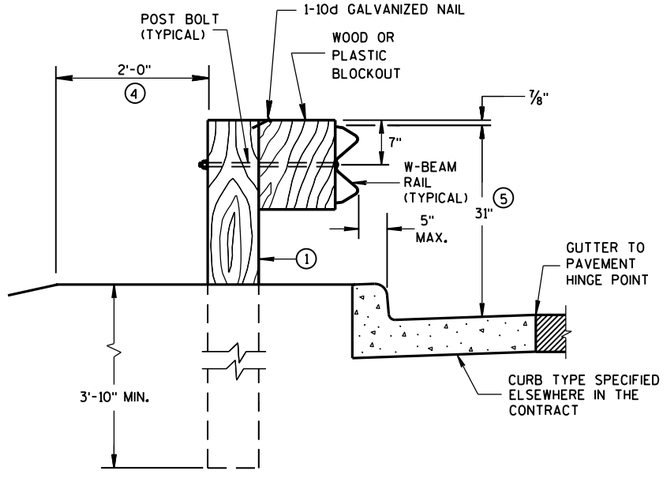


END VIEW
SETTING STEEL OR WOOD POST IN ROCK ③



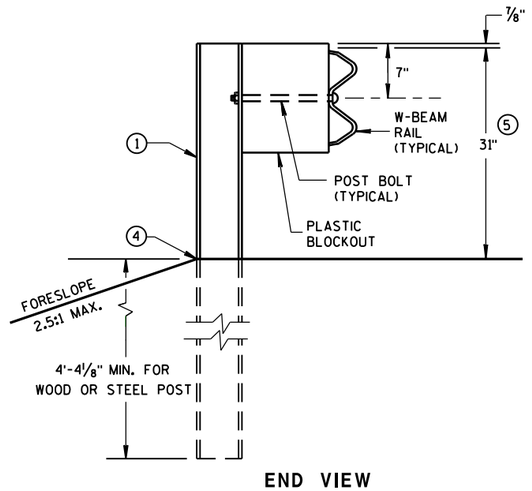
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



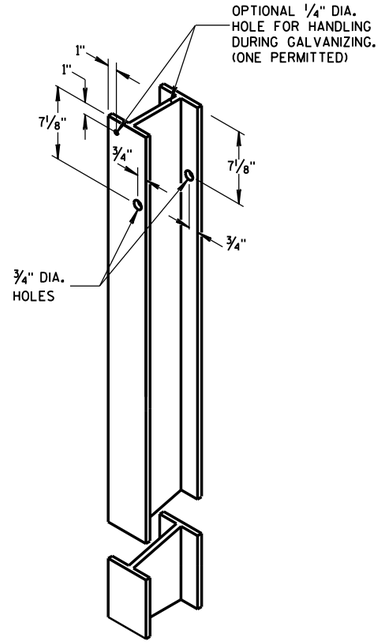
END VIEW

LOCATED ALONG A CURBED ROADWAY

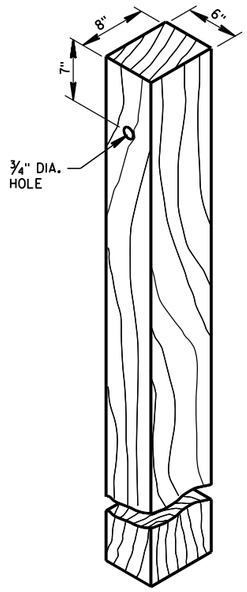


END VIEW

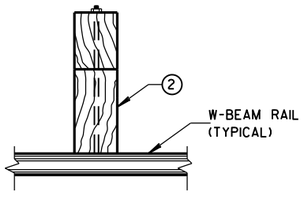
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



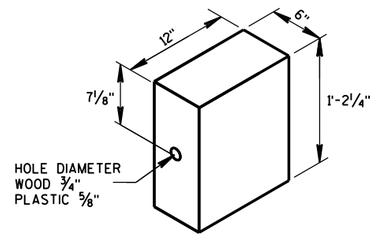
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



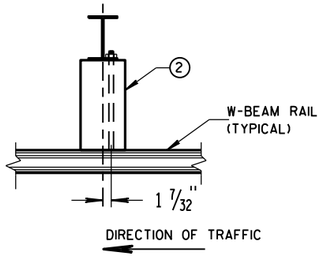
WOOD POST
(6" X 8") NOMINAL ①



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT ②

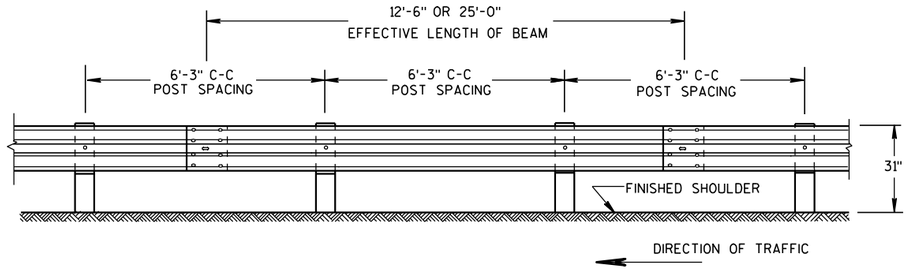


PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

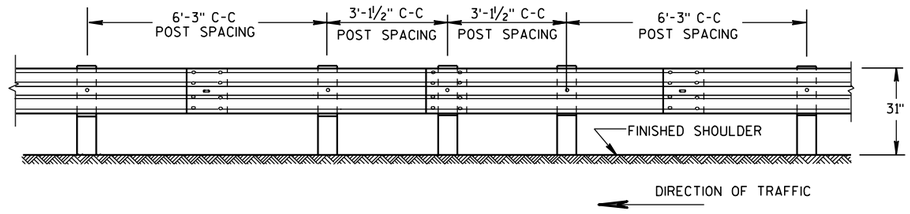
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 14 B 42-2a



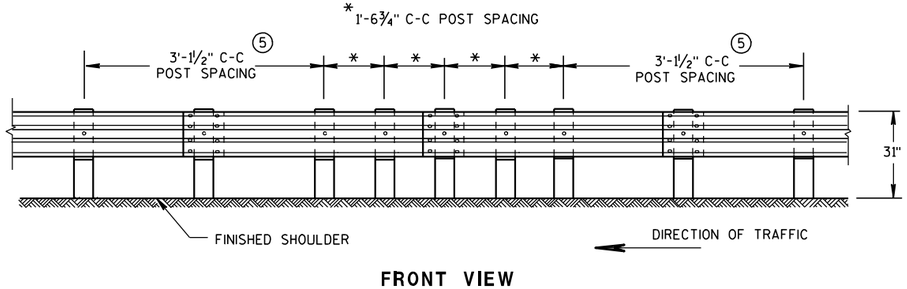
FRONT VIEW

POST SPACING STANDARD INSTALLATION



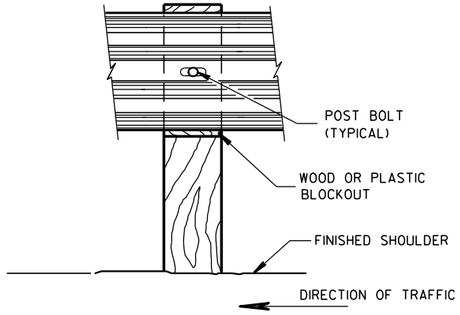
FRONT VIEW

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

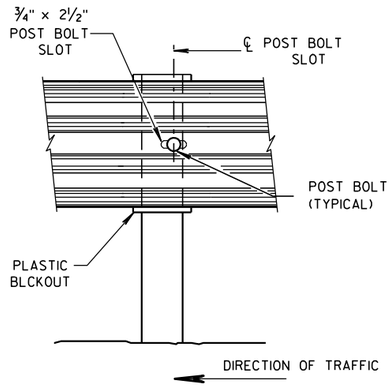


FRONT VIEW

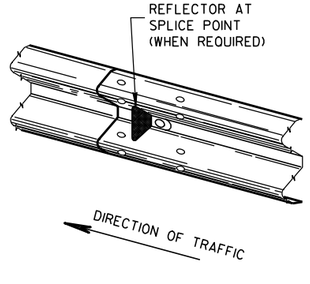
QUARTER POST SPACING (QS)

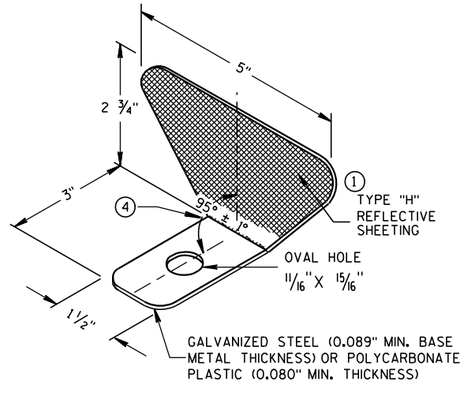


FRONT VIEW AT WOOD POST

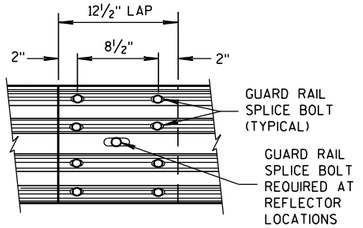


FRONT VIEW AT STEEL POST

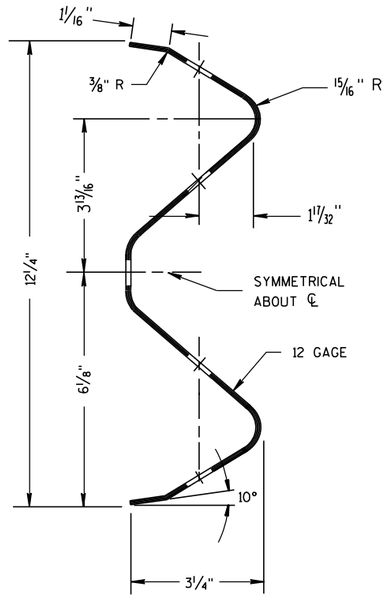




ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION ①



FRONT VIEW
MID-SPAN BEAM SPLICE



SECTION THRU W-BEAM RAIL

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

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

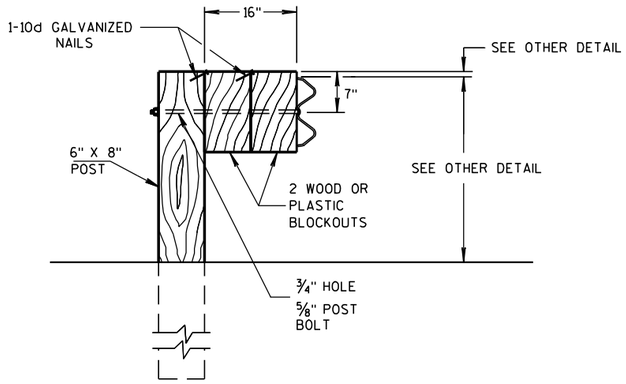
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

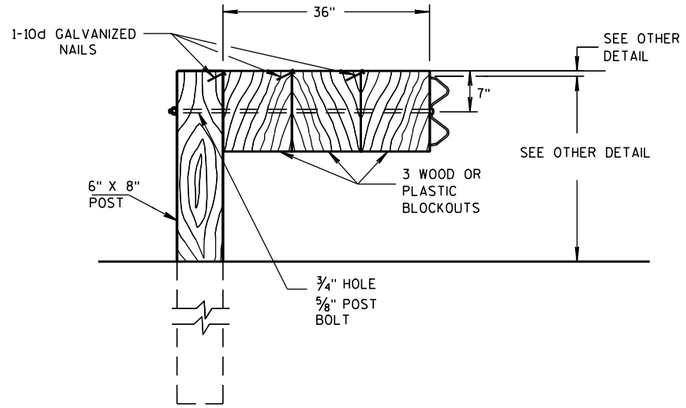
S.D.D. 14 B 42-2b

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.

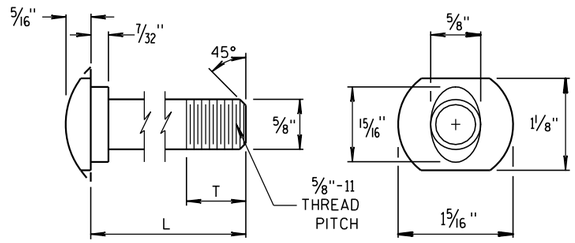


DETAIL FOR 36" BLOCKOUT DEPTH

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.

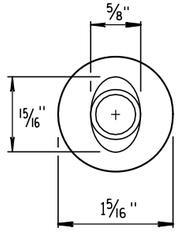
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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.

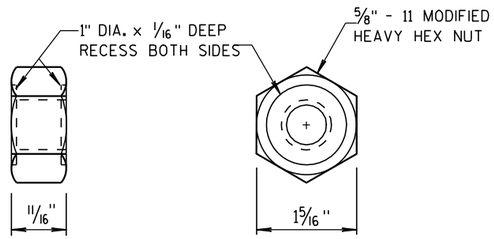


POST BOLT TABLE

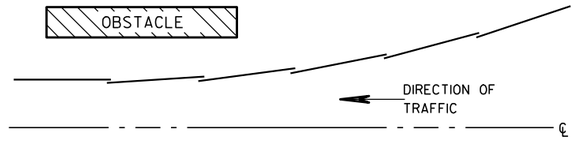
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

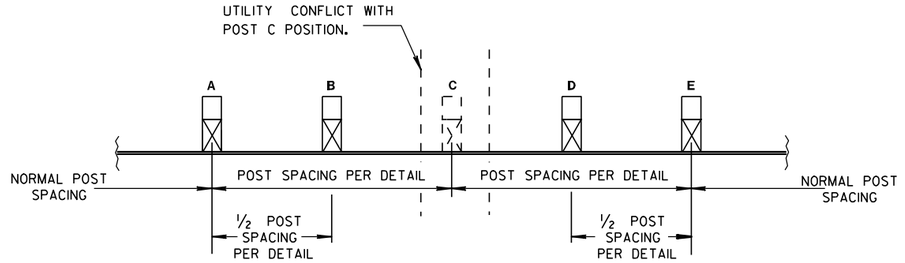


POST BOLT AND RECESS NUT

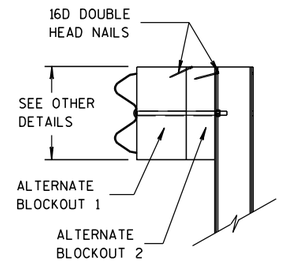


PLAN VIEW

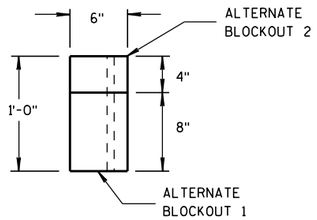
BEAM LAPPING DETAIL



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

ENT

6

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

6

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.

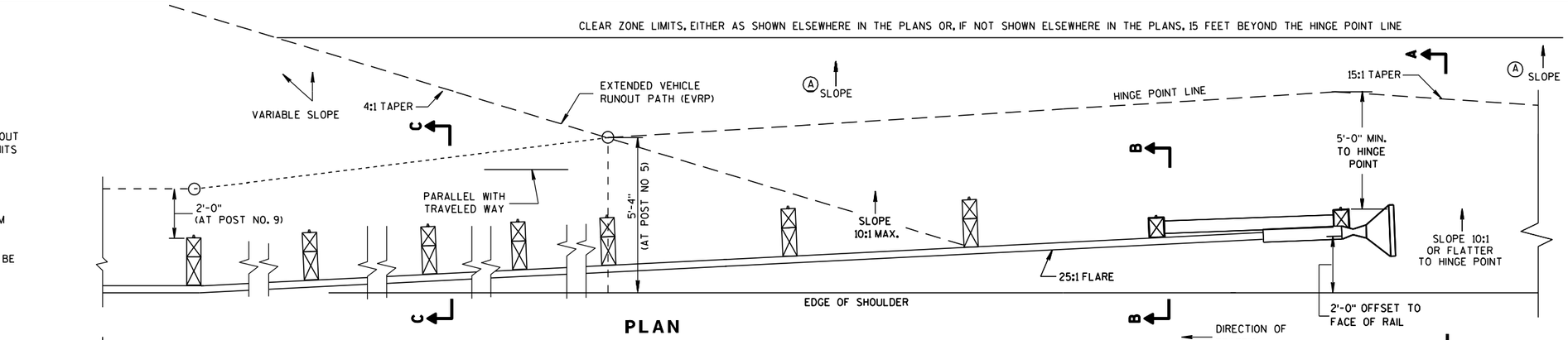
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

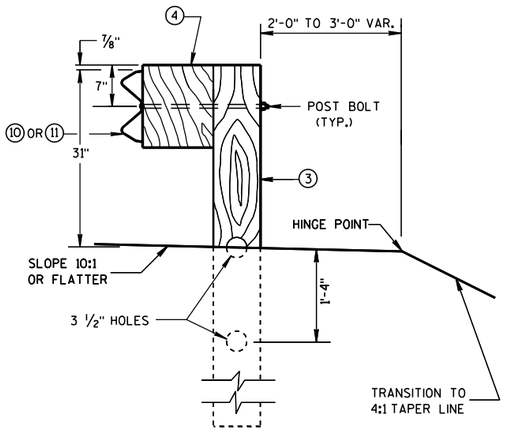
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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.

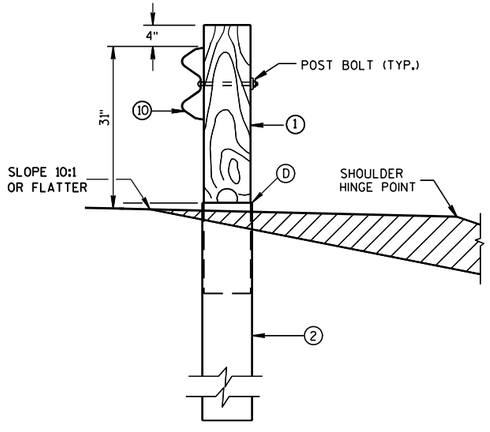
PATTERN AND COLORS ON REFLECTIVE SHEETING TYPE H ARE TO CONFORM TO OM3-L OR OM3-R OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

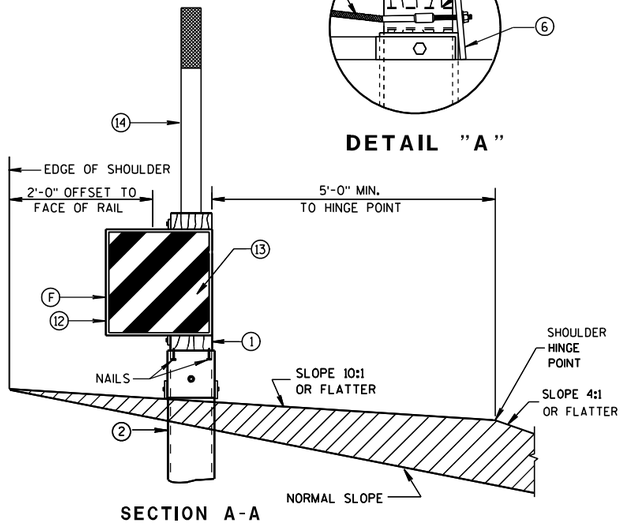




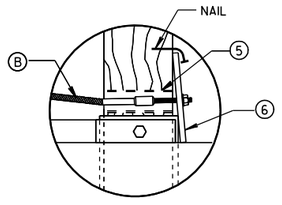
SECTION C-C
TYPICAL AT POST NOS. 3-9



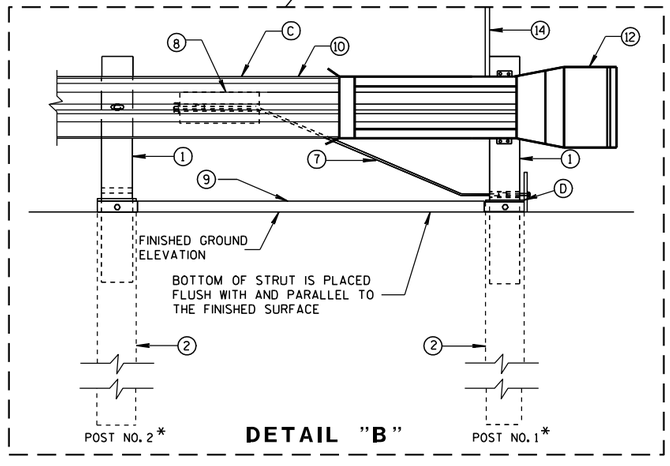
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"

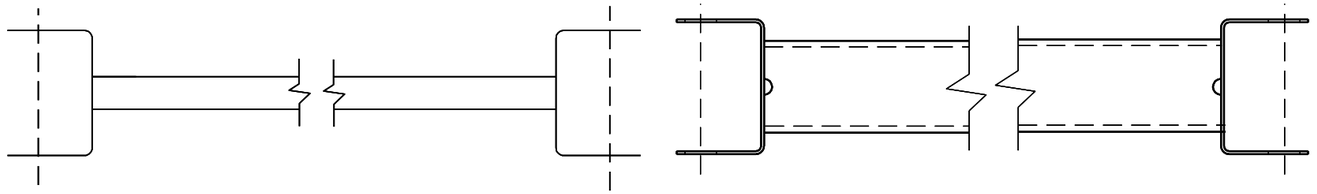


DETAIL "B"

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

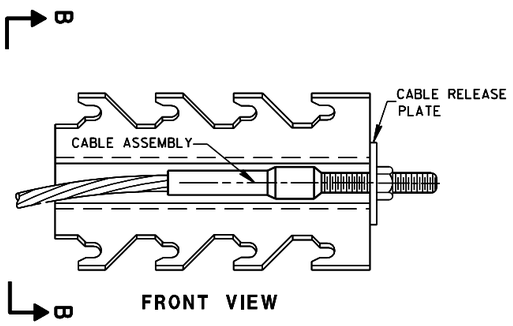
6
S.D.D. 14 B 44-1a



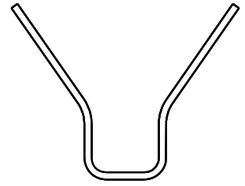
GENERIC GROUND STRUT (9) (H)

BILL OF MATERIALS

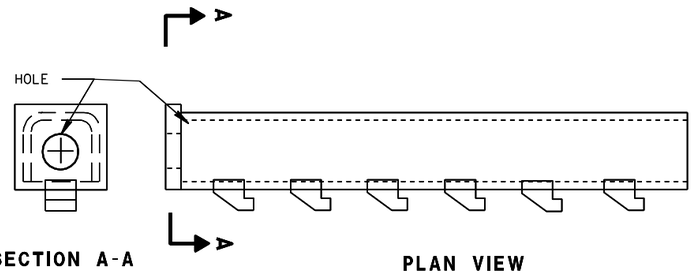
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	WOOD BREAKAWAY POST
(2)	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR 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)



FRONT VIEW



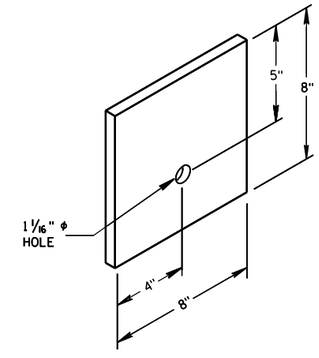
SECTION B-B



SECTION A-A

PLAN VIEW

GENERIC ANCHOR CABLE BOX (8) (H)



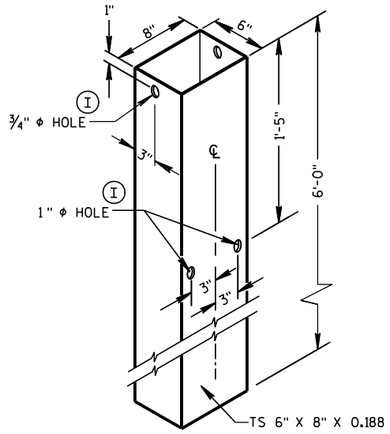
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

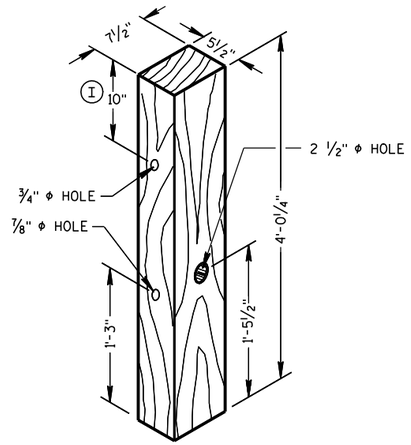
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

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

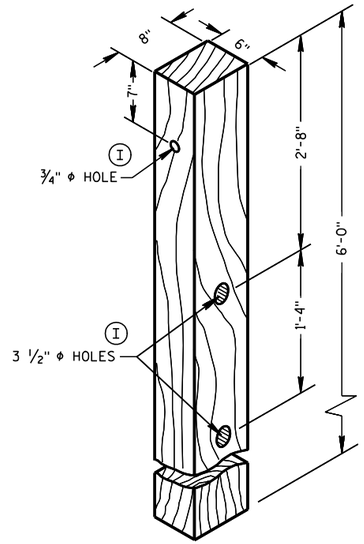


FOUNDATION TUBE (2)



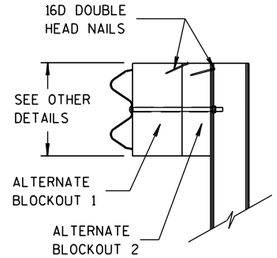
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

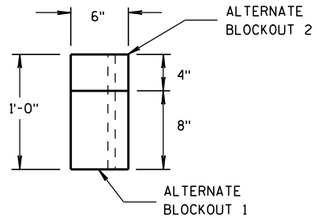


POSTS NUMBER 3-9

WOOD CRT POST (3)

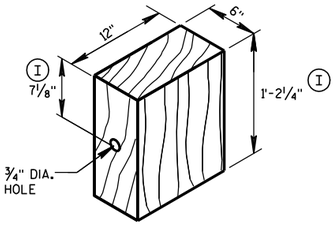


SIDE VIEW



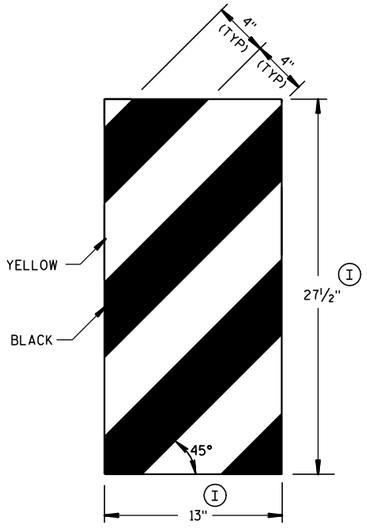
TOP VIEW

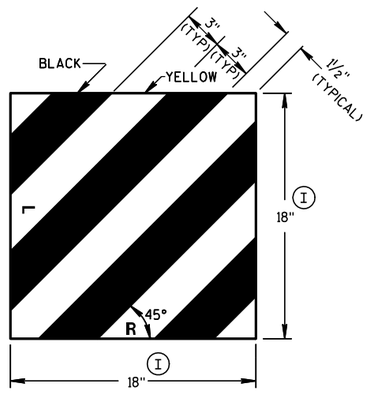
ALTERNATE WOOD BLOCKOUT DETAIL



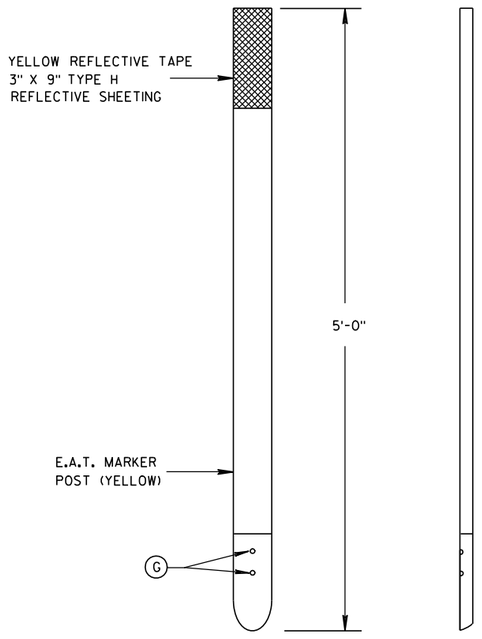
WOOD BLOCKOUT (4)

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





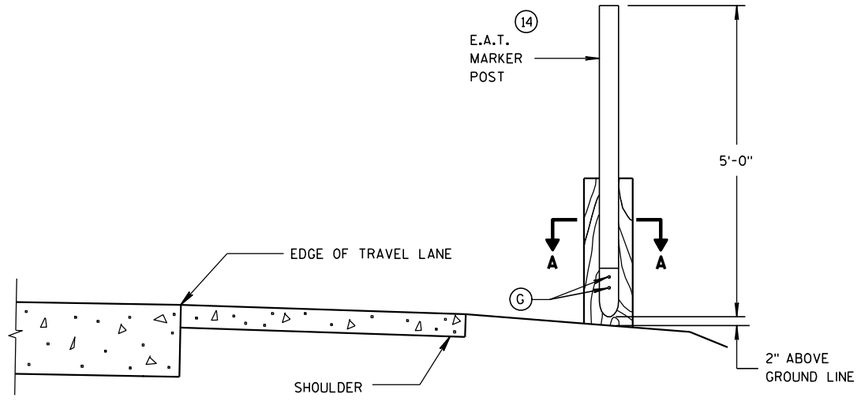
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

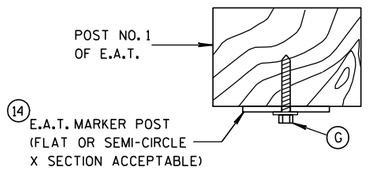
SIDE VIEW

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)

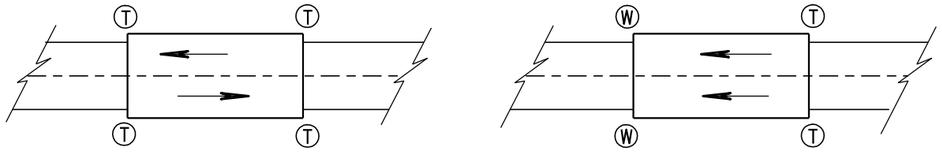


SECTION A-A

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



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

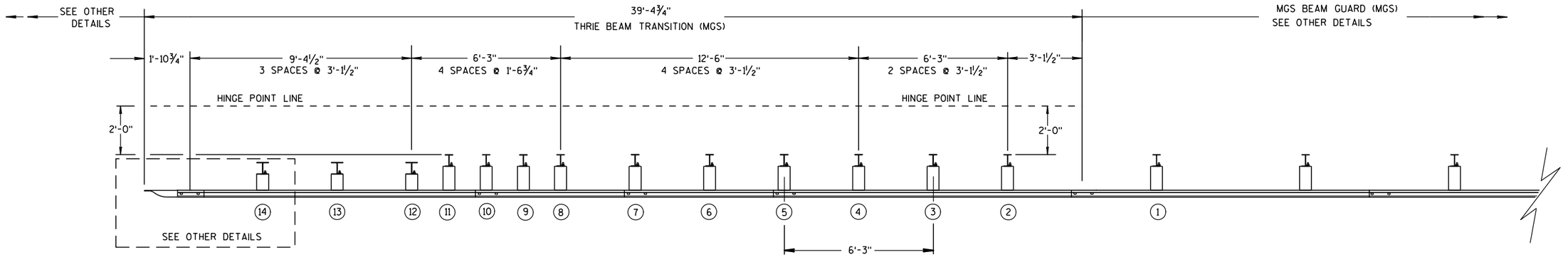
BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3.

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

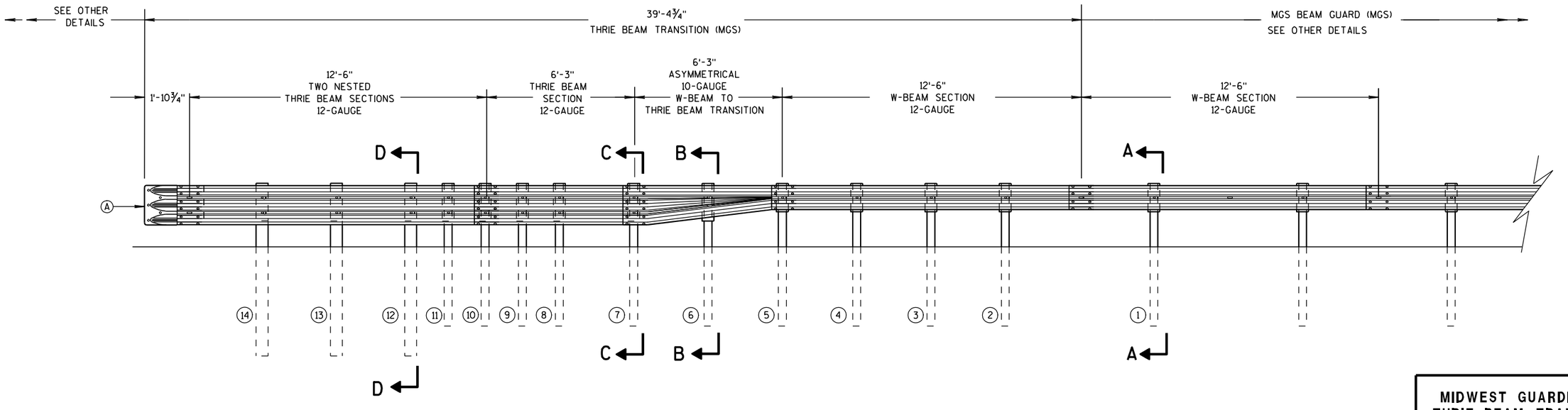
TRANSITION USES STEEL POSTS ONLY.

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

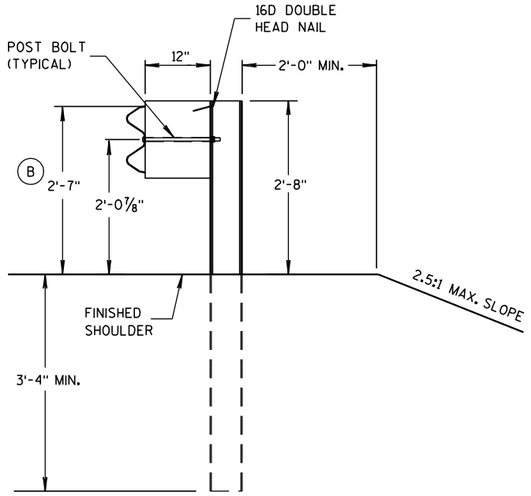
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

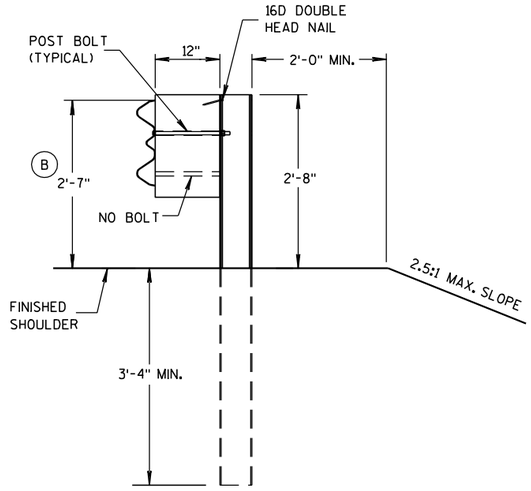
GENERAL NOTES

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



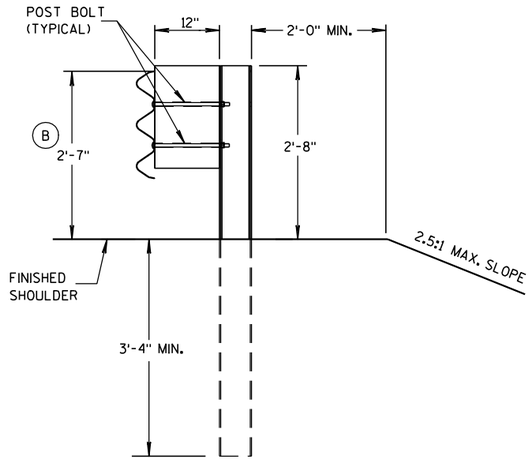
SECTION A-A

POSTS 1-5



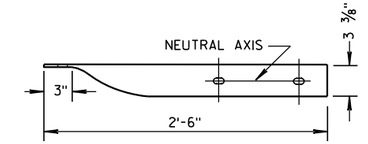
SECTION B-B

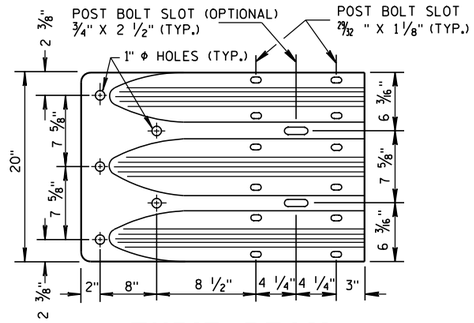
POST 6



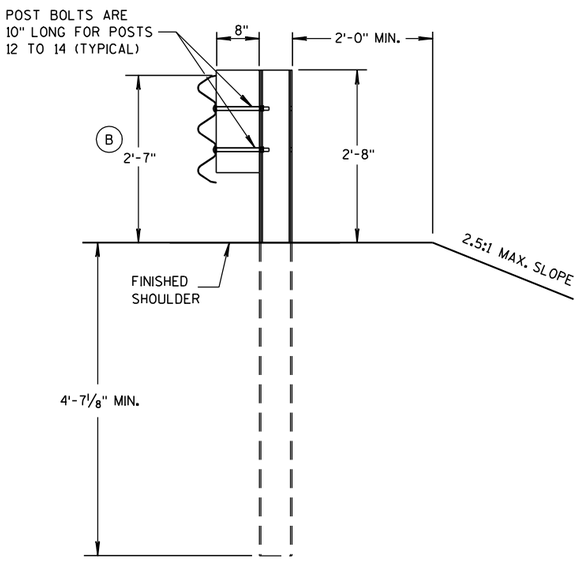
SECTION C-C

POSTS 7-11



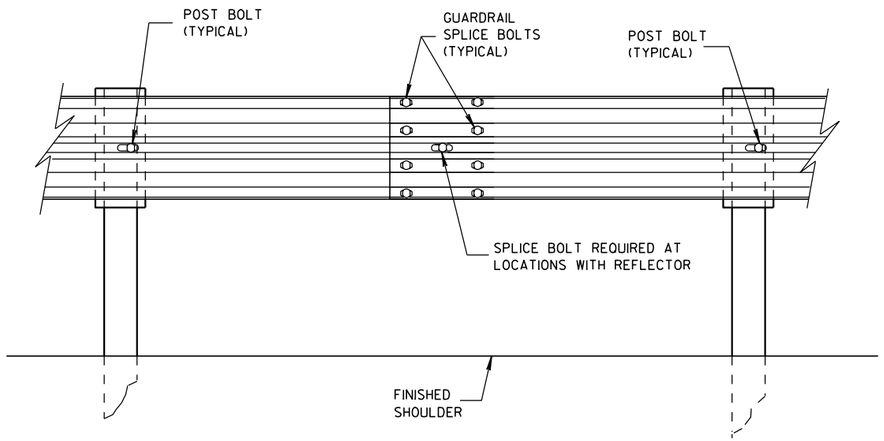


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-14



SPLICE DETAIL

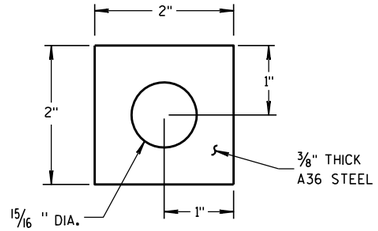
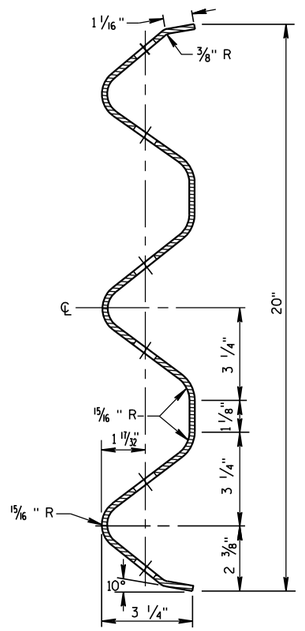


PLATE WASHER DETAIL

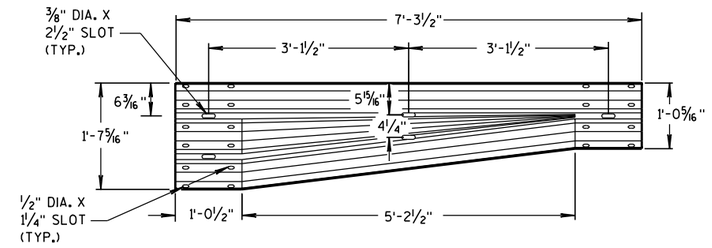


SECTION THRU THRIE BEAM RAIL ELEMENT

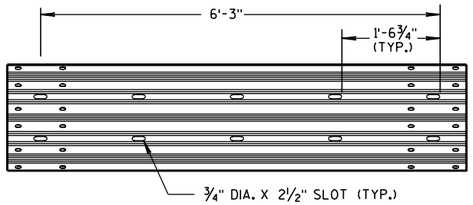
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

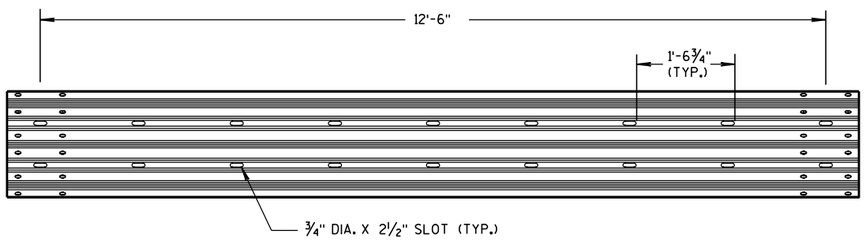
6
S.D.D. 14 B 45-3b



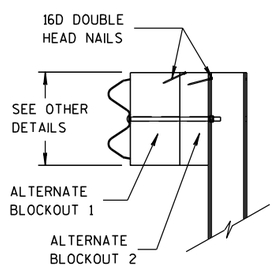
W-BEAM TO THRIE BEAM TRANSITION SECTION



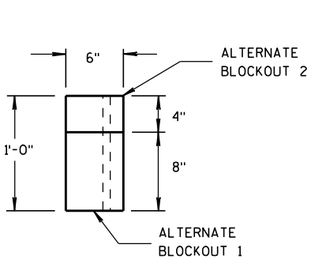
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

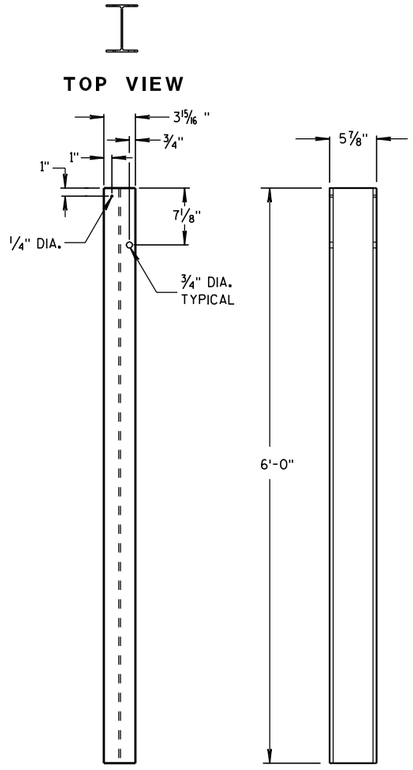


SIDE VIEW

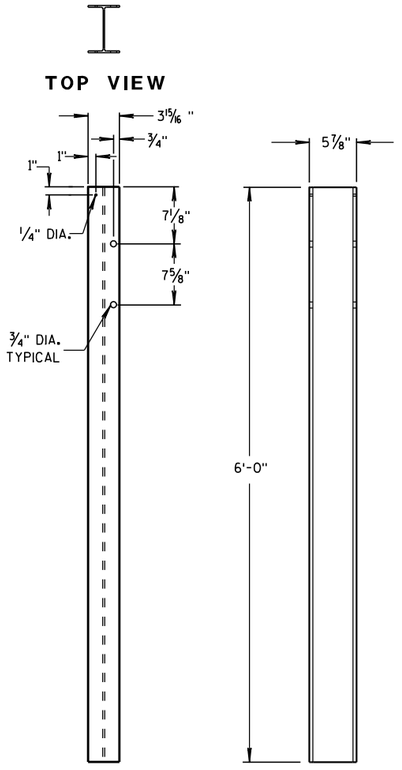


TOP VIEW

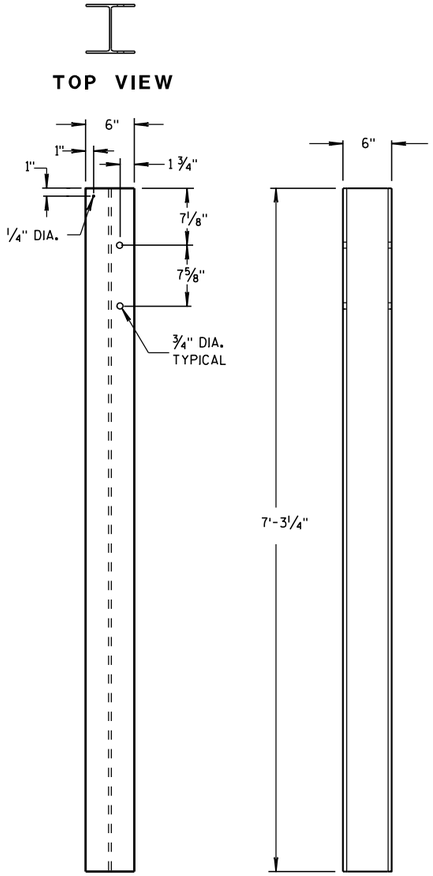
ALTERNATE WOOD BLOCKOUT DETAIL



STEEL POSTS 1-5

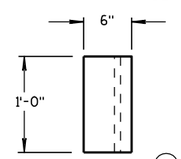


STEEL POSTS 6-11

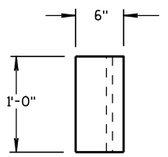


STEEL POSTS 12-14

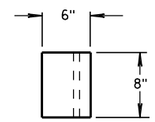
(1) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.



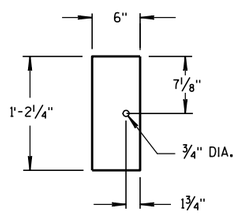
TOP VIEW (1)



TOP VIEW (1)

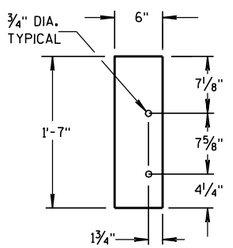


TOP VIEW



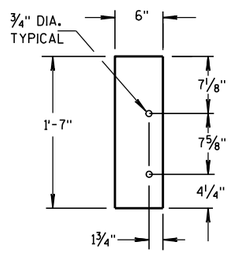
FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-11



FRONT VIEW

BLOCKOUT POSTS 12-14

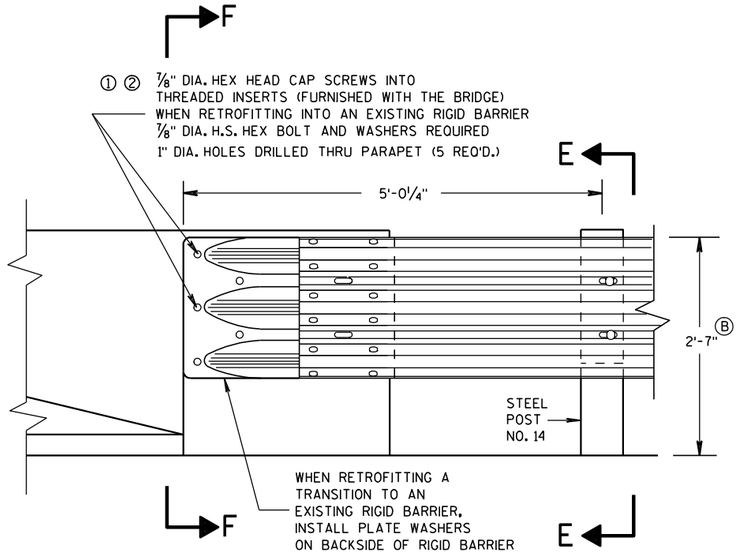
STEEL POST SIZES

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"

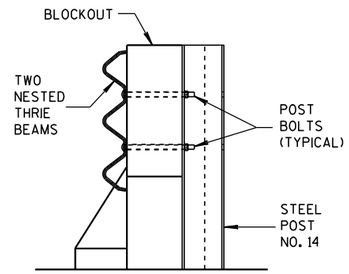
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



FRONT VIEW



SECTION E-E

GENERAL NOTES

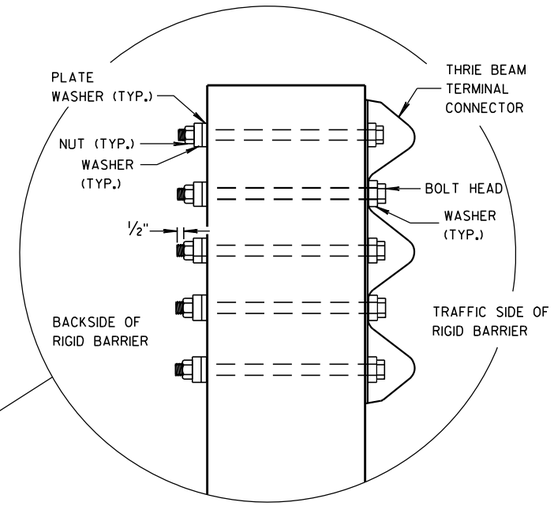
THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

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

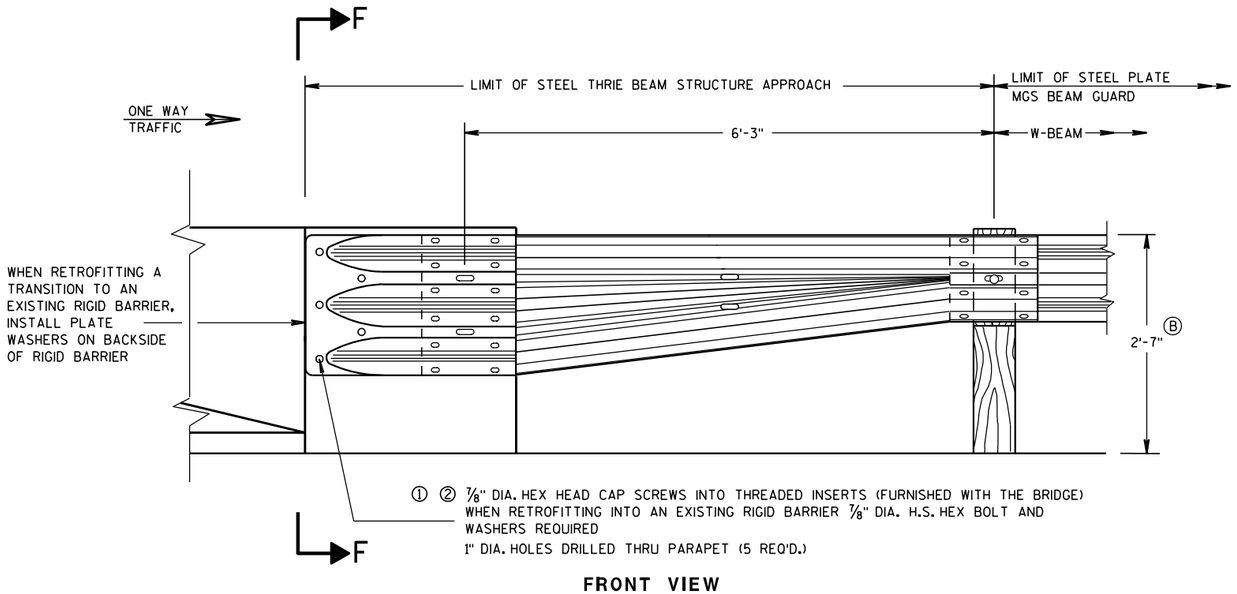
② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. 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".

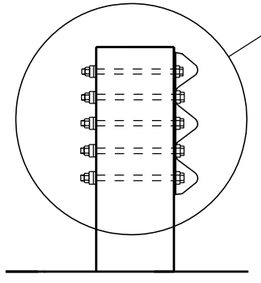
Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".



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 [illegible] ENGINEER

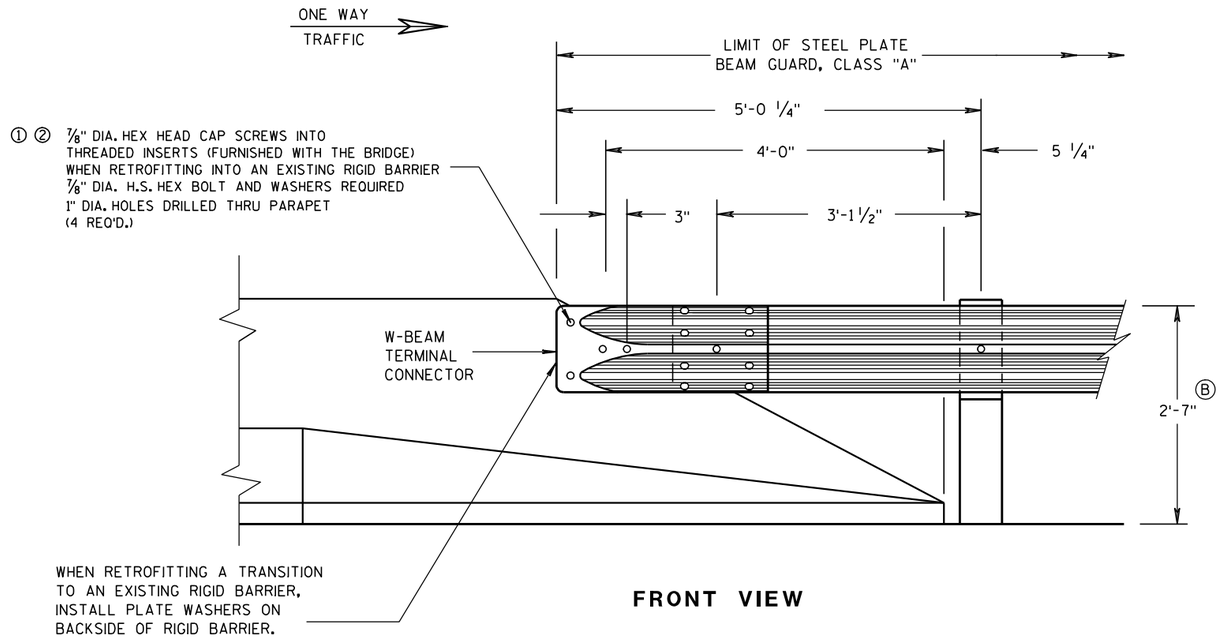
FHWA

6

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

6

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



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

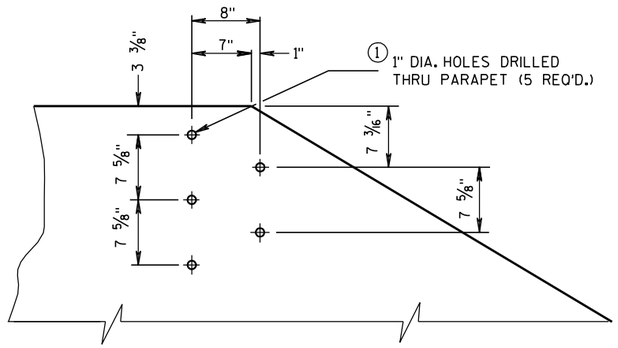
(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

GENERAL NOTES

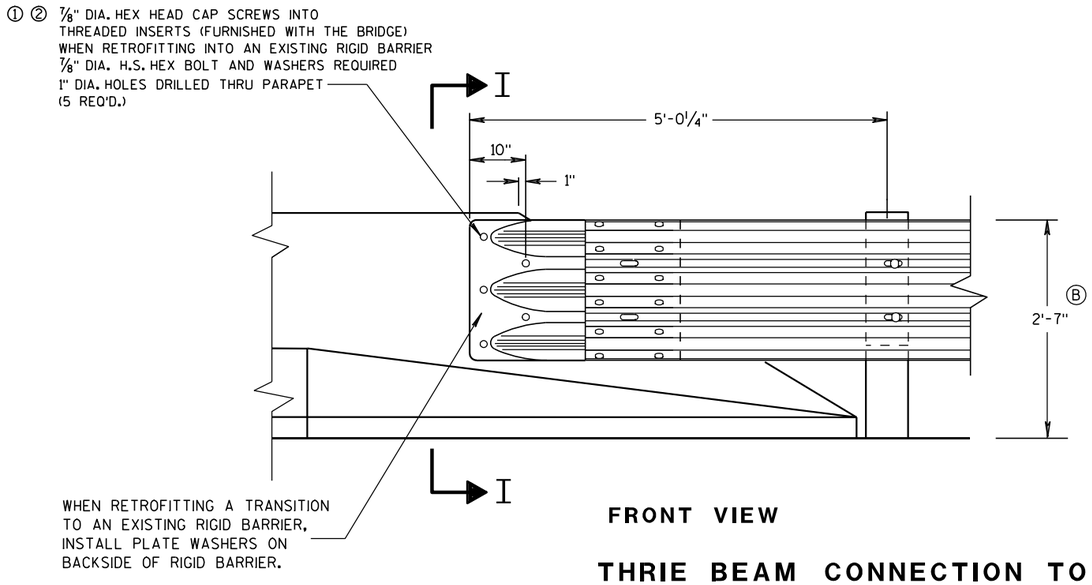
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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.

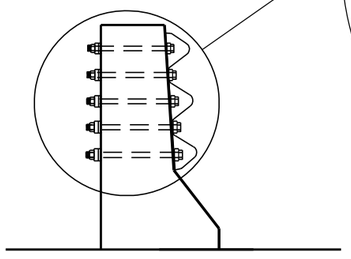
Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".



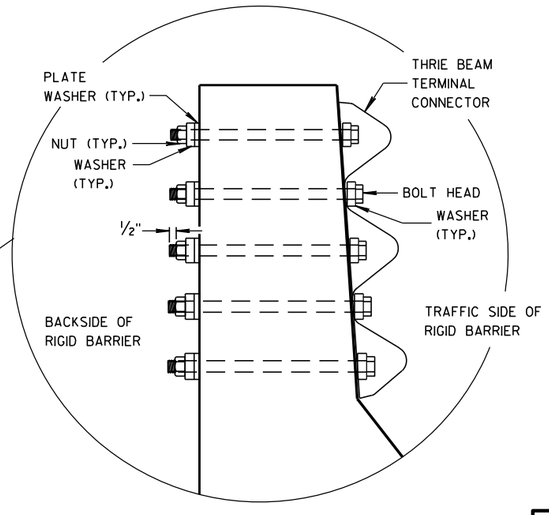
DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012 — DATE

/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER

78

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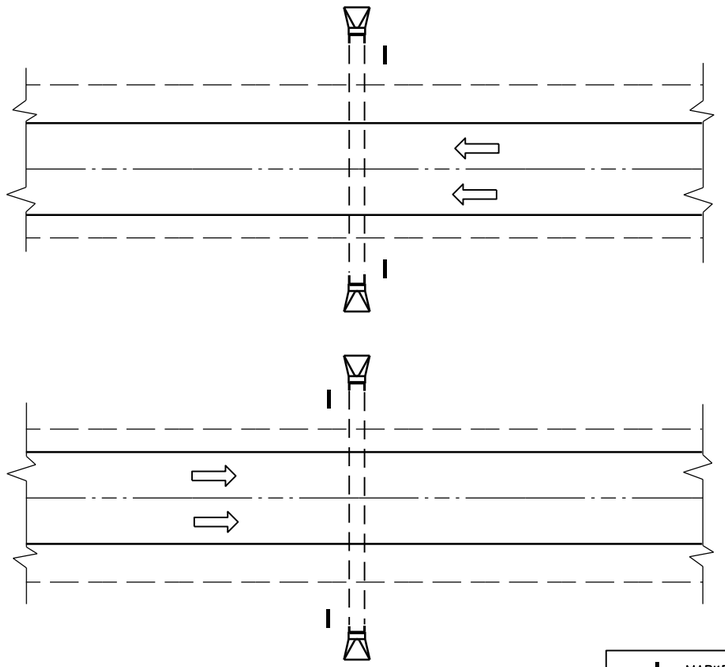
FHWA

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

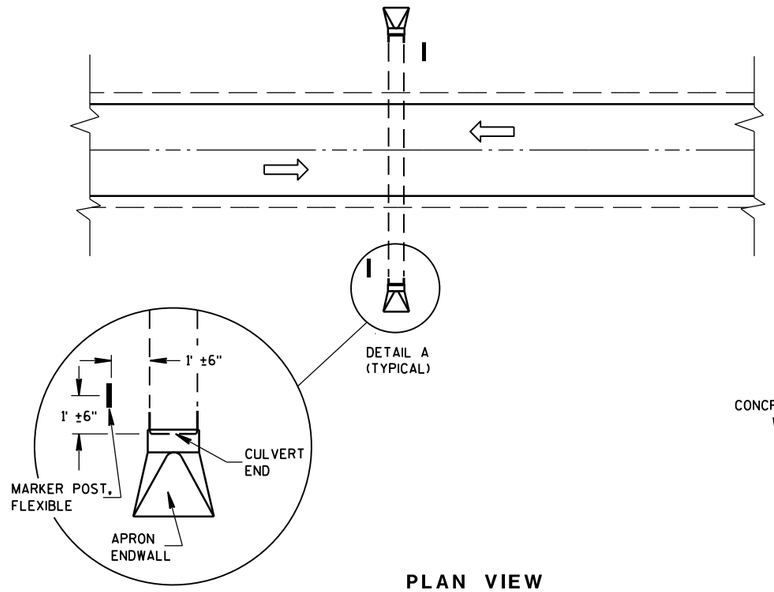
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S.D.D. 14 B 45-3f



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

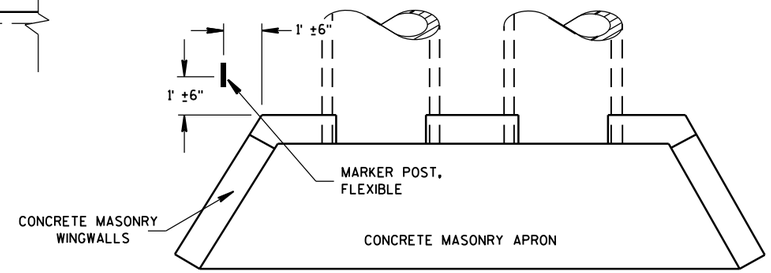
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

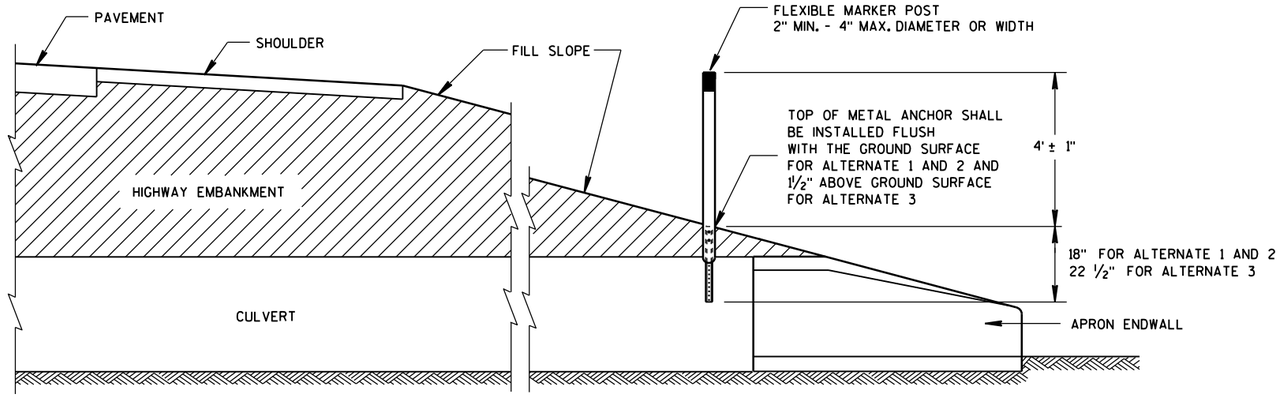
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

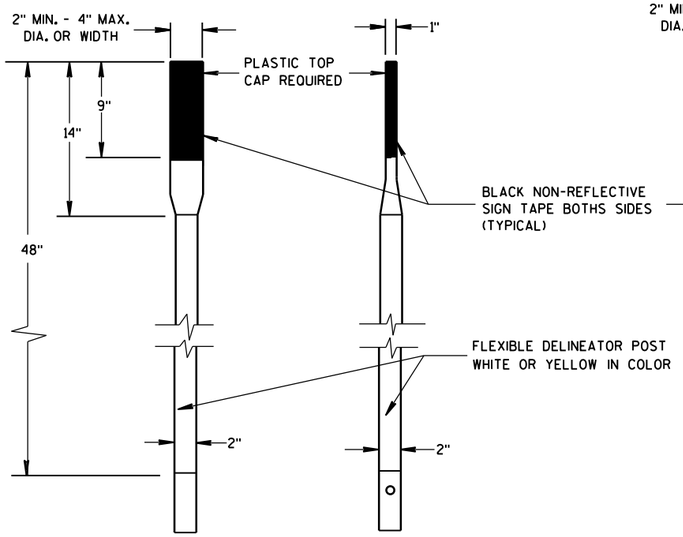
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

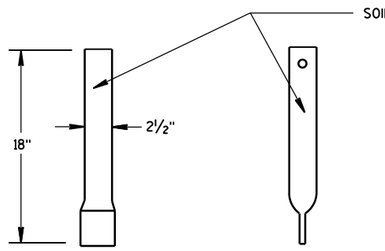
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S.D.D. 15 A 3-2a

6

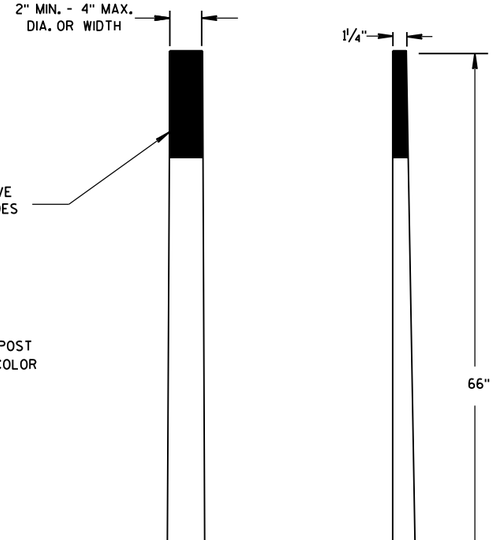
S.D.D. 15 A 3-2a





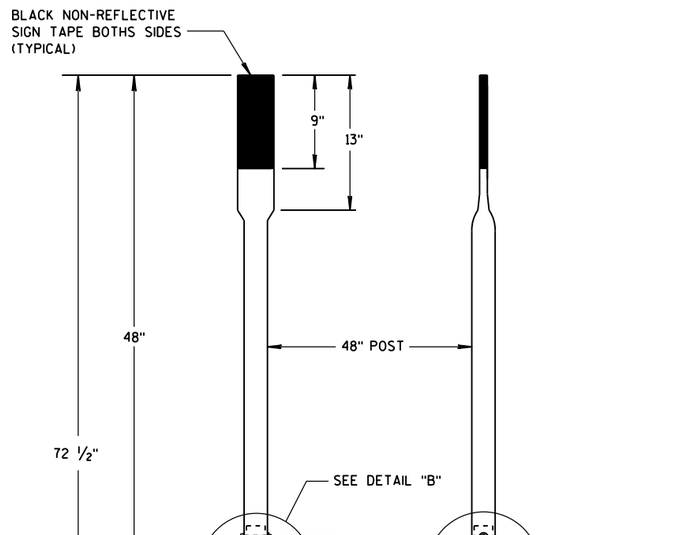
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

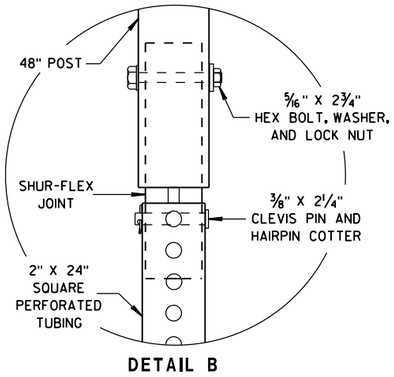
ALTERNATE 2



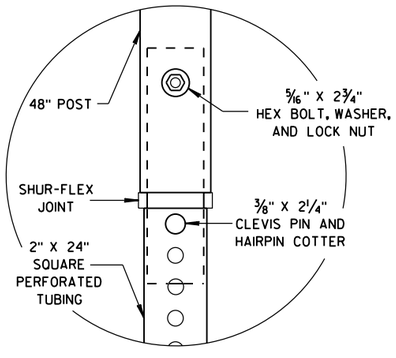
FRONT VIEW SIDE VIEW

ALTERNATE 3

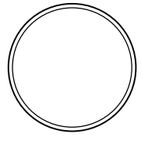
FLEXIBLE MARKER POSTS



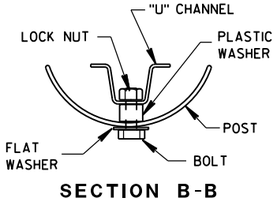
DETAIL B



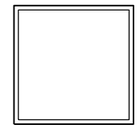
DETAIL C



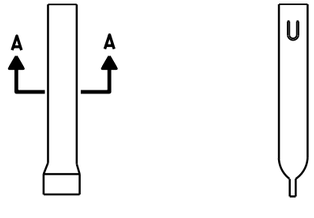
SECTION A-A



SECTION B-B

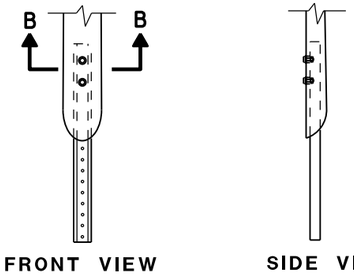


SECTION C-C



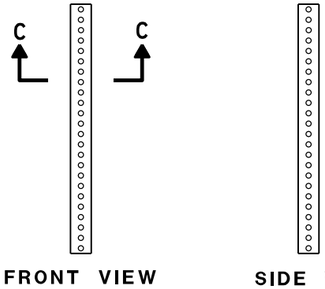
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

ALTERNATE 2



FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

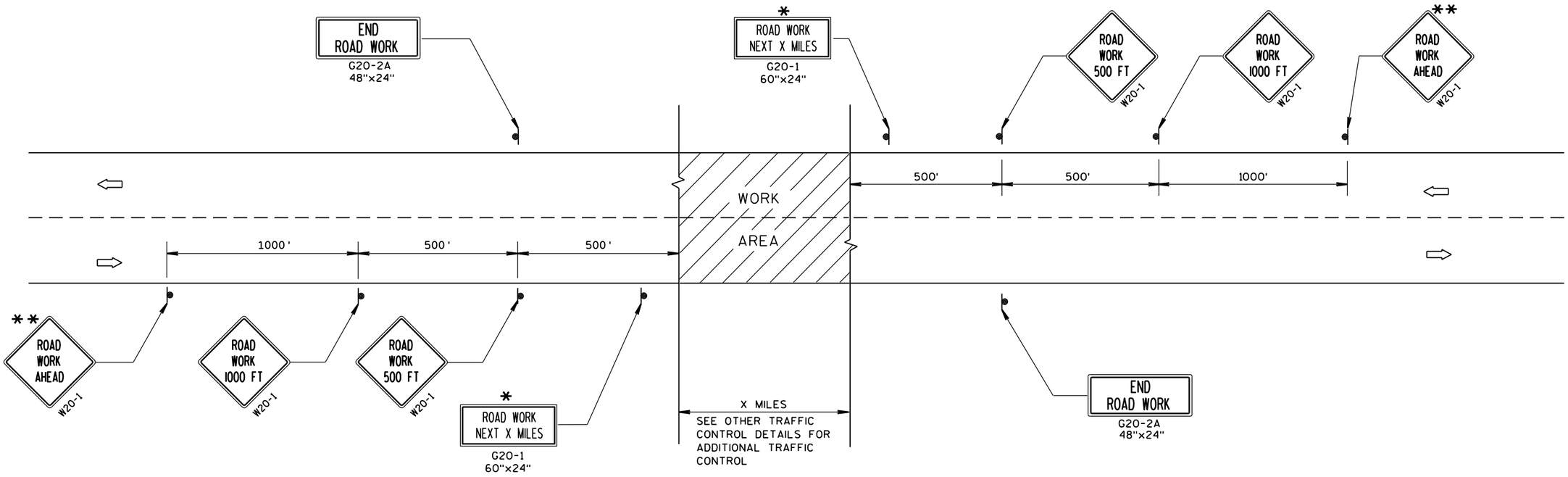
APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

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

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



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.

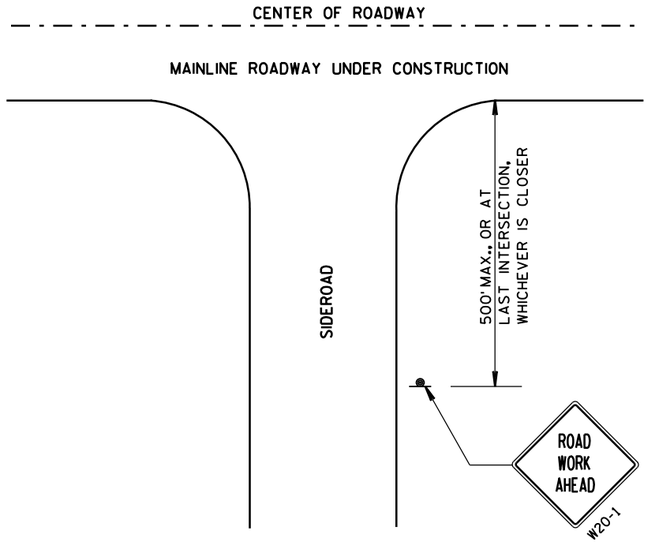
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

FHWA

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S.D.D. 15 C 4-2

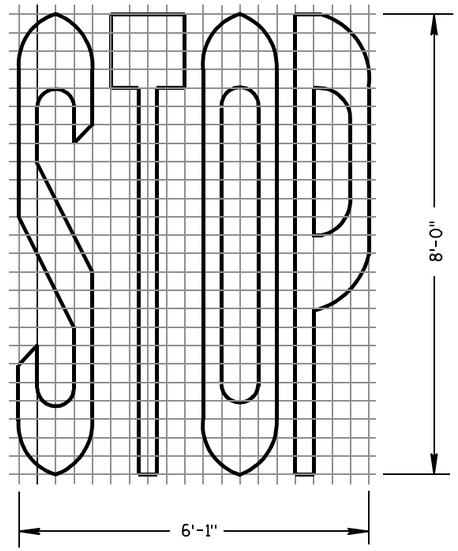
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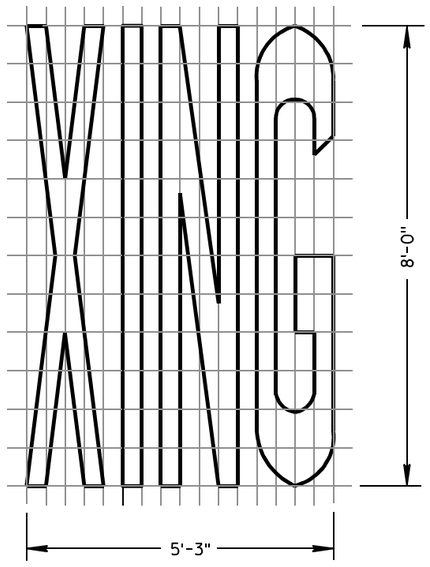
S.D.D. 15 C 4-2

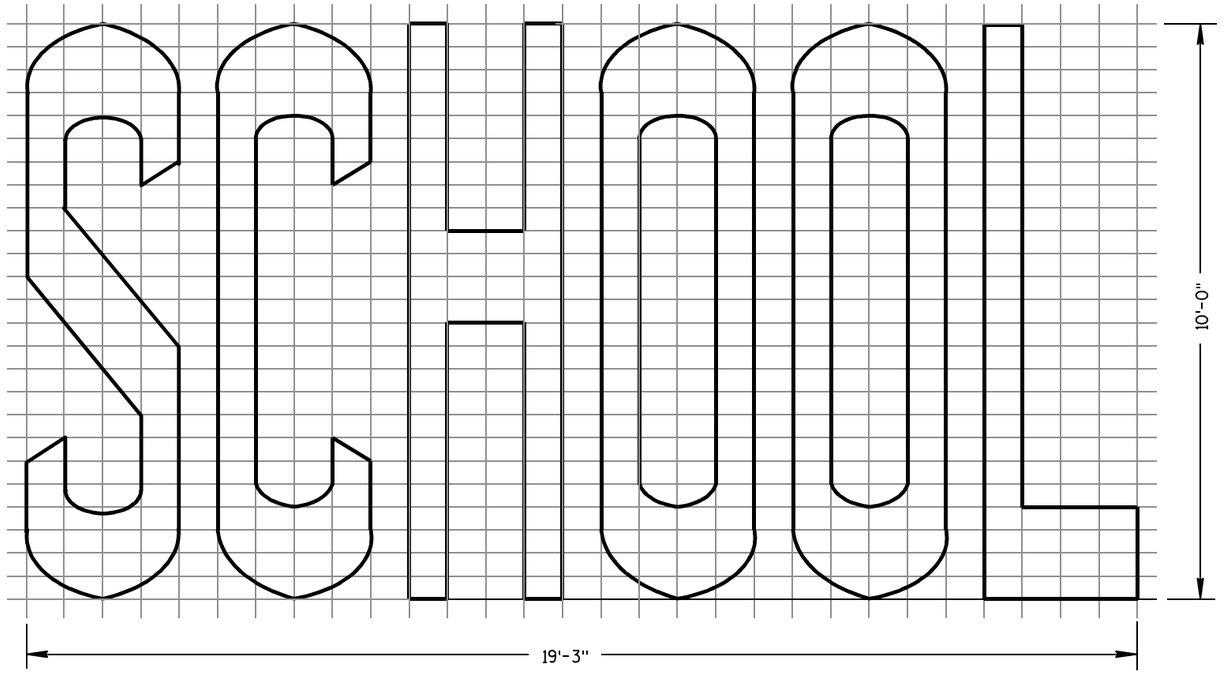
GENERAL NOTES

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.

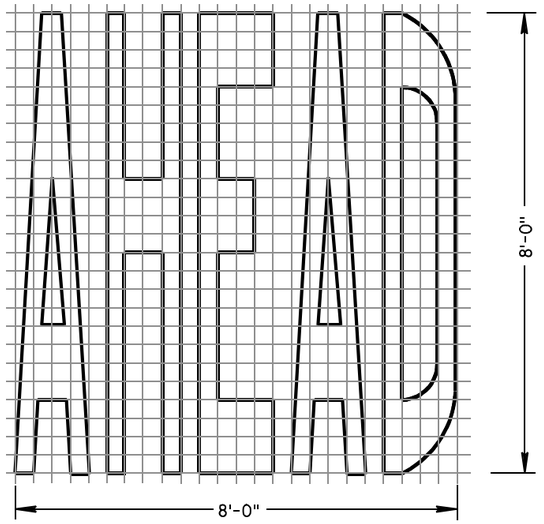
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.

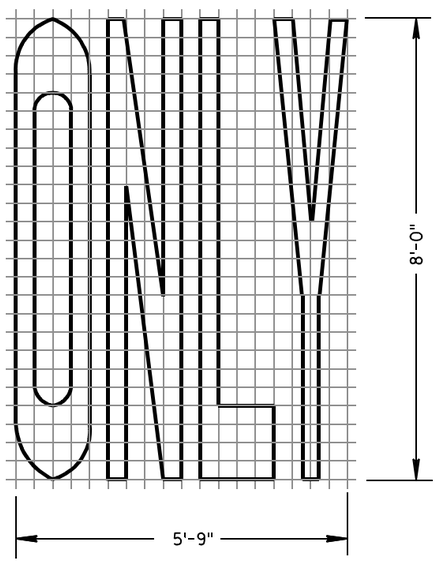


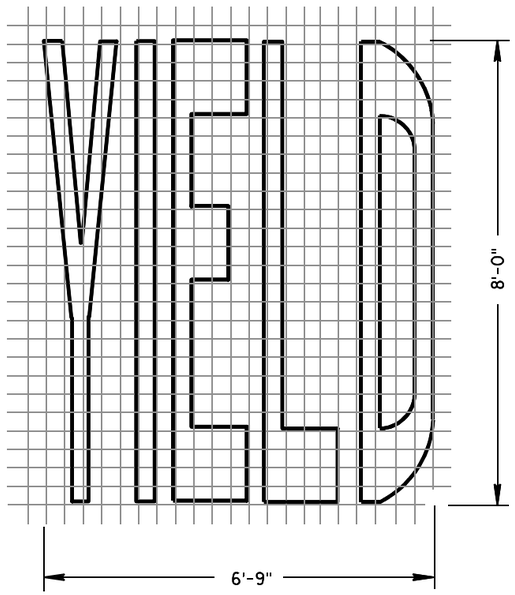


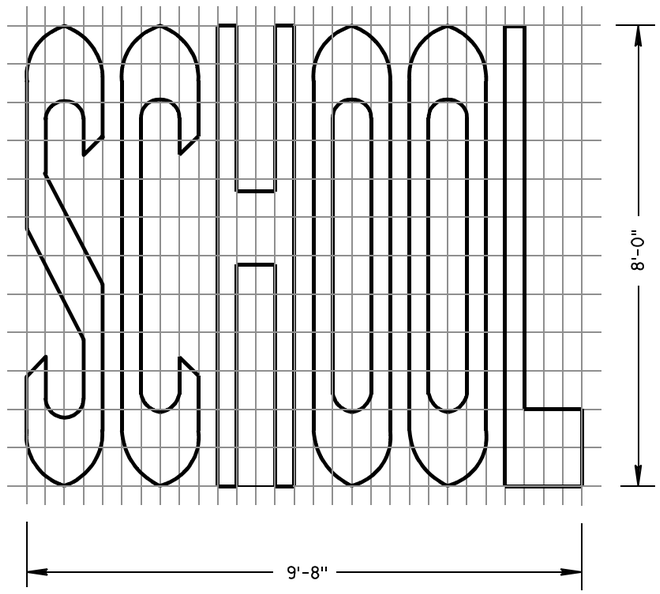


TWO-LANE









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

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S.D.D. 15 C 7-12b

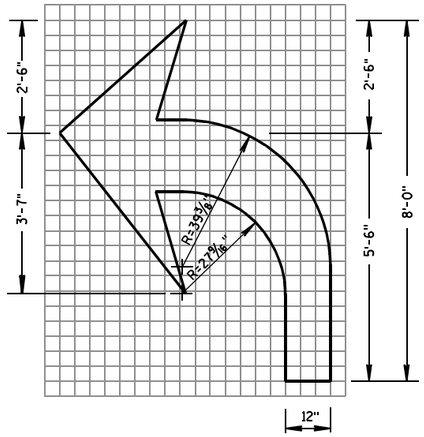
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S.D.D. 15 C 7-12b

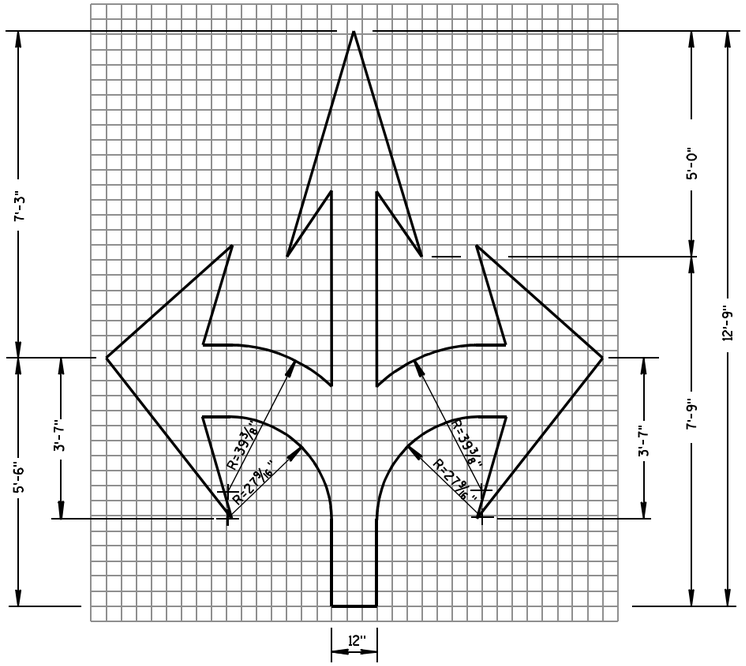
GENERAL NOTES

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.

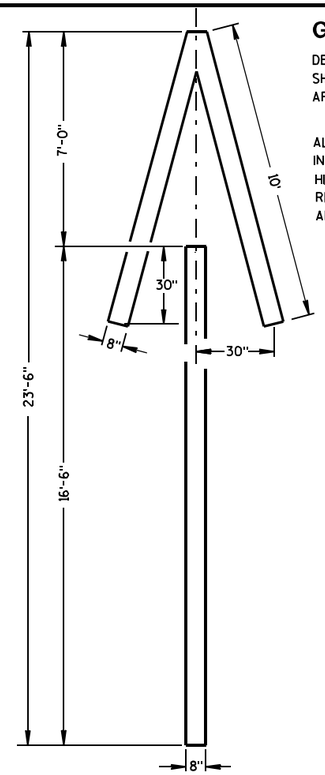
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.



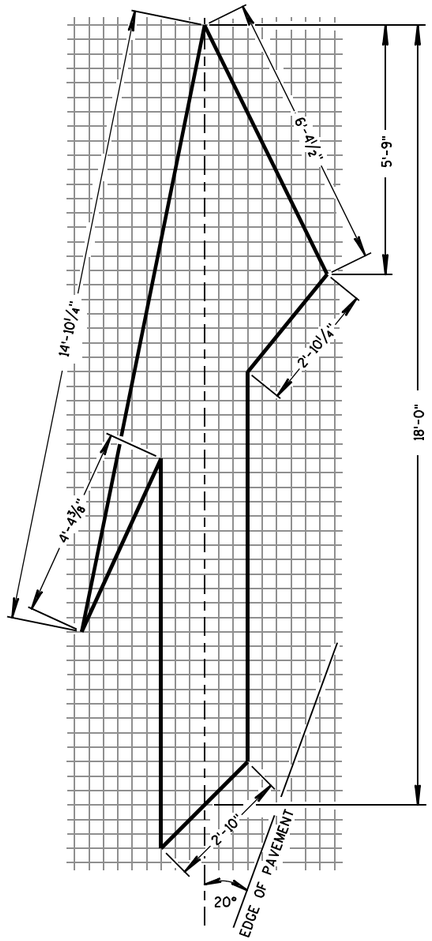
TYPE 2



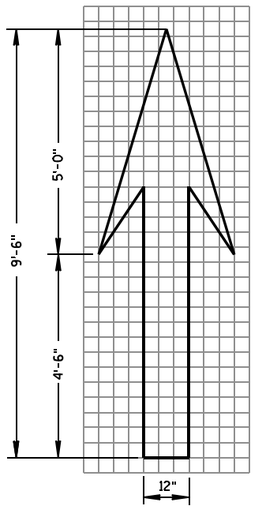
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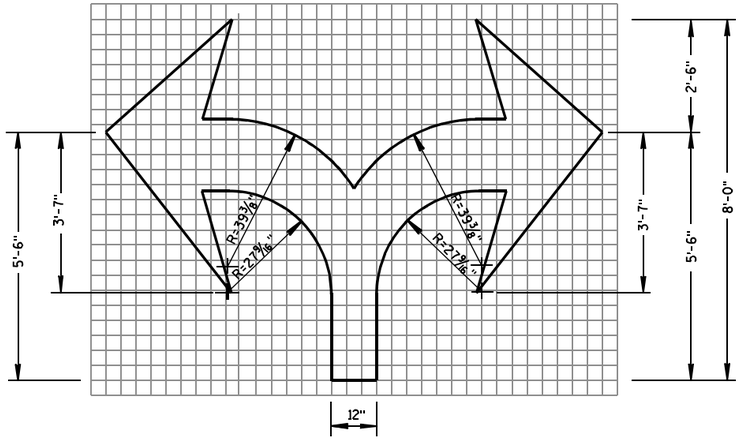
TYPE 4



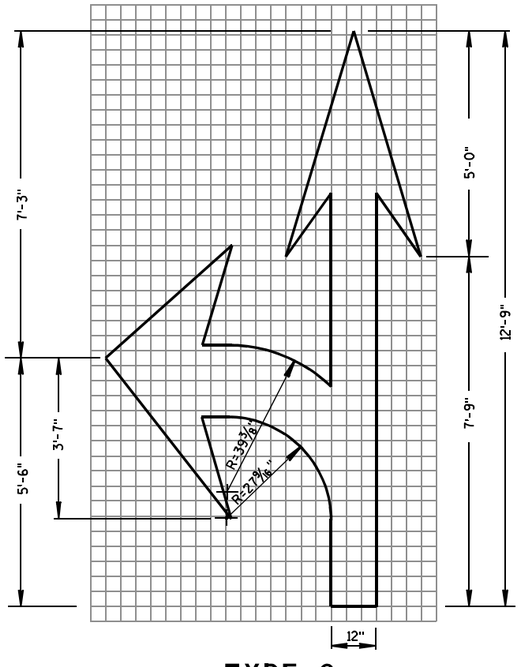
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/1/11 — DATE

/S/ Thomas N. Nothdurft — STATE TRAFFIC ENGINEER

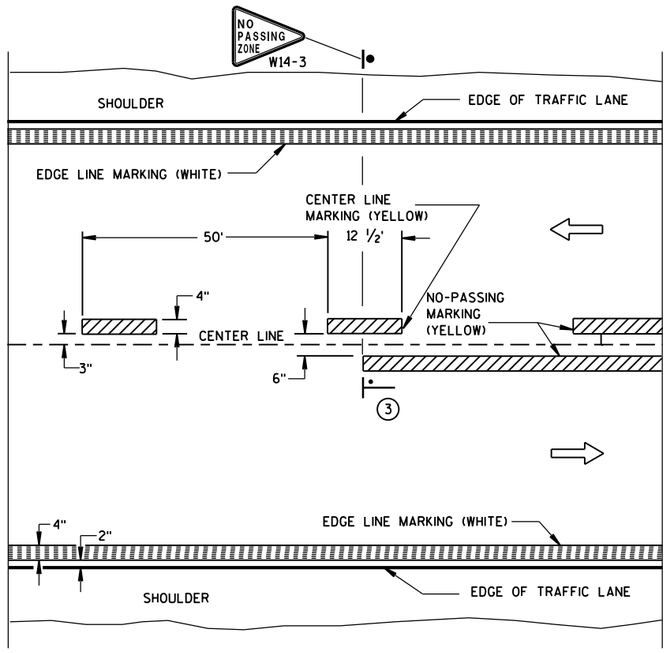
FHWA

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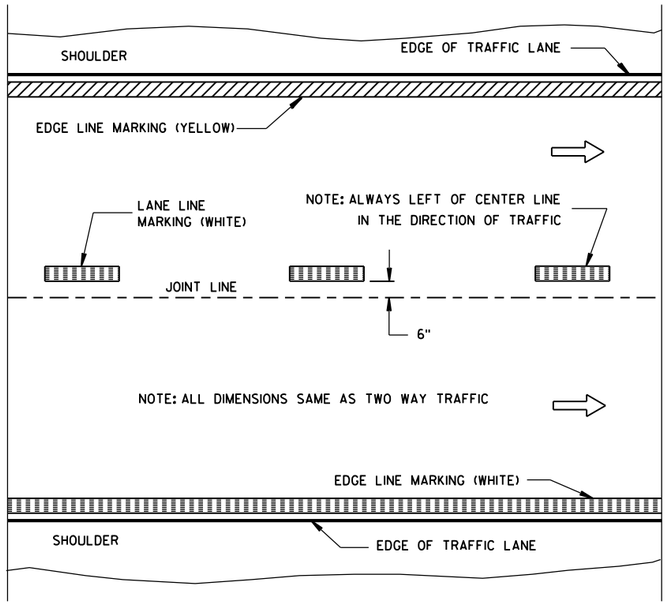
S.D.D. 15 C 7-12c

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S.D.D. 15 C 7-12c

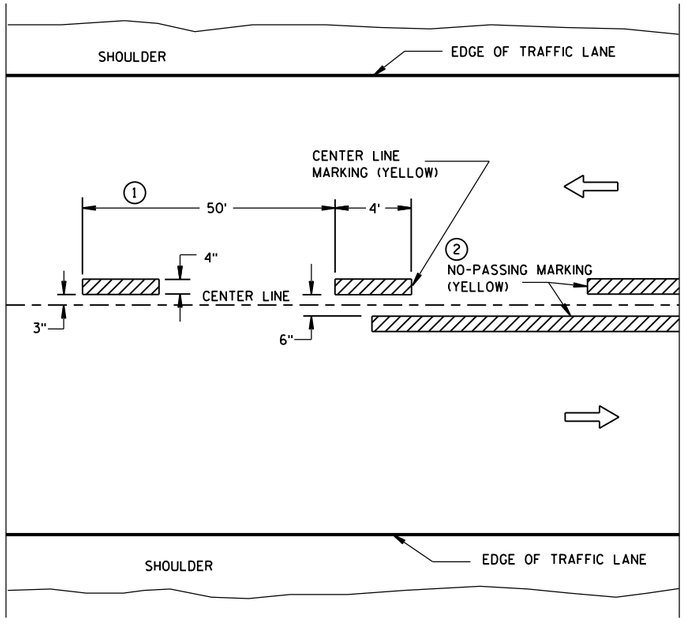


TWO WAY TRAFFIC

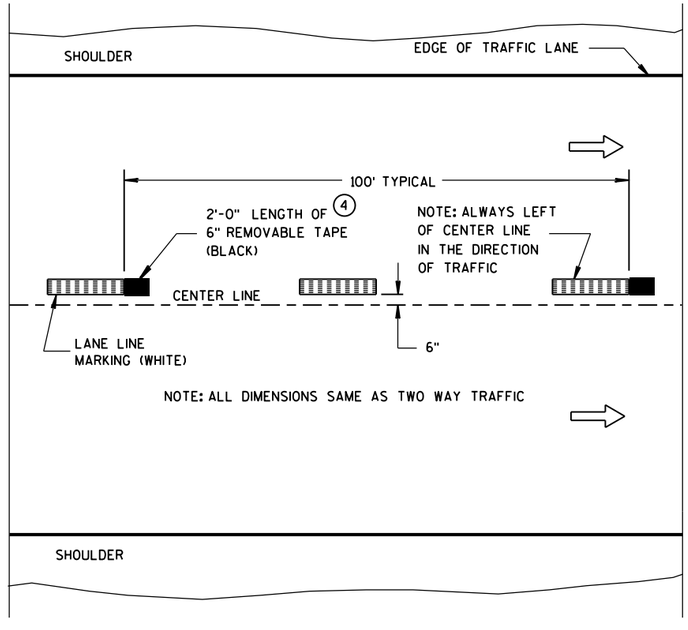


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

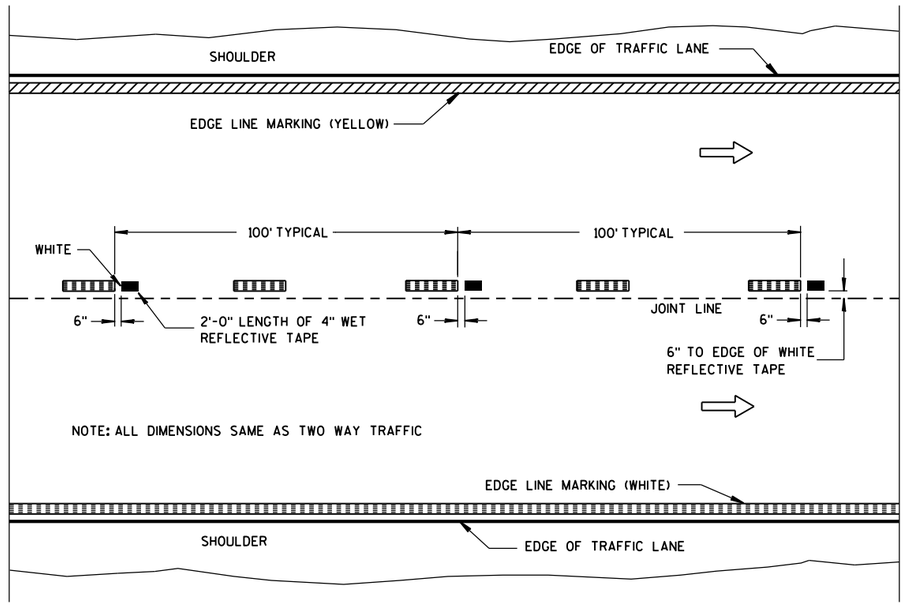
GENERAL NOTES

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

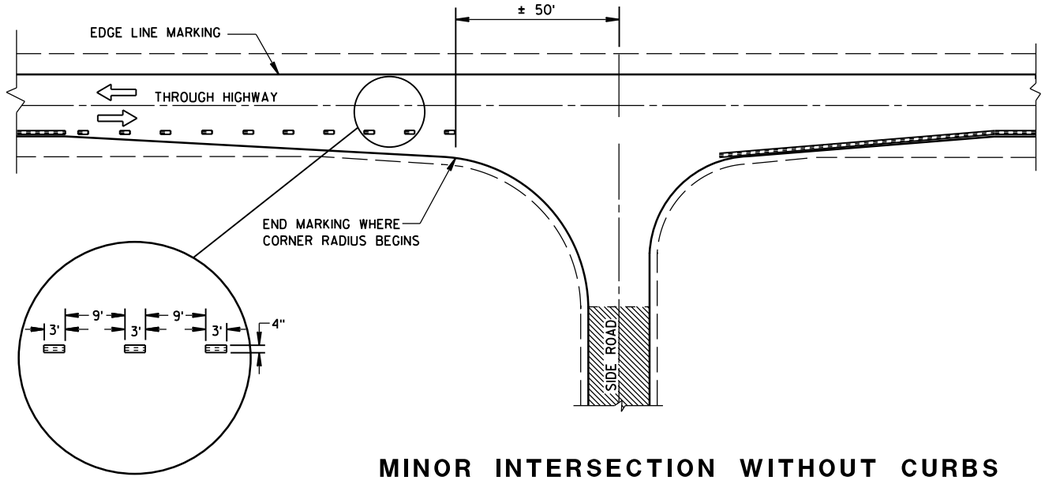
APPROVED
5-13-2013 DATE
/S/ Travis Feltes STATE TRAFFIC E
FHWA

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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.

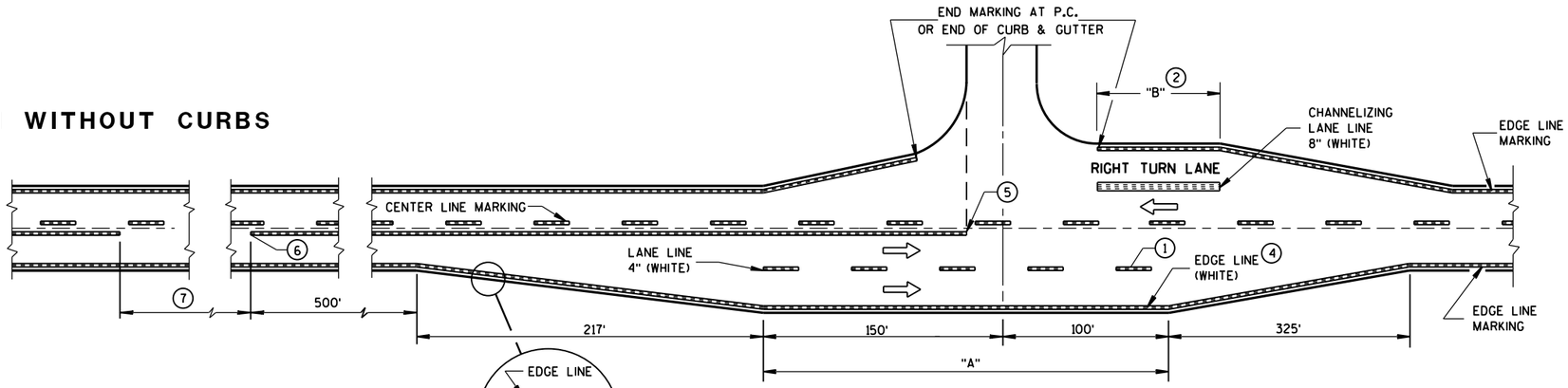
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

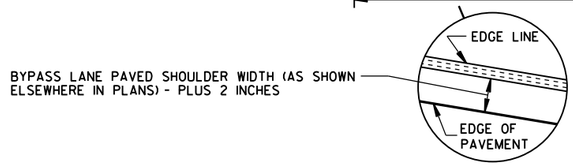
(8) 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

(7)

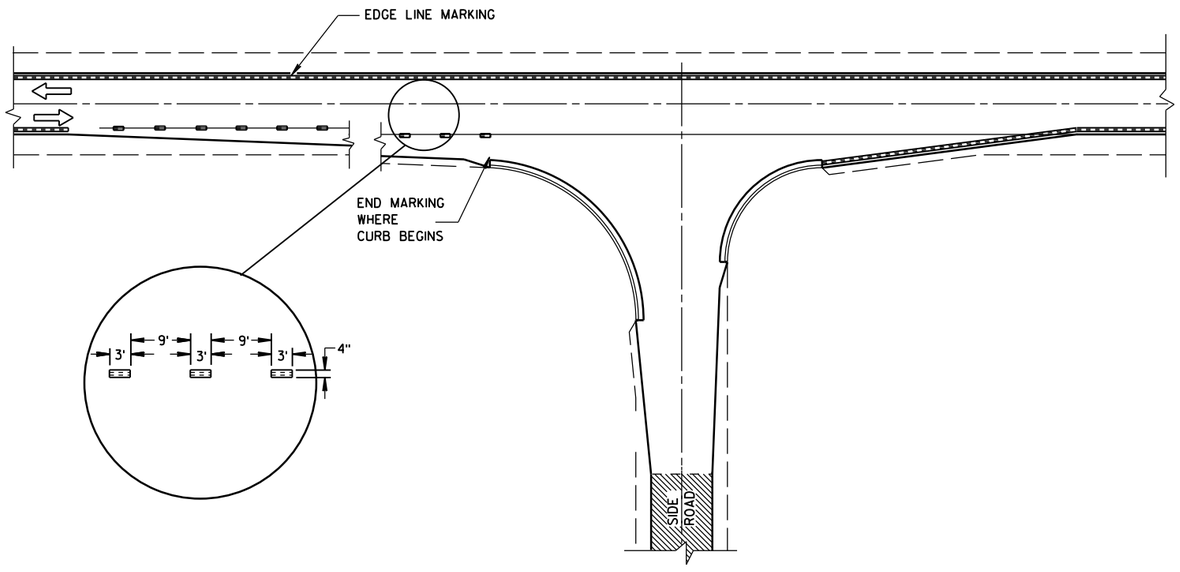
POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792





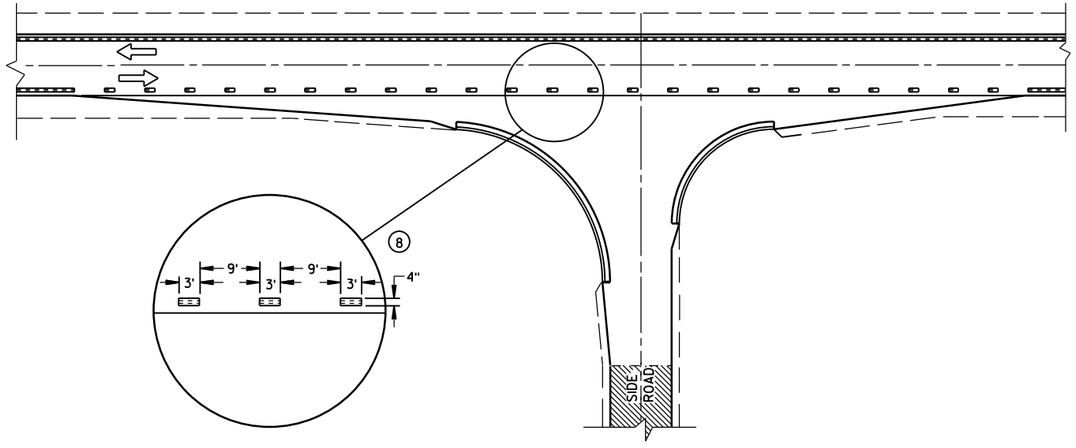
MAJOR INTERSECTIONS

(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)

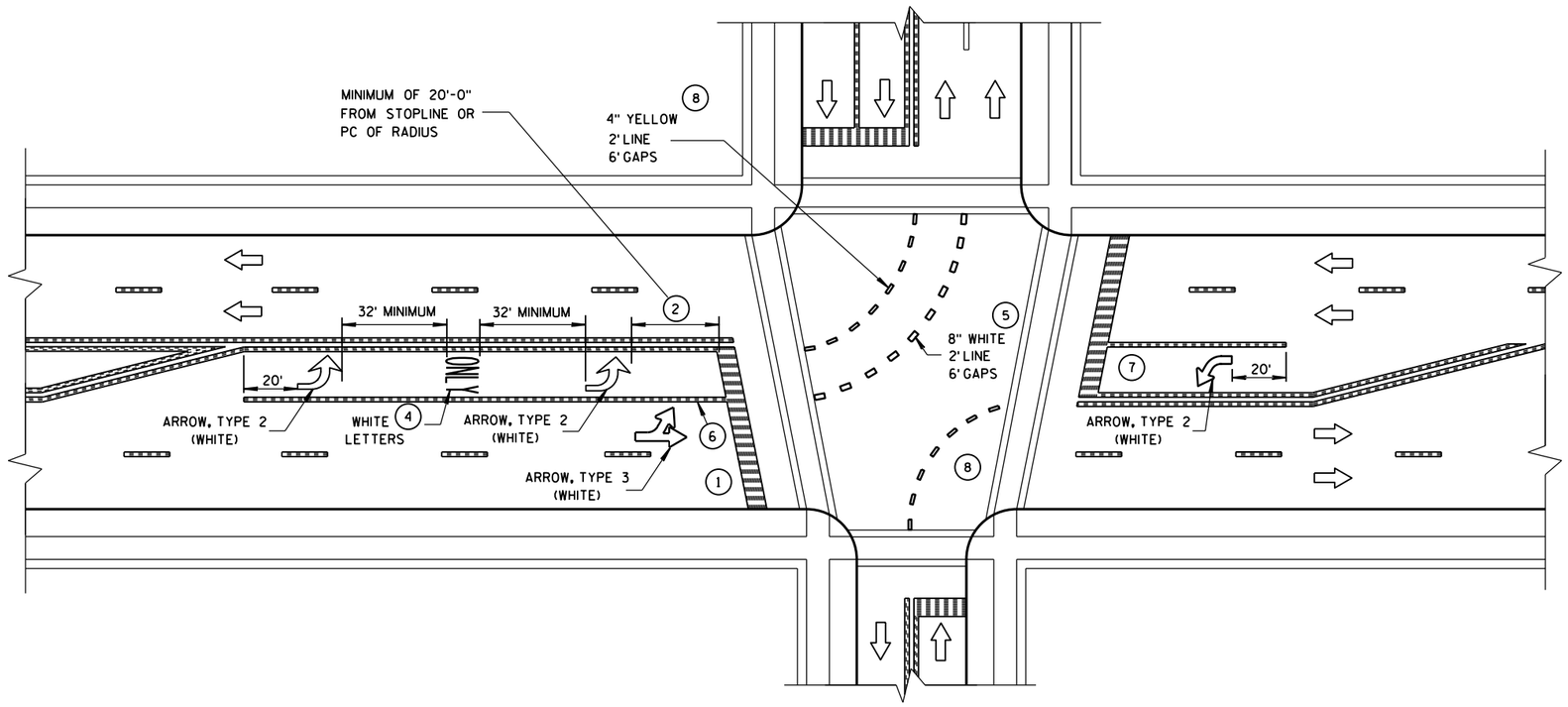
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 15 C 8-16b

6

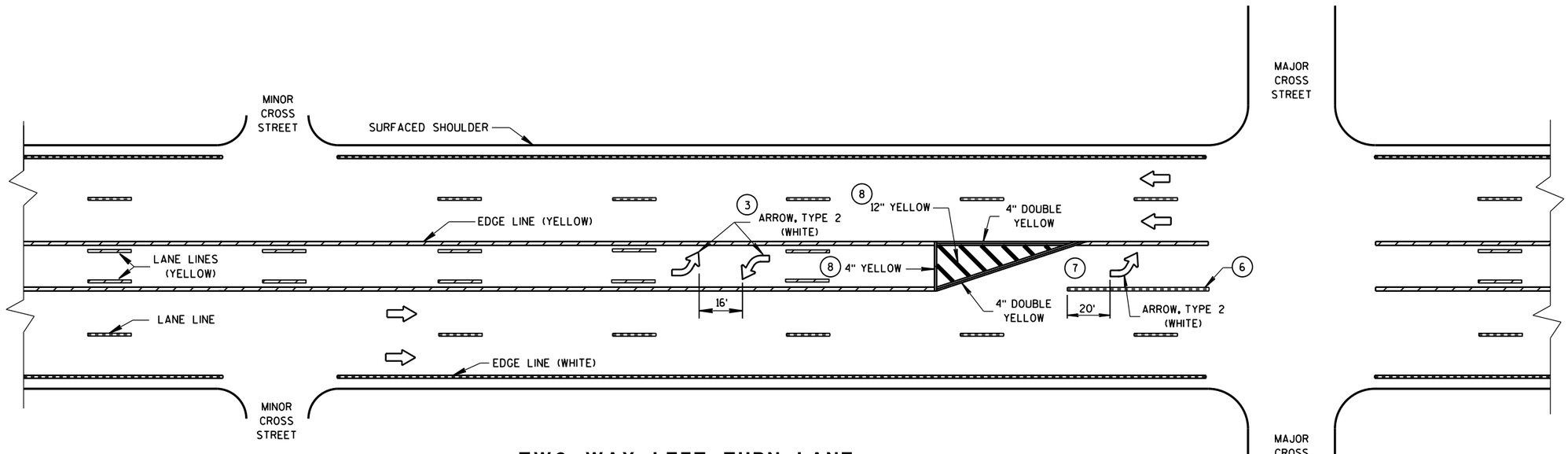
S.D.D. 15 C 8-16b



GENERAL NOTES

1. STOP BAR IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
2. DISTANCE MAY BE ADJUSTED TO ACCOMODATE SHORT LEFT TURN LANES. AS APPROVED BY THE ENGINEER.
3. A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
4. ADD EXTRA SETS OF ONE ARROW AND ONE ONLY PER 160 FEET OR WHEN ON A CURVE.
5. 8" WHITE WITH 2' LINE 6' GAPS FOR DUAL TURN LANE.
6. 8" WHITE
7. ADD SECOND ARROW WHEN TURN BAY IS GREATER THAN OR EQUAL TO 108 FEET.
8. REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TWO WAY LEFT TURN LANE

PAVEMENT MARKING (LEFT TURN LANE)

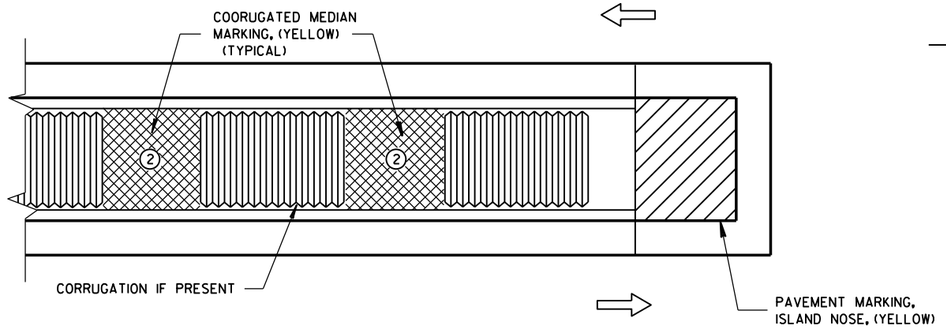
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

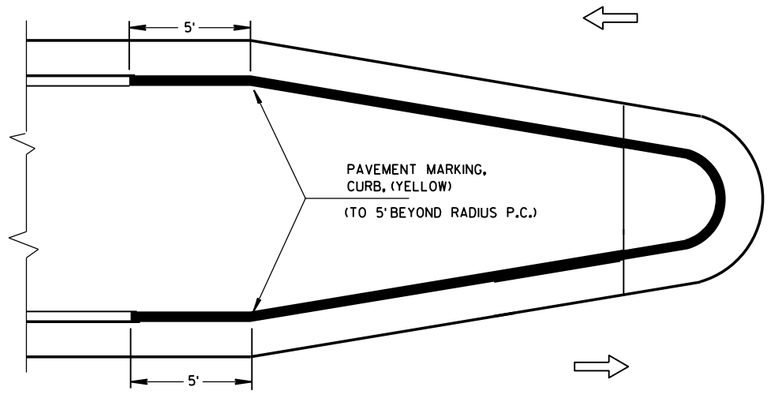
S.D.D. 15 C 8-16e

6

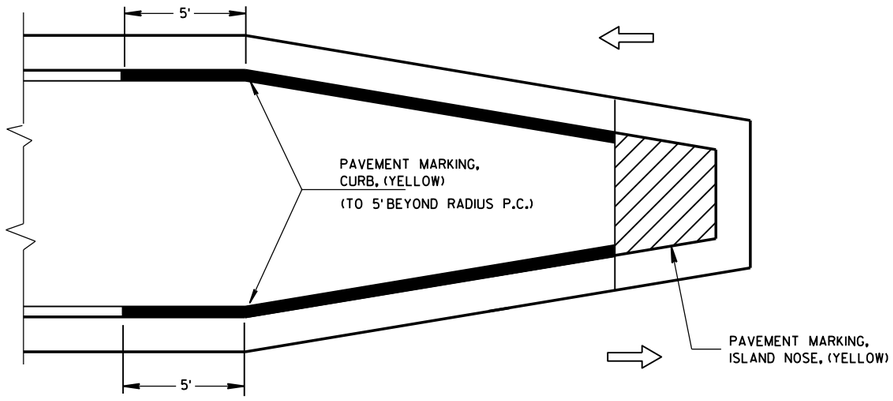
S.D.D. 15 C 8-16e



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

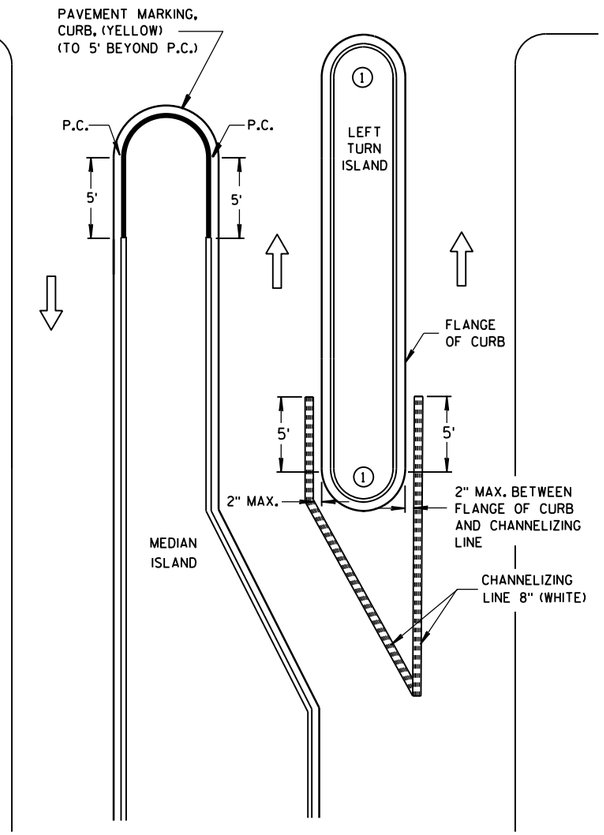


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

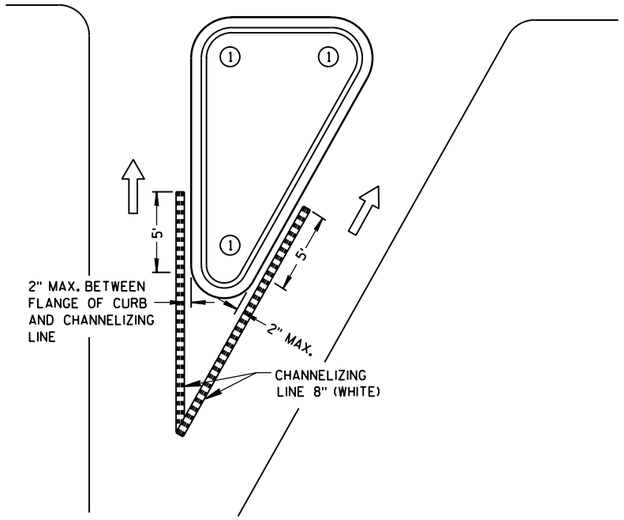


LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

1. DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.

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



RIGHT TURN ISLAND

LEGEND

- ISLAND NOSE MARKING
- CURB MARKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL

PAVEMENT MARKING
(ISLANDS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 15 C 8-16f

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S.D.D. 15 C 8-16f

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA

FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

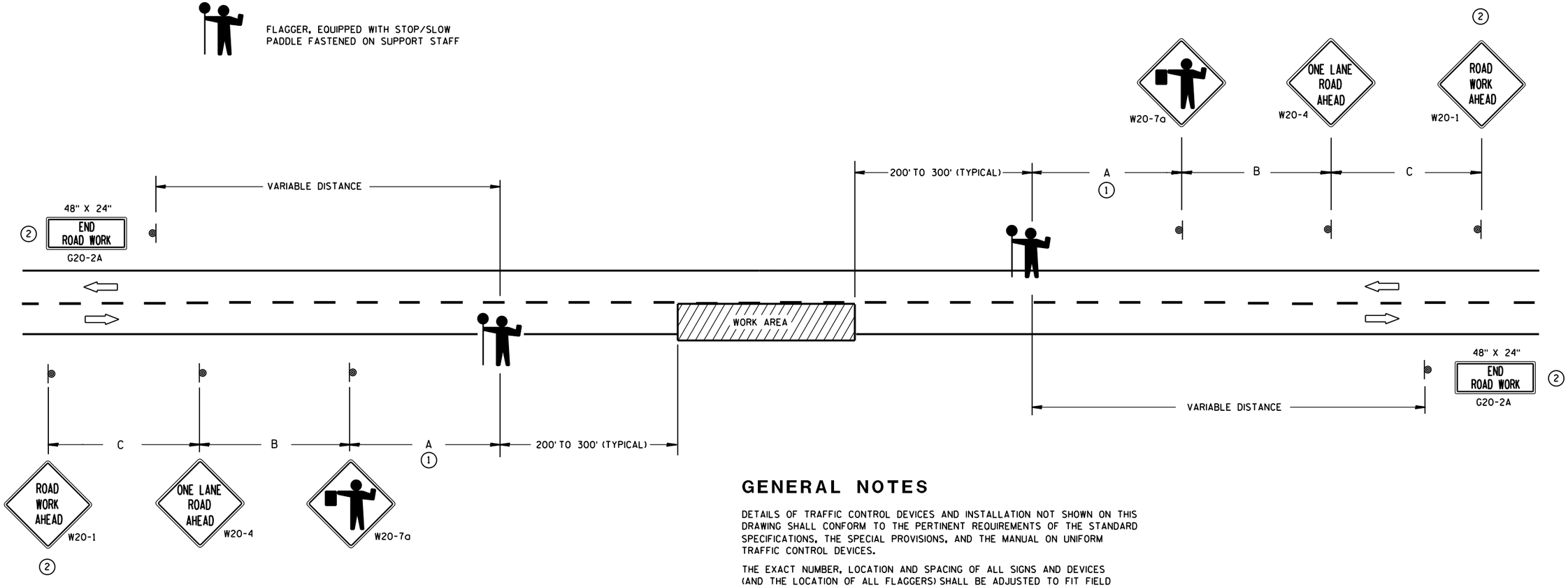
SIGN SPACING TABLE

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

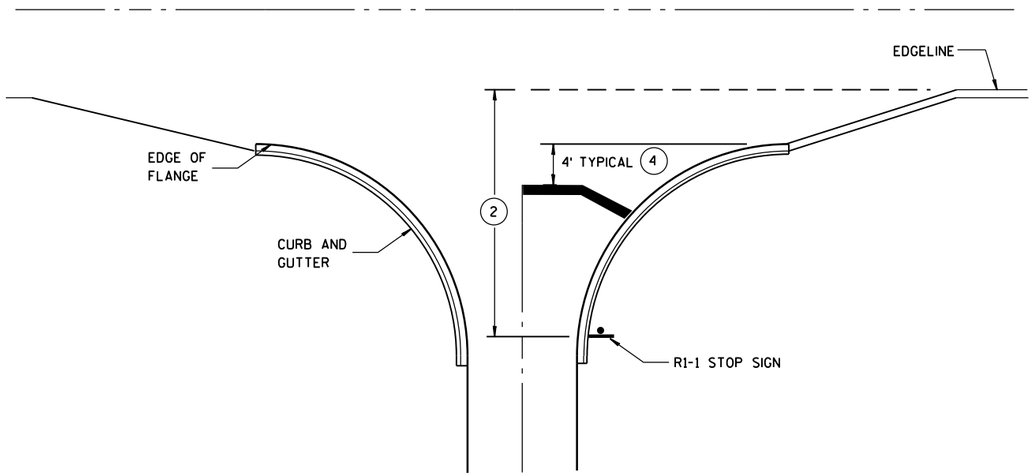
APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

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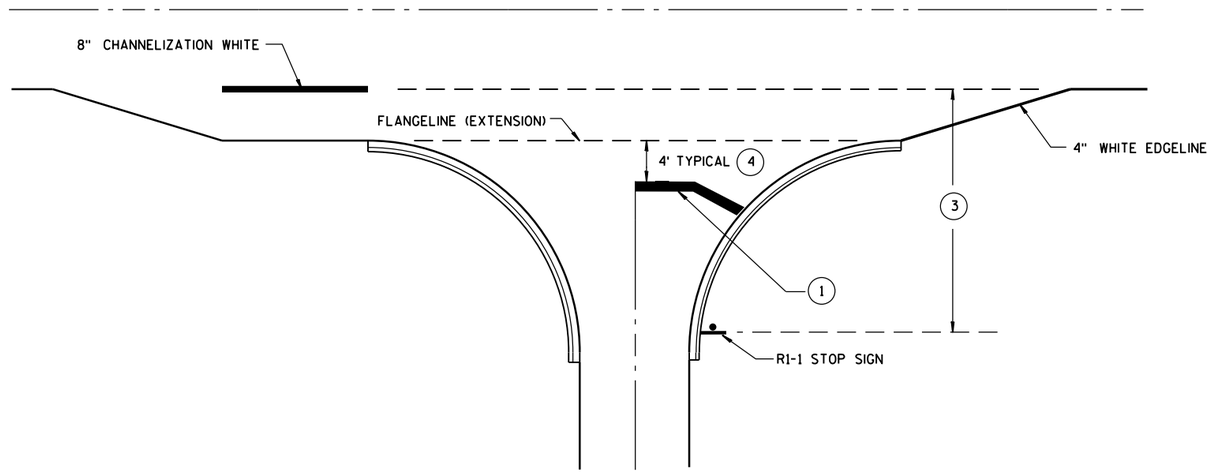
S.D.D. 15 C 12-4

6

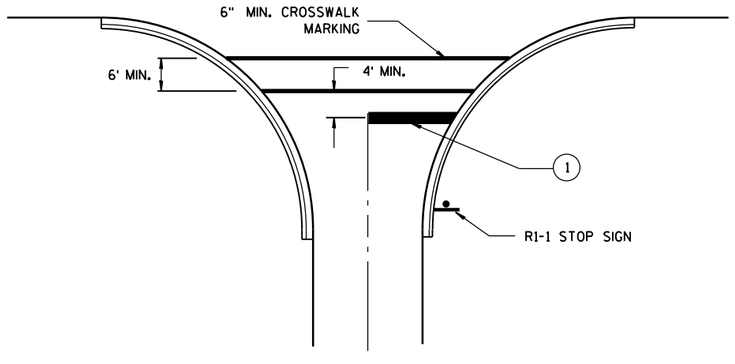
S.D.D. 15 C 12-4



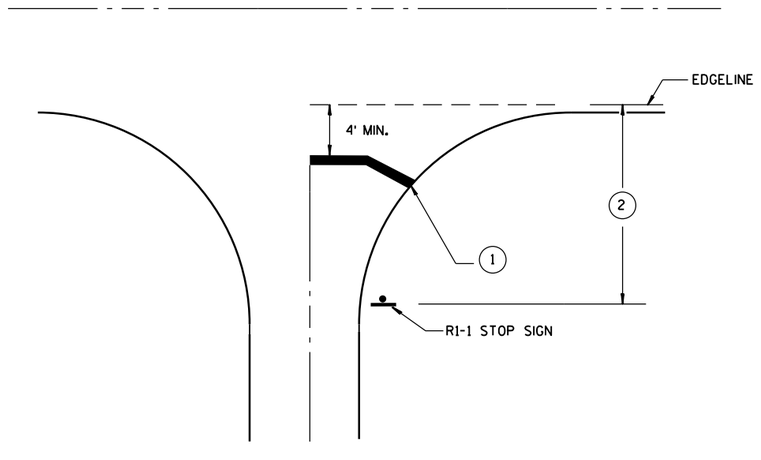
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



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

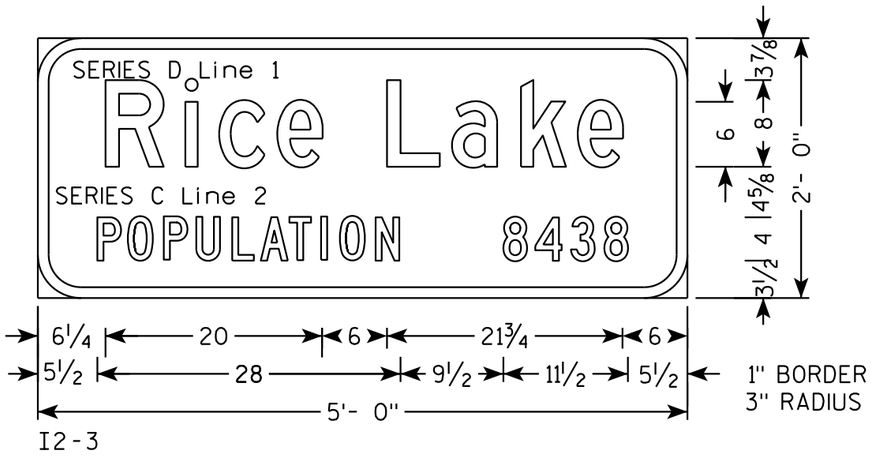
FHWA

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S.D.D. 15 C 33-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - GREEN
   Message - WHITE
3. Message Series - as Shown



I2-3

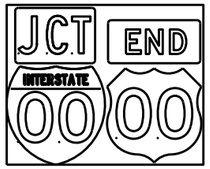
7

7

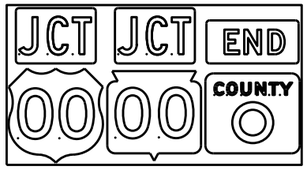
TYPICAL ASSEMBLIES



J1-1



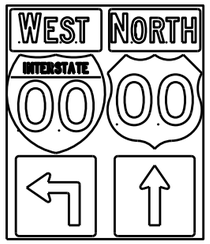
J1-2



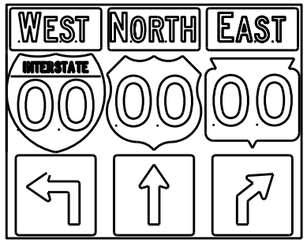
J1-3



J2-1



J2-2

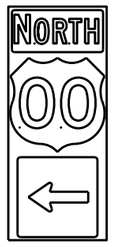


J2-3

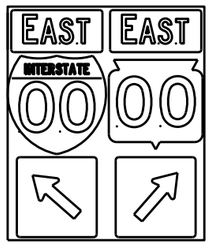


JV

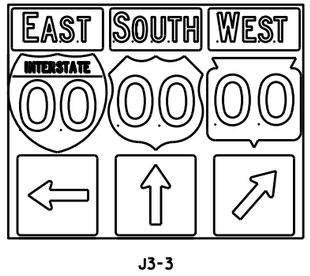
(Typical Vertical J-Assembly
See Note 10 and 11)



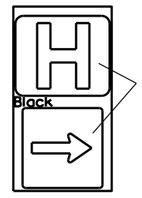
J3-1



J3-2



J3-3

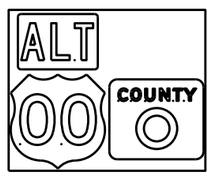


Blue Background

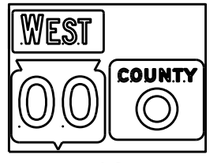
JH-1



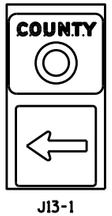
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1

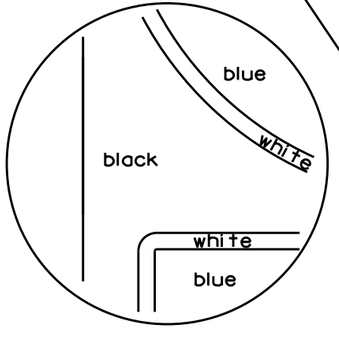


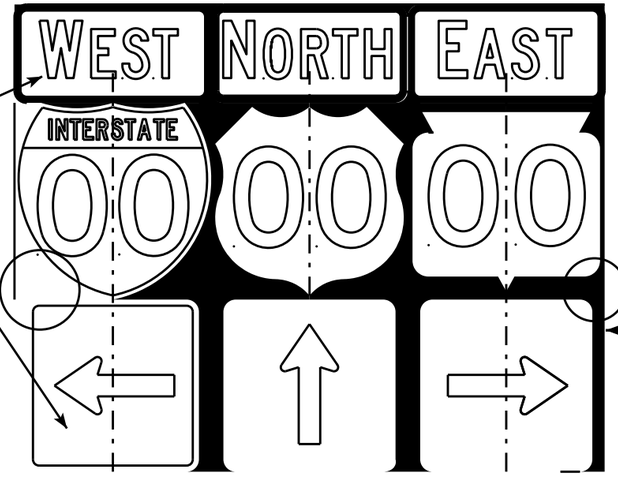
J23-1

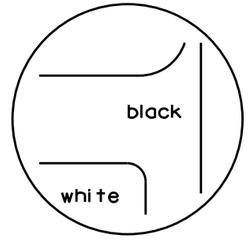


J22-1

[blue background with interstate]







[black background]

NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Black Non-reflective
   Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inchs (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

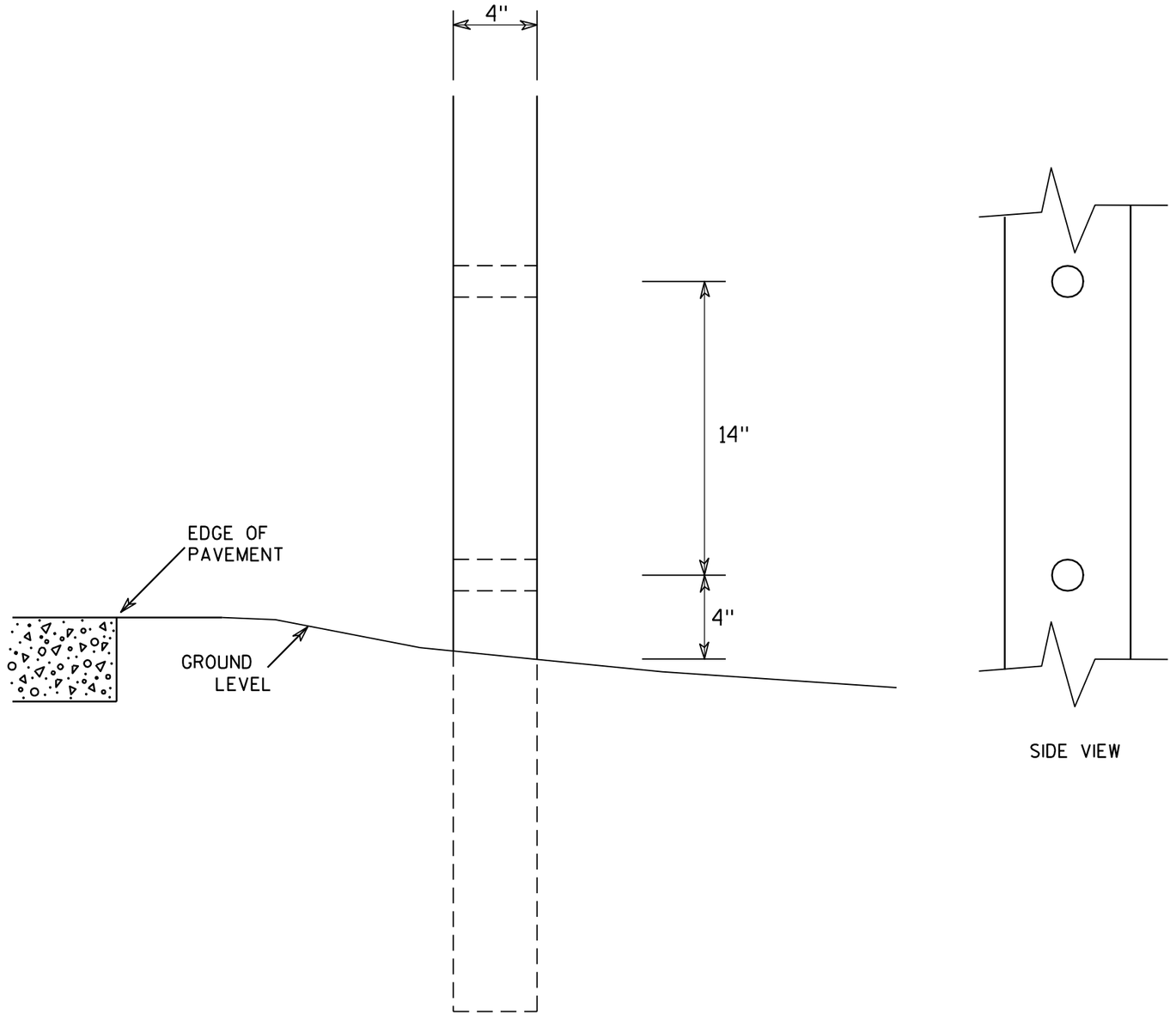
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/06/14 PL... A2-1S.8

PROJECT NO: | SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :

WISDOT/CADDS SHEET 42



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

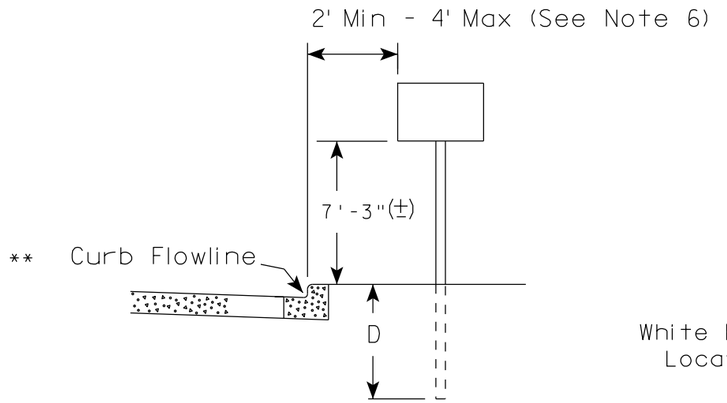
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

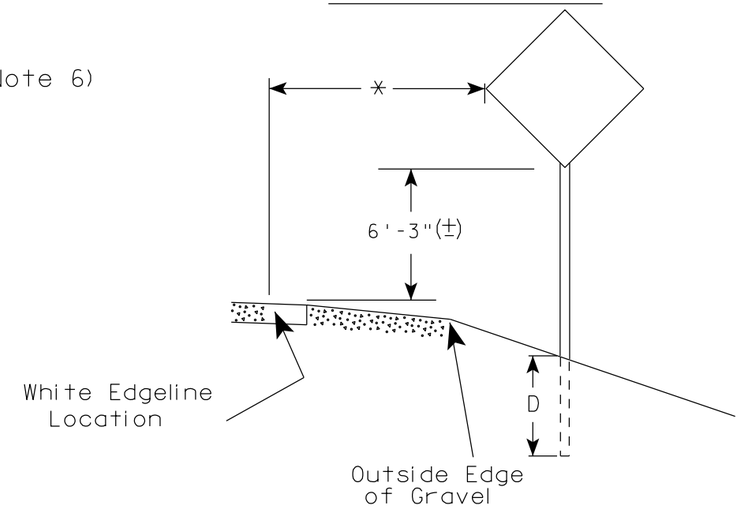
DATE 3/27/97 PLATE NO. A4-11.2

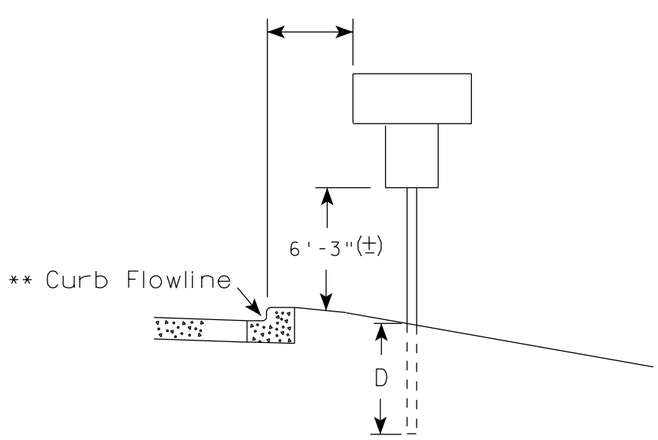
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 92	E

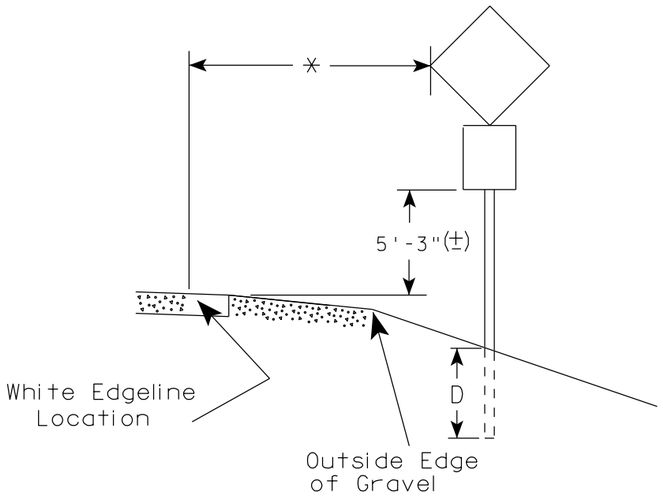
URBAN AREA



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'

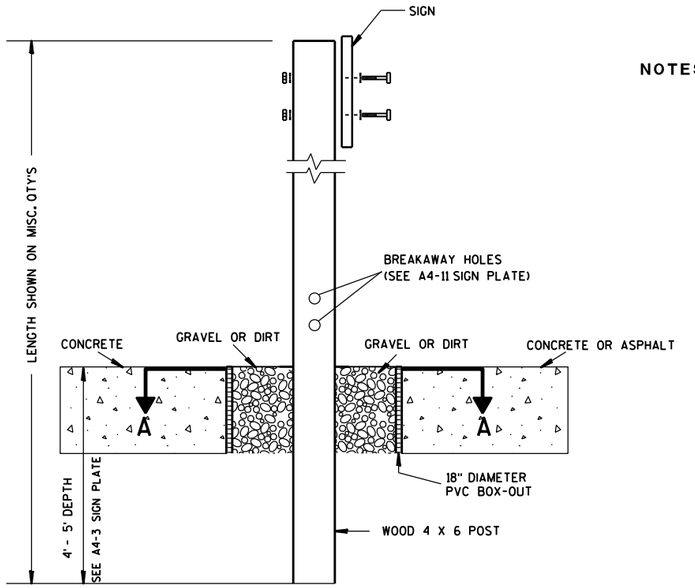
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 9/30/13 PLATE NO. A4-3.18

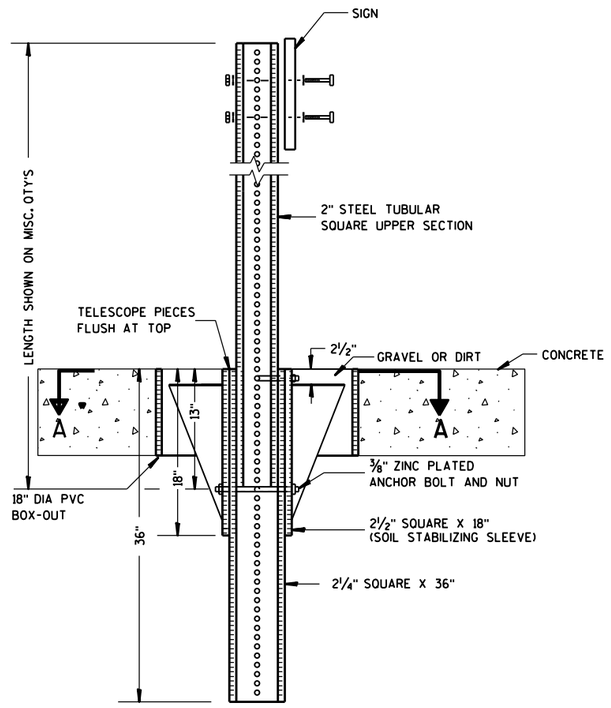
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



ELEVATION VIEW

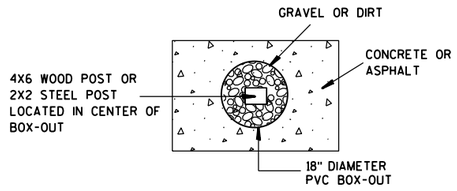
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

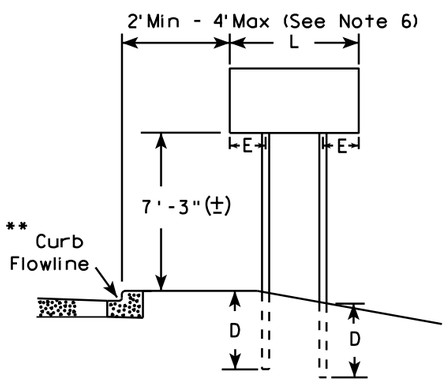
APPROVED Matthew R Rauch
for State Traffic Engineer

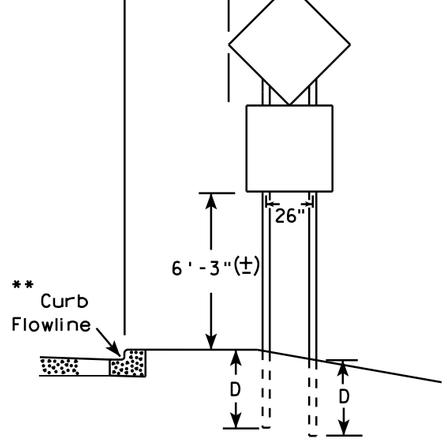
DATE 1/27/14 PLATE NO. A4-3B.1

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

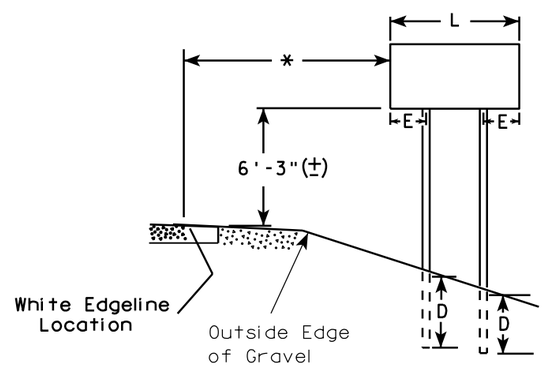
URBAN AREA

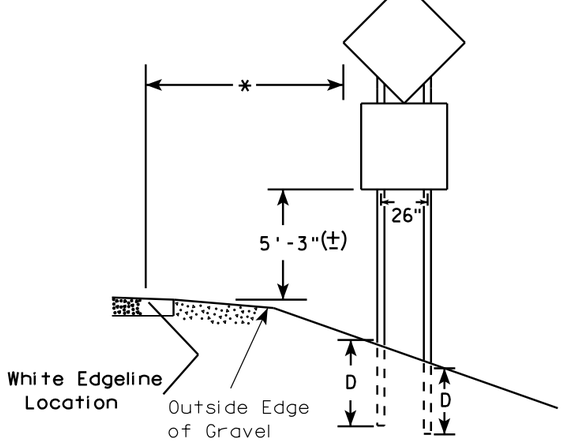




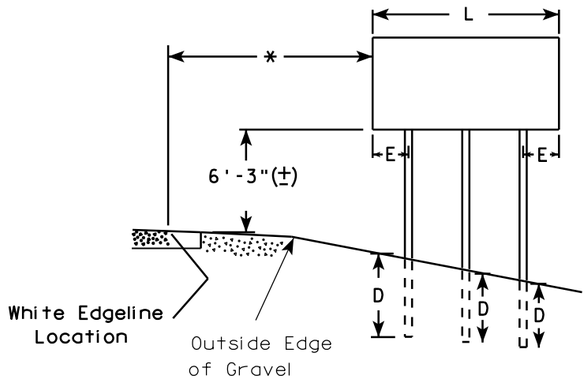
48" DIAMOND WARNING SIGN

RURAL AREA (See Note 3)





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 less than 20 S.F. 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

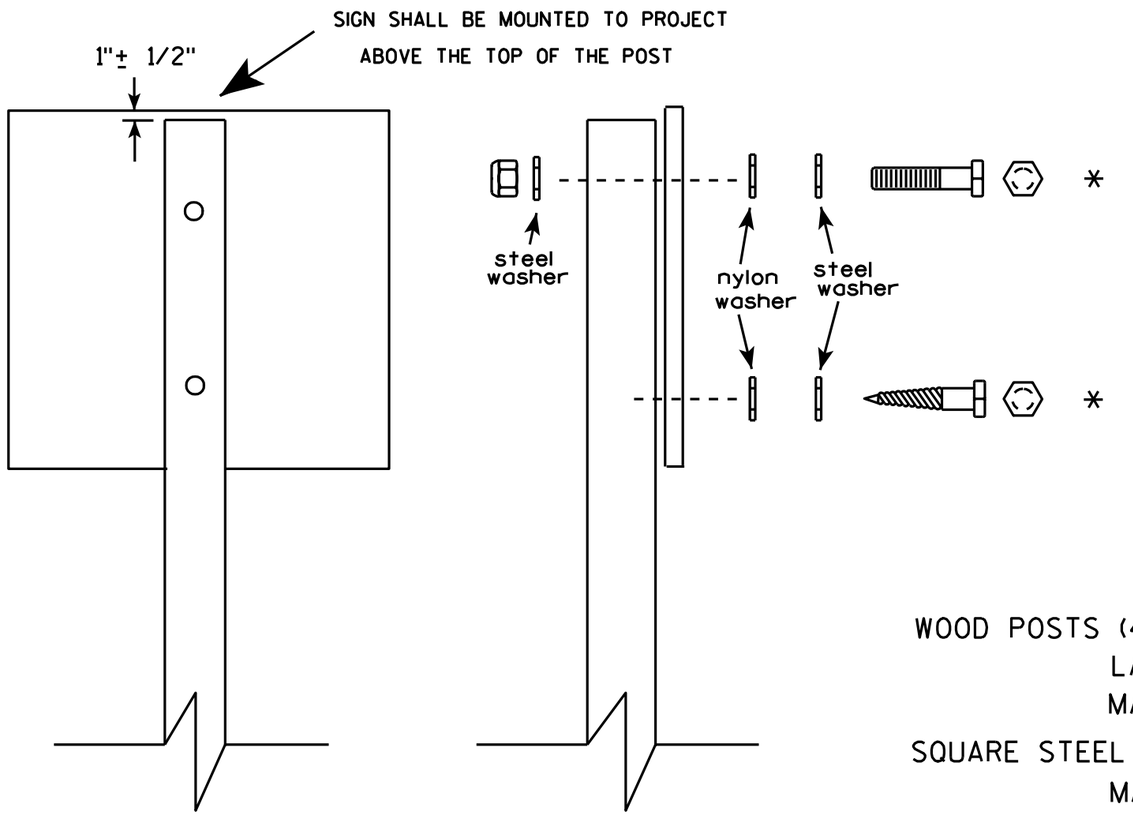
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/29/14 PLATE NO. A4-4 13
95

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A44.DGN PLOT DATE : 30-APR-2014 13:10 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 107.021305:1.000000



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

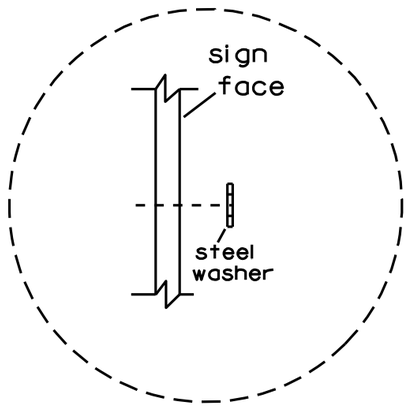
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

7

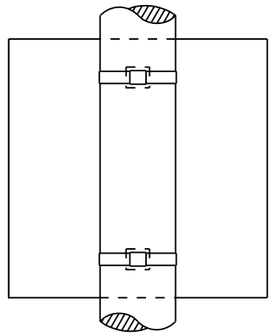
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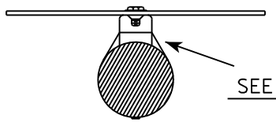
PROJECT NO:

SHEET NO: 96 E

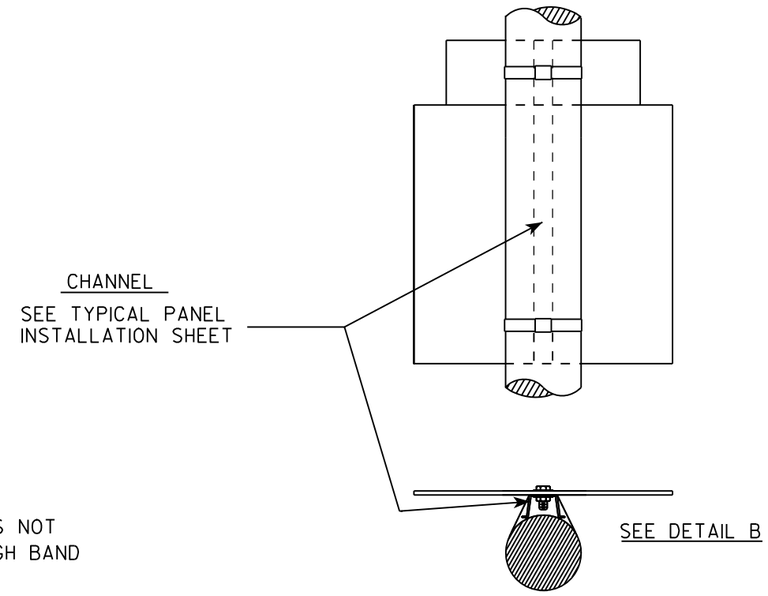
BANDING

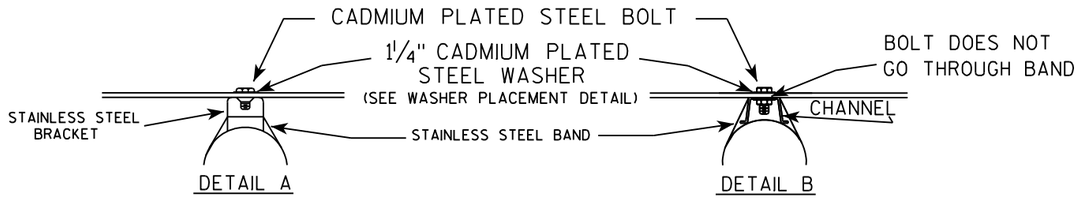
SINGLE SIGN



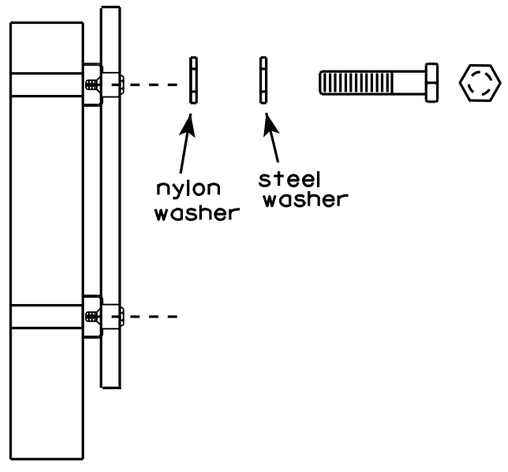


"J" ASSEMBLY





WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" 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: 97	E



D5-63 * See Note 5

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Brown
   Message - White
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

Metric equivalent for this sign is:

SIZE	
1	
2	1500 mm X 900 mm
3	
4	
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	60	36	2 1/4		3/4	6	4	5 1/2	4 1/4	25	17		5	1	12												15.0	1.35
3																												
4																												
5																												

STANDARD SIGN
D5-63

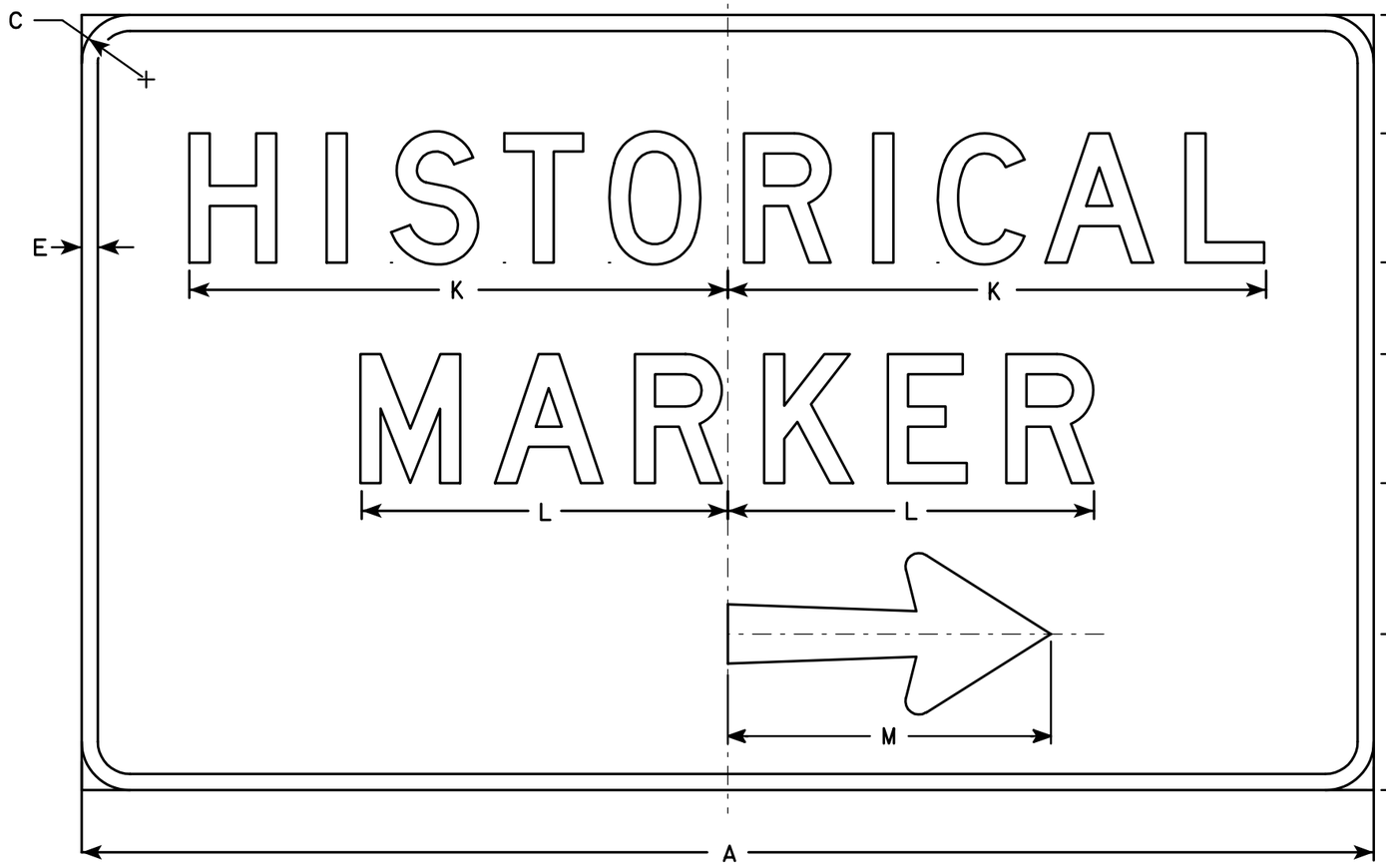
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

DATE 3/23/99 PLATE NO. D5-63.9

STATE PROJECT NUMBER:

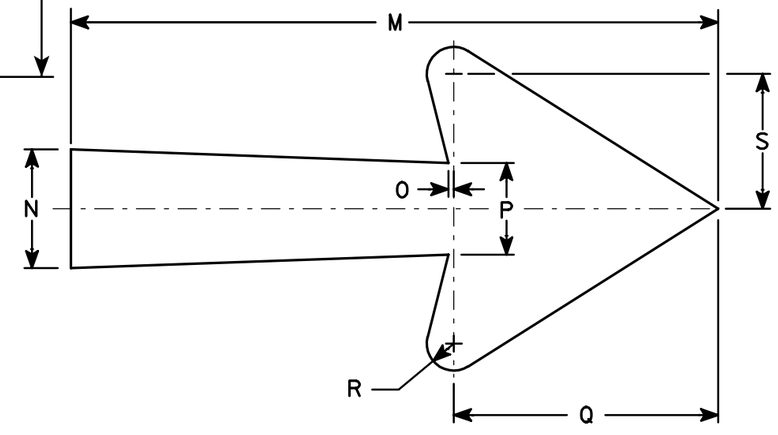
SHEET NO: 98 E



D5-64R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Brown
   Message - White
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. D5-64L is the same as D5-64R except the arrow is reversed.



Arrow Detail

Metric equivalent for this sign is:

SIZE	
1	
2	1500 mm X 900 mm
3	
4	
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	60	36	2 1/4		3/4	6	5 1/2	4 1/4	7	7 1/4	25	17	15	2 3/4	1/8	2 1/8	6 1/8	5/8	3 1/8								15.0	1.35
3																												
4																												
5																												

STANDARD SIGN
D5-64

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Charles J Spay
for State Traffic Engineer

DATE 1/09/02 PLATE NO. D5-64.5

STATE PROJECT NUMBER:

SHEET NO: 99 E

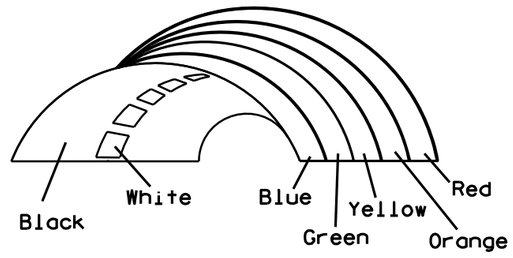


* VARIES

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

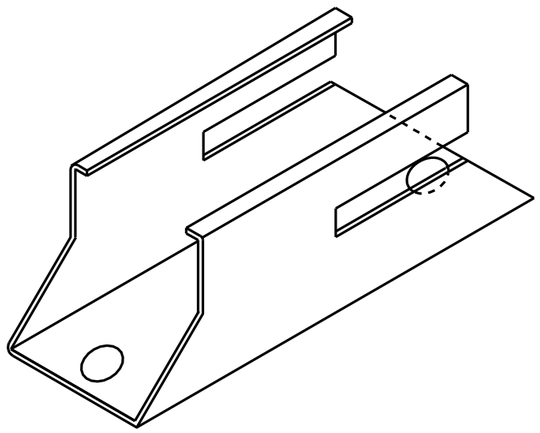
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/27/11 PLATE NO. 155-56.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 100

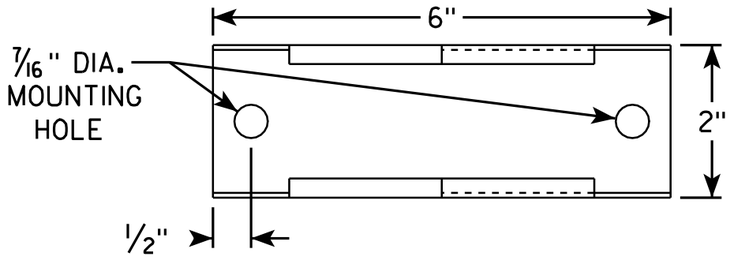
ISOMETRIC VIEW



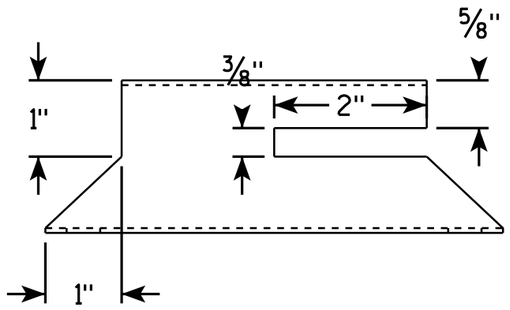
NOTES

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.

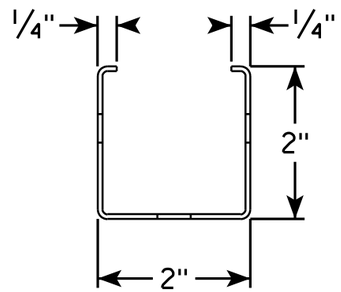
TOP VIEW



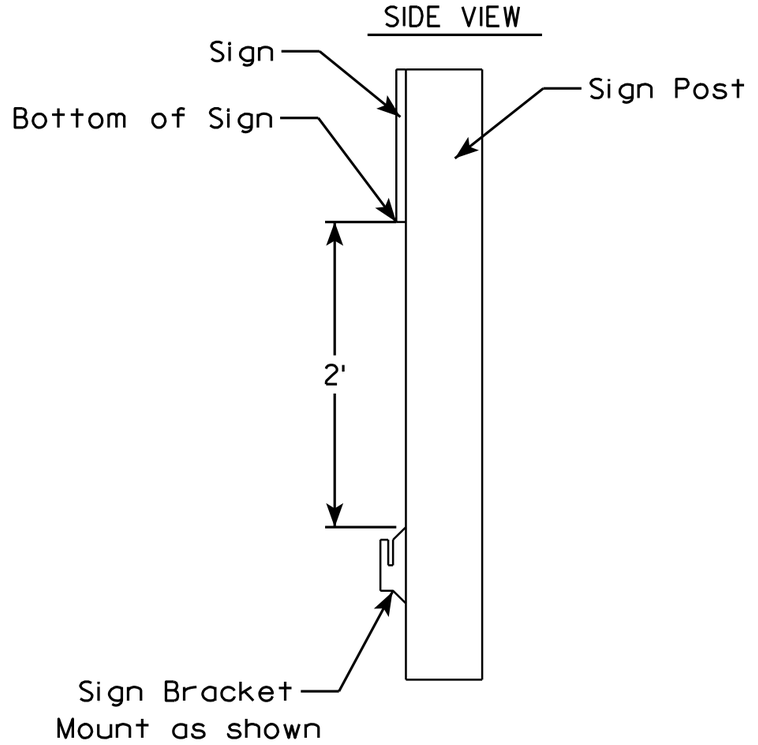
SIDE VIEW



END VIEW



SIDE VIEW



7

7

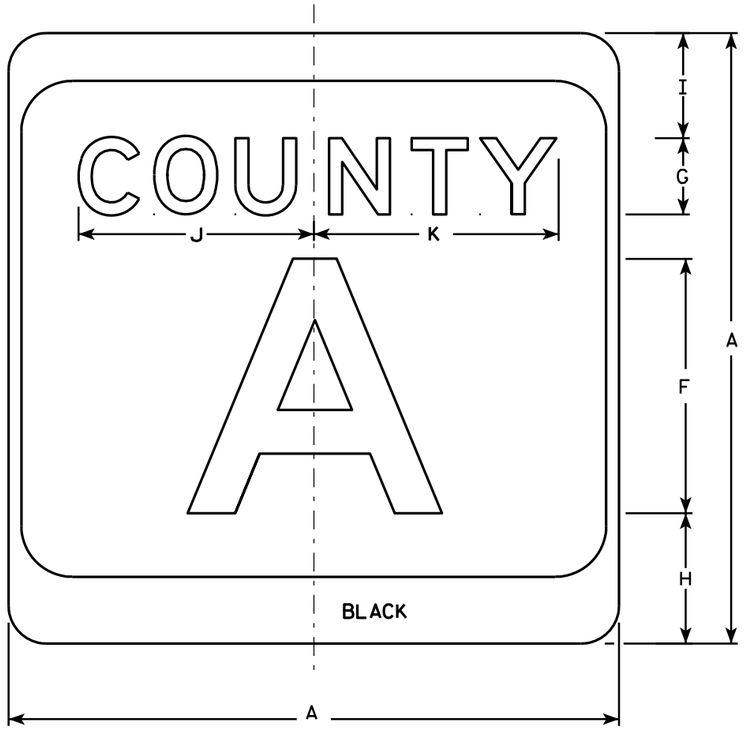
ROLLUP SIGN BRACKET
I55-56B

WISCONSIN DEPT OF TRANSPORTATION

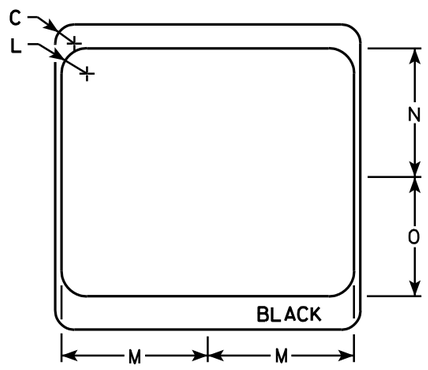
APPROVED Matthew R Rauch
for State Traffic Engineer

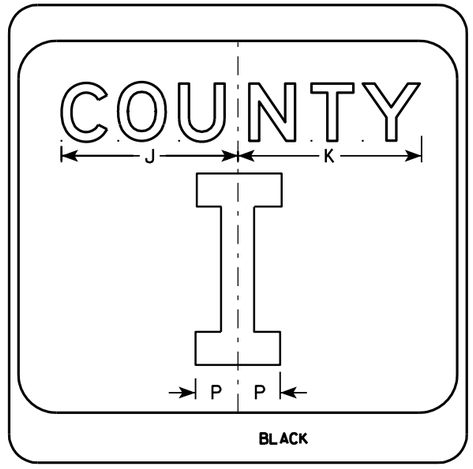
DATE 2/5/10 PLATE NO. I55-56B.1

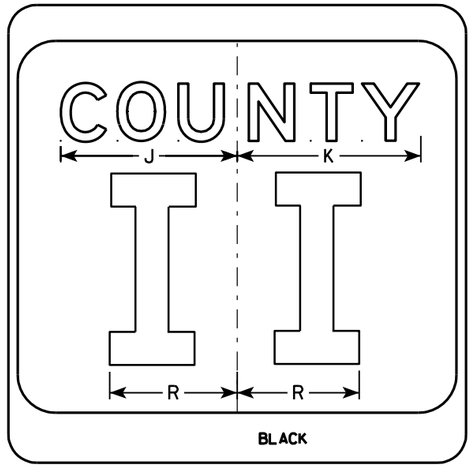
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 101	E



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

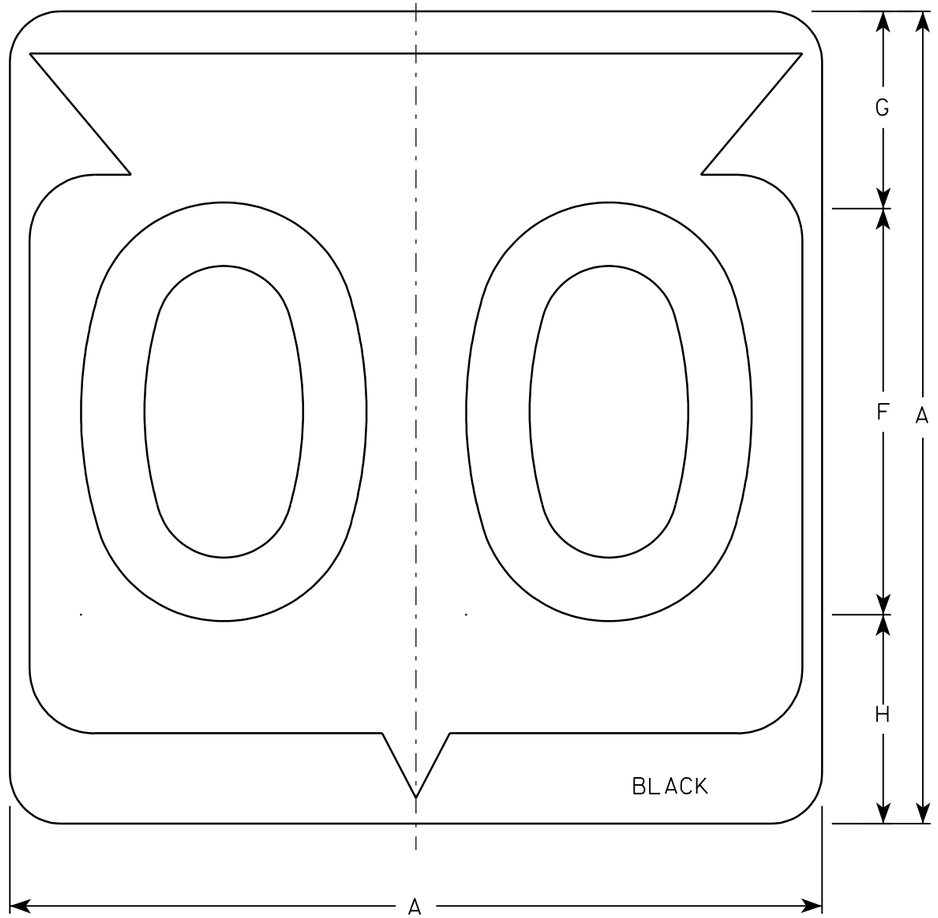
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8

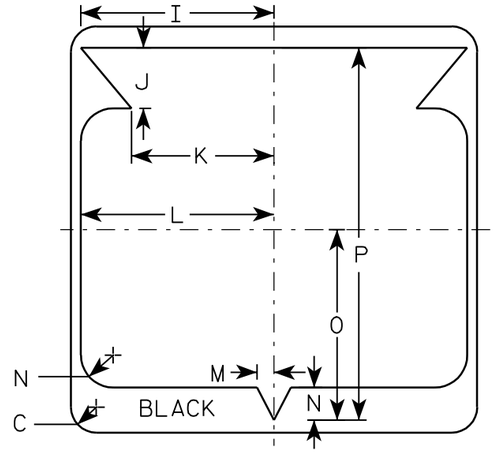
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 102	E



M1-6

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 Series numerals and adjust spacing as per plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective



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		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0	.36
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81

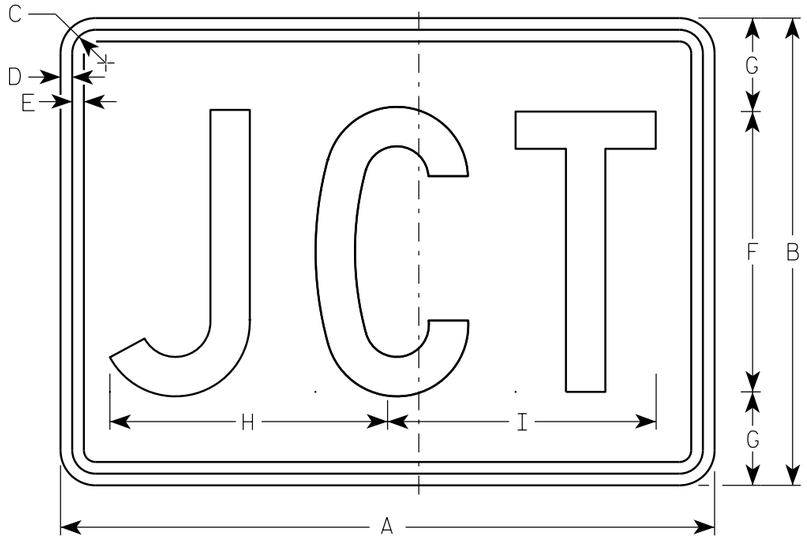
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

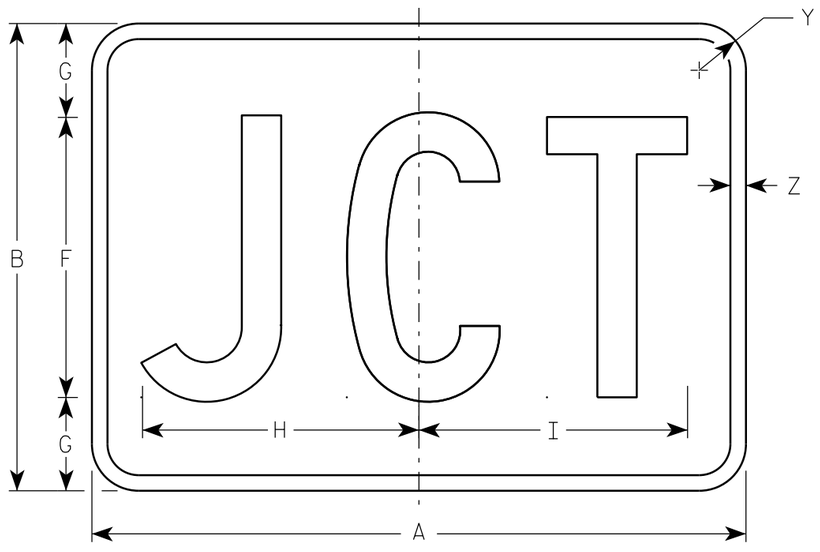
APPROVED Chester J Spang for State Traffic Engineer

DATE 3/20/02 PLATE NO. M1-6.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 103	E



M2-1
MK2-1
MM2-1
MN2-1
MR2-1



MB2-1

NOTES

1. Sign is Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M2-1 Background - White
   Message - Black
   MB2-1 Background - Blue
   Message - White
   MK2-1 Background - Green
   Message - White
   MM2-1 Background - White
   Message - Green
   MN2-1 Background - Brown
   Message - White
   MR2-1 Background - Brown
   Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40

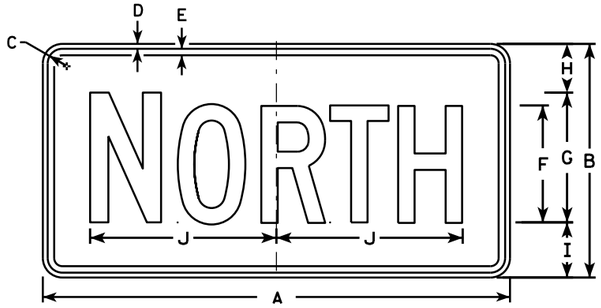
STANDARD SIGN
M2-1

WISCONSIN DEPT OF TRANSPORTATION

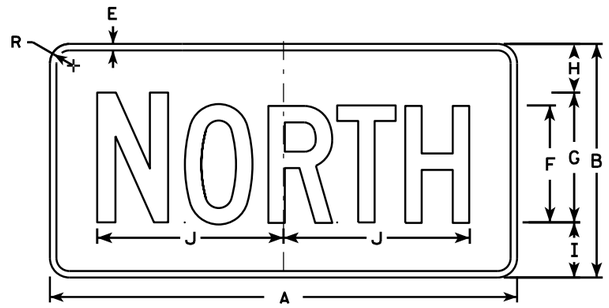
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 6/30/14 PLATE 104 12-1.11

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



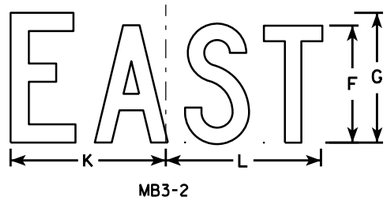
M3-1
MK3-1
MM3-1
MN3-1



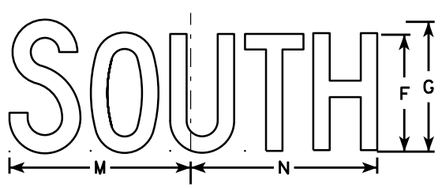
MB3-1



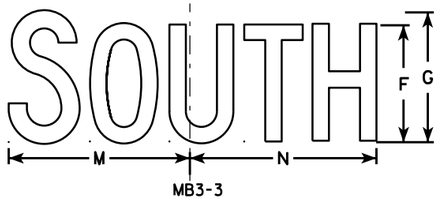
M3-2
MK3-2
MM3-2
MN3-2



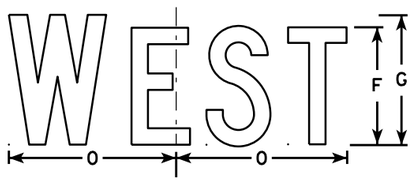
MB3-2



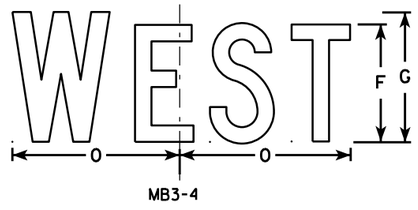
M3-3
MK3-3
MM3-3
MN3-3



MB3-3



M3-4
MK3-4
MM3-4
MN3-4



MB3-4

NOTES

1. All Signs Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White
   MK3-1 thru MK3-4 Background - Green
   Message - White
   MM3-1 thru MM3-4 Background - White
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White
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

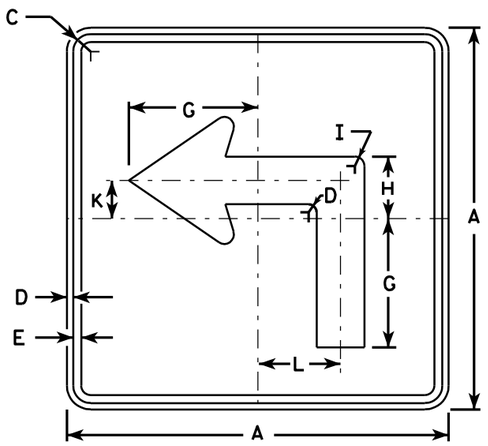
STANDARD SIGNS
M3-1 thur M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

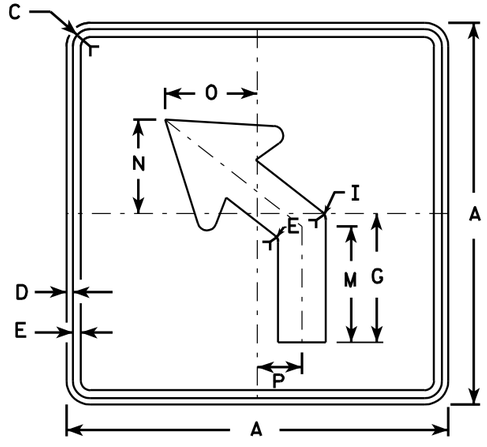
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 6/30/14 PLATE NO M3-1.13

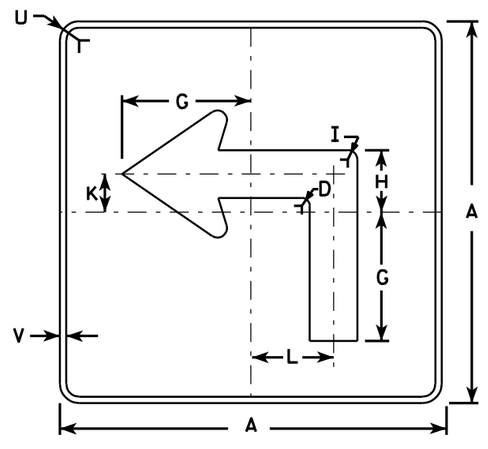
PROJECT NO: | HWY: | COUNTY: | | SHEET NO: E



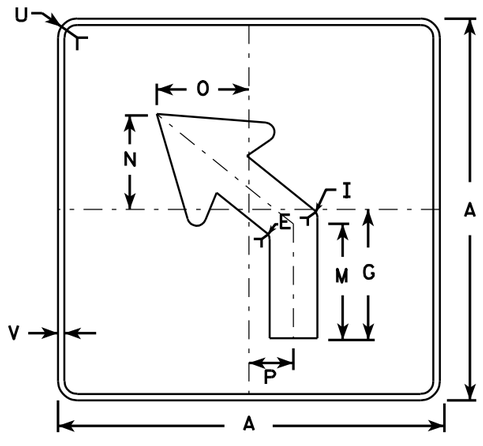
M5-1L
MK5-1L
MM5-1L
MO5-1L
MP5-1L
MR5-1L



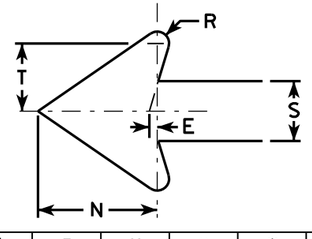
M5-2L
MK5-2L
MM5-2L
MO5-2L
MP5-2L
MR5-2L



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

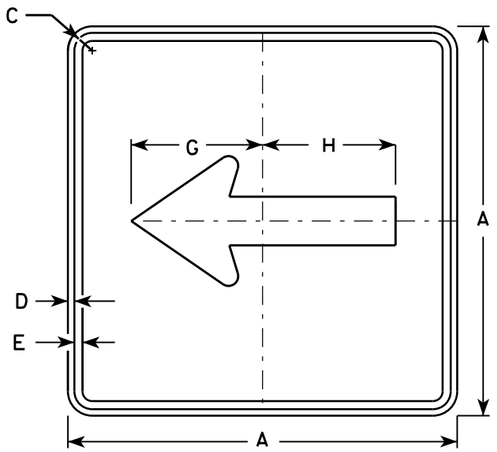
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

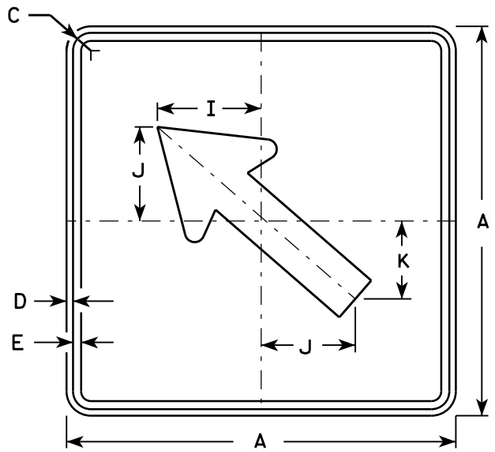
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/29/13 PLATE NO. M5-1.12

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



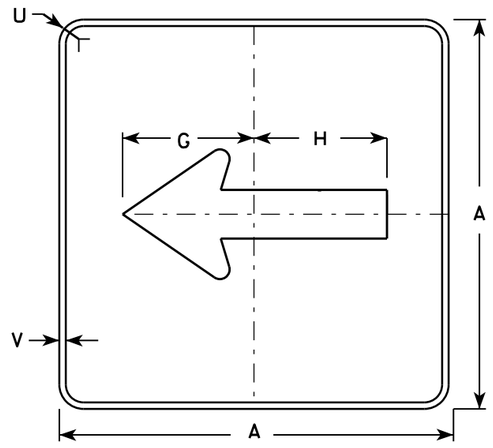
M6-1
MK6-1
MM6-1
MN6-1
MO6-1
MP6-1
MR6-1



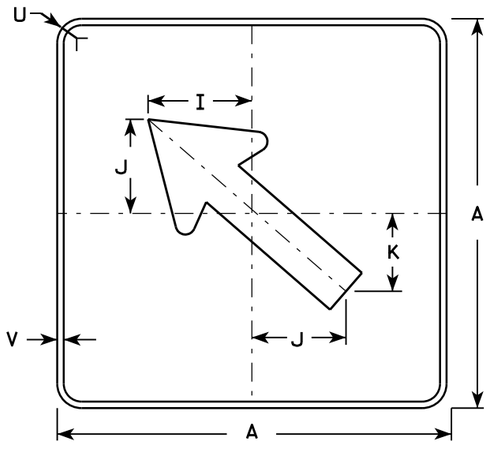
M6-2
MK6-2
MM6-2
MN6-2
MO6-2
MP6-2
MR6-2

NOTES

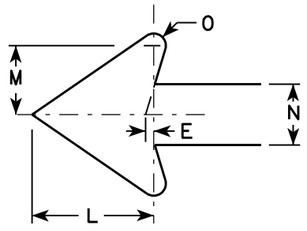
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MG6-1 and MG6-2 Background - Green
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow



MB6-1



MB6-2



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2						3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25

STANDARD SIGN M6-1 & M6-2 SERIES

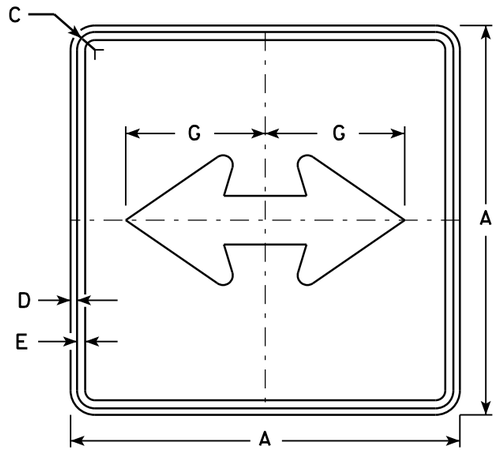
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

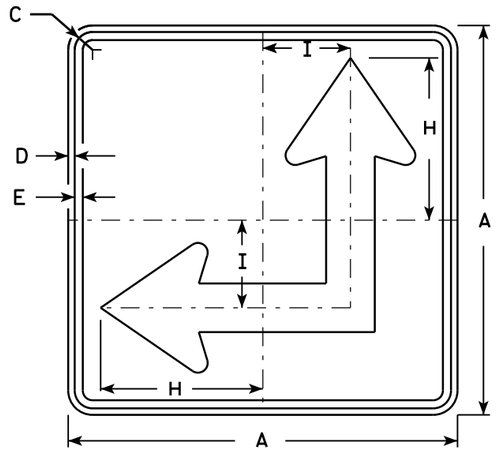
DATE 7/03/14 PLATE M6-1.14

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

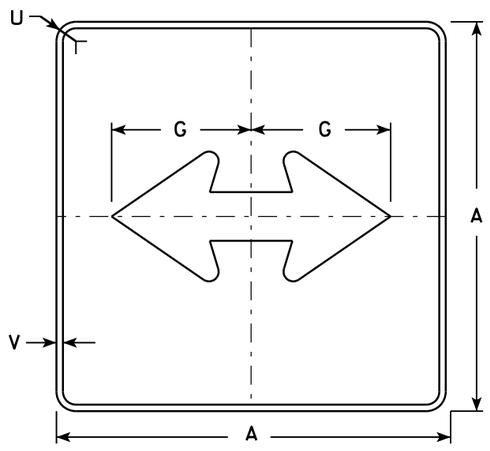
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\M61.DGN PLOT DATE : 03-JUL-2014 14:28 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 11.675051:1.000000
WISDOT/CADDS SHEET 42



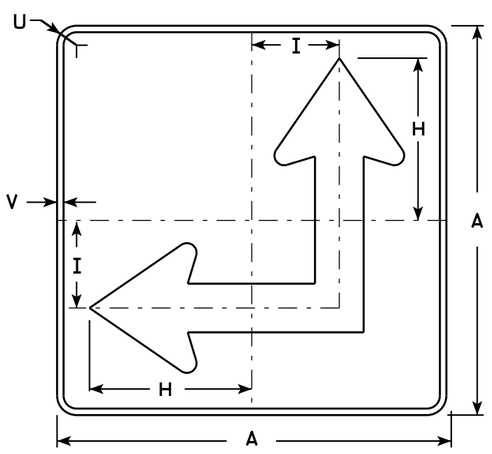
M6-4
MK6-4
MM6-4
MN6-4
MO6-4
MP6-4
MR6-4



M6-6
MK6-6
MM6-6
MN6-6
MO6-6
MP6-6
MR6-6



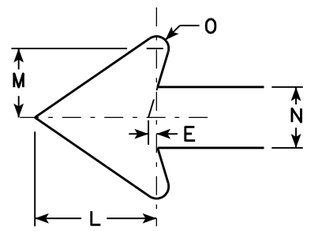
MB6-4



MB6-6

NOTES

1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See Note 4
   Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-4 and M6-6 Background - White
   Message - Black
   MB6-4 and MB6-6 Background - Blue
   Message - White
   MK6-4 and MK6-6 Background - Green
   Message - White
   MM6-4 and MM6-6 Background - White
   Message - Green
   MN6-4 and MN6-6 Background - Brown
   Message - White
   MO6-4 and MO6-6 Background - Orange - Type F Reflective
   Message - Black
   MP6-4 and MP6-6 Background - White
   Message - Blue
   MR6-4 and MR6-6 Background - Brown
   Message - Yellow
5. M6-6R same as M6-6L except arrow points ahead and right.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

STANDARD SIGN M6-4 & M6-6 SERIES

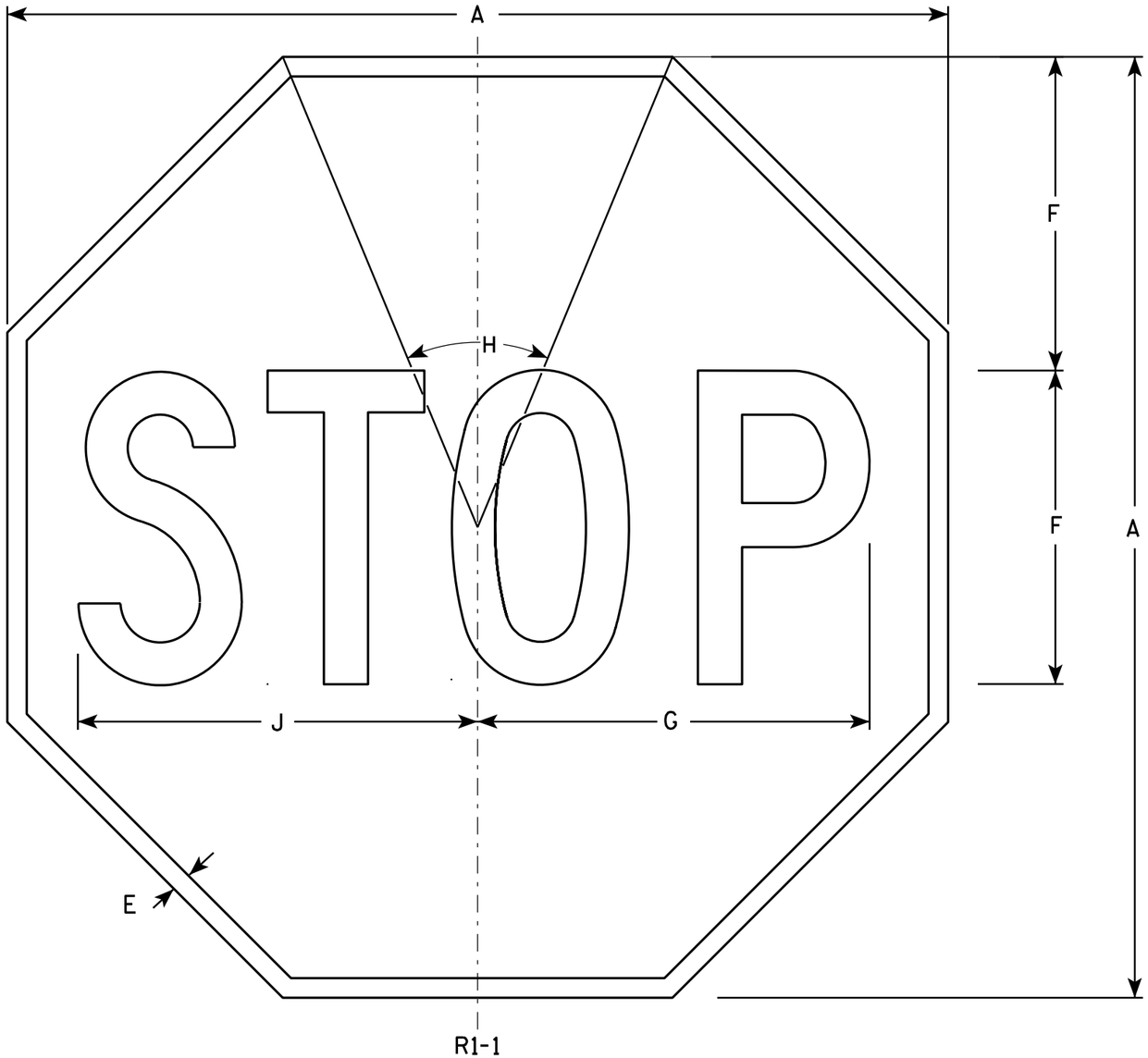
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 7/03/14 PLATE M6-4.9

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

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\M64.DGN PLOT DATE : 03-JUL-2014 14:56 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 11.675051:1.000000



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C

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

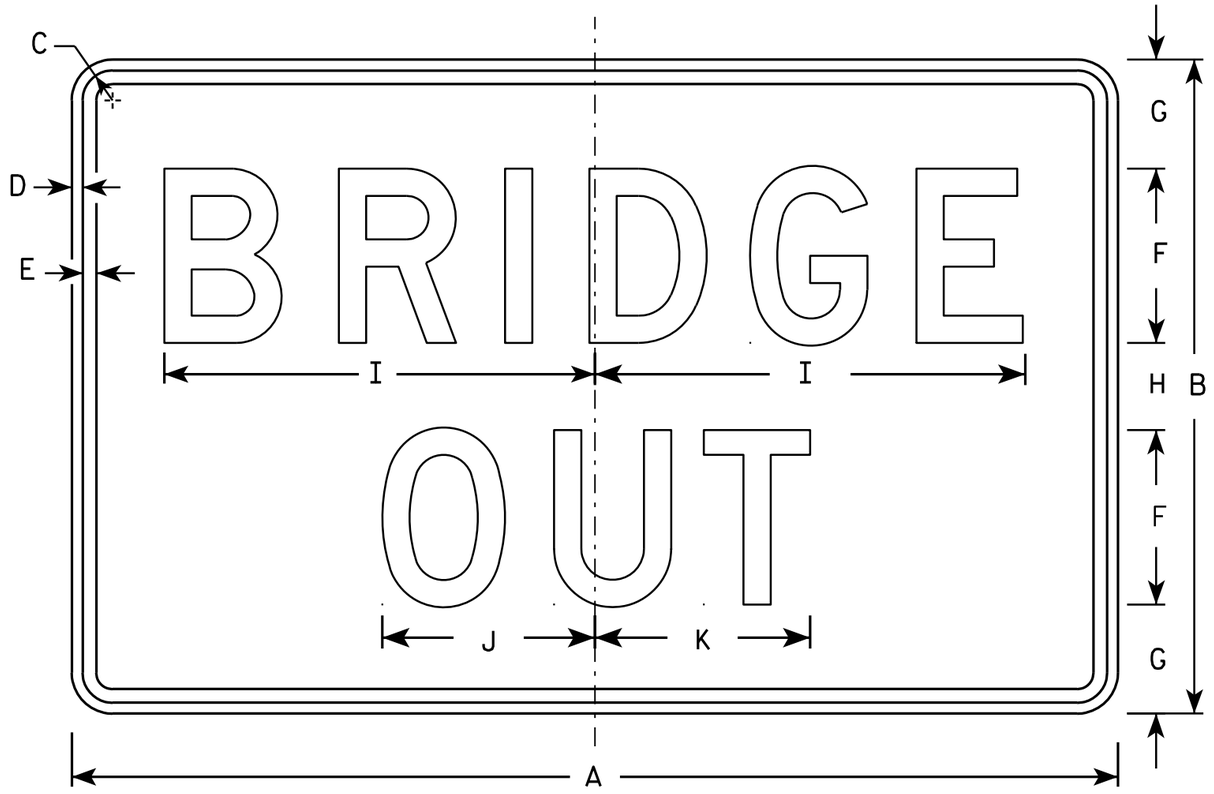
STANDARD SIGN
R1-1

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: 109	E



R11-2B

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.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0

STANDARD SIGN
R11-2B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

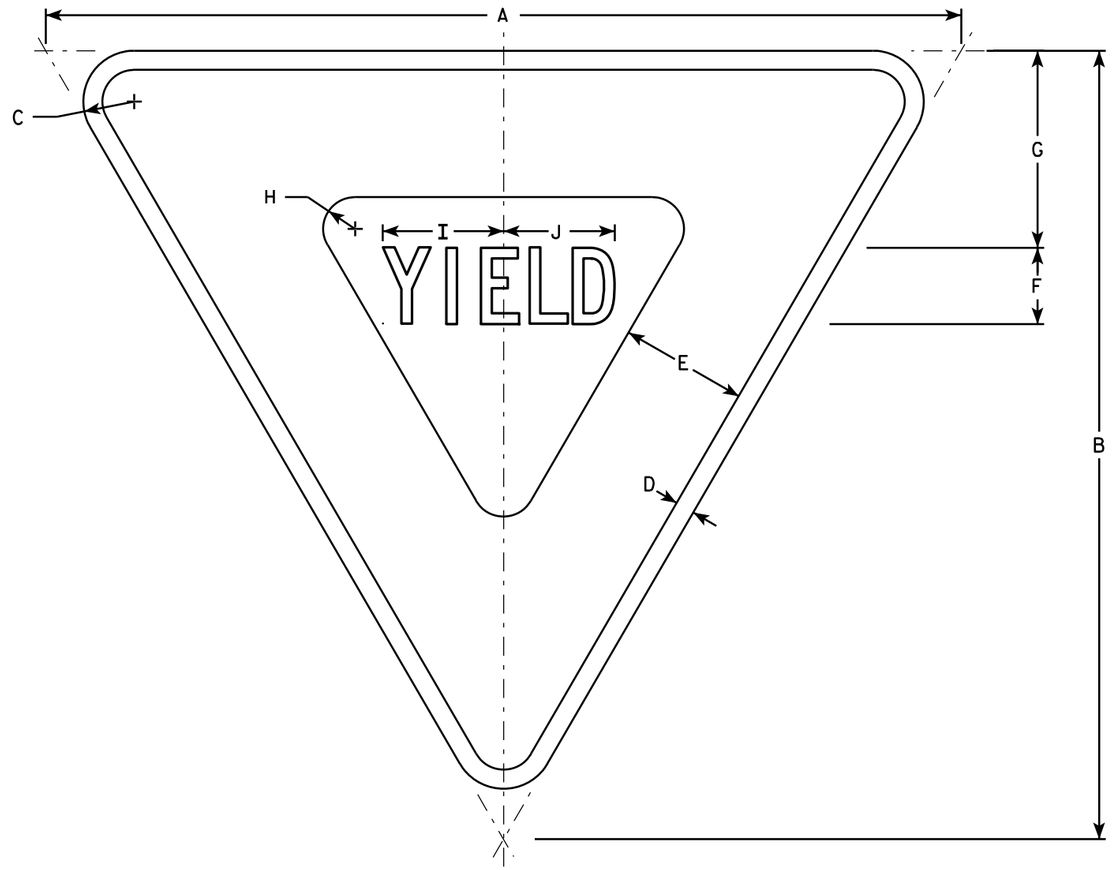
DATE 4/1/11 PLATE NO. R11-2B.2

PROJECT NO:

SHEET NO: 110 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R112B.DGN PLOT DATE : 01-APR-2011 14:23 PLOT BY : mscj9h

WISDOT/CADDS SHEET 42



R1-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The border strip and word message are reflectorized red.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	26	1 1/2	5/8	4	2 1/2	6 3/8	7/8	4	3 5/8																	2.71
2S	36	31	2	3/4	5	3	7 3/4	1 1/4	4 3/4	4 3/8																	3.88
2M	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
3	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
4	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
5	60	52	3	1 1/2	8	5	13	2 1/2	7 7/8	7 1/4																	10.83
6	24	21	1 1/2	3/8	3	2	4 3/4	7/8	3 1/4	3																	1.75
7	18	15 1/2	1	3/8	2 1/2	1 1/2	3 7/8	5/8	2 3/8	2 1/4																	0.97

STANDARD SIGN
R1-2

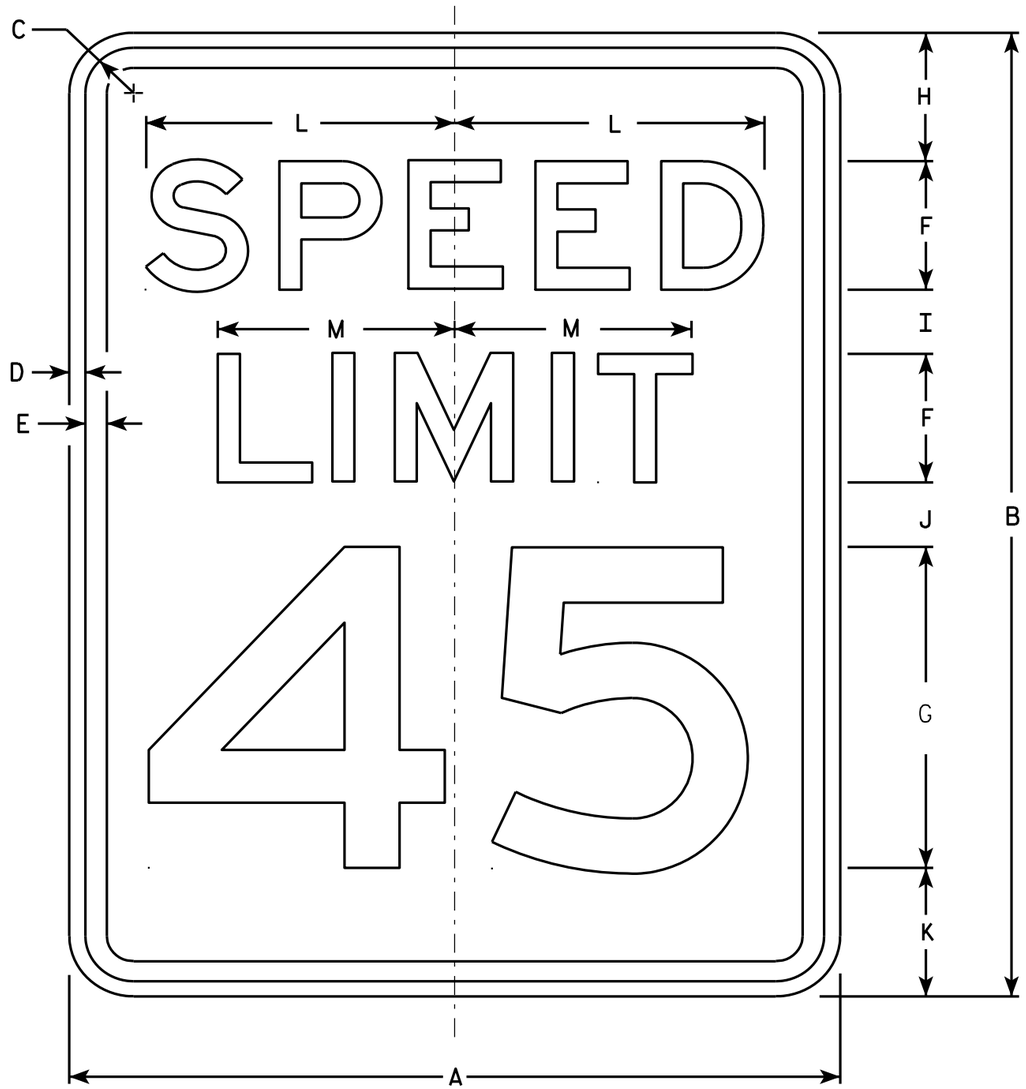
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/02/10 PLATE NO. R1-2.11

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

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R12.DGN PLOT DATE : 02-NOV-2010 10:38 PLOT BY : dotsja PLOT NAME : PLOT SCALE : 5.959043:1.000000
WISDOT/CADDS SHEET 42



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

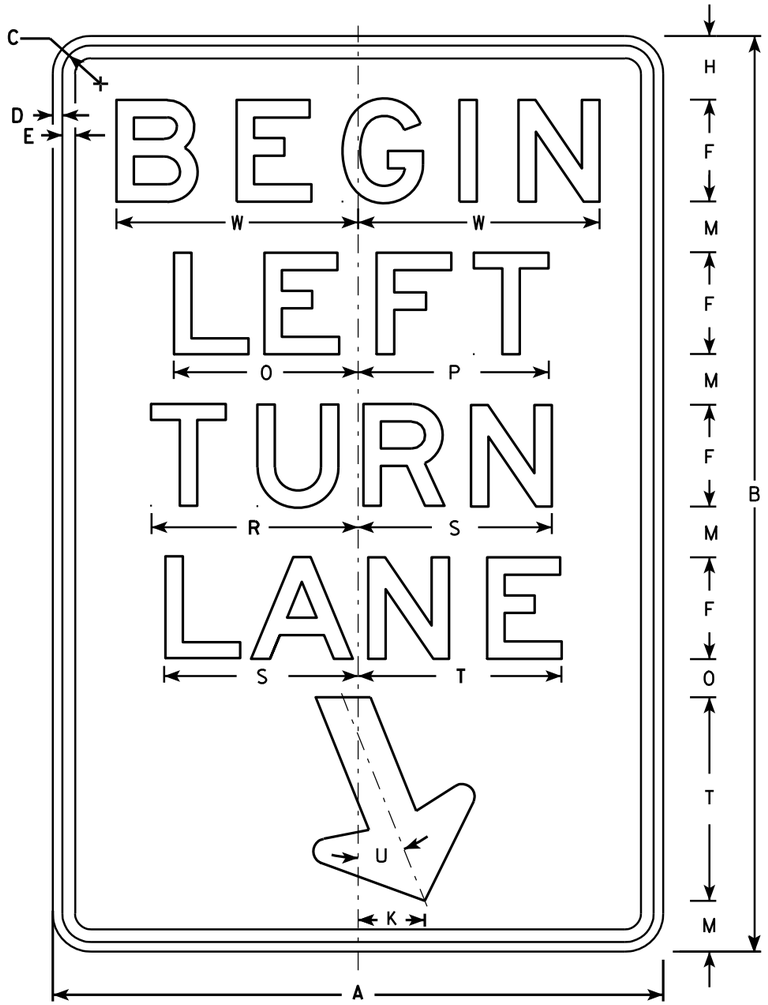
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

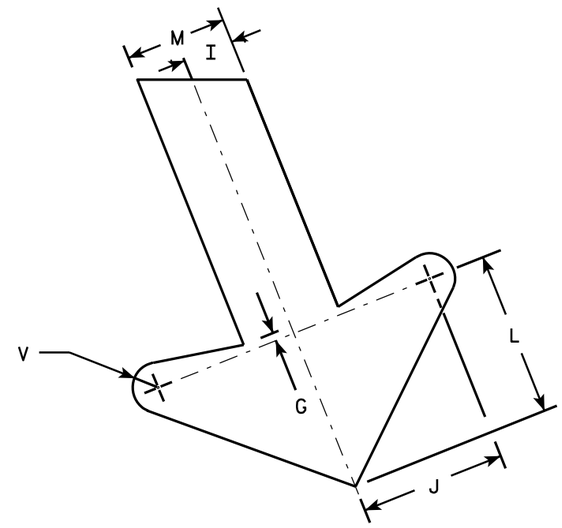
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 112 | E



R3-20L

NOTES

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



ARROW DETAIL

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

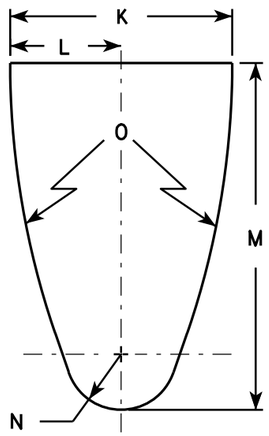
STANDARD SIGN
R3-20L

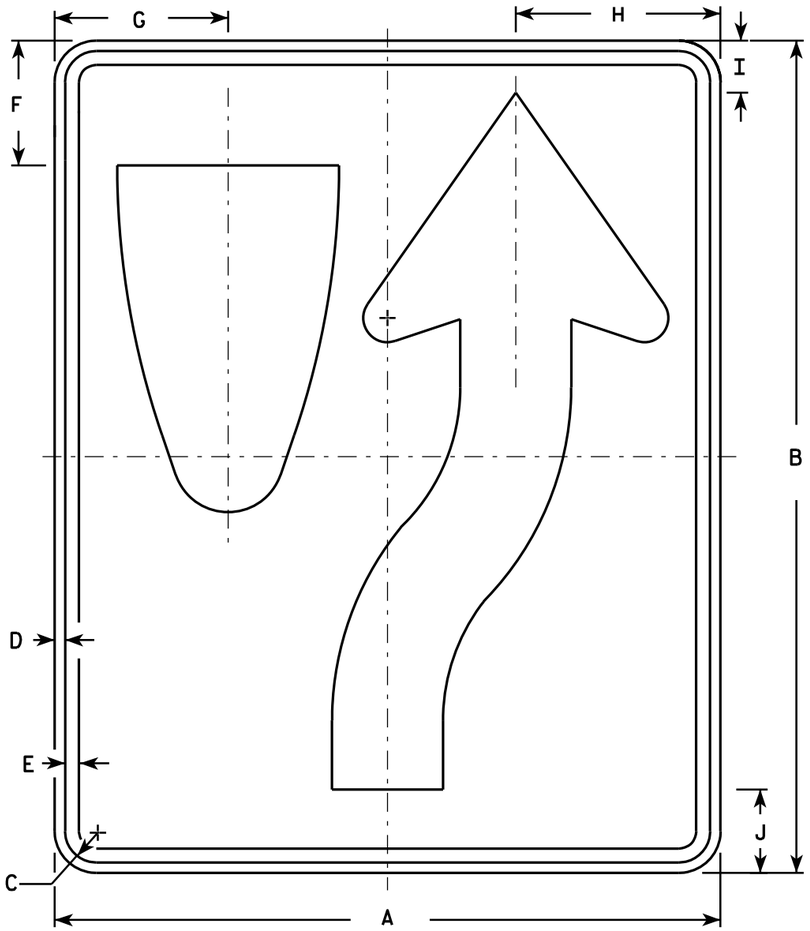
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 113 | E

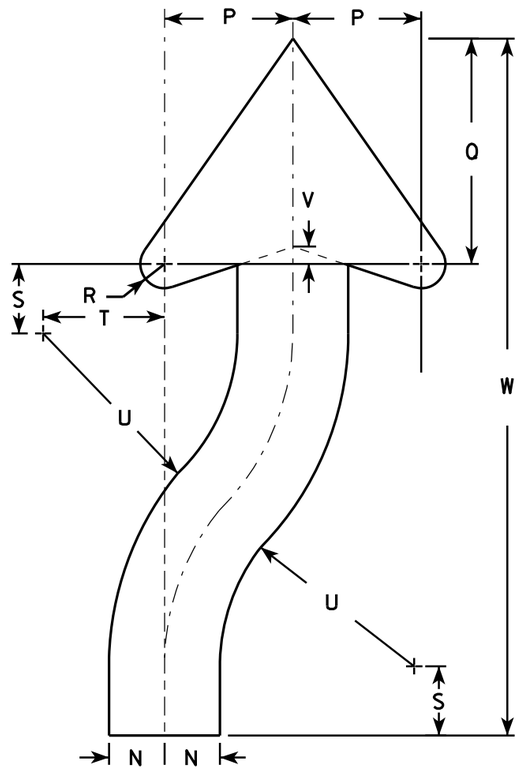




R4-7

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

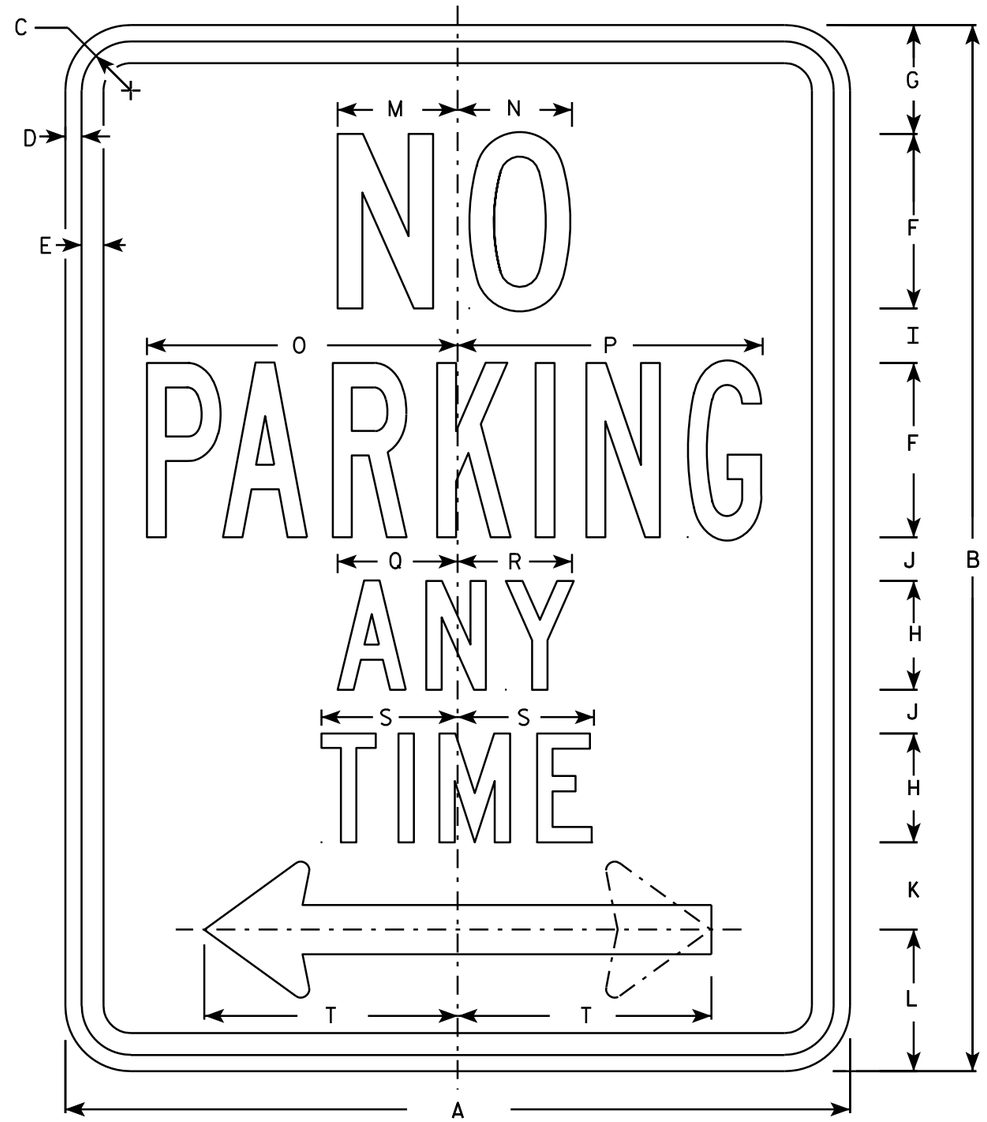
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

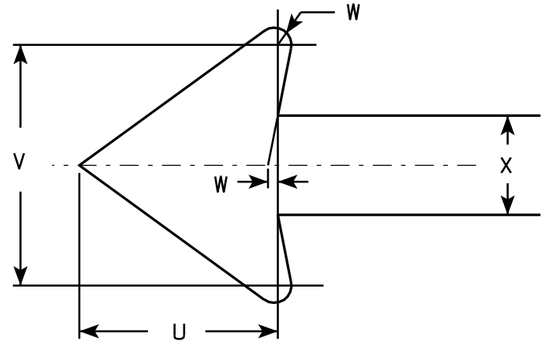
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 114	E



R7-1

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 - Red
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 and 4 are series C, line 2 is series B.
6. R7-1D (double arrow)
   R7-1L (left arrow)
   R7-1R (right arrow)



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 1/8	3/8	3/8	3	1 7/8	2	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2 1/4	2 1/8	2 1/2	3 7/8	1 1/2	1 3/4	1/8	3/4			1.5
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 3/4	2 5/8	3 1/8	5 7/8	2 1/4	2 5/8	1/4	1 1/8			3.0
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
4																											
5																											

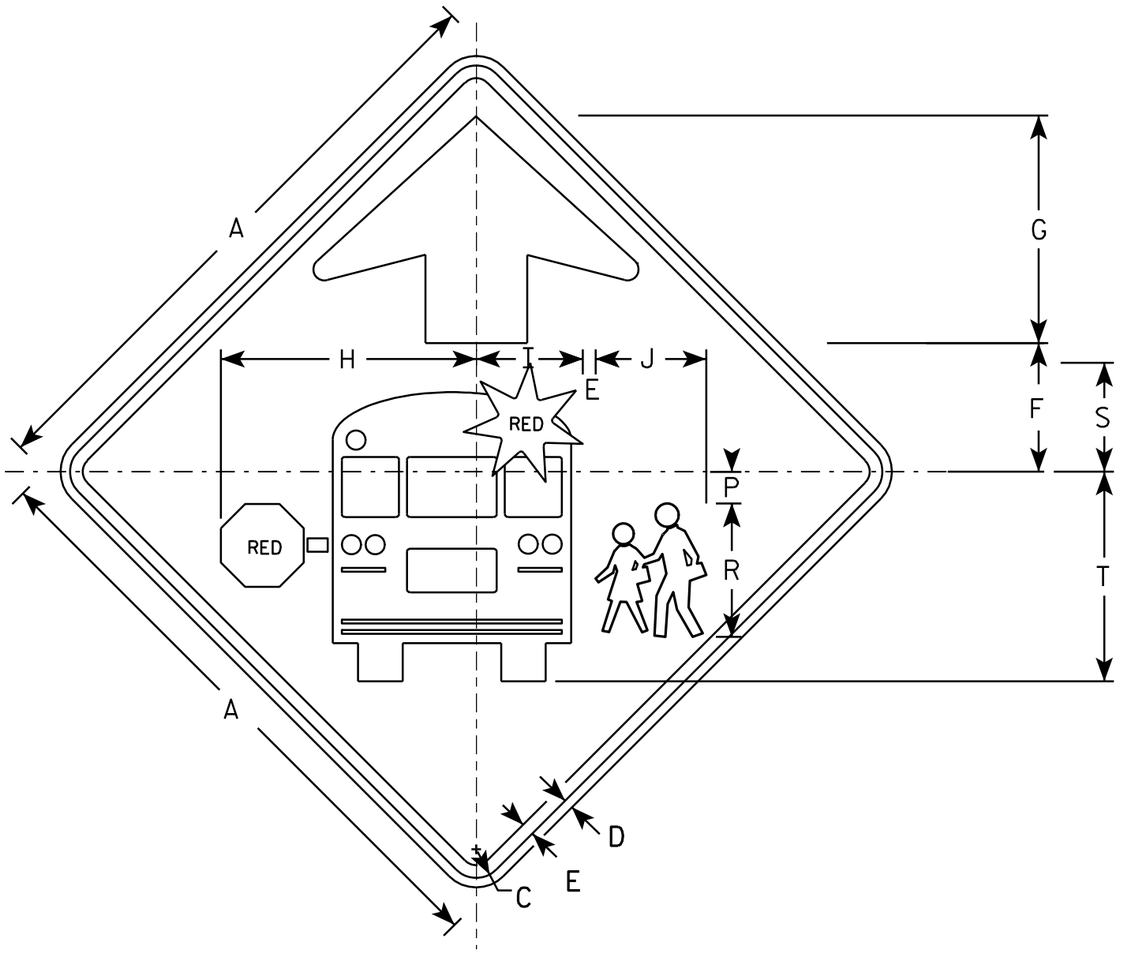
STANDARD SIGN
R7-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-1.9

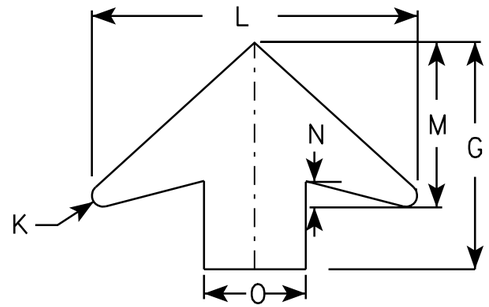
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 115	E



S3-1

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-GREEN
   Message - BLACK except as noted
   Circles except PEDS- RED BACKGROUND
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	30		1 3/8	1/2	5/8	6 1/4	11 1/4	12 1/2	5 1/4	5 1/2	1/2	16	8	1 1/4	5	1 1/2		6 5/8	5 3/8	10 3/8							6.25
2	36		1 5/8	5/8	3/4	7 1/2	13 1/2	15 1/8	6 1/4	6 1/2	5/8	19 1/4	9 3/4	1 5/8	6	1 7/8		7 7/8	6 3/8	12 3/8							9.0
3	48		2 1/4	3/4	1	10	17 7/8	20 1/8	8 3/8	8 3/4	7/8	25 5/8	13	2	8	2 1/2		10 1/2	8 1/2	16 1/2							16.0
4	48		2 1/4	3/4	1	10	17 7/8	20 1/8	8 3/8	8 3/4	7/8	25 5/8	13	2	8	2 1/2		10 1/2	8 1/2	16 1/2							16.0
5																											

STANDARD SIGN
S3-1

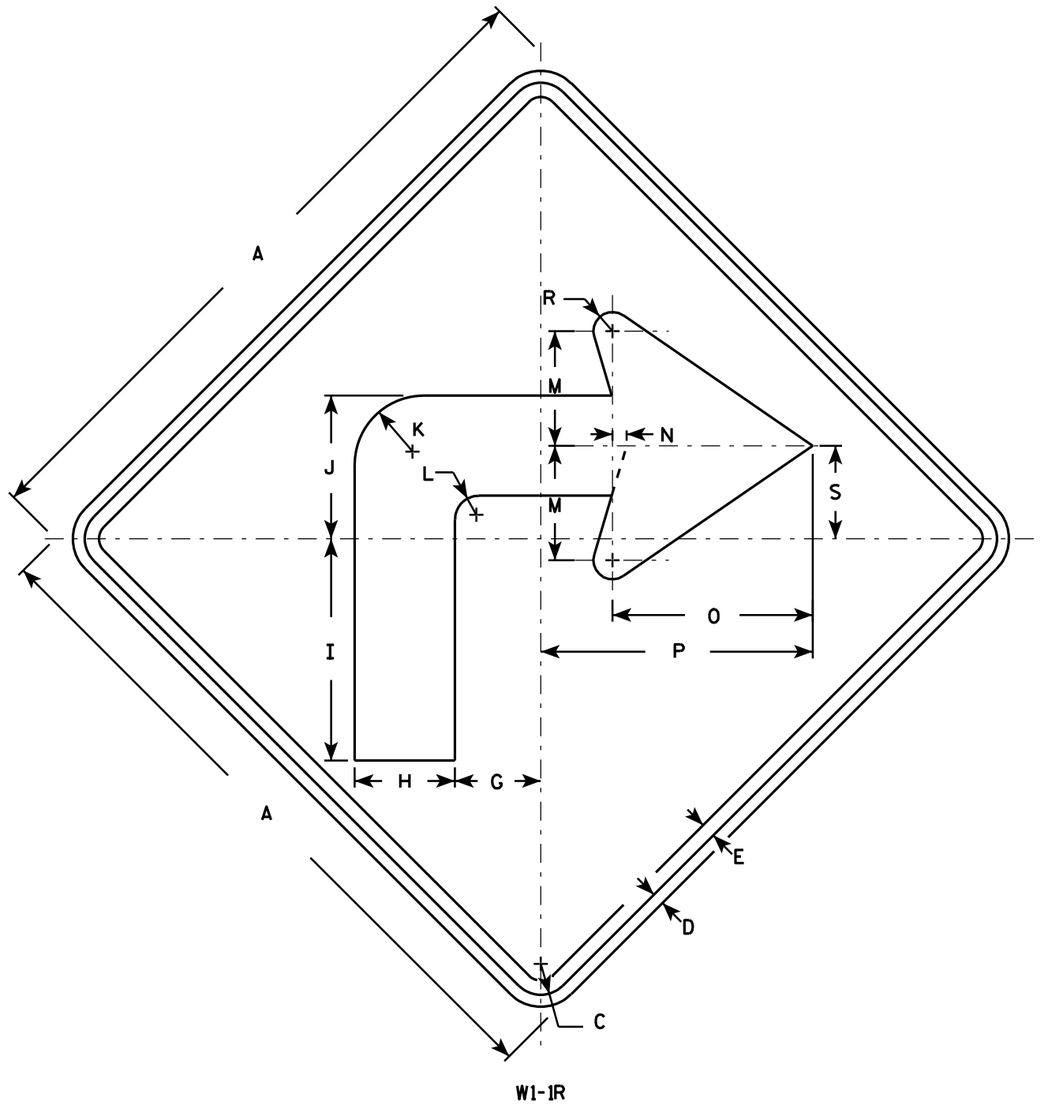
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/8/10 PLATE NO. S3-1.6

PROJECT NO:

SHEET NO: 116 E



W1-1R

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. W1-1L is the same as W1-1R 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	3 1/2	7 3/4	5	2 1/2	7/8	4	1/2	7	9 1/2		5/8	3 1/4								4.0
2S	36		1 5/8	5/8	3/4		4 1/2	5 1/4	11 5/8	7 1/2	3 5/8	1 1/4	6	3/4	10 1/2	14 1/4		1	4 7/8								9.0
2M	36		1 5/8	5/8	3/4		4 1/2	5 1/4	11 5/8	7 1/2	3 5/8	1 1/4	6	3/4	10 1/2	14 1/4		1	4 7/8								9.0
3	36		1 5/8	5/8	3/4		4 1/2	5 1/4	11 5/8	7 1/2	3 5/8	1 1/4	6	3/4	10 1/2	14 1/4		1	4 7/8								9.0
4	48		2 1/4	3/4	1		6	7	15 1/2	10	4 7/8	1 5/8	8	1	14	19		1 1/4	6 1/2								16.0
5	48		2 1/4	3/4	1		6	7	15 1/2	10	4 7/8	1 5/8	8	1	14	19		1 1/4	6 1/2								16.0

STANDARD SIGN
W1-1

WISCONSIN DEPT OF TRANSPORTATION

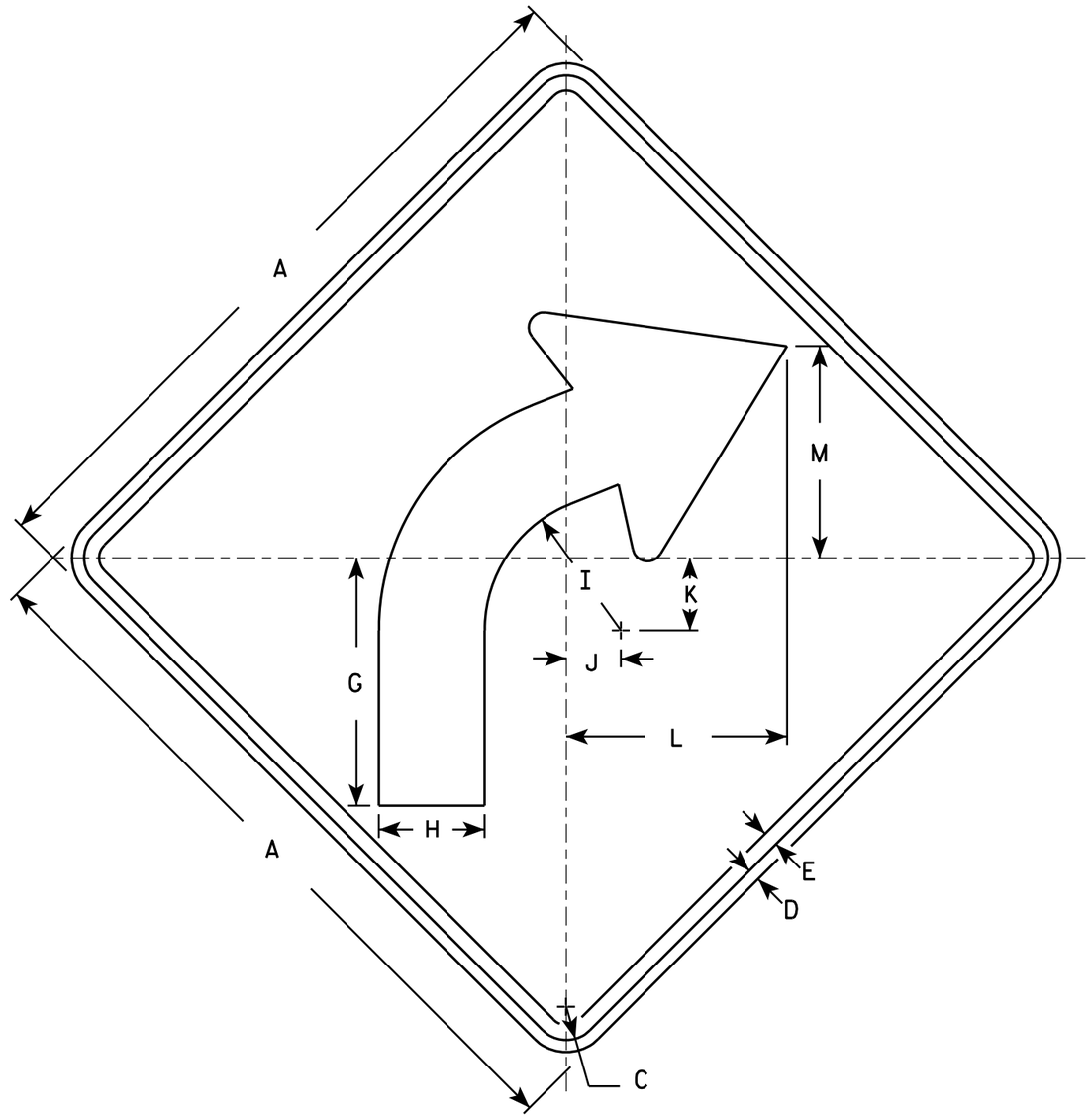
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/15/12 PLATE NO. W1-1.11

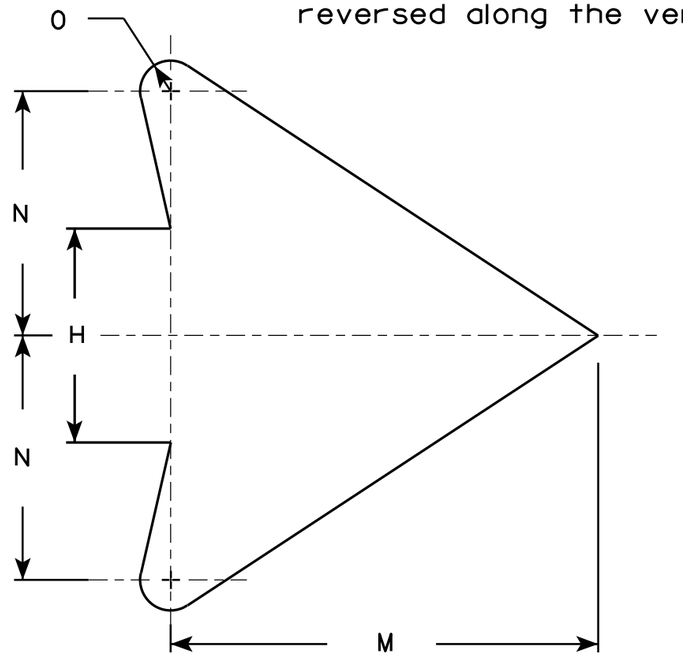
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 117 | E

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. W1-2L is the same as W1-2R except the arrow is reversed along the vertical centerline.



W1-2R



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2		8 1/4	3 1/2	4 1/2	1 3/4	2 3/8	7 1/4	7	4	1/2												4.0
2S	30		1 3/8	1/2	5/8		10 1/4	4 3/8	5 5/8	2 1/4	3	9 1/8	8 3/4	5	5/8												6.25
2M	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
3	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
4	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
5	48		2 1/4	3/4	1		16 1/2	7	9	3 1/2	4 5/8	14 1/2	14	8	1												16.0

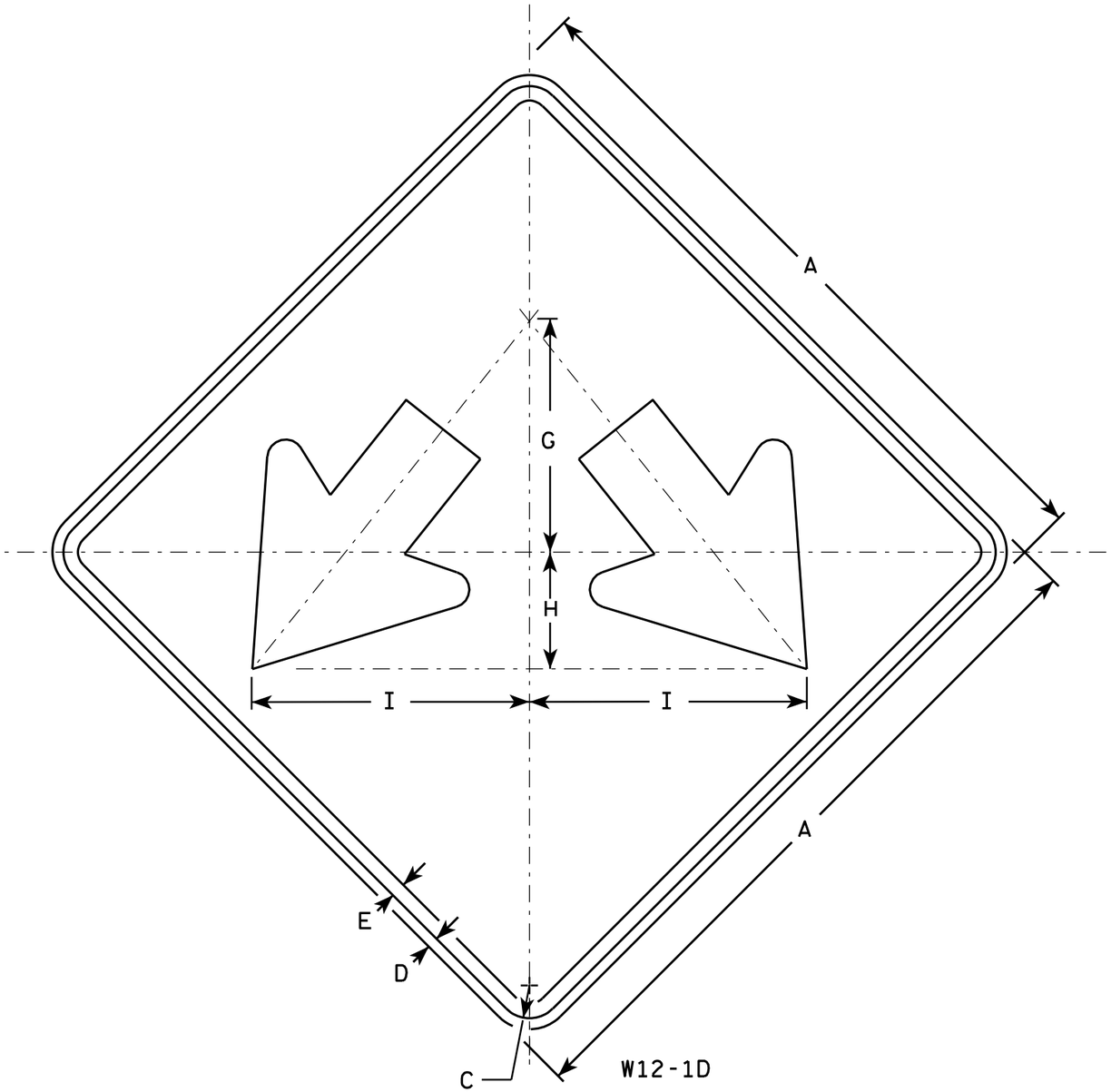
STANDARD SIGN
W1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

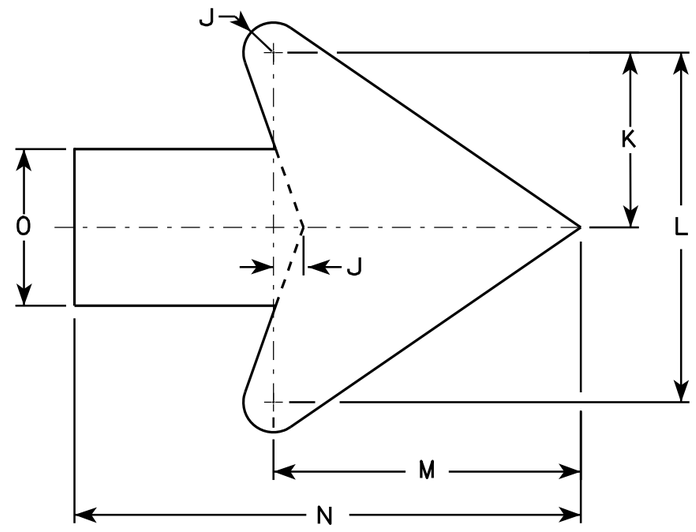
DATE 5/15/12 PLATE NO. W1-2.10

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



NOTES

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



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2M	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
3	30		1 3/8	1/2	5/8		10	5	11 7/8	3/4	4 1/2	9	7 7/8	13	4												6.25
4	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0
5	48		2 1/4	3/4	1		16	8	19	1 1/4	7 1/4	14 1/2	12 3/4	21	6 1/4												16.0

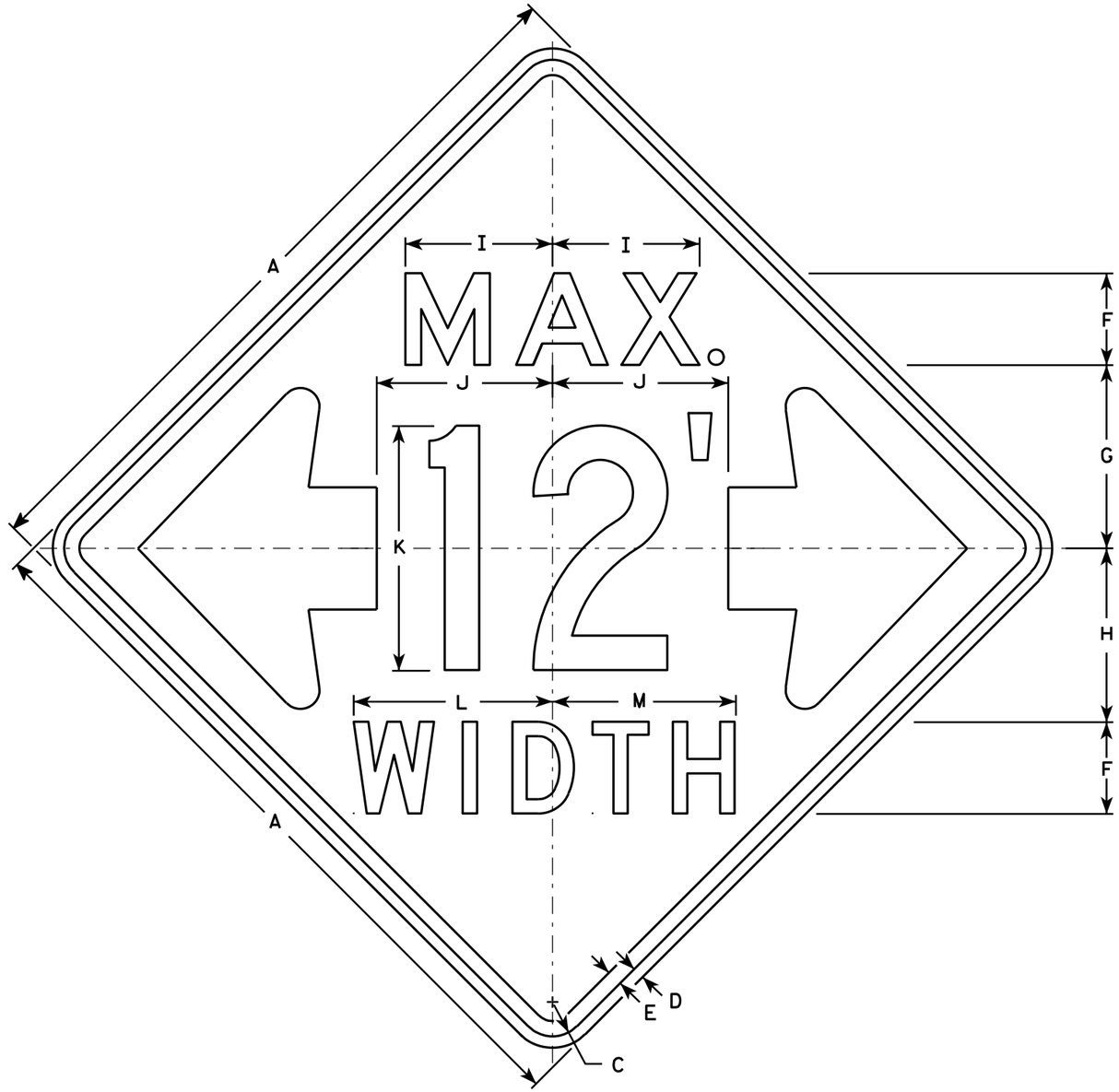
STANDARD SIGN
W12-1D

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W12-1D.15

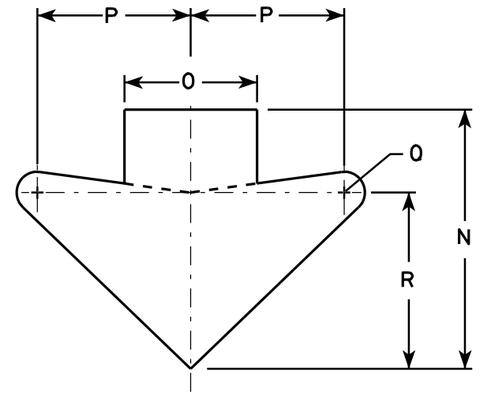
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 119	E



W12-52

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - 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. The top line is series E, the numerals are series C, and the bottom line is series D.
6. Substitute appropriate numerals and adjust spacing as required.



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	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
2M	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
3																											
4																											
5																											

STANDARD SIGN
W12-52

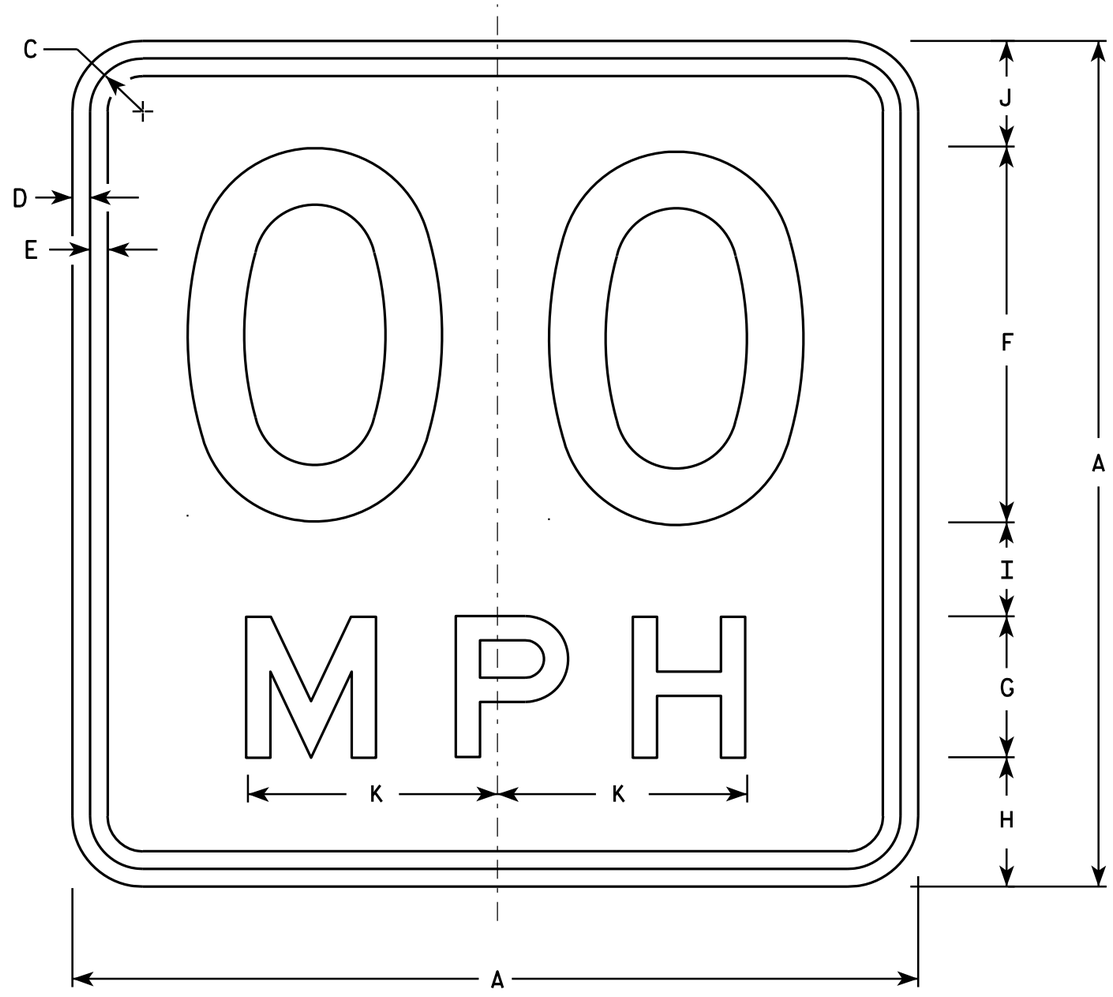
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/11 PLATE NO. W12-52.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 120 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W1252.DGN PLOT DATE : 16-MAR-2011 14:45 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.137199:1.000000
WISDOT/CADDS SHEET 42



W13-1

* For 30" x 30" Warning Signs, use 18" x 18" W13-1 signs.
For 36" x 36" Warning Signs, use 24" x 24" W13-1 signs.

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 - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
   Line 2 is Series E

	SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
	1	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
*	2S	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
*	2M	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
	3	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8																4.00
	4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
	5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

STANDARD SIGN
W13-1

WISCONSIN DEPT OF TRANSPORTATION

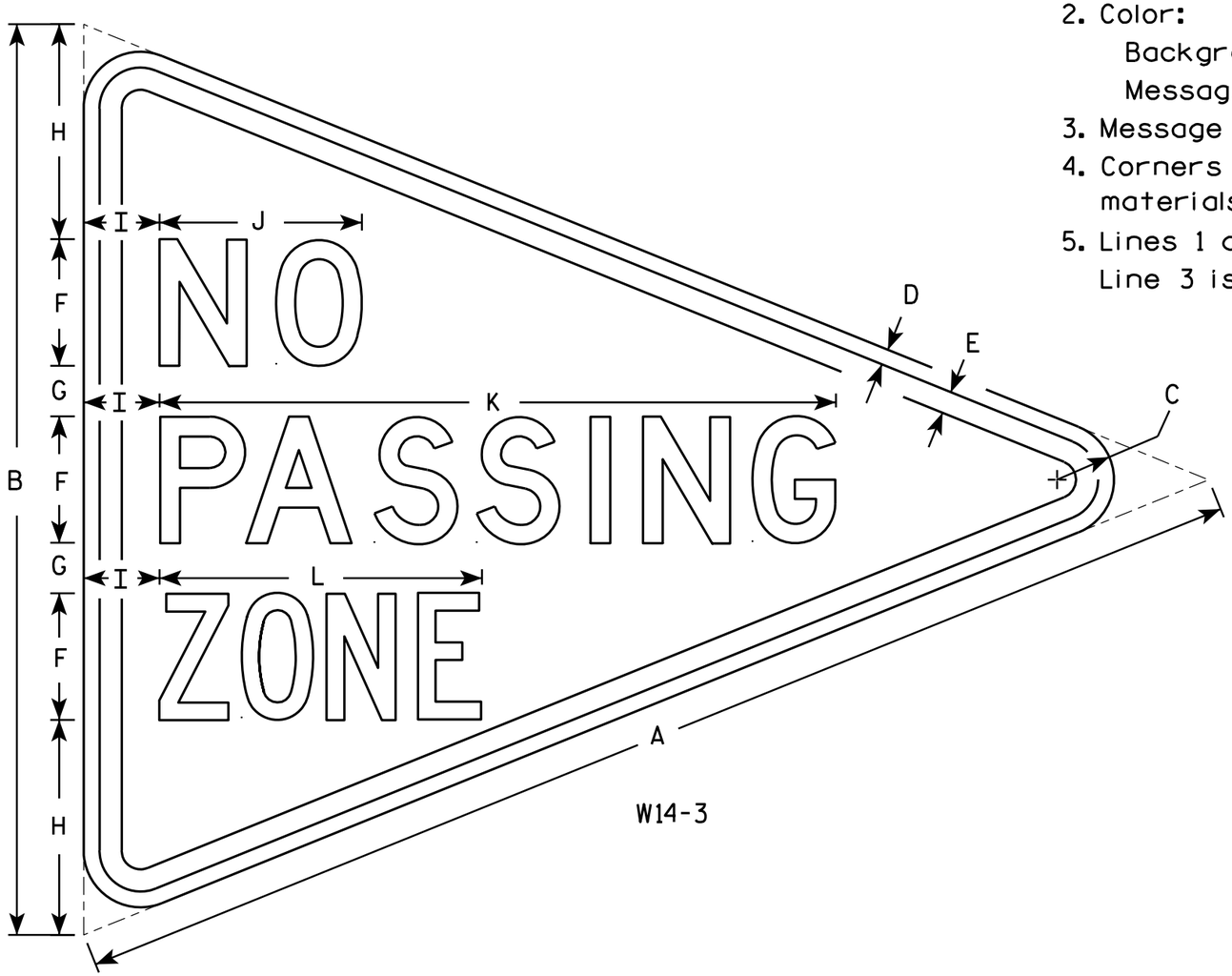
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 5/31/12 PLATE NO. W13-1.16

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 121 | 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. Message Series - See note 5
4. Corners and borders shall be rounded on all base materials for this sign.
5. Lines 1 and 2 are Series D.
   Line 3 is series C.



W14-3

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
2M	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
3	64	48	3	3/4	1 1/4	6	3	12	4	10 3/4	33 5/8	16 1/2															10.7
4																											
5																											

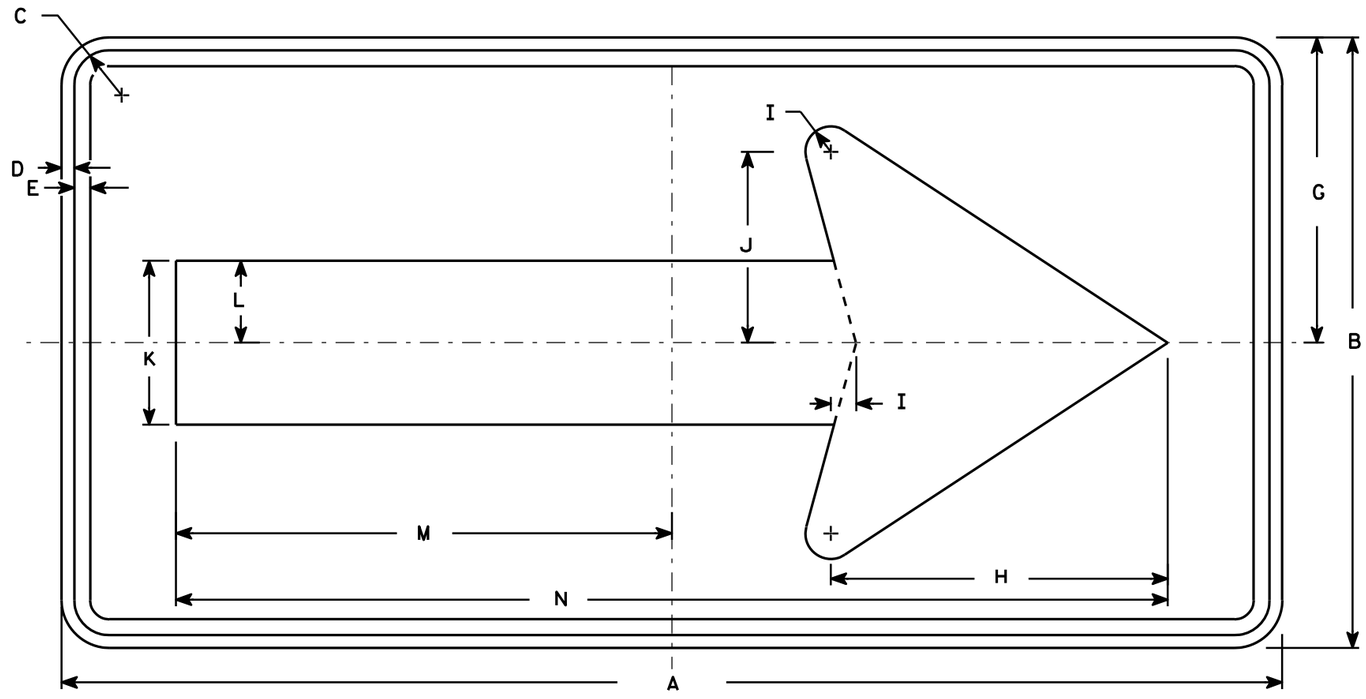
STANDARD SIGN
W14-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W14-3.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 122	E



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

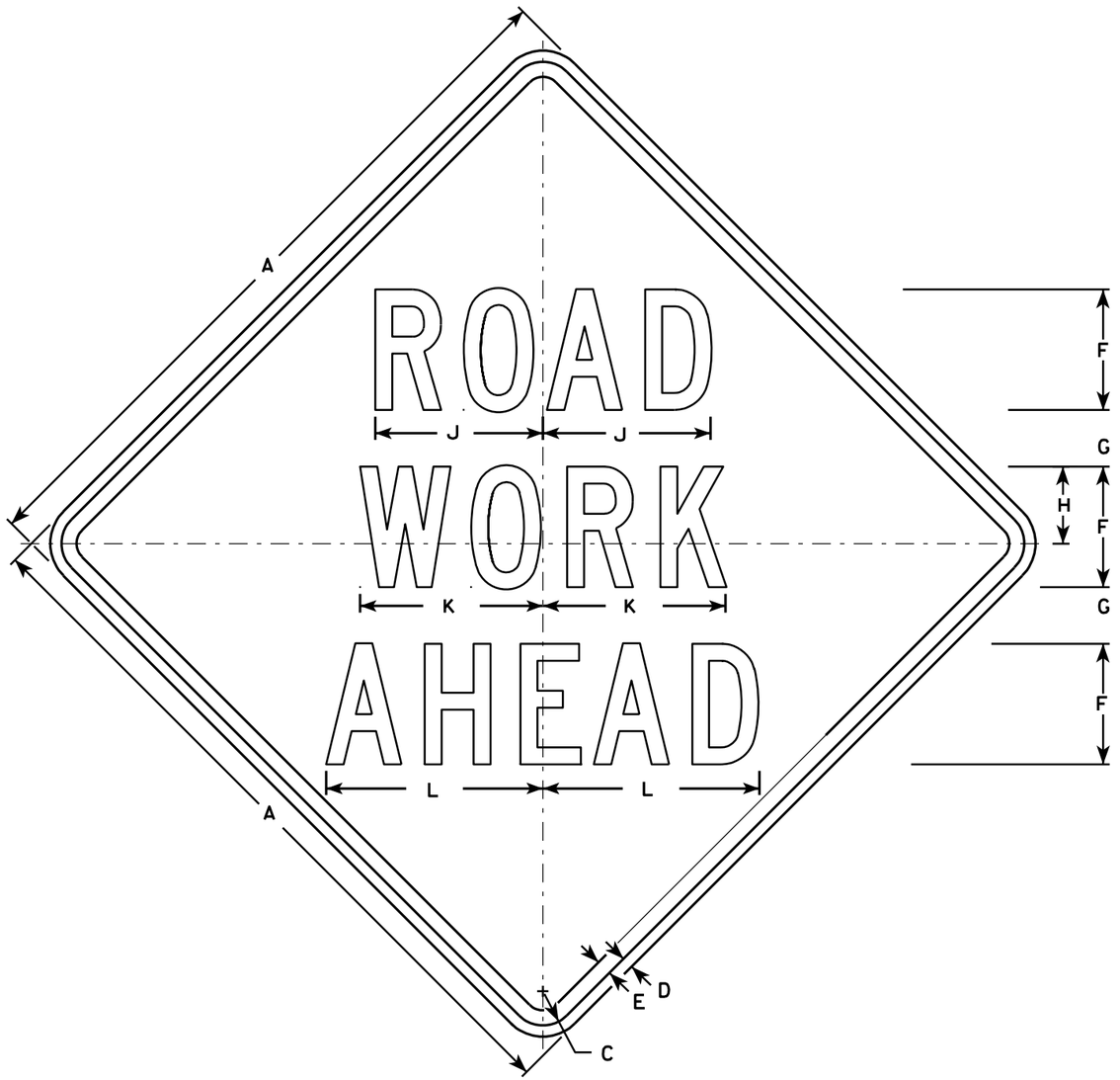
STANDARD SIGN
W1-6

WISCONSIN DEPT OF TRANSPORTATION

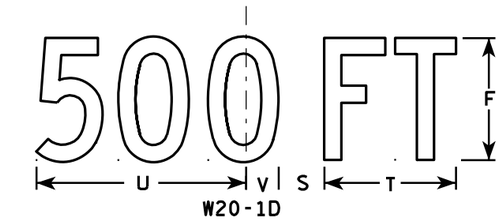
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-6.8

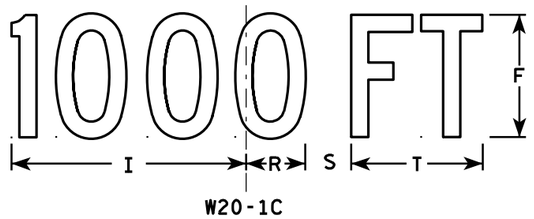
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 123



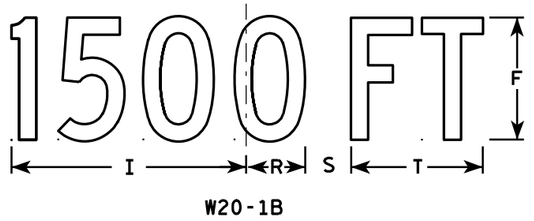
W20-1A



W20-1D



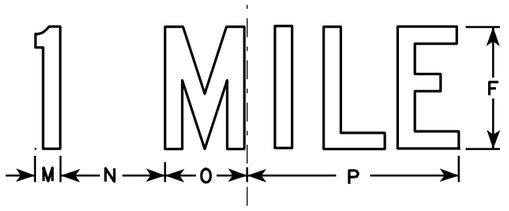
W20-1C



W20-1B



W20-1G



W20-1F

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	1/2	5/8	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9		2 1/2	1 7/8	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-1.9

PROJECT NO:

SHEET NO: 124 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W201.DGN PLOT DATE : 18-MAR-2011 09:56 PLOT BY : mscj9h

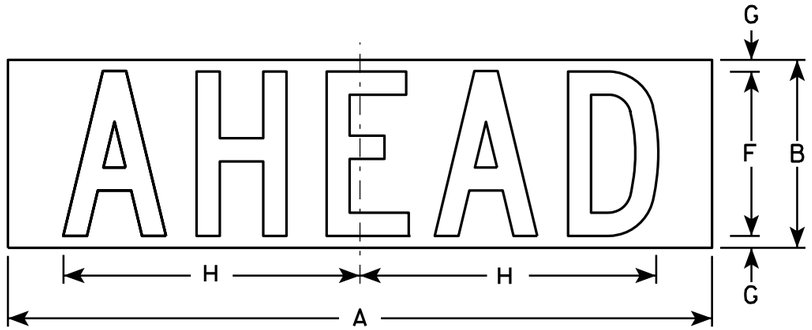
WISDOT/CADDS SHEET 42

7

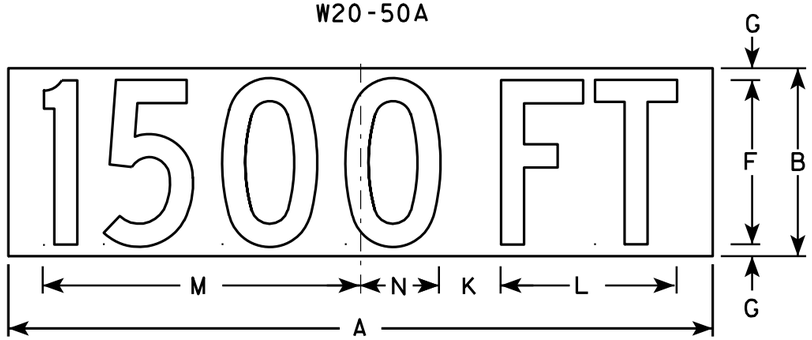
7

NOTES

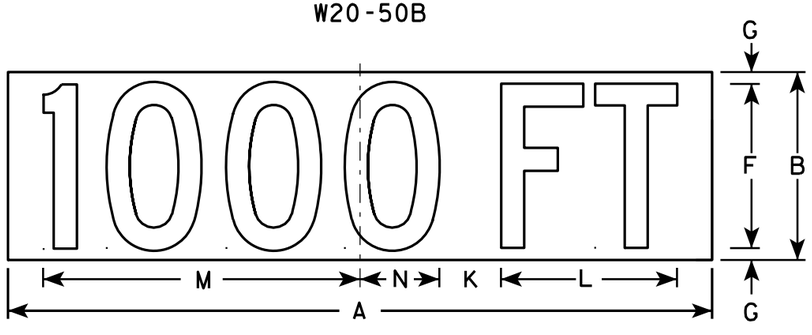
1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. These plaques are for changing the distance shown on signs W20 series of signs.



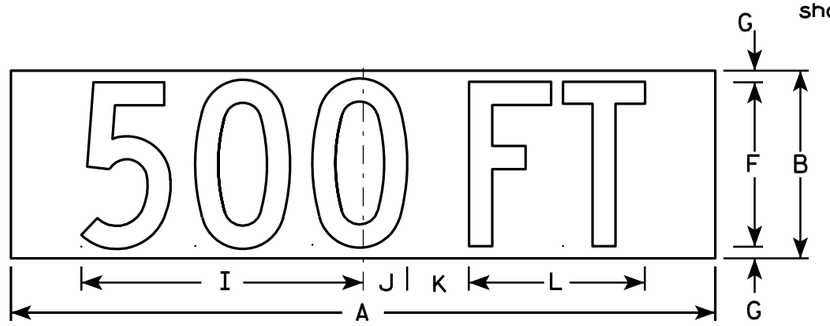
W20-50A



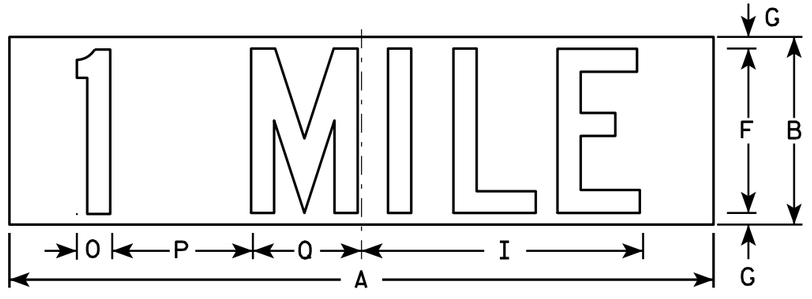
W20-50B



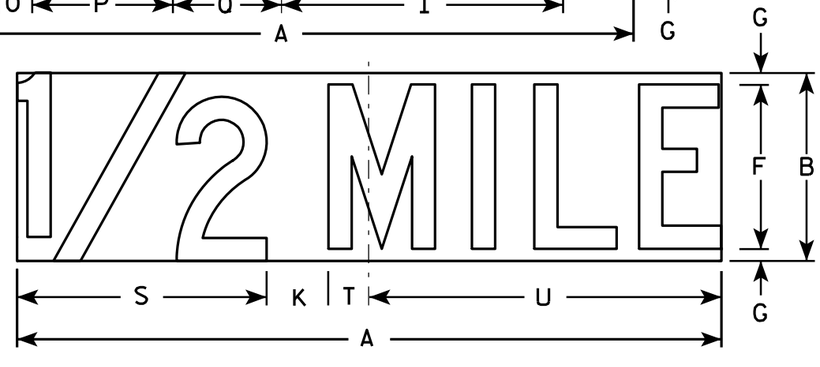
W20-50C



W20-50D



W20-50F



W20-50G

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	22	6				5	½	9 ½	9	1 ⅜	1 ⅞	5 ⅝	10 ⅛	2 ½	1 ⅛	4 ½	3 ½		8	1 ¾	10 ¾						0.92
2S	30	8				7	½	12 ⅝	12	1 ⅞	2 ⅝	7 ½	13 ½	3 ⅜	1 ½	6	4 ⅝		10 ⅝	2 ⅜	14 ⅜						1.67
2M	30	8				7	½	12 ⅝	12	1 ⅞	2 ⅝	7 ½	13 ½	3 ⅜	1 ½	6	4 ⅝		10 ⅝	2 ⅜	14 ⅜						1.67
3	30	8				7	½	12 ⅝	12	1 ⅞	2 ⅝	7 ½	13 ½	3 ⅜	1 ½	6	4 ⅝		10 ⅝	2 ⅜	14 ⅜						1.67
4	30	8				7	½	12 ⅝	12	1 ⅞	2 ⅝	7 ½	13 ½	3 ⅜	1 ½	6	4 ⅝		10 ⅝	2 ⅜	14 ⅜						1.67
5	30	8				7	½	12 ⅝	12	1 ⅞	2 ⅝	7 ½	13 ½	3 ⅜	1 ½	6	4 ⅝		10 ⅝	2 ⅜	14 ⅜						1.67

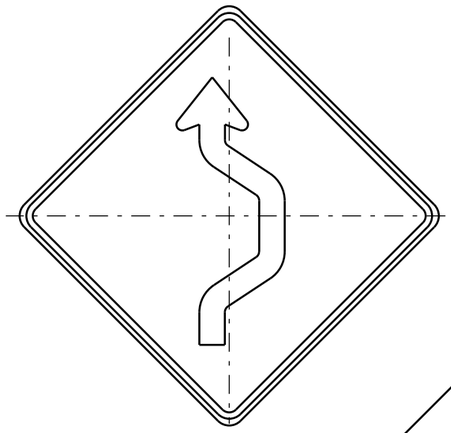
SUPPLEMENTARY MESSAGES
W20-50A, B, C, D, F, & G

WISCONSIN DEPT OF TRANSPORTATION

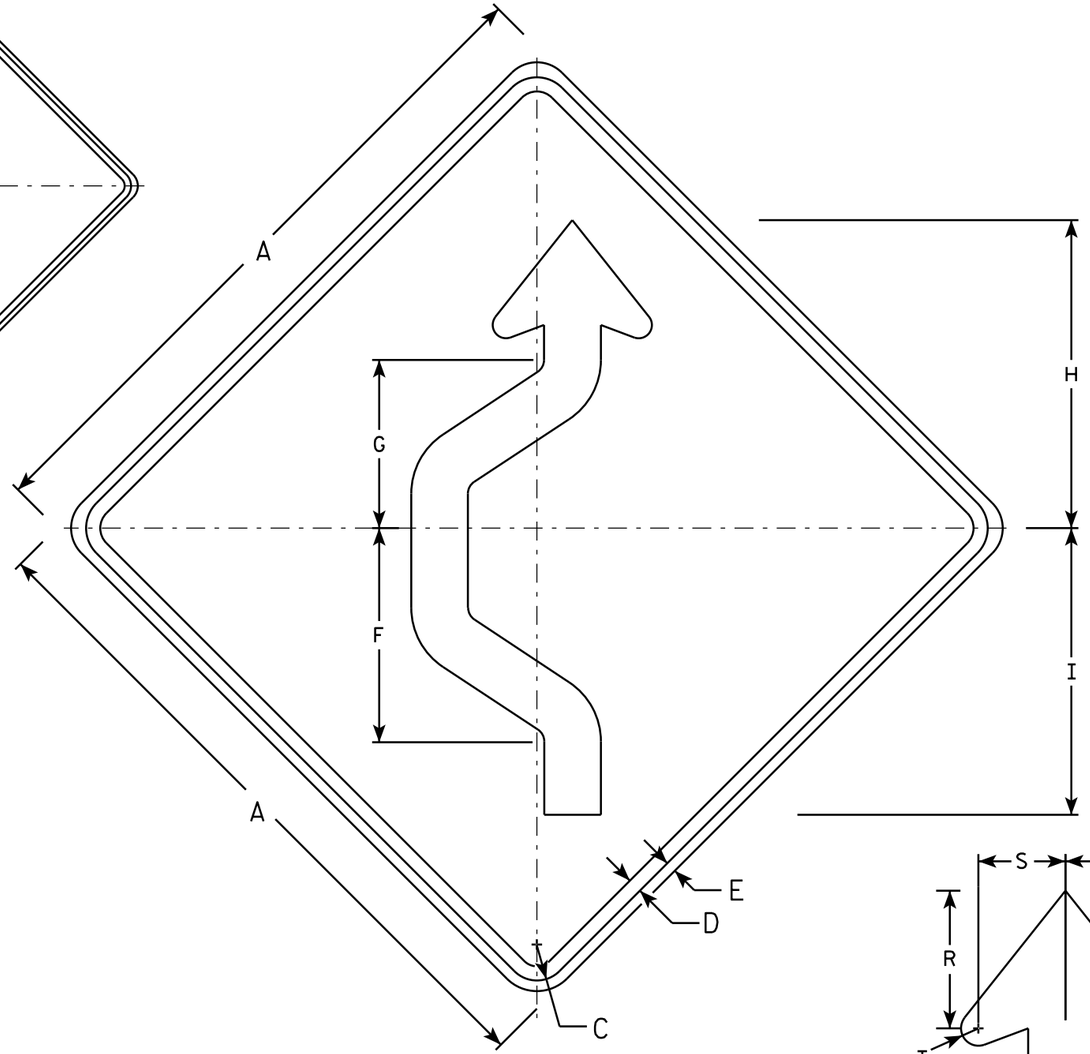
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-50.6

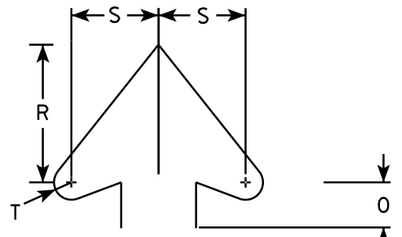
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 125	E



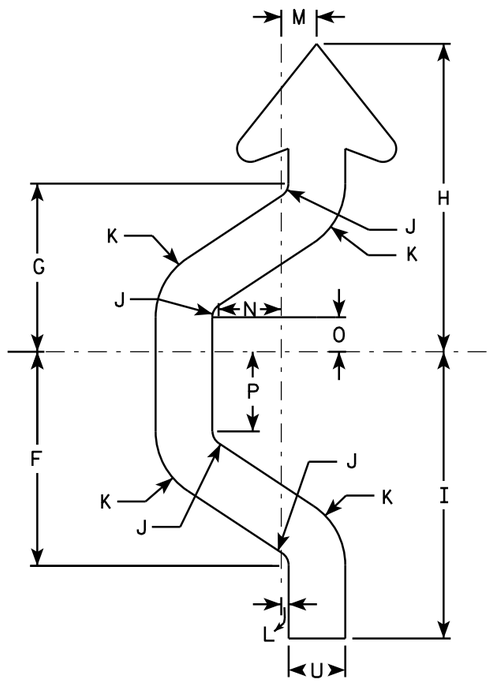
W24-1R



W24-1L



Arrowhead Detail



Arrow Detail

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. W24-1R is the same as W24-1L except reversed along the vertical centerline.

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

STANDARD SIGN
W24-1 L & R

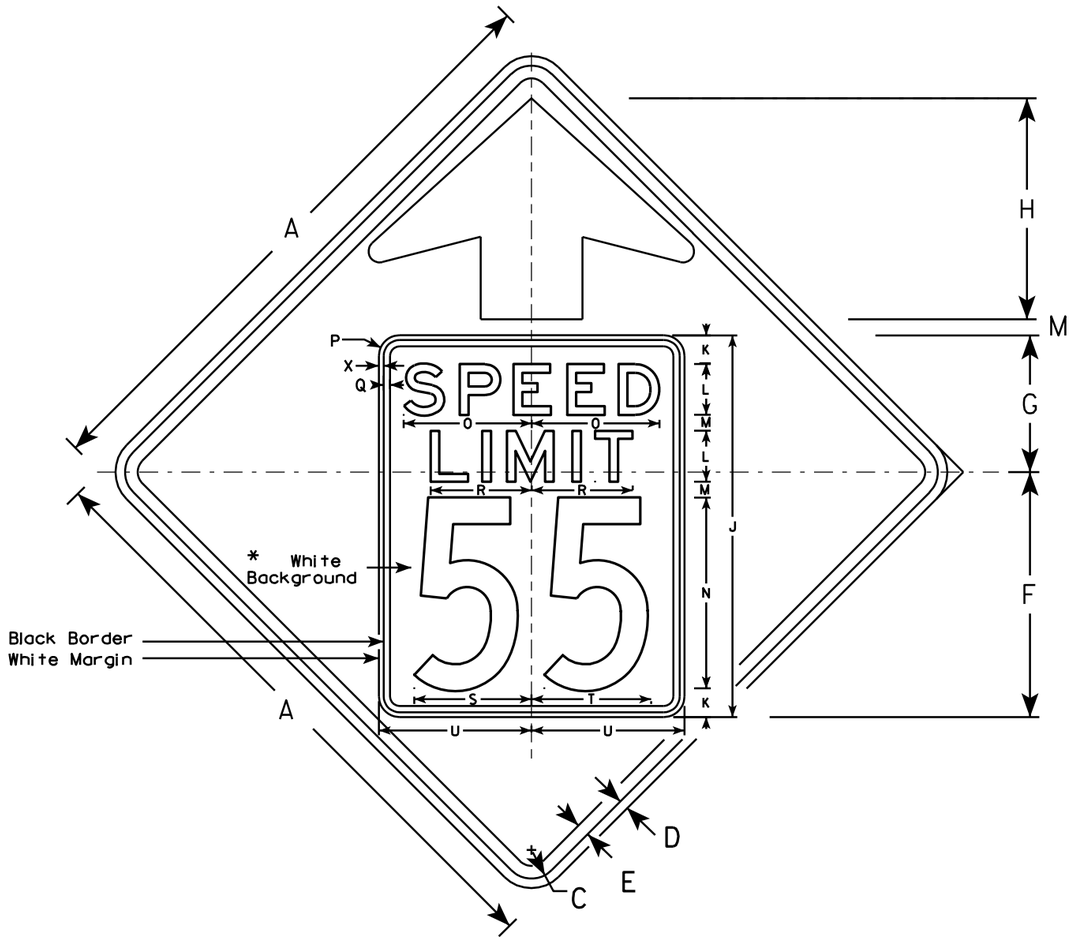
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/25/2013 PLATE NO. W24-1.3

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

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W241L.DGN PLOT DATE : 25-SEP-2013 13:00 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 10.702132:1.000000
WISDOT/CADDS SHEET 42

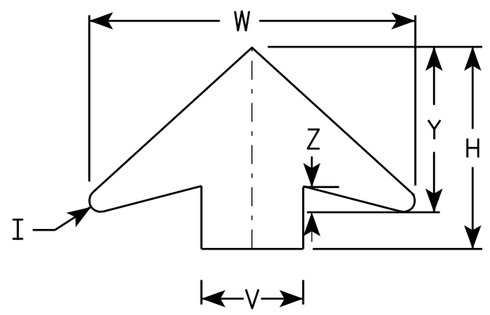


W3-5

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color: *
   Background - YELLOW*
   Message - BLACK
3. Message Series - C for numbers Series E for wording
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance

*Speed Limit Sign shall have a White 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																											
2S	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
2M	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
3	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
4	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
5	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0

STANDARD SIGN
W3-5

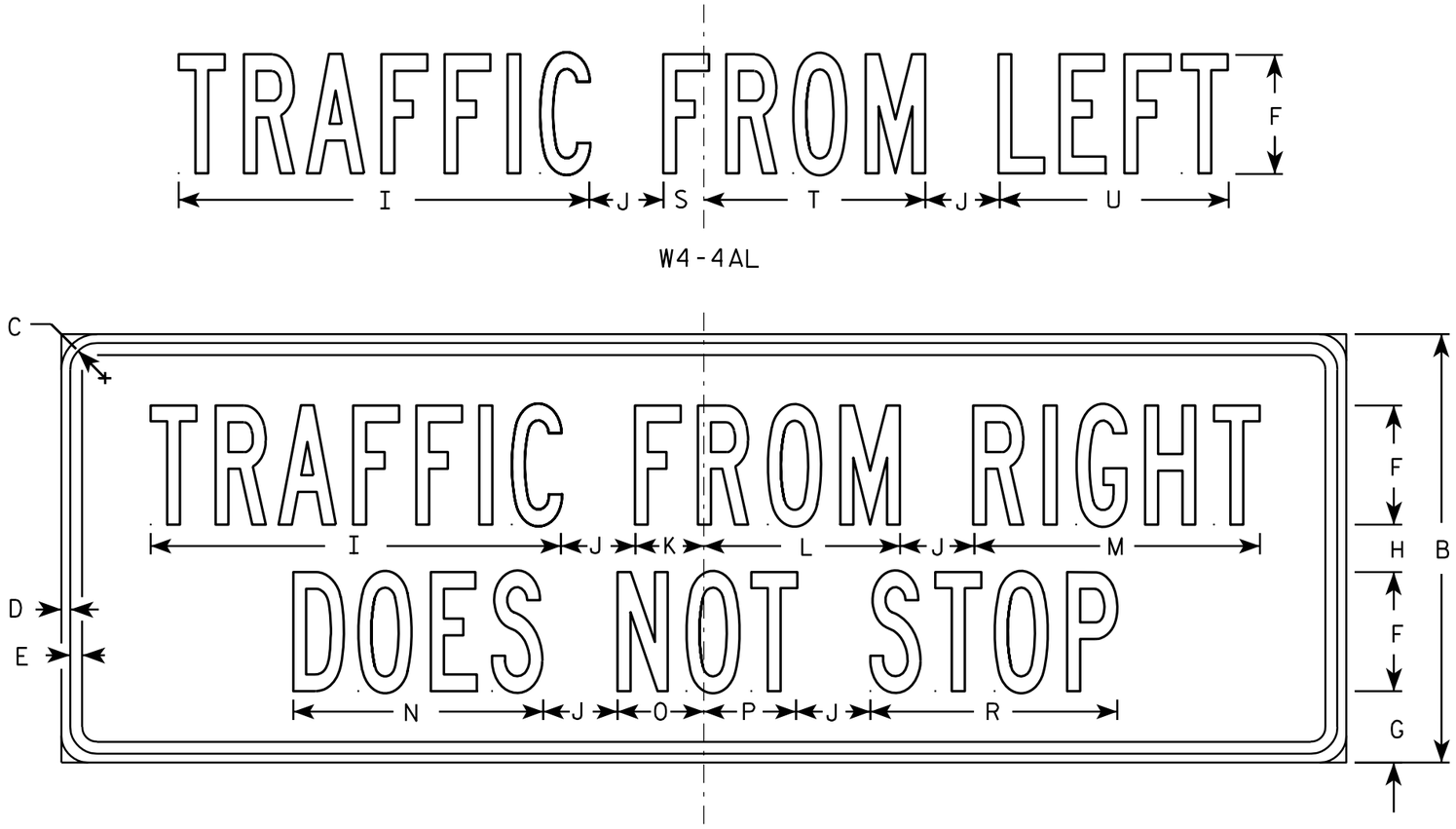
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W3-5.5

PROJECT NO:

SHEET NO: 127 E



W4-4AL

W4-4AR

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 - 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	30	12	1 1/8	3/8	3/8	3	2 1/4	1 1/2	10 3/8	1 1/2	1 3/4	4 7/8	7 1/4	6 1/4	2 1/4	2 1/4		6 1/4	1	5 5/8	5 3/4						2.5
2M	30	12	1 1/8	3/8	3/8	3	2 1/4	1 1/2	10 3/8	1 1/2	1 3/4	4 7/8	7 1/4	6 1/4	2 1/4	2 1/4		6 1/4	1	5 5/8	5 3/4						2.5
3	42	15	1 1/8	3/8	1/2	4	2 5/8	1 3/4	13 7/8	2 3/8	2 1/8	6 3/4	9 3/4	8 3/8	2 3/4	3 3/8		8 3/8	1 1/8	7 3/4	7 3/4						4.4
4	54	18	1 1/8	3/8	1/2	5	3	2	17 1/4	3 1/8	2 7/8	8 1/4	12	10 1/2	3 5/8	3 7/8		10 3/8	1 3/4	9 3/8	9 5/8						6.8
5																											

STANDARD SIGN
W4-4AL & W4-4AR

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W4-4A.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 128 | E

7

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W44A.DGN PLOT DATE : 12-MAR-2013 11:35 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 6.202372:1.000000
WISDOT/CADDS SHEET 42



W4-4B

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 - 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	30	12	1 1/8	3/8	1/2	3	2 1/4	1 1/2	12 3/8	5/8	1 1/2	10 3/8	6 1/4	2 1/4	2 1/4	6 1/4											2.5
2M	30	12	1 1/8	3/8	1/2	3	2 1/4	1 1/2	12 3/8	5/8	1 1/2	10 3/8	6 1/4	2 1/4	2 1/4	6 1/4											2.5
3	42	15	1 1/8	3/8	1/2	4	2 5/8	1 3/4	16 7/8	5/8	2 3/8	13 7/8	8 3/8	3	3 1/8	8 3/8											4.17
4	48	18	1 1/8	3/8	1/2	5	3	2	21	5/8	3 1/8	17 1/4	10 1/2	3 5/8	3 7/8	10 3/8											6.0
5																											

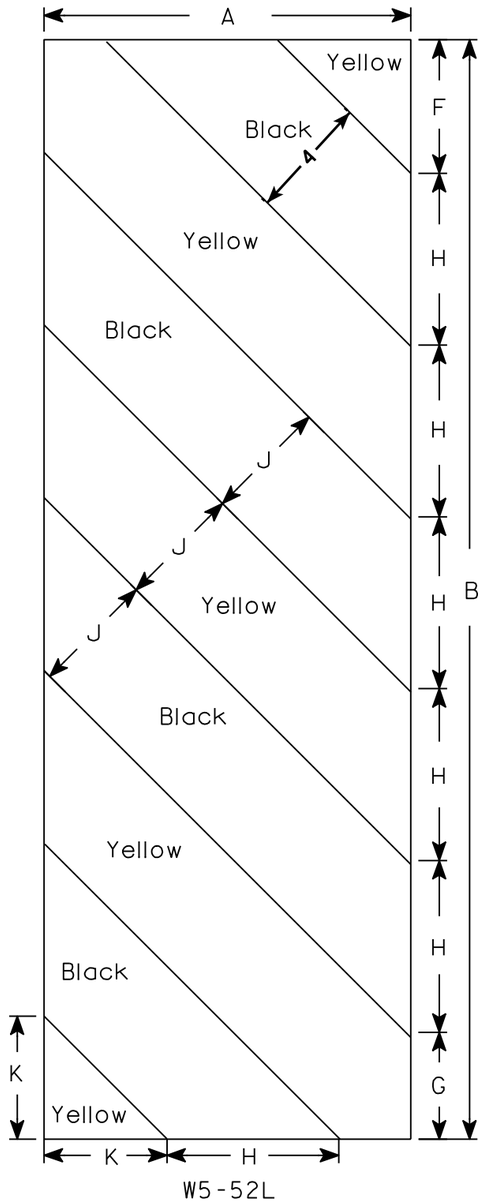
STANDARD SIGN
W4-4B

WISCONSIN DEPT OF TRANSPORTATION

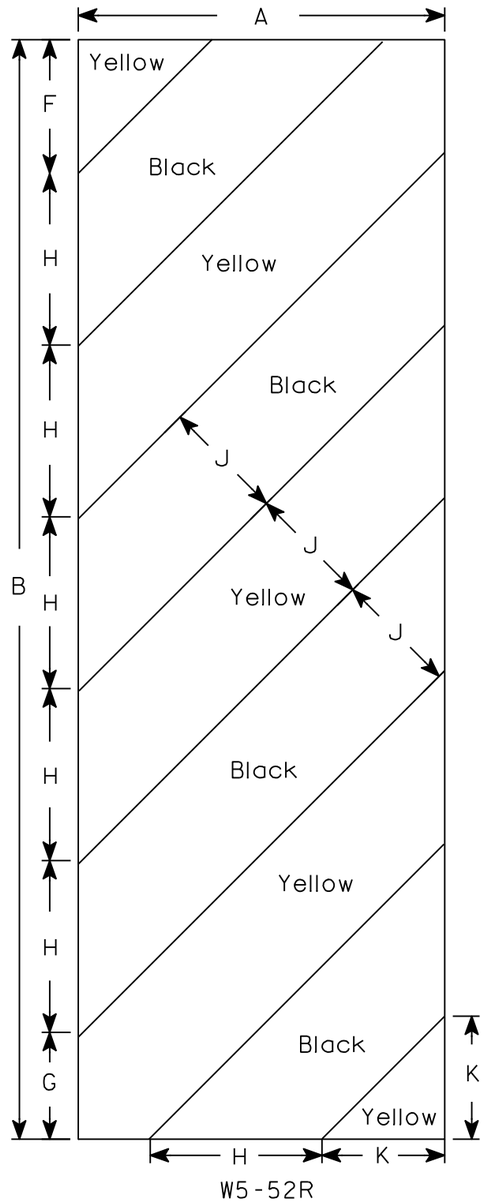
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W4-4B.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 129	E



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

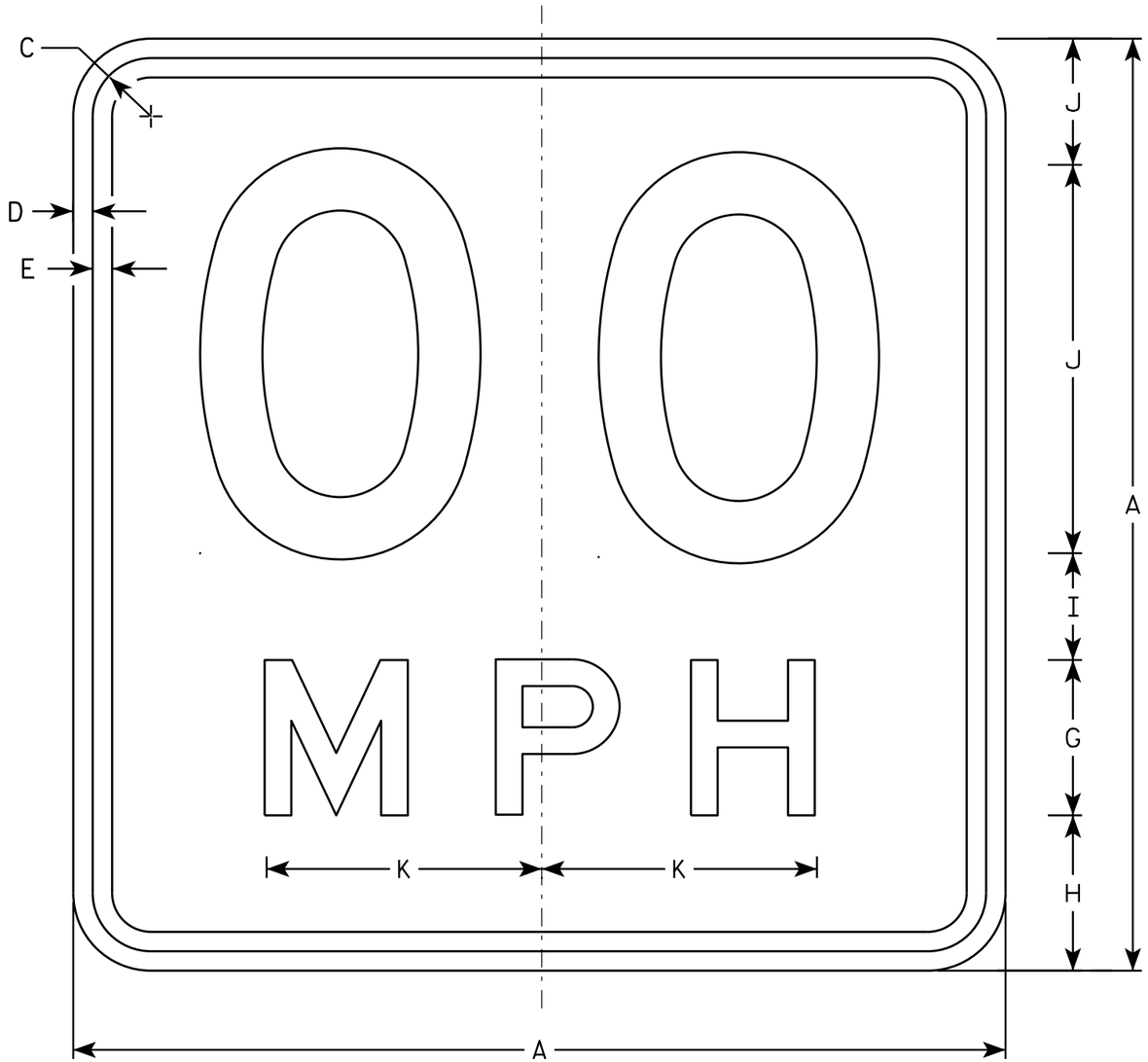
W5-52L & W5-52R

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: 130 | E



W013-1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
   Line 2 is Series E

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	7 1/8																4.00
2S	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
2M	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
3	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

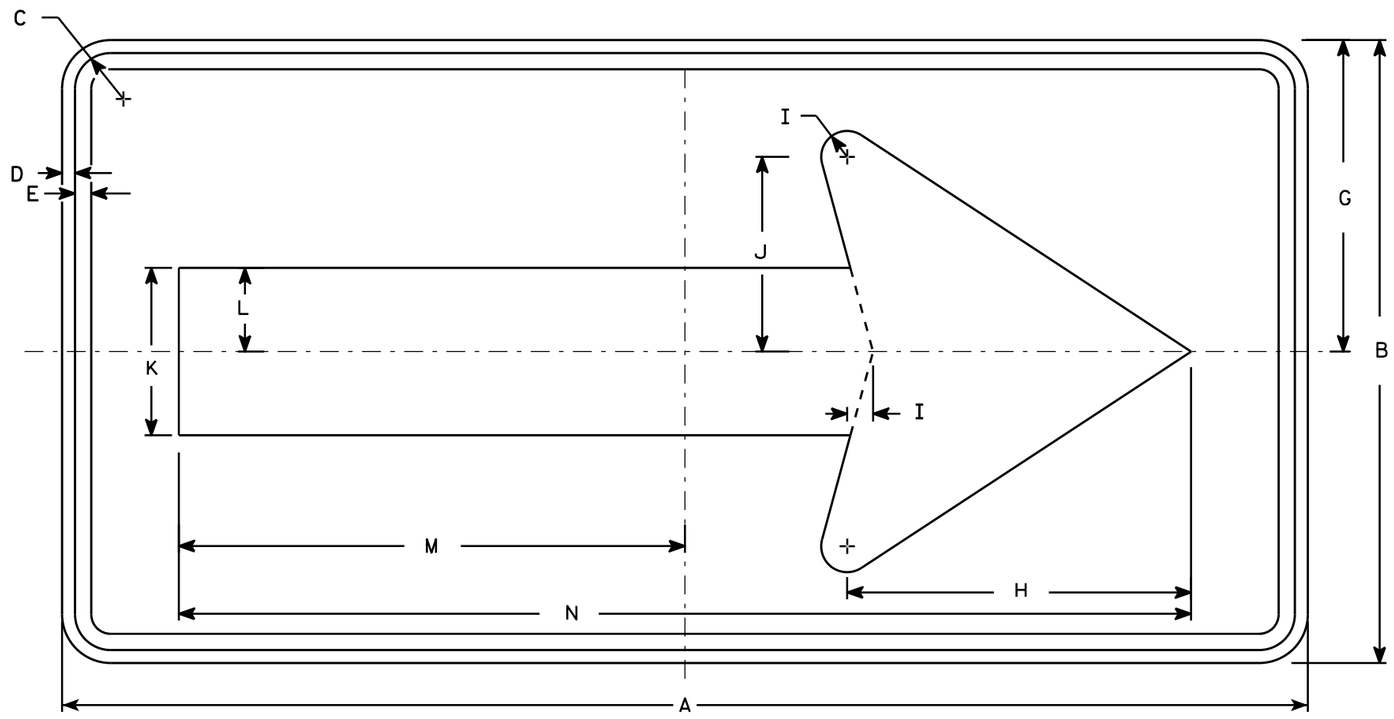
STANDARD SIGN
W013-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/21/13 PLATE 131 W013-1.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W01-6

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

STANDARD SIGN
W01-6

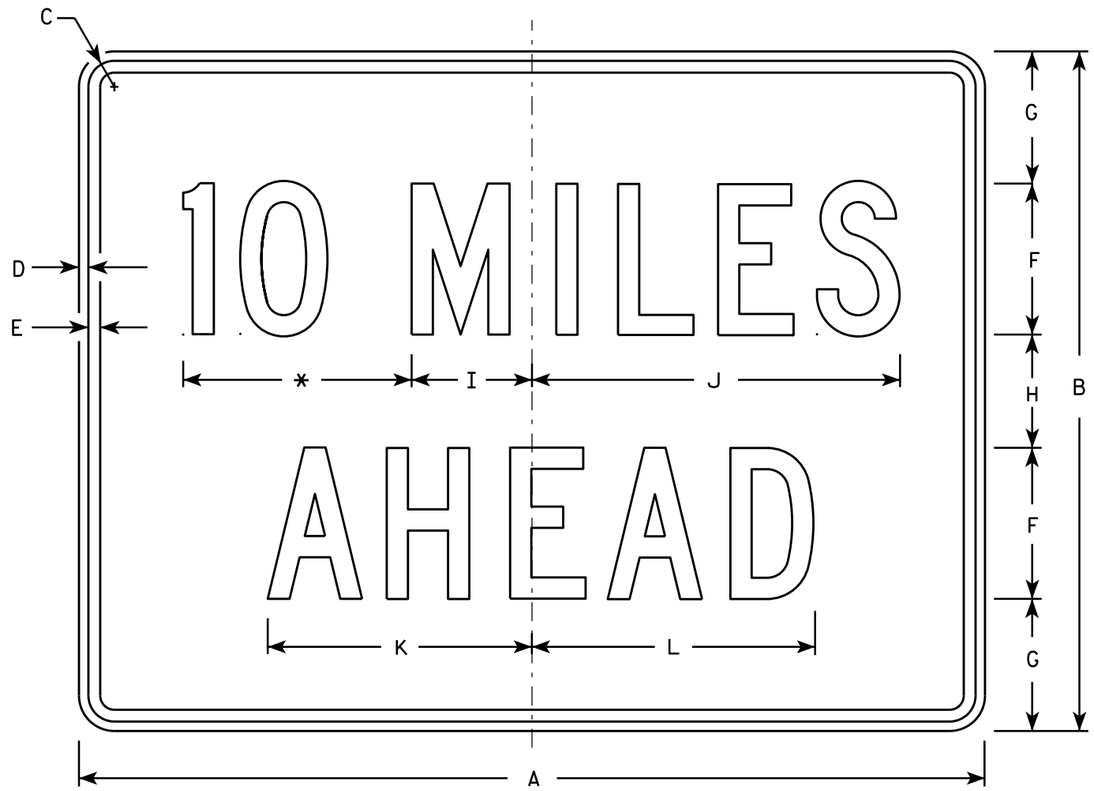
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

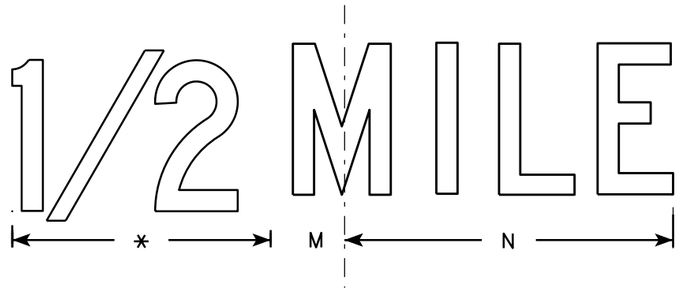
DATE 11/18/13 PLATE NO. W01-6.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W016.DGN PLOT DATE : 28-FEB-2014 11:37 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.837526:1.000000 WISDOT/CADDS SHEET 42



W057-52



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

* See note 5

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	24	1 1/8	3/8	1/2	6	4 1/2	3	4 3/4	14 5/8	10 5/8	11 3/8	2	13													6.0
2S	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	17 3/8													12.0
2M	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	17 3/8													12.0
3	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	17 3/8													12.0
4	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	17 3/8													12.0
5	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	17 3/8													12.0

STANDARD SIGN
W057-52

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

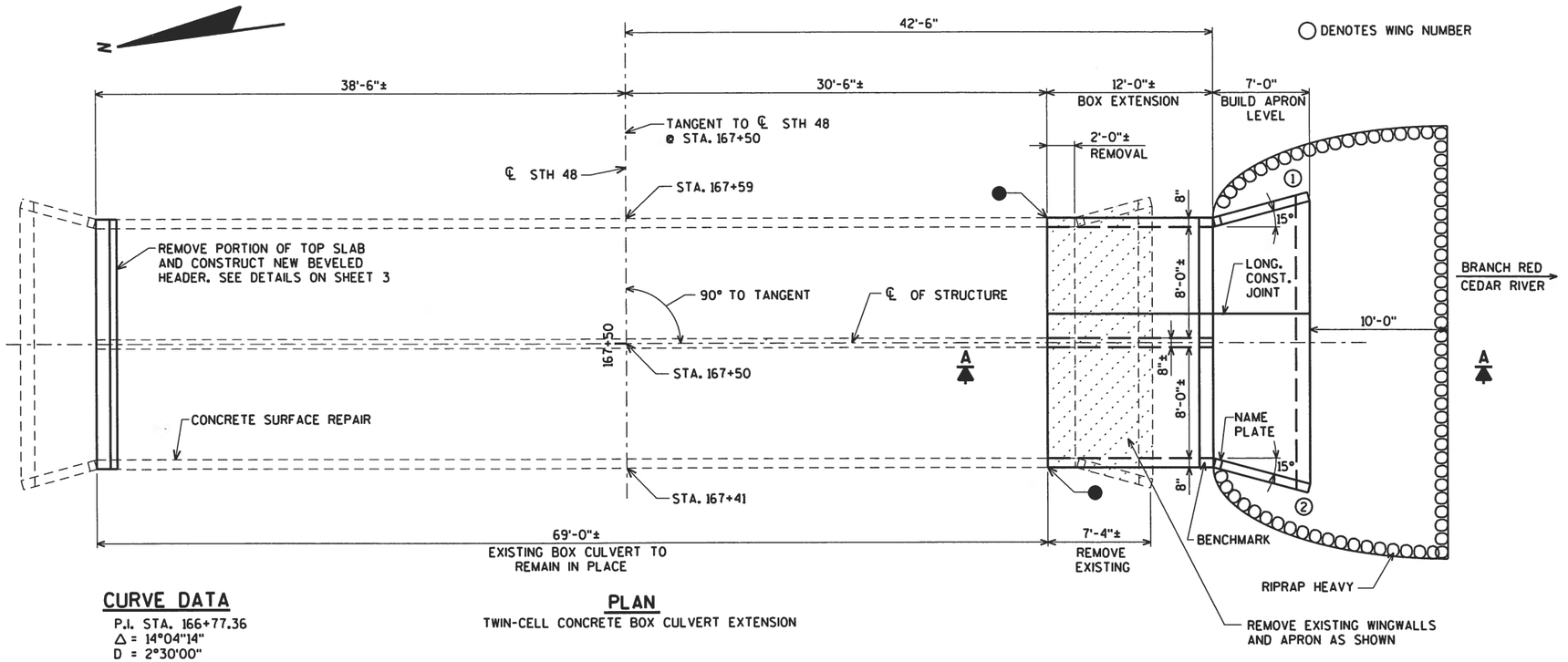
DATE 11/20/13 PLATE W057-52.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W05752.DGN PLOT DATE : 28-FEB-2014 11:42 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 8.026599:1.000000 WISDOT/CADDS SHEET 42

$PRFNAME$
U:\41-0662.00 - STH 48 Culvert Extension, Barron County\STRUCTURE\410662 gp cul.dgn

STATE PROJECT NUMBER
8570-03-70



PLAN

TWIN-CELL CONCRETE BOX CULVERT EXTENSION

CURVE DATA

P.I. STA. 166+77.36
△ = 14°04'14"
D = 2°30'00"
R = 2292.00'
T = 282.85'
L = 562.86'
E = 17.39'
S.E. = 4.80%

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: 1.05
OPERATING RATING FACTOR : 1.35
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 255 KIPS

EARTH LOAD: 2.0 FEET TO 6.5 FEET

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY ——— f'_c = 3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60) ——— f_y = 60,000 p.s.i.

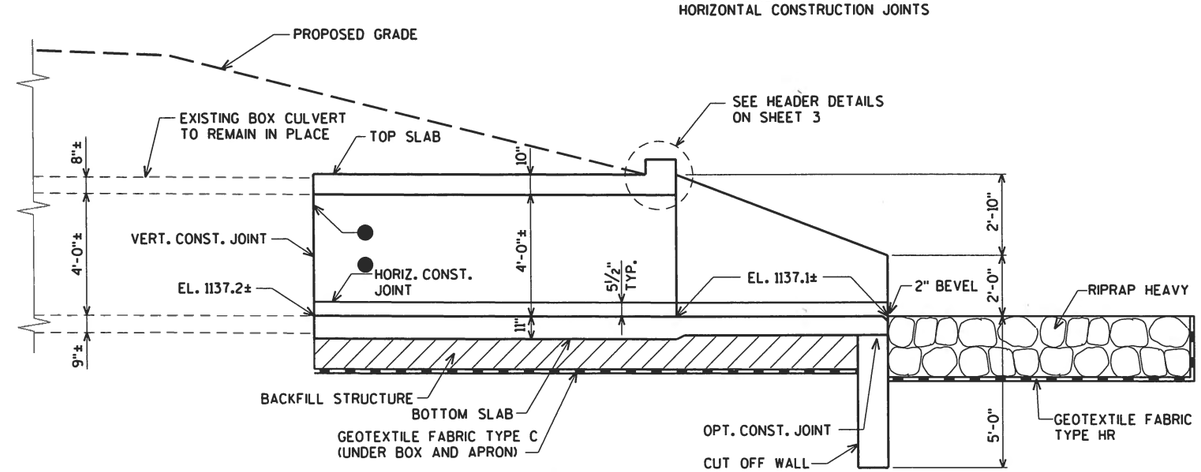
TRAFFIC DATA:

A.D.T. = 4,300 (2014)
A.D.T. = 5,800 (2034)
R.D.S. = 60 M.P.H.

LIST OF DRAWINGS

1. GENERAL PLAN
2. WING DETAILS, QUANTITIES & GENERAL NOTES
3. APRON DETAILS
4. BOX DETAILS
5. BAR STEEL LAYOUT
6. BILL OF BARS AND DETAILS

● 18" RUBBERIZED MEMBRANE WATERPROOFING UP WALLS AND ACROSS TOP SLAB AT VERTICAL CONSTRUCTION JOINTS AND ALONG HORIZONTAL CONSTRUCTION JOINTS



SECTION A

(OUTLET)

FOR QUANTITIES AND GENERAL NOTES SEE SHEET 2

WISCONSIN
CHRISTOPHER B. McMAHON
E-29454
EAU CLAIRE, WI
PROFESSIONAL ENGINEER
8/21/14

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
CHRIS MCMAHON
(715)-834-3161

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 08/22/14
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE C-3-7

STH 48 OVER BRANCH RED CEDAR RIVER

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
BARRON	RICE LAKE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
JCK	AEB	JCK/CLS	CBM

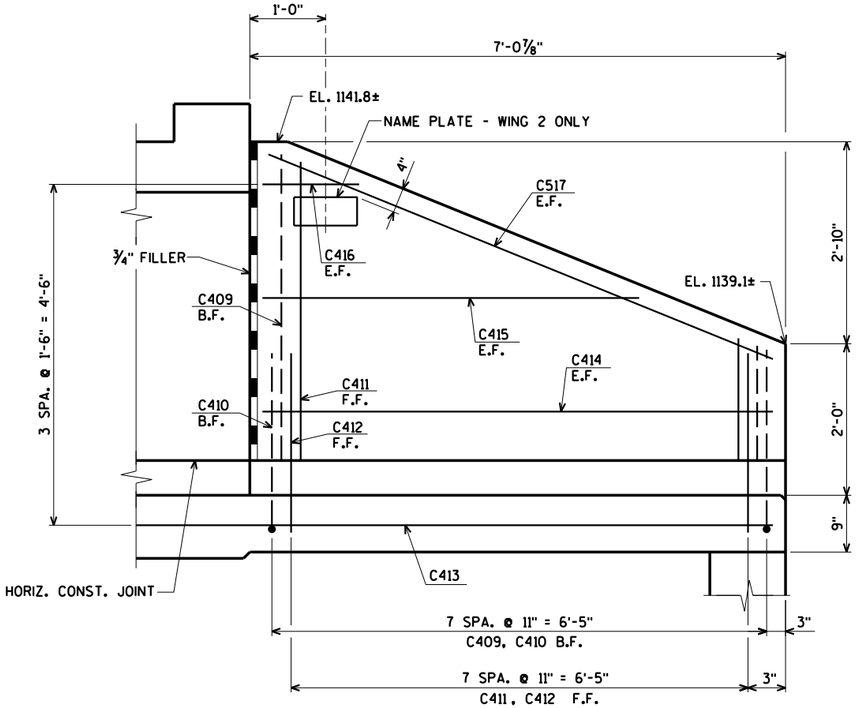
GENERAL PLAN

SHEET 1 OF 6
134

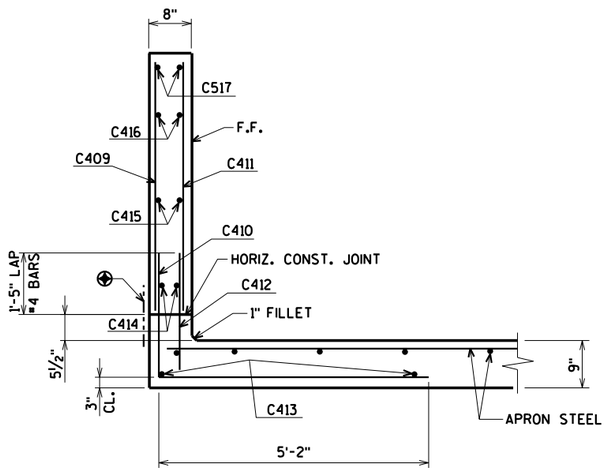
DATE:
DATE:
DATE:
CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:

8

8



ELEVATION - WING 1
(WING 2 SIMILAR)



TYP. SECTION THRU WING

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M 213.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES" SHALL BE THE EXISTING GROUND LINE.

THE ALTERNATE CUTOFF WALL MAY BE USED IN LIEU OF THE CAST-IN-PLACE CONCRETE CUTOFF WALL. PAYMENT SHALL BE BASED ON THE CONCRETE CUTOFF WALL.

THE CONCRETE IN THE CUTOFF WALL MAY BE PLACED UNDERWATER IF THE EXCAVATION CANNOT BE DEWATERED.

ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL TO THE ELEVATION OF THE TOP OF THE BOX WITHIN THE LENGTH OF THE BOX. THE PAY LIMITS OF THE STRUCTURAL BACKFILL ARE 3'-0" BEYOND THE HORIZONTAL PLAN LIMITS AT THE BOTTOM OF THE BOX AND APRON AND UP AT A 1:1.5 BACKFILL SLOPE FROM BOTTOM OF SLAB TO TOP OF BOX OR PROPOSED SUBGRADE ELEVATION, WHICHEVER IS LOWER, PLUS 6" BELOW BOX.

THE EXISTING STRUCTURE C-3-7, IS A TWIN-CELL 8'-0"± x 4'-0"± CONCRETE BOX CULVERT WITH A BARREL LENGTH OF 71'-0"±.

REMOVING OLD STRUCTURE STATION 167+50, INCLUDES REMOVING EXISTING OUTLET WINGS, APRON, AND EXISTING INLET HEADWALL.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS. THE CONTRACTOR SHALL ADJUST THE DIMENSIONS OF THE BOX CELL OPENINGS TO MATCH THE EXISTING CULVERT.

ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1" DEEP SAW CUT UNLESS SHOWN OR NOTED OTHERWISE.

FILLET THE FORMS WITH ¾ INCH TRIANGULAR MOLDING CHAMFER STRIPS AT ALL EXPOSED, SHARP CORNERS AND AT THE EDGES OF THE CONCRETE, UNLESS SPECIFIED OTHERWISE.

THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW THE ORIGINAL CONSTRUCTION YEAR (1961).

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEMS	AMOUNT
203.0500.S	REMOVING OLD STRUCTURE OVER WATERWAY STATION 167+50	1 LS
206.2000	EXCAVATION FOR STRUCTURES CULVERTS C-3-7	1 LS
210.0100	BACKFILL STRUCTURE	80 CY
502.5005	MASONRY ANCHORS TYPE L NO. 5 BARS	66 EACH
504.0100	CONCRETE MASONRY CULVERTS	28 CY
505.0410	BAR STEEL REINFORCEMENT HS CULVERTS	3,410 LB
⊗ 509.1500	CONCRETE SURFACE REPAIR	10 SF
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	13 SY
606.0300	RIPRAP HEAVY	30 CY
645.0105	GEOTEXTILE FABRIC TYPE C	55 SY
645.0120	GEOTEXTILE FABRIC TYPE HR	60 SY
	NON-BID ITEMS	
	FILLER	¾ SIZE

⊗ UNDISTRIBUTED, AS DIRECTED BY THE ENGINEER IN THE FIELD.

⊕ 18" MIN. WIDTH RUBBERIZED MEMBRANE WATERPROOFING ALONG HORIZ. CONSTR. JT. IN WING

E.F. DENOTES EACH FACE

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-3-7

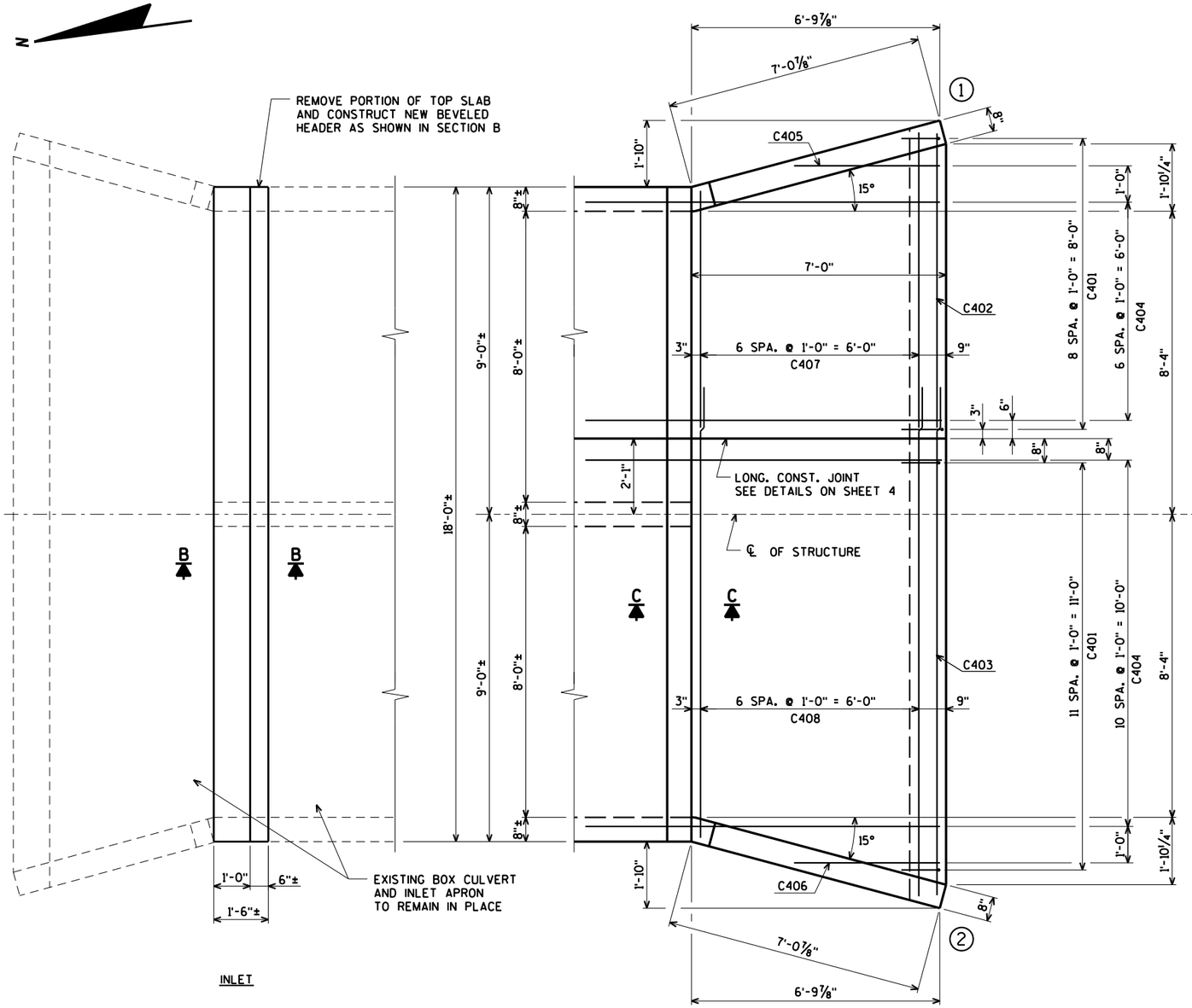
DRAWN BY CLS | PLANS CK'D. AEB

WING DETAILS, QUANTITIES & GENERAL NOTES

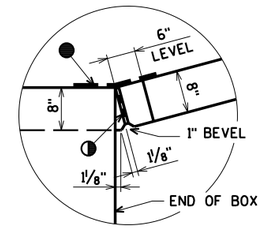
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U:±41-0662.00 - STH 48 Culvert Extension, Barron County±STRUCTURE±410662 cul.dgn
8/21/2014
PENTABLE:BReau_shd_util.tbl

STATE PROJECT NUMBER

8570-03-70



PLAN OF APRONS



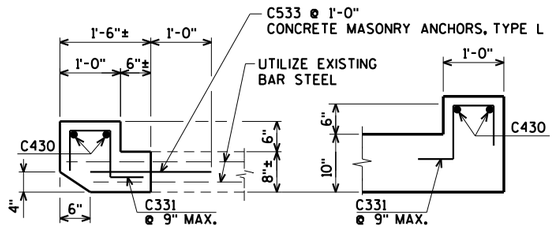
WING 1 SHOWN
WING 2 SIMILAR

CORNER DETAIL

● 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM HORIZ. CONST. JT. TO TOP OF WING.

◑ ¾" FILLER TO EXTEND FROM HORIZ. CONST. JT. TO TOP OF WING.

NOTE:
DO NOT RUN ANY BAR STEEL REINF. THRU JOINT FILLER.



SECTION B

SECTION C

REMOVE PORTION OF TOP SLAB AND CONSTRUCT INLET HEADER AS SHOWN.

HEADER DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-3-7

DRAWN BY CLS | PLANS CK'D. AEB

APRON DETAILS

SHEET 3 OF 6
136

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8

8

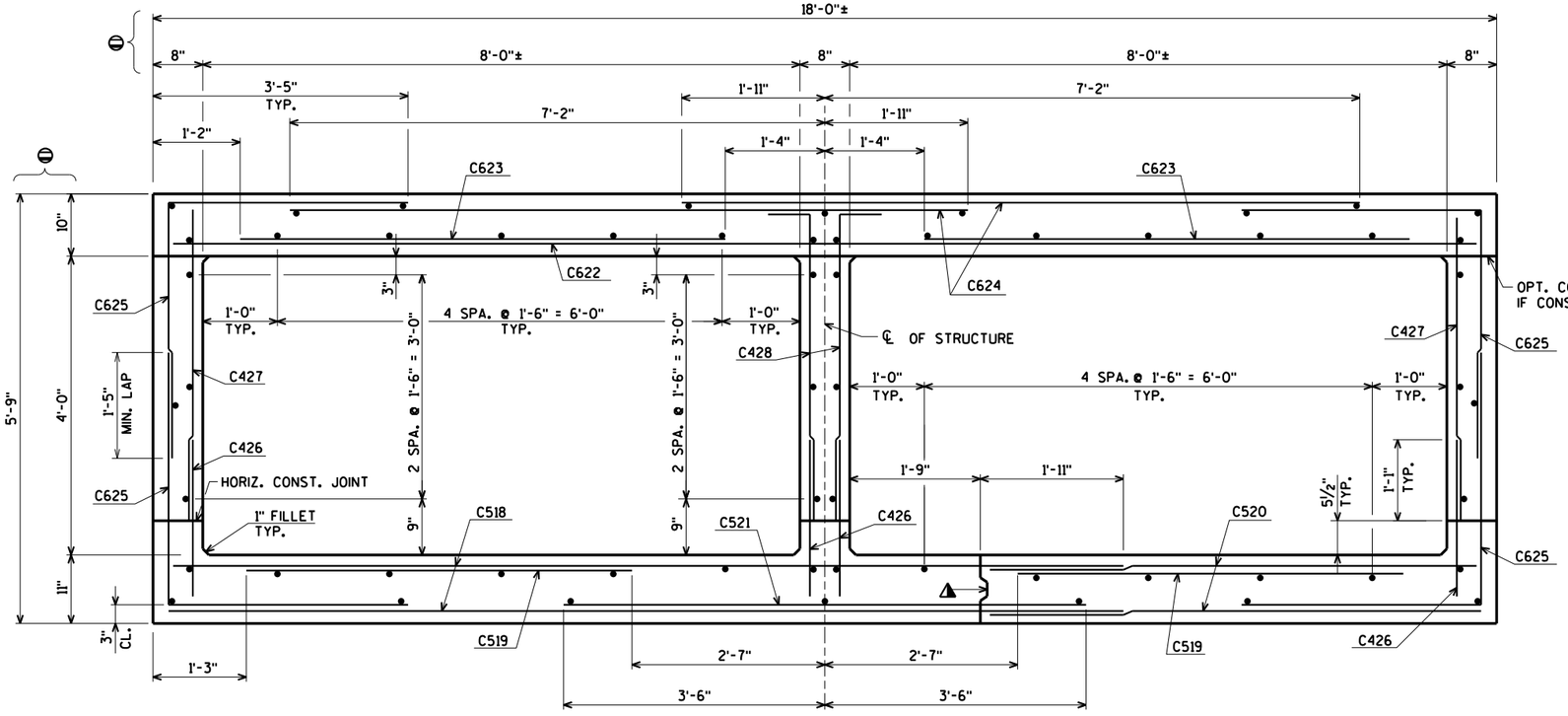
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8/21/2014

PENTABLE:BRegu_shd_util.tbl

STATE PROJECT NUMBER

8570-03-70



ALL LONGITUDINAL BARS IN BOX ARE C429 UNLESS SHOWN OTHERWISE

⊖ ADJUST AS NECESSARY TO MATCH THE OPENINGS OF THE EXISTING CULVERT.

⚠ LONG. CONST. JOINT KEYWAY FORMED BY A SURFACED BEVELED 1½" x 4". SEE DETAIL ON THIS SHEET.

TYPICAL SECTION THRU BOX

(LOOKING NORTH)

LONG. CONST. JOINT DETAIL

(BOTTOM OF APRON)

LONG. CONST. JOINT DETAIL

(BOTTOM SLAB OF BOX)

TYPICAL SECTION THRU BOX EXTENSION AND BACKFILL DETAIL

NOTE: MATCH EXISTING CULVERT OPENING

(LOOKING NORTH)

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-3-7

DRAWN BY CLS | PLANS CK'D. AEB

BOX DETAILS

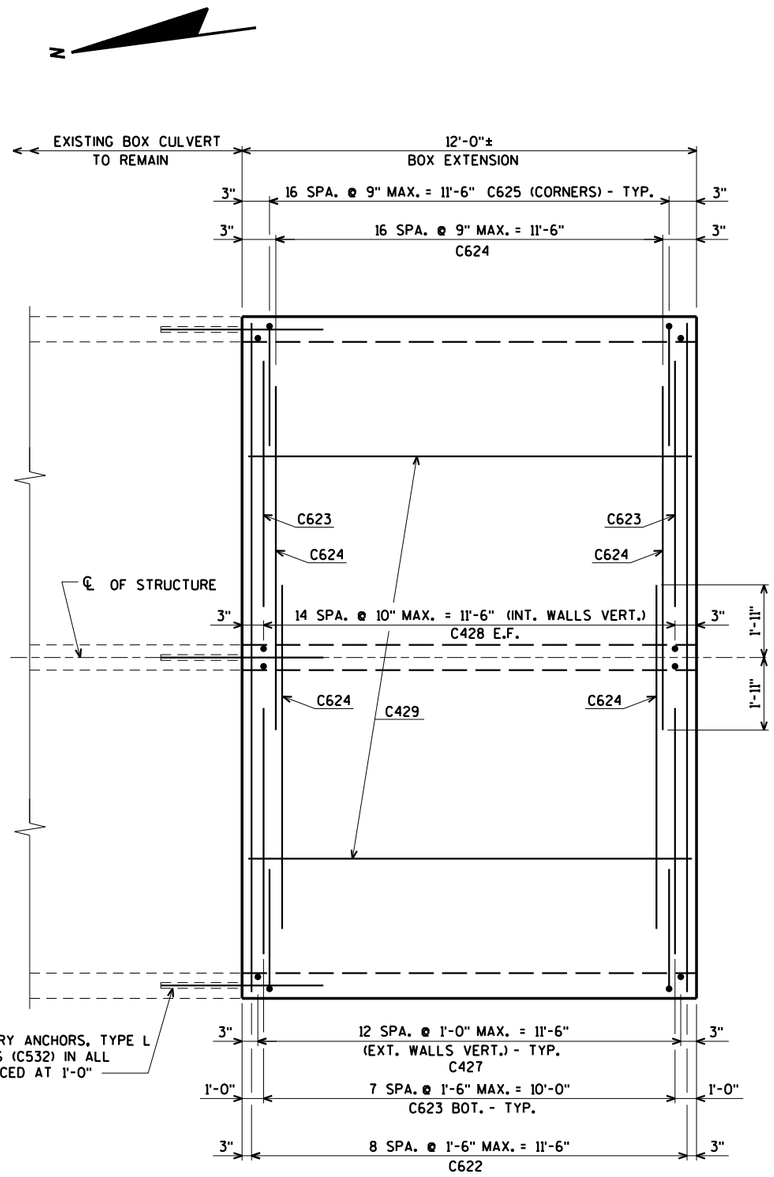
SHEET 4 OF 6
137

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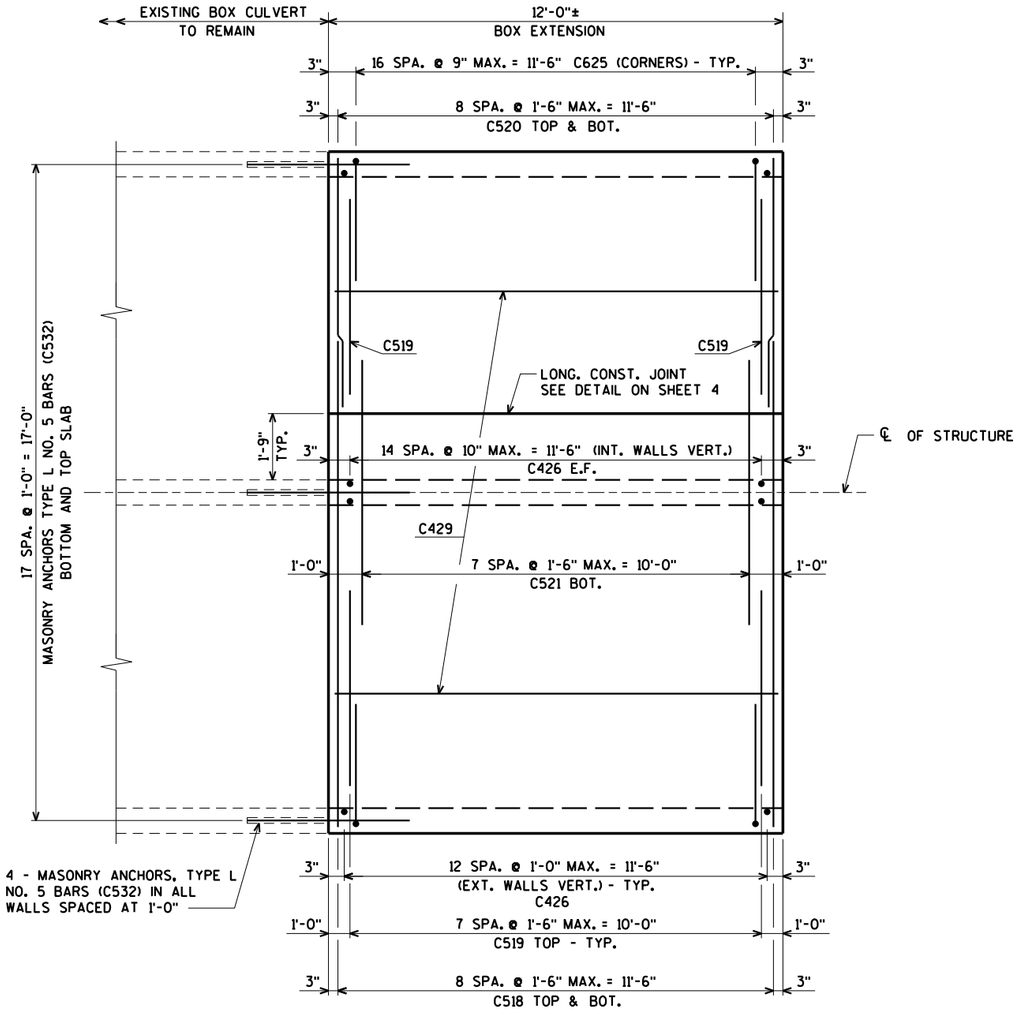
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U:±41-0662.00 - STH 48 Culvert Extension, Barron County±STRUCTURE±410662 cul.dgn

8/21/2014

PENTABLE:BReau_shd_util.tbl



TOP SLAB



BOTTOM SLAB

E.F. DENOTES EACH FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-3-7

DRAWN BY CLS | PLANS CK'D. AEB

BAR STEEL LAYOUT

SHEET 5 OF 6
138

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STATE PROJECT NUMBER

8570-03-70

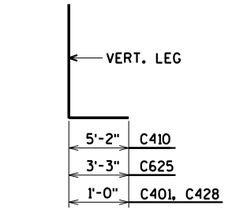
BILL OF BARS

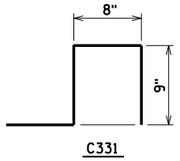
BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED	BAR SERIES	3.410" UNCOATED LOCATION
C401		21	5-7	X			CUTOFF WALL OUTLET
C402		5	8-2				CUTOFF WALL OUTLET
C403		5	14-0				CUTOFF WALL OUTLET
C404		18	9-1				APRON OUTLET
C405		1	4-0				APRON OUTLET WING 1
C406		1	4-0				APRON OUTLET WING 2
C407		7	7-5			⊗	APRON OUTLET
C408		7	13-4			⊗	APRON OUTLET
C409		16	2-8			⊗	WINGS 1 & 2 VERT. B.F.
C410		16	7-5	X			WINGS 1 & 2 VERT. B.F.
C411		16	2-8			⊗	WINGS 1 & 2 VERT. F.F.
C412		16	2-4				WINGS 1 & 2 VERT. F.F.
C413		4	9-1				WINGS 1 & 2 HORIZ.
C414		4	6-7				WINGS 1 & 2 HORIZ. E.F.
C415		4	4-10				WINGS 1 & 2 HORIZ. E.F.
C416		4	1-2				WINGS 1 & 2 HORIZ. E.F.
C517		4	7-2				WINGS 1 & 2 DIAG. E.F.
C518		18	12-10				BOX BOT. SLAB TRANS. TOP & BOT.
C519		16	5-2				BOX BOT. SLAB TRANS. TOP
C520		18	6-7				BOX BOT. SLAB TRANS. TOP & BOT.
C521		8	7-0				BOX BOT. SLAB TRANS. BOT.
C622		9	17-8				BOX TOP SLAB TRANS. BOT.
C623		16	6-6				BOX TOP SLAB TRANS. BOT.
C624		17	9-1				BOX TOP SLAB TRANS. TOP
C625		68	6-6	X			BOX CORNERS
C426		56	2-4				BOX DOWELS WALLS
C427		26	4-2				BOX EXT. WALLS VERT.
C428		30	5-2	X			BOX INT. WALLS VERT. E.F.
C429		58	11-8				BOX LONG.
C430		4	17-8				BOX HEADER
C331		50	2-5	X			BOX HEADER
▲ C532		48	3-0				BOX VERT. CONST. JT.
▲ C533		18	2-0				BOX INLET HEADER CONST. JT.

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

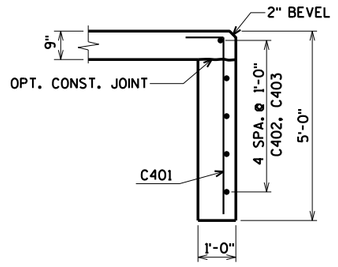
⊗ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

▲ CONCRETE MASONRY ANCHORS TYPE L NO. 5 BARS.



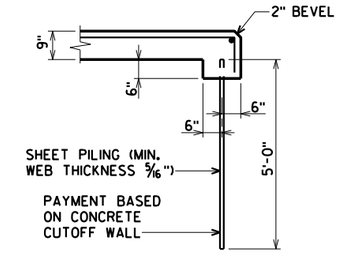


C331



OUTLET

SECTION THRU CUTOFF WALL

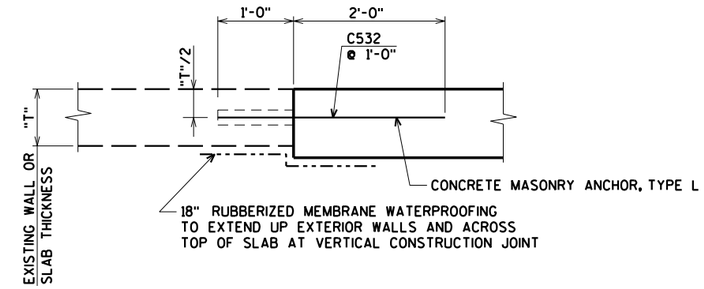


SECTION THRU ALTERNATE CUTOFF WALL

BAR SERIES TABLE

BAR MARK	NO REQ'D.	LENGTH
C407	1 SERIES OF 7	6'-7" TO 8'-3"
C408	1 SERIES OF 7	12'-8" TO 14'-0"
C409	2 SERIES OF 8	1'-4" TO 4'-0"
C411	2 SERIES OF 8	1'-4" TO 4'-0"

BUNDLE AND TAG EACH SERIES SEPARATELY.



VERT. CONST. JOINT

(EXTERIOR WALL & TOP OF SLAB SHOWN)
(INTERIOR WALL & BOTTOM SLAB SIMILAR)

E.F. DENOTES EACH FACE

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-3-7

DRAWN BY CLS | PLANS CK'D. AEB

BILL OF BARS AND DETAILS

SHEET 6 OF 6
139

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8

8

STH 48

STATION	AREA ML CUT SF	VOLUME ML CUT CY	VOLUME SR&PE CUT CY	VOLUME 205.0100 COMMON EXC. CY	AREA ML FILL SF	VOLUME FILL ML FILL CY (15%SKG)	VOLUME FILL SR&PE FILL CY (15%SKG)	VOLUME TOTAL FILL CY (15%SKG)	COMMON EXC. - TOTAL FILL CY	MASS ORDINATE CY
163+00	0.0				0					
		5.5		5.5		0.0		0.0	5.5	5.5
163+50	5.9				0					
		11.1		11.1		0.0		0.0	11.1	16.6
164+00	6.1				0					
		11.6		11.6		0.0		0.0	11.6	28.3
164+50	6.4				0					
		11.0		11.0		0.3		0.3	10.7	38.9
165+00	5.4				0.3					
		10.5		10.5		4.3		4.3	6.2	45.1
165+50	5.9				3.77					
		11.0		11.0		20.4		20.4	-9.4	35.7
166+00	6.0				15.4					
		10.1		10.1		48.2		48.2	-38.1	-2.4
166+50	4.9				29.84					
		8.3		8.3		64.3		64.3	-56.0	-58.4
167+00	4.1				30.58					
		9.4		9.4		56.0		56.0	-46.6	-104.9
167+50	6.1				21.98					
		12.9		12.9		26.5		26.5	-13.6	-118.5
168+00	7.8				2.86					
		11.4		11.4		9.7		9.7	1.7	-116.8
168+50	4.6				6.26					
		14.3		14.3		6.7		6.7	7.7	-109.1
169+00	10.9				0					
		17.2		17.2		0.0		0.0	17.2	-91.9
169+50	7.7				0					
		8.7		8.7		12.0		12.0	-3.2	-95.1
170+00	1.7				11.24					
		10.3		10.3		20.8		20.8	-10.5	-105.6
170+50	9.4				8.31					
		15.8		15.8		12.3		12.3	3.5	-102.1
171+00	7.7				3.21					
		12.8		12.8		6.3		6.3	6.5	-95.6
171+50	6.1				2.72					
		6.8		6.8		8.7		8.7	-1.9	-97.5
171+78	7.0				11.92					
		5.9		5.9		6.2		6.2	-0.3	-97.8
172+00	7.6				1.38					
		12.7		12.7		1.5		1.5	11.3	-86.5
172+50	6.2				0					
		14.6		14.6		0.0		0.0	14.6	-71.9
172+64	50.2				0					
		36.6		36.6		0.0		0.0	36.6	-35.3
172+85	44.0				0.0					

9

9

PROJECT NO: 8150-20-72	HWY: STH 27	COUNTY: DOUGLAS	EARTHWORK DATA SHEET	SHEET: 140	E

FILE NAME : 090102_ew PLOT DATE : _____ PLOT BY : DOTR7M PLOT NAME : 090102_ew PLOT SCALE : 1:1

STH 48

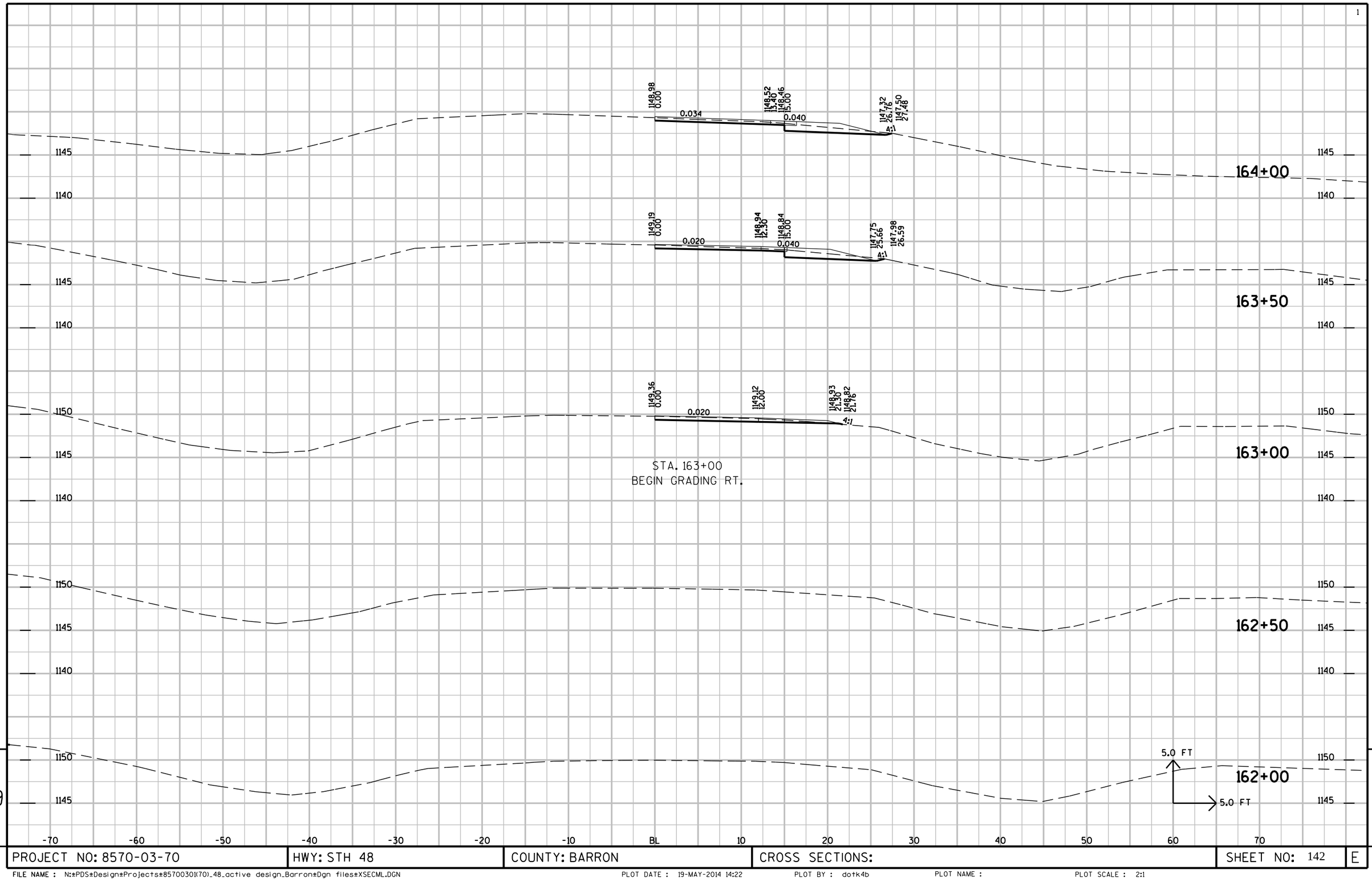
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172+85	44.0				0.0					
		0.0		0.0		0.0		0.0	0.0	-35.3
173+85	44.0				0.0					
		41.9		41.9		0.0		0.0	41.9	6.6
174+09	50.3				0					
		42.9		42.9		1.2		1.2	41.7	48.3
174+50	6.3				1.43					
		12.6		12.6		23.5		23.5	-10.9	37.4
175+00	7.3				20.68					
		13.8		13.8		25.2		25.2	-11.4	25.9
175+50	7.6				3.01					
		11.5		11.5		8.1		8.1	3.4	29.3
176+00	4.9				4.6					
		9.1		9.1		10.4		10.4	-1.4	28.0
176+50	4.9				5.19					
		9.9		9.9		7.9		7.9	2.0	29.9
177+00	5.7				2.22					
		11.6		11.6		4.2		4.2	7.4	37.4
177+50	6.8				1.68					
		11.6		11.6		3.5		3.5	8.1	45.5
178+00	5.8				1.65					
		11.4		11.4		2.4		2.4	9.0	54.4
178+50	6.6				0.65					
		13.4		13.4		2.5		2.5	10.9	65.3
179+00	7.9				1.7					
		14.4		14.4		2.6		2.6	11.8	77.2
179+50	7.6				0.71					
		14.4		14.4		0.8		0.8	13.6	90.8
180+00	7.9				0					
		15.1		15.1		0.0		0.0	15.1	105.9
180+50	8.4				0					
		15.3		15.3		0.1		0.1	15.2	121.1
181+00	8.1				0.128					
		8.3		8.3		0.3		0.3	8.1	129.1
181+50	0.9				0.125					
		1.7		1.7		0.1		0.1	1.5	130.7
182+00	0.9				0					
TOTALS				527.8				397.1	130.7	-191.9

9

9

PROJECT NO: 8150-20-72	HWY: STH 27	COUNTY: DOUGLAS	EARTHWORK DATA SHEET	SHEET: 141	E

FILE NAME : 090102_ew PLOT DATE : _____ PLOT BY : DOTR7M PLOT NAME : 090102_ew PLOT SCALE : 1:1

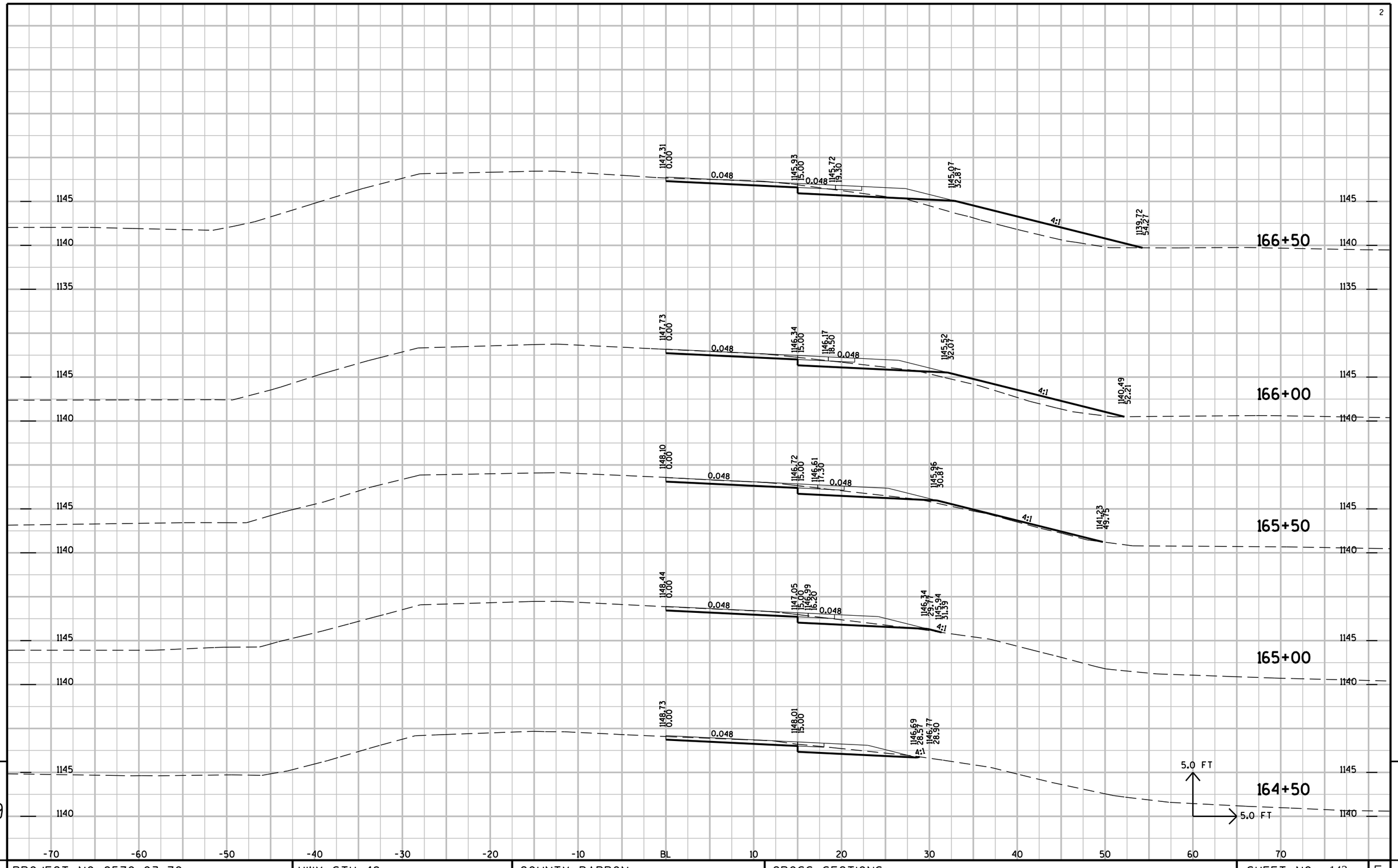


9

PROJECT NO: 8570-03-70	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS:	SHEET NO: 142	E

FILE NAME : N:±PDS±Design±Projects±85700301(70)_48_active design_Barron±Dgn files±XSECML.DGN PLOT DATE : 19-MAY-2014 14:22 PLOT BY : dotk4b PLOT NAME : PLOT SCALE : 2:1

9



9

9

PROJECT NO: 8570-03-70	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS:	SHEET NO: 143	E

FILE NAME : N:±PDS±Design±Projects±85700301(70)_48_active design_Barron±Dgn files±XSECML.DGN PLOT DATE : 19-MAY-2014 14:22 PLOT BY : dotk4b PLOT NAME : PLOT SCALE : 2:1

STA. 169+03 PE RT.
1 - 18" X 36' CPCS
2 - 18" AEW'S

1144.69 0.00
0.048
1143.02 21.00
1142.97 21.90
0.048
1142.32 35.47
2.5:1
1144.09 52.88
169+00

1145.25 0.00
0.048
1143.63 20.00
1143.55 21.70
0.048
1142.90 35.27
4:1
1141.51 40.82
168+50

1145.82 0.00
0.048
1144.29 18.00
1144.13 21.30
0.048
1143.48 34.87
4:1
1141.87 41.31
168+00

EXISTING BOX CULVERT

BOX CULVERT C-3-07

STA. 167+50
TWIN 4' X 8' CIP BOX CULVERT
EXTENSION 10' RT

1146.36 0.00
0.048
1144.97 15.00
0.048
1144.70 20.70
1144.05 34.27
4:1
1138.15 57.85
167+50

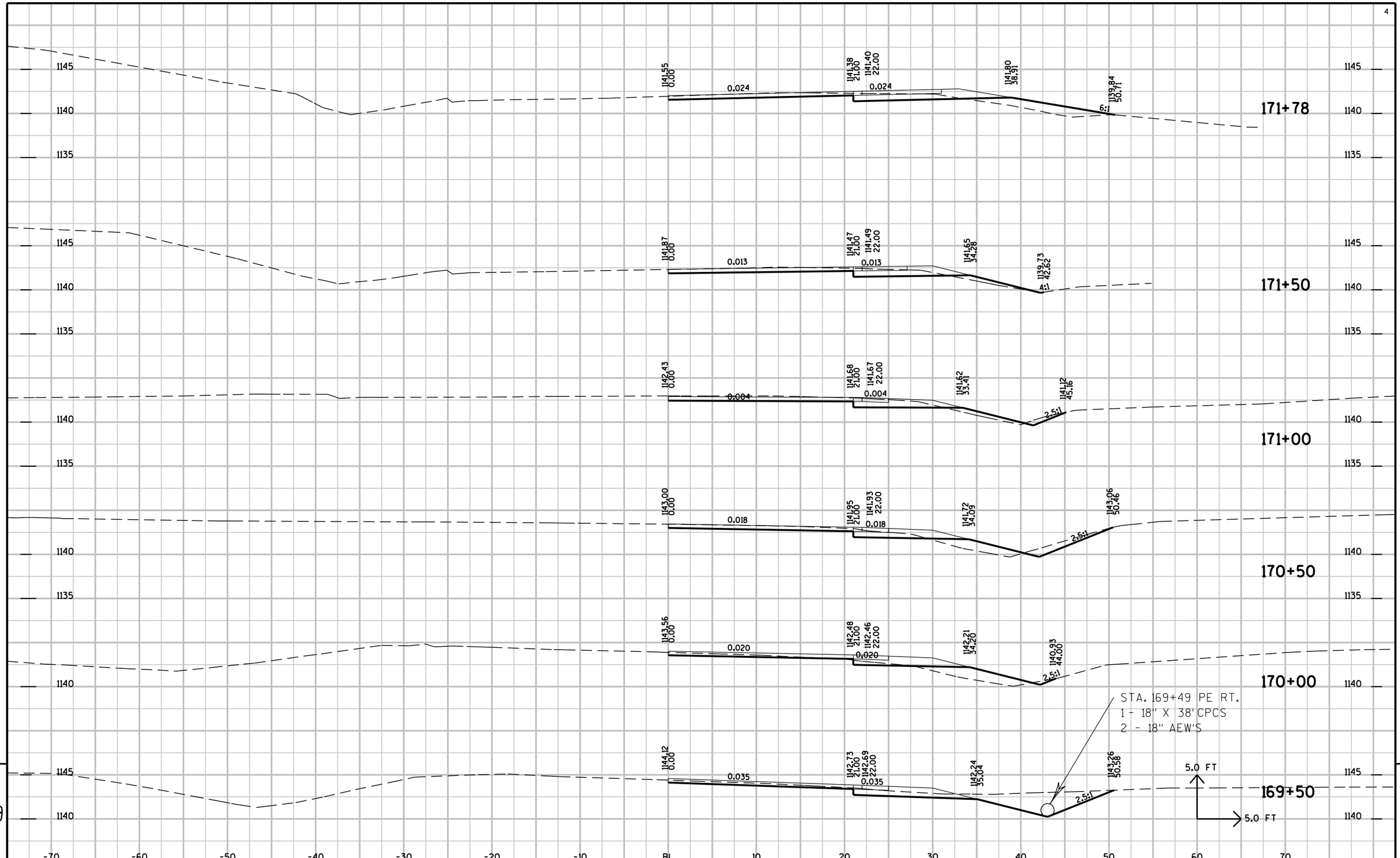
1146.85 0.00
0.048
1145.47 15.00
0.048
1145.22 20.20
1144.57 33.77
4:1
1139.66 53.39
5.0 FT
167+00
5.0 FT

1145
1140
1135

-70 -60 -50 -40 -30 -20 -10 BL 10 20 30 40 50 60 70

9

PROJECT NO: 8570-03-70	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS:	SHEET NO: 144	E



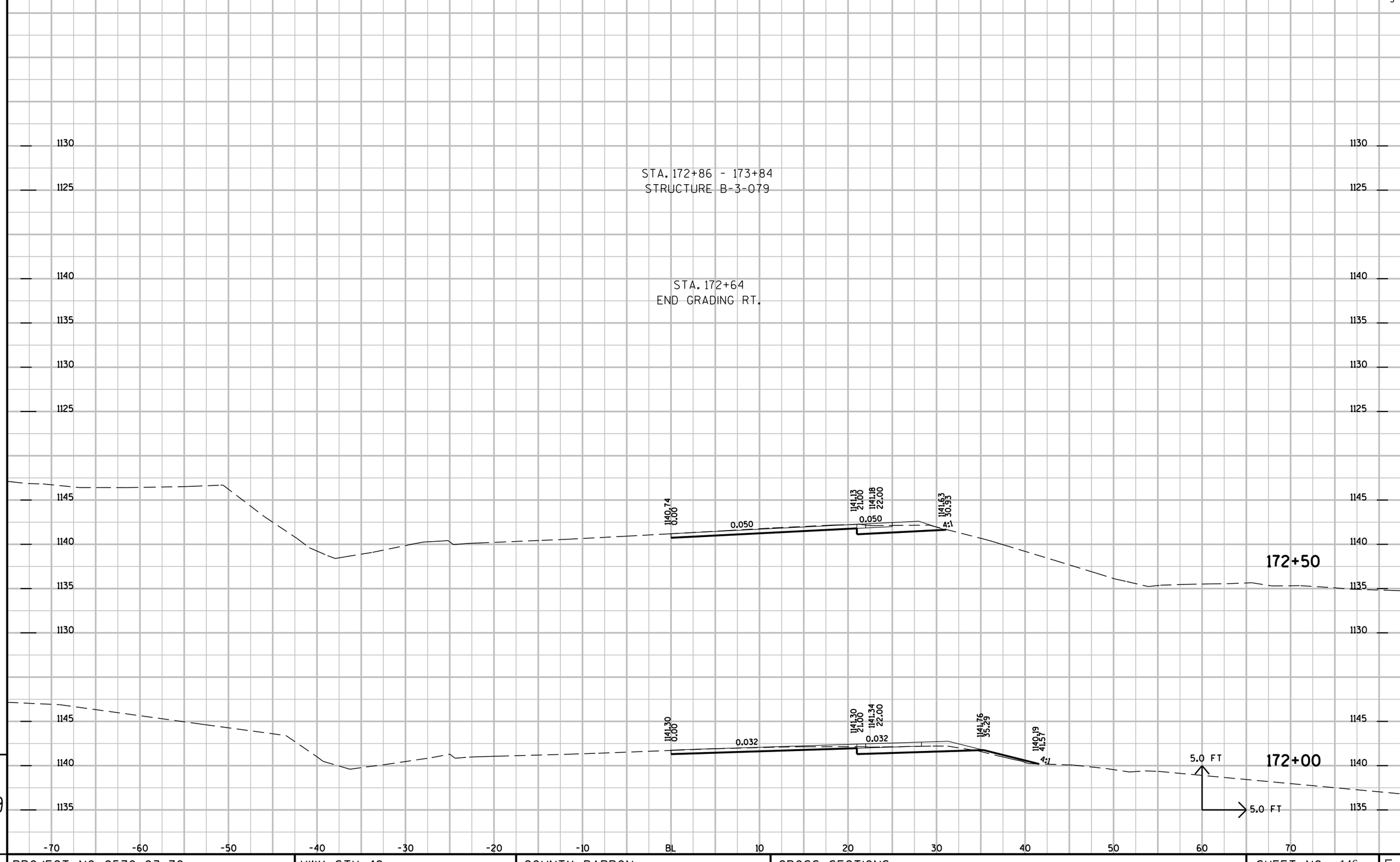
9

PROJECT NO: 8570-03-70	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS:	SHEET NO: 145	E

FILE NAME : N:±PDS±Design±Projects±85700301(70)_48_active design_Barron±Dgn files±XSECML.DGN PLOT DATE : 19-MAY-2014 14:22 PLOT BY : dotk4b PLOT NAME : PLOT SCALE : 2:1

STA. 172+86 - 173+84
STRUCTURE B-3-079

STA. 172+64
END GRADING RT.

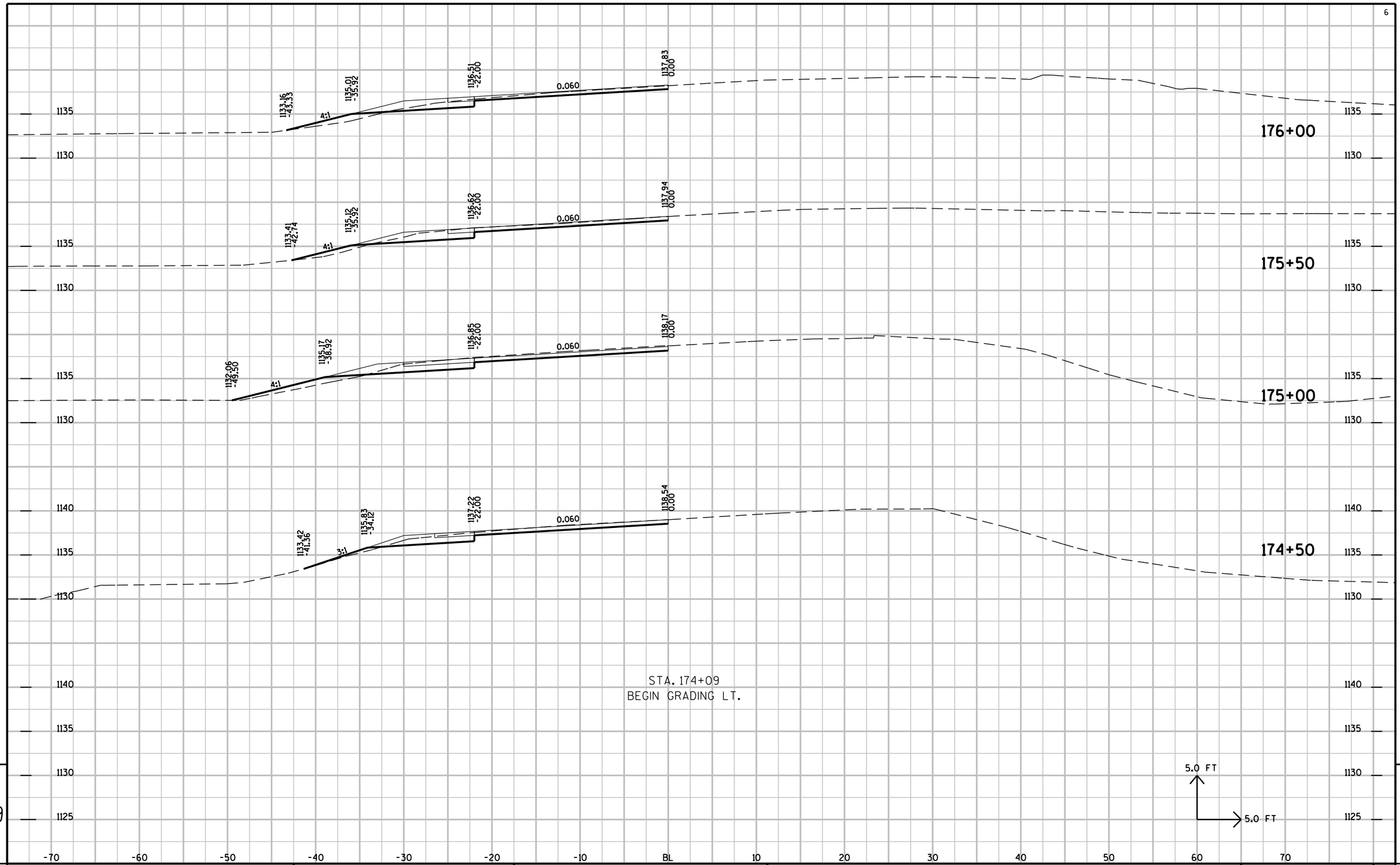


9

9

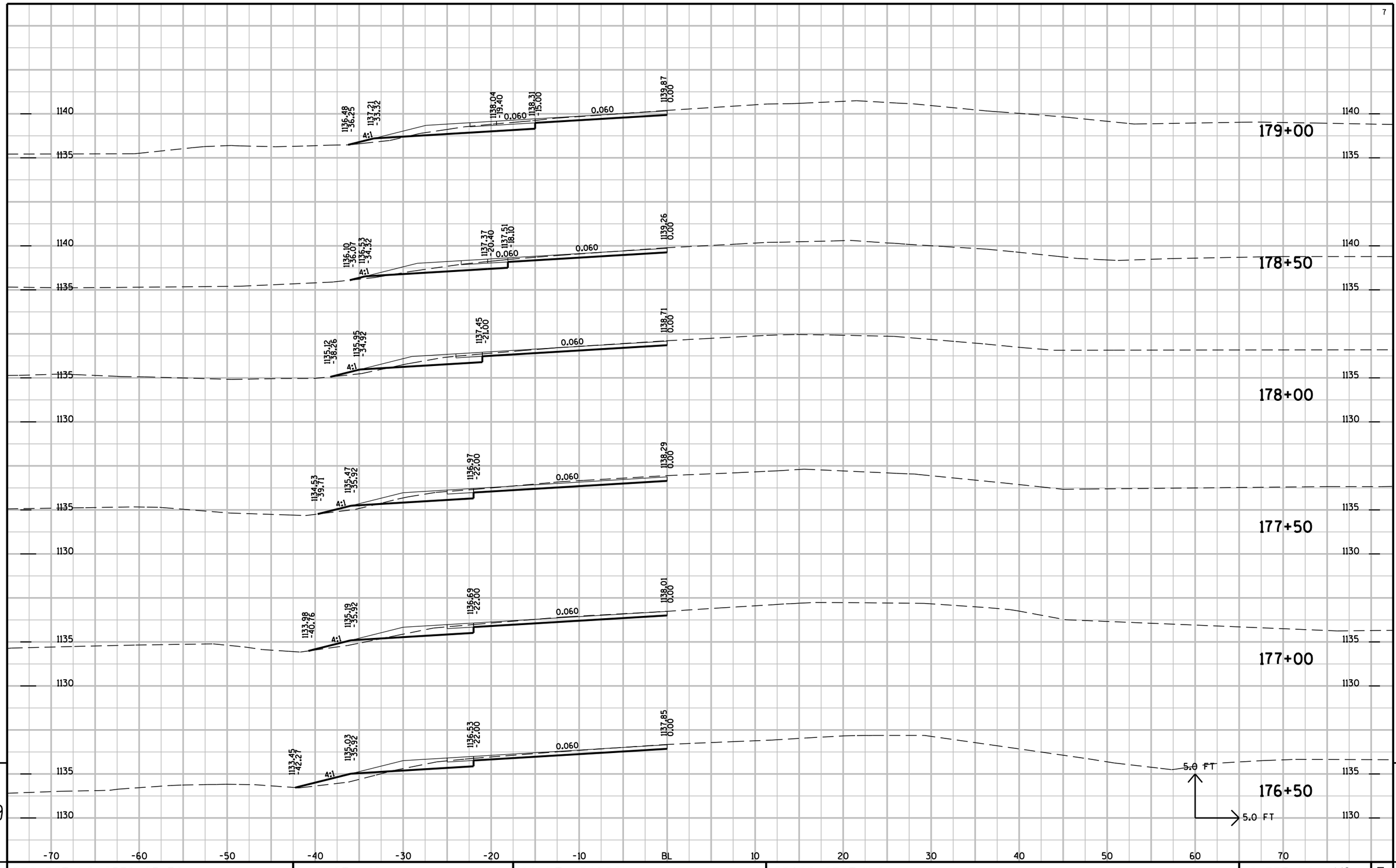
PROJECT NO: 8570-03-70	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS:	SHEET NO: 146	E

FILE NAME : N:±PDS±Design±Projects±85700301(70)_48_active design_Barron±Dgn files±XSECML.DGN PLOT DATE : 19-MAY-2014 14:22 PLOT BY : dotk4b PLOT NAME : PLOT SCALE : 2:1



PROJECT NO: 8570-03-70	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS:	SHEET NO: 147	E

FILE NAME : N:±PDS±Design±Projects±85700301(70)_48_active design_Barron±Dgn files±XSECML.DGN PLOT DATE : 19-MAY-2014 14:22 PLOT BY : dotk4b PLOT NAME : PLOT SCALE : 2:1

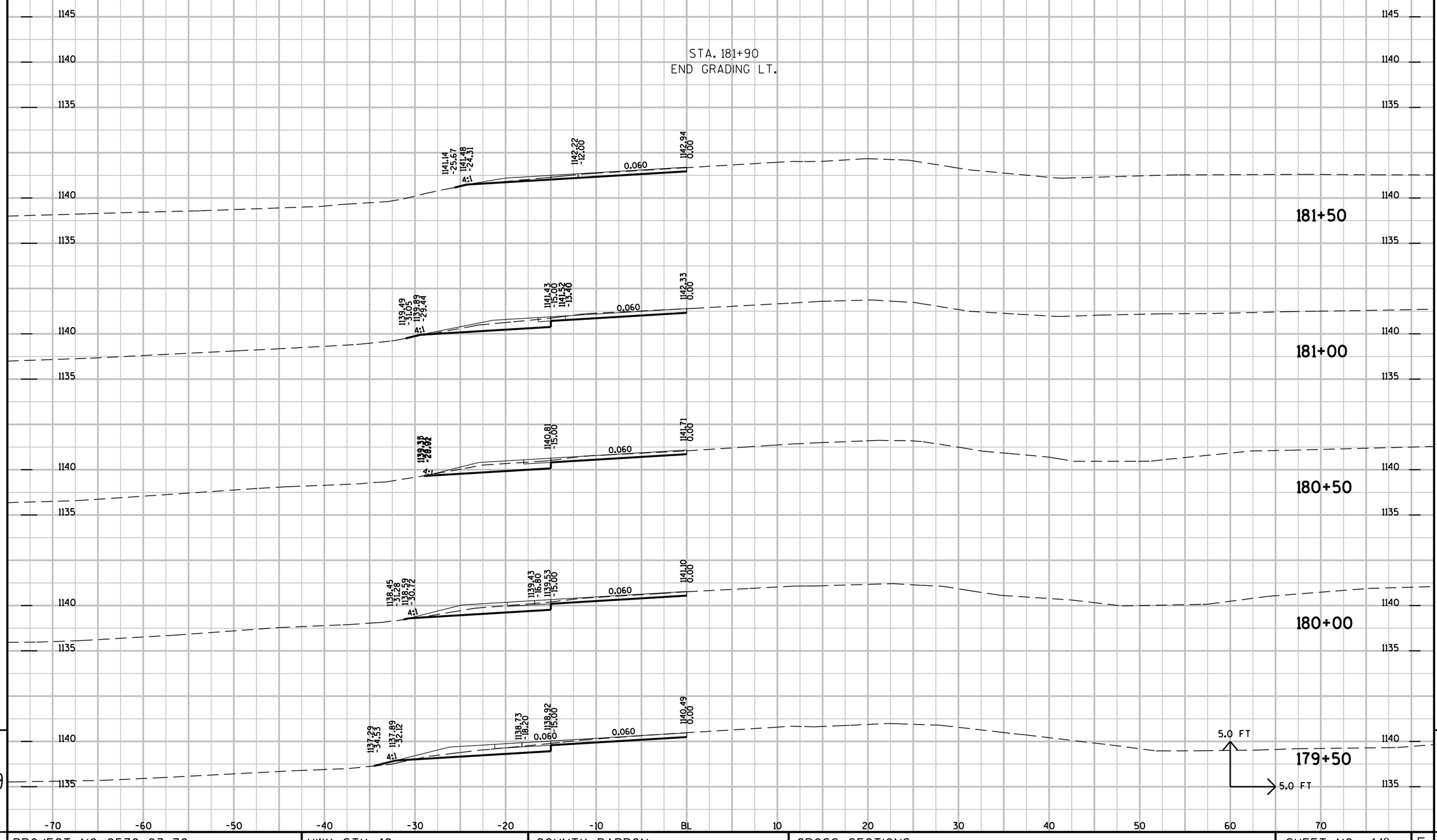


9

PROJECT NO: 8570-03-70	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS:	SHEET NO: 148	E

FILE NAME : N:±PDS±Design±Projects±85700301(70)_48_active design_Barron±Dgn files±XSECML.DGN PLOT DATE : 19-MAY-2014 14:22 PLOT BY : dotk4b PLOT NAME : PLOT SCALE : 2:1

STA. 181+90
END GRADING LT.



PROJECT NO: 8570-03-70	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS:	SHEET NO: 149	E

FILE NAME : N:±PDS±Design±Projects±85700301(70)_48_active design_Barron±Dgn files±XSECML.DGN PLOT DATE : 19-MAY-2014 14:22 PLOT BY : dotk4b PLOT NAME : PLOT SCALE : 2:1

9

9

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov

SUP

PROJECT ID: 8570-03-72

WITH: 8570-03-70

COUNTY: BARRON

DEC 2014

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
~~Section No.~~	~~4~~	~~Right of Way Plat~~
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
~~Section No.~~	~~8~~	~~Structure Plans~~
Section No.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 150

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

CITY OF RICE LAKE, HAMMOND AVENUE

KNAPP STREET TO NORTH STREET

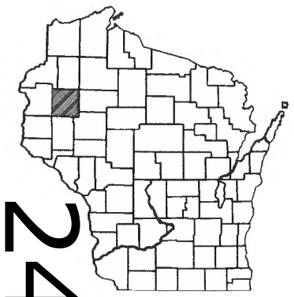
STH 48

BARRON COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
8570-03-72	WISC 2014455	1

STATE PROJECT NUMBER

8570-03-72



24

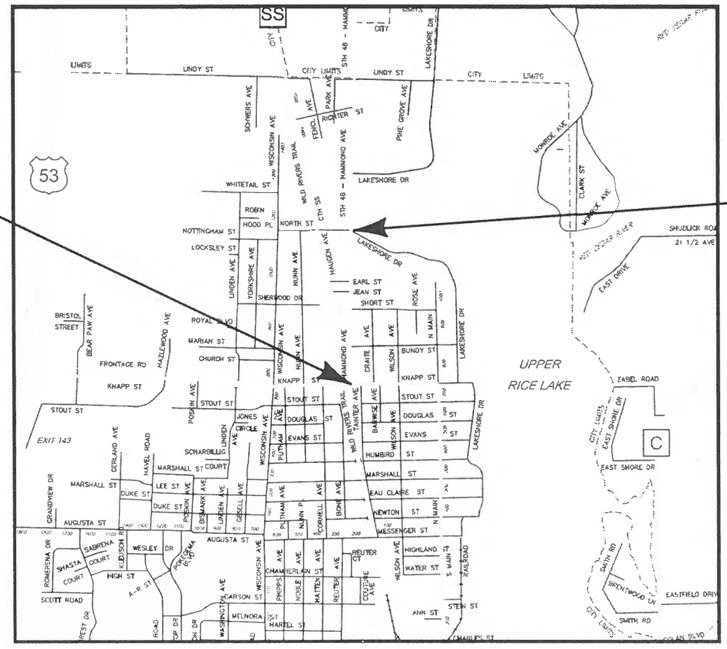
N

DESIGN DESIGNATION

A.A.D.T. 2008	=	3600
A.A.D.T. 2028	=	4350
D.H.V. 2029	=	697
D.D.	=	59/41
T. (DHV)	=	7.5%
DESIGN SPEED	=	35 MPH
ESALS	=	1,080,000

BEGIN PROJECT
STA 3+42.45
Y = 137146.62
X = 333918.80

END PROJECT
STA 28+56.32



LAYOUT
SCALE 0 1/4 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.476 MI.

Coordinates on this plan are referenced to the Wisconsin County Coordinate System (WCCS), Barron County.

ACCEPTED FOR
CITY OF RICE LAKE

7-29-14 Steve Harrington Mayor
DATE NAME - TITLE

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES

WISCONSIN
JEFFREY A. ABRAMSON
32337
Eau Claire
WI
PROFESSIONAL ENGINEER

DATE: 7-24-14

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	C.O. SURVEY & MAPPING
Designer	AYRES ASSOCIATES INC
Project Manager	MATT DICKENSON P.E.
Regional Examiner	DAN OJIBWAY
Regional Supervisor	DAVID OSTROWSKI P.E.
C.O. Examiner	

APPROVED FOR THE DEPARTMENT

DATE: 7/30/14 (Signature)

E

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

GENERAL NOTES

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

WHEN THE QUANTITY OF BASE AGGREGATE DENSE AND ASPHALTIC PAVEMENT ARE MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS AS SHOWN ON THE PLAN IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND UPON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER IN THE FIELD.

ALL RADII ARE MEASURED TO EDGE OF PAVEMENT UNLESS OTHERWISE SHOWN OR NOTED ON THE PLAN.

CURB HEIGHTS AT THE END OF CURB AND GUTTER SHALL BE TAPERED FROM 0 TO 6 INCHES IN 6 FEET.

CURVE DATA SHOWN ON THE PLAN IS "ARC DEFINITION".

CONTROL POINTS ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM BARRON COUNTY. BENCHMARK ELEVATIONS ARE REFERENCED TO NGVD 29.

DESIGN CONTACT

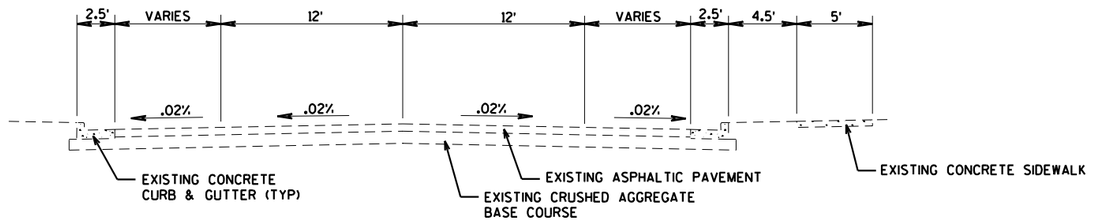
AYRES ASSOCIATES
3433 OAKWOOD HILLS PARKWAY
EAU CLAIRE, WI 54701
ATTN: JEFF ABRAMSON, PE
abramsonj@ayresassociates.com
(715) 834-3161

DNR CONTACT

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
810 WEST MAPLE STREET
SPOONER, WI 54801
ATTN: AMY CRONK
amy.cronk@wisconsin.gov
(715) 635-4229

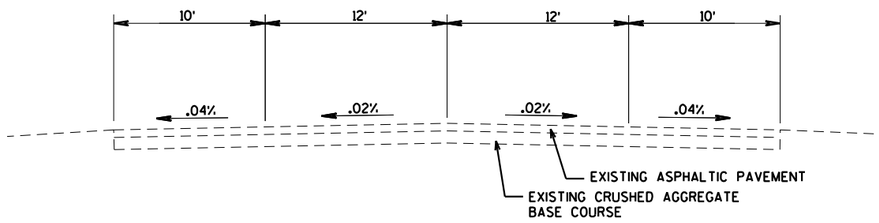
CITY OF RICE LAKE

ATTN: JIM ANDERSON
STREET DIRECTOR
326 SOUTH MAIN STREET
RICE LAKE, WI 54868
janderson@ricelakegov.org
(715) 234-7402



EXISTING TYPICAL SECTION - STH 48

STA 9+30.00 - STA 13+90.00 LT
STA 6+80.00 - STA 14+00.00 RT



EXISTING TYPICAL SECTION - STH 48

STA 3+42.00 - STA 9+30.00 LT
STA 3+42.00 - STA 6+80.00 RT
STA 13+90.00 - STA 28+56.00 LT
STA 14+00.00 - STA 28+56.00 RT

UTILITIES

* CHARTER COMMUNICATIONS
2304 SOUTH MAIN STREET
RICE LAKE, WI 54868
ATTN: TOM HAASE
thomas.haase@chartercom.com
(715) 236-5005

* CENTURYLINK
20 SOUTH WILSON AVENUE
RICE LAKE, WI 54868
ATTN: REED LECHNIR
reed.lechnir@centurylink.com
(715) 234-5526

* WE ENERGIES - GAS
104 WEST SOUTH STREET
RICE LAKE, WI 54868
ATTN: LEWIS KNAPP
lewis.knapp@we-energies.com
(715) 234-9605

CITY OF RICE LAKE ST DEPT - STORM WATER
326 SOUTH MAIN STREET
RICE LAKE, WI 54868
ATTN: JAMES ANDERSON
janderson@ricelakegov.org
(715) 234-7402

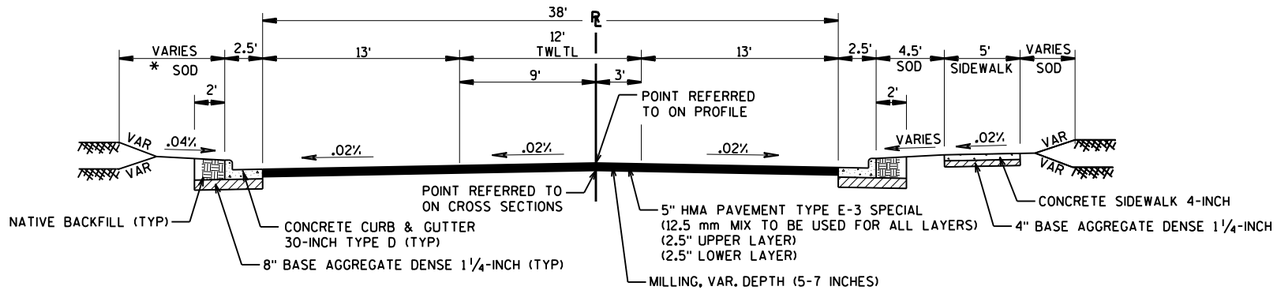
RICE LAKE UTILITIES - WATER & SANITARY
320 WEST COLEMAN STREET
RICE LAKE, WI 54868
ATTN: WALLY THOM
wallyt@ricelakeutilities.com
(715) 234-7004

RICE LAKE UTILITIES - ELECTRIC
320 WEST COLEMAN STREET
RICE LAKE, WI 54868
ATTN: LEO DIEHL
leod@ricelakeutilities.com
(715) 234-7004

* DENOTES DIGGERS HOTLINE MEMBER

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

2



TYPICAL FINISHED SECTION

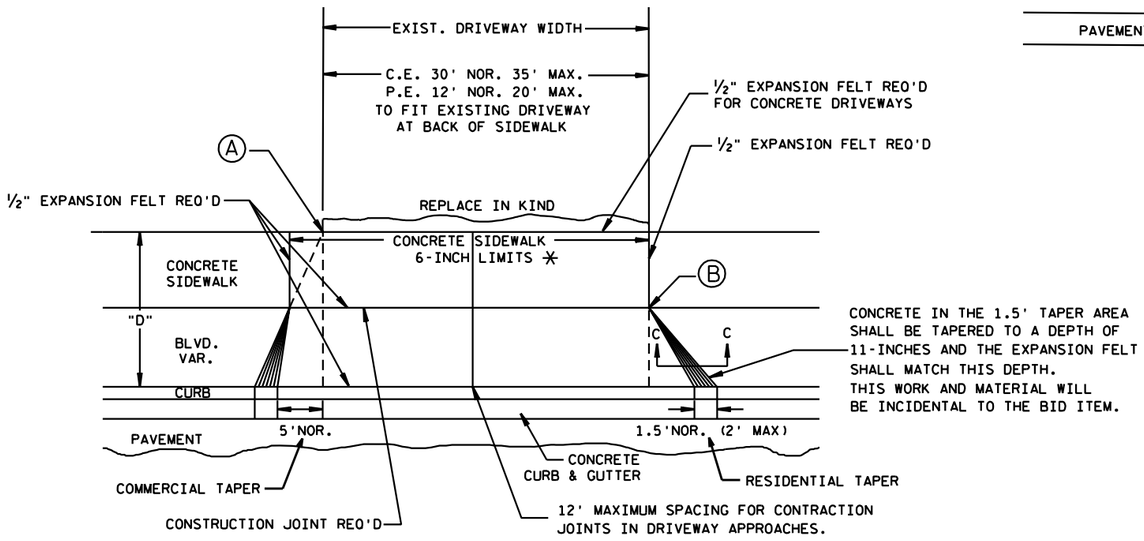
STA 3+42.00 - STA 28+56.00

* ASPHALTIC SURFACE AS NOTED

NOTE:
LOCATION OF ASPHALTIC CONSTRUCTION JOINTS SHALL BE APPROVED BY THE ENGINEER IN THE FIELD

PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	TYPICAL SECTIONS	SHEET 3	E

PAVEMENT FIELD CORE LOG							
PROJECT: 8570-03-72		ROAD: STH 48			CITY OF RICE LAKE, HAMMOND AVE		
COUNTY: BARRON		DISTRICT: NW REGION			KNAPP STREET - NORTH STREET		
CORE NO.	STATION	OFFSET	CORE IN INCHES	CORE DIAMETER	BASE	PAVEMENT TYPE	DATE
2	4+00	10' LT	5	4.5	CONC	HMA	7/6/2011
3	6+00	7' RT	8	4.5	BASE	HMA	7/6/2011
4	11+00	5.5' LT	4	4.5	BASE	HMA	7/6/2011
5	16+00	10' RT	5	4.5	BASE	HMA	7/6/2011
6	21+00	9.5' LT	4	4.5	BASE	HMA	7/6/2011
7	26+00	3' RT	4	4.5	BASE	HMA	7/6/2011

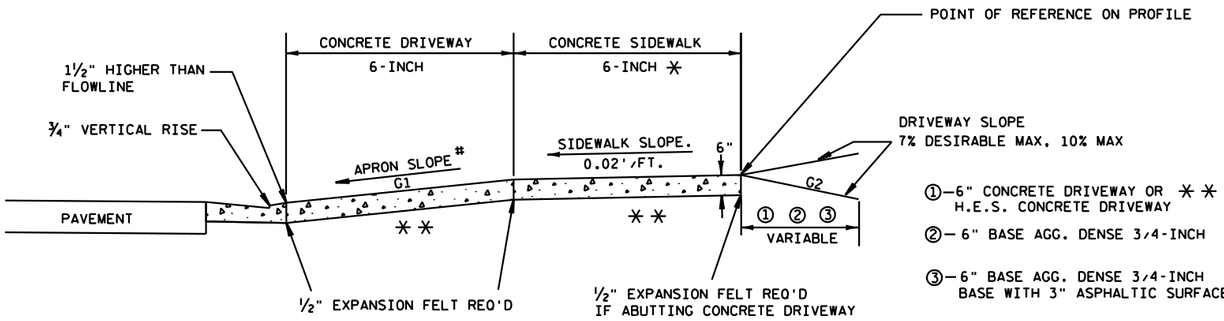


PLAN VIEW

Ⓐ WHEN "D" IS 13' OR LESS, ALIGN TAPER WITH BACK OF SIDEWALK

Ⓑ WHEN "D" IS GREATER THAN 13', ALIGN TAPER WITH FRONT OF SIDEWALK

✳ = PAID FOR AS CONCRETE DRIVEWAY 6-INCH



✳ = PAID FOR AS CONCRETE DRIVEWAY 6-INCH

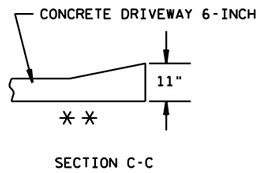
✳✳ = 6" BASE AGG. DENSE 3/4-INCH REQ'D UNDER CONCRETE DRIVEWAY

TYPICAL SIDEWALK SECTION

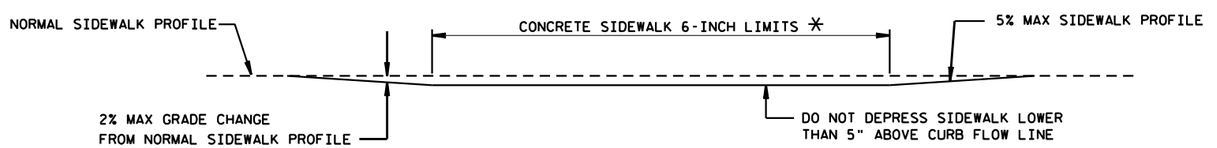
TERRACE WIDTH	APRON SLOPE (G1) MIN %	DESIRABLE %	MAX %
3 FT	7.0	8.5	9.0
4 FT	5.0	7.0	9.0
5 FT	4.0	7.0	9.0
6 FT	4.0	7.0	9.0
7 FT	3.5	7.0	9.0
8 FT	3.0	7.0	9.0

NOTE: ALGEBRAIC DIFFERENCE BETWEEN TANGENT GRADES G1 & G2 TO NOT EXCEED 15%

DEPRESS SIDEWALK PROFILE IF DRIVEWAY APRON EXCEEDS MAX SLOPE



SECTION C-C



DEPRESSED SIDEWALK PROFILE DETAIL

✳ = PAID FOR AS CONCRETE DRIVEWAY 6-INCH

DRIVEWAY ENTRANCE DETAIL WITH SIDEWALK, CURB & GUTTER

XXXXX = SAWCUT

BEGIN PROJECT
STA 3+42.45

ASPHALTIC SURFACE

CONCRETE CURB & GUTTER
30-INCH TYPE D (TYP)

7.5'

MATCH 1145.82 1145.81 1145.80 1145.77 1145.72 1145.66 1145.60 1145.52 1145.44 1145.37 1145.29 1145.26 1145.30 1145.37 1145.44 1145.52 1145.59 1145.66 1145.74 1145.81

13'

12'

13'

5'

2+00 3+00 4+00 5+00 6+00 STH 48/HAMMOND AVE 7+00 8+00

MATCH 1145.95 1145.93 1145.92 1145.89 1145.84 1145.78 1145.72 1145.64 1145.56 1145.49 1145.41 1145.38 1145.42 1145.49 1145.56 1145.64 1145.71 1145.78 1145.72

CURB RAMP
(TYPE 4B1)

MATCH

R 20'

ASPHALTIC SURFACE

ASPHALTIC SURFACE

CONCRETE SIDEWALK 4-INCH

STA 7+51.33, 36'RT
Y=137554.98
X=333959.55

STA 12+33.57, 107'LT
Y=138039.21
X=333823.69

BUNDY ST

HAUGEN AVE/CTH SS

R 85'

ASPHALTIC SURFACE

CONCRETE CURB & GUTTER
30-INCH TYPE D

MATCH

STA 13+69.14, 47'LT
Y=138173.86
X=333885.74

R 25'

1145.81 1145.88 1145.96 1146.03 1146.10 1146.15 1146.20 1146.24 1146.28 1146.31 1146.35 1146.38 1146.42 1146.46 1146.49 1146.53 1146.56 1146.60 1146.61 1146.81 1146.91 1146.97

8+00 9+00 STH 48/HAMMOND AVE 10+00 11+00 12+00 13+00 14+00

13'

12'

13'

5'

CURB RAMP
(TYPE 4B1)

1145.91 1146.08 1146.15 1146.22 1146.27 1146.32 1146.36 1146.40 1146.43 1146.47 1146.50 1146.54 1146.58 1146.61 1146.65 1146.68 1146.72 1146.76 1146.80 1146.85 1146.91 1146.97 1147.03 1147.07

MATCH

R 20'

STA 8+46.93, 36'RT
Y=137650.46
X=333960.82

ASPHALTIC SURFACE

CONCRETE CURB & GUTTER
30-INCH TYPE D (TYP)

CONCRETE SIDEWALK 4-INCH

R 25'

STA 13+89.30, 41'RT
Y=138192.68
X=333974.03

BUNDY ST

PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	PAVING DETAIL	SHEET 5	E

FILE NAME : T:\410662\dgn\plan\021201_pd.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

2

N

JEAN ST

EARL ST

STA16+97.37, 47'LT
Y=138501.79
X=333889.09

STA 17+79.37, 47'LT
Y=138583.79
X=333889.84

CONCRETE CURB & GUTTER
30-INCH TYPE D (TYP)

CONCRETE CURB & GUTTER
30-INCH TYPE D (TYP)

R 25'

R 25'

XXXXX

XXXXX

XXXXX

XXXXX

1146.97 1147.04 1147.10 1147.16 1147.23 1147.29 1147.32 1147.33 1147.30 1147.25 1147.19 1147.13 1147.07 1147.10 1147.13 1147.30 1147.21 1147.12 1147.20 1147.26 1147.33 1147.40 1147.46 1147.53 1147.61 1147.70 1147.80

13'

12'

13'

5'

14+00 15+00 16+00 17+00 18+00 19+00 20+00

STH 48/HAMMOND AVE

CURB RAMP
(TYPE 4B1)

1147.07 1147.40 1147.50 1147.80 1147.75 1147.25 1147.28 1147.35 1147.41 1147.44 1147.45 1147.42 1147.37 1147.31 1147.25 1147.19 1147.16 1147.19 1147.25 1147.32 1147.38 1147.45 1147.52 1147.58 1147.65 1147.73 1147.82 1147.92

R 25'

R 25'

STA 14+63.06, 41'RT
Y=138266.68
X=333974.93

XXXXX

SHORT ST

CONCRETE SIDEWALK 4-INCH

XXXXX = SAWCUT

N

CONCRETE SIDEWALK 4-INCH

CONCRETE CURB & GUTTER
30-INCH TYPE D (TYP)

CURB RAMP
(TYPE 7B)

XXXXX XXXXX XXXXX XXXX

1147.80 1147.91 1148.01 1148.12 1148.22 1148.32 1148.43 1148.53 1148.64 1148.74 1148.84 1148.95 1149.05 1149.16 1149.26 1149.37 1149.47 1149.57 1149.68 1149.74 1149.77 1149.76 1149.72 1149.66 1149.61

13'

12'

13'

5'

20+00 21+00 22+00 23+00 24+00 25+00 26+00

STH 48/HAMMOND AVE

CURB RAMP
(TYPE 7B)

1147.92 1148.03 1148.13 1148.24 1148.34 1148.44 1148.55 1148.65 1148.76 1148.86 1148.96 1149.07 1149.17 1149.28 1149.38 1149.49 1149.59 1149.69 1149.80 1149.86 1149.89 1149.88 1149.84 1149.78 1149.73

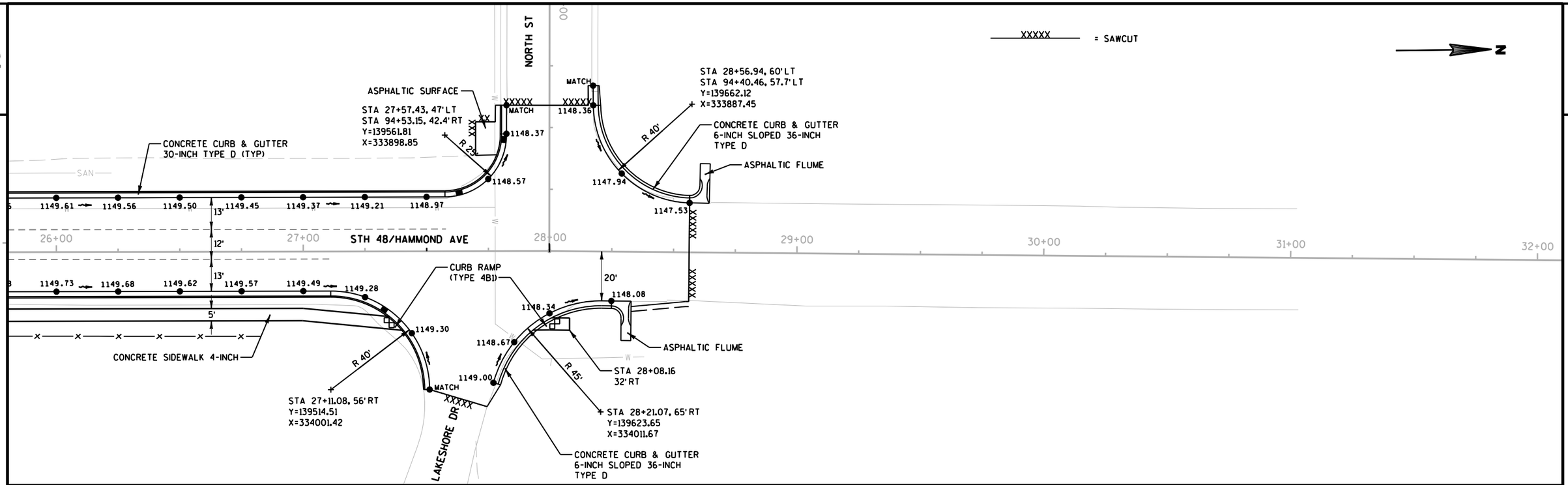
XXXXX

XXXXX

CONCRETE SIDEWALK 4-INCH

PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	PAVING DETAIL	SHEET 6	E

FILE NAME : T:\410662\dgn\plan\021202_pd.dgn PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:40



PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	PAVING DETAIL	SHEET 7	E

FILE NAME : T:\410662\dgn\plan\021203_pd.dgn PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

2

BEGIN PROJECT
STA 3+42.45

N

TYPE D (2)
SLOPE INTERCEPT
TYPE A (2)
TYPES A & C (2)
TYPES A & C (4)
TYPE D (4)
TYPE D (1)

2+00 3+00 4+00 5+00 6+00 STH 48/HAMMOND AVE 7+00 8+00

BUNDY ST

LEGEND

EROSION MAT CLASS 1 TYPE B
SILT FENCE
TEMPORARY DITCH CHECKS
INLET PROTECTION
(TYPE NOTED ON PLAN SHEETS)
(X) INDICATES STAGE INSTALLED

N

TYPE D (2)
TYPES A & C (2)
SLOPE INTERCEPT
TYPE A (2)
TYPES A & C (4)
TYPE D (1)

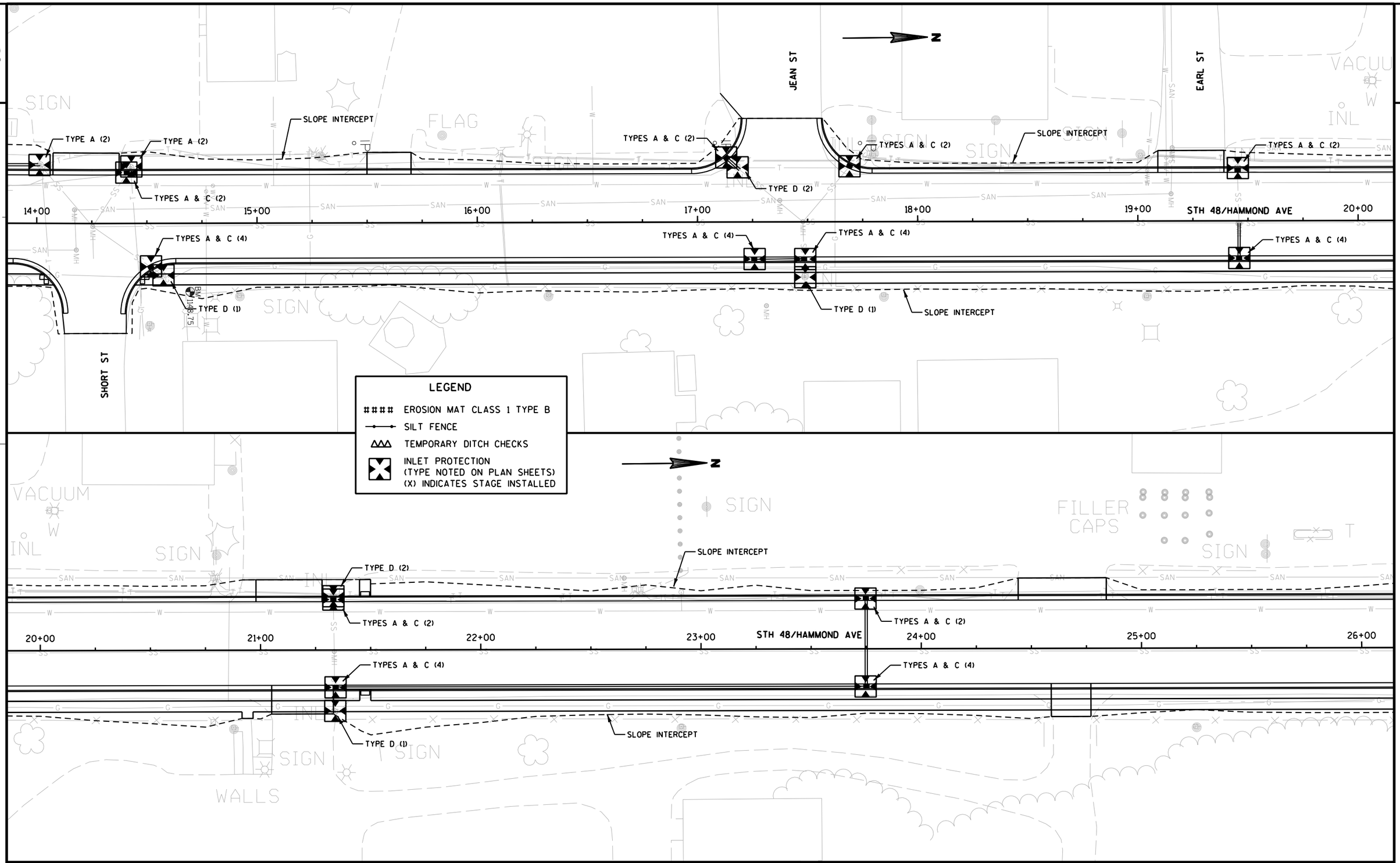
8+00 9+00 STH 48/HAMMOND AVE 10+00 11+00 12+00 13+00 14+00

HAUGEN AVE/CTH SS

BUNDY ST

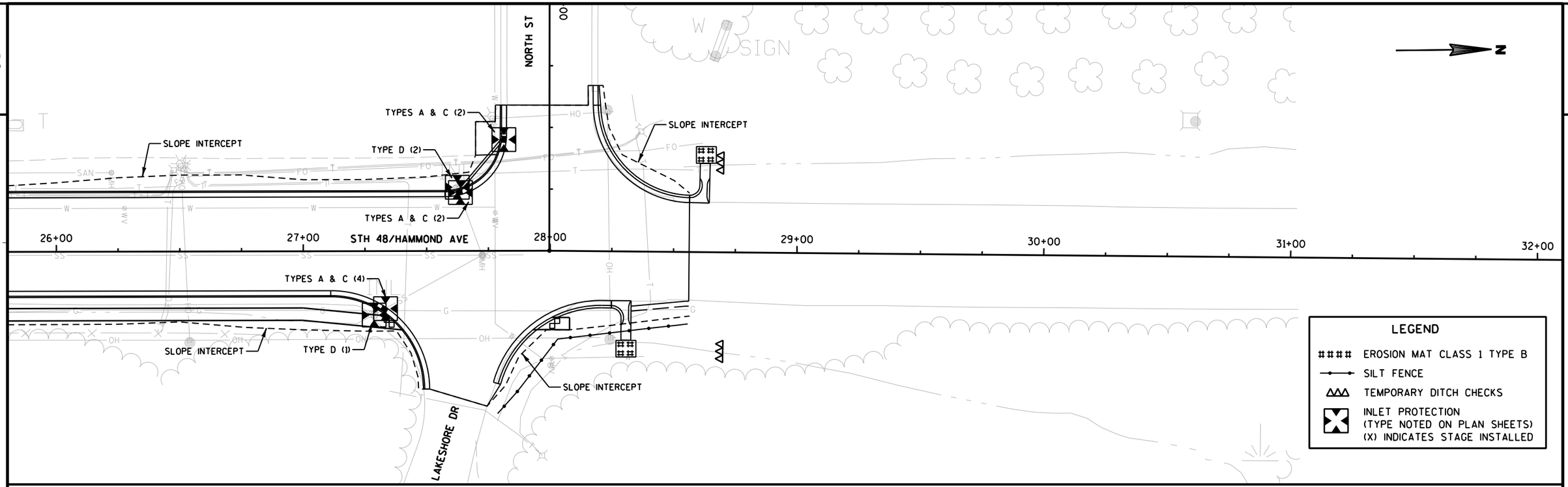
PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	EROSION CONTROL	SHEET 8	E

FILE NAME : T:\410662\dgn\plan\022001_ec.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:40



PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	EROSION CONTROL	SHEET	E

FILE NAME : T:\410662\dgn\plan\022002_ec.dgn PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:40



PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	EROSION CONTROL	SHEET 10	E

FILE NAME : T:\410662\dgn\plan\022003_ec.dgn PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

STH 48/KNAPP ST

STA 4+53.8, 27.7 LT (EX4)
ADJUST INLET
TYPE C COVER REQ'D

STA 4+53.0, -24.5
IN1A, INLETS 4-HS

STA 5+98.6, -24.5
IN2, INLETS 2X3-HS

2+00 3+00 4+00 5+00 STH 48/HAMMOND AVE 6+00 7+00

STA 4+45.7, 13.6 RT (EX2)
RECONSTRUCT MANHOLE

STA 5+98.6, 18.5
CB1, CATCH BASINS 5-HS

STA 4+60.0, 30
IN 1, INLETS 2x2-B

STA 5+56.8, 31.3 RT (EX3A)
TYPE B COVER REQ'D

STA 4+55, 20.2 RT (EX3)
REMOVE INLET
REMOVE STORM SEWER 12-INCH

1150 1145 1140 1135 1130 1125 1120

IN1A
FL EL 1145.56
INV OUT 1141.70 (E)

IN1
FL EL 1145.40
INV OUT 1141.66 (SW)
23' - 12" SSPRC @ 3.74%

EX2
RIM 1145.29
INV IN 1140.49 (N)
INV IN 1140.80 (NE)
INV IN 1140.49 (W)

IN2
FL EL 1145.15
INV OUT 1141.65 (E)
40' - 12" SSPRC @ 2.63%

CB1
FL EL 1145.18
INV IN 1140.60 (N)
INV IN 1140.90 (W)
INV OUT 1140.60 (S)
SUMP 2.00'

PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	STORM SEWER	SHEET 11	E

2

N

CANOPY

CANOPY

SIGN

SIGN

STA 7+89.7, 32.8 LT (EX7)
RECONSTRUCT MANHOLE

EX7

STA 7+89.9, -24.5
IN3, INLETS 2X3-HS

STA 10+84.9, -39.8
CB4, CATCH BASINS 4-HS

STA 10+85.1, -24.5
IN5, INLETS 2X3-HS

STA 12+51.8, 59.9 LT (EX14)
RECONSTRUCT MANHOLE

EX14

STA 12+32.0, -24.5
IN6, INLETS 2X3-HS

7+00 8+00 9+00 10+00 11+00 STH 48/HAMMOND AVE 12+00 13+00

STA 7+49.8, 18.5
CB2, CATCH BASINS 4-HS

EX5 EX6

STA 7+68, 23.0 RT (EX5)
sTAGE 1: ADJUST INLET
TEMP TYPE C COVER REO'D.
STAGE 4: REMOVE INLET (EX5)
REMOVE STORM SEWER 12-INCH

STA 7+86, 16.7 RT (EX6)
RECONSTRUCT MANHOLE STAGE 4

STA 8+48.3, 18.5
CB3, CATCH BASINS 2X3-HS

EX8

STA 8+40, 19.8 RT (EX8)
STAGE 1: ADJUST INLET
TEMP TYPE C COVER REO'D.
STAGE 4: REMOVE INLET (EX8)
REMOVE STORM SEWER 12-INCH

STA 9+50, 16.5 RT (EX9)
RECONSTRUCT MANHOLE
TYPE HS COVER REO'D.

EX9 EX10

STA 9+58.8, 19.5 RT (EX10)
STAGE 1: ADJUST INLET
TEMP TYPE C COVER REO'D.
STAGE 4: REMOVE INLET (EX10)
REMOVE STORM SEWER 12-INCH

STA 11+75.0, 18.5
IN4, INLETS 2X3-HS

BUNDY ST

1150 1145 1140 1135

CB2
FL EL 1145.68
INV IN 1140.72 (N)
INV OUT 1140.72 (S)
SUMP 2.00'

CB3
FL EL 1146.00
INV IN 1141.20 (N)
INV OUT 1141.20 (S)
SUMP 2.00'

EX7
RIM 1143.27
INV IN 1140.91 (E)

IN3
FL EL 1145.68
INV OUT 1141.18 (W)

9' - 12" SSPRC @ 3.00%

IN5
FL EL 1146.30
INV IN 1141.12 (E)
INV OUT 1141.12 (W)

18' - 12" SSPRC @ 3.00%

CB4
FL EL 1146.40
INV IN 1140.58 (E)
INV OUT 1138.20 (N&S)
SUMP 2.00'

IN6
FL EL 1146.50
INV OUT 1142.00 (NW)

41' - 12" SSPRC @ 2.05%

EX14
RIM 1145.06
INV IN 1141.16 (SE)

EX9
RIM 1145.70
INV IN 1142.06 (NE)
INV OUT 1142.00 (S)

225' - 12" SSPRC @ 0.44%

IN4
FL EL 1146.55
INV OUT 1143.00 (S)

PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	STORM SEWER	SHEET 12	E

2

HAUGEN AVE/CTH SS

SHORT ST

JEAN ST

STH 48/HAMMOND AVE

STA 14+43. 25.4 LT (EX30)
REMOVE INLET

STA 14+01.4. -26.6 (EX15)
RECONSTRUCT INLET
INLET COVER TYPE J

STA 13+58.1. -27.4
IN9, INLETS 2X3-HS

STA 14+41.0. -24.5
IN7, INLETS 2X3-HS

EX30

EX16,
STA 14+25.4, 1.4

STA 14+52.4, 21.2
IN8, INLETS 2X3-HS

EX17

STA 14+57, 23.5 RT (EX17)
STAGE 1: ADJUST INLET
TEMP TYPE C COVER REQ'D.
STAGE 4: REMOVE INLET (EX17)
REMOVE STORM SEWER 12-INCH

STA 17+17.9, 25.1 LT (EX18)
REMOVE INLET

EX18,
STA 17+17.9, -25.1

STA 17+12.2, -30.1
IN10, INLETS 2X3-HS

STA 17+69.4, -25.4 (EX21)
ADJUST INLET
INLET COVER TYPE HS

EX19

STA 17+25.7, 18.5
IN11, INLETS 2X3-HS

STA 17+48.4, 18.5
IN11A, INLETS 4-HS

EX20

STA 17+48.4, 25 RT (EX20)
STAGE 1: ADJUST INLET
TEMP TYPE C COVER REQ'D.
STAGE 4: REMOVE INLET (EX20)
REMOVE STORM SEWER 12-INCH

13+00 14+00 15+00 16+00 17+00 18+00 19+00

IN7
FL EL 1147.00
INV OUT 1142.50 (SE)

EX16
RIM 1147.34
INV IN 1142.00 (NE)
INV IN 1142.00 (NW)

IN8
FL EL 1147.40
INV OUT 1142.45 (SW)

EX16
RIM 1147.34
INV IN 1142.00 (NE)
INV IN 1142.00 (NW)

IN9
FL EL 1146.71
INV OUT 1143.21 (N)

44' - 12" SSPRC @ 1.14%

EX15
RIM 1145.51
INV IN 1142.71 (S)

IN10
FL EL 1147.00
INV OUT 1143.23 (NE)

EX15
RIM 1145.51
INV IN 1143.11 (S)

9' - 12" SSPRC
@ 1.33%

IN11
FL EL 1147.06
INV OUT 1142.56 (N)

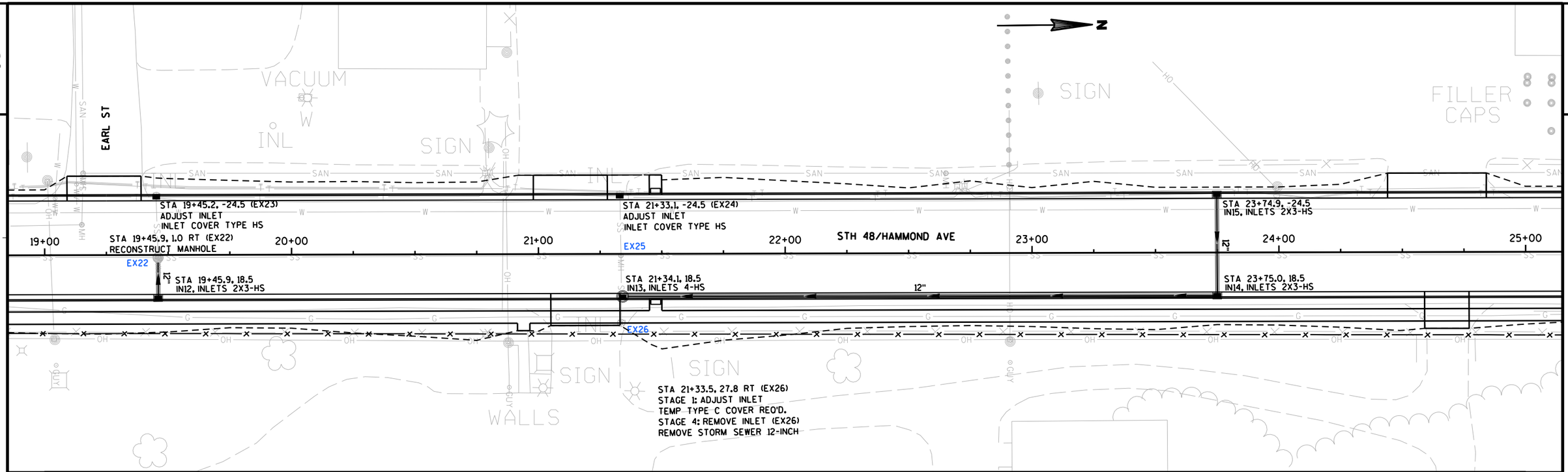
IN11A
FL EL 1147.09
INV IN 1142.12 (S)
INV OUT 1141.29

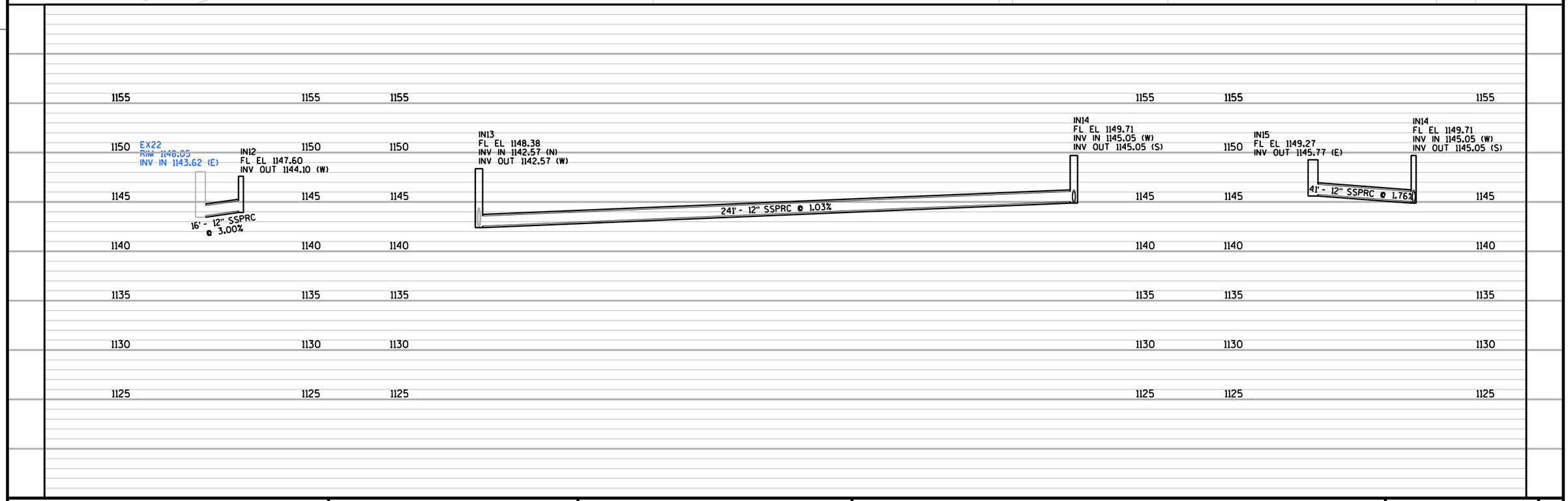
23' - 12" SSPRC
@ 1.91%

1155 1150 1145 1140 1135 1130 1125

PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	STORM SEWER	SHEET	E

FILE NAME : T:\410662\dgn\plan\022503_ss.dgn PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:40
WISDOT/CADDS SHEET 41





PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	STORM SEWER	SHEET 14	E

2

N

NORTH ST

SIGN

SIGN

STA 27+79.9, -45.3
IN18, INLETS 2X3-HS

STA 27+62.9, -25.2
IN17, INLETS 2X3-HS

STA 27+62.4, 25.7 LT (EX27)
REMOVE INLET

STA 27+32.8, 23.5 RT
IN16, INLETS 2X3-HS

STA 27+28.6, 25.7 RT (EX29)
STAGE 1: ADJUST INLET
TEMP TYPE C COVER REQ'D.
STAGE 4: REMOVE INLET (EX29)
REMOVE STORM SEWER 12-INCH

EX27

EX28

EX29

BM 1149.67

STH 48/HAMMOND AVE

00 | 26+00 | 27+00 | 28+00 | 29+00 | 30+00 | 31+00

1155 | 1150 | 1145 | 1140 | 1135 | 1130 | 1125

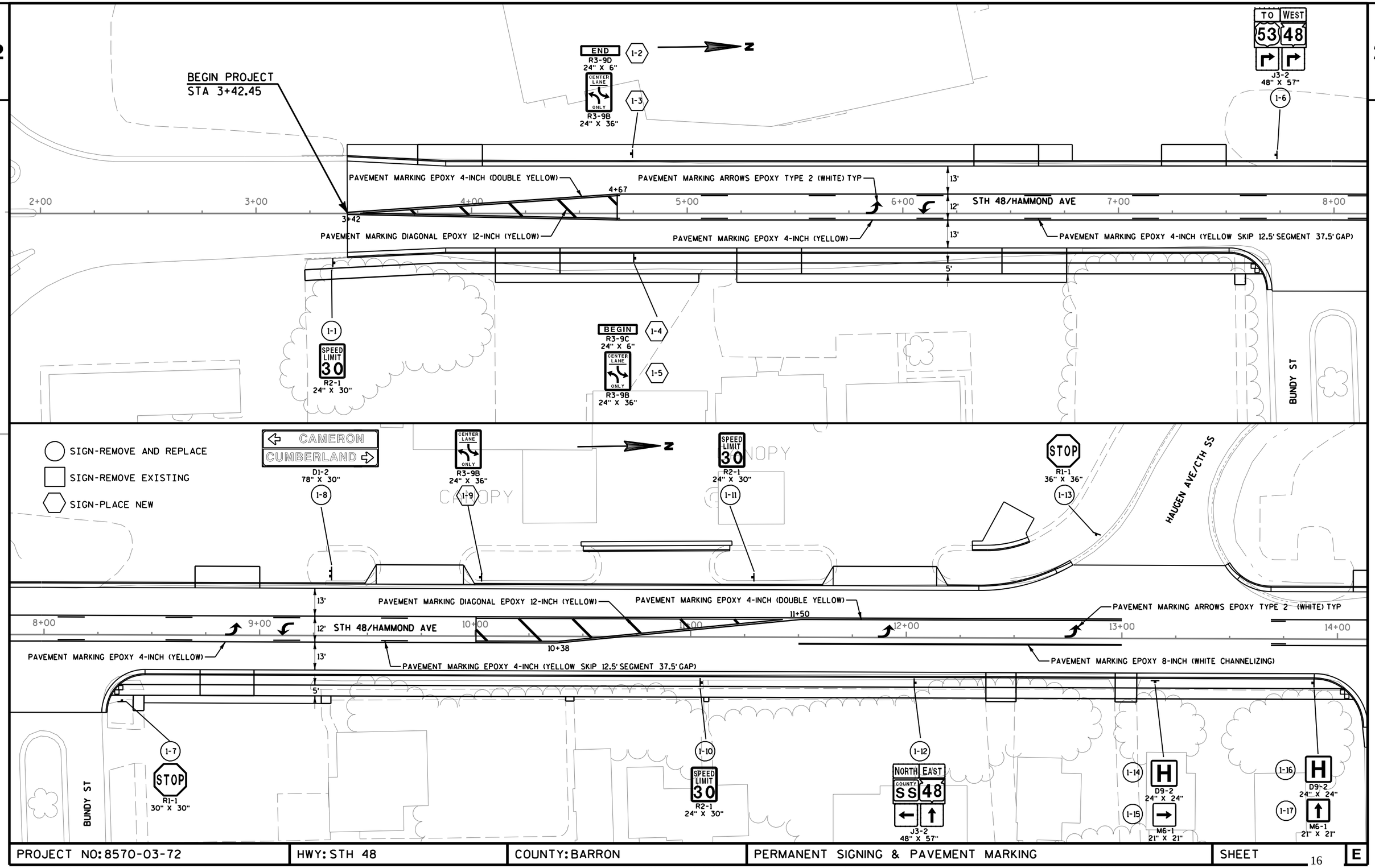
IN16
FL EL 1149.19
INV OUT 1144.37 (N)

IN18
FL EL 1148.27
INV OUT 1144.56 (SE)

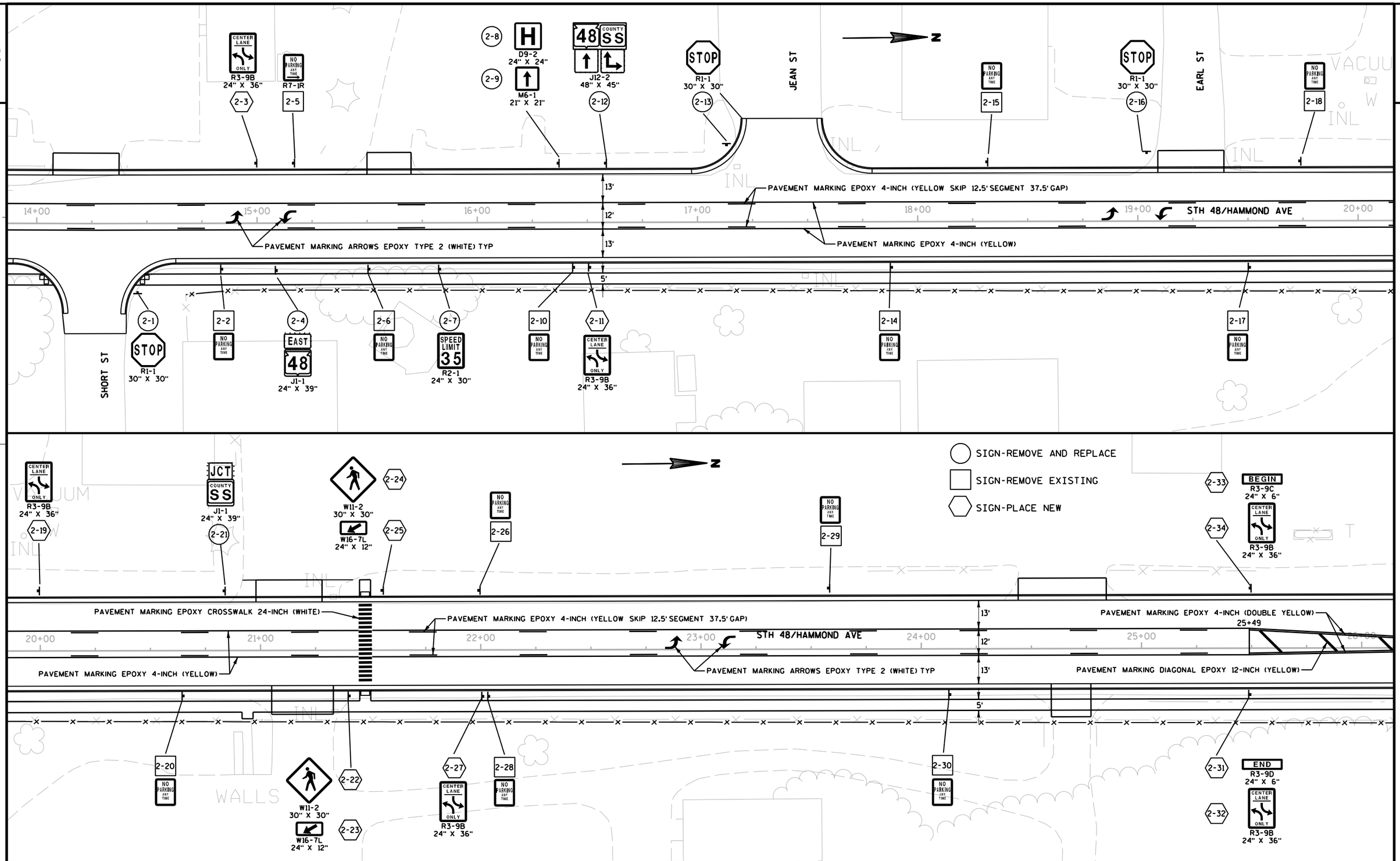
IN17
FL EL 1148.70
INV IN 1144.00 (NW)

28' - 12" SSPRC
@ 2.00%

PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	STORM SEWER	SHEET 15	E

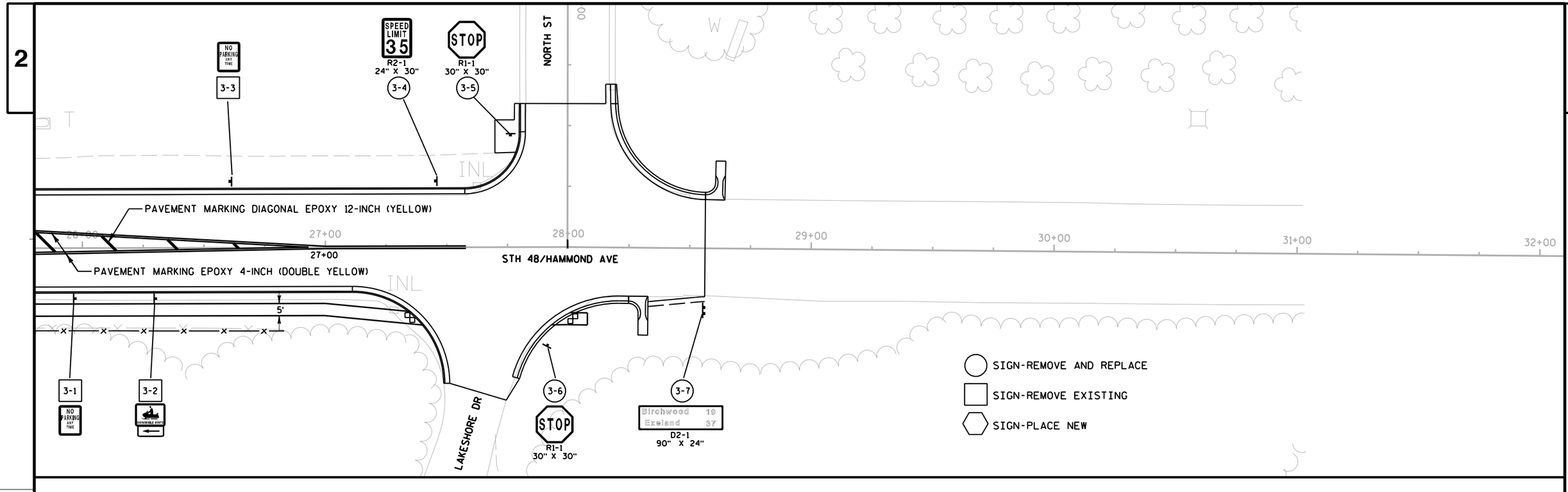


PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	PERMANENT SIGNING & PAVEMENT MARKING	SHEET 16	E



PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	PERMANENT SIGNING & PAVEMENT MARKING	SHEET	E

FILE NAME : T:\410662\dgn\plan\023202_ps.dgn PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:40



PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	PERMANENT SIGNING & PAVEMENT MARKING	SHEET 18	E

2

2

N

ROAD WORK AHEAD W20-1

NUNN AVE

ROAD WORK 500 FT W20-1

CORNELL AVE

ROAD WORK 250 FT W20-1

STH 48/W KNAPP ST

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

BIKE PATH

CANOPY

CANOPY

STH 48/CTH SS

ROAD WORK 500 FT W20-1

CTH SS/HAUGEN AVE

ROAD WORK AHEAD W20-1

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

JEAN ST

ROAD WORK AHEAD W20-1

EARL ST

VACUUM

VACUUM

CANOPY

ROAD WORK AHEAD W20-1

NORTH ST

STH 48

BUNDY ST

ROAD WORK 250 FT W20-1

ROAD WORK AHEAD W20-1

SHORT ST

ROAD WORK AHEAD W20-1

LAKESHORE DR

ROAD WORK AHEAD W20-1

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

CTH SS/W KNAPP ST

ROAD WORK 500 FT W20-1

ROAD WORK AHEAD W20-1

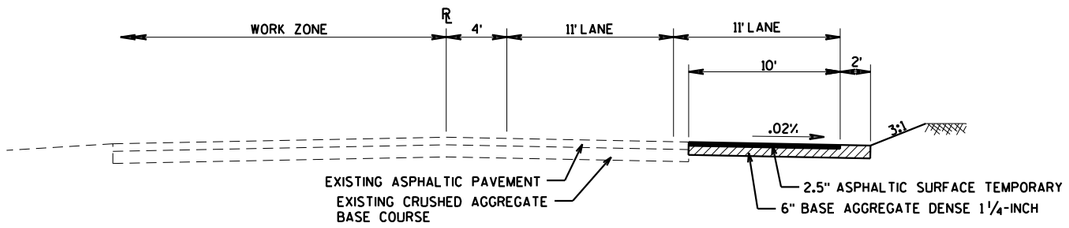
SEE SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC" FOR ADDITIONAL INFORMATION.

PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	TRAFFIC CONTROL - ADVANCED WARNING	SHEET	E

FILE NAME : T:\410662\dgn\plan\023301_aw.dgn PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:200

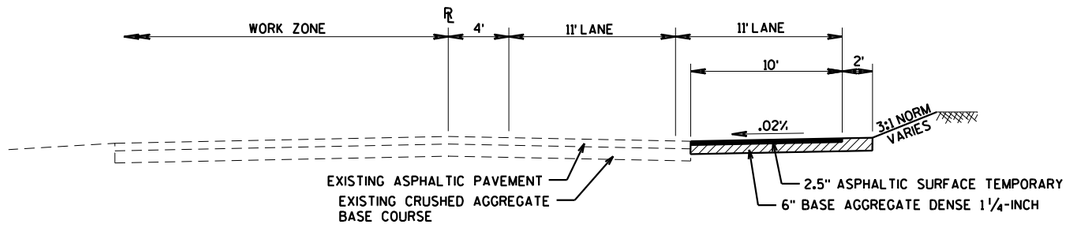
WISDOT/CADDS SHEET 42

2



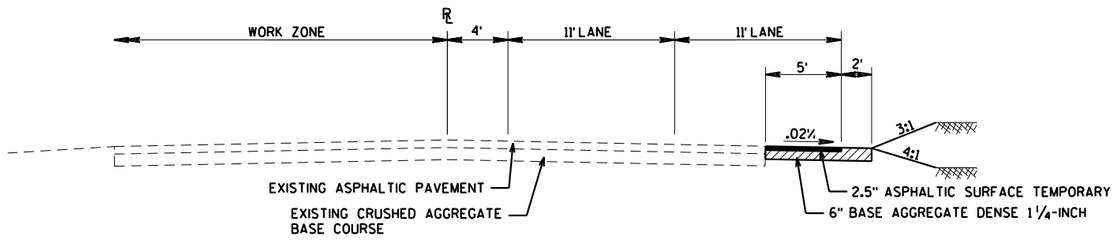
TEMPORARY WIDENING TYPICAL SECTION

STA 6+75.00 - STA 7+73.00, RT



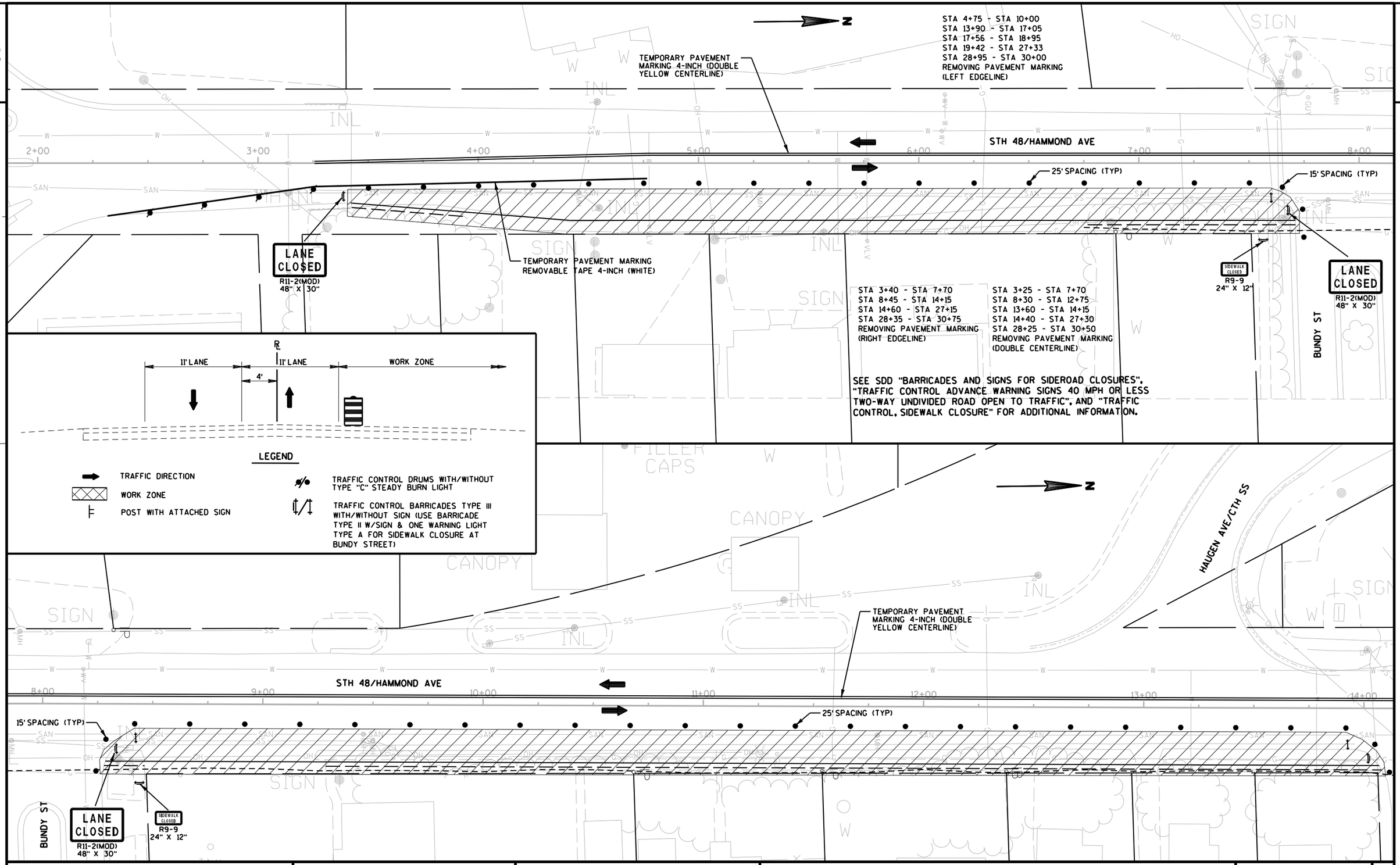
TEMPORARY WIDENING TYPICAL SECTION

STA 8+25.00 - STA 14+10.00, RT



TEMPORARY WIDENING TYPICAL SECTION

STA 14+45.00 - STA 27+30.00, RT



PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	TRAFFIC CONTROL - STAGE 1	SHEET 21	E

2

TEMPORARY PAVEMENT MARKING 4-INCH (DOUBLE YELLOW CENTERLINE)

JEAN ST

EARL ST

N

STH 48/HAMMOND AVE

14+00 15+00 16+00 17+00 18+00 19+00 20+00

15' SPACING (TYP)

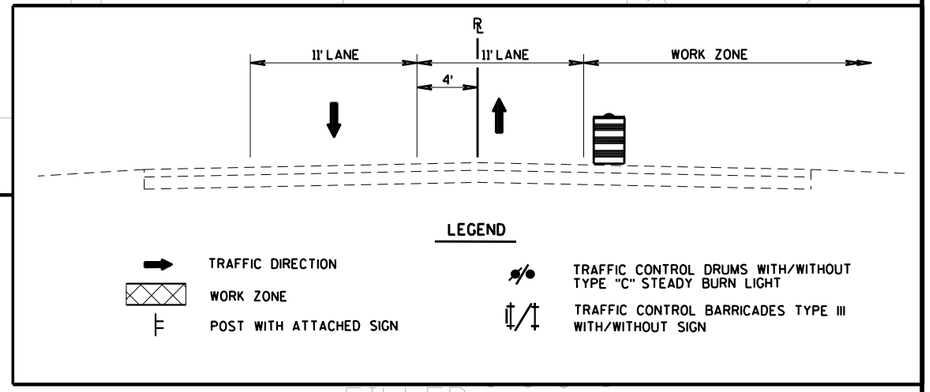
15' SPACING (TYP)

25' SPACING (TYP)

LANE CLOSED
R11-2(MOD)
48" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

SHORT ST



TEMPORARY PAVEMENT MARKING 4-INCH (DOUBLE YELLOW CENTERLINE)

N

STH 48/HAMMOND AVE

20+00 21+00 22+00 23+00 24+00 25+00 26+00

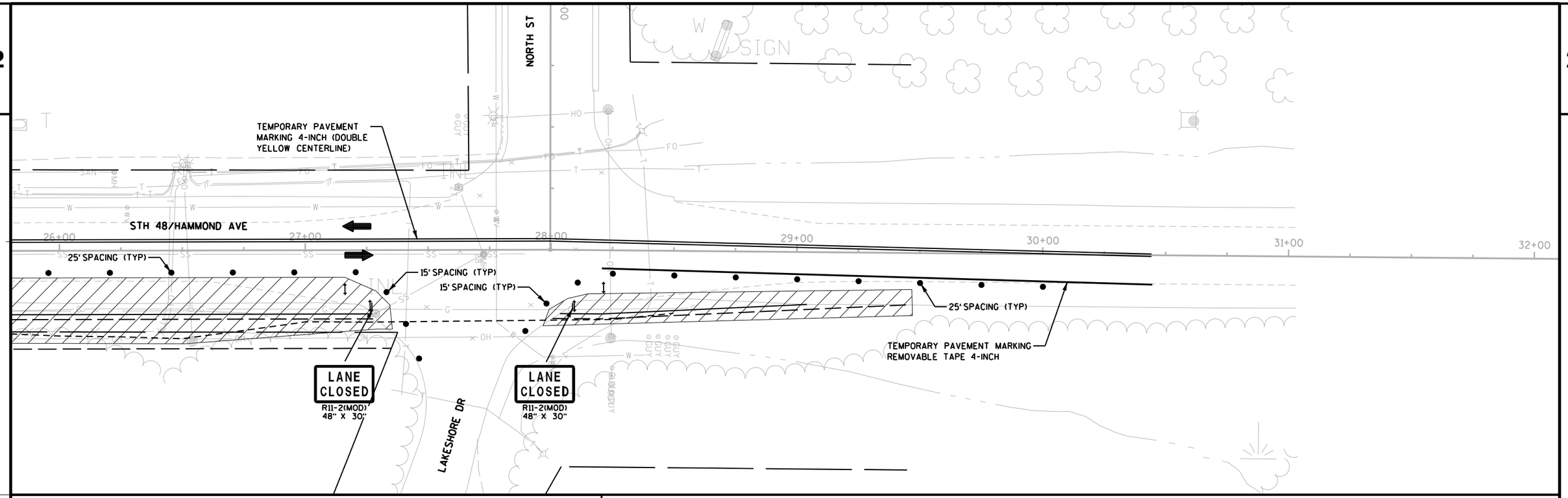
25' SPACING (TYP)

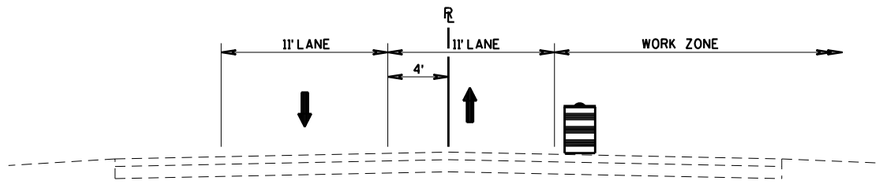
2

PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	TRAFFIC CONTROL - STAGE 1	SHEET	E

FILE NAME : T:\410662\dgn\plan\026002_s1.dgn PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:40

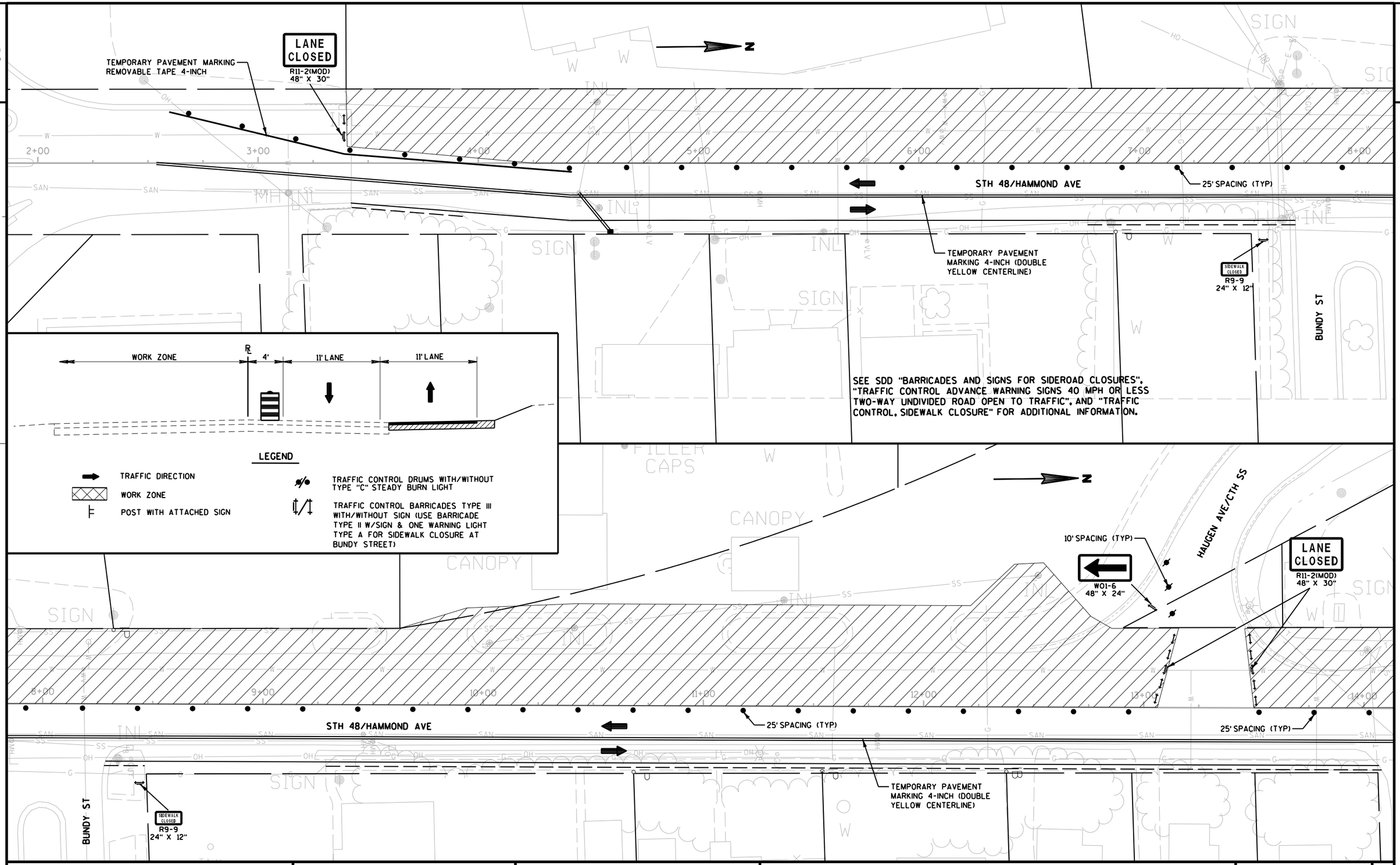
WISDOT/CADDS SHEET 42





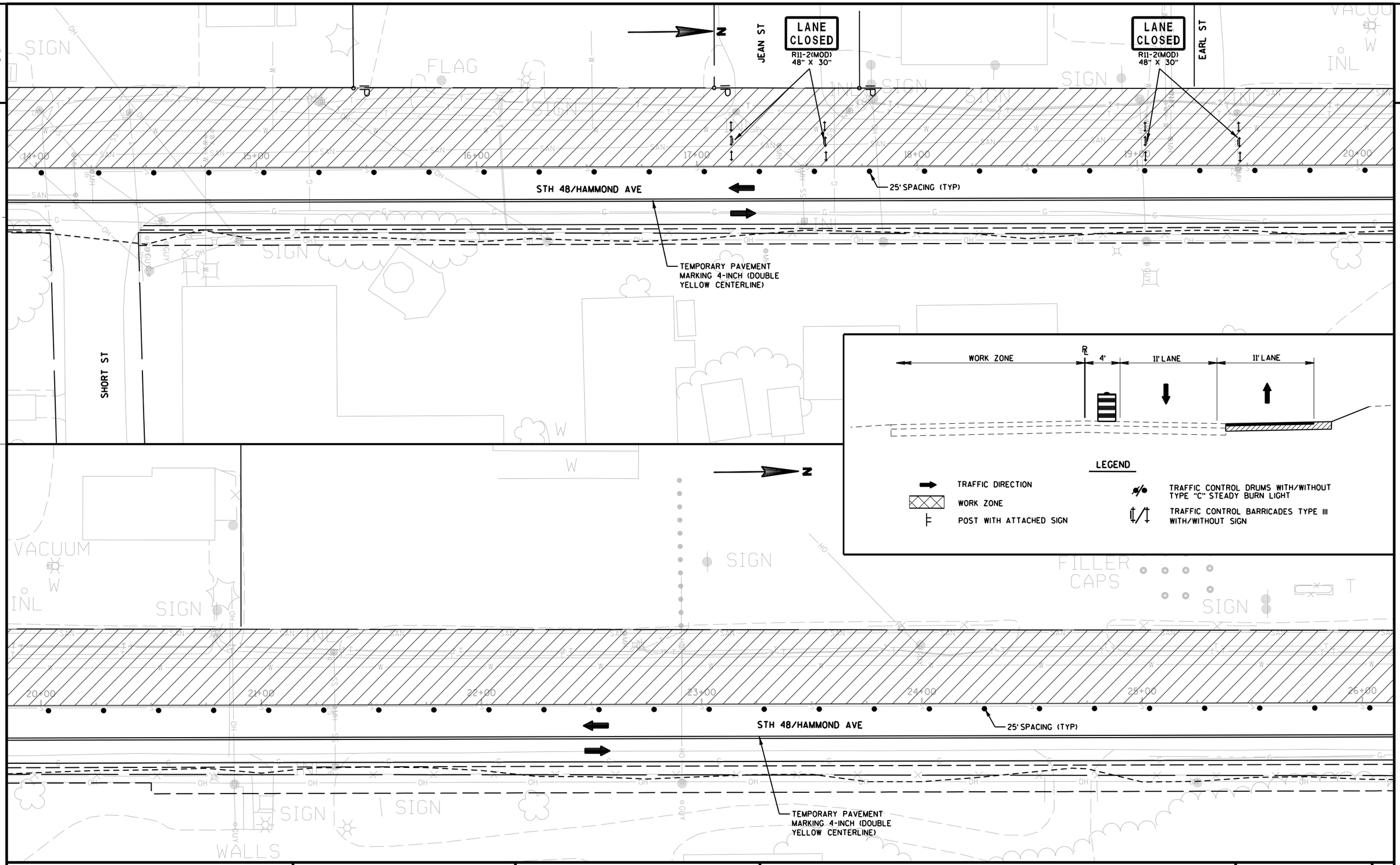
LEGEND

- TRAFFIC DIRECTION
- WORK ZONE
- POST WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN

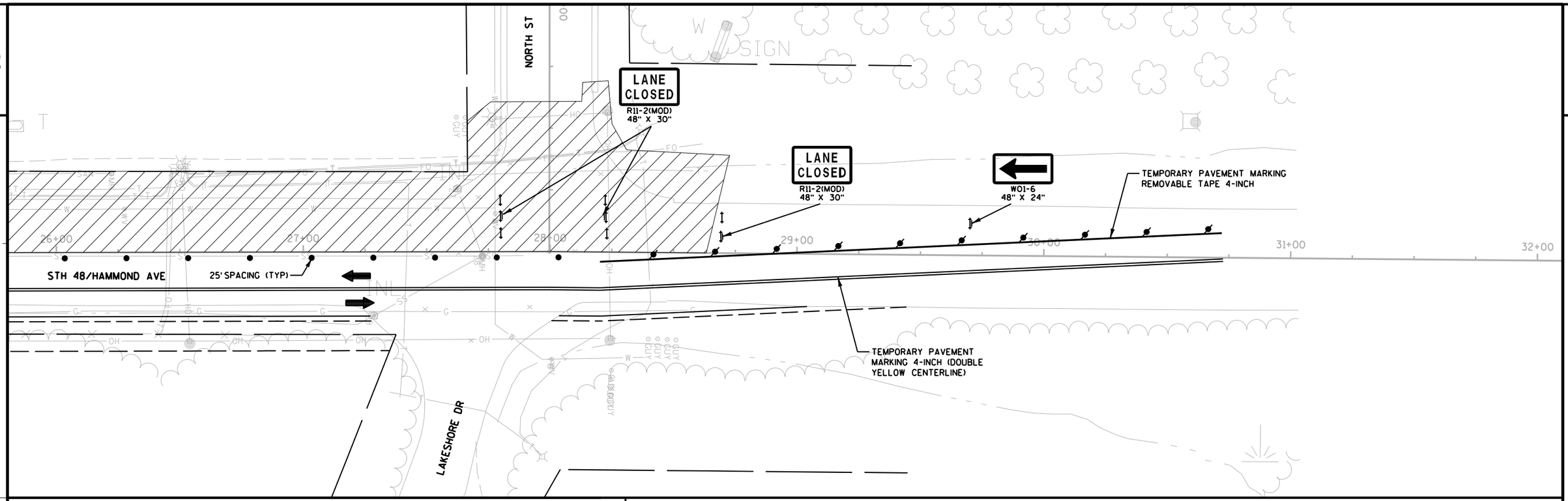


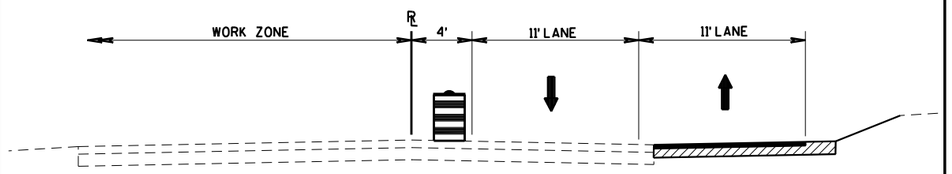
PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	TRAFFIC CONTROL - STAGE 2	SHEET	E

FILE NAME : T:\410662\dgn\plan\026101_s2.dgn PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:40



PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	TRAFFIC CONTROL - STAGE 2	SHEET 25	E



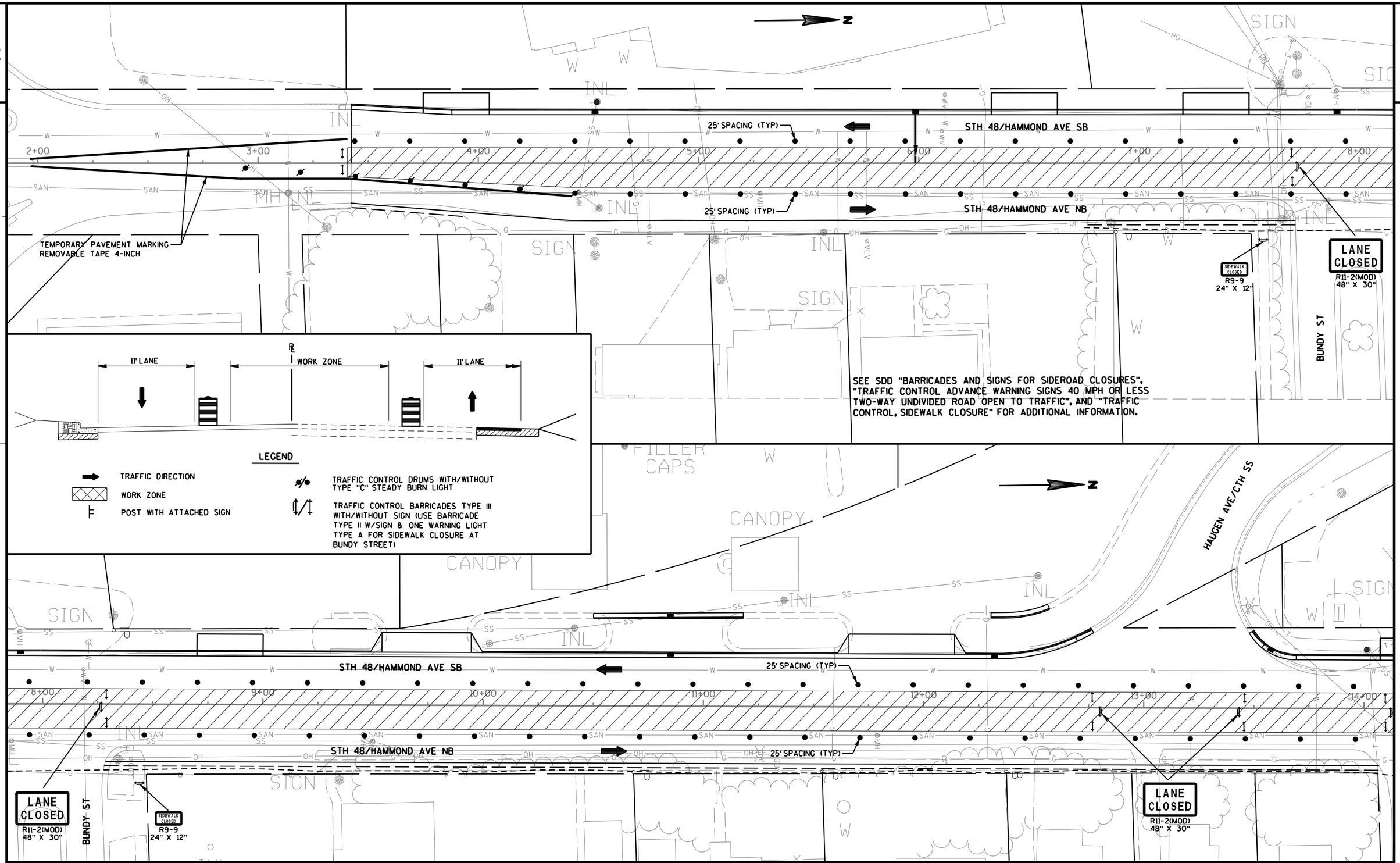


LEGEND

- TRAFFIC DIRECTION
- WORK ZONE
- POST WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN

PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	TRAFFIC CONTROL - STAGE 2	SHEET 26	E

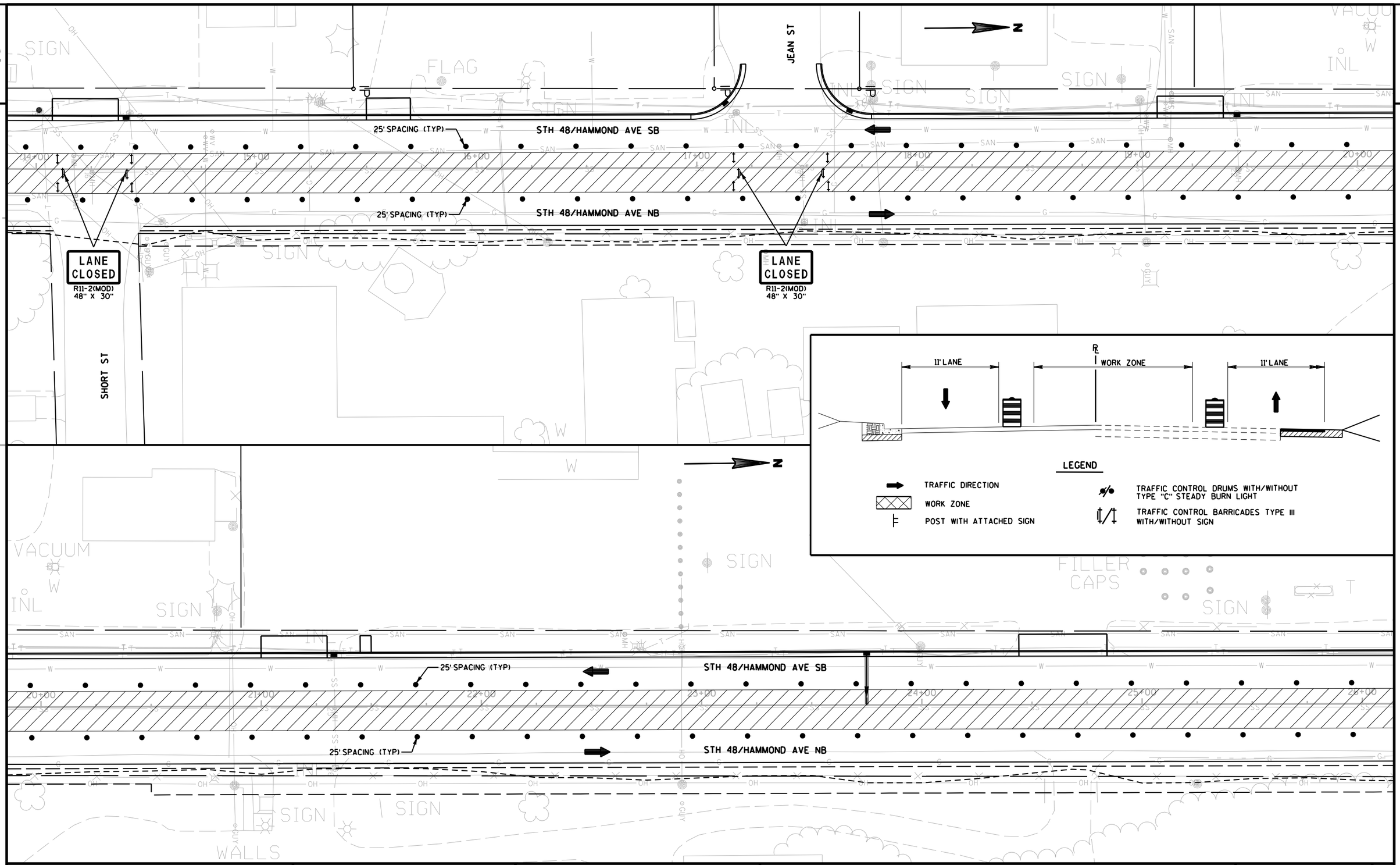
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PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	TRAFFIC CONTROL - STAGE 3	SHEET 27	E

FILE NAME : T:\410662\dgn\plan\026201_s3.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

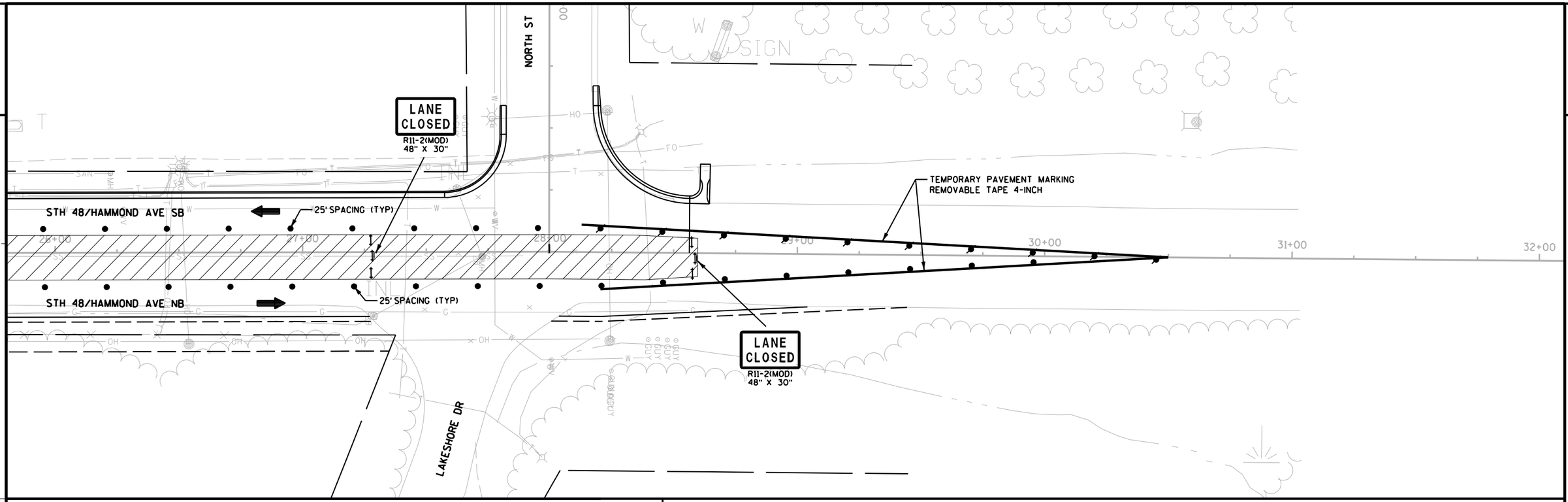


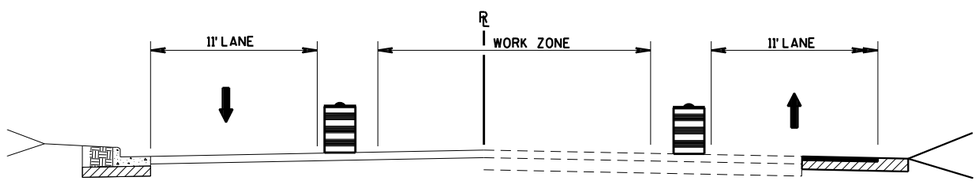
LEGEND

- TRAFFIC DIRECTION
- WORK ZONE
- POST WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN

PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	TRAFFIC CONTROL - STAGE 3	SHEET 28	E

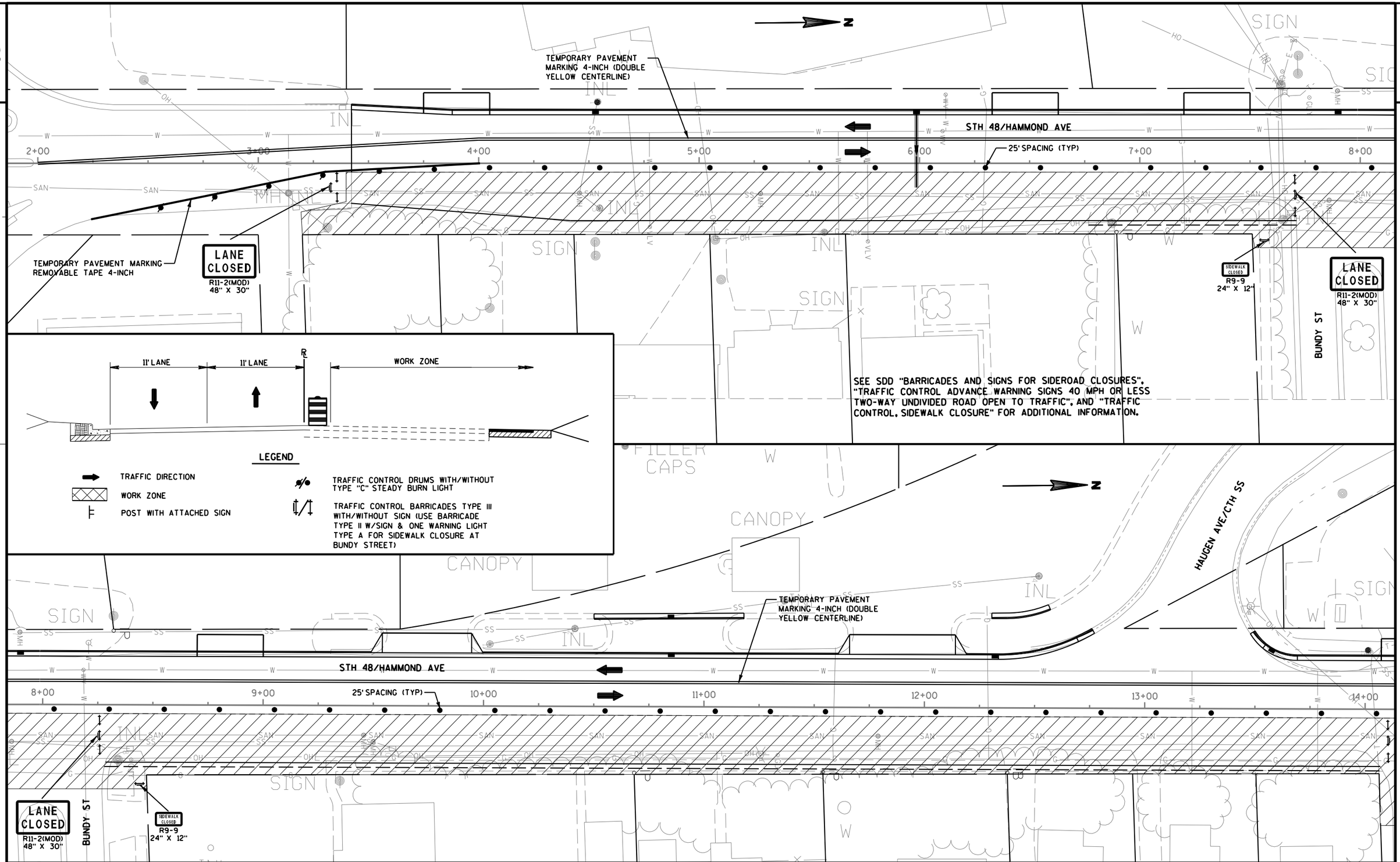
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LEGEND

- TRAFFIC DIRECTION
- WORK ZONE
- POST WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN



PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	TRAFFIC CONTROL - STAGE 4	SHEET 30	E

FILE NAME : T:\410662\dgn\plan\026301_s4.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

TEMPORARY PAVEMENT MARKING 4-INCH (DOUBLE YELLOW CENTERLINE)

JEAN ST

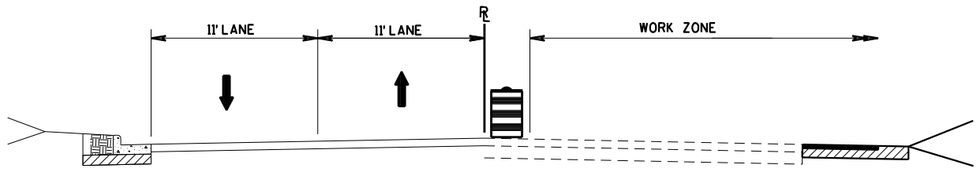
EARL ST

STH 48/HAMMOND AVE

14+00 15+00 16+00 17+00 18+00 19+00 20+00

LANE CLOSED
R11-2(MOD)
48" X 30"

SHORT ST



LEGEND

- TRAFFIC DIRECTION
- WORK ZONE
- POST WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN

TEMPORARY PAVEMENT MARKING 4-INCH (DOUBLE YELLOW CENTERLINE)

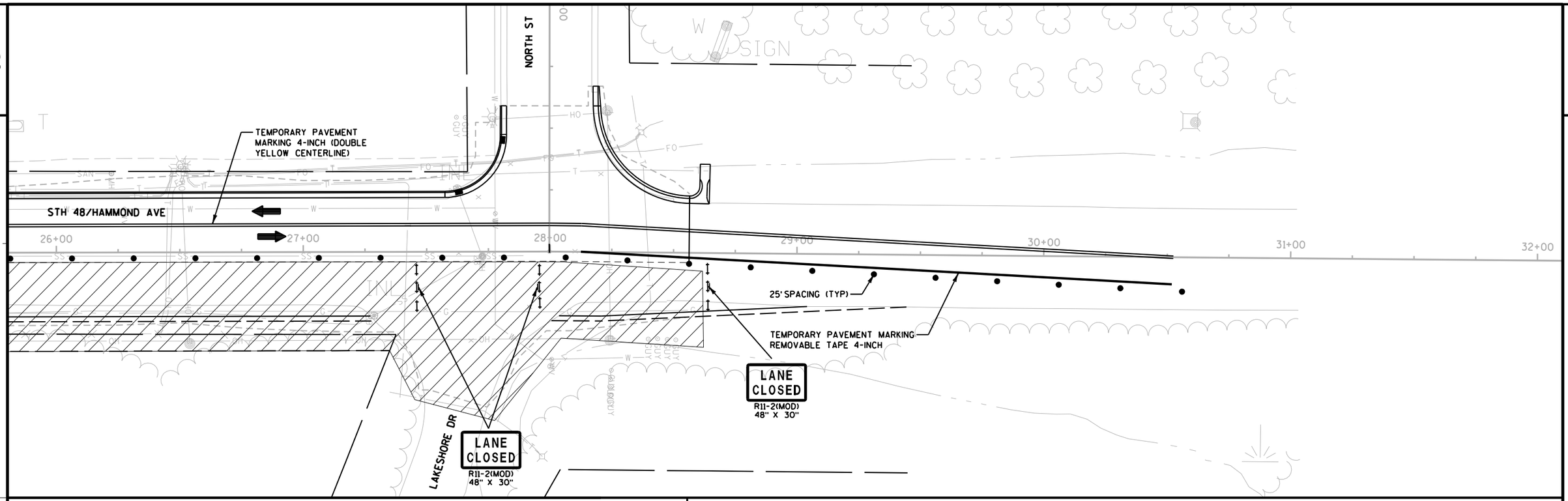
STH 48/HAMMOND AVE

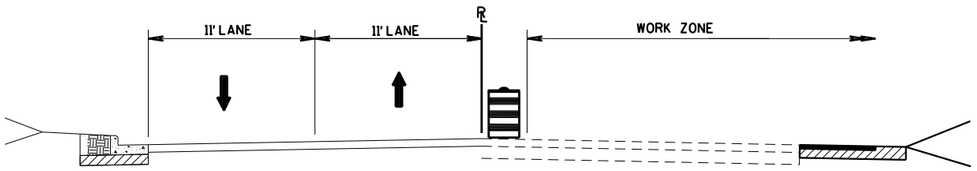
20+00 21+00 22+00 23+00 24+00 25+00 26+00

PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	TRAFFIC CONTROL - STAGE 4	SHEET	E

FILE NAME : T:\410662\dgn\plan\026302_s4.dgn PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:40

2





LEGEND

- TRAFFIC DIRECTION
- WORK ZONE
- POST WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN

PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	TRAFFIC CONTROL - STAGE 4	SHEET 32	E

FILE NAME : T:\410662\dgn\plan\026303_s4.dgn PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:40

DATE 16SEP14 — 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	8570-03-72 QUANTITY
0010	201.0105	CLEARING	STA	2.000	2.000
0020	201.0205	GRUBBING	STA	2.000	2.000
0050	204.0100	REMOVING PAVEMENT	SY	37.000	37.000
0060	204.0110	REMOVING ASPHALTIC SURFACE	SY	103.000	103.000
0070	204.0115	REMOVING ASPHALTIC SURFACE BUTT JOINTS	SY	583.000	583.000
0080	204.0120	REMOVING ASPHALTIC SURFACE MILLING	SY	12,900.000	12,900.000
0090	204.0150	REMOVING CURB & GUTTER	LF	958.000	958.000
0100	204.0155	REMOVING CONCRETE SIDEWALK	SY	333.000	333.000
0110	204.0170	REMOVING FENCE	LF	1,164.000	1,164.000
0120	204.0220	REMOVING INLETS	EACH	11.000	11.000
0130	204.0245	REMOVING STORM SEWER (SIZE) 01.12-INCH	LF	117.000	117.000
0140	204.0245	REMOVING STORM SEWER (SIZE) 02.18-INCH	LF	18.000	18.000
0150	205.0100	EXCAVATION COMMON	CY	1,584.000	1,584.000
0190	211.0100	PREPARE FOUNDATION FOR ASPHALTIC PAVING (PROJECT) 02. 8570-03-72	LS	1.000	1.000
0220	213.0100	FINISHING ROADWAY (PROJECT) 02. 8570-03-72	EACH	1.000	1.000
0240	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	3,280.000	3,280.000
0260	416.0160	CONCRETE DRIVEWAY 6-INCH	SY	93.000	93.000
0270	440.4410.S	INCENTIVE IRI RIDE	DOL	1,904.000	1,904.000
0280	455.0605	TACK COAT	GAL	289.200	289.200
0290	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	2,160.000	2,160.000
0300	465.0105	ASPHALTIC SURFACE	TON	125.000	125.000
0320	465.0120	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	TON	90.000	90.000
0330	465.0125	ASPHALTIC SURFACE TEMPORARY	TON	200.000	200.000
0340	465.0315	ASPHALTIC FLUMES	SY	24.000	24.000
0450	601.0411	CONCRETE CURB & GUTTER 30-INCH TYPE D	LF	4,901.000	4,901.000
0470	601.0557	CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D	LF	127.000	127.000
0480	602.0405	CONCRETE SIDEWALK 4-INCH	SF	10,761.000	10,761.000
0490	602.0415	CONCRETE SIDEWALK 6-INCH	SF	925.000	925.000
0500	602.0505	CURB RAMP DETECTABLE WARNING FIELD YELLOW	SF	56.000	56.000
0520	608.0312	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH	LF	758.000	758.000
0530	611.0420	RECONSTRUCTING MANHOLES	EACH	4.000	4.000
0540	611.0430	RECONSTRUCTING INLETS	EACH	3.000	3.000
0550	611.0530	MANHOLE COVERS TYPE J	EACH	2.000	2.000
0560	611.0606	INLET COVERS TYPE B	EACH	2.000	2.000
0570	611.0612	INLET COVERS TYPE C	EACH	11.000	11.000
0590	611.0639	INLET COVERS TYPE H-S	EACH	27.000	27.000
0600	611.1004	CATCH BASINS 4-FT DIAMETER	EACH	2.000	2.000
0610	611.1005	CATCH BASINS 5-FT DIAMETER	EACH	1.000	1.000
0620	611.1230	CATCH BASINS 2X3-FT	EACH	1.000	1.000
0630	611.3004	INLETS 4-FT DIAMETER	EACH	3.000	3.000
0640	611.3220	INLETS 2X2-FT	EACH	1.000	1.000
0650	611.3230	INLETS 2X3-FT	EACH	16.000	16.000
0660	611.8110	ADJUSTING MANHOLE COVERS	EACH	11.000	11.000
0670	611.8115	ADJUSTING INLET COVERS	EACH	10.000	10.000
0770	616.0205	FENCE CHAIN LINK 5-FT	LF	1,164.000	1,164.000
0780	616.0329	GATES CHAIN LINK (WIDTH) 01. 5-FOOT	EACH	1.000	1.000
0790	616.0329	GATES CHAIN LINK (WIDTH) 02. 18-FOOT	EACH	1.000	1.000
0800	616.0329	GATES CHAIN LINK (WIDTH) 03. 28-FOOT	EACH	1.000	1.000
0820	619.1000	MOBILIZATION	EACH	0.400	0.400

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DATE 16SEP14 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	8570-03-72 QUANTITY
0840	625.0500	SALVAGED TOPSOIL	SY	3,010.000	3,010.000
0870	628.1504	SILT FENCE	LF	115.000	115.000
0880	628.1520	SILT FENCE MAINTENANCE	LF	230.000	230.000
0890	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	2.000	2.000
0900	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	2.000	2.000
0910	628.2004	EROSION MAT CLASS I TYPE B	SY	10.000	10.000
0920	628.7005	INLET PROTECTION TYPE A	EACH	36.000	36.000
0930	628.7015	INLET PROTECTION TYPE C	EACH	34.000	34.000
0940	628.7020	INLET PROTECTION TYPE D	EACH	20.000	20.000
0950	628.7504	TEMPORARY DITCH CHECKS	LF	30.000	30.000
0970	629.0210	FERTILIZER TYPE B	CWT	2.000	2.000
1000	631.1000	SOD LAWN	SY	3,010.000	3,010.000
1020	634.0614	POSTS WOOD 4X6-INCH X 14-FT	EACH	35.000	35.000
1040	637.2210	SIGNS TYPE II REFLECTIVE H	SF	255.970	255.970
1070	638.2602	REMOVING SIGNS TYPE II	EACH	41.000	41.000
1080	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	39.000	39.000
1110	643.0100	TRAFFIC CONTROL (PROJECT) 02. 8570-03-72	EACH	1.000	1.000
1120	643.0300	TRAFFIC CONTROL DRUMS	DAY	13,213.000	13,213.000
1130	643.0410	TRAFFIC CONTROL BARRICADES TYPE II	DAY	206.000	206.000
1140	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	2,939.000	2,939.000
1150	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	3,908.000	3,908.000
1160	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	1,081.000	1,081.000
1170	643.0900	TRAFFIC CONTROL SIGNS	DAY	2,817.000	2,817.000
1200	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	6,405.000	6,405.000
1210	646.0126	PAVEMENT MARKING EPOXY 8-INCH	LF	150.000	150.000
1240	647.0166	PAVEMENT MARKING ARROWS EPOXY TYPE 2	EACH	12.000	12.000
1280	647.0726	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH	LF	172.000	172.000
1290	647.0796	PAVEMENT MARKING CROSSWALK EPOXY 24-INCH	LF	38.000	38.000
1310	649.0100	TEMPORARY PAVEMENT MARKING 4-INCH	LF	16,784.000	16,784.000
1330	649.0400	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	LF	2,177.000	2,177.000
1340	650.4000	CONSTRUCTION STAKING STORM SEWER	EACH	24.000	24.000
1350	650.4500	CONSTRUCTION STAKING SUBGRADE	LF	4,689.000	4,689.000
1360	650.5000	CONSTRUCTION STAKING BASE	LF	4,689.000	4,689.000
1370	650.5500	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER	LF	5,028.000	5,028.000
1420	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 02. 8570-03-72	LS	1.000	1.000
1430	650.9920	CONSTRUCTION STAKING SLOPE STAKES	LF	4,689.000	4,689.000
1440	690.0150	SAWING ASPHALT	LF	1,506.000	1,506.000
1450	690.0250	SAWING CONCRETE	LF	67.000	67.000
1500	SPV.0090	SPECIAL 02. CONCRETE CURB AND GUTTER CURE AND SEAL TREATMENT	LF	5,028.000	5,028.000
1540	SPV.0165	SPECIAL 01. CONCRETE SIDEWALK CURE AND SEAL TREATMENT	SF	11,686.000	11,686.000
1550	SPV.0170	SPECIAL 01. REHEATING HMA PAVEMENT LONGITUDINAL JOINTS SPECIAL	STA	25.000	25.000
1580	SPV.0195	SPECIAL 02. HMA PAVEMENT TYPE E-3 SPECIAL	TON	3,250.000	3,250.000

3

CLEARING AND GRUBBING

STATION TO STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
14+00 - 16+00	RT	2	2
TOTALS		**2**	**2**

REMOVING PAVEMENT

STATION TO STATION	LOCATION	204.0100 SY
8+45 - 9+24	RT	37
TOTAL		**37**

REMOVING ASPHALTIC SURFACE

STATION TO STATION	LOCATION	204.0110 SY
4+11 - 5+05	RT	10
5+23 - 6+76	RT	13
8+46 - 9+29	RT	9
10+49 - 11+19	LT	16
12+30 - 12+59	LT	33
17+10 - 17+20	LT	4
27+70 - 27+79	LT	16
94+33 - 94+41	LT, NORTH ST	2
TOTAL		**103**

REMOVING ASPHALTIC SURFACE BUTT JOINT

STATION TO STATION	LOCATION	204.0115 SY
3+42.45 - 3+62	STH 48	102
	BUNDY ST	123
	HAUGEN AVE/CTH SS	94
	SHORT ST	62
	JEAN ST	71
	LAKESHORE DR	54
	NORTH ST	77
TOTAL		**583**

REMOVING ASPHALTIC SURFACE MILLING

STATION TO STATION	LOCATION	204.0120 SY
3+42.45 - 28+56.32	STH 48	12900
TOTAL		**12900**

REMOVING CURB & GUTTER

STATION TO STATION	LOCATION	204.0150 LF
SE QUAD BUNDY ST/STH 48 INT		22
8+25 - 13+96	RT	578
9+30 - 9+56	LT	29
9+92 - 10+58	LT	84
11+08 - 11+67	LT	77
12+12 - 12+76	LT	68
12+30 - 12+56	LT	27
13+49 - 13+89	LT	46
SW QUAD NORTH ST/STH 48 INT		24
NW QUAD NORTH ST/STH 48 INT		3
TOTAL		**958**

REMOVING CONCRETE SIDEWALK

STATION TO STATION	LOCATION	204.0155 SY
7+26	RT	8
8+30 - 14+06	RT	325
TOTAL		**333**

REMOVING INLETS

STATION	LOCATION	204.0220 EACH
4+55	20.5' RT	1
7+68	23' RT	1
8+39.5	20' RT	1
9+58	19' RT	1
14+42	25' LT	1
14+57	23.5' RT	1
17+18	24.5' LT	1
17+48.5	25' RT	1
21+33.5	28' RT	1
27+28.5	26' RT	1
27+62.5	25.5' LT	1
TOTAL		**11**

REMOVING STORM SEWER

STATION TO STATION	LOCATION	SIZE	204.0245.01 LF	204.0245.02 LF
4+45 - 4+55	RT	12"	11	---
7+68 - 7+85	RT	12"	18	---
7+85 - 8+39.5	RT	12"	53	---
9+50 - 9+58	RT	12"	8	---
14+41	LT	12"	3	---
14+53	RT	12"	6	---
17+48	RT	18"	---	8
21+33.5	RT	18"	---	10
27+28.5 - 27+44.7	RT	12"	18	---
TOTALS			**117**	**18**

PREPARE FOUNDATION FOR ASPHALTIC PAVING (8570-03-72)

PROJECT	211.0100 EACH
8570-03-72	1
TOTAL	**1**

FINISHING ROADWAY

PROJECT	213.0100 EACH
8570-03-72	1
TOTAL	**1**

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

3

EARTHWORK SUMMARY

STATION TO STATION	LOCATION	205.0100 EXCAVATION CUT (2)(11) CY	COMMON (1) EBS (3) CY	SALVAGED/ UNUSABLE PAVEMENT MATERIAL CY	(4) AVAILABLE MATERIAL CY	UNEXPANDED FILL CY	(8) (9) EXPANDED FILL CY	(10) MASS ORDINATE +/- CY	WASTE CY
3+42 - 28+56	STH 48	2736	---	1792	944	723	904	40	40
6+75 - 28+50	TEMP WIDENING	640	---	---	640	---	---	640	640
SUBTOTALS		3376							680
PROJECT ID TOTALS		**1584**							

1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
3) EBS EXCAVATION TO BE BACKFILLED WITH BORROW MATERIAL.
4) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL
8) EXPANDED FILL FACTOR = 1.25
9) EXPANDED FILL = UNEXPANDED FILL * FILL FACTOR
10) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.
11) 5-INCH MILLING DEPTH (1792 CY) IS REMOVED FROM PROJECT ID TOTAL FOR EXCAVATION COMMON QUANTITY.

HMA PAVEMENT ITEMS

STATION TO STATION	LOCATION	SPV.0195.02 HMA PAVEMENT TYPE E-3 SPECIAL TON	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON	465.0125 ASPHALTIC SURFACE TEMPORARY TON
3+42.45 - 28+56.32	STH 48	3250	289.2	---	---
3+42.45 - 3+75	LT	---	---	6	---
4+05 - 6+33	LT	---	---	54	---
4+11 - 5+05	RT	---	---	12	---
5+23 - 6+76	RT	---	---	20	---
6+63 - 6+79	LT	---	---	4	---
8+46 - 9+28	RT	---	---	9	---
10+50 - 11+18	LT	---	---	5	---
SW QUAD HAUGEN AVE/STH 48 INT		---	---	10	---
SW QUAD NORTH ST/STH 48 INT		---	---	5	---
TEMPORARY WIDENING	RT	---	---	---	200
TOTALS		**3250**	**289.2**	**125**	**200**

BASE AGGREGATE DENSE 1 1/4-INCH

STATION TO STATION	LOCATION	305.0120 TON
3+42.45 - 28+56.32	STH 48 RT & LT	1300
3+25 - 27+50	STH 48 RT SIDEWALK	330
6+75 - 29+00	TEMPORARY WIDENING	1300
	DRIVEWAYS	100
UNDISTRIBUTED		250
TOTAL		**3280**

ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES

STATION	LOCATION	465.0120 TON
3+90	LT	7
6+48	LT	7
7+35	LT	8
8+85	LT	7
9+74	LT	11
11+90	LT	14
14+23	LT	7
15+60	LT	5
19+24	LT	7
21+10	LT	7
24+64	LT	10
TOTAL		**90**

ASPHALTIC FLUMES

STATION	LOCATION	465.0315 SY
28+25	RT	12
28+56.32	LT	12
TOTAL		**24**

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

CONCRETE DRIVEWAY 6-INCH & CONCRETE SIDEWALK 6-INCH

CATEGORY	STATION	LOCATION	416.0160 DRIVEWAY 6-INCH SY	602.0415 SIDEWALK 6-INCH SF
	4+26	RT	15	150
	5+38	RT	15	150
	6+61	RT	15	150
0020	8+85	RT	13	125
0020	12+44	RT	7	70
0020	13+02	RT	5	50
	21+19	RT	14	140
	24+68	RT	9	90
0010 TOTALS			93	680
0020 TOTALS			---	245
PROJECT TOTALS			**93**	**925**

CONCRETE CURB & GUTTER

STATION TO STATION	LOCATION	601.0411 30-INCH TYPE D LF	601.0557 6-INCH SLOPED 36-INCH TYPE D LF
3+42.45 - 12+76	LT	967	---
3+42.45 - 7+70	RT	437	---
8+28 - 14+14	RT	607	---
10+50 - 11+18	40' LT	68	---
12+30 - 12+56	40' LT	27	---
13+49 - 17+21	LT	388	---
14+39 - 27+50	RT	1344	---
17+55 - 27-82	LT	1063	---
NW QUAD NORTH ST/STH 48 INT		---	67
NE QUAD LAKESHORE DR/STH 48 INT		---	60
TOTALS		**4901**	**127**

CURB RAMP DETECTABLE WARNING FIELD YELLOW

STATION	LOCATION	602.0505 SF
7+63	RT	8
8+35	RT	8
14+03	RT	8
14+50	RT	8
21+50	LT	8
21+50	RT	8
27+30	RT	8
TOTAL		**56**

CONCRETE SIDEWALK 4-INCH

CATEGORY	STATION TO STATION	LOCATION	602.0405 SF
	3+22 - 4+11	RT	443
	4+41 - 5+23	RT	410
	5+53 - 6+46	RT	465
	6+76 - 7+67	RT	474
0020	8+33 - 8+72.5	RT	236
0020	8+97.5 - 12+37	RT	1724
0020	12+51 - 12+97	RT	230
0020	13+07 - 14+03	RT	496
	14+48 - 21+05	RT	3332
	21+50	LT	38
	21+33 - 24+59	RT	1630
	24+77 - 27+30	RT	1283
0010 TOTAL			8075
0020 TOTAL			2686
PROJECT TOTAL			**10761**

RECONSTRUCTING MANHOLES & INLETS

STATION	LOCATION	611.0420 MH EACH	611.0430 INL EACH
4+45.7	13.5' RT	1	---
7+85.8	16.9' RT	1	---
7+89.7	32.5' LT	---	1
9+50	18.5' RT	1	---
12+51.5	59.8' LT	---	1
14+01.2	26.7' LT	---	1
19+45.9	1' RT	1	---
TOTALS		**4**	**3**

FENCE ITEMS

STATION - STATION	LOCATION	616.0205 CHAIN LINK 5-FT LF	616.0329.01 GATES 5-FT EACH	616.0329.02 GATES 18-FT EACH	616.0329.03 GATES 28-FT EACH	204.0170 REMOVING FENCE EACH
14+68 - 26+83	RT	1164	---	---	---	1164
20+94	RT	---	1	---	---	---
21+19	RT	---	---	---	1	---
24+68	RT	---	---	1	---	---
TOTALS		**1164**	**1**	**1**	**1**	**1164**

ADJUSTING MANHOLE COVERS & INLET COVERS

CATEGORY	STATION	LOCATION	611.8110 MH COVERS EACH	611.8115 INL COVERS EACH
	4+53.8	27.7' LT	---	1
0030	5+28	13.7' RT	1	---
	7+68	22.4' RT	---	1
	8+40	19.7' RT	---	1
0030	9+46	13.4' RT	1	---
0030	11+79	13.0' RT	1	---
0030	14+17	6.2' LT	1	---
0030	14+18	12.1' RT	1	---
	14+25	2' RT	1	---
	14+57	23.5' RT	---	1
0030	17+37	9.7' LT	1	---
	17+48.4	25' RT	---	1
	17+48.4	0'	1	---
	17+69.4	25' LT	---	1
0030	19+15	12.3' LT	1	---
	19+45.2	24.5' LT	---	1
	21+33.1	1' RT	1	---
	21+33.5	27.8' RT	---	1
	21+33.1	24.5' LT	---	1
	27+28.6	25.8' RT	---	1
	27+70	3' RT	1	---
0010 TOTALS			4	10
0030 TOTALS			7	0
TOTALS			**11**	**10**

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

STORM SEWER SCHEDULE

STRUCTURE NUMBER	**** STATION	**** OFFSET	611.3220 INLETS 2x2 EACH	611.3230 INLETS 2X3 EACH	611.3004 INLETS 4 EACH	611.1004 CATCH BASIN 4 EACH	611.1005 CATCH BASIN 5 EACH	611.1230 CATCH BASIN 2x3 EACH	611.0606 INLET COVERS TYPE B EACH	611.0639 INLET COVERS TYPE H-S EACH	611.0612 INLET COVERS TYPE C EACH	611.0530 INLET COVERS TYPE J EACH	* FLOWLINE/RIM ELEV	** BOX ELEV	DEPTH	INVERT ELEV	FROM	DISCHARGE ELEV	TO	608.0312 REINFORCED CONCRETE CL.III 12-INCH LF	SLOPE %	COMMENT
IN1	4+60.0	31.0 RT	1	---	---	---	---	---	1	---	---	---	1145.40	1144.07	2.41	---	---	1141.66	EX2	23	3.74%	
EX2	4+45.7	13.6 RT	---	---	---	---	---	---	---	---	---	---	1145.29	---	---	1140.80 (NE)	IN1	1140.49 (EXIST)	EXIST	---	---	RECONSTRUCT MH
EX3	4+55	20.2 RT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	REMOVE INL
EX4	4+53.8	27.7 LT	---	---	---	---	---	---	---	---	1	---	1145.22	---	---	---	---	---	---	---	---	ADJUST INL
IN1A	4+53	24.5 LT	---	---	1	---	---	---	---	1	---	---	1145.56			1141.70	EX4	1141.70	EX2	---	---	
EX3A	5+57	31.3 RT	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	---	---	
IN2	5+98.6	24.5 LT	---	1	---	---	---	---	---	1	---	---	1145.15	1144.15	2.50	---	---	1141.65	CB1	40	2.63%	
CB1	5+98.6	18.5 RT	---	---	---	---	1	---	---	1	---	---	1145.18	1144.18	3.58	1140.90	IN2	1140.60	EXIST	---	---	
CB2	7+49.8	18.5 RT	---	---	---	1	---	---	---	1	1	---	1145.68	1144.68	3.96	1140.72	EXIST	1140.72	EXIST	---	---	TEMP TYPE C COVER
IN3	7+89.9	24.5 LT	---	1	---	---	---	---	---	1	---	---	1145.68	1144.68	3.50	---	---	1141.18	EX7	9	3.00%	
EX7	7+89.7	32.9 LT	---	---	---	---	---	---	---	---	---	---	---	---	---	1140.91	IN3	1138.67	EXIST	---	---	RECONSTRUCT INL
EX5	7+68	22.4 RT	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	EMP TYPE C COVER. ADJUST INL. REMOVE INL
EX6	7+86	16.9 RT	---	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	RECONSTRUCT MH
EX8	8+40	19.7 RT	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	EMP TYPE C COVER. ADJUST INL. REMOVE INL
CB3	8+48.3	18.5 RT	---	---	---	---	---	1	---	1	1	---	1146.00	1145.00	3.80	1141.20	EXIST	1141.20	EXIST	---	---	TEMP TYPE C COVER
EX9	9+50	18.5 RT	---	---	---	---	---	---	---	1	---	---	1146.22	1145.22	3.22	1142.00	IN4	1142.00	CB3	---	---	RECONSTRUCT MH
IN4	11+75	18.5 RT	---	1	---	---	---	---	---	1	1	---	1146.55	1145.55	2.55	---	---	1143.00	EX9	225	0.44%	TEMP TYPE C COVER.
EX10	9+58.8	19.5 RT	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	EMP TYPE C COVER. ADJUST INL. REMOVE INL
IN5	10+85.1	24.5 LT	---	1	---	---	---	---	---	1	---	---	1146.30	1145.30	4.18	---	---	1141.12	CB4	18	3.00%	
CB4	10+84.9	39.8 LT	---	---	---	1	---	---	---	1	---	---	1146.40	1145.40	7.20	1140.58 (E)	IN5	1138.20	EXIST	---	---	
IN6	12+32.0	24.5 LT	---	1	---	---	---	---	---	1	---	---	1146.50	1145.50	3.50	---	---	1142.00	EX14	41	2.05%	
EX14	12+51.8	59.9 LT	---	---	---	---	---	---	---	---	---	---	---	---	---	1141.16	IN6	EXIST	EXIST	---	---	RECONSTRUCT MH
IN9	13+58.1	27.4 LT	---	1	---	---	---	---	---	1	---	---	1146.71	1145.71	2.50	---	---	1143.21	EX15	44	1.14%	
EX15	14+01.4	26.6 LT	---	---	---	---	---	---	---	---	---	1	---	---	---	1142.71	IN9	EXIST	EX16	---	---	RECONSTRUCT INL
IN7	14+41.0	24.5 LT	---	1	---	---	---	---	---	1	---	---	1147.00	1146.00	3.50	---	---	1142.50	EX16	---	---	
IN8	14+52.4	21.2 RT	---	1	---	---	---	---	---	1	---	---	1147.40	1146.40	3.95	---	---	1142.45	EX16	---	---	
EX17	14+57	23.5 RT	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	TEMP TYPE C COVER. ADJUST INL. REMOVE INL
IN10	17+12.2	30.1 LT	---	1	---	---	---	---	---	1	---	---	1147.00	1146.00	2.77	---	---	1143.23	EX19	9	1.33%	
EX18	17+17.9	25.1 LT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	REMOVE INL
IN11	17+25.7	18.5 RT	---	1	---	---	---	---	---	1	---	---	1147.06	1146.06	3.50	---	---	1142.56	IN11A	23	1.91%	
IN11A	17+48.4	18.5 RT	---	---	1	---	---	---	---	1	---	---	1147.09	1146.09	4.80	1142.12	IN11	1141.29	EX19	---	---	
EX20	17+48.4	25 RT	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	TEMP TYPE C COVER. ADJUST INL. REMOVE INL
EX21	17+69.4	25.4 LT	---	---	---	---	---	---	---	1	---	---	1146.64	---	---	---	---	---	---	---	---	ADJUST INL
EX23	19+45.2	24.5 LT	---	---	---	---	---	---	---	1	---	---	1147.08	---	---	---	---	---	---	---	---	ADJUST INL
IN12	19+45.9	18.5 RT	---	1	---	---	---	---	---	1	---	---	1147.60	1146.60	2.50	---	---	1144.10	EX22	16	3.00%	
EX22	19+45.9	1.0 RT	---	---	---	---	---	---	---	---	---	---	1147.90	---	---	1143.62 (E)	IN12	EXIST	EXIST	---	---	REONSTRUCT MH
IN13	21+34.1	18.5 RT	---	---	1	---	---	---	---	1	---	---	1148.38	1147.38	4.81	1142.57	IN14	1142.57	EX25	---	---	
IN14	23+75.0	18.5 RT	---	1	---	---	---	---	---	1	---	---	1149.71	1148.71	3.66	1145.05	IN15	1145.05	IN13	241	1.03%	
IN15	23+74.9	24.5 LT	---	1	---	---	---	---	---	1	---	---	1149.27	1148.27	2.50	---	---	1145.77	IN14	41	1.76%	
EX26	21+33.5	27.8 RT	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	EMP TYPE C COVER. ADJUST INL. REMOVE INL
EX24	21+33.1	24.5 LT	---	---	---	---	---	---	---	1	---	---	1147.82	---	---	---	---	---	---	---	---	ADJUST INL
IN16	27+32.7	23.5 RT	---	1	---	---	---	---	---	1	---	---	1149.19	1148.19	3.82	---	---	1144.37	EX28	---	---	
IN17	27+62.9	25.2 LT	---	1	---	---	---	---	---	1	---	---	1148.70	1147.70	3.70	1144.00	IN18	1144.00	EX28	---	---	
IN18	27+79.9	45.3 LT	---	1	---	---	---	---	---	1	---	---	1148.27	1147.27	2.71	---	---	1144.56	IN17	28	2.00%	
EX29	27+28.6	25.8 RT	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	TEMP TYPE C COVER. ADJUST INL. REMOVE INL
TOTALS			**1**	**16**	**3**	**2**	**1**	**1**	**2**	**27**	**11**	**2**								**758**		

NOTES:
* FLAGLINE ELEVATIONS FOR INLETS IN CURB AND GUTTER ARE DEPRESSED 0.10'
** FOR NEW STRUCTURES, TOP OF BOX ELEVATIONS ARE TYPICALLY FLOWLINE/RIM ELEVATIONS MINUS CASTING DEPTH AND 6" FOR ADJUSTING RINGS. DEPTH FOR ADJUSTMENT MAY VARY.
*** JOINT TIES ARE INCIDENTAL TO SSPRC.
**** STRUCTURE STATION AND OFFSET MEASURED TO CENTER OF STRUCTURE.

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

INLET PROTECTION

STATION	LOCATION	STAGE	628.7005 TYPE A EACH	628.7015 TYPE C EACH	628.7020 TYPE D EACH
4+60	RT	1	---	---	1
7+68	RT	1	---	---	1
8+40	RT	1	---	---	1
9+58.8	RT	1	---	---	1
14+57	RT	1	---	---	1
17+48.4	RT	1	---	---	1
21+33.5	RT	1	---	---	1
27+28.6	RT	1	---	---	1
4+53	LT	2	1	1	---
4+53.8	LT	2	---	---	1
5+98.6	LT	2	1	1	---
7+89.7	LT	2	1	---	---
7+89.9	LT	2	1	1	---
10+02.8	LT	2	1	---	---
10+41.4	LT	2	1	---	---
10+84.9	LT	2	1	1	---
10+85.1	LT	2	1	1	---
11+36.5	LT	2	---	---	1
12+32	LT	2	1	1	---
12+51.8	LT	2	---	---	1
13+58.1	LT	2	1	1	---
14+01.4	LT	2	1	---	---
14+41	LT	2	1	1	---
14+43	LT	2	1	---	---
17+12.2	LT	2	1	1	---
17+17.9	LT	2	---	---	1
17+69.4	LT	2	---	1	1
19+45.2	LT	2	---	1	1
21+33.1	LT	2	---	1	1
23+74.9	LT	2	1	1	---
27+62.4	LT	2	---	---	1
27+62.9	LT	2	1	1	---
27+79.9	LT	2	1	1	---
5+98.6	LT	4	1	1	---
7+49.8	LT	4	1	1	---
8+48.3	LT	4	1	1	---
9+50	LT	4	1	1	---
11+75	LT	4	1	1	---
14+52.4	LT	4	1	1	---
17+25.7	LT	4	1	1	---
17+48.4	LT	4	1	1	---
19+45.9	LT	4	1	1	---
21+34.1	LT	4	1	1	---
23+75	LT	4	1	1	---
27+32.8	LT	4	1	1	---
UNDISTRIBUTED			7	7	4
TOTALS			**36**	**34**	**20**

EROSION MAT CLASS I TYPE B

STATION	LOCATION	STAGE	628.2004 SY
28+56.32	LT	2	4
28+25	RT	4	4
UNDISTRIBUTED			2
TOTAL			**10**

TEMPORARY DITCH CHECKS

STATION	LOCATION	STAGE	628.7504 LF
28+70	LT	1	10
28+70	RT	1	14
UNDISTRIBUTED			6
TOTAL			**30**

SALVAGED TOPSOIL, FERTILIZER, & SOD

STATION TO STATION	625.0500 SALVAGED TOPSOIL SY	629.0210 FERTILIZER TYPE B CWT	631.1000 SOD LAWN SY
3+42.45 - 7+00	185	0.15	185
7+00 - 13+00	690	0.45	690
13+00 - 19+00	735	0.50	735
19+00 - 25+00	780	0.50	780
25+00 - 28+56.32	370	0.25	370
UNDISTRIBUTED	250	0.15	250
TOTALS	**3010**	**2.00**	**3010**

PAVEMENT MARKING DIAGONAL EPOXY 12-INCH

STATION TO STATION	DESCRIPTION	647.0726 YELLOW LF
3+42 - 4+67	TWLTL	47
10+00 - 11+50	TWLTL	69
25+49 - 27+00	TWLTL	56
TOTAL		**172**

MOBILIZATIONS EROSION CONTROL

PROJECT	628.1905 EACH
STH 48	2
TOTAL	**2**

MOBILIZATIONS EMERGENCY EROSION CONTROL

PROJECT	628.1910 EACH
STH 48	2
TOTAL	**2**

TRAFFIC CONTROL DRUMS, BARRICADES, LIGHTS, AND SIGNS

STAGE	643.0300 DRUMS EACH	643.0300 DRUMS DAYS	643.0410 BARRICADES TYPE II EACH	643.0410 BARRICADES TYPE II DAYS	643.0420 BARRICADES TYPE III EACH	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A EACH	643.0705 WARNING LIGHTS TYPE A DAYS	643.0715 WARNING LIGHTS TYPE C EACH	643.0715 WARNING LIGHTS TYPE C DAYS	643.0900 SIGNS EACH	643.0900 SIGNS DAYS
STAGE 1	120	840	2	14	13	91	22	154	4	28	25	175
STAGE 2	114	4560	2	80	34	1360	44	1760	13	520	30	1200
STAGE 3	218	5014	2	46	32	736	44	1012	17	391	28	644
STAGE 4	113	2599	2	46	24	552	34	782	4	92	26	598
UNDISTRIBUTED	20	200	2	20	20	200	20	200	5	50	20	200
TOTALS		**13213**		**206**		**2939**		**3908**		**1081**		**2817**

PAVEMENT MARKING EPOXY

STATION TO STATION	DESCRIPTION	646.0106 4-INCH YELLOW LF	646.0126 8-INCH WHITE LF
3+42 - 4+67	DOUBLE YELLOW	500	---
4+67 - 10+00	TWLTL	1335	---
10+00 - 13+00	DOUBLE YELLOW	900	---
11+50 - 13+00	CHANNELIZING	---	150
13+69 - 25+49	TWLTL	2950	---
25+49 - 27+58	DOUBLE YELLOW	720	---
TOTALS		**6405**	**150**

PAVEMENT MARKING ARROWS EPOXY TYPE 2

STATION	DESCRIPTION	647.0166 WHITE EACH
6+00	TWLTL	2
9+00	TWLTL	2
	LT TURN LANE	1
	LT TURN LANE	1
15+00	TWLTL	2
19+00	TWLTL	2
23+00	TWLTL	2
TOTAL		**12**

SILT FENCE

STATION TO STATION	LOCATION	STAGE	628.1504 SILT FENCE LF	628.1520 MAINTENANCE LF
27+77 - 28+55	RT	1	92	184
UNDISTRIBUTED			23	46
TOTALS			**115**	**230**

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

PERMANENT SIGNING

SIGN NO.	STATION	LOCATION	SIGN CODE	SIGN SIZE WxH (INCHES)	634.0614 POSTS WOOD 4x6-INCH 14-FT EACH	637.2210 SIGNS TYPE II REFLECTIVE H SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	COMMENT
1-1	3+40	RT	R2-1	24 X 30	1	5.00	1	1	30 MPH
1-2	4+75	LT	R3-9D	24 X 6	1	1.00	---	---	
1-3	4+75	LT	R3-9B	24 X 36	---	6.00	---	---	
1-4	4+75	RT	R3-9C	24 X 6	1	1.00	---	---	
1-5	4+75	RT	R3-9B	24 X 36	---	6.00	---	---	
1-6	7+75	LT	J3-2	48 X 57	1	19.00	1	1	
1-7	8+35	RT	R1-1	30 X 30	1	5.18	1	1	
1-8	9+35	LT	D1-2	78 X 30	2	16.25	1	2	
1-9	10+00	LT	R3-9B	24 X 36	1	6.00	---	---	
1-10	11+10	RT	R2-1	24 X 30	1	5.00	1	1	30 MPH
1-11	11+30	LT	R2-1	24 X 30	1	5.00	1	1	30 MPH
1-12	12+00	RT	J3-2	48 X 57	1	19.00	1	1	
1-13	12+85	LT	R1-1	36 X 36	1	7.46	1	1	HAUGEN AVENUE
1-14	13+20	RT	D9-2	24 X 24	1	4.00	1	1	
1-15	13+20	RT	M6-1	21 X 21	---	3.06	1	---	
1-16	13+80	RT	D9-2	24 X 24	1	4.00	1	1	
1-17	13+80	RT	M6-1	21 X 21	---	3.06	1	---	
2-1	14+50	RT	R1-1	30 X 30	1	5.18	1	1	SHORT STREET
2-2	14+80	RT			---	---	1	1	
2-3	15+00	LT	R3-9B	24 X 36	1	6.00	---	---	
2-4	15+10	RT	J1-1	24 X 36	1	6.00	1	---	
2-5	15+15	LT			---	---	1	1	
2-6	15+50	RT			---	---	1	1	
2-7	15+75	RT	R2-1	24 X 30	1	5.00	1	1	35 MPH
2-8	16+40	LT	D9-2	24 X 24	1	4.00	1	1	
2-9	16+40	LT	M6-1	21 X 21	---	3.06	1	---	
2-10	16+45	RT			---	---	1	1	
2-11	16+50	RT	R3-9B	24 X 36	1	6.00	---	---	
2-12	16+60	LT	J12-2	48 X 45	1	15.00	1	1	
2-13	17+15	LT	R1-1	30 X 30	1	5.18	1	1	JEAN STREET
2-14	17+85	RT			---	---	1	1	
2-15	18+25	LT			---	---	1	1	
2-16	19+00	LT	R1-1	30 X 30	1	5.18	1	1	EARL STREET
2-17	19+50	RT			---	---	1	1	
2-18	19+75	LT			---	---	1	1	
2-19	20+00	LT	R3-9B	24 X 36	1	6.00	---	---	
2-20	20+60	RT			---	---	1	1	
2-21	20+84	LT	J1-1	24 X 39	1	6.50	1	1	
2-22	21+40	RT	W11-2	30 x 30	1	6.25	---	---	
2-23	21+40	RT	W16-7L	24 x 12	---	2.00	---	---	
2-24	21+56	LT	W11-2	30 x 30	1	6.25	---	---	
2-25	21+56	LT	W16-7L	24 x 12	---	2.00	---	---	
2-26	22+00	LT			---	---	1	1	
2-27	22+00	RT	R3-9B	24 X 36	1	6.00	---	---	
2-28	22+00	RT			---	---	1	1	
2-29	23+50	LT			---	---	1	1	
2-30	24+10	RT			---	---	1	1	
2-31	25+50	RT	R3-9D	24 X 6	1	1.00	---	---	
2-32	25+50	RT	R3-9B	24 X 36	---	6.00	---	---	
2-33	25+50	LT	R3-9C	24 X 6	1	1.00	---	---	
2-34	25+50	LT	R3-9B	24 X 36	---	6.00	---	---	
3-1	26+00	RT			---	---	1	1	
3-2	26+25	RT			---	---	1	1	
3-3	26+60	LT			---	---	1	1	
3-4	27+50	LT	R2-1	24 X 30	1	5.00	1	1	35 MPH
3-5	27+75	LT	R1-1	30 X 30	1	5.18	1	1	NORTH STREET
3-6	27+90	RT	R1-1	30 X 30	1	5.18	1	1	LAKESHORE DRIVE
3-7	28+50	RT	D2-1	90 X 24	2	15.00	1	2	
TOTALS					**35**	**255.97**	**41**	**39**	

PAVEMENT MARKING CROSSWALK EPOXY 24-INCH

STATION	LOCATION	647.0796 WHITE LF
21+47	STH 48	38
TOTAL		**38**

TEMPORARY PAVEMENT MARKING 4-INCH

STATION TO STATION	DESCRIPTION	STAGE	649.0100 LF
3+25 - 30+45	DOUBLE YELLOW	1	5440
2+54 - 30+73	DOUBLE YELLOW	2	5638
2+00 - 30+53	DOUBLE YELLOW	4	5706
TOTAL			**16784**

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH

STATION TO STATION	STAGE	COLOR	649.0400 LF
2+32 - 4+75	1	WHITE	243
28+21 - 30+45	1	WHITE	224
2+60 - 4+43	2	WHITE	183
28+20 - 30+72	2	WHITE	252
1+96 - 3+41	3	YELLOW	145
1+96 - 4+43	3	YELLOW	247
28+13 - 30+50	3	YELLOW	237
28+20 - 30+50	3	YELLOW	230
2+24 - 4+00	4	WHITE	176
28+12 - 30+52	4	WHITE	240
TOTAL			**2177**

CONSTRUCTION STAKING STORM SEWER

STATION	LOCATION	650.4000 EACH
4+60	RT	1
4+53	LT	1
5+98.6	LT	1
5+98.6	RT	1
7+49.8	RT	1
7+89.9	LT	1
8+43.3	RT	1
11+75	TR	1
10+85.1	LT	1
10+84.9	LT	1
12+32.0	LT	1
13+58.1	LT	1
14+41.0	LT	1
14+52.4	RT	1
17+12.2	LT	1
17+25.7	RT	1
17+48.4	RT	1
19+45.9	RT	1
21+34.1	RT	1
23+75.0	RT	1
23+74.9	LT	1
27+32.7	RT	1
27+62.9	LT	1
27+79.9	LT	1
TOTAL		**24**

CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER

STATION TO STATION	LOCATION	650.5500 LF
3+42.45 - 12+76	LT	967
3+42.45 - 7+70	RT	437
8+28 - 14+14	RT	607
10+50 - 11+18	40' LT	68
12+30 - 12+56	40' LT	27
13+49 - 17+21	LT	388
14+39 - 27+50	RT	1344
17+55 - 27+82	LT	1063
NW QUAD NORTH ST/STH 48 INT		67
NE QUAD LAKESHORE DR/STH 48 INT		60
TOTAL		**5028**

CONSTRUCTION STAKING SUPPLEMENTAL CONTROL

PROJECT	650.9910 LS
8570-03-72	1

CONSTRUCTION STAKING

STATION TO STATION	LOCATION	650.4500 SUBGRADE LF	650.5000 BASE LF	650.9920 SLOPE STAKES LF
3+42.45 - 28+56.32	STH 48	2514	2514	2514
6+75 - 28+50	TEMP WIDENING	2175	2175	2175
TOTALS		**4689**	**4689**	**4689**

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

SAWING

STATION TO STATION	LOCATION	690.0150 ASPHALT LF	691.0250 CONCRETE LF
3+42.45		43	---
3+42 - 6+79	LT	337	---
4+11 - 5+05	RT	95	---
5+23 - 6+76	RT	153	---
3+40	LT	---	2.5
3+40	RT	---	2.5
7+56	RT	---	5
7+69	RT	---	2.5
7+71 - 8+27	RT	55	---
8+29	RT	---	2.5
8+44	RT	---	5
8+46 - 9+29	RT	82	---
9+31	RT	---	4.5
9+54	LT	---	2.5
9+56 - 9+93	LT	37	---
9+94	LT	---	2.5
10+44	RT	---	4
10+50 - 11+19	LT	74	---
10+50	LT	---	2.5
11+07	RT	---	2.5
11+19	LT	---	2.5
11+66	LT	---	2.5
11+67 - 12+12	LT	45	---
12+14	LT	---	2.5
12+30	LT	---	2.5
12+30 - 12+59	LT	53	---
12+37 - 12+51	RT	14	---
12+56	LT	---	2.5
12+76	LT	---	3
12+77 - 13+48	LT	70	---
12+97 - 13+07	RT	10	---
13+49	LT	---	3
14+13 - 14+41	RT	30	---
14+07 - 14+37	LT	30	---
15+50 - 15+70	LT	20	---
17+10 - 17+56	LT	51	---
19+09 - 19+39	LT	30	---
20+94	RT	---	5
20+92 - 21+42	LT	50	---
21+05 - 21+33	RT	28	---
24+44 - 21+84	LT	40	---
24+59 - 24+77	RT	18	---
27+48 - 27+75	RT	27	---
27+70 - 27+80	LT	31	---
27+81	LT	---	2.5
27+82 - 28+18	LT	43	---
28+18	LT	---	2.5
28+56.32		40	---
TOTALS		**1506**	**67**

CONCRETE CURB AND GUTTER
CURE AND SEAL TREATMENT

STATION TO STATION	LOCATION	SPV.0090.02 LF
3+42.45 - 12+76	LT	967
3+42.45 - 7+70	RT	437
8+28 - 14+14	RT	607
10+50 - 11+18	40' LT	68
12+30 - 12+56	40' LT	27
13+49 - 17+21	LT	388
14+39 - 27+50	RT	1344
17+55 - 27-82	LT	1063
NW QUAD NORTH ST/STH 48 INT		67
NE QUAD LAKESHORE DR/STH 48 INT		60
TOTAL		**5028**

CURE AND SEAL TREATMENT
CONCRETE SIDEWALK

CATEGORY	STATION TO STATION	LOCATION	SPV.0165.01 SF
	3+22 - 4+11	RT	443
	4+26	RT	150
	4+41 - 5+23	RT	410
	5+38	RT	150
	5+53 - 6+46	RT	465
	6+61	RT	150
	6+76 - 7+67	RT	474
0020	8+33 - 8+72.5	RT	236
	8+85	RT	125
0020	8+97.5 - 12+37	RT	1724
	12+44	RT	70
0020	12+51 - 12+97	RT	230
	13+02	RT	50
0020	13+07 - 14+03	RT	496
	14+48 - 21+05	RT	3332
	21+19	RT	140
	21+50	LT	38
	21+33 - 24+59	RT	1630
	24+68	RT	90
	24+77 - 27+30	RT	1283
0010 TOTAL			9000
0020 TOTAL			2686
PROJECT TOTAL			**11686**

REHEATING HMA PAVEMENT
LONGITUDINAL JOINTS SPECIAL

PROJECT	SPV.0170.01 STA
8570-03-72	25

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

CURVE DATA

P.I. 1+38.39
Y 136942.51
X 333916.43

STH 48/KNAPP ST

PI 1+38.39

BEGIN PROJECT
STA 3+42.45
MATCH EXISTING
SAWCUT REQ'D
Y 137146.62
X 333918.80

STA 3+90, LT
CONSTRUCT CE (30')
SAWCUT REQ'D

STA 6+48, LT
CONSTRUCT CE (30')
SAWCUT REQ'D

STA 3+88.00, 22' LT

STA 3+88.00, 16' RT

WE ENERGIES

RICE LAKE UTILITIES
- ELECTRIC

SLOPE INTERCEPT

WE ENERGIES

RICE LAKE UTILITIES
- WATER & SANITARY

STH 48/HAMMOND AVE

N 0°39'56" E

22'

16'

CITY OF RICE LAKE
- STORM WATER

5' SIDEWALK

RICE LAKE UTILITIES
- ELECTRIC

WE ENERGIES

STA 4+26, RT
CONSTRUCT CE (30')
SAWCUT REQ'D

STA 5+38, RT
CONSTRUCT CE (30')
SAWCUT REQ'D

STA 6+61, RT
CONSTRUCT CE (30')
SAWCUT REQ'D

2+00 3+00 4+00 5+00 6+00 7+00

VPOT STA 3+08.53
VPOT EL146.37

-0.17 %

VPC STA 3+86.60
VPC EL146.24

VPI STA 4+36.60
VPI EL146.15

K = 719.94
VCL 100.00

VPT STA 4+86.60
VPT EL146.00

-0.31 %

VPC STA 5+73.15
VPC EL145.74

VCL 50.00
K = 83.47

5+98.72
145.70

VPI STA 5+98.15
VPI EL145.66

VPT STA 6+23.15
VPT EL145.73

+0.29 %

1154 1152 1150 1148 1146 1144 1142 1140

146.34 146.30 146.26 146.21 146.16 146.10 146.04 145.96 145.88 145.81 145.73 145.70 145.74 145.81 145.88 145.96

3+25 3+50 3+75 4+00 4+25 4+50 4+75 5+00 5+25 5+50 5+75 6+00 6+25 6+50 6+75 7+00

PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	PLAN & PROFILE	SHEET	E

FILE NAME : T:\410662\dgn\plan\050101_pp.dgn PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 40

CURVE DATA

P.I. 7+98.74
Y 137602.81
X 333924.10
△ = 0°12'06"

CONTROL PT 50 W/ TIES
STA 12+20.68, 44.47 LT
Y=138025.38
X=333886.02
MAG NAIL
61.77'
CP
35.2'
MAG NAIL
19.43'
MAG NAIL

STA 12+33.57, 107' LT
Y=138039.21
X=333823.69

STA 7+35, LT
CONSTRUCT CE (30')

STA 8+85, LT
CONSTRUCT CE (30')

STA 9+74, LT
CONSTRUCT CE
SAWCUT REQ'D

STA 11+90, LT
CONSTRUCT CE
SAWCUT REQ'D

CP 50

CHARTER COMMUNICATION
RICE LAKE UTILITIES - ELECTRIC
WE ENERGIES
BM"1
SLOPE INTERCEPT
CONSTRUCTION LIMITS SAWCUT REQ'D
R 85'
CENTURYLINK
CITY OF RICE LAKE - STORM WATER
WE ENERGIES
WE ENERGIES
CITY OF RICE LAKE - STORM WATER
5' SIDEWALK
RICE LAKE UTILITIES - ELECTRIC
RICE LAKE UTILITIES - WATER & SANITARY
STA 12+44, RT
CONSTRUCT PE (12")
SAWCUT REQ'D
R 20'
R 20'
CONSTRUCTION LIMITS SAWCUT REQ'D
WE ENERGIES
SLOPE INTERCEPT
STA 8+85, RT
CONSTRUCT CE (25')
SAWCUT REQ'D
BUNDY ST
STH 48/HAMMOND AVE
N 0°39'56" E
N 0°52'02" E
36'
22'
16'
34'
7+00
8+00
9+00
10+00
11+00
12+00
13+00

BENCH MARKS				
NO.	STA.	OFFSET	DESCRIPTION	ELEV.
1	8+21	28.5'	BOLT W/BURY TAG, NW CORNER OF HYD	1146.21

VPC STA 8+69.35
VPC EL146.45
VPI STA 9+19.35
VPI EL146.60
VPT STA 9+69.35
VPT EL146.67
+0.29 %
K = 672.84
VCL 100.00
+0.14 %
VCL 100.00
K = 925.33
VPC STA 12+37.33
VPC EL147.06
VPI STA 12+87.33
VPI EL147.13

1154 1152 1150 1148 1146 1144 1142 1140

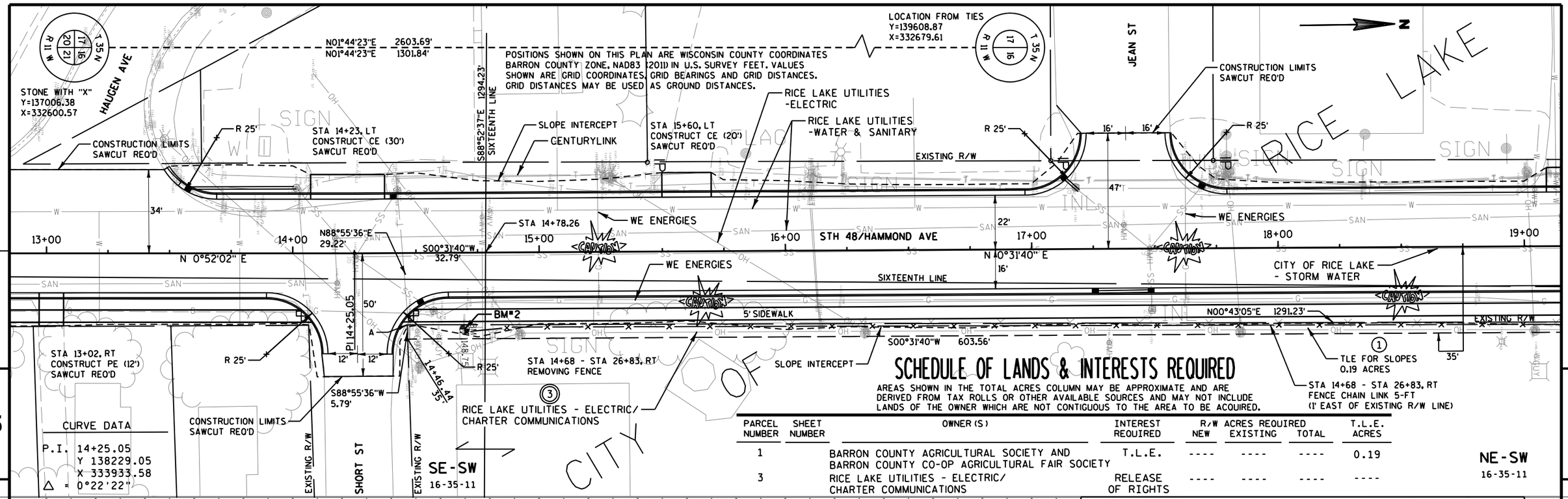
145.96 146.03 146.10 146.18 146.25 146.32 146.40 146.47 146.54 146.59 146.64 146.68 146.72 146.75 146.79 146.82 146.86 146.90 146.93 146.97 147.00 147.04 147.08 147.12 147.17

7+00 7+25 7+50 7+75 8+00 8+25 8+50 8+75 9+00 9+25 9+50 9+75 10+00 10+25 10+50 10+75 11+00 11+25 11+50 11+75 12+00 12+25 12+50 12+75 13+00

PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	PLAN & PROFILE	SHEET 43 E

FILE NAME : T:\410662\dgn\plan\050102_pp.dgn PLOT DATE : 7/31/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 40



SCHEDULE OF LANDS & INTERESTS REQUIRED

AREAS SHOWN IN THE TOTAL ACRES COLUMN MAY BE APPROXIMATE AND ARE DERIVED FROM TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED.

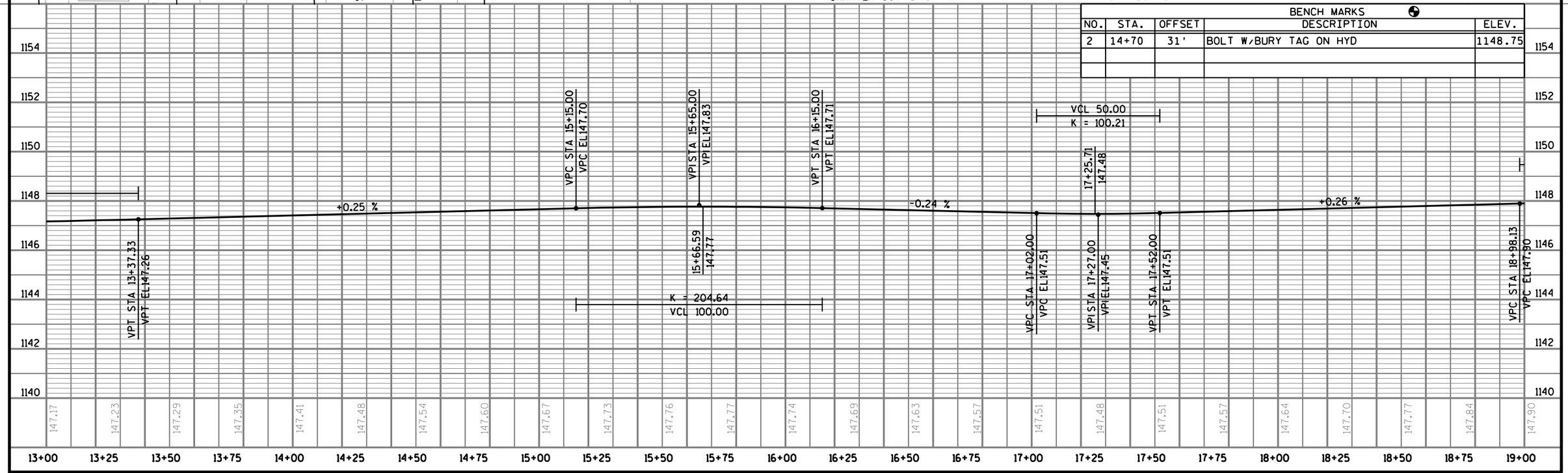
PARCEL NUMBER	SHEET NUMBER	OWNER(S)	INTEREST REQUIRED	R/W ACRES REQUIRED NEW	EXISTING	TOTAL	T.L.E. ACRES
1		BARRON COUNTY AGRICULTURAL SOCIETY AND BARRON COUNTY CO-OP AGRICULTURAL FAIR SOCIETY	T.L.E.	----	----	----	0.19
3		RICE LAKE UTILITIES - ELECTRIC/ CHARTER COMMUNICATIONS	RELEASE OF RIGHTS	----	----	----	----

CURVE DATA

P.I. 14+25.05
Y 138229.05
X 333933.58
△ = 0°22'22"

BENCH MARKS

NO.	STA.	OFFSET	DESCRIPTION	ELEV.
2	14+70	31'	BOLT W/BURY TAG ON HYD	1148.75



PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	PLAN & PROFILE	SHEET 44	E

STA 19+24, LT
CONSTRUCT CE (30')
SAWCUT REQ'D

STA 21+15, LT
CONSTRUCT CE (30')
SAWCUT REQ'D

STA 24+64, LT
CONSTRUCT CE (40')
SAWCUT REQ'D

EARL ST

VACUUM

RICE LAKE

FILLER CAPS

CENTURYLINK

SLOPE INTERCEPT

MAG NAIL

MAG NAIL

MAG NAIL

RICE LAKE UTILITIES - WATER & SANITARY

RICE LAKE UTILITIES - ELECTRIC

EXISTING R/W

WE ENERGIES

72.11'

64.45'

82.66'

22'

16'

19+00 20+00 21+00 22+00 23+00 24+00 25+00

N 0°31'40" E

STH 48/HAMMOND AVE

SIXTEENTH LINE

WE ENERGIES

5' SIDEWALK

CP 51

N00°43'05"E 1291.23'

S00°31'40"W 603.56'

35'

N 89°28'20" W 5.00'

20+50 35' 840'

CITY OF RICE LAKE - STORM WATER

TLE FOR SLOPES 0.19 ACRES

STA 21+19, RT GATES CHAIN LINK (28')

STA 20+94, RT GATES CHAIN LINK (5')

CONTROL PT 51 W/ TIES
STA 22+03.56, 25.98 RT
Y=139007.29
X=333966.73

S00°31'40"W 684.91'

SLOPE INTERCEPT

STA 14+68 - STA 26+83, RT
FENCE CHAIN LINK 5-FT
(1' EAST OF EXISTING R/W LINE)

EXISTING R/W

STA 24+68, RT GATES CHAIN LINK (18')

40'

RICE LAKE UTILITIES - ELECTRIC/ CHARTER COMMUNICATIONS

③

CITY OF

① BARRON COUNTY AGRICULTURAL SOCIETY AND BARRON COUNTY CO-OP AGRICULTURAL FAIR SOCIETY

STA 14+68 - STA 26+83, RT
REMOVING FENCE

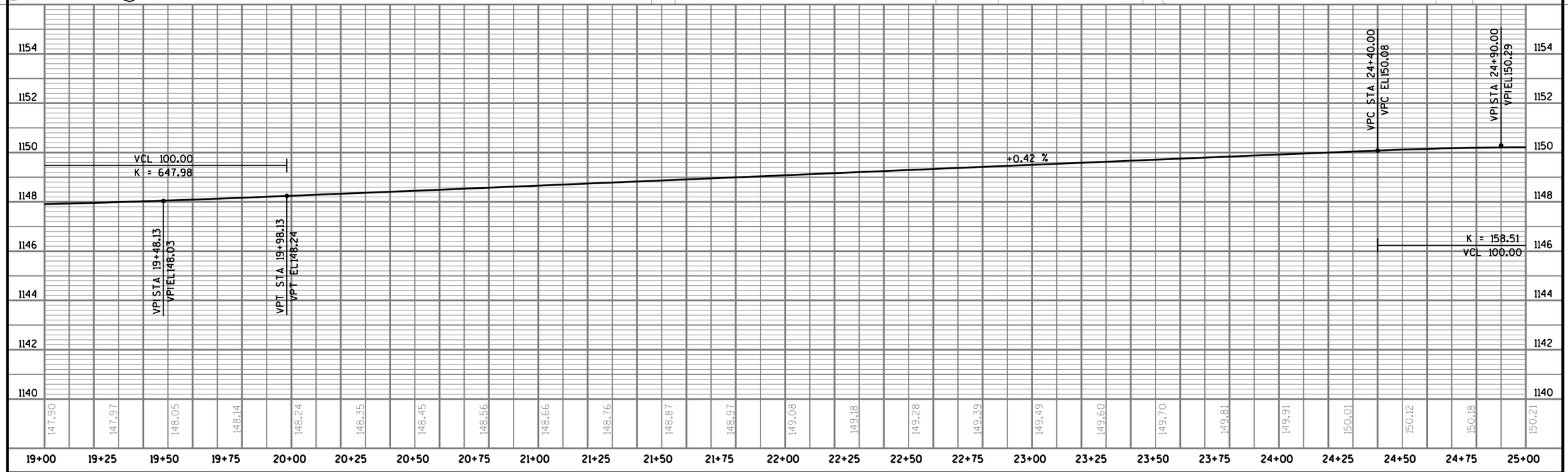
STA 21+19, RT
CONSTRUCT CE (28')
SAWCUT REQ'D

NE - SW
16-35-11

STA 24+68, RT
CONSTRUCT CE (18')
SAWCUT REQ'D

5

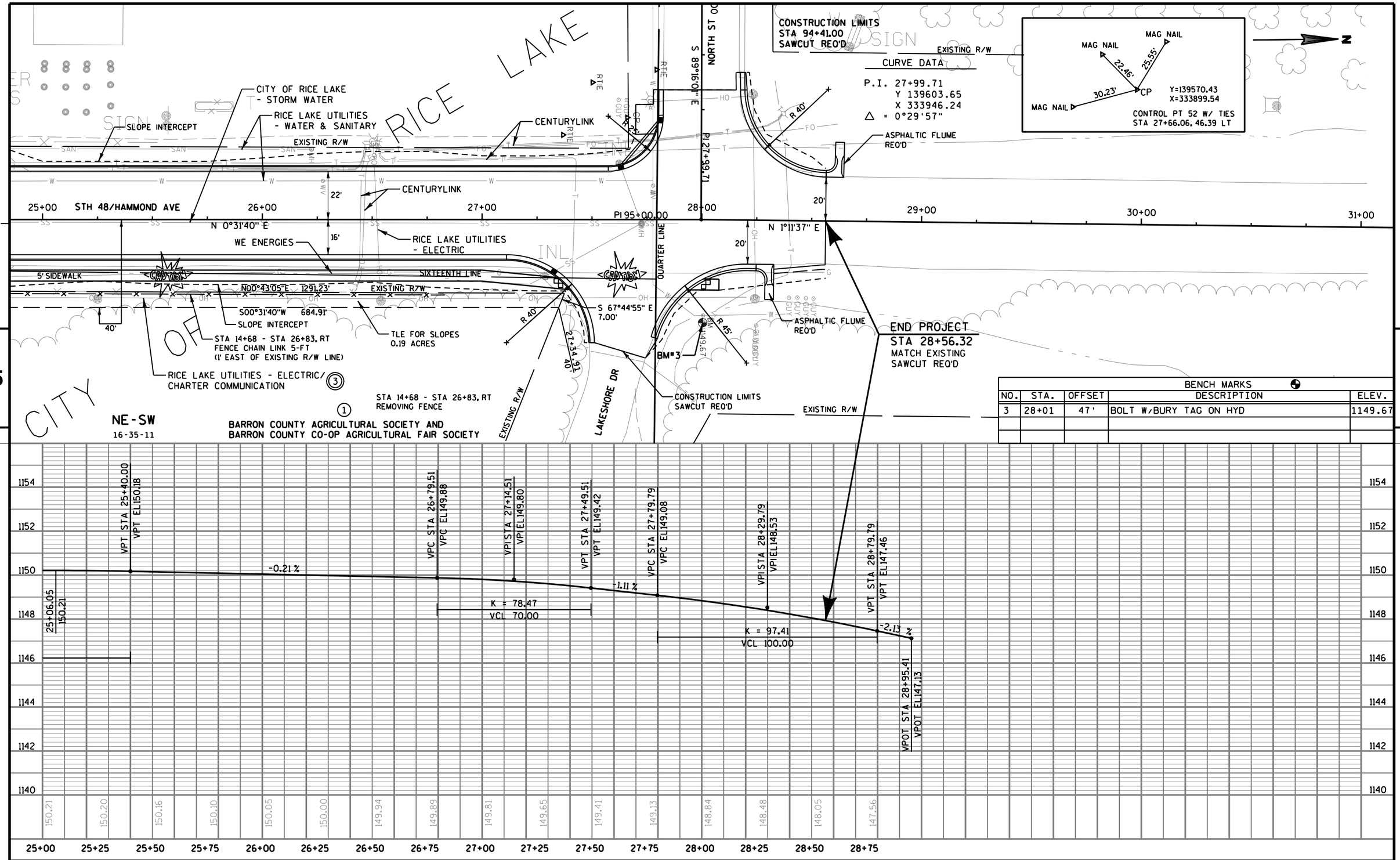
5



PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	PLAN & PROFILE	SHEET 45	E

FILE NAME : T:\410662\dgn\plan\050104_pp.dgn PLOT DATE : 9/2/2014 PLOT BY : AYRES-EC PLOT NAME : PLOT SCALE : 1:40

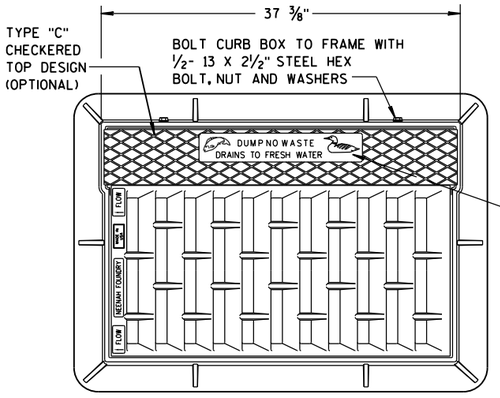
WISDOT/CADDS SHEET 40



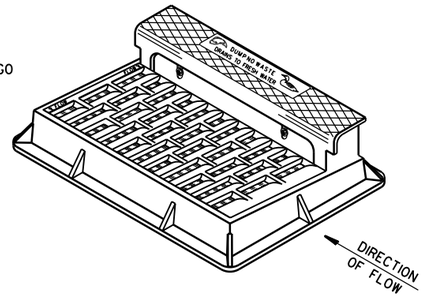
PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	PLAN & PROFILE	SHEET 46	E

Standard Detail Drawing List

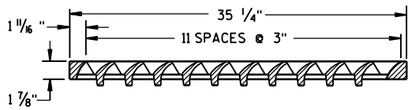
08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08A08-01	CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER
08A09-01	CATCH BASINS 2X3-FT AND 2.5X3-FT
08C06-01	INLETS 3-FT AND 4-FT DIAMETER
08C07-01	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
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
08F05-01	CLASS "B" BEDDING FOR CULVERT PIPE OR STORM SEWER
15B03-13A	FENCE CHAIN LINK
15B03-13B	FENCE CHAIN LINK
15C03-02	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C05-02	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-12C	PAVEMENT MARKING ARROWS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C08-16E	PAVEMENT MARKING (LEFT TURN LANE)
15C08-16F	PAVEMENT MARKING (ISLANDS)
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C33-01	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D20-02	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D21-02	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D30-01	TRAFFIC CONTROL, SIDEWALK CLOSURE

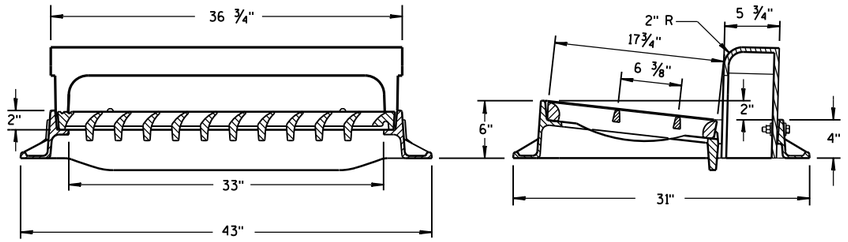


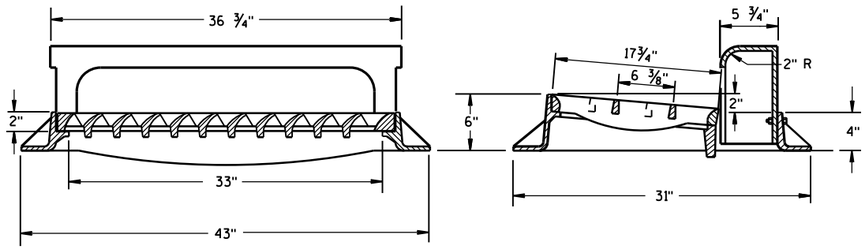
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

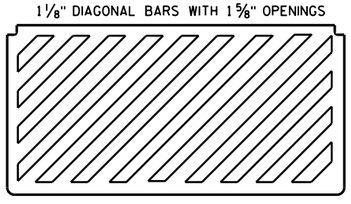






TYPE "H"

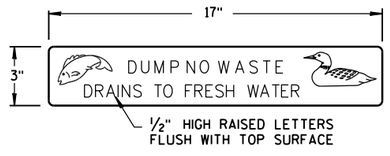
NOTE: EITHER CASTING IS ACCEPTABLE



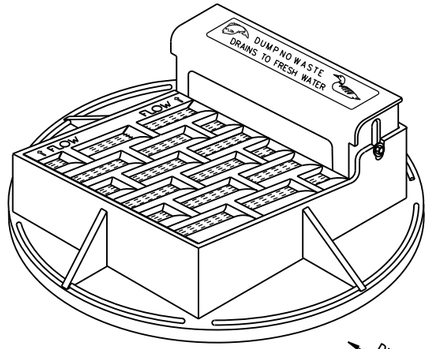
SPECIAL GRATE FOR TYPE "H" COVER

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

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

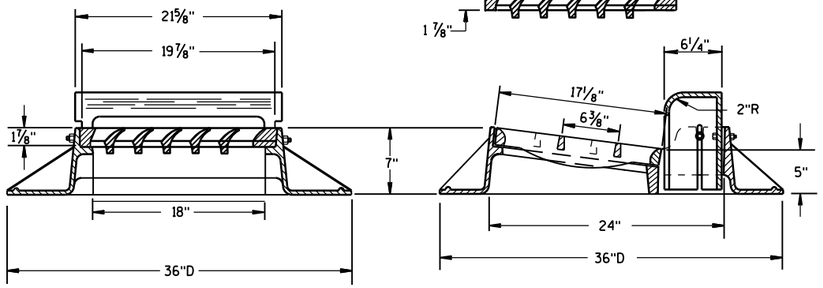


LOGO DETAIL

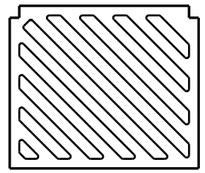


NOTE: CURB BOX ADJUSTABLE 4" TO 9"

NOTE:
GRATE IS REVERSIBLE.



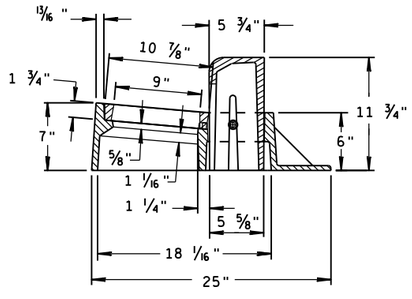
TYPE "A"

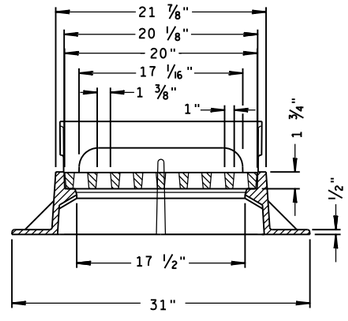


SPECIAL GRATE FOR TYPE "A" COVER

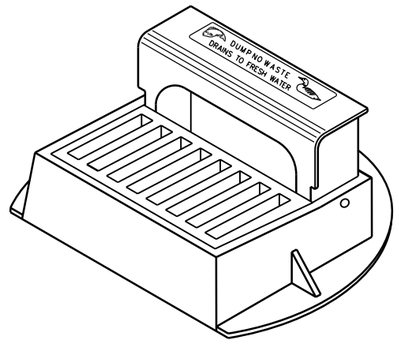
(MEASURES 19 3/4" X 17" X 1 7/8")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)





TYPE "Z"



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.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

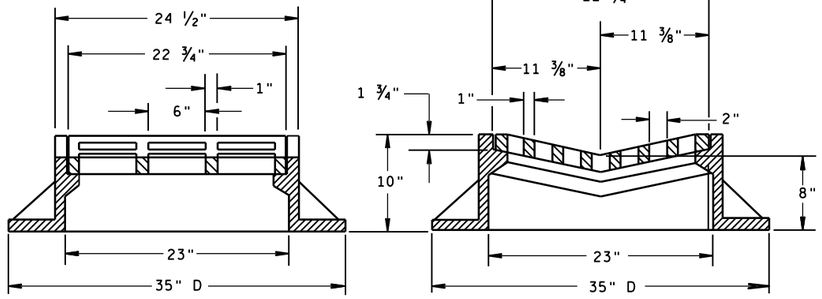
11-27-13 — DATE

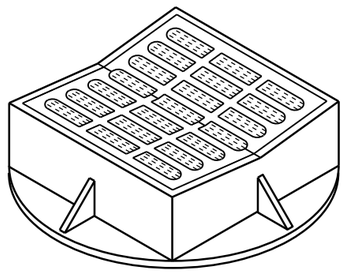
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER

FHWA

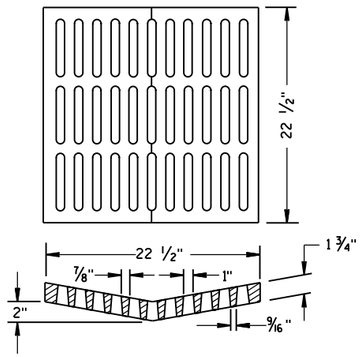
6

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



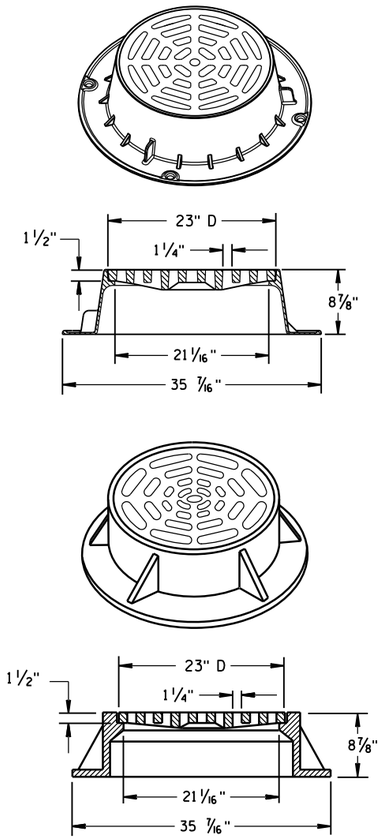


TYPE "B"



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"

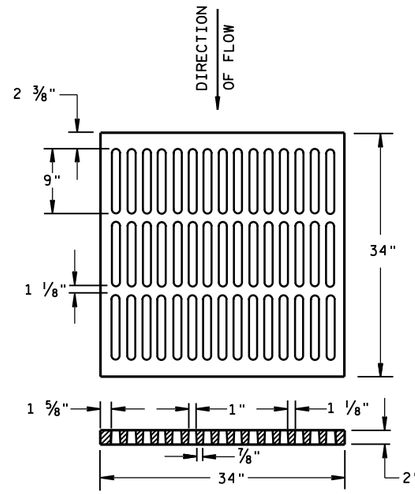
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

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

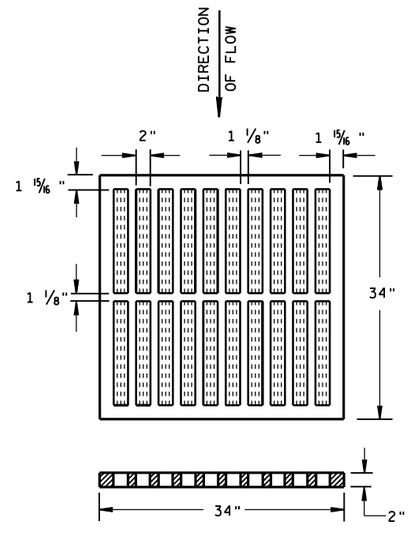
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



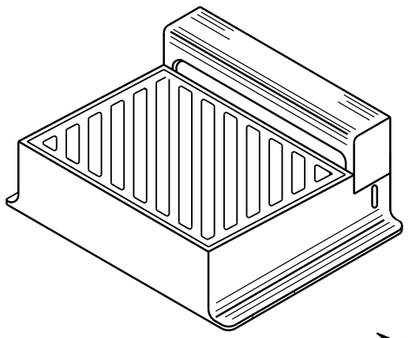
ALTERNATIVE TYPE "MS"

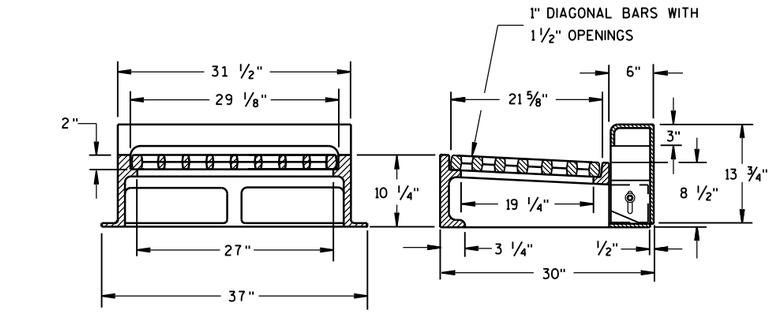
USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE



TYPE "MS"

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





NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

DIRECTION OF FLOW

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

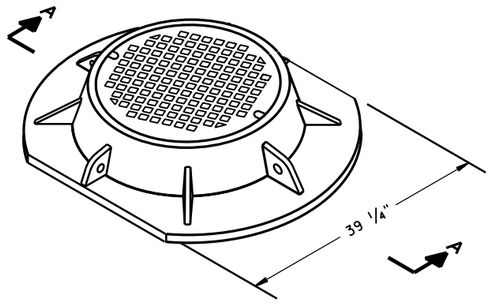
INLET COVERS
TYPE B, B-A, C, MS, MS-A, & WM

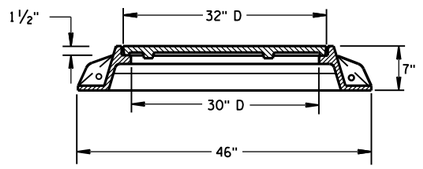
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

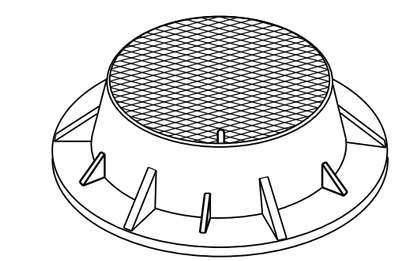
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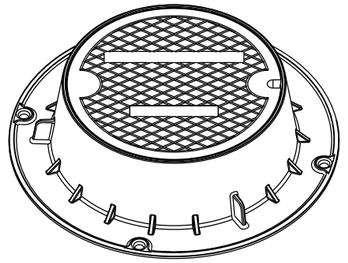
S.D.D. 8 A 5-19b

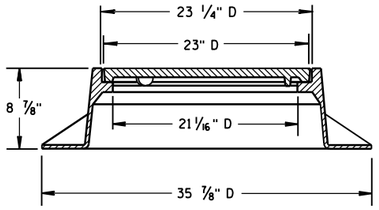


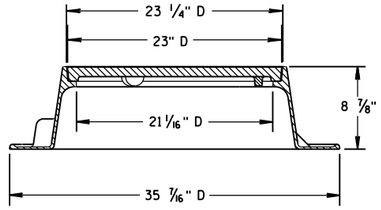


SECTION A-A
TYPE "K"









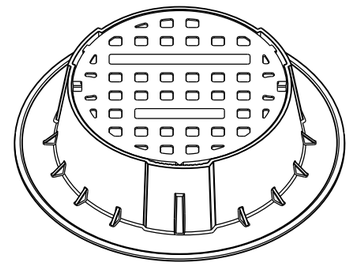
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

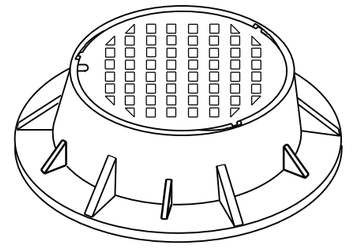
GENERAL NOTES

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

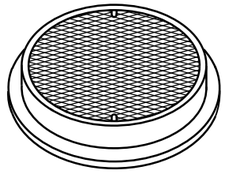
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

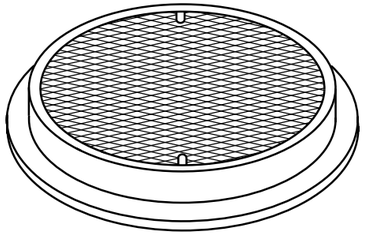
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

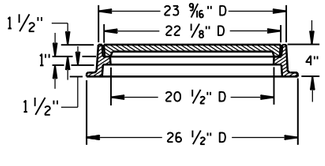




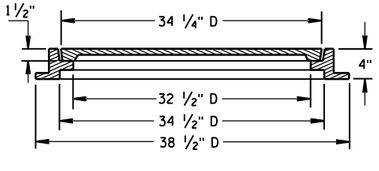
TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE



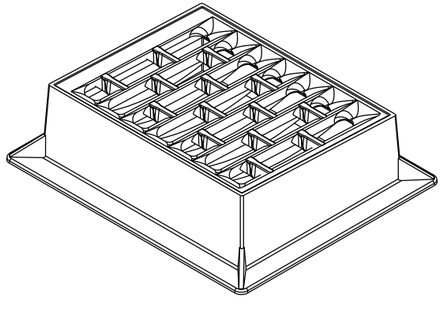


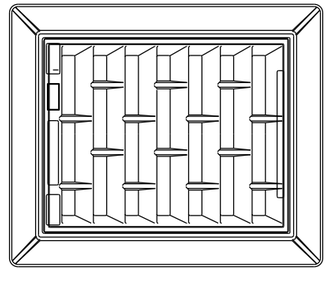


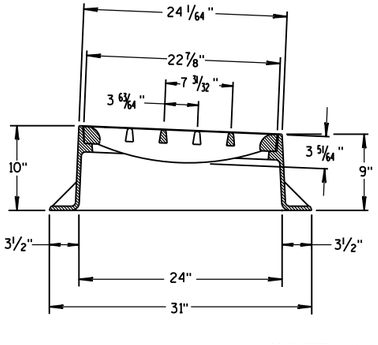
TYPE "L"

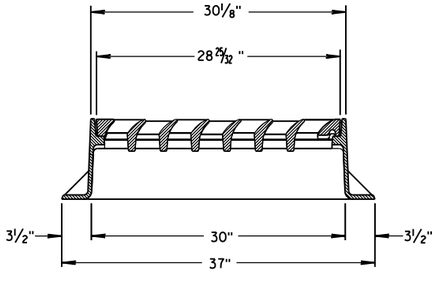


TYPE "M"









INLET COVER TYPE "BW"

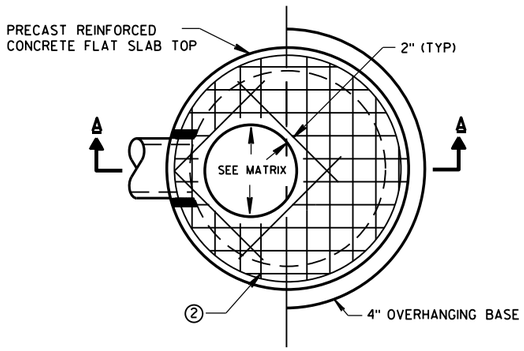
INLET COVER TYPE BW
MANHOLE COVERS, TYPE K, J, J-S, L & M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

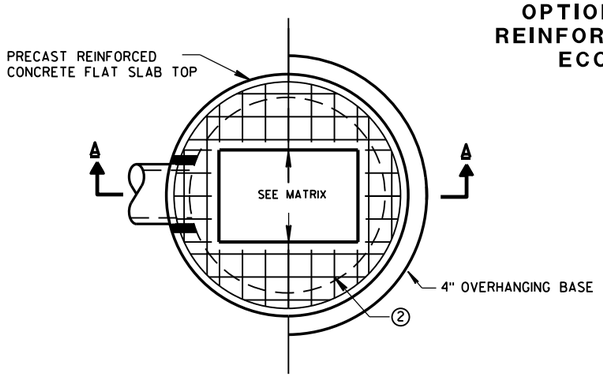
APPROVED
11/27/2013
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

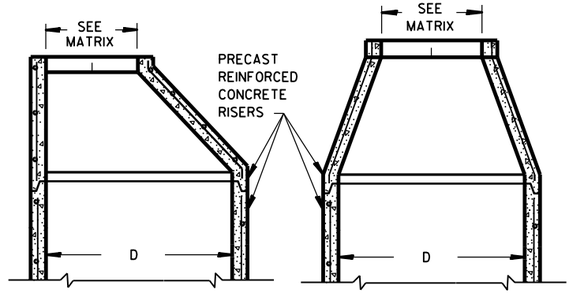
S.D.D. 8 A 5-19d



PLAN VIEW CIRCULAR OPENING

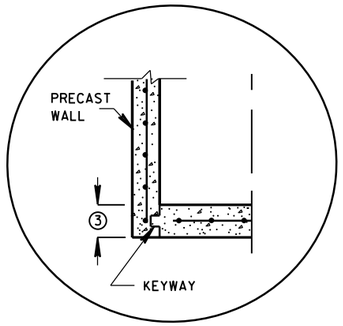


PLAN VIEW RECTANGULAR OPENING

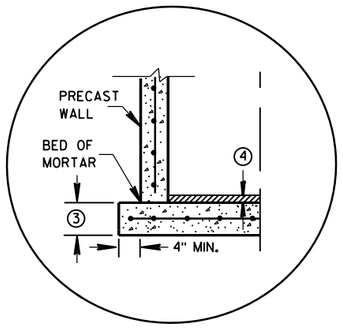


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

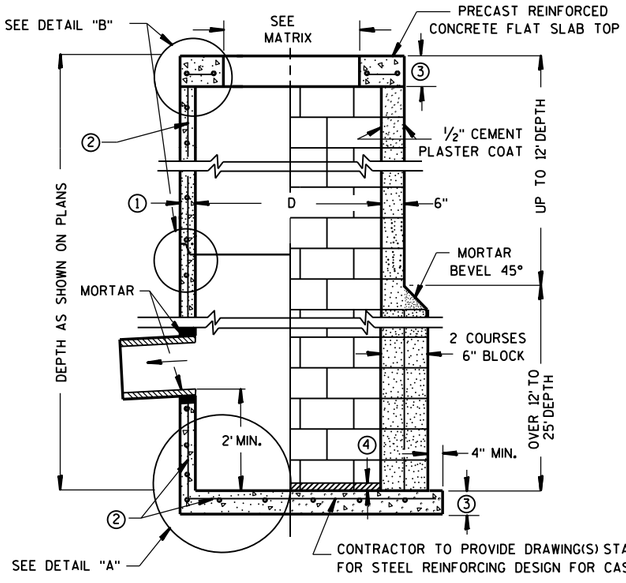


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"

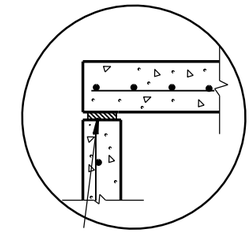


CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES

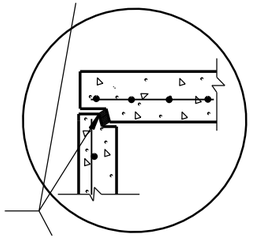
SECTION A-A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

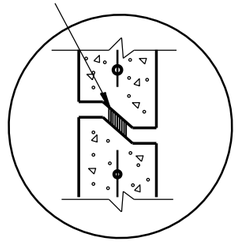


TOP WITH PLAIN END JOINT



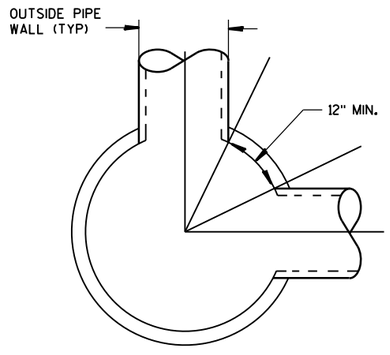
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"



DETAIL "C"

GENERAL NOTES

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

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

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

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

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

PRECAST REINFORCED CONCRETE CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES. THE 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 1/2 INCH AND MEET THE REQUIREMENTS OF ASTM A615.

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

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

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

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

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

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

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

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

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

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

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

CATCH BASIN COVER OPENING MATRIX

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

PIPE MATRIX

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

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

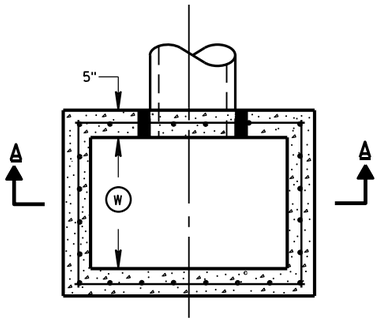
CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

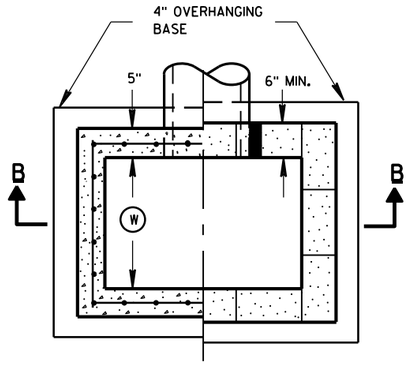
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6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

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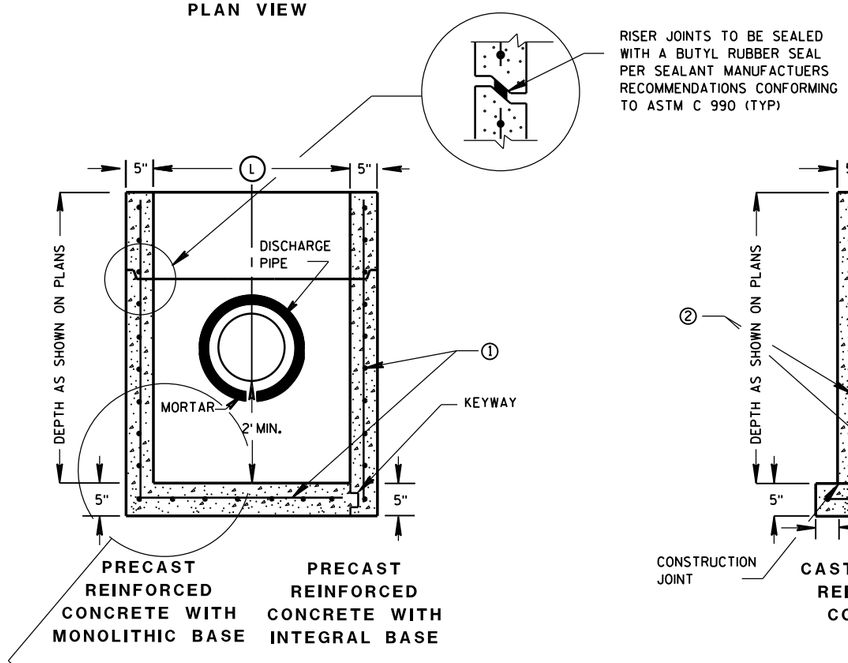
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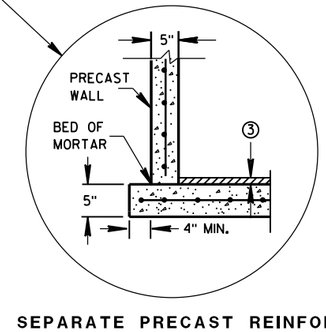
PLAN VIEW



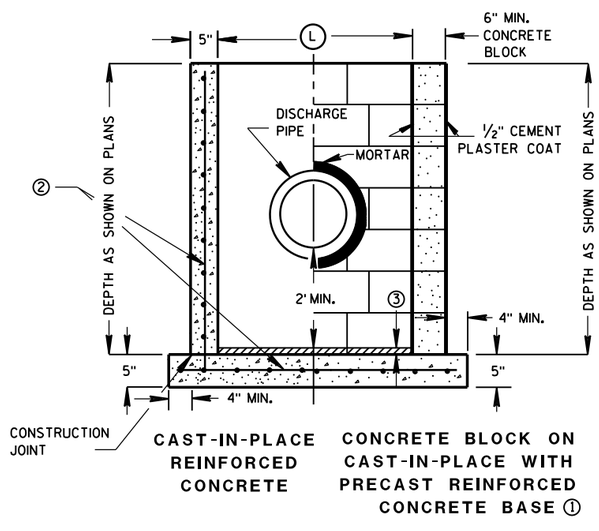
PLAN VIEW



SECTION A-A



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION



SECTION B-B

GENERAL NOTES

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

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

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

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

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

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF 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" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

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

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

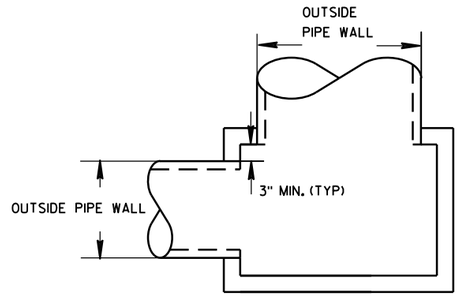
③ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2' SUMP MEASURED FROM TOP OF KEY.

CATCH BASIN COVER MATRIX

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

PIPE MATRIX

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



DETAIL "A"

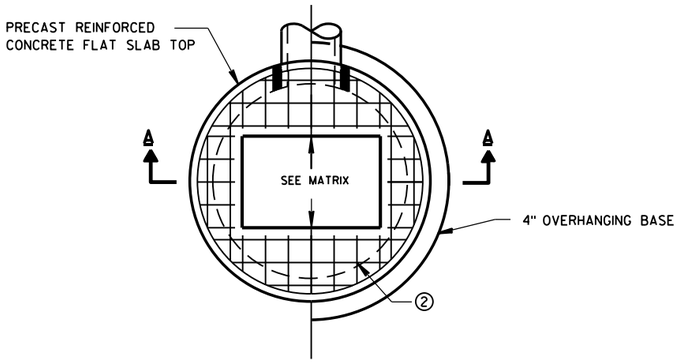
CATCH BASINS 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

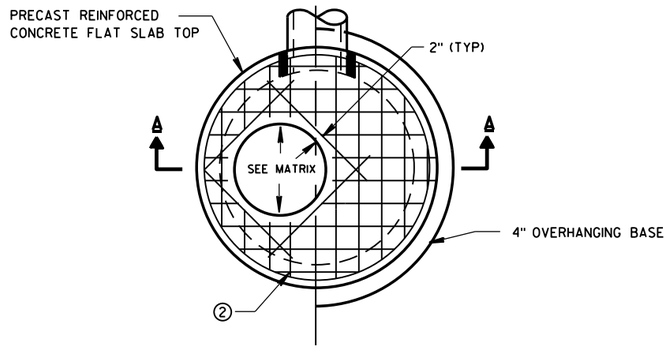
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FHWA

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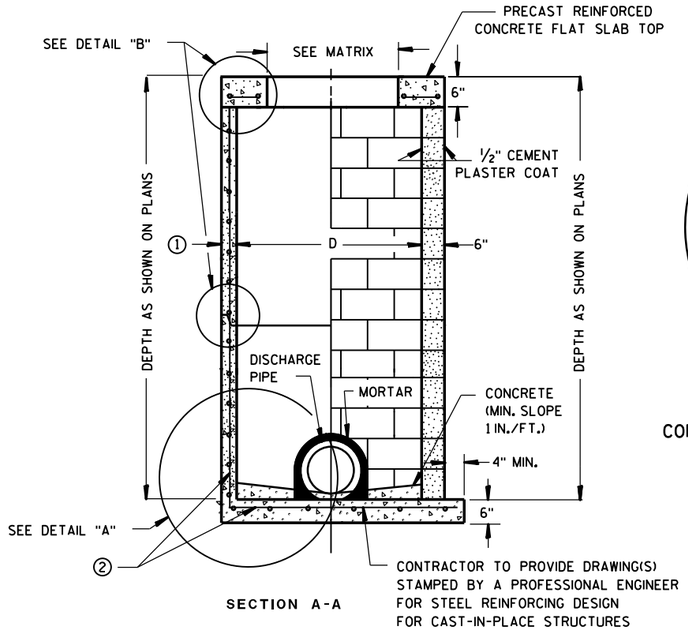
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PLAN VIEW RECTANGULAR OPENING



PLAN VIEW CIRCULAR OPENING

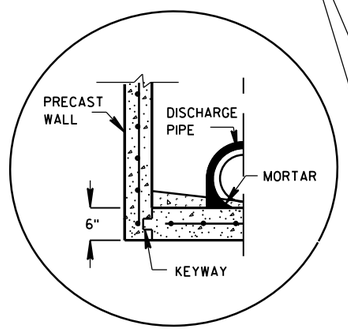


SECTION A-A

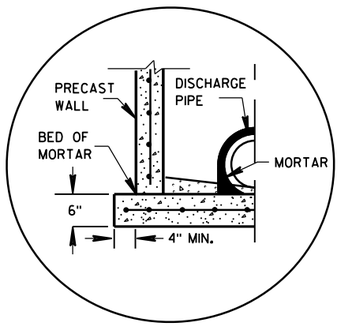
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

CIRCULAR INLETS W/ FLAT TOP

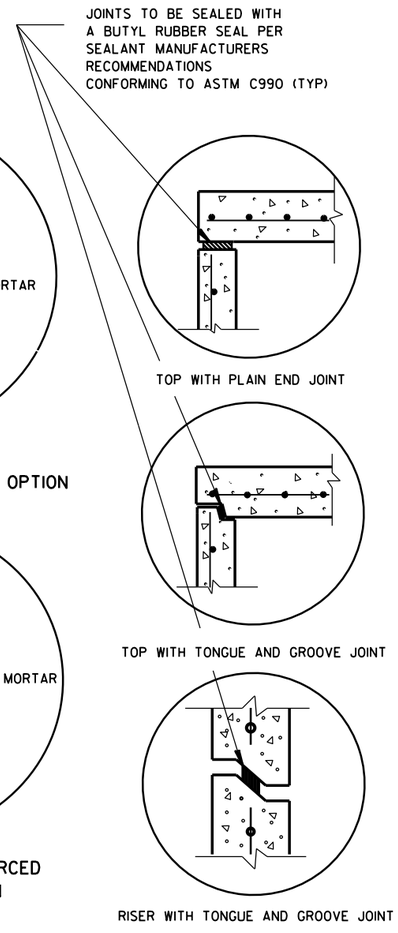


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "B"

GENERAL NOTES

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

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

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

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

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF 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.

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

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

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

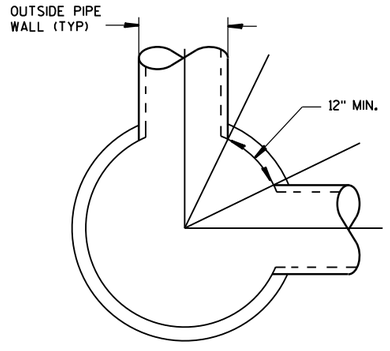
FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4-IN FOR 3-FT DIAMETER AND 5-IN FOR 4-FT DIAMETER PRECAST INLETS.

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

INLET COVER OPENING MATRIX

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



DETAIL "C"

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18

INLETS 3-FT AND 4-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

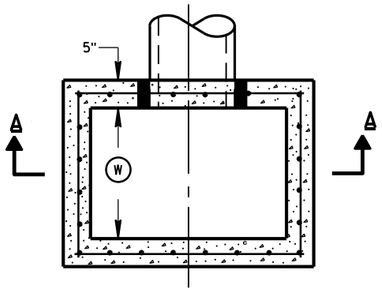
APPROVED
6/5/2012
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

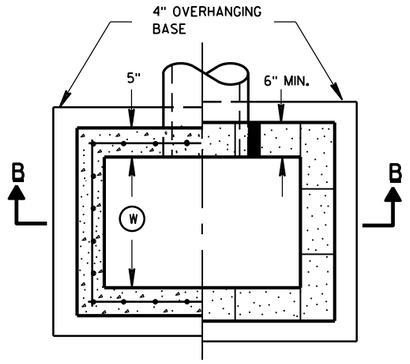
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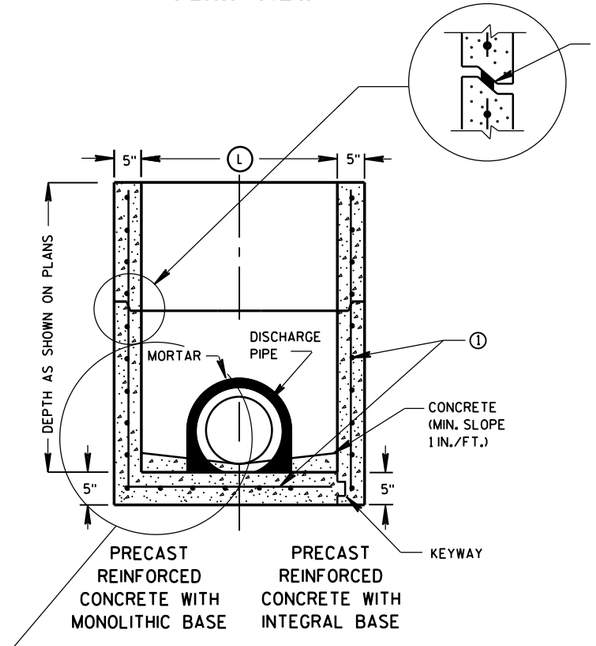
INLETS 3-FT AND 4-FT DIAMETER



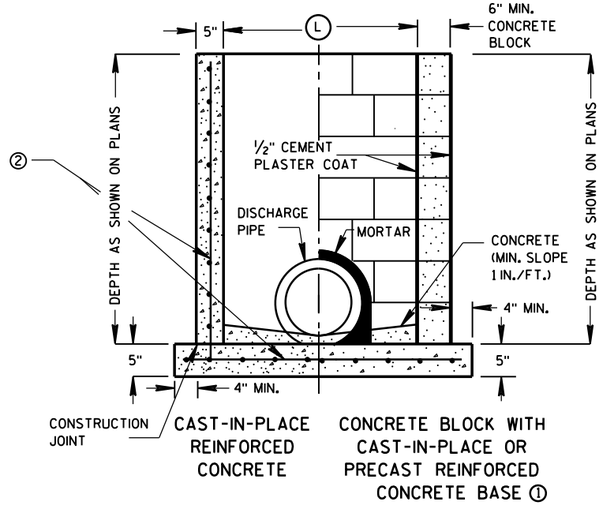
PLAN VIEW



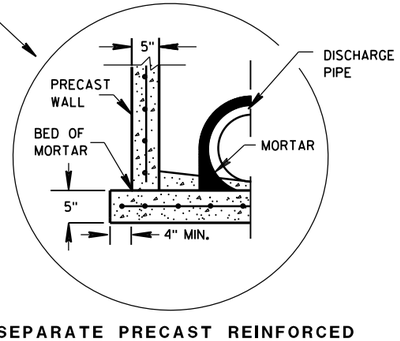
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

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

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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.

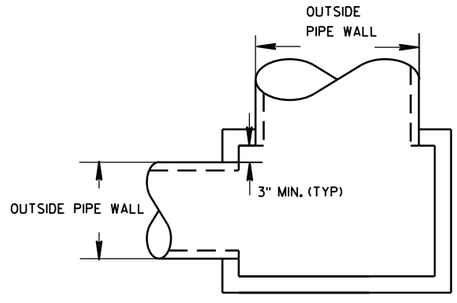
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

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



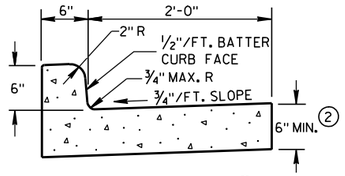
DETAIL "A"

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

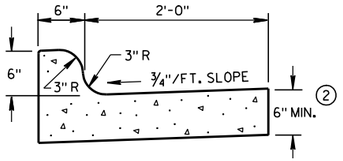
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

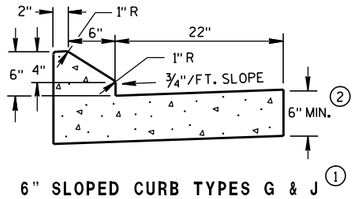
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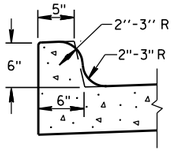
TYPES A & D (1)



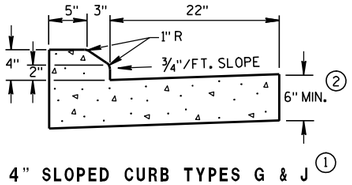
TYPES K & L (1)



6" SLOPED CURB TYPES G & J (1)

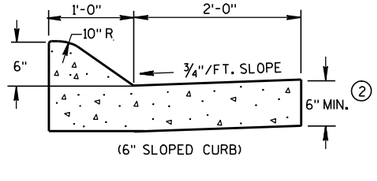


OPTIONAL CURB SHAPE FOR TYPES K & L (1)

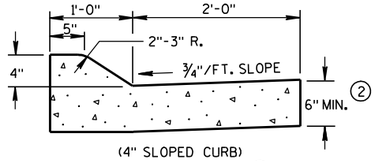


4" SLOPED CURB TYPES G & J (1)

CONCRETE CURB & GUTTER 30"

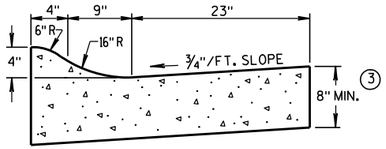


(6" SLOPED CURB)



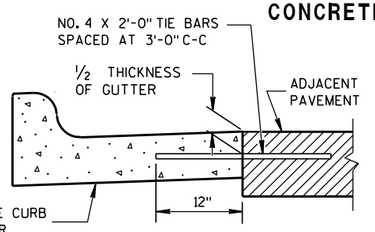
(4" SLOPED CURB)

TYPES A & D (1)

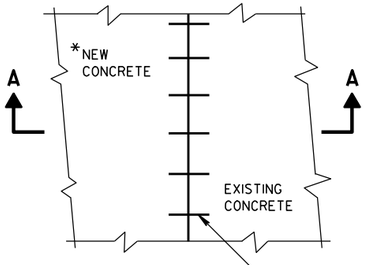


4" SLOPED CURB TYPES R & T (1) (4)

CONCRETE CURB & GUTTER 36"

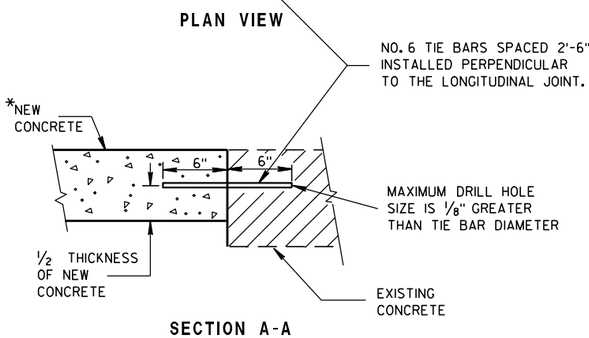


TYPICAL TIE BAR LOCATION (1)



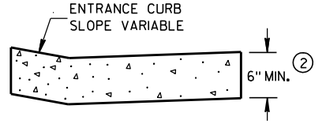
PLAN VIEW

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



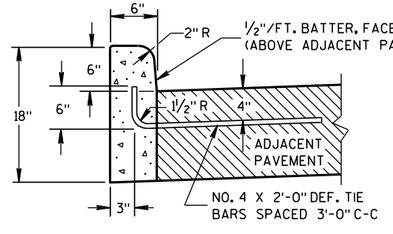
SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT



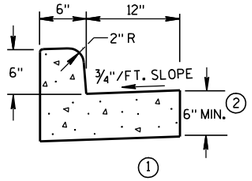
DRIVEWAY ENTRANCE CURB

(WHEN DIRECTED BY THE ENGINEER)



(1)

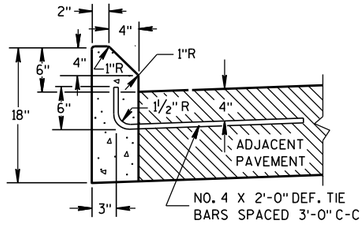
TYPES A & D



(1)

TYPES A & D

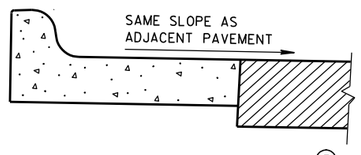
CONCRETE CURB & GUTTER 18"



(1)

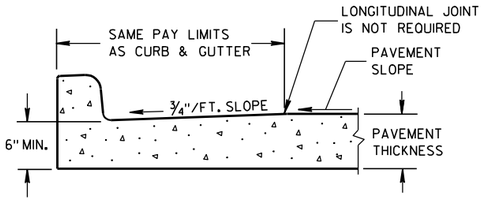
TYPES G & J

CONCRETE CURB

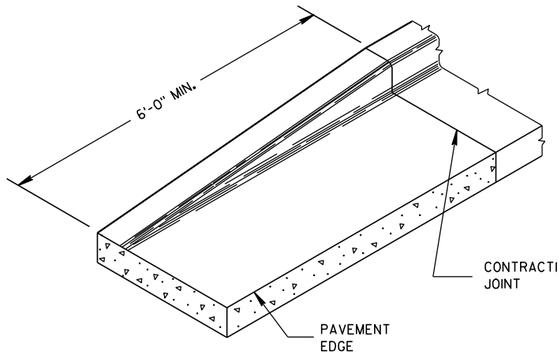


REVERSE SLOPE GUTTER (5)

(TYPICAL FOR ALL CURB & GUTTER TYPES)



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

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.

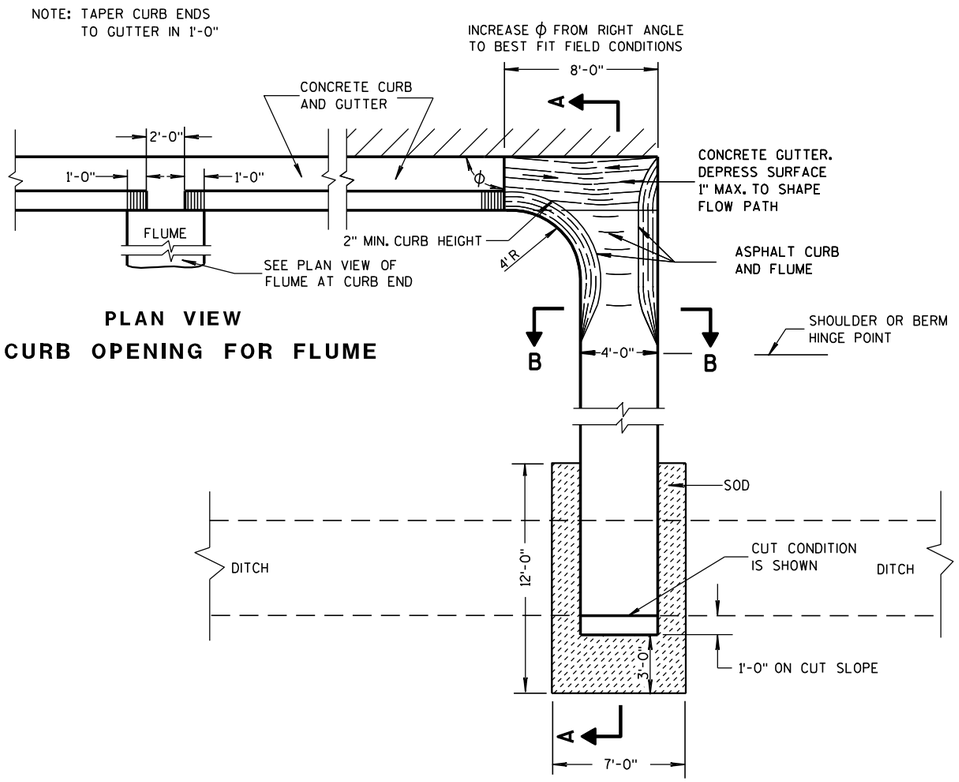
(5) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

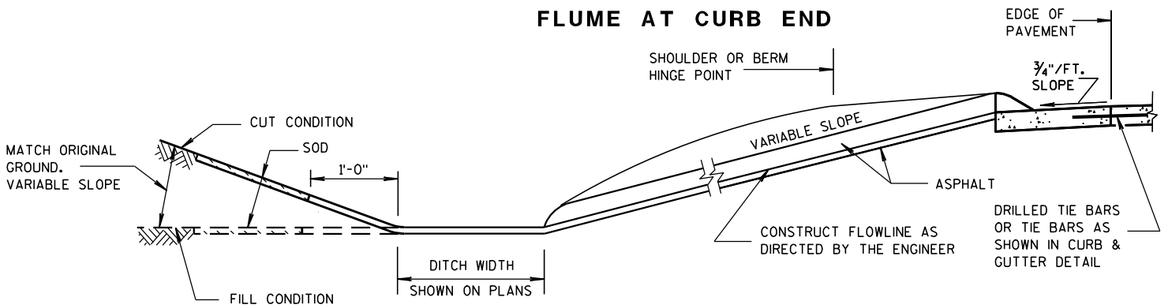
APPROVED
9/4/08 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
FHWA

ASPHALTIC FLUME

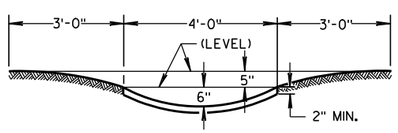


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

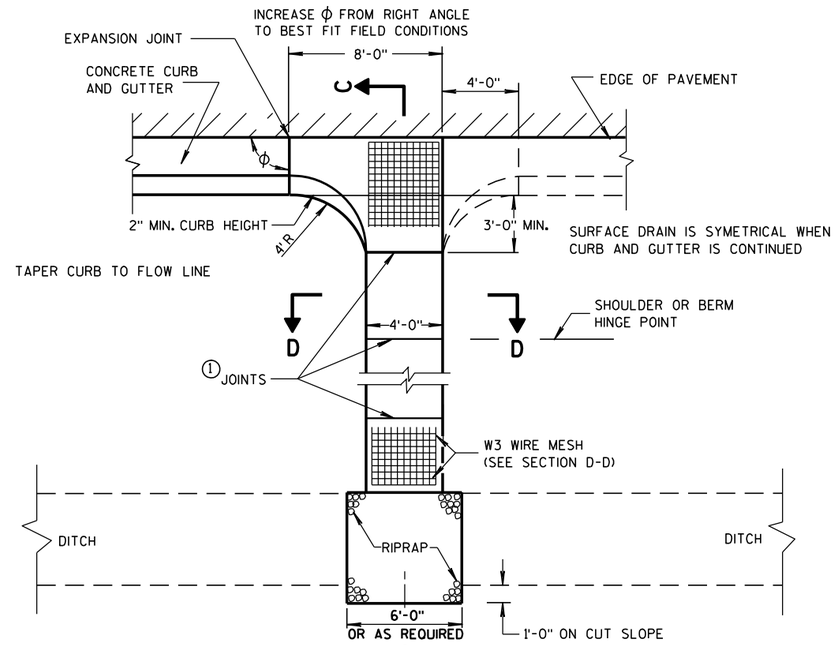
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

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

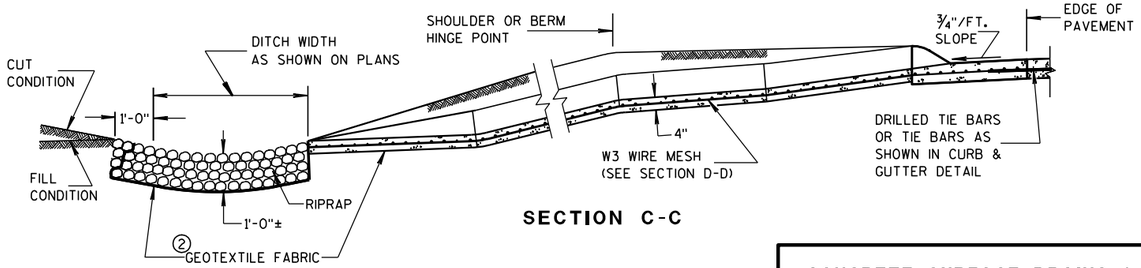
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

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

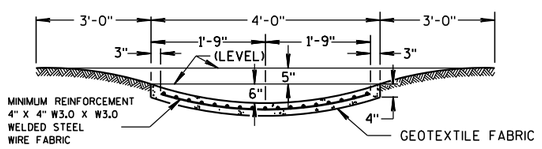
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

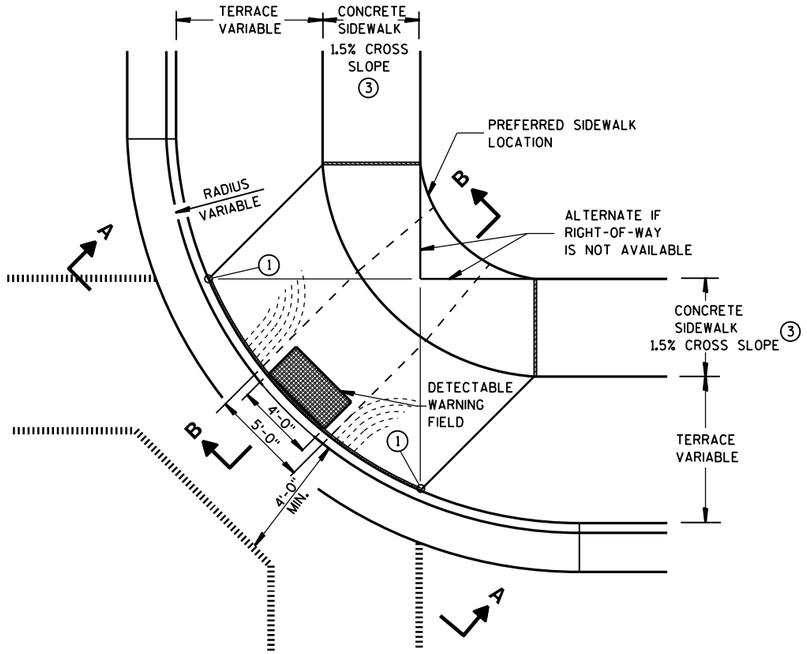
FHWA

6

S.D.D. 8 D 4-5

6

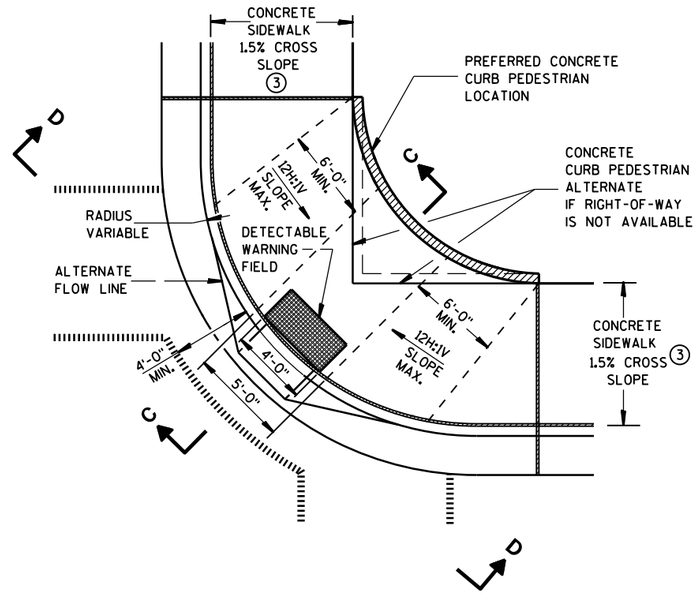
S.D.D. 8 D 4-5



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.

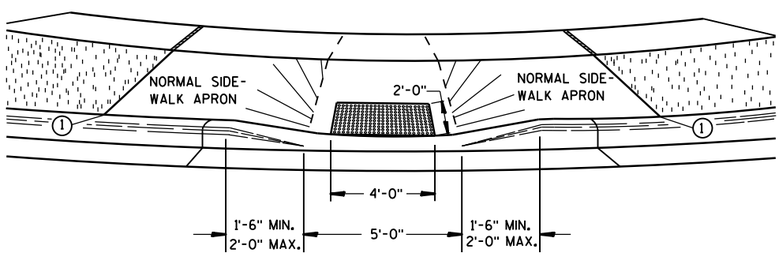
① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.

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.

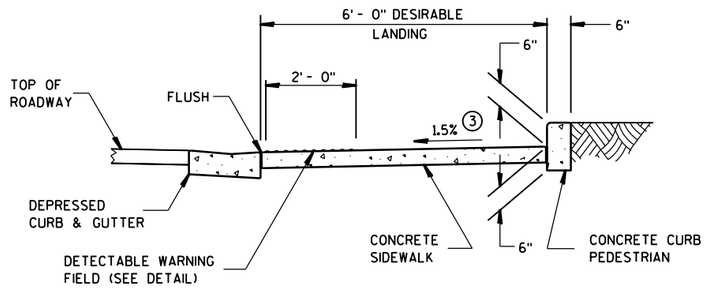
③ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

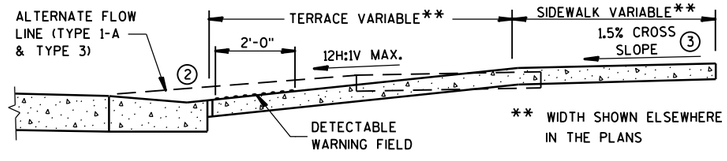
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



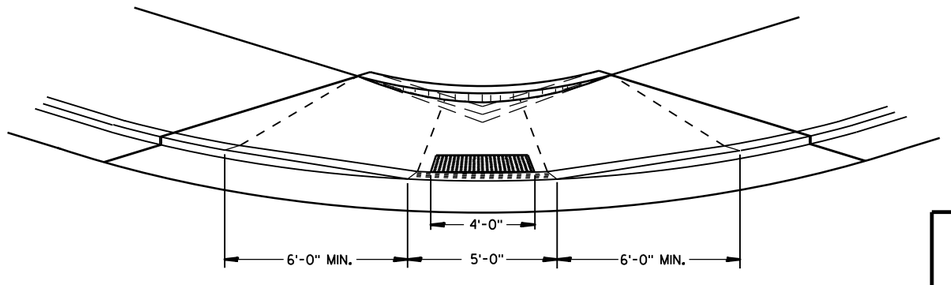
VIEW A-A



SECTION C-C



SECTION B-B



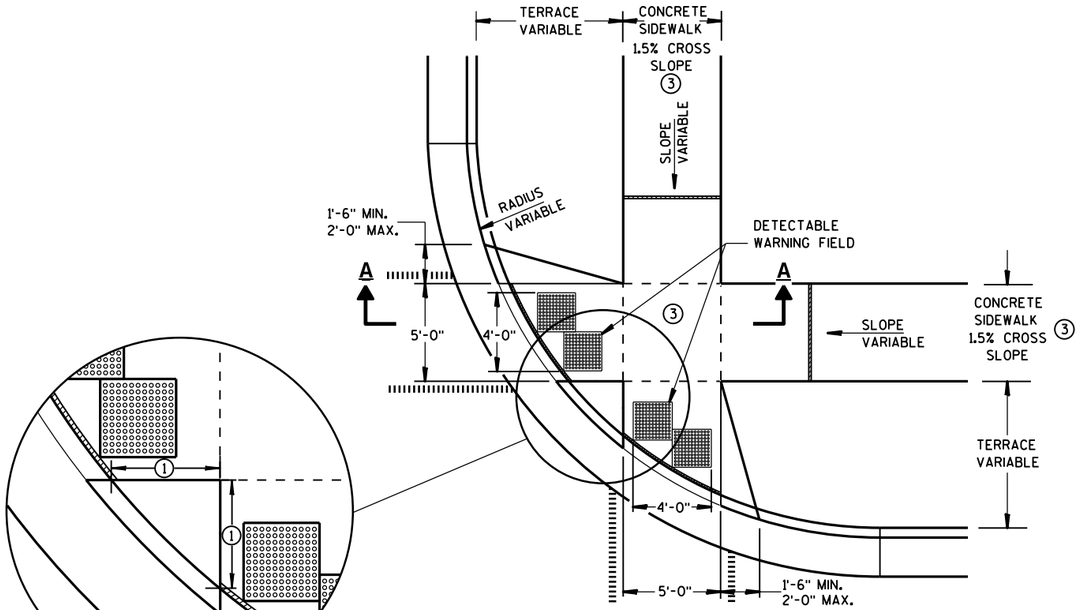
VIEW D-D

CURB RAMPS TYPES 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

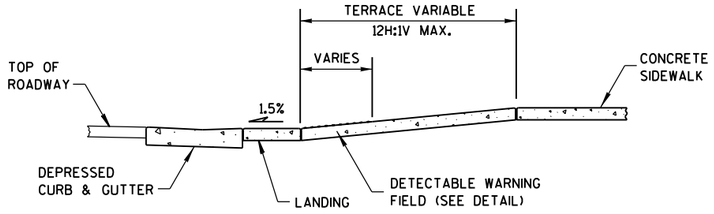
S.D.D. 8 D 5-15a



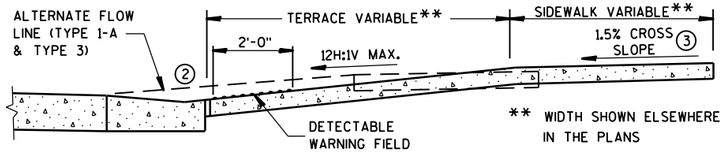
PLAN VIEW

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.

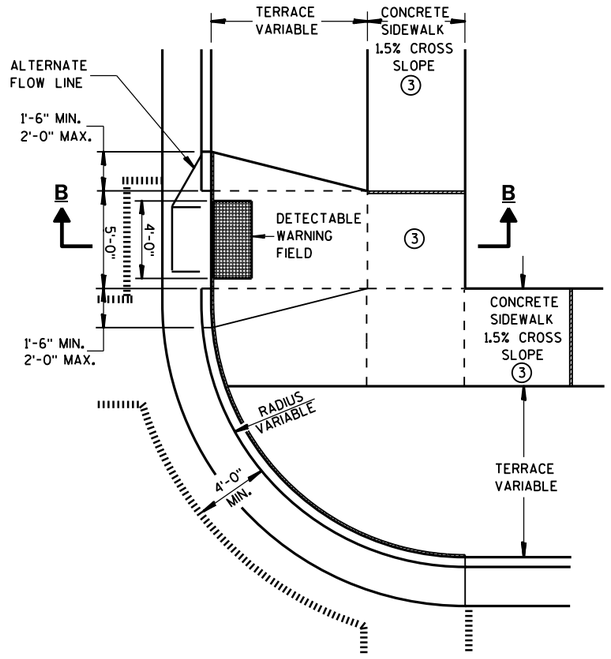
① WHEN THIS DISTANCE IS LESS THAN 6'-0" IT MAY BE DIFFICULT TO ACHIEVE A 12H:1V SLOPE, OR FLATTER, ON THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 12H:1V SLOPE, OR FLATTER, ON RAMP. 2" MINIMUM CURB HEIGHT.

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

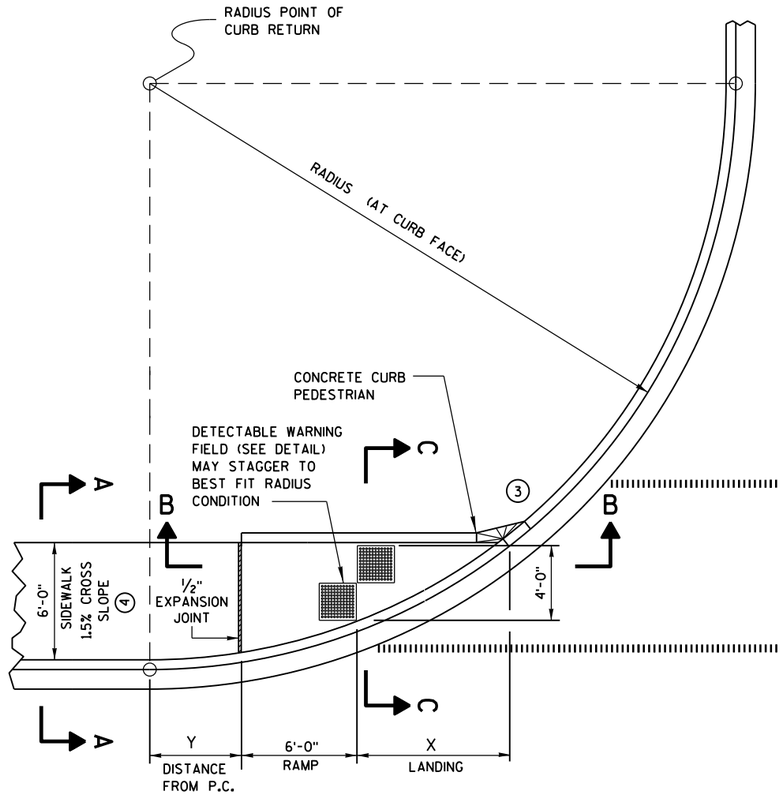
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS TYPES 2 AND 3

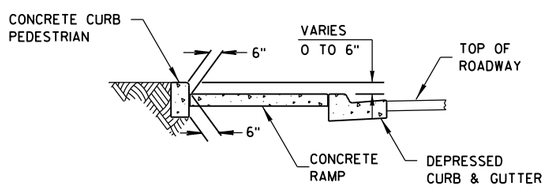
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

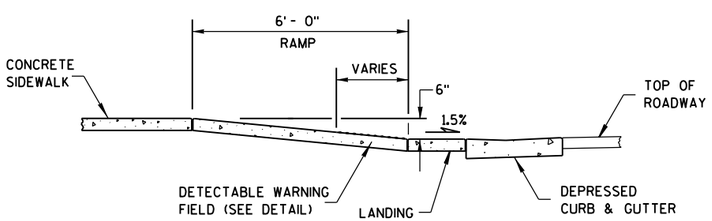
S.D.D. 8 D 5-15b



CURB RAMP TYPE 4A
PLAN VIEW



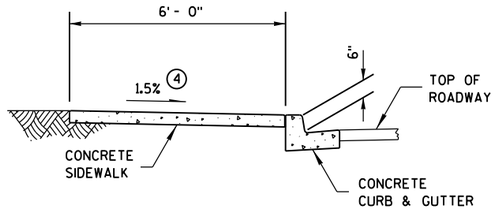
SECTION C-C FOR TYPE 4A



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

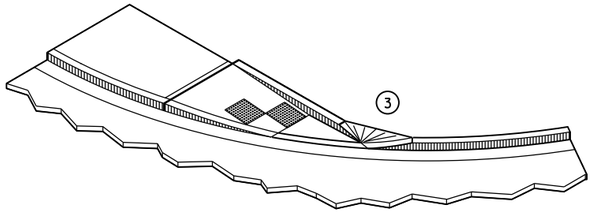
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

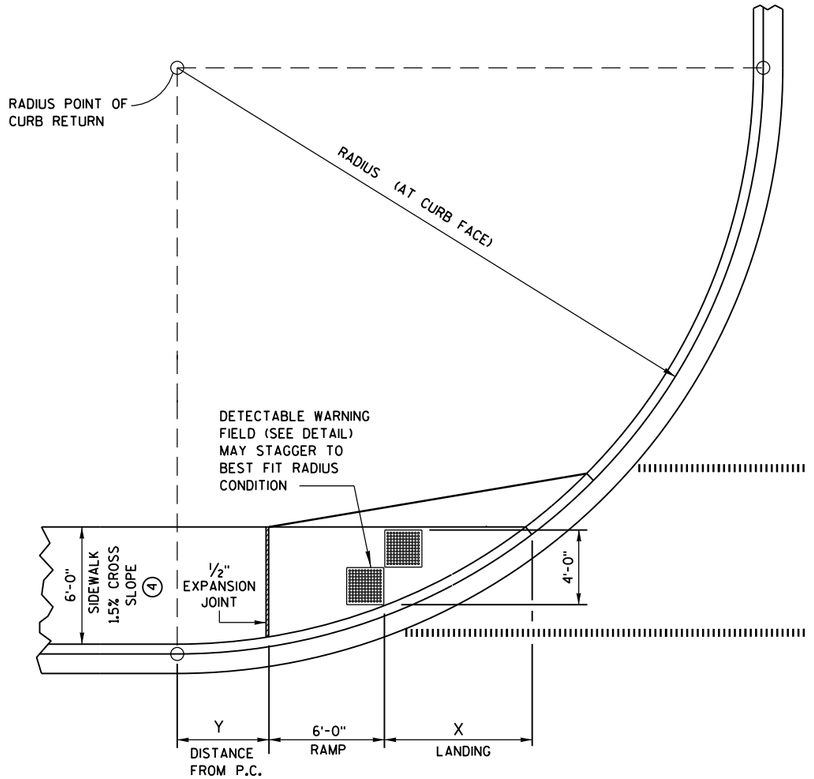
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

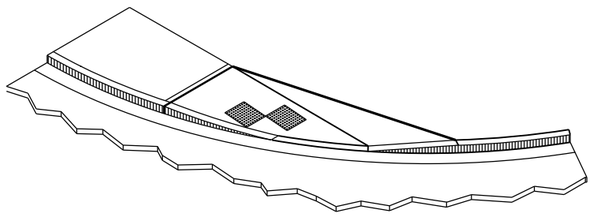
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



ISOMETRIC VIEW FOR TYPE 4A



CURB RAMP TYPE 4A1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

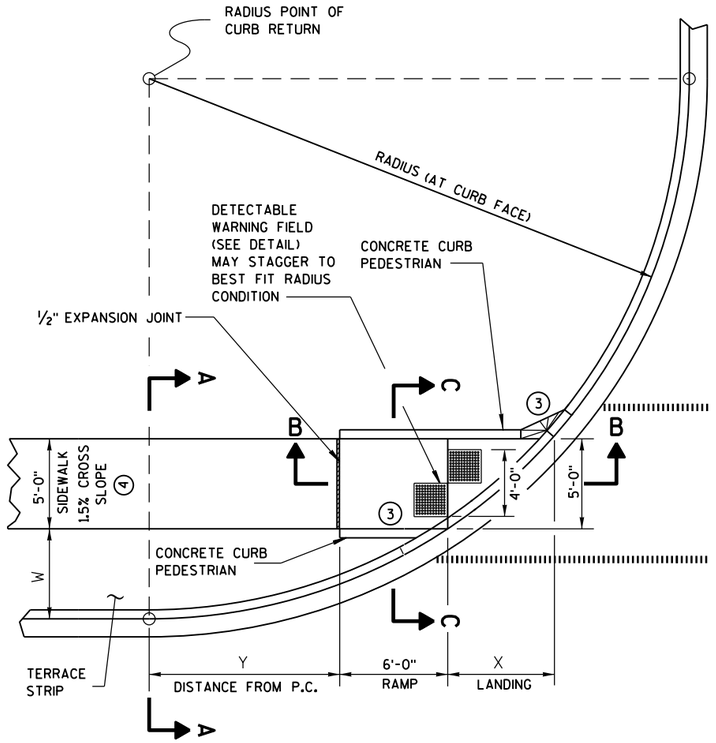
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

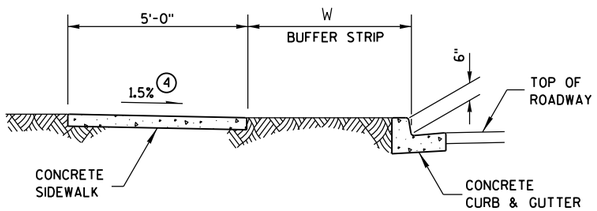
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

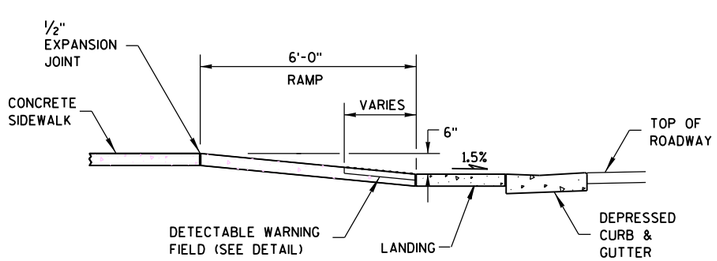
S.D.D. 8 D 5-15c



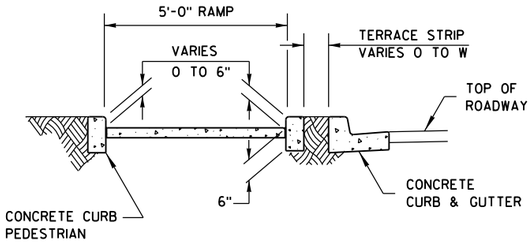
CURB RAMP TYPE 4B
PLAN VIEW



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

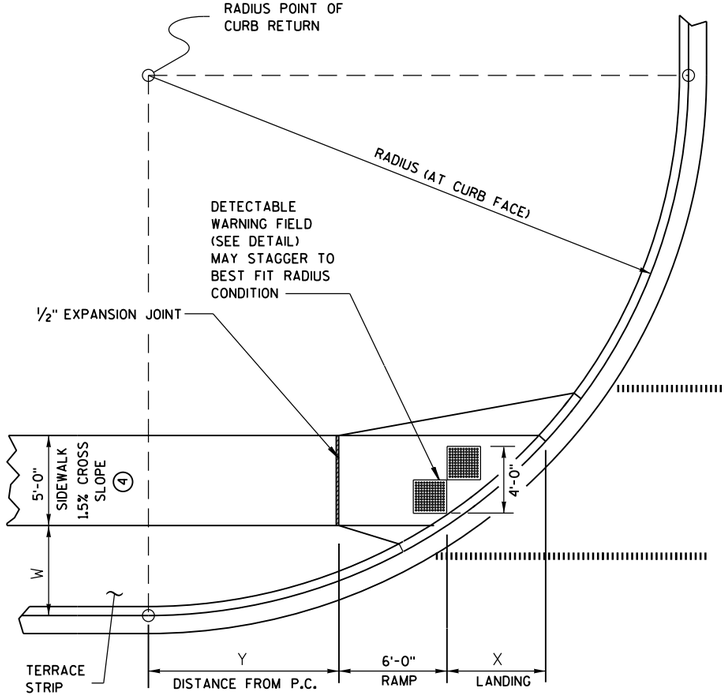
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

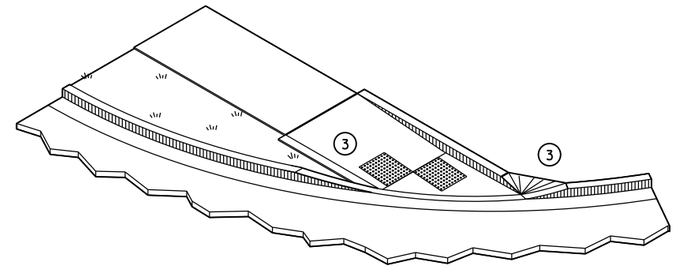
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

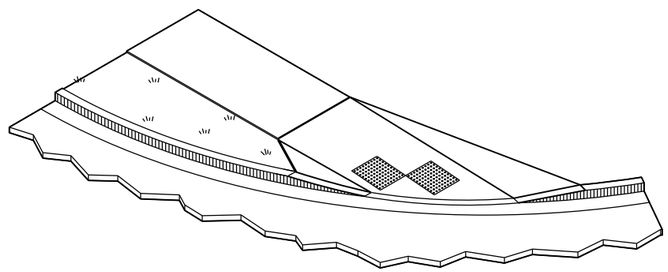
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



CURB RAMP TYPE 4B1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4B



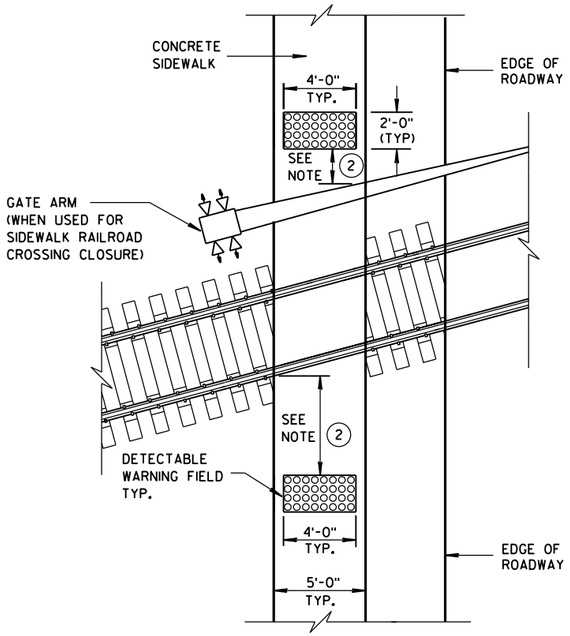
ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS TYPE 4B AND 4B1

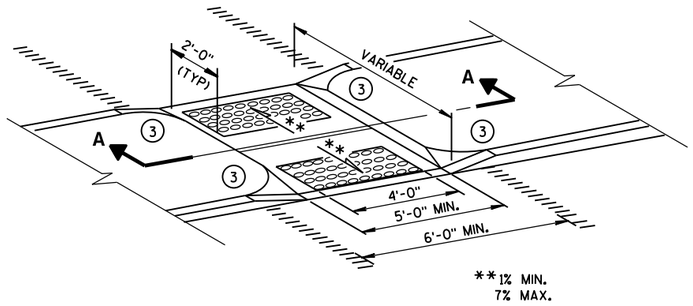
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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%.

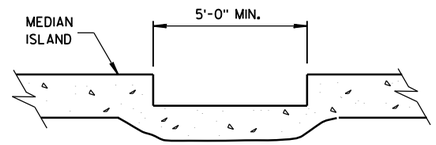
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

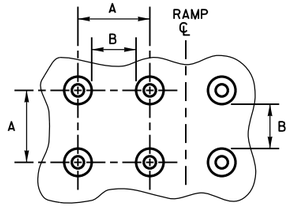
(2) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET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



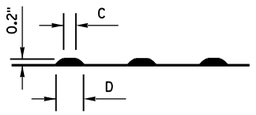
SECTION A-A



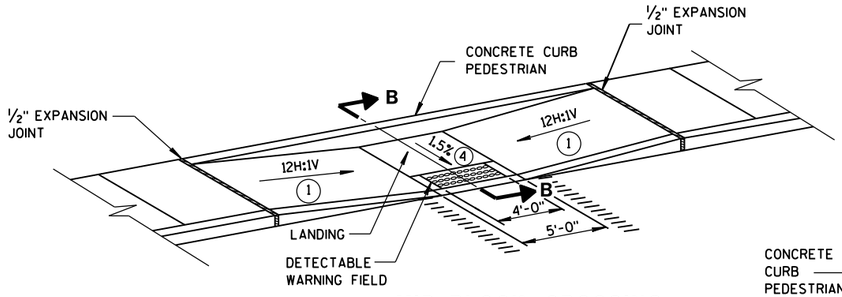
PLAN VIEW

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

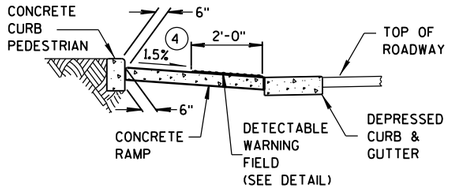
* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



ELEVATION VIEW

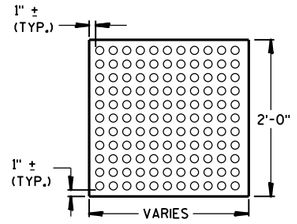


MID-BLOCK CROSSING
TYPE 7A



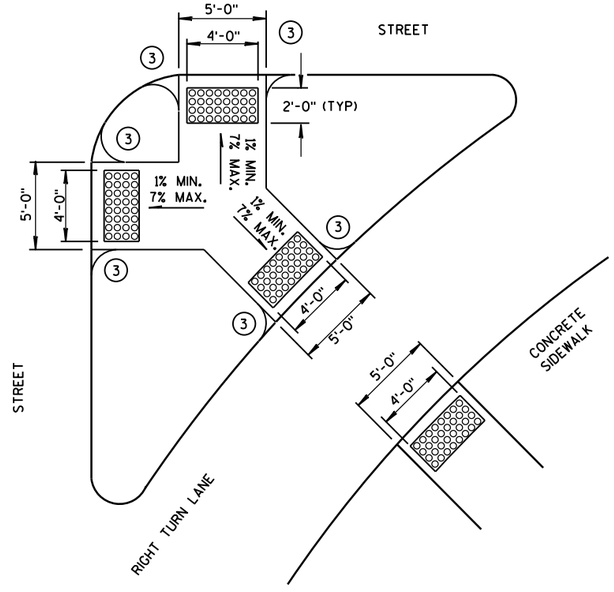
SECTION B-B

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL

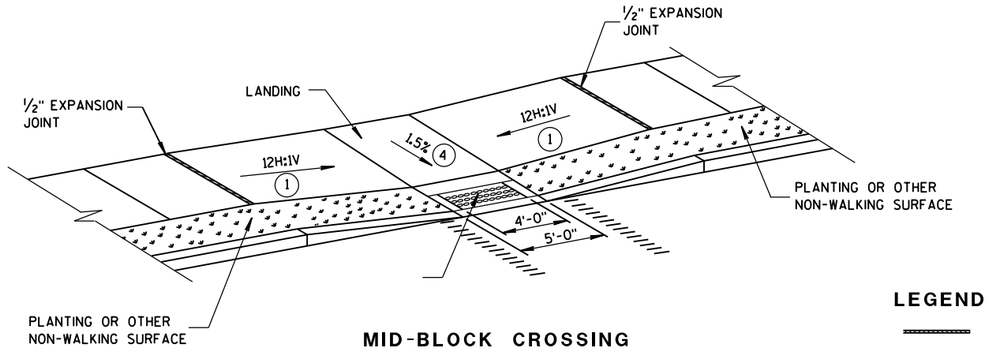


PLAN VIEW

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)

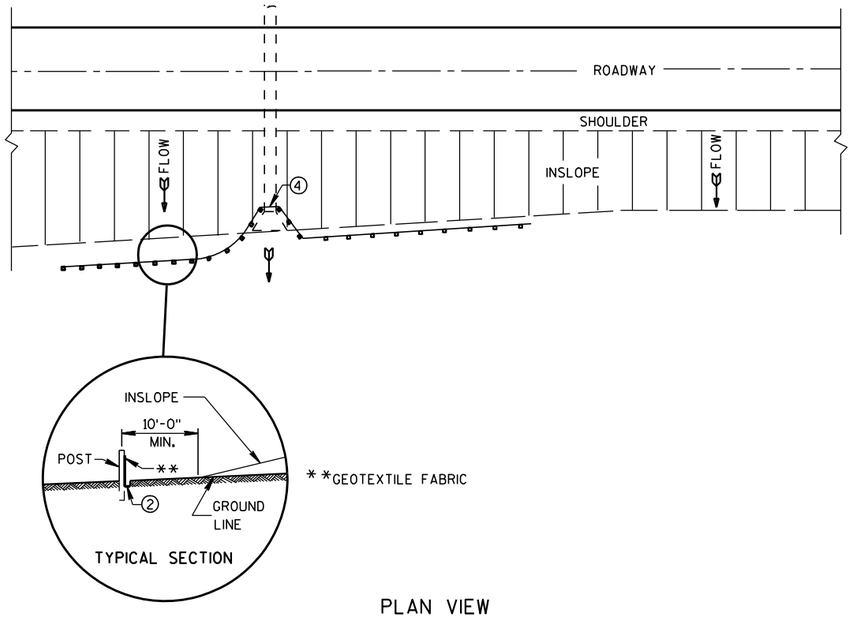
CURB RAMPS
TYPES 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

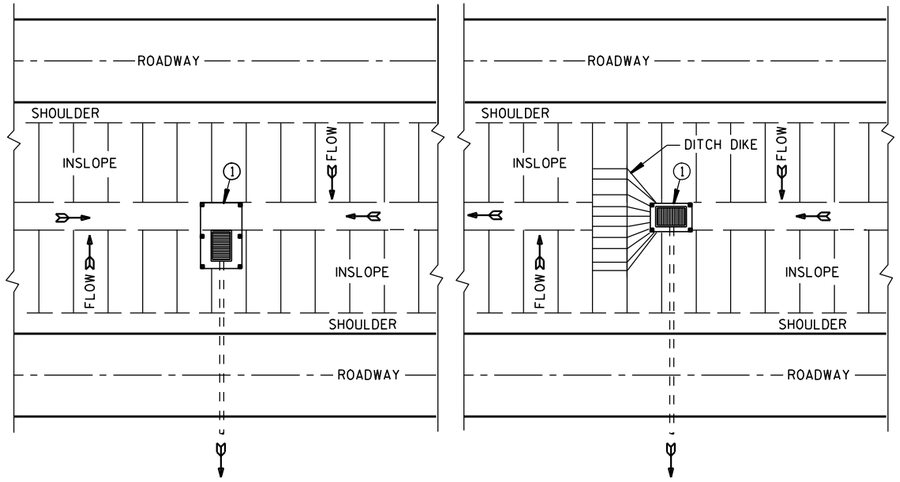
6

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



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



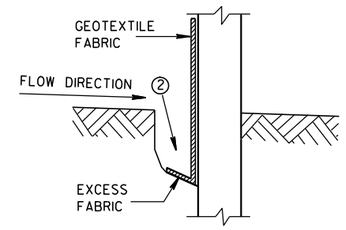
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

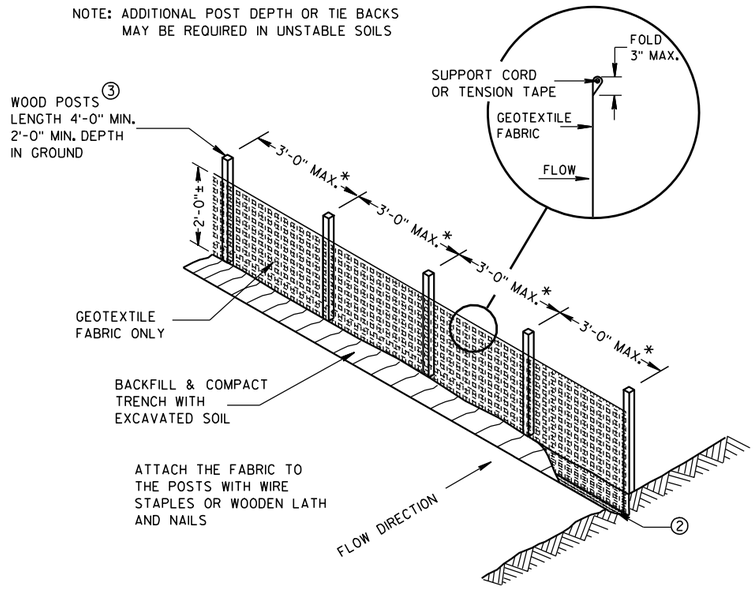
GENERAL NOTES

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

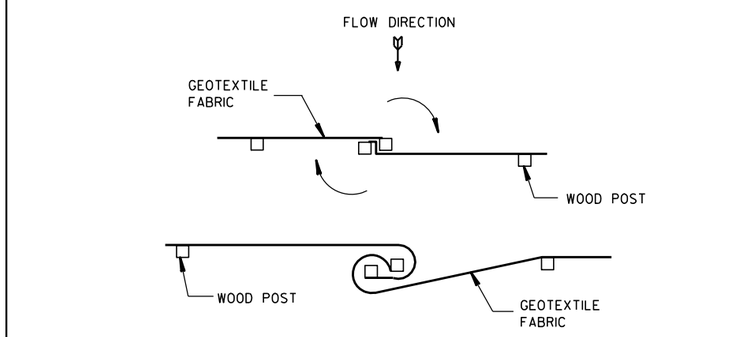
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL 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.



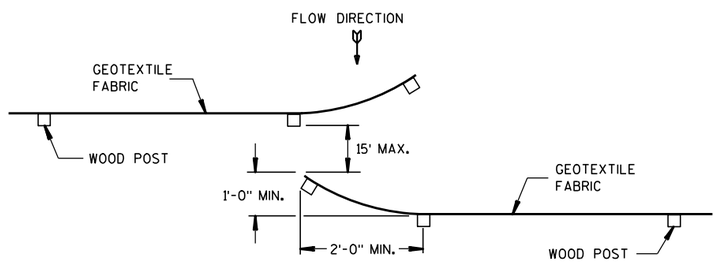
TRENCH DETAIL



SILT FENCE

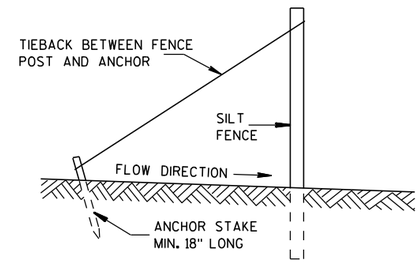


TWIST METHOD



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

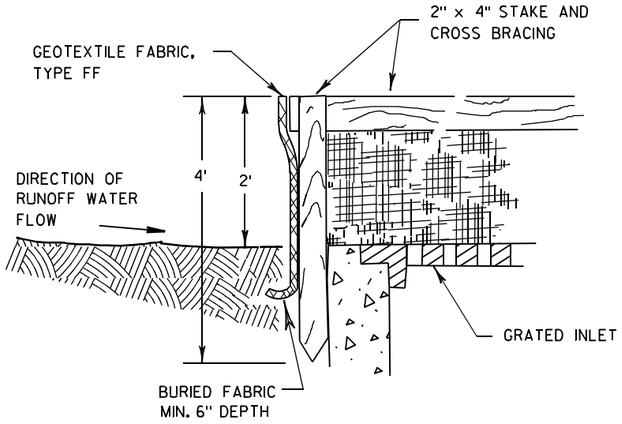
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

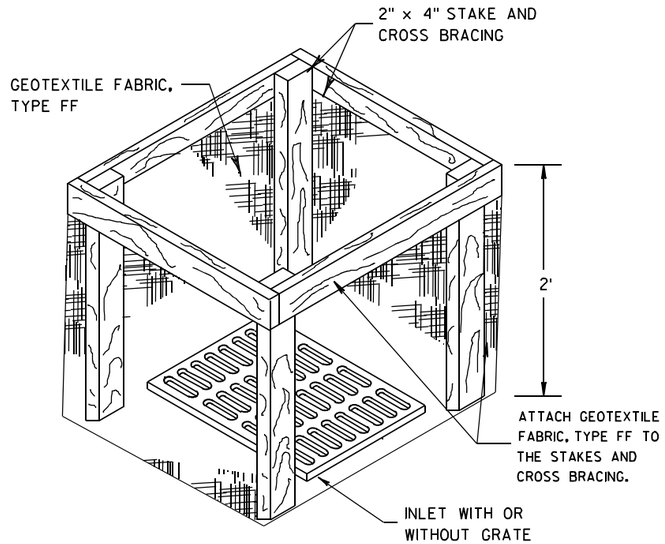
6

S.D.D. 8 E 9-6

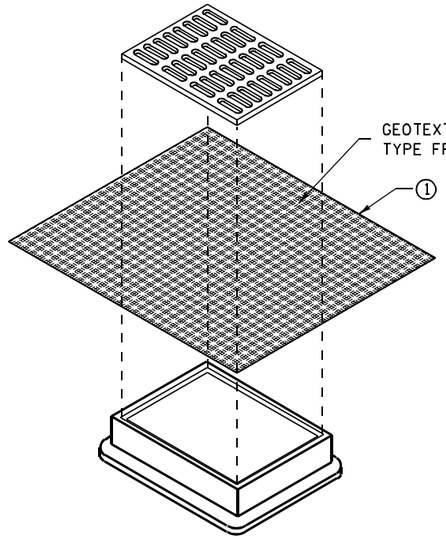
6

S.D.D. 8 E 9-6



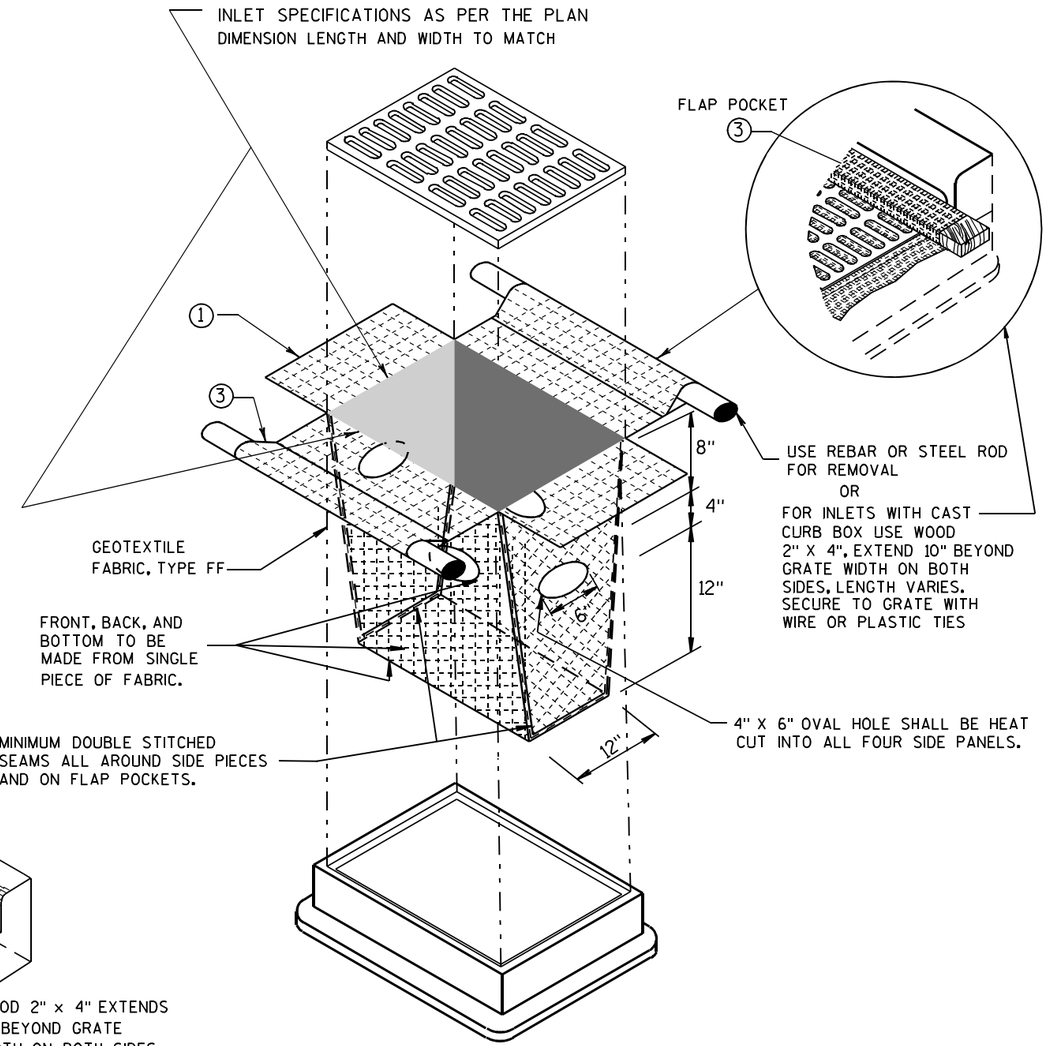


INLET PROTECTION, TYPE A



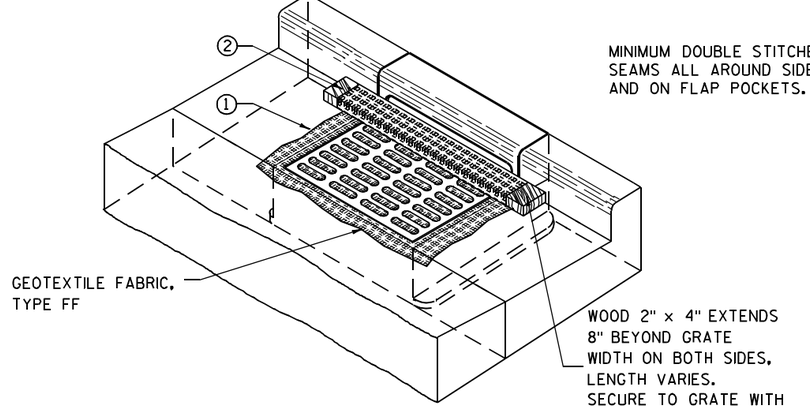
INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE D

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

GENERAL NOTES

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

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

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

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

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

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

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

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

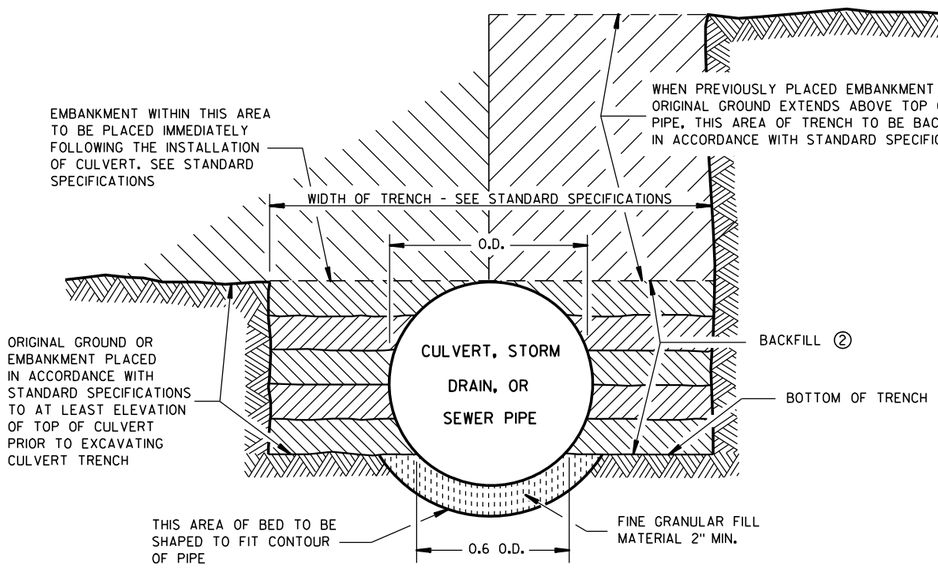
GENERAL NOTES

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

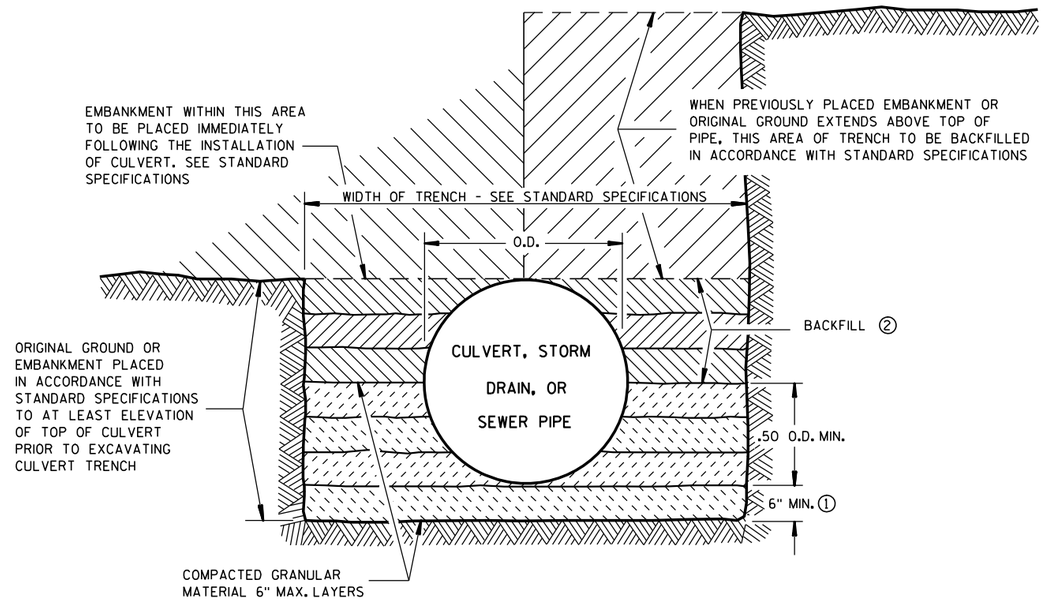
THE SHAPED SUBGRADE WITH GRANULAR FOUNDATION IS AN EQUAL ALTERNATE TO THE GRANULAR FOUNDATION EXCEPT WHERE ROCK IS ENCOUNTERED.

① WHERE ROCK, HARD PAN OR FRAGMENTED MATERIAL IS ENCOUNTERED, THE TRENCH SHALL BE EXCAVATED BELOW THE BOTTOM OF THE PIPE AN AMOUNT EQUAL TO ½ INCH PER FOOT OF PROPOSED EMBANKMENT ABOVE THE TOP OF THE PIPE, BUT NOT LESS THAN 6 INCHES.

② TRENCH SHALL BE BACKFILLED AS REQUIRED BY STANDARD SPECIFICATIONS; SECTION 520 FOR PIPE CULVERTS AND SECTION 607 FOR STORM SEWERS.



SHAPED SUBGRADE WITH GRANULAR FOUNDATION



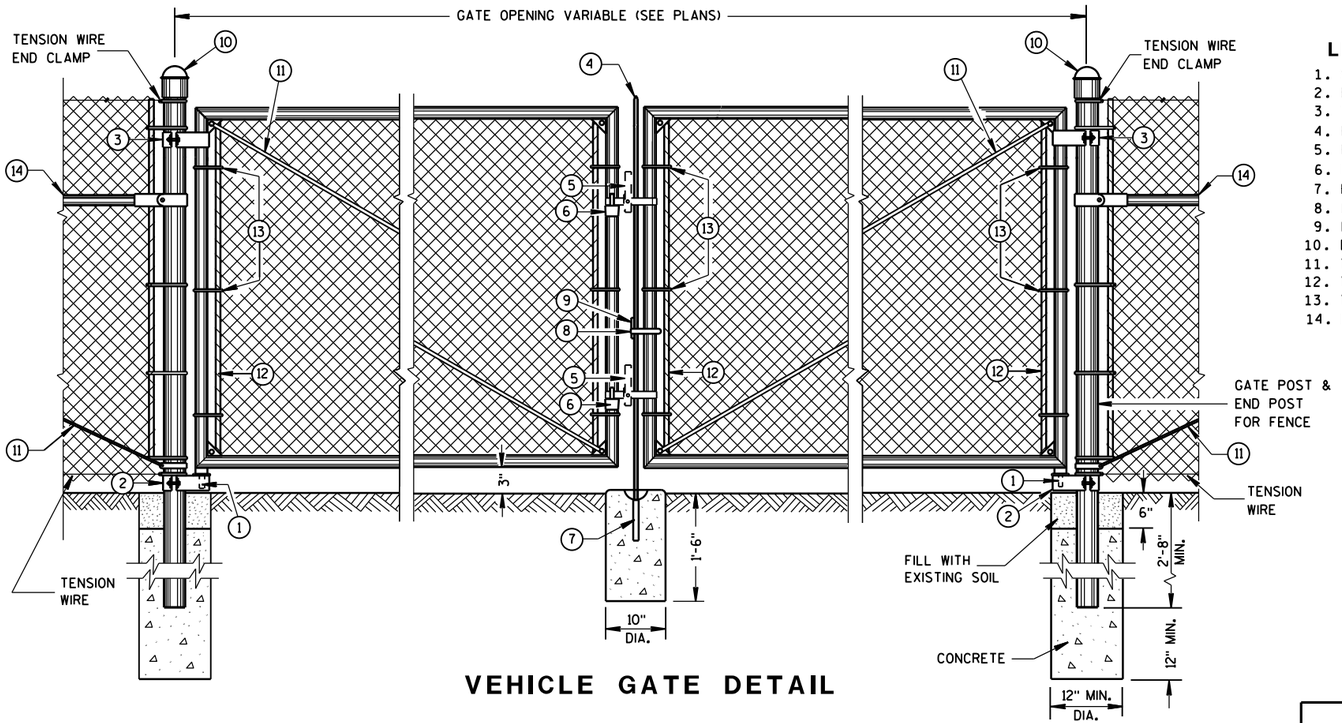
GRANULAR FOUNDATION

CLASS "B" BEDDING

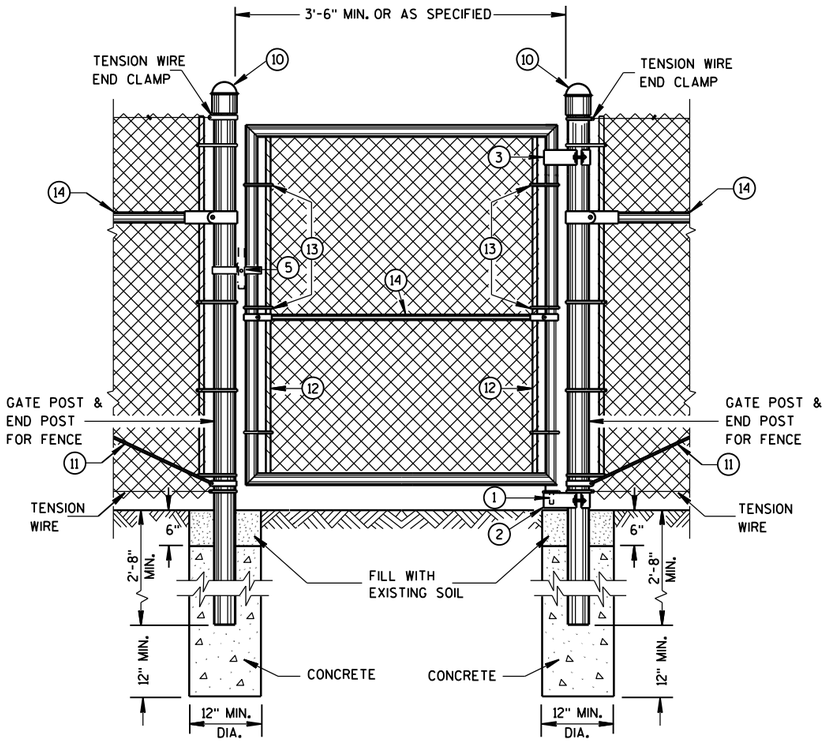
CLASS "B" BEDDING FOR CULVERT PIPE OR STORM SEWER	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
4/7/83 DATE	/S/ D. L. Strand STATE DESIGN ENGINEER
FHWA	HWYS

6

S.D.D. 8 F 5-1



VEHICLE GATE DETAIL



PEDESTRIAN GATE DETAIL

LEGEND

1. STRAIGHT PLUG
2. BOTTOM HINGE
3. TOP HINGE
4. PLUNGER ROD
5. FULCRUM LATCH
6. FORK CATCH *
7. PLUNGER ROD CATCH
8. LOCK KEEPER GUIDE
9. LOCK KEEPER
10. DOME TOPS
11. TRUSS RODS
12. TENSION BAR
13. TENSION BANDS
14. BRACE RAIL

*NOT REQUIRED ON SINGLE SWING PEDESTRIAN GATE

GENERAL NOTES

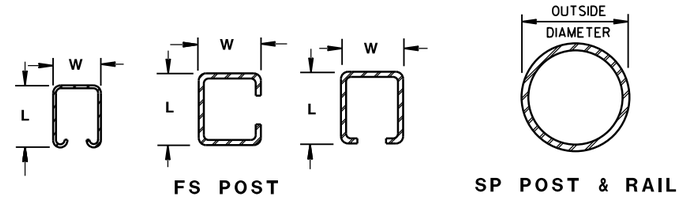
FENCE POSTS INSTALLED ON CONCRETE WALLS SHALL BE ANCHORED INTO EMBEDDED METAL SLEEVES OR CORED HOLE BY FILLING THE ANNULAR SPACE WITH PEA GRAVEL FOLLOWED BY AN EPOXY RESIN ADHESIVE. THE EPOXY RESIN ADHESIVE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 235, CLASS A, B OR C.

USE FENCE FABRIC KNUCKLED AT BOTH SELVAGES.

FOR LEAF GATES GREATER THAN 8 FEET WIDE, INSTALL INTERIOR VERTICAL BRACE RAIL AT 8 FOOT INTERVALS.

FOR FABRIC HEIGHTS GREATER THAN 8 FEET, INSTALL INTERIOR HORIZONTAL BRACE RAILS TO LEAF GATE.

MAXIMUM SAG FOR OUTER GATE MEMBER SHALL NOT EXCEED THE GREATER OF 1% OF THE LEAF GATE WIDTH OR 2 INCHES.



FS POST

SP POST & RAIL

CROSS SECTIONS OF POSTS AND RAILS

REQUIRED FENCE POST SIZES

USE	FABRIC HEIGHTS FEET	POST TYPE
TERMINAL POSTS **	LESS THAN OR EQUAL TO 6 FT.	SP3
	GREATER THAN OR EQUAL TO 6 FT.	SP4
LINE POSTS	LESS THAN OR EQUAL TO 6 FT.	SP2
	LESS THAN OR EQUAL TO 8 FT.	SP3
	GREATER THAN OR EQUAL TO 8 FT.	SP4
	LESS THAN OR EQUAL TO 8 FT.	FS2 OR FS2†
	GREATER THAN OR EQUAL TO 8 FT.	FS3

BRACE RAIL TYPES

USE		TYPE
BRACE RAIL		SP1 OR FS1

** INCLUDES END, CORNER, ANGLE, INTERSECTION AND INTERMEDIATE BRACED POSTS

SHAPE, SIZE AND WEIGHT REQUIREMENTS FOR FORMED STEEL FENCE POST

POST TYPE	LENGTH (L) INCH	WIDTH (W) INCH	WEIGHT LBS/FT
FS1	1.625	1.25	1.35
FS2†	1.875	1.625	1.850
FS2	1.875	1.625	2.400
FS3	2.250	1.700	2.780

REQUIRED POST SIZE FOR GATES

USE	LEAF WIDTHS FEET	POST TYPE
GATES	LESS THAN OR EQUAL TO 6 FT.	SP4
	LESS THAN OR EQUAL TO 13 FT.	SP5
	LESS THAN OR EQUAL TO 18 FT.	SP6
	LESS THAN OR EQUAL TO 23 FT.	SP7

SHAPE, SIZE AND WEIGHT REQUIREMENTS FOR ROUND STEEL FENCE POST

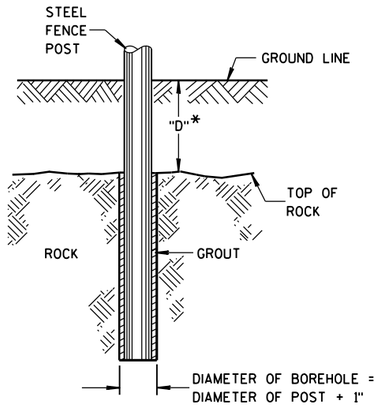
POST TYPE	OUTSIDE DIMENSION INCH	WALL THICKNESS INCH	WEIGHT LBS/FT
SP1	1.660	0.140	2.270
SP2	1.900	0.145	2.720
SP3	2.375	0.154	3.650
SP4	2.875	0.203	5.800
SP5	4.000	0.226	9.120
SP6	6.625	0.280	18.990
SP7	8.625	0.322	28.580

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

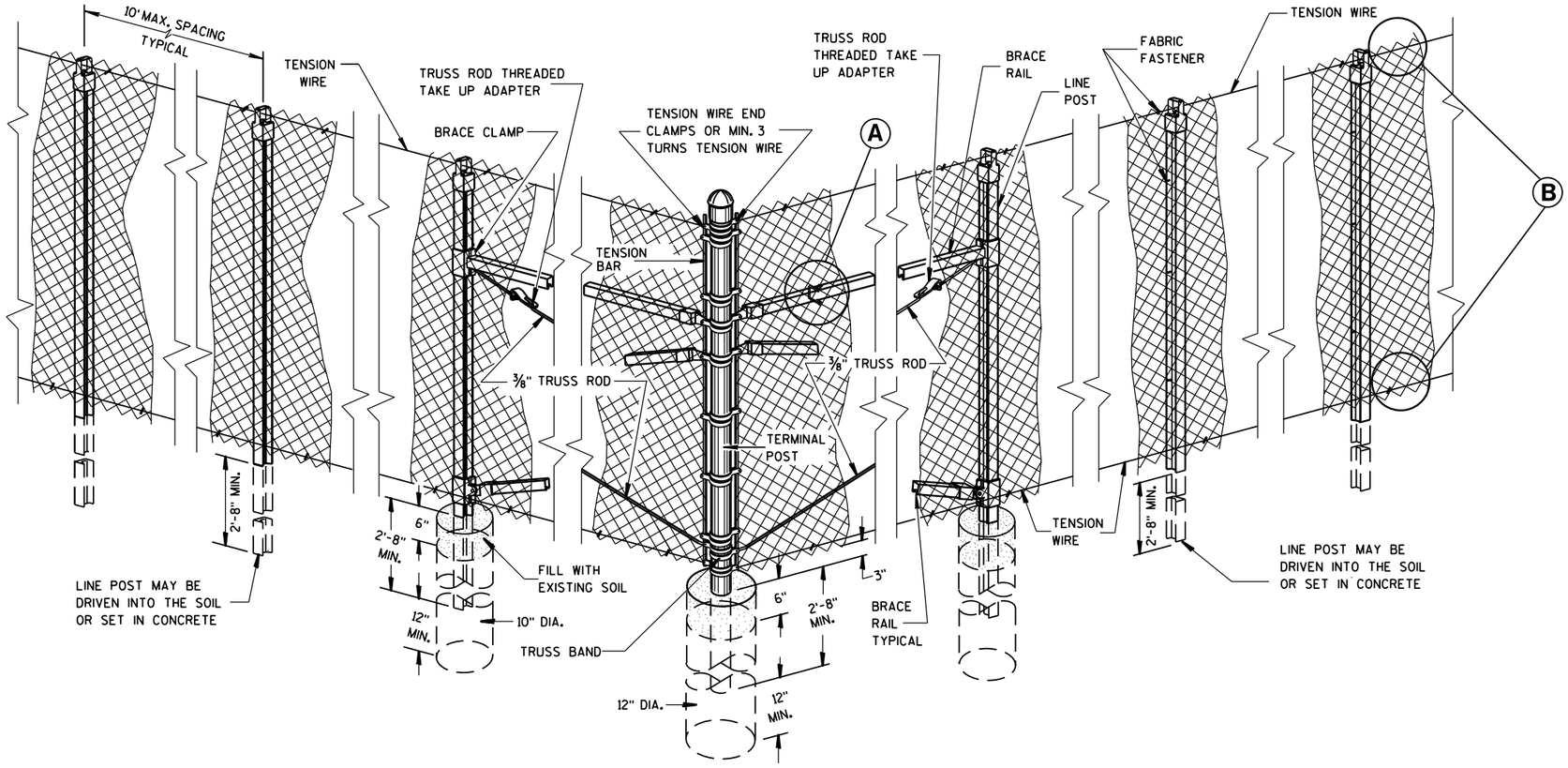
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S.D.D. 15 B 3-13a

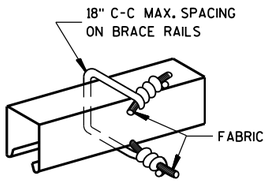


*IF "D" IS LESS THAN 2'-6", DRILL ROCK AND INSTALL GROUT

ROCK INSTALLATION OF LINE POST



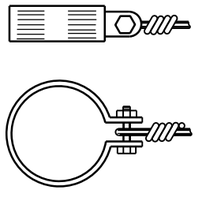
END, CORNER, ANGLE INTERSECTION & INTERMEDIATE BRACED POSTS



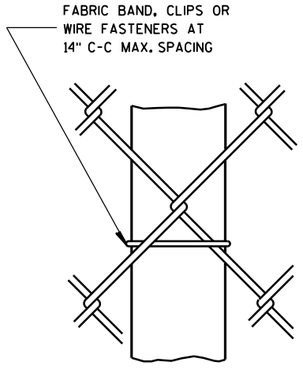
BRACE RAIL

FABRIC FASTENER

Ⓐ



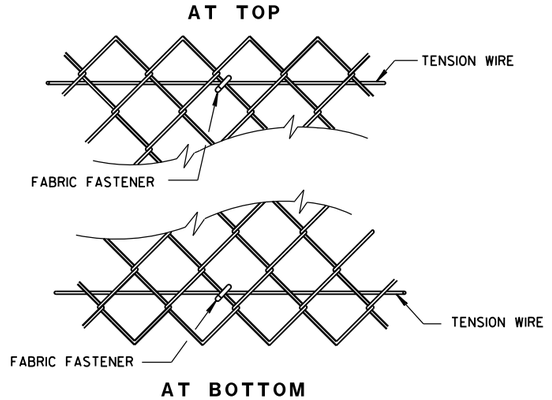
TENSION WIRE END CLAMP



LINE POST

FABRIC FASTENER

AT TOP



AT BOTTOM

SELVAGES

Ⓑ

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

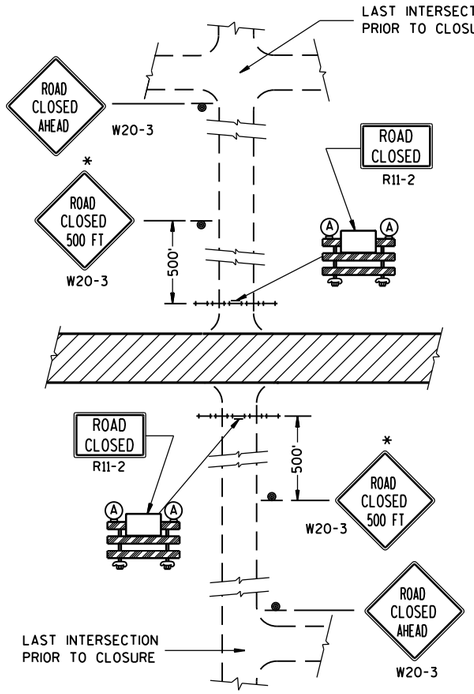
APPROVED
7/16/2013 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 15 B 3-13b

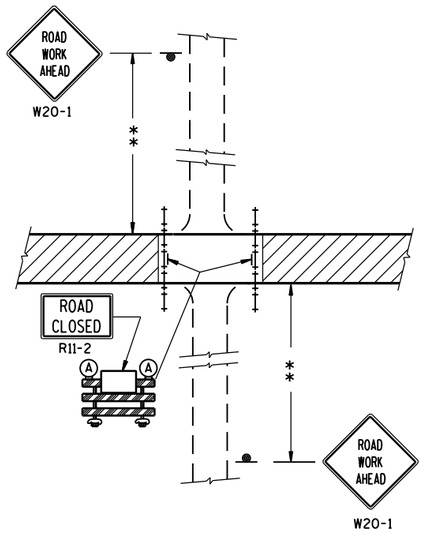
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S.D.D. 15 B 3-13b



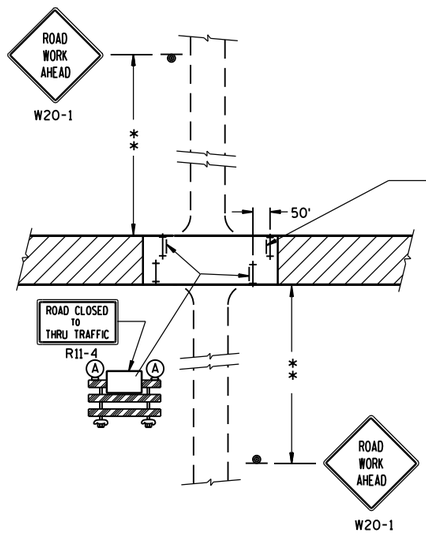
DETAIL 1

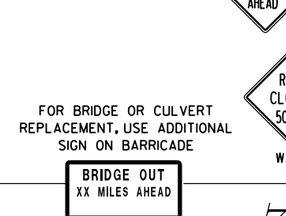
(NO ACCESS TO PROJECT)



DETAIL 2

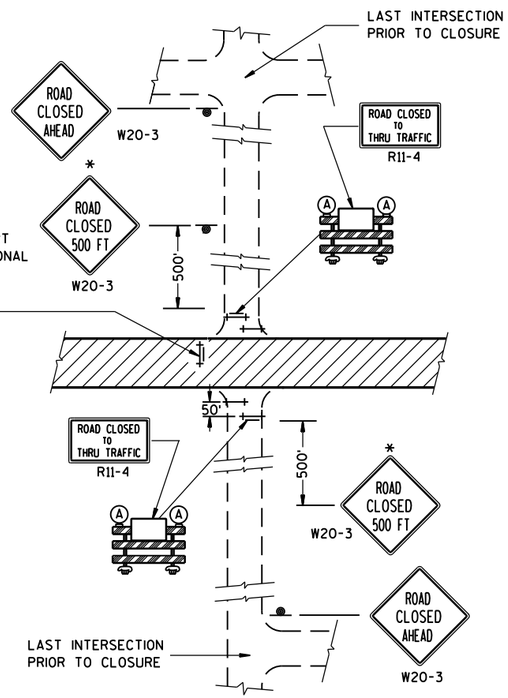
(PUBLIC CROSS-TRAFFIC MAINTAINED. NO ACCESS TO PROJECT).





DETAIL 3

(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS).



DETAIL 4

(CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

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

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

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

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 AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

*OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FT. OR LESS FROM THE WORK ZONE.

**500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

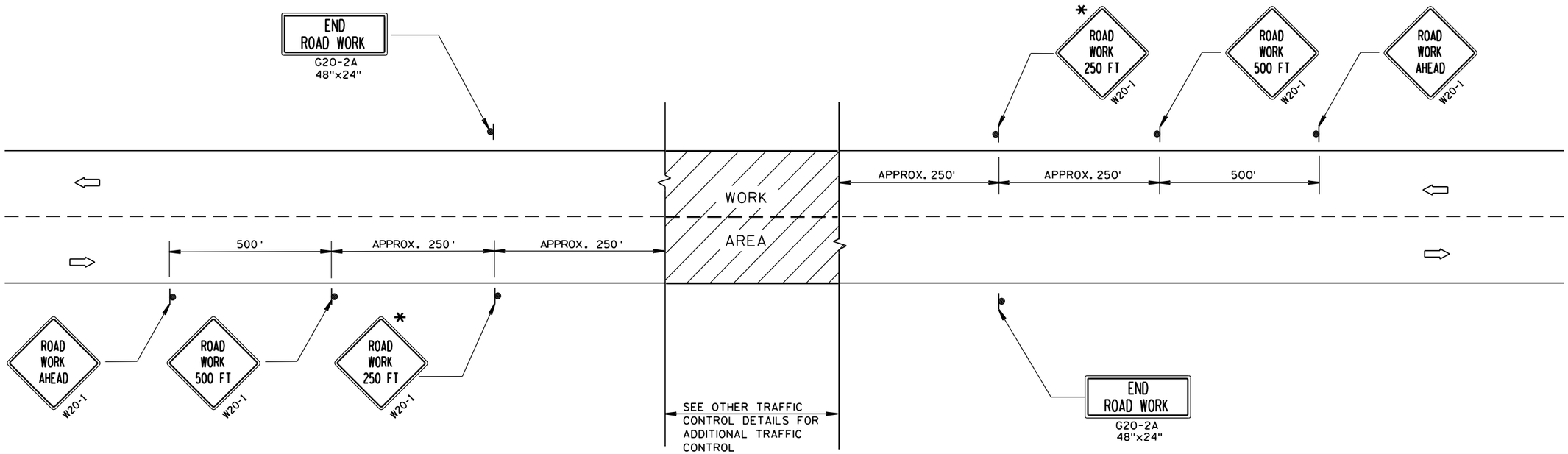
APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 C 3-2

6

S.D.D. 15 C 3-2



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.

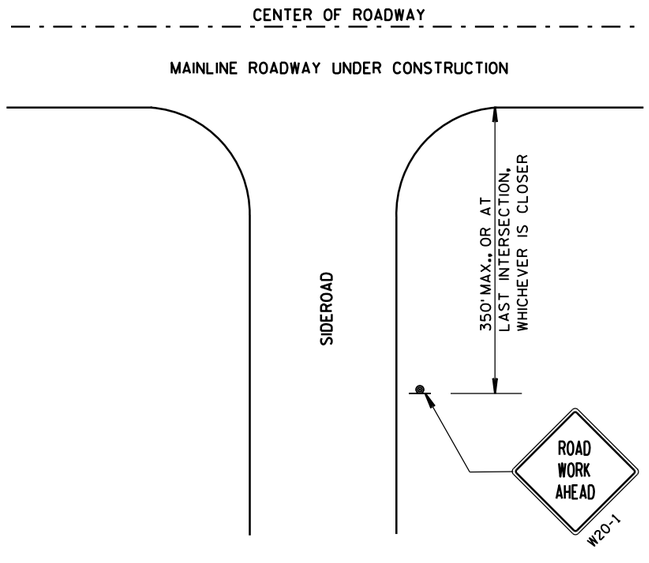
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

SIGN

FHWA

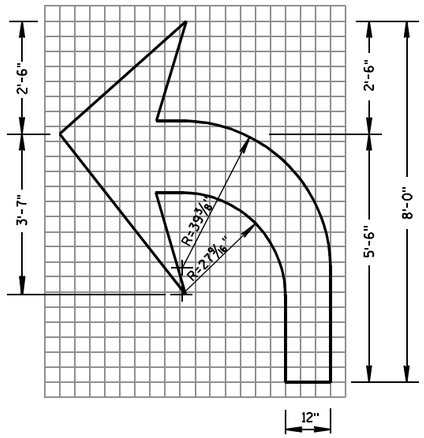
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S.D.D. 15 C 5-2

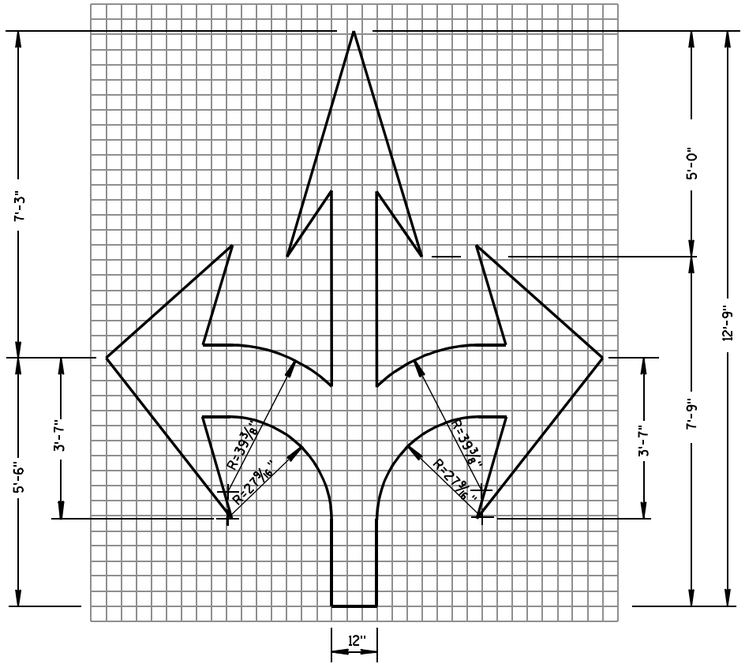
GENERAL NOTES

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.

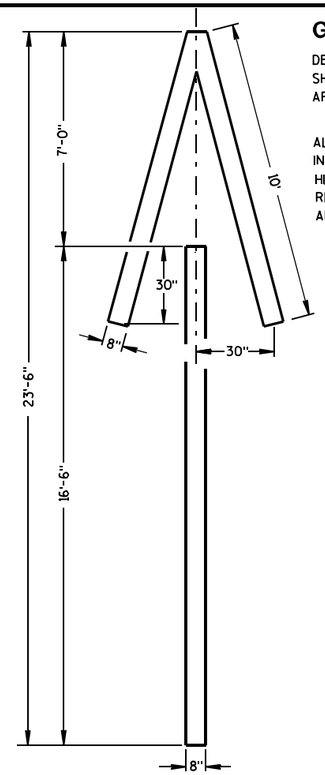
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.



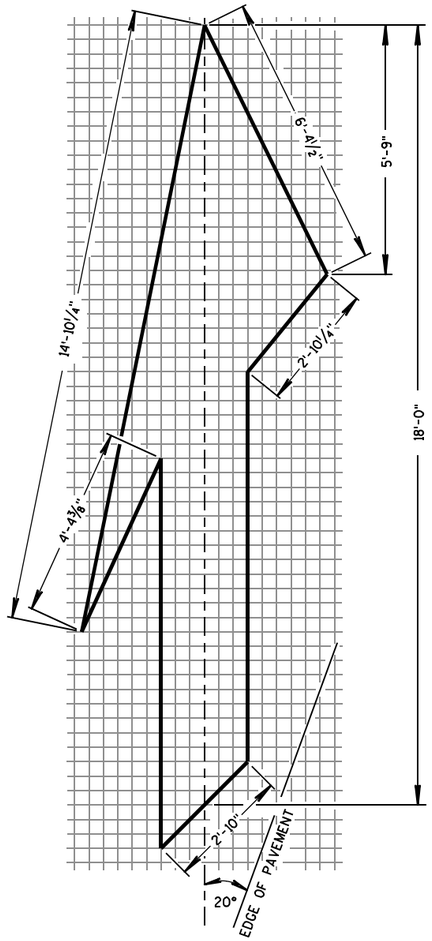
TYPE 2



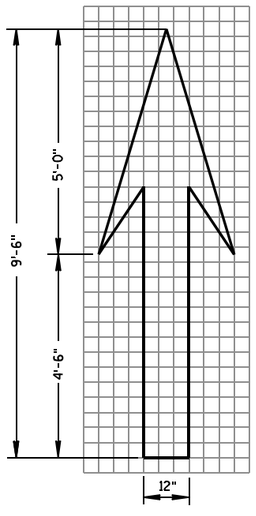
TYPE 6



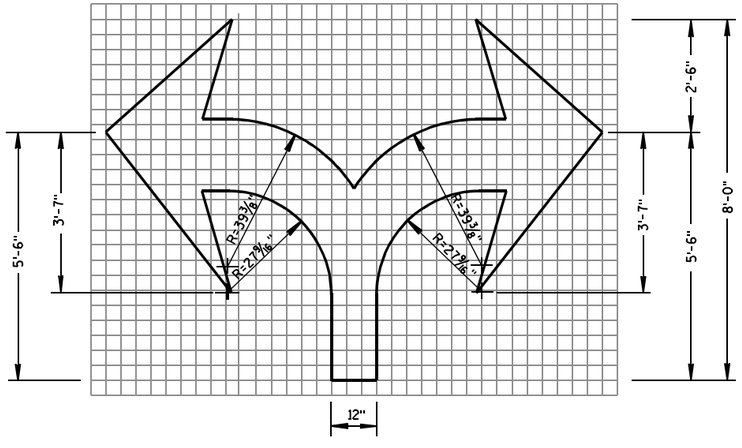
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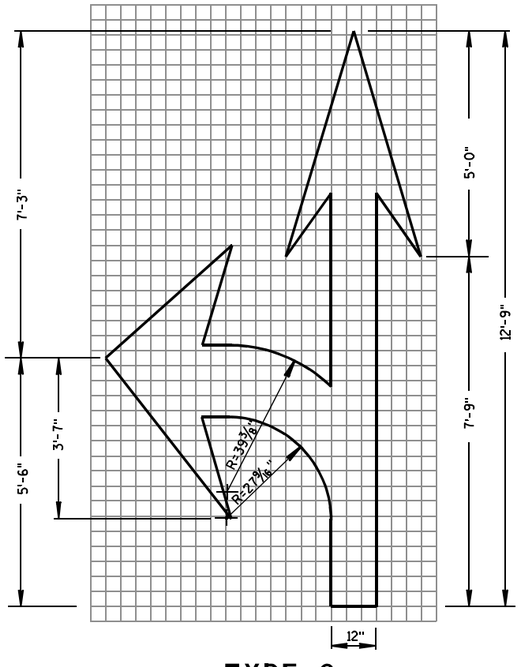
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/1/11 — DATE

/S/ Thomas N. Nothdurft — STATE TRAFFIC ENGINEER

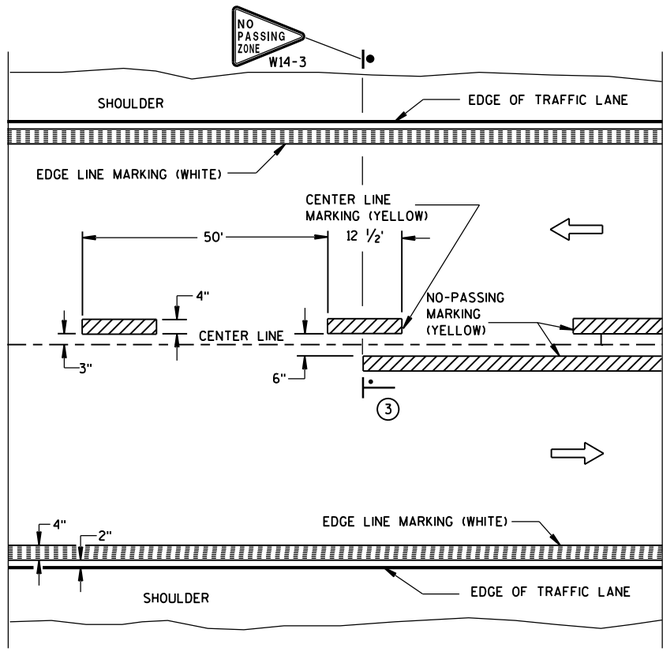
FHWA

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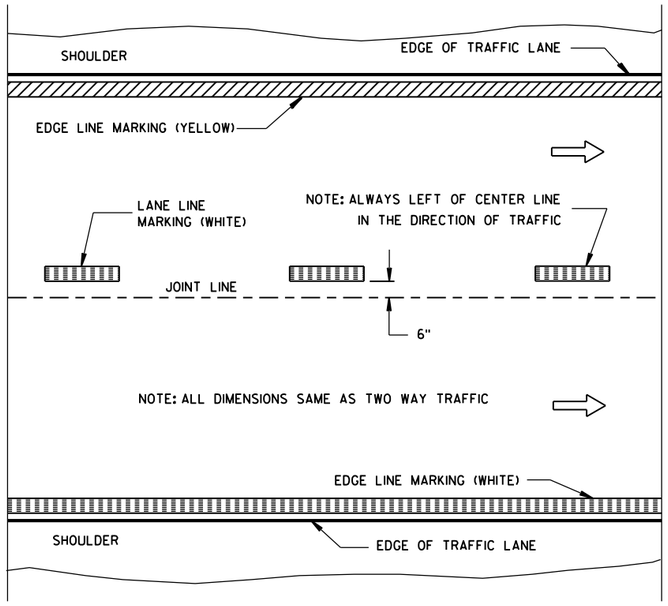
S.D.D. 15 C 7-12c

6

S.D.D. 15 C 7-12c

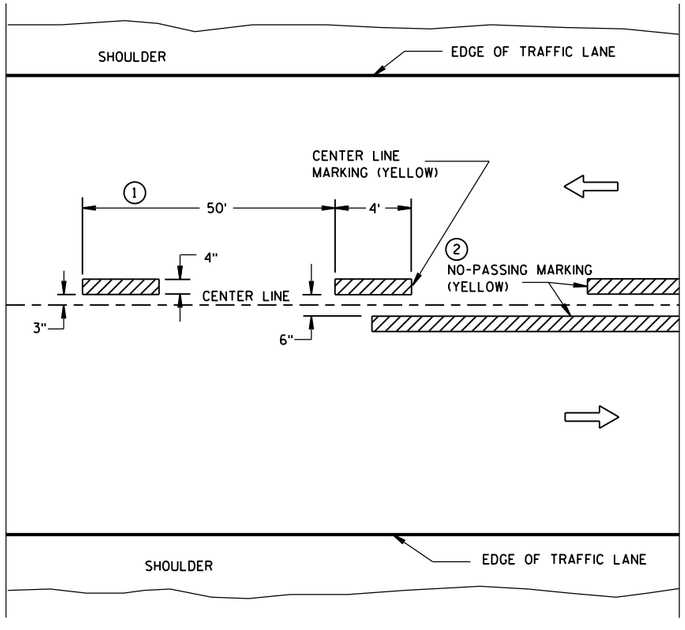


TWO WAY TRAFFIC

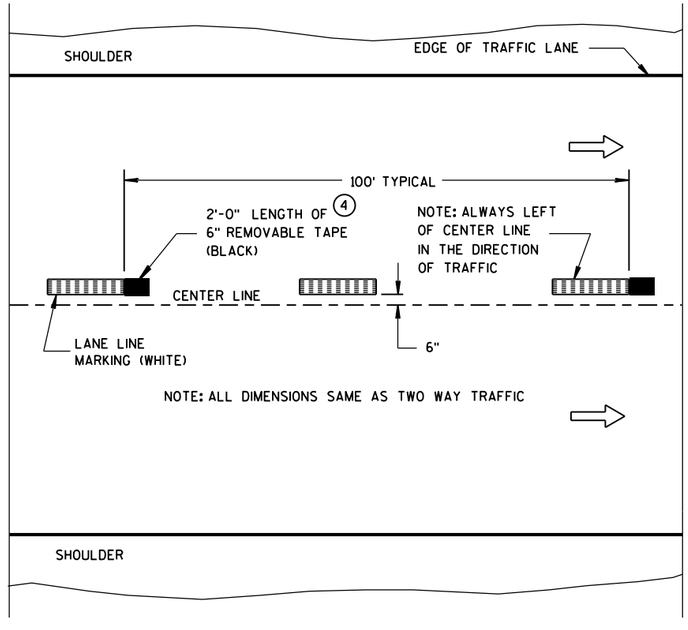


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

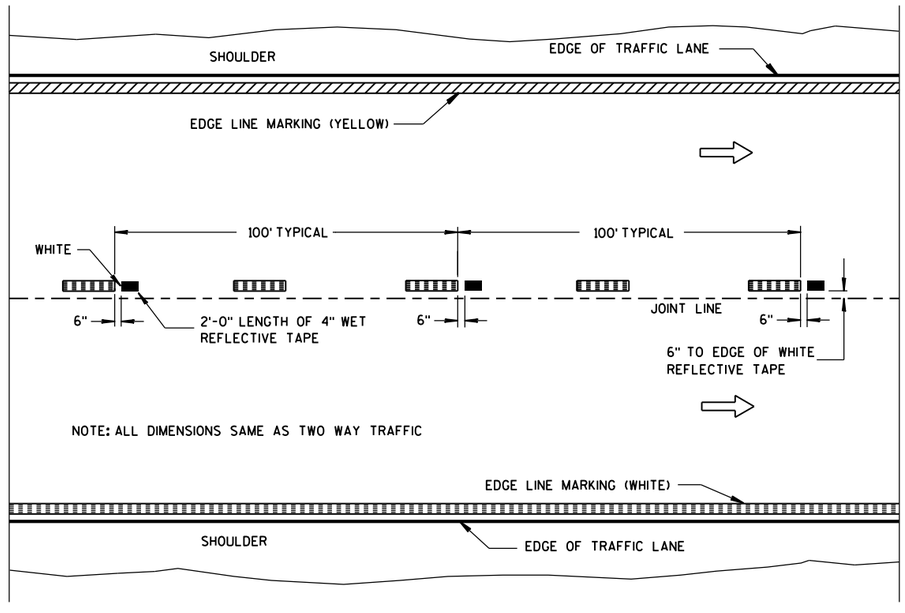
GENERAL NOTES

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

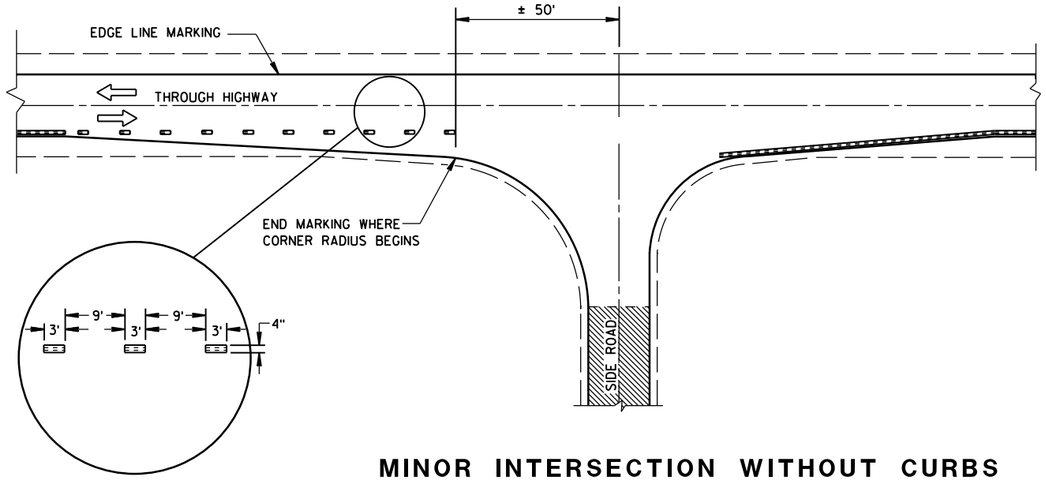
FHWA

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.

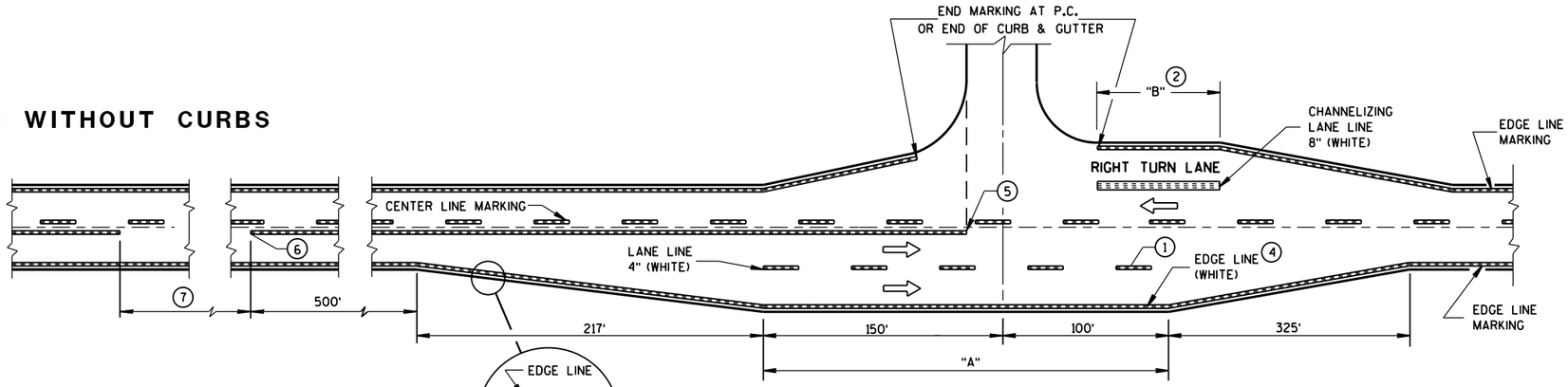
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

(8) 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

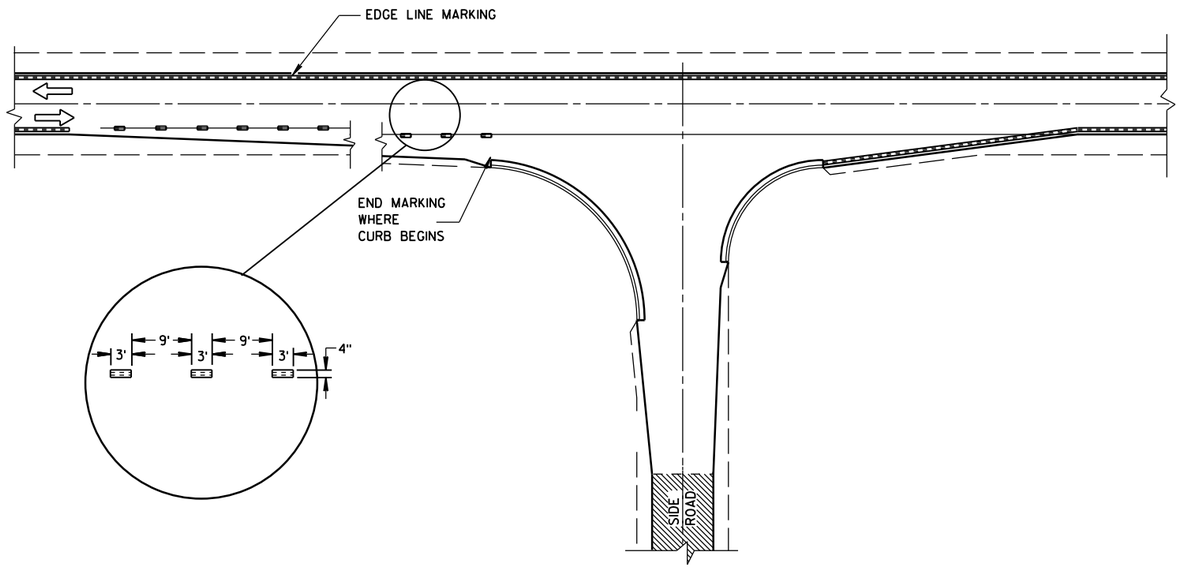
(7)

POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792



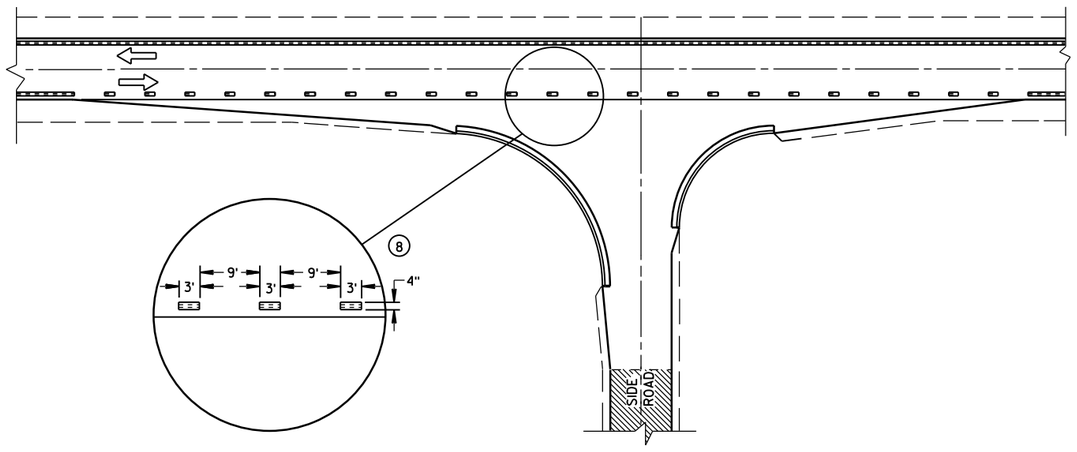
MAJOR INTERSECTIONS

(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)

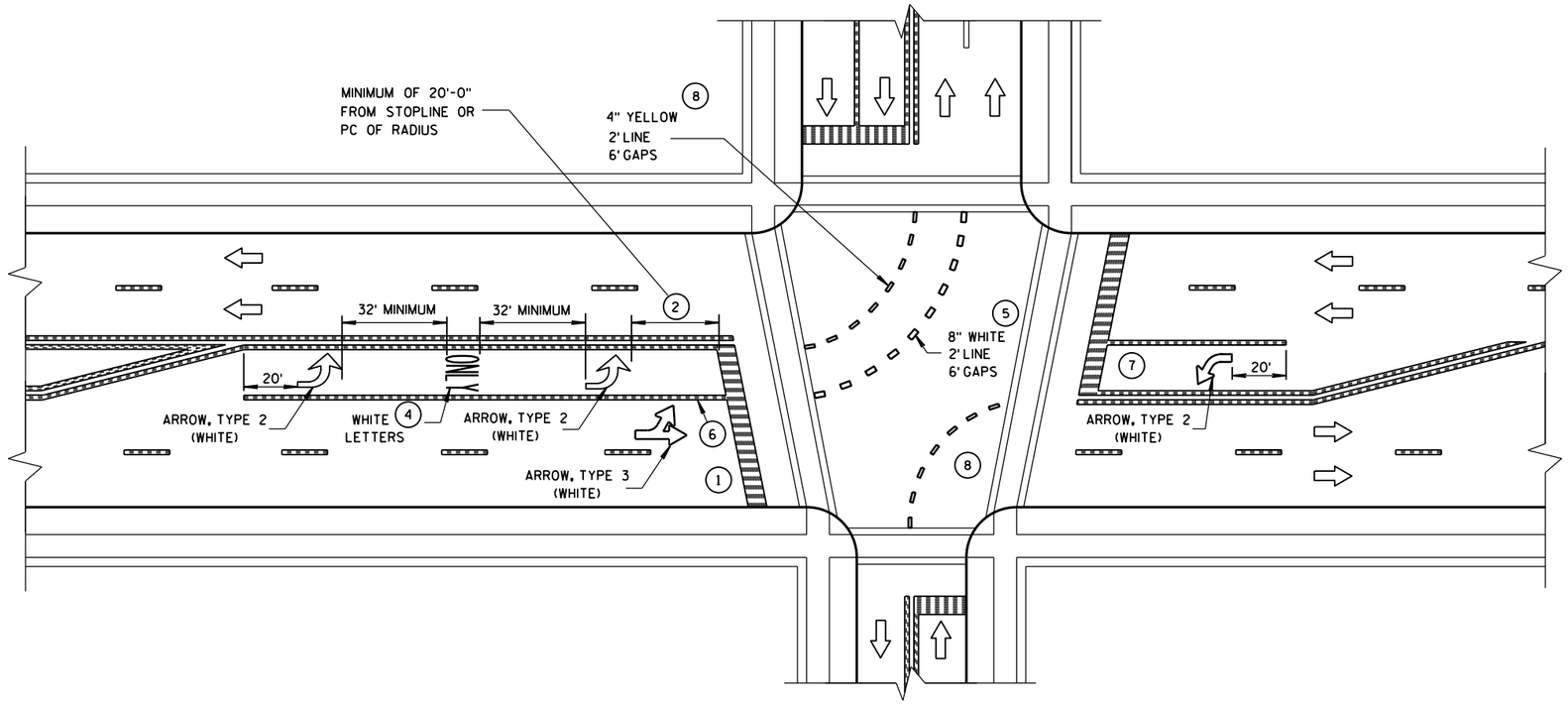
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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S.D.D. 15 C 8-16b

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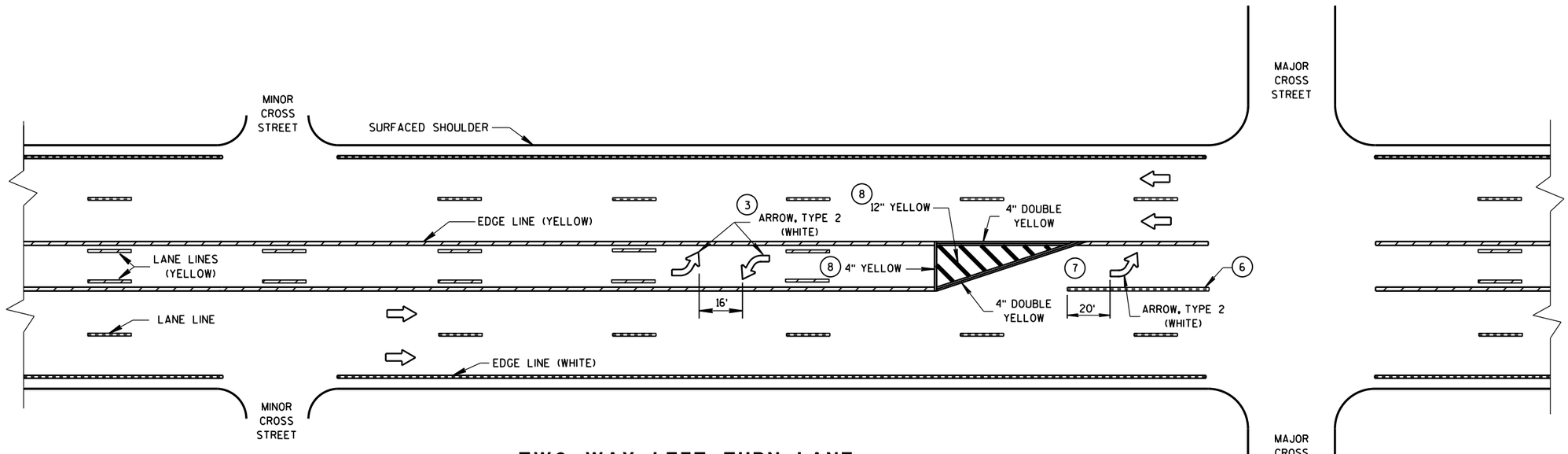
S.D.D. 15 C 8-16b



GENERAL NOTES

1. STOP BAR IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
2. DISTANCE MAY BE ADJUSTED TO ACCOMODATE SHORT LEFT TURN LANES. AS APPROVED BY THE ENGINEER.
3. A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
4. ADD EXTRA SETS OF ONE ARROW AND ONE ONLY PER 160 FEET OR WHEN ON A CURVE.
5. 8" WHITE WITH 2' LINE 6' GAPS FOR DUAL TURN LANE.
6. 8" WHITE
7. ADD SECOND ARROW WHEN TURN BAY IS GREATER THAN OR EQUAL TO 108 FEET.
8. REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TWO WAY LEFT TURN LANE

PAVEMENT MARKING (LEFT TURN LANE)

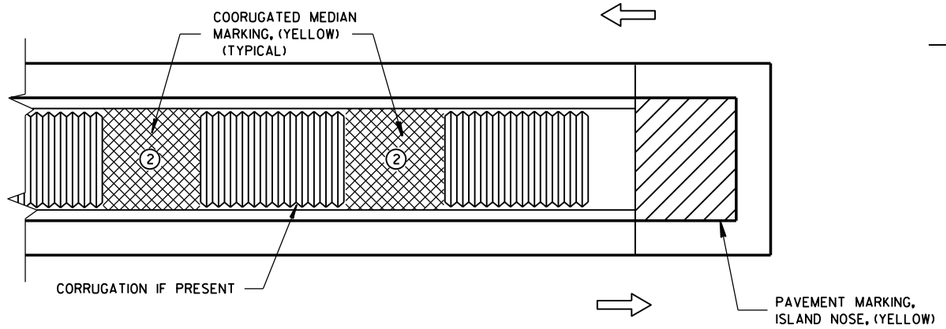
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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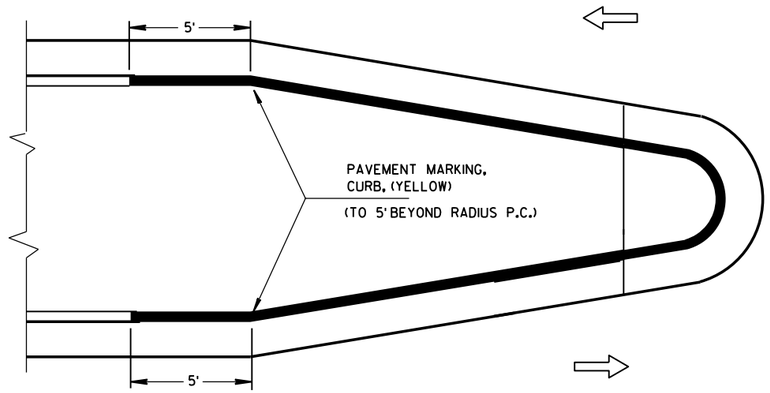
S.D.D. 15 C 8-16e

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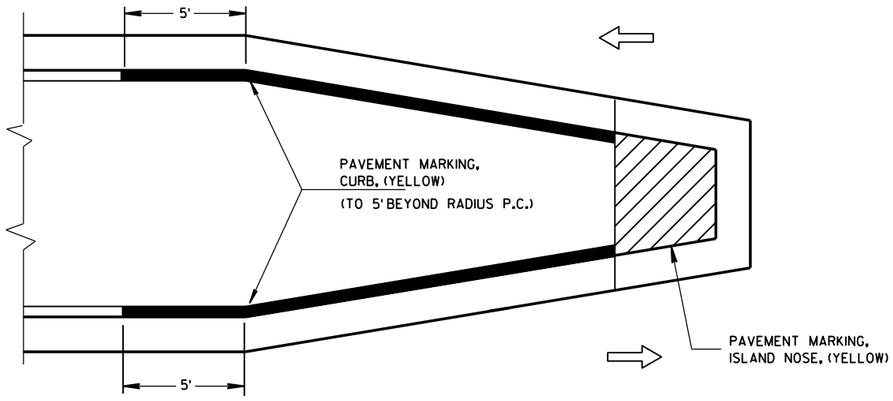
S.D.D. 15 C 8-16e



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

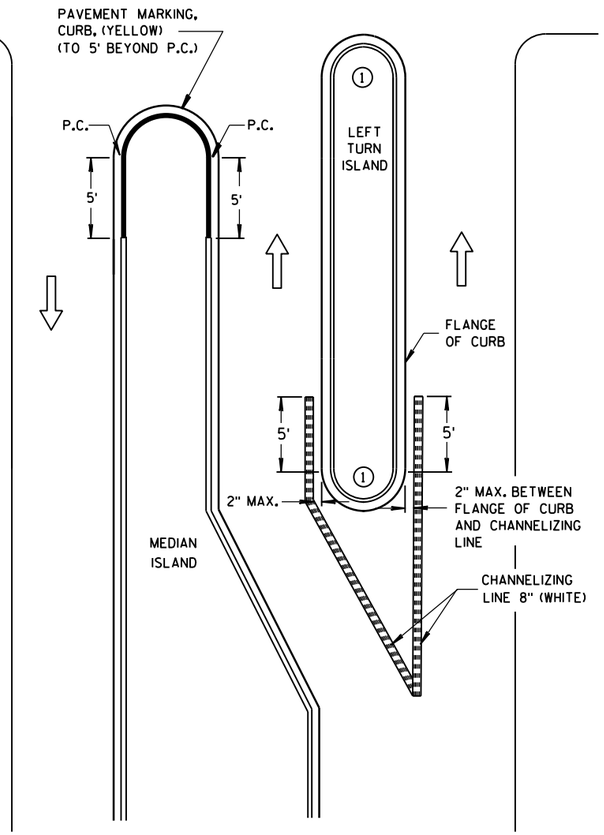


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

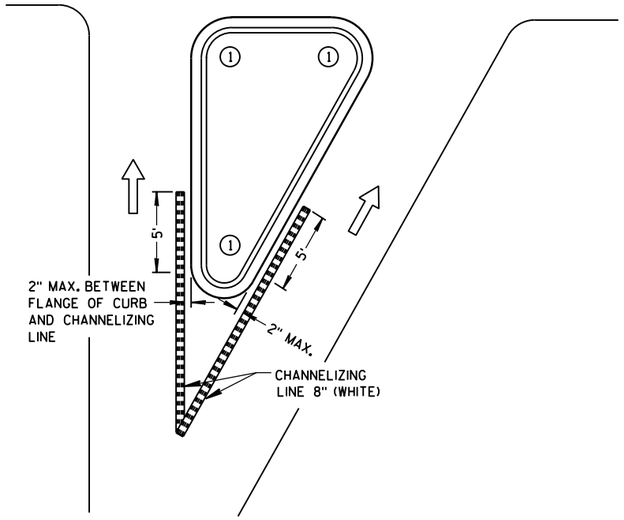


LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

1. DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.

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



RIGHT TURN ISLAND

LEGEND

- ISLAND NOSE MARKING
- CURB MARKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL

PAVEMENT MARKING
(ISLANDS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 15 C 8-16f

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S.D.D. 15 C 8-16f

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA

FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

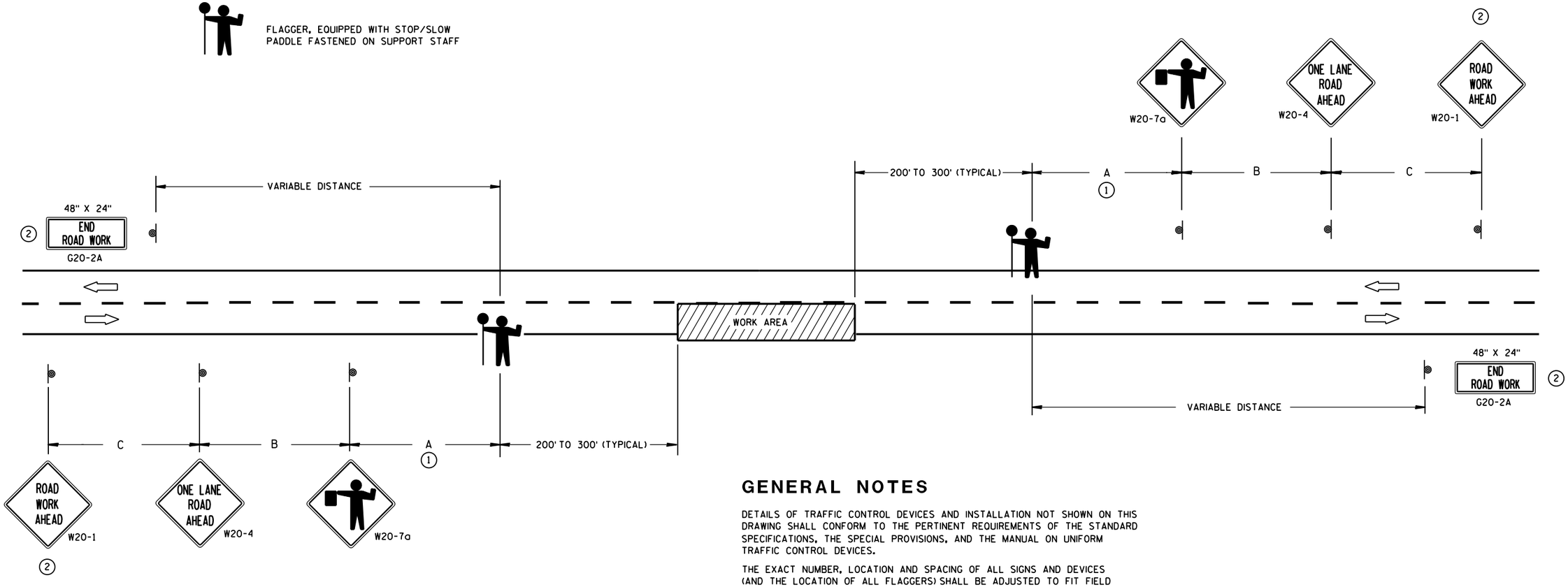
SIGN SPACING TABLE

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

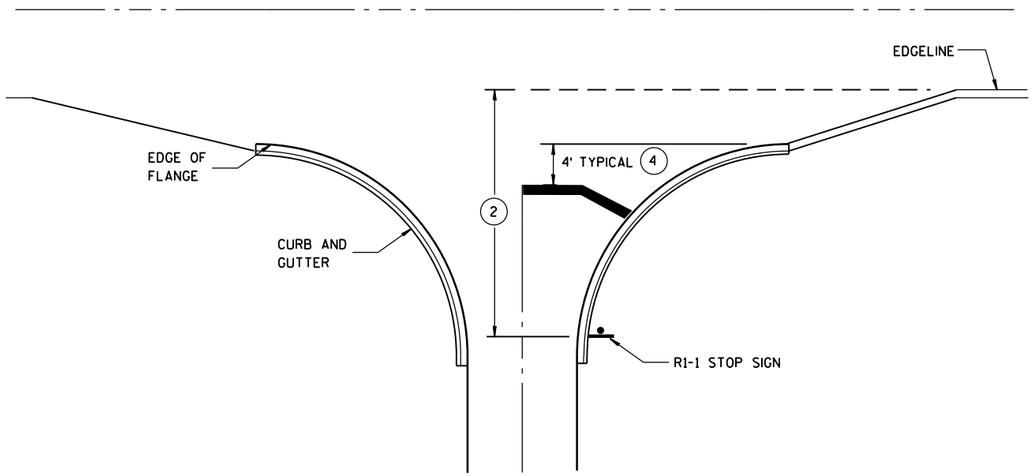
APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

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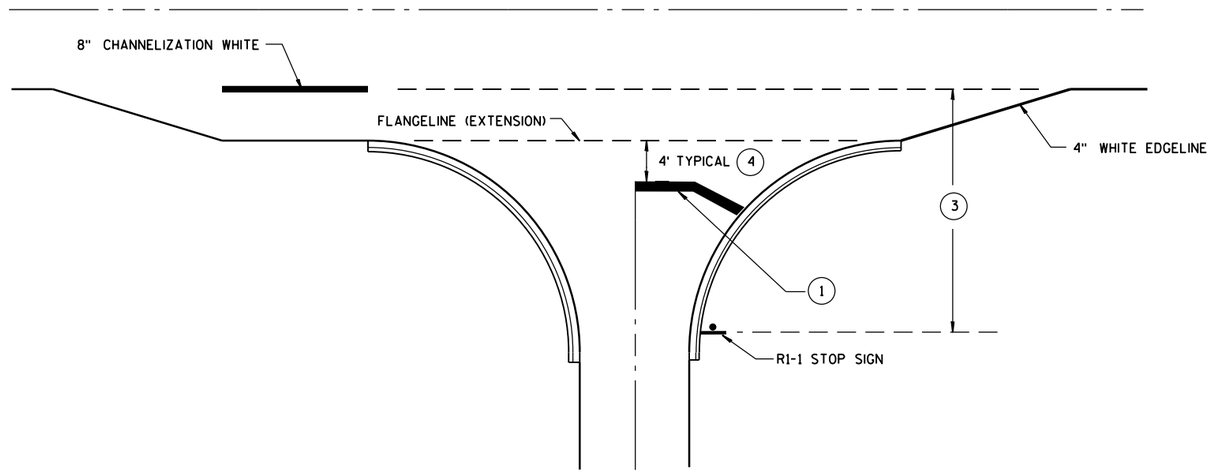
S.D.D. 15 C 12-4

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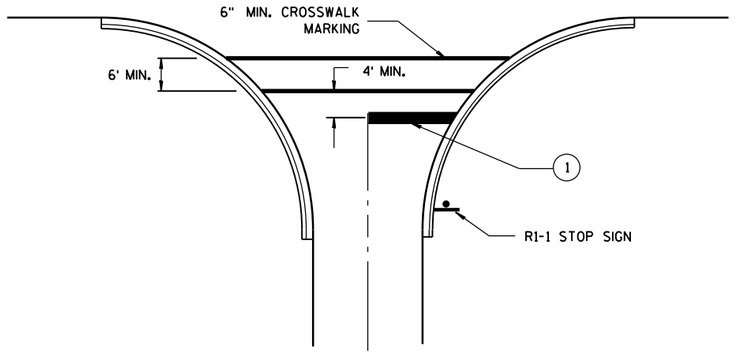
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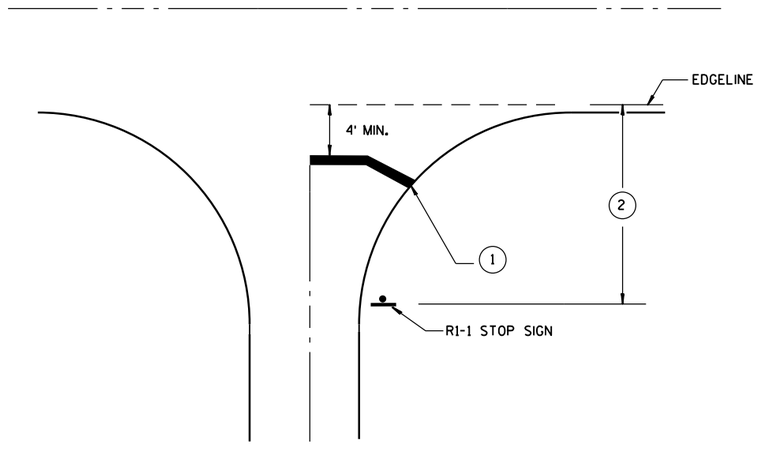
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



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

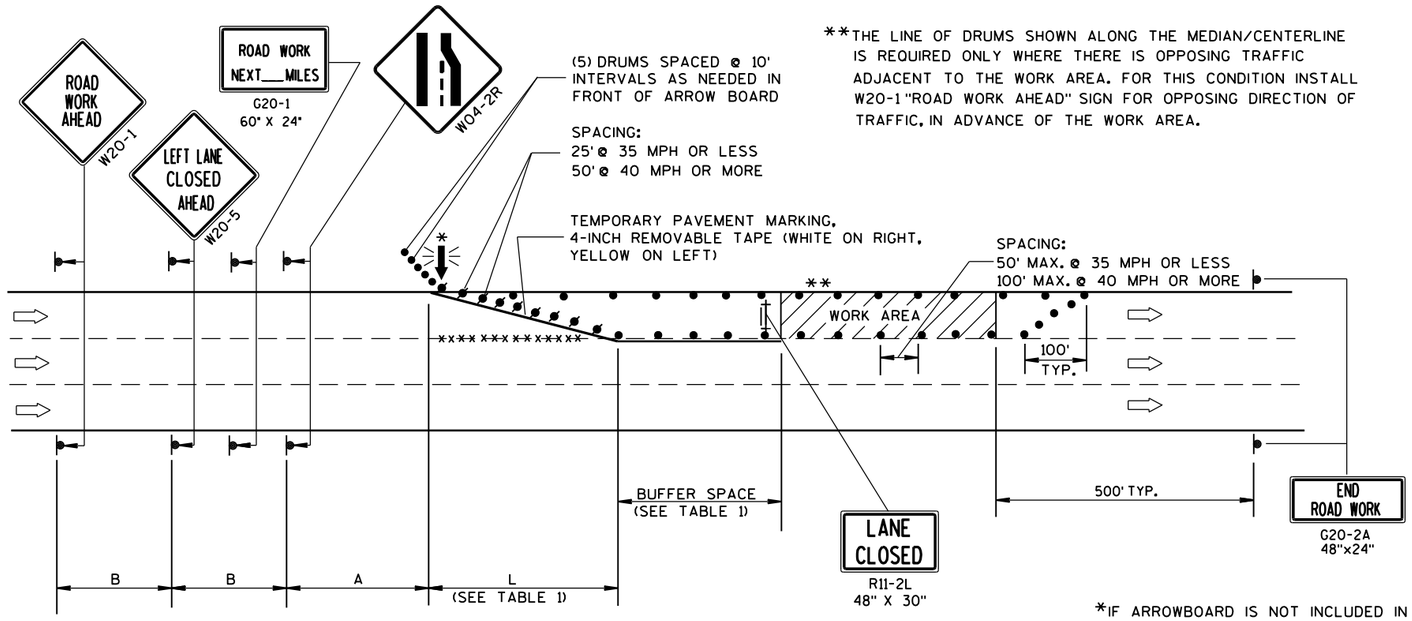
/S/ Travis Feltes
STATE TRAFFIC EN

FHWA

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S.D.D. 15 C 33-1

S.D.D. 15 C 33-1



**THE LINE OF DRUMS SHOWN ALONG THE MEDIAN/CENTERLINE IS REQUIRED ONLY WHERE THERE IS OPPOSING TRAFFIC ADJACENT TO THE WORK AREA. FOR THIS CONDITION INSTALL W20-1 "ROAD WORK AHEAD" SIGN FOR OPPOSING DIRECTION OF TRAFFIC, IN ADVANCE OF THE WORK AREA.

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

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

(PLACE BARRICADE AND SIGN APPROX. EVERY 1000' ACROSS THE CLOSED LANE)

*IF ARROWBOARD IS NOT INCLUDED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE A TYPE III BARRICADE WITH W01-6 SIGN IN THE LANE CLOSURE TAPER.

W01-6
48"x24"

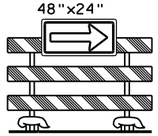


TABLE 1
TAPER AND BUFFER SPACE
FOR 12' LANE WIDTH

S	L	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	540'	220'
50	600'	280'
55	660'	335'

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

LEGEND

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

GENERAL NOTES

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

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

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

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

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

ON UNDIVIDED ROADWAYS, OMIT THE SIGNS SHOWN ON LEFT SIDE OF ROAD.

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

OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

PLACE THE ARROWBOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

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

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

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

TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

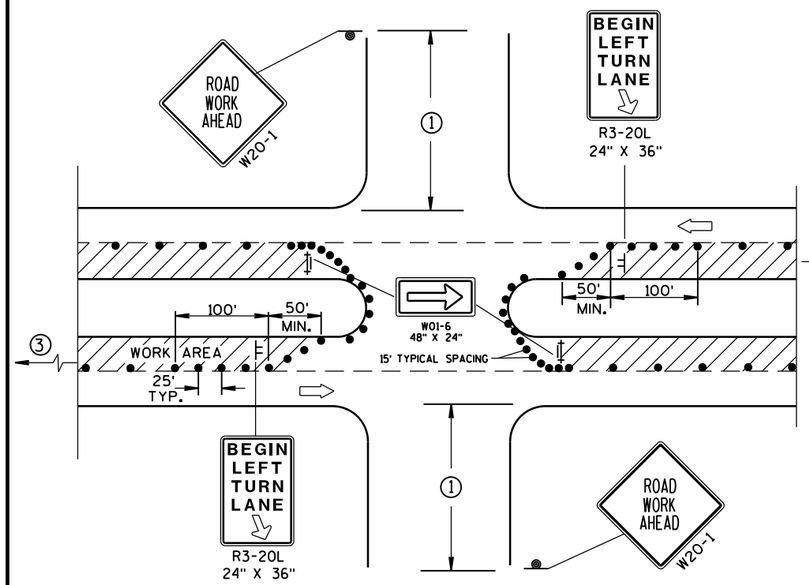
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FHWA

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S.D.D. 15 D 20-2

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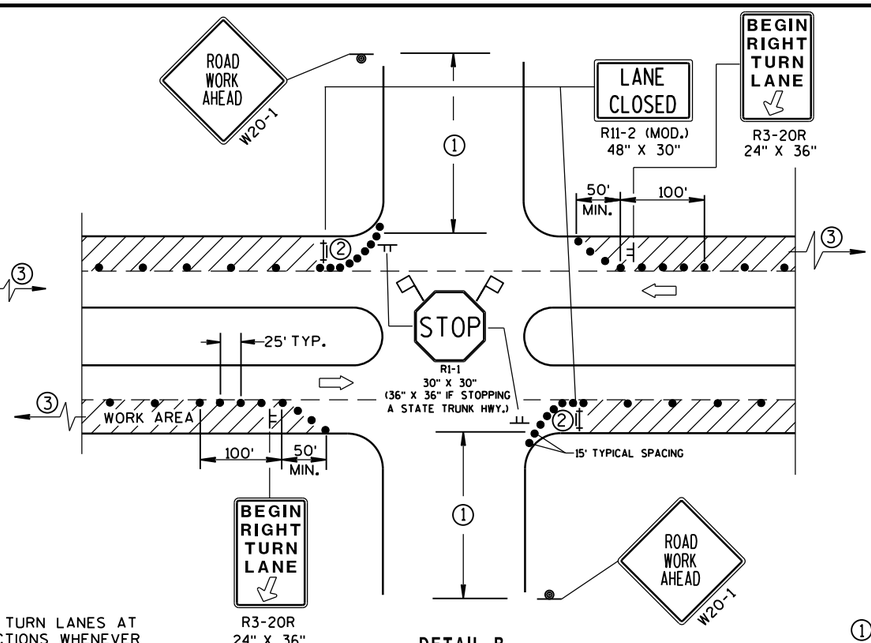
S.D.D. 15 D 20-2



DETAIL A

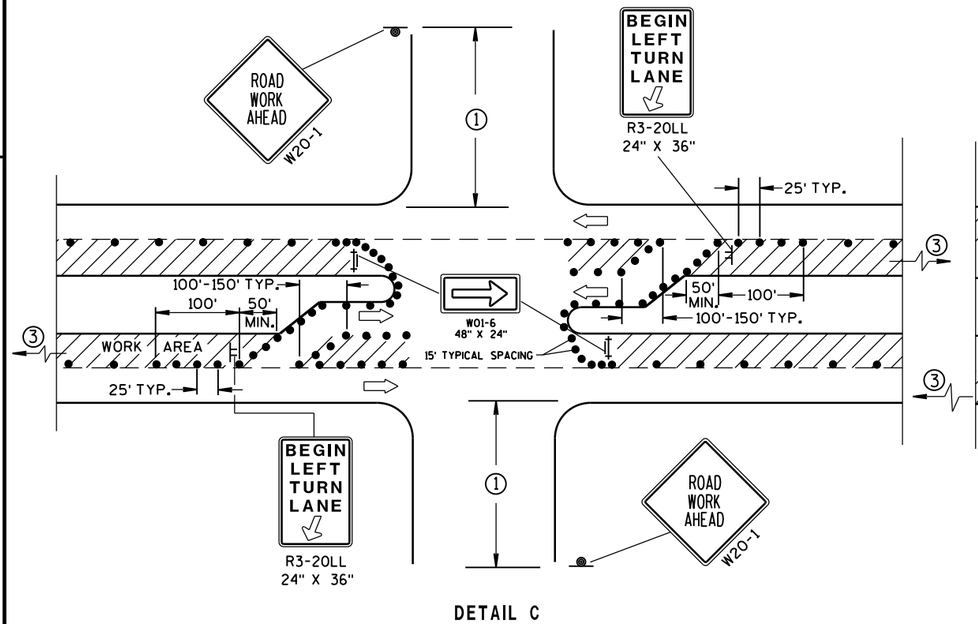
FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

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



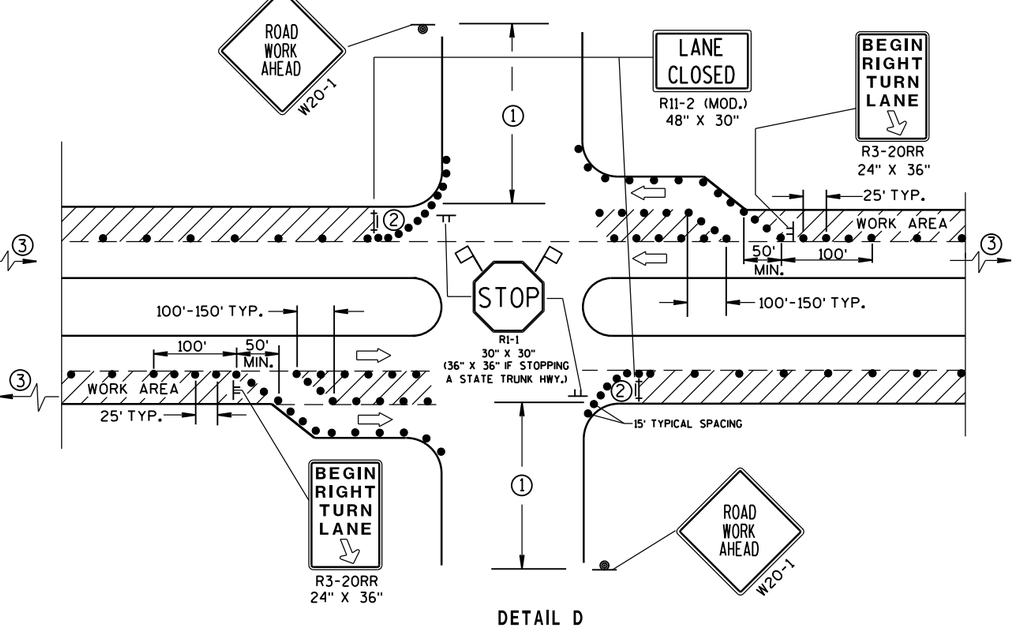
DETAIL B

FOR RIGHT LANE CLOSURE AT INTERSECTION



DETAIL C

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



DETAIL D

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

GENERAL NOTES

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

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

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

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

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

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

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

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

③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.

LEGEND

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

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

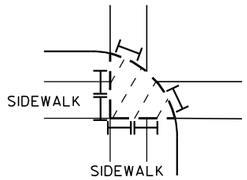
8/2013	/S/ Travis Feltes
DATE	STATE TRAFFIC ENGINEER

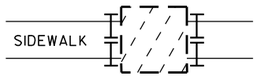
FHWA

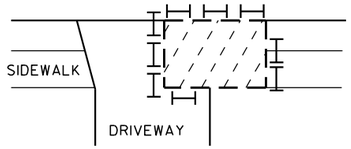
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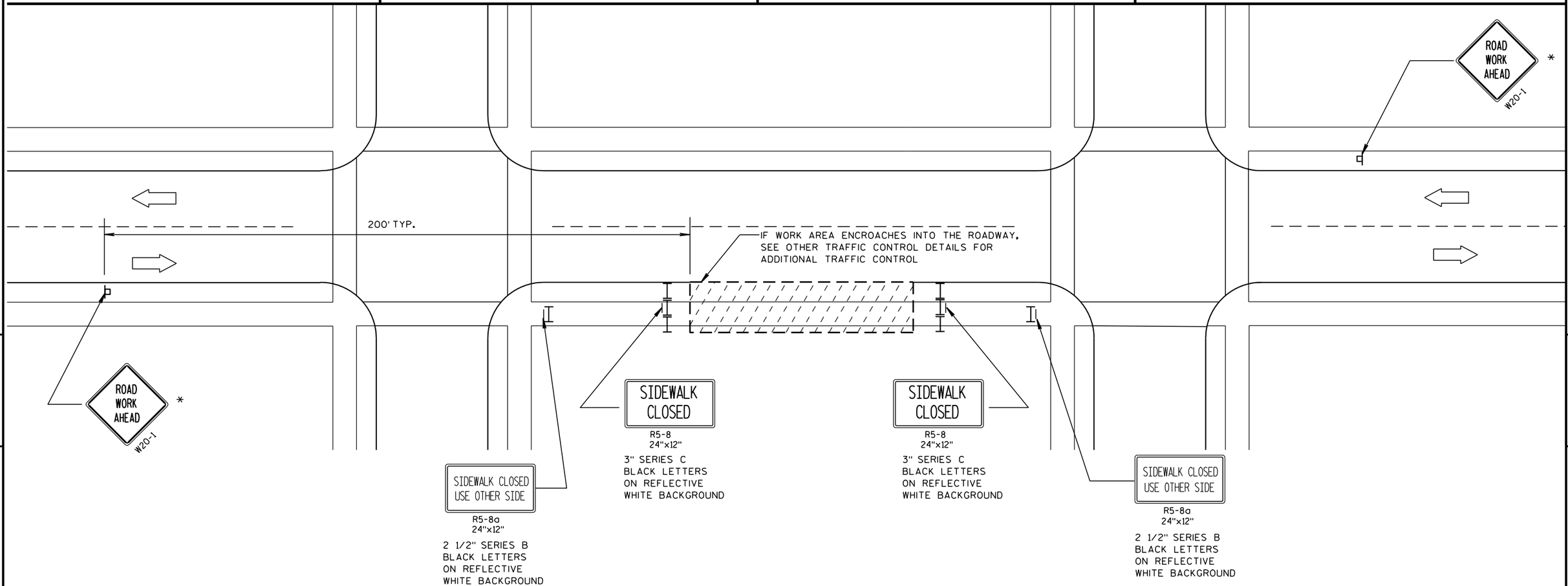
S.D.D. 15 D 21-2

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

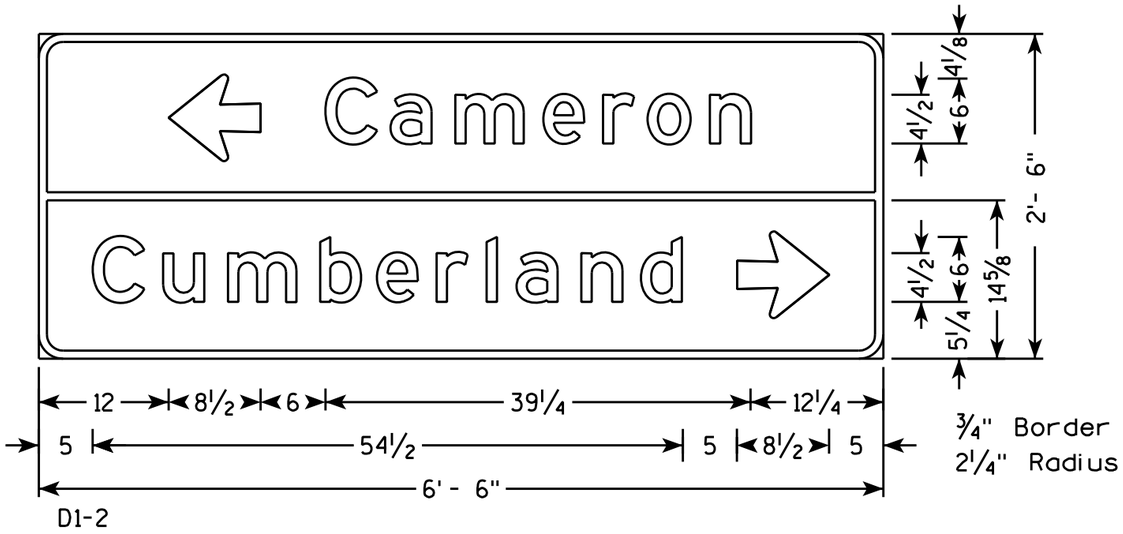
TRAFFIC CONTROL, SIDEWALK CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/2000 DATE
/S/ Chester J. [illegible]
CHIEF SIGNS AND MARK[illegible] ENGINEER
FHWA

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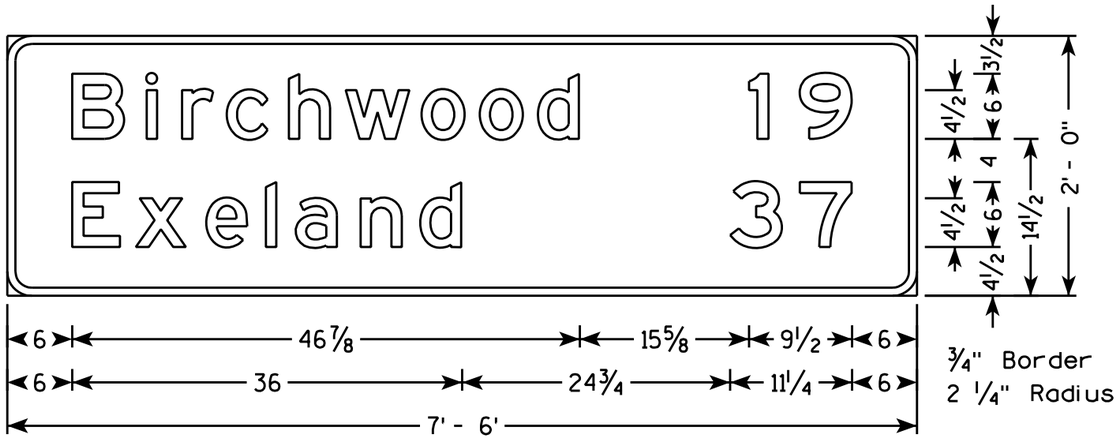
S.D.D. 15 D 30-1



D1-2

NOTES

1. All Signs Type II - Type H Reflective
2. Color:
   Background - GREEN
   Message - WHITE
3. Message Series - E

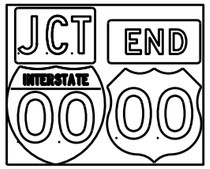


D2-1

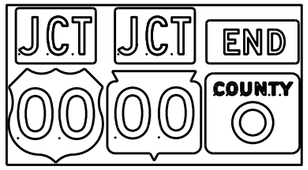
TYPICAL ASSEMBLIES



J1-1



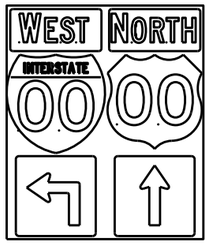
J1-2



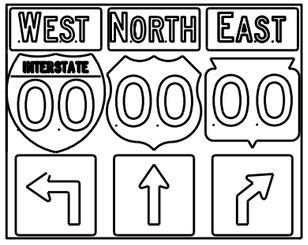
J1-3



J2-1



J2-2

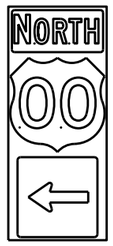


J2-3

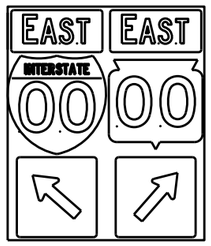


JV

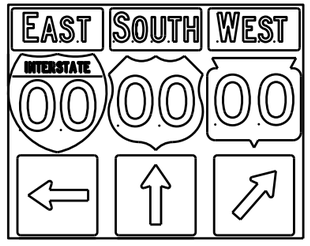
(Typical Vertical J-Assembly
See Note 10 and 11)



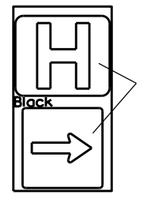
J3-1



J3-2



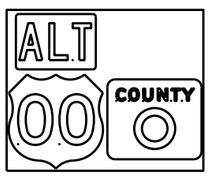
J3-3



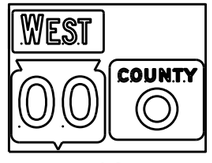
JH-1



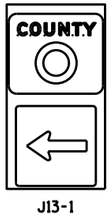
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1

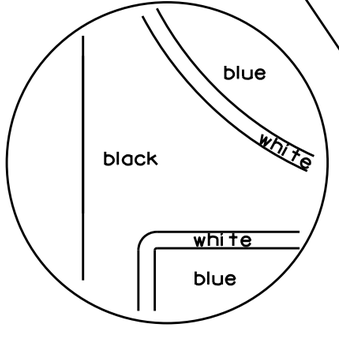


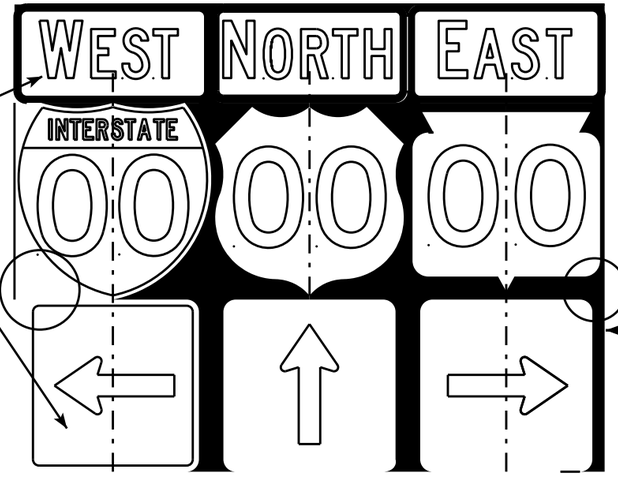
J23-1

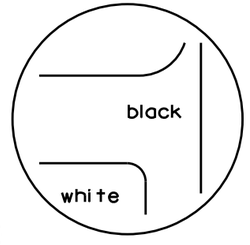


J22-1

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

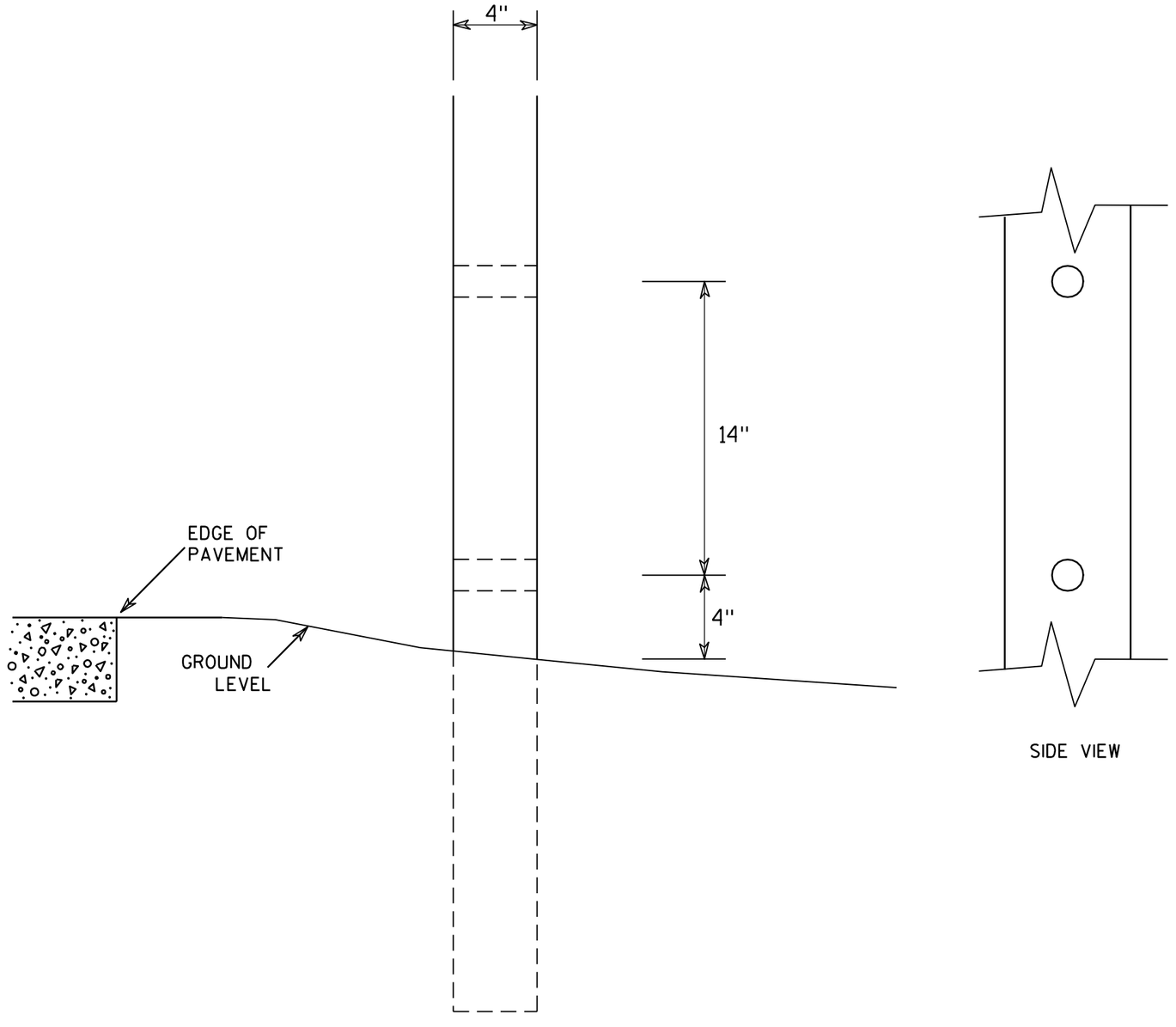
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/06/14 PL... A2-1S.8

PROJECT NO: | SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :

WISDOT/CADDS SHEET 42



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

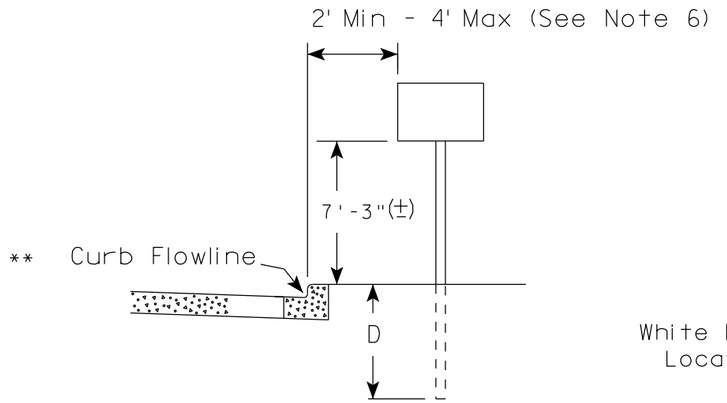
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

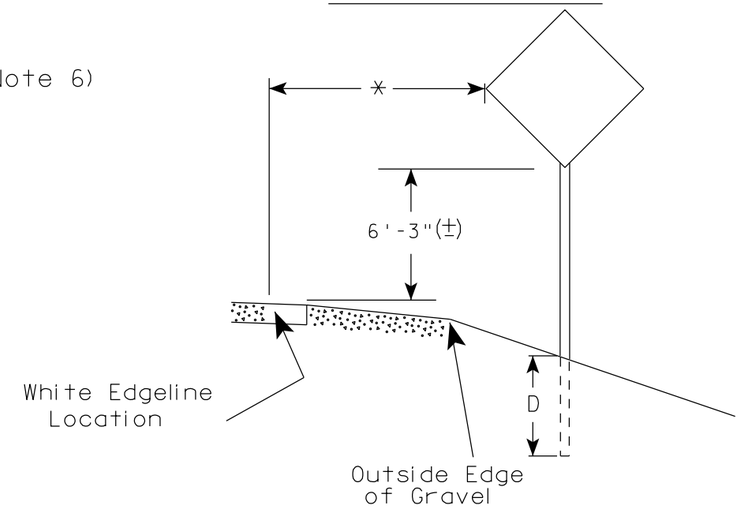
DATE 3/27/97 PLATE NO. A4-11.2

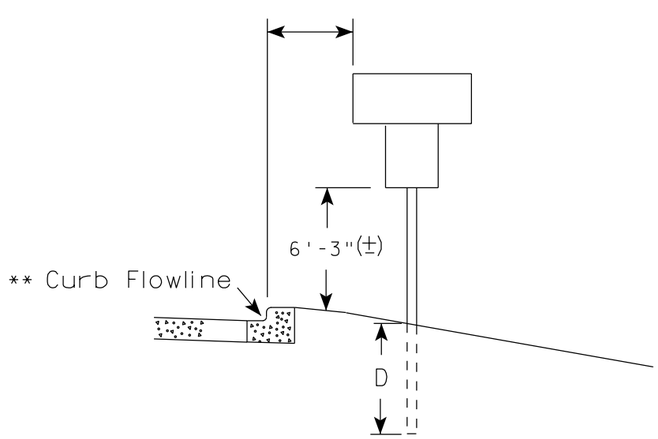
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 81	E

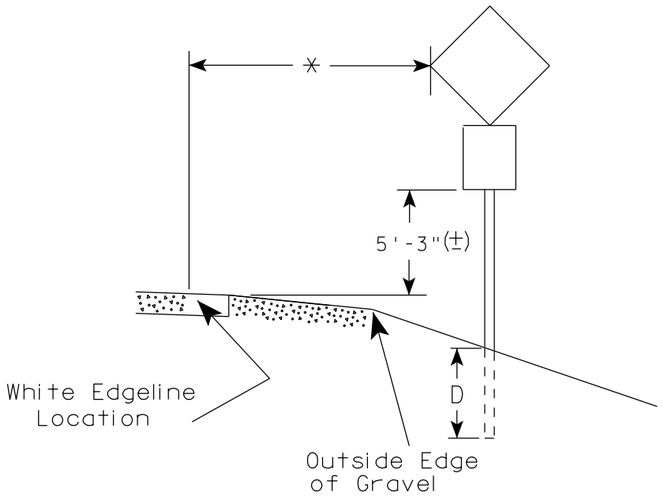
URBAN AREA



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

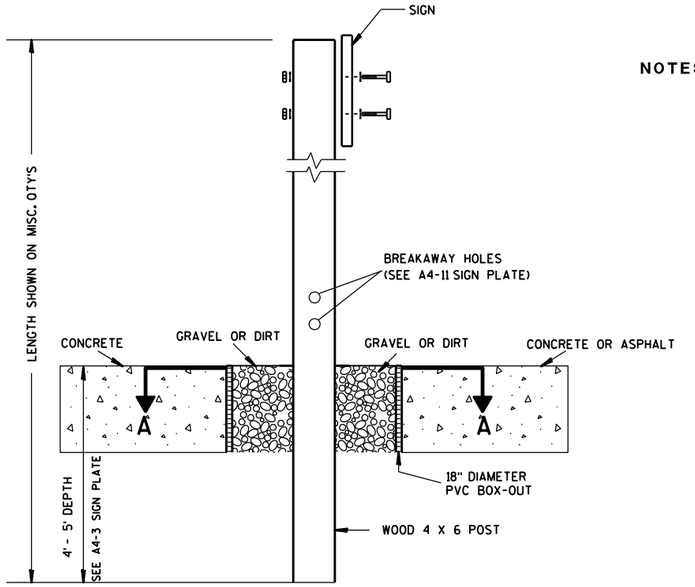
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/13 PLATE NO. A4-3.18

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

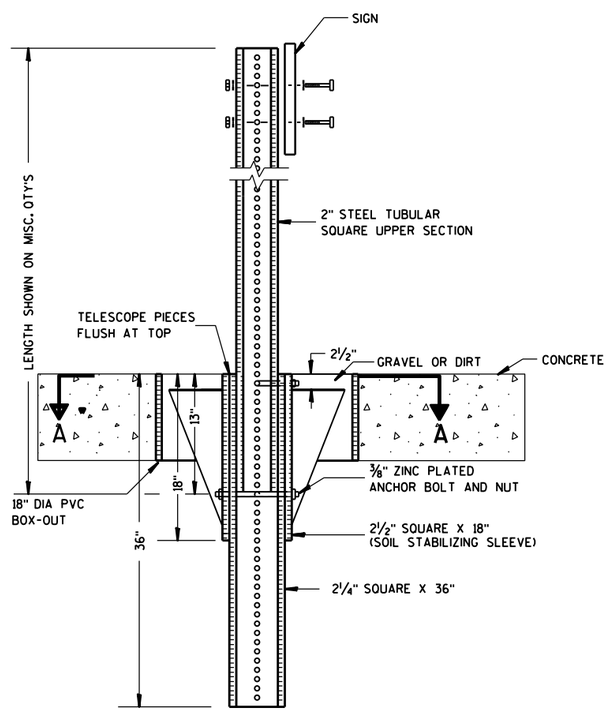
7



ELEVATION VIEW

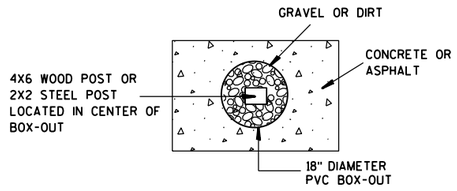
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

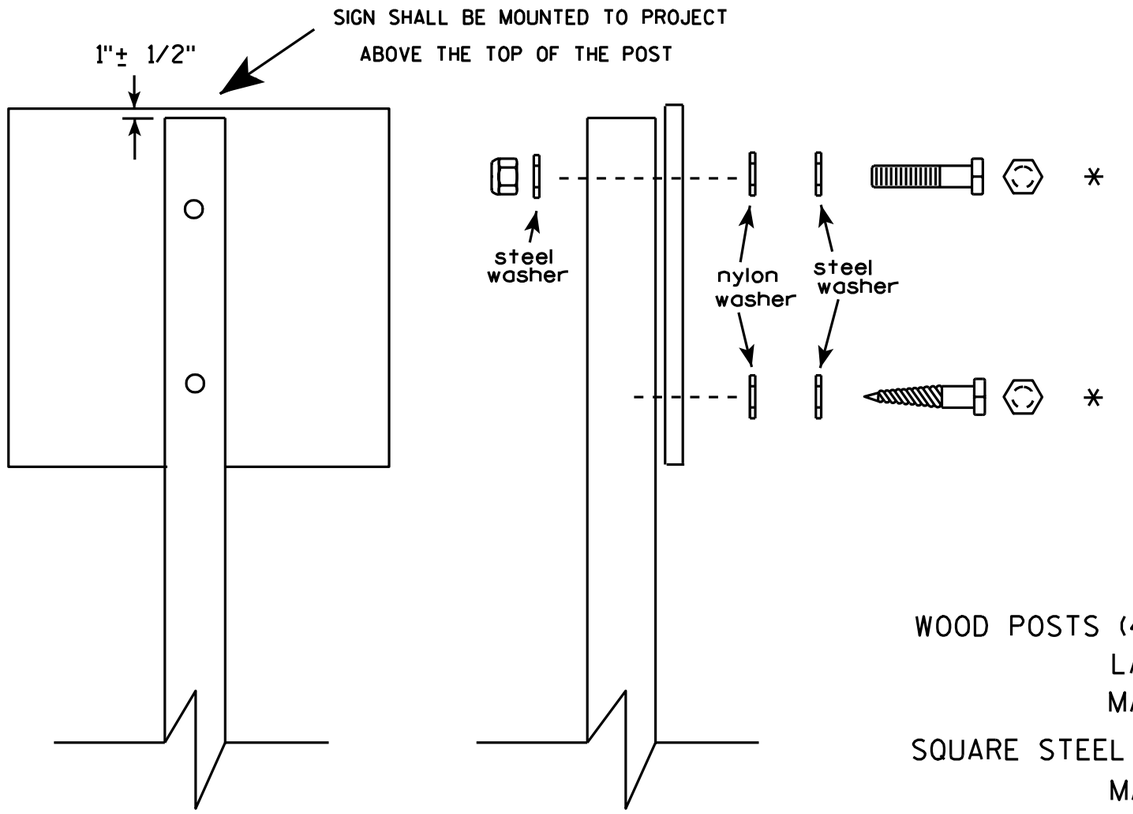
WISCONSIN DEPT OF TRANSPORTATION

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



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

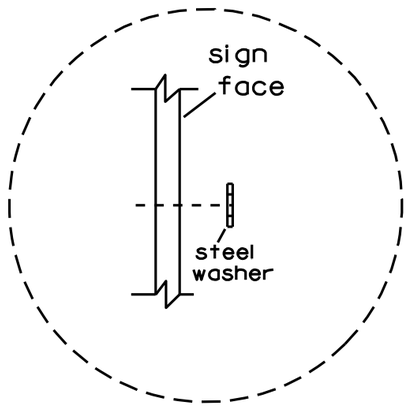
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

7

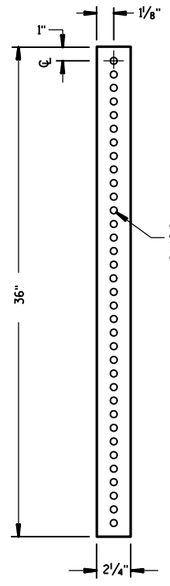
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PROJECT NO:

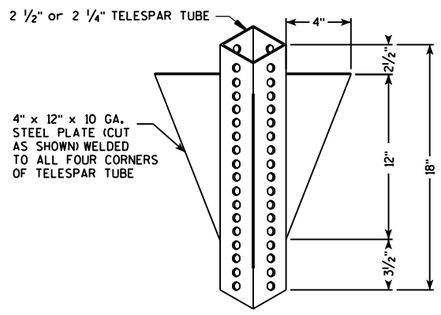
SHEET NO: 84 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

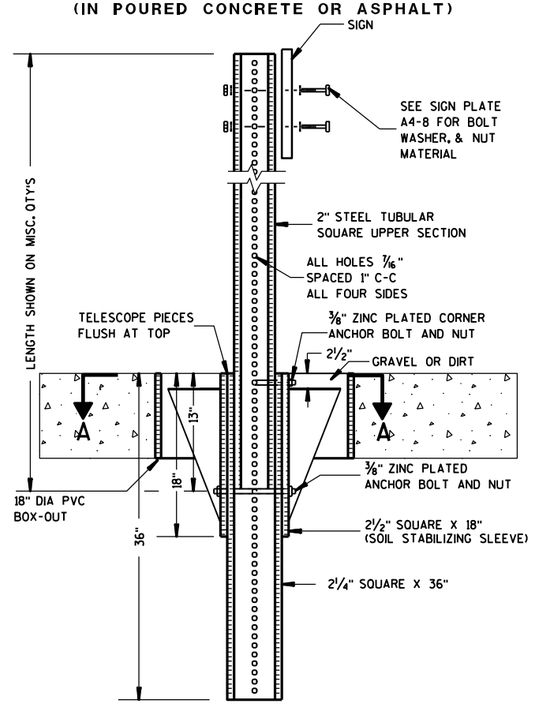
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



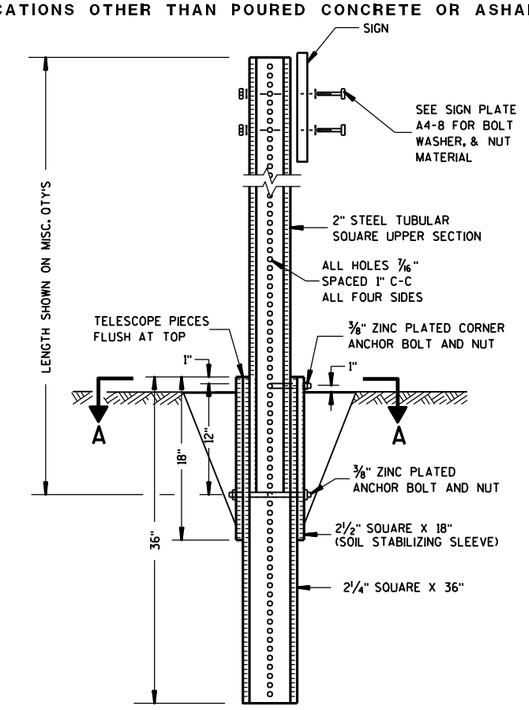
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

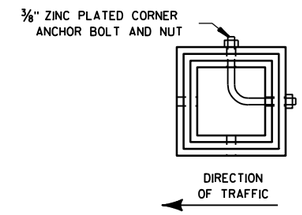


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR 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

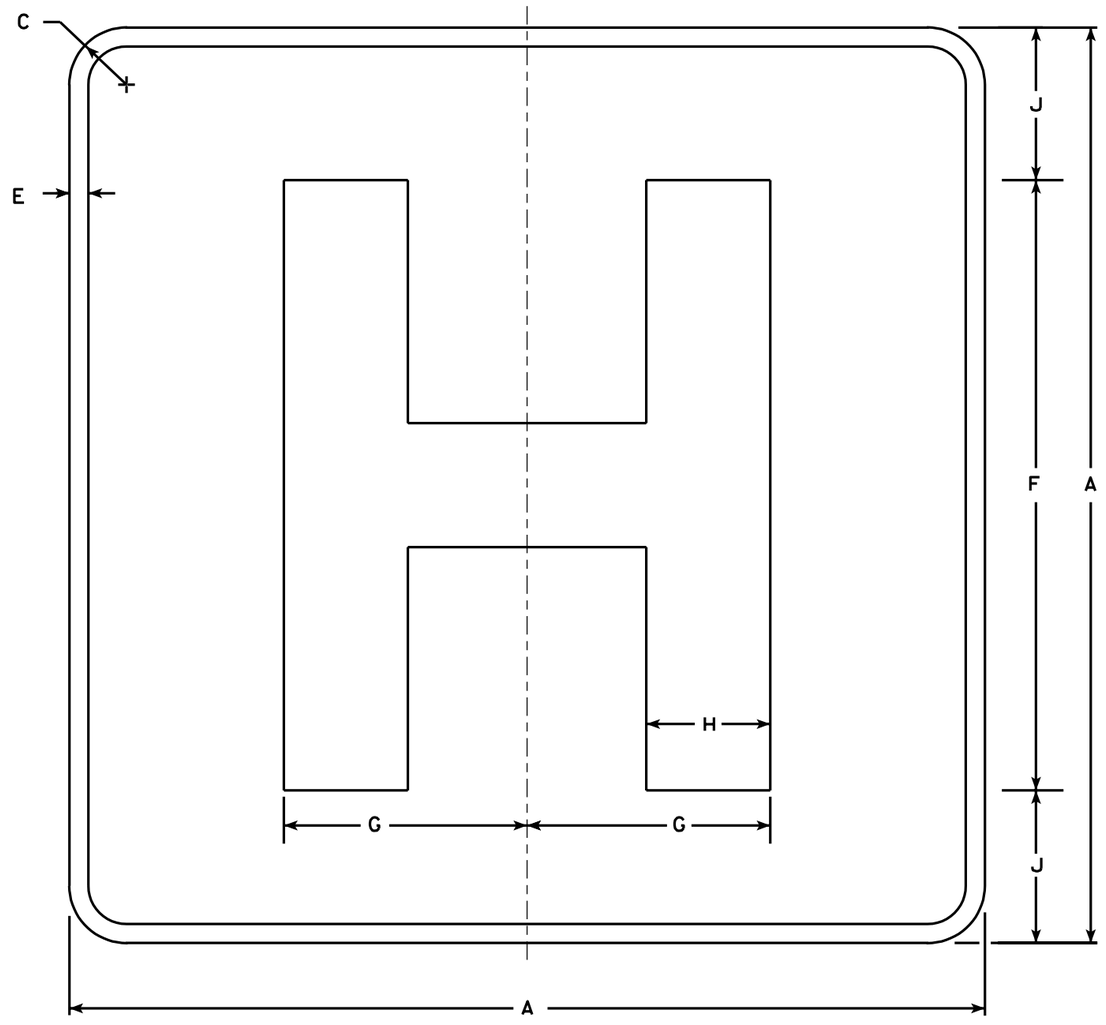
Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

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: 85	E



D9-2

NOTES

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

Metric equivalent for this sign is:

SIZE	
1	450 mmX 450 mm
2	600 mmX 600 mm
3	900 mmX 900 mm
4	X
5	X

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		1 1/8		1/2	12	4 3/4	2 3/8		3																	4.0
2	24		1 1/2		1/2	16	6 3/8	3 1/4		4																	4.0
3	36		2 1/4		3/4	24	9 1/2	4 7/8		6																	9.0
4																											
5																											

STANDARD SIGN
D9-2

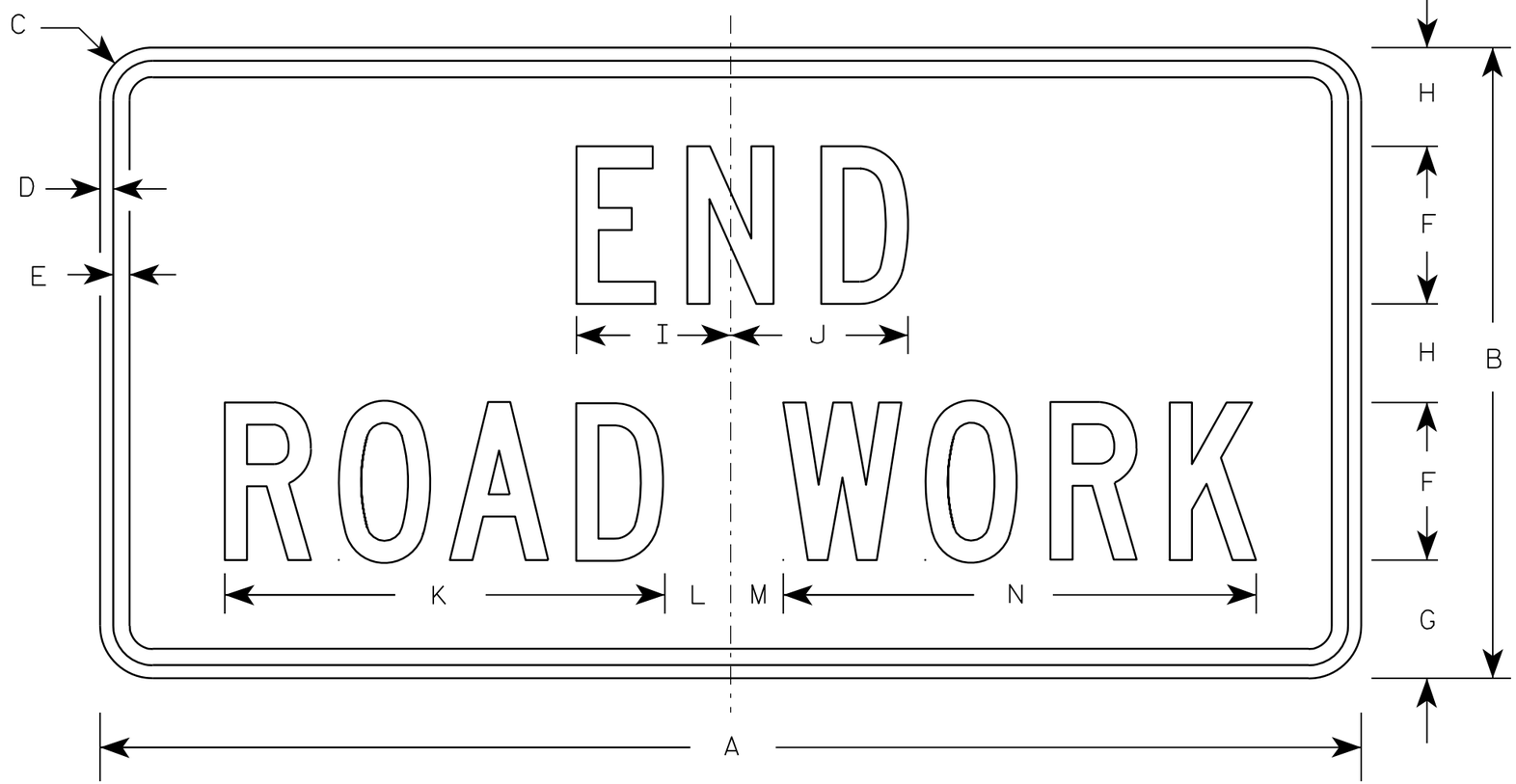
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spong for State Traffic Engineer

DATE 1/15/02 PLATE NO. D9-2.4

PROJECT NO:

SHEET NO: 86 E



G20-2A

NOTES

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

Metric equivalent for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

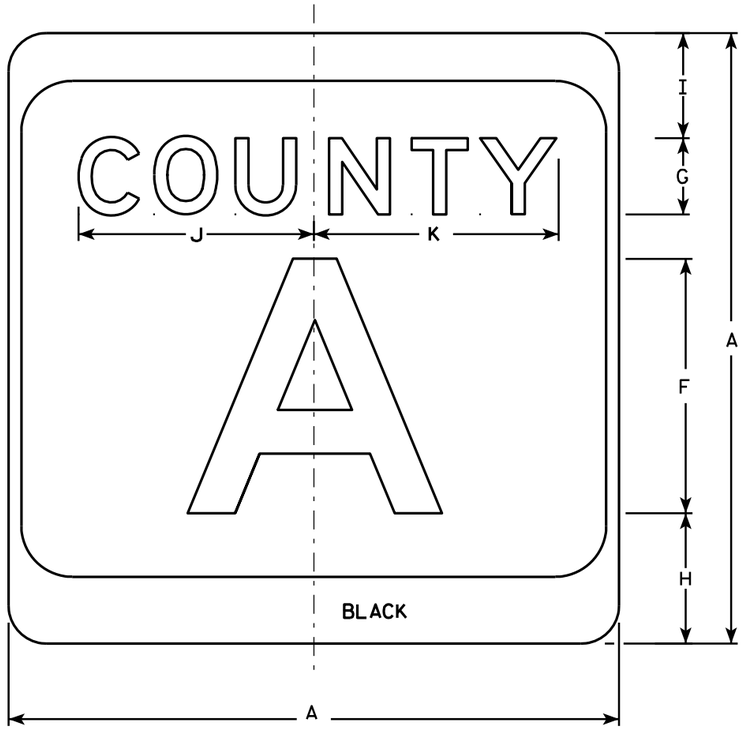
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

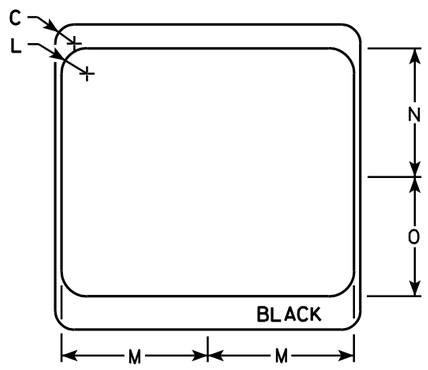
APPROVED Matthew R Rauch
for State Traffic Engineer

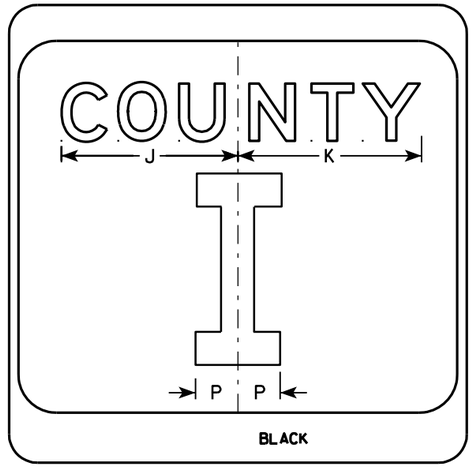
DATE 9/30/09 PLATE NO. G20-2A.8

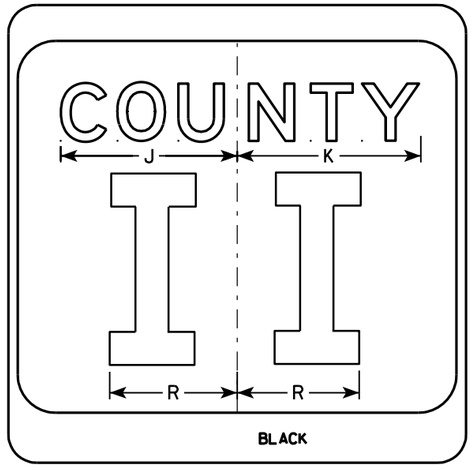
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 87	E



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

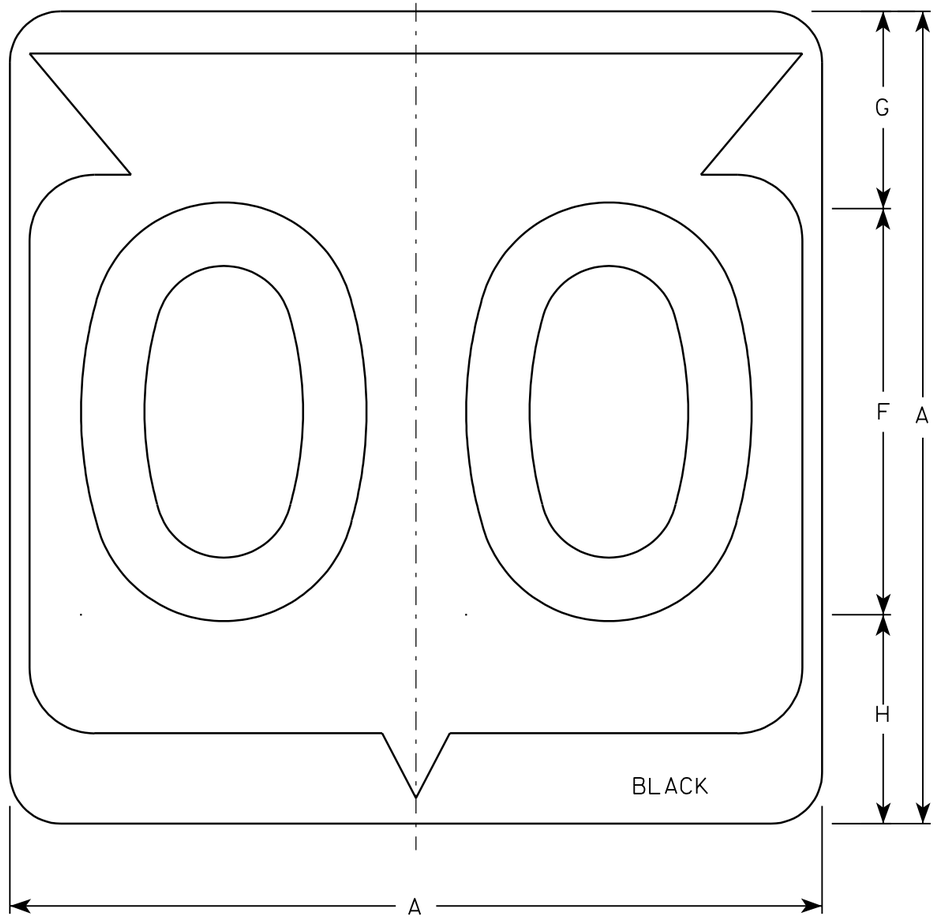
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8

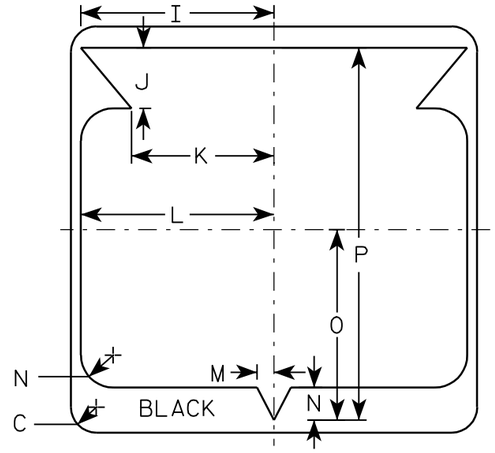
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 88	E



M1-6

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 Series numerals and adjust spacing as per plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective



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		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0	.36
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81

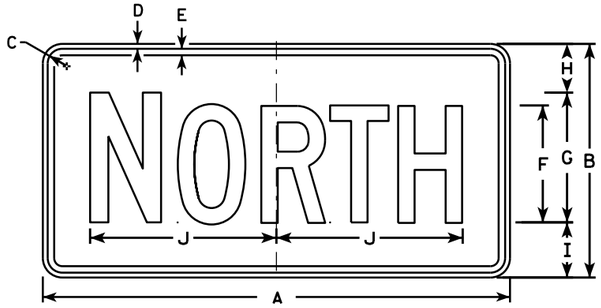
STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

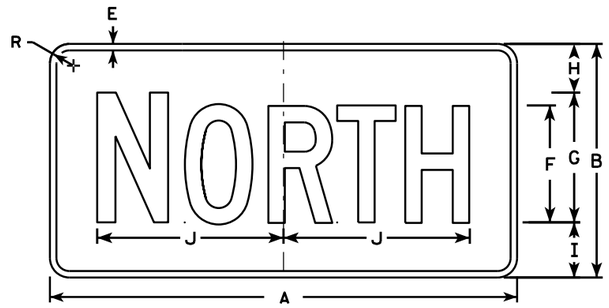
APPROVED Chester J Spang for State Traffic Engineer

DATE 3/20/02 PLATE NO. M1-6.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 89	E



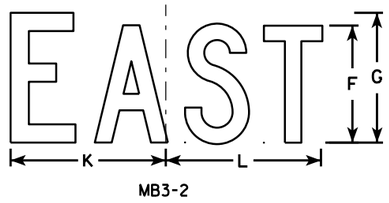
M3-1
MK3-1
MM3-1
MN3-1



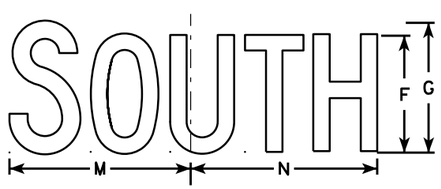
MB3-1



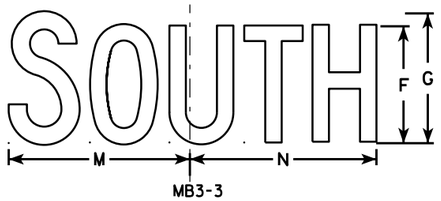
M3-2
MK3-2
MM3-2
MN3-2



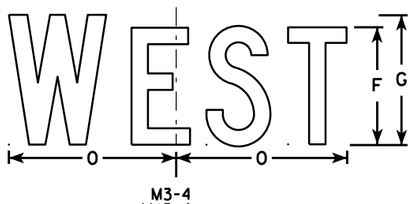
MB3-2



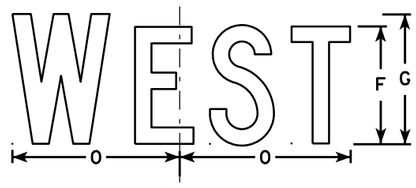
M3-3
MK3-3
MM3-3
MN3-3



MB3-3



M3-4
MK3-4
MM3-4
MN3-4



MB3-4

NOTES

1. All Signs Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White
   MK3-1 thru MK3-4 Background - Green
   Message - White
   MM3-1 thru MM3-4 Background - White
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White
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

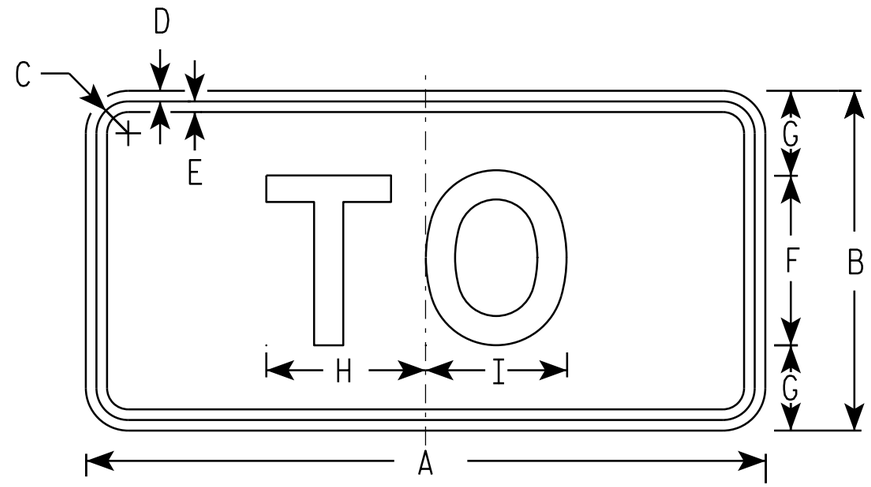
STANDARD SIGNS
M3-1 thur M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

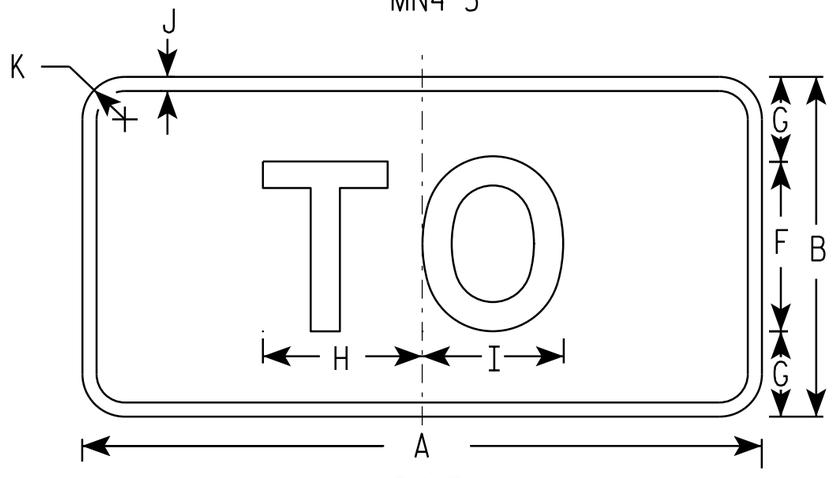
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 6/30/14 PLATE NO. M3-1.13

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



M4-5
MK4-5
MM4-5
MN4-5



MB4-5

NOTES

1. Sign is Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-5 Background - White
   Message - Black

   MB4-5 Background - Blue
   Message - White

   MK4-5 Background - Green
   Message - White

   MM4-5 Background - White
   Message - Green

   MN4-5 Background - Brown
   Message - White

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	5 3/8	5 1/4	1/2	1 1/2																2.00
3	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
4	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
5	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5

STANDARD SIGN
M4-5

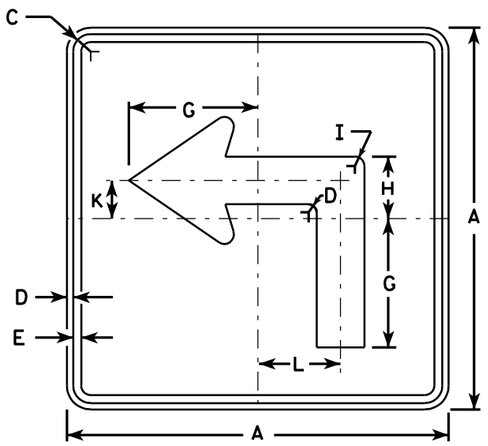
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

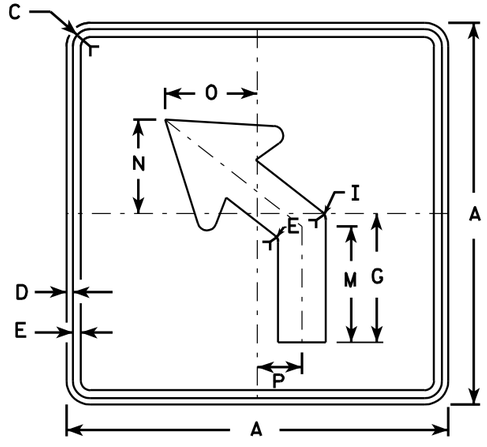
DATE 6/30/14 PLATE M4-5.7

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

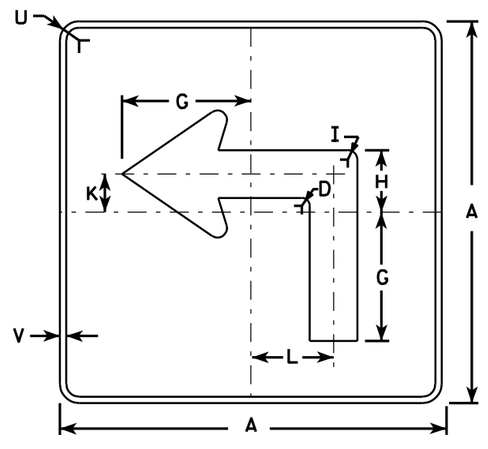
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\M45.DGN PLOT DATE : 30-JUN-2014 12:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.351066:1.000000
WISDOT/CADDS SHEET 42



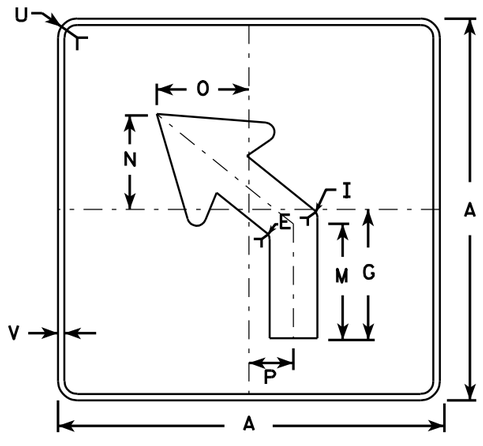
M5-1L
MK5-1L
MM5-1L
MO5-1L
MP5-1L
MR5-1L



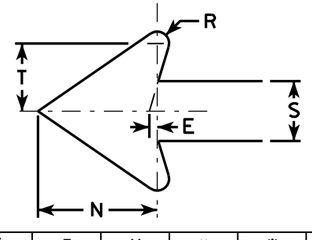
M5-2L
MK5-2L
MM5-2L
MO5-2L
MP5-2L
MR5-2L



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

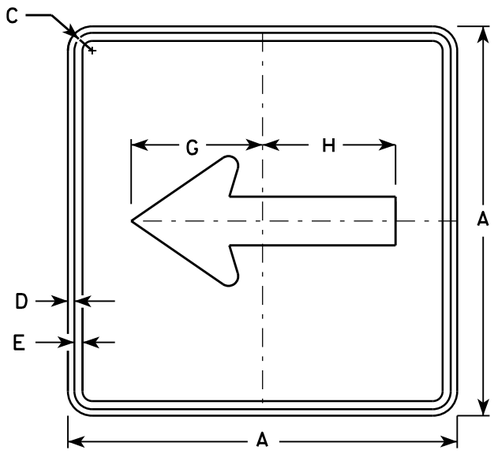
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

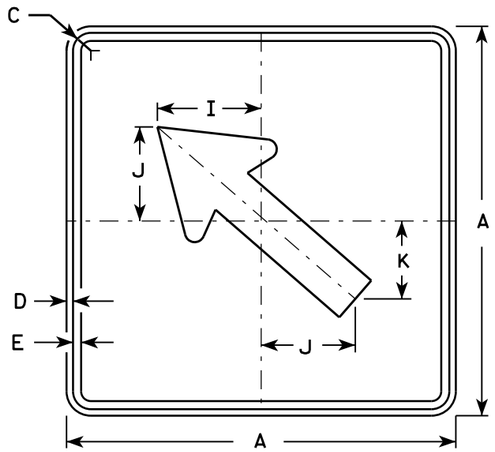
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/29/13 PLATE NO. M5-1.12

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 92 | E



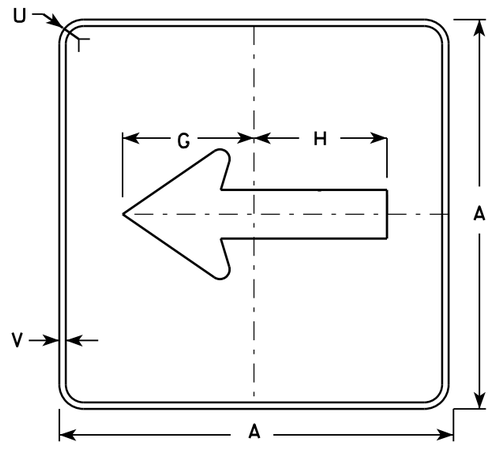
M6-1
MK6-1
MM6-1
MN6-1
MO6-1
MP6-1
MR6-1



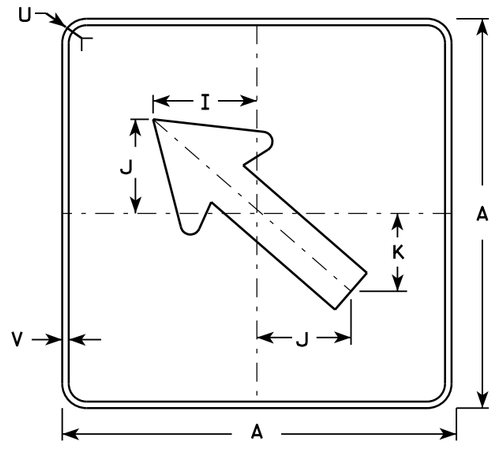
M6-2
MK6-2
MM6-2
MN6-2
MO6-2
MP6-2
MR6-2

NOTES

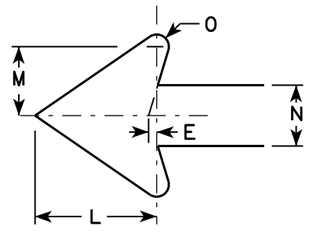
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MG6-1 and MG6-2 Background - Green
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow



MB6-1



MB6-2



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2						3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25

STANDARD SIGN M6-1 & M6-2 SERIES

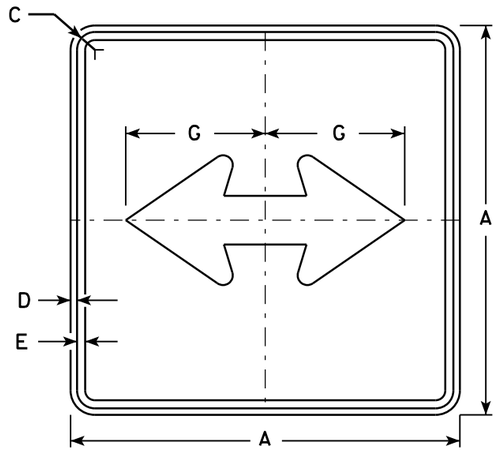
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

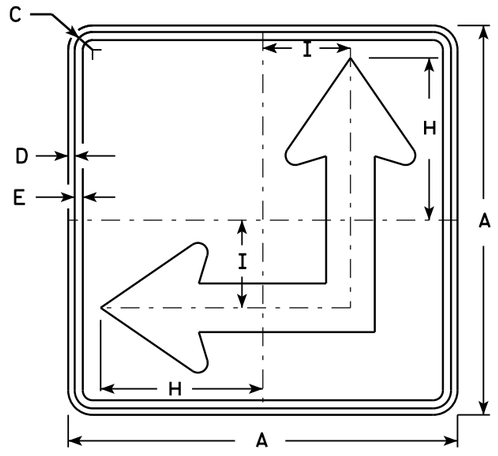
DATE 7/03/14 PLATE 93 M6-1.14

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

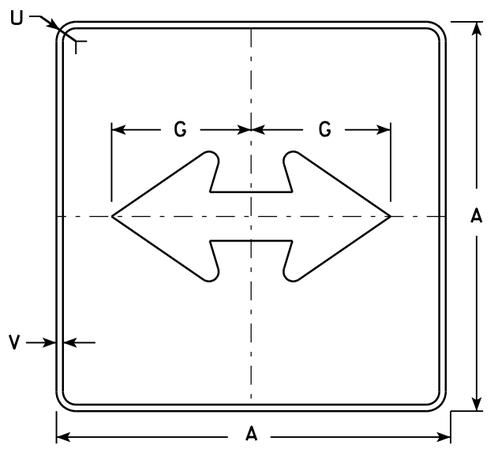
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\M61.DGN PLOT DATE : 03-JUL-2014 14:28 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 11.675051:1.000000



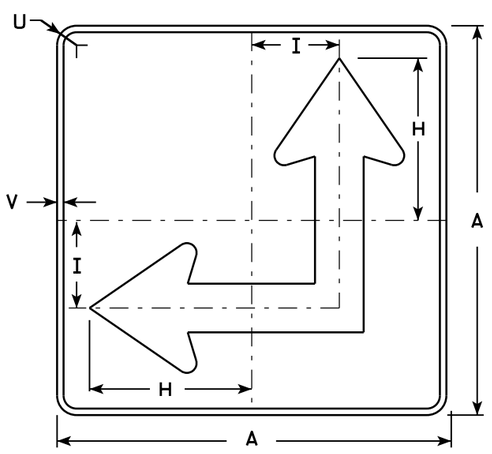
M6-4
MK6-4
MM6-4
MN6-4
MO6-4
MP6-4
MR6-4



M6-6
MK6-6
MM6-6
MN6-6
MO6-6
MP6-6
MR6-6



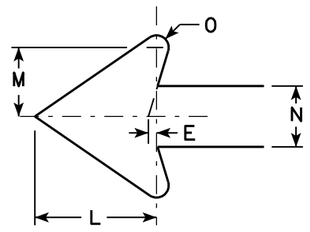
MB6-4



MB6-6

NOTES

1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See Note 4
   Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-4 and M6-6 Background - White
   Message - Black
   MB6-4 and MB6-6 Background - Blue
   Message - White
   MK6-4 and MK6-6 Background - Green
   Message - White
   MM6-4 and MM6-6 Background - White
   Message - Green
   MN6-4 and MN6-6 Background - Brown
   Message - White
   MO6-4 and MO6-6 Background - Orange - Type F Reflective
   Message - Black
   MP6-4 and MP6-6 Background - White
   Message - Blue
   MR6-4 and MR6-6 Background - Brown
   Message - Yellow
5. M6-6R same as M6-6L except arrow points ahead and right.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

STANDARD SIGN
M6-4 & M6-6
SERIES

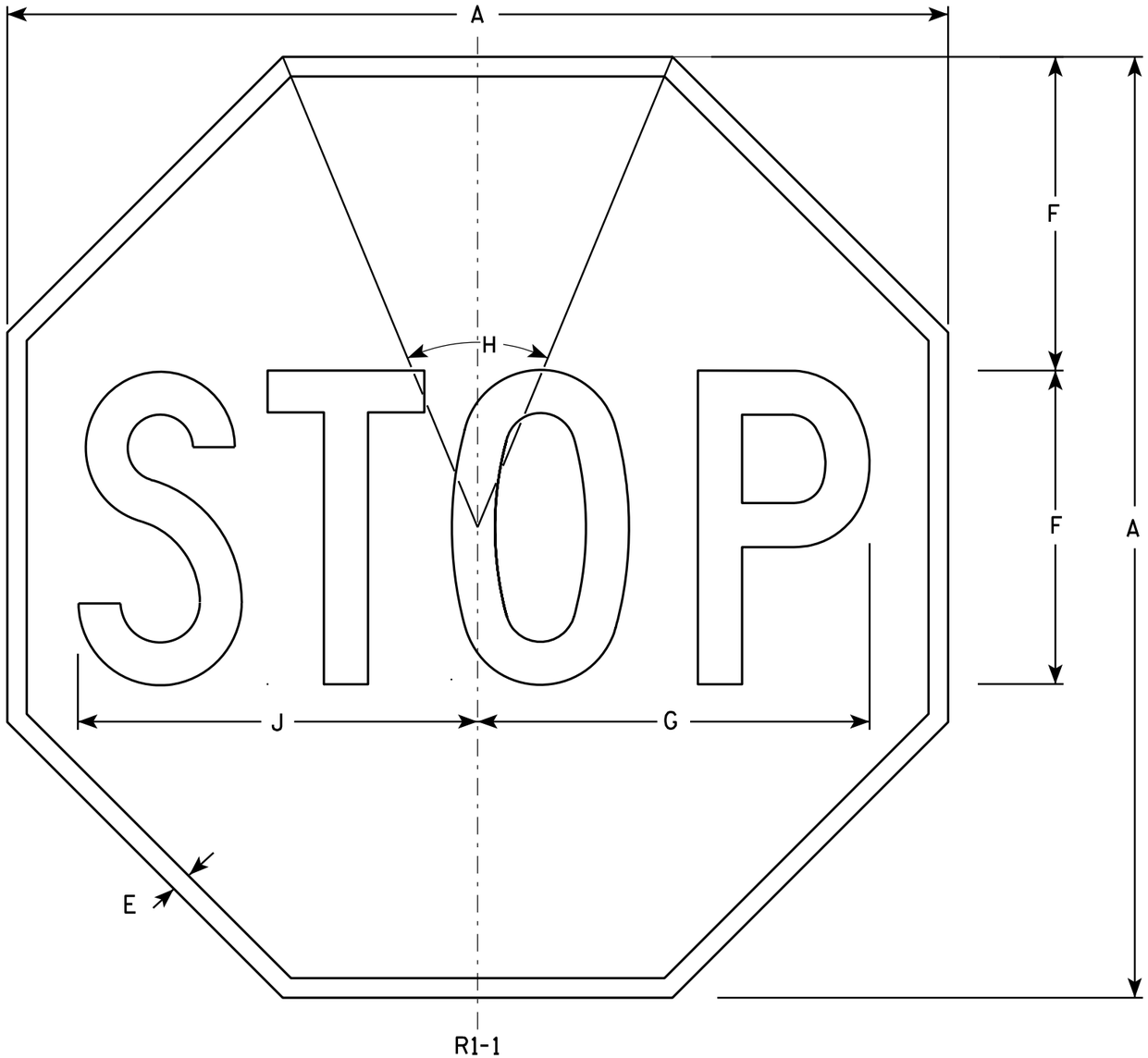
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 7/03/14 PLATE M6-4.9

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

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\M64.DGN PLOT DATE : 03-JUL-2014 14:56 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 11.675051:1.000000



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C

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

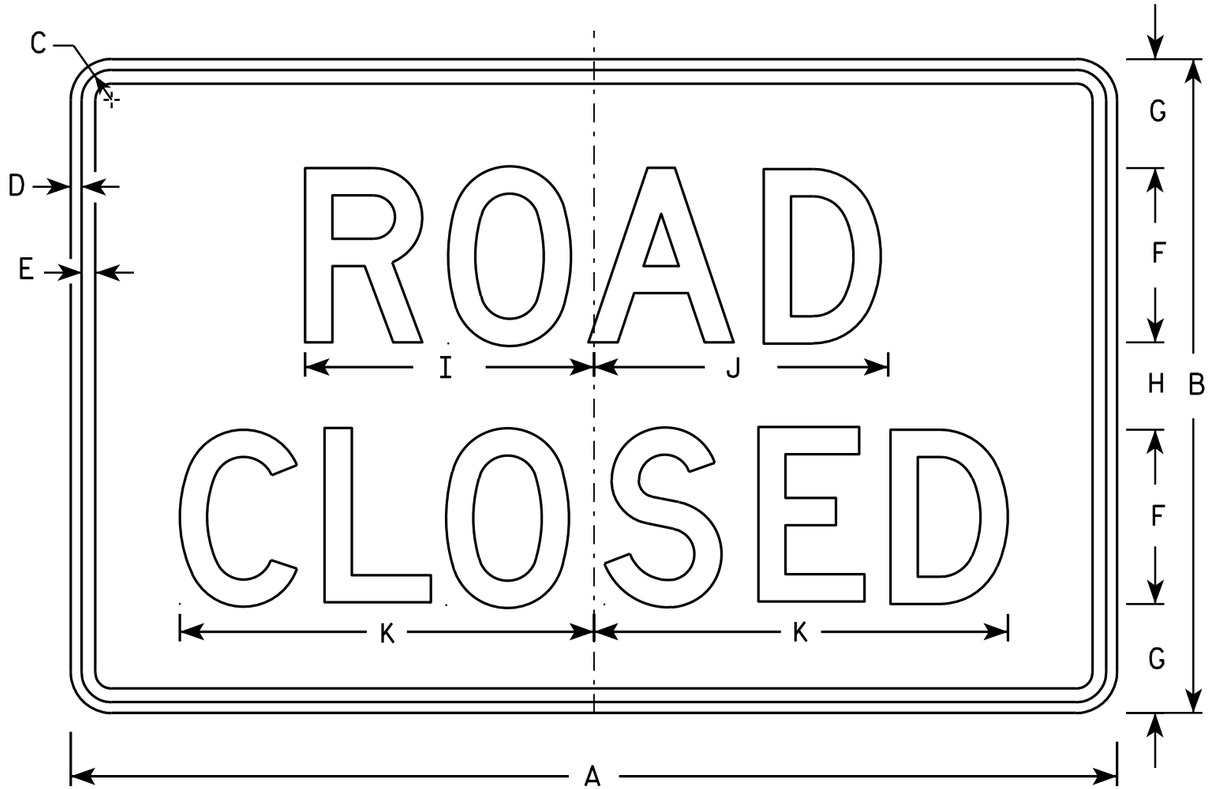
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1.12

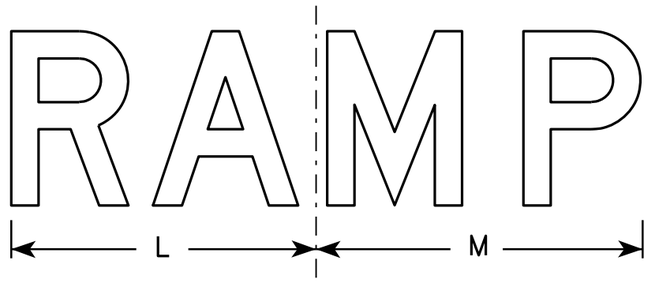
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 95	E



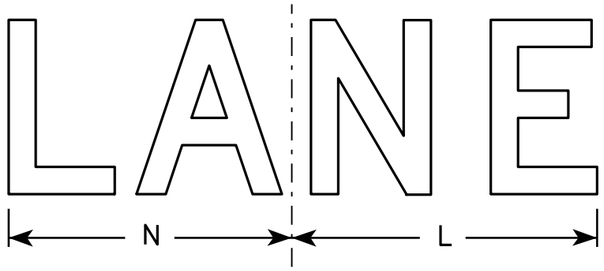
R11-2

NOTES

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



R11-2R



R11-2L

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

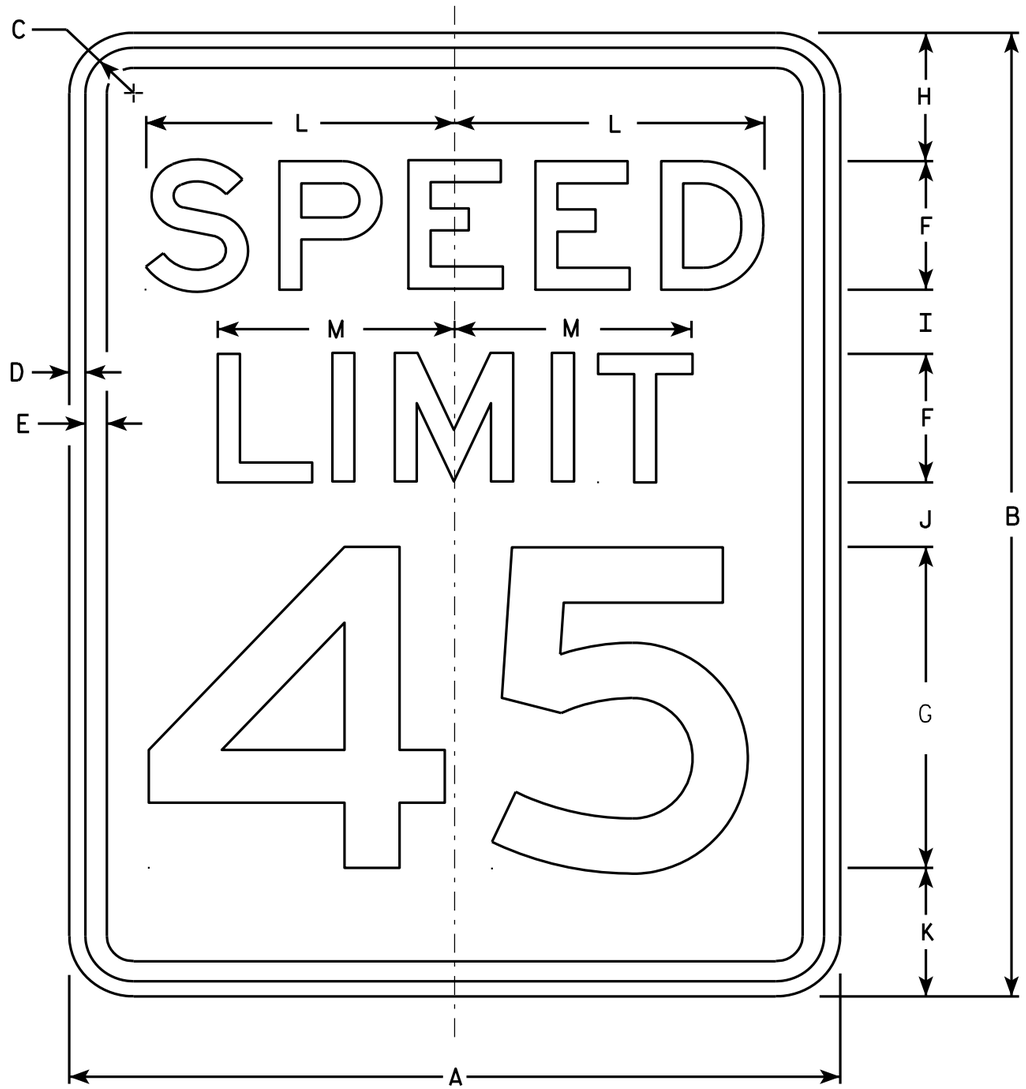
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 96	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

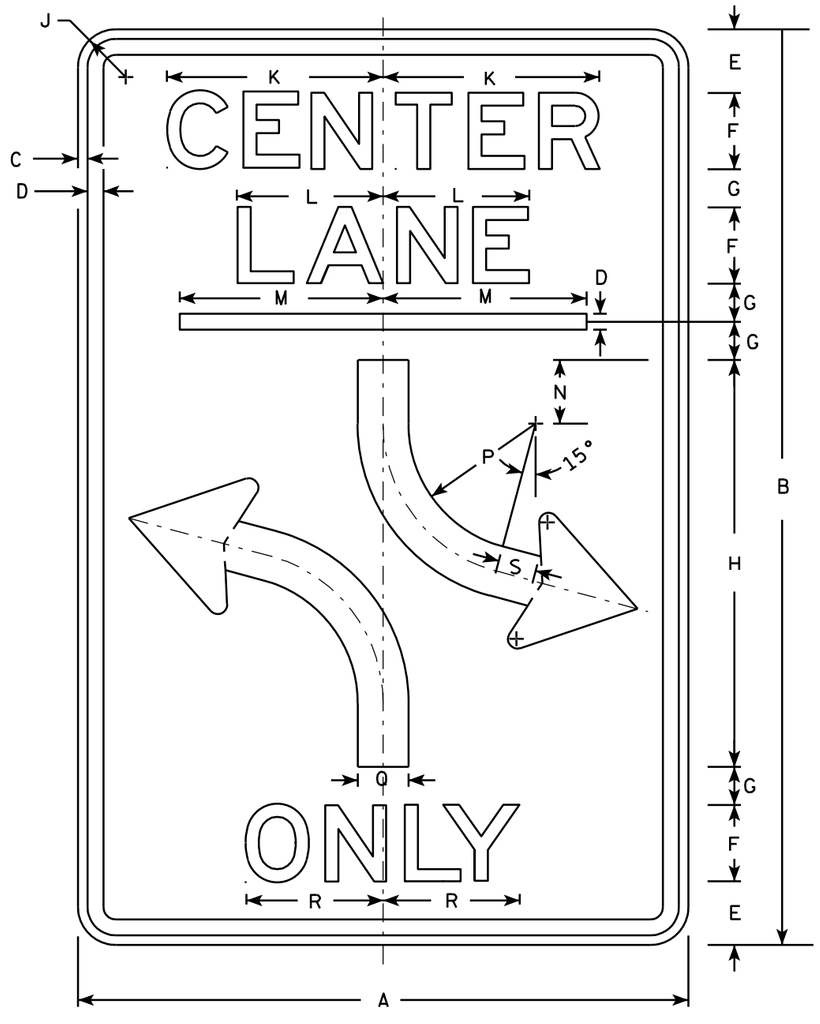
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 97 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R21.DGN PLOT DATE : 28-MAY-2010 08:32 PLOT BY : ditjph PLOT NAME : PLOT SCALE : 4.717577:1.000000

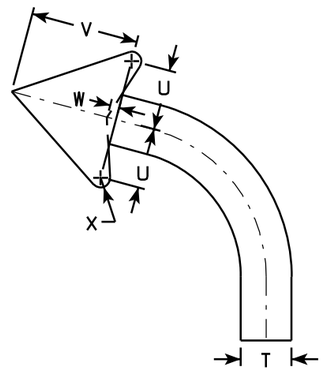
WISDOT/CADDS SHEET 42



R3-9B

NOTES

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



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	3/8	1/2	2 1/2	3	1 1/2	16		1 1/2	8 1/2	5 3/4	8	2 1/2		6	2	5 1/8	1 1/2		2 3/8	4 3/8	3/8				6.0
2M	24	36	3/8	1/2	2 1/2	3	1 1/2	16		1 1/2	8 1/2	5 3/4	8	2 1/2		6	2	5 1/8	1 1/2		2 3/8	4 3/8	3/8				6.0
3	36	48	5/8	7/8	3 1/2	5	1 1/2	20		2 1/4	14 1/8	9 1/2	12	3		4	3	9 7/8	2		3 1/2	6 1/8	1/2				12.0
4																											
5																											

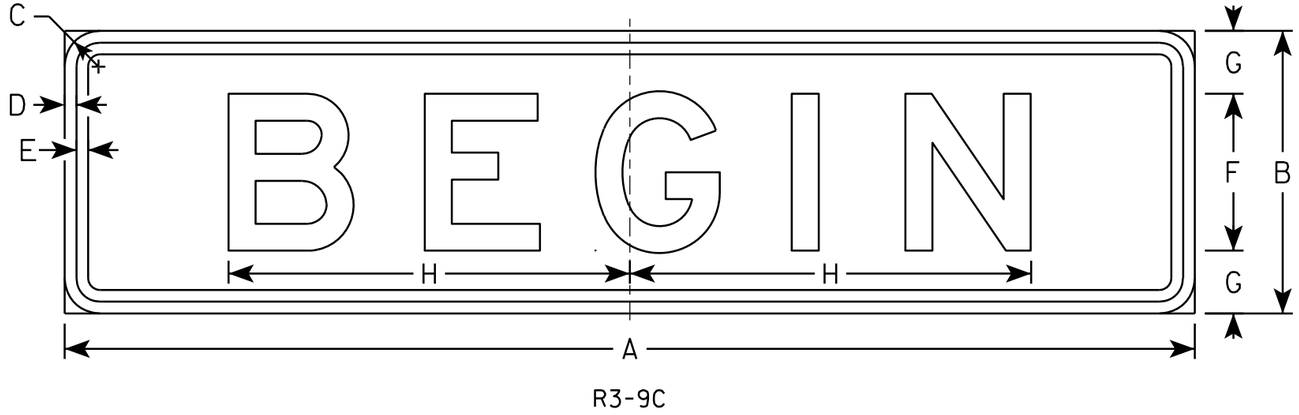
STANDARD SIGN
R3-9B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-9B.5

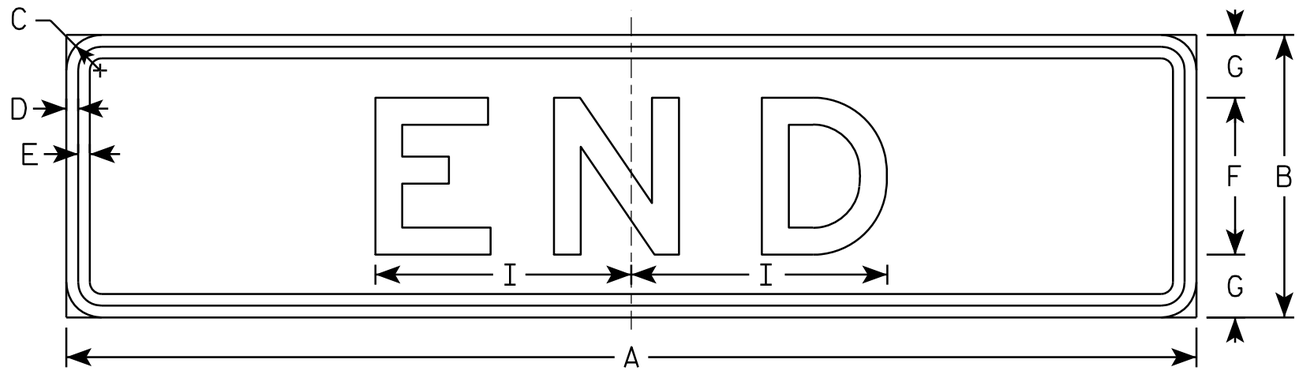
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 98 | E



R3-9C

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.



R3-9D

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	6	1 1/8	3/8	3/8	3	1 1/2	7 3/4	4 7/8																		1.0
2M	24	6	1 1/8	3/8	3/8	3	1 1/2	7 3/4	4 7/8																		1.0
3	36	9	1 1/8	3/8	3/8	5	2	12 3/4	8 1/8																		1.86
4																											
5																											

STANDARD SIGN
R3-9C & R3-9D

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-9C.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 99	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																											

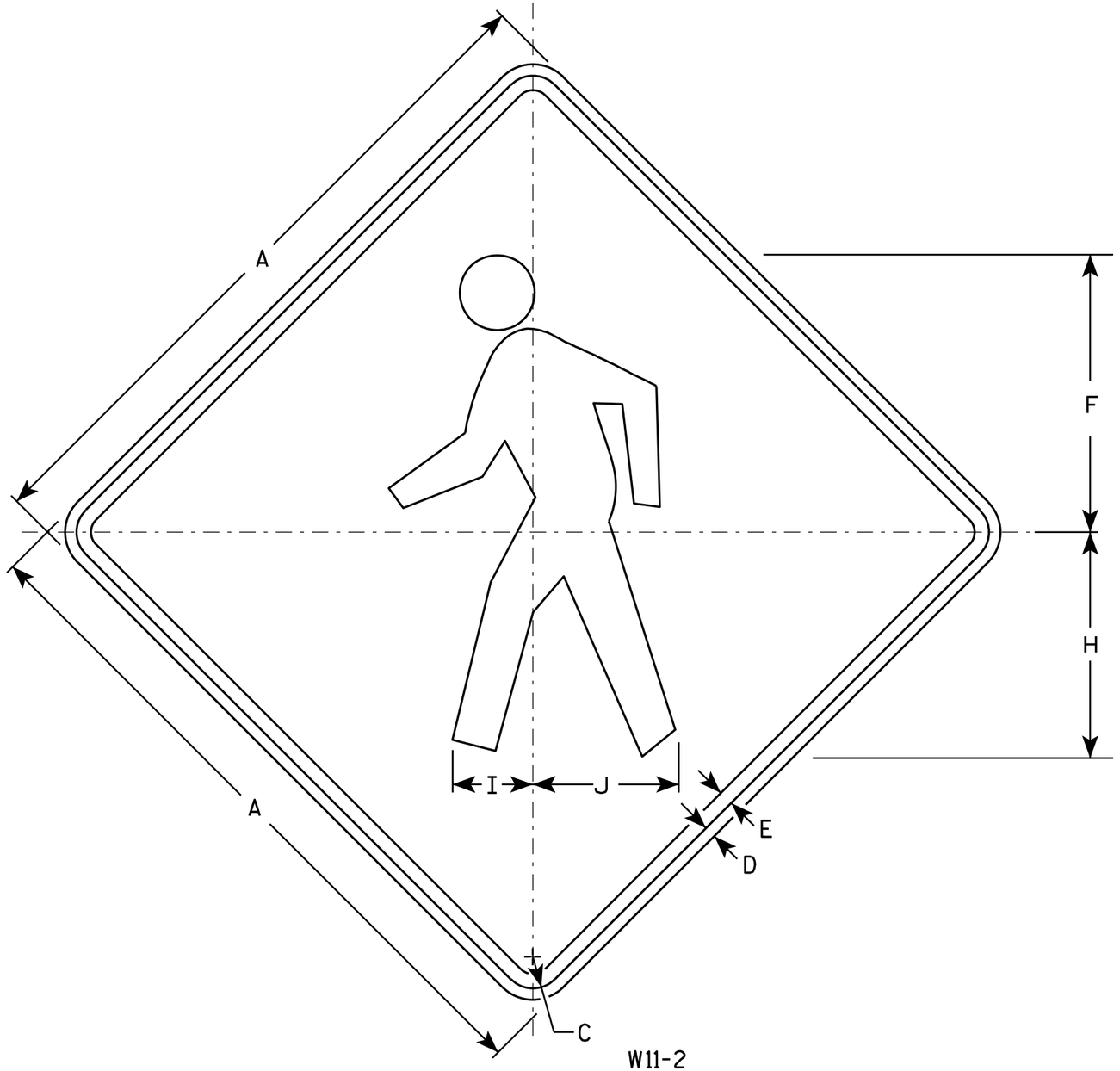
STANDARD SIGN
R9-9

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: 100	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																											

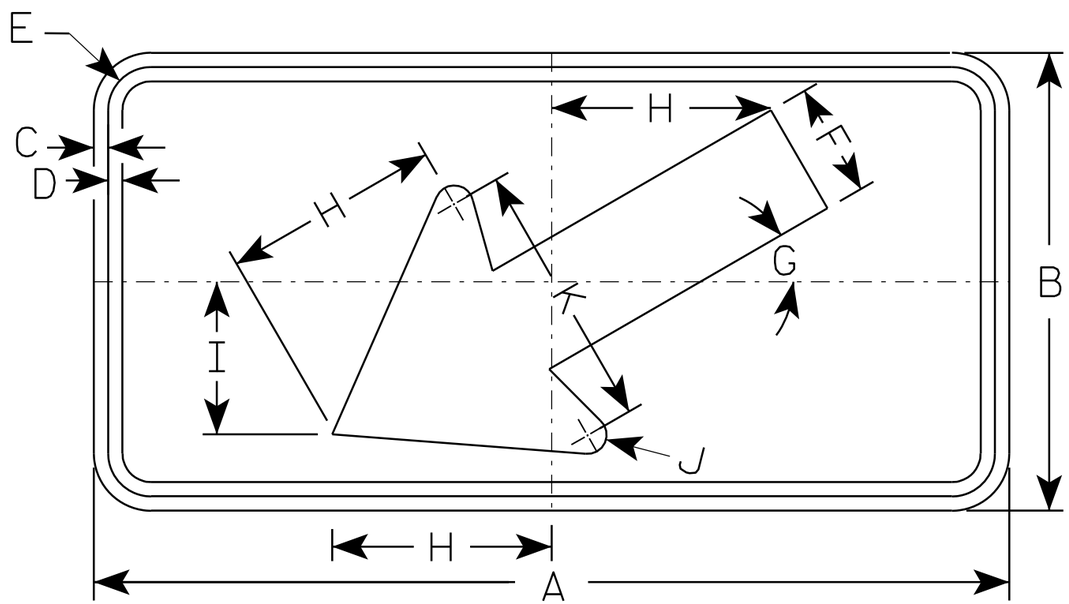
STANDARD SIGN
W11-2

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: 101	E



W16-7L

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
   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. W16-7R is the same as W16-L except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	3/8	3/8	1 1/8	3	30°	5 3/4	4	1/2	7																2.0
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																											8
5																											8

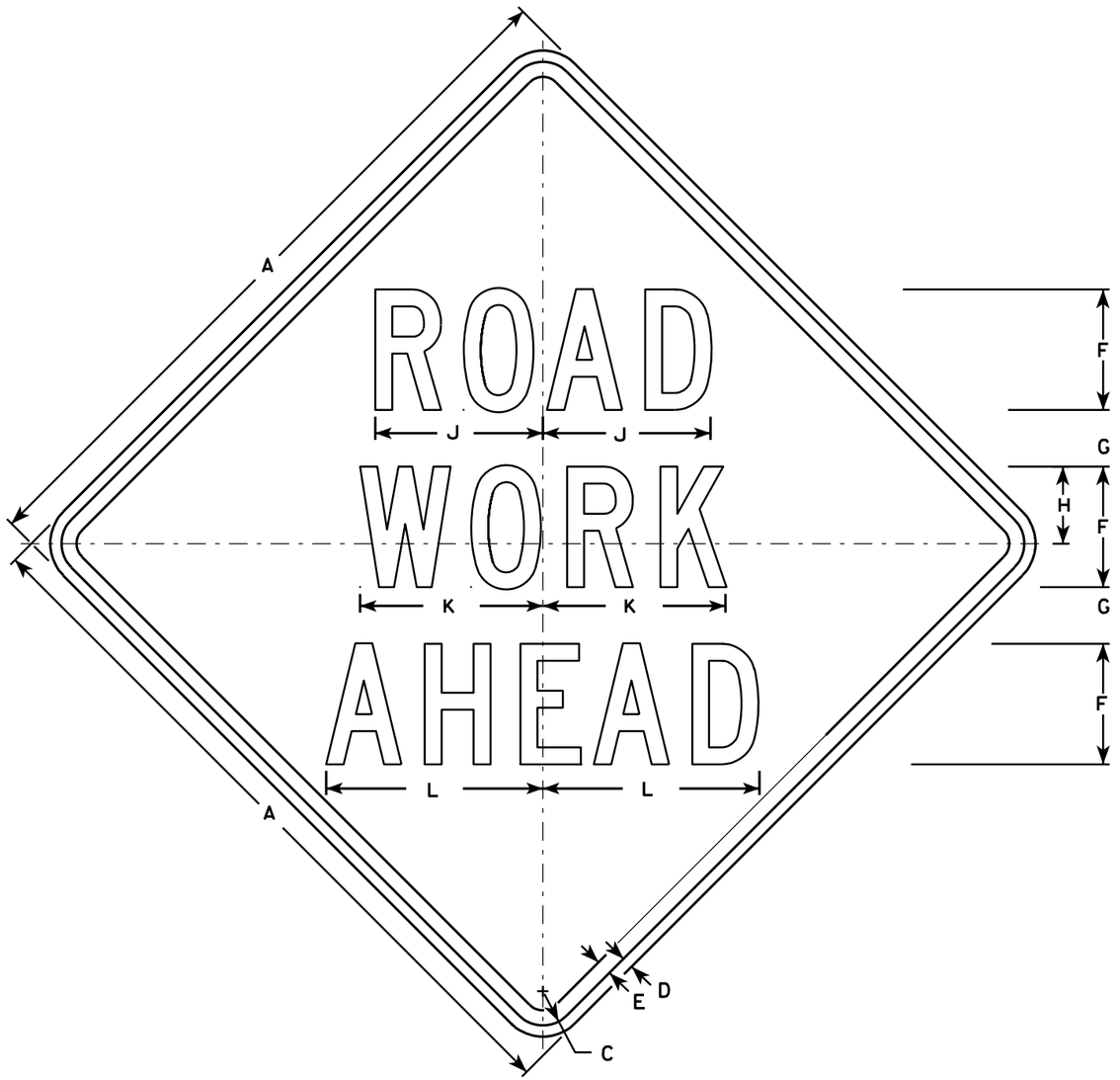
STANDARD SIGN
W16-7

WISCONSIN DEPT OF TRANSPORTATION

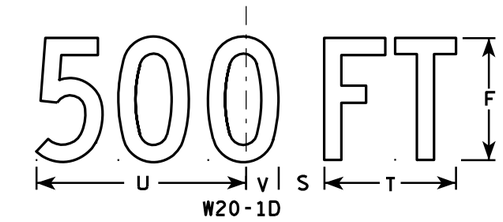
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/02/10 PLATE NO. W16-7.5

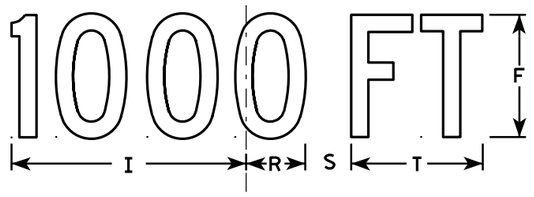
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 102	E



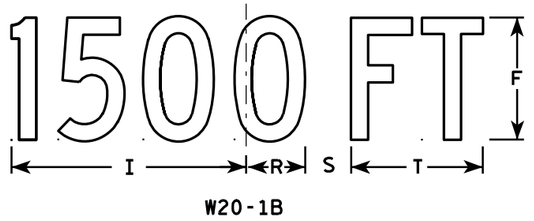
W20-1A



W20-1D



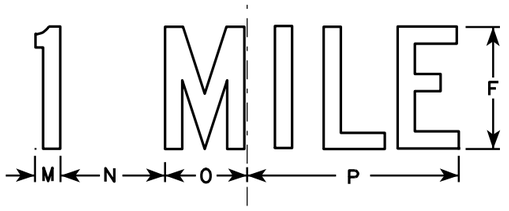
W20-1C



W20-1B



W20-1G



W20-1F

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	1/2	5/8	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9		2 1/2	1 7/8	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew L Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-1.9

PROJECT NO:

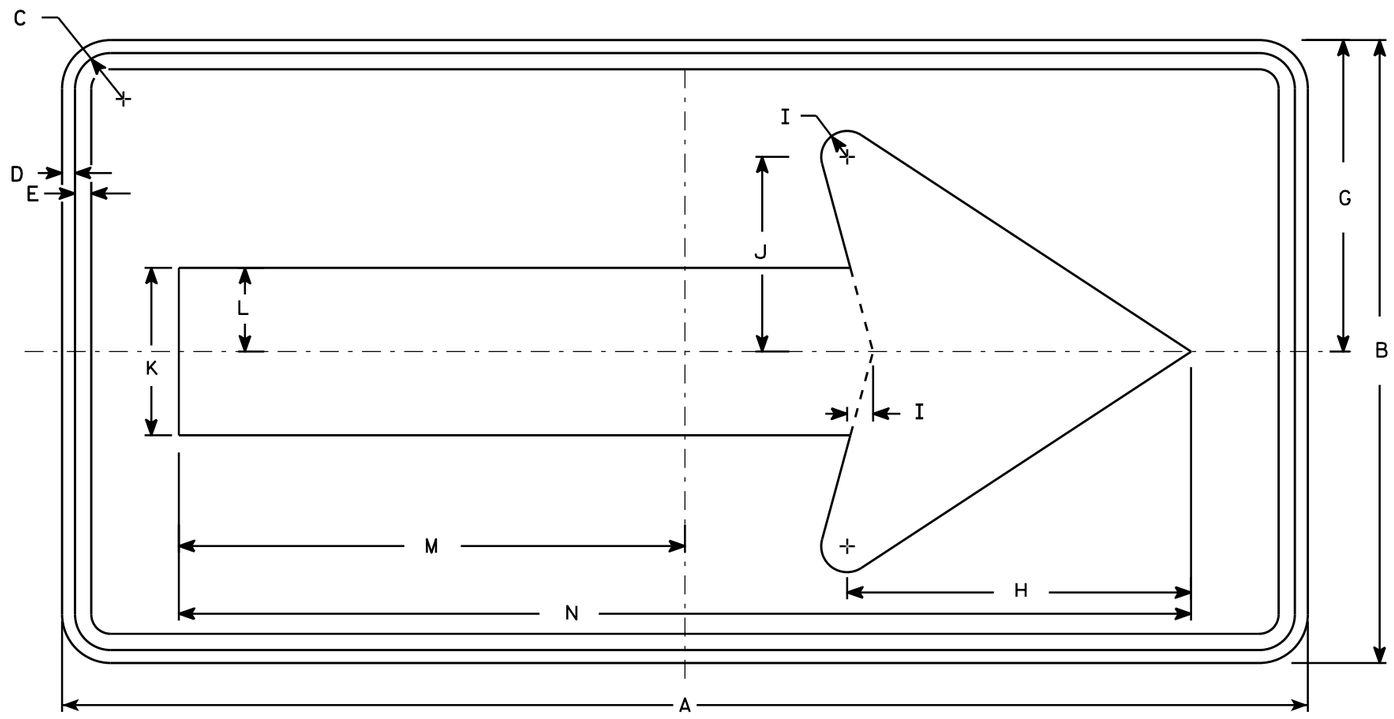
SHEET NO: 103 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W201.DGN PLOT DATE : 18-MAR-2011 09:56 PLOT BY : mscj9h

WISDOT/CADDS SHEET 42

7

7



W01-6

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

STANDARD SIGN
W01-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE W01-6.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

EARTHWORK DATA - STH 48

STATION	COMMON SF	FILL SF	COMMON CY	FILL CY	MASS HAUL
3+50.00	33.70	1.11	0.00	0.00	0.00
3+75.00	33.04	1.11	30.90	1.28	29.61
4+00.00	30.17	1.92	29.26	1.75	57.12
4+25.00	38.94	0.02	32.00	1.12	88.00
4+50.00	34.04	1.55	33.79	0.91	120.88
4+75.00	34.14	1.64	31.56	1.85	150.59
5+00.00	37.35	1.84	33.10	2.01	181.68
5+25.00	43.02	0.00	37.21	1.06	217.82
5+50.00	38.96	0.50	37.95	0.29	255.48
5+75.00	36.96	4.04	35.15	2.63	288.01
6+00.00	36.76	2.63	34.13	3.86	318.28
6+25.00	35.52	2.54	33.46	2.99	348.75
6+50.00	31.11	0.00	30.85	1.47	378.12
6+75.00	34.22	0.67	30.25	0.39	407.98
7+00.00	24.77	10.86	27.31	6.67	428.62
7+25.00	23.61	9.46	22.40	11.76	439.26
7+50.00	26.29	12.12	23.10	12.49	449.87
7+75.00	29.87	1.26	26.00	7.74	468.13
8+00.00	31.98	0.00	28.63	0.73	496.03
8+25.00	28.63	0.46	28.06	0.27	523.83
8+50.00	24.14	10.33	24.43	6.24	542.01
8+75.00	28.20	0.39	24.23	6.20	560.04
8+85.00	28.09	0.32	10.42	0.16	570.30
9+00.00	29.38	6.69	15.96	2.43	583.83
9+25.00	31.29	7.88	28.09	8.43	603.49
9+50.00	28.94	9.20	27.88	9.88	621.49
9+75.00	31.74	9.11	28.09	10.60	638.98
10+00.00	25.20	9.53	26.36	10.79	654.56
10+25.00	23.83	8.63	22.70	10.51	666.75
10+50.00	24.17	8.51	22.22	9.92	679.05
10+75.00	32.49	14.21	26.23	13.15	692.13
11+00.00	33.67	15.80	30.63	17.37	705.40
11+25.00	28.39	9.22	28.73	14.48	719.65
11+50.00	26.12	9.62	25.24	10.90	733.98
11+75.00	26.80	8.77	24.50	10.64	747.84
12+00.00	25.15	7.94	24.05	9.67	762.22
12+25.00	20.69	8.85	21.22	9.72	773.73
12+44.00	28.69	1.65	17.37	4.62	786.48
12+50.00	30.36	1.62	6.56	0.45	792.59
12+75.00	37.35	6.93	31.35	4.95	818.99
13+00.00	36.86	0.69	34.36	4.41	848.94

EARTHWORK DATA - STH 48

STATION	COMMON SF	FILL SF	COMMON CY	FILL CY	MASS HAUL
13+25.00	31.64	8.22	31.71	5.16	875.49
13+50.00	34.94	8.20	30.82	9.50	896.81
13+75.00	26.65	14.65	28.51	13.22	912.11
14+00.00	29.65	8.68	26.06	13.50	924.67
14+25.00	42.71	0.00	33.50	5.02	953.15
14+50.00	25.63	14.62	31.64	8.46	976.32
14+75.00	28.80	14.19	25.20	16.67	984.85
15+00.00	29.24	11.06	26.87	14.61	997.11
15+25.00	27.41	9.81	26.23	12.08	1011.26
15+50.00	24.12	9.88	23.86	11.39	1023.72
15+60.00	24.55	10.23	9.01	4.66	1028.08
15+75.00	26.61	11.35	14.21	7.49	1034.80
16+00.00	29.40	11.40	25.93	13.17	1047.56
16+25.00	29.59	9.02	27.31	11.82	1063.05
16+50.00	29.30	10.18	27.26	11.11	1079.21
16+75.00	29.68	11.11	27.31	12.32	1094.19
17+00.00	30.04	10.16	27.65	12.31	1109.53
17+25.00	25.41	8.44	25.67	10.76	1124.44
17+50.00	30.28	7.30	25.78	9.11	1141.11
17+75.00	27.79	7.71	26.88	8.69	1159.31
18+00.00	29.16	8.17	26.37	9.19	1176.49
18+25.00	30.85	9.14	27.78	10.02	1194.25
18+50.00	30.16	10.33	28.25	11.27	1211.23
18+75.00	30.46	9.98	28.06	11.75	1227.54
19+00.00	27.83	9.47	26.99	11.26	1243.27
19+25.00	30.61	8.76	27.06	10.55	1259.78
19+50.00	28.42	8.21	27.33	9.82	1277.28
19+75.00	28.76	7.43	26.47	9.05	1294.71
20+00.00	28.84	6.93	26.67	8.31	1313.06
20+25.00	27.12	8.48	25.91	8.92	1330.05
20+50.00	25.41	9.51	24.32	10.41	1343.96
20+75.00	25.68	10.03	23.65	11.31	1356.31
21+00.00	19.94	10.23	21.12	11.72	1365.70
21+19.00	25.28	0.93	15.91	4.91	1376.70
21+25.00	23.03	0.88	5.37	0.25	1381.82
21+50.00	20.48	15.32	20.14	9.38	1392.59
21+75.00	22.06	12.57	19.69	16.14	1396.14
22+00.00	25.21	10.74	21.88	13.49	1404.54
22+25.00	27.19	11.10	24.26	12.64	1416.16
22+50.00	28.18	11.05	25.63	12.82	1428.97
22+75.00	28.23	11.27	26.12	12.92	1442.17

EARTHWORK DATA - STH 48

STATION	COMMON SF	FILL SF	COMMON CY	FILL CY	MASS HAUL
23+00.00	27.07	11.17	25.60	12.99	1454.79
23+25.00	27.87	11.26	25.44	12.98	1467.24
23+50.00	27.66	11.59	25.71	13.22	1479.73
23+75.00	28.58	12.57	26.04	13.98	1491.78
24+00.00	29.79	12.46	27.02	14.48	1504.32
24+25.00	30.00	11.88	27.68	14.09	1517.92
24+50.00	30.11	10.82	27.83	13.14	1532.61
24+68.00	37.16	0.89	22.42	4.88	1550.15
24+75.00	36.40	1.28	9.54	0.35	1559.34
25+00.00	30.69	12.37	31.06	7.90	1582.50
25+25.00	30.99	11.76	28.56	13.96	1597.09
25+50.00	28.72	10.89	27.64	13.11	1611.63
25+75.00	26.23	11.17	25.44	12.77	1624.30
26+00.00	23.75	11.42	23.14	13.07	1634.37
26+25.00	21.81	12.07	21.09	13.59	1641.86
26+50.00	22.00	13.02	20.28	14.52	1647.63
26+75.00	24.20	12.04	21.39	14.50	1654.51
27+00.00	23.64	11.71	22.15	13.74	1662.92
27+25.00	25.19	8.09	22.61	11.46	1674.07
27+50.00	33.68	0.53	27.25	4.99	1696.33
27+75.00	42.34	0.85	35.19	0.80	1730.73
28+00.00	45.97	0.19	40.88	0.60	1771.01
28+25.00	37.71	3.38	38.74	2.07	1807.68
28+50.00	21.80	0.85	27.55	2.45	1832.79

EARTHWORK DATA - TEMP WIDENING

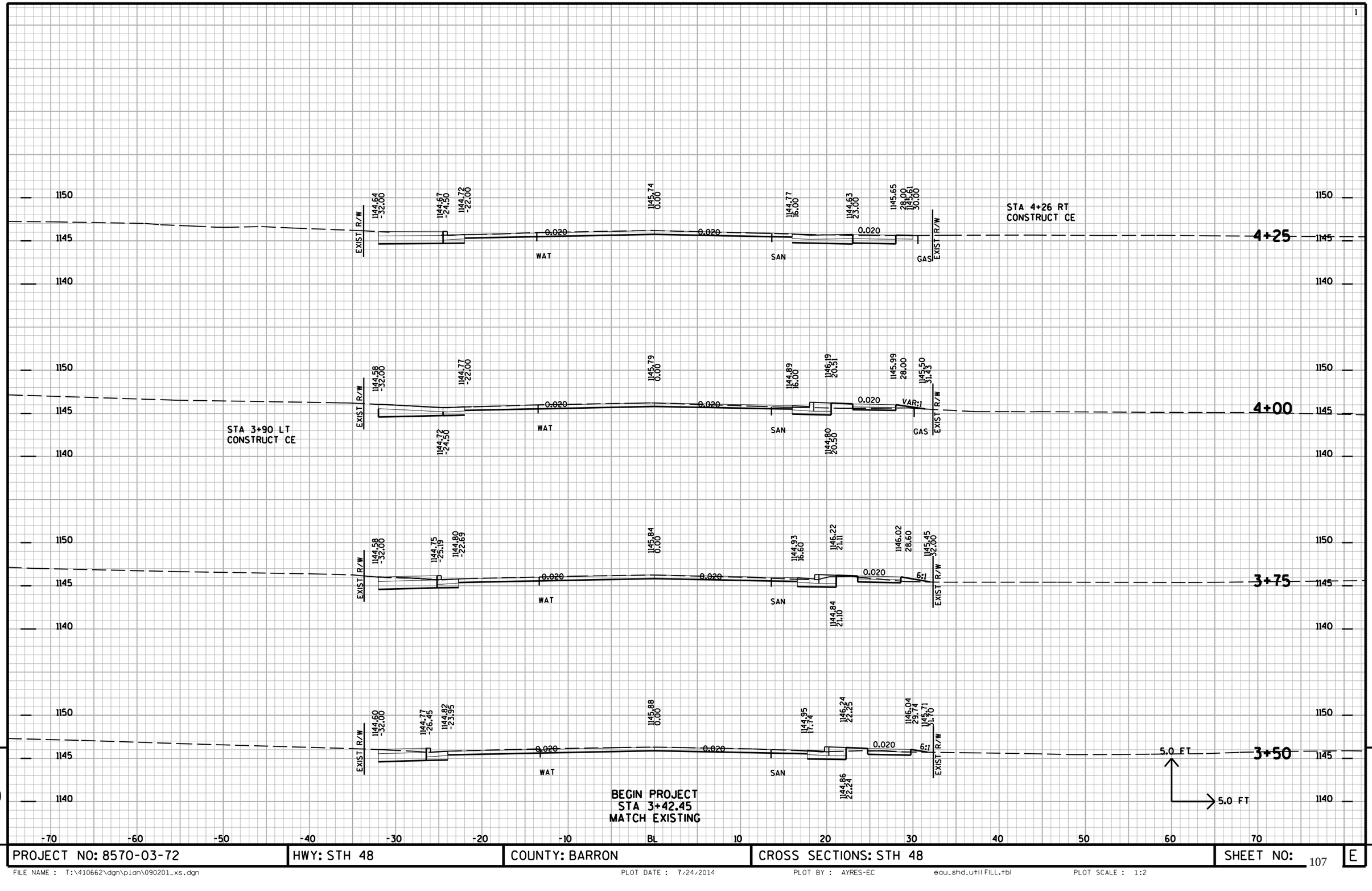
STATION	COMMON SF	FILL SF	COMMON CY	FILL CY	MASS HAUL
3+50.00	0.00	0.00	0.00	0.00	0.00
3+75.00	0.00	0.00	0.00	0.00	0.00
4+00.00	0.00	0.00	0.00	0.00	0.00
4+25.00	0.00	0.00	0.00	0.00	0.00
4+50.00	0.00	0.00	0.00	0.00	0.00
4+75.00	0.00	0.00	0.00	0.00	0.00
5+00.00	0.00	0.00	0.00	0.00	0.00
5+25.00	0.00	0.00	0.00	0.00	0.00
5+50.00	0.00	0.00	0.00	0.00	0.00
5+75.00	0.00	0.00	0.00	0.00	0.00
6+00.00	0.00	0.00	0.00	0.00	0.00
6+25.00	0.00	0.00	0.00	0.00	0.00
6+50.00	0.00	0.00	0.00	0.00	0.00
6+75.00	10.07	0.00	4.66	0.00	4.66
7+00.00	14.10	0.00	11.19	0.00	15.85
7+25.00	15.27	0.00	13.60	0.00	29.45
7+50.00	17.29	0.00	15.07	0.00	44.52
7+75.00	0.00	0.00	8.00	0.00	52.53
8+00.00	0.00	0.00	0.00	0.00	52.53
8+25.00	0.00	0.00	0.00	0.00	52.53
8+50.00	8.66	0.00	4.01	0.00	56.54
8+75.00	6.94	0.00	7.22	0.00	63.76
8+85.00	7.48	0.00	2.67	0.00	66.43
9+00.00	8.09	0.00	4.33	0.00	70.75
9+25.00	12.38	0.00	9.48	0.00	80.23
9+50.00	11.83	0.00	11.21	0.00	91.44
9+75.00	11.30	0.00	10.71	0.00	102.15
10+00.00	11.22	0.00	10.43	0.00	112.57
10+25.00	10.27	0.00	9.95	0.00	122.52
10+50.00	10.30	0.00	9.52	0.00	132.05
10+75.00	11.20	0.00	9.95	0.00	142.00
11+00.00	11.26	0.00	10.40	0.00	152.40
11+25.00	11.30	0.00	10.44	0.00	162.84
11+50.00	11.50	0.00	10.56	0.00	173.40
11+75.00	10.99	0.00	10.41	0.00	183.81
12+00.00	10.23	0.00	9.82	0.00	193.63
12+25.00	10.22	0.00	9.47	0.00	203.10
12+44.00	9.45	0.00	6.92	0.00	210.02
12+50.00	10.11	0.00	2.17	0.00	212.20
12+75.00	10.47	0.00	9.53	0.00	221.72
13+00.00	10.48	0.00	9.70	0.00	231.42

EARTHWORK DATA - TEMP WIDENING

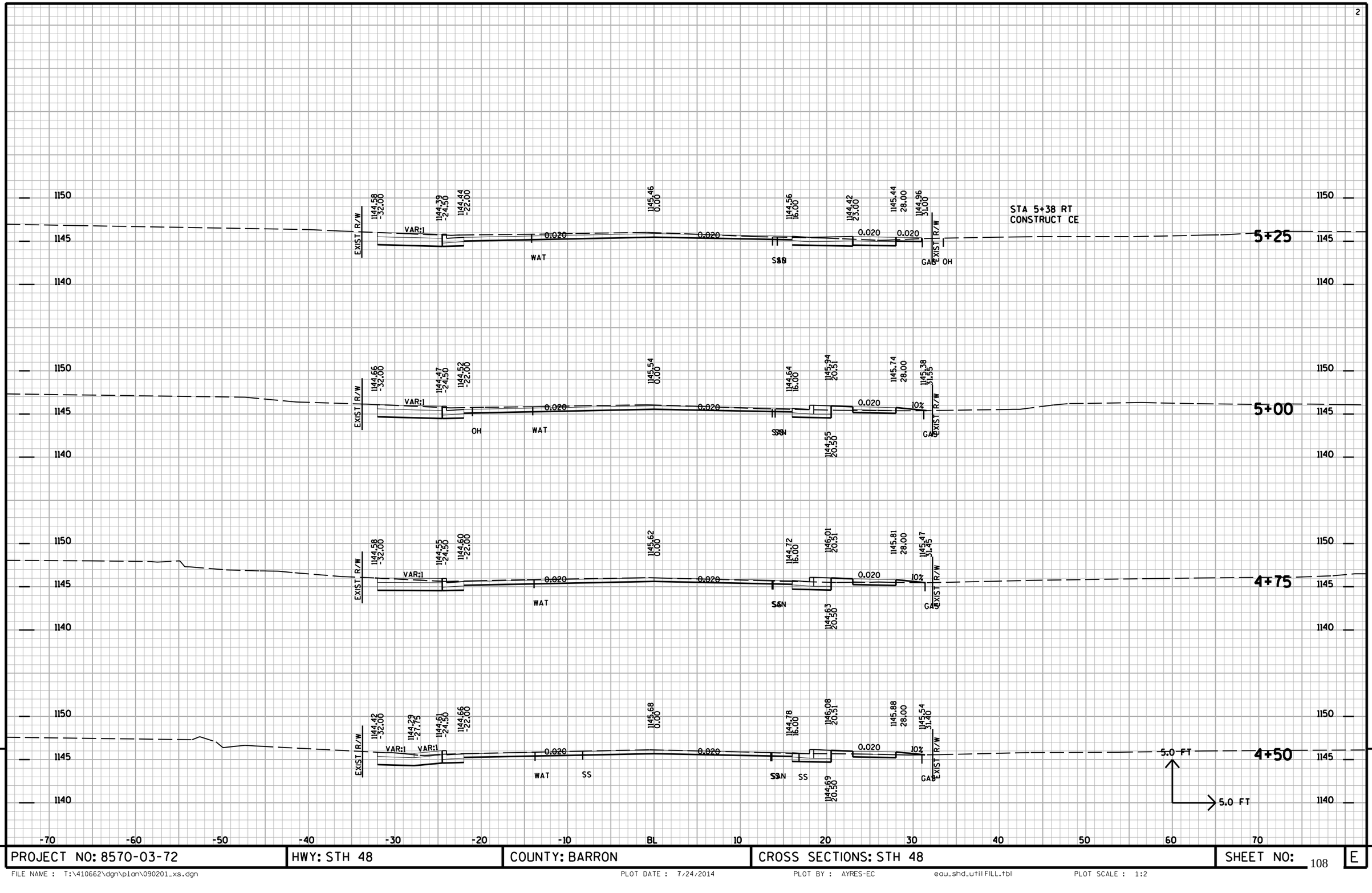
STATION	COMMON SF	FILL SF	COMMON CY	FILL CY	MASS HAUL
13+25.00	12.58	0.00	10.68	0.00	242.10
13+50.00	12.84	0.00	11.77	0.00	253.87
13+75.00	13.38	0.00	12.14	0.00	266.01
14+00.00	9.48	0.00	10.58	0.00	276.59
14+25.00	0.00	0.00	4.39	0.00	280.98
14+50.00	8.47	0.00	3.92	0.00	284.90
14+75.00	4.29	0.00	5.91	0.00	290.81
15+00.00	7.74	0.00	5.57	0.00	296.38
15+25.00	7.50	0.00	7.06	0.00	303.43
15+50.00	7.98	0.00	7.17	0.00	310.60
15+60.00	9.00	0.00	3.14	0.00	313.74
15+75.00	9.91	0.00	5.25	0.00	319.00
16+00.00	13.07	0.00	10.64	0.00	329.64
16+25.00	10.81	0.00	11.06	0.00	340.69
16+50.00	12.54	0.00	10.81	0.00	351.50
16+75.00	12.55	0.00	11.62	0.00	363.12
17+00.00	11.18	0.00	10.99	0.00	374.10
17+25.00	6.17	0.00	8.03	0.00	382.14
17+50.00	3.57	0.00	4.51	0.00	386.64
17+75.00	5.00	0.00	3.97	0.00	390.61
18+00.00	5.47	0.00	4.85	0.00	395.46
18+25.00	5.54	0.00	5.10	0.00	400.56
18+50.00	6.38	0.00	5.52	0.00	406.07
18+75.00	5.92	0.00	5.69	0.00	411.77
19+00.00	5.91	0.00	5.48	0.00	417.25
19+25.00	5.57	0.00	5.31	0.00	422.56
19+50.00	5.47	0.00	5.11	0.00	427.67
19+75.00	6.20	0.00	5.40	0.00	433.07
20+00.00	6.08	0.00	5.69	0.00	438.76
20+25.00	6.44	0.00	5.80	0.00	444.56
20+50.00	6.31	0.00	5.90	0.00	450.46
20+75.00	5.63	0.00	5.53	0.00	455.99
21+00.00	6.07	0.00	5.42	0.00	461.40
21+19.00	5.74	0.00	4.16	0.00	465.56
21+25.00	4.98	0.00	1.19	0.00	466.75
21+50.00	4.48	0.00	4.38	0.00	471.13
21+75.00	4.92	0.00	4.35	0.00	475.48
22+00.00	5.88	0.00	5.00	0.00	480.48
22+25.00	7.38	0.00	6.14	0.00	486.62
22+50.00	7.73	0.00	7.00	0.00	493.62
22+75.00	8.06	0.00	7.31	0.00	500.93

EARTHWORK DATA - TEMP WIDENING

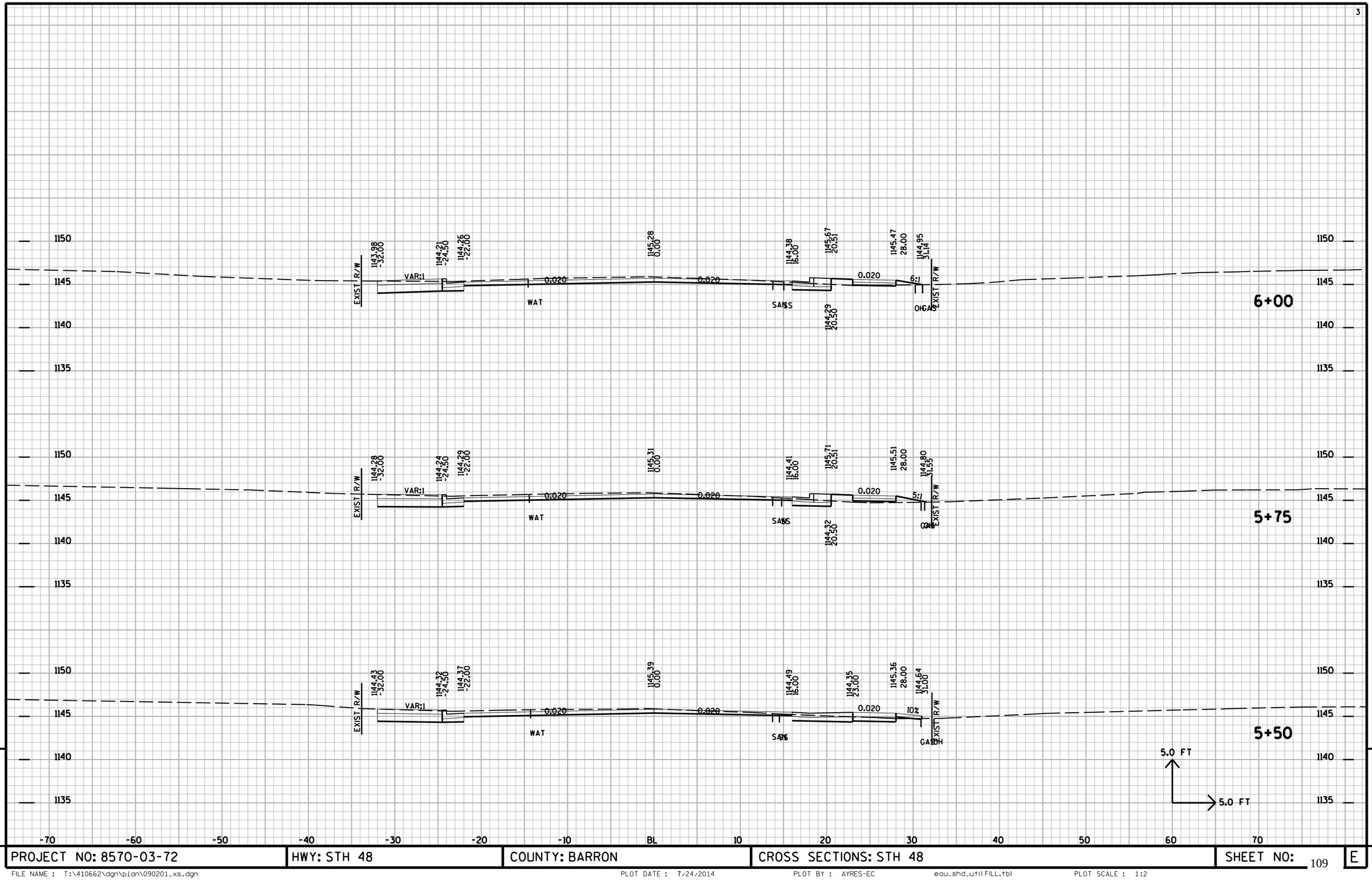
STATION	COMMON SF	FILL SF	COMMON CY	FILL CY	MASS HAUL
23+00.00	7.30	0.00	7.11	0.00	508.04
23+25.00	6.91	0.00	6.58	0.00	514.62
23+50.00	6.21	0.00	6.07	0.00	520.69
23+75.00	9.81	0.00	7.42	0.00	528.11
24+00.00	9.93	0.00	9.14	0.00	537.25
24+25.00	7.74	0.00	8.18	0.00	545.43
24+50.00	7.26	0.00	6.94	0.00	552.37
24+68.00	6.74	0.00	4.67	0.00	557.04
24+75.00	6.90	0.00	1.77	0.00	558.81
25+00.00	9.64	0.00	7.66	0.00	566.46
25+25.00	12.14	0.00	10.08	0.00	576.55
25+50.00	7.98	0.00	9.31	0.00	585.86
25+75.00	7.42	0.00	7.13	0.00	592.99
26+00.00	7.80	0.00	7.05	0.00	600.04
26+25.00	8.59	0.00	7.59	0.00	607.62
26+50.00	11.78	0.00	9.43	0.00	617.06
26+75.00	6.38	0.00	8.41	0.00	625.46
27+00.00	3.97	0.20	4.79	0.12	630.14
27+25.00	3.21	0.35	3.32	0.32	633.14
27+50.00	0.00	0.00	1.49	0.20	634.43
27+75.00	0.00	0.00	0.00	0.00	634.43
28+00.00	0.00	0.00	0.00	0.00	634.43
28+25.00	4.05	0.00	1.88	0.00	636.30
28+50.00	2.53	0.00	3.05	0.00	639.35



PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: STH 48	SHEET NO: 107	E



PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: STH 48	SHEET NO: 108	E

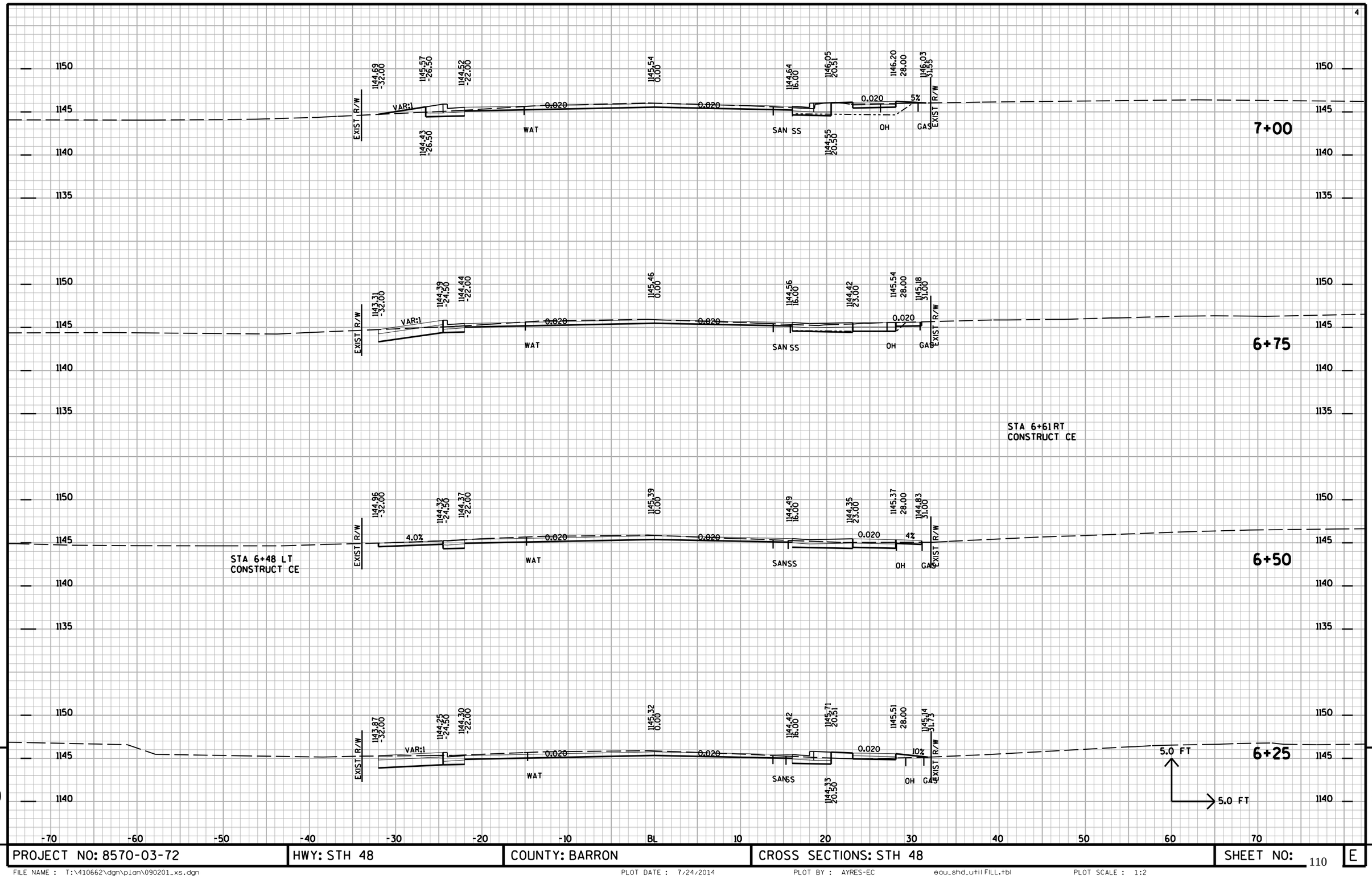


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PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: STH 48	SHEET NO:	E

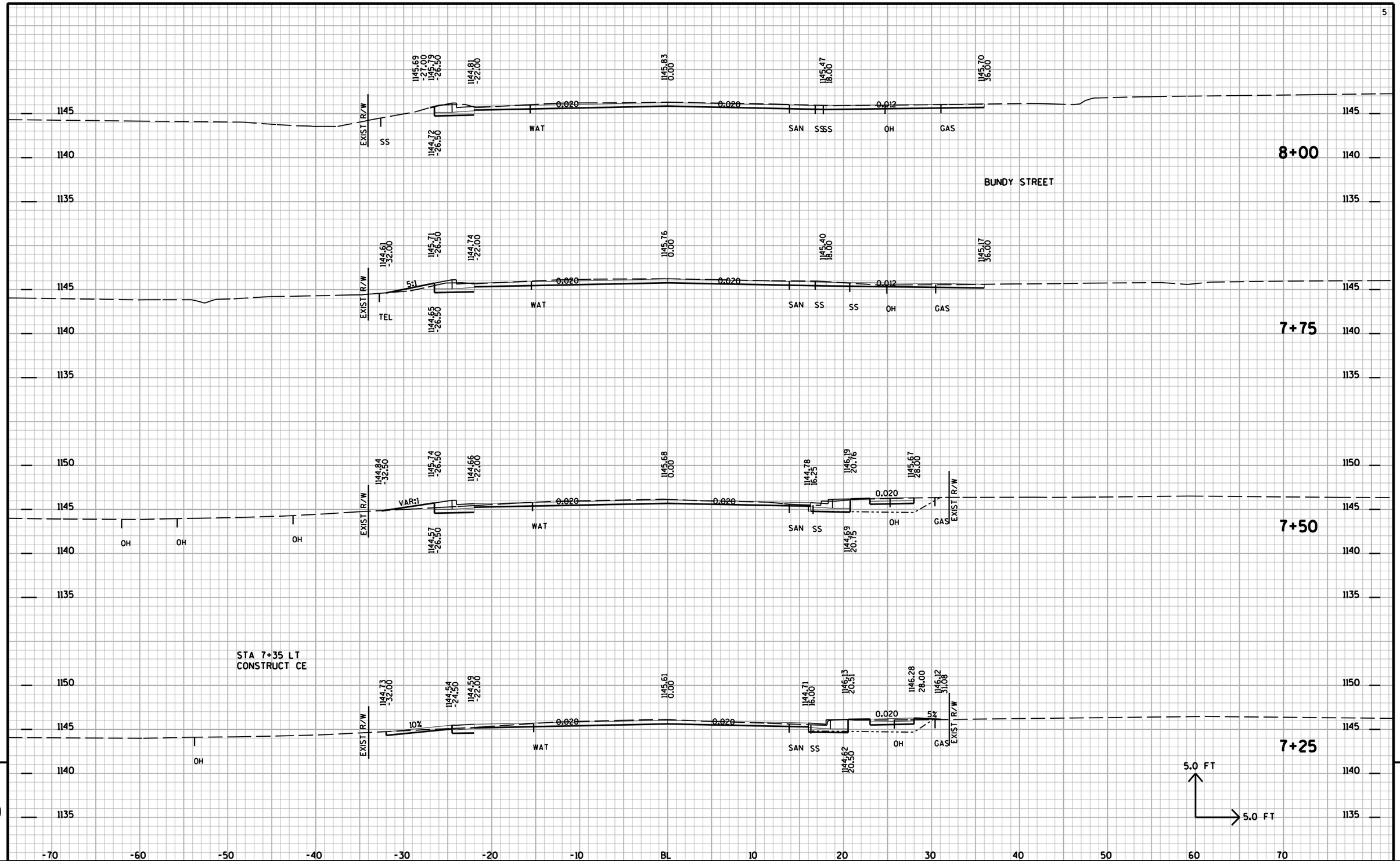
FILE NAME : T:\410662\dgn\plan\090201_xs.dgn PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC eau_shd_utilFILL.tbl PLOT SCALE : 1:2



9

PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: STH 48	SHEET NO: 110 E

FILE NAME : T:\410662\dgn\plan\090201_xs.dgn PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC edu_shd_utilFILL.tbl PLOT SCALE : 1:2



9

9

PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: STH 48	SHEET NO: 111	E

FILE NAME : T:\410662\dgn\plan\090201_xs.dgn PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC eau_shd_utilFILL.tbl PLOT SCALE : 1:2

STA 8+85 LT
CONSTRUCT CE

STA 8+85 RT
CONSTRUCT CE

8+85

1145.73 -32.00 | 1145.01 -24.50 | 1145.06 -22.00 | 1146.08 0.00 | 1145.18 16.00 | 1145.04 23.00 | 1146.50 28.00 | 1146.23 31.00

EXIST R/W | SS | 3.0% | 0.020 | WAT | 0.020 | SAN | SS | OH | 0.020 | 5.0% | EXIST R/W | GAS

8+75

1145.63 -32.00 | 1144.98 -24.50 | 1145.03 -22.00 | 1146.05 0.00 | 1145.15 16.00 | 1145.01 23.00 | 1146.47 28.00 | 1146.17 31.00

EXIST R/W | SS | 4.0% | 0.020 | WAT | 0.020 | SAN | SS | OH | 0.020 | 4.0% | EXIST R/W | GAS

8+50

1145.51 -30.00 | 1146.03 -26.50 | 1144.96 -22.00 | 1145.98 0.00 | 1145.08 16.09 | 1146.49 20.60 | 1146.64 28.00 | 1146.30 31.40

EXIST R/W | SS | 0.020 | WAT | 0.020 | SAN | SS | OH | 0.020 | 5% | EXIST R/W | GAS

1144.87 -26.50 | 1144.99 20.59

8+25

1145.60 -30.00 | 1146.02 -26.50 | 1144.88 -22.00 | 1145.90 0.00 | 1145.54 16.00 | 1145.27 36.00

EXIST R/W | SS | 0.020 | WAT | 0.020 | SAN | SS | SS | OH | 0.015 | GAS | BUNDY STREET | 5.0 FT | 5.0 FT

1144.79 -26.50

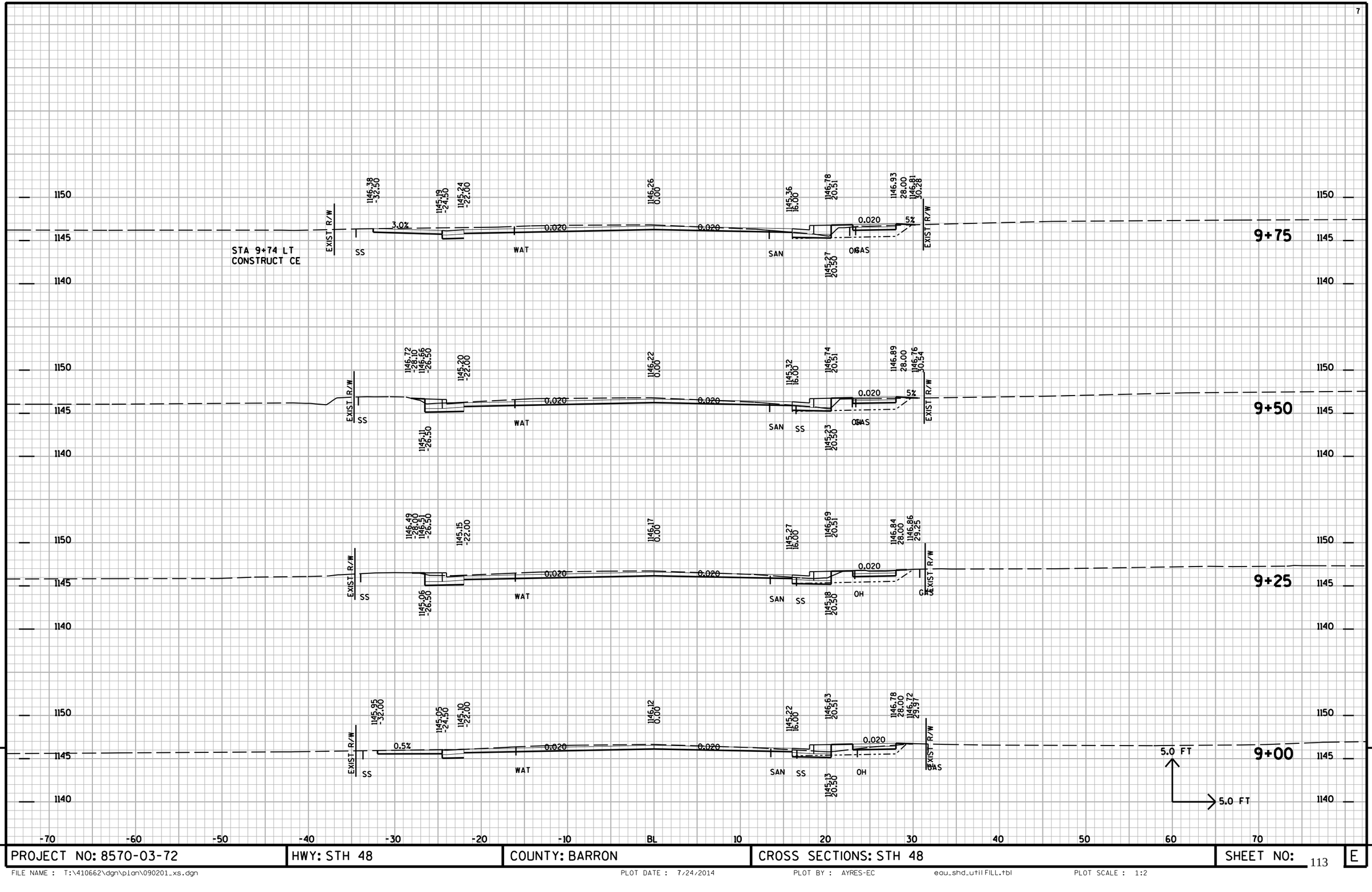
1150 | 1145 | 1140

-70 -60 -50 -40 -30 -20 -10 BL 10 20 30 40 50 60 70

9 | 9

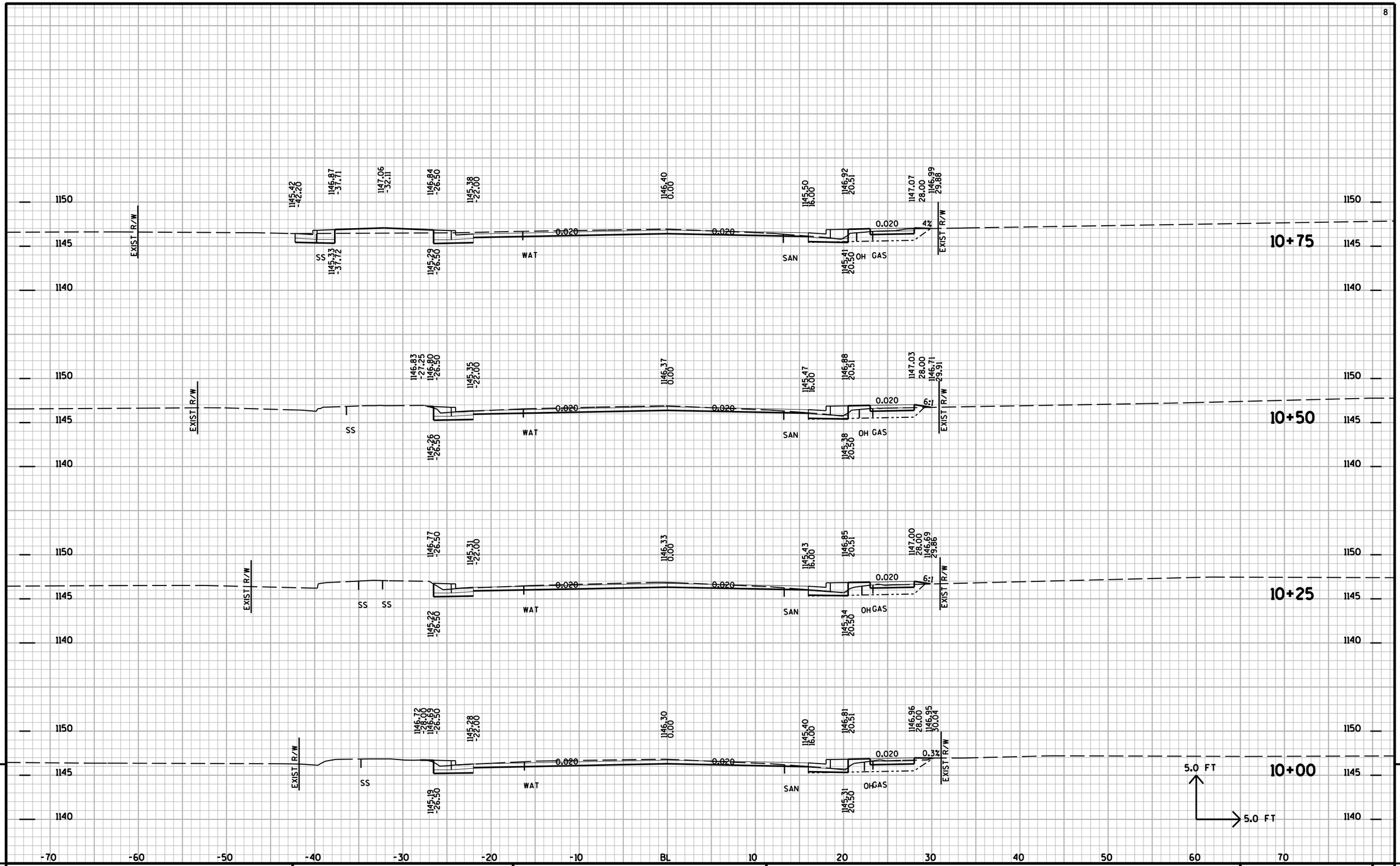
PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: STH 48	SHEET NO: 112	E

FILE NAME : T:\410662\dgn\plan\090201_xs.dgn PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC edu_shd_utilFILL.tbl PLOT SCALE : 1:2



PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: STH 48	SHEET NO: 113	E

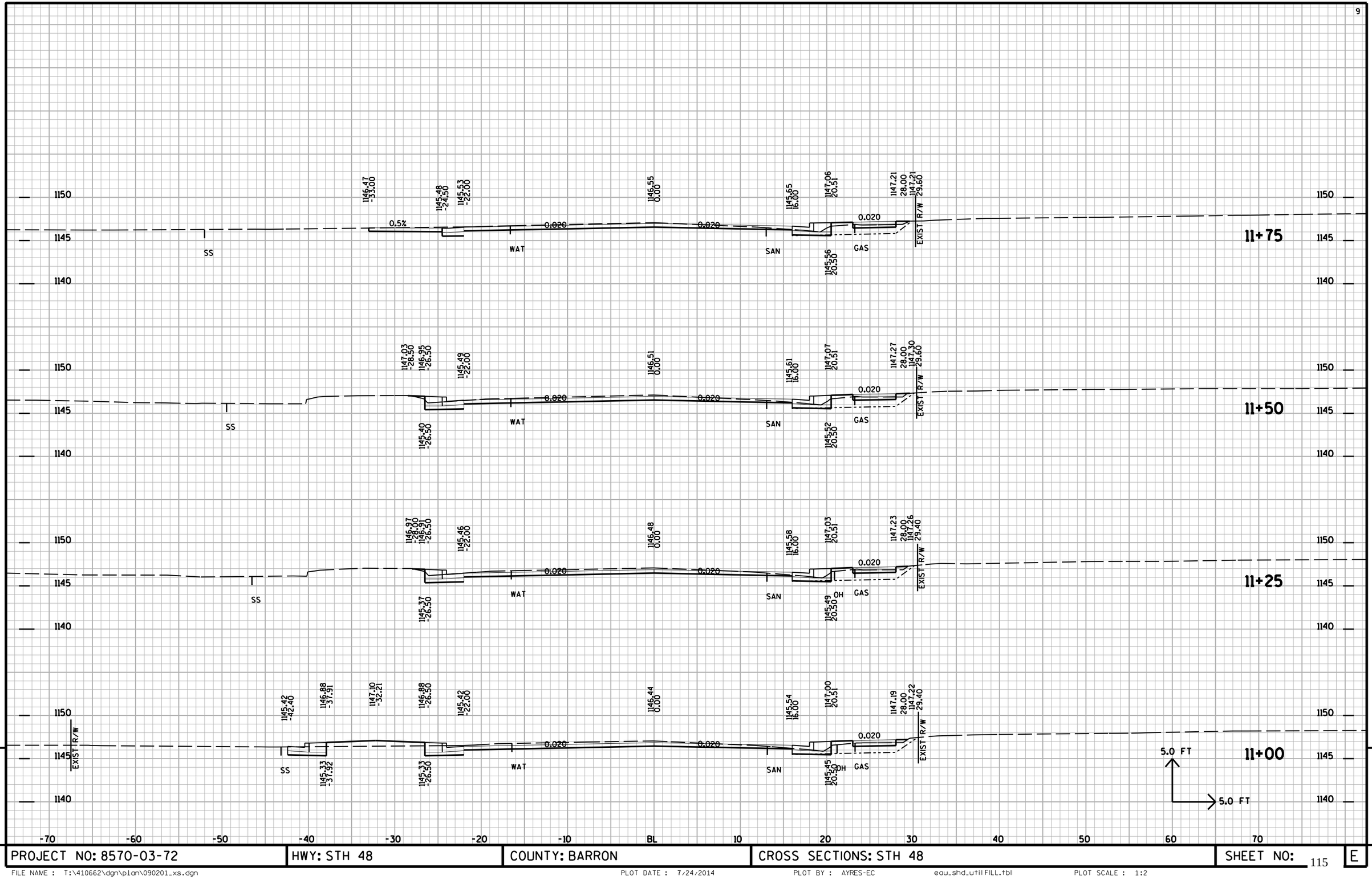
FILE NAME : T:\410662\dgn\plan\090201_xs.dgn PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC edu_shd_utilFILL.tbl PLOT SCALE : 1:2



9

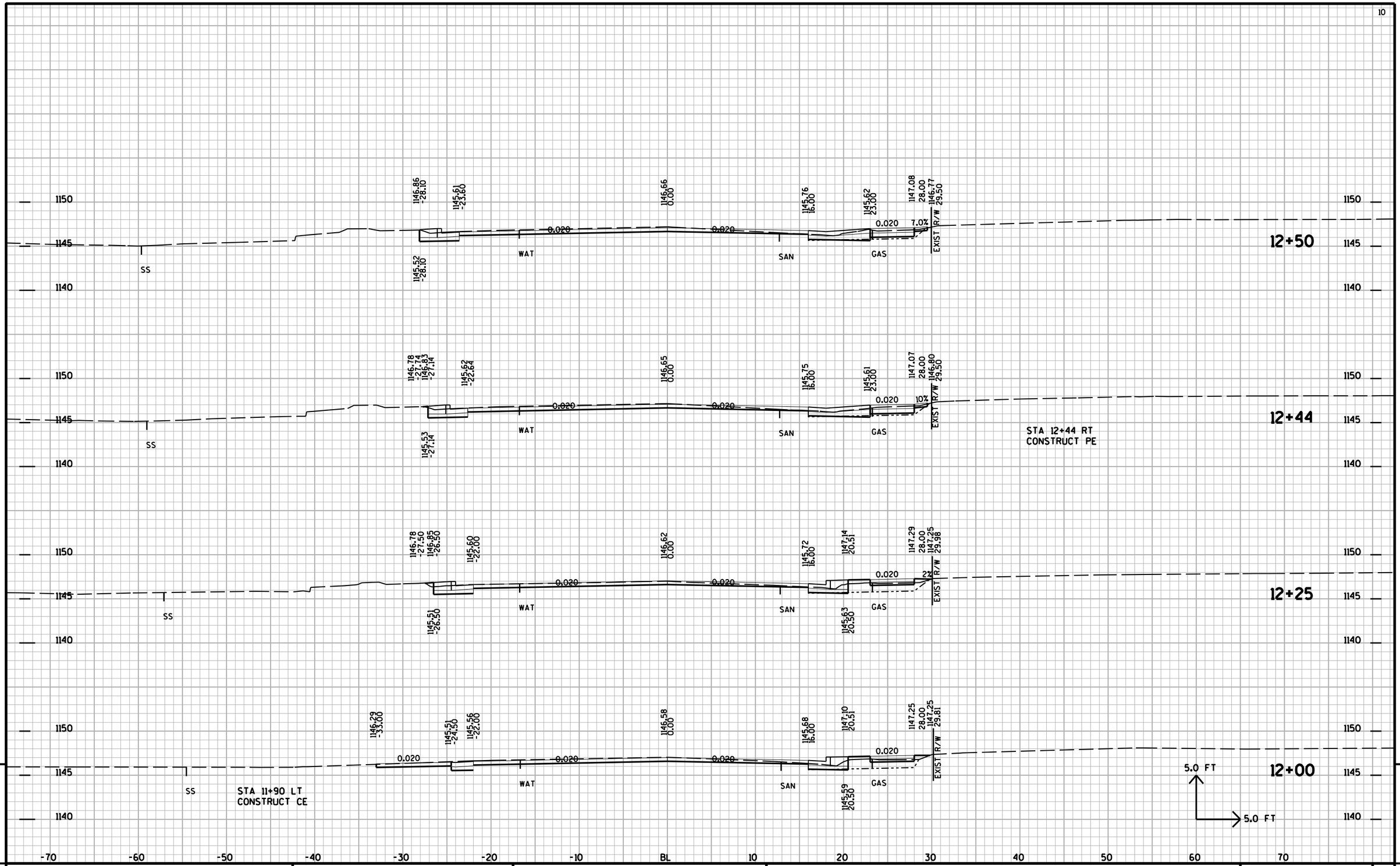
PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: STH 48	SHEET NO: 114	E

FILE NAME : T:\410662\dgn\plan\090201_xs.dgn PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC edu_shd_utilFILL.tbl PLOT SCALE : 1:2



PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: STH 48	SHEET NO: 115	E

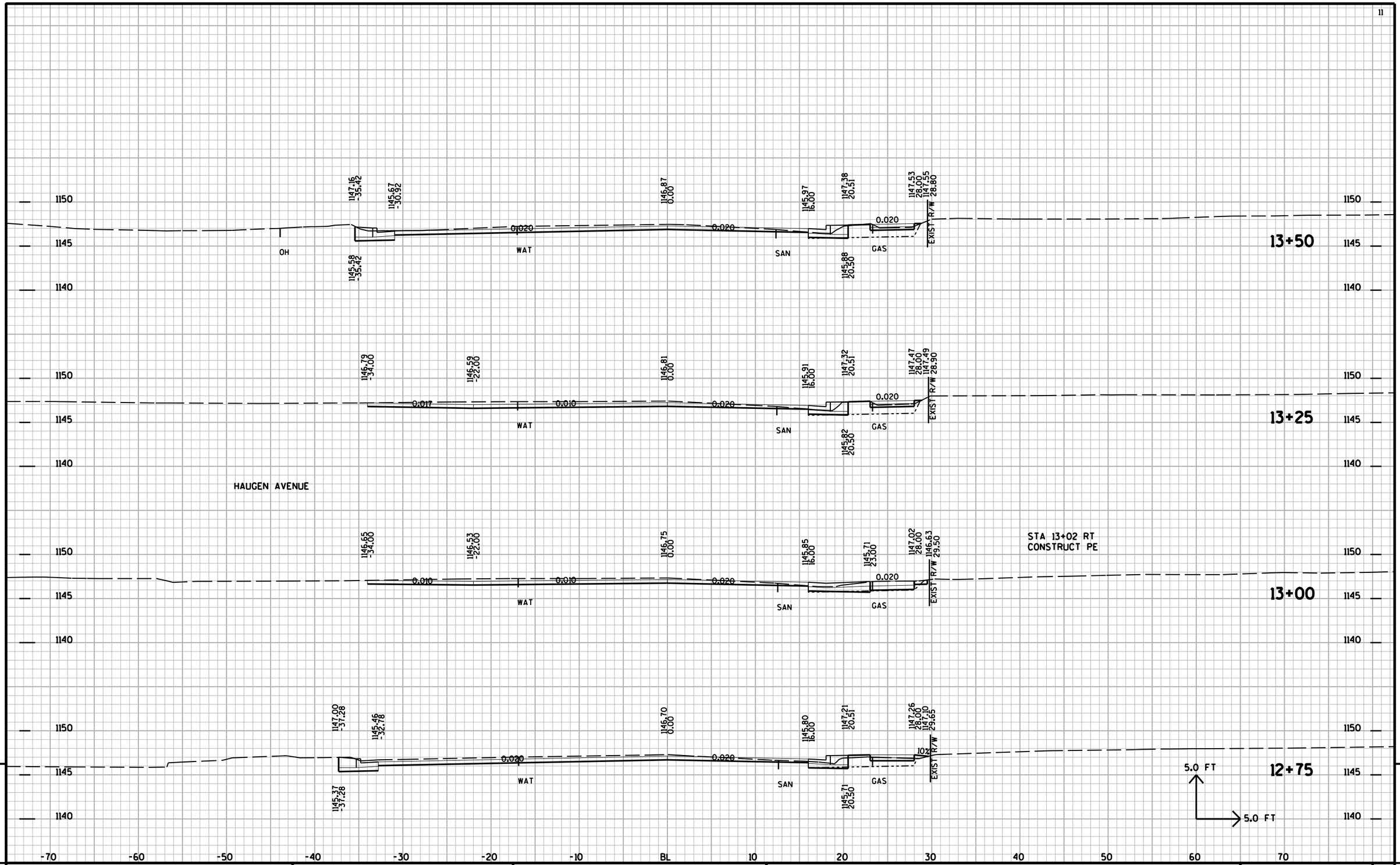
FILE NAME : T:\410662\dgn\plan\090201_xs.dgn PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC edu_shd_utilFILL.tbl PLOT SCALE : 1:2



9

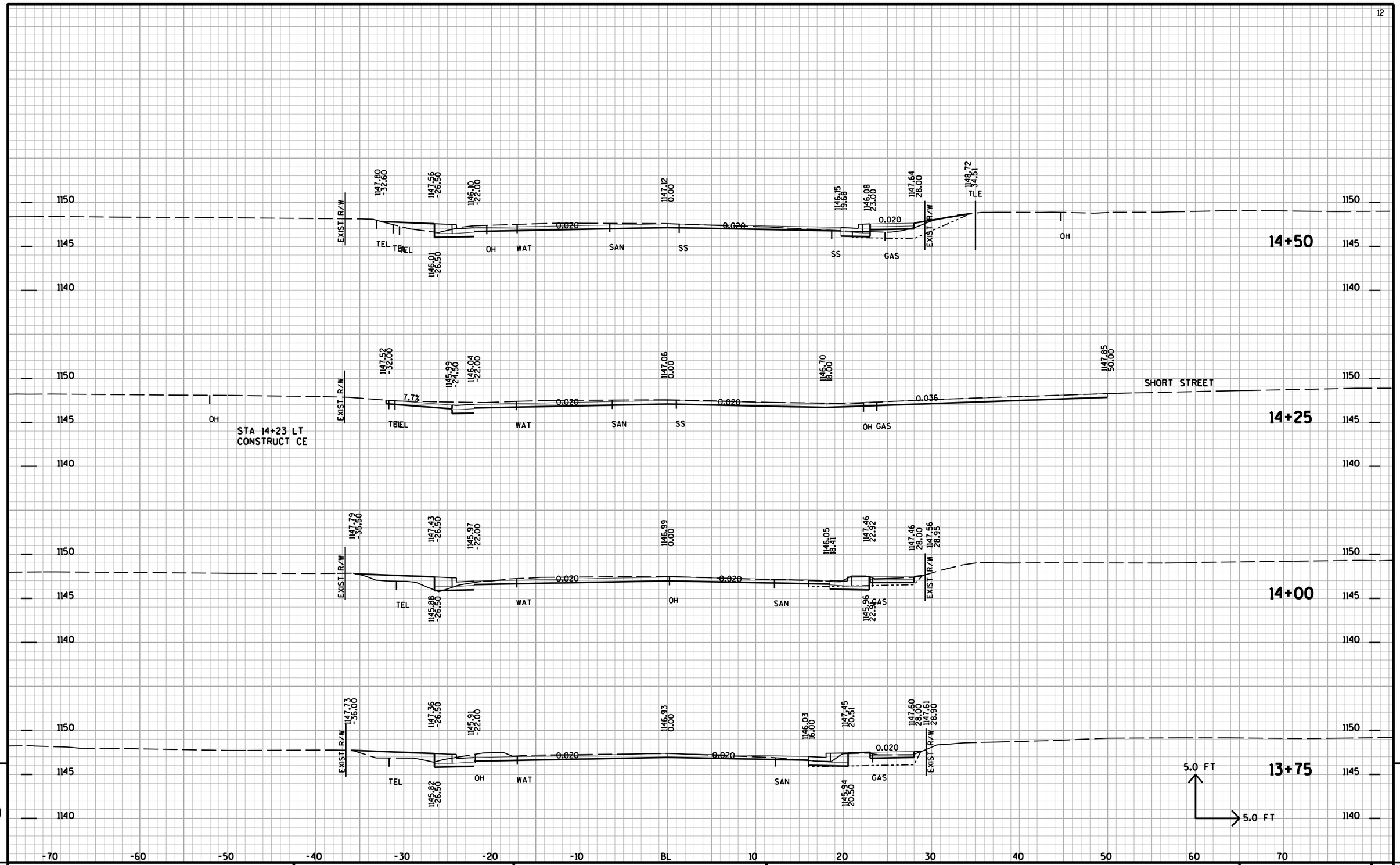
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PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: STH 48	SHEET NO: 116	E



9 9

PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: STH 48	SHEET NO: 117	E

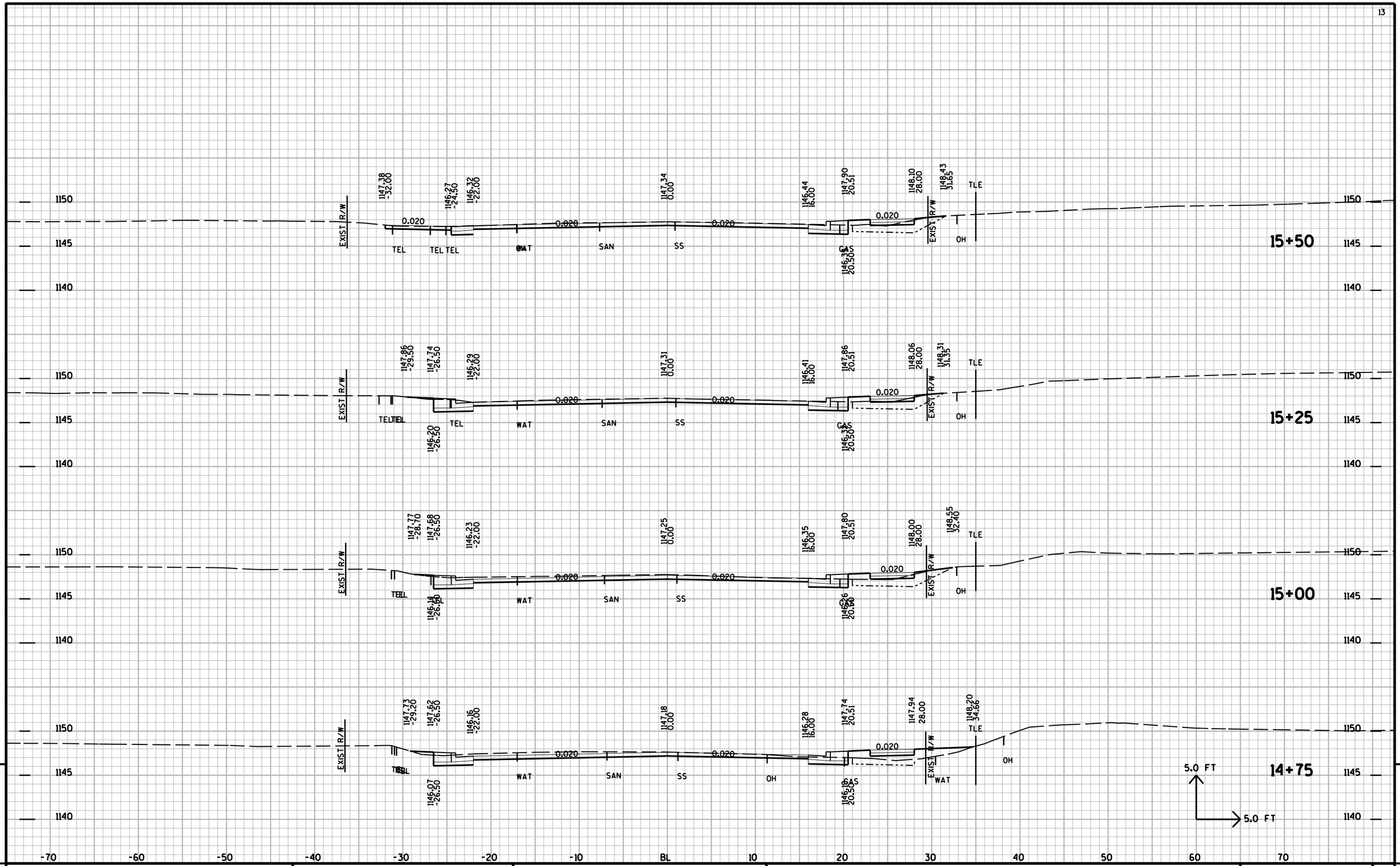


9

9

PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: STH 48	SHEET NO: 118	E

FILE NAME : T:\410662\dgn\plan\090201_xs.dgn PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC eau_shd_utilFILL.tbl PLOT SCALE : 1:2

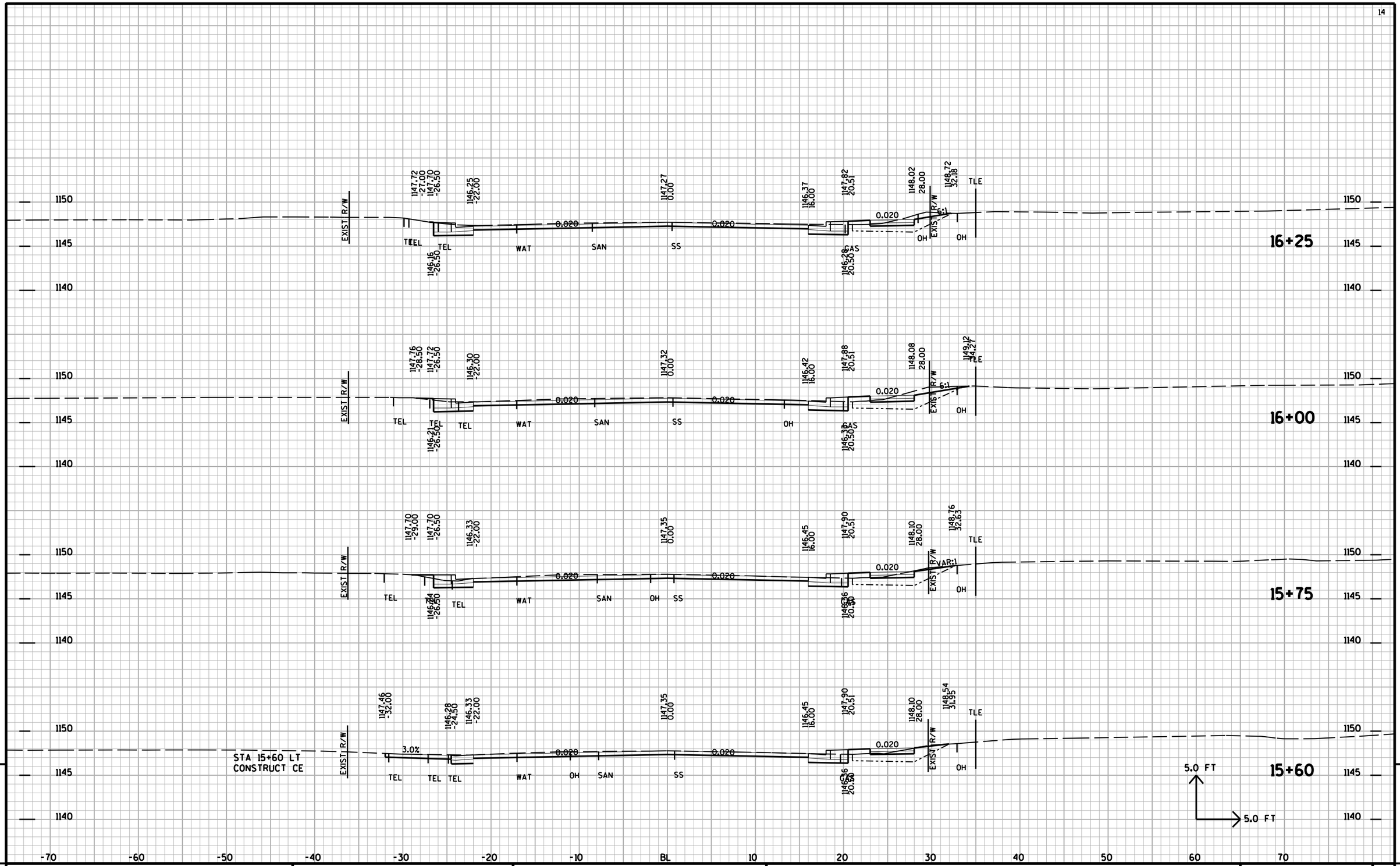


9

9

PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: STH 48	SHEET NO: 119	E

FILE NAME : T:\410662\dgn\plan\090201_xs.dgn PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC edu_shd_utilFILL.tbl PLOT SCALE : 1:2

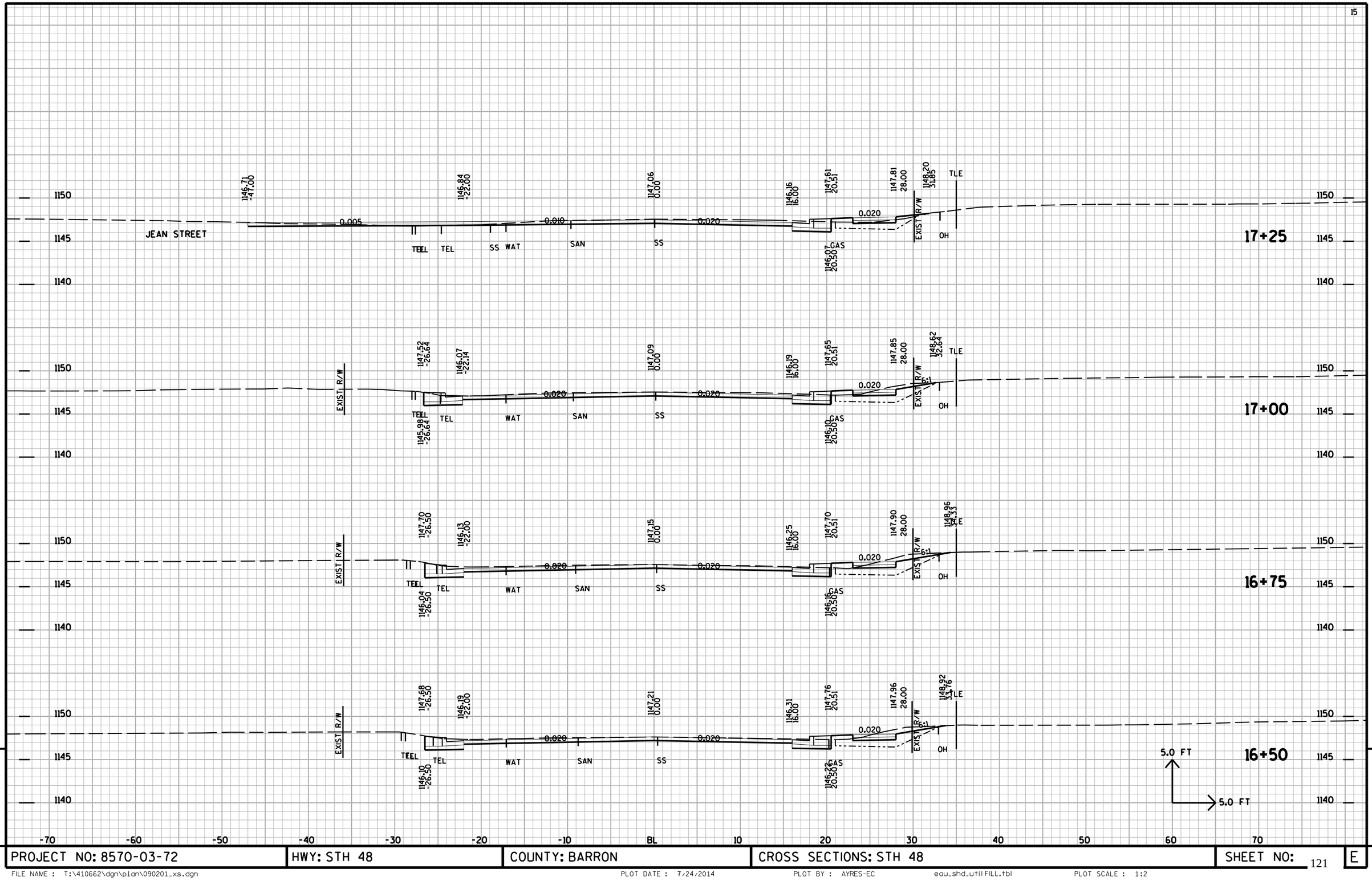


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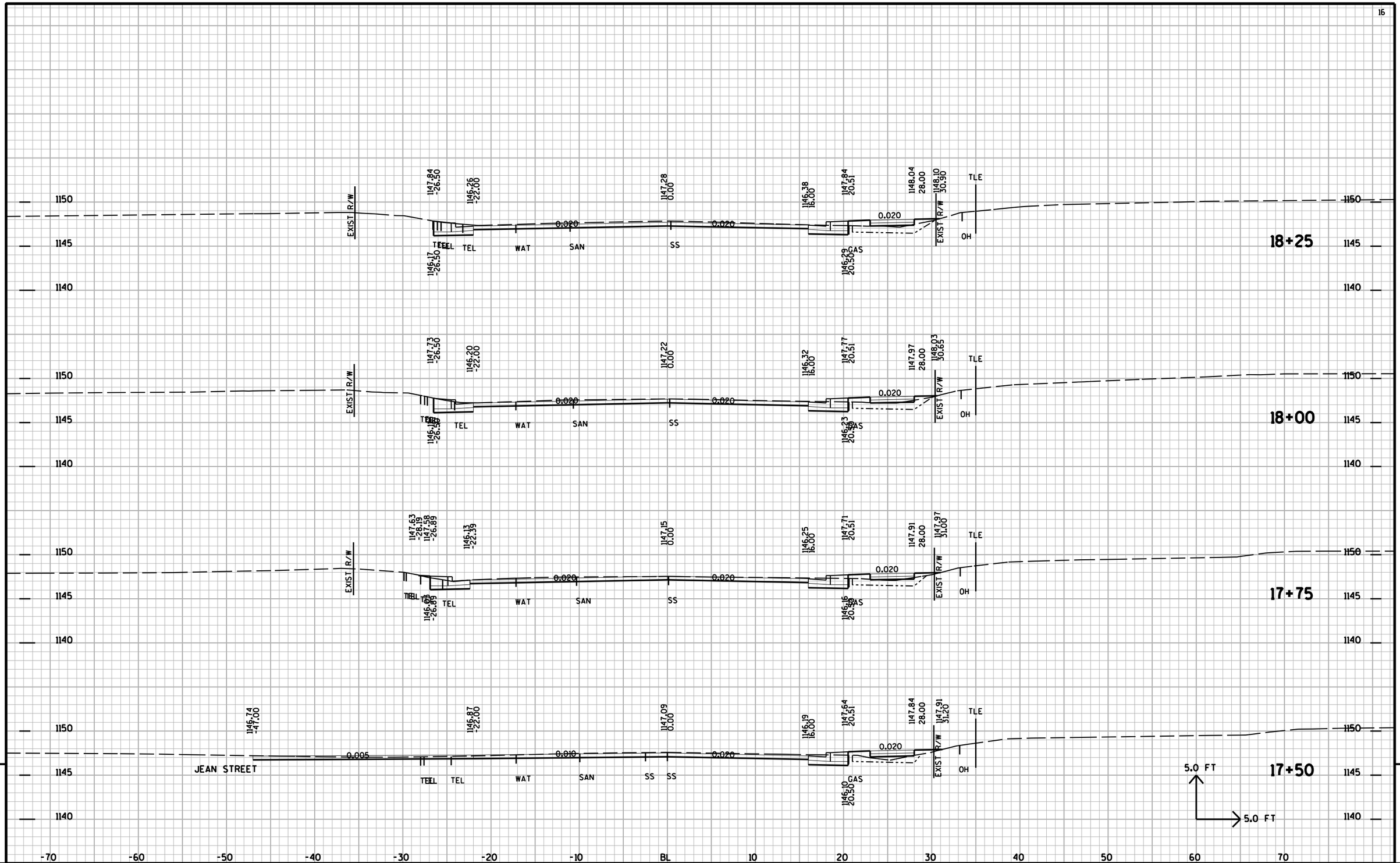
9

PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: STH 48	SHEET NO: 120	E

FILE NAME : T:\410662\dgn\plan\090201_xs.dgn PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC edu_shd_utilFILL.tbl PLOT SCALE : 1:2



PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: STH 48	SHEET NO: 121	E



9

9

PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: STH 48	SHEET NO: 122	E

FILE NAME : T:\410662\dgn\plan\090201_xs.dgn PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC eau_shd_utilFILL.tbl PLOT SCALE : 1:2

STA 19+24 LT
CONSTRUCT CE

EXIST R/W | 1147.61 -32.00 | 1146.48 -24.50 | 1146.53 -22.00 | 1147.55 0.00 | 1146.65 16.00 | 1148.11 20.51 | 1148.31 28.00 | 1148.39 32.01 | TLE | EXIST R/W | OH

2.5% | 0.020 | 0.020 | 0.020

SAN | TEL | TEL | WAT | SS | GAS

1146.56 20.50

19+25

EXIST R/W | 1147.76 -26.50 | 1146.46 -22.00 | 1147.48 0.00 | 1146.58 16.00 | 1148.04 20.51 | 1148.24 28.00 | 1148.31 31.76 | TLE | EXIST R/W | OH

0.020 | 0.020 | 0.020

TEL | TEL | WAT | SAN | SS | GAS

1146.37 -26.50 | 1146.49 20.50

19+00

EXIST R/W | 1147.69 -26.50 | 1146.40 -22.00 | 1147.42 0.00 | 1146.52 16.00 | 1147.97 20.51 | 1148.17 28.00 | 1148.23 31.10 | TLE | EXIST R/W | OH

0.020 | 0.020 | 0.020

TEL | TEL | WAT | SAN | SS | GAS

1146.31 -26.50 | 1146.43 20.50

18+75

EXIST R/W | 1147.83 -26.50 | 1146.33 -22.00 | 1147.35 0.00 | 1146.45 16.00 | 1147.90 20.51 | 1148.10 28.00 | 1148.18 31.60 | TLE | EXIST R/W | OH

0.020 | 0.020 | 0.020

TEL | TEL | WAT | SAN | SS | GAS

1146.24 -26.50 | 1146.36 20.50

18+50

5.0 FT
5.0 FT

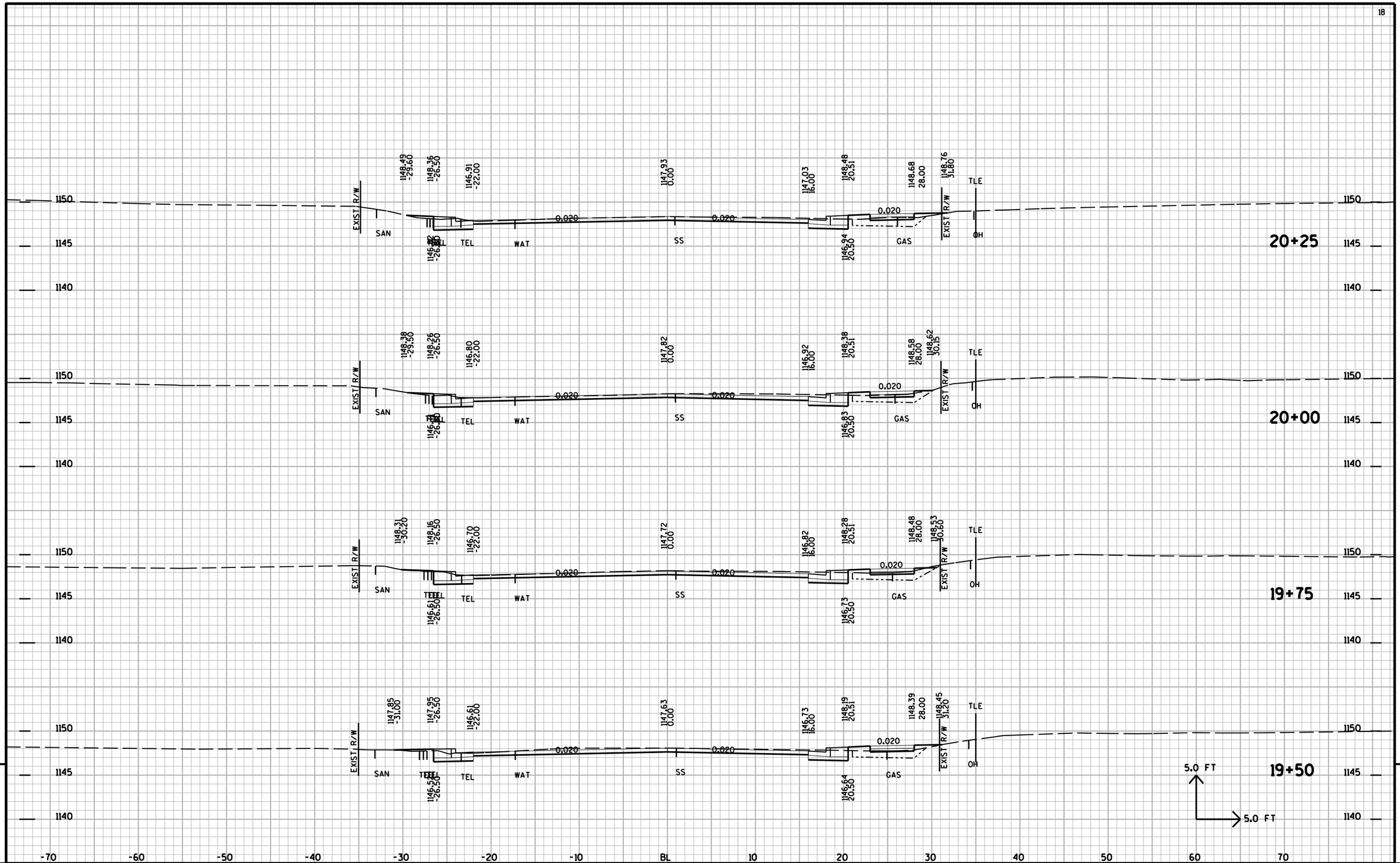
1150 | 1145 | 1140

-70 -60 -50 -40 -30 -20 -10 BL 10 20 30 40 50 60 70

9 9

PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: STH 48	SHEET NO: 123	E

FILE NAME : T:\410662\dgn\plan\090201_xs.dgn PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC edu_shd_utilFILL.tbl PLOT SCALE : 1:2

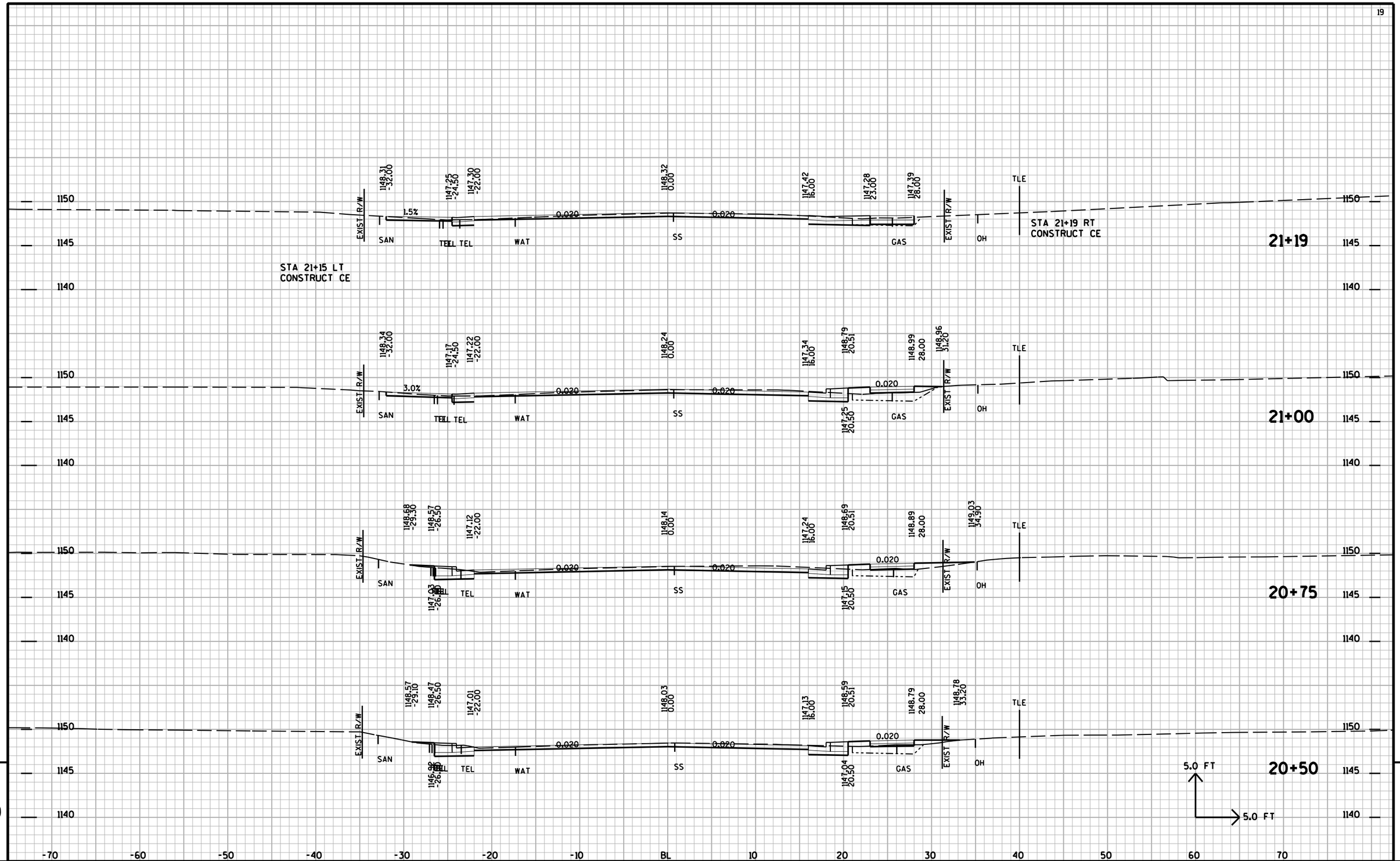


9

9

PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: STH 48	SHEET NO: 124	E

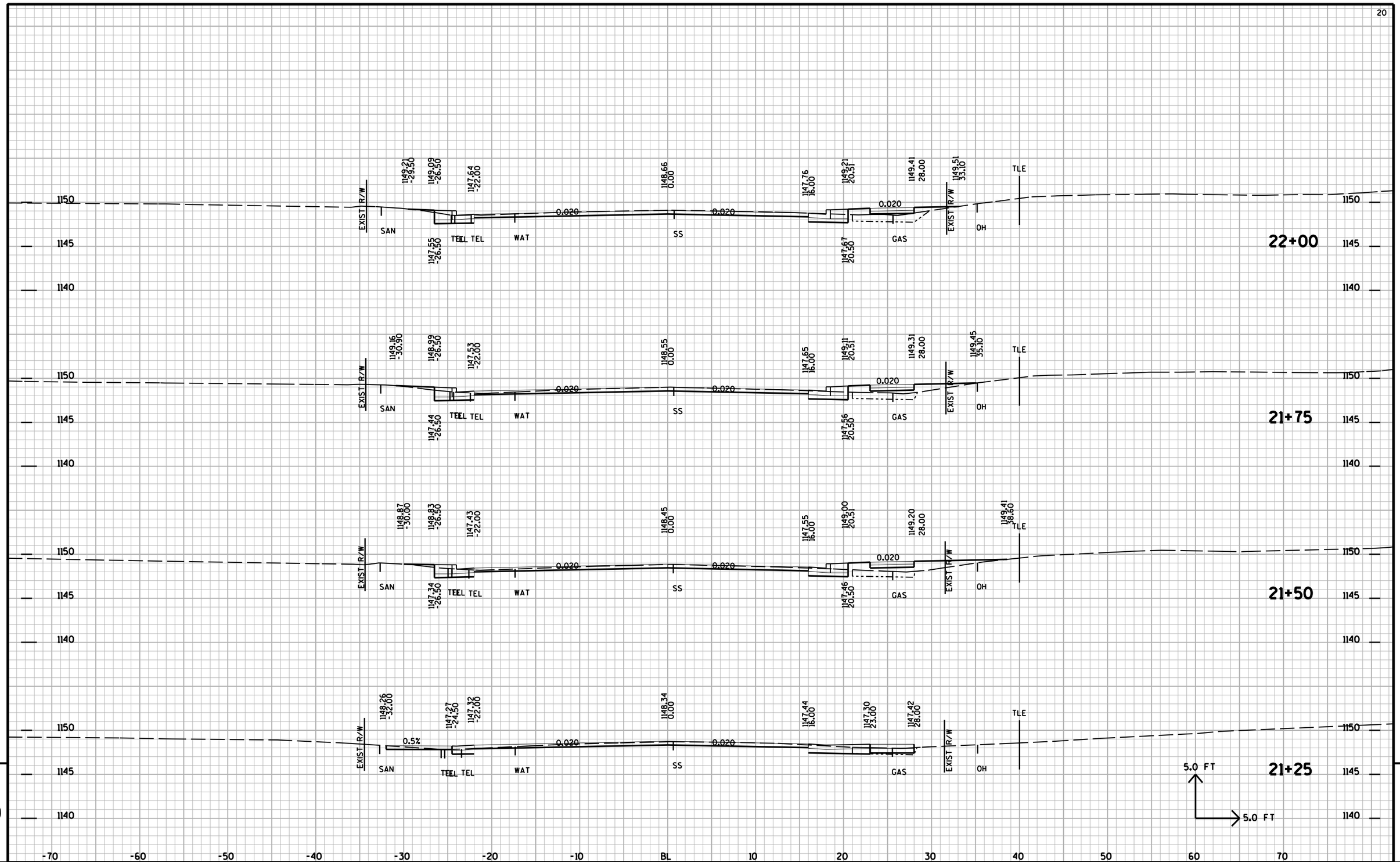
FILE NAME : T:\410662\dgn\plan\090201_xs.dgn PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC edu_shd_utilFILL.tbl PLOT SCALE : 1:2



9 9

PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: STH 48	SHEET NO: 125 E

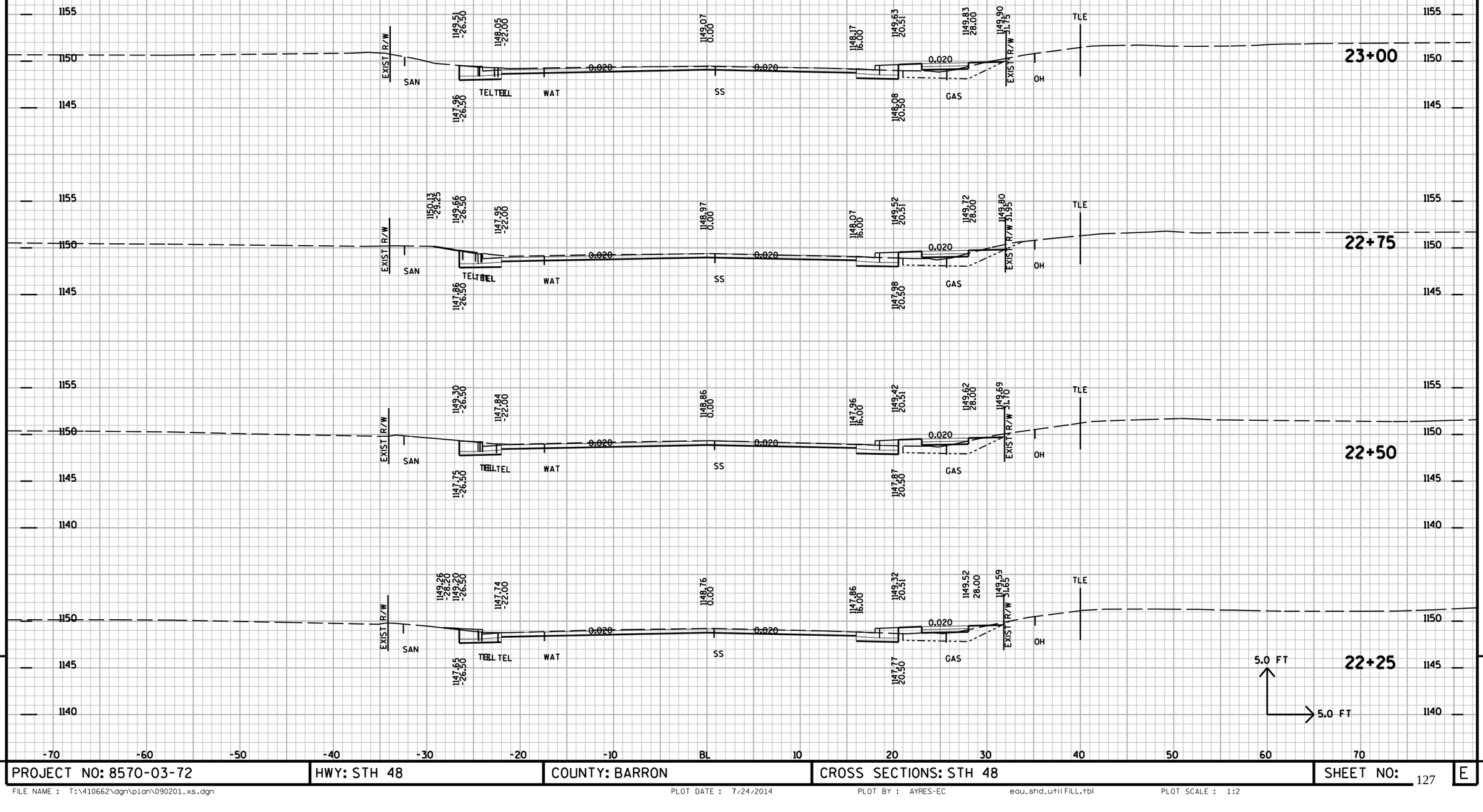
FILE NAME : T:\410662\dgn\plan\090201_xs.dgn PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC eau_shd_utilFILL.tbl PLOT SCALE : 1:2



9 9

PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: STH 48	SHEET NO:	E

FILE NAME : T:\410662\dgn\plan\090201_xs.dgn PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC edu_shd_utilFILL.tbl PLOT SCALE : 1:2

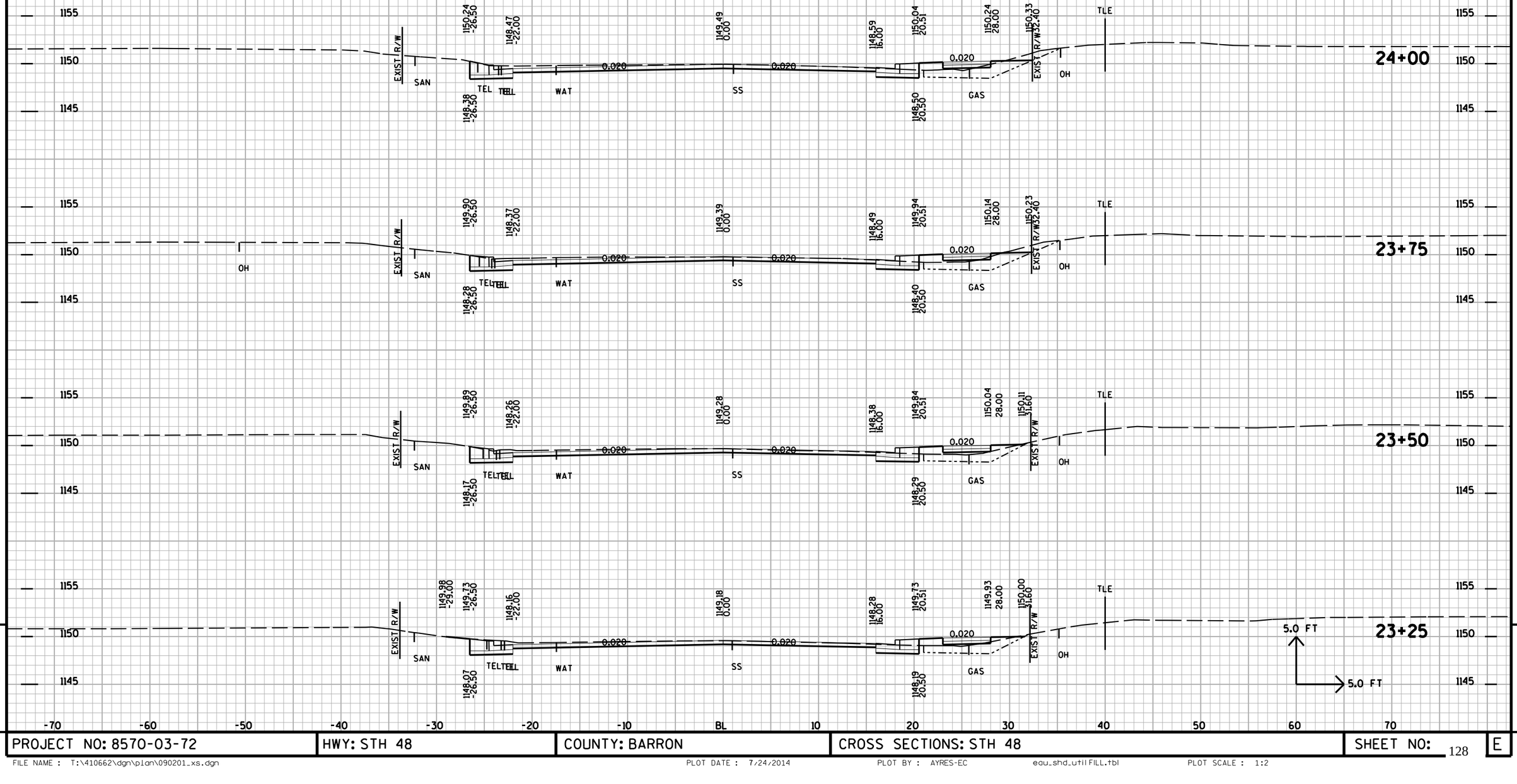


9

9

PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: STH 48	SHEET NO:	E

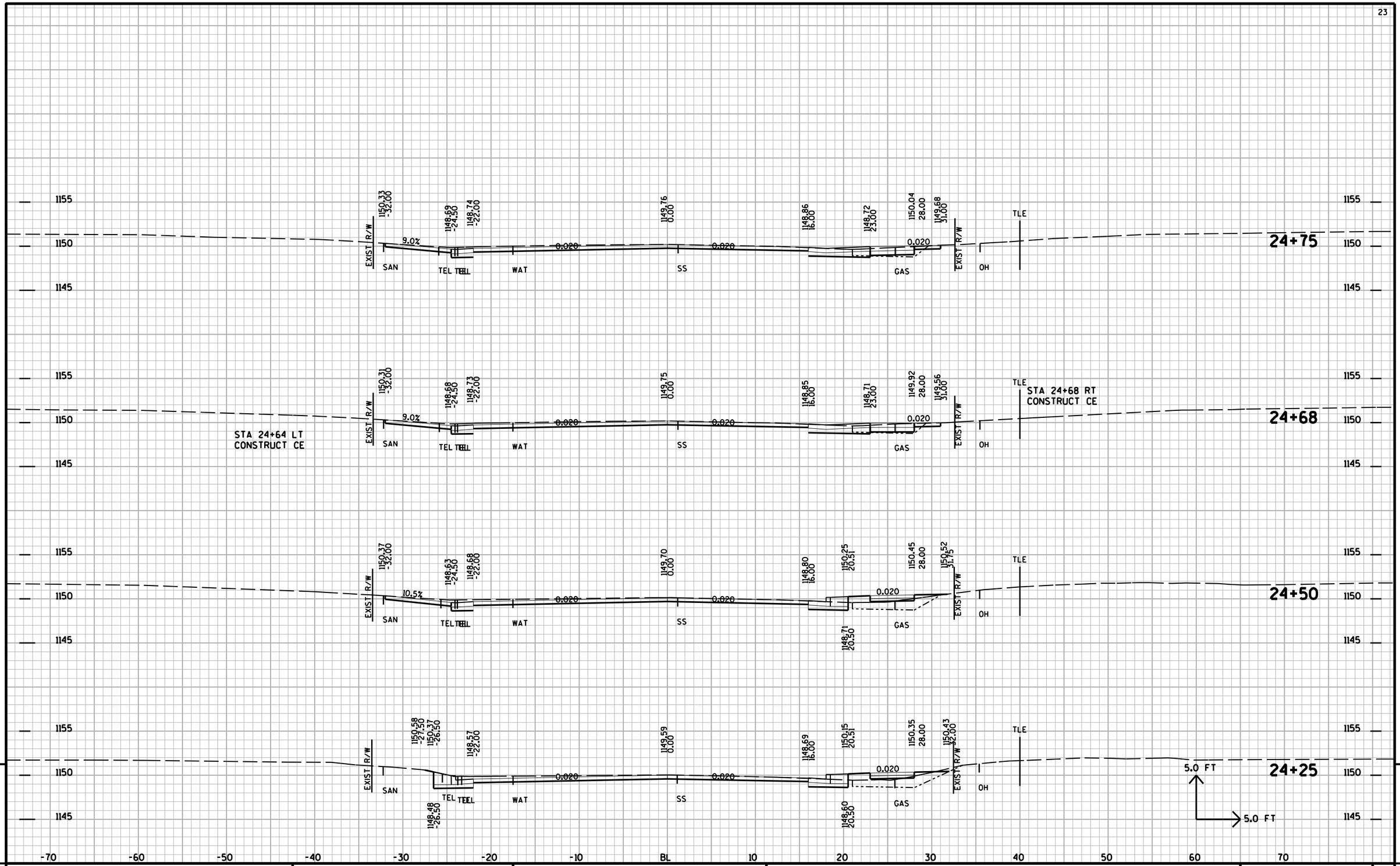
FILE NAME : T:\410662\dgn\plan\090201_xs.dgn PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC edu_shd_utilFILL.tbl PLOT SCALE : 1:2



9

PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: STH 48	SHEET NO: 128	E

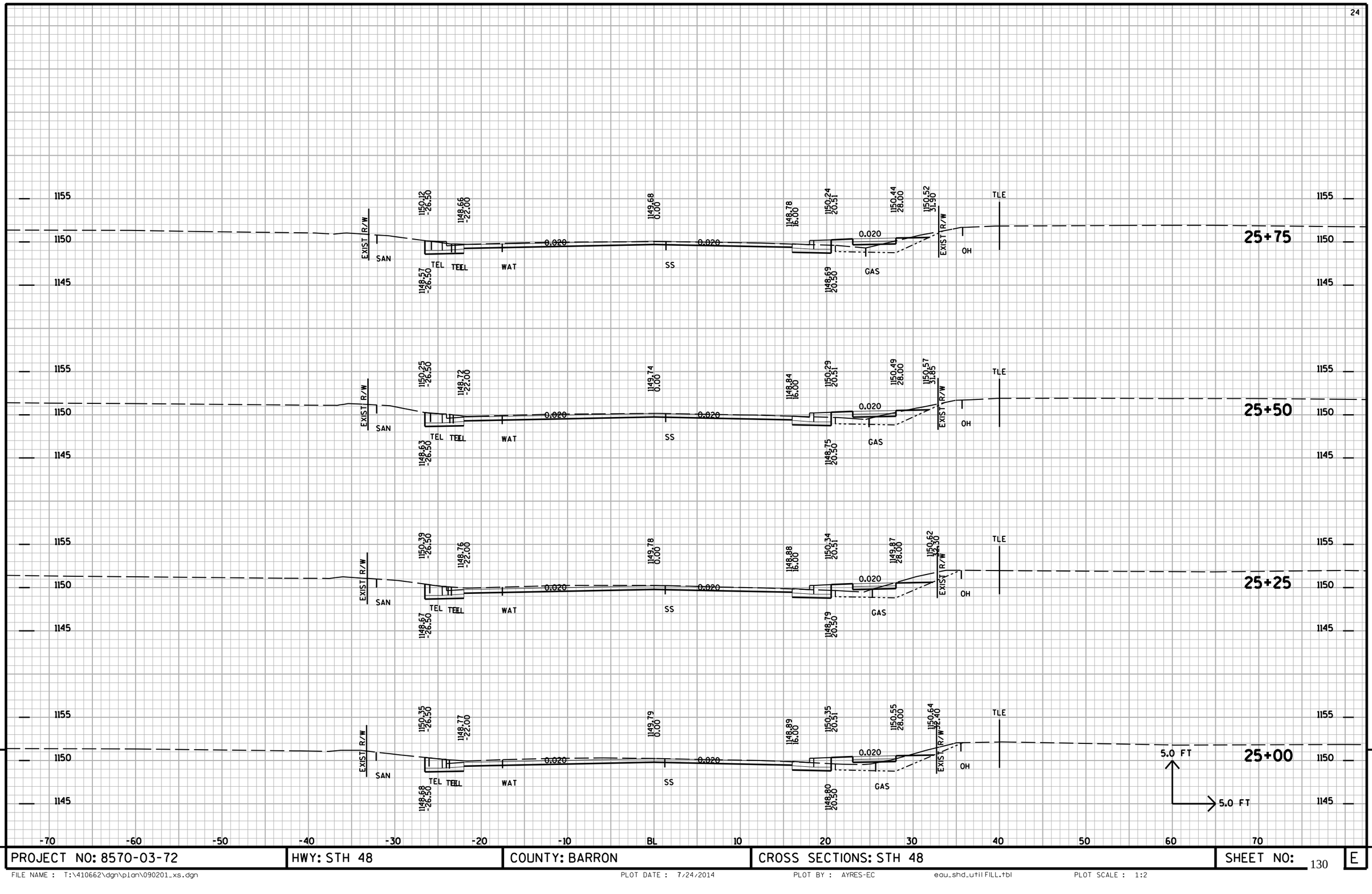
FILE NAME : T:\410662\dgn\plan\090201_xs.dgn PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC edu_shd_utilFILL.tbl PLOT SCALE : 1:2



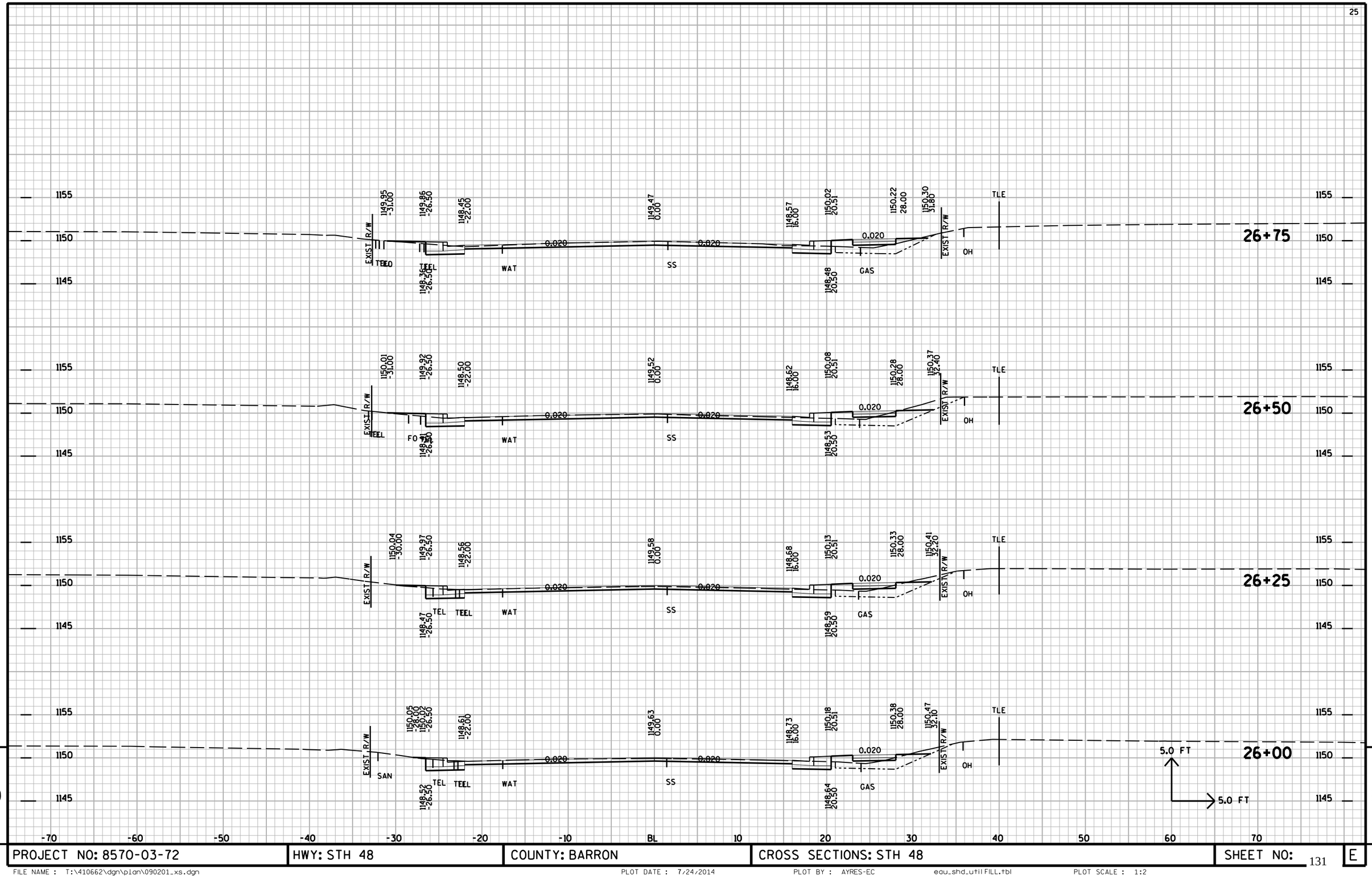
9

PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: STH 48	SHEET NO: 129	E

FILE NAME : T:\410662\dgn\plan\090201_xs.dgn PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC edu_shd_utilFILL.tbl PLOT SCALE : 1:2

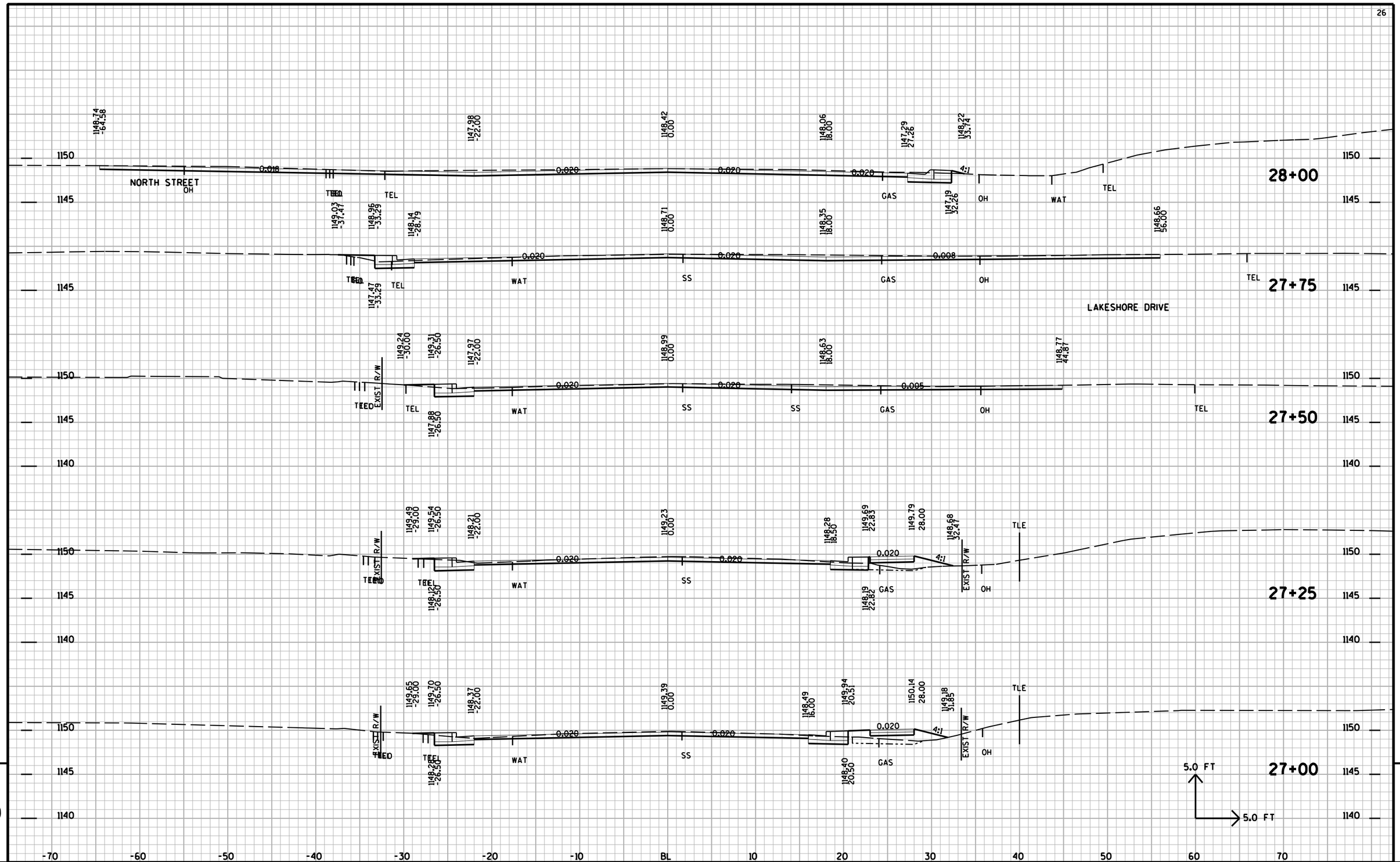


PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: STH 48	SHEET NO: 130 E



PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: STH 48	SHEET NO: 131	E

FILE NAME : T:\410662\dgn\plan\090201_xs.dgn PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC edu_shd_utilFILL.tbl PLOT SCALE : 1:2



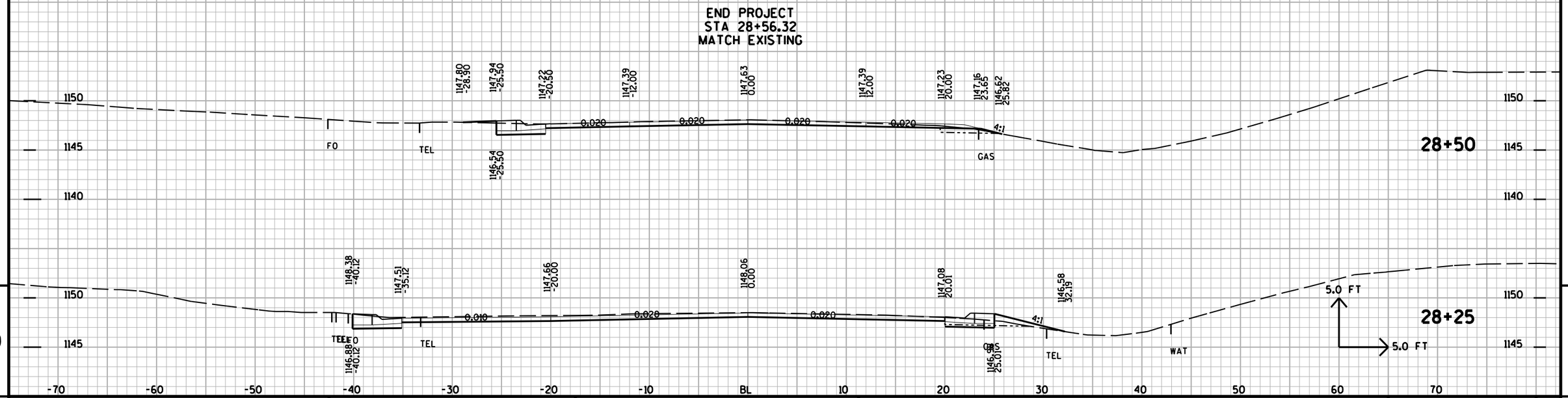
9

9

PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: STH 48	SHEET NO: 132	E

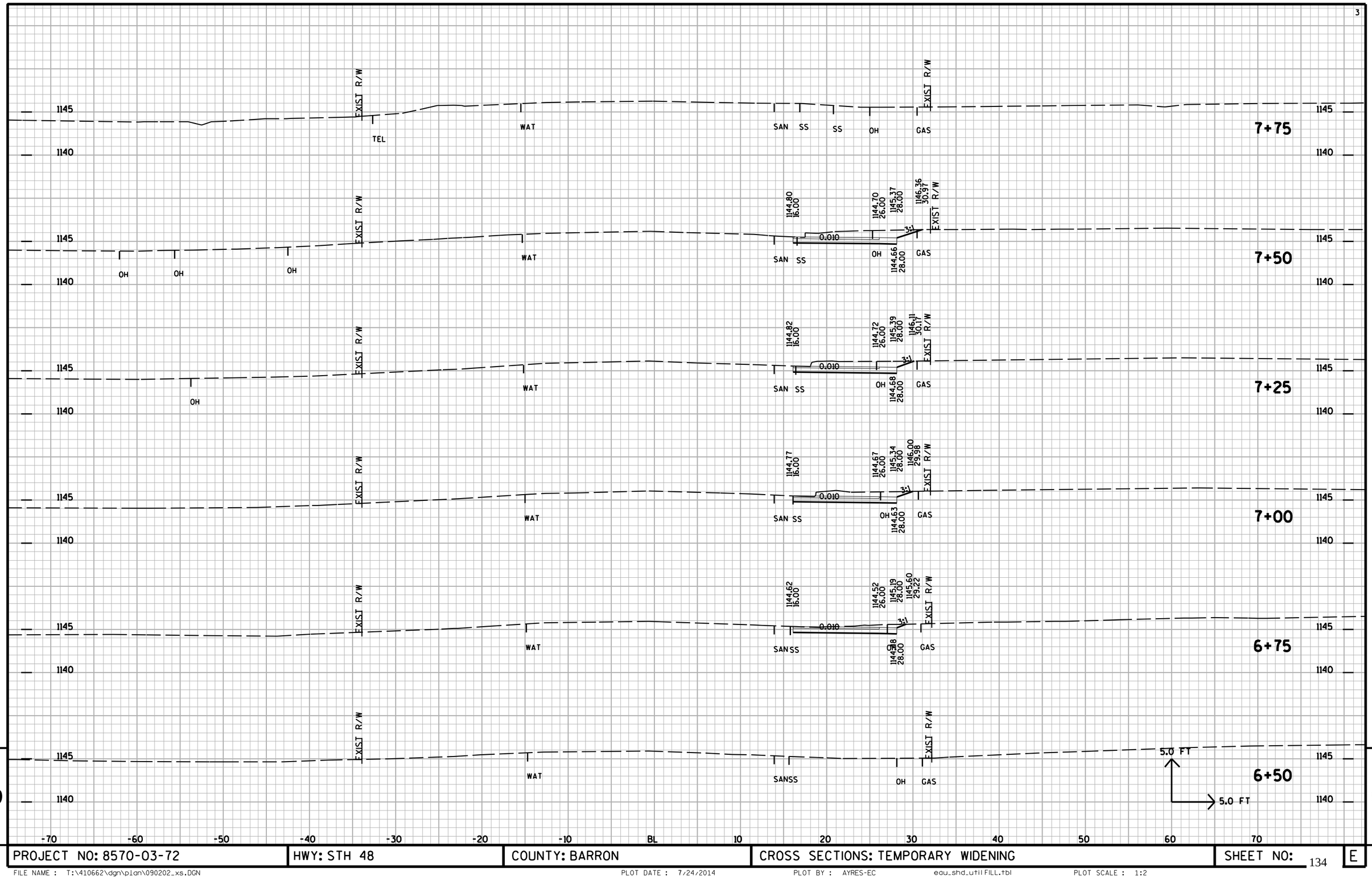
FILE NAME : T:\410662\dgn\plan\090201_xs.dgn PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC eau_shd_utilFILL.tbl PLOT SCALE : 1:2

END PROJECT
STA 28+56.32
MATCH EXISTING



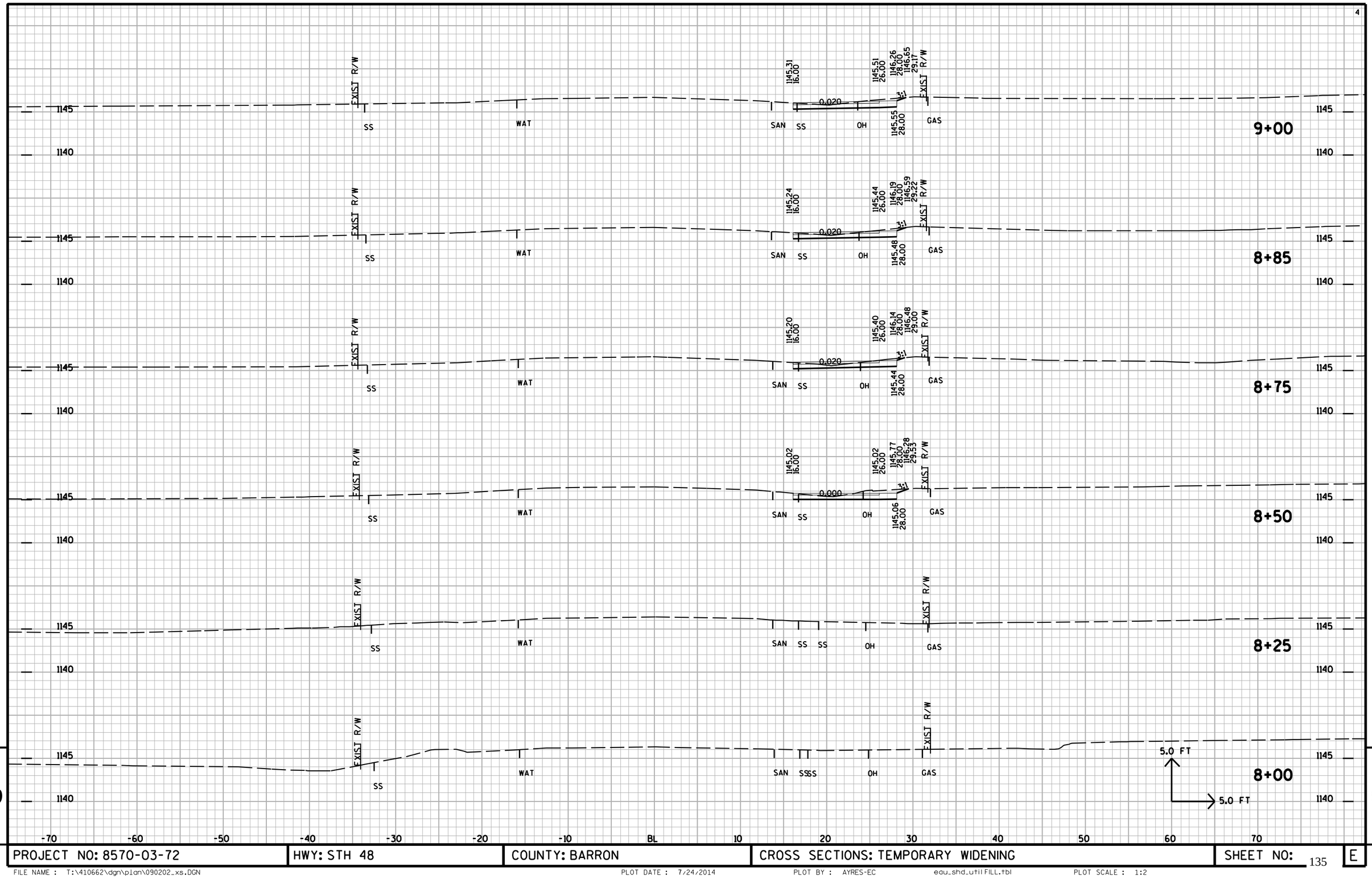
9 9

PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: STH 48	SHEET NO: 133 E



9 9

PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: TEMPORARY WIDENING	SHEET NO: 134 E

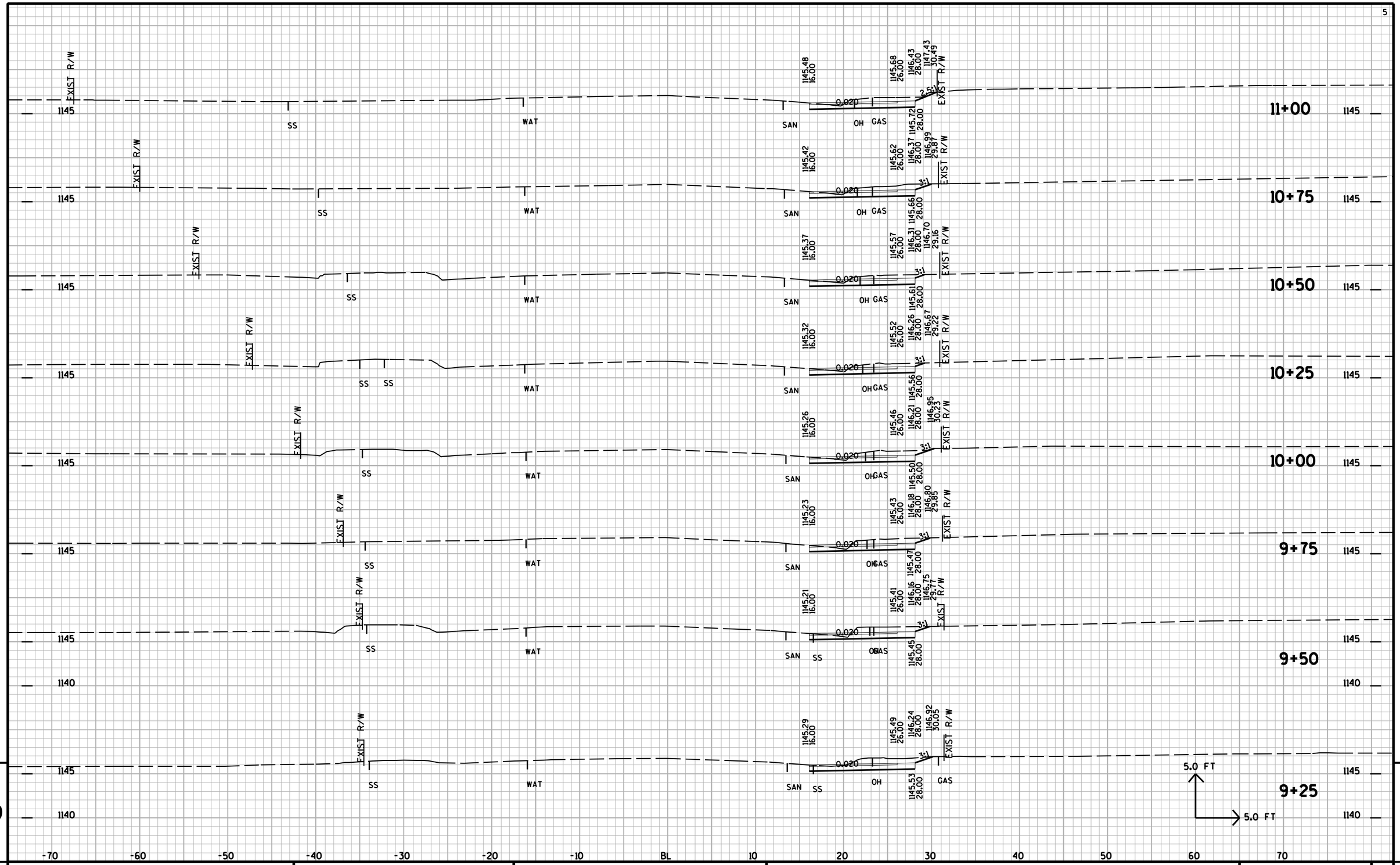


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PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: TEMPORARY WIDENING	SHEET NO: 135	E

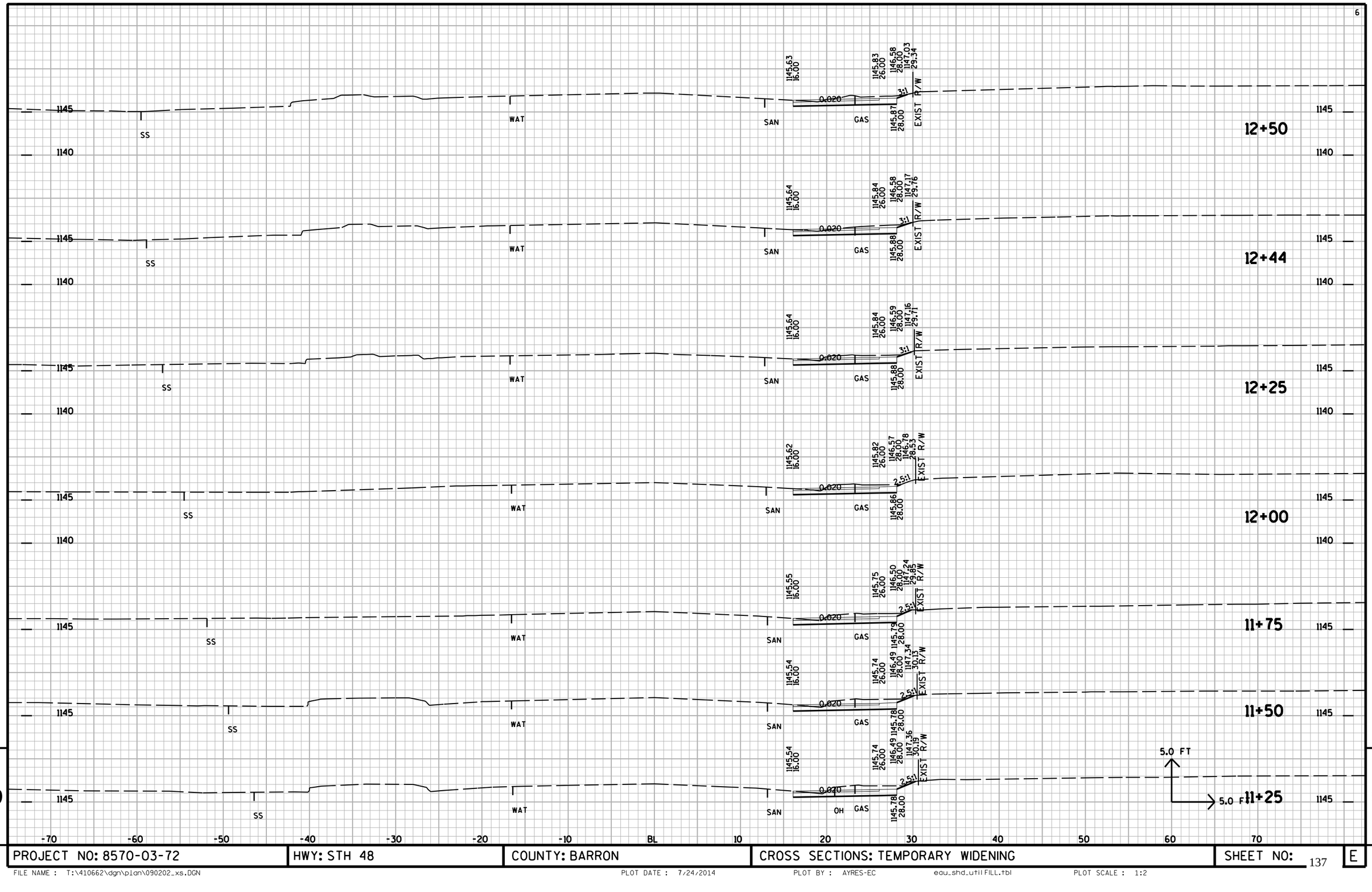
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9 9

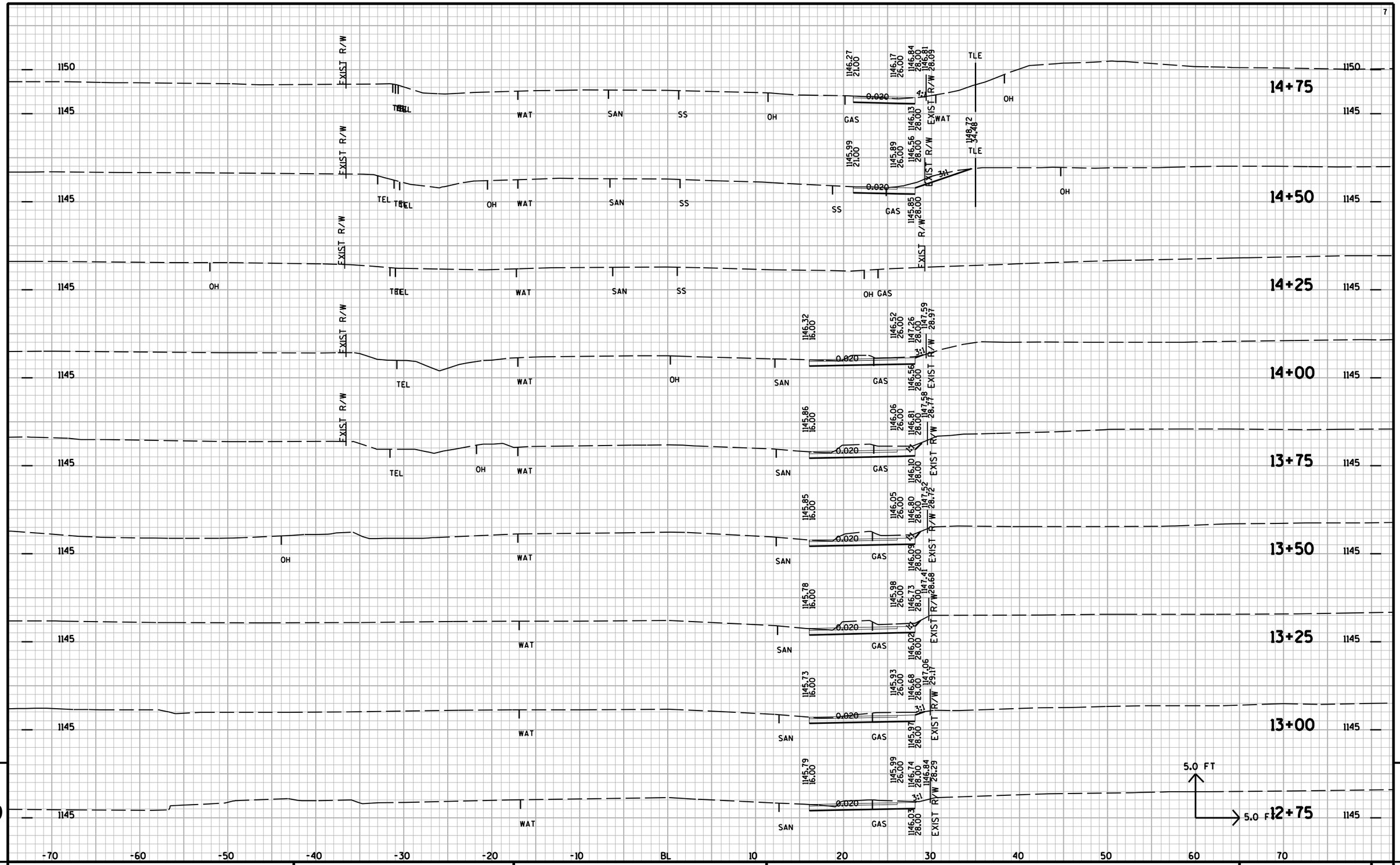
PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: TEMPORARY WIDENING	SHEET NO: E

FILE NAME : T:\410662\dgn\plan\090202_xs.DGN PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC edu_shd_utilFILL.tbl PLOT SCALE : 1:2



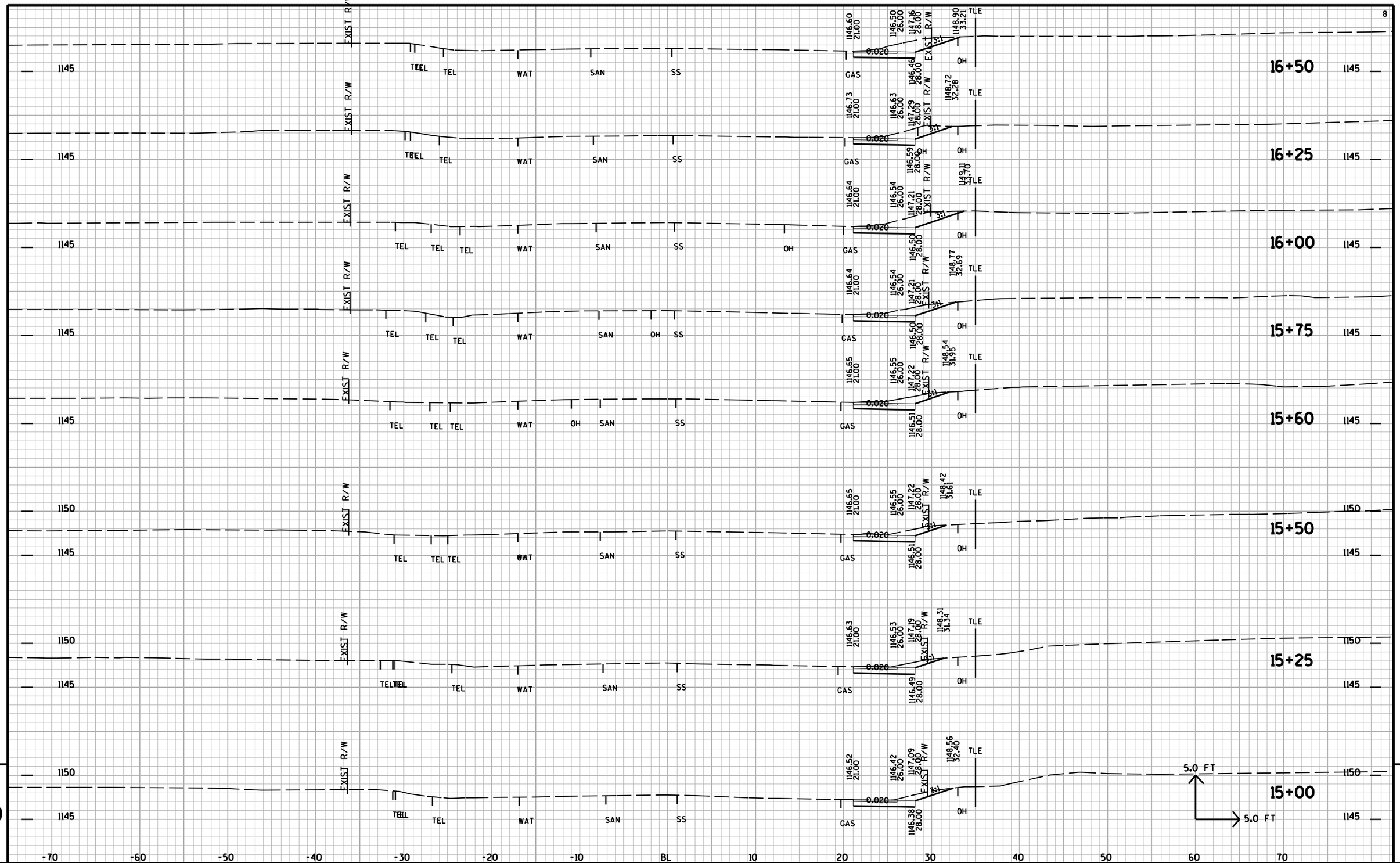
PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: TEMPORARY WIDENING	SHEET NO: 137 E

FILE NAME : T:\410662\dgn\plan\090202_xs.DGN PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC edu_shd_utilFILL.tbl PLOT SCALE : 1:2



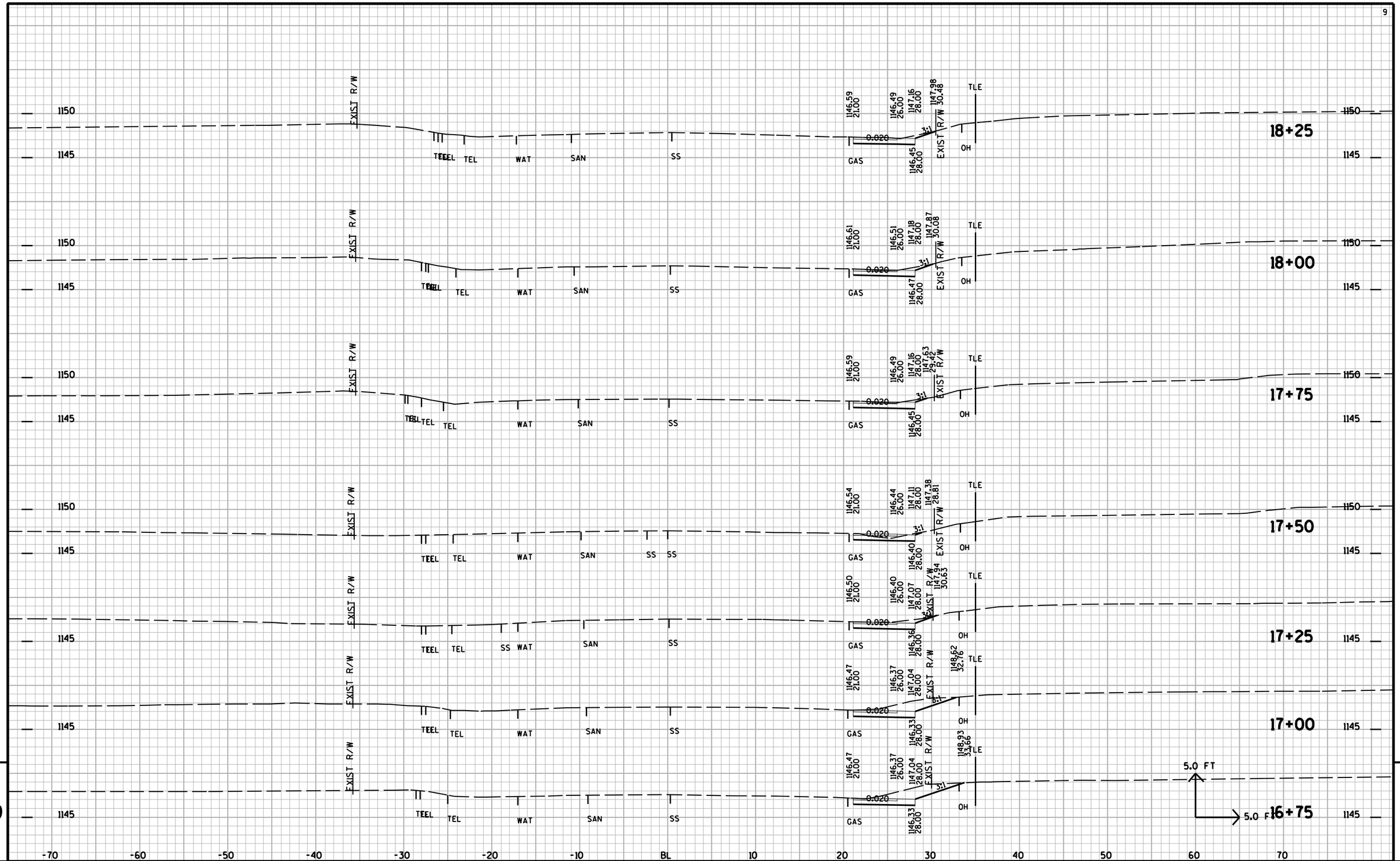
PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: TEMPORARY WIDENING	SHEET NO: 138 E

FILE NAME : T:\410662\dgn\plan\090202_xs.DGN PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC edu_shd_utilFILL.tbl PLOT SCALE : 1:2



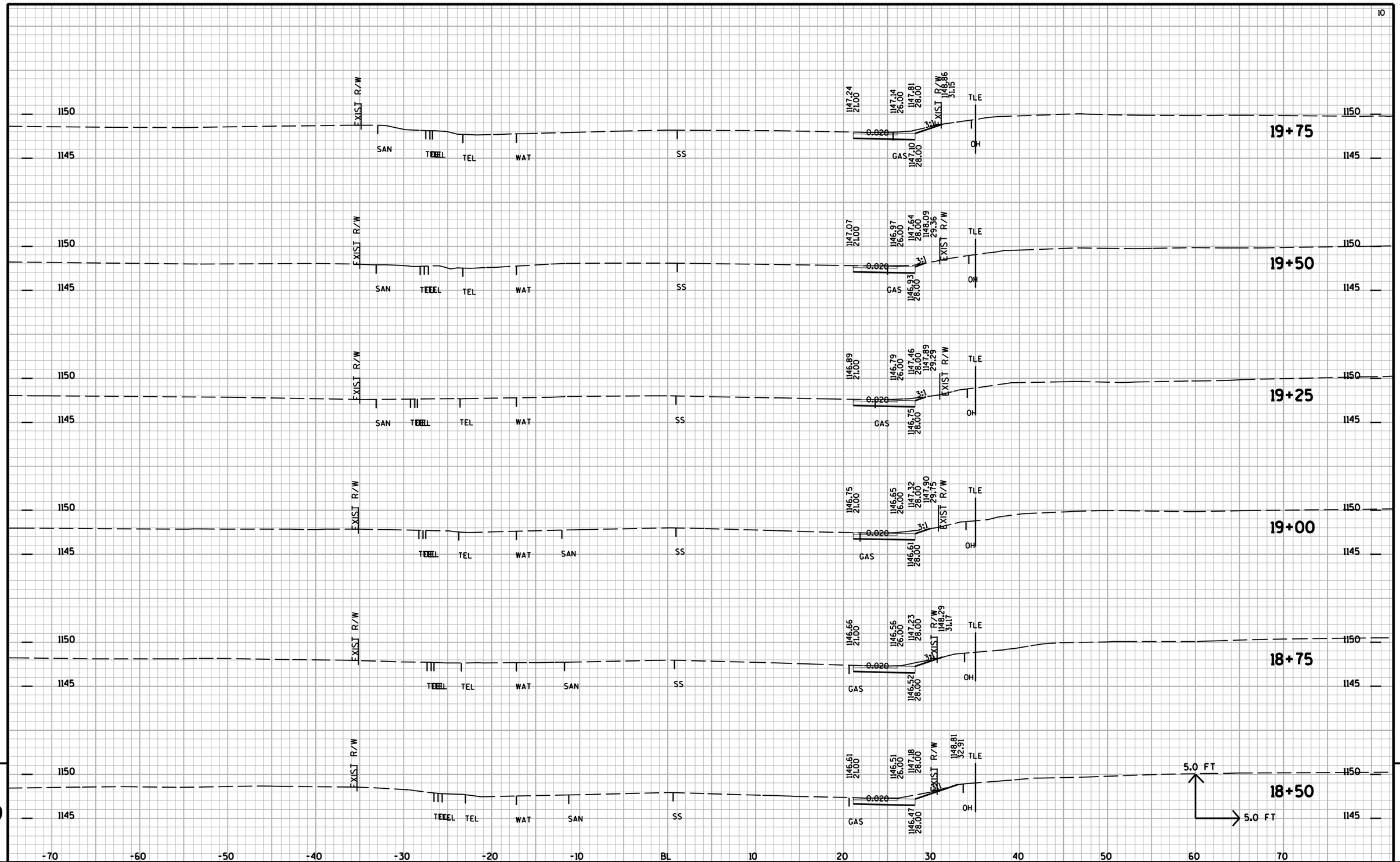
PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: TEMPORARY WIDENING	SHEET NO:

FILE NAME : T:\410662\dgn\plan\090202_xs.DGN PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC eau_shd_utilFILL.tbl PLOT SCALE : 1:2



PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: TEMPORARY WIDENING	SHEET NO: 140 E

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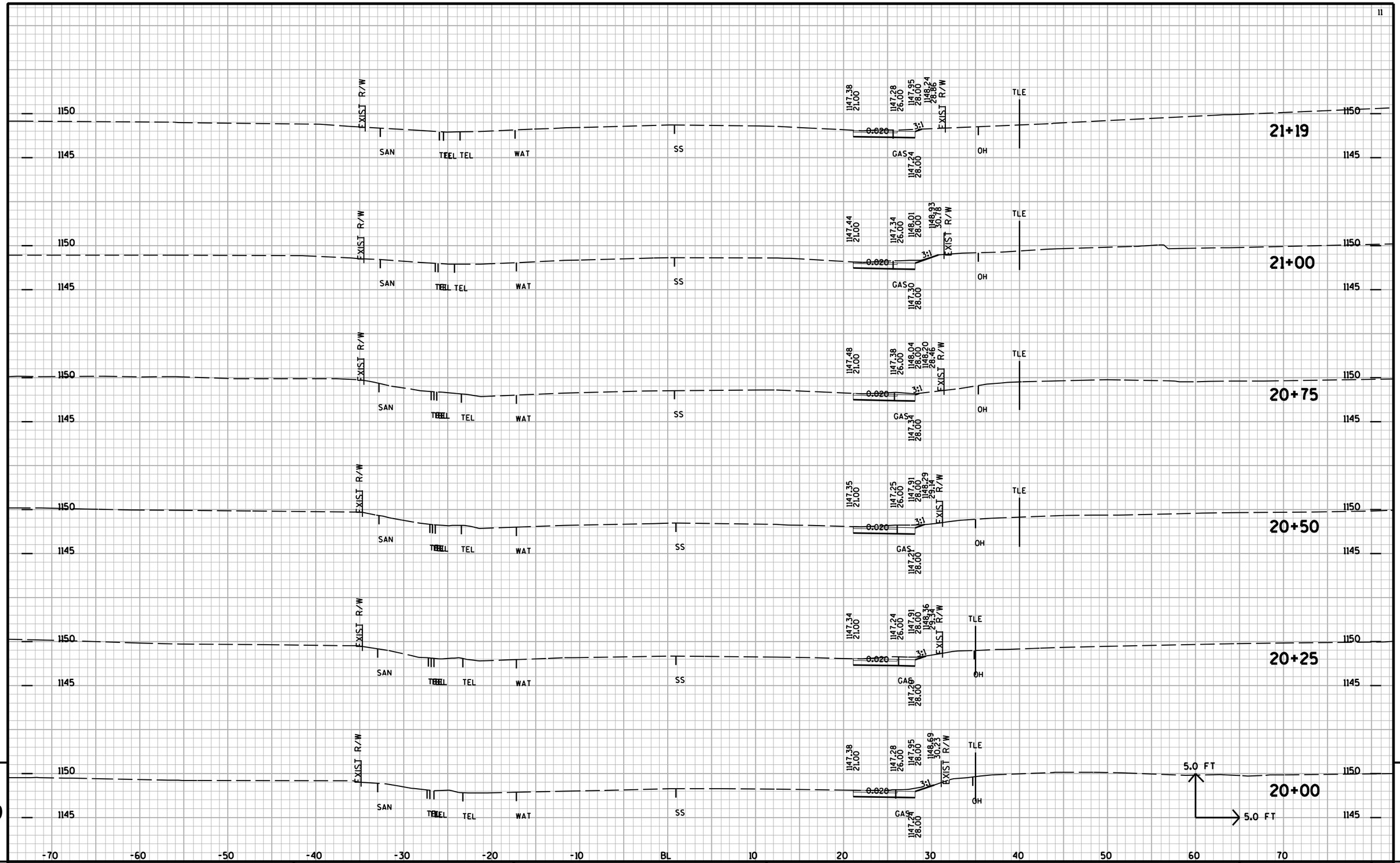


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PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: TEMPORARY WIDENING	SHEET NO: 141	E

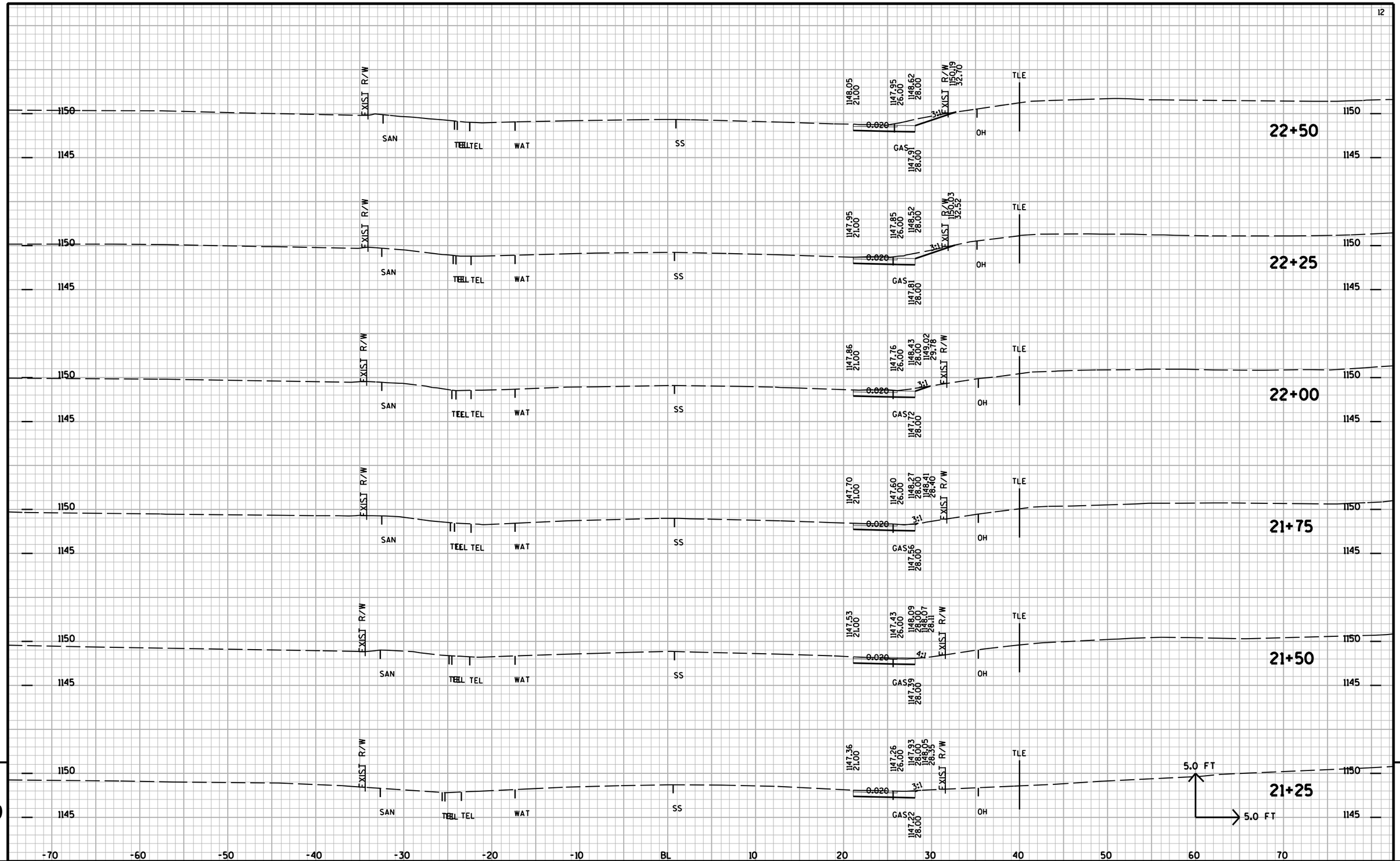
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PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: TEMPORARY WIDENING	SHEET NO:	E

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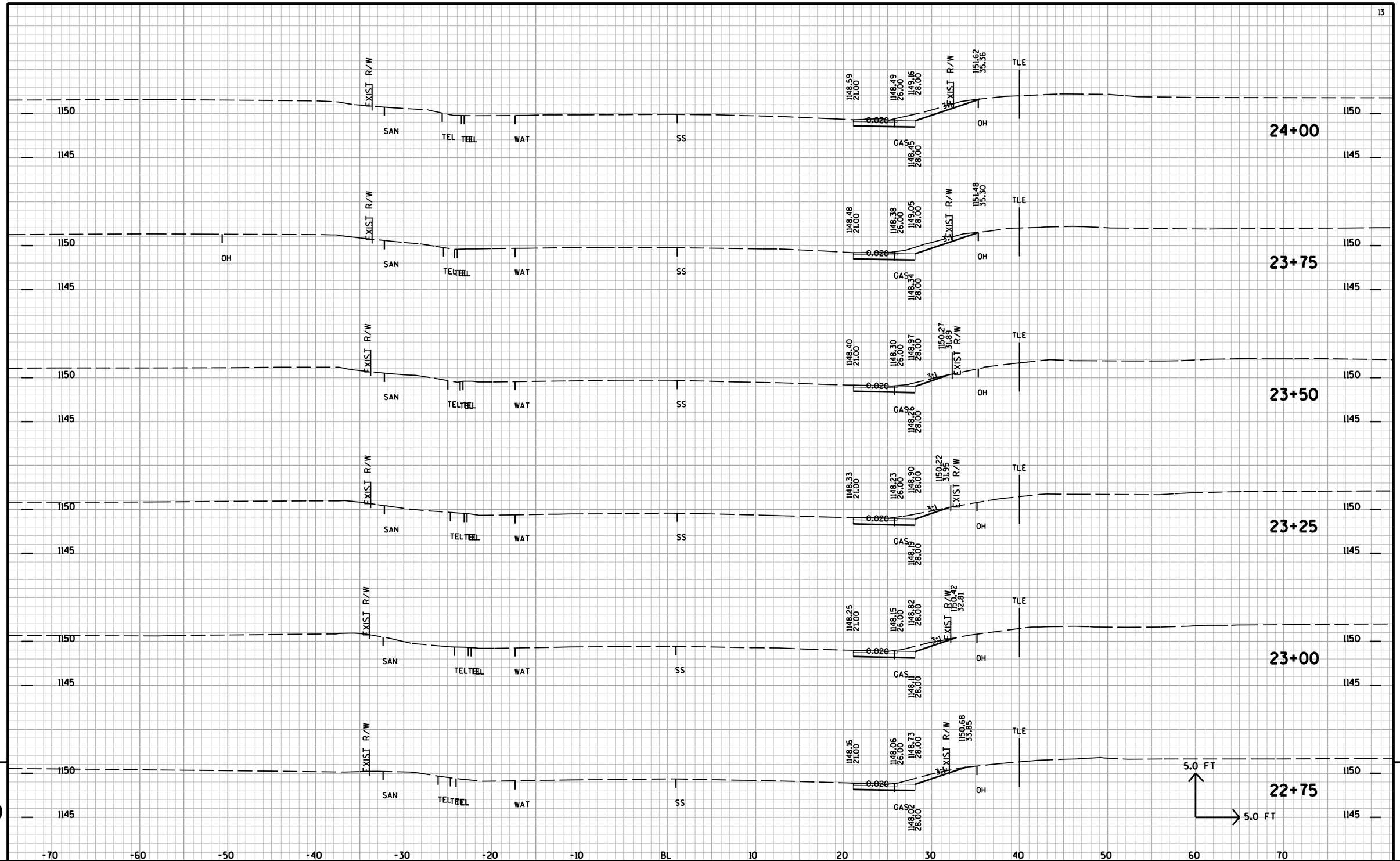


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PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: TEMPORARY WIDENING	SHEET NO:	E

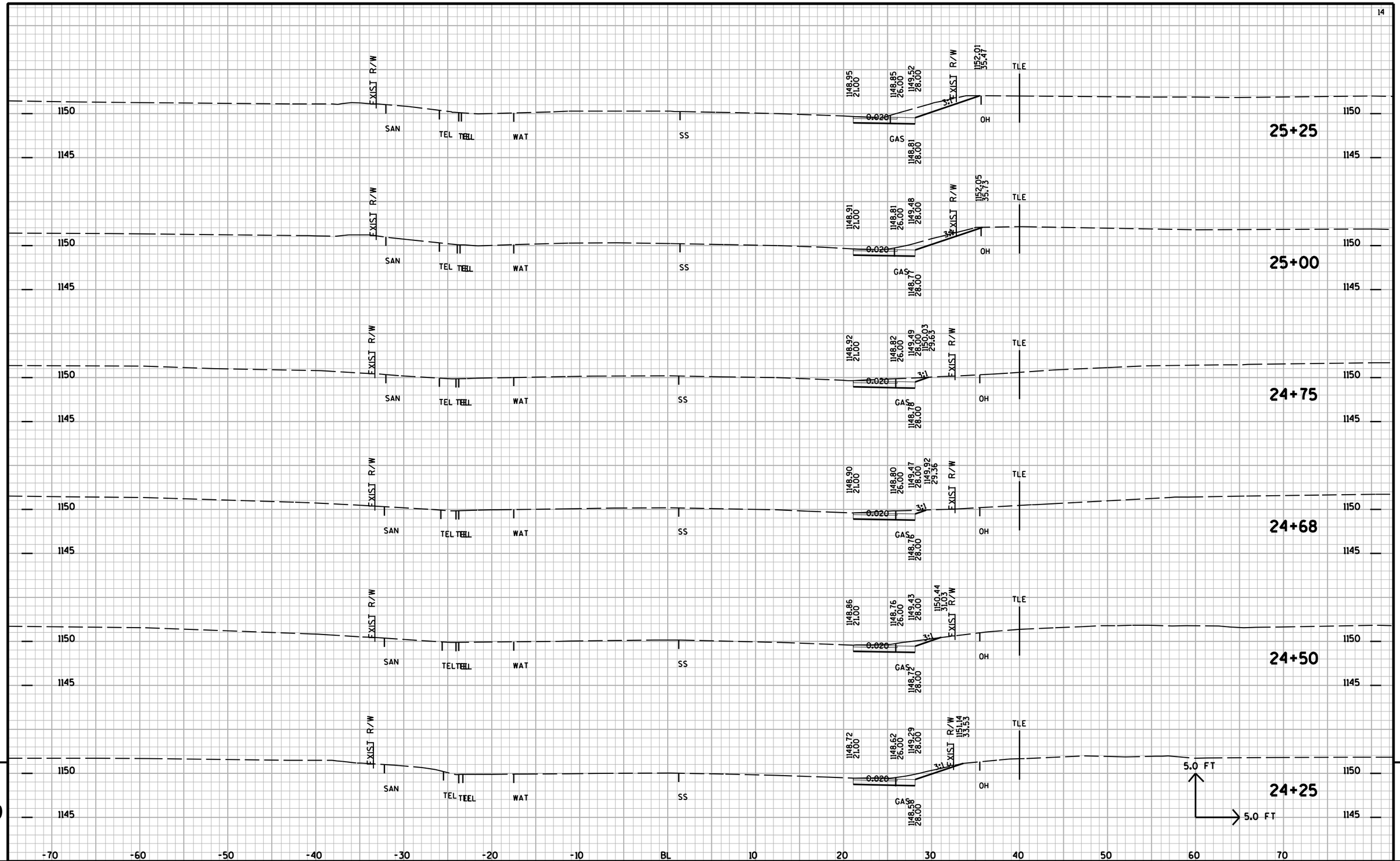
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PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: TEMPORARY WIDENING	SHEET NO: 144 E

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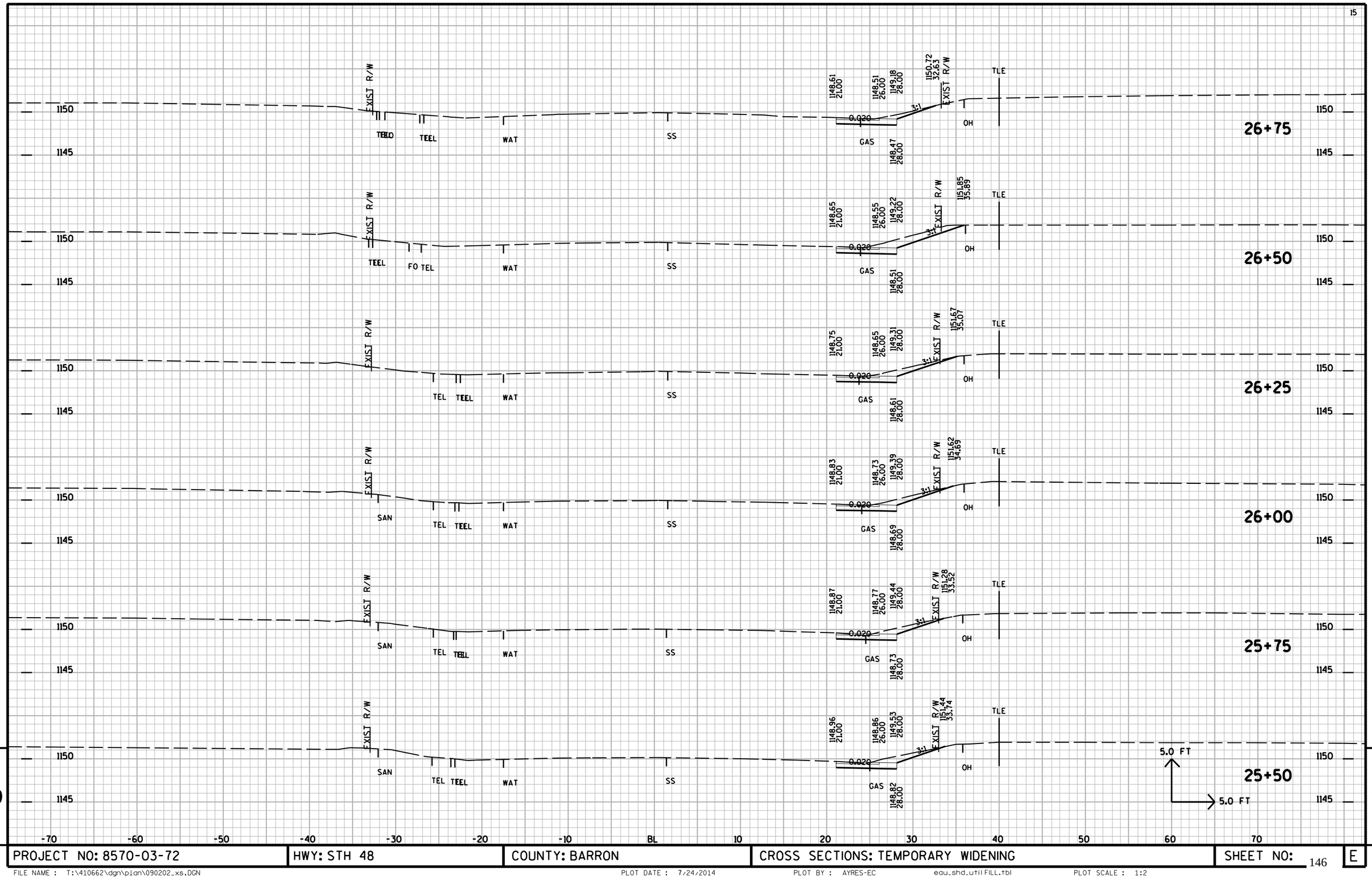


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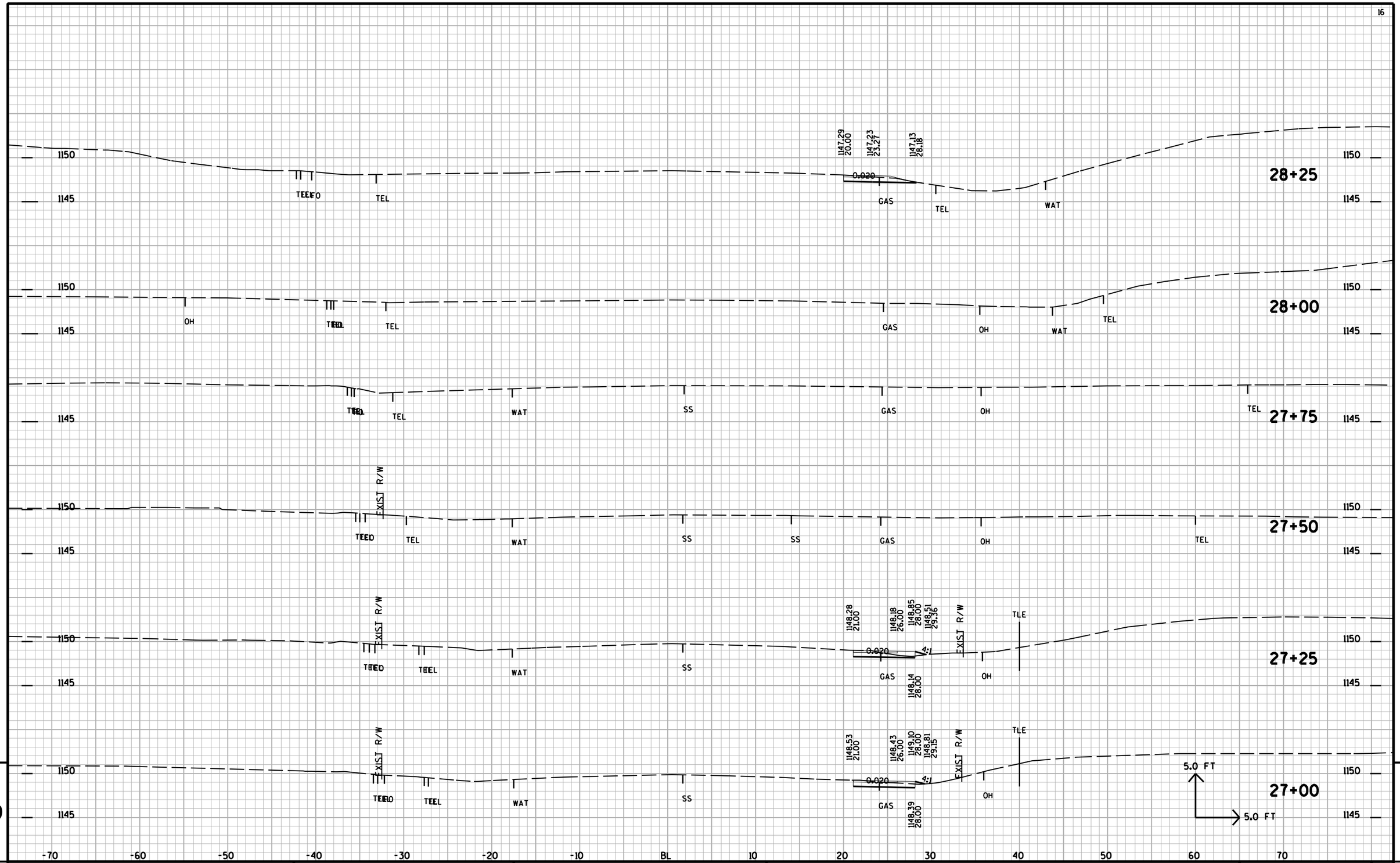
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PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: TEMPORARY WIDENING	SHEET NO: 146	E

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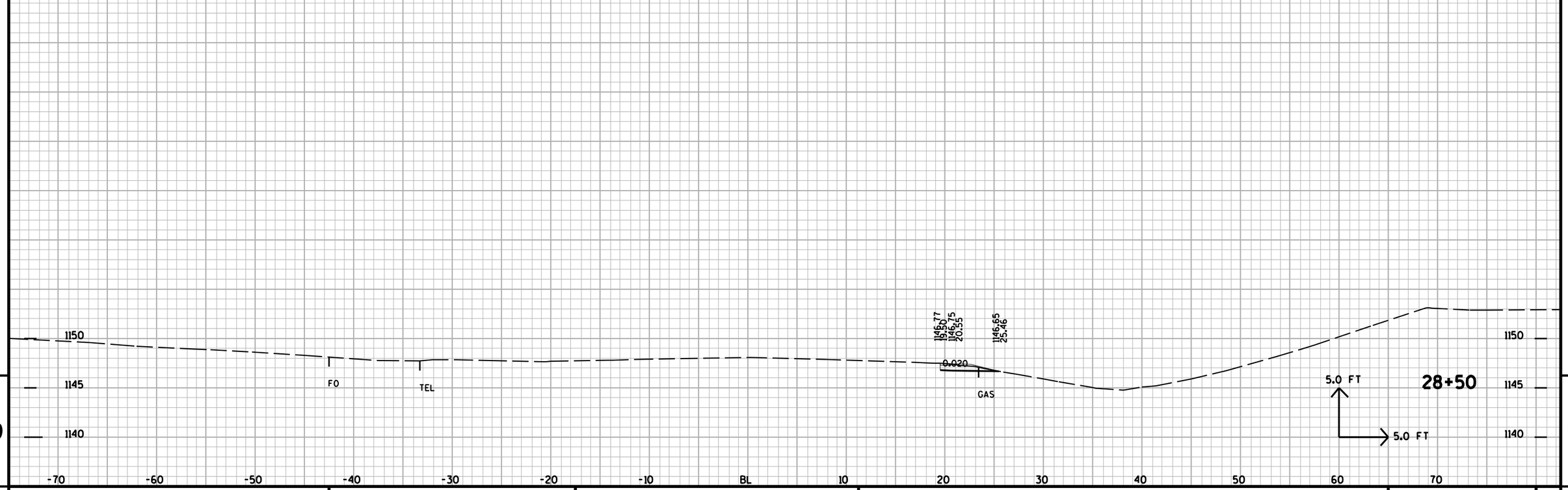


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PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: TEMPORARY WIDENING	SHEET NO:	E

FILE NAME : T:\410662\dgn\plan\090202_xs.DGN PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC eau_shd_utilFILL.tbl PLOT SCALE : 1:2



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PROJECT NO: 8570-03-72	HWY: STH 48	COUNTY: BARRON	CROSS SECTIONS: TEMPORARY WIDENING	SHEET NO:	E

FILE NAME : T:\410662\dgn\plan\090202_xs.DGN PLOT DATE : 7/24/2014 PLOT BY : AYRES-EC eau_shd_utilFILL.tbl PLOT SCALE : 1:2

Notes

Wisconsin Department of Transportation

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