EAU

PROJECT ID: 7070-08-73

COUNTY: EAU CLAIRE

JUNE 2016

ORDER OF SHEETS

TOTAL SHEETS = 160

N

DESIGN DESIGNATION

A.A.D.T.	2018	= 3300
A.A.D.T.	2038	= 3700
D.H.V.		= 578
D.D.		= 63/37
T.		= 17.5%
DESIGN SPEED		= 35 MPH
ESALS		= 1,100,000

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7070-08-73		

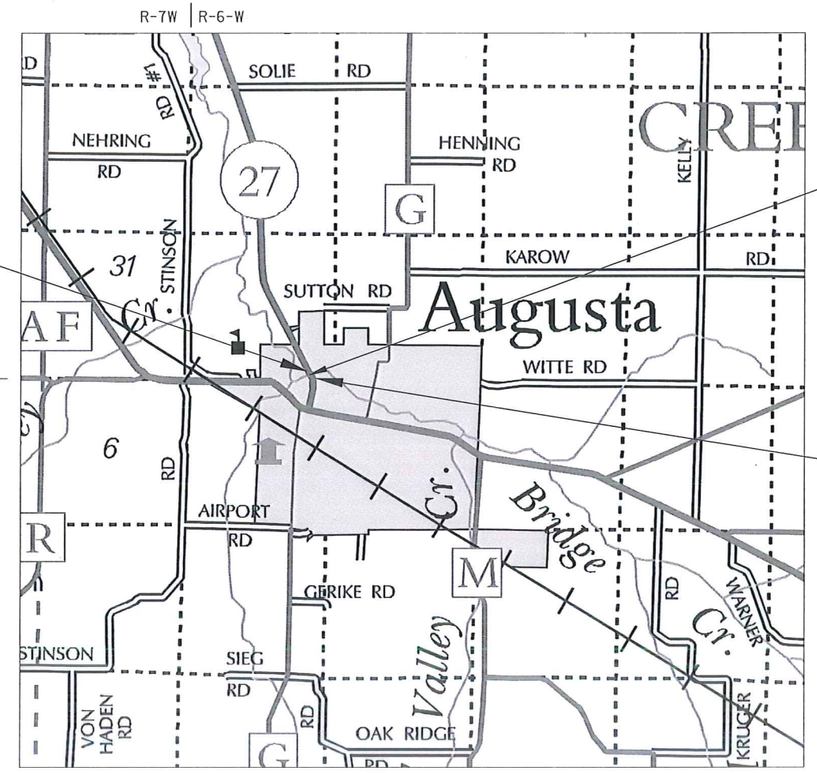
AUGUSTA - CADOTT

BRIDGE CREEK BRIDGE B-18-226

STH 27

EAU CLAIRE COUNTY

STATE PROJECT NUMBER
7070-08-73



END PROJECT
STA. 17+53.12
Y = 232675.967
X = 435647.350

STRUCTURE B-18-0226

BEGIN PROJECT
STA. 9+46.00
Y = 231941.695
X = 435960.835

LAYOUT
SCALE 0 1/2 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.153

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, EAU CLAIRE COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	FAA
Designer	FAA
Project Manager	DAVE KOEPP
Regional Examiner	CHRISTINE KOSKI
Regional Supervisor	TIM MASON

APPROVED FOR THE DEPARTMENT

DATE: 2/3/2016 (Signature)

E

STANDARD ABBREVIATIONS

ABUT	ABUTMENT
AC	ACRE
AGG	AGGREGATE
ASPH	ASPHALTIC
AVG	AVERAGE
ADT	AVERAGE DAILY TRAFFIC
BAH	BEARING AHEAD
BBK	BEARING BACK
BF	BACK FACE
BM	BENCH MARK
BR	BRIDGE
C/L	CENTER LINE
Δ	CENTRAL ANGLE OR DELTA
CE	COMMERCIAL ENTRANCE
CMP	CORRIGATED METAL PIPE
CONC	CONCRETE
CP	CULVERT PIPE
CP	CONTROL POINT
CPCP	CULVERT PIPE CORRUGATED POLYETHYLENE
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III
CR	CREEK
CWT	HUNDREDWEIGHT
CY	CUBIC YARD
C & G	CURB AND GUTTER
D	DEGREE OF CURVE/BOX DEPTH
DHV	DESIGN HOUR VOLUME
DD	DIRECTIONAL DISTRIBUTION
DISCH	DISCHARGE
DG	DITCH GRADE
DWY	DRIVEWAY
E	EAST
EL/ELEV	ELEVATION
ENT	ENTRANCE
ESALS	EQUIVALENT SINGLE AXLE LOADS
EXC	EXCAVATION
EBS	EXCAVATION BELOW SUBGRADE
EXIST	EXISTING
FE	FIELD ENTRANCE
FERT	FERTILIZE
FF	FACE TO FACE
FL	FLOW LINE
FO	FIBER OPTIC
FS	FULL SUPER ELEVATION
FT	FOOT
G	GRADE
HMA	HOT MIX ASPHALT
HYD	HYDRANT
ID	INSIDE DIAMETER
INV	INVERT
IP	IRON PIPE OR PIN
K	RATE OF VERTICAL CURVATURE
LHF	LEFT-HAND FORWARD
L	LENGTH OF CURVE
LB	POUND
LF	LINEAR FOOT
LCB	LONG CHORD BEARING
LC	LONG CHORD
LN	LANE
LT	LEFT
LN	LANE
LS	LUMP SUM
LT	LEFT
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MI	MILE
ML	MAINLINE
N	NORTH
NC	NORMAL CROWN
NO	NUMBER
NOR	NORMAL
OBLIT	OBLITERATE
PAVT	PAVEMENT
PC	POINT OF CURVATURE
PE	PRIVATE ENTRANCE
PI	POINT OF INTERSECTION
POB	POINT OF BEGINNING
POE	POINT OF ENDING
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVRC	POINT OF VERTICAL REVERSE CURVATURE
PVT	POINT OF VERTICAL TANGENCY
R/RAD	RADIUS
RCCP	REINFORCED CONCRETE CULVERT PIPE
REQ'D	REQUIRED
RES	RESIDENCE OR RESIDENTIAL
RHF	RIGHT-HAND FORWARD
R/W	RIGHT OF WAY
RD	ROAD
RDWY	ROADWAY
RR	RAILROAD
RT	RIGHT
SALV	SALVAGED
SAN S	SANITARY SEWER
S	SOUTH
SQ	SQUARE
SF	SQUARE FEET
SY	SQUARE YARD
SDD	STANDARD DETAIL DRAWINGS
STH	STATE TRUNK HIGHWAYS
STA	STATION
SS	STORM SEWER
SE	SUPERELEVATION
T	TANGENT LENGTH
T.	TRUCKS (PERCENT OF)
TC	TOP OF CURB
T OR TN	TOWN
TLE	TEMPORARY LIMITED EASEMENT
t	TON
TYP.	TYPICAL
VAR	VARIABLE
VC	VERTICAL CURVE
W	WEST
X	EAST GRID COORDINATE
Y	NORTH GRID COORDINATE
YD	YARD

GENERAL NOTES

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO USGS DATUM.

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

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

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

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE SALVAGED TOPSOILED, FERTILIZED, SEEDED AND MULCHED

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

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

SIGN PLATE DETAILS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" UNLESS OTHERWISE PROVIDED FOR IN THE PLAN.

CURVE DATA IS BASED ON THE ARC DEFINITION.

SEED MIXTURE NO. 20 SHALL BE USED THROUGHOUT THE PROJECT.

PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE COUNTY LAND SURVEYOR CONCERNING MONUMENT AND PROPERTY CORNER PRESERVATION. LANDMARK REFERENCE MONUMENTS SHALL BE PERPETUATED BY THE COUNTY SURVEYOR.

RADIUS DIMENSIONS ARE SHOWN TO FLAGLINE OF CURB & GUTTER OR EDGE OF PAVEMENT.

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

6-INCH ASPHALTIC SURFACE SHALL BE PLACED AS 2-INCH UPPER AND TWO 2-INCH LOWER LAYERS.

DESIGN CONTACT

FLEMING, ANDRE & ASSOCIATES, INC.
3615 N. HASTINGS WAY
SUITE 100
EAU CLAIRE, WI. 54703-0474
ATTENTION: MATT GUNDRY
PHONE: 715-832-8400

W.D.N.R. CONTACT

DEPARTMENT OF NATURAL RESOURCES
1300 W CLAIREMONT AVE
EAU CLAIRE, WI 54701
ATTENTION: CHRIS WILLGER
PHONE: 715-839-1609

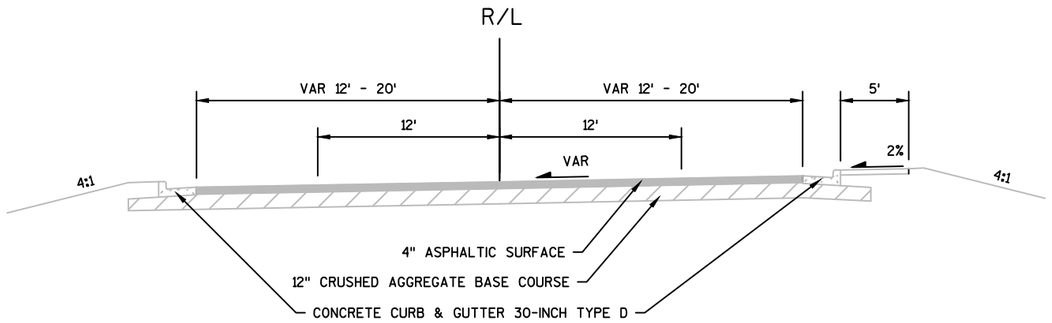
UTILITIES

CENTURY LINK
333 N FRONT ST
P.O. BOX 4800
LA CROSSE, WI 54602
ATTN: STEVE BLADO
PHONE: 608-796-5543
STEVE.BLADO@CENTURYLINK.COM

WE ENERGIES
A299
333 W EVERETT ST
MILWAUKEE, WI 53203
ATTN: DAN SANDE
PHONE: 414-221-5617

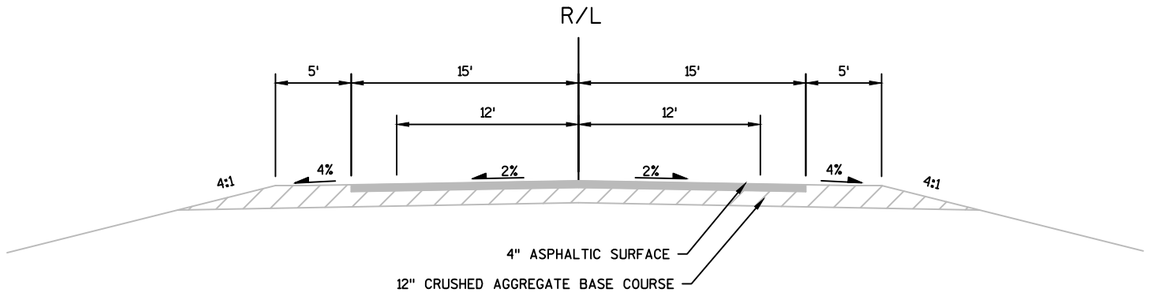
CITY OF AUGUSTA
145 WEST LINCOLN
PO BOX 475
AUGUSTA, WI 54722
ATTN: KIM KRUEGER
PHONE: 715-286-2555

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



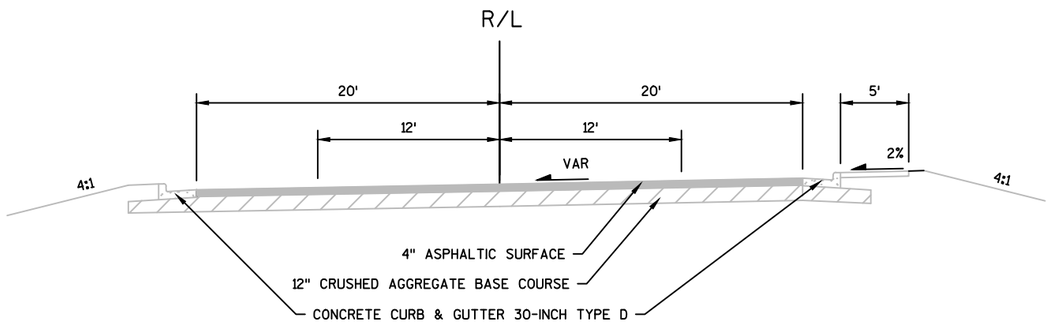
EXISTING TYPICAL SECTION STH 27

STA 11+55 TO STA 12+14



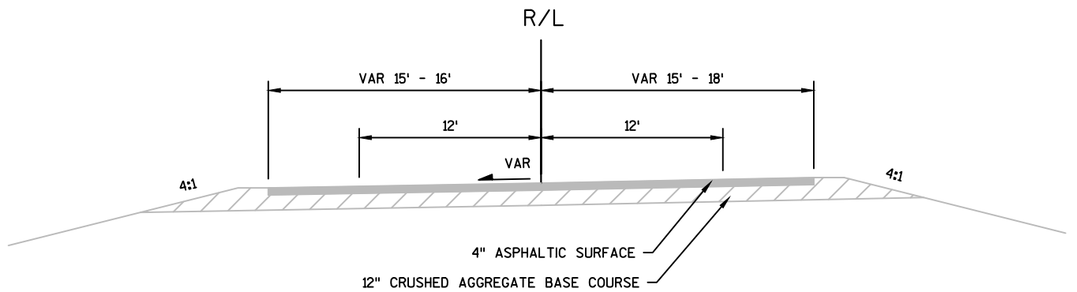
EXISTING TYPICAL SECTION STH 27

STA 14+75 TO STA 17+53



EXISTING TYPICAL SECTION STH 27

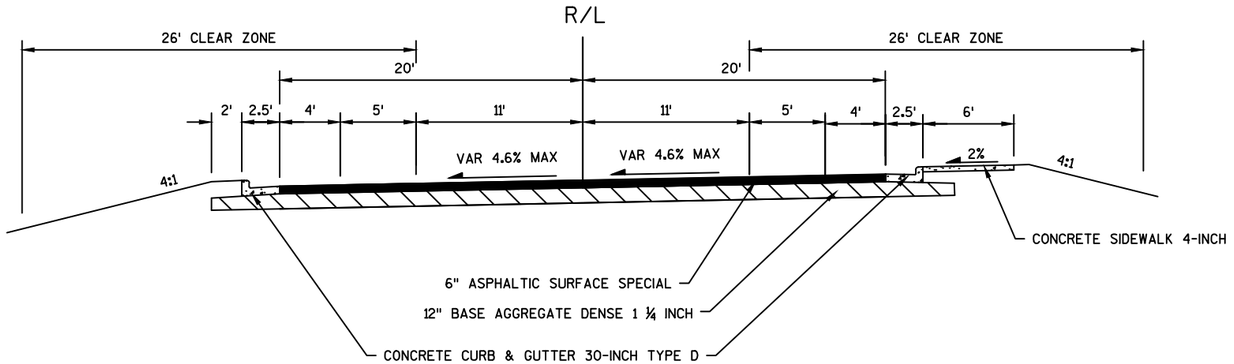
STA 9+46 TO STA 11+55



EXISTING TYPICAL SECTION STH 27

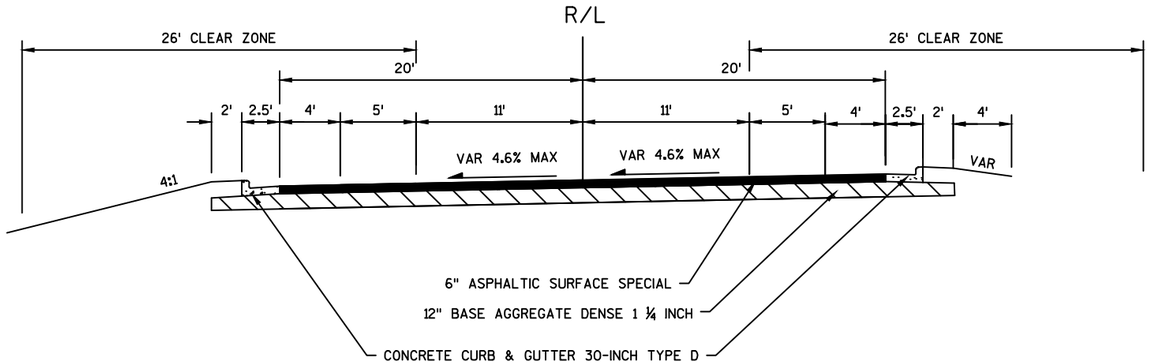
STA 13+32 TO STA 14+75

PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	PLAN: EXISTING TYPICAL SECTIONS	SHEET 3	E



FINISHED TYPICAL SECTION - STH 27

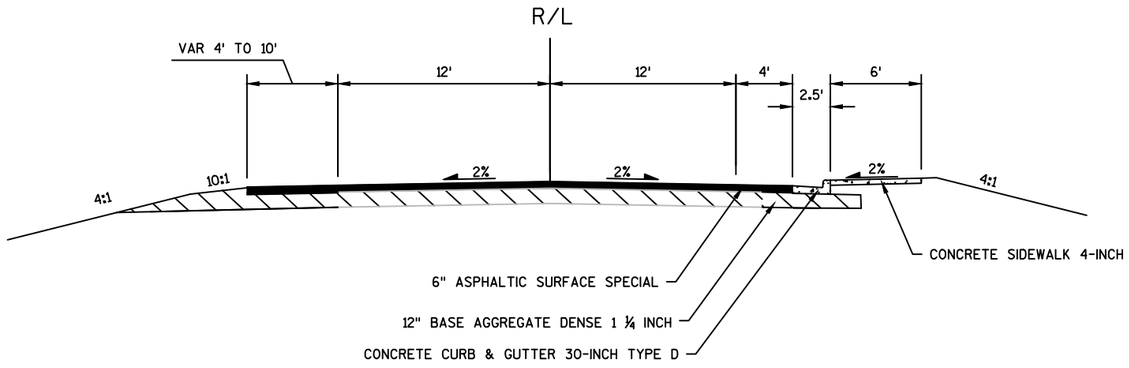
STA 10+92 TO STA 12+28.75
SOUTH OF BRIDGE



FINISHED TYPICAL SECTION - STH 27

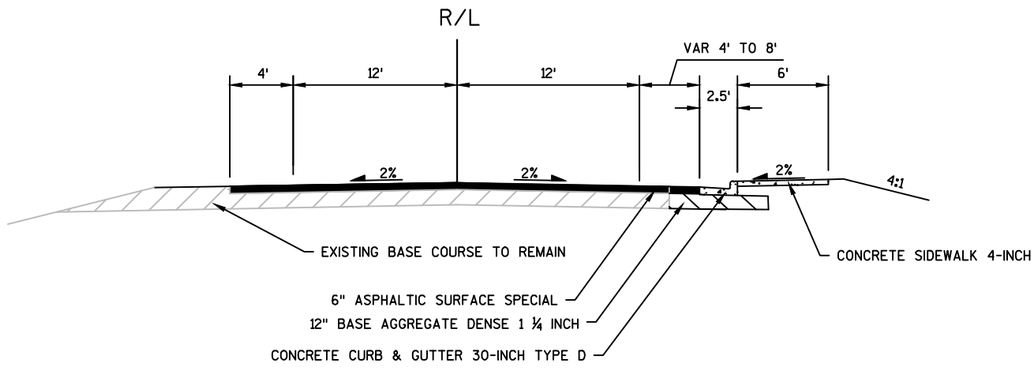
STA 9+46 TO STA 10+92

PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	PLAN: FINISHED TYPICAL SECTIONS	SHEET 4	E



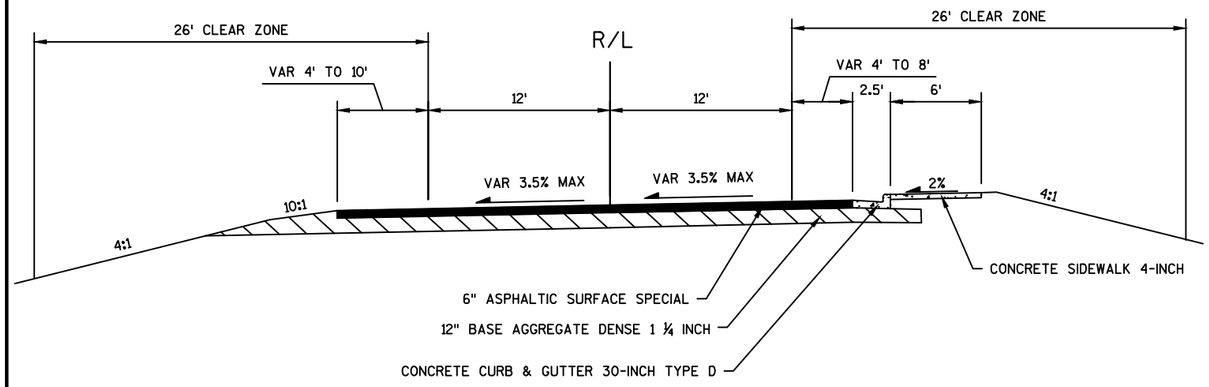
FINISHED TYPICAL SECTION STH 27

STA 14+63 TO STA 16+11



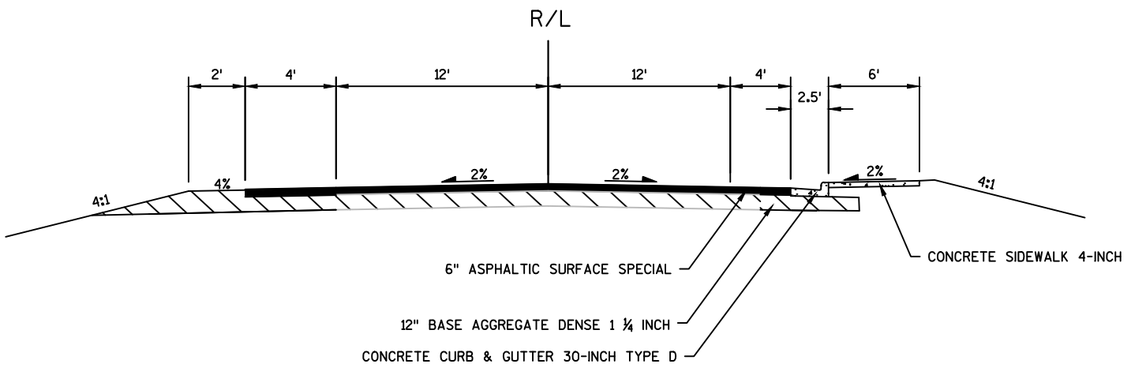
FINISHED TYPICAL SECTION STH 27

STA 16+50 TO STA 17+53



FINISHED TYPICAL SECTION - STH 27

STA 13+16.30 TO STA 14+63
NORTH OF BRIDGE

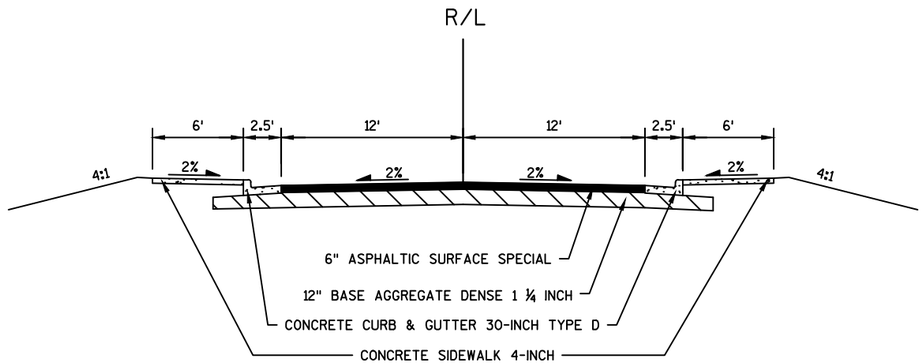


FINISHED TYPICAL SECTION STH 27

STA 16+11 TO STA 16+50

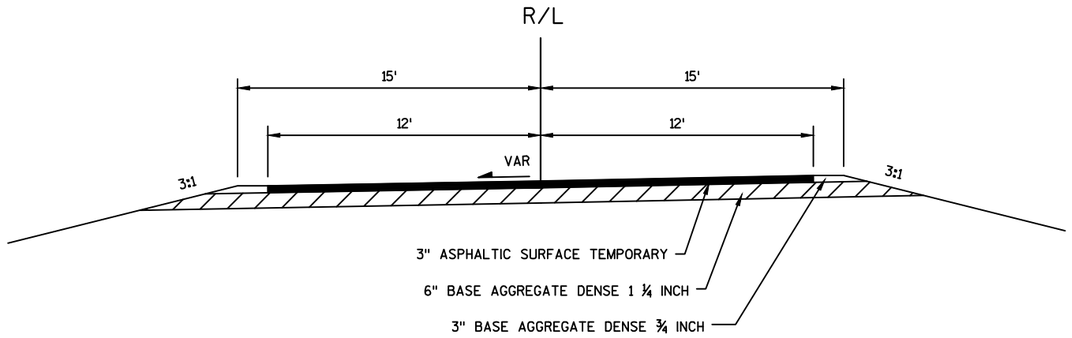
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	PLAN: FINISHED TYPICAL SECTIONS	SHEET 5	E

2



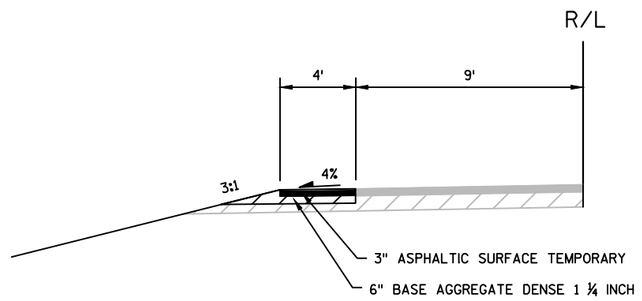
FINISHED TYPICAL SECTION - PERKINS RD.

STA 9+49 TO STA 11+55



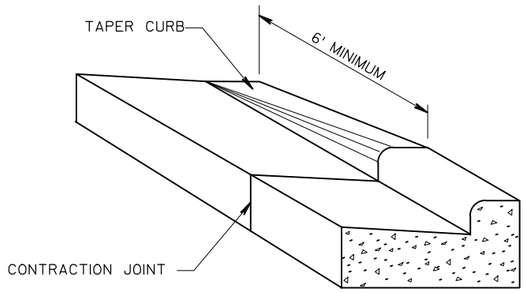
PROPOSED BYPASS

STA 2+70.3'BP TO STA 7+75'BP

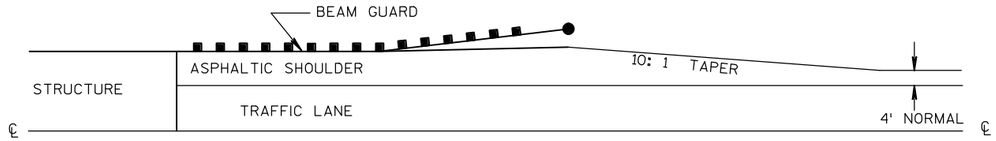


SHOULDER WIDENING HALF SECTION - BYPASS

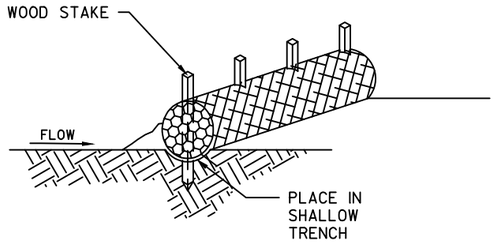
STA 7+75'BP TO STA 9+77'BP LT



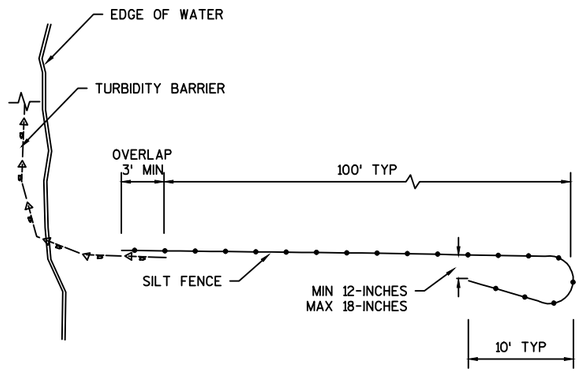
DETAIL OF CURB & GUTTER TERMINI



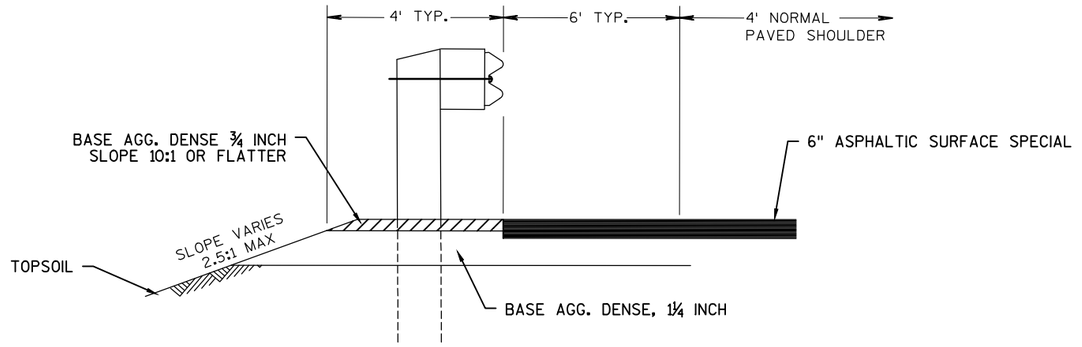
DETAIL FOR ASPHALTIC SHOULDER AT BEAM GUARD



TEMPORARY DITCH CHECKS



EXCLUSTION FENCING TURN-AROUND



ASPHALTIC SHOULDER AT BEAM GUARD

PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	PLAN: CONSTRUCTION DETAILS	SHEET 7	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\021001_CD.DWG
PROJECTSHEETDATA - 021001_CD
PLOT DATE : 2/2/2016 5:18 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

STH 27 TRANSITION TABLE		
CROWN	STATIONS	CROWN
-0.042	9+46.00	0.042
-0.045	9+80.50	0.045
-0.046	9+92.00	0.046
-0.046	12+95.46	0.046
-0.045	12+97.39	0.045
-0.040	13+07.06	0.040
-0.035	13+16.74	0.035
-0.030	13+26.41	0.030
-0.025	13+36.08	0.025
-0.020	13+45.76	0.020
-0.020	13+55.43	0.015
-0.020	13+65.11	0.010
-0.020	13+74.78	0.005
-0.020	13+83.75	0.000
-0.020	13+94.20	-0.005
-0.020	14+03.95	-0.010
-0.020	14+13.70	-0.015
-0.020	14+23.45	-0.020

BYPASS TRANSITION TABLE		
CROWN	STATIONS	CROWN
-0.040	2+90.45'BP	0.040
-0.035	2+99.41'BP	0.035
-0.030	3+08.37'BP	0.030
-0.025	3+17.34'BP	0.025
-0.020	3+326.3'BP	0.020
-0.015	3+35.27'BP	0.015
-0.010	3+44.23'BP	0.010
-0.005	3+53.19'BP	0.005
0.000	3+62.16'BP	0.000
0.005	3+71.12'BP	-0.005
0.010	3+80.09'BP	-0.010
0.015	3+89.05'BP	-0.015
0.020	3+98.02'BP	-0.020
0.025	4+06.98'BP	-0.025
0.030	4+15.94'BP	-0.030
0.035	4+24.91'BP	-0.035
0.040	4+33.87'BP	-0.040
0.040	6+09.11'BP	-0.040
0.035	6+14.99'BP	-0.035
0.030	6+20.87'BP	-0.030
0.025	6+26.75'BP	-0.025
0.020	6+32.63'BP	-0.020
0.015	6+38.51'BP	-0.015
0.010	6+44.39'BP	-0.010
0.005	6+50.27'BP	-0.005
0.000	6+56.15'BP	0.000
-0.005	6+62.03'BP	0.005
-0.010	6+67.91'BP	0.010
-0.015	6+73.79'BP	0.015
-0.020	6+79.67'BP	0.020
-0.025	6+85.55'BP	0.025
-0.030	6+91.43'BP	0.030
-0.035	6+97.31'BP	0.035
-0.040	7+03.19'BP	0.040
-0.040	7+84.21'BP	0.040
-0.035	7+93.34'BP	0.035
-0.030	8+02.46'BP	0.030
-0.025	8+11.59'BP	0.025
-0.020	8+20.71'BP	0.020
-0.020	8+29.84'BP	0.015
-0.020	8+38.96'BP	0.010
-0.020	8+48.09'BP	0.005
-0.020	8+57.21'BP	0.000
-0.020	8+66.34'BP	-0.005
-0.020	8+75.46'BP	-0.010
-0.020	8+84.59'BP	-0.015
-0.020	8+93.71'BP	-0.020

SUPERELEVATION TRANSITION TABLES

2

CURVE 1

PI STA = 10+49.99
Y = 232041.213
X = 436003.800
DELTA = 40°14'00"
D = 6°59'44"
T = 299.99'
L = 575.12'
R = 819.02'
PC STA = 7+50.00
Y = 231746.653
X = 435946.988
PT STA = 13+25.12
Y = 232302.782
X = 435856.915
BK = N10°55'00.0"E
AH = N29°19'00.0"W

CURVE 2

PI STA = 1+09.98'BP
Y = 231877.958
X = 435964.980
DELTA = 18°14'05"
D = 15°57'18"
T = 57.63'
L = 114.29'
R = 359.11'
PC STA = 0+52.34'BP
Y = 231820.828
X = 435957.394
PT STA = 1+66.63'BP
Y = 231934.593
X = 435954.309
BK = N07°33'51.4"E
AH = N10°40'13.5"W

CURVE 3

PI STA = 2+68.83'BP
Y = 232035.023
X = 435935.386
DELTA = 21°18'32"
D = 22°55'06"
T = 47.03'
L = 92.98'
R = 250.00'
PC STA = 2+21.80'BP
Y = 231988.804
X = 435944.095
PT STA = 3+14.78'BP
Y = 232074.918
X = 435910.477
BK = N10°40'13.5"W
AH = N31°58'45.7"W

CURVE 4

PI STA = 4+48.12'BP
Y = 232188.028
X = 435839.855
DELTA = 4°37'23"
D = 22°55'06"
T = 10.09'
L = 20.17'
R = 250.00'
PC STA = 4+38.03'BP
Y = 232179.468
X = 435845.199
PT STA = 4+58.20'BP
Y = 232196.991
X = 435835.217
BK = N31°58'45.7"W
AH = N27°21'22.4"W

CURVE 5

PI STA = 5+88.37'BP
Y = 232312.604
X = 435775.402
DELTA = 20°53'38"
D = 22°55'06"
T = 46.10'
L = 91.17'
R = 250.00'
PC STA = 5+42.28'BP
Y = 232271.663
X = 435796.584
PT STA = 6+33.45'BP
Y = 232358.406
X = 435770.214
BK = N27°21'22.4"W
AH = N06°27'44.4"W

CURVE 6

PI STA = 7+42.91'BP
Y = 232467.178
X = 435757.893
DELTA = 22°38'57"
D = 17°54'18"
T = 64.09'
L = 126.50'
R = 320.00'
PC STA = 6+78.83'BP
Y = 232403.500
X = 435765.106
PT STA = 8+05.32'BP
Y = 232523.168
X = 435726.715
BK = N06°27'44.4"W
AH = N29°06'41.6"W

CURVE 7

PI STA = 10+86.43'P
Y = 232143.377
X = 436015.412
DELTA = 30°04'24"
D = 31°49'52"
T = 48.35'
L = 94.48'
R = 180.00'
PC STA = 10+38.08'P
Y = 232130.473
X = 435968.811
PT STA = 11+32.56'P
Y = 232131.191
X = 436062.205
BK = N74°31'24.1"E
AH = S75°24'11.9"E

PI STA: 9+77.36'BP
Y = 232673.469
X = 435643.018
DELTA = 2°54'49"
BK = N29°06'41.64"W
AH = N26°11'53.13"W

N

STA 22+03.75
Y = 233068.885
X = 435426.704

CP104
REBAR W/ CAP
STA 17+81.68, 20.04 LT
Y = 232691.054
X = 435615.895
ELEV = 963.016

N29° 19' 00"W
878.63'

STA 10+69.27'BP
STA 18+44.83, 0.000
Y = 232755.935
X = 435602.444

CP101
REBAR W/ CAP
STA 8+99.21, 25.42 LT
Y = 231895.135
X = 435936.363
ELEV = 954.346

CP103
REBAR W/ CAP
STA 15+75.74, 48.28 RT
Y = 232544.942
X = 435776.304
ELEV = 959.641

STA 6+25.41
Y = 231624.319
X = 435923.393

STA 0+00.00'BP
STA 7+72.56, -0.458 LT
Y = 231768.939
X = 435950.503

CP102
REBAR W/ CAP
STA 10+99.94, 40.61 RT
Y = 232103.371
X = 435978.438
ELEV = 956.606

STA 10+00.00'P
STA 11+27.28
Y = 232120.312
X = 435932.111

STA 11+42.25'P
Y = 232128.749
X = 436071.582

N10° 55' 00"E
124.59'

N10° 40' 14"W
55.17' 2'BP

N31° 58' 46"W 41'BP
123.26'

N27° 21' 22"W
84.07'

BYPASS N6° 27' 44"W
45.38'

N29° 06' 42"W
172.03'

S75° 24' 12"E
9.69'

N74° 31' 24"E
36.08'

CURVE 1
CURVE 2
CURVE 3
CURVE 4
CURVE 5
CURVE 6
CURVE 7

STH 27
PERKINS ST

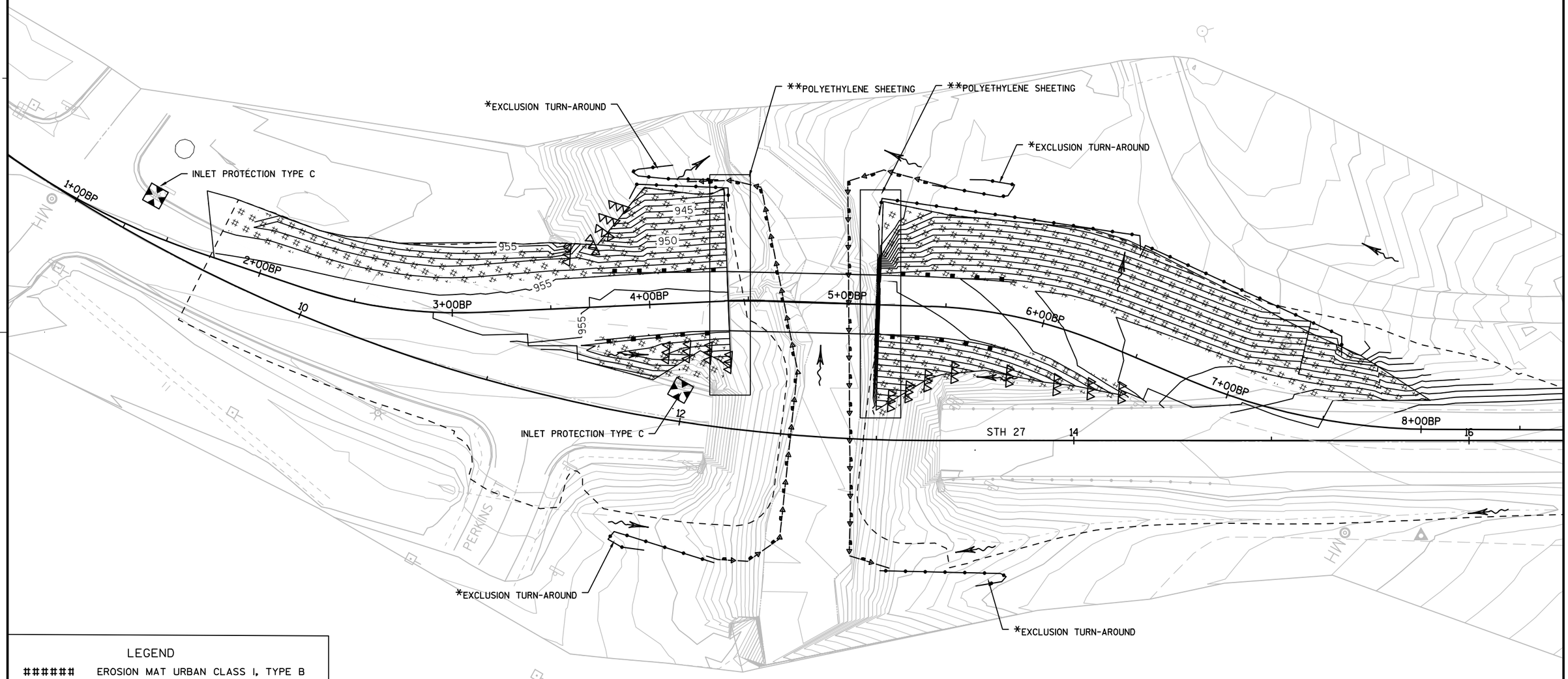
PC
PT
CP101
CP102
CP103
CP104

8
10
12
14
16
18
20
22
6'BP
8'BP

PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	ALIGNMENT CONTROL	SHEET 9	E

* NOTE: SILT FENCE PLACED AS EXCLUSION FENCING FOR WOOD TURTLES. PLACE CONTIGUOUS WITH THE END OF TURBIDITY BARRIER WITH NO GAPS. PROVIDE EXCLUSION FENCING TURN-AROUND AT FENCE END PER CONSTRUCTION DETAIL. TO REMAIN FOR DURATION OF PROJECT.

** NOTE: PRIOR TO PLACING FILL, INSTALL POLYETHYLENE SHEETING AT RIVER BANKS, AS DIRECTED BY ENGINEER.



LEGEND

- ###### EROSION MAT URBAN CLASS I, TYPE B
- SILT FENCE
- TURBIDITY BARRIER
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- SURFACE WATER FLOW

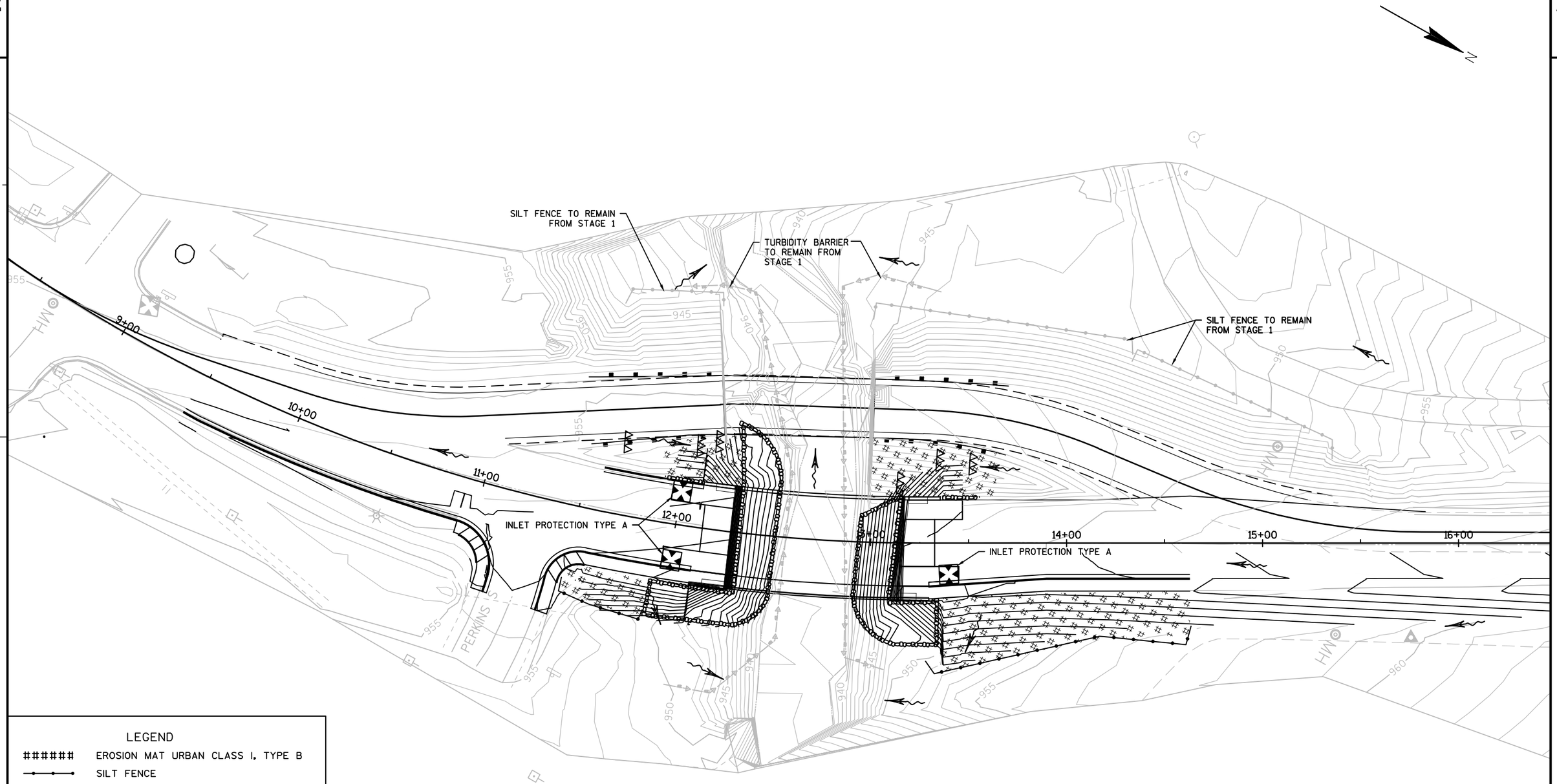
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	EROSION CONTROL - STAGE 1	SHEET 10	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022001_EC

PLOT DATE : 2/9/2016 3:59 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1:50_XREF

WISDOT/CADDS SHEET 42

2



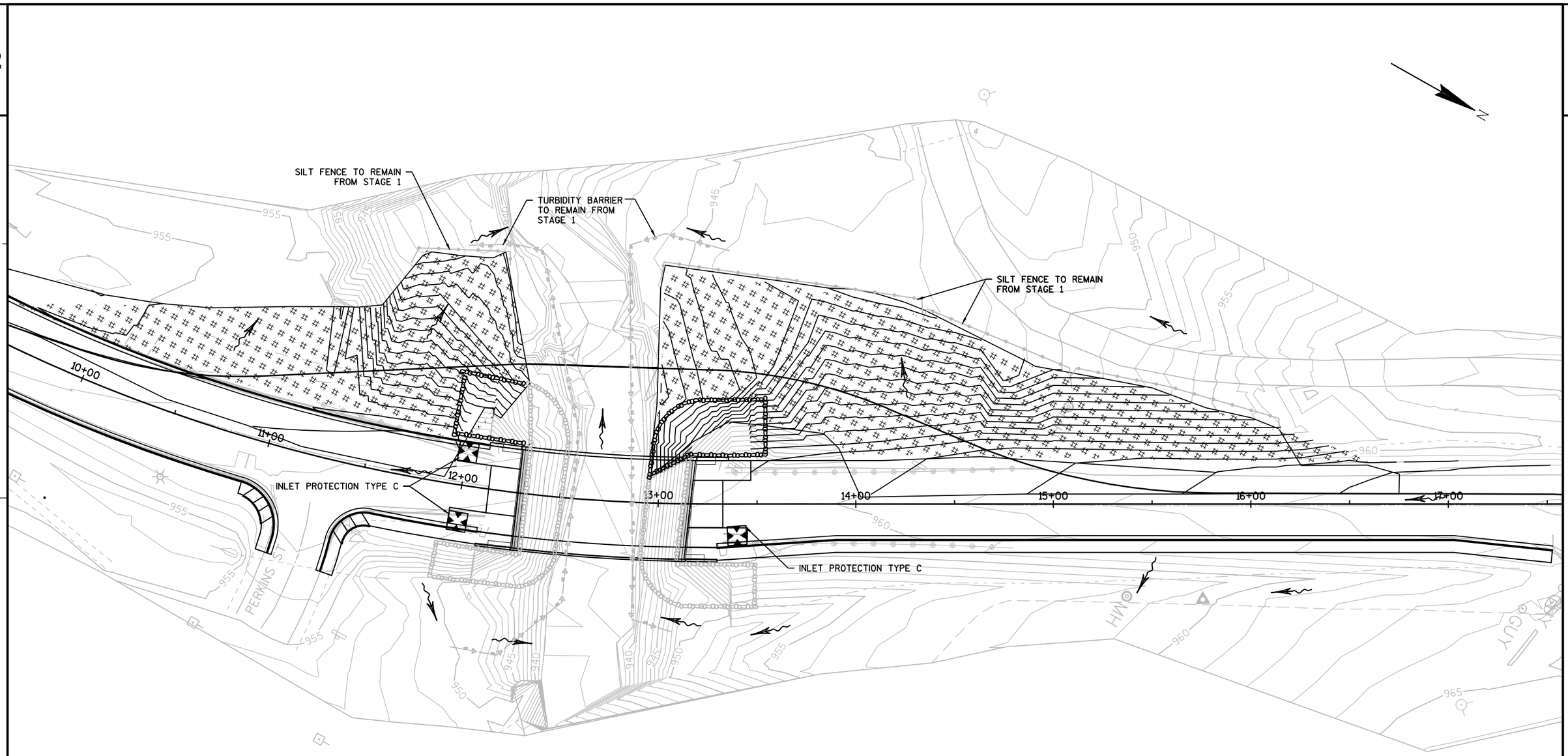
LEGEND

######	EROSION MAT URBAN CLASS I, TYPE B
	SILT FENCE
	TURBIDITY BARRIER
	INLET PROTECTION
	TEMPORARY DITCH CHECK
	RIP RAP HEAVY
	SURFACE WATER FLOW

PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	EROSION CONTROL - STAGE 2	SHEET 11	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\022002_EC.DWG
LAYOUT NAME - 022002_EC
PLOT DATE : 2/9/2016 4:00 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1:50_XREF
WISDOT/CADDS SHEET 42

2



LEGEND

######	EROSION MAT URBAN CLASS I, TYPE B
	SILT FENCE
	TURBIDITY BARRIER
	INLET PROTECTION
	RIP RAP HEAVY
	SURFACE WATER FLOW

PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	EROSION CONTROL - STAGES 3 AND 4	SHEET 12 E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\022003_EC.DWG
LAYOUT NAME - 022003_EC
PLOT DATE : 2/9/2016 4:00 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1:50_XREF
WISDOT/CADDS SHEET 42

2

LEGEND

EXISTING SIGN LOCATION, SALVAGE AND REINSTALL

SIGN, MOVED IN STAGE 1 (SEE TRAFFIC CONTROL PLAN)

PROPOSED SIGN LOCATION, MOVING SIGNS

N

6+00 7+00 STH 27 8+00 9+00 10+00 11+00 12+00 13+00

MATCHLINE 12+60.00

SALVAGE AND REINSTALL

STOP

SALVAGE AND REINSTALL

BRIDGE CREEK

SALVAGE AND REINSTALL

SALVAGE AND REINSTALL

MH

PERKINS ST

11+00 P

2

N

BRIDGE CREEK

SALVAGE AND REINSTALL

SALVAGE AND REINSTALL

SPEED LIMIT 30

MOVE

SEE TRAFFIC CONTROL PLAN FOR EXISTING LOCATION

SPEED LIMIT 30

MOVE

13+00 14+00 15+00 16+00 17+00 STH 27 18+00 19+00 20+00

MATCHLINE 12+60.00

SALVAGE AND REINSTALL

HWY

HWY

CATV

HUDSON ST

SPEED LIMIT 45

END SCHOOL ZONE

MOVE

PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	PERMANENT SIGNING	SHEET 13	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\023201_PS.DWG
LAYOUT NAME - 023201_PS

PLOT DATE : 2/9/2016 4:01 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1:50_XREF

WISDOT/CADDS SHEET 44

2

2

N

PAVEMENT MARKING EPOXY 4-INCH (WHITE)

PAVEMENT MARKING EPOXY 4-INCH (DOUBLE YELLOW)

PAVEMENT MARKING CROSSWALK EPOXY 6-INCH (WHITE)

PAVEMENT MARKING STOP LINE EPOXY 18-INCH (WHITE)

PAVEMENT MARKING EPOXY 4-INCH (WHITE)

6+00 7+00 STH 27 8+00 9+00 10+00 11+00 12+00 13+00

MATCHLINE 12+60.00

MH

NGTON ST

PERKINS ST

11+00 P

N

PAVEMENT MARKING EPOXY 4-INCH (DOUBLE YELLOW)

PAVEMENT MARKING EPOXY 4-INCH (YELLOW SOLID)

PAVEMENT MARKING EPOXY 4-INCH (WHITE)

13+00 14+00 15+00 16+00 17+00 STH 27 18+00 19+00 20+00

MATCHLINE 12+60.00

PAVEMENT MARKING EPOXY 4-INCH (YELLOW SKIPS)

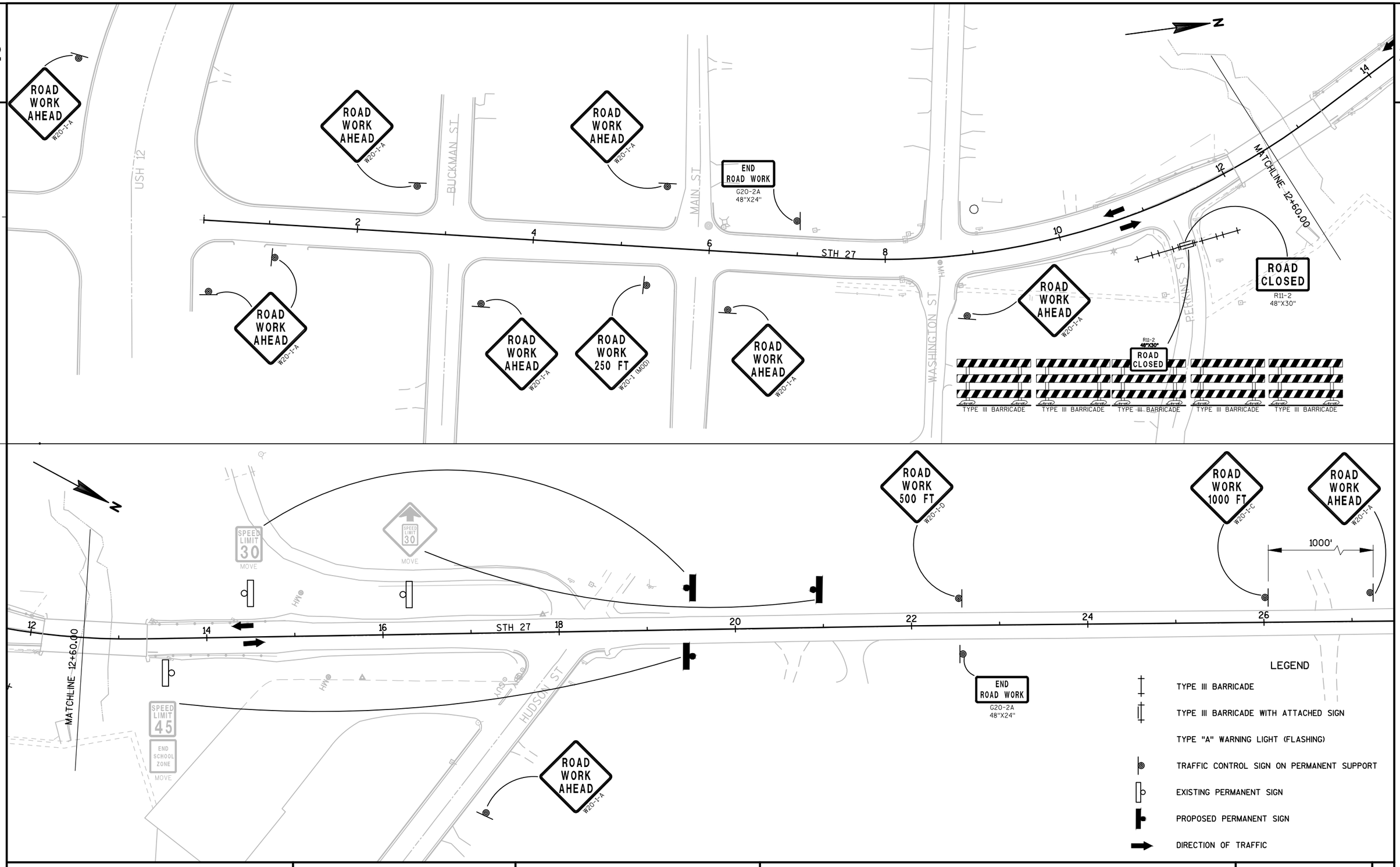
PAVEMENT MARKING EPOXY 4-INCH (WHITE)

HUDSON ST

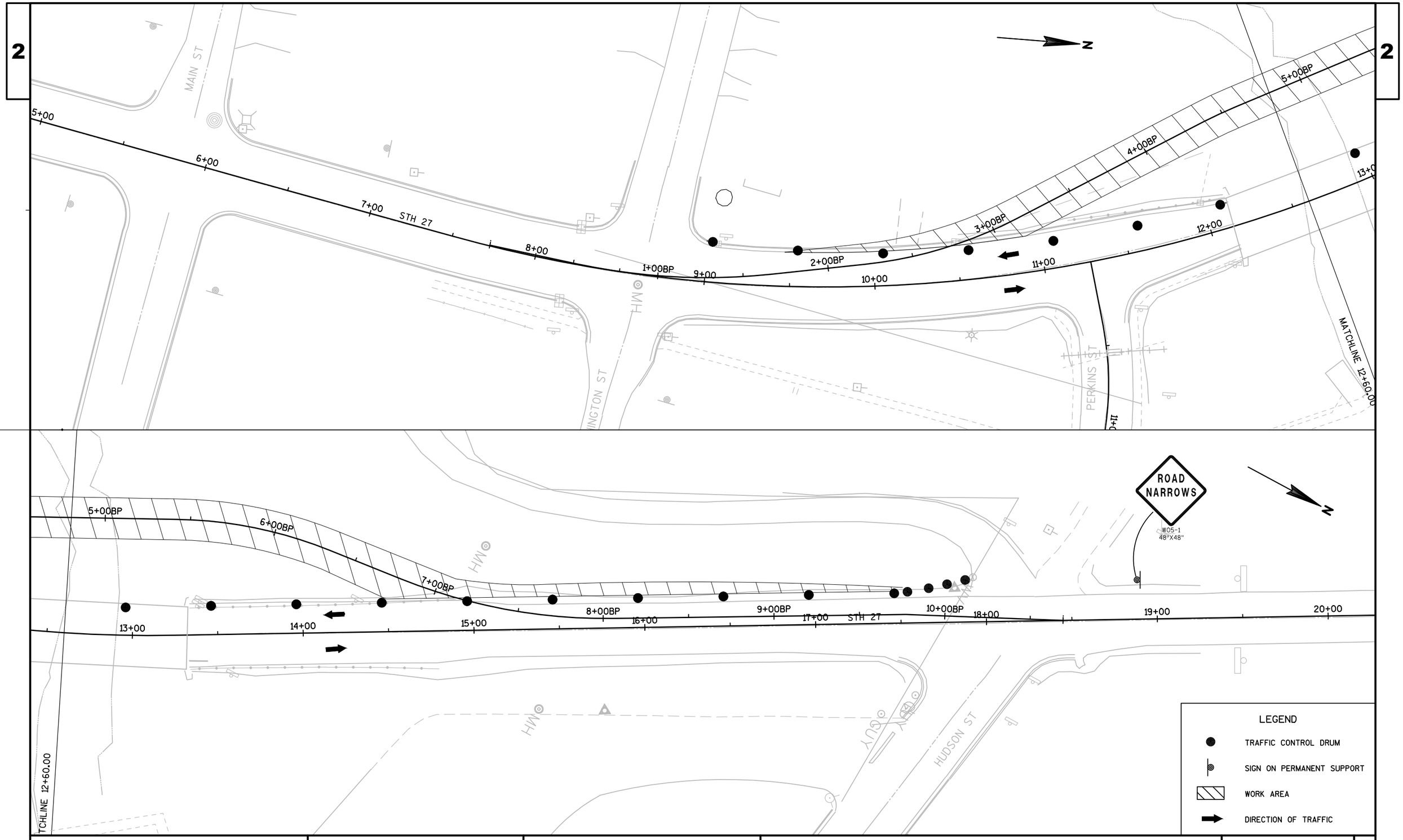
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	PAVEMENT MARKING	SHEET 14	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\024501_PM.DWG
LAYOUT NAME - 024501_PM

PLOT DATE : 2/9/2016 4:02 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1:50_XREF



PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	TRAFFIC CONTROL - PROJECT	SHEET 15	E



PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	TRAFFIC CONTROL - STAGE 1	SHEET	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\025002_TC.DWG
LAYOUT NAME - 025002_TC

PLOT DATE : 2/9/2016 4:03 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : **********

WISDOT/CADDS SHEET 42

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- TEMPORARY DELINEATOR, WHITE (SINGLE DELINEATOR)
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY YELLOW)
- DIRECTION OF TRAFFIC
- XXX REMOVE PAVEMENT MARKING

2

N

W01-3L

W05-52R 12"X36"

W05-52L 12"X36"

MATCHLINE 4+80BP

5+00BP

4+00BP

3+00BP

2+00BP

1+00BP

7+00 STH 27

8+00

9+00

10+00

11+00

12+00

13+0

25'

* TEMPORARY PAVEMENT MARKING, 4-INCH WHITE EDGELINES

* TEMPORARY PAVEMENT MARKING, 4-INCH DOUBLE YELLOW CENTERLINE

W01-3L

ROAD NARROWS

W05-1 48"X48"

W01-6 48"X24"

W01-6 48"X24"

R11-2-B 48"X30"

BRIDGE OUT

TYPE III BARRICADE

TYPE III BARRICADE

PERKINS

* USE REMOVABLE TAPE WHERE TEMPORARY MARKING CROSSES PERMANENT PAVEMENT

W05-52R 12"X36"

W05-52L 12"X36"

W01-6 48"X24"

W01-3R

W01-6 48"X24"

5+00BP

6+00BP

7+00BP

8+00BP

9+00BP

10+00BP

MATCHLINE 4+80BP

13+00

14+00

15+00

16+00

17+00 STH 27

18+00

19+00

20+00

25'

* TEMPORARY PAVEMENT MARKING, 4-INCH DOUBLE YELLOW CENTERLINE

* TEMPORARY PAVEMENT MARKING, 4-INCH WHITE EDGELINES

W01-6 48"X24"

R11-2-B 48"X30"

BRIDGE OUT

W01-6 48"X24"

TYPE III BARRICADE

TYPE III BARRICADE

ROAD NARROWS

W05-1 48"X48"

W01-3R

N

HUDSON ST

* USE REMOVABLE TAPE WHERE TEMPORARY MARKING CROSSES PERMANENT PAVEMENT

PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	TRAFFIC CONTROL - STAGE 2	SHEET 17	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\025003_TC.DWG
LAYOUT NAME - 025003_TC

PLOT DATE : 4/25/2016 1:35 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1:50_XREF

LEGEND

	TYPE III BARRICADE	Ⓐ	TYPE "A" WARNING LIGHT (FLASHING)
	TYPE III BARRICADE WITH ATTACHED SIGN		WORK AREA
	TRAFFIC CONTROL DRUM		TEMPORARY RAISED PAVEMENT MARKER (TWO WAY YELLOW)
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT		DIRECTION OF TRAFFIC
	SIGN ON PERMANENT SUPPORT	XXX	REMOVE PAVEMENT MARKING
	TEMPORARY DELINEATOR, WHITE (SINGLE DELINEATOR)		

2

2

N

W01-3L

* TEMPORARY PAVEMENT MARKING, 4-INCH WHITE EDGELINE

* TEMPORARY PAVEMENT MARKING, 4-INCH DOUBLE YELLOW CENTERLINE

ROAD NARROWS
W05-1
48"X48"

W01-6
48"X24"

* USE REMOVABLE TAPE WHERE TEMPORARY MARKING CROSSES PERMANENT PAVEMENT

7+00 STH 27 8+00 1+00BP 9+00 2+00BP 10+00 3+00BP 11+00 4+00BP 12+00 5+00BP

MATCHLINE 12+60.00

25' 25' 50'

HWY

PERKINS ST

W05-52R 12"X36" W05-52L 12"X36" W01-6 48"X24"

5+00BP 6+00BP 7+00BP 8+00BP 9+00BP 10+00BP 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00

MATCHLINE 12+60.00

* TEMPORARY PAVEMENT MARKING, 4-INCH DOUBLE YELLOW CENTERLINE

* TEMPORARY PAVEMENT MARKING, 4-INCH WHITE EDGELINES

R11-2-L 48"X30"

LANE CLOSED

W01-6 48"X24"

TYPE III BARRICADE

TYPE III BARRICADE

ROAD NARROWS
W05-1
48"X48"

W01-3R

HUDSON ST

GUY

* USE REMOVABLE TAPE WHERE TEMPORARY MARKING CROSSES PERMANENT PAVEMENT

PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	TRAFFIC CONTROL - STAGE 3	SHEET 18	E

2

2

MAIN ST

6+00

7+00

STH 27

8+00

9+00

10+00

11+00

12+00

13+00

MATCHLINE 12+60.00

N

ROAD NARROWS

W05-1
48"X48"

* TEMPORARY PAVEMENT MARKING,
4-INCH DOUBLE YELLOW CENTERLINE

* USE REMOVABLE TAPE WHERE TEMPORARY MARKING
CROSSES PERMANENT PAVEMENT

MH

PERKINS ST

11+00 P

MATCHLINE 12+60.00

13+00

14+00

15+00

16+00

17+00

STH 27

18+00

19+00

20+00

N

ROAD NARROWS

W05-1
48"X48"

* TEMPORARY PAVEMENT MARKING,
4-INCH DOUBLE YELLOW CENTERLINE

* USE REMOVABLE TAPE WHERE TEMPORARY MARKING
CROSSES PERMANENT PAVEMENT

MH

CATV

HUDSON ST

LEGEND

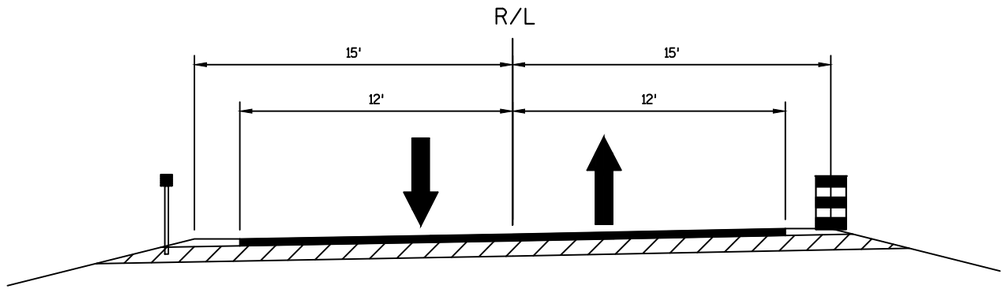
- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC

PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	TRAFFIC CONTROL - STAGE 4	SHEET 19	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\025005_TC.DWG
LAYOUT NAME - 025005_TC

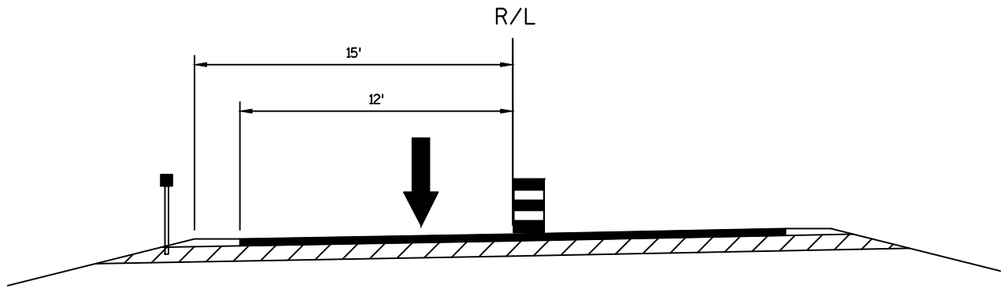
PLOT DATE : 4/25/2016 1:36 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1:50_XREF

WISDOT/CADDS SHEET 44



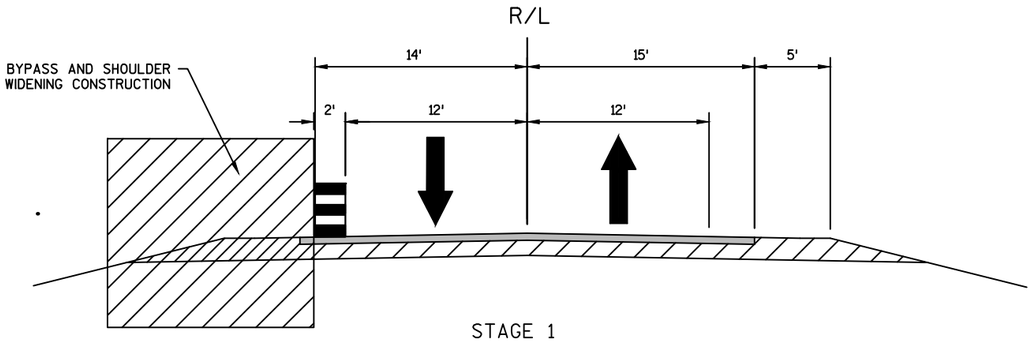
STAGE 2

BYPASS



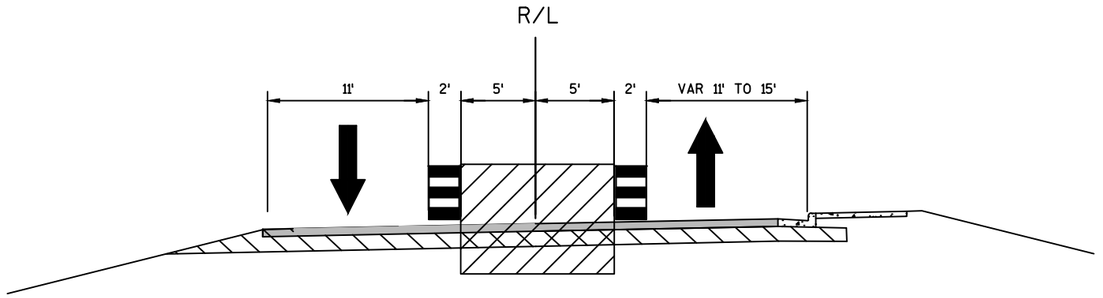
STAGE 3 - SOUTH BOUND

BYPASS



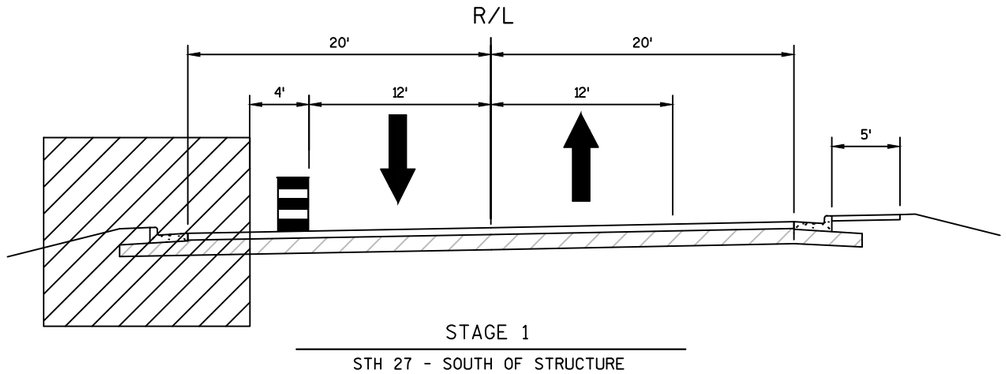
STAGE 1

STH 27 - NORTH OF STRUCTURE



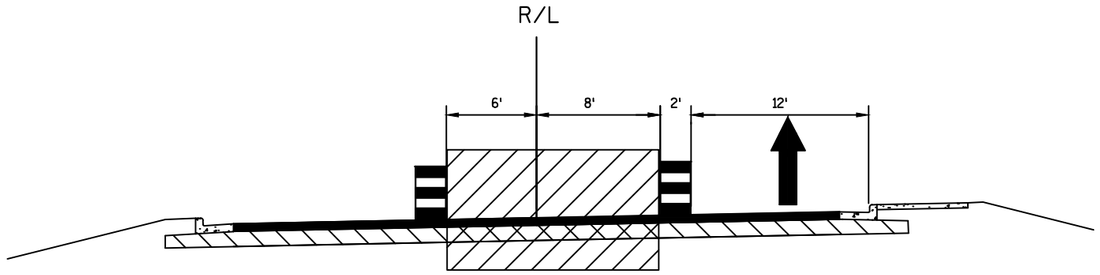
STAGE 3 - NORTH BOUND

STH 27 - NORTH OF STRUCTURE



STAGE 1

STH 27 - SOUTH OF STRUCTURE



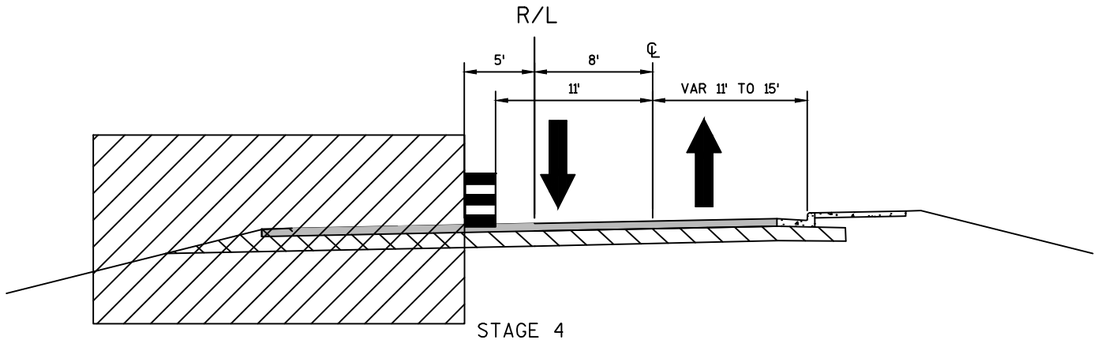
STAGE 3 - NORTH BOUND

STH 27 - SOUTH OF STRUCTURE

NOTE: UPPER LAYER OF ASPHALTIC SURFACE SPECIAL TO BE PLACED UNDER THE CONDITIONS OF SDD 15C12-04
TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

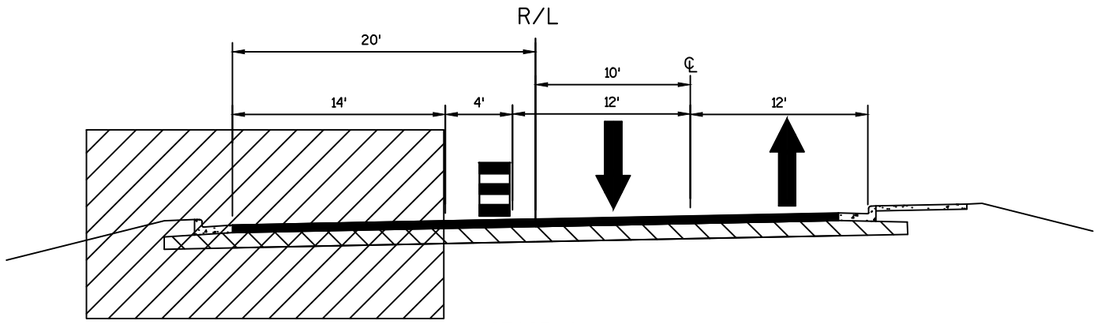
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	PLAN: TRAFFIC CONTROL SECTIONS	SHEET 20	E

2



STAGE 4

STH 27 - NORTH OF STRUCTURE



STAGE 4

STH 27 - SOUTH OF STRUCTURE

NOTE: UPPER LAYER OF ASPHALTIC SURFACE SPECIAL TO BE PLACED UNDER THE CONDITIONS OF SDD 15C12-04
TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

DATE 27APR16 — 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	7070-08-73 QUANTITY
0010	201.0105	Clearing	STA	7.000	7.000
0020	201.0205	Grubbing	STA	7.000	7.000
0030	203.0100	Removing Small Pipe Culverts	EACH	1.000	1.000
0040	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 12+75	LS	1.000	1.000
0050	204.0150	Removing Curb & Gutter	LF	540.000	540.000
0060	204.0155	Removing Concrete Sidewalk	SY	75.000	75.000
0070	204.0220	Removing Inlets	EACH	1.000	1.000
0080	205.0100	Excavation Common	CY	6,050.000	6,050.000
0090	206.1000	Excavation for Structures Bridges (structure) 01. B-18-0226	LS	1.000	1.000
0100	208.0100	Borrow	CY	6,590.000	6,590.000
0110	210.0100	Backfill Structure	CY	510.000	510.000
0120	213.0100	Finishing Roadway (project) 01. 7070-08-73	EACH	1.000	1.000
0130	305.0110	Base Aggregate Dense 3/4-Inch	TON	85.000	85.000
0140	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	2,950.000	2,950.000
0150	415.0410	Concrete Pavement Approach Slab	SY	86.000	86.000
0160	416.1010	Concrete Surface Drains	CY	28.000	28.000
0170	455.0605	Tack Coat	GAL	290.000	290.000
0180	465.0125	Asphaltic Surface Temporary	TON	255.000	255.000
0190	502.0100	Concrete Masonry Bridges	CY	390.000	390.000
0200	502.3200	Protective Surface Treatment	SY	515.000	515.000
0210	502.3210	Pigmented Surface Sealer	SY	105.000	105.000
0220	503.0146	Prestressed Girder Type I 45W-Inch	LF	430.000	430.000
0230	505.0400	Bar Steel Reinforcement HS Structures	LB	8,270.000	8,270.000
0240	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	43,440.000	43,440.000
0250	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	10.000	10.000
0260	506.4000	Steel Diaphragms (structure) 01. B-18-0226	EACH	8.000	8.000
0270	516.0500	Rubberized Membrane Waterproofing	SY	40.000	40.000
0280	517.1015.S	Concrete Staining Multi-Color (structure) 01. B-18-0226	SF	1,385.000	1,385.000
0290	517.1050.S	Architectural Surface Treatment (structure) 01. B-18-0226	SF	1,385.000	1,385.000
0300	520.2024	Culvert Pipe Temporary 24-Inch	LF	28.000	28.000
0310	520.8000	Concrete Collars for Pipe	EACH	1.000	1.000
0320	521.1012	Apron Endwalls for Culvert Pipe Steel 12-Inch	EACH	3.000	3.000
0330	526.0100	Temporary Structure (station) 01. 12+75	LS	1.000	1.000
0340	550.0020	Pre-Boring Rock or Consolidated Materials	LF	165.000	165.000
0350	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	495.000	495.000
0360	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	940.000	940.000
0370	602.0405	Concrete Sidewalk 4-Inch	SF	400.000	400.000
0380	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	16.000	16.000
0390	606.0300	Riprap Heavy	CY	740.000	740.000
0400	611.0654	Inlet Covers Type V	EACH	3.000	3.000
0410	611.3220	Inlets 2x2-FT	EACH	3.000	3.000
0420	611.8120.S	Cover Plates Temporary	EACH	1.000	1.000
0430	611.9710	Salvaged Inlet Covers	EACH	1.000	1.000
0440	612.0212	Pipe Underdrain Unperforated 12-Inch	LF	110.000	110.000
0450	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	220.000	220.000

3

DATE 27APR16 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	7070-08-73 QUANTITY
0460	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	2.000	2.000
0470	614.0920	Salvaged Rail	LF	397.000	397.000
0480	614.1100	MGS Guardrail Temporary Thrie Beam Transition	LF	158.000	158.000
0490	614.1200	MGS Guardrail Temporary Terminal EAT	EACH	4.000	4.000
0500	614.2300	MGS Guardrail 3	LF	38.000	38.000
0510	614.2500	MGS Thrie Beam Transition	LF	79.000	79.000
0520	614.2610	MGS Guardrail Terminal EAT	EACH	2.000	2.000
0530	619.1000	Mobilization	EACH	1.000	1.000
0540	625.0500	Salvaged Topsoil	SY	5,600.000	5,600.000
0550	627.0200	Mulching	SY	1,100.000	1,100.000
0560	628.1504	Silt Fence	LF	1,570.000	1,570.000
0570	628.1520	Silt Fence Maintenance	LF	1,570.000	1,570.000
0580	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0590	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0600	628.2008	Erosion Mat Urban Class I Type B	SY	7,400.000	7,400.000
0610	628.5505	Polyethylene Sheeting	SY	600.000	600.000
0620	628.6005	Turbidity Barriers	SY	1,000.000	1,000.000
0630	628.7005	Inlet Protection Type A	EACH	3.000	3.000
0640	628.7015	Inlet Protection Type C	EACH	5.000	5.000
0650	628.7504	Temporary Ditch Checks	LF	330.000	330.000
0660	629.0210	Fertilizer Type B	CWT	4.000	4.000
0670	630.0120	Seeding Mixture No. 20	LB	115.000	115.000
0680	630.0200	Seeding Temporary	LB	85.000	85.000
0690	633.1100	Delineators Temporary	EACH	14.000	14.000
0700	638.2102	Moving Signs Type II	EACH	6.000	6.000
0710	638.4000	Moving Small Sign Supports	EACH	8.000	8.000
0720	642.5001	Field Office Type B	EACH	1.000	1.000
0730	643.0100	Traffic Control (project) 01. 7070-08-73	EACH	1.000	1.000
0740	643.0300	Traffic Control Drums	DAY	2,390.000	2,390.000
0750	643.0420	Traffic Control Barricades Type III	DAY	1,735.000	1,735.000
0760	643.0705	Traffic Control Warning Lights Type A	DAY	3,176.000	3,176.000
0770	643.0715	Traffic Control Warning Lights Type C	DAY	1,800.000	1,800.000
0780	643.0900	Traffic Control Signs	DAY	2,898.000	2,898.000
0790	645.0120	Geotextile Fabric Type HR	SY	1,150.000	1,150.000
0800	646.0106	Pavement Marking Epoxy 4-Inch	LF	2,440.000	2,440.000
0810	646.0600	Removing Pavement Markings	LF	790.000	790.000
0820	647.0566	Pavement Marking Stop Line Epoxy 18-Inch	LF	15.000	15.000
0830	647.0766	Pavement Marking Crosswalk Epoxy 6-Inch	LF	75.000	75.000
0840	649.0400	Temporary Pavement Marking Removable Tape 4-Inch	LF	1,820.000	1,820.000
0850	649.0402	Temporary Pavement Marking Paint 4-Inch	LF	4,600.000	4,600.000
0860	649.2100	Temporary Raised Pavement Markers	EACH	54.000	54.000
0870	650.4500	Construction Staking Subgrade	LF	1,211.000	1,211.000
0880	650.5000	Construction Staking Base	LF	1,211.000	1,211.000
0890	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	787.000	787.000
0900	650.6500	Construction Staking Structure Layout (structure) 01. B-18-0226	LS	1.000	1.000
0910	650.9910	Construction Staking Supplemental Control (project) 01. 7070-08-73	LS	1.000	1.000
0920	650.9920	Construction Staking Slope Stakes	LF	1,211.000	1,211.000
0930	690.0150	Sawing Asphalt	LF	1,865.000	1,865.000
0940	690.0250	Sawing Concrete	LF	17.000	17.000

DATE 27APR16 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	7070-08-73 QUANTITY
0950	715.0502	Incentive Strength Concrete Structures	DOL	2,340.000	2,340.000
0960	SPV.0060	Special 01. Salvage and Reinstall Sign	EACH	7.000	7.000
0970	SPV.0090	Special 01. Fence Chain Link Polymer Coated 4-Ft	LF	127.000	127.000
0980	SPV.0195	Special 01. Asphaltic Surface Special	TON	650.000	650.000

3

CLEARING AND GRUBBING			
		201.0105 CLEARING	201.0205 GRUBBING
STATION TO STATION	LOCATION	STA	STA
10+00 TO 16+10	LT	7	7
ITEM TOTAL		7	7

REMOVING SMALL PIPE CULVERTS		203.0100
STATION TO STATION	LOCATION	EACH
12+00	LT	1
ITEM TOTAL		1

REMOVING CURB & GUTTER			204.0150
STATION TO STATION		LOCATION	LF
9+46 TO	12+14	LT	268
10+20 TO	10+42	PERKINS - SE RAD	36
10+20 TO	10+38	PERKINS - NE RAD	26
9+46 TO	12+14	RT	210
ITEM TOTAL			540

REMOVING CONCRETE SIDEWALK			204.0155
STATION TO STATION		LOCATION	SY
10+23 P TO	10+55 P	PERKINS - S.E. RAD.	18
10+20 P TO	10+55 P	PERKINS - N.E. RAD.	22
11+57 TO	12+14	RT	35
ITEM TOTAL			75

REMOVING INLETS		204.0220
STATION TO STATION	LOCATION	EACH
12+00	LT	1
ITEM TOTAL		1

FINISHING ROADWAY (7070-08-73)			213.0100
STATION TO STATION		LOCATION	EACH
9+46 TO	17+53	MAINLINE	1
ITEM TOTAL			1

BASE AGGREGATE DENSE 3/4-INCH			305.0110
STATION TO STATION		LOCATION	TON
1+76 BP TO	4+40 BP	BYPASS - SOUTH	25
5+16 BP TO	7+49 BP	BYPASS - NORTH	25
13+33 TO	16+11	SHOULDERS - STH 27	35
ITEM TOTAL			85

BASE AGGREGATE DENSE 1 1/4-INCH			305.0120
STATION TO STATION		LOCATION	TON
1+76 BP TO	4+40 BP	BYPASS - SOUTH	285
5+16 BP TO	7+49 BP	BYPASS - NORTH	265
9+46 TO	12+29	STH 27 - SOUTH	1010
13+16 TO	17+53	STH 27 - NORTH	1220
10+20 P TO	10+55 P	PERKINS	170
ITEM TOTAL			2950

TACK COAT			455.0605
STATION TO STATION		LOCATION	GAL
9+46 TO	12+29	STH 27 - SOUTH	115
13+16 TO	17+53	STH 27 - NORTH	165
10+20 P TO	10+55 P	PERKINS	10
ITEM TOTAL			290

CONCRETE PAVEMENT APPROACH SLAB			415.0410
STATION TO STATION		LOCATION	SY
12+13 TO	12+29	SOUTH APPROACH	42
13+16 TO	13+32	NORTH APROACH	44
ITEM TOTAL			86

CONCRETE SURFACE DRAINS		416.1010
STATION TO STATION	LOCATION	CY
11+92	APPROACH SLAB RT	7.5
11+99	APPROACH SLAB LT	7.0
13+45	APPROACH SLAB LT	6.5
13+47	APPROACH SLAB RT	7.0
ITEM TOTAL		28.0

ASPHALTIC SURFACE SPECIAL			SPV.0195.01
STATION TO STATION		LOCATION	TON
9+46 TO	12+29	STH 27 - SOUTH	265
13+16 TO	17+53	STH 27 - NORTH	345
10+20 P TO	10+55 P	PERKINS	40
ITEM TOTAL			650

ASPHALTIC SURFACE TEMPORARY			465.0125
STATION TO STATION		LOCATION	TON
1+76 BP TO	4+40 BP	BYPASS - SOUTH	125
5+16 BP TO	7+49 BP	BYPASS - NORTH	130
ITEM TOTAL			255

CONCRETE COLLAR FOR PIPE		520.8000
STATION TO STATION	LOCATION	EACH
4+30 BP	RT	1
ITEM TOTAL		1

APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH		521.1012
STATION TO STATION	LOCATION	EACH
11+97.3	RT	1
12+03.5	LT	1
13+41.5	RT	1
ITEM TOTAL		3

CULVERT PIPE TEMPORARY 24-INCH		520.2024
STATION TO STATION	LOCATION	LF
4+30 BP	RT	28.0
ITEM TOTAL		28.0

CONCRETE CURB AND GUTTER, 30-INCH, TYPE D			601.0411
STATION TO STATION		LOCATION	LF
10+20 P TO	10+55 P	LT, RT	94.0
9+46 TO	10+92	RT	150.0
9+46 TO	11+96	LT	250.0
11+58 TO	11+96	RT	38.0
13+45 TO	17+53	RT	408.0
ITEM TOTAL			940.0

CONCRETE SIDEWALK, 4-INCH			602.0405
STATION TO STATION		LOCATION	SY
10+27 P TO	10+55 P	RT	28
10+25 P TO	10+55 P	LT	27
11+58 TO	12+28	RT	50
13+14 TO	17+53	RT	295
ITEM TOTAL			400

CURB RAMP DETECTABLE WARNING FIELD YELLOW			602.0505
STATION TO STATION		LOCATION	SF
10+25 P		LT & RT	16
ITEM TOTAL			16

DIVISION	FROM/TO STATION	LOCATION	EXCAVATION COMMON (ITEM 205.0100) CUT (2)	SALVAGED/ UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (13) FACTOR 1.25	MASS ORDINATE +/- (14)	WASTE	BORROW (ITEM *208.0100)
Stage 1										
1	1+76 - 4+00	BYPASS	339	0	339	1196	1495	-1156		1156
2	5+50 - 7+49	BYPASS	12	0	12	3826	4783	-4771		4771
Stage 2										
3	9+46 - 12+29	MAINLINE	397	85	312	474	593	-281		202
4	13+16 - 17+53	MAINLINE	371	96	275	589	736	-461		461
Stage 3										
5	9+46 - 12+29	MAINLINE	186	69	117	0	0	117	117	
6	13+16 - 17+53	MAINLINE	193	77	116	0	0	116	116	
Stage 4										
7	9+46 - 12+29	MAINLINE	1721	100	1621	247	309	1312	1312	
8	13+16 - 17+53	MAINLINE	2686	84	2602	231	289	2313	2313	
Perkins										
9	10+50 - 10+55	PERKINS	136	17	119	32	40	79	79	
GRAND TOTAL			6041	528	5513	6595	8244	-2732	3937	6590
TOTAL EXCAVATION COMMON			6050							

*ALL ITEMS ARE CATEGORY 010 UNLESS OTHERWISE NOTED

1) Excavation Common 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 Select Borrow material. Note: this is designers choice, can be backfilled with Borrow, or Cut as well.
4) Salvaged/Unusable Pavement Material
5) Available Material = Cut - Salvaged/Unusuable Pavement Material
6) Marsh Excavation - to be backfilled with Select Borrow Material. Note: this is designers choice, can be backfilled with Borrow, or Cut as well. Item number 205.0500
7) Rock Excavation Item number 205.0200
8) Reduced Marsh in Fill - Excavated Marsh material is usuable in Fills outside the 1:1 slope. Marsh in Fill Reduction factor = 0.6
9) Reduced EBS in Fill - Excavated EBS material is usuable in Fills outside the 1:1 slope. EBS in Fill Reduction factor = 0.8
10) Expanded Marsh Backfill - This is to be filled with Select Borrow material. Marsh Backfill Factor = 1.5. Item number 208.11
11) Expanded EBS Backfill - This is to be filled with Select Borrow material. EBS Backfill Factor = 1.3. Item number 208.11
12) Expanded Rock - Factor = 1.1.
13) Expanded Fill. Factor = 1.25

Depending on selections:
Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced Marsh - Reduced EBS) * Fill Factor
Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced EBS) * Fill Factor
Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced Marsh) * Fill Factor
Expanded Fill = (Unexpanded Fill - Rock* Rock Factor) * Fill Factor

14) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

*ALL ITEMS ARE CATEGORY 010 UNLESS OTHERWISE NOTED

INLETS COVERS TYPE V		611.0654
STATION TO STATION	LOCATION	EACH
12+00	RT	1
12+01	LT	1
13+37	RT	1
ITEM TOTAL		3

INLETS 2x2-FT		611.3220
STATION TO STATION	LOCATION	EACH
12+00	RT	1
12+01	LT	1
13+37	RT	1
ITEM TOTAL		3

COVER PLATES TEMPORARY		611.8120.S
STATION TO STATION	LOCATION	EACH
10+48	LT	1
ITEM TOTAL		1

SALVAGED INLET COVERS		611.9710
STATION TO STATION	LOCATION	EACH
10+48	LT	1
ITEM TOTAL		1

PIPE UNDERDRAIN UNPERFORATED 12-INCH		612.0212
STATION TO STATION	LOCATION	LF
12+00.0	RT	38.0
12+01.0	LT	34.0
13+37.0	RT	38.0
ITEM TOTAL		110.0

SALVAGED RAIL		614.0920
STATION TO STATION	LOCATION	LF
11+18 TO 12+13	LT	95
13+34 TO 14+90	LT	156
13+34 TO 14+79	RT	146
ITEM TOTAL		397

SILT FENCE & SILT FENCE MAINTENANCE			
STATION TO STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF
STAGE 1			
1+75 BP TO 4+40 BP	BYPASS, LT	70	70.0
5+15 BP TO 7+50 BP	BYPASS, LT	350	350.0
12+22	AMPHIB TURN-AROUND	350	350.0
13+28	AMPHIB TURN-AROUND	350	350.0
UNDISTRIBUTED		100	100.0
STAGE 2			
11+58 TO 12+22	RT	130	130.0
13+28 TO 14+61	RT	150	150.0
UNDISTRIBUTED		70	70.0
ITEM TOTAL		1570	1570

POLYETHYLENE SHEETING		628.5505
STATION TO STATION	LOCATION	SY
4+45 BP	TEMP STRUCTURE - SOUTH	230
5+10 BP	TEMP STRUCTURE - NORTH	230
UNDISTRIBUTED		140
ITEM TOTAL		600

TURBIDITY BARRIER		628.6005
STATION TO STATION	LOCATION	SY
4+45 BP	TEMP STRUCTURE - SOUTH	200
5+10 BP	TEMP STRUCTURE - NORTH	200
12+35	SOUTH ABUT.	200
13+00	NORTH ABUT.	200
UNDISTRIBUTED		200
ITEM TOTAL		1000

EROSION MAT URBAN, CLASS I TYPE B		628.2008
STATION TO STATION	LOCATION	SY
STAGE 1		
1+75 BP TO 4+40 BP	BYPASS	790
5+15 BP TO 7+50 BP	BYPASS	1295
UNDISTRIBUTED		400
STAGE 2		
11+58 TO 12+22	LT	95
11+58 TO 12+22	RT	90
13+28 TO 13+58	LT	200
13+28 TO 14+61	RT	430
UNDISTRIBUTED		200
STAGES 3 & 4		
11+58 TO 12+22	LT	1250
13+28 TO 16+11	LT	1950
UNDISTRIBUTED		700
ITEM TOTAL		7400

INLET PROTECTION TYPE A		628.7005
STATION TO STATION	LOCATION	EACH
STAGE 2		
12+00	RT	1
12+01	LT	1
13+37	RT	1
ITEM TOTAL		3

INLET PROTECTION TYPE C		628.7015
STATION TO STATION	LOCATION	EACH
STAGE 1		
10+48	LT	1
12+00	LT	1
STAGES 3 & 4		
12+00	RT	1
12+01	LT	1
13+37	RT	1
ITEM TOTAL		5

GUARDRAIL SUMMARY							
STATION TO STATION	LOCATION	614.1100 MGS THRIE BEAM TEMPORARY TRANSITION LF	614.1200 MGS GUARDRAIL TEMPORARY TERMINAL EAT EACH	614.2300 MGS 3 GUARDRAIL LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
11+21.6 TO 12+14.1	LT	-	-	-	39.4	1
13+33.0 TO 14+63.1	LT	-	-	37.5	39.4	1
3+69 BP TO 4+40 BP	LT	39.4	1	-	-	-
3+69 BP TO 4+40 BP	RT	39.4	1	-	-	-
5+16 BP TO 5+87 BP	LT	39.4	1	-	-	-
5+16 BP TO 5+87 BP	RT	39.4	1	-	-	-
ITEM TOTAL		158	4	38	79	2

MOBILIZATION			619.1000	
STATION TO STATION	LOCATION	EACH	CATEGORY	
9+46 TO 17+53	MAINLINE	0.4	010	
12+75	B-18-226	0.6	020	
ITEM TOTAL		1		

TEMPORARY DITCH CHECKS		628.7504
STATION TO STATION	LOCATION	LF
STAGE 1		
3+60 BP TO 4+40 BP	BYPASS, RT	60
5+15 BP TO 6+60 BP	BYPASS, RT	120
UNDISTRIBUTED		45
STAGE 2		
11+58 TO 12+22	RT	45
13+28 TO 13+90	RT	45
UNDISTRIBUTED		15
ITEM TOTAL		330

SALVAGED TOPSOIL, MULCHING, FERTILIZING, & SEEDING							
STATION TO STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 SEEDING TEMPORARY LB
9+46 TO 12+29	LT & RT	1700	270	1.4	30	-
13+16 TO 17+53	LT & RT	3200	650	2.0	65	-
9+46 TO 12+29	LT & RT	-	-	-	-	25
13+16 TO 17+53	LT & RT	-	-	-	-	45
UNDISTRIBUTED		700	180	0.6	20	15
ITEM TOTAL		5600	1100	4	115	85

MOBILIZATIONS EROSION CONTROL			
STATION TO STATION	LOCATION	628.1905 MOBILAZIONS EROSION CONTROL EACH	628.1910 MOBILAZIONS EMERGENCY EROSION CONTROL EACH
9+46 TO 17+53	PROJECT	4	2
ITEM TOTAL		4	2

*ALL ITEMS ARE CATEGORY 010 UNLESS OTHERWISE NOTED

MOVING SIGNS TYPE II		638.2102
STAGE	LOCATION	EACH
STAGE 1	SEE TRAFFIC CONTROL PLAN - PROJECT	3
STAGE 5	SEE PERMANENT SIGNING PLAN	3
ITEM TOTAL		6

MOVING SMALL SIGN SUPPORTS		638.4000
STATION TO STATION	LOCATION	EACH
STAGE 1	SEE TRAFFIC CONTROL PLAN - PROJECT	4
STAGE 4	SEE PERMANENT SIGNING PLAN	4
ITEM TOTAL		8

FIELD OFFICE TYPE B		642.5001
STATION TO STATION	LOCATION	EACH
3+00 TO 16+50	PROJECT	1
ITEM TOTAL		1

PAVEMENT MARKING EPOXY 4-INCH		646.0106
STATION TO STATION	LOCATION	LF
9+46 TO 17+53	MAINLINE	2440
ITEM TOTAL		2440

REMOVING PAVEMENT MARKINGS		646.0600
STATION TO STATION	LOCATION	LF
9+00 TO 11+00	STH 27 - STAGE 2	400
14+50 TO 15+50	STH 27 - STAGE 2	390
ITEM TOTAL		790

PAVEMENT MARKING STOP LINE EPOXY 18-INCH		647.0566
STATION TO STATION	LOCATION	LF
10+35 P	PERKINS	15
ITEM TOTAL		15

PAVEMENT MARKING CROSSWALK EPOXY 6-INCH		647.0766
STATION TO STATION	LOCATION	LF
10+25 P	PERKINS	75
ITEM TOTAL		75

SALVAGE AND REINSTALL SIGN		SPV. 0060.01
STATION TO STATION	LOCATION	EACH
11+50 TO 13+50	SEE PERMANENT SIGNING PLAN	7
ITEM TOTAL		7

TRAFFIC CONTROL ITEMS

	LOCATION	643.0100 TRAFFIC CONTROL (7070-08-73) EACH	633.1100 DELINEATORS TEMPORARY EACH	643.0300 TRAFFIC CONTROL DRUMS DAY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	643.0900 TRAFFIC CONTROL SIGNS DAY
PROJECT	SEE TRAFFIC CONTROL SHEETS	1	-	-	500	1200	-	1600
STAGE 1	SEE TRAFFIC CONTROL SHEETS	-	-	294	-	-	-	14
STAGE 2	SEE TRAFFIC CONTROL SHEETS	-	14	1620	1200	1920	1800	1200
STAGE 3	SEE TRAFFIC CONTROL SHEETS	-	-	308	35	56	-	70
STAGE 4	SEE TRAFFIC CONTROL SHEETS	-	-	168	-	-	-	14
ITEM TOTAL		1	14	2390	1735	3176	1800	2898

CONSTRUCTION STAKING

STATION TO STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (B-18-226) CATEGORY 020 LS	650.9910 CONSTRUCTION STAKING SUPPLIMENTAL CONTROL (7070-08-73) LS	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
9+46 TO 17+53	PROJECT	-	-	-	-	1	-
1+76 BP TO 7+49 BP	BYPASS - STAGE 1	493	493	-	-	-	493
10+92 TO 14+63	MAINLINE - STAGE 2	282	282	-	-	-	282
9+46 TO 17+53	MAINLINE - STAGES 3 & 4	436	436	-	-	-	436
10+20 P TO 10+55 P	LT, RT	-	-	94	-	-	-
9+46 TO 11+99	LT	-	-	253	-	-	-
11+58 TO 11+92	RT	-	-	34	-	-	-
13+47 TO 17+53	RT	-	-	406	-	-	-
12+75	B-18-226	-	-	-	1	-	-
ITEM TOTAL		1211	1211	787	1	1	1211

TEMPORARY PAVEMENT MARKING PAINT 4-INCH		649.0402
STATION TO STATION	LOCATION	LF
1+76 BP TO 7+79 BP	BYPASS	1640
7+50 TO 19+00	STH 27 - STAGE 4	2960
ITEM TOTAL		4600

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH		649.0400
STATION TO STATION	LOCATION	LF
1+76 BP TO 3+15 BP	BYPASS	1200
6+61 BP TO 7+79 BP	BYPASS	620
ITEM TOTAL		1820

TEMPORARY RAISED PAVEMENT MARKERS		649.2100
STATION TO STATION	LOCATION	EACH
1+76 BP TO 7+79 BP	BYPASS CL	54
ITEM TOTAL		54

SAWING ASPHALT			690.0150
STATION TO STATION		LOCATION	LF
STAGE 1			
9+46 TO 11+58		LT	220
9+46		MAINLINE	40
17+53		MAINLINE	36
STAGE 2			
9+46 TO 11+95		MAINLINE	260
13+47 TO 17+53		MAINLINE	410
10+55 P		PERKINS	24
STAGE 3			
9+46 TO 11+95		MAINLINE	260
13+47 TO 17+53		MAINLINE	410
STAGE 4			
15+50 TO 17+53		SHLD WIDENING	205
ITEM TOTAL			1865

SAWING CONCRETE		690.0250
STATION TO STATION	LOCATION	LF
9+46	CURB & GUTTER LT	5.0
10+55 P	SIDEWALK, LT & RT	12.0
ITEM TOTAL		17

TRANSPORTATION PROJECT PLAT NO: 7070-08-23 - 4.01

THAT PART OF THE SE 1/4 - SE 1/4 OF SECTION 32 AND THE NE 1/4 - NE 1/4 OF SECTION 5 ALL IN T-26-N, R-6-W, CITY OF AUGUSTA, EAU CLAIRE COUNTY, WISCONSIN

PROJECT DESCRIPTION: STH 27, AUGUSTA TO CADOTT, BRIDGE CREEK BRIDGE

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

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3), 84.09 AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

ACCEPTED FOR RECORDING AND FILING IN THE OFFICE OF THE REGISTER OF DEEDS IN EAU CLAIRE COUNTY, WISCONSIN AT 4:11 PM ON SEPT. 30, 2015 AS DOCUMENT # 1121001 AND FILED IN VOL: 1 OF TPP, PG: 46A

KATHY A. CHRISTENSON
SIGNATURE OF REGISTER OF DEEDS

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 7070-08-23-4.01
AMENDMENT NO:

CONVENTIONAL SYMBOLS AND ABBREVIATIONS

STATE, COUNTY, or TOWN LINE
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
PROPOSED REFERENCE LINE
PROPOSED R/W LINE
EXISTING H.E. LINE
PROPERTY LINE
EASEMENT LINE
CORPORATE LIMITS
EXISTING CENTERLINE
LOT & TIE LINES
UTILITIES — F.O. (TYPE) (TELEPHONE, GAS, ELECTRIC, CABLE TV, FIBER OPTIC)
FIRE HYDRANT
ACCESS RESTRICTED (BY PREVIOUS PROJECT/CONTROL)
NO ACCESS (BY ACQUISITION)
NO ACCESS (BY STATUTORY AUTHORITY)
FEE (HATCH VARIES)
TEMPORARY LIMITED EASEMENT
PERMANENT LIMITED EASEMENT
R/W BOUNDARY POINT 40000
PLE/TLE POINT 60000
PARCEL NUMBER 8
SIGN NUMBER (OFF PREMISE) 21-1
BUILDING
FOUND IRON PIPE/PIN (SIZE & TYPE NOTED)
R/W MONUMENT (OFFSET)
R/W STANDARD (OFFSET)
SIGN | SIGN | SIGN

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

CURVE DATA

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

	NON COMPENSABLE	COMPENSABLE
POWER POLE		
TELEPHONE POLE		
TELEPHONE PEDESTAL		
GUY POLE		N/A

SECTION CORNER MONUMENT
SECTION CORNER (17, 26, 35, 35, 26, 16)

ALIGNMENT DATA STH 27

POB STA 6+25.41
Y = 231624.32
X = 435923.39
PI STA 9+11.00
Y = 231904.74
X = 435977.48
DELTA = 22°14'33" Left
D = 06°59'44"
T = 161.00'
L = 317.95'
R = 819.02'
LCH = 315.96'
LCB = N 00°12'17" W
BBK = N 10°55'00" E
PC STA 7+50.00
Y = 231746.65
X = 435946.99
PCC STA 10+67.95
Y = 232062.61
X = 435945.86
BAH = N 11°19'33" W
PI STA 11+97.60
Y = 232189.73
X = 435920.40
DELTA = 17°59'27" Left
D = 06°59'44"
T = 129.65'
L = 257.17'
R = 819.02'
LCH = 256.11'
LCB = N 20°19'17" W
BBK = N 11°19'33" W
PCC STA 10+67.95
Y = 232062.61
X = 435945.86
PT STA 13+25.12
Y = 232302.78
X = 435856.91
POE STA 22+03.75
Y = 233068.89
X = 435426.70

ALIGNMENT DATA BYPASS

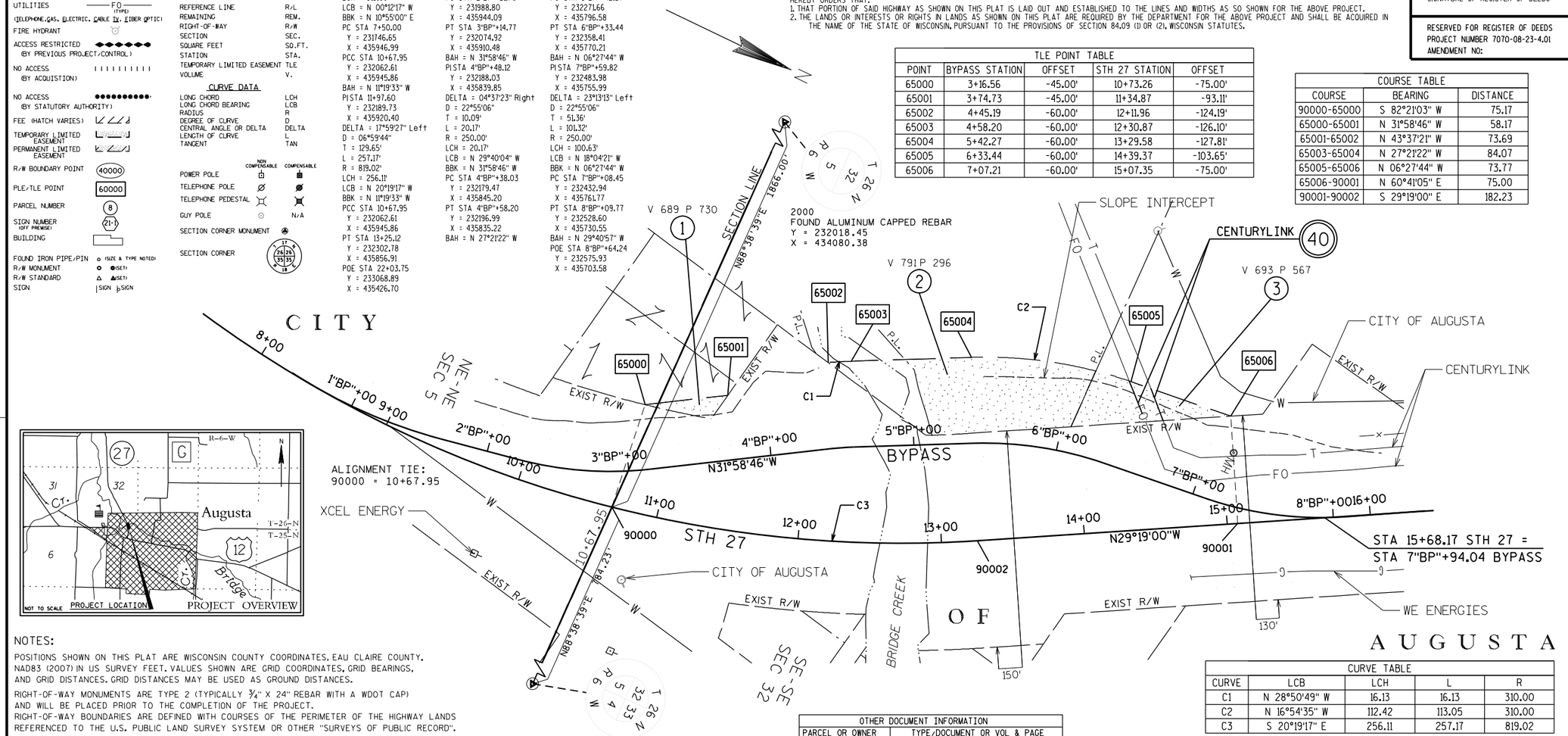
PI STA 2"BP"+68.83
Y = 232035.02
X = 435935.39
DELTA = 21°18'32" Left
D = 22°55'06"
T = 47.03'
L = 92.98'
R = 250.00'
LCH = 92.44'
LCB = N 21°19'30" W
BBK = N 10°40'14" W
PC STA 2"BP"+21.79
Y = 231988.80
X = 435944.09
PT STA 3"BP"+14.77
Y = 232074.92
X = 435910.48
BAH = N 31°58'46" W
PI STA 4"BP"+48.12
Y = 232188.03
X = 435839.85
DELTA = 04°37'23" Right
D = 22°55'06"
T = 10.09'
L = 20.17'
R = 250.00'
LCH = 20.17'
LCB = N 29°40'04" W
BBK = N 31°58'46" W
PC STA 4"BP"+38.03
Y = 232179.47
X = 435845.20
PT STA 4"BP"+58.20
Y = 232196.99
X = 435835.22
BAH = N 27°21'22" W

ALIGNMENT DATA BYPASS

PI STA 5"BP"+88.37
Y = 232312.60
X = 435775.40
DELTA = 20°53'38" Right
D = 22°55'06"
T = 46.10'
L = 91.17'
R = 250.00'
LCH = 90.66'
LCB = N 16°54'33" W
BBK = N 27°21'22" W
PC STA 5"BP"+42.27
Y = 232271.66
X = 435796.58
PT STA 6"BP"+33.44
Y = 232358.41
X = 435770.21
BAH = N 06°27'44" W
PI STA 7"BP"+59.82
Y = 232483.98
X = 435755.99
DELTA = 23°13'13" Left
D = 22°55'06"
T = 51.36'
L = 101.32'
R = 250.00'
LCH = 100.63'
LCB = N 18°04'21" W
BBK = N 06°27'44" W
PC STA 7"BP"+08.45
Y = 232432.94
X = 435761.77
PT STA 8"BP"+09.77
Y = 232528.60
X = 435730.55
BAH = N 29°40'57" W
POE STA 8"BP"+64.24
Y = 232575.93
X = 435703.58

TLE POINT TABLE				
POINT	BYPASS STATION	OFFSET	STH 27 STATION	OFFSET
65000	3+16.56	-45.00'	10+73.26	-75.00'
65001	3+74.73	-45.00'	11+34.87	-93.11'
65002	4+45.19	-60.00'	12+11.96	-124.19'
65003	4+58.20	-60.00'	12+30.87	-126.10'
65004	5+42.27	-60.00'	13+29.58	-127.81'
65005	6+33.44	-60.00'	14+39.37	-103.65'
65006	7+07.21	-60.00'	15+07.35	-75.00'

COURSE TABLE		
COURSE	BEARING	DISTANCE
90000-65000	S 82°21'03" W	75.17
65000-65001	N 31°58'46" W	58.17
65001-65002	N 43°37'21" W	73.69
65003-65004	N 27°21'22" W	84.07
65005-65006	N 06°27'44" W	73.77
65006-90001	N 60°41'05" E	75.00
90001-90002	S 29°19'00" E	182.23



CURVE TABLE				
CURVE	LCB	LCH	L	R
C1	N 28°50'49" W	16.13	16.13	310.00
C2	N 16°54'35" W	112.42	113.05	310.00
C3	S 20°19'17" E	256.11	257.17	819.02

SCALE, FEET
0 40 80

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, EAU CLAIRE COUNTY, NAD83 (2007) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICALLY ¾" X 24" REBAR WITH A WDOT CAP) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.
RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".

THE POINT OF INTERSECTIONS DESIGNATED WITH A 90000 SERIES NUMBER HAVE BEEN CREATED FOR THE PURPOSE OF SHOWING A CLOSED TRAVERSE. THE POINTS ARE INTENDED TO BE ON THE RIGHT-OF-WAY LINES BUT NOT NECESSARILY ON OR ANY PART OF A BOUNDARY, SIXTEENTH, QUARTER OR SECTION (P.L.S.S.) LINE. THESE POINTS WILL NOT BE MONUMENTED IN THE FIELD.

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

EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE: EXISTING HIGHWAY RIGHT-OF-WAY FOR STH 27 ESTABLISHED FROM PREVIOUS PROJECT DIVISION JOB NO. 6437.

FOR CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE WISCONSIN DEPARTMENT OF TRANSPORTATION NORTHWEST REGIONAL OFFICE - EAU CLAIRE.

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

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

OTHER DOCUMENT INFORMATION	
PARCEL OR OWNER	TYPE/DOCUMENT OR VOL & PAGE
3	ING.-EGR. EASEMENT / DOC#1030802

UTILITY EASEMENT INFORMATION
PARCEL 3 WISCONSIN TELEPHONE COMPANY VOL. 130 PG. 143

UTILITY INTERESTS REQUIRED		
UTILITY NUMBER	OWNERS	INTEREST REQUIRED
40	CENTURYTEL OF CENTRAL WISCONSIN, LLC D/B/A CENTURYLINK	RELEASE OF RIGHTS

SCHEDULE OF LANDS AND INTERESTS REQUIRED — OWNER NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE DEPARTMENT

PARCEL NUMBER	OWNERS	INTEREST REQUIRED	R/W ACRES REQUIRED			TLE ACRES REQUIRED
			NEW	EXISTING H.E.	TOTAL	
1	RUTH DECORAH	TLE	0.00	0.00	0.00	0.01
2	CITY OF AUGUSTA	TLE	0.00	0.00	0.00	0.14
3	JUDY ANN KNUTH	TLE	0.00	0.00	0.00	0.05

FAA CONSULTING ENGINEERS
Fleming, Andre & Associates, Inc.
3615 N. Hastings Way • Suite 100
Eau Claire, WI 54703

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

I, JOHN T. MUELLER, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN AND UNDER THE DIRECTION OF THE DEPTARTMENT OF TRANSPORTATION, I HAVE MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

WISCONSIN JOHN T. MUELLER 2454 CHIPPEWA FALLS, WI LAND SURVEYOR

SIGNATURE: _____ DATE: 9/22/2015
PRINT NAME: JOHN T. MUELLER
REGISTRATION NUMBER: S-2454

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION.
NORTHWEST REGION - EAU CLAIRE
SIGNATURE: _____ DATE: 9/22/2015
PRINT NAME: MICHAEL PILLER

FILE NAME : F:\Drawings\2012-134\0003\040101-rp.dgn
PLOT DATE : 12/8/2010
PLOT BY :
PLOT NAME :
PLOT SCALE : 1 in : 100 ft
APPRAISAL PLAT DATE :

4.01

STATION & OFFSET TABLE						
POINT	STATION	OFFSET	STATION	OFFSET	ELEVATION	COMMENTS
1	9+46.00	20.00 LT			954.58	
2	9+46.00	19.50 RT			956.23	
3	9+55.77	20.00 RT			956.30	
4	10+92.08	20.11 RT	10+19.34'P	36.05 RT	957.21	
5	10+92.07	44.00 RT	10+44.53'P	37.00 RT		25 FT RADIUS
6	11+15.76	45.49 RT	10+45.93'P	12.00 RT	956.86	
7	11+15.33	53.94 RT	10+55.00'P	12.00 RT	956.63	
8	11+37.72	56.17 RT	10+55.00'P	12.00 LT	956.70	
9	11+38.73	39.36 RT	10+39.20'P	12.00 LT	957.06	
10	11+57.79	40.00 RT	10+39.20'P	32.00 LT		20 FT RADIUS
11	11+57.79	20.00 RT	10+19.42'P	31.25 LT	957.87	
12	12+10.74	20.00 RT			958.51	
13	12+11.59	20.00 LT			956.68	
14	13+29.69	20.00 RT			959.67	

BENCHMARK TABLE			
POINT	STATION	DESCRIPTION	ELEVATION
BM 1	10+52	YELLOW SPIKE IN PWR POLE	958.146

PI STA = 10+49.99
Y = 232041.213
X = 436003.800
DELTA = 40°14'00"
D = 6°59'44"
T = 299.99'
L = 575.12'
R = 819.02'
PC STA = 7+50.00
PT STA = 13+25.12
SE = 4.6%

STA 12+00 LT
1 EA - REMOVING SMALL PIPE CULVERTS

STA 11+21.6 - STA 12+14.1 LT
39.4 LF - MGS THRIE BEAM TRANSITION REQ'D
1 EA - MGS GUARDRAIL TERMINAL EAT REQ'D

STA 13+45 LT
CONSTRUCT CONCRETE SURFACE DRAINS

STA 12+01 LT
CONSTRUCT CONCRETE SURFACE DRAINS
DROP INLET TYPE

STA 12+13 - STA 12+29
CONSTRUCT CONCRETE APPROACH SLAB

PROPOSED STRUCTURE
B-18-226

STA 11+18 - STA 12+13
95 LF - SALVAGE GUARDRAIL

STA 9+46 - STA 11+96 LT
250 LF - CONCRETE CURB AND GUTTER,
30-INCH, TYPE D

STA 10+48 LT
1 EA - SALVAGED INLET COVERS REQ'D
1 EA - COVER PLATES TEMPORARY REQ'D

STA 13+37 RT
CONSTRUCT CONCRETE SURFACE DRAINS
DROP INLET TYPE

STA 13+16 - STA 13+32
CONSTRUCT CONCRETE APPROACH SLAB

STA 12+00 RT
CONSTRUCT CONCRETE SURFACE DRAINS
DROP INLET TYPE

EXISTING STRUCTURE
B-18-684

BEGIN PROJECT
STA 9+46.00
Y = 231941.695
X = 435960.835
(SAW CUT REQ'D)

MATCH EXISTING
STA 9+46.00
EL. 955.41

STA 9+46 - STA 11+96 RT
298 LF - CONCRETE CURB AND GUTTER,
30-INCH, TYPE D

STA 10+92 - STA 11+96 RT
105 SY - CONCRETE SIDEWALK, 4-INCH

SAW CUT REQ'D

N10° 55' 00"E
124.59'

PC: 7+50.00

STH 27
ASPHALT

PERKINS RD.

BRIDGE CREEK

MATCH LINE 13+50

EXIST R/W

TLE

SLOPE INTERCEPT

XCEL ENERGY

CITY OF AUGUSTA

1+00'BP
2+00'BP
3+00'BP
4+00'BP
5+00'BP
6+00'BP
9+00
10+00
11+00
12+00
13+00

PT: 13+25.12

VCL = 700.00
K = 272.08

1.30%
1.27%

EXISTING PROFILE
PROPOSED PROFILE

VPI STA 8+50.00
VPI EL 953.00

VPT STA 12+00.00
VPT EL 957.45

960
950
940
933

7+50 8+00 8+50 9+00 10+00 11+00 12+00 13+00 13+50

955.05 955.45 | 954.91 955.30 | 954.92 955.25 | 955.20 955.29 | 955.42 955.42 | 955.81 955.64 | 956.21 955.96 | 956.61 956.37 | 957.16 956.86 | 957.95 957.45 | 941.35 958.09 | 942.77 958.73 | 959.46 959.36

PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	PLAN AND PROFILE: STH 27	SHEET 29	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\050201_PP.DWG
LAYOUT NAME - 050201_PP

PLOT DATE : 4/25/2016 1:38 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 44

STA 13+33.0 - STA 14+63.1 LT
39.4 LF - MGS THRIE BEAM TRANSITION REQ'D
37.5 LF - MGS GUARDRAIL 3 REQ'D
1 EA - MGS GUARDRAIL TERMINAL EAT REQ'D

TLE

EXIST R/W

SLOPE INTERCEPT

6+00'BP

STA 13+34 - 14+90 LT
156 LF - SALVAGE GUARDRAIL

7+00'BP

8+00'BP

9+00'BP

10+00'BP

10+69'BP N29° 19' 00"W
878.63'

END PROJECT
STA 17+53.12
X = 435647.350
Y = 232675.967
(SAW CUT REQ'D)

CITY OF AUGUSTA

CENTURYLINK

WE ENGERGIES

STATION & OFFSET TABLE			
POINT	STATION	OFFSET	ELEVATION
15	13+89.71	16.00 RT	959.74
16	17+03.12	16.00 RT	963.44
17	17+52.91	21.20 RT	963.79

STA 13+45 - STA 17+53 RT
408 LF - CONCRETE CURB AND GUTTER,
30-INCH, TYPE D

STA 13+14 - STA 17+53 RT
295 SY - CONCRETE SIDEWALK, 4-INCH

SLOPE INTERCEPT

EXIST R/W

MATCH EXISTING
STA 16+50
EL. 963.17

STA 13+34 - 14+79 RT
146 LF - SALVAGE GUARDRAIL

MATCH LINE 13+50

VPC STA 16+26.63
VPC EL 962.88

VPI STA 19+26.63
VPI EL 966.70

EXISTING PROFILE

PROPOSED PROFILE

1.27%

VCL = 600.00
K = 227.80

980 / 970 / 960 / 950

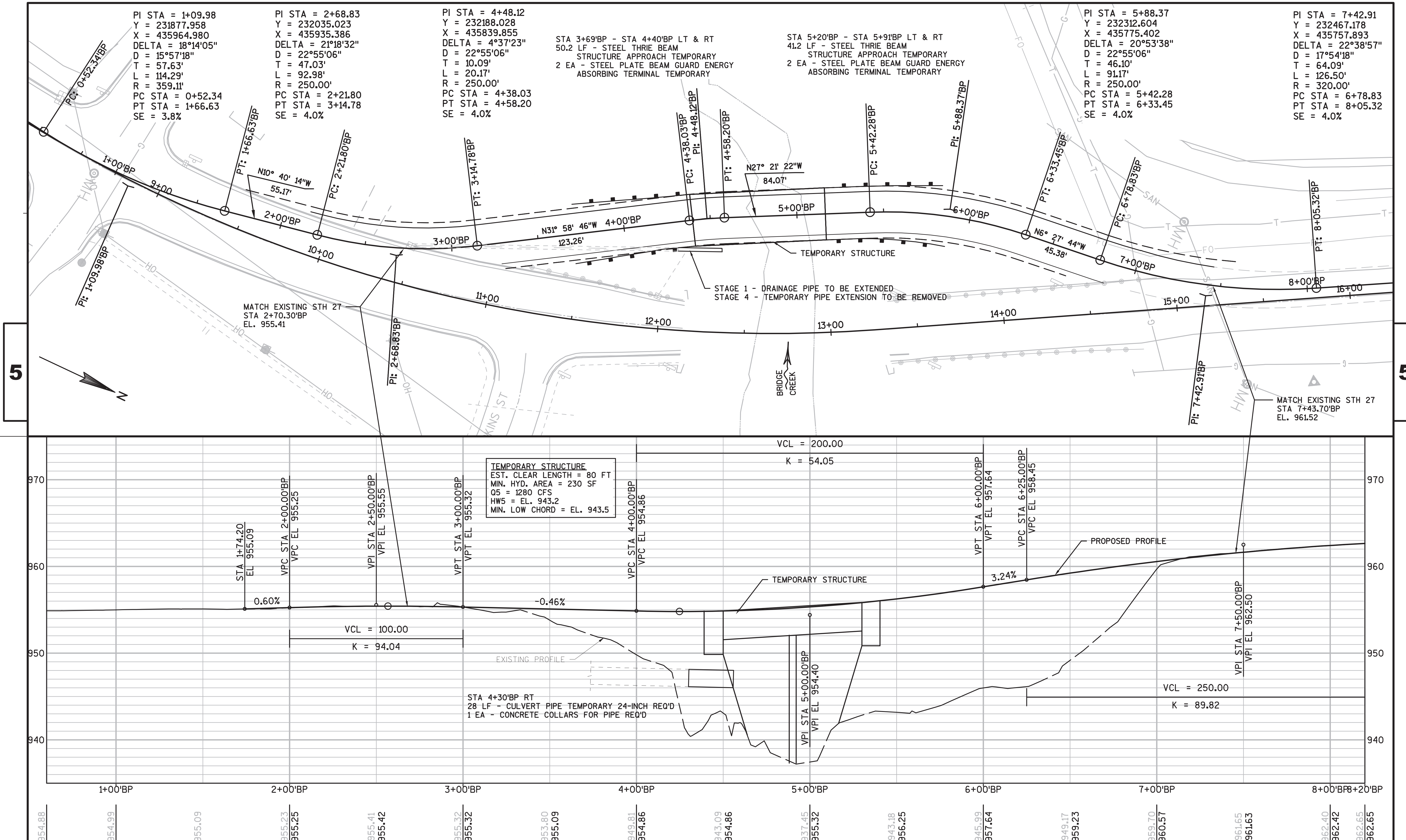
13+50 14+00 15+00 16+00 17+00 18+00 19+00 19+60

959.46	960.15	960.94	961.59	962.26	962.87	963.21	963.61	964.05	964.21	964.57	964.71	964.71
959.36	960.00	960.64	961.27	961.91	962.55	963.17	963.70	964.12	964.43	964.63	964.72	964.70
												964.72
												964.69

PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	PLAN AND PROFILE: STH 27	SHEET 30	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\050201_PP.DWG
LAYOUT NAME - 050202_PP

PLOT DATE : 4/25/2016 1:38 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1:40_XREF

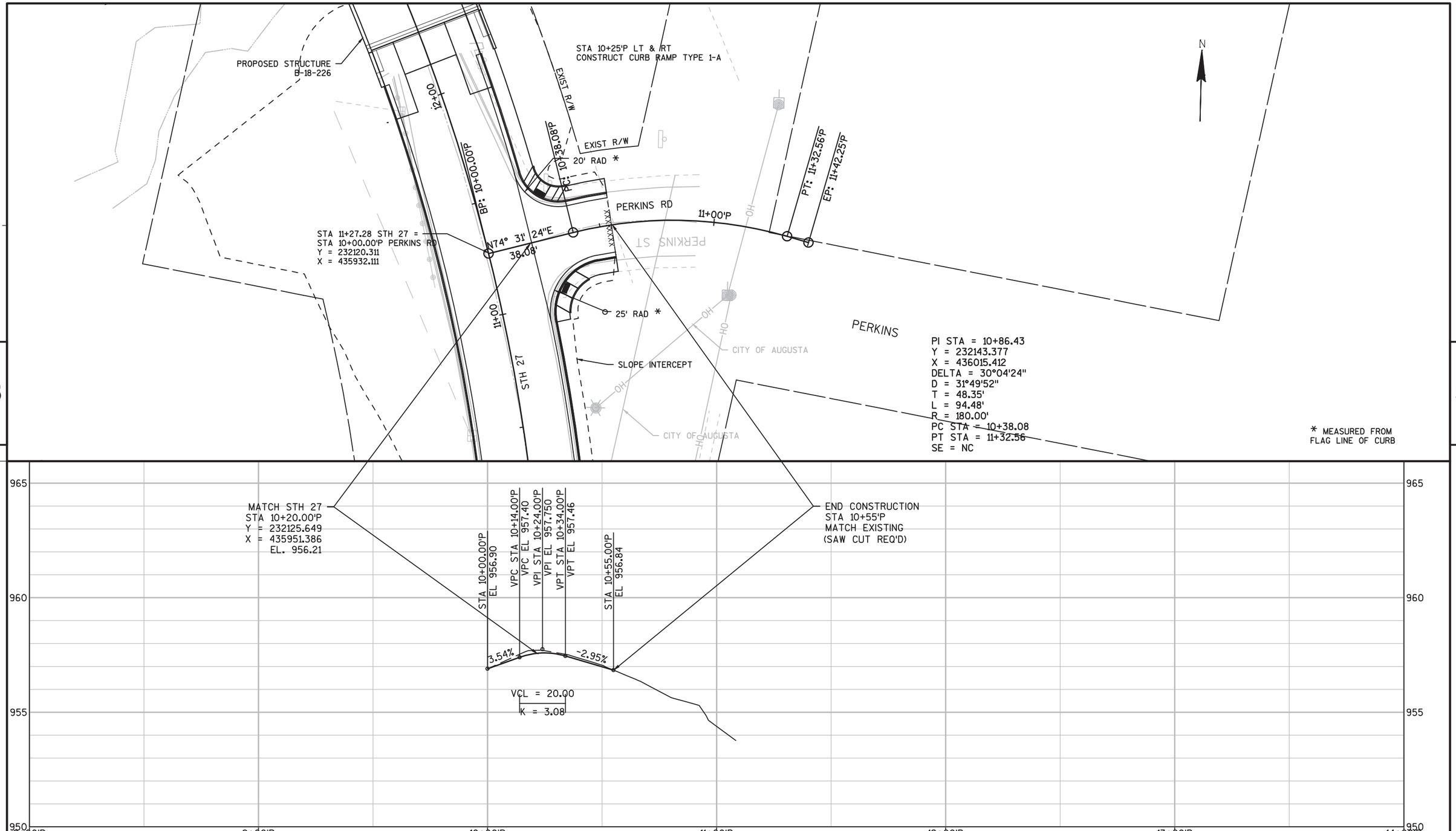


PROJECT NO: 7070-08-73 | HWY: STH 27 | COUNTY: EAU CLAIRE | PLAN AND PROFILE: TEMPORARY BYPASS | SHEET 31 | E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\050202_PP.DWG
LAYOUT NAME - 050203_PP

PLOT DATE : 4/25/2016 1:38 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1:50_XREF

WISDOT/CADDS SHEET 44

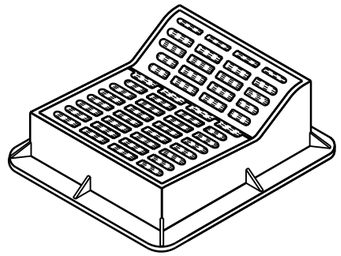


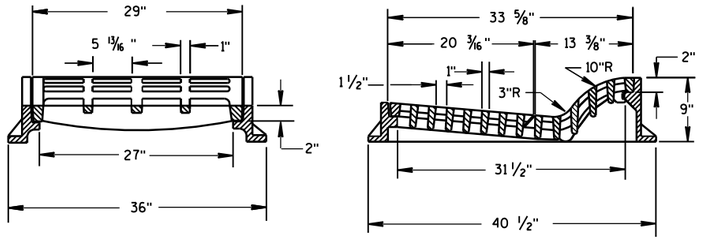
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	PLAN AND PROFILE: PERKINS RD	SHEET 32 E

Standard Detail Drawing List

08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08C07-01	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-18	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D03-06	CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES
08D05-16A	CURB RAMPS TYPES 1 AND 1-A
08D05-16B	CURB RAMPS TYPES 2 AND 3
08D05-16C	CURB RAMPS TYPES 4A AND 4A1
08D05-16D	CURB RAMPS TYPE 4B AND 4B1
08D05-16E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E11-02	TURBIDITY BARRIER
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
12A03-10	NAME PLATE (STRUCTURES)
13B02-08A	CONCRETE PAVEMENT APPROACH SLAB
13B02-08B	STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB
14B42-03A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-02A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-04A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15A02-08	DELINEATOR POST, DELINEATOR, AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING
15B01-08A	FENCE WOVEN WIRE
15B01-08B	FENCE WOVEN WIRE
15C03-03	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C05-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C06-07	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C08-16E	PAVEMENT MARKING (LEFT TURN LANE)
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C33-01	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D28-03	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D31-03	TRAFFIC CONTROL, TEMPORARY BYPASS ROADWAY

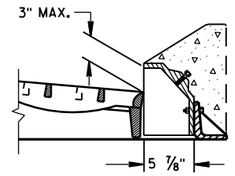
6





TYPE "F"

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



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

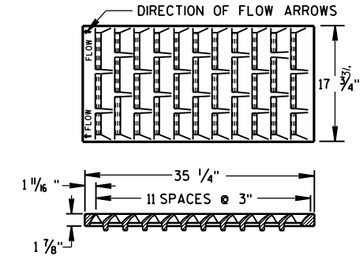
USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

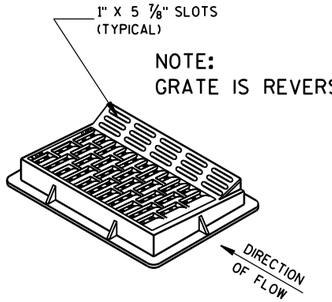
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

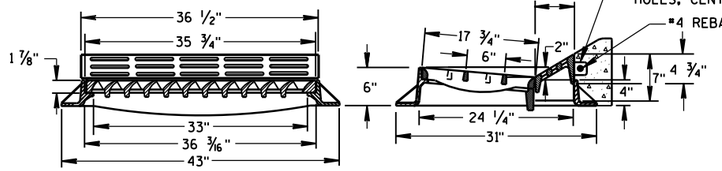
GENERAL NOTES

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.



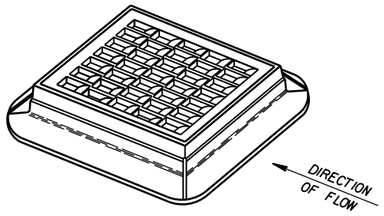


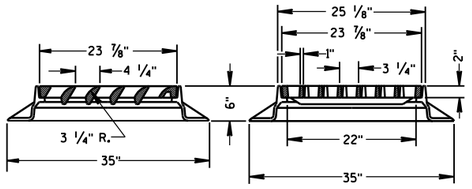


TYPE "HM"

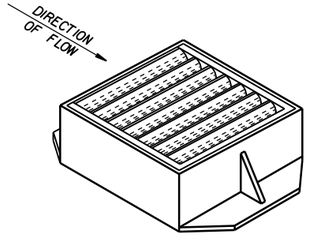
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

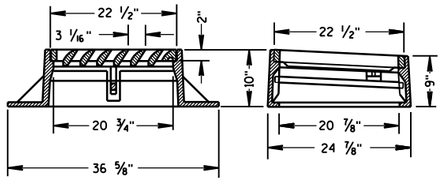
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



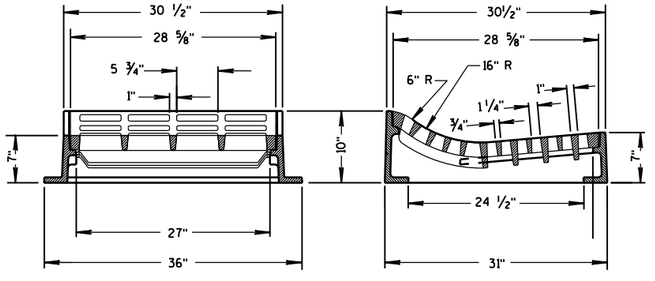


TYPE "S"



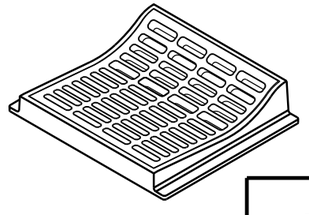


TYPE "V"



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

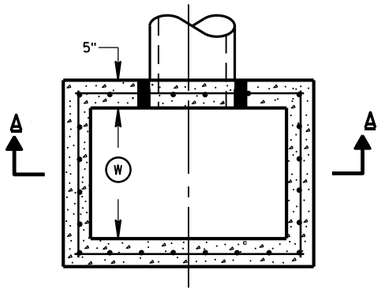
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE

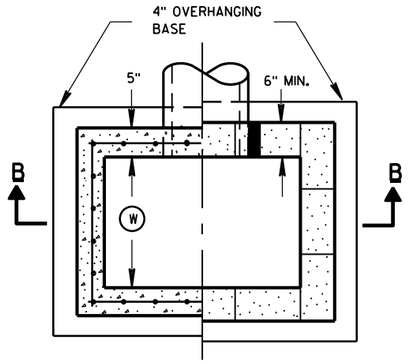
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA

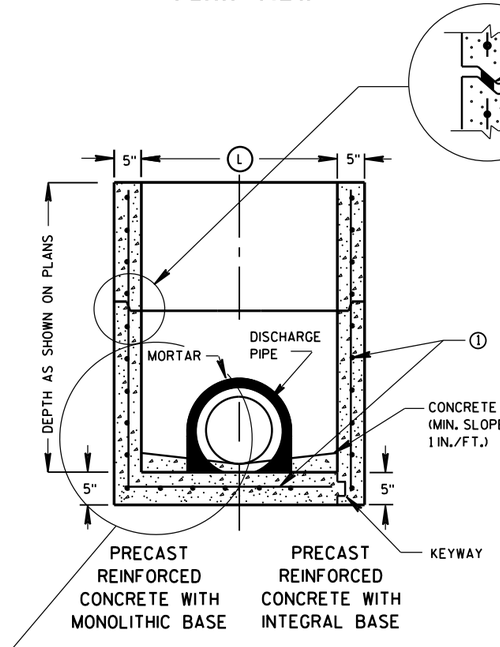
6
S.D.D. 8 A 5-19c



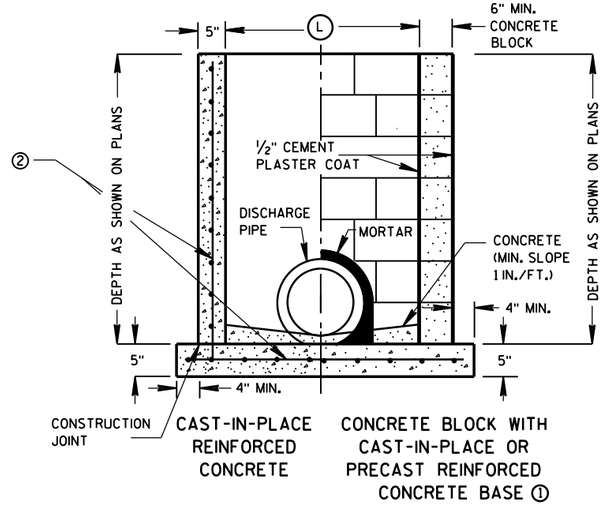
PLAN VIEW



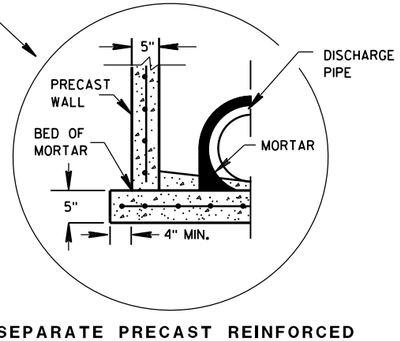
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

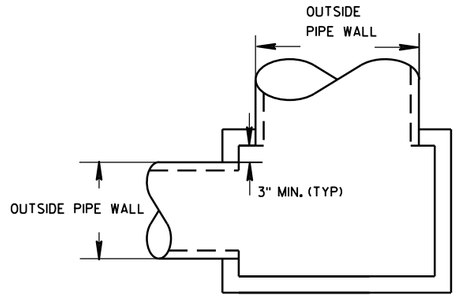
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

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

PIPE MATRIX

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



DETAIL "A"

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

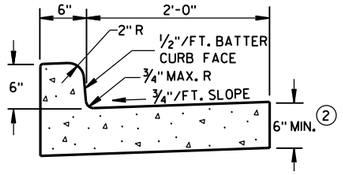
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012
DATE
FHWA

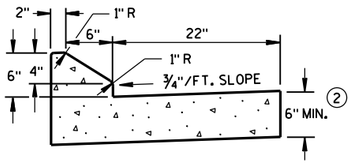
/S/ Jerry H. Zogg
ROADWAY STANDARDS DE
ENGINEER

6
S.D.D. 8 C 7-1

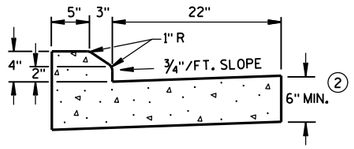
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT



TYPES A & D ①

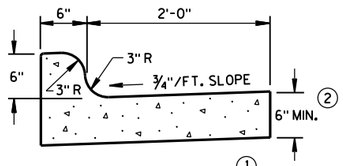


6" SLOPED CURB TYPES G & J ①

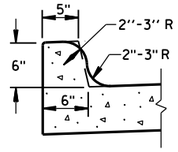


4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"

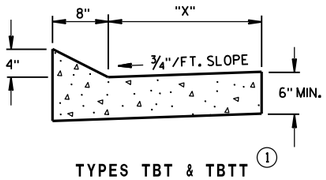


TYPES K & L ①



OPTIONAL CURB SHAPE FOR TYPES K & L ①

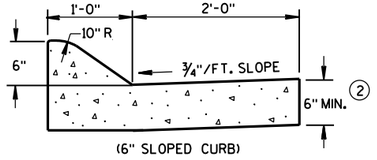
CONCRETE CURB & GUTTER 30"



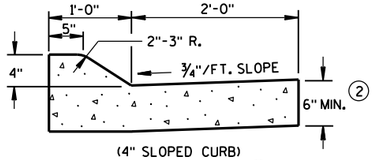
TYPES TBT & TBTT ①

CONCRETE CURB & GUTTER

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

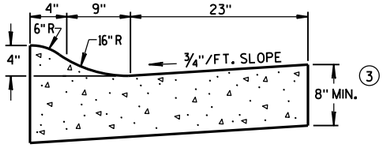


(6" SLOPED CURB)



(4" SLOPED CURB)

TYPES A & D ①



4" SLOPED CURB TYPES R & T ① ④

CONCRETE CURB & GUTTER 36"

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.

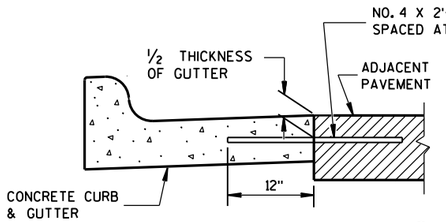
① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.

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

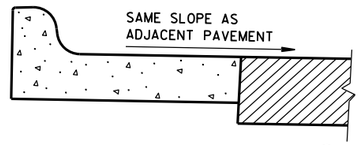
③ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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

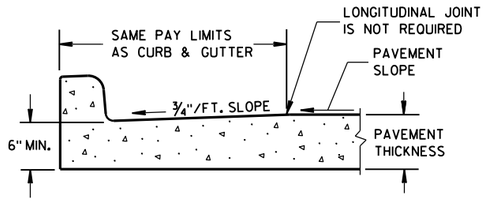
⑤ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



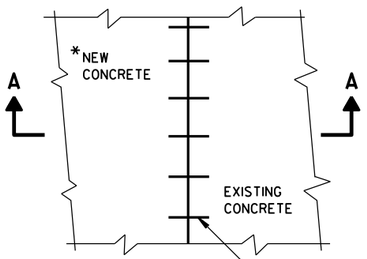
TYPICAL TIE BAR LOCATION ①



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

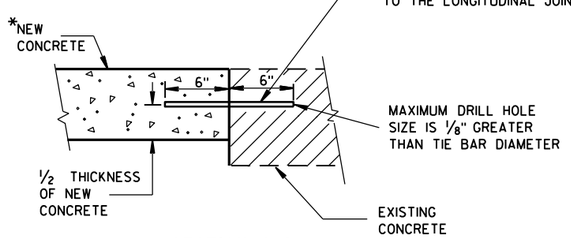


PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



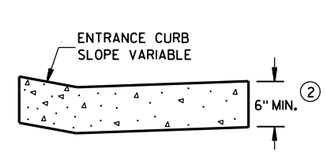
PLAN VIEW

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

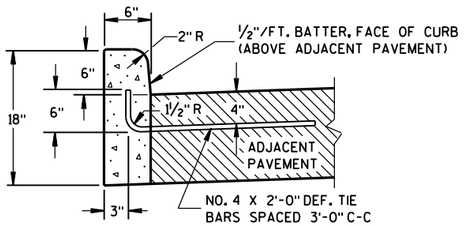


SECTION A-A

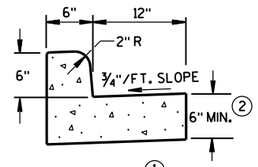
TIE BARS DRILLED
INTO EXISTING PAVEMENT



DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

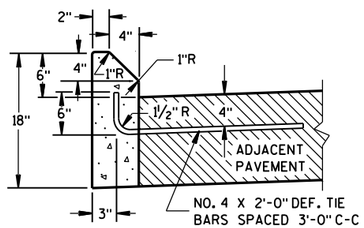


① TYPES A & D



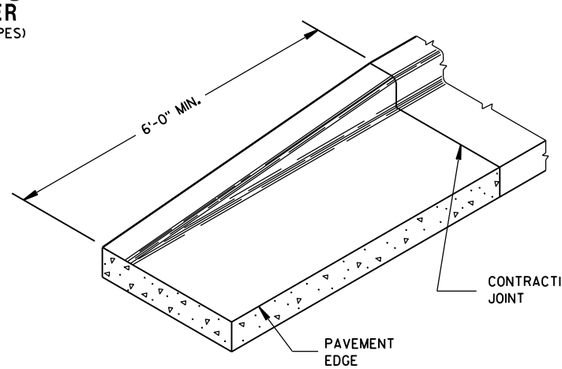
① TYPES A & D

CONCRETE CURB & GUTTER 18"



① TYPES G & J

CONCRETE CURB



END SECTION CURB & GUTTER

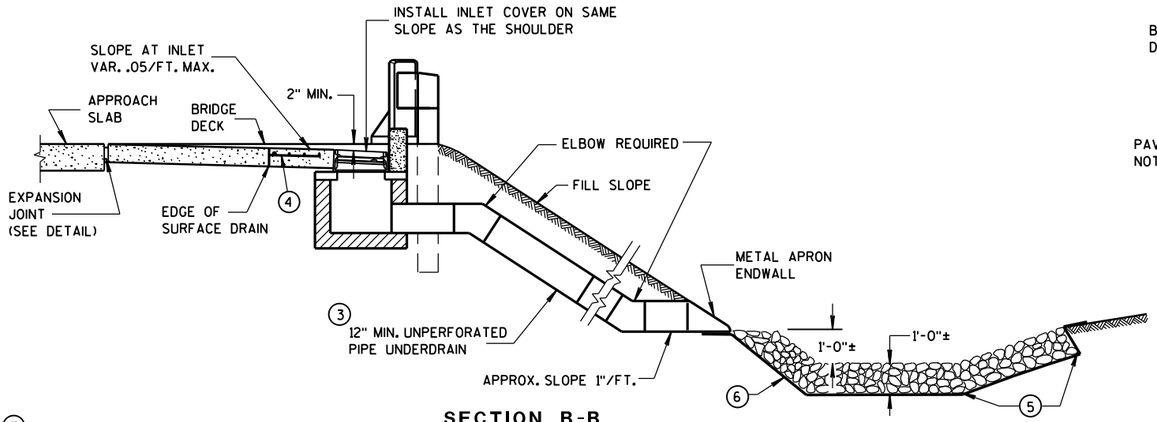
CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

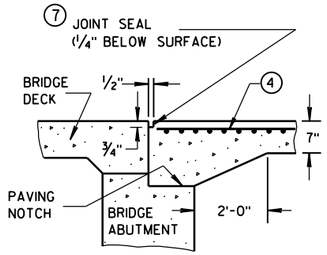
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

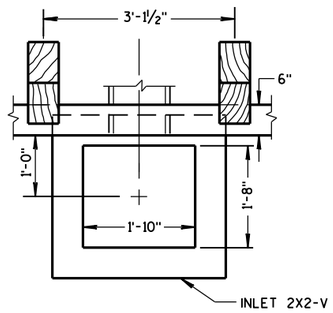
S.D.D. 8 D 1-18



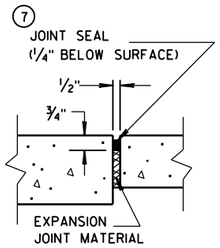
SECTION B-B



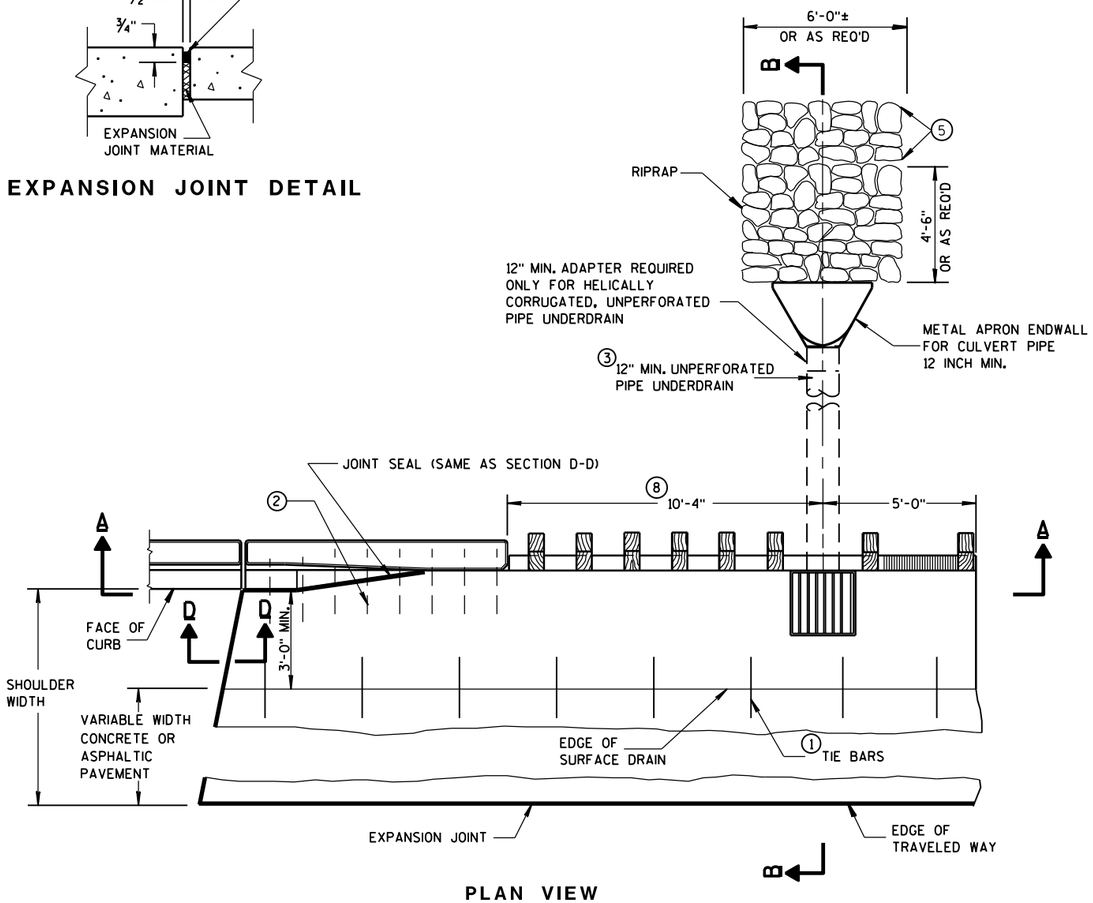
SECTION D-D



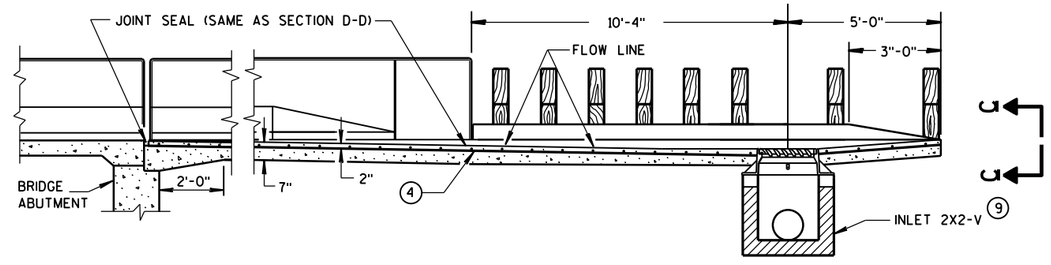
PLAN VIEW



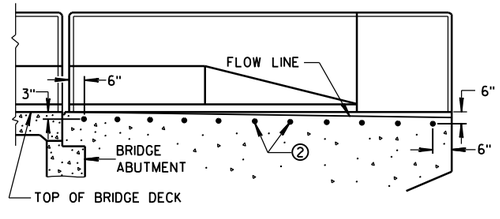
EXPANSION JOINT DETAIL



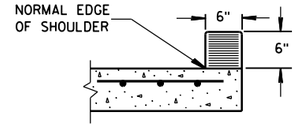
PLAN VIEW



SECTION A-A



LOCATION OF TIE BARS IN WINGWALL



SECTION C-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.

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

(1) NO. 4 X 2'-0" TIE BARS SPACED AT 3'-0" CENTERS TO BE USED ONLY WHEN ADJACENT TO P.C. CONCRETE.

(2) NO. 4 X 2'-0" TIE BARS SPACED AT 12" CENTERS TO BE PLACED BY BRIDGE CONTRACTOR, OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.

(3) THE PIPE UNDERDRAIN MAY BE ANY ONE OF THE SIX MATERIALS LISTED IN THE STANDARD SPECIFICATIONS SECTION 612.2 EXCEPT DRAIN TILE.

(4) MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.

(5) LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.

(6) GEOTEXTILE FABRIC, TYPE 'R'

(7) HOT POURED SEALANT UNLESS OTHERWISE SPECIFIED.

(8) THIS DIMENSION MAY VARY DEPENDING ON THE SPACING OF POSTS FOR THE STEEL PLATE BEAM GUARD. THE TYPICAL LOCATION FOR THE SURFACE DRAIN IS WHERE THE POST SPACING WIDENS TO 3'-1½".

(9) SEE CURRENT STANDARD DETAIL DRAWINGS 8A5 AND 8C7 FOR DETAILS.

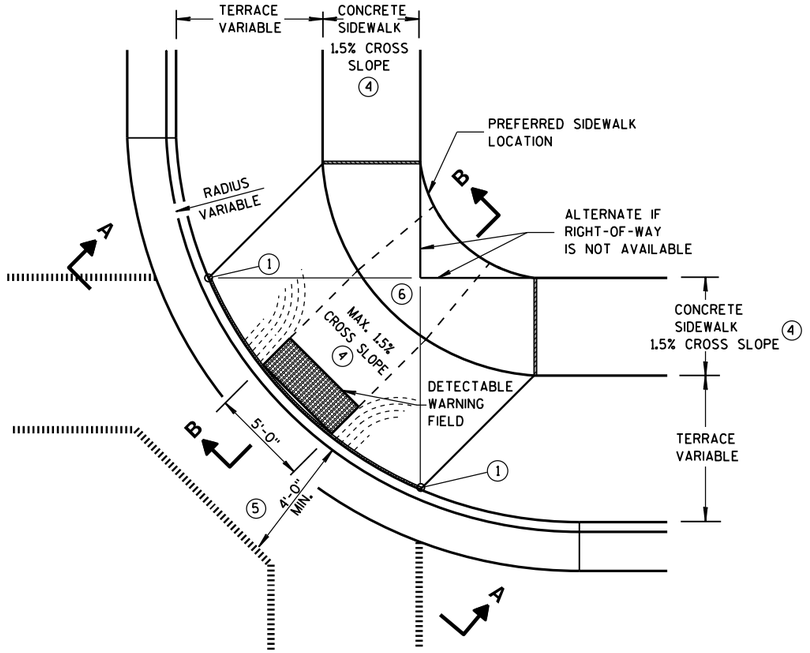
CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

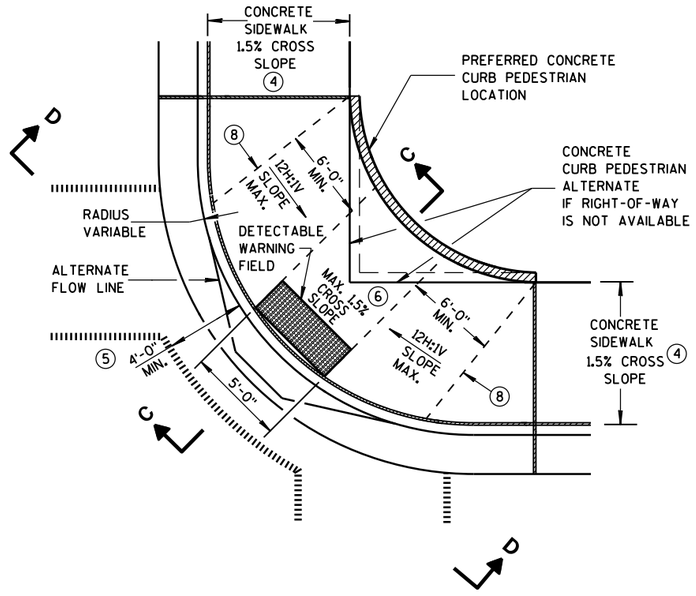
S.D.D. 8 D 3-6



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.

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%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED.

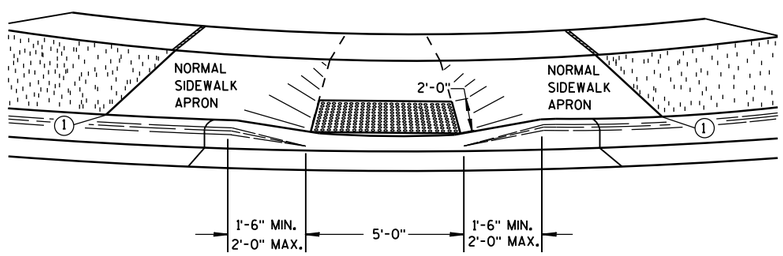
(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

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

(5) PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA. (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.

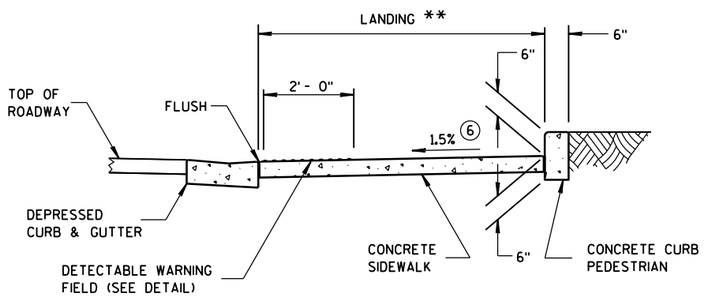
(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

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



VIEW A-A

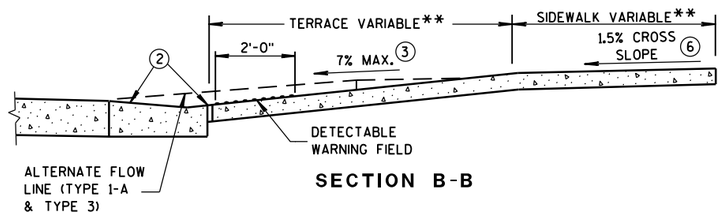
** WIDTH SHOWN ELSEWHERE IN THE PLANS



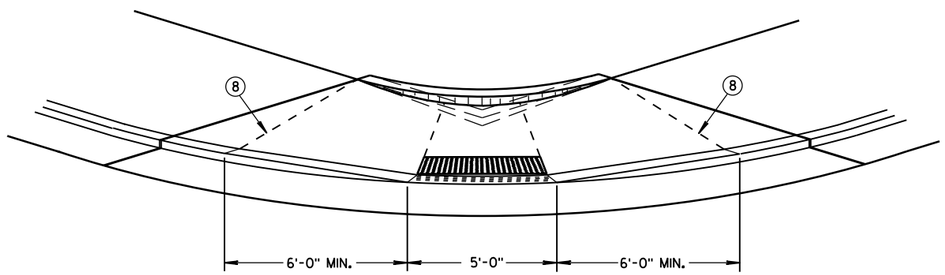
SECTION C-C

LEGEND

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

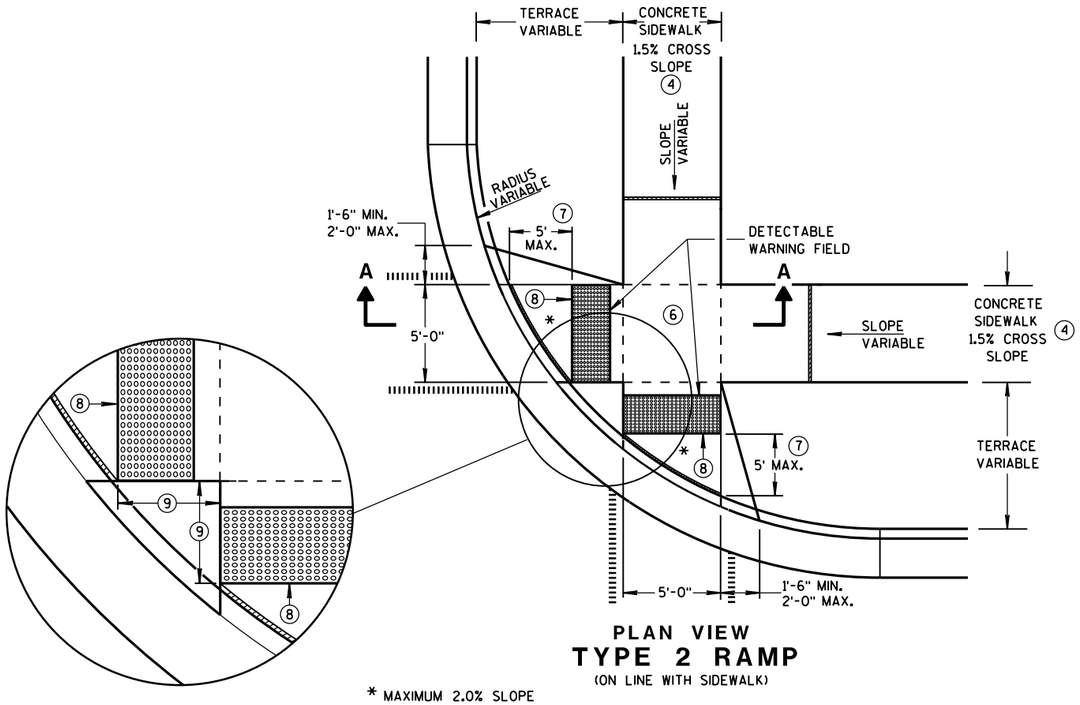


SECTION B-B



VIEW D-D

CURB RAMPS TYPES 1 AND 1-A

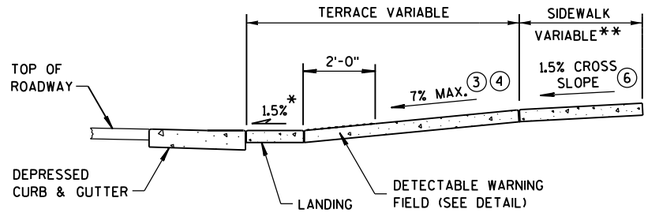


PLAN VIEW

TYPE 2 RAMP

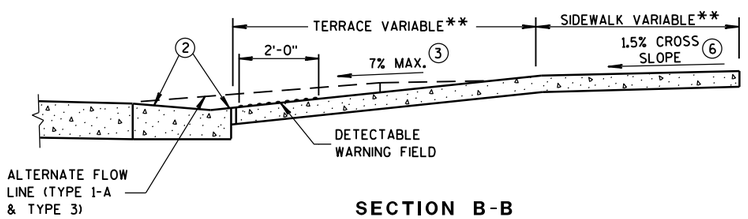
(ON LINE WITH SIDEWALK)

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



SECTION A-A

** WIDTH SHOWN ELSEWHERE IN THE PLANS



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.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

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

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

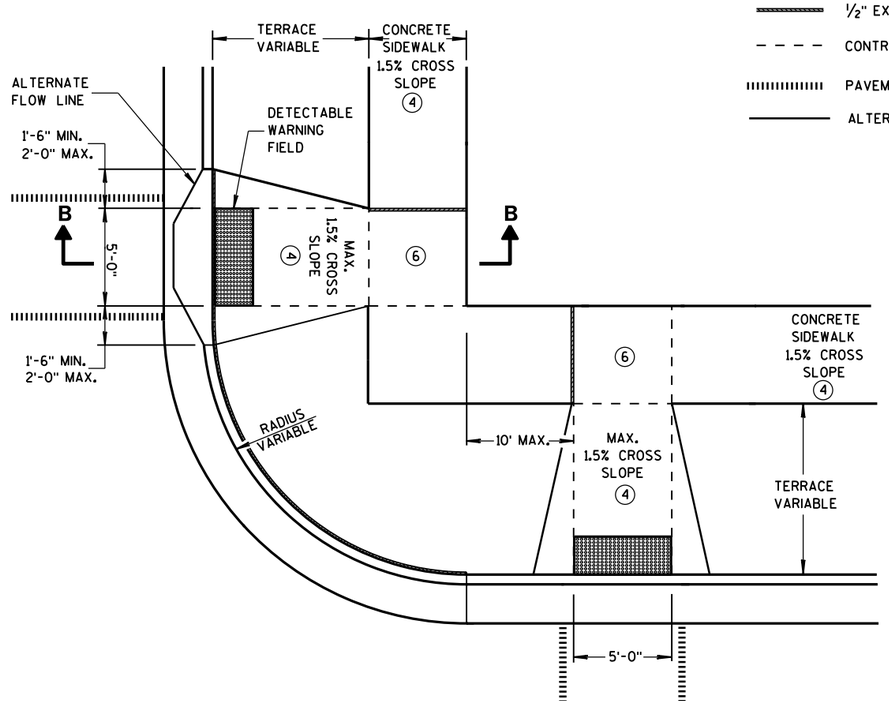
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, USE MULTIPLE DETECTABLE WARNING PANELS ACROSS THE RAMP AND STAGGER ADDITIONAL DETECTABLE WARNING PANEL(S) FORWARD TO REDUCE THIS DISTANCE.

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

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

LEGEND

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



PLAN VIEW

TYPE 3 RAMP

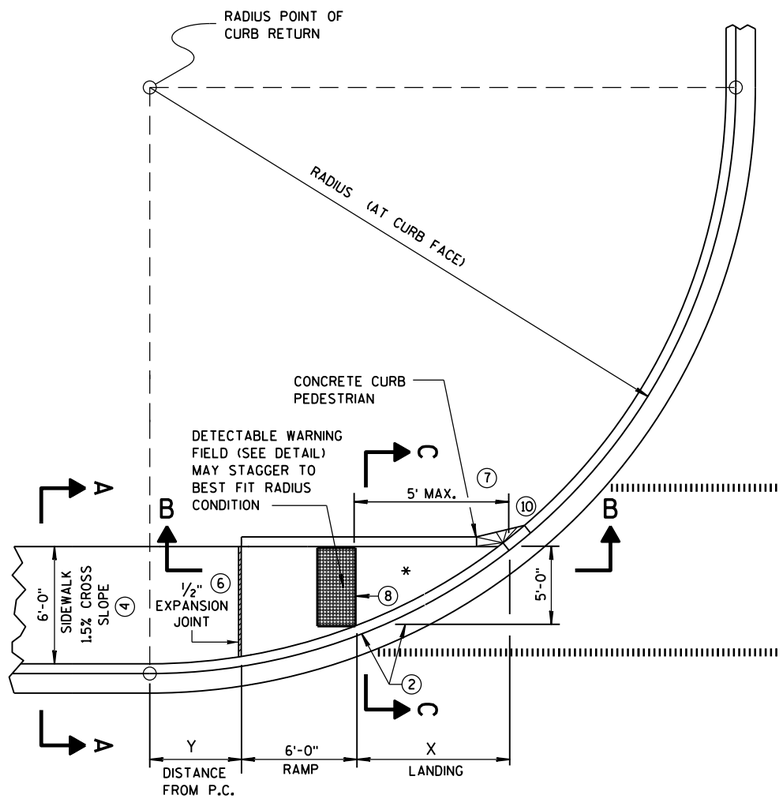
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS TYPES 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

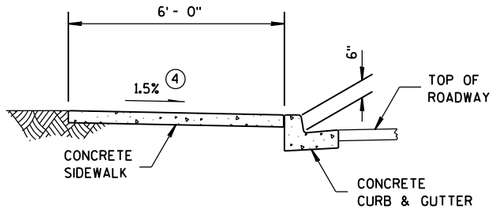
S.D.D. 8 D 5-16b



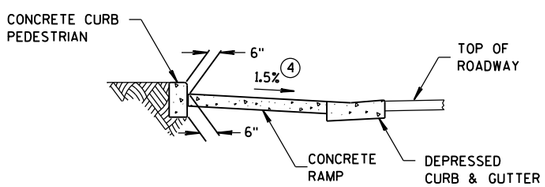
CURB RAMP TYPE 4A
PLAN VIEW

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"

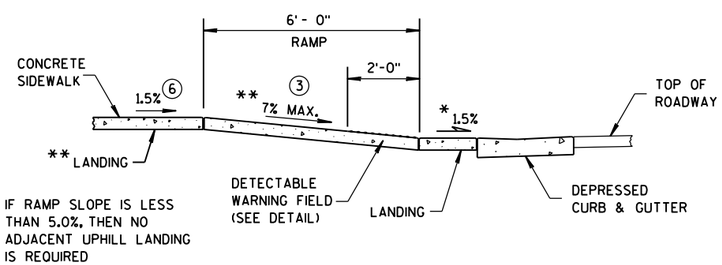
INTERMEDIATE RADII CAN BE INTERPOLATED



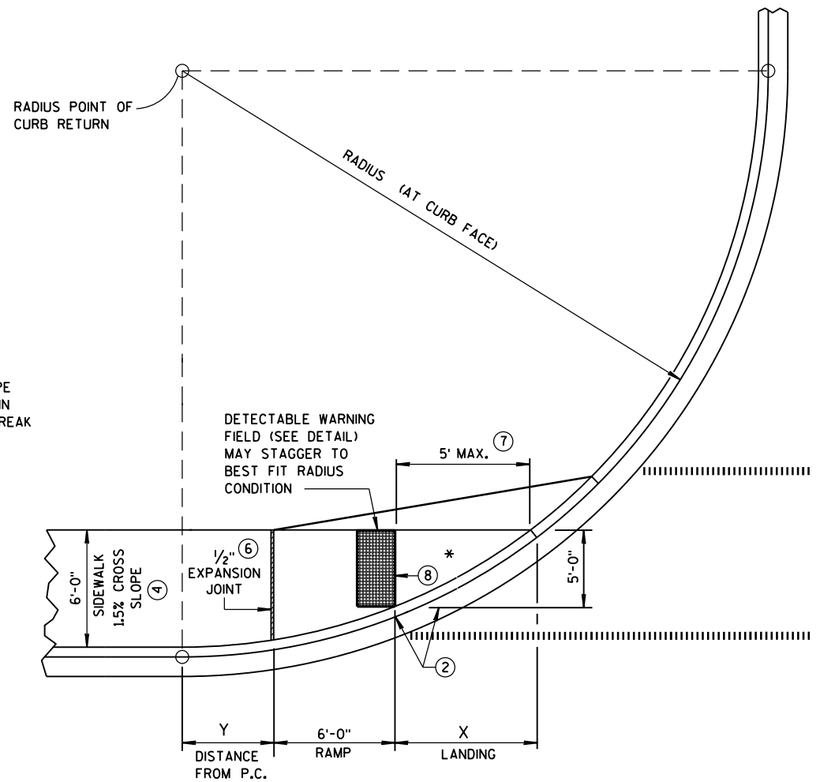
SECTION A-A FOR TYPE 4A



SECTION C-C FOR TYPE 4A



SECTION B-B FOR TYPE 4A



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

CURB RAMP TYPE 4A1
PLAN VIEW

GENERAL NOTES

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

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

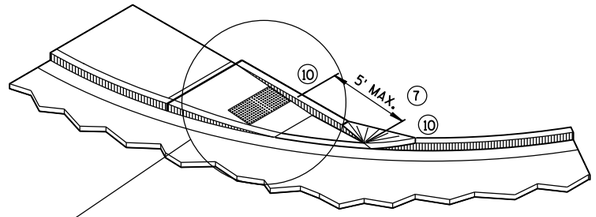
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

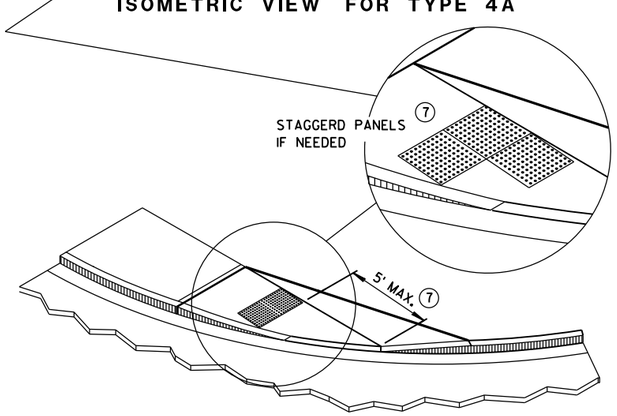
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, USE MULTIPLE DETECTABLE WARNING PANELS ACROSS THE RAMP AND STAGGER ADDITIONAL DETECTABLE WARNING PANEL(S) FORWARD TO REDUCE THIS DISTANCE.

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

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



ISOMETRIC VIEW FOR TYPE 4A



ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

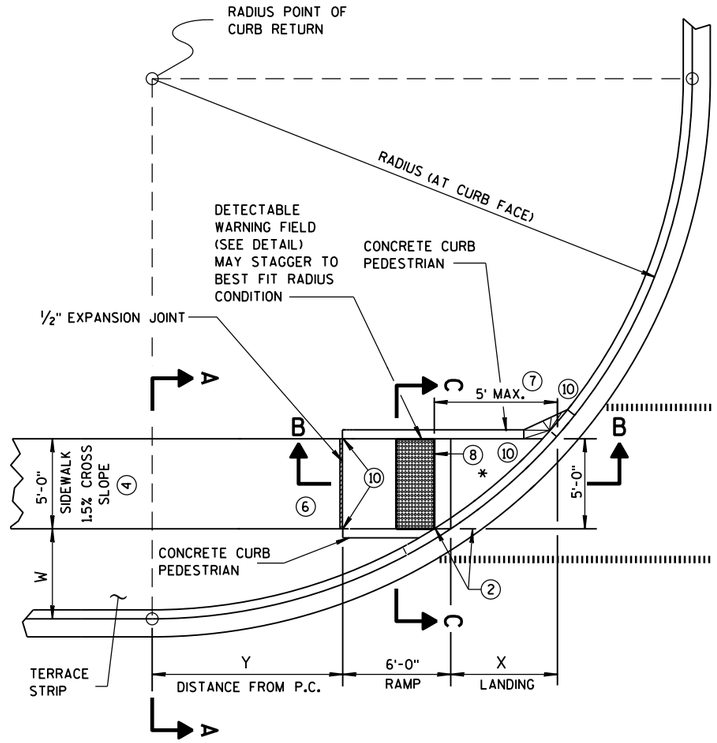
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPES 4A AND 4A1

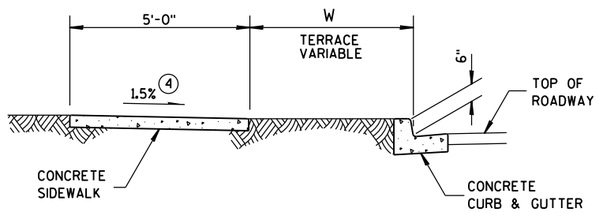
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

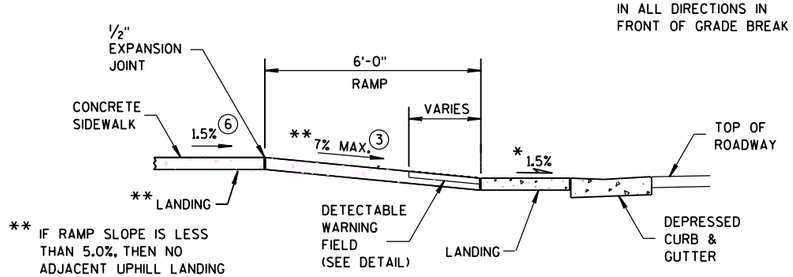
S.D.D. 8 D 5-16c



CURB RAMP TYPE 4B
PLAN VIEW



SECTION A-A FOR TYPE 4B



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

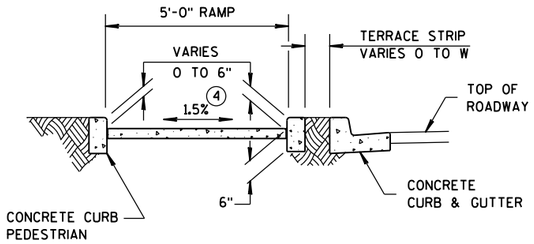
SECTION B-B FOR TYPE 4B

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

PAVEMENT MARKING CROSSWALK (WHITE)



SECTION C-C FOR TYPE 4B

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.

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼-INCH ARE ALLOWED.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

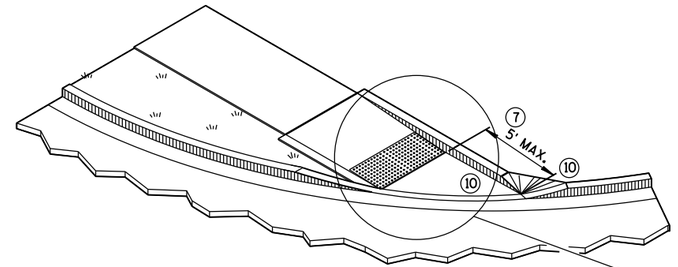
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

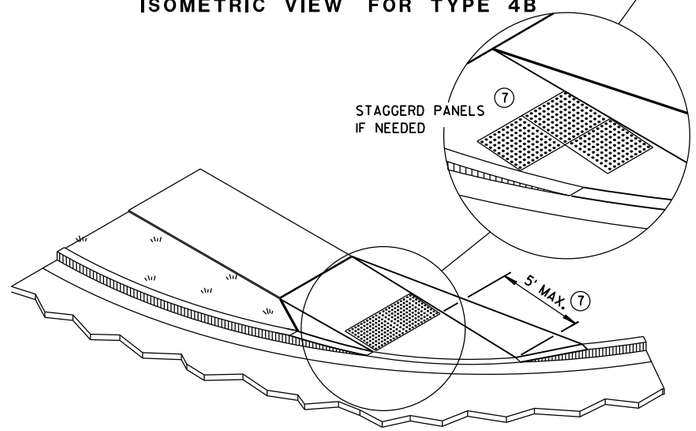
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, USE MULTIPLE DETECTABLE WARNING PANELS ACROSS THE RAMP AND STAGGER ADDITIONAL DETECTABLE WARNING PANEL(S) FORWARD TO REDUCE THIS DISTANCE.

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

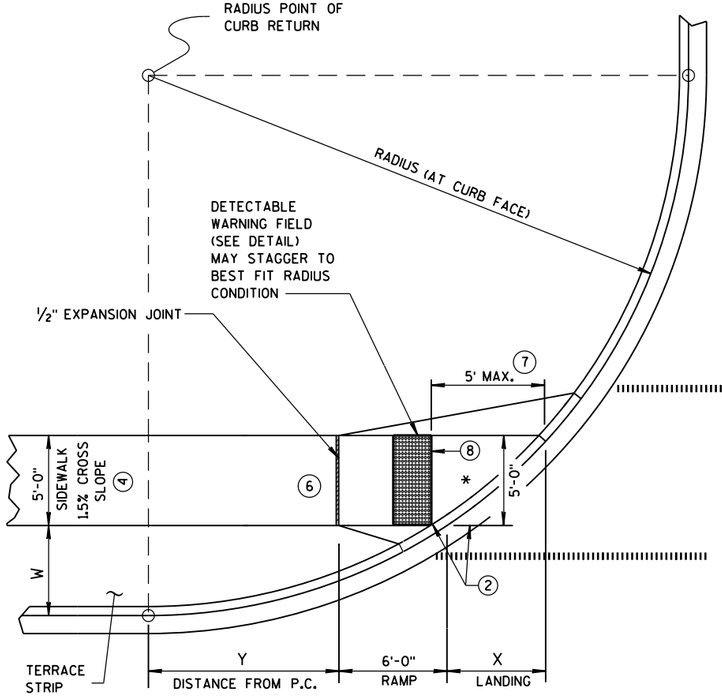
(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1



CURB RAMP TYPE 4B1
PLAN VIEW

CURB RAMPS
TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 8 D 5-16d

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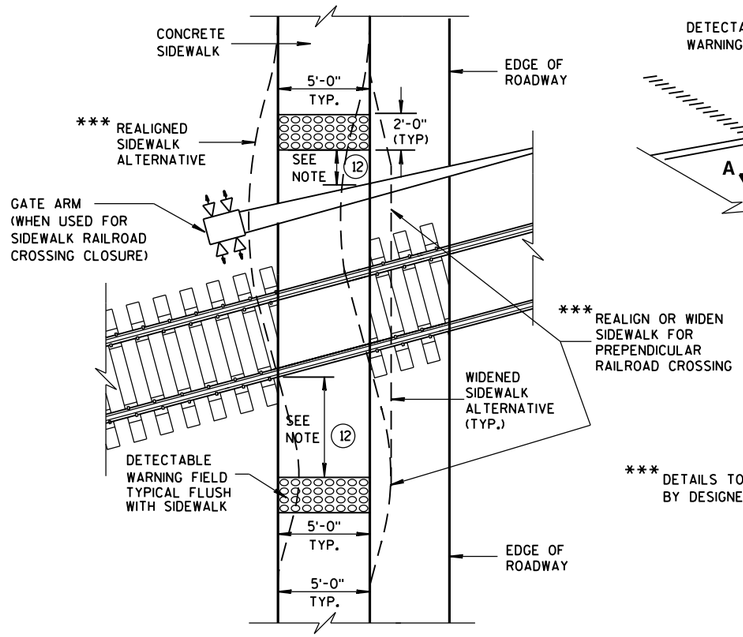
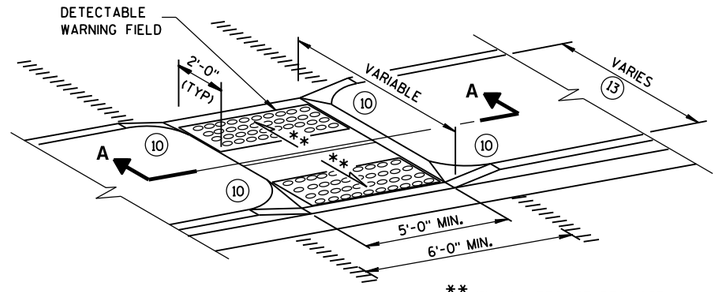
S.D.D. 8 D 5-16d



TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING

*** DETAILS TO BE DETERMINED BY DESIGNER



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.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

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

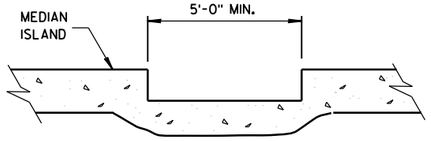
(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

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

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

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

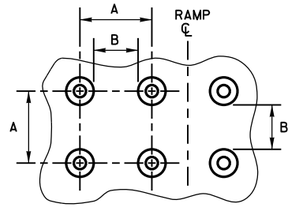
(13) DO NOT INSTALL DETECTABLE WARNING FIELDS IF MEDIAN WIDTH BETWEEN BACK OF CURBS IS LESS THAN 6 FEET.



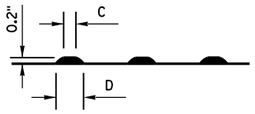
SECTION A-A

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

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

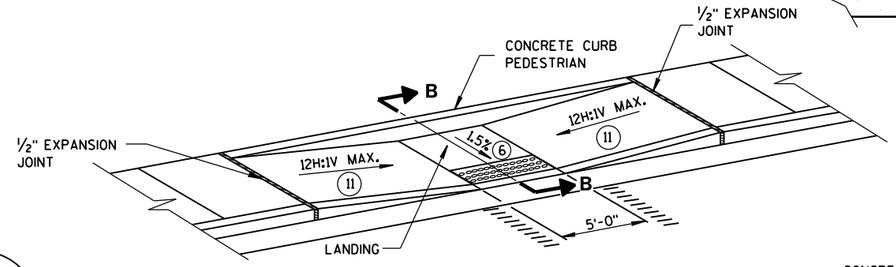


PLAN VIEW

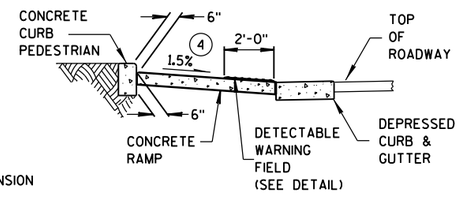


ELEVATION VIEW

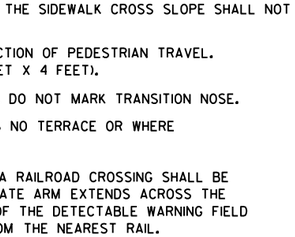
TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



MID-BLOCK CROSSING
TYPE 7A



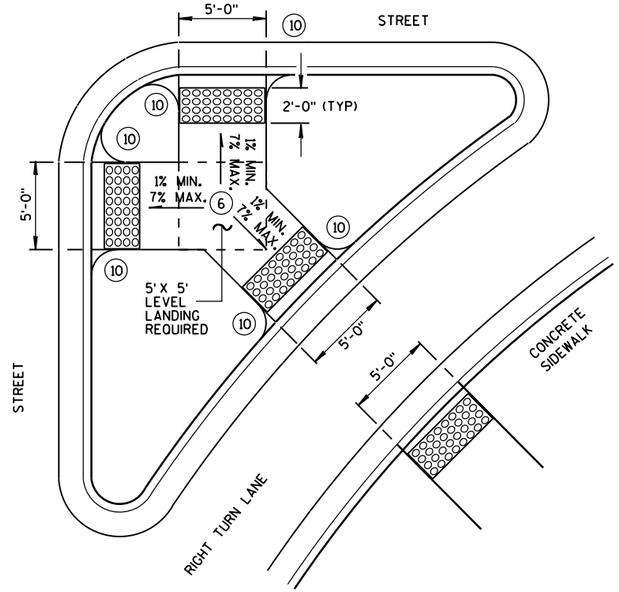
SECTION B-B



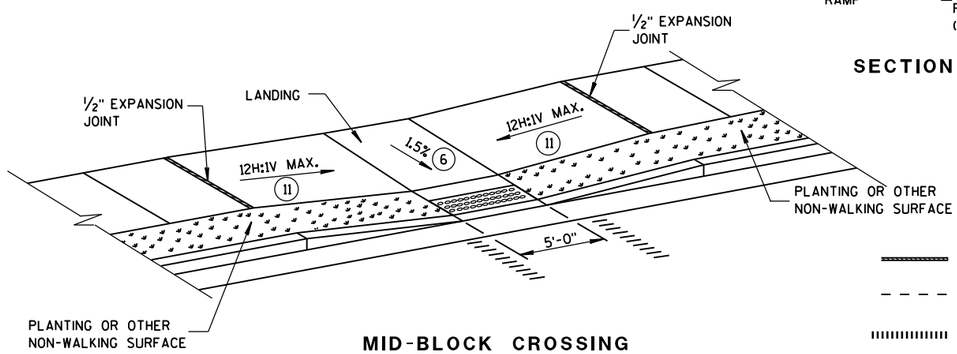
PLAN VIEW

DETECTABLE WARNING FIELD (TYPICAL)

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



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

- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

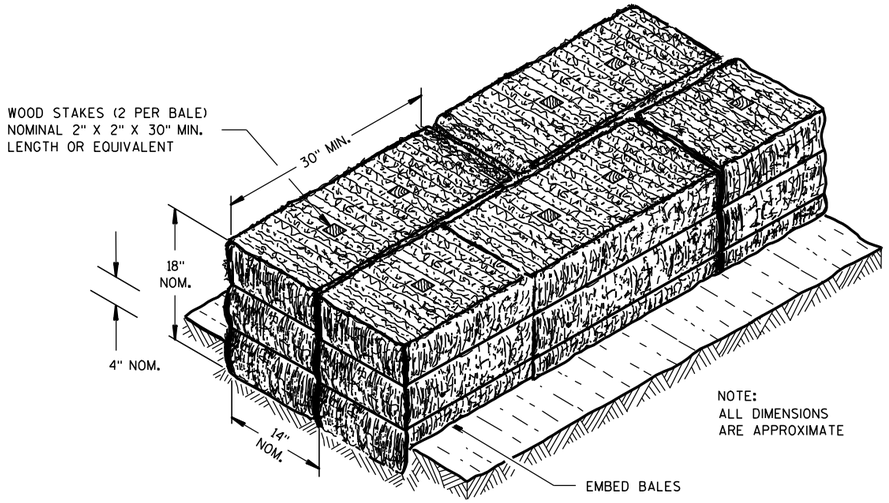
CURB RAMPS
TYPES 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

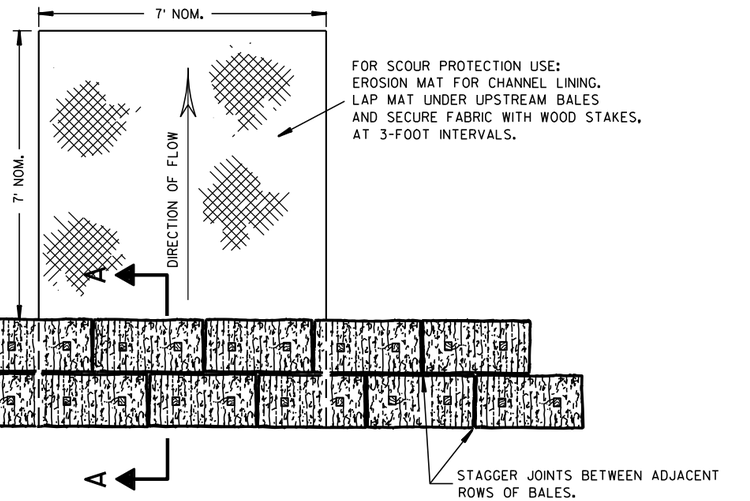
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

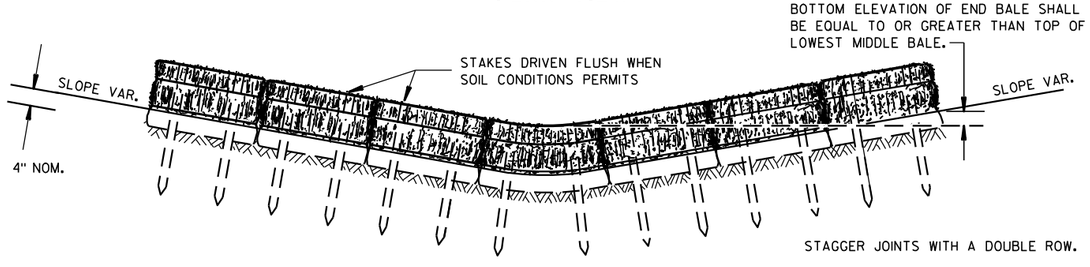
S.D.D. 8 D 5-16e



SECTION A-A



PLAN VIEW



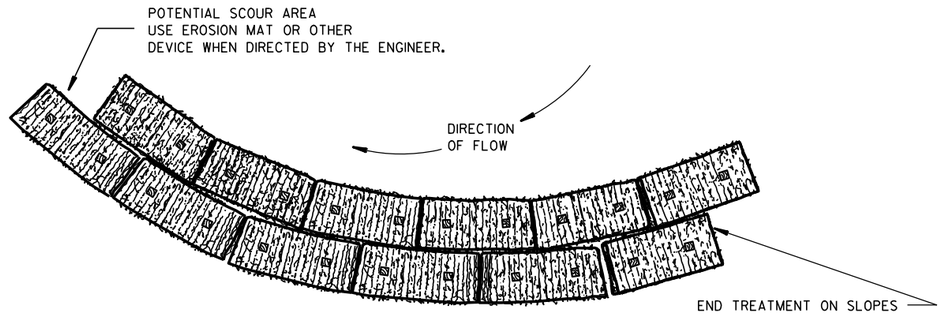
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

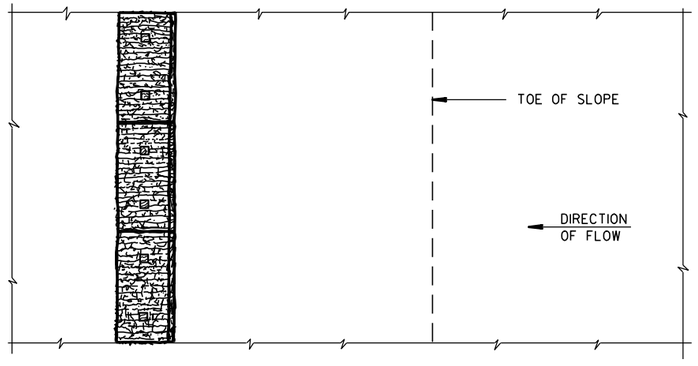
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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.

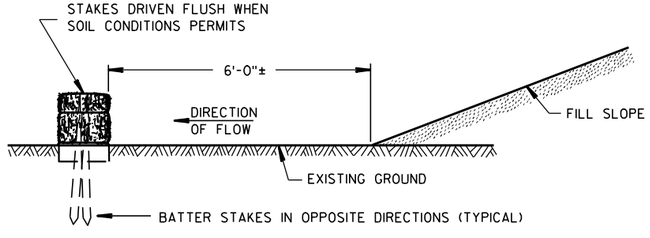


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

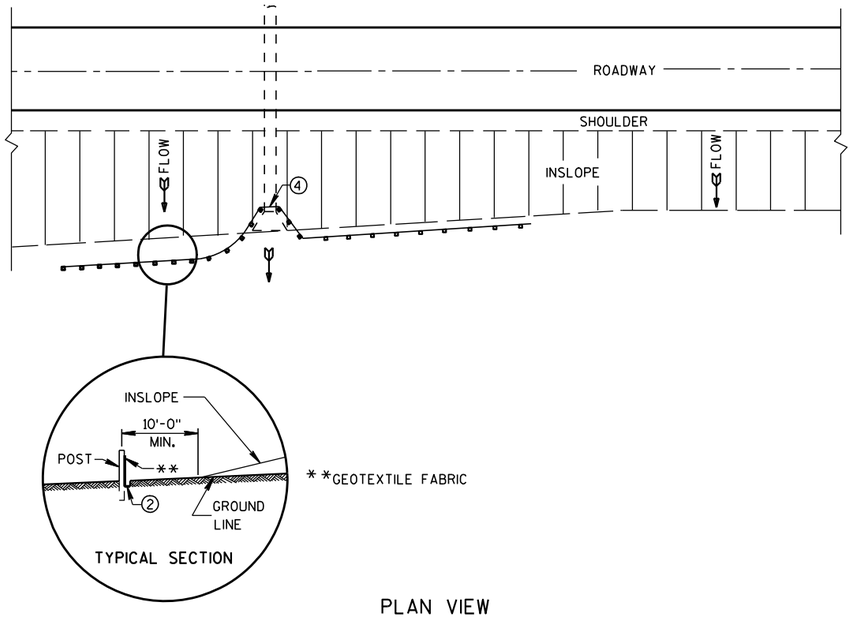
WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

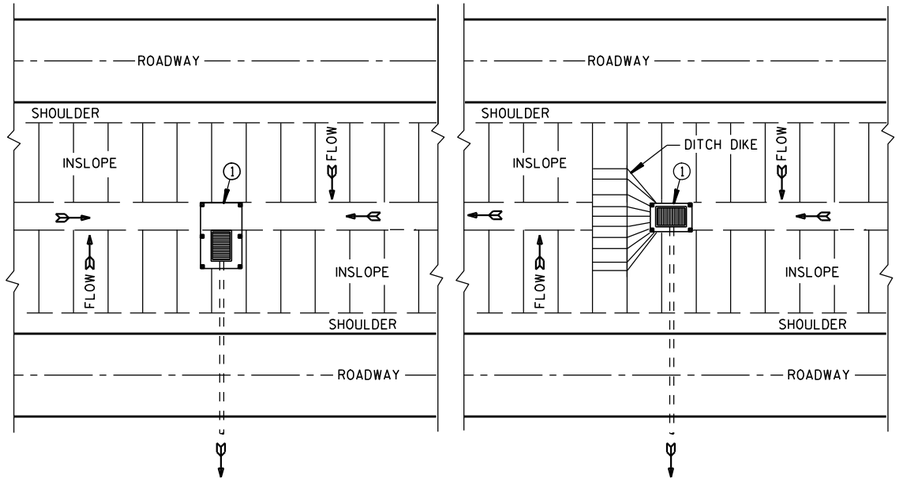
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



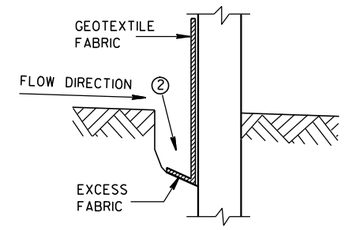
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

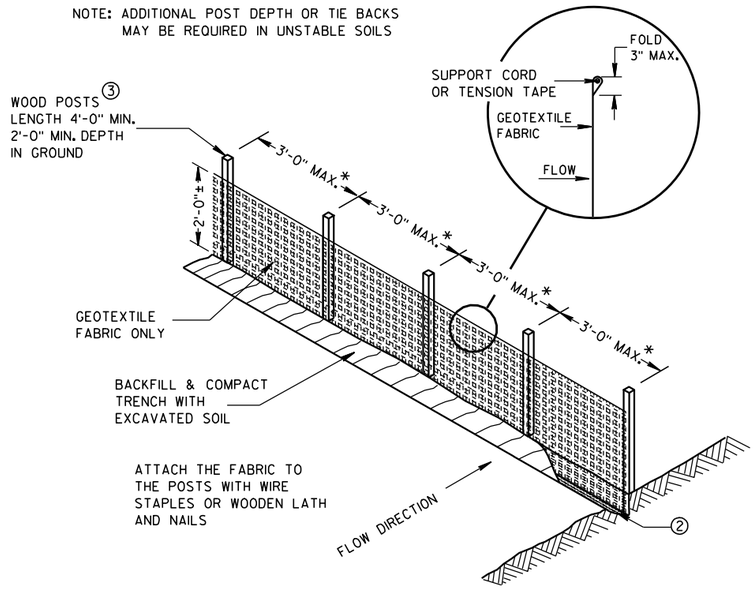
GENERAL NOTES

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

1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.

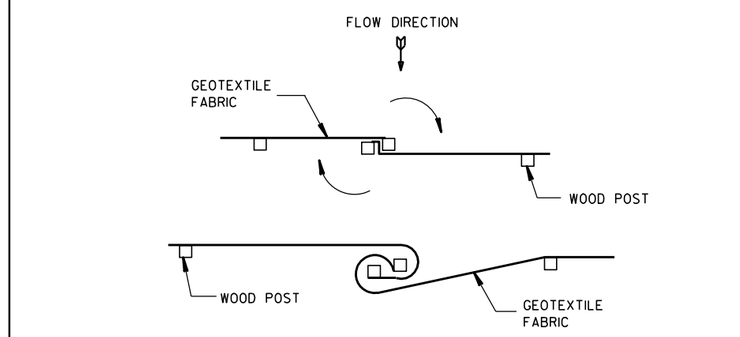


TRENCH DETAIL

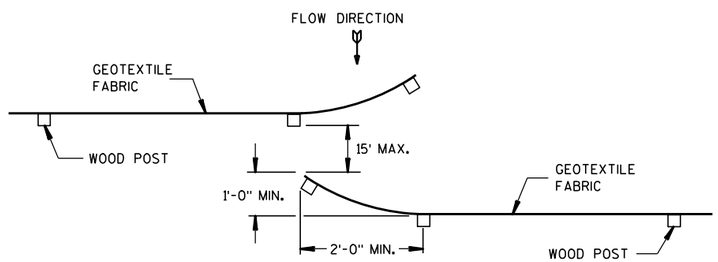


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

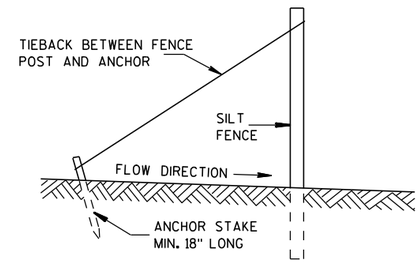


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 8 E 9-6

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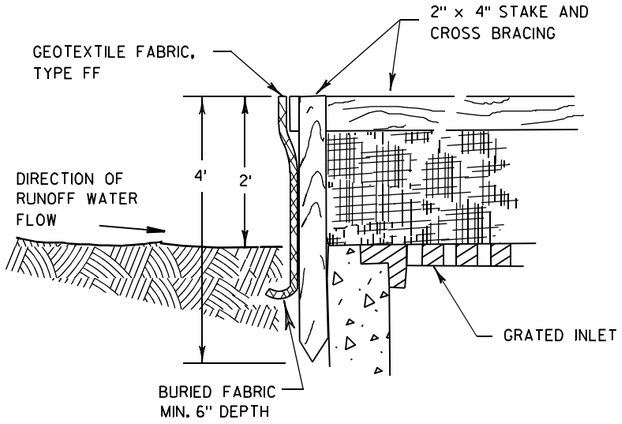
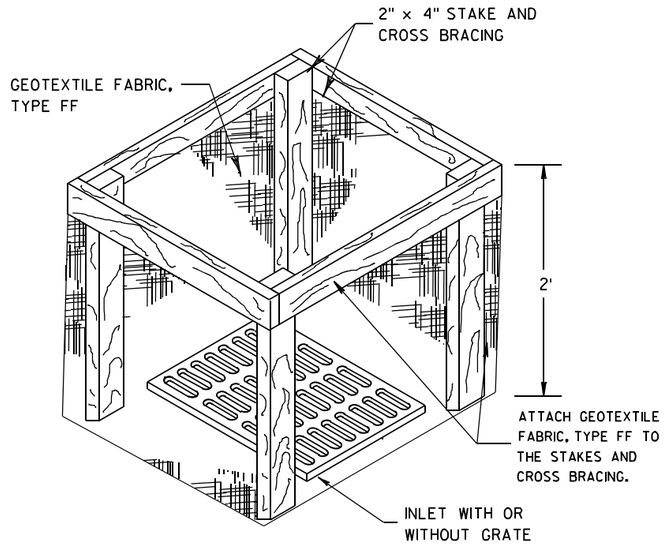
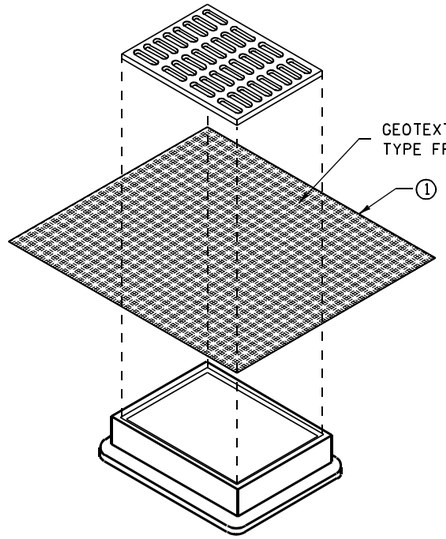
S.D.D. 8 E 9-6



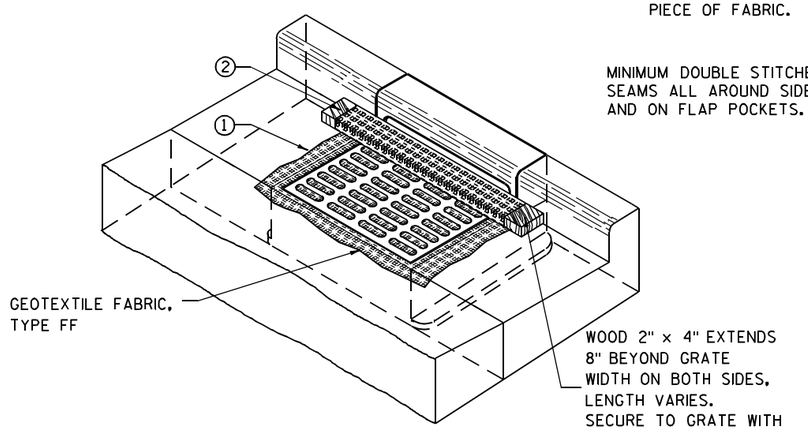


INLET PROTECTION, TYPE A

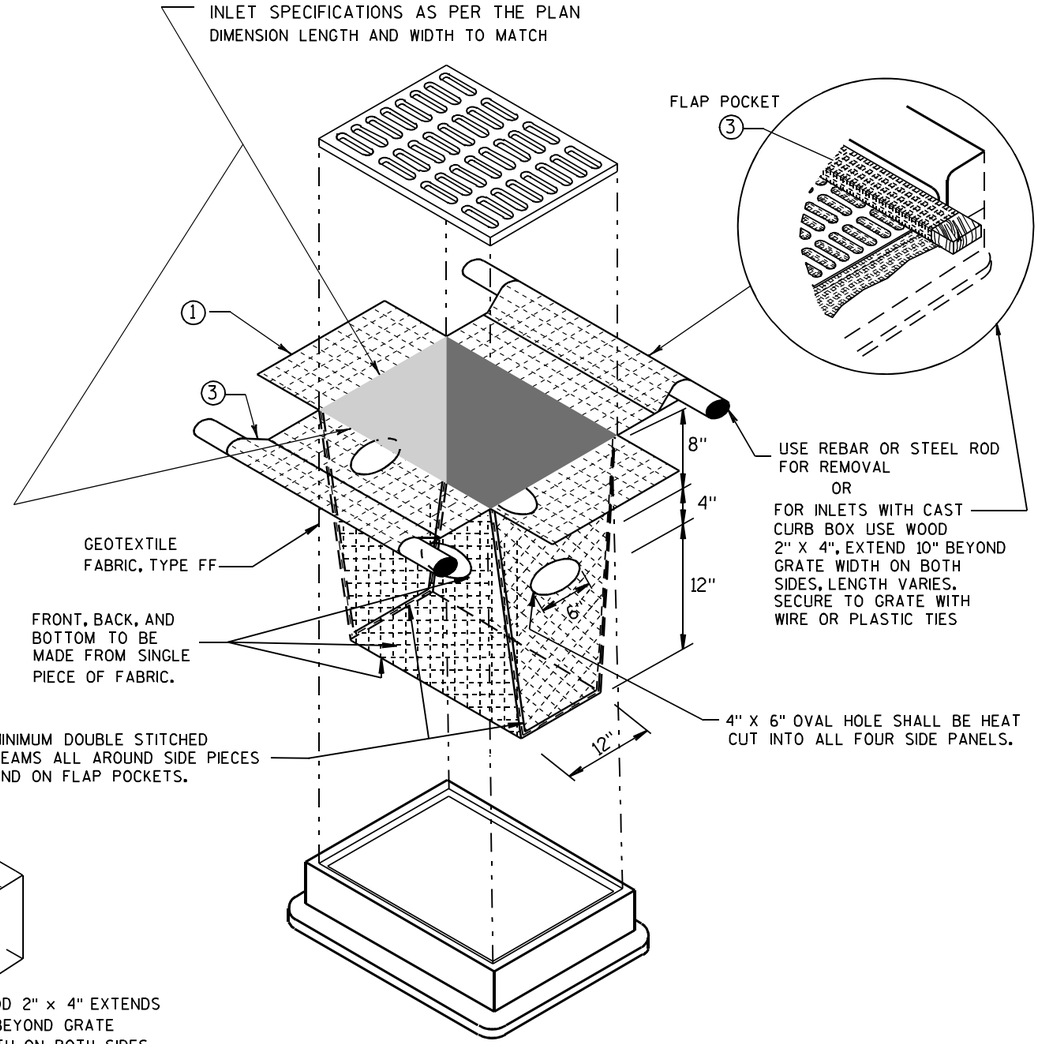


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

GENERAL NOTES

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

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

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

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

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

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

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

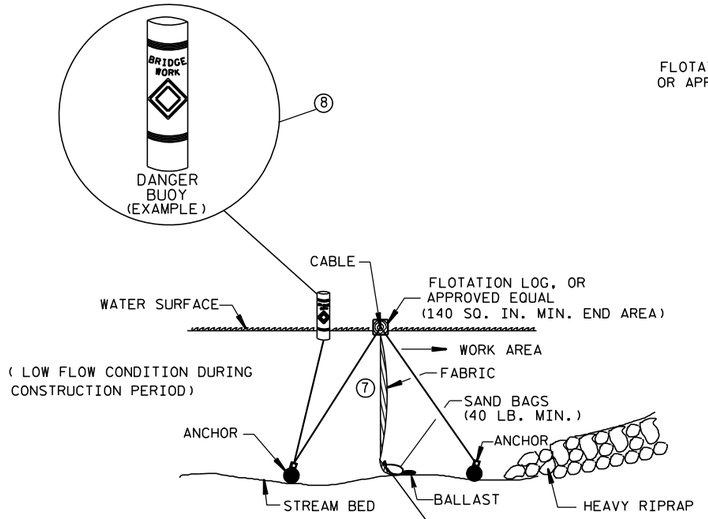
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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

INLET PROTECTION
TYPE A, B, C, AND D

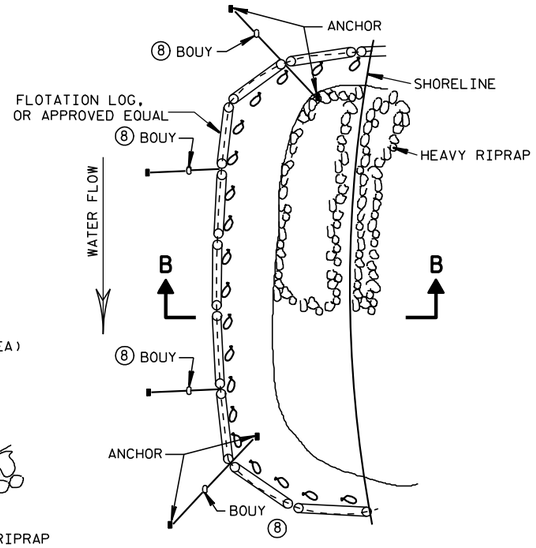
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

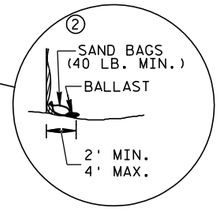
APPROVED
10/16/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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

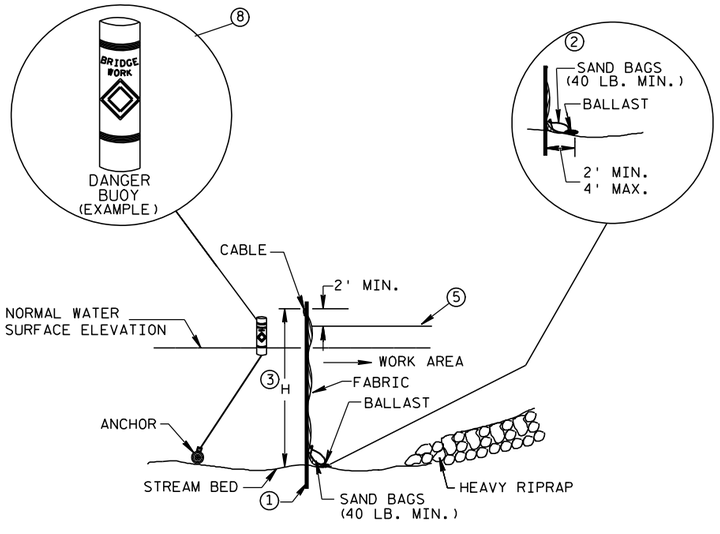


SECTION B-B

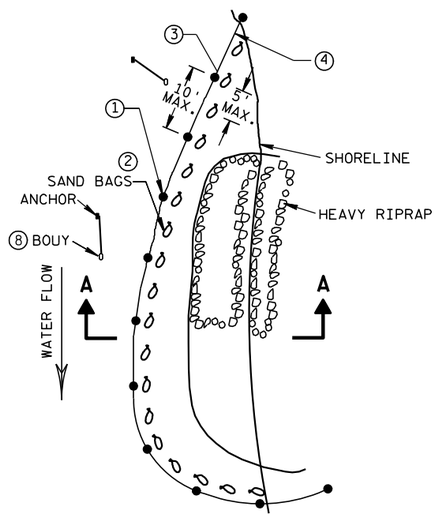




TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



SECTION A-A



PLAN VIEW

TURBIDITY BARRIER STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS

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.

TURBIDITY BARRIER MAY BE REMOVED AT THE ENGINEERS DISCRETION, WHEN PERMANENT EROSION CONTROL MEASURES HAVE BEEN ESTABLISHED.

① DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.

② SANDBAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.

③ WHEN BARRIER HEIGHT, H, EXCEEDS 8 FT., POST SPACING MAY NEED TO BE DECREASED.

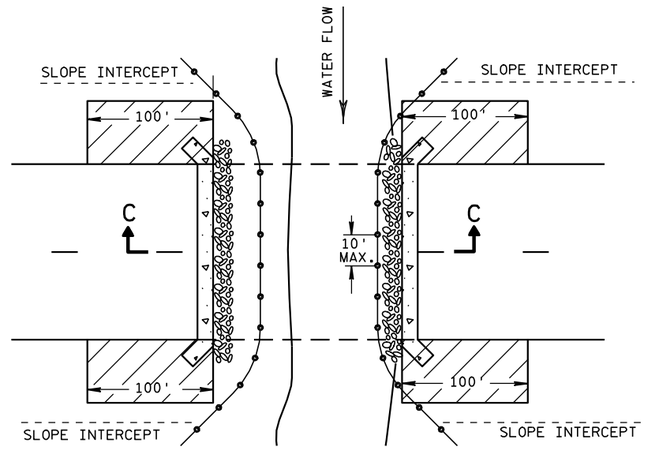
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MIMIMUM BARRIER HEIGHT SHALL BE 2'GREATER THAN EITHER THE O2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WICHEVER IS GREATER.

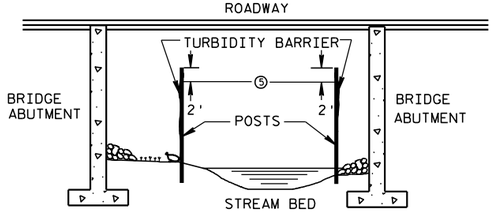
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

⑦ ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.

⑧ USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



PLAN VIEW



SECTION C-C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

METAL APRON ENDWALLS

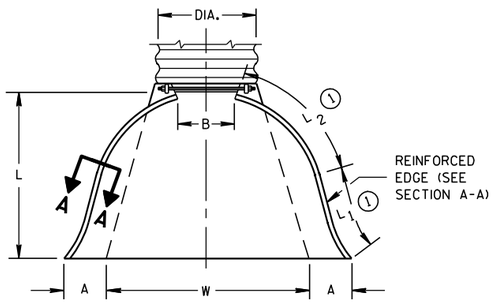
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

× EXCEPT CENTER PANEL SEE GENERAL NOTES

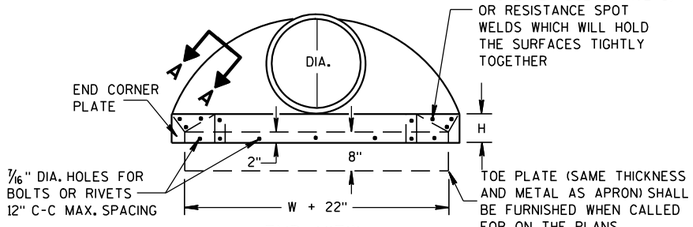
REINFORCED CONCRETE APRON ENDWALLS

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

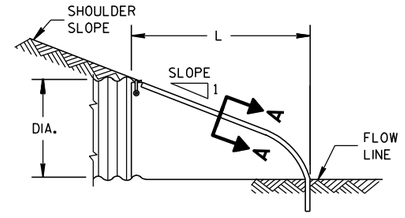
*MINIMUM
**MAXIMUM



PLAN VIEW

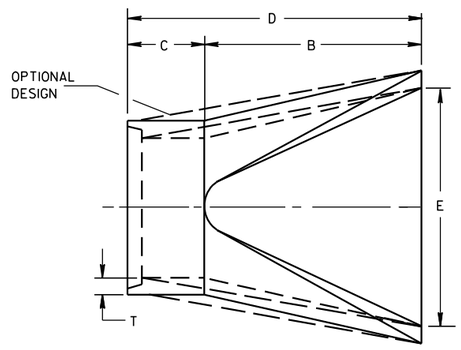


END VIEW

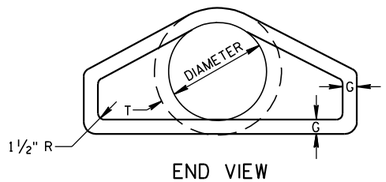


SIDE ELEVATION

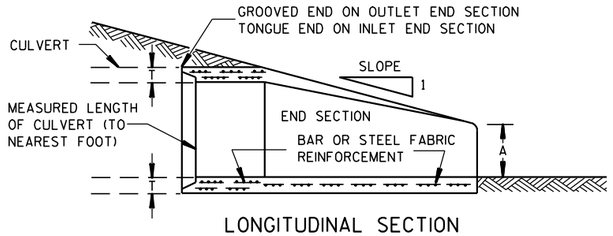
METAL ENDWALLS



PLAN

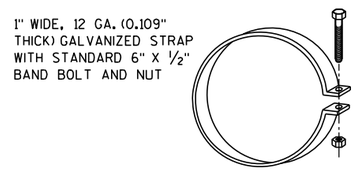


END VIEW



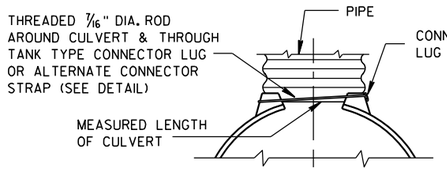
LONGITUDINAL SECTION

CONCRETE ENDWALLS

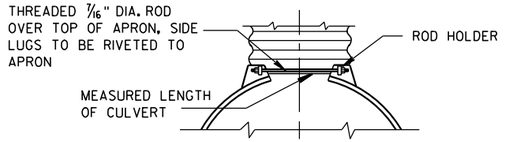


ALTERNATE FOR TYPE 1 CONNECTION

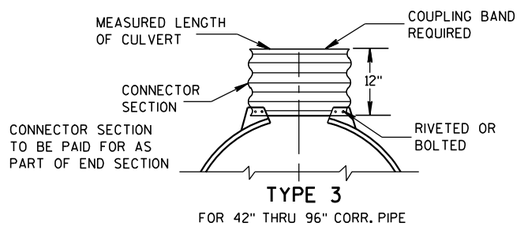
END SECTION CONNECTOR STRAP



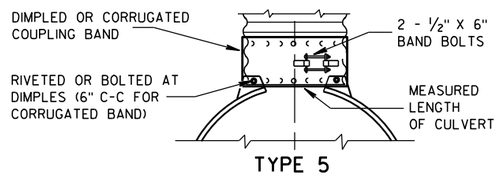
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

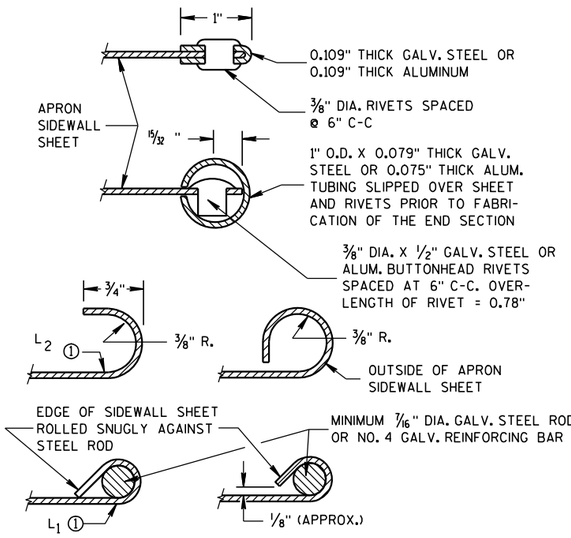
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

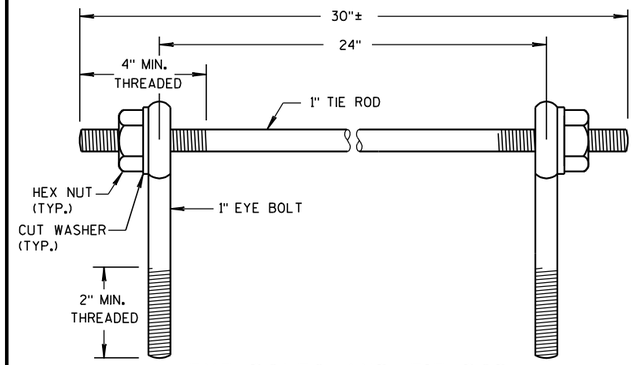
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

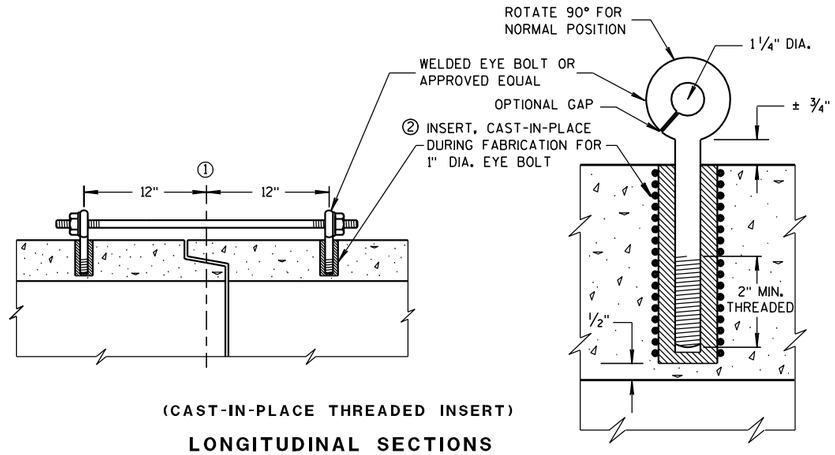
APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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.

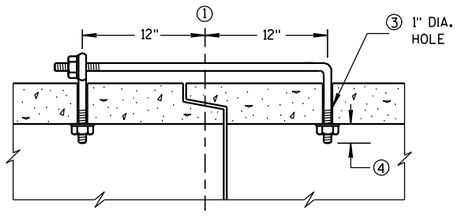
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

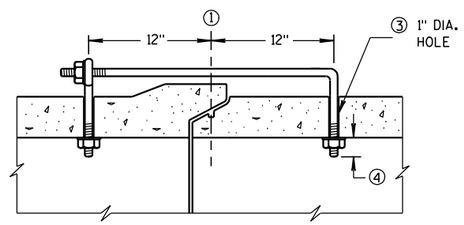
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

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)

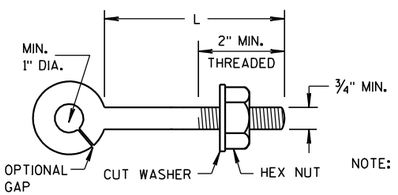


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

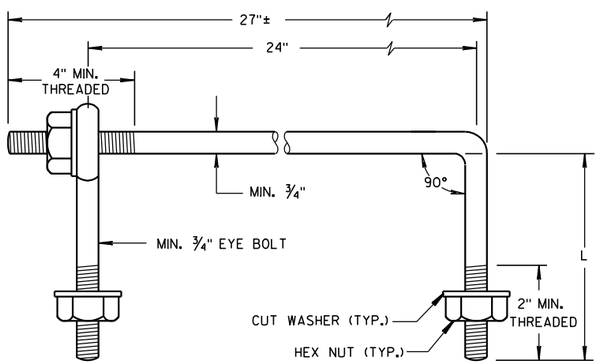
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

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



EYE BOLT AND TIE ROD

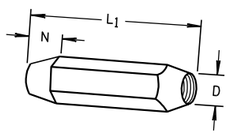
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

ADJUSTABLE TIE ROD TABLE

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

DIMENSIONS SHOWN ARE IN INCHES



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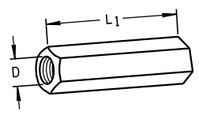
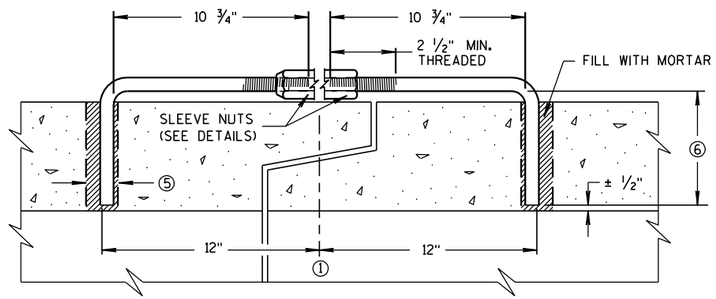


PLAIN

RIGHT AND LEFT THREADS

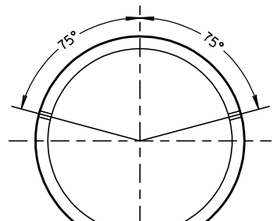
SLEEVE NUTS



LONGITUDINAL SECTION

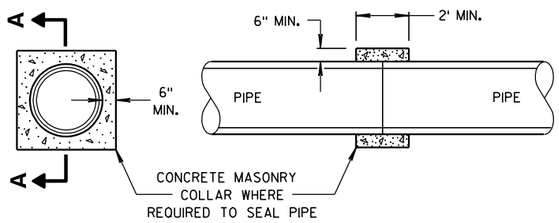
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

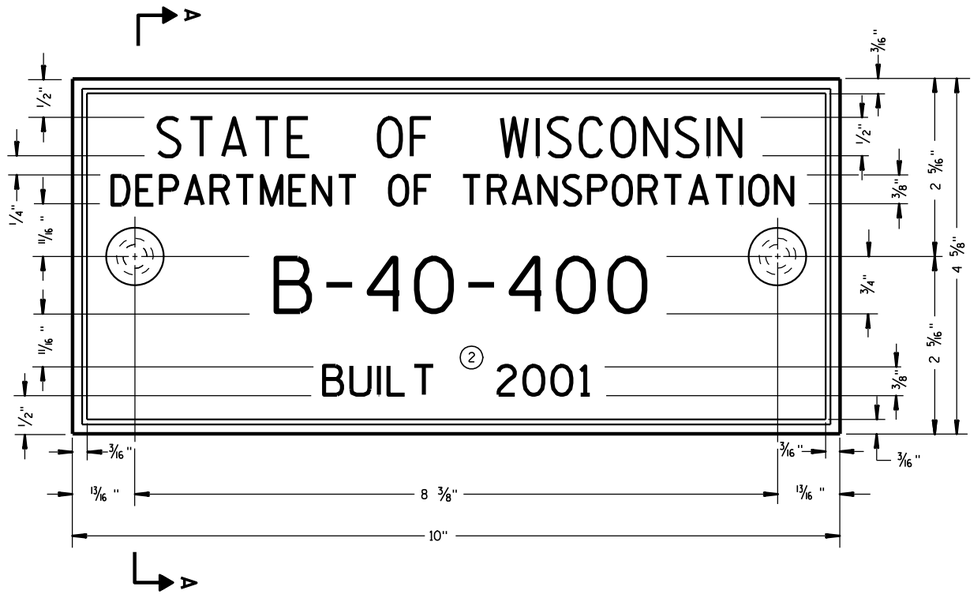
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
48
FHWA

6

S.D.D. 8 F 4-7

6

S.D.D. 8 F 4-7



TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)

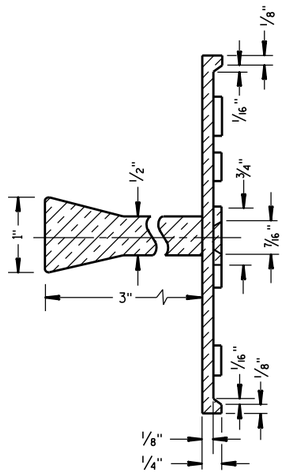
GENERAL NOTES

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

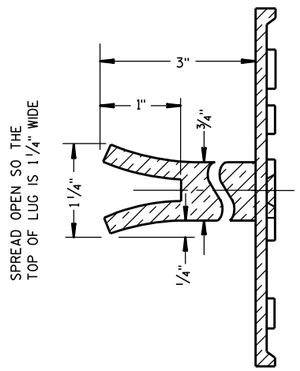
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

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



SECTION A-A



ALTERNATE LUG

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

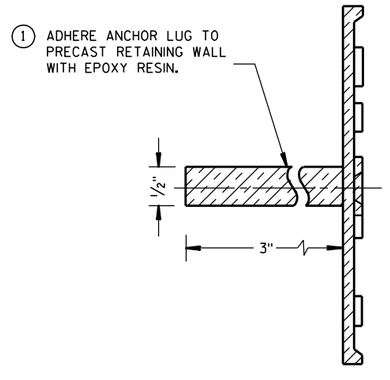
COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

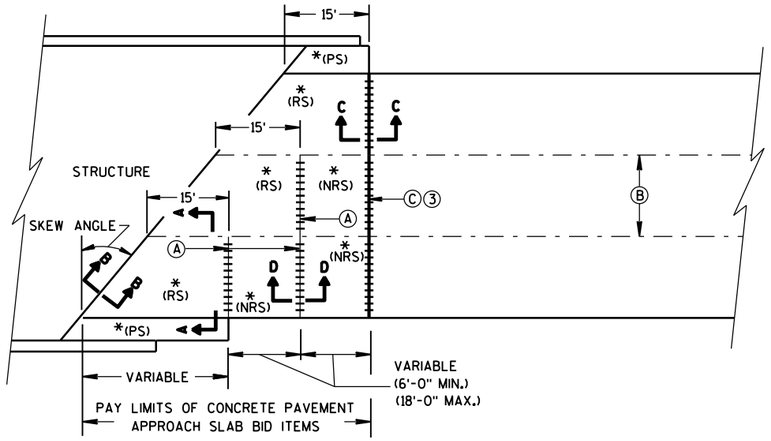
3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER

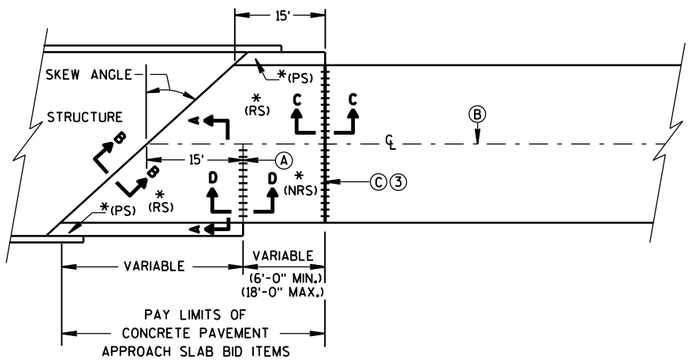
FHWA

6

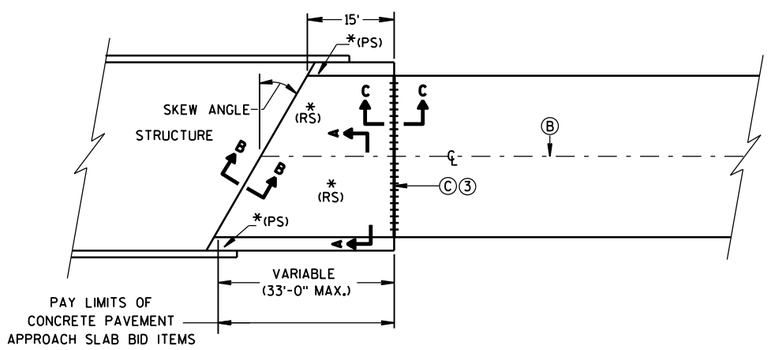
S.D.D. 12 A 3-10



SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >20°
(PAVEMENT WIDTH ≤30')



SKEWS ≤20°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

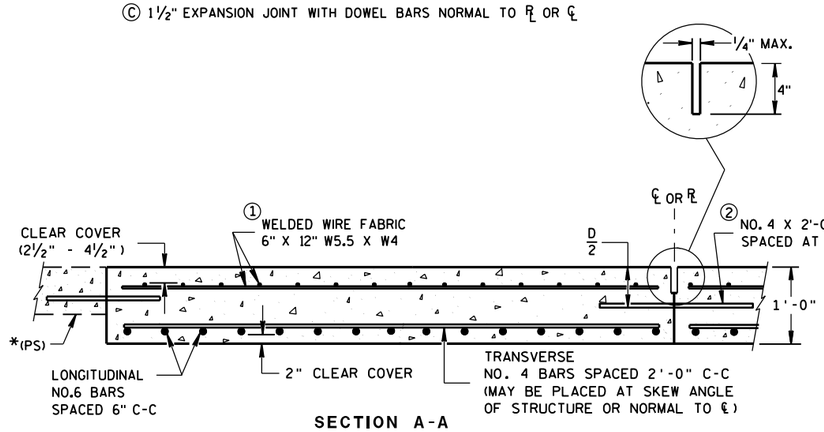
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
(SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

***STANDARD DOWEL BAR DIAMETER
(SEE SDD 13C11, & SDD 13C13)

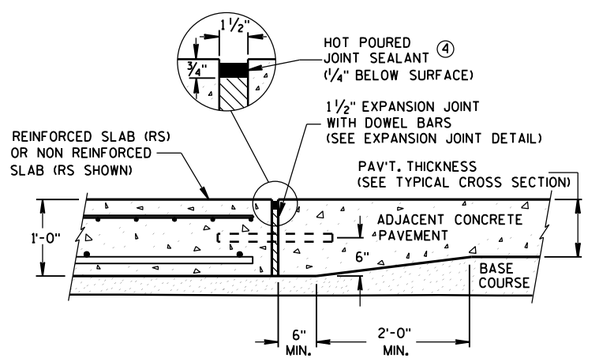
Ⓐ STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄

Ⓑ STANDARD LONGITUDINAL JOINT WITH TIE BARS.

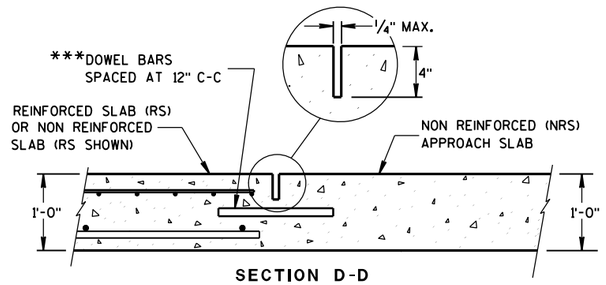
Ⓒ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



SECTION D-D
CONTRACTION JOINT

GENERAL NOTES

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.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

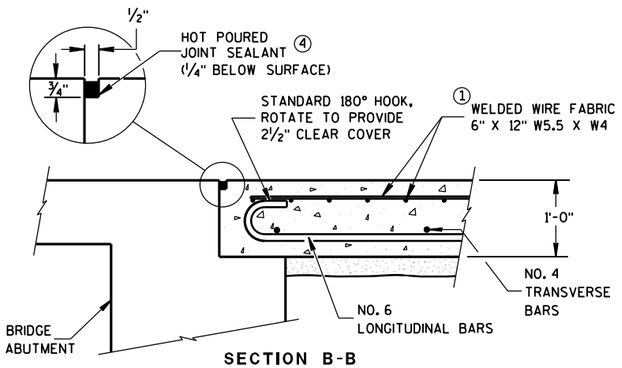
① THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

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

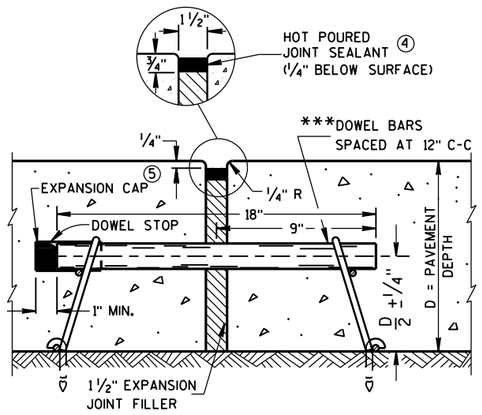
③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

④ USE A JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM D6690.

⑤ PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.



SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT



EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE
/S/ Peter Kemp, P.E.
PAVEMENT SUPER
FHWA

6

S.D.D. 13 B 2-8a

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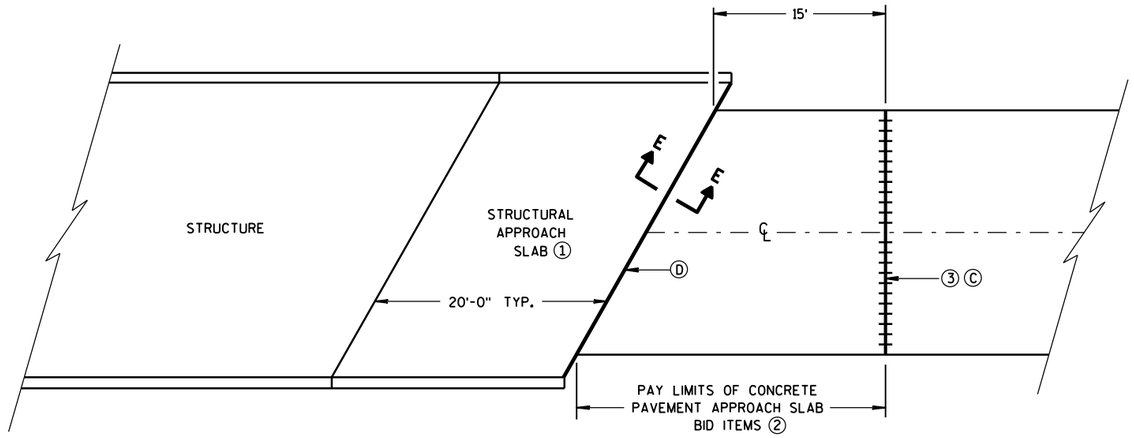
S.D.D. 13 B 2-8a



GENERAL NOTES

ALL PROJECTS THAT INVOLVE A STRUCTURAL APPROACH SLAB WILL ALSO HAVE A CONCRETE PAVEMENT APPROACH SLAB.

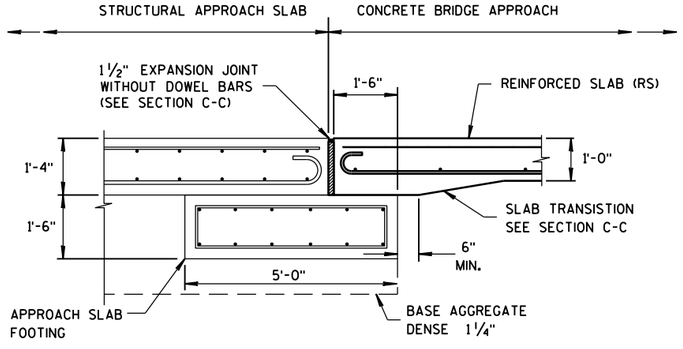
① SEE BRIDGE PLAN.

② CONFORM TO SHEET 13 B 2(A) FOR CONCRETE PAVEMENT APPROACH SLAB DETAILS.

③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

Ⓒ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄

Ⓓ 1½" EXPANSION JOINT (NO DOWELS)



SECTION E-E

FOOTING DETAIL

STRUCTURAL APPROACH SLAB TO CONCRETE BRIDGE APPROACH

STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June, 2015 — DATE

/S/ Peter Kemp, P.E. — PAVEMENT SUPERV

FHWA

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S.D.D. 13 B 2-8b

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.

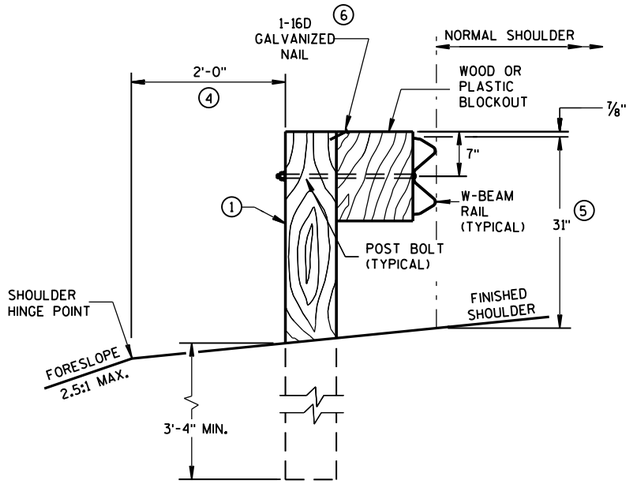
(2) USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

(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).

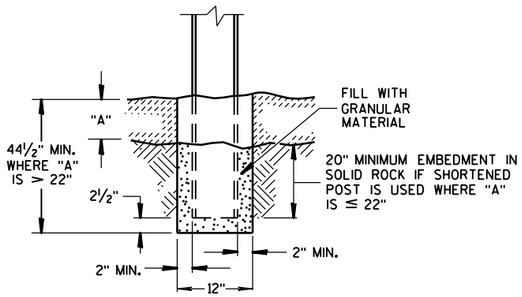
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

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



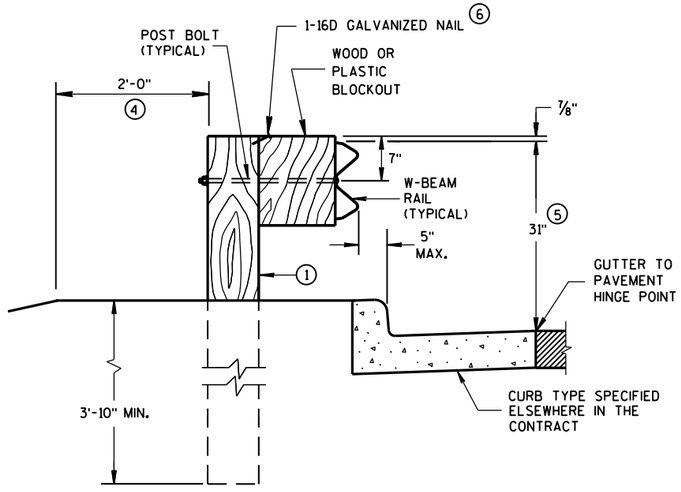
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



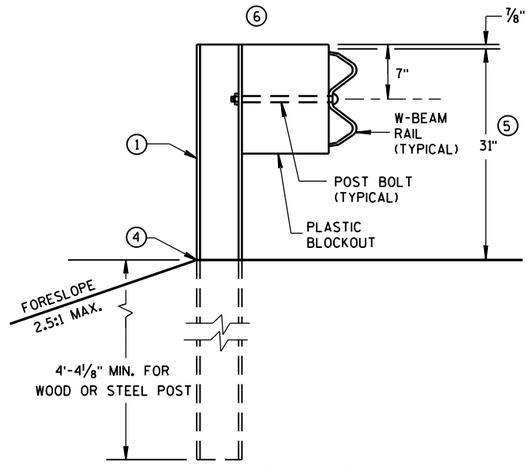
END VIEW

SETTING STEEL OR WOOD POST IN ROCK (3)



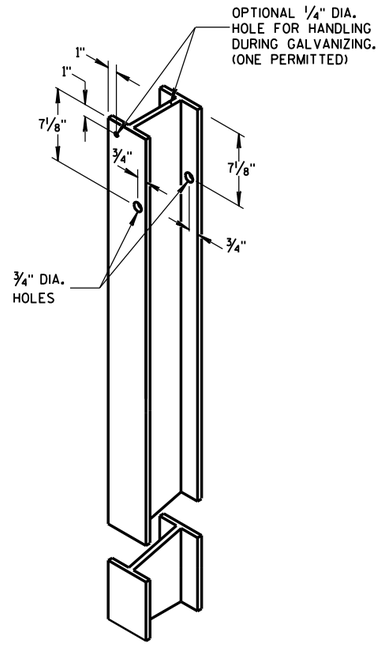
END VIEW

LOCATED ALONG A CURBED ROADWAY

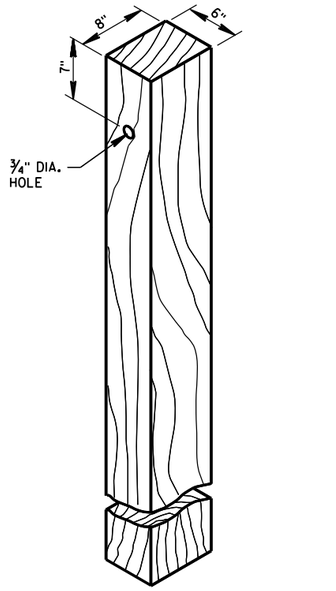


END VIEW

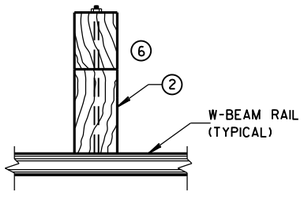
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



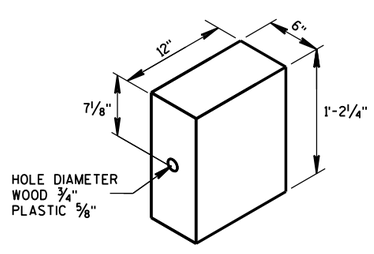
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) (1)



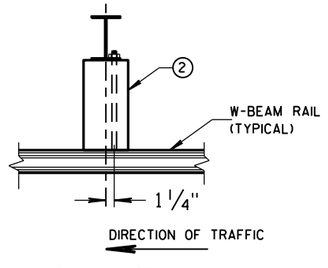
WOOD POST
(6" X 8") NOMINAL (1)



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT (2)



PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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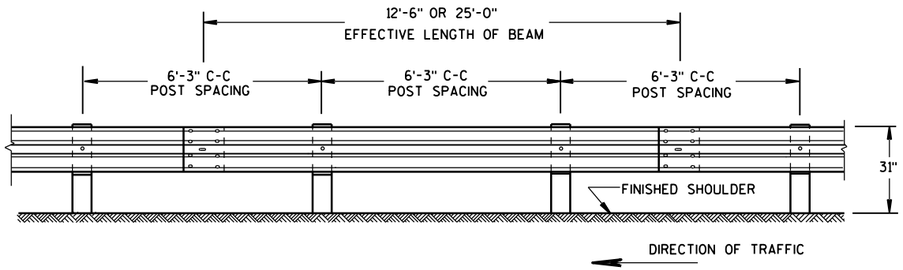
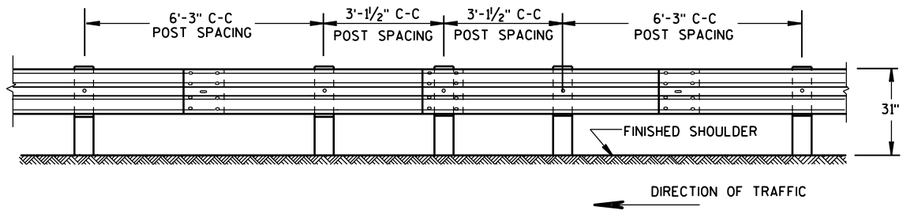
S.D.D. 14 B 42-3a



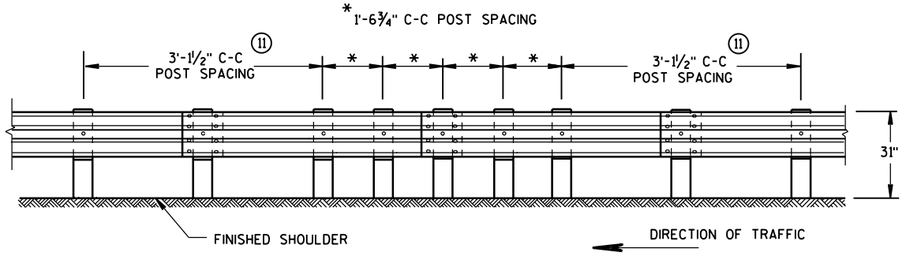
FRONT VIEW

POST SPACING STANDARD INSTALLATION



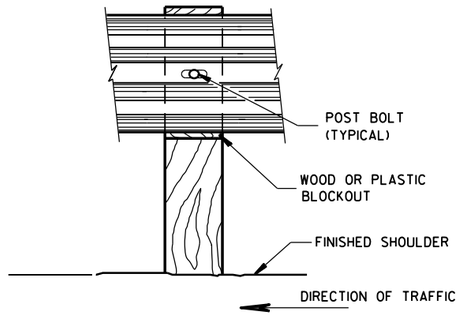
FRONT VIEW

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

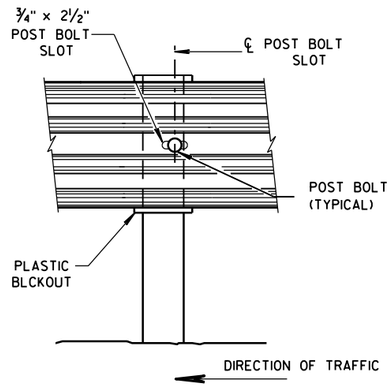


FRONT VIEW

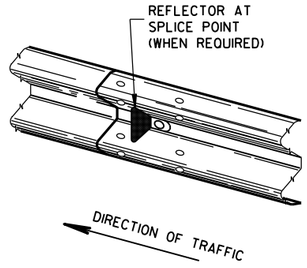
QUARTER POST SPACING (QS)

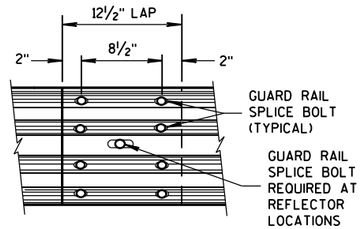


FRONT VIEW AT WOOD POST



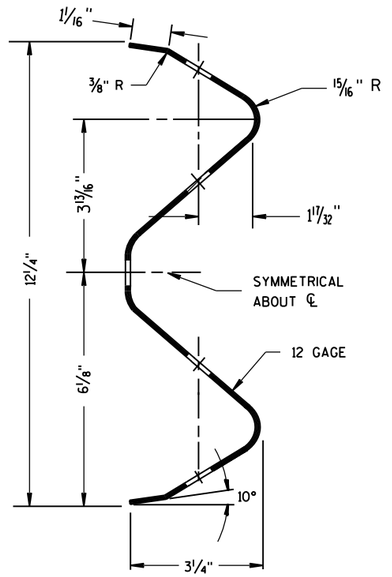
FRONT VIEW AT STEEL POST



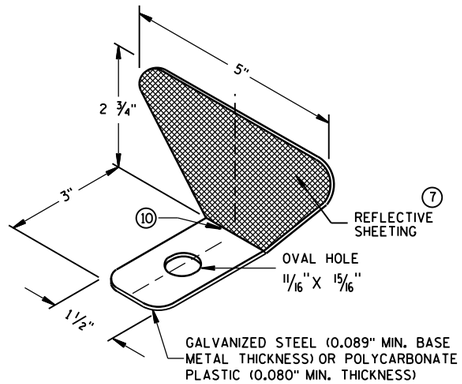


FRONT VIEW

MID-SPAN BEAM SPLICE



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION ⑦

GENERAL NOTES

⑦ PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.

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

⑨ REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.

⑩ PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.

⑪ 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.

REFLECTOR SPACING ⑧

	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 ⑨ 1	6
TWO WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	2 2 ⑩	3

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

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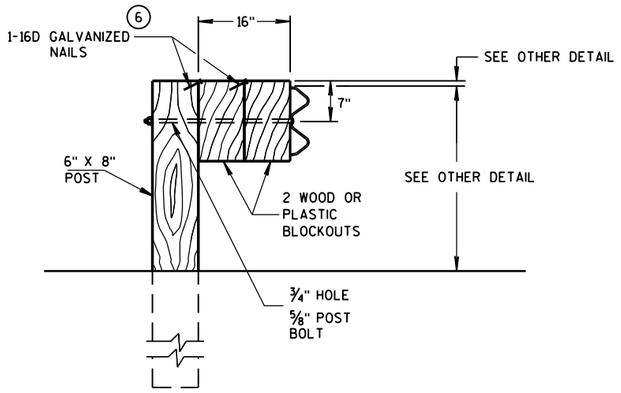
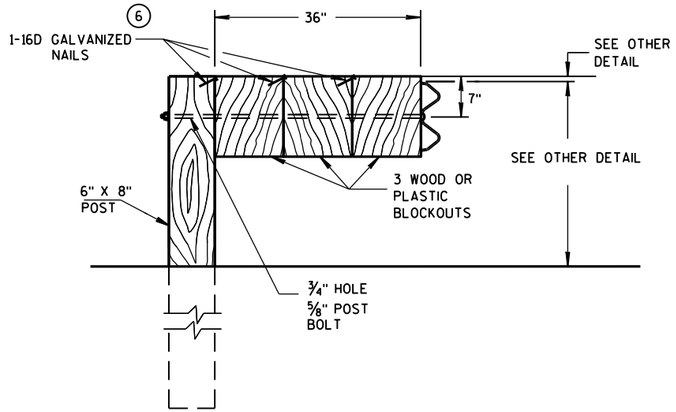


DETAIL FOR 16" BLOCKOUT DEPTH

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.

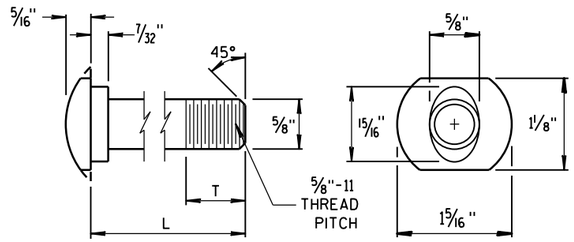


DETAIL FOR 36" BLOCKOUT DEPTH

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.

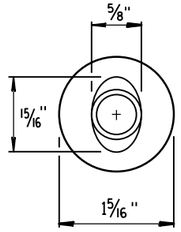
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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.

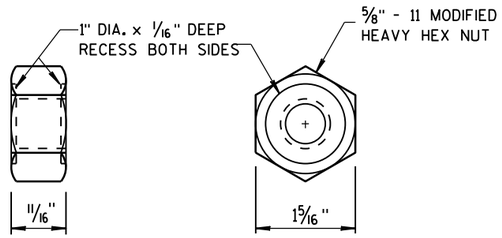


POST BOLT TABLE

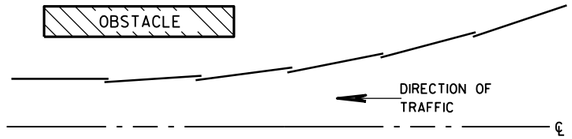
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

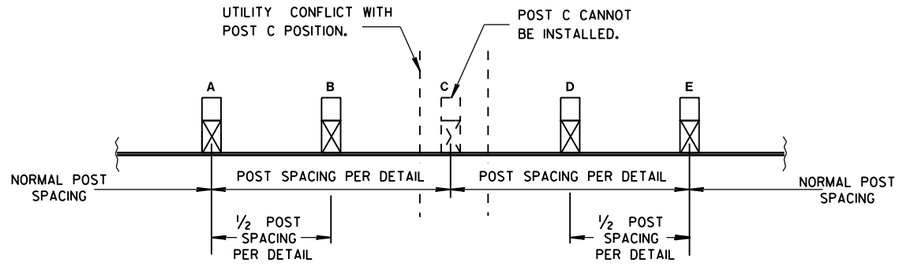


POST BOLT AND RECESS NUT

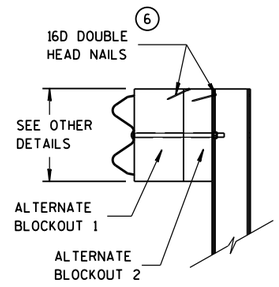


PLAN VIEW

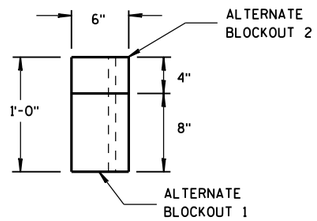
BEAM LAPPING DETAIL



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

6
S.D.D. 14 B 42-3c

GENERAL NOTES

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

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

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

(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.

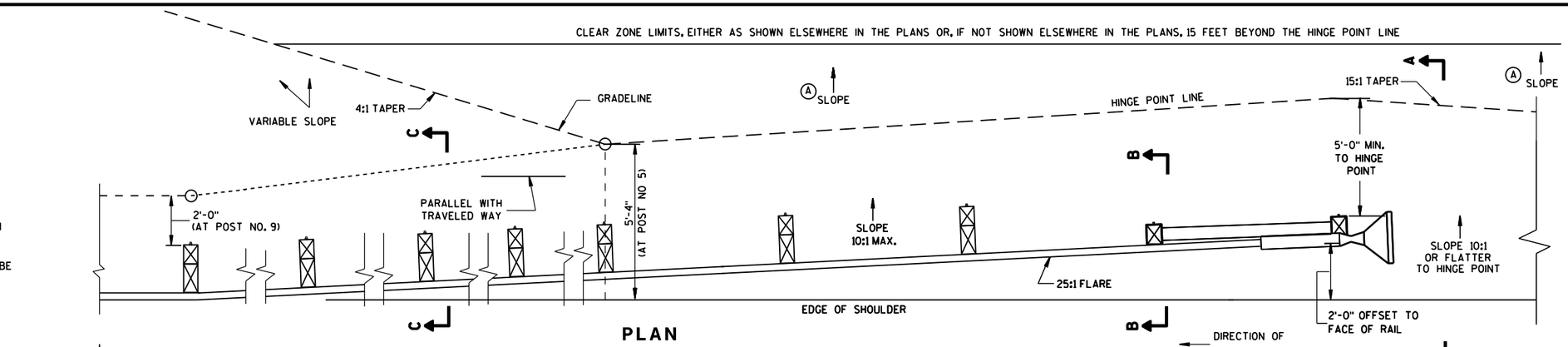
SEE SDD 14B42 FOR MORE INFORMATION.

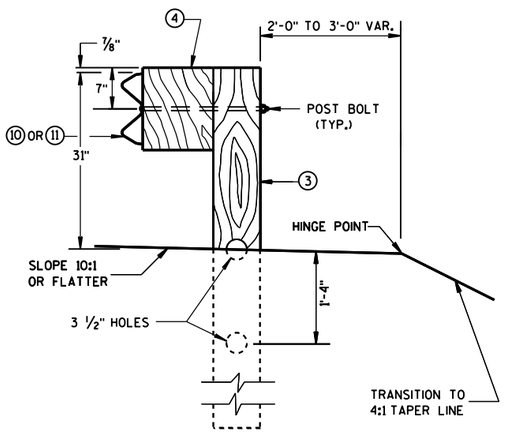
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

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

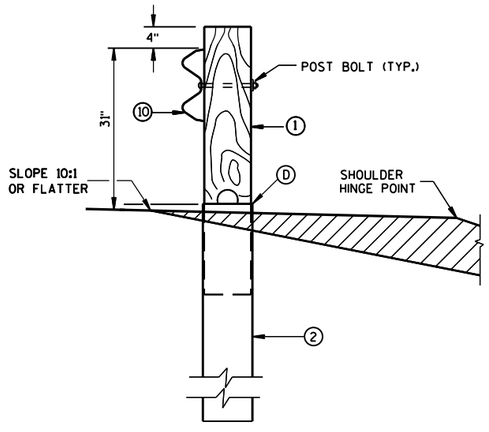
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE.

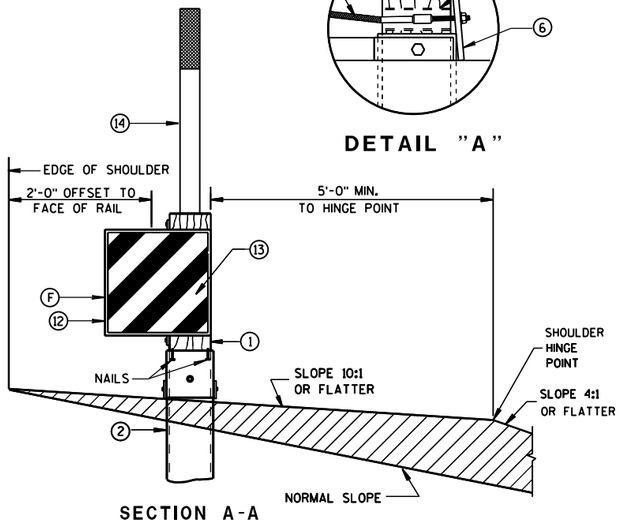




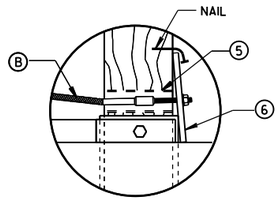
SECTION C-C
TYPICAL AT POST NOS. 3-9



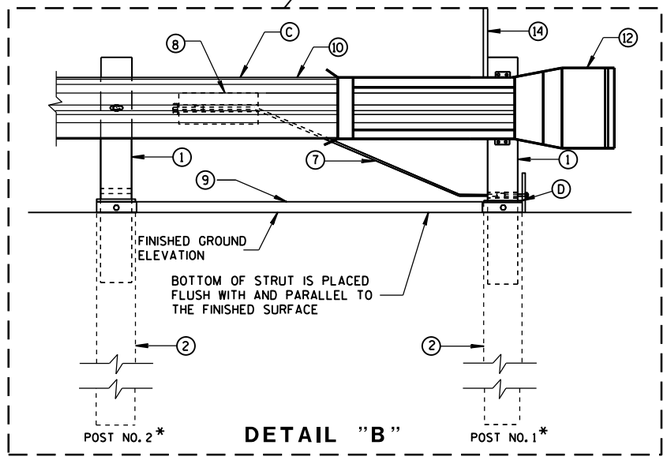
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



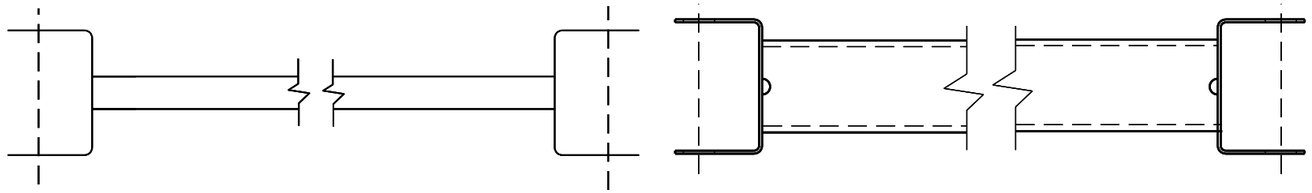
DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

S.D.D. 14 B 44-2a

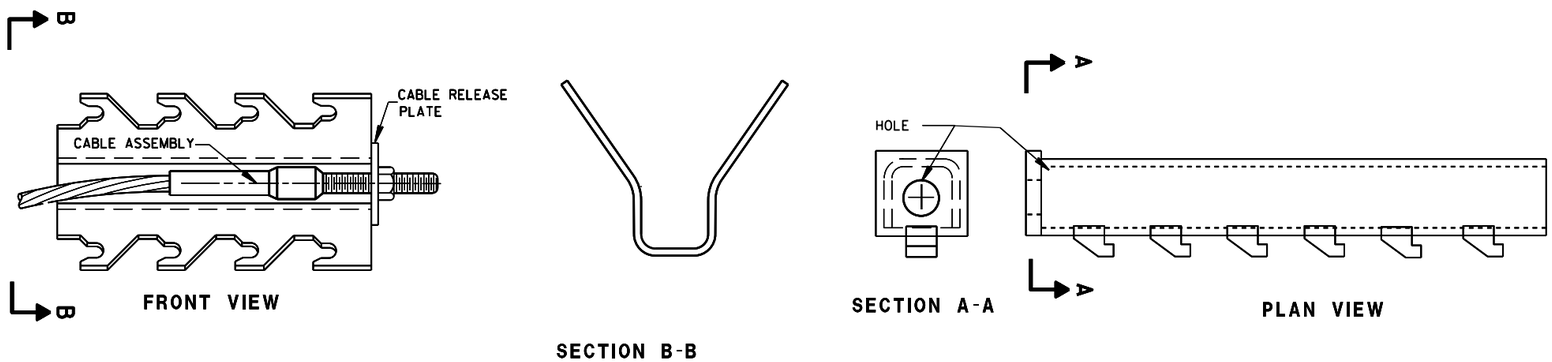
S.D.D. 14 B 44-2a



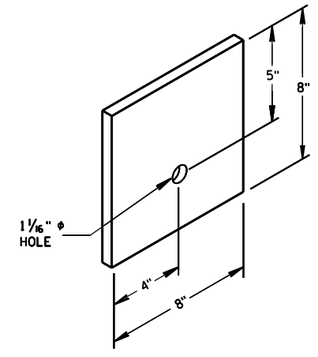
GENERIC GROUND STRUT (9) (H)

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 F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
(14)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



GENERIC ANCHOR CABLE BOX (8) (H)



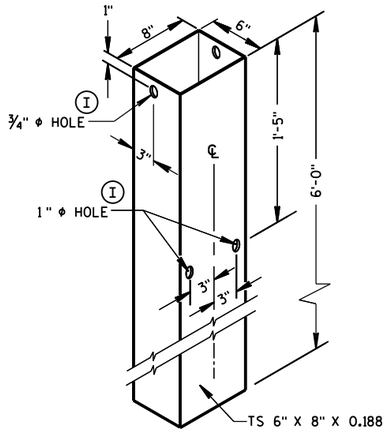
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

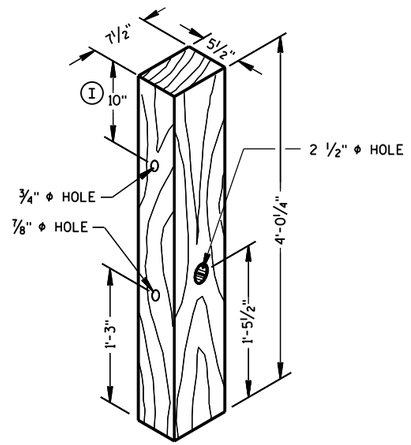
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 44-2b

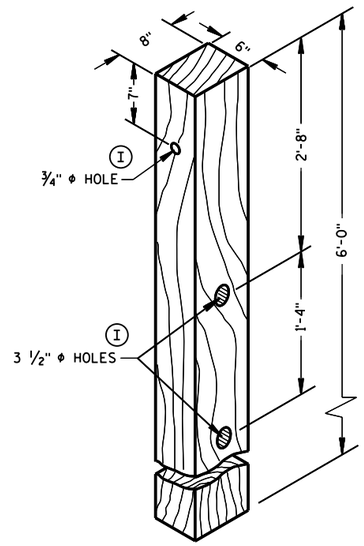


FOUNDATION TUBE (2)



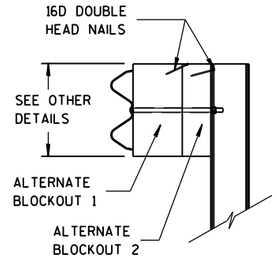
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

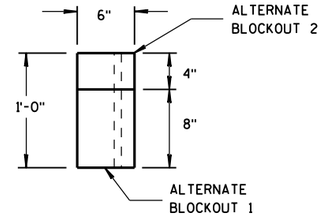


POSTS NUMBER 3-9

WOOD CRT POST (3)

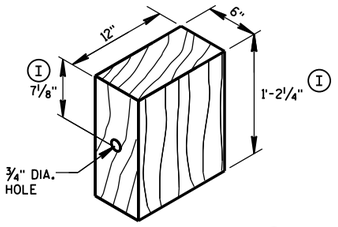


SIDE VIEW



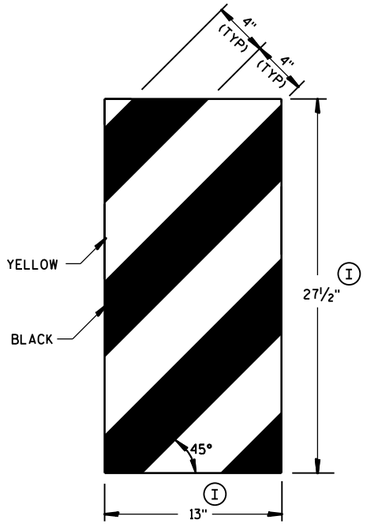
TOP VIEW

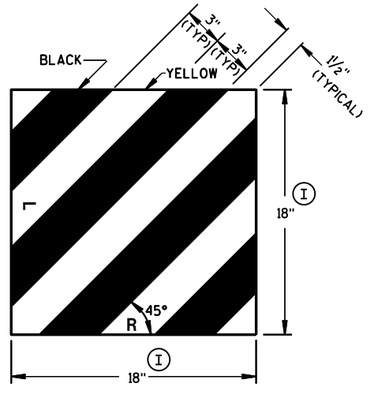
ALTERNATE WOOD BLOCKOUT DETAIL



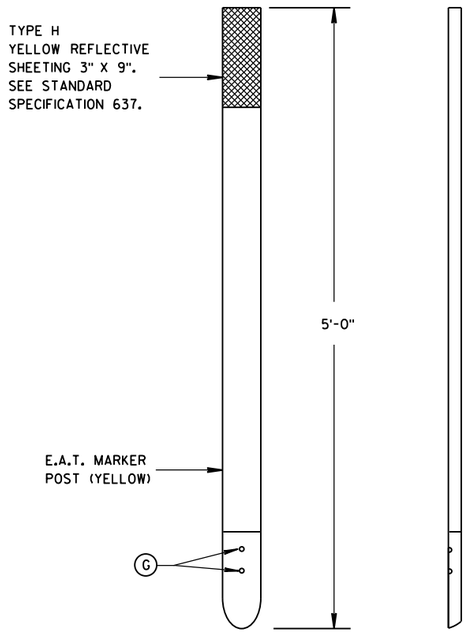
WOOD BLOCKOUT (4)

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





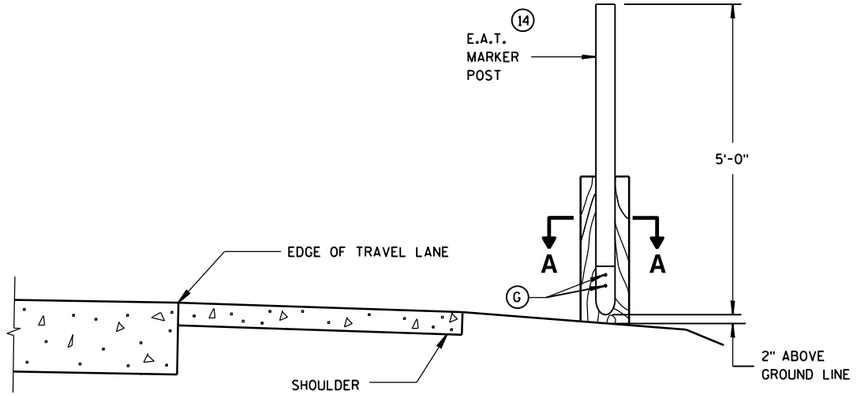
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

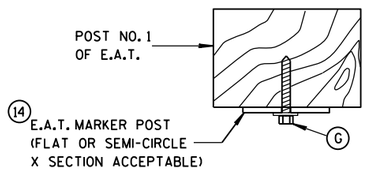
SIDE VIEW

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

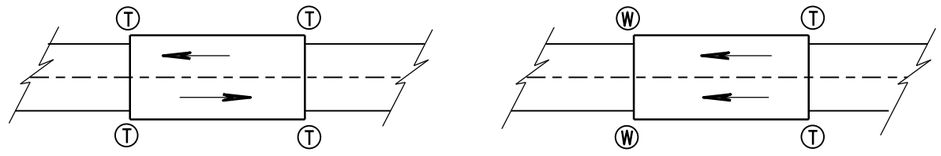
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 14 B 44-2c



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

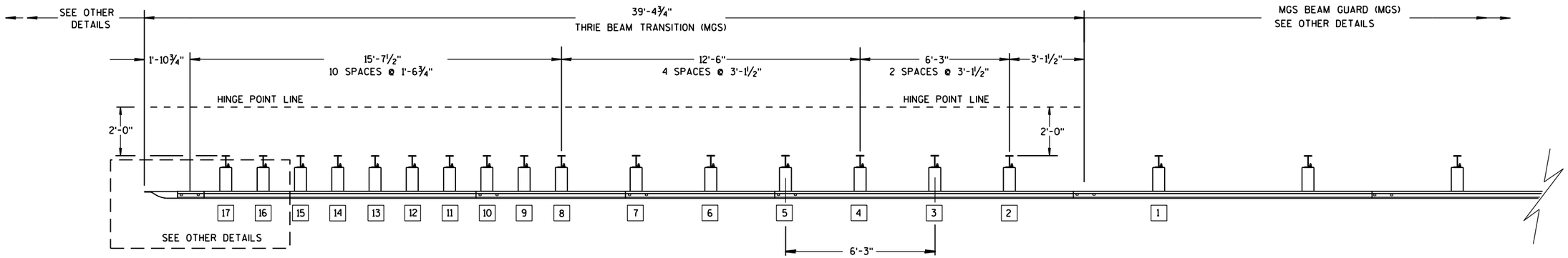
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

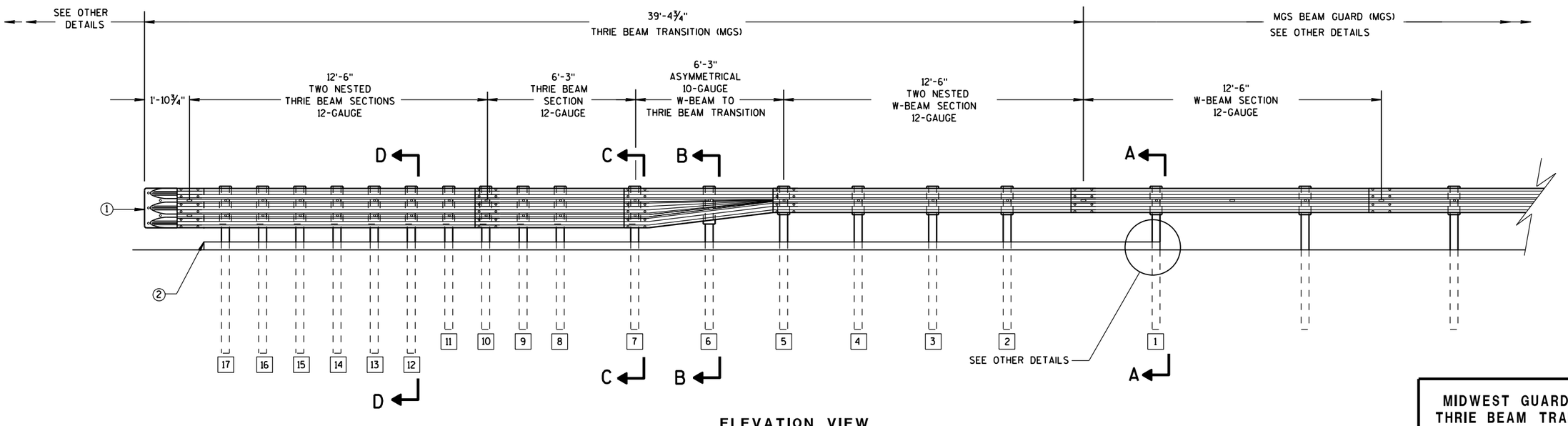
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

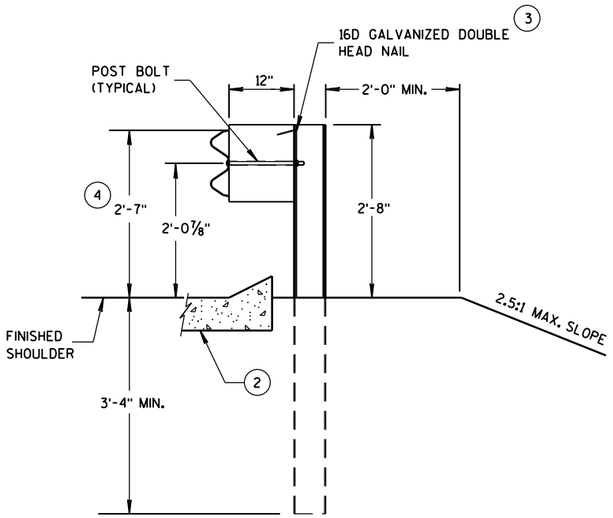
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

GENERAL NOTES

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE_FEATURE SEE PLAN FOR INFORMATION.

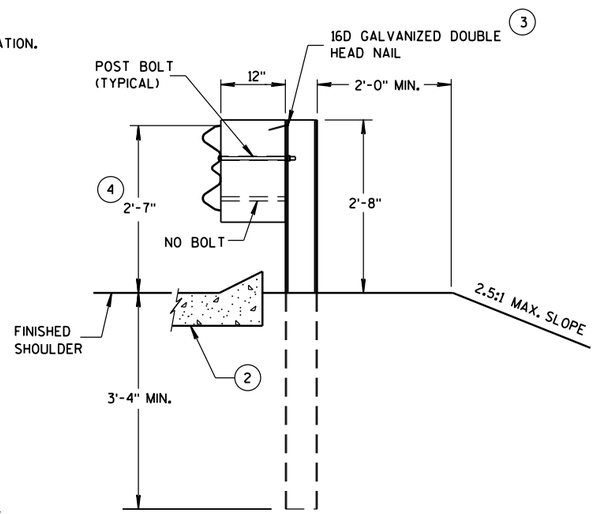
(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

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



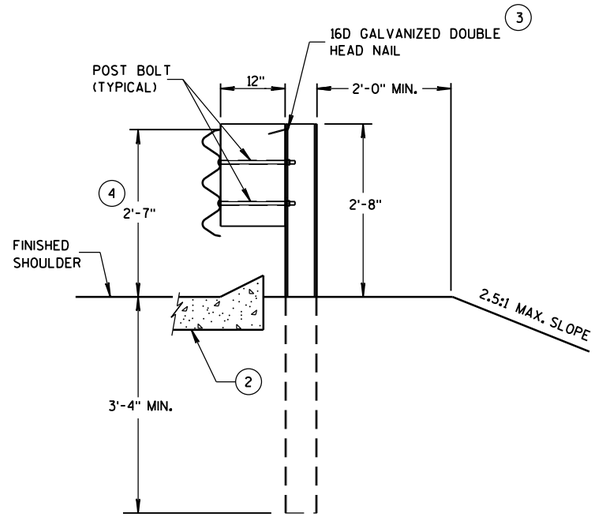
SECTION A-A

POSTS 1-5



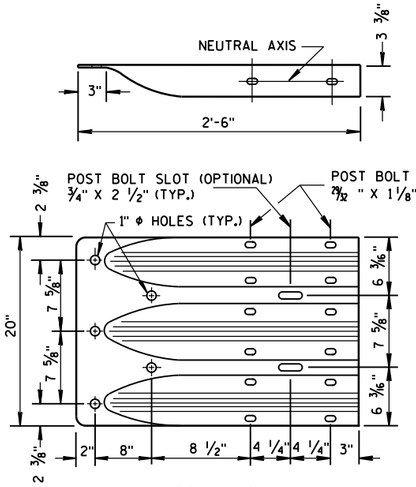
SECTION B-B

POST 6



SECTION C-C

POSTS 7-11



THRIE BEAM TERMINAL CONNECTOR

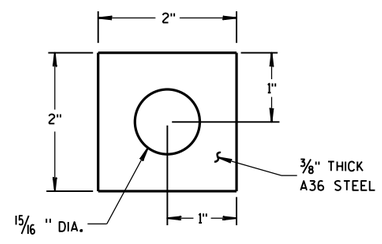
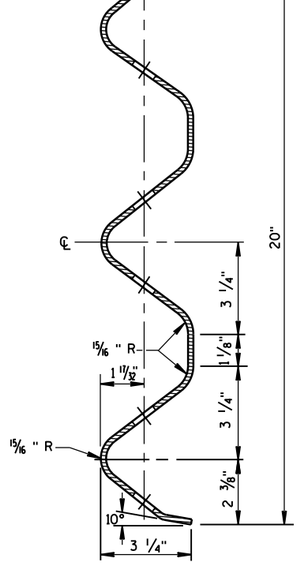
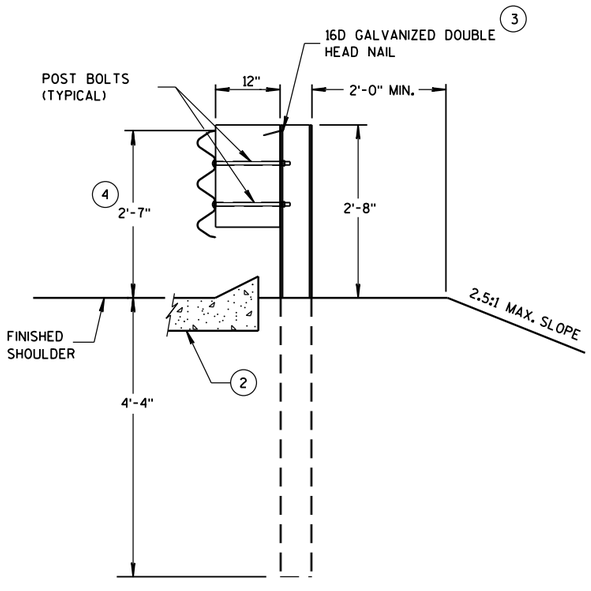


PLATE WASHER DETAIL

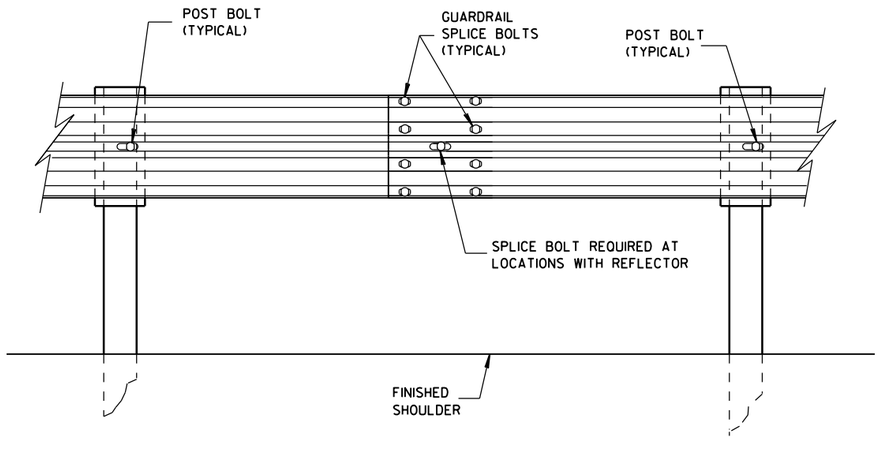


SECTION THRU THRIE BEAM RAIL ELEMENT



SECTION D-D

POSTS 12-17



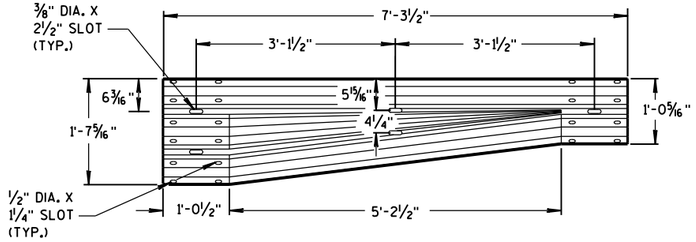
SPLICE DETAIL

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

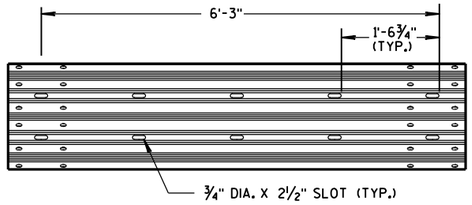
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

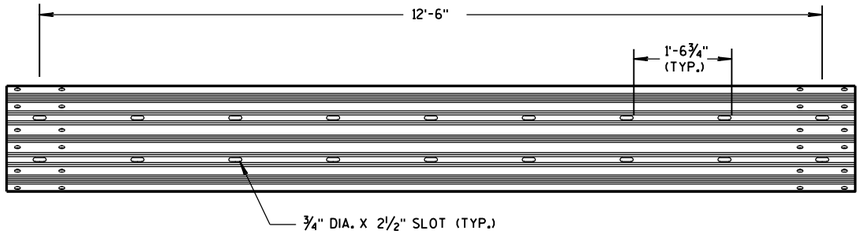
S.D.D. 14 B 45-4b



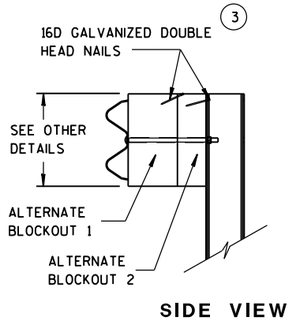
W-BEAM TO THRIE BEAM TRANSITION SECTION



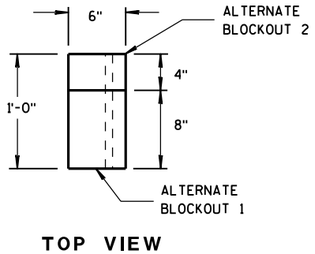
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

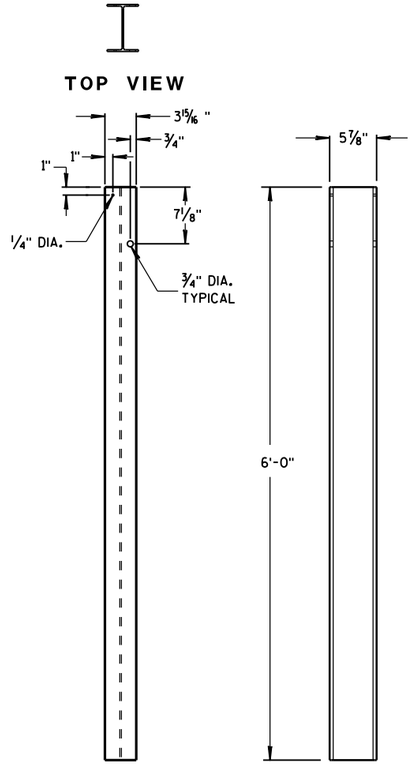


SIDE VIEW



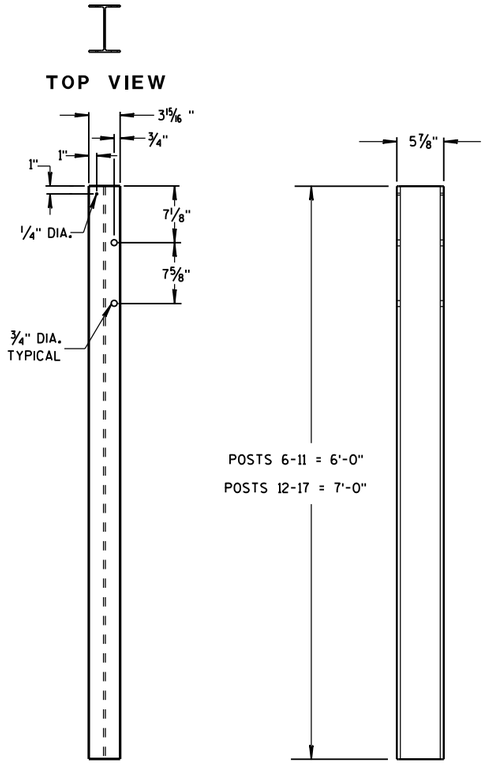
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



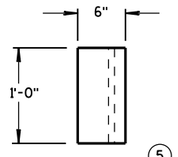
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5

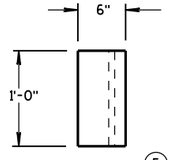


FRONT VIEW SIDE VIEW

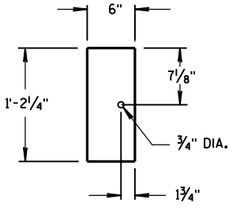
STEEL POSTS 6-17



TOP VIEW (5)

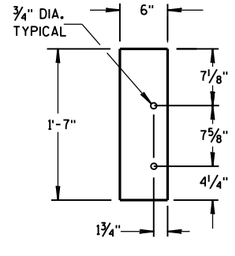


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

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

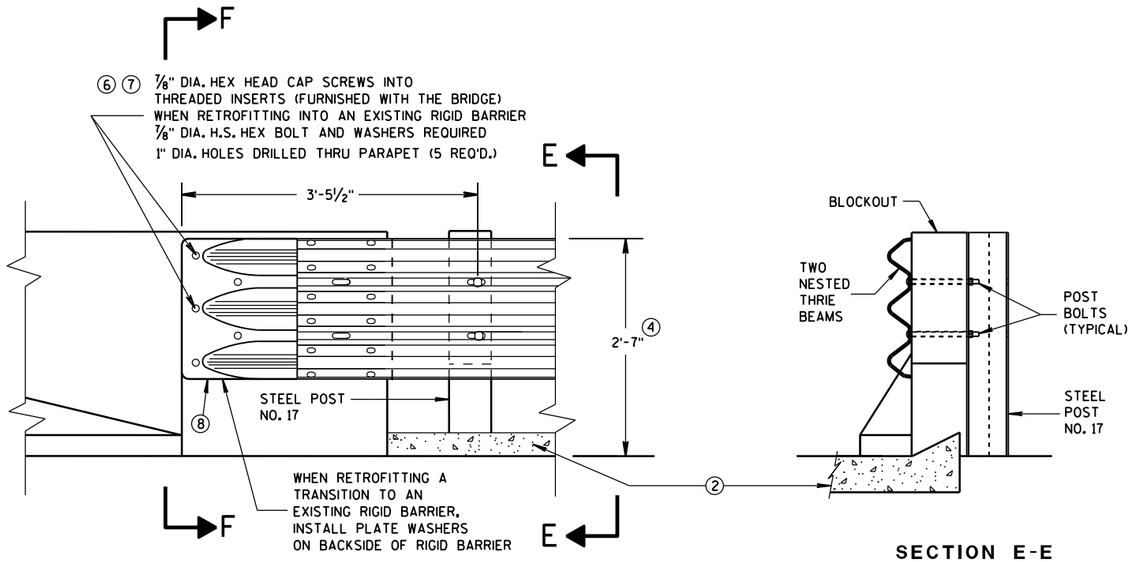
(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 45-4c



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

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

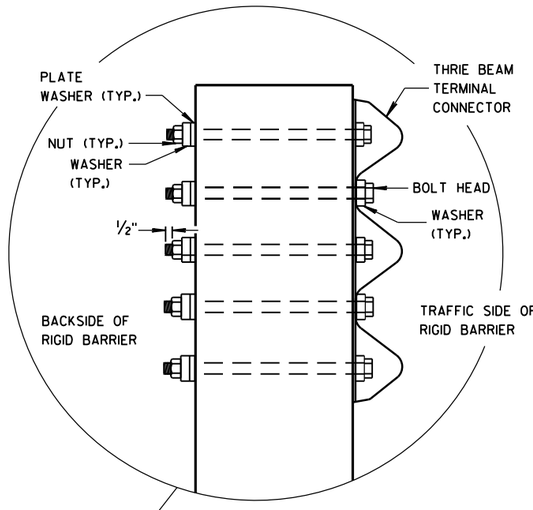
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

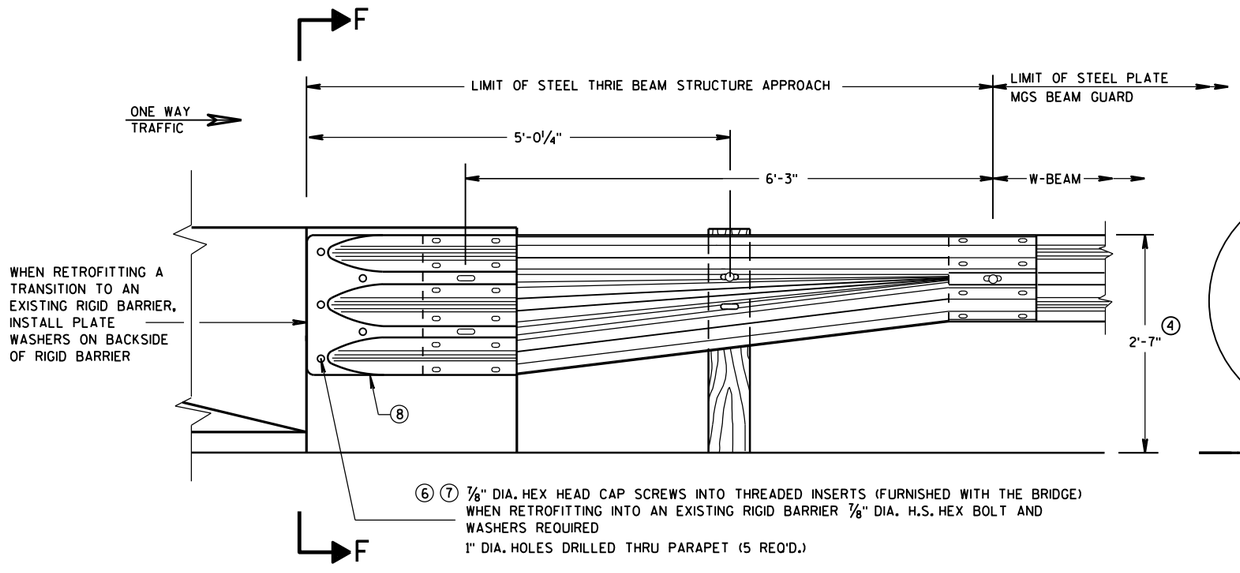
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

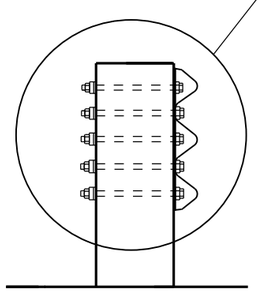
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. 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.

⑧ 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".

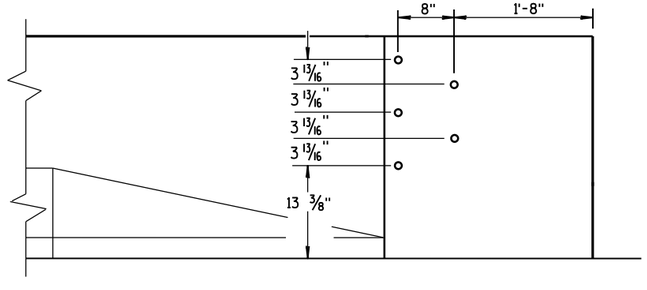




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

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
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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S.D.D. 14 B 45-4d

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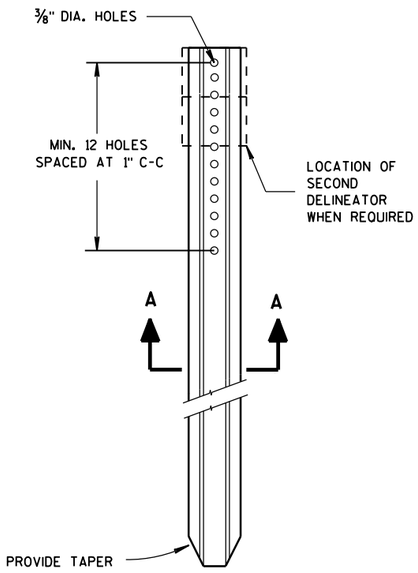
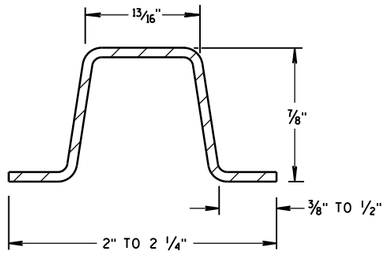
S.D.D. 14 B 45-4d

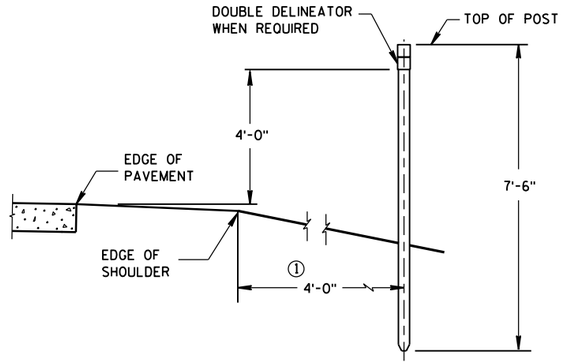


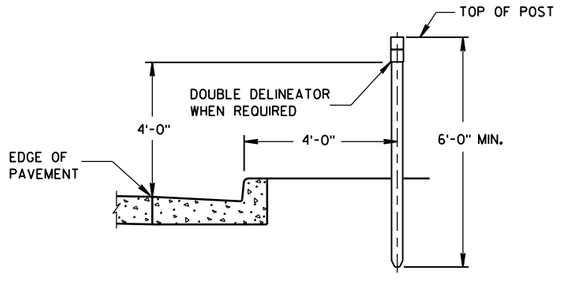
DELINEATOR POST



SECTION A-A

WEIGHT 1.12 LBS PER FT. ± 0.1 LB.



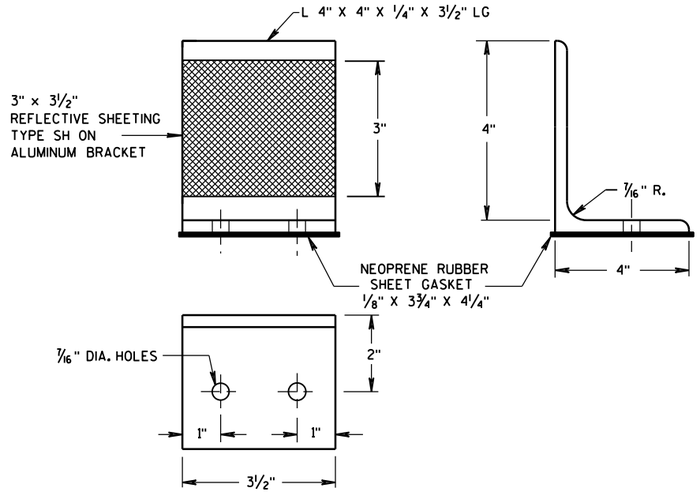


TYPICAL INSTALLATIONS OF DELINEATOR POSTS

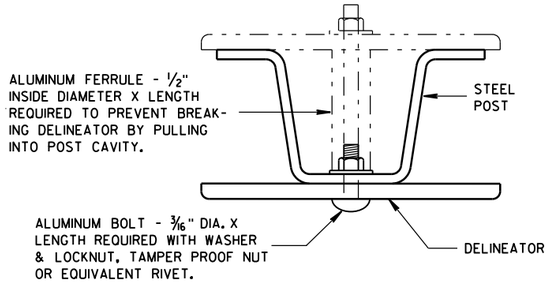
GENERAL NOTES

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

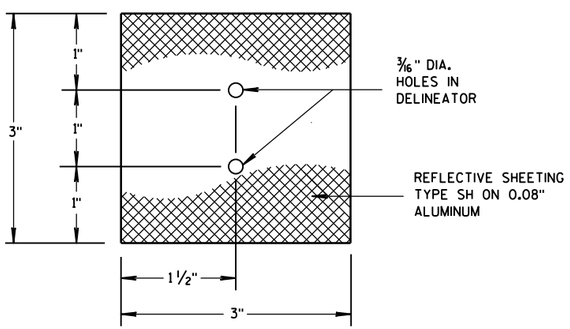
① DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.



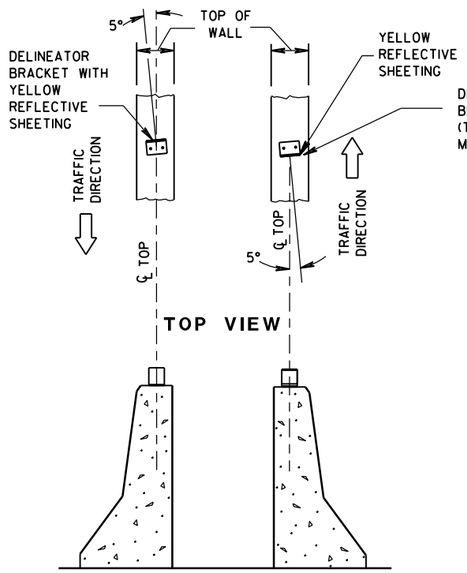
DELINEATOR BRACKET



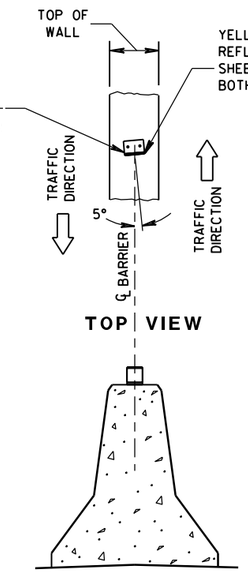
MOUNTING DETAIL FOR DELINEATOR



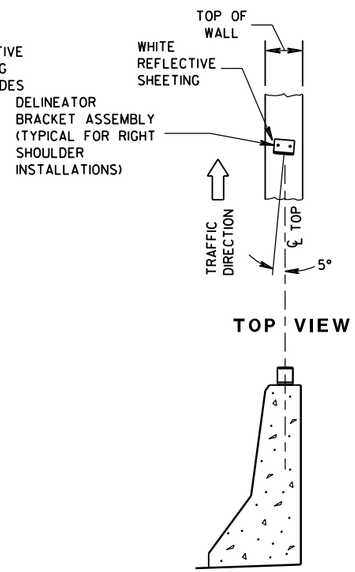
3"x 3" DELINEATOR



DOUBLE BARRIERS IN MEDIAN

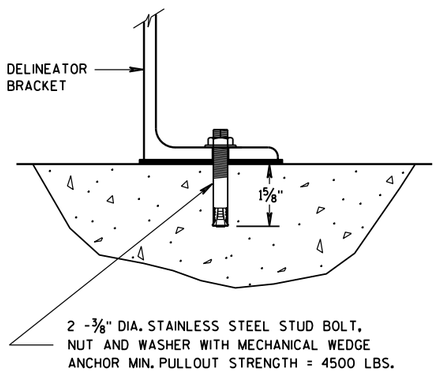


MEDIAN BARRIER



BARRIER LOCATED TO RT. OF TRAFFIC FLOW

LOCATION AND AIMING DETAILS FOR DELINEATOR BRACKETS MOUNTED ON CONCRETE BARRIERS



DELINEATOR BRACKET MOUNTING DETAIL

DELINEATOR POST, DELINEATOR, AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC E
FHWA

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S.D.D. 15 A 2-8

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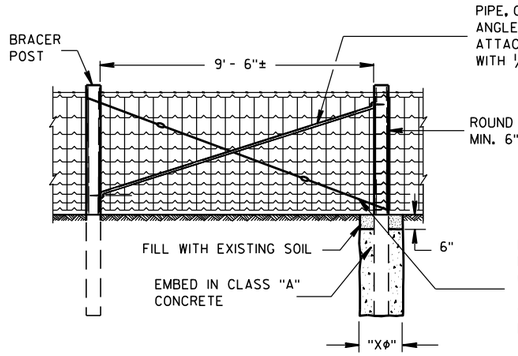
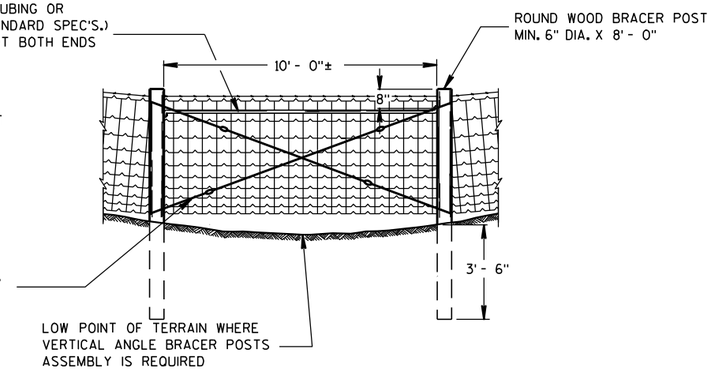
S.D.D. 15 A 2-8

NOTE: PULL OR STRETCHER POST ASSEMBLIES SHALL BE PLACED MIDWAY BETWEEN END POSTS AND CORNER POSTS WHERE A RUN OF FENCE EXCEEDS 660' BUT IS LESS THAN 1,320'. FOR RUNS OF FENCE IN EXCESS OF 1,320' MAXIMUM SPACING OF PULL OR STRETCHER POST ASSEMBLIES SHALL BE 660'± C-C.

ILLUSTRATION SHOWS POSITION OF STANDARD STEEL BRACE, DOUBLE STRAND GALVANIZED WIRE, AND THE POST TO BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM LEFT TO RIGHT. THE BRACES SHALL BE POSITIONED ON THE OPPOSITE DIAGONALS AND THE OPPOSITE POST SHALL BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM RIGHT TO LEFT.



PULL OR STRETCHER POSTS ASSEMBLY



VERTICAL ANGLE BRACER POSTS ASSEMBLY

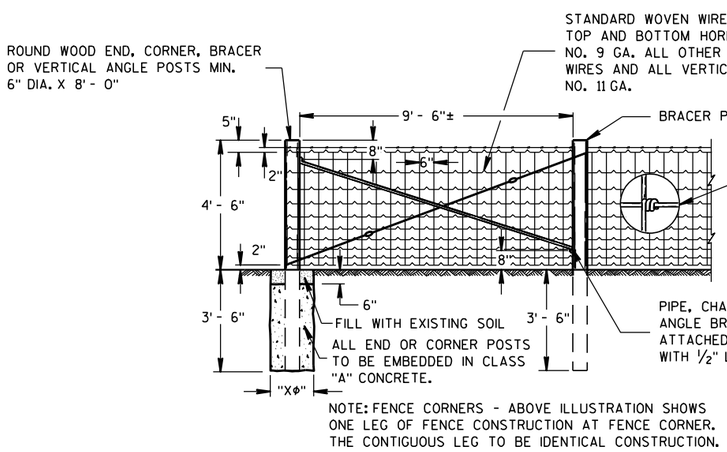
GENERAL NOTES

"XΦ" = DIAMETER OF THE POST PLUS 12".

FENCE STAPLES SHOULD NEVER BE DRIVEN VERTICALLY INTO WOOD POSTS (WITH BOTH LEGS PARALLEL WITH THE WOOD GRAIN). DOING SO CAN SEPARATE THE GRAIN AND SIGNIFICANTLY REDUCE THE HOLDING POWER. ROTATING THE STAPLES SLIGHTLY OFF VERTICAL STRADDLES THE GRAIN AND PROVIDES MORE RESISTANCE TO PULL-OUT.

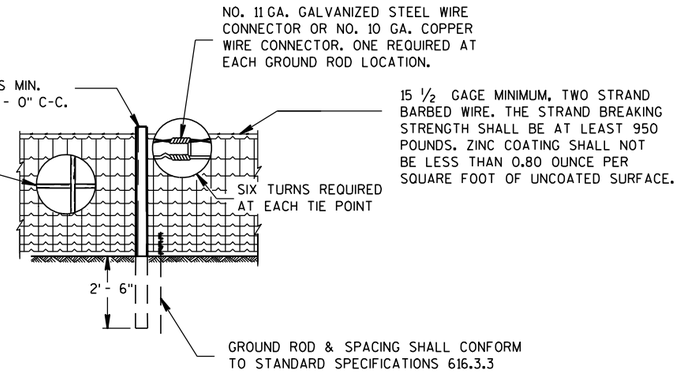
DO NOT STAPLE WIRE TIGHT TO THE LINE POSTS. ALLOW MOVEMENT OF WIRE FOR EXPANSION AND CONTRACTION. STAPLE ARRANGEMENT SHALL BE THE SAME FOR ALL OTHER POSTS EXCEPT THAT THEY SHALL BE DRIVEN TIGHT TO POSTS. ALL STAPLES SHALL BE 2" X 9 GAGE AND SHALL BE MANUFACTURED FROM GALVANIZED WIRE OR HOT DIP GALVANIZED AFTER FORMING. STAPLES SHALL HAVE SLASH-CUT POINTS.

FENCE SHALL BE LOCATED 3'-0" INSIDE THE RIGHT OF WAY LINE UNLESS OTHERWISE INDICATED ON THE PLANS.



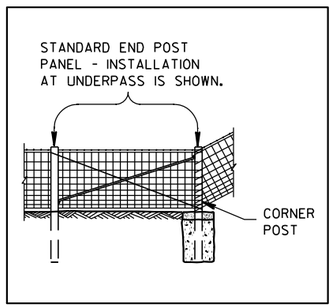
NOTE: FENCE CORNERS - ABOVE ILLUSTRATION SHOWS ONE LEG OF FENCE CONSTRUCTION AT FENCE CORNER. THE CONTIGUOUS LEG TO BE IDENTICAL CONSTRUCTION.

END OR CORNER POSTS ASSEMBLY

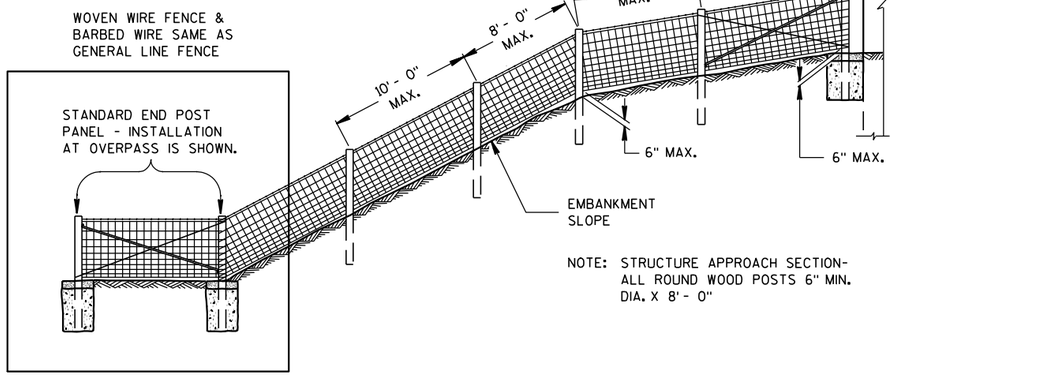


LINE FENCE CONSTRUCTION

GENERAL ROADSIDE VIEW OF WOVEN WIRE FENCE



ALTERNATE FENCE DESIGN AT STRUCTURE



NOTE: STRUCTURE APPROACH SECTION- ALL ROUND WOOD POSTS 6" MIN. DIA. X 8' - 0"

FENCE DESIGN AT STRUCTURE APPROACH

FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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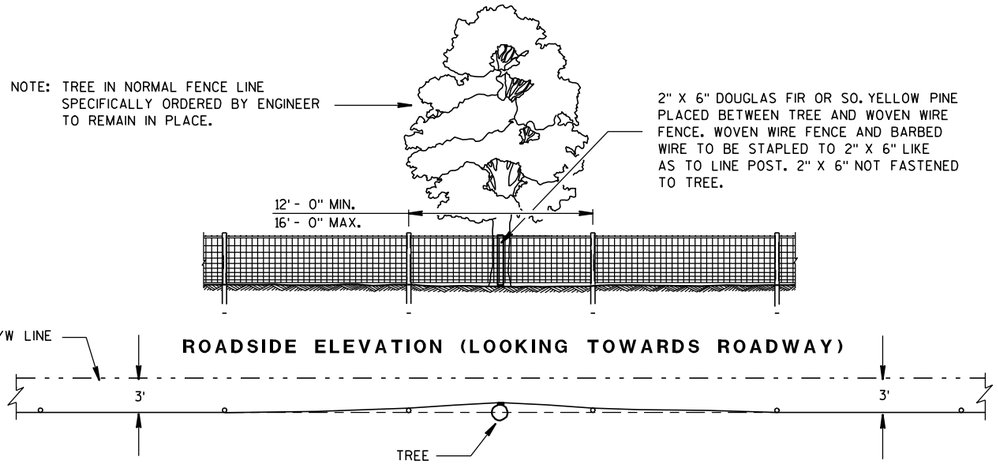
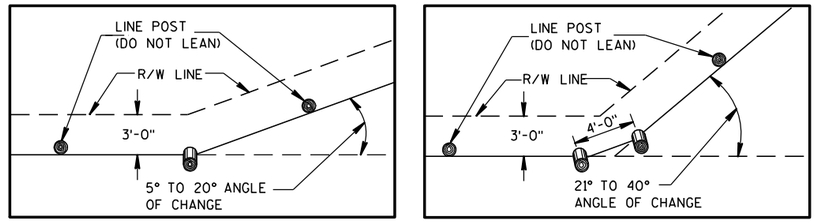
S.D.D. 15 B 1-8a



PLAN VIEW

FENCE DESIGN AT TREES REMAINING IN NORMAL FENCE LINE



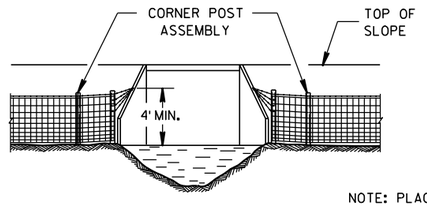
PLAN VIEW
SINGLE POST CORNER

PLAN VIEW
DOUBLE POST CORNER

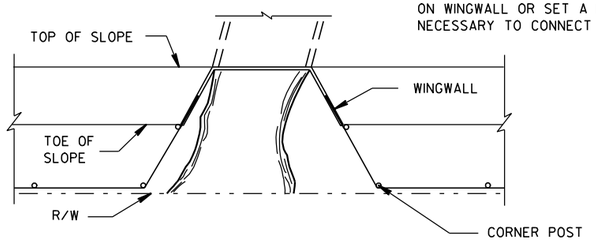
RIGHT OF WAY LINE CHANGE 40° AND LESS

NOTE: SINGLE AND DOUBLE POSTS SHALL BE A MIN. 6" DIA. X 8'-0" WITH A LEAN OF 4" TOWARD THE OUTSIDE OF THE CURVE.

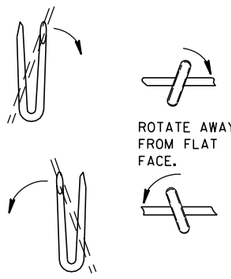
WHEN THE RIGHT OF WAY LINE CHANGE IS MORE THAN 40° USE THE CORNER OR STRETCHER POSTS ASSEMBLY.



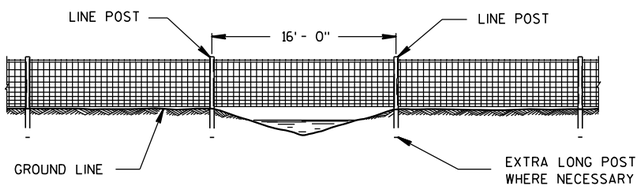
NOTE: PLACE A MINIMUM OF 4 STRANDS OF BARBED WIRE, 6" MAXIMUM CENTERS IN FAN SHAPE CONNECTED TO AN EYE BOLT ON WINGWALL OR SET A LONE POST WHEN NECESSARY TO CONNECT BARBED WIRE.



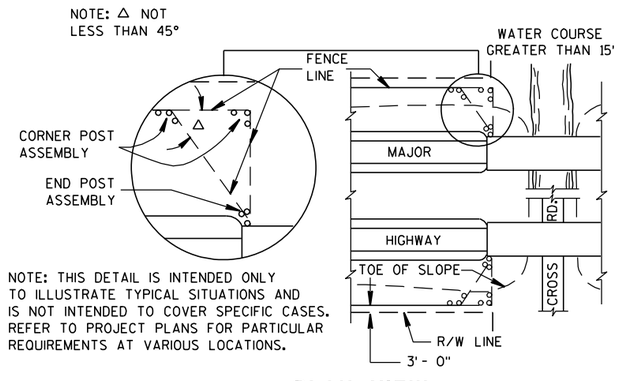
FENCE INSTALLATION TO WINGWALLS



LINE POST

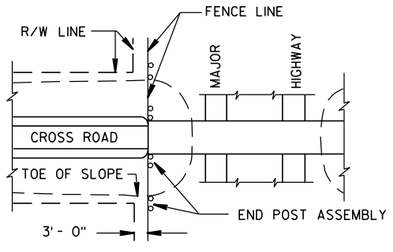


FENCE CONSTRUCTION OVER STREAM COURSES OF 15 FT. OR LESS IN WIDTH



PLAN VIEW

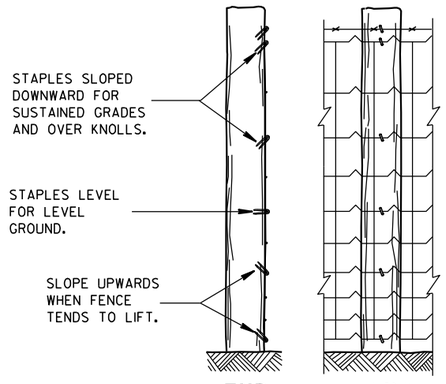
MAJOR HIGHWAY OVERPASS OR STREAM COURSE CROSSING OF GREATER THAN 15 FT. IN WIDTH



PLAN VIEW

MAJOR HIGHWAY UNDERPASS

NOTE: WHEN POSTS ARE DRIVEN THE SMALL END SHALL BE DOWN.



END ELEVATION

FARM SIDE ELEVATION

FENCE MOUNTING DETAIL

FENCE LOCATION AT STRUCTURES

FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/4/2008
DATE
/S/ Jerry H. Zeier
ROADWAY STANDARDS [64]
ENGINEER
FHWA

S.D.D. 15 B 1-8b

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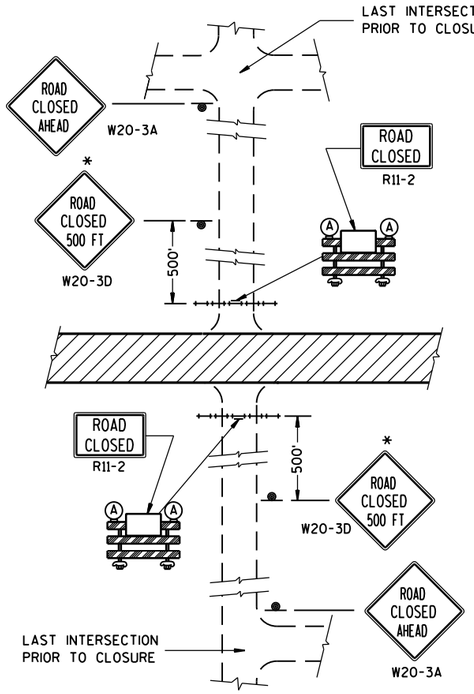
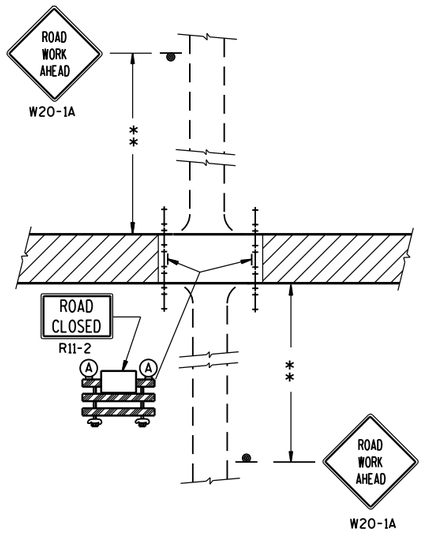
S.D.D. 15 B 1-8b



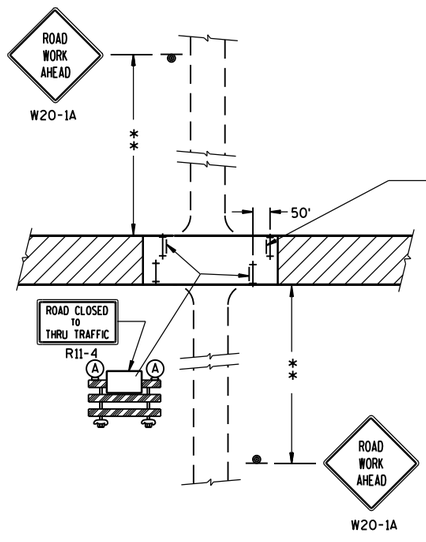
DETAIL 1

(NO ACCESS TO PROJECT)



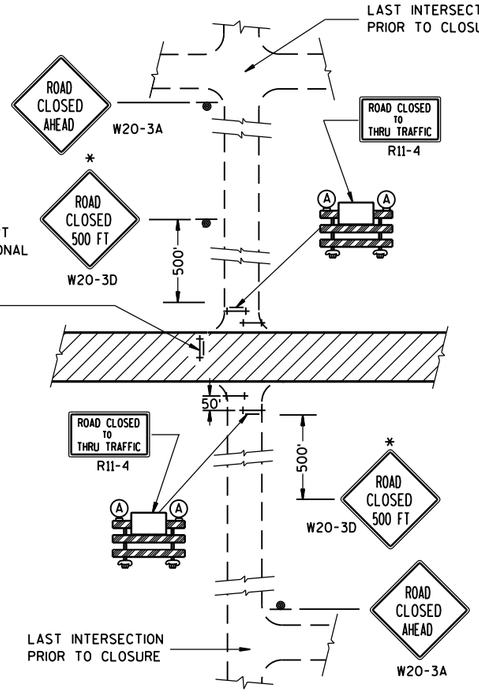
DETAIL 2

(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
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO... SAFETY ENGI... — FHWA

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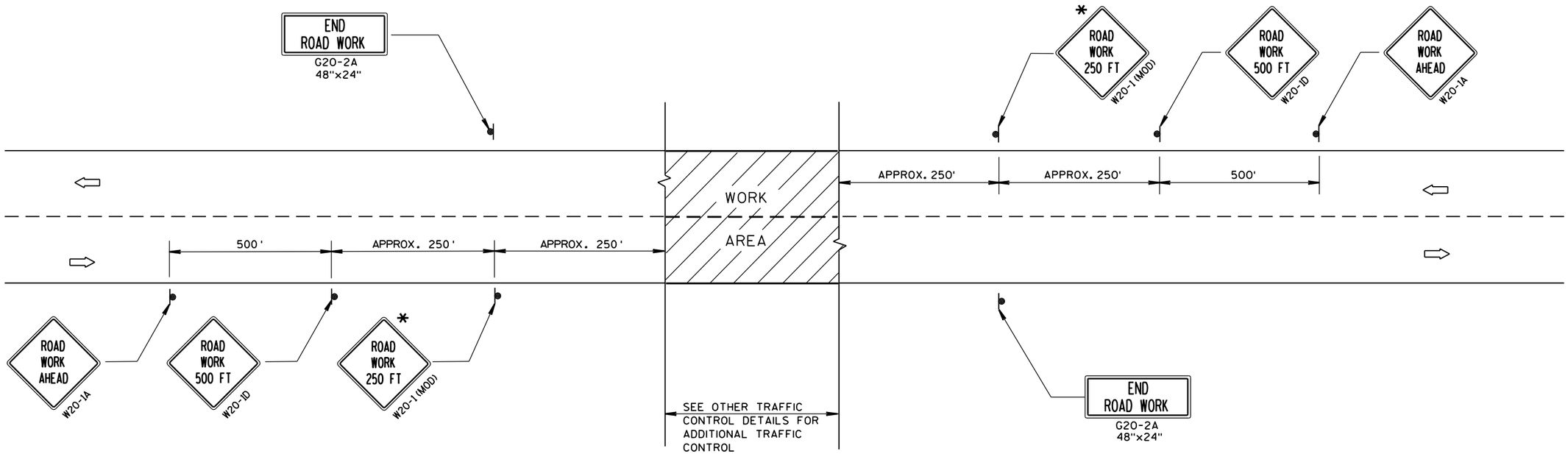
S.D.D. 15 C 3-3

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.

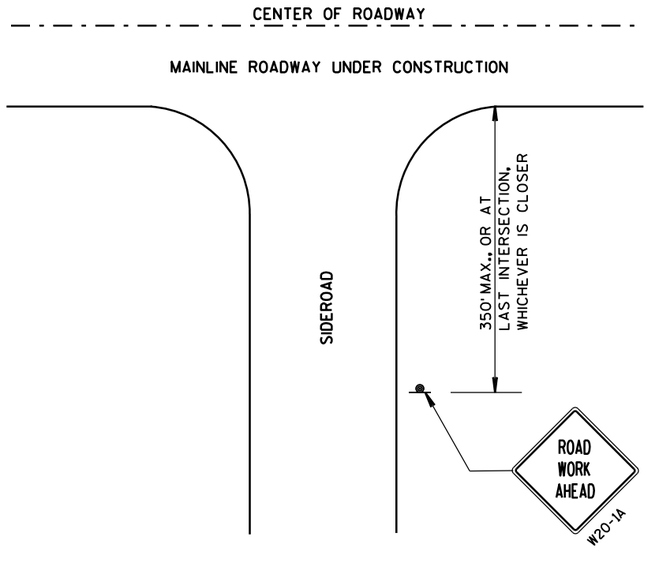
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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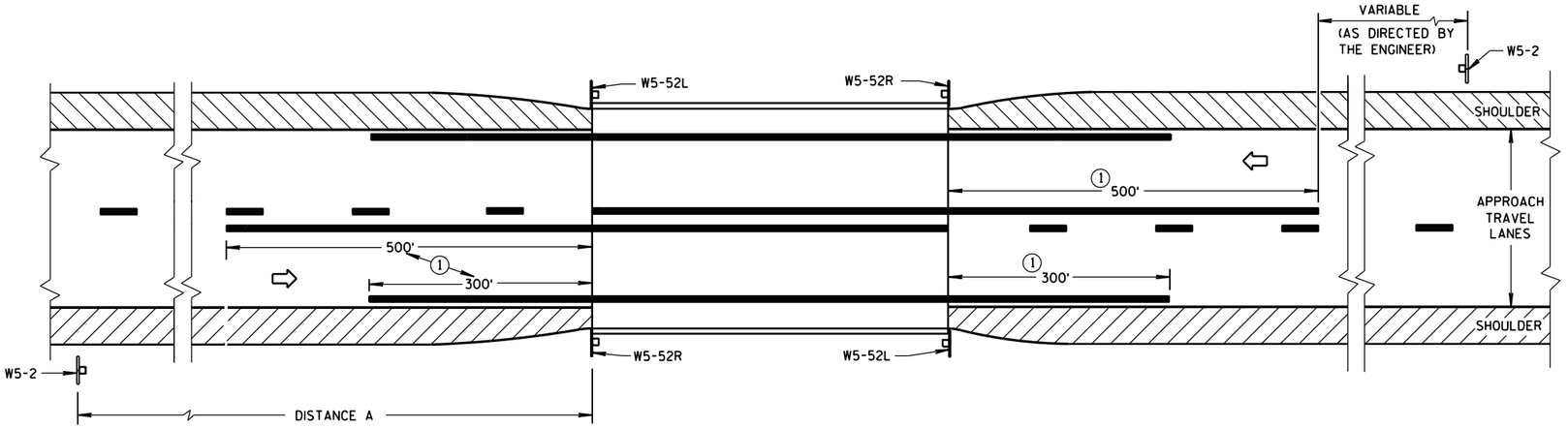
S.D.D. 15 C 5-3



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.

PAVEMENT MARKING SHOWN ON THIS DRAWING IS NOT REQUIRED UNLESS OTHERWISE SPECIFIED IN THE CONTRACT. WHEN SPECIFIED, PAVEMENT MARKING SHALL CONFORM TO THIS DRAWING AND OTHER CONTRACT REQUIREMENTS.

(1) MINIMUM DISTANCE UNLESS OTHERWISE SHOWN ON THE PLAN.

(2) FACE OF OBJECT MARKERS W5-52R, AND W5-52L SHALL BE COVERED WITH TYPE F REFLECTIVE SHEETING.

(3) LOCATE OBJECT MARKER POST(S) BEHIND GUARDRAIL WHEN PRESENT.

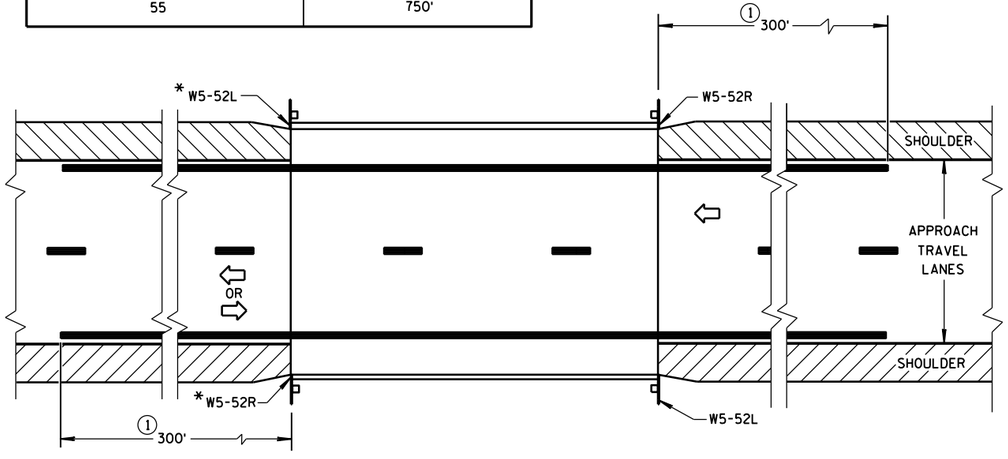
DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	750'

SITUATION 1

WARRANTING CRITERIA:

BRIDGE WIDTH IS AT LEAST 16 FEET BUT LESS THAN 24 FEET

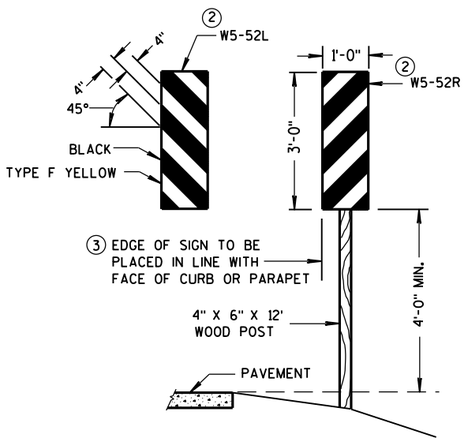


*OMIT ON ONE-WAY TRAVELLED WAYS

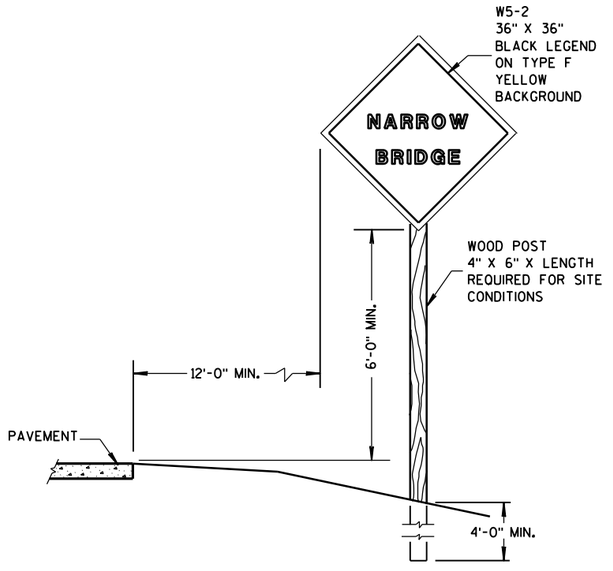
SITUATION 2

WARRANTING CRITERIA:

1. BRIDGE WIDTH IS AT LEAST 24 FEET AND
2. BRIDGE IS LESS THAN 6 FEET WIDER (ON EACH SIDE) THAN APPROACH TRAVEL LANES.



OBJECT MARKER PLACEMENT



SIGN PLACEMENT

SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

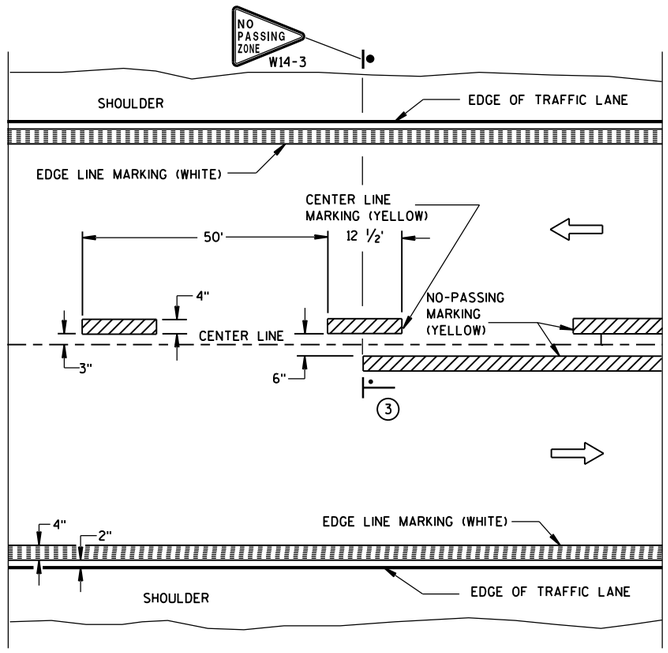
3-2014 DATE

/S/ Travis Feltes STATE TRAFFIC ENGINEER

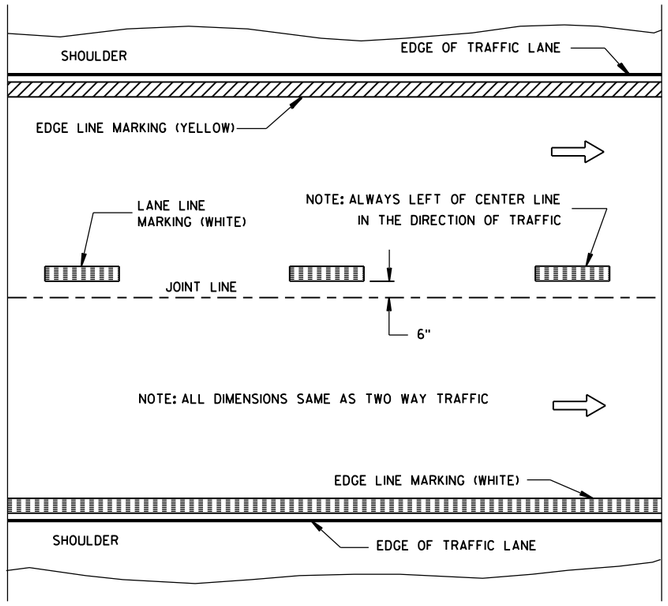
FHWA

6

S.D.D. 15 C 6-7

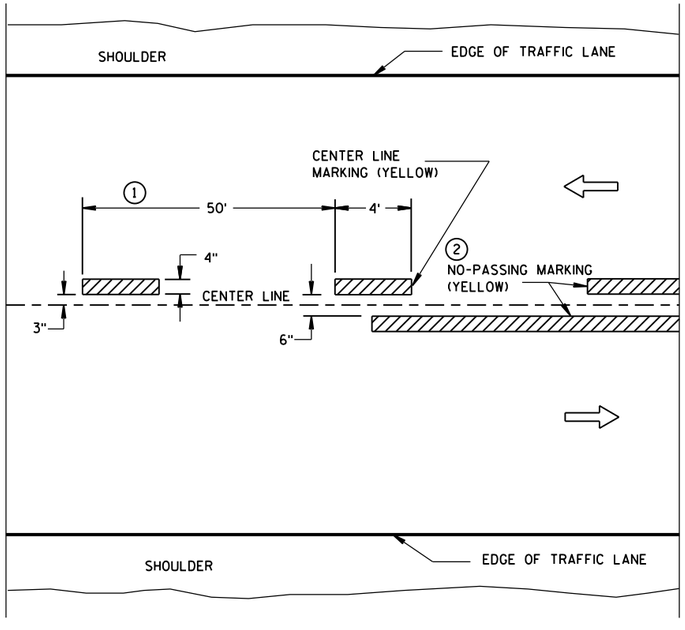


TWO WAY TRAFFIC

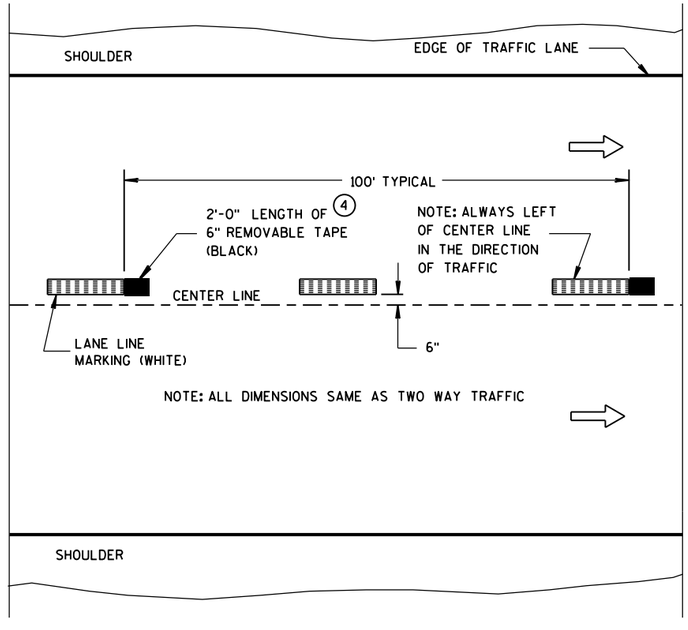


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

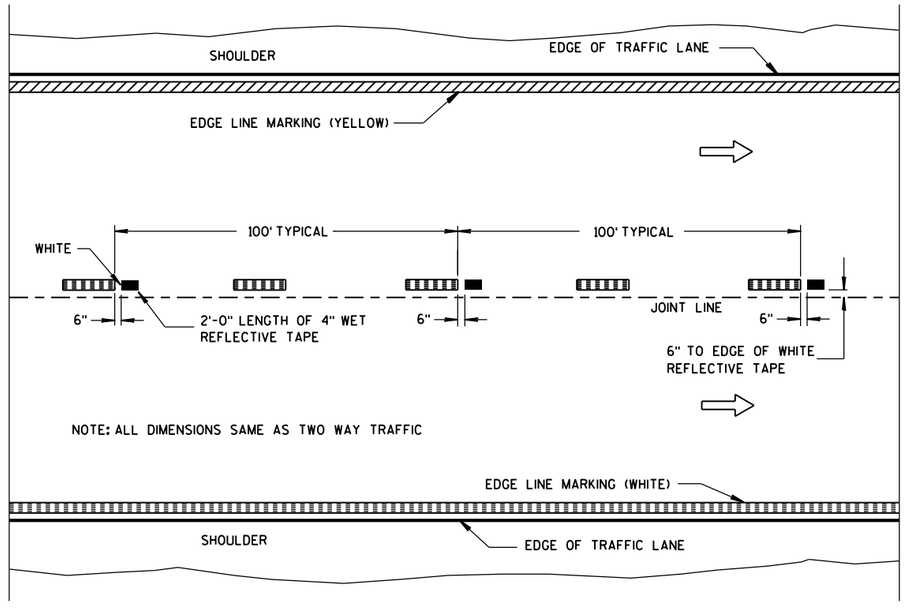
GENERAL NOTES

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

1. HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
2. NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
3. NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
4. CONCRETE ONLY.

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-13-2013
DATE

/S/ Travis Feltes
STATE TRAFFIC E

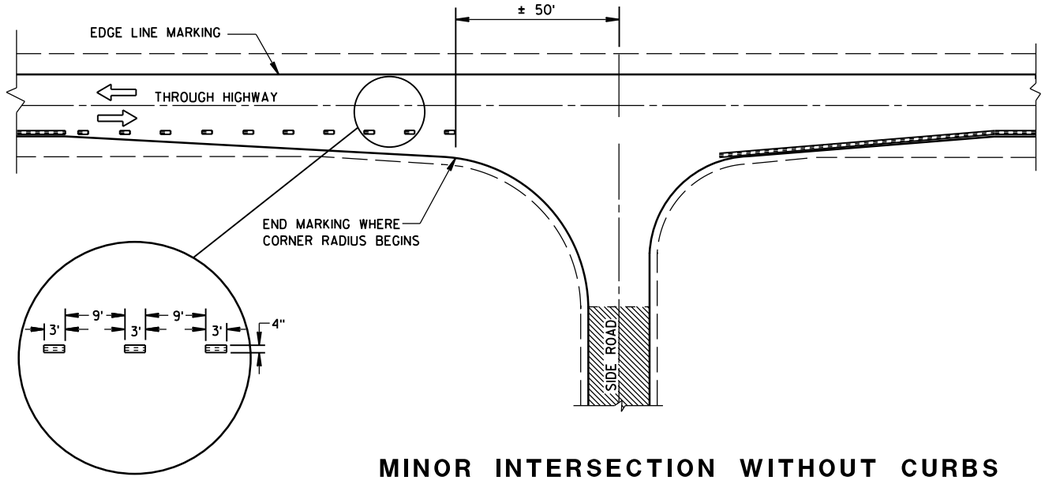
FHWA

6

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

6

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



MINOR INTERSECTION WITHOUT CURBS

GENERAL NOTES

EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.

(1) WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.

(2) WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.

(3) ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.

(4) THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.

(5) BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.

(6) BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

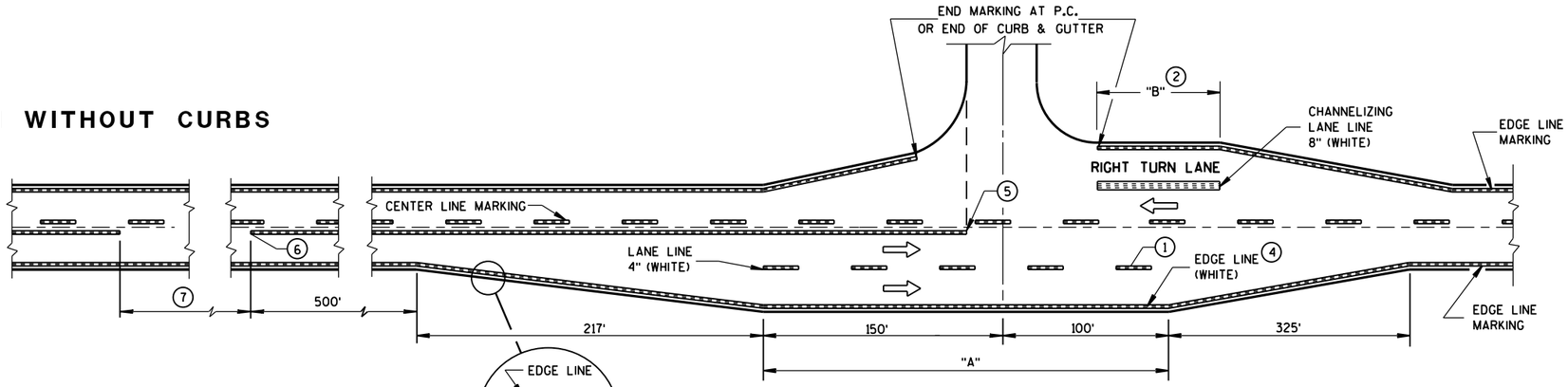
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

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

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

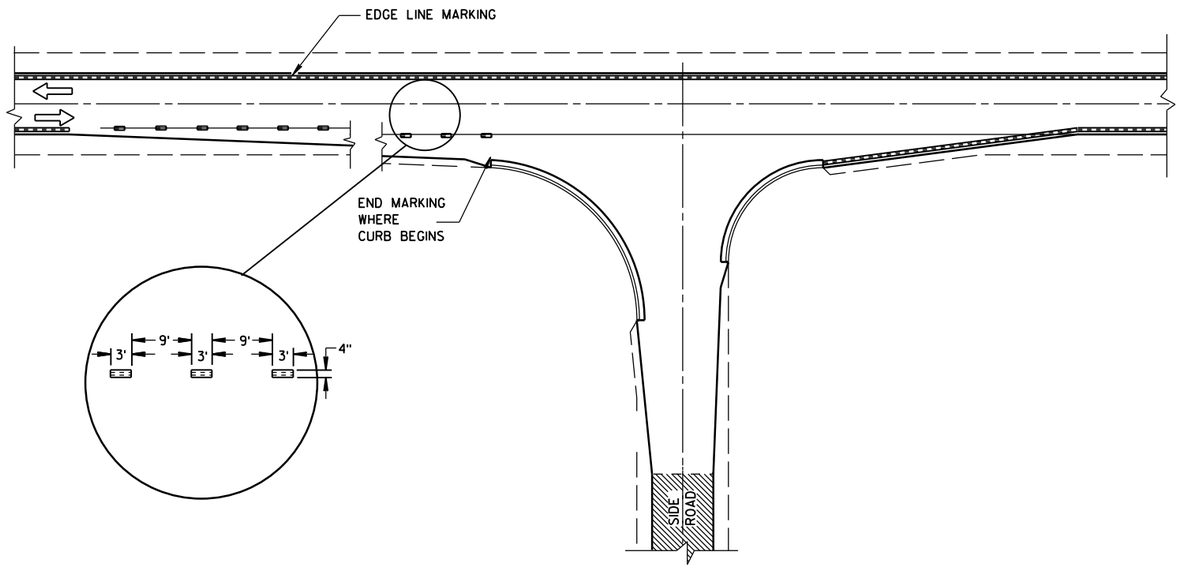
(7)

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



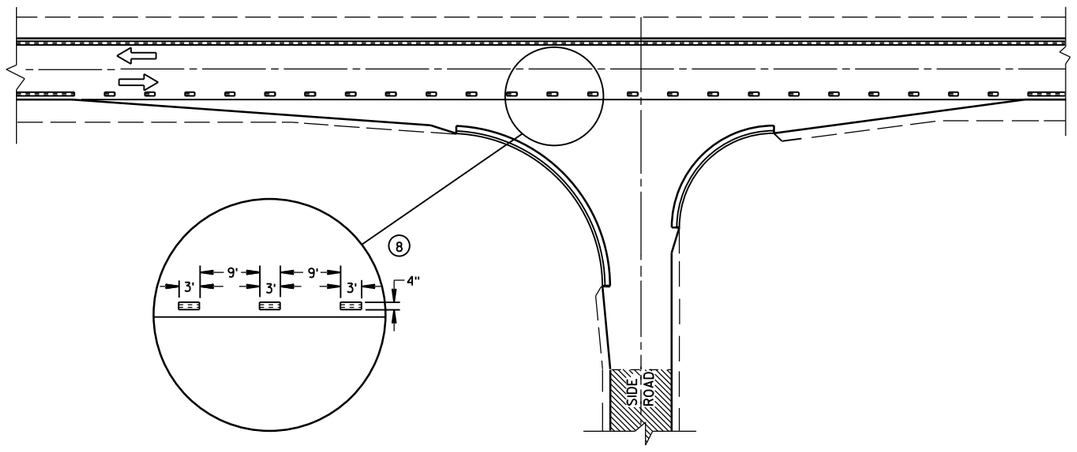
MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



MINOR INTERSECTION WITH CURBS

(TYPICAL MARKING)



MINOR INTERSECTION WITH CURBS

(3) (FOR SPECIAL CONDITIONS AS SPECIFIED)

PAVEMENT MARKING
(INTERSECTIONS)

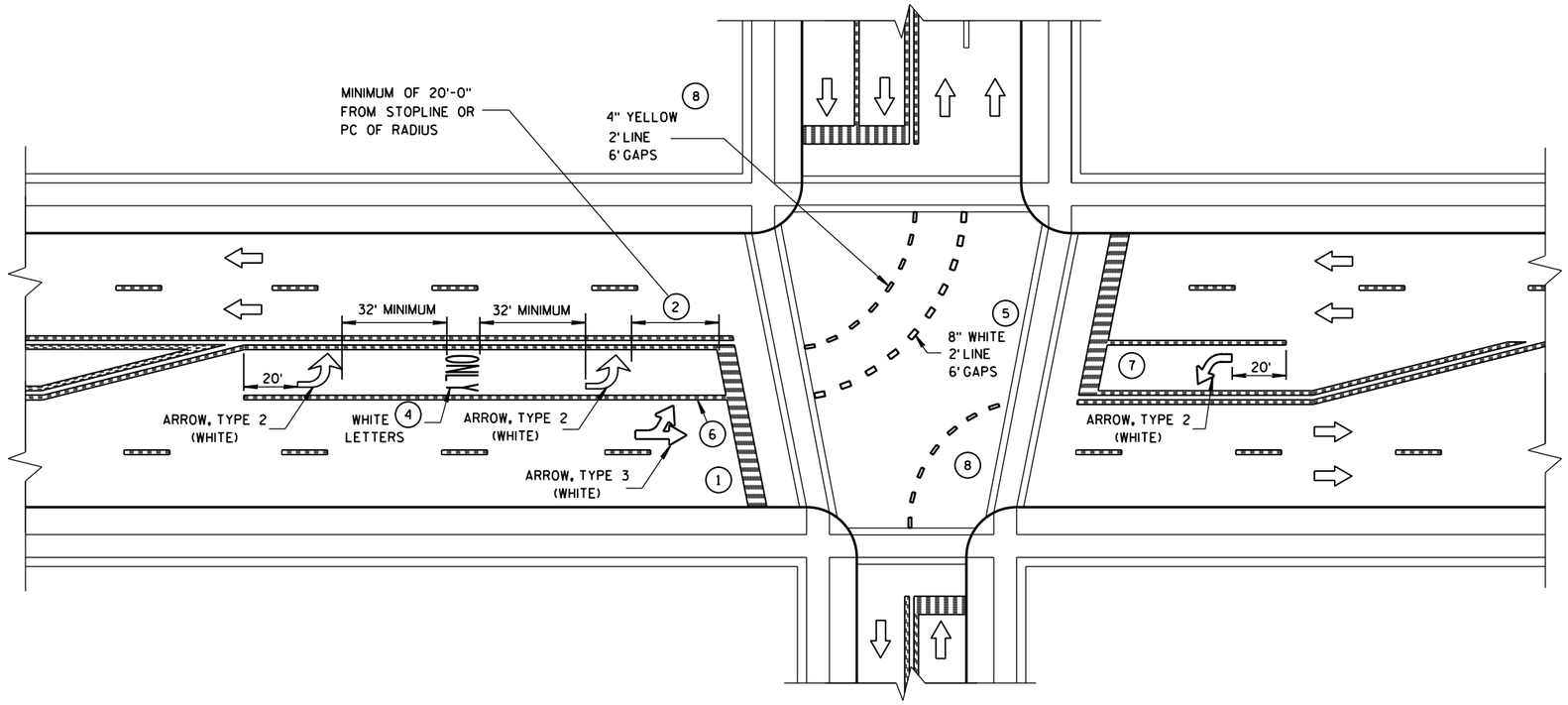
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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

6

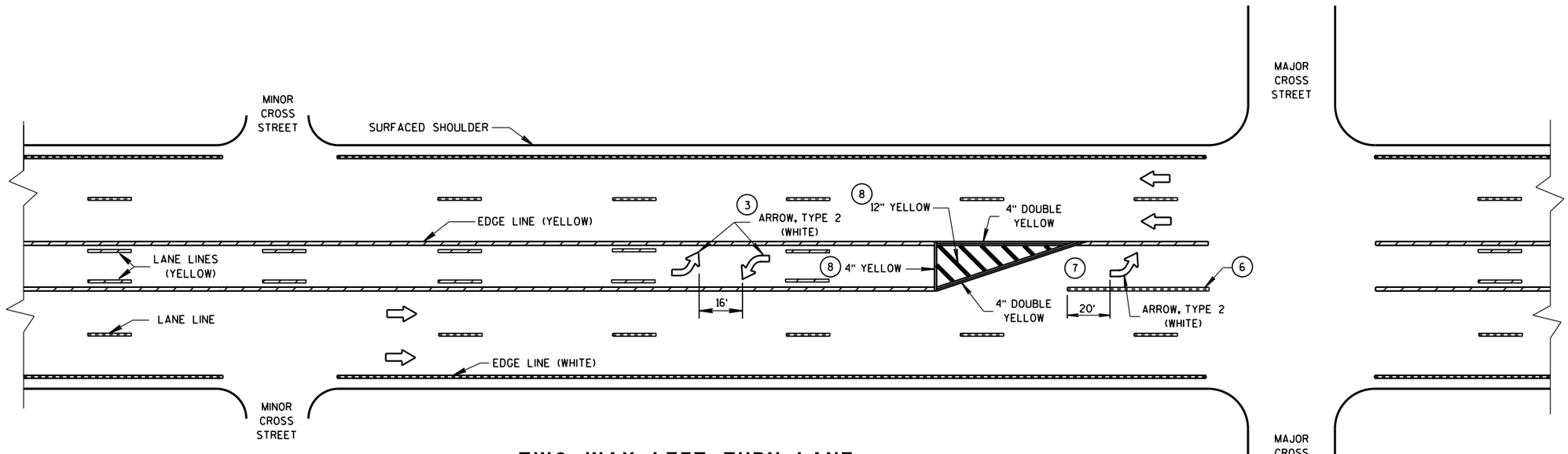
S.D.D. 15 C 8-16b



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

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA

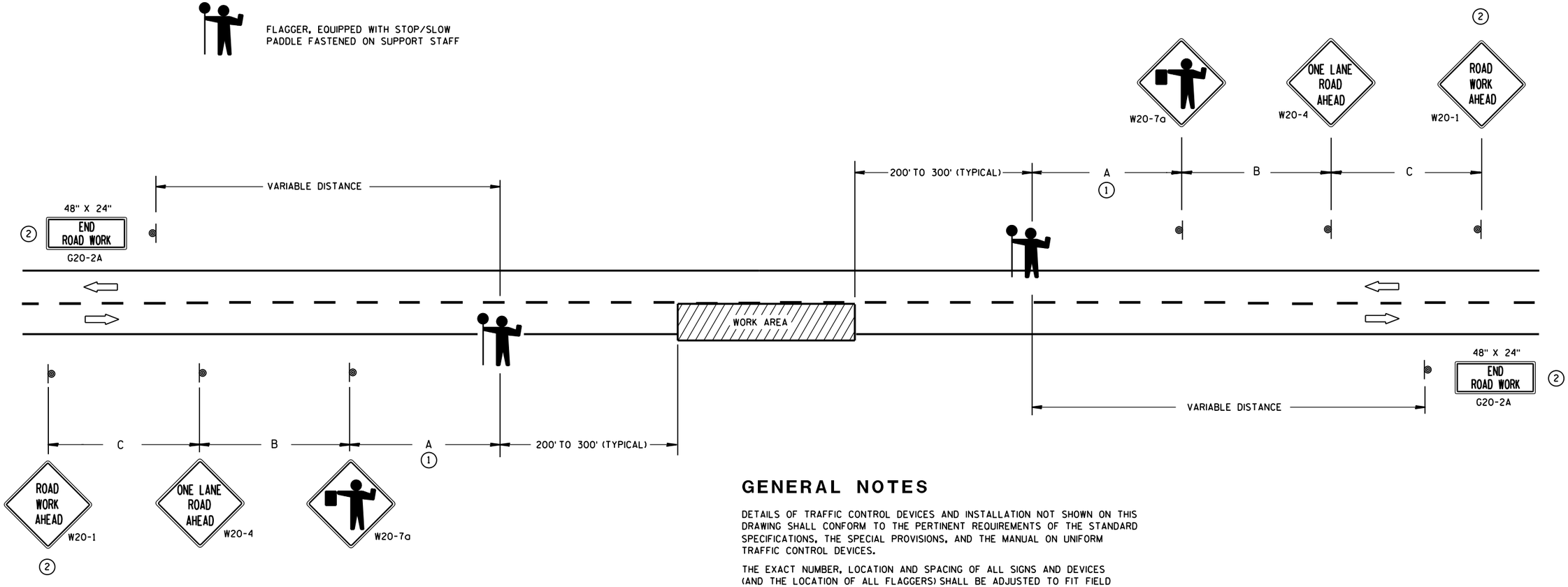
FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN SPACING TABLE

SPEED LIMIT	SIGN SPACING A,B,C
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'

BE PREPARED TO STOP
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
DESIGN
FHWA

6

S.D.D. 15 C 12-4

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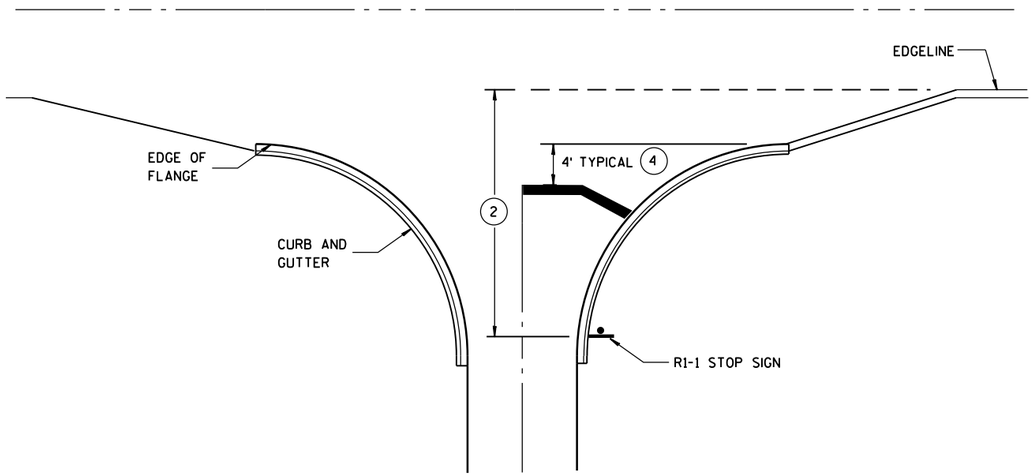
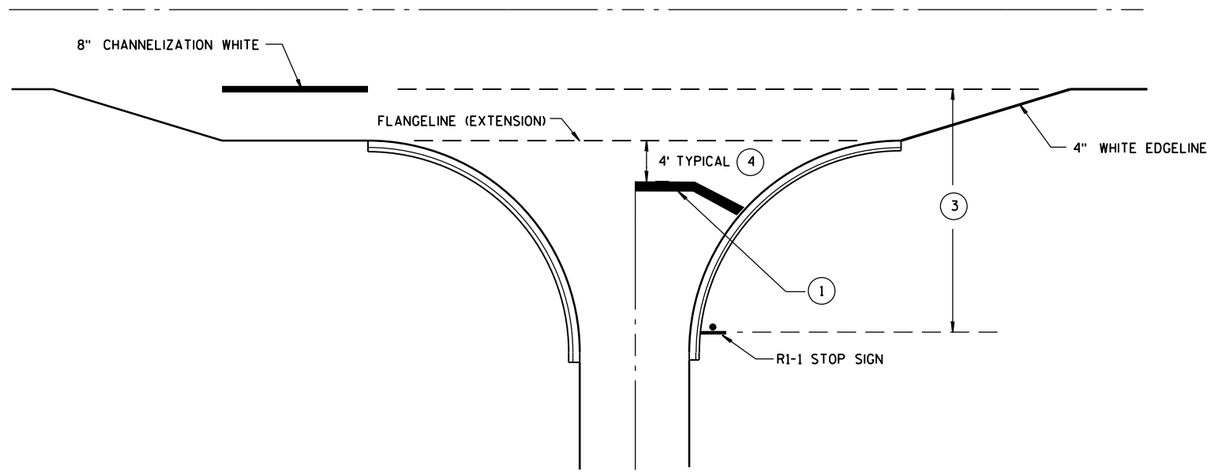
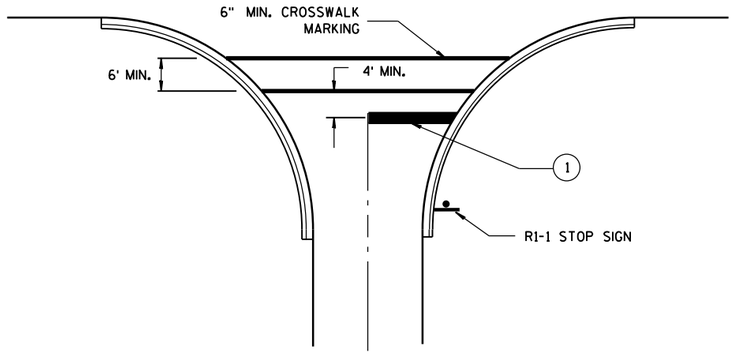
S.D.D. 15 C 12-4



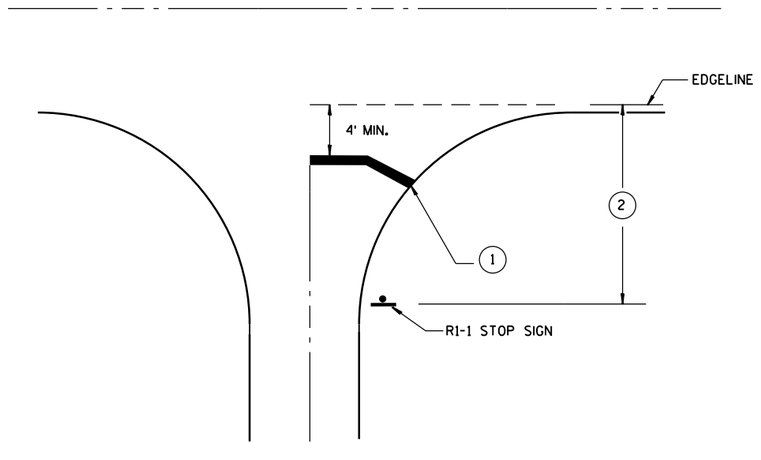
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



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

6

S.D.D. 15 C 33-1

GENERAL NOTES

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

ALL SIGNS ARE 48" X 48" 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 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.

W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.

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

TABLE A

SHOULDER TAPER LENGTH (FEET)					BUFFER SPACE (FEET)
S \ W	4	6	8	10	
30	20	30	40	50	200
35	30	45	55	70	250
40	40	55	75	90	305
45	60	90	120	150	360
50	70	100	135	170	425
55	75	110	150	185	495

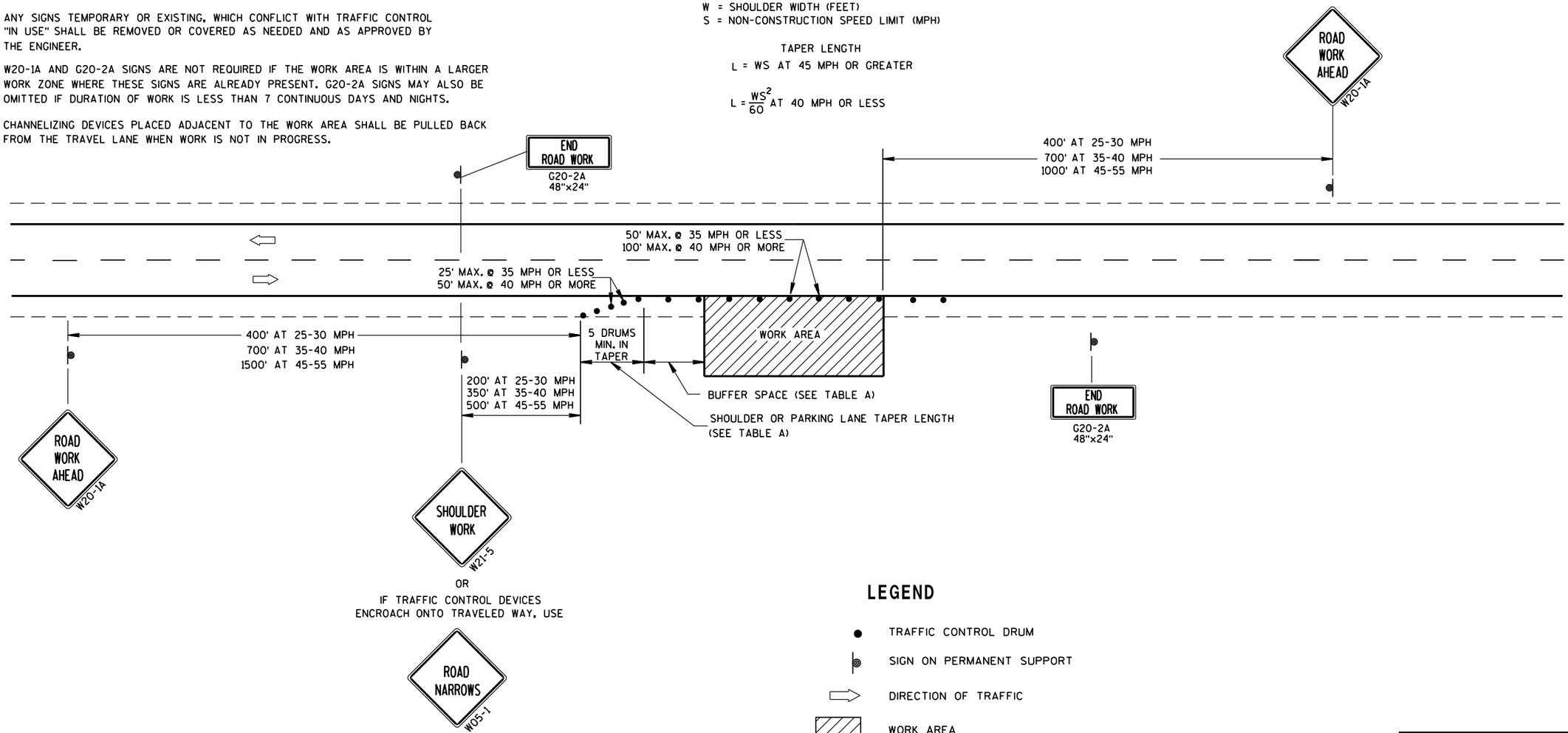
W = SHOULDER WIDTH (FEET)
S = NON-CONSTRUCTION SPEED LIMIT (MPH)

TAPER LENGTH

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

SHOULDER TAPER LENGTH = $\frac{1}{3}L$



LEGEND

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

TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

July 14, 2015 — DATE

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

FHWA

6

S.D.D. 15 D 28-3

S	BUFFER SPACE (DESIRABLE)
25	55'
30	85'
35	120'
40	170'
45	220'
50	280'
55	335'

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

END ROAD WORK
G20-2A
48"x24"

NO PASSING ZONE
W14-3
48"x36"

BEGIN TEMPORARY PAVEMENT MARKING, 4-INCH SOLID YELLOW CENTERLINE ✳✳

1000'
500'
400'
500'
200'
50'
50'
25' TYP.

W01-6
48"x24"
✳✳✳

R11-2
48"x30"
ROAD CLOSED
TYPE III BARRICADE

FOR BRIDGE OR CULVERT REPLACEMENTS SUBSTITUTE
BRIDGE OUT
R11-2B
48"x30"

ROAD CLOSURE OR BRIDGE/CULVERT REPLACEMENT

BUFFER SPACE (SEE TABLE)

WORK AREA

BUFFER SPACE (SEE TABLE)

TEMPORARY STEEL PLATE BEAM GUARD AND END TREATMENT WHEN INCLUDED IN THE CONTRACT. FOR LAYOUT, SEE DETAILS ELSEWHERE IN THE PLAN.

W05-52L
12"x36"

W05-52R
12"x36"

25' TYP.

OR

W01-3L
W01-4L
W013-1
XX M.P.H.
24"x24"

ROAD WORK 1000 FT
W20-1C

ROAD WORK AHEAD
W20-1A

END TEMPORARY PAVEMENT MARKING, 4-INCH SOLID YELLOW CENTERLINE ✳✳

BEGIN TEMPORARY PAVEMENT MARKING, 4-INCH WHITE EDGELINE

END TEMPORARY PAVEMENT MARKING, 4-INCH WHITE EDGELINE

TEMPORARY PAVEMENT MARKING, 4-INCH WHITE EDGELINES. (USE REMOVABLE TAPE WHERE TEMPORARY MARKING CROSSES PERMANENT PAVEMENT)

TEMPORARY PAVEMENT MARKING, 4-INCH DOUBLE YELLOW CENTERLINE AND 2-WAY YELLOW RAISED PAVEMENT MARKERS AT 25' SPACING. USE REMOVABLE TAPE WHERE TEMPORARY MARKING CROSSES PERMANENT PAVEMENT.

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.

"WO" IS THE SAME AS "W" 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.

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

EQUIPMENT, VEHICLES, OR MATERIAL SHOULD NOT BE STORED IN BUFFER SPACE.

✳ IF ADVISORY SPEED IS GREATER THAN 30 MPH, USE THE W01-4 SIGN. IF ADVISORY SPEED IS 30 MPH OR LESS, USE THE W01-3 SIGN.

✳✳ WHEN THE DISTANCE TO/FROM THE NEXT CLOSEST NO-PASSING ZONE IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES AS INDICATED IN THE SPECIFICATIONS, THE TWO ZONES SHALL BE CONNECTED.

✳✳✳ OMIT THESE W01-6 SIGNS IF THE ADVISORY SPEED OF THE CURVE IS GREATER THAN 30 MPH.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY-BURN LIGHT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- Ⓐ TYPE "A" WARNING LIGHT (FLASHING)
- TEMPORARY DELINEATOR, (WHITE) (SINGLE DELINEATOR)
- TEMPORARY RAISED PAVEMENT MARKERS (TWO-WAY YELLOW)
- XXX REMOVE PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY STEEL PLATE BEAM GUARD AND END TREATMENT
- WORK AREA

TRAFFIC CONTROL, TEMPORARY BYPASS ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

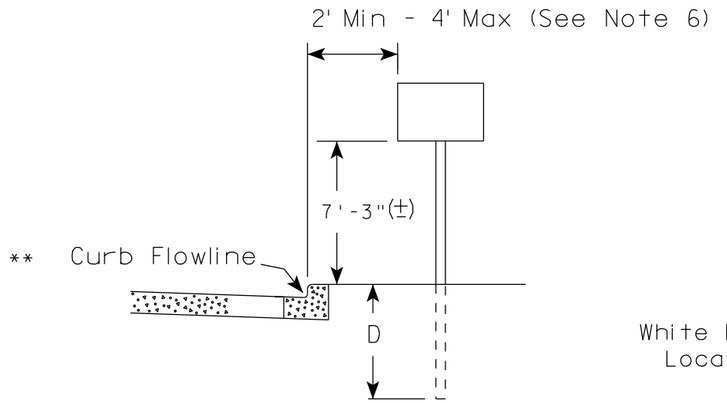
APPROVED

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

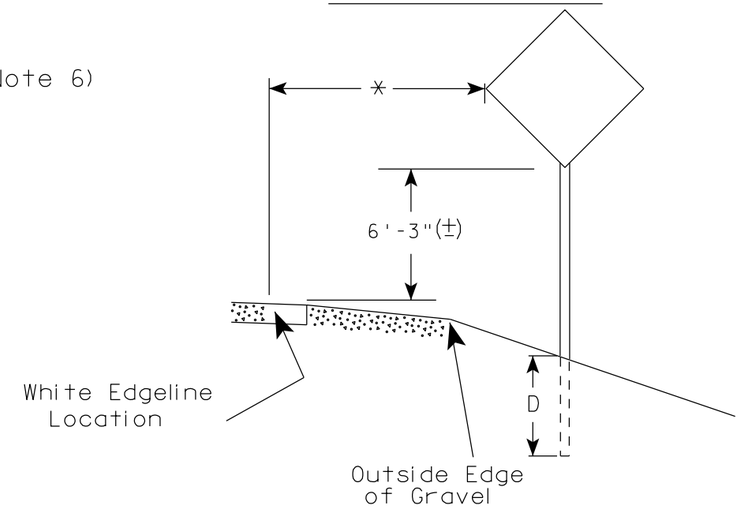
FHWA FIC

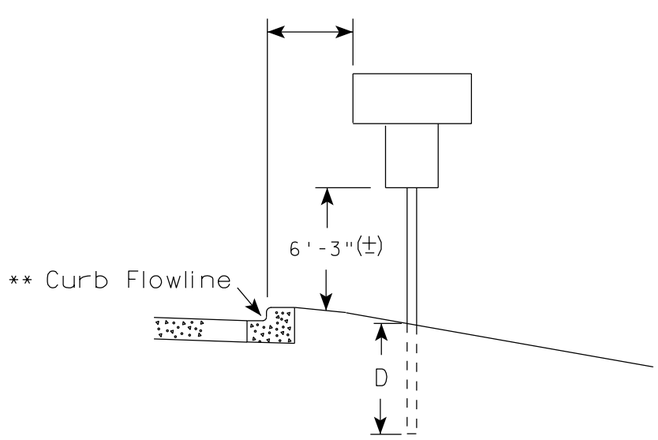
6 S.D.D. 15 D 31-3

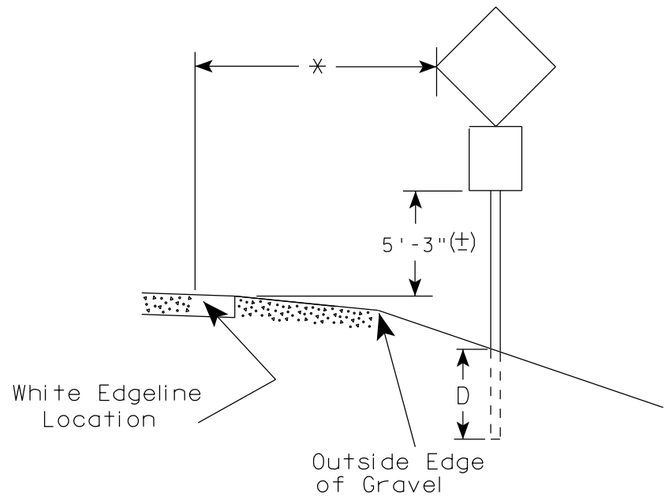
URBAN AREA



RURAL AREA (See Note 2)







** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq.Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A2-1S) 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 signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

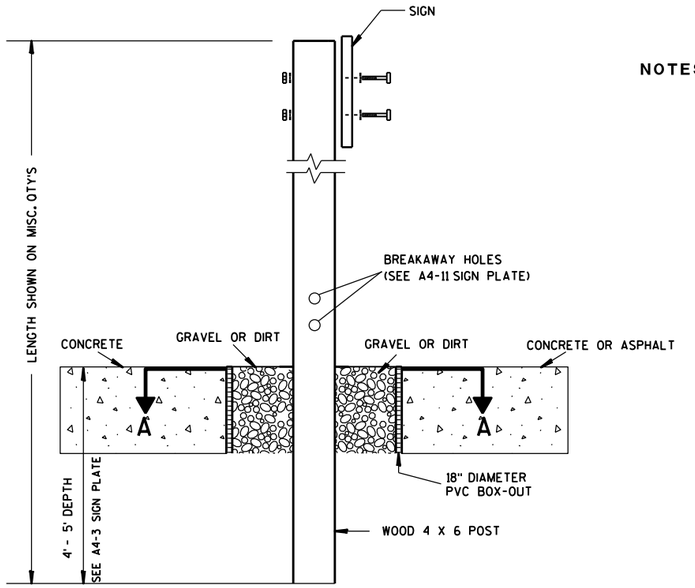
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-3.20

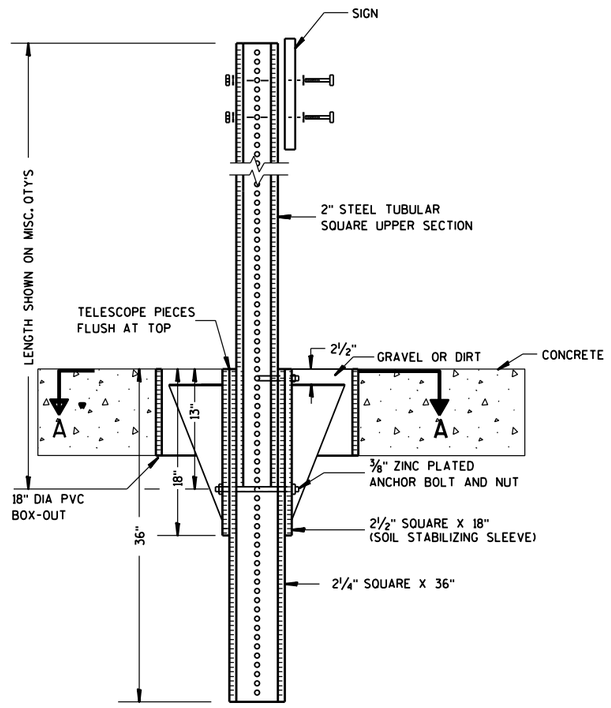
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



ELEVATION VIEW

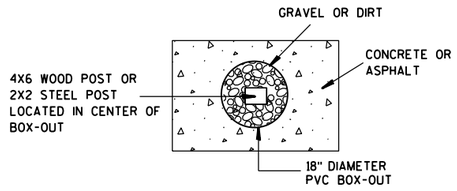
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

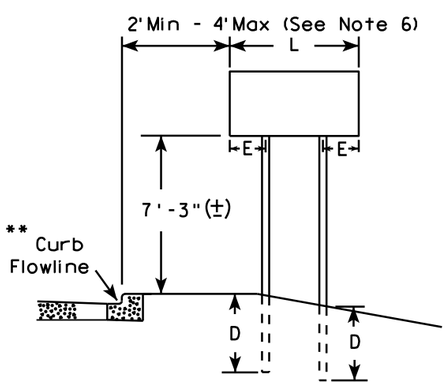
APPROVED Matthew R Rauch
for State Traffic Engineer

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

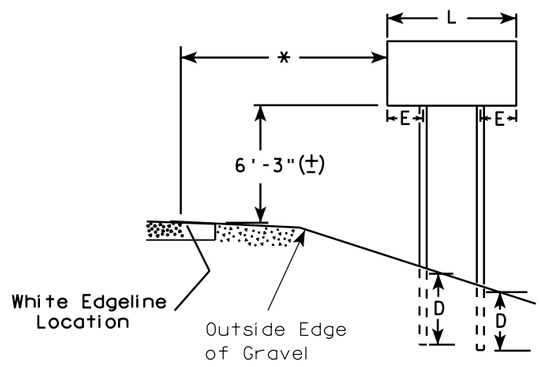
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

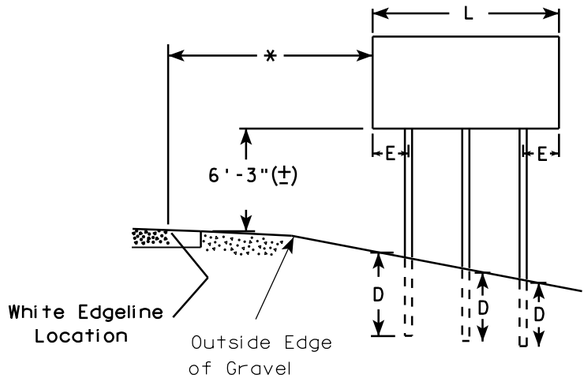
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

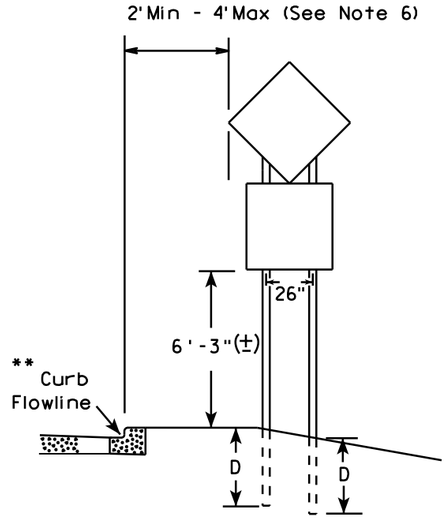
URBAN AREA



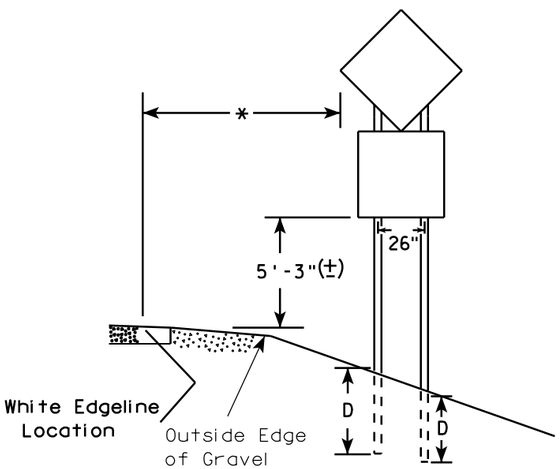
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. Minimum mounting height for J assemblies (A2-1S) 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 signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

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

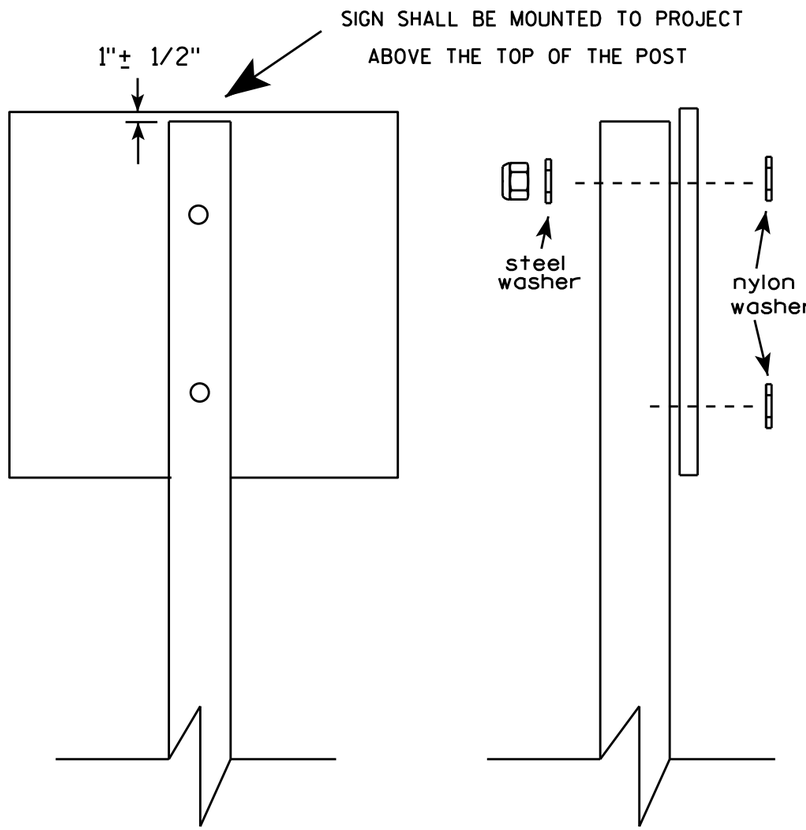
APPROVED Matthew R Rauch
for State Traffic Engineer

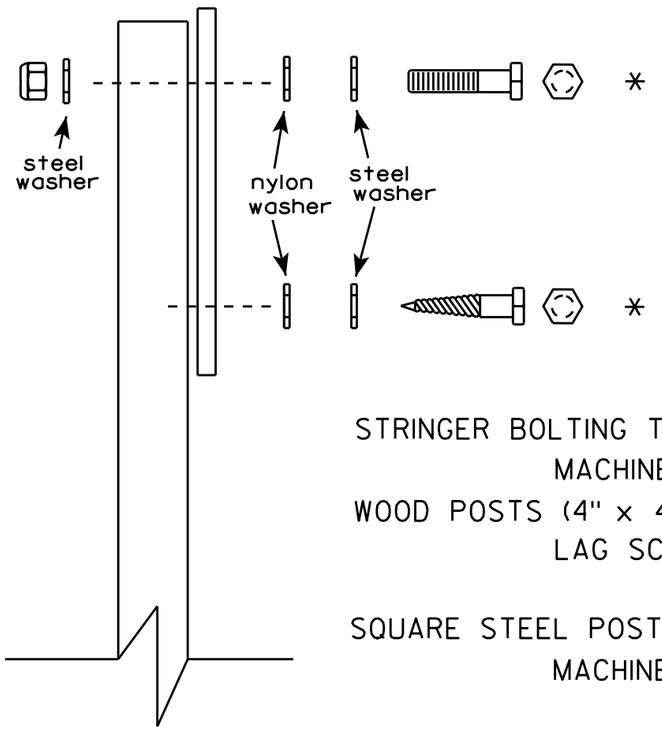
DATE 7/23/15 PLATE NO. A4-4 77 14

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A44.DGN PLOT DATE : 23-JUL-2015 15:23 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 107.021305:1.000000

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.

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/8" X 1-3/4" Length w/ nuts

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

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

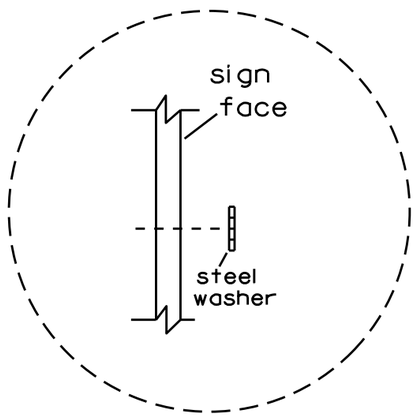
SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON 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

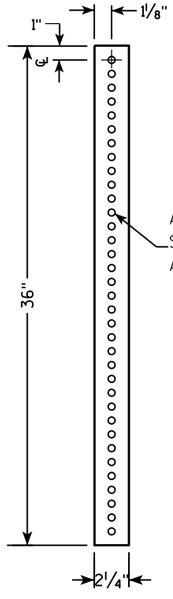
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/5/16 PLATE NO. A4-8.8

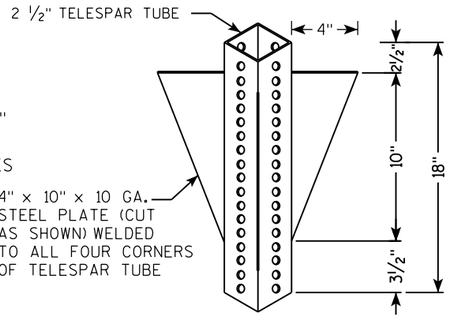
PROJECT NO: SHEET NO: E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

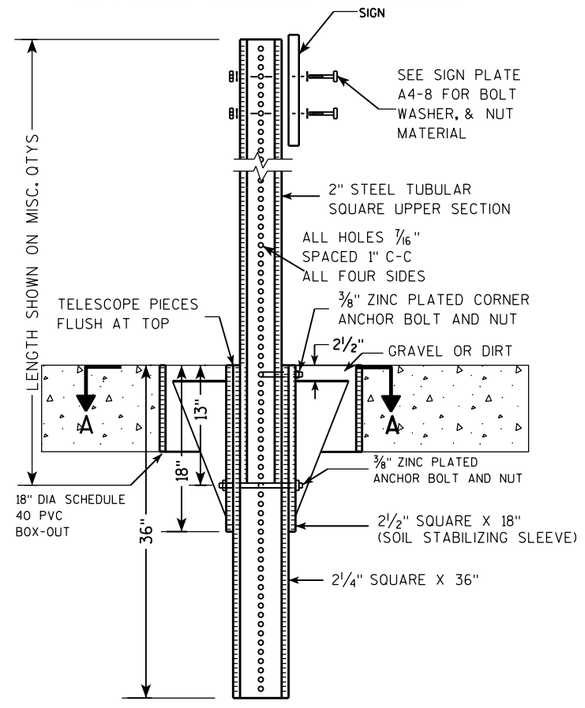
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



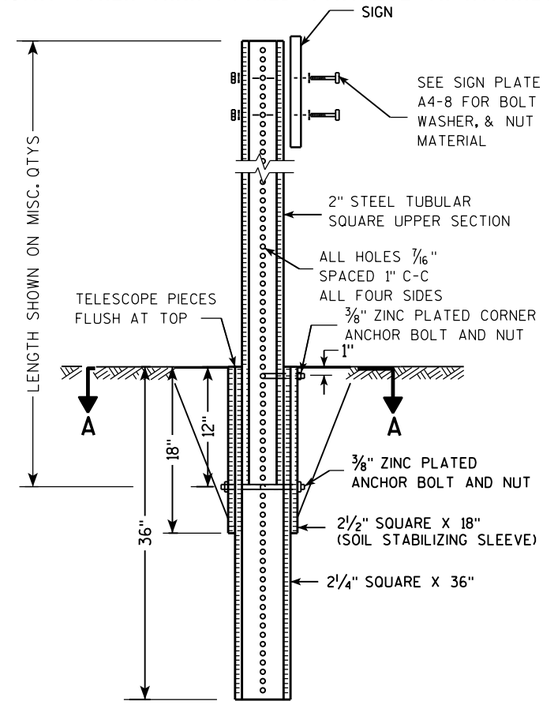
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

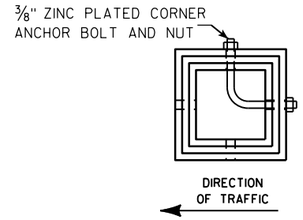


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

TUBULAR STEEL
SIGN POST
A4-9

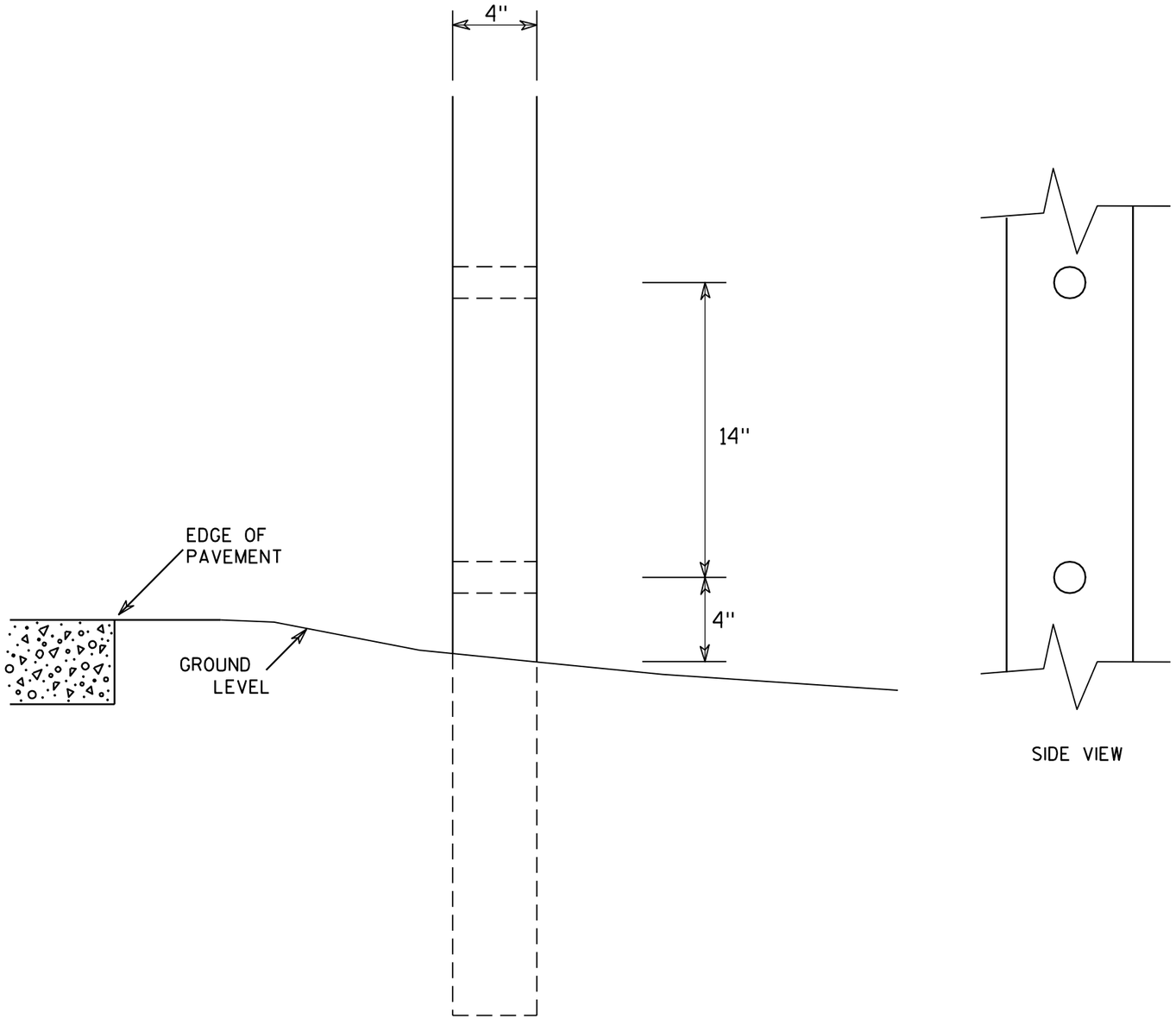
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 79 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE : 05-FEB-2015 17:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000



SIDE VIEW

GENERAL NOTES

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

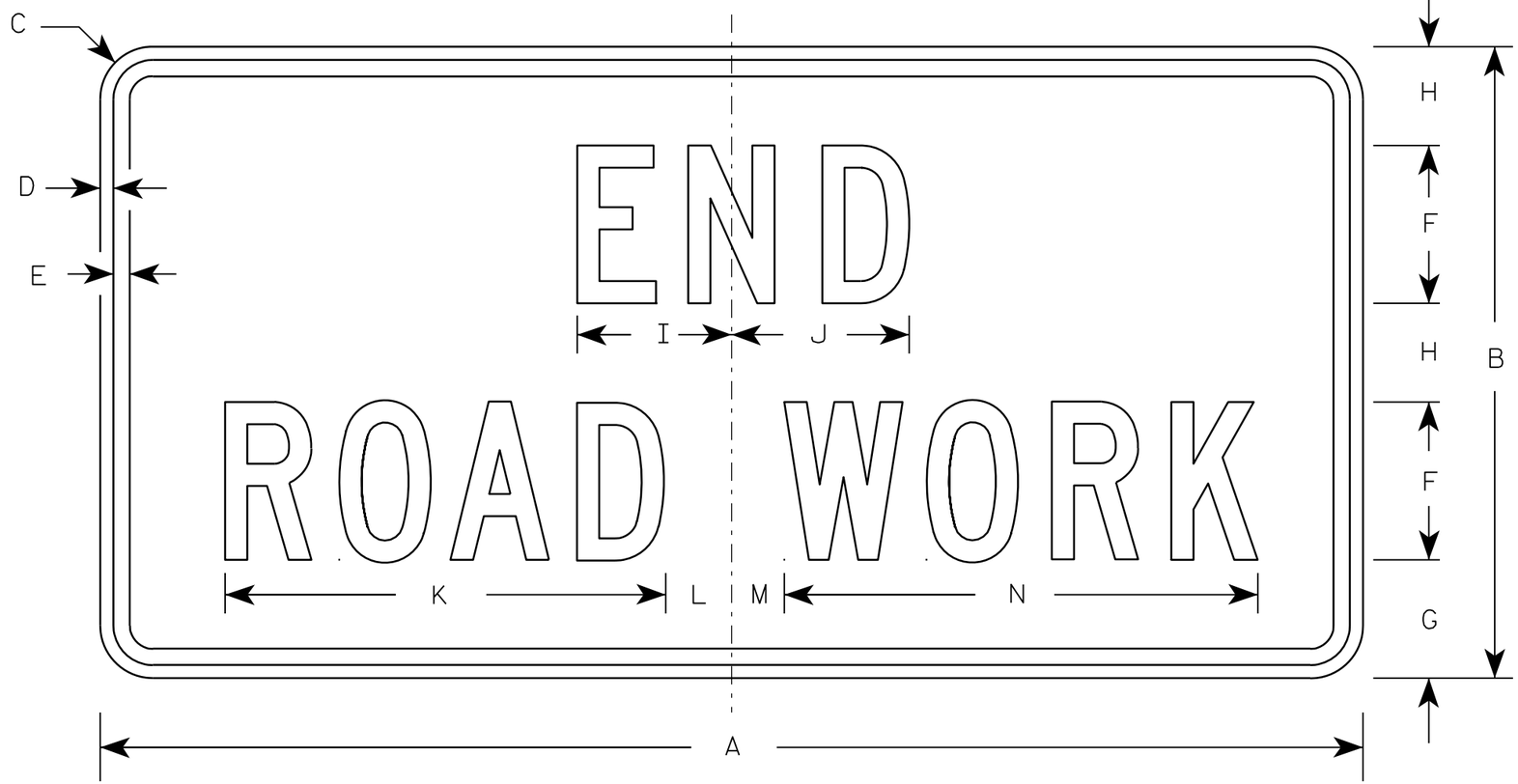
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 80	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

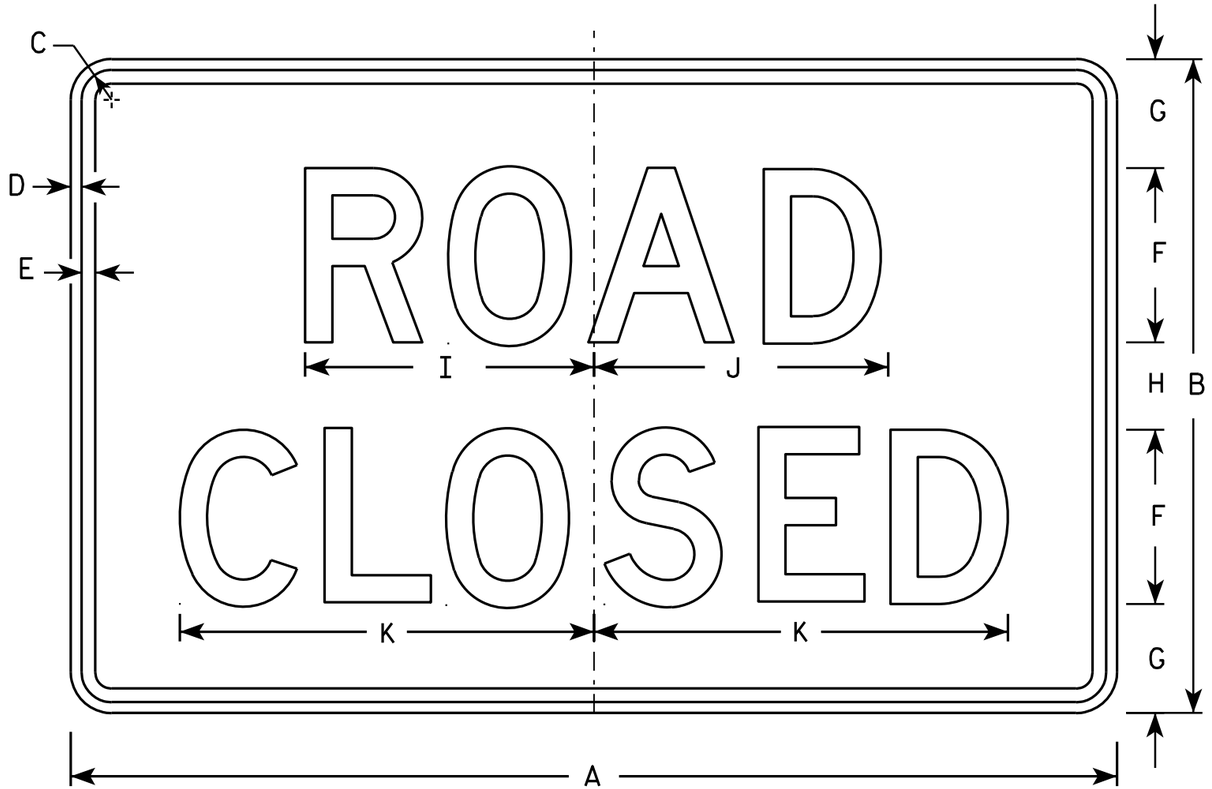
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

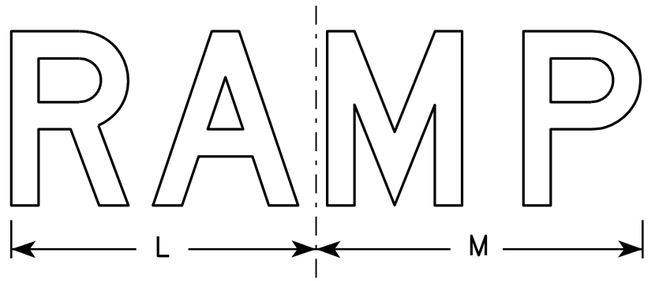
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 81	E



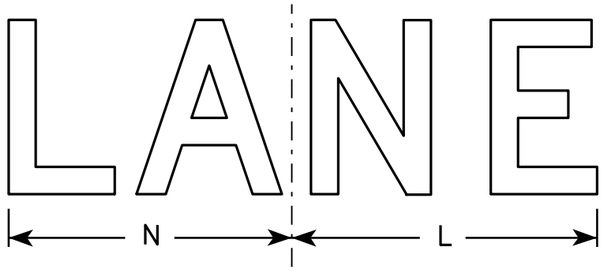
R11-2

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

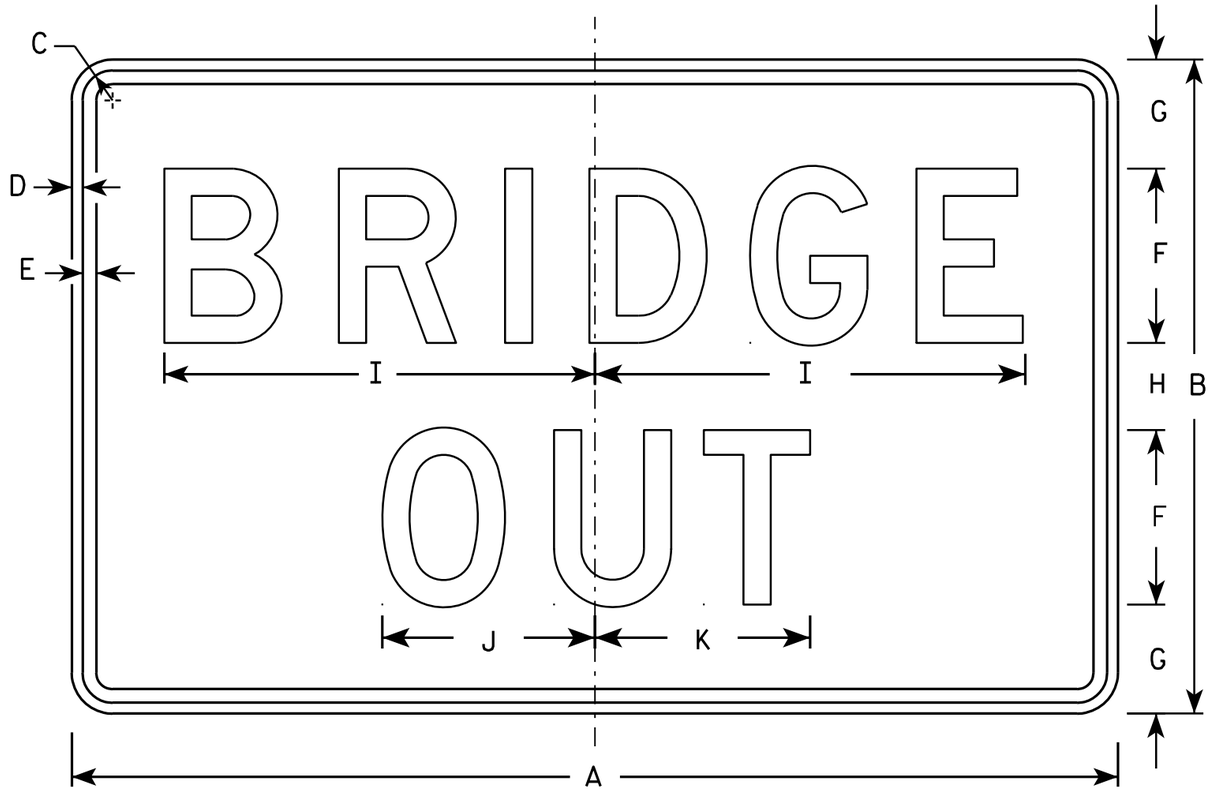
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 82	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R112.DGN PLOT DATE : 01-APR-2011 14:25 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.952219:1.000000

WISDOT/CADDS SHEET 42



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

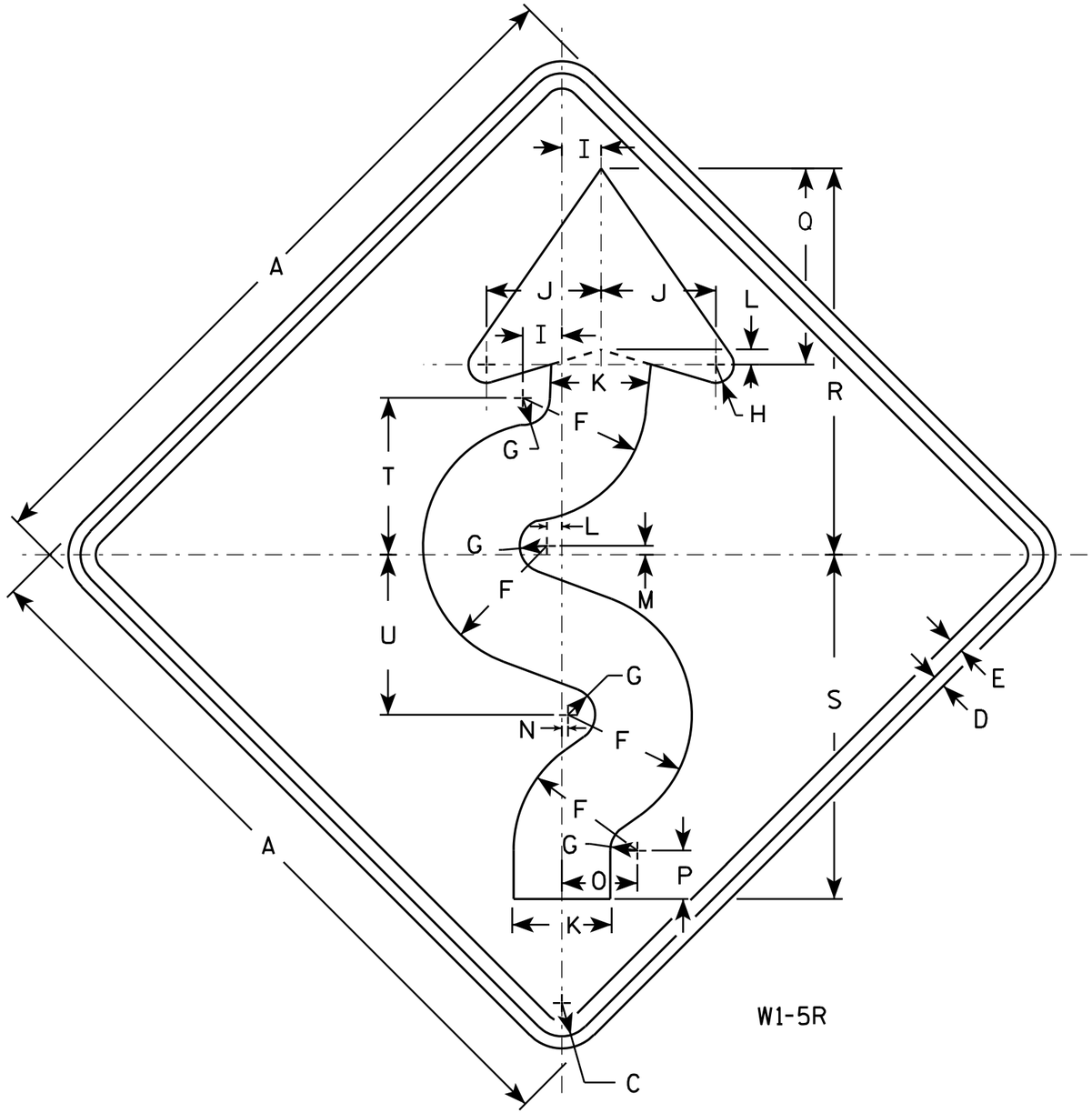
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

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

PROJECT NO:

SHEET NO: 83 E



W1-5R

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. W1-5L is the same as W1-5R 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	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	4 1/8	7/8	5/8	1 1/4	3 3/4	3 1/4	1/2	1/4	1/8	2 1/2	1 5/8	6 1/2	12 3/4	11 3/8	5 1/4	5 1/4						4.0
2S	30		1 3/8	1/2	5/8	5 1/8	1 1/8	3/4	1 5/8	4 3/4	4 1/8	5/8	3/8	1/4	3 1/8	2	8 1/8	16	14 1/4	6 1/2	6 5/8						6.25
2M	36		1 5/8	5/8	3/4	6 1/4	1 3/8	1	1 7/8	5 5/8	4 7/8	3/4	3/8	1/4	3 3/4	2 7/8	9 3/4	19 1/8	17 1/8	7 3/4	7 7/8						9.0
3	36		1 5/8	5/8	3/4	6 1/4	1 3/8	1	1 7/8	5 5/8	4 7/8	3/4	3/8	1/4	3 3/4	2 7/8	9 3/4	19 1/8	17 1/8	7 3/4	7 7/8						9.0
4	36		1 5/8	5/8	3/4	6 1/4	1 3/8	1	1 7/8	5 5/8	4 7/8	3/4	3/8	1/4	3 3/4	2 7/8	9 3/4	19 1/8	17 1/8	7 3/4	7 7/8						9.0
5	48		2 1/4	3/4	1	8 1/4	1 3/4	1 1/4	2 1/2	7 1/2	6 1/2	1	1/2	3/8	5	3 1/4	13	25 1/2	22 3/4	10 3/8	10 1/2						16.0

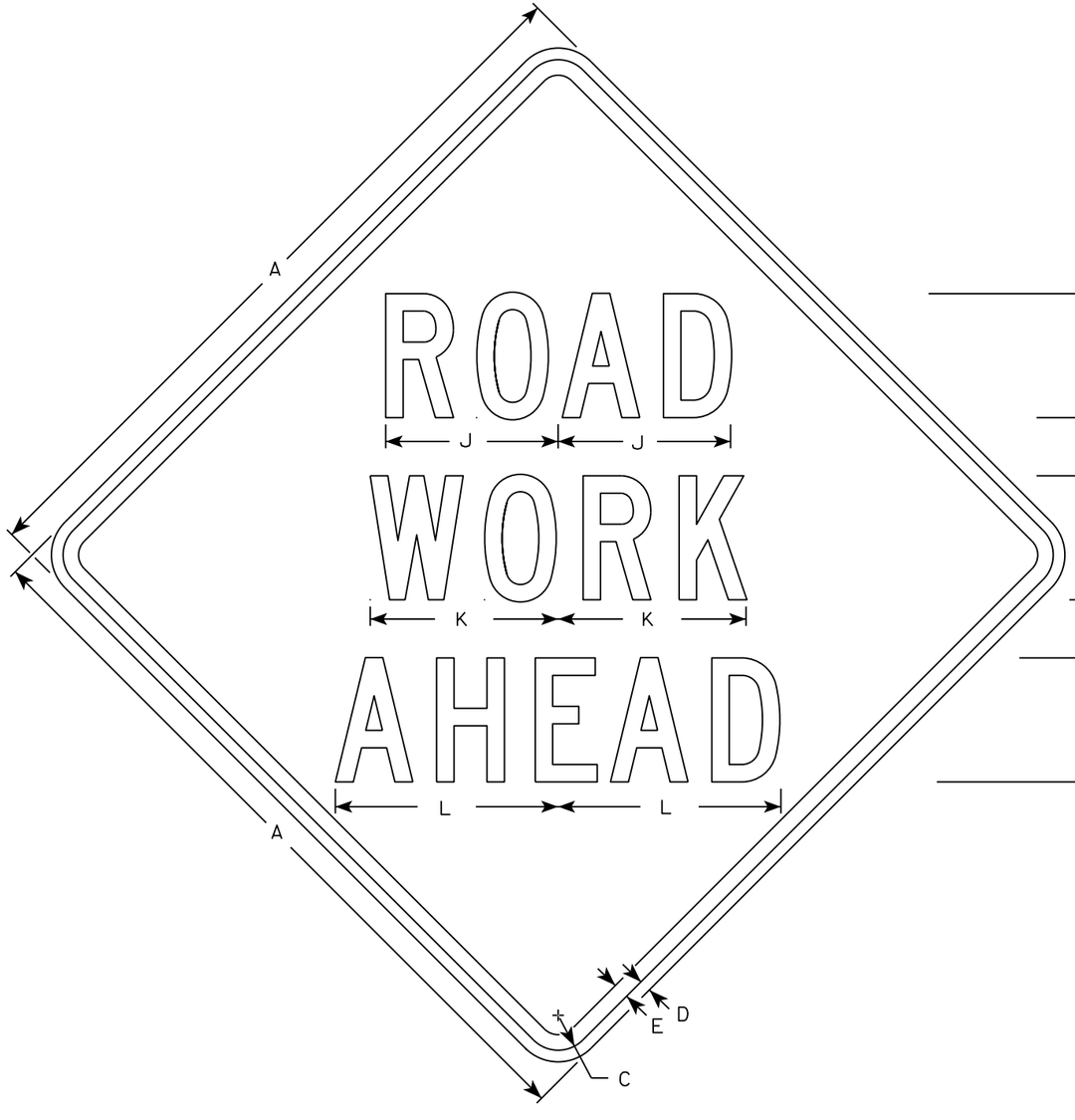
STANDARD SIGN
W1-5

WISCONSIN DEPT OF TRANSPORTATION

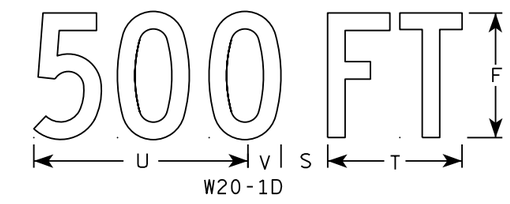
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 5/18/12 PLATE NO. W1-5.8

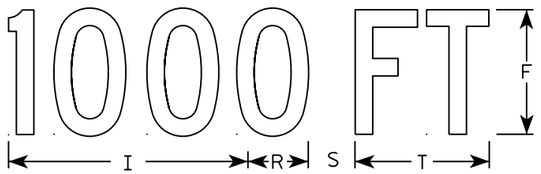
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 84 | E



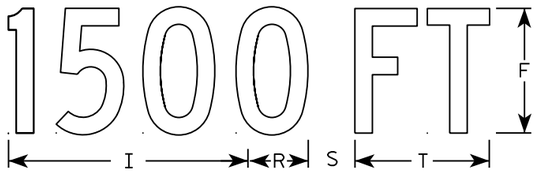
W20-1A



W20-1D

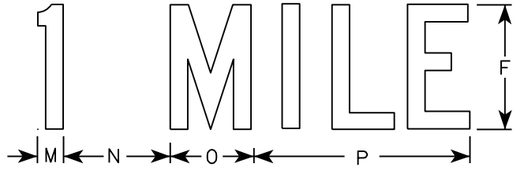


W20-1C

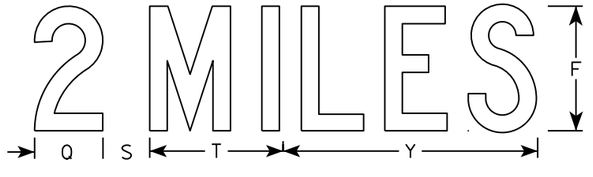


W20-1B

W20-1G



W20-1F



W20-1E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

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

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

WISCONSIN DEPT OF TRANSPORTATION

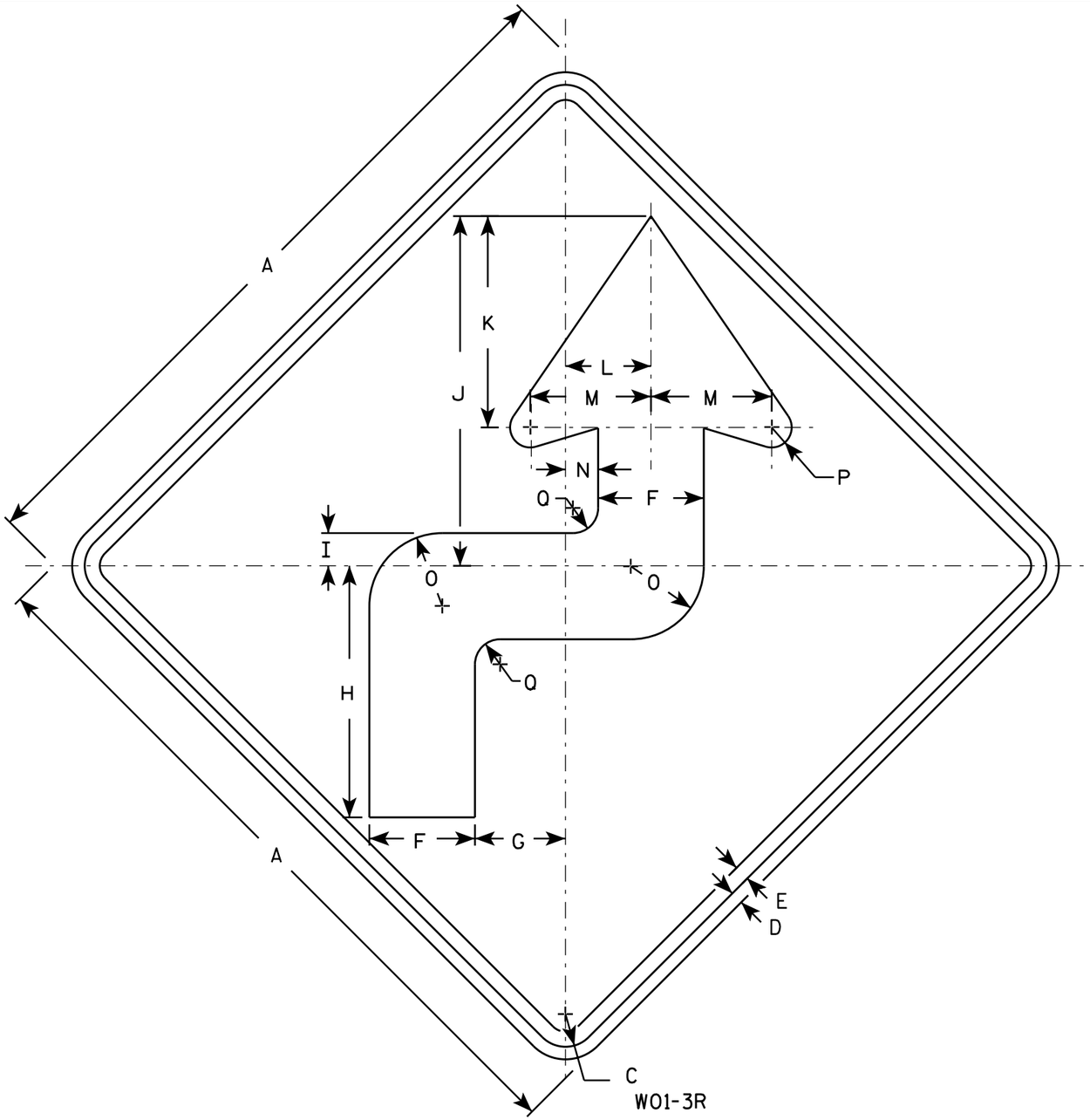
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:

SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 01-DEC-2015 18:24 PLOT BY : $$ plotuser $$



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-3L is the same as W01-3R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5 1/4	4 1/2	12 1/2	1 5/8	17 3/8	10 1/2	4 1/4	6	1 5/8	3 5/8	1	1 1/4										9.0
2S	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0
2M	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0
3	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0
4	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0
5	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0

STANDARD SIGN
W01-3

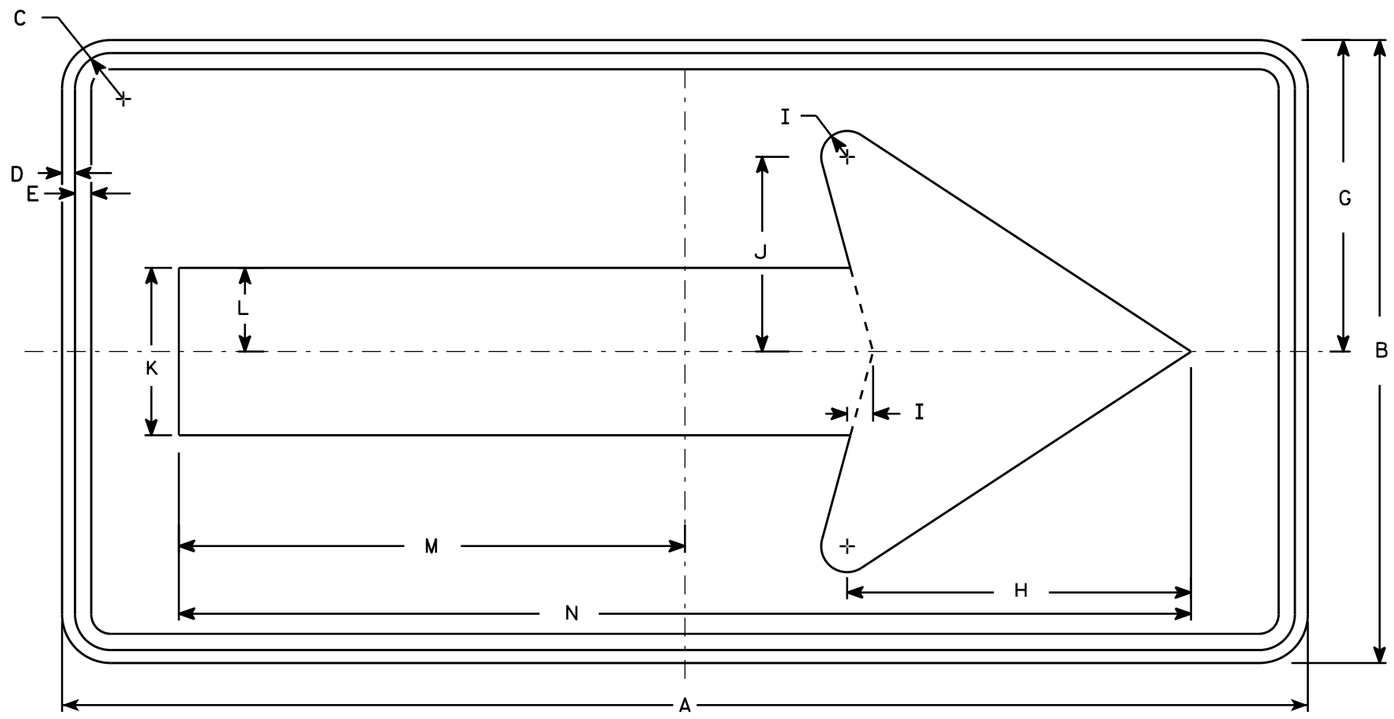
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE W01-3.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W013.DGN PLOT DATE : 28-FEB-2014 11:35 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.567217:1.000000 WISDOT/CADDS SHEET 42



W01-6

NOTES

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

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

STANDARD SIGN
W01-6

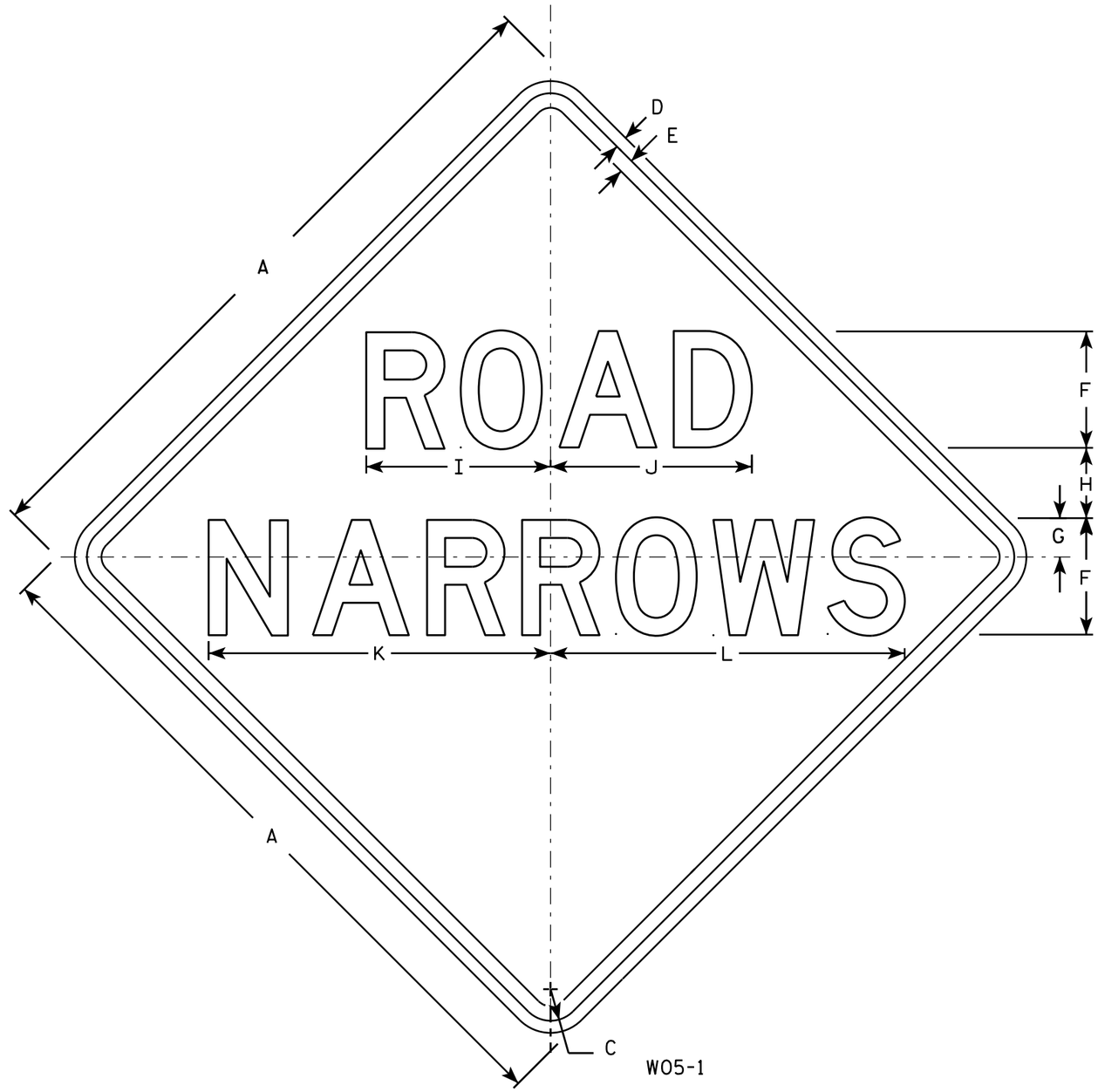
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE 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



W05-1

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 - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	2	3 1/2	9 1/2	10 3/8	17 5/8	18 1/4															9.0
2S	48		2 1/4	3/4	1	8	3	4	12 3/4	13 3/4	23 1/2	24 3/8															16.0
2M	48		2 1/4	3/4	1	8	3	4	12 3/4	13 3/4	23 1/2	24 3/8															16.0
3	48		2 1/4	3/4	1	8	3	4	12 3/4	13 3/4	23 1/2	24 3/8															16.0
4	48		2 1/4	3/4	1	8	3	4	12 3/4	13 3/4	23 1/2	24 3/8															16.0
5	48		2 1/4	3/4	1	8	3	4	12 3/4	13 3/4	23 1/2	24 3/8															16.0

STANDARD SIGN
W05-1

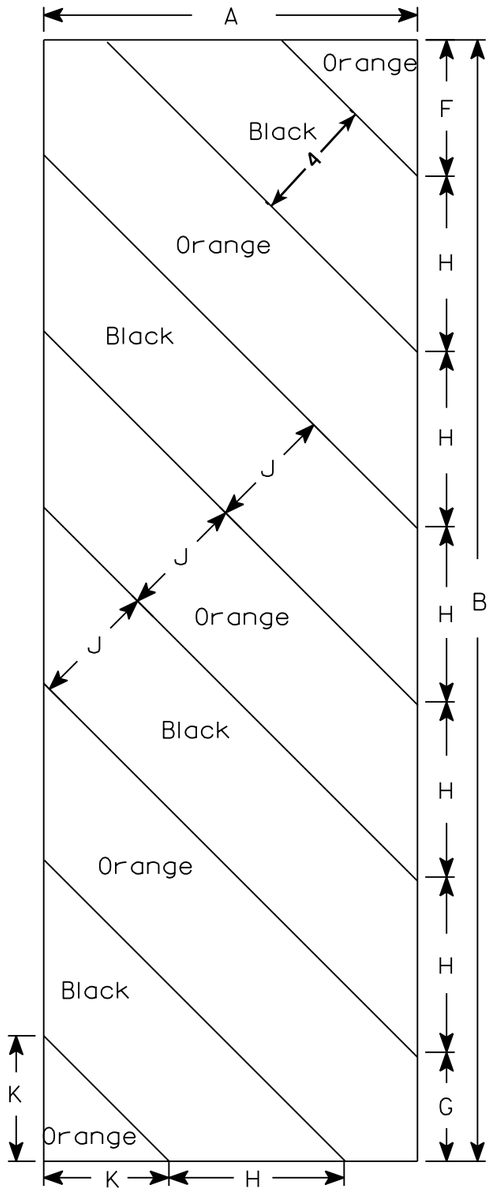
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

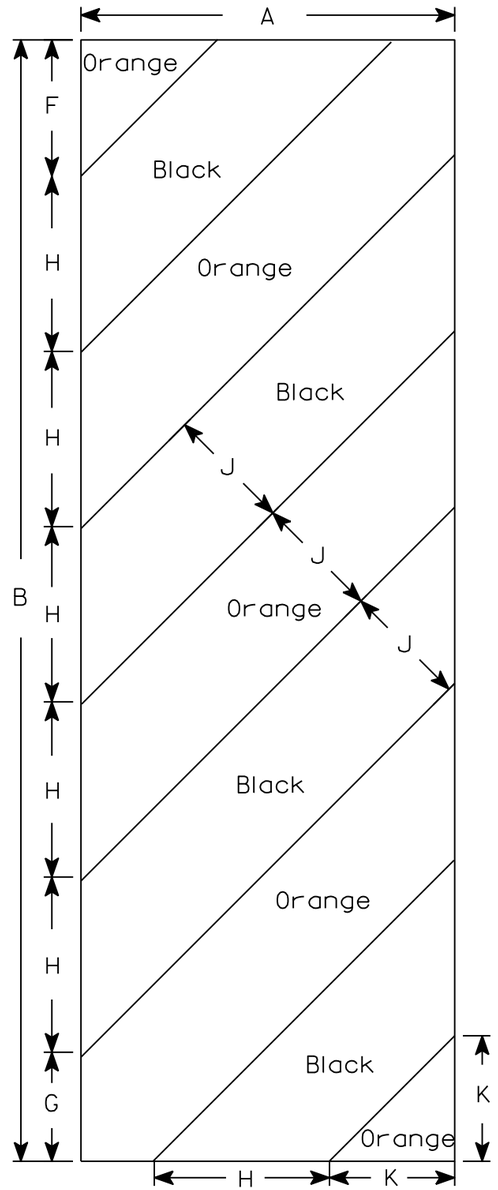
DATE 11/20/13 PLATE NO. W05-1.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W051.DGN PLOT DATE : 20-NOV-2013 11:56 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 6.810445:1.000000
WISDOT/CADDS SHEET 42



W05-52L



W05-52R

NOTES

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

W05-52L & W05-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE W05-52.1

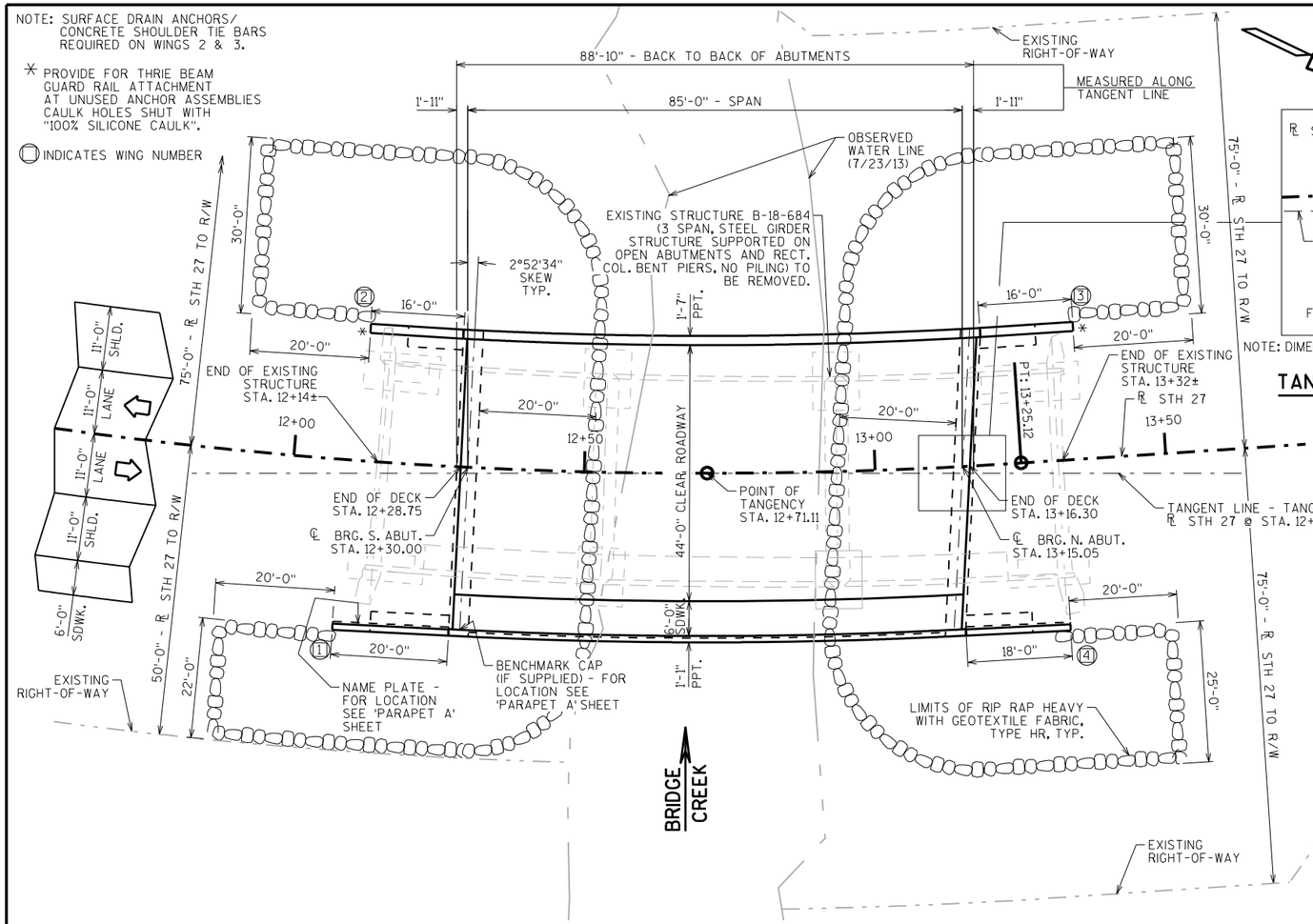
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W0552.DGN PLOT DATE : 28-FEB-2014 11:39 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 4.864607:1.000000 WISDOT/CADDS SHEET 42

NOTE: SURFACE DRAIN ANCHORS/ CONCRETE SHOULDER TIE BARS REQUIRED ON WINGS 2 & 3.

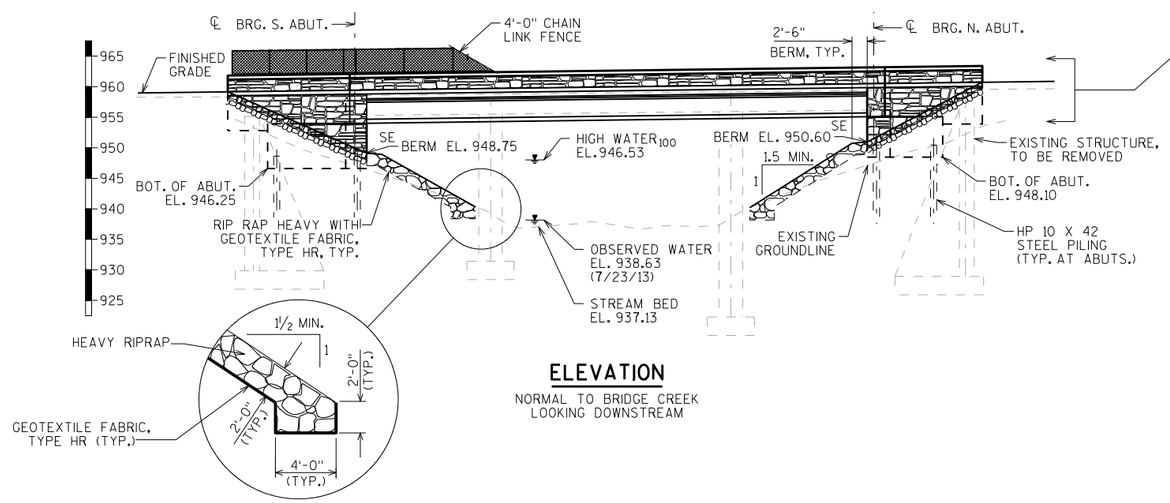
✳ PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK".

⬡ INDICATES WING NUMBER



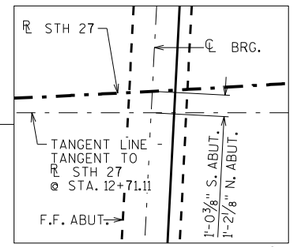
PLAN

SINGLE SPAN - 45W" PRESTRESSED GIRDER



ELEVATION

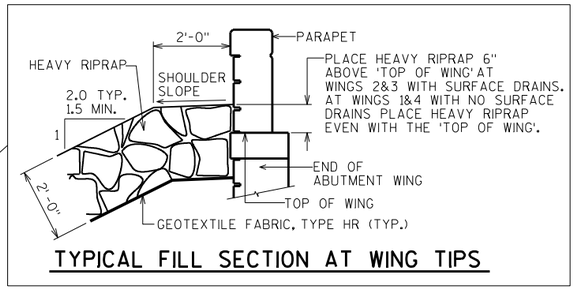
NORMAL TO BRIDGE CREEK LOOKING DOWNSTREAM



NOTE: DIMENSIONS ARE MEASURED ALONG ℄ BRG.

TANGENT OFFSET DETAIL

NORTH ABUT. SHOWN
SOUTH ABUT. SIMILAR



TYPICAL FILL SECTION AT WING TIPS

DESIGN DATA

LIVE LOAD:

DESIGN LOADING; HL-93
INVENTORY RATING FACTOR: RF=1.10
OPERATING RATING FACTOR: RF=1.43
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250 (KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY DECK — f'c = 4,000 P.S.I. ALL OTHER — f'c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60 — fy = 60,000 P.S.I.
45W" PRESTRESSED GIRDERS, CONCRETE MASONRY — f'c = 8,000 P.S.I.
STRANDS- 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10 X 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ✳✳ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 20'-0" LONG PILES @ SOUTH ABUT.
ESTIMATED 25'-0" LONG PILES @ NORTH ABUT.
ANTICIPATE SIGNIFICANT VARIATION IN ALL PILE LENGTHS AT NORTH ABUT.
PREBORING REQUIRED FOR NORTH ABUT. PILES WITH AN AVERAGE EXPECTED PREBORE OF 15'-0" PER PILE.
EXTEND PREBORE 3'-0" PER PILE INTO WEATHERED SANDSTONE ROCK.

✳✳ THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

CURVE DATA

STH 27

P.I. = 10+49.99
Δ = 40°-14'-00"
D = 06°-59'-44.52"
T = 299.99
L = 575.12
R = 819.02
S.E. = 4.60%
P.T. = 13+25.12

HYDRAULIC DATA

100 YEAR FREQUENCY

Q_{100} = 2650 C.F.S.
VEL. =6.2 F.P.S.
HW_{100} = EL. 946.53
WATERWAY AREA= 426 SQ. FT.
DRAINAGE AREA= 35.6 SQ. MI.
ROAD OVERTOPPING = NA
SCOUR CRITICAL CODE = 8

2 YEAR FREQUENCY

Q_2 = 800 C.F.S.
HW_2 = EL. 942.91

TEMPORARY STRUCTURE

Q_5 = 1,280 C.F.S.
HW_5 = EL. 943.2
MIN. HYDRAULIC AREA = 230 S.F.
LOW CHORD = EL. 943.5

TRAFFIC VOLUME

STH 27

A.D.T.=3,600 (2037)
R.D.S.=35 M.P.H.

STRUCTURE DESIGN CONTACTS:

ADAM SWIERCZEK (608) 267-4593
AARON BONK (608) 261-0261

LIST OF DRAWINGS

STATE PROJECT NUMBER

7070-08-73

NO.	DATE	REVISION	BY

Plans Prepared By WISDOT
BUREAU OF STRUCTURES

ACCEPTED William C. Dreher 4/18/16
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-18-226

STH 27 OVER BRIDGE CREEK

COUNTY	CITY
EAU CLAIRE	AUGUSTA

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
ABS	EMK	JPH	ABS

GENERAL PLAN

SHEET 1 OF 19

90

I.D. 7070-08-03

DATE: DEC. 2015

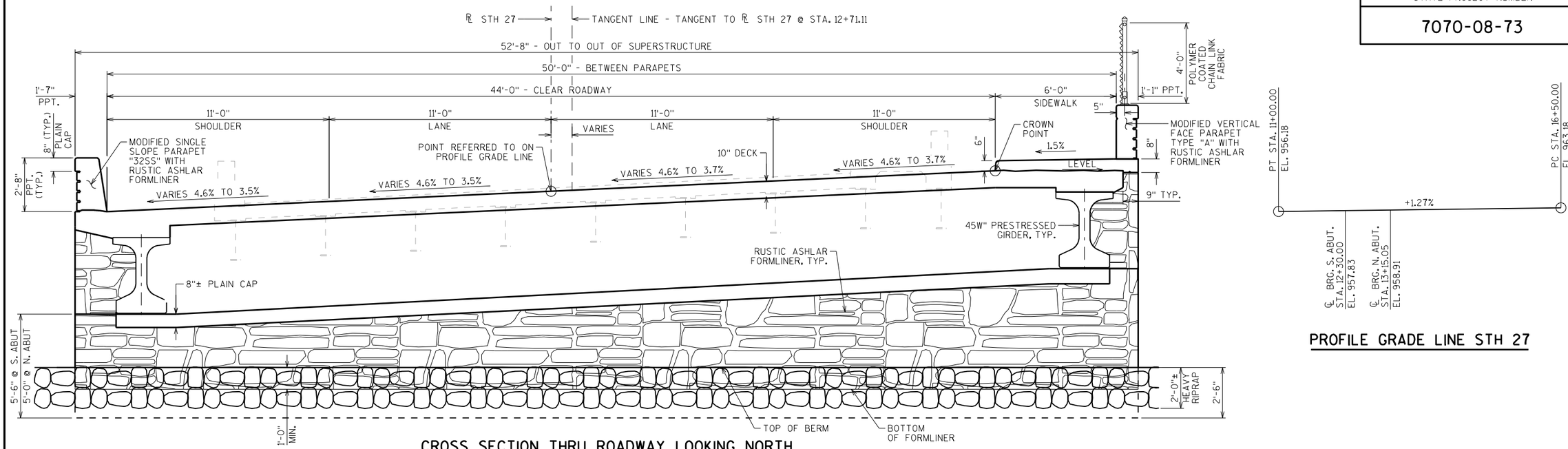
SCALE = 12

8

8

STATE PROJECT NUMBER

7070-08-73



CROSS SECTION THRU ROADWAY LOOKING NORTH

(ALL HORIZONTAL DIMENSIONS ARE MEASURED RADIALLY - NORMAL TO THE CURVED ℄ STH 27.)

PROFILE GRADE LINE STH 27

SUPERELEVATION TRANSITION TABLE

STATION	LEFT SHOULDER	LEFT LANE	RIGHT LANE	RIGHT SHOULDER
7+79.66	4.6% ←	4.6% ←	4.6% ←	4.6% ←
12+95.46	4.6% ←	4.6% ←	4.6% ←	4.6% ←
13+45.76	2.0% ←	2.0% ←	2.0% ←	2.0% ←

℄ STH 27 →

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	SOUTH ABUT.	NORTH ABUT.	TOTALS
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STA. 12+75	LS	———	———	———	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-18-226	LS	———	———	———	1
210.0100	BACKFILL STRUCTURE	CY	———	270	240	510
502.0100	CONCRETE MASONRY BRIDGES	CY	240	80	70	390
502.3200	PROTECTIVE SURFACE TREATMENT	SY	510	3	2	515
502.3210	PIGMENTED SURFACE SEALER	SY	75	15	15	105
503.0146	PRESTRESSED GIRDER TYPE I 45W-INCH	LF	430	———	———	430
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	———	4275	3995	8270
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	36,565	3600	3275	43,440
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	10	———	———	10
506.4000	STEEL DIAPHRAGMS B-18-226	EACH	8	———	———	8
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	———	20	20	40
517.1015.S	CONCRETE STAINING MULTI-COLOR B-18-226	SF	455	500	430	1,385
517.1050.S	ARCHITECTURAL SURFACE TREATMENT B-18-226	SF	455	500	430	1,385
526.0100	TEMPORARY STRUCTURE STA. 12+75	LS	———	———	———	1
550.0020	PRE-BORING ROCK OR CONSOLIDATED MATERIALS	LF	———	———	165	165
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	———	220	275	495
606.0300	RIPRAP HEAVY	CY	———	365	375	740
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	———	110	110	220
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	———	1	1	2
645.0120	GEOTEXTILE FABRIC TYPE HR	SY	———	565	585	1,150
SPV.0090	FENCE CHAIN LINK POLYMER COATED 4-FT	LF	89	20	18	127
	NON-BID ITEMS					
	FILLER	SIZE	———	———	———	½" & ¾"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

AT THE BACKFACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

THE GRADATION OF THE STRUCTURE BACKFILL SHALL MEET THE REQUIREMENTS OF SECTION 209.2.2 OF THE STANDARD SPECIFICATIONS FOR GRADE 1 MATERIAL.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK SURFACE, THE EXPOSED FRONT FACE AND TOP OF SIDEWALK SURFACES AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT THE DECK, SIDEWALK AND WINGS.

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACES AND TOPS OF THE PARAPETS, INCLUDING PARAPETS ON ABUTMENT WINGS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP AND GEOTEXTILE FABRIC TYPE 'HR' TO THE EXTENT SHOWN ON SHEET 1 AND ON THE ABUTMENT SHEETS.

EXISTING STRUCTURE B-18-684, A 3 SPAN STEEL GIRDER STRUCTURE SUPPORTED ON OPEN ABUTMENTS AND RECT. COL. BENT PIERS, NO PILING, WITH AN OVERALL WIDTH OF 36'-3"± AND AN OVERALL LENGTH OF 118'-6"± IS TO BE REMOVED WITH MINIMAL DEBRIS PRIOR TO CONSTRUCTION OF B-18-226.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE SHOWN OR NOTED.

THE COLOR OF POLYMER-COATING FOR THE CHAIN LINK FENCE SHALL BE BLACK IN ACCORDANCE WITH ASTM F934. ALL FENCE COMPONENTS SHALL BE GALVANIZED STEEL WITH A COLORED POLYMER-COATING ON THE OUTSIDE.

MULTI-COLOR CONCRETE STAINING AND ARCHITECTURAL SURFACE TREATMENT REQUIRED ON BRIDGE, SEE "AESTHETIC DETAILS" SHEET FOR ITS LOCATIONS AND LIMITS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-226

DRAWN BY JPH | PLANS CK'D. ABS

CROSS SECTION & QUANTITIES

SHEET 2

91

8

8

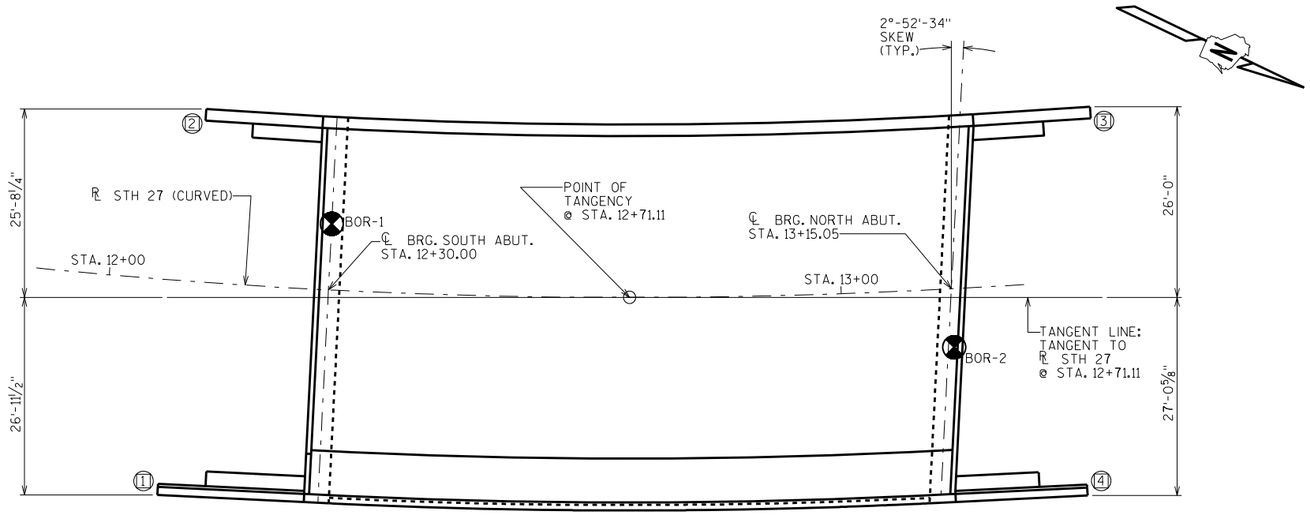
SCALE = 2.5

STH 27 OVER BRIDGE CREEK
AUGUSTA - CADOTT

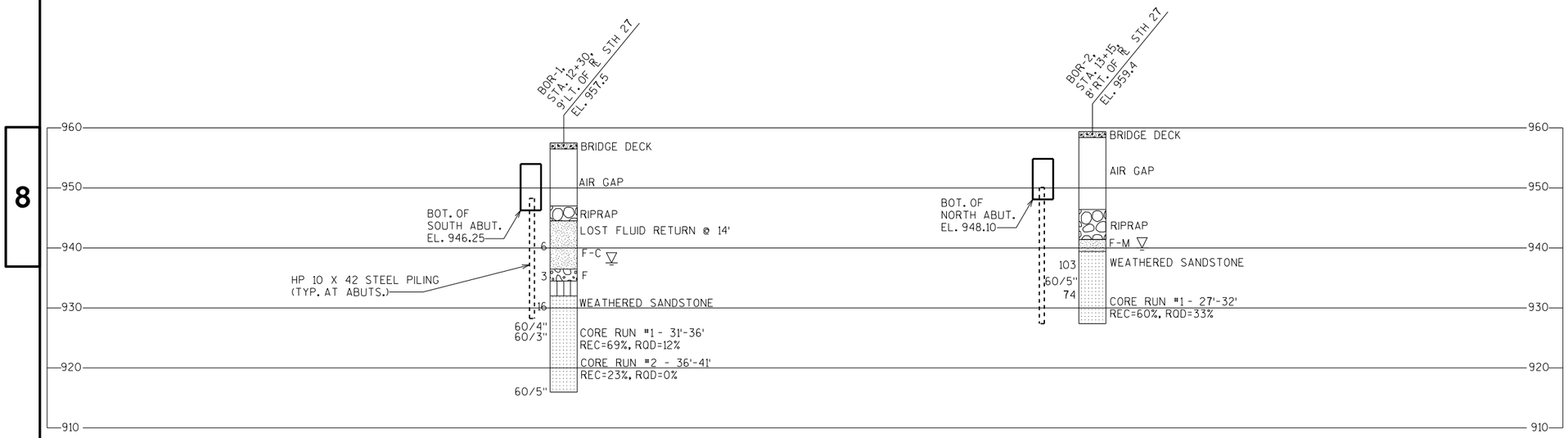
BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	12/16/2014	232216	435889
2	12/17/2014	232303	435865

BORINGS COMPLETED BY: WISDOT
REPORT COMPLETED BY: WISDOT
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) EAU CLAIRE COUNTY

WING NUMBERS



PLAN



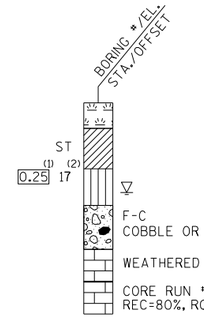
STATE PROJECT NUMBER

7070-08-73

MATERIAL SYMBOLS

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

LEGEND OF BORING



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

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

GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-226

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SUBSURFACE EXPLORATION

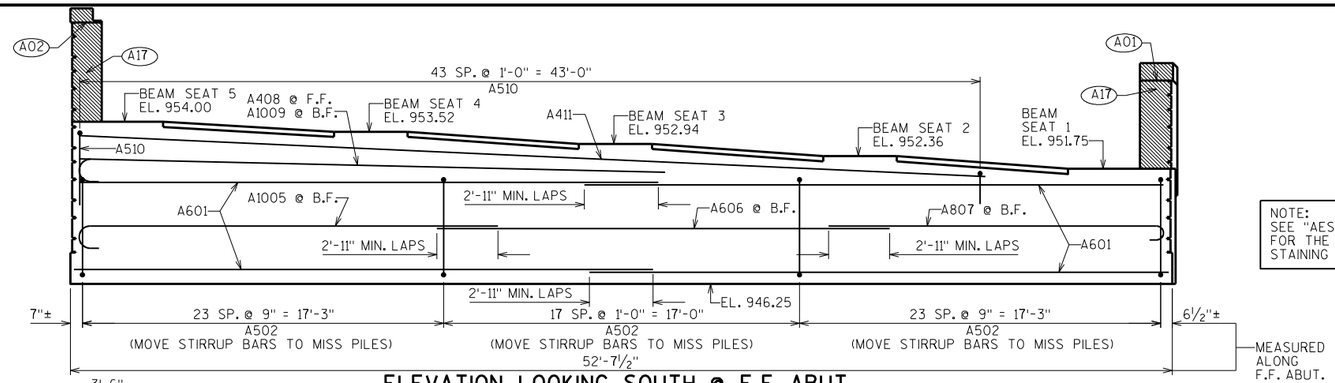
SHEET 3

92

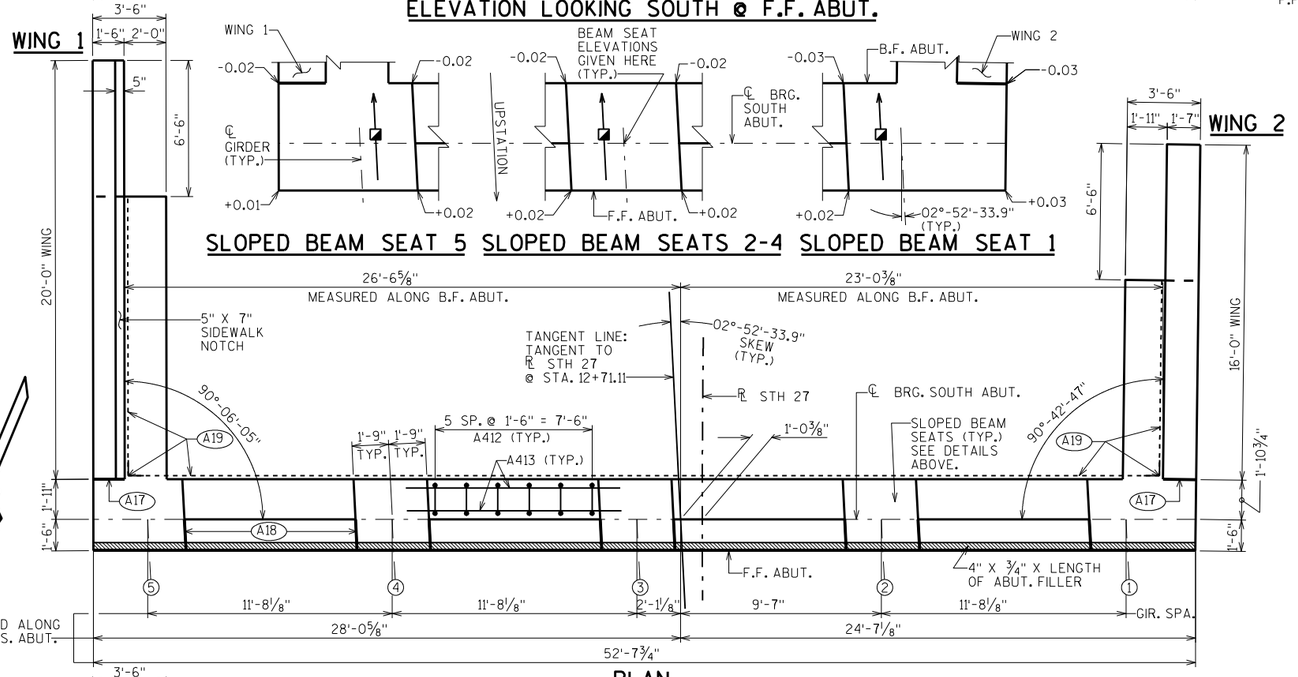
SCALE = 10

STATE PROJECT NUMBER

7070-08-73

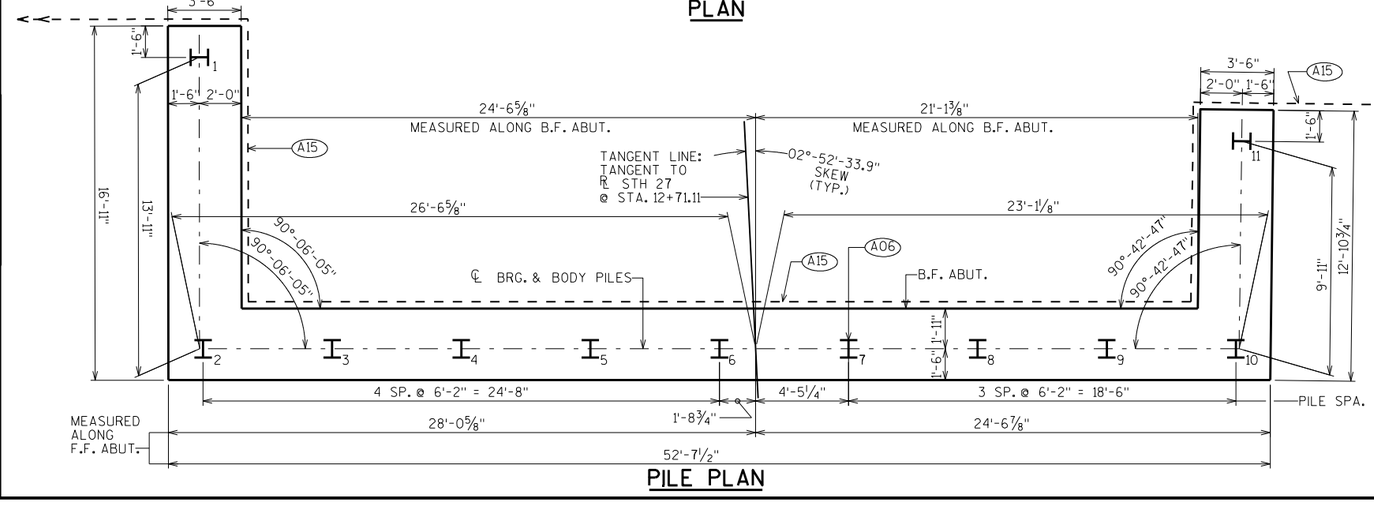


ELEVATION LOOKING SOUTH @ F.F. ABUT.

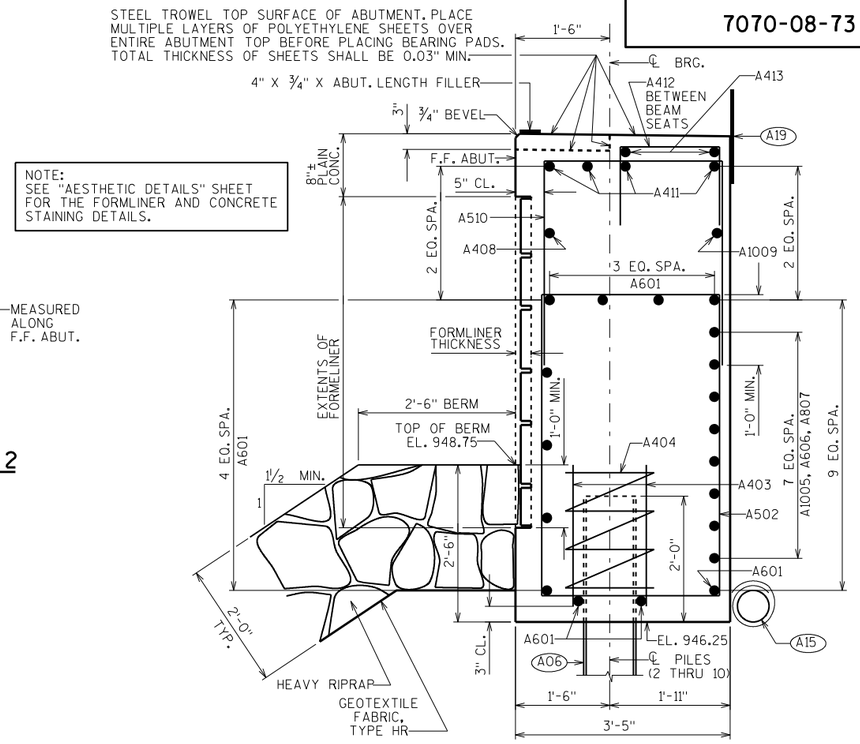


PLAN

SLOPED BEAM SEAT 5 SLOPED BEAM SEATS 2-4 SLOPED BEAM SEAT 1



PILE PLAN

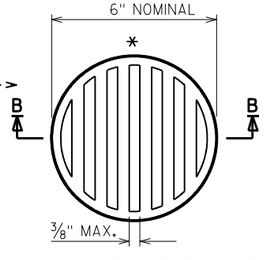


SECTION THRU BODY

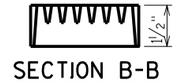
NOTE:
SEE "AESTHETIC DETAILS" SHEET FOR THE FORMLINER AND CONCRETE STAINING DETAILS.

INDICATES SLOPED BEAM SEAT DIRECTION - POINTING DOWNWARDS

NOTE:
REMOVE THE EXISTING RIPRAP WITHIN 3 FEET OF THE NEW ABUTMENT FOOTPRINT. REPLACE REMOVED RIPRAP WITH STRUCTURE BACKFILL UP TO BOTTOM OF ABUTMENT.



RODENT SHIELD DETAIL



SECTION B-B

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

(A01) OPTIONAL CONSTRUCTION JOINT: STRIKE OFF AND LEAVE ROUGH. (18" R.M.W. @ B.F. IF JOINT IS USED)

(A02) CONSTRUCTION JOINT: POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH. PLACE 18" RUBBERIZED MEMBRANE WATERPROOFING @ B.F. JOINT.

(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 20 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING AND NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE. COLOR OF JOINT SEALER SHALL MATCH THE ADJACENT CONCRETE STAINING COLOR AND MUST BE APPROVED BY THE ENGINEER.

(A18) ¾" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-226

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SOUTH ABUTMENT

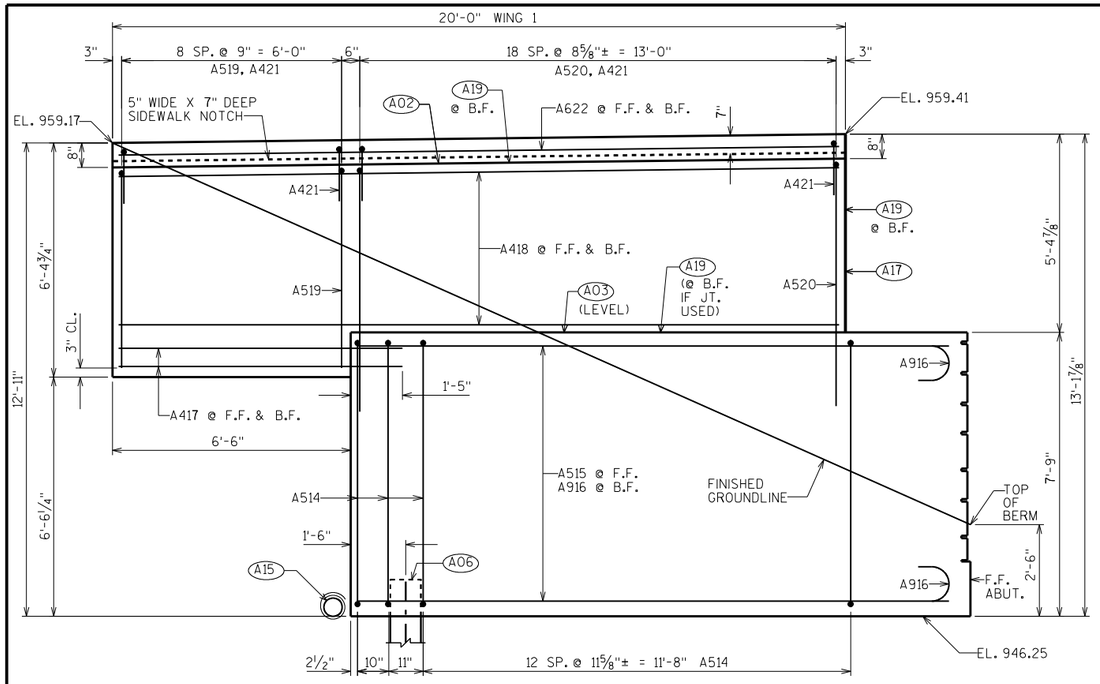
SHEET 4

93

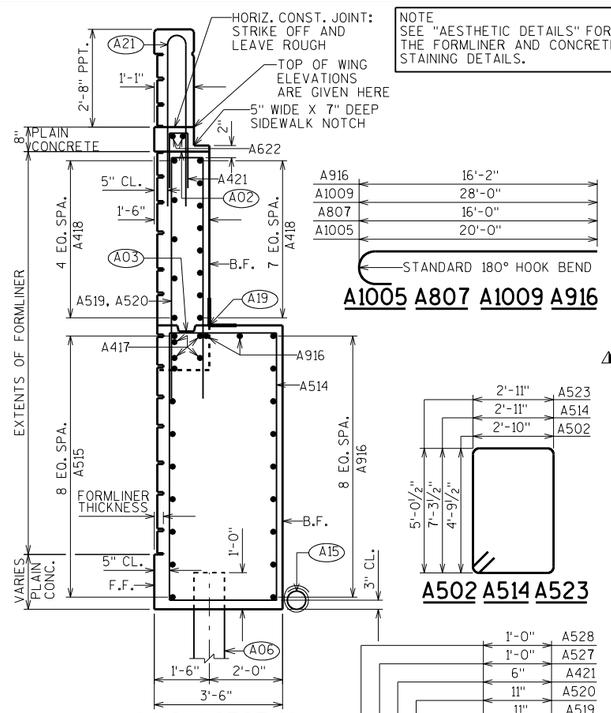
8

8

SCALE = 3.5



WING 1 ELEVATION LOOKING @ F.F. WING

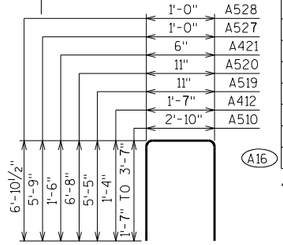


WING 1 SECTION

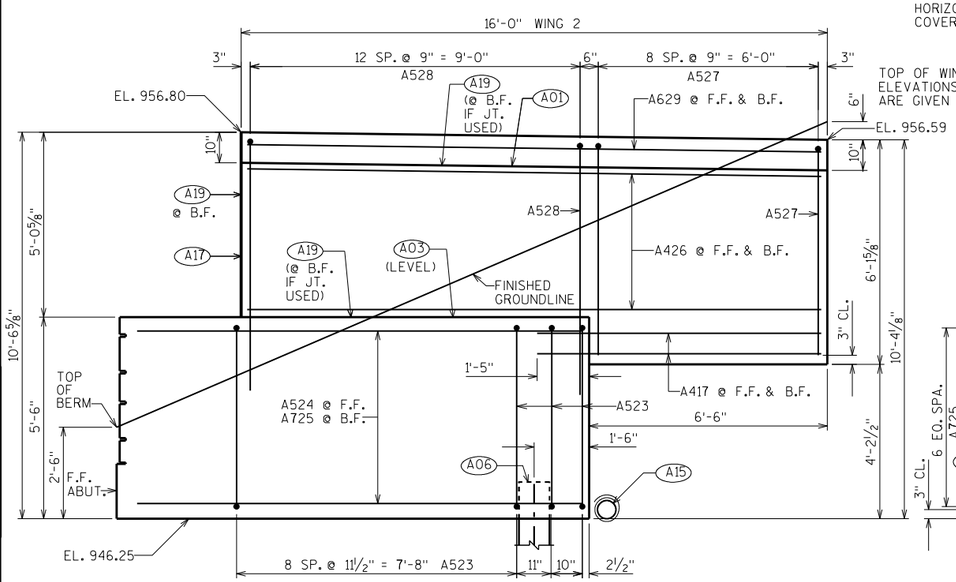
NOTE
SEE "AESTHETIC DETAILS" FOR THE FORMLINER AND CONCRETE STAINING DETAILS.

A1005 A807 A1009 A916

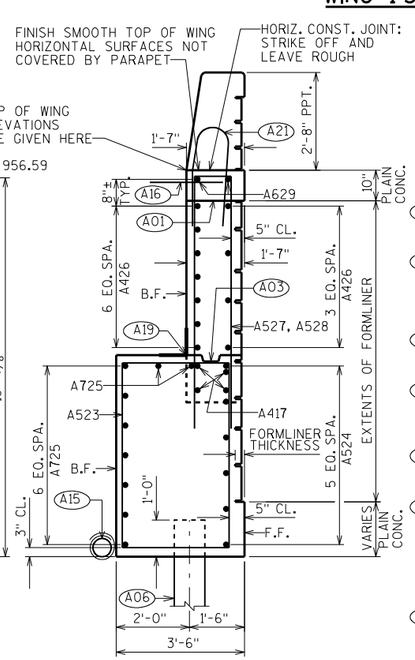
A502 A514 A523



A510 A412 A519 A520
A421 A527 A528



WING 2 ELEVATION LOOKING @ F.F. WING



WING 2 SECTION

A01 OPTIONAL CONSTRUCTION JOINT: STRIKE OFF AND LEAVE ROUGH. (18" R.M.W. @ B.F. IF JOINT IS USED)

A02 CONSTRUCTION JOINT: POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH. PLACE 18" RUBBERIZED MEMBRANE WATERPROOFING @ B.F. JOINT.

A03 OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2" x 6". (18" R.M.W. @ B.F. IF JOINT IS USED).

A06 SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 20 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.

A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

A16 A430 BARS SPACED @ 1'-0" CTRS. EMBED 1'-0" INTO WING CONC. LOCATE 3" DOWN FROM TOP OF WING @ BACKFACE TO 6" DOWN @ WING TIP. (DRILLED IN EPOXY ANCHORED #4 BARS 2'-0" LONG MAY BE USED.) COST INCIDENTAL TO BID ITEM "BAR STEEL REINFORCEMENT HS COATED STRUCTURES".

A17 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING AND NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE. COLOR OF JOINT SEALER SHALL MATCH THE ADJACENT CONCRETE STAINING COLOR AND MUST BE APPROVED BY THE ENGINEER.

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

A21 FOR PPT. BARS & DIMENSIONS SEE PARAPET SHEETS.

STATE PROJECT NUMBER

7070-08-73

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A601		22	27'-8"			BODY-HORIZONTAL
A502		64	15'-11"	X		BODY-STIRRUPS-VERT.
A403		18	2'-3"			BODY-BOT.-2 PER BODY PILE-VERT.
A404		9	28'-0"	X		BODY-BOT.-SPIRAL-1 PER BODY PILE-VERT.
A1005		8	21'-5"	X		BODY-HORIZONTAL-B.F.-AT WING 1 END
A606		8	22'-3"			BODY-HORIZONTAL-B.F.-AT CENTER
A807		8	16'-11"	X		BODY-HORIZONTAL-B.F.-AT WING 2 END
A408		1	28'-0"			BODY-HORIZ.-TOP-F.F.-AT WING 1 END
A1009		1	29'-5"	X		BODY-HORIZ.-TOP-B.F.-AT WING 1 END
⚠ A510		44	7'-9"	X	X	BODY-TOP-VERT.-UNDER BEAM SEATS 2-5
A411		4	43'-4"			BODY-TOP-HORIZ.-UNDER BEAM SEATS 2-5
A412		24	4'-1"	X		BODY-TOP-VERT.-BETWEEN BEAM SEATS
A413		8	10'-3"			BODY-TOP-HORIZ.-BETWEEN BEAM SEATS
A514	X	15	21'-1"	X		WING 1-BOT.-STIRRUP-VERT.
A515	X	9	16'-2"			WING 1-BOT.-HORIZONTAL-F.F.
A916	X	11	17'-5"	X		WING 1-BOT.-HORIZONTAL-B.F.
A417	X	8	7'-9"			WINGS 1&2-HORIZONTAL-BOT.-B.F. & F.F.
A418	X	13	19'-8"			WING 1-TOP-HORIZONTAL-B.F. & F.F.
A519	X	9	11'-6"	X		WING 1-TOP-VERTICAL-AT ENDS
A520	X	19	14'-0"	X		WING 1-TOP-VERTICAL
A421	X	28	3'-4"	X		WING 1-TOP-VERTICAL
A622	X	2	19'-8"			WING 1-HORIZONTAL-TOP-F.F. & B.F.
A523	X	11	16'-7"	X		WING 2-BOT.-STIRRUP-VERT.
A524	X	6	12'-2"			WING 2-BOT.-HORIZONTAL-F.F.
A725	X	9	12'-2"			WING 2-BOT.-HORIZONTAL-B.F.
A426	X	11	15'-8"			WING 2-TOP-HORIZONTAL-B.F. & F.F.
A527	X	9	12'-3"	X		WING 2-TOP-VERTICAL-AT ENDS
A528	X	13	14'-6"	X		WING 2-TOP-VERTICAL
A629	X	2	15'-8"			WING 2-HORIZONTAL-TOP-F.F. & B.F.
A16 A430	X	16	2'-0"			WING 2-TOP-B.F.-HORIZ.-SURFACE DRAINS

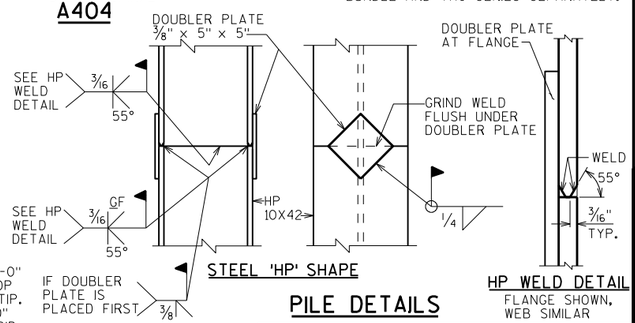
⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

BAR MARK	NUMBER REQUIRED	LENGTH
A510	1 SERIES OF 44 BARS	5'-9" TO 9'-9"

BUNDLE AND TAG SERIES SEPARATELY.

A404



STEEL 'HP' SHAPE

HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR

PILE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-226

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SOUTH ABUTMENT DETAILS

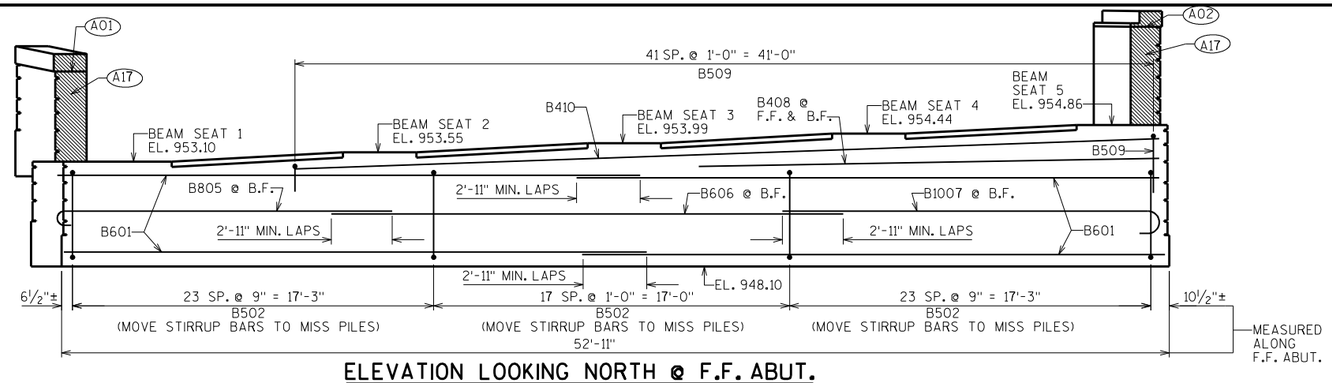
SHEET 5

94

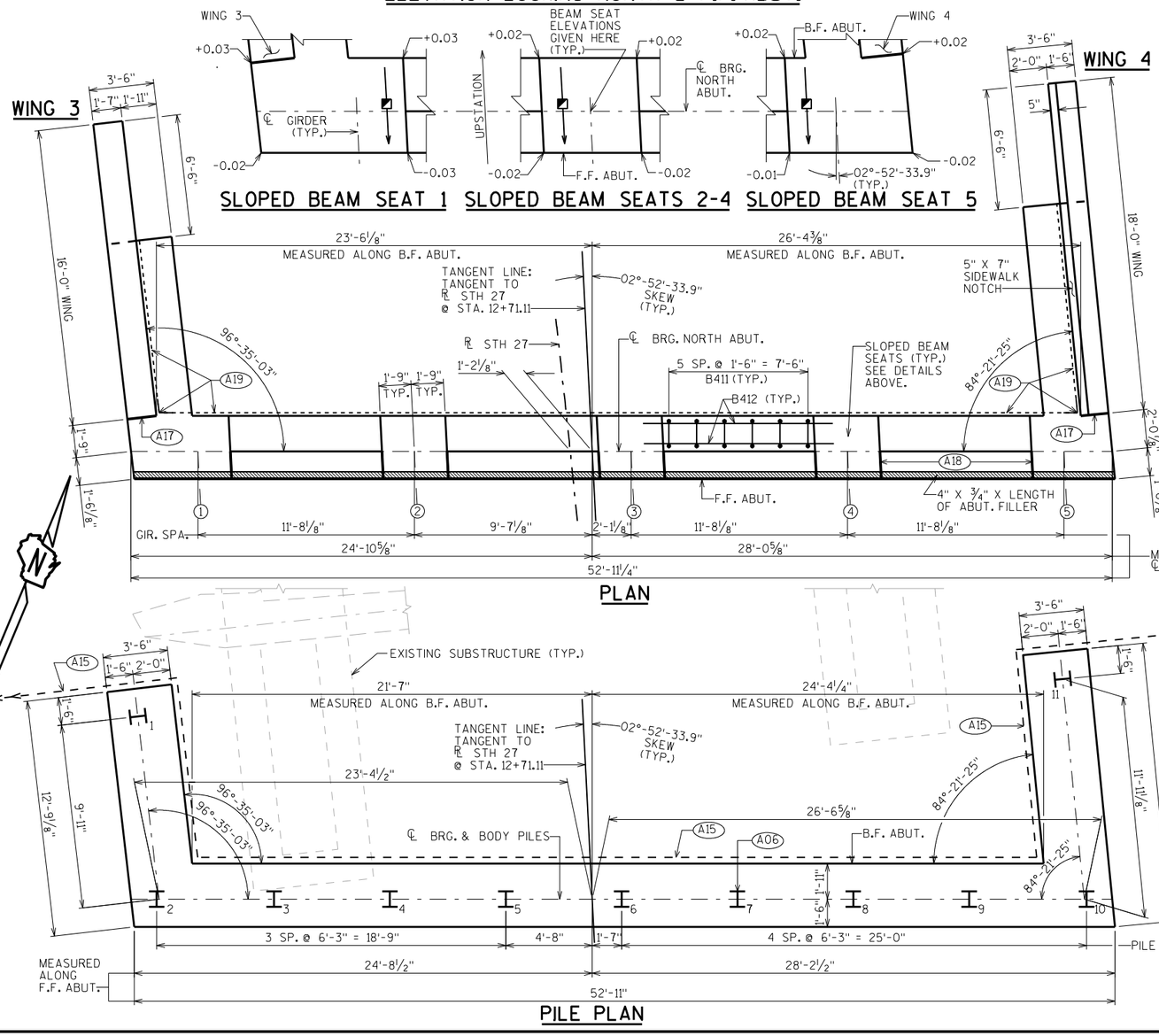
SCALE = 2

STATE PROJECT NUMBER

7070-08-73



ELEVATION LOOKING NORTH @ F.F. ABUT.

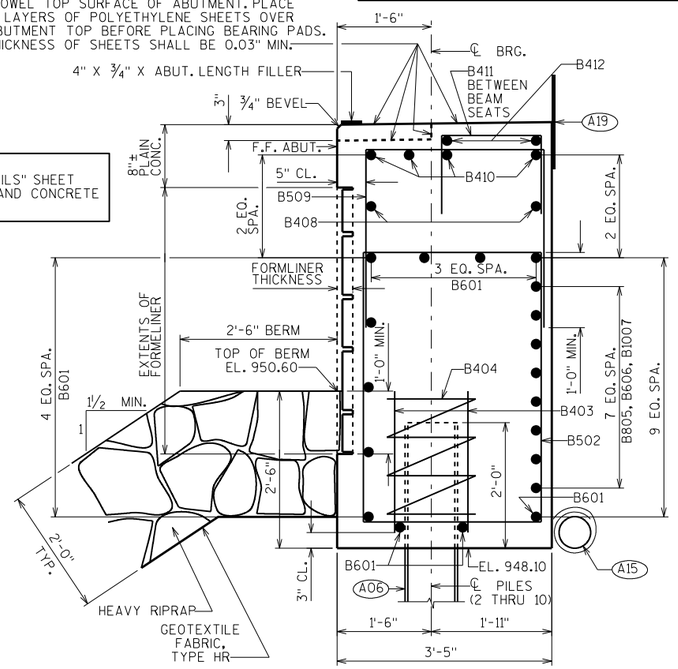


PLAN

PILE PLAN

STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PADS. TOTAL THICKNESS OF SHEETS SHALL BE 0.03" MIN.

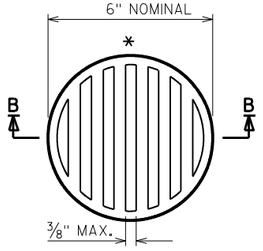
NOTE:
SEE "AESTHETIC DETAILS" SHEET FOR THE FORMLINER AND CONCRETE STAINING DETAILS.



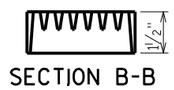
SECTION THRU BODY

INDICATES SLOPED BEAM SEAT DIRECTION - POINTING DOWNWARDS

NOTE:
REMOVE THE EXISTING RIPRAP WITHIN 3 FEET OF THE NEW ABUTMENT FOOTPRINT. REPLACE REMOVED RIPRAP WITH STRUCTURE BACKFILL UP TO BOTTOM OF ABUTMENT.



RODENT SHIELD DETAIL



SECTION B-B

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

(A01) OPTIONAL CONSTRUCTION JOINT: STRIKE OFF AND LEAVE ROUGH. (18" R.M.W. @ B.F. IF JOINT IS USED)

(A02) CONSTRUCTION JOINT: POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH. PLACE 18" RUBBERIZED MEMBRANE WATERPROOFING @ B.F. JOINT.

(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING ESTIMATED AVERAGE LENGTH FOR ALL PILES = 25 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. ANTICIPATE SIGNIFICANT VARIATION IN ALL PILE LENGTHS. PREBORING REQUIRED AT ALL PILES WITH AN AVERAGE EXPECTED PREBORE OF 15'-0" PER PILE. EXTEND PREBORE 3'-0" PER PILE INTO WEATHERED SANDSTONE ROCK.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING AND NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE. COLOR OF JOINT SEALER SHALL MATCH THE ADJACENT CONCRETE STAINING COLOR AND MUST BE APPROVED BY THE ENGINEER.

(A18) ¾" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

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STRUCTURES DESIGN SECTION

STRUCTURE B-18-226

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NORTH ABUTMENT

SHEET 6

95

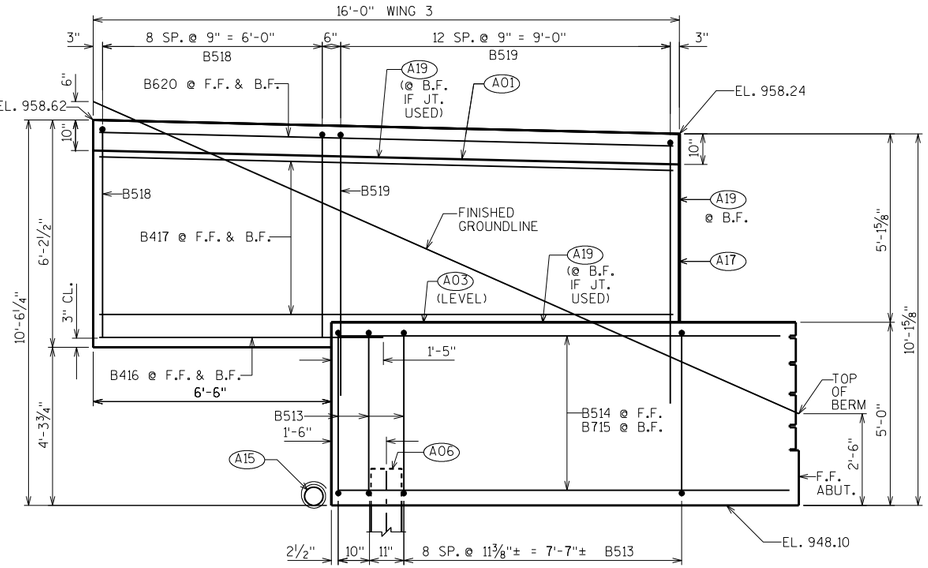
SCALE = 3.5

8

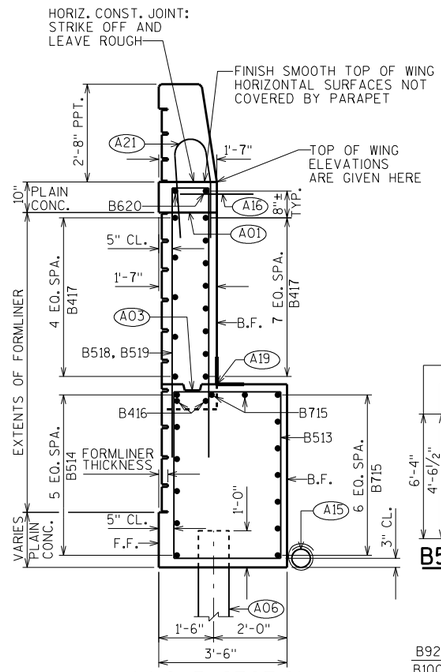
8

STATE PROJECT NUMBER

7070-08-73

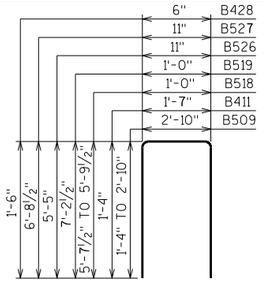


WING 3 ELEVATION LOOKING @ F.F. WING

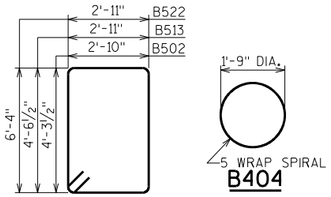


WING 3 SECTION

NOTE
SEE "AESTHETIC DETAILS" FOR THE FORMLINER AND CONCRETE STAINING DETAILS.



B509 B411 B518 B519
B526 B527 B428



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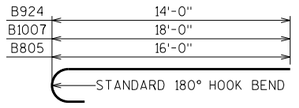
B404



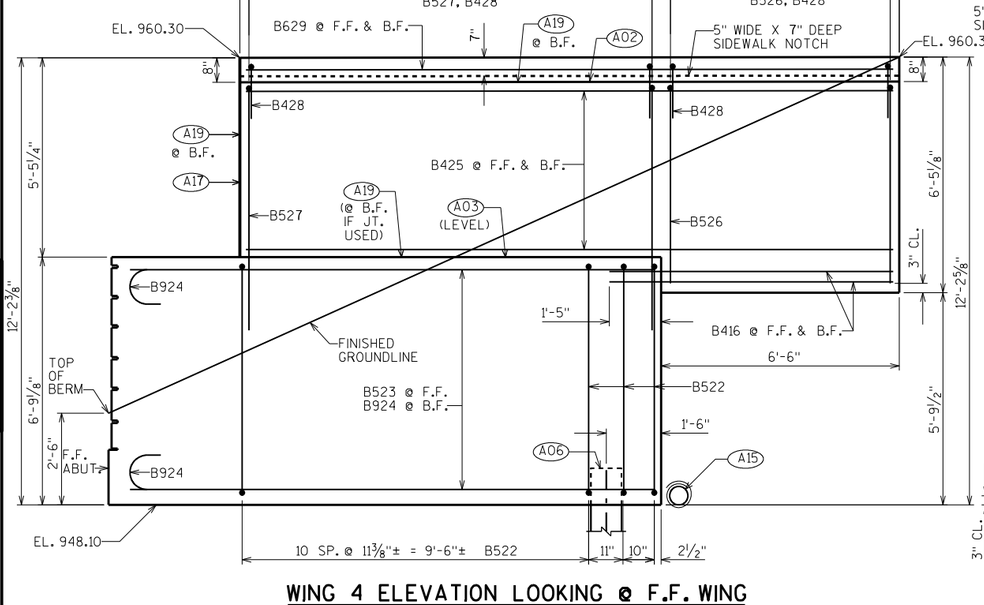
B805 B1007 B924

BILL OF BARS

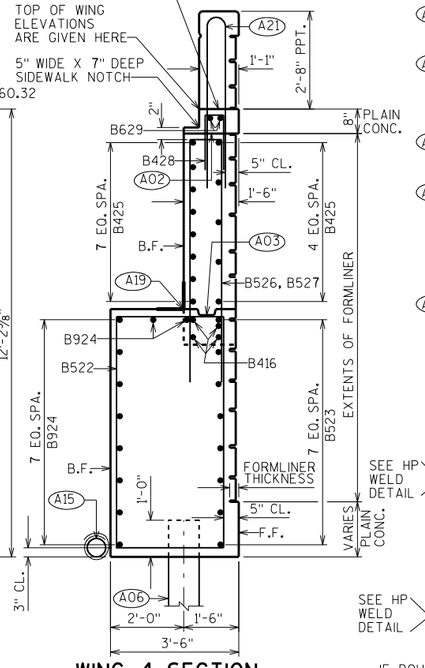
NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B601		22	27'-10"			BODY-HORIZONTAL
B502		64	14'-11"	X		BODY-STIRRUPS-VERT.
B403		18	2'-3"			BODY-BOT.-2 PER BODY PILE-VERT.
B404		9	28'-0"	X		BODY-BOT.-SPIRAL-1 PER BODY PILE-VERT.
B805		8	16'-11"	X		BODY-HORIZONTAL-B.F.-AT WING 3 END
B606		8	24'-6"			BODY-HORIZONTAL-B.F.-AT CENTER
B1007		8	19'-5"	X		BODY-HORIZONTAL-B.F.-AT WING 4 END
B408		2	22'-0"			BODY-HORIZ.-TOP-F.F.& B.F.-AT WING 4 END
⚠ B509		42	6'-9"	X	X	BODY-TOP-VERT.-UNDER BEAM SEATS 2-5
B410		4	41'-4"			BODY-TOP-HORIZ.-UNDER BEAM SEATS 2-5
B411		24	4'-1"	X		BODY-TOP-VERT.-BETWEEN BEAM SEATS
B412		8	10'-3"			BODY-TOP-HORIZ.-BETWEEN BEAM SEATS
B513	X	11	15'-7"	X		WING 3-BOT.-STIRRUP-VERT.
B514	X	6	12'-1"			WING 3-BOT.-HORIZONTAL-F.F.
B715	X	9	12'-4"			WING 3-BOT.-HORIZONTAL-B.F.
B416	X	6	7'-9"			WINGS 3&4-HORIZONTAL-BOT.-B.F.& F.F.
B417	X	13	15'-8"			WING 3-TOP-HORIZONTAL-B.F.& F.F.
⚠ B518	X	9	12'-2"	X	X	WING 3-TOP-VERTICAL-AT ENDS
B519	X	13	15'-2"	X		WING 3-TOP-VERTICAL
B620	X	2	15'-8"			WING 3-HORIZONTAL-TOP-F.F.& B.F.
B421	X	16	2'-0"			WING 3-TOP-B.F.-HORIZ.-SURFACE DRAINS
B522	X	13	19'-2"	X		WING 4-BOT.-STIRRUP-VERT.
B523	X	8	14'-4"			WING 4-BOT.-HORIZONTAL-F.F.
B924	X	10	15'-3"	X		WING 4-BOT.-HORIZONTAL-B.F.
B425	X	13	17'-8"			WING 4-TOP-HORIZONTAL-B.F.& F.F.
B526	X	9	11'-6"	X		WING 4-TOP-VERTICAL-AT ENDS
B527	X	16	14'-1"	X		WING 4-TOP-VERTICAL
B428	X	25	3'-4"	X		WING 4-TOP-VERTICAL
B629	X	2	17'-8"			WING 4-HORIZONTAL-TOP-F.F.& B.F.

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



WING 4 ELEVATION LOOKING @ F.F. WING



WING 4 SECTION

(A01) OPTIONAL CONSTRUCTION JOINT: STRIKE OFF AND LEAVE ROUGH. (18" R.M.W. @ B.F. IF JOINT IS USED)

(A02) CONSTRUCTION JOINT: POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH. PLACE 18" RUBBERIZED MEMBRANE WATERPROOFING @ B.F. JOINT.

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2" x 6". (18" R.M.W. @ B.F. IF JOINT IS USED).

(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING ESTIMATED AVERAGE LENGTH FOR ALL PILES = 25 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. ANTICIPATE SIGNIFICANT VARIATION IN ALL PILE LENGTHS. PREBORING REQUIRED AT ALL PILES WITH AN AVERAGE EXPECTED PREBORE OF 15'-0" PER PILE. EXTEND PREBORE 3'-0" PER PILE INTO WEATHERED SANDSTONE ROCK.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A16) B421 BARS SPACED @ 1'-0" CTRS. EMBED 1'-0" INTO WING CONC. LOCATE 3" DOWN FROM TOP OF WING @ BACKFACE TO 6" DOWN @ WING TIP. (DRILLED IN EPOXY ANCHORED #4 BARS 2'-0" LONG MAY BE USED.) COST INCIDENTAL TO BID ITEM "BAR STEEL REINFORCEMENT HS COATED STRUCTURES".

(A17) ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING AND NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE. COLOR OF JOINT SEALER SHALL MATCH THE ADJACENT CONCRETE STAINING COLOR AND MUST BE APPROVED BY THE ENGINEER.

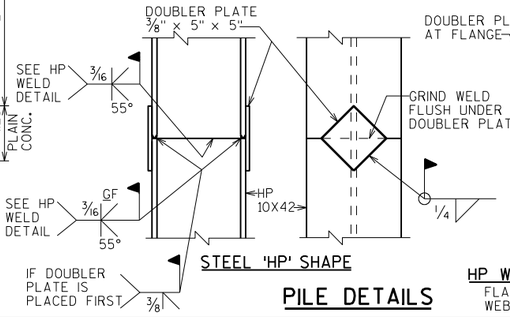
(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

(A21) FOR PPT. BARS & DIMENSIONS SEE PARAPET SHEETS.

BAR SERIES TABLE

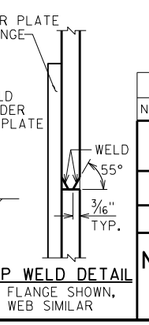
BAR MARK	NUMBER REQUIRED	LENGTH
B509	1 SERIES OF 42 BARS	5'-3" TO 8'-3"
B518	1 SERIES OF 9 BARS	12'-0" TO 12'-4"

BUNDLE AND TAG SERIES SEPARATELY.



STEEL 'HP' SHAPE

PILE DETAILS



HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR

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STRUCTURE B-18-226

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NORTH ABUTMENT DETAILS

SHEET 7

96

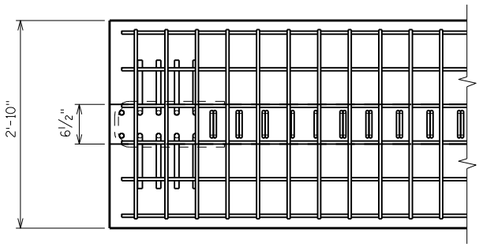
8

8

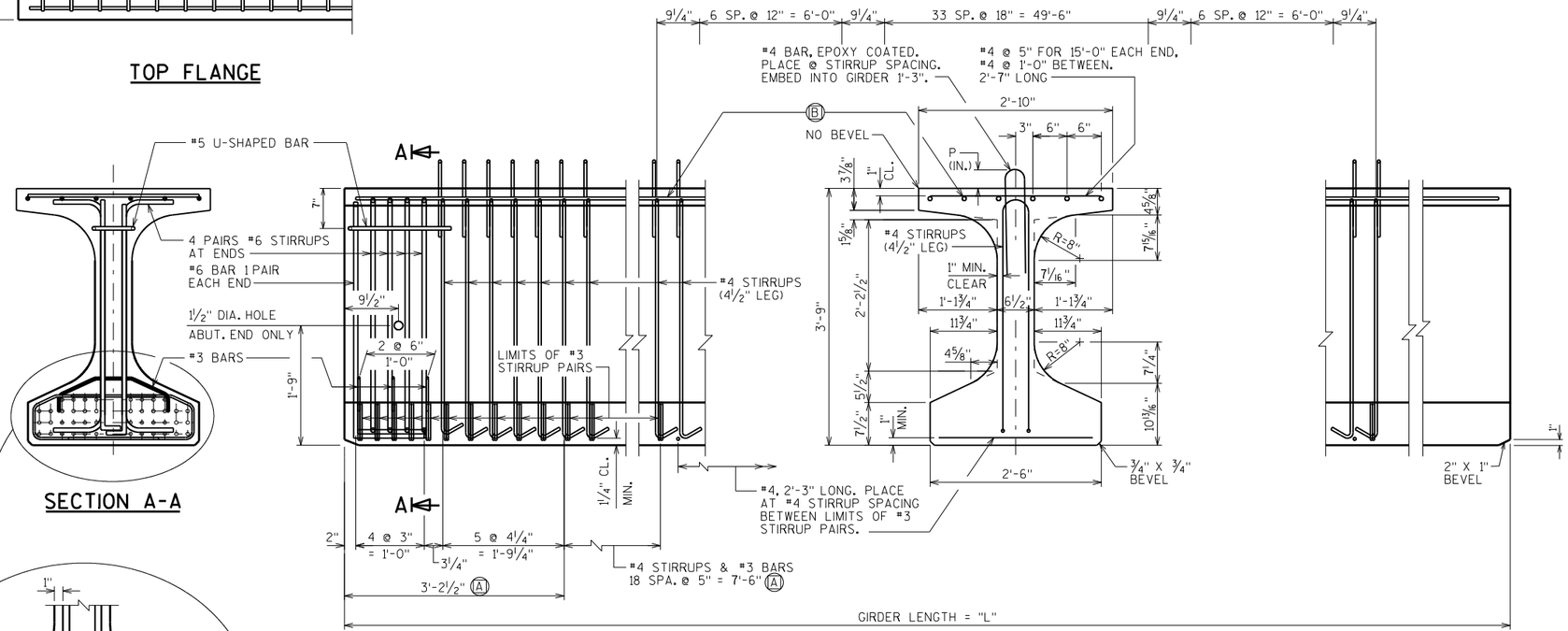
SCALE = 2

STATE PROJECT NUMBER

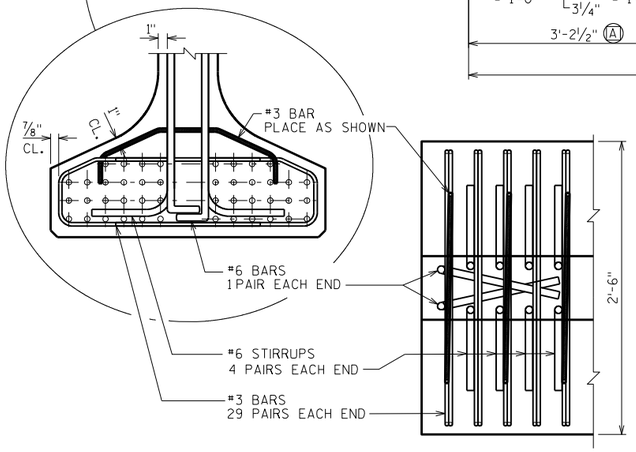
7070-08-73



TOP FLANGE



SECTION A-A



BOTTOM FLANGE

SIDE VIEW & TYPICAL SECTION IN SPAN

(A) DETAIL TYP. AT EACH END

(B) SIX #4 BARS, EXTENDING FULL LENGTH WITH 1'-11" MIN. LAPS

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 8" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 8" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

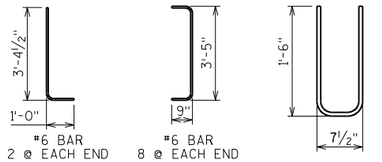
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

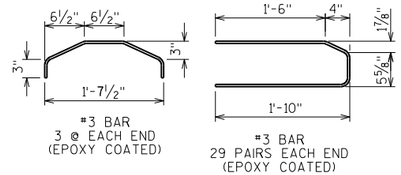
SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

PRESTRESSING STRANDS SHALL BE (0.6" DIA.)-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.





✳ MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

GIRDER	GIRDER LENGTH "L" (FEET)	DEAD LOAD DEFL. (IN.) 1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CONC. STRGTH. f'c (p.s.i.)	"P" 1ST 1/3 OF GIRDER (IN.)	"P" 2ND 1/3 OF GIRDER (IN.)	"P" 3RD 1/3 OF GIRDER (IN.)	DIA. OF STRAND (IN.)	DRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) ✳	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	UNDRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) ✳
1	86.00	0.45	0.86	1.17	1.37	1.44	1.37	1.17	0.86	0.45	8000	10	7.5	10	0.6	30	6400	32	11	14	4		
2	86.00	0.56	1.06	1.45	1.69	1.78	1.69	1.45	1.06	0.56	8000	9.5	7.5	9.5	0.6	36	6400	32	11	14	4		
3	86.00	0.56	1.06	1.45	1.69	1.78	1.69	1.45	1.06	0.56	8000	9	7.5	9	0.6	36	6400	32	11	14	4		
4	86.00	0.56	1.06	1.45	1.69	1.78	1.69	1.45	1.06	0.56	8000	8.5	8	8.5	0.6	36	6400	32	11	14	4		
5	86.00	0.41	0.78	1.07	1.26	1.32	1.26	1.07	0.78	0.41	8000	7	7	7	0.6	30	6400	32	11	14	4		

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45W" PRESTRESSED GIRDER DETAILS 1

SHEET 8

97

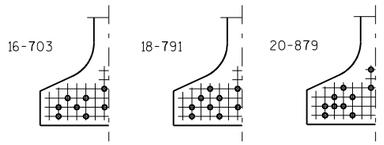
SCALE = 1

8

8

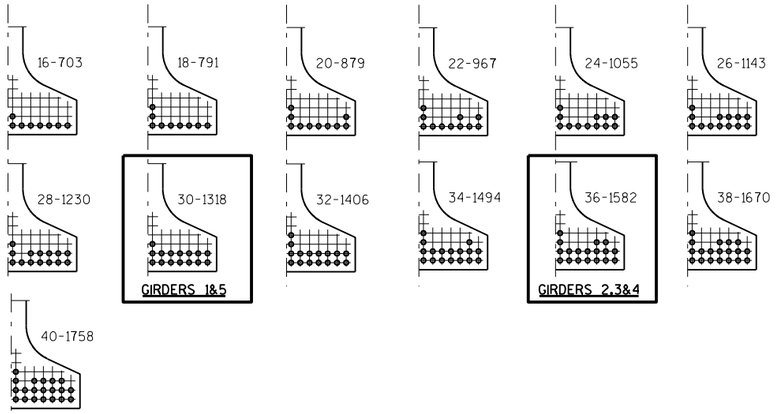
STATE PROJECT NUMBER

7070-08-73



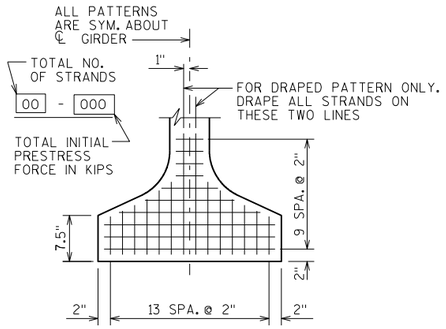
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6"Φ STRANDS

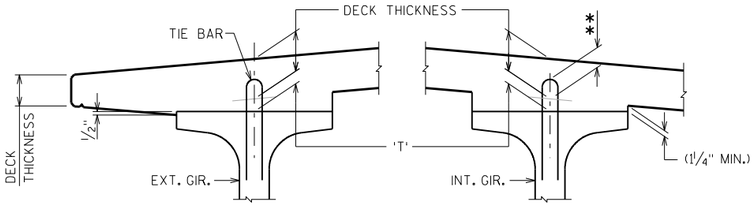


ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6"Φ STRANDS



TYP. STRAND PATTERN



DECK HAUNCH DETAIL

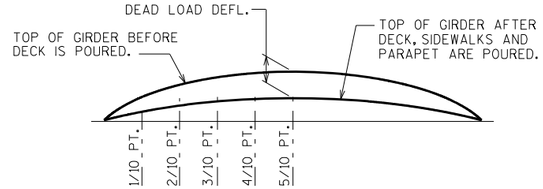
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

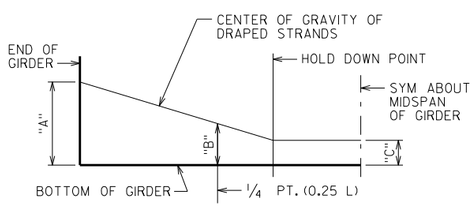
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- DECK THICKNESS
= HAUNCH HEIGHT 'T'

NOTE:
AN AVERAGE HAUNCH ('T') OF 3.65" WAS USED FOR COMPUTING THE SUPERSTRUCTURE QUANTITY "CONCRETE MASONRY BRIDGES".



DEAD LOAD DEFLECTION DIAGRAM



DRAPED STRAND PROFILE

*THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

GIRDER	CAMBER (IN.) *
1	2.74
2	3.29
3	3.29
4	3.29
5	2.81

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

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STRUCTURE B-18-226

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45W" PRESTRESSED GIRDER DETAILS 2

SHEET 9

98

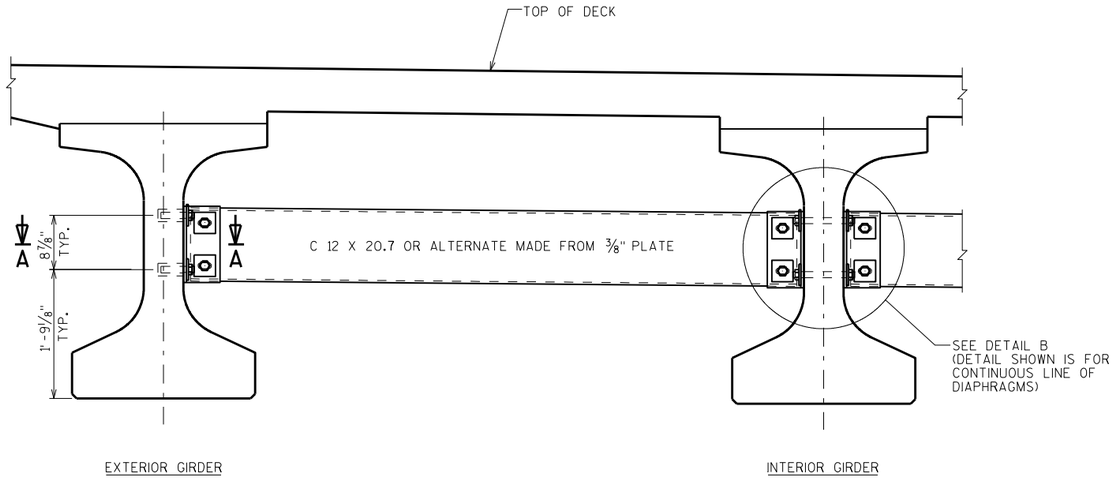
SCALE = 1

8

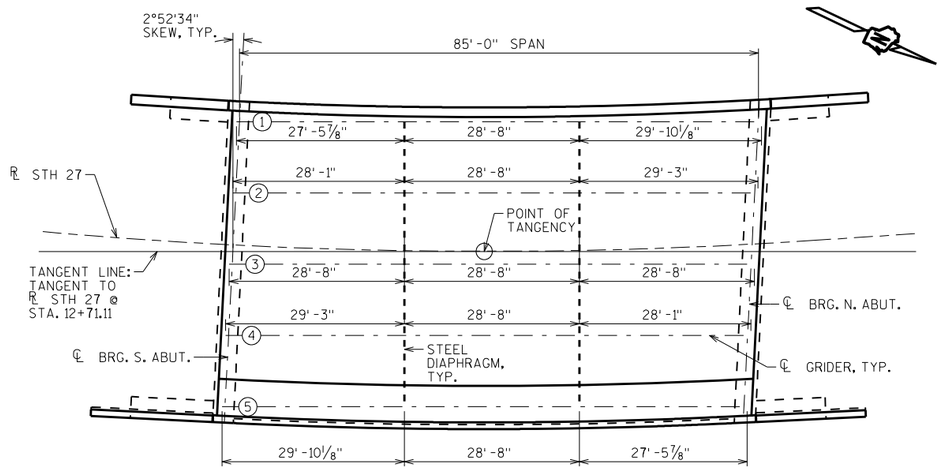
8

STATE PROJECT NUMBER

7070-08-73

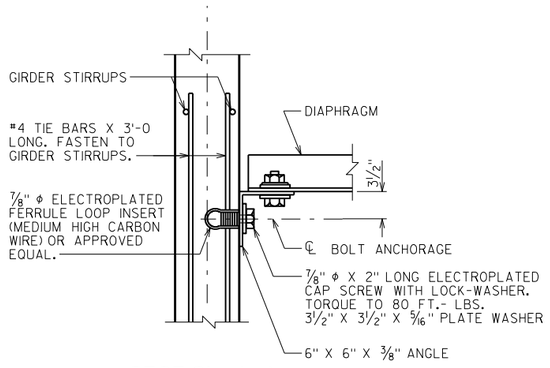


PART TRANSVERSE SECTION AT DIAPHRAGM



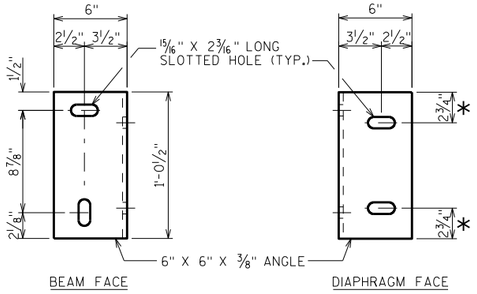
DIAPHRAGM FRAMING PLAN

MEASUREMENTS TAKEN FROM END OF GIRDERS ALONG ℄ GIRDER



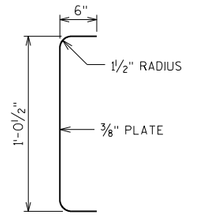
SECTION A-A

(FOR EXTERIOR ATTACHMENT)

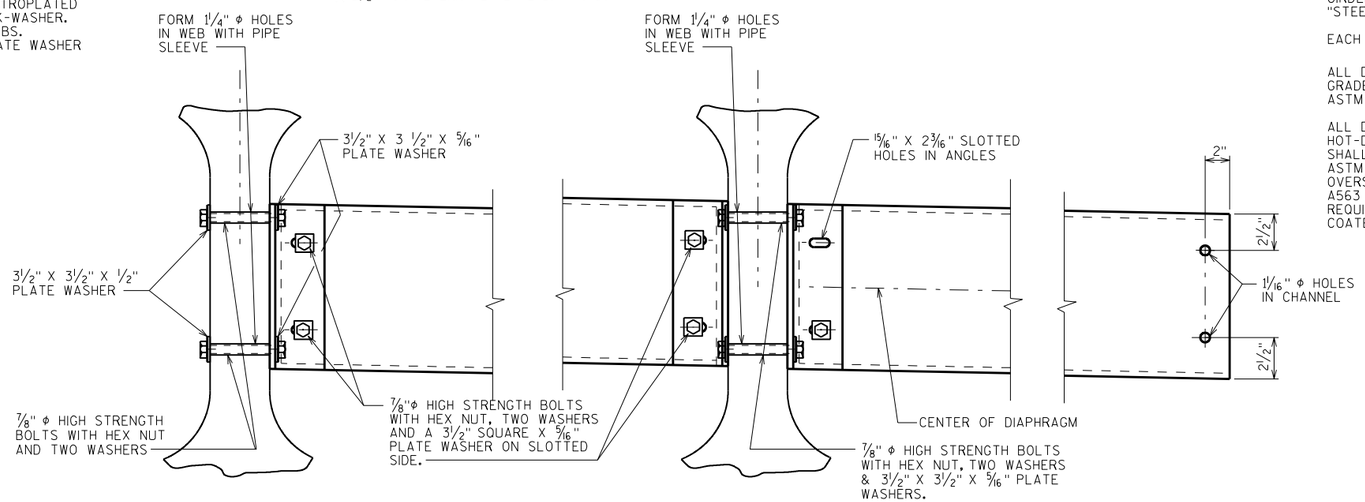


DIAPHRAGM SUPPORT

* 2½" FOR ALTERNATE PLATE DIAPHRAGM



SECTION THRU ALTERNATE DIAPHRAGM



DETAIL B

NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-18-226", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
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STRUCTURE B-18-226

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STEEL DIAPHRAGM

SHEET 10

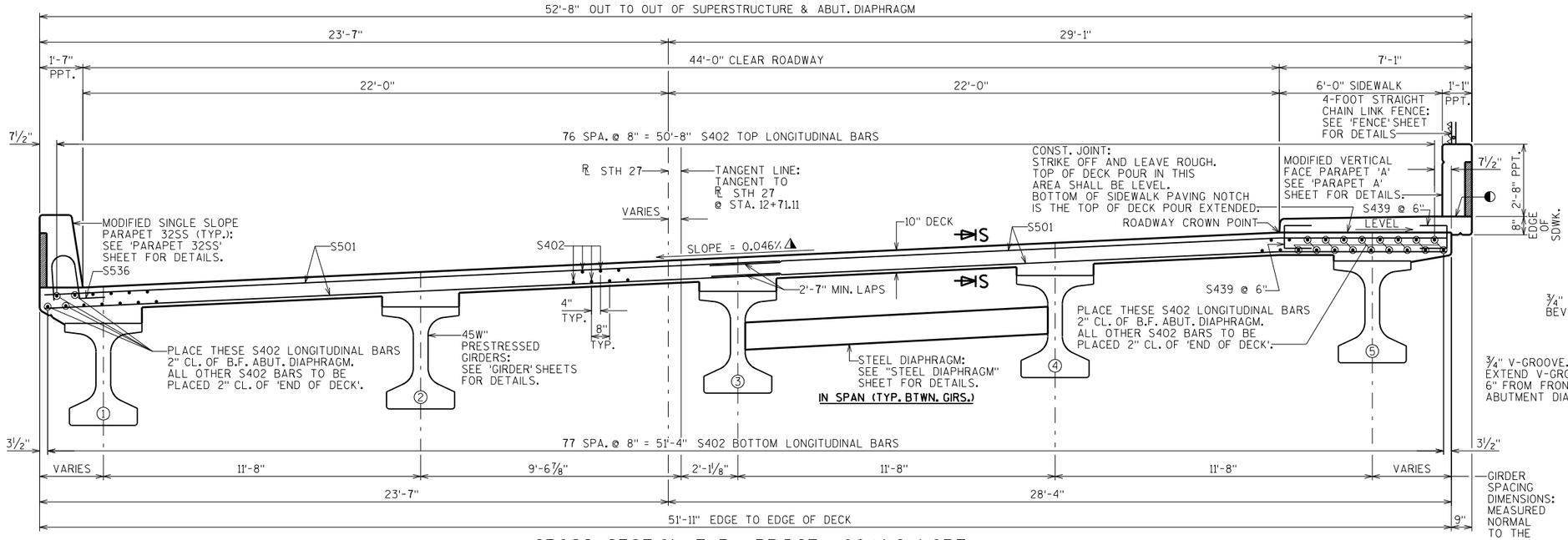
99

SCALE = 1

8

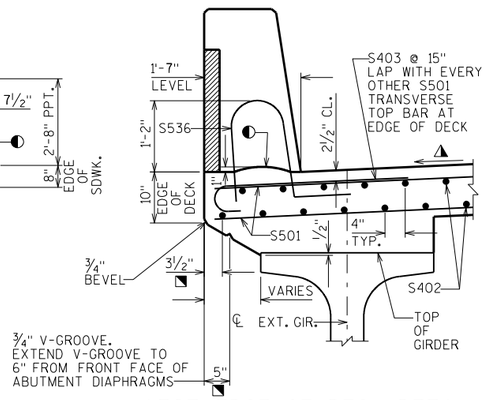
8

STATE PROJECT NUMBER
7070-08-73

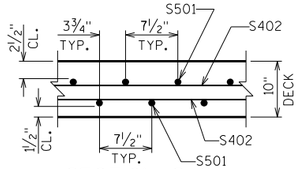


CROSS SECTION THRU BRIDGE LOOKING NORTH

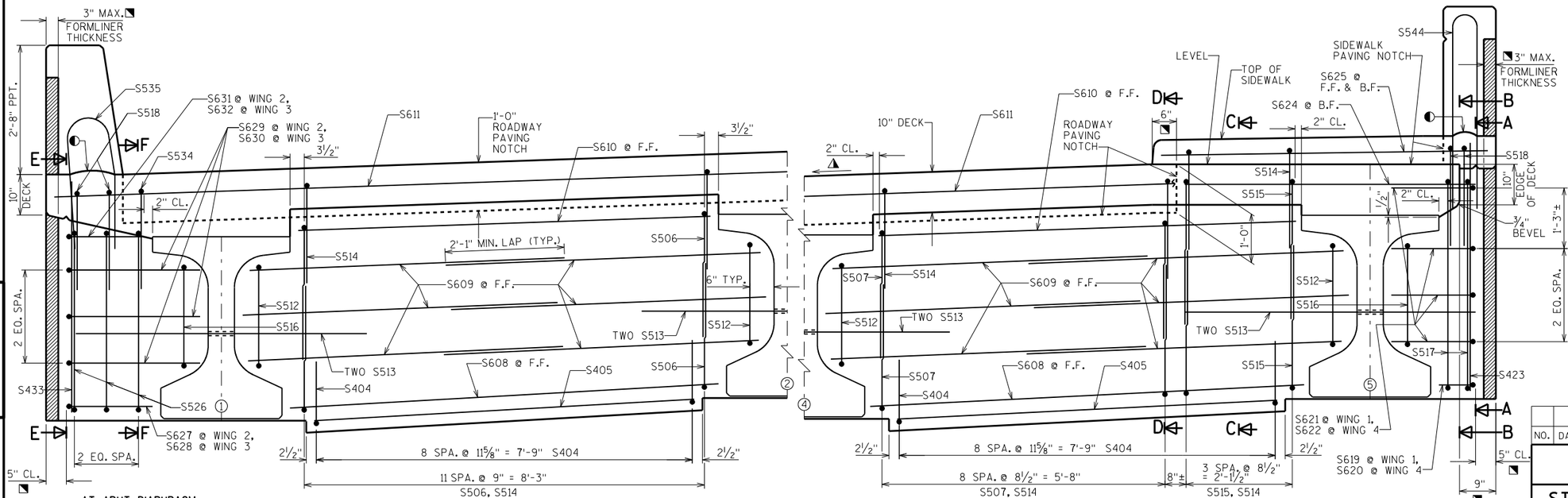
(ALL HORIZONTAL DIMENSIONS ARE MEASURED RADIALLY - NORMAL TO THE CURVED ℄ STH 27, EXCEPT FOR THE GIRDER SPACING DIMENSIONS.)



WEST EDGE OF DECK DETAIL



SECTION S-S



PARTIAL CROSS SECTION THRU BRIDGE AT ABUTMENT DIAPHRAGMS LOOKING NORTH

(ALL HORIZONTAL DIMENSIONS ARE MEASURED NORMAL TO THE TANGENT LINE UNLESS OTHERWISE SHOW OR NOTED)
(NORTH ABUTMENT SHOWN, SOUTH ABUTMENT SIMILAR)

NOTES:

FOR THE SECTIONS THRU THE ABUTMENT DIAPHRAGMS (SECTIONS A-A THRU F-F) SEE "SUPERSTRUCTURE DETAILS" SHEET.

SEE "SUPERSTRUCTURE DETAILS" SHEET FOR ABUTMENT DIAPHRAGM CORNER DETAILS

SEE "AESTHETIC DETAILS" SHEET FOR THE FORMLINER AND THE CONCRETE STAINING DETAILS.

⚠ SUPERELEVATION = 0.046% UP TO AND INCLUDING STA. 12+95.46. SLOPE IS TRANSITIONING FROM 0.046% AT STA. 12+95.46 TO 0.02% AT STA. 13+45.76

◥ HORIZONTAL DIMENSION: MEASURED RADIALLY - NORMAL TO THE CURVED ℄ STH 27.

◐ HORIZ. CONST. JOINT: STRIKE OFF AND LEAVE ROUGH AS SHOWN

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DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-226

DRAWN BY	JPH	PLANS CK'D.	ABS

SUPERSTRUCTURE CROSS SECTIONS

SHEET 11

100

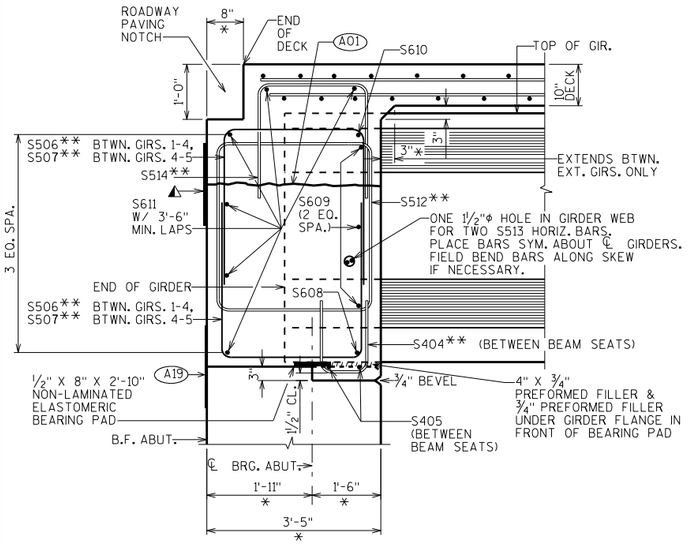
8

8

SCALE = 1:8

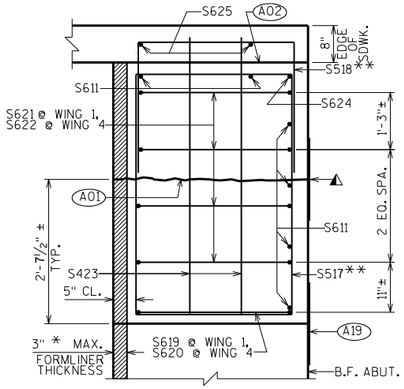
STATE PROJECT NUMBER

7070-08-73



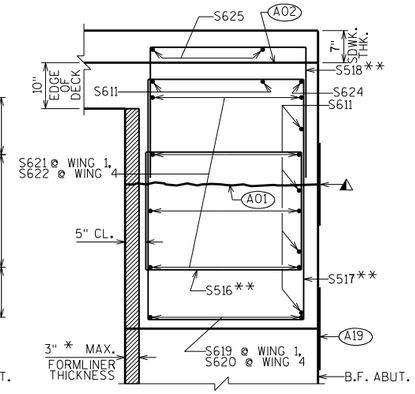
CROSS SECTION THRU ABUTMENT DIAPHRAGMS

(SECTION TAKEN BETWEEN GIRDER 1 AND F.F. OF SIDEWALK.)



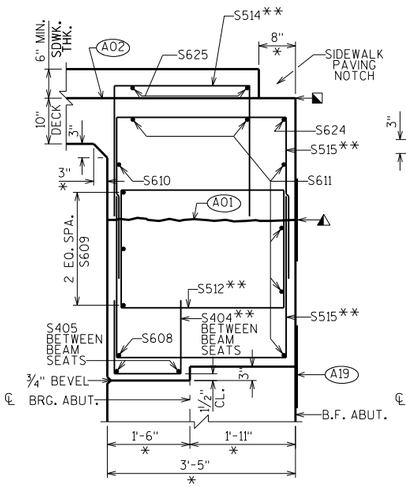
SECTION A-A

(SECTION TAKEN THRU SIDEWALK OVERHANG. TYPICAL AT WINGS 1&4 CORNERS)



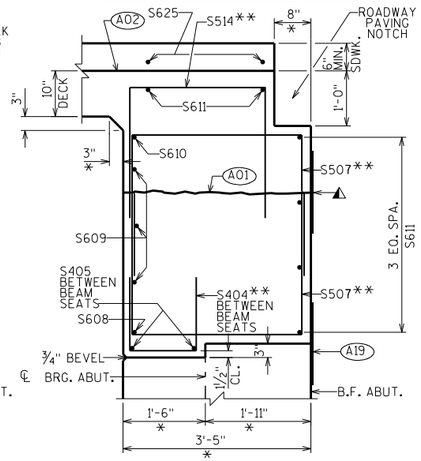
SECTION B-B

(SECTION COINCIDENT WITH EDGE OF DECK. TYPICAL AT WINGS 1&4 CORNERS)



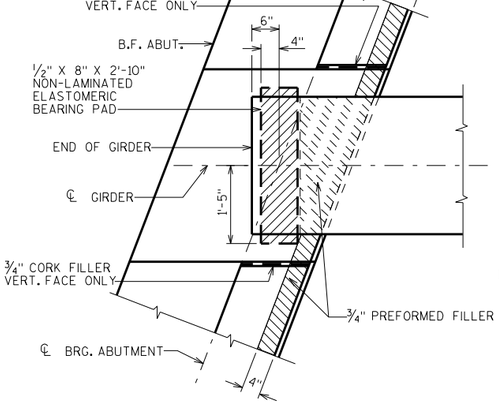
SECTION C-C

(SECTION TAKEN BETWEEN GIRDER 5 AND END OF ROADWAY PAVING NOTCH. TYPICAL AT WINGS 1&4 CORNERS)

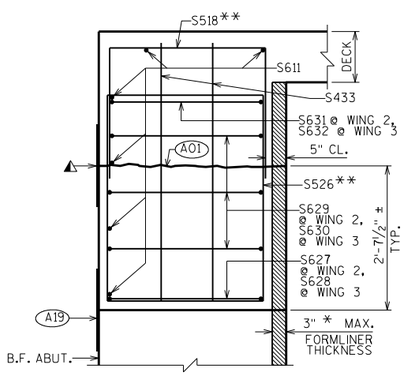


SECTION D-D

(SECTION TAKEN BETWEEN F.F. OF SIDEWALK AND END OF ROADWAY PAVING NOTCH. TYPICAL AT WINGS 1&4 CORNERS)

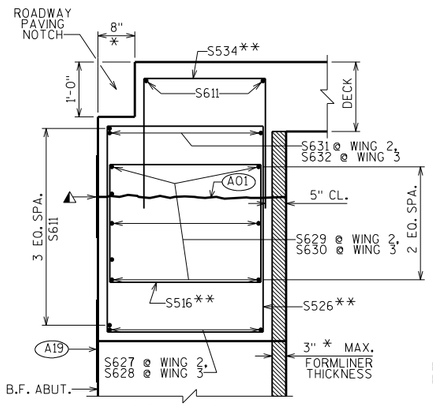


PLAN VIEW AT ABUTMENTS



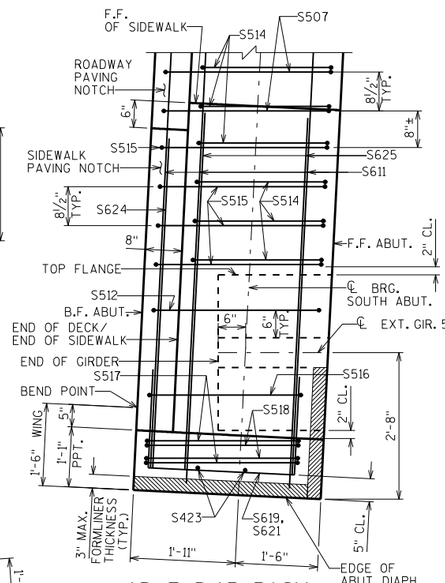
SECTION E-E

(SECTION TAKEN THRU DECK OVERHANG. TYPICAL AT WINGS 2&3 CORNERS)

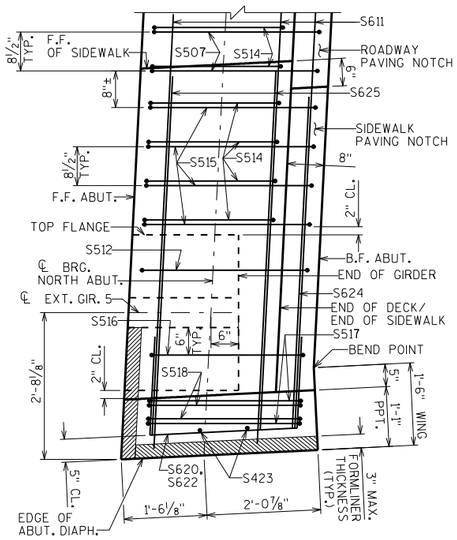


SECTION F-F

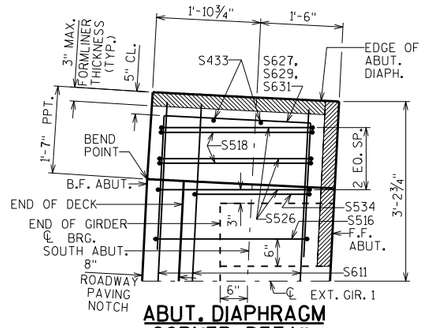
(SECTION TAKEN BETWEEN GIRDER 1 AND END OF ROADWAY PAVING NOTCH. TYPICAL AT WINGS 2&3 CORNERS)



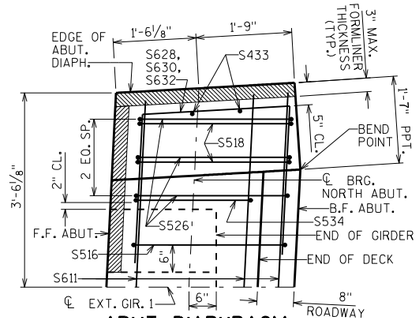
ABUT. DIAPHRAGM CORNER DETAIL AT WING 1



ABUT. DIAPHRAGM CORNER DETAIL AT WING 4



ABUT. DIAPHRAGM CORNER DETAIL AT WING 2



ABUT. DIAPHRAGM CORNER DETAIL AT WING 3

(A01) OPTIONAL CONSTRUCTION JOINT 1'-2" BELOW TOP OF GIRDER. IF USED, DECK POUR MUST BE WITHIN 2 WEEKS FROM THE TIME OF THE DIAPHRAGM POUR.

(A02) CONSTRUCTION JOINT: POUR CONCRETE ABOVE THIS JOINT AFTER DECK CONCRETE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH. TOP OF DECK POUR AND BOTTOM OF SIDEWALK PAVING NOTCH SHALL BE LEVEL IN THIS AREA. BOTTOM OF SIDEWALK PAVING NOTCH IS THE TOP OF DECK POUR EXTENDED.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

◥ MATCH BOTTOM OF SIDEWALK PAVING NOTCH WITH THE 'TOP OF DECK'. BOTH SURFACES SHALL BE LEVEL.

⚠ 18" R.M.W.: SEAL ONLY IF OPT. CONST. JT. IS USED (COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES")

*DIMENSION IS TAKEN PERPENDICULAR TO ℄ BRG. ABUTMENTS.

**BARS ARE PLACED PARALLEL TO ℄ GIRDERS AND SPACED PERPENDICULAR TO ℄ GIRDERS

NOTE:
SEE "SUPERSTRUCTURE BAR DETAILS" SHEET FOR THE 'BILL OF BARS' AND BAR DETAILS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-226

DRAWN BY JPH | PLANS CK'D. ABS

SUPERSTRUCTURE DETAILS

SHEET 12

101

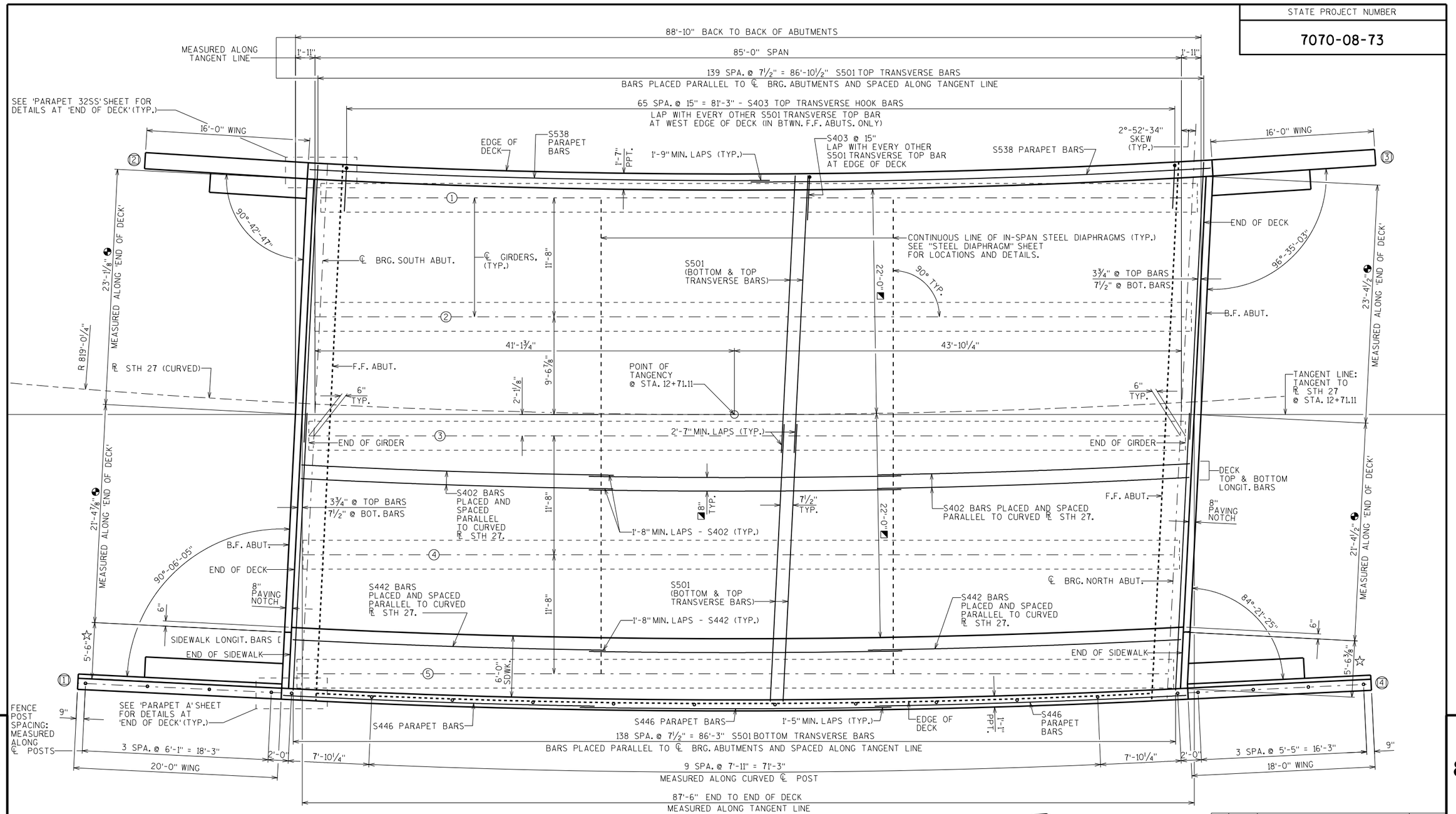
SCALE = 1.3333

8

8

STATE PROJECT NUMBER

7070-08-73



PLAN

TOP OF DECK ELEVATIONS

EOD = EDGE OF DECK

	℄ S. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	℄ N. ABUT.	
WEST EOD	956.82	956.93	957.05	957.16	957.27	957.38	957.49	957.60	957.76	957.97	958.18	WEST EOD
WEST FLOW LINE	956.82	956.93	957.05	957.16	957.27	957.38	957.49	957.60	957.76	957.97	958.18	WEST FLOW LINE
℄ GIRDER 1	956.90	957.00	957.09	957.20	957.30	957.41	957.53	957.65	957.81	958.03	958.25	℄ GIRDER 1
℄ GIRDER 2	957.44	957.53	957.63	957.73	957.83	957.94	958.05	958.17	958.31	958.47	958.63	℄ GIRDER 2
℞ STH 27	957.83	957.94	958.05	958.16	958.27	958.38	958.48	958.59	958.70	958.81	958.92	℞ STH 27
℄ GIRDER 3	957.98	958.07	958.16	958.26	958.36	958.47	958.58	958.69	958.81	958.92	959.03	℄ GIRDER 3
℄ GIRDER 4	958.52	958.60	958.70	958.79	958.89	959.00	959.11	959.22	959.33	959.38	959.44	℄ GIRDER 4
℄ GIRDER 5	958.85	958.95	959.06	959.16	959.27	959.37	959.48	959.58	959.68	959.69	959.70	℄ GIRDER 5
F.F. SIDEWALK	958.85	958.95	959.06	959.16	959.27	959.37	959.48	959.58	959.68	959.69	959.70	F.F. SIDEWALK
EAST EOD	958.85	958.95	959.06	959.16	959.26	959.37	959.47	959.58	959.68	959.69	959.70	EAST EOD

◥ HORIZONTAL DIMENSION: MEASURED RADIALLY - NORMAL TO THE CURVED ℞ STH 27.

◓ LIMITS OF 8" WIDE X 1'-0" DEEP ROADWAY PAVING NOTCH

☆ LIMITS OF 8" WIDE X 6" MIN. SIDEWALK PAVING NOTCH

◯ INDICATES WING NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-226

DRAWN BY JPH | PLANS CK'D. ABS

SUPERSTRUCTURE PLAN

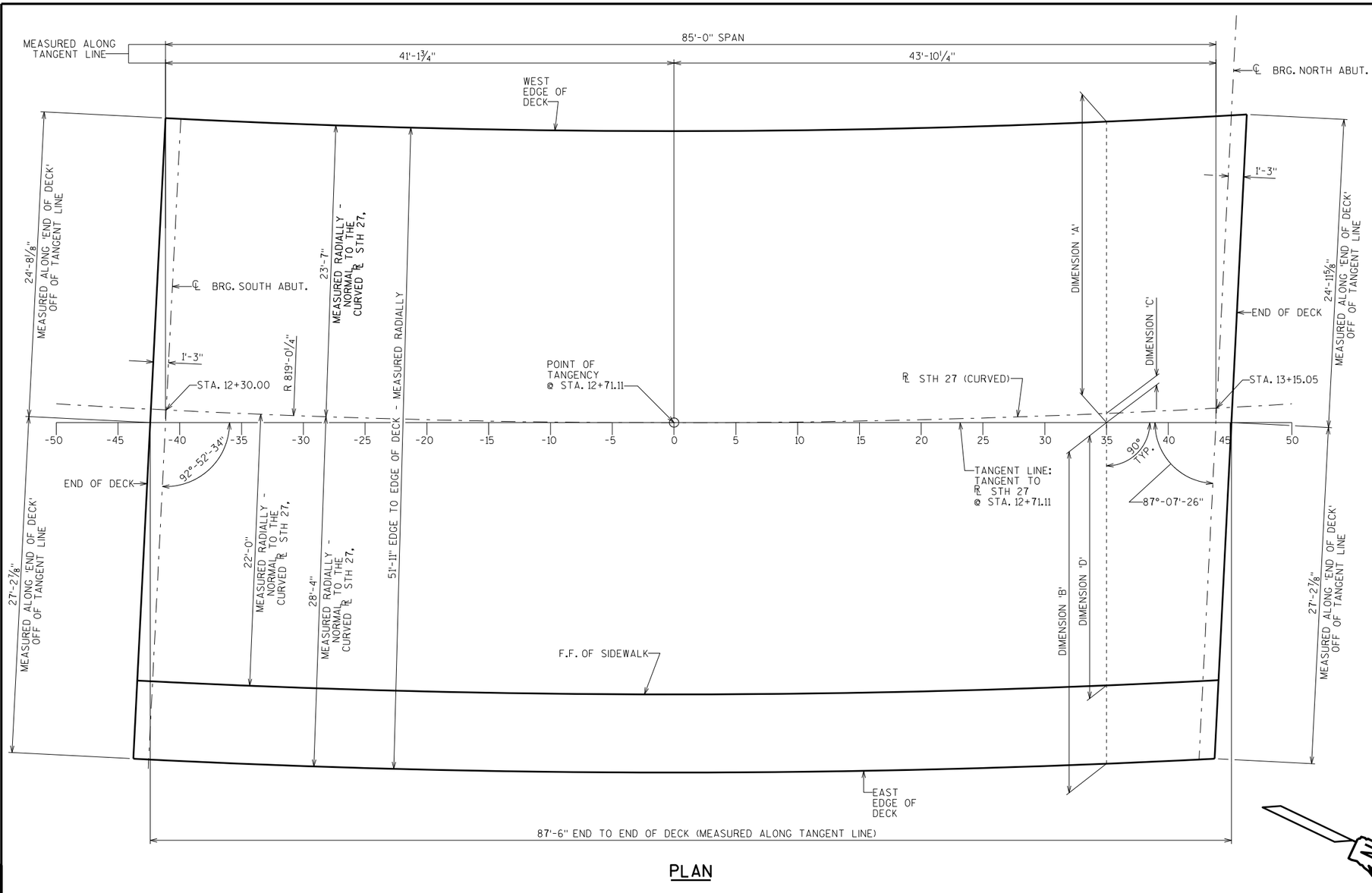
SHEET 13

102

SCALE = 4.5

STATE PROJECT NUMBER

7070-08-73



PLAN

TABLE OF TAN. OFFSETS

DISTANCES ARE TYP. FOR BOTH +PLUS & -MINUS LOCATIONS FROM POINT OF TANGENCY (OFFSETS ARE NORMAL TO TAN. LINE.)

	DIST.	A	B	C	D
P.O.T.	0	23'-7"	28'-4"	0"	22'-0"
	5	23'-7 1/4"	28'-3 7/8"	1/8"	21'-11 7/8"
	10	23'-7 3/4"	28'-3 1/4"	3/4"	21'-11 1/4"
	15	23'-8 3/4"	28'-2 3/8"	1 5/8"	21'-10 3/8"
	20	23'-10"	28'-1 1/8"	2 7/8"	21'-9 1/8"
	25	23'-11 3/4"	27'-11 5/8"	4 5/8"	21'-7 1/2"
	30	24'-1 3/4"	27'-9 5/8"	6 5/8"	21'-5 5/8"
	35	24'-4 1/4"	27'-7 3/8"	9"	21'-3 1/4"
	40	24'-7 1/8"	27'-4 5/8"	11 3/4"	21'-0 5/8"
	45	24'-10 1/4"	27'-1 5/8"	1'-2 7/8"	20'-9 1/2"
	50	25'-1 7/8"	26'-10 1/4"	1'-6 3/8"	20'-6 1/8"

NOTES:

DIMENSION 'A' = DISTANCE BETWEEN THE 'TANGENT LINE' AND THE WEST 'EDGE OF DECK'.

DIMENSION 'B' = DISTANCE BETWEEN THE 'TANGENT LINE' AND THE EAST 'EDGE OF DECK'.

DIMENSION 'C' = DISTANCE BETWEEN THE 'TANGENT LINE' AND ℄ STH 27'.

DIMENSION 'D' = DISTANCE BETWEEN THE 'TANGENT LINE' AND 'F.F. OF SIDEWALK'.

SIDEWALK OVERHANG IS NOT SHOWN.
OVERHANG IS CONSTANT 9" FROM EAST 'EDGE OF DECK', MEASURED RADIALLY.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-226

DRAWN BY JPH | PLANS CK'D. ABS

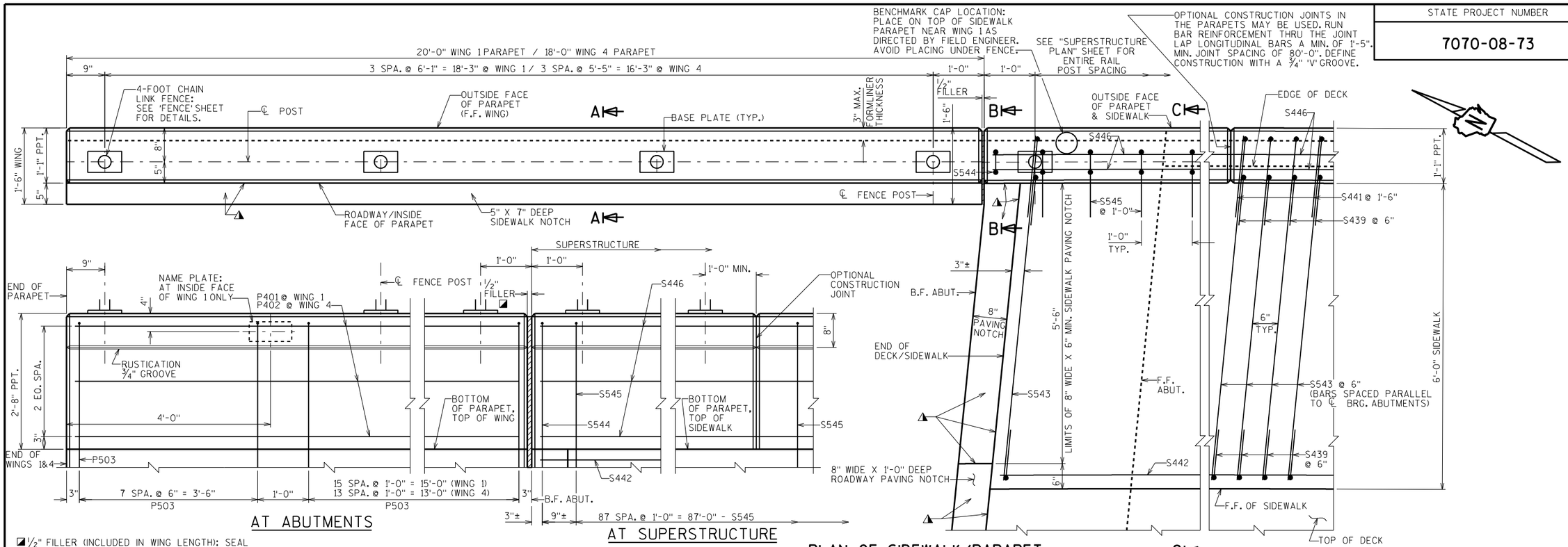
DECK LAYOUT

SHEET 14

103

SCALE = 4.5

STATE PROJECT NUMBER
7070-08-73



AT ABUTMENTS

AT SUPERSTRUCTURE

PLAN OF SIDEWALK/PARAPET

(WING 4 SHOWN, WING 1 SIMILAR)

◪ 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING AND NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE. COLOR OF JOINT SEALER SHALL MATCH THE ADJACENT CONCRETE STAINING COLOR AND MUST BE APPROVED BY THE ENGINEER.

INSIDE ELEVATION OF PARAPET

SEE "AESTHETIC DETAILS" SHEET FOR 'OUTSIDE ELEVATION' (F.F. WINGS)

BENCHMARK CAP LOCATION: PLACE ON TOP OF SIDEWALK PARAPET NEAR WING 1 AS DIRECTED BY FIELD ENGINEER. AVOID PLACING UNDER FENCE.

SEE "SUPERSTRUCTURE PLAN" SHEET FOR ENTIRE RAIL POST SPACING

OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINFORCEMENT THRU THE JOINT LAP LONGITUDINAL BARS A MIN. OF 1'-5". MIN. JOINT SPACING OF 80'-0". DEFINE CONSTRUCTION WITH A 3/4" 'V' GROOVE.

BILL OF BARS

REBAR FOR ABUTMENT WINGS 1&4 PARAPETS ONLY

BAR MARK	COAT	NO. REQUIRED S.ABUT	NO. REQUIRED N.ABUT	LENGTH	BENT	LOCATION
P401	X	6	--	19'-8"		PARAPET-HORIZ.-LONGIT.-BOTH FACES-AT WING 1
P402	X	--	6	17'-8"		PARAPET-HORIZ.-LONGIT.-BOTH FACES-AT WING 4
P503	X	24	22	9'-6"	X	WING/PARAPET-VERT.-TRANS.-AT WINGS 1&4

NOTES:
SEE "SUPERSTRUCTURE BAR DETAILS" SHEET FOR THE SUPERSTRUCTURE BILL OF BARS AND BAR DETAILS.

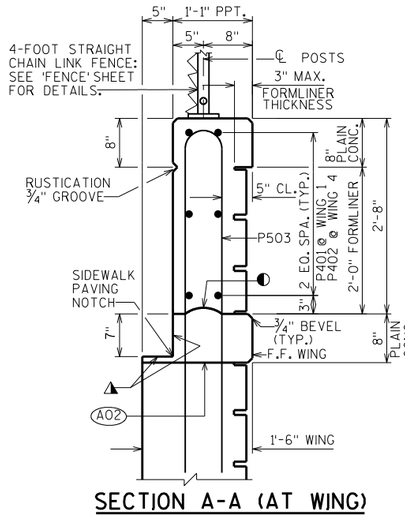
SEE "AESTHETIC DETAILS" SHEET FOR THE FORMLINER AND CONCRETE STAINING DETAILS.

(A02) CONSTRUCTION JOINT: POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

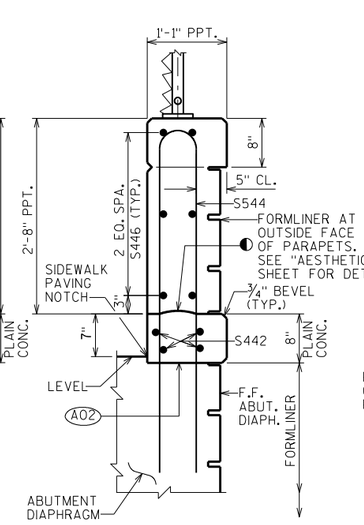
◓ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

◐ HORIZ. CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH

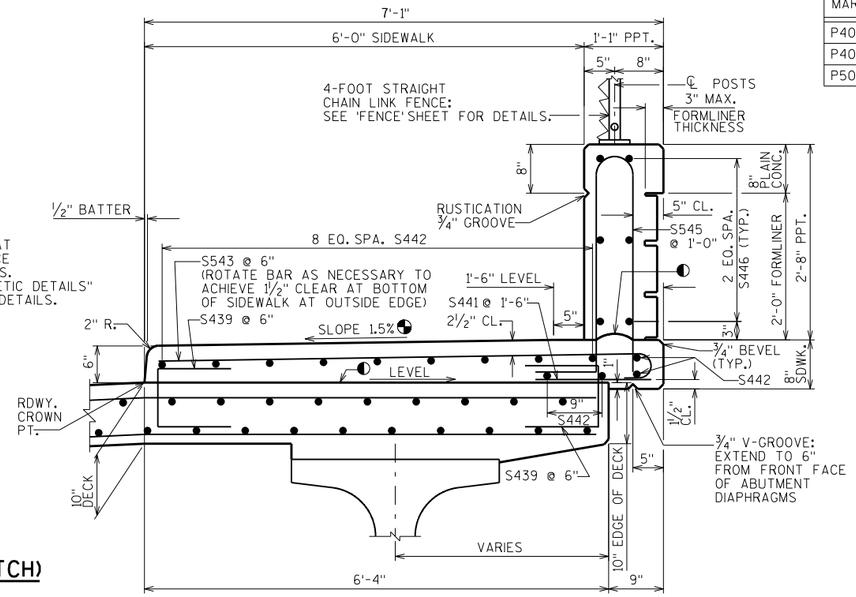
⚠ "PROTECTIVE SURFACE TREATMENT" SHALL ALSO BE APPLIED TO THESE CONCRETE SURFACE AREAS



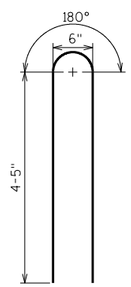
SECTION A-A (AT WING)



SECTION B-B (AT PAVING NOTCH)



SECTION C-C (AT SIDEWALK ON DECK)



P503

NOTE:
ALL HORIZONTAL DIMENSIONS ARE MEASURED RADIALLY - NORMAL TO THE CURVED ℞ STH 27.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-226

DRAWN BY JPH | PLANS CK'D. ABS

SIDEWALK & MODIFIED VERTICAL FACE PARAPET 'A'

SHEET 15

104

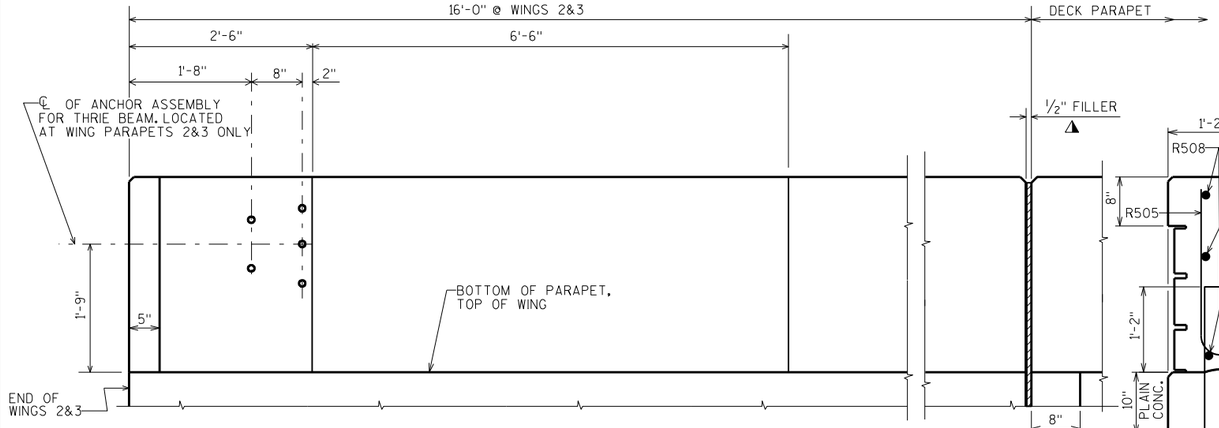
8

8

SCALE = 1

STATE PROJECT NUMBER

7070-08-73

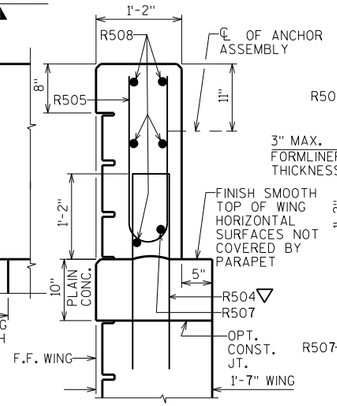


INSIDE ELEVATION

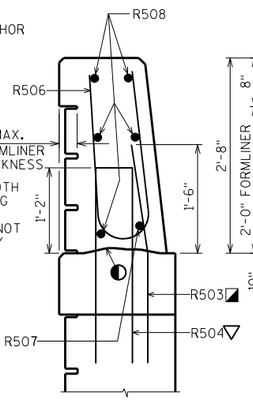
(WING 2 SHOWN, WING 3 SIMILAR)

△1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING AND NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE. COLOR OF JOINT SEALER SHALL MATCH THE ADJACENT CONCRETE STAINING COLOR AND MUST BE APPROVED BY THE ENGINEER.

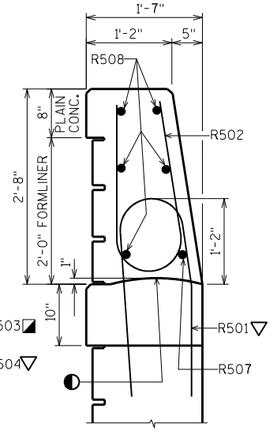
NOTE:
SEE "AESTHETIC DETAILS" SHEET FOR THE FORMLINER AND CONCRETE STAINING AT THE OUTSIDE FACES OF PARAPET.



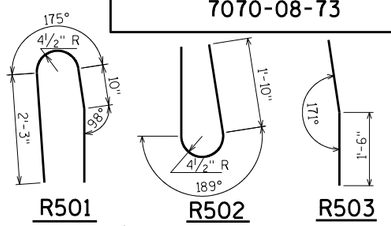
SECTION A-A

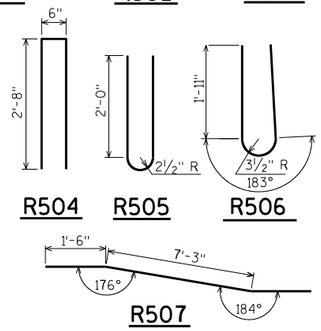


SECTION B-B



SECTION C-C



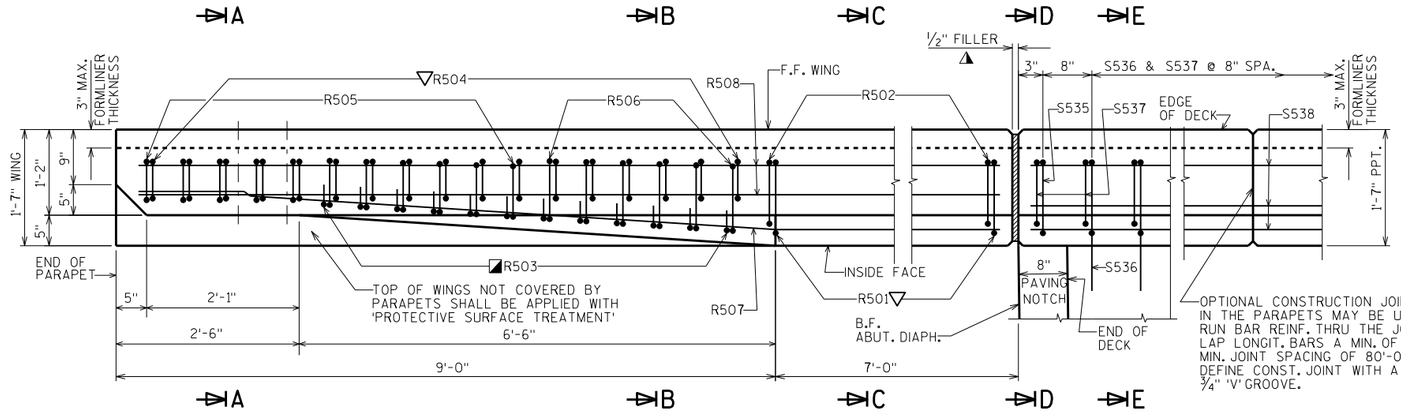


BILL OF BARS

FOR ABUT. WING 2&3 PARAPETS ONLY

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	SOUTH ABUT.	NORTH ABUT.	LENGTH	BENT	LOCATION
R501	X	11	11	5'-10"	X	WING/PARAPET-VERT.-TRANS.-@ WINGS 2&3
R502	X	11	11	5'-0"	X	PARAPET-VERT.-TRANS.-@ WINGS 2&3
R503	X	12	12	3'-0"	X	WING/PARAPET-INSIDE FACE-VERT.-TRANS.-@ WINGS 2&3
R504	X	17	17	5'-7"	X	WING/PARAPET-VERT.-TRANS.-@ WINGS 2&3
R505	X	11	11	4'-9"	X	PARAPET-VERT.-TRANS.-@ WINGS 2&3 ENDS
R506	X	6	6	4'-10"	X	PARAPET-VERT.-TRANS.-@ WINGS 2&3
R507	X	1	1	15'-8"	X	PARAPET-INSIDE FACE-HORIZ.-LONGIT.-BOT.-@ WINGS 2&3
R508	X	5	5	15'-8"		PARAPET-HORIZ.-LONGIT.-@ WINGS 2&3



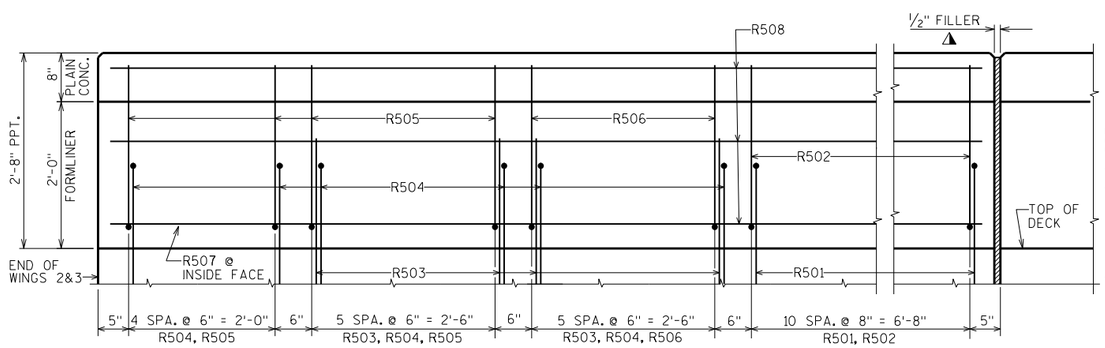
PLAN

(WING 2 SHOWN, WING 3 SIMILAR)

◐ HORIZ. CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH.

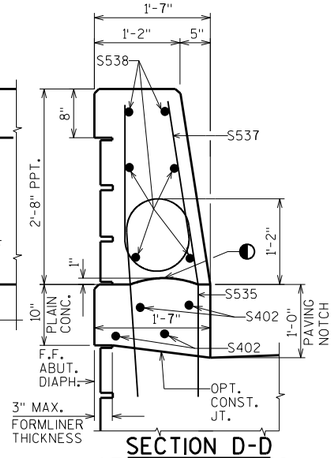
◪ R503 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▽ R501 AND R504 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.

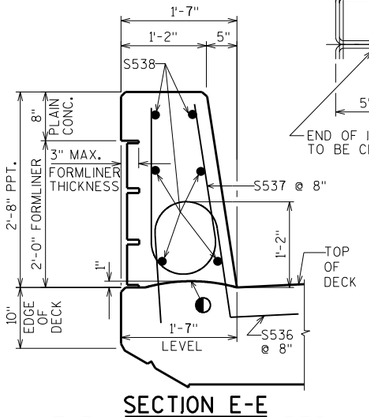


OUTSIDE ELEVATION SHOWING REINFORCEMENT

(WING 3 SHOWN, WING 2 SIMILAR)

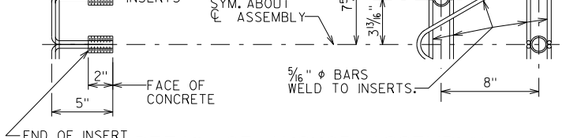


SECTION D-D (AT PAVING NOTCH)



SECTION E-E (THRU PARAPET ON DECK)

SEE "SUPERSTRUCTURE BAR DETAILS" SHEET FOR THE SUPERSTRUCTURE BILL OF BARS AND BAR DETAILS.



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-226

DRAWN BY JPH | PLANS CK'D. ABS

MODIFIED SINGLE SLOPE PARAPET 32SS

SHEET 16

105

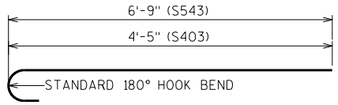
SCALE = 1

8

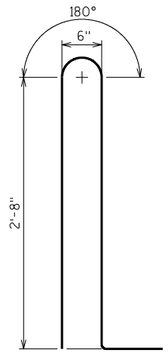
8

STATE PROJECT NUMBER

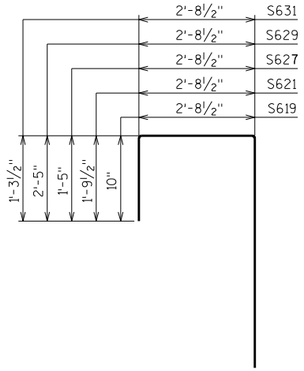
7070-08-73



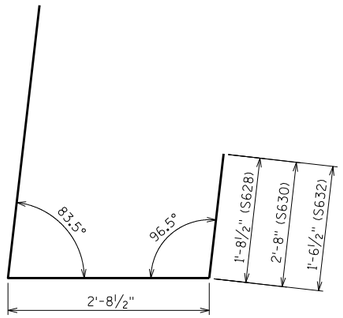
S403 S543



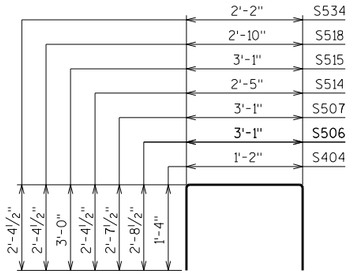
S545



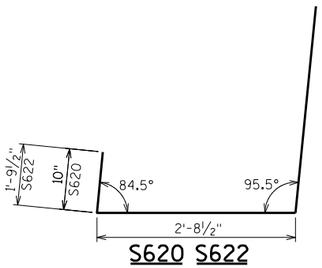
S619 S621 S627 S629 S631



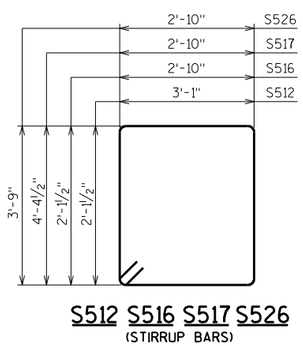
S628 S630 S632



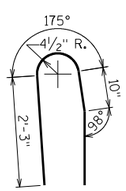
S404 S506 S507 S514 S515 S518 S534



S620 S622



S512 S516 S517 S526
(STIRRUP BARS)



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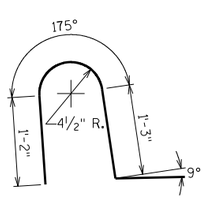

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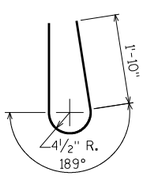

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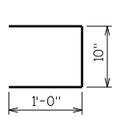

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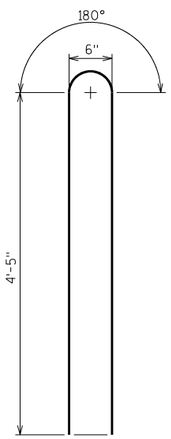


S544

BILL OF BARS

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	558	27'-3"			DECK-TOP & BOT.-HORIZ.-TRANS.
S402	X	465	30'-8"			DECK-TOP & BOT.-HORIZ.-LONGIT.
S403	X	66	4'-11"	X		DECK-TOP-VERT.-TRANS.-AT EDGES OF DECK
S404	X	72	3'-8"	X		ABUT. DIAPHS.-F.F.-BOT.-VERT.-BTWN. BEAM SEATS
S405	X	16	7'-10"			ABUT. DIAPHS.-F.F.-BOT.-HORIZ.-BTWN. BEAM SEATS
S506	X	144	8'-3"	X		ABUT. DIAPHS.-VERT.-BTWN. GIRS. 1-4
S507	X	36	8'-1"	X		ABUT. DIAPHS.-VERT.-BTWN. GIRS. 4-5
S608	X	8	8'-10"			ABUT. DIAPHS.-F.F.-BOT.-HORIZ.-BTWN. GIRS. 1-5
S609	X	48	6'-6"			ABUT. DIAPHS.-F.F.-HORIZ.-BTWN. GIRS. 1-5
S610	X	8	8'-6"			ABUT. DIAPHS.-F.F.-TOP-HORIZ.-BTWN. GIRS. 1-5
S611	X	24	28'-0"			ABUT. DIAPHS.-B.F. & DECK-HORIZ.
S512	X	16	11'-1"	X		ABUT. DIAPHS.-VERT.-UNDER GIR. FLANGES-BTWN. GIRS. 1-5
S513	X	20	6'-0"			ABUT. DIAPHS.-HORIZ.-THRU GIRDERS
S514	X	98	6'-11"	X		ABUT. DIAPHS./DECK/SDWK.-VERT.-BTWN. GIRS. 1-5
S515	X	16	8'-10"	X		ABUT. DIAPHS./DECK-VERT.-BTWN. GIRS. 4-5-UNDER SIDEWALK
S516	X	4	10'-7"	X		ABUT. DIAPHS.-VERT.-UNDER GIR. FLANGES-AT ALL FOUR GIR. EXTERIOR CORNERS ONLY
S517	X	4	15'-1"	X		ABUT. DIAPHS./DECK-VERT.-AT GIR. 5 EXTERIOR CORNERS ONLY
S518	X	8	7'-4"	X		ABUT. DIAPHS./DECK/SDWK.-VERT.-AT ALL FOUR GIR. EXTERIOR CORNERS ONLY
S619	X	1	7'-0"	X		SOUTH ABUT. DIAPH.-BOT.-HORIZ.-AT GIR. 5 EXTERIOR CORNER ONLY
S620	X	1	7'-0"	X		NORTH ABUT. DIAPH.-BOT.-HORIZ.-AT GIR. 5 EXTERIOR CORNER ONLY
S621	X	4	7'-11"	X		SOUTH ABUT. DIAPH.-HORIZ.-AT GIR. 5 EXTERIOR CORNER ONLY
S622	X	4	7'-11"	X		NORTH ABUT. DIAPH.-HORIZ.-AT GIR. 5 EXTERIOR CORNER ONLY
S423	X	4	5'-1"			ABUT. DIAPHS./SDWK.-VERT.-AT GIR. 5 EXTERIOR CORNERS ONLY
S624	X	2	6'-0"			ABUT. DIAPHS.-TOP-B.F.-HORIZ.-UNDER SIDEWALK-ABOVE GIR. 5
S625	X	4	6'-9"			SIDEWALKS-ABOVE ABUT. DIAPHS.-TOP-HORIZ.-AT WING 1&4 CORNERS
S526	X	6	13'-10"	X		ABUT. DIAPHS.-VERT.-AT GIR. 1 EXTERIOR CORNERS ONLY
S627	X	1	7'-7"	X		SOUTH ABUT. DIAPH.-BOT.-HORIZ.-AT GIR. 1 EXTERIOR CORNER ONLY
S628	X	1	7'-10"	X		NORTH ABUT. DIAPH.-BOT.-HORIZ.-AT GIR. 1 EXTERIOR CORNER ONLY
S629	X	3	8'-7"	X		SOUTH ABUT. DIAPH.-HORIZ.-AT GIR. 1 EXTERIOR CORNER ONLY
S630	X	3	8'-10"	X		NORTH ABUT. DIAPH.-HORIZ.-AT GIR. 1 EXTERIOR CORNER ONLY
S631	X	1	7'-5"	X		SOUTH ABUT. DIAPH.-TOP-HORIZ.-AT GIR. 1 EXTERIOR CORNER ONLY
S632	X	1	7'-8"	X		NORTH ABUT. DIAPH.-TOP-HORIZ.-AT GIR. 1 EXTERIOR CORNER ONLY
S433	X	4	4'-9"			ABUT. DIAPHS./DECK-VERT.-AT GIR. 1 EXTERIOR CORNERS ONLY
S534	X	2	6'-8"	X		ABUT. DIAPHS./DECK-VERT.-AT GIR. 1 EXTERIOR CORNERS ONLY
S535	X	2	5'-10"	X		PARAPET 32SS/ABUT DIAPH.-VERT.-TRANS.-AT BOTH ENDS ONLY
S536	X	132	4'-5"	X		PARAPET 32SS/DECK-VERT.-TRANS.
S537	X	134	5'-0"	X		PARAPET 32SS-VERT.-TRANS.
S538	X	12	45'-3"			PARAPET 32SS-HORIZ.-LONGIT.
S439	X	350	2'-8"	X		DECK/SIDEWALK-VERT.-TRANSVERSE-AT BOTH FACES
S440		--	--			NOT USED
S441	X	59	1'-8"			SIDEWALK-BOT.-HORIZ.-TRANSVERSE-OUTSIDE EDGE
S442	X	39	30'-9"			SIDEWALK TOP & BOT.-HORIZ.-LONGIT.
S543	X	175	7'-4"	X		SIDEWALK-TOP-VERT.-TRANSVERSE
S544	X	2	9'-6"	X		PARAPET A/ABUT DIAPH.-VERT.-TRANS.-AT BOTH ENDS ONLY
S545	X	88	6'-8"	X		SIDEWALK/PARAPET-VERT.-TRANSVERSE
S446	X	18	30'-7"			PARAPET-HORIZ.-BOTH FACES-LONGIT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-226

DRAWN BY JPH | PLANS CK'D. ABS

SUPERSTRUCTURE BAR DETAILS

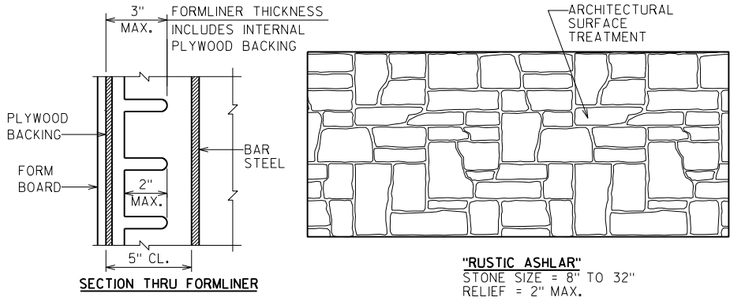
SHEET 17

106

SCALE = 1

8

8



SECTION THRU FORMLINER

"RUSTIC ASHLAR"
STONE SIZE = 8" TO 32"
RELIEF = 2" MAX.

☆PLAIN CONCRETE:
ALL PLAIN CONCRETE AREAS SHALL NOT BE STAINED

⚠ ARCHITECTURAL SURFACE TREATMENT FORMLINER REQUIRED AT FRONT FACES OF ABUTMENT WINGS & BODY, ABUT. DIAPHRAGM ENDS AND FRONT FACE EXTERIORS & OUTSIDE FACES OF PARAPETS SHALL BE "RUSTIC ASHLAR" FORMLINER PATTERN.

ALL ARCHITECTURAL SURFACE TREATMENT FORMLINER AREAS SHALL BE STAINED, INDIVIDUAL CUT STONES IN FORMLINED AREAS SHALL BE STAINED AS INDICATED IN THE SPECIAL PROVISIONS. WORK SHALL BE PAID FOR UNDER THE BID ITEM "CONCRETE STAINING MULTI-COLOR B-18-226". MULTI-COLOR STAIN TO LOOK SIMILAR TO WEATHERED LIMESTONE AS APPROVED BY FIELD ENGINEER.

GENERAL NOTES

ALL FORMLINER WORK SHALL BE COVERED UNDER THE BID ITEM "ARCHITECTURAL SURFACE TREATMENT".

THE FORMLINER COURSING ON THE WINGS SHALL BE VERTICALLY ALIGNED WITH THE FORMLINER COURSING AT THE ENDS OF ABUTMENT DIAPHRAGMS.

THE FORMLINER COURSING ON THE WING BODY SHALL BE VERTICALLY ALIGNED WITH THE FORMLINER COURSING ON THE FRONT OF THE ABUTMENT BODY.

THE FORMLINER COURSING AT THE ENDS OF ABUTMENT DIAPHRAGMS SHALL BE VERTICALLY ALIGNED WITH THE FORMLINER COURSING AT FRONT OF THE ABUTMENT DIAPHRAGMS AT GIRDER EXTERIORS.

THE FORMLINER PATTERN SHALL BE CONTINUOUS ACROSS CONSTRUCTION JOINTS.

ALL ARCHITECTURAL SURFACE TREATMENT AREAS TO BE STAINED. WORK TO BE PAID FOR UNDER THE BID ITEM "CONCRETE STAINING MULTI-COLOR B-18-226".

ONLY FORMLINER AREAS SHALL BE STAINED WITH "CONCRETE STAINING MULTI-COLOR B-18-226".

IF TOUCH UP PAINTING IS REQUIRED, IT SHALL BE DONE TO THE SATISFACTION OF THE FIELD ENGINEER AT NO ADDITIONAL COST.

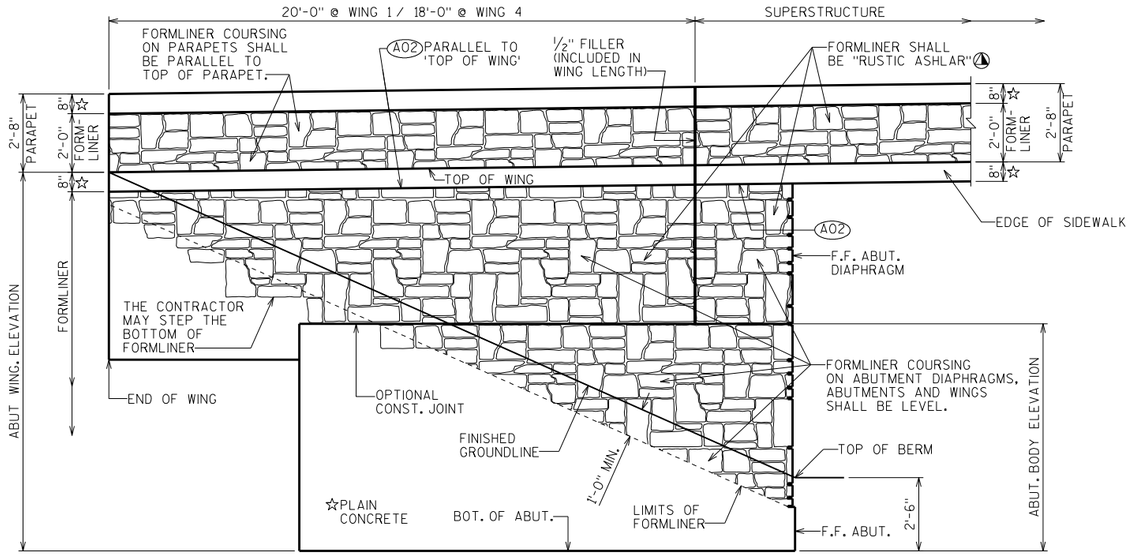
FORMLINER COURSING ON ABUTMENT DIAPHRAGMS, ABUTMENTS AND WINGS SHALL BE LEVEL.

FORMLINER COURSING ON PARAPETS SHALL BE PARALLEL TO TOP OF PARAPET.

WRAP AROUND/MATCH FORMLINER PATTERN AT CORNERS.

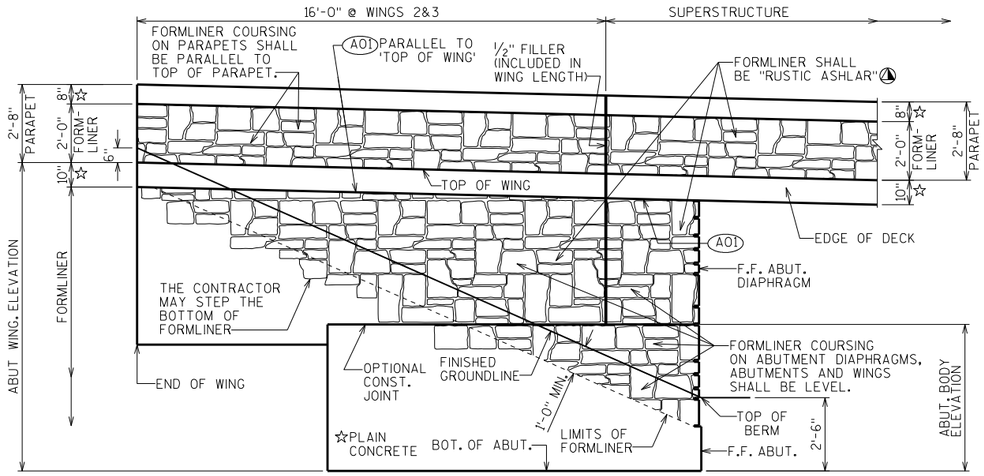
STATE PROJECT NUMBER
7070-08-73

FORMLINER DETAILS



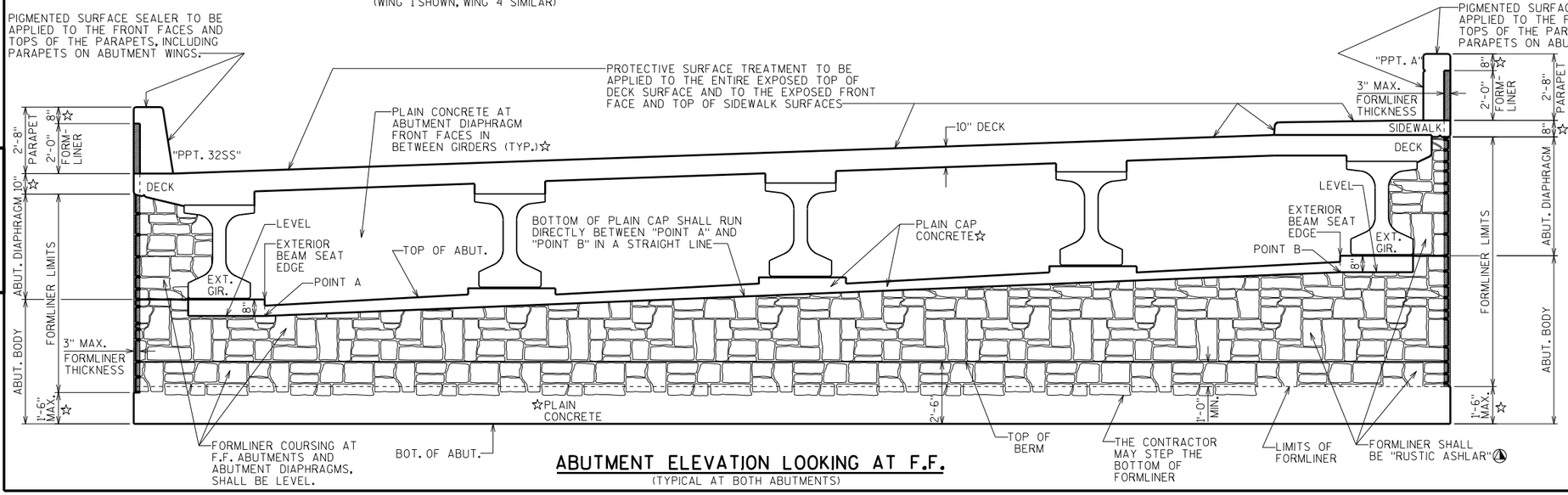
EAST PARAPET ELEVATION LOOKING @ OUTSIDE FACE SHOWING FORMLINER

(WING 1 SHOWN, WING 4 SIMILAR)



WEST PARAPET ELEVATION LOOKING @ OUTSIDE FACE SHOWING FORMLINER

(WING 3 SHOWN, WING 2 SIMILAR)



ABUTMENT ELEVATION LOOKING AT F.F.

(TYPICAL AT BOTH ABUTMENTS)

A01 OPTIONAL CONSTRUCTION JOINT: STRIKE OFF AND LEAVE ROUGH. (18" R.M.W. @ B.F. IF JOINT IS USED)

A02 CONSTRUCTION JOINT: POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH. PLACE 18" RUBBERIZED MEMBRANE WATERPROOFING @ B.F. JOINT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-226

DRAWN BY JPH | PLANS CK'D. ABS

AESTHETIC DETAILS

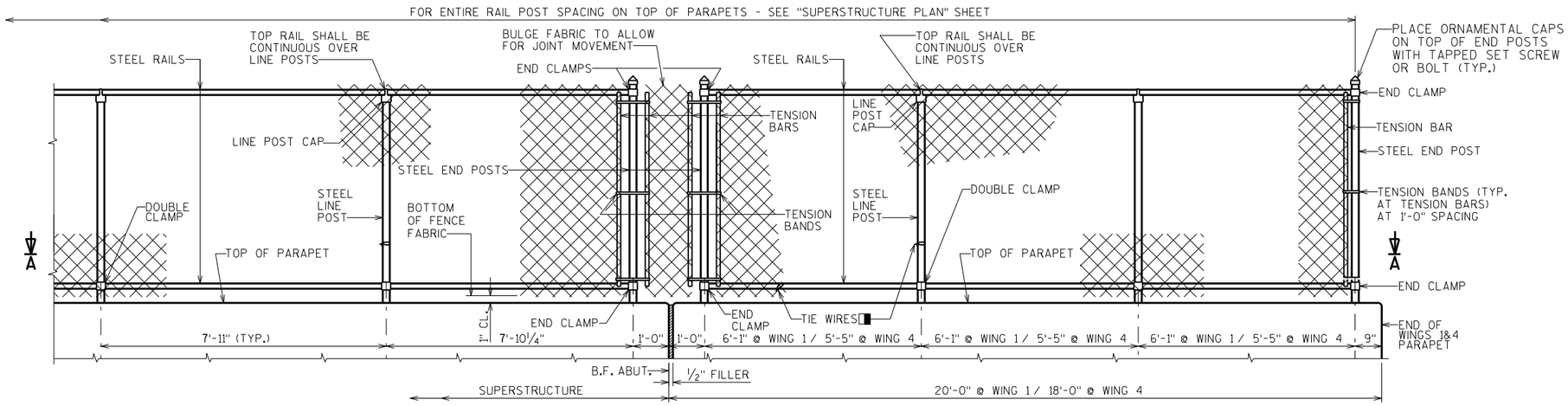
SHEET 18

107

SCALE = 2.5

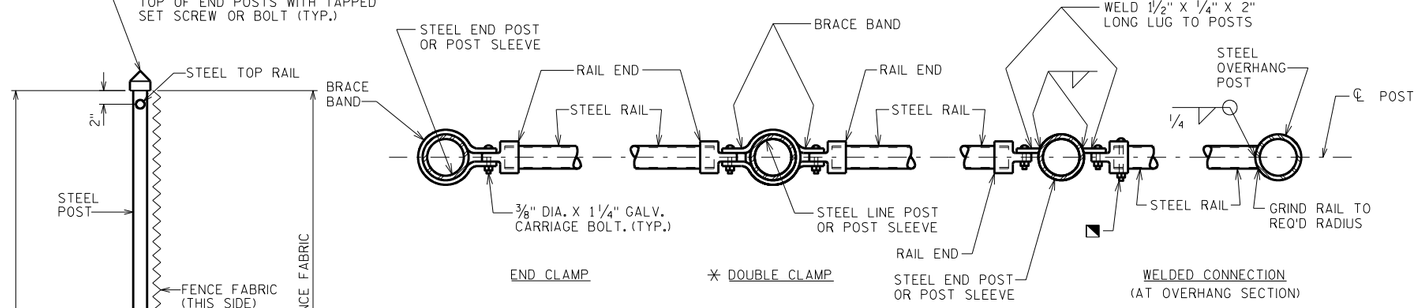
8

8



FENCE PART ELEVATION

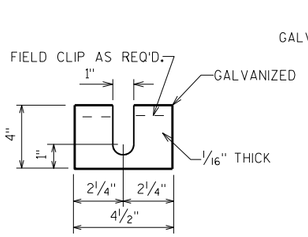
VIEWING FABRIC SIDE - INSIDE FACE OF PARAPET



SECTION THRU FENCE

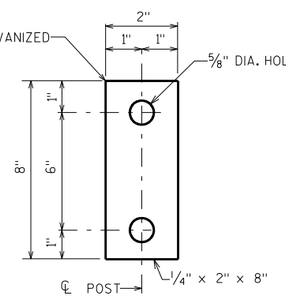
SECTION A-A

NOTE: PLACE ALL BOLT HEADS ON SIDE OF FENCE ADJACENT TO PEDESTRIANS

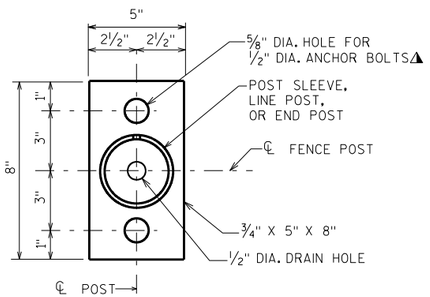


POST SHIM DETAILS

SHIMS REQUIRED ONLY WHEN END POSTS AND LINE POSTS ARE WELDED TO BASE PLATES. PROVIDE 4 SHIMS PER POST. USE WHERE REQUIRED FOR ALIGNMENT.



ANCHOR PLATE



BASE PLATE

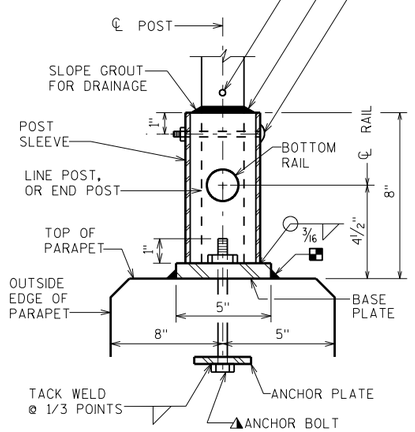
FENCE MEMBER SIZE & WEIGHT

STEEL FENCE MEMBER	OUTSIDE DIAMETER (INCHES)	WEIGHT (LB/FT)
RAILS	1.660	2.27
END POST	2.875	5.80
LINE POST	2.375	3.65
POST SLEEVE	4.000	9.12

⅜" DIA. GALV. CARRIAGE BOLT WITH LOCKING NUT. (TO BE SUPPLIED WITH ASSEMBLY)

FILL SLEEVE AND BEVEL AWAY FROM POST WITH NON-SHRINK GROUT AFTER SETTING POST. (LEAVE NO VOIDS)

DRILL 3⁄16" DIA. DRAIN HOLE PARALLEL TO ROADWAY IMMEDIATELY ABOVE GROUT IN POST. SLEEVE LOCATIONS ONLY.



DETAIL 'A'

UNIT SHALL BE GALVANIZED AFTER FABRICATION

NOTE: IN LIEU OF USING THE POST SLEEVE, THE FENCE POST MAY BE WELDED TO THE BASE PLATE.

STATE PROJECT NUMBER

7070-08-73

GENERAL NOTES

POSTS ARE TO BE SET VERTICAL.

ALL FENCE COMPONENTS SHALL BE GALVANIZED STEEL WITH A COLORED POLYMER-COATING ON THE OUTSIDE.

FABRIC SHALL CONFORM TO ASTM F668, CLASS 2B. STEEL RAILS, POSTS AND POST SLEEVES SHALL CONFORM TO ASTM F1083, STANDARD WEIGHT PIPE (SCHEDULE 40). FITTINGS SHALL CONFORM TO ASTM F626. SEE THE "BRIDGE SPECIAL PROVISIONS" FOR ADDITIONAL DETAILS.

THE COLOR OF POLYMER-COATING FOR THIS FENCING SHALL BE "BLACK", FEDERAL COLOR NO. 27038 IN ACCORDANCE WITH ASTM F934.

THE BID ITEM SHALL BE "FENCE CHAIN LINK POLYMER COATED 4-FT", LF.

COMPLETE ANY REQUIRED WELDING OF COMPONENTS BEFORE GALVANIZING.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

BASE PLATES, ANCHOR PLATES AND SHIMS SHALL BE ASTM A709, GRADE 36.

ALL POST SPACINGS ARE MEASURED HORIZONTALLY ALONG THE ℄ OF THE POST.

◪ CAULK AROUND PERIMETER OF BASE PLATE AND FILL PORTION OF SLOTTED HOLE AROUND ANCHOR BOLT IN SHIM WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

✳ ALTERNATE TO DOUBLE CLAMP: USE LINE RAIL CLAMP (BOULEVARD) OR 180° BRACE BAND, WHICH MAY BE USED WHEN THE POSTS ARE EITHER BOLTED TO THE POST SLEEVES OR DIRECTLY WELDED TO THE BASE PLATE.

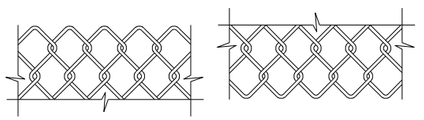
▲ ½" DIA. X 6⅞" LONG GALVANIZED HEX BOLT WITH NUT & WASHER. TYPE "S". ½" DIA. CONCRETE MASONRY ANCHORS MAY BE SUBSTITUTED FOR ½" DIA. BOLTS. ANCHOR PLATE NOT REQUIRED WHEN TYPE "S" ANCHORS ARE USED. SEE ☆

☆ MASONRY ANCHOR TYPE S ½-INCH. EMBED 6" IN CONCRETE. ANCHOR, WASHER, AND NUT SHALL BE GALVANIZED.

◨ ATTACH FABRIC TO RAILS, AND TO POSTS WITHOUT TENSION BANDS, WITH TIE WIRES (ROUND, 9-GAGE) SPACED AT 1'-0".

◹ BOLT RAIL TO RAIL END TO SECURE OVERHANG SECTION. ALTERNATE IS TO WELD RAIL DIRECTLY TO END POST.

MINIMUM LENGTH OF TOP RAIL BETWEEN SPLICES SHALL BE 20'-0". LOCATE SPLICES NEAR ¼ POINT OF POST SPACING.



TOP DETAIL BOTTOM DETAIL

FENCE FABRIC

FENCE FABRIC WOVEN OF 9-GAGE WIRE IN 2" DIAMOND PATTERN MESH WITH BOTH THE TOP AND BOTTOM SELVAGES KNUCKLED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-18-226

DRAWN BY JPH | PLANS CK'D. ABS

CHAIN LINK FENCE DETAILS

SHEET 19

108

SCALE = 5.3333

8

8

DIVISION 1 - BYPASS

STATION	REAL STATION	DISTANCE	AREA (SF) CUT	AREA (SF) SALVAGED/UNUSABLE PAVEMENT MATERIAL	AREA (SF) FILL	INCREMENTAL VOL (CY) (UNADJUSTED) CUT NOTE 1	INCREMENTAL VOL (CY) (UNADJUSTED) SALVAGED/UNUSABLE PAVEMENT MATERIAL NOTE 2	INCREMENTAL VOL (CY) (UNADJUSTED) FILL NOTE 3	CUMULATIVE VOL (CY) CUT 1.00 NOTE 1	CUMULATIVE VOL (CY) EXP. FILL 1.25	MASS ORD. NOTE 8
1+76	176		10	0	0	0	0	0	0	0	0
2+00	200	24	35	0	0	20	0	0	20	0	20
2+22	222	22	29	0	0	26	0	0	46	0	46
2+50	250	28	36	0	0	34	0	0	80	0	80
2+68	268	18	39	0	0	26	0	0	106	0	106
3+00	300	32	41	0	0	47	0	0	153	0	153
3+15	315	15	43	0	0	23	0	0	176	0	176
3+50	350	35	49	0	7	60	0	4	236	5	232
4+00	400	50	35	0	354	78	0	334	314	423	-108
4+38	438	38	0	0	683	25	0	730	339	1335	-996
4+48	448	10	0	0	3	0	0	128	339	1495	-1156
				COLUMN TOTALS		339	0	1196			

DIVISION 2 - BYPASS

STATION	REAL STATION	DISTANCE	AREA (SF) CUT	AREA (SF) SALVAGED/UNUSABLE PAVEMENT MATERIAL	AREA (SF) FILL	INCREMENTAL VOL (CY) (UNADJUSTED) CUT NOTE 1	INCREMENTAL VOL (CY) (UNADJUSTED) SALVAGED/UNUSABLE PAVEMENT MATERIAL NOTE 2	INCREMENTAL VOL (CY) (UNADJUSTED) FILL NOTE 3	CUMULATIVE VOL (CY) CUT 1.00 NOTE 1	CUMULATIVE VOL (CY) EXP. FILL 1.25	MASS ORD NOTE 8
5+25	525		0	0	794	0	0	0	0	0	0
5+42	542	17	0	0	675	0	0	470	0	588	-588
5+50	550	8	0	0	665	0	0	192	0	828	-828
5+88	588	38	0	0	603	0	0	889	0	1939	-1939
6+00	600	12	0	0	596	0	0	270	0	2276	-2276
6+33	633	33	0	0	562	0	0	717	0	3173	-3173
6+50	650	17	0	0	488	0	0	322	0	3575	-3575
6+79	679	29	3	0	341	1	0	442	0	4128	-4126
7+00	700	21	5	0	187	3	0	207	0	4386	-4382
7+42	742	42	1	0	76	5	0	205	0	4643	-4633
7+50	750	8	1	0	68	0	0	21	0	4669	-4659
8+00	800	50	1	0	11	1	0	73	0	4760	-4749
8+05	805	5	1	0	7	0	0	2	0	4763	-4752
8+50	850	45	0	0	4	1	0	9	0	4774	-4762
9+00	900	50	0	0	3	1	0	6	0	4781	-4769
9+25	925	25	0	0	0	0	0	1	0	4783	-4770
				COLUMN TOTALS		12	0	3826			

DIVISION 3 - MAINLINE

STATION	REAL STATION	DISTANCE	AREA (SF) CUT	AREA (SF) SALVAGED/UNUSABLE PAVEMENT MATERIAL	AREA (SF) FILL	INCREMENTAL VOL (CY) (UNADJUSTED) CUT NOTE 1	INCREMENTAL VOL (CY) (UNADJUSTED) SALVAGED/UNUSABLE PAVEMENT MATERIAL NOTE 2	INCREMENTAL VOL (CY) (UNADJUSTED) FILL NOTE 3	CUMULATIVE VOL (CY) CUT 1.00 NOTE 1	CUMULATIVE VOL (CY) EXP. FILL 1.25	MASS ORD. NOTE 8
9+46	946		21	7	1	0	0	0	0	0	0
9+50	950	4	21	7	1	3	1	0	3	0	2
10+00	1000	50	24	7	0	42	13	1	45	1	29
10+38	1038	38	24	7	0	33	10	1	78	3	51
10+50	1050	12	24	8	0	11	3	0	89	3	59
11+00	1100	50	33	6	0	53	13	1	142	4	98
11+19	1119	19	73	6	0	37	4	0	179	4	131
11+27	1127	8	69	6	0	22	2	0	201	4	151
11+45	1145	17	50	6	0	38	4	0	239	4	185
11+50	1150	5	33	9	0	8	1	0	247	4	192
11+70	1170	20	29	7	21	24	6	8	271	14	200
12+00	1200	30	85	19	83	63	14	57	334	85	178
12+11	1211	11	80	18	142	33	7	45	367	141	148
12+12	1212	1	87	18	71	3	1	3	370	145	145
12+28	1228	16	0	0	472	27	6	166	397	353	-42
12+50	1250	22	0	0	0	0	0	192	397	593	-282
12+75	1275	25	0	0	0	0	0	0	397	593	-282
				COLUMN TOTALS		397	85	474			

DIVISION 4 - MAINLINE

STATION	REAL STATION	DISTANCE	AREA (SF) CUT	AREA (SF) SALVAGED/UNUSABLE PAVEMENT MATERIAL	AREA (SF) FILL	INCREMENTAL VOL (CY) (UNADJUSTED) CUT NOTE 1	INCREMENTAL VOL (CY) (UNADJUSTED) SALVAGED/UNUSABLE PAVEMENT MATERIAL NOTE 2	INCREMENTAL VOL (CY) (UNADJUSTED) FILL NOTE 3	CUMULATIVE VOL (CY) CUT 1.00 NOTE 1	CUMULATIVE VOL (CY) EXP. FILL 1.25	MASS ORD. NOTE 8
13+17	1317		0	0	499	0	0	0	0	0	0
13+25	1325	8	0	0	341	0	0	127	0	159	-159
13+30	1330	5	0	0	261	0	0	51	0	223	-222
13+36	1336	6	65	7	159	7	1	45	7	279	-273
13+50	1350	14	30	7	93	25	4	68	32	364	-337
13+90	1390	40	27	7	30	41	10	91	73	478	-419
14+00	1400	10	26	7	26	10	3	11	83	491	-426
14+13	1413	13	27	7	21	13	3	11	96	505	-429
14+38	1438	25	27	7	17	25	6	18	121	528	-433
14+50	1450	12	28	7	13	12	3	7	133	536	-433
14+63	1463	13	28	7	8	13	3	5	146	543	-429
15+00	1500	37	27	6	10	37	8	12	183	558	-414
15+50	1550	50	27	6	18	50	10	25	233	589	-406
16+00	1600	50	25	6	19	48	10	34	281	631	-411
16+50	1650	50	21	6	18	42	10	34	323	674	-421
17+00	1700	50	9	6	17	28	11	32	351	714	-444
17+03	1703	3	10	6	16	1	1	2	352	716	-447
17+50	1750	47	12	8	2	18	12	16	370	736	-460
17+53	1753	3	8	8	0	1	1	0	371	736	-460
				COLUMN TOTALS		371	96	589			

Notes:

1 - Cut ——— Cut Includes Salvaged/Unusable Pavement material

2 - Salvaged/Unusable Pavement Material ——— This does not show up in cross sections

3 - Fill ——— Does not include Unusable Pavement Exc volume

4 - Expanded Marsh Backfill ——— Will be backfilled with Granular Backfill (or Cut, or Borrow)

5 - Expanded EBS ——— Will be backfilled with Granular Backfill (or Cut, or Borrow)

6 - Reduced Marsh In Fill ——— Reduced Marsh Excavation that can be used in Fill

7 - Reduced EBS In Fill ——— Reduced EBS Excavation that can be used in Fill

8 - Mass Ordinate ——— If Marsh or EBS to be backfilled with Cut or Borrow:
^{2}(Cut + Marsh Exc + EBS) - ((Fill - Reduced Marsh In Fill) - (Reduced EBS In Fill) - Expanded Rock) * Fill Factor)^{3}

8 - Mass Ordinate ——— If Marsh and EBS to be backfilled with Granular:
^{2}(Cut + EBS + Marsh Exc) - ((Fill - (Reduced Marsh In Fill) - (Reduced EBS In Fill) - (Expanded Rock)) * Fill Factor))^{3}

8 - Mass Ordinate ——— If Marsh and EBS to be backfilled with Granular: ^{2}(Cut) - ((Fill - Expanded Rock) * Fill Factor))^{3}

8 - Mass Ordinate ——— If Marsh and EBS to be backfilled with Cut or Borrow: ^{2}(Cut) - ((Fill - Expanded Rock) * Fill Factor))^{3}

DIVISION 5 - MAINLINE

STATION	REAL STATION	DISTANCE	AREA (SF) CUT	AREA (SF) SALVAGED/UNUSABLE PAVEMENT MATERIAL	AREA (SF) FILL	INCREMENTAL VOL (CY) (UNADJUSTED) CUT NOTE 1	INCREMENTAL VOL (CY) (UNADJUSTED) SALVAGED/UNUSABLE PAVEMENT MATERIAL NOTE 2	INCREMENTAL VOL (CY) (UNADJUSTED) FILL NOTE 3	CUMULATIVE VOL (CY) CUT 1.00 NOTE 1	CUMULATIVE VOL (CY) EXP. FILL 1.25	MASS ORD. Note 8
9+46	946		19	7	0	0	0	0	0	0	0
9+50	950	4	19	7	0	3	1	0	3	0	2
10+00	1000	50	21	7	0	37	13	0	40	0	25
10+38	1038	38	21	7	0	29	10	0	69	0	44
10+50	1050	12	21	7	0	10	3	0	79	0	51
11+00	1100	50	21	7	0	39	13	0	118	0	77
11+19	1119	19	21	7	0	15	5	0	133	0	87
11+27	1127	8	21	7	0	7	2	0	140	0	91
11+45	1145	17	21	7	0	14	5	0	154	0	100
11+50	1150	5	21	7	0	4	1	0	158	0	103
11+70	1170	20	22	7	0	16	5	0	174	0	115
12+00	1200	30	0	7	0	12	8	0	186	0	119
12+11	1211	11	0	7	0	0	3	0	186	0	116
				COLUMN TOTALS		186	69	0			

DIVISION 6 - MAINLINE

STATION	REAL STATION	DISTANCE	AREA (SF) CUT	AREA (SF) SALVAGED/UNUSABLE PAVEMENT MATERIAL	AREA (SF) FILL	INCREMENTAL VOL (CY) (UNADJUSTED) CUT NOTE 1	INCREMENTAL VOL (CY) (UNADJUSTED) SALVAGED/UNUSABLE PAVEMENT MATERIAL NOTE 2	INCREMENTAL VOL (CY) (UNADJUSTED) FILL NOTE 3	CUMULATIVE VOL (CY) CUT 1.00 NOTE 1	CUMULATIVE VOL (CY) EXP. FILL 1.25	MASS ORD. Note 8
13+36	1336		0	5	0	0	0	0	0	0	0
13+50	1350	14	7	5	0	2	3	0	2	0	-1
13+90	1390	40	14	5	0	15	7	0	17	0	7
14+00	1400	10	14	5	0	5	2	0	22	0	10
14+13	1413	13	15	5	0	7	2	0	29	0	15
14+38	1438	25	15	5	0	14	5	0	43	0	24
14+50	1450	12	15	5	0	7	2	0	50	0	29
14+63	1463	13	16	5	0	8	2	0	58	0	34
15+00	1500	37	16	5	0	21	7	0	79	0	49
15+50	1550	50	16	5	0	29	9	0	108	0	69
16+00	1600	50	16	5	0	30	9	0	138	0	90
16+50	1650	50	14	5	0	27	9	0	165	0	108
17+00	1700	50	5	5	0	17	9	0	182	0	116
17+03	1703	3	5	5	0	1	1	0	183	0	116
17+50	1750	47	5	5	0	9	9	0	192	0	116
17+53	1753	3	5	5	0	1	1	0	193	0	115
				COLUMN TOTALS		193	77	0			

DIVISION 7 - MAINLINE

STATION	REAL STATION	DISTANCE	AREA (SF) CUT	AREA (SF) SALVAGED/UNUSABLE PAVEMENT MATERIAL	AREA (SF) FILL	INCREMENTAL VOL (CY) (UNADJUSTED) CUT NOTE 1	INCREMENTAL VOL (CY) (UNADJUSTED) SALVAGED/UNUSABLE PAVEMENT MATERIAL NOTE 2	INCREMENTAL VOL (CY) (UNADJUSTED) FILL NOTE 3	CUMULATIVE VOL (CY) CUT 1.00 NOTE 1	CUMULATIVE VOL (CY) EXP. FILL 1.25	MASS ORD. NOTE 8
9+46	946		23	9	11	0	0	0	0	0	0
9+50	950	4	24	9	12	3	1	2	3	3	0
10+00	1000	50	29	9	17	49	16	27	52	36	-1
10+38	1038	38	29	9	31	41	12	33	93	78	-13
10+50	1050	12	30	9	35	14	4	15	107	96	-22
11+00	1100	50	28	9	34	53	17	65	160	178	-67
11+19	1119	19	29	9	79	20	6	40	180	228	-103
11+27	1127	8	30	9	27	9	3	16	189	248	-117
11+45	1145	17	185	9	12	70	6	13	259	264	-70
11+50	1150	5	246	9	15	42	2	3	301	268	-33
11+70	1170	20	284	8	28	201	6	16	502	288	141
12+00	1200	30	456	7	0	405	8	15	907	306	519
12+30	1230	30	443	7	1	492	7	1	1399	308	1003
12+12	1212	12	437	7	1	189	3	1	1588	309	1187
12+28	1228	16	0	7	0	133	4	0	1721	309	1317
12+50	1250	22	0	7	0	0	5	0	1721	309	1312
				COLUMN TOTALS		1721	100	247			

DIVISION 8 - MAINLINE

STATION	REAL STATION	DISTANCE	AREA (SF) CUT	AREA (SF) SALVAGED/UNUSABLE PAVEMENT MATERIAL	AREA (SF) FILL	INCREMENTAL VOL (CY) (UNADJUSTED) CUT NOTE 1	INCREMENTAL VOL (CY) (UNADJUSTED) SALVAGED/UNUSABLE PAVEMENT MATERIAL NOTE 2	INCREMENTAL VOL (CY) (UNADJUSTED) FILL NOTE 3	CUMULATIVE VOL (CY) CUT 1.00 NOTE 1	CUMULATIVE VOL (CY) EXP. FILL 1.25	MASS ORD. Note 8
13+00	1300		738	0	0	0	0	0	0	0	0
13+17	1317	17	678	0	0	445	0	0	445	0	445
13+25	1325	8	624	0	0	196	0	0	641	0	641
13+30	1330	5	619	0	0	105	0	0	746	0	746
13+36	1336	6	596	0	0	132	0	0	878	0	878
13+50	1350	14	511	7	36	297	2	10	1175	13	1160
13+90	1390	40	257	7	42	565	10	57	1740	84	1644
14+00	1400	10	270	7	25	100	2	13	1840	100	1726
14+13	1413	13	263	7	10	129	3	8	1969	110	1842
14+38	1438	25	214	7	0	221	6	5	2190	116	2050
14+50	1450	12	175	7	0	86	3	0	2276	116	2133
14+63	1463	13	134	7	0	75	3	0	2351	116	2205
15+00	1500	37	59	5	6	132	8	4	2483	121	2324
15+50	1550	50	27	5	58	80	9	60	2563	196	2320
16+00	1600	50	25	5	11	48	9	64	2611	276	2279
16+50	1650	50	20	5	0	42	9	10	2653	289	2299
17+00	1700	50	5	5	0	23	9	0	2676	289	2314
17+03	1703	3	5	5	0	1	1	0	2677	289	2313
17+50	1750	47	5	5	0	8	9	0	2685	289	2313
17+53	1753	3	5	5	0	1	1	0	2686	289	2312
				COLUMN TOTALS		2686	84	231			

DIVISION 9 - PERKINS

STATION	REAL STATION	DISTANCE	AREA (SF) CUT	AREA (SF) SALVAGED/UNUSABLE PAVEMENT MATERIAL	AREA (SF) FILL	INCREMENTAL VOL (CY) (UNADJUSTED) CUT NOTE 1	INCREMENTAL VOL (CY) (UNADJUSTED) SALVAGED/UNUSABLE PAVEMENT MATERIAL NOTE 2	INCREMENTAL VOL (CY) (UNADJUSTED) FILL NOTE 3	CUMULATIVE VOL (CY) CUT 1.00 NOTE 1	CUMULATIVE VOL (CY) EXP. FILL 1.25	MASS ORD. Note 8
10+19	1019		245	21	0	0	0	0	0	0	0
10+38	1038	19	58	10	56	105	11	19	105	24	70
10+50	1050	12	47	10	2	23	4	13	128	40	73
10+55	1055	5	36	10	0	8	2	0	136	40	79
				COLUMN TOTALS		136	17	32			

Notes:

1 - Cut ——— Cut Includes Salvaged/Unusable Pavement material

2 - Salvaged/Unusable Pavement Material ——— This does not show up in cross sections

3 - Fill ——— Does not include Unusable Pavement Exc volume

4 - Expanded Marsh Backfill ——— Will be backfilled with Granular Backfill (or Cut, or Borrow)

5 - Expanded EBS ——— Will be backfilled with Granular Backfill (or Cut, or Borrow)

6 - Reduced Marsh in Fill ——— Reduced Marsh Excavation that can be used in Fill

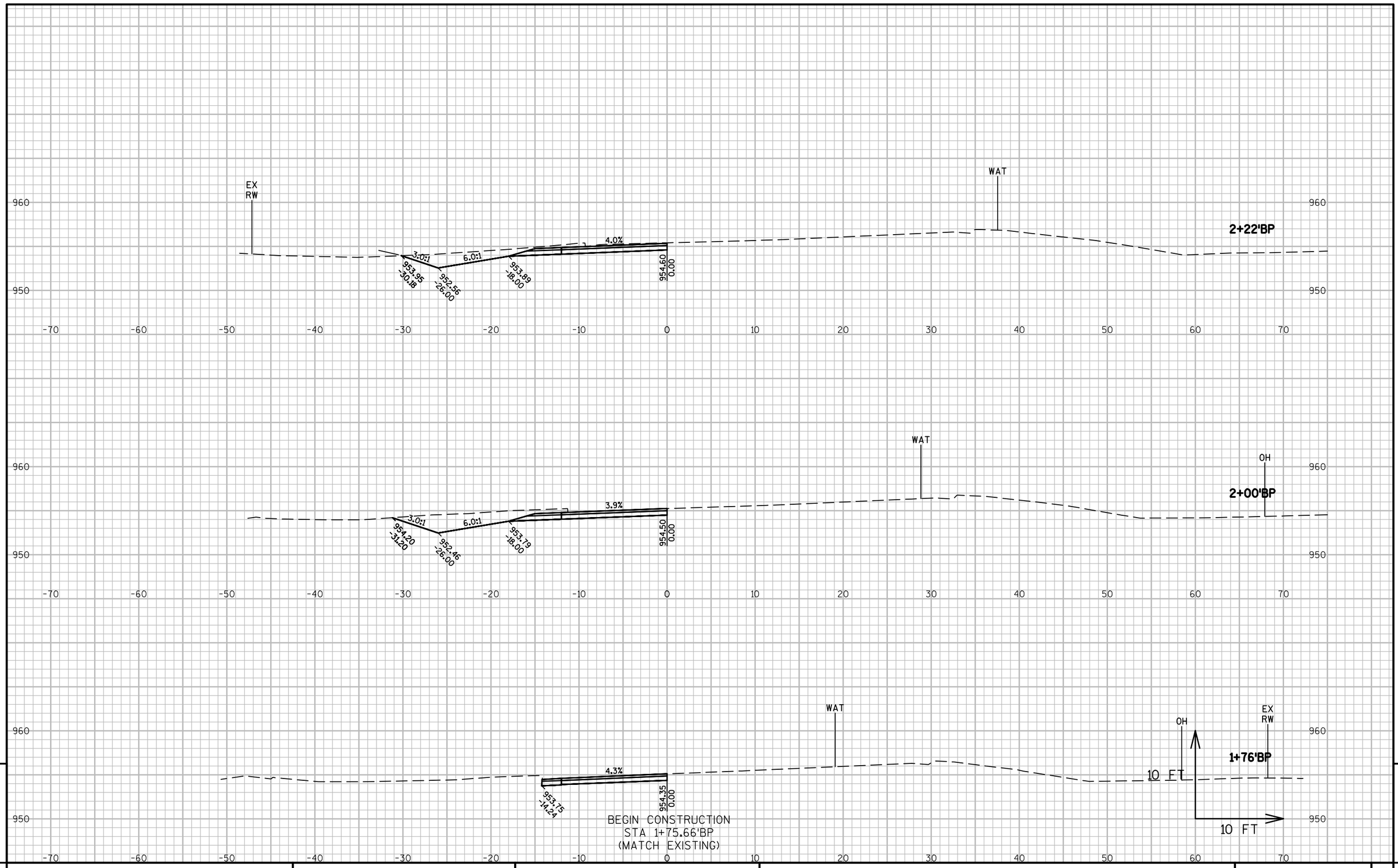
7 - Reduced EBS in Fill ——— Reduced EBS Excavation that can be used in Fill

8 - Mass Ordinate ——— If Marsh or EBS to be backfilled with Cut or Borrow:
^{2}(Cut + Marsh Exc + EBS) - ((Fill - Reduced Marsh in Fill) - (Reduced EBS in Fill) - Expanded Rock) * Fill Factor)^{3}

8 - Mass Ordinate ——— If Marsh and EBS to be backfilled with Granular:
^{2}(Cut + EBS + Marsh Exc) - ((Fill - (Reduced Marsh in Fill) - (Reduced EBS in Fill) - (Expanded Rock)) * Fill Factor))^{3}

8 - Mass Ordinate ——— If Marsh and EBS to be backfilled with Granular: ^{2}(Cut) - ((Fill - Expanded Rock) * Fill Factor))^{3}

8 - Mass Ordinate ——— If Marsh and EBS to be backfilled with Cut or Borrow: ^{2}(Cut) - ((Fill - Expanded Rock) * Fill Factor))^{3}



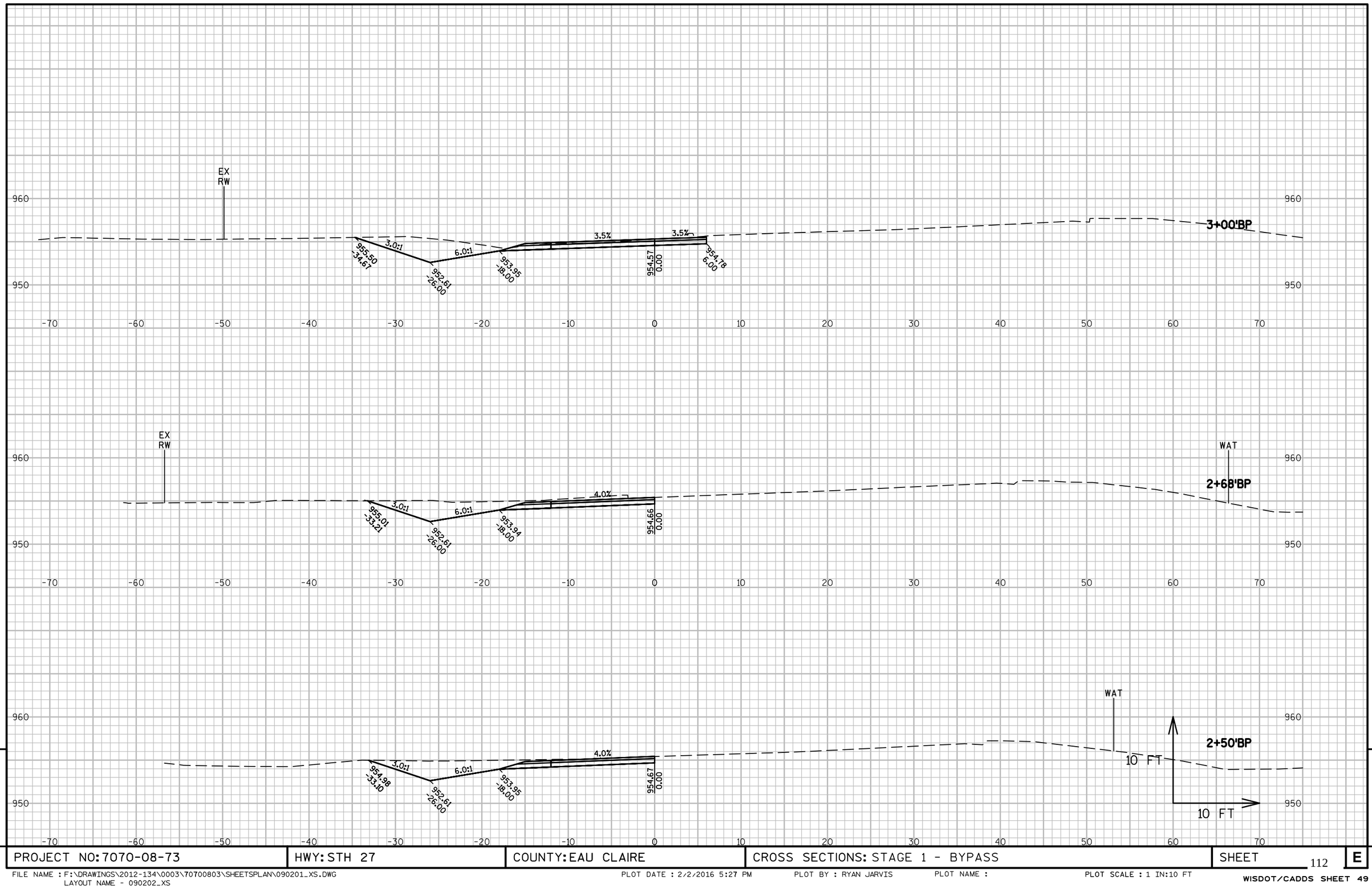
9

9

PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGE 1 - BYPASS	SHEET 111	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS

PLOT DATE : 2/2/2016 5:27 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

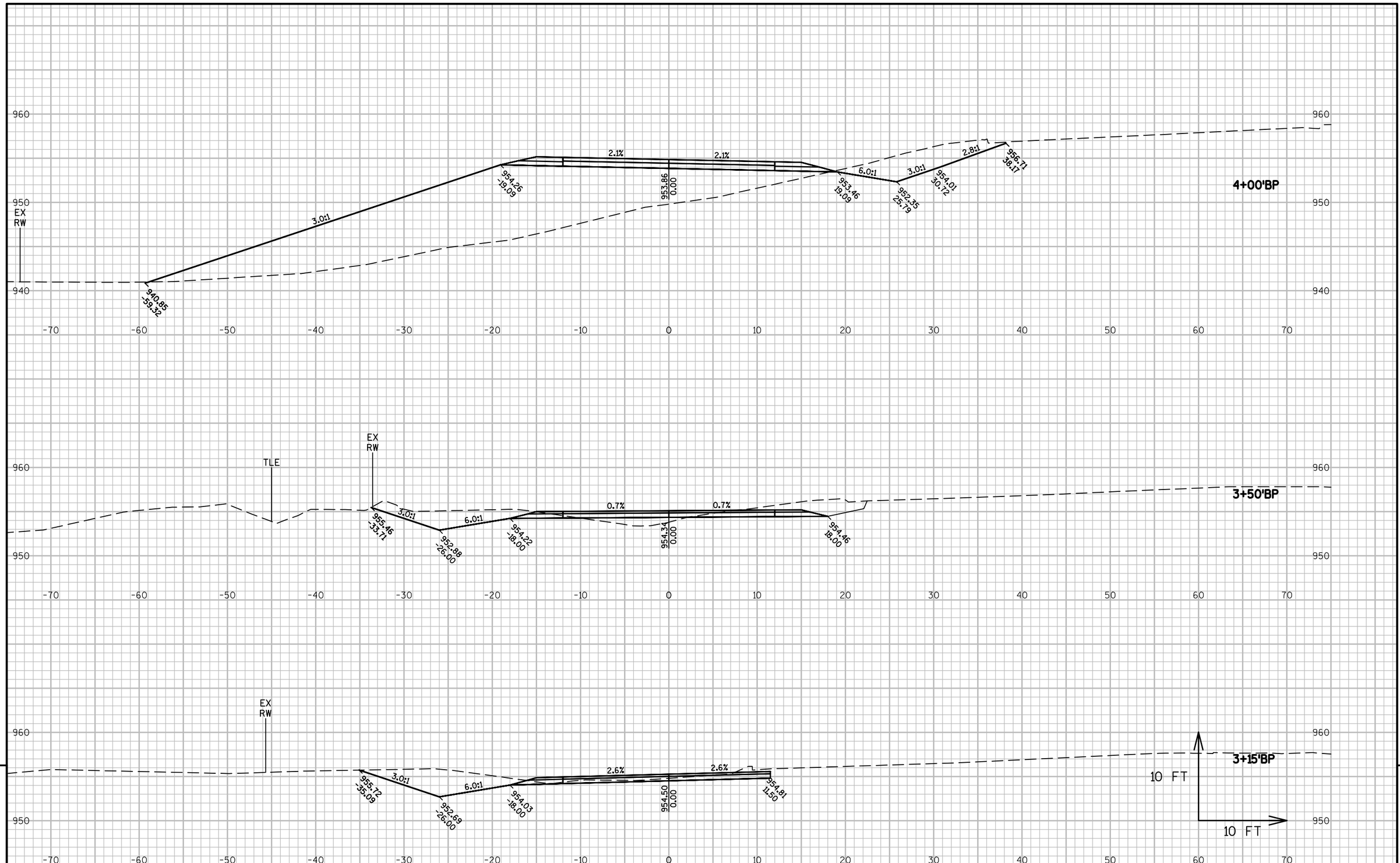


PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGE 1 - BYPASS	SHEET 112	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090202_XS

PLOT DATE : 2/2/2016 5:27 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

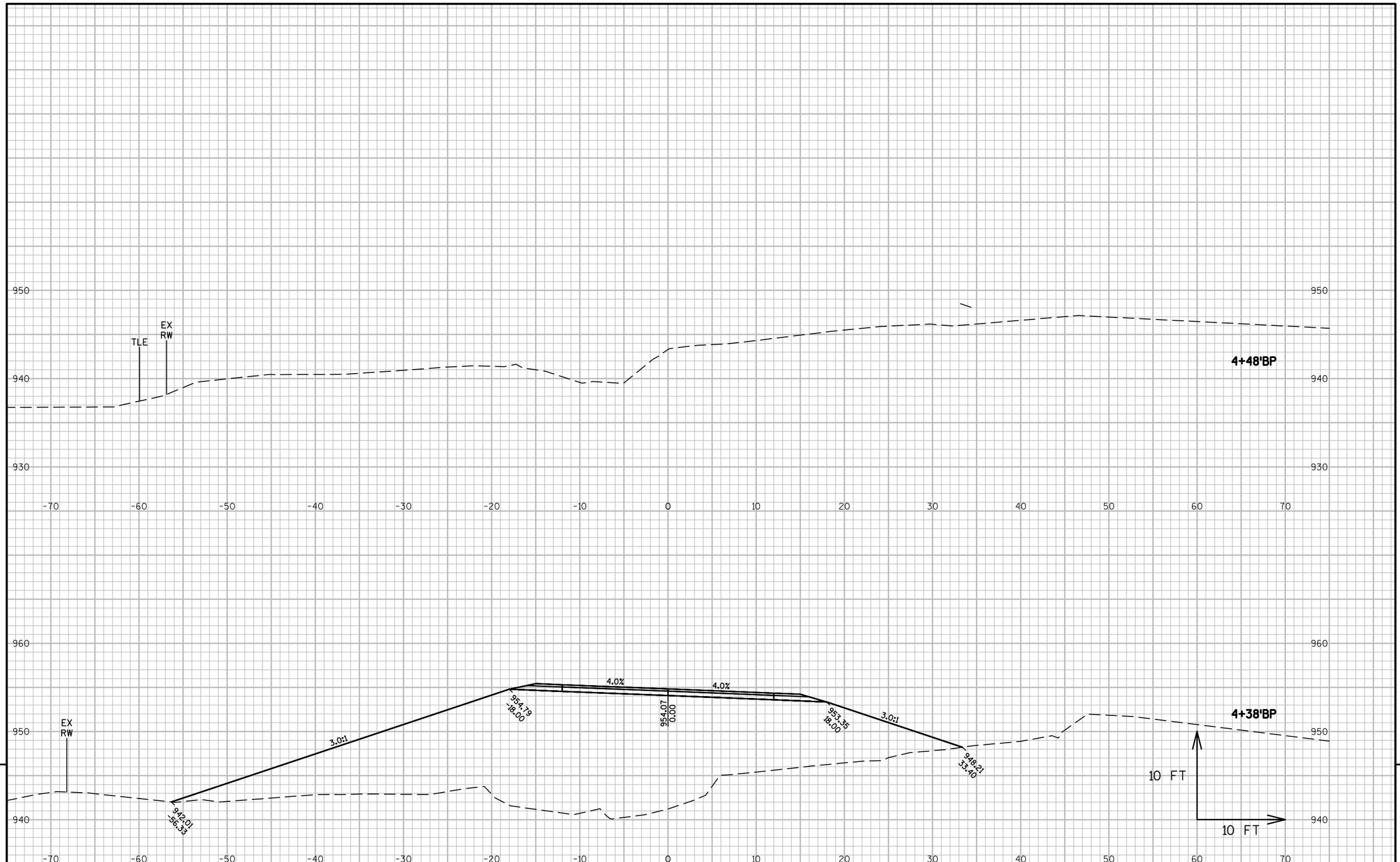


PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGE 1 - BYPASS	SHEET 113	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090203_XS

PLOT DATE : 2/2/2016 5:28 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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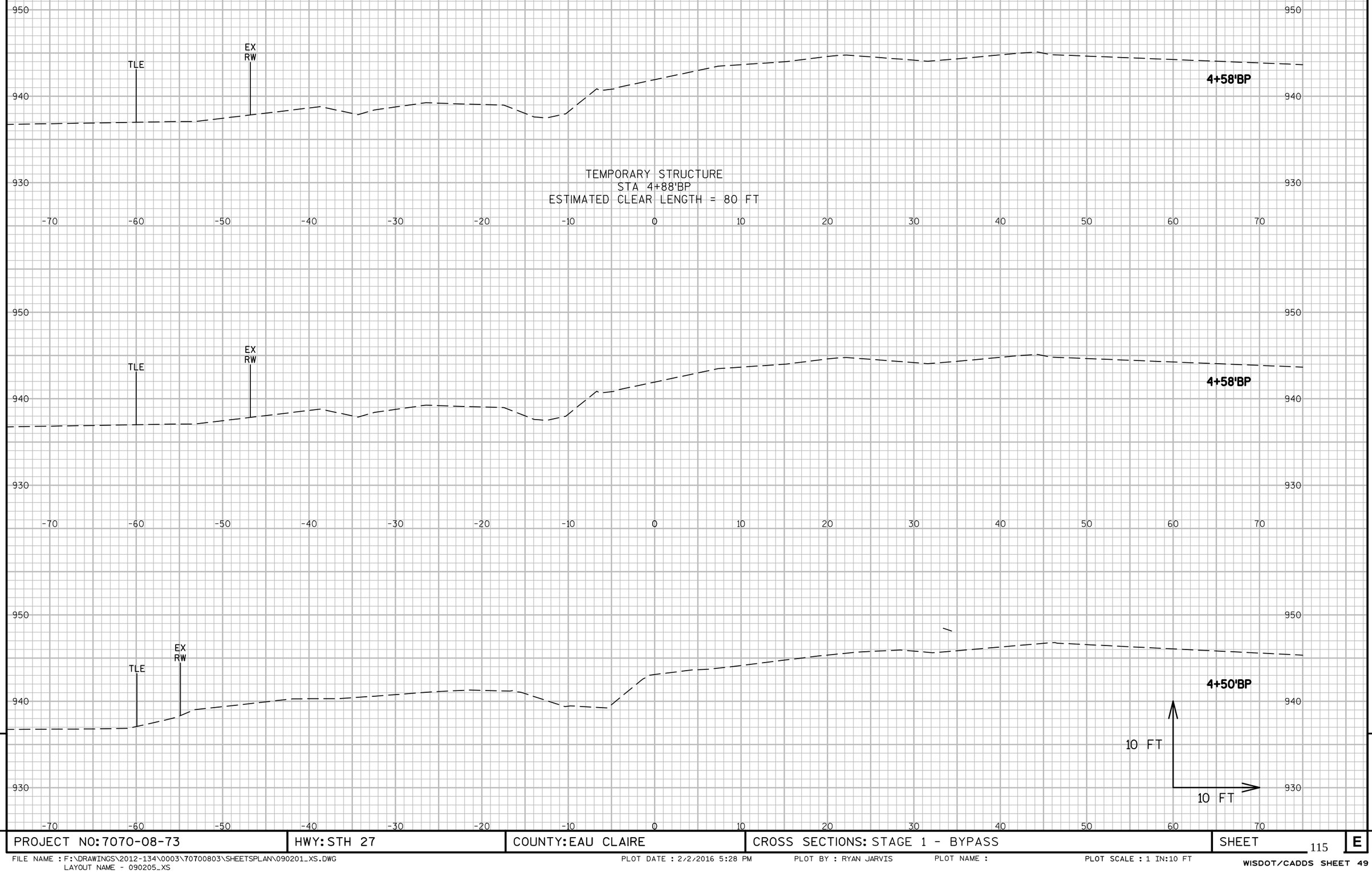
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGE 1 - BYPASS	SHEET 114	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090204_XS

PLOT DATE : 2/2/2016 5:28 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

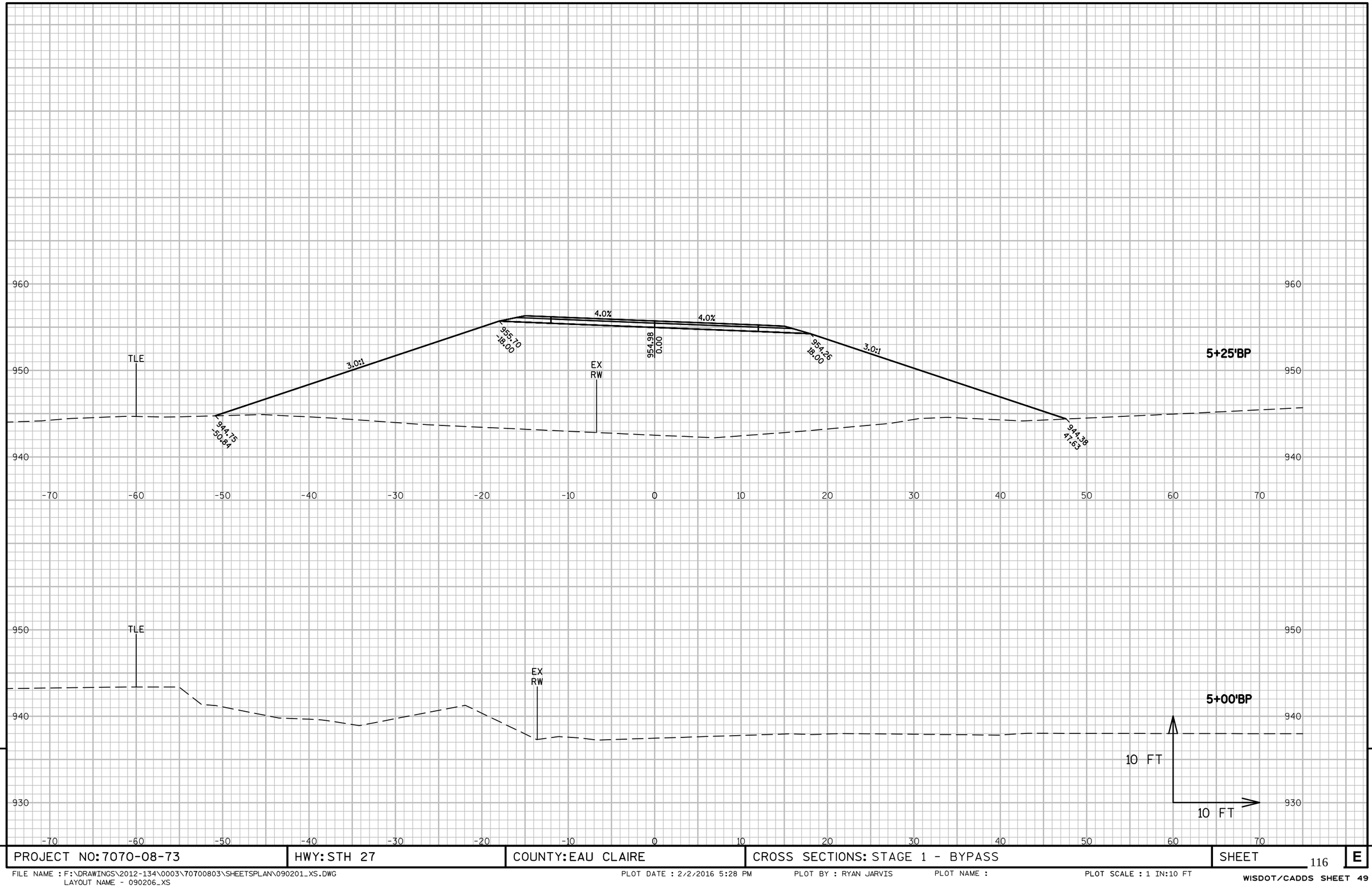


PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGE 1 - BYPASS	SHEET 115	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090205_XS

PLOT DATE : 2/2/2016 5:28 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

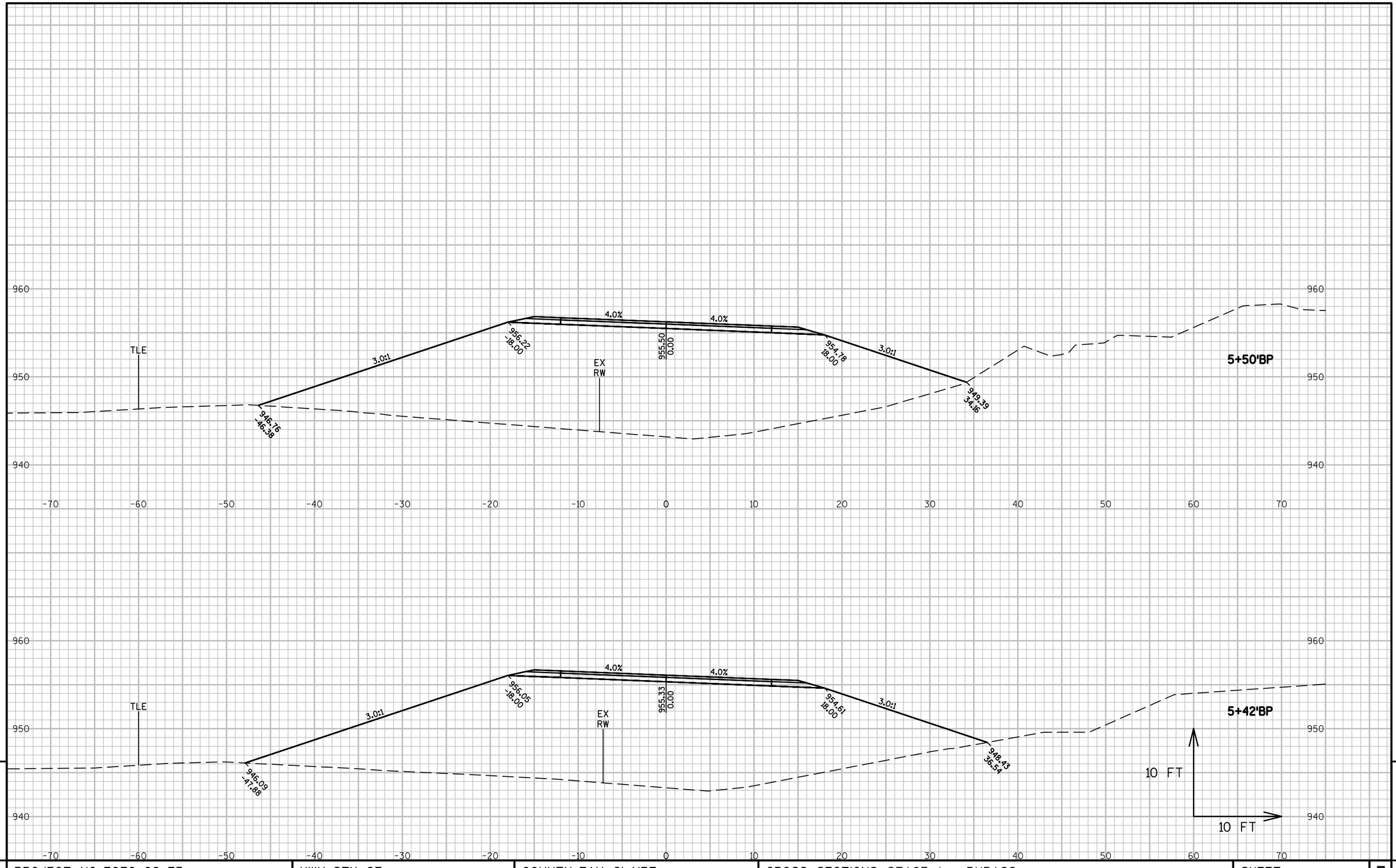


PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGE 1 - BYPASS	SHEET	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090206_XS

PLOT DATE : 2/2/2016 5:28 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

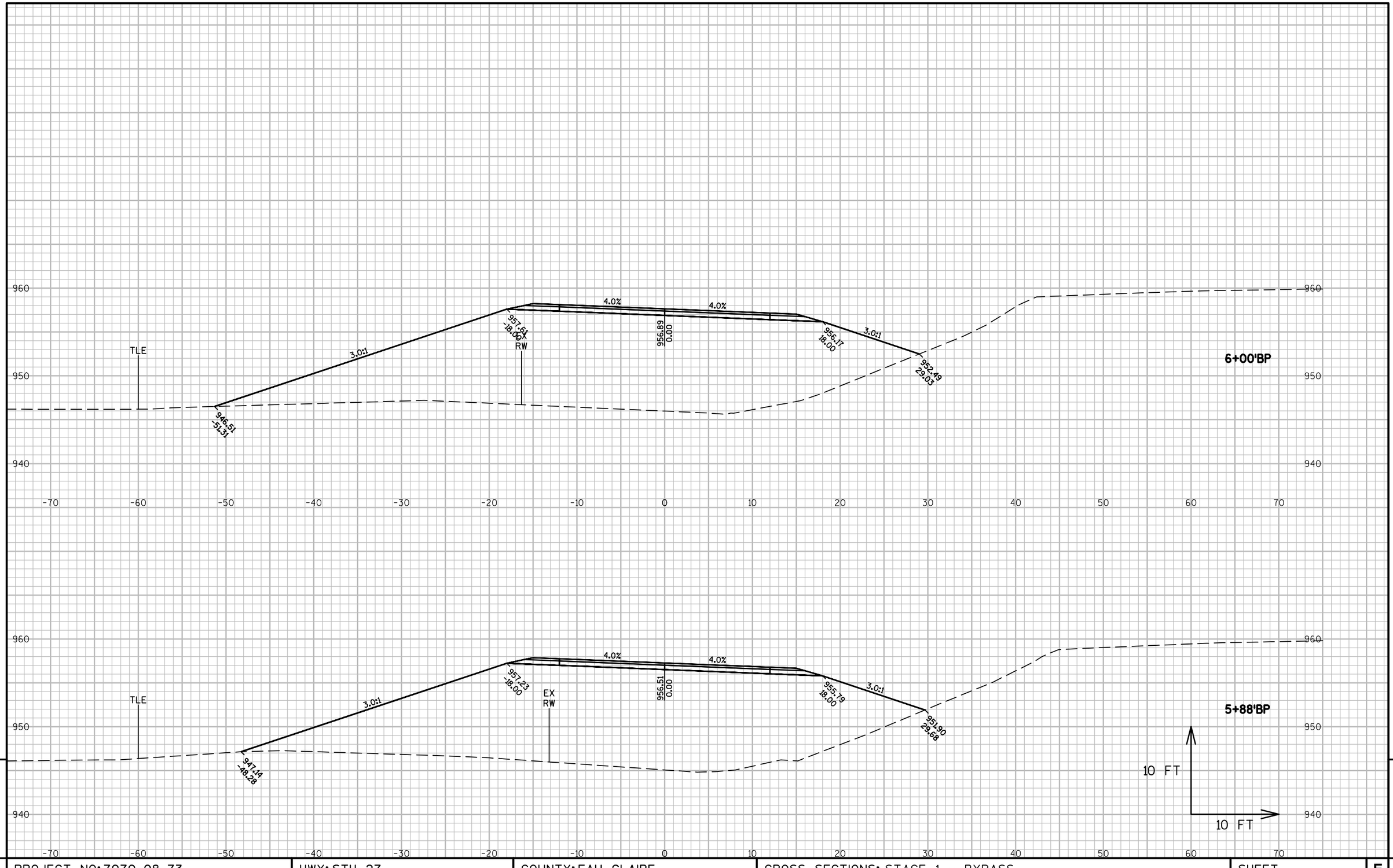


PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGE 1 - BYPASS	SHEET 117	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090207_XS

PLOT DATE : 2/2/2016 5:28 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

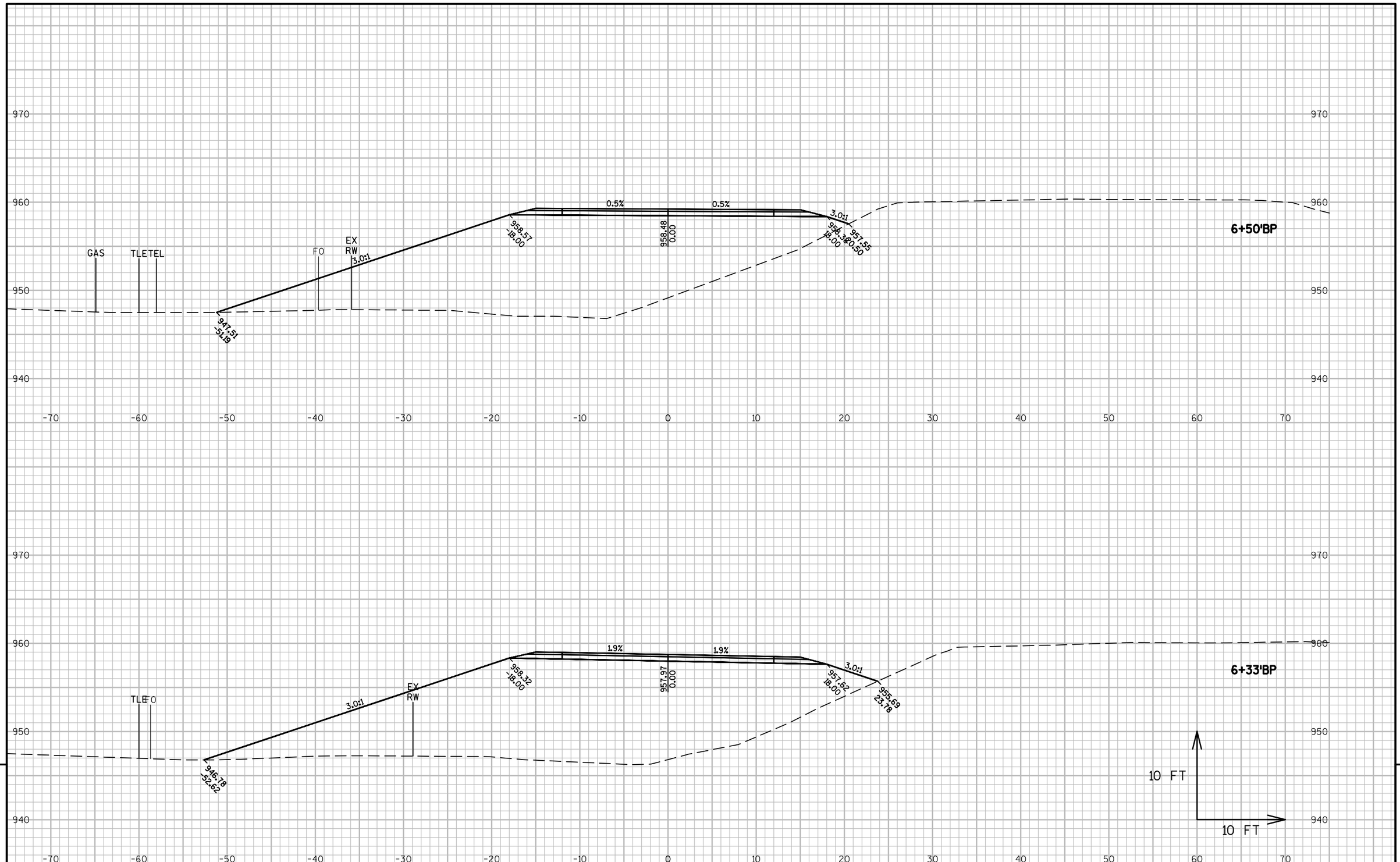


PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGE 1 - BYPASS	SHEET 118	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090208_XS

PLOT DATE : 2/2/2016 5:28 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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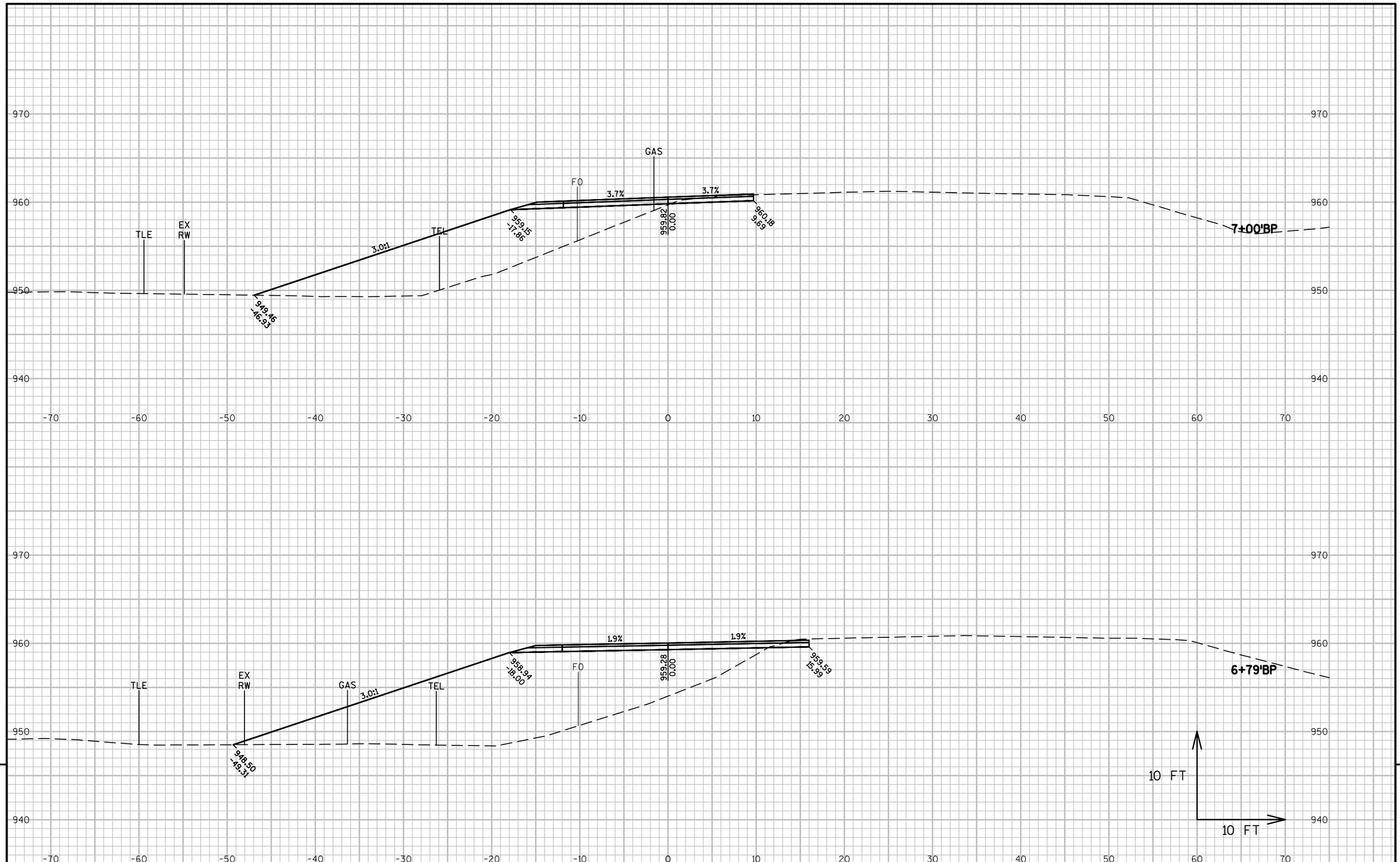
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGE 1 - BYPASS	SHEET 119	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090209_XS

PLOT DATE : 2/2/2016 5:28 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT



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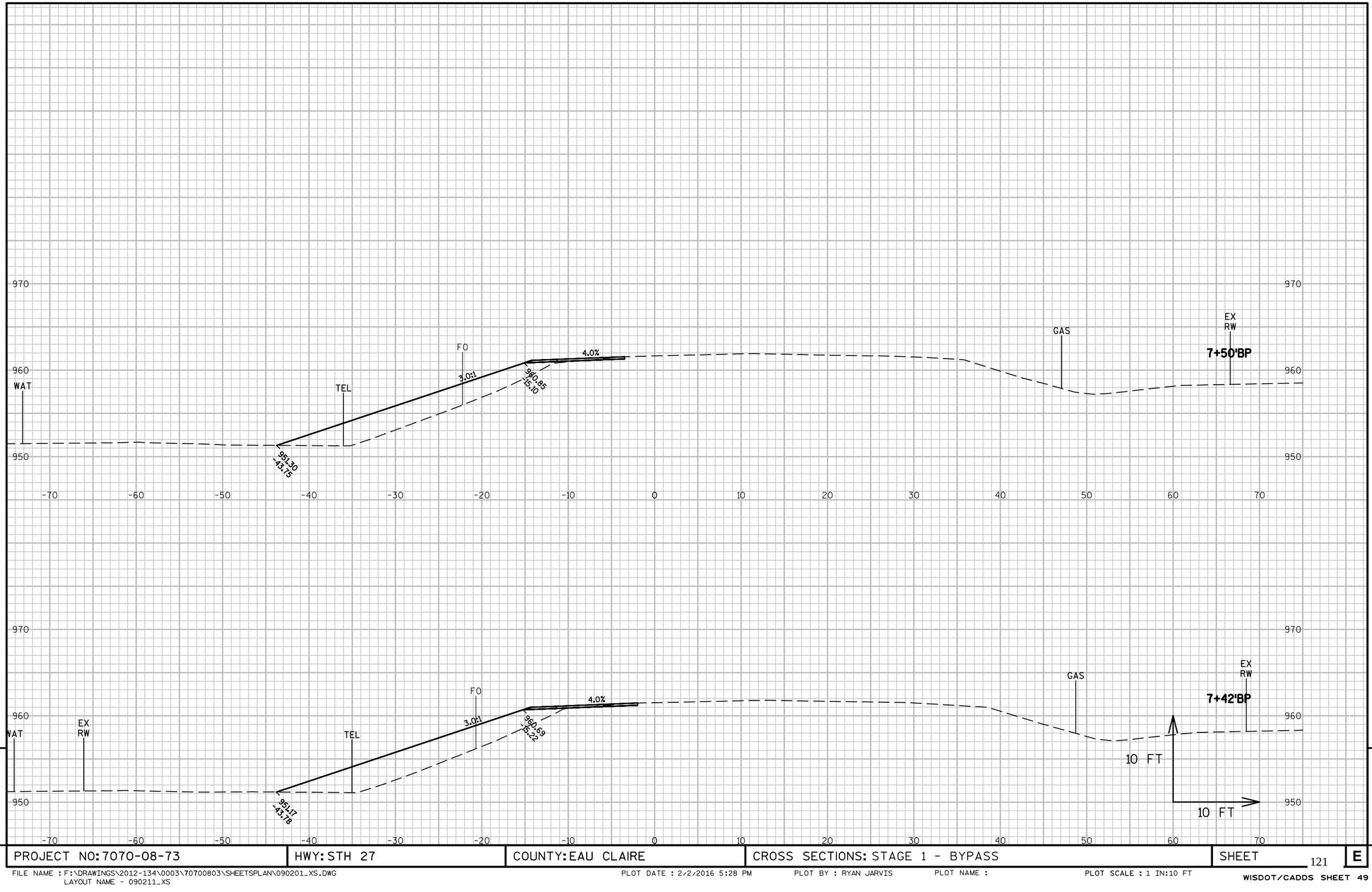
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGE 1 - BYPASS	SHEET 120	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090210_XS

PLOT DATE : 2/2/2016 5:28 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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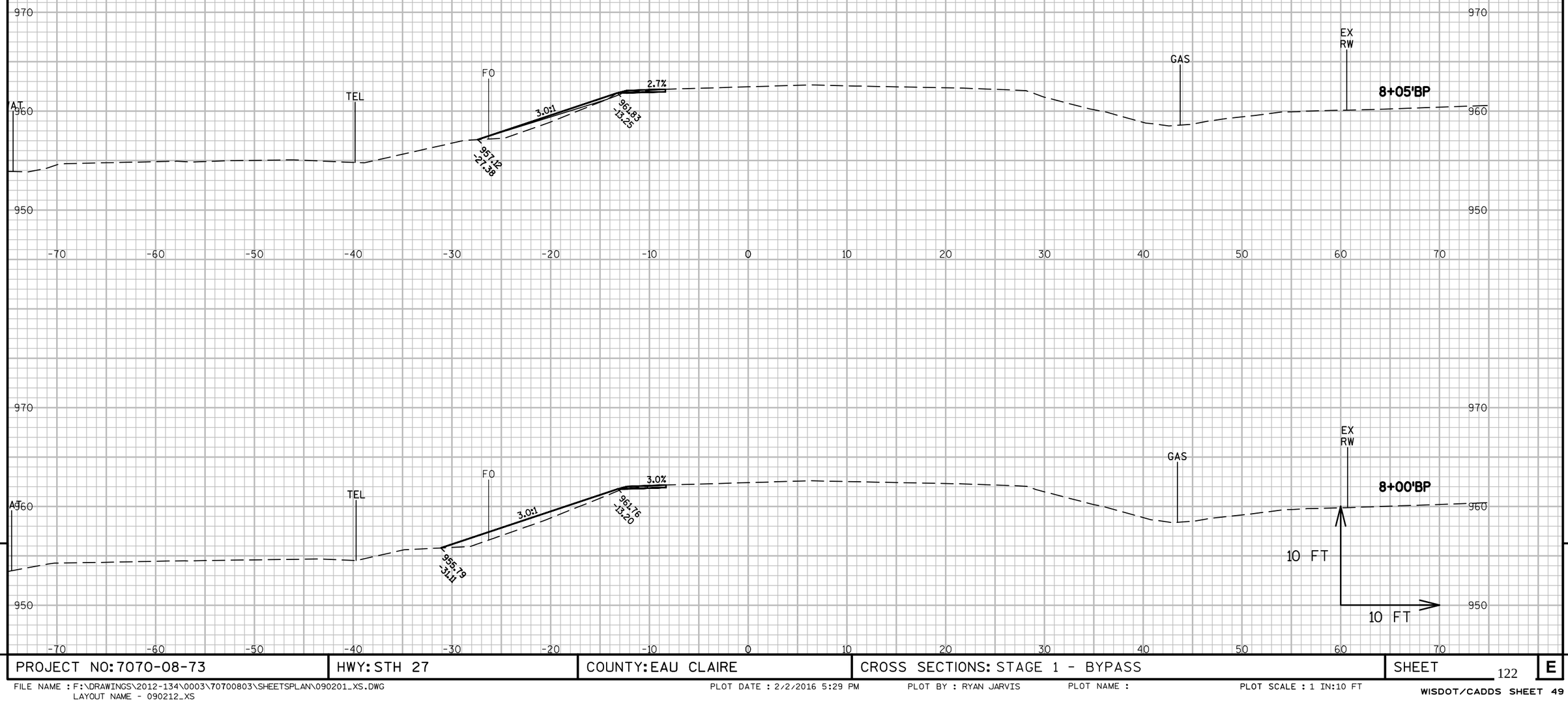
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGE 1 - BYPASS	SHEET 121	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090211_XS

PLOT DATE : 2/2/2016 5:28 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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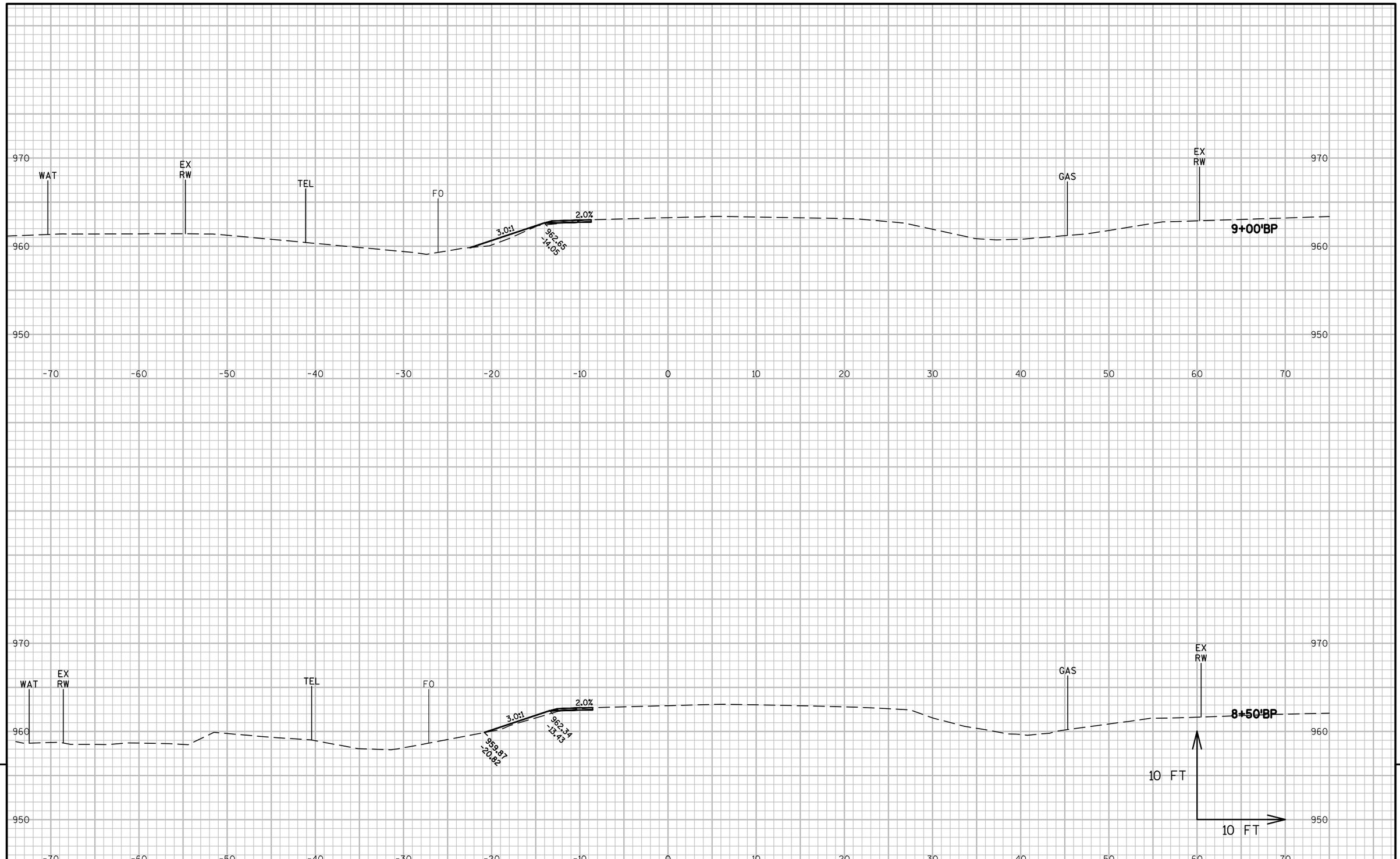
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGE 1 - BYPASS	SHEET 122	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090212_XS

PLOT DATE : 2/2/2016 5:29 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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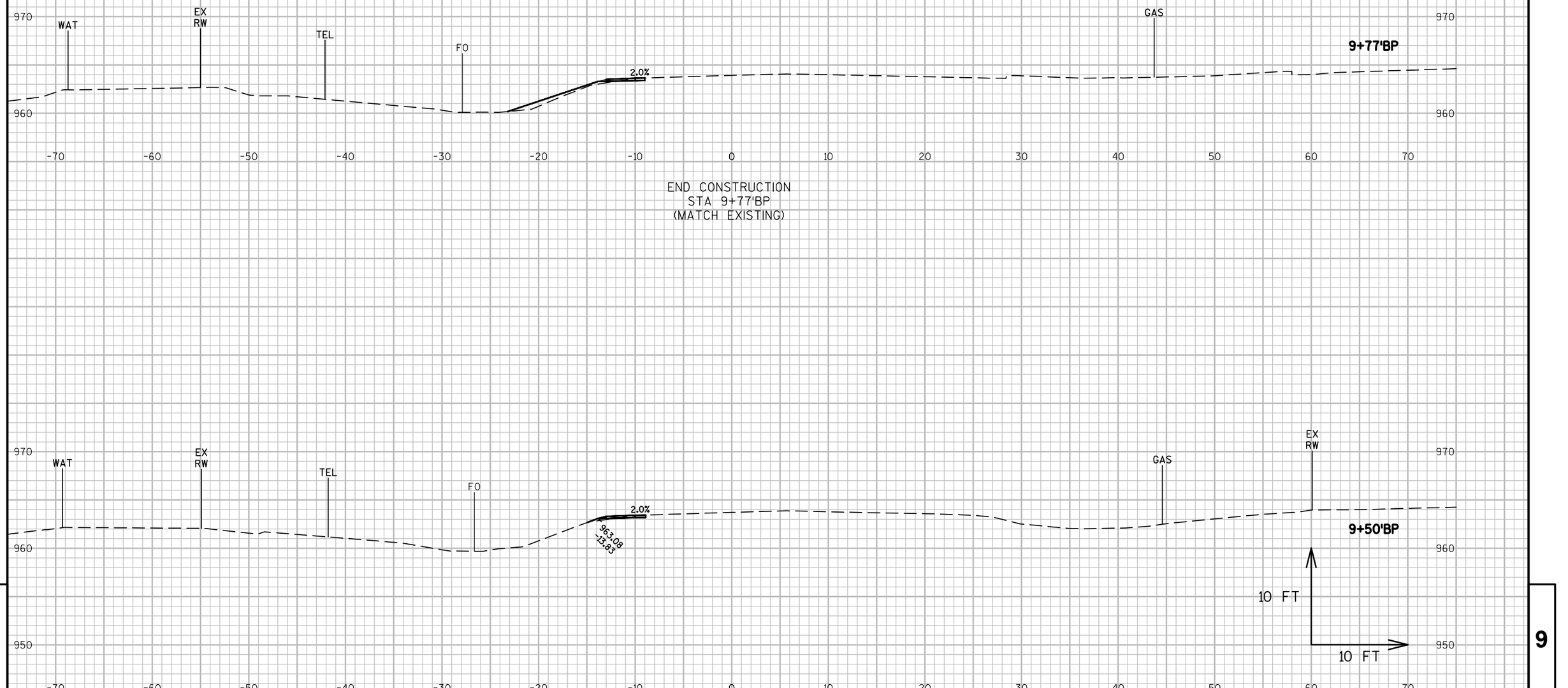
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGE 1 - BYPASS	SHEET 123	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090213_XS

PLOT DATE : 2/2/2016 5:29 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



END CONSTRUCTION
STA 9+77'BP
(MATCH EXISTING)

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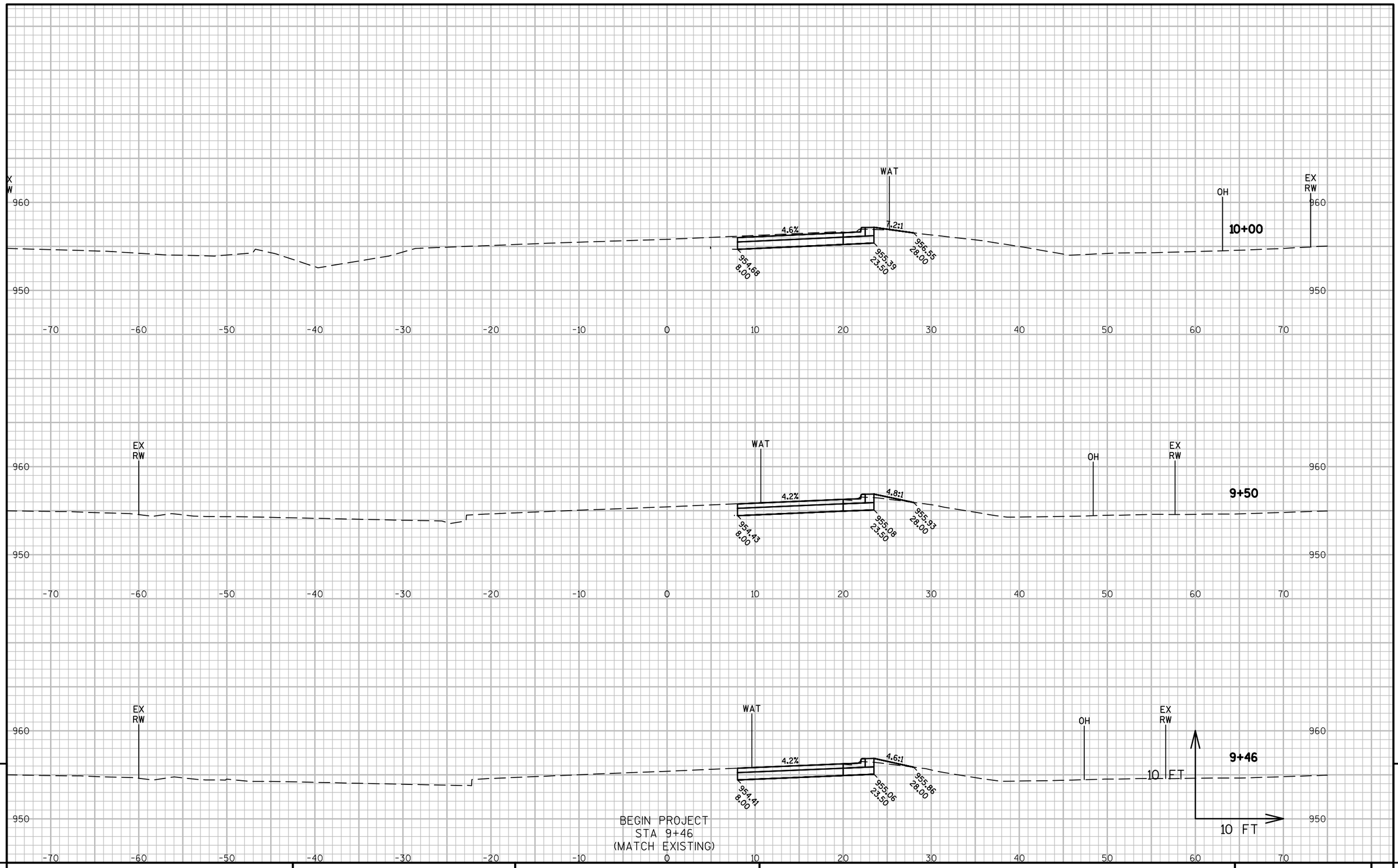
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGE 1 - BYPASS	SHEET 124	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090214_XS

PLOT DATE : 2/2/2016 5:29 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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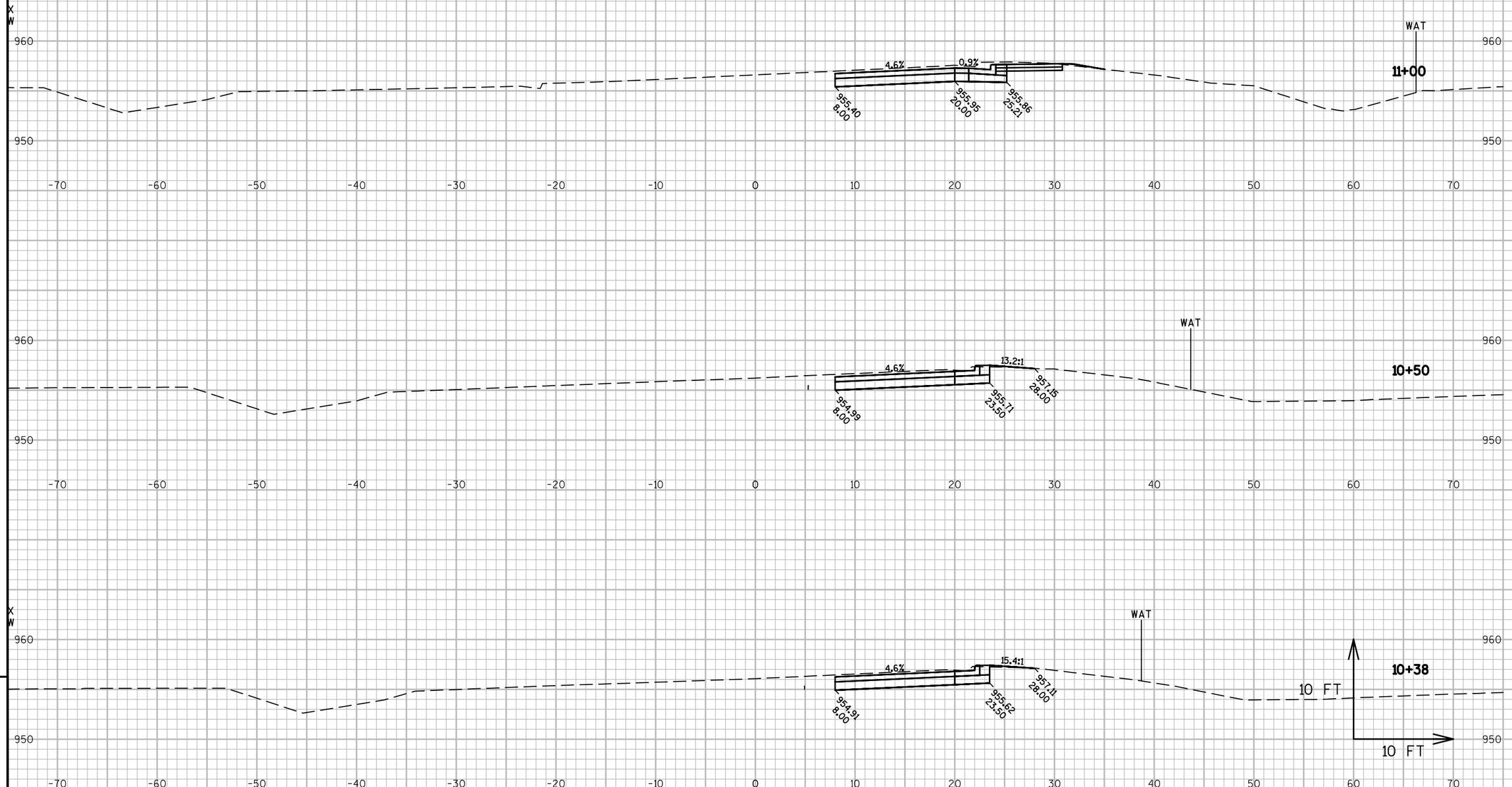
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGE 2 - STH 27	SHEET 125	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090215_XS

PLOT DATE : 2/2/2016 5:29 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT



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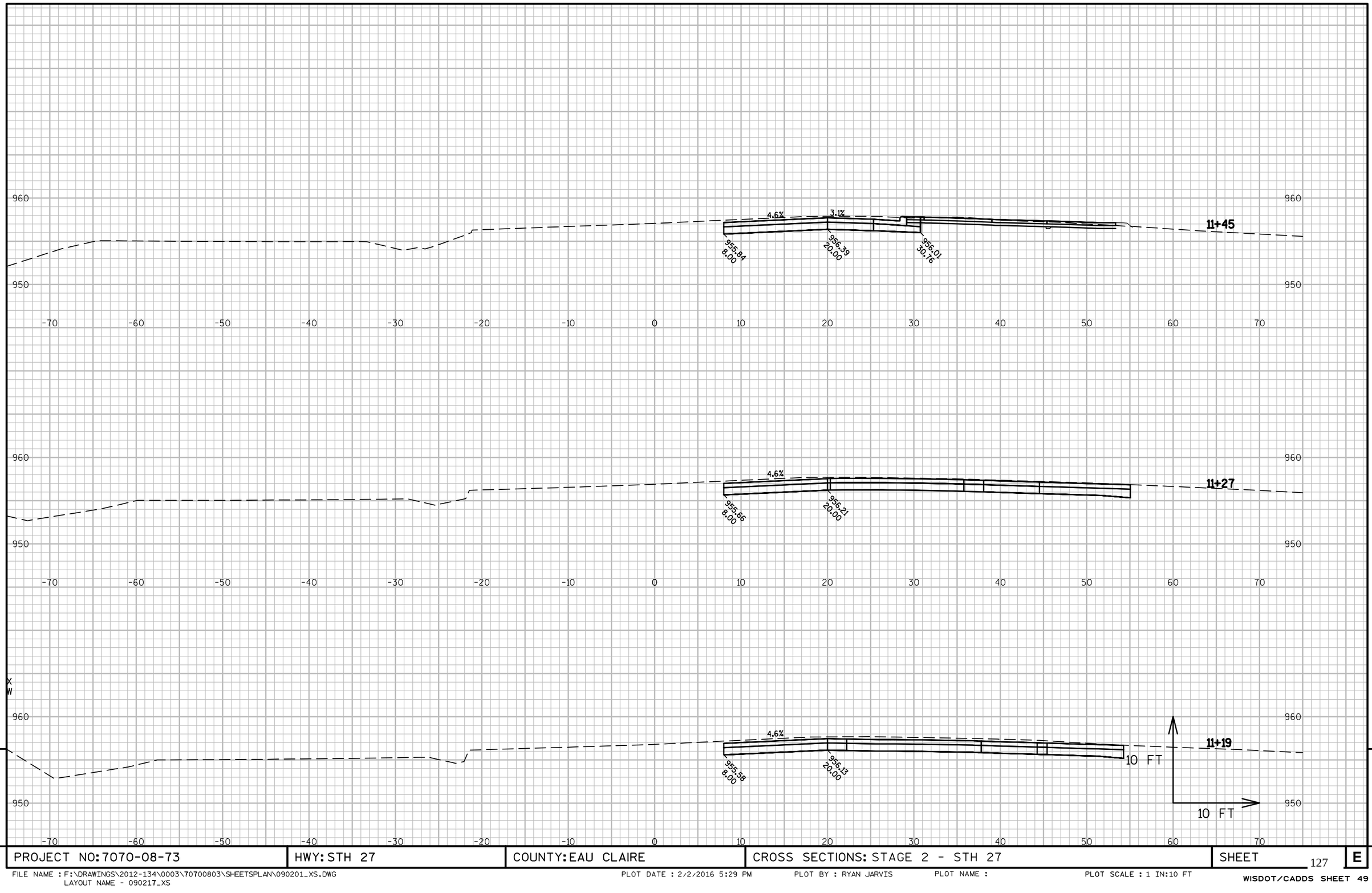
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGE 2 - STH 27	SHEET 126	E

9

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090216_XS

PLOT DATE : 2/2/2016 5:29 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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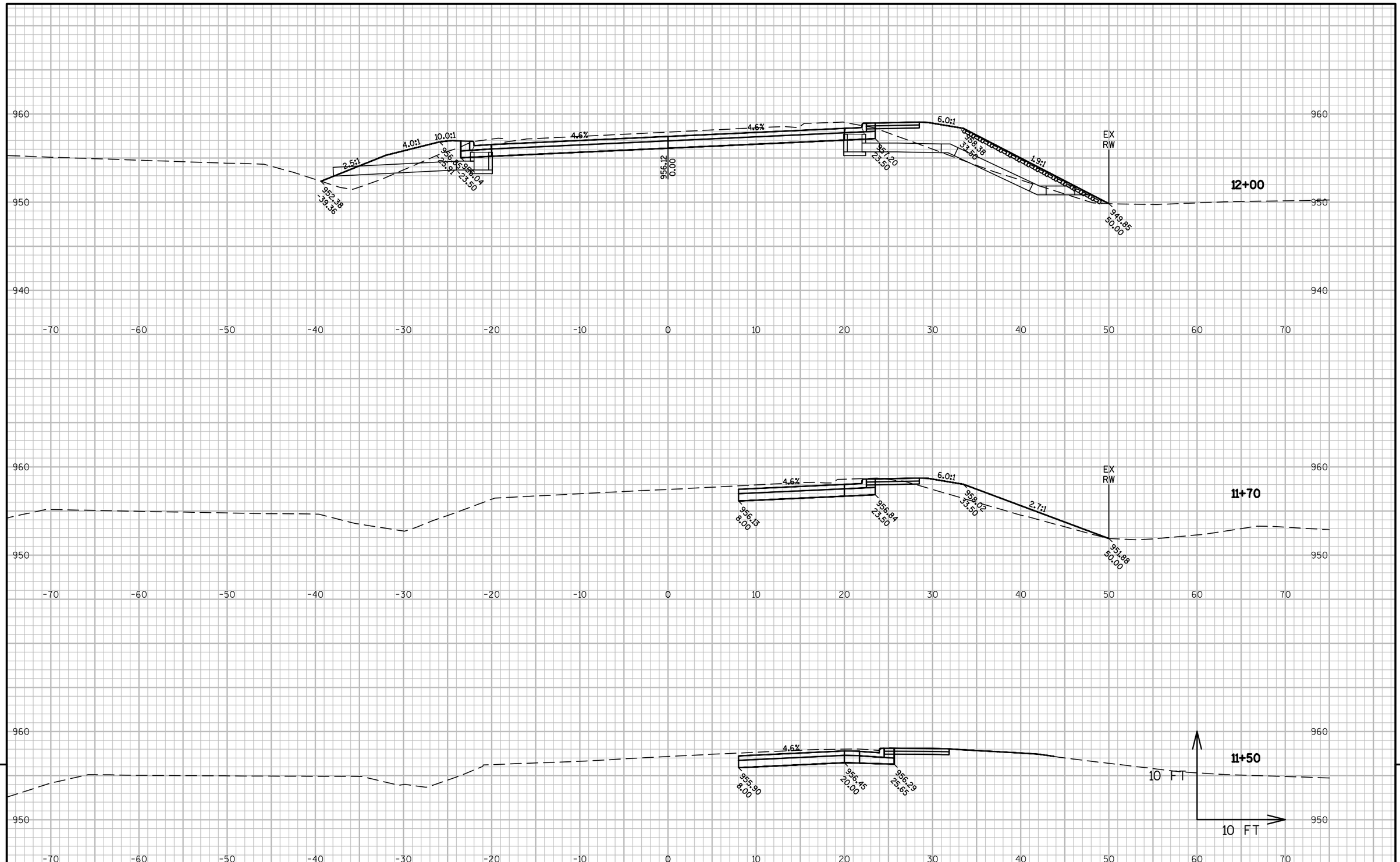
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGE 2 - STH 27	SHEET 127	E

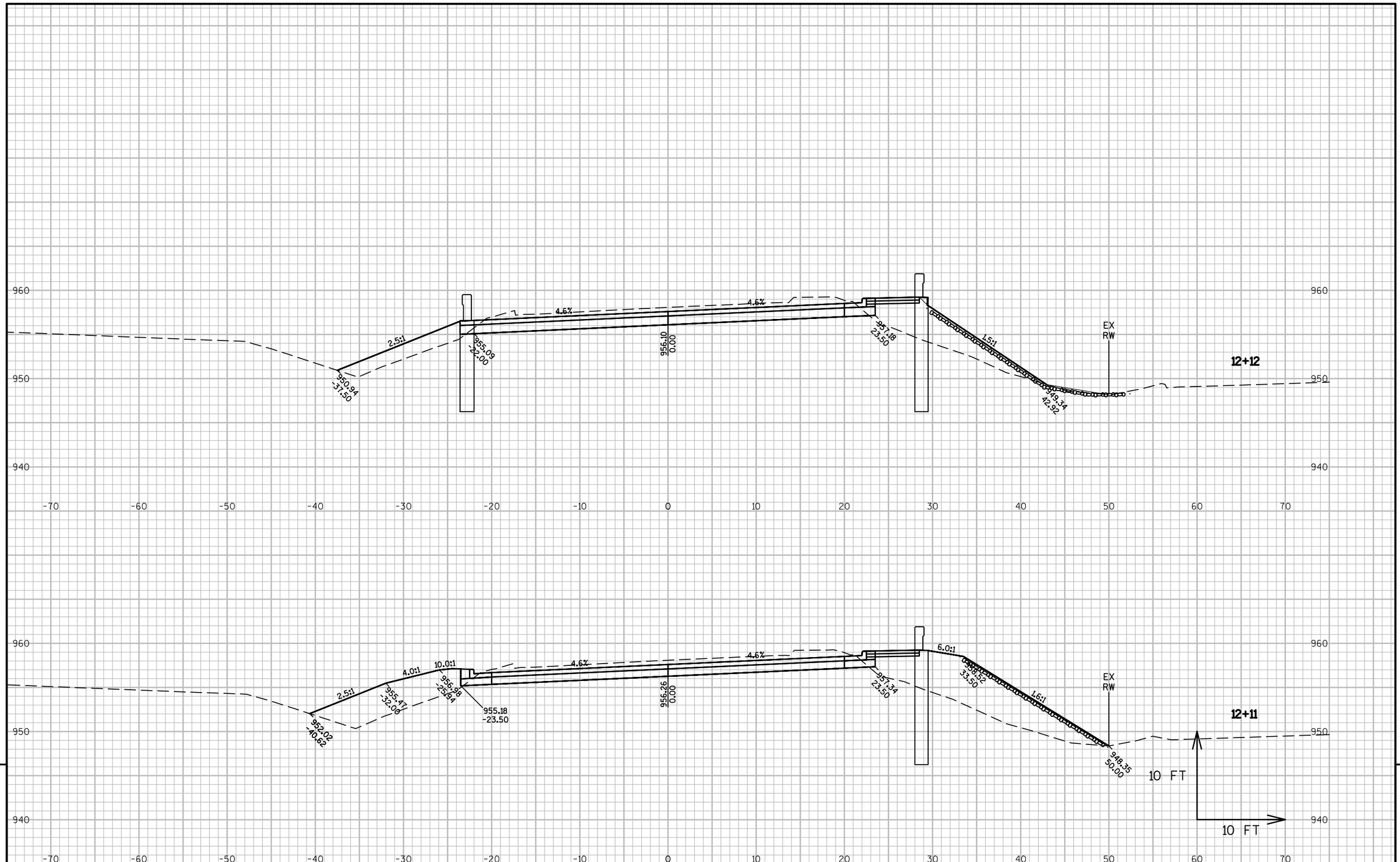
FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090217_XS

PLOT DATE : 2/2/2016 5:29 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGE 2 - STH 27	SHEET 128	E

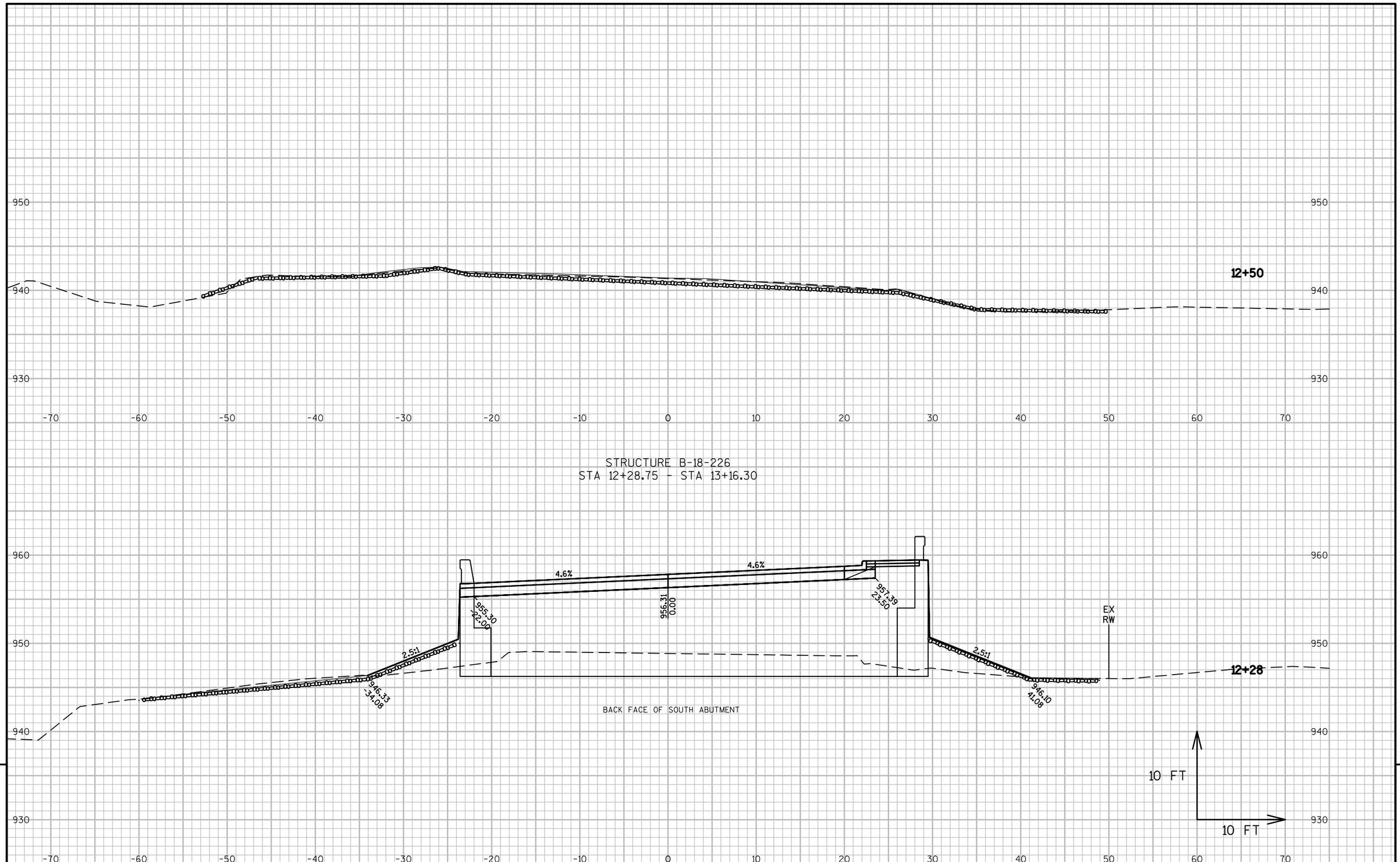


PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGE 2 - STH 27	SHEET 129 E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090219_XS

PLOT DATE : 2/2/2016 5:29 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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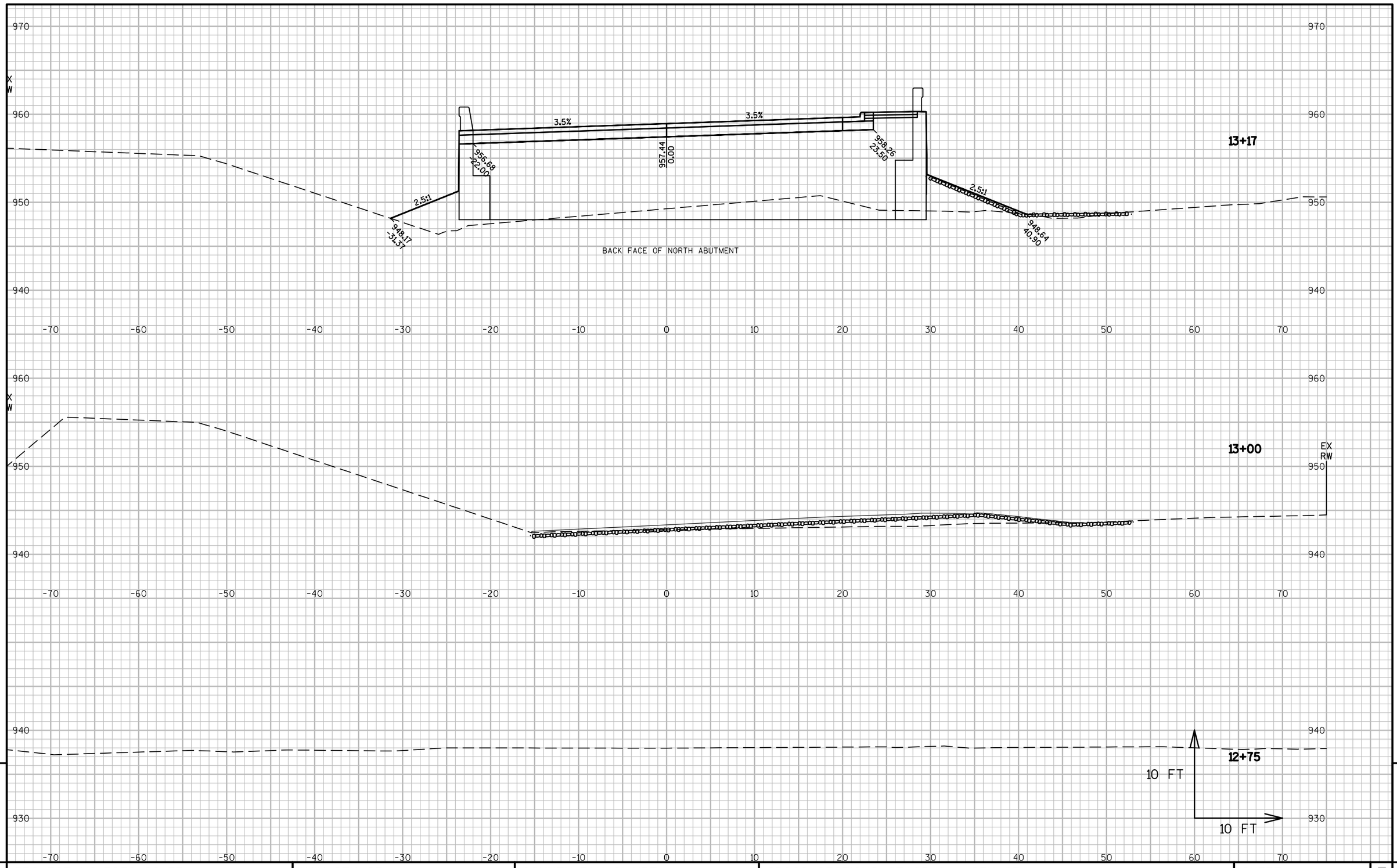
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGE 2 - STH 27	SHEET 130	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090220_XS

PLOT DATE : 2/2/2016 5:29 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT



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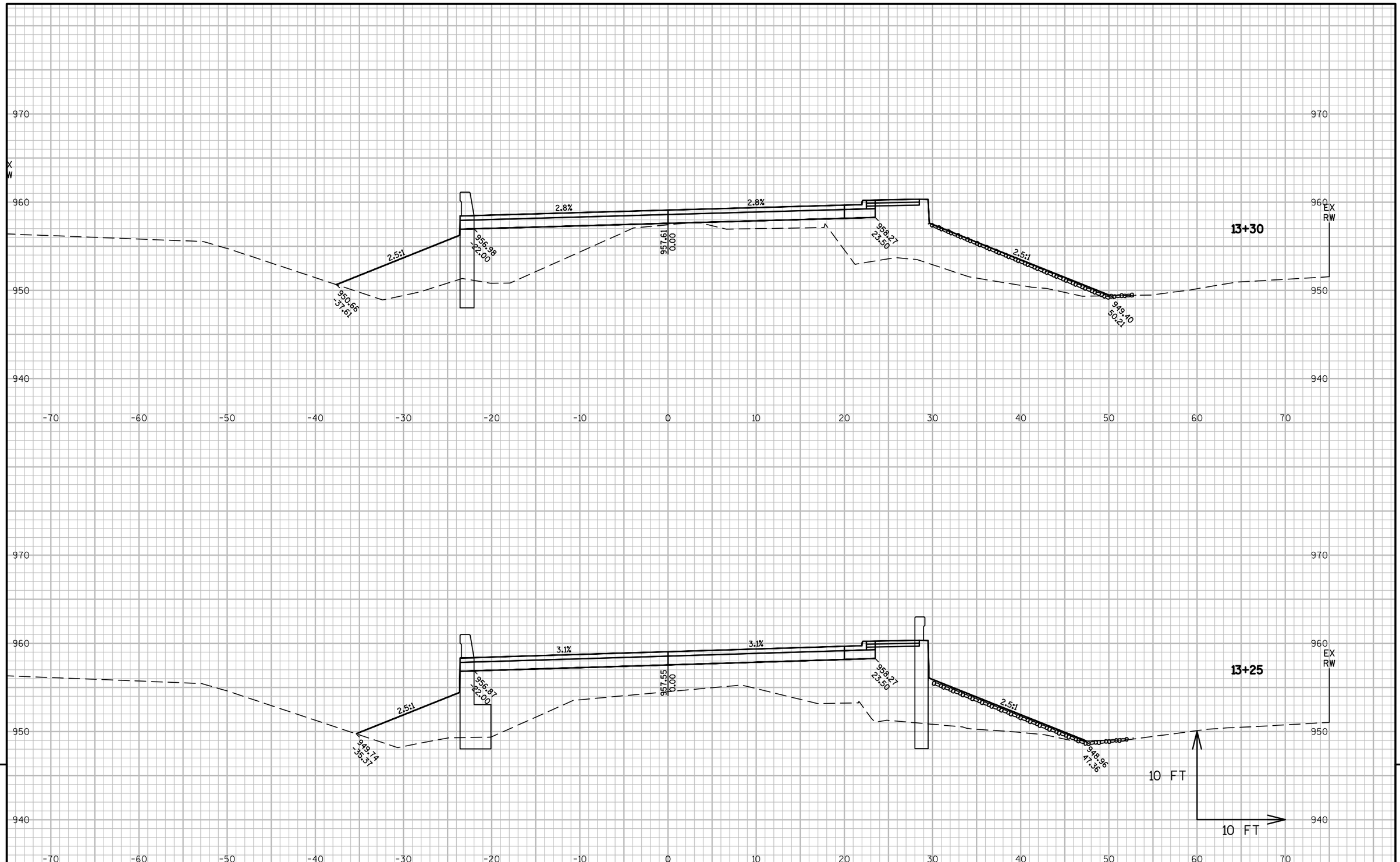
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGE 2 - STH 27	SHEET 131	E

9

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090221_XS

PLOT DATE : 2/2/2016 5:30 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT



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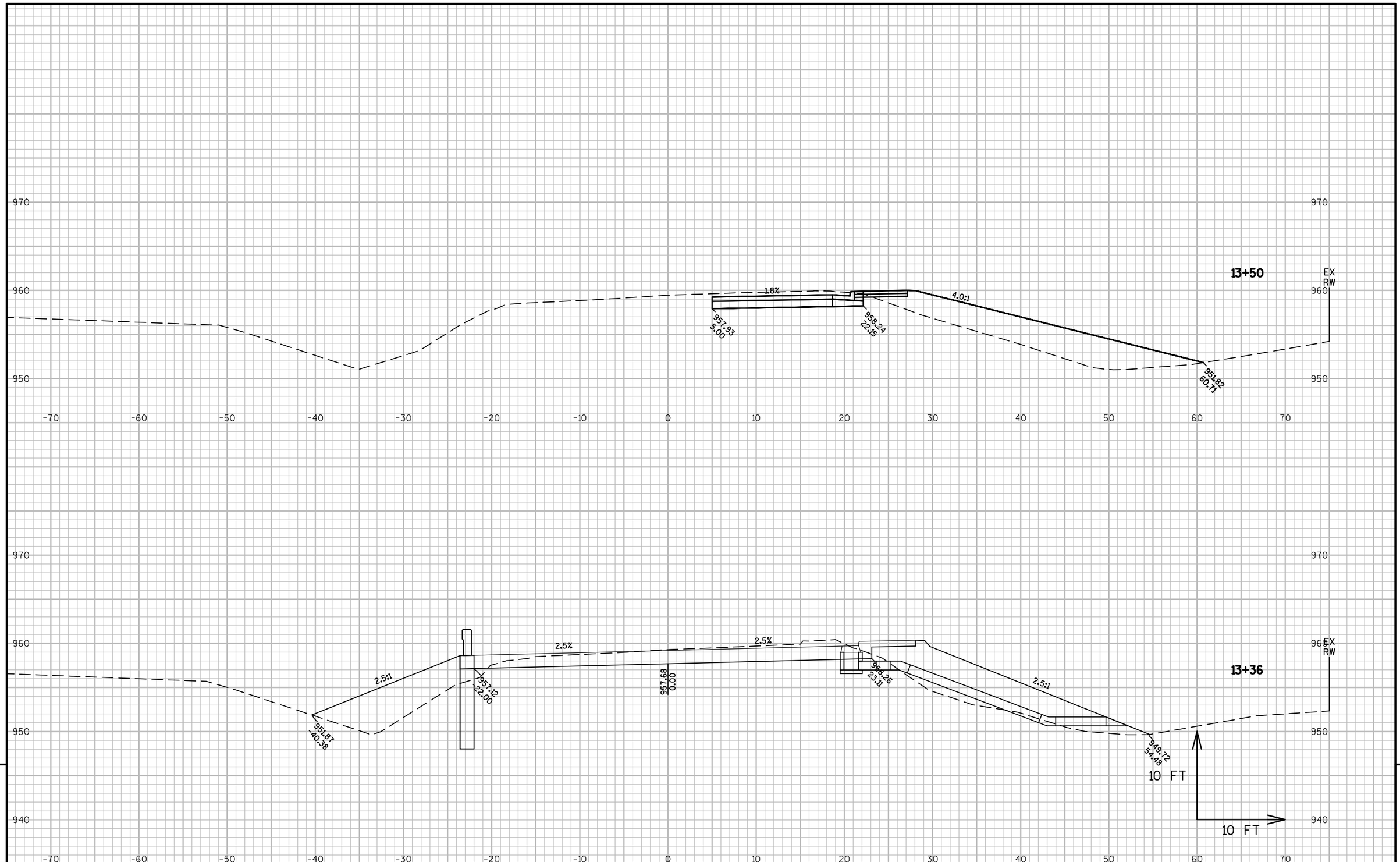
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGE 2 - STH 27	SHEET 132	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090222_XS

PLOT DATE : 2/2/2016 5:30 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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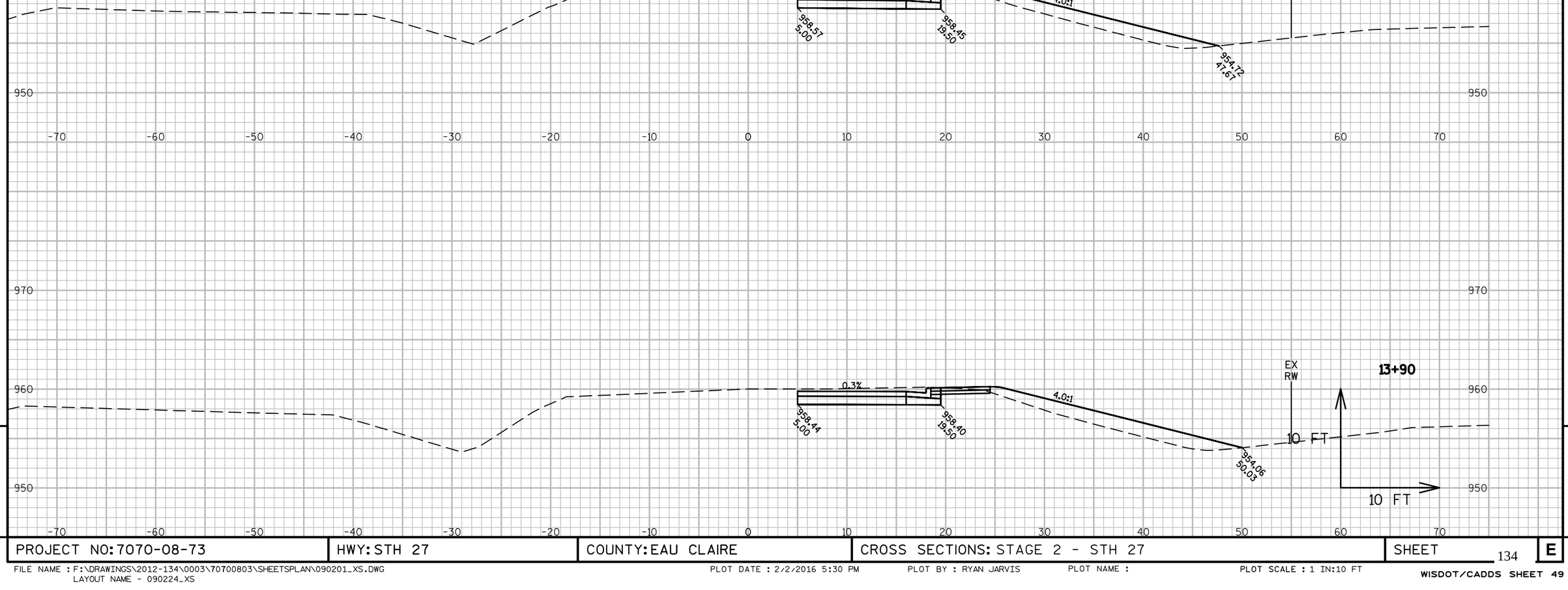
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGE 2 - STH 27	SHEET 133 E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090223_XS

PLOT DATE : 2/2/2016 5:30 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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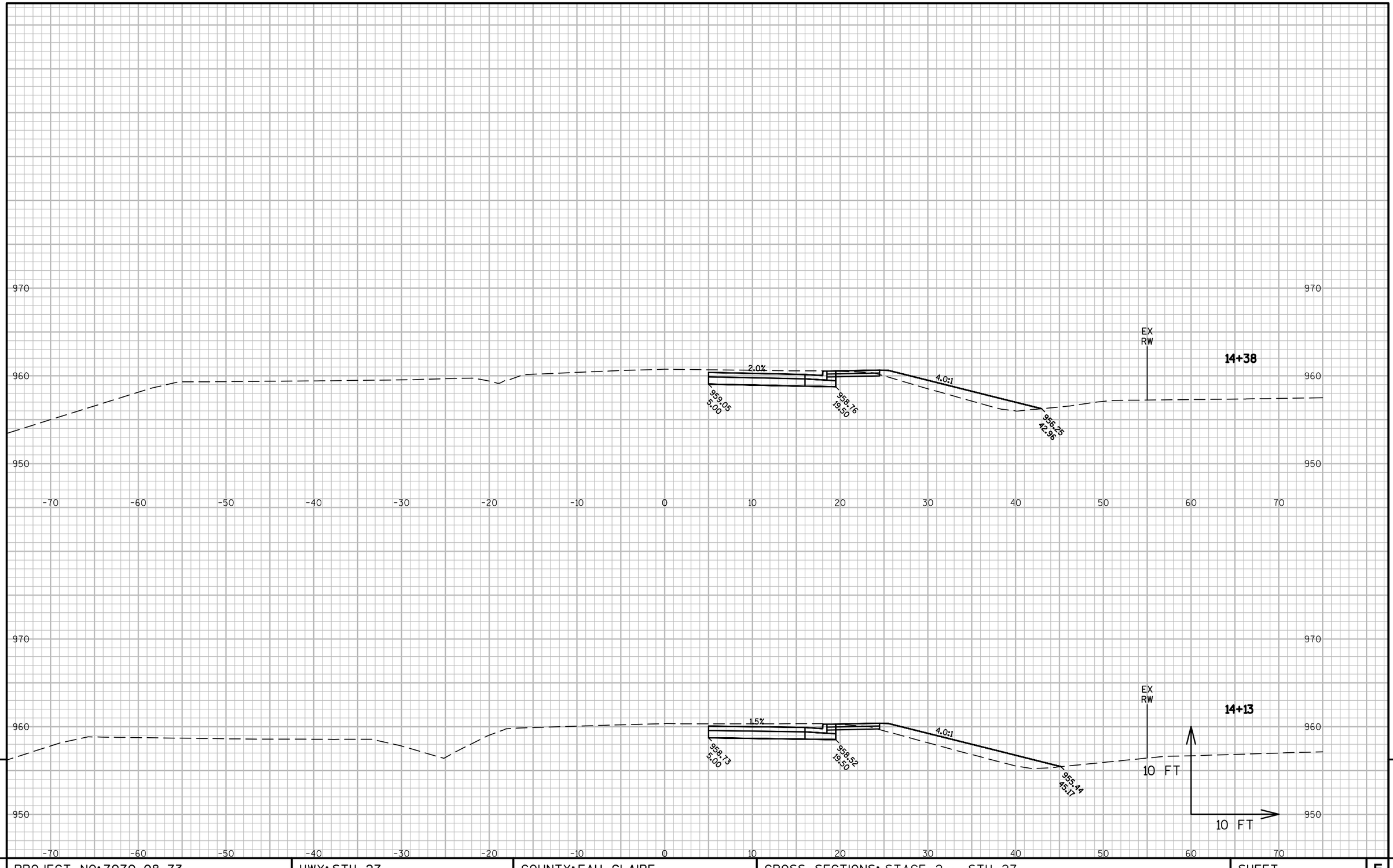
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGE 2 - STH 27	SHEET 134	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090224_XS

PLOT DATE : 2/2/2016 5:30 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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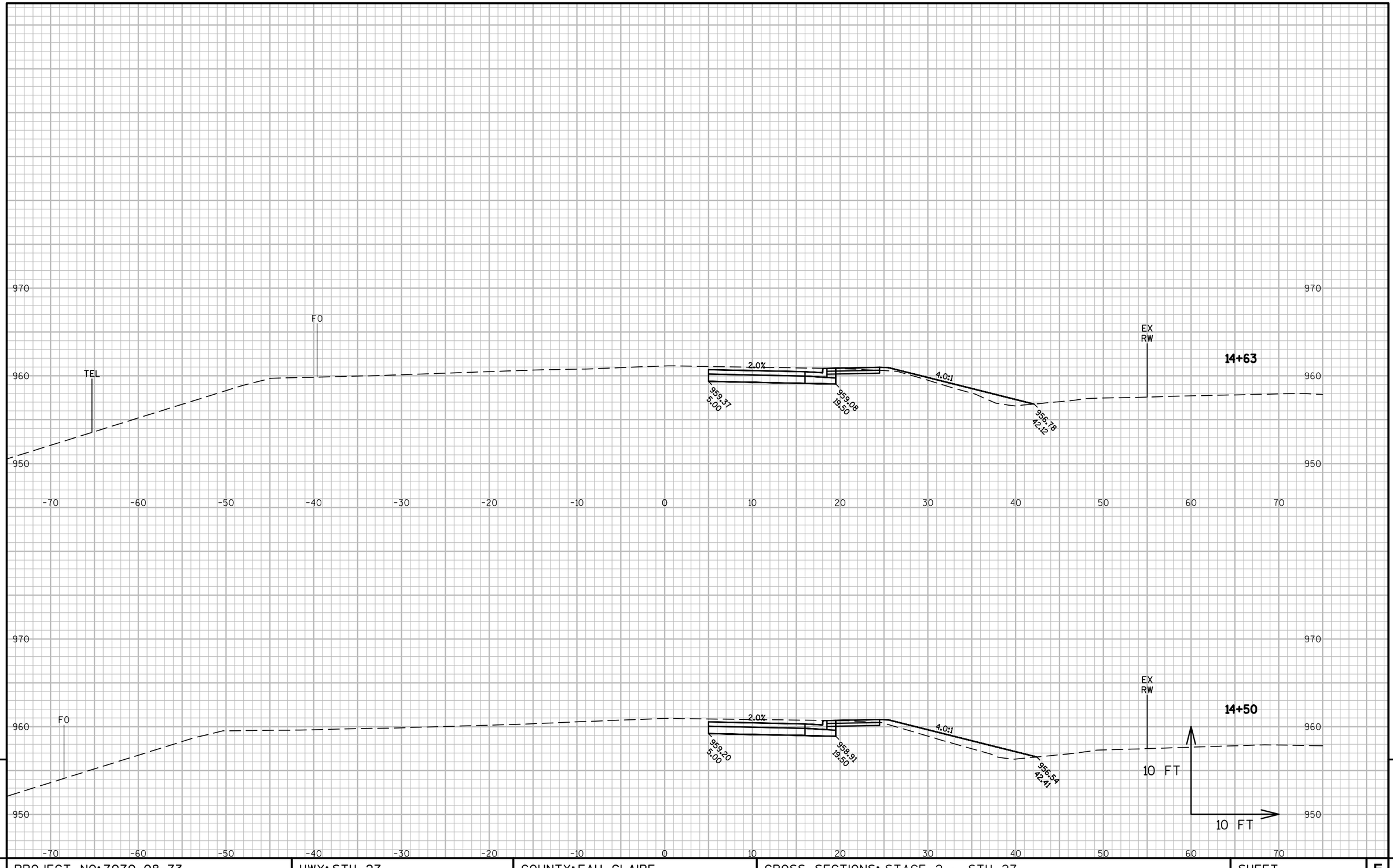
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGE 2 - STH 27	SHEET	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090225_XS

PLOT DATE : 2/2/2016 5:30 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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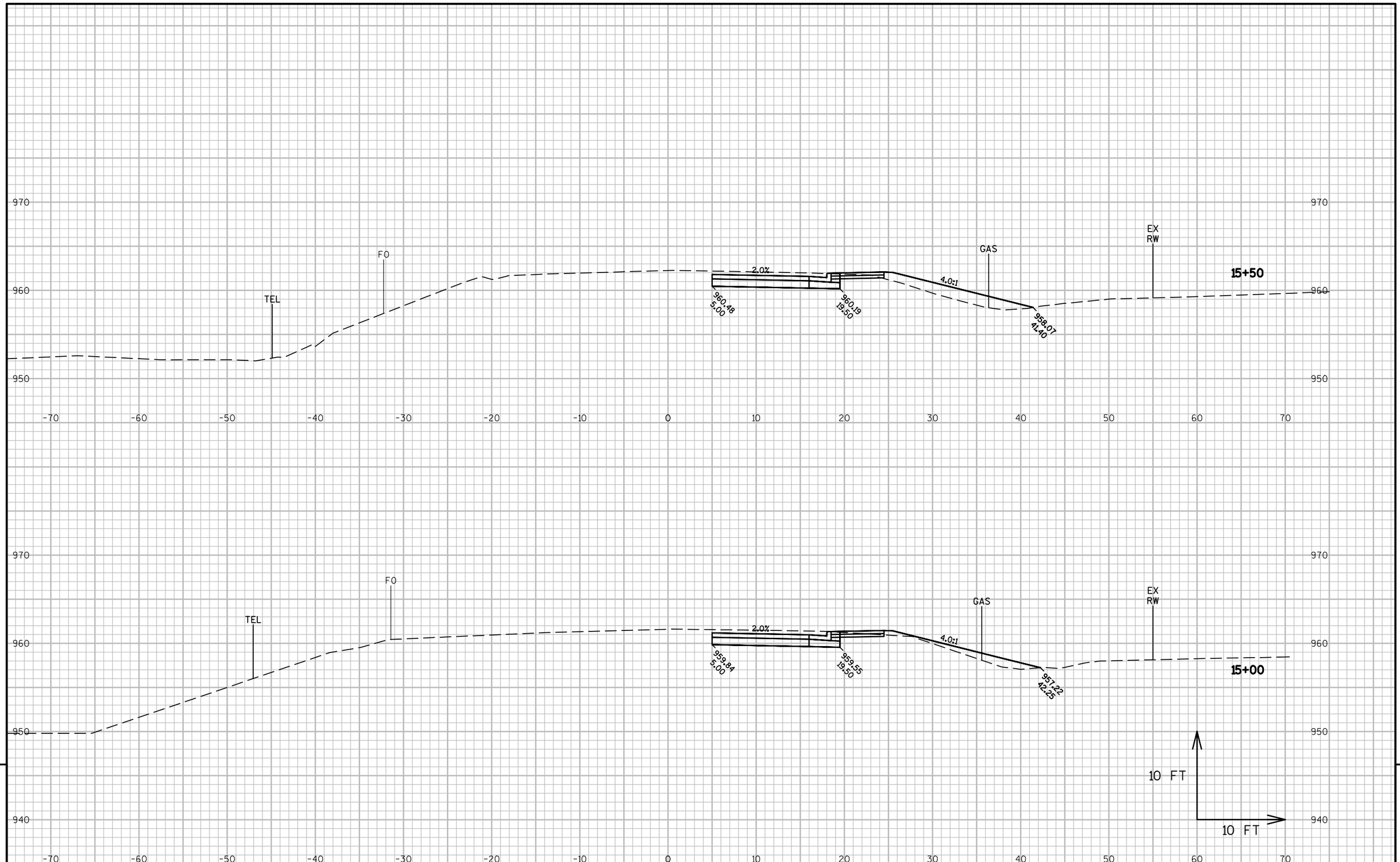
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGE 2 - STH 27	SHEET	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090226_XS

PLOT DATE : 2/2/2016 5:30 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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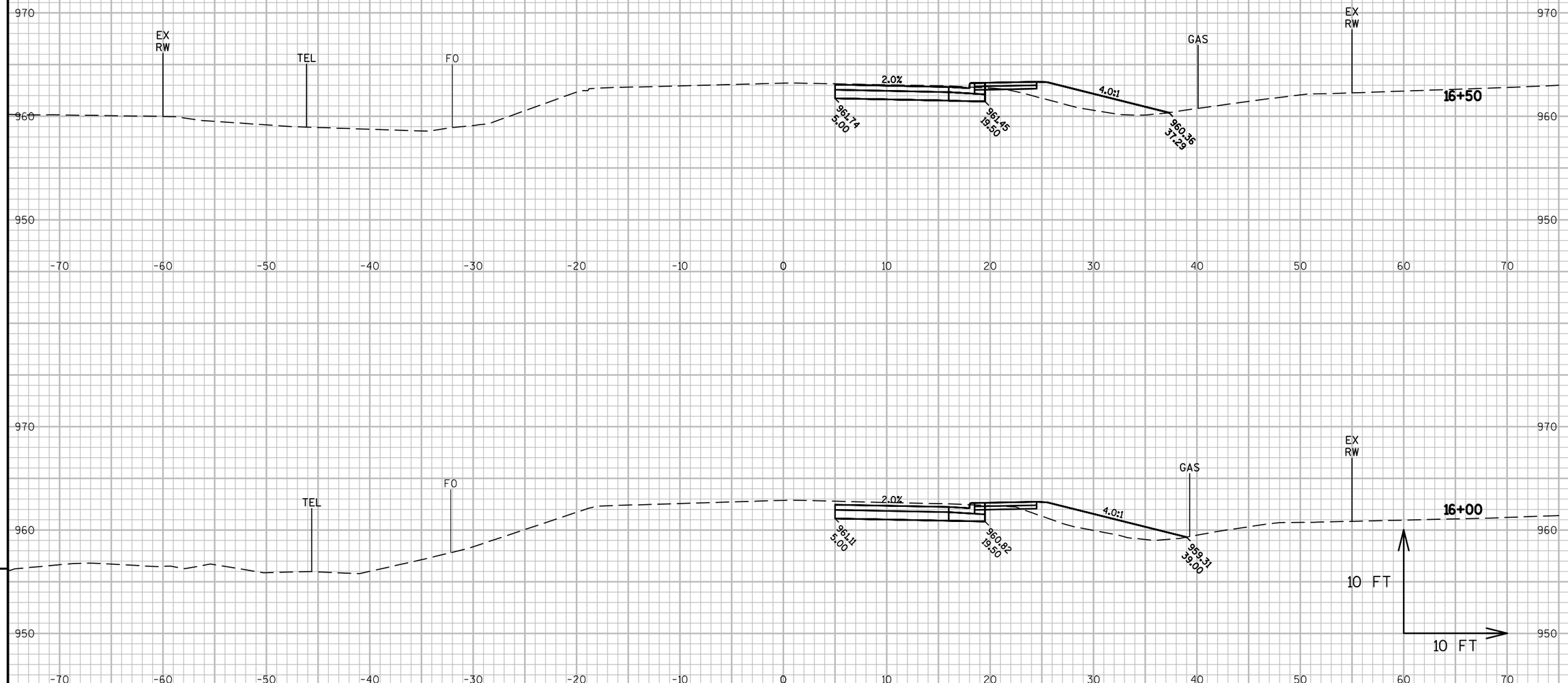
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGE 2 - STH 27	SHEET 137	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090227_XS

PLOT DATE : 2/2/2016 5:30 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

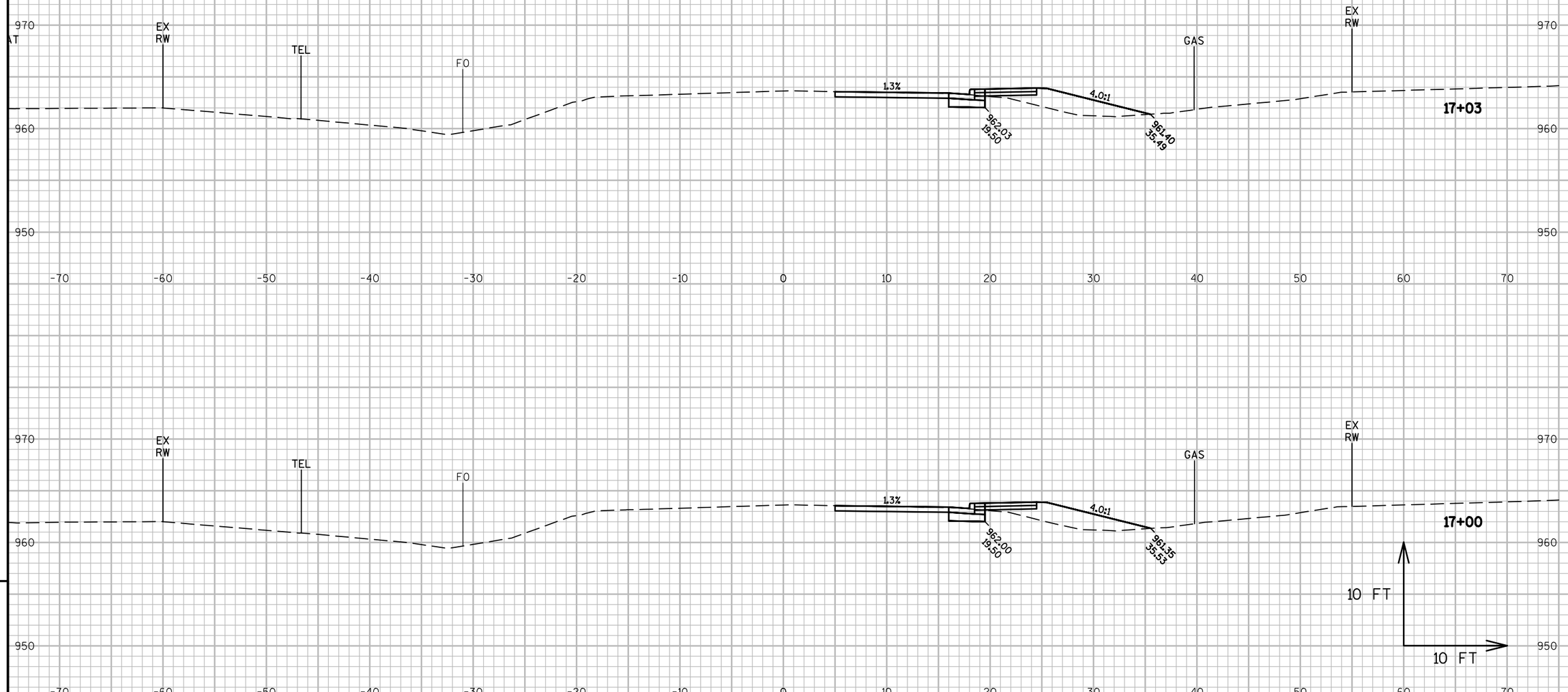


PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGE 2 - STH 27	SHEET 138 E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090228_XS

PLOT DATE : 2/2/2016 5:30 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

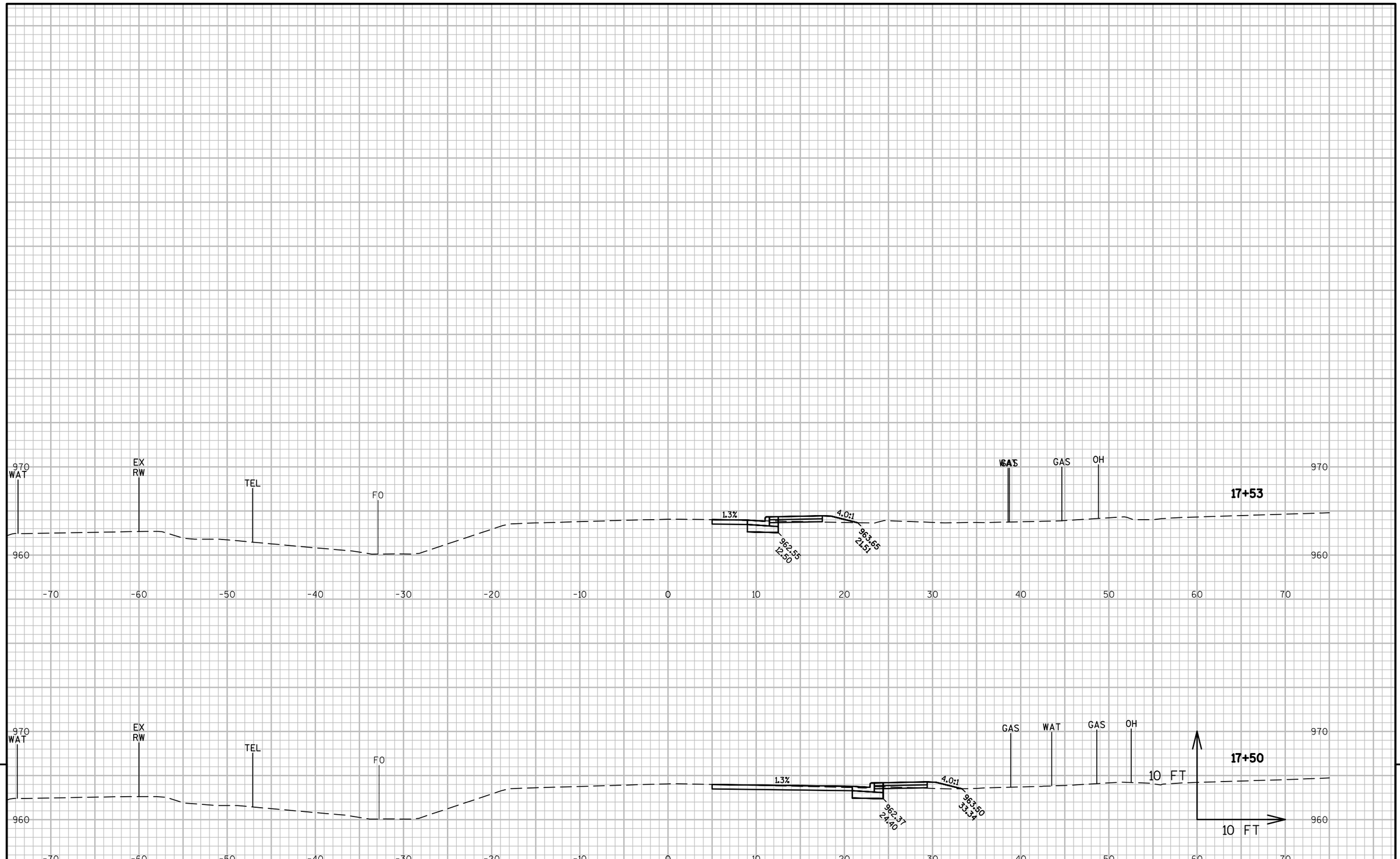
WISDOT/CADDS SHEET 49



PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGE 2 - STH 27	SHEET 139	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090229_XS

PLOT DATE : 2/2/2016 5:30 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT



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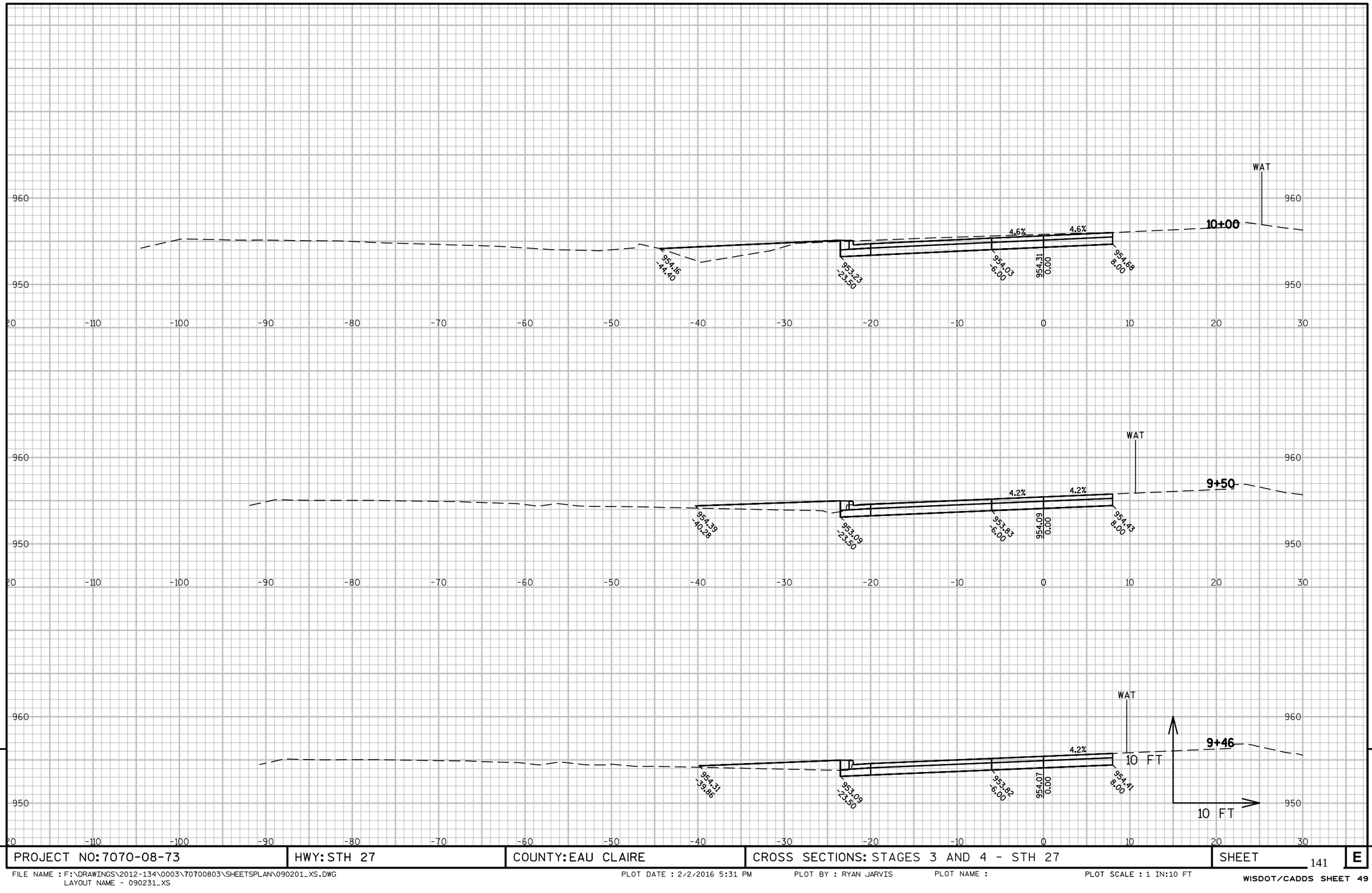
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGE 2 - STH 27	SHEET 140	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090230_XS

PLOT DATE : 2/2/2016 5:31 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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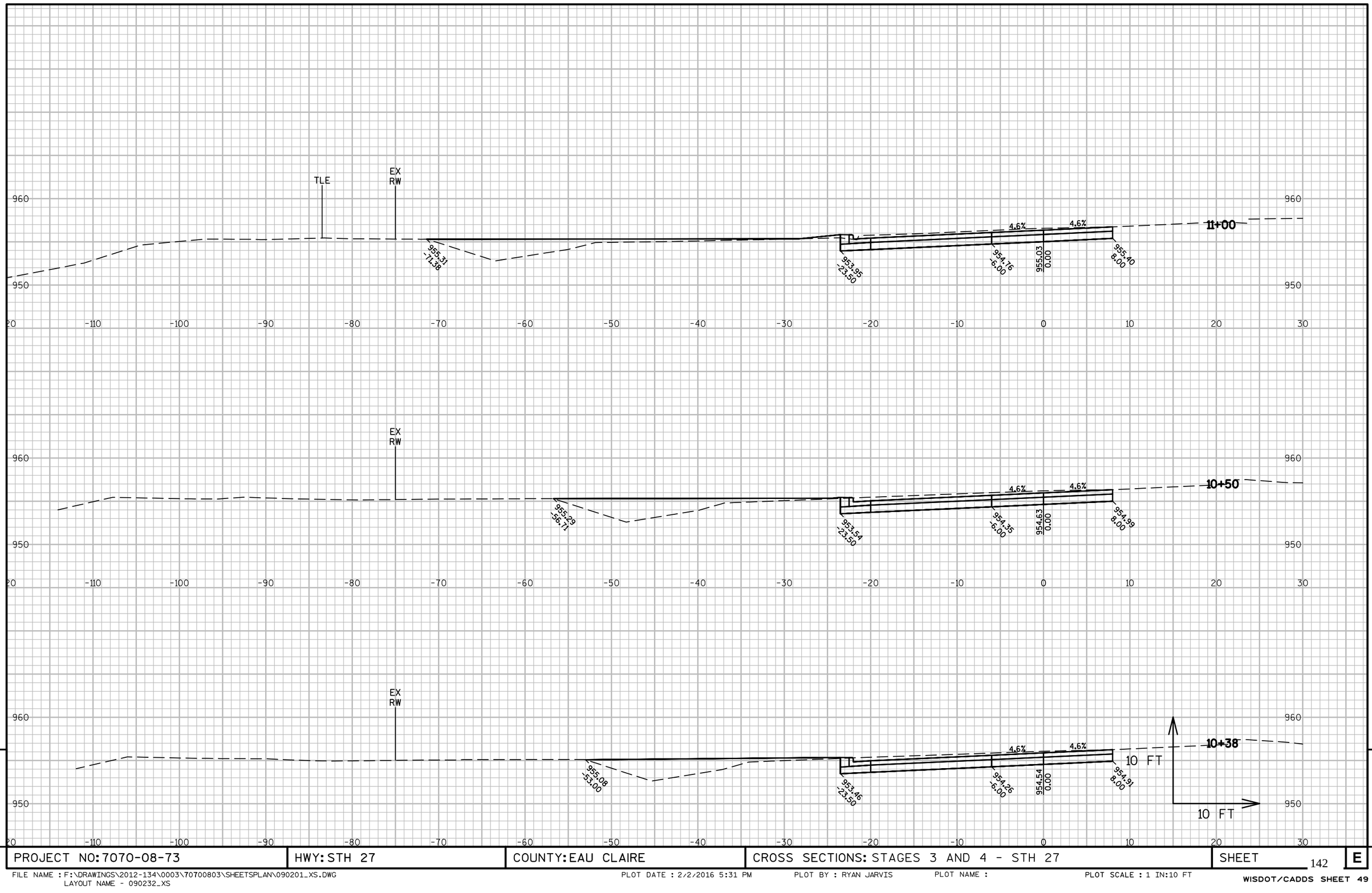
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGES 3 AND 4 - STH 27	SHEET 141	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090231_XS

PLOT DATE : 2/2/2016 5:31 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

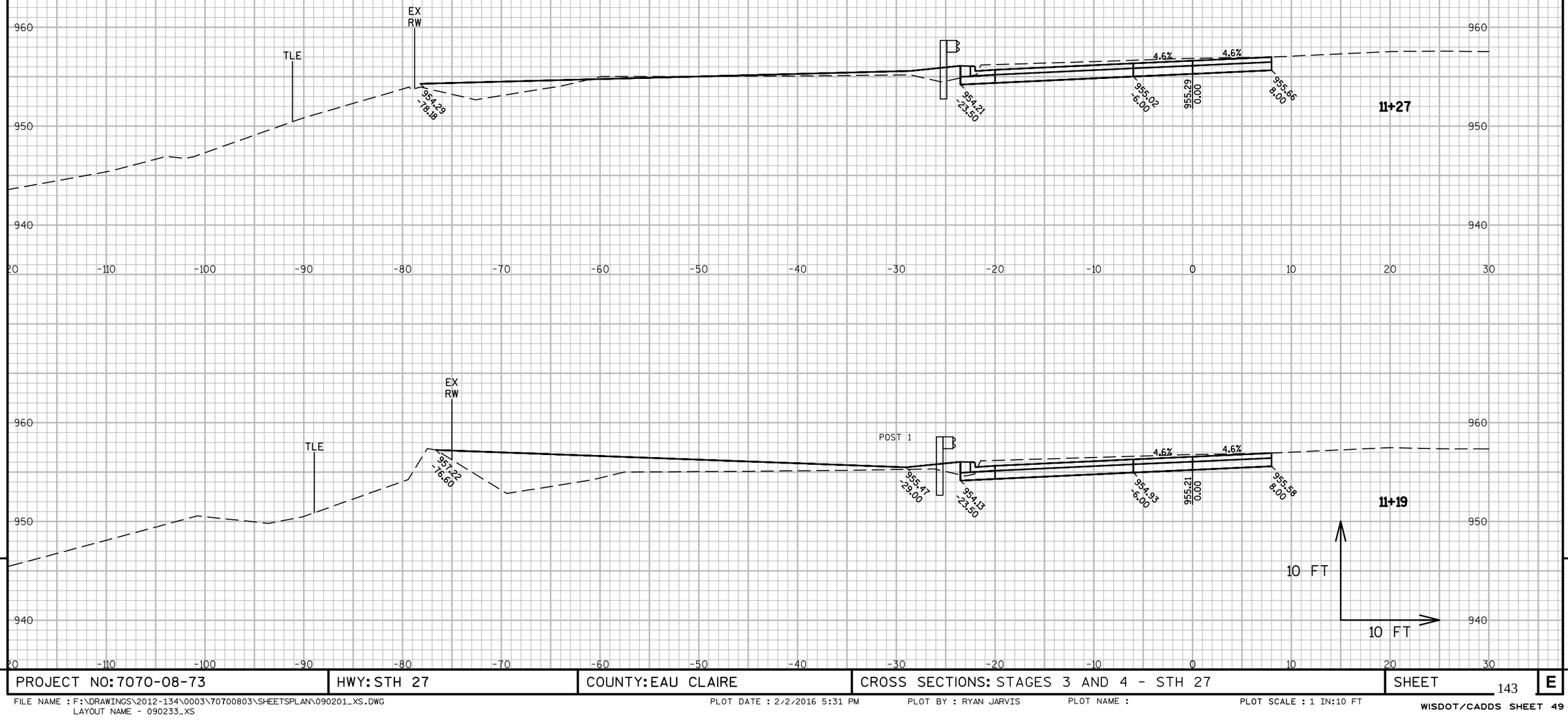


PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGES 3 AND 4 - STH 27	SHEET 142	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090232_XS

PLOT DATE : 2/2/2016 5:31 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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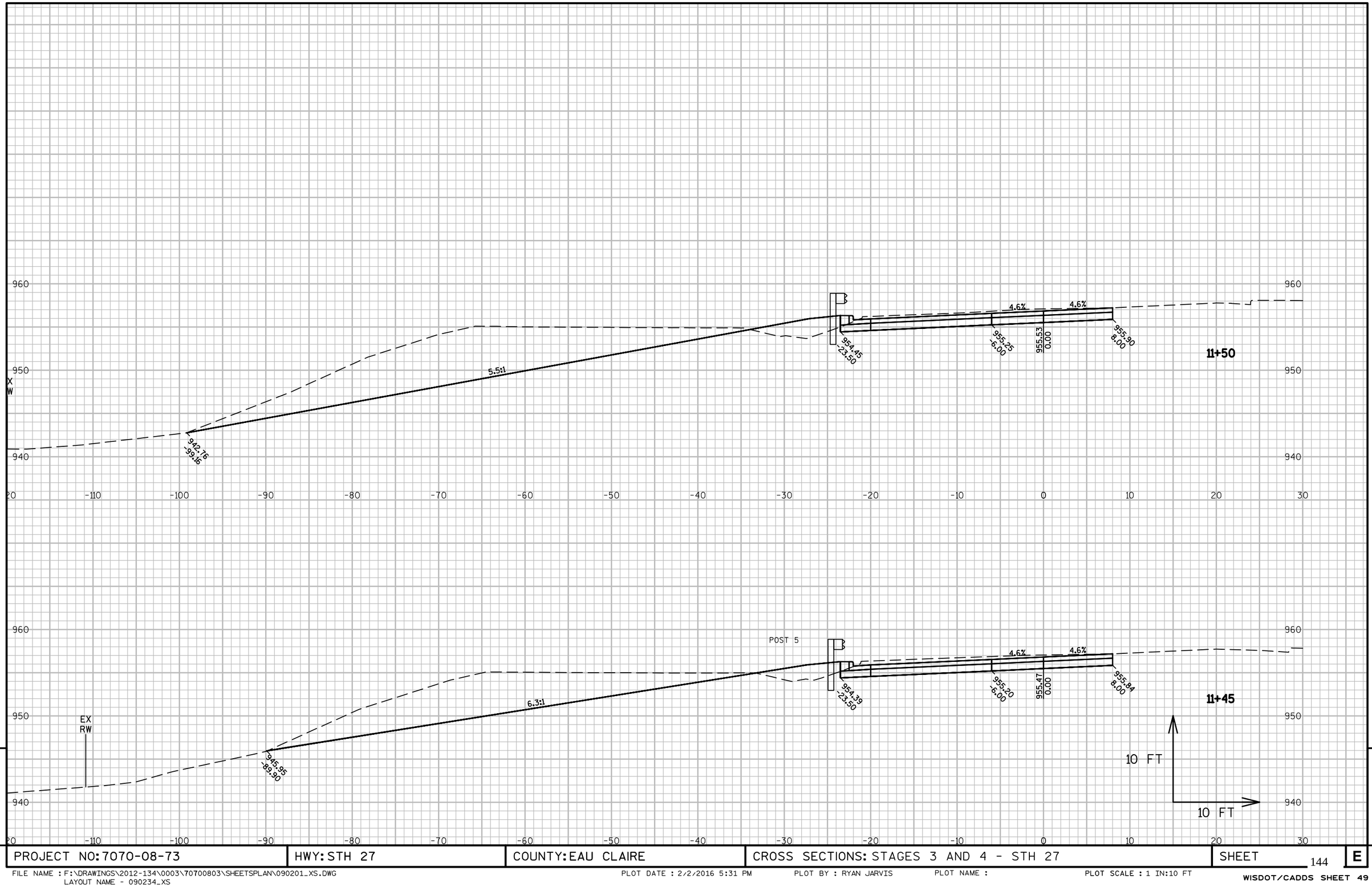
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGES 3 AND 4 - STH 27	SHEET 143 E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090233_XS

PLOT DATE : 2/2/2016 5:31 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT



PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGES 3 AND 4 - STH 27	SHEET 144	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090234_XS

PLOT DATE : 2/2/2016 5:31 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

960
950
940
-120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30

942.48
-117.46

945.00
-72.27

4.5:1

12+00

POST 9

954.68
-25.50

955.49
-6.00

955.76
0.00

956.13
8.00

4.6%
4.6%

5.9:1

941.36
-114.24

11+70

10 FT
10 FT

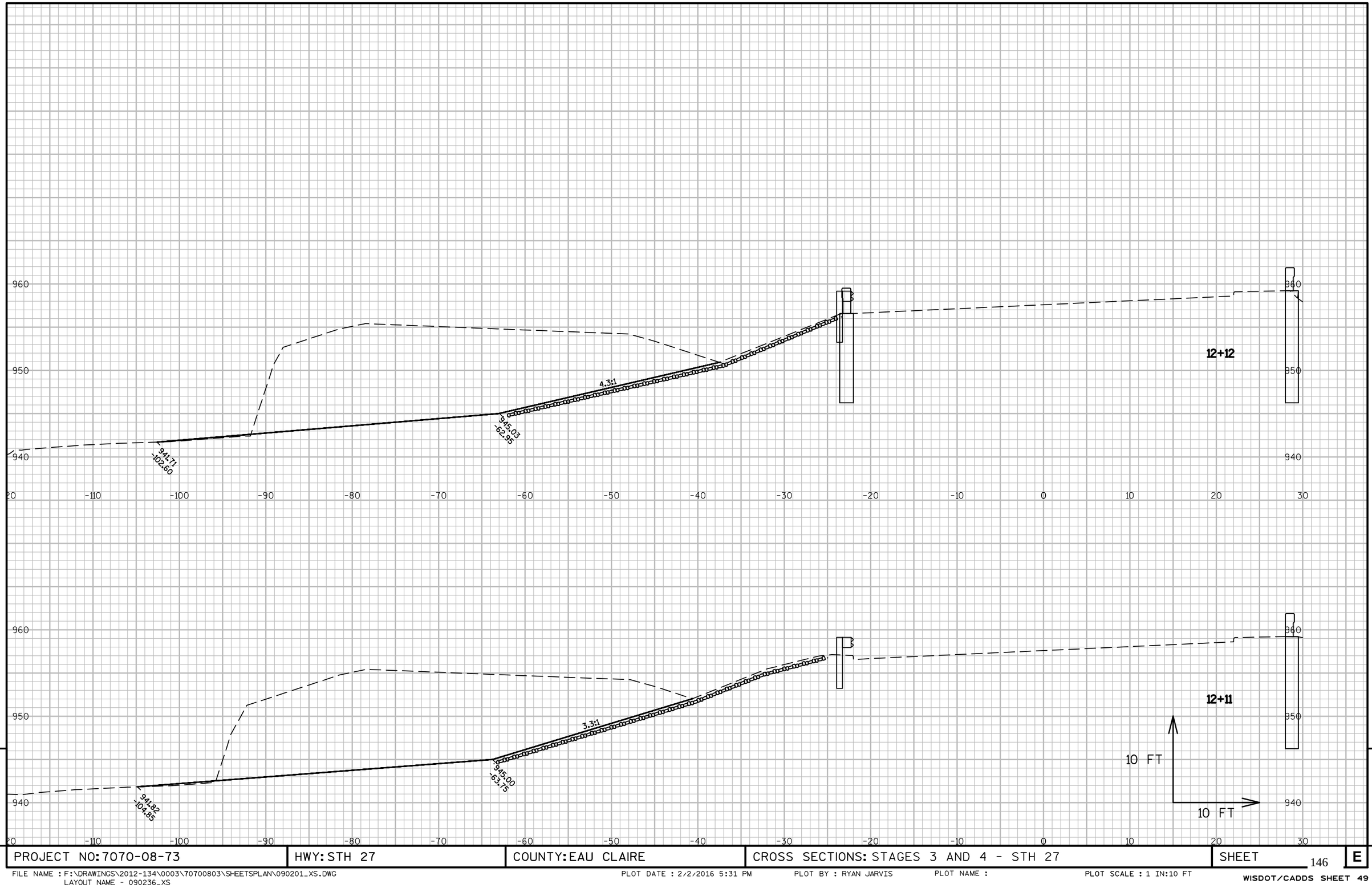
9

PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGES 3 AND 4 - STH 27	SHEET 145	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090235_XS

PLOT DATE : 2/2/2016 5:31 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGES 3 AND 4 - STH 27	SHEET 146	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090236_XS

PLOT DATE : 2/2/2016 5:31 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

EX RW

12+75

12+50

STRUCTURE B-18-226
STA 12+28.75 - STA 13+16.30

12+28

BACK FACE OF SOUTH ABUTMENT

10 FT

10 FT

9

9

PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGES 3 AND 4 - STH 27	SHEET 147	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090237_XS

PLOT DATE : 2/2/2016 5:31 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

970
960
950
940

EX
RW

945.30
-117.94

943.38
-52.84

BACK FACE OF NORTH ABUTMENT

13+17

970
960
950
940

EX
RW

944.26
-111.32

940.71
-57.30

13+00

10 FT

10 FT

-120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30

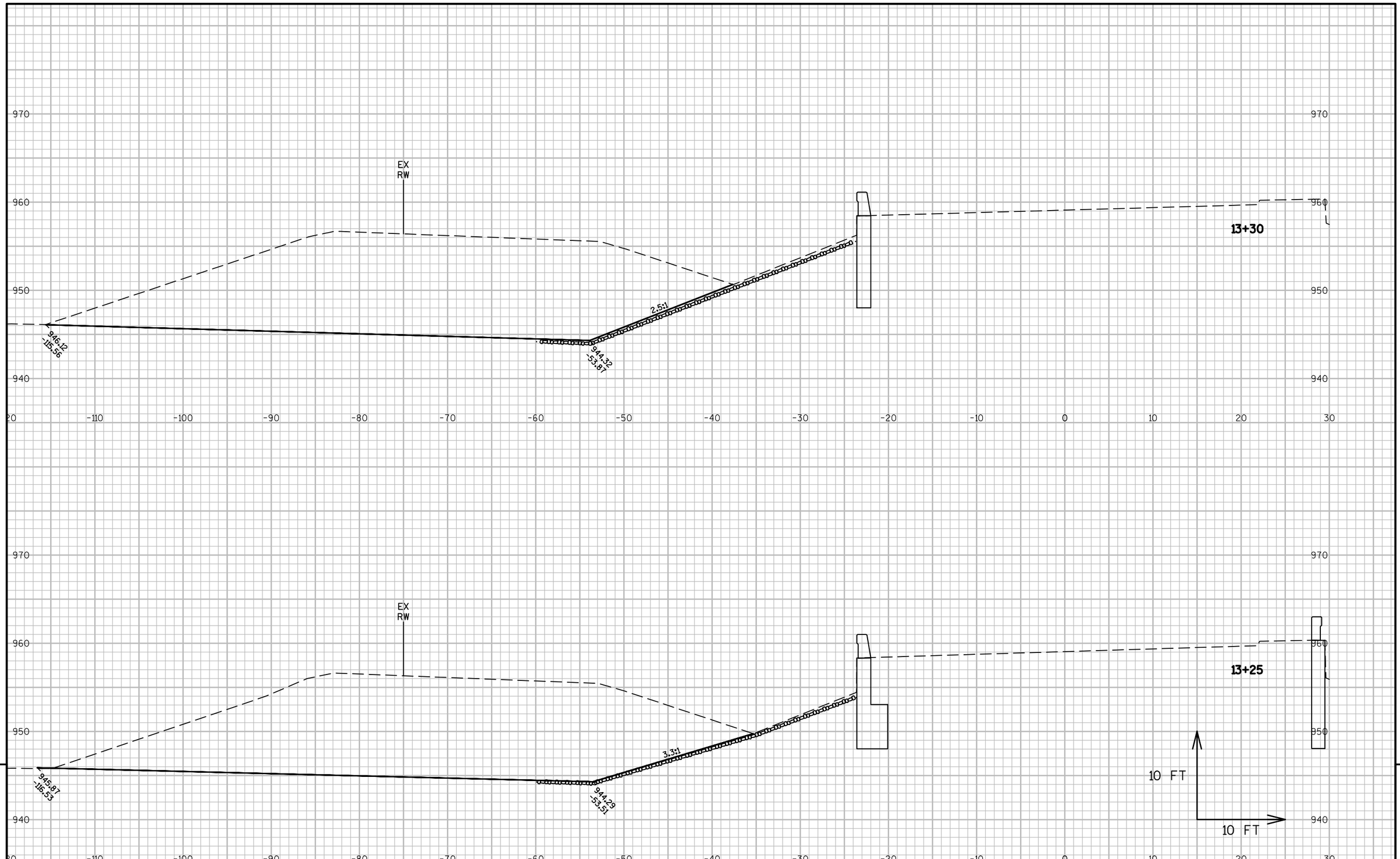
9

9

PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGES 3 AND 4 - STH 27	SHEET 148	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090238_XS

PLOT DATE : 2/2/2016 5:31 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT



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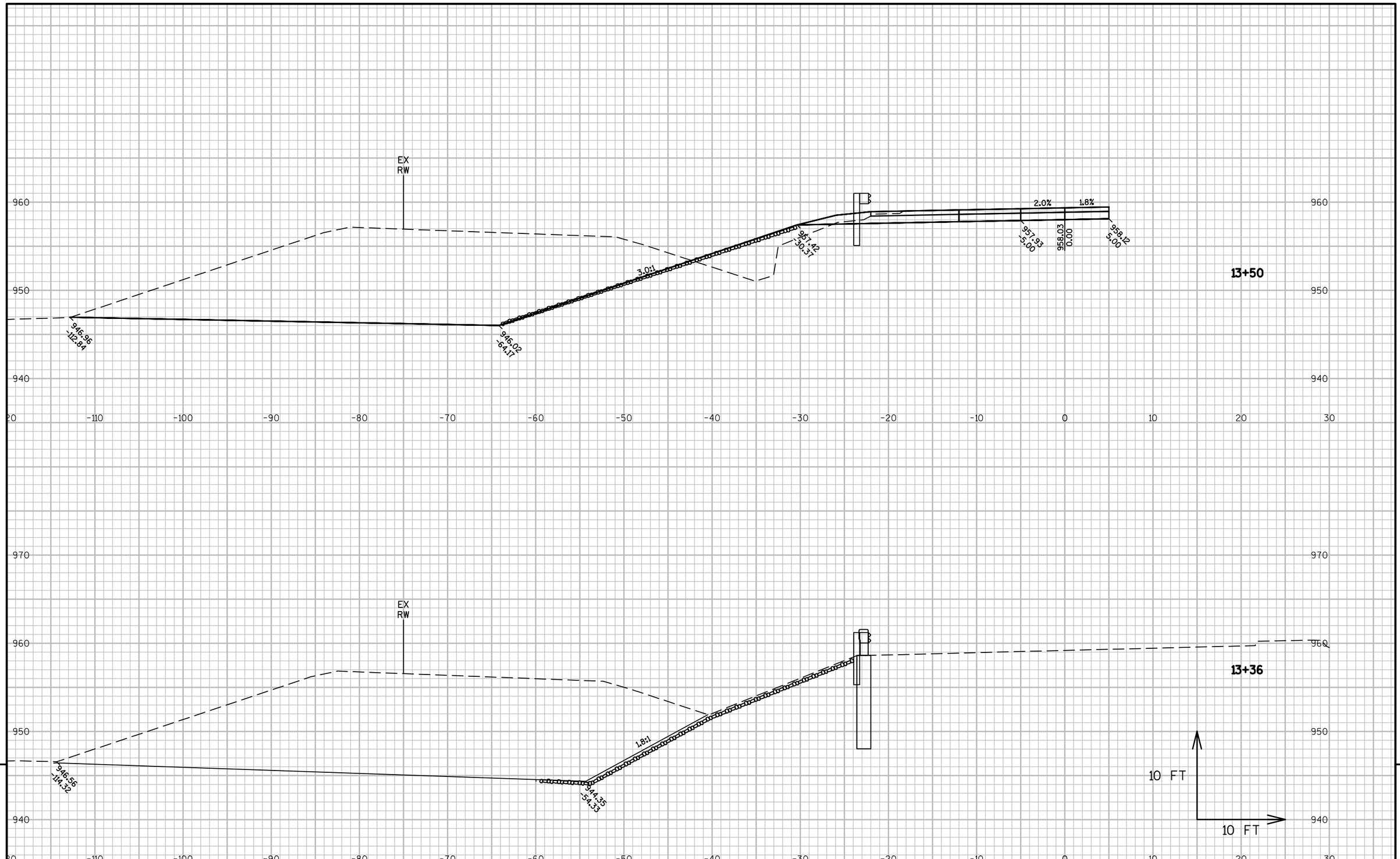
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGES 3 AND 4 - STH 27	SHEET 149	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090239_XS

PLOT DATE : 2/2/2016 5:31 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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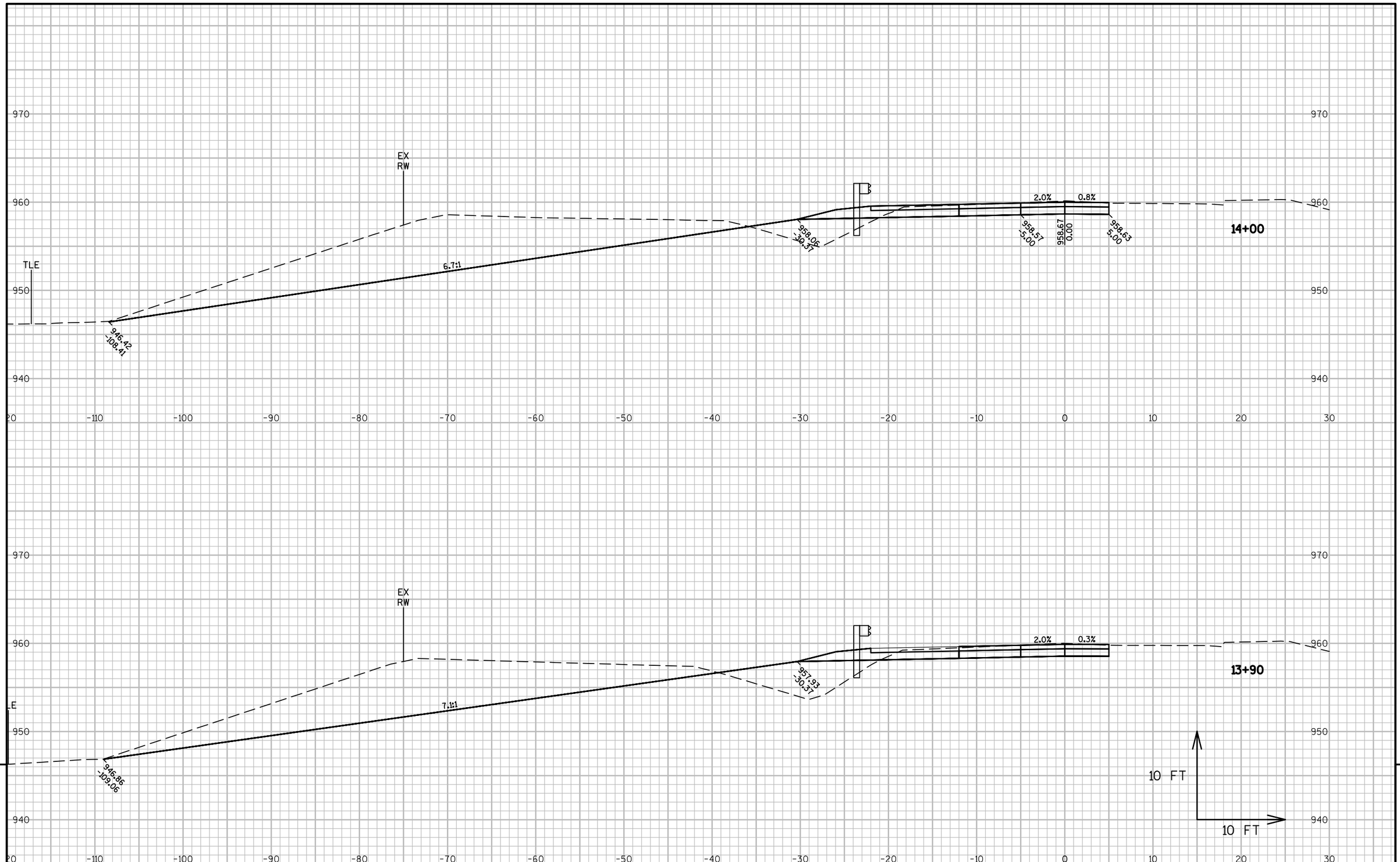
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGES 3 AND 4 - STH 27	SHEET 150	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090240_XS

PLOT DATE : 2/2/2016 5:32 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT



9

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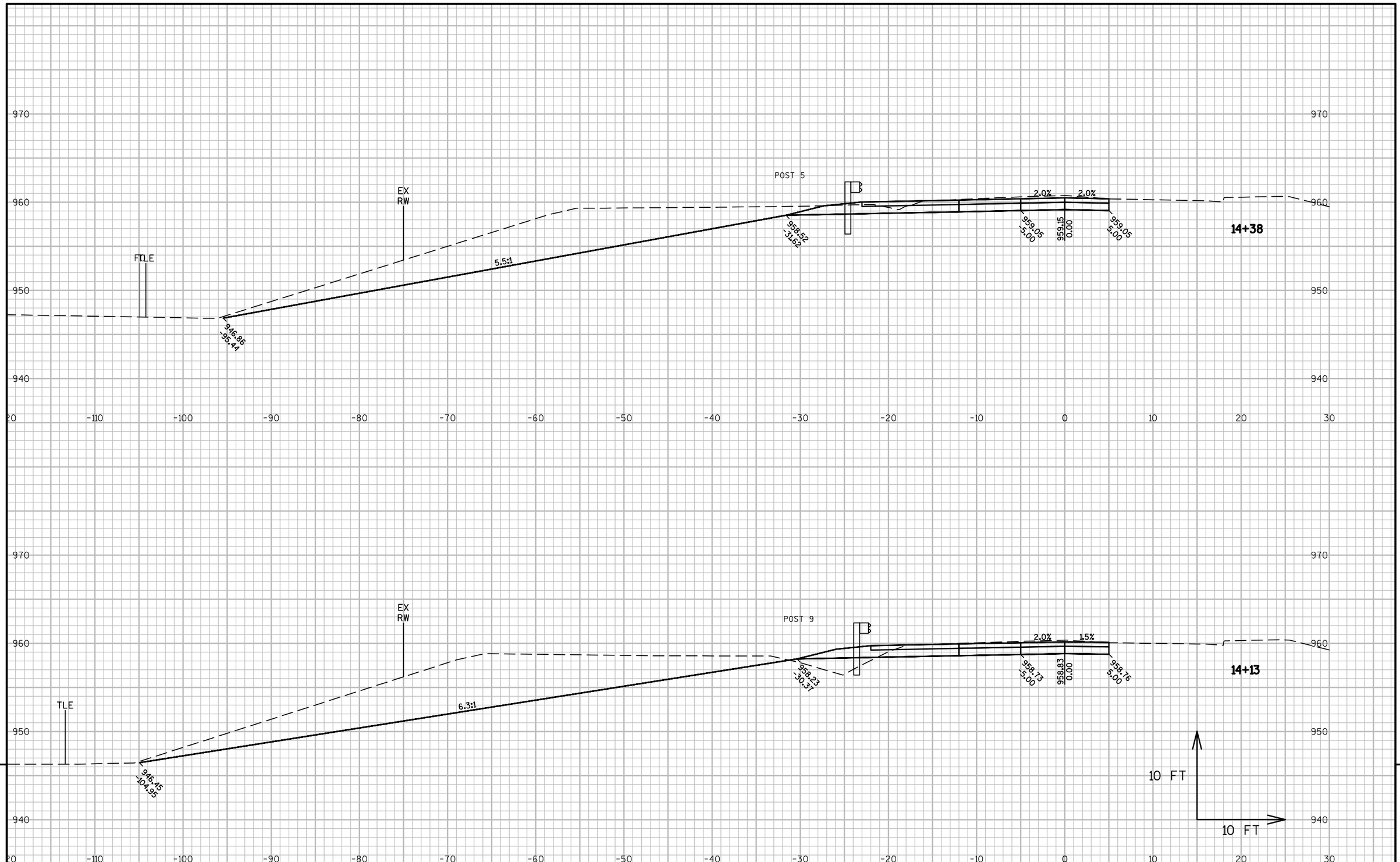
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGES 3 AND 4 - STH 27	SHEET 151	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090241_XS

PLOT DATE : 2/2/2016 5:32 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT



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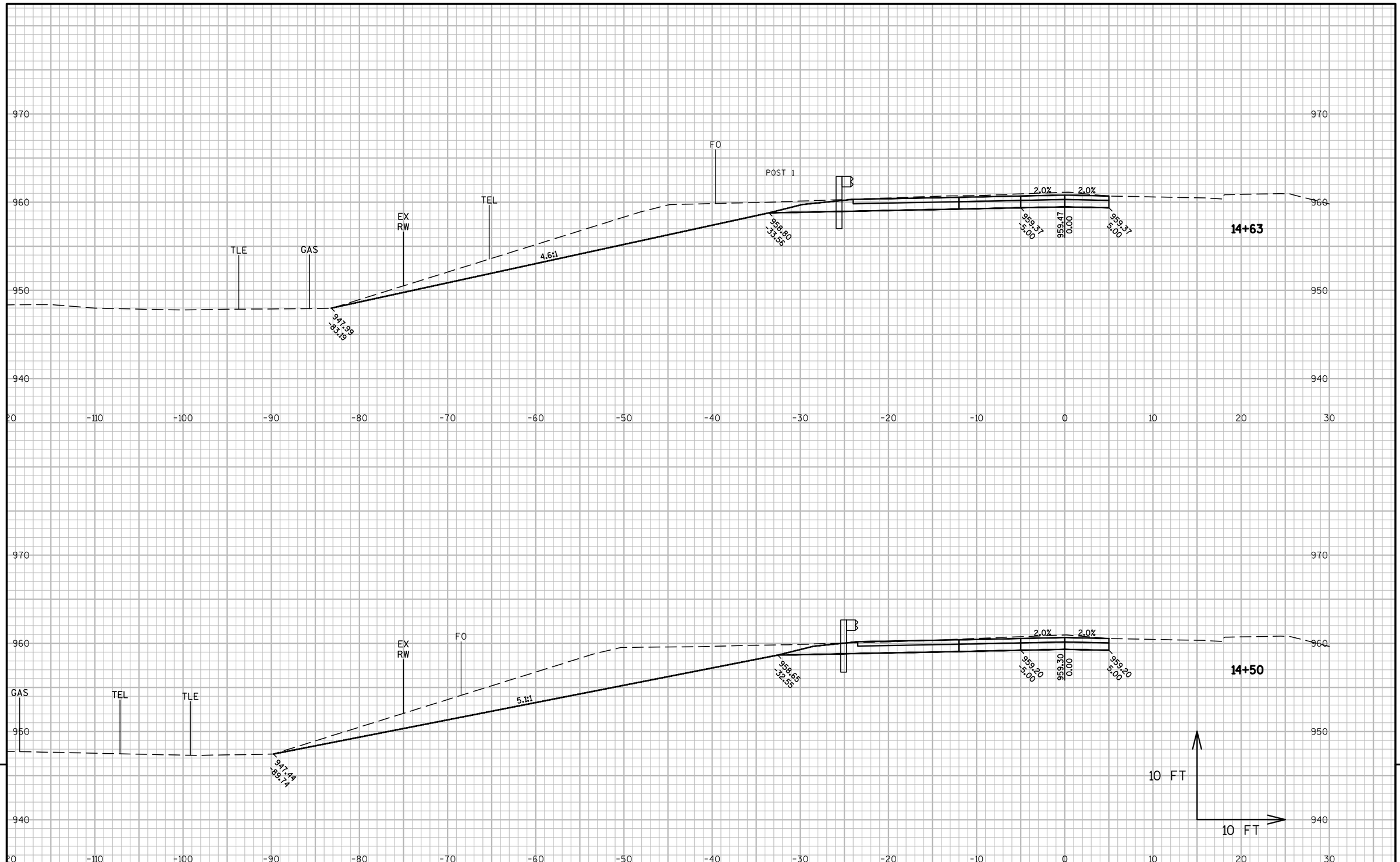
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGES 3 AND 4 - STH 27	SHEET 152	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090242_XS

PLOT DATE : 2/2/2016 5:32 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

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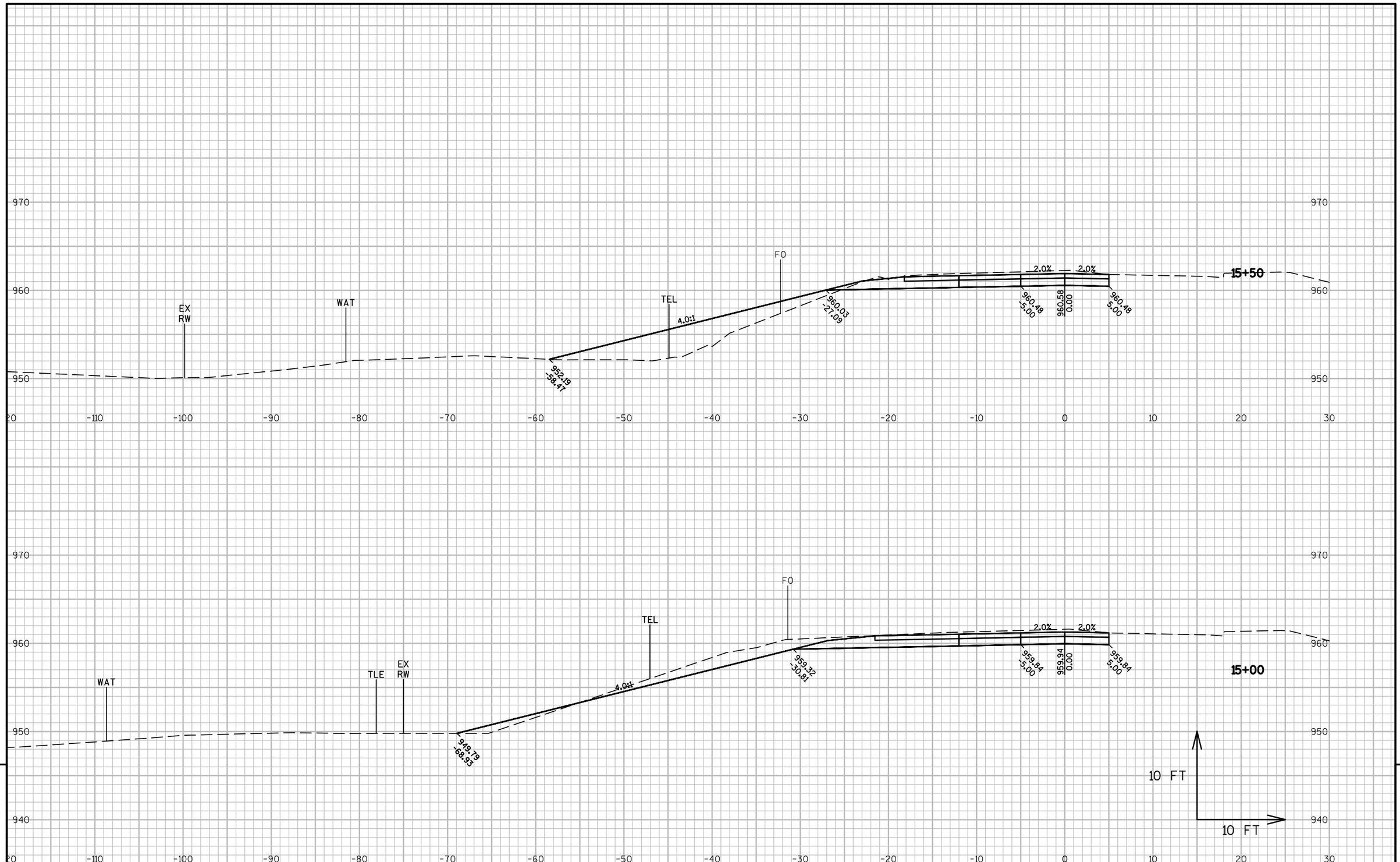
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGES 3 AND 4 - STH 27	SHEET 153	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090243_XS

PLOT DATE : 2/2/2016 5:32 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT



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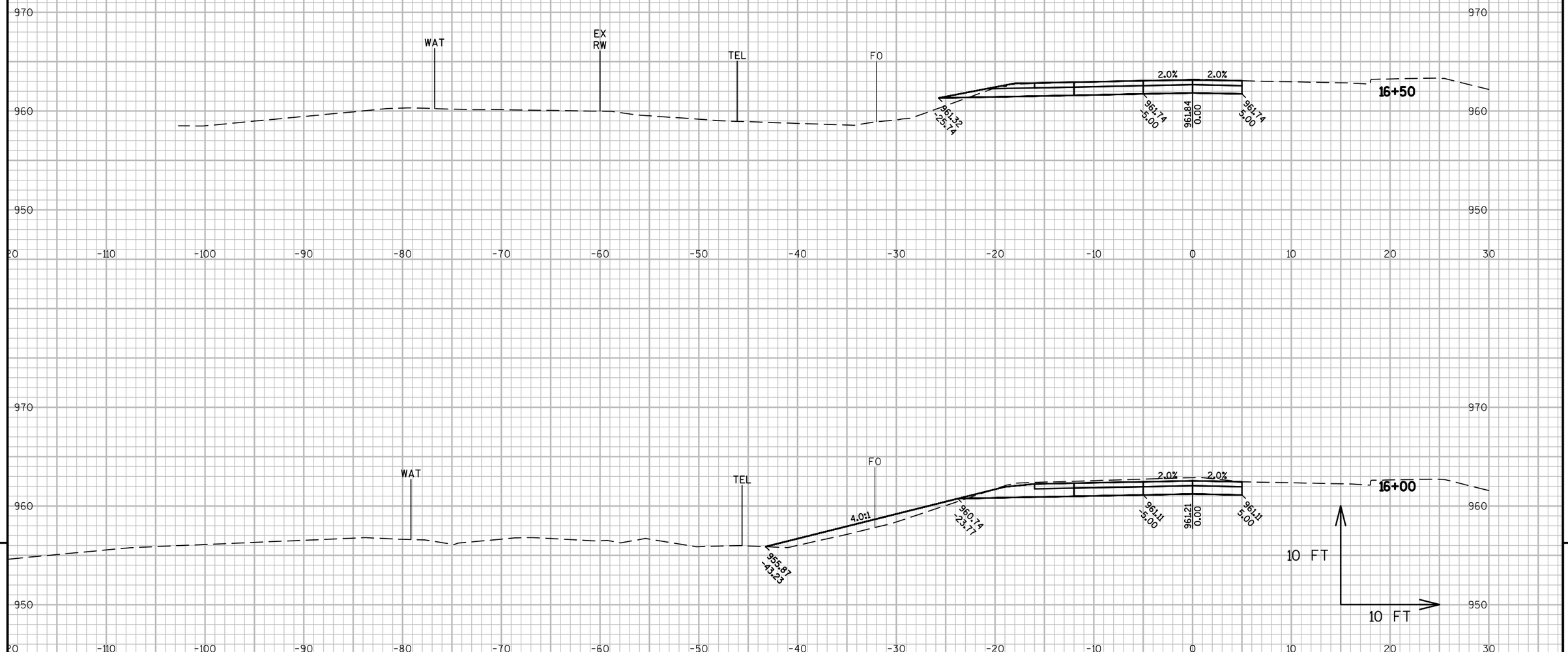
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGES 3 AND 4 - STH 27	SHEET 154	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090244_XS

PLOT DATE : 2/2/2016 5:32 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT



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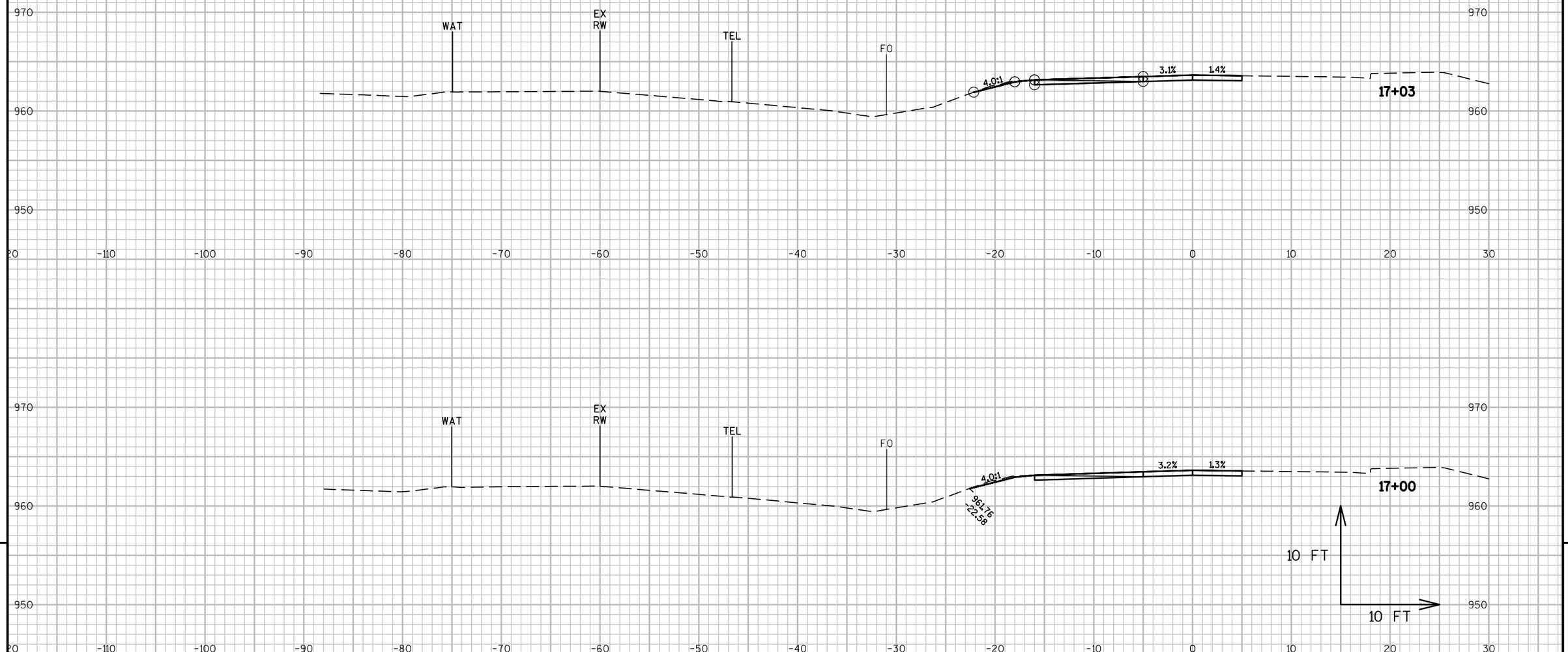
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGES 3 AND 4 - STH 27	SHEET 155	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090245_XS

PLOT DATE : 2/2/2016 5:32 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT



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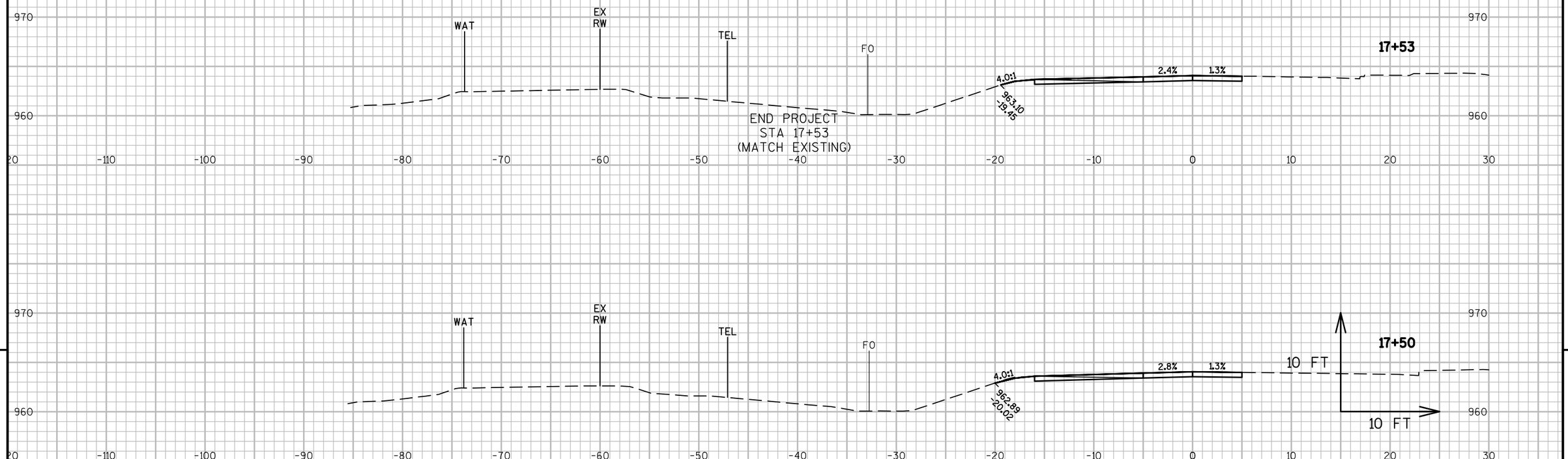
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGES 3 AND 4 - STH 27	SHEET 156	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090246_XS

PLOT DATE : 2/2/2016 5:32 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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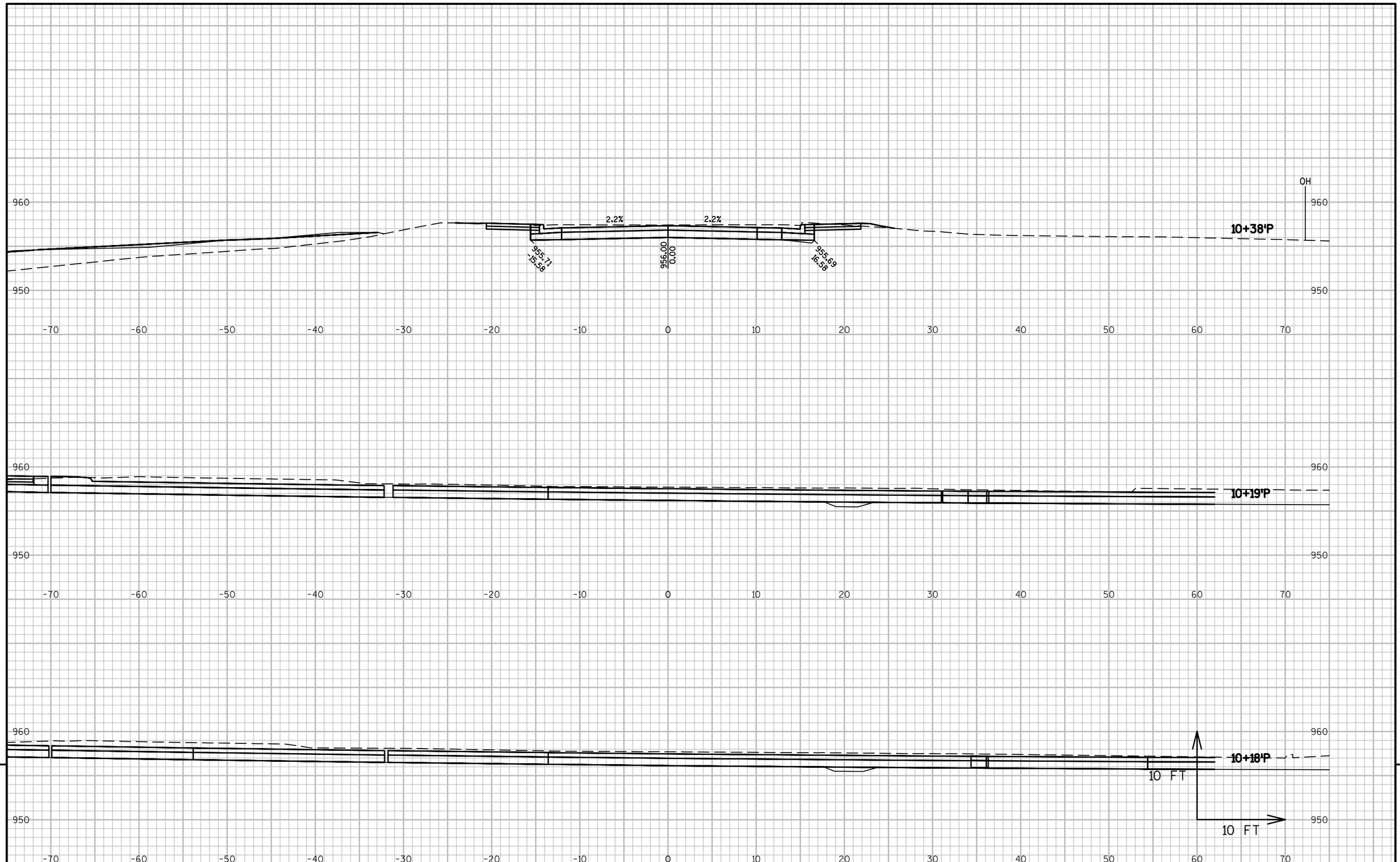
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: STAGES 3 AND 4 - STH 27	SHEET 157	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090247_XS

PLOT DATE : 2/2/2016 5:32 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT



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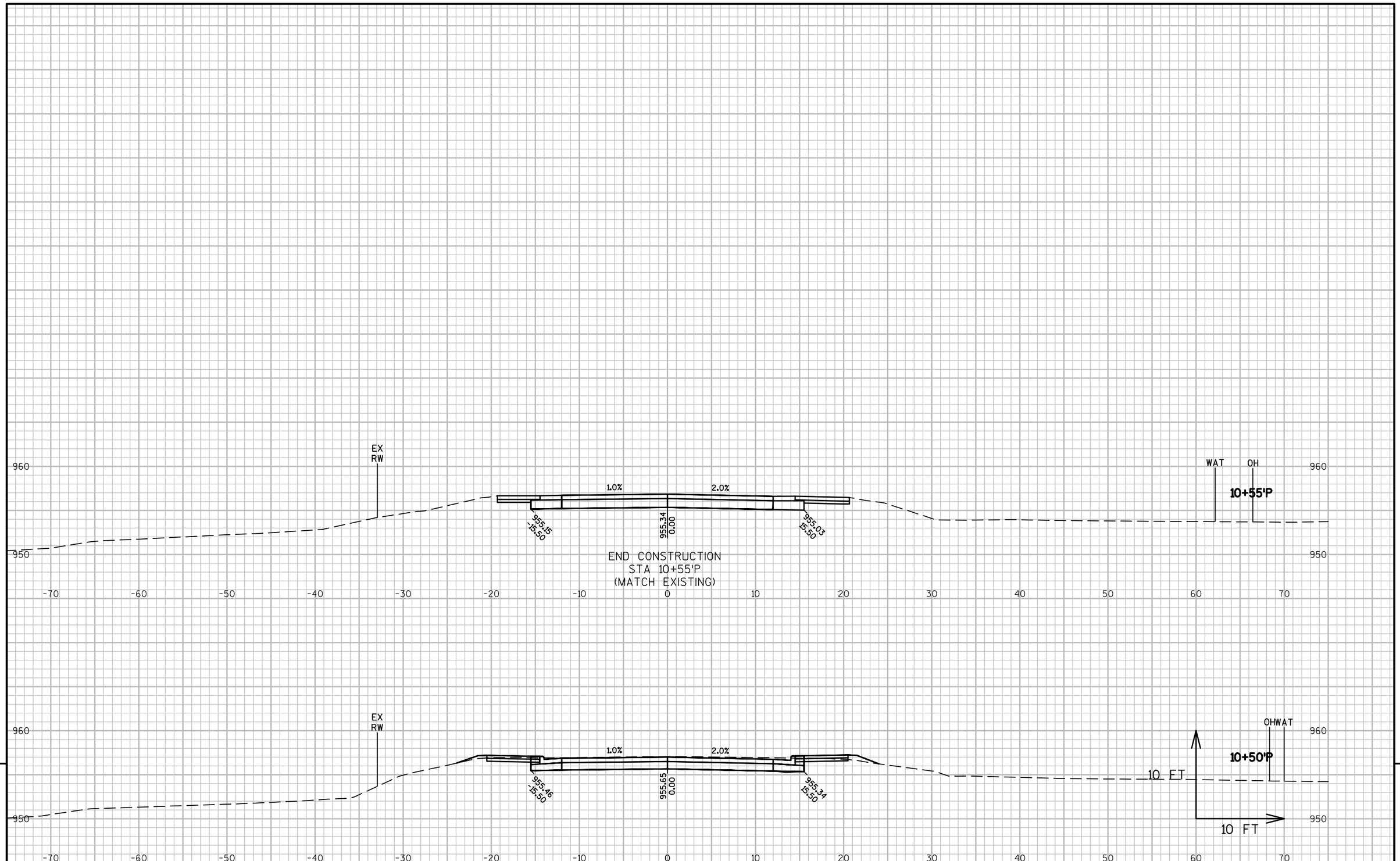
PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: PERKINS RD	SHEET 158	E



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PROJECT NO: 7070-08-73	HWY: STH 27	COUNTY: EAU CLAIRE	CROSS SECTIONS: PERKINS RD	SHEET 159	E

FILE NAME : F:\DRAWINGS\2012-134\0003\70700803\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090249_XS

PLOT DATE : 2/2/2016 5:33 PM PLOT BY : RYAN JARVIS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

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