GRE MAR 2014

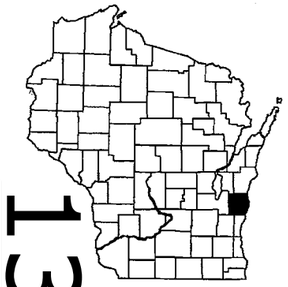
PROJECT ID: 1440-27-71
WITH: WISDOT

COUNTY: SHEBOYGAN

ORDER OF SHEETS

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

TOTAL SHEETS = 272



13

DESIGN DESIGNATION FOR CTH Y

A.A.D.T.	2014	=	19,000
A.A.D.T.	2034	=	21,800
D.H.V.	2034	=	2244
D.D.		=	58/42
T. -----		=	5.4%
DESIGN SPEED		=	50 MPH
ESALS		=	3,803,300

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

FOND DU LAC - SHEBOYGAN

STH 23 & CTH Y INTERCHANGE

STH 23

SHEBOYGAN COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1440-27-71	WISC 2014070	1
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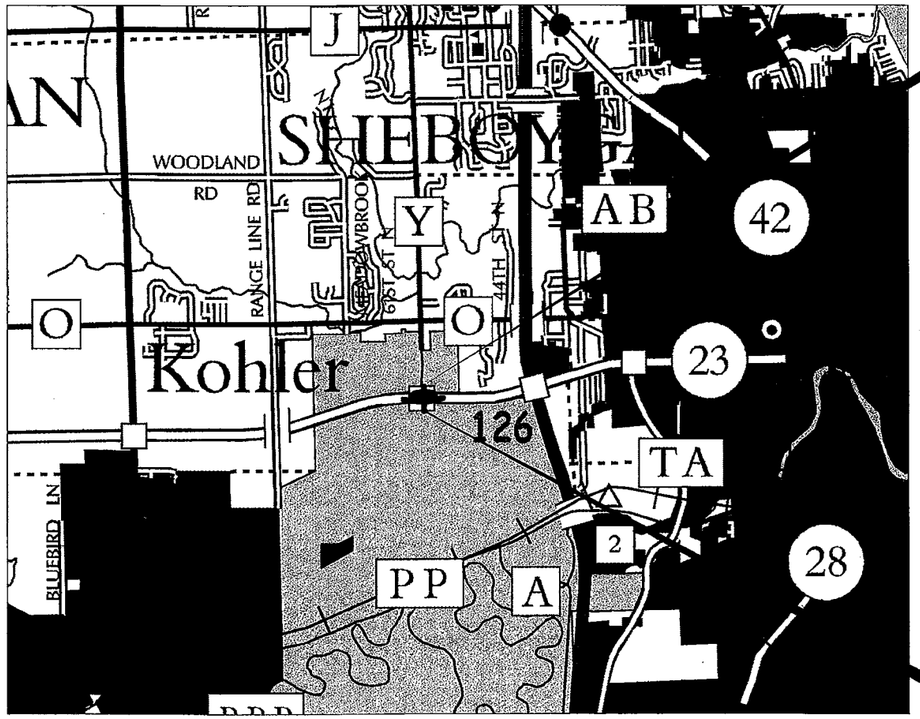
STATE PROJECT NUMBER
1440-27-71



END PROJECT
STA. 57+35

BEGIN PROJECT
STA. 44+75
Y: 177,052.51
X: 201,268.32

LAYOUT
SCALE 0 0.5 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.3 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), SHEBOYGAN COUNTY, NAD 83(2007)
ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007)

ORIGINAL PLANS PREPARED BY
DONOHUE & ASSOCIATES

WISCONSIN
JOHN C. BAINTER, JR.
E-34975
SHEBOYGAN
WI
PROFESSIONAL ENGINEER

1/14/14 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT
Designer	DONOHUE & ASSOCIATES
Project Manager	PAUL BRAUER
Regional Examiner	
Regional Supervisor	JAMES THOMPSON
C.O. Examiner	

APPROVED FOR THE DEPARTMENT
DATE: 1/15/2014 Paul O Brauer (Signature)

E

2

GENERAL NOTES

CROSS DRAIN, STORM SEWER PIPE, INLET AND DISCHARGE ELEVATIONS, LENGTHS AND LOCATIONS AS SHOWN ON THE PLANS MAY BE ADJUSTED TO FIT EXISTING FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

THE EXACT LENGTHS OF CULVERT PIPES SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS ARE TO BE SEEDED, FERTILIZED AND MULCHED AS DIRECTED BY THE ENGINEER. ALL OTHER DISTURBED AREAS ARE TO BE SEEDED, FERTILIZED AND MULCHED AT THE CONTRACTORS EXPENSE.

SEED MIXTURE 30 SHALL BE USED ON ALL DISTURBED AREAS.

THE LOCATIONS 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 APPROVAL OF THE ENGINEER.

ALL CURB AND GUTTER RADII SHOWN ON THE PLANS ARE MEASURED TO THE FLANGE UNLESS OTHERWISE NOTED.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO CALL DIGGERS HOTLINE PRIOR TO BEGINNING WORK OPERATIONS.

THE EROSION CONTROL ITEMS SHOWN ON THE PLANS ARE AT SUGGESTED LOCATIONS. THE ENGINEER MAY MODIFY LOCATIONS AS NEEDED.

MAINTAIN ALL TEMPORARY EROSION CONTROL MEASURES UNTIL SUCH TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY. PROTECT WETLANDS AND OTHER WATERWAYS THAT ARE PRESENT WITHIN THE PROJECT LIMITS.

PAVEMENT REMOVAL WILL BE TO THE NEAREST JOINT OR A SAWED EDGE WILL BE REQUIRED AS DIRECTED BY THE ENGINEER.

PRIOR TO THE INSTALLATION OF TRAFFIC CONTROL DEVICES THE CONTRACTOR SHALL PROVIDE THE ENGINEER AND ALL EMERGENCY PROVIDERS WITH THE TELEPHONE NUMBER OF A LOCAL PERSON RESPONSIBLE FOR EMERGENCY MAINTENANCE OF TRAFFIC CONTROL.

ALL EXISTING SIGNS SHALL REMAIN IN PLACE UNTIL CONSTRUCTION OPERATIONS REQUIRE THEIR REMOVAL OR THE ENGINEER APPROVES THEIR REMOVAL.

TEMPORARY STORAGE OF ANY EXCAVATED MATERIAL WILL NOT BE PERMITTED IN WETLANDS.

VERIFY GRADES AT BRIDGE APPROACHES AFTER DECK OVERLAY IS COMPLETED.

UTILITY CONTACTS

WISCONSIN POWER AND LIGHT
- ALLIANT ENERGY
(ELECTRIC)
JASON HOGAN
SUITE 1000
4902 N BILTMORE LANE
MADISON, WI 53718
PHONE: 608-458-4871
MOBILE: 608-395-7395

AMERICAN TRANSMISSION COMPANY LLC
MIKE OLSEN
801 O'KEEFE ROAD
PO BOX 6113
DEPERE, WI 54115
PHONE: 920-338-6582
MOBILE: 920-660-2390

TIME WARNER CABLE
LUKAS LACROSSE
1320 N DR MARTIN LUTHER KING JR DRIVE
MILWAUKEE, WI 53212
PHONE: 414-908-4766
MOBILE: 414-430-9321
EMAIL: LUKAS.LACROSSE@TWCABLE.COM

WISCONSIN PUBLIC SERVICE
(ELECTRIC - DISTRIBUTION & GAS)
MICHAEL LOWTHER
933 S WILDWOOD AVE
PO BOX 329
SHEBOYGAN, WI 53082
PHONE: 920-451-3743
GENERAL CONTACT:
LORI BUTRY
700 NORTH ADAMS STREET
PO BOX 19001
GREEN BAY, WI 54307-9001
PHONE: 920-433-1703
FAX: 920-433-1360
E-MAIL: LBUTRY@WPSR.COM

AT&T WISCONSIN
(TELECOMMUNICATIONS)
KARI JENSEN
AT&T WI DESIGN ENGINEERING
205 S. JEFFERSON STREET
GREEN BAY, WI 54301
PHONE: 920-433-4112
MOBILE:920-227-8902
E-MAIL: KJ2897@ATT.COM
LISA SUPRENAND
70 EAST DIVISION STREET
FOND DU LAC, WI 54935
PHONE:
EMAIL: AD5647@ATT.COM

DIGGERS HOTLINE
Call 811 3 Work Days Before You Dig
or Toll Free (800) 242-8511

CONTACTS

WDNR CONTACT
JOANNE KLINE
WISCONSIN DEPARTMENT OF NATURAL RESOURCES
2300 N DR. MARTIN LUTHER KING JR. DRIVE
PHONE: 414-263-8656
E-MAIL: JOANNE.KLINE@WISCONSIN.GOV

SHEBOYGAN COUNTY HIGHWAY DEPARTMENT
GREG SCHNELL
HIGHWAY COMMISSIONER
PHONE: 920-459-3822
FAX: 920-459-3831
E-MAIL: SCHNEGFS@CO.SHEBOYGAN.WI.US

SHEBOYGAN COUNTY HIGHWAY DEPARTMENT
ED HARVEY
1211 N. 23RD
SHEBOYGAN, WI 53081
PHONED: 920-459-3826
FAX: 920-459-4317
E-MAIL: HARVEELH@CO.SHEBOYGAN.WI.US

EMERGENCY CONTACT NUMBERS FOR WISCONSIN PUBLIC SERVICE
ELECTRIC 24 HOUR EMERGENCY SERVICE: 1-800-450-7240
GAS 24 HOUR EMERGENCY SERVICE: 1-800-450-7280

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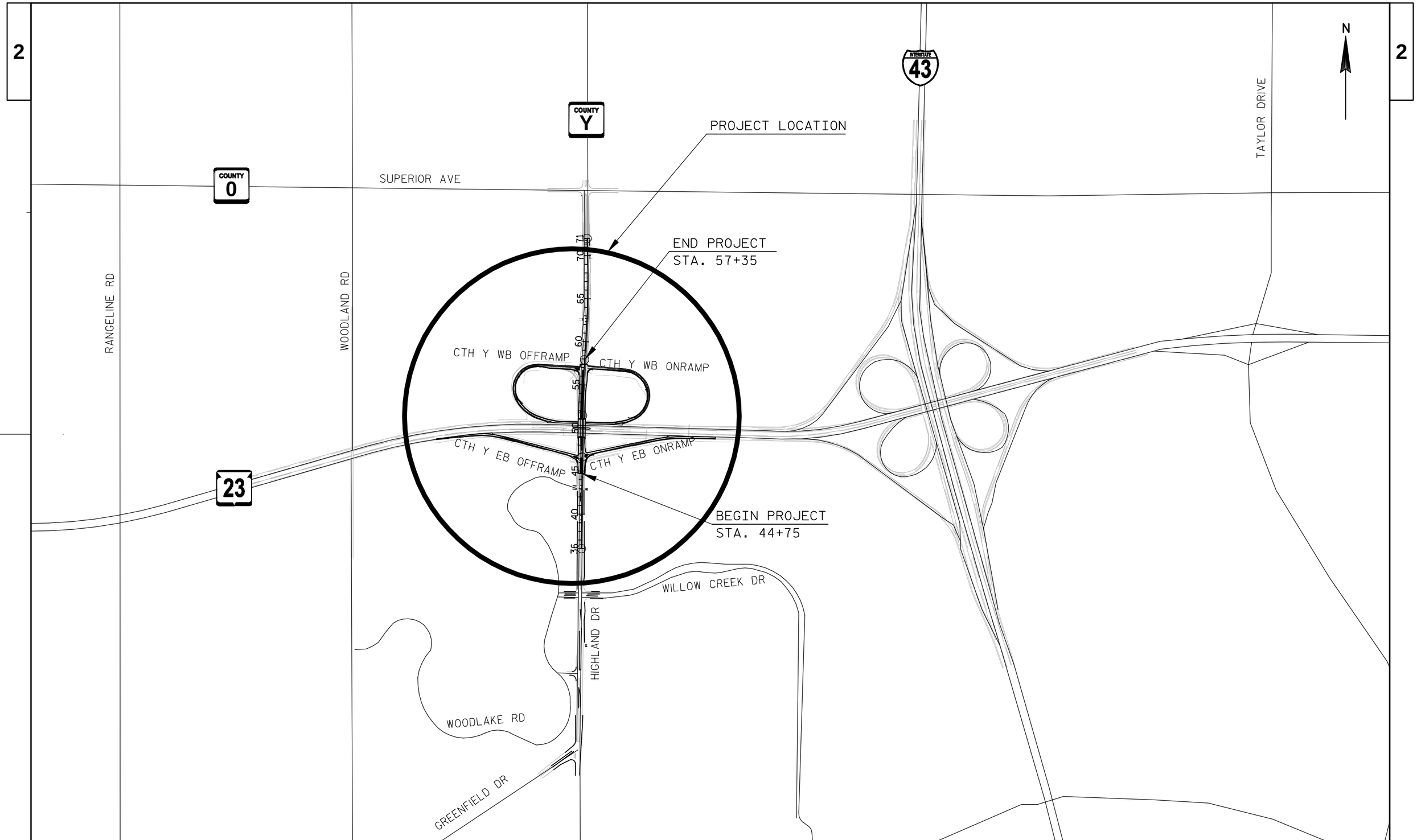
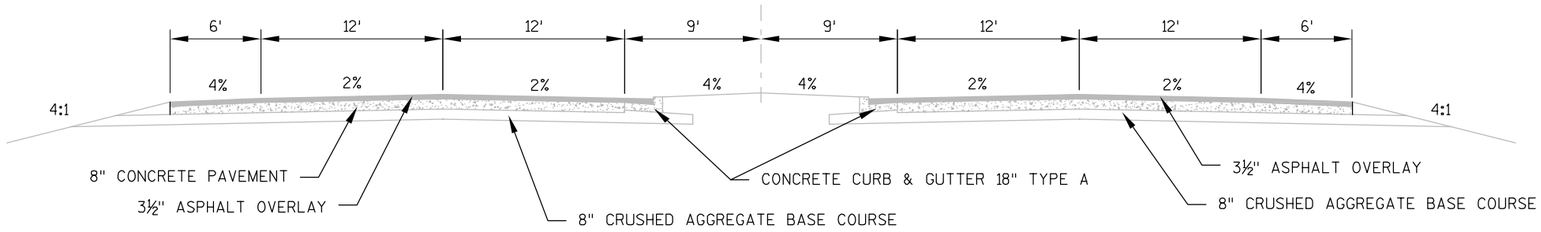
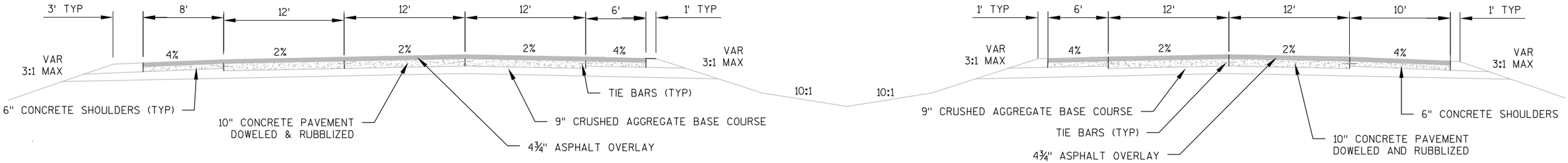


PROJECT NO:1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PROJECT OVERVIEW	SHEET 3	E



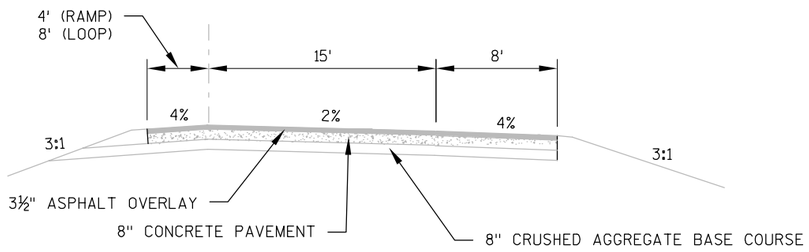
TYPICAL EXISTING SECTION

CTH Y



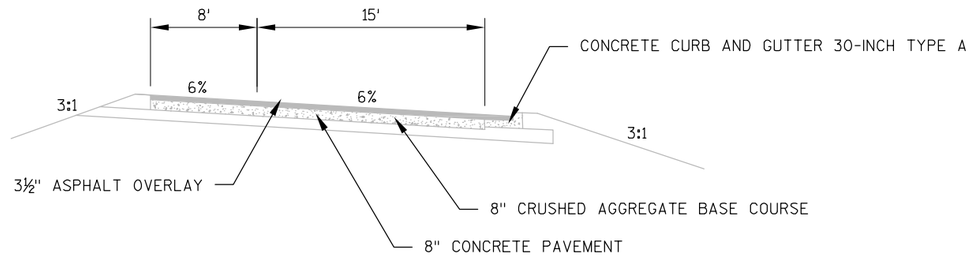
TYPICAL EXISTING SECTION

STH 23



TYPICAL EXISTING SECTION

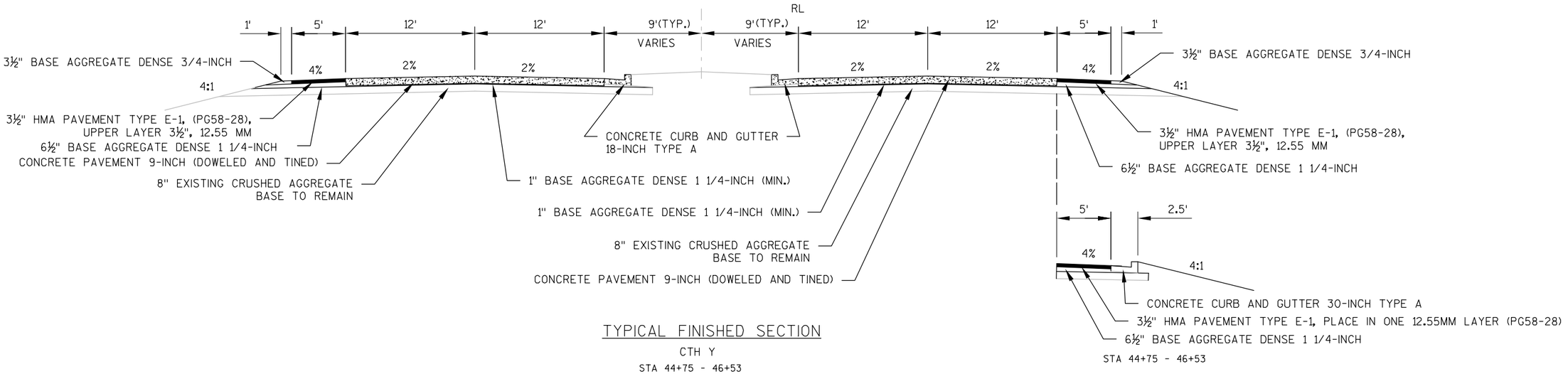
RAMPS AND LOOPS



TYPICAL EXISTING SECTION

LOOPS

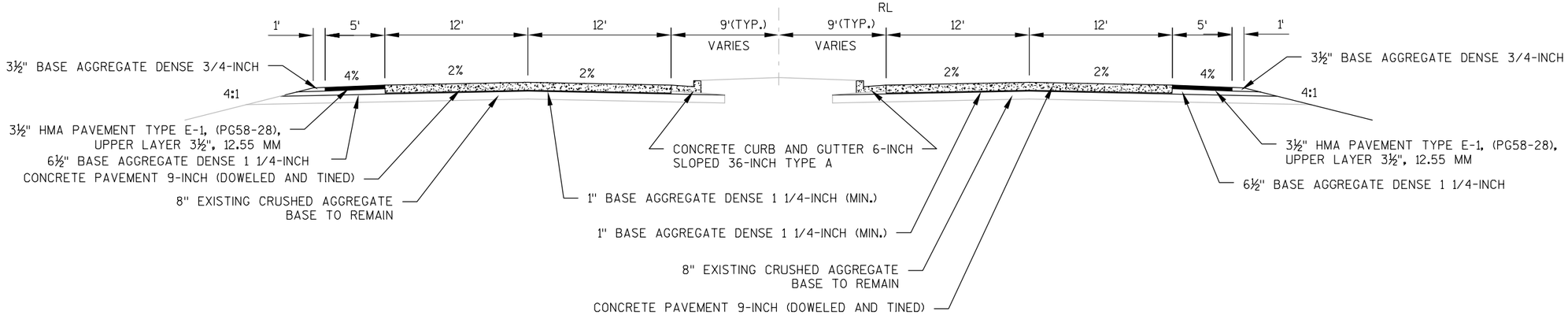
PROJECT NO:1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	TYPICAL SECTIONS - EXISTING	SHEET 4	E



TYPICAL FINISHED SECTION

CTH Y

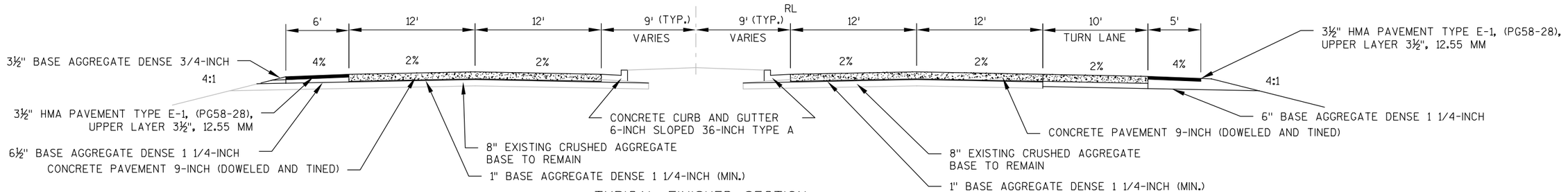
STA 44+75 - 46+53



TYPICAL FINISHED SECTION

CTH Y

STA 47+44 - 48+93
STA 51+04 - 53+92

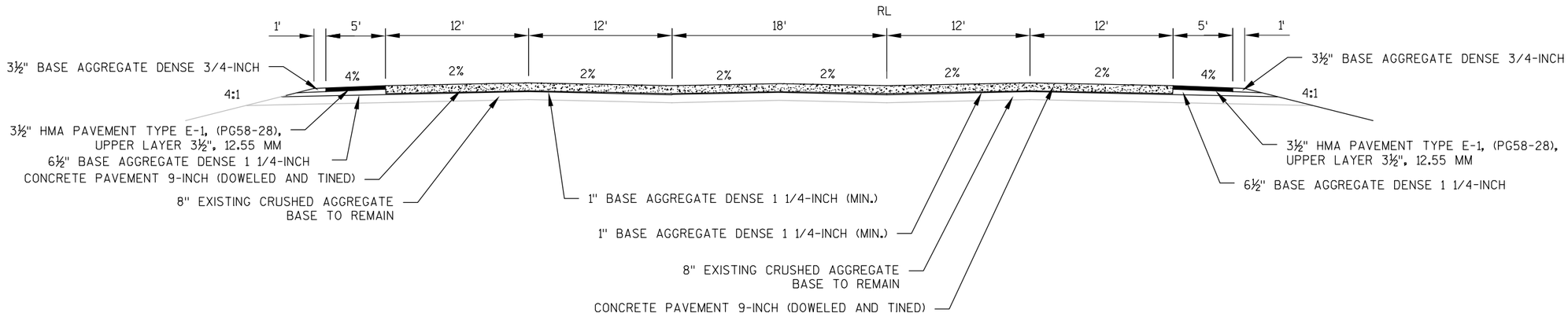


TYPICAL FINISHED SECTION

CTH Y

STA 53+92 - 56+70

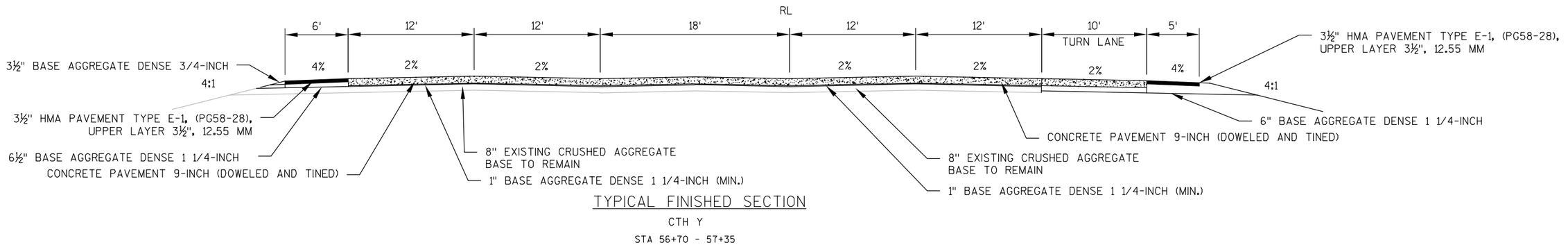
PROJECT NO:1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	TYPICAL SECTIONS - PROPOSED	SHEET 5	E



TYPICAL FINISHED SECTION

CTH Y

STA 46+53 - 47+44

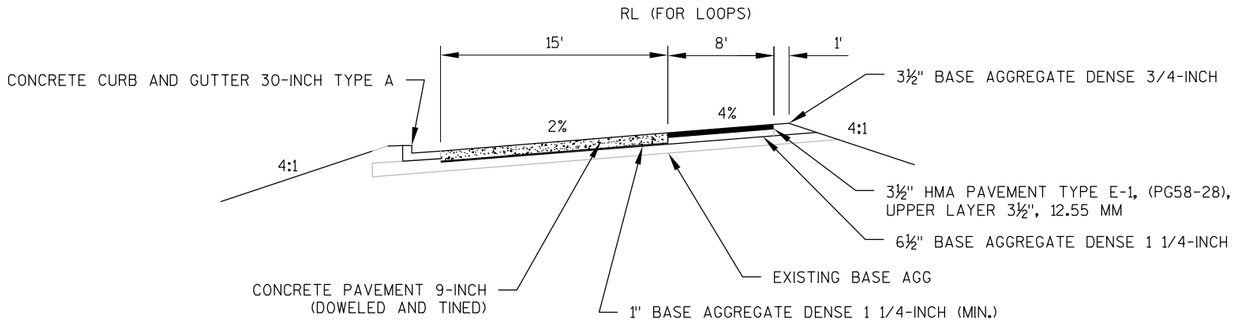


TYPICAL FINISHED SECTION

CTH Y

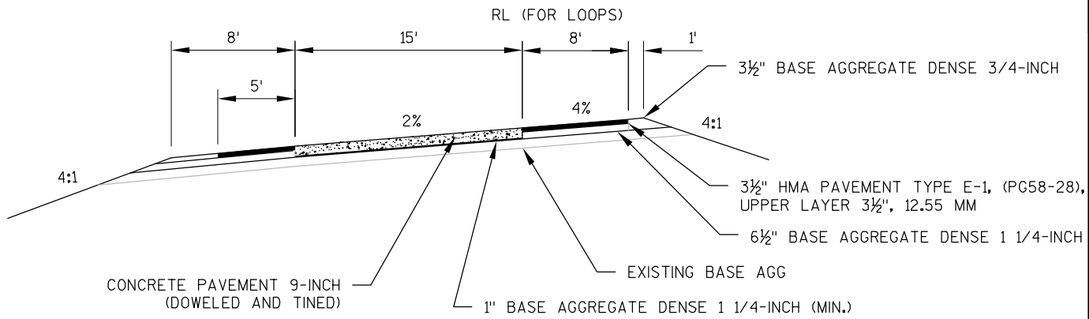
STA 56+70 - 57+35

PROJECT NO:1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	TYPICAL SECTIONS - PROPOSED	SHEET 6	E



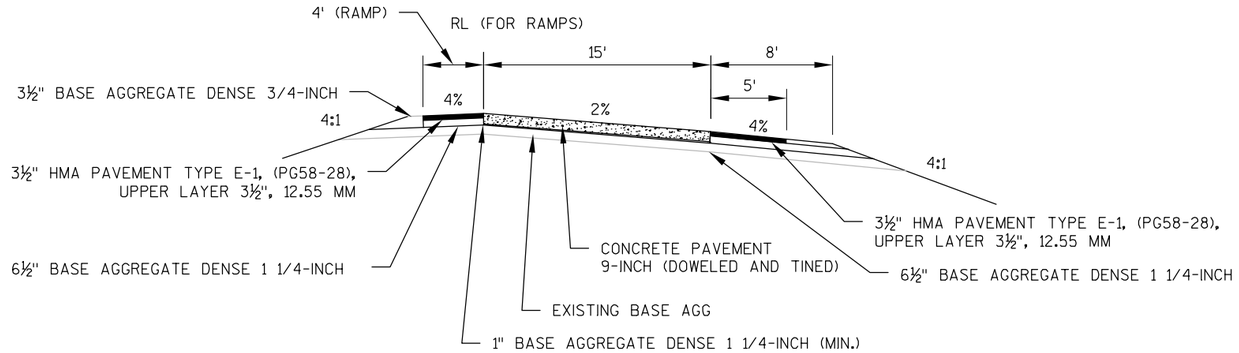
TYPICAL FINISHED SECTION

LOOPS WITH CURB AND GUTTER



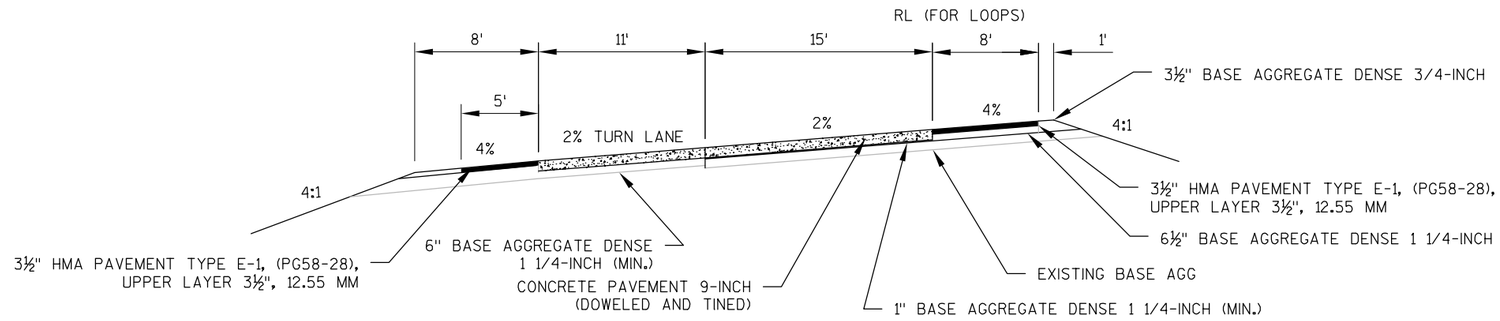
TYPICAL FINISHED SECTION

LOOPS WITHOUT CURB AND GUTTER



TYPICAL FINISHED SECTION

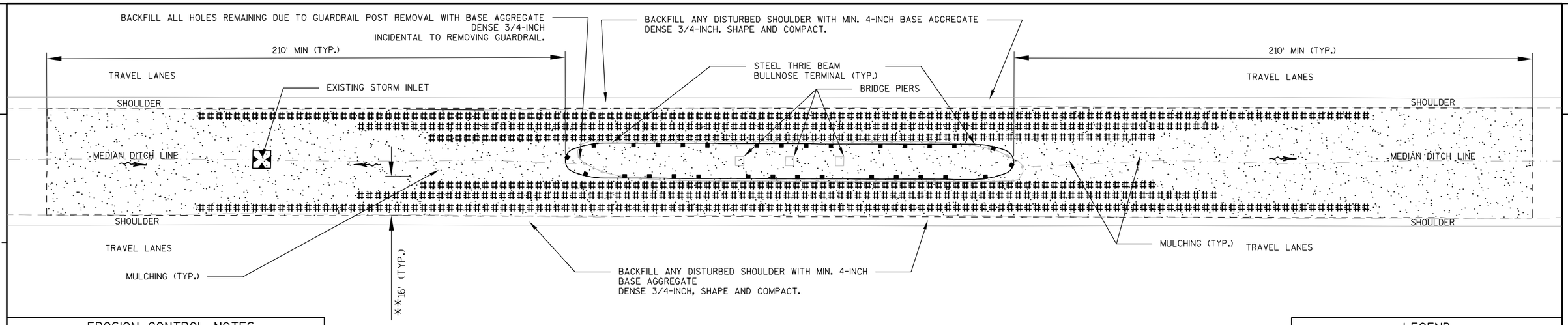
RAMPS



TYPICAL FINISHED SECTION

LOOPS WITH TURN LANE

PROJECT NO:1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	TYPICAL SECTIONS - PROPOSED	SHEET 7	E



EROSION CONTROL NOTES

DETAILS OF CONSTRUCTION AND EROSION CONTROL DEVICES NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE WISCONSIN D.O.T. STANDARD DETAILS.

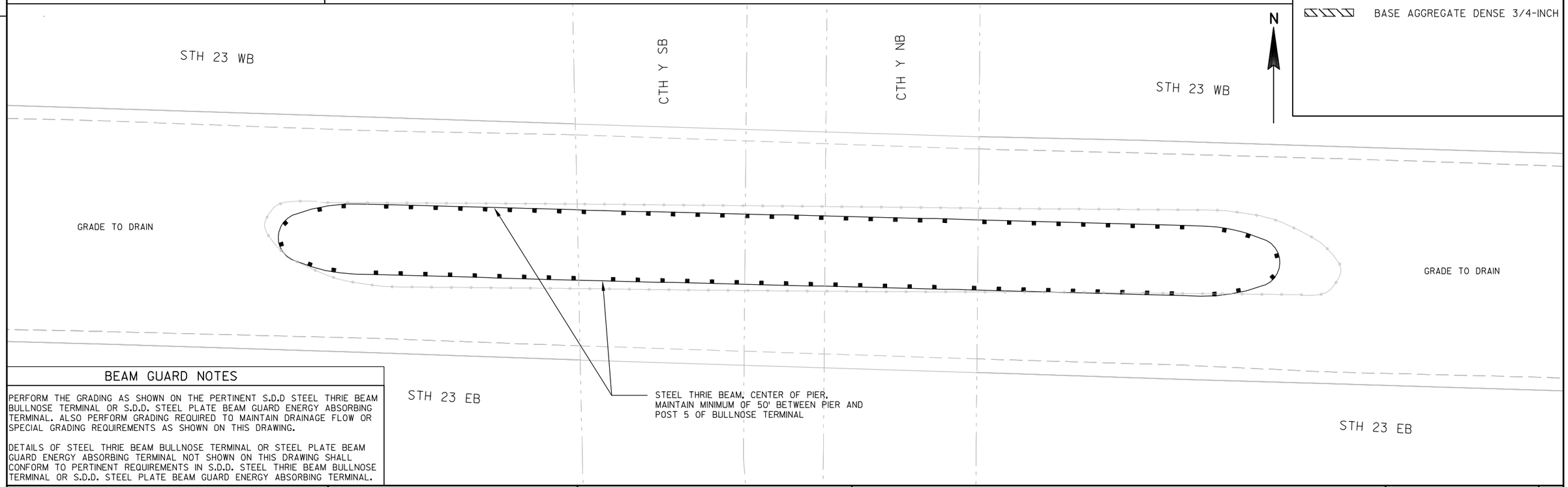
*TYPICAL EROSION CONTROL DEVICE INSTALLATION. SEE MISCELLANEOUS QUANTITIES FOR QUANTITIES.

**TYPICAL WIDTH IS MIN. FOR COVERAGE OF EROSION MAT CLASS I TYPE A OUTSIDE THE BULLNOSE TERMINAL. MULCHING IS REQUIRED INSIDE BULLNOSE TERMINAL AND THRIE BEAM. REMAINING AREA OUTSIDE BULLNOSE TERMINAL AND THRIE BEAM NOT COVERED BY EROSION MAT SHALL BE MULCHED.

LEGEND

- EROSION MAT CLASS I, TYPE A
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION TYPE A
- SURFACE WATER FLOW
- LIMITS OF CONSTRUCTION
- BASE AGGREGATE DENSE 3/4-INCH

TYPICAL DETAIL FOR CONSTRUCTION, EROSION CONTROL & RESTORATION AT STEEL THRIE BEAM BULLNOSE TERMINAL INSTALLATIONS



BEAM GUARD NOTES

PERFORM THE GRADING AS SHOWN ON THE PERTINENT S.D.D STEEL THRIE BEAM BULLNOSE TERMINAL OR S.D.D. STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL. ALSO PERFORM GRADING REQUIRED TO MAINTAIN DRAINAGE FLOW OR SPECIAL GRADING REQUIREMENTS AS SHOWN ON THIS DRAWING.

DETAILS OF STEEL THRIE BEAM BULLNOSE TERMINAL OR STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS IN S.D.D. STEEL THRIE BEAM BULLNOSE TERMINAL OR S.D.D. STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL.

PROJECT NO:1440-27-71	HWY: CTH Y	COUNTY: SHEBOYGAN	TYP. EROSION CONTROL, RESTORATION, & CONSTRUCTION DETAILS	SHEET 8	E

2

RADIUS POINT TABLE

1	45+92.09, 141.0, RT
2	46+05.45, 82.8' LT
3	46+43.17, 9.0' LT, 9' RAD
4	46+48.90, 58.1, LT, 5' RAD
5	46+57.35, 58.85, LT, 5' RAD
6	46+68.09, 38.0, RT, 5' RAD
7	46+84.53, 37.0, RT, 5' RAD
8	46+86.56, 52, LT
9	47+29.45, 56, RT
10	47+47.56, 4.0, LT
11	116+38.34, 19.0, RT, 4' RAD
12	200+54.17, 20.0, RT, 5' RAD

N

STH 23 EB OFF RAMP

ASPHALTIC SURFACE SAFETY ISLAND

CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE A

CONCRETE CURB & GUTTER 18-INCH TYPE A

SAWING ASPHALT MATCH 60' LT

CURB RAMP DETECTABLE WARNING FIELD YELLOW CURB RAMP TYPE 2

CONCRETE MEDIAN SLOPED NOSE

CTH Y

CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE A

CURB RAMP DETECTABLE WARNING FIELD YELLOW CURB RAMP TYPE 5

SAWING CONCRETE

MATCH CURB & GUTTER FROM PROJECT 4996-15-70 PLANNED TO BE CONSTRUCTED 2014

SAWING ASPHALT MATCH 36' LT

CONCRETE CURB & GUTTER 30-INCH TYPE A

CURB RAMP DETECTABLE WARNING FIELD YELLOW CURB RAMP TYPE 2

SAWING ASPHALT MATCH 45' LT

CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE A

ASPHALTIC SURFACE SAFETY ISLAND

CONCRETE CURB & GUTTER 30-INCH TYPE A

STH 23 EB ON RAMP

PROJECT NO:1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PAVING DETAIL: CTH Y	SHEET 9	E

FILE NAME : L:\PROJECTS\12067\DWG\021201_PD.DWG PLOT DATE : 10/30/2013 9:58 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

2

N

CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE A

CTH Y

660.93 660.63 660.74 660.44 660.57 660.27

318+14.31

685.50 686.07 686.34 686.52 686.58 686.41 686.06

685.02 685.59 685.86 686.04 686.10 685.93 685.58

685.17 685.61 685.91 686.08 686.11 686.00 685.77

685.17 685.61 685.91 686.08 686.11 685.99 685.63 685.14

24'

24'

+92.34

24.00

49+00 50+00 51+00 52+00 53+00 54+00 55+00

400+00

400+00

660.12 659.82 659.89 659.59

PROJECT NO:1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PAVING DETAIL: CTH Y	SHEET 10	E

FILE NAME : L:\PROJECTS\12067\DWG\021201_PD.DWG PLOT DATE : 10/30/2013 9:58 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

2

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RADIUS POINT TABLE

13	56+14.63, 100.0', LT
14	56+40.09, 91.0' RT
15	56+59.8, 9.0' LT
16	56+75.0, 58.1' LT, 5' RAD
17	56+82.0, 58.8' LT, 5' RAD
18	56+83.1, 97.6' LT, 4' RAD
19	57+11.9, 53' LT
20	57+34.9, 56' RT

ASPHALTIC SURFACE SAFETY ISLAND

CONCRETE MEDIAN SLOPED NOSE

CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE A

CONCRETE MEDIAN SLOPED NOSE

SAWING CONCRETE

CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE A

R50 R10 R50 R20

24' 32' 41' 23'

55+00 56+00 57+00 58+00 59+00 60+00 61

301+00 302+00 417+00 418+00

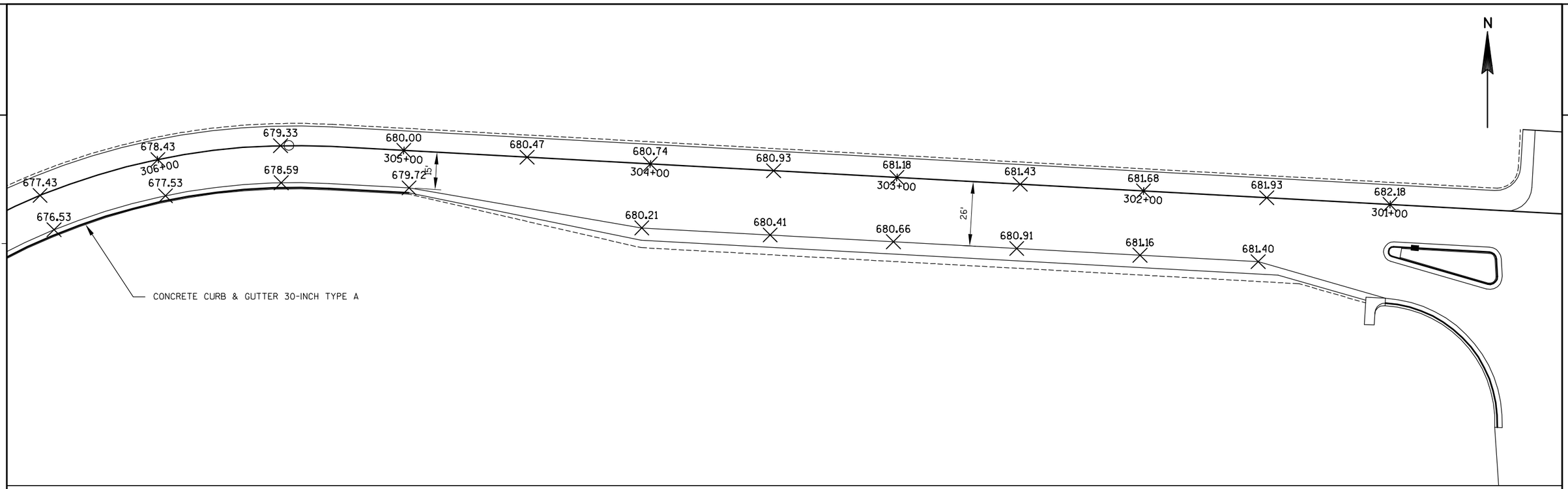
+52.05 -26.00 +64.21 -99.77 +14.99 -42.00 +14.63 -50.00 +59.80 -18.00 +59.80 0.00 +1.92 -52.99 +11.88 -43.00 +42.65 41.00 +40.00 41.00 +34.86 36.00 +14.71 57.43 +90.46 92.69

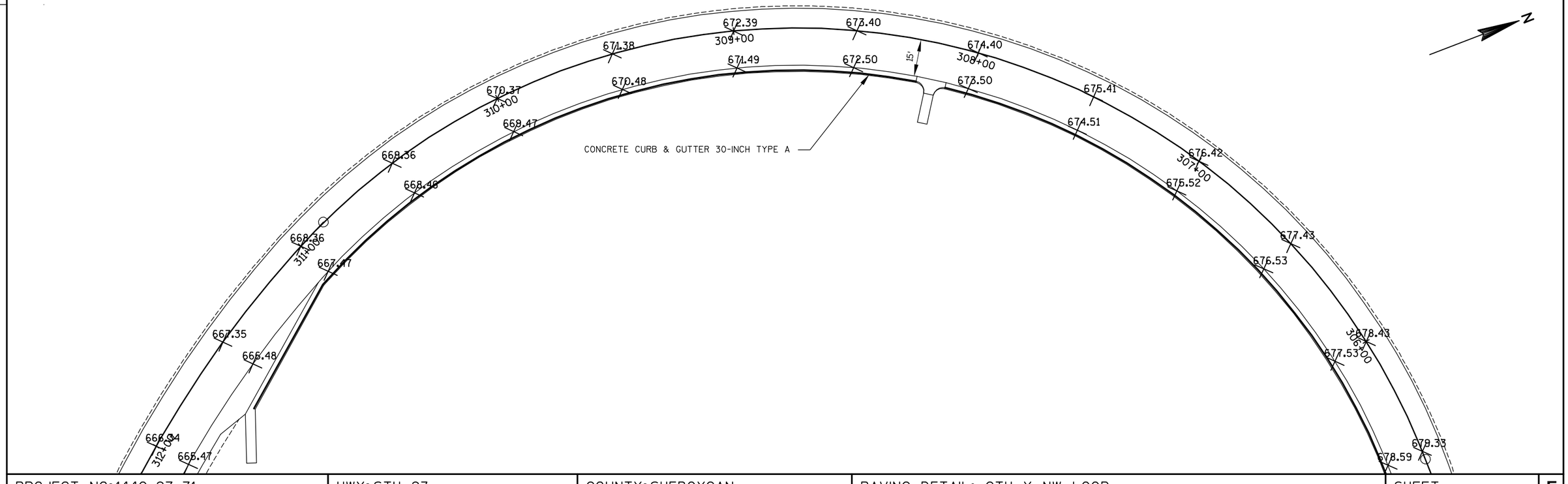
681.68 681.93 681.53 681.89 682.18 681.86 682.05 682.35 682.83 682.93 682.83 683.68 684.75 685.65 685.33 682.63 682.63 685.17 684.77 684.09 683.28 685.04 685.39 684.88 684.24 683.45 683.28 682.54 685.14 684.54 683.90 683.28 683.09 680.98 681.67 681.74 680.60 681.02 679.72 680.10

13 14 15 16 17 18 19 20

PROJECT NO:1440-27-71 | HWY:STH 23 | COUNTY:SHEBOYGAN | PAVING DETAIL: CTH Y | SHEET 11 | E

2





PROJECT NO:1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PAVING DETAIL: CTH Y NW LOOP	SHEET 12	E

2

2

N

665.47
664.34
314+00
664.46
665.33
663.65
664.52
313+00
662.97
663.84
662.40
663.25
314+00
662.11
15'
662.74
661.68
662.31
315+00
661.33
661.96
661.07
661.70
316+00
660.89
661.51
660.75
661.32
317+00
660.83
661.13
660.63
660.93
318+00
660.44
660.74
660.80
318+00

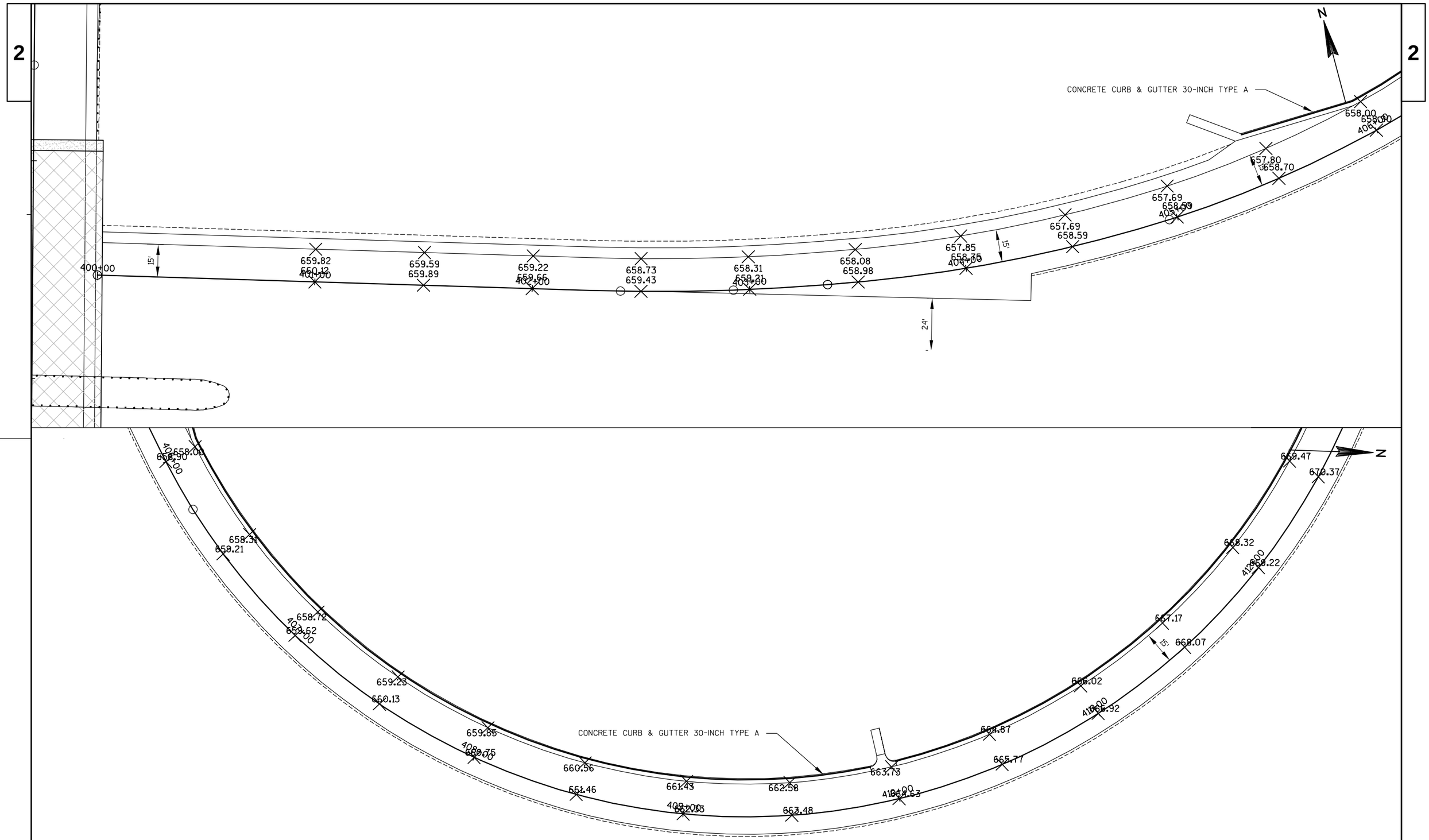
N

662.11
662.74
661.68
662.31
314+00
661.33
661.96
661.07
661.70
316+00
660.89
661.51
660.75
661.32
317+00
660.83
661.13
660.63
660.93
318+00
660.44
660.74
15'
319+00
319+14
400+00
51+00
51+00
50+00
50+00

PROJECT NO:1440-27-71	HWY:STH 23	COUNTY:SHEBOYGAN	PAVING DETAIL: CTH Y NW LOOP	SHEET 13	E

FILE NAME : L:\PROJECTS\12067\DWG\021204_PD.DWG PLOT DATE : 10/30/2013 9:58 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42



PROJECT NO:1440-27-71	HWY:STH 23	COUNTY:SHEBOYGAN	PAVING DETAIL: CTH Y NE LOOP	SHEET 14	E

FILE NAME : L:\PROJECTS\12067\DWG\021206_PD.DWG PLOT DATE : 10/30/2013 9:58 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

2

N

418+00

681.02

680.10

417+00

679.18

678.26

416+00

677.25

676.11

415+00

674.96

673.81

414+00

672.66

671.51

413+00

670.31

669.47

669.22

412+00

668.32

920'

700'

678.88

677.96

676.95

675.81

674.66

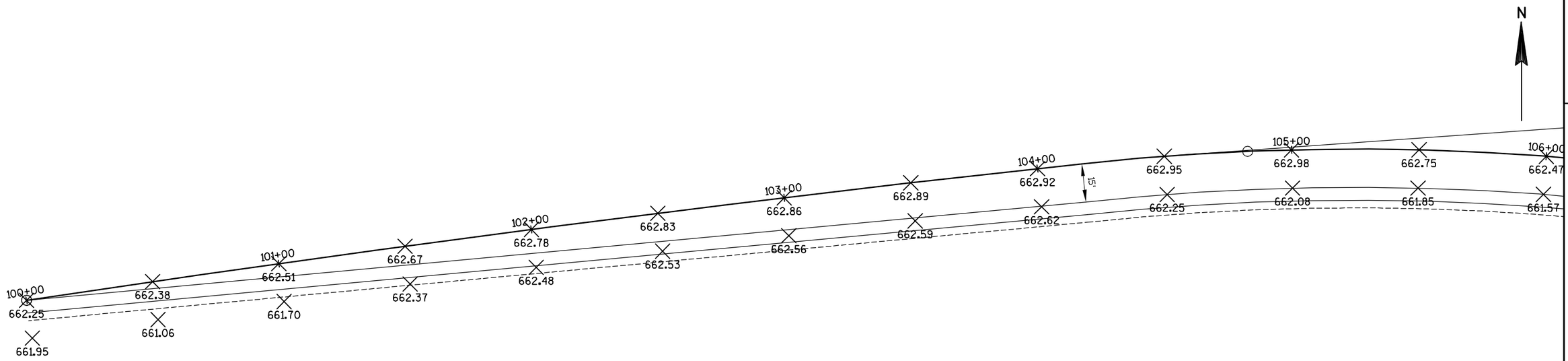
673.40

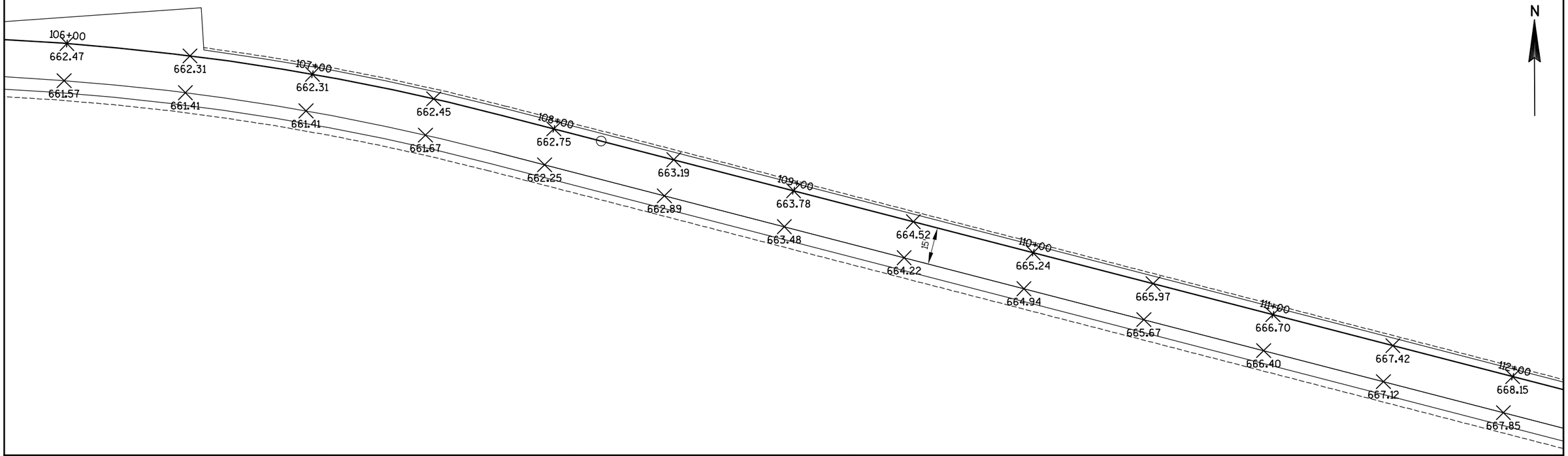
671.96

670.61

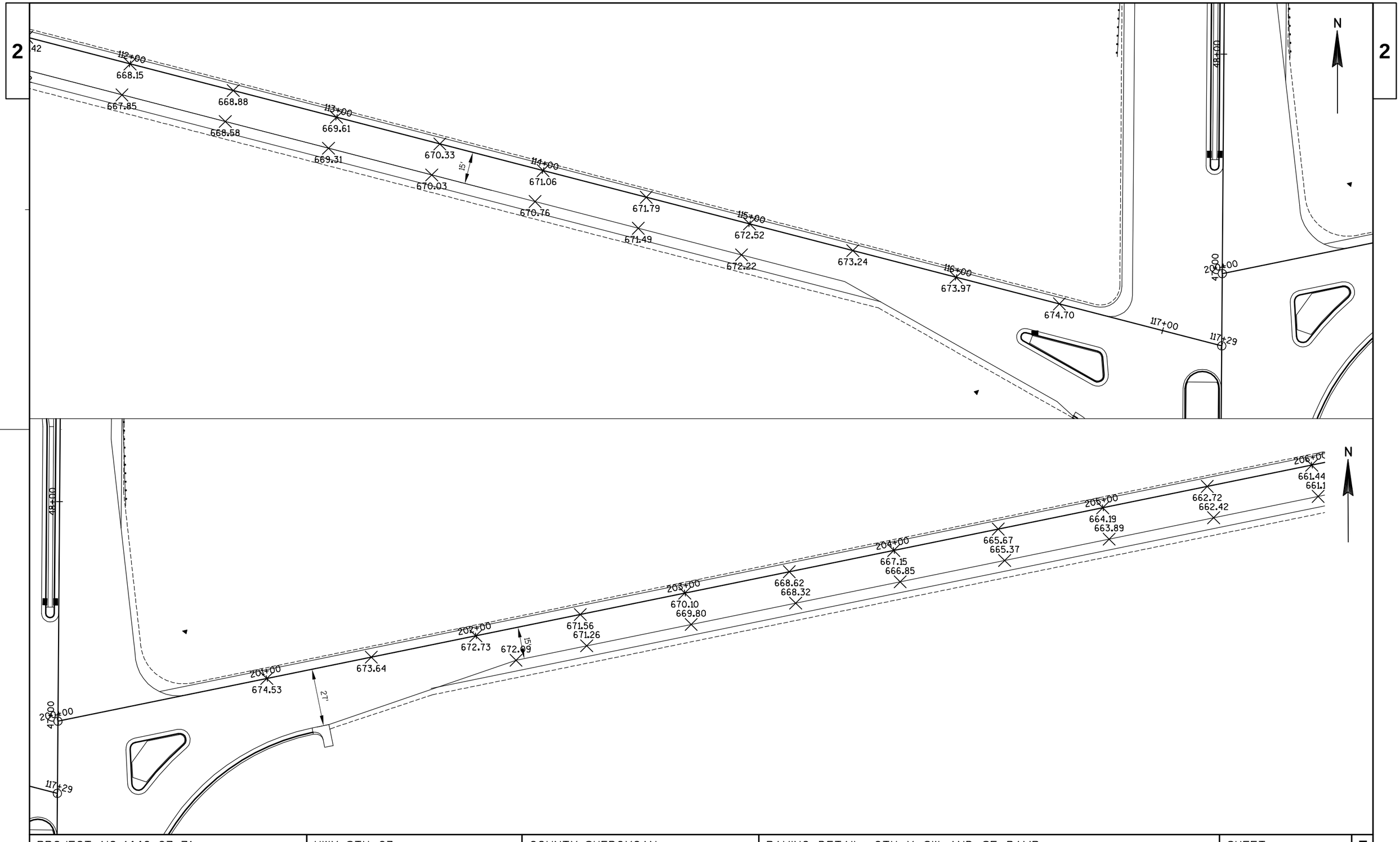
CONCRETE CURB & GUTTER 30-INCH TYPE A

PROJECT NO:1440-27-71	HWY:STH 23	COUNTY:SHEBOYGAN	PAVING DETAIL: CTH Y NE LOOP	SHEET 15	E

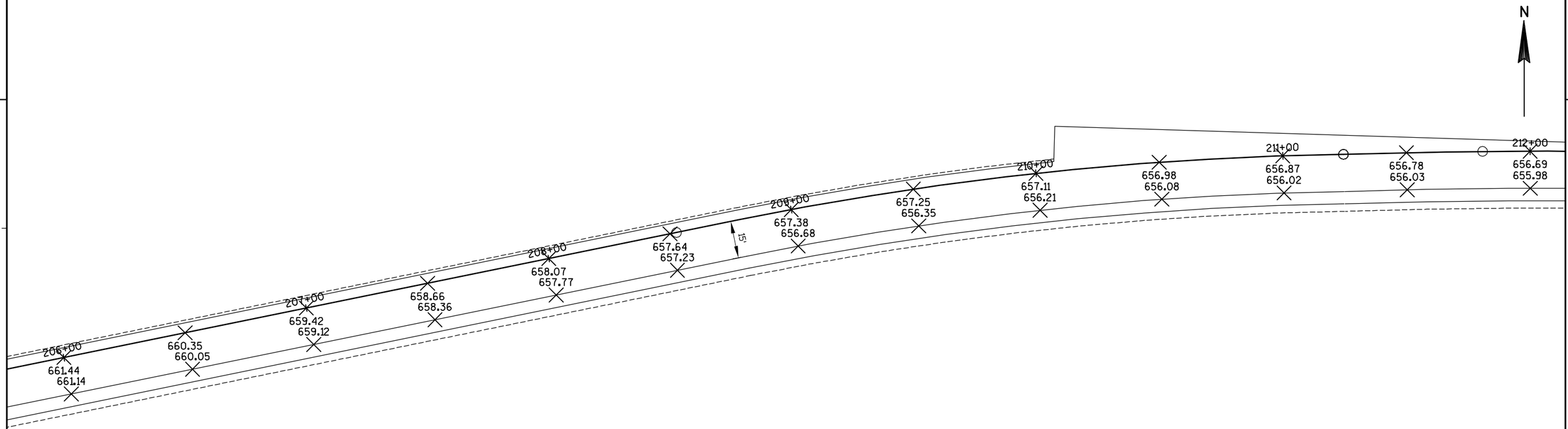


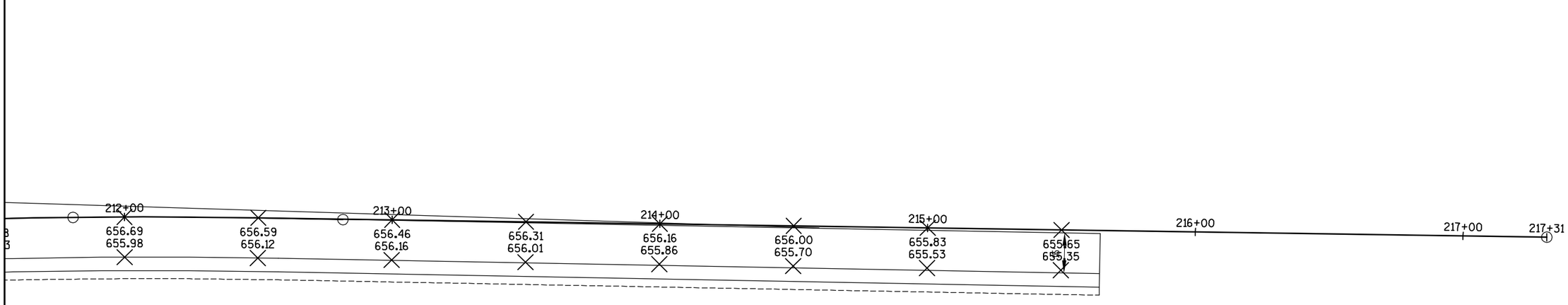


PROJECT NO:1440-27-71	HWY:STH 23	COUNTY:SHEBOYGAN	PAVING DETAIL: CTH Y SW RAMP	SHEET 16	E



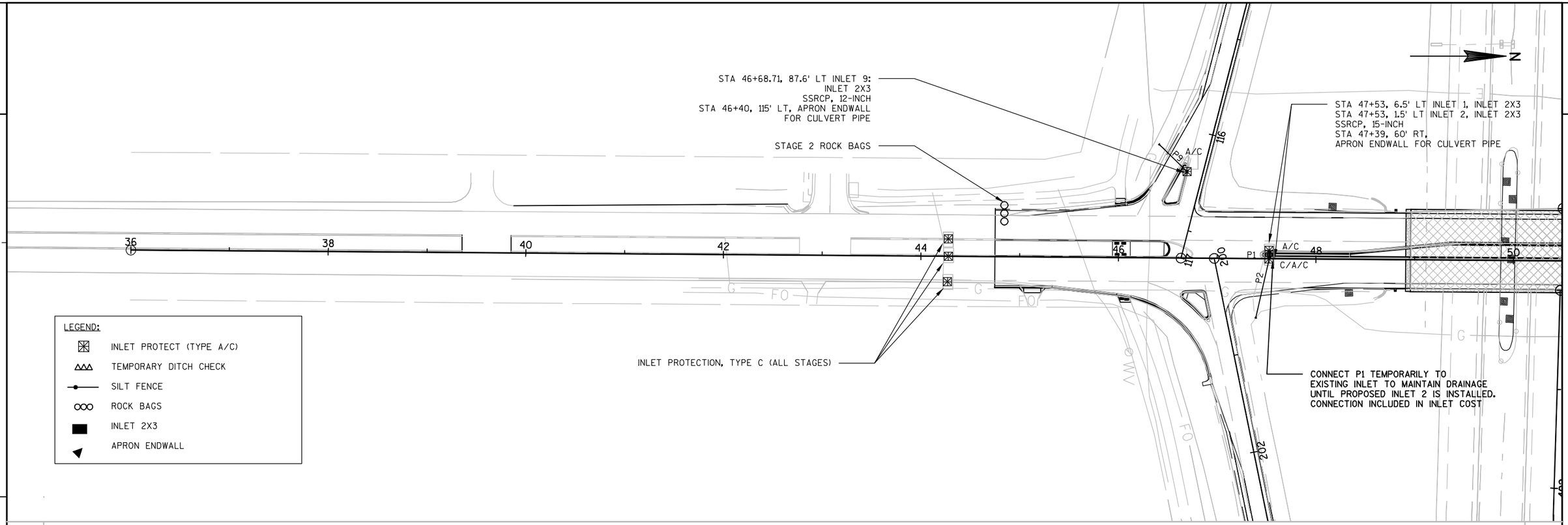
PROJECT NO:1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PAVING DETAIL: CTH Y SW AND SE RAMP	SHEET 17	E



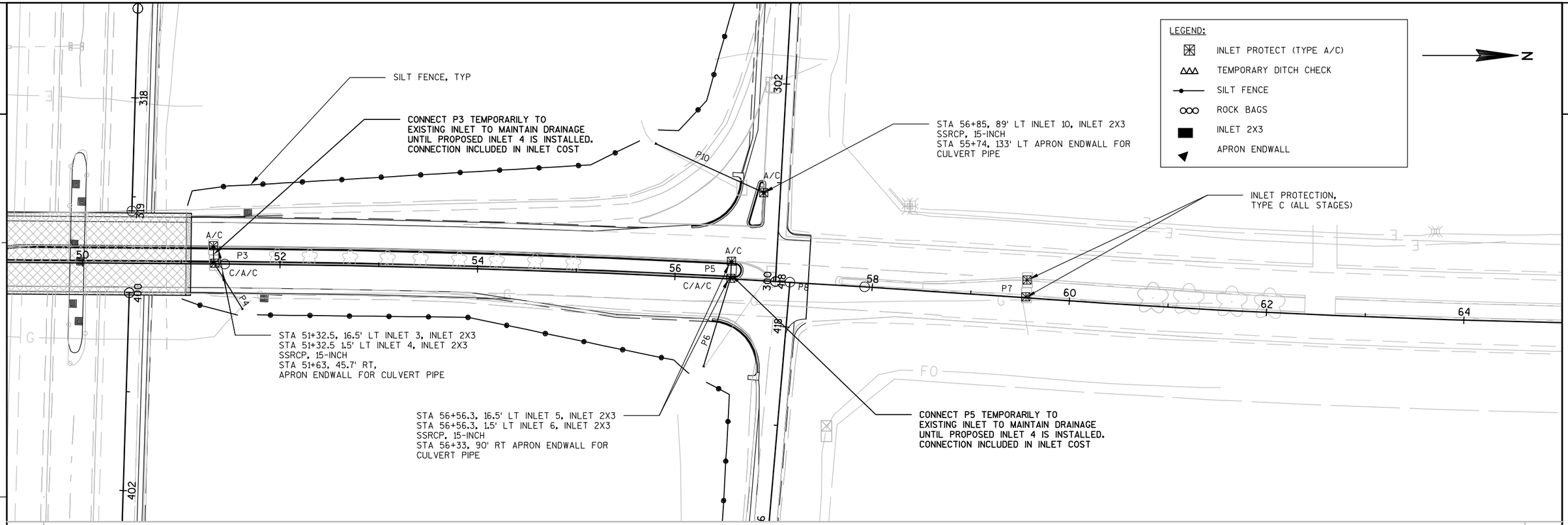


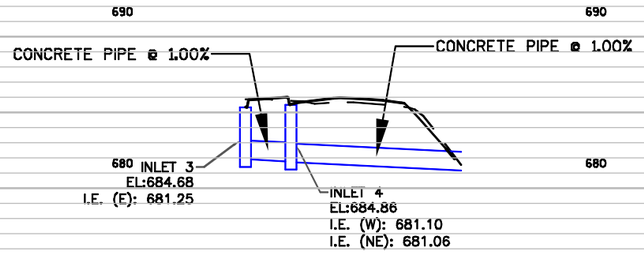
PROJECT NO:1440-27-71	HWY:STH 23	COUNTY:SHEBOYGAN	PAVING DETAIL: CTH Y SE RAMP	SHEET 18	E

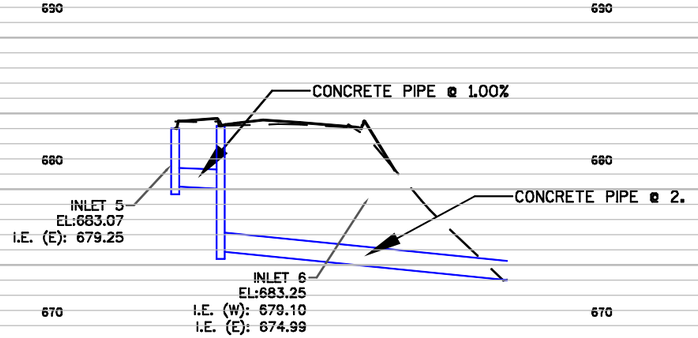
FILE NAME : L:\PROJECTS\12067\DWG\021210_PD.DWG PLOT DATE : 10/30/2013 9:59 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1:40

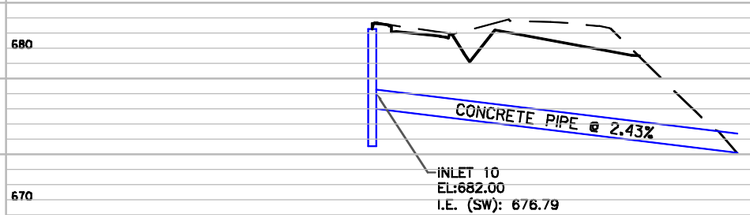


PROJECT NO:1440-27-71	HWY: CTH Y	COUNTY: SHEBOYGAN	EROSION CONTROL/STORM SEWER CTH Y	SHEET 19	E

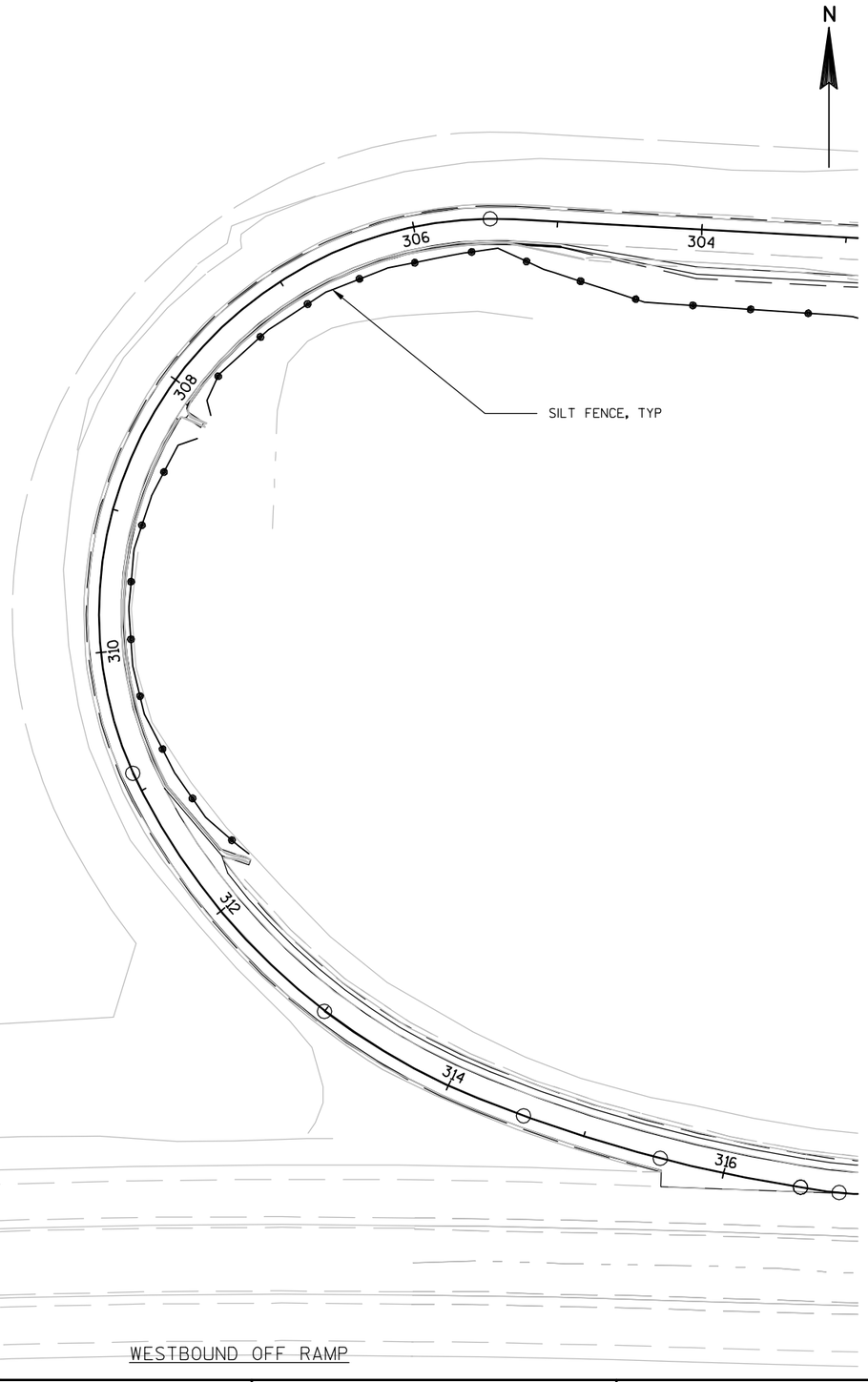




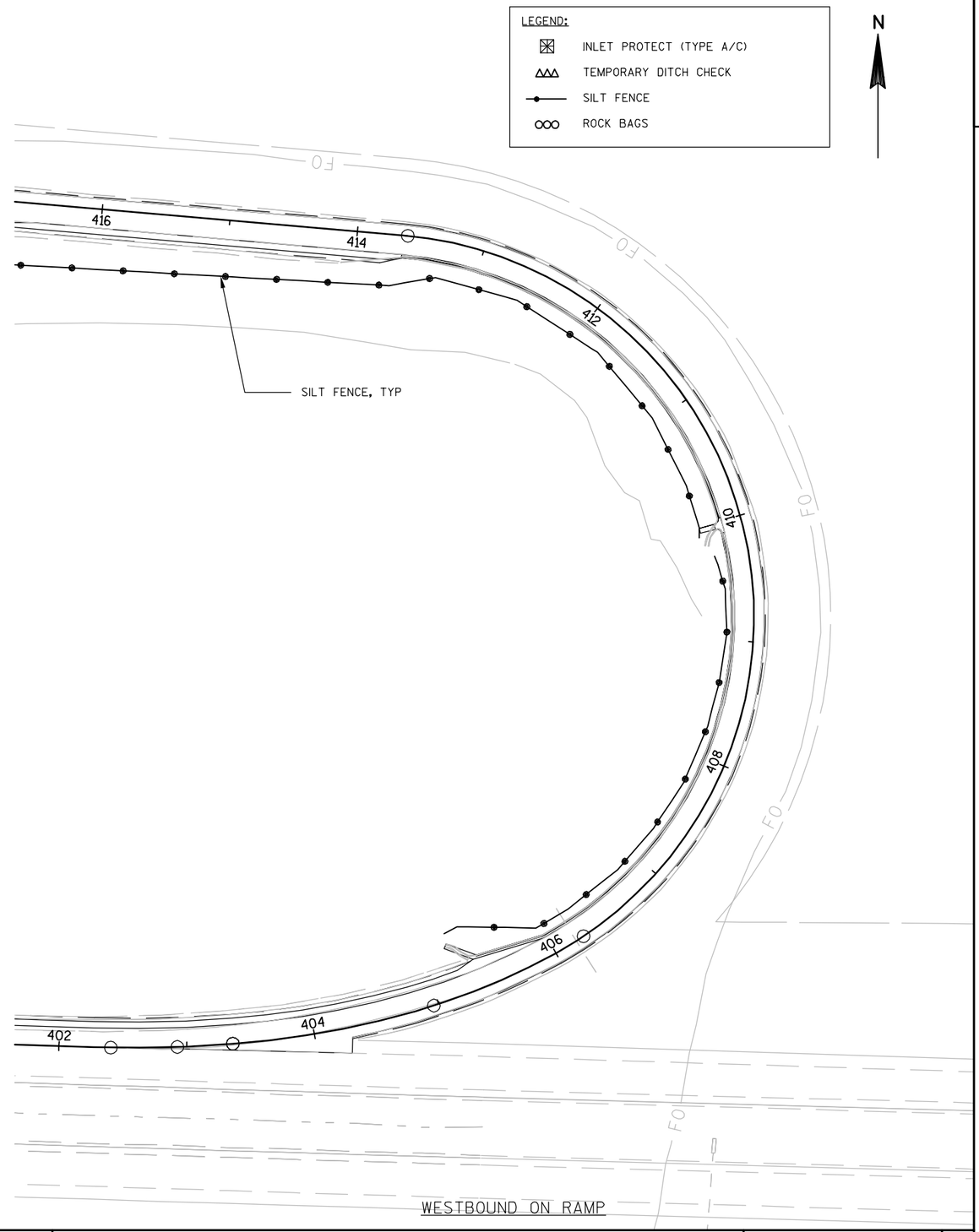




PROJECT NO:1440-27-71	HWY: CTH Y	COUNTY: SHEBOYGAN	EROSION CONTROL/STORM SEWER CTH Y	SHEET 20	E



WESTBOUND OFF RAMP



WESTBOUND ON RAMP

2

PROJECT NO:1440-27-71	HWY:CTH Y	COUNTY:SHEBOYGAN	EROSION CONTROL - WESTBOUND OFF AND ON RAMPS	SHEET 21	E

SIGNING NOTES

TYPE II SIGNS AND SUPPORTS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL TRAFFIC UNIT. SIGNS SHALL BE CAREFULLY REMOVED FROM THE SUPPORTS, SORTED BY BASE MATERIAL AND PALLETIZED BY MATERIAL TYPE. SUPPORTS SHALL BE SORTED BY LENGTH AND TYPE. THE REGIONAL TRAFFIC UNIT 920-492-5653, SHALL BE NOTIFIED THREE WORKING DAYS PRIOR TO DELIVERY OF SIGNS AND SUPPORTS.

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

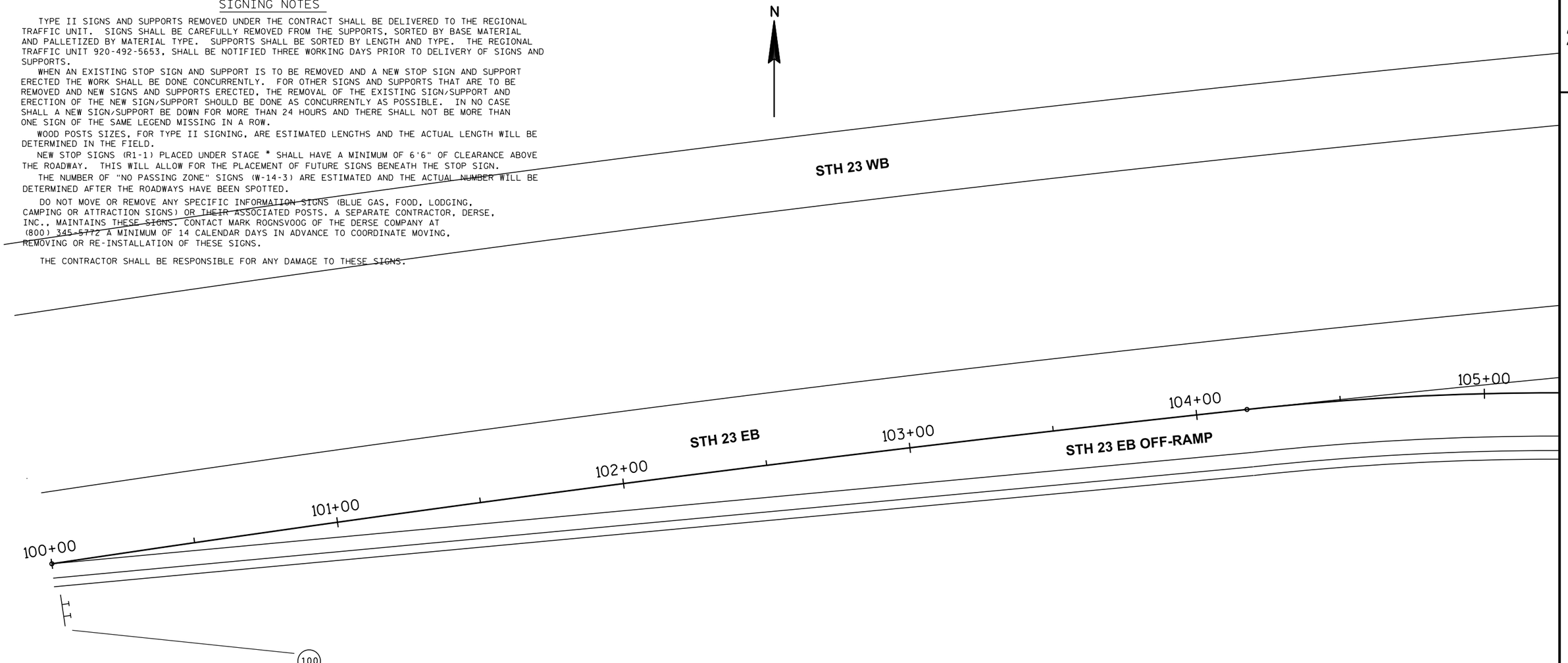
WOOD POSTS SIZES, FOR TYPE II SIGNING, ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

NEW STOP SIGNS (R1-1) PLACED UNDER STAGE * SHALL HAVE A MINIMUM OF 6'6" OF CLEARANCE ABOVE THE ROADWAY. THIS WILL ALLOW FOR THE PLACEMENT OF FUTURE SIGNS BENEATH THE STOP SIGN.

THE NUMBER OF "NO PASSING ZONE" SIGNS (W-14-3) ARE ESTIMATED AND THE ACTUAL NUMBER WILL BE DETERMINED AFTER THE ROADWAYS HAVE BEEN SPOTTED.

DO NOT MOVE OR REMOVE ANY SPECIFIC INFORMATION SIGNS (BLUE GAS, FOOD, LODGING, CAMPING OR ATTRACTION SIGNS) OR THEIR ASSOCIATED POSTS. A SEPARATE CONTRACTOR, DERSE, INC., MAINTAINS THESE SIGNS. CONTACT MARK ROGNSVOOG OF THE DERSE COMPANY AT (800) 345-5772 A MINIMUM OF 14 CALENDAR DAYS IN ADVANCE TO COORDINATE MOVING, REMOVING OR RE-INSTALLATION OF THESE SIGNS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THESE SIGNS.



E4-1A
180" X 90"

SIGN-REMOVE AND REPLACE

SIGN-REMOVE EXISTING

SIGN-PLACE NEW

PLAN SHEET PRODUCED
BY WisDOT-NE REGION

PROJECT NO:1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PERMANENT SIGNING	SHEET 22	E

2

SIGNING NOTES

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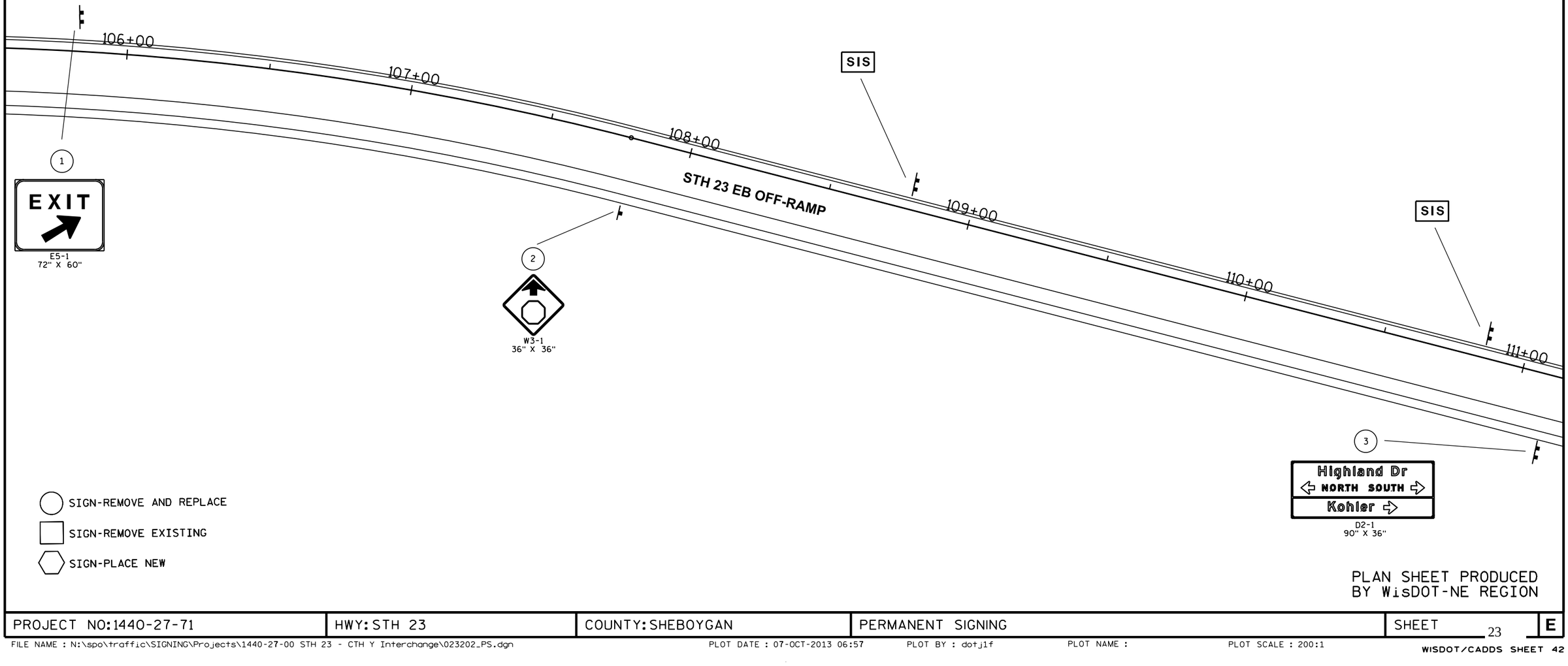

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO:1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PERMANENT SIGNING	SHEET 23	E

2

SIGNING NOTES

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THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THESE SIGNS.

N

SIS

112+00

113+00

114+00

115+00

116+00

STH 23 EB OFF-RAMP

4
COUNTY Y
J13-1
24" X 45"

5
WRONG WAY
R5-1A
36" X 24"

WRONG WAY
R5-1A
36" X 24"
4A

W12-1D
24" X 24"
5A

STOP
R1-1
30" X 30"
6

DIVIDED HIGHWAY
R6-3
30" X 24"
6A

ONE WAY
R6-2L
24" X 30"
7A

DO NOT ENTER
R5-1
30" X 30"
7

8A
ONE WAY
R6-1R
36" X 12"

8
STOP
R1-1
30" X 30"

9
ONE WAY
R6-2L

10
ONE WAY
R6-2R

11
DO NOT ENTER
R5-1

SIGN-REMOVE AND REPLACE

SIGN-REMOVE EXISTING

SIGN-PLACE NEW

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PERMANENT SIGNING	SHEET	E

FILE NAME : N:\spo\traffic\SIGNING\Projects\1440-27-00 STH 23 - CTH Y Interchange\023203_PS.dgn PLOT DATE : 07-OCT-2013 06:57 PLOT BY : dotj1f PLOT NAME : PLOT SCALE : 200:1

WISDOT/CADDS SHEET 42

SIGNING NOTES

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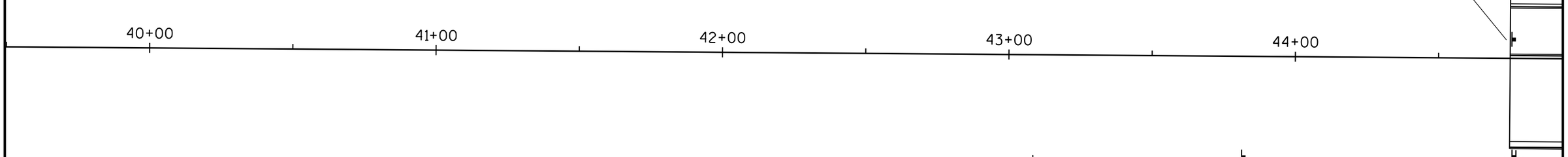

14
NORTH TO COUNTY Y 42
J3-2
48" X 57"

21
JCT JCT 23 COUNTY Y
J1-2
48" X 39"

19
WEST 23 EAST
KEEP LEFT
KEEP RIGHT
D1-72
120" X 60"

20
WEST TO INTERSTATE 23 43 EAST 23
J2-3

18
Hwy 42 Plymouth
D1-2
66" X 24"

17
SPEED LIMIT 45
R2-1
24" X 30"

16
EAST TO INTERSTATE 23 43
J3-2
48" X 57"

SIGN-REMOVE AND REPLACE

SIGN-REMOVE EXISTING

SIGN-PLACE NEW

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PERMANENT SIGNING	SHEET 25	E

2

N

STH 23 EB OFF-RAMP

116+00

117+00

45

46+00

47+00

48+00

49+00

50

50+00

HIGHLAND DR

201+00

STH 23 EB ON-RAMP

29 — R5-1 DO NOT ENTER 30" X 30"

30 — R3-1 24" X 24"

31 — R5-1A WRONG WAY 36" X 24"

32 — D1-1 Kohler 54" X 15"

12 A — R3-2 24" X 24"

12 — J3-2 EAST TO INTERSTATE 23 43 48" X 57"

22 — J3-2 EAST TO INTERSTATE 23 43

23 — R5-1 DO NOT ENTER 30" X 30"

24 — R6-2L ONE WAY 24" X 30"

33 — R5-57 PEDESTRIANS BICYCLES NON MOTORIZED TRAFFIC MOTOR BICYCLES PROHIBITED 36" X 36"

25 — R4-7 24" X 30"

26 — R6-2L ONE WAY 24" X 30"

27 — D1-70 23 EAST Sheboygan 78" X 30"

28 — D1-71 23 WEST Fond du Lac / 23 EAST Sheboygan 78" X 60"

SIGN-REMOVE AND REPLACE

SIGN-REMOVE EXISTING

SIGN-PLACE NEW

SIGNING NOTES

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PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PERMANENT SIGNING	SHEET 26	E

2

SIGNING NOTES

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THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THESE SIGNS.

N

319+00

319+14

51+00

52+00

53+00

54+00

55

55+00

400+00

401+00

CTH Y / HIGHLAND DR

STH 23 WB OFF-RAMP

48
RECREATIONAL TRAIL XING
W11-15A
30" X 30"

48
EAST
23
J2-1
49

47
YIELD
R1-2

50
NORTH WEST
COUNTY Y 23
J2-2
48" X 57"

51
RAMP
30
M.P.H.
W13-3
48" X 60"

Y
Kohler
E4-1A
180" X 90"

101

54
Plymouth
Greenbush
D1-2
72" X 24"

55
WRONG WAY
R5-1A
36" X 24"

SIGN-REMOVE AND REPLACE

SIGN-REMOVE EXISTING

SIGN-PLACE NEW

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PERMANENT SIGNING	SHEET 27	E

2

SIGNING NOTES

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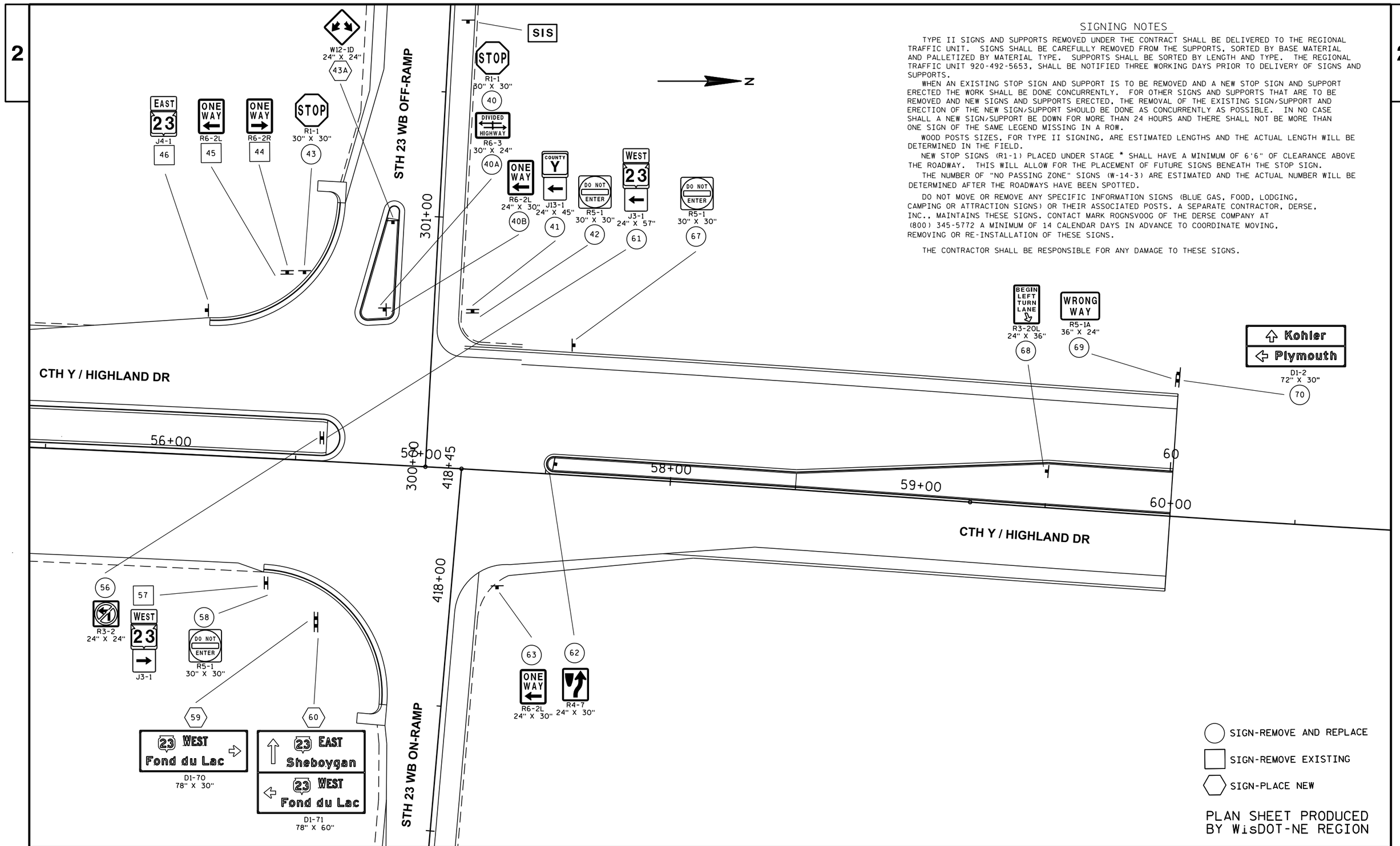

SIGN-REMOVE AND REPLACE

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SIGN-PLACE NEW

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO:1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PERMANENT SIGNING	SHEET 28 E

SIGNING NOTES

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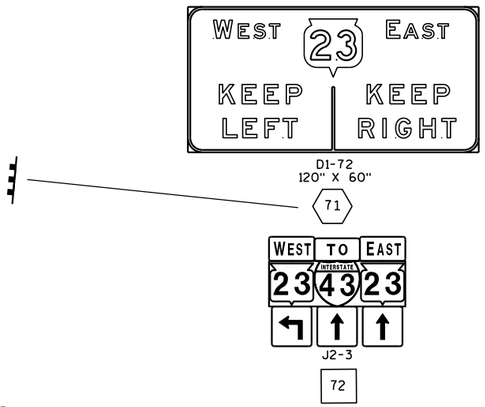

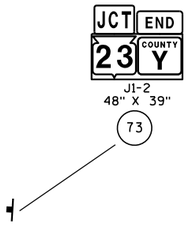

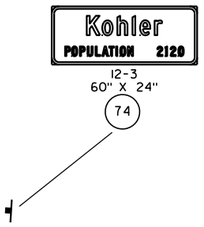

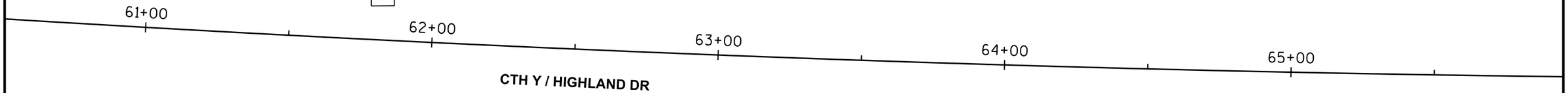

SIGN-REMOVE AND REPLACE

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SIGN-PLACE NEW

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PERMANENT SIGNING	SHEET 29	E

2

N

36E
W1-8
18" X 24"

312+00

36D
W1-8
18" X 24"

W1-8
18" X 24"
36C

313+00

W1-8
18" X 24"
36B

W1-8
18" X 24"
36A

314+00

WEST
23
J4-1
36" X 54"
34

SPONSOR
155-56
35

315+00

EXIT
E5-1
72" X 60"
36

316+00

317+00

SIGN-REMOVE AND REPLACE

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SIGNING NOTES

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PLAN SHEET PRODUCED
BY WisDOT-NE REGION

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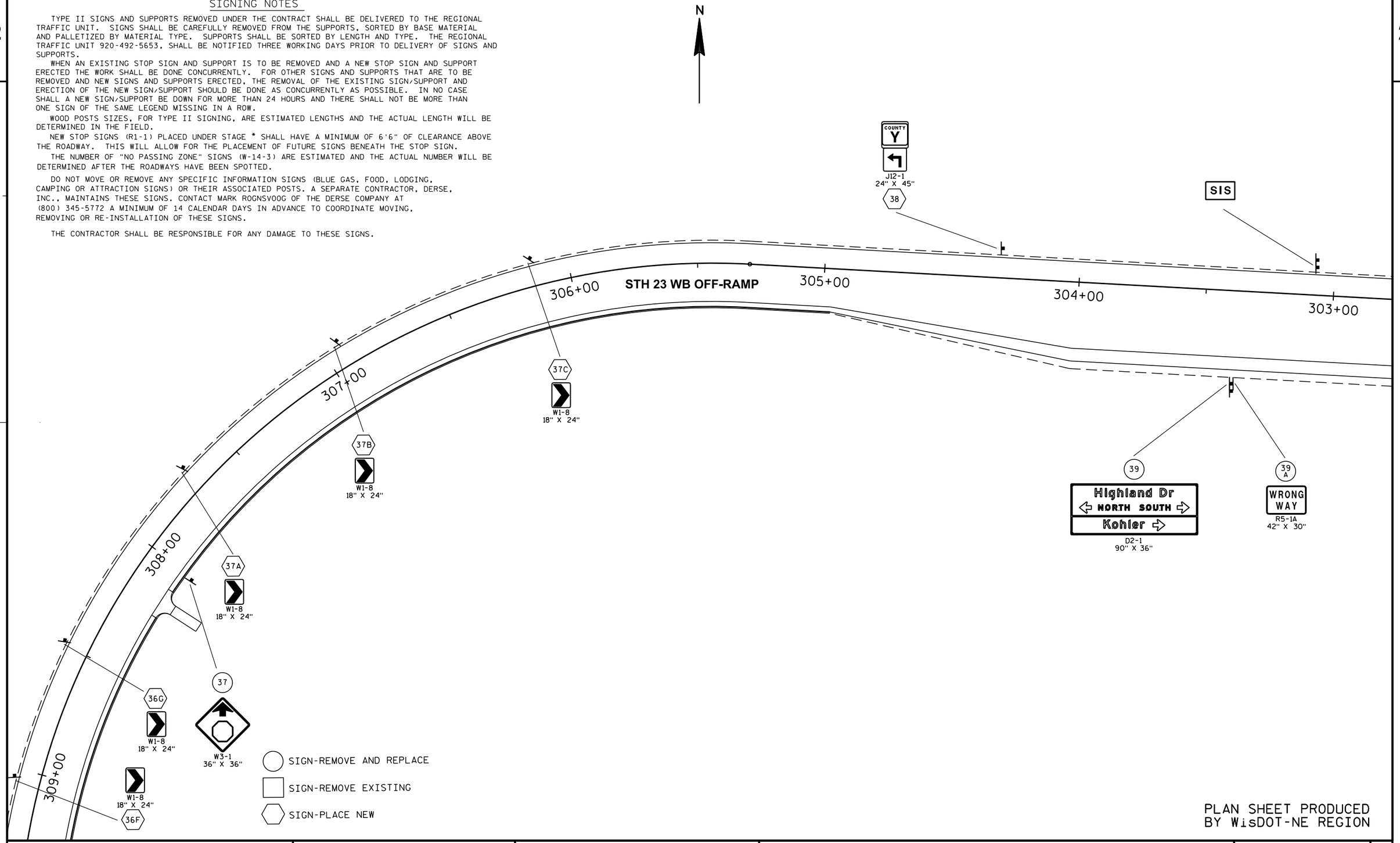

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PERMANENT SIGNING	SHEET 31	E

SIGNING NOTES

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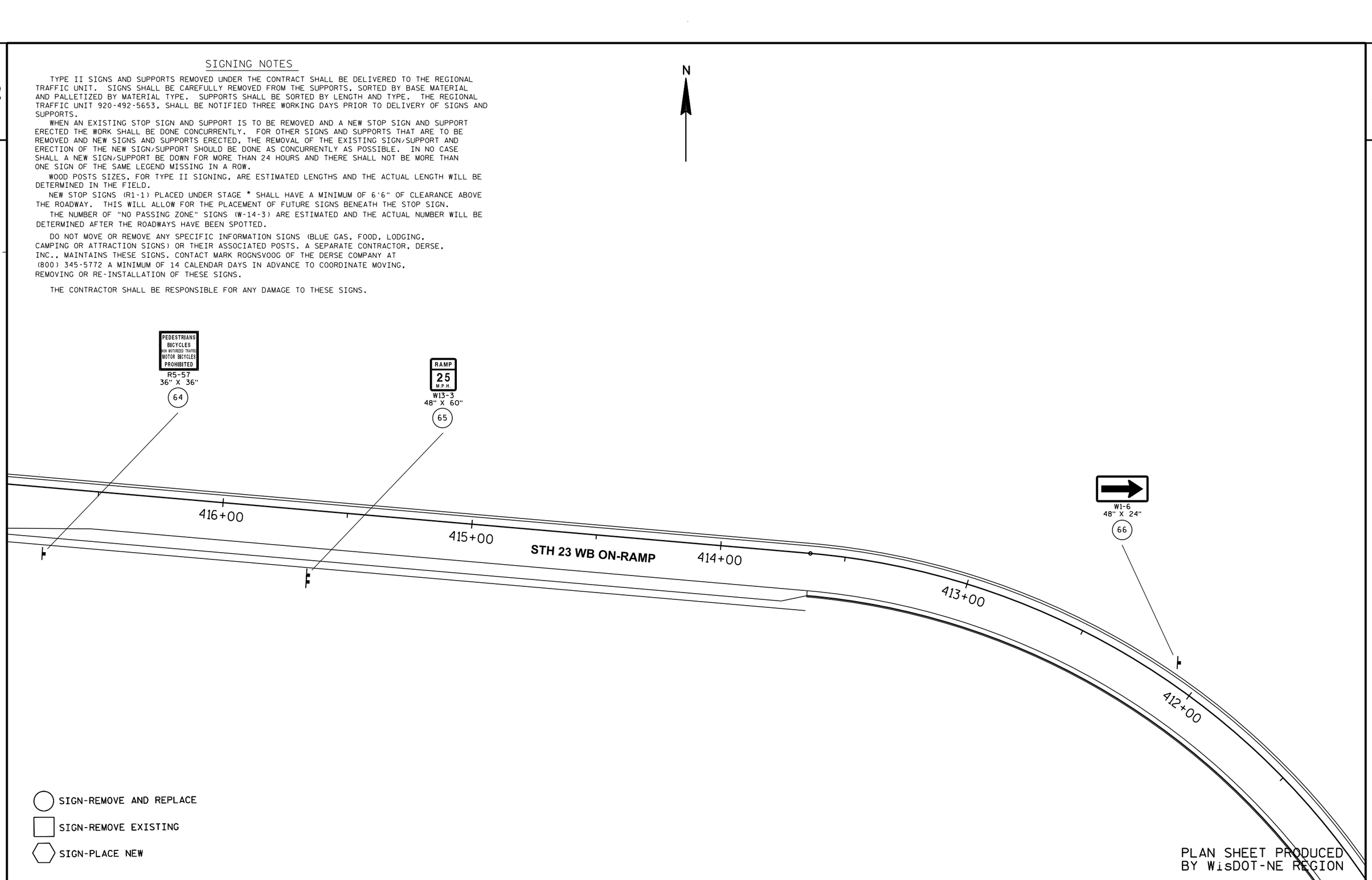

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO:1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PERMANENT SIGNING	SHEET 32	E

2

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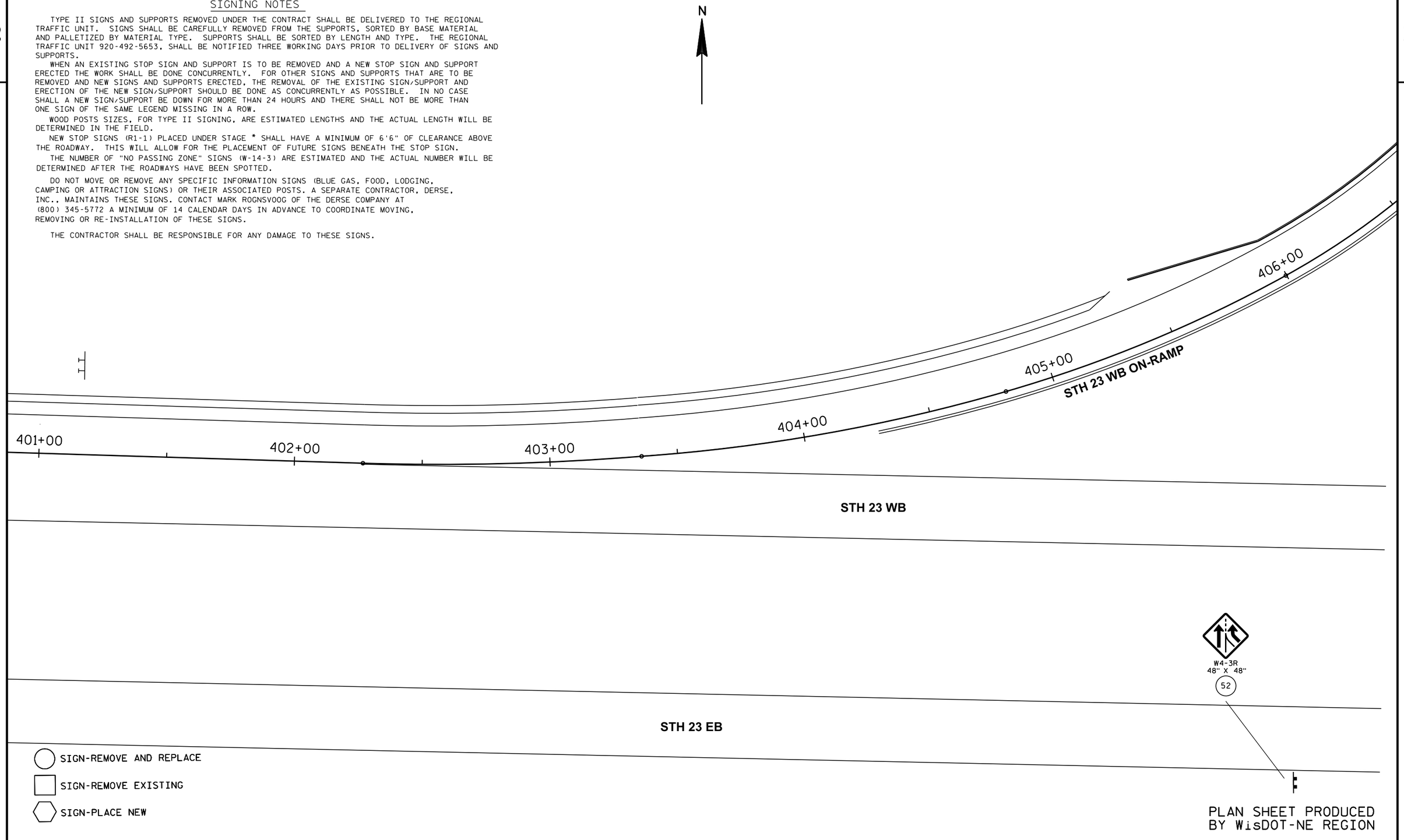

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO:1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PERMANENT SIGNING	SHEET 33	E

FILE NAME : N:\spo\traffic\SIGNING\Projects\1440-27-00 STH 23 - CTH Y Interchange\023212_PS.dgn PLOT DATE : 07-OCT-2013 06:57 PLOT BY : dotj1f PLOT NAME : PLOT SCALE : 200:1

WISDOT/CADDS SHEET 42

2

N

STH 23 WB ON-RAMP

408+00

407+00

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W4-1
48" X 48"
53

STH 23 WB

SIGN-REMOVE AND REPLACE

SIGN-REMOVE EXISTING

SIGN-PLACE NEW

STH 23 EB

PLAN SHEET PRODUCED
BY WisDOT-NE REGION

PROJECT NO:1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PERMANENT SIGNING	SHEET 34	E

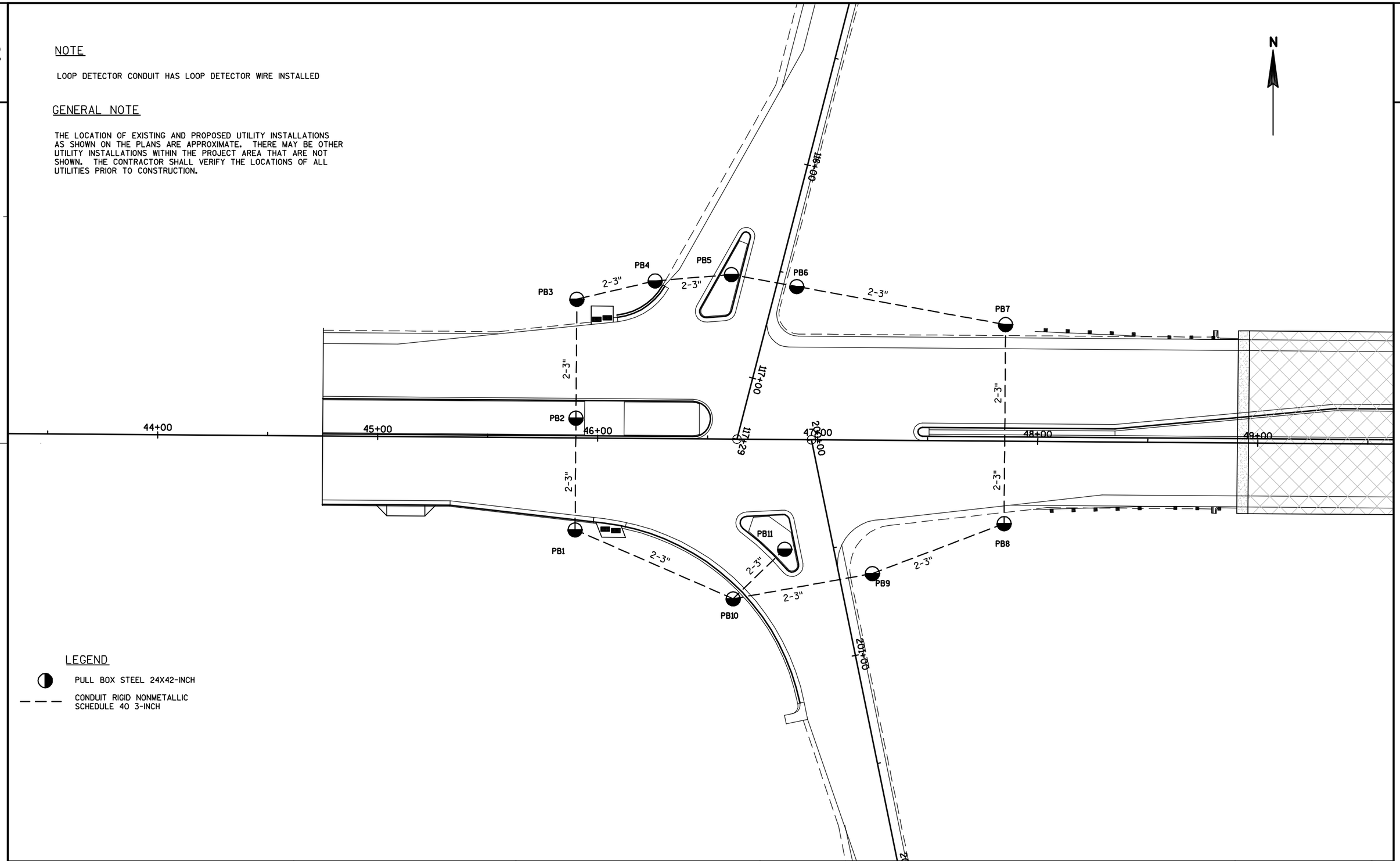
2

NOTE

LOOP DETECTOR CONDUIT HAS LOOP DETECTOR WIRE INSTALLED

GENERAL NOTE

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. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.



PROJECT NO:1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	UNDERGROUND SIGNAL EQUIPMENT U59-0001	SHEET 35	E

2

NOTE

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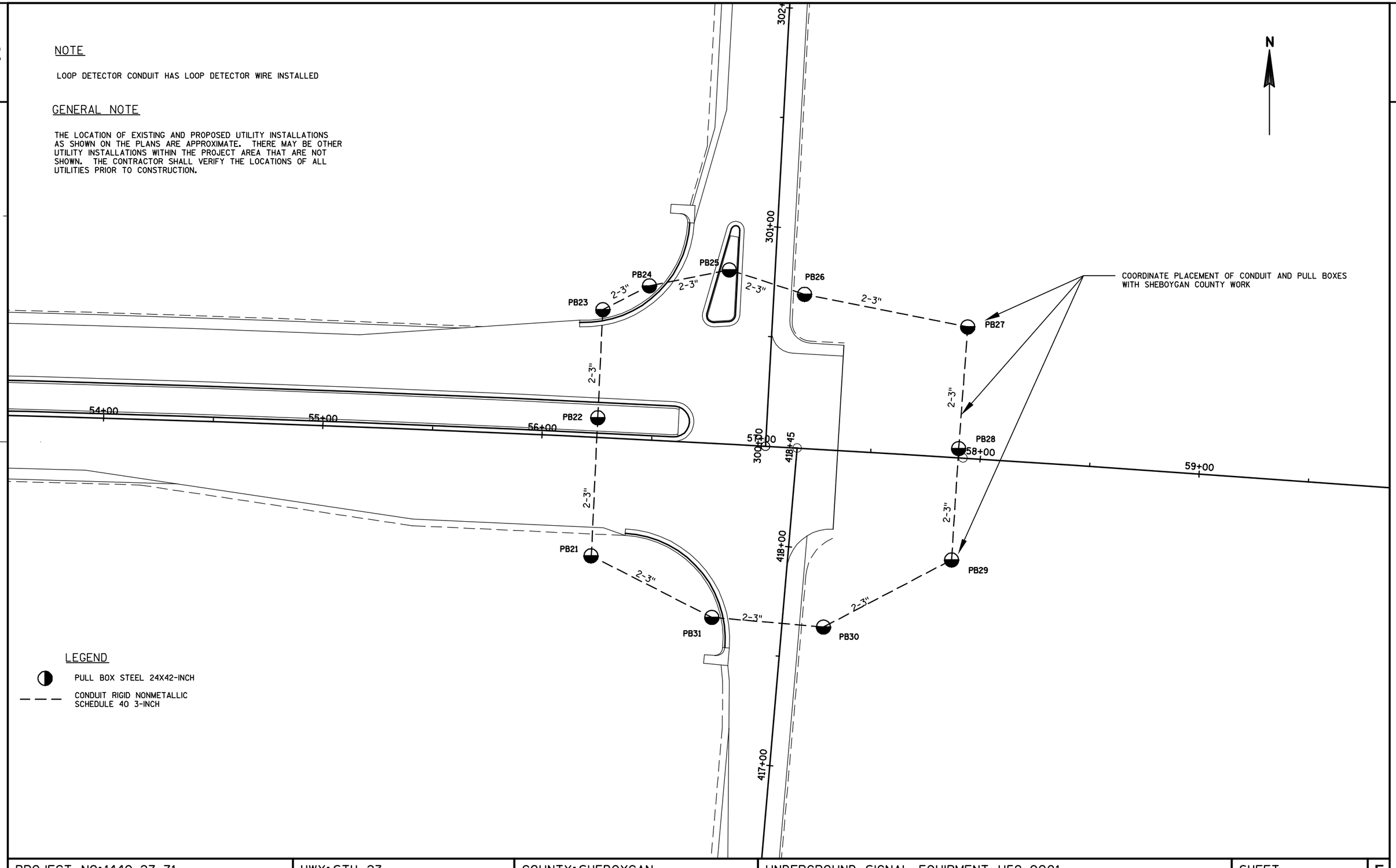

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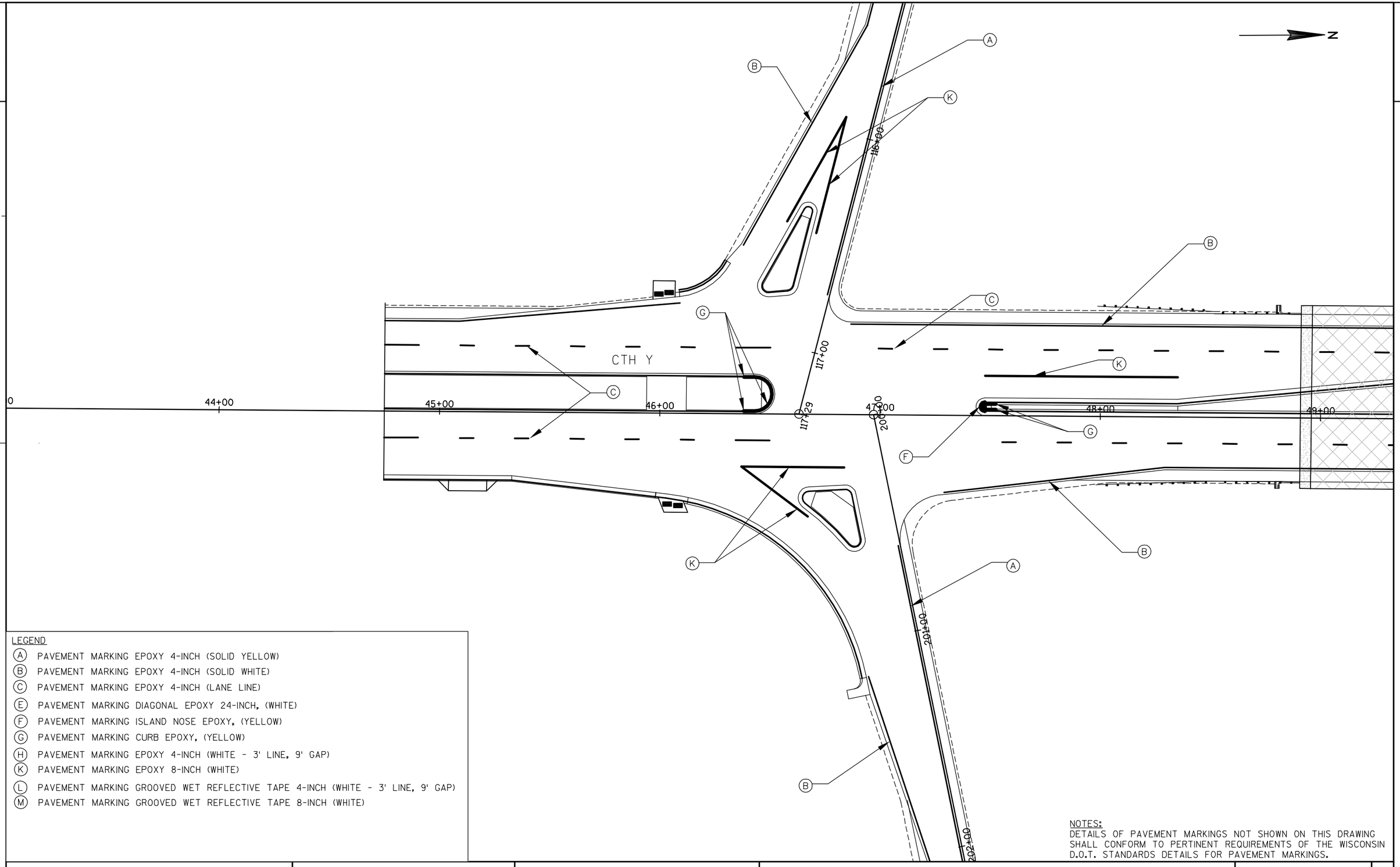
PROJECT NO:1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	UNDERGROUND SIGNAL EQUIPMENT U59-0001	SHEET	E

FILE NAME : L:\PROJECTS\12067\DWG\024201_CR.DWG PLOT DATE : 10/1/2013 2:45 PM PLOT BY : BAINTER, JOHN PLOT NAME : PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

2



LEGEND

- (A) PAVEMENT MARKING EPOXY 4-INCH (SOLID YELLOW)
- (B) PAVEMENT MARKING EPOXY 4-INCH (SOLID WHITE)
- (C) PAVEMENT MARKING EPOXY 4-INCH (LANE LINE)
- (E) PAVEMENT MARKING DIAGONAL EPOXY 24-INCH, (WHITE)
- (F) PAVEMENT MARKING ISLAND NOSE EPOXY, (YELLOW)
- (G) PAVEMENT MARKING CURB EPOXY, (YELLOW)
- (H) PAVEMENT MARKING EPOXY 4-INCH (WHITE - 3' LINE, 9' GAP)
- (K) PAVEMENT MARKING EPOXY 8-INCH (WHITE)
- (L) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH (WHITE - 3' LINE, 9' GAP)
- (M) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH (WHITE)

NOTES:
DETAILS OF PAVEMENT MARKINGS NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE WISCONSIN D.O.T. STANDARDS DETAILS FOR PAVEMENT MARKINGS.

PROJECT NO:1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PAVEMENT MARKING	SHEET 37	E

FILE NAME : L:\PROJECTS\12067\DWG\024501_PM.DWG PLOT DATE : 10/17/2013 8:23 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1:40

LEGEND

- (A) PAVEMENT MARKING EPOXY 4-INCH (SOLID YELLOW)
- (B) PAVEMENT MARKING EPOXY 4-INCH (SOLID WHITE)
- (C) PAVEMENT MARKING EPOXY 4-INCH (LANE LINE)
- (E) PAVEMENT MARKING DIAGONAL EPOXY 24-INCH, (WHITE)
- (F) PAVEMENT MARKING ISLAND NOSE EPOXY, (YELLOW)
- (G) PAVEMENT MARKING CURB EPOXY, (YELLOW)
- (H) PAVEMENT MARKING EPOXY 4-INCH (WHITE - 3' LINE, 9' GAP)
- (K) PAVEMENT MARKING EPOXY 8-INCH (WHITE)
- (L) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH (WHITE - 3' LINE, 9' GAP)
- (M) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH (WHITE)

N

STH 23

CTH Y

318+00

319+14

319+00

400+00

401+00

49+00

50+00

51+00

52+00

53+00

54+00

55+00

B

C

B

NOTES:
DETAILS OF PAVEMENT MARKINGS NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE WISCONSIN D.O.T. STANDARDS DETAILS FOR PAVEMENT MARKINGS.

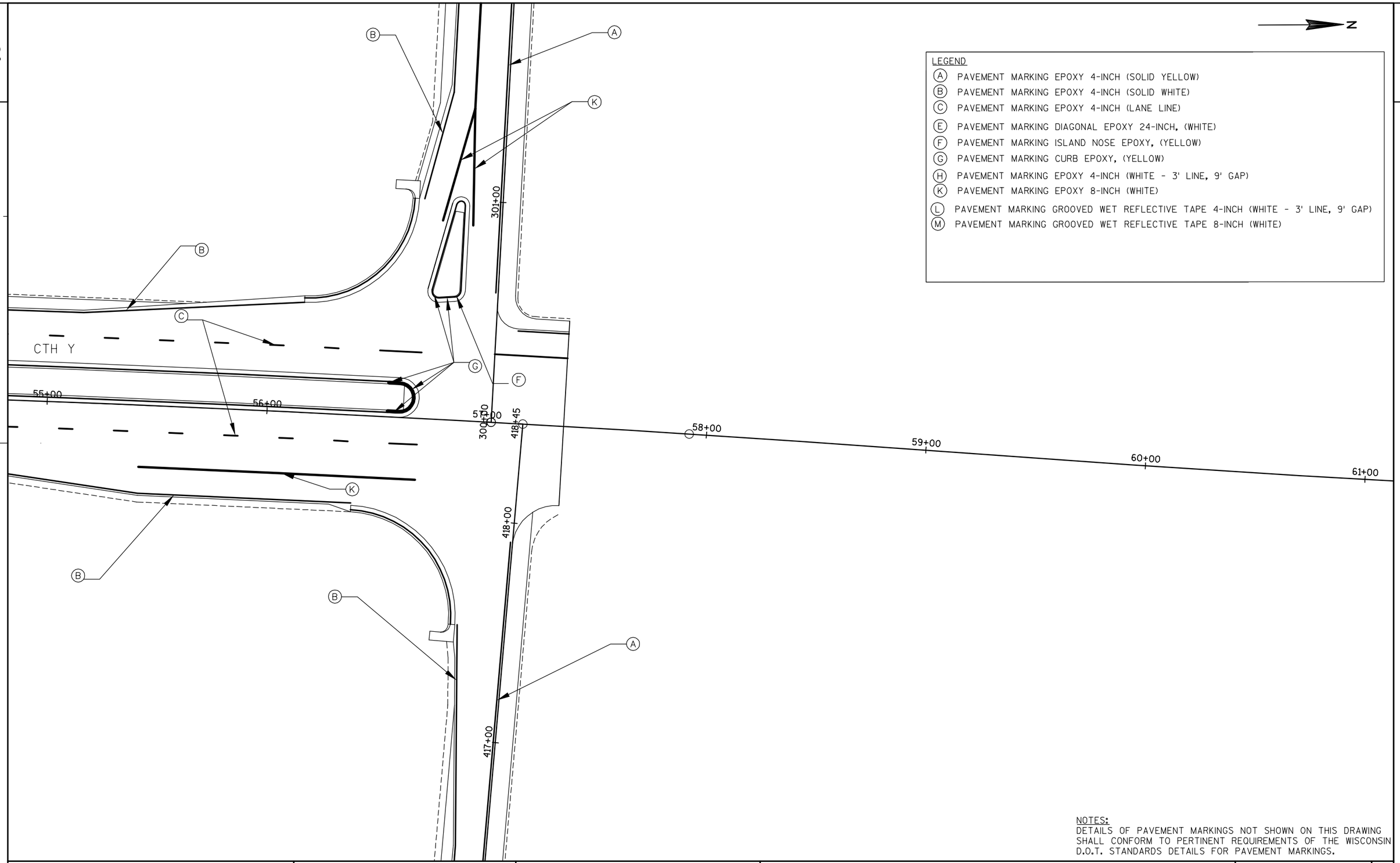
PROJECT NO:1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PAVEMENT MARKING	SHEET 38	E

2

N

LEGEND

- (A) PAVEMENT MARKING EPOXY 4-INCH (SOLID YELLOW)
- (B) PAVEMENT MARKING EPOXY 4-INCH (SOLID WHITE)
- (C) PAVEMENT MARKING EPOXY 4-INCH (LANE LINE)
- (E) PAVEMENT MARKING DIAGONAL EPOXY 24-INCH, (WHITE)
- (F) PAVEMENT MARKING ISLAND NOSE EPOXY, (YELLOW)
- (G) PAVEMENT MARKING CURB EPOXY, (YELLOW)
- (H) PAVEMENT MARKING EPOXY 4-INCH (WHITE - 3' LINE, 9' GAP)
- (K) PAVEMENT MARKING EPOXY 8-INCH (WHITE)
- (L) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH (WHITE - 3' LINE, 9' GAP)
- (M) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH (WHITE)



NOTES:
DETAILS OF PAVEMENT MARKINGS NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE WISCONSIN D.O.T. STANDARDS DETAILS FOR PAVEMENT MARKINGS.

PROJECT NO:1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PAVEMENT MARKING	SHEET 39	E

FILE NAME : L:\PROJECTS\12067\DWG\024501_PM.DWG PLOT DATE : 10/17/2013 8:23 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1:40
WISDOT/CADDS SHEET 42

2

N

LEGEND

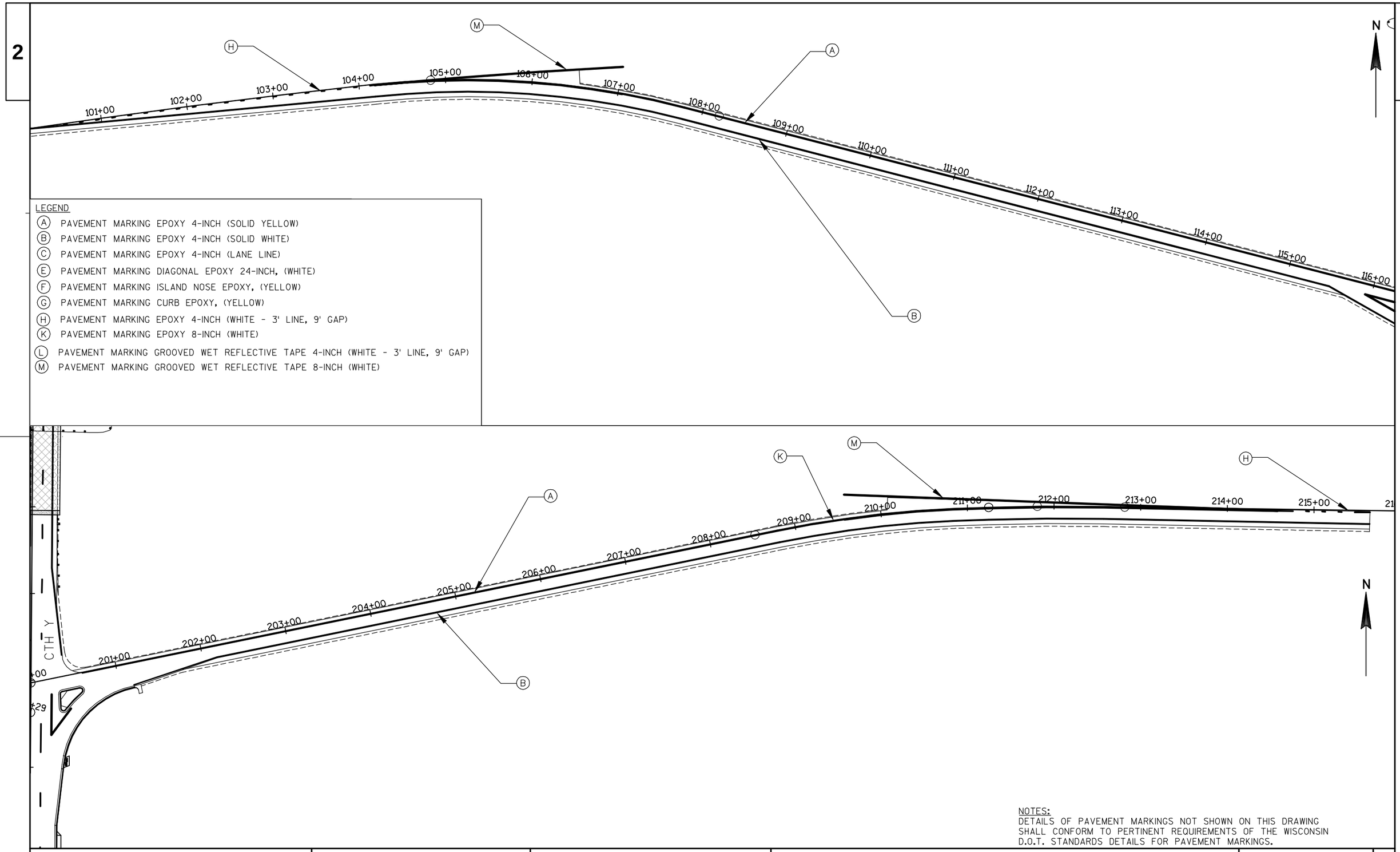
- (A) PAVEMENT MARKING EPOXY 4-INCH (SOLID YELLOW)
- (B) PAVEMENT MARKING EPOXY 4-INCH (SOLID WHITE)
- (C) PAVEMENT MARKING EPOXY 4-INCH (LANE LINE)
- (E) PAVEMENT MARKING DIAGONAL EPOXY 24-INCH, (WHITE)
- (F) PAVEMENT MARKING ISLAND NOSE EPOXY, (YELLOW)
- (G) PAVEMENT MARKING CURB EPOXY, (YELLOW)
- (H) PAVEMENT MARKING EPOXY 4-INCH (WHITE - 3' LINE, 9' GAP)
- (K) PAVEMENT MARKING EPOXY 8-INCH (WHITE)
- (L) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH (WHITE - 3' LINE, 9' GAP)
- (M) PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH (WHITE)

CTH Y

STH 23

NOTES:
DETAILS OF PAVEMENT MARKINGS NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE WISCONSIN D.O.T. STANDARDS DETAILS FOR PAVEMENT MARKINGS.

PROJECT NO:1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PAVEMENT MARKING	SHEET 40	E



NOTES:
DETAILS OF PAVEMENT MARKINGS NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE WISCONSIN D.O.T. STANDARDS DETAILS FOR PAVEMENT MARKINGS.

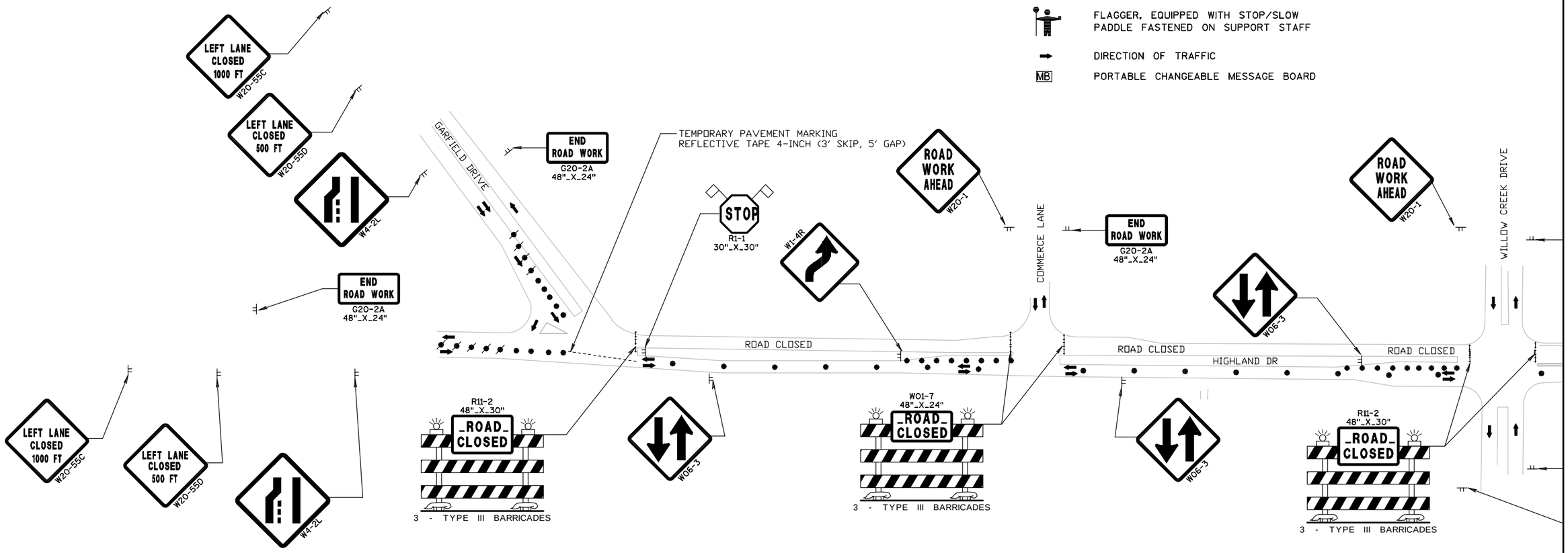
PROJECT NO:1440-27-71	HWY:STH 23	COUNTY:SHEBOYGAN	PAVEMENT MARKING	SHEET 41	E

FILE NAME : L:\PROJECTS\12067\DWG\024501_PM.DWG PLOT DATE : 10/17/2013 8:23 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1:100
WISDOT/CADDS SHEET 42

N

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	TRAFFIC CONTROL STAGE 1	SHEET 42	E

FILE NAME : L:\PROJECTS\12067\DWG\026101_S1.DWG PLOT DATE : 1/17/2014 1:56 PM PLOT BY : BAINTER, JOHN PLOT NAME : ----------

WISDOT/CADDS SHEET 42

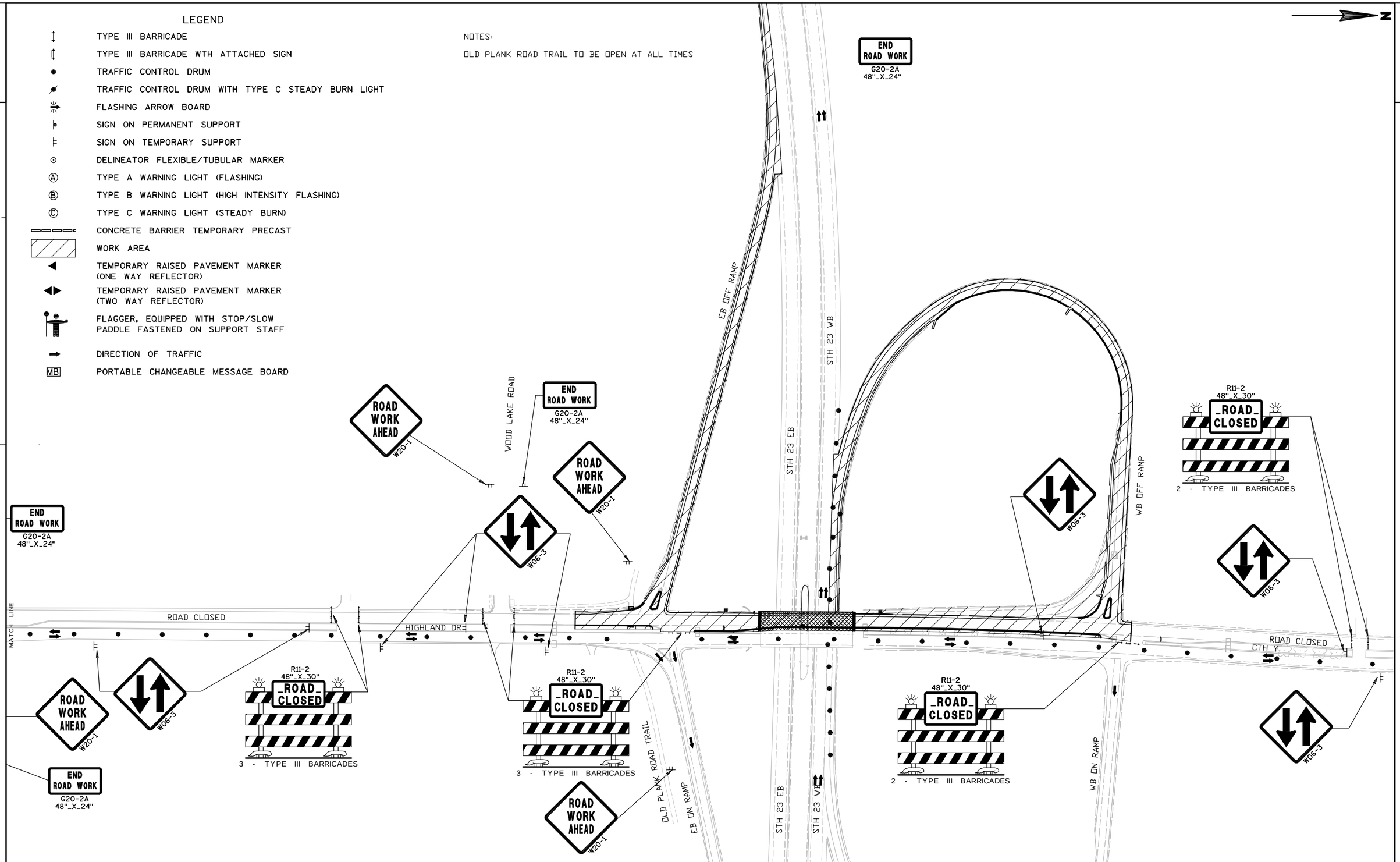
LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

NOTES:

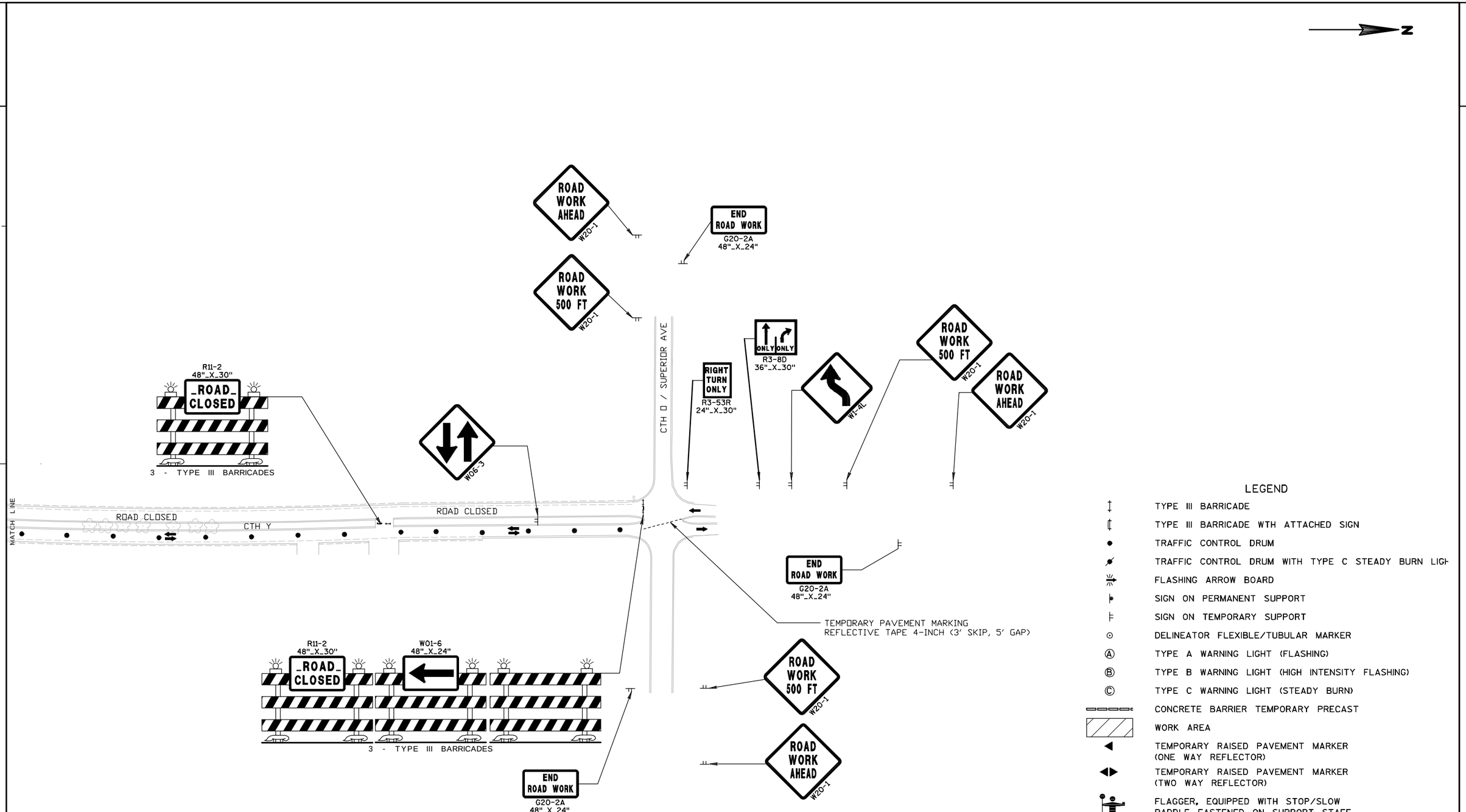
OLD PLANK ROAD TRAIL TO BE OPEN AT ALL TIMES

N



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	TRAFFIC CONTROL STAGE 1	SHEET 43	E

FILE NAME : L:\PROJECTS\12067\DWG\026102_S1.DWG PLOT DATE : 1/17/2014 1:56 PM PLOT BY : BAINTER, JOHN PLOT NAME : ----------



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	TRAFFIC CONTROL STAGE 1	SHEET 44	E

LEGEND

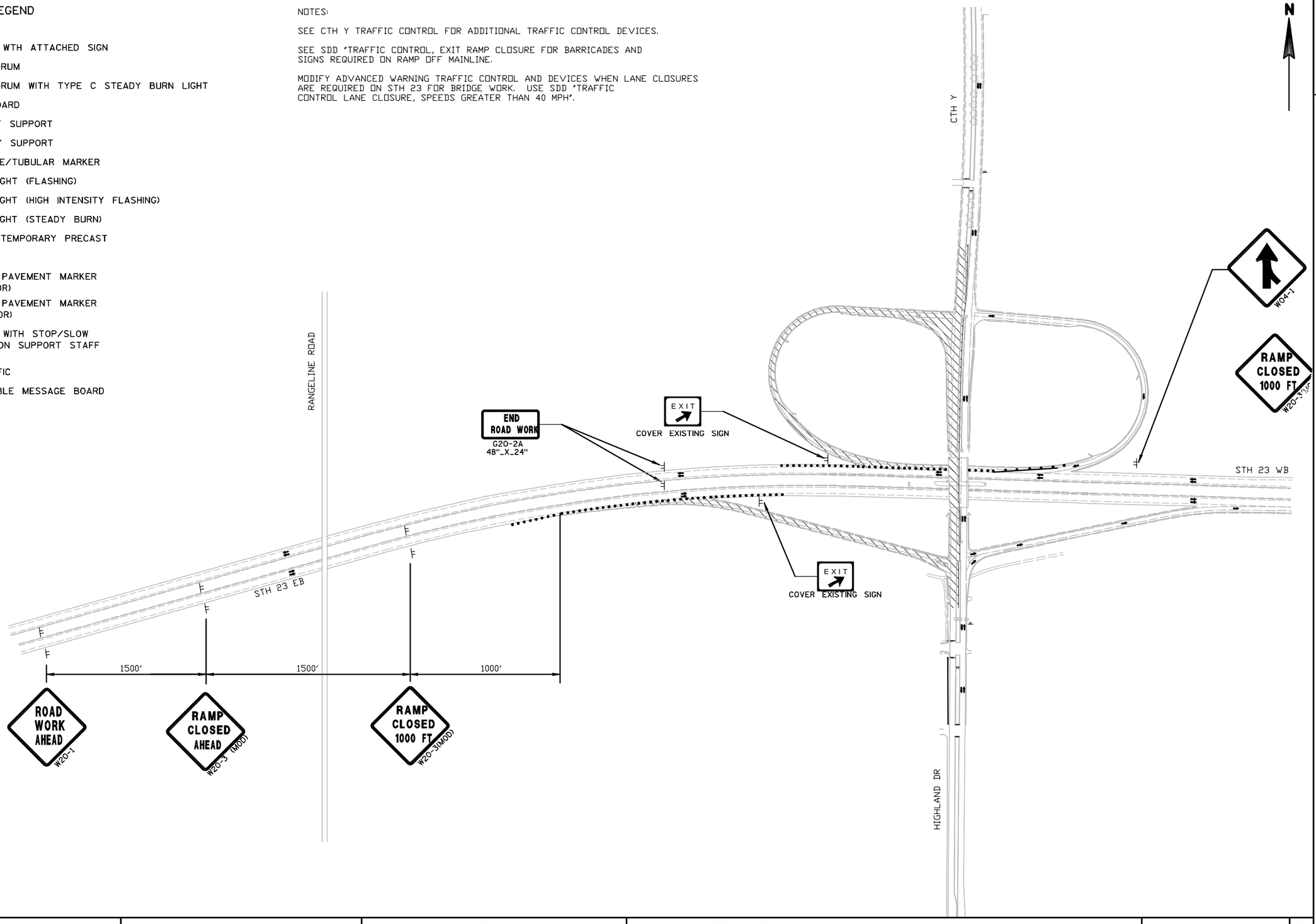
- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

NOTES:

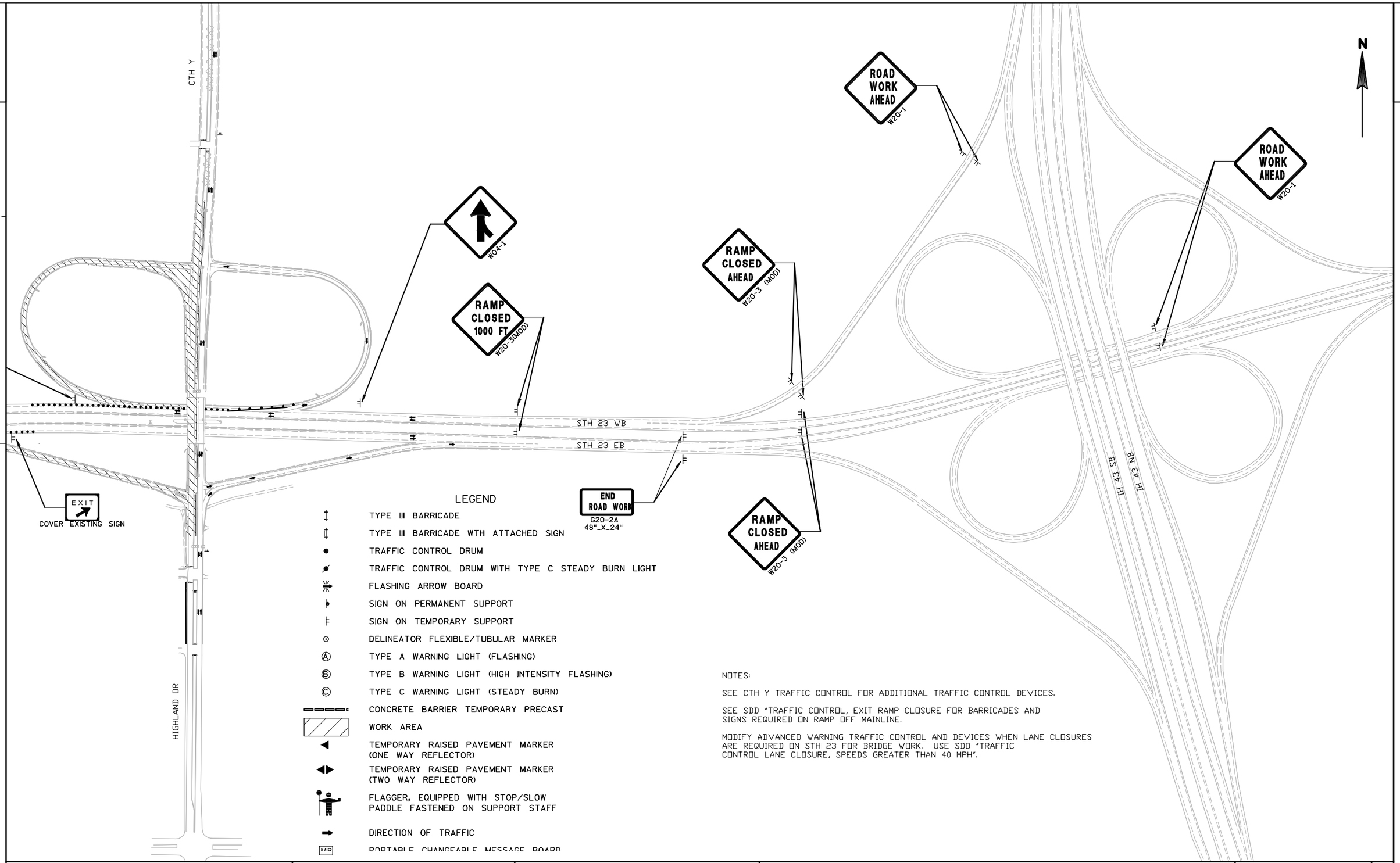
SEE CTH Y TRAFFIC CONTROL FOR ADDITIONAL TRAFFIC CONTROL DEVICES.

SEE SDD "TRAFFIC CONTROL, EXIT RAMP CLOSURE FOR BARRICADES AND SIGNS REQUIRED ON RAMP OFF MAINLINE.

MODIFY ADVANCED WARNING TRAFFIC CONTROL AND DEVICES WHEN LANE CLOSURES ARE REQUIRED ON STH 23 FOR BRIDGE WORK. USE SDD "TRAFFIC CONTROL LANE CLOSURE, SPEEDS GREATER THAN 40 MPH".



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	TRAFFIC CONTROL STAGE 1	SHEET 45	E



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- PORTABLE CHANGEABLE MESSAGE BOARD

NOTES:

SEE CTH Y TRAFFIC CONTROL FOR ADDITIONAL TRAFFIC CONTROL DEVICES.

SEE SDD "TRAFFIC CONTROL, EXIT RAMP CLOSURE FOR BARRICADES AND SIGNS REQUIRED ON RAMP OFF MAINLINE.

MODIFY ADVANCED WARNING TRAFFIC CONTROL AND DEVICES WHEN LANE CLOSURES ARE REQUIRED ON STH 23 FOR BRIDGE WORK. USE SDD "TRAFFIC CONTROL LANE CLOSURE, SPEEDS GREATER THAN 40 MPH".

PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	TRAFFIC CONTROL STAGE 1	SHEET 46	E

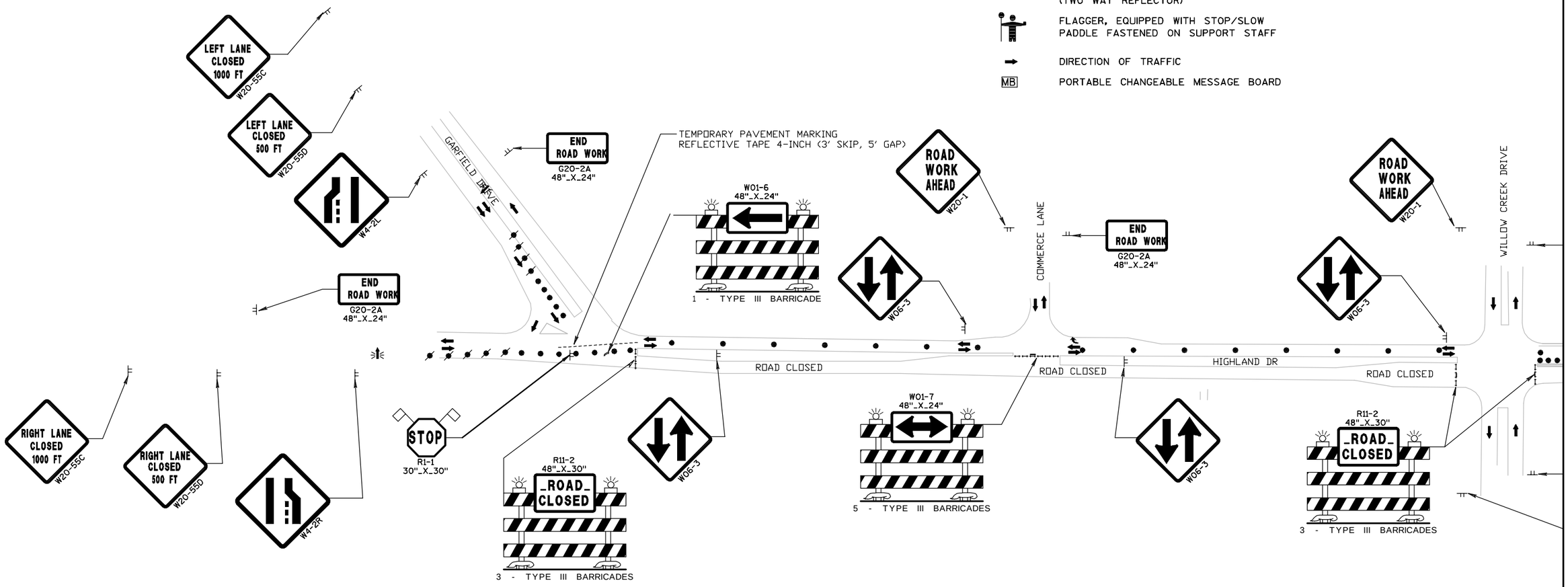
2

2

N

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	TRAFFIC CONTROL STAGE 2	SHEET 47	E

FILE NAME : L:\PROJECTS\12067\DWG\026106_S2.DWG PLOT DATE : 1/17/2014 1:58 PM PLOT BY : BAINTER, JOHN PLOT NAME : ----------

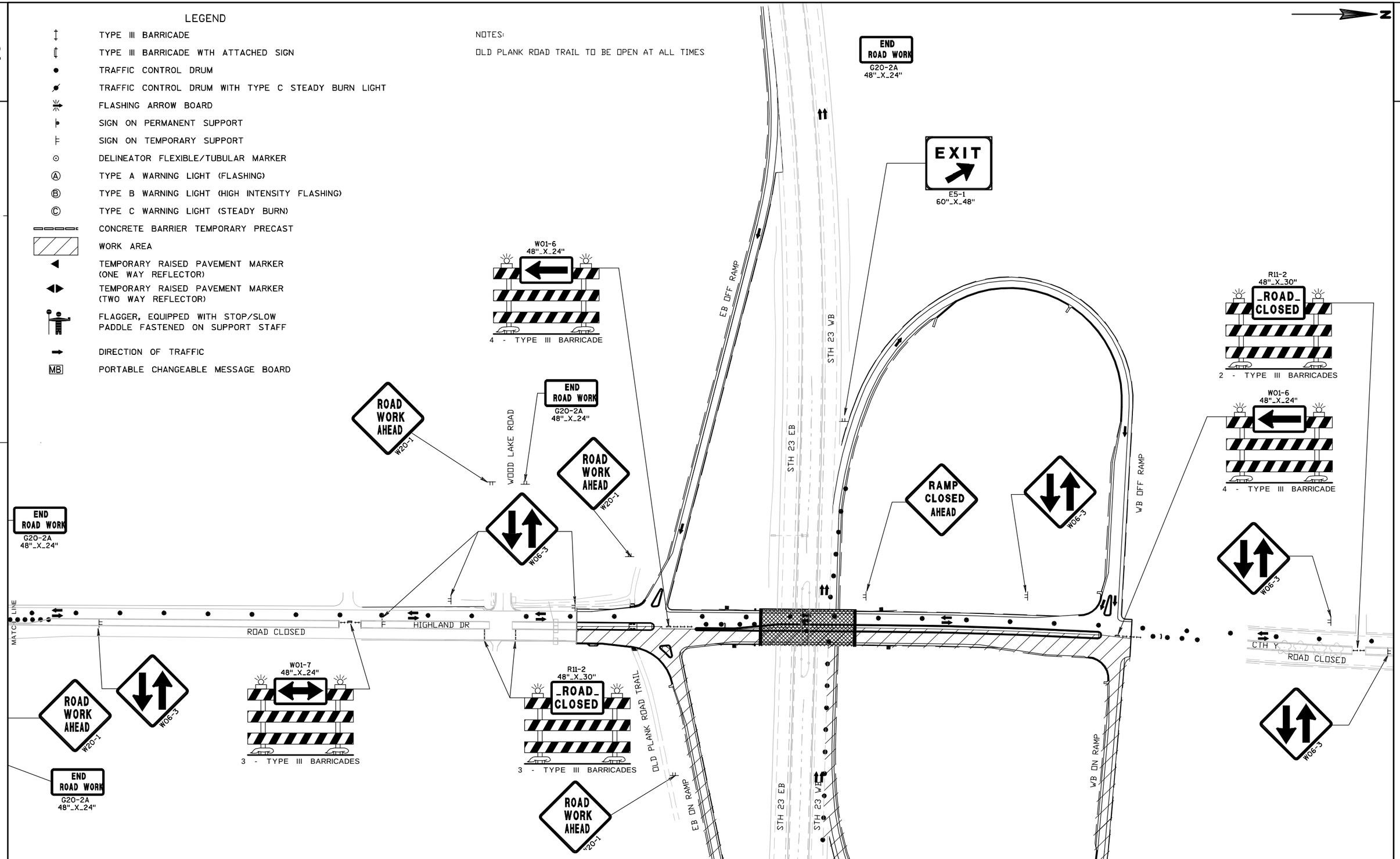
WISDOT/CADDS SHEET 42

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE A WARNING LIGHT (FLASHING)
- (B) TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

NOTES:

OLD PLANK ROAD TRAIL TO BE OPEN AT ALL TIMES

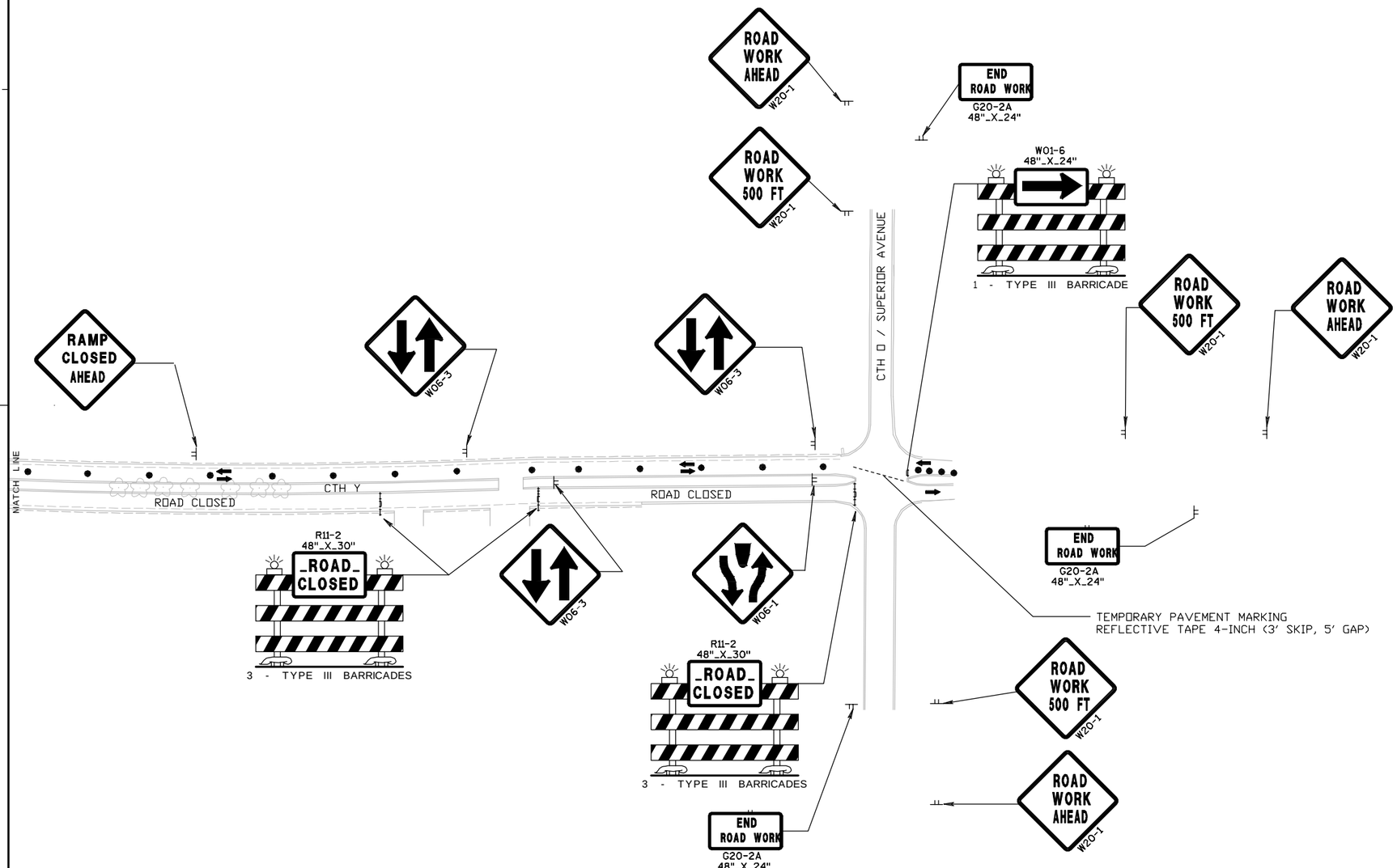


PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	TRAFFIC CONTROL STAGE 2	SHEET 48	E

FILE NAME : L:\PROJECTS\12067\DWG\026107_S2.DWG PLOT DATE : 1/17/2014 1:58 PM PLOT BY : BAINTER, JOHN PLOT NAME : ----------

WISDOT/CADDS SHEET 42

NOTES:



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGH
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	TRAFFIC CONTROL STAGE 2	SHEET 49	E

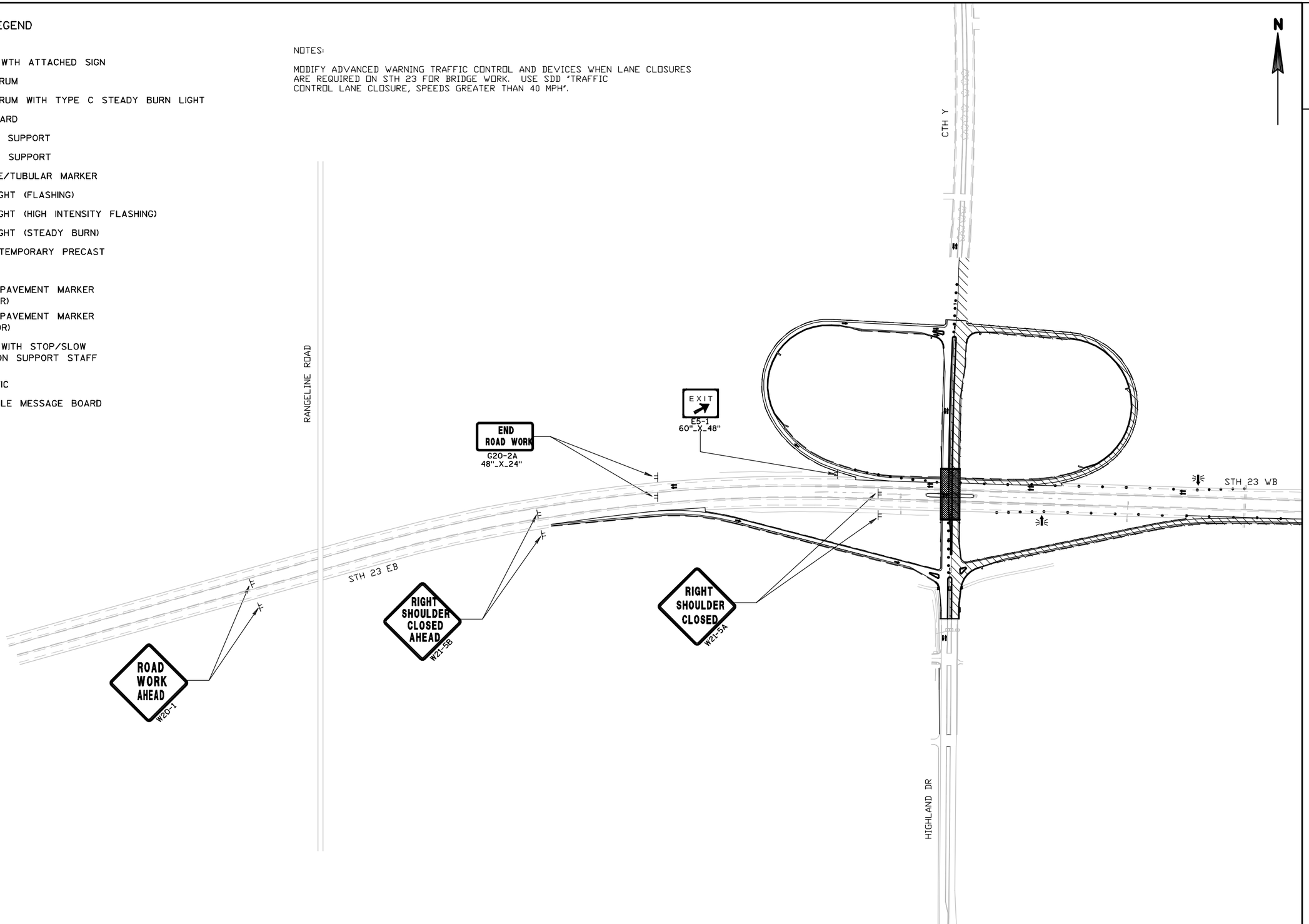
2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- TYPE A WARNING LIGHT (FLASHING)
- TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

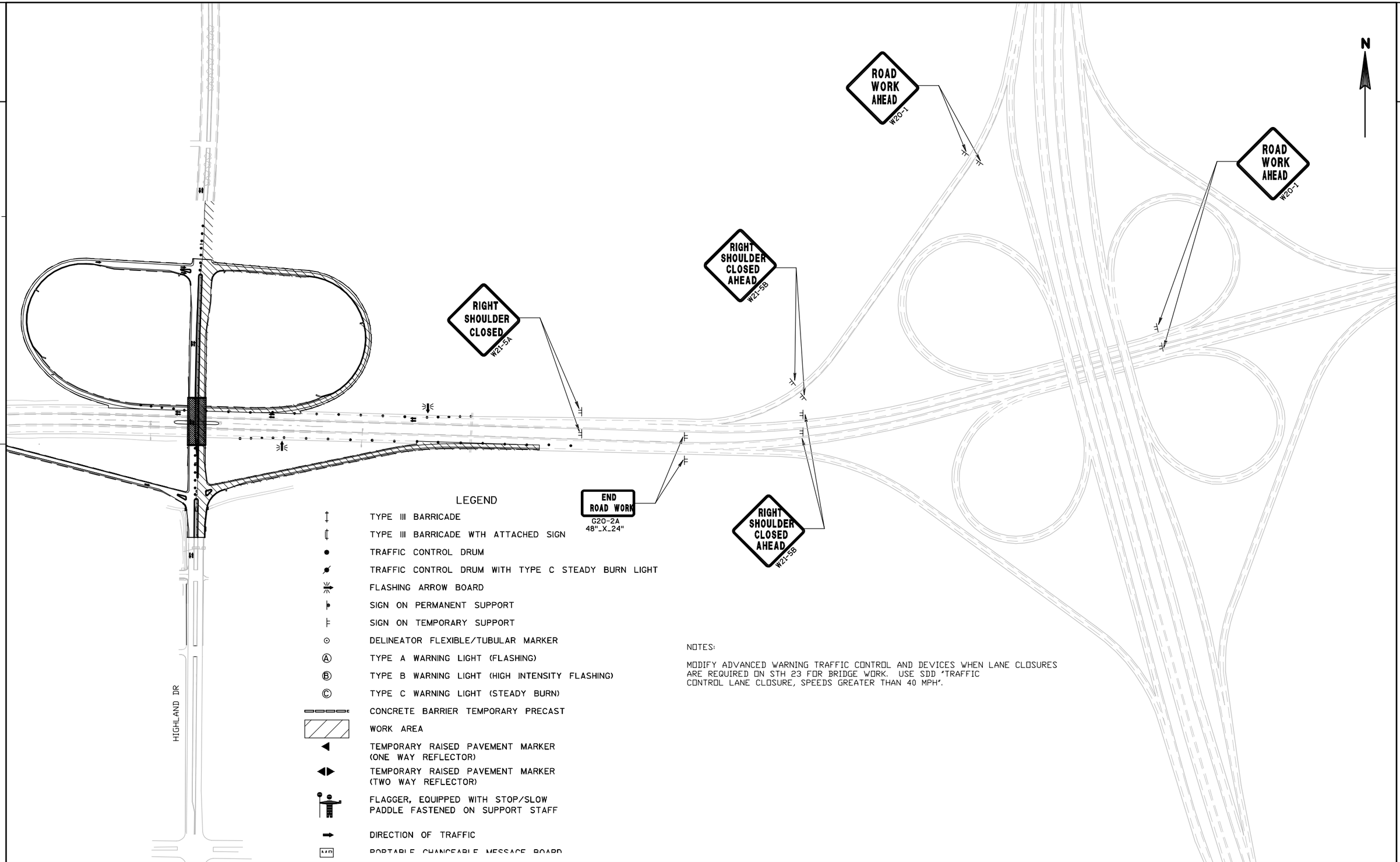
NOTES:

MODIFY ADVANCED WARNING TRAFFIC CONTROL AND DEVICES WHEN LANE CLOSURES ARE REQUIRED ON STH 23 FOR BRIDGE WORK. USE SDD 'TRAFFIC CONTROL LANE CLOSURE, SPEEDS GREATER THAN 40 MPH'.



PROJECT NO:1440-27-71	HWY:STH 23	COUNTY:SHEBOYGAN	TRAFFIC CONTROL STAGE 2	SHEET 50	E

2



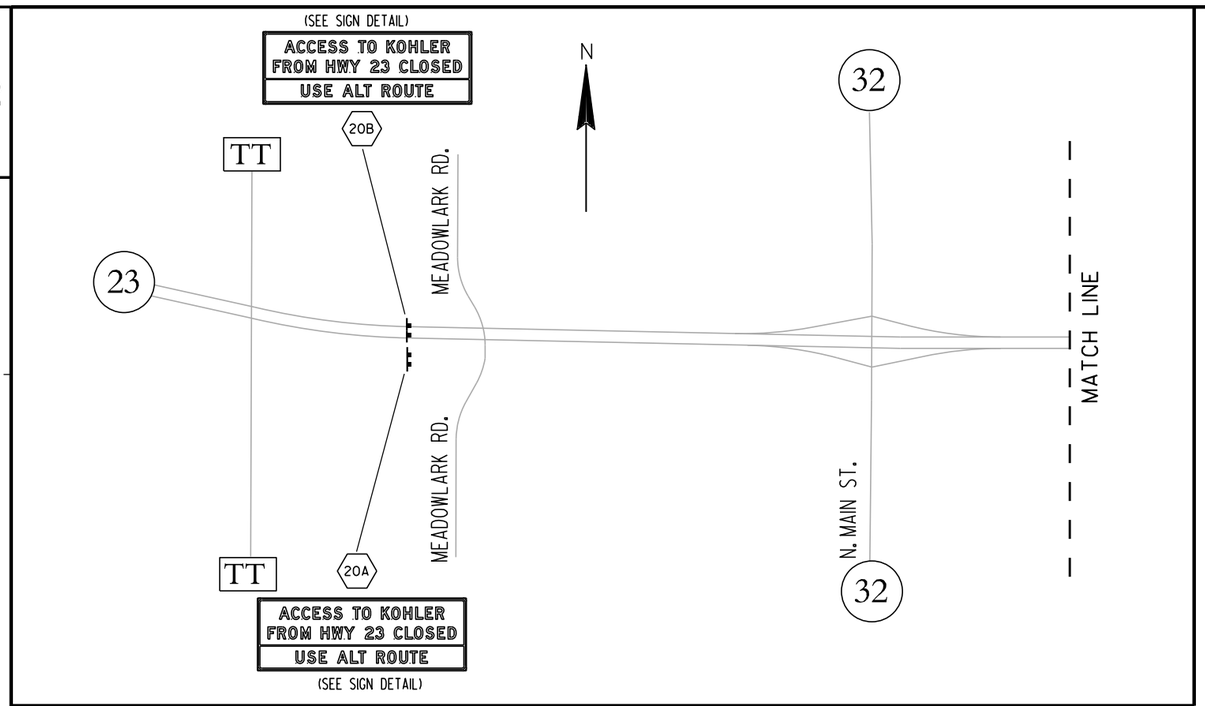
LEGEND

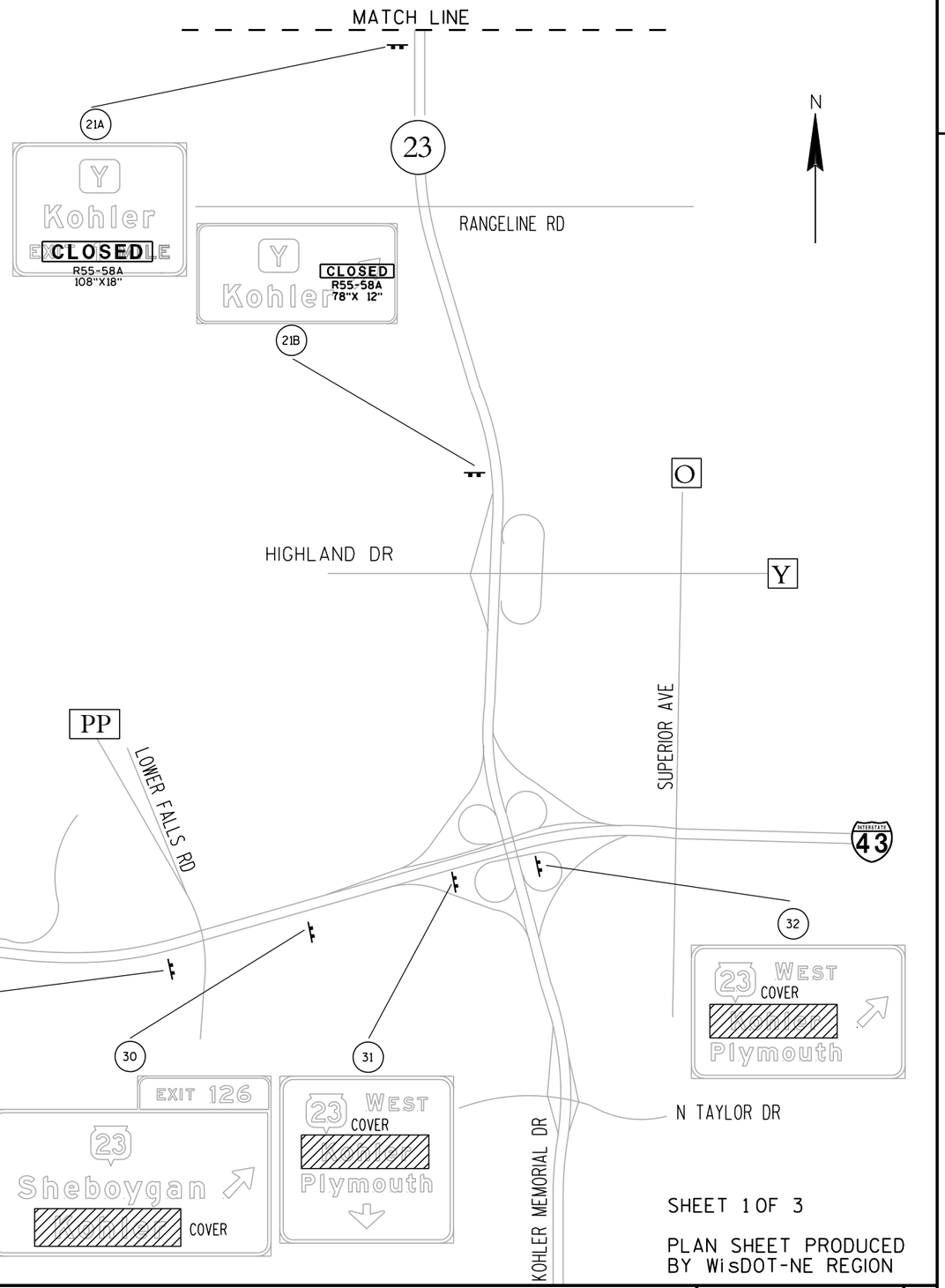
- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- PORTABLE CHANGEABLE MESSAGE BOARD

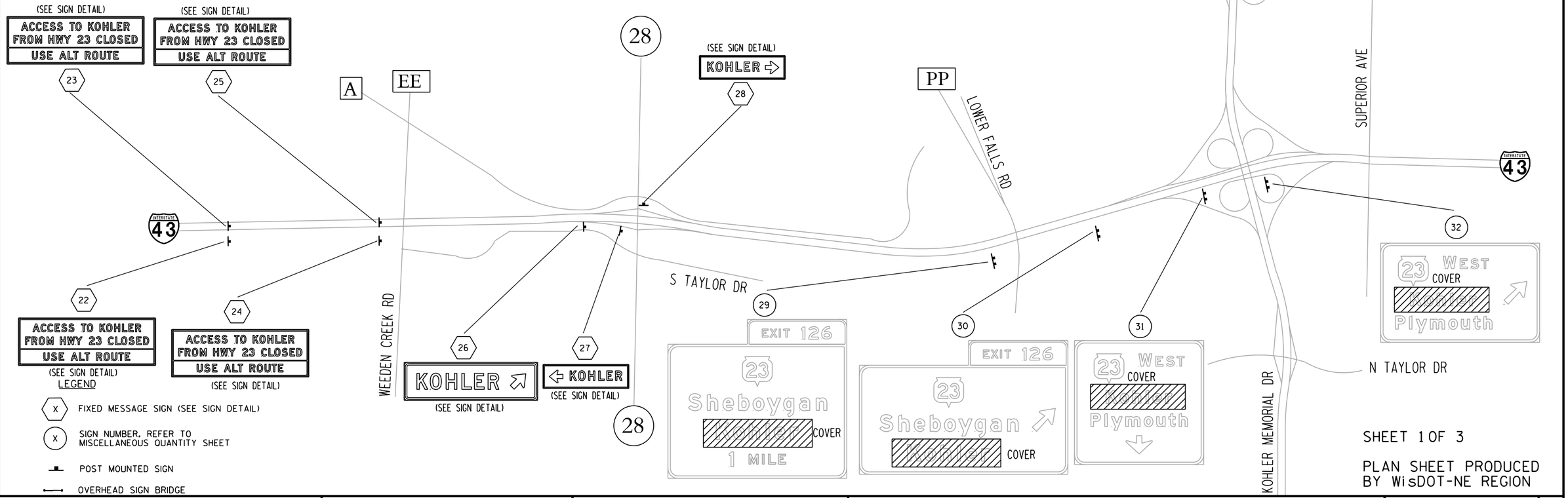
NOTES:

MODIFY ADVANCED WARNING TRAFFIC CONTROL AND DEVICES WHEN LANE CLOSURES ARE REQUIRED ON STH 23 FOR BRIDGE WORK. USE SDD "TRAFFIC CONTROL LANE CLOSURE, SPEEDS GREATER THAN 40 MPH".

PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	TRAFFIC CONTROL STAGE 2	SHEET 51	E







SHEET 1 OF 3

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	DETOUR SIGNING DETAIL-STAGE 1	SHEET 52	E

2

N

COVER

Y
Kohler
CLOSED
R55-58A
78"X 12"

13

Y
Kohler
CLOSED
R55-58A
108"X18"

12

23 WEST
COVER
Kohler
Plymouth

11

EXIT 126
23
Sheboygan
Kohler
COVER

10

EXIT 126
23
Sheboygan
Kohler
COVER
1¼ MILES

9

(SEE SIGN DETAIL)
KOHLER

8

42

Y

(SEE SIGN DETAIL)
KOHLER

7

(SEE SIGN DETAIL)
KOHLER

6

(SEE SIGN DETAIL)
KOHLER

5

(SEE SIGN DETAIL)
ACCESS TO KOHLER
FROM HWY 23 CLOSED
USE ALT ROUTE

1

(SEE SIGN DETAIL)
ACCESS TO KOHLER
FROM HWY 23 CLOSED
USE ALT ROUTE

3

(SEE SIGN DETAIL)
ACCESS TO KOHLER
FROM HWY 23 CLOSED
USE ALT ROUTE

2

(SEE SIGN DETAIL)
ACCESS TO KOHLER
FROM HWY 23 CLOSED
USE ALT ROUTE

4

(SEE SIGN DETAIL)
ACCESS TO KOHLER
FROM HWY 23 CLOSED
USE ALT ROUTE

15

(SEE SIGN DETAIL)
ACCESS TO KOHLER
FROM HWY 23 CLOSED
USE ALT ROUTE

14

(SEE SIGN DETAIL)
ACCESS TO KOHLER
FROM HWY 23 CLOSED
USE ALT ROUTE

23

Y

J

O

PP

42

PLAYBIRD RD

SUPERIOR AVE

N TAYLOR DR

N 40TH ST

KOHLER MEMORIAL DR

INTERSTATE 43

INTERSTATE 43

LEGEND

- X — FIXED MESSAGE SIGN (SEE SIGN DETAIL)
- X — SIGN NUMBER. REFER TO MISCELLANEOUS QUANTITY SHEET
- POST MOUNTED SIGN
- OVERHEAD SIGN BRIDGE

SHEET 2 OF 3

PLAN SHEET PRODUCED
BY WisDOT-NE REGION

PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	DETOUR SIGNING DETAIL-STAGE 1	SHEET 53	E

2

N

23

WOODLAND RD.

WOODLAND RD.

GREENFIELD DR.

UPPER RD

O

SUPERIOR AVE

ACCESS TO
HWY 23 CLOSED
USE ALT ROUTE

(SEE SIGN DETAIL)

19

17

NO RE-ENTRY
TO FREEWAY

W6-54
132" X 48"

Y

HIGHLAND DR.

HIGHLAND DR.

Y

18

ACCESS TO
HWY 23 CLOSED
USE ALT ROUTE

(SEE SIGN DETAIL)

PP

LOWER FALLS RD

16

SUPERIOR AVE

NO RE-ENTRY
TO FREEWAY

W6-54
132" X 48"

INTERSTATE 43

INTERSTATE 43

23

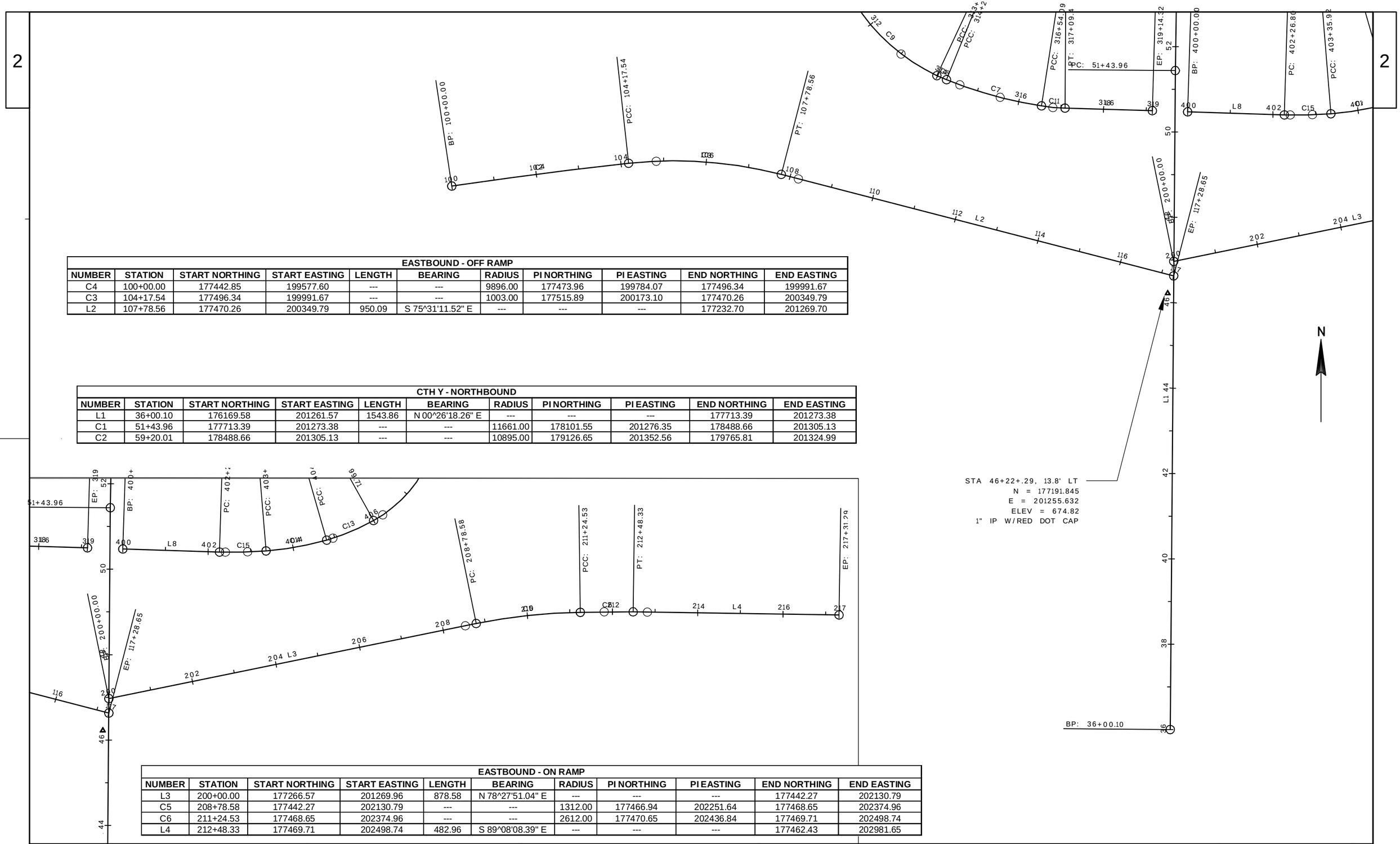
LEGEND

- (X) FIXED MESSAGE SIGN (SEE SIGN DETAIL)
- (X) SIGN NUMBER. REFER TO MISCELLANEOUS QUANTITY SHEET
- POST MOUNTED SIGN
- OVERHEAD SIGN BRIDGE

SHEET 3 OF 3

PLAN SHEET PRODUCED
BY WisDOT-NE REGION

PROJECT NO:1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	DETOUR SIGNING DETAIL-STAGE 2	SHEET 54	E



EASTBOUND - OFF RAMP

NUMBER	STATION	START NORTHING	START EASTING	LENGTH	BEARING	RADIUS	PI NORTHING	PI EASTING	END NORTHING	END EASTING
C4	100+00.00	177442.85	199577.60	---	---	9896.00	177473.96	199784.07	177496.34	199991.67
C3	104+17.54	177496.34	199991.67	---	---	1003.00	177515.89	200173.10	177470.26	200349.79
L2	107+78.56	177470.26	200349.79	950.09	S 75^31'11.52" E	---	---	---	177232.70	201269.70

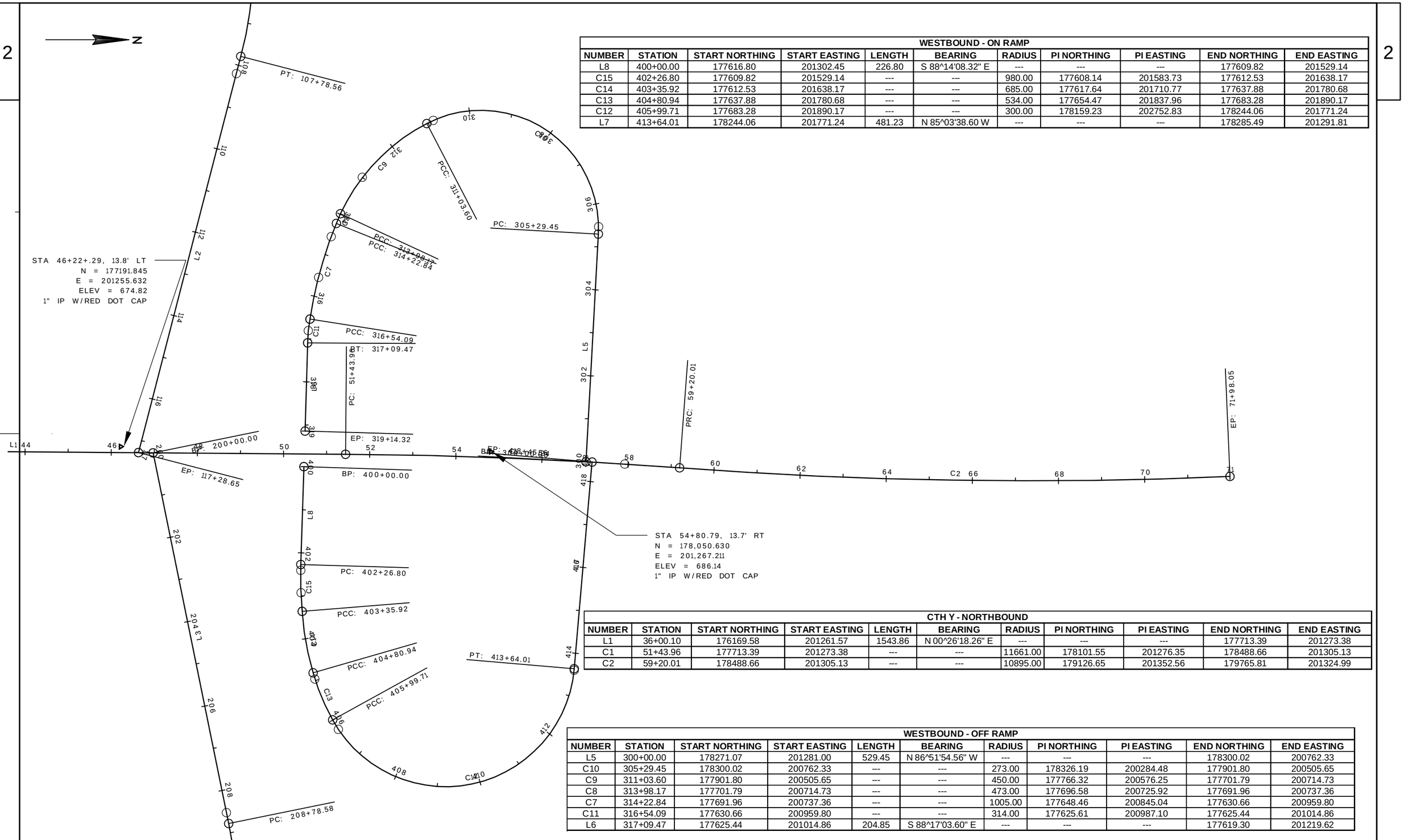
CTH Y - NORTHBOUND

NUMBER	STATION	START NORTHING	START EASTING	LENGTH	BEARING	RADIUS	PI NORTHING	PI EASTING	END NORTHING	END EASTING
L1	36+00.10	176169.58	201261.57	1543.86	N 00^26'18.26" E	---	---	---	177713.39	201273.38
C1	51+43.96	177713.39	201273.38	---	---	11661.00	178101.55	201276.35	178488.66	201305.13
C2	59+20.01	178488.66	201305.13	---	---	10895.00	179126.65	201352.56	179765.81	201324.99

EASTBOUND - ON RAMP

NUMBER	STATION	START NORTHING	START EASTING	LENGTH	BEARING	RADIUS	PI NORTHING	PI EASTING	END NORTHING	END EASTING
L3	200+00.00	177266.57	201269.96	878.58	N 78^27'51.04" E	---	---	---	177442.27	202130.79
C5	208+78.58	177442.27	202130.79	---	---	1312.00	177466.94	202251.64	177468.65	202374.96
C6	211+24.53	177468.65	202374.96	---	---	2612.00	177470.65	202436.84	177469.71	202498.74
L4	212+48.33	177469.71	202498.74	482.96	S 89^08'08.39" E	---	---	---	177462.43	202981.65

PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN: ALIGNMENT DIAGRAM	SHEET 55	E



WESTBOUND - ON RAMP										
NUMBER	STATION	START NORTHING	START EASTING	LENGTH	BEARING	RADIUS	PI NORTHING	PI EASTING	END NORTHING	END EASTING
L8	400+00.00	177616.80	201302.45	226.80	S 88^14'08.32" E	---	---	---	177609.82	201529.14
C15	402+26.80	177609.82	201529.14	---	---	980.00	177608.14	201583.73	177612.53	201638.17
C14	403+35.92	177612.53	201638.17	---	---	685.00	177617.64	201710.77	177637.88	201780.68
C13	404+80.94	177637.88	201780.68	---	---	534.00	177654.47	201837.96	177683.28	201890.17
C12	405+99.71	177683.28	201890.17	---	---	300.00	178159.23	202752.83	178244.06	201771.24
L7	413+64.01	178244.06	201771.24	481.23	N 85^03'38.60 W	---	---	---	178285.49	201291.81

CTH Y - NORTHBOUND										
NUMBER	STATION	START NORTHING	START EASTING	LENGTH	BEARING	RADIUS	PI NORTHING	PI EASTING	END NORTHING	END EASTING
L1	36+00.10	176169.58	201261.57	1543.86	N 00^26'18.26" E	---	---	---	177713.39	201273.38
C1	51+43.96	177713.39	201273.38	---	---	11661.00	178101.55	201276.35	178488.66	201305.13
C2	59+20.01	178488.66	201305.13	---	---	10895.00	179126.65	201352.56	179765.81	201324.99

WESTBOUND - OFF RAMP										
NUMBER	STATION	START NORTHING	START EASTING	LENGTH	BEARING	RADIUS	PI NORTHING	PI EASTING	END NORTHING	END EASTING
L5	300+00.00	178271.07	201281.00	529.45	N 86^51'54.56" W	---	---	---	178300.02	200762.33
C10	305+29.45	178300.02	200762.33	---	---	273.00	178326.19	200284.48	177901.80	200505.65
C9	311+03.60	177901.80	200505.65	---	---	450.00	177766.32	200576.25	177701.79	200714.73
C8	313+98.17	177701.79	200714.73	---	---	473.00	177696.58	200725.92	177691.96	200737.36
C7	314+22.84	177691.96	200737.36	---	---	1005.00	177648.46	200845.04	177630.66	200959.80
C11	316+54.09	177630.66	200959.80	---	---	314.00	177625.61	200987.10	177625.44	201014.86
L6	317+09.47	177625.44	201014.86	204.85	S 88^17'03.60" E	---	---	---	177619.30	201219.62

PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN: ALIGNMENT DIAGRAM	SHEET	E

FILE NAME : L:\PROJECTS\12067\DWG\027201_AD.DWG PLOT DATE : 10/17/2013 9:46 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

DATE 17JAN14 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	1440-27-71 QUANTITY
0010	201.0105	CLEARING	STA	3.000	3.000
0020	201.0205	GRUBBING	STA	3.000	3.000
0030	204.0100	REMOVING PAVEMENT	SY	30,500.000	30,500.000
0040	204.0165	REMOVING GUARDRAIL	LF	454.000	454.000
0050	204.0190	REMOVING SURFACE DRAINS	EACH	8.000	8.000
0060	204.0220	REMOVING INLETS	EACH	10.000	10.000
0070	204.0245	REMOVING STORM SEWER (SIZE) 01. 15-INCH	LF	424.000	424.000
0080	205.0100	EXCAVATION COMMON	CY	1,710.000	1,710.000
0090	208.0100	BORROW	CY	375.000	375.000
0100	213.0100	FINISHING ROADWAY (PROJECT) 01. 1440-27-71	EACH	1.000	1.000
0110	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	420.000	420.000
0120	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	4,645.000	4,645.000
0130	415.0090	CONCRETE PAVEMENT 9-INCH	SY	21,470.000	21,470.000
0140	415.0410	CONCRETE PAVEMENT APPROACH SLAB	SY	170.000	170.000
0150	416.0610	DRILLED TIE BARS	EACH	960.000	960.000
0160	416.0620	DRILLED DOWEL BARS	EACH	51.000	51.000
0170	416.1010	CONCRETE SURFACE DRAINS	CY	34.000	34.000
0180	440.4410.S	INCENTIVE IRI RIDE	DOL	3,410.000	3,410.000
0190	455.0105	ASPHALTIC MATERIAL PG58-28	TON	72.000	72.000
0200	455.0605	TACK COAT	GAL	160.000	160.000
0210	460.1101	HMA PAVEMENT TYPE E-1	TON	1,290.000	1,290.000
0220	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	90.000	90.000
0230	465.0120	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	TON	10.000	10.000
0240	465.0305	ASPHALTIC SURFACE SAFETY ISLANDS	TON	15.000	15.000
0250	502.3100	EXPANSION DEVICE (STRUCTURE) 01. B-59-80	LS	1.000	1.000
0260	502.3200	PROTECTIVE SURFACE TREATMENT	SY	1,570.000	1,570.000
0270	505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	4,020.000	4,020.000
0280	509.0301	PREPARATION DECKS TYPE 1	SY	188.000	188.000
0290	509.0302	PREPARATION DECKS TYPE 2	SY	94.000	94.000
0300	509.0500	CLEANING DECKS	SY	1,490.000	1,490.000
0310	509.1000	JOINT REPAIR	SY	75.000	75.000
0320	509.1500	CONCRETE SURFACE REPAIR	SF	34.000	34.000
0330	509.2000	FULL-DEPTH DECK REPAIR	SY	1.000	1.000
0340	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	113.000	113.000
0350	509.9010.S	REMOVING ASPHALTIC CONCRETE DECK OVERLAY (STRUCTURE) 01. B-59-80	SY	1,490.000	1,490.000
0360	513.4055	RAILING TUBULAR TYPE H (STRUCTURE) 01. B-59-80	LS	1.000	1.000
0370	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 01. B-59-80	LS	1.000	1.000
0380	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 01. B-59-80	LS	1.000	1.000
0390	517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH	1.000	1.000
0400	520.1012	APRON ENDWALLS FOR CULVERT PIPE 12-INCH	EACH	1.000	1.000
0410	520.1015	APRON ENDWALLS FOR CULVERT PIPE 15-INCH	EACH	4.000	4.000
0420	601.0405	CONCRETE CURB & GUTTER 18-INCH TYPE A	LF	365.000	365.000
0430	601.0409	CONCRETE CURB & GUTTER 30-INCH TYPE A	LF	1,875.000	1,875.000
0440	601.0555	CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE A	LF	1,410.000	1,410.000
0450	602.0410	CONCRETE SIDEWALK 5-INCH	SF	1,590.000	1,590.000

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DATE 17JAN14 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	1440-27-71 QUANTITY
0460	602.0505	CURB RAMP DETECTABLE WARNING FIELD YELLOW	SF	128.000	128.000
0470	603.8000	CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	LF	1,600.000	1,600.000
0480	603.8125	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	LF	3,200.000	3,200.000
0490	608.0315	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH	LF	333.000	333.000
0500	608.0412	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH	LF	32.000	32.000
0510	608.0415	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 15-INCH	LF	15.000	15.000
0520	611.0624	INLET COVERS TYPE H	EACH	8.000	8.000
0530	611.3230	INLETS 2X3-FT	EACH	8.000	8.000
0540	614.0010	BARRIER SYSTEM GRADING SHAPING FINISHING	EACH	2.000	2.000
0550	614.0220	STEEL THRIE BEAM BULLNOSE TERMINAL	EACH	2.000	2.000
0560	614.0230	STEEL THRIE BEAM	LF	200.000	200.000
0570	614.2500	MGS THRIE BEAM TRANSITION	LF	156.000	156.000
0580	614.2610	MGS GUARDRAIL TERMINAL EAT	EACH	4.000	4.000
0590	619.1000	MOBILIZATION	EACH	1.000	1.000
0600	620.0300	CONCRETE MEDIAN SLOPED NOSE	SF	167.000	167.000
0610	625.0100	TOPSOIL	SY	6,420.000	6,420.000
0620	627.0200	MULCHING	SY	6,420.000	6,420.000
0630	628.1504	SILT FENCE	LF	3,380.000	3,380.000
0640	628.1520	SILT FENCE MAINTENANCE	LF	3,380.000	3,380.000
0650	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	2.000	2.000
0660	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	2.000	2.000
0670	628.2002	EROSION MAT CLASS I TYPE A	SY	1,600.000	1,600.000
0680	628.7005	INLET PROTECTION TYPE A	EACH	9.000	9.000
0690	628.7015	INLET PROTECTION TYPE C	EACH	16.000	16.000
0700	628.7570	ROCK BAGS	EACH	3.000	3.000
0710	629.0210	FERTILIZER TYPE B	CWT	4.600	4.600
0720	630.0130	SEEDING MIXTURE NO. 30	LB	79.000	79.000
0730	634.0614	POSTS WOOD 4X6-INCH X 14-FT	EACH	35.000	35.000
0740	634.0616	POSTS WOOD 4X6-INCH X 16-FT	EACH	44.000	44.000
0750	634.0618	POSTS WOOD 4X6-INCH X 18-FT	EACH	6.000	6.000
0760	635.0300	SIGN SUPPORTS REPLACING BASE CONNECTION BOLTS	EACH	8.000	8.000
0770	637.1220	SIGNS TYPE I REFLECTIVE SH	SF	225.000	225.000
0780	637.2210	SIGNS TYPE II REFLECTIVE H	SF	695.600	695.600
0790	637.2230	SIGNS TYPE II REFLECTIVE F	SF	142.250	142.250
0800	638.2601	REMOVING SIGNS TYPE I	EACH	2.000	2.000
0810	638.2602	REMOVING SIGNS TYPE II	EACH	111.000	111.000
0820	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	66.000	66.000
0830	642.5001	FIELD OFFICE TYPE B	EACH	1.000	1.000
0840	643.0100	TRAFFIC CONTROL (PROJECT) 01. 1440-27-71	EACH	1.000	1.000
0850	643.0300	TRAFFIC CONTROL DRUMS	DAY	14,740.000	14,740.000
0860	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	4,110.000	4,110.000
0870	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	5,680.000	5,680.000
0880	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	1,740.000	1,740.000
0890	643.0800	TRAFFIC CONTROL ARROW BOARDS	DAY	400.000	400.000
0900	643.0900	TRAFFIC CONTROL SIGNS	DAY	8,800.000	8,800.000
0910	643.0910	TRAFFIC CONTROL COVERING SIGNS TYPE I	EACH	10.000	10.000
0920	643.1000	TRAFFIC CONTROL SIGNS FIXED MESSAGE	SF	548.700	548.700

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DATE 17JAN14 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	1440-27-71 QUANTITY
0930	643.1050	TRAFFIC CONTROL SIGNS PCMS	DAY	48.000	48.000
0940	643.2000	TRAFFIC CONTROL DETOUR (PROJECT) 01. 1440-27-71	EACH	1.000	1.000
0950	643.3000	TRAFFIC CONTROL DETOUR SIGNS	DAY	280.000	280.000
0960	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	14,320.000	14,320.000
0970	646.0126	PAVEMENT MARKING EPOXY 8-INCH	LF	2,005.000	2,005.000
0980	646.0881.S	PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH	LF	130.000	130.000
0990	646.0883.S	PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH	LF	1,260.000	1,260.000
1000	647.0456	PAVEMENT MARKING CURB EPOXY	LF	220.000	220.000
1010	647.0606	PAVEMENT MARKING ISLAND NOSE EPOXY	EACH	1.000	1.000
1020	647.0746	PAVEMENT MARKING DIAGONAL EPOXY 24-INCH	LF	100.000	100.000
1030	649.0300	TEMPORARY PAVEMENT MARKING REFLECTIVE TAPE 4-INCH	LF	485.000	485.000
1040	650.4000	CONSTRUCTION STAKING STORM SEWER	EACH	13.000	13.000
1050	650.4500	CONSTRUCTION STAKING SUBGRADE	LF	350.000	350.000
1060	650.7000	CONSTRUCTION STAKING CONCRETE PAVEMENT	LF	8,535.000	8,535.000
1070	650.8500	CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (PROJECT) 01. 1440-27-71	LS	1.000	1.000
1080	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 1440-27-71	LS	1.000	1.000
1090	652.0235	CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	LF	1,200.000	1,200.000
1100	653.0140	PULL BOXES STEEL 24X42-INCH	EACH	22.000	22.000
1110	690.0150	SAWING ASPHALT	LF	91.000	91.000
1120	690.0250	SAWING CONCRETE	LF	2,145.000	2,145.000
1130	715.0415	INCENTIVE STRENGTH CONCRETE PAVEMENT	DOL	1,835.000	1,835.000
1140	ASP.1T0A	ON-THE-JOB TRAINING APPRENTICE AT $5. 00/HR	HRS	2,000.000	2,000.000
1150	ASP.1T0G	ON-THE-JOB TRAINING GRADUATE AT $5.00/HR	HRS	1,320.000	1,320.000
1160	SPV.0105	SPECIAL 01. CONCRETE PAVEMENT JOINT LAYOUT	LS	1.000	1.000

ALL ITEMS CATEGORY 0010
UNLESS OTHERWISE NOTED

3

CLEARING AND GRUBBING

STATION	-	STATION	LOCATION	201.0105 CLEARING STA.	201.0205 GRUBBING STA.
52+00		55+00	CTH Y	3	3
TOTALS				**3**	**3**

EARTHWORK SUMMARY

DIVISION	CAT	FROM/TO STATION	LOCATION	EXCAVATION COMMON (NOTE 1) (ITEM #205.0100) CUT (NOTE 2)	SALVAGED / UNUSEABLE PAVEMENT MATERIAL (NOTE 3)	AVAILABLE MATERIAL (NOTE 4)	UNEXPANDED FILL (NOTE 5)	EXPANDED FILL (NOTE 6) FACTOR 1.25	MASS ORDINATE +/- (NOTE 7)	WASTE	BORROW (ITEM #208.0100) (NOTE 8) FACTOR 1.15
1440-27-71											
1	0010	44+75 - 48+93	SOUTH OF BRIDGE	55	0	55	65	81	-26	0	24
2	0010	51+05 -57+35	NORTH OF BRIDGE	304	0	304	380	475	-171	0	157
3	0010	100+00 - 116+50	EB ON RAMP	273	0	273	26	33	241	241	0
4	0010	200+50 - 217+00	EB OFF RAMP	317	0	317	10	13	305	305	0
5	0010	300+00 - 318+50	WB OFF RAMP	617	0	617	662	828	-211	0	194
6	0010	401+00 - 417+50	WB ON RAMP	144	0	144	85	106	38	38	--
TOTALS				1,710	0	1,710	1,228	1,535	175	583	375

1) NO EBS IS ANTICIPATED. IF EBS IS REQUIRED IT WILL BE PAID AS COMMON EXCAVATION. ITEM NUMBER 205.0100
2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT
3) SALVAGED/UNUSABLE PAVEMENT MATERIAL EQUALS AREA OF PROJECT PAVEMENT REMOVAL * TYPICAL EXISTING PAVEMENT
4) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL
5) UNEXPANDED FILL IS A SUM OF CROSS SECTION AREAS FROM EACH DIVISIONAL SHEET
6) EXPANDED FILL FACTOR = 1.25, EXPANDED FILL = (UNEXPANDED FILL) * FILL FACTOR
7) 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.
8) BORROW = (ABSOLUTE VALUE OF MASS ORDINATE / EXPANDED FILL FACTOR) * BORROW FACTOR
9) WASTE MAY BE USED AS BORROW MATERIAL IF THE CONTRACTOR CAN COORDINATE STAGING

REMOVING SMALL PIPE CULVERTS, REMOVING INLETS AND REMOVING STORM SEWER (SIZE)

STATION	LOCATION	204.0220 REMOVING INLETS EACH	204.0245 REMOVING STORM SEWER 15-INCH LF	DESCRIPTION
46+70	LT	1	34	
47+48	LT & RT	2	48	
51+27	LT & RT	2	74	
56+58	LT	1	95	
56+85	LT	2	61	
56+92	LT & RT	2	112	
TOTALS		**10**	**424**	

REMOVING PAVEMENT, ITEM NO. 204.0100

STATION	-	STATION	LOCATION	SY
44+75	-	57+35	CTH Y	9,675
100+00	-	117+10	EASTBOUND OFF	4,360
200+00	-	215+64	EASTBOUND ON	4,805
300+00		319+14	WESTBOUND OFF	5,830
400+00	-	418+20	WESTBOUND ON	5,830
TOTAL				**30,500**

REMOVING GUARDRAIL, ITEM NO. 204.0165

STATION	-	STATION	LOCATION	LF
49+90	-	50+00	BRIDGE PIERS & STH 23	454
TOTAL				**454**

BASE AGGREGATE DENSE, CONCRETE PAVEMENT, AND HMA PAVEMENT ITEMS

ROADWAY	STATION	TO	STATION	ITEM NO. 305.0110 BASE AGGREGATE DENSE 3/4-INCH TONS	ITEM NO. 305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TONS	ITEM NO. 415.0900 CONCRETE PAVEMENT 9-INCH SY	ITEM NO. 455.0105 ASPHALTIC MATERIAL PG58-28 TON	ITEM NO. 455.0605 TACK COAT GAL	ITEM NO. 460.1101 HMA PAVEMENT TYPE E-1 TONS	ITEM NO. 465.012 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TONS	ITEM NO. 465.0305 ASPHALTIC SURFACE SAFETY ISLANDS TONS
CTH Y NB	44+75	-	57+35	25	476	4515	6	13	106	---	---
CTH Y SB	44+75	-	57+35	25	476	4515	6	13	106	---	---
EASTBOUND OFF RAMP	100+00	-	117+50	135	809	2790	14	30	238	---	5
EAST BOUND ON RAMP	200+00	-	215+64	135	809	2720	13	29	235	---	5
WEST BOUND OFF RAMP	300+00		319+14	50	1015	3465	17	38	303	---	5
WEST BOUND ON RAMP	400+00	-	418+20	50	1015	3465	16	37	302	---	---
*OLD PLANK ROAD TRAIL	46+00	-	---	---	40	---	---	---	---	5	---
CTH Y NB DRIVEWAY RIGHT	45+15	-	---	---	5	---	---	---	---	5	---
TOTALS				**420**	**4,645**	**21,470**	**72**	**160**	**1,290**	**10**	**15**

*UNDISTRIBUTED AMOUNT OF BASE AGGREGATE INCLUDES TO MAINTAIN TRAIL CROSSING DURING CONSTRUCTION

CONCRETE SIDWALK 5-INCH, ITEM NO. 602.0410

STATION	-	STATION	LOCATION	SF
45+94	-	46+46	MEDIAN	1400
47+50	-	48+35	MEDIAN	170
46+00	-	46+00	LT & RT, TRAIL	20
TOTAL				**1590**

CURB RAMP DETECTABLE WARNING FIELD YELLOW, ITEM NO. 602.0505

STATION	LOCATION	SF
46+00	MEDIAN	64
46+00	LT	32
46+00	RT	32
TOTAL		**128**

CONCRETE PAVEMENT APPROACH SLAB ITEM NO. 415.0410

STATION	LOCATION	SY
48+81	LT & RT	85
48+81	LT & RT	85
TOTAL		**170**

REMOVING SURFACE DRAINS, ITEM NO. 204.0190

STATION	LOCATION	EACH
48+81	LT	1
48+81	RT	1
201+22	RT	1
301+06	LT	1
221+62	LT	1
308+16	LT	1
405+20	RT	1
409+96	LT	1
TOTAL		**8**

CONCRETE CURB & GUTTER

STATION	-	STATION	LOCATION	ITEM NO. 601.0405 CONCRETE CURB & GUTTER 18-INCH TYPE A LF	ITEM NO. 601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A LF	ITEM NO. 601.0555 CONCRETE CURB & GUTTER SLOPED 36-INCH TYPE A LF
44+75	-	46+52	MEDIAN	365	---	---
47+45	-	49+95	MEDIAN	---	---	290
51+04	-	56+68	MEDIAN	---	---	1120
305+29	-	311+85	WESTBOUND OFF	---	656	---
405+20	-	413+64	WESTBOUND ON	---	845	---
44+75	-	46+70	CURB RETURN RT	---	256	---
46+08	-	46+31	CURB RETURN LT	---	23	---
56+40	-	56+91	CURB RETURN RT	---	51	---
56+14	-	56+58	CURB RETURN LT	---	44	---
TOTAL				**365**	**1875**	**1410**

DRILLED TIE BARS AND DRILLED DOWEL BARS

STATION	LOCATION	ITEM NO. 416.0610 CY	ITEM NO. 416.0620 CY
44+75	LT & RT	4	36
57+35	LT & RT	4	---
	WB OFF RAMP	172	
	WB ON RAMP	173	
	EB OFF RAMP	262	---
	EB ON RAMP	345	15
TOTAL		**960**	**51**

CONCRETE SURFACE DRAINS, ITEM NO. 416.1010

STATION	LOCATION	CY
48+81	LT	5
48+81	RT	5
201+22	RT	3
301+06	LT	3
221+62	LT	3
308+16	LT	3
311+86	LT	3
405+20	RT	3
409+96	LT	3
417+46	RT	3
TOTAL		**34**

CONCRETE BARRIER TEMPORARY PRECAST

CATEGORY	LOCATION	603.8000 DELIVERED	603.8125 INSTALLED	REMARKS
0020	STH 23 EB OUTSIDE LANE	400	800	B-59-80, CTH Y
0020	STH 23 EB MEDIAN LANE	400	800	B-59-80, CTH Y
0020	STH 23 WB MEDIAN LANE	400	800	B-59-80, CTH Y
0020	STH 23 EB OUTSIDE LANE	400	800	B-59-80, CTH Y
	TOTAL	**1600**	**3200**	

GUARDRAIL

STATION	-	STATION	LOCATION	ITEM NO. 614.2500 MGS THRIE BEAM TRANSITION LF	ITEM NO. 614.610 MGS GUARDRAIL TERMINAL EAT EACH
48+01	-	48+93	RT	39	1
48+01	-	48+93	LT	39	1
51+05	-	51+97	RT	39	1
51+05	-	51+97	LT	39	1
TOTALS				156	4

STORM SEWER PIPE REINFORCED CONCRETE CLASS III AND APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE

FROM	TO	APRON ENDWALLS FOR CULVERT PIPE ITEM NO. 520.1012 12-INCH EACH	APRON ENDWALLS FOR CULVERT PIPE ITEM NO. 520.1015 15-INCH EACH	STORM SEWER PIPE REINFORCED CONCRETE CLASS III ITEM NO. 608.0315 15-INCH LF	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV ITEM NO. 608.0412 12-INCH LF	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV ITEM NO. 608.0415 15-INCH LF	INVERT	DISCHARGE
9	ENDWALL	1	---	---	32	---	671.50	671.50
1	2	---	---	6	---	---	673.31	673.26
2	ENDWALL	---	1	58	---	---	673.26	673.00
3	4	---	---	---	---	15	681.25	681.10
4	ENDWALL	---	1	51	---	---	681.06	680.50
10	ENDWALL	---	1	113	---	---	676.79	673.86
5	6	---	---	16	---	---	679.25	679.10
6	ENDWALL	---	1	89	---	---	674.04	673.10
TOTALS		**1**	**4**	**333**	**32**	**15**		

BARRIER SYSTEM GRADING SHAPING FINISHING, ITEM 614.0010
STEEL THRIE BEAM BULLNOSE TERMINAL, 614.0220
STEEL THRIE BEAM, ITEM 614.0230

LOCATION	ITEM NO. 614.0010 EACH	ITEM NO. 614.0220 EACH	ITEM NO. 614.0230 LF	*COMMON EXCAVATION CY	*FILL CY	*BORROW CY	*SALVAGED TOPSOIL SY	*FERTILIZER TYPE B CWY	ITEM NO. 628.2002 EROSION MAT CLASS I TYPE A SY	*SEEDING MIXTURE NO.30 LBS
STH 23	2	2	200	0	0	0	1600	1.1	1600	45
TOTALS	2	2	200	0	0	0	1600	1.1	1600	45

*THE EXISTING GRADES AT THIS LOCATION MEET CURRENT STANDARDS. MINIMAL GRADING IS EXPECTED. ITEMS & QUANTITIES FOR INFORMATION ONLY.

CATCH BASINS AND COVERS

STRUCTURE NO.	STATION	LOCATION	ITEM NO. 611.3230 INLETS 2X3-FT EACH	ITEM NO. 611.0624 INLET COVERS TYPE H EACH	RIM OR GRATE ELEVATION	TOP OF STRUCTURE	STRUCTURE INVERT ELEVATION	DEPTH	NOTES
1	47+53.00	6.5' LT	1	1	677.31	676.06	673.31	4.00	
2	47+53.00	1.5' LT	1	1	676.95	675.70	673.26	3.69	
3	51+32.50	16.5' LT	1	1	684.68	683.43	681.25	3.43	
4	51+32.50	1.5' LT	1	1	684.86	683.61	681.06	3.80	
5	56+56.30	16.5' LT	1	1	683.07	681.82	679.25	3.82	
6	56+56.30	1.5' LT	1	1	683.25	682.00	674.04	9.21	
9	46+68.71	87.6' LT	1	1	674.24	672.99	671.70	2.54	MINIMAL STRUCTURE DEPTH ABOVE PIPE*
10	56+85.00	89' LT	1	1	682.00	680.75	676.79	5.21	
TOTALS			**8**	**8**					

STRUCTURE DEPTH SUBTRACTED FOR FRAME AND RINGS .

DEPTH FOR FRAME AND RINGS FOR:
*CONTRACTOR MAY REDUCE ADJUSTING RINGS AS NECESSARY
INLET COVER TYPE H = 1.25' (INCLUDES 0.50' FOR ADJUSTING RINGS.)

SAWING

STATION	LOCATION	ASPHALT ITEM NO. 690.0150 LF	CONCRETE ITEM NO. 690.0250 LF
44+75	LT & RT	5	54
45+15	LT	18	---
46+00	LT & RT	20	---
57+35	LT & RT	48	6
	WB OFF RAMP	---	435
	WB ON RAMP	---	435
	EB OFF RAMP	---	655
	EB ON RAMP	---	560
TOTAL		**91**	**2145**

CONCRETE MEDIAN SLOPED NOSE, ITEM NO. 620.0300

STATION	LOCATION	SF	NOTES
46+51	CENTER	45	TYPE 1
46+67	LEFT	14	TYPE 1
46+65	RIGHT	22	TYPE 1
46+86	RIGHT	32	TYPE 1
47+45	CENTER	7	TYPE 1
56+66	CENTER	33	TYPE 1
56+83	LEFT	14	TYPE 1
TOTAL		**167**	

CONSTRUCTION STAKING

STATION	-	STATION	ROADWAY	ITEM NO. 650.4000 STORM SEWER SYSTEM EACH	ITEM NO. 650.4500 SUBGRADE LF	ITEM NO. 650.7000 CONCRETE PAVEMENT LF
44+75	-	57+35	CTH Y	13	---	1525
100+00	-	117+10	EASTBOUND OFF RAMP	---	---	1710
200+00	-	215+64	EASTBOUND ON RAMP	---	---	1565
300+00	-	319+14	WESTBOUND OFF RAMP		350	1915
400+00	-	418+20	WESTBOUND ON RAMP	---	---	1820
TOTAL				13	350	8535

EROSION CONTROL ITEMS

LOCATION	ROADWAY	ITEM NO. 625.0100 TOPSOIL SY	ITEM NO. 627.0200 MULCHING SY	ITEM NO. 628.1504 SILT FENCE LF	ITEM NO. 628.1420 SILT FENCE MAINTENANCE LF	ITEM NO. 628.7005 INLET PROTECTION TYPE A EACH	ITEM NO. 628.7015 INLET PROTECTION TYPE C EACH	ITEM NO. 628.7570 ROCK BAGS EACH	ITEM NO. 629.0210 FERTILIZER TYPE B CWT	ITEM NO. 630.0130 SEEDING MIXTURE NO. 30 LB
	CTH Y	5,330	5,330	920	920	9	16	3	3.4	28
	WB OFF RAMP	---	---	1,010	1,010	---	---	---	---	---
	WB ON RAMP	---	---	1,150	1,150	---	---	---	---	---
	UNDISTRIBUTED	1,090	1,090	300	300	---	---	---	1.2	51
TOTAL		**6,420**	**6,420**	**3,380**	**3,380**	**9**	**16**	**3**	**4.6**	**79**

ALL ITEMS CATEGORY 0010
UNLESS OTHERWISE NOTED

ALL ITEMS CATEGORY 0010
UNLESS OTHERWISE NOTED

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 40 DAYS	643.3000 DETOUR SIGNS DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	643.1000 SIGNS FIXED MESSAGE S.F.	*643.091 COVERING SIGNS TYPE I EACH	REMARKS
	STAGE 1 (NW LOOP RAMP & SW RAMP CLOSED)									
1	1000' S OF TYPE 1 (42,SHEBOYGAN/HOWARDS GROVE, EXIT 1 MILE)	FMS	11'-6"x4'-0"	1				46.00		
2	ACROSS FROM SIGN # 1 (MEDIAN SIDE)	FMS	11'-6"x4'-0"	1				46.00		
3	1500' S OF SIGN # 1 ON I 43 (SB)	FMS	11'-6"x4'-0"	1				46.00		
4	ACROSS FROM SIGN # 3 (MEDIAN SIDE)	FMS	11'-6"x4'-0"	1				46.00		
5	RT OF TYPE 1 (42,SHEBOYGAN/HOWARDS GROVE, TILT RT)	FMS	7'-0"x2'-0"	1				14.00		
6	ACROSS FROM D1-1 (LAKELAND COLLAGE-RIGHT) (RIGHT SIDE)	FMS	4'-6"x1'-3"	1				5.75		
7	ABOVE D1-1 RAB DIAGRAMTIC (LT-S VANGUARD DR; N-42-AH; N VANGUARD DR-RT)	FMS	4'-6"x1'-3"	1				5.75		
8	BACKSIDE D1-1 (LT-PLAYBIRD RD, 42 SB)	FMS	4'-6"x1'-3"	1				5.75		
9	TYPE 1 (23; SHEBOYGAN/KOHLER; EXIT 1 1/4 MILES)								1	KOHLER
10	TYPE 1 (23; SHEBOYGAN/KOHLER; TILT RT)								1	KOHLER
11	TYPE 1 (23 WEST; KOHLER/PLYMOUTH; TILT RT)								1	KOHLER
12	TYPE 1 (Y; KOHLER; EXIT 1/2 MILE)	R 55-58-A	108"x18"	1	40	40				PLACE OVER-EXIT 1/2 MILE
13	TYPE 1 (Y; KOHLER; TILT RIGHT)	R 55-58-A	76"x12"	1	40	40				PLACE OVER-TILT RIGHT
14	1000' E OF SIGN BRIDGE S-59-9	FMS	11'-6"x4'-0"	1				46.00		
15	ACROSS FROM SIGN # 14 (MEDIAN SIDE)	FMS	11'-6"x4'-0"	1				46.00		
	GAP IN STAGE 1 NUMBERING									
20A	1000' W OF TYPE 1 (32; HOWARDS GROVE/SHEBOYGAN FALLS; EXIT 1 MILE) ON HWY 23 (EB)									
20B	ACROSS FROM SIGN # 20A (MEDIAN SIDE)									
21A	TYPE 1 (Y; KOHLER; EXIT 1 MILE) ON HWY 23 (EB)	R 55-58-A	108"x18"	1	40	40				Y-KOHLER-EXIT 1 MILE
21B	TYPE 1 (Y; KOHLER; TILT RIGHT) ON HWY 23 (EB)	R 55-58-A	76"x12"	1	40	40				Y-KOHLER-TILT RIGHT
22	1000' S OF TYPE 1 (28/A,SHEBOYGAN/SHEBOYGAN FALLS, EXIT 1 MILE)	FMS	11'-6"x4'-0"	1				46.00		
23	ACROSS FROM SIGN # 22 (MEDIAN SIDE)	FMS	11'-6"x4'-0"	1				46.00		
24	1500' S OF SIGN # 22 ON I 43 (NB)	FMS	11'-6"x4'-0"	1				46.00		
25	ACROSS FROM SIGN # 24 (MEDIAN SIDE)	FMS	11'-6"x4'-0"	1				46.00		
26	RT OF TYPE 1 (42,SHEBOYGAN/SHEBOYGAN FALLS, TILT RT)	FMS	7'-0"x2'-0"	1				14.00		
27	ACROSS FROM W3-3 (SIGNAL AHEAD) SIGN (LEFT SIDE)	FMS	4'-6"x1'-3"	1				5.75		
28	150' E OF CTHY A INTERSECTION ON HWY 28 WB	FMS	4'-6"x1'-3"	1				5.75		
29	TYPE 1 (23; SHEBOYGAN/KOHLER; EXIT 1 MILE)								1	KOHLER
30	TYPE 1 (23; SHEBOYGAN/KOHLER; TILT RT)								1	KOHLER
31	TYPE 1 (23 WEST; KOHLER/PLYMOUTH; DOWN ARROW)								1	KOHLER
32	TYPE 1 (23 WEST; KOHLER/PLYMOUTH; TILT RT)								1	KOHLER
	UNDISTRIBUTED	PCMS		2	10		20			
	SUBTOTAL			23		160	20	516.75	7	
	STAGE 2 (SE RAMP & NE LOOP RAMP CLOSED)				60					
16	500' E OF TYPE 1 SIGN (CTY Y - KOHLER- TILT RT)	W 6-54	132"x48"	1	60	60				
17	500' W OF TYPE 1 SIGN (CTY Y - KOHLER- TILT RT)	W 6-54	132"x48"	1	60	60				
18	100' N OF UPPER RD INTERSECTION ON CTY Y (NB)	FMS	8'-6"x 4'-0"					34.00		SEE SIGN DETAIL
19	100' N OF CTY O INTERSECTION ON CTY Y (SB)	FMS	8'-6"x 4'-0"					34.00		SEE SIGN DETAIL
	SUBTOTAL			2		120	0	68.00	0	
	PROJECT TOTAL			25		280	20	584.75	7	

*NOTE: COVERED/UNCOVER SIGNS 1 CYLE PER STAGE

ALL ITEMS CATEGORY 0010
UNLESS OTHERWISE NOTED

TRAFFIC CONTROL SUMMARY

CATEGORY	LOCATION	APPROX. SERVICE DAYS	643.0300 DRUMS NO. IN SERVICE	643.0300 DRUMS DAYS	643.0420 BARRICADES TYPE III NO. IN SERVICE	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A NO. IN SERVICE	643.0705 WARNING LIGHTS TYPE A DAYS	643.0715 WARNING LIGHTS TYPE C NO. IN SERVICE	643.0715 WARNING LIGHTS TYPE C DAYS	643.0800 ARROW BOARDS NO. IN SERVICE	643.0800 ARROW BOARDS DAYS	643.0900 SIGNS NO. IN SERVICE	643.0900 SIGNS DAYS	*643.0910 COVERING SIGNS TYPE 1 EACH	643.1050 SIGNS PCMS NO. IN SERVICE	643.1050 SIGNS PCMS DAYS	649.0300 TEMP PAVT MARKING REFLECTIVE TAPE 4-INCH LF
STAGE 1																		
0010	CTH Y	40	86	3440	36	1440	46	1840	---	---	1	40	53	2120	---	---	---	120
0010	STH 23	40	53	2120	---	---	---	---	6	240	---	---	23	920	3	---	---	245
STAGE 1 SUBTOTAL				5560		1440		1840		240		40		3040	3		0	365
STAGE 2																		
0010	CTH Y	60	93	5580	35	2100	49	2940	6	360	2	120	58	3480	---	---	---	120
0010	STH 23	60	40	2400	---	---	---	---	10	600	3	180	21	1260	---	---	---	---
STAGE 2 SUBTOTAL				7980		2100		2940		960		300		4740	0		0	120
SUBTOTAL CAT 0010				**13540**		**3540**		**4780**		**1200**		**340**		**7780**	**3**		**0**	**485**
0020	STH 23 EB OUTSIDE LANE	8	40	320	1	8	2	16	18	144	2	16	28	224	---	---	---	---
0020	STH 23 EB MEDIAN LANE	6	40	240	1	6	2	12	18	108	2	12	28	168	---	---	---	---
0020	STH 23 WB MEDIAN LANE	6	40	240	1	6	2	12	18	108	2	12	28	168	---	---	---	---
0020	STH 23 EB OUTSIDE LANE	10	40	400	1	10	2	20	18	180	2	20	28	280	---	---	---	---
0020	CTH Y	30	---	---	18	540	28	840	---	---	---	---	6	180	---	---	---	---
0020	CTH Y APPROACHES	7	---	---	---	---	---	---	---	---	---	---	---	---	---	2	14	---
0020	STH 23 EB	7	---	---	---	---	---	---	---	---	---	---	---	---	---	1	7	---
0020	STH 23 WB	7	---	---	---	---	---	---	---	---	---	---	---	---	---	1	7	---
SUBTOTAL CAT 0020				**1200**		**570**		**900**		**540**		**60**		**1020**	**0**		**28**	**0**
PROJECT TOTAL				**14740**		**4110**		**5680**		**1740**		**400**		**8800**	**3**		**28**	**485**

PAVEMENT MARKING EPOXY

LOCATION FROM	LOCATION TO	ROADWAY	ITEM NO. 646.0106 EPOXY 4-INCH WHITE L.F.	ITEM NO. 646.0106 EPOXY 4-INCH YELLOW L.F.	ITEM NO. 646.0126 EPOXY 8-INCH WHITE L.F.	ITEM NO. 647.0456 CURB EPOXY L.F.	ITEM NO. 647.0506 ISLAND NOSES EPOXY EACH	ITEM NO. 647.0746 DIAGONAL EPOXY 24-INCH L.F.	ITEM NO. 646.0881.S GROOVED WET REFLECTIVE TAPE 4-INCH L.F.	ITEM NO. 646.0883.S GROOVED WET REFLECTIVE TAPE 8-INCH L.F.
			PAVEMENT MARKING							
44+75	47+00	CTH Y	145	---	---	100	---	---	---	---
47+00	57+00	CTH Y	2325	---	212	110	1	---	---	---
57+00	57+35	CTH Y	692	---	100	10	---	---	---	---
100+00	117+00	STH 23 EB Off	1765	970	370	---	---	---	---	320
200+00	215+65	STH 23 EB On	708	850	495	---	---	---	---	500
399+70	418+00	STH 23 WB On	1760	1780	258	---	---	---	65	250
300+00	319+14	STH 23 WB Off	1865	1460	570	---	---	100	65	190
SUBTOTALS			9260	5060	2005	220	1	100	130	1260
TOTALS			**14320**		**2005**	**220**	**1**	**100**	**130**	**1260**

PULL BOXES STEEL 24X42-INCH

STATION	ITEM NO. 653.0140 LF
EB RAMPS	11
WB RAMPS	11
TOTAL	**22**

CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH

FROM	-	TO	ITEM NO. 652.0235 LF
PB1		PB2	51
PB2		PB3	54
PB3		PB4	36
PB4		PB5	35
PB5		PB6	30
PB6		PB7	96
PB7		PB8	90
PB8		PB9	64
PB9		PB10	64
PB10		PB11	32
PB10		PB1	78
PB21		PB22	63
PB22		PB23	49
PB23		PB24	24
PB24		PB25	37
PB25		PB26	36
PB26		PB27	76
PB27		PB28	56
PB28		PB29	51
PB29		PB30	66
PB30		PB31	51
PB31		PB21	61
TOTAL			**1200**

3

ERECTION AND REMOVAL OF TYPE II SIGNS AND SUPPORTS

SIGN NO.	LOCATION	SIGN CODE	W X H	637.2210 SIGNS TYPE II REFLECTIVE H S.F.	637.2230 SIGNS TYPE II REFLECTIVE F S.F.	634.0614 POSTS WOOD 4x6x14 EACH	634.0616 POSTS WOOD 4x6x16 EACH	634.0618 POSTS WOOD 4x6x18 EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
1	STH 23, EB OFF-RAMP TO CTH Y	E5-1	72" X 60"	30.00			2		1	2	
2	"	W3-1	36" X 36"		9.00		1		1	1	
3	"	D2-1	90" X 36"	22.50			1	1	1	2	SEE SIGN DETAIL SHEET
4	"	J13-1	24" X 45"	7.50			1		2	1	CTH Y, SEE PLAN SHEET
4A	"	R5-1A	36" X 24"	6.00		1					
5	"	R5-1A	36" X 24"	6.00		1			1		
5A	"	W12-1D	24" X 24"		4.00	1					
6	"	R1-1	30" X 30"	5.18		1			1	1	
6A	"	R6-3	30" X 24"	5.00							MOUNT BELOW SIGN #6
7	"	R5-1	30" X 30"	6.25		1			1	1	
7A	"	R6-2L	24" X 30"	5.00							MOUNT ON SIGN #6 POST FACING NORTH
8	"	R1-1	30" X 30"	5.18		1			1	1	
8A	"	R6-1R	36" X 12"	3.00							MOUNT ABOVE SIGN #8
9	"	R6-2L							1		
10	"	R6-2R							1	1	
11	"	R5-1							1		MOUNT ON BACK OF SIGN #10
12	HIGHLAND DR, SB INSIDE MEDIAN	J3-2	48" X 57"	19.00			1		1	1	EAST STH 23, TO I-43, SEE PLAN SHEET
12A	"	R3-2	24" X 24"	4.00					1		MOUNT ON BACK OF SIGN #12
13	VACANT										
14	HIGHLAND DR, SB INSIDE MEDIAN	J3-2	48" X 57"	19.00			1		6	1	NORTH CTH Y, TO STH 42, SEE PLAN SHEET
15	HIGHLAND DR, S. OF ON/OFF EB RAMPS	R5-1A	36" X 24"	6.00			1		1	1	
16	"	J3-2	48" X 57"	19.00					6		MOUNT ON BACK OF SIGN #15
17	"	R2-1	24" X 30"	5.00		1			1	1	45 MPH
18	"	D1-2	66" X 24"	11.00			1	1	1	2	HWY 42, PLYMOUTH, SEE SIGN DETAIL SHEET
19	"	D1-72	120" X 60"	50.00			2	1			SEE SIGN DETAIL SHEET
20	"	J2-3							9	2	
21	"	J1-2	48" X 39"	13.00			1			1	JCT STH 23, JCT CTH Y, SEE PLAN SHEET
22	HIGHLAND DR, SPLITTER ISLAND TO STH 23	J3-2							1	1	EAST STH 23, TO I-43, SEE PLAN SHEET
23	"	R5-1	30" X 30"	6.25		1			1		
24	"	R6-2L	24" X 30"	5.00		1			1	1	
25	HIGHLAND DR, N. OF ON/OFF EB RAMPS	R4-7	24" X 30"	5.00		1			1	1	
26	"	R6-2L	24" X 30"	5.00		1			1	1	
27	"	D1-70	78" X 30"	16.25			3				SEE SIGN DETAIL SHEET
28	"	D1-71	78" X 60"	32.50							SEE SIGN DETAIL SHEET
29	"	R5-1	30" X 30"	6.25					1		MOUNT ON BACK OF SIGN #30
30	"	R3-1	24" X 24"	4.00		1			1	1	
31	"	R5-1A	36" X 24"	6.00					1		MOUNT ON BACK OF SIGN #32
32	"	D1-1	54" X 15"	5.63		1	1		1	2	KOHLER
33	STH 23, EB ON-RAMP	R5-57	36" X 36"	9.00		1			1	1	
34	STH 23, W. OF CTH Y OVERPASS	J4-1	36" X 54"	13.50			1		2	1	EAST STH 23
35	"	I55-56							1	1	
36	"	E5-1	72" X 60"	30.00			2		1	2	
	PAGE SUBTOTALS			391.99	13.00	14	19	3	52	31	

PLAN SHEET PRODUCED

BY WisDOT - NE REGION

ERECTION AND REMOVAL OF TYPE II SIGNS AND SUPPORTS

SIGN NO.	LOCATION	SIGN CODE	W X H	637.2210 SIGNS TYPE II REFLECTIVE H S.F.	637.2230 SIGNS TYPE II REFLECTIVE F S.F.	634.0614 POSTS WOOD 4x6x14 EACH	634.0616 POSTS WOOD 4x6x16 EACH	634.0618 POSTS WOOD 4x6x18 EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
36A	STH 23, WB OFF-RAMP TO CTH Y	W1-8	18" X 24"		3.00	1					
36B	"	W1-8	18" X 24"		3.00	1					
36C	"	W1-8	18" X 24"		3.00	1					
36D	"	W1-8	18" X 24"		3.00	1					
36E	"	W1-8	18" X 24"		3.00	1					
36F	"	W1-8	18" X 24"		3.00	1					
36G	"	W1-8	18" X 24"		3.00	1					
37	"	W3-1	36" X 36"		9.00		1		1	1	
37A	"	W1-8	18" X 24"		3.00	1					
37B	"	W1-8	18" X 24"		3.00	1					
37C	"	W1-8	18" X 24"		3.00	1					
38	"	J12-1	24" X 45"	7.50			1				CTH Y, SEE PLAN SHEET
39	"	D2-1	90" X 36"	22.50			1	1	1	2	SEE SIGN DETAIL SHEET
39A	"	R5-1A	42" X 30"	8.75					1		
40	"	R1-1	30" X 30"	5.18		1			1	1	
40A	"	R6-3	30" X 24"	5.00							MOUNT BELOW SIGN #40
40B	"	R6-2L	24" X 30"	5.00							MOUNT ON SIGN #40 POST FACING NORTH
41	"	J13-1	24" X 45"	7.50			1		2	1	CTH Y, SEE PLAN SHEET, EXISTING LOCATED IN SPLITTER
42	"	R5-1	30" X 30"	6.25		1			1	1	MOUNT ON BACK OF SIGN #41
43	"	R1-1	30" X 30"	5.18		1			1	1	
43A	"	W12-1D	24" X 24"		4.00	1					
44	"	R6-2R							1	1	
45	"	R6-2L							1		
46	CTH Y, S. OF ON/OFF WB RAMPS	J4-1							2	1	EAST STH 23, EXISTING LOCATED IN SPLITTER ISLAND
47	"	R1-2							1	1	
48	"	W11-15A	30" X 30"		6.25	1			1	1	
49	"	J2-1							3		EAST STH 23, SEE PLAN SHEET
50	"	J2-2	48" X 57"	19.00			1		6	1	NORTH CTH Y, WEST STH 23, SEE PLAN SHEET
51	STH 23, WB ON-RAMP	W13-3	48" X 60"		20.00		1	1	1	2	30 MPH
52	STH 23, E. OF CTH Y OVERPASS	W4-3R	48" X 48"		16.00		2		1	2	
53	"	W4-1	48" X 48"		16.00		2		1	2	
54	CTH Y, S. OF ON/OFF WB RAMPS	D1-2	72" X 24"	12.00			2		1	2	PLYMOUTH, GREENBUSH, SEE SIGN DETAIL SHEET
55	"	R5-1A	36" X 24"	6.00					1		MOUNT ON BACK OF SIGN #54
56	"	R3-2	24" X 24"	4.00			1		1	1	
57	"	J3-1							3	1	WEST STH 23, SEE PLAN SHEET
58	"	R5-1	30" X 30"	6.25		1			1		
59	"	D1-70	78" X 30"	16.25			3				SEE SIGN DETAIL SHEET
60	"	D1-71	78" X 60"	32.50							SEE SIGN DETAIL SHEET
61	"	J3-1	24" X 57"	9.50					3		WEST STH 23, MOUNT ON BACK OF SIGN #56, SEE PLAN SHEET
62	CTH Y, N. OF ON/OFF WB RAMPS	R4-7	24" X 30"	5.00		1			1	1	
	PAGE SUBTOTALS			183.36	101.25	17	16	2	37	23	

PLAN SHEET PRODUCED

BY WisDOT - NE REGION

3

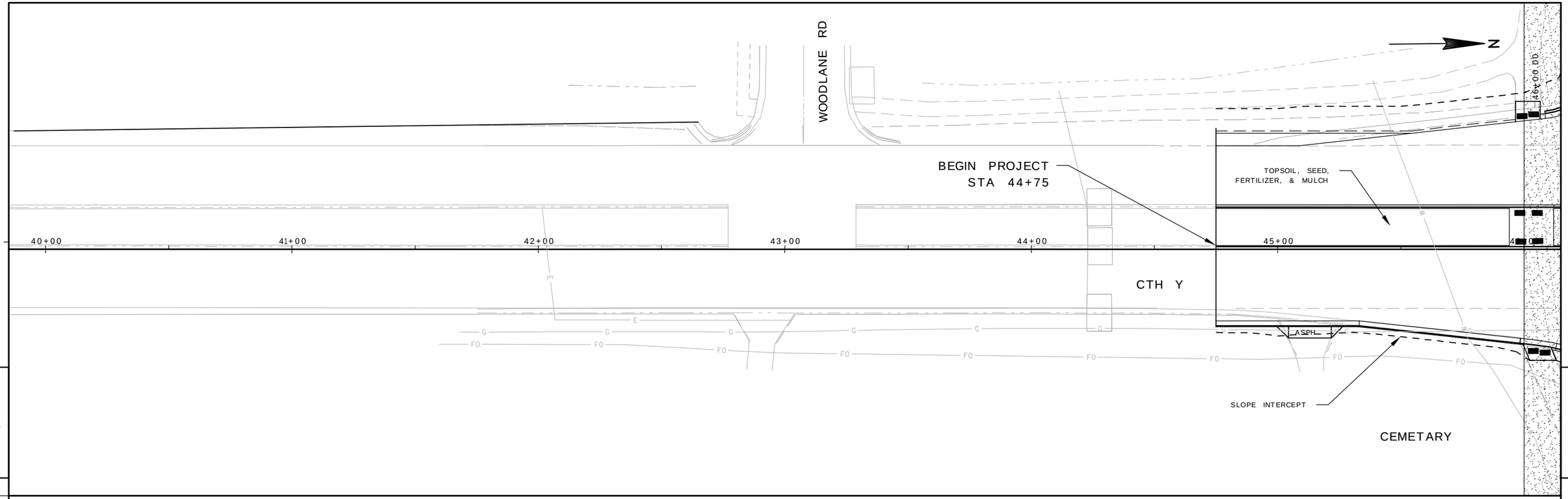
ERECTION AND REMOVAL OF TYPE II SIGNS AND SUPPORTS

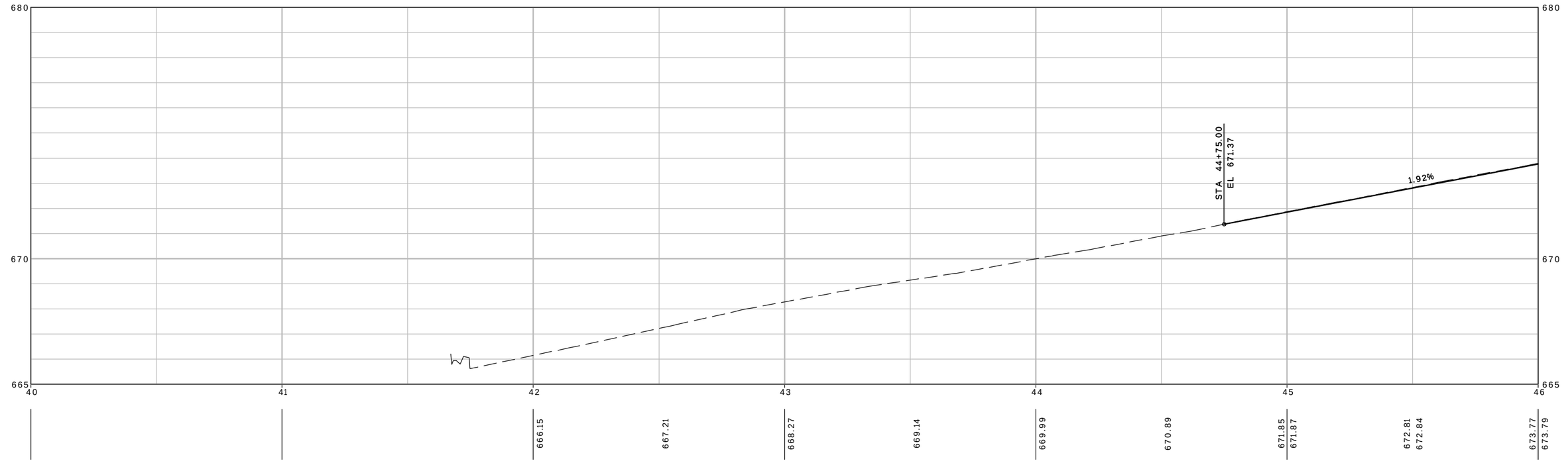
SIGN NO.	LOCATION	SIGN CODE	W X H	637.2210 SIGNS TYPE II REFLECTIVE H S.F.	637.2230 SIGNS TYPE II REFLECTIVE F S.F.	634.0614 POSTS WOOD 4x6x14 EACH	634.0616 POSTS WOOD 4x6x16 EACH	634.0618 POSTS WOOD 4x6x18 EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
63	CTH Y, N. OF ON/OFF WB RAMPS	R6-2L	24" X 30"	5.00		1			1	1	
64	STH 23, WB ON-RAMP	R5-57	36" X 36"	9.00			1		1	1	
65	"	W13-3	48" X 60"		20.00		2		1	2	25 MPH
66	"	W1-6	48" X 24"		8.00	1			1	1	
67	CTH Y, N. OF ON/OFF WB RAMPS	R5-1	30" X 30"	6.25		1			1	1	
68	"	R3-20L	24" X 36"	6.00			1		1	1	
69	"	R5-1A	36" X 24"	6.00					1		MOUNT ON BACK OF SIGN #70
70	"	D1-2	72" X 30"	15.00			2		1	2	SEE SIGN DETAIL SHEET
71	"	D1-72	120" X 60"	50.00			2	1			SEE SIGN DETAIL SHEET
72	"	J2-3							9	2	
73	"	J1-2	48" X 39"	13.00			1		4	1	JCT STH 23, END CTH Y
74	"	I2-3	60" X 24"	10.00		1			1		KOHLER, SEE SIGN DETAIL SHEET
	PAGE SUBTOTALS			120.25	28.00	4	9	1	22	12	
	PROJECT TOTALS			**695.60**	**142.25**	**35**	**44**	**6**	**111**	**66**	

ERECTION AND REMOVAL OF TYPE I SIGNS AND SUPPORTS

SIGN NO.	LOCATION	SIGN CODE	637.1220 SIGNS TYPE I REFLECTIVE SH W X H	S.F.	635.0300 SIGN SUPPORTS REPLACING BASE CONNECTION BOLTS EACH	638.2601 REMOVING SIGNS TYPE I EACH	REMARKS
100	STH 23, EB OFF-RAMP TO CTH Y	E4-1A	180" X 90"	112.50	4	1	REUSE STRUCTURAL STEEL, SEE SIGN DETAILS
101	STH 23, WB OFF-RAMP TO CTH Y	E4-1A	180" X 90"	112.50	4	1	REUSE STRUCTURAL STEEL, SEE SIGN DETAILS
	PROJECT TOTALS			225.00	8	2	

PLAN SHEET PRODUCED
BY WisDOT - NE REGION





PROJECT NO: 1440-27-71	HWY: CTH Y	COUNTY: SHEBOYGAN	PLAN AND PROFILE: STA 40+00 TO STA 46+00	SHEET 67	E

FILE NAME : L:\PROJECTS\12067\DWG\050101_PP.DWG PLOT DATE : 1/15/2014 8:10 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 44

SLOPE INTERCEPT
REMOVING SURFACE DRAIN
MGS THRIE BEAM TRANSITION
REMOVING CURB AND GUTTER
MGS GUARDRAIL TERMINAL EAT
STA 48+01
CONCRETE SURFACE DRAIN
REMOVING
INLETS
CONCRETE SIDEWALK 5-INCH
CONCRETE SIDEWALK 5-INCH
CTH Y
STA 46+63.25 =
STA 117+29
117+00
34
STA 48+95.81
END OF DECK
REMOVING STORM SEWER (15-INCH)
REMOVING GUARDRAIL
REMOVING CURB
AND GUTTER
OLD PLANK ROAD TRAIL
MGS GUARDRAIL TERMINAL EAT
STA 48+01
REMOVING SURFACE DRAIN
MGS THRIE BEAM TRANSITION
CONCRETE SURFACE DRAIN
CONCRETE PAVEMENT APPROACH SLAB
STA 46+97.12 =
STA 200+00
200+00
20
STRUCTURE NO. B-59-80
CONCRETE DECK OVERLAY
SEE STRUCTURE PLANS
REMOVING GUARDRAIL
MGS THRIE BEAM TRANSITION
MGS GUARDRAIL TERMINAL EAT
STA 51+97
REMOVING GUARDRAIL
STA 51+04.72
END OF DECK
PC: 51+48.96
24
REMOVING INLETS
24
REMOVING STORM
SEWER (15-INCH)
CONCRETE SIDEWALK
5-INCH
MGS THRIE BEAM
TRANSITION
MGS GUARDRAIL TERMINAL EAT
STA 51+97
N
46+00.00
46
47
48
49
50
51
52
52+00.00
5
5

VCL = 128.13
K = 253.59
VCL = 821.97
K = 184.59
680
670

VPC STA 46+32.51
VPC EL 674.39
VPI STA 46+96.57
VPI EL 675.67
VPT STA 46+32.51
VPC EL 674.39
STA 47+60.64
EL 677.26
VPC STA 49+19.19
VPC EL 681.39
STA 49+19.19
EL 681.39

673.77 673.79
674.75 674.73
675.82 675.87
677.00 676.91
678.29 678.31
679.59 679.43
680.89 680.91
682.06 682.12
683.04 683.07
683.89 683.95
684.59 684.65
685.17 685.16
685.61 685.64

PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN AND PROFILE: STA 46+00 TO 52+00	SHEET	E

FILE NAME : L:\PROJECTS\12067\DWG\050102_PP.DWG
PLOT DATE : 1/15/2014 8:10 AM
PLOT BY : BAINTER, JOHN
PLOT NAME : ---------- PLOT SCALE : 1" = 40'_XREF
WISDOT/CADDS SHEET 44

SLOPE INTERCEPT

TOPSOIL, SEED, FERTILIZER, & MULCH

REMOVING CURB AND GUTTER

STA 57+01.97 =
STA 300+00

REMOVING INLETS

REMOVING STORM SEWER (15-INCH)

REMOVING CURB AND GUTTER

STA 57+16.41 =
STA 418+45

CTH Y

24

24

41

52+00.00

53+00

54+00

55+00

56+00

57+00

58+00.00

300+00

418+45

418+00

301+

N

5

5

690

680

675

52

53

54

55

56

57

58

END
PROJECT
STA 57+35

HIGH POINT STA 53+36.73
HIGH POINT EL 686.11

VCL = 821.97
K = 184.59

VCL = 282.31
K = 192.89

STA 57+41.16
EL 681.68
VPT STA 57+41.16
VPT EL 681.68

VPC STA 57+41.16
VPC EL 681.68

685.61 685.64
685.91 685.94
686.08 686.07
686.11 686.08
686.00 685.98
685.77 685.70
685.39 685.23
684.88 684.84
684.24 684.24
683.45 683.39
682.54 682.40
681.52 681.42
680.70 680.54

PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN AND PROFILE: STA 52+00 TO 56+00	SHEET 69	E

FILE NAME : L:\PROJECTS\12067\DWG\050103_PP.DWG PLOT DATE : 1/15/2014 8:10 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 44

SAWING ASPHALT

SAWING CONCRETE

35

PRC: 59+20.01

24

24

CTH Y

58+00

59+00

60+00

61+00

62+00

63+00

64+00

REMOVING INLETS

REMOVING STORM SEWER (15-INCH)

END PROJECT
STA 60+00

N

5

5

58+00.00

VCL = 282.31

K = 192.89

VPI STA 58+82.32
VPI EL 679.11

VPT STA 60+23.47
VPT EL 678.59

STA 60+23.47
EL 678.59

700.00

690.00

680.00

670.00

660.00

700.

690.

680.

670.

660.

58

59

60

61

62

63

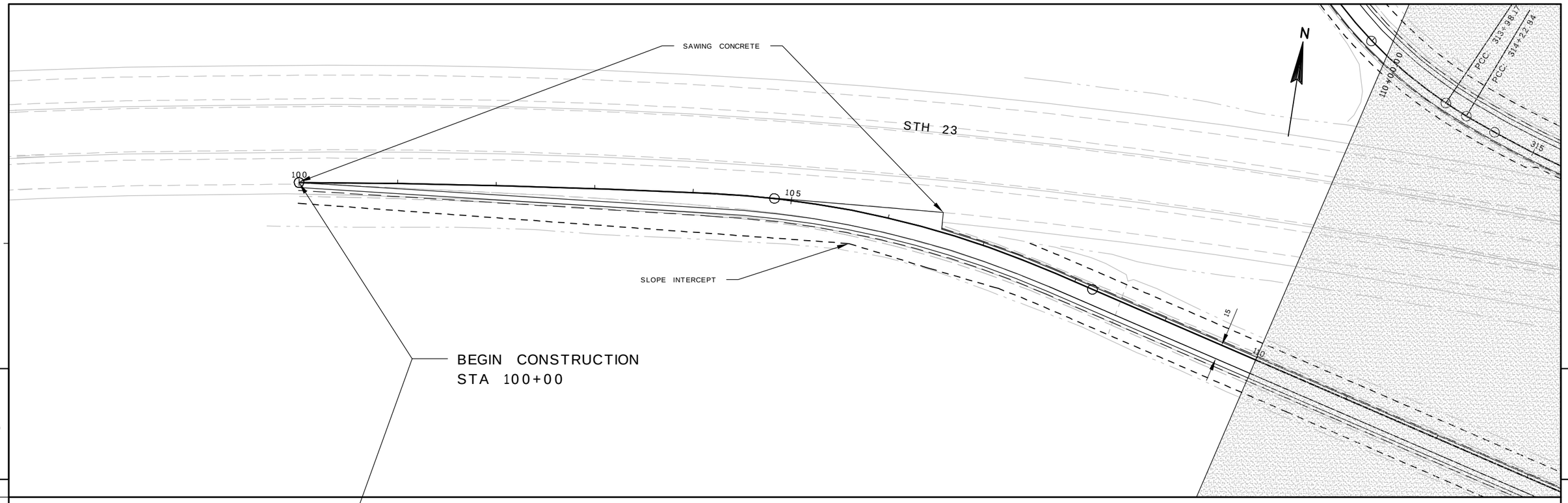
64

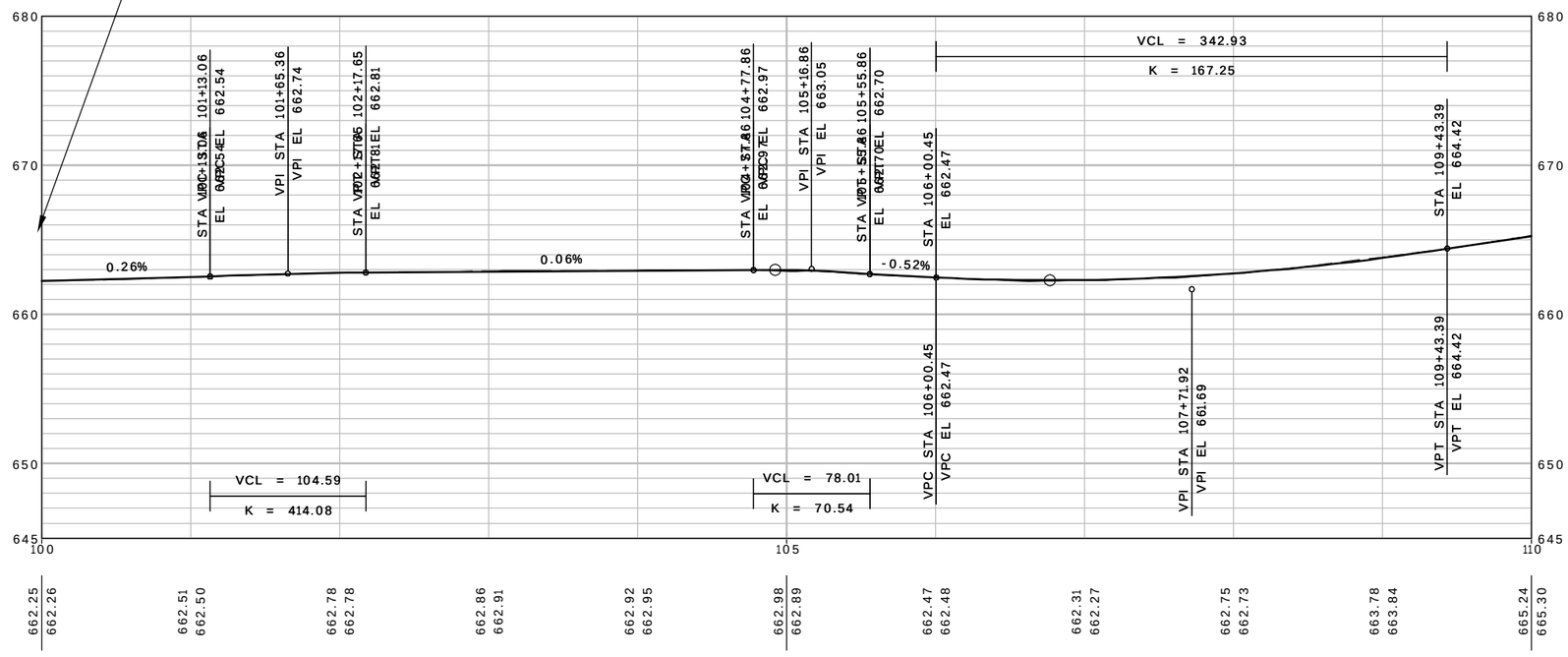
680.70
680.54
680.00
679.97
679.44
679.41
679.00
679.03
678.69
678.71
678.56
678.45
678.26
677.44

PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN AND PROFILE: STA 56+00 TO END STA	SHEET 70	E

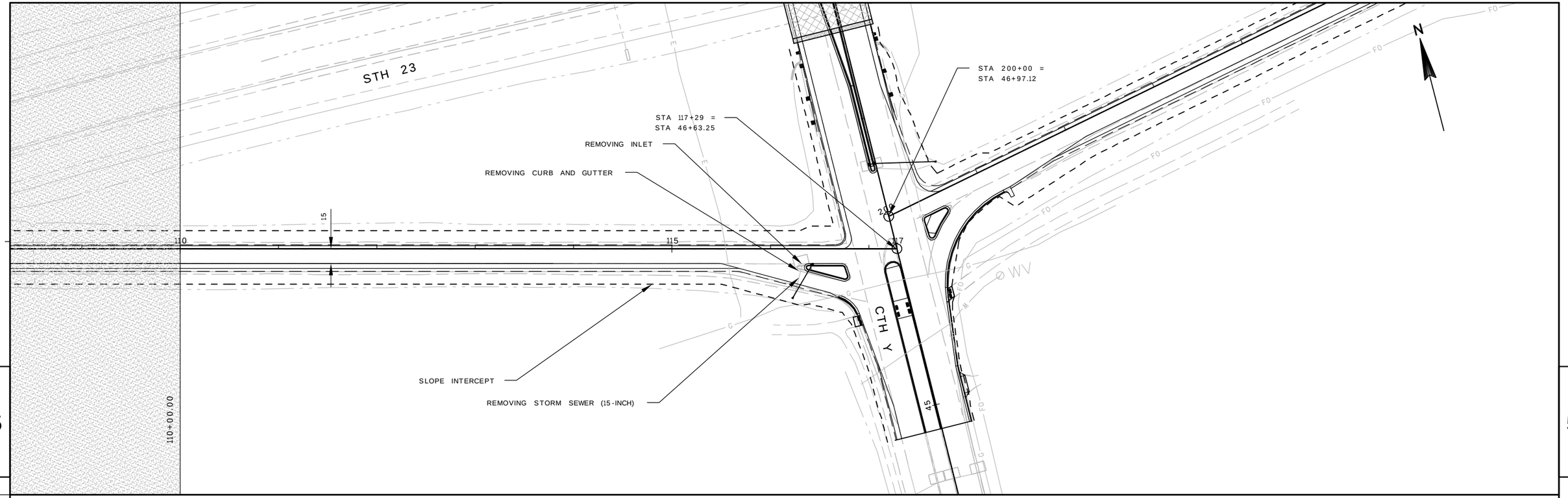
FILE NAME : L:\PROJECTS\12067\DWG\050104_PP.DWG PLOT DATE : 1/15/2014 8:10 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1:40_XREF

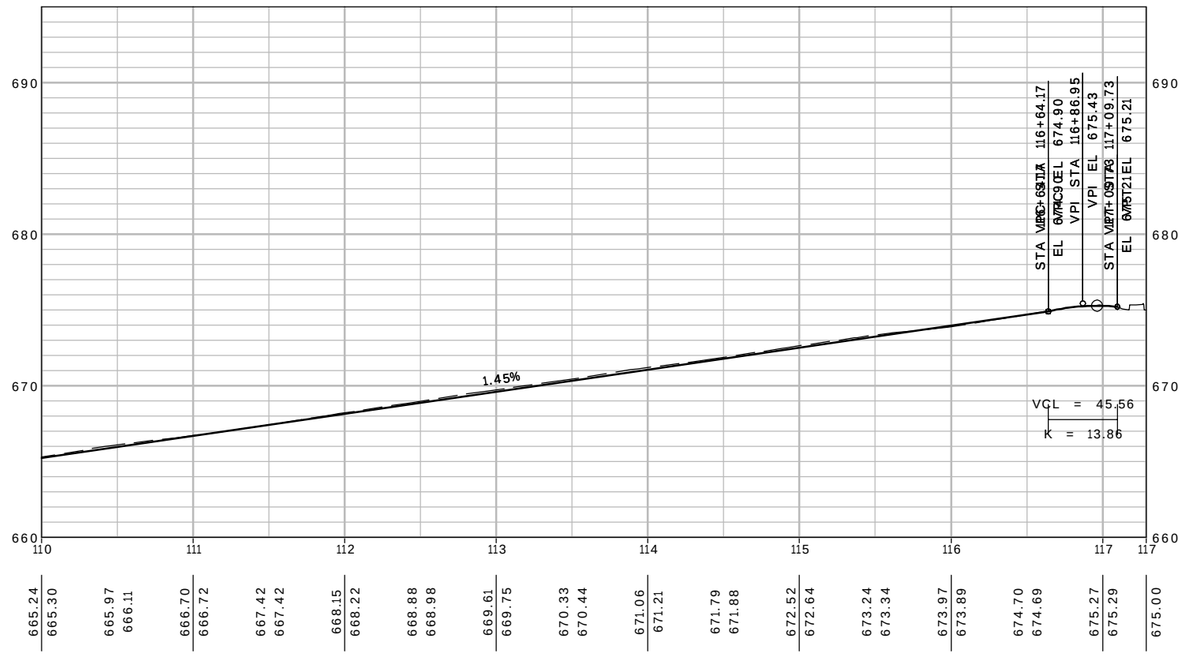
WISDOT/CADDS SHEET 44





PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN AND PROFILE: EASTBOUND OFF RAMP 1 OF 2	SHEET 71	E

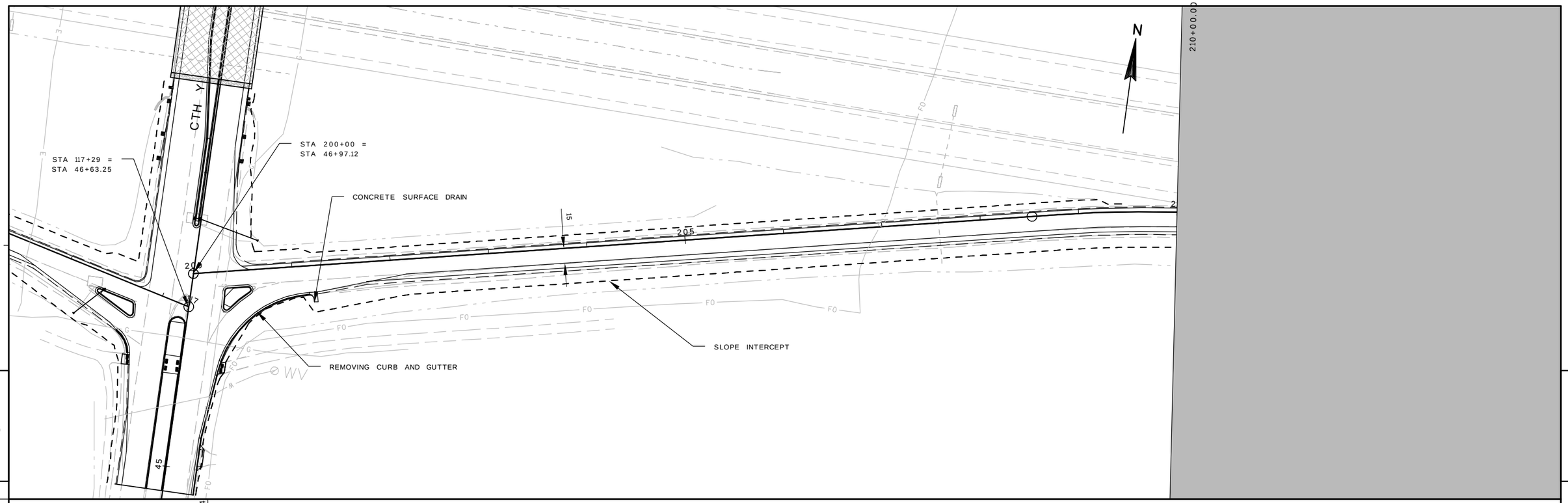


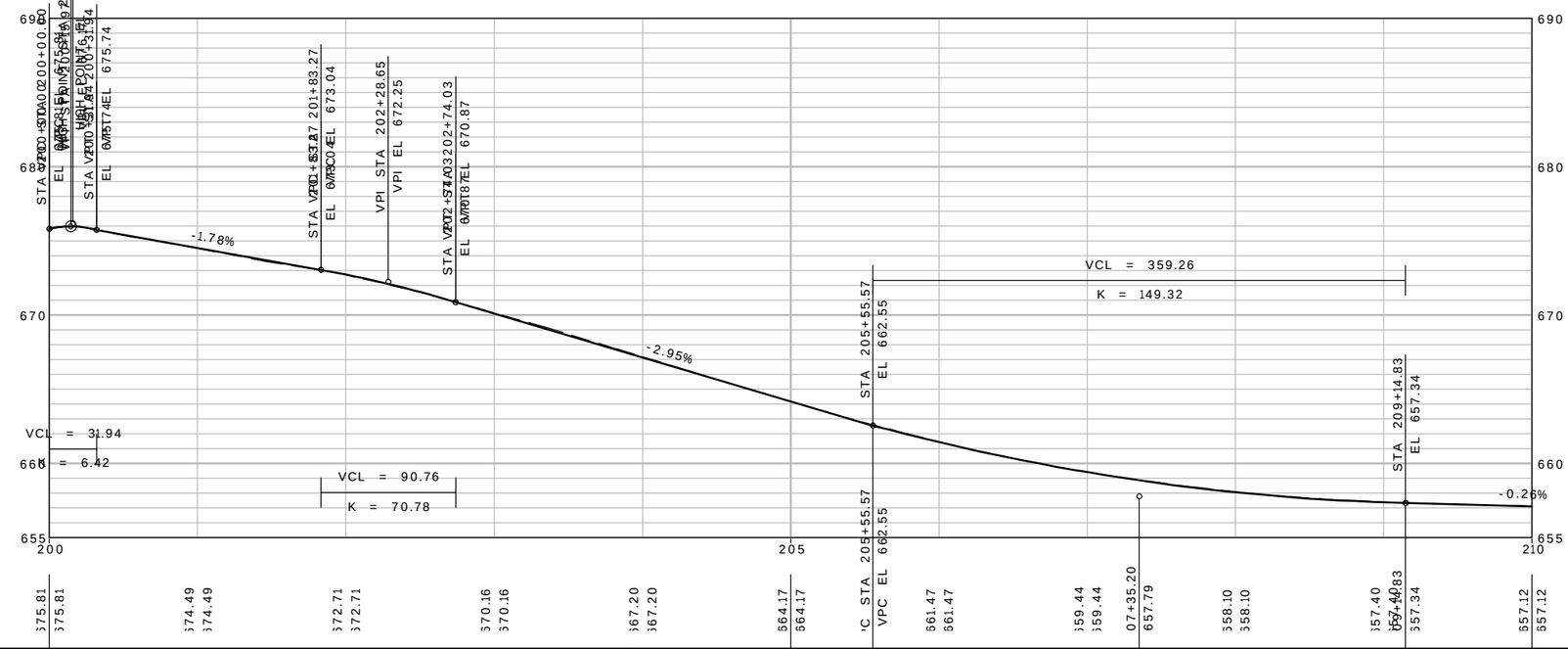


PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN AND PROFILE: EASTBOUND OFF RAMP 2 OF 2	SHEET 72	E

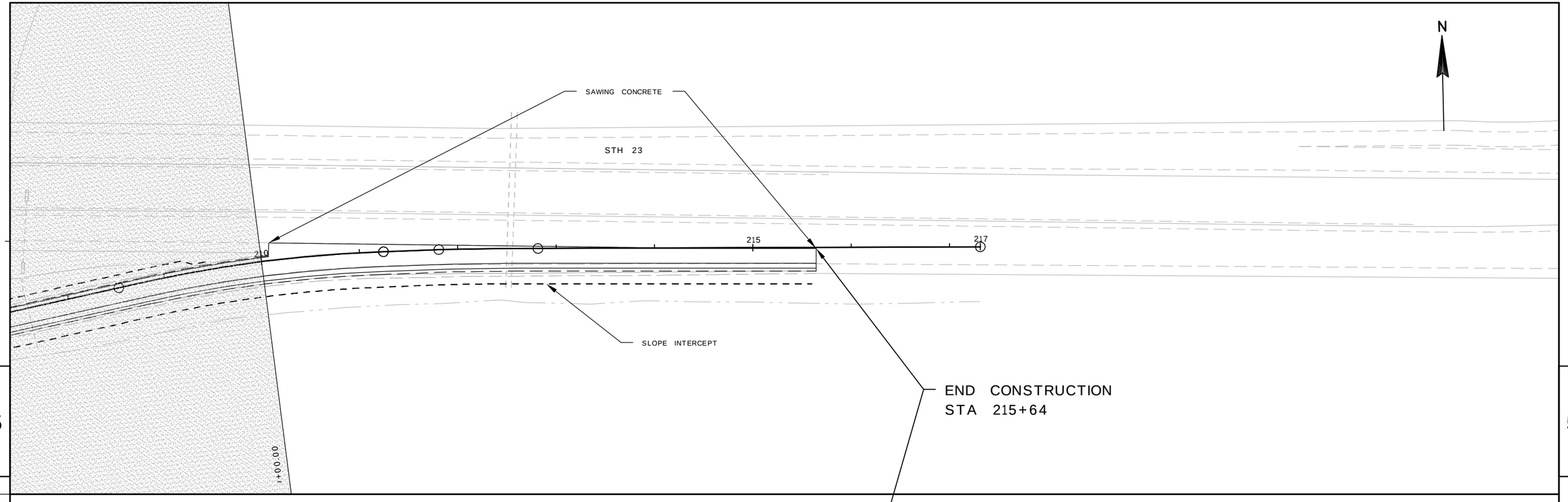
FILE NAME : L:\PROJECTS\12067\DWG\050106_PP.DWG PLOT DATE : 1/15/2014 8:11 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

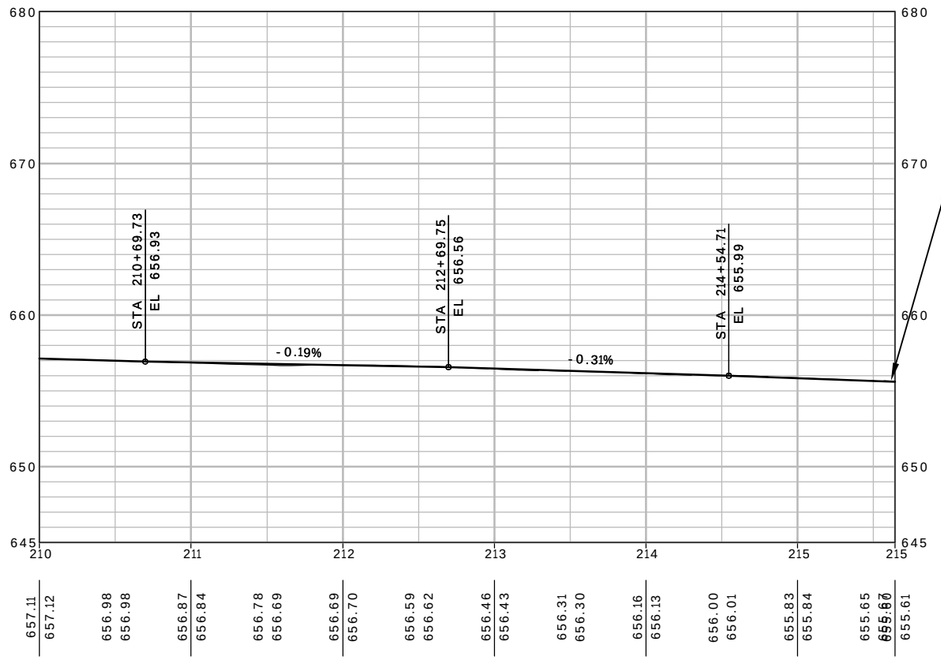
WISDOT/CADDS SHEET 44





PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN AND PROFILE: EASTBOUND ON RAMP 1 OF 2	SHEET 73	E

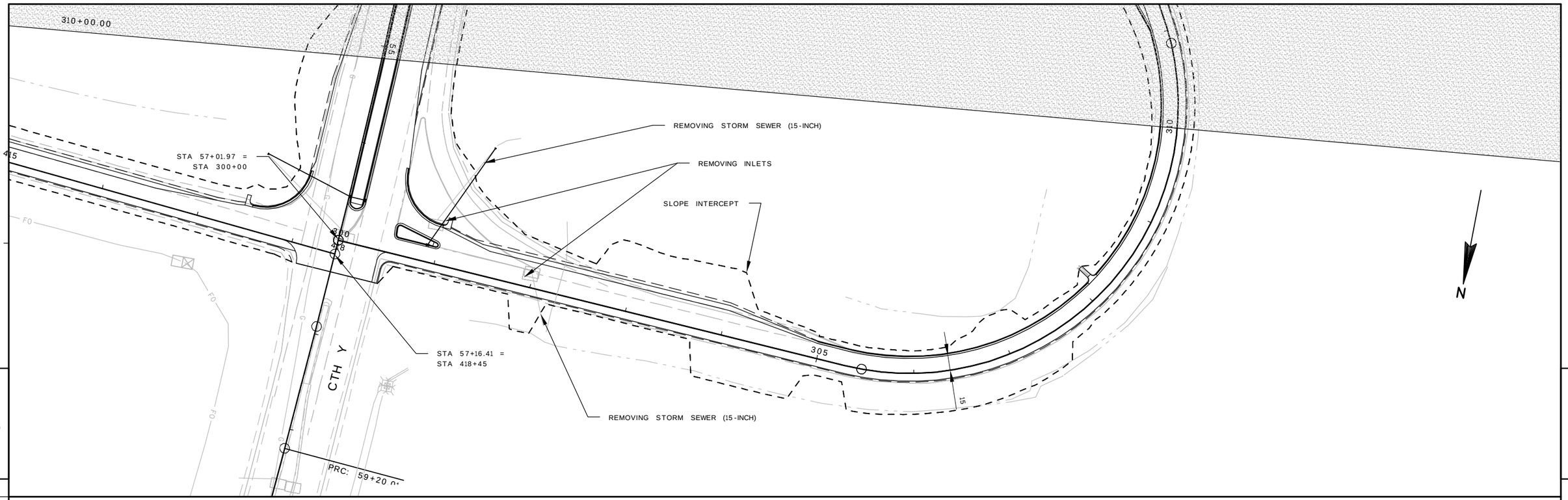


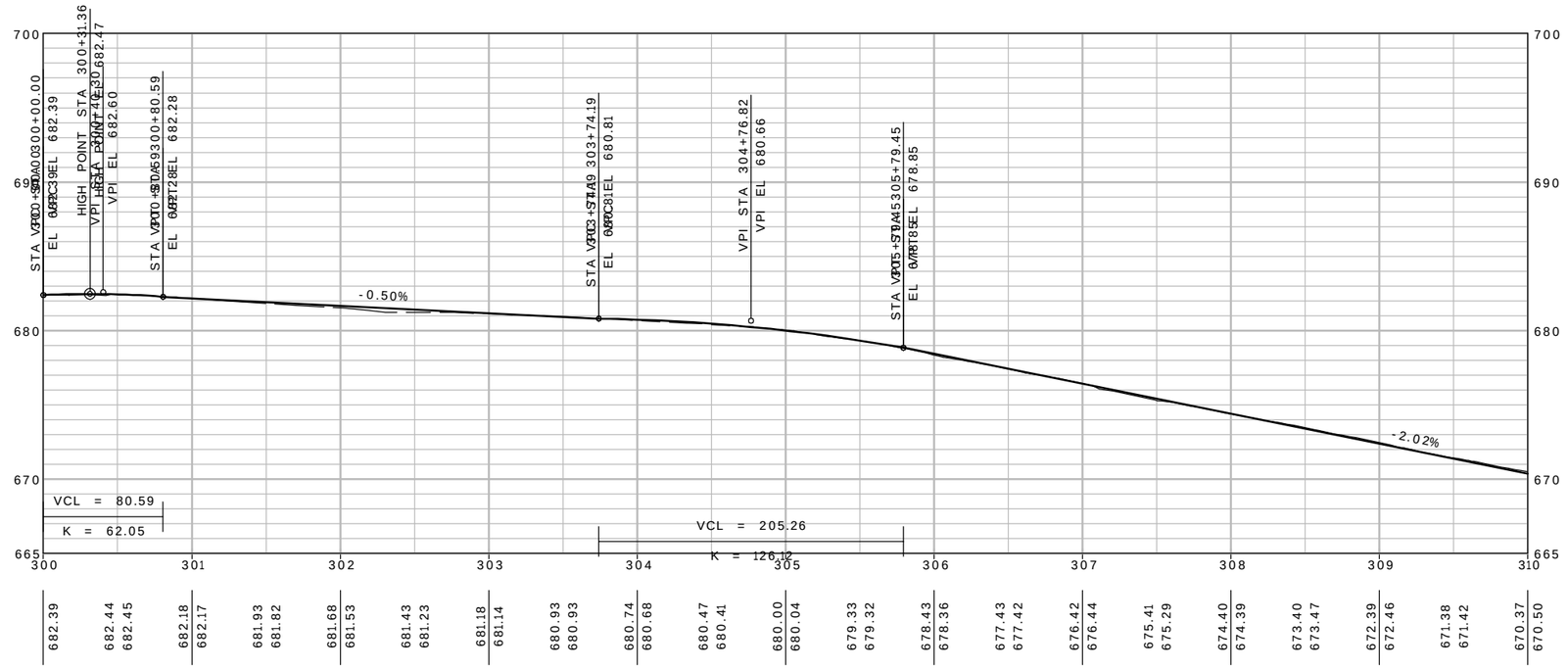


PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN AND PROFILE: EASTBOUND ON RAMP 2 OF 2	SHEET 74	E

FILE NAME : L:\PROJECTS\12067\DWG\050108_PP.DWG PLOT DATE : 1/15/2014 8:11 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 44

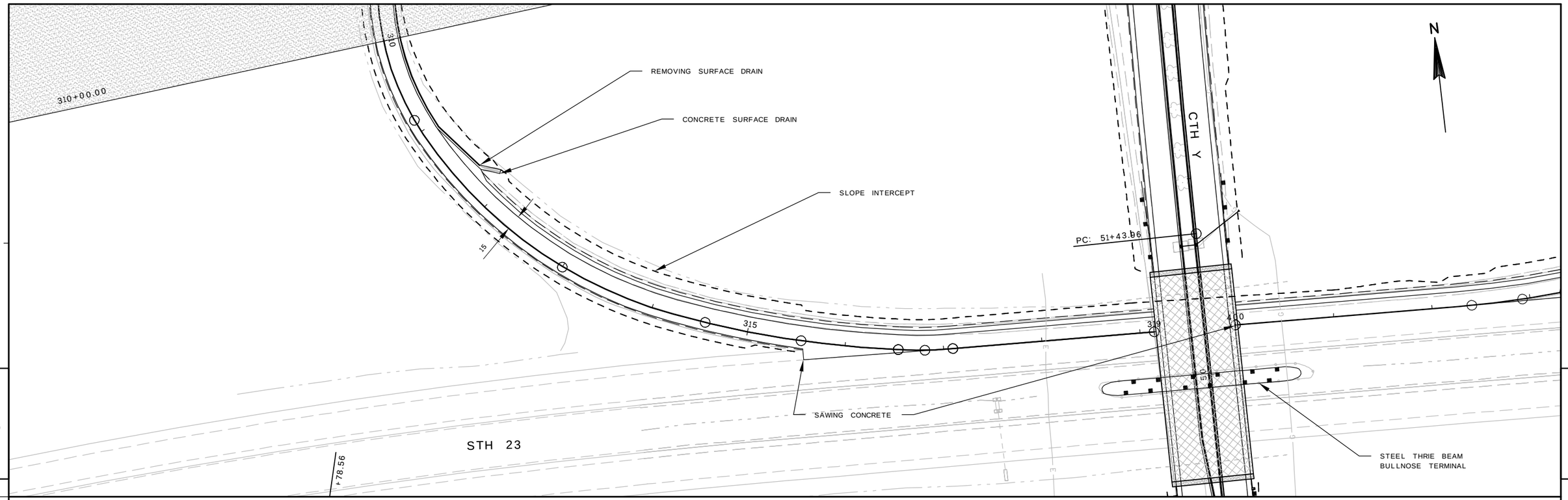


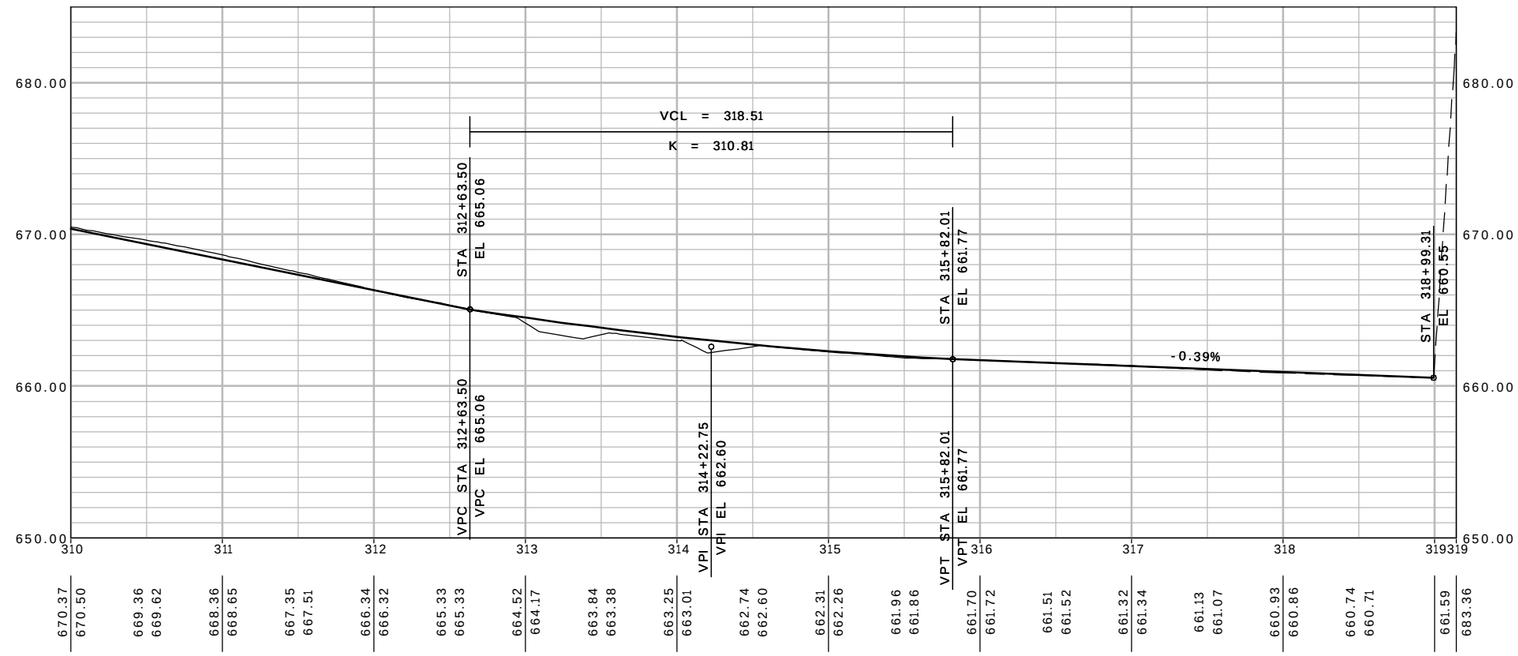


PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN AND PROFILE: WESTBOUND OFF RAMP 1 OF 2	SHEET 75	E

FILE NAME : L:\PROJECTS\12067\DWG\050109_PP.DWG PLOT DATE : 1/15/2014 8:12 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

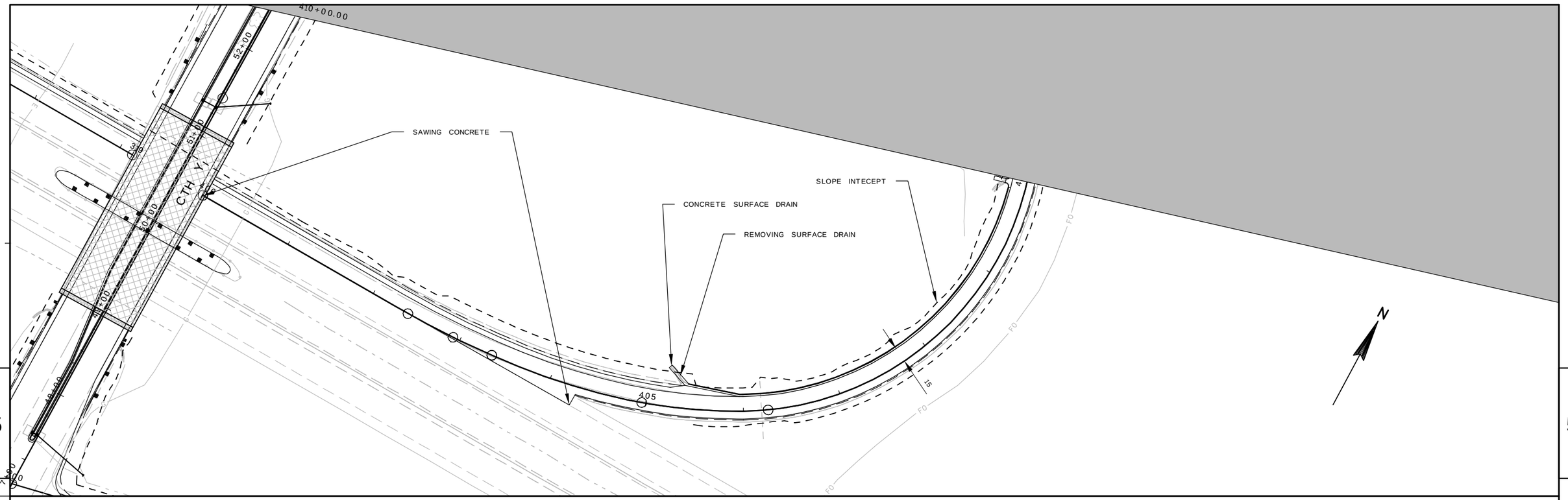
WISDOT/CADDS SHEET 44

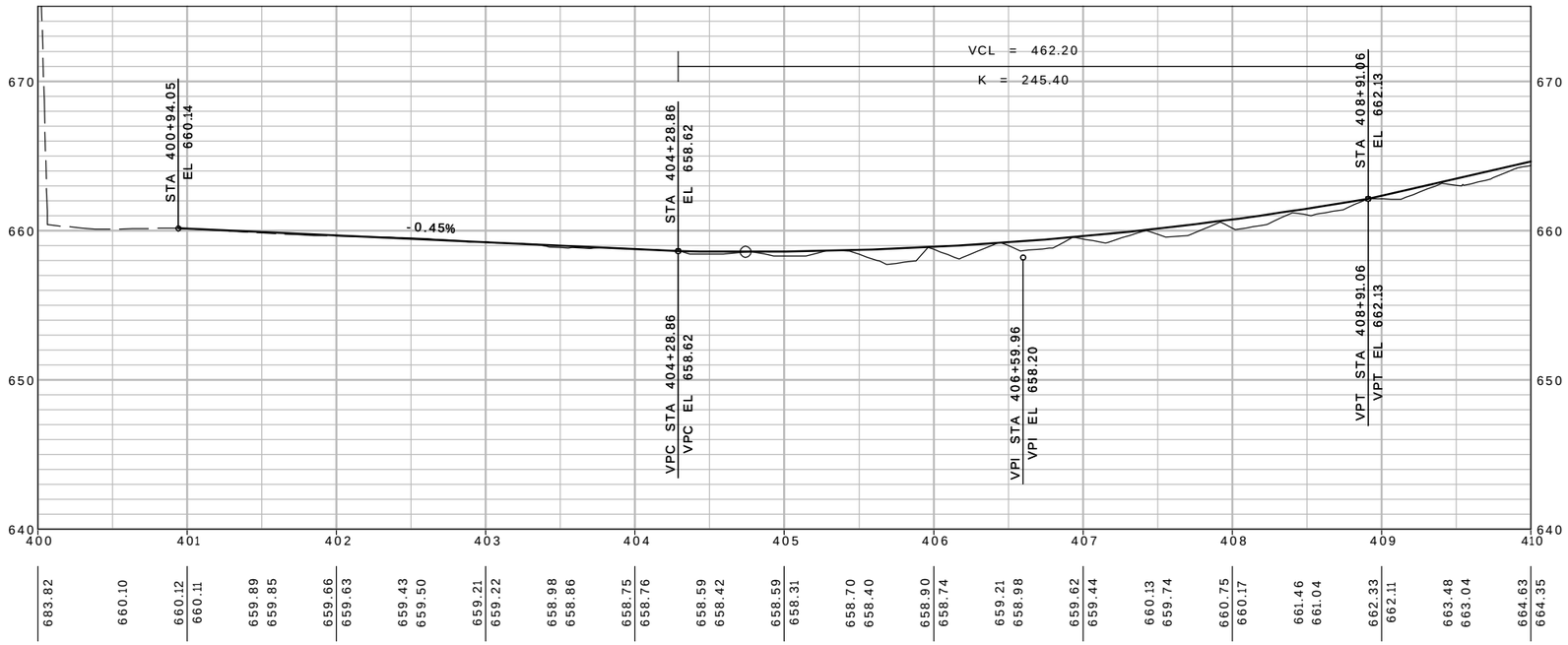




PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN AND PROFILE: WESTBOUND OFF RAMP 2 OF 2	SHEET	E

FILE NAME : L:\PROJECTS\12067\DWG\050110_PP.DWG PLOT DATE : 1/15/2014 8:12 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1:100_XREF
WISDOT/CADDS SHEET 44

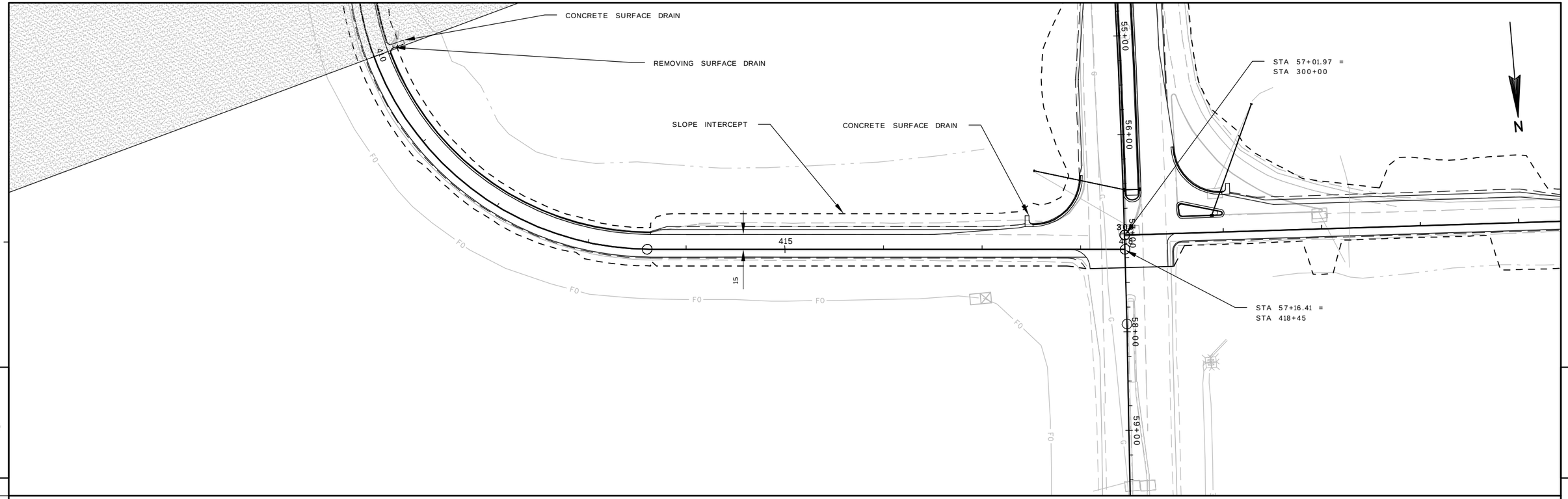


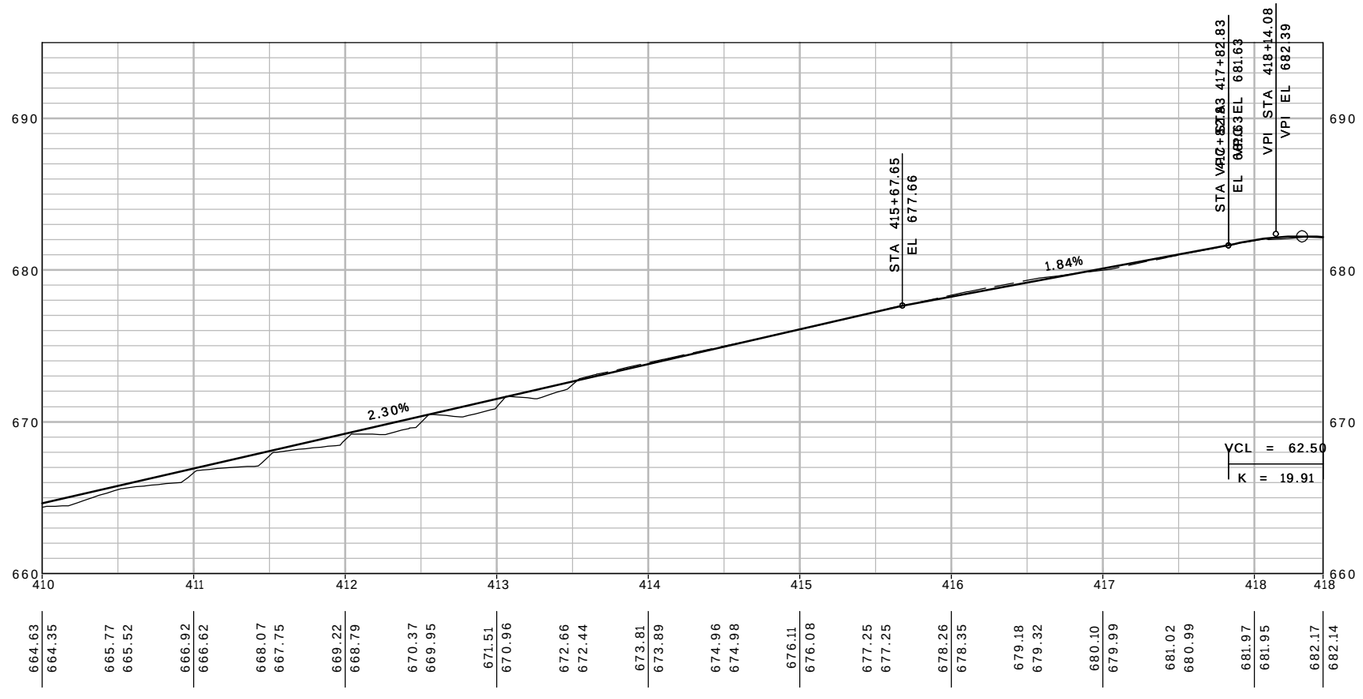


PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN AND PROFILE: WESTBOUND ON RAMP 1 OF 2	SHEET 77	E

FILE NAME : L:\PROJECTS\12067\DWG\050111_PP.DWG PLOT DATE : 1/15/2014 8:12 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 44





PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PLAN AND PROFILE: WESTBOUND ON RAMP SHEET 2 OF 2	SHEET	E

FILE NAME : L:\PROJECTS\12067\DWG\050112_PP.DWG PLOT DATE : 1/15/2014 8:12 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 100'_XREF

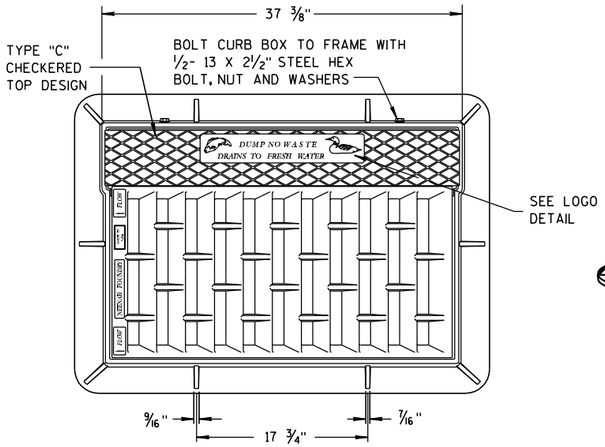
Standard Detail Drawing List

08A05-18A	INLET COVERS TYPE A, H, A-S, & H-S
08C07-01	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D02-06	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D05-15A	CURB RAMPS TYPES 1 AND 1-A
08D05-15B	CURB RAMPS TYPES 2 AND 3
08D05-15C	CURB RAMPS TYPES 4A AND 4A1
08D05-15D	CURB RAMPS TYPE 4B AND 4B1
08D05-15E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-07	CONDUIT
09B04-10	PULL BOX
11B02-02	CONCRETE MEDIAN NOSE
13B02-06	CONCRETE PAVEMENT APPROACH SLAB
13C01-16	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C17-01A	CONCRETE JOINT DETAIL FOR EXIT RAMP TERMINI
13C17-01B	CONCRETE JOINT DETAIL FOR ENTRANCE RAMP TERMINI
13C18-02A	CONCRETE PAVEMENT JOINTING
13C18-02B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-02C	CONCRETE PAVEMENT JOINT TIES
13C18-02D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
14B07-13A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B08-01A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B26-02A	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-02B	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-02C	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-02D	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-02E	STEEL THRIE BEAM BULLNOSE TERMINAL
14B42-02A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-01A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-03A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C05-02	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C08-16C	PAVEMENT MARKING (CLIMBING LANE & PASSING LANE)
15C08-16D	PAVEMENT MARKING (CLIMBING LANE & PASSING LANE)
15C08-16E	PAVEMENT MARKING (LEFT TURN LANE)
15C08-16F	PAVEMENT MARKING (ISLANDS)
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

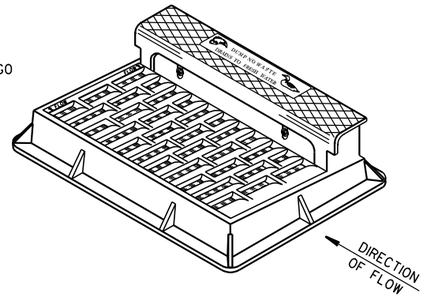
6

Standard Detail Drawing List

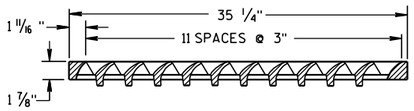
15C18-03	MEDIAN ISLAND MARKING
15D03-02	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. WITH BARRIER
15D07-03	TRAFFIC CONTROL, TEMPORARY EXIT RAMP CROSSOVER
15D08-04	TRAFFIC CONTROL, TEMPORARY ENTRANCE RAMP CROSSOVER
15D09-03	TRAFFIC CONTROL, SINGLE LANE CROSSOVER EXIT
15D10-03	TRAFFIC CONTROL, SINGLE LANE CROSSOVER EXIT WITH BARRIER
15D12-03	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H.
15D15-01	TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE

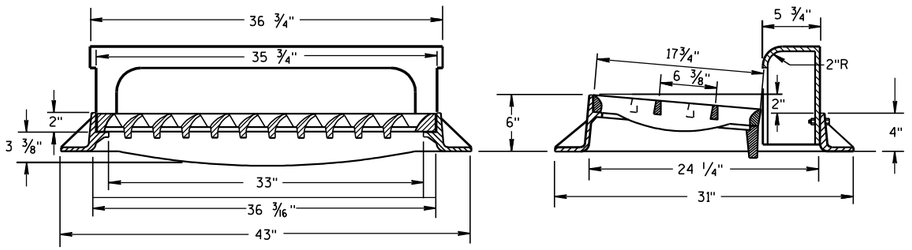


NOTE:
GRATE IS REVERSIBLE.



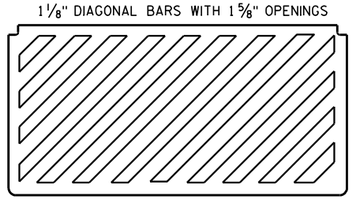
NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"





TYPE "H"

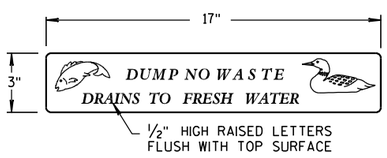
(APPROXIMATE WEIGHT 441 LBS.)
FRAME..... 181 LBS.
GRATE..... 146 LBS.
CURB BOX..... 114 LBS.



SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35 1/4" X 17 3/4" X 2")
(APPROXIMATE WEIGHT 159 LBS.)
GRATE..... 159 LBS.

(NOTED AS TYPE H-S ON DRAINAGE TABLE)



LOGO DETAIL

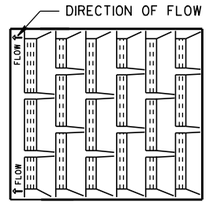
GENERAL NOTES

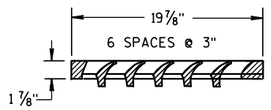
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

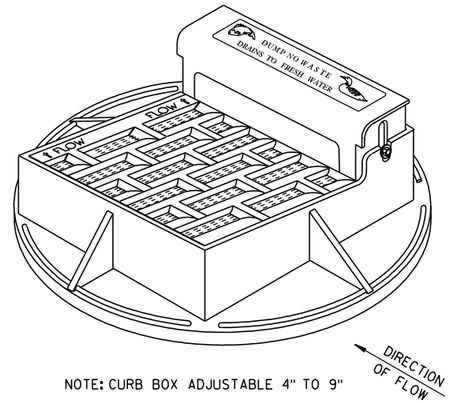
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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

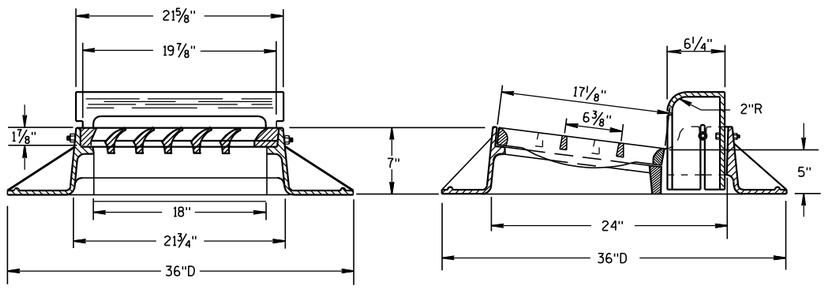
THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.





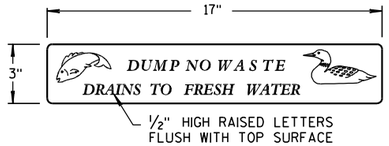


NOTE: CURB BOX ADJUSTABLE 4" TO 9"



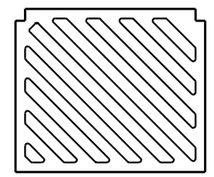
TYPE "A"

(APPROXIMATE WEIGHT 340 LBS.)
FRAME..... 185 LBS.
GRATE..... 71 LBS.
CURB BOX..... 84 LBS.



LOGO DETAIL

NOTE:
GRATE IS REVERSIBLE.



SPECIAL GRATE FOR TYPE "A" COVER

(MEASURES 19 3/4" X 17" X 1 7/8"
GRATE..... 84 LBS.

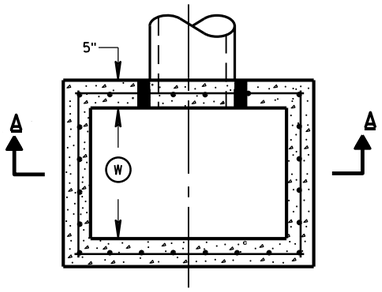
(NOTED AS TYPE A-S ON DRAINAGE TABLE)

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

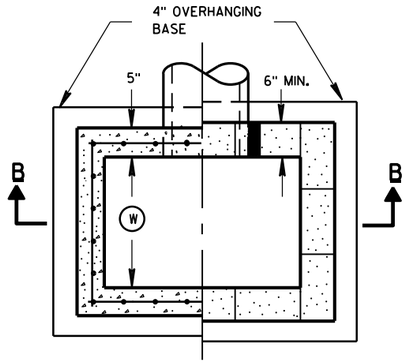
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
FHWA

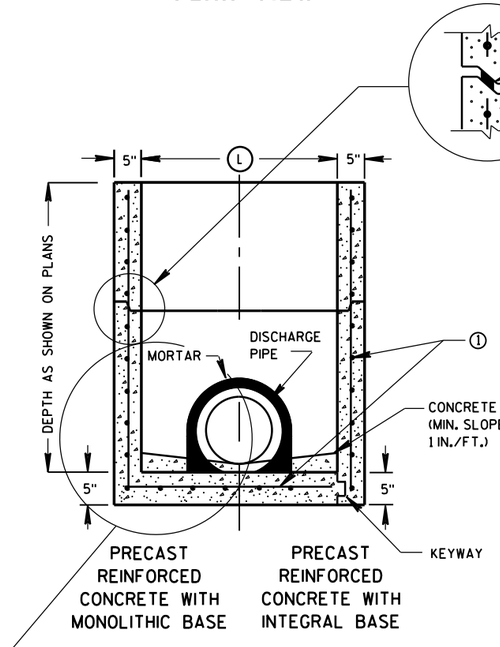
6
S.D.D. 8 A 5-18a



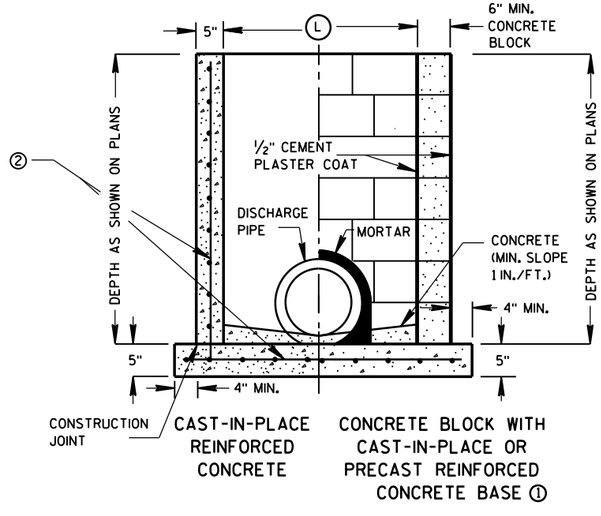
PLAN VIEW



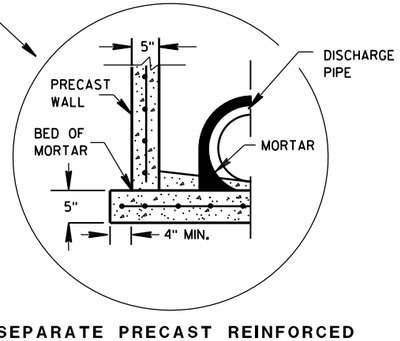
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

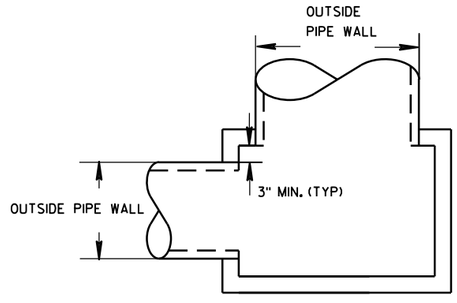
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

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

PIPE MATRIX

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



DETAIL "A"

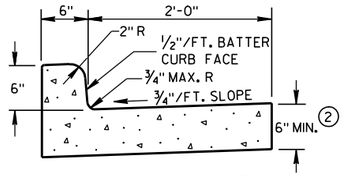
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

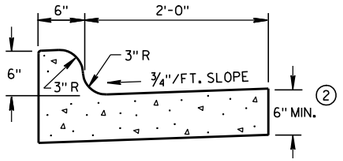
APPROVED
6/5/2012
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DE ENGINEER

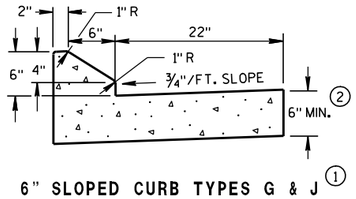
6
S.D.D. 8 C 7-1



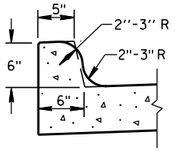
TYPES A & D (1)



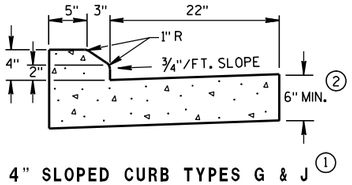
TYPES K & L (1)



6" SLOPED CURB TYPES G & J (1)

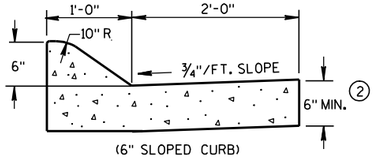


OPTIONAL CURB SHAPE FOR TYPES K & L (1)

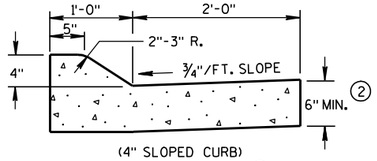


4" SLOPED CURB TYPES G & J (1)

CONCRETE CURB & GUTTER 30"

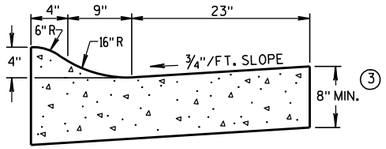


(6" SLOPED CURB)



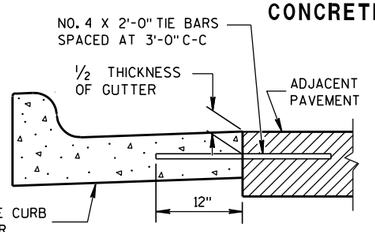
(4" SLOPED CURB)

TYPES A & D (1)

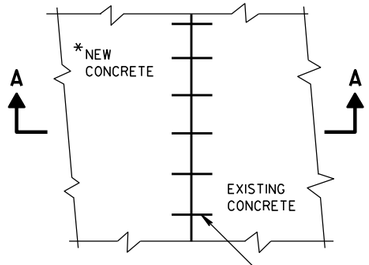


4" SLOPED CURB TYPES R & T (1) (4)

CONCRETE CURB & GUTTER 36"

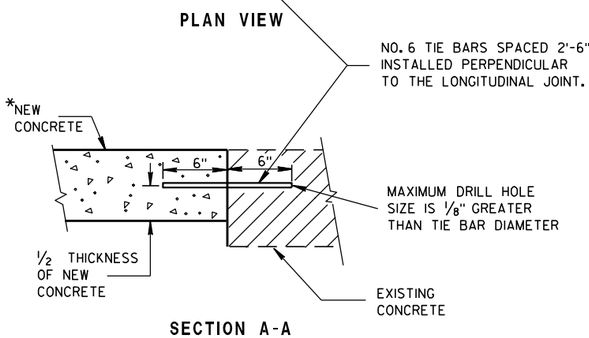


TYPICAL TIE BAR LOCATION (1)



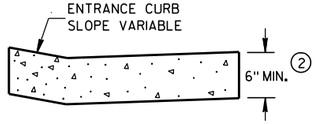
PLAN VIEW

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



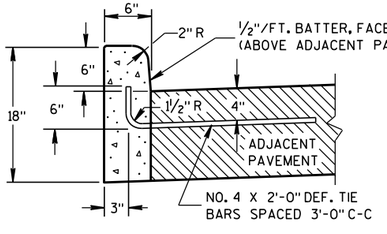
SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT



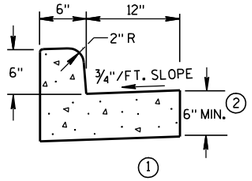
DRIVEWAY ENTRANCE CURB

(WHEN DIRECTED BY THE ENGINEER)



(1)

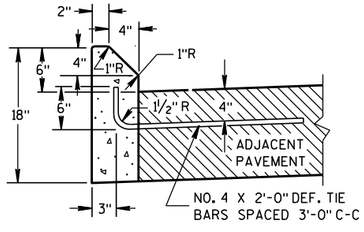
TYPES A & D



(1)

TYPES A & D

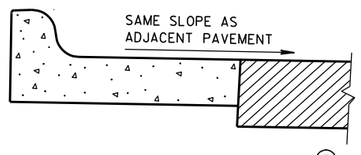
CONCRETE CURB & GUTTER 18"



(1)

TYPES G & J

CONCRETE CURB



(5)

REVERSE SLOPE GUTTER

(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

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

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

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

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

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

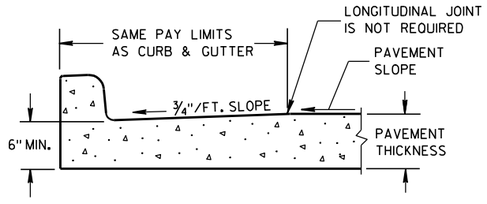
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.

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

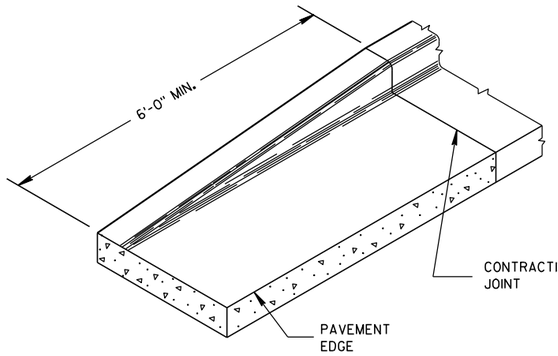
(3) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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

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



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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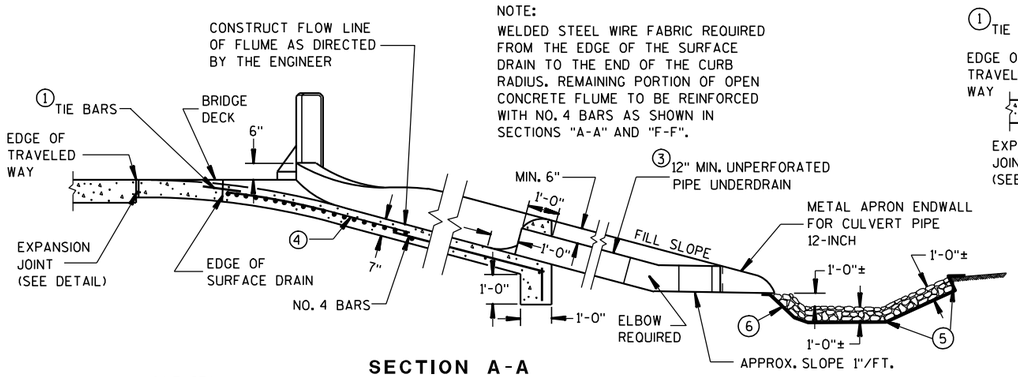
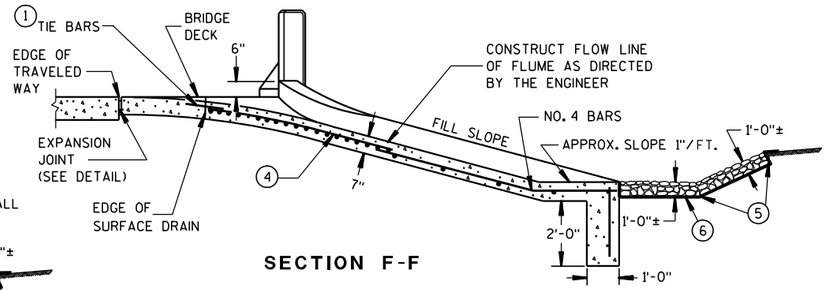
S.D.D. 8 D 1-17



SECTION A-A



SECTION F-F

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

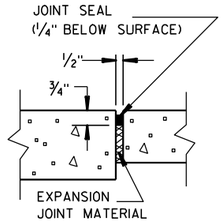
(4) MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.

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

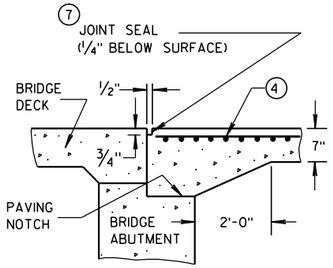
(6) GEOTEXTILE FABRIC, TYPE 'R"

(7) HOT POURED SEALANT UNLESS OTHERWISE SPECIFIED.

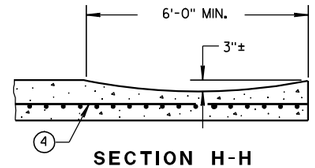
(8) THIS DIMENSION MAY VARY DEPENDING ON THE SPACING OF POSTS FOR THE STEEL PLATE BEAM GUARD. THE TYPICAL LOCATION FOR THE SURFACE DRAIN IS WHERE THE POST SPACING WIDENS TO 3'-1½".



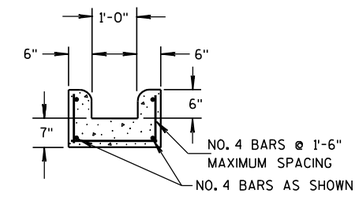
EXPANSION JOINT DETAIL



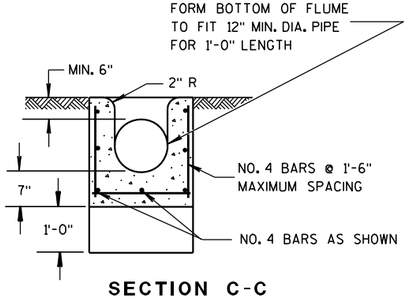
SECTION D-D



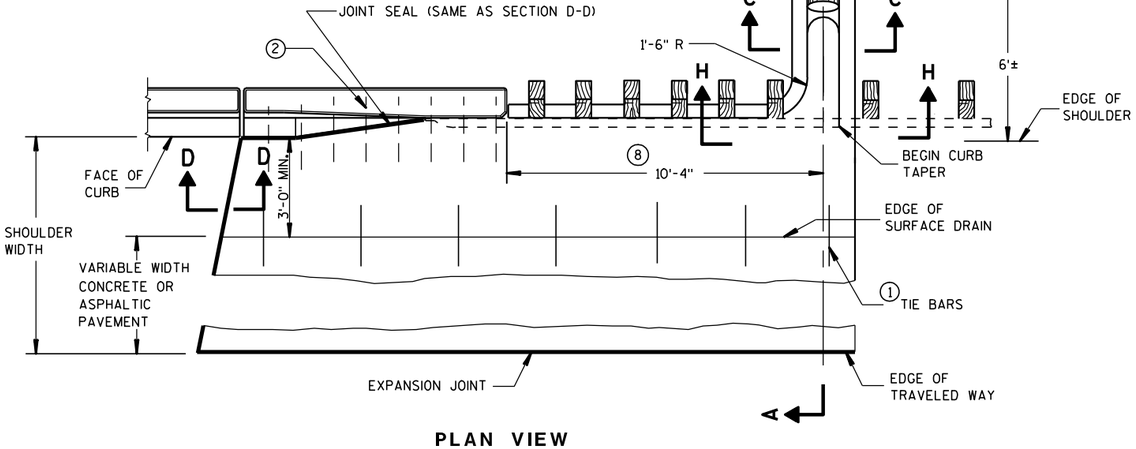
SECTION H-H



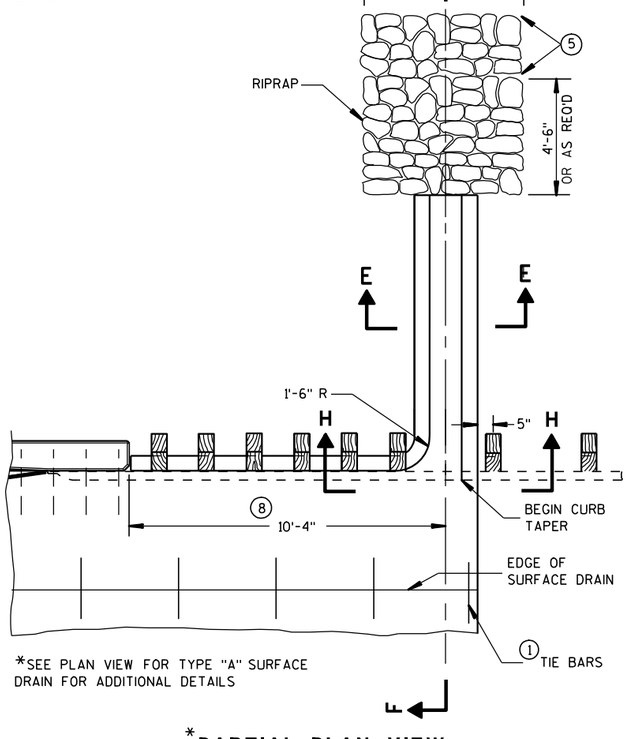
SECTION E-E



SECTION C-C

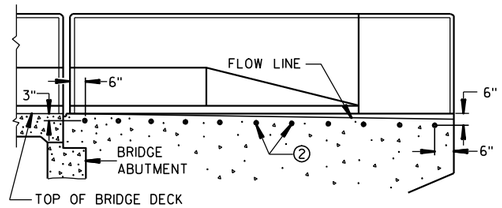


PLAN VIEW
SURFACE DRAIN WITH PIPE
TYPE "A"



*SEE PLAN VIEW FOR TYPE "A" SURFACE DRAIN FOR ADDITIONAL DETAILS

*PARTIAL PLAN VIEW
SURFACE DRAIN WITHOUT PIPE
TYPE "B"



LOCATION OF
TIE BARS IN WINGWALL

CONCRETE SURFACE DRAINS
FLUME TYPE
AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/4/08
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS 84 ENGINEER
FHWA

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S.D.D. 8 D 2-6

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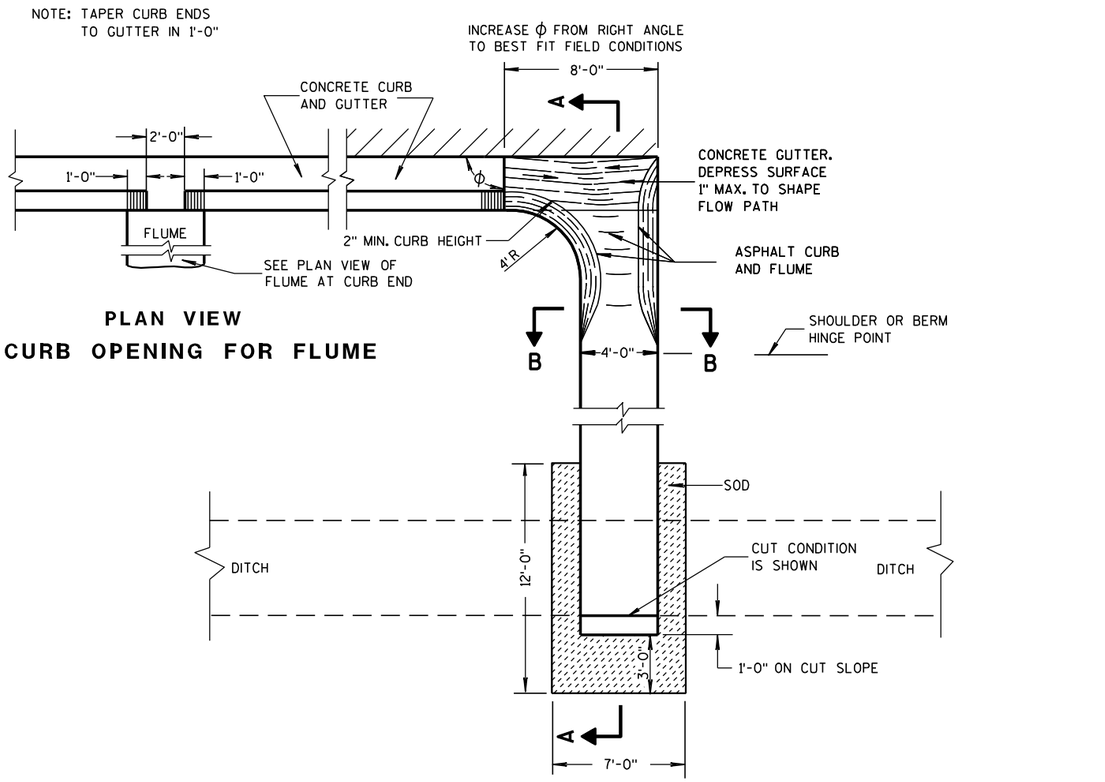
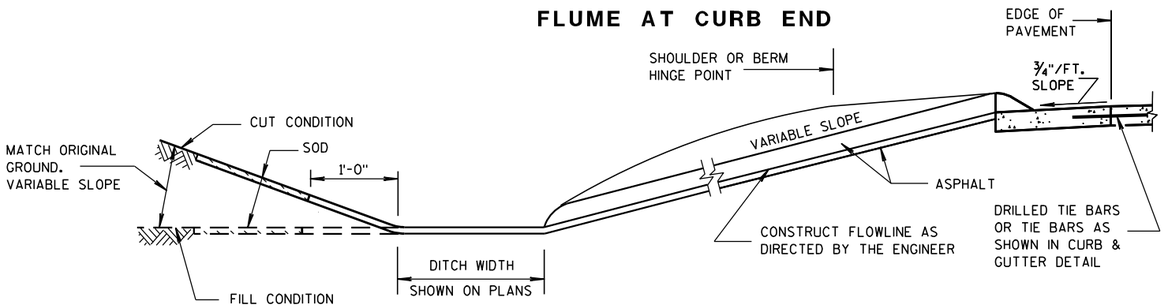
S.D.D. 8 D 2-6

ASPHALTIC FLUME

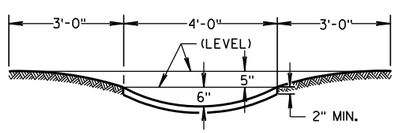


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

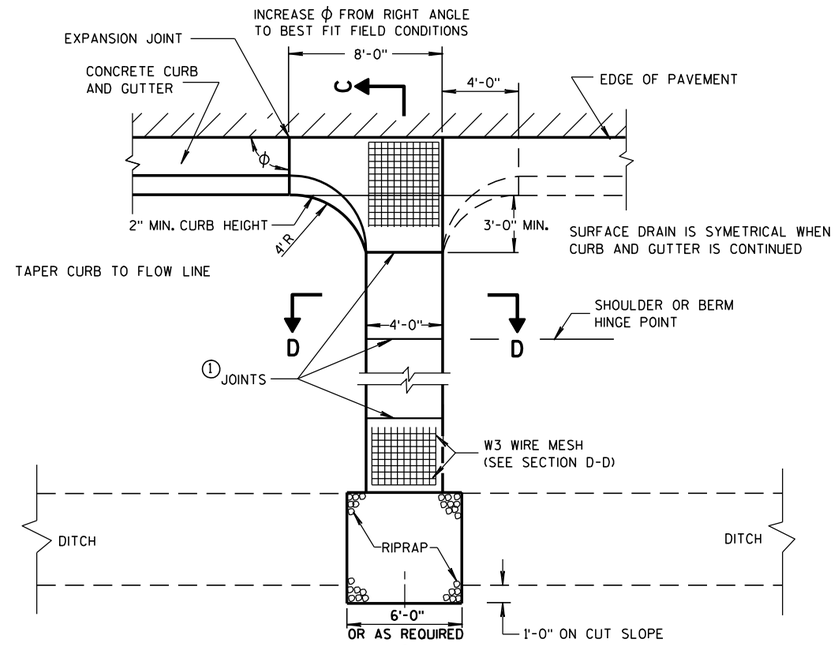
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE $\frac{1}{8}$ TO $\frac{1}{4}$ INCH WIDE BY $1\frac{1}{2}$ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

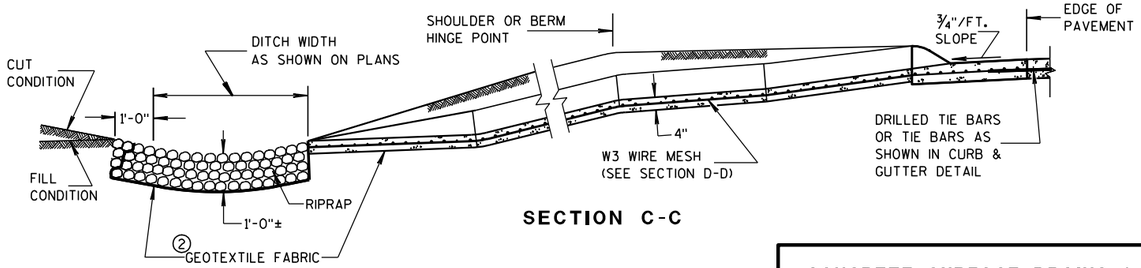
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

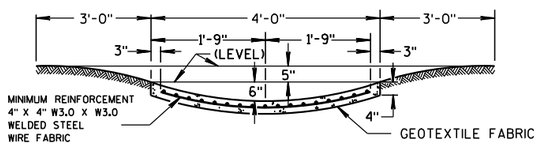
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9-4-08 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
85
MENT
FHWA

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S.D.D. 8 D 4-5

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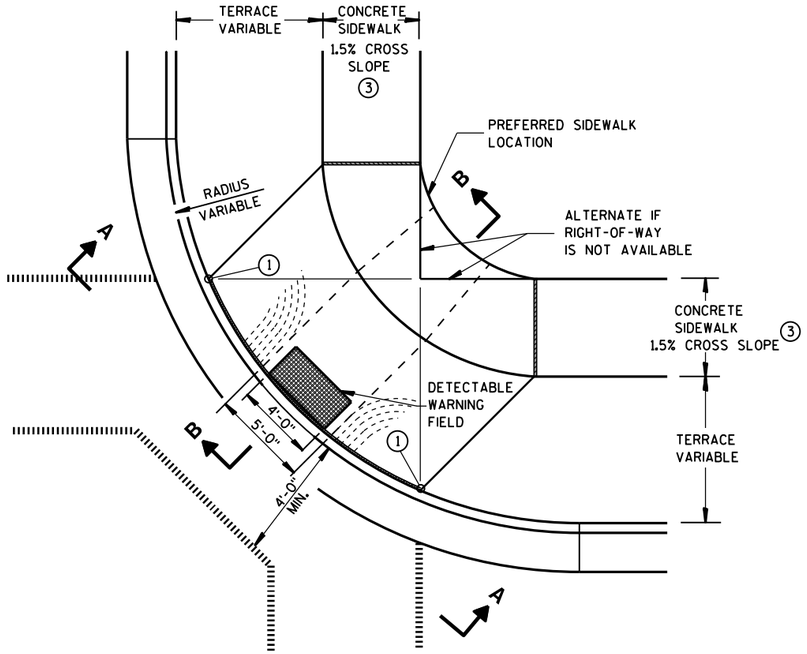
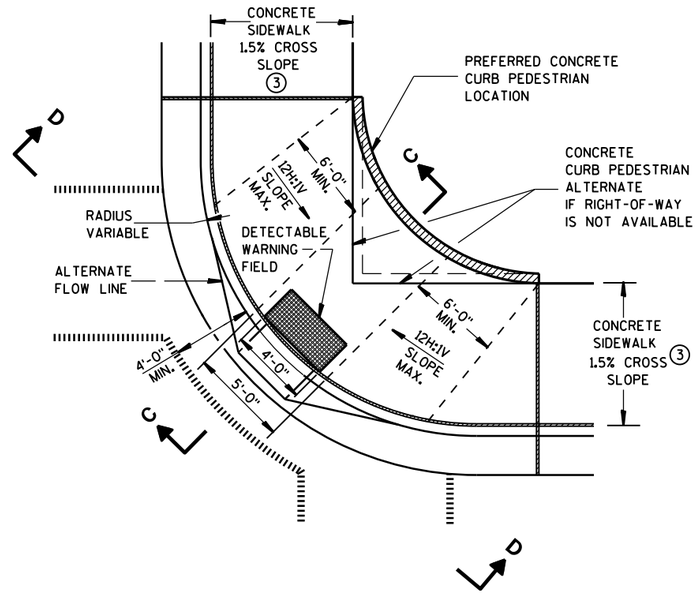
S.D.D. 8 D 4-5



PLAN VIEW

TYPE 1 RAMP

(CENTER OF CORNER RADIUS)



PLAN VIEW

TYPE 1-A RAMP

(NO TERRACE)

GENERAL NOTES

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

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

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

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAL FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD".

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

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

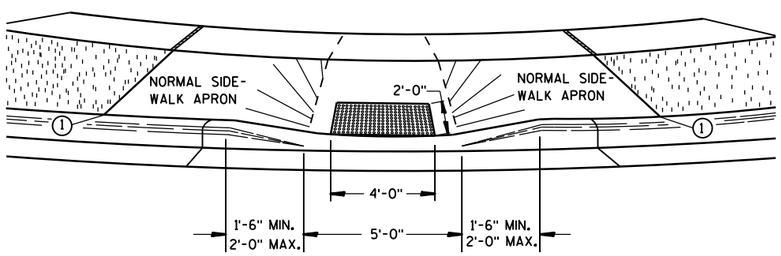
① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.

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

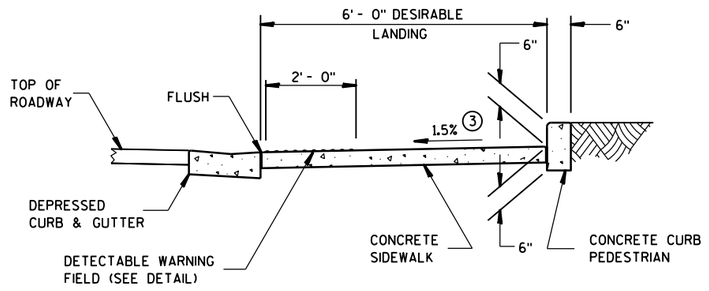
③ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

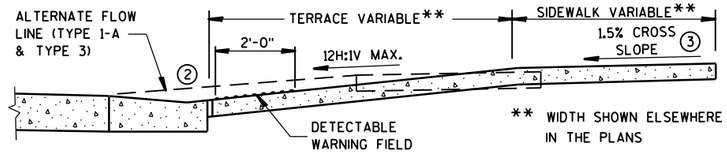
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



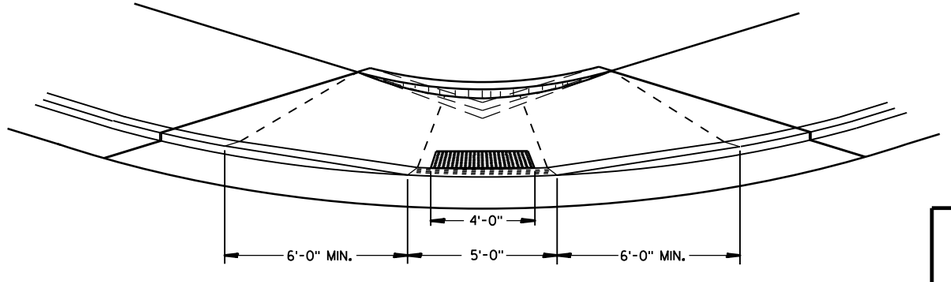
VIEW A-A



SECTION C-C



SECTION B-B



VIEW D-D

CURB RAMPS TYPES 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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

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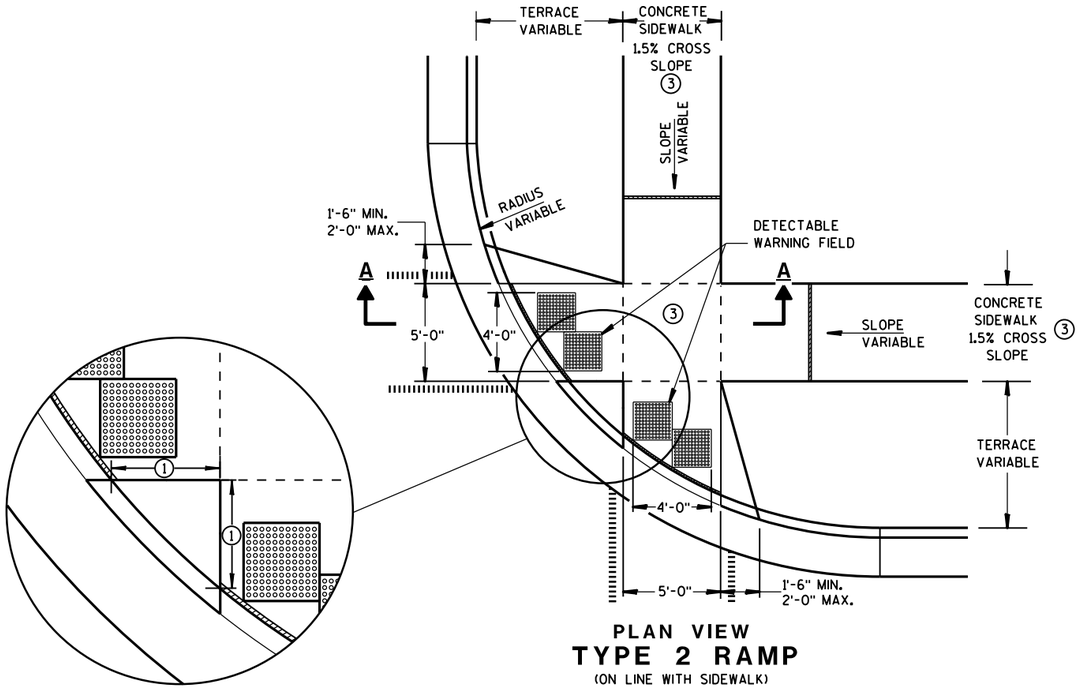
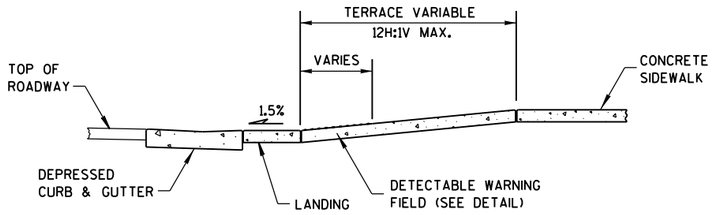
S.D.D. 8 D 5-15a



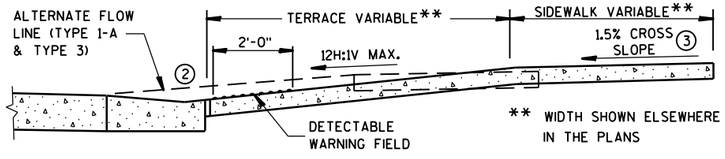
PLAN VIEW

TYPE 2 RAMP

(ON LINE WITH SIDEWALK)



SECTION A-A



SECTION B-B

GENERAL NOTES

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

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

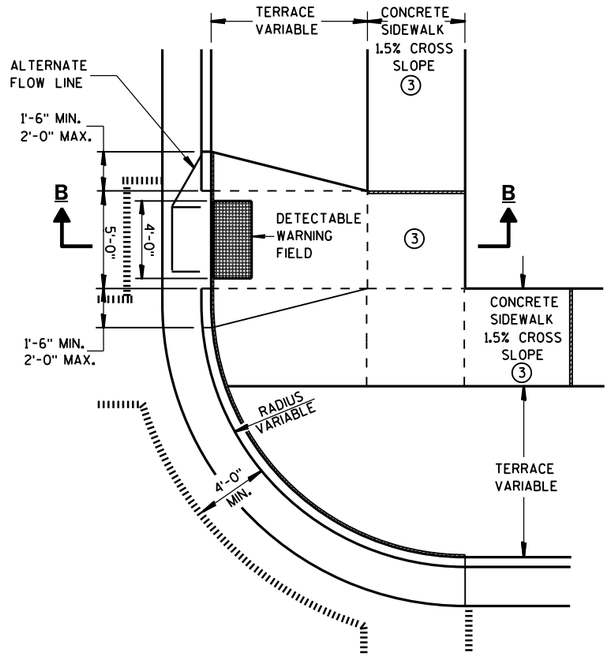
① WHEN THIS DISTANCE IS LESS THAN 6'-0" IT MAY BE DIFFICULT TO ACHIEVE A 12H:1V SLOPE, OR FLATTER, ON THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 12H:1V SLOPE, OR FLATTER, ON RAMP. 2" MINIMUM CURB HEIGHT.

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

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

LEGEND

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



PLAN VIEW

TYPE 3 RAMP

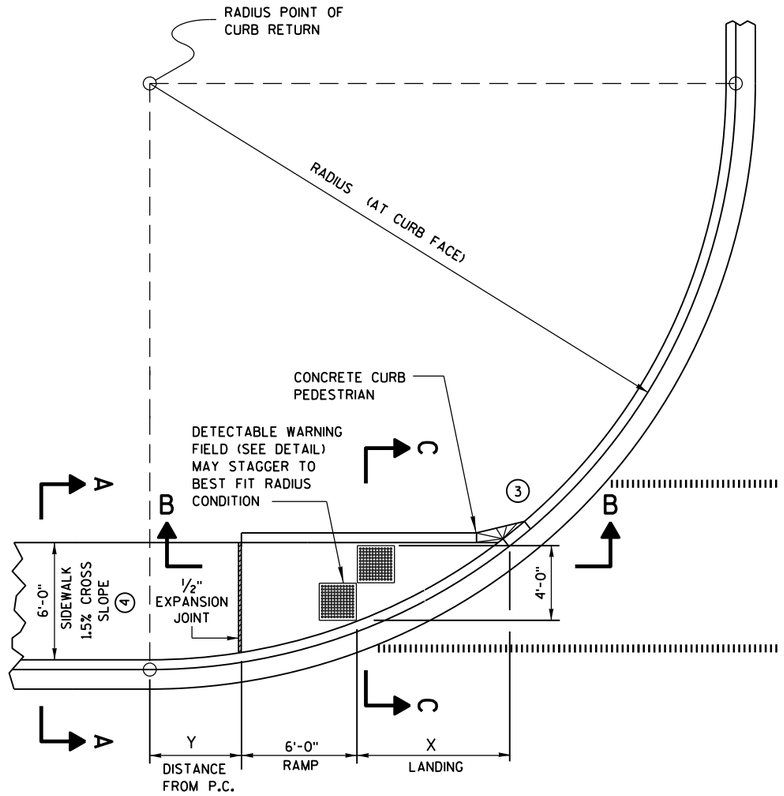
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS
TYPES 2 AND 3

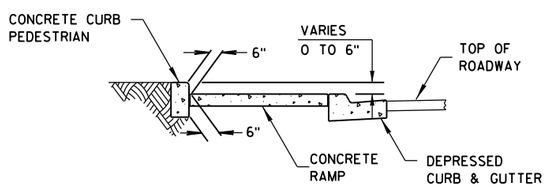
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

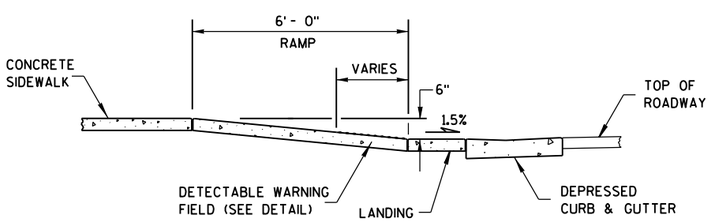
S.D.D. 8 D 5-15b



CURB RAMP TYPE 4A
PLAN VIEW



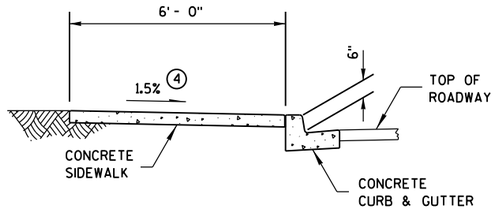
SECTION C-C FOR TYPE 4A



SECTION B-B FOR TYPE 4A

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

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A

GENERAL NOTES

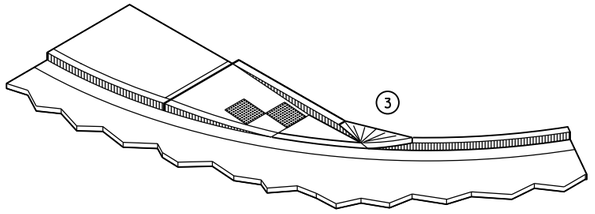
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

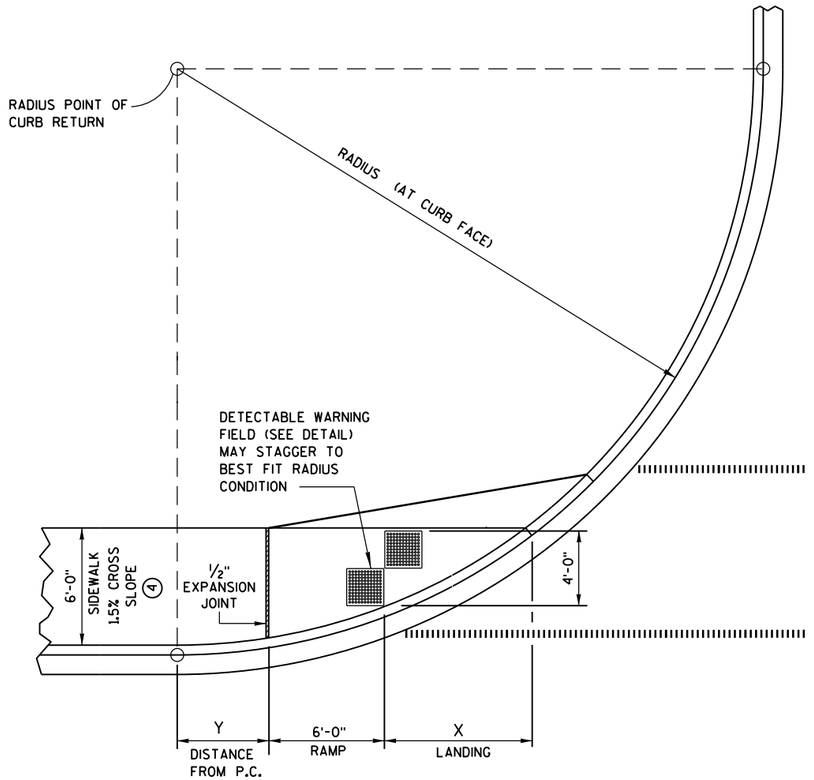
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

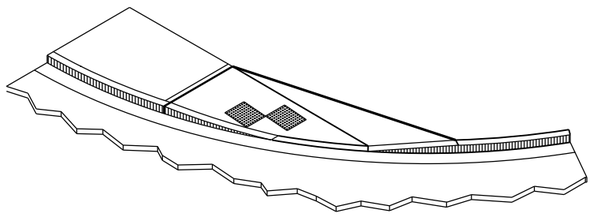
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



ISOMETRIC VIEW FOR TYPE 4A



CURB RAMP TYPE 4A1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

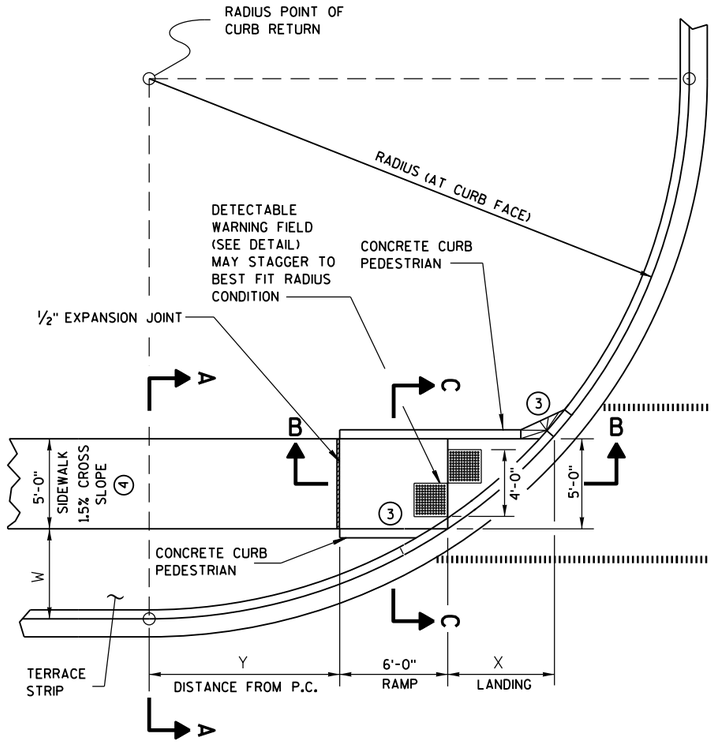
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

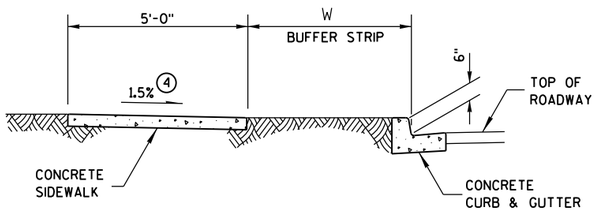
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

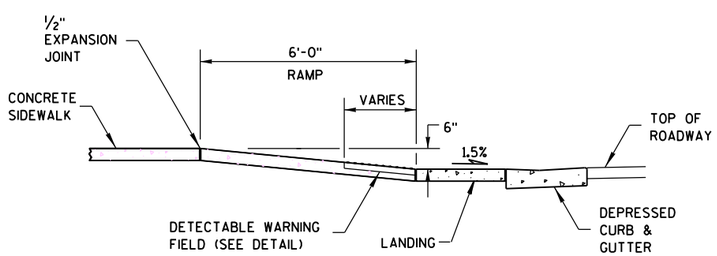
S.D.D. 8 D 5-15c



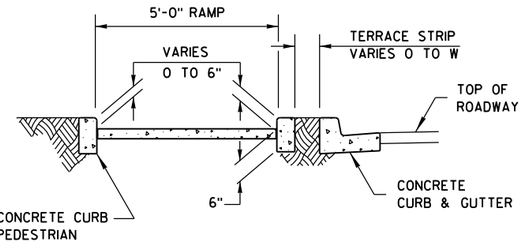
CURB RAMP TYPE 4B
PLAN VIEW



SECTION A-A FOR TYPE 4B



SECTION B-B FOR TYPE 4B



SECTION C-C FOR TYPE 4B

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

PAVEMENT MARKING CROSSWALK (WHITE)

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

INTERMEDIATE RADII CAN BE INTERPOLATED

GENERAL NOTES

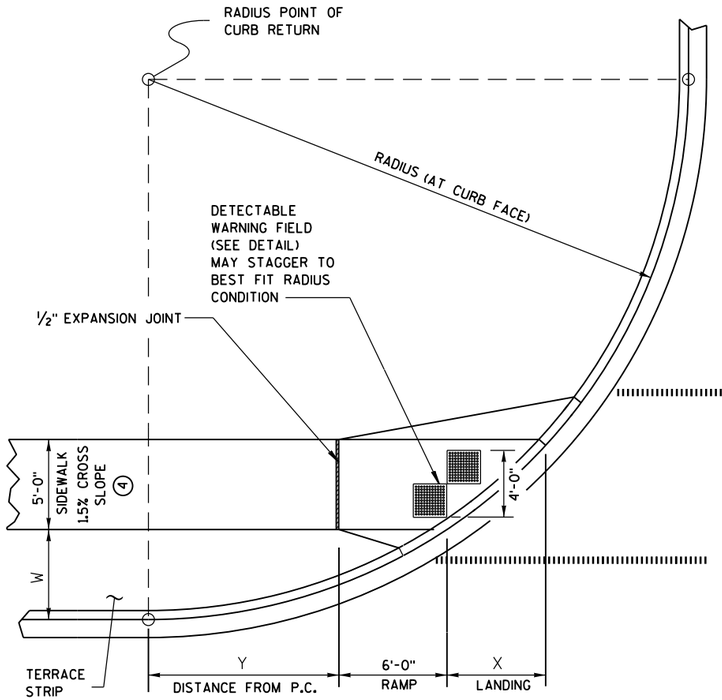
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

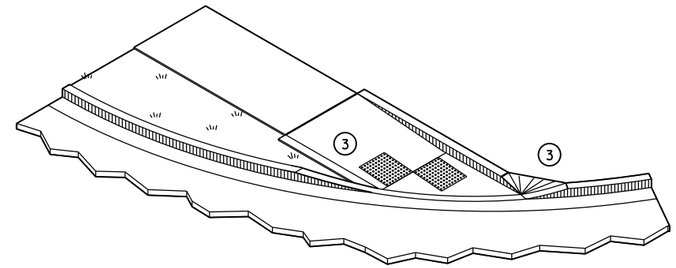
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

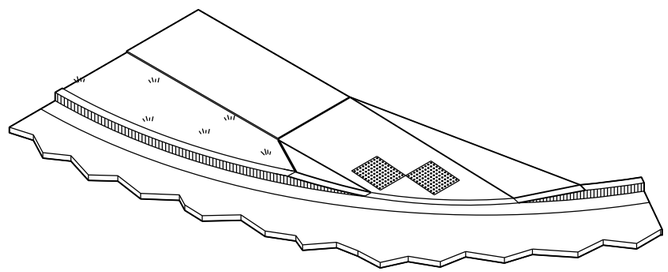
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



CURB RAMP TYPE 4B1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4B



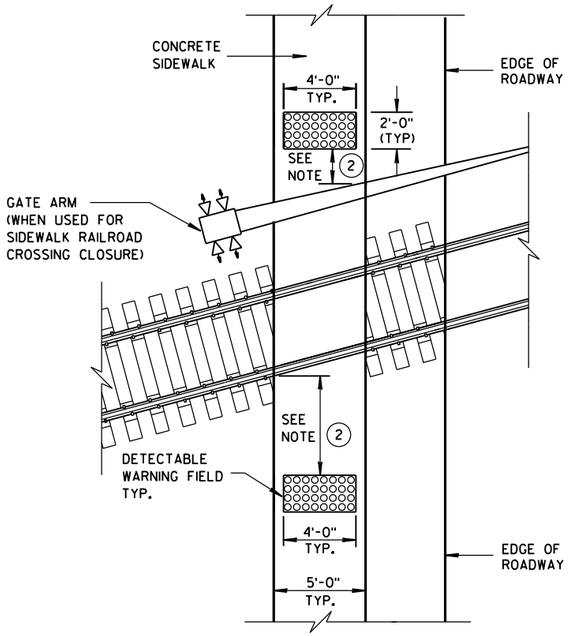
ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS
TYPE 4B AND 4B1

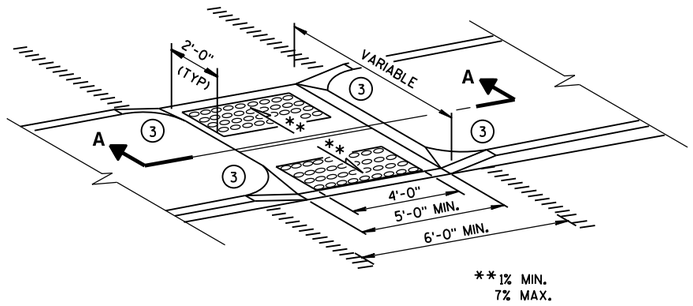
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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



TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING



MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5

GENERAL NOTES

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

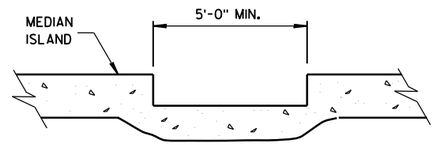
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

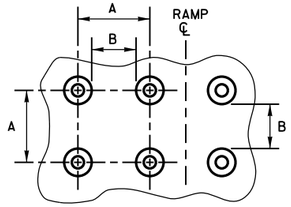
(2) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET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

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

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



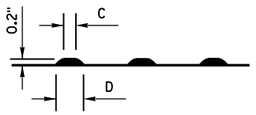
SECTION A-A



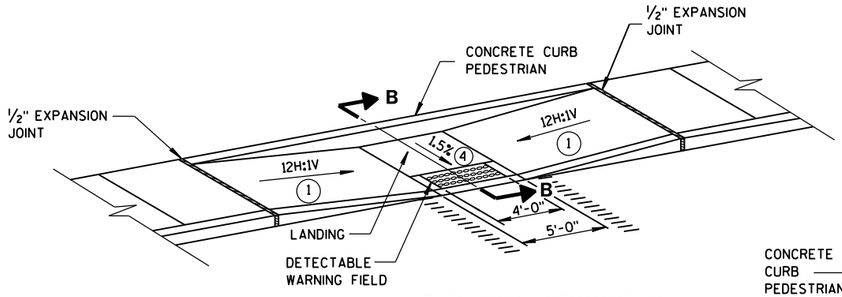
PLAN VIEW

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

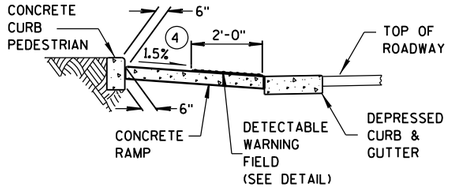
* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



ELEVATION VIEW

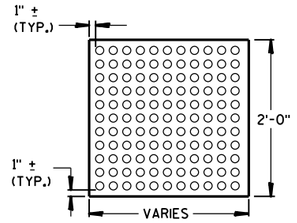


MID-BLOCK CROSSING
TYPE 7A



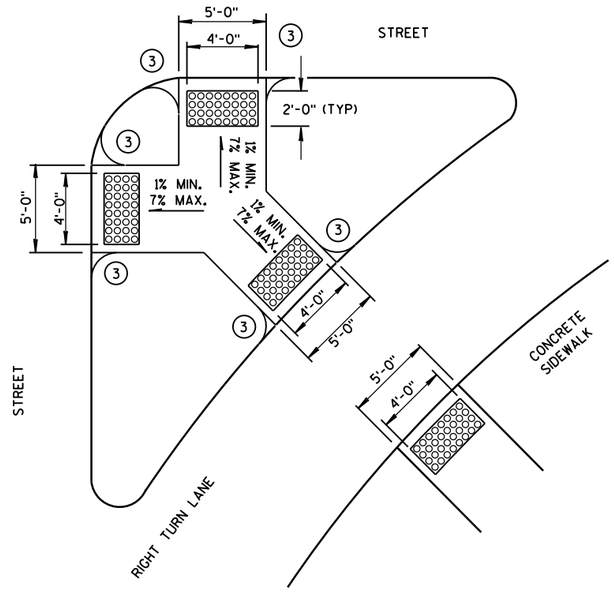
SECTION B-B

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL

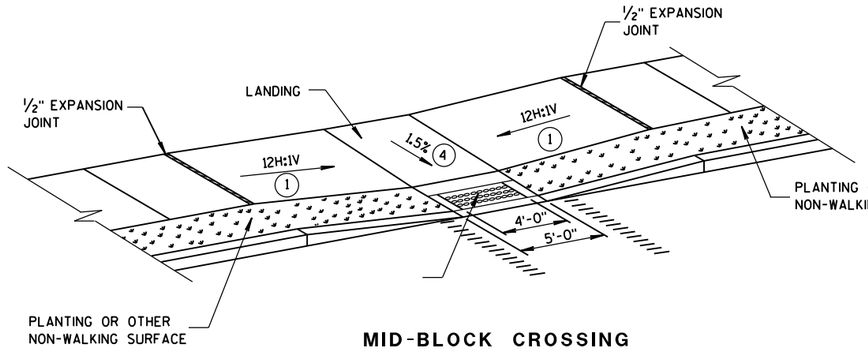


PLAN VIEW

DETECTABLE WARNING FIELD (TYPICAL)



TYPE 6
DETECTABLE WARNING AT ISLANDS



MID-BLOCK CROSSING
TYPE 7B

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

LEGEND

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

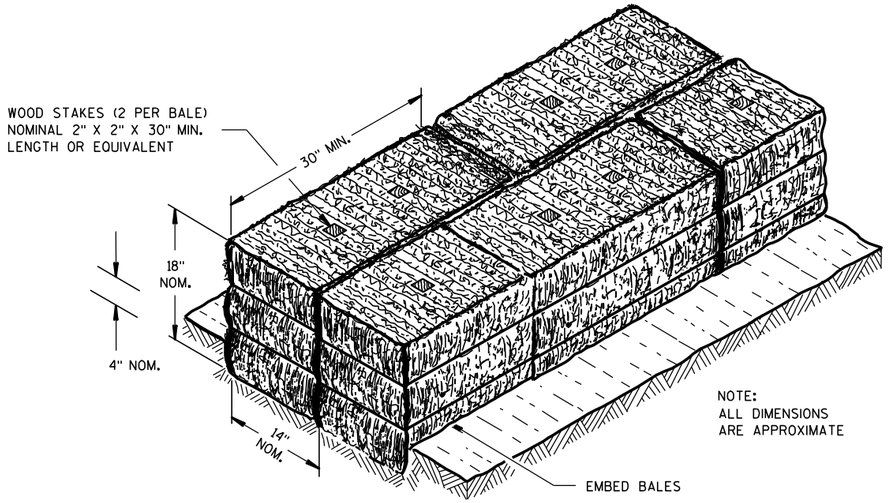
CURB RAMPS
TYPES 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

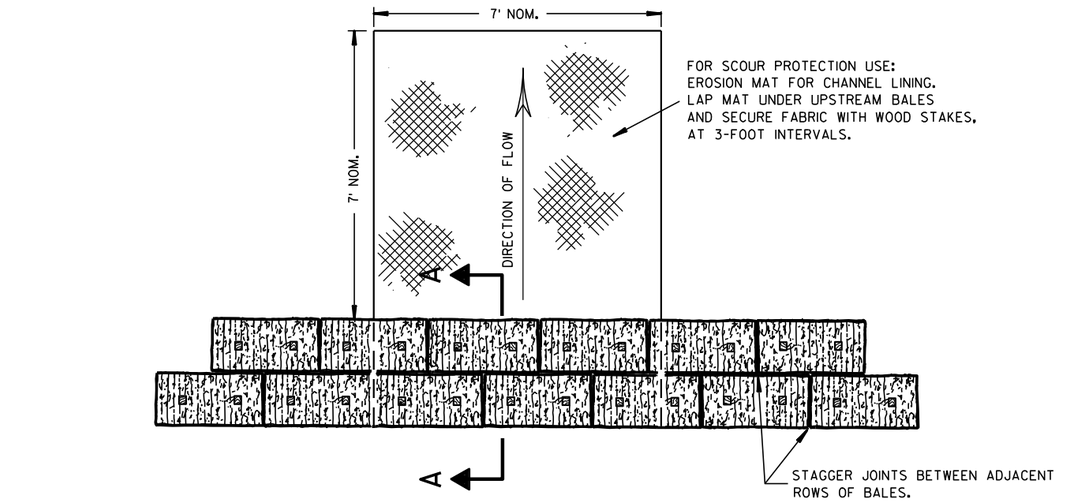
APPROVED
2-6-2013 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

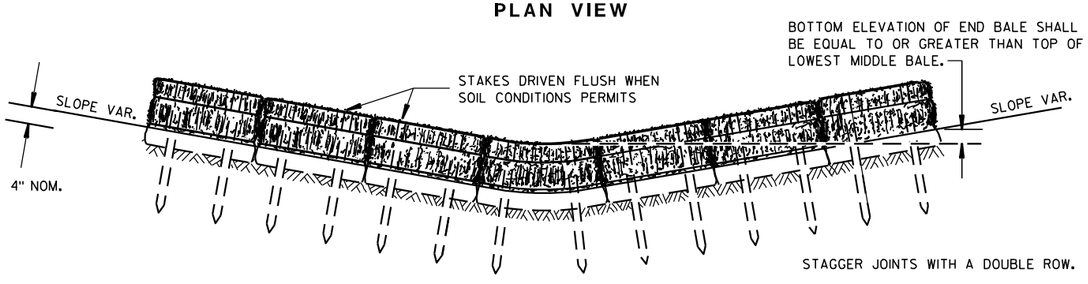
S.D.D. 8 D 5-15e



SECTION A-A



PLAN VIEW



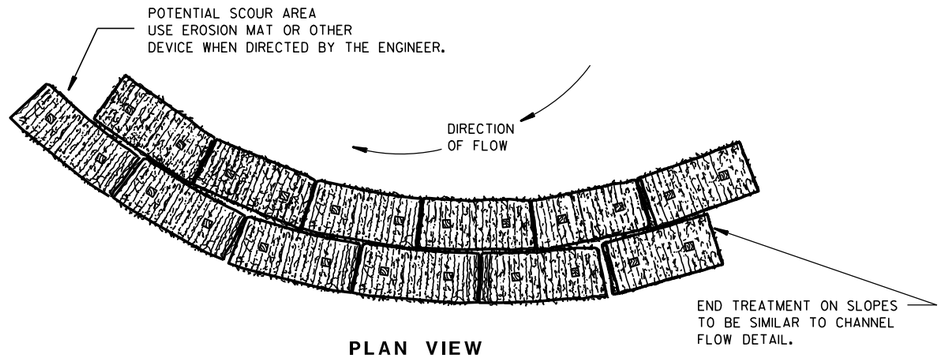
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

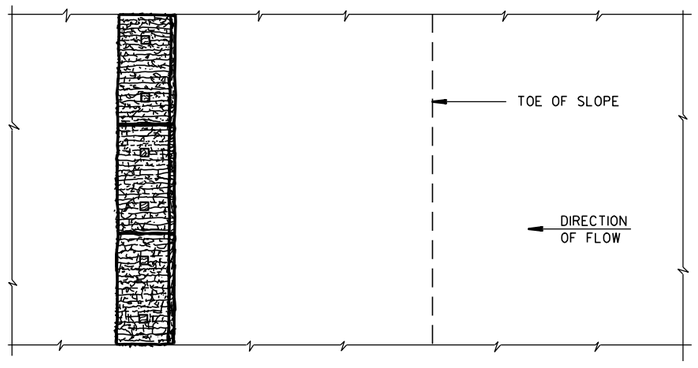
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

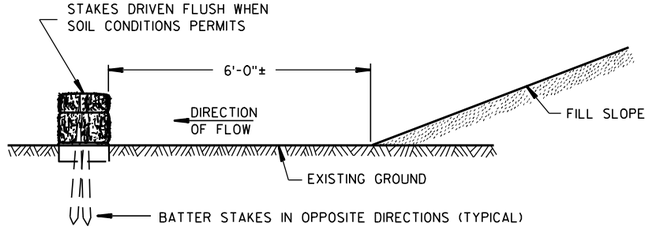


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

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

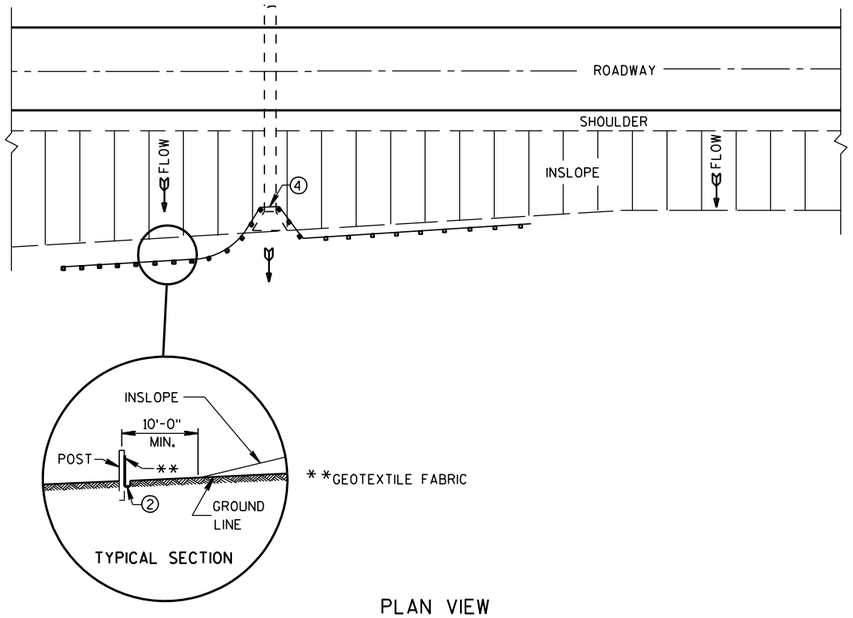
FHWA

6

S.D.D. 8 E 8-3

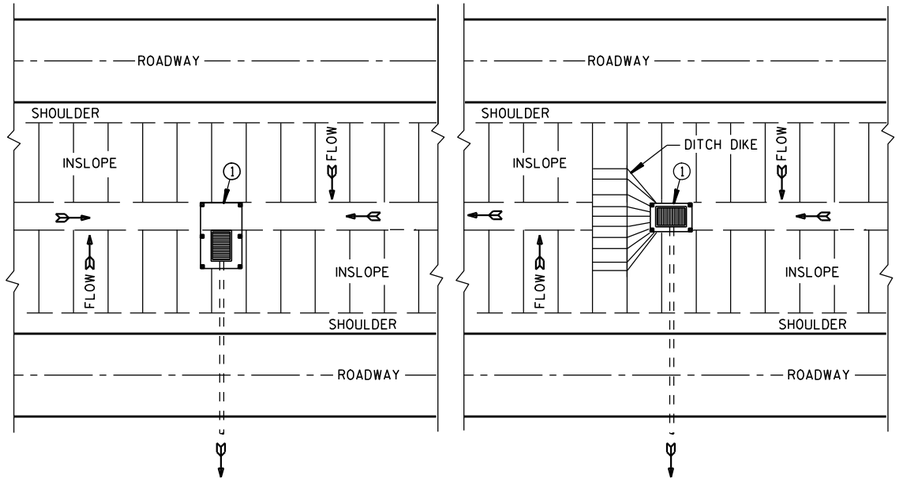
6

S.D.D. 8 E 8-3



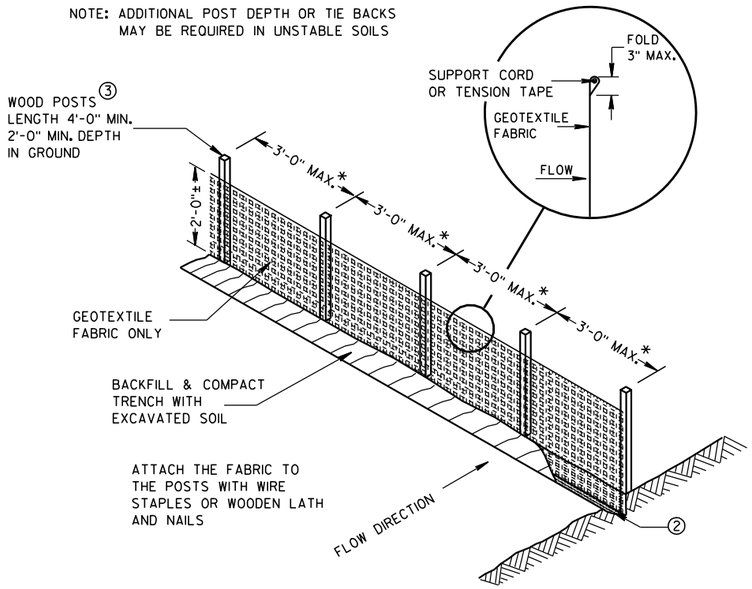
PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



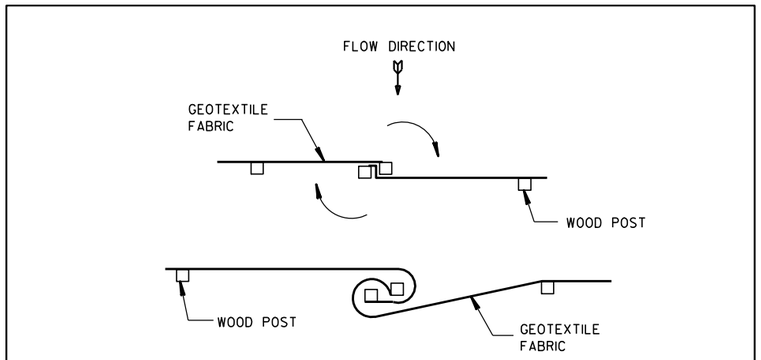
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS



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

SILT FENCE

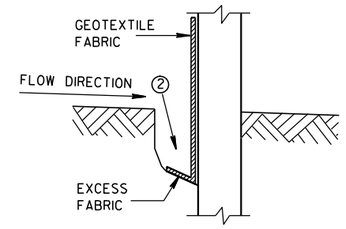


JOINING TWO LENGTHS OF SILT FENCE 5

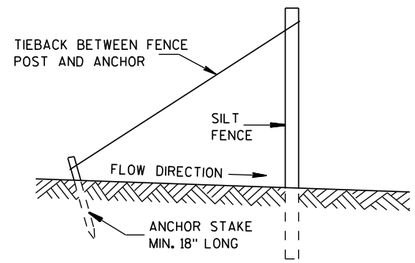
GENERAL NOTES

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

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



TRENCH DETAIL



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

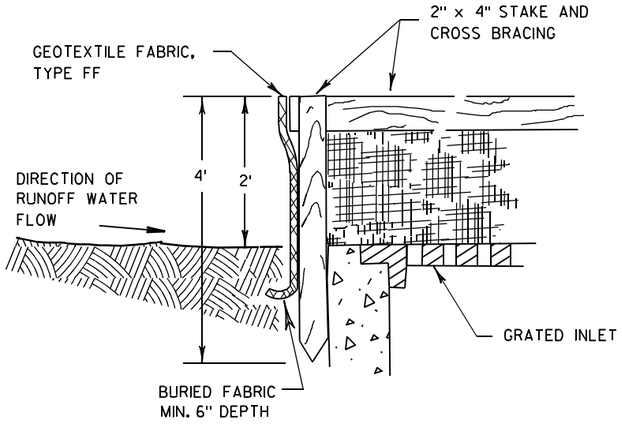
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

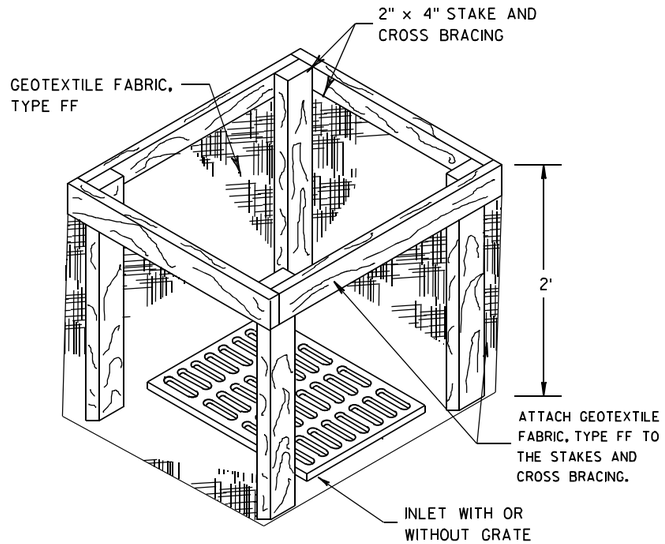
6

S.D.D. 8 E 9-6

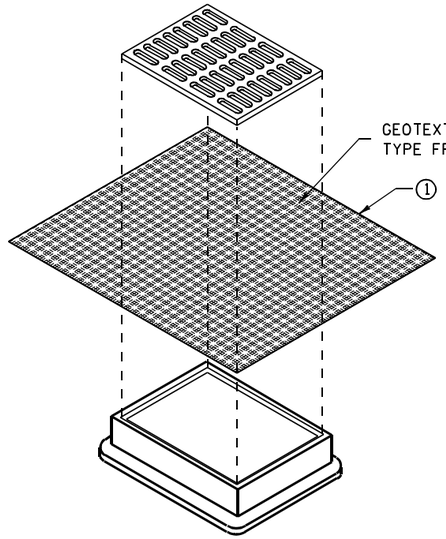
6

S.D.D. 8 E 9-6



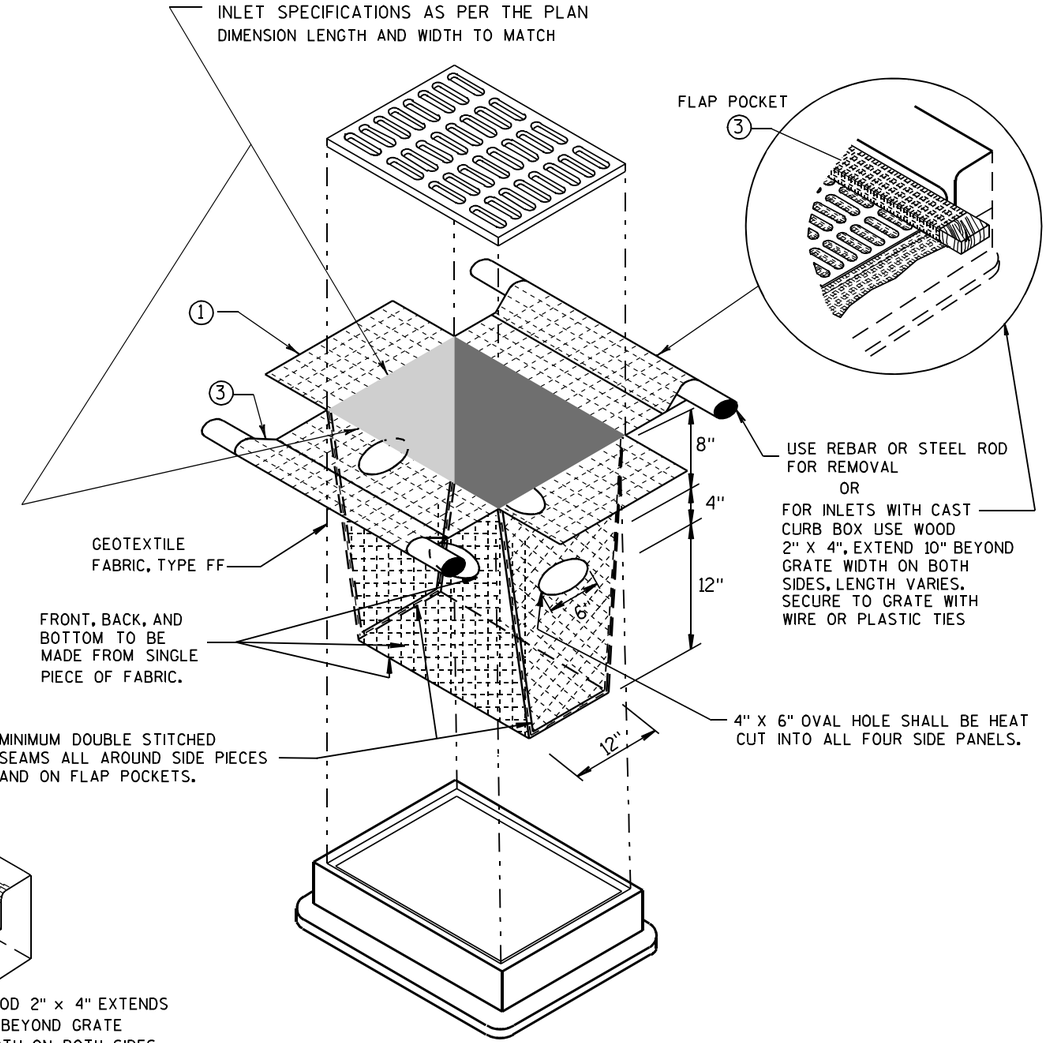


INLET PROTECTION, TYPE A



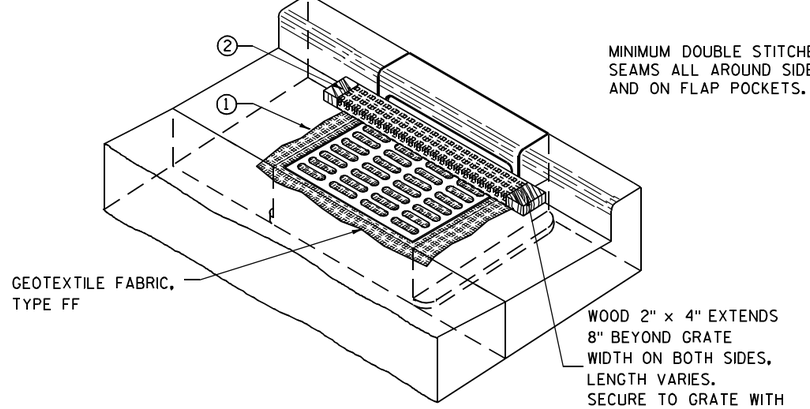
INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE D

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

GENERAL NOTES

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

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

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

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

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

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

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

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

METAL APRON ENDWALLS

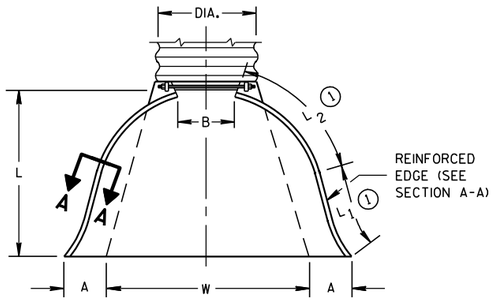
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

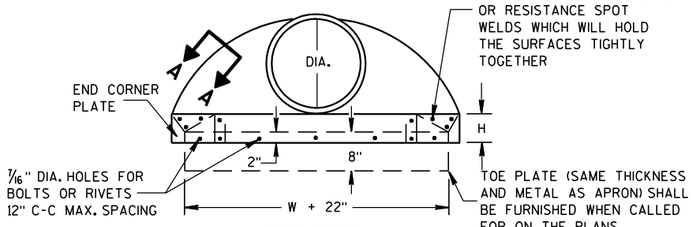
REINFORCED CONCRETE APRON ENDWALLS

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

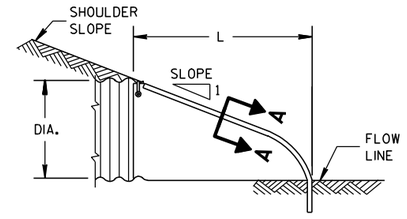
*MINIMUM
**MAXIMUM



PLAN VIEW

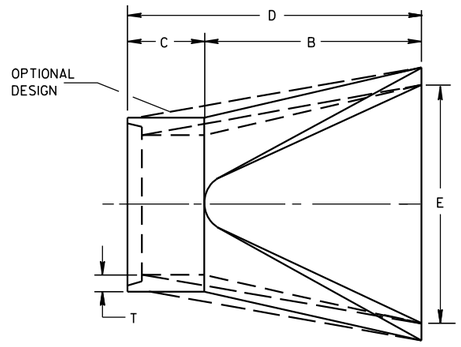


END VIEW

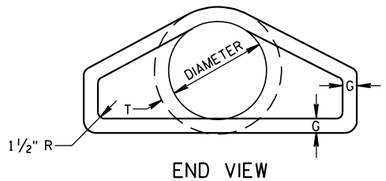


SIDE ELEVATION

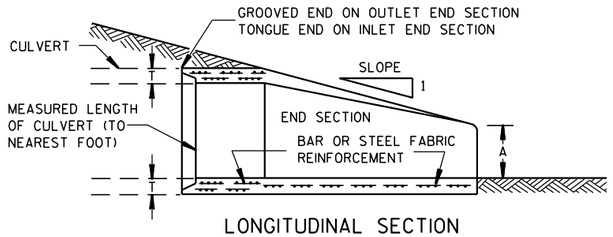
METAL ENDWALLS



PLAN

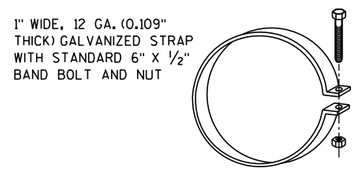


END VIEW



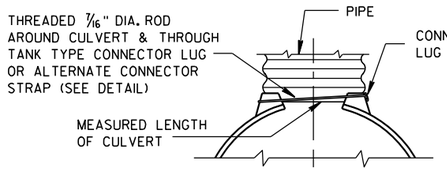
LONGITUDINAL SECTION

CONCRETE ENDWALLS

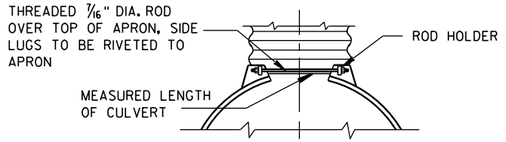


ALTERNATE FOR TYPE 1 CONNECTION

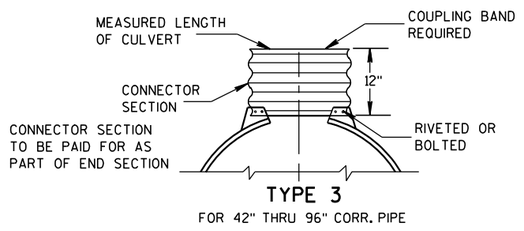
END SECTION CONNECTOR STRAP



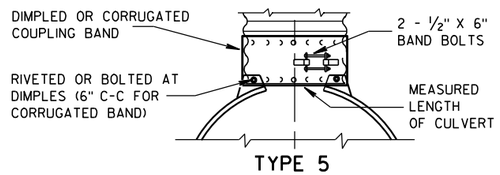
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

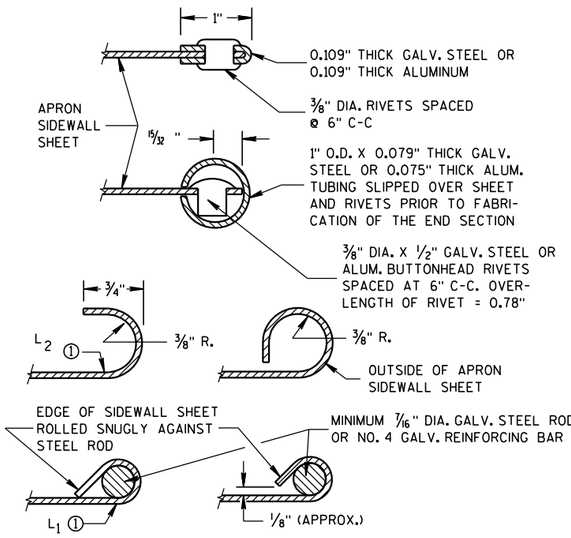
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

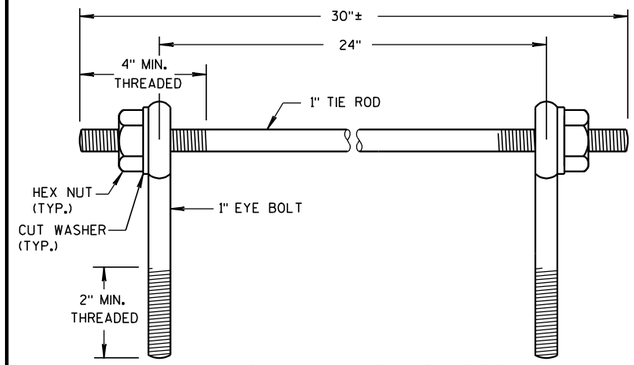
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

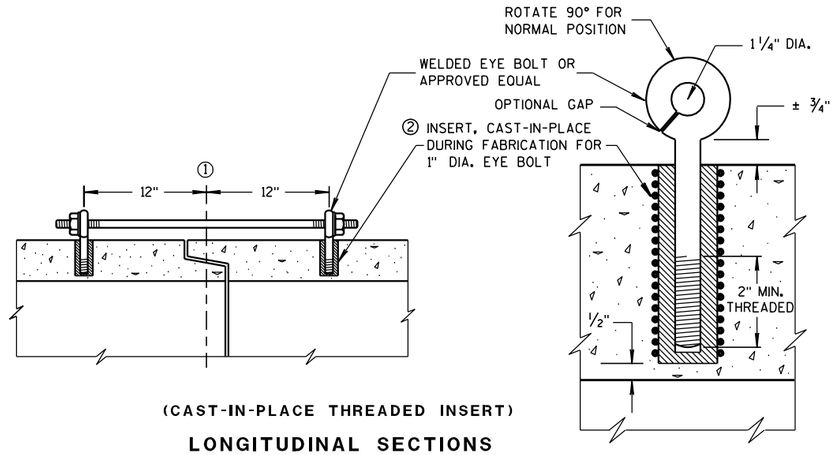
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 — DATE
/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOP 94 NEER
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.

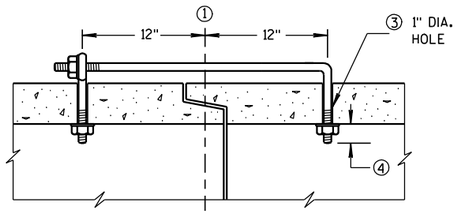
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

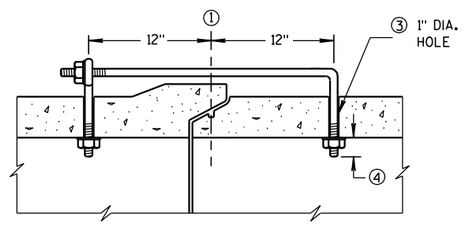
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

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)

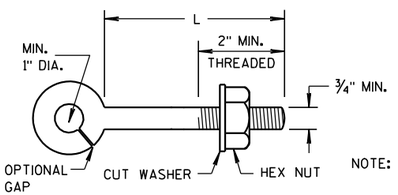


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

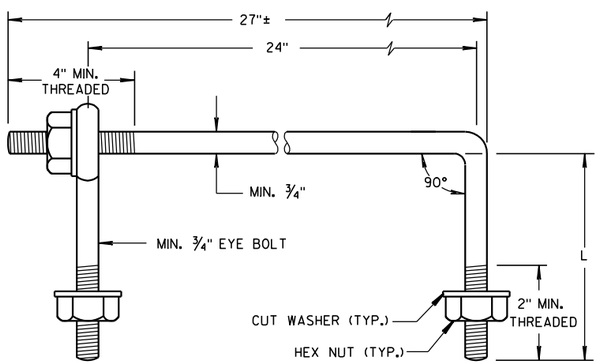
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



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

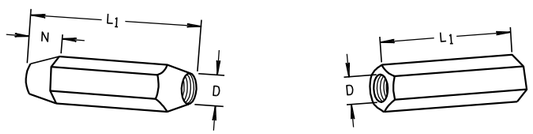
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

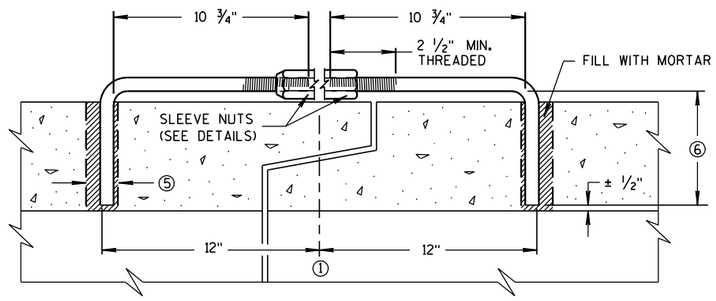
DIMENSIONS SHOWN ARE IN INCHES



TAPERED PLAIN

RIGHT AND LEFT THREADS

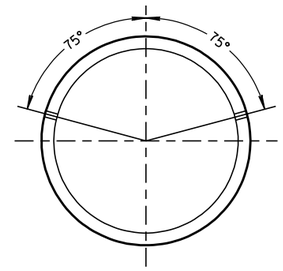
SLEEVE NUTS



LONGITUDINAL SECTION

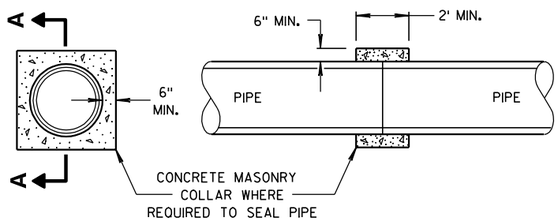
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
95 — 'MENT

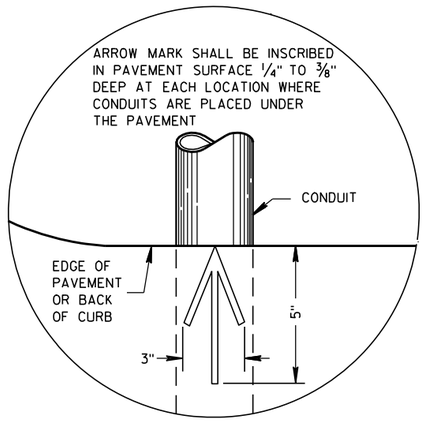
FHWA

6

S.D.D. 8 F 4-7

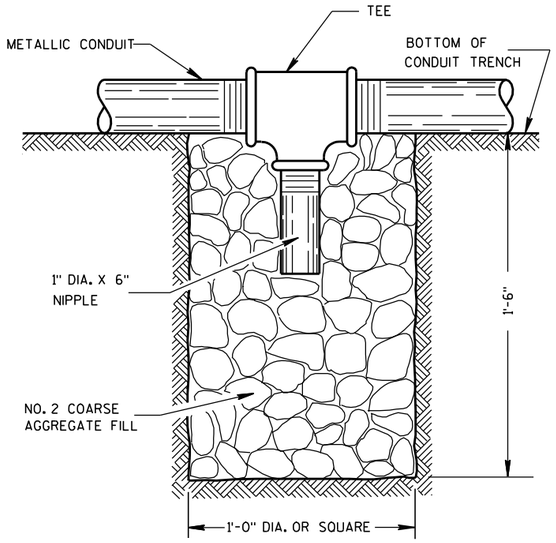
6

S.D.D. 8 F 4-7



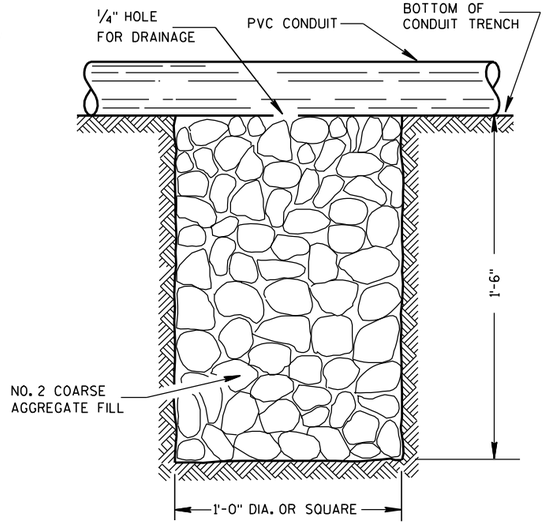
PLAN VIEW

ARROW MARK



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

DRAIN SUMP FOR METALLIC CONDUIT



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

DRAIN SUMP FOR PVC CONDUIT

GENERAL NOTES

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

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

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

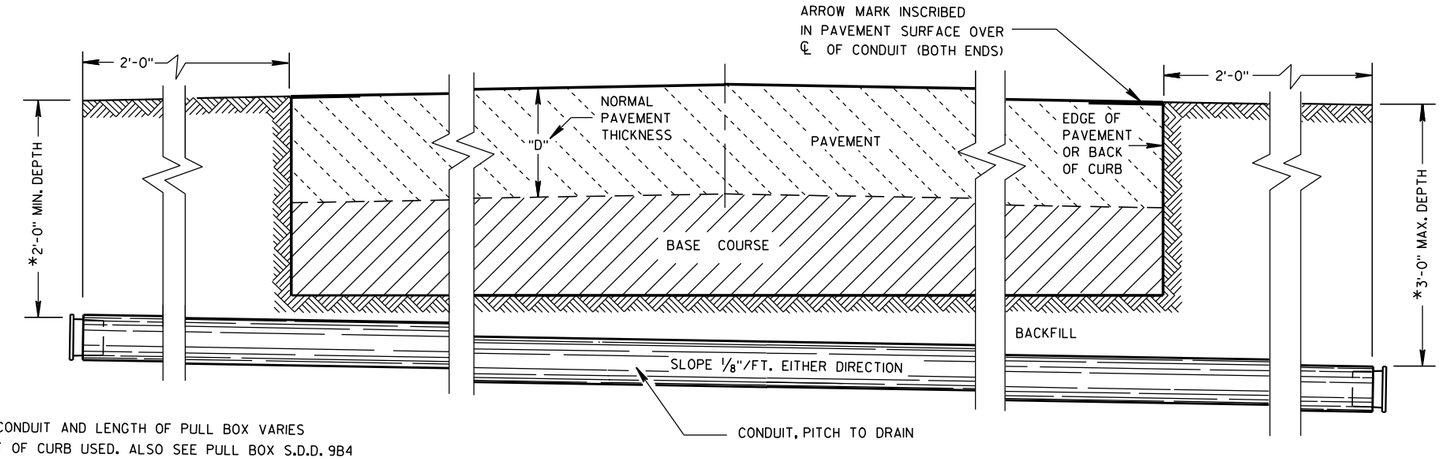
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

POLY ROPE OR A PULL WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/23/03 — DATE

/S/ Balu Ananthanarayanan — STATE ELECTRICAL ENGI

FHWA — HWYS

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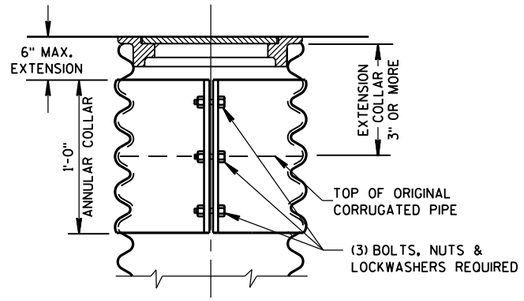
S.D.D. 9 B 2-7

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

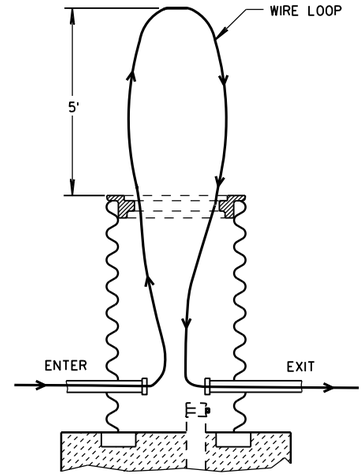
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2	26 1/2	26 1/2	26 1/2
FRAME	F	8 1/2	8 1/2	8 1/2	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2
FRAME	G	11 1/2	11 1/2	11 1/2	17 1/2	17 1/2	17 1/2	23 1/2	23 1/2	23 1/2
WEIGHT IN POUNDS *										
FRAME AND COVER		60	60	60	110	110	110	155	155	155

* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

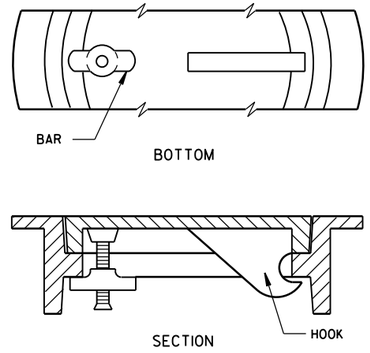
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

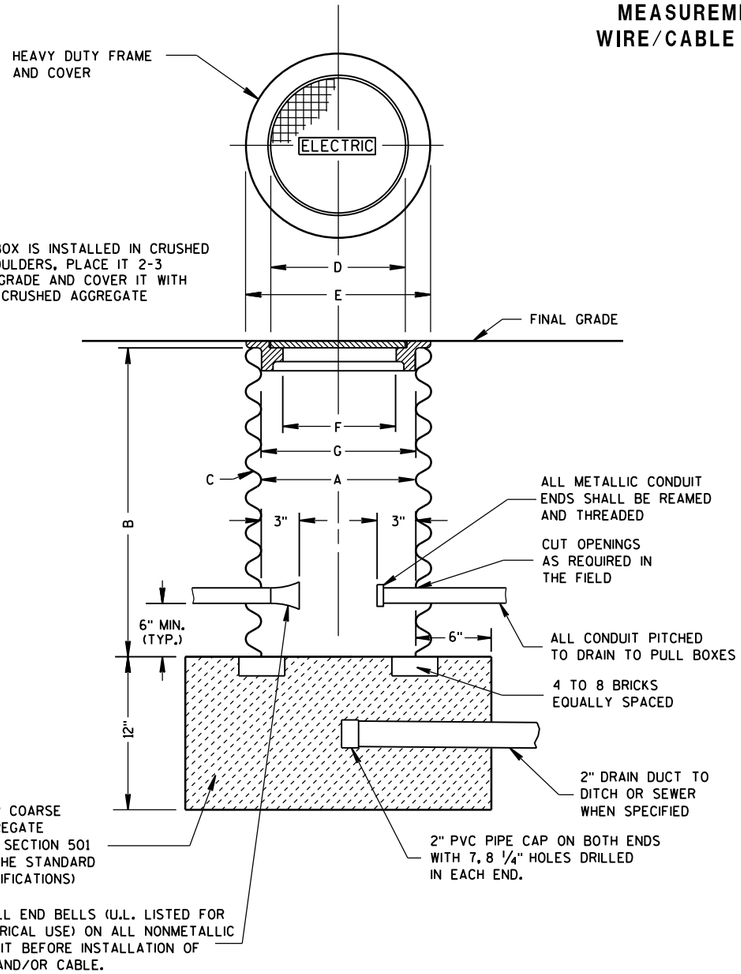


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



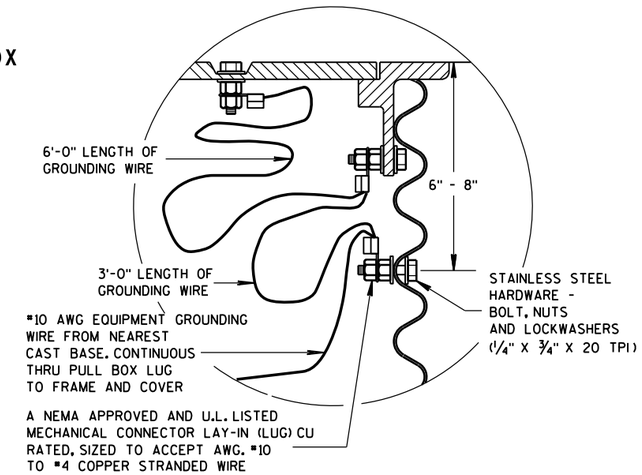
ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE

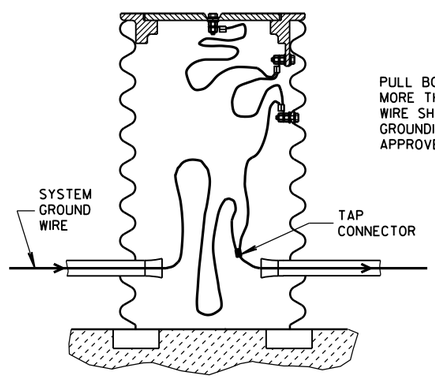


WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

PULL BOX



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



PULL BOX TO NEAREST BASE DISTANCE MORE THAN 20 FEET. PULL BOX GROUND WIRE SHALL CONNECT AT SYSTEM GROUNDING WIRE. USE DEPARTMENT APPROVED TAP CONNECTOR.

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

GENERAL NOTES

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

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

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

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

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

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

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

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.

PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

2-7-2013
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL

FHWA

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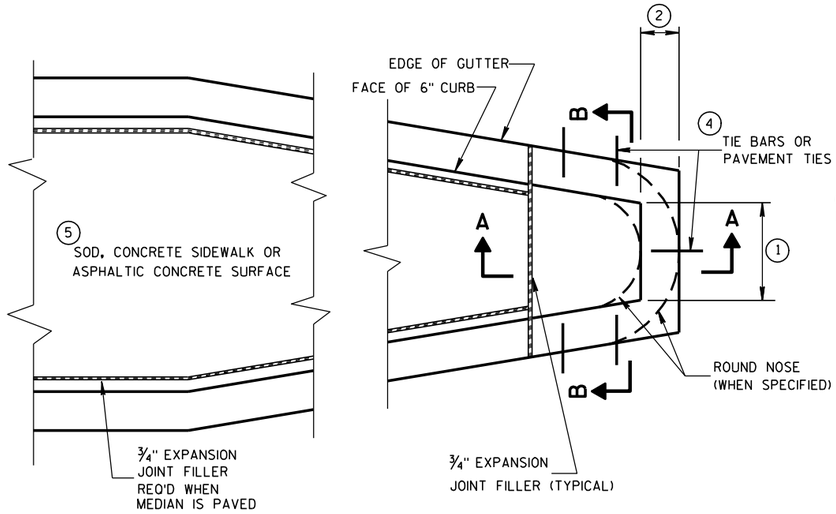
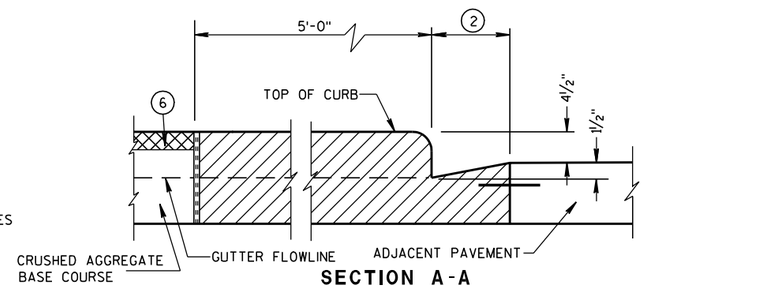
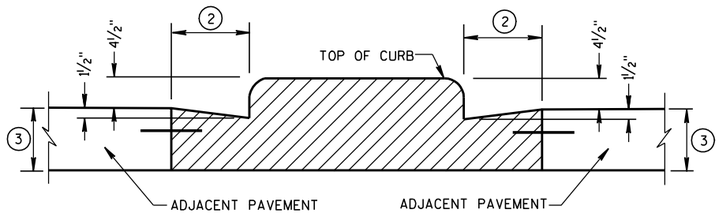
S.D.D. 9 B 4-10





SECTION A-A



SECTION B-B

CONCRETE MEDIAN BLUNT NOSE DETAIL

GENERAL NOTES

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

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

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

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

(1) NEW OR EXISTING CONCRETE PAVEMENT.

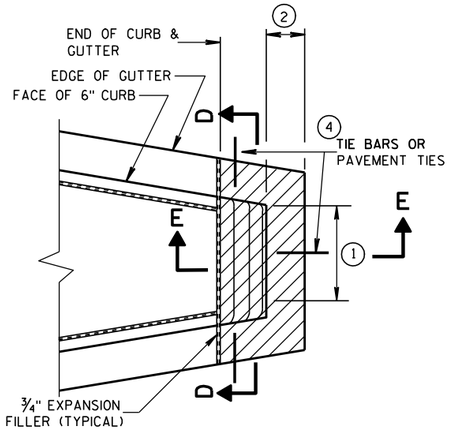
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

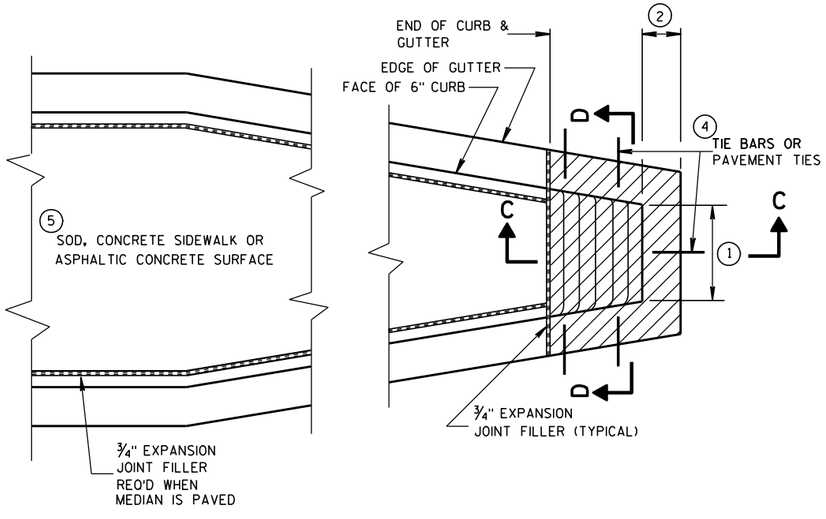
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

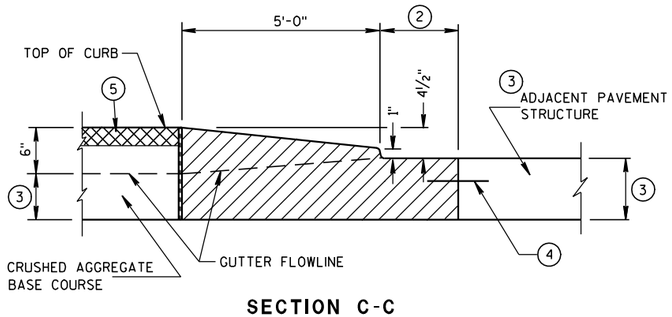
(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

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

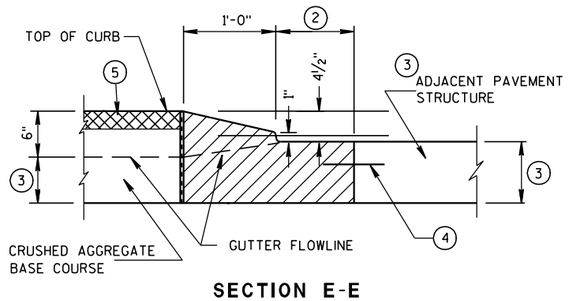
(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.







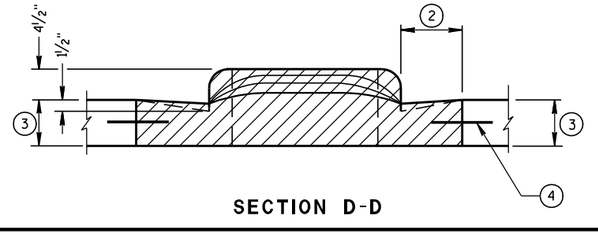
SECTION C-C



SECTION E-E

CONCRETE MEDIAN SLOPED NOSE TYPE 2

CONCRETE MEDIAN SLOPED NOSE TYPE 1



SECTION D-D

CONCRETE MEDIAN NOSE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 6/8/2006 DATE FHWA	/S/ Jerry H. [illegible] ROADWAY STANDARDS ENGINEER 98
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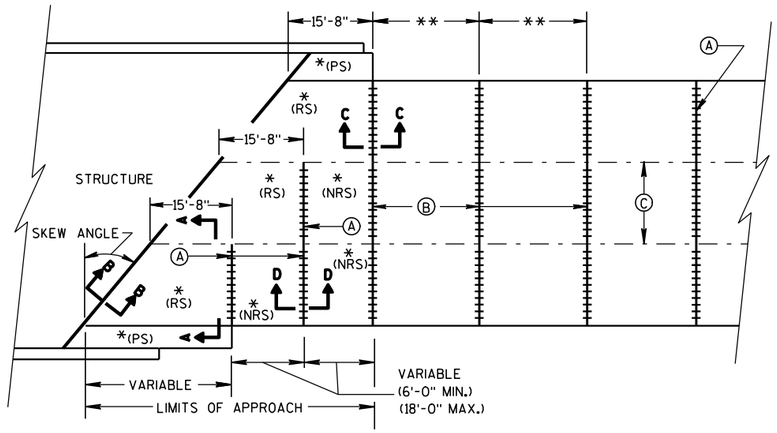
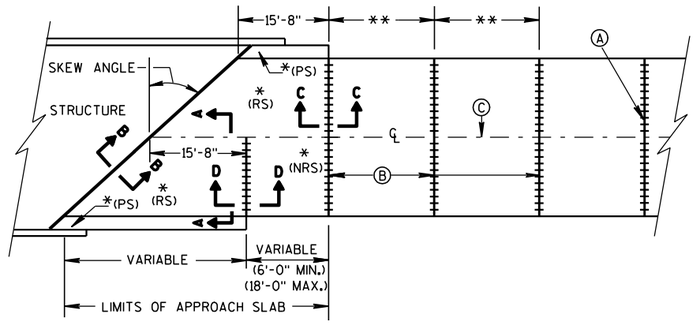
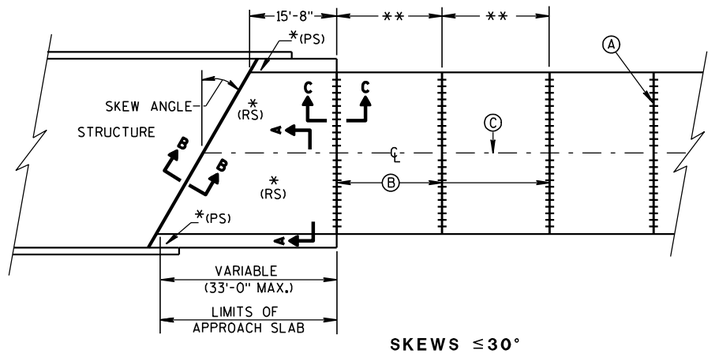
S.D.D. 11 B 2-2



SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >30°
(PAVEMENT WIDTH ≤30')



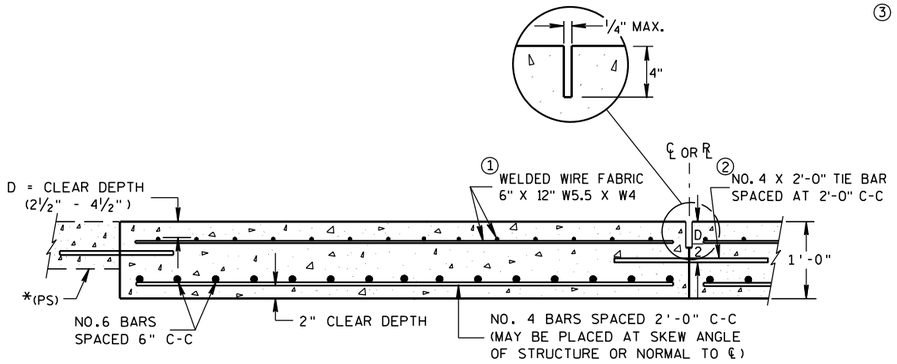
SKEWS ≤30°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

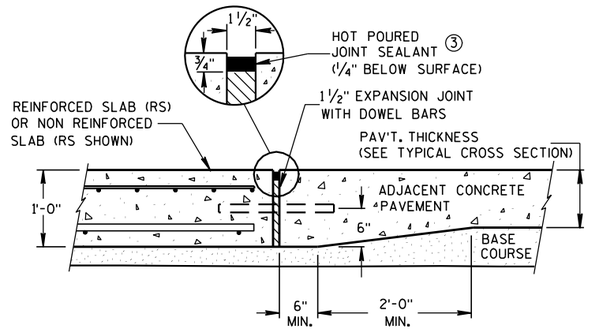
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER: CONCRETE PAVEMENT, OR CONCRETE SURFACE DRAIN
(SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

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

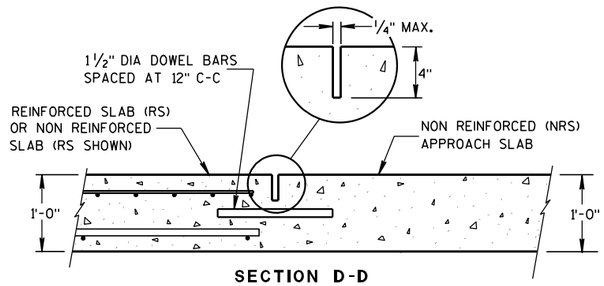
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄
(B) 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄
(C) STANDARD LONGITUDINAL JOINT AND TIE BARS.



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



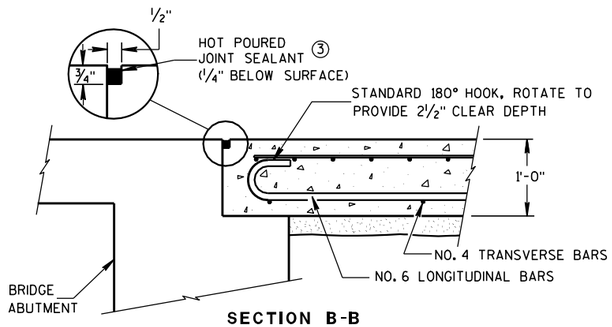
SECTION D-D
CONTRACTION JOINT

GENERAL NOTES

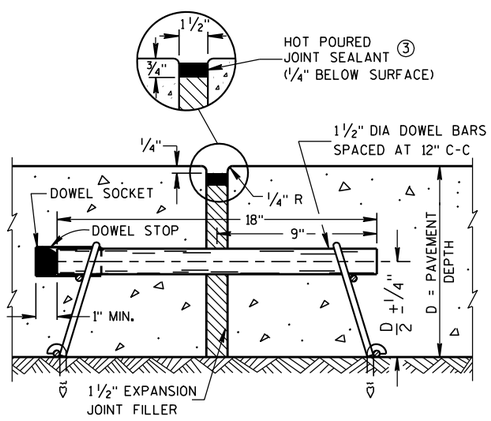
APPROACH SLABS ABUTTING AN HMA PAVEMENT OVER BASE COURSE DO NOT NEED TO BE DOWELED.

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

1. THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.
2. THE CONTRACTOR MAY OMIT TIE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.
3. USE A JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM D6690.



SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT



EXPANSION JOINT

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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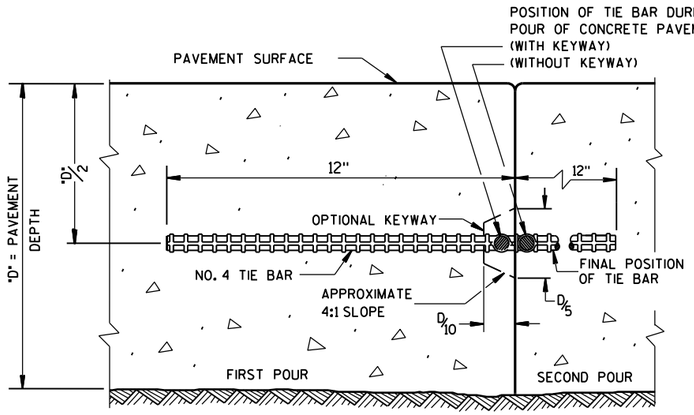
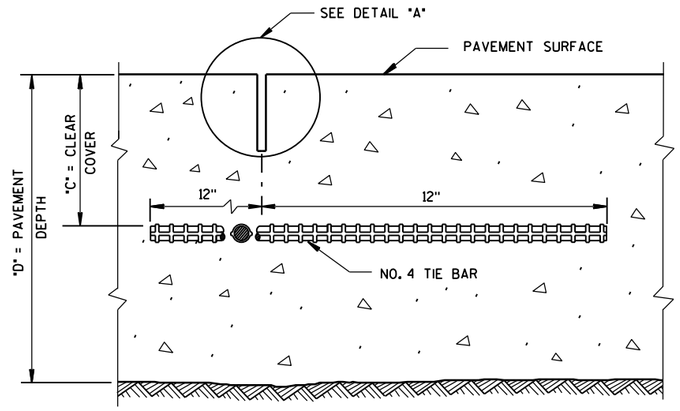
S.D.D. 13 B 2-6



CONSTRUCTION JOINT



SAWED JOINT

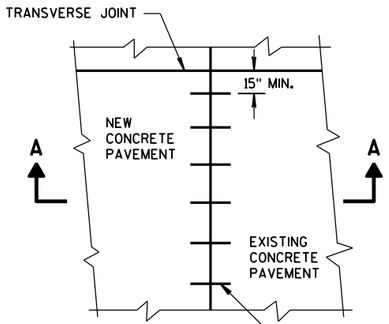
GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

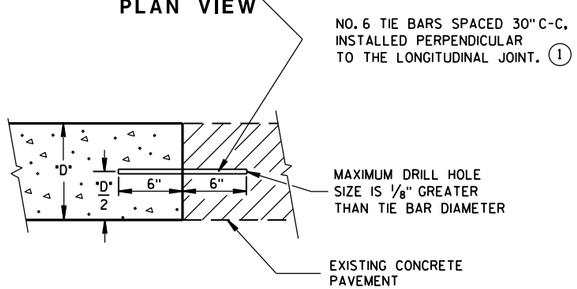
CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

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

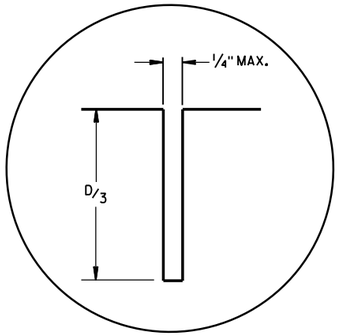


PLAN VIEW



SECTION A-A

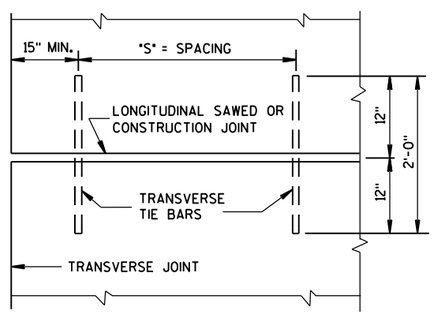
LONGITUDINAL CONSTRUCTION JOINT
TIE BARS ANCHORED
INTO EXISTING PAVEMENT



DETAIL "A"

TIE BAR TABLE

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



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT
LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-3-2013
DATE

/S/ Deb Bischoff
PAVEMENT POLICY & DE

FHWA

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S.D.D. 13 C 1-16

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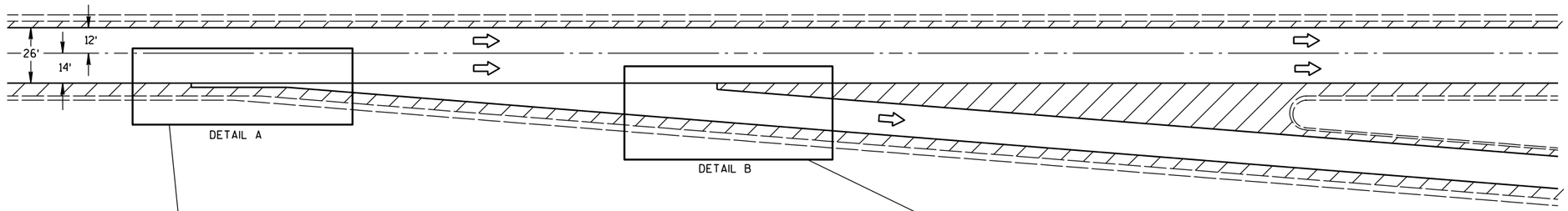
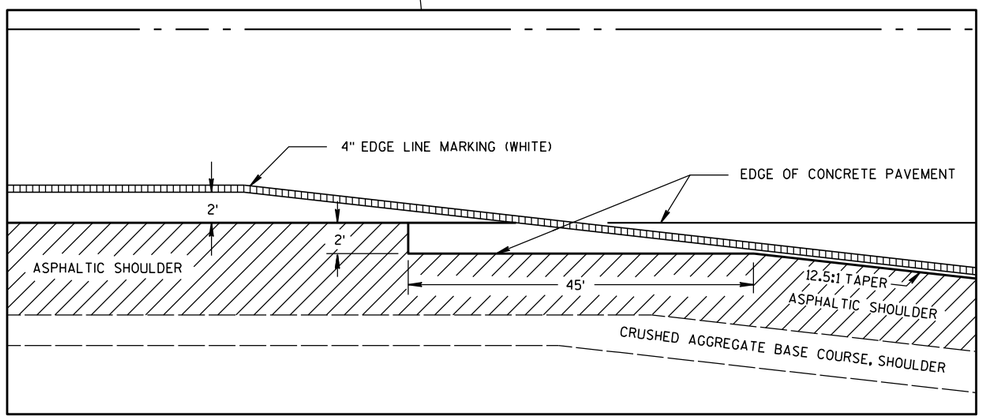
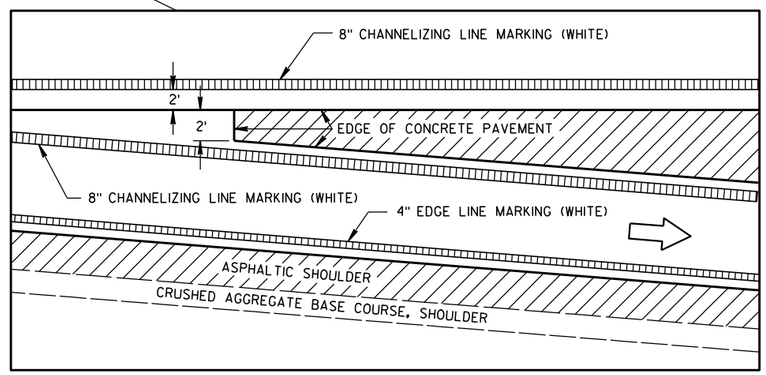
S.D.D. 13 C 1-16



EXIT RAMP DETAIL



DETAIL A



DETAIL B

CONCRETE JOINT PAVING DETAILS

GENERAL NOTES

PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

SEE SDD 13 A 4-4c OR SDD 13 A 5-1b FOR RAMP AND GORE RUMBLE STRIP LOCATION.

CONCRETE JOINT DETAIL FOR EXIT RAMP TERMINI

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 13 C 17-1a

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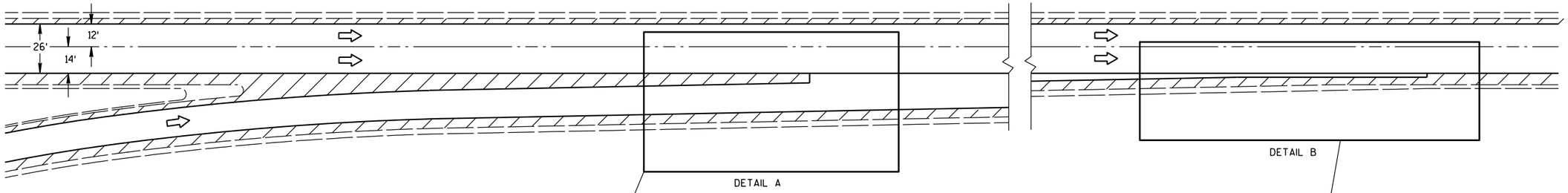
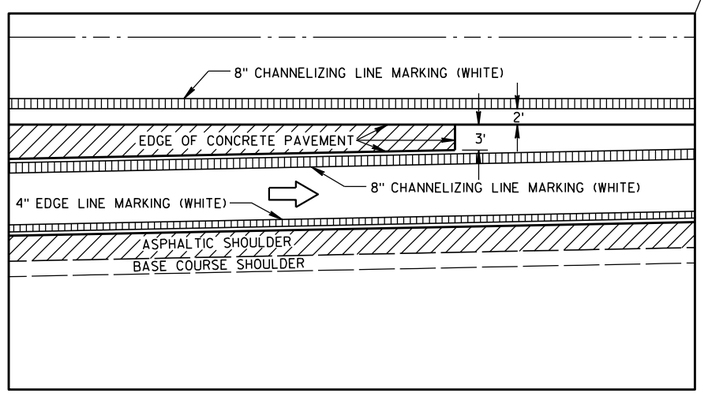
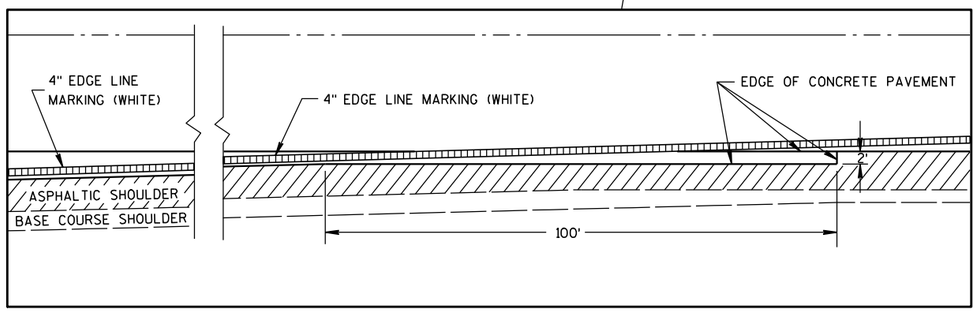
S.D.D. 13 C 17-1a



ENTRANCE RAMP DETAIL



DETAIL A



DETAIL B

CONCRETE JOINT PAVING DETAILS

GENERAL NOTES

PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

SEE SDD 13 A 4-4c OR SDD 13 A 5-1b FOR RAMP AND GORE RUMBLE STRIP LOCATION.

CONCRETE JOINT DETAIL FOR ENTRANCE RAMP TERMINI

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

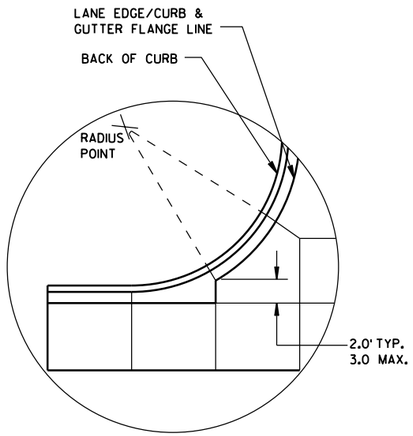
5/27/98
DATE

/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER

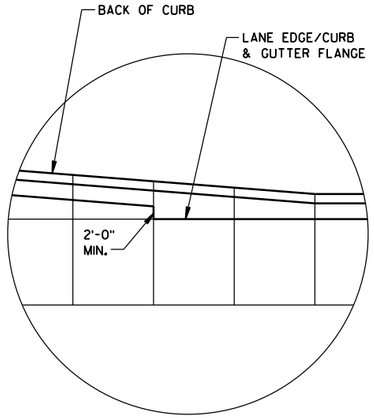
FHWA

6

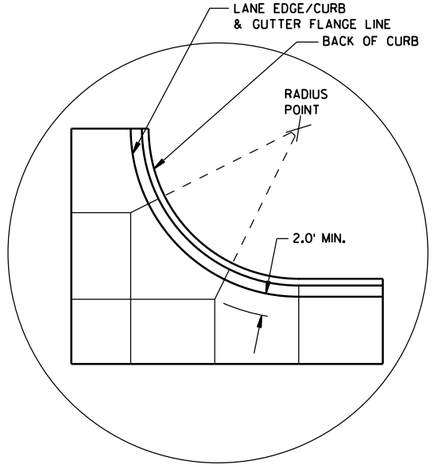
S.D.D. 13 C 17-1b



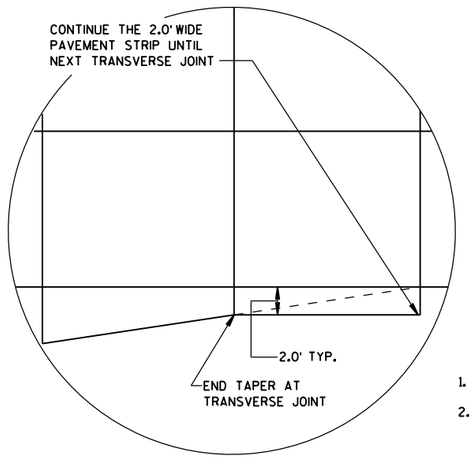
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

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

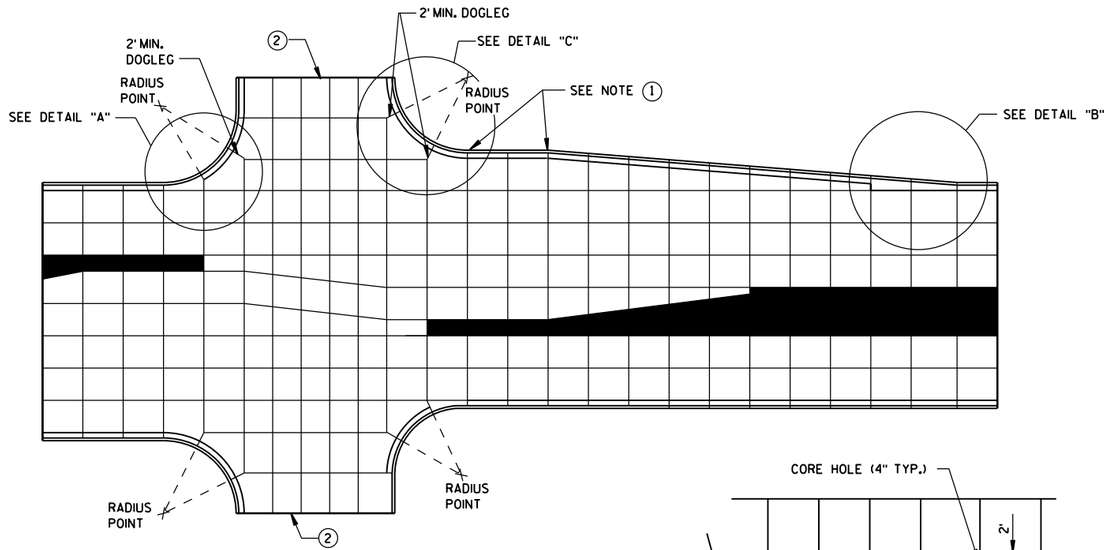
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

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

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

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

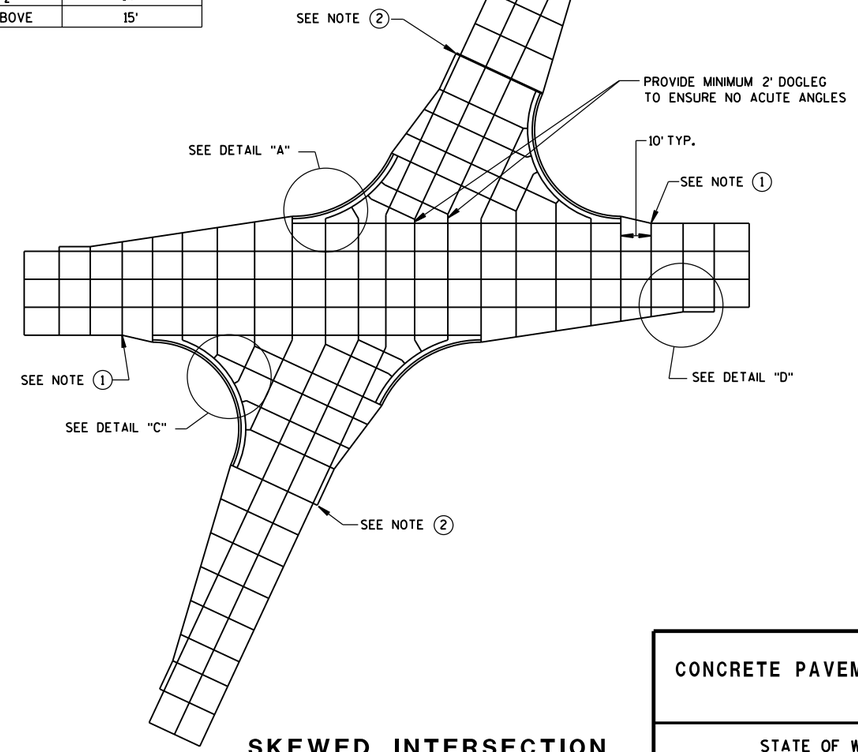
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM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



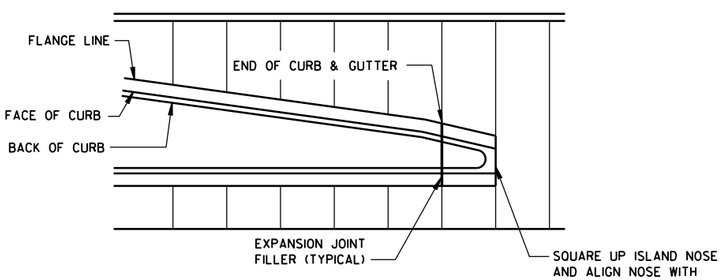
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

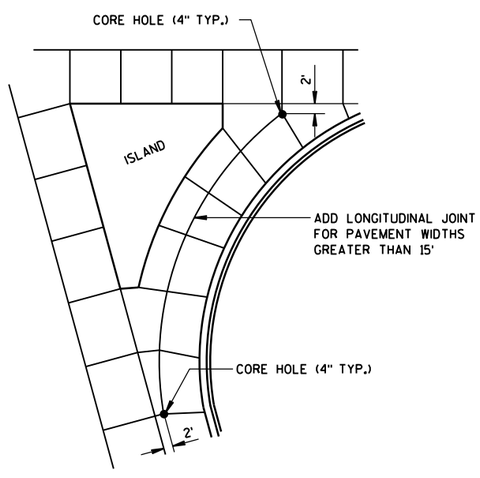
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6½"	12'
7", 7½"	14'
8" & ABOVE	15'



SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

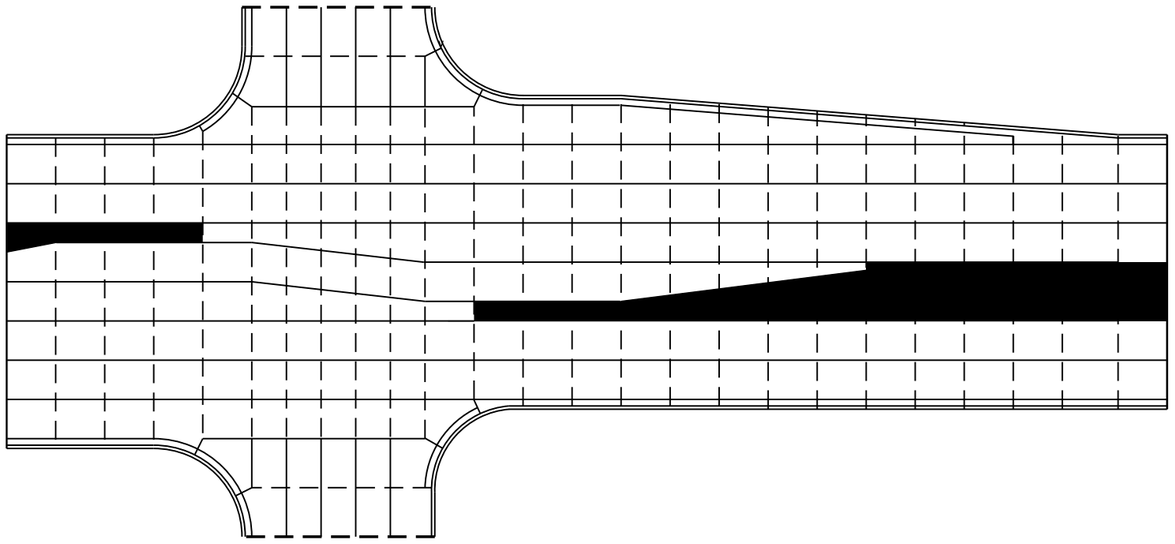
6
S.D.D. 13 C 18-2a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

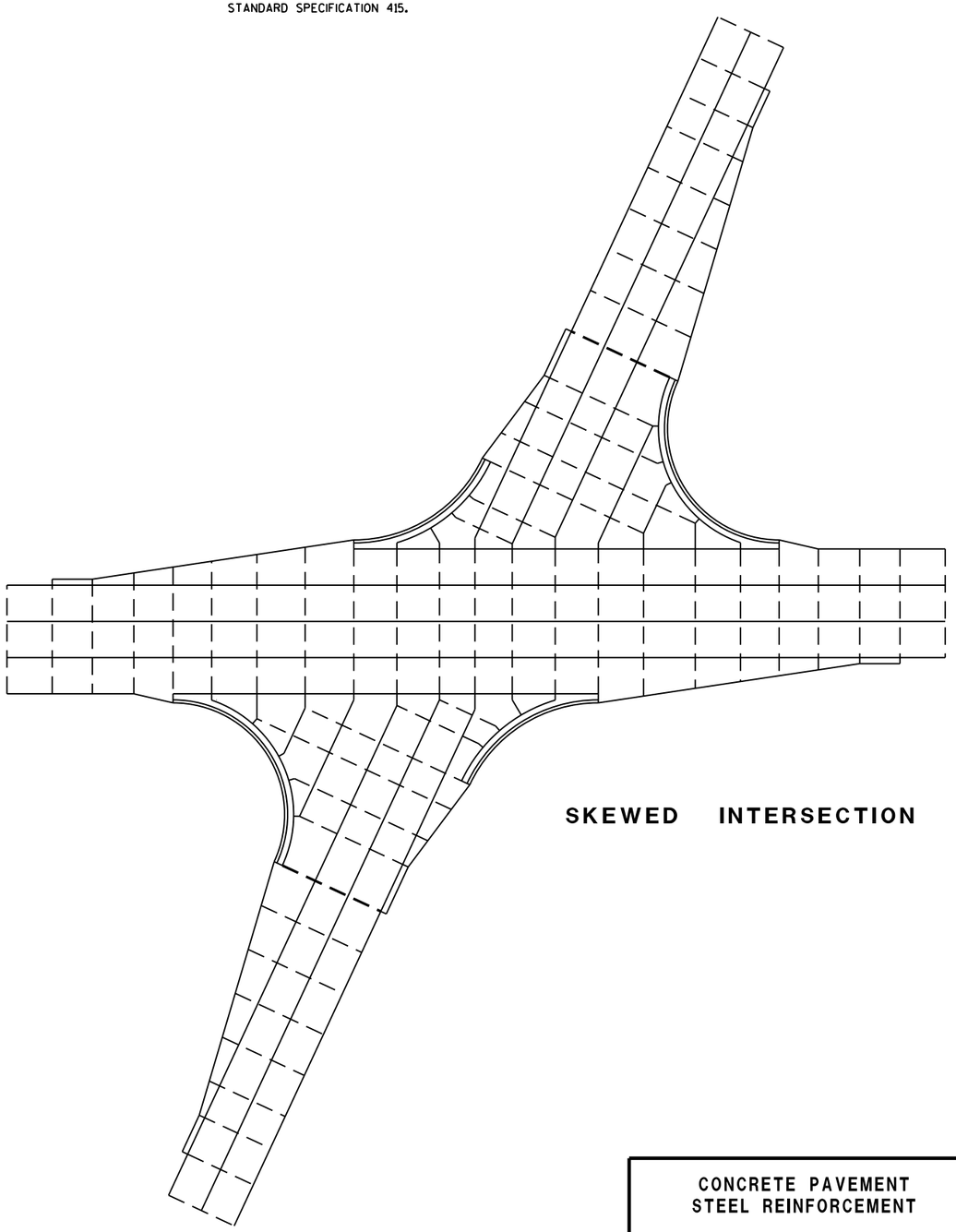
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

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



SKEWED INTERSECTION

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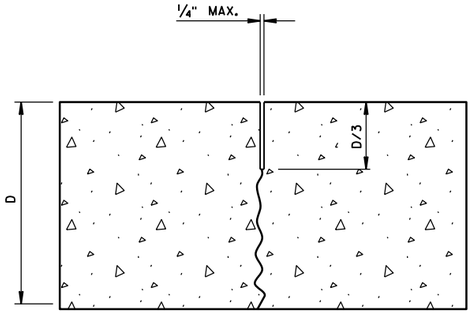
S.D.D. 13 C 18-2b

CONCRETE PAVEMENT
STEEL REINFORCEMENT

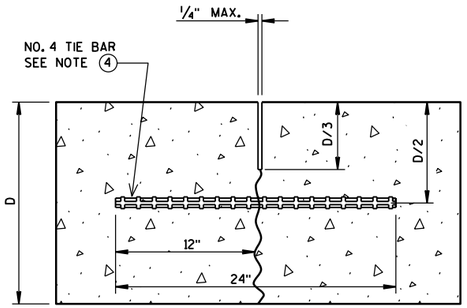
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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



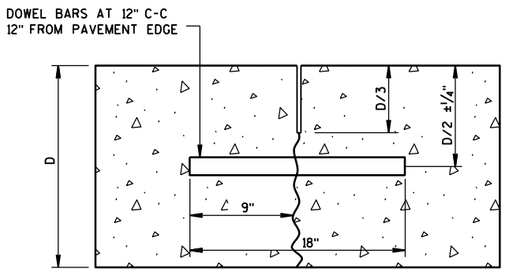
UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

GENERAL NOTES

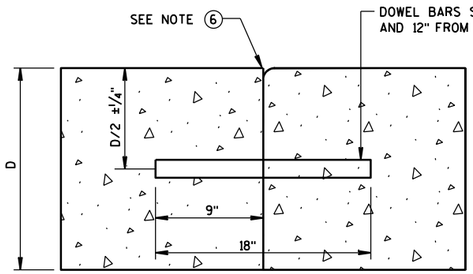
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF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



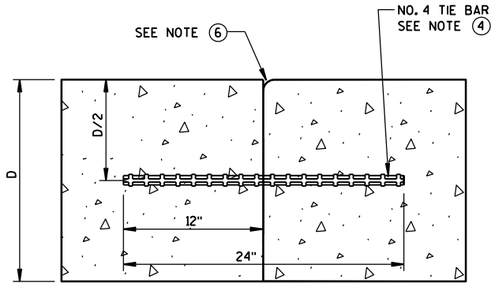
DOWELED-TRANSVERSE

CONTRACTION JOINTS

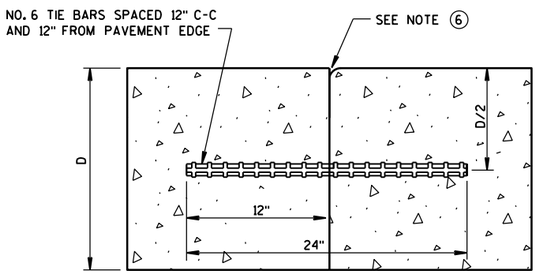
SEE NOTE (2)



DOWELED TRANSVERSE

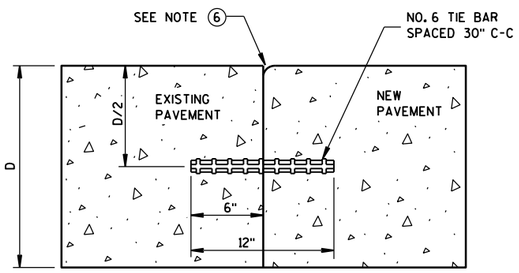


TIED LONGITUDINAL



TIED TRANSVERSE

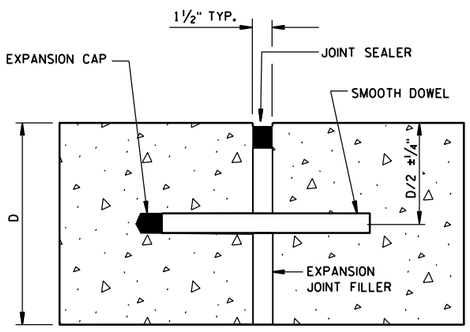
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



TIED LONGITUDINAL TO EXISTING

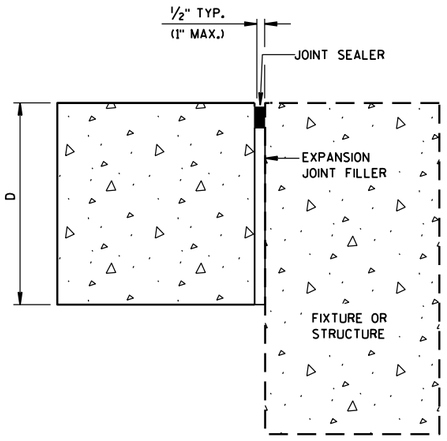
CONSTRUCTION JOINTS

SEE NOTE (5)



DOWELED-TRANSVERSE

SEE NOTE (1)



UNTIED-LONGITUDINAL

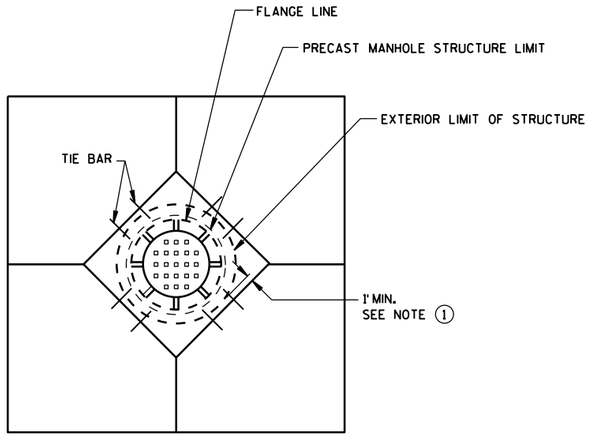
EXPANSION JOINTS

CONCRETE PAVEMENT
JOINT TYPES

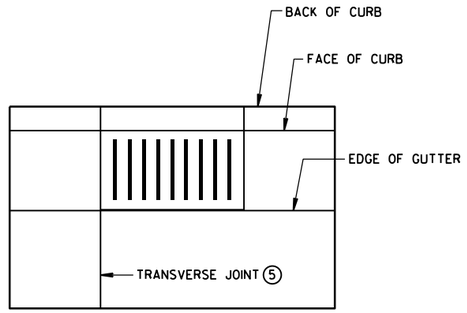
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

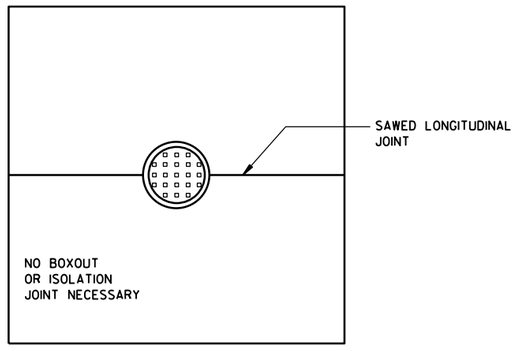
S.D.D. 13 C 18-2c



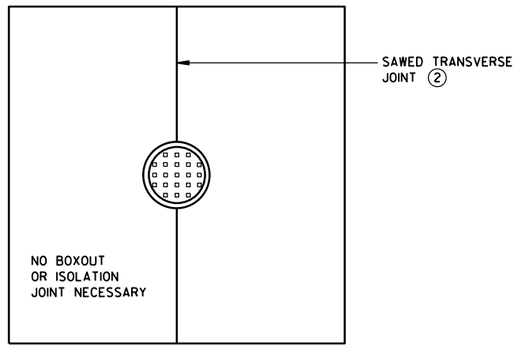
DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS



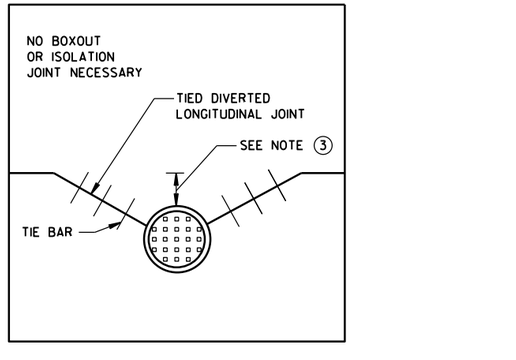
INLET WITH TRANSVERSE JOINT



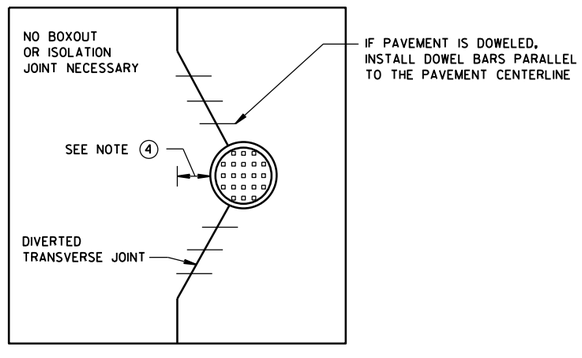
MANHOLE WITH LONGITUDINAL JOINT



MANHOLE WITH TRANSVERSE JOINT



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT

GENERAL NOTES

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

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

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

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

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

CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

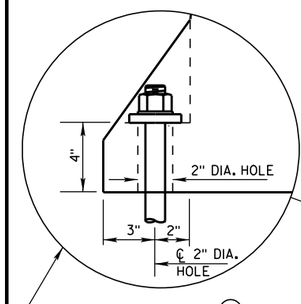
APPROVED

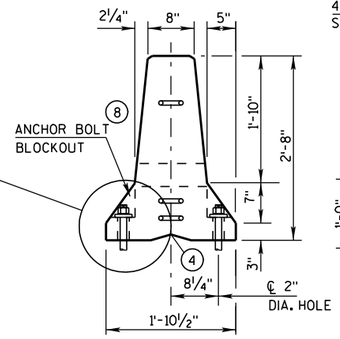
5-3-2013	/S/ Deb Bischoff	
DATE	PAVEMENT POLICY & DE	NEER

FHWA

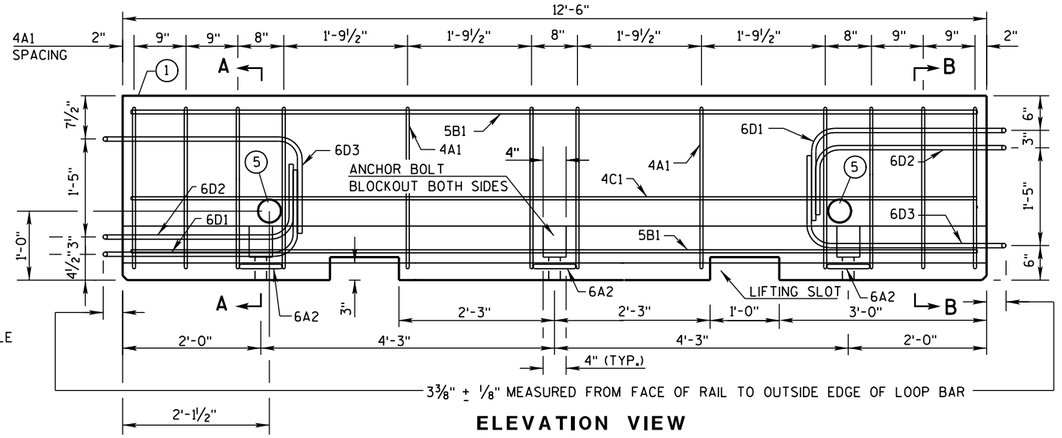
6

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

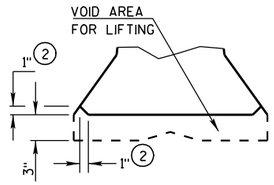




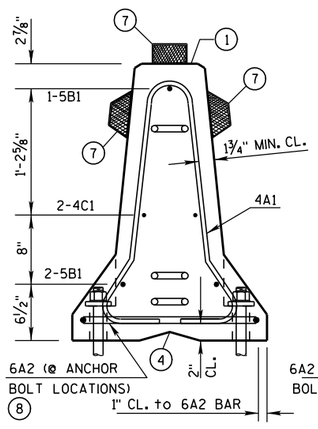
END VIEW



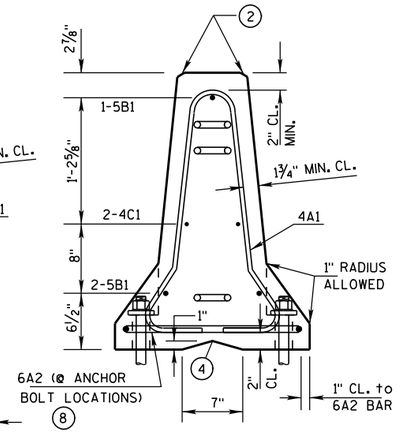
ELEVATION VIEW



DETAIL "B"
LIFTING SLOT DETAIL



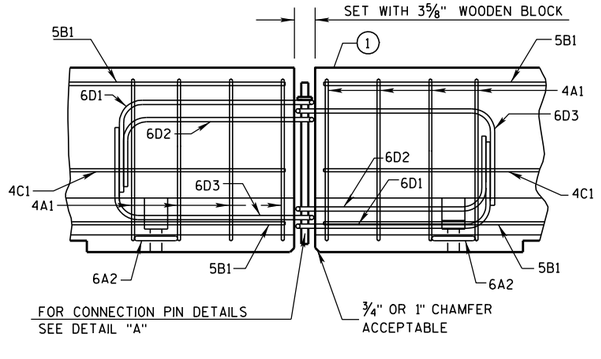
SECTION A-A
(STIRRUP PLACEMENT)



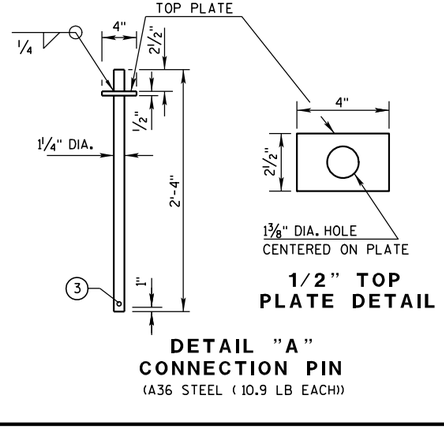
SECTION B-B
(STIRRUP PLACEMENT)

PLAN VIEW

DETAILS OF BARRIER SECTION

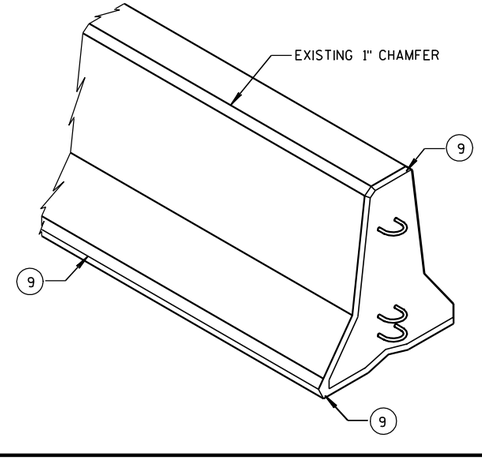


DETAILS OF BARRIER CONNECTION



1/2" TOP PLATE DETAIL

DETAIL "A"
CONNECTION PIN
(A36 STEEL (10.9 LB EACH))



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-13(a) THRU 14B7-13(h).

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRCAST, 12'-6" (CBTP12.5) WITH OTHER TEMPORARY CONCRETE BARRIERS.

USE ASTM A-615, GRADE 60, DEFORMED STEEL BARS FOR BARS 4A1, 6A2, 5B1 AND 4C1 IN THE BARRIER SECTION AND FOR 4V1, 4V2, 4V3, 4V4, 4V5, 4V6, 4F1, 4F2 AND 5F3 IN THE BARRIER TAPER SECTION.

LOOP BARS 6D1, 6D2 AND 6D3 SHALL BE ¾" SMOOTH STEEL BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSI, A TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH BUT A MINIMUM OF 80 KSI, A MINIMUM 14% ELONGATION IN 8 INCHES AND PASSING A 180 DEGREE BEND TEST USING A 3-½" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN ⅛" OF THE PLAN DIMENSION.

CONSTRUCT LIFTING SLOTS AS SPECIFIED ON THE PLANS TO FACILITATE THE DRAINAGE OF WATER AFTER INSTALLATION.

PLACE BARRIER ON A PAVED SURFACE. REMOVE ALL LOOSE DIRT AND SAND FROM THE ROADWAY SURFACE PRIOR TO PLACEMENT OF THE BARRIER.

INSTALL MECHANICAL OR EPOXY ANCHORS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE MANUFACTURER'S INFORMATION TO PROJECT ENGINEER.

(1) MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
- a. TYPE: WICBTP
- b. MANUFACTURER
- c. DATE MANUFACTURED (MONTH AND YEAR)

(2) 1" CHAMFER TO PREVENT SPALLING.

(3) A ⅜" HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..

(4) "V" NOTCH IS OPTIONAL.

(5) THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).

(6) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

(7) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MAY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURES INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED TO THE LEFT OF TRAFFIC AND WHITE REFLECTORS WHEN BARRIER IS LOCATED TO THE RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART. PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO THE SIDE MOUNTED DELINEATORS ON ALL BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAN 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.

(8) SEE SHEET D FOR ANCHORING CRITERIA.

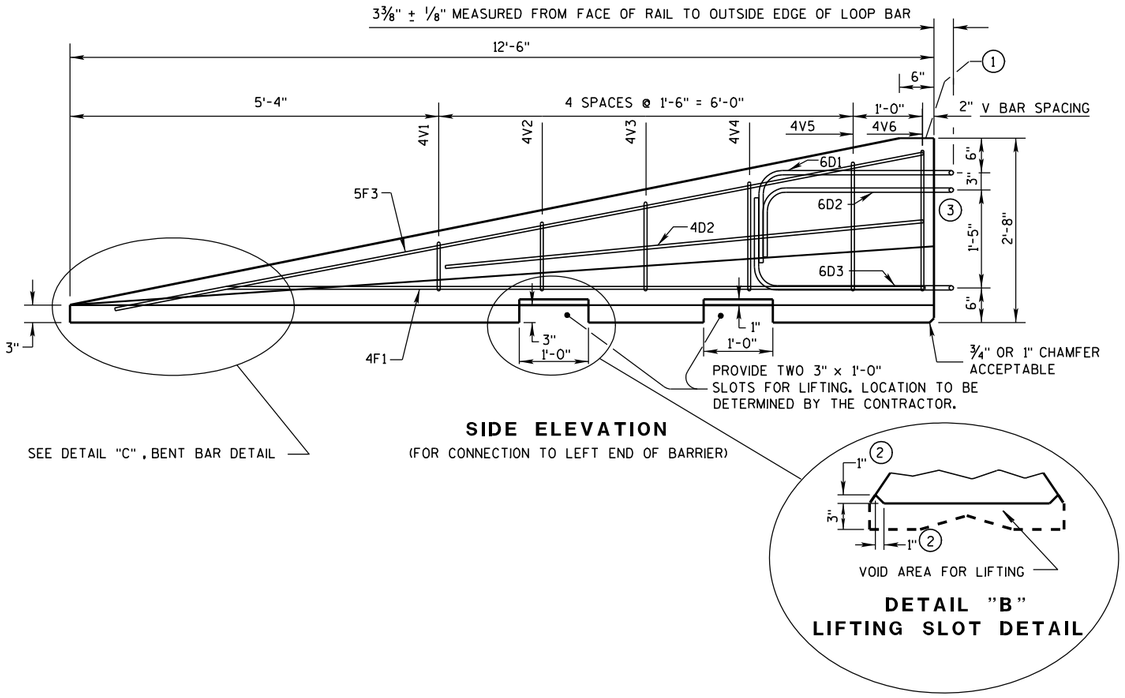
(9) 1" CHAMFER OPTIONAL.

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO.....

6

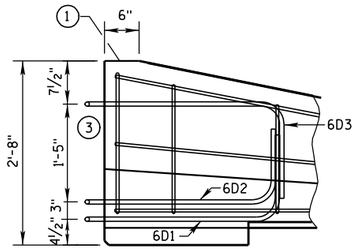
S.D.D. 14 B 7-13a



SIDE ELEVATION

(FOR CONNECTION TO LEFT END OF BARRIER)

DETAIL "B"
LIFTING SLOT DETAIL

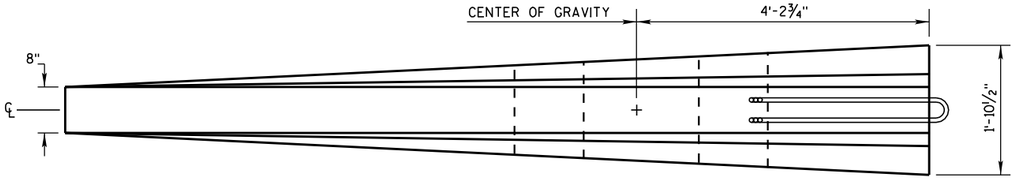


SIDE ELEVATION

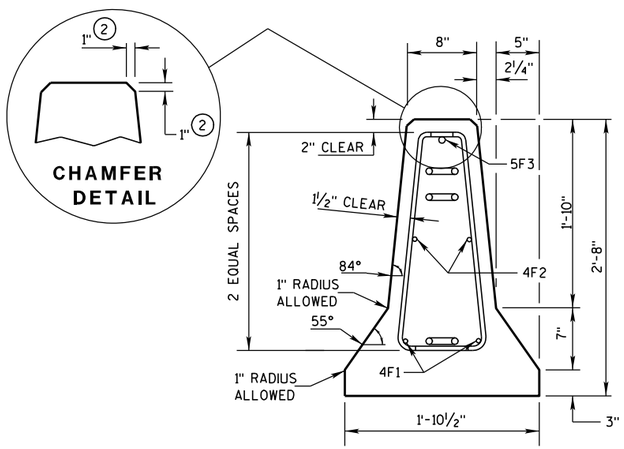
LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

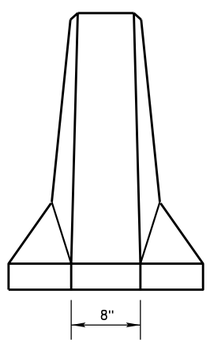
1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



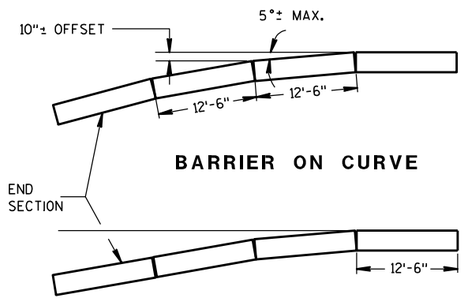
PLAN VIEW



END SECTION



FRONT ELEVATION



BARRIER ON CURVE

FLARE AT BARRIER END

POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

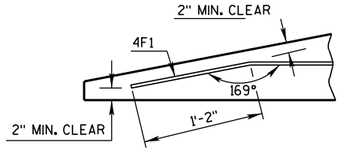
6

S.D.D. 14 B 7-13b

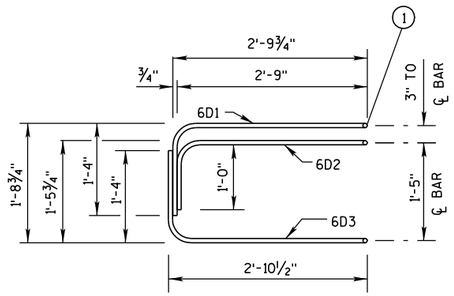
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

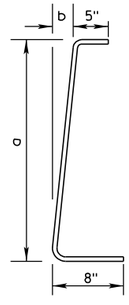
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



DETAIL "C"
BENT BAR DETAIL



ELEVATION
LOOP BAR ASSEMBLY



BAR	a	b
V1	10"	1"
V2	1'-1"	1¼"
V3	1'-5"	1⅝"
V4	1'-8"	1⅞"
V5	2'-0½"	2⅜"
V6	2'-3"	2¾"

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

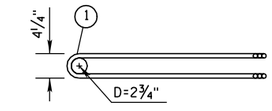
GENERAL NOTES

(1) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

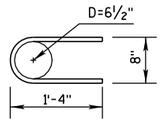
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

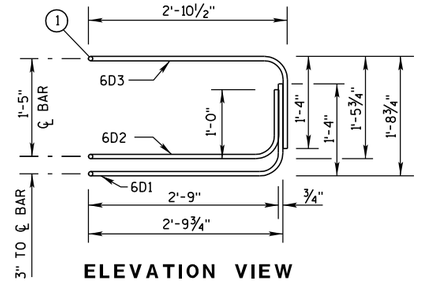
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



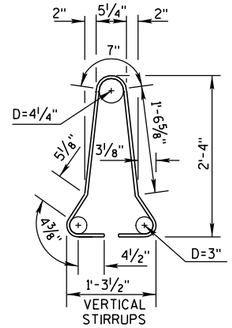
PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



6A2



ELEVATION VIEW



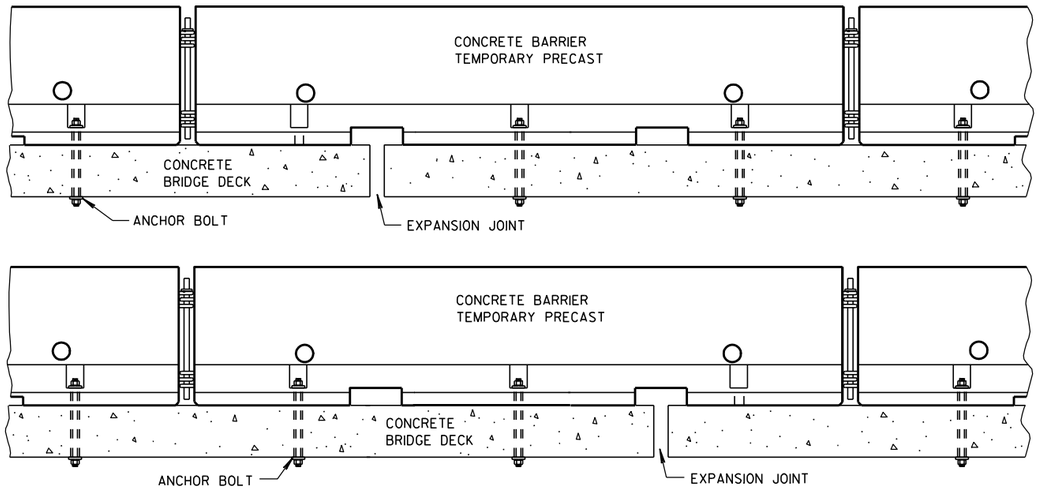
4A1

BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

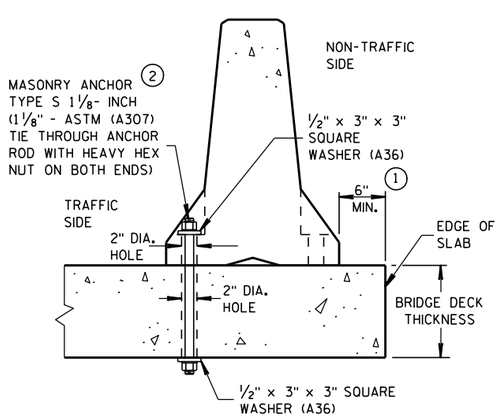
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 7-13c



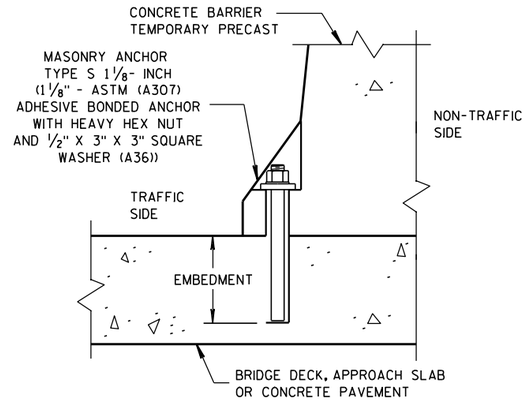
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.)



THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)



REMOVABLE ADHESIVE BONDED ANCHOR INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

2

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

GENERAL NOTES

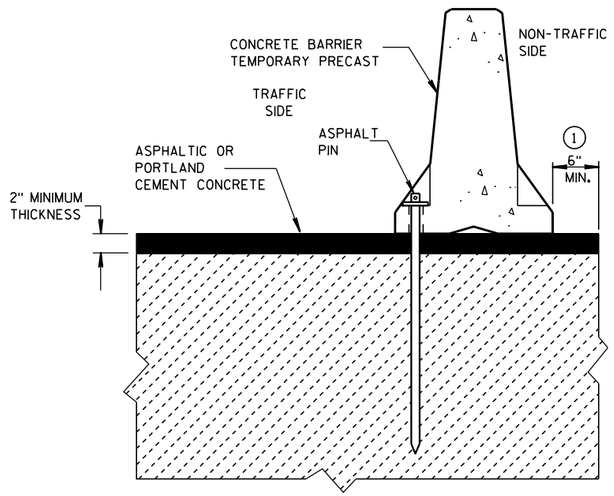
1. CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
   THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 45 MPH OR GREATER, OR

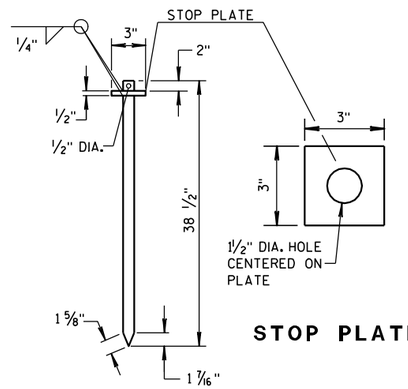
   THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT. IS LESS THAN 2 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 40 MPH OR LESS.

2. ANCHORING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST.

   WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED (EPOXY) ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1⅛-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE CAPACITY OF THE ANCHOR BOLT AND PROVIDE DOCUMENTATION TO CONFIRM THIS.

   UPON REMOVAL OR RELOCATION OF THE BARRIER UNITS, REMOVE ALLANCHOR BOLTS AND COMPLETELY FILL IN THE REMAINING HOLES IN CONCRETE BRIDGE DECKS, CONCRETE APPROACH SLABS AND CONCRETE PAVEMENTS THAT ARE TO REMAIN, WITH A NON-SHRINK COMMERICAL GROUT OR EPOXY MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST.



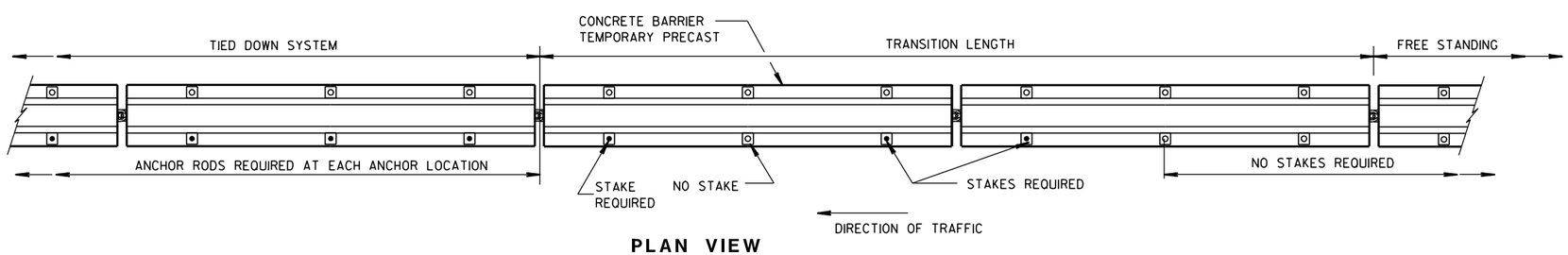


STOP PLATE

ASPHALT PIN
(ASTM A36 STEEL)

STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



PLAN VIEW

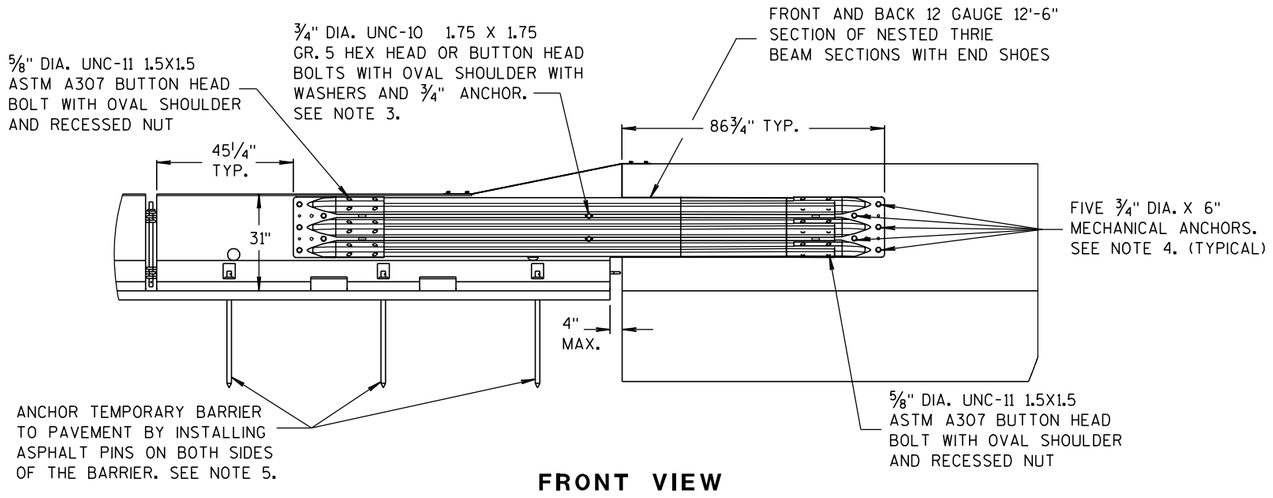
FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

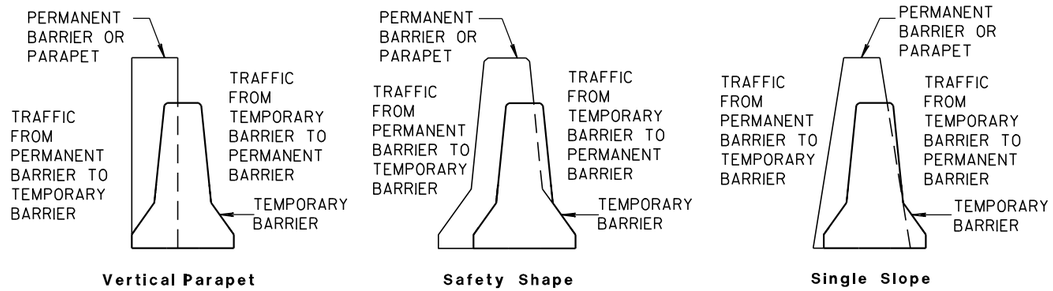
6
S.D.D. 14 B 7-13d



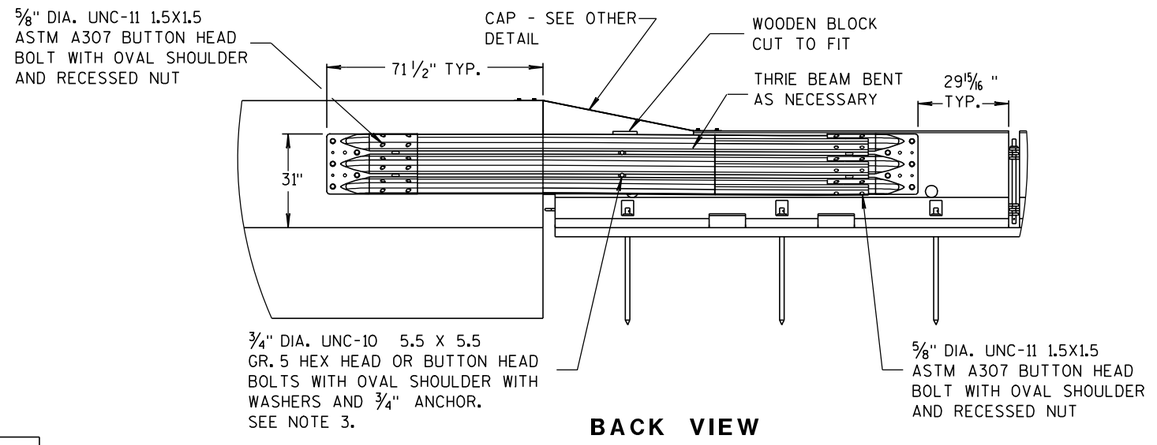
FRONT VIEW

NOTES

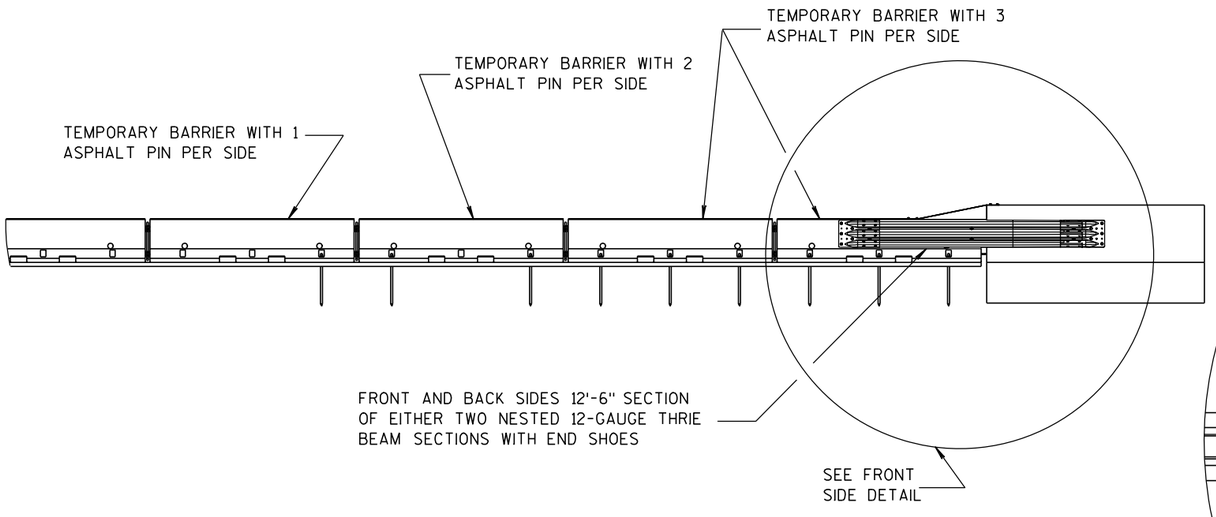
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.
4. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS.
5. MAY BE USED ON CONCRETE OR ASPHALT PAVEMENTS. ASPHALT OPTION SHOWN. FOR CONCRETE OPTION SEE OTHER DETAILS.
6. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.



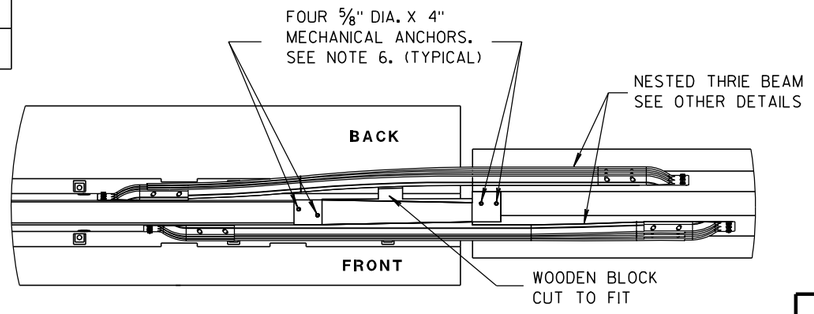
TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM



BACK VIEW



FRONT VIEW



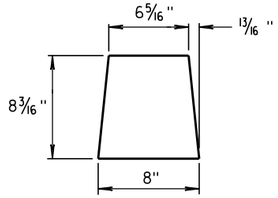
PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

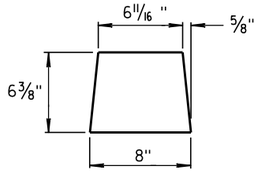
CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 7-13e



GUSSET 1



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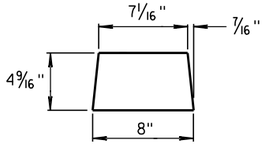

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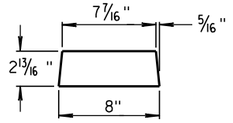
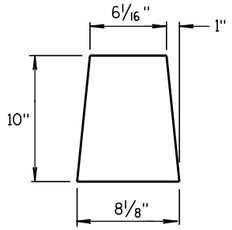
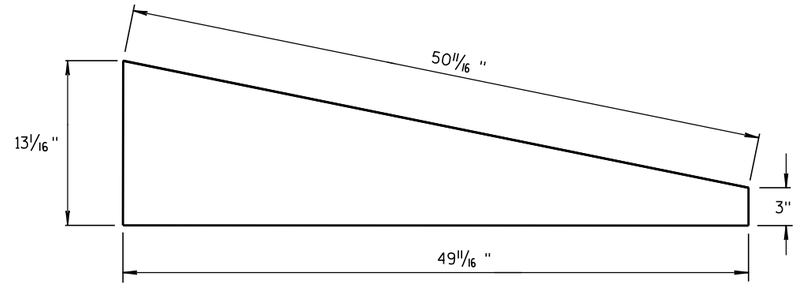


GUSSET 4

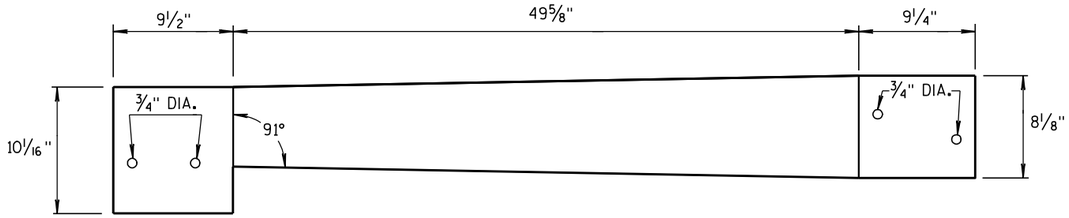
GUSSETS

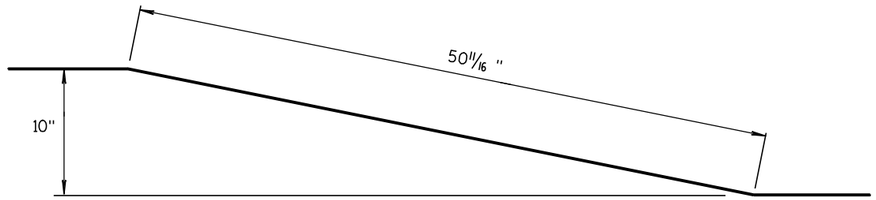


END PLATE

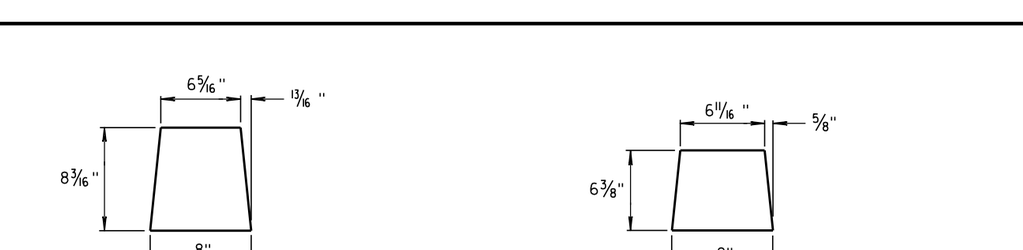


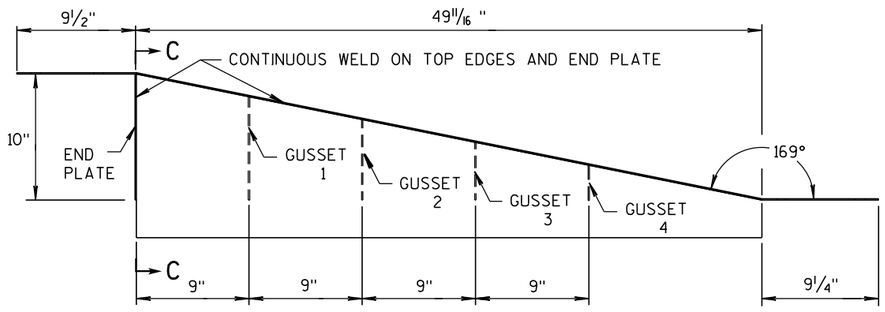
SIDE PLATE

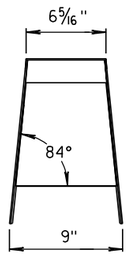




TOP PLATE







SECTION C-C

NOTES

1. FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
2. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE, AND GUSSETS.

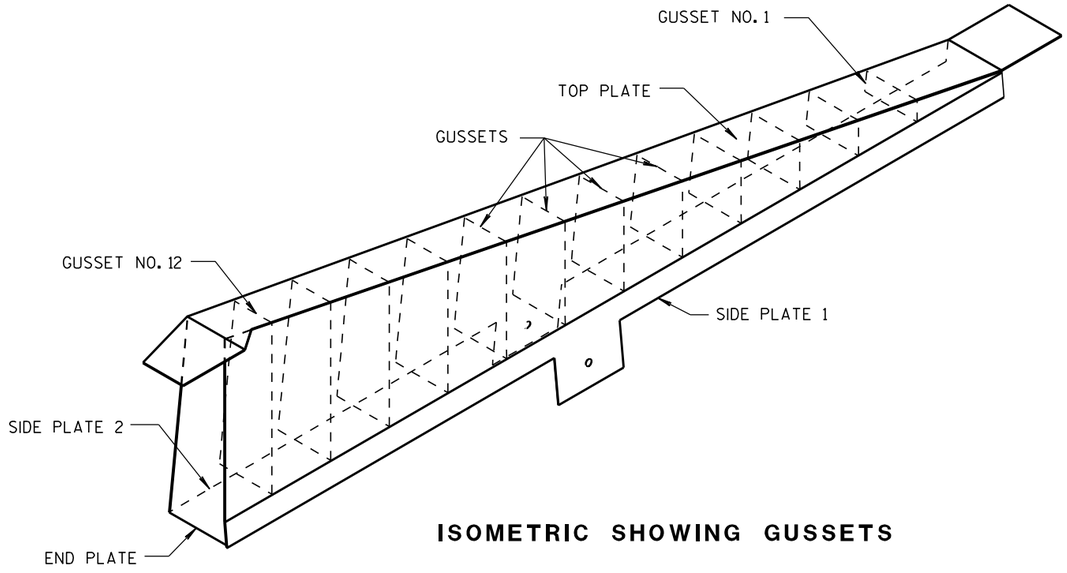
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

SIDE, TOP AND END PLATES FOR CAP FROM TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

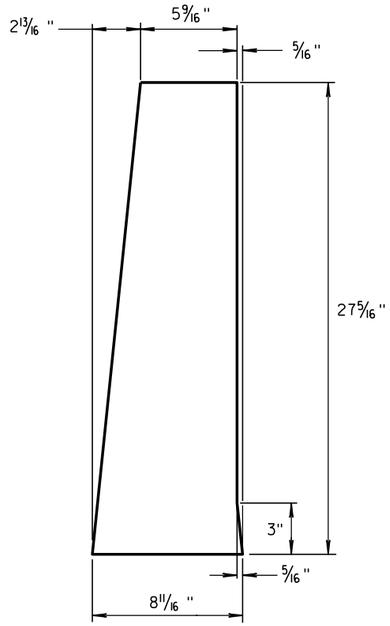
SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO.....T

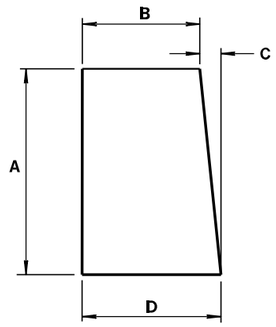


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



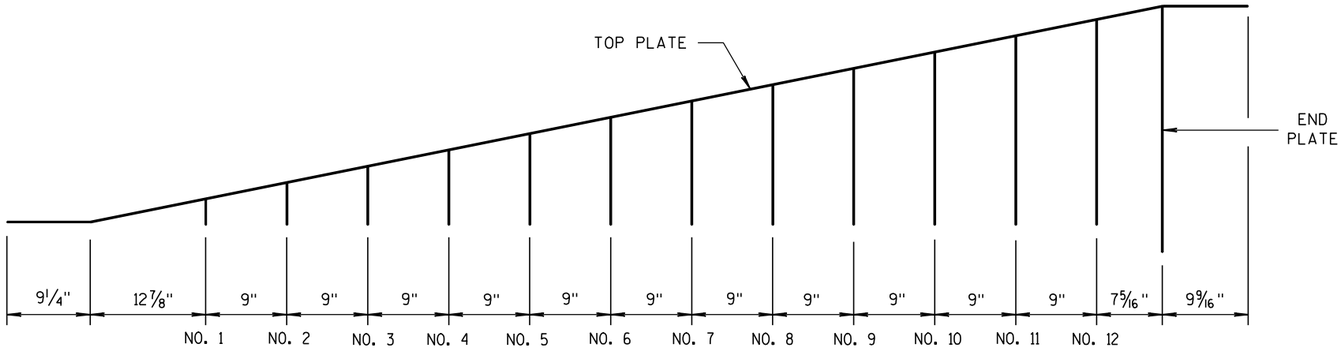
GUSSETS 1 - 12

ALL GUSSETS 1/8" STEEL PLATE

GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
1	2 7/8"	7 3/4"	1/4"	8
2	4 11/16 "	7 9/16 "	1/2"	8
3	6 1/2"	7 3/8"	11/16 "	8 1/16 "
4	8 5/16 "	7 3/16 "	7/8"	8 1/16 "
5	10 1/8"	7"	1 1/16 "	8 1/16 "
6	11 15/16 "	6 13/16 "	1 1/4"	8 1/16 "
7	13 3/4"	6 5/8"	1 7/16 "	8 1/16 "
8	15 9/16 "	6 7/16 "	1 9/16 "	8 1/16 "
9	17 3/8"	6 1/4"	1 13/16 "	8 1/16 "
10	19 3/16 "	6 1/16 "	1 15/16 "	8 1/16 "
11	21"	5 7/8"	2 3/16 "	8 1/16 "
12	22 13/16 "	5 11/16 "	2 5/16 "	8 1/16 "

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 STEEL AND GALVANIZED.

GUSSETS AND END PLATE ARE STITCH WELDED ON 3 SIDES. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE AND GUSSETS.



GUSSET LOCATION

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

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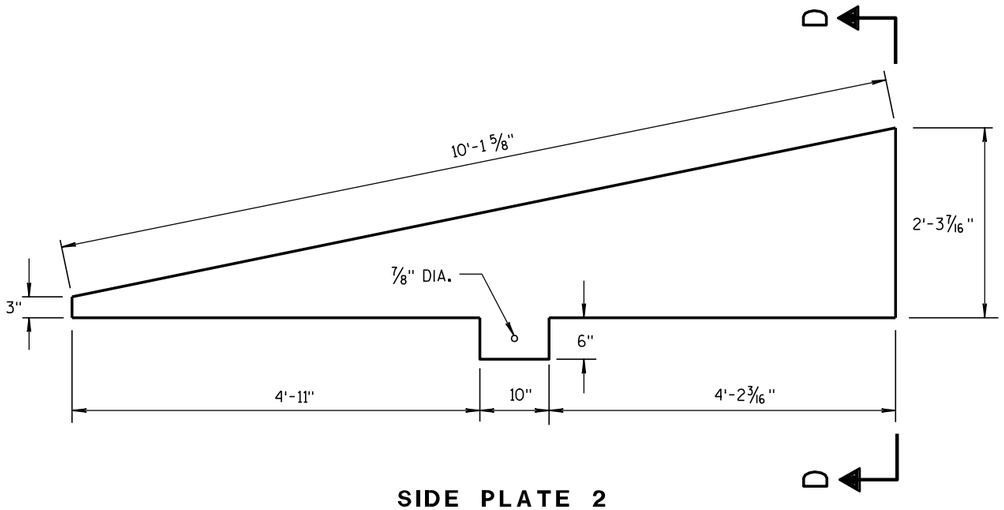
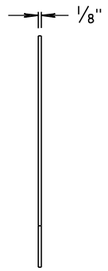
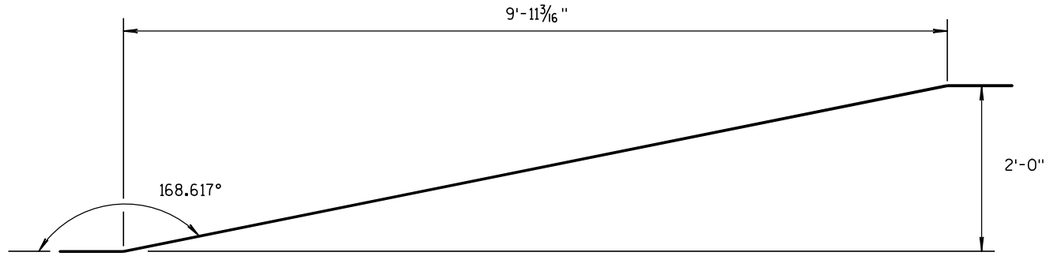
S.D.D. 14 B 7-13g



SIDE PLATE 2

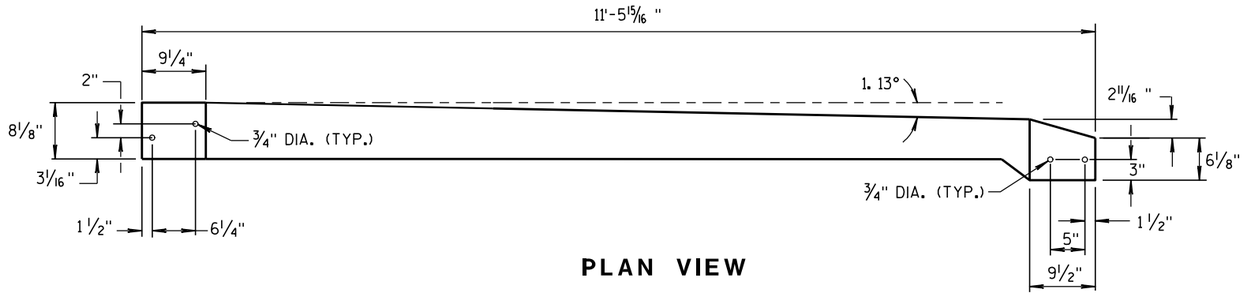


END VIEW



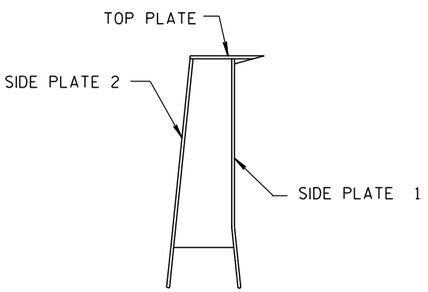
SIDE VIEW

TOP PLATE

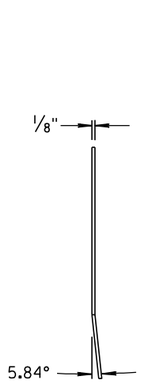


PLAN VIEW

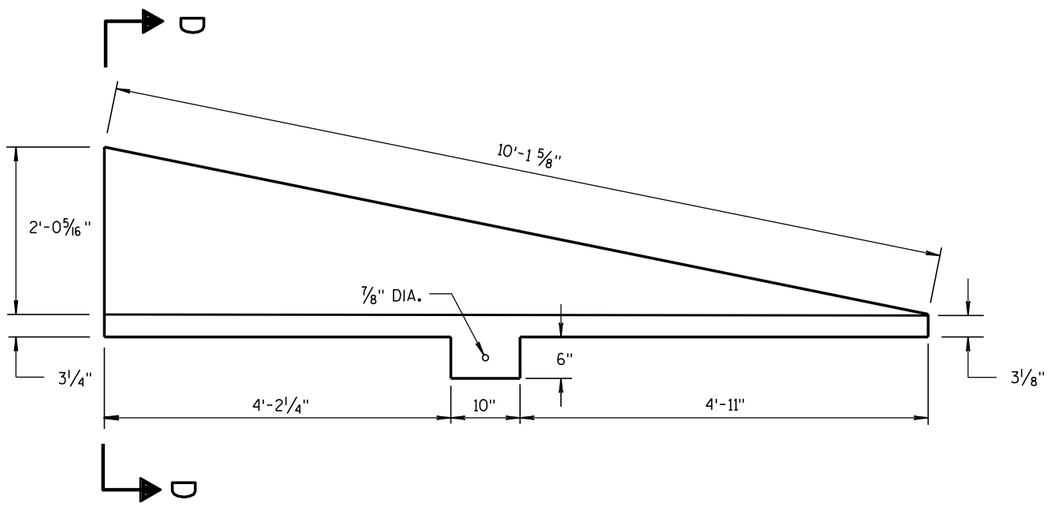
TOP PLATE



SECTION D-D



END VIEW



SIDE PLATE 1

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED 8/31/2012 DATE /S/ Jerry H. ROADWAY STANDARDS ENGINEER 114 ENT
FHWA

6

S.D.D. 14 B 7-13h

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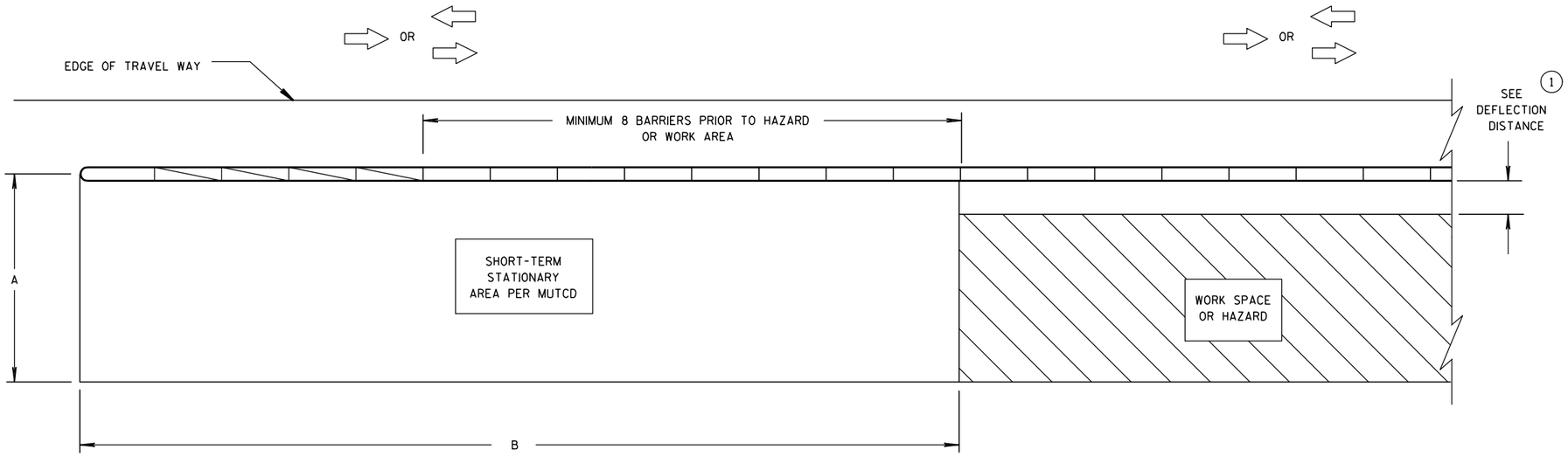
S.D.D. 14 B 7-13h



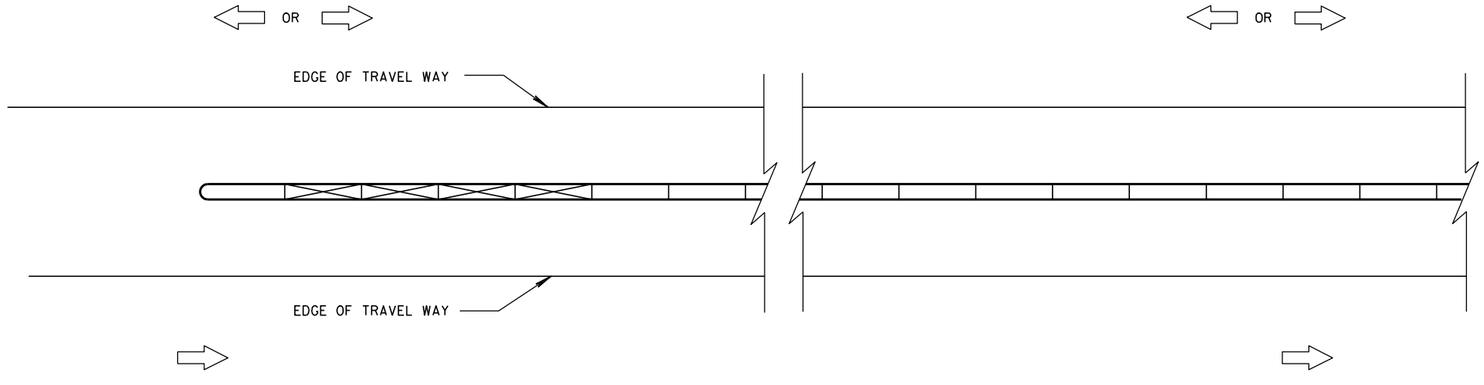
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

DIMENSION A TABLE (2)

FACILITY	POSTED SPEED MPH	DIMENSION A	
		MIN. FT	MAX. FT
FREEWAY/EXPRESSWAY	ALL	15	20
NON-FREEWAY/EXPRESSWAY	GREATER THAN OR EQUAL TO 45	10	15
NON-FREEWAY/EXPRESSWAY	LESS THAN 45	8	10
AADT LESS THAN 1,500	ALL	8	10

DIMENSION B TABLE (2)

POSTED SPEEDS MPH	DIMENSION B FT
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON BOTH SIDES OF BARRIER

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

DETAILS PROVIDE A GENERAL LAYOUT OF TEMPORARY CONCRETE BARRIER, CRASH CUSHIONS, SAND BARREL ARRAYS AND TIE DOWN TRANSITIONS. DETAILS PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

ADDITIONAL TEMPORARY BARRIER MAY BE REQUIRED TO PROTECT TRAVELING PUBLIC FROM HAZARDS, CONTRACTOR'S OPERATIONS OR TO CONTROL TRAFFIC.

TEMPORARY BARRIER MAY BE REQUIRED TO BE ANCHORED TO PAVEMENT OR BRIDGE DECK.

FOR DETAILS ON CRASH CUSHION OR SAND BARREL ARRAYS SEE OTHER SECTIONS OF THE PLAN AND MANUFACTURE'S DETAILS.

SLOPES LEADING TO TEMPORARY BARRIER, CRASH CUSHION OR SAND BARREL ARRAY ARE 10:1 OR LESS.

(1) FOR DEFLECTION INFORMATION SEE STANDARD DETAIL DRAWING 14B7.

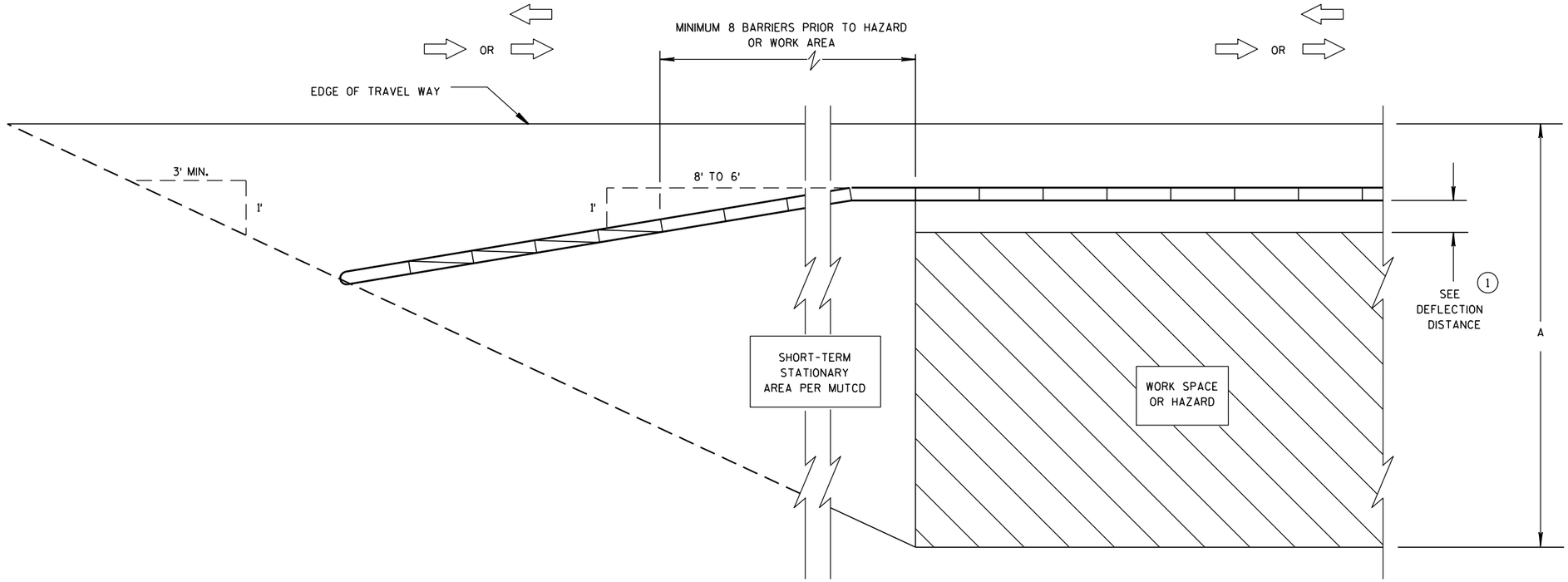
(2) VALUES PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

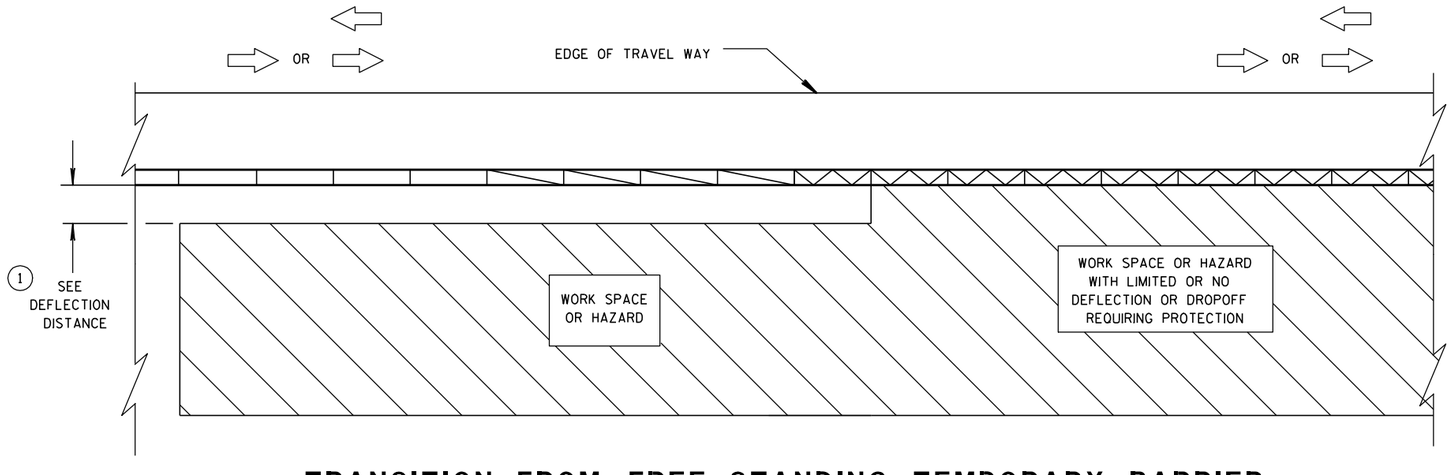
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 8-1a



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE - FLARED INSTALLATION



TRANSITION FROM FREE STANDING TEMPORARY BARRIER TO ANCHORED BARRIER

LEGEND

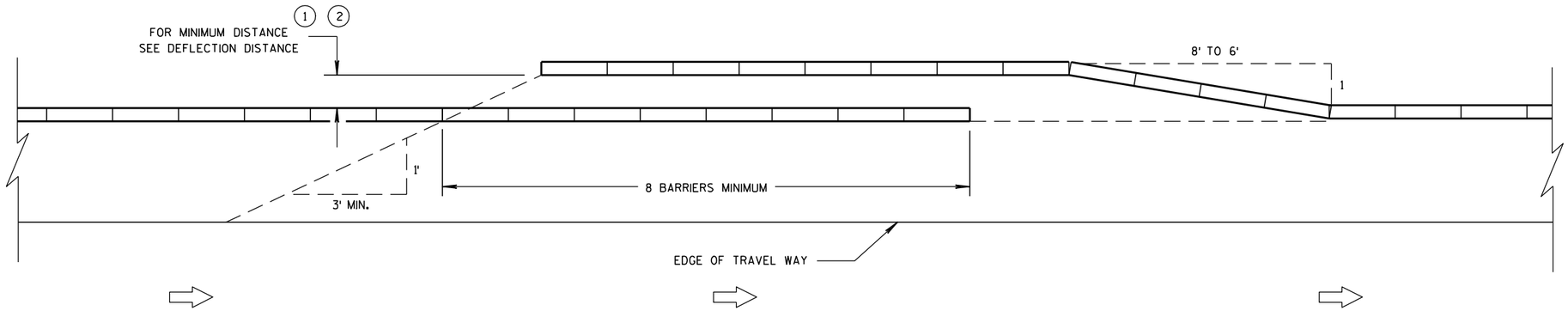
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

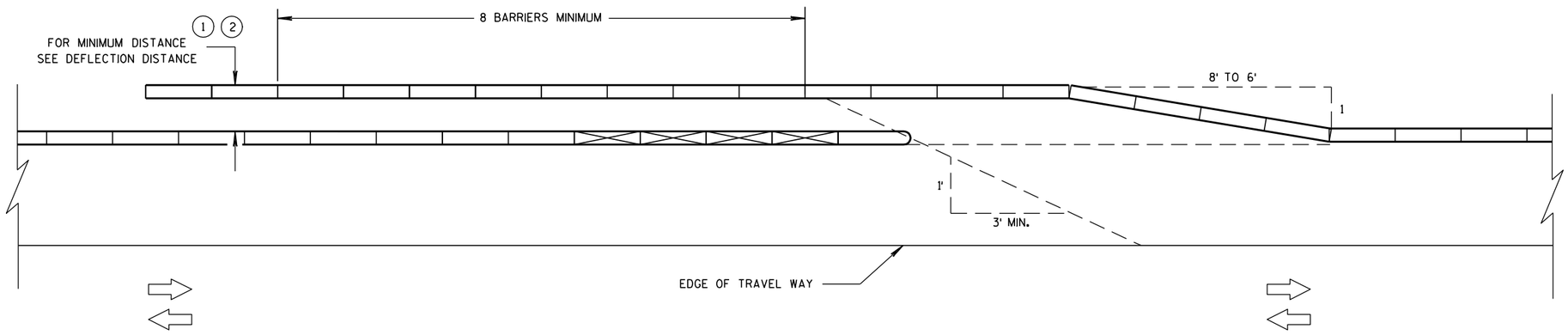
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

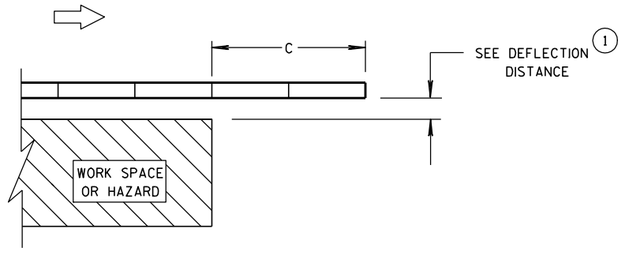
S.D.D. 14 B 8-1b



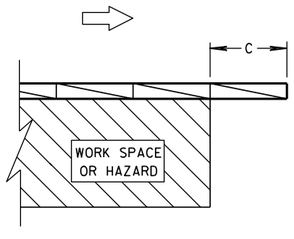
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

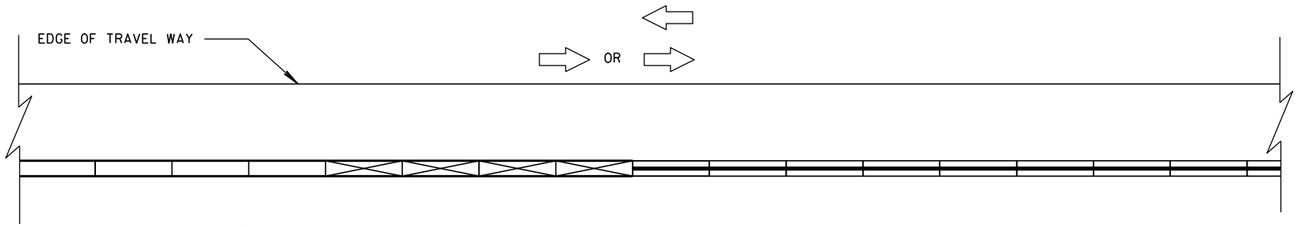
LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

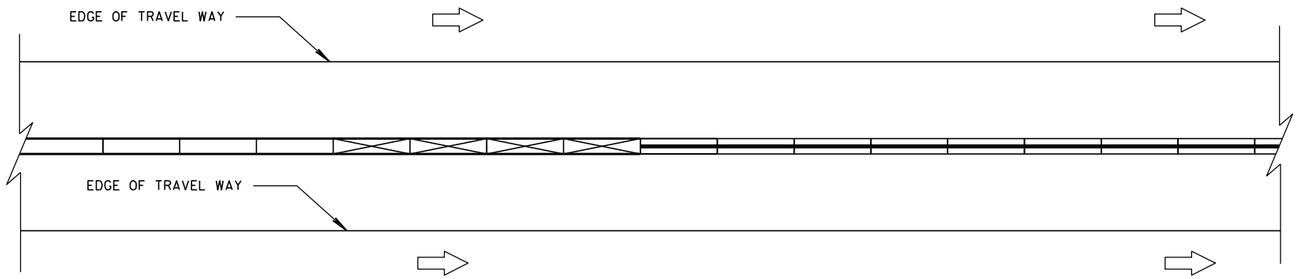
CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 8-1c



CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON ONE SIDE



CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON BOTH SIDES

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR
SAND BARREL ARRAY

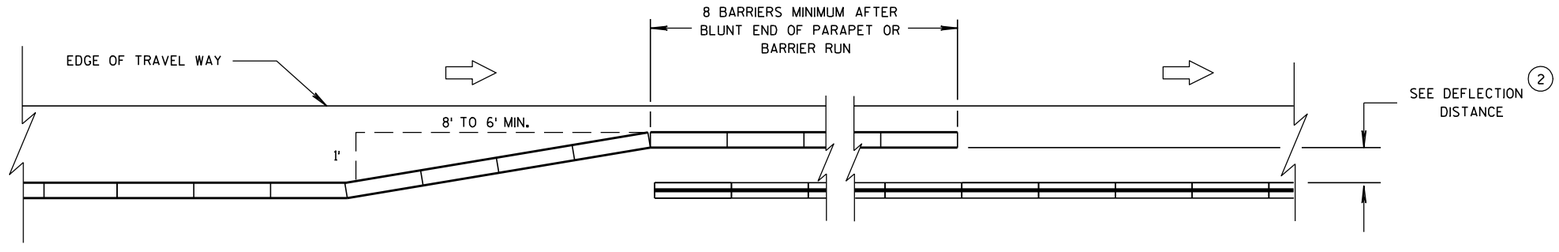
SEE FREE STANDING TRANSITION
TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION
TO TIED-DOWN SYSTEM DETAILS

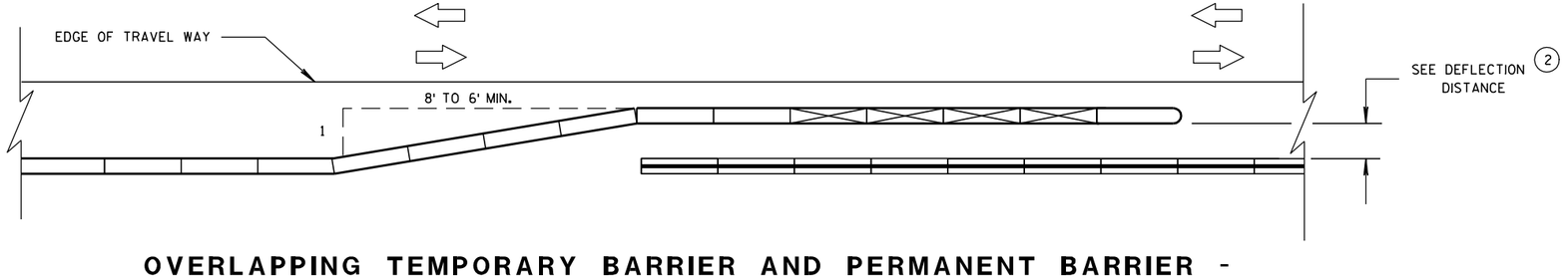
3 PINS PLACED ON
TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER
OR CONCRETE PARAPET

FREE STANDING TEMPORARY
BARRIER



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
ONE WAY TRAFFIC



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
TWO WAY TRAFFIC

CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

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S.D.D. 14 B 8-1d

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

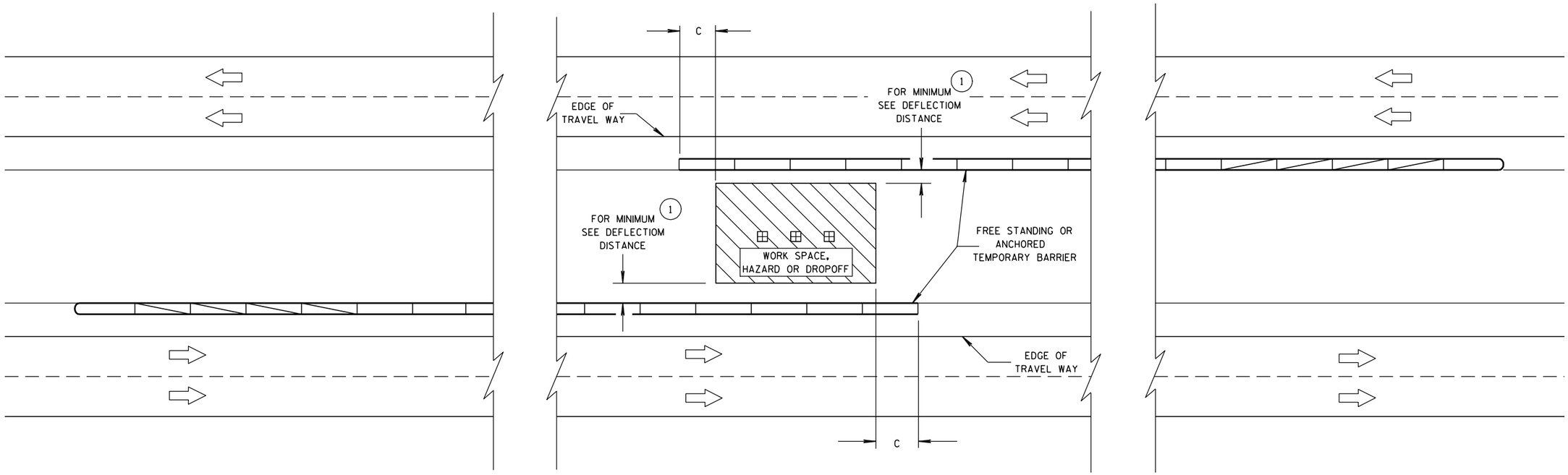
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE (2)

AVAILABLE DEFLECTION DISTANCE	MINIMUM LENGTH OF BARRIER BEYOND HAZARD FT
GREATER THAN 8'	12.5
LESS THAN OR EQUAL TO 8' BUT GREATER THAN 4'	50
LESS THAN OR EQUAL TO 4'	100



CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/31/2012 DATE
/S/ Jerry H. Zogg ROADWAY STANDARDS ENGINNER
FHWA

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S.D.D. 14 B 8-1e

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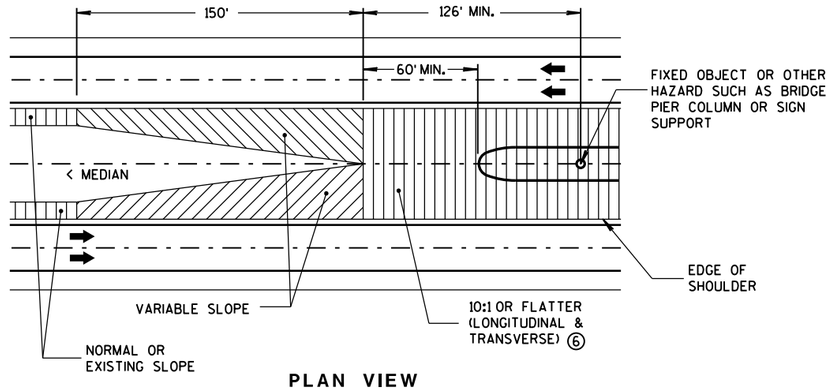
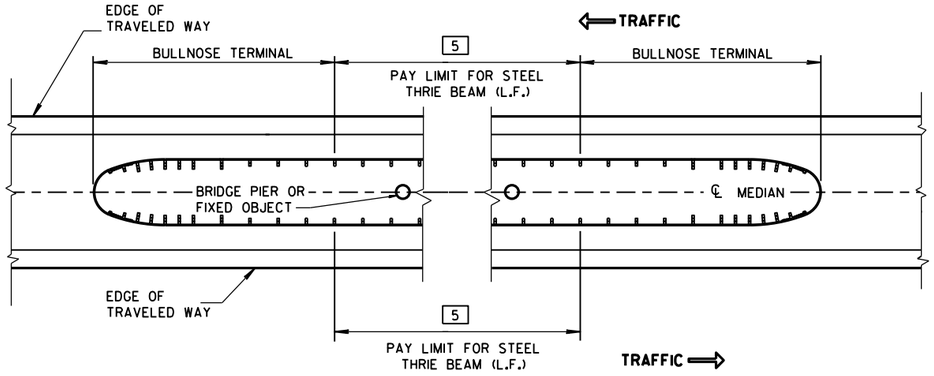
S.D.D. 14 B 8-1e

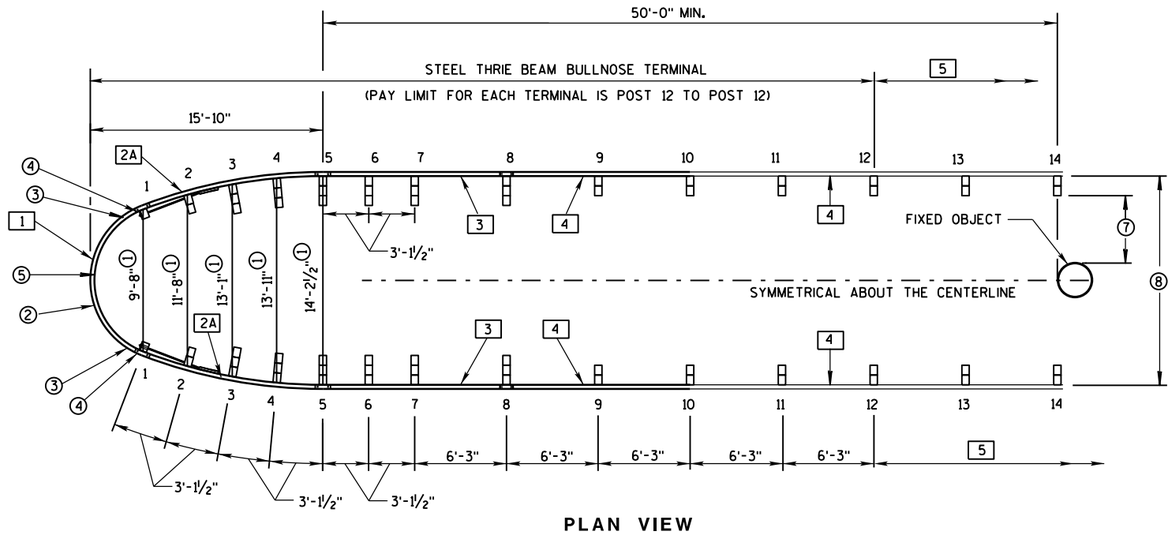


PLAN VIEW

GRADING AT BULLNOSE
(ALL INSTALLATIONS)

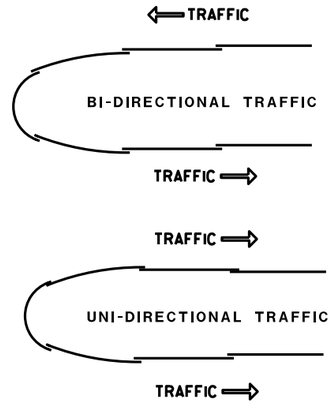


MEDIAN HAZARD PROTECTION PAY LIMITS



PLAN VIEW

TYPICAL BULLNOSE LAYOUT



LAPPING DETAIL
(ALL INSTALLATIONS)

GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.

PUNCHING, DRILLING, CUTTING OR WELDING IS NOT PERMITTED ON ANY GALVANIZED THRIE BEAM ACCESSORY OR TERMINAL ACCESSORY.

OTHER ANCHOR CABLE ASSEMBLIES HAVING 40,000 LBS. MIN. BREAKING STRENGTH MAY BE USED.

FOR POSTS 2 THROUGH 14, IF POST CANNOT BE INSTALLED AT SPECIFIED LOCATION 1 EXTRA STANDARD WOOD BLOCK MAY BE ADDED.

THE USE OF STEEL POSTS ON THE BULLNOSE IS NOT ALLOWED.

BOLTS AND ALL NECESSARY HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.

ALL THRIE BEAM SHALL BE 12-GAUGE.

[1] SLOTTED THRIE BEAM RAIL NO. 1. (POST 1 TO POST 1)

[2A] SLOTTED THRIE BEAM RAIL NO. 2A. (POST 1 TO POST 5)

[3] SLOTTED THRIE BEAM RAIL NO. 3. (POST 5 TO POST 8)

[4] UNBENT STANDARD THRIE-BEAM RAIL NO.4. (POST 8 TO POST 10 & POST 10 TO POST 12)

[5] BEYOND POST 12: CONSTRUCT STEEL THRIE BEAM - USE UNBENT STANDARD THRIE BEAM RAIL NO. 5.

① DIMENSIONS ARE FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO POST OR BLOCK.

② U-BOLT CABLE CLIPS (3 PER CABLE) SPACED OUT ON NOSE, TO HOLD CABLE TO BACKSIDE OF THE RAIL.

③ NOSE CABLE W/SWAGGED END BUTTONS.

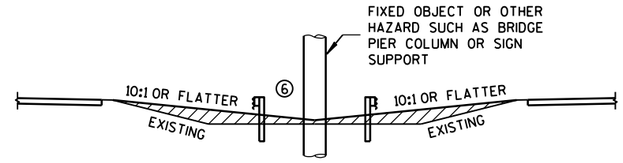
④ NOSE CABLE ANCHOR PLATE (BACKSIDE OF SPLICE).

⑤ THE SLACK IN THE NOSE CABLES SHALL BE EVENLY DISTRIBUTED BETWEEN THE CABLE CLIP FASTENERS AND POST NO. 1 ON EITHER SIDE OF THE NOSE.

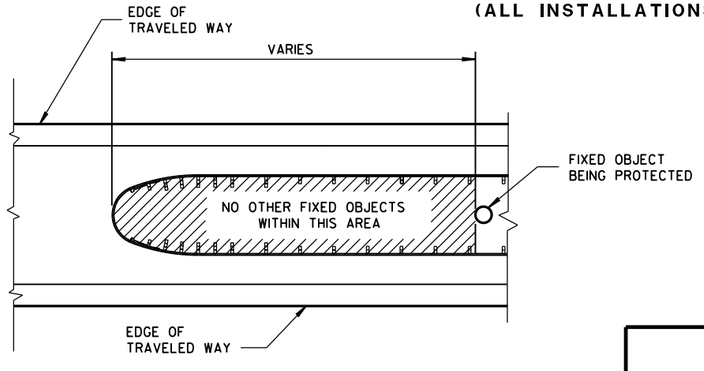
⑥ PROVIDE SUITABLE DRAINAGE WHEN MEDIAN GRADING IMPEDES NORMAL FLOW.

⑦ 2'-6" MINIMUM LATERAL DISTANCE BETWEEN BACK OF POST AND FACE OF FIXED OBJECT.

⑧ MAXIMUM WIDTH OF SYSTEM IS 14'-2½" MEASURED FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO A POST OR BLOCK.



MEDIAN GRADING SECTION
(ALL INSTALLATIONS)



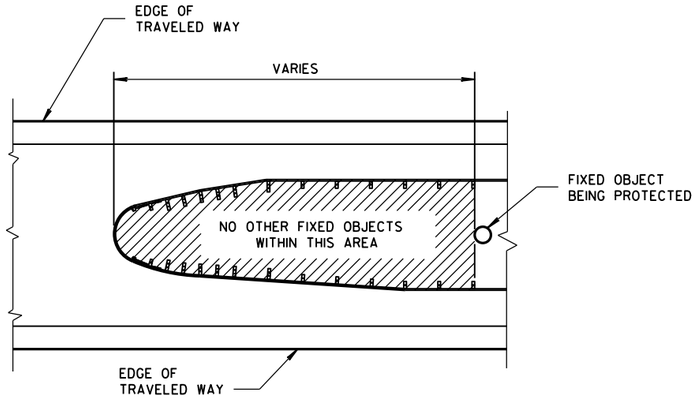
HAZARD FREE AREA INSIDE BULLNOSE

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 26-2a



HAZARD FREE
AREA INSIDE BULLNOSE

GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.

FOR POSTS 2 THROUGH 14, IF POST CANNOT BE INSTALLED AT SPECIFIED LOCATION 1 EXTRA STANDARD WOOD BLOCK MAY BE ADDED.

[1] SLOTTED THRIE BEAM RAIL NO. 1. (POST 1 TO POST 1)

[2A] SLOTTED THRIE BEAM RAIL NO. 2A, (POST 1 TO POST 5)

[2B] SLOTTED THRIE BEAM RAIL NO. 2B, (POST 1 TO POST 5)

[3] SLOTTED THRIE BEAM RAIL NO. 3. (POST 5 TO POST 8)

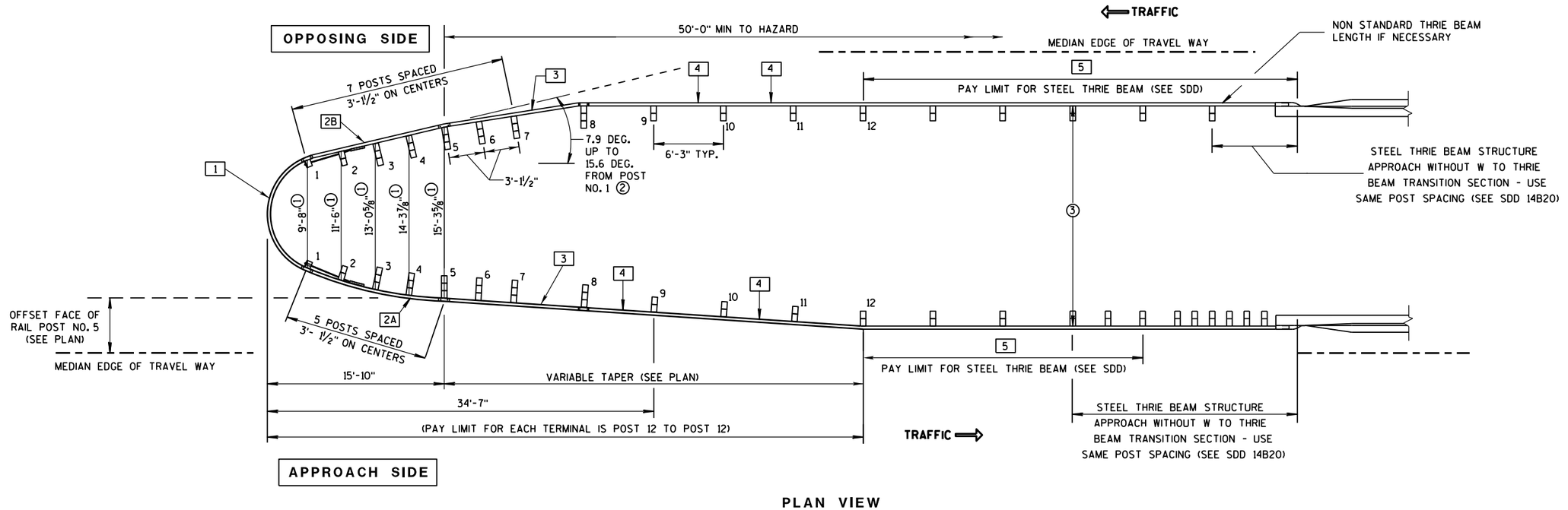
[4] UNBENT STANDARD THRIE-BEAM RAIL NO. 4, (POST 8 TO POST 10 & POST 10 TO POST 12)

[5] BEYOND POST 12: CONSTRUCT STEEL THRIE BEAM - USE UNBENT STANDARD THRIE BEAM RAIL NO. 5.

① DIMENSIONS ARE FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO POST.

② TAPER BEGINNING AT POST NO. 1 MUST CONTINUE TO POST NO. 5. PAST POST NO. 5 TAPER MAY END OR BE EXTENDED UP TO 15.6 DEGREES TO FIT VARIABLE MEDIAN WIDTHS. (SEE PLAN)

③ FOR MEDIANS WIDER THAN 14'-2½" MEASURED FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO A POST OR BLOCK.



PLAN VIEW

WIDENED BULLNOSE DESIGN

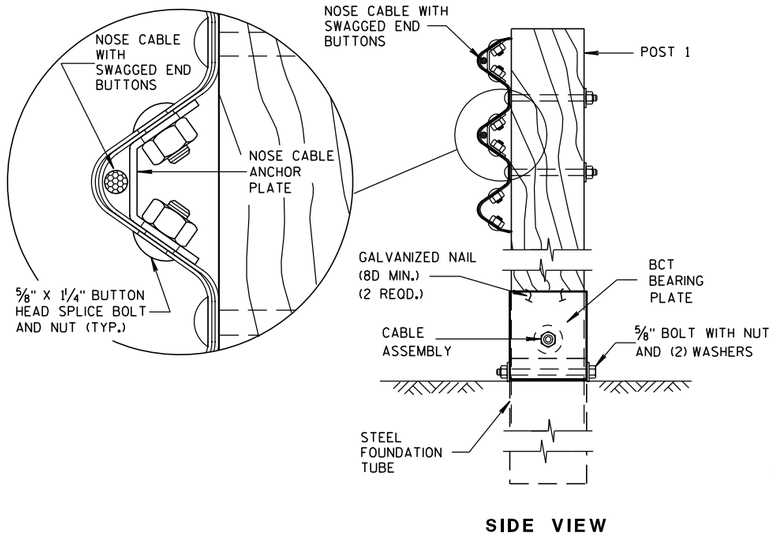
(INSTALLATION AT TWIN BRIDGES WITH BI-DIRECTIONAL TRAFFIC SHOWN)

STEEL THRIE BEAM
BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

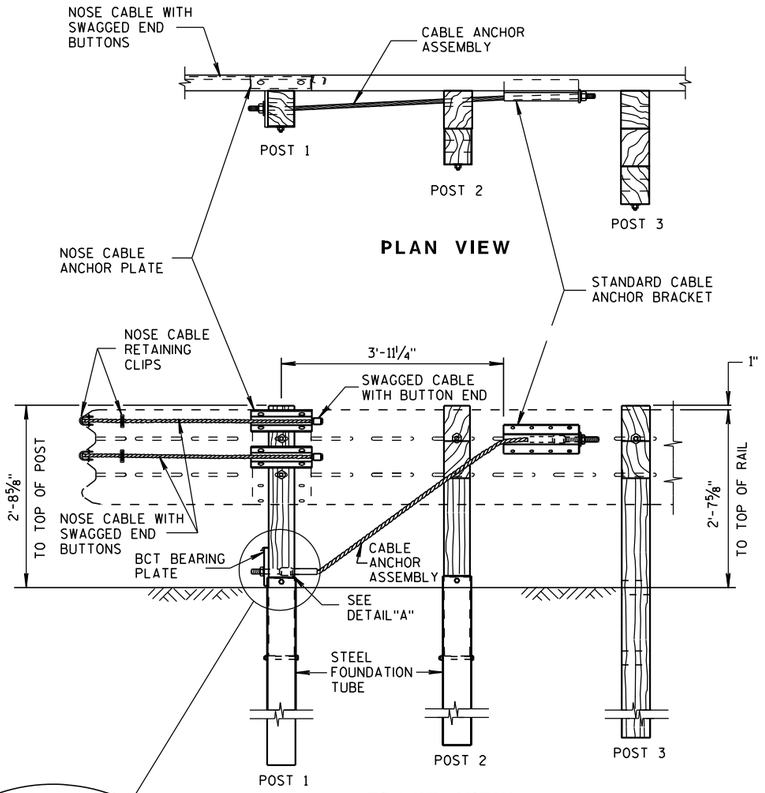
6

S.D.D. 14 B 26-2b



SIDE VIEW

NOSE CABLE ASSEMBLY AT POST NO. 1



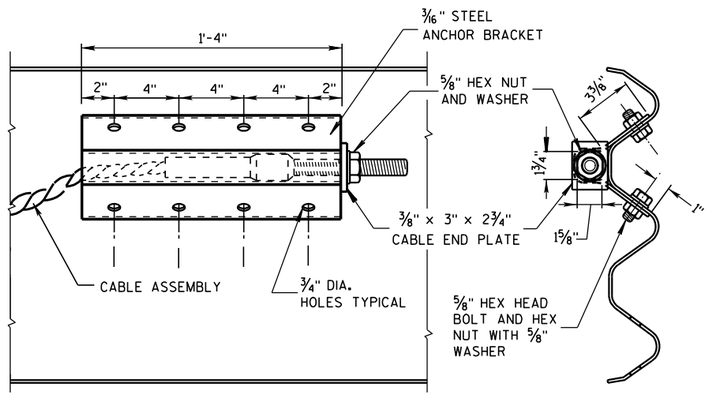
PLAN VIEW

FRONT VIEW

NOSE CABLE ANCHOR AND STANDARD BRACKET ASSEMBLY

GENERAL NOTES

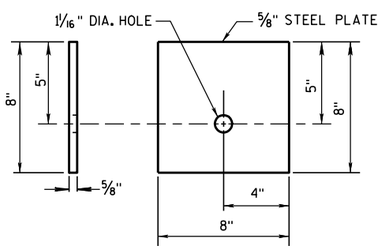
SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.



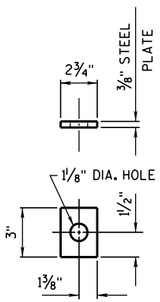
FRONT VIEW

END VIEW

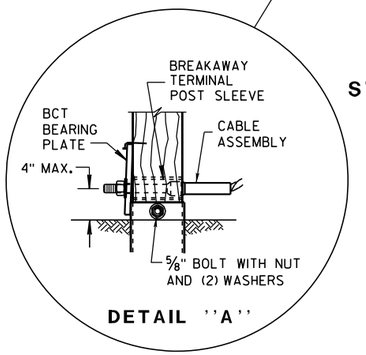
DETAILS OF CABLE ANCHOR BRACKET



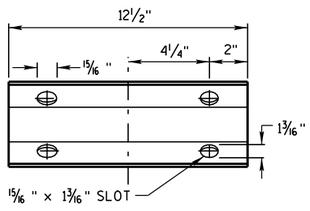
BCT BEARING PLATE



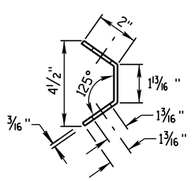
CABLE END PLATE



DETAIL ''A''



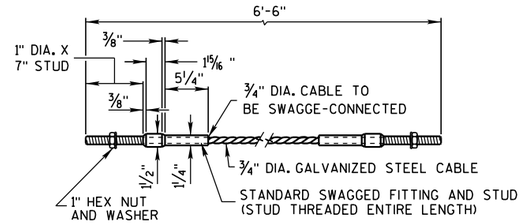
ELEVATION VIEW



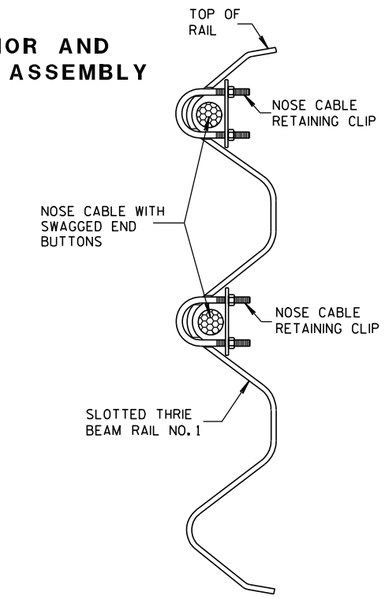
END VIEW

NOSE CABLE ANCHOR PLATE

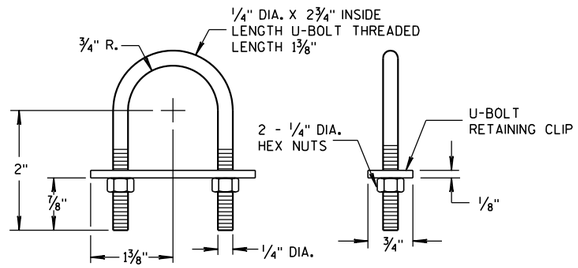
NOTE: 12 1/2" x 5 13/16" x 3/16" STEEL PLATE (A306)



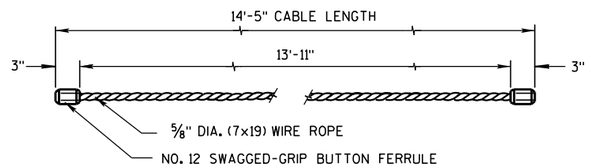
DETAILS OF CABLE ANCHOR ASSEMBLY



PLACEMENT OF NOSE CABLE RETAINING CLIP



NOSE CABLE RETAINING CLIP



NOSE CABLE WITH SWAGGED END BUTTONS

TO PULL OFF SWAGGED GRIP BUTTON FERRULE FROM WIRE ROPE REQUIRES A FORCE EQUAL TO 98% OF THE WIRE ROPE'S BREAKING STRENGHT.

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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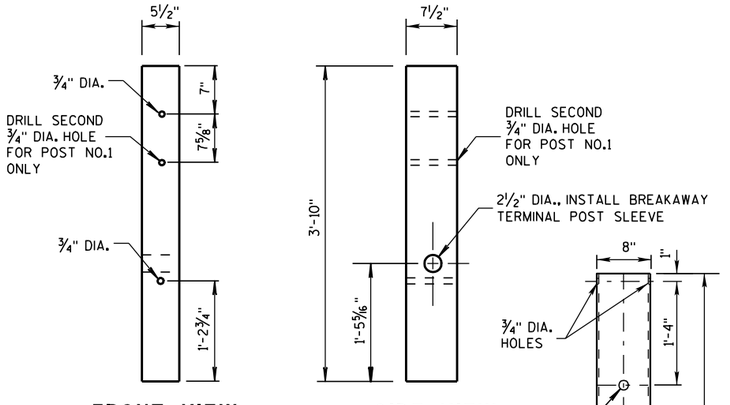
S.D.D. 14 B 26-2c

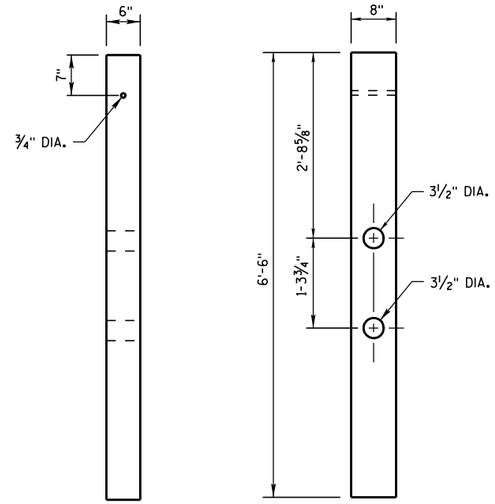


FRONT VIEW SIDE VIEW

THRIE-BEAM BCT POSTS

BREAKAWAY TERMINAL POST SLEEVE

STEEL FOUNDATION TUBE

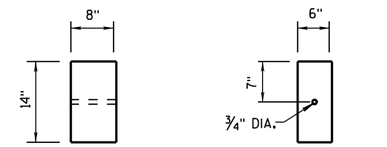


FRONT VIEW SIDE VIEW

THRIE-BEAM CRT WOOD POSTS

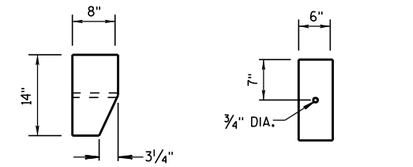
GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.



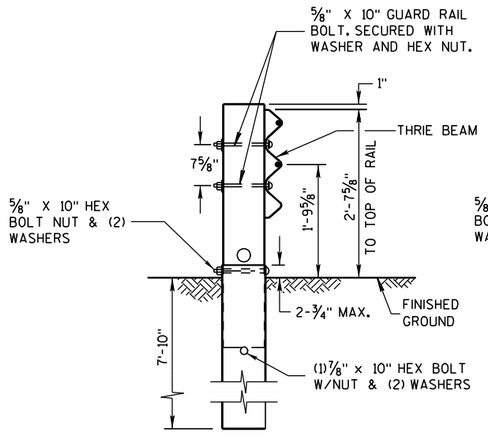
SIDE VIEW FRONT VIEW

STANDARD WOOD BLOCK



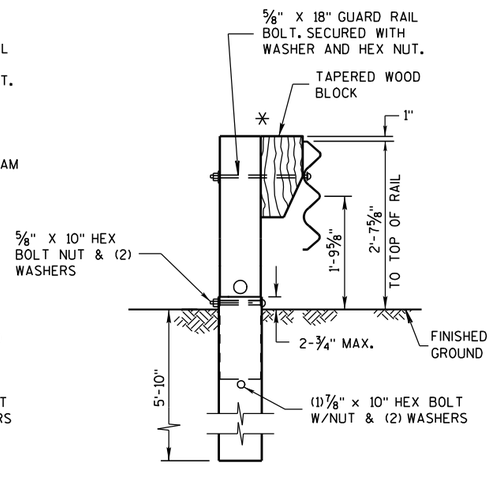
SIDE VIEW FRONT VIEW

TAPERED WOOD BLOCK



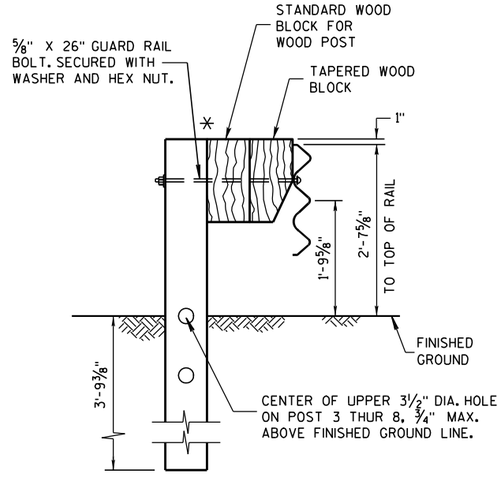
THRIE-BEAM BCT POST
(WITH 8'-0" FOUNDATION TUBE)

POST NO. 1



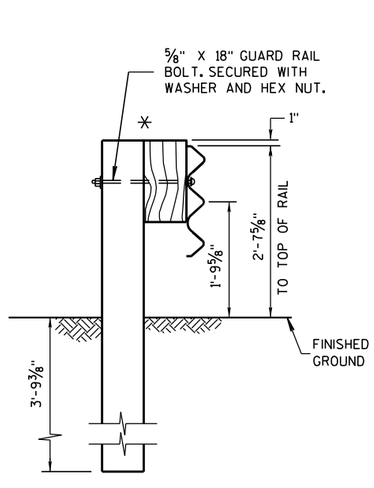
THRIE-BEAM BCT POST
(WITH 6'-0" FOUNDATION TUBE AND 1'-2" TAPERED BLOCK)

POST NO. 2



THRIE-BEAM CRT POST
(6'-6" LONG POST WITH 1'-2" BLOCK AND 1'-2" TAPERED BLOCK)

POST NO. 3,4,5,6,7, & 8



THRIE-BEAM POST
(6'-6" LONG POST WITH 1'-2" BLOCK)

POST NO. 9,10,11,& 12
(ALSO USE FOR STEEL THRIE BEAM BEYOND POST 12)

✳ IF NEEDED DUE TO AN UNDERGROUND OBSTACLE ADD 1 ADDITIONAL STANDARD BLOCKOUT TO POST.

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

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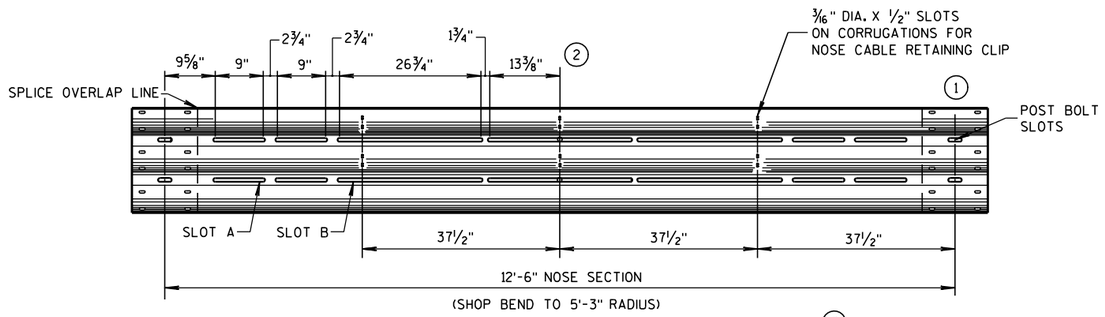
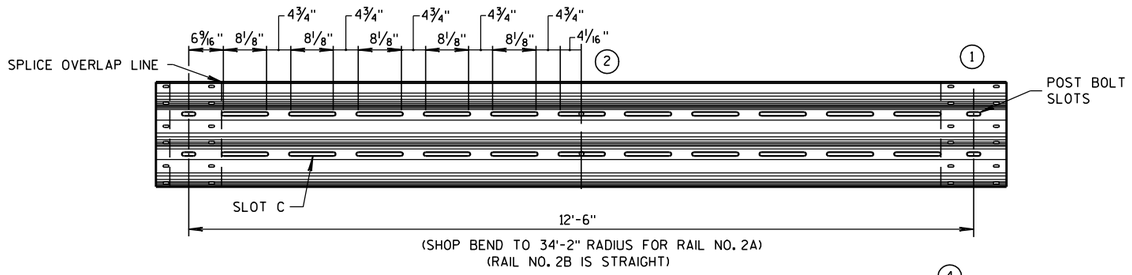
S.D.D. 14 B 26-2d

6

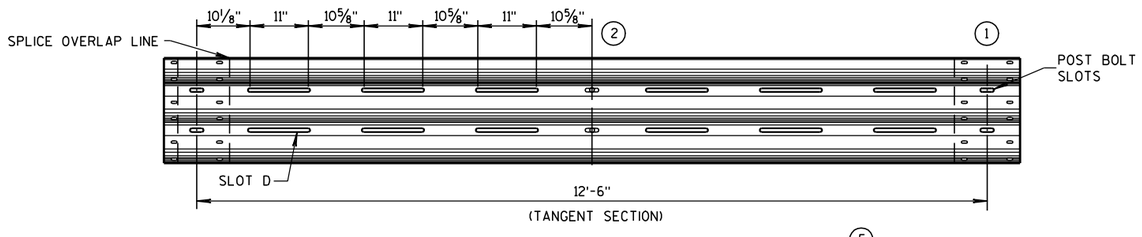
S.D.D. 14 B 26-2d



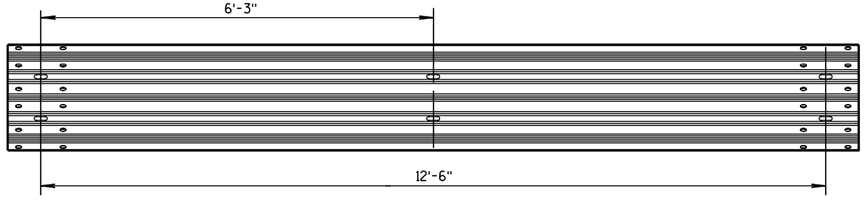
SLOTTED THRIE BEAM RAIL NO. 1 (3)



SLOTTED THRIE BEAM RAILS NO. 2A AND NO. 2B (4)



SLOTTED THRIE BEAM RAIL NO. 3 (5)



UNBENT STANDARD THRIE BEAM RAIL NO. 4 AND NO. 5

GENERAL NOTES

SEE STANADRD DETAIL DRAWINGS 14 B 26a-e.

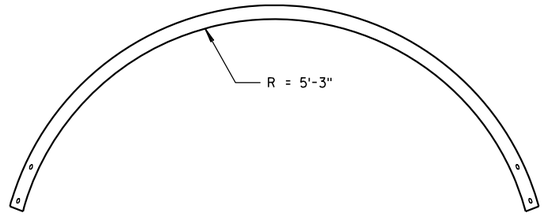
(1) SLOTTED THRIE BEAM RAIL DIMENSIONS SHOWN ARE BEFORE BENDING TO THE RADIUS SHOWN.

(2) SLOT SIZE AND SPACING SYMMETRIC.

(3) SLOTTED THRIE BEAM RAIL NO. 1, 12'-6", SHOP BEND TO R=5'-3".

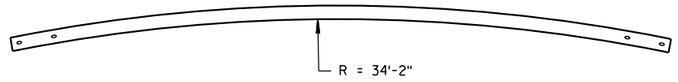
(4) SLOTTED THRIE BEAM RAIL NO. 2A, 12'-6", SHOP BEND TO R=34'-2".
SLOTTED THRIE BEAM RAIL NO. 2B, 12'-6", RAIL IS STRAIGHT.

(5) SLOTTED THRIE BEAM RAIL NO. 3, 12'-6", TANGENT.



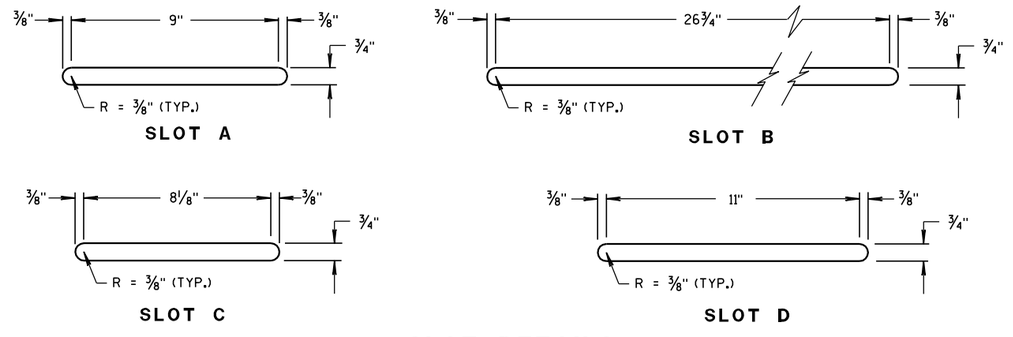
PLAN VIEW

SLOTTED THRIE BEAM RAIL NO. 1



PLAN VIEW

SLOTTED THRIE BEAM RAIL NO. 2A



SLOT DETAILS

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9-16-2010
DATE

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

FHWA

6

S.D.D. 14 B 26-2e

6

S.D.D. 14 B 26-2e

GENERAL NOTES

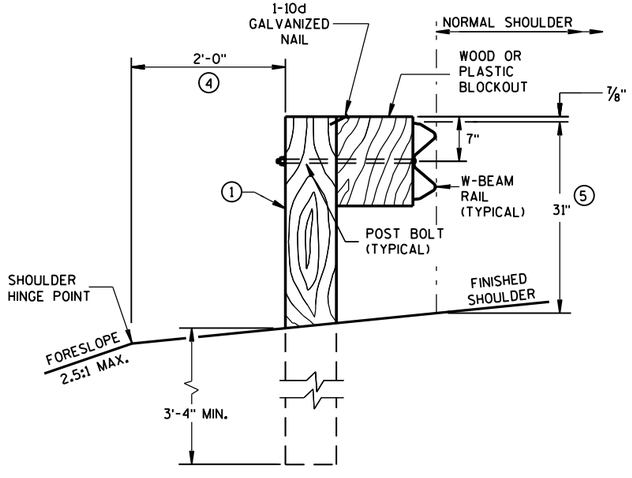
1. WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

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

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

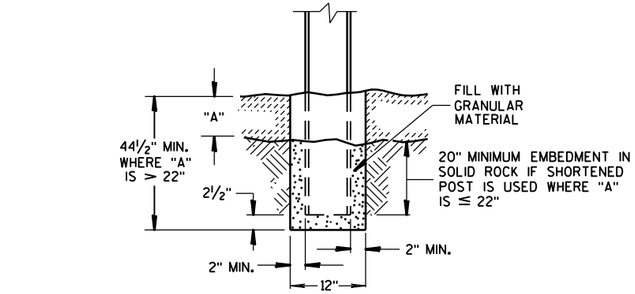
4. WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

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



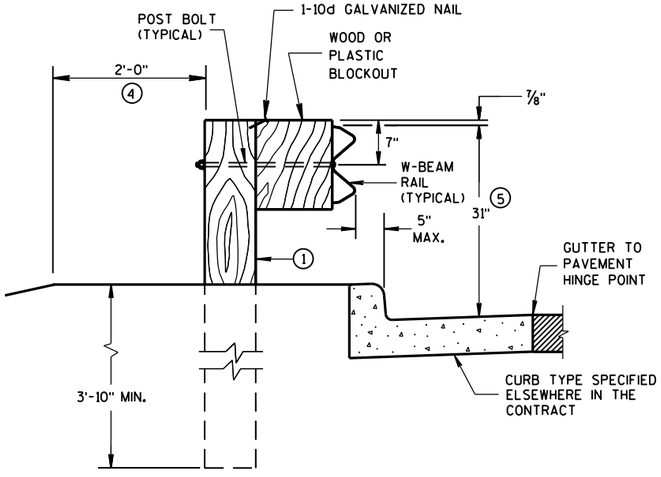
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



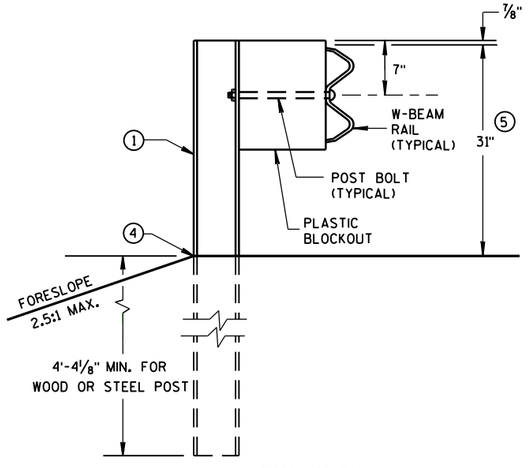
END VIEW

SETTING STEEL OR WOOD POST IN ROCK ③



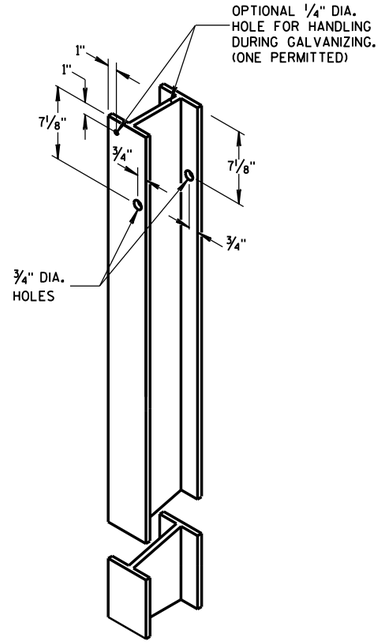
END VIEW

LOCATED ALONG A CURBED ROADWAY

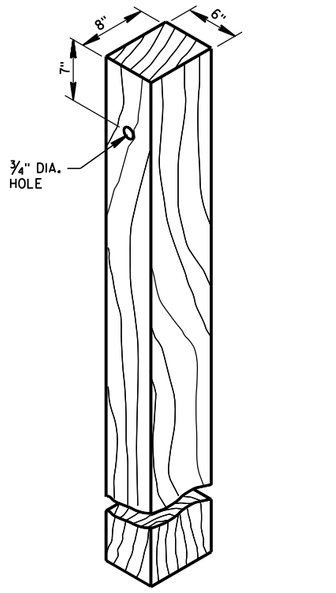


END VIEW

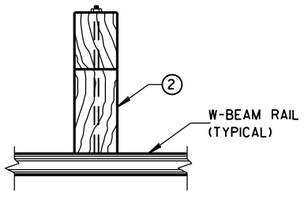
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



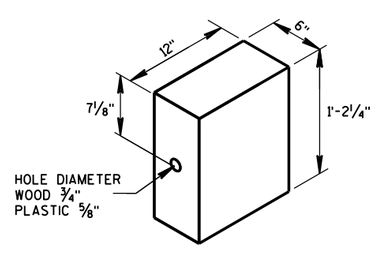
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



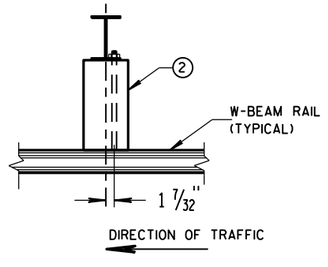
WOOD POST
(6" X 8") NOMINAL ①



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT ②



PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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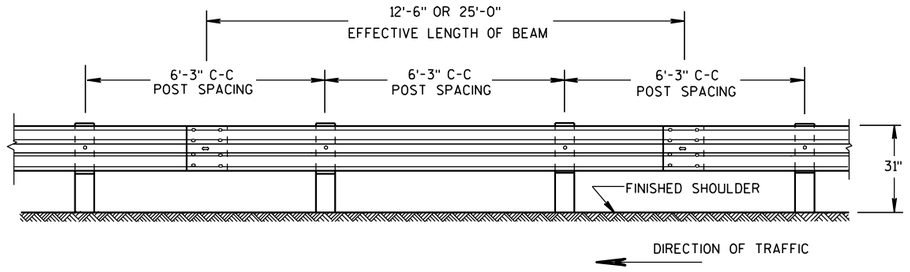
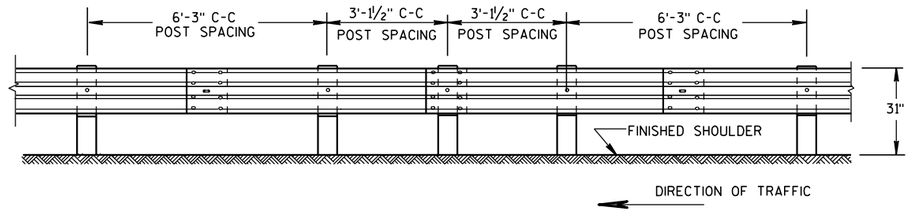
S.D.D. 14 B 42-2a



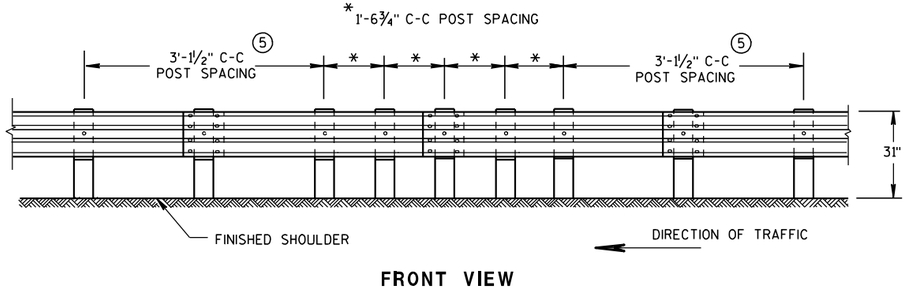
FRONT VIEW

POST SPACING STANDARD INSTALLATION



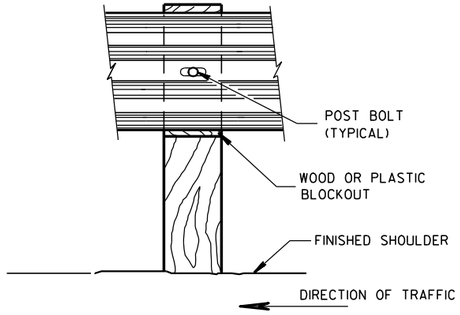
FRONT VIEW

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

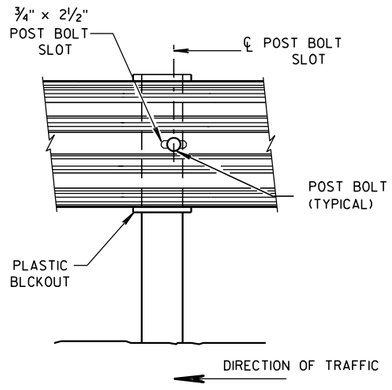


FRONT VIEW

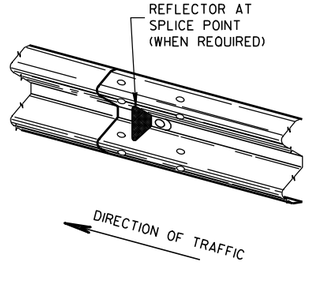
QUARTER POST SPACING (QS)

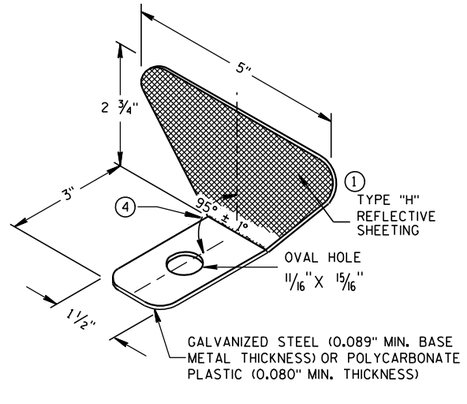


FRONT VIEW AT WOOD POST

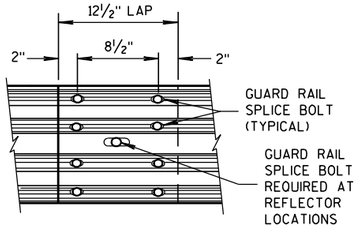


FRONT VIEW AT STEEL POST



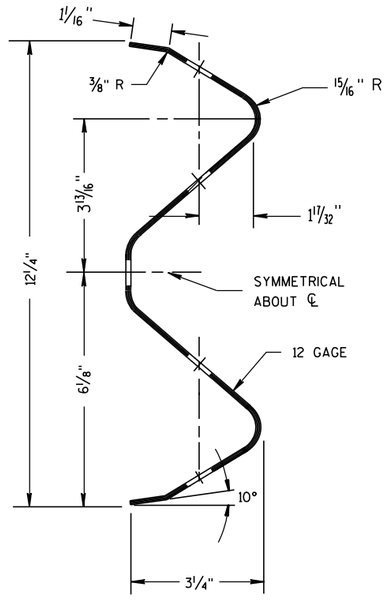


ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION ①



FRONT VIEW

MID-SPAN BEAM SPLICE



SECTION THRU W-BEAM RAIL

GENERAL NOTES

① PROVIDE TYPE "H" SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH TYPE "H" YELLOW REFLECTIVE SHEETING.

② DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.

③ REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.

④ PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.

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

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

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

REFLECTOR SPACING ②

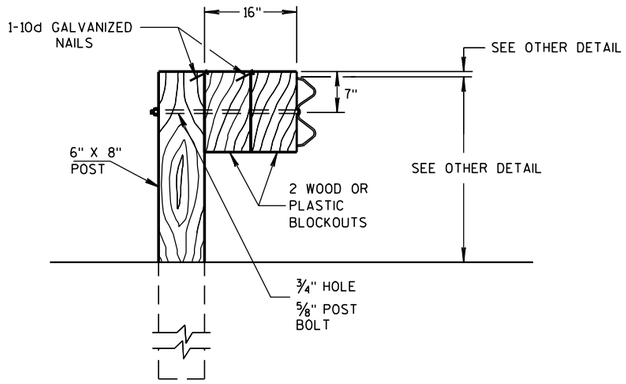
	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	1 1	3
TWO WAY TRAFFIC	< 200' > 200'	25' C-C 50' C-C	1 ③ 1	6
TWO WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	2 ④ 2	3

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

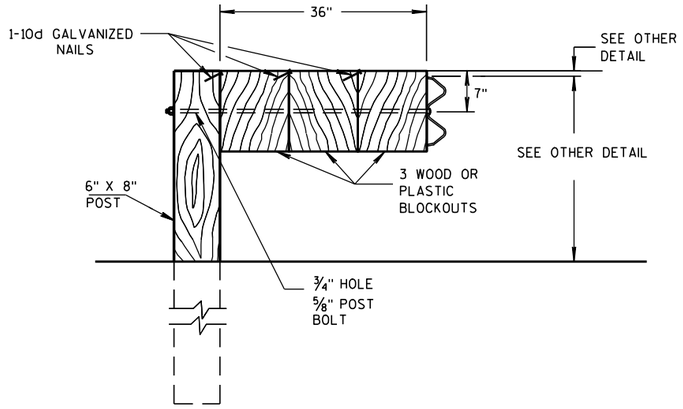
S.D.D. 14 B 42-2b

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



DETAIL FOR 16" BLOCKOUT DEPTH

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

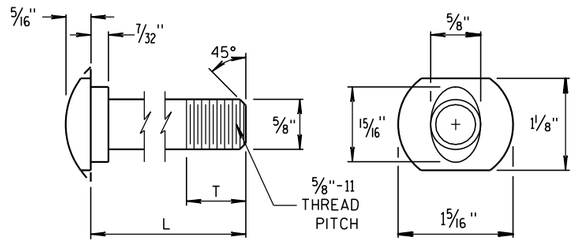


DETAIL FOR 36" BLOCKOUT DEPTH

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

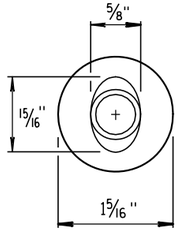
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

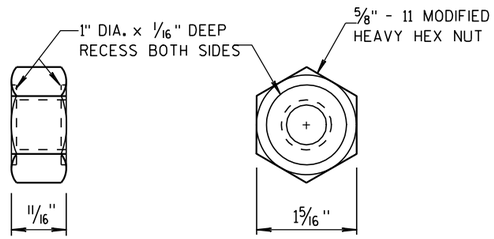


POST BOLT TABLE

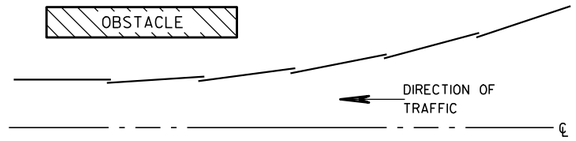
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

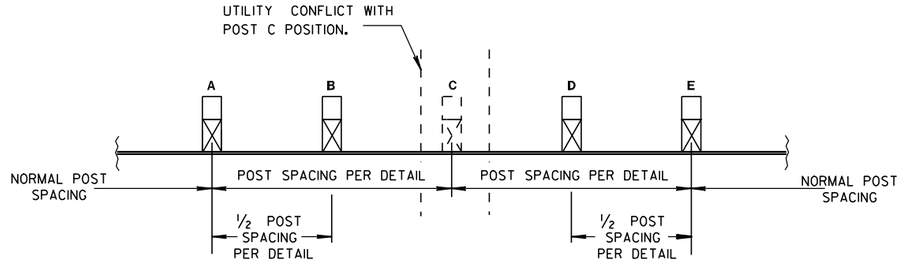


POST BOLT AND RECESS NUT

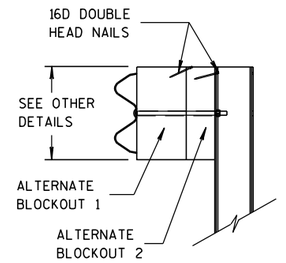


PLAN VIEW

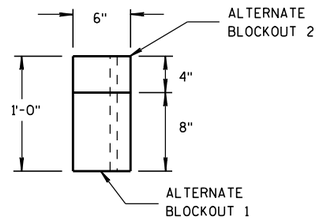
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/15/2011
DATE

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

FHWA

ENT

6

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

6

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

GENERAL NOTES

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

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

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

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

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

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

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

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

SEE SDD 14B42 FOR MORE INFORMATION.

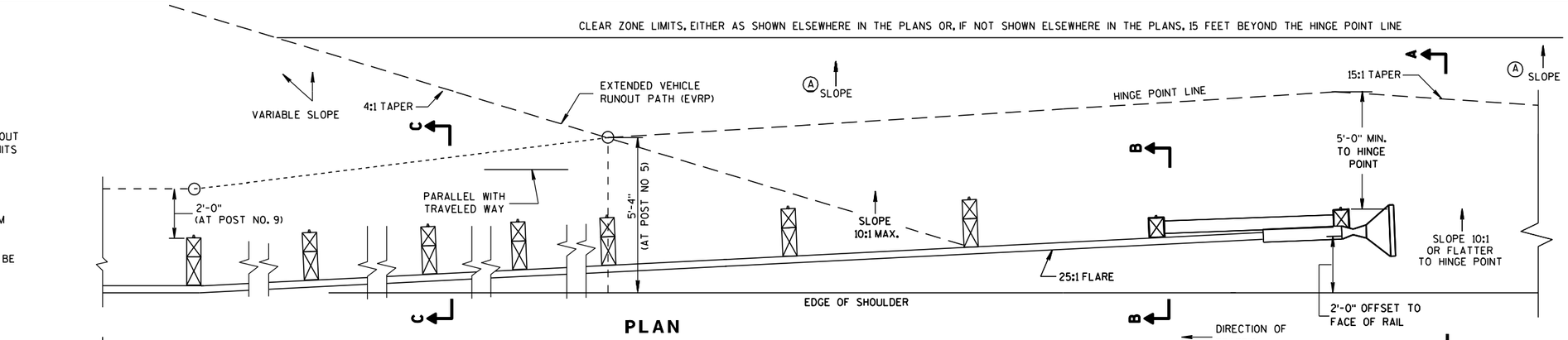
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

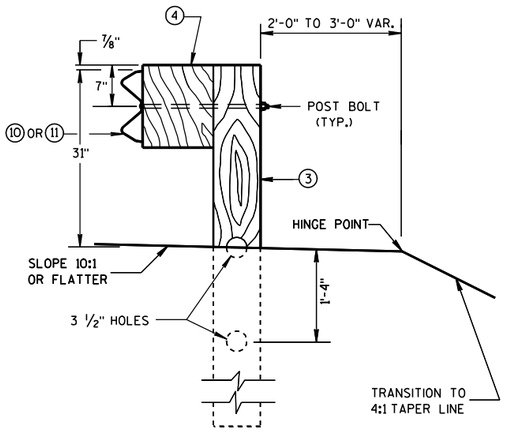
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

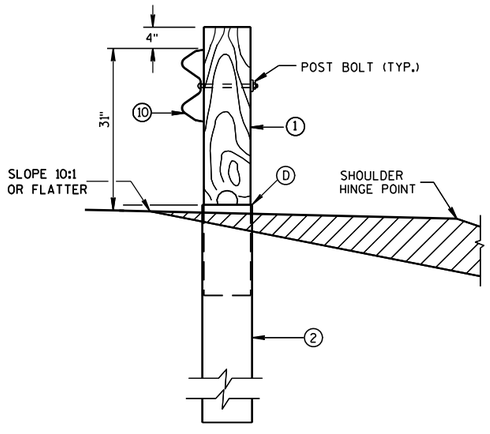
PATTERN AND COLORS ON REFLECTIVE SHEETING TYPE H ARE TO CONFORM TO OM3-L OR OM3-R OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

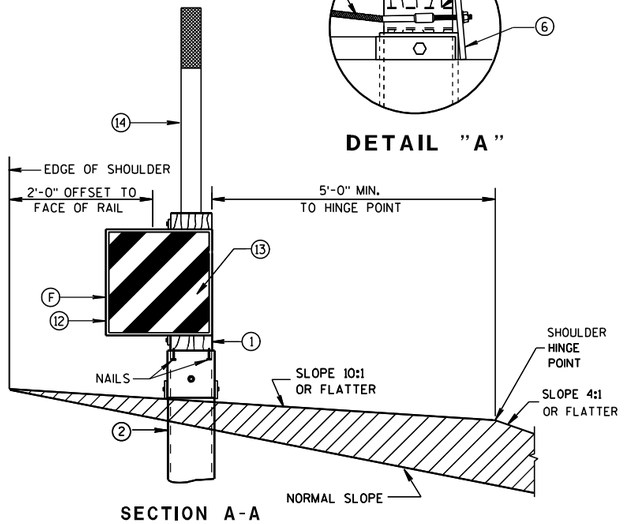




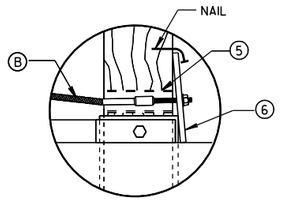
SECTION C-C
TYPICAL AT POST NOS. 3-9



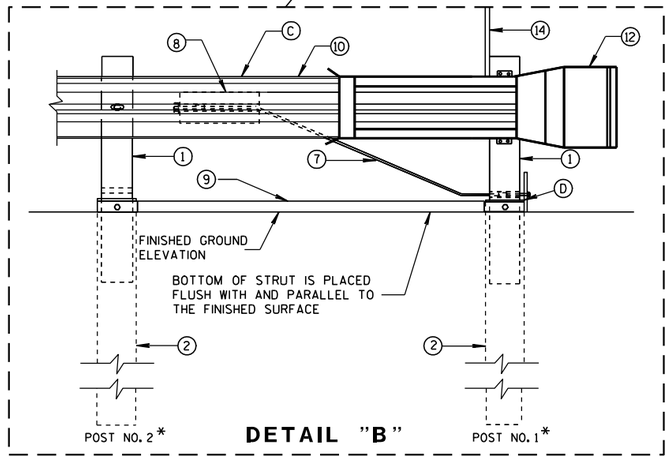
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



DETAIL "B"

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

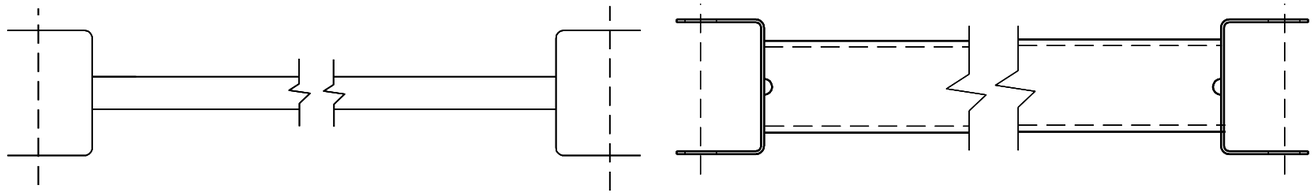
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

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

6

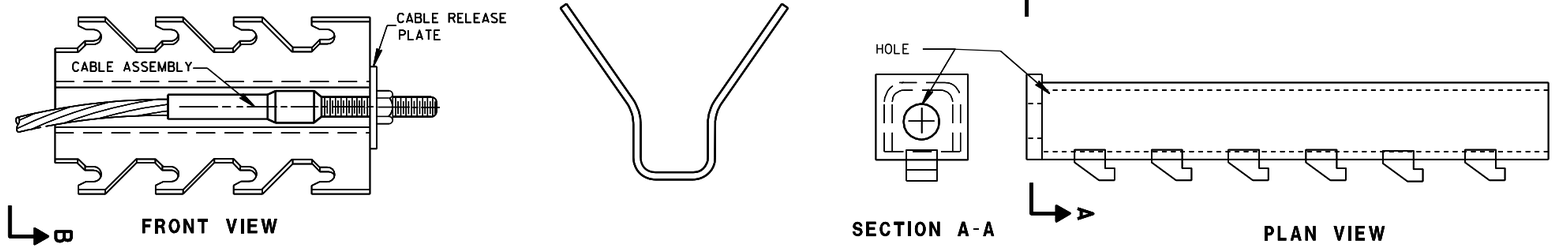
S.D.D. 14 B 44-1a



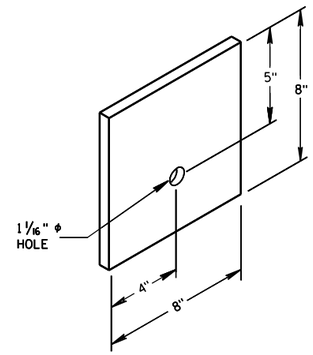
GENERIC GROUND STRUT (9) (H)

BILL OF MATERIALS

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



GENERIC ANCHOR CABLE BOX (8) (H)



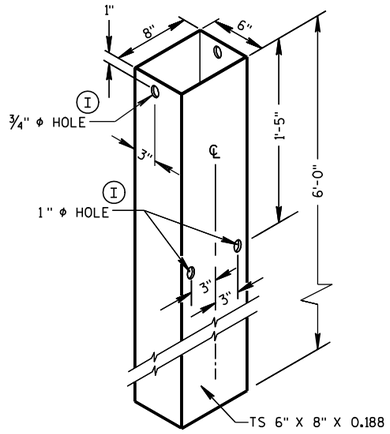
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

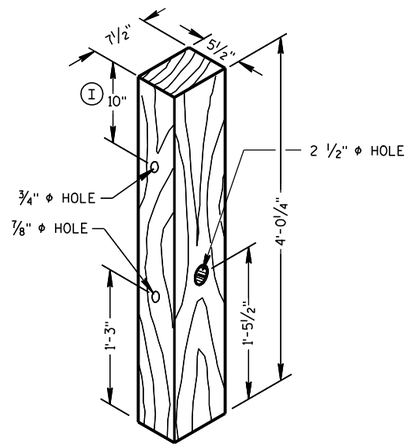
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

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

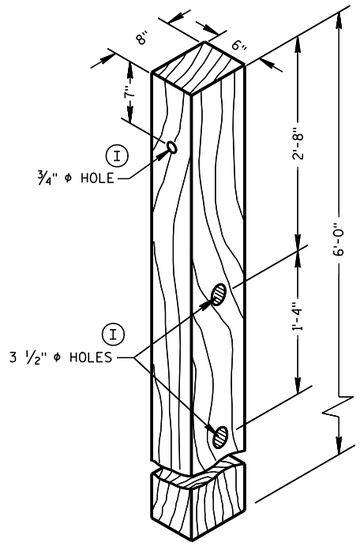


FOUNDATION TUBE (2)



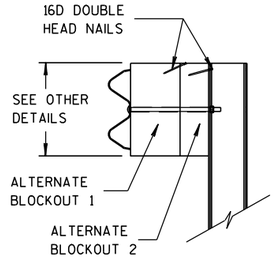
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

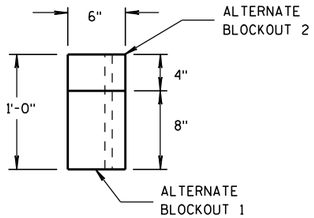


POSTS NUMBER 3-9

WOOD CRT POST (3)

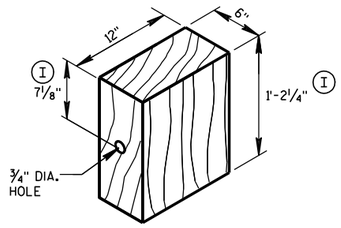


SIDE VIEW



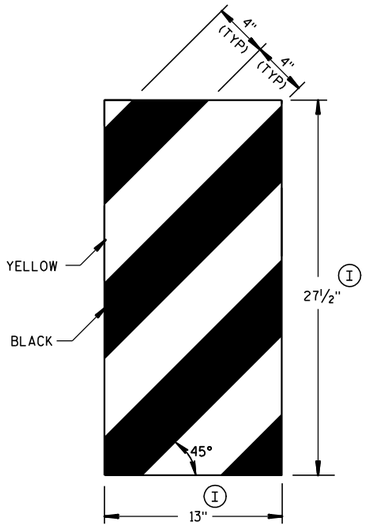
TOP VIEW

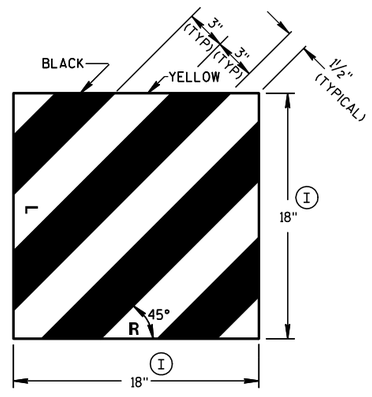
ALTERNATE WOOD BLOCKOUT DETAIL



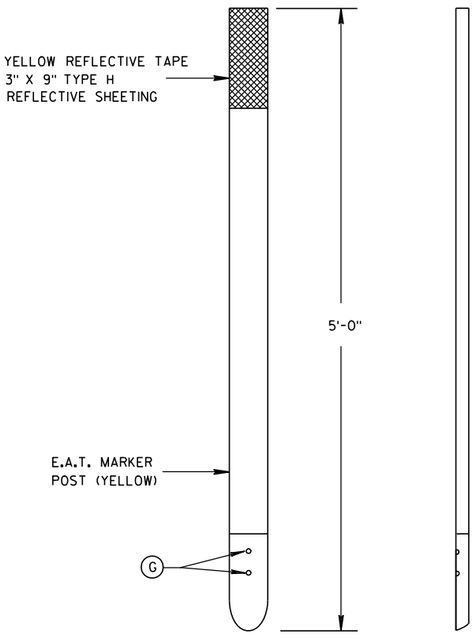
WOOD BLOCKOUT (4)

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



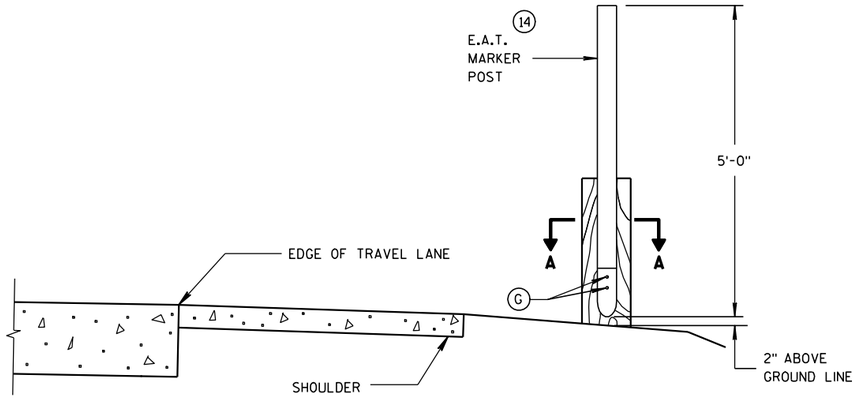


GENERIC REFLECTIVE SHEETING (13) (H)



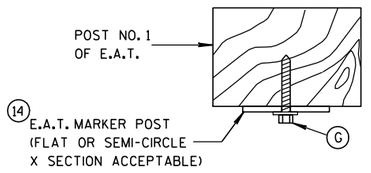
FRONT VIEW **SIDE VIEW**

E.A.T. MARKER POST (14)



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

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



SECTION A-A

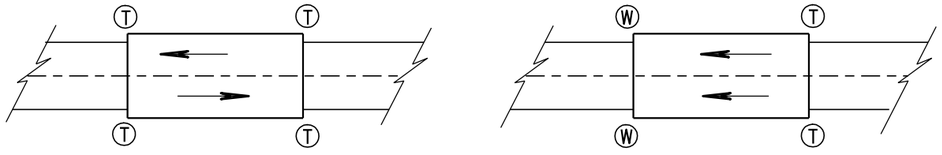
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/2011 — DATE
/S/ Jerry H. [illegible] — ROADWAY STANDARDS ENGINEER
FHWA

6

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



TWO WAY TRAFFIC

ONE WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

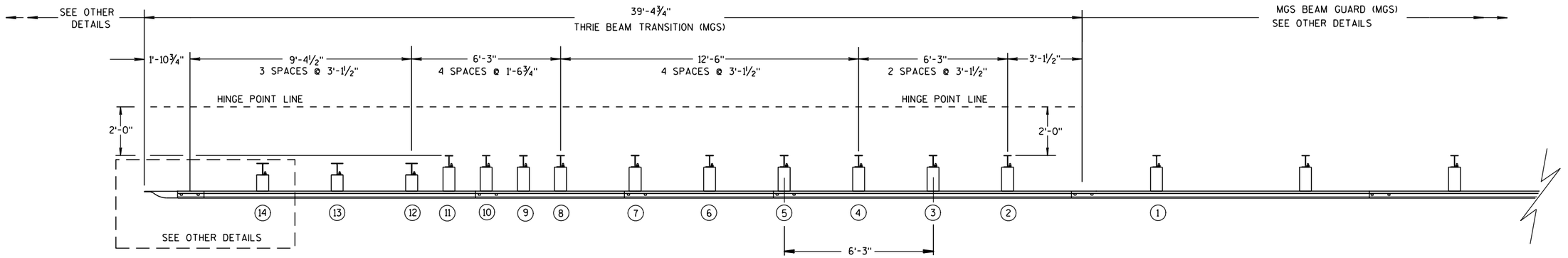
BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3.

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

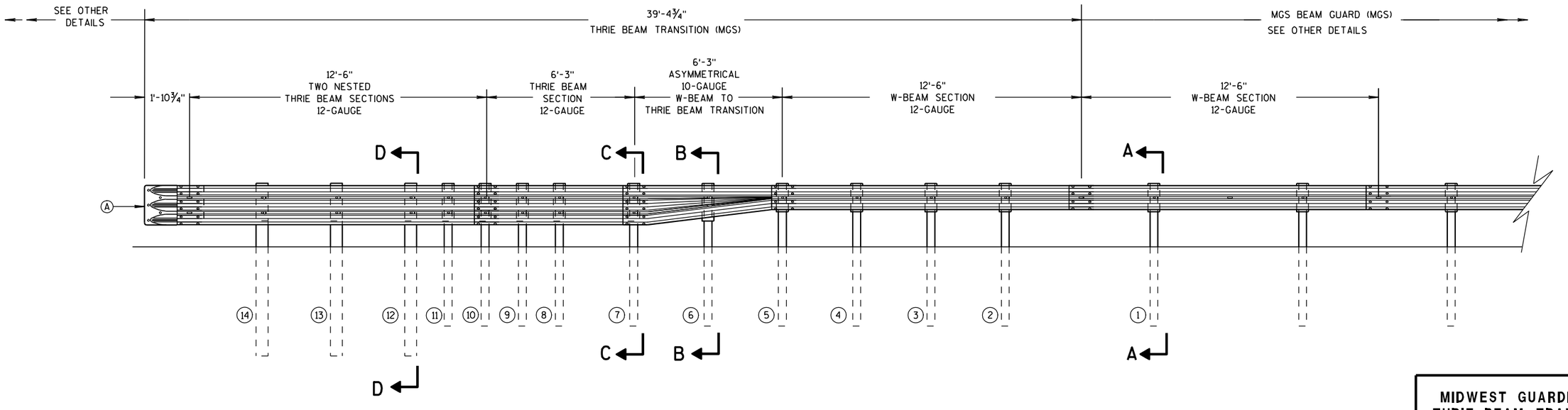
TRANSITION USES STEEL POSTS ONLY.

SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

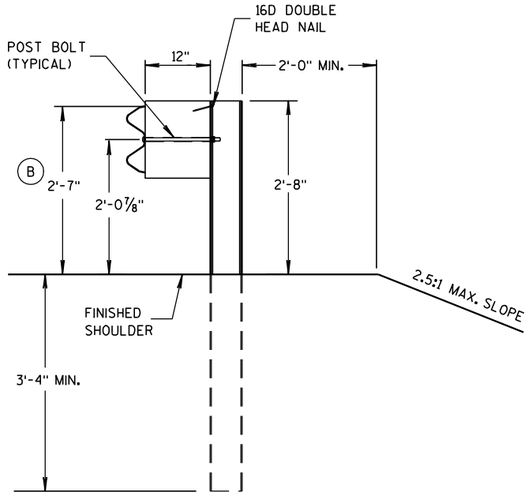
S.D.D. 14 B 45-3a

6

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

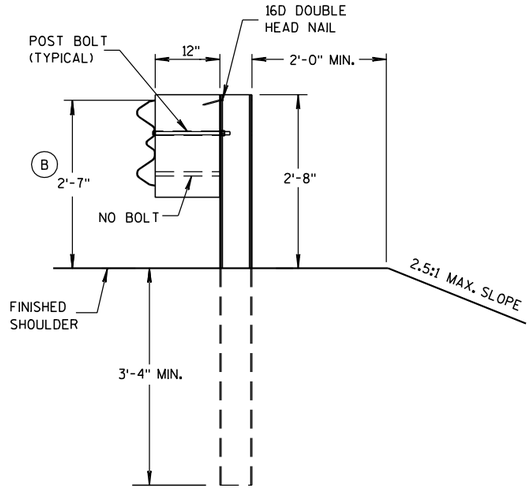
GENERAL NOTES

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



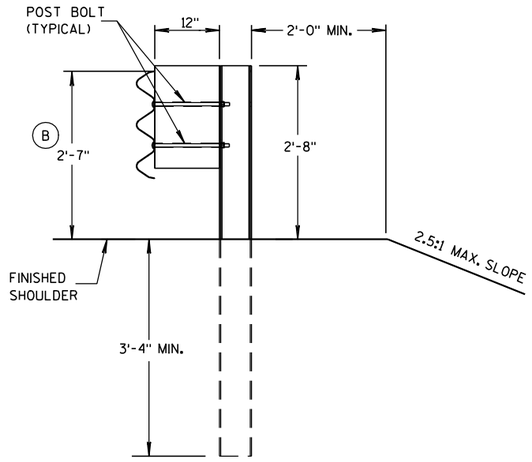
SECTION A-A

POSTS 1-5



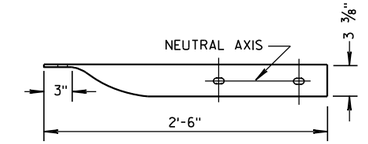
SECTION B-B

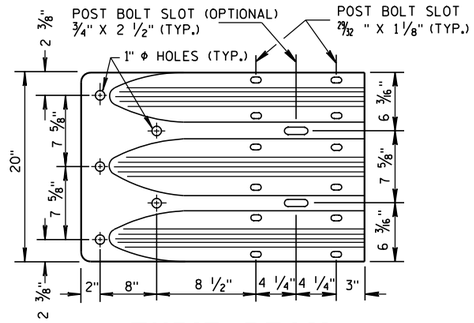
POST 6



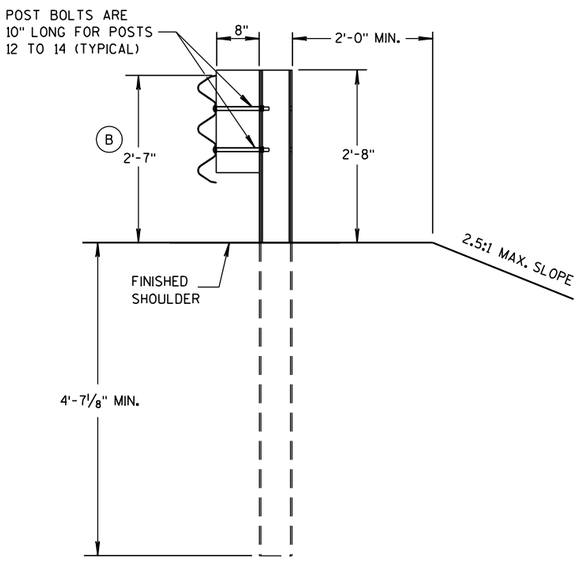
SECTION C-C

POSTS 7-11





THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-14

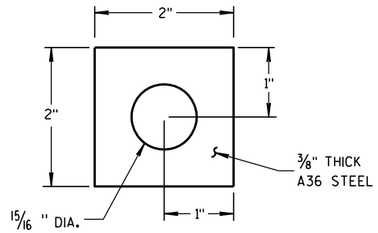
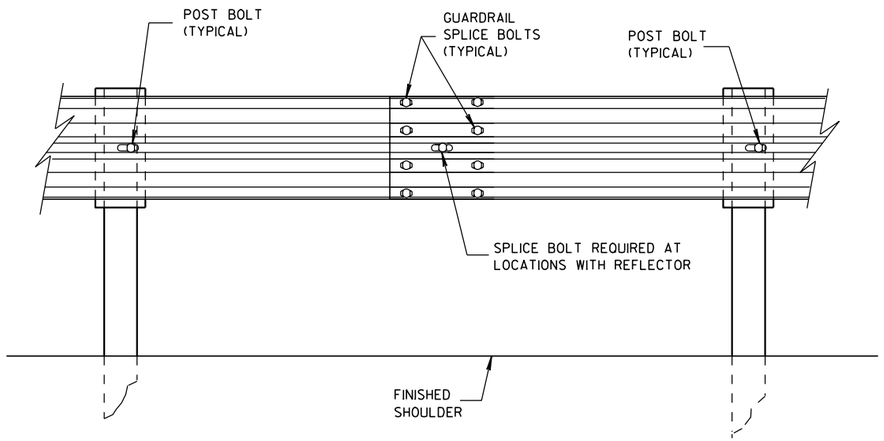
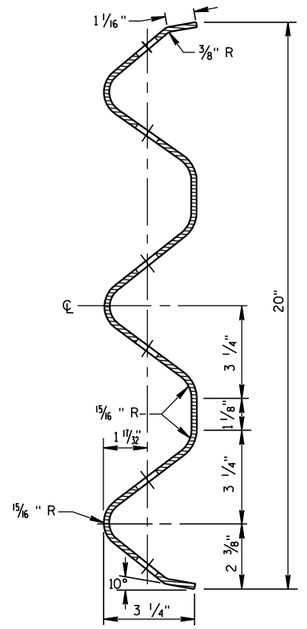


PLATE WASHER DETAIL



SPLICE DETAIL



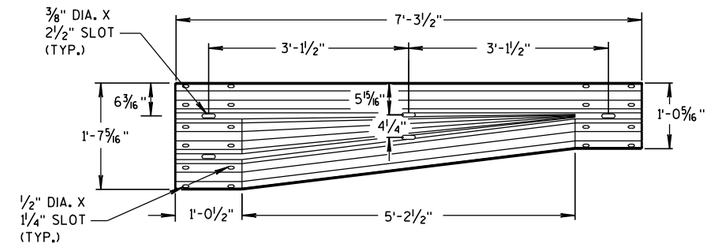
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

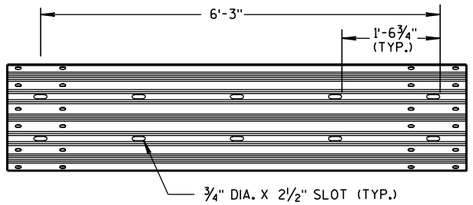
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

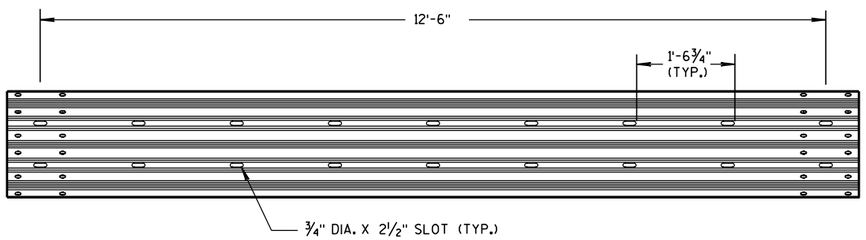
S.D.D. 14 B 45-3b



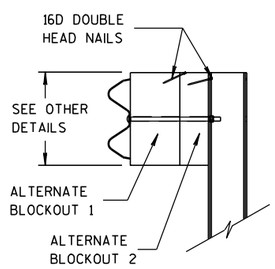
W-BEAM TO THRIE BEAM TRANSITION SECTION



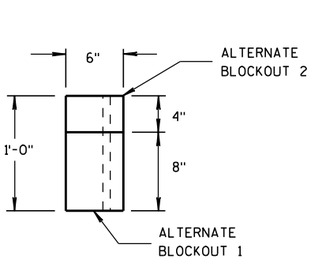
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

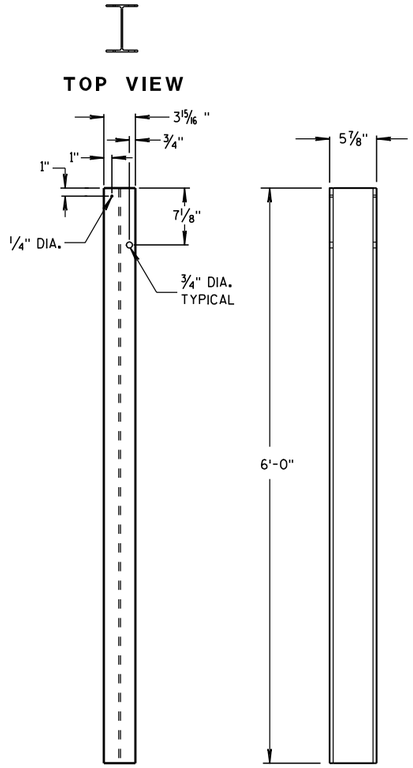


SIDE VIEW

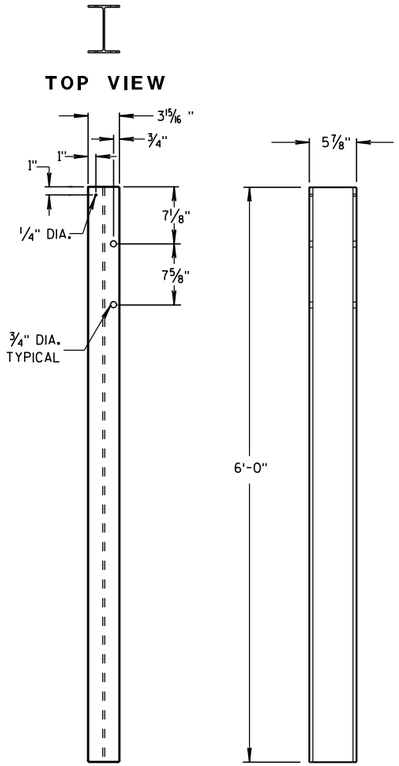


TOP VIEW

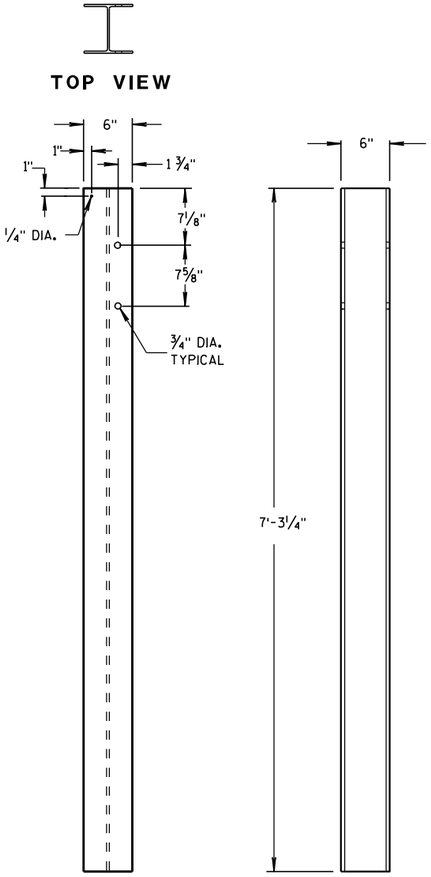
ALTERNATE WOOD BLOCKOUT DETAIL



STEEL POSTS 1-5

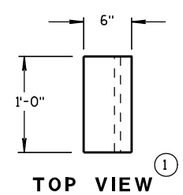


STEEL POSTS 6-11

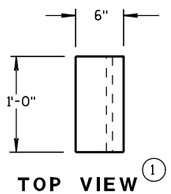


STEEL POSTS 12-14

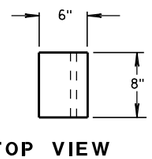
(1) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.



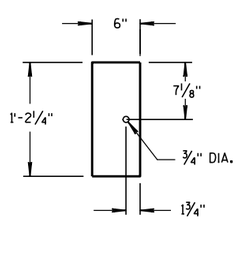
TOP VIEW (1)



TOP VIEW (1)

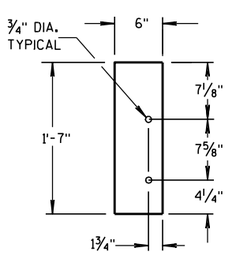


TOP VIEW



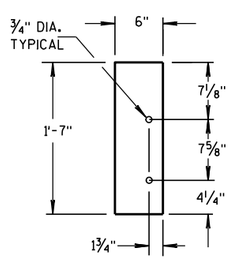
FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-11



FRONT VIEW

BLOCKOUT POSTS 12-14

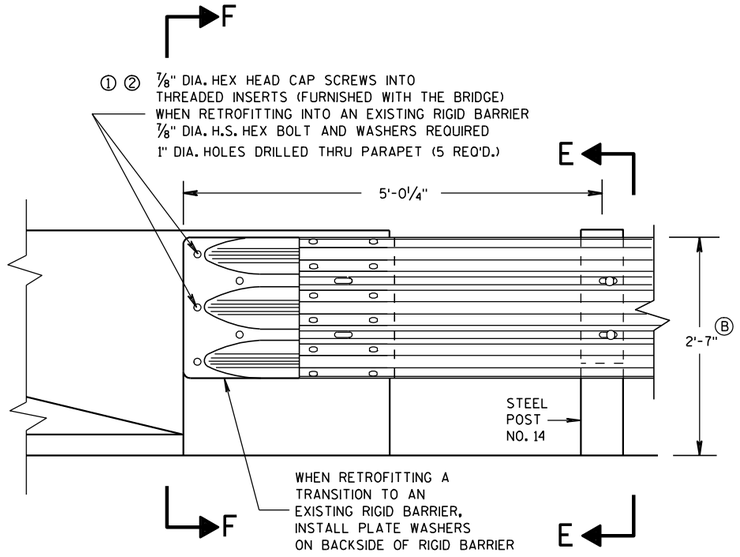
STEEL POST SIZES

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

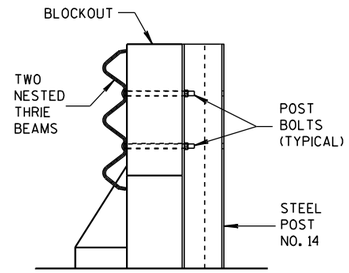
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



FRONT VIEW



SECTION E-E

GENERAL NOTES

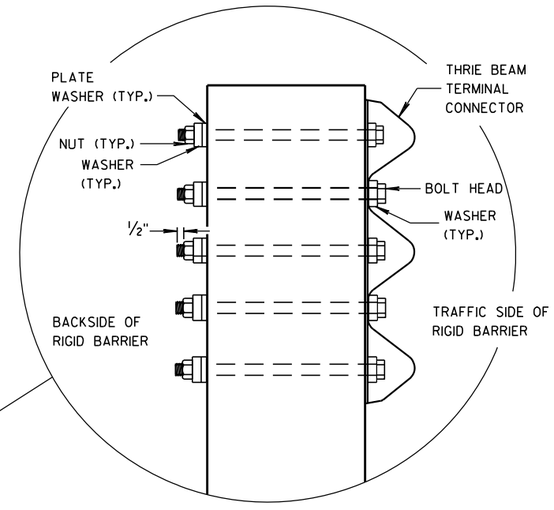
THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

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

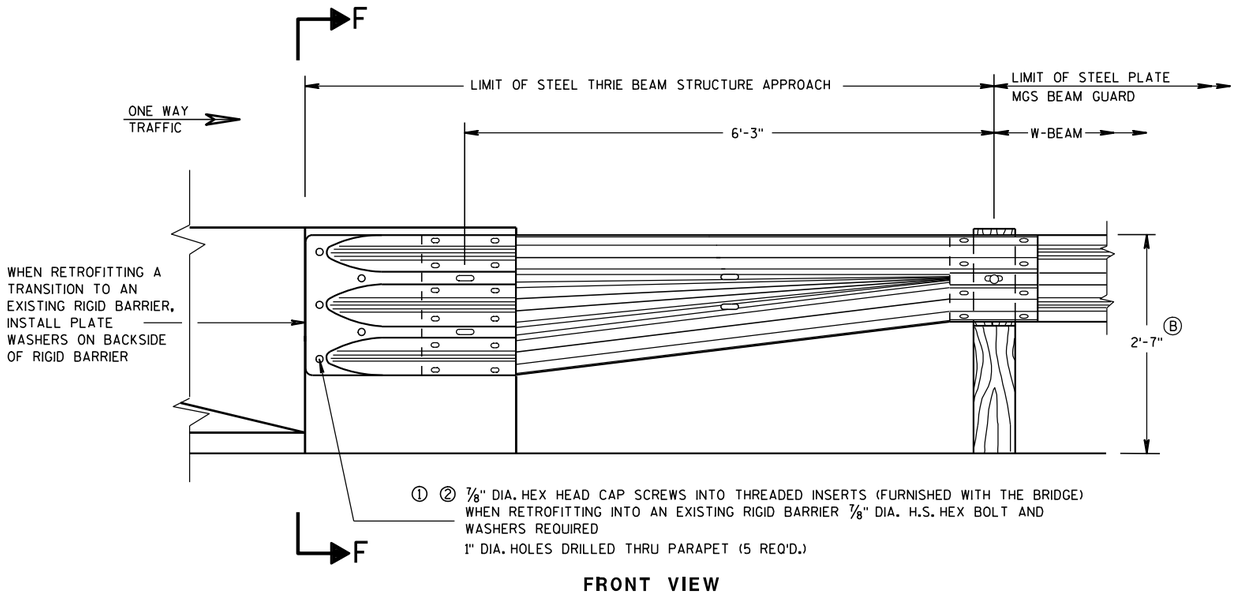
② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE.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

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

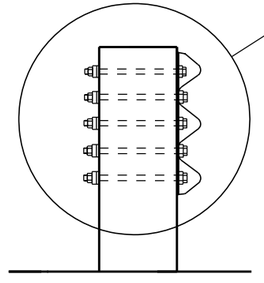
Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".



THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS



FRONT VIEW



SECTION F-F

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012 — DATE

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

FHWA

GENERAL NOTES

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

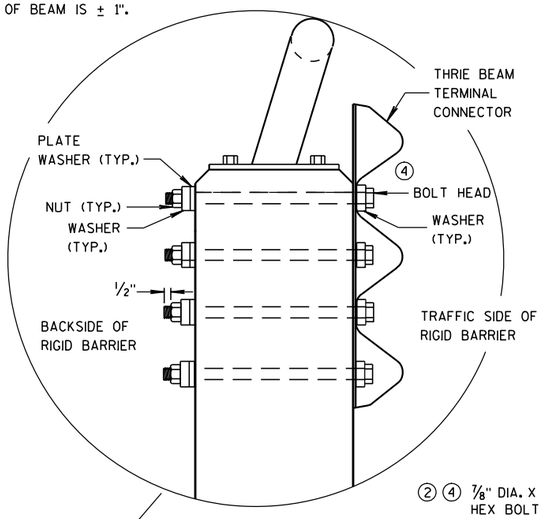
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

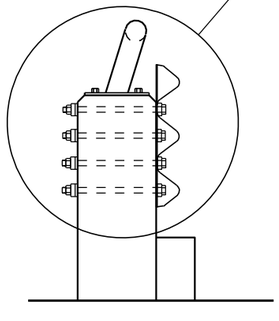
② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE.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

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

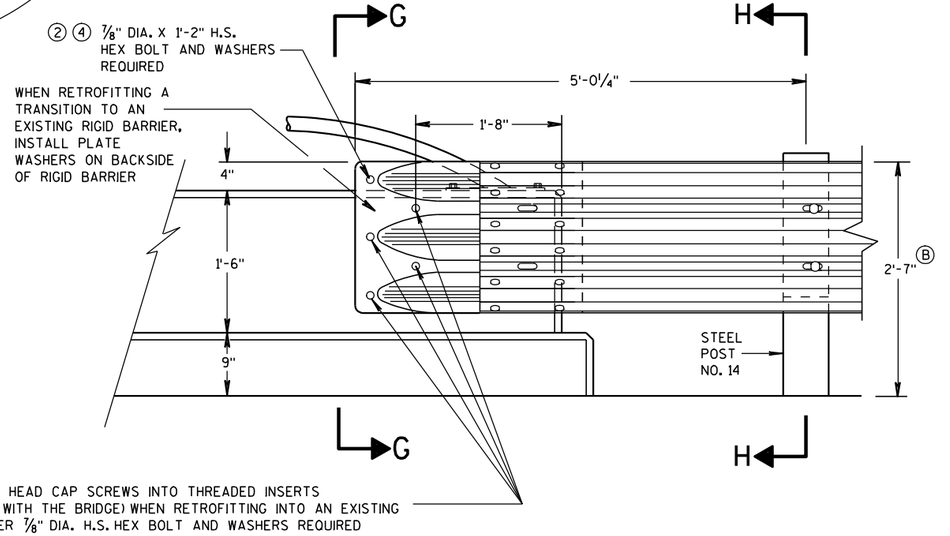
④ BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.

Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".

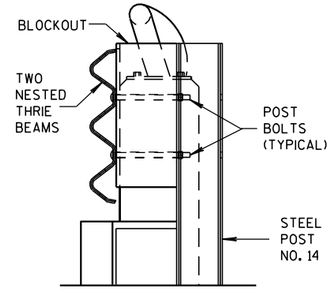




SECTION G-G

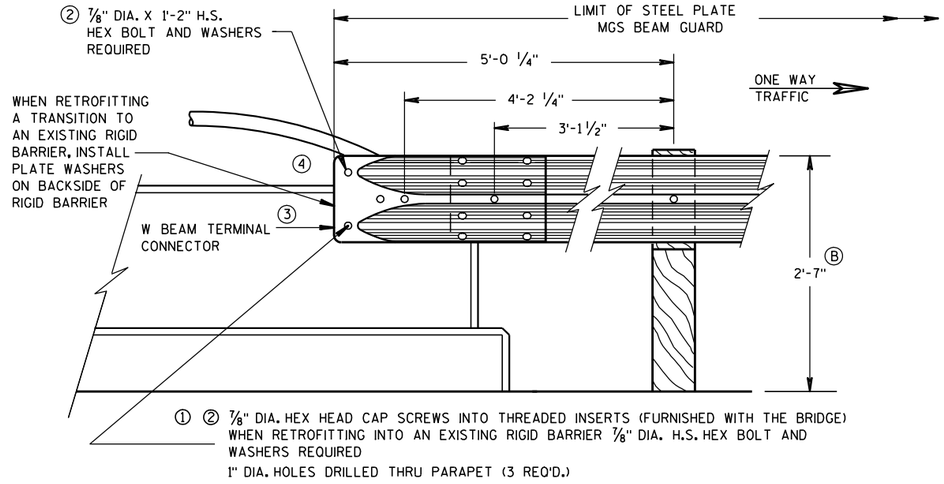


FRONT VIEW



SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8-31-2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

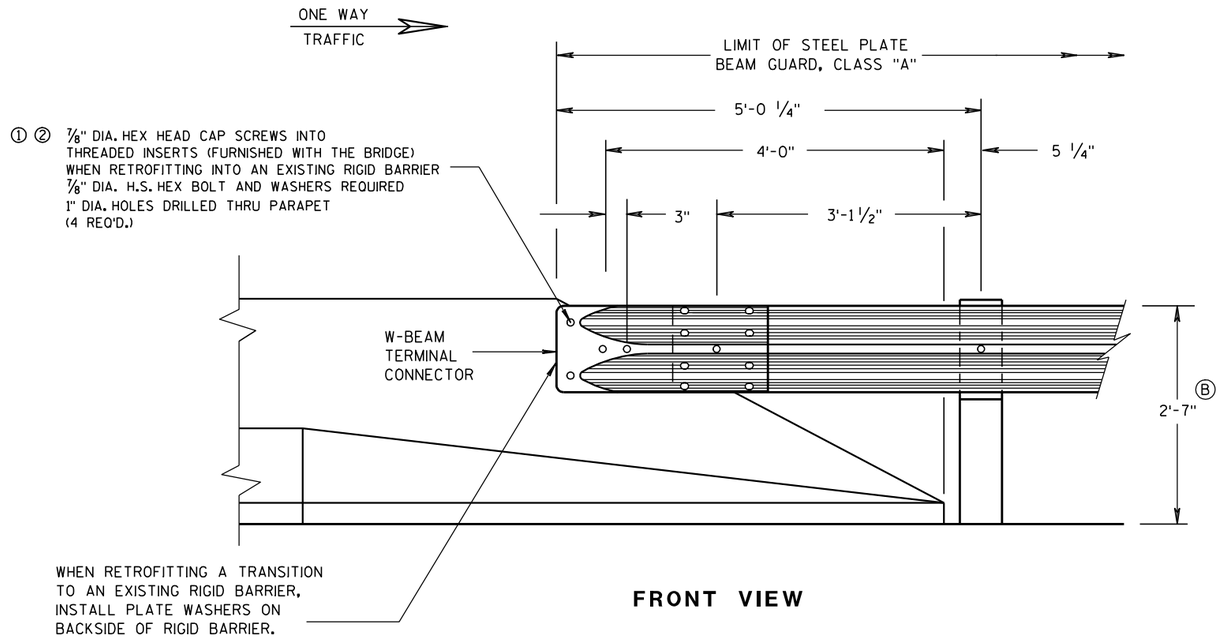
FHWA

6

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

6

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



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

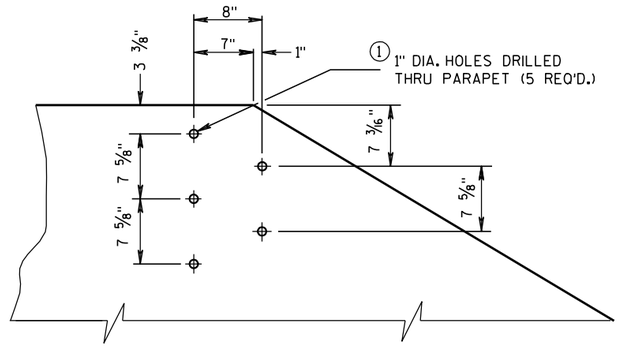
(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

GENERAL NOTES

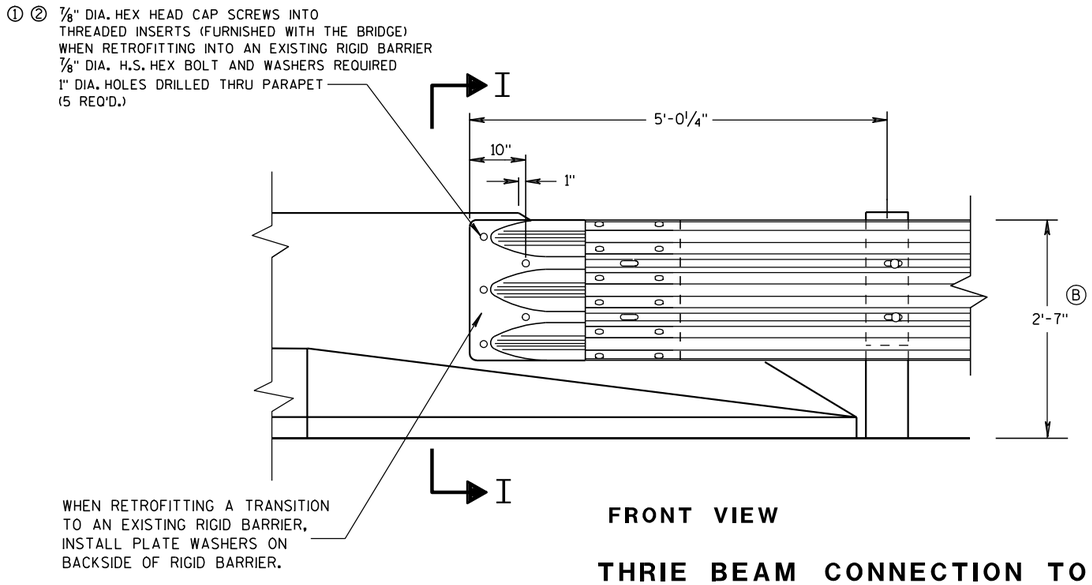
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

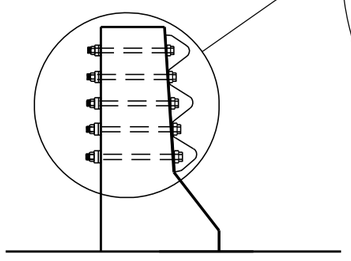
Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".



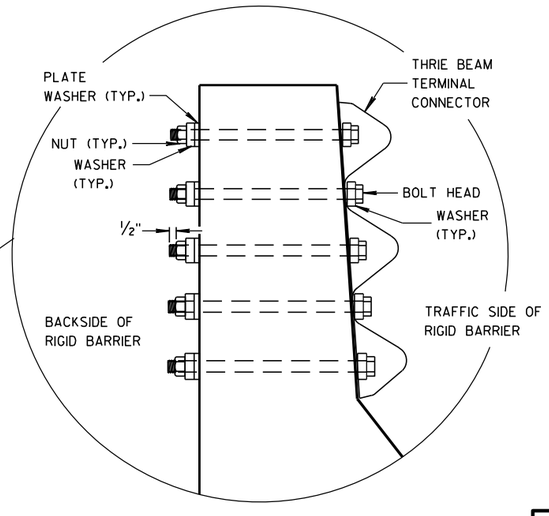
DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012 — DATE

/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER

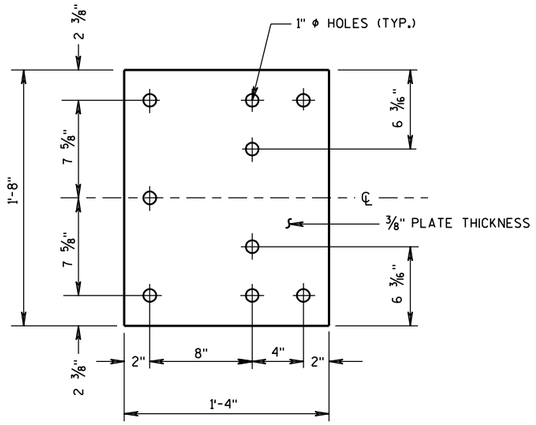
FHWA

6

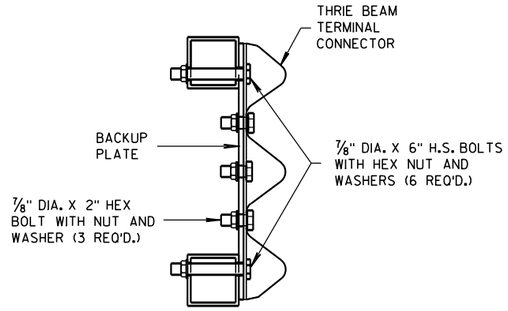
S.D.D. 14 B 45-3f

6

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



BACK-UP PLATE DETAIL

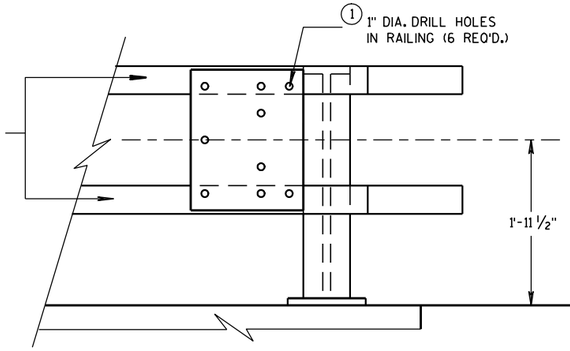


SECTION J-J

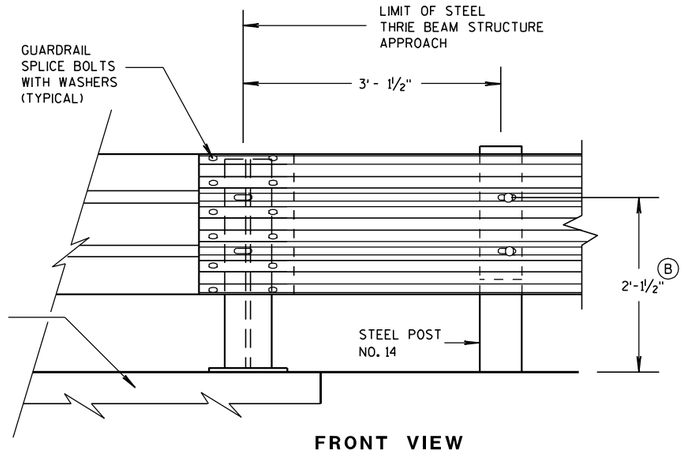
GENERAL NOTES

(1) DRILLING HOLES THROUGH THE PAPRPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

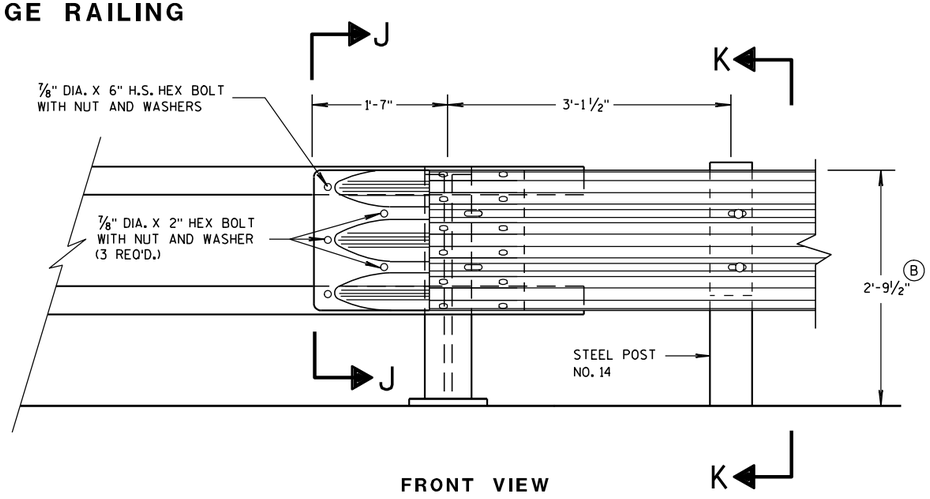


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

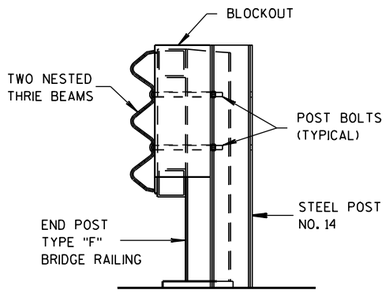


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED 8/31/2012 DATE /S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER FHWA

6

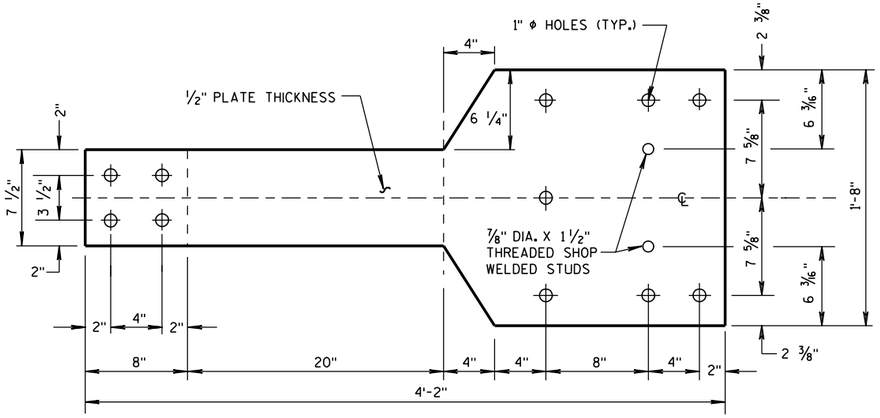
S.D.D. 14 B 45-3g

6

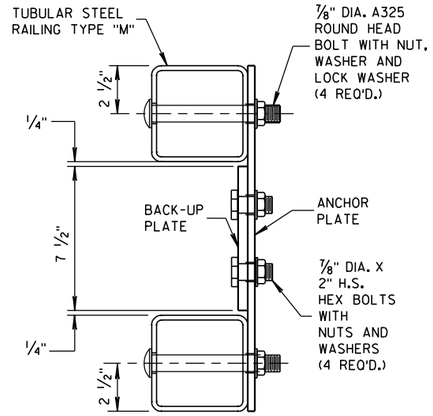
S.D.D. 14 B 45-3g

GENERAL NOTES

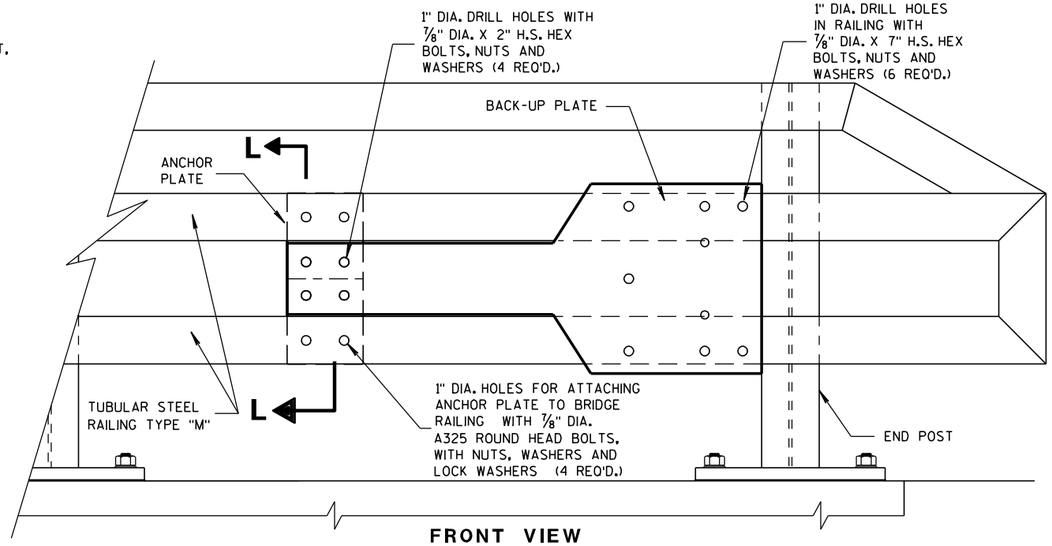
(B) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



FRONT VIEW

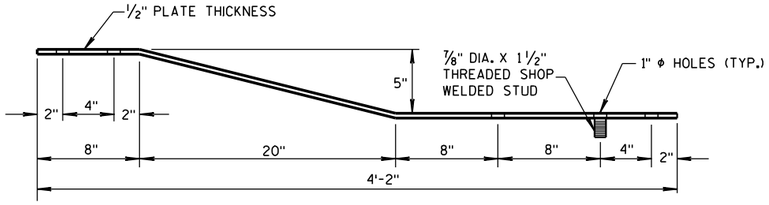


SECTION L-L



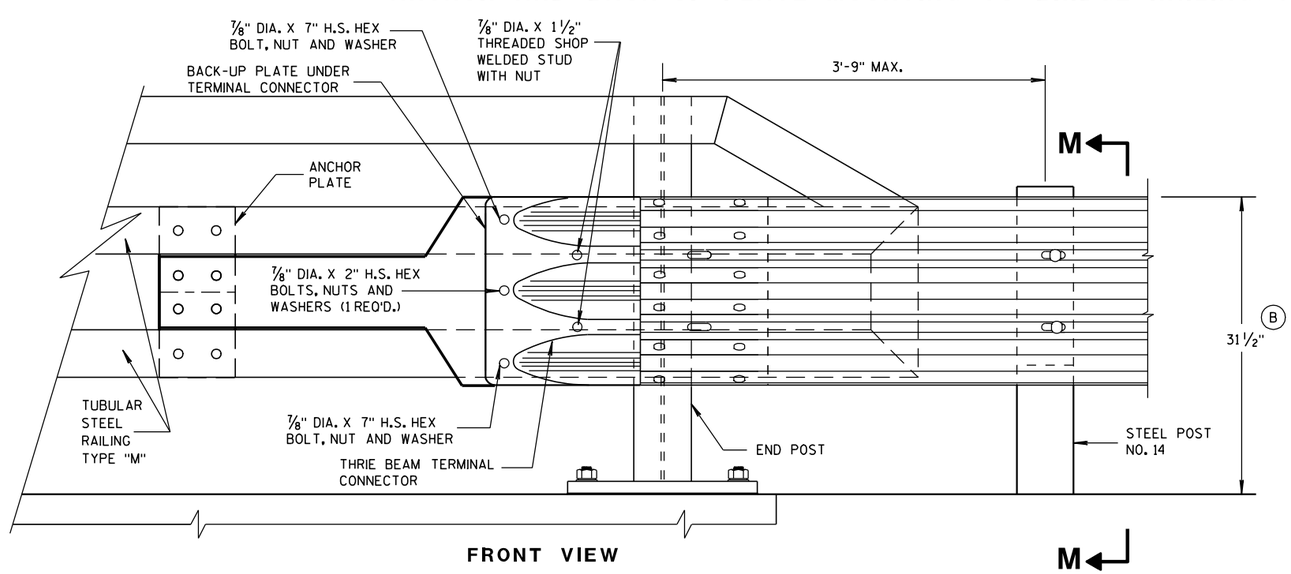
FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"

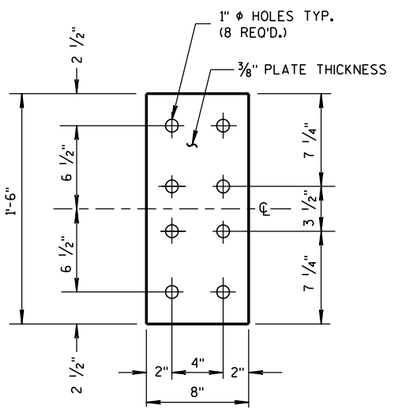


PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

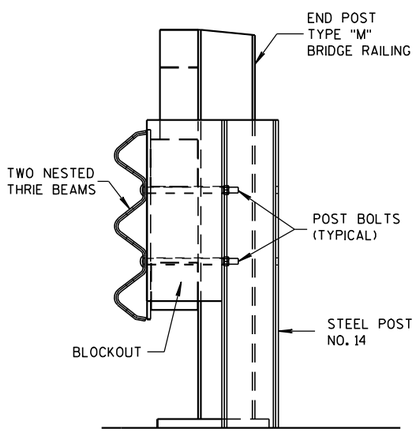


FRONT VIEW

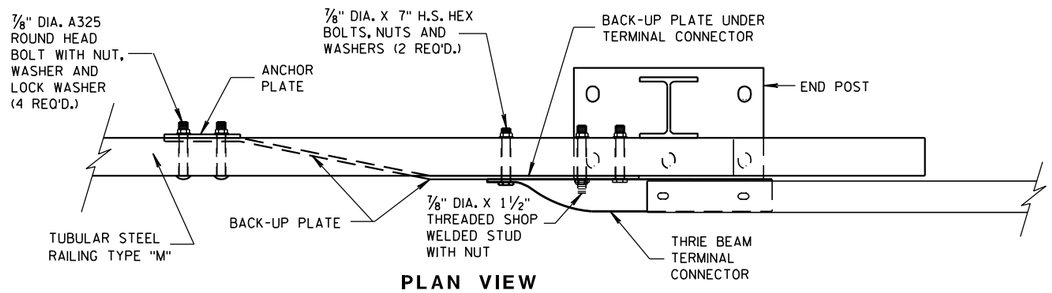


FRONT VIEW

ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8-31-2012 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

FHWA

6

S.D. 14 B 45-3h

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S.D. 14 B 45-3h

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

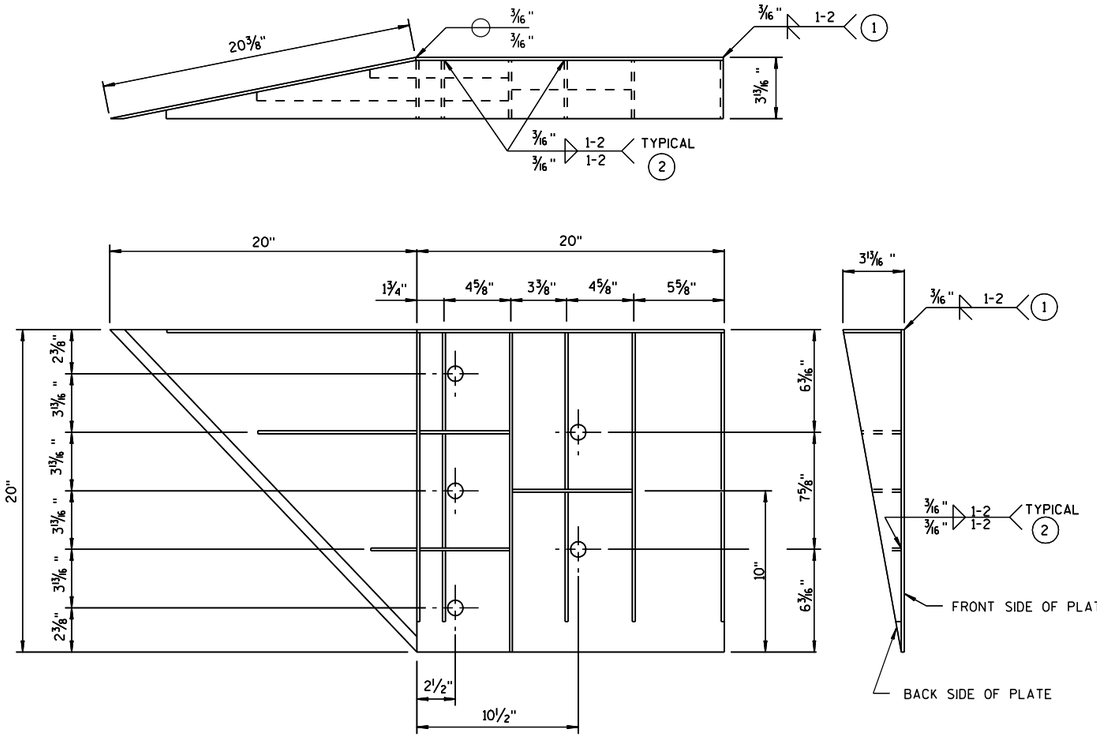
FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(1) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(2) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

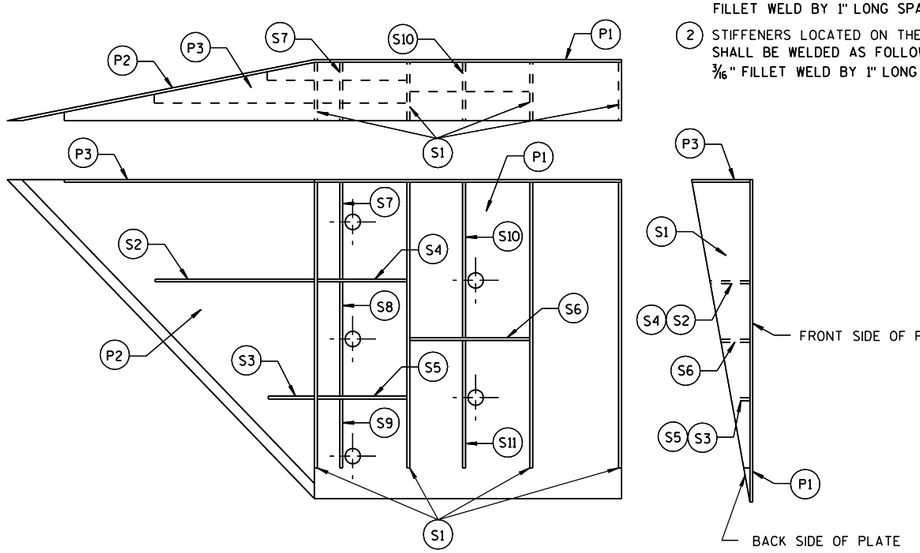


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

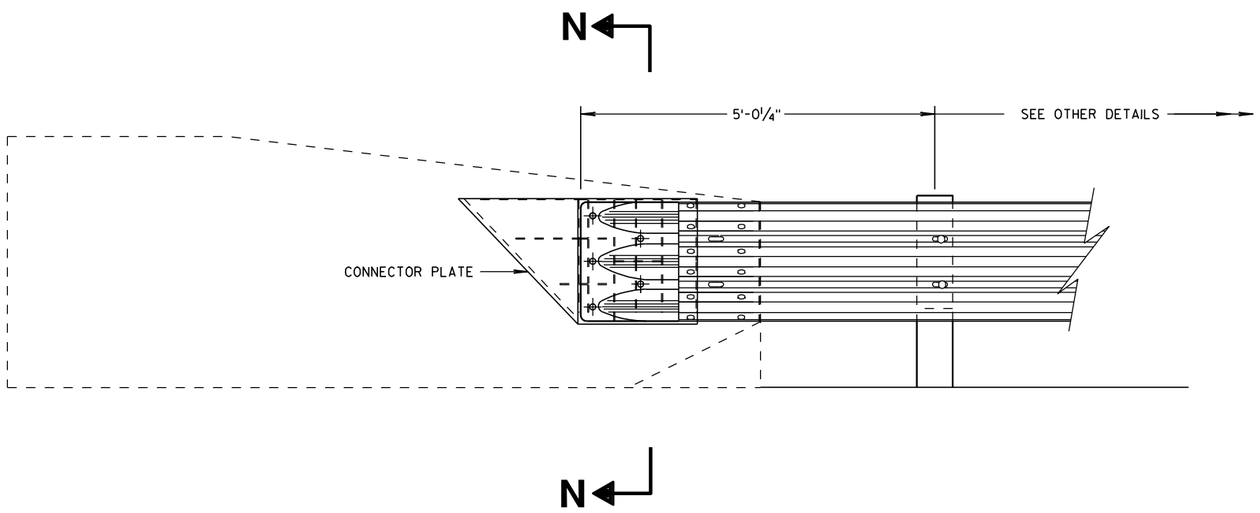
PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

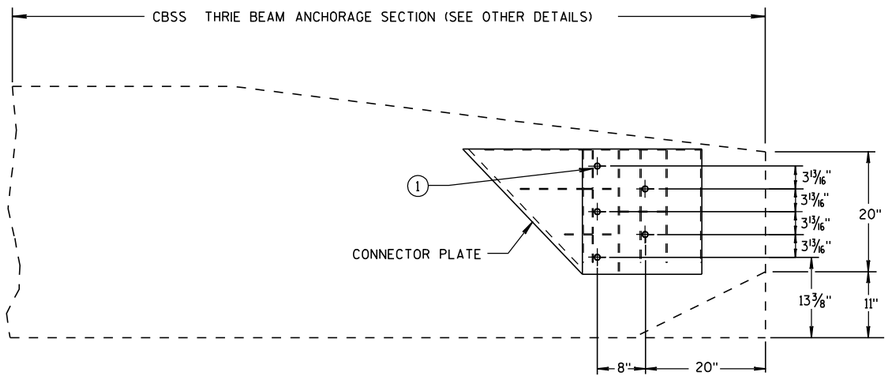
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/31/2012 DATE
/S/ Jerry H ____
ROADWAY STANDARDS ENGINEER
FHWA



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER

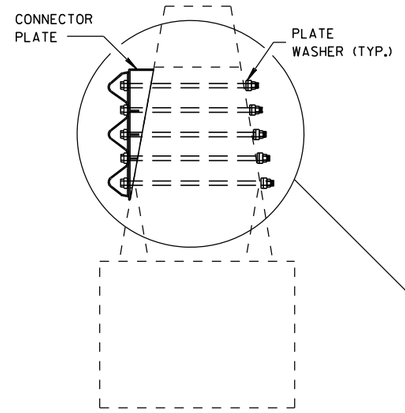


SINGLE SLOPE CONNECTION PLATE PLACEMENT

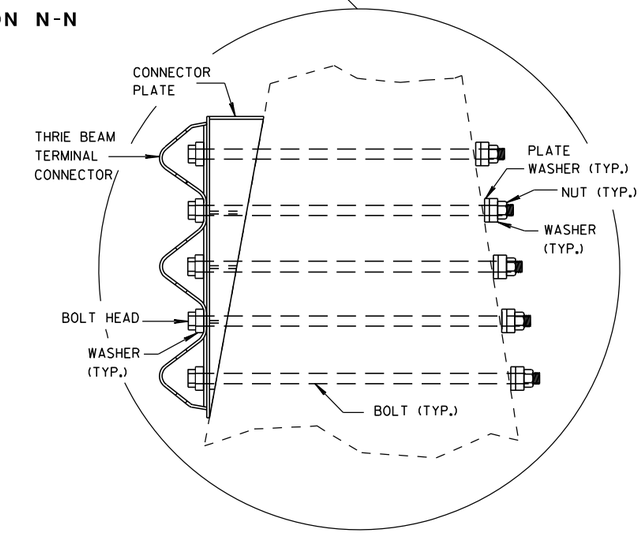
GENERAL NOTES

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

(1) 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 ⅝" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012
DATE

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

FHWA

6

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

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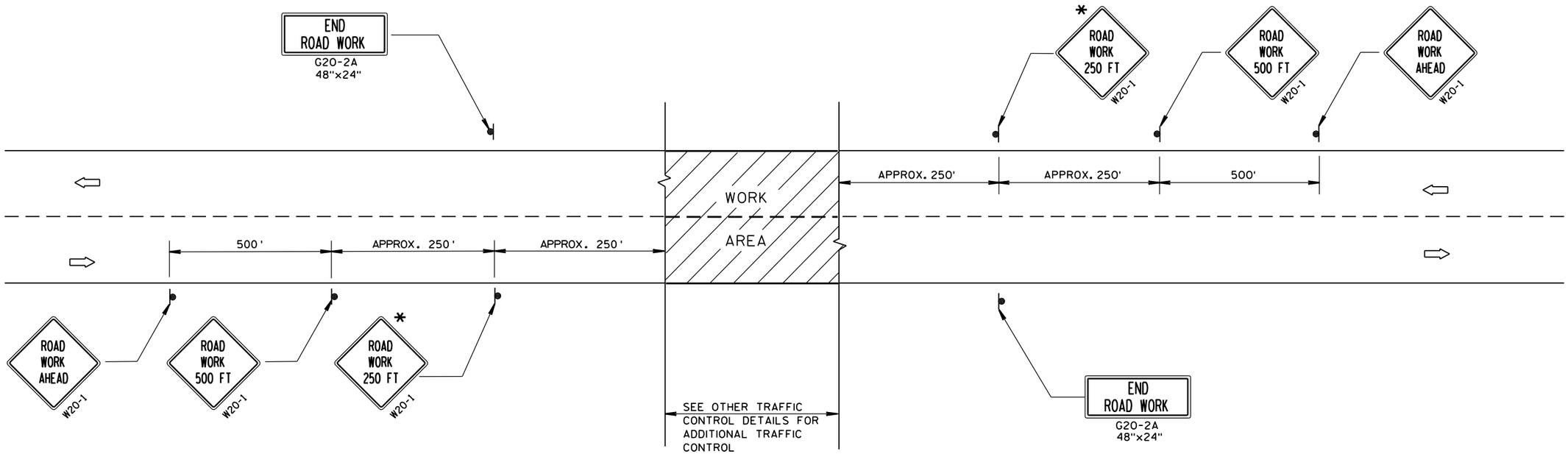
S.D.D. 14 B 45-3j



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

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

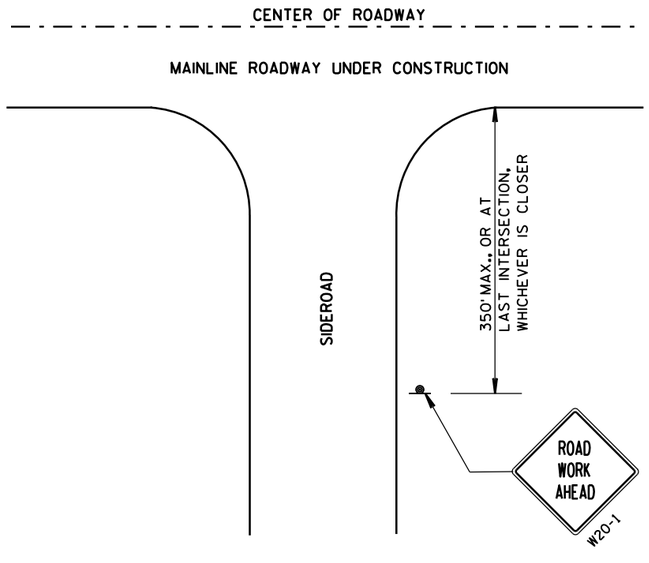
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS.

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

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FT" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.



LEGEND

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

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

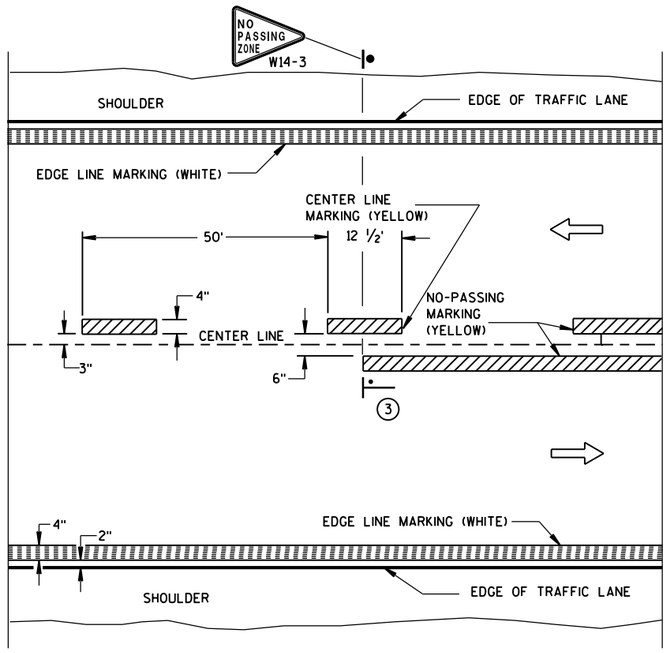
APPROVED

8/2013 DATE — /S/ Travis Feltes STATE TRAFFIC ENGINEER — SIGN

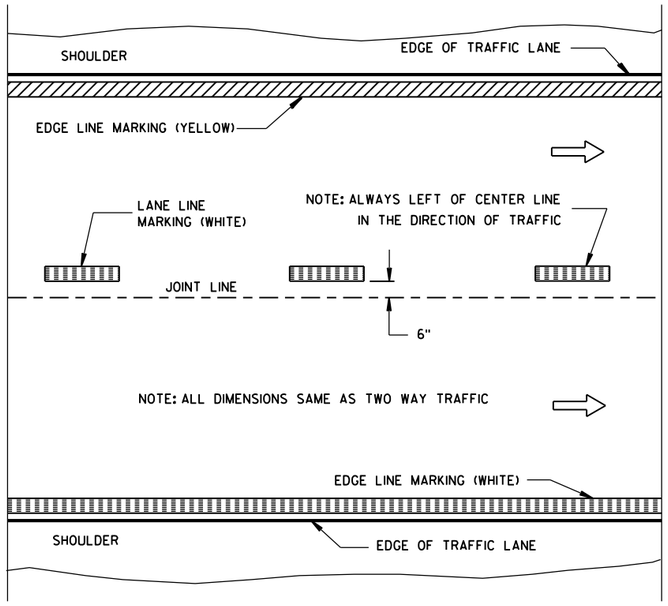
FHWA

6

S.D.D. 15 C 5-2

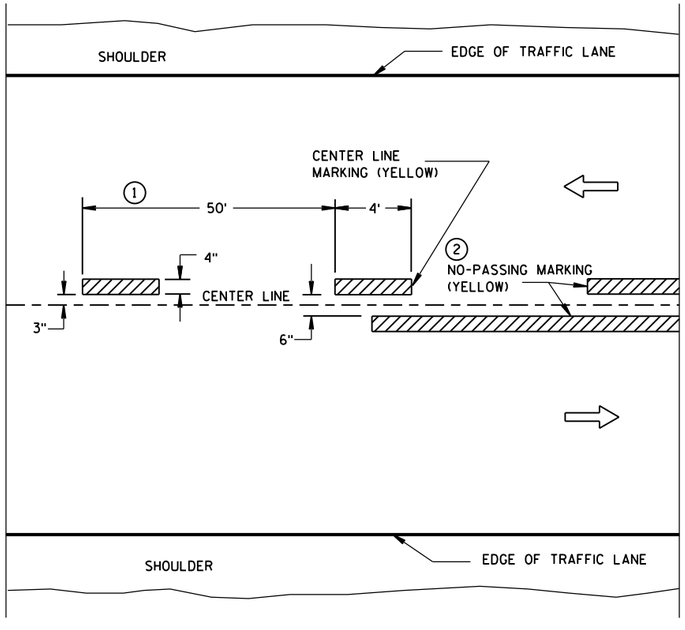


TWO WAY TRAFFIC

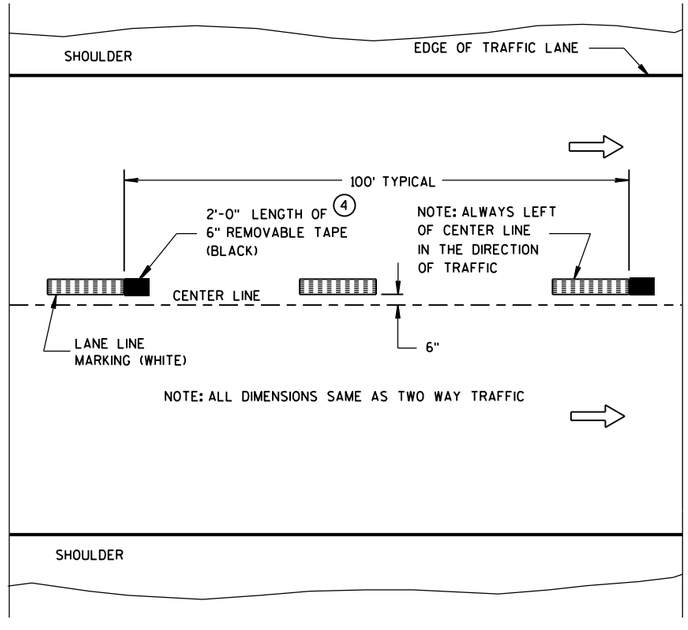


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

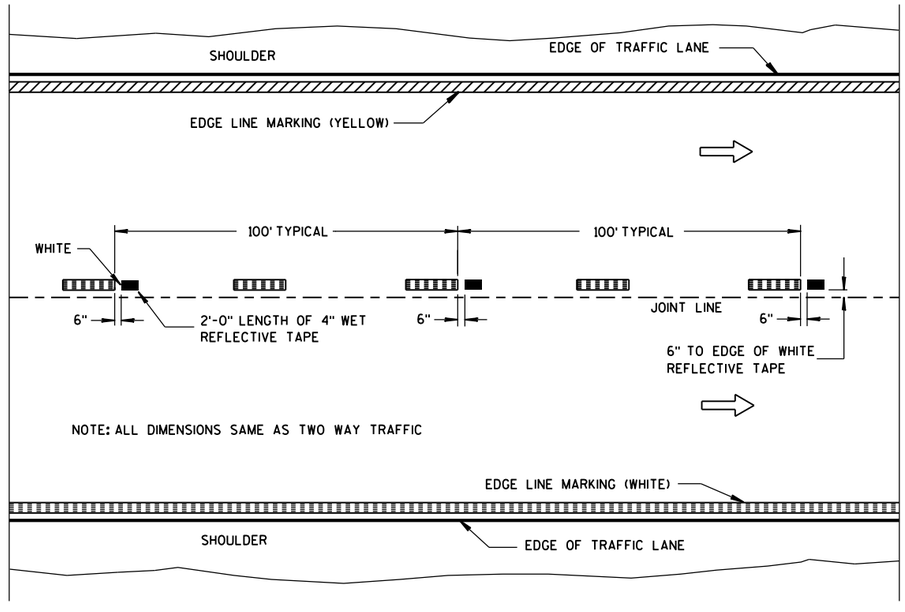
GENERAL NOTES

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

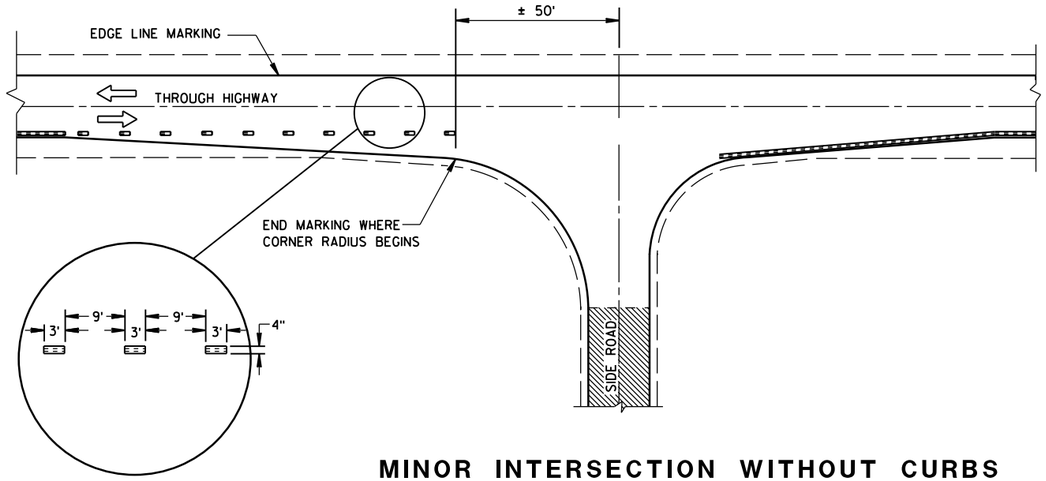
FHWA

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.

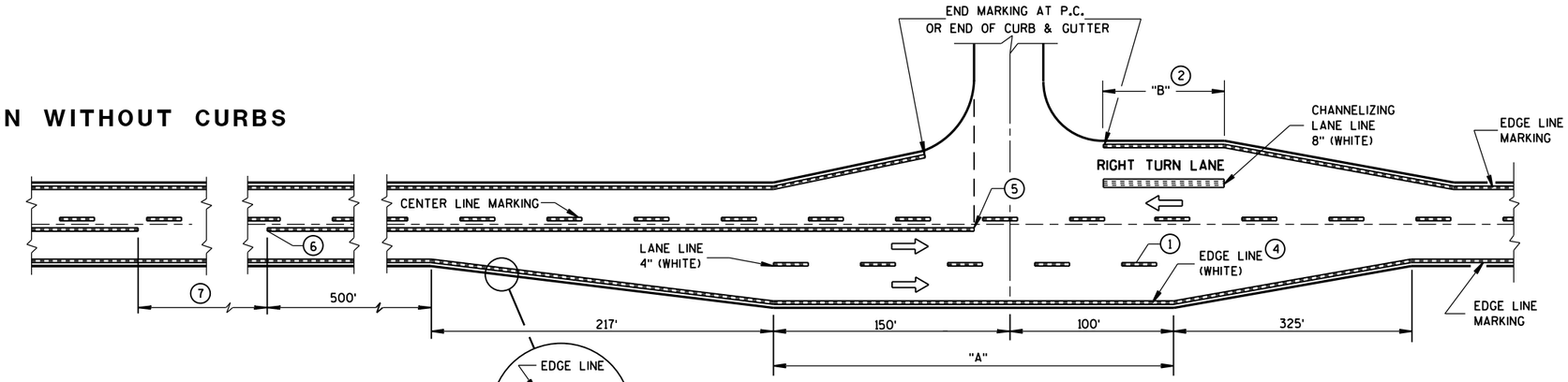
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

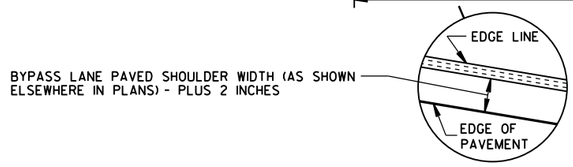
(8) 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

(7)

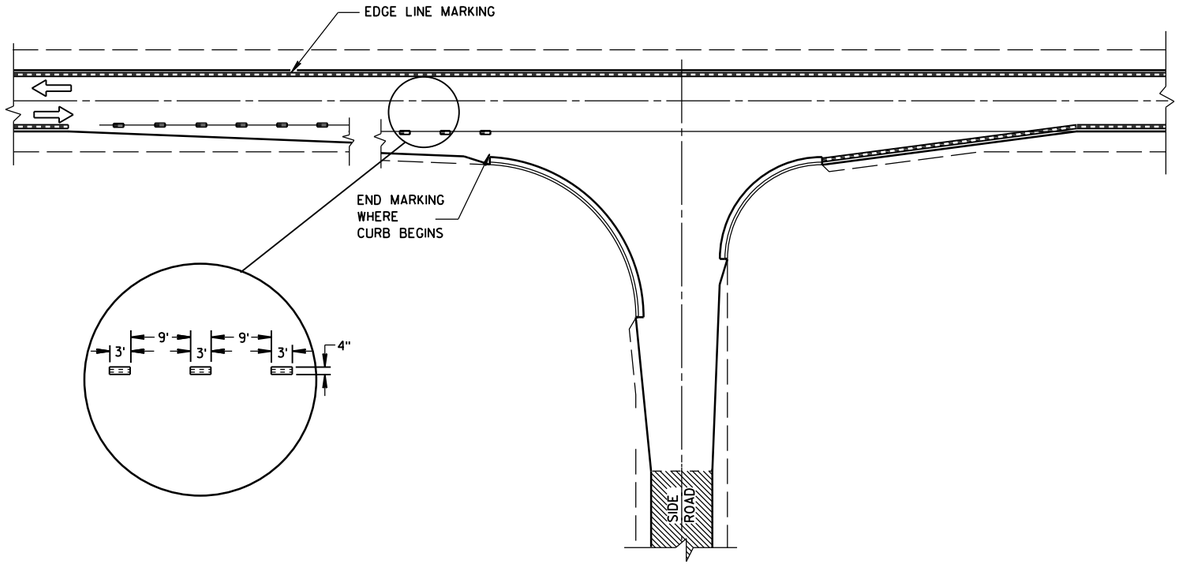
POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792





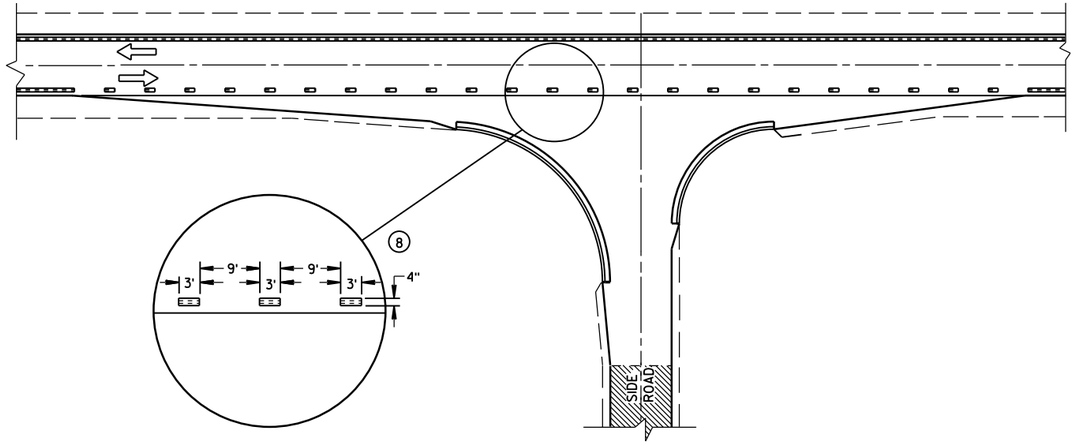
MAJOR INTERSECTIONS

(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)

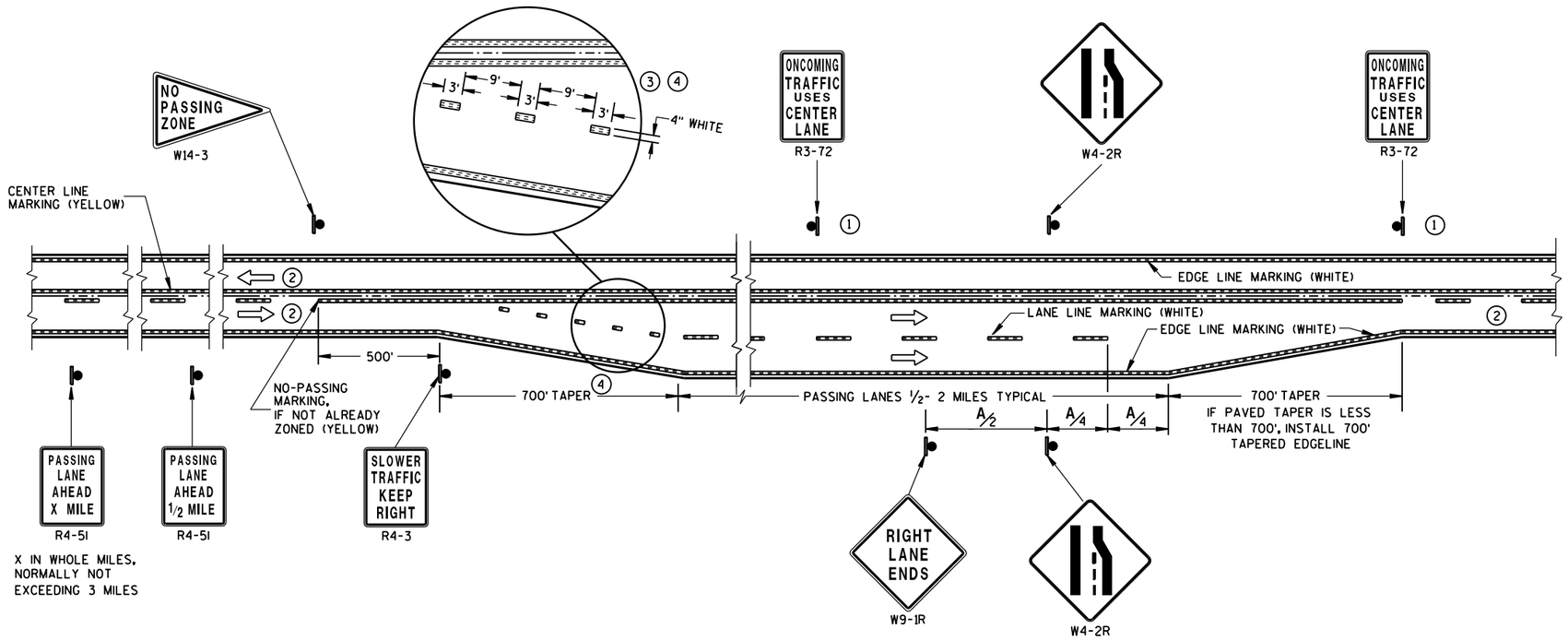
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

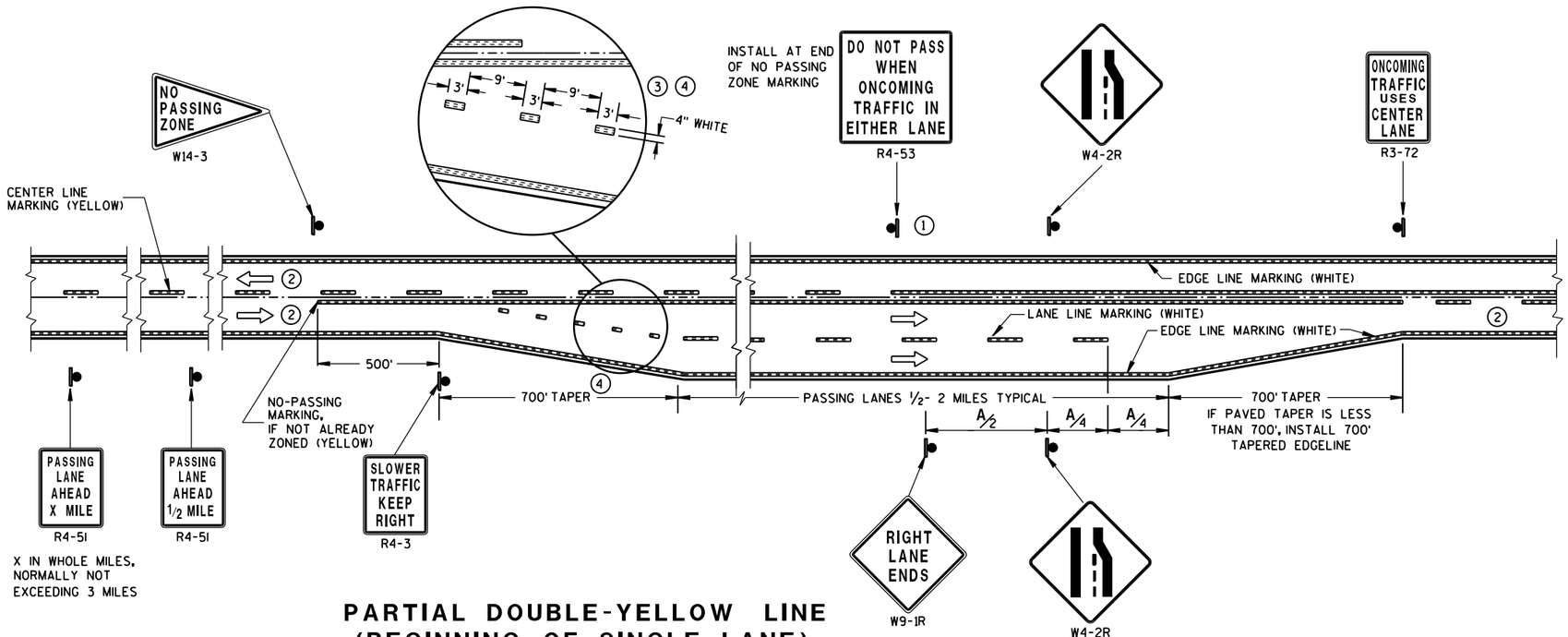
S.D.D. 15 C 8-16b

6

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



SOLID DOUBLE-YELLOW LINE
(THROUGHOUT ENTIRE PASSING/CLIMBING LANE)



PARTIAL DOUBLE-YELLOW LINE
(BEGINNING OF SINGLE LANE)

GENERAL NOTES

1. SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
2. THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
3. THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3'LINE 9'GAP, EXCEPT RETRACE THE EXISTING LINE-GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
4. WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING/CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	750
50	850
55	950

PAVEMENT MARKING & SIGNING (CLIMBING LANE & PASSING LANE)

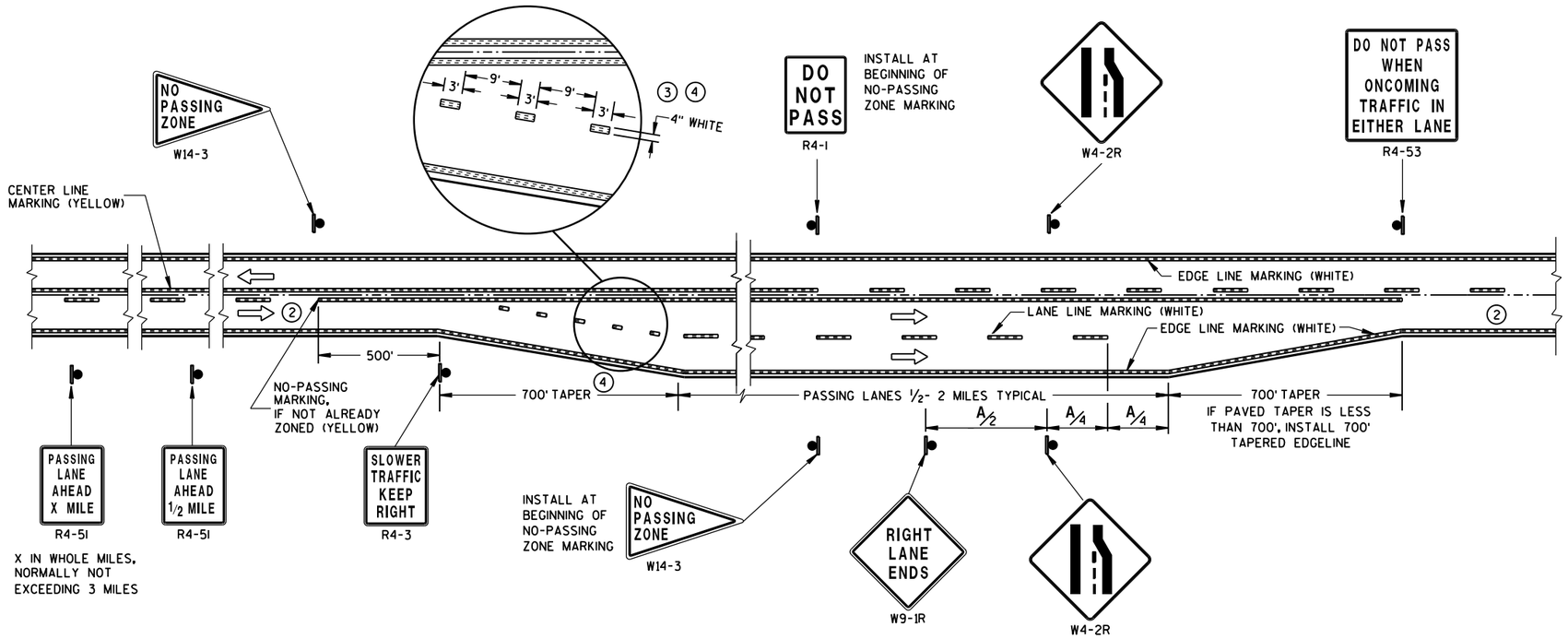
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

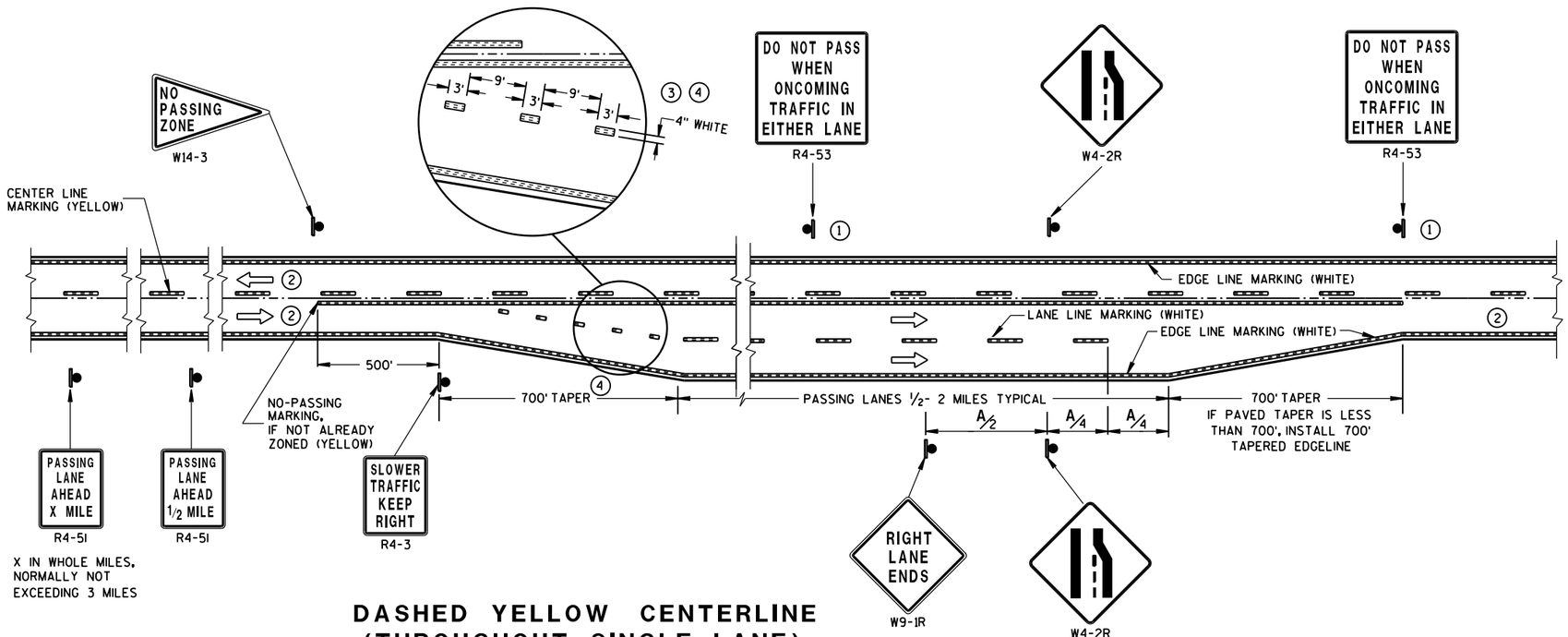
S.D.D. 15 C 8-16c

6

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



SOLID DOUBLE-YELLOW LINE (END OF SINGLE LANE)



DASHED YELLOW CENTERLINE (THROUGHOUT SINGLE LANE)

GENERAL NOTES

1. SIGN SHALL BE REPEATED AT 1/2 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
2. THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
3. THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3'LINE 9'GAP, EXCEPT RETRACE THE EXISTING LINE-GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
4. WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING/CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

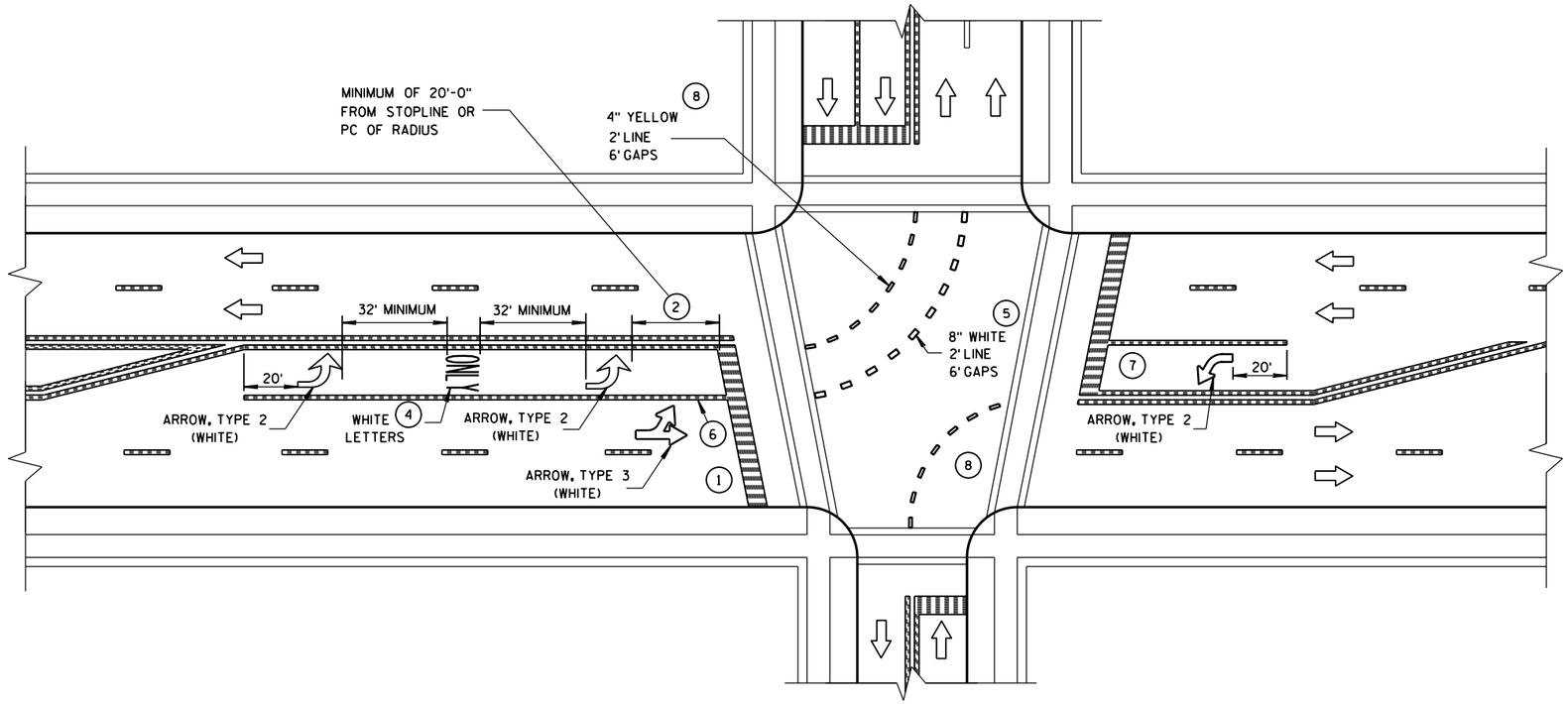
POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	750
50	850
55	950

PAVEMENT MARKING & SIGNING (CLIMBING LANE & PASSING LANE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

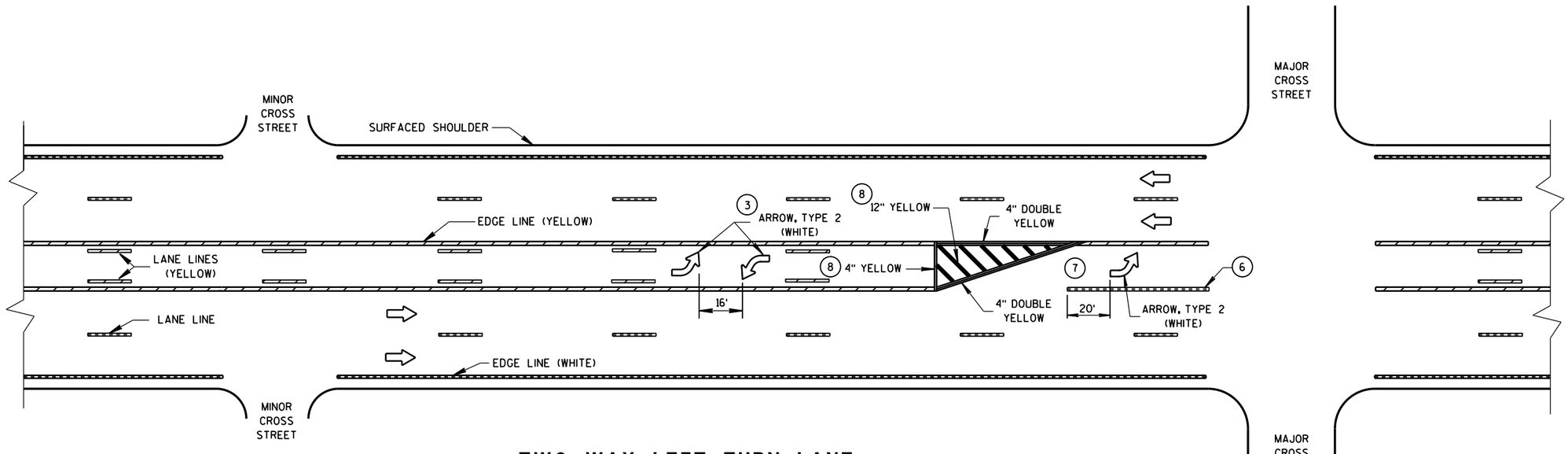
S.D.D. 15 C 8-16d



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



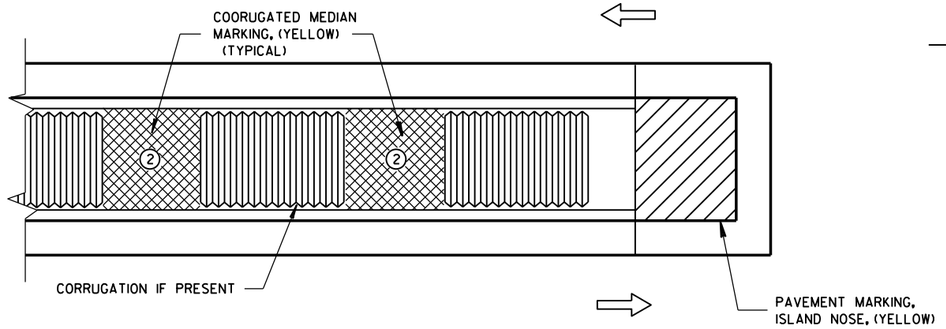
TWO WAY LEFT TURN LANE

PAVEMENT MARKING (LEFT TURN LANE)

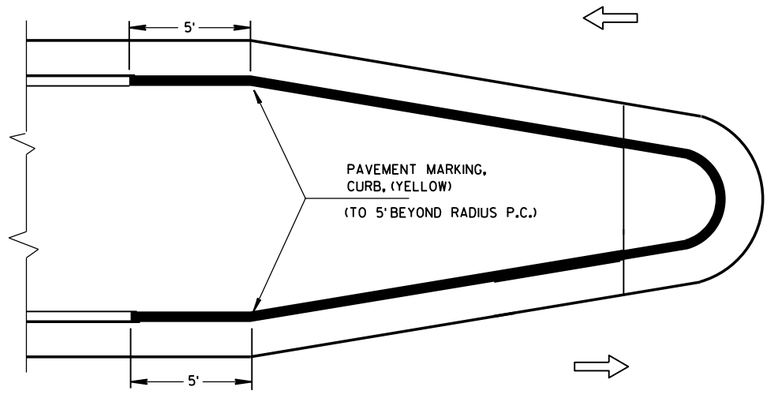
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

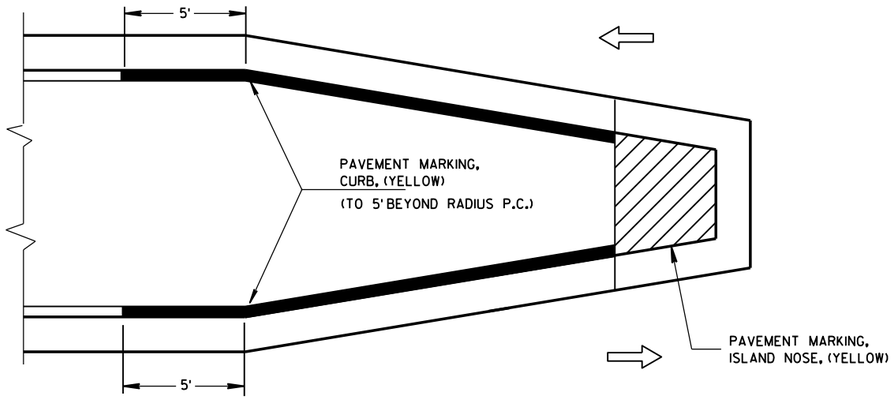
S.D.D. 15 C 8-16e



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

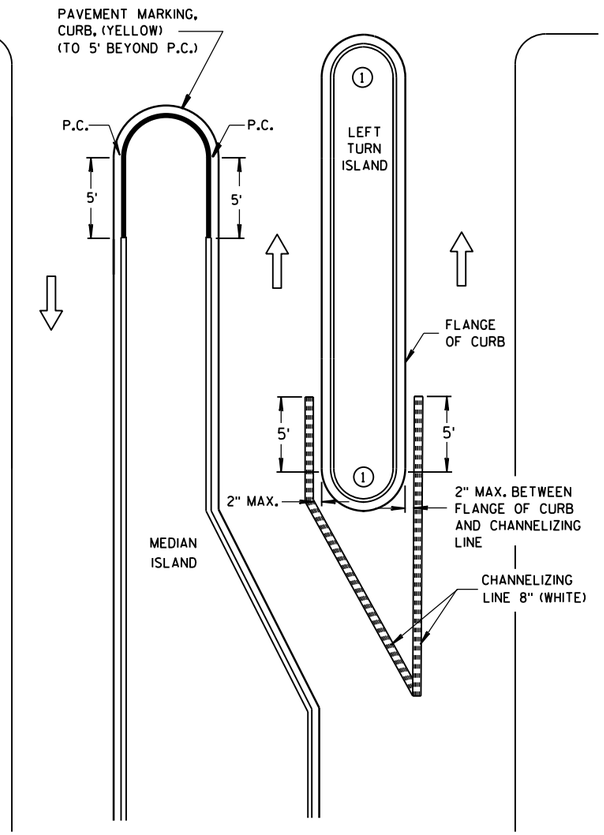


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

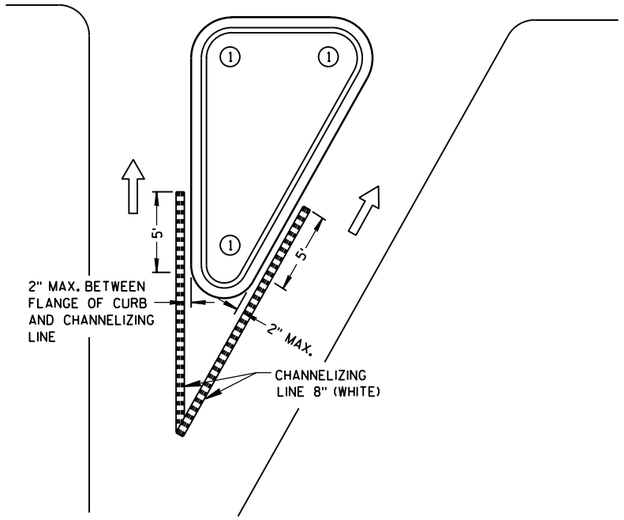


LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

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

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



RIGHT TURN ISLAND

LEGEND

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

PAVEMENT MARKING
(ISLANDS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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

6

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

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA

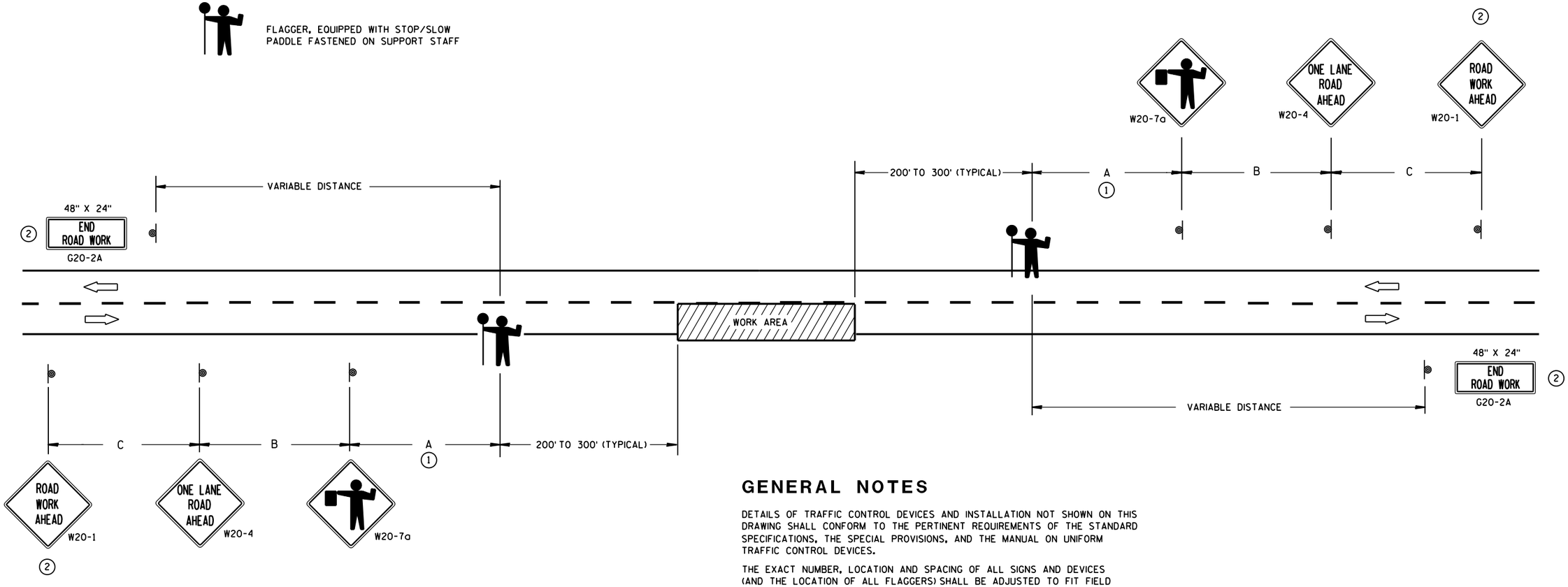
FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN SPACING TABLE

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

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

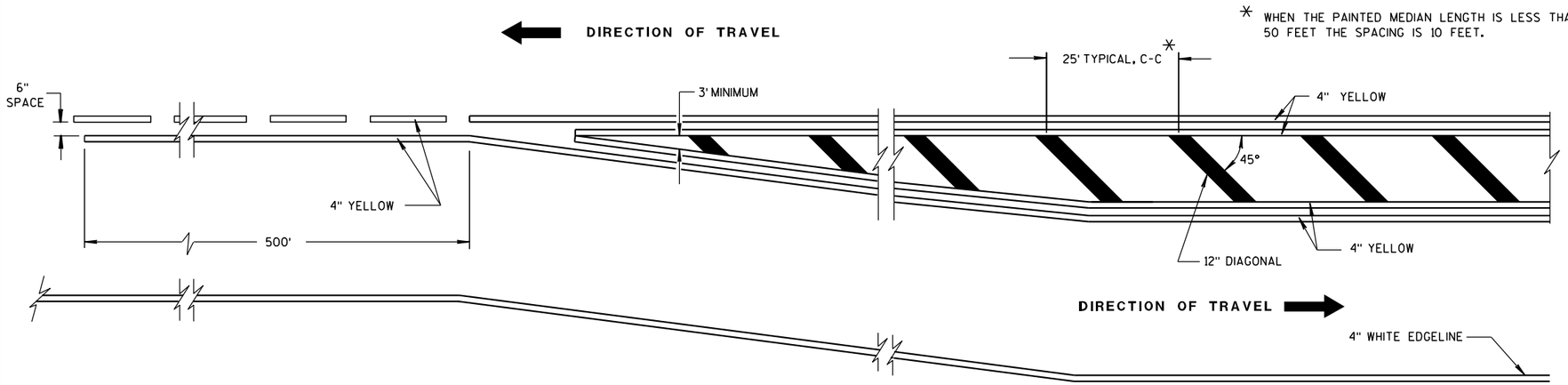
APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 C 12-4

6

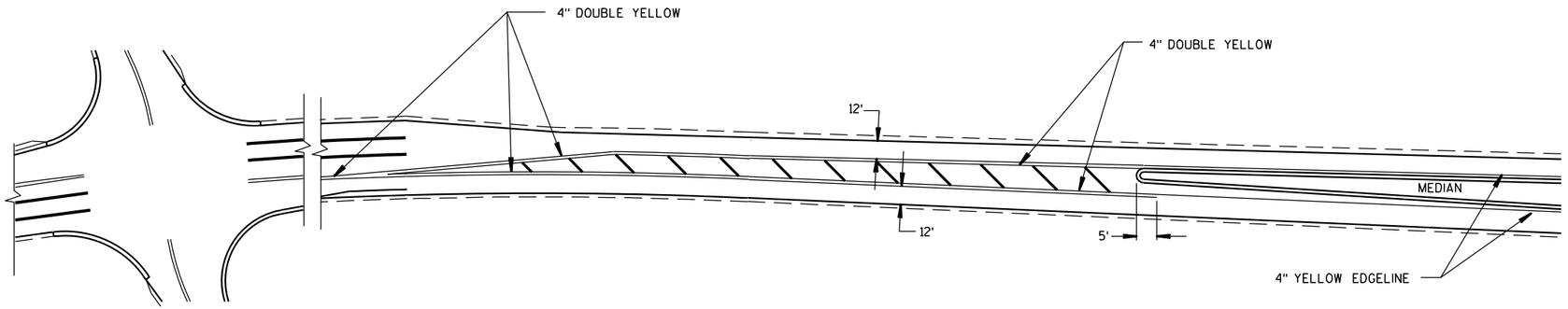
S.D.D. 15 C 12-4



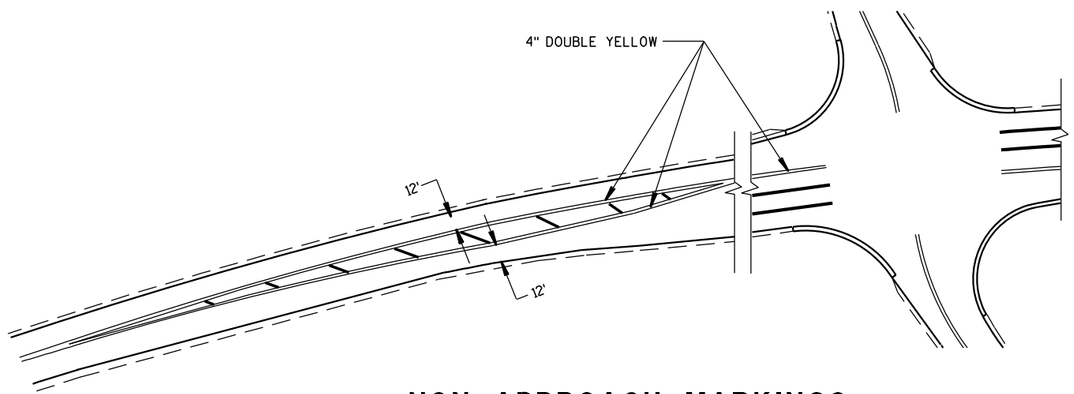
MEDIAN ISLAND DETAIL

GENERAL NOTE

DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT WIDEST POINT.



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON APPROACH MARKINGS

MEDIAN ISLAND MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 2-5-09 DATE	/S/ Thomas N. Nothohm STATE TRAFFIC ENGINEER
FHWA	

6

S.D.D. 15 C 18-3

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- REMOVING PAVEMENT MARKING
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA

W057-52
36"x24"

INSTALL ON EACH APPROACH AT THE CLOSEST INTERSECTION WITH A STATE OR COUNTY TRUNK HIGHWAY, OR AS DIRECTED BY THE ENGINEER. WIDTH ON SIGN TO BE APPROX. 1 FOOT LESS THAN AVAILABLE WIDTH (OMIT IF AVAILABLE WIDTH IS MORE THAN 16 FEET).

LOCATED 500 FEET IN ADVANCE OF R2-1 SIGN AND 500 FEET BEYOND THE "ROAD WORK 1 MILE" SIGN.

R2-1
48"x60"
(BLACK AND WHITE)

IF THE REGULATORY SPEED HAS BEEN REDUCED, A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. THERE SHOULD BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 2 OR 3 MILES.

* INCLUDE RESUME SPEED LIMIT SIGN A MINIMUM OF 200 FEET (500 FEET DESIRABLE) AFTER END ROAD WORK SIGNS.

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

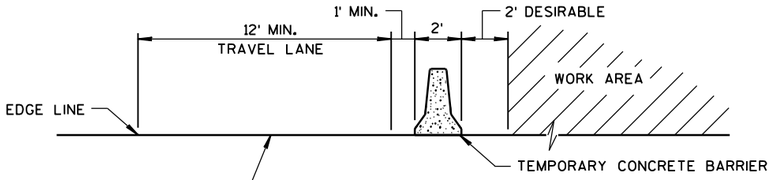
(1) CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUM TAPER.

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

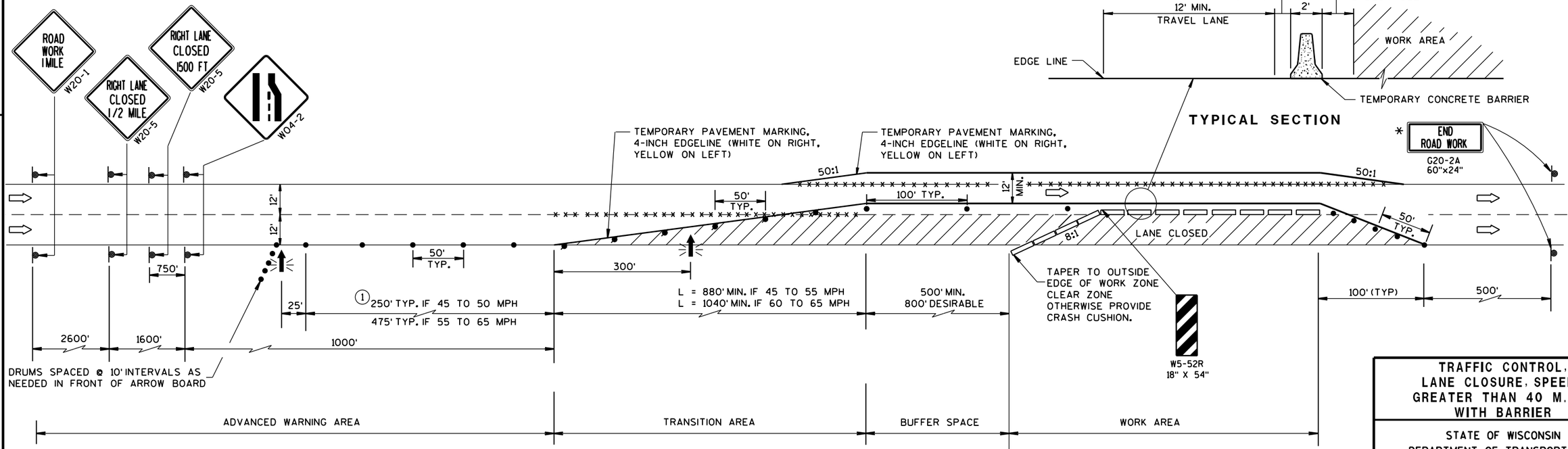
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

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



TYPICAL SECTION



TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. WITH BARRIER

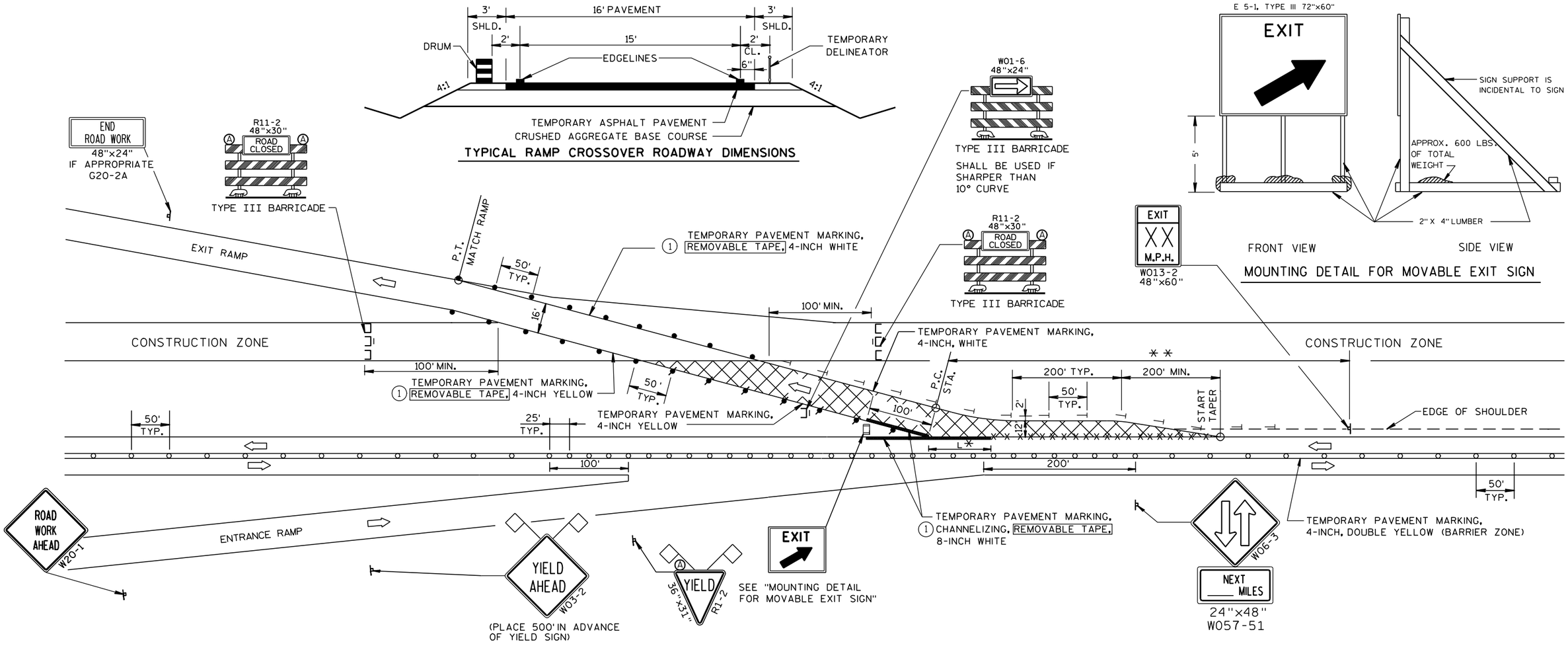
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

S.D.D. 15 D 3-2



LEGEND

- 8' TYPE III BARRICADE WITHOUT/WITH ATTACHED SIGN
- POST WITH ATTACHED SIGN
- DRUM WITH WARNING LIGHT (TYPE C)
- DRUM
- TEMPORARY DELINEATOR - WHITE (STEEL POST W/SINGLE DELINEATOR)
- (A) WARNING LIGHT, TYPE A
- TEMPORARY CROSSOVER ASPHALTIC PAVEMENT
- REMOVING PAVEMENT MARKINGS
- FLEXIBLE TUBULAR MARKER POST AND BASE
- FLAGS, 12" X 12", RED
- DIRECTION OF TRAFFIC

GENERAL NOTES :

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

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

(1) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE SHALL BE USED WHEN CROSSING PERMANENT ROADWAY SURFACES THAT WILL REMAIN AFTER USE OF CROSSOVER. OTHERWISE TEMPORARY PAVEMENT MARKING MAY BE USED.

TRAFFIC CONTROL FOR RAMP CROSSOVERS ARE TYPICAL FOR ALL CONSTRUCTION PHASES.

* LENGTH L SHALL BE REQUIRED WHEN TANGENT LENGTH OF EXIT RAMP PARALLEL TO MAINLINE EXCEEDS 300'. LENGTH SHALL BE EQUAL TO THE EXIT RAMP TANGENT LENGTH MINUS 300' OR AS APPROVED BY THE ENGINEER AND SHALL CHANGE TO ACCOMODATE PAVING GAPS.

** ADJUST EXIT RAMP SPEED AS NEEDED IN THE FIELD. DISTANCE TO SIGN LOCATION SHALL ALSO BE PLACED ACCORDING TO TABLE.

WORK ALONG EDGES OF RAMP SHALL MAINTAIN A 10 FOOT AREA CLEAR OF PHYSICAL OBSTRUCTIONS SUCH AS DROP OFFS FROM PAVEMENT REMOVAL OR BROKEN CONCRETE CHUNKS DURING PAVEMENT REMOVAL. THESE AREAS SHALL BE LEVELED WITH TEMPORARY FILL TO PROTECT THE TRAVELING PUBLIC WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE CROSSOVER.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

** TABLE FOR ADVANCE WARNING SIGN PLACEMENT DISTANCE

POSTED SPEED MPH	DESIRED SPEED AT CONDITION (MPH)				
	10	20	30	40	50
45	350	300	250		
50	425	400	325	225	
55	500	475	400	300	
60	575	550	500	400	300
65	650	625	575	500	375

TRAFFIC CONTROL, TEMPORARY EXIT RAMP CROSSOVER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

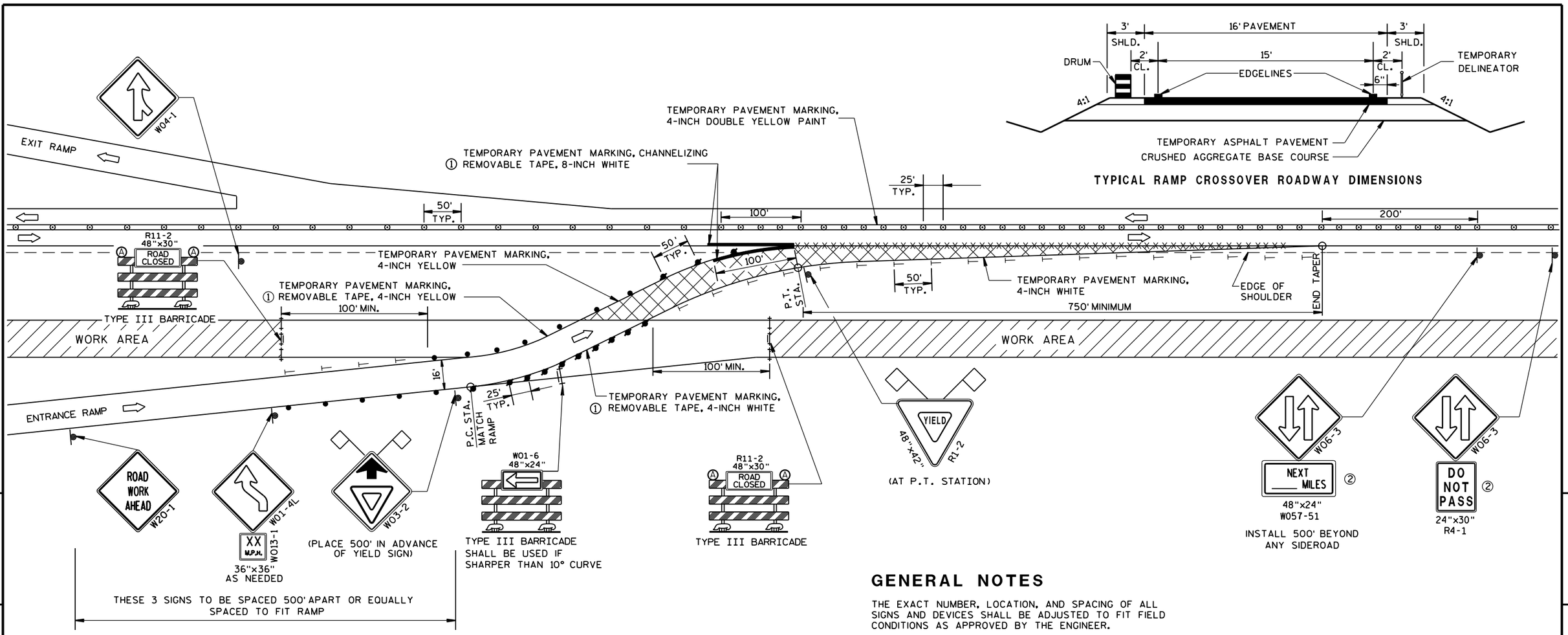
APPROVED
12-4-95 DATE
/S/ Chester J. [illegible]
DIRECTOR, OFFICE O 151 C
FHWA

6

S.D.D. 15 D 7-3

6

S.D.D. 15 D 7-3



TYPICAL RAMP CROSSOVER ROADWAY DIMENSIONS

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- TEMPORARY DELINEATOR - WHITE (STEEL POST W/SINGLE DELINEATOR) COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING
- Ⓐ TYPE "A" WARNING LIGHT (FLASHING)
- TEMPORARY CROSSOVER ASPHALTIC PAVEMENT
- ~~~~ REMOVING PAVEMENT MARKINGS
- ⊙ DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLAGS, 16" X 16" MIN., (ORANGE)
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

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

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

① TEMPORARY PAVEMENT MARKING REMOVABLE TAPE SHALL BE USED WHEN CROSSING PERMANENT ROADWAY SURFACES THAT WILL REMAIN AFTER USE OF CROSSOVER.

② INSTALL THE W06-3 SIGN WITH THE R4-1 SIGN 1000 FEET BEYOND THE W06-3 SIGN WITH THE W057-51 SIGN AND ALTERNATE THE SEQUENCE OF THESE SIGNS EVERY 1 MILE.

TRAFFIC CONTROL FOR RAMP CROSSOVERS ARE TYPICAL FOR ALL CONSTRUCTION PHASES.

WORK ALONG EDGES OF RAMP SHALL MAINTAIN A 10-FOOT AREA CLEAR OF PHYSICAL OBSTRUCTIONS SUCH AS DROP OFFS FROM PAVEMENT REMOVAL OR BROKEN CONCRETE CHUNKS DURING PAVEMENT REMOVAL. THESE AREAS SHALL BE LEVELED WITH TEMPORARY FILL TO PROTECT THE TRAVELING PUBLIC WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE CROSSOVER.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

TRAFFIC CONTROL, TEMPORARY ENTRANCE RAMP CROSSOVER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

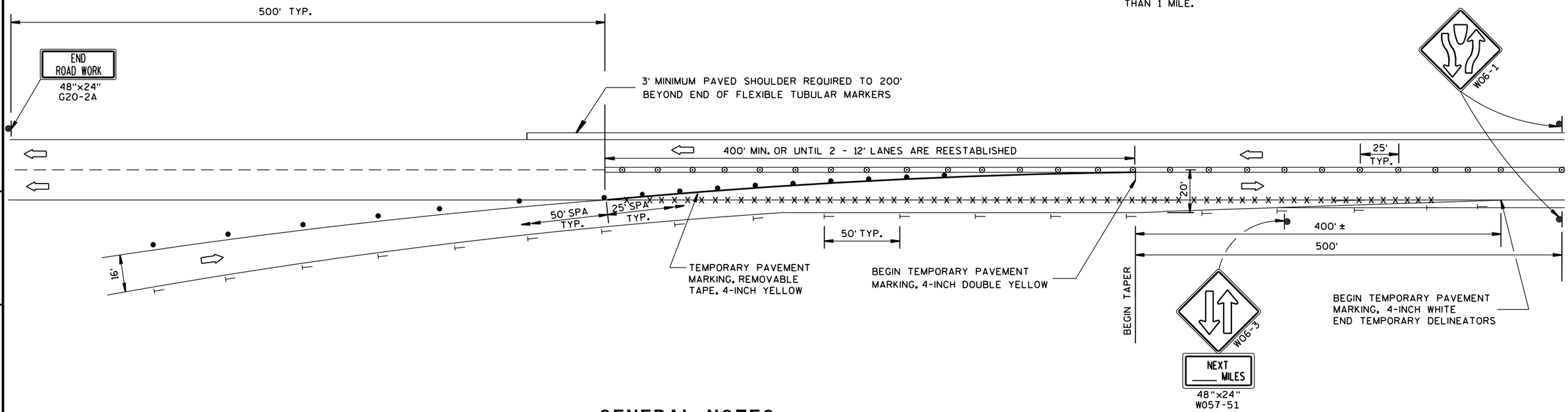
8/2013 DATE — /S/ Travis Feltes STATE TRAFFIC ENGINEER — SIGN

FHWA

S.D.D. 15 D 8-4

LEGEND

- SIGN ON PERMANEMT SUPPORT
- TRAFFIC CONTROL DRUM
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- TEMPORARY DELINEATOR (STEEL POST W/SINGLE DELINEATOR) COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING
- REMOVE PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC



24"x30"
R4-1

REPEAT EVERY 1/4 MILE IF PROJECT IS LONGER THAN 1 MILE.

GENERAL NOTES

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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

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

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE SHALL BE USED WHEN CROSSING PERMANENT ROADWAY SURFACES THAT WILL REMAIN AFTER USE OF CROSSOVER.

TRAFFIC CONTROL, SINGLE LANE CROSSOVER EXIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

6

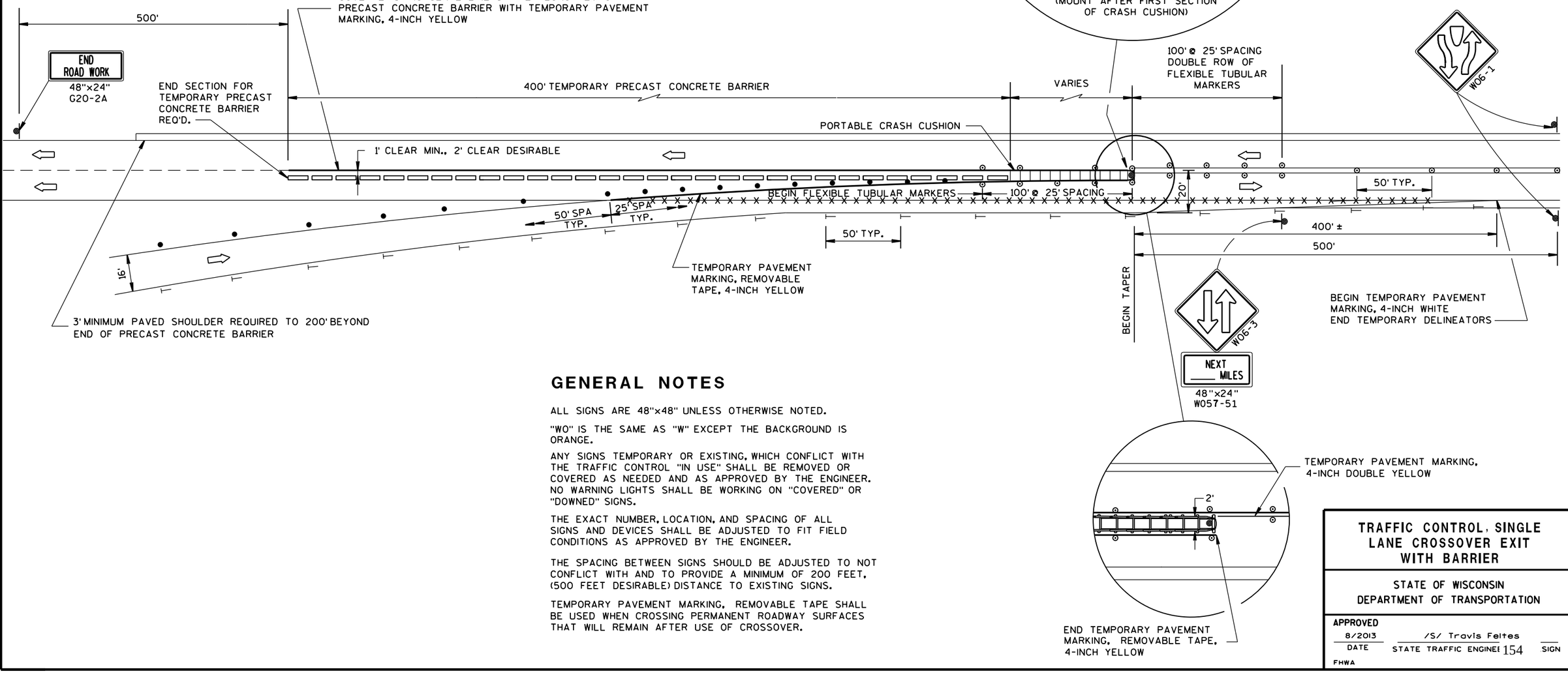
S.D.D. 15 D 9-3

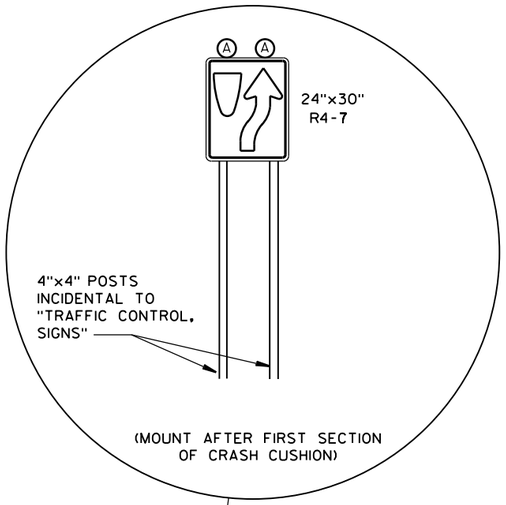
6

S.D.D. 15 D 9-3

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- TEMPORARY DELINEATOR (STEEL POST W/SINGLE DELINEATOR) COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- PORTABLE CRASH CUSHION
- CONCRETE BARRIER TEMPORARY PRECAST
- ~~XXXX~~ REMOVE PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC





GENERAL NOTES

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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

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

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE SHALL BE USED WHEN CROSSING PERMANENT ROADWAY SURFACES THAT WILL REMAIN AFTER USE OF CROSSOVER.

TRAFFIC CONTROL, SINGLE LANE CROSSOVER EXIT WITH BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 DATE

/S/ Travis Feltes STATE TRAFFIC ENGINEER

SIGN

FHWA

6

S.D.D. 15 D 10-3

LEGEND

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

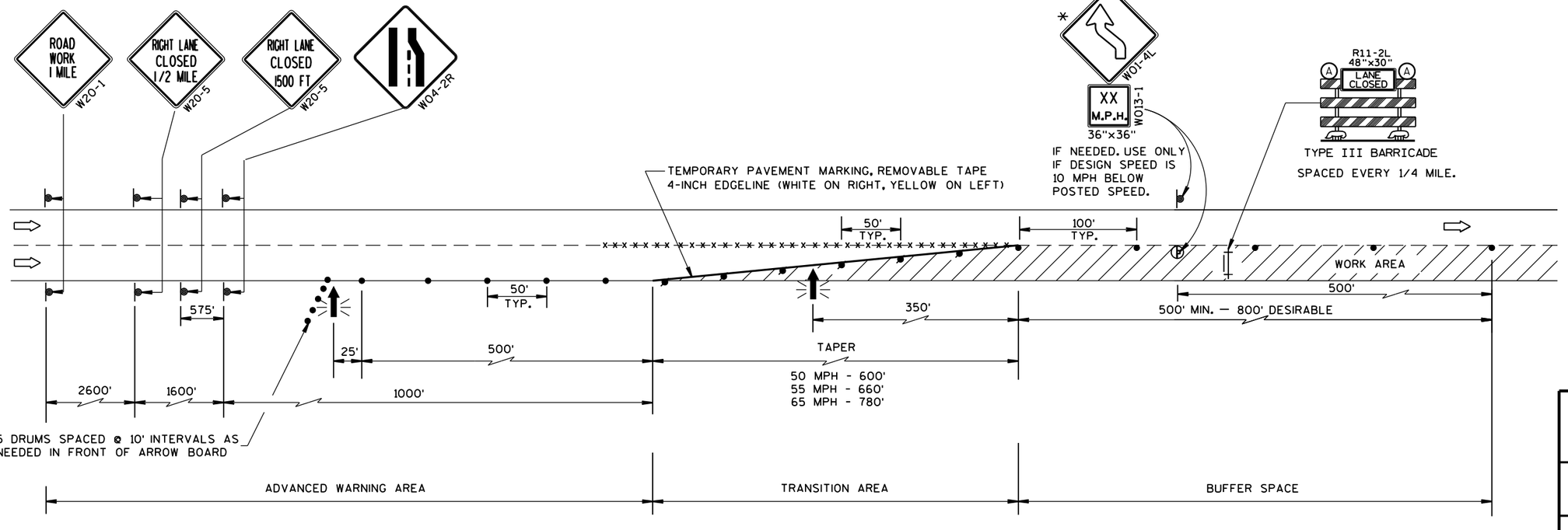
ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN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

* THE LEFT REVERSE CURVE SIGN (W01-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.

LOCATED 500 FEET IN ADVANCE OF R2-1 SIGN AND 500 FEET BEYOND THE "ROAD WORK 1 MILE" SIGN.

R2-1
48"×60"
(BLACK AND WHITE)

IF THE REGULATORY SPEED HAS BEEN REDUCED, A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. THERE SHOULD BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 2 OR 3 MILES.



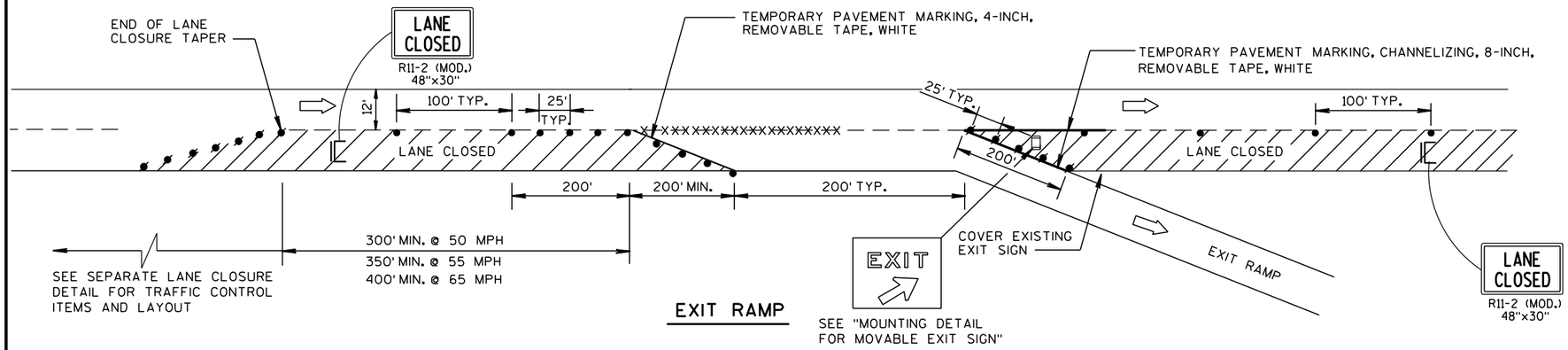
TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

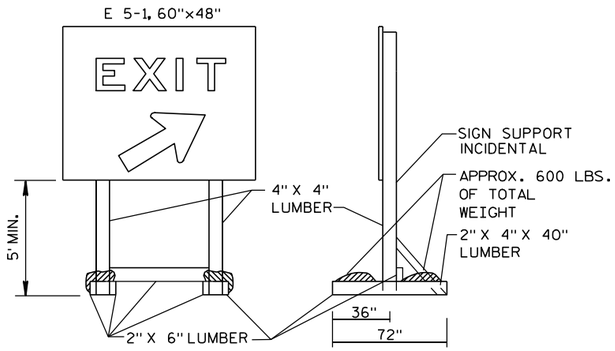
APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 D 12-3

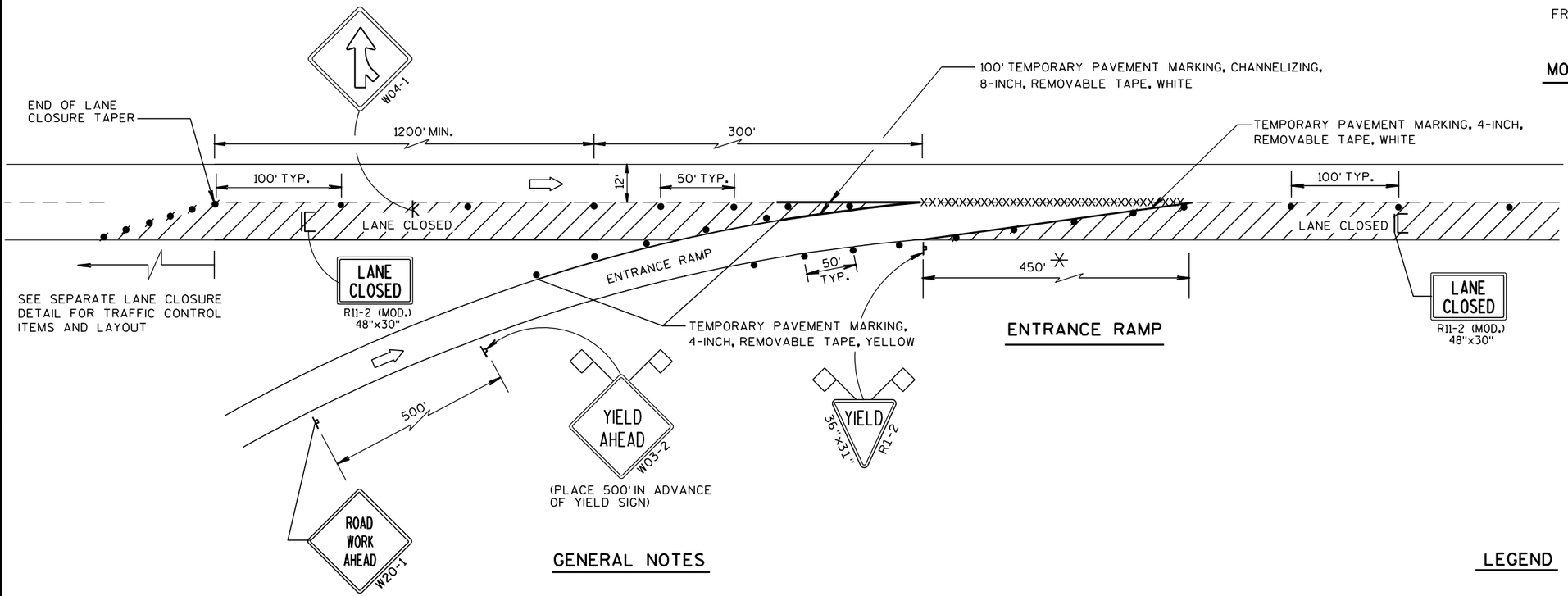


EXIT RAMP



NOTE: ALL LUMBER DIMENSIONS ARE NOMINAL

MOUNTING DETAIL FOR MOVABLE EXIT SIGN



ENTRANCE RAMP

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

THE SPACING BETWEEN 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.

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2 (MOD.) "LANE CLOSED" SIGNS.

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

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

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 7 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

✳ LENGTH OF OPENING MAY BE REDUCED TO 150 FEET DURING STAGING OF WORK IN IMMEDIATE AREA OF RAMP TAPER.

LEGEND

- POST MOUNTED SIGN
- SIGN ON PORTABLE SUPPORT
- TRAFFIC CONTROL, DRUM
- TRAFFIC CONTROL, DRUM WITH WARNING LIGHT, TYPE C (STEADY-BURN)
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- TYPE III BARRICADE (8' EQUIVALENT) WITH SIGN
- FLAGS, 16"x16" MIN., ORANGE
- DIRECTION OF TRAFFIC FLOW

TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE

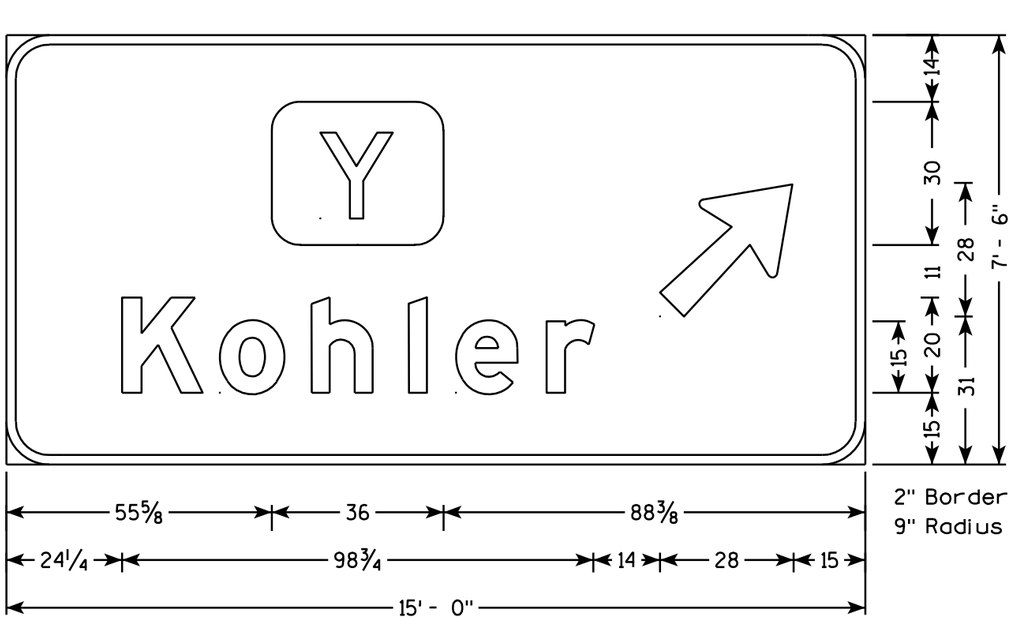
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/24/2000
DATE
/S/ Chester J. [illegible]
CHIEF SIGNS AND MARKINGS ENGINEER
FHWA

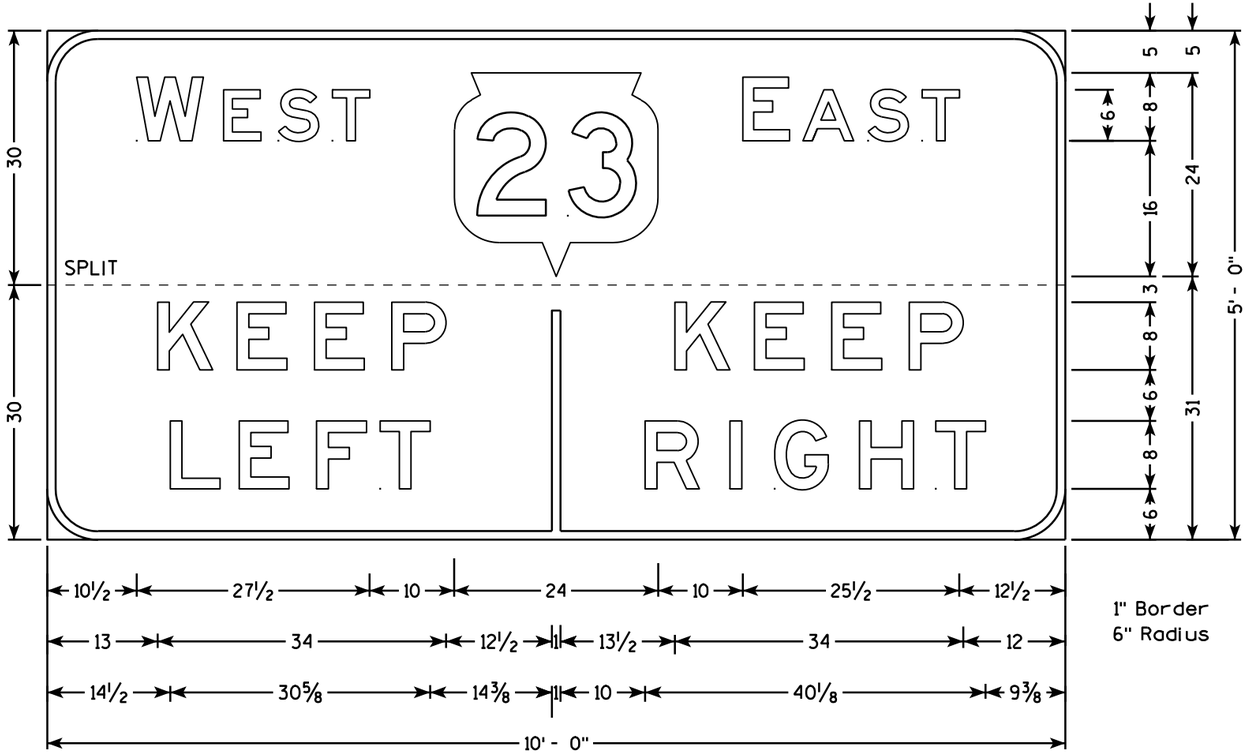
6
S.D.D. 15 D 15-1

NOTES

1. Sign is Type I - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White
3. Message Series - E Modified



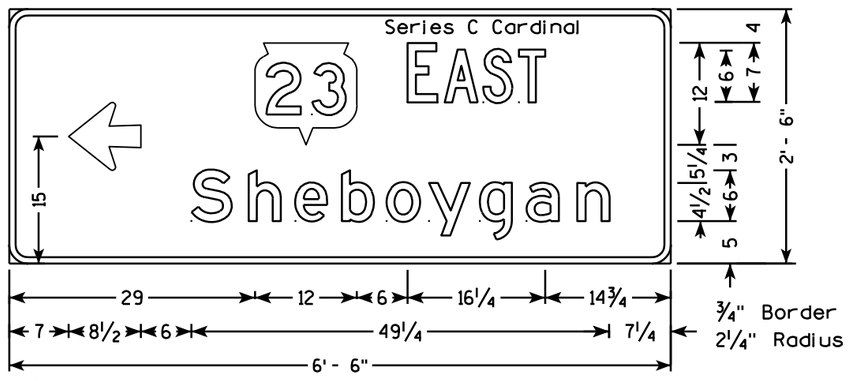
PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: Sheboygan	PERMANENT SIGNING	SHEET NO: 157	E



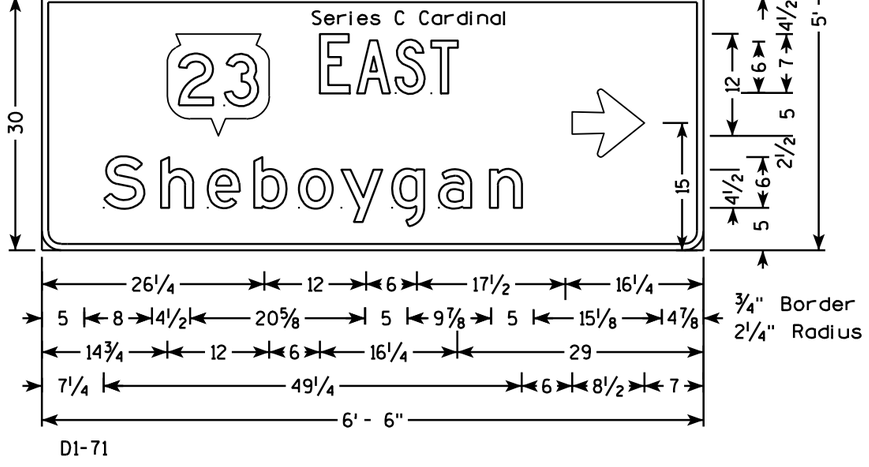
D1-72

NOTES

1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - GREEN
   Message - WHITE
3. Message Series - E



D1-70



D1-71

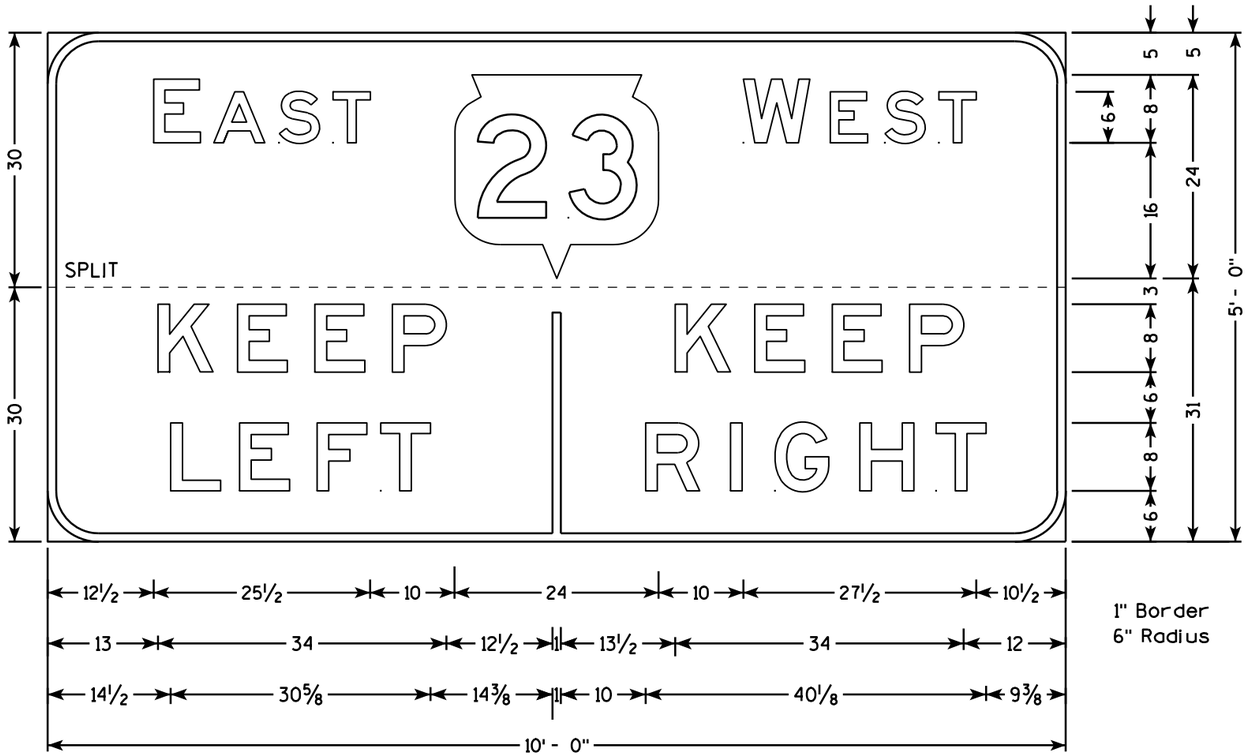
7

7

PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PERMANENT SIGNING	SHEET NO: 158	E

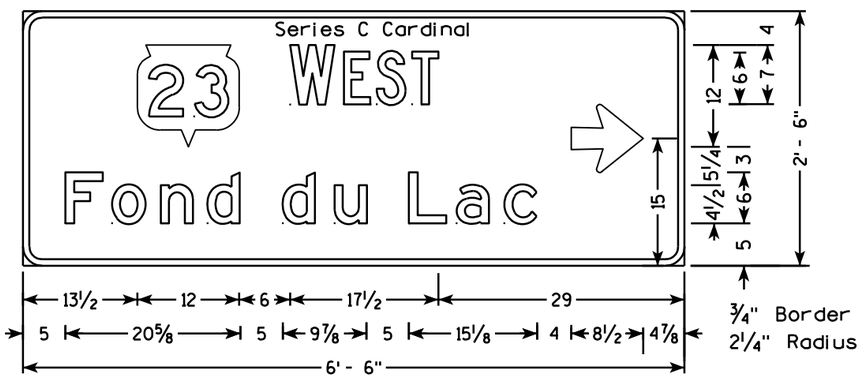
NOTES

1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - GREEN
   Message - WHITE
3. Message Series - E



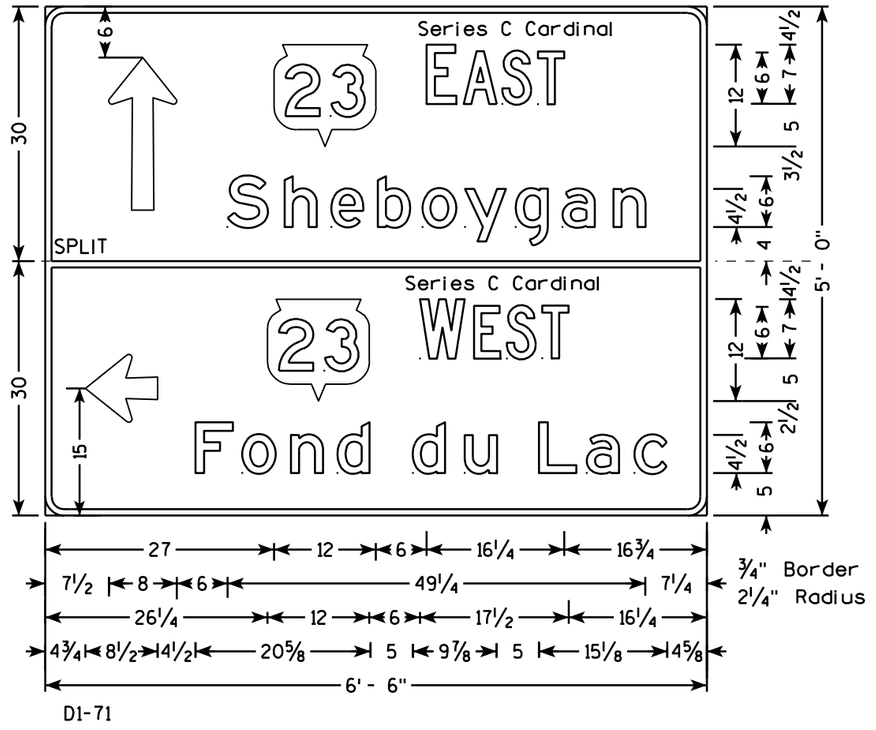
1" Border
6" Radius

D1-72



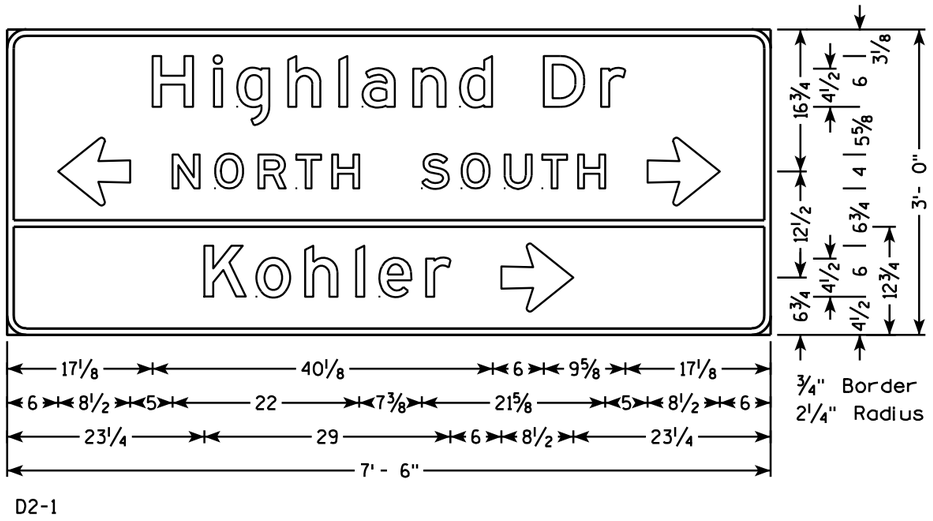
¾" Border
2¼" Radius

D1-70

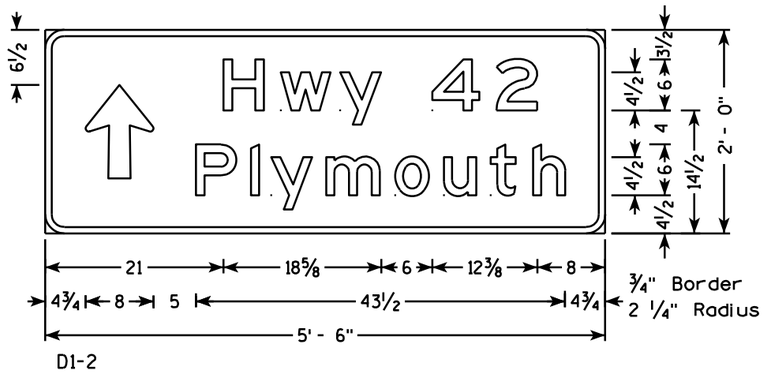


¾" Border
2¼" Radius

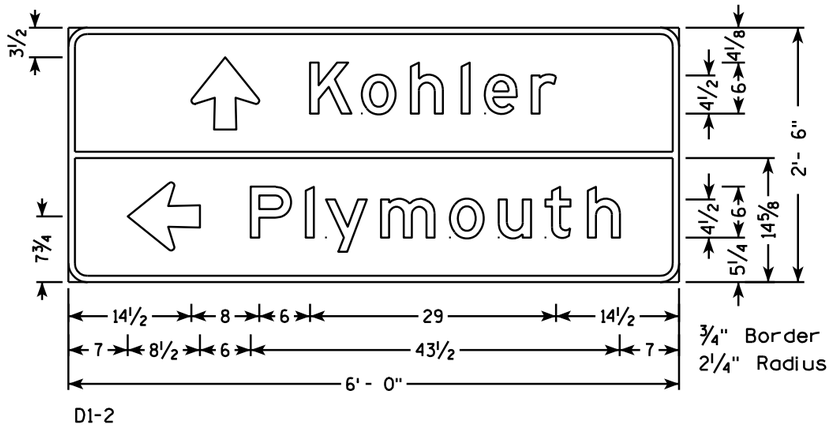
D1-71



D2-1



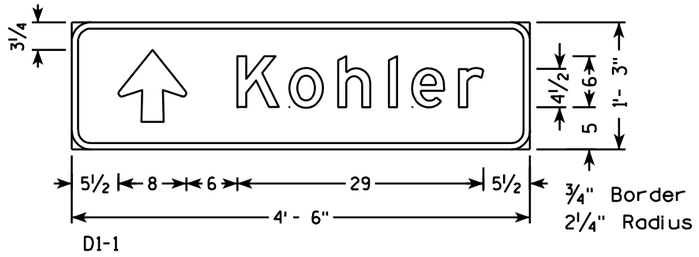
D1-2



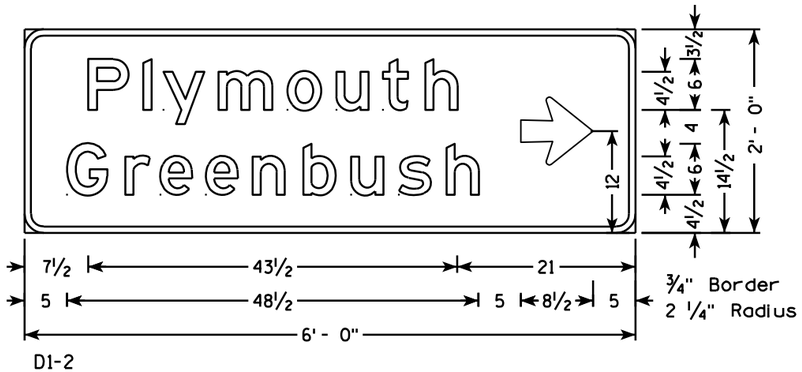
D1-2

NOTES

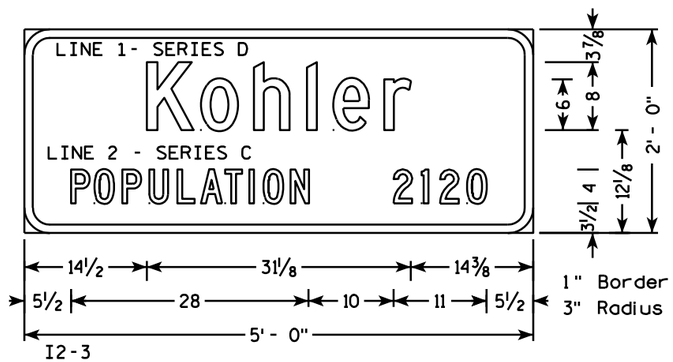
1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - GREEN
   Message - WHITE
3. Message Series - E except as Shown



D1-1



D1-2



I2-3

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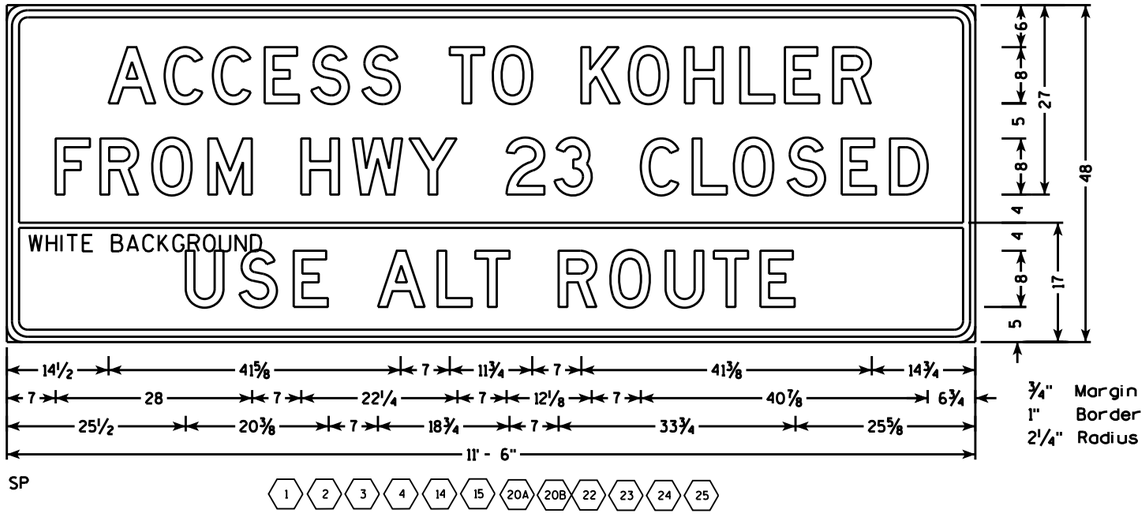
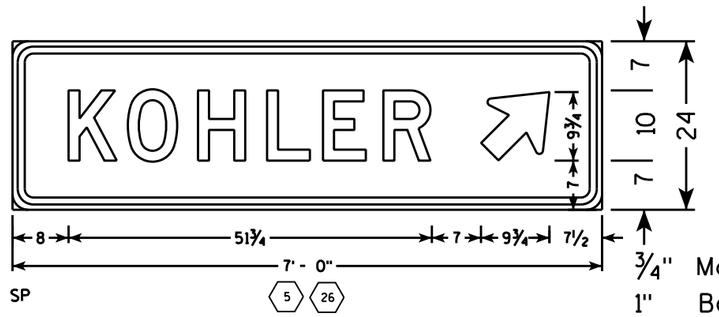
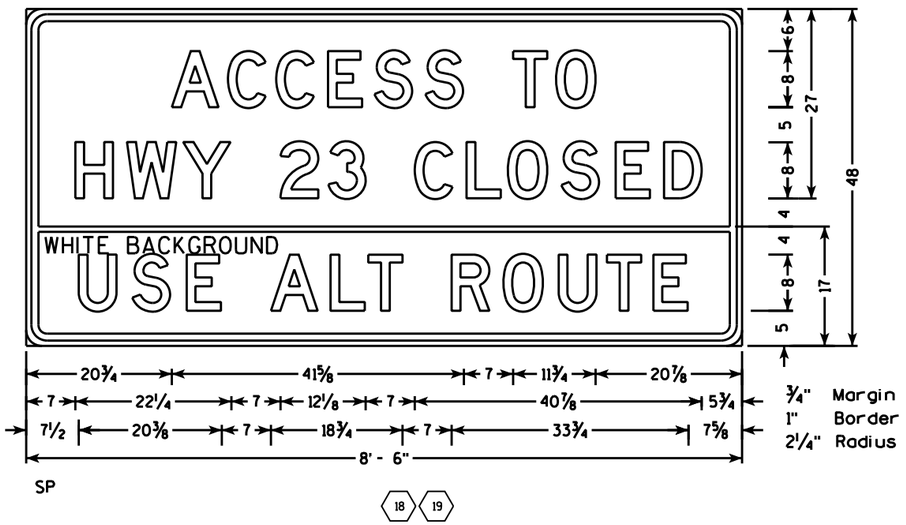
PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	PERMANENT SIGNING	SHEET NO: 160	E

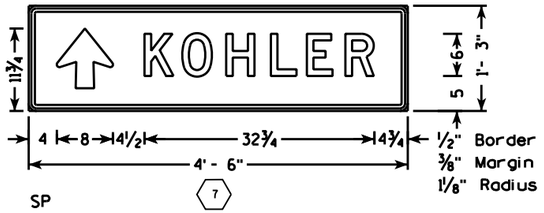


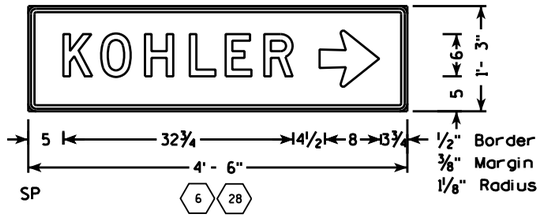
NOTES

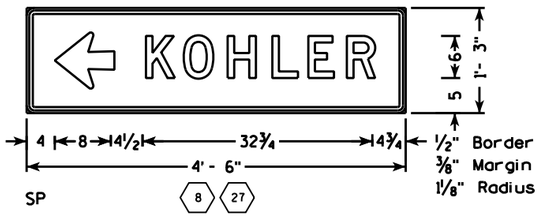
1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - ORANGE except as Shown
   Message - BLACK
3. Message Series - D









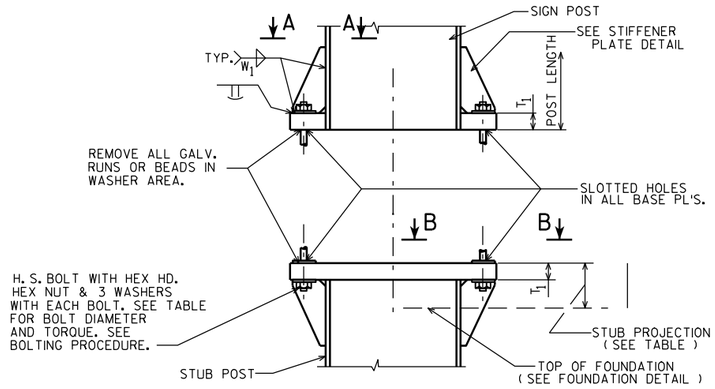


PLAN SHEET PRODUCED
BY WisDOT-NE REGION

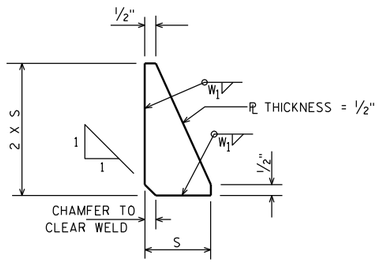
7

7

PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	TEMPORARY SIGNING	SHEET NO: 161	E

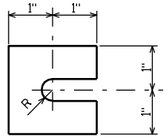


SIGN POST AND STUB POST ELEVATION



STIFFENER PLATE DETAIL

(SEE TABLE FOR DIMENSIONS)



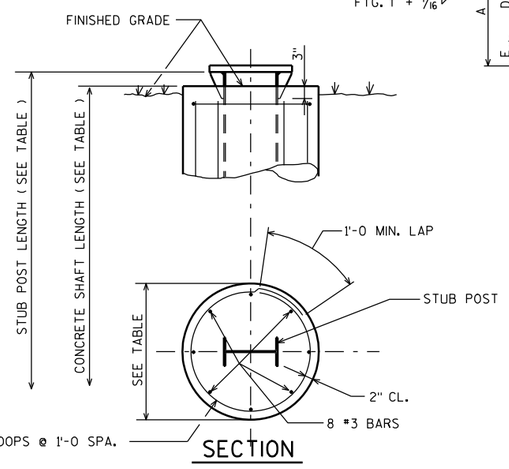
FURNISH 2 @ .012" ± THICK AND 2 @ .032" ± THICK SHIMS PER POST. SHIMS SHALL BE FABRICATED FROM BRASS SHIM STOCK OR STRIP CONFORMING TO A.S.T.M.- B36.

SHIM DETAIL

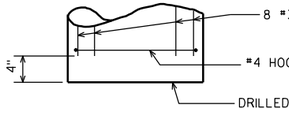
POST DETAIL

	QUANTITIES FOR 1 FOOTING	
	CONC. MASONRY C.Y.	REINF. STEEL LBS.
A	0.6	34
B	0.8	49
C	0.9	50
D	0.9	56
⑦ E	1.0	62

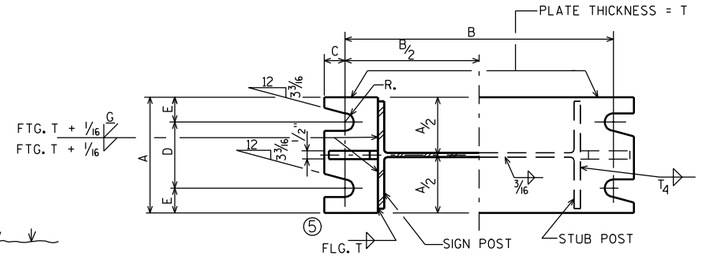
REINF.	TYPE	#3	#4
	A	8 @ 4'-5	5 @ 6'-3
	B	8 @ 6'-5	7 @ 6'-3
	C	8 @ 6'-11	7 @ 6'-3
	D	8 @ 7'-5	8 @ 6'-3
⑦	E	8 @ 7'-11	9 @ 6'-3



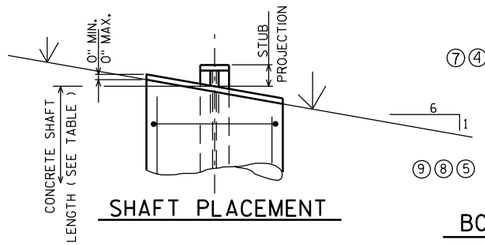
SECTION



FOUNDATION DETAIL



SECTION A-A SECTION B-B



SHAFT PLACEMENT

DESIGN DATA

WIND PRESSURE = 75 M.P.H.
WIND COMPONENTS - NORMAL = 1.0 TRANSVERSE = 0.0
ICE LOAD = 3 P.S.F.

GROUP LOADS	PERCENT OF ALLOWABLE STRESS
1. DEAD	100
2. DEAD & WIND	140
3. DEAD, ICE & 1/2 WIND△	140 △25 P.S.F. MIN.

ALLOWABLE SOIL PRESSURE = 1½T / SQ. FT.
WIND LOAD WAS APPLIED TO THE AREA OF THE SIGN AND TO THE SUPPORTING MEMBERS.
ICE LOAD WAS APPLIED TO ONE FACE OF THE SIGN AND AROUND THE SURFACE OF THE SUPPORTING MEMBERS.

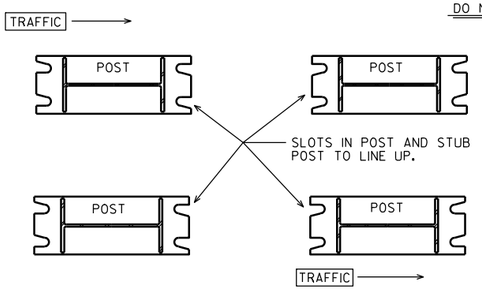
GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
DESIGN CONFORMS WITH A.A.S.H.T.O. SPECIFICATIONS 1985.
ALL POSTS, POST STUBS & ATTACHMENTS SHALL BE A.S.T.M. A709 GRADE 50.
⑨ THE POST, BASE PLATES, UPPER SIX INCHES OF STUB POST FLANGE SPLICE PLATE AND FUSE PLATE SHALL BE GALVANIZED AFTER FABRICATION.
H.S. BOLTS, WASHERS & NUTS SHALL BE A325 GALVANIZED WHEN POSTS, POST STUBS AND ATTACHMENTS ARE A709 GRADE 50 AND GALVANIZED.

BOLTING PROCEDURE - BASE CONNECTION

1. ASSEMBLE SIGN POST TO STUB POST WITH BOLTS AND ONE OF THE FLAT WASHERS ON EACH BOLT BETW. PLATES.
2. SHIM AS REQ'D. TO PLUMB POST.
3. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE WITH 12" OR 15" WRENCH TO BED WASHERS & SHIMS AND TO CLEAN BOLT THREADS, THEN LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE. (SEE TABLE)
4. BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

NOTE:
TIGHTEN THE HIGH STRENGTH BOLTS TO THE TORQUE SHOWN. DO NOT OVERTIGHTEN.



POST SLOT ORIENTATION ⑦

		BASE CONNECTION DATA TABLE											FOUNDATION DATA				②
	TYPE	DIMENSION / POST SIZE	BOLT SIZE & TORQUE	A	B	C	D	E	T_1	T_4	W_1	R	S	STUB LENGTH	STUB PROJECTION	SHAFT DIAMETER	SHAFT LENGTH	K
④	A	W10"X12.0 #/FT.	3/4" ℄ @ 75#-FT.	5 1/4"	1'-0 3/8	7/8"	3 1/2"	7/8"	1"	3/16"	5/16"	13/32 "	2 1/8"	3'-6	3"	2'-0 ℄	5'-0	76.0# ④
④	B	W12"X16.0 #/FT.	7/8" ℄ @ 85#-FT.	5 1/2"	1'-4 1/4	1"	3 1/2"	1"	1 1/4"	1/4"	5/16"	15/32 "	3"	5'-6	3"	2'-0 ℄	7'-0	146.5# ④
	C	W12"X19.0 #/FT.	7/8" ℄ @ 85#-FT.	5 1/2"	1'-4 1/4	1"	3 1/2"	1"	1 1/2"	5/16"	5/16"	15/32 "	3"	6'-0	3"	2'-0 ℄	7'-6	182.1#
	D	W12"X22.0 #/FT.	7/8" ℄ @ 85#-FT.	5 1/2"	1'-4 1/4	1"	3 1/2"	1"	1 1/2"	3/8"	5/16"	15/32 "	3"	6'-6	3"	2'-0 ℄	8'-0	210.5#
③	E	W12"X26.0 #/FT.	1" ℄ @ 90#-FT.	7"	1'-4 1/4	1 1/4"	4"	1 1/2"	1 1/2"	3/8"	5/16"	17/32 "	3"	7'-0	3"	2'-0 ℄	8'-6	293.0# ③

① ⑥ ①

STRUCTURAL CARBON STEEL PAY WTS. (1 POST) = K+ (POST LENGTH X POST WT.)
" K " INCLUDES STUB, BASE PLATES, STIFFS., BOLTS, AND WASHERS.

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer
DATE 4/26/11 PLATE NO. A3-1.13

NO.	DATE	REVISION
⑨	4-26-11	REMOVE NON-GALVANIZED
⑧	10-30-96	NOT GALVANIZED/GALVANIZED
⑦	10-30-92	QUANT., A588 EXCEPT., ADD SLOT VIEW
⑥	8-24-87	BASE CONN. WELD
⑤	10-13-81	BASE CONN. WELD & FUSE ℄ WASHERS
④	10-19-79	POST A & B, A572 GR. 50, & K
②	11-28-78	"K" ③ 4-23-79 TYPE "E"
①	5-4-78	T_1 , T_2 & W_1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

TYPE A, B, C, D, & E

CONST. SPEC. 2011 | DRAWN BY JPH | PLANS CK'D.

FTG. & SIGN SUPPORT DETAILS GROUND MOUNT BREAK-AWAY SIGNS

SHEET

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 162 | E

VERITCAL DIMENSION ⇨

HORIZONTAL DIMENSION ⇩

⇩ \ ⇨	2.5 ft.	3 ft.	3.5 ft.	4 ft.	4.5 ft.	5 ft.	5.5 ft.	6 ft.	6.5 ft.	7 ft.	7.5 ft.	8 ft.	8.5 ft.	9 ft.	9.5 ft.	10 ft.	10.5 ft.	11 ft.	11.5 ft.	12 ft.	12.5 ft.	13 ft.	13.5 ft.	14 ft.	14.5 ft.	15 ft.	15.5 ft.	16 ft.
10 ft.	25 Sq. Ft	30 Sq. Ft	35 Sq. Ft	40 Sq. Ft	45 Sq. Ft	50 Sq. Ft	55 Sq. Ft	60 Sq. Ft	65 Sq. Ft	70 Sq. Ft	75 Sq. Ft	80 Sq. Ft	85 Sq. Ft	90 Sq. Ft	95 Sq. Ft	100 Sq. Ft	105 Sq. Ft	110 Sq. Ft	115 Sq. Ft	120 Sq. Ft	125 Sq. Ft	130 Sq. Ft	135 Sq. Ft	140 Sq. Ft	145 Sq. Ft	150 Sq. Ft	155 Sq. Ft	160 Sq. Ft
11 ft.	27.5 Sq. Ft	33 Sq. Ft	38.5 Sq. Ft	44 Sq. Ft	49.5 Sq. Ft	55 Sq. Ft	60.5 Sq. Ft	66 Sq. Ft	71.5 Sq. Ft	77 Sq. Ft	82.5 Sq. Ft	88 Sq. Ft	93.5 Sq. Ft	99 Sq. Ft	104.5 Sq. Ft	110 Sq. Ft	115.5 Sq. Ft	121 Sq. Ft	126.5 Sq. Ft	132 Sq. Ft	137.5 Sq. Ft	143 Sq. Ft	148.5 Sq. Ft	154 Sq. Ft	159.5 Sq. Ft	165 Sq. Ft	170.5 Sq. Ft	176 Sq. Ft
12 ft.	30 Sq. Ft	36 Sq. Ft	42 Sq. Ft	48 Sq. Ft	54 Sq. Ft	60 Sq. Ft	66 Sq. Ft	72 Sq. Ft	78 Sq. Ft	84 Sq. Ft	90 Sq. Ft	96 Sq. Ft	102 Sq. Ft	108 Sq. Ft	114 Sq. Ft	120 Sq. Ft	126 Sq. Ft	132 Sq. Ft	138 Sq. Ft	144 Sq. Ft	150 Sq. Ft	156 Sq. Ft	162 Sq. Ft	168 Sq. Ft	174 Sq. Ft	180 Sq. Ft	186 Sq. Ft	192 Sq. Ft
13 ft.	32.5 Sq. Ft	39 Sq. Ft	45.5 Sq. Ft	52 Sq. Ft	58.5 Sq. Ft	65 Sq. Ft	71.5 Sq. Ft	78 Sq. Ft	84.5 Sq. Ft	91 Sq. Ft	97.5 Sq. Ft	104 Sq. Ft	110.5 Sq. Ft	117 Sq. Ft	123.5 Sq. Ft	130 Sq. Ft	136.5 Sq. Ft	143 Sq. Ft	149.5 Sq. Ft	156 Sq. Ft	162.5 Sq. Ft	169 Sq. Ft	175.5 Sq. Ft	182 Sq. Ft	188.5 Sq. Ft	195 Sq. Ft	201.5 Sq. Ft	208 Sq. Ft
14 ft.	35 Sq. Ft	42 Sq. Ft	49 Sq. Ft	56 Sq. Ft	63 Sq. Ft	70 Sq. Ft	77 Sq. Ft	84 Sq. Ft	91 Sq. Ft	98 Sq. Ft	105 Sq. Ft	112 Sq. Ft	119 Sq. Ft	126 Sq. Ft	133 Sq. Ft	140 Sq. Ft	147 Sq. Ft	154 Sq. Ft	161 Sq. Ft	168 Sq. Ft	175 Sq. Ft	182 Sq. Ft	189 Sq. Ft	196 Sq. Ft	203 Sq. Ft	210 Sq. Ft	217 Sq. Ft	224 Sq. Ft
15 ft.	37.5 Sq. Ft	45 Sq. Ft	52.5 Sq. Ft	60 Sq. Ft	67.5 Sq. Ft	75 Sq. Ft	82.5 Sq. Ft	90 Sq. Ft	97.5 Sq. Ft	105 Sq. Ft	112.5 Sq. Ft	120 Sq. Ft	127.5 Sq. Ft	135 Sq. Ft	142.5 Sq. Ft	150 Sq. Ft	157.5 Sq. Ft	165 Sq. Ft	172.5 Sq. Ft	180 Sq. Ft	187.5 Sq. Ft	195 Sq. Ft	202.5 Sq. Ft	210 Sq. Ft	217.5 Sq. Ft	225 Sq. Ft	232.5 Sq. Ft	240 Sq. Ft
16 ft.	40 Sq. Ft	48 Sq. Ft	56 Sq. Ft	64 Sq. Ft	72 Sq. Ft	80 Sq. Ft	88 Sq. Ft	96 Sq. Ft	104 Sq. Ft	112 Sq. Ft	120 Sq. Ft	128 Sq. Ft	136 Sq. Ft	144 Sq. Ft	152 Sq. Ft	160 Sq. Ft	168 Sq. Ft	176 Sq. Ft	184 Sq. Ft	192 Sq. Ft	200 Sq. Ft	208 Sq. Ft	216 Sq. Ft	224 Sq. Ft	232 Sq. Ft	240 Sq. Ft	248 Sq. Ft	256 Sq. Ft
17 ft.	42.5 Sq. Ft	51 Sq. Ft	59.5 Sq. Ft	68 Sq. Ft	76.5 Sq. Ft	85 Sq. Ft	93.5 Sq. Ft	102 Sq. Ft	110.5 Sq. Ft	119 Sq. Ft	127.5 Sq. Ft	136 Sq. Ft	144.5 Sq. Ft	153 Sq. Ft	161.5 Sq. Ft	170 Sq. Ft	178.5 Sq. Ft	187 Sq. Ft	195.5 Sq. Ft	204 Sq. Ft	212.5 Sq. Ft	221 Sq. Ft	229.5 Sq. Ft	238 Sq. Ft	246.5 Sq. Ft	255 Sq. Ft	263.5 Sq. Ft	272 Sq. Ft
18 ft.	45 Sq. Ft	54 Sq. Ft	63 Sq. Ft	72 Sq. Ft	81 Sq. Ft	90 Sq. Ft	99 Sq. Ft	108 Sq. Ft	117 Sq. Ft	126 Sq. Ft	135 Sq. Ft	144 Sq. Ft	153 Sq. Ft	162 Sq. Ft	171 Sq. Ft	180 Sq. Ft	189 Sq. Ft	198 Sq. Ft	207 Sq. Ft	216 Sq. Ft	225 Sq. Ft	234 Sq. Ft	243 Sq. Ft	252 Sq. Ft	261 Sq. Ft	270 Sq. Ft	279 Sq. Ft	288 Sq. Ft
19 ft.	47.5 Sq. Ft	57 Sq. Ft	66.5 Sq. Ft	76 Sq. Ft	85.5 Sq. Ft	95 Sq. Ft	104.5 Sq. Ft	114 Sq. Ft	123.5 Sq. Ft	133 Sq. Ft	142.5 Sq. Ft	152 Sq. Ft	161.5 Sq. Ft	171 Sq. Ft	180.5 Sq. Ft	190 Sq. Ft	199.5 Sq. Ft	209 Sq. Ft	218.5 Sq. Ft	228 Sq. Ft	237.5 Sq. Ft	247 Sq. Ft	256.5 Sq. Ft	266 Sq. Ft	275.5 Sq. Ft	285 Sq. Ft	294.5 Sq. Ft	304 Sq. Ft
20 ft.	50 Sq. Ft	60 Sq. Ft	70 Sq. Ft	80 Sq. Ft	90 Sq. Ft	100 Sq. Ft	110 Sq. Ft	120 Sq. Ft	130 Sq. Ft	140 Sq. Ft	150 Sq. Ft	160 Sq. Ft	170 Sq. Ft	180 Sq. Ft	190 Sq. Ft	200 Sq. Ft	210 Sq. Ft	220 Sq. Ft	230 Sq. Ft	240 Sq. Ft	250 Sq. Ft	260 Sq. Ft	270 Sq. Ft	280 Sq. Ft	290 Sq. Ft	300 Sq. Ft	310 Sq. Ft	320 Sq. Ft
21 ft.	52.5 Sq. Ft	63 Sq. Ft	73.5 Sq. Ft	84 Sq. Ft	94.5 Sq. Ft	105 Sq. Ft	115.5 Sq. Ft	126 Sq. Ft	136.5 Sq. Ft	147 Sq. Ft	157.5 Sq. Ft	168 Sq. Ft	178.5 Sq. Ft	189 Sq. Ft	199.5 Sq. Ft	210 Sq. Ft	220.5 Sq. Ft	231 Sq. Ft	241.5 Sq. Ft	252 Sq. Ft	262.5 Sq. Ft	273 Sq. Ft	283.5 Sq. Ft	294 Sq. Ft	304.5 Sq. Ft	315 Sq. Ft	325.5 Sq. Ft	336 Sq. Ft

Type "A" (2 Posts)
1.2 CY Conc.
68 LBs Bar Steel

Type "B" (2 Posts)
1.6 CY Conc.
98 LBs Bar Steel

Type "C" (2 Posts)
1.8 CY Conc.
100 LBs Bar Steel

Type "D" (2 Posts)
1.8 CY Conc.
112 LBs Bar Steel

Type "C" (3 Posts)
2.7 CY Conc.
150 LBs Bar Steel

STEEL POST SIZE

"A" - W10" x 12"
"B" - W12" x 16"
"C" - W12" x 19"
"D" - W12 x 22"

7

7

DETERMINATION OF HIGH STRENGTH STRUCTURAL STEEL SIGN SUPPORT TYPE

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/03/10 PLATE NO. A3-2.2

PROJECT NO: | SHEET NO: E

FILE NAME : C:\users\PROJECTS\tr_stdplate\A32.DGN PLOT DATE : 05-MAR-2010 10:10 PLOT BY : ditjph

WISDOT/CADDS SHEET 42

VERTICAL DIMENSION ⇨

HORIZONTAL DIMENSION ⇩

Type "A" (2 Posts) 1.2 CY Conc. 68 LBs Bar Steel

⇩ \ ⇨	2.5 ft.	3 ft.	3.5 ft.	4 ft.	4.5 ft.	5 ft.	5.5 ft.	6 ft.	6.5 ft.	7 ft.	7.5 ft.	8 ft.	8.5 ft.	9 ft.	9.5 ft.	10 ft.	10.5 ft.	11 ft.	11.5 ft.	12 ft.	12.5 ft.	13 ft.	13.5 ft.	14 ft.	14.5 ft.	15 ft.	15.5 ft.	16 ft.
22 ft.	55 Sq. Ft	66 Sq. Ft	77 Sq. Ft	88 Sq. Ft	99 Sq. Ft	110 Sq. Ft	121 Sq. Ft	132 Sq. Ft	143 Sq. Ft	154 Sq. Ft	165 Sq. Ft	176 Sq. Ft	187 Sq. Ft	198 Sq. Ft	209 Sq. Ft	220 Sq. Ft	231 Sq. Ft	242 Sq. Ft	253 Sq. Ft	264 Sq. Ft	275 Sq. Ft	286 Sq. Ft	297 Sq. Ft	308 Sq. Ft	319 Sq. Ft	330 Sq. Ft	341 Sq. Ft	352 Sq. Ft
23 ft.	57.5 Sq. Ft	69 Sq. Ft	80.5 Sq. Ft	92 Sq. Ft	103.5 Sq. Ft	115 Sq. Ft	126.5 Sq. Ft	138 Sq. Ft	149.5 Sq. Ft	161 Sq. Ft	172.5 Sq. Ft	184 Sq. Ft	195.5 Sq. Ft	207 Sq. Ft	218.5 Sq. Ft	230 Sq. Ft	241.5 Sq. Ft	253 Sq. Ft	264.5 Sq. Ft	276 Sq. Ft	287.5 Sq. Ft	299 Sq. Ft	310.5 Sq. Ft	322 Sq. Ft	333.5 Sq. Ft	345 Sq. Ft	356.5 Sq. Ft	368 Sq. Ft
24 ft.	60 Sq. Ft	72 Sq. Ft	84 Sq. Ft	96 Sq. Ft	108 Sq. Ft	120 Sq. Ft	132 Sq. Ft	144 Sq. Ft	156 Sq. Ft	168 Sq. Ft	180 Sq. Ft	192 Sq. Ft	204 Sq. Ft	216 Sq. Ft	228 Sq. Ft	240 Sq. Ft	252 Sq. Ft	264 Sq. Ft	276 Sq. Ft	288 Sq. Ft	300 Sq. Ft	312 Sq. Ft	324 Sq. Ft	336 Sq. Ft	348 Sq. Ft	360 Sq. Ft	372 Sq. Ft	384 Sq. Ft
25 ft.	62.5 Sq. Ft	75 Sq. Ft	87.5 Sq. Ft	100 Sq. Ft	112.5 Sq. Ft	125 Sq. Ft	137.5 Sq. Ft	150 Sq. Ft	162.5 Sq. Ft	175 Sq. Ft	187.5 Sq. Ft	200 Sq. Ft	212.5 Sq. Ft	225 Sq. Ft	237.5 Sq. Ft	250 Sq. Ft	262.5 Sq. Ft	275 Sq. Ft	287.5 Sq. Ft	300 Sq. Ft	312.5 Sq. Ft	325 Sq. Ft	337.5 Sq. Ft	350 Sq. Ft	362.5 Sq. Ft	375 Sq. Ft	387.5 Sq. Ft	400 Sq. Ft
26 ft.	65 Sq. Ft	78 Sq. Ft	91 Sq. Ft	104 Sq. Ft	117 Sq. Ft	130 Sq. Ft	143 Sq. Ft	156 Sq. Ft	169 Sq. Ft	182 Sq. Ft	195 Sq. Ft	208 Sq. Ft	221 Sq. Ft	234 Sq. Ft	247 Sq. Ft	260 Sq. Ft	273 Sq. Ft	286 Sq. Ft	299 Sq. Ft	312 Sq. Ft	325 Sq. Ft	338 Sq. Ft	351 Sq. Ft	364 Sq. Ft	377 Sq. Ft	390 Sq. Ft	403 Sq. Ft	416 Sq. Ft
27 ft.	67.5 Sq. Ft	81 Sq. Ft	94.5 Sq. Ft	108 Sq. Ft	121.5 Sq. Ft	135 Sq. Ft	148.5 Sq. Ft	162 Sq. Ft	175.5 Sq. Ft	189 Sq. Ft	202.5 Sq. Ft	216 Sq. Ft	229.5 Sq. Ft	243 Sq. Ft	256.5 Sq. Ft	270 Sq. Ft	283.5 Sq. Ft	297 Sq. Ft	310.5 Sq. Ft	324 Sq. Ft	337.5 Sq. Ft	351 Sq. Ft	364.5 Sq. Ft	378 Sq. Ft	391.5 Sq. Ft	405 Sq. Ft	418.5 Sq. Ft	432 Sq. Ft
28 ft.	70 Sq. Ft	84 Sq. Ft	98 Sq. Ft	112 Sq. Ft	126 Sq. Ft	140 Sq. Ft	154 Sq. Ft	168 Sq. Ft	182 Sq. Ft	196 Sq. Ft	210 Sq. Ft	224 Sq. Ft	238 Sq. Ft	252 Sq. Ft	266 Sq. Ft	280 Sq. Ft	294 Sq. Ft	308 Sq. Ft	322 Sq. Ft	336 Sq. Ft	350 Sq. Ft	364 Sq. Ft	378 Sq. Ft	392 Sq. Ft	406 Sq. Ft	420 Sq. Ft	434 Sq. Ft	448 Sq. Ft
29 ft.	72.5 Sq. Ft	87 Sq. Ft	101.5 Sq. Ft	116 Sq. Ft	130.5 Sq. Ft	145 Sq. Ft	159.5 Sq. Ft	174 Sq. Ft	188.5 Sq. Ft	203 Sq. Ft	217.5 Sq. Ft	232 Sq. Ft	246.5 Sq. Ft	261 Sq. Ft	275.5 Sq. Ft	290 Sq. Ft	304.5 Sq. Ft	319 Sq. Ft	333.5 Sq. Ft	348 Sq. Ft	362.5 Sq. Ft	377 Sq. Ft	391.5 Sq. Ft	406 Sq. Ft	420.5 Sq. Ft	435 Sq. Ft	449.5 Sq. Ft	464 Sq. Ft
30 ft.	75 Sq. Ft	90 Sq. Ft	105 Sq. Ft	120 Sq. Ft	135 Sq. Ft	150 Sq. Ft	165 Sq. Ft	180 Sq. Ft	195 Sq. Ft	210 Sq. Ft	225 Sq. Ft	240 Sq. Ft	255 Sq. Ft	270 Sq. Ft	285 Sq. Ft	300 Sq. Ft	315 Sq. Ft	330 Sq. Ft	345 Sq. Ft	360 Sq. Ft	375 Sq. Ft	390 Sq. Ft	405 Sq. Ft	420 Sq. Ft	435 Sq. Ft	450 Sq. Ft	465 Sq. Ft	480 Sq. Ft
31 ft.	77.5 Sq. Ft	93 Sq. Ft	108.5 Sq. Ft	124 Sq. Ft	139.5 Sq. Ft	155 Sq. Ft	170.5 Sq. Ft	186 Sq. Ft	201.5 Sq. Ft	217 Sq. Ft	232.5 Sq. Ft	248 Sq. Ft	263.5 Sq. Ft	279 Sq. Ft	294.5 Sq. Ft	310 Sq. Ft	325.5 Sq. Ft	341 Sq. Ft	356.5 Sq. Ft	372 Sq. Ft	387.5 Sq. Ft	403 Sq. Ft	418.5 Sq. Ft	434 Sq. Ft	449.5 Sq. Ft	465 Sq. Ft	480.5 Sq. Ft	496 Sq. Ft
32 ft.	80 Sq. Ft	96 Sq. Ft	112 Sq. Ft	128 Sq. Ft	144 Sq. Ft	160 Sq. Ft	176 Sq. Ft	192 Sq. Ft	208 Sq. Ft	224 Sq. Ft	240 Sq. Ft	256 Sq. Ft	272 Sq. Ft	288 Sq. Ft	304 Sq. Ft	320 Sq. Ft	336 Sq. Ft	352 Sq. Ft	368 Sq. Ft	384 Sq. Ft	400 Sq. Ft	416 Sq. Ft	432 Sq. Ft	448 Sq. Ft	464 Sq. Ft	480 Sq. Ft	496 Sq. Ft	512 Sq. Ft
33 ft.	82.5 Sq. Ft	99 Sq. Ft	115.5 Sq. Ft	132 Sq. Ft	148.5 Sq. Ft	165 Sq. Ft	181.5 Sq. Ft	198 Sq. Ft	214.5 Sq. Ft	231 Sq. Ft	247.5 Sq. Ft	264 Sq. Ft	280.5 Sq. Ft	297 Sq. Ft	313.5 Sq. Ft	330 Sq. Ft	346.5 Sq. Ft	363 Sq. Ft	379.5 Sq. Ft	396 Sq. Ft	412.5 Sq. Ft	429 Sq. Ft	445.5 Sq. Ft	462 Sq. Ft	478.5 Sq. Ft	495 Sq. Ft	511.5 Sq. Ft	528 Sq. Ft
34 ft.	85 Sq. Ft	102 Sq. Ft	119 Sq. Ft	136 Sq. Ft	153 Sq. Ft	170 Sq. Ft	187 Sq. Ft	204 Sq. Ft	221 Sq. Ft	238 Sq. Ft	255 Sq. Ft	272 Sq. Ft	289 Sq. Ft	306 Sq. Ft	323 Sq. Ft	340 Sq. Ft	357 Sq. Ft	374 Sq. Ft	391 Sq. Ft	408 Sq. Ft	425 Sq. Ft	442 Sq. Ft	459 Sq. Ft	476 Sq. Ft	493 Sq. Ft	510 Sq. Ft	527 Sq. Ft	544 Sq. Ft
35 ft.	87.5 Sq. Ft	105 Sq. Ft	122.5 Sq. Ft	140 Sq. Ft	157.5 Sq. Ft	175 Sq. Ft	192.5 Sq. Ft	210 Sq. Ft	227.5 Sq. Ft	245 Sq. Ft	262.5 Sq. Ft	280 Sq. Ft	297.5 Sq. Ft	315 Sq. Ft	332.5 Sq. Ft	350 Sq. Ft	367.5 Sq. Ft	385 Sq. Ft	402.5 Sq. Ft	420 Sq. Ft	437.5 Sq. Ft	455 Sq. Ft	472.5 Sq. Ft	490 Sq. Ft	507.5 Sq. Ft	525 Sq. Ft	542.5 Sq. Ft	560 Sq. Ft
36 ft.	90 Sq. Ft	108 Sq. Ft	126 Sq. Ft	144 Sq. Ft	162 Sq. Ft	180 Sq. Ft	198 Sq. Ft	216 Sq. Ft	234 Sq. Ft	252 Sq. Ft	270 Sq. Ft	288 Sq. Ft	306 Sq. Ft	324 Sq. Ft	342 Sq. Ft	360 Sq. Ft	378 Sq. Ft	396 Sq. Ft	414 Sq. Ft	432 Sq. Ft	450 Sq. Ft	468 Sq. Ft	486 Sq. Ft	504 Sq. Ft	522 Sq. Ft	540 Sq. Ft	558 Sq. Ft	576 Sq. Ft

Type "B" (2 Posts)
1.6 CY Conc.
98 LBs Bar Steel

Type "C" (2 Posts)
1.8 CY Conc.
100 LBs Bar Steel

Type "D" (2 Posts)
1.8 CY Conc.
112 LBs Bar Steel

Type "C" (3 Posts)
2.7 CY Conc.
150 LBs Bar Steel

Type "D" (3 Posts)
2.7 CY Conc.
168 LBs Bar Steel

STEEL POST SIZE
"A" - W10" x 12"
"B" - W12" x 16"
"C" - W12" x 19"
"D" - W12 x 22"

DETERMINATION OF HIGH STRENGTH STRUCTURAL STEEL SIGN SUPPORT TYPE

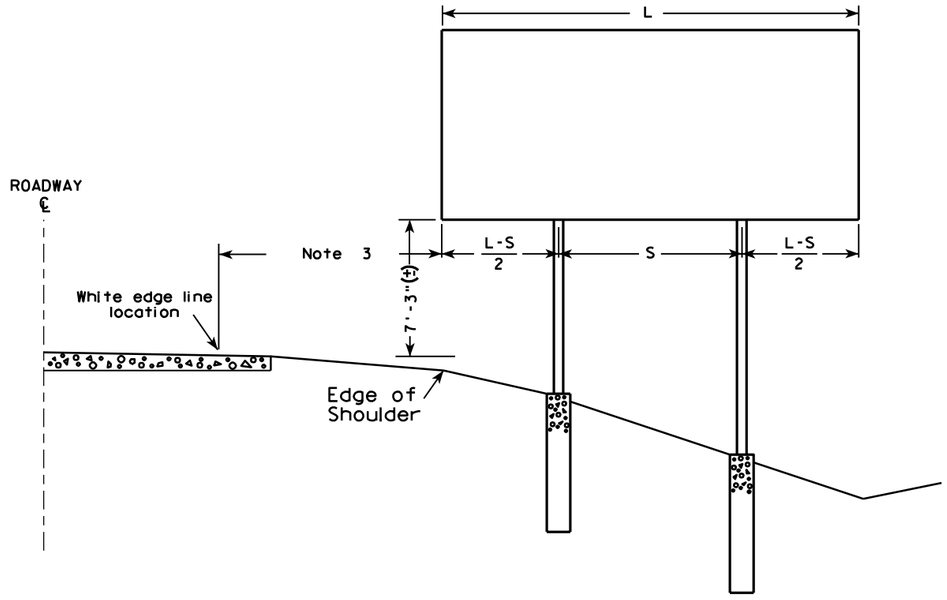
WISCONSIN DEPT OF TRANSPORTATION

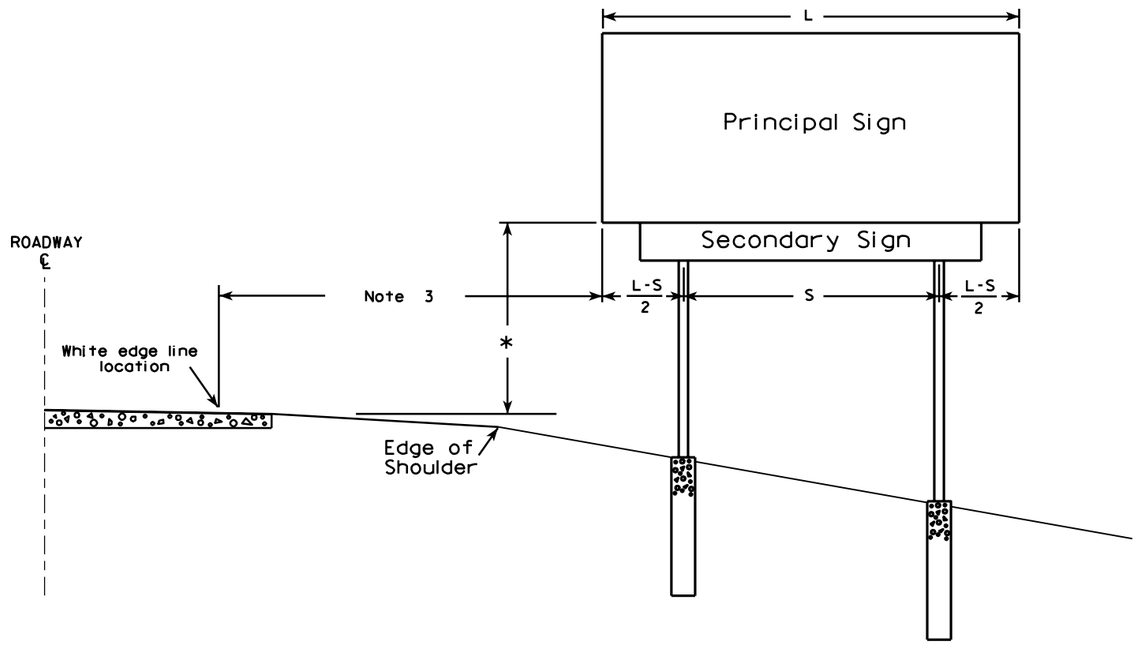
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/5/10 PLATE NO. A3-3.2

PROJECT NO: | SHEET NO: E

FILE NAME : C:\users\PROJECTS\tr_stdplate\A33.DGN PLOT DATE : 05-MAR-2010 10:07 PLOT BY : ditjph





GENERAL NOTES

1. For a 2 post installation, S equals 3L/5, but shall not be less than 9 ft.
2. For a 3 post installation, S equals 5L/7, but shall not be less than 18 ft., and the space between any two posts shall not be less than 9 ft.
3. Unless noted in the plan, the sign offset distance shall be a minimum of 17'-6", desirable 30'-0".
4. The (±) tolerance shown on this sheet is 3 in.
5. The vertical sign height clearance detailed is measured from the bottom of the sign to the near edge of pavement.
6. Post lengths shown in the miscellaneous quantities are estimated lengths. The contractor shall verify post lengths at the time of final grading.
7. Refer to the Traffic Guidelines Manual for further guidance on minimum vertical clearance requirements.

* Clearance is 8'-3"(±) when the secondary sign is 3 ft. or less in height. For secondary signs larger than 3 ft., the clearance to the bottom of the secondary sign shall be 5'-3"(±).

7

7

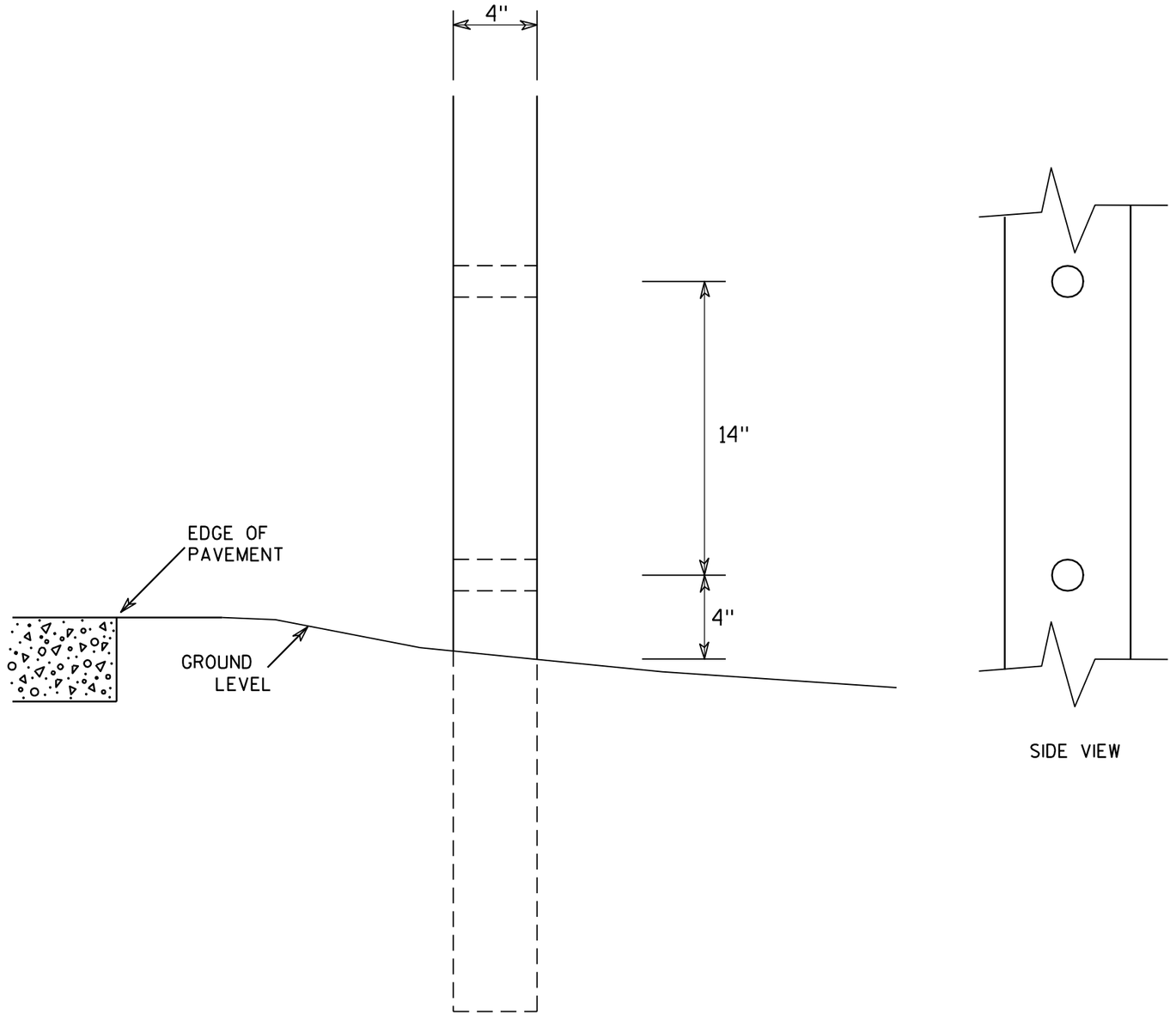
TYPICAL INSTALLATION
OF TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/02/08 PLATE NO. A4-1.9

PROJECT NO:				SHEET NO: 165	E



SIDE VIEW

GENERAL NOTES

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

7

7

4 X 6 WOOD POST MODIFICATIONS

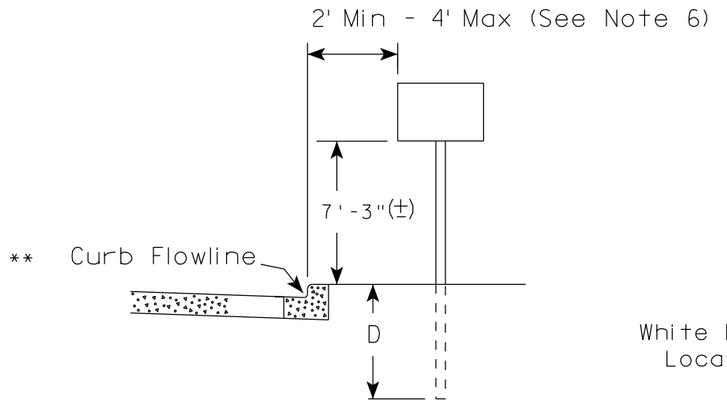
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

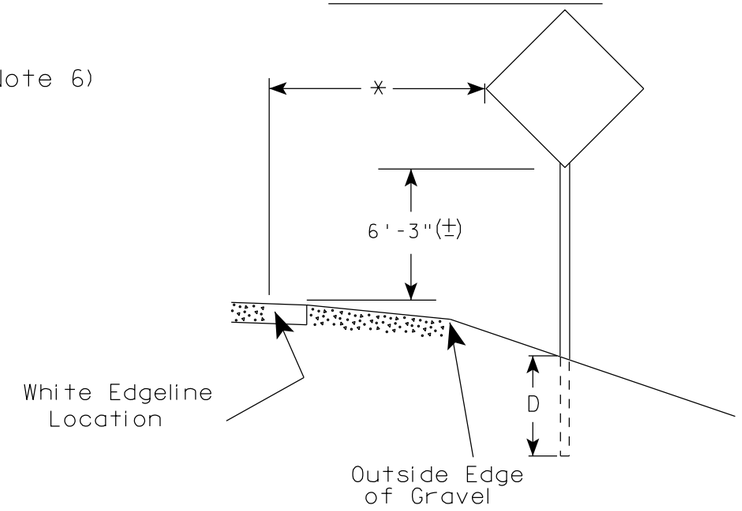
DATE 3/27/97 PLATE NO. A4-11.2

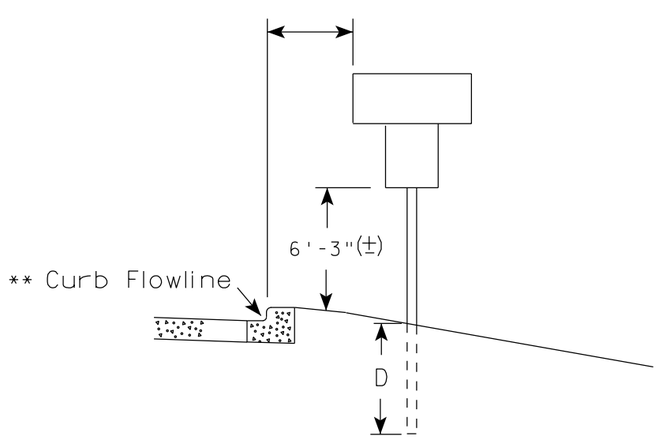
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 166	E

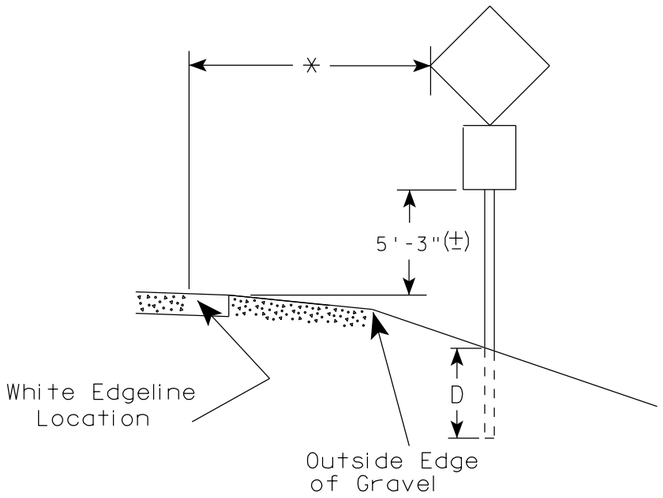
URBAN AREA



RURAL AREA (See Note 2)







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

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

GENERAL NOTES

1. Signs wider than 4 feet, 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series) & End of Rod Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (+).

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

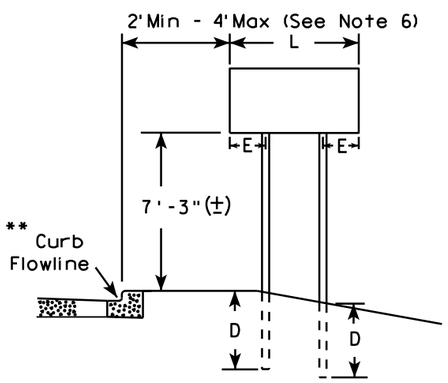
WISCONSIN DEPT OF TRANSPORTATION

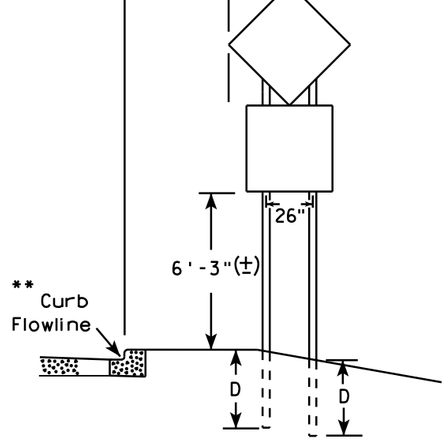
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

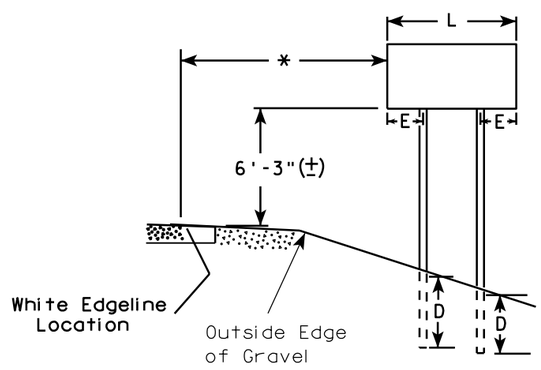
URBAN AREA

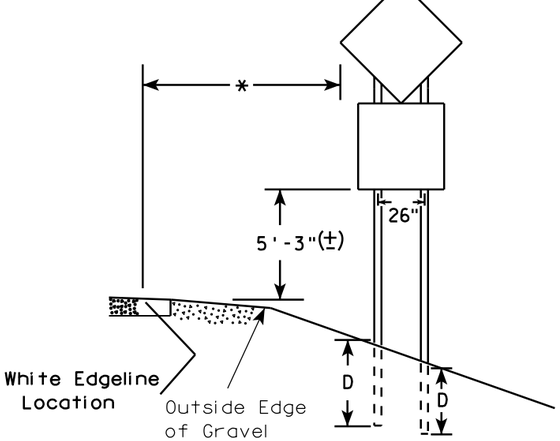




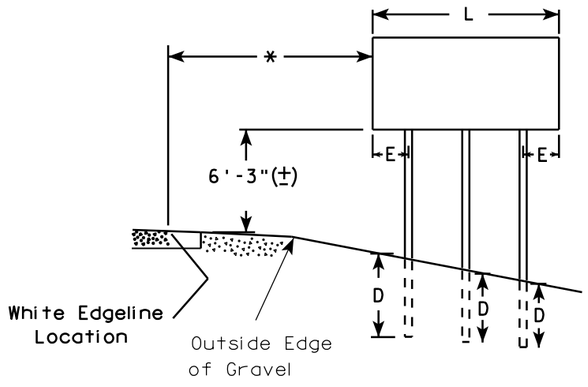
48" DIAMOND WARNING SIGN

RURAL AREA (See Note 3)





48" DIAMOND WARNING SIGN



GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series) & End of Road Markers (W5-56 & W5-56A) shall be mounted at a height of 4"-3" (±).

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

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

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

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 120"	L/5

***

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

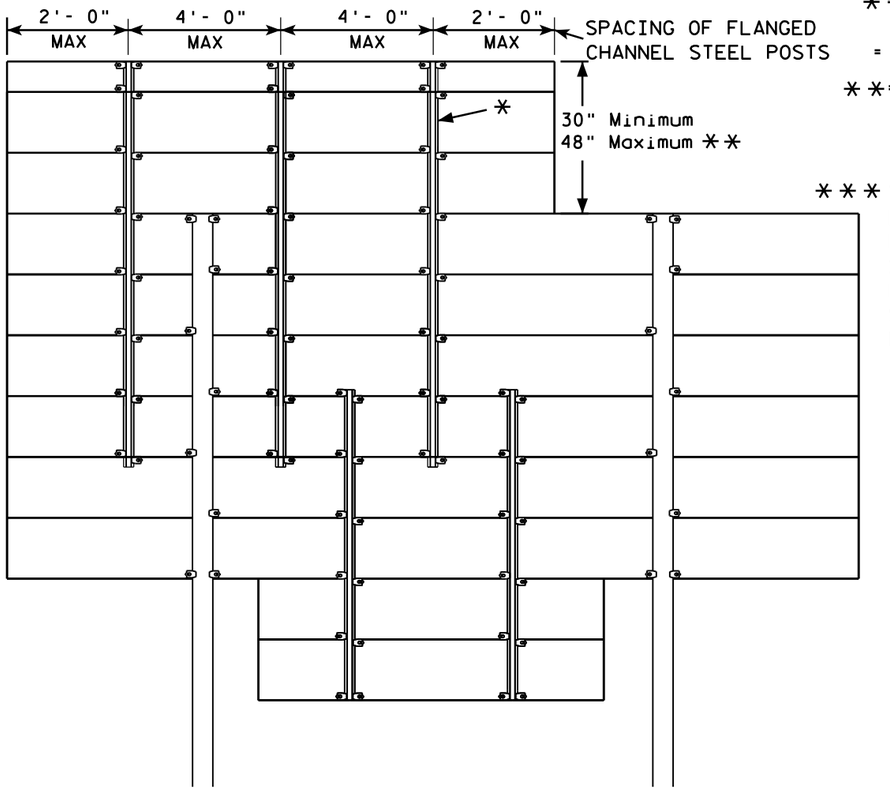
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/13 PLATE NO. A4-4 12

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

GROUND MOUNTED SIGN

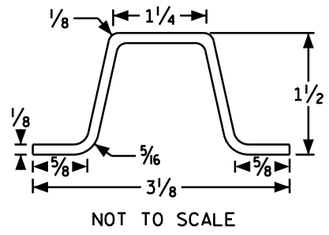


*=2.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

**=FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

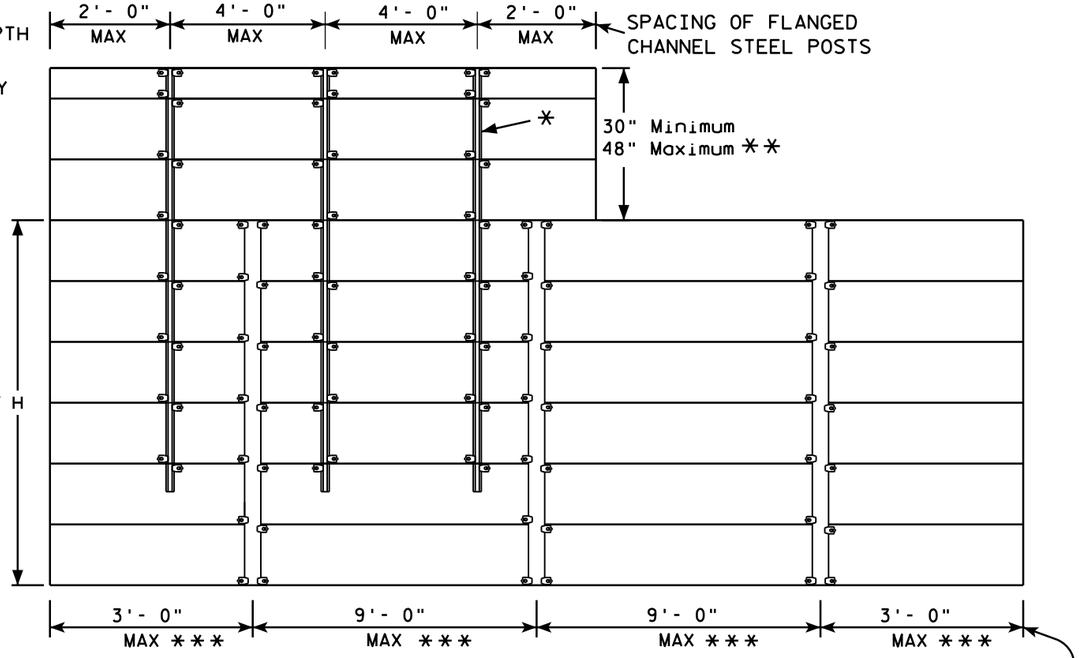
*** THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 16 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 16 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.

FLANGE CHANNEL DETAIL



NOT TO SCALE

SIGN BRIDGE MOUNTED SIGN



GENERAL NOTES

1. Flanged channel steel posts shall conform to size and material above, and shall be considered as incidental to other items in the contract.
2. Number of Flanged channel steel supports varies with length of panel and shall be spaced as shown:

   PANEL LENGTH 8'-0" OR LESS = 2 CHANNELS
   PANEL LENGTH 9'- 0" - 12'- 0" = 3 CHANNELS
   PANEL LENGTH 13'- 0" OR MORE = 4 CHANNELS

   If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.
3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER PANEL shall be aligned with the left edge of the guide sign.
4. If the bolt holes in the top panel (EXIT NUMBER), or sub panel (NEXT EXIT) line up with holes in main sign panel, stitch bolts shall be used in addition to the channels.
5. Provide post clips for each sign as shown. (Please note the differences between a ground mounted versus Sign bridge mounted sign as far as number of clips required on the main supports or beams)
6. Structural steel sign supports shall extend to the top of the main signs, as shown on the above details.

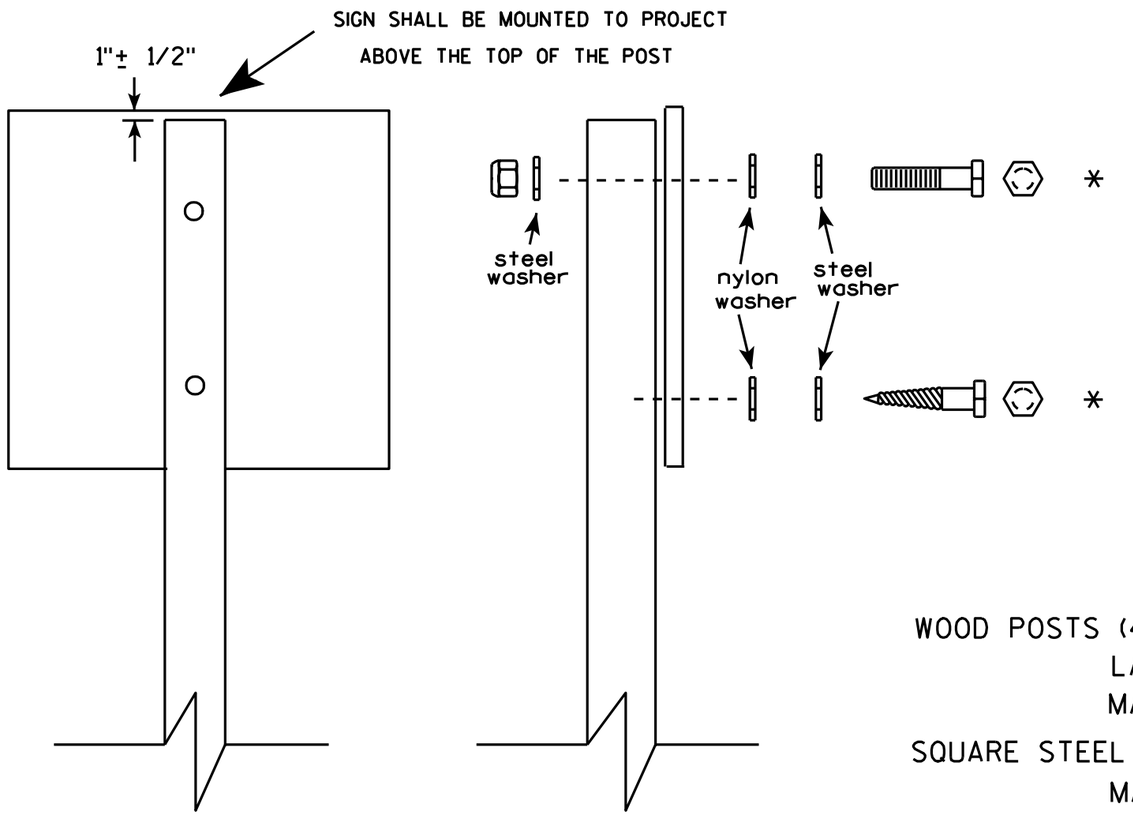
ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/05/13 PLAT 169 A4-6.12

PROJECT NO:				SHEET NO:	E



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

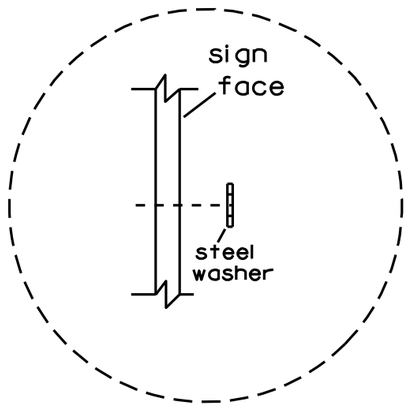
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3"
MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts

SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts
RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON for all Type H signs.



Washer Placement when Sign Has Other Than Type H or Type F Face

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/23/10 PLATE NO. A4-8.7

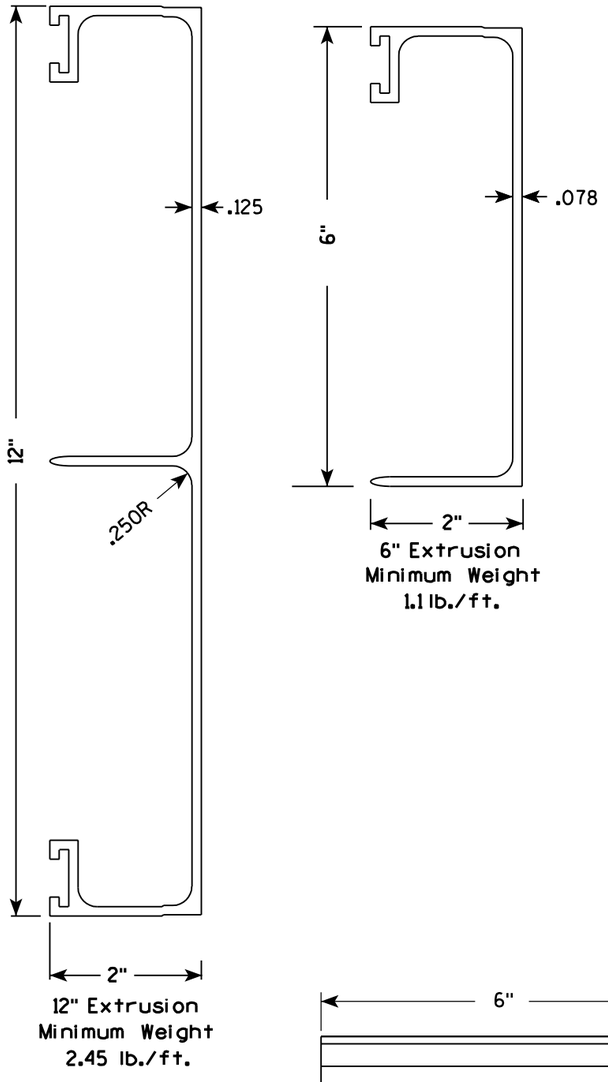
7

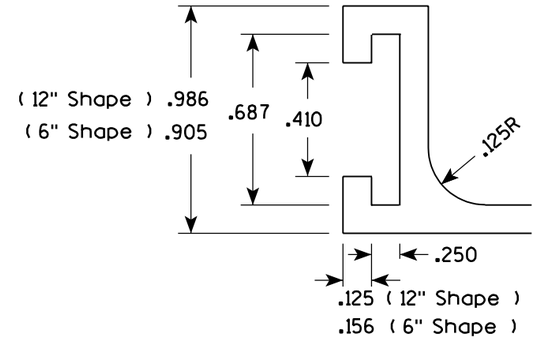
7

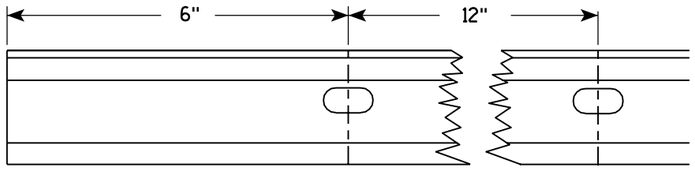
PROJECT NO:

SHEET NO: 170 E

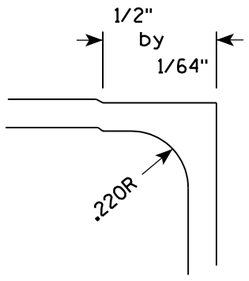
Extruded Shape







Punch 7/16" x 7/8" oval holes beginning 6" in from end of extrusion 12" CC on both edges of 6" and 12" panels.

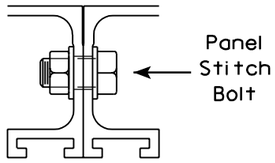


Hardware

STITCH BOLT, WASHER & NUT

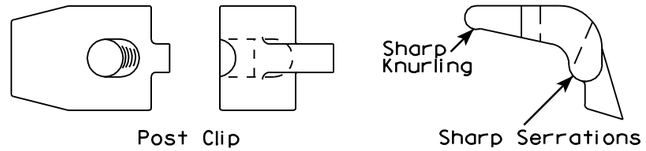
The hardware includes:

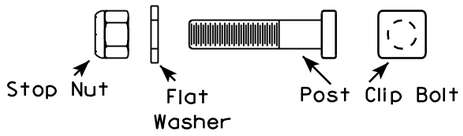
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy



POST CLIP, POST CLIP BOLT, WASHER & NUT

Post Clip shall be Alum. Alloy 356-T6
Post Clip Bolt shall be Stainless Steel.
Flat washer shall be 3/8" X .091, Stainless Steel.
Stop nut shall be stainless steel.





NOTES

1. The contractor may select any brand of extrusion that conforms to the illustrations or meets with the approval of the engineer, but all extrusions used on this contract shall be of the same brand.
2. Panel Stitch Bolts shall be used to assemble adjacent panels. Maximum stitch bolt spacing shall be 24" C-C, and a minimum of 4 bolts shall be used to connect any two extrusions.
3. Post Clips shall be used to attach the sign panel to the sign support.

ALUMINUM EXTRUSIONS FOR TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spagg
for State Traffic Engineer

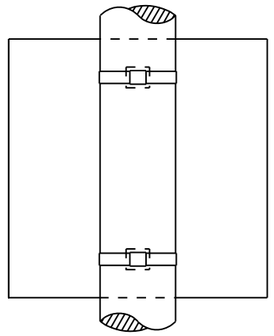
DATE 11/18/99 PLATE NO. A5-2.9

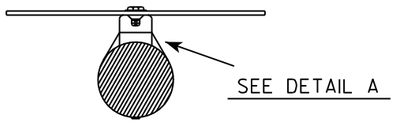
PROJECT NO:

SHEET NO: 171 E

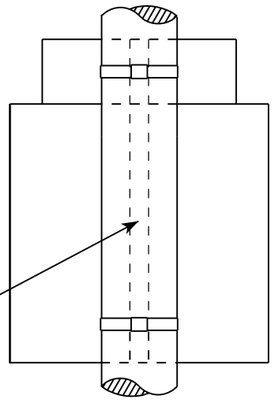
BANDING

SINGLE SIGN

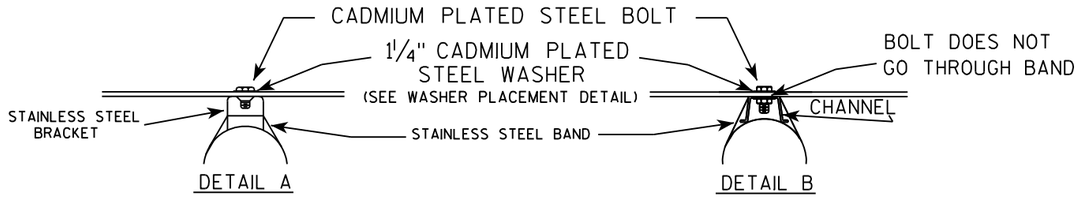




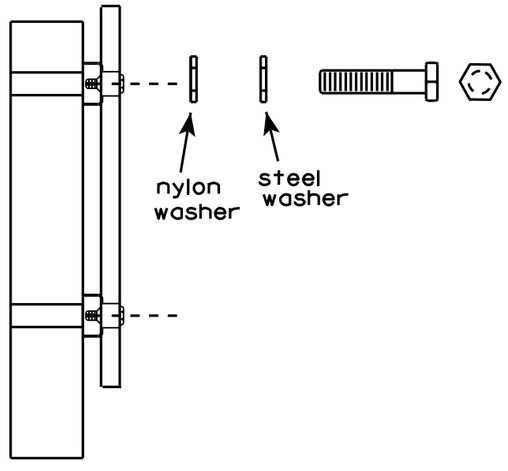
"J" ASSEMBLY



CHANNEL
SEE TYPICAL PANEL INSTALLATION SHEET



WASHER PLACEMENT



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

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.

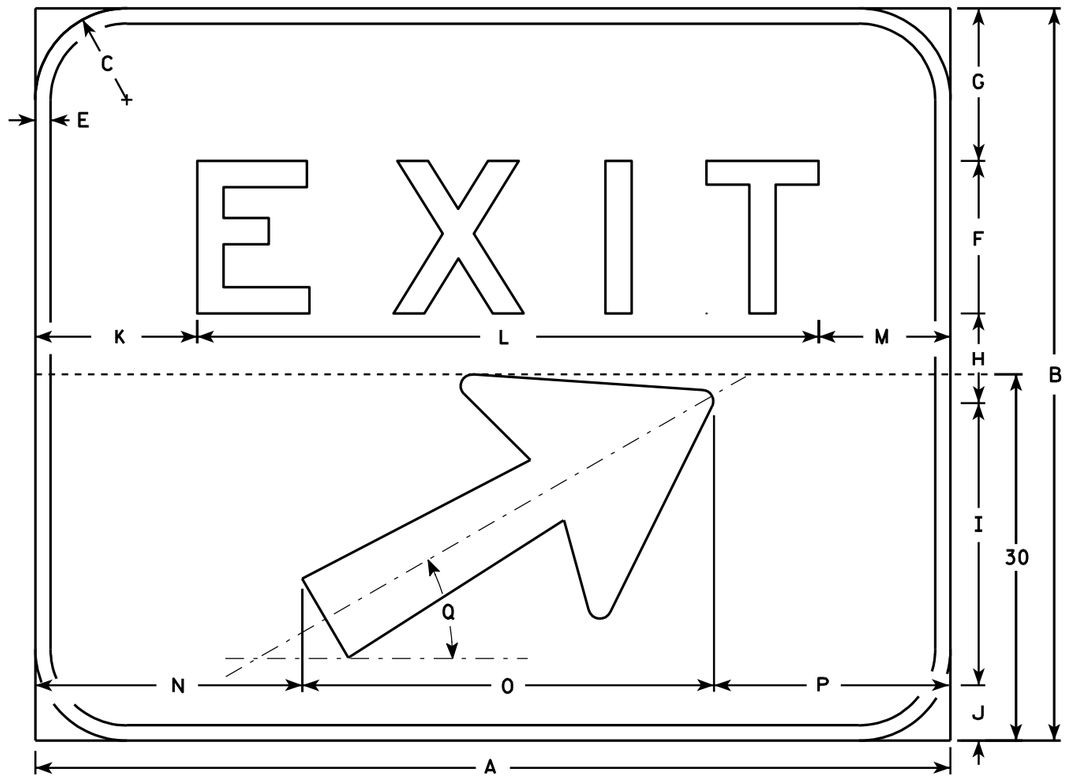
STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 172	E



E5-1

NOTES

1. Sign is Type II - Type H reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White (Type H reflective)
3. Message Series - E
4. Corners may be square or rounded but borders shall be rounded as shown.
5. Base material for this sign shall be plywood and shall be split into two seperate pieces for the 72 x 60 size as shown on the detail by the dashed line (----------).
6. Arrow is Type "A" from sign plate A1-1.
7. As per the Standard Spec's, this sign shall not have a vertical joint.

Metric equivalent for this sign is:

SIZE	
1	
2	
3	
4	1500 mm X 1200 mm
5	1800 mm X 1500 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2																												
3																												
4	60	48	6		1	10	10	5 7/8	18 1/2	3 5/8	10 5/8	40 3/4	8 5/8	17 1/2	27	15 1/2	30°										20.0	1.80
5	72	60	6		1	12	12	10	18 1/2	7 1/2	13 1/4	48 1/2	10 1/4	23 1/2	27	21 1/2	30°										30.0	2.70

STANDARD SIGN
E5 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

DATE 6/22/00 PLATE NO. E5-1.8

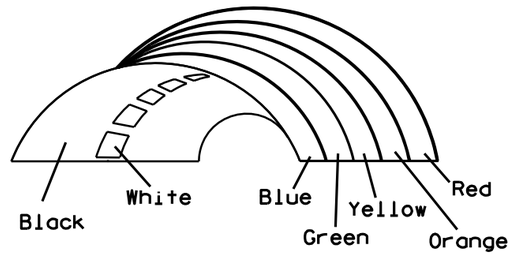
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 173	E

* VARIES

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - (See Note 5)
3. Message Series - (See Note 6)
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Border - Blue
   Line 1 - Red
   Line 2 - Black
   Line 3-5 - Blue
6. Line 1 - Dutch 8011L
   Line 2 - Series E
   Line 3-5 - Series C
7. Contractor shall provide and install a new post bracket in accordance with the I55-56B sign detail.

Background Colors of Symbol*



*1/4" Black Border between each color of rainbow and border of rainbow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	36	1 1/2	1/2	5/8	3	2	3 1/2	2 7/8	1	8	2 1/8	11 1/4	11 1/8	9 3/8	1 1/4		3/4	12 5/8	7 1/2							7.5
3																											
4																											
5																											

STANDARD SIGN
I55-56

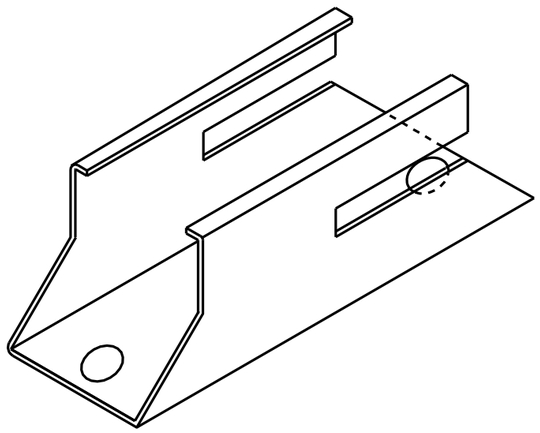
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 174

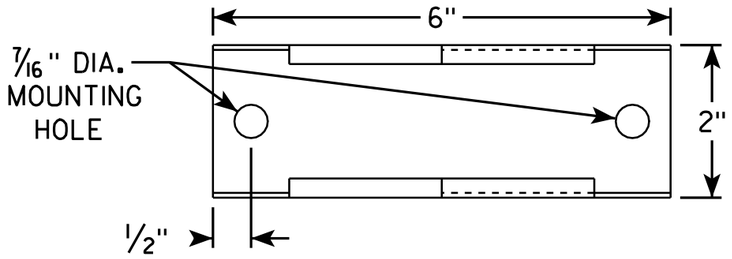
ISOMETRIC VIEW



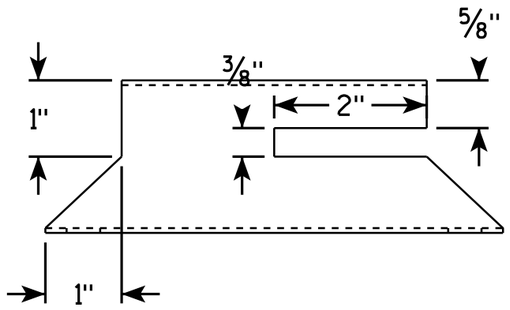
NOTES

1. Must be capable of permanent attachment to a wood or steel channel sign post utilizing the fastening hardware specified on the A4-8 sign plate.
2. Shall be entirely primed and painted with two coats of a black powder coated enamel paint.
3. Shall be made with 12 gauge steel, and incorporate no welds, no hinged components, no threaded lock-type components, and no parts which are loose or can be separated from the main body.
4. Shall have rounded edges with at least 1/8" radii.
5. Shall not have unrounded and uncoated metal edges which can contact the back surface of the roll-up sign.
6. Top of bracket shall be mounted 2' below the bottom of the I55-56 sign.
7. Cost of bracket and fastening hardware shall be incidental to the I55-56 sign.

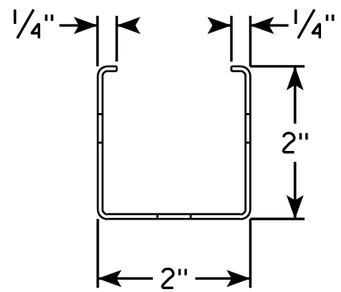
TOP VIEW



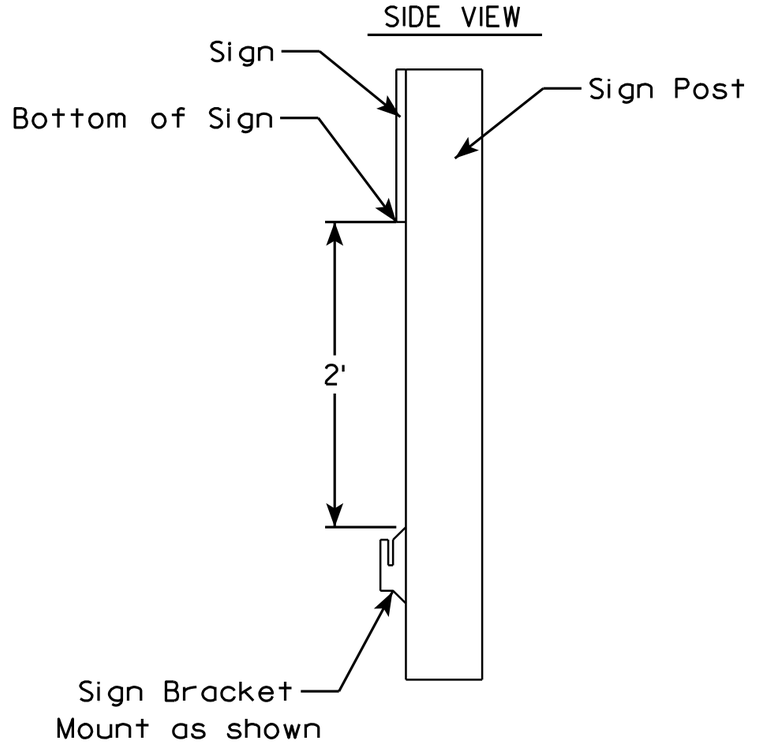
SIDE VIEW



END VIEW



SIDE VIEW



ROLLUP SIGN BRACKET I55-56B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

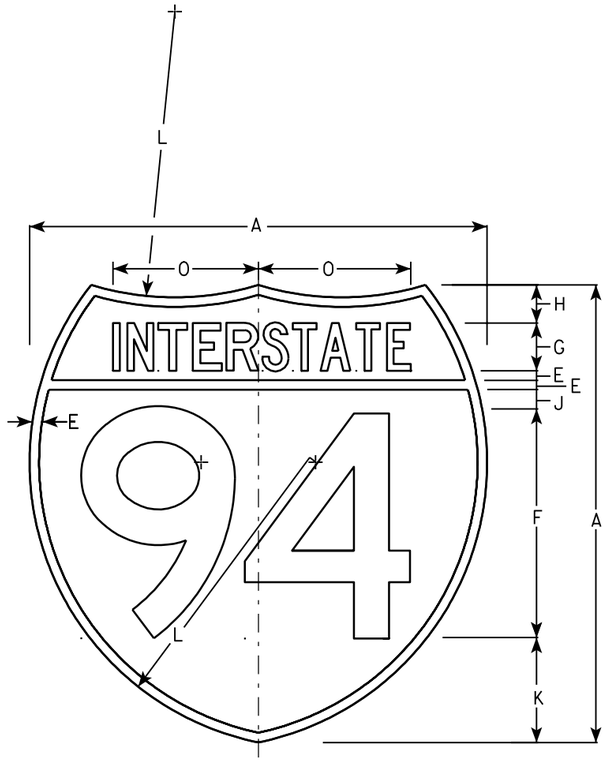
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 175	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\I5556B.DGN PLOT DATE : 01-MAR-2010 15:34 PLOT BY : ditjph PLOT NAME : PLOT SCALE : 1.986348:1.000000

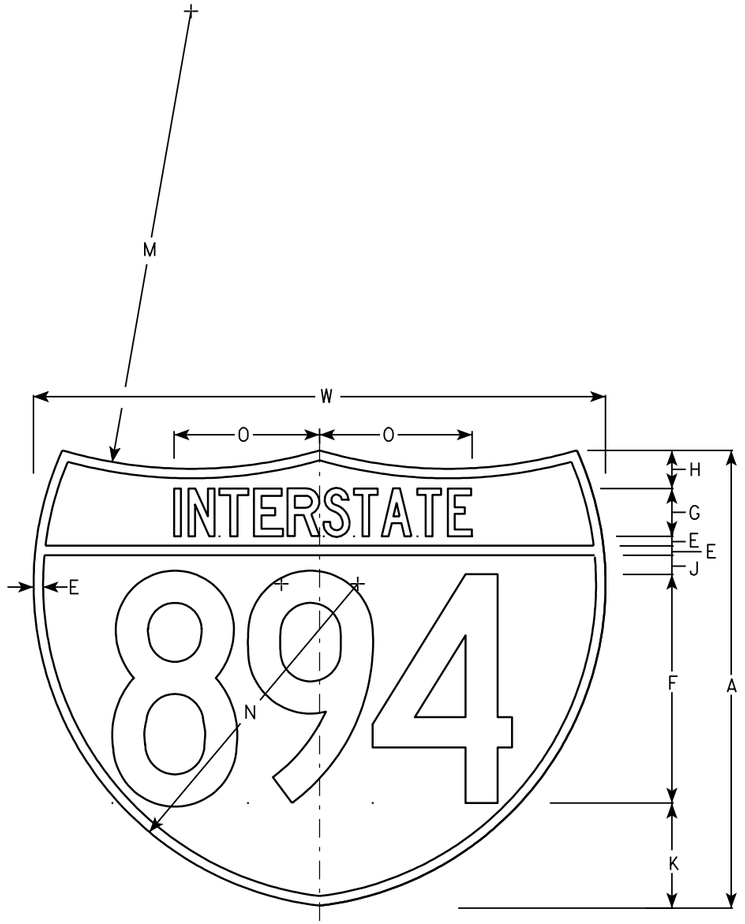
WISDOT/CADDS SHEET 42

7

7



M1-1



M1-1A

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Top Red - Bottom Blue (See Note 6)
   Message - White - See Note 6
3. Message Series - See note 5
4. Substitute appropriate numerals & ajust spacing as per plate A10-1.
5. M1-1 - Numerals - D
   Interstate - C
   M1-1A - All copy - C
6. Permanent Signs
   Message - Type H Reflective
   Detour or other temporary signs
   Background - Reflective
   Message - Reflective

7

7

Metric equivalent for these signs are:

SIZE	M1-1	SIZE	M1-1A
1			
2	600 mm X 600 mm	2	600 mm X 750 mm
3	900 mm X 900 mm	3	900 mm X 1125 mm
4	900 mm X 900 mm	4	900 mm X 1125 mm
5	900 mm X 900 mm	5	900 mm X 1125 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	M1-1 Area sq. ft.	M1-1A Area sq. ft.	M1-1 Area m2	M1-1A Area m2
1																													
2	24				1/2	12	2 1/2	2		1	5 1/2	15	24	17	7 7/8								30			3.13	3.91	.36	.46
3	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
4	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
5	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05

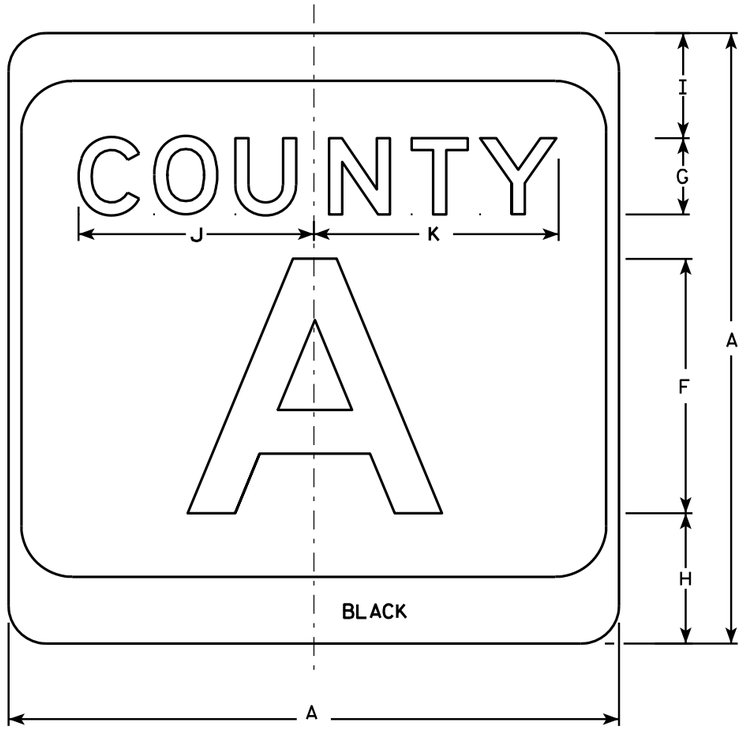
INTERSTATE ROUTE MARKER
M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

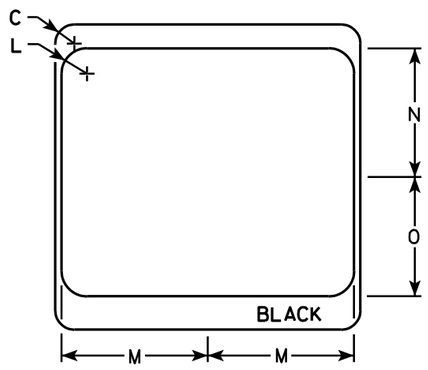
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/23/05 PLATE NO. M1-1.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 176	E

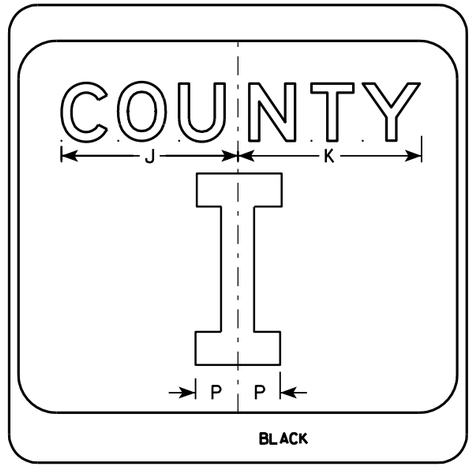


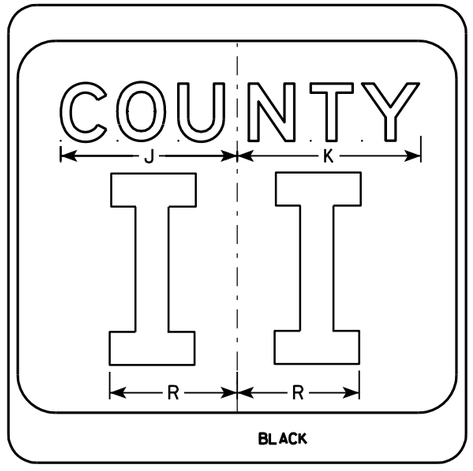
M1-5A



NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 7
   Message - Black
3. Message Series - see Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Message Series E for 1 letter.
   Message Series D for 2 letters unless message is too big then Series C.
   Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective





SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

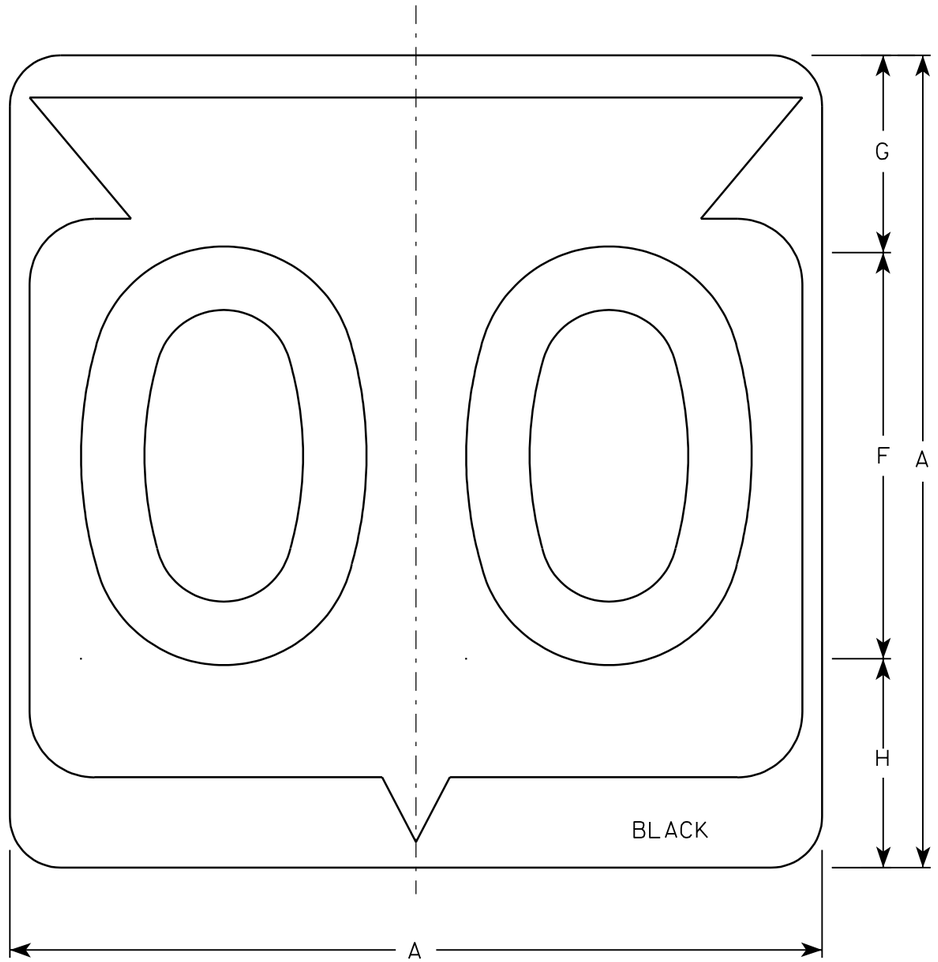
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

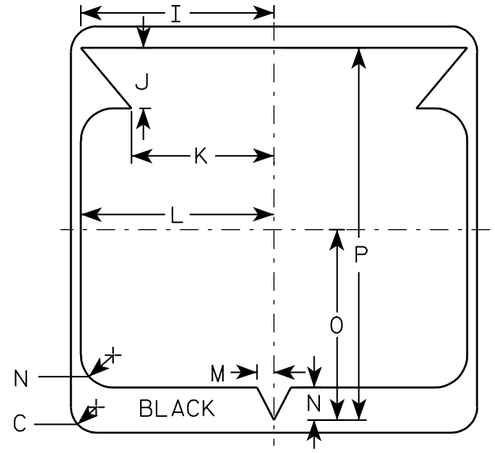
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 177	E



M1-6

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 6
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate Series numerals and adjust spacing as per plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective



Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0	.36
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81

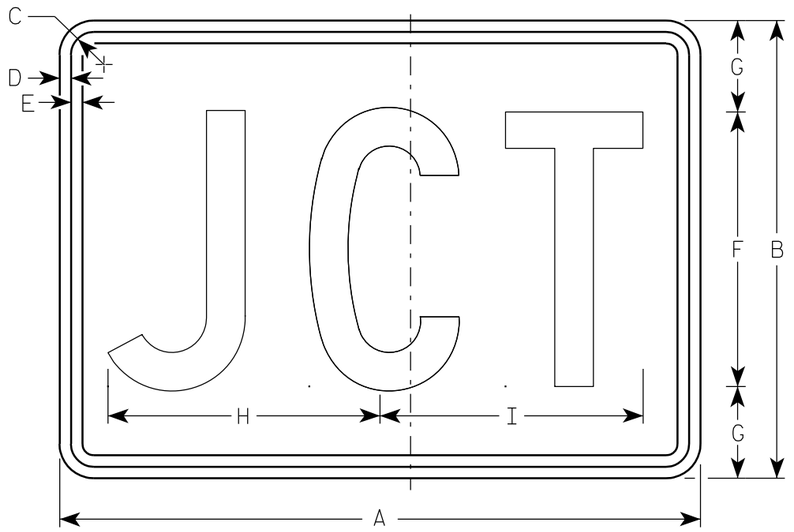
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

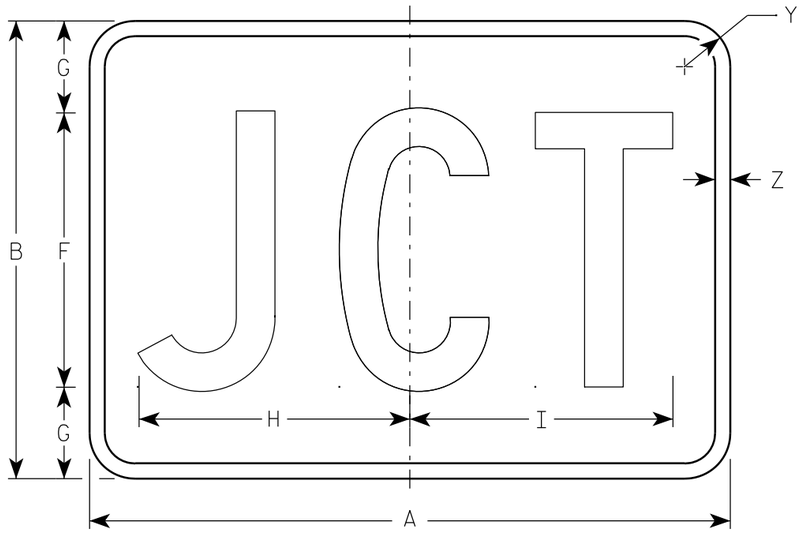
APPROVED Chester J Spang for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 178	E



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



MB2-1
MG2-1
MN2-1

NOTES

1. Sign is Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M2-1 Background - White - Type H Reflective
   (Detour or temporary Signs - Reflective)
   Message - Black
   MB2-1 Background - Blue
   Message - White - Type H Reflective
   (Detour or temporary Signs - Reflective)
   MG2-1 Background - Green
   Message - White - Type H Reflective
   MK2-1 Background - Green
   Message - White - Type H Reflective
   MM2-1 Background - White - Type H Reflective
   Message - Green
   MN2-1 Background - Brown
   Message - White - Type H Reflective
   MR2-1 Background - Brown
   Message - Yellow - Type H Reflective

Metric equivalent for this sign is:

SIZE	
1	
2	525 mm X 375 mm
3	750 mm X 525 mm
4	750 mm X 525 mm
5	750 mm X 525 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20	0.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20

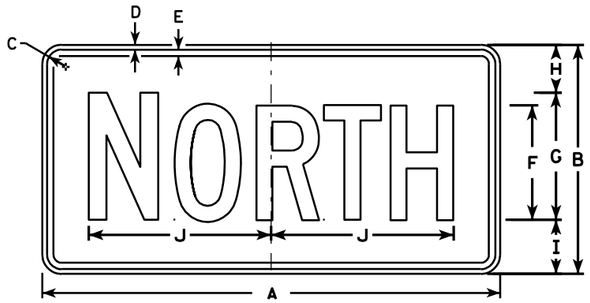
STANDARD SIGN
M2-1

WISCONSIN DEPT OF TRANSPORTATION

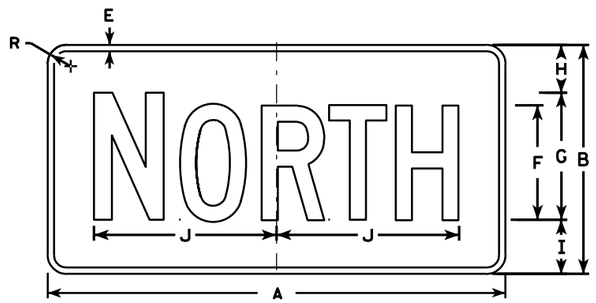
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/10 PLATE NO. M2-1.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 179	E



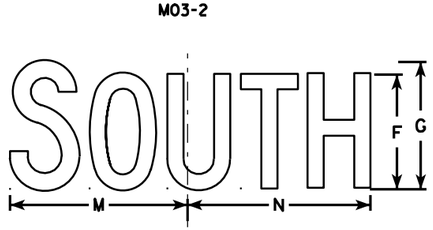
M3-1
MK3-1
MO3-1



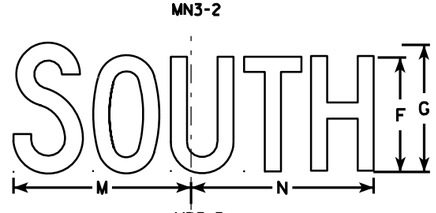
MB3-1
MG3-1
MM3-1
MN3-1

M3-2
MK3-2
MO3-2

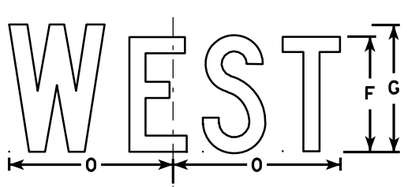
MB3-2
MG3-2
MM3-2
MN3-2



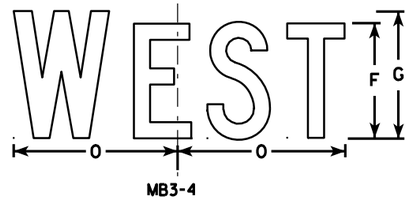
M3-3
MK3-3
MO3-3



MB3-3
MG3-3
MM3-3
MN3-3



M3-4
MK3-4
MO3-4



MB3-4
MG3-4
MM3-4
MN3-4

NOTES

1. All Signs Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White - Type H Reflective (Detour or temporary signs - Reflective) Message - Black
   MB3-1 thru MB3-4 Background - Blue Message - White - Type H Reflective (Detour or temporary signs - Reflective)
   MG3-1 thru MG3-4 Background - Green Message - White - Type H Reflective
   MK3-1 thru MK3-4 Background - Green Message - White - Type H Reflective
   MM3-1 thru MM3-4 Background - White - Type H Reflective Message - Green
   MN3-1 thru MN3-4 Background - Brown Message - White - Type H Reflective
   M03-1 thru M03-4 Background - Orange - Reflective Message - Black
6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

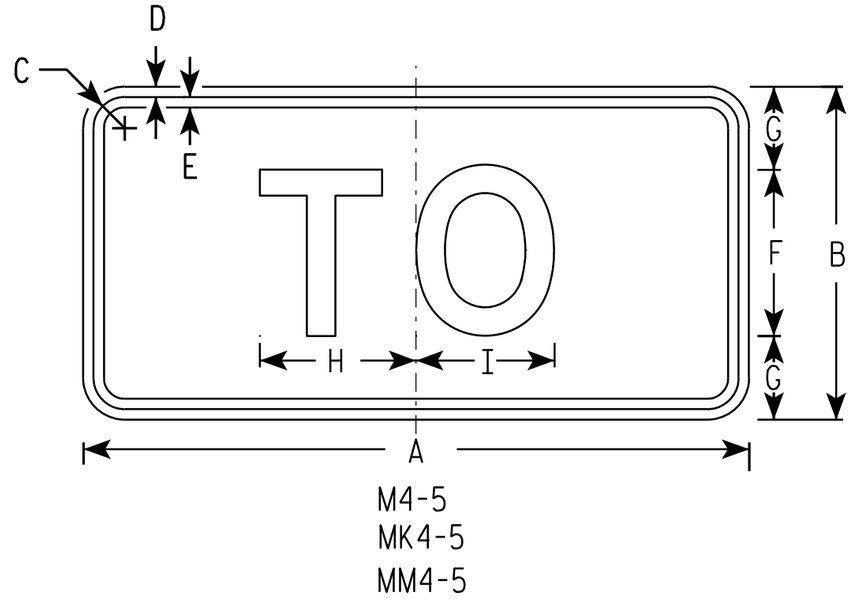
STANDARD SIGNS
M3-1 thur M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

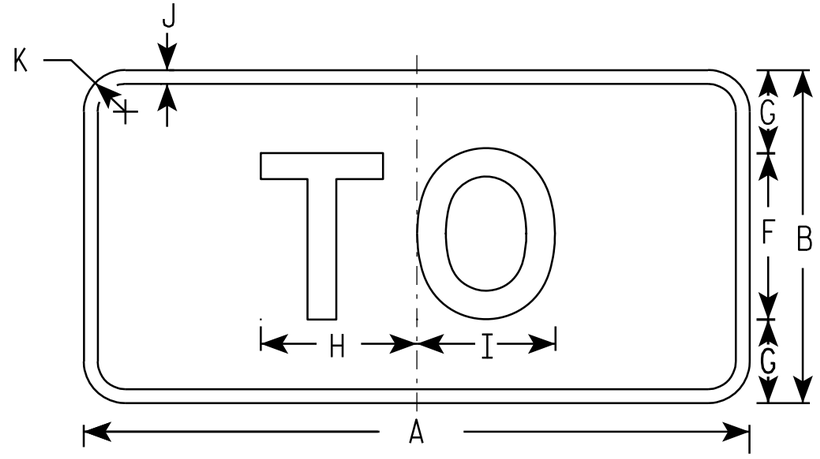
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 11/10/10 PLATE NO. M3-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 180	E



M4-5
MK4-5
MM4-5



MB4-5
MG4-5
MN4-5

NOTES

1. Sign is Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-5 Background - White - Type H Reflective (Detour or temporary Signs - Reflective)
   Message - Black
   MB4-5 Background - Blue
   Message - White - Type H Reflective (Detour or temporary Signs - Reflective)
   MG4-5 Background - Green
   Message - White - Type H Reflective
   MK4-5 Background - Green
   Message - White - Type H Reflective
   MM4-5 Background - White - Type H Reflective
   Message - Green
   MN4-5 Background - Brown
   Message - White - Type H Reflective

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	5 3/8	5 1/4	1/2	1 1/2																2.00
3	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
4	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
5	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5

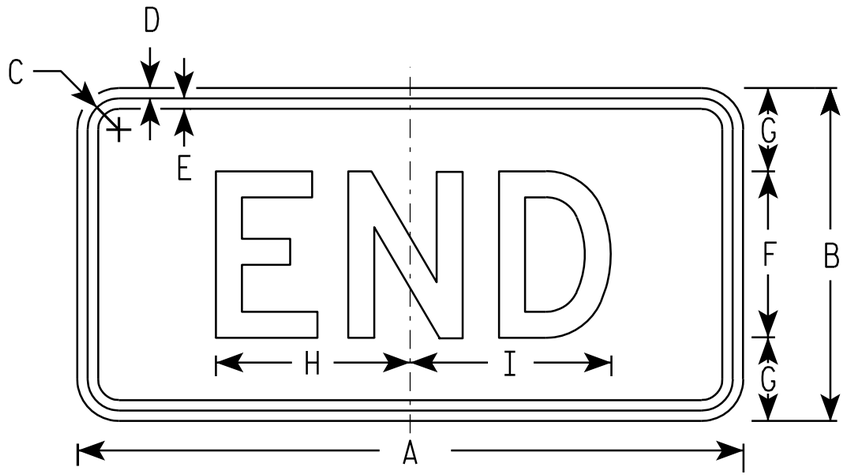
STANDARD SIGN
M4-5

WISCONSIN DEPT OF TRANSPORTATION

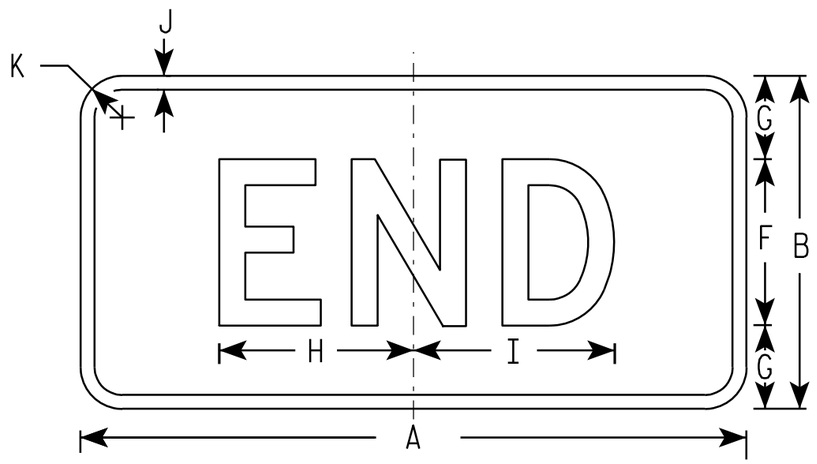
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-5.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 181 | E



M4-6
MK4-6
MM4-6
MR4-6



MB4-6
MG4-6
MN4-6

NOTES

1. Sign is Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-6 Background - White - Type H Reflective (Detour or temporary Signs - Reflective)
   Message - Black

   MB4-6 Background - Blue
   Message - White - Type H Reflective (Detour or temporary Signs - Reflective)

   MG4-6 Background - Green
   Message - White - Type H Reflective

   MK4-6 Background - Green
   Message - White - Type H Reflective

   MM4-6 Background - White - Type H Reflective
   Message - Green

   MN4-6 Background - Brown
   Message - White - Type H Reflective

   MR4-6 Background - Brown
   Message - Yellow - Type H Reflective

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	7	7 1/4	1/2	1 1/2																2.00
3	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5
4	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5
5	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5

STANDARD SIGN
M4-6

WISCONSIN DEPT OF TRANSPORTATION

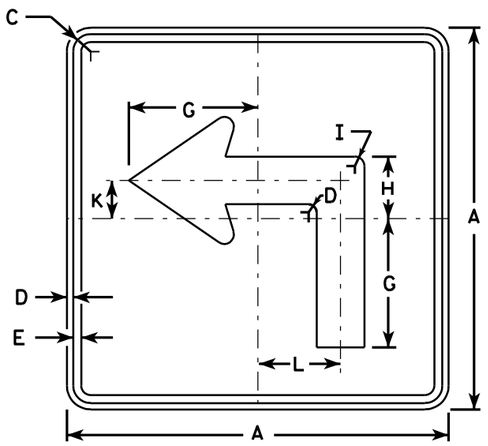
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-6.7

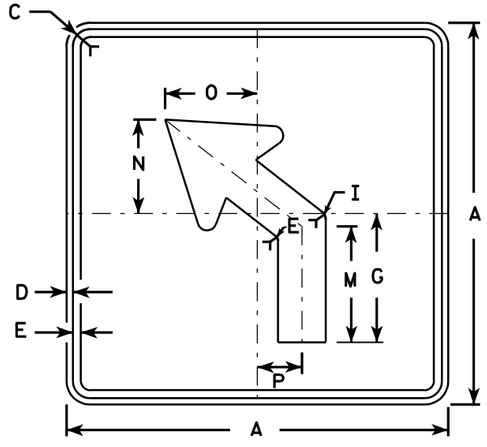
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 182 | E

7

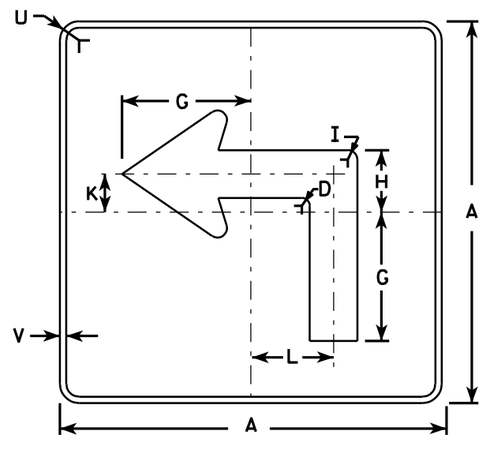
FILE NAME : C:\Users\PROJECTS\tr_stdplate\M46.DGN PLOT DATE : 10-NOV-2010 12:57 PLOT BY : ditjph PLOT NAME : PLOT SCALE : 5.462457:1.000000
WISDOT/CADDS SHEET 42



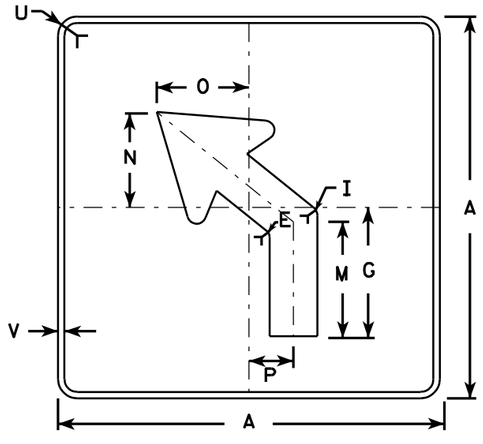
M5-1L
MK5-1L
MM5-1L
MO5-1L
MP5-1L
MR5-1L



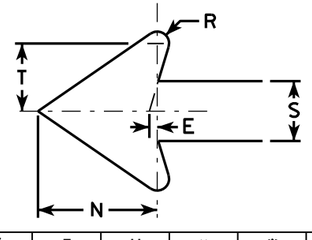
M5-2L
MK5-2L
MM5-2L
MO5-2L
MP5-2L
MR5-2L



MB5-1L
MG5-1L
MN5-1L



MB5-2L
MG5-2L
MN5-2L



NOTES

1. Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M5-1 and M5-2 Background - White - Type H Reflective
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White - Type H Reflective
   MG5-1 and MG5-2 Background - Green
   Message - White - Type H Reflective
   MK5-1 and MK5-2 Background - Green
   Message - White Type H Reflective
   MM5-1 and MM5-2 Background - White - Type H Reflective
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White - Type H Reflective
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White - Type H Reflective
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow - Type H Reflective
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 1/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 1/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 1/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

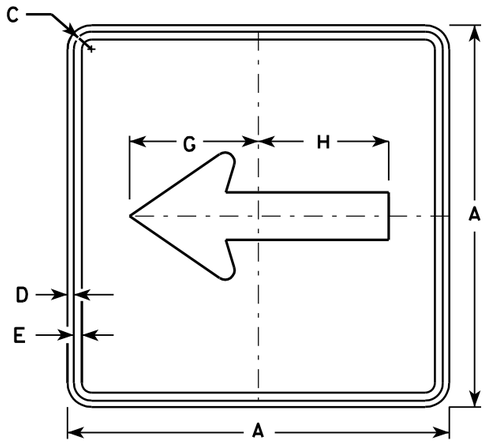
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

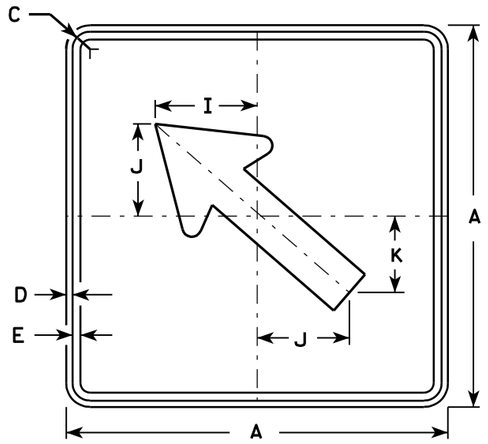
APPROVED Matthew R Rauch
for State Traffic Engineer

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

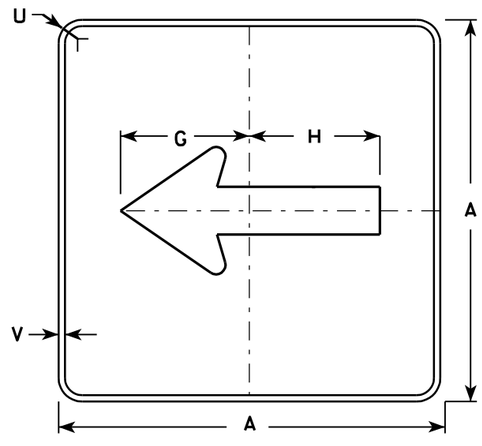
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 183 | E



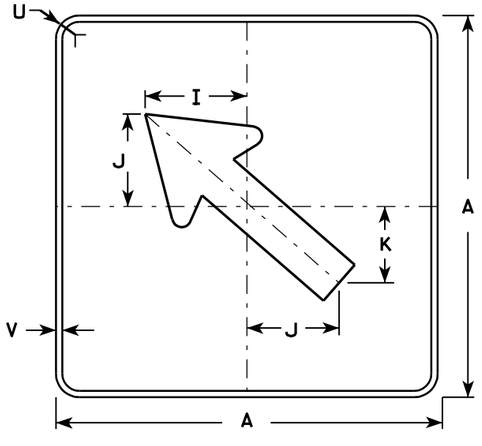
M6-1
MK6-1
MM6-1
MO6-1
MP6-1
MR6-1



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



MB6-1
MG6-1
MN6-1



MB6-2
MG6-2
MN6-2

NOTES

1. Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White - Type H Reflective
   Message - Black

   MB6-1 and MB6-2 Background - Blue
   Message - White - Type H Reflective

   MG6-1 and MG6-2 Background - Green
   Message - White - Type H Reflective

   MK6-1 and MK6-2 Background - Green
   Message - White - Type H Reflective

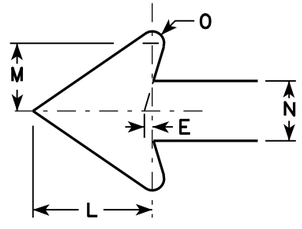
   MM6-1 and MM6-2 Background - White - Type H Reflective
   Message - Green

   MN6-1 and MN6-2 Background - Brown
   Message - White - Type H Reflective

   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black

   MP6-1 and MP6-2 Background - White - Type H Reflective
   Message - Blue

   MR6-1 and MR6-2 Background - Brown
   Message - Yellow - Type H Reflective



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

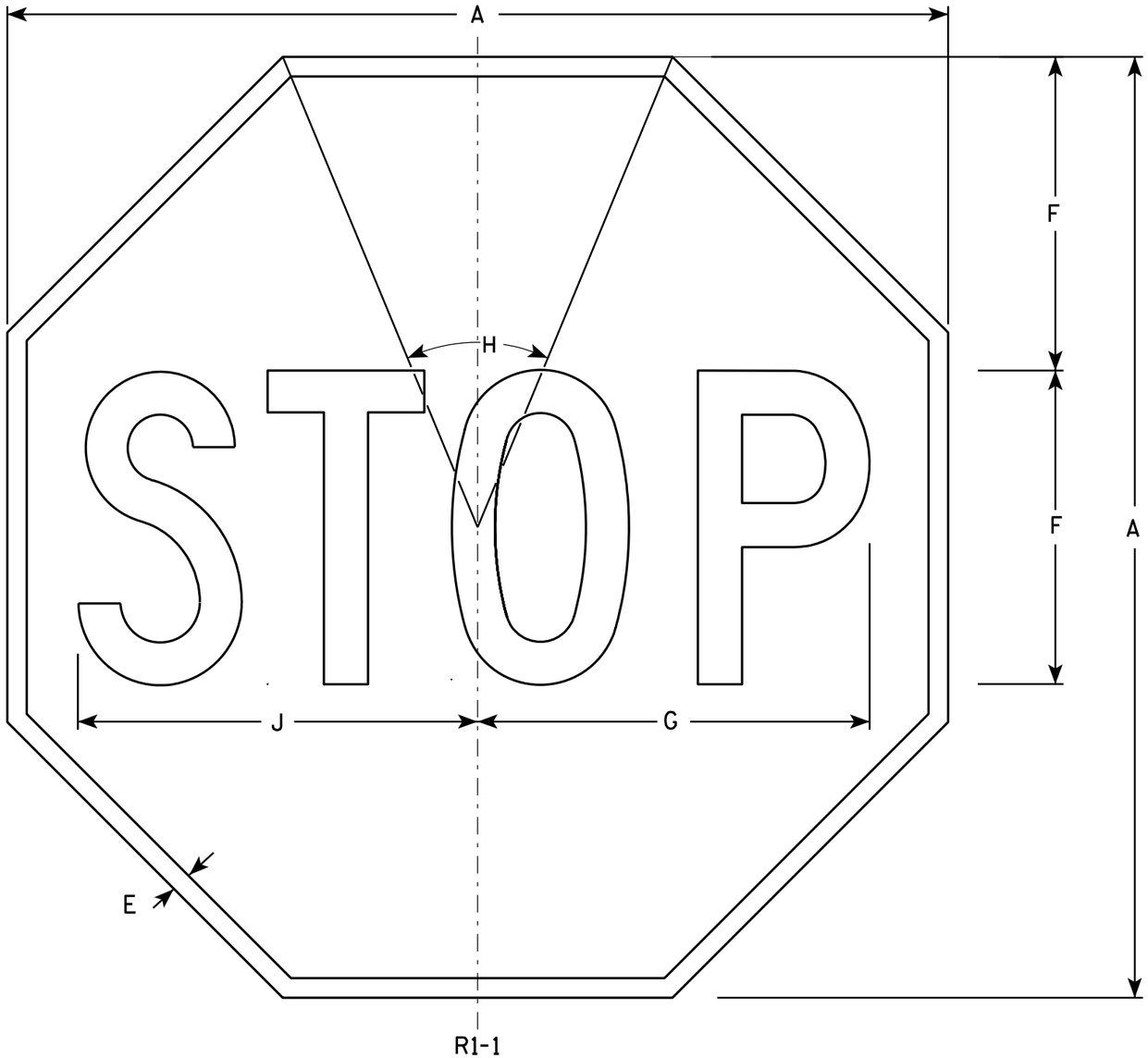
STANDARD SIGN M6-1 & M6-2 SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/29/13 PLATE NO. M6-1.13

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 184	E



NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24				3/8	8	10	45°		10 1/4																	3.31
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1.12

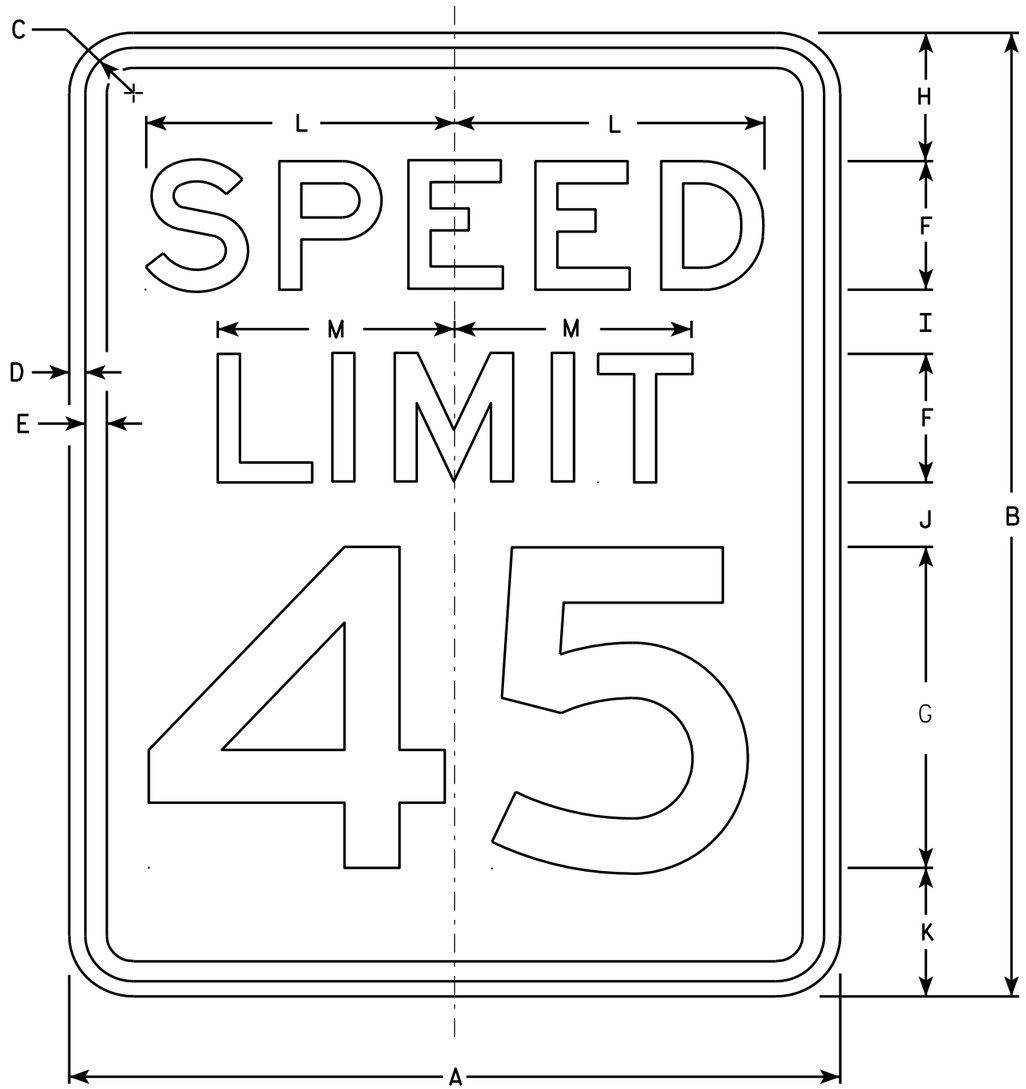
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 185	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R11.DGN PLOT DATE : 02-DEC-2010 15:09 PLOT BY : dotsja PLOT NAME : PLOT SCALE : 4.469282:1.000000

WISDOT/CADDS SHEET 42

7

7



R2-1

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

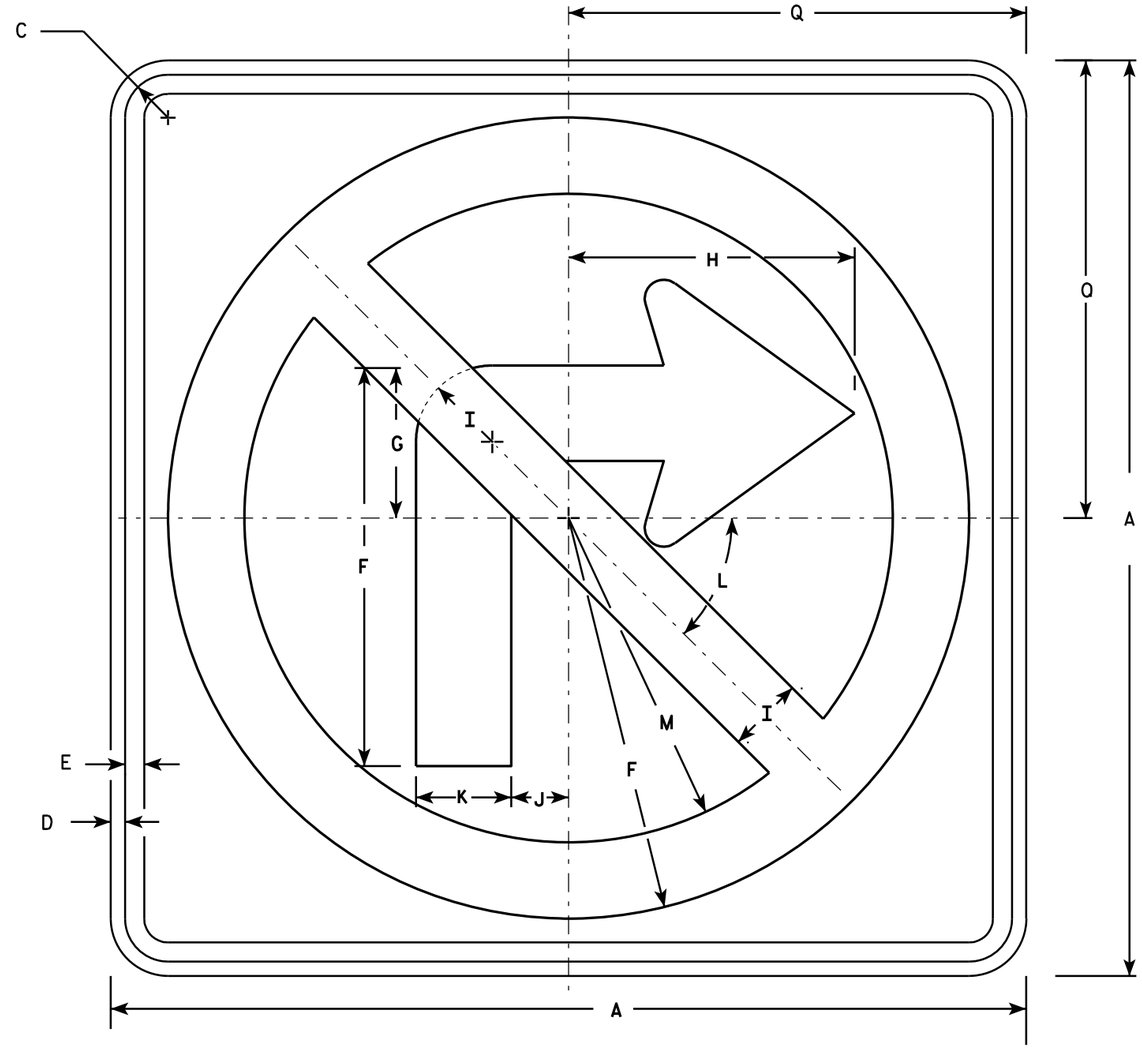
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

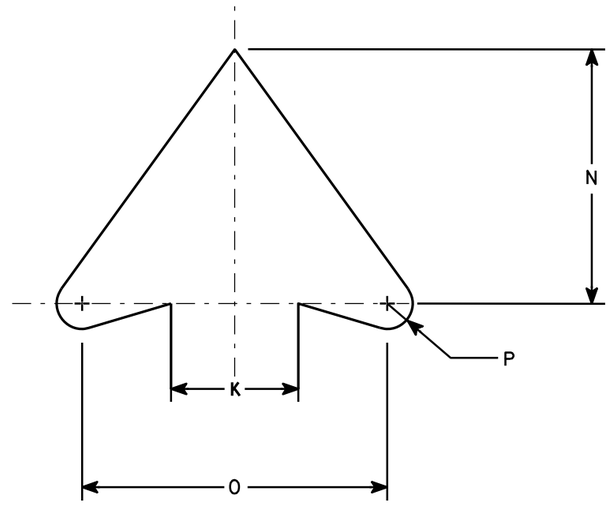
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 186 | E



R3-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45	8 1/2	5	6	1/2	12										4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2	12										4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4	18										9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1	24										16.0

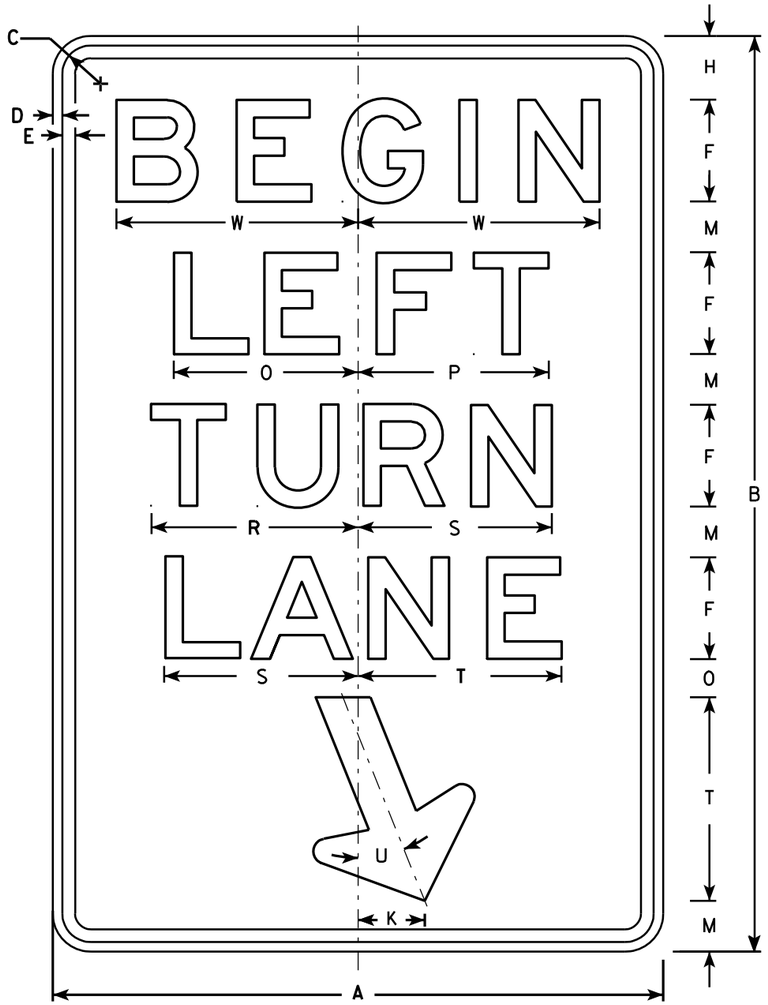
STANDARD SIGN
R3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

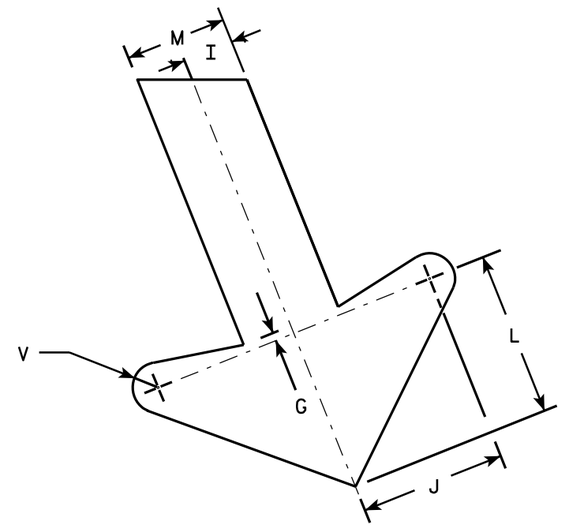
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 187	E



R3-20L

NOTES

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



ARROW DETAIL

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

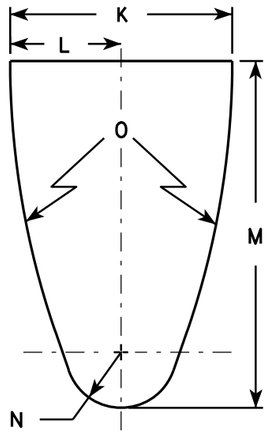
STANDARD SIGN
R3-20L

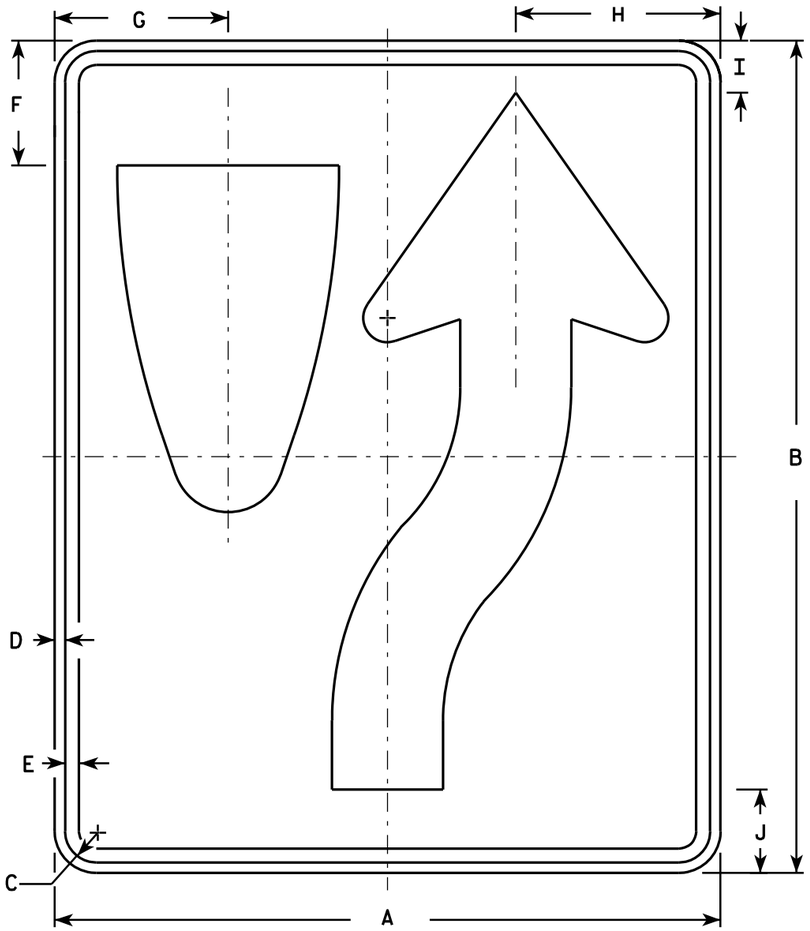
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 188 | E

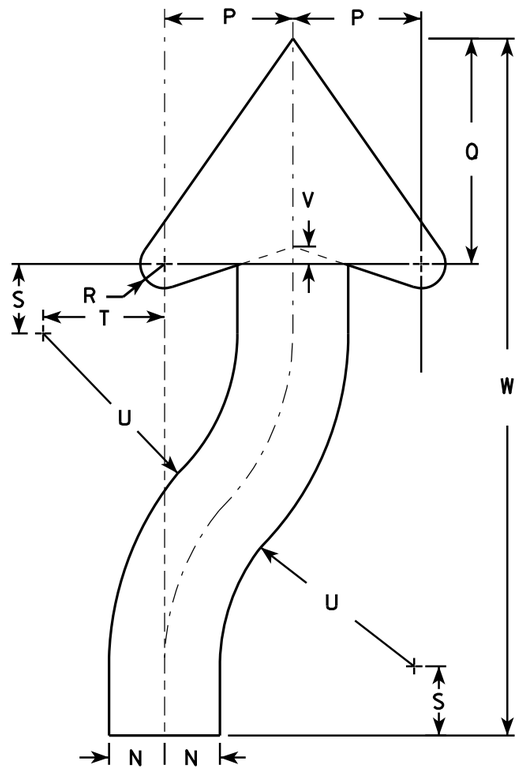




R4-7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:
   Background - White
   Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend is reversed.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

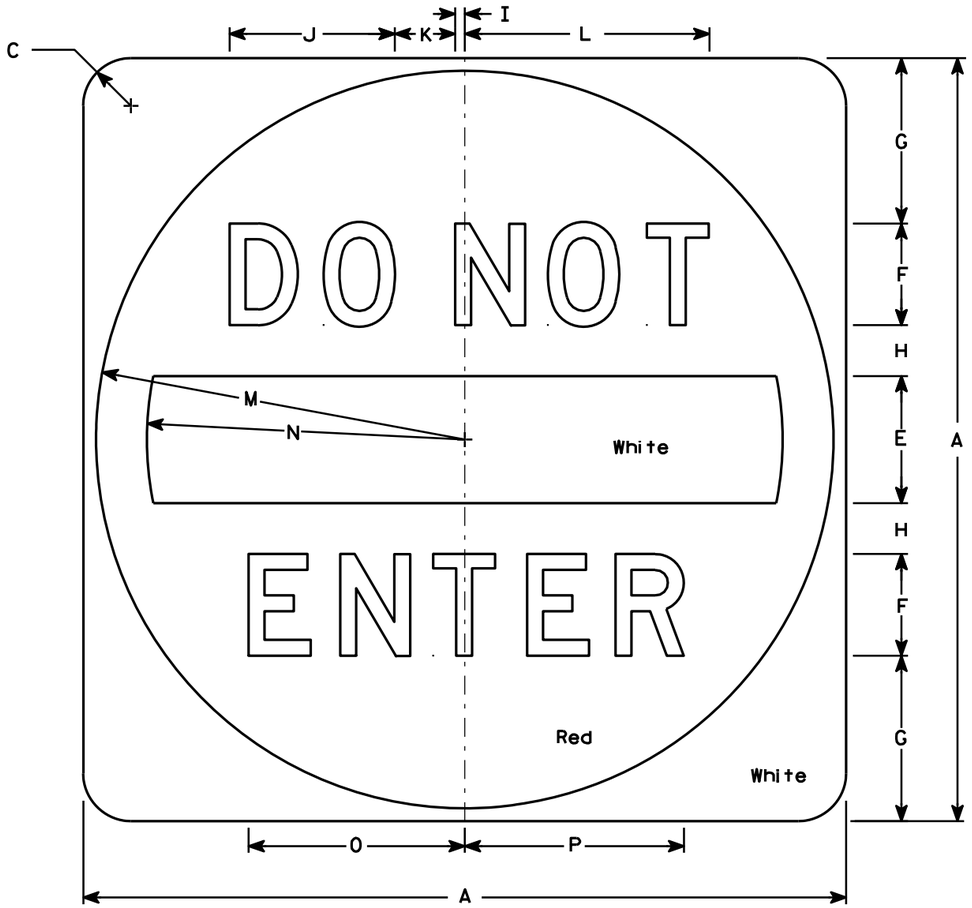
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 189	E



R5-1

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8											6.26
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8											16.0

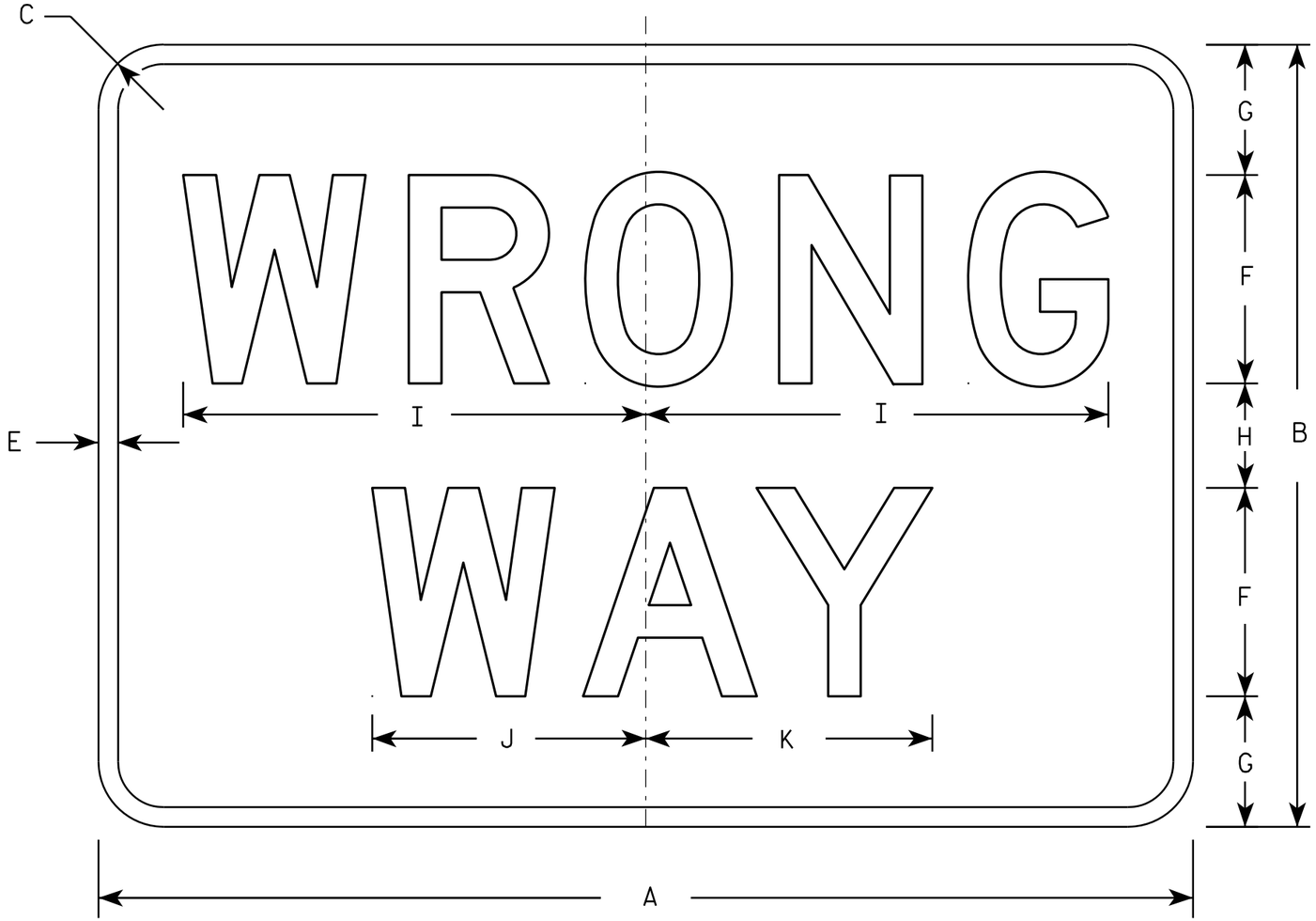
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1.15

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 190 | E



R5-1A

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - 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	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1A.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 191 | E

R5-57

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 - Lines 1, 2, and 5 are Series C.
   Lines 3 and 4 are Series B.
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

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

STANDARD SIGN
R5-57

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-57.10

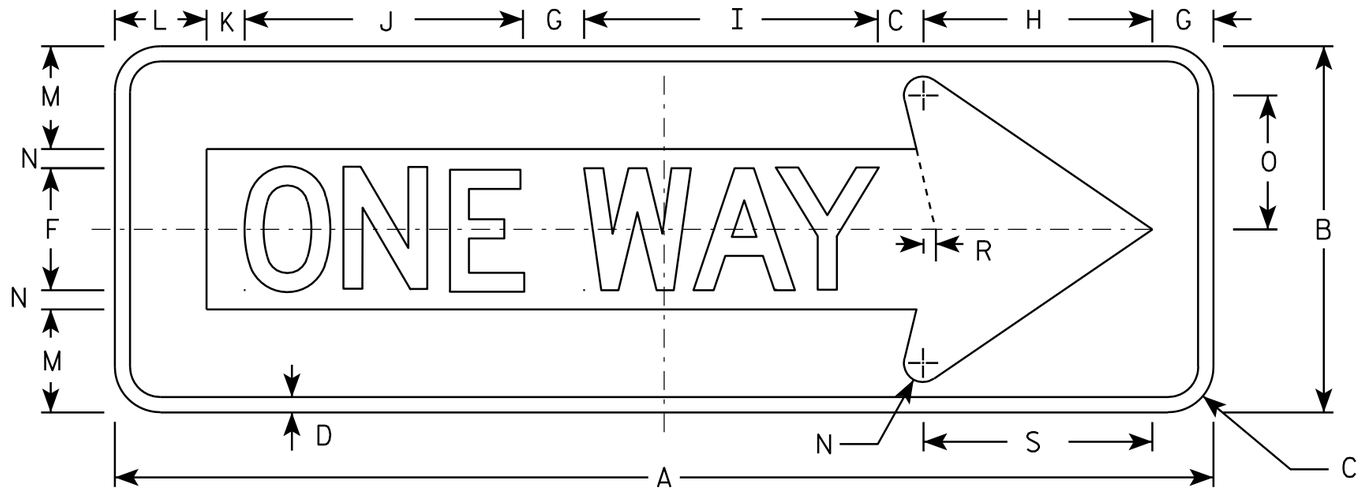
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 192 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R557.DGN PLOT DATE : 29-MAR-2011 14:38 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.959043:1.000000

WISDOT/CADDS SHEET 42

7

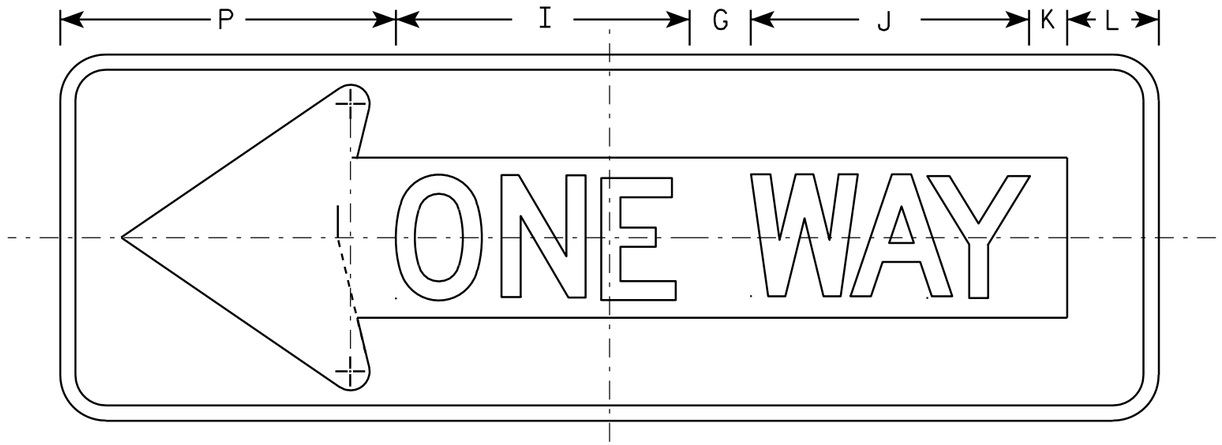
7



R6-1R

NOTES

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



R6-1L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36	12	1 ½	½		4	2	7 ½	9 ⅝	9 ⅛	1 ¼	3	3 ⅜	⅝	4 ⅜	11		⅜	7 ½								3.0
2M	54	18	2 ¼	¾		6	3	11 ¼	14 ½	13 ⅝	1 ⅞	4 ½	5	1	6 ½	16 ½		⅝	11 ¼								6.75
3	54	18	2 ¼	¾		6	3	11 ¼	14 ½	13 ⅝	1 ⅞	4 ½	5	1	6 ½	16 ½		⅝	11 ¼								6.75
4	54	18	2 ¼	¾		6	3	11 ¼	14 ½	13 ⅝	1 ⅞	4 ½	5	1	6 ½	16 ½		⅝	11 ¼								6.75
5																											

STANDARD SIGN
R6-1 L & R

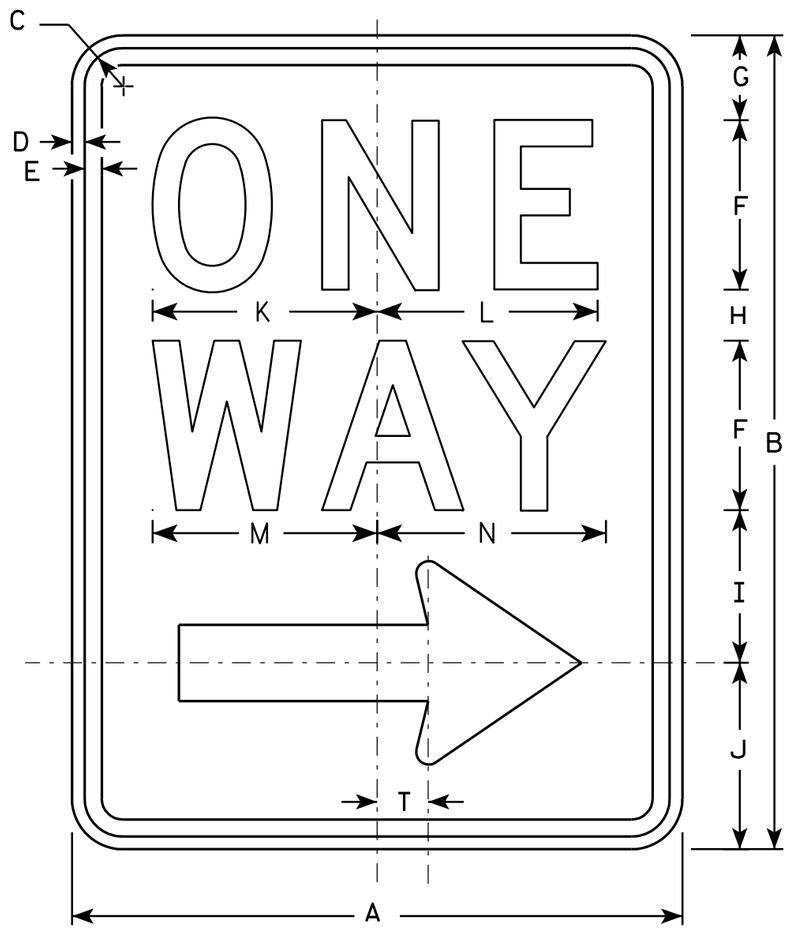
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R6-1.2

PROJECT NO:

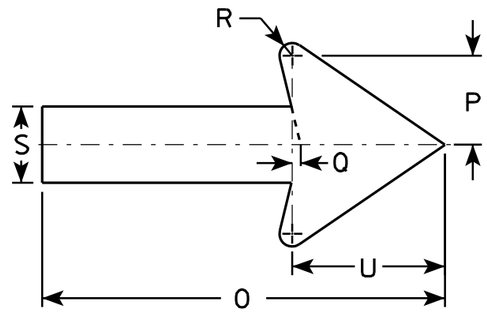
SHEET NO: 193 E



R6-2R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R6-2L same as R6-2R except arrow points to the left.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

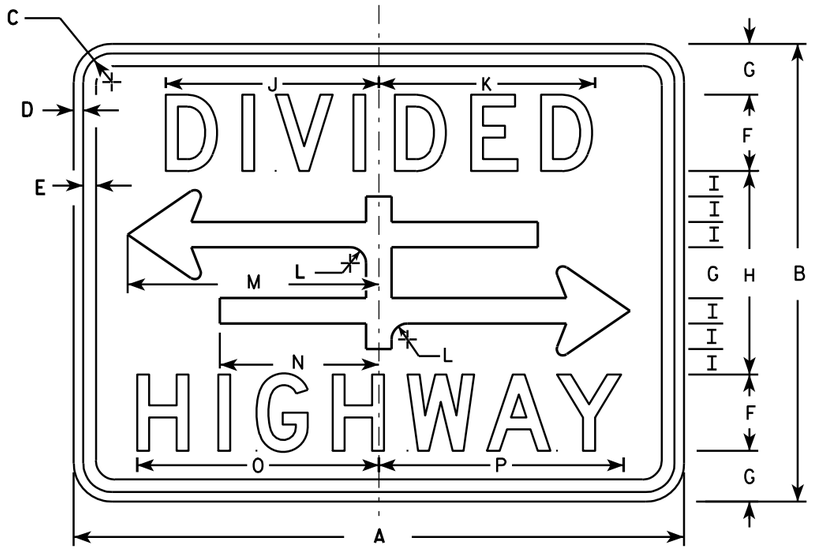
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

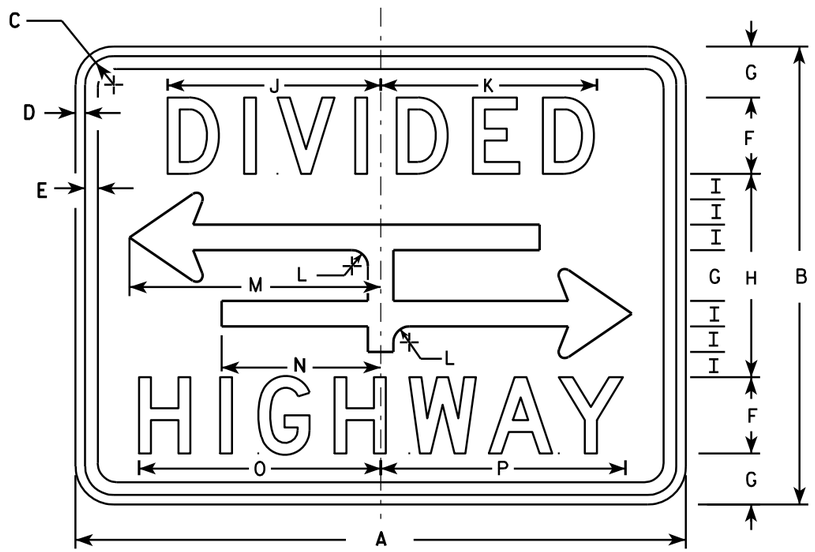
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 194	E



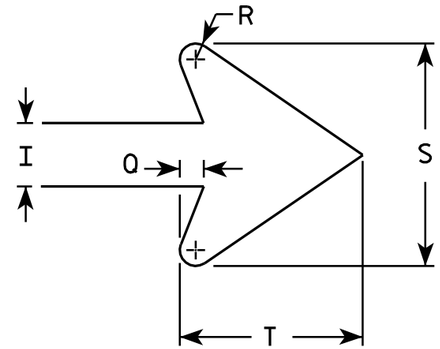
R6-3

NOTES

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



R6-3A



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24	18	1 1/8	3/8	3/8	3	2	8	1	8 3/8	8 1/2	5/8	9 7/8	6 1/4	9 1/2	9 5/8	3/8	1/4	3 1/2	2 3/4							3.0
2S	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
2M	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
3																											
4																											
5																											

STANDARD SIGN
R6-3 & R6-3A

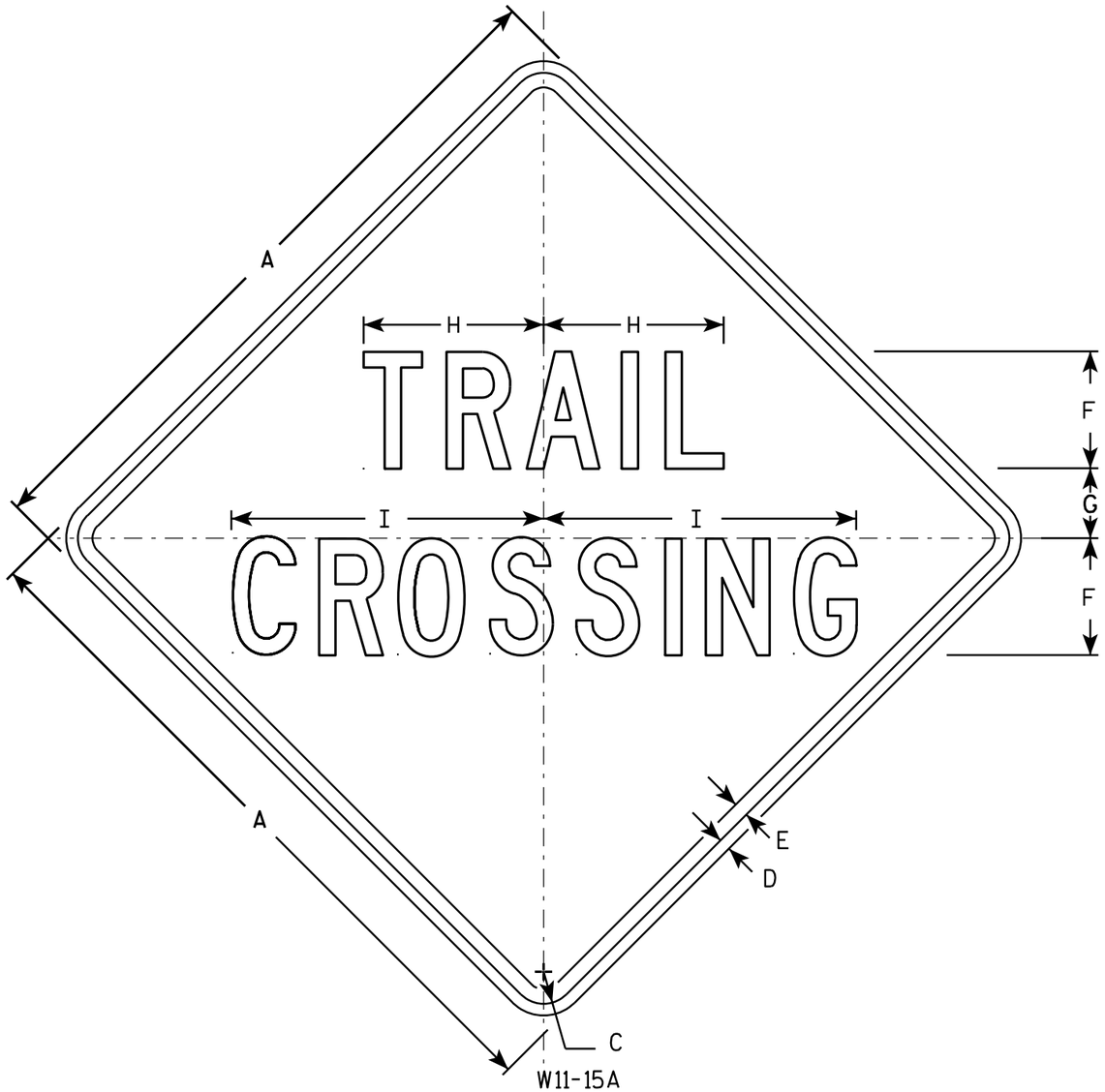
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R6-3.5

PROJECT NO:

SHEET NO: 195 E



NOTES

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

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

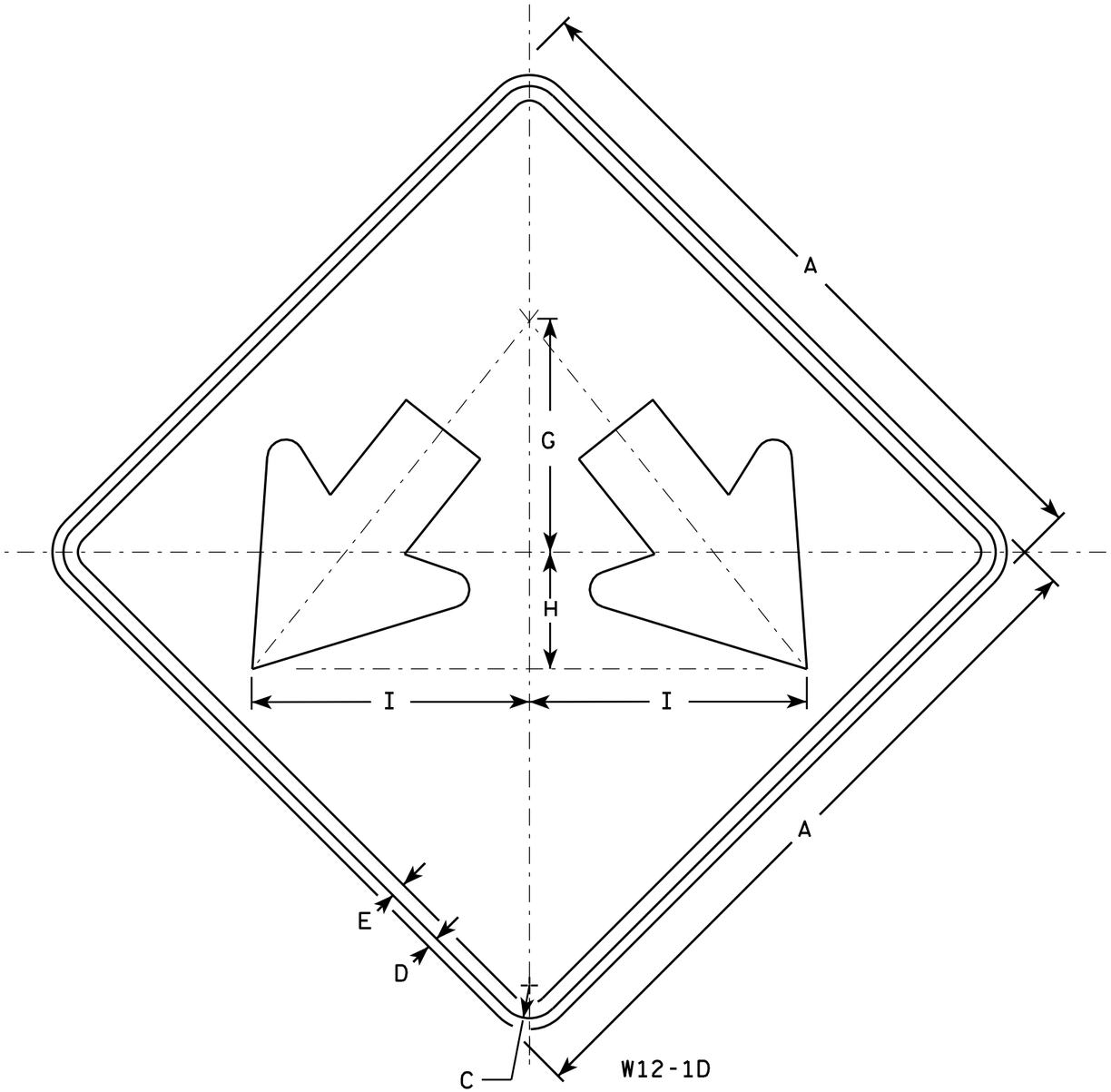
STANDARD SIGN
W11-15A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

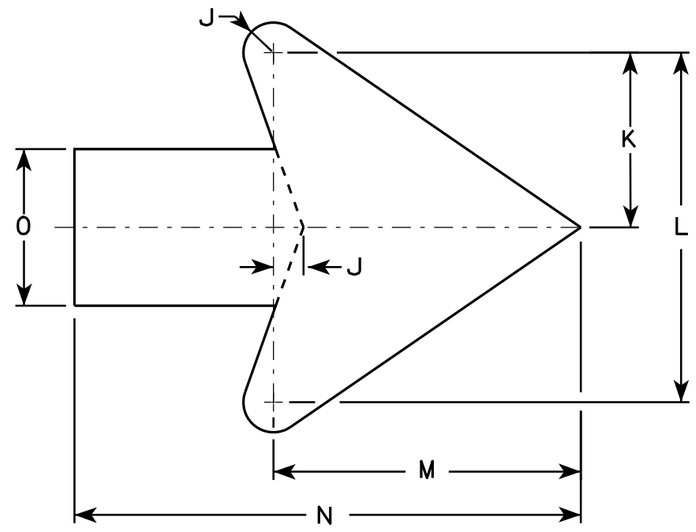
DATE 12/21/10 PLATE NO. W11-15A.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 196	E



NOTES

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



Arrow Detail

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

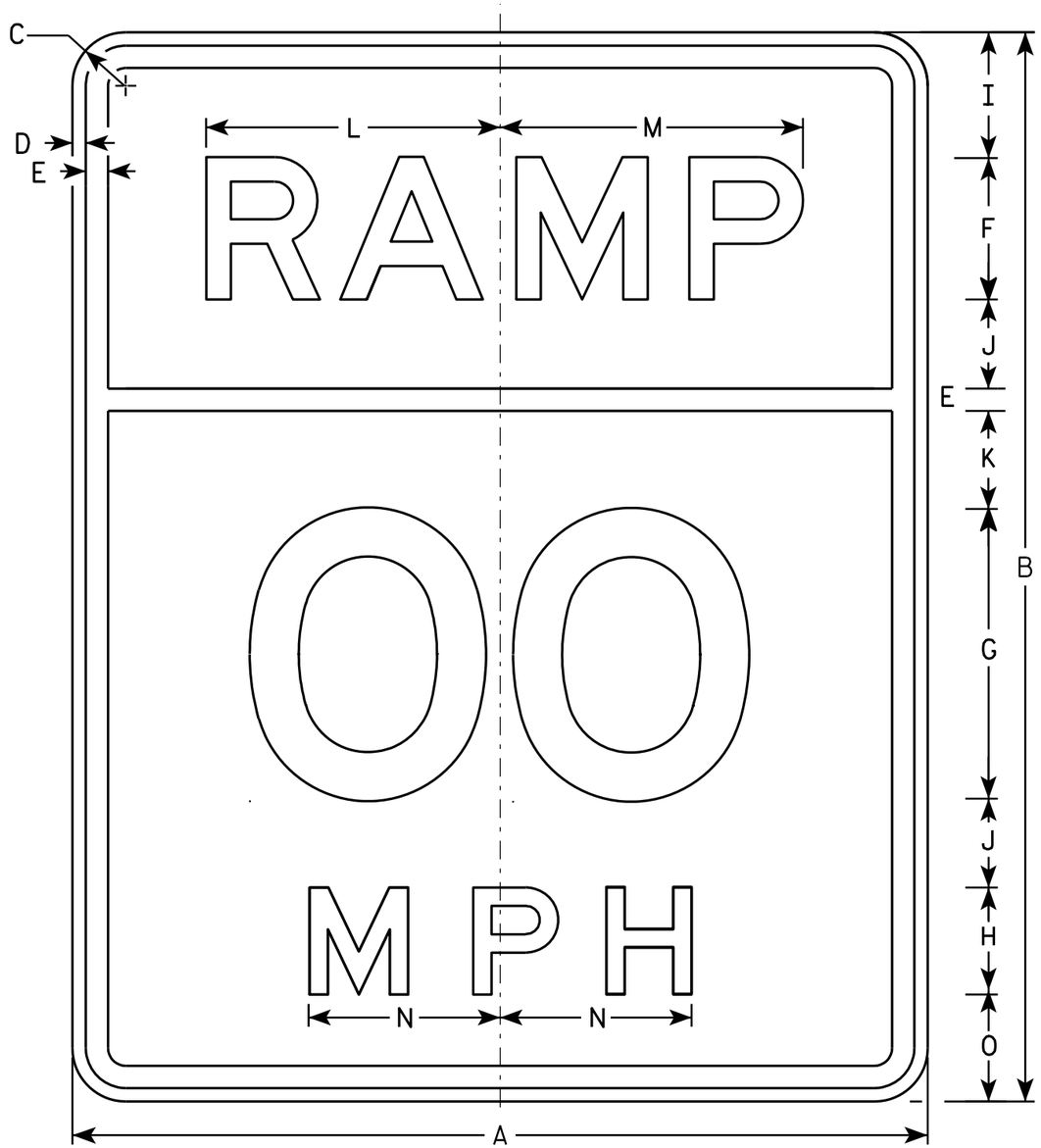
STANDARD SIGN
W12-1D

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 197	E



W13-3

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24	30	1 1/8	3/8	5/8	4	8	3	3 1/2	2 1/2	2 7/8	8 1/4	8 1/2	5 3/8	3												5.0
2S	24	30	1 1/8	3/8	5/8	4	8	3	3 1/2	2 1/2	2 7/8	8 1/4	8 1/2	5 3/8	3												5.0
2M	24	30	1 1/8	3/8	5/8	4	8	3	3 1/2	2 1/2	2 7/8	8 1/4	8 1/2	5 3/8	3												5.0
3																											
4	36	48	1 5/8	5/8	7/8	6	12	4	6	4 1/8	5 1/8	13 1/2	13 5/8	7 1/8	6												12.0
5	48	60	2 1/4	3/4	1 1/4	8	16	6	7	5	5 3/4	16 1/2	17	10 5/8	6												20.0

STANDARD SIGN
W13-3

WISCONSIN DEPT OF TRANSPORTATION

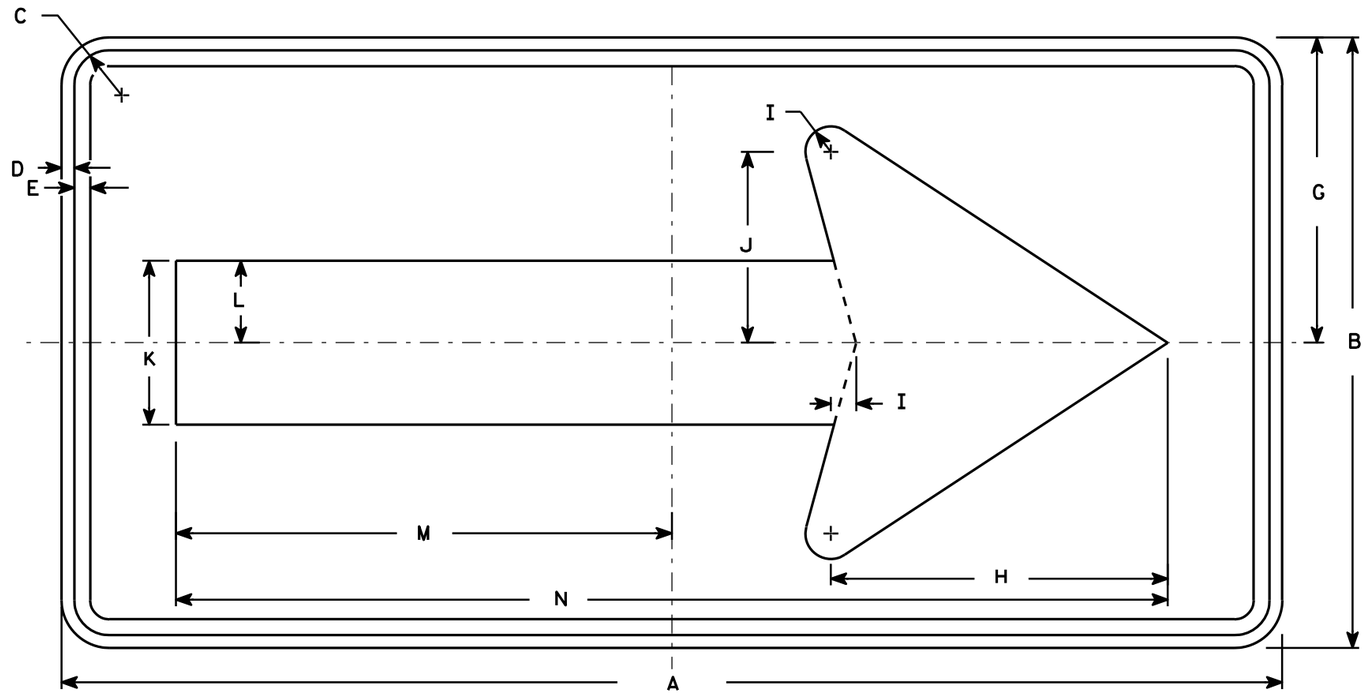
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/13/13 PLATE NO. W13-3.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 198 | E

NOTES

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



W1-6

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/8	3/8	3/8		9	10	3/4	5 5/8	4 3/4	2 3/8	14 5/8	29 1/4													4.5
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	96	48	2 1/4	3/4	1		24	26 1/2	2	15	13	6 1/2	39	78													32.0

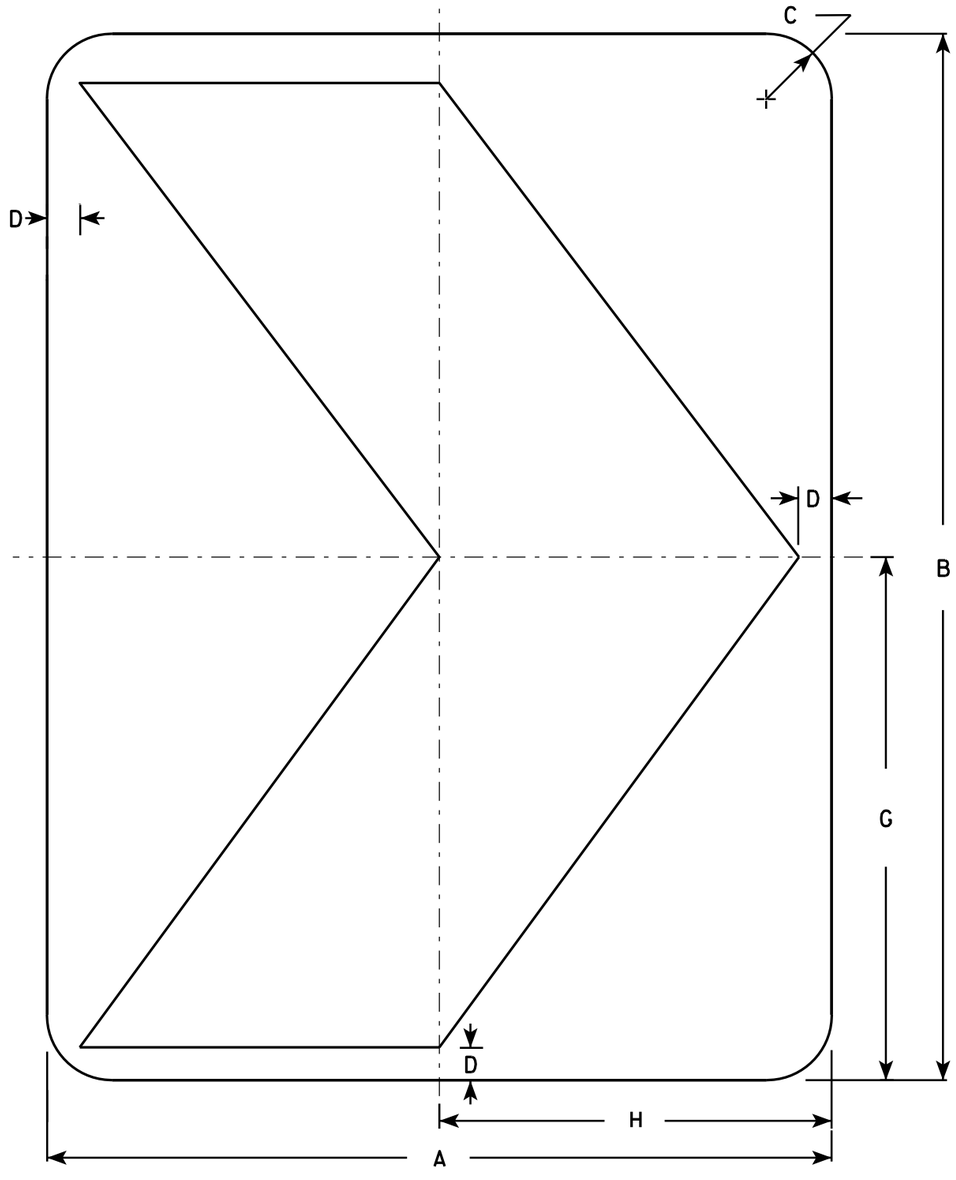
STANDARD SIGN
W1-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 199



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.

W1-8

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 ½	½			9	6																			1.5
2S	18	24	1 ½	¾			12	9																			3.0
2M	18	24	1 ½	¾			12	9																			3.0
3	24	30	1 ½	1			15	12																			5.0
4	30	36	1 ⅞	1 ¼			18	15																			7.5
5	36	48	2 ¼	1 ½			24	18																			12.0

STANDARD SIGN
W1-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-8.6

PROJECT NO:

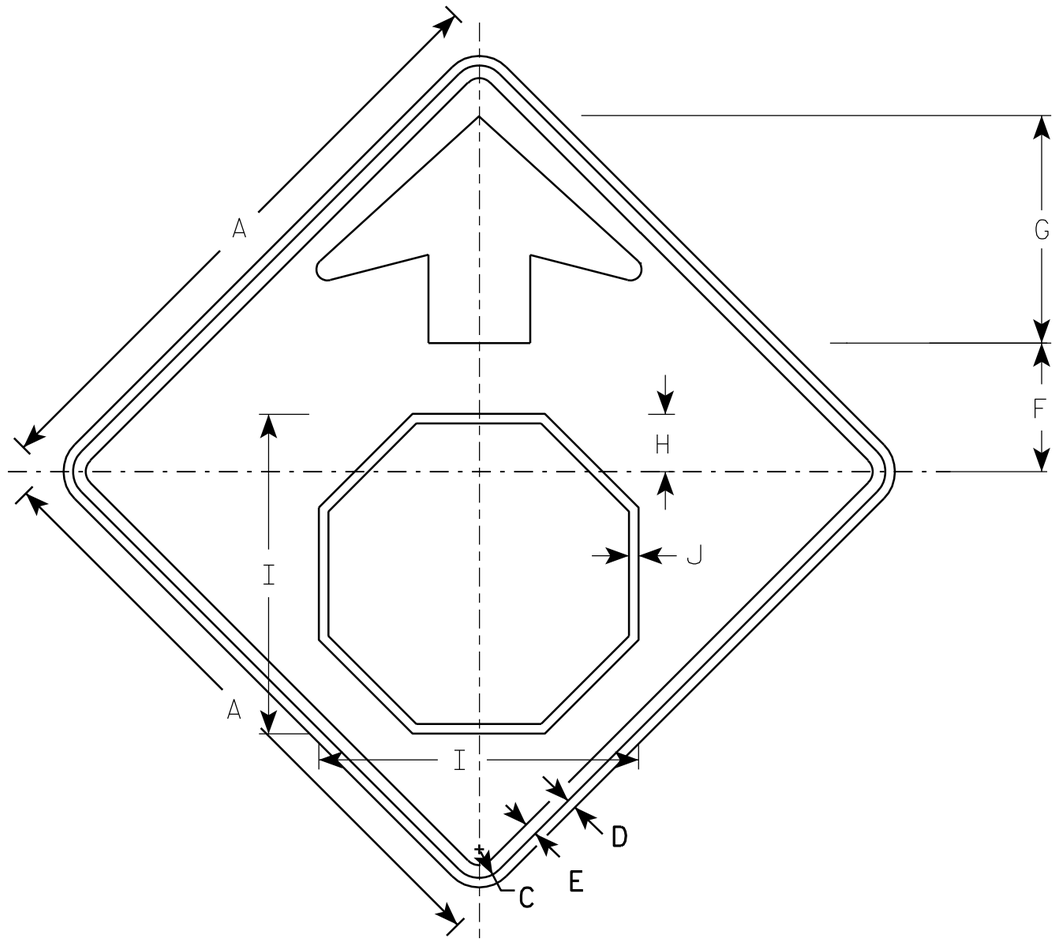
SHEET NO: 200 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W18.DGN PLOT DATE : 07-JUN-2010 12:55 PLOT BY : ditjph

WISDOT/CADDS SHEET 42

7

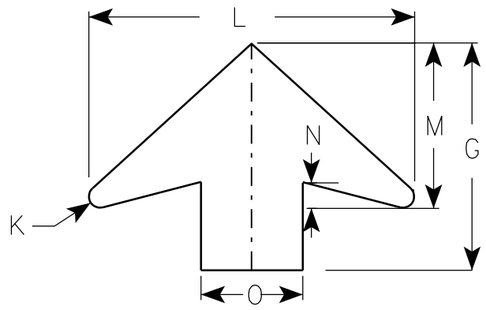
7



W3-1

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - YELLOW
   Arrow & Border - BLACK
   Stop Symbol - WHITE BORDER ON RED BACKGROUND



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	6 1/4	11 1/4	2 7/8	15 3/4	1/2	1/2	16	8	1 1/4	5												6.25
2S	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
2M	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
3	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0

STANDARD SIGN
W3-1

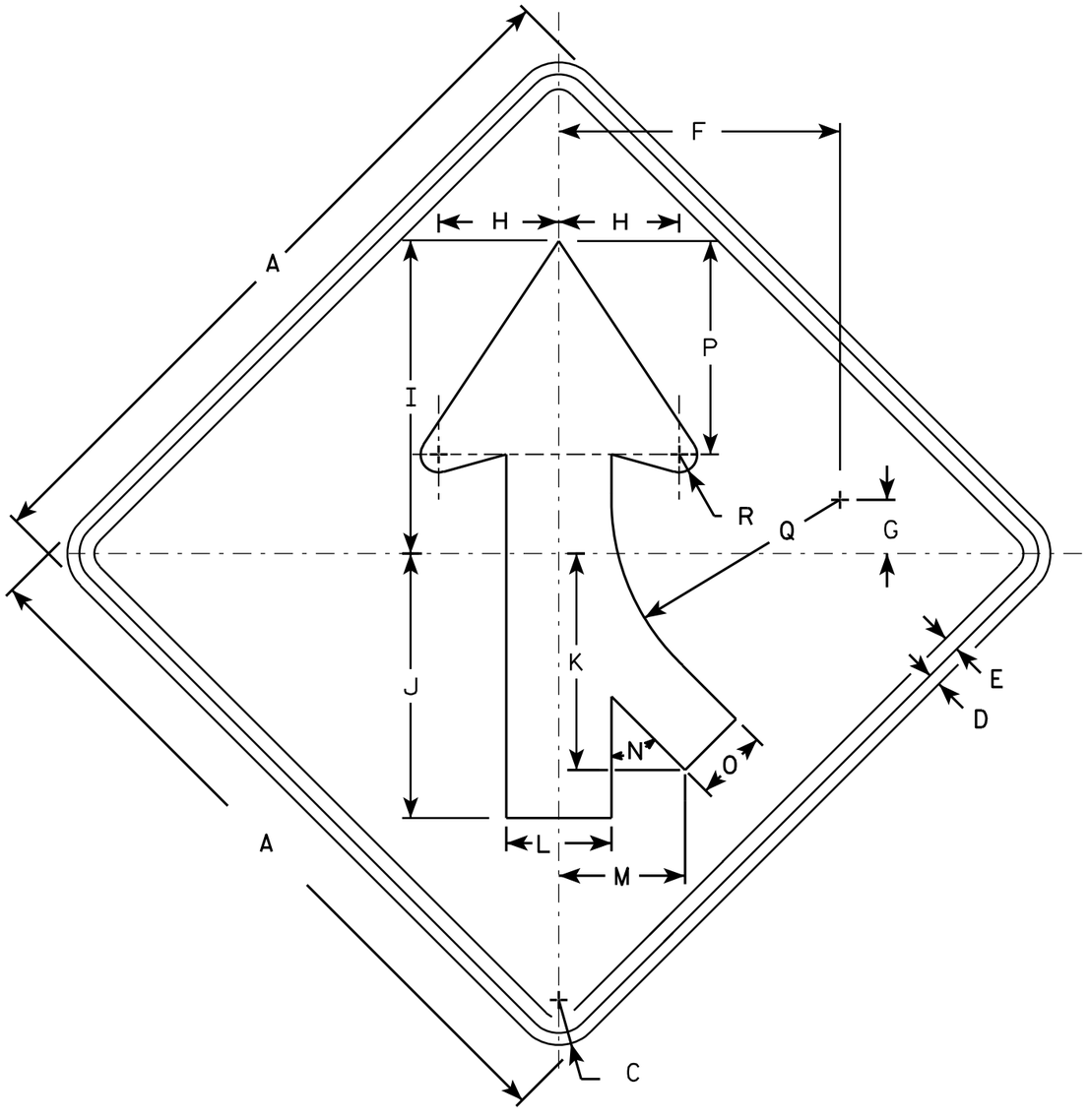
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-1.12

PROJECT NO:

SHEET NO: 201 E



W4-1 R

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. W4-1L is the same as W4-1R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	11 5/8	2 1/2	5	13	11	9	4 3/8	5 1/4	45°	3	8 7/8	9 1/2	3/4									6.25
2S	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
2M	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
3	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
4	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
5	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0

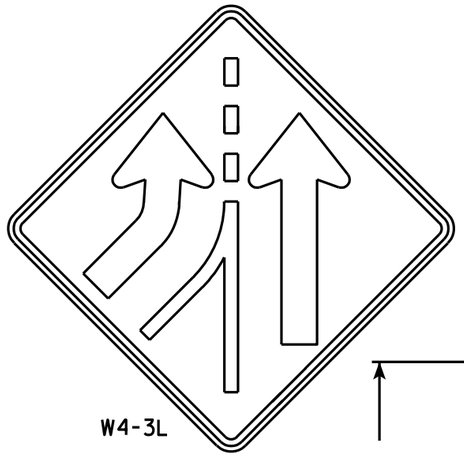
STANDARD SIGN
W4-1

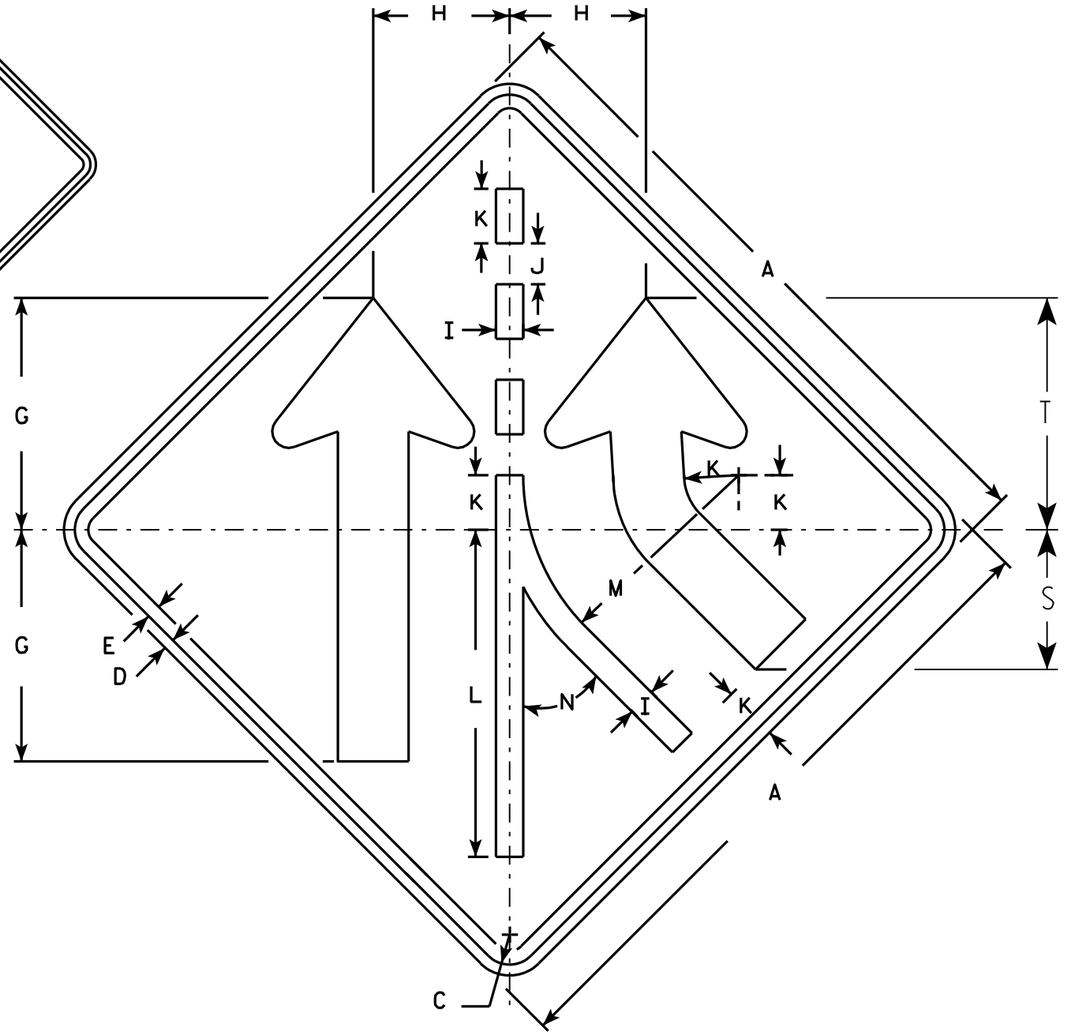
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rausch for State Traffic Engineer

DATE 03/12/13 PLATE NO. W4-1.14

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 202	E

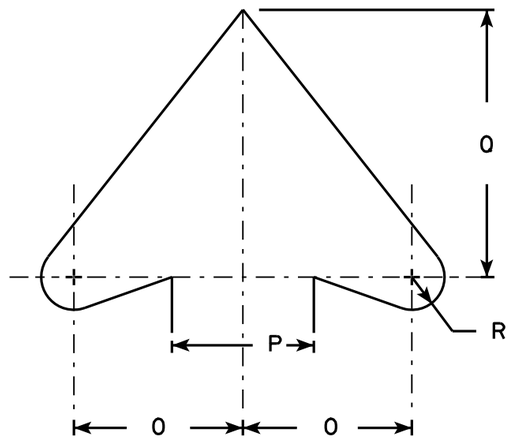




W4-3R

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. W4-3 L is the same as W4-3 R except the arrow is reversed along the vertical centerline.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8		10 5/8	6 1/4	1 1/4	1 7/8	2 1/2	15	9 7/8	45°	3 7/8	3 1/4	6 1/8	3/4	6 3/8	10 5/8							6.25
2S	36		1 5/8	5/8	3/4		12 3/4	7 1/2	1 1/2	2 1/4	3	18	11 7/8	45°	4 5/8	4	7 3/8	7/8	7 3/4	12 3/4							9.0
2M	36		1 5/8	5/8	3/4		12 3/4	7 1/2	1 1/2	2 1/4	3	18	11 7/8	45°	4 5/8	4	7 3/8	7/8	7 3/4	12 3/4							9.0
3																											
4	48		2 1/4	3/4	1		17	10	2	3	4	24	15 3/4	45°	6 1/4	5 1/2	9 7/8	1 1/4	10 1/4	17							16.0
5	48		2 1/4	3/4	1		17	10	2	3	4	24	15 3/4	45°	6 1/4	5 1/2	9 7/8	1 1/4	10 1/4	17							16.0

STANDARD SIGN
W4-3

WISCONSIN DEPT OF TRANSPORTATION

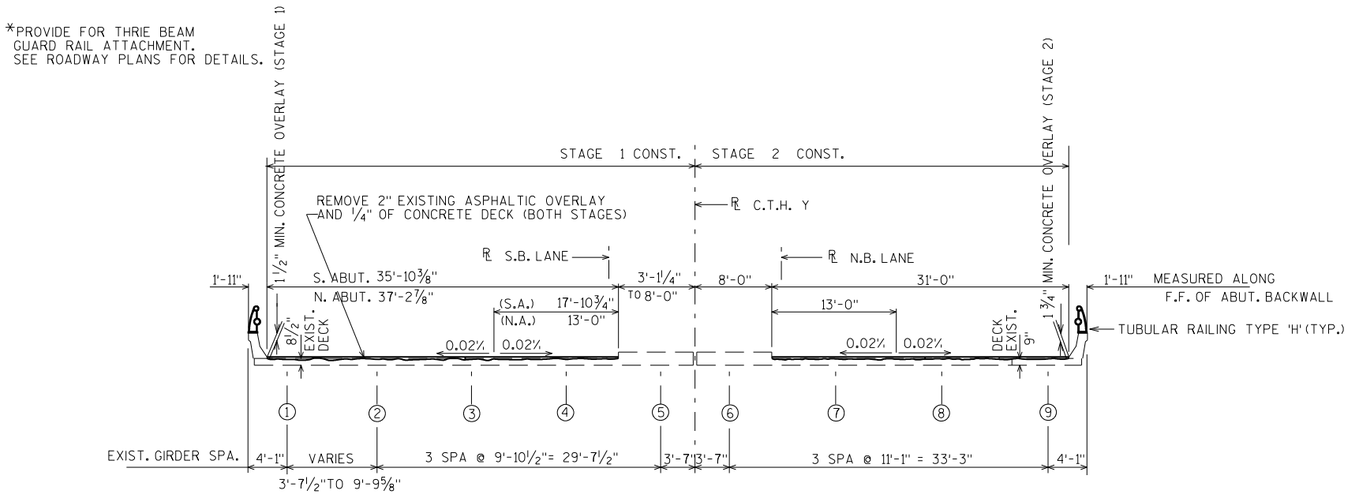
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W4-3.8

PROJECT NO:

SHEET NO: 203 E

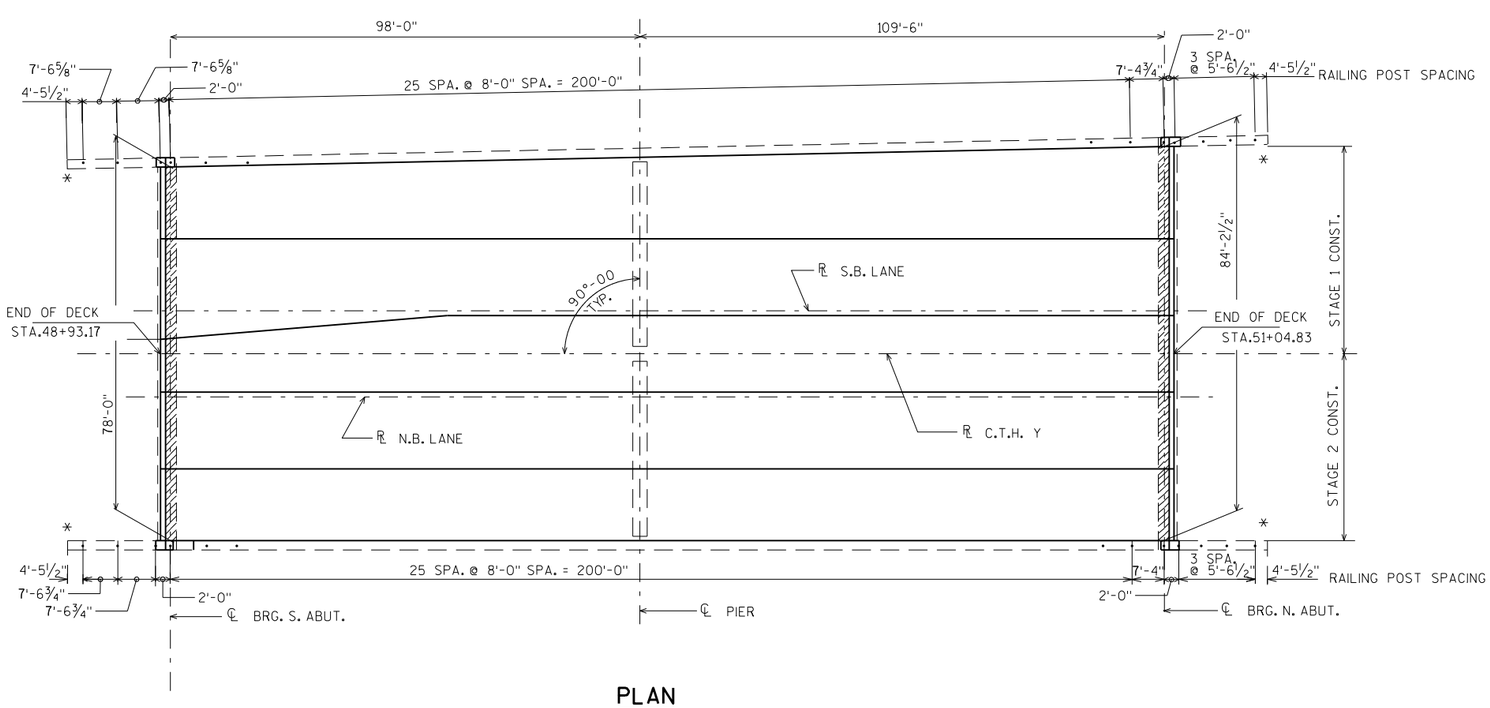
STATE PROJECT NUMBER
1440-27-71



CROSS SECTION THRU ROADWAY

(LOOKING NORTH)

AVERAGE CONCRETE OVERLAY = 2⅛"



PLAN

DESIGN DATA

LIVE LOAD:

INVENTORY RATING: HS-20
OPERATIONAL RATING: HS-33
MAXIMUM STANDARD PERMIT VEHICLE LOAD = 220 KIPS.

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY OVERLAY DECKS ——— f'c = 4,000 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60 ——— fy = 60,000 P.S.I.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE TOP OF DECK OVERLAY SURFACE AND THE JOINT REPAIR SURFACE WHICH INCLUDES THE MEDIAN AND THE TOP AND ROADWAY SIDE OF PARAPET.

DIMENSIONS SHOWN ARE BASED ON THE EXISTING ORIGINAL STRUCTURE PLANS.

ANY EXCAVATION NECESSARY TO COMPLETE THE OVERLAY AT THE ABUTMENTS IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

CONTACT THE BUREAU OF STRUCTURES BEFORE PLACEMENT OF OVERLAY IF THE AVERAGE THICKNESS OF THE NEW OVERLAY WILL EXCEED THE AVERAGE OVERLAY SHOWN ON THE PLANS BY MORE THAN ½".

THE EXISTING OVERLAY SHALL BE REMOVED FROM THE BRIDGE DECK UNDER BID ITEM "REMOVING ASPHALT CONCRETE DECK OVERLAY B-59-80".

FOR ESTIMATED DECK PREPARATION LOCATIONS, SEE THE THERMOGRAPHY REPORT PROVIDED BY THE FIELD ENGINEER. LOCATE ACTUAL PREPARATION DECKS TYPE 1 AND PREPARATION DECKS TYPE 2 AS DIRECTED BY THE FIELD ENGINEER.

1/4" OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER THE BID ITEM "CLEANING DECKS".

CLEAN & PAINT ALL EXPOSED STEEL SURFACES UNDERNEATH THE BRIDGE DECK. THE SURFACES INCLUDE GIRDERS, DIAPHRAGMS, WEB STIFFENERS, AND SPLICE PLATES.

JOINT REPAIR AT BOTH ABUTMENTS. SALVAGE AND INCORPORATE EXISTING PARAPET REINFORCEMENT IN JOINT REPAIR LOCATIONS.

LIST OF DRAWINGS

1. CONCRETE OVERLAY
2. QUANTITIES
3. EXPANSION DEVICE
4. COVER PLATE DETAILS
5. TUBULAR RAILING TYPE 'H' (ALUM.)
6. TUBULAR RAILING TYPE 'H' (STEEL)

STRUCTURE DESIGN CONTACT:
MAY LIU (608)266-5163
DAVID KIEKBUSCH (608)266-5084

NO.	DATE	REVISION	BY

Plans Prepared By WISDOT
BUREAU OF STRUCTURES

ACCEPTED William C. Dreher DJK 12/13/13
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-59-80

COUNTY		~~TOWN/CITY~~/VILLAGE	
SHEBOYGAN			KOHLER
DESIGN SPEC.	REHABILITATION		N/A
DESIGNED BY	MWL	DESIGN CK'D. MSC	DRAWN BY MWL	PLANS CK'D. MSC

CONCRETE OVERLAY

SHEET 1 OF 6

204

I.D. 1440-27-00

DATE: 7/23/13

SCALE =

STATE PROJECT NUMBER
1440-27-71

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTAL
502.3100	EXPANSION DEVICE B-59-80	LS	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	1,570
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	4,020
509.0301	PREPARATION DECKS TYPE 1	SY	188
509.0302	PREPARATION DECKS TYPE 2	SY	94
509.0500	CLEANING DECKS	SY	1,490
509.1000	JOINT REPAIR	SY	75
509.1500	CONCRETE SURFACE REPAIR	SF	34
509.2000	FULL-DEPTH DECK REPAIR	SY	1
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	113
509.9010.S	REMOVING ASPHALTIC CONCRETE DECK OVERLAY B-59-80	SY	1,490
513.4055	RAILING TUBULAR TYPE H B-59-80	LS	1
517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE B-59-80	LS	1
517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-59-80	LS	1
517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH	1

LOCATIONS OF CONCRETE SURFACE REPAIR:

10 SF ON SOUTH ABUTMENT.
4 SF ON NORHT ABUTMENT.
20 SF ON VARIOUS LOCATIONS OF PARAPET.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-80

DRAWN BY MWL | PLANS CK'D. MSC

QUANTITIES

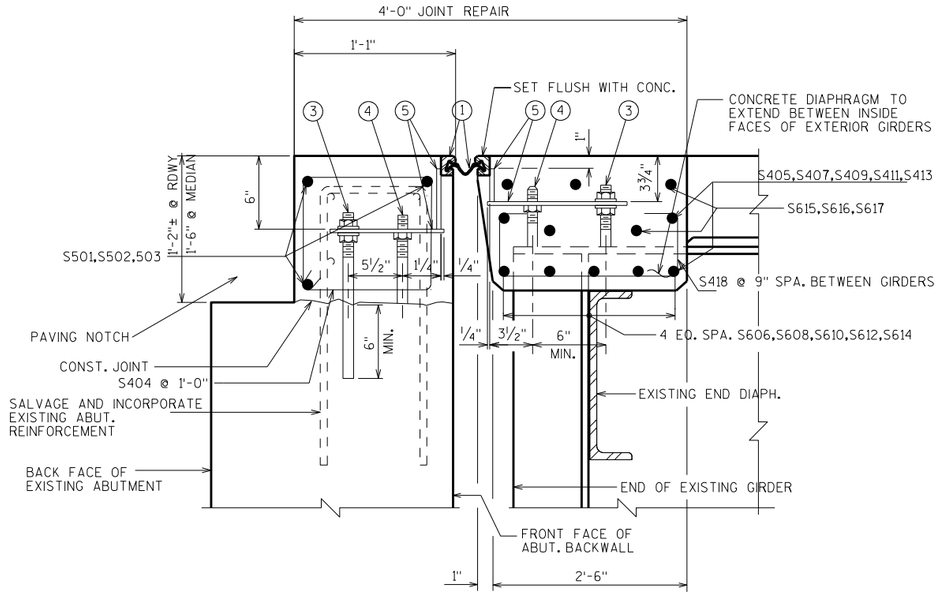
SHEET 2

205

SCALE =

STATE PROJECT NUMBER

1440-27-71



SECTION THRU JOINT AT ABUTMENT

NORMAL TO ℄ SUBSTRUCTURE

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		18	7'-9"			PAVING BLOCK- S. ABUT STG 1
S502		36	7'-7"			PAVING BLOCK- S&N ABUT STG 2
S503		21	7'-8"			PAVING BLOCK- N ABUT STG 1
S404		164	3'-8"	X		PAVING BLOCK-STIRRUPS
S405		4	5'-10"			DIA @ ABUTS-BETWN GDRS 5&6
S606		10	5'-10"			DIA @ ABUTS-BETWN GDRS 5&6
S407		12	9'-9"			DIA@ ABUTS-BETWN GDRS 6,7,8,9
S608		30	9'-9"			DIA @ ABUT-BETWN GDRS 6,7,8,9
S409		12	8'-5"			DIA@ ABUTS BETWN GDRS 2,3,4,5
S610		30	8'-5"			DIA@ ABUT BETWN GDRS 2,3,4,5
S411		2	2'-3"			DIA @ S.ABUT-BETWN GDRS 1&2
S612		5	2'-3"			DIA @ S.ABUT- BETWN GDRS 1&2
S413		2	8'-5"			DIA @ N. ABUT-BETWN GDRS 1&2
S614		5	8'-5"			DIA @ N.ABUT-BETWN GDRS 1&2
S615		5	42'-0"			DECK S. ABUT. STG. 1
S616		10	40'-2"			DECK S.&N.ABUT. STG. 2
S617		5	48'-6"	X		DECK N. ABUT STG. 1
S418		190	4'-6"			DIA @ ABUTS-VERT. BETWN GDRS

LEGEND

(1) NEOPRENE STRIP SEAL (4 - INCH) AND STEEL EXTRUSIONS.

(2) STUDS 5/8"Φ X 6 3/8" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.

(2A) 1/2" THICK ANCHOR PLATE WITH 5/8"Φ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.

(3) 3/4" Φ THREADED ROD WITH 2 NUTS AND PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.

(4) 3/4"Φ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.

(5) FABRICATE SUPPORT FROM 3" X 1/2" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1 1/2" Φ HOLE FOR NO. 3 AND 1" Φ HOLE FOR NO. 4.

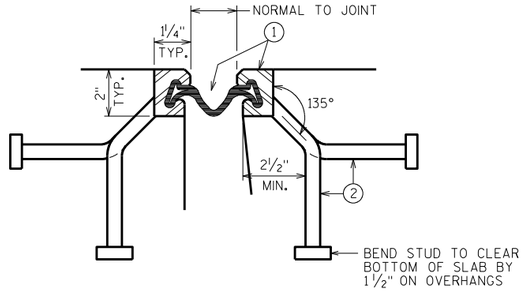
(6) GALVANIZED PLATE 3/8" X 10" X 2'-2" LONG WITH HOLES FOR NO. 7. BEND AS SHOWN.

(7) 3/4"Φ X 1 1/2" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.

(8) 3/4"Φ X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.

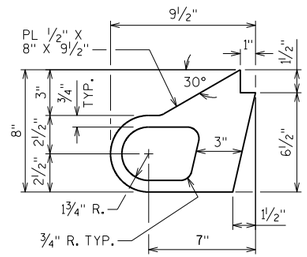
(9) 3/4"Φ X 2 1/4" GALVANIZED THREADED COUPLING.

(10) 1" X 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

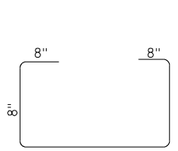


SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS AND MEDIANS.



ALTERNATE STRIP SEAL ANCHOR



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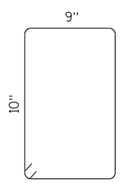
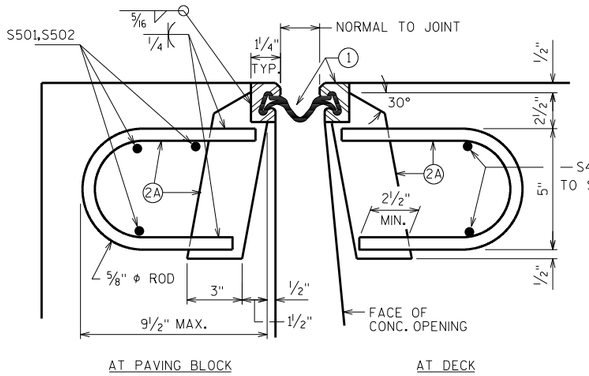
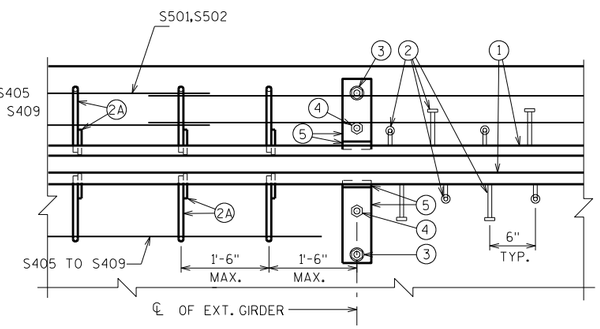


S404



SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.



PART PLAN

NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS, UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING OR GALVANIZING REQUIREMENTS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST AND SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN AND SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST PLATES, SUPPORTS AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORM TO ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-59-80".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-80

DRAWN BY MWL | PLANS CK'D. MSC

EXPANSION DEVICE

SHEET 3

206

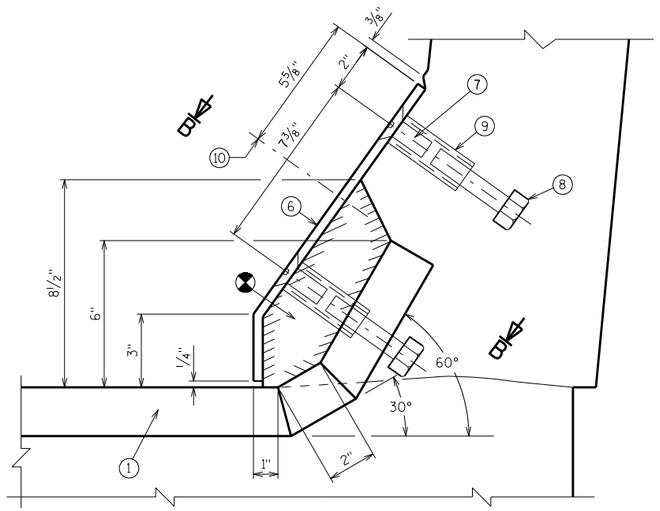
SCALE = 1

8

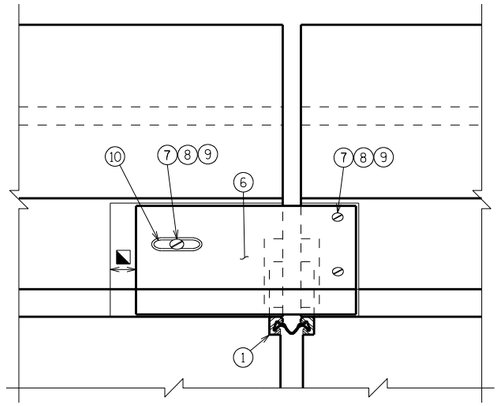
8

STATE PROJECT NUMBER

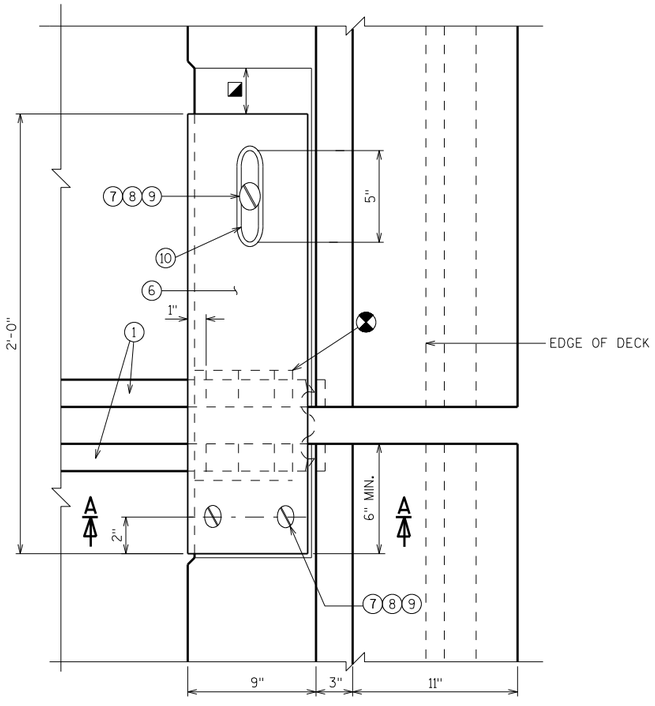
1440-27-71



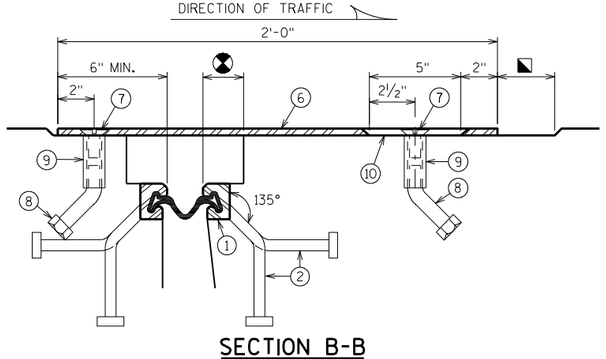
SECTION A-A



VIEW OF PARAPET PLATE FROM ROADWAY



PLAN



SECTION B-B

BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

JOINT OPENING DIMENSION ALONG SKEW PLUS 1/2".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-80

DRAWN BY MWL | PLANS CK'D. MSC

COVER PLATE DETAILS

SHEET 4

207

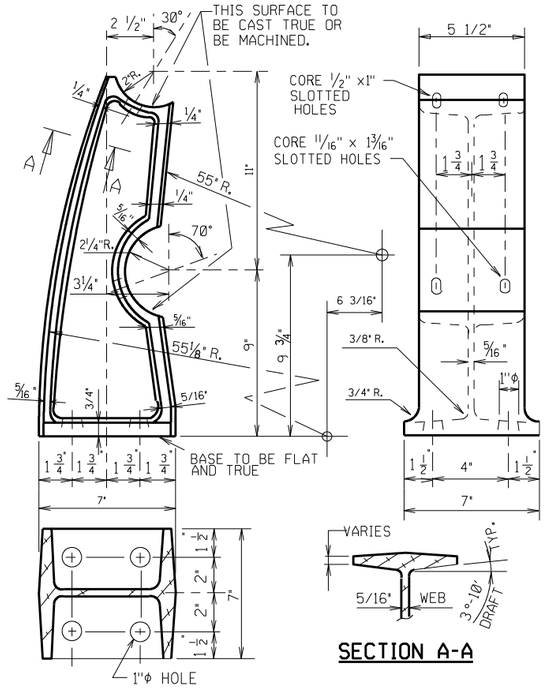
SCALE = 1

8

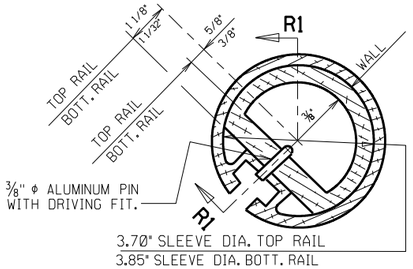
8

STATE PROJECT NUMBER

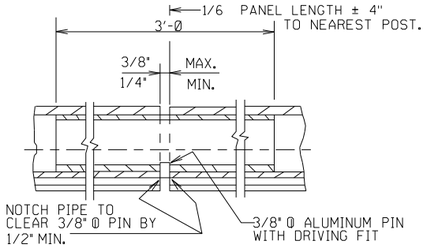
1440-27-71



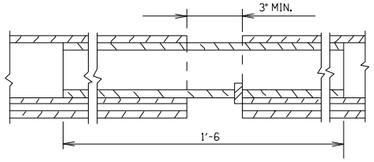
ALUMINUM POST CASTING



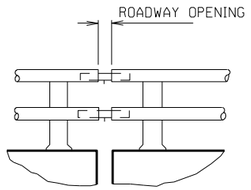
RAIL SPLICE DETAIL



SECTION R1

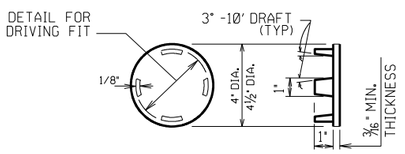


SLEEVE DETAIL AT ABUTMENT

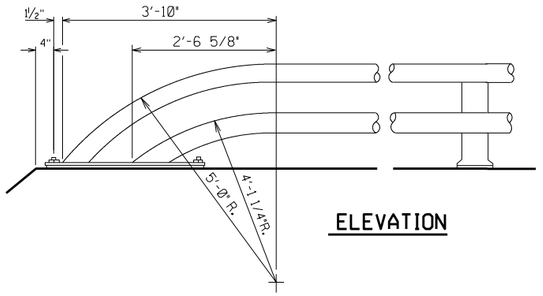


DETAIL AT RAIL OPENINGS

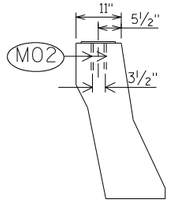
ALL SLEEVE DETAILS SAME AS 'RAIL SPLICE DETAIL' UNLESS SHOWN OTHERWISE



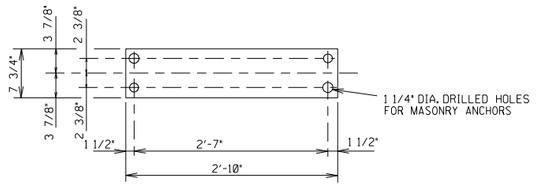
RAIL CLOSURE CAP DETAIL



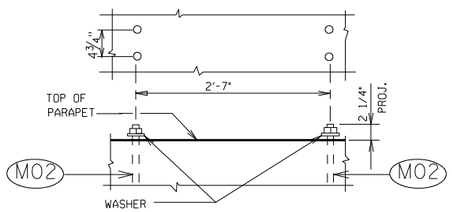
ELEVATION



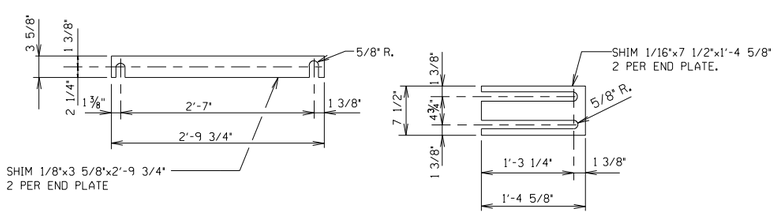
MASONRY ANCHORS IN EXISTING PPT



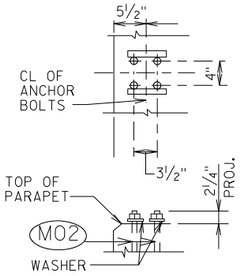
END PLATE



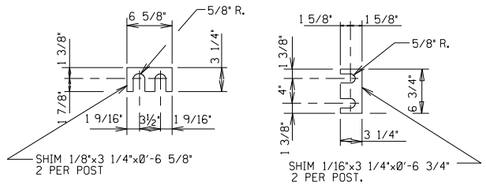
MASONRY ANCHORS AT END PLATE



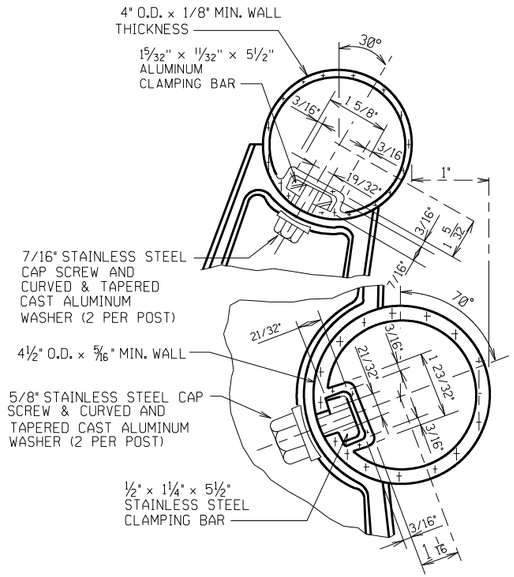
END PLATE SHIM DETAILS



MASONRY ANCHORS AT POSTS



POST SHIM DETAILS



DETAIL OF RAIL ATTACHMENT TO POST

NOTES: MAX. REDUCTION IN DIAMETER OF BENT SECTION SHALL BE 3% WALL THICKNESS OF TUBING SHOWN ABOVE SHALL BE MIN. NOMINAL AVERAGE WALL THICKNESS.
MAX. REDUCTION IN SLOT WIDTH IN BENT TUBING SHALL BE 3/16".

GENERAL NOTES

BID ITEM SHALL BE "RAILING TUBULAR TYPE H B-59-80" WHICH INCLUDES ALL ITEMS SHOWN.

MASONRY ANCHORS, NUTS AND WASHERS SHALL BE STAINLESS STEEL.

(M02) MASONRY ANCHORS TYPE S 5/8-INCH, EMBED 5" INTO CONCRETE. PROVIDE 3" OF THREAD FOR WASHER & NUT. CHAMFER BEFORE THREADING.

SHIMS SHALL CONFORM TO SAME MATERIAL AS POSTS.

RAILINGS SHALL BE FABRICATED IN 2 AND 3 PANEL LENGTHS.

RAILING POSTS SHALL BE SET NORMAL TO GRADE LINE.

ALL POST SPACINGS ARE MEASURED HORIZONTALLY ALONG CENTERLINE OF THE POST BASE.

SHIMS SHALL BE USED UNDER POSTS AND END PLATES WHERE REQ'D. FOR ALIGNMENT.

FILL ALL EXPOSED OPENINGS BETWEEN SHIMS AND MASONRY ANCHOR HOLES WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

RAILS SHALL BE BUILT STRAIGHT AND SPRUNG INTO PLACE FOR STRUCTURES CURVED UP TO 3°. FOR STRUCTURES CURVED GREATER THAN 3°, RAILS SHALL BE CURVED TO FIT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-80

DRAWN BY MWL | PLANS CK'D. MSC

TUBULAR RAILING TYPE 'H' (ALUM.)

SHEET 5

208

SCALE =

8

8

STATE PROJECT NUMBER

1440-27-71

GENERAL NOTES

BID ITEM SHALL BE "RAILING TUBULAR TYPE H B-59-80" WHICH INCLUDES ALL ITEMS SHOWN.

(M02) MASONRY ANCHORS TYPE S 5/8-INCH. EMBED 5" INTO CONCRETE. PROVIDE 3" OF THREAD FOR WASHER & NUT. CHAMFER BEFORE THREADING.

MASONRY ANCHORS, NUTS AND WASHERS SHALL BE EITHER STAINLESS STEEL OR ASTM A307. IF A307 IS USED ELECTRO-GALVANIZE NUTS, WASHERS & TOP 3½" OF MASONRY ANCHORS.

CLOSURE ENDS ON STEEL RAILING SHALL BE ¼" PLATE. WELD AND GRIND SMOOTH.

RAILINGS SHALL BE FABRICATED IN 2 AND 3 PANEL LENGTHS.

RAILING POSTS SHALL BE SET NORMAL TO GRADE LINE.

ALL POST SPACINGS ARE MEASURED HORIZONTALLY ALONG CENTERLINE OF THE POST BASE.

SHIMS SHALL BE USED UNDER POSTS AND END PLATES WHERE REQ'D. FOR ALIGNMENT.

FILL ALL EXPOSED OPENINGS BETWEEN SHIMS AND MASONRY ANCHOR HOLES WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

RAILS, POSTS & SHIMS SHALL BE MADE FROM MATERIALS CONFORMING TO ASTM DESIGNATION A709, GRADE 36.

ALL MATERIALS, EXCEPT ANCHORAGES, SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL SHALL BE GIVEN A NO. 6 BLAST CLEANING BY SSPC SPECIFICATIONS.

RAILS SHALL BE BUILT STRAIGHT AND SPRUNG INTO PLACE FOR STRUCTURES CURVED UP TO 3°. FOR STRUCTURES CURVED GREATER THAN 3°, RAILS SHALL BE CURVED TO FIT.

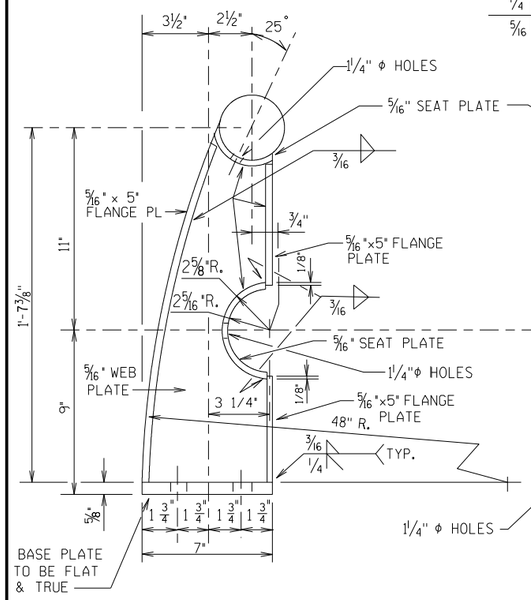
ALL SLEEVE DETAILS SAME AS "FIELD ERECTION JOINT DETAIL" UNLESS SHOWN OTHERWISE.

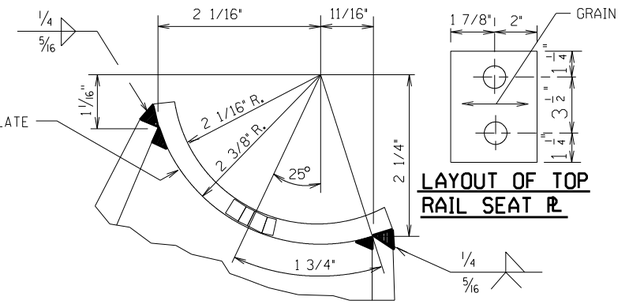
○ 5/16" × 3/8" WELDED STUDS

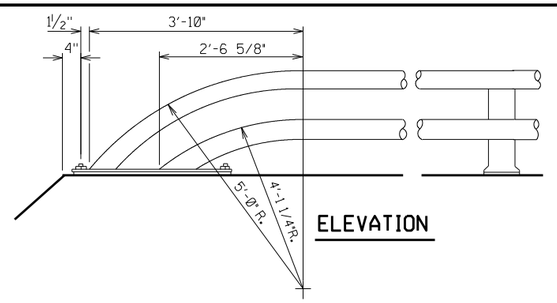
⬡ 3" ϕ STD. PIPE x 1'-10 LONG

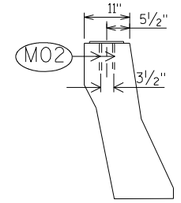
□ 3" ϕ EXTRA STRONG PIPE x 1'-10 LONG

△ 11" CIRCUMF. GRIND BEADS SO THAT ½" ϕ WELD BEADS AT 1/3 PTS. ON PIPE SLEEVE FITS FREELY IN THE I.D. OF 4" ϕ EXTRA STRONG PIPE.

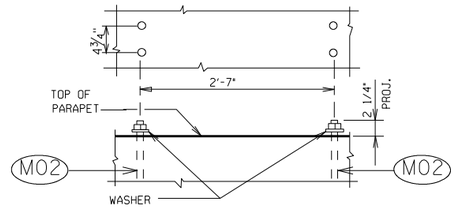




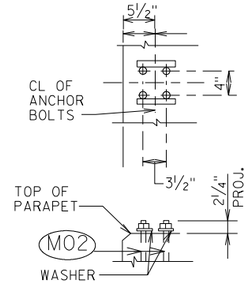




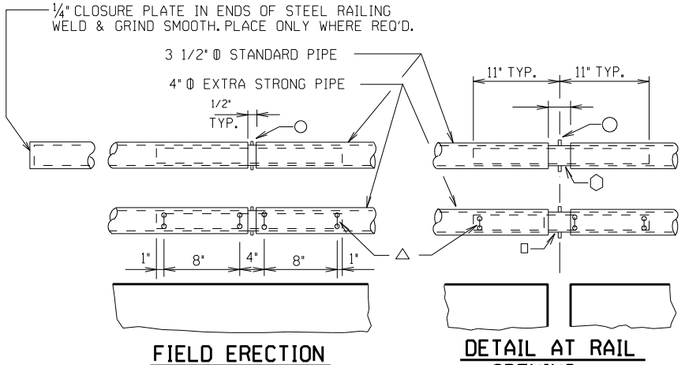
MASONRY ANCHORS AT EXISTING PPT.



MASONRY ANCHORS AT END PLATE

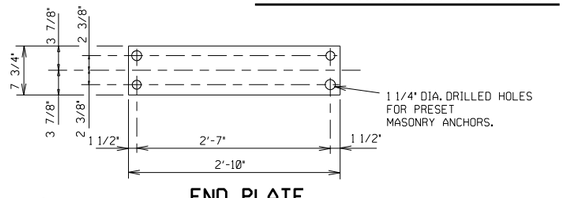


MASONRY ANCHORS AT POSTS

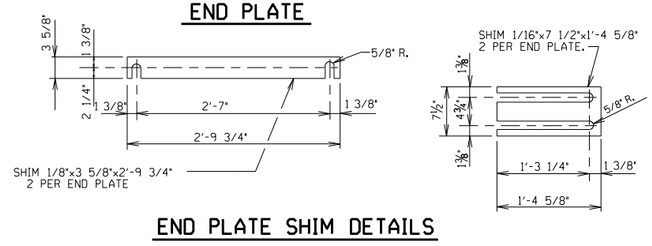


FIELD ERECTION JOINT DETAIL

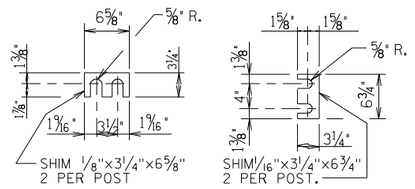
DETAIL AT RAIL OPENING



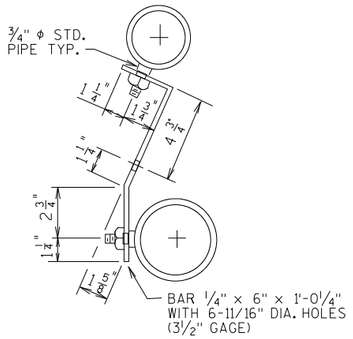
END PLATE



END PLATE SHIM DETAILS



POST SHIM DETAILS



SHIPPING BAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-59-80

DRAWN BY MWL | PLANS CK'D. MSC

TUBULAR RAILING TYPE 'H' (STEEL)

SHEET 6

209

SCALE = 1:1

8

8

CTH Y - SOUTH OFSTRUCTURE		
	CUT	FILL
	AREA	AREA
STATION	SF	SF
44+75	0	0.0
45+00	1.8	0.3
45+50	4.7	0.0
46+00	4.7	0.3
46+50	0	0.0
47+00	0.88	0.0
47+50	1.3	15.3
48+00	2.6	7.9
48+50	11	2.8
48+93	3.9	6.6

CTH Y - NORTH OFSTRUCTURE		
	CUT	FILL
	AREA	AREA
STATION	SF	SF
51+05	16.9	231.0
51+50	13.8	0.5
52+00	19.5	0.0
52+50	17.9	0.0
53+00	18.8	0.0
53+50	17.9	0.0
54+00	18.4	0.0
54+50	15.9	0.0
55+00	17	18.3
55+50	17.5	19.0
56+00	0	18.0
56+50	0	3.0
57+00	0	0.0
57+35	0	0.0

EASTBOUND ON RAMP		
	CUT	FILL
	AREA	AREA
STATION	SF	SF
100+00	0	0.0
100+50	2	0.0
101+00	0	1.0
101+50	0	1.0
102+00	0	1.0
102+50	0	1.0
103+00	0	1.0
103+50	0	3.5
104+00	0	3.5
104+50	1.3	0.0
105+00	2.5	0.0
105+50	2.7	0.0
106+00	3.5	0.0
106+50	3.5	0.0
107+00	4	0.0
107+50	6.7	0.0
108+00	10	0.0
108+50	6.1	0.0
109+00	2	0.0
109+50	2	0.0
110+00	2	0.0
110+50	2	0.0
111+00	4	0.0
111+50	4	0.0
112+00	5	0.0
112+50	6	0.0
113+00	10	0.0
113+50	12	0.0
114+00	10	0.0
114+50	13	0.0
115+00	13	0.0
115+50	10	0.0
116+00	10	0.0
116+50	0	0.0

EASTBOUND OFF RAMP		
	CUT	FILL
	AREA	AREA
STATION	SF	SF
200+50	7.3	0.0
201+00	5.3	0.0
201+50	8.4	0.0
202+00	9.4	0.0
202+50	8.1	0.0
203+00	9.1	0.0
203+50	8.2	0.0
204+00	6.5	0.0
204+50	5.6	0.0
205+00	5.1	0.0
205+50	5.6	0.0
206+00	6.2	0.0
206+50	6.3	0.0
207+00	5.2	0.0
207+50	3.5	0.0
208+00	4.1	0.0
208+50	3.5	0.0
209+00	4.4	0.0
209+50	5.7	0.0
210+00	5.3	0.0
210+50	5	0.0
211+00	4.8	0.0
211+50	5.5	0.0
212+00	8.5	0.0
212+50	7	0.0
213+00	3.3	0.0
213+50	2.9	0.0
214+00	3.2	0.0
214+50	3.3	0.0
215+00	3.6	0.0
215+50	4.1	0.0
216+00	0	4.2
216+50	0	0.0
217+00	0	0.0

WESTBOUND OFF RAMP		
	CUT	FILL
	AREA	AREA
STATION	SF	SF
300+00	0	0.0
300+50	0	0.0
301+00	62.8	0.0
301+50	67	0.0
302+00	49.5	21.2
302+50	32.3	0.0
303+00	22	10.8
303+50	20	10.6
304+00	18	59.4
304+50	16	32.4
305+00	0	1.3
305+50	0	35.1
306+00	0	31.1
306+50	0	22.5
307+00	0	26.7
307+50	0	10.1
308+00	0	1.0
308+50	0	0.8
309+00	0	0.0
309+50	0	2.9
310+00	0	4.5
310+50	0	8.8
311+00	0	5.2
311+50	3.2	0.9
312+00	5.5	0.0
312+50	6.8	0.0
313+00	4.4	0.0
313+50	3.7	0.0
314+00	6.6	0.0
314+50	0	0.0
315+00	0	0.0
315+50	6.6	0.0
316+00	1.9	0.0
316+50	2.3	0.0
317+00	1.7	0.0
317+50	0	0.0
318+00	1.8	0.0
318+50	1.5	0.0

WESTBOUND ON RAMP		
	CUT	FILL
	AREA	AREA
STATION	SF	SF
401+00	0	0.0
401+50	0	1.5
402+00	0	0.0
402+50	7	0.0
403+00	7	0.0
403+50	4.4	0.0
404+00	5	0.0
404+50	4.9	0.0
405+00	4.7	0.0
405+50	0	3.1
406+00	0	1.8
406+50	0	2.5
407+00	0	1.5
407+50	0	1.6
408+00	0	2.5
408+50	0	2.5
409+00	0	1.3
409+50	0	3.2
410+00	0	3.1
410+50	0	2.1
411+00	0	2.5
411+50	0	2.1
412+00	0	1.5
412+50	0	1.7
413+00	0	1.1
413+50	0	0.5
414+00	6.3	0.0
414+50	4.7	0.0
415+00	4.8	0.0
415+50	5.1	0.0
416+00	7.5	0.0
416+50	7.5	0.0
417+00	6.5	0.0
417+50	3.9	0.0

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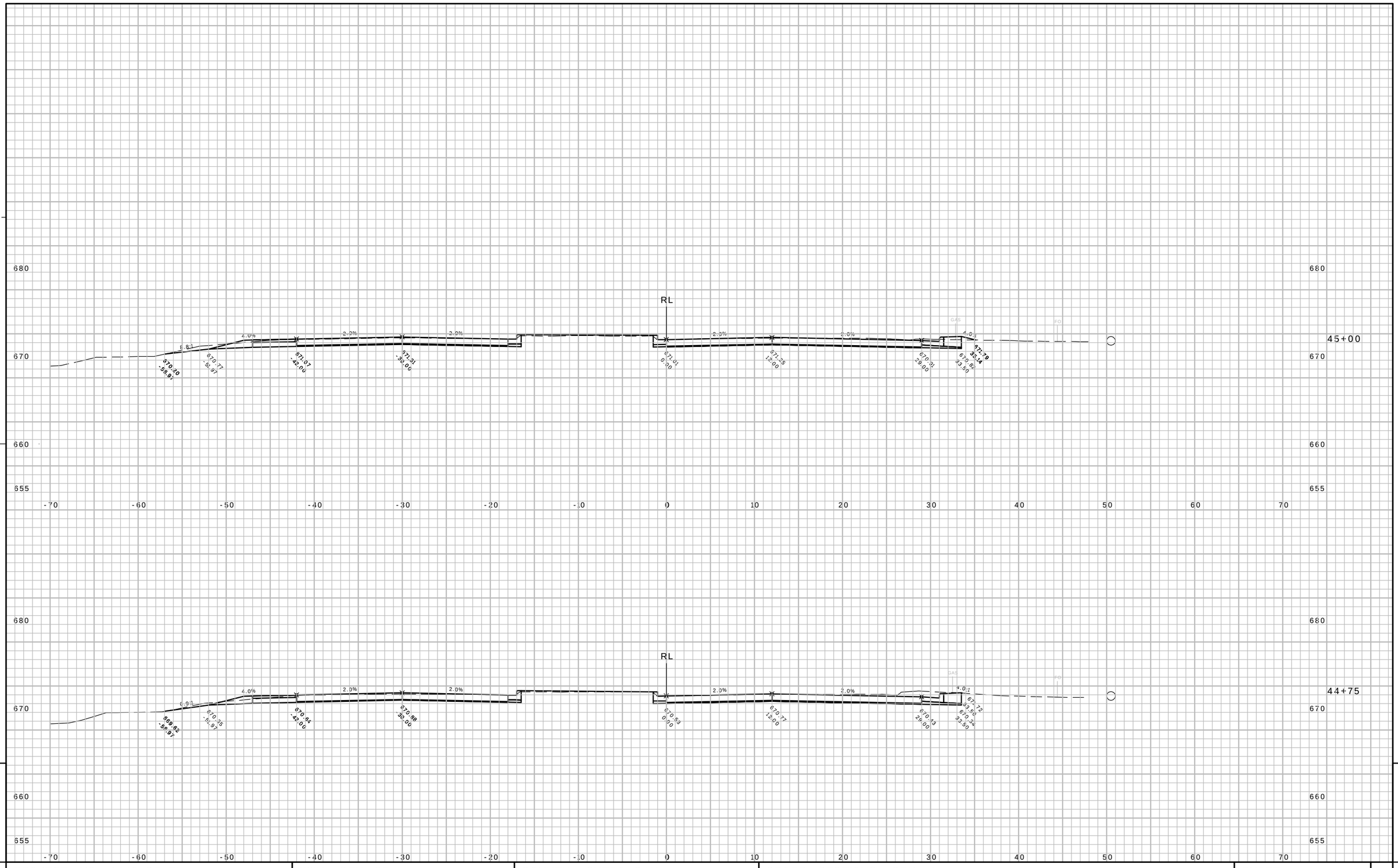
PROJECT NO:1440-27-71 | HWY: STH 23 | COUNTY: SHEBOYGAN | CROSS SECTIONS: EARTHWORK | SHEET 210 | E



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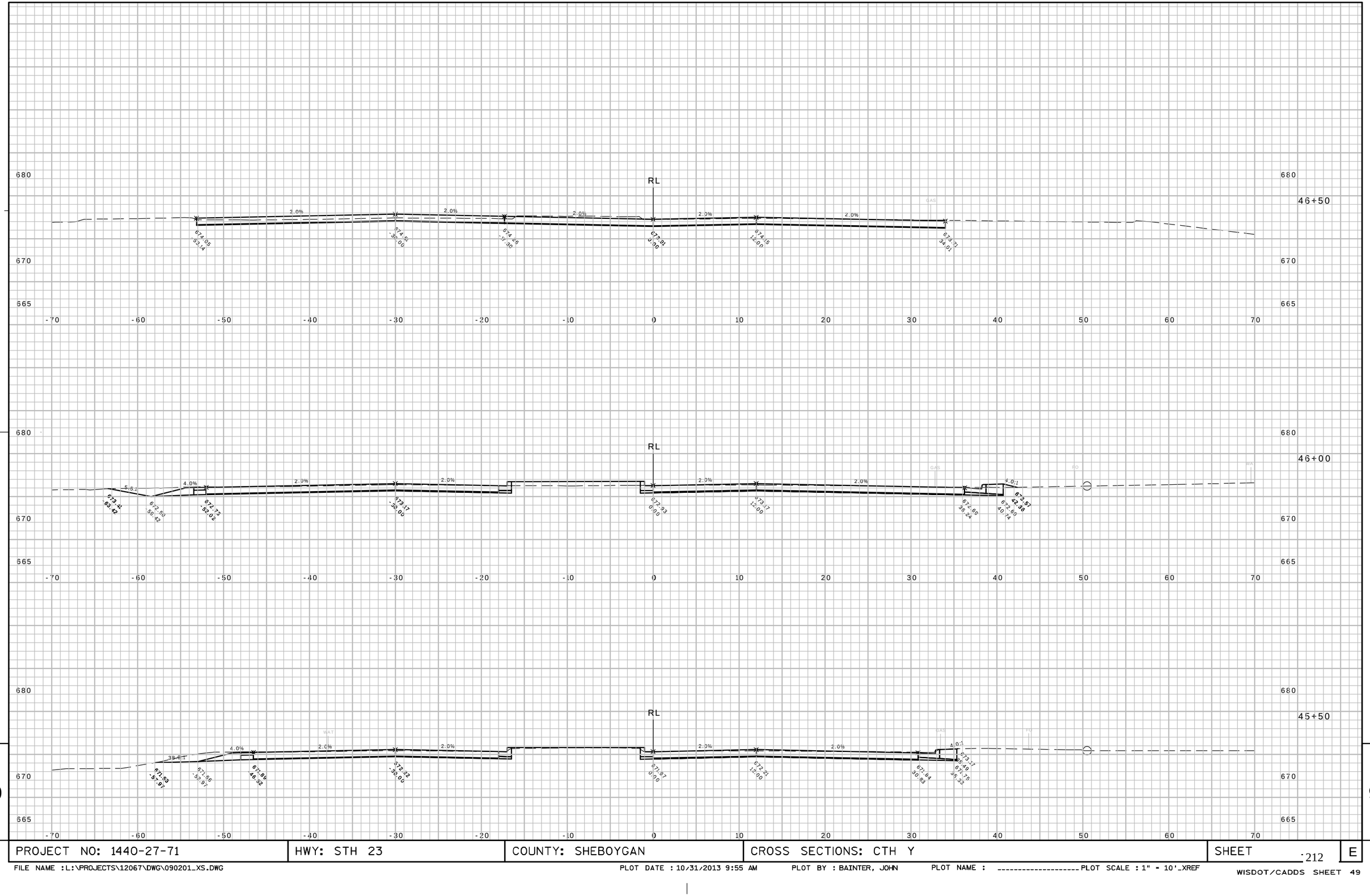
PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: CTH Y	SHEET 211	E

FILE NAME : L:\PROJECTS\12067\DWG\090201_XS.DWG PLOT DATE : 10/31/2013 9:54 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

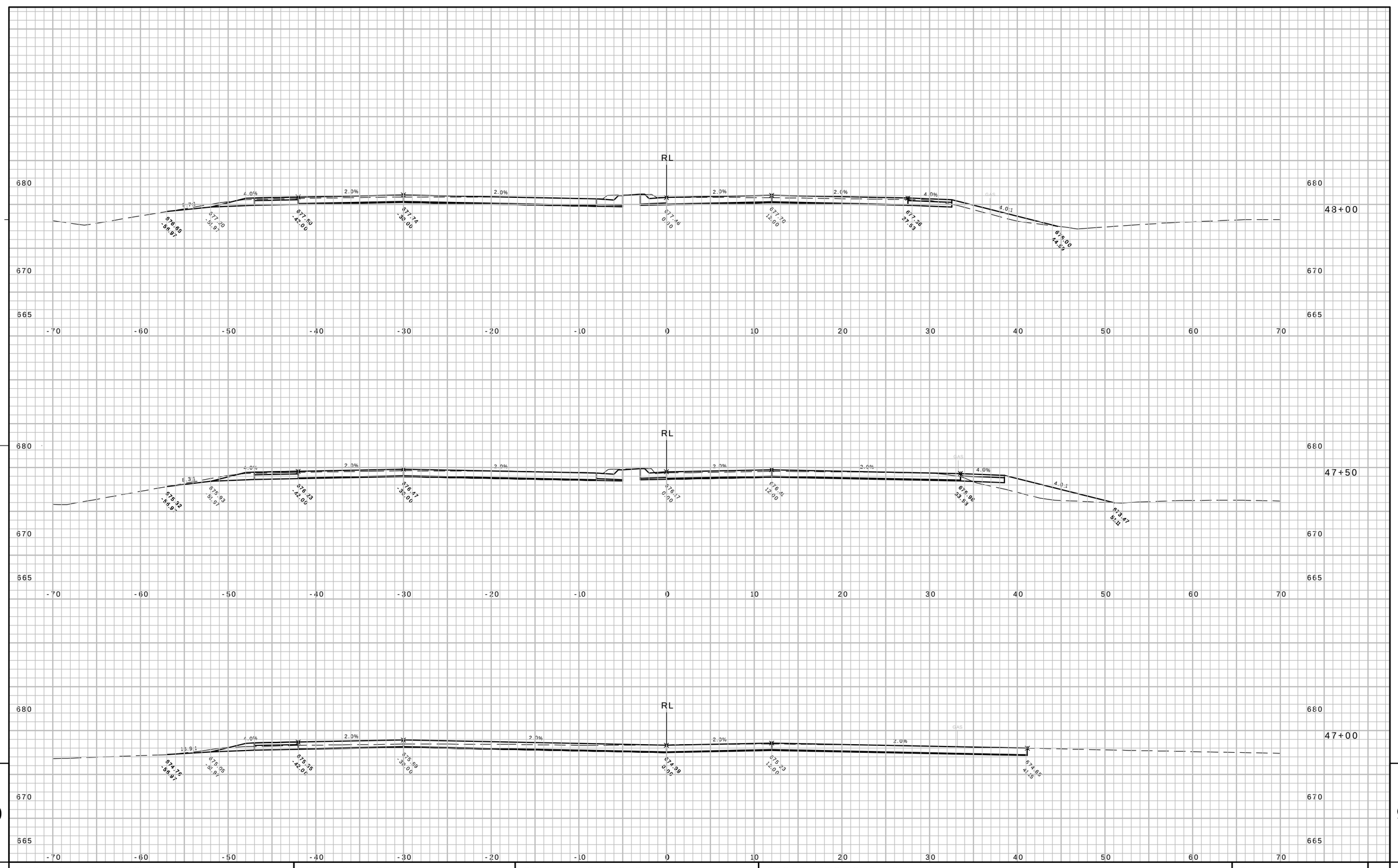
WISDOT/CADDS SHEET 49



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: CTH Y	SHEET 212	E

FILE NAME : L:\PROJECTS\12067\DWG\090201_XS.DWG PLOT DATE : 10/31/2013 9:55 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

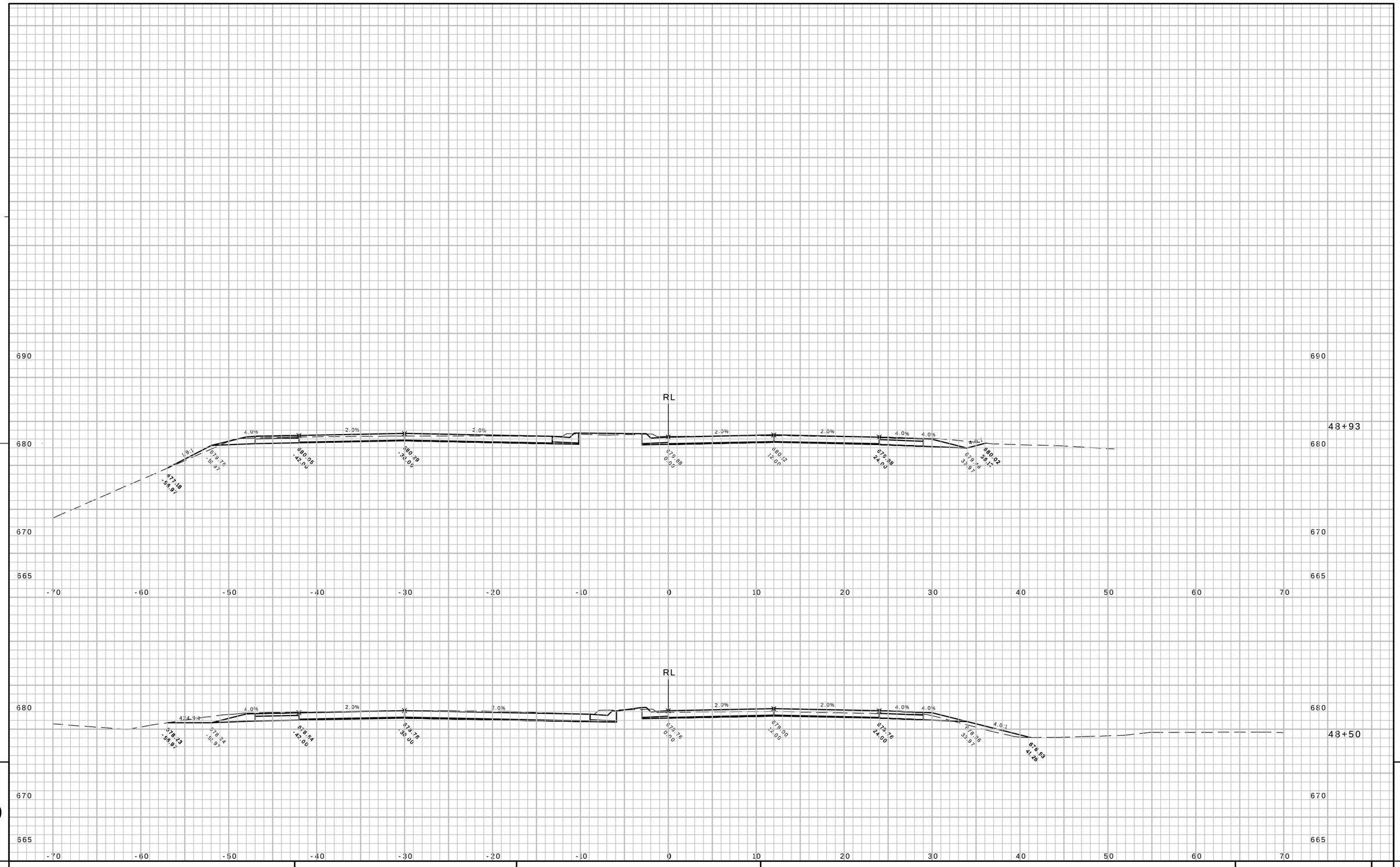
WISDOT/CADDS SHEET 49



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: CTH Y	SHEET 213	E

FILE NAME :L:\PROJECTS\12067\DWG\090201_XS.DWG PLOT DATE : 10/31/2013 9:55 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

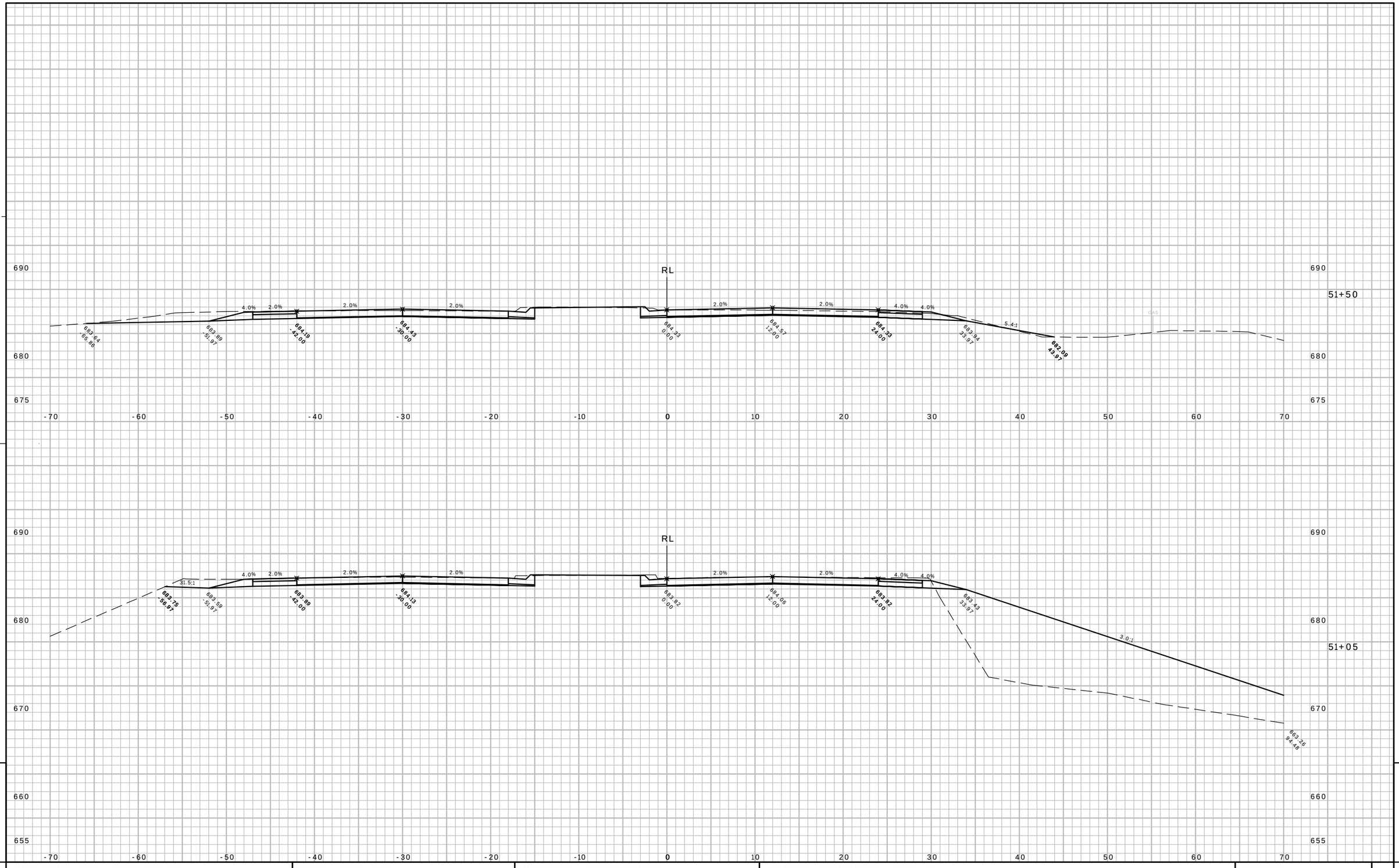
WISDOT/CADDS SHEET 49



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: CTH Y	SHEET 214	E

FILE NAME :L:\PROJECTS\12067\DWG\090201_XS.DWG PLOT DATE : 10/31/2013 9:55 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

WISDOT/CADDS SHEET 49



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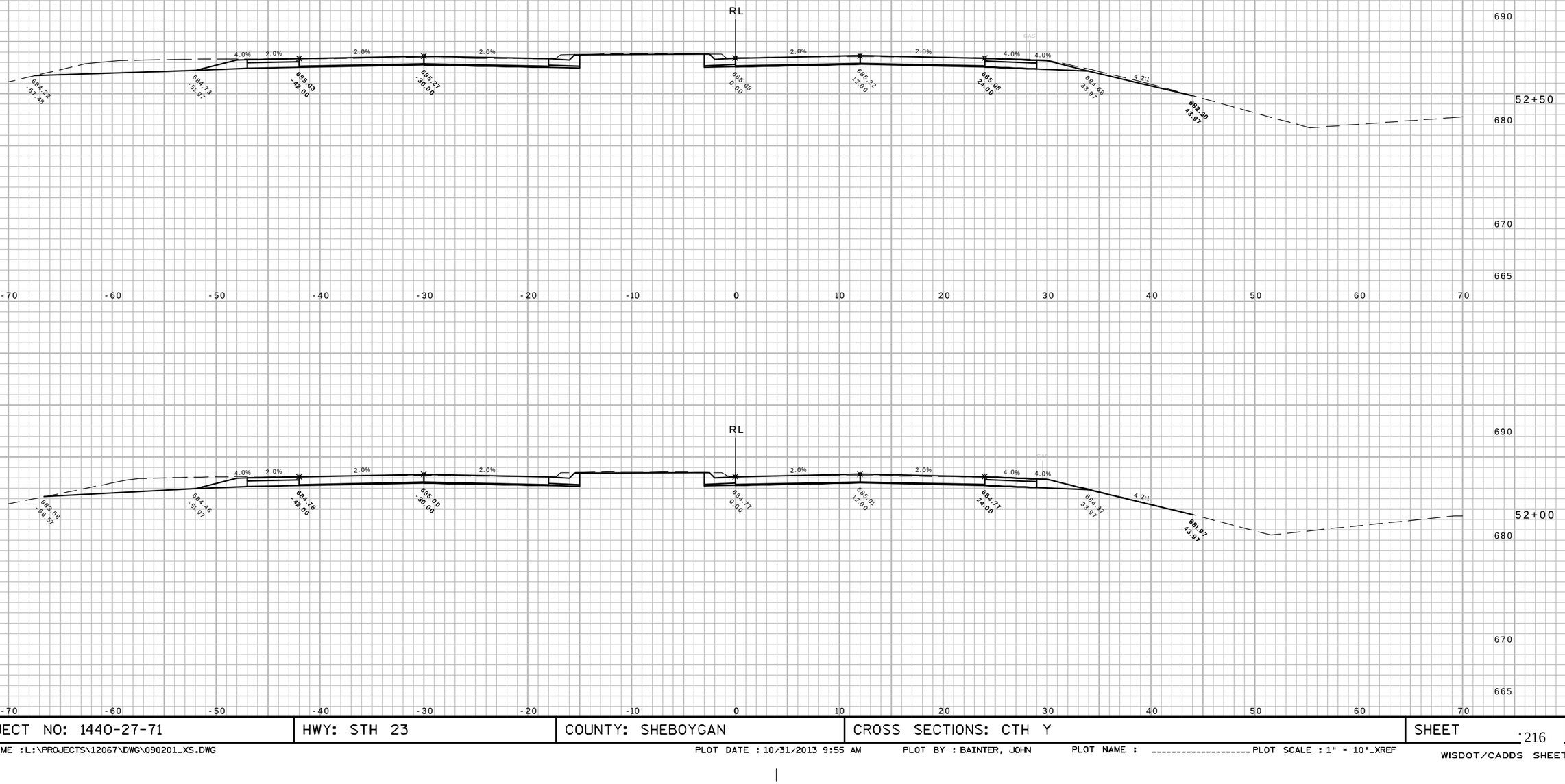
PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: CTH Y	SHEET 215	E

FILE NAME :L:\PROJECTS\12067\DWG\090201_XS.DWG PLOT DATE : 10/31/2013 9:55 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

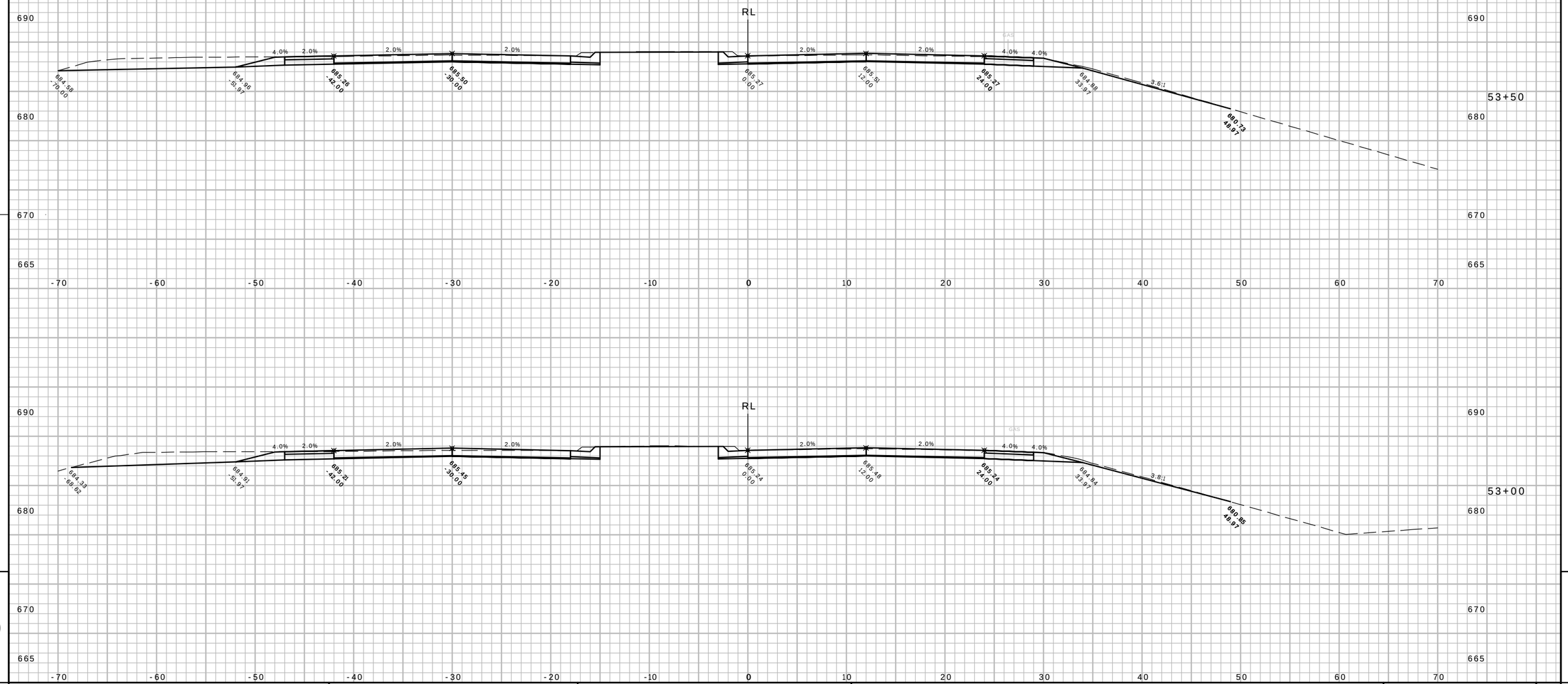
WISDOT/CADDS SHEET 49



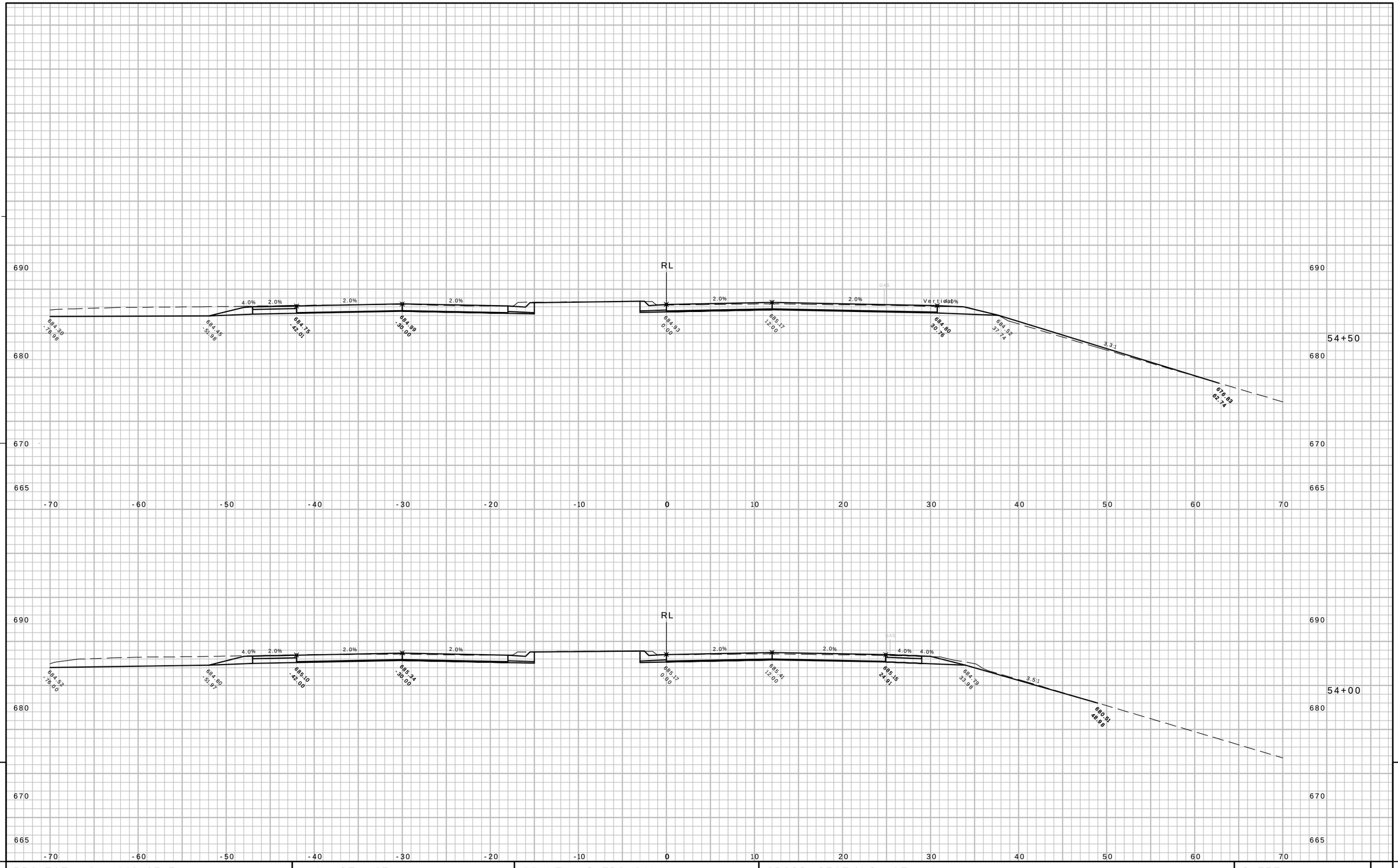
PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: CTH Y	SHEET 216	E

FILE NAME :L:\PROJECTS\12067\DWG\090201_XS.DWG PLOT DATE : 10/31/2013 9:55 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

WISDOT/CADDS SHEET 49



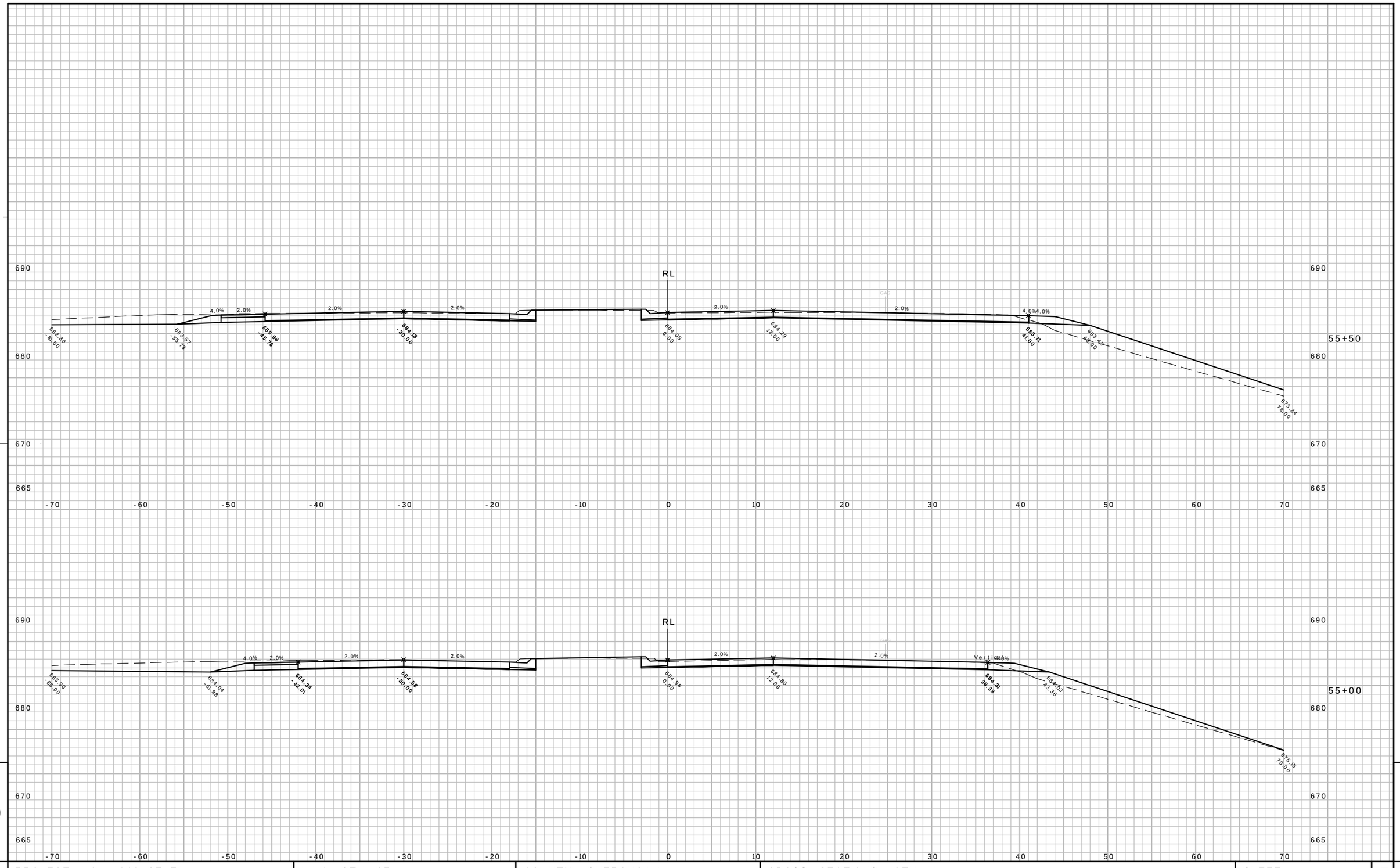
PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: CTH Y	SHEET 217	E



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: CTH Y	SHEET 218	E

FILE NAME :L:\PROJECTS\12067\DWG\090201_XS.DWG PLOT DATE : 10/31/2013 9:55 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

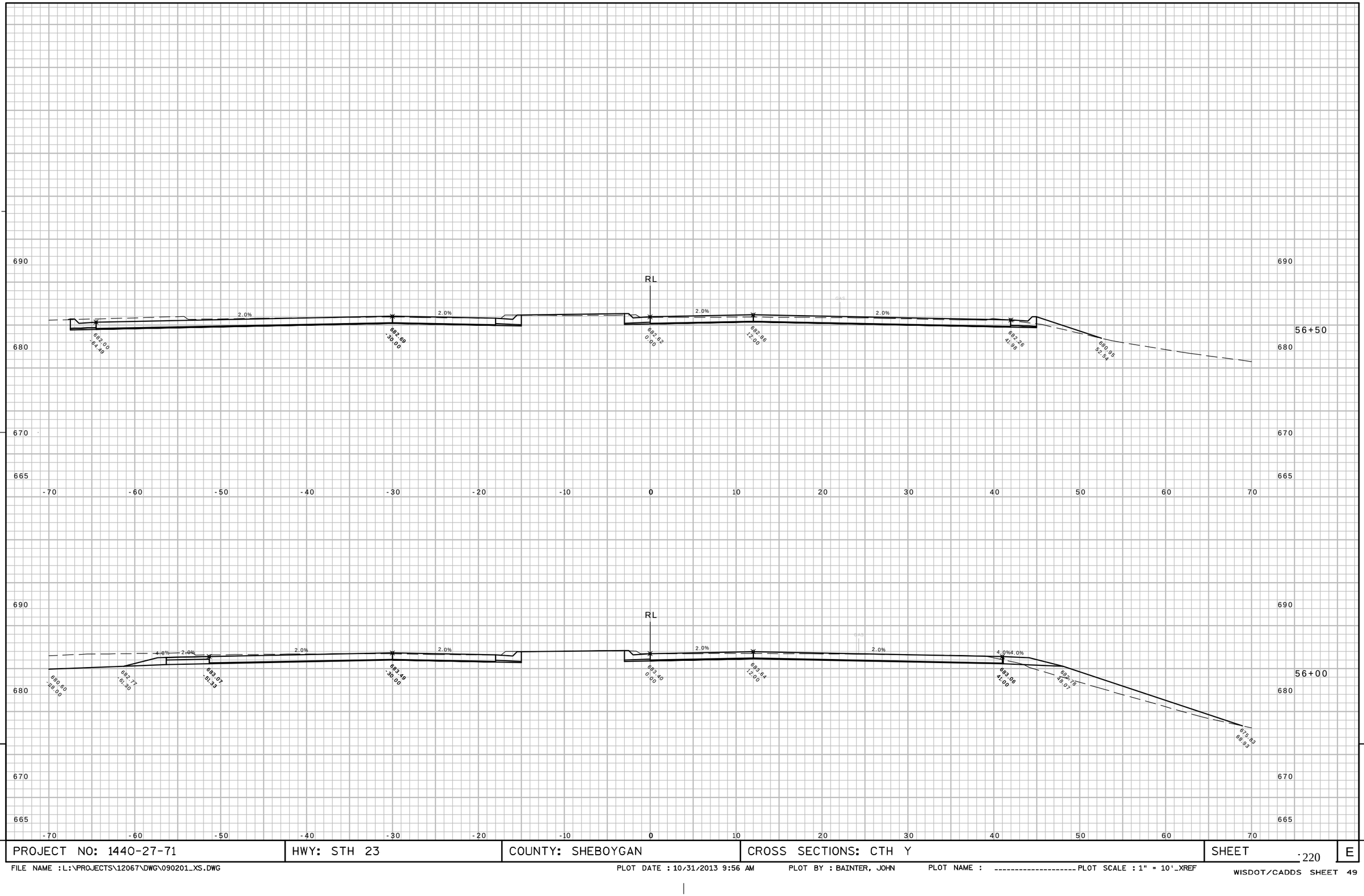
WISDOT/CADDS SHEET 49



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: CTH Y	SHEET 219	E

FILE NAME : L:\PROJECTS\12067\DWG\090201_XS.DWG PLOT DATE : 10/31/2013 9:55 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

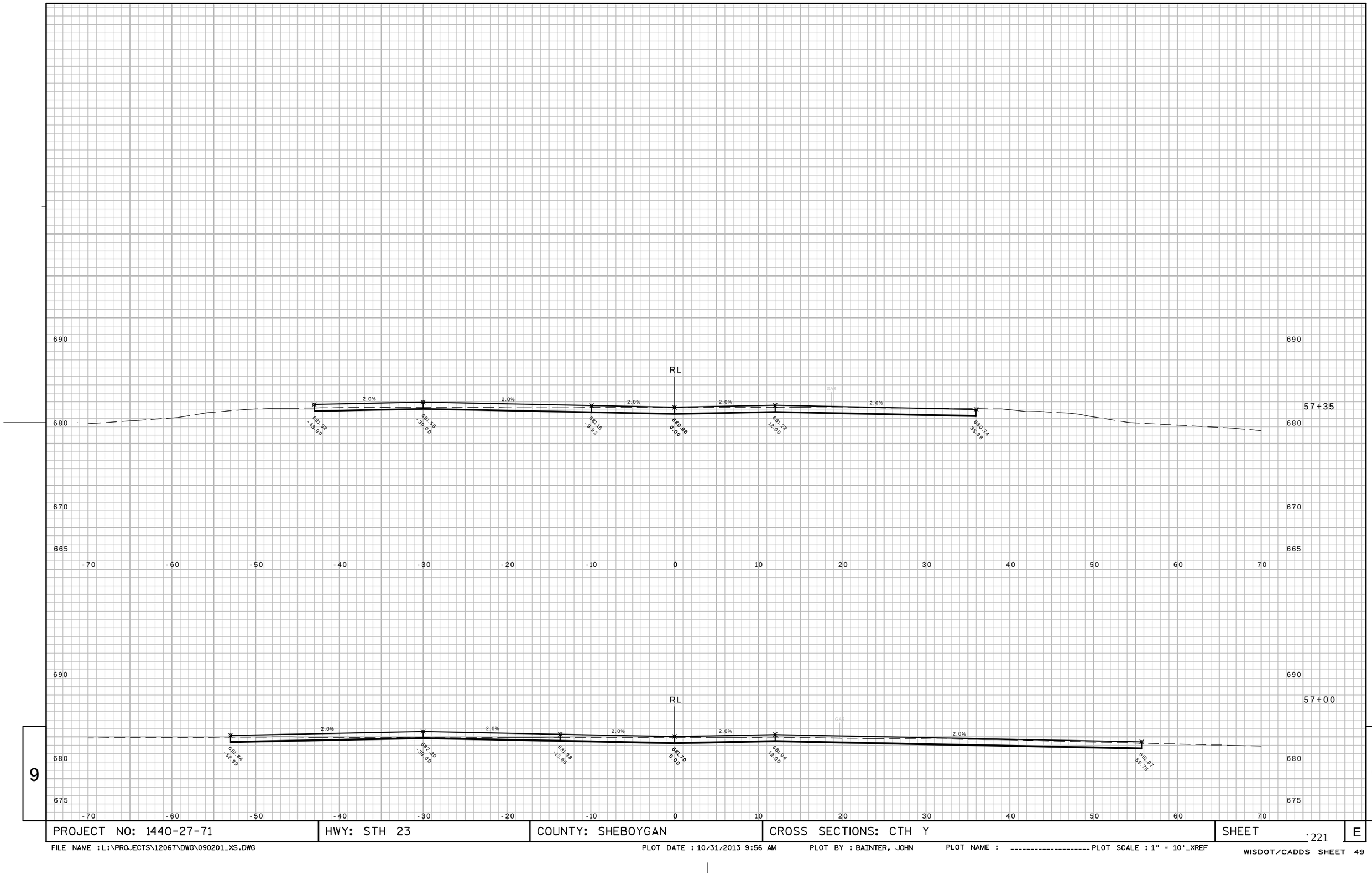
WISDOT/CADDS SHEET 49



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: CTH Y	SHEET 220 E

FILE NAME : L:\PROJECTS\12067\DWG\090201_XS.DWG PLOT DATE : 10/31/2013 9:56 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

WISDOT/CADDS SHEET 49



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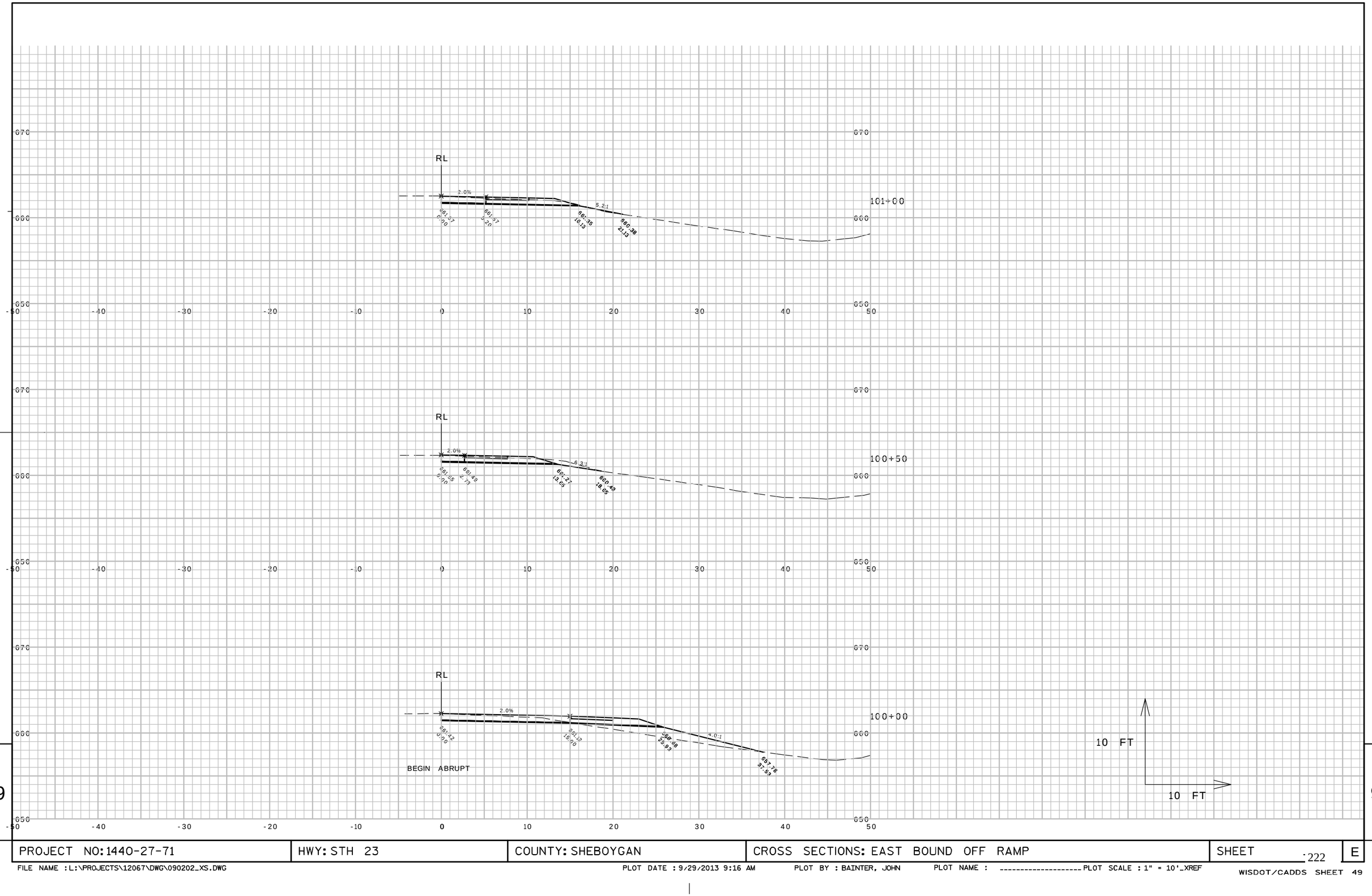
PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: CTH Y	SHEET	E

FILE NAME : L:\PROJECTS\12067\DWG\090201_XS.DWG PLOT DATE : 10/31/2013 9:56 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

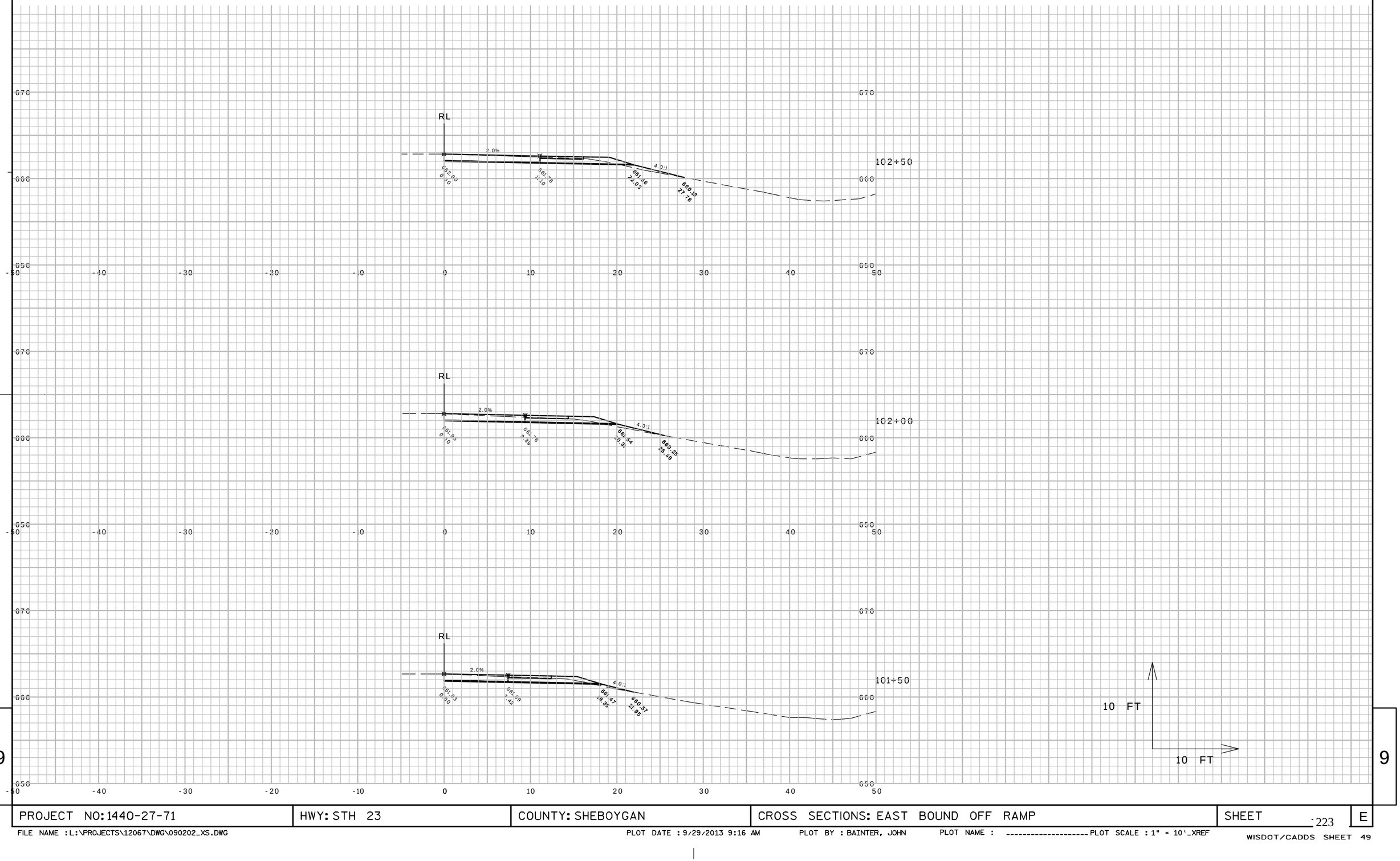
WISDOT/CADDS SHEET 49



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: EAST BOUND OFF RAMP	SHEET	E

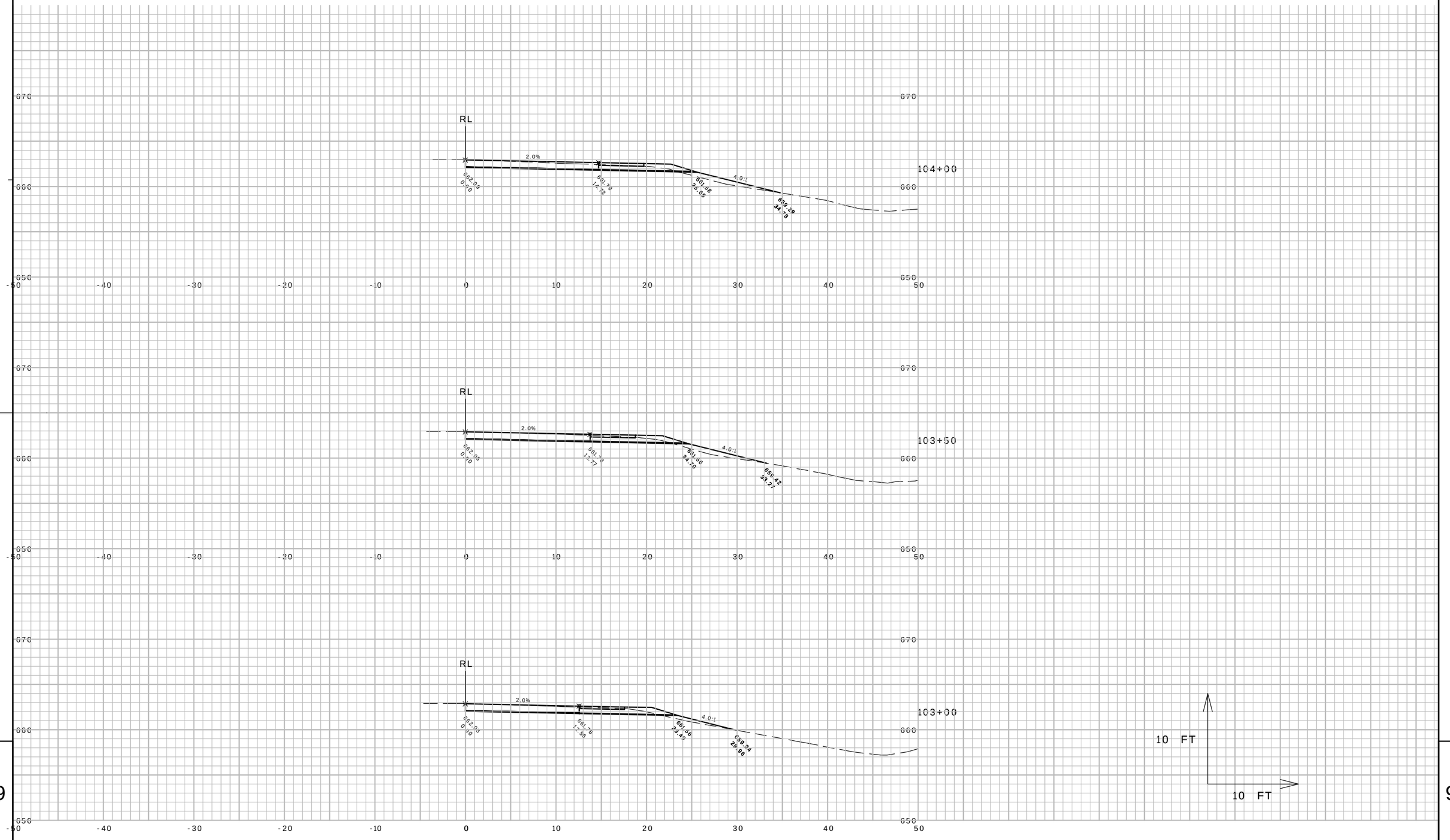
FILE NAME : L:\PROJECTS\12067\DWG\090202_XS.DWG PLOT DATE : 9/29/2013 9:16 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: EAST BOUND OFF RAMP	SHEET	E

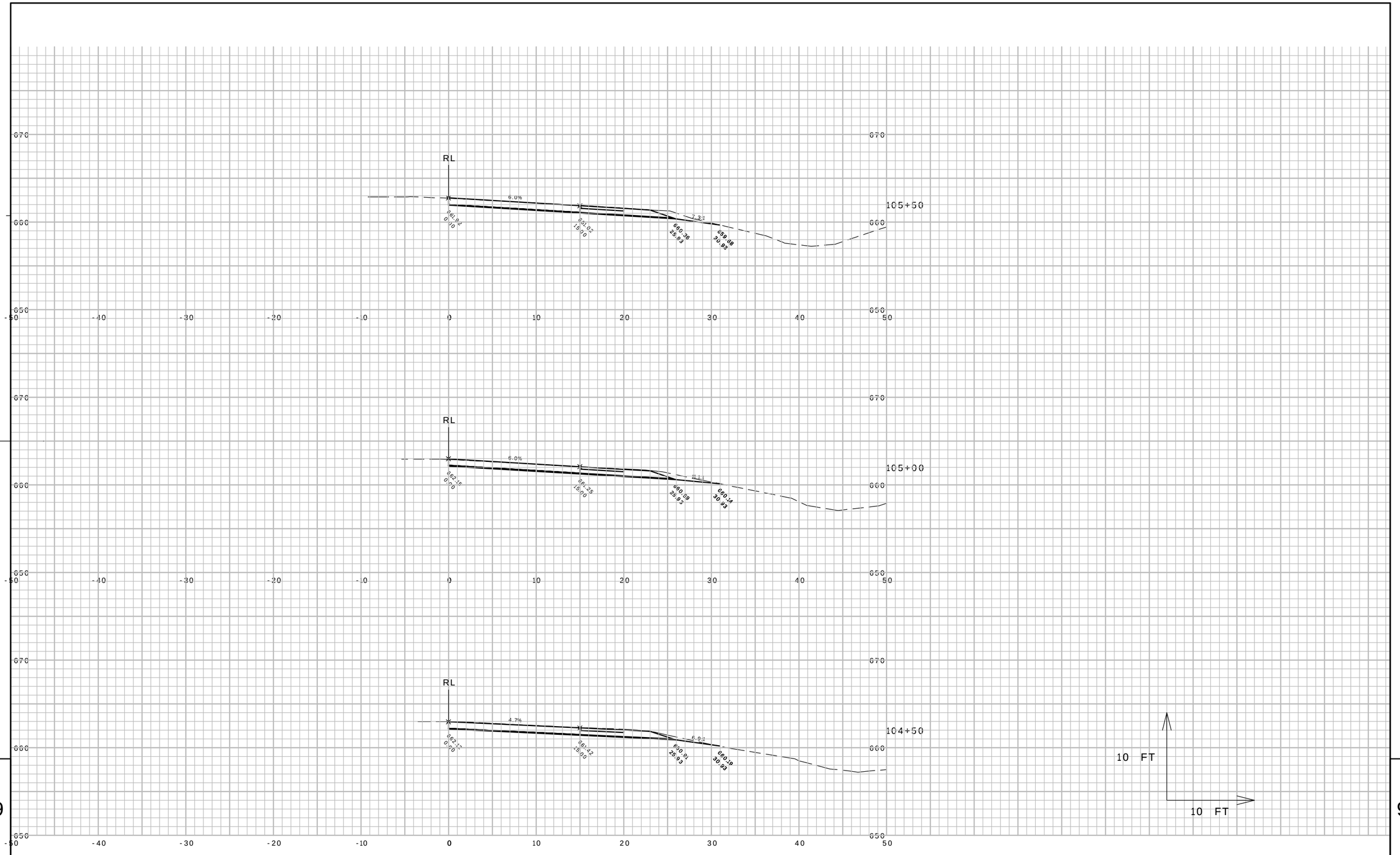
FILE NAME : L:\PROJECTS\12067\DWG\090202_XS.DWG PLOT DATE : 9/29/2013 9:16 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: EAST BOUND OFF RAMP	SHEET	E

FILE NAME : L:\PROJECTS\12067\DWG\090202_XS.DWG PLOT DATE : 9/29/2013 9:17 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

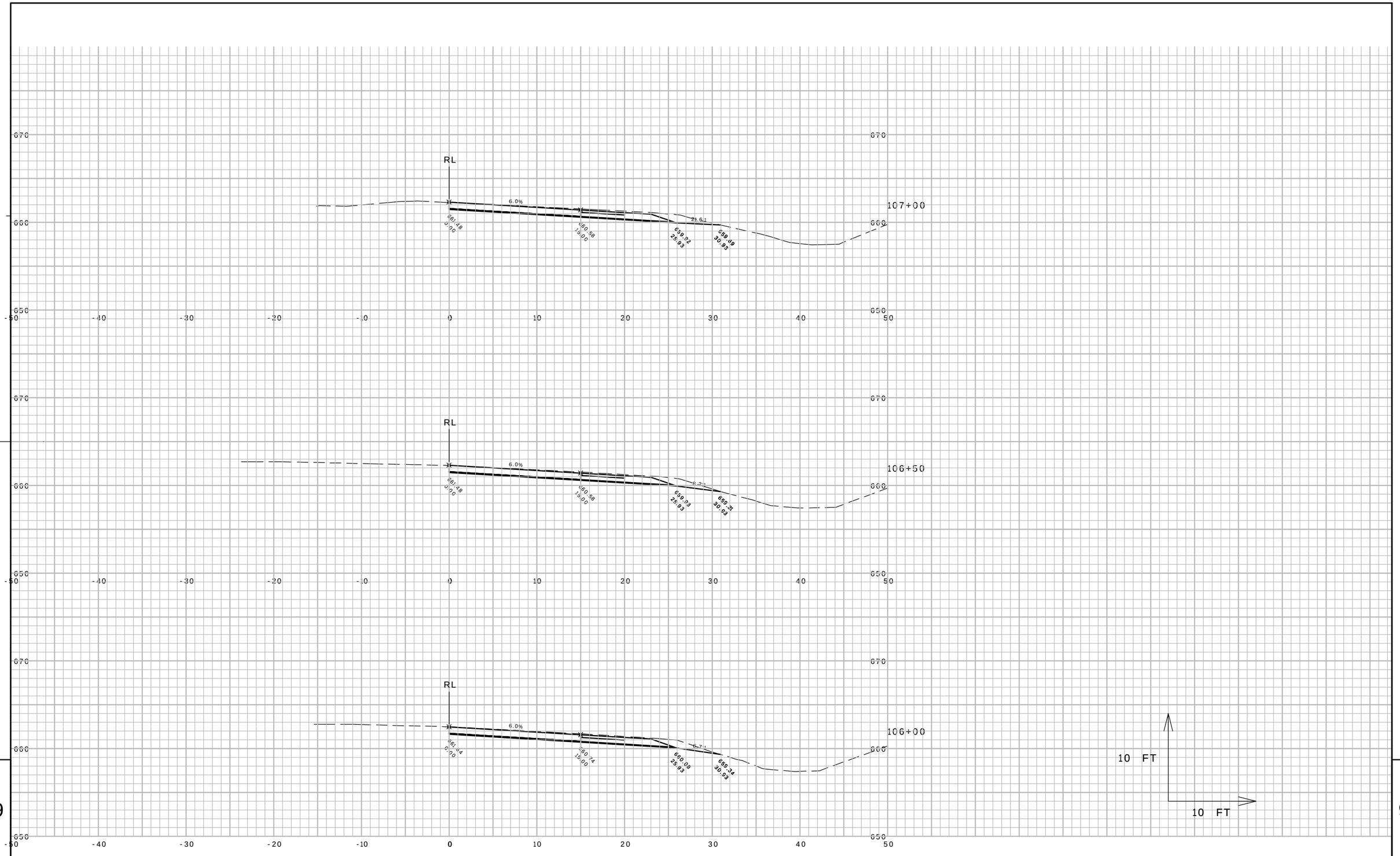
WISDOT/CADDS SHEET 49



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: EAST BOUND OFF RAMP	SHEET	E

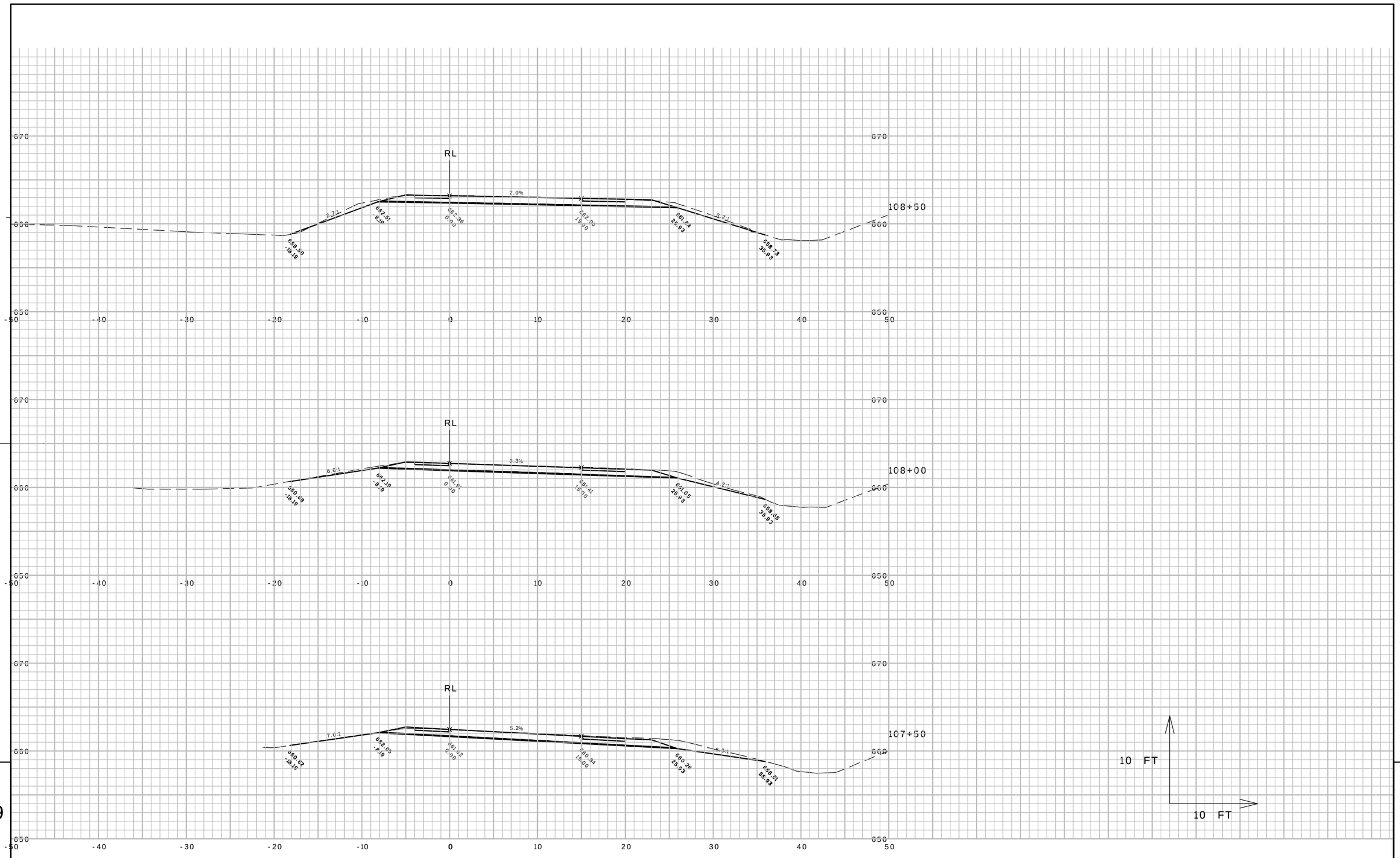
FILE NAME : L:\PROJECTS\12067\DWG\090202_XS.DWG PLOT DATE : 9/29/2013 9:17 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

WISDOT/CADDS SHEET 49



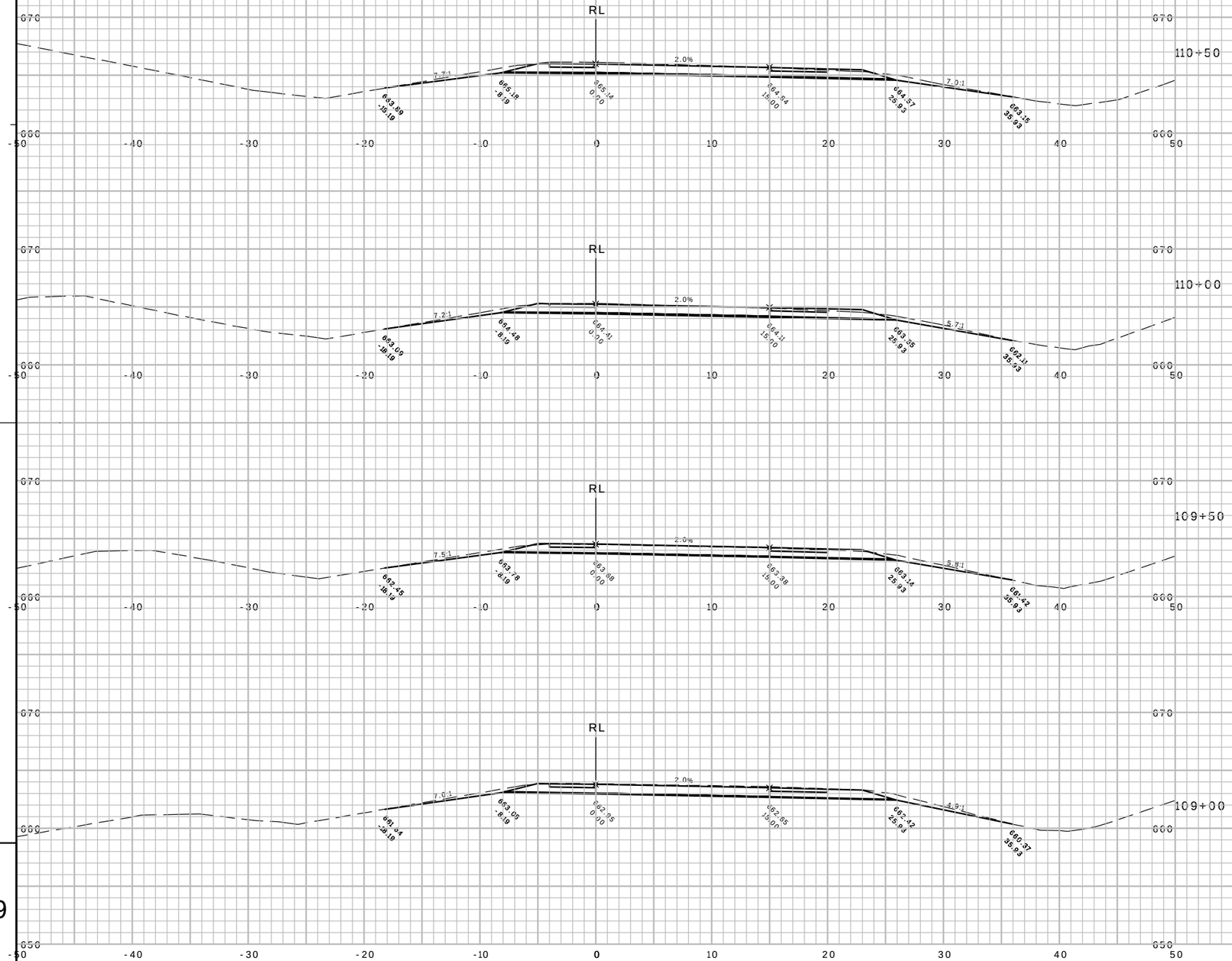
PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: EAST BOUND OFF RAMP	SHEET	E

FILE NAME : L:\PROJECTS\12067\DWG\090202_XS.DWG PLOT DATE : 9/29/2013 9:17 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: EAST BOUND OFF RAMP	SHEET	E

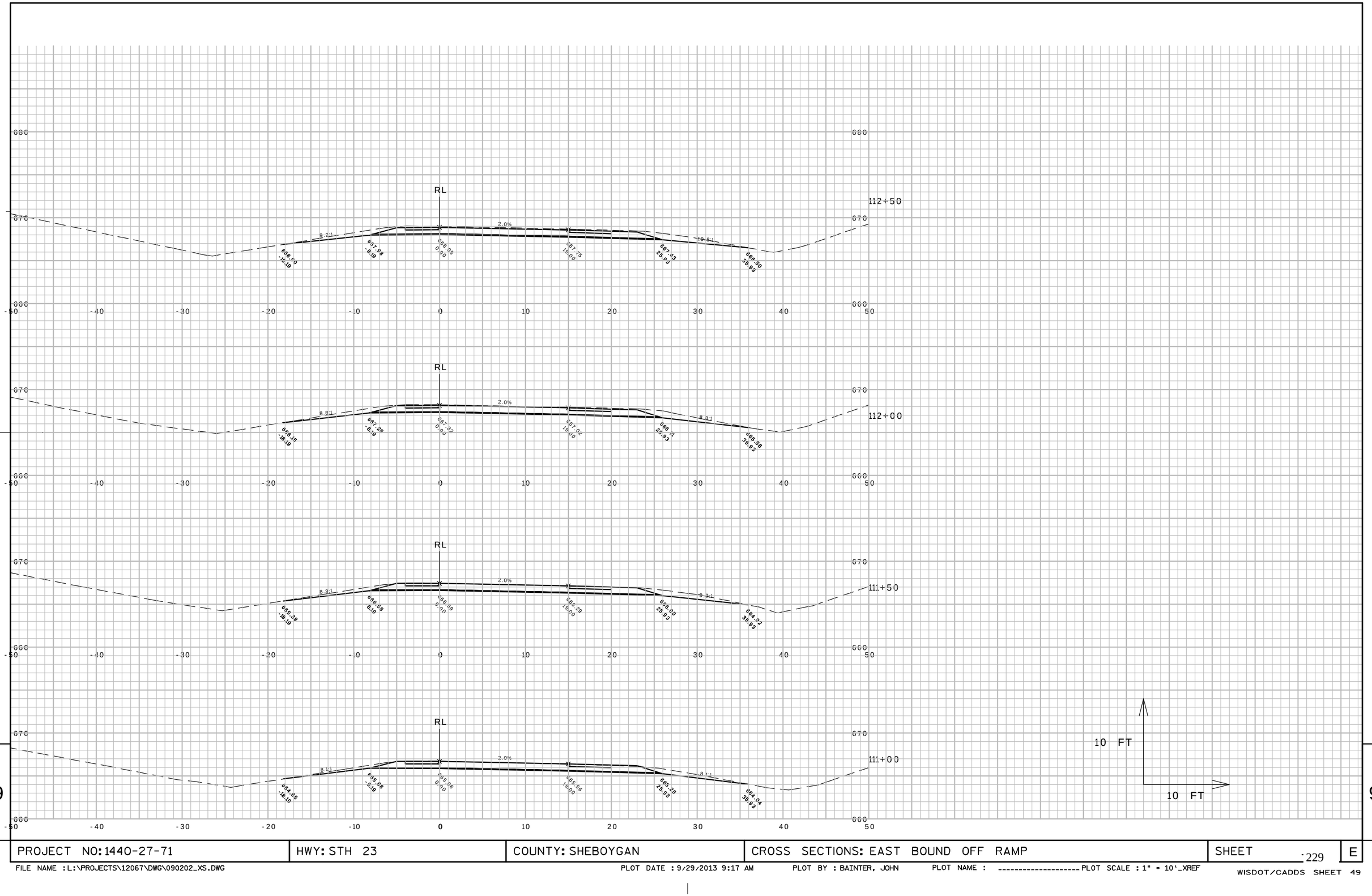
FILE NAME : L:\PROJECTS\12067\DWG\090202_XS.DWG PLOT DATE : 9/29/2013 9:17 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: EAST BOUND OFF RAMP	SHEET	E

FILE NAME : L:\PROJECTS\12067\DWG\090202_XS.DWG PLOT DATE : 9/29/2013 9:17 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

WISDOT/CADDS SHEET 49



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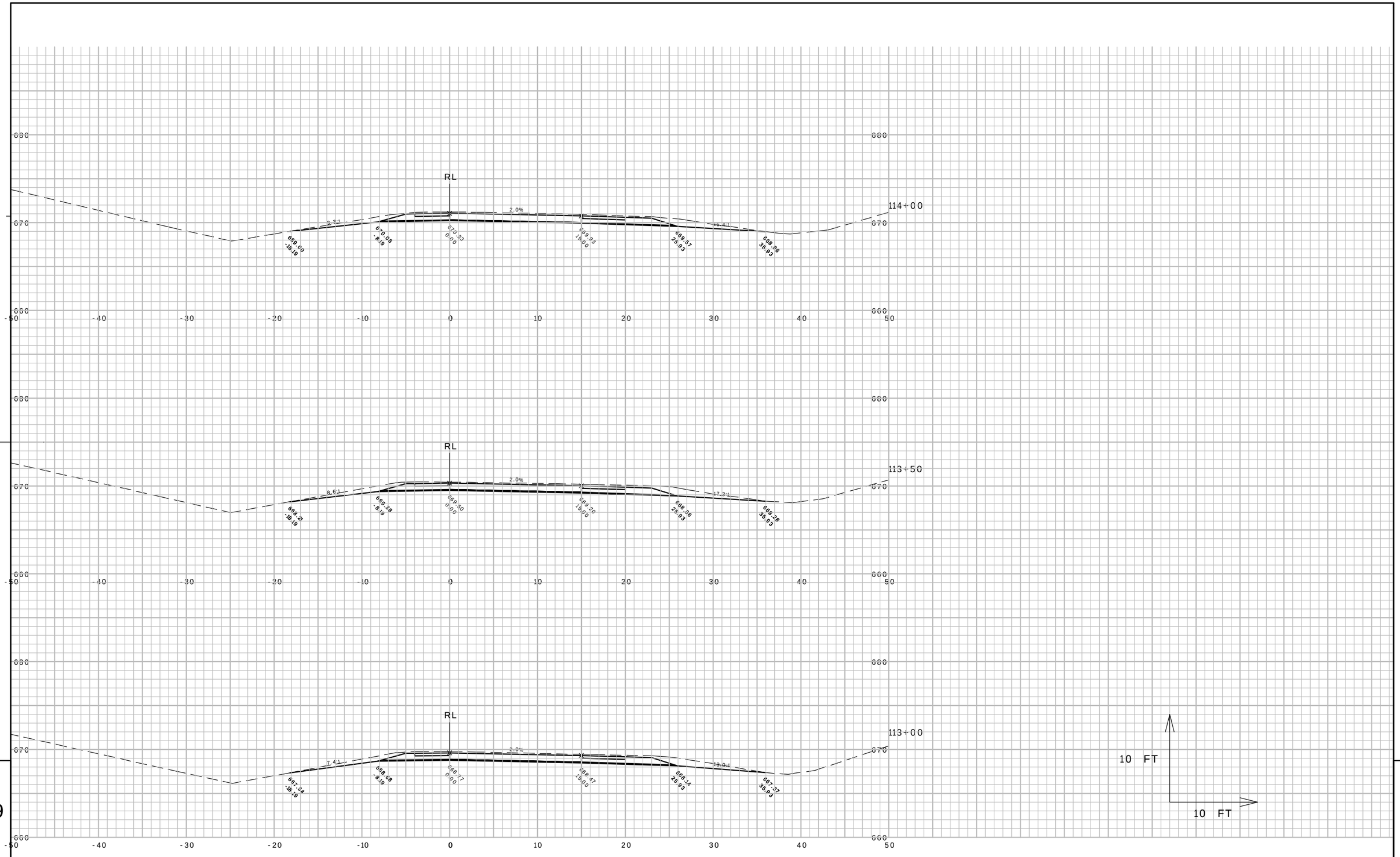
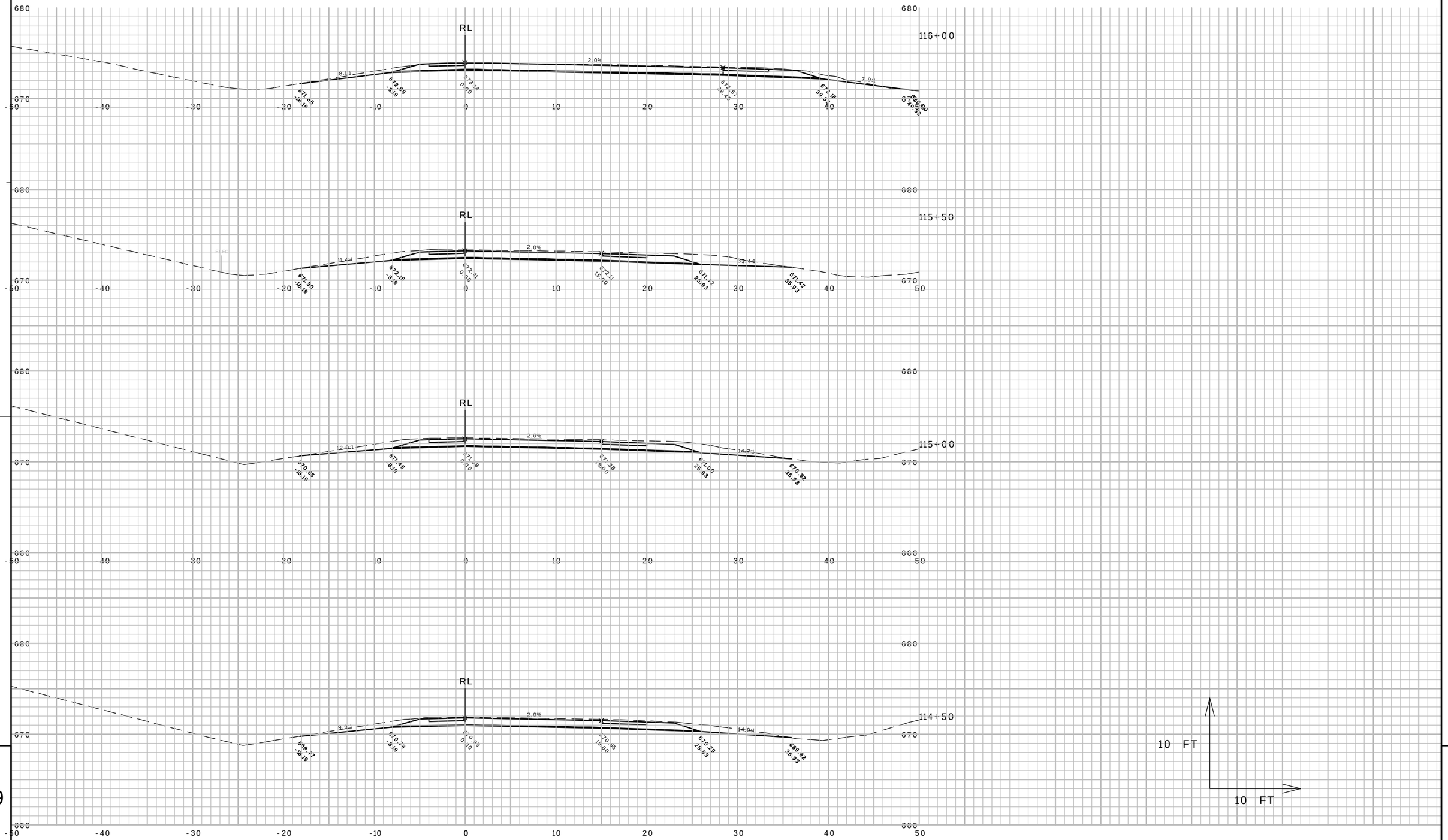
PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: EAST BOUND OFF RAMP	SHEET	E

FILE NAME : L:\PROJECTS\12067\DWG\090202_XS.DWG PLOT DATE : 9/29/2013 9:17 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: EAST BOUND OFF RAMP	SHEET	E

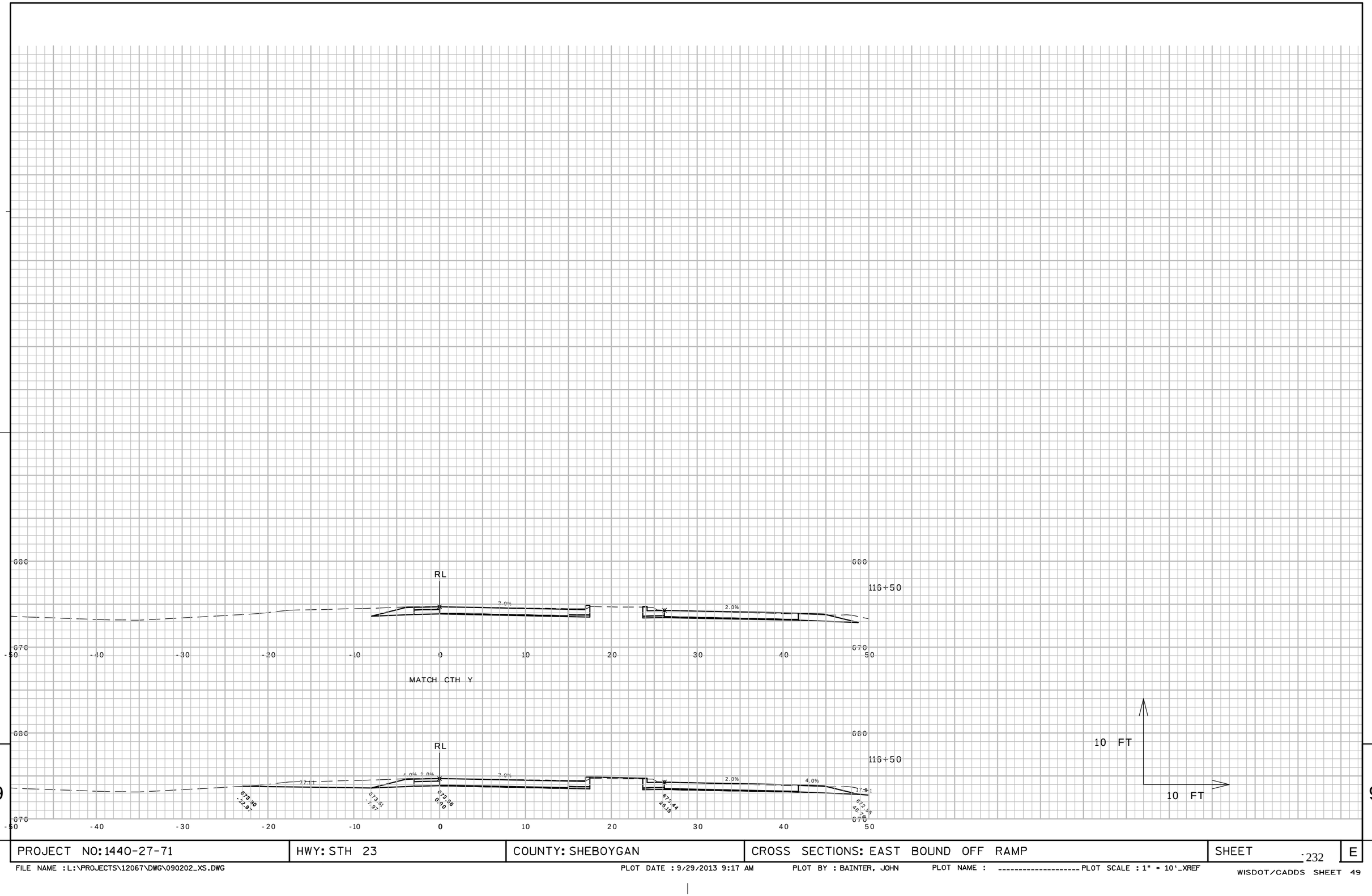
FILE NAME : L:\PROJECTS\12067\DWG\090202_XS.DWG PLOT DATE : 9/29/2013 9:17 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: EAST BOUND OFF RAMP	SHEET	E

FILE NAME : L:\PROJECTS\12067\DWG\090202_XS.DWG PLOT DATE : 9/29/2013 9:17 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

WISDOT/CADDS SHEET 49



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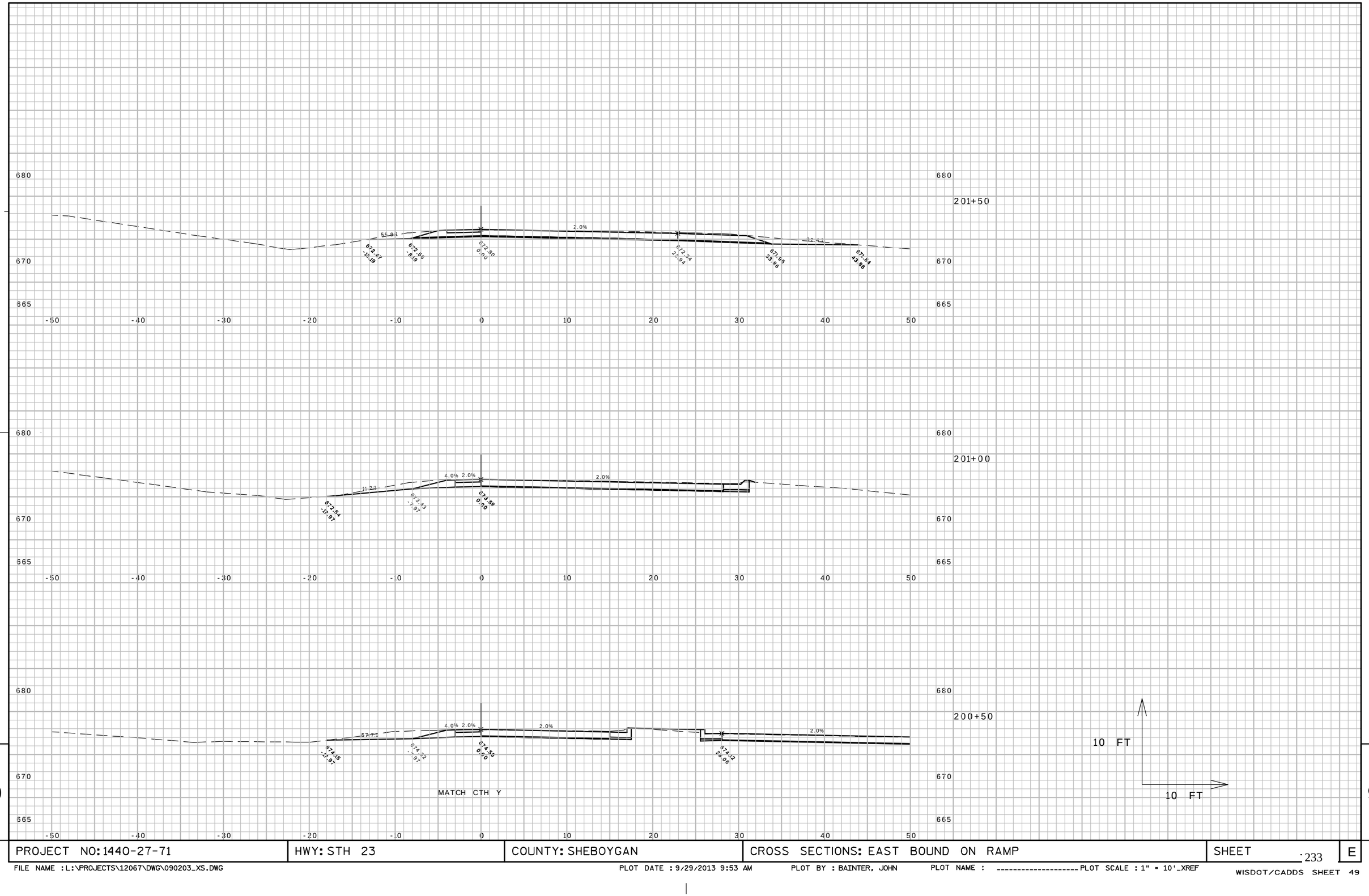
PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: EAST BOUND OFF RAMP	SHEET	E

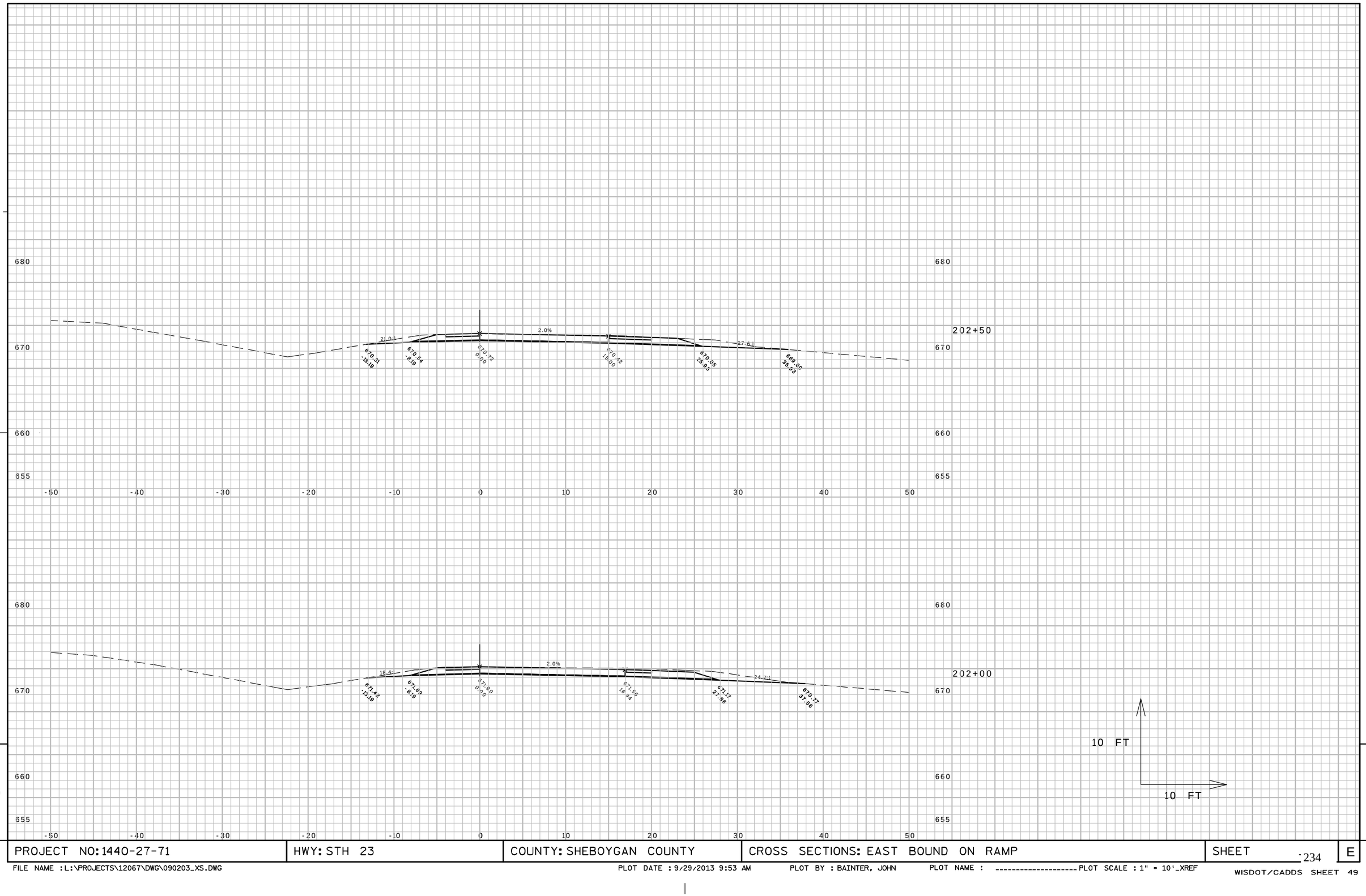
FILE NAME : L:\PROJECTS\12067\DWG\090202_XS.DWG PLOT DATE : 9/29/2013 9:17 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: EAST BOUND ON RAMP	SHEET 233 E

FILE NAME : L:\PROJECTS\12067\DWG\090203_XS.DWG PLOT DATE : 9/29/2013 9:53 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

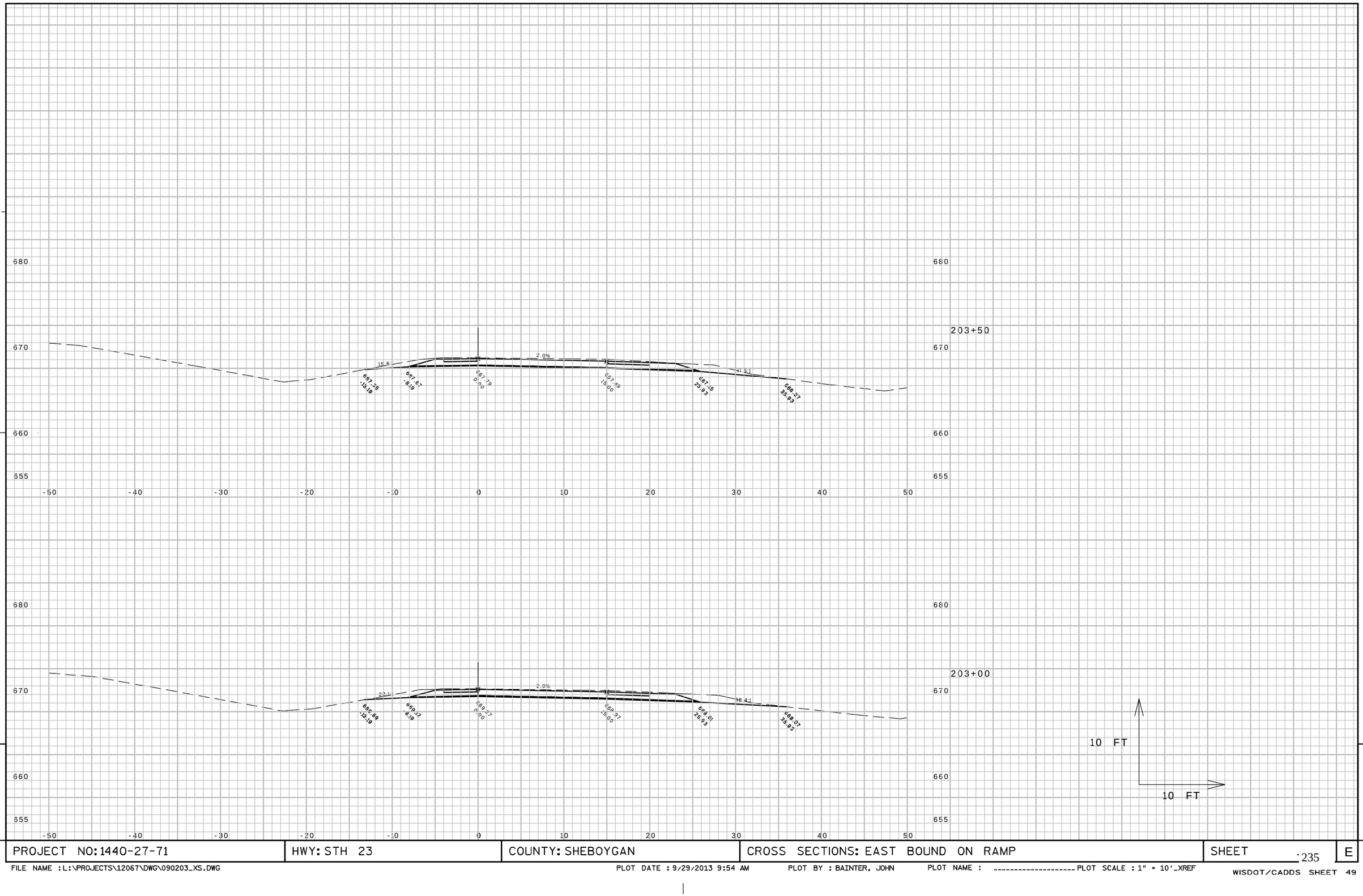
WISDOT/CADDS SHEET 49



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN COUNTY	CROSS SECTIONS: EAST BOUND ON RAMP	SHEET 234	E

FILE NAME : L:\PROJECTS\12067\DWG\090203_XS.DWG PLOT DATE : 9/29/2013 9:53 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

WISDOT/CADDS SHEET 49



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PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: EAST BOUND ON RAMP	SHEET 235	E

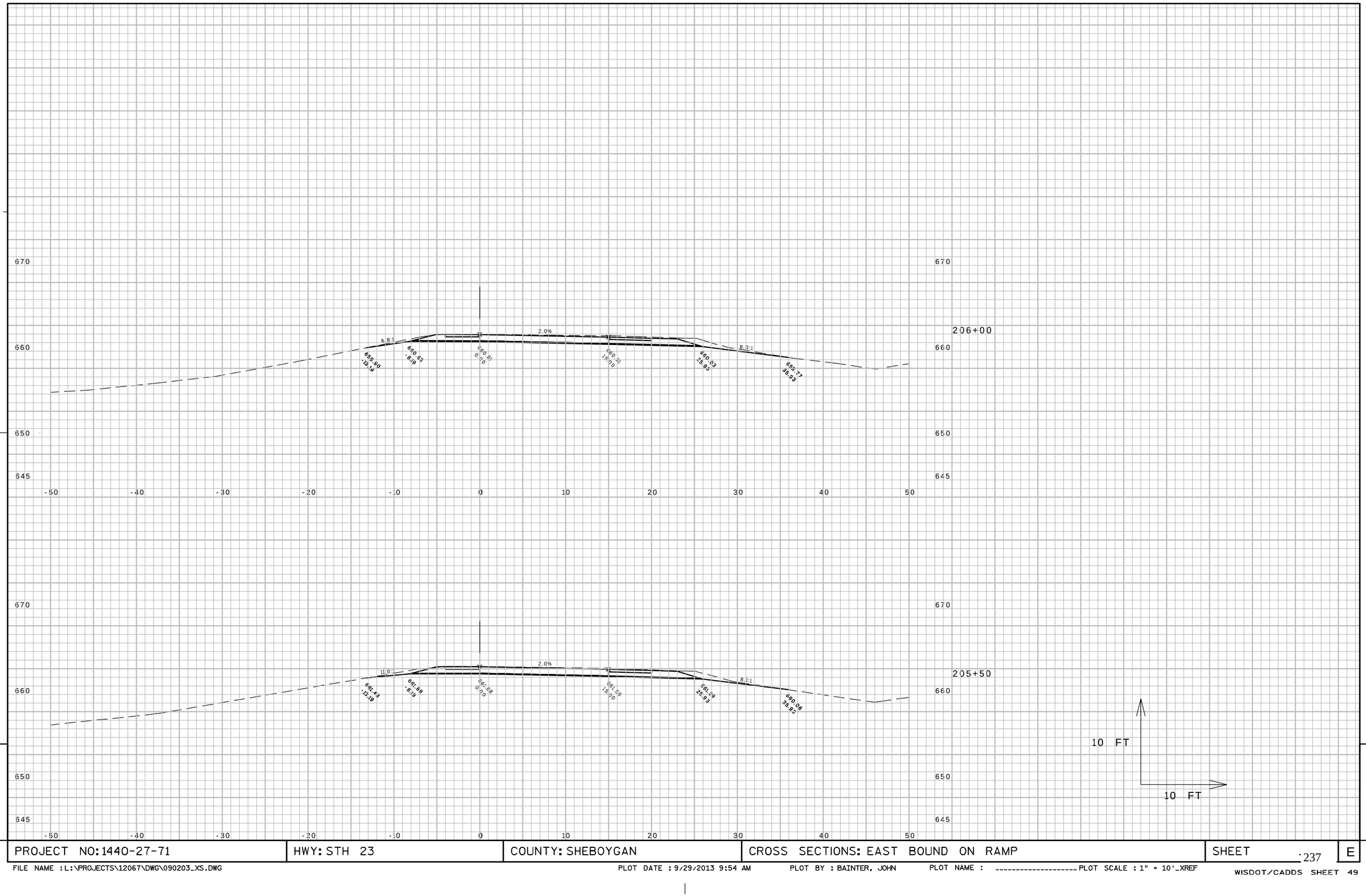
FILE NAME : L:\PROJECTS\12067\DWG\090203_XS.DWG PLOT DATE : 9/29/2013 9:54 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

WISDOT/CADDS SHEET 49

PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: EAST BOUND ON RAMP	SHEET	E

FILE NAME : L:\PROJECTS\12067\DWG\090203_XS.DWG PLOT DATE : 9/29/2013 9:54 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

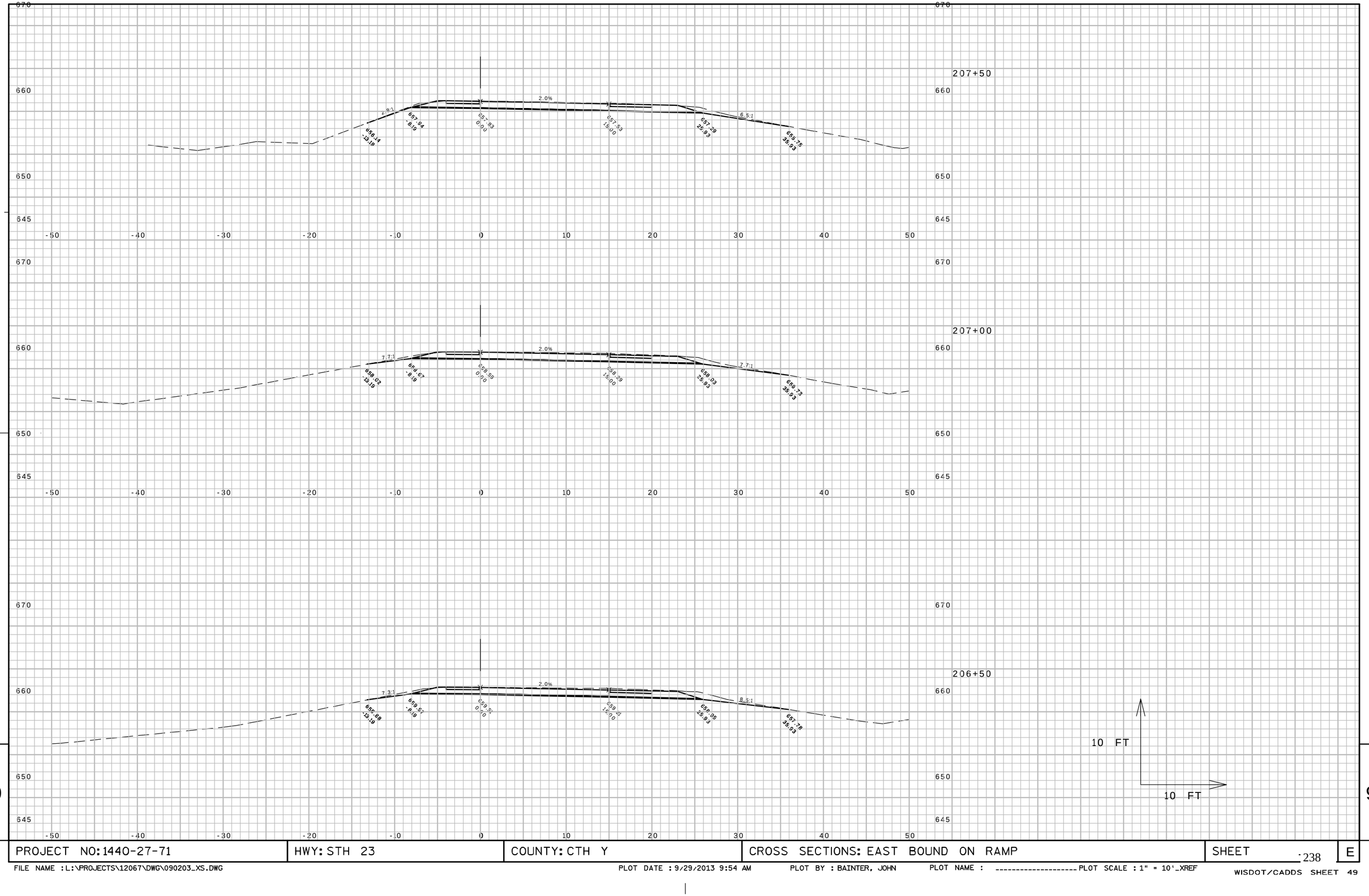
WISDOT/CADDS SHEET 49



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: EAST BOUND ON RAMP	SHEET 237	E

FILE NAME : L:\PROJECTS\12067\DWG\090203_XS.DWG PLOT DATE : 9/29/2013 9:54 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

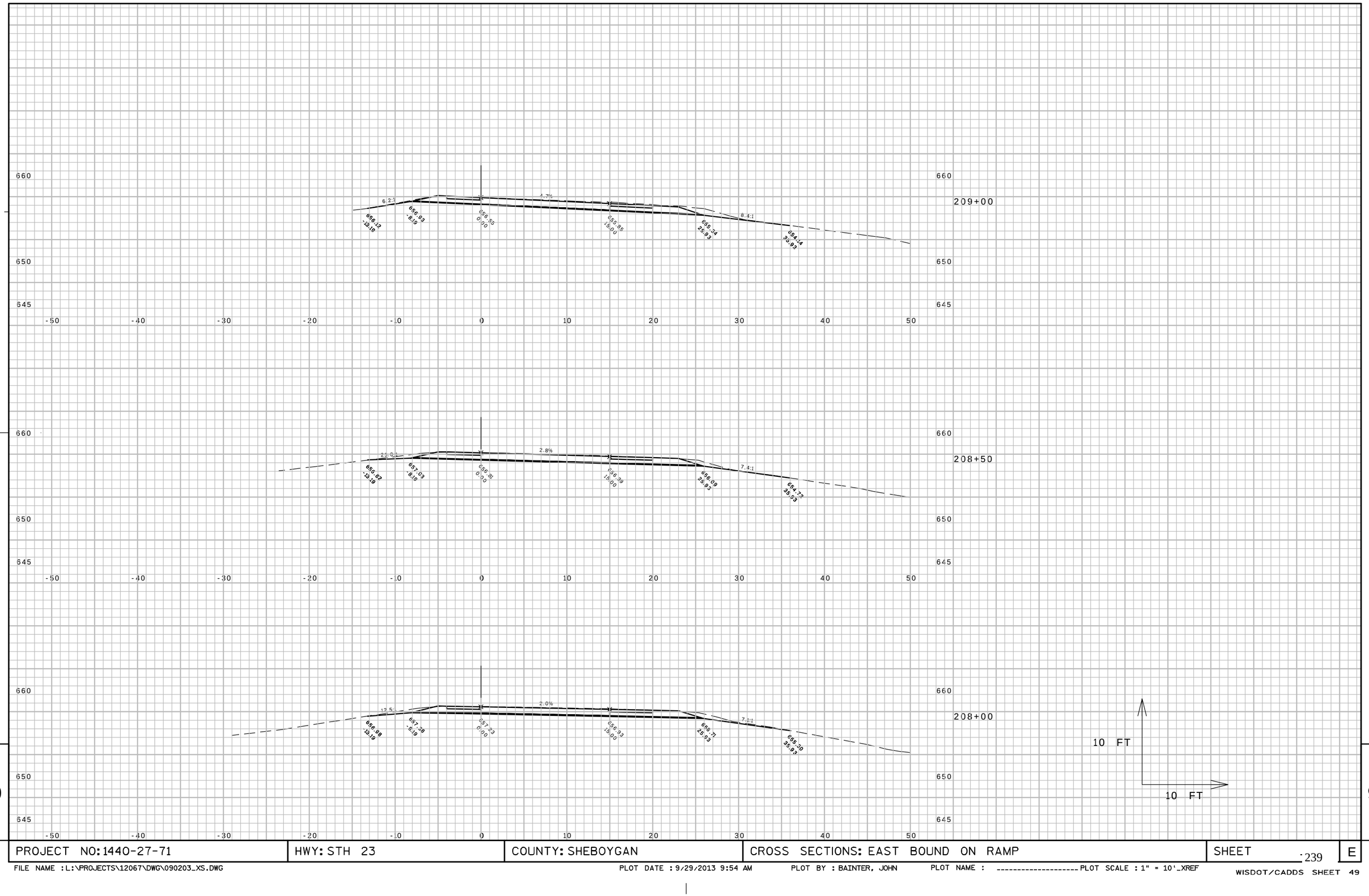
WISDOT/CADDS SHEET 49



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: CTH Y	CROSS SECTIONS: EAST BOUND ON RAMP	SHEET 238	E

FILE NAME : L:\PROJECTS\12067\DWG\090203_XS.DWG PLOT DATE : 9/29/2013 9:54 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

WISDOT/CADDS SHEET 49



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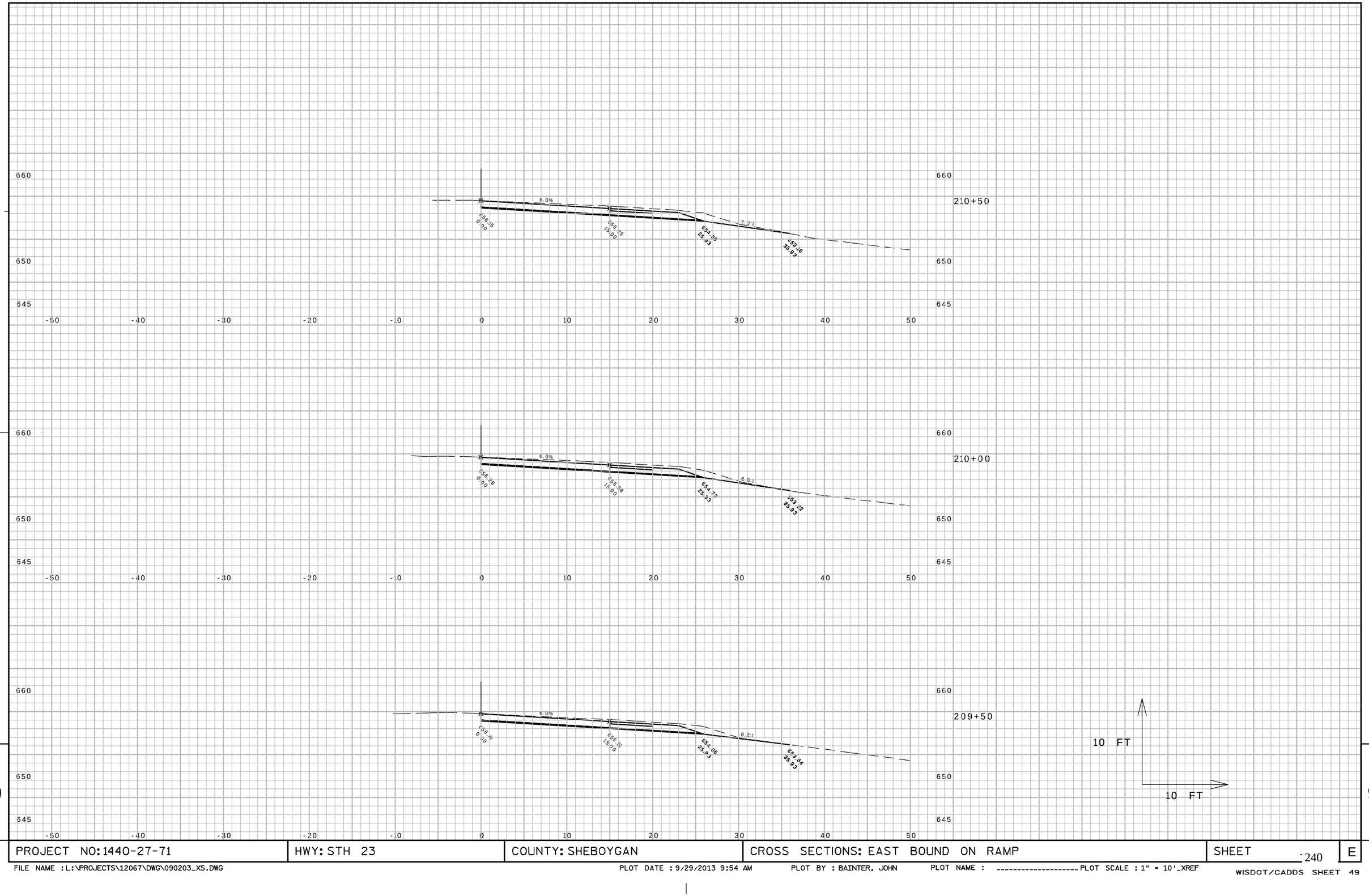
PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: EAST BOUND ON RAMP	SHEET 239	E

FILE NAME : L:\PROJECTS\12067\DWG\090203_XS.DWG PLOT DATE : 9/29/2013 9:54 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

WISDOT/CADDS SHEET 49



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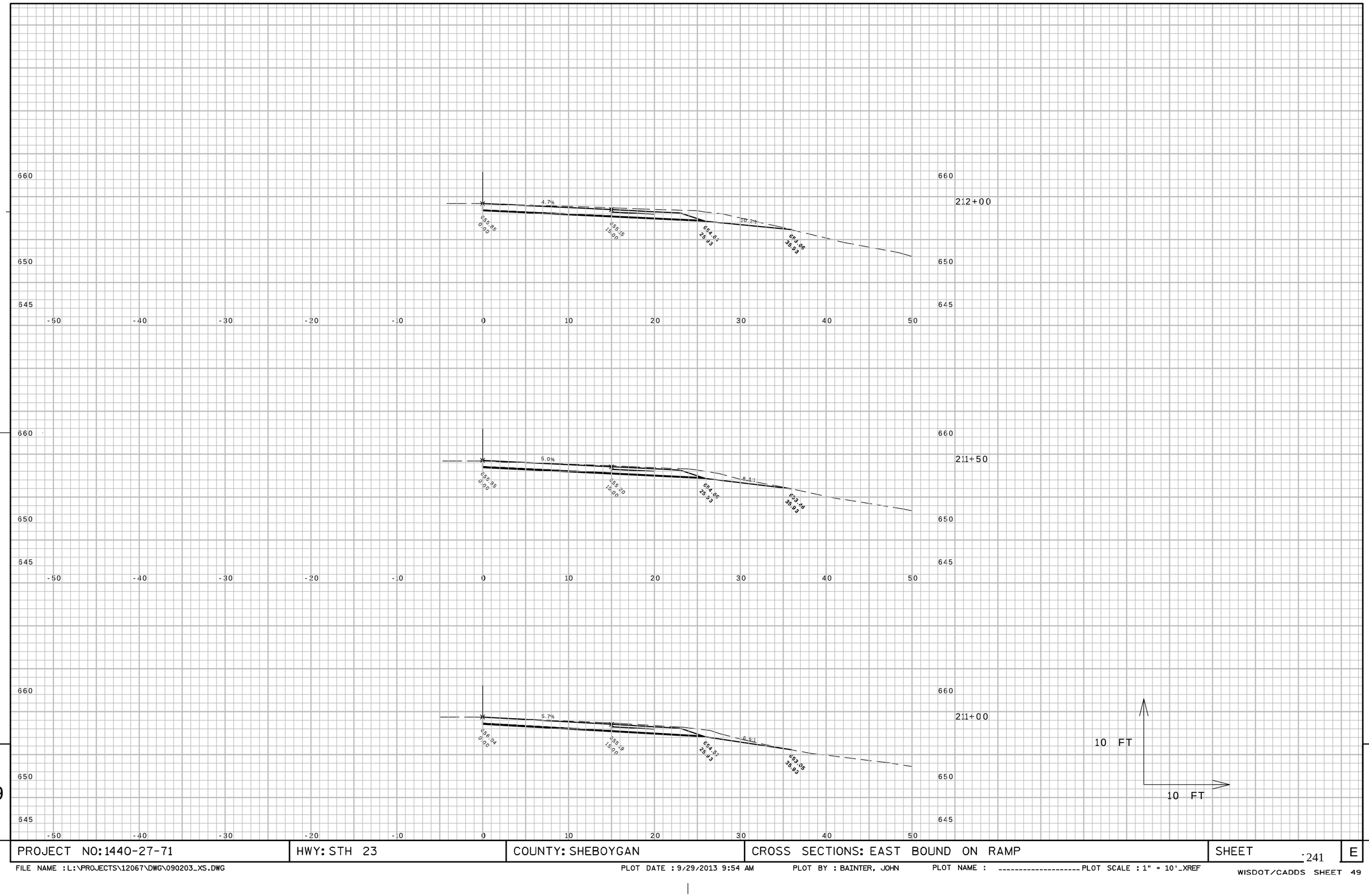
PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: EAST BOUND ON RAMP	SHEET 240	E

FILE NAME : L:\PROJECTS\12067\DWG\090203_XS.DWG PLOT DATE : 9/29/2013 9:54 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

WISDOT/CADDS SHEET 49



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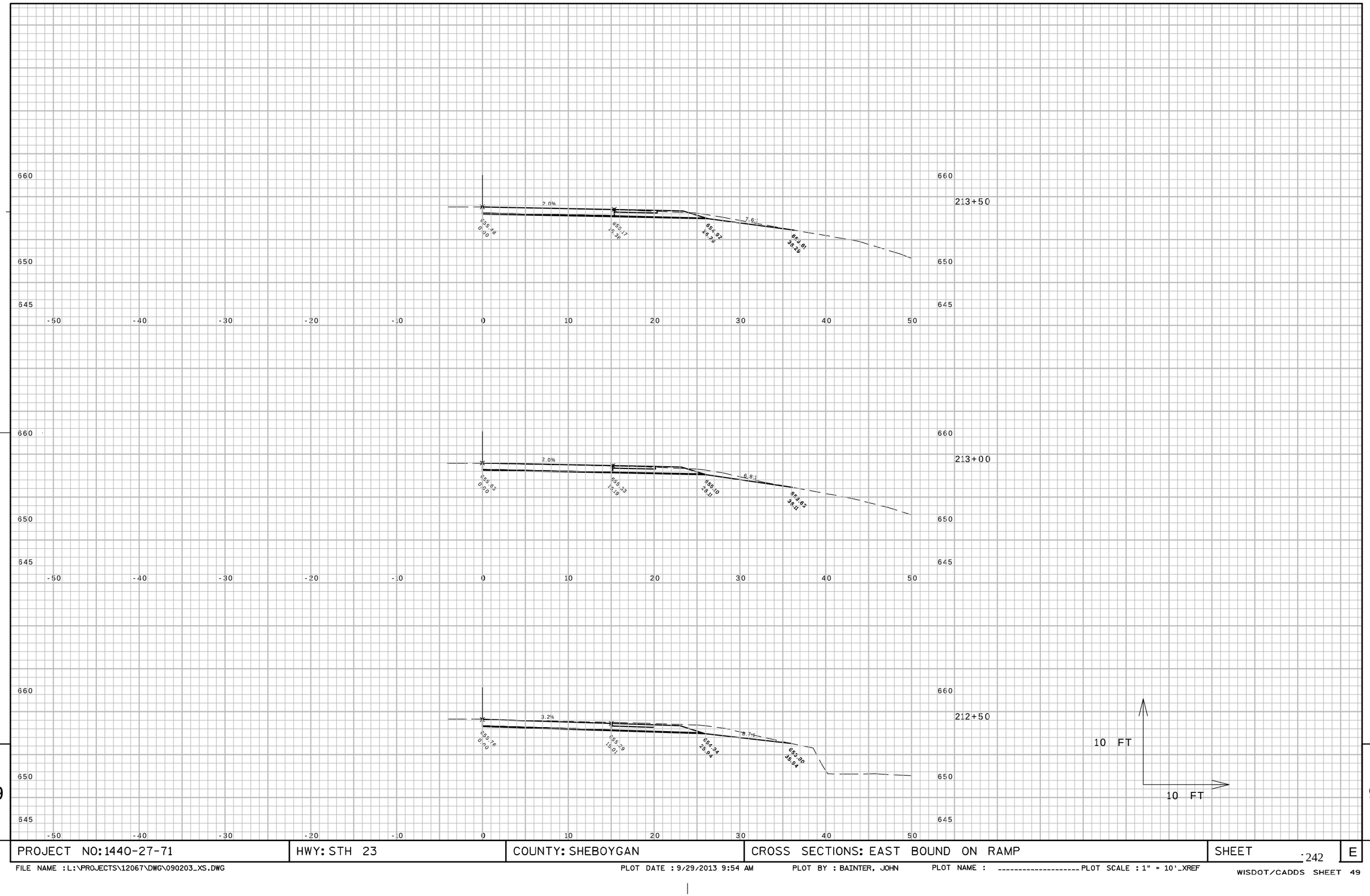
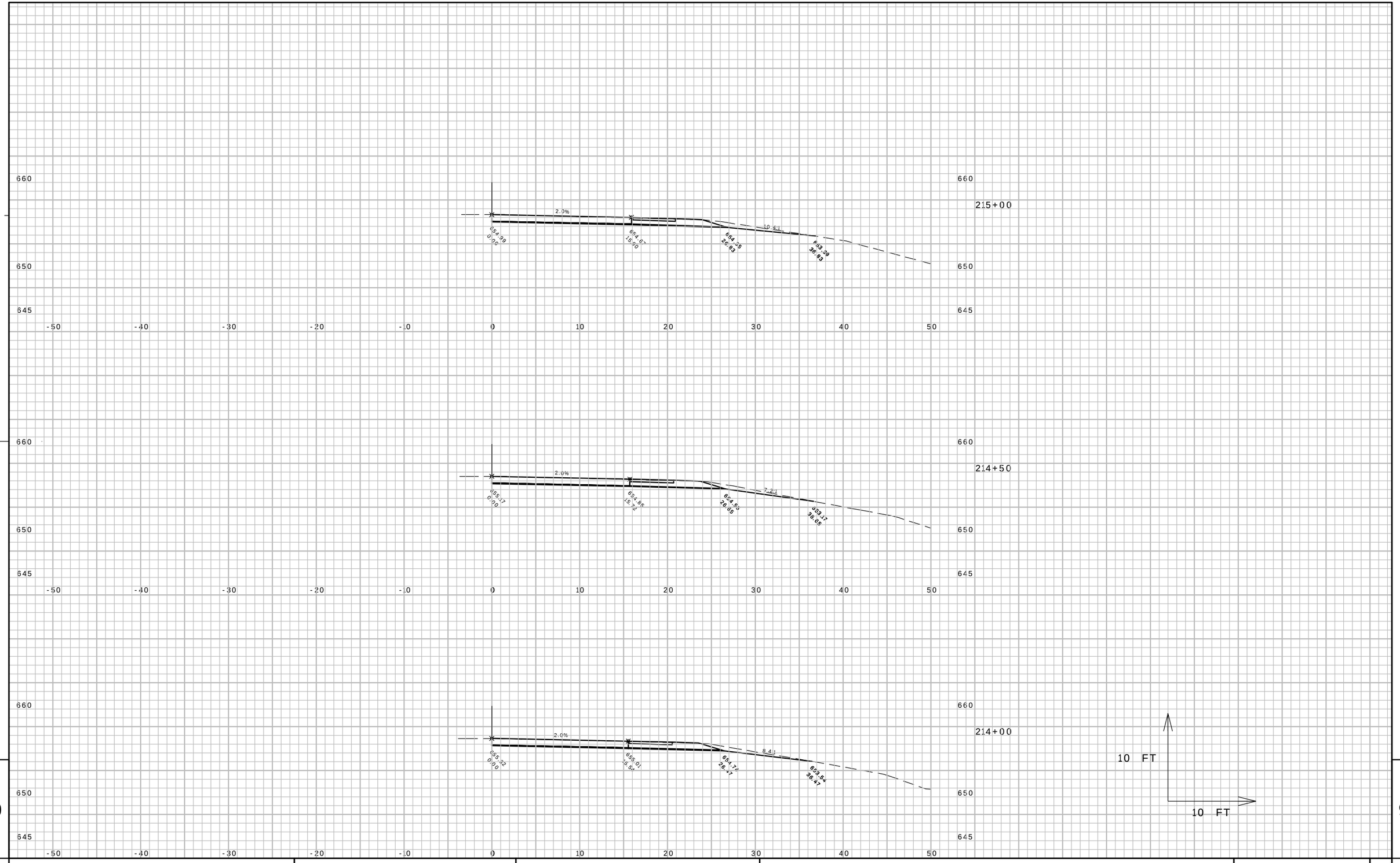
PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: EAST BOUND ON RAMP	SHEET	E

FILE NAME : L:\PROJECTS\12067\DWG\090203_XS.DWG PLOT DATE : 9/29/2013 9:54 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: EAST BOUND ON RAMP	SHEET	E

FILE NAME : L:\PROJECTS\12067\DWG\090203_XS.DWG PLOT DATE : 9/29/2013 9:54 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF



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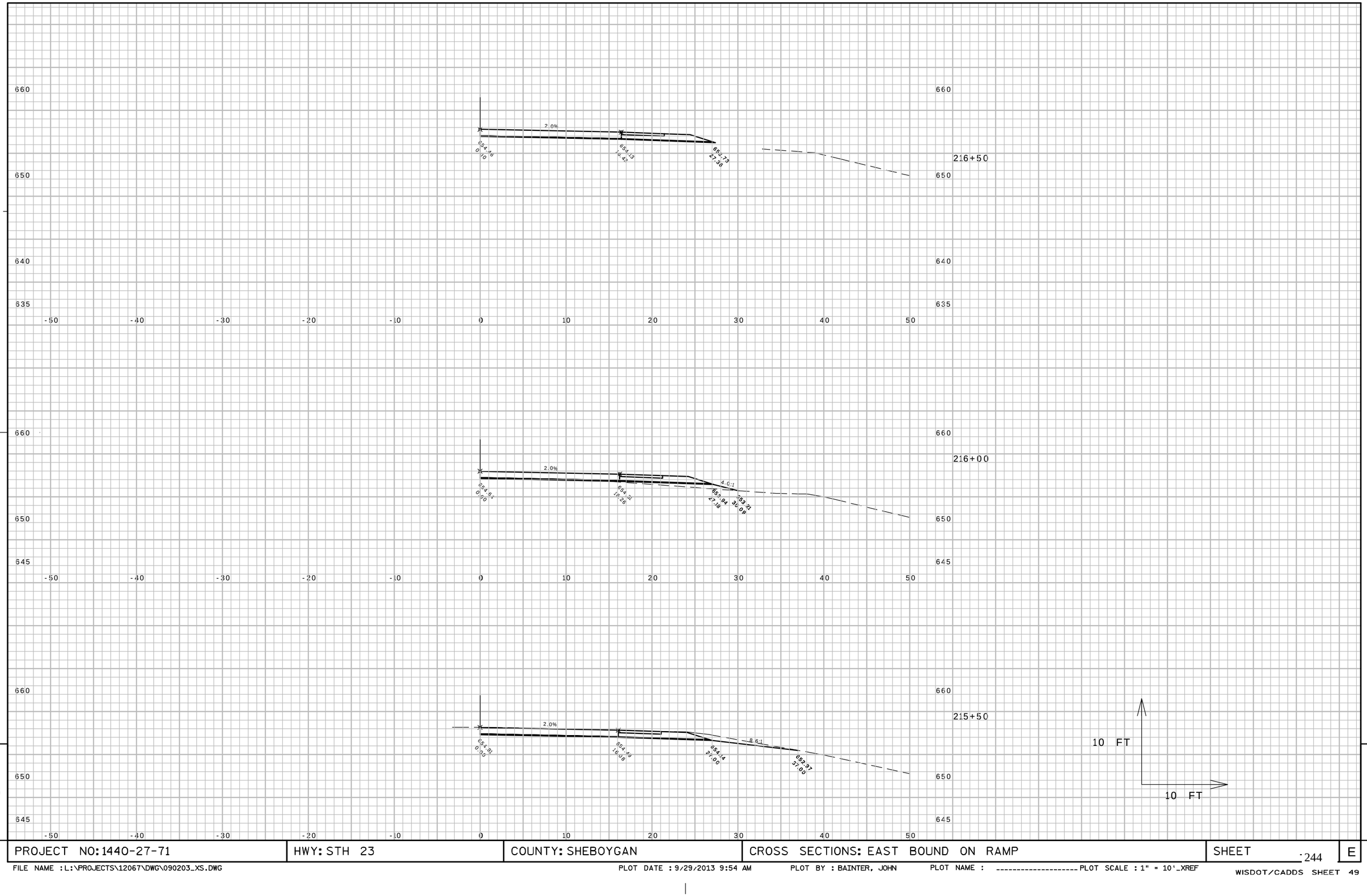
PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: EAST BOUND ON RAMP	SHEET	E

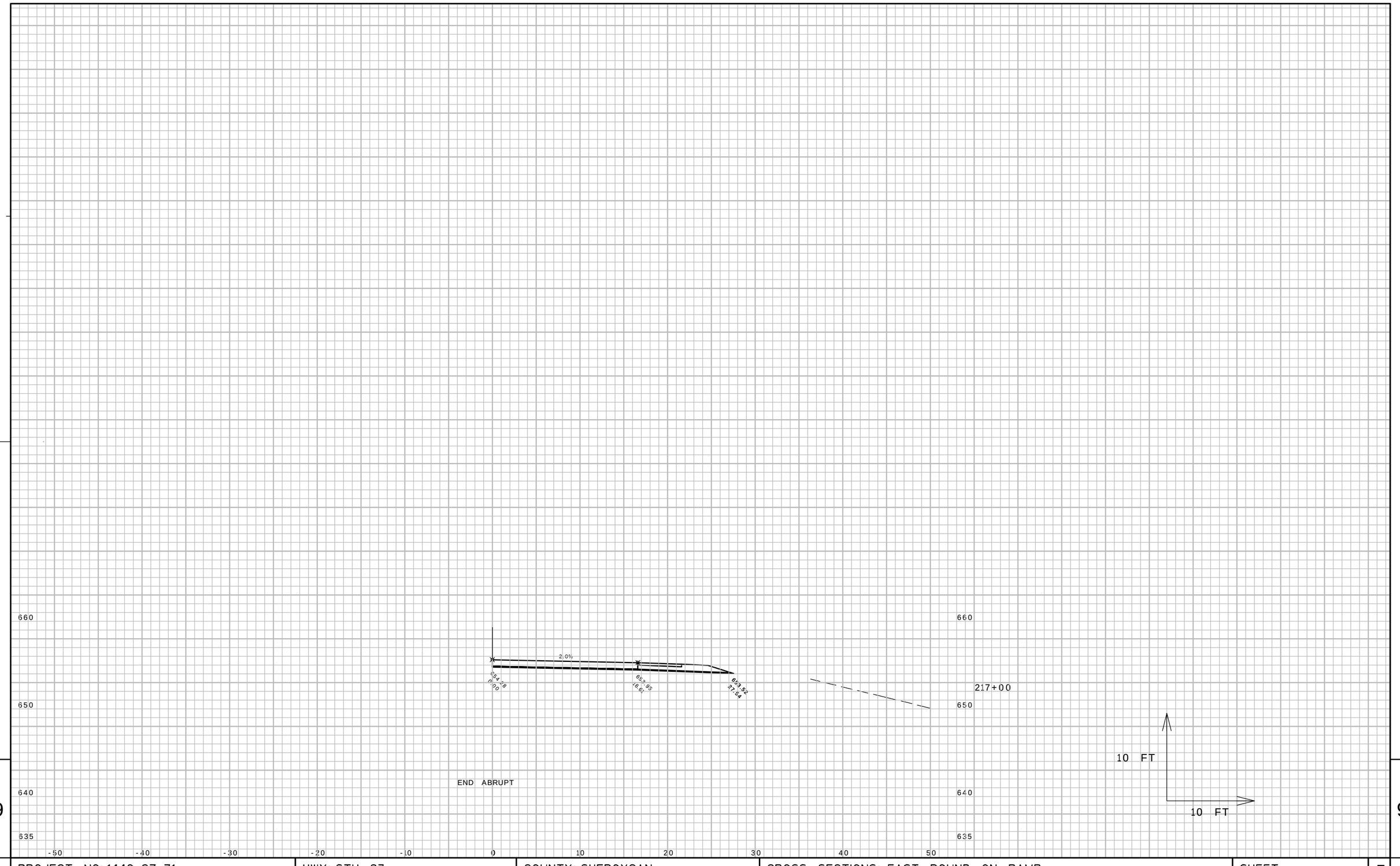
FILE NAME : L:\PROJECTS\12067\DWG\090203_XS.DWG PLOT DATE : 9/29/2013 9:54 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF
WISDOT/CADDS SHEET 49



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: EAST BOUND ON RAMP	SHEET 244 E

FILE NAME : L:\PROJECTS\12067\DWG\090203_XS.DWG PLOT DATE : 9/29/2013 9:54 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

WISDOT/CADDS SHEET 49



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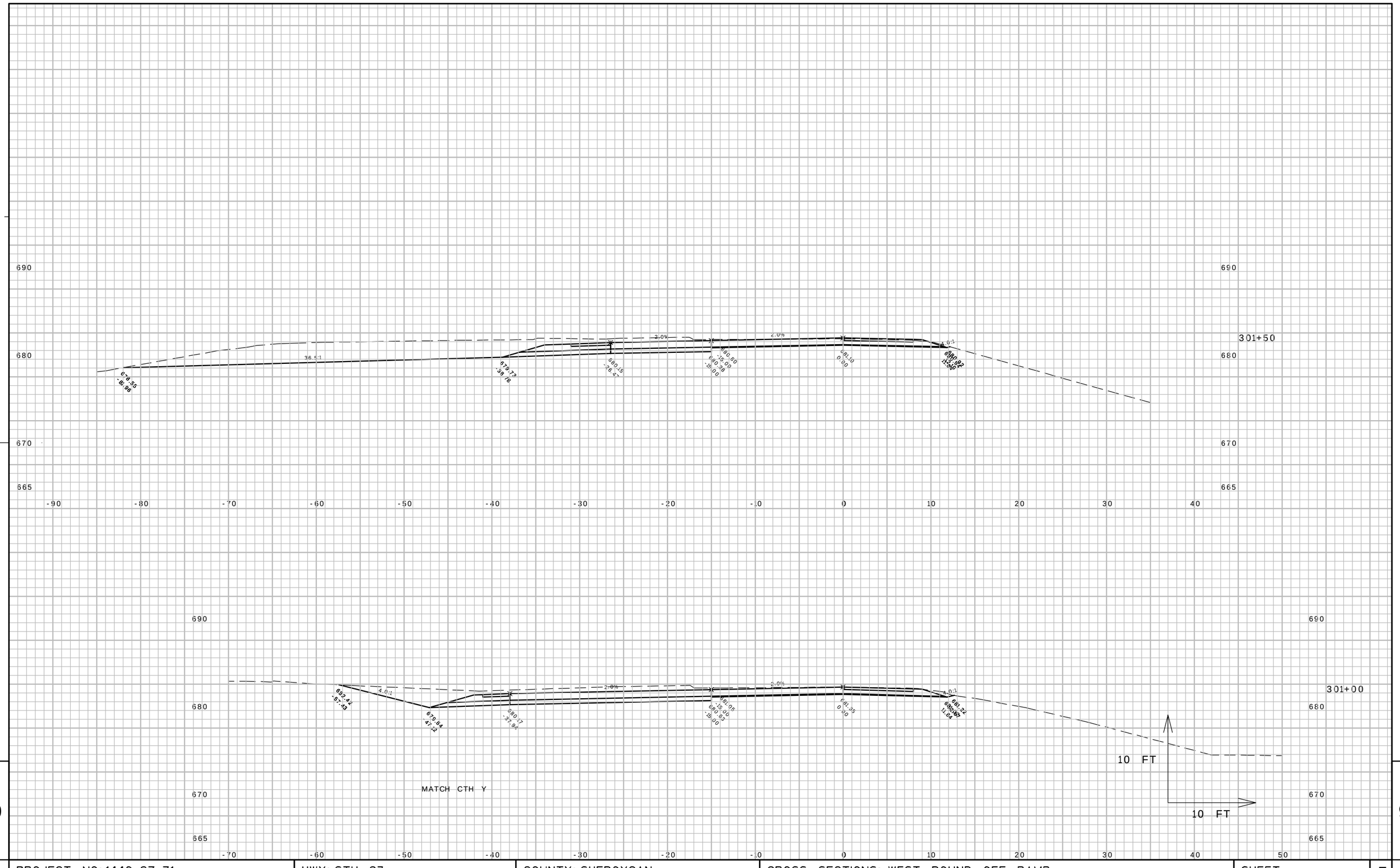
PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: EAST BOUND ON RAMP	SHEET 245	E



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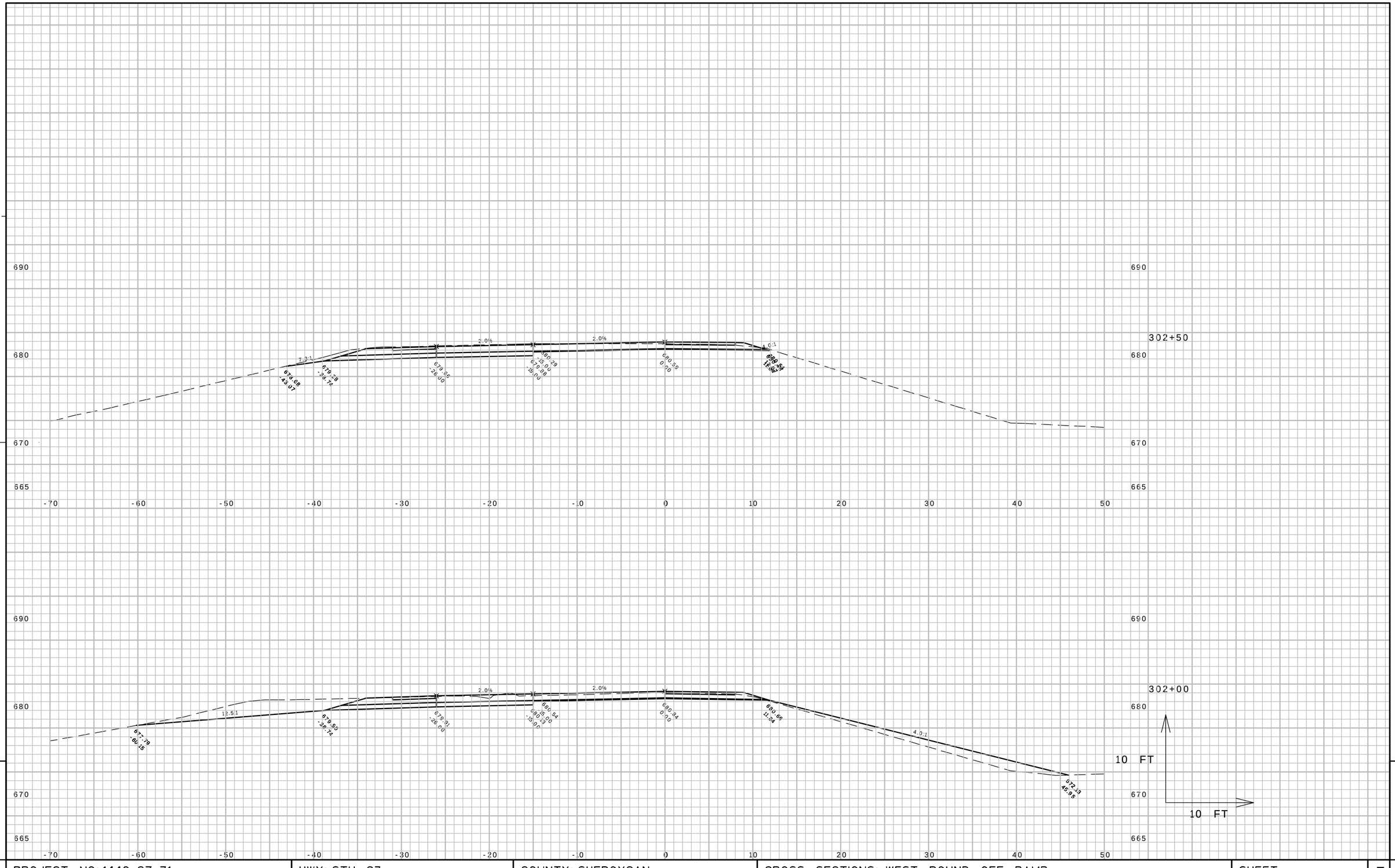
PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: WEST BOUND OFF RAMP	SHEET 246	E

FILE NAME : L:\PROJECTS\12067\DWG\090204_XS.DWG PLOT DATE : 9/29/2013 11:04 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

WISDOT/CADDS SHEET 49



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PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: WEST BOUND OFF RAMP	SHEET 247	E

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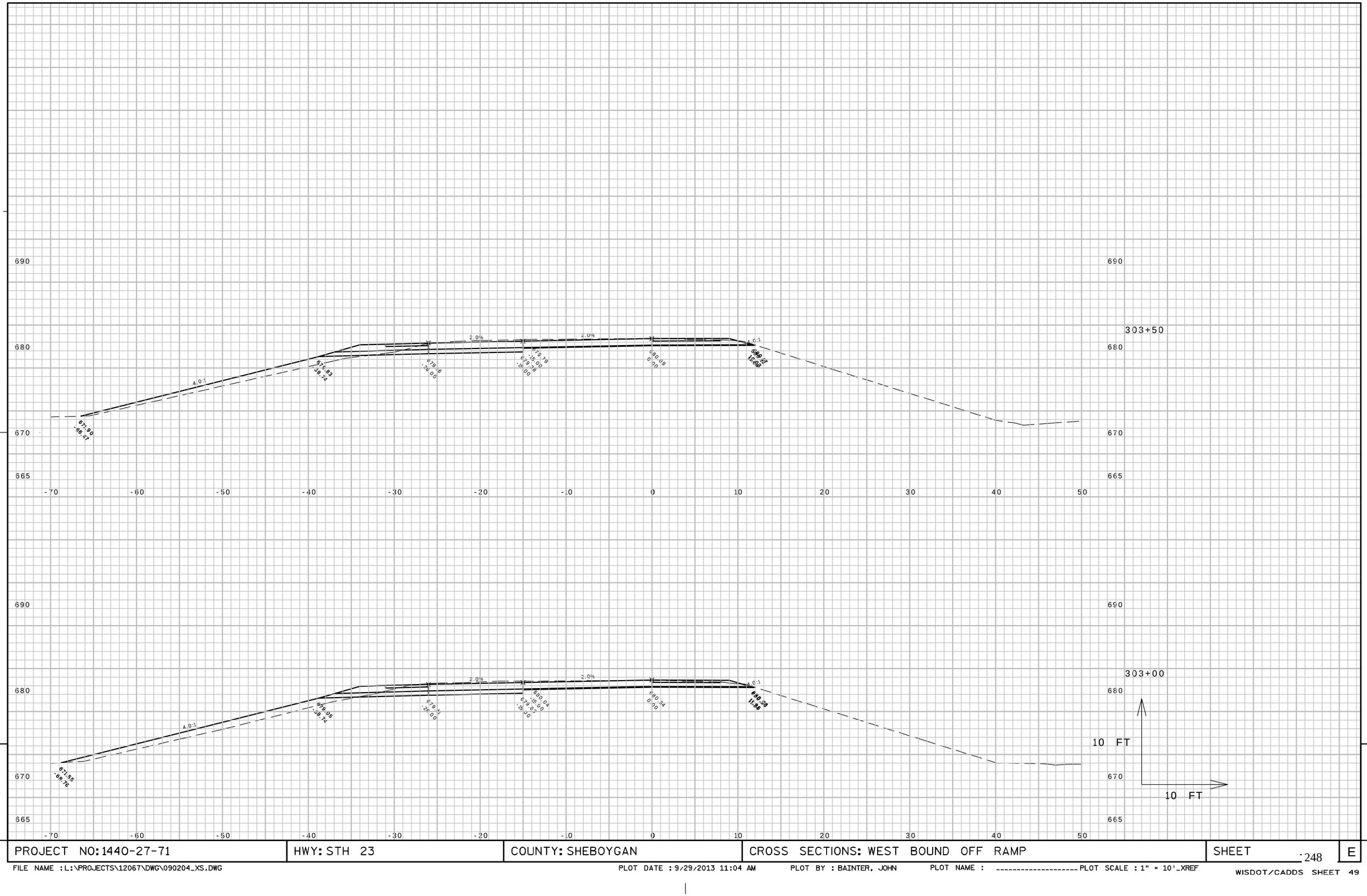
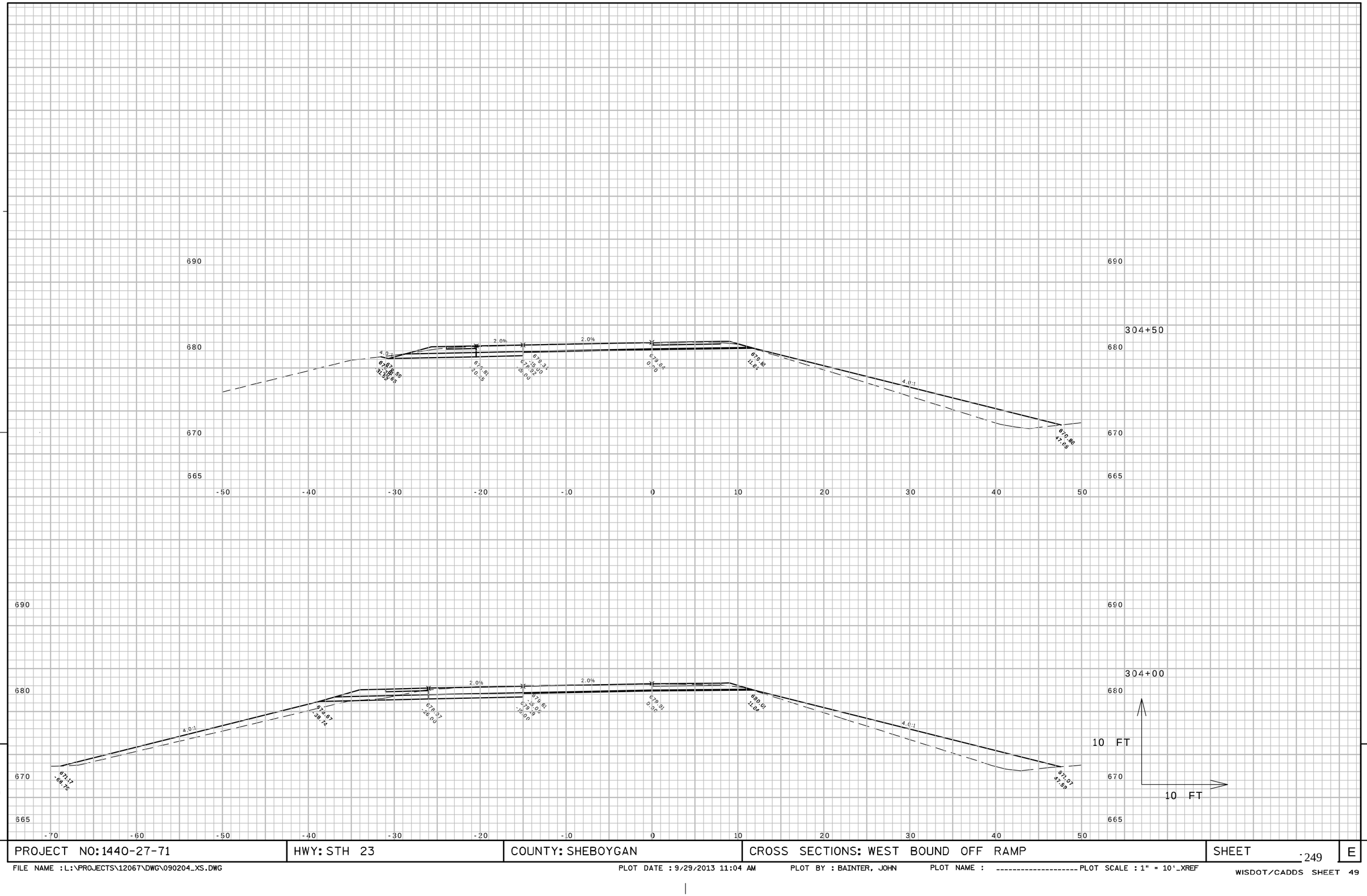
WISDOT/CADDS SHEET 49



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: WEST BOUND OFF RAMP	SHEET 248	E

FILE NAME : L:\PROJECTS\12067\DWG\090204_XS.DWG PLOT DATE : 9/29/2013 11:04 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

WISDOT/CADDS SHEET 49



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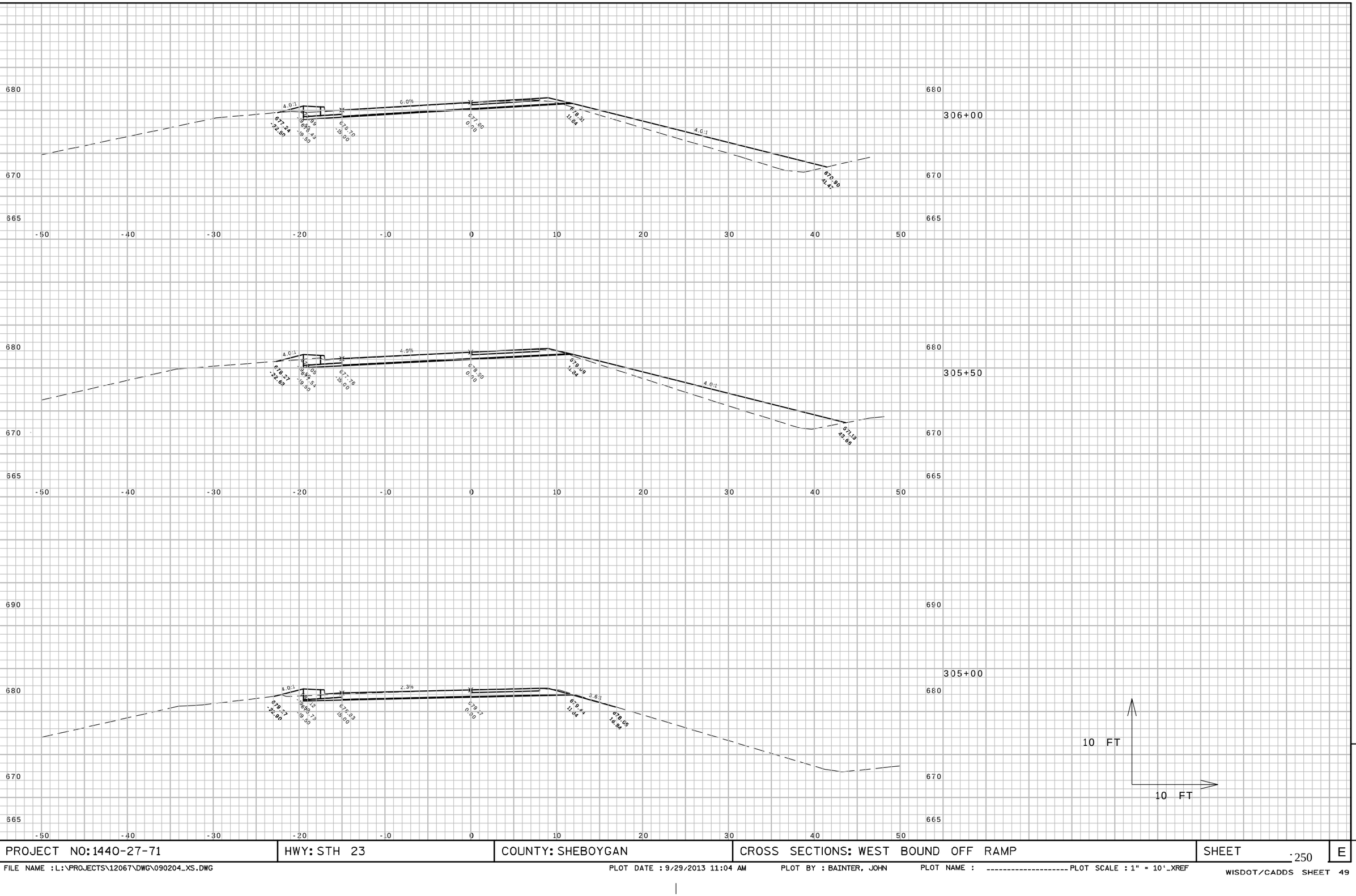
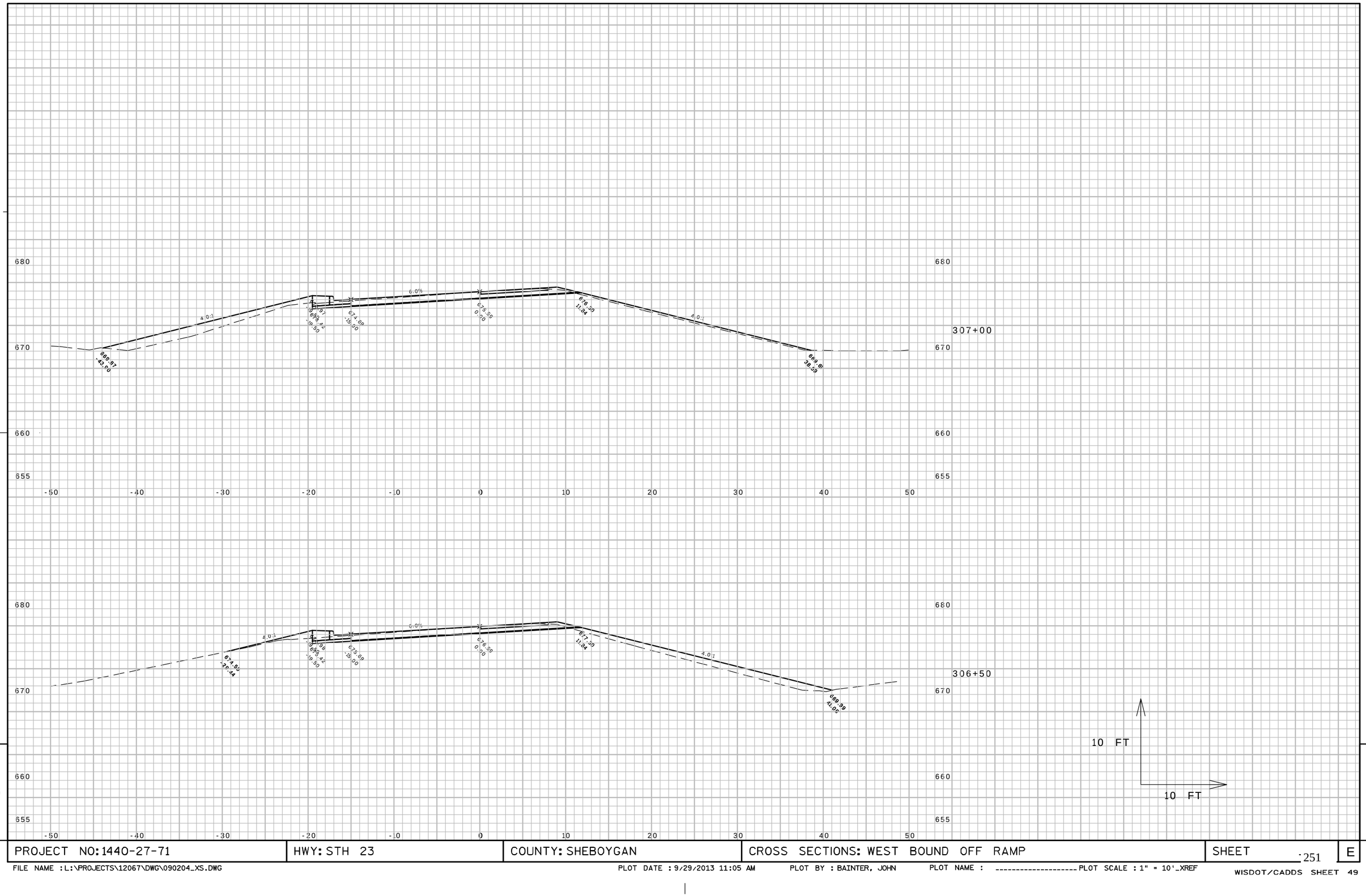
PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: WEST BOUND OFF RAMP	SHEET	E



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: WEST BOUND OFF RAMP	SHEET 250	E

FILE NAME : L:\PROJECTS\12067\DWG\090204_XS.DWG PLOT DATE : 9/29/2013 11:04 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

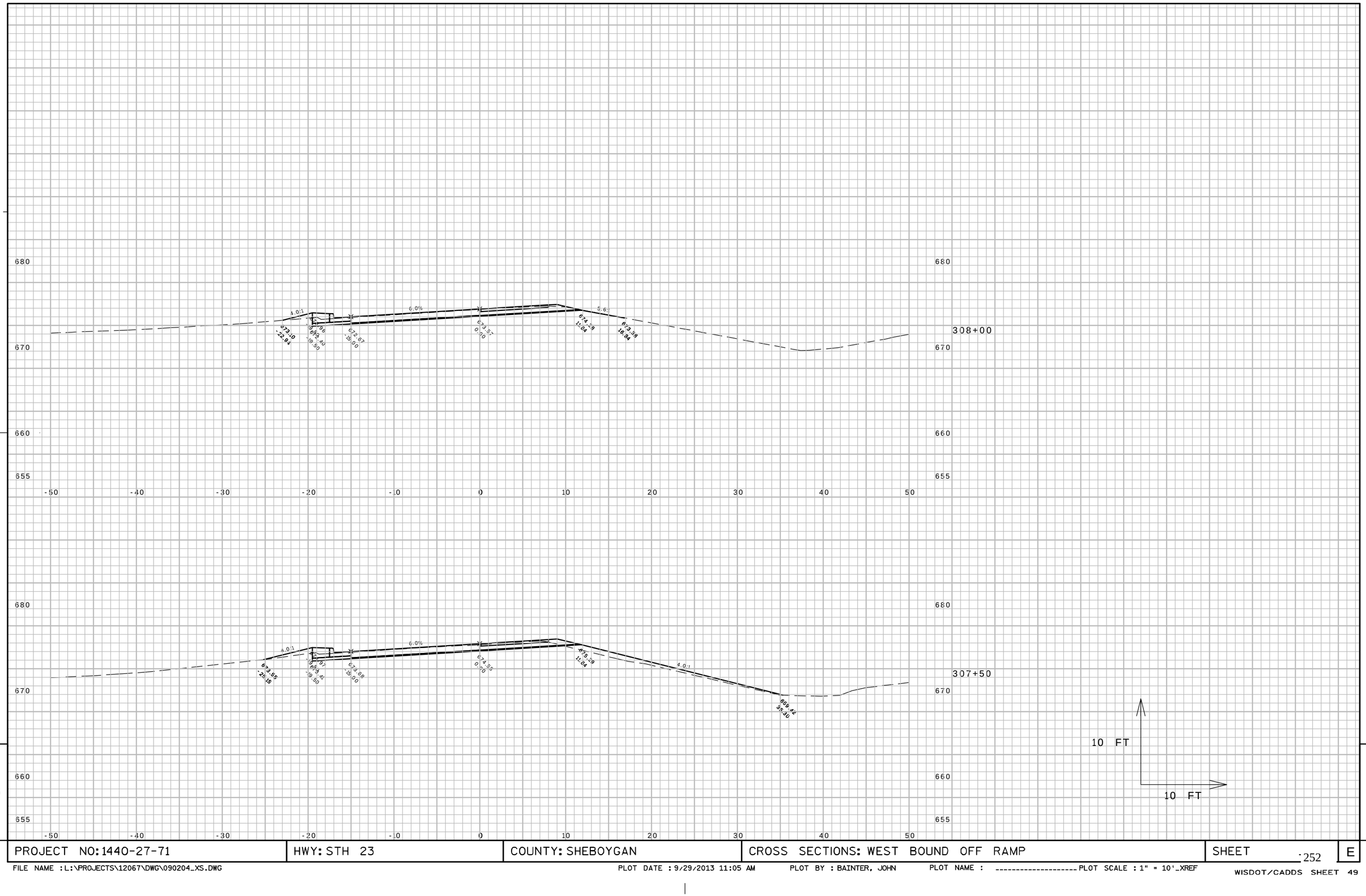
WISDOT/CADDS SHEET 49



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: WEST BOUND OFF RAMP	SHEET 251 E

FILE NAME : L:\PROJECTS\12067\DWG\090204_XS.DWG PLOT DATE : 9/29/2013 11:05 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

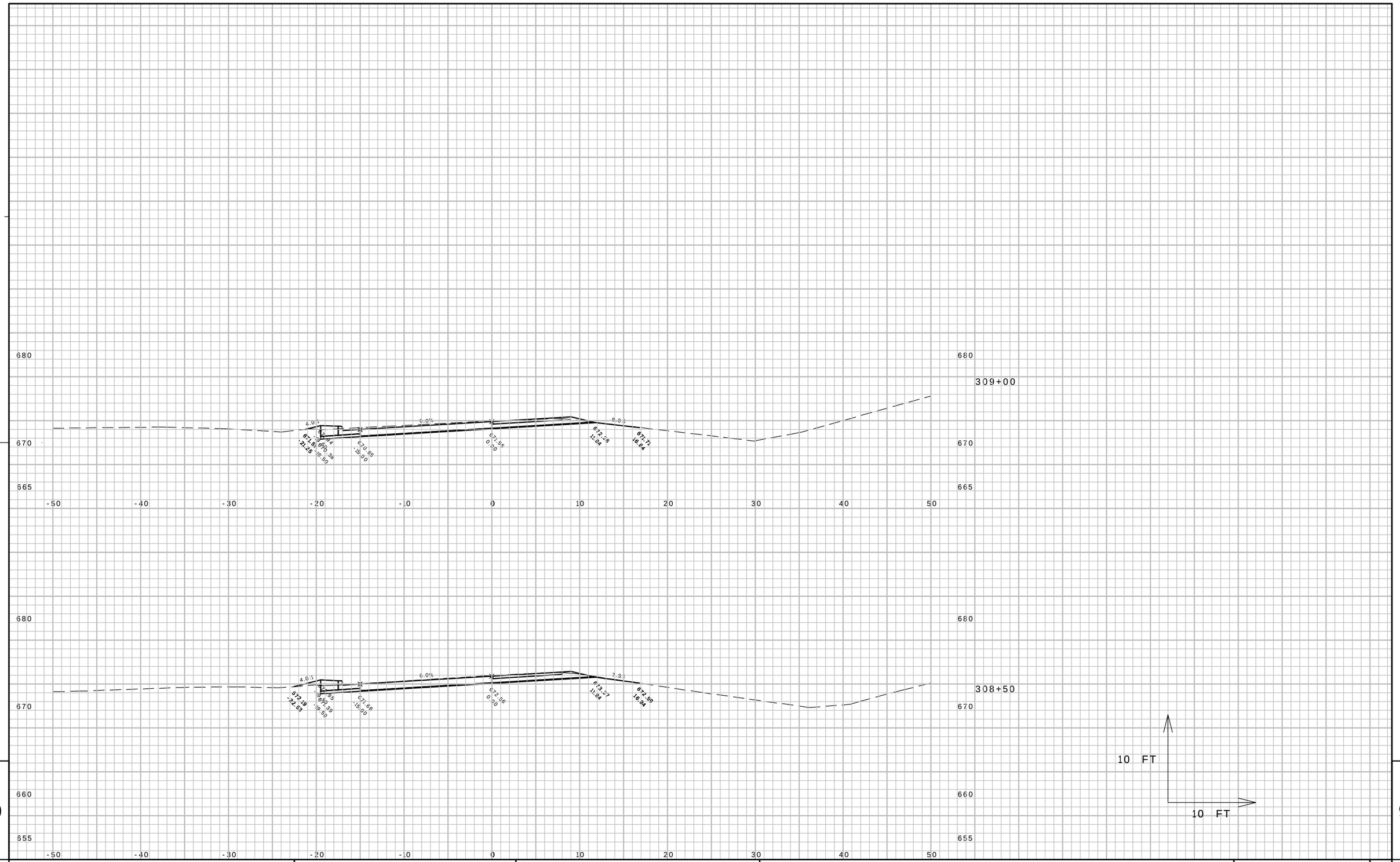
WISDOT/CADDS SHEET 49



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: WEST BOUND OFF RAMP	SHEET 252	E

FILE NAME : L:\PROJECTS\12067\DWG\090204_XS.DWG PLOT DATE : 9/29/2013 11:05 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

WISDOT/CADDS SHEET 49



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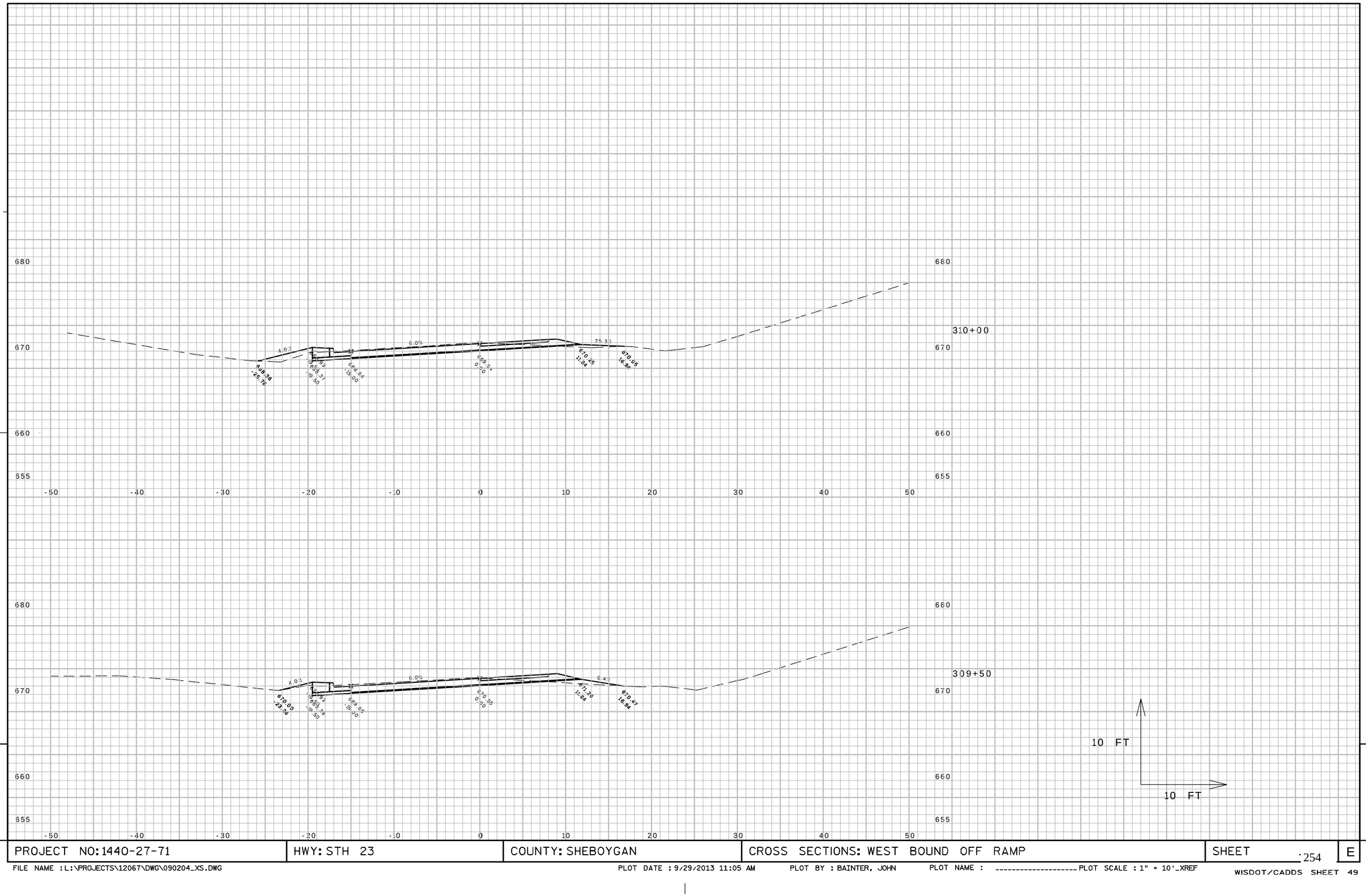
PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: WEST BOUND OFF RAMP	SHEET	E

FILE NAME : L:\PROJECTS\12067\DWG\090204_XS.DWG PLOT DATE : 9/29/2013 11:05 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

WISDOT/CADDS SHEET 49



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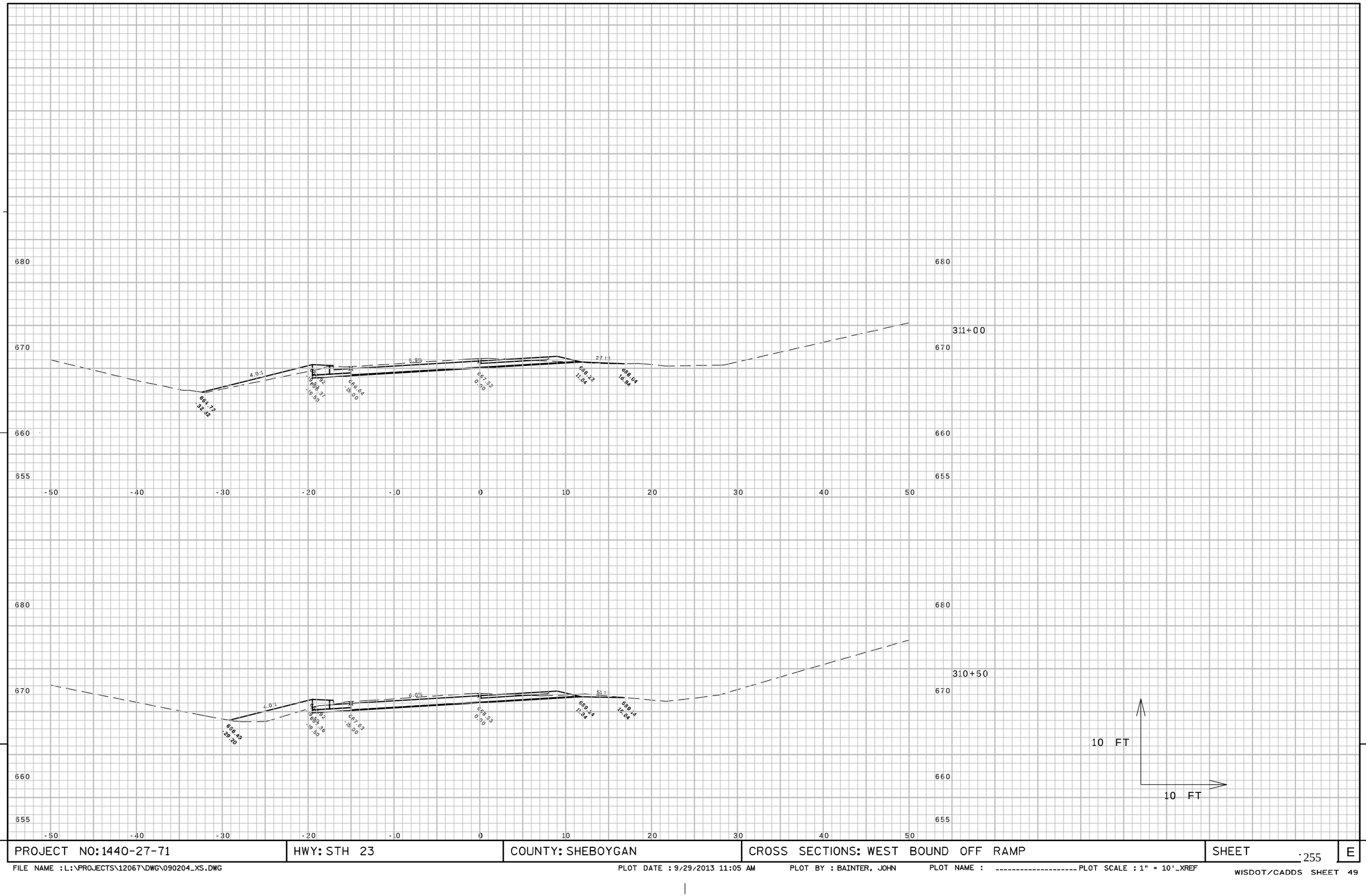
PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: WEST BOUND OFF RAMP	SHEET 254	E

FILE NAME : L:\PROJECTS\12067\DWG\090204_XS.DWG PLOT DATE : 9/29/2013 11:05 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

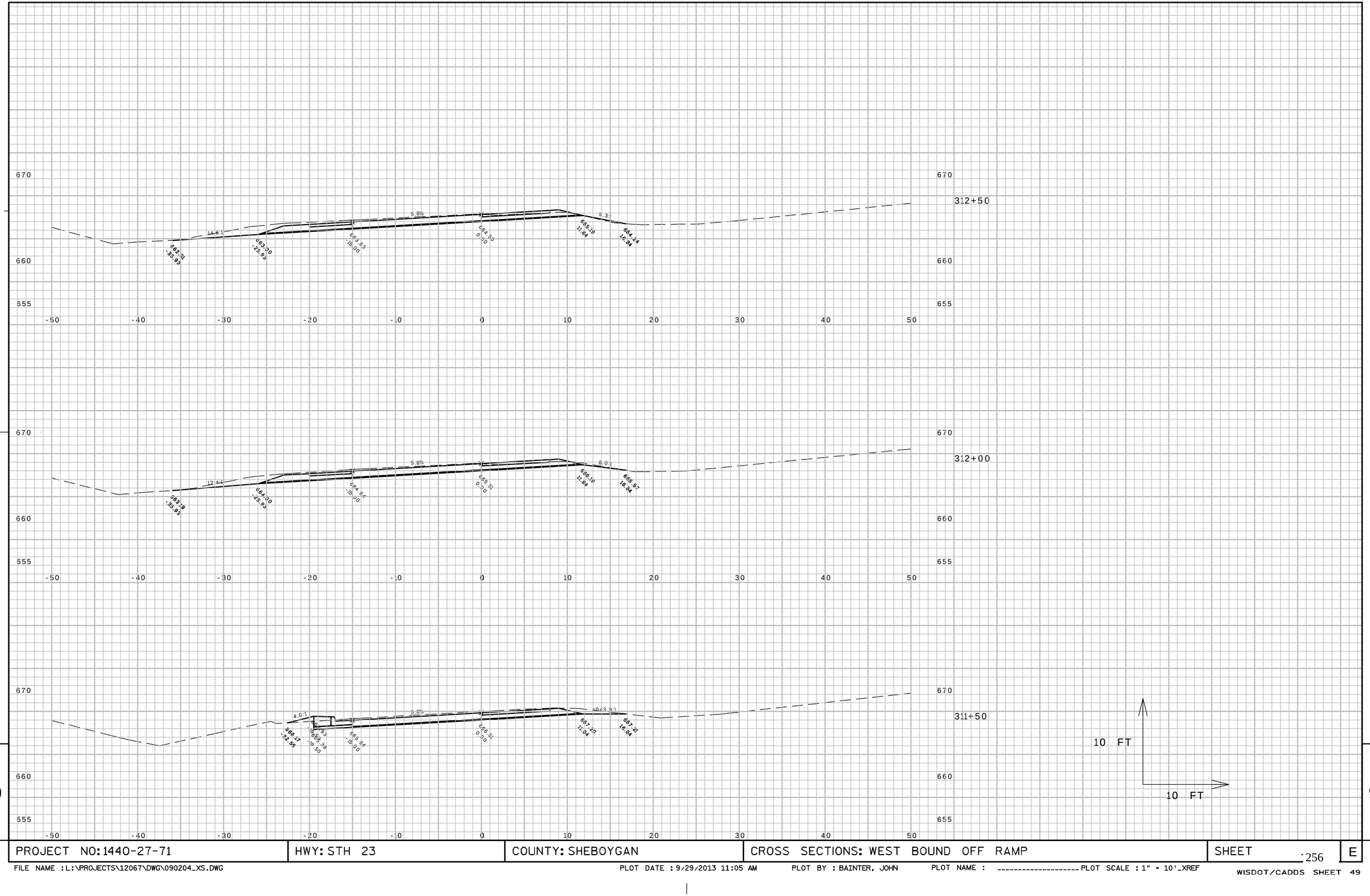
WISDOT/CADDS SHEET 49



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: WEST BOUND OFF RAMP	SHEET 255 E

FILE NAME : L:\PROJECTS\12067\DWG\090204_XS.DWG PLOT DATE : 9/29/2013 11:05 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

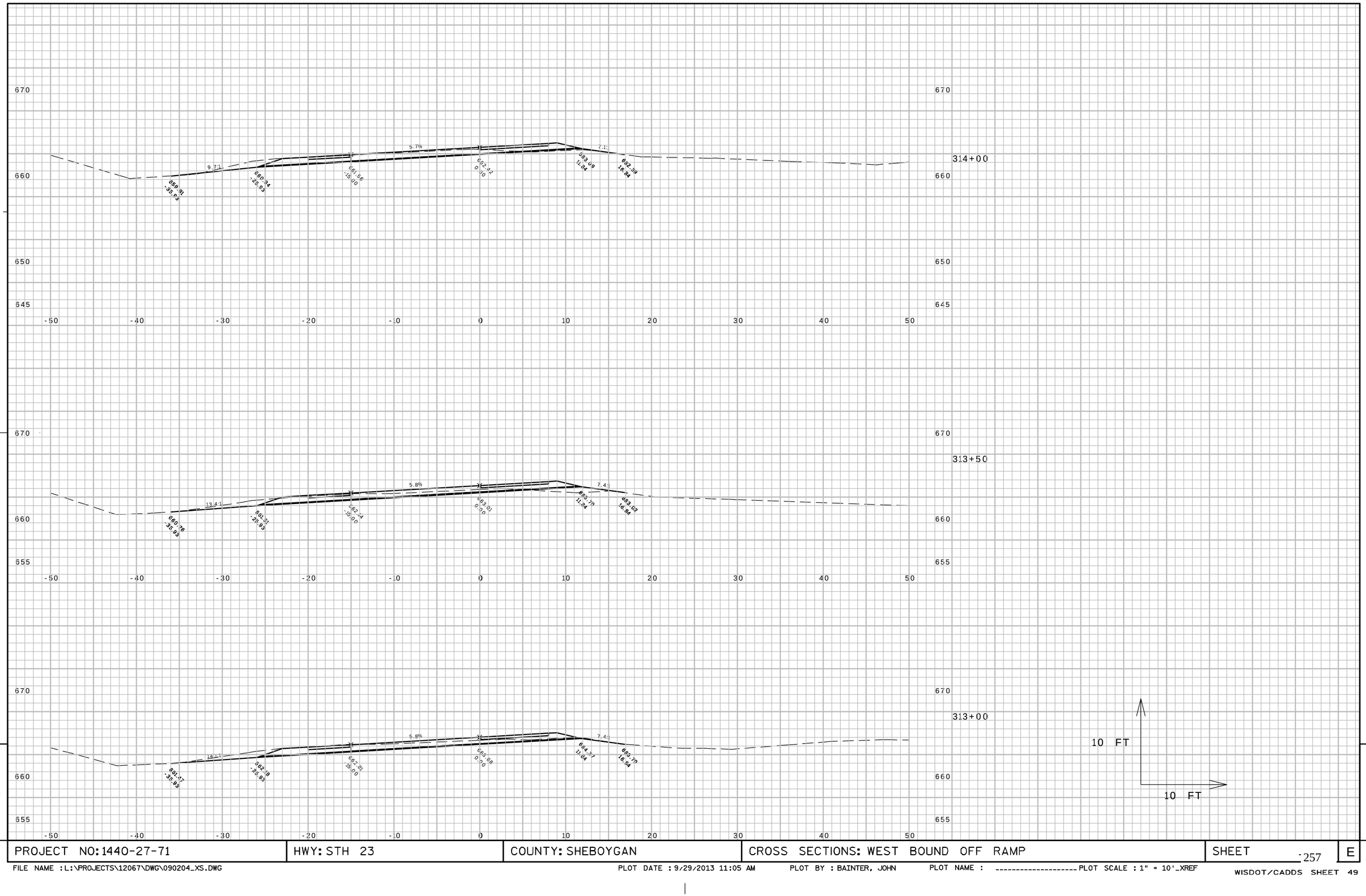
WISDOT/CADDS SHEET 49



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: WEST BOUND OFF RAMP	SHEET 256	E

FILE NAME : L:\PROJECTS\12067\DWG\090204_XS.DWG PLOT DATE : 9/29/2013 11:05 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

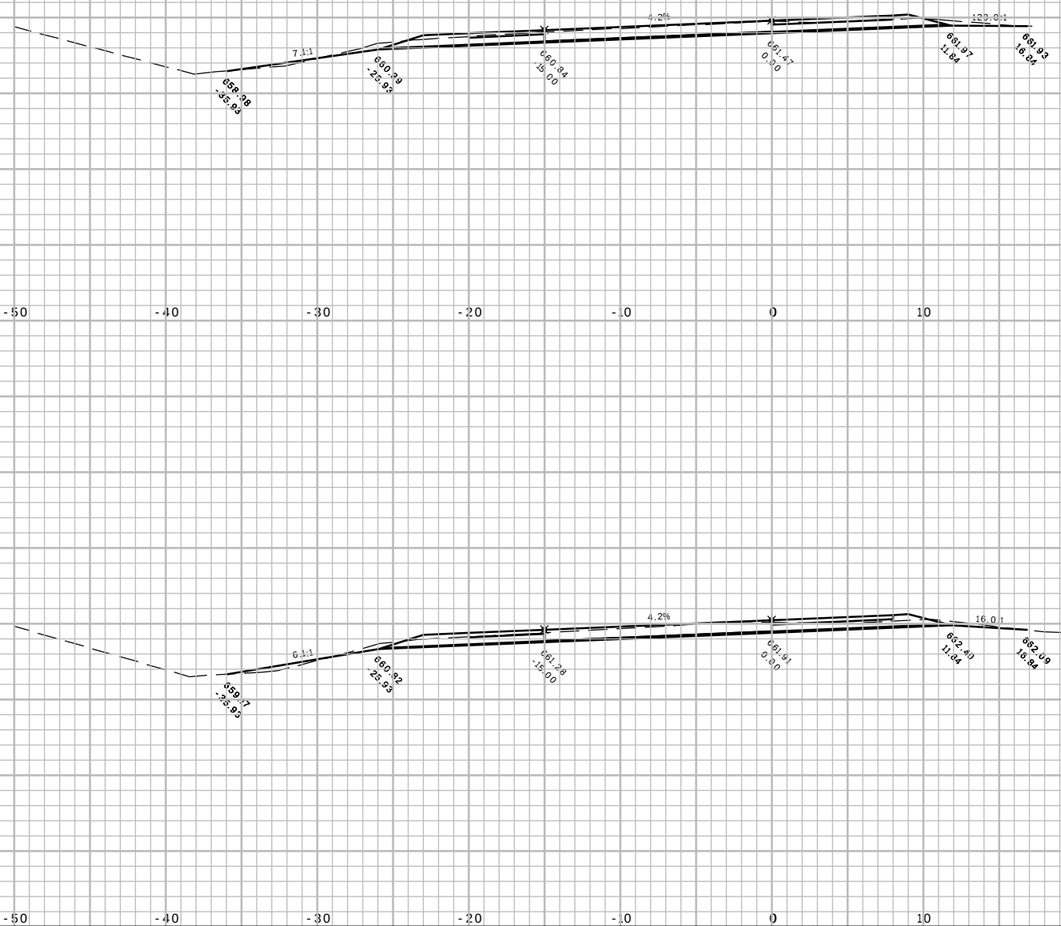
WISDOT/CADDS SHEET 49

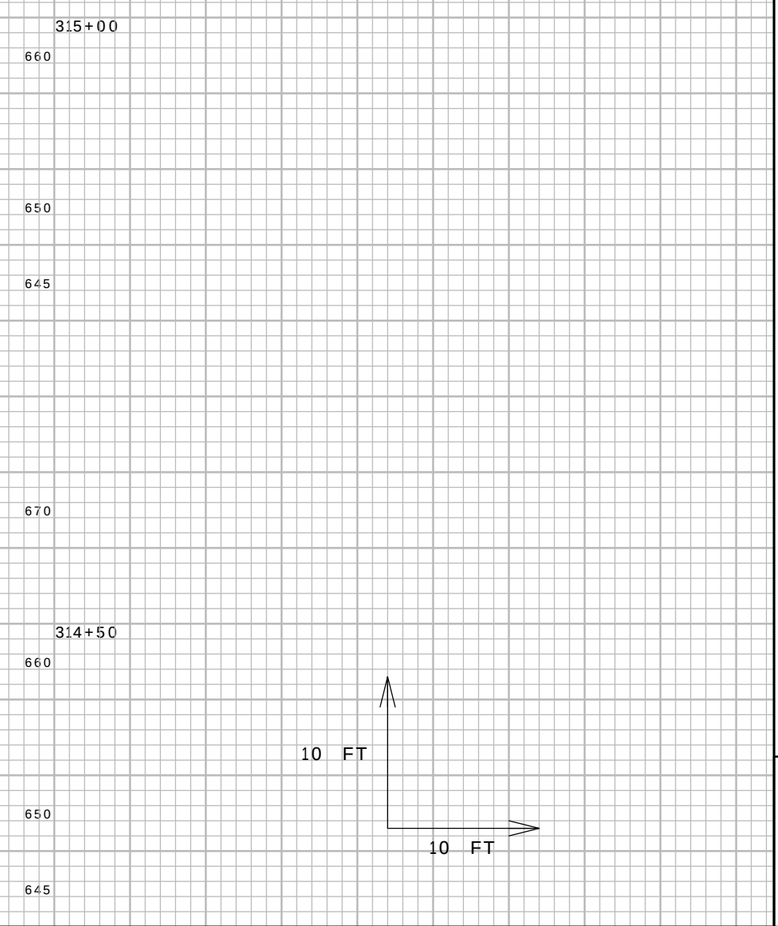


PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: WEST BOUND OFF RAMP	SHEET 257	E

FILE NAME : L:\PROJECTS\12067\DWG\090204_XS.DWG PLOT DATE : 9/29/2013 11:05 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

WISDOT/CADDS SHEET 49





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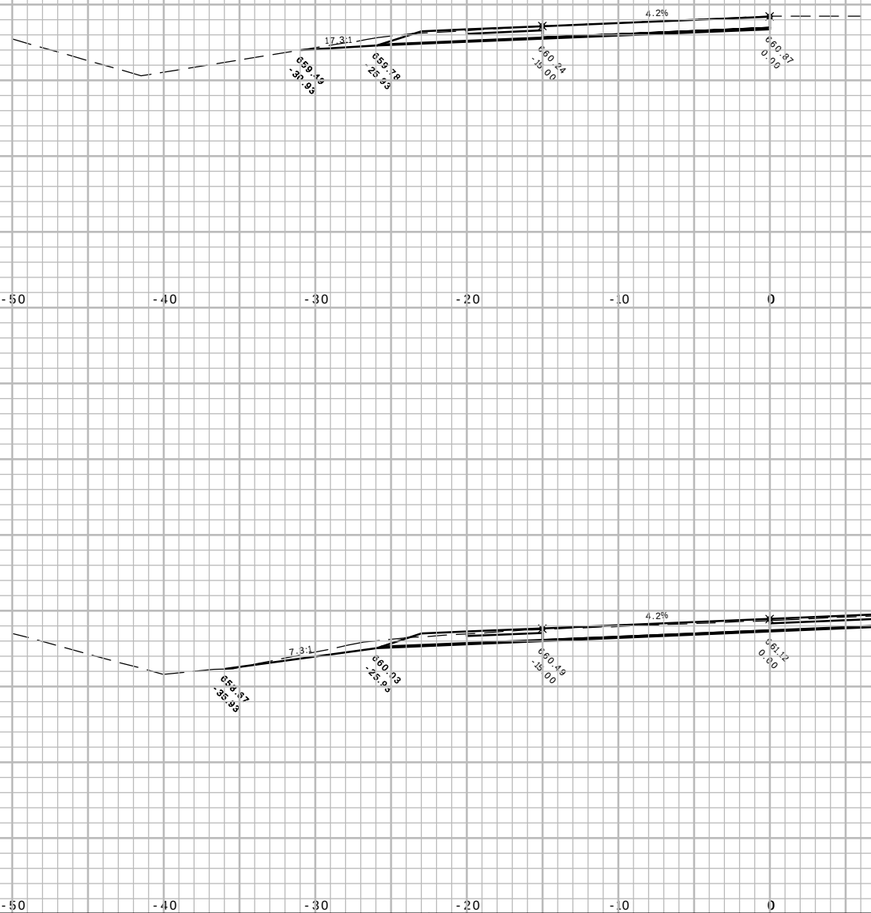
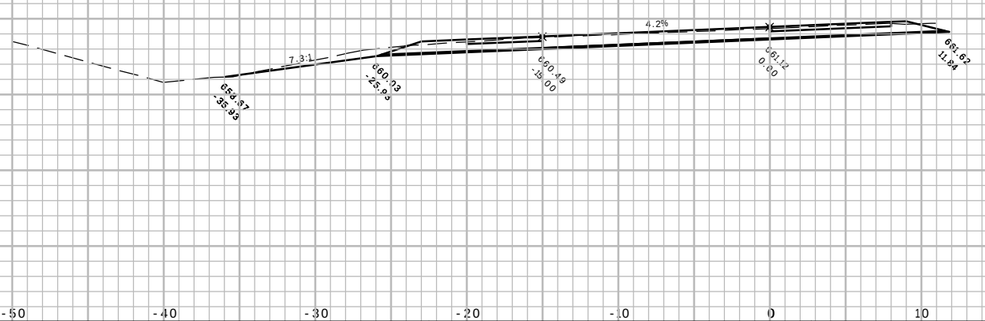
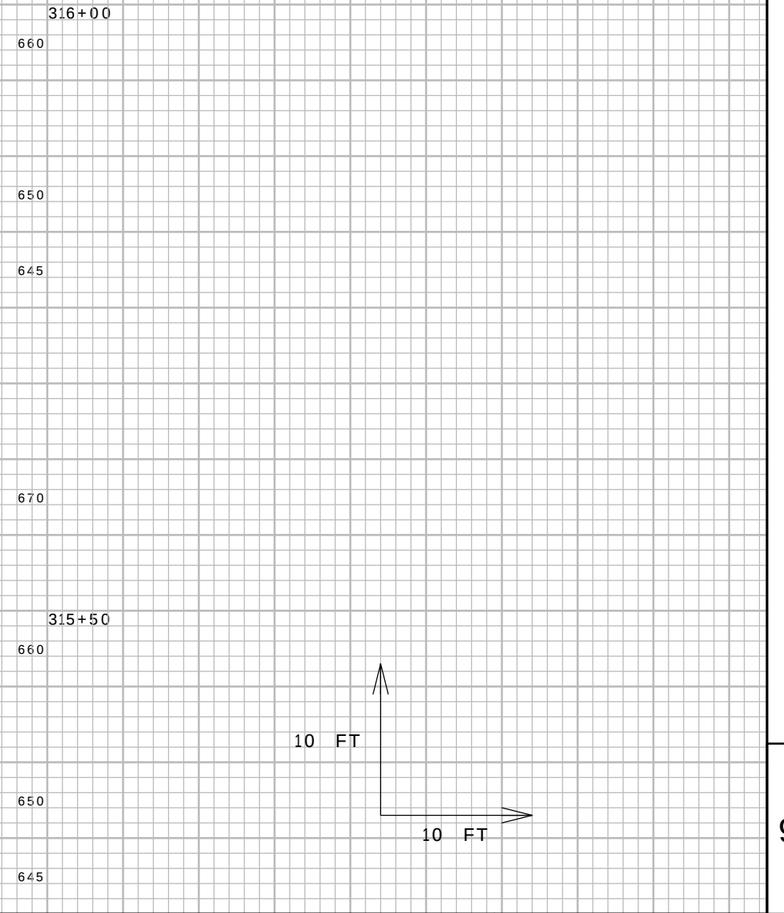
PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: WEST BOUND OFF RAMP	SHEET 258	E







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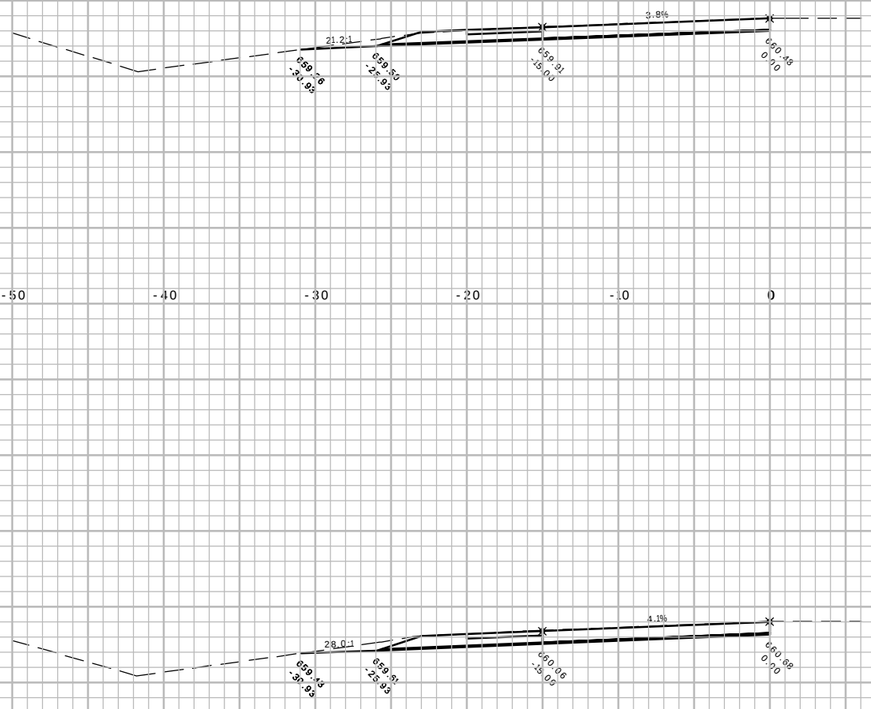
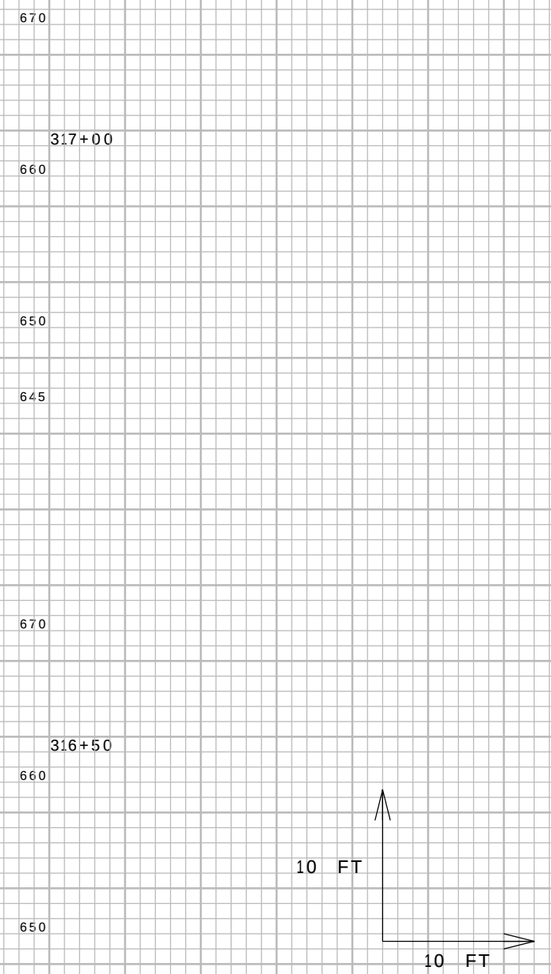
PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: WEST BOUND OFF RAMP	SHEET 259	E

FILE NAME : L:\PROJECTS\12067\DWG\090204_XS.DWG PLOT DATE : 9/29/2013 11:05 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

WISDOT/CADDS SHEET 49





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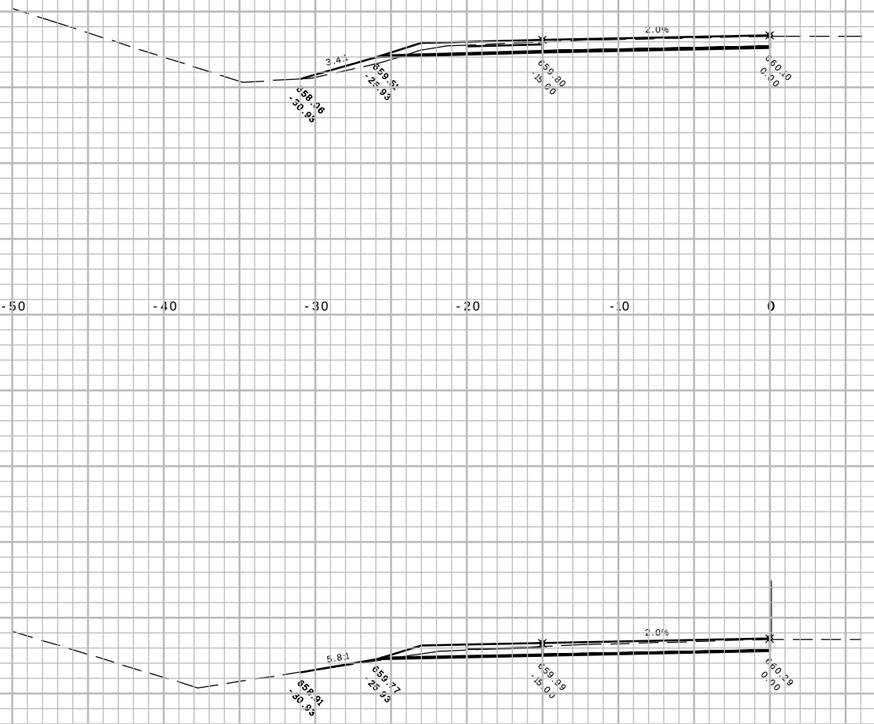
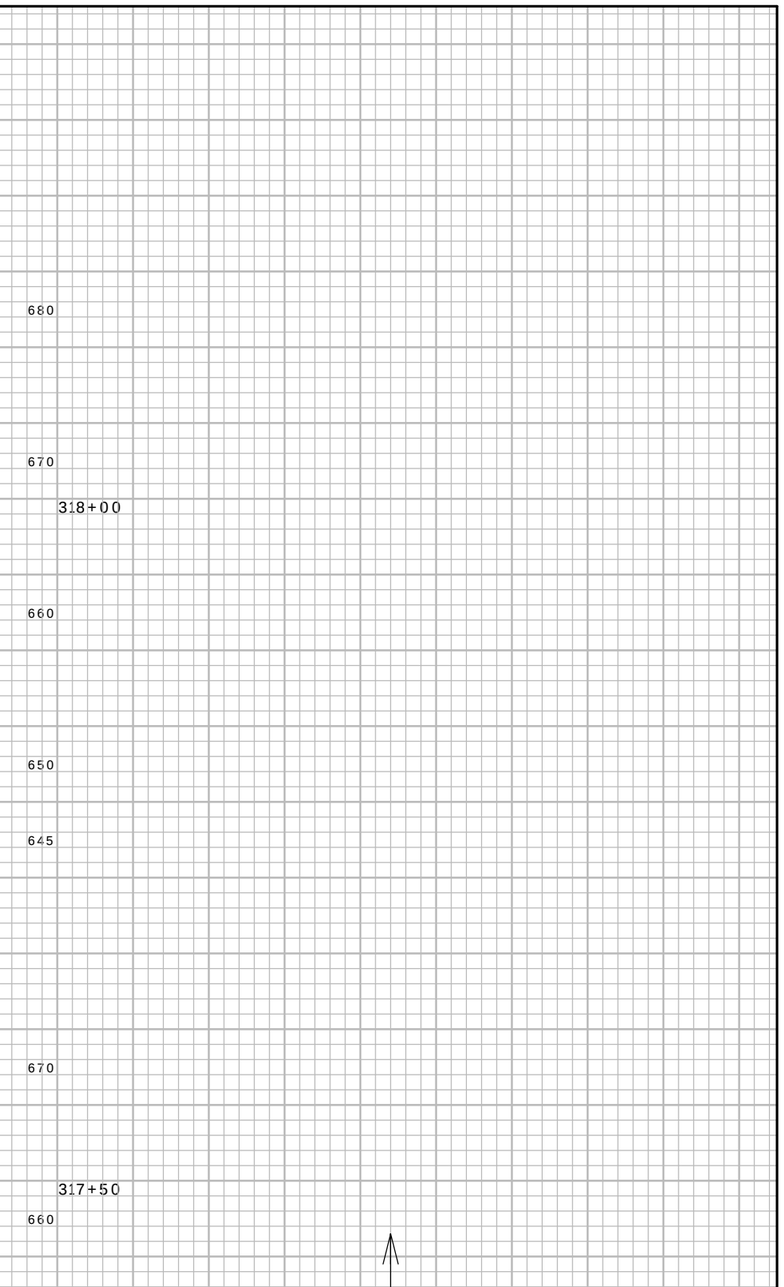
PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: WEST BOUND OFF RAMP	SHEET 260	E

FILE NAME : L:\PROJECTS\12067\DWG\090204_XS.DWG PLOT DATE : 9/29/2013 11:05 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

WISDOT/CADDS SHEET 49





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PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: WEST BOUND OFF RAMP	SHEET 261	E

FILE NAME : L:\PROJECTS\12067\DWG\090204_XS.DWG PLOT DATE : 9/29/2013 11:06 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

WISDOT/CADDS SHEET 49

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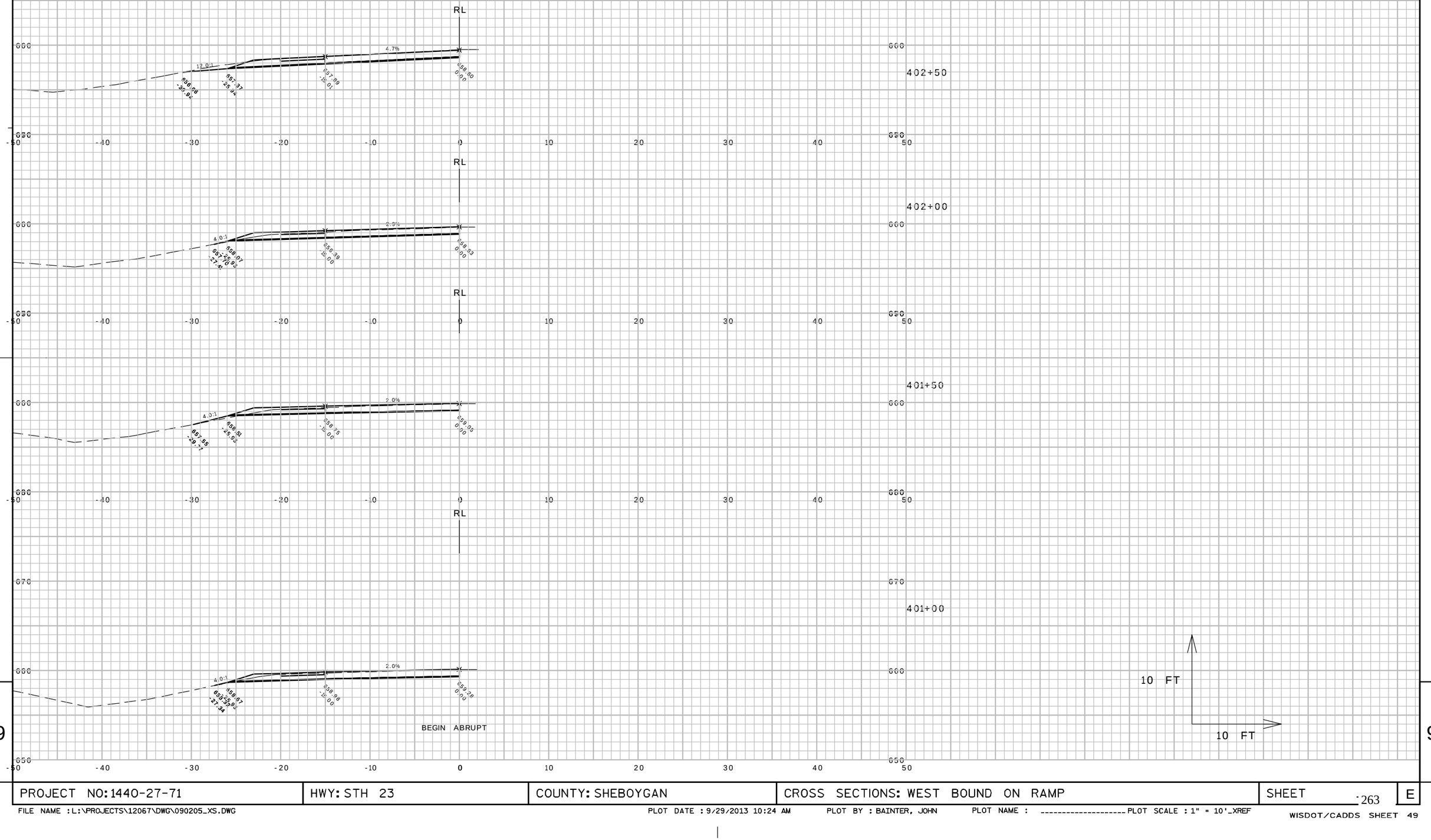
PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: WEST BOUND OFF RAMP	SHEET 262	E

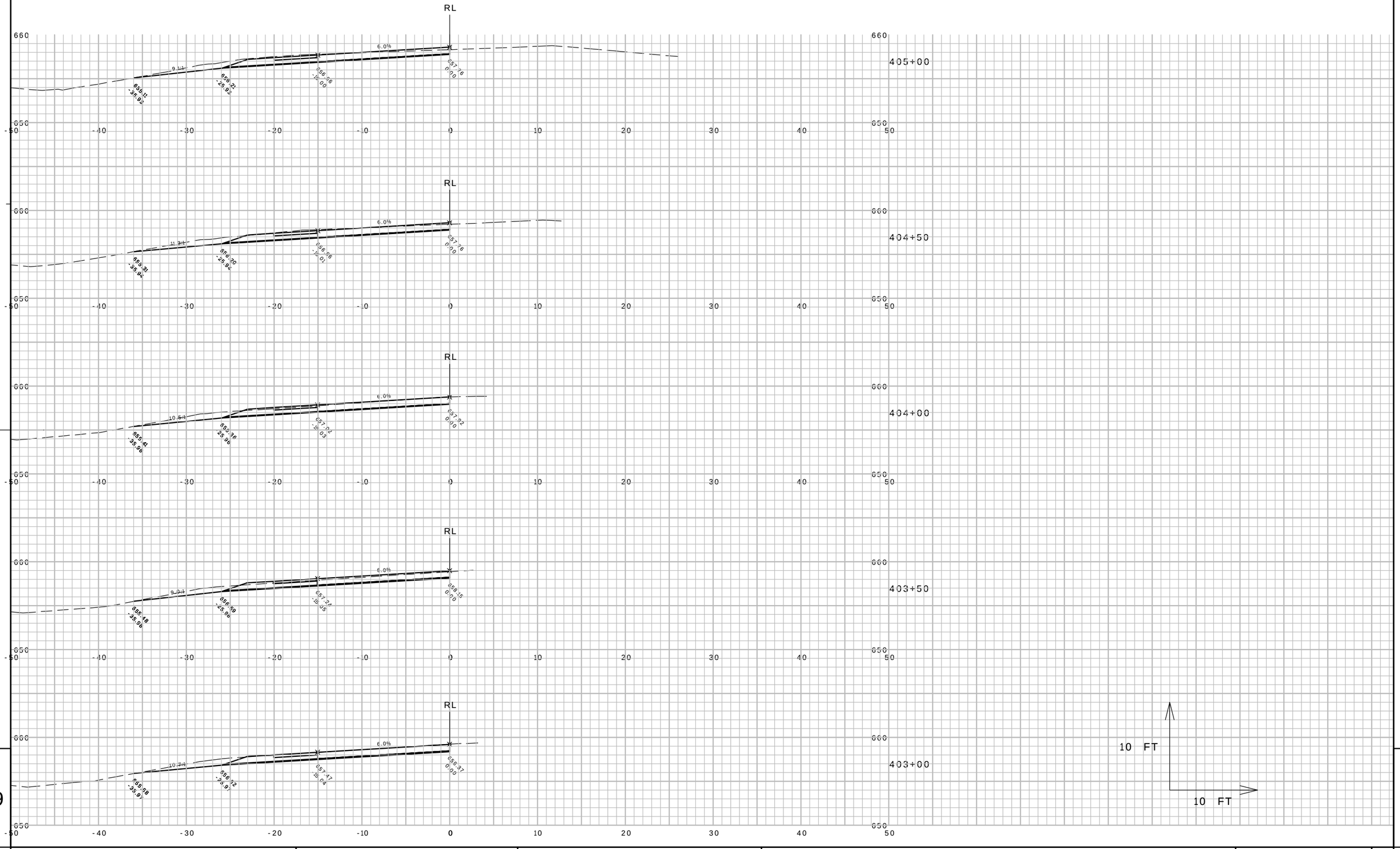
FILE NAME : L:\PROJECTS\12067\DWG\090204_XS.DWG PLOT DATE : 9/29/2013 11:06 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: WEST BOUND ON RAMP	SHEET	E

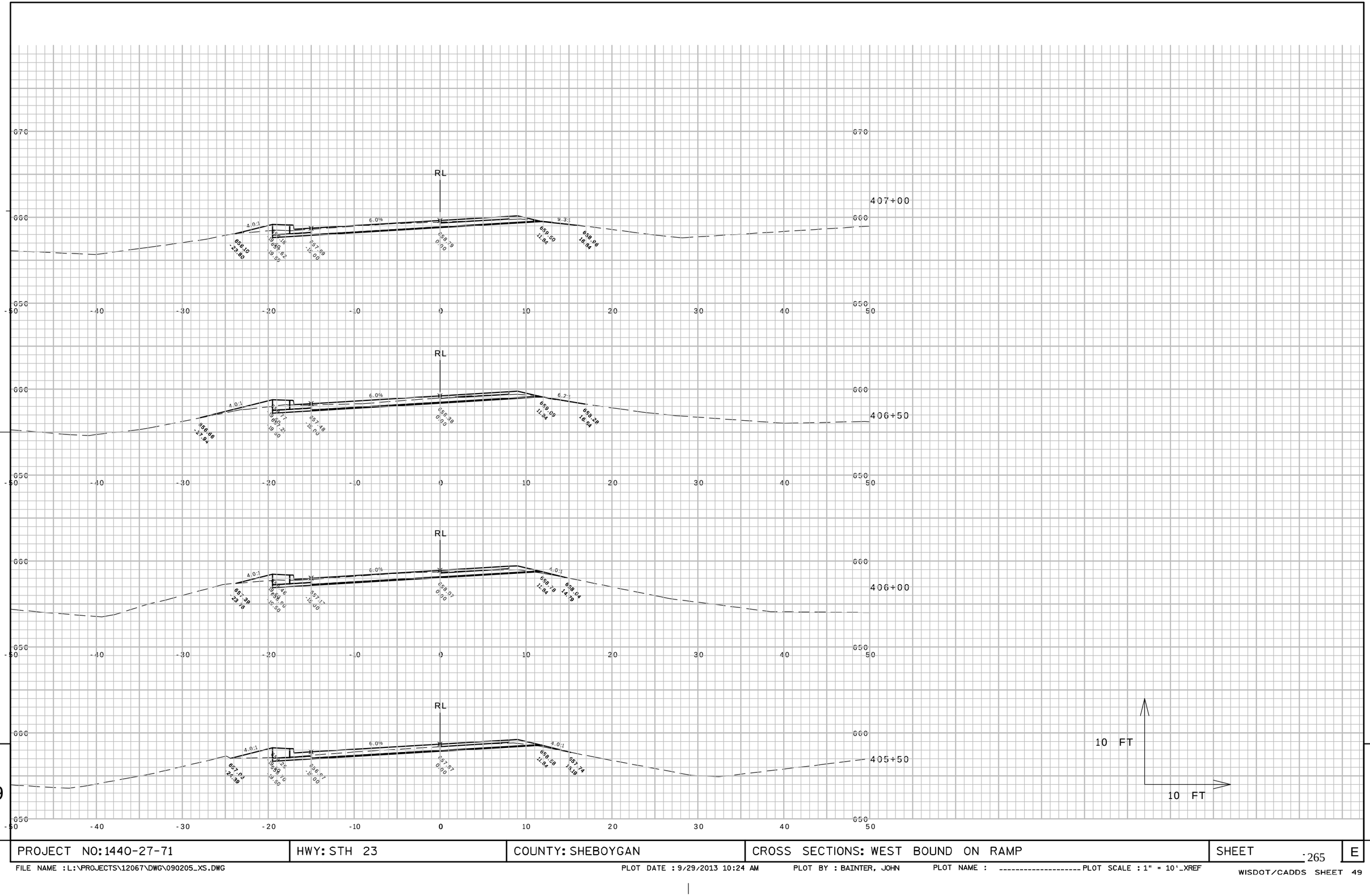
FILE NAME : L:\PROJECTS\12067\DWG\090205_XS.DWG PLOT DATE : 9/29/2013 10:24 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: WEST BOUND ON RAMP	SHEET	E

FILE NAME : L:\PROJECTS\12067\DWG\090205_XS.DWG PLOT DATE : 9/29/2013 10:24 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

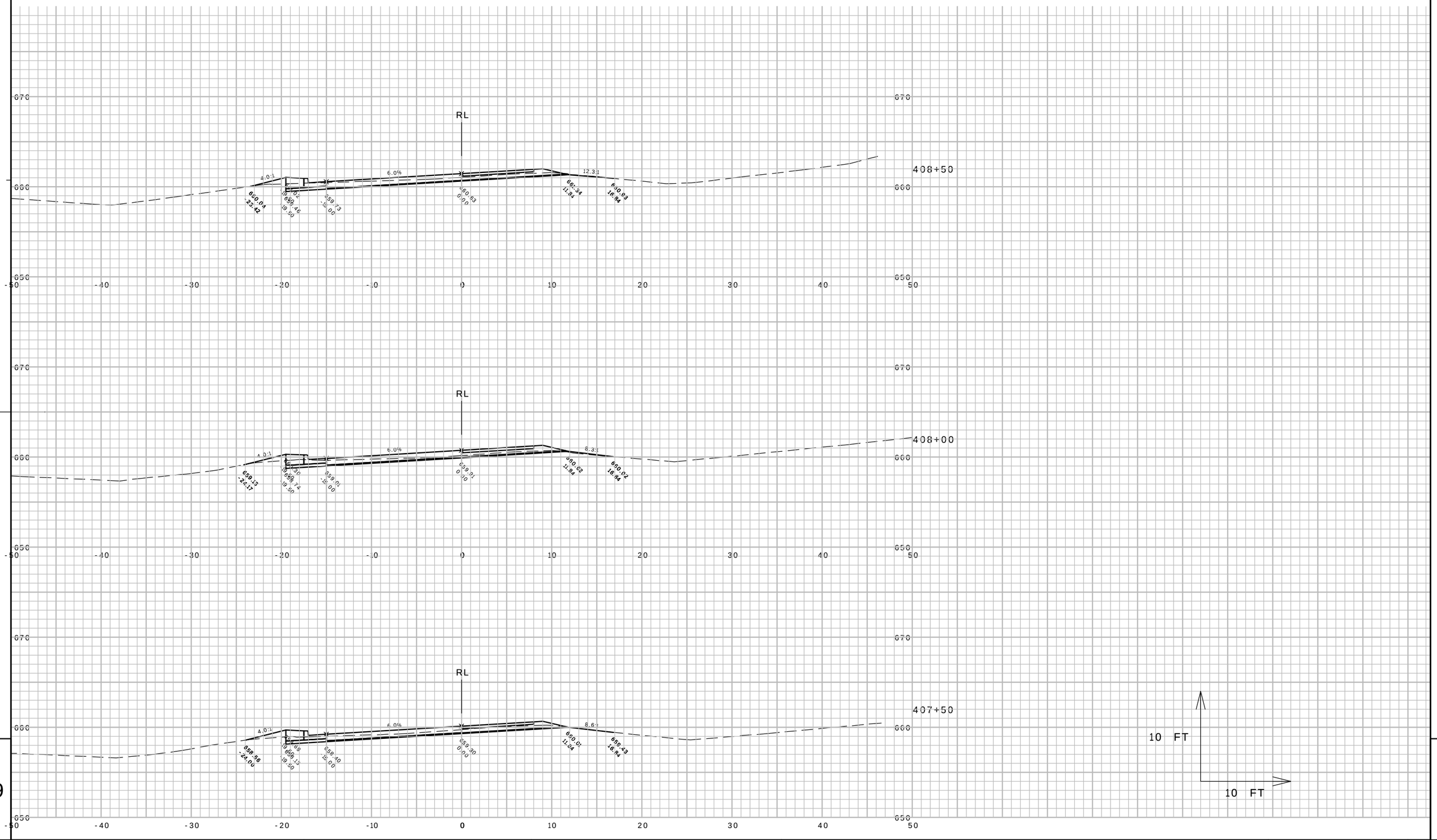
WISDOT/CADDS SHEET 49



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: WEST BOUND ON RAMP	SHEET	E

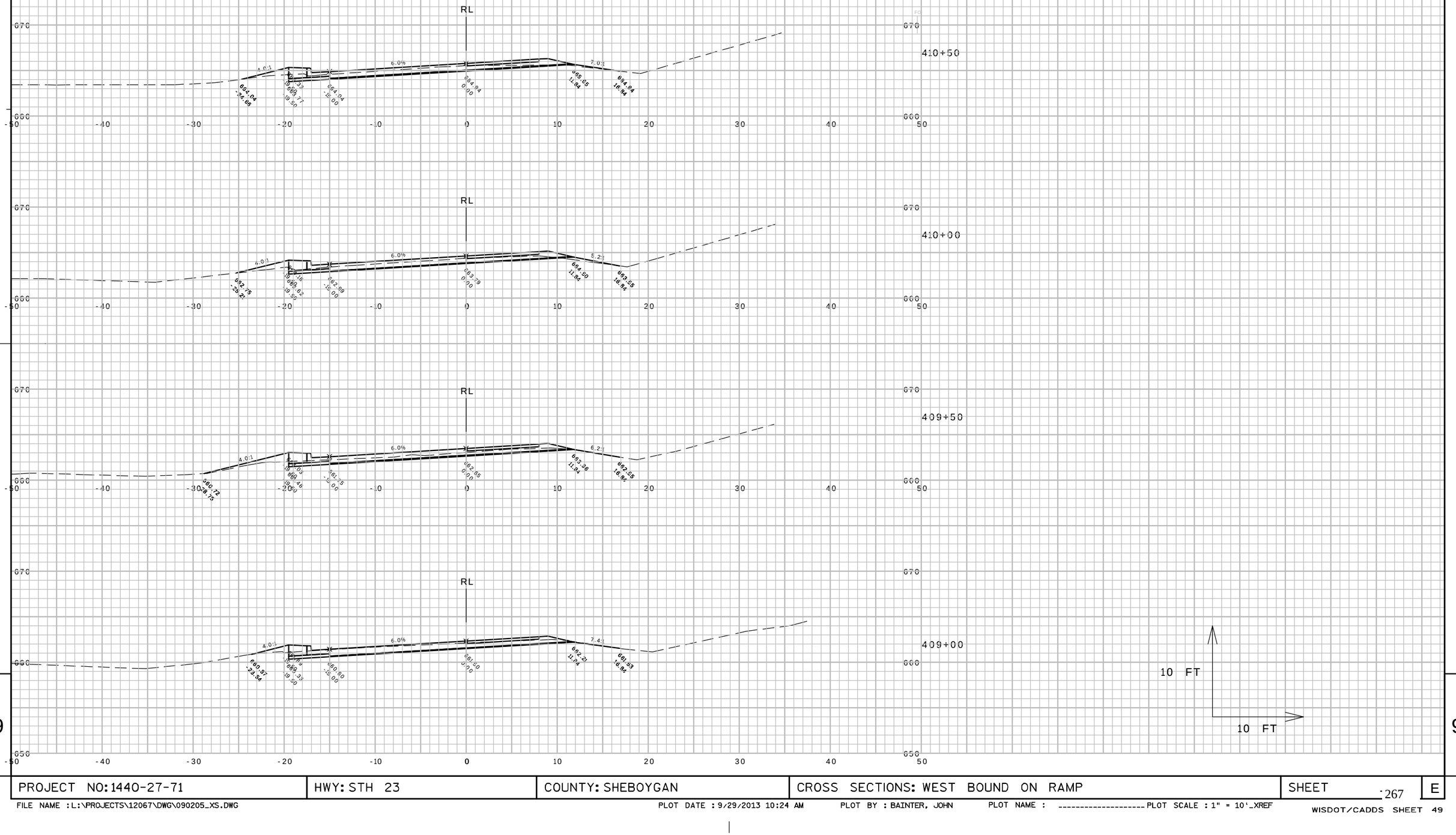
FILE NAME : L:\PROJECTS\12067\DWG\090205_XS.DWG PLOT DATE : 9/29/2013 10:24 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: WEST BOUND ON RAMP	SHEET	E

FILE NAME : L:\PROJECTS\12067\DWG\090205_XS.DWG PLOT DATE : 9/29/2013 10:24 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF



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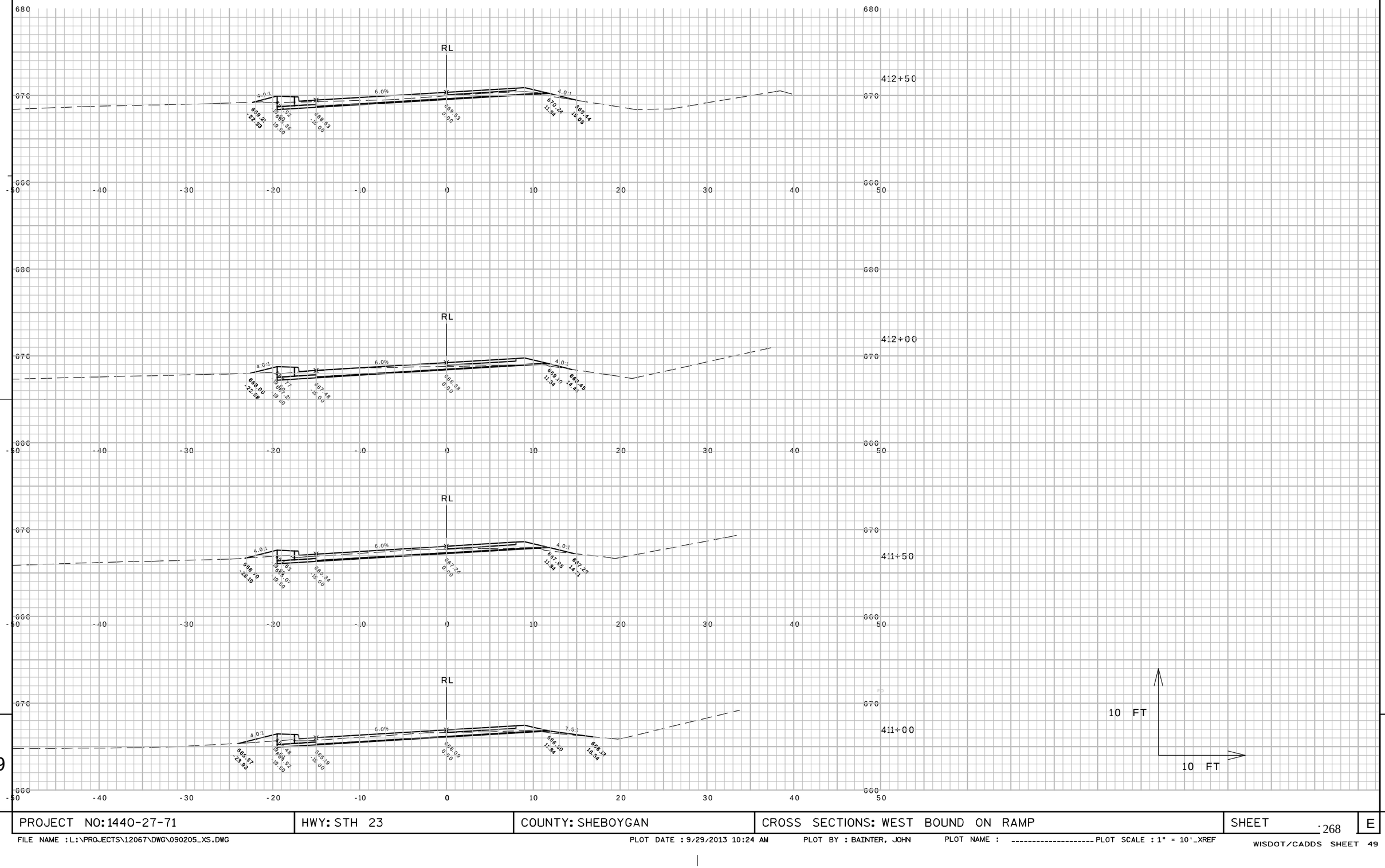
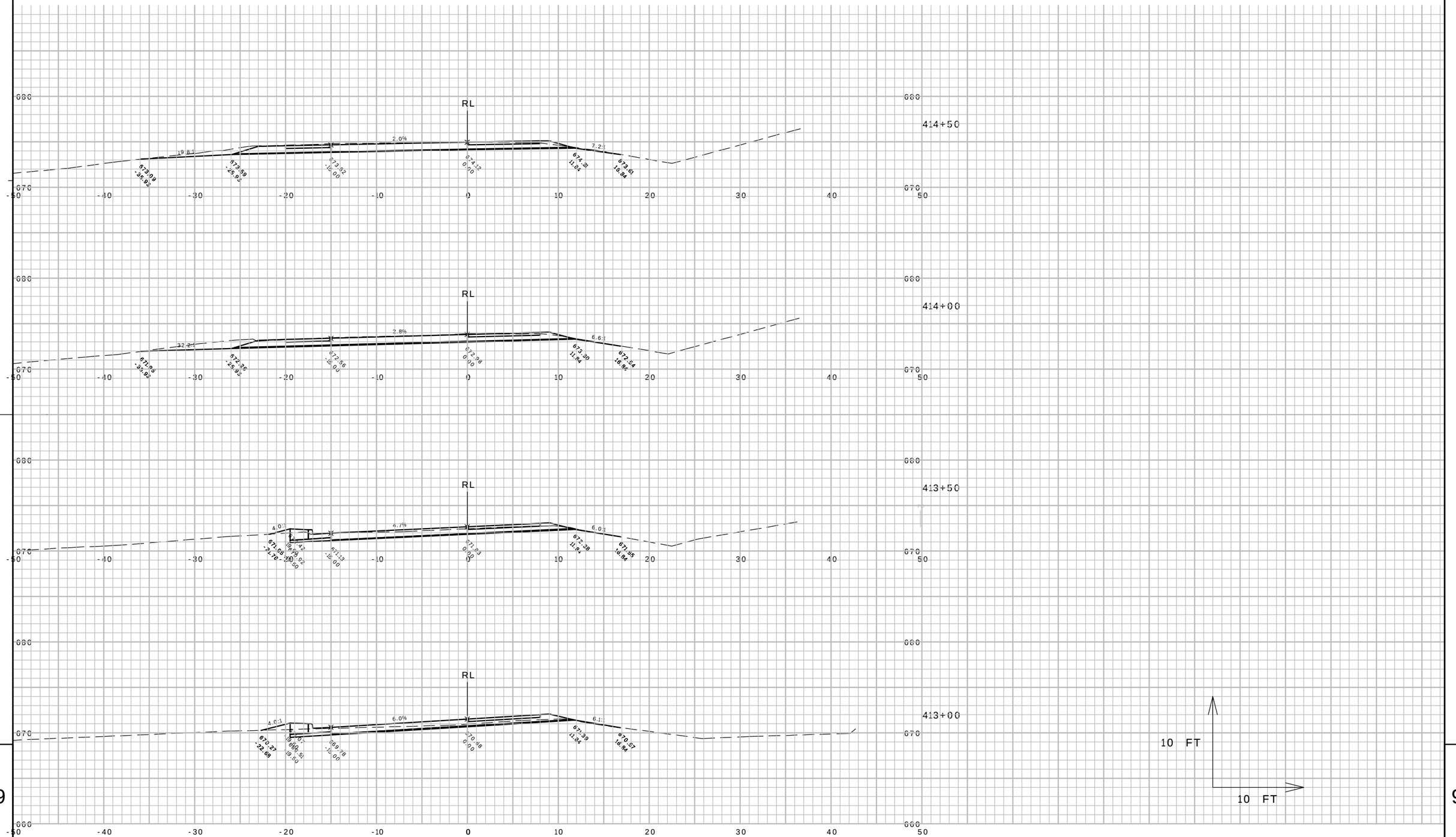
PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: WEST BOUND ON RAMP	SHEET	E

FILE NAME : L:\PROJECTS\12067\DWG\090205_XS.DWG PLOT DATE : 9/29/2013 10:24 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

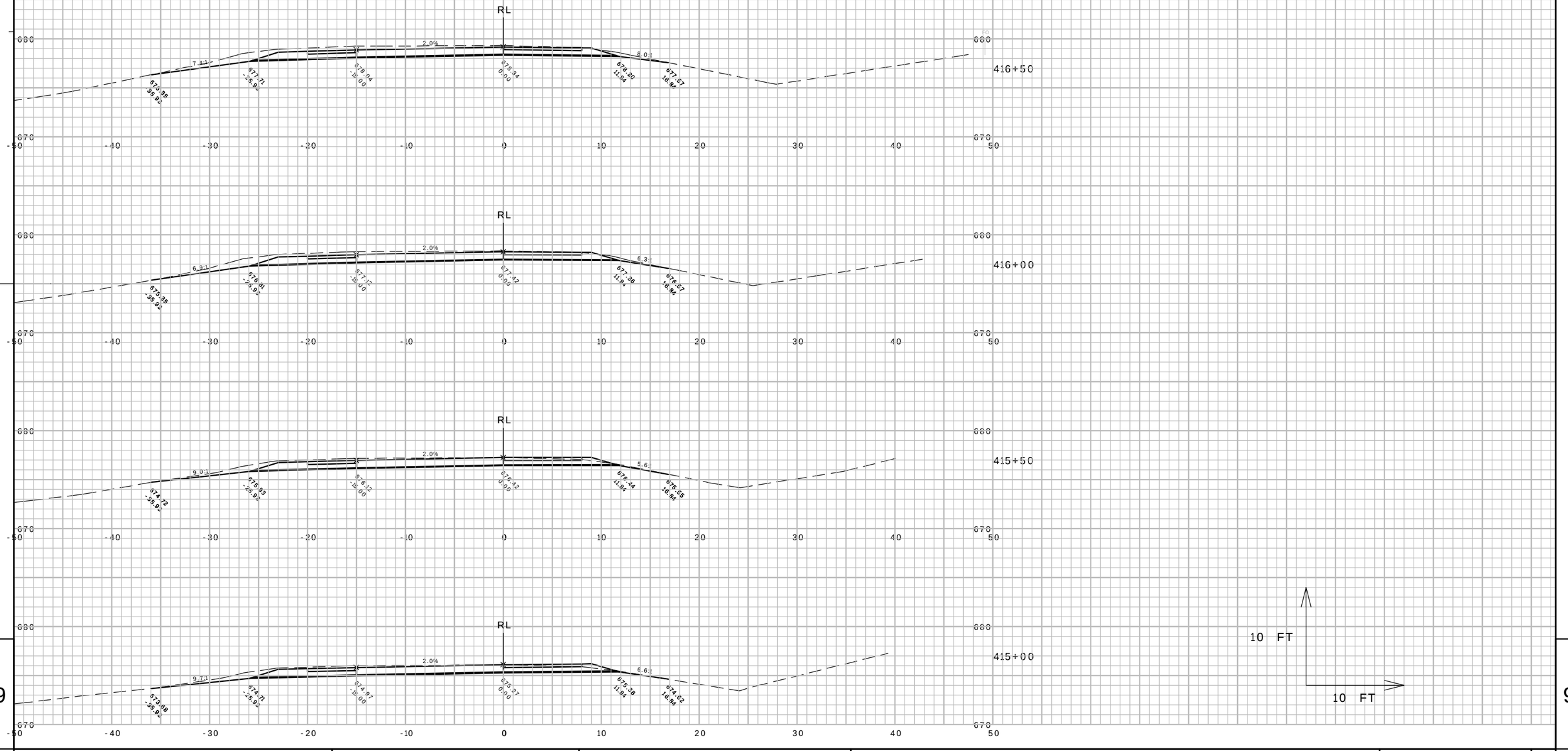


PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: WEST BOUND ON RAMP	SHEET	E



PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: WEST BOUND ON RAMP	SHEET	E

FILE NAME : L:\PROJECTS\12067\DWG\090205_XS.DWG PLOT DATE : 9/29/2013 10:25 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF



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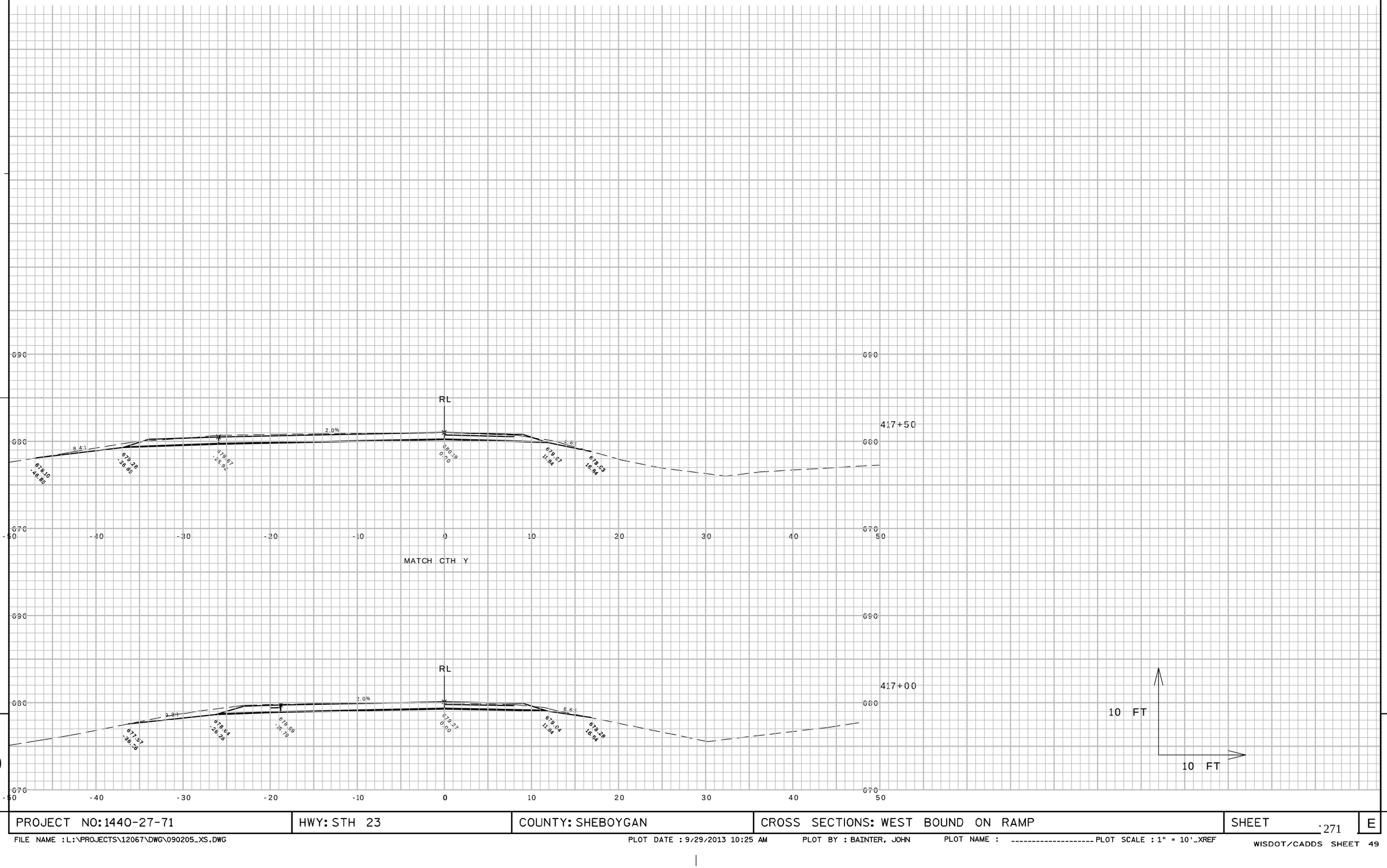
PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: WEST BOUND ON RAMP	SHEET 270	E

FILE NAME : L:\PROJECTS\12067\DWG\090205_XS.DWG PLOT DATE : 9/29/2013 10:25 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF



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PROJECT NO: 1440-27-71	HWY: STH 23	COUNTY: SHEBOYGAN	CROSS SECTIONS: WEST BOUND ON RAMP	SHEET	E

FILE NAME : L:\PROJECTS\12067\DWG\090205_XS.DWG PLOT DATE : 9/29/2013 10:25 AM PLOT BY : BAINTER, JOHN PLOT NAME : ---------- PLOT SCALE : 1" = 10'_XREF

WISDOT/CADDS SHEET 49

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