GRE APR 2014

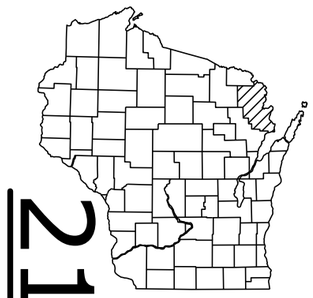
PROJECT ID: 1490-27-71
WITH: N/A

COUNTY: MARINETTE

ORDER OF SHEETS

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

TOTAL SHEETS = 318



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

COLEMAN - CRIVITZ

STH 64 INTERCHANGE

USH 141

MARINETTE COUNTY

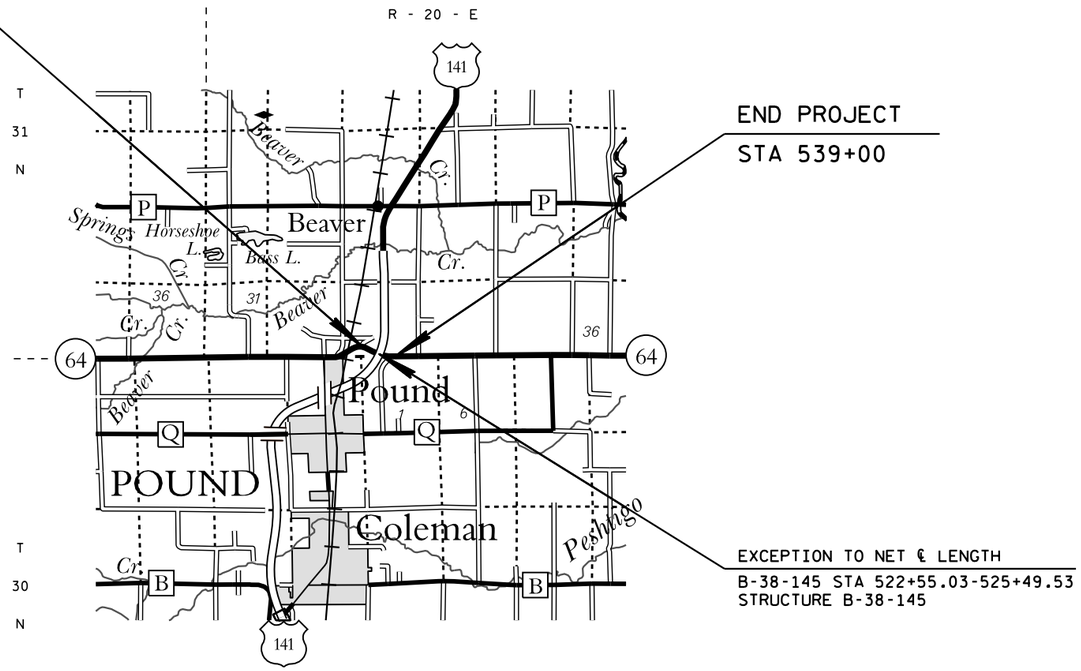
STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1490-27-71	WISC 2014110	1

STATE PROJECT NUMBER
1490-27-71

BEGIN PROJECT
STA 512+00
Y = 152,908.066
X = 702,393.369

END PROJECT
STA 539+00

EXCEPTION TO NET & LENGTH
B-38-145 STA 522+55.03-525+49.53
STRUCTURE B-38-145



N

DESIGN DESIGNATION

A.A.D.T.	2014	=	3,400
A.A.D.T.	2034	=	3,800
D.H.V.	2014	=	322
D.D.		=	60/40
T.		=	12.7%
DESIGN SPEED		=	50 MPH
ESALS		=	115

CONVENTIONAL SYMBOLS

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

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

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

LAYOUT
SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.455 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), NAD 83 (1991), NAD 88 (1991) MARINETTE COUNTY.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
- Surveyor: WISDOT NE REGION
- Designer: O. D. CREAPEAU
- Project Manager: P. R. ZOELLNER
- Regional Examiner:
- Regional Supervisor: D. J. SEGERSTROM
- C.O. Examiner:

APPROVED FOR THE DEPARTMENT
DATE: 12-2-2013 (Signature)

E

UTILITIES

DENNIS HAAG
CENTURYLINK - COMMUNICATION LINE
144 N PEARL STREET
P.O. BOX 70
BERLIN, WI 54923
(920) 361-0040
dennis.haag@centurytel.com

WAYNE CRETTON
PACKERLAND BROADBAND - COMMUNICATION LINE
105 KENT STREET
PO BOX 190
IRON MOUNTAIN, MI 49801
(906) 282-3768
wayne.cretton@packerlandbroadband.com

KEVIN SCHUTTE
VILLAGE OF POUND WATER & SEWER UTILITY - WATER
CTH O AND USH 141
P.O. BOX 127
POUND, WI 54161-0127
(920) 897-4307; CELL (920) 373-5066
vopks@hotmail.com

LORI BUTRY
WISCONSIN PUBLIC SERVICE CORPORATION - ELECTRICITY
700 N ADAMS STREET
P.O. BOX 19001
GREEN BAY, WI 54307-9001
(920) 433-1703
LAButry@integrysgroup.com

LORI BUTRY
WISCONSIN PUBLIC SERVICE CORPORATION - GAS/PETROLEUM
700 N ADAMS STREET
P.O. BOX 19001
GREEN BAY, WI 54307-9001
(920) 433-1703
LAButry@integrysgroup.com

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

DIGGERS HOTLINE
Call 811 3 Work Days Before You Dig
or Toll Free (800) 242-8511
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

DNR AREA LIAISON

JAMES DOPERALSKI JR
DEPARTMENT OF NATURAL RESOURCES
NORTHEAST REGION
2984 SHAWANO AVE
GREEN BAY, WI 54313
920-662-5119
JAMES.DOPERALSKI@WISCONSIN.GOV

GENERAL NOTES

ALL ELEVATIONS ON THIS PROJECT ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (1991).

ALL DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS BETWEEN THE SUBGRADE SHOULDER POINTS, SHALL BE FERTILIZED, SEEDED AND MULCHED.

EARTHWORK BALANCES AND HAULS AS SHOWN ON THE PLAN AND PROFILE SHEETS MAY BE REVISED WITH THE APPROVAL OF THE ENGINEER IF SUCH REVISIONS WILL FACILITATE THE CONTRACTOR'S PLAN OF OPERATION AND SATISFY THE REQUIREMENTS OF THE CONTRACT PLANS, SPECIFICATIONS AND SPECIAL PROVISIONS.

EXCAVATION BELOW SUBGRADE (EBS), AS SHOWN ON THE PLAN SHEETS, SHALL BE MEASURED AND PAID FOR AS UNCLASSIFIED EXCAVATION. THE EXACT LIMITS AND LOCATIONS ARE TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

CURB AND GUTTER RADII ARE SHOWN TO THE FRONT FACE OF CURB.

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

IMMEDIATELY AFTER CONSTRUCTION OF ANY INLET, CONTRACTOR SHALL CONSTRUCT THE INLET PROTECTION TO MINIMIZE SEDIMENTATION IN THE INLET AND STORM SEWER.

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES SHOWN ON THE PLAN ARE APPROXIMATE AND SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES. THE THE CONTRACTOR SHALL VERIFY RELATED DRAINAGE INFORMATION IN THE PLAN WITH THE ENGINEER.

THE LIMITS OF MARSH EXCAVATION AND MARSH DISPOSAL SHOWN ON THE CROSS SECTION SHEETS ARE APPROXIMATE. THE EXACT LIMITS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD. THE SHRINKAGE ALLOWANCE USED FOR MARSH EXCAVATION IS 50%, BASED ON ITS ORIGINAL POSITION.

2

N

2ND ROAD

19TH ROAD

STH 64

USH 141

NW RAMP

NE RAMP

SW RAMP

SE RAMP

NORTH 13TH ROAD

500 505 510 515 520 525 530 535 540 545 550

1265 1260 1255 1250 1245 1240 1235 1230 1225 1220

395

BEGIN 1491-27-71 CONSTRUCTION

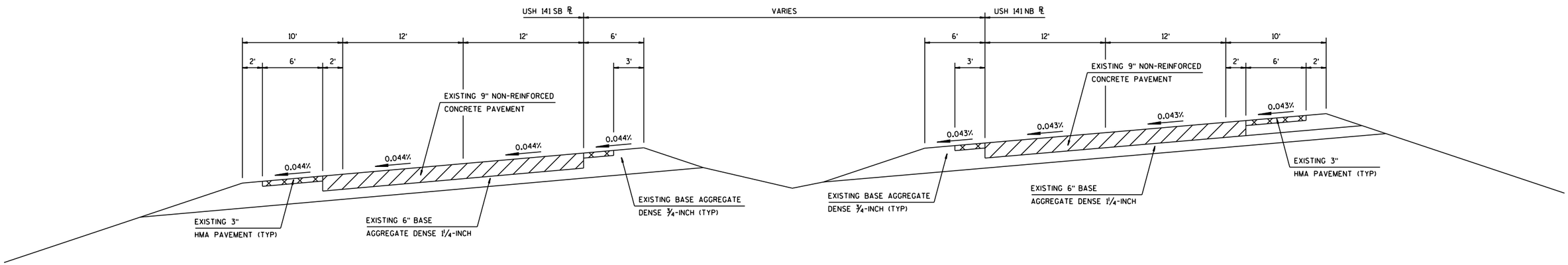
AT 512+00

END 1490-27-71 CONSTRUCTION

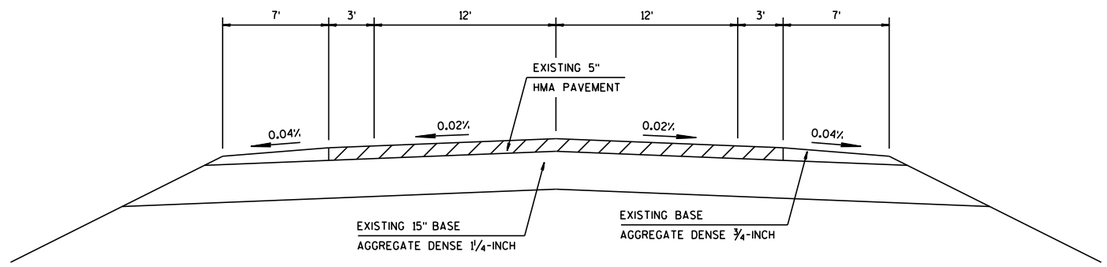
STA 539+00

PROJECT NO: 1490-27-71	HWY: STH 64	COUNTY: MARINETTE	PROJECT OVERVIEW	SHEET 3	E

2



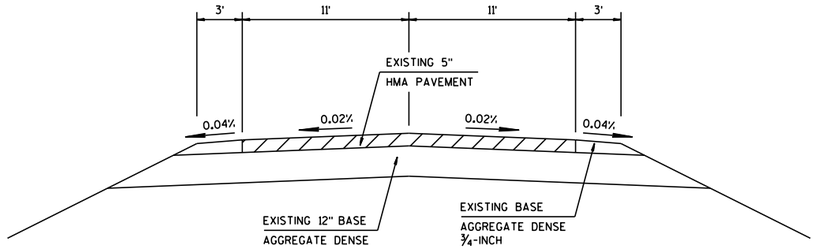
TYPICAL EXISTING CROSS SECTION FOR USH 141



TYPICAL EXISTING CROSS SECTION FOR STH 64

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	TYPICAL CROSS SECTIONS	SHEET 4	E

FILE NAME : F:\d3_149027\020301_ts.dgn PLOT DATE : 09-JUL-2013 09:35 PLOT BY : dotbrb PLOT NAME : 020301ts e1 PLOT SCALE : 10:1



TYPICAL EXISTING CROSS SECTION FOR N 13TH ROAD

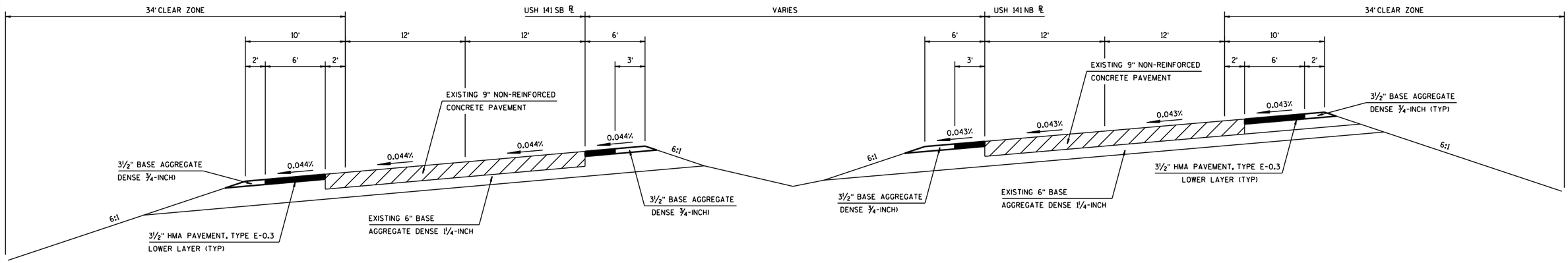
2

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	TYPICAL CROSS SECTIONS	SHEET 5	E

FILE NAME : F:\d3_149027\020301_ts.dgn PLOT DATE : 09-JUL-2013 09:35 PLOT BY : dotbrb PLOT NAME : 020301ts e2 PLOT SCALE : 10:1

WISDOT/CADDS SHEET 42

2

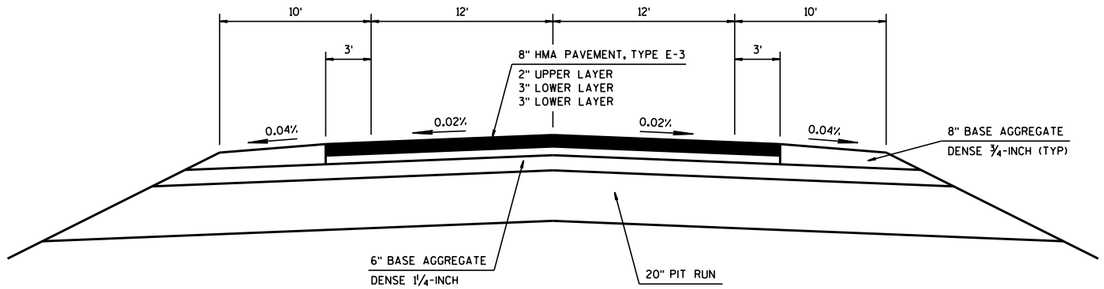


TYPICAL FINISHED CROSS SECTION FOR USH 141

1227+00 - 1270+50

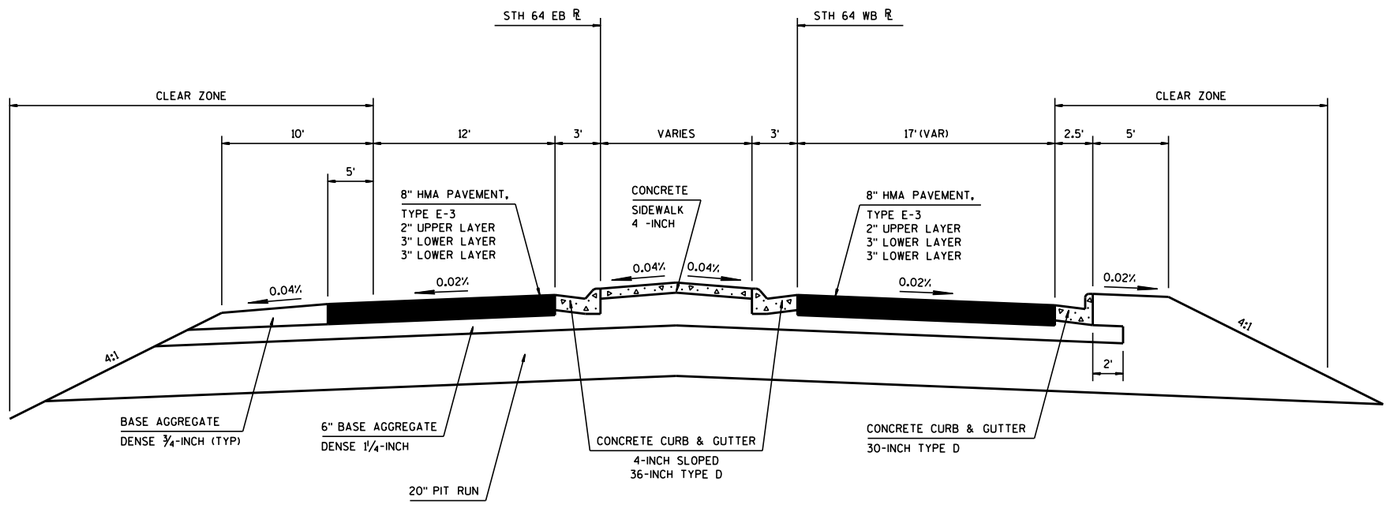
PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	TYPICAL CROSS SECTIONS	SHEET 6	E

2



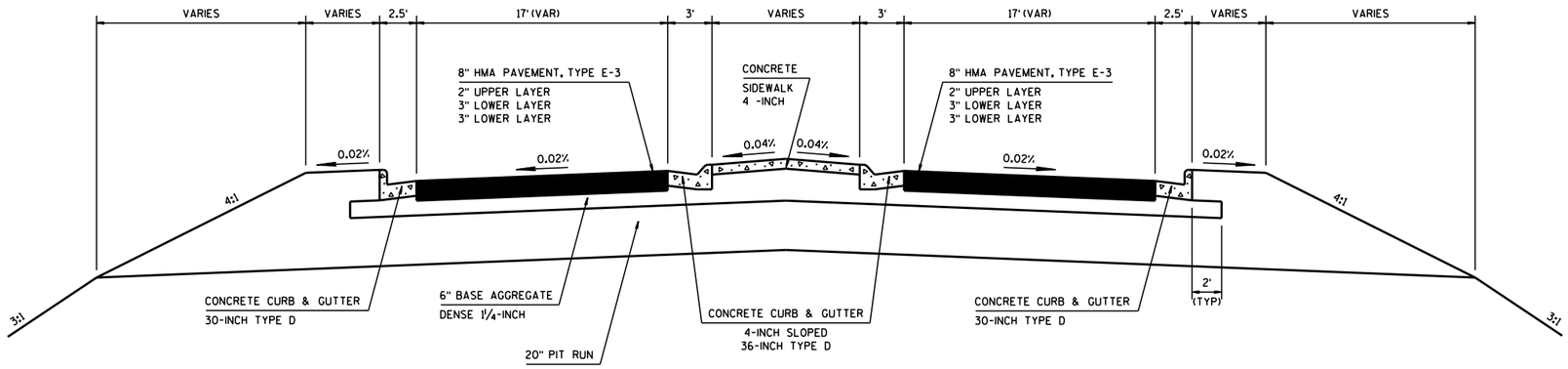
TYPICAL FINISHED CROSS SECTION FOR STH 64

512+00 - 517+26
531+63 - 539+00



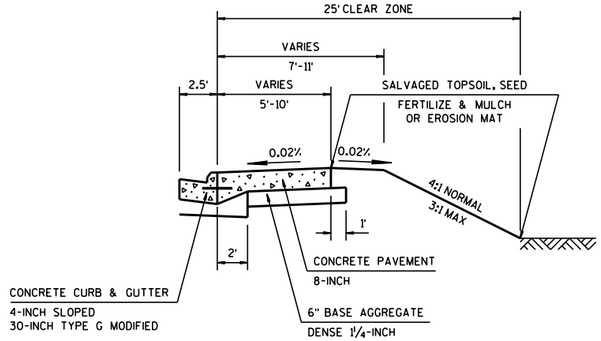
TYPICAL FINISHED SECTION FOR STH 64

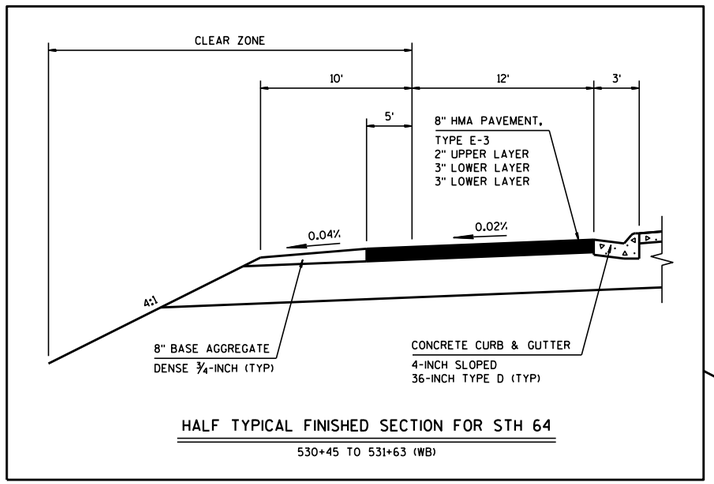
517+30 EASTBOUND RT
518+68 WESTBOUND LT



TYPICAL FINISHED SECTION FOR STH 64

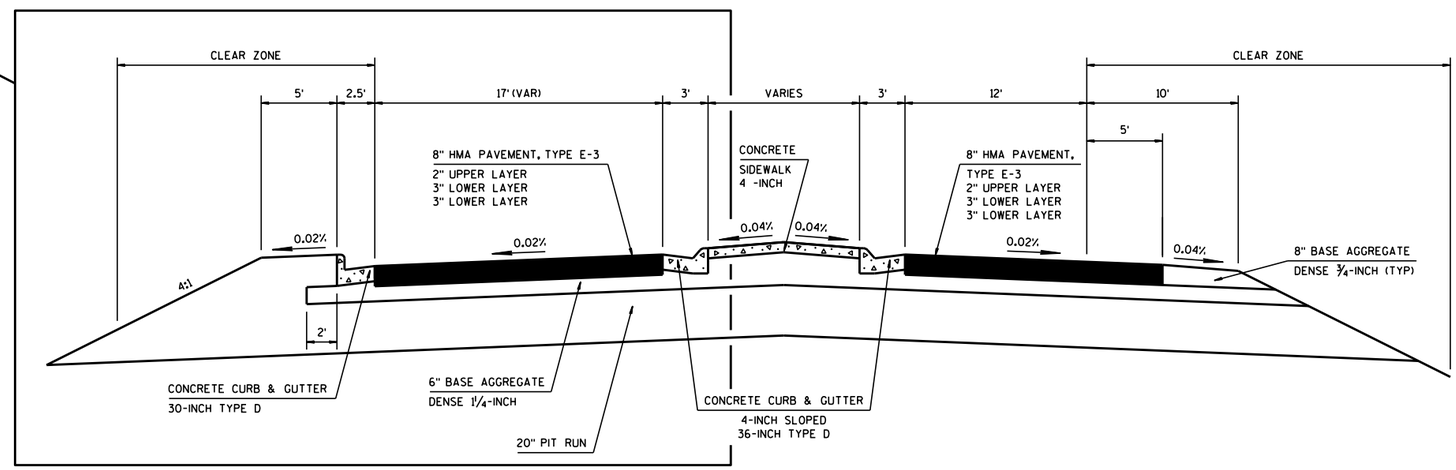
518+60 TO 519+99
521+46 TO 522+81
525+21 TO 526+59
528+04 TO 529+95





HALF TYPICAL FINISHED SECTION FOR STH 64

530+45 TO 531+63 (WB)

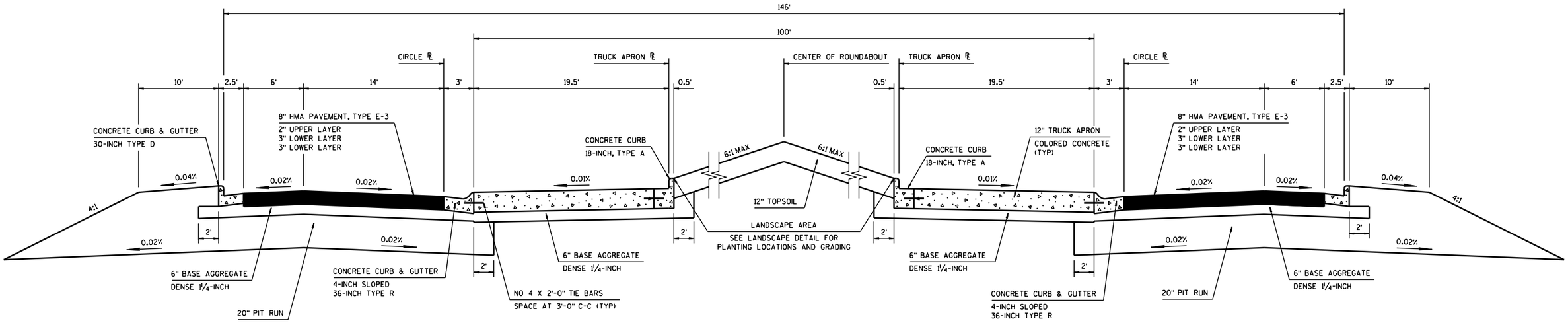


TYPICAL FINISHED SECTION FOR STH 64

529+95 TO 530+50

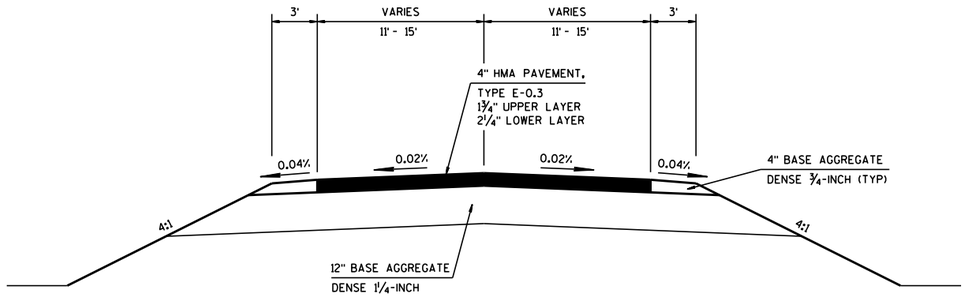
PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	TYPICAL CROSS SECTIONS	SHEET 8	E

2



TYPICAL FINISHED CROSS SECTION AT STH 64

ROUNDABOUT DETAIL

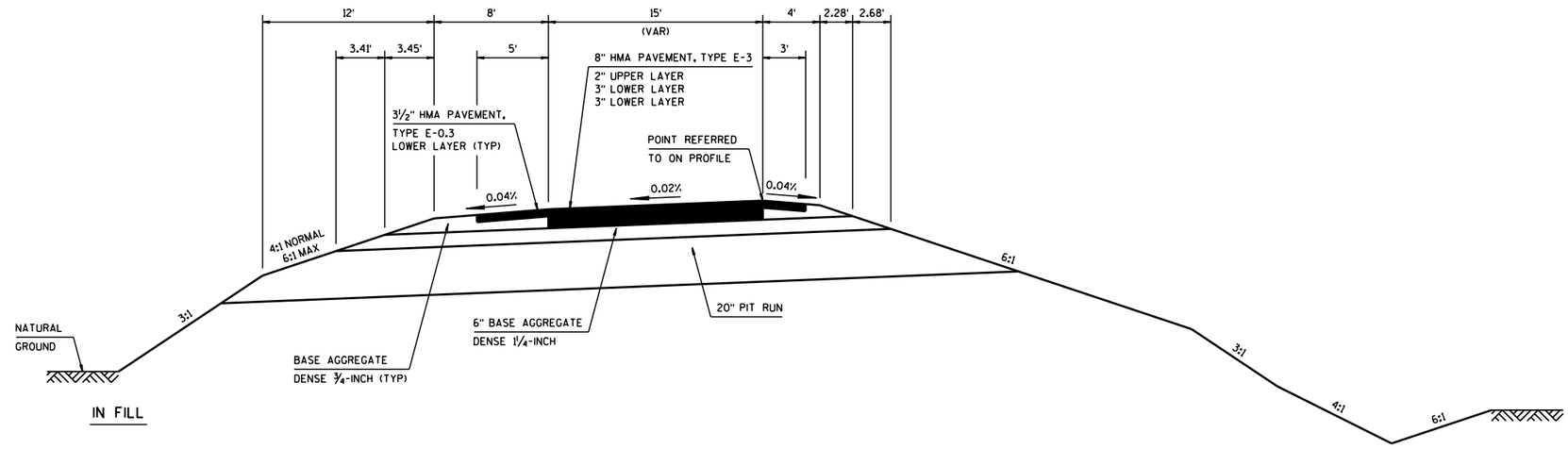


TYPICAL FINISHED CROSS SECTION FOR 13TH ROAD

393+75 - 399+41

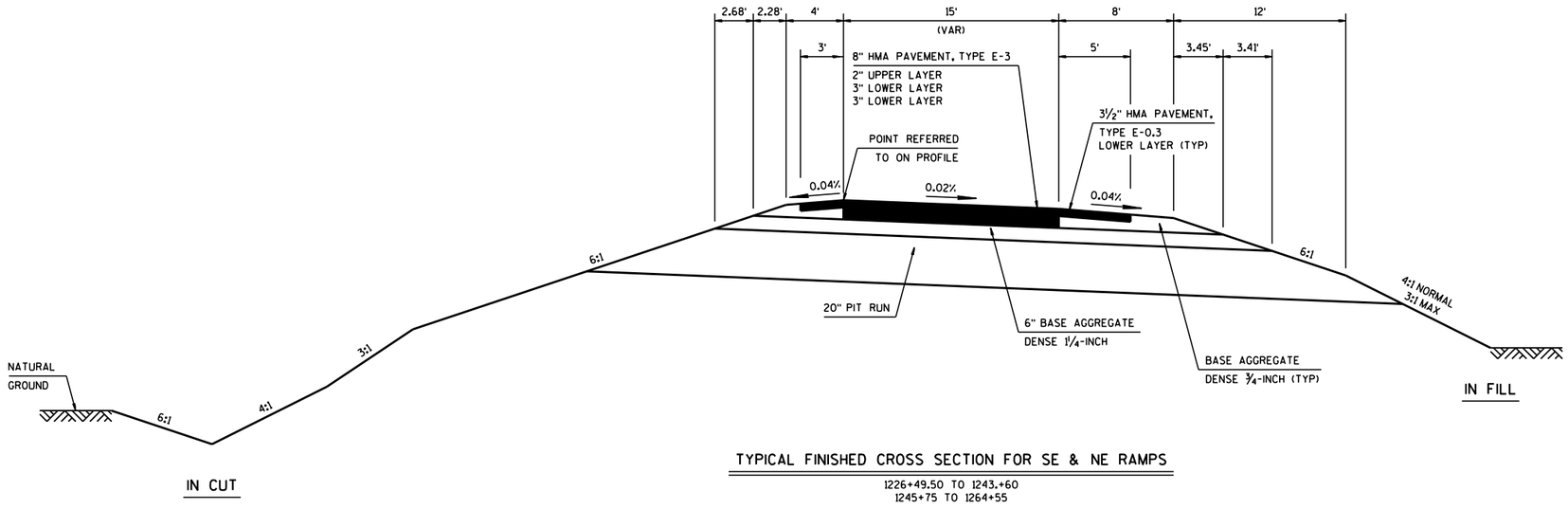
PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	TYPICAL CROSS SECTIONS	SHEET 9	E

2



TYPICAL FINISHED CROSS SECTION FOR SW & NW RAMPS

1227+65.56 TO 1245+90
1249+00 TO 1268+98

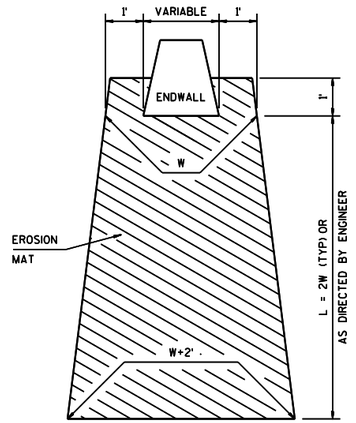


TYPICAL FINISHED CROSS SECTION FOR SE & NE RAMPS

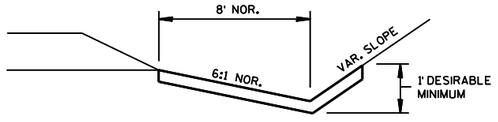
1226+49.50 TO 1243.+60
1245+75 TO 1264+55

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	TYPICAL CROSS SECTIONS	SHEET 10	E

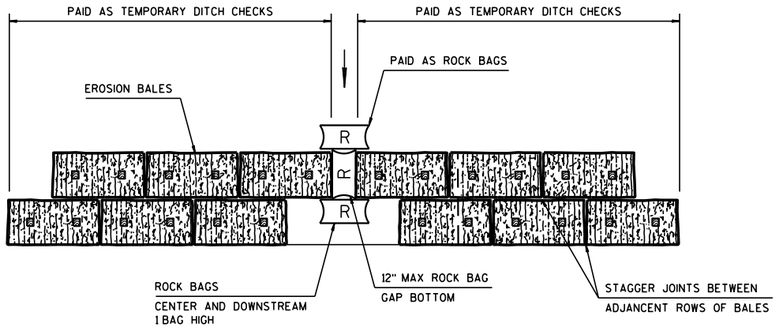
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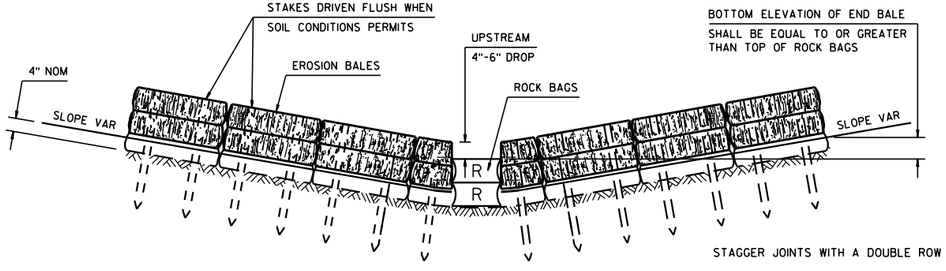
EROSION MAT TREATMENT AT CULVERTS



EROSION MAT DETAIL FOR DITCHES



PLAN VIEW

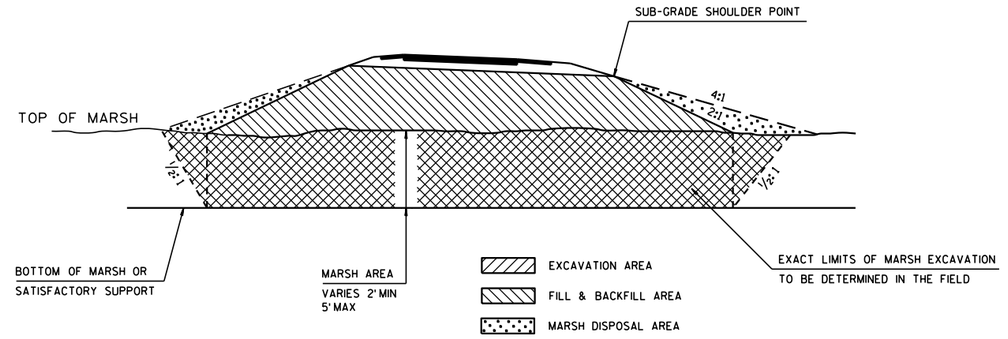


FRONT ELEVATION

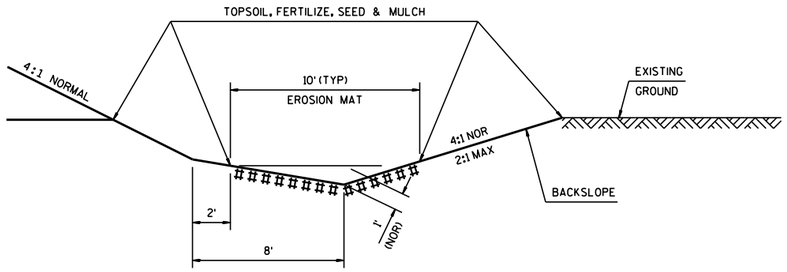
GENERAL NOTES

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

TEMPORARY DITCH CHECKS WITH ROCK BAG RELIEF

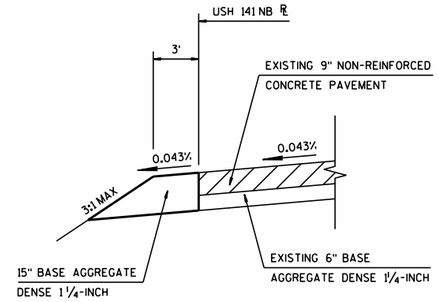


TYPICAL MARSH EXCAVATION SECTION



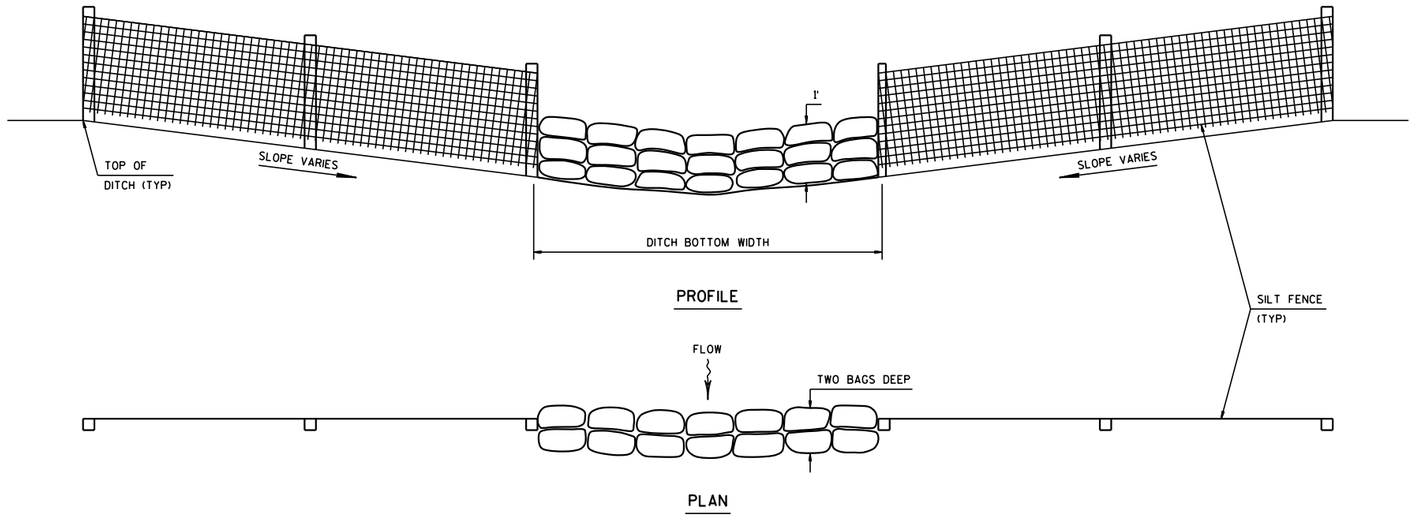
TYPICAL INSTALLATION FOR EROSION MAT

DITCH LINING



USH 141 TEMPORARY SHOULDER WIDENING AT LANE CLOSURE LOCATIONS

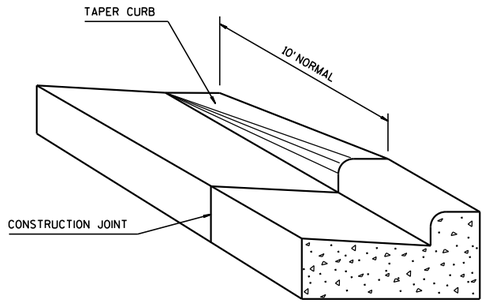
(PROVIDE WIDENED SHOULDER FOR TRAFFIC SAFETY)



PROFILE

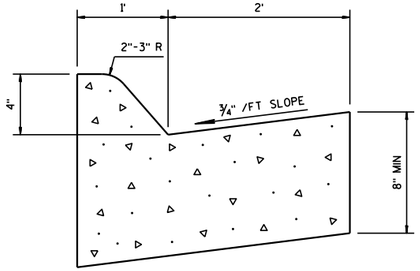
PLAN

EROSION CONTROL FILTER BAG DETAIL

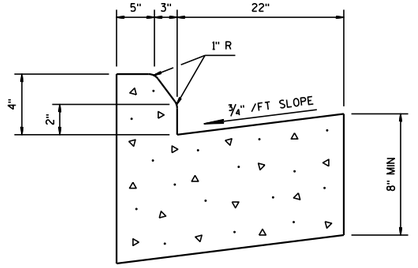


DETAIL OF CURB & GUTTER TERMINI

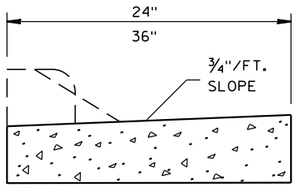
NOTE: TROWEL ISLAND NOSE TO A SMOOTH FINISH.
JOINT SPACING TO BE DETERMINED IN FIELD.



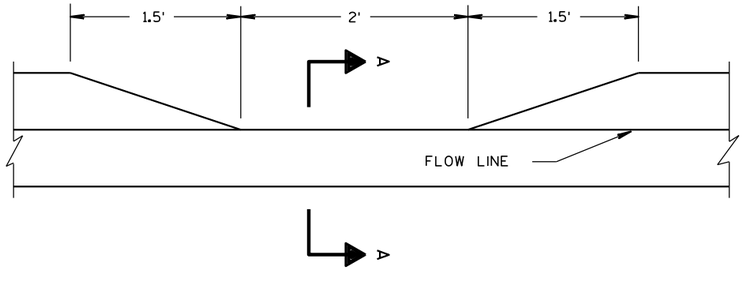
CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D MODIFIED



CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE G MODIFIED

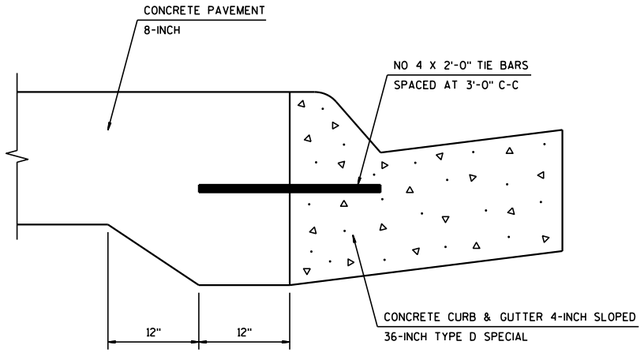


SECTION A-A



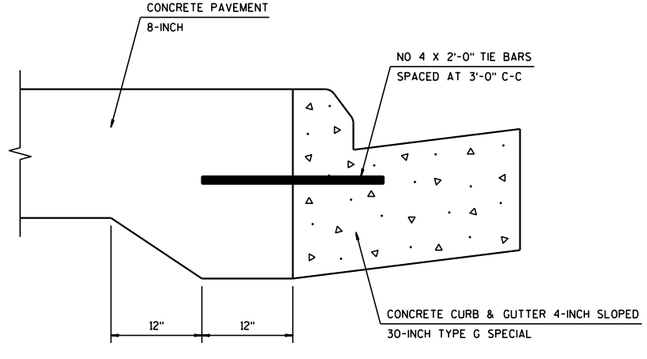
DETAIL OF CURB HEAD DEPRESSION FOR DRAINAGE AT CURB & GUTTER SECTION

CTH B SE RAMP (REMOVE EXISTING FUME LOCATION)



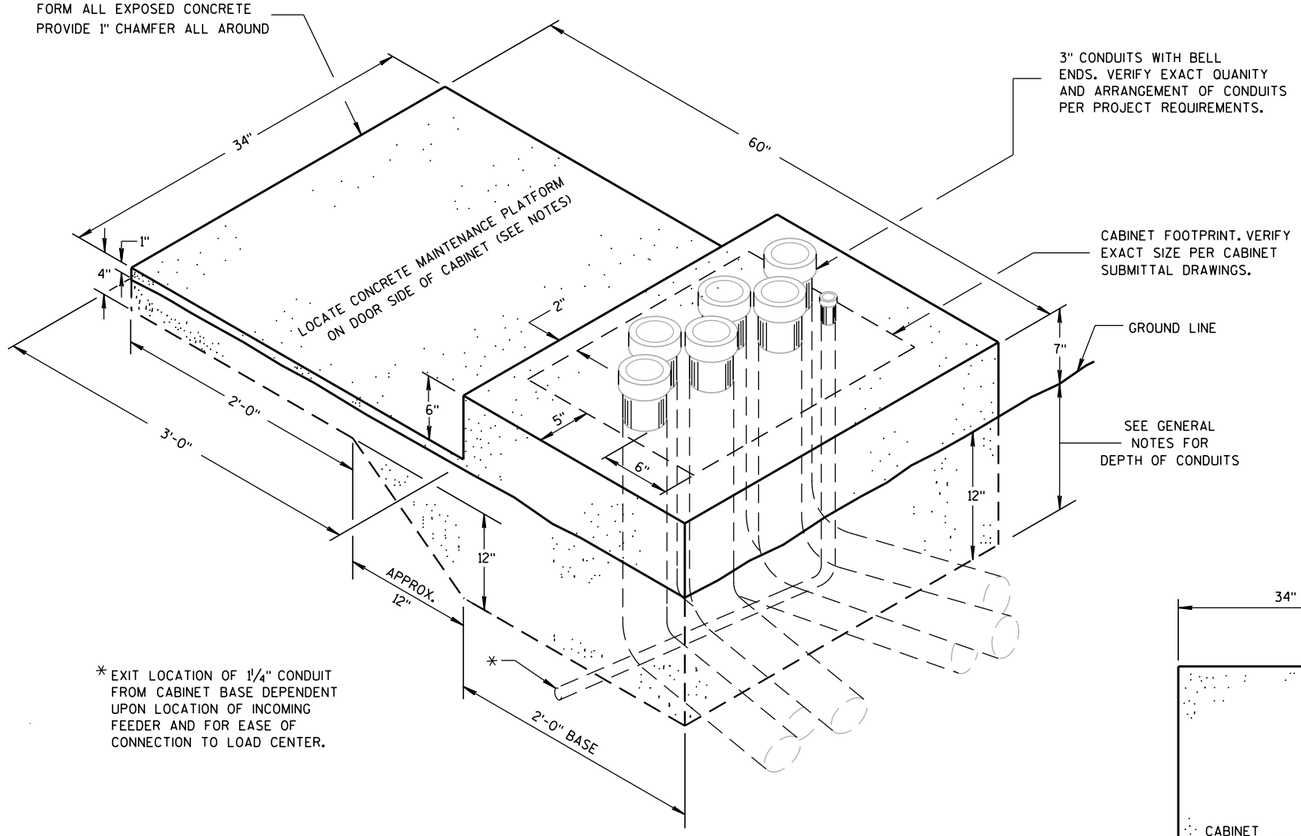
TRUCK OVERTRACKING DETAIL

15TH ROAD
CTH B NW RAMP
CTH B NE RAMP
CTH B SE RAMP



TRUCK OVERTRACKING DETAIL

STH 64 WEST ROUNDABOUT
STH 64 EAST ROUNDABOUT



ISOMETRIC VIEW

CONCRETE CONTROL CABINET BASE, TYPE SPECIAL

(C.Y. CONCRETE = APPROX. 0.4)

GENERAL NOTES

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

INSTALL FOUR STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS TO ANCHOR THE CABINET BASES. THE ANCHORS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

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

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

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

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

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

CONTROL CABINET BASE TOP SURFACE SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND BE LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

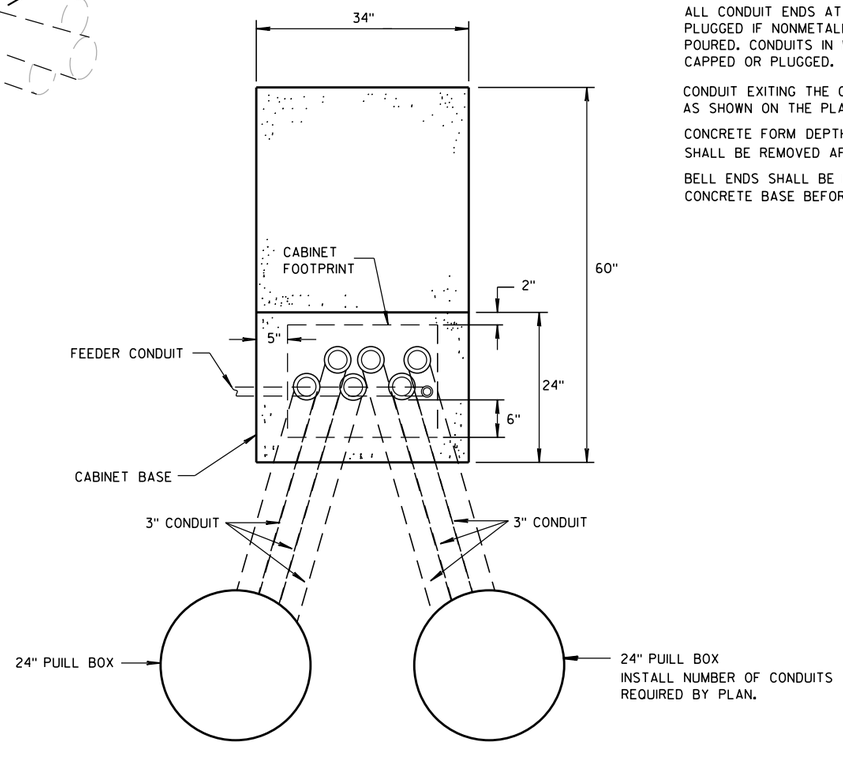
PLUG ALL BELOW GRADE NONMETALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

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

CONDUIT EXITING THE CONCRETE BASE (SIX THREE INCH) SHALL TERMINATE IN PULL BOXES AS SHOWN ON THE PLANS.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

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



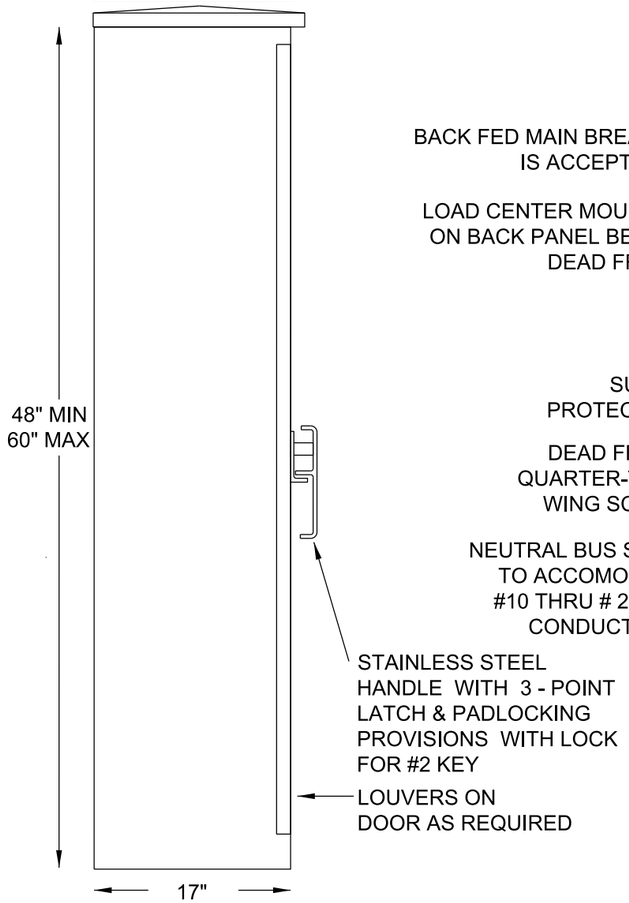
PLAN VIEW

CONCRETE CONTROL CABINET BASE, TYPE SPECIAL

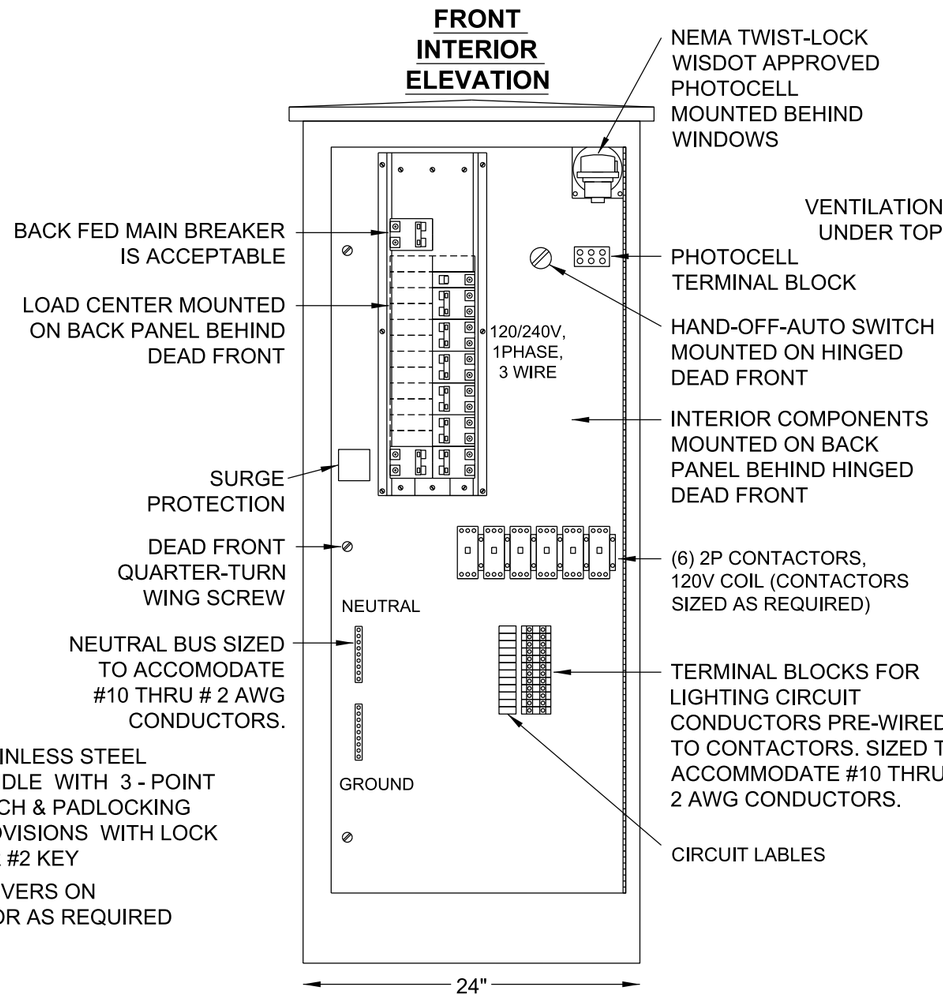
PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CONSTRUCTION DETAIL - LIGHTING CONTROL CABINET BASE	SHEET 15	E

Not to scale

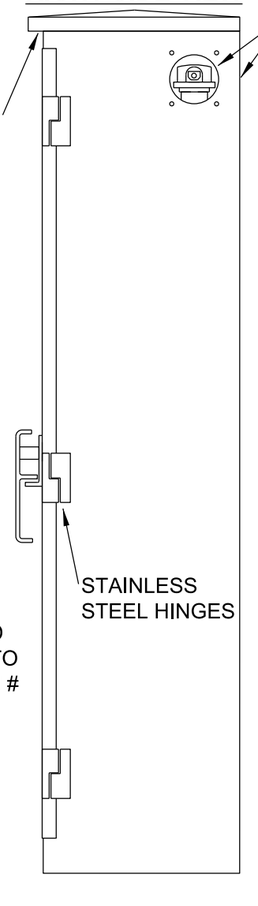
LEFT SIDE VIEW

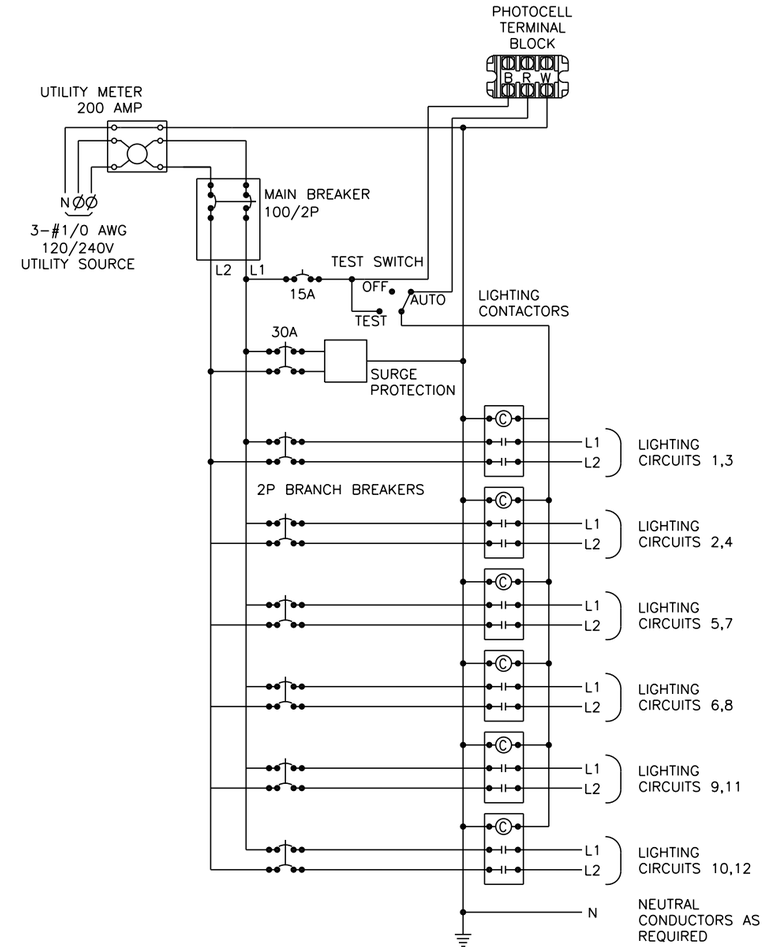


FRONT INTERIOR ELEVATION



RIGHT SIDE VIEW



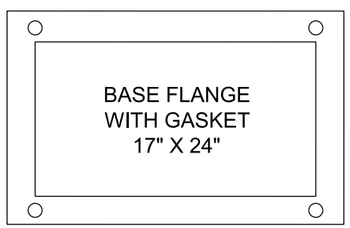


CONTROL CABINET SCHEMATIC

120/240 VOLT LIGHTING CONTROL CABINET WISDOT 120/240

BOX CONSTRUCTION:

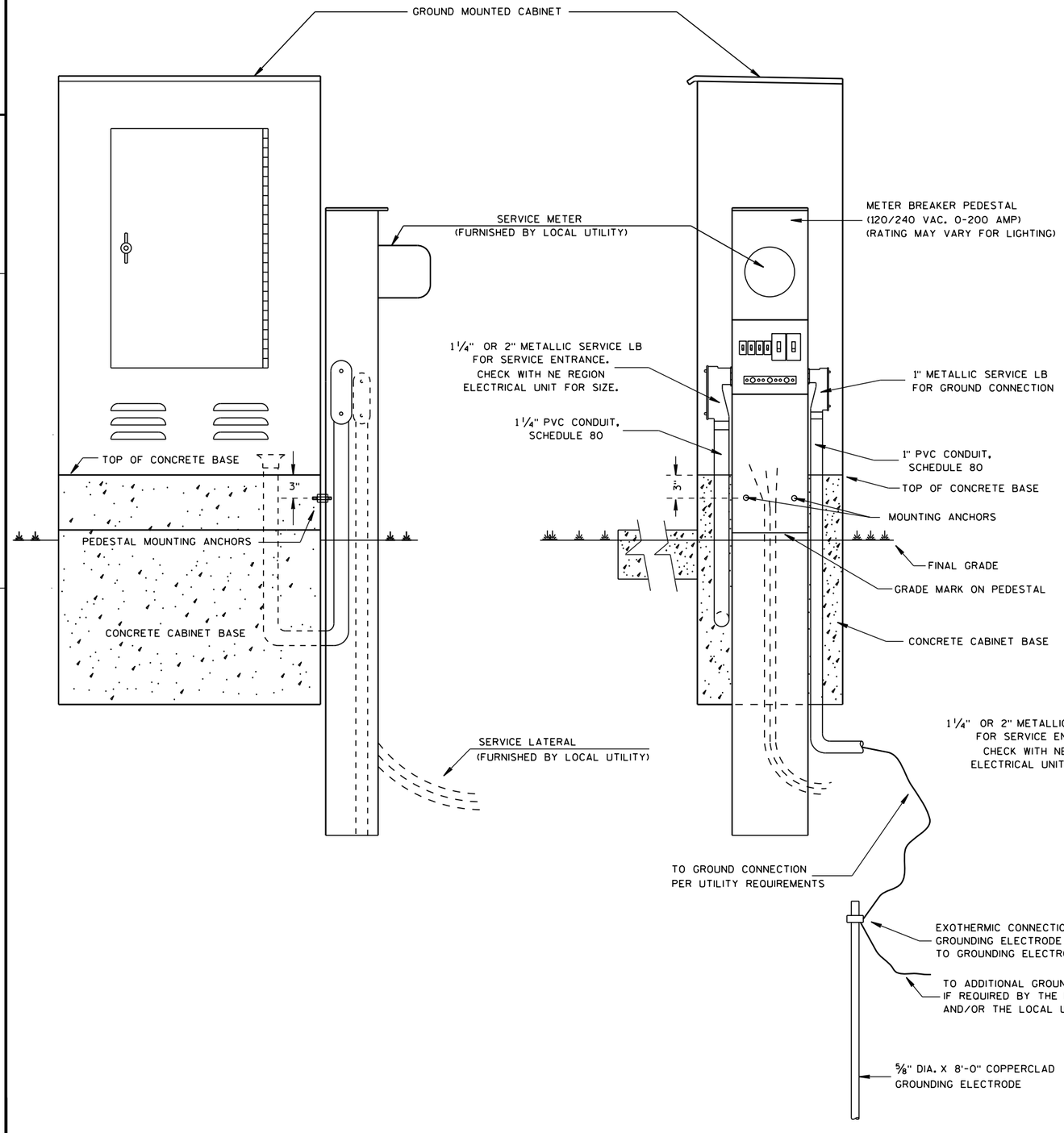
- NEMA3R
- UL LISTED
- -1/8" ALUMINUM 5052-H32 ANODIZED CLEAR
- BENT CONSTRUCTION - ONE PIECE SIDES AND BACK
- NEOPRENE GASKETED DOORS
- STAINLESS STEEL HARDWARE
- ETL LISTED IN ACCORDANCE W/ UL508A



LOAD CENTER:

- 30 CIRCUIT MIN.
- 100AMP MAIN CIRCUIT BREAKER
- COPPER BUS
- 22K AIC
- (1) 15A/1P CONTROL BREAKER
- (1) 30A/2P BREAKER FOR SURGE PROTECTION DEVICE
- (6) 2P BRANCH BREAKERS (BREAKERS SIZED AS REQUIRED)

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CONSTRUCTION DETAIL - LIGHTING CONTROL CABINET 120/240 VOLT	SHEET 16	E



GENERAL NOTES

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

THE EXACT LOCATION OF THE METER BREAKER PEDESTAL SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE TYPE OF CONCRETE CABINET BASE TO BE INSTALLED SHALL BE AS CALLED FOR IN THE PLANS.

TO FACILITATE FLUSH MOUNTING OF THE METER BREAKER PEDESTAL AGAINST THE SIDE OF THE CABINET BASE (IF FLUSH MOUNTING POSSIBLE. CONFER WITH THE LOCAL UTILITY TO DETERMINE WHICH SIDE OF THE CONCRETE BASE THE ELECTRICAL SERVICE LATERAL WILL APPROACH. THEN FORM THAT INDICATED SIDE FOR FULL SIDE DEPTH.

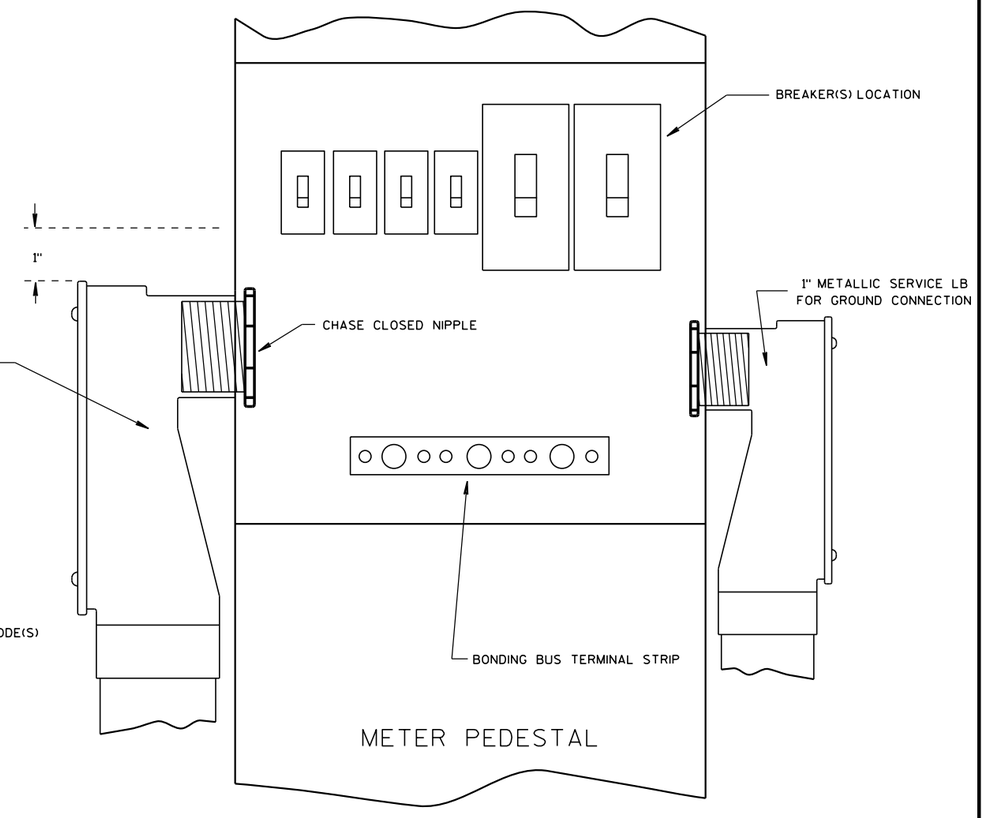
WHILE FLUSH MOUNTING IS THE MOST DESIRABLE MOUNTING CONFIGURATION UTILITY REQUIREMENTS MAY PRECLUDE THIS OPTION. CONTRACTOR MUST PROVIDE UTILITY APPROVED PEDESTAL AND INSTALL PER UTILITY AND MANUFACTURERS REQUIREMENTS.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT OR SCHEDULE 80 PVC, NIPPLES AND/OR CONDULETS AS REQUIRED. CONDUIT LB SHALL BE OF METALLIC SERVICE ENTRANCE TYPE.

SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AND LOCATED AS REQUIRED BY THE LOCAL UTILITY AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.

IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER NEC.

* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.



PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CONSTRUCTION DETAIL- NER METER PEDESTAL INSTALLATION	SHEET 17	E

2

2

N

PC 1021+18.63

1021

NW RAMP

CONCRETE CURB & GUTTER
4-INCH SLOPED
36-INCH TYPE D MODIFIED

+23

1020

8-INCH CONCRETE PAVEMENT
(COLORED)

REMOVE EXISTING
CONCRETE CURB & GUTTER

REMOVE EXISTING
CONCRETE CURB & GUTTER
CONCRETE SAFETY MEDIAN

+47

1022

CTH B WB

595 596 597 598 599 600

PT 595+18.69 BK=
595+04.63 AH 595

PT 595+04.63

596+86.79 CTH B WB=
1019+39.36 NW RAMP

596+97.86 CTH B EB=
1019+82.77 SW RAMP

+42 2" +72

+43 2" +28

CTH B EB

SAW CUT
REQ'D

CONCRETE CORRUGATED MEDIAN

CONCRETE CORRUGATED MEDIAN

1019

SW RAMP

1021

USH 141 SB

1020

USH 141 NB

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	INTERSECTION DETAIL - CTH B INTERCHANGE	SHEET 18	E

FILE NAME : F:\d3_149027\021101_opt1_id.dgn PLOT DATE : 26-NOV-2013 13:39 PLOT BY : dotbrb PLOT NAME : 021101opt1id PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

2

N

1025

NE RAMP

1024

+21

REMOVE EXISTING FLUME

CONCRETE CURB & GUTTER
4-INCH SLOPED
36-INCH TYPE D MODIFIED

8-INCH CONCRETE PAVEMENT
(COLORED)

REMOVE EXISTING
CONCRETE CURB & GUTTER

2"

48' R

SAW CUT
REQ'D

+00

1023

CTH B WB

602

603

+18

604

605

606

607

608

602+91.42 CTH B WB=
1022+72.35 NE RAMP

REMOVE EXISTING
CONCRETE CURB & GUTTER
CONCRETE SAFETY MEDIAN

602

603

604

605

606

607

608

603+02.50 CTH B EB=
1023+26.97 SE RAMP

CTH B EB

SAW CUT
REQ'D

+01

2"

+32

SAW CUT
REQ'D

CONCRETE CORRUGATED MEDIAN

1023

PROVIDE CURB OPENING
FOR DRAINAGE

2"

48' R

REMOVE EXISTING
CONCRETE CURB & GUTTER

CONCRETE CURB & GUTTER
4-INCH SLOPED
36-INCH TYPE D MODIFIED

+43

REMOVE EXISTING FLUME

8-INCH CONCRETE PAVEMENT

SE RAMP

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	INTERSECTION DETAIL - CTH B INTERCHANGE	SHEET 19	E

2

2

N

481+89.89 BK=
481+89.75 AH

21ST RD

11

PI 485+11.69

481

STH 64 WB

482

483+10.13 STH 64 WB=
10+00.00 21ST RD

483

484

485

486

487

482

STH 64 EB

483

483+06.73 STH 64 EB=
1193+39.53 15TH RD

MH

SAW CUT REQ'D

2'

REMOVE EXISTING
CONCRETE CURB & GUTTER

58'R

CONCRETE CURB & GUTTER
4-INCH SLOPED
36-INCH TYPE D MODIFIED

8-INCH CONCRETE PAVEMENT
(COLORED)

1193

1192

PI 1191+80.48

15TH ROAD

1191

W

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	INTERSECTION DETAIL - STH 64/15TH RD	SHEET 20	E

FILE NAME : F:\d3_149027\021105_opt2_id.dgn PLOT DATE : 26-NOV-2013 13:17 PLOT BY : dotbrb PLOT NAME : 021105 opt2 id PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

2

N

REMOVE AND REPLACE EXISTING TURN LANE
SECTION WITHIN CONSTRUCTION LIMITS

BLDG

EXISTING R/W

SHOULDER LINE

BP: 515+30.46WB64

PRC: 515+29.72EB64

511 STH 64 512 513 514 515 516 516 517 517 STH 64 WB

17'

SHOULDER LINE

STH 64 EB

MATCH EXISTING

BEGIN PROJECT
512+00

SLOPE INTERCEPTS

EXISTING R/W

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	PLAN DETAILS - STH 64	SHEET	E

ISLAND CURB LINE TAPER - STH 64 EB			
STATION	COORDINATES X	Y	
517+32.49	702863.8981	152664.0393	ISL 1
517+95.71	702921.4085	152637.8882	ISL 2

ISLAND CURB LINE - STH 64 EB			
STATION	COORDINATES X	Y	
519+67.32	703078.6190	152574.1482	ISL 3
521+41.01	703207.8464	152487.3424	ISL 4
521+77.89	703244.0744	152480.4986	ISL 5

ISLAND CURB LINE - STH 64 WB			
STATION	COORDINATES X	Y	
517+61.92	702867.5844	152672.2433	ISL 6
520+04.26	703100.2307	152606.1211	ISL 7
521+80.38	703223.4493	152509.3749	ISL 8
522+12.95	703246.7736	152486.8546	ISL 9

ISLAND CURB TAPER LINE
CURVE NOTES

PI STA = 517+64.12
Y = 152650.050
X = 702892.238
DELTA = 3°38'25"
D = 5°45'40"
T = 31.60'
L = 63.19'
R = 994.51'
PC STA = 517+32.52
PT STA = 517+95.71
POC STA = 517+95.71 (STH 64 EB)

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	PLAN DETAIL - STH 64	SHEET 22 E

ISLAND CURB LINE TAPER - STH 64 EB			
STATION	COORDINATES X	Y	
526+25.81	703658.6265	152311.6578	ISL 10
526+61.07	703684.6116	152288.0947	ISL 11
ISLAND CURB LINE - STH 64 EB			
STATION	COORDINATES X	Y	
528+37.50	703809.9356	152193.8762	ISL 12
531+66.02	704134.1641	152141.5090	ISL 13

ISLAND CURB LINE - STH 64 WB			
STATION	COORDINATES X	Y	
526+23.80	703661.2939	152318.0254	ISL 14
526+63.13	703669.9295	152310.7427	ISL 15
528+39.28	703829.3754	152222.5832	ISL 16
ISLAND CURB LINE TAPER - STH 64 WB			
STATION	COORDINATES X	Y	
530+99.84	704078.6969	152169.7689	ISL 17
531+59.30	704136.8275	152157.2572	ISL 18

ISLAND CURB TAPER LINE
CURVE NOTES

PI STA = 531+29.57
Y = 152163.945
X = 704107.855
DELTA = 1°42'11"
D = 2°51'51"
T = 29.73'
L = 59.46'
R = 2000.51'
PC STA = 530+99.84
PT STA = 531+59.30

N

NE RAMP

1246

PT: 1245+70.94NE

+69.71

+69.00

SEE PLANTING DETAIL

CONCRETE SIDEWALK
4-INCH

BP: 525+55.18WB64

PRC: 527+71.48WB64

18'
+9.50

BP: 1245+00.00NE

ROUNDABOUT CONCRETE TRUCK
APRON 12-INCH, COLORED RED

PRC: 527+90.84WB64

PRC: 528+39.08WB64

PRC: 529+19.83WB64

SLOPE INTERCEPTS

CONCRETE SIDEWALK
4-INCH

SHOULDER LINE

PRC: 531+52.51WB64

PRC: 530+33.56EB64

STH 64 WB

STH 64 EB

526

527

528

529

530

531

532

1.5'R

2.5'R

ISL 14

ISL 15

ISL 16

ISL 17

ISL 18

ISL 10

ISL 11

ISL 12

ISL 13

18.67'

19.33'

19.50'

19.65'

20'

21'

24.82'

17'
+38.25

17'
+32.46

20'
+9.22

+96.71

6'R

10'

+66.02

+40.53

PCC: 1+47.45

PCC: 1+42.96

BP: 2+00.00ERAB

EP: 5+33.01ERAB

PCC: 3+66.26

PCC: 1+04.49

BP: 1+00.00

PC: 526+09.20EB64

PRC: 527+09.32EB64

PRC: 527+77.59EB64

ERAB INNER CIRCLE
CONSTRUCTION ℄

SEE STAMP
IMPRINT DETAIL

1244

EP: 1244+32.39SE

PRC: 1243+71.67SE

+53.63

+46.56

+24.93

SE RAMP

EXISTING R/W

FO

PROJECT NO: 1490-27-71 | HWY: USH 141 | COUNTY: MARINETTE | PLAN DETAIL - STH 64 | SHEET 23 | E

FILE NAME : F:\d3_149027\021205_pd.dgn PLOT DATE : 20-NOV-2013 13:50 PLOT BY : dotbrb PLOT NAME : 021205 pd PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

2

N

EXISTING R/W

SHOULDER LINE

532

533

534

535

536

537

538

STH 64

532+27.64 STH 64 EB
399+63.28 13TH RD

PT: 533+15.03EB64

EP: 534+62.50WB64
PI: 534+71.16EB64

SHOULDER LINE

399

SLOPE INTERCEPTS

EXISTING R/W

EXISTING R/W

PI 539+00.03

538

STH 64

539

540

MATCH EXISTING

END PROJECT
359+00

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	PLAN DETAILS - STH 64	SHEET 24	E

NOTE:
PAVEMENT GRADES ARE SHOWN ALONG THE CURB & GUTTER FLANGE LINE AT 25'INTERVALS.

EXISTING R/W

CONCRETE CURB & GUTTER
30-INCH, TYPE G MODIFIED
STA 521+95 - 522+69

CONCRETE PAVEMENT
8-INCH

CONCRETE CURB
18-INCH, TYPE A

CONCRETE CURB & GUTTER
4-INCH SLOPED
36-INCH, TYPE R

CONCRETE PAVEMENT
8-INCH

CONCRETE CURB & GUTTER
30-INCH, TYPE G MODIFIED
STA 514+86 - 515+68

CONCRETE CURB & GUTTER
30-INCH, TYPE D

ASPHALTIC
FLUME (TYP)

STH 64 WB CONST ℄

STH 64 WB CURB
CONSTRUCTION ℄

STH 64 WB

STH 64 EB

STH 64 EB CONST ℄

STH 64 EB CURB
CONSTRUCTION ℄

CONCRETE CURB & GUTTER
30-INCH, TYPE D

CONCRETE CURB & GUTTER
30-INCH, TYPE G MODIFIED
STA 521+11 - 522+67

CONCRETE PAVEMENT
8-INCH

EXISTING R/W

ERAB CENTER
ELEV 728.51

PCC: 2+86.56
BP: 1+00.00
PC: 1+27.04
PCC: 1+30.62
BP: +00.00
EP: 4+33.01

EP: 523+36.65
PRC: 1248+71.81NW
BP: 1248+00.00NW
PCC: 522+34.91
PCC: 522+01.38
PRC: 522+13.22MB64
PRC: 521+32.07WB64
BP: 514+59.10
PCC: 522+09.02WB64
PT: 515+68.96
PCC: 522+34.54WB64
PI: 515+99.04
EP: 522+78.44WB64
PRC: 519+08.63EB64
PRC: 521+11.65
BP: 521+11.65
PCC: 519+77.66EB64
PRC: 520+16.64EB64
PCC: 522+28.86
EP: 1246+90.67SW
PRC: 520+65.51
BP: 522+65.51
PCC: 521+21.34EB64
PT: 523+98.06
PT: 522+36.66EB64
PI: 524+28.29
PC: 1246+08.41SW
EP: 523+44.68
SW RAMP
NW RAMP

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	PLAN DETAILS - STH 64	SHEET 25	E

2

NOTE:
PAVEMENT GRADES ARE SHOWN ALONG THE CURB & GUTTER FLANGE LINE AT 25' INTERVALS.

N

NE RAMP

PT: 1245+70.94NE

BP: 514+00.00

STH 64 WB CURB CONSTRUCTION ℄

CONCRETE CURB & GUTTER
30-INCH, TYPE G MODIFIED
STA 527+67 - 528+19

CONCRETE CURB & GUTTER
30-INCH, TYPE D

CONCRETE CURB
18-INCH, TYPE A

CONCRETE CURB & GUTTER
30-INCH, TYPE D

CONCRETE CURB & GUTTER
30-INCH, TYPE G MODIFIED
STA 515+21 - 516+39

CONCRETE PAVEMENT
8-INCH

STH 64 WB CONST ℄

WRAB CENTER
ELEV 731.75

STH 64 WB

STH 64 EB

STH 64 EB CURB CONSTRUCTION ℄

CONCRETE PAVEMENT
8-INCH

STH 64 EB CONST ℄

CONCRETE CURB & GUTTER
30-INCH, TYPE D

CONCRETE CURB & GUTTER
4-INCH SLOPED
36-INCH, TYPE R

ASPHALTIC
FLUME (TYP)

EXISTING R/W

SE RAMP

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	PLAN DETAILS - STH 64	SHEET 26	E

2

N

SEPV
SEPV
SEPV
SEPV
SEPV

BLDG
BLDG
BLDG
GUY

EXISTING R/W
STH 64
515
EXISTING R/W
510

NW RAMP
1250
1250
1250
1250
520
525
1245
1245
1245
SW RAMP
USH 141 SB
USH 141 NB

LEGEND

EROSION MAT CLASS I	SILT FENCE
EROSION MAT URBAN CLASS I, TYPE B	INLET PROTECTION
MEDIUM RIPRAP	SURFACE WATER FLOW
DITCH CHECK	SLOPE INTERCEPT
TEMPORARY DITCH CHECK WITH ROCK BAG RELIEF	WETLAND

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	EROSION CONTROL DETAIL - STH 64	SHEET	E

FILE NAME : F:\d3_149027\022020_ec.dgn PLOT DATE : 03-FEB-2014 08:39 PLOT BY : dotqdc PLOT NAME : 022020 ec PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

2

N

EXISTING R/W

540

545

STH 64

EXISTING R/W

USH 141 SB

1250

NE RAMP

525

1245

530

535

STH 64

USH 141 NB

1245

EXISTING R/W

1240

SE RAMP

13TH RD

395

LEGEND

- EROSION MAT CLASS I
- EROSION MAT URBAN CLASS I, TYPE B
- MEDIUM RIPRAP
- DITCH CHECK
- TEMPORARY DITCH CHECK WITH ROCK BAG RELIEF
- SILT FENCE
- INLET PROTECTION
- SURFACE WATER FLOW
- SLOPE INTERCEPT
- WETLAND

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	EROSION CONTROL DETAIL - STH 64	SHEET	E

FILE NAME : F:\d3_149027\022021_ec.dgn PLOT DATE : 03-FEB-2014 08:40 PLOT BY : dotqdc PLOT NAME : 022021ec PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

2

N

EXISTING R/W

USH 141 SB

USH 141 NB

SW RAMP

SE RAMP

1230

1235

1240

EXISTING R/W

LEGEND

EROSION MAT CLASS I	SILT FENCE
EROSION MAT URBAN CLASS I, TYPE B	INLET PROTECTION
MEDIUM RIPRAP	SURFACE WATER FLOW
DITCH CHECK	SLOPE INTERCEPT
TEMPORARY DITCH CHECK WITH ROCK BAG RELIEF	WETLAND

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	EROSION CONTROL DETAIL	SHEET 29	E

FILE NAME : F:\d3_149027\022022_ec.dgn PLOT DATE : 03-FEB-2014 08:44 PLOT BY : dotqdc PLOT NAME : 022022 ec PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

2

N

EXISTING R/W

NW RAMP

USH 141 SB

USH 141 NB

NE RAMP

1250

1255

1260

1265

1270

STA BACK

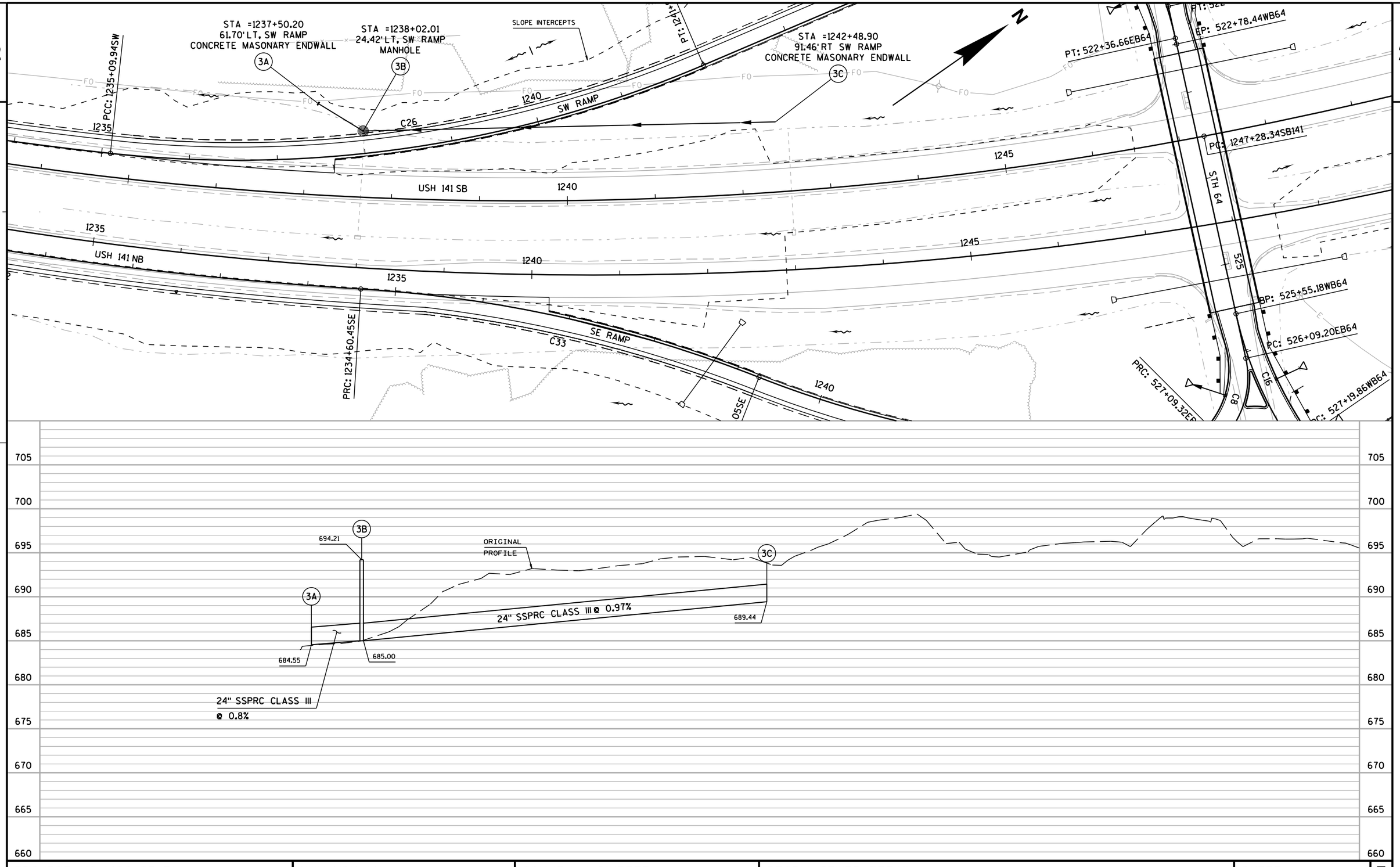
STA AHEAD

EXISTING R/W

LEGEND

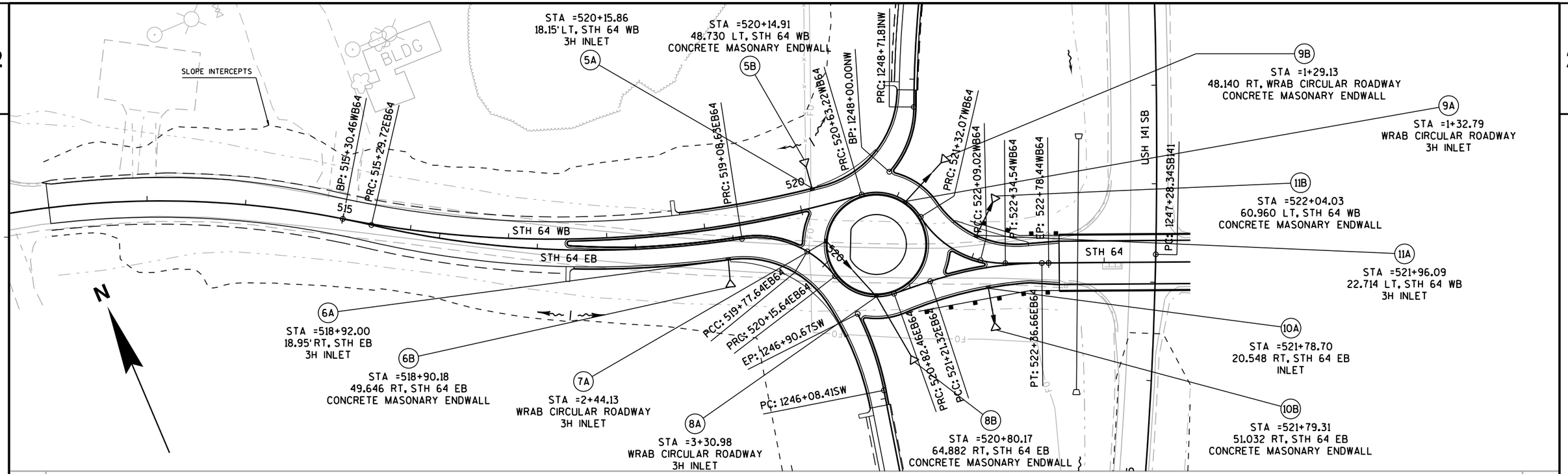
EROSION MAT CLASS I	SILT FENCE
EROSION MAT URBAN CLASS I, TYPE B	INLET PROTECTION
MEDIUM RIPRAP	SURFACE WATER FLOW
DITCH CHECK	SLOPE INTERCEPT
TEMPORARY DITCH CHECK WITH ROCK BAG RELIEF	WETLAND

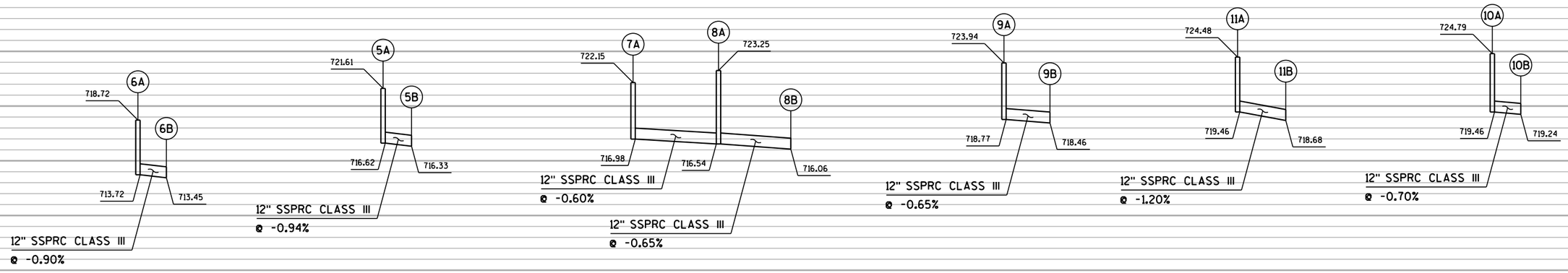
PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	EROSION CONTROL DETAIL	SHEET 30	E



PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	STORM SEWER DETAIL	SHEET E

FILE NAME : F:\d3_149027\022502_ss.dgn PLOT DATE : 25-NOV-2013 11:13 PLOT BY : dotbrb PLOT NAME : 022502 ss PLOT SCALE : 100:1





PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	STORM SEWER DETAIL	SHEET E

FILE NAME : F:\d3_149027\022503_ss.dgn PLOT DATE : 25-NOV-2013 11:13 PLOT BY : dotbrb PLOT NAME : 022503 ss PLOT SCALE : 100:1

STA =2+00
ERAB CIRCULTORY ROADWAY
3H INLET
16A

STA =2+14.65
54.177 LT, ERAB
CIRCULAR ROADWAY
CONCRETE MASONARY ENDWALL
16B

STA =2+80.80
54.274 LT, ERAB CIRCULAR ROADWAY
CONCRETE MASONARY ENDWALL
14B

STA =2+77.34
ERAB CIRCULAR ROADWAY
3H INLET
14A

STA =526+41.72
49.254 LT, STH 64 WB
CONCRETE MASONARY ENDWALL
12B

STA =526+42.19
19.006 LT, STH 64 WB
3H INLET
12A

STA =526+57.69
23.045 RT, STH 64 EB
3H INLET
13A

STA =526+54.50
53.478 RT, STH 64 EB
CONCRETE MASONARY ENDWALL
13B

STA =527+79.99
ERAB CIRCULAR ROADWAY
3H INLET
15A

STA =527+82.41
51.130 RT, STH 64 EB
CONCRETE MASONARY ENDWALL
15B

USH 141 NB
STH 64
STH 64 WB
STH 64 EB
1250
525
530
535

PT: 1245+10.94NE
BP: 1245+00.00NE
PRC: 524+90.84WB64
PRC: 528+39.08WB64
PRC: 529+19.83WB64
PRC: 530+33.56EB64
PRC: 531+52.5WB64
PT: 533+15.03EB64
EP: 534+62.50WB64
PI: 534+71.16EB64
BP: 525+55.18WB64
RC: 526+09.20EB64
PRC: 527+19.88WB64
PRC: 527+09.32EB64
PRC: 527+77.59EB64
EP: 1244+32.39SE
1243+71.16SE
SLOPE INTERCEPTS
PT: 399+06.02RD13
532+27.64 STH 64 EB
399+63.28 13TH RD
N

740
735
730
725
720
715
710
705
700
695

12A 727.24 — 12B 722.07 / 721.56
12" SSPRC CLASS III
@ -0.50%

13A 727.08 — 13B 722.13 / 721.97
12" SSPRC CLASS III
@ -0.55%

14A 727.15 — 14B 721.82 / 721.49
12" SSPRC CLASS III
@ -0.60%

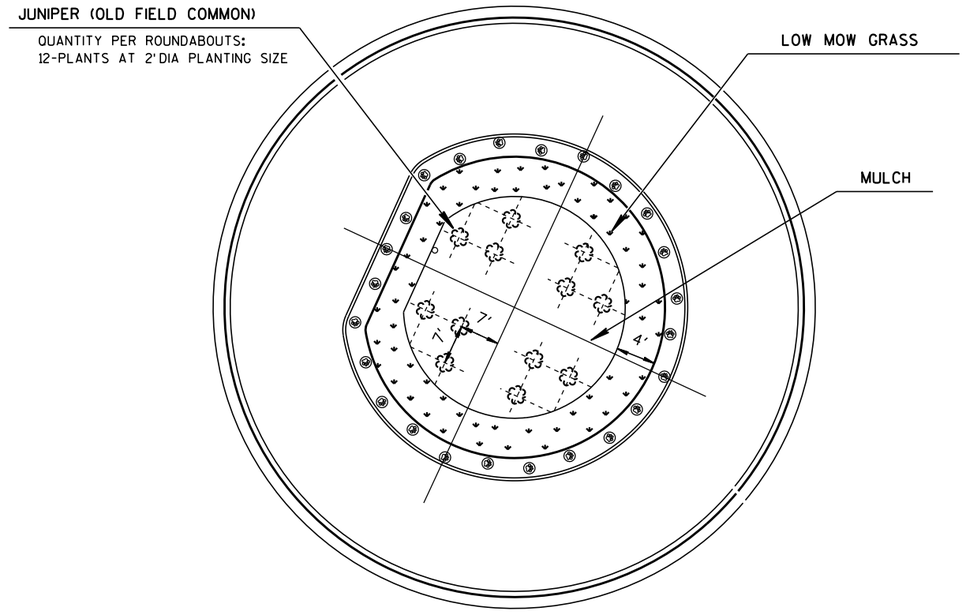
15A 726.90 — 15B 721.57 / 721.13
12" SSPRC CLASS III
@ -0.85%

16A 726.30 — 16B 721.13 / 720.67
12" SSPRC CLASS III
@ -0.50%

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	STORM SEWER DETAIL	SHEET 33	E

FILE NAME : F:\d3_149027\022504_ss.dgn
PLOT DATE : 25-NOV-2013 11:13
PLOT BY : dotbrb
PLOT NAME : 022504 ss
PLOT SCALE : 100:1

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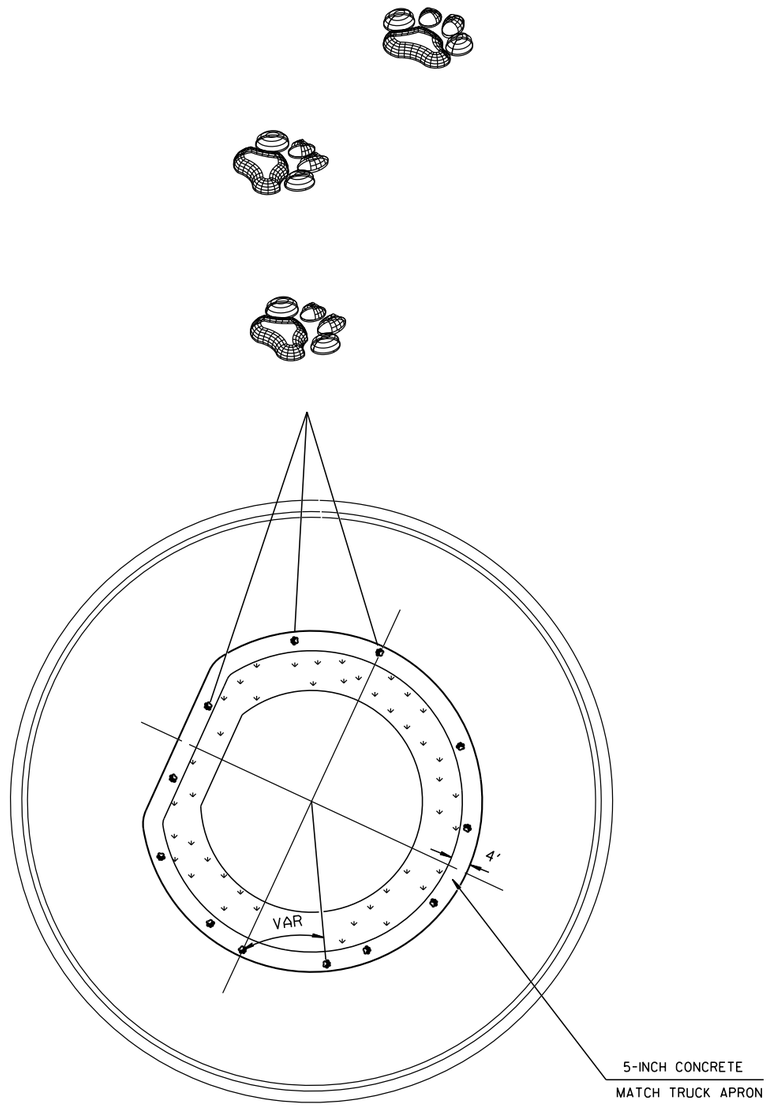


ROUNDABOUT PLANTING DETAIL

WEST ROUNDABOUT
EAST ROUNDABOUT

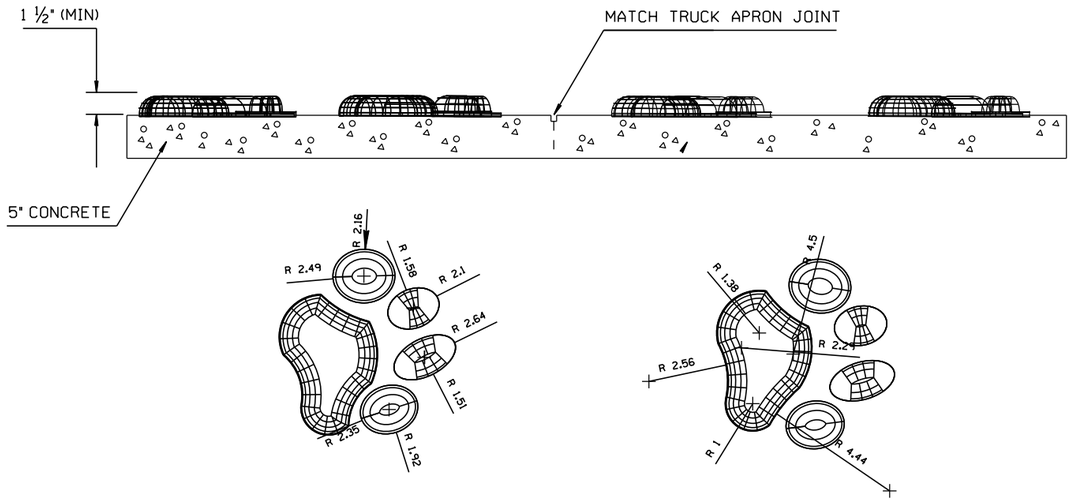
ALSO SEE MISCELLANEOUS QUANTITIES

PROJECT NO:1490-27-71	HWY:USH 141	COUNTY:MARINETTE	ROUNDABOUT PLANTING DETAIL	SHEET 34	E



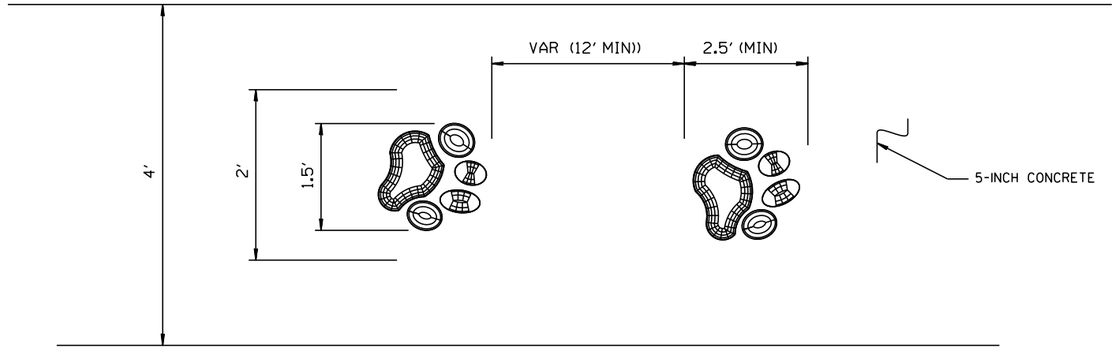
STAMP LAYOUT AT ROUNDABOUTS

WEST ROUNDABOUT
EAST ROUNDABOUT



STAMP DETAIL

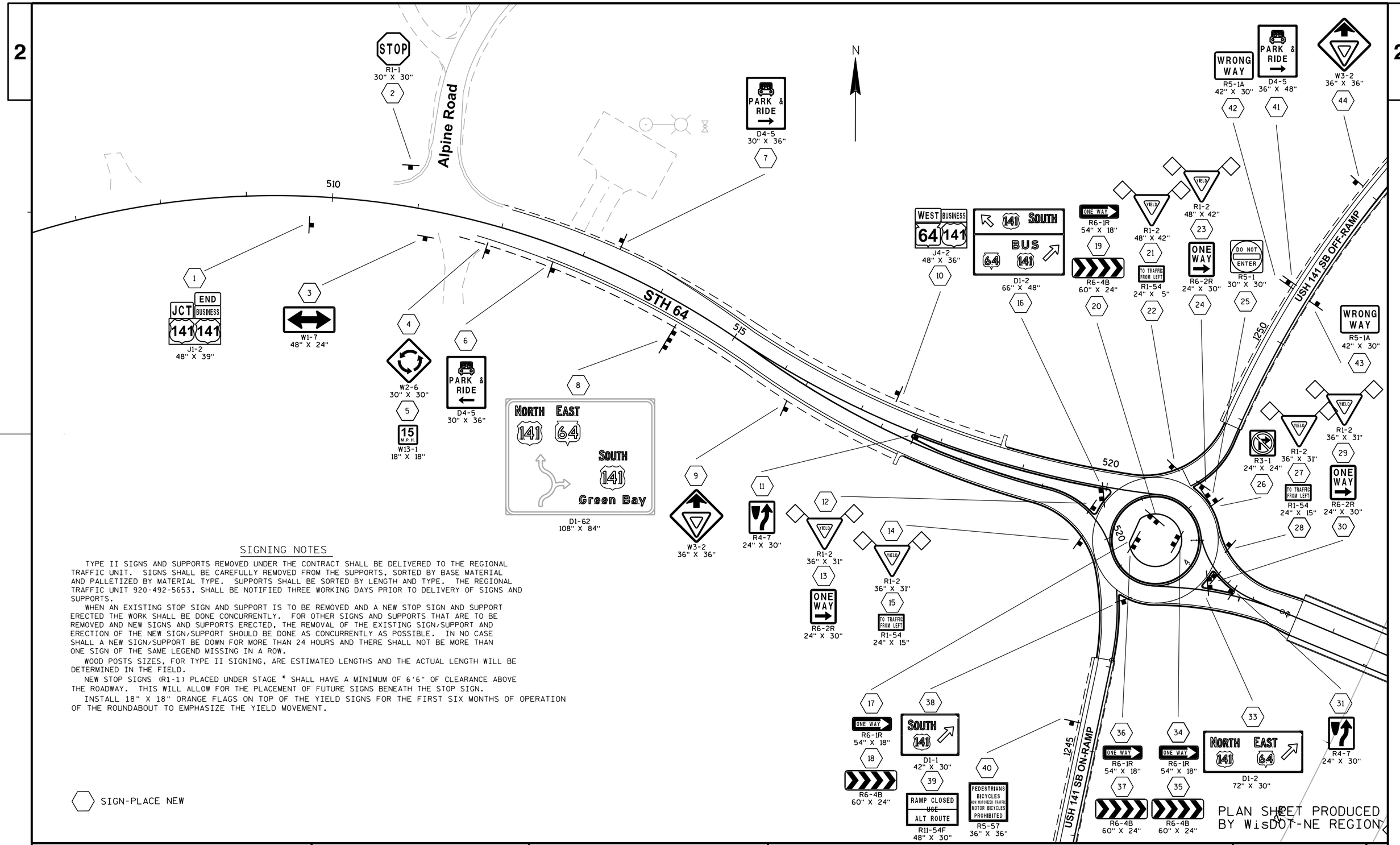
PAW PRINT STAIN COLOR REQUIRED



STAMP SPACING DETAIL

ASSUMED PER ROUNDABOUT:
12 STAMPS AT 12' ON CENTER
(ADJUST FOR MATCHING JOINT)

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CONSTRUCTION DETAIL	SHEET 35	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.

INSTALL 18" X 18" ORANGE FLAGS ON TOP OF THE YIELD SIGNS FOR THE FIRST SIX MONTHS OF OPERATION OF THE ROUNDABOUT TO EMPHASIZE THE YIELD MOVEMENT.

⬡ SIGN-PLACE NEW

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	PERMANENT SIGNING PLAN	SHEET 36 E

2

SIGNING NOTES

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N

USH 141 SB

USH 141 NB

USH 141 NB ON-RAMP

USH 141 NB OFF-RAMP

13th ROAD

STH 64

1250

1245

1240

525

530

535

NORTH 141 Iron Mountain — D1-62 132" X 72" — 32

SOUTH 141 WEST 64 — D1-2 72" X 30" — 78

W4-1 48" X 48" — 49

R1-2 36" X 31" — 79

R4-7 24" X 30" — 81

R6-2R 24" X 30" — 80

ONE WAY R6-1R 54" X 18" — 76

R6-4B 60" X 24" — 77

PEDESTRIANS BICYCLES NON MOTORIZED TRAFFIC MOTOR BICYCLES PROHIBITED — R5-57 36" X 36" — 75

NORTH 141 — D1-1 42" X 30" — 73

RAMP CLOSED USE ALT ROUTE — R11-54F 48" X 30" — 74

ONE WAY R6-1R 54" X 18" — 71

R6-4B 60" X 24" — 72

R1-2 36" X 31" — 69

TO TRAFFIC FROM LEFT R1-54 24" X 15" — 70

R1-2 36" X 31" — 67

ONE WAY R6-2R 24" X 30" — 68

R4-7 24" X 30" — 87

W3-2 36" X 36" — 88

SOUTH 141 WEST 64 NORTH 141 Iron Mountain — D1-62 108" X 84" — 90

W2-6 30" X 30" — 92

15 M.P.H. W13-1 18" X 18" — 93

JCT 141 JCT 141 BUSINESS — J1-2 48" X 51" — 95

SOUTH 141 WEST 64 Green Bay — D1-62 132" X 72" — 83

R1-2 36" X 31" — 84

R3-1 24" X 24" — 85

DO NOT ENTER R5-1 30" X 30" — 86

TO TRAFFIC FROM LEFT R1-54 24" X 15" — 57

WRONG WAY R5-1A 42" X 30" — 50

W4-1 48" X 48"

PARK & RIDE D4-5 36" X 48" — 56

WRONG WAY R5-1A 42" X 30" — 58

ONE WAY R6-2R 24" X 30" — 60

R1-2 48" X 42" — 59

R1-2 48" X 42" — 61

TO TRAFFIC FROM LEFT R1-54 24" X 15" — 62

ONE WAY R6-1R 54" X 18" — 63

R6-4B 60" X 24" — 64

NORTH 141 EAST 64 — D2-2 66" X 42" — 65

EAST 64 — J4-1 24" X 36" — 66

STOP R1-1 30" X 30" — 89

Marinette 19 Menominee 21 — D2-2 84" X 24" — 91

SPEED LIMIT 55 R2-1 24" X 30" — 94

SIGN-PLACE NEW

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	PERMANENT SIGNING PLAN	SHEET 37	E

SIGNING NOTES

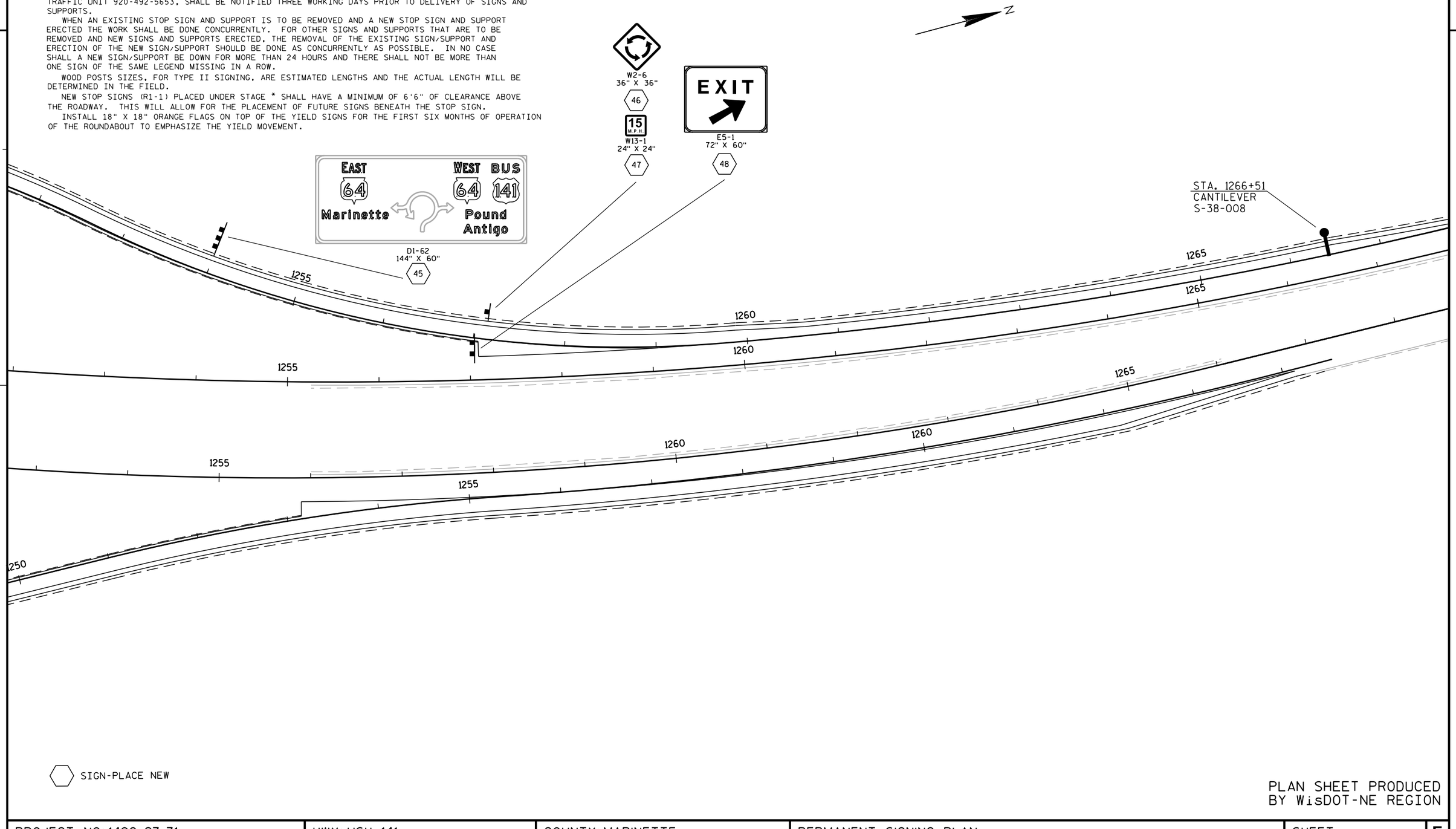
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WOOD POSTS SIZES, FOR TYPE II SIGNING, ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

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.

INSTALL 18" X 18" ORANGE FLAGS ON TOP OF THE YIELD SIGNS FOR THE FIRST SIX MONTHS OF OPERATION OF THE ROUNDABOUT TO EMPHASIZE THE YIELD MOVEMENT.



SIGN-PLACE NEW

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	PERMANENT SIGNING PLAN	SHEET 38 E

2

SIGNING NOTES

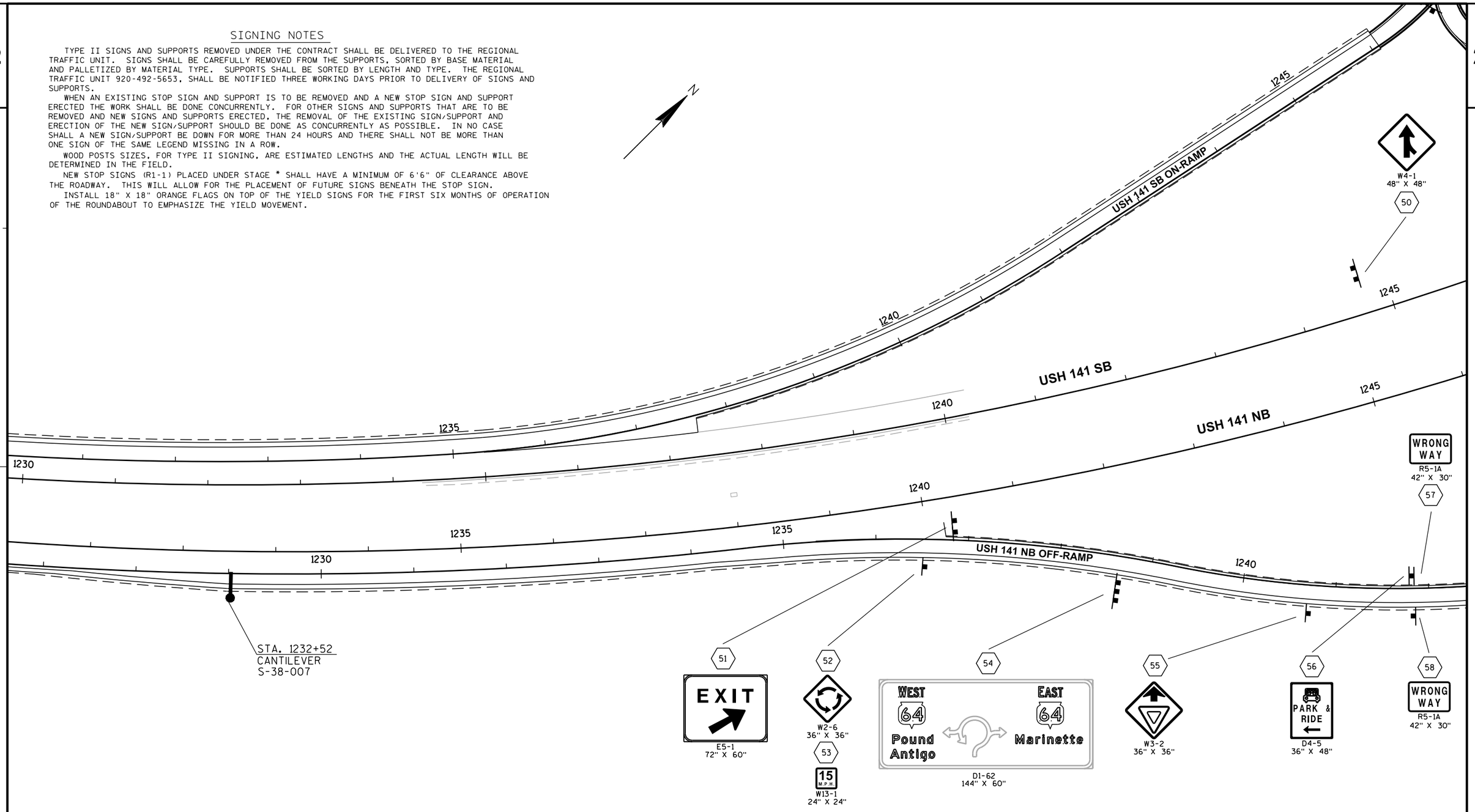
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SIGN-PLACE NEW

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	PERMANENT SIGNING PLAN	SHEET 39	E

SIGNING NOTES

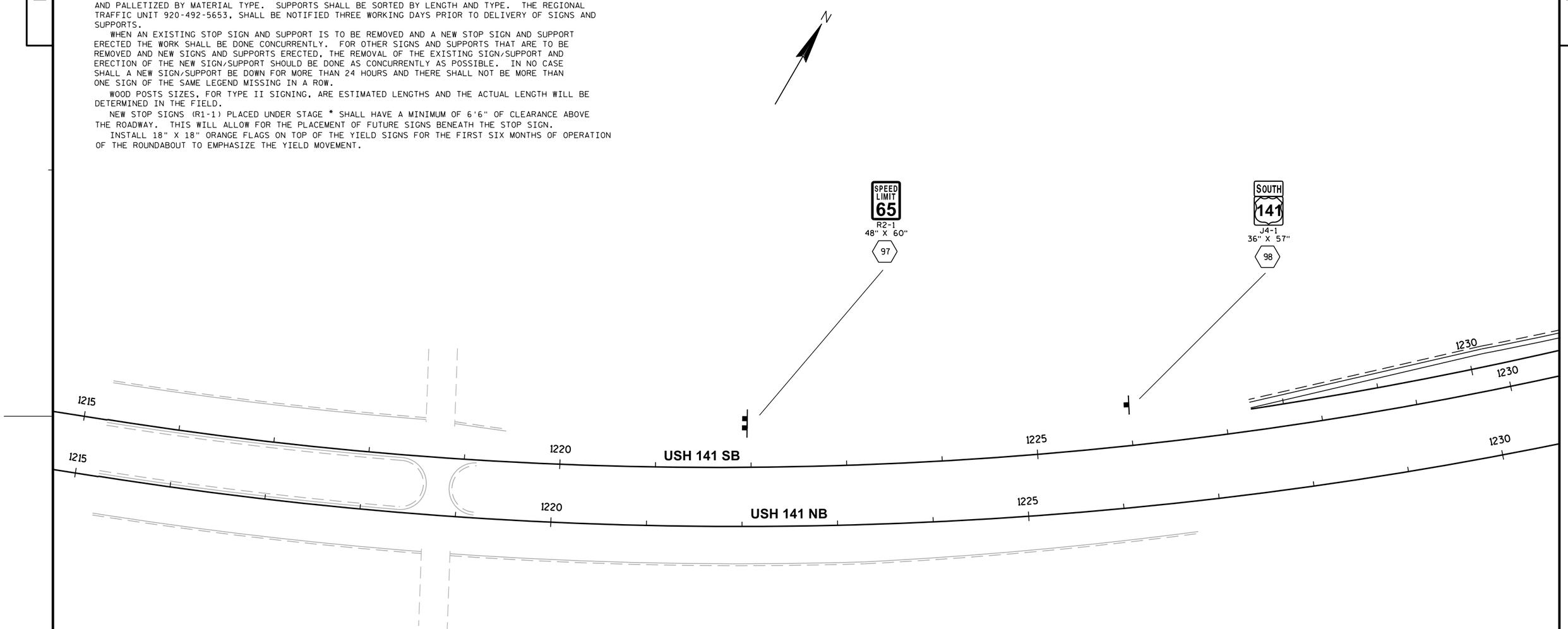
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SIGN-PLACE NEW

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	PERMANENT SIGNING PLAN	SHEET 40	E

2

SIGNING NOTES

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N

1270 1275 1280

USH 141 SB

1270 1275 1280

USH 141 NB

99
NORTH
141
J4-1
36" X 57"

100
SPEED LIMIT
65
R2-1
48" X 60"

SIGN-PLACE NEW

PLAN SHEET PRODUCED BY WisDOT-NE REGION

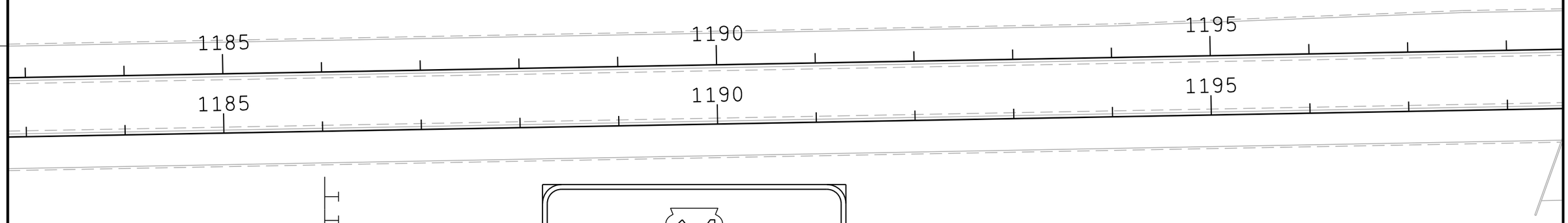
PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	PERMANENT SIGNING PLAN	SHEET 41	E

SIGNING NOTES

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.





STA. 1186+01
GROUND MOUNT



E1-1A
192" X 162"
201

SIGN-PLACE NEW

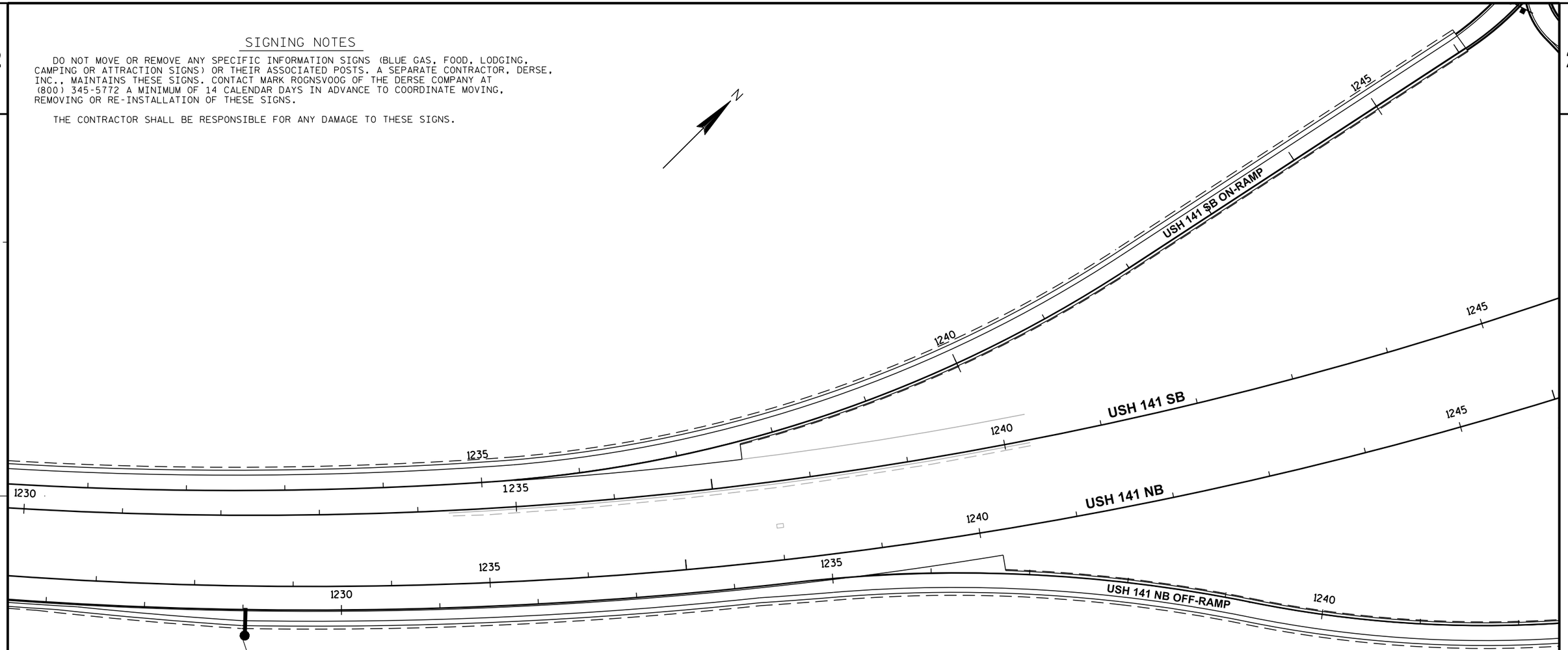
PLAN SHEET PRODUCED
BY WisDOT-NE REGION

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	PERMANENT SIGNING PLAN	SHEET 42	E

SIGNING NOTES

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



STA. 1232+52
CANTILEVER
S-38-007



E6-1
180" X 162"
202

SIGN-PLACE NEW

PLAN SHEET PRODUCED
BY WisDOT-NE REGION

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	PERMANENT SIGNING PLAN	SHEET 43	E

FILE NAME : N:\spo\traffic\SIGNING\Projects\1490-27-71 STH 64 Interchange\023209_ps.dgn PLOT DATE : 03-OCT-2013 12:27 PLOT BY : dotj1f PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

SIGNING NOTES

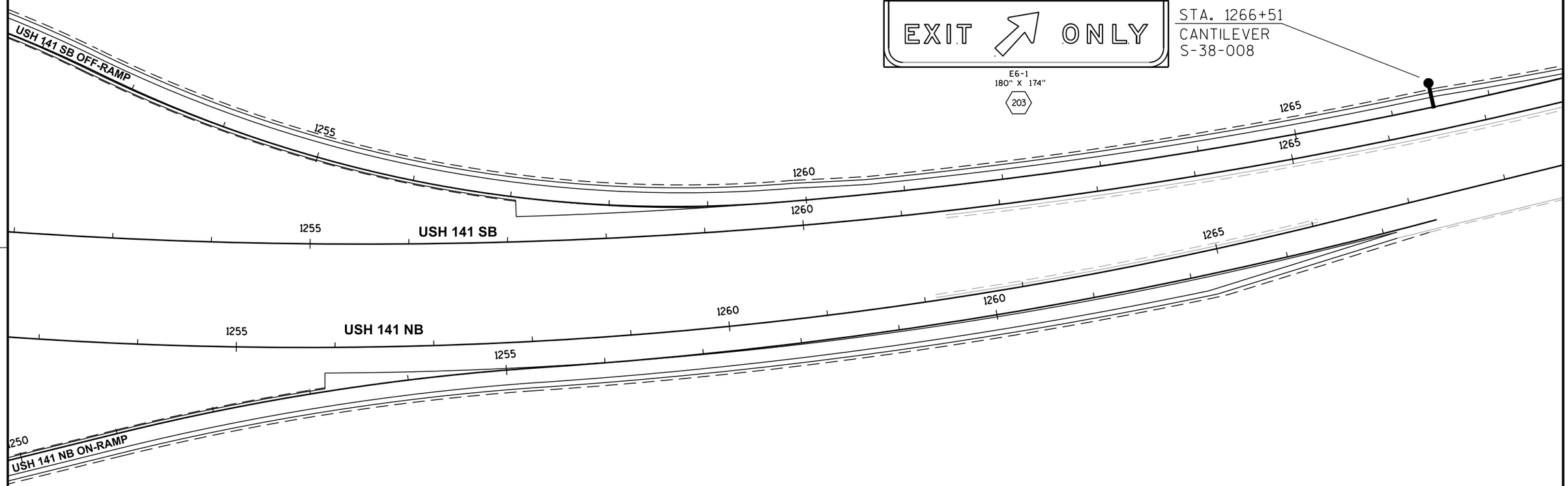
DO NOT MOVE OR REMOVE ANY SPECIFIC INFORMATION SIGNS (BLUE GAS, FOOD, LODGING, CAMPING OR ATTRACTION SIGNS) OR THEIR ASSOCIATED POSTS. A SEPARATE CONTRACTOR, DERSE, INC., MAINTAINS THESE SIGNS. CONTACT MARK ROGNSVOOG OF THE DERSE COMPANY AT (800) 345-5772 A MINIMUM OF 14 CALENDAR DAYS IN ADVANCE TO COORDINATE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

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



E6-1
180" X 174"
203

STA. 1266+51
CANTILEVER
S-38-008



SIGN-PLACE NEW

PLAN SHEET PRODUCED
BY WisDOT-NE REGION

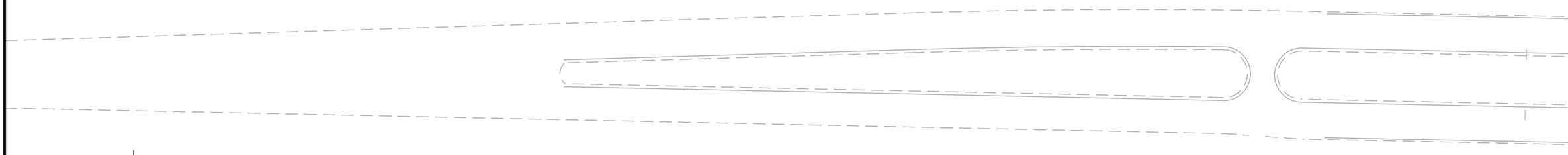
PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	PERMANENT SIGNING PLAN	SHEET 44	E

SIGNING NOTES

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.

N



STA. 1311+87
GROUND MOUNT



E1-1A
180" X 174"
204

SIGN-PLACE NEW

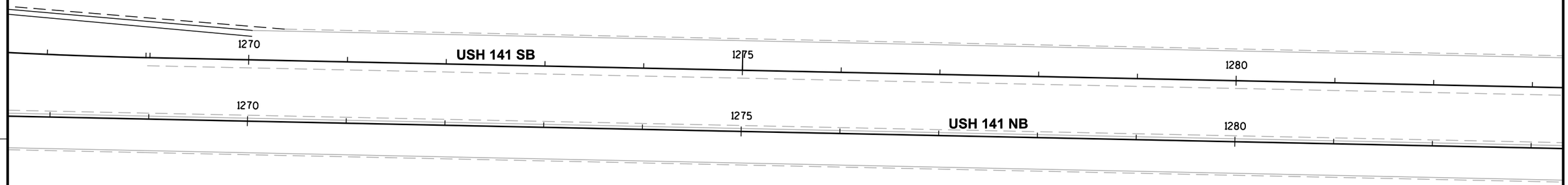
PLAN SHEET PRODUCED
BY WisDOT-NE REGION

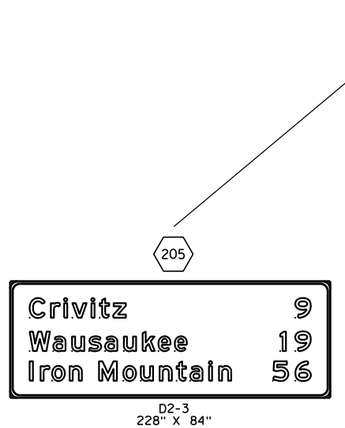
SIGNING NOTES

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

N





D2-3
228" X 84"

SIGN-PLACE NEW

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	PERMANENT SIGNING PLAN	SHEET 46	E

2

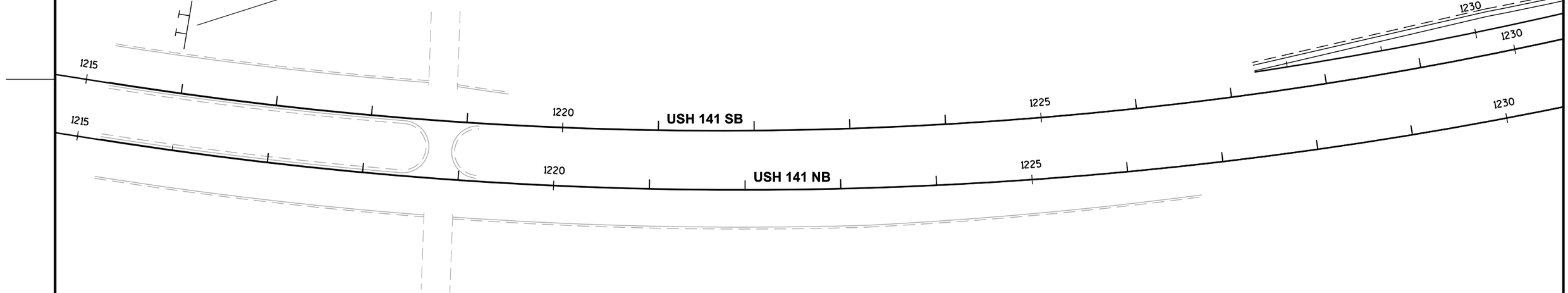
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THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THESE SIGNS.



D2-3
180" X 84"
206



SIGN-PLACE NEW

PLAN SHEET PRODUCED
BY WisDOT-NE REGION

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	PERMANENT SIGNING PLAN	SHEET 47	E

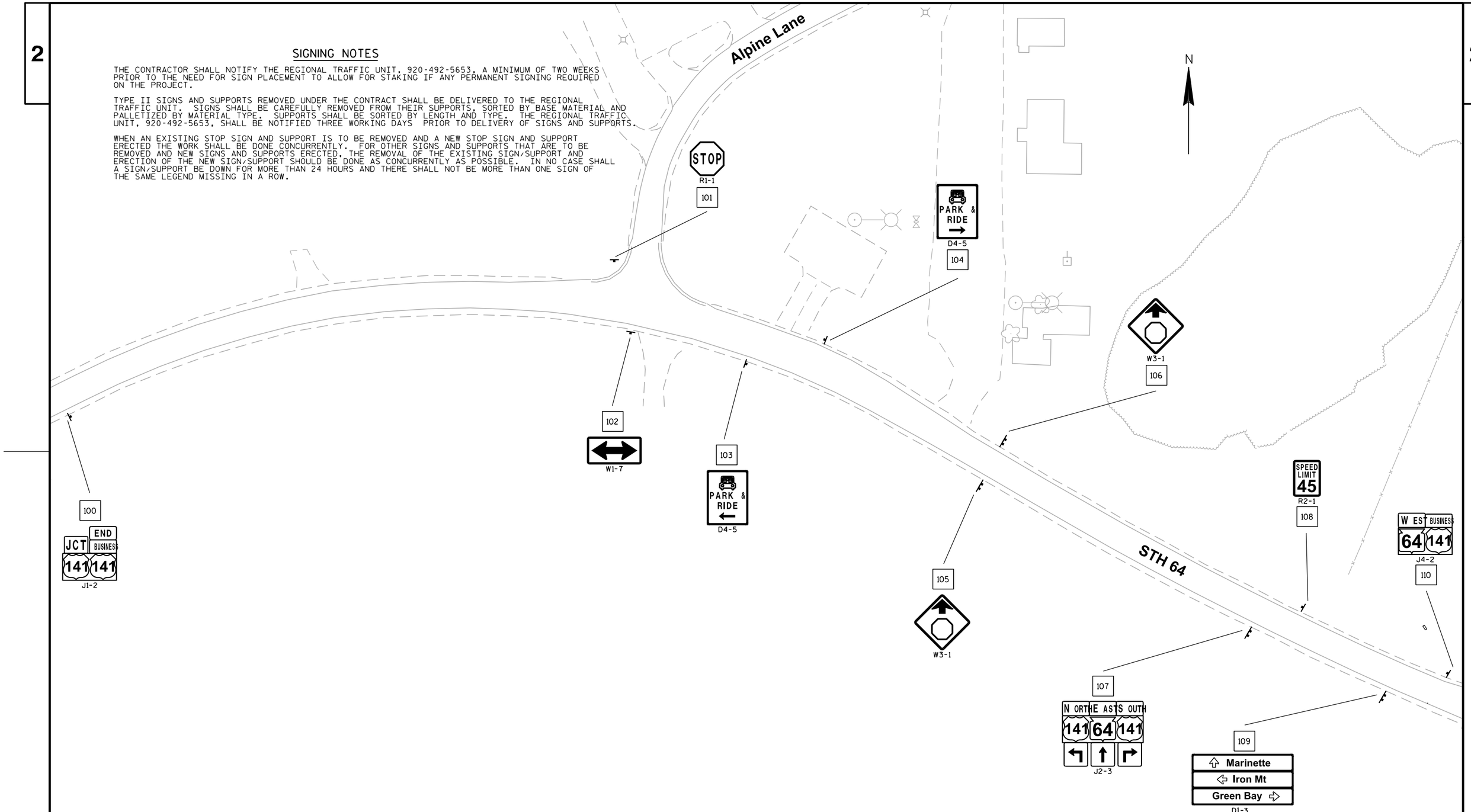
2

SIGNING NOTES

THE CONTRACTOR SHALL NOTIFY THE REGIONAL TRAFFIC UNIT, 920-492-5653, A MINIMUM OF TWO WEEKS PRIOR TO THE NEED FOR SIGN PLACEMENT TO ALLOW FOR STAKING IF ANY PERMANENT SIGNING REQUIRED ON THE PROJECT.

TYPE II SIGNS AND SUPPORTS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL TRAFFIC UNIT. SIGNS SHALL BE CAREFULLY REMOVED FROM THEIR 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 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.



SIGN-REMOVE EXISTING

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	SIGN REMOVALS-TYPE II	SHEET 48	E

2

STH 64

USH 141 SB

USH 141 NB

1250

1255

1260

STOP R1-1 111

E AST S OUTH 64 141 J3-2 113

DIVIDED HIGHWAY R6-3 112

S OUTH 141 J3-1 114

STOP R1-1 115

DIVIDED HIGHWAY R6-3 116

R4-7 117

R3-1 118

DO NOT ENTER R5-1 119

W EST BUSINES 64 141 J3-2 120

WRONG WAY R5-1A 121

BEGIN LEFT TURN LANE R3-20L 162

BEGIN RIGHT TURN LANE R3-20R 164

Marinette
Pound
Antigo
D1-3 165

W EST BUSINES 64 141 J2-2 167

E AST 64 J2-1 168

JCT BUSINES 64 141 J1-2 169

JCT BUSINES 64 141 J1-2 170

YIELD R1-2 128

YIELD R1-2 129

R3-1 130

DO NOT ENTER R5-1 131

R4-7 132

STOP R1-1 133

DIVIDED HIGHWAY R6-3 134

E AST 64 J4-1 135

STOP R1-1 126

DIVIDED HIGHWAY R6-3 127

BUSINES W EST N ORTH 141 64 141 J3-3 125

N ORTH 141 J3-1 124

E AST 64 J3-1 123

N ORTH 141 J4-1 122

SPEED LIMIT 65 R2-1 163

Crivitz 9
Wausaukee 19
Iron Mt 56
D2-3 166

Antigo
Green Bay
Iron Mt
D1-3 151

SIGN-REMOVE EXISTING

SIGNING NOTES

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PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	SIGN REMOVALS-TYPE II	SHEET 49	E

2

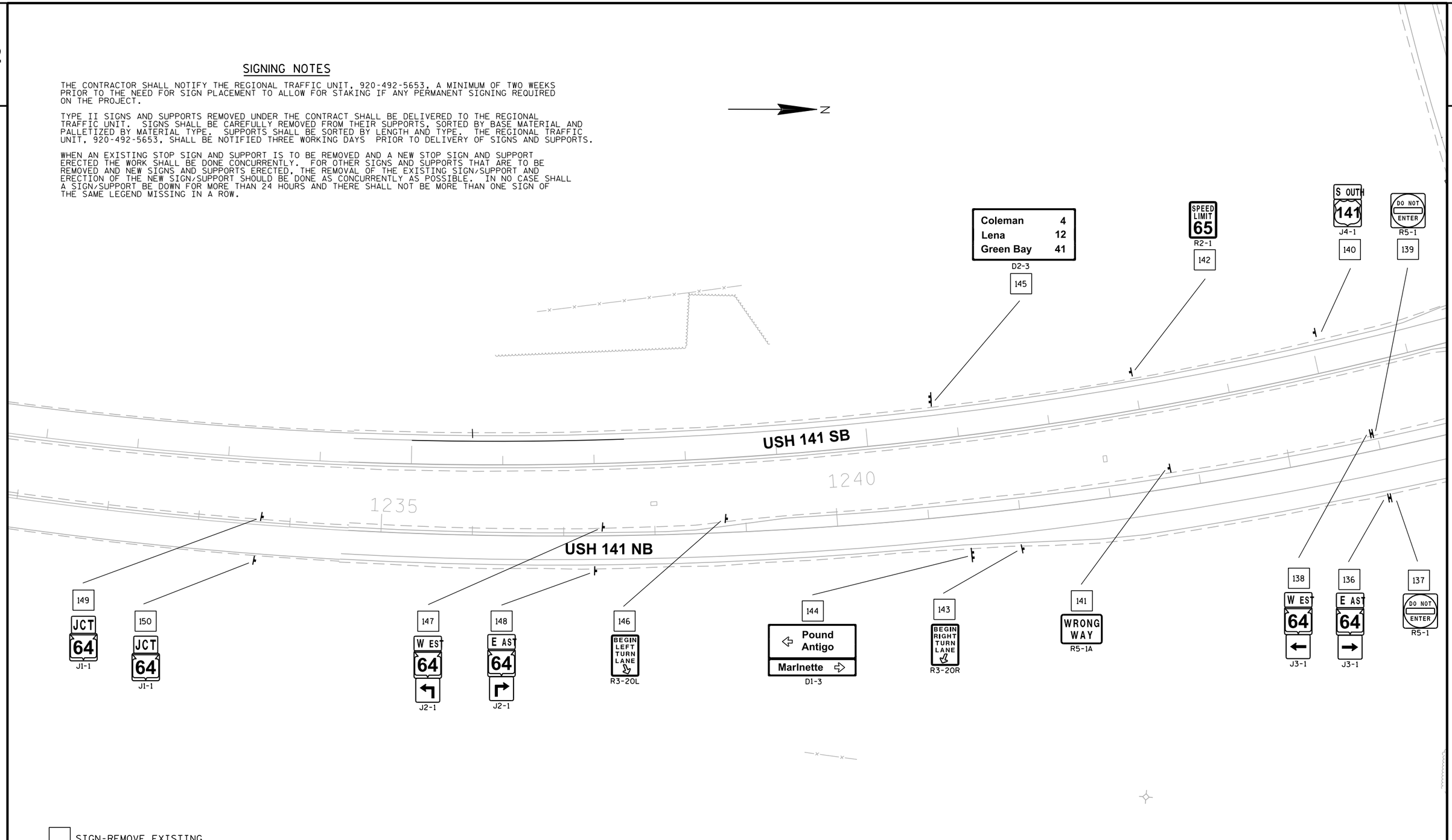
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N



SIGN-REMOVE EXISTING

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	SIGN REMOVALS-TYPE II	SHEET 50 E

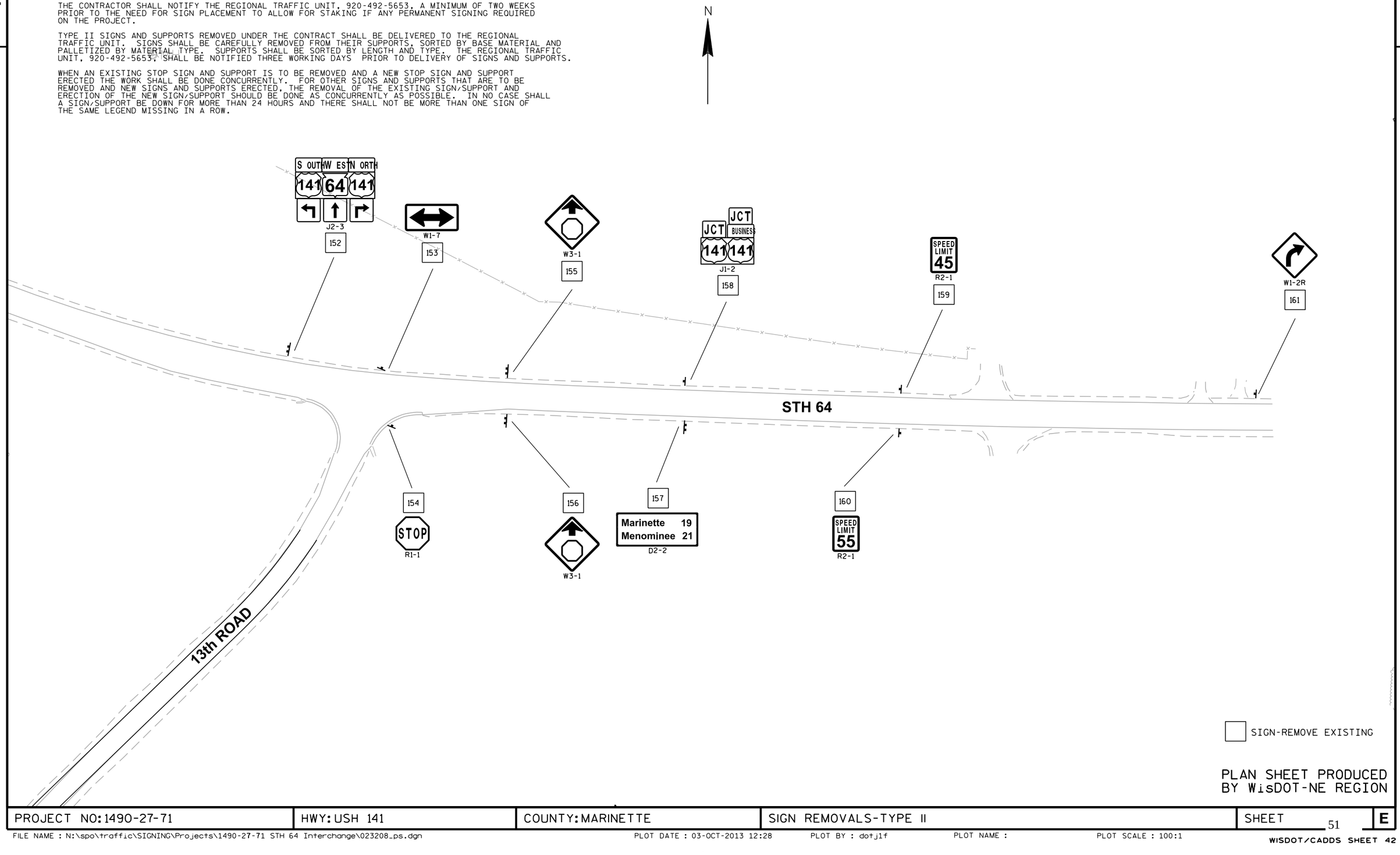
2

SIGNING NOTES

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SIGN-REMOVE EXISTING

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	SIGN REMOVALS-TYPE II	SHEET 51 E

2

2

LEGEND

PULL BOX 24" X 42"

RED FLASHING BEACON WITH STOP SIGN

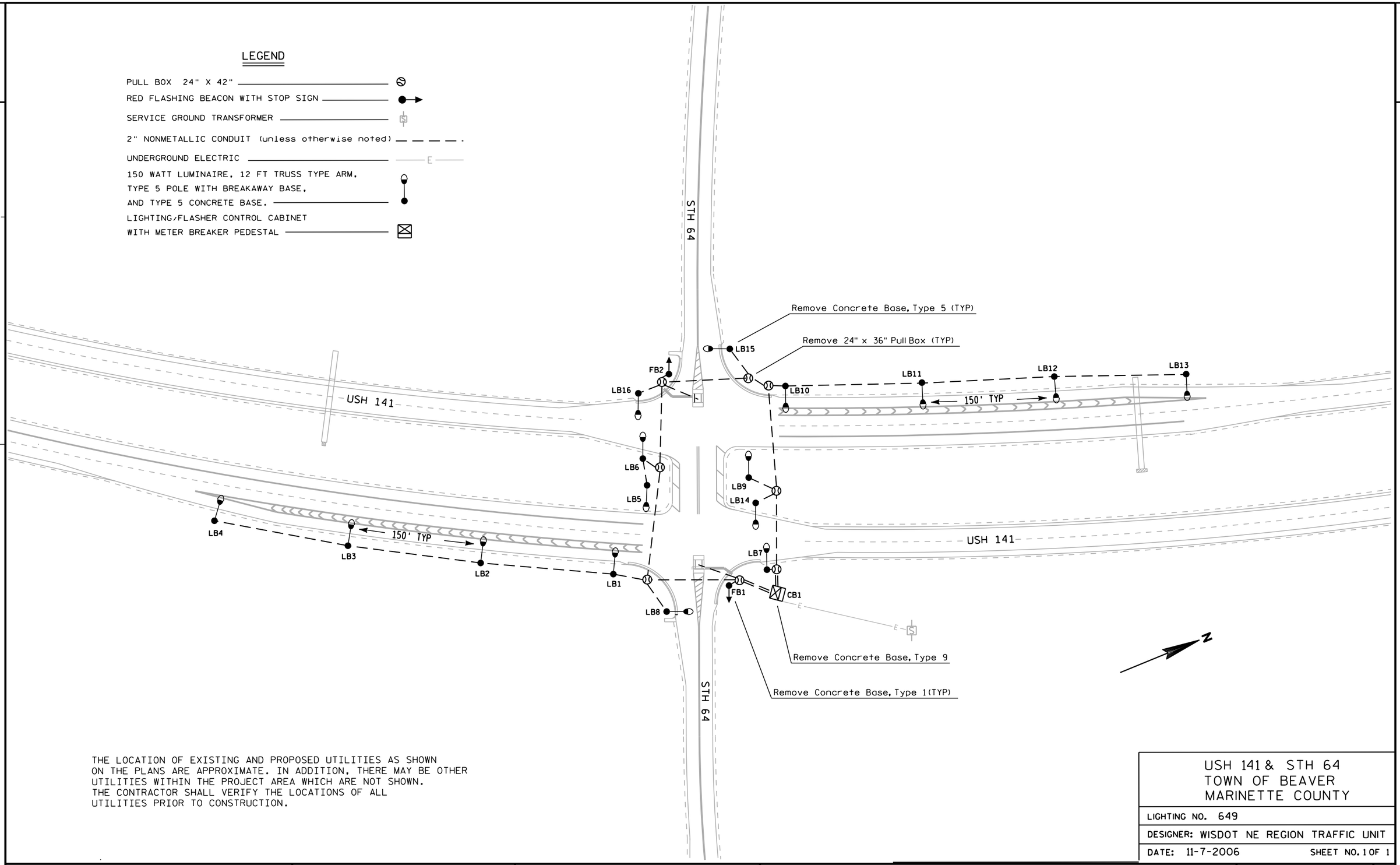
SERVICE GROUND TRANSFORMER

2" NONMETALLIC CONDUIT (unless otherwise noted)

UNDERGROUND ELECTRIC — E —

150 WATT LUMINAIRE, 12 FT TRUSS TYPE ARM, TYPE 5 POLE WITH BREAKAWAY BASE, AND TYPE 5 CONCRETE BASE.

LIGHTING/FLASHER CONTROL CABINET WITH METER BREAKER PEDESTAL



THE LOCATION OF EXISTING AND PROPOSED UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. IN ADDITION, THERE MAY BE OTHER UTILITIES WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.

USH 141 & STH 64
TOWN OF BEAVER
MARINETTE COUNTY

LIGHTING NO. 649

DESIGNER: WISDOT NE REGION TRAFFIC UNIT

DATE: 11-7-2006 SHEET NO. 1 OF 1

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CONSTRUCTION DETAIL - REMOVE LIGHTING/BEACON	SHEET	E

FILE NAME : F:\d3_traffi\L649.dgn PLOT DATE : 20-SEP-2013 10:33 PLOT BY : dotc5s PLOT NAME : L-649,remove PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

EXAMPLE (see individual label on each lighting unit)

III-LED A-12-5-A-4

- LIGHT UNIT NUMBER IN CIRCUIT
- CIRCUIT NUMBER
- BASE TYPE
- MAST ARM LENGTH (in feet)
- LAMP WATTAGE
- DISTRIBUTION TYPE

240 VOLT SYSTEM

120/240 VOLT ELECTRIC SERVICE

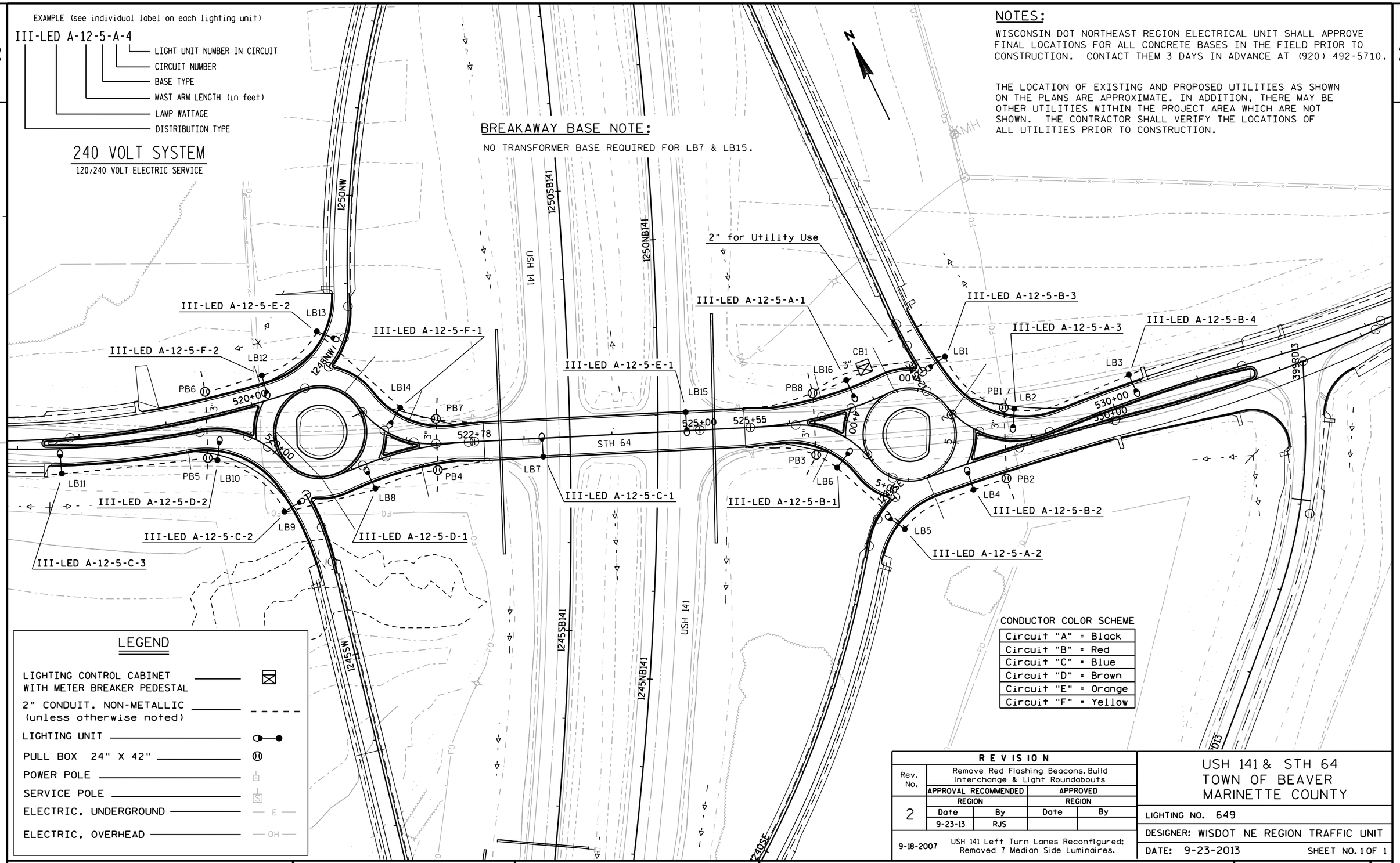
BREAKAWAY BASE NOTE:

NO TRANSFORMER BASE REQUIRED FOR LB7 & LB15.

NOTES:

WISCONSIN DOT NORTHEAST REGION ELECTRICAL UNIT SHALL APPROVE FINAL LOCATIONS FOR ALL CONCRETE BASES IN THE FIELD PRIOR TO CONSTRUCTION. CONTACT THEM 3 DAYS IN ADVANCE AT (920) 492-5710.

THE LOCATION OF EXISTING AND PROPOSED UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. IN ADDITION, THERE MAY BE OTHER UTILITIES WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.



LEGEND

- LIGHTING CONTROL CABINET WITH METER BREAKER PEDESTAL
- 2" CONDUIT, NON-METALLIC (unless otherwise noted)
- LIGHTING UNIT
- PULL BOX 24" X 42"
- POWER POLE
- SERVICE POLE
- ELECTRIC, UNDERGROUND — E —
- ELECTRIC, OVERHEAD — OH —

CONDUCTOR COLOR SCHEME

Circuit "A" = Black
Circuit "B" = Red
Circuit "C" = Blue
Circuit "D" = Brown
Circuit "E" = Orange
Circuit "F" = Yellow

REVISION				
Rev. No.	Remove Red Flashing Beacons, Build Interchange & Light Roundabouts			
	APPROVAL RECOMMENDED		APPROVED	
	REGION		REGION	
2	Date	By	Date	By
	9-23-13	RJS		
9-18-2007	USH 141 Left Turn Lanes Reconfigured; Removed 7 Median Side Luminaires.			

USH 141 & STH 64
TOWN OF BEAVER
MARINETTE COUNTY

LIGHTING NO. 649

DESIGNER: WISDOT NE REGION TRAFFIC UNIT

DATE: 9-23-2013 SHEET NO. 1 OF 1

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	HIGHWAY LIGHTING L-649	SHEET 53	E

FILE NAME : F:\d3_traffi\L649.dgn PLOT DATE : 26-SEP-2013 14:08 PLOT BY : dotc5s PLOT NAME : L-649,rev2 PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

PAVEMENT MARKING EPOXY
4-INCH EDGELINE, YELLOW

PAVEMENT MARKING EPOXY 8-INCH
EDGELINE WHITE, (5' PAST CURB

PAVEMENT MARKING EPOXY
ISLAND NOSE, YELLOW

PAVEMENT MARKING EPOXY
4-INCH EDGELINE, YELLOW

PAVEMENT MARKING
PREFORMED THERMOPLASTIC, 18-INCH
(2 FT LINE, 2 FT GAP)
WHITE (TYP)

PAVEMENT MARKING EPOXY
4-INCH EDGELINE, WHITE

PAVEMENT MARKING EPOXY
4-INCH EDGELINE, YELLOW

PAVEMENT MARKING EPOXY
4-INCH EDGELINE, WHITE

PAVEMENT MARKING EPOXY 8-INCH
EDGELINE WHITE, (5' PAST CURB

STH 64 WB
STH 64 EB
1249 NW RAMP
SW RAMP
1246
1247
N 13TH RD
NW RAMP
NE RAMP
SE RAMP
STH 64

517 517 518 518 519 519 520 521 521 522 522 523

5' TYP

NOTE:
PAVEMENT MARKING EXITING THE ROUNDABOUT ALONG SPLITTER ISLANDS WILL BE DETERMINED IN THE FIELD.

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	PAVEMENT DETAIL	SHEET E

FILE NAME : F:\d3_149027\024501_pm.dgn PLOT DATE : 26-FEB-2014 16:00 PLOT BY : dotqdc PLOT NAME : 024501pm PLOT SCALE : 40:1

PAVEMENT MARKING EPOXY 8-INCH
EDGELINE WHITE, (5' PAST CURB

PAVEMENT MARKING EPOXY
4-INCH EDGELINE, YELLOW

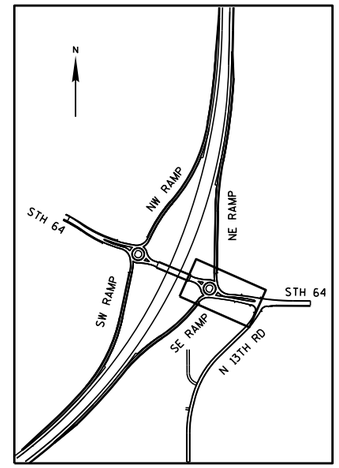
PAVEMENT MARKING
PREFORMED THERMOPLASTIC, 18-INCH
(2 FT LINE, 2 FT GAP)
WHITE (TYP)

PAVEMENT MARKING EPOXY
4-INCH EDGELINE, YELLOW

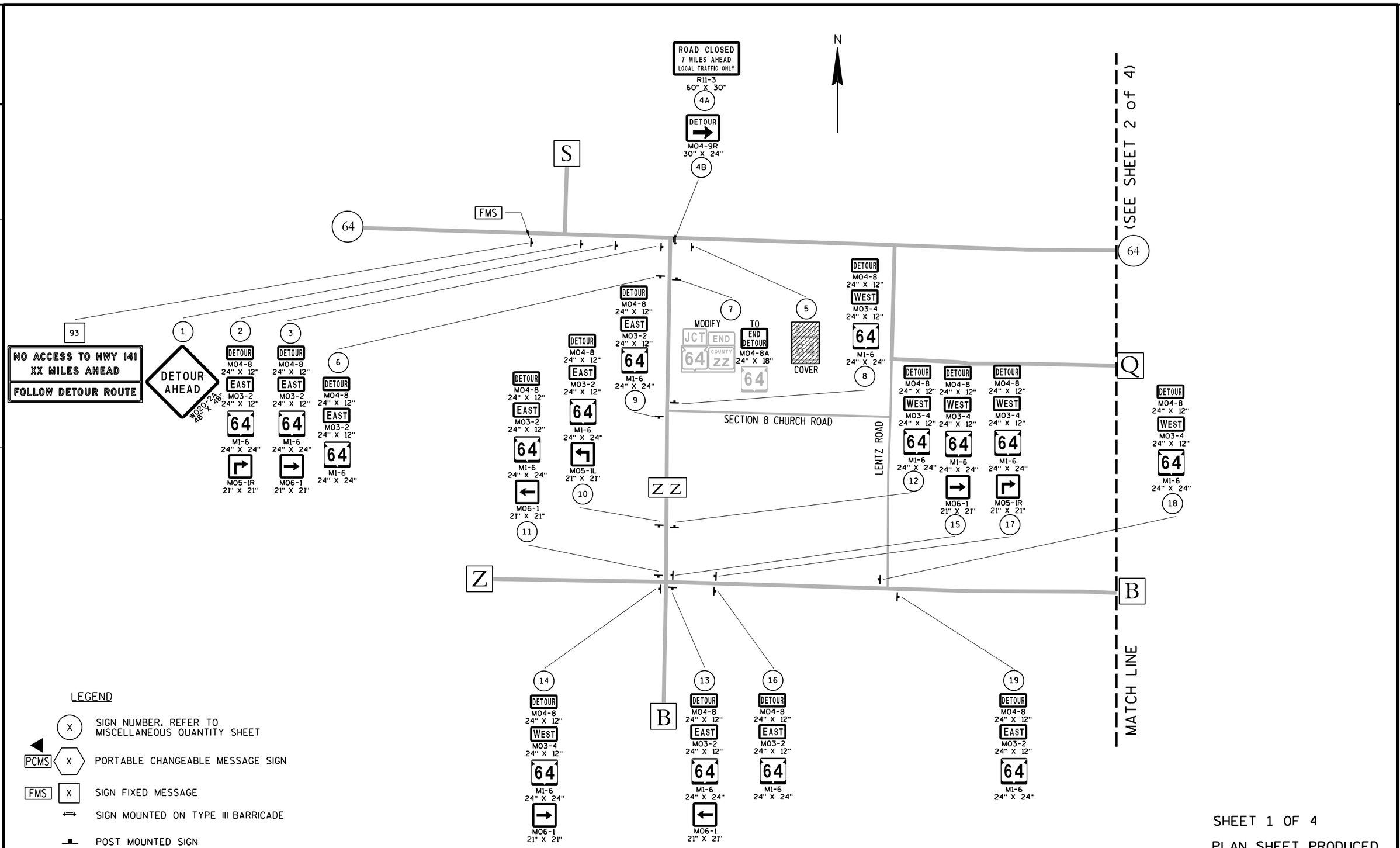
PAVEMENT MARKING EPOXY
4-INCH EDGELINE, WHITE

PAVEMENT MARKING EPOXY 8-INCH
EDGELINE WHITE, (5' PAST CURB

NOTE:
PAVEMENT MARKING EXITING THE ROUNDABOUT ALONG SPLITTER ISLANDS WILL BE DETERMINED IN THE FIELD.



PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	PAVEMENT DETAIL	SHEET	E

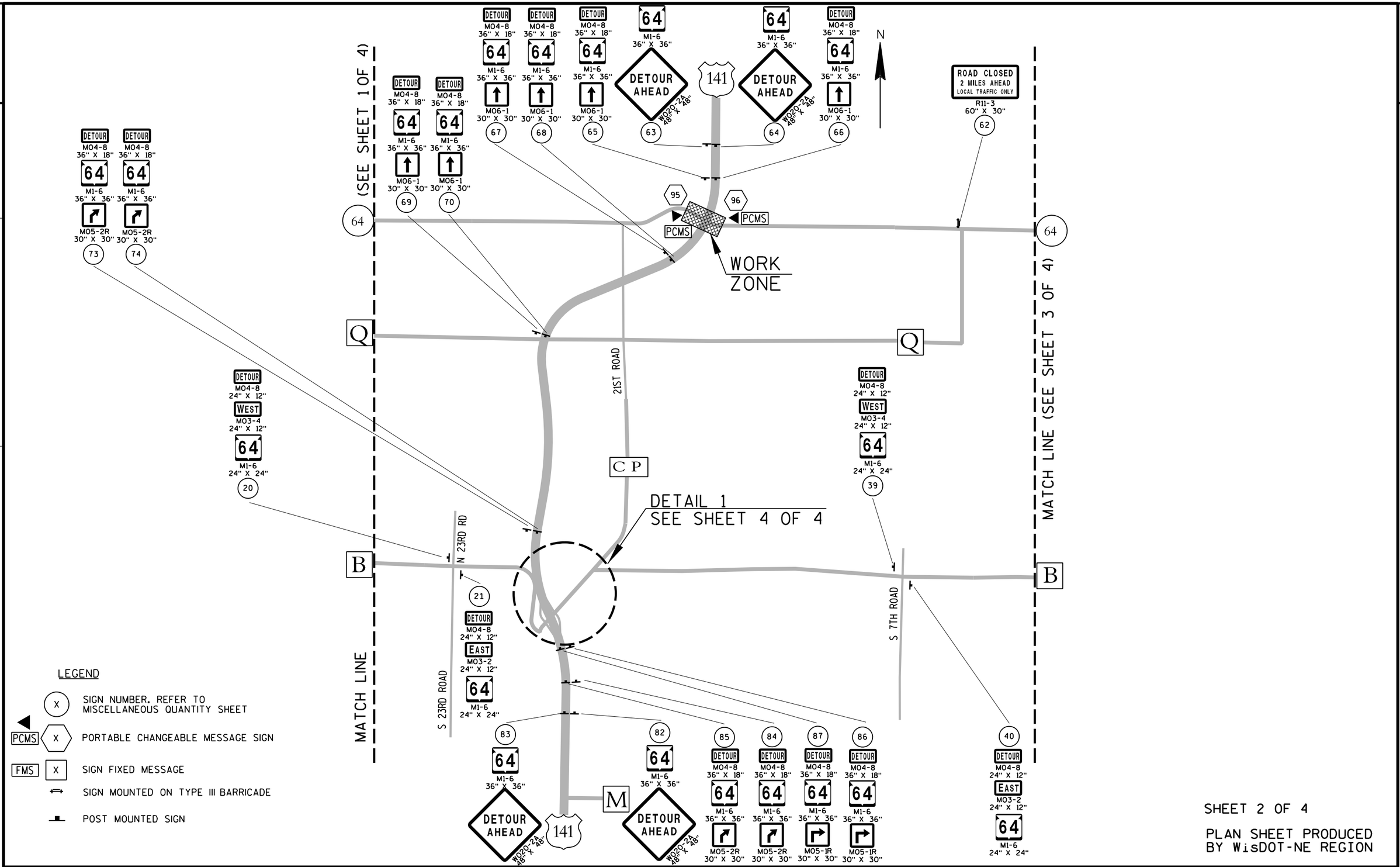


SHEET 1 OF 4

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 1490-27-71	HWY: STH 64	COUNTY: MARINETTE	DETOUR SIGNING DETAIL	SHEET E

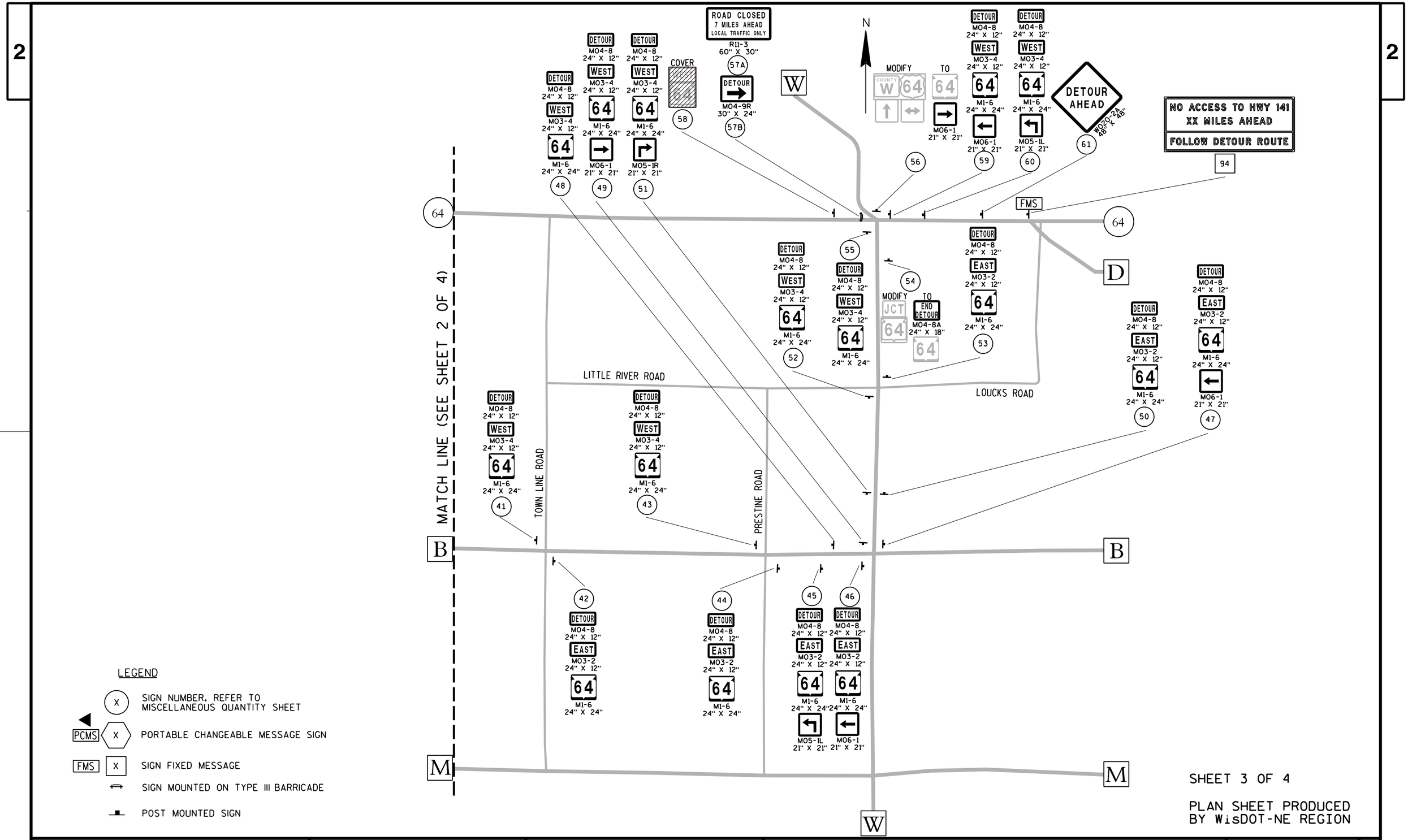
FILE NAME : $$....designfile....$$ PLOT DATE : $$...plottingdate...$$ PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



SHEET 2 OF 4

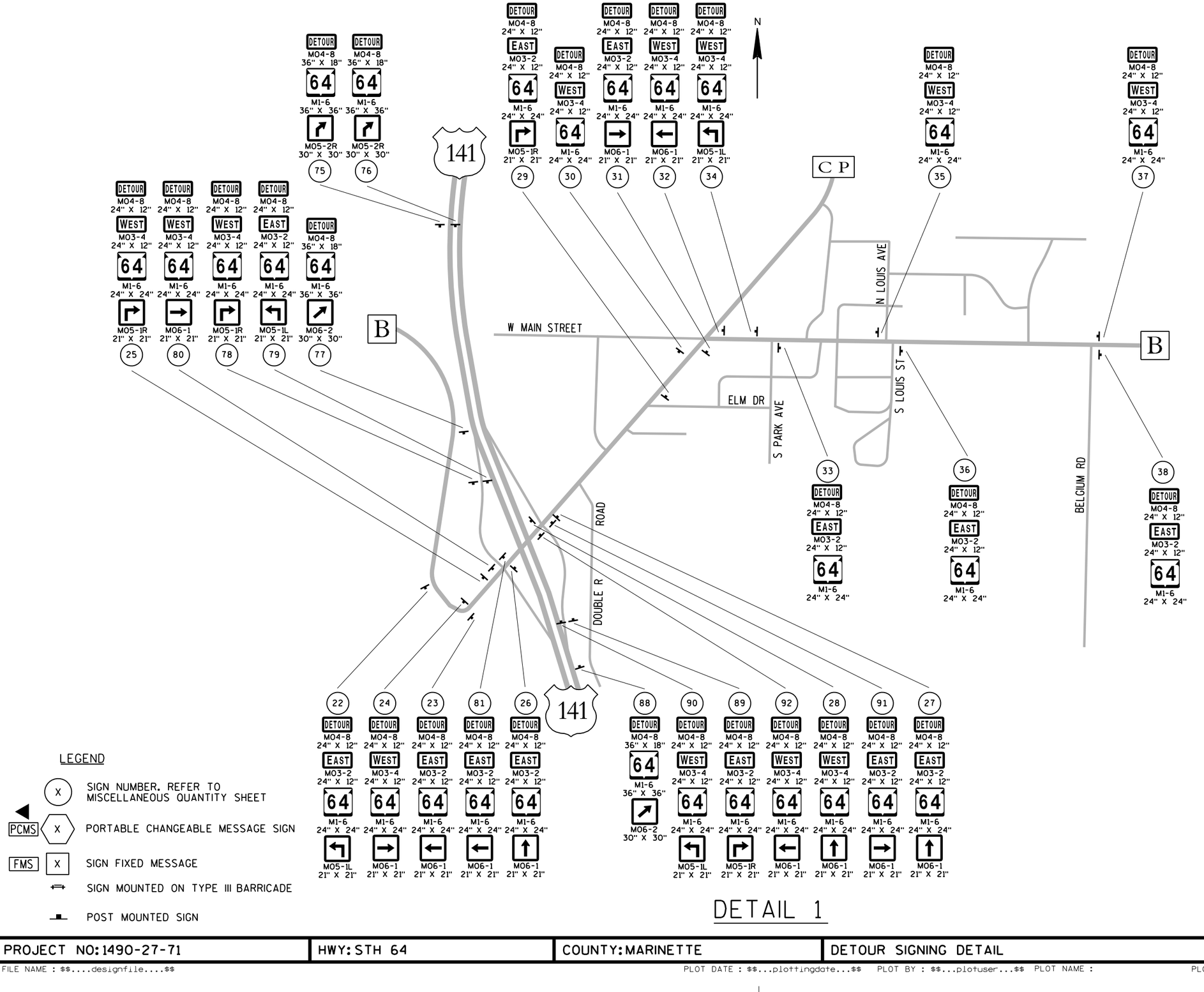
PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 1490-27-71	HWY: STH 64	COUNTY: MARINETTE	DETOUR SIGNING DETAIL	SHEET 57	E



PROJECT NO:1490-27-71	HWY: STH 64	COUNTY: MARINETTE	DETOUR SIGNING DETAIL	SHEET E

FILE NAME : $$....designfile....$$ PLOT DATE : $$...plottingdate...$$ PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$



LEGEND

- (X) SIGN NUMBER. REFER TO MISCELLANEOUS QUANTITY SHEET
- PCMS (X) PORTABLE CHANGEABLE MESSAGE SIGN
- FMS (X) SIGN FIXED MESSAGE
- SIGN MOUNTED ON TYPE III BARRICADE
- POST MOUNTED SIGN

DETAIL 1

SHEET 4 OF 4

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO:1490-27-71	HWY: STH 64	COUNTY: MARINETTE	DETOUR SIGNING DETAIL	SHEET 59	E

FILE NAME : $$....designfile....$$ PLOT DATE : $$...plottingdate...$$ PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

STH 64 EB C1 CURVE NOTES
PI = 510+67.47
Y = 153106.557
X = 702216.895
∠ = 243°-07'-45"
Δ = 63°-07'-45"
D = 6°-02'-31"
T = 582.58'
L = 1044.83'
R = 948.29'
RUNOFF =
S.E. =
S.E. TRANSITION =

STH 64 EB C2 CURVE NOTES
PI = 517+21.49
Y = 152651.146
X = 702843.173
∠ = 158°-12'-50"
Δ = 21°-47'-10"
D = 21°-47'-10"
T = 191.77'
L = 378.91'
R = 996.51'
RUNOFF =
S.E. =
S.E. TRANSITION =

STH 64 EB C3 CURVE NOTES
PI = 519+44.57
Y = 152595.142
X = 703063.892
∠ = 119°-31'-25"
Δ = 39°-31'-25"
D = 57°-16'-25"
T = 35.94'
L = 69.01'
R = 100.04'
RUNOFF =
S.E. =
S.E. TRANSITION =

STH 64 EB C4 CURVE NOTES
PI = 519+96.87
Y = 152550.642
X = 703096.507
∠ = 201°-49'-51"
Δ = 21°-49'-51"
D = 57°-27'-15"
T = 19.23'
L = 38.00'
R = 99.72'
RUNOFF =
S.E. =
S.E. TRANSITION =

STH 64 EB C5 CURVE NOTES
PI = 520+54.31
Y = 152494.560
X = 703110.915
∠ = 107°-46'-01"
Δ = 72°-13'-59"
D = 108°-06'-20"
T = 38.67'
L = 66.82'
R = 53.00'
RUNOFF =
S.E. =
S.E. TRANSITION =

STH 64 EB C6 CURVE NOTES
PI = 521+01.89
Y = 152491.155
X = 703168.921
∠ = 181°-28'-24"
Δ = 1°-28'-24"
D = 3°-47'-28"
T = 19.43'
L = 38.87'
R = 1511.35'
RUNOFF =
S.E. =
S.E. TRANSITION =

STH 64 EB C7 CURVE NOTES
PI = 521+79.46
Y = 152484.620
X = 703246.215
∠ = 197°-44'-38"
Δ = 17°-44'-38"
D = 15°-23'-03"
T = 58.13'
L = 115.34'
R = 372.43'
RUNOFF =
S.E. =
S.E. TRANSITION =

STH 64 WB C8 CURVE NOTES
PI = STH 64 EB C8
Y = 152298.273
X = 703694.406
∠ = 237°-23'-00"
Δ = 57°-23'-00"
D = 57°-19'-01"
T = 54.71'
L = 100.12'
R = 99.96'
RUNOFF =
S.E. =
S.E. TRANSITION =

STH 64 EB C9 CURVE NOTES
PI = 527+49.11
Y = 152205.218
X = 703710.881
∠ = 106°-12'-03"
Δ = 73°-47'-57"
D = 108°-06'-19"
T = 39.79'
L = 68.27'
R = 53.00'
RUNOFF =
S.E. =
S.E. TRANSITION =

STH 64 EB C10 CURVE NOTES
PI = 529+05.66
Y = 152187.202
X = 703877.779
∠ = 185°-16'-31"
Δ = 5°-16'-31'
D = 2°-03'-39"
T = 128.07'
L = 255.97'
R = 2780.19'
RUNOFF =
S.E. =
S.E. TRANSITION =

STH 64 EB C11 CURVE NOTES
PI = 531+74.74
Y = 152133.816
X = 704141.689
∠ = 168°-52'-31"
Δ = 11°-07'-29"
D = 3°-57'-09"
T = 141.18'
L = 281.47'
R = 1449.65'
RUNOFF =
S.E. =
S.E. TRANSITION =

STH 54 WB C13 CURVE NOTES
PI = 521+03.47
Y = 152593.216
X = 703198.588
∠ = 254°-25'-51"
Δ = 74°-25'-51"
D = 108°-06'-19"
T = 40.25'
L = 68.35'
R = 53.00'
RUNOFF =
S.E. =
S.E. TRANSITION =

STH 64 WB C12 CURVE NOTES
PI = 518+02.07
Y = 152628.902
X = 702888.774
∠ = 152°-30'-29"
Δ = 27°-29'-31"
D = 5°09'-37"
T = 271.61'
L = 532.76'
R = 1110.32'
RUNOFF =
S.E. =
S.E. TRANSITION =

STH 64 WB C15 CURVE NOTES
PI = 522+21.85
Y = 152481.447
X = 703253.848
∠ = 165°-40'-02"
Δ = 14°-19'-58"
D = 56°-10'-20"
T = 12.82'
L = 25.52'
R = 102.00'
RUNOFF =
S.E. =
S.E. TRANSITION =

STH 64 WB C14 CURVE NOTES
PI = 521+72.57
Y = 152513.466
X = 703211.217
∠ = 135°-54'-29"
Δ = 44°-05'-31"
D = 57°-18'-05"
T = 40.49'
L = 76.95'
R = 99.99'
RUNOFF =
S.E. =
S.E. TRANSITION =

STH 64 WB C16 CURVE NOTES
PI = 526+38.56
Y = 152307.138
X = 703673.082
∠ = 157°-47'-59"
Δ = 22°-12'-01"
D = 13°-28'-53"
T = 83.38'
L = 167.67'
R = 425.00'
RUNOFF =
S.E. =
S.E. TRANSITION =

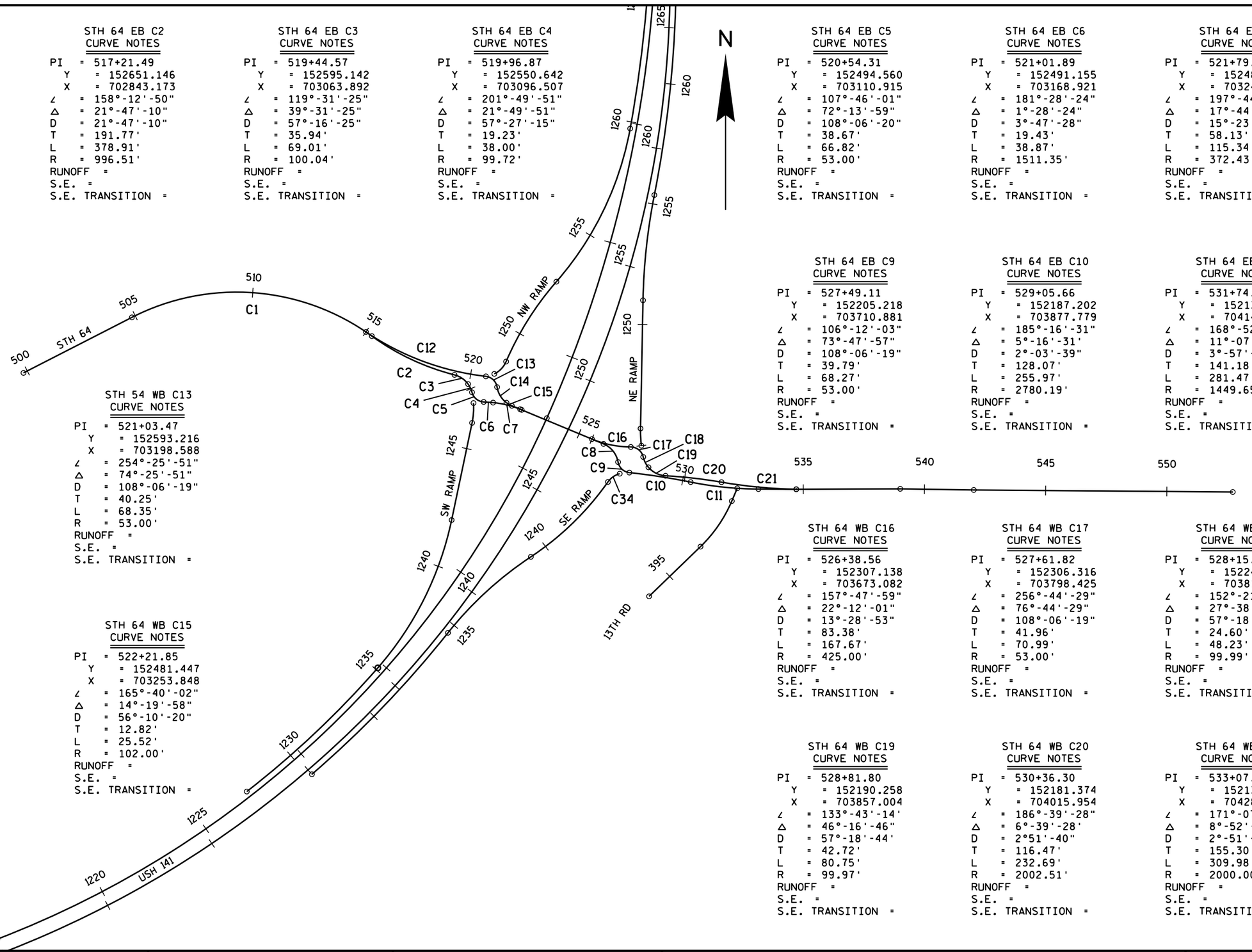
STH 64 WB C17 CURVE NOTES
PI = 527+61.82
Y = 152306.316
X = 703798.425
∠ = 256°-44'-29"
Δ = 76°-44'-29"
D = 108°-06'-19"
T = 41.96'
L = 70.99'
R = 53.00'
RUNOFF =
S.E. =
S.E. TRANSITION =

STH 64 WB C18 CURVE NOTES
PI = 528+15.44
Y = 152241.432
X = 703813.265
∠ = 152°-21'-40"
Δ = 27°-38'-20"
D = 57°-18'-05"
T = 24.60'
L = 48.23'
R = 99.99'
RUNOFF =
S.E. =
S.E. TRANSITION =

STH 64 WB C19 CURVE NOTES
PI = 528+81.80
Y = 152190.258
X = 703857.004
∠ = 133°-43'-14"
Δ = 46°-16'-46"
D = 57°-18'-44"
T = 42.72'
L = 80.75'
R = 99.97'
RUNOFF =
S.E. =
S.E. TRANSITION =

STH 64 WB C20 CURVE NOTES
PI = 530+36.30
Y = 152181.374
X = 704015.954
∠ = 186°-39'-28"
Δ = 6°-39'-28'
D = 2°51'-40"
T = 116.47'
L = 232.69'
R = 2002.51'
RUNOFF =
S.E. =
S.E. TRANSITION =

STH 64 WB C21 CURVE NOTES
PI = 533+07.82
Y = 152134.849
X = 704283.720
∠ = 171°-07'-11'
Δ = 8°-52'-49'
D = 2°-51'-53"
T = 155.30'
L = 309.98'
R = 2000.00'
RUNOFF =
S.E. =
S.E. TRANSITION =



SW RAMP C25 CURVE NOTES

PI = 1231+38.88
Y = 151114.675
X = 702466.907
∠ = 169°-03'-05"
Δ = 10°-56'-55"
D = 1°-28'-15"
T = 373.33'
L = 744.39'
R = 3895.55'
RUNOFF =
S.E. =
S.E. TRANSITION =

SW RAMP C26 CURVE NOTES

PI = 1238+62.16
Y = 151660.700
X = 702944.699
∠ = 150°-42'-32"
Δ = 29°-17'-28"
D = 4°-15'-04"
T = 352.22'
L = 689.03'
R = 1347.81'
RUNOFF =
S.E. =
S.E. TRANSITION =

SW RAMP C27 CURVE NOTES

PI = 1246+49.80
Y = 152446.504
X = 703110.237
∠ = 164°-17'-22"
Δ = 15°-42'-38"
D = 19°-05'-56"
T = 41.39'
L = 82.26'
R = 300.00'
RUNOFF =
S.E. =
S.E. TRANSITION =

NW RAMP C28 CURVE NOTES

PI = 1248+37.52
Y = 152624.378
X = 703227.257
∠ = 138°-58'-44"
Δ = 41°-01'-16"
D = 57°-07'-41"
T = 37.52'
L = 71.81'
R = 100.29'
RUNOFF =
S.E. =
S.E. TRANSITION =

NW RAMP C29 CURVE NOTES

PI = 1250+68.87
Y = 152839.911
X = 703319.857
∠ = 197°-53'-35"
Δ = 17°-53'-35"
D = 4°-34'-38"
T = 197.06'
L = 390.92'
R = 1251.77'
RUNOFF =
S.E. =
S.E. TRANSITION =

NW RAMP C30 CURVE NOTES

PI = 1256+26.26
Y = 153262.081
X = 703688.694
∠ = 149°-11'32"
Δ = 30°-48'-28"
D = 4°-20'-33"
T = 363.53'
L = 709.46'
R = 1319.45'
RUNOFF =
S.E. =
S.E. TRANSITION =

NW RAMP 31 CURVE NOTES

PI = 1264+36.29
Y = 154076.284
X = 703837.173
∠ = 169°-59'-56"
Δ = 10°-00'-04"
D = 1°-04'-49"
T = 464.10'
L = 925.84'
R = 5304.10'
RUNOFF =
S.E. =
S.E. TRANSITION =

SE RAMP C32 CURVE NOTES

PI = 1230+56.17
Y = 151222.131
X = 702749.027
∠ = 169°-14'-50"
Δ = 10°-45'-10"
D = 1°-19'-33"
T = 406.67'
L = 810.96'
R = 4321.18'
RUNOFF =
S.E. =
S.E. TRANSITION =

NE RAMP C36 CURVE NOTES

PI = 1245+35.52
Y = 152347.199
X = 703795.880
∠ = 187°-48'-54"
Δ = 7°-48'-54"
D = 11°-00'-59"
T = 35.52'
L = 70.94'
R = 520.09'
RUNOFF =
S.E. =
S.E. TRANSITION =

SE RAMP C33 CURVE NOTES

PI = 1236+95.18
Y = 151723.970
X = 703148.465
∠ = 197°-58'-24"
Δ = 17°-58'-24"
D = 3°-51'-37"
T = 234.73'
L = 465.60'
R = 1484.24'
RUNOFF =
S.E. =
S.E. TRANSITION =

SE RAMP C35 CURVE NOTES

PI = 1244+03.30
Y = 152188.135
X = 703680.171
∠ = 219°-34'-18"
Δ = 39°-34'-18"
D = 65°-10'-01"
T = 31.63'
L = 60.72'
R = 87.92'
RUNOFF =
S.E. =
S.E. TRANSITION =

SE RAMP C34 CURVE NOTES

PI = 1241+51.47
Y = 151977.999
X = 703532.133
∠ = 158°-40'-22"
Δ = 21°-19'-38"
D = 4°-47'-10"
T = 225.42'
L = 445.62'
R = 1197.16'
RUNOFF =
S.E. =
S.E. TRANSITION =

N 13TH ROAD C24 CURVE NOTES

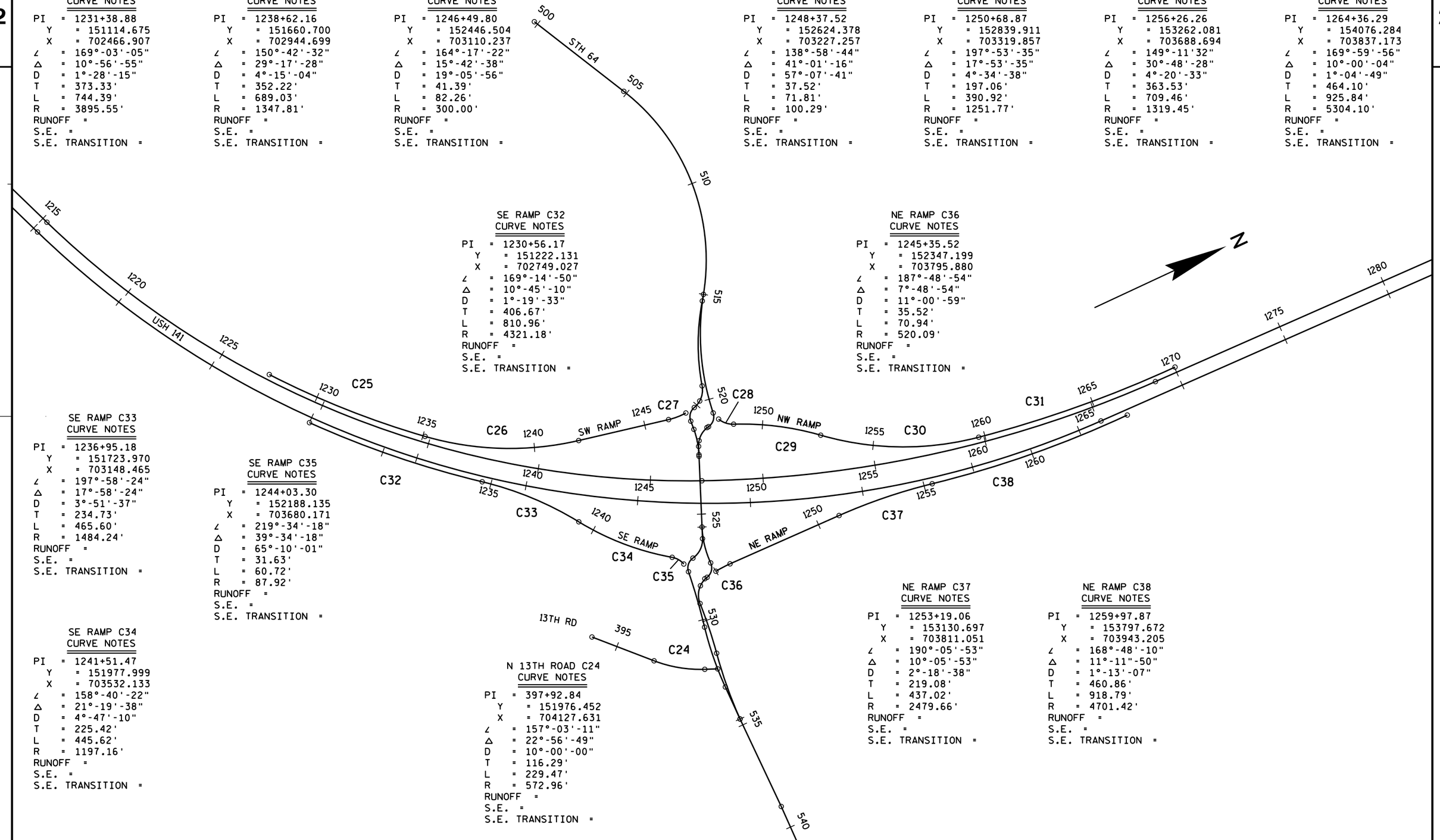
PI = 397+92.84
Y = 151976.452
X = 704127.631
∠ = 157°-03'-11"
Δ = 22°-56'-49"
D = 10°-00'-00"
T = 116.29'
L = 229.47'
R = 572.96'
RUNOFF =
S.E. =
S.E. TRANSITION =

NE RAMP C37 CURVE NOTES

PI = 1253+19.06
Y = 153130.697
X = 703811.051
∠ = 190°-05'-53"
Δ = 10°-05'-53"
D = 2°-18'-38"
T = 219.08'
L = 437.02'
R = 2479.66'
RUNOFF =
S.E. =
S.E. TRANSITION =

NE RAMP C38 CURVE NOTES

PI = 1259+97.87
Y = 153797.672
X = 703943.205
∠ = 168°-48'-10"
Δ = 11°-11'-50"
D = 1°-13'-07"
T = 460.86'
L = 918.79'
R = 4701.42'
RUNOFF =
S.E. =
S.E. TRANSITION =



PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	ALIGNMENT DIAGRAM - USH 141 AND RAMPS AND 13TH ROAD	SHEET 61	E

PI DATA TABLE (STH64-NW FLANGE)		
STATION	COORDINATES X	Y
520+44.63	702972.5877	152653.1628
523+36.65	703235.2169	152680.8109

DATA TABLE		
POINT NUMBER	STATION	OFFSET (FT)
4	521+95.56	3.50 LT
5	522+31.17	5.42 LT
6	522+69.02	3.50 RT

DATA TABLE		
POINT NUMBER	STATION	OFFSET (FT)
7	514+85.71	3.51 LT
8	515+26.91	10.65 LT
9	515+68.10	3.50 LT

518 519 520 521 522 523

WBFL1-CUR10

PI STA = 519+68.18
Y = 152654.330
X = 702887.142
DELTA = 25°05'04"
D = 5°17'27"
T = 240.92'
L = 474.11'
R = 1082.93'
PC STA = 517+27.27
PT STA = 522+01.38

WBFL1-CUR11

PI STA = 522+18.32
Y = 152616.888
X = 703142.270
DELTA = 18°32'14"
D = 55°10'56"
T = 16.94'
L = 33.59'
R = 103.83'
PC STA = 522+01.38
PT STA = 522+34.97

N

WBFL1-NWRCUR12

PI STA = 522+90.39
Y = 152629.845
X = 703213.460
DELTA = 56°33'05"
D = 55°36'55"
T = 55.42'
L = 101.68'
R = 103.02'
PC STA = 522+34.97
PT STA = 523+36.65

EP: 523+36.65

PCC: 522+01.38

PCC: 522+34.97

WBFL1-NWRCUR12

WBFL1-CUR11

EBFL1-CUR1

PI STA = 519+29.74
Y = 152640.068
X = 702831.051
DELTA = 20°43'33"
D = 5°38'02"
T = 185.97'
L = 367.88'
R = 1017.00'
PC STA = 517+43.77
PT STA = 521+11.65

EBFL1-CUR1

PI DATA TABLE (STH64-WB FLANGE)		
STATION	COORDINATES X	Y
515+68.96	703295.2796	152483.4458

WBFL3-CUR14

PI STA = 515+20.27
Y = 152499.889
X = 703236.369
DELTA = 62°44'06"
D = 57°06'29"
T = 61.16'
L = 109.85'
R = 100.33'
PC STA = 514+59.10
PT STA = 515+68.96

BP: 514+59.10

PT: 515+68.96

PI: 515+99.04

WBFL3-CIR14

PI DATA TABLE (STH64-SW FLANGE)		
STATION	COORDINATES X	Y
519+44.78	702853.7864	152648.0451
523+44.68	703083.9122	152394.3066

EBFL1-CUR2

PI STA = 521+77.37
Y = 152574.064
X = 703073.928
DELTA = 64°34'22"
D = 55°05'32"
T = 65.71'
L = 117.21'
R = 104.00'
PC STA = 521+11.65
PT STA = 522+28.86

PRC: 521+11.65

BP: 521+11.65

PCC: 522+28.86

EBFL1-CUR2

EBFL1-SWRCUR3

PI STA = 522+87.50
Y = 152451.687
X = 703096.000
DELTA = 22°07'12"
D = 19°05'55"
T = 58.64'
L = 115.82'
R = 300.00'
PC STA = 522+28.86
PT STA = 523+44.68

EP: 523+44.68

EBFL1-SWRCUR3

EBFL2-CIR5

BP: 522+66.51

EBFL2-CUR5

PI STA = 523+32.88
Y = 152472.106
X = 703218.835
DELTA = 18°45'52"
D = 14°15'50"
T = 66.37'
L = 131.55'
R = 401.69'
PC STA = 522+66.51
PT STA = 523+98.06

PT: 523+98.06

PI: 524+28.29

DATA TABLE		
POINT NUMBER	STATION	OFFSET (FT)
1	521+11.65	4.53 RT
2	521+90.38	8.33 RT
3	522+67.06	3.50 RT

PI DATA TABLE (STH64-SW FLANGE)		
STATION	COORDINATES X	Y
523+98.21	703281.7557	152450.5403

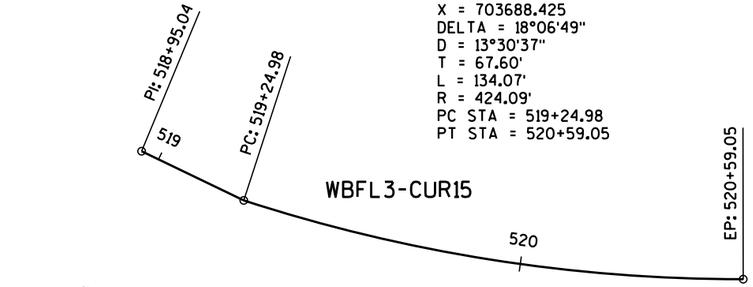
PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	ALIGNMENT DIAGRAM (QUADRANT CURB LINES STH 64)	SHEET 62	E

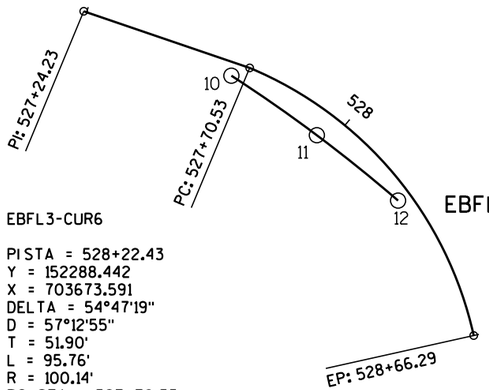
2

PI DATA TABLE (STH64-WB FLANGE)		
STATION	COORDINATES X	Y
519+25.00	703624.1932	152347.4828
520+59.05	703756.0252	152326.5921

WBFL3-CUR15

PISTA = 519+92.58
Y = 152326.483
X = 703688.425
DELTA = 18°06'49"
D = 13°30'37"
T = 67.60'
L = 134.07'
R = 424.09'
PC STA = 519+24.98
PT STA = 520+59.05



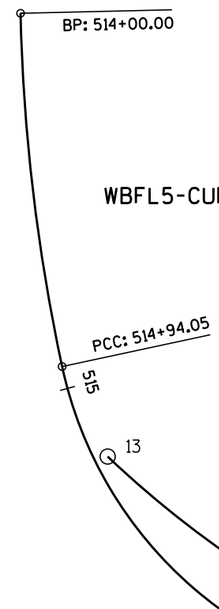


EBFL3-CUR6

PISTA = 528+22.43
Y = 152288.442
X = 703673.591
DELTA = 54°47'19"
D = 57°12'55"
T = 51.90'
L = 95.76'
R = 100.14'
PC STA = 527+70.53
PT STA = 528+66.29

DATA TABLE		
POINT NUMBER	STATION	OFFSET (FT)
10	527+66.62	3.50 RT
11	527+95.66	6.63 RT
12	528+24.56	3.49 RT

PI DATA TABLE (STH64-EB FLANGE)		
STATION	COORDINATES X	Y
527+70.53	703625.7042	152308.4422



WBFL5-CUR17

PISTA = 514+47.16
Y = 152334.064
X = 703813.187
DELTA = 10°46'38"
D = 11°27'33"
T = 47.16'
L = 94.05'
R = 500.00'
PC STA = 514+00.00
PT STA = 514+94.05

DATA TABLE		
POINT NUMBER	STATION	OFFSET (FT)
13	515+20.92	3.50 LT
14	515+79.99	13.27' LT
15	516+38.76	3.50 LT

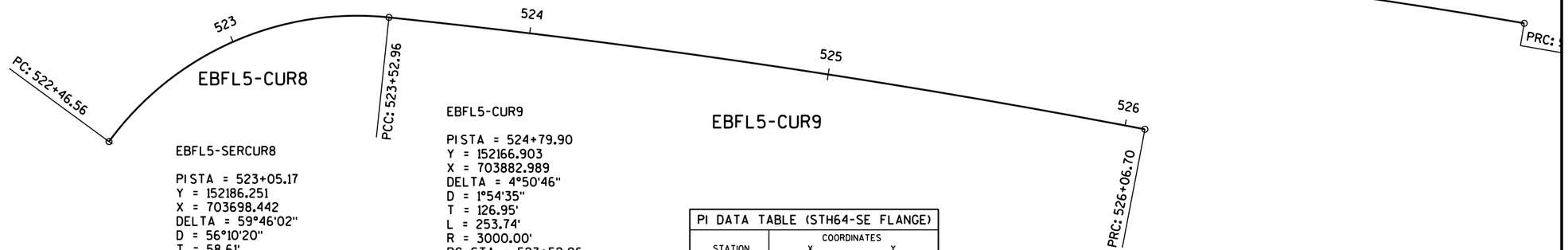
WBFL5-CUR18

PISTA = 515+74.82
Y = 152208.988
X = 703840.081
DELTA = 74°02'14"
D = 53°29'24"
T = 80.77'
L = 138.41'
R = 107.12'
PC STA = 514+94.05
PT STA = 516+32.46

PI DATA TABLE (STH64-NE FLANGE)		
STATION	COORDINATES X	Y
514+00.00	703812.0940	152381.2153
516+32.46	703920.6743	152203.6198
518+46.98	704133.5819	152178.1905

WBFL5-CUR19

PISTA = 517+39.82
Y = 152196.572
X = 704027.805
DELTA = 6°05'38"
D = 2°50'26"
T = 107.36'
L = 214.52'
R = 2017.00'
PC STA = 516+32.46
PT STA = 518+46.98



EBFL5-SERCUR8

PISTA = 523+05.17
Y = 152186.251
X = 703698.442
DELTA = 59°46'02"
D = 56°10'20"
T = 58.61'
L = 106.40'
R = 102.00'
PC STA = 522+46.56
PT STA = 523+52.96

EBFL5-CUR9

PISTA = 524+79.90
Y = 152166.903
X = 703882.989
DELTA = 4°50'46"
D = 1°54'35"
T = 126.95'
L = 253.74'
R = 3000.00'
PC STA = 523+52.96
PT STA = 526+06.70

PI DATA TABLE (STH64-SE FLANGE)		
STATION	COORDINATES X	Y
522+46.56	703663.8092	152138.9630
526+06.70	704007.6730	152143.0477

N

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	ALIGNMENT DIAGRAM (QUADRANT CURB LINES STH 64)	SHEET	E

FILE NAME : F:\d3_149027\027206_ad.dgn PLOT DATE : 16-DEC-2013 12:55 PLOT BY : dotbrb PLOT NAME : 027206 ad PLOT SCALE : 40:1
WISDOT/CADDS SHEET 42

DATE 27FEB14 — 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	1490-27-71 QUANTITY
0010	201.0105	CLEARING	STA	21.000	21.000
0020	201.0205	GRUBBING	STA	21.000	21.000
0030	204.0100	REMOVING PAVEMENT	SY	250.000	250.000
0040	204.0110	REMOVING ASPHALTIC SURFACE	SY	21,400.000	21,400.000
0050	204.0150	REMOVING CURB & GUTTER	LF	1,930.000	1,930.000
0060	204.0155	REMOVING CONCRETE SIDEWALK	SY	760.000	760.000
0070	204.0195	REMOVING CONCRETE BASES	EACH	19.000	19.000
0080	205.0100	EXCAVATION COMMON	CY	41,800.000	41,800.000
0090	205.0400	EXCAVATION MARSH	CY	3,800.000	3,800.000
0100	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 01. B-38-145	LS	1.000	1.000
0110	208.0100	BORROW	CY	291,000.000	291,000.000
0120	208.1100	SELECT BORROW	CY	4,350.000	4,350.000
0130	210.0100	BACKFILL STRUCTURE	CY	690.000	690.000
0140	211.0400	PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS	STA	55.000	55.000
0150	213.0100	FINISHING ROADWAY (PROJECT) 01. 1490-27-71	EACH	1.000	1.000
0160	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	3,600.000	3,600.000
0170	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	10,900.000	10,900.000
0180	313.0110	PIT RUN	TON	29,100.000	29,100.000
0190	405.0100	COLORING CONCRETE RED	CY	939.000	939.000
0200	415.0080	CONCRETE PAVEMENT 8-INCH	SY	615.000	615.000
0210	415.0410	CONCRETE PAVEMENT APPROACH SLAB	SY	155.000	155.000
0220	416.0512	CONCRETE ROUNDABOUT TRUCK APRON 12-INCH	SY	1,085.000	1,085.000
0230	455.0105	ASPHALTIC MATERIAL PG58-28	TON	845.000	845.000
0240	455.0605	TACK COAT	GAL	1,500.000	1,500.000
0250	460.1100	HMA PAVEMENT TYPE E-0.3	TON	2,210.000	2,210.000
0260	460.1103	HMA PAVEMENT TYPE E-3	TON	13,200.000	13,200.000
0270	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	9,870.000	9,870.000
0280	465.0315	ASPHALTIC FLUMES	SY	120.000	120.000
0290	465.0400	ASPHALTIC SHOULDER RUMBLE STRIP	LF	9,050.000	9,050.000
0300	502.0100	CONCRETE MASONRY BRIDGES	CY	1,050.000	1,050.000
0310	502.3200	PROTECTIVE SURFACE TREATMENT	SY	2,131.000	2,131.000
0320	503.0172	PRESTRESSED GIRDER TYPE I 72W-INCH	LF	2,050.000	2,050.000
0330	505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	10,750.000	10,750.000
0340	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	164,505.000	164,505.000
0350	506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	28.000	28.000
0360	506.4000	STEEL DIAPHRAGMS (STRUCTURE) 01. B-38-145	EACH	24.000	24.000
0370	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	30.000	30.000
0380	517.1010.S	CONCRETE STAINING (STRUCTURE) 01. B-38-145	SF	5,790.000	5,790.000
0390	517.1015.S	CONCRETE STAINING MULTI-COLOR (STRUCTURE) 01. B-38-145	SF	1,600.000	1,600.000
0400	517.1050.S	ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 01. B-38-145	SF	1,600.000	1,600.000
0410	522.0124	CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH	LF	590.000	590.000
0420	522.1012	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH	EACH	11.000	11.000
0430	522.1024	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH	EACH	8.000	8.000
0440	550.2106	PILING CIP CONCRETE 10 3/4 X 0.365-INCH	LF	4,075.000	4,075.000
0450	601.0405	CONCRETE CURB & GUTTER 18-INCH TYPE A	LF	380.000	380.000

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DATE 27FEB14 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	1490-27-71 QUANTITY
0460	601.0411	CONCRETE CURB & GUTTER 30-INCH TYPE D	LF	3,700.000	3,700.000
0470	601.0553	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D	LF	150.000	150.000
0480	601.0580	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R	LF	665.000	665.000
0490	602.0405	CONCRETE SIDEWALK 4-INCH	SF	10,700.000	10,700.000
0500	603.8000	CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	LF	4,980.000	4,980.000
0510	603.8125	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	LF	4,980.000	4,980.000
0520	604.0400	SLOPE PAVING CONCRETE	SY	575.000	575.000
0530	606.0200	RIPRAP MEDIUM	CY	42.000	42.000
0540	608.0312	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH	LF	496.000	496.000
0550	608.0324	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH	LF	522.000	522.000
0560	611.0530	MANHOLE COVERS TYPE J	EACH	1.000	1.000
0570	611.0624	INLET COVERS TYPE H	EACH	4.000	4.000
0580	611.0652	INLET COVERS TYPE T	EACH	8.000	8.000
0590	611.2004	MANHOLES 4-FT DIAMETER	EACH	1.000	1.000
0600	611.3230	INLETS 2X3-FT	EACH	4.000	4.000
0610	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	520.000	520.000
0620	614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	4.000	4.000
0630	614.2300	MGS GUARDRAIL 3	LF	125.000	125.000
0640	614.2500	MGS THRIE BEAM TRANSITION	LF	158.000	158.000
0650	614.2610	MGS GUARDRAIL TERMINAL EAT	EACH	4.000	4.000
0660	618.0100	MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 01. 1490-27-71	EACH	1.000	1.000
0670	619.1000	MOBILIZATION	EACH	1.000	1.000
0680	620.0100	CONCRETE CORRUGATED MEDIAN	SF	9,305.000	9,305.000
0690	620.0300	CONCRETE MEDIAN SLOPED NOSE	SF	200.000	200.000
0700	624.0100	WATER	MGAL	210.000	210.000
0710	625.0500	SALVAGED TOPSOIL	SY	82,000.000	82,000.000
0720	627.0200	MULCHING	SY	45,000.000	45,000.000
0730	628.1504	SILT FENCE	LF	2,550.000	2,550.000
0740	628.1520	SILT FENCE MAINTENANCE	LF	2,550.000	2,550.000
0750	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	4.000	4.000
0760	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	4.000	4.000
0770	628.2004	EROSION MAT CLASS I TYPE B	SY	33,800.000	33,800.000
0780	628.7005	INLET PROTECTION TYPE A	EACH	12.000	12.000
0790	628.7015	INLET PROTECTION TYPE C	EACH	12.000	12.000
0800	628.7504	TEMPORARY DITCH CHECKS	LF	240.000	240.000
0810	628.7570	ROCK BAGS	EACH	140.000	140.000
0820	629.0210	FERTILIZER TYPE B	CWT	40.000	40.000
0830	630.0120	SEEDING MIXTURE NO. 20	LB	2,200.000	2,200.000
0840	630.0130	SEEDING MIXTURE NO. 30	LB	690.000	690.000
0850	630.0200	SEEDING TEMPORARY	LB	770.000	770.000
0860	630.0300	SEEDING BORROW PIT	LB	540.000	540.000
0870	632.0201	SHRUBS (SPECIES, ROOT, SIZE) 01. JUNIPER, OLDFIELD COMMON, CG, 2' HT	EACH	24.000	24.000
0880	632.9101	LANDSCAPE PLANTING SURVEILLANCE AND CARE CYCLES	EACH	15.000	15.000
0890	633.0100	DELINEATOR POSTS STEEL	EACH	64.000	64.000
0900	633.0500	DELINEATOR REFLECTORS	EACH	80.000	80.000

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DATE 27FEB14 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	1490-27-71 QUANTITY
0910	633.5200	MARKERS CULVERT END	EACH	9.000	9.000
0920	634.0614	POSTS WOOD 4X6-INCH X 14-FT	EACH	12.000	12.000
0930	634.0616	POSTS WOOD 4X6-INCH X 16-FT	EACH	36.000	36.000
0940	634.0618	POSTS WOOD 4X6-INCH X 18-FT	EACH	10.000	10.000
0950	634.0814	POSTS TUBULAR STEEL 2X2-INCH X 14-FT	EACH	24.000	24.000
0960	634.0816	POSTS TUBULAR STEEL 2X2-INCH X 16-FT	EACH	12.000	12.000
0970	635.0200	SIGN SUPPORTS STRUCTURAL STEEL HS	LB	3,611.000	3,611.000
0980	636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	6.000	6.000
0990	636.0500	SIGN SUPPORTS STEEL REINFORCEMENT	LB	362.000	362.000
1000	637.1220	SIGNS TYPE I REFLECTIVE SH	SF	671.500	671.500
1010	637.2210	SIGNS TYPE II REFLECTIVE H	SF	1,018.900	1,018.900
1020	637.2215	SIGNS TYPE II REFLECTIVE H FOLDING	SF	20.000	20.000
1030	637.2230	SIGNS TYPE II REFLECTIVE F	SF	112.750	112.750
1040	638.2602	REMOVING SIGNS TYPE II	EACH	150.000	150.000
1050	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	74.000	74.000
1060	642.5201	FIELD OFFICE TYPE C	EACH	1.000	1.000
1070	643.0100	TRAFFIC CONTROL (PROJECT) 01. 1490-27-71	EACH	1.000	1.000
1080	643.0300	TRAFFIC CONTROL DRUMS	DAY	16,124.000	16,124.000
1090	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	3,690.000	3,690.000
1100	643.0453	TRAFFIC CONTROL BARRICADES PERMANENT TYPE III	EACH	6.000	6.000
1110	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	4,920.000	4,920.000
1120	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	6,300.000	6,300.000
1130	643.0800	TRAFFIC CONTROL ARROW BOARDS	DAY	300.000	300.000
1140	643.0900	TRAFFIC CONTROL SIGNS	DAY	6,193.000	6,193.000
1150	643.0920	TRAFFIC CONTROL COVERING SIGNS TYPE II	EACH	2.000	2.000
1160	643.1000	TRAFFIC CONTROL SIGNS FIXED MESSAGE	SF	76.000	76.000
1170	643.1050	TRAFFIC CONTROL SIGNS PCMS	DAY	14.000	14.000
1180	643.2000	TRAFFIC CONTROL DETOUR (PROJECT) 01. 1490-27-71	EACH	1.000	1.000
1190	643.3000	TRAFFIC CONTROL DETOUR SIGNS	DAY	56,785.000	56,785.000
1200	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	100.000	100.000
1210	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	32,150.000	32,150.000
1220	646.0126	PAVEMENT MARKING EPOXY 8-INCH	LF	400.000	400.000
1230	646.0158	PAVEMENT MARKING PREFORMED THERMOPLASTIC 18-INCH	LF	96.000	96.000
1240	646.0600	REMOVING PAVEMENT MARKINGS	LF	7,050.000	7,050.000
1250	646.0841.S	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH	LF	290.000	290.000
1260	646.0843.S	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH	LF	1,865.000	1,865.000
1270	646.0881.S	PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH	LF	110.000	110.000
1280	647.0606	PAVEMENT MARKING ISLAND NOSE EPOXY	EACH	11.000	11.000
1290	647.0726	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH	LF	140.000	140.000
1300	647.0856	PAVEMENT MARKING CONCRETE CORRUGATED MEDIAN EPOXY	SF	3,680.000	3,680.000
1310	650.4000	CONSTRUCTION STAKING STORM SEWER	EACH	26.000	26.000
1320	650.4500	CONSTRUCTION STAKING SUBGRADE	LF	12,050.000	12,050.000
1330	650.5000	CONSTRUCTION STAKING BASE	LF	12,050.000	12,050.000
1340	650.5500	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER	LF	5,340.000	5,340.000
1350	650.6000	CONSTRUCTION STAKING PIPE CULVERTS	EACH	3.000	3.000

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DATE 27FEB14 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	1490-27-71 QUANTITY
1360	650.6500	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 01. B-38-145	LS	1.000	1.000
1370	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 1490-27-71	LS	1.000	1.000
1380	650.9920	CONSTRUCTION STAKING SLOPE STAKES	LF	12,300.000	12,300.000
1390	652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	24.000	24.000
1400	652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	2,526.000	2,526.000
1410	652.0235	CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	LF	390.000	390.000
1420	653.0140	PULL BOXES STEEL 24X42-INCH	EACH	8.000	8.000
1430	653.0220	JUNCTION BOXES 18X6X6-INCH	EACH	2.000	2.000
1440	653.0905	REMOVING PULL BOXES	EACH	8.000	8.000
1450	654.0105	CONCRETE BASES TYPE 5	EACH	14.000	14.000
1460	655.0610	ELECTRICAL WIRE LIGHTING 12 AWG	LF	2,400.000	2,400.000
1470	655.0615	ELECTRICAL WIRE LIGHTING 10 AWG	LF	13,810.000	13,810.000
1480	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 01. USH 141 & STH 64	LS	1.000	1.000
1490	657.0255	TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE	EACH	14.000	14.000
1500	657.0322	POLES TYPE 5-ALUMINUM	EACH	16.000	16.000
1510	657.0710	LUMINAIRE ARMS TRUSS TYPE 4 1/2-INCH CLAMP 12-FT	EACH	16.000	16.000
1520	657.6005.S	ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES	EACH	2.000	2.000
1530	659.1115	LUMINAIRES UTILITY LED A	EACH	16.000	16.000
1540	690.0150	SAWING ASPHALT	LF	11,400.000	11,400.000
1550	690.0250	SAWING CONCRETE	LF	58.000	58.000
1560	715.0415	INCENTIVE STRENGTH CONCRETE PAVEMENT	DOL	500.000	500.000
1570	715.0502	INCENTIVE STRENGTH CONCRETE STRUCTURES	DOL	6,300.000	6,300.000
1580	ASP.1T0A	ON-THE-JOB TRAINING APPRENTICE AT $5.00/HR	HRS	2,400.000	2,400.000
1590	ASP.1T0G	ON-THE-JOB TRAINING GRADUATE AT $5.00/HR	HRS	3,040.000	3,040.000
1600	SPV.0060	SPECIAL 01. CONCRETE CONTROL CABINET BASE	EACH	1.000	1.000
1610	SPV.0060	SPECIAL 03. BARRICADE RACK	EACH	2.000	2.000
1620	SPV.0060	SPECIAL 04. POSTS TUBULAR STEEL 2X2X18	EACH	6.000	6.000
1630	SPV.0060	SPECIAL 05. INLETS 2X2.5-FT SPECIAL	EACH	8.000	8.000
1640	SPV.0060	SPECIAL 09. LIGHTING CONTROL CABINET	EACH	1.000	1.000
1650	SPV.0085	SPECIAL 01. LOW MAINTENANCE SEED MIX	LB	15.000	15.000
1660	SPV.0090	SPECIAL 01. CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE G MODIFIED	LF	485.000	485.000
1670	SPV.0090	SPECIAL 02. CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D MODIFIED	LF	340.000	340.000
1680	SPV.0105	SPECIAL 01. RAILING STEEL SPECIAL B-38-145	LS	1.000	1.000
1690	SPV.0105	SPECIAL 02. REMOVE LIGHTING / BEACON	LS	1.000	1.000
1700	SPV.0165	SPECIAL 01. CONCRETE SIDEWALK 4-INCH WITH STAMPED AND STAINED RELIEF	SF	1,408.000	1,408.000

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CLEARING AND GRUBBING

CATEGORY	STATION	TO	STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
0010	1238+00	-	1246+00	USH 141 NB, RT	8	8
0010	1256+00	-	1258+00	USH 141 SB, LT	2	2
0010	1235+00	-	1245+00	USH 141 SB, LT	10	10
0010	528+00	-	529+00	STH 64 EB, RT	1	1
				TOTAL	21	21

REMOVING PAVEMENT

CATEGORY	STATION	TO	STATION	LOCATION	204.0100 SY
0010	596+42	-	596+74	CTH B MEDIAN	14
0010	597+41	-	598+28	CTH B MEDIAN	41
0010	603+16	-	607+32	CTH B MEDIAN	191
0010	1192+30	-	1193+15	15TH RD / STH 64	21
				TOTAL	250

REMOVING ASPHALTIC SURFACE

CATEGORY	STATION	TO	STATION	LOCATION	204.0110 SY
0010	511+95	-	513+95	STH 64	867
0010	513+95	-	515+18	STH 64	472
0010	515+18	-	521+64.5	STH 64	2155
0010	521+64.5	-	522+48	STH 64 LT	195
0010	521+64.5	-	522+38	STH 64 RT	123
0010	522+38	-	522+63	STH 64 RT	46
0010	522+48	-	523+08	STH 64 LT	160
0010	522+48	-	523+08	STH 64 LT	87
0010	523+07	-	523+27	STH 64 LT	187
0010	522+63	-	523+17	STH 64 RT	108
0010	522+63	-	523+17	STH 64 RT	61
0010	523+17	-	523+27	STH 64 RT	76
0010	522+97	-	523+17	STH 64 RT	-9
0010	1246+00	-	1246+50	USH 141 SB LT	53
0010	1227+00	-	1246+00	USH 141 SB LT	1267
0010	1248+03	-	1248+13	USH 141 SB LT	2
0010	1248+03	-	1253+55	USH 141 SB LT	1227
0010	1253+55	-	1255+10	USH 141 SB LT	224
0010	1255+10	-	1270+50	USH 141 SB LT	1027
0010	1249+00	-	1267+50	USH 141 NB RT	1233
0010	1248+52	-	1249+00	USH 141 NB RT	51
0010	1246+94	-	1247+04	USH 141 NB RT	2
0010	1243+07	-	1247+04	USH 141 NB RT	889
0010	1241+21	-	1243+07	USH 141 NB RT	269
0010	1230+00	-	1241+21	USH 141 NB RT	747
0010	524+80	-	525+43	STH 64 LT	236
0010	524+80	-	525+55	STH 64 RT	434
0010	525+43	-	525+53	STH 64 LT	2
0010	525+43	-	525+68	STH 64 LT	46
0010	525+68	-	526+38.5	STH 64 LT	118
0010	525+55	-	526+38.5	STH 64 RT	195
0010	526+38.5	-	528+01.5	STH 64	543
0010	528+01.5	-	529+19	STH 64	450
				SUBTOTAL	13500

REMOVING ASPHALTIC SURFACE CONT'D

CATEGORY	STATION	TO	STATION	LOCATION	204.0110 SY
0010	529+19	-	531+19	STH 64	867
0010	531+09	-	531+19	STH 64	2
0010	531+19	-	532+44	STH 64	542
0010	532+44	-	533+27.5	STH 64	195
0010	533+27.5	-	538+60.76	STH 64	1778
0010	398+64	-	399+66.28	13TH RD LT	267
0010	399+05	-	399+66.28	13TH RD RT	117
0010	397+94	-	398+64	13TH RD LT	113
0010	398+65	-	399+05	13TH RD RT	58
0010	398+95	-	399+05	13TH RD RT	2
0010	397+94	-	398+95	13TH RD RT	123
0010	393+75	-	397+94	13TH RD	1024
0010	1238+00	-	1238+22.5	USH 141 NB LT	8
0010	1238+22.5	-	1239+40	USH 141 NB LT	98
0010	1239+40	-	1247+56.07	USH 141 NB LT	1088
0010	523+56.6	-	524+32.73	STH 64	89
0010	523+56.6	-	524+32.73	STH 64	-70
0010	523+56.6	-	524+32.73	STH 64	22
0010	523+56.6	-	524+32.73	STH 64	-17
0010	523+44.63	-	524+44.73	STH 64	556
0010	1248+04	-	1248+14	USH 141 NB LT	13
0010	1248+14	-	1248+90.25	USH 141 NB LT	64
0010	1248+90.25	-	1249+00	USH 141 NB LT	3
0010	1246+00	-	1246+09.75	USH 141 SB RT	3
0010	1246+09.75	-	1246+86	USH 141 SB RT	64
0010	1246+86	-	1246+96	USH 141 SB RT	13
0010	1247+46	-	1252+75	USH 141 SB RT	705
0010	1252+75	-	1253+92.5	USH 141 SB RT	98
0010	1253+92.5	-	1254+00	USH 141 SB RT	3
				SUBTOTAL	7828
				GRAND TOTAL	**21400**

REMOVING CURB & GUTTER

CATEGORY	STATION	TO	STATION	LOCATION	204.0150 LF	REMARKS
0010	522+64	-	523+12	STH 64 EB RT	77	STH 64 EB ALIGNMENT
0010	523+00	-	523+17	STH 64	43	MEDIAN ISLAND
0010	524+88	-	525+05	STH 64	41	MEDIAN ISLAND
0010	522+47	-	523+06	STH 64 WB LT	91	USH 141 AT-GRADE INTER
0010	524+96	-	525+54	STH 64 EB RT	88	USH 141 AT-GRADE INTER
0010	524+93	-	525+42	STH 64 WB LT	77	USH 141 AT-GRADE INTER
0010	531+55	-	531+93	STH 64/13TH RD	79	INTERSECTION
0010	532+32	-	532+87	STH 64/13TH RD	72	INTERSECTION
0010	596+42	-	596+72	CTH B INTERCHANGE	75	WEST MEDIAN ISLAND
0010	597+43	-	598+28	CTH B INTERCHANGE	182	CENTER MEDIAN ISLAND
0010	1022+61	-	1023+00	USH 141/CTH B INTERCH	70	SE RAMP
0010	1023+20	-	1023+73	USH 141/CTH B INTERCH	85	NE RAMP
0010	603+18	-	607+32	CTH B	860	EAST MEDIAN ISLAND
0010	1192+30	-	1193+15	15TH RD / STH 64	95	SE RADIUS
				TOTAL	1930	

REMOVING CONCRETE SIDEWALK

CATEGORY	STATION	TO	STATION	LOCATION	204.0155 SY	REMARKS
0010	596+43	-	596+72	CTH B	24	WEST MEDIAN ISLAND
0010	597+43	-	598+29	CTH B	53	CENTER MEDIAN ISLAND
0010	603+18	-	607+32	CTH B	681	EAST MEDIAN ISLAND
				TOTAL	760	

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EARTHWORK SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	205.0100 COMMON EXCAVATION CY	205.0500 MARSH EXCAVATON CY	**** AVAILABLE MATERIAL FROM COMMON CY	**** REQUIRED FILL (EXPANDED) CY	208.0100 BORROW CY
DIVISION 1									
0010	1248+10	-	1268+98	NW RAMP	7,212	0	7,212	32,555	25,343
0010	1227+66	-	1246+82	SW RAMP	13,084	3500	13,084	60,089	47,005
0010	512+00	-	523+00	STH 64 WEST	753	0	753	80,001	79,248
				SUBTOTAL	21,049	3,500	21,049	172,645	151,596
DIVISION 2									
0010	391+00	-	399+30	13TH RD	1,447	0	1,447	2,920	1,473
0010	524+79	-	538+73	STH 64 EAST	911	0	911	87,086	86,175
0010	1245+10		1264+56	NE RAMP	15,242	0	15,242	26,520	11,278
0010	1226+50	-	1244+20	SE RAMP	2,867	300	2,867	43,402	40,535
				SUBTOTAL	20,467	300	20,467	159,928	139,461
				PROJECT TOTALS	41,516	3,800	41,516	332,573	291,057

**** FOR INFORMATION ONLY
NOTE: EXPANSION FACTOR FOR FILL USED: 1.15
SEE SECTION 9 FOR DETAILED CALCULATIONS

SELECT BORROW

CATEGORY	STATION	TO	STATION	LOCATION	208.1100 CY	REMARKS
0010	1231+00	-	1237+50	SW RAMP	4005	MARSH EX (1.15% EXPANSION FACTOR)
0010	1232+50	-	1239+50	SE RAMP	345	MARSH EX (1.15% EXPANSION FACTOR)
				TOTAL	4350	

PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS

CATEGORY	STATION	TO	STATION	LOCATION	211.0400 STA
0010	1237+30	-	1257+10	USH 141 SB LT	20
0010	1246+00	-	1254+00	USH 141 SB RT	8
0010	1240+25	-	1255+90	USH 141 NB RT	16
0010	1238+00	-	1249+00	USH 141 NB LT	11
				TOTAL	55

FINISHING ROADWAY (1490-27-71)

CATEGORY	STATION	TO	STATION	LOCATION	213.0100 EACH
0010	511+88		540+18	STH 64	1
				TOTAL	1

BASE AGGREGATE DENSE 1 1/4-INCH

CATEGORY	STATION	TO	STATION	LOCATION	305.0120 TON	REMARKS
0010	512+00	-	517+50	STH 64	896	
0010	517+50	-	519+90	STH 64	178	WB
0010	517+50	-	519+90	STH 64	174	EB
0010	519+88	-	521+26	WRAB	296	
0010	521+30	-	522+50	STH 64	185	
0010	525+50	-	526+50	STH 64	185	
0010	526+82	-	528+23	ERAB	296	
0010	531+50	-	540+00	STH 64	1407	
0010	1248+00	-	1268+87	NW RAMP	1481	
0010	1245+00	-	1264+25	NE RAMP	1378	
0010	1226+50	-	1244+32	SE RAMP	1259	
0010	1228+62	-	1246+90	SW RAMP	1444	
0010	393+82	-	399+63	13TH RD	548	
0010	1192+27	-	1193+11	21ST RD	36	SW
0010	1192+40	-	1193+14	21ST RD	20	SE
0010	481+10	-	482+65	21ST RD	57	WEST MEDIAN
0010	483+61	-	485+27	21ST RD	51	EAST MEDIAN
0010	1019+76	-	1020+25	CTH B	48	NW
0010	1023+31	-	1024+36	CTH B	78	NE
0010	1022+34	-	1023+15	CTH B	40	SE
0010	596+41	-	596+72	CTH B	15	WEST SMALL MEDIAN
0010	597+43	-	598+42	CTH B	36	WEST MEDIAN
0010	603+18	-	607+43	CTH B	306	EAST MEDIAN
				TOTAL	10900	

BASE AGGREGATE DENSE 3/4-INCH

CATEGORY	STATION	TO	STATION	LOCATION	305.0110 TON	REMARKS
0010	512+05	-	522+54	STH 64 SHOULDER	453	WEST LEG
0010	525+50	-	540+00	STH 64 SHOULDER	534	EAST LEG
0010	1238+45	-	1256+00	USH 141 SHOULDER	391	
0010	1238+45	-	1256+00	USH 141 SHOULDER	478	
0010	1248+00	-	1268+87	NW RAMP SHOULDER	409	
0010	1245+00	-	1264+25	NE RAMP SHOULDER	382	
0010	1226+50	-	1244+32	SE RAMP SHOULDER	366	
0010	1228+62	-	1246+90	SW RAMP SHOULDER	372	
0010	393+81	-	399+16	13TH RD SHOULDER	217	
				TOTAL	3600	

3

PIT RUN

CATEGORY	STATION	TO	STATION	LOCATION	313.0110 TON
0010	512+00	-	522+88	STH 64	5443
0010	525+48	-	539+00	STH 64	5996
0010	1248+00	-	1269+00	NW RAMP	4311
0010	1245+00	-	1255+55	NE RAMP	5489
0010	1227+49	-	1244+32	SE RAMP	4181
0010	1228+65	-	1246+90	SW RAMP	3626
				TOTAL	29100

CONCRETE PAVEMENT 8-INCH

CATEGORY	STATION	TO	STATION	LOCATION	415.0080 CONCRETE PAVEMENT 8-INCH SY	*406.0100 COLORING CONCRETE RED CY	REMARKS
0010	521+12	-	522+67	STH 64	69	46	PNT 1-3, STH 63 ALI DIAGRAM
0010	521+95	-	522+69	STH 64	18	12	PNT 4-6, STH 63 ALI DIAGRAM
0010	514+86	-	515+68	STH 64	50	34	PNT 7-9, STH 63 ALI DIAGRAM
0010	527+67	-	528+25	STH 64	18	12	PNT 10-12, STH 63 ALI DIAGRAM
0010	515+21	-	516+39	STH 64	93	62	PNT 13-15, STH 63 ALI DIAGRAM
0010	1019+76	-	1020+25	CTH B	150	101	NW RAMP
0010	1023+31	-	1024+36	CTH B	235	157	NE RAMP
0010	1022+34	-	1023+15	CTH B	120	80	SE RAMP
0010	1192+27	-	1193+11	15TH RD / STH 64	108	72	SE QUADRANT
				TOTAL	615	577	

* ADDITIONAL QUANTITY SHOWN ELSEWHERE

CONCRETE PAVEMENT APPROACH SLAB

CATEGORY	STATION	TO	STATION	LOCATION	415.0410 SY	REMARKS
0010	522+39.36	-	522+55.03	STH 64	77	WEST APPROACH
0010	525+49.53	-	525+65.20	STH 64	77	EAST APPROACH
				TOTAL	155	

ROUNDABOUT CONCRETE

CATEGORY	STATION	TO	STATION	LOCATION	416.0512 CONCRETE TRUCK APRON 12-INCH SY	*405.0100 COLORING CONCRETE RED CY	601.0405 CONCRETE CURB AND GUTTER 18" TYPE A LF
0010	519+88	-	521+26	WEST RAB	535	178	190
0010	526+82	-	528+23	EAST RAB	551	184	190
				TOTAL	1085	362	380

* ADDITIONAL QUANTITY SHOWN ELSEWHERE

HMA SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	455.0105 ASPHALTIC MATERIAL PG 58-28 TON	455.0605 TACK COAT GAL	460.1103 HMA PAVEMENT TYPE E-3 TON	460.1100 HMA PAVEMENT TYPE E-0.3 TON	REMARKS
0010	512+00	-	517+33	STH 64	66	133	1200		EB & WB TRAVEL LANES
0010	517+33	-	519+74	STH 64	26	52	475		EB & WB TRAVEL LANES
0010	1+02	-	4+35	WEST RAB	22	44	400		ROUNDABOUT CIRCULARITY TRAVEL LANE
0010	521+32	-	522+55	STH 64	14	28	250		EB & WB TRAVEL LANES
0010	525+50	-	526+68	STH 64	14	28	250		EB & WB TRAVEL LANES
0010	2+00	-	5+33	EAST RAB	22	44	400		ROUNDABOUT CIRCULARITY TRAVEL LANE
0010	528+27	-	531+67	STH 64	37	75	675		EB & WB TRAVEL LANES
0010	531+67	-	539+00	STH 64	105	211	1900		EB & WB TRAVEL LANES
0010	1248+00	-	1270+50	NW RAMP	129	222	2000	340	E-0.3 INCLUDES SHOULDERS AND GORE
0010	1245+00	-	1264+60	NE RAMP	119	207	1860	301	E-0.3 INCLUDES SHOULDERS AND GORE
0010	1226+50	-	1244+32	SE RAMP	108	189	1700	264	E-0.3 INCLUDES SHOULDERS AND GORE
0010	1227+30	-	1246+90	SW RAMP	124	217	1950	306	E-0.3 INCLUDES SHOULDERS AND GORE
0010	393+81	-	399+45	13TH RD	26	41	-	469	
0010	1192+40	-	1193+12	15TH RD	1	-	11		2' AREA NEAR TYPE D MODIFIED CURB
0010	596+42	-	598+28	CTH B	1	-	25		2' AREA NEAR CORR CONCRETE MEDIAN
0010	603+16	-	607+32	CTH B	5	-	85		2' AREA NEAR CORR CONCRETE MEDIAN
0010	1023+53	-	1024+47	CTH B LT	1	-	10		2' AREA NEAR TYPE D MODIFIED CURB
0010	1022+12	-	1023+20	CTH B RT	0	-	7		2' AREA NEAR TYPE D MODIFIED CURB
0010	1237+30	-	1257+10	USH 141 SB LT	13	-		231	
0010	1246+00	-	1254+00	USH 141 SB RT	3	-		47	
0010	1240+25	-	1255+90	USH 141 NB RT	10	-		183	
0010	1238+00	-	1249+00	USH 141 NB LT	4	-		64	
				TOTAL	845	1500	13200	2210	

ASPHALTIC FLUMES

CATEGORY	STATION	LOCATION	465.0315 SY
0010	530+03	STH 64 EB RT	8
0010	530+45	STH 64 WB LT	8
0010	517+32	STH 64 EB RT	8
0010	518+70	STH 64 WB LT	8
0010	1245+86	SW RAMP	8
0010	1248+95	NW RAMP	8
0010	1243+46	SE RAMP	8
0010	1245+77	NE RAMP	8
0010	531+38	STH 64 EB RT	8
0010	398+56	13TH RD LT	8
0010	398+95	13TH RD RT	8
0010	1192+33	SW	9
0010	1023+79	CTH B NE RAMP	9
0010	1022+38	CTH B SE RAMP	9
		TOTAL	120

ASPHALTIC SHOULDER RUMBLE STRIPS

CATEGORY	STATION	TO	STATION	LOCATION	465.0400 LF
0010	1237+30	-	1257+10	USH 141 SB LT	1980
0010	1246+00	-	1254+00	USH 141 SB RT	800
0010	1240+25	-	1255+90	USH 141 NB RT	1565
0010	1238+00	-	1249+00	USH 141 NB LT	1100
0010	1227+66	-	1236+66	SW RAMP LT	900
0010	1226+50	-	1235+50	SE RAMP RT	900
0010	1259+98	-	1268+98	NW RAMP LT	900
0010	1255+56	-	1264+56	NE RAMP RT	900
				TOTAL	9050

CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH

CATEGORY	STATION	LOCATION	522.0124 LF	*522.1024 EACH
0010	522+72	STH 64, EB RT	243	2
0010	525+12	STH 64, EB RT	248	2
0010	1238+86	SE RAMP, RT	98	2
		TOTAL	590	6

* ADDITIONAL QUANTITY LISTED ELSEWHERE

STORM SEWER SUMMARY

CATEGORY	STRUCTURE PLAN ID NUMBER FROM	-	TO	LOCATION	608.0312 SSPRC CLASS III 12 - INCH LF	608.0324 SSPRC CLASS III 24- INCH LF	522.1012 AE FOR CPRC 12 - INCH EACH	*522.1024 AE FOR CPRC 24-INCH EACH
0010	3A	-	3D	SW RAMP, LT	-	62	-	1
0010	3D	-	3C	SW RAMP, LT	-	460	-	1
0010	5A	-	5B	STH 64 WB, LT	24	-	1	-
0010	6A	-	6B	STH 64 EB, RT	24	-	1	-
0010	7A	-	8A	WEST RAB CIRC	72	-	-	-
0010	8A	-	8B	WEST RAB CIRC, RT	64	-	1	-
0010	9A	-	9B	WEST RAB CIRC, LT	40	-	1	-
0010	10A	-	10B	STH 64 EB, RT	24	-	1	-
0010	11A	-	11B	STH 64 WB, LT	32	-	1	-
0010	12A	-	12B	STH 64 WB, LT	32	-	1	-
0010	13A	-	13B	STH 64 EB, RT	32	-	1	-
0010	14A	-	14B	WEST RAB CIRC, LT	48	-	1	-
0010	15A	-	15B	WEST RAB CIRC, RT	48	-	1	-
0010	16A	-	16B	EAST RAB CIRC, LT	56	-	1	-
				TOTALS	496	522	11	2

* ADDITIONAL QUANTITY LISTED ELSEWERE

STORM SEWER STRUCTURE SUMMARY

CATEGORY	STATION	STRUCTURE ID	LOCATION	611.0530 MANHOLE COVERS TYPE J EACH	611.0624 INLET COVERS TYPE H EACH	611.0652 INLET COVERS TYPE T EACH	611.2004 MANHOLES 4-FT DIAMETER EACH	611.3230 INLETS 2X3-FT EACH	SPV.0060.05 INLETS 2X2.5-FT EACH	RIM ELEVATION	TOP OF STRUCTURE ELEVATION	STRUCTURE FLOWLINE ELEVATION	STRUCTURE FLOWLINE DEPTH FT	REMARKS
PROJECT 1490-27-71														
0010	1238+02	3D	SW RAMP, LT	1			1			694.208	692.958	684.500	8.458	
0010	520+16	5A	STH 64 WB, LT		1			1		721.613	720.613	716.783	3.83	
0010	518+92	6A	STH 64 EB, RT		1			1		718.720	717.72	713.890	3.83	
0010	2+44	7A	WEST RAB			1			1	722.150	721.067	717.150	3.917	RUBBER RING(S) REQ'D
0010	3+31	8A	WEST RAB			1			1	723.251	721.418	716.706	4.712	RUBBER RING(S) REQ'D
0010	1+32	9A	WEST RAB			1			1	723.94	722.856	718.940	3.916	RUBBER RING(S) REQ'D
0010	521+79	10A	STH 64 EB, RT		1			1		724.790	723.79	719.623	4.167	
0010	521+96	11A	STH 64 WB, LT			1			1	724.480	723.369	719.313	4.056	RUBBER RING(S) REQ'D
0010	526+42	12A	STH 64 WB, LT		1			1		727.240	726.24	722.073	4.167	
0010	526+60	13A	STH 64 EB, RT			1			1	727.078	725.994	722.300	3.694	RUBBER RING(S) REQ'D
0010	2+77	14A	EAST RAB			1			1	727.150	726.066	721.983	4.083	RUBBER RING(S) REQ'D
0010	4+46	15A	EAST RAB			1			1	726.900	725.016	721.733	3.283	RUBBER RING(S) REQ'D
0010	2+00	16A	EAST RAB			1			1	726.300	725.216	721.133	4.083	RUBBER RING(S) REQ'D
			TOTAL	1	4	8	1	4	8					

* ADDITIONAL QUANTITY SHOWN ELSEWHERE

NOTES:

RIM/PVT ELEVATION IS THE FLANGE ELEVATION

OFFSETS TO ALL STRUCTURES ARE GIVEN TO CENTER OF STRUCTURE

TOP OF STRUCTURE ELEVATION - FLOWLINE ELEVATION = STRUCTURE FLOWLINE DEPTH

RIM/PVT ELEVATION - TOP OF STRUCTURE = CASTING AND ADJUSTMENT ALLOWANCES

MANHOLE 4-FT DIAMETER HAVE 9" CASTING ALLOWANCE AND 6" ADJUSTMENT ALLOWANCE

INLETS 2x3 FT HAVE 6" CASTING ALLOWANCE AND 6" ADJUSTMENT ALLOWANCE

INLETS SPV.0060.05 HAVE 7" CASTING ALLOWANCE AND 6" ADJUSTMENT ALLOWANCE

3

CONCRETE CURB & GUTTER 30-INCH TYPE D

CATEGORY	STATION	TO	STATION	LOCATION	601.0411 LF	REMARKS
0010	517+38	-	518+94	STH 64 EB, S	159	WEST LEG
0010	520+47	-	520+63	STH 64 EB, S	77	WEST LEG
0010	518+76	-	520+20	STH 64 WB, N	143	WEST LEG
0010	520+80	-	520+86	STH 64 WB, N	67	WEST LEG
0010	520+50	-	522+54	STH 64 EB, S	267	WEST LEG
0010	520+87	-	521+61	STH 64 WB, N	177	WEST LEG
0010	522+58	-	522+54	STH 64 WB, N	31	WEST LEG
0010	525+50	-	525+93	STH 64 EB, S	42	EAST LEG
0010	526+61	-	527+48	STH 64 EB, S	170	EAST LEG
0010	525+50	-	527+54	STH 64 WB,N	280	EAST LEG
0010	527+47	-	531+83	STH 64 EB, S	547	EAST LEG
0010	527+41	-	528+01	STH 64 WB, N	121	EAST LEG
0010	529+46	-	530+38	STH 64 WB, N	93	EAST LEG
0010	532+25	-	532+78	STH 64 EB, S	70	EAST LEG
0010	517+35	-	519+67	STH 64	521	WEST SPLITTER ISLAND
0010	521+42	-	521+77	STH 64	107	WEST SMALL SPLITTER
0010	526+26	-	526+62	STH 64	114	EAST SMALL SPLITTER
0010	528+41	-	531+73	STH 64	715	EAST SPLITTER ISLAND
				TOTAL	3700	

CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D

CATEGORY	STATION	TO	STATION	LOCATION	601.0553 LF
0010	398+63	-	399+12	13TH RD LT	82
0010	399+04	-	399+48	13TH RD RT	68
				TOTAL	150

CONCRETE SIDEWALK 4-INCH

CATEGORY	STATION	TO	STATION	LOCATION	602.0405 SF	REMARKS
0010	517+35	-	519+67	STH 64	3967	W SPLITTER ISLAND
0010	521+42	-	521+77	STH 64	654	W SMALL SPLITTER
0010	526+26	-	526+62	STH 64	703	E SMALL SPLITTER
0010	528+41	-	531+73	STH 64	5395	E SPLITTER ISLAND
				TOTAL	10700	

CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE R

CATEGORY	STATION	TO	STATION	LOCATION	601.0580 LF	REMARKS
0010	519+83	-	521+25	STH 64 W RAB	333	CENTRAL ISLAND
0010	526+80	-	528+26	STH 64 E RAB	333	CENTRAL ISLAND
				TOTAL	665	

CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D MODIFIED

CATEGORY	STATION	TO	STATION	LOCATION	SPV.0090.02 LF	REMARKS (OSOW TURN OVER-TRACKING)
0010	1192+19	-	1193+26	15TH RD, RT	107	SE QUAD
0010	1019+74	-	1020+33	CTH B RAMP TERMINAL	58	NW RAMP, RT
0010	1023+53	-	1024+47	CTH B RAMP TERMINAL	97	NE RAMP, RT
0010	1022+12	-	1023+20	CTH B RAMP TERMINAL	73	SE RAMP, RT
				TOTAL	340	

CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE G MODIFIED

CATEGORY	STATION	TO	STATION	LOCATION	SPV.0090.01 LF	REMARKS (OSOW TURN OVER-TRACKING)
0010	521+11	-	522+67	STH 64 EB, RT	155	REF QUADRANT CURB LINES
0010	521+95	-	522+69	STH 64 WB, LT	73	REF QUADRANT CURB LINES
0010	514+86	-	515+68	STH 64 WB, LT	83	REF QUADRANT CURB LINES
0010	527+67	-	528+19	STH 64 EB, RT	51	REF QUADRANT CURB LINES
0010	515+21	-	516+39	STH 64 WB, LT	118	REF QUADRANT CURB LINES
				TOTAL	485	

3

CONCRETE BARRIER TEMPORARY PRECAST DELIVERED

CATEGORY	STATION	TO	STATION	LOCATION	603.8000 LF	REMARKS
0010	1236+60	-	1238+40	US 141 NB LT	180	15:1 angle
0010	1238+40	-	1249+10	US 141 NB LT	1070	
0010	1249+10	-	1250+90	US 141 NB LT	180	15:1 angle
0010	1239+35	-	1241+15	US 141 NB RT	180	15:1 angle
0010	1241+15	-	1248+89	US 141 NB RT	774	
0010	1248+89	-	1250+69	US 141 NB RT	180	15:1 angle
0010	1257+06	-	1255+26	US 141 SB LT	180	15:1 angle
0010	1255+26	-	1246+09	US 141 SB LT	917	
0010	1246+09	-	1244+29	US 141 SB LT	180	15:1 angle
0010	1255+84	-	1254+04	US 141 SB RT	180	15:1 angle
0010	1254+04	-	1246+21	US 141 SB RT	782	
0010	1246+21	-	1244+41	US 141 SB RT	180	15:1 angle
				TOTAL	4980	

CONCRETE BARRIER TEMPORARY PRECAST INSTALLED

CATEGORY	STATION	TO	STATION	LOCATION	603.8125 LF	REMARKS
0010	1236+60	-	1238+40	US 141 NB LT	180	15:1 angle
0010	1238+40	-	1249+10	US 141 NB LT	1070	
0010	1249+10	-	1250+90	US 141 NB LT	180	15:1 angle
0010	1239+35	-	1241+15	US 141 NB RT	180	15:1 angle
0010	1241+15	-	1248+89	US 141 NB RT	774	
0010	1248+89	-	1250+69	US 141 NB RT	180	15:1 angle
0010	1257+06	-	1255+26	US 141 SB LT	180	15:1 angle
0010	1255+26	-	1246+09	US 141 SB LT	917	
0010	1246+09	-	1244+29	US 141 SB LT	180	15:1 angle
0010	1255+84	-	1254+04	US 141 SB RT	180	15:1 angle
0010	1254+04	-	1246+21	US 141 SB RT	782	
0010	1246+21	-	1244+41	US 141 SB RT	180	15:1 angle
				TOTAL	4980	

BEAM GUARD SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	614.2500 MGS THRIE BEAM TRANSITION LF	614.2300 MGS GUARDRAIL 3 LF	614.2610 MGS GUARDRAIL EAT EACH
0010	520+84	-	522+39	STH 64 RT	39.5	62.5	1
0010	524+46	-	522+39	STH 64 LT	39.5	-	1
0010	525+66	-	526+59	STH 64 RT	39.5	-	1
0010	525+66	-	527+21	STH 64 LT	39.5	62.5	1
				TOTALS	158	125	4

3

CONCRETE MEDIAN SLOPED NOSE

CATEGORY	STATION	TO	STATION	LOCATION	620.0300 SF	REMARKS
0010	521+32	-	521+37.5	STH 64 EB	28	WEST SMALL SPLITTER
0010	521+76.5	-	521+81	STH 64 EB	17	WEST SMALL SPLITTER
0010	526+22	-	526+26	STH 64 EB	16	EAST SMALL SPLITTER
0010	526+69	-	526+73	STH 64 WB	28	EAST SMALL SPLITTER
0010	517+28	-	520+33	STH 64 EB	25	WEST SPLITTER
0010	520+04	-	520+08	STH 64 WB	27	WEST SPLITTER
0010	528+33	-	528+37	STH 64 EB	27	EAST SPLITTER
0010	531+68	-	531+74	STH 64 EB	45	EAST SPLITTER
				TOTAL	200	

CONCRETE CORRUGATED MEDIAN

CATEGORY	STATION	TO	STATION	LOCATION	620.0100 SF	REMARKS
0010	596+42	-	596+72	CTH B	404	WEST MEDIAN ISLAND
0010	597+43	-	598+28	CTH B	850	MEDIAN ISLAND
0010	603+18	-	607+32	CTH B	8051	EAST MEDIAN ISLAND
				TOTAL	9305	

SILT FENCE SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	628.1504 FENCE LF	628.1520 MAINTENANCE LF	REMARKS
0010	1235+83	-	1243+30	SE RAMP	150	150	3, 50' SEGMENTS
0010	528+88	-	529+32	STH 64, RT	50	50	1, 50' SEGMENT
0010	393+26	-	398+02	13TH ST, RT	100	100	2, 50' SEGMENTS
0010	392+76	-	398+50	13TH ST, LT	100	100	2, 50' SEGMENTS
0010	535+63	-	539+26	STH 64, RT	100	100	2, 50' SEGMENTS
0010	529+82	-	539+29	STH 64, LT	150	150	3, 50' SEGMENTS
0010	1247+51	-	1258+61	NE RAMP	100	100	2, 50' SEGMENTS
0010	1249+94	-	1261+70	NW RAMP	100	100	2, 50' SEGMENTS
0010	513+70	-	519+46	STH 64, LT	100	100	2, 50' SEGMENTS
0010	513+06	-	519+59	STH 64, RT	100	100	2, 50' SEGMENTS
0010	1233+73	-	1243+07	SW RAMP	100	100	2, 50' SEGMENTS
0010	1231+24	-	1261+83	CENTER MEDIAN	200	200	4, 50' SEGMENTS
0010	1233+27	-	1261+00	MEDIAN DRAIN SURROUNDS	200	200	5, 40' WRAPAROUND
0010		-		UNDISTRIBUTED	1000	1000	
				TOTAL	2550	2550	

MOBILIZATION

CATEGORY	STATION	TO	STATION	LOCATION	619.1000 EACH
0010	512+00	-	539+00	PROJECT	1
				TOTAL	1

WATER

CATEGORY	LOCATION	624.0100 MGAL	REMARKS
0010	PROJECT	44	1 1/4 AGGREGATE DUST
0010	PROJECT	109	1 1/4 AGGREGATE COMPACTION
0010	PROJECT	14	3/4 AGGREGATE DUST
0010	PROJECT	36	3/4 AGGREGATE COMPACTION
	TOTAL	210	

MOBILIZATIONS EROSION CONTROL

CATEGORY	STATION	TO	STATION	LOCATION	628.1905 EACH
0010	511+88	-	540+20	STH 64	1
0010	1228+44	-	1269+92	USH 141	3
				TOTAL	4

MOBILIZATIONS EMERGENCY EROSION CONTROL

CATEGORY	LOCATION	628.1910 EACH
0010	PROJECT	4
	TOTAL	4

3

3

LANDSCAPE SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0130 SEEDING MIXTURE NO. 30 LB	630.0200 SEEDING TEMPORARY LB	REMARKS
0010	1226+62	-	1243+54	E OF 141, S OF 64, E OF SE RAMP	7518	4890	4.74	126	51	89	EMBANKMENTS ON SIDE OF ROADS AND RAMPS
0010	527+47	-	531+73	E OF 141, S OF 64, E OF SE RAMP	3320	2299	2.09	67	15	41	EMBANKMENTS ON SIDE OF ROADS AND RAMPS
0010	393+13	-	398+60	E OF 141, S OF 64, W OF 13TH ST	1270	761	0.80	13	14	14	EMBANKMENTS ON SIDE OF ROADS AND RAMPS
0010	393+13	-	399+00	E OF 141, S OF 64, E OF 13TH ST	1490	337	0.94	13	18	16	EMBANKMENTS ON SIDE OF ROADS AND RAMPS
0010	532+30	-	539+37	E OF 141, S OF 64, E OF 13TH	2694	2467	1.70	41	21	31	EMBANKMENTS ON SIDE OF ROADS AND RAMPS
0010	527+41	-	539+36	E OF 141, N OF 64, E OF NE RAMP	6568	5901	4.14	127	34	80	EMBANKMENTS ON SIDE OF ROADS AND RAMPS
0010	1245+70	-	1264+24	E OF 141, N OF 64, E OF NE RAMP	8217	5509	5.18	142	53	98	EMBANKMENTS ON SIDE OF ROADS AND RAMPS
0010	1248+92	-	1268+89	W OF 141, N OF 64, W OF NW RAMP	11371	8496	7.16	218	60	139	EMBANKMENTS ON SIDE OF ROADS AND RAMPS
0010	511+95	-	520+86	W OF 141, N OF 64, W OF NW RAMP	4800	2862	3.02	88	28	58	EMBANKMENTS ON SIDE OF ROADS AND RAMPS
0010	511+88	-	520+60	W OF 141, S OF 64, W OF SW RAMP	4536	3252	2.86	82	27	54	EMBANKMENTS ON SIDE OF ROADS AND RAMPS
0010	1228+66	-	1246+08	W OF 141, S OF 64, W OF SW RAMP	9411	5078	5.93	177	52	114	EMBANKMENTS ON SIDE OF ROADS AND RAMPS
0010	1246+79	-	1247+74	ADDITIONAL GRASS MEDIAN BETWEEN 141 UNDER OVERPASS	475	475	0.30	13	-	7	
0010	1238+44	-	1247+99	141 NB, LFT SIDE	1141	1141	0.72	31	-	16	LEFT TURN LANE, 141 NB
0010	1246+44	-	1253+50	141 SB, LFT SIDE	577	577	0.36	16	-	8	LEFT TURN LANE, 141 SB
0010	517+72	-	519+79	W OF 141, S OF 64	176	176	0.11	-	3	2	PAVEMENT TO GRASS
0010	1+00	-	4+35	W RAB CENTER	316	-	0.20	-	-	-	
0010	2+00	-	5+33	E RAB CENTER	300	-	0.19	-	-	-	
0010	526+26	-	531+95	E OF 141, 64 EB, W OF 13, RT SIDE	2434	-	-	-	-	-	GRASS TO ROAD
0010	1235+00	-	1244+32	SE RAMP	2090	-	-	-	-	-	GRASS TO ROAD
0010	1245+00	-	1256+29	NE RAMP	2847	-	-	-	-	-	GRASS TO ROAD
0010	532+31	-	539+37	E OF 141, 64 EB, E OF 13, RT SIDE	1068	-	-	-	-	-	GRASS TO ROAD
0010	517+66	-	522+12	W OF 141, 64 WB, RT SIDE	1637	-	-	-	-	-	GRASS TO ROAD
0010	1248+00	-	1259+56	NW RAMP	2504	-	-	-	-	-	GRASS TO ROAD
0010	1235+57	-	1246+90	SW RAMP	3000	-	-	-	-	-	
0010	1240+74	-	1247+04	USH 141 SB RT	811	-	-	-	-	-	GRASS TO ROAD
0010	1247+40	-	1255+22	USH 141 NB LT	1012	-	-	-	-	-	
				TOTAL	82000	45000	40	2200	690	770	

3

EROSION MAT CLASS I TYPE B

CATEGORY	STATION	TO	STATION	LOCATION	628.2004 SY
0010	1226+83	-	1243+31	SE RAMP, LT	2520
0010	527+54	-	531+58	STH 64 EB, RT	949
0010	395+22	-	398+44	13TH ST, LT	392
0010	395+13	-	399+08	13TH ST, RT	874
0010	532+41	-	546+27	STH 64 EB, RT	2591
0010	527+76	-	546+05	STH 64 WB, LT	2380
0010	1245+00	-	1264+19	NE RAMP, LT	2673
0010	1245+32	-	1255+32	NE RAMP, RT	1530
0010	1+00	-	4+35	RAB WEST	253
0010	2+00	-	5+33	RAB EAST	253
0010	1238+60	-	1256+17	USH 141 NB, LT	1942
0010	1238+17	-	1255+46	USH 141 SB, RT	1932
0010	1248+06	-	1256+66	NW RAMP, RT	2111
0010	1248+00	-	1268+82	NW RAMP, LT	2825
0010	511+49	-	520+80	STH 64 WB, LT	1888
0010	511+16	-	520+16	STH 64 EB, RT	1258
0010	1228+76	-	1246+91	SW RAMP, LT	3055
0010	1239+12	-	1246+70	SW RAMP, RT	2245
0010	1237+40	-	1244+12	SE RAMP, LT	2159
				TOTAL	33800

INLET PROTECTION TYPE A

CATEGORY	STATION	LOCATION	628.7005 EACH
0010	518+92	STH 64 EB, 6A	1
0010	520+15	STH 64 WB, 5A	1
0010	519+94	STH 64 EB RAB, LT	1
0010	520+65	STH 64 EB RAB, LT	1
0010	521+10	STH 64 WB RAB, RT	1
0010	521+97	STH 64 WB, LT	1
0010	521+95	STH 64 EB, RT	1
0010	526+59	STH 64 EB, RT	1
0010	526+42	STH 64 WB, LT	1
0010	527+80	STH 64 EB RAB, LT	1
0010	527+25	STH 64 WB RAB, RT	1
0010	528+02	STH 64 WB RAB, RT	1
		TOTAL	12

INLET PROTECTION TYPE C

CATEGORY	STATION	LOCATION	628.7015 EACH
0010	518+95	STH 64 EB RT	1
0010	520+15	STH 64 WB LT	1
0010	519+85	STH 64 EB LT RAB	1
0010	520+65	STH 64 EB LT RAB	1
0010	521+10	STH 64 WB RT RAB	1
0010	521+97	STH 64 WB LT	1
0010	521+95	STH 64 EB RT	1
0010	526+59	STH 64 EB RT	1
0010	526+42	STH 64 WB LT	1
0010	527+80	STH 64 EB LT RAB	1
0010	527+25	STH 64 WB RT RAB	1
0010	528+02	STH 64 WB RT RAB	1
		TOTAL	12

3

TEMPORARY DITCH CHECKS

CATEGORY	STATION	TO	STATION	LOCATION	628.7504 LF	REMARKS
0010	1239+58	-	1243+05	SE RAMP, LT	60	2, 30' SEGMENTS
0010	1247+66	-	1248+76	NE RAMP, LT	60	2, 30' SEGMENTS
0010	1249+49	-	1252+23	NW RAMP, RT	60	2, 30' SEGMENTS
0010	1242+83	-	1244+99	SW RAMP, RT	60	2, 30' SEGMENTS
				TOTAL	240	

ROCK BAGS

CATEGORY	STATION	TO	STATION	LOCATION	628.7570 EACH	REMARKS	INLET LABEL
0010	1233+28	-	1261+00	MEDIAN DRAINS	30	5 DRAINS	
0010	520+16	-	-	STH 64 WB, LT	3	INLET PROTECTION	5A
0010	518+92	-	-	STH 64 EB, RT	3	INLET PROTECTION	6A
0010	2+44	-	-	WEST RAB CIRC	3	INLET PROTECTION	7A
0010	3+31	-	-	WEST RAB CIRC	3	INLET PROTECTION	8A
0010	1+33	-	-	WEST RAB CIRC	3	INLET PROTECTION	9A
0010	521+79	-	-	STH 64 EB, RT	3	INLET PROTECTION	10A
0010	521+96	-	-	STH 64 WB, LT	3	INLET PROTECTION	11A
0010	526+42	-	-	STH 64 WB, LT	3	INLET PROTECTION	12A
0010	526+58	-	-	STH 64 EB, RT	3	INLET PROTECTION	13A
0010	2+77	-	-	EAST RAB CIRC	3	INLET PROTECTION	14A
0010	527+80	-	-	EAST RAB CIRC	3	INLET PROTECTION	15A
0010	2+00	-	-	EAST RAB CIRC	3	INLET PROTECTION	16A
0010	-	-	-	UNDISTRIBUTED	75		
				TOTAL	140		

SEEDING BORROW PIT

CATEGORY	630.0300 LB	REMARKS
0010	540	850'x 850' x 12'
	540	

3

PLANTING SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	632.0201 EACH	REMARKS
0010	1+00	-	4+35	WEST RAB CENTRAL ISLAND	12	2 FT - HT, JUNIPERUS COMMUNIS VAR DEPRESSA
0010	2+00	-	5+33	EAST RAB CENTRAL ISLAND	12	2 FT - HT, JUNIPERUS COMMUNIS VAR DEPRESSA
				TOTAL	24	

LANDSCAPE PLANTING SURVEILLANCE AND CARE CYCLES

CATEGORY	LOCATION	632.9101 EACH
0010	PROJECT	15

PLANT DATA CHART

*INFORMATION ONLY NOT FOR BID

COMMON NAME	SYMBOL	SCIENTIFIC NAME	ANS TYPE	NATURE HEIGHT	SIZE WHEN PLANTED	ROOT CONDITION	MINIMUM SIZE				BRACE OR GUY	FERTILIZER UNITS REQ'D	RODENT PROTECTION REQUIRED	MULCH RING DIAMETER
							BALL/POT DIAM.	ROOT DEPTH	PLANT DIAM.	HOLE DEPTH				
JUNIPER, OLDFIELD COMMON	OCJ	JUNIPERUS COMMUNIS VAR. DEPRESSA	3C	4'	2'	CG	10"	6.5"	34"	6.5"	NONE	2	NO	120"

CG: CONTAINER GROWN

DELINEATOR SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	633.0100 STEEL POSTS EACH	633.0500 REFLECTORS EACH	REMARKS	
0010	1235+00	-	1244+32	SE RAMP	10	14	4 NEAR TAPER ARE DOUBLE	100' SPACING
0010	1245+00	-	1256+00	NE RAMP	12	16	4 NEAR TAPER ARE DOUBLE	100' SPACING
0010	1248+00	-	1260+64	NW RAMP	12	16	4 NEAR TAPER ARE DOUBLE	100' SPACING
0010	1235+00	-	1246+90	SW RAMP	12	16	4 NEAR TAPER ARE DOUBLE	100' SPACING
0010	1240+19	-	1255+90	USH 141 NB	8	8	IN BETWEEN RAMPS	200' SPACING
0010	1237+35	-	1257+09	USH 141 SB	10	10	IN BETWEEN RAMPS	200' SPACING
				TOTAL	64	80		

FIELD OFFICE TYPE C

CATEGORY	LOCATION	642.5201 EACH
0010	PROJECT	1
	TOTAL	1

MARKERS CULVERT END

CATEGORY	STATION	TO	STATION	LOCATION	633.5200 EACH	REMARKS
0010	1238+54	-	1239+40	SE RAMP	1	
0010	1247+08	-	1248+95	US 141 SB NB, RT	1	EAST ABUTMENT
0010	1245+85	-	1248+55	US 141 SB SB, LT	1	WEST ABUTMENT
0010	1233+00	-	-	US 141 SB	1	
0010	1237+66	-	-	US 141 SB	1	
0010	1242+55	-	-	US 141 SB	1	
0010	1252+32	-	-	US 141 SB	1	
0010	1260+15	-	-	US 141 SB	1	
0010	1236+43	-	-	SW RAMP	1	
				TOTAL	9	

TRAFFIC CONTROL (1490-27-71)

CATEGORY	LOCATION	643.0100 EACH
0010	PROJECT	1
	TOTAL	1

3

REMOVING TYPE II SIGNS AND REMOVING SMALL SIGN SUPPORTS

SIGN NO.	LOCATION	SIGN CODE	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
100	STH 64, W. OF ALPINE LANE	J1-2	5	1	JCT USH 141, END BUSINESS USH 141
101	ALPINE LANE	R1-1	1	1	
102	STH 64, AT ALPINE LANE	W1-7	1	1	
103	STH 64, E. OF ALPINE LANE	D4-5	1	1	
104	"	D4-5	1	1	
105	"	W3-1	1	1	
106	"	W3-1	1	1	
107	STH 64, W. OF USH 141	J2-3	9	2	NORTH USH 141, EAST STH 64, SOUTH USH 141
108	"	R2-1	1	1	45 MPH
109	"	D1-3	1	2	MARINETTE, IRON MT, GREEN BAY
110	"	J4-2	4	1	WEST STH 64, BUSINESS USH 141
111	STH 64 & USH 141 INTERSECTION	R1-1	1	1	
112	"	R6-3	1		
113	"	J3-2	6	1	EAST STH 64, SOUTH USH 141
114	"	J3-1	3		SOUTH USH 141
115	"	R1-1	1	1	
116	"	R6-3	1		
117	"	R4-7	1		
118	"	R3-1	1	1	
119	"	R5-1	1		
120	"	J3-2	6	2	WEST STH 64, BUSINESS USH 141
121	"	R5-1A	1	1	
122	"	J4-1	2	1	
123	"	J3-1	3	1	EAST STH 64
124	"	J3-1	3	1	NORTH USH 141
125	"	J3-3	9	2	BUSINESS USH 141, WEST STH 64, NORTH USH 141
126	"	R1-1	1	1	
127	"	R6-3	1		
128	"	R1-2	1	1	
129	"	R1-2	1	1	
130	"	R3-1	1	1	
131	"	R5-1	1		
132	"	R4-7	1		
133	"	R1-1	1	1	
134	"	R6-3	1		
135	"	J4-1	2	1	EAST STH 64
136	USH 141 NB, S. OF STH 64	J3-1	3		EAST STH 64
137	"	R5-1	1	1	
	PAGE SUBTOTALS		81	32	

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REMOVING TYPE II SIGNS AND REMOVING SMALL SIGN SUPPORTS

SIGN NO.	LOCATION	SIGN CODE	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
138	USH 141 NB, S. OF STH 64	J3-1	3	1	WEST USH 141
139	"	R5-1	1		
140	"	J4-1	2	1	SOUTH USH 141
141	"	R5-1A	1	1	
142	"	R2-1	1	1	65 MPH
143	"	R3-20R	1	1	
144	"	D1-3	1	2	
145	"	D2-3	1	2	
146	"	R3-20L	1	1	
147	"	J2-1	3	1	WEST STH 64
148	"	J2-1	3	1	EAST STH 64
149	"	J1-1	2	1	JCT STH 64
150	"	J1-1	2	1	JCT STH 64
151	STH 64, E. OF USH 141	D1-3	1	2	
152	"	J2-3	9	2	SOUTH USH 141, WEST STH 64, NORTH USH 141
153	"	W1-7	1	1	
154	13TH ROAD	R1-1	1	1	
155	STH 64, E. OF 13TH ROAD	W3-1	1	1	
156	"	W3-1	1	1	
157	"	D2-2	1	2	
158	"	J1-2	5	1	JCT USH 141, JCT BUSINESS USH 141
159	"	R2-1	1	1	45 MPH
160	"	R2-1	1	1	55 MPH
161	"	W1-2R	1	1	
162	USH 141 SB, N. OF STH 64	R3-20L	1	1	
163	"	R2-1	1	1	65 MPH
164	"	R3-20R	1	1	
165	"	D1-3	1	2	
166	"	D2-3	1	2	
167	"	J2-2	6	2	WEST STH 64, BUSINESS USH 141
168	"	J2-1	3	1	EAST STH 64
169	"	J1-2	5	2	JCT STH 64, JCT BUSINESS USH 141
170	"	J1-2	5	2	JCT STH 64, JCT BUSINESS USH 141
	PAGE SUBTOTALS		69	42	
	PROJECT TOTALS		**150**	**74**	

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ERECTION OF TYPE II SIGNS AND SUPPORTS

SIGN NO.	LOCATION	SIGN CODE	W X H	637.2210 SIGNS TYPE II REFLECTIVE H S.F.	637.2215 FOLDING 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	634.0814 POSTS TUBULAR STEEL 2x2x14 EACH	634.0816 POSTS TUBULAR STEEL 2x2x16 EACH	SPV.0060.04 POSTS TUBULAR STEEL 2x2x18 EACH	REMARKS
1	STH 64, W. OF ALPINE LANE	J1-2	48" X 48"	16.00			1						MODIFIED DUE TO END & BUSINESS PLAQUES, JCT USH 141, END BUS USH 141, SEE PLAN SHEET
2	ALPINE LANE	R1-1	30" X 30"	5.18			1						
3	STH 64, E. OF ALPINE LANE	W1-7	48" X 24"			8.00	1						
4	"	W2-6	30" X 30"			6.25		1					
5	"	W13-1	18" X 18"			2.25							MOUNT BELOW SIGN #4, 15 MPH
6	"	D4-5L	30" X 36"	7.50				1					
7	"	D4-5R	30" X 36"	7.50				1					
8	"	D1-62	108" X 84"	63.00				2	1				SEE SIGN DETAIL SHEET
9	"	W3-2	36" X 36"			9.00	1						
10	"	J4-2	48" X 36"	12.00			1						WEST STH 64, BUSINESS STH 64, SEE PLAN SHEET
11	STH 64, W. OF USH 141	R4-7	24" X 30"	5.00						1			REFER TO INSTALL PLATE A4-9 FOR POST INSTALLATION
12	"	R1-2	36" X 31"	3.88							1		REFER TO INSTALL PLATE A4-9 FOR POST INSTALLATION
13	"	R6-2R	24" X 30"	5.00									MOUNT BELOW SIGN #12
14	"	R1-2	36" X 31"	3.88							1		REFER TO INSTALL PLATE A4-9 FOR POST INSTALLATION
15	"	R1-54	24" X 15"	2.50									MOUNT BELOW SIGN #14
16	"	D1-2	66" X 48"	22.00							2		REFER TO INSTALL PLATE A4-9 FOR POST INSTALLATION, SEE SIGN DETAIL SHEET
17	STH 64, CENTRAL ISLAND WEST RAB	R6-1R	54" X 18"	6.75						2			REFER TO INSTALL PLATE A4-9 FOR POST INSTALLATION
18	"	R6-4B	60" X 24"	10.00									MOUNT BELOW SIGN #17
19	"	R6-1R	54" X 18"	6.75						2			REFER TO INSTALL PLATE A4-9 FOR POST INSTALLATION
20	"	R6-4B	60" X 24"	10.00									MOUNT BELOW SIGN #19
21	USH 141 SB OFF-RAMP	R1-2	48" X 42"	7.00							1		REFER TO INSTALL PLATE A4-9 FOR POST INSTALLATION
22	"	R1-54	24" X 15"	2.50									MOUNT BELOW SIGN #21
23	"	R1-2	48" X 42"	7.00								1	REFER TO INSTALL PLATE A4-9 FOR POST INSTALLATION
24	"	R6-2R	24" X 30"	5.00									MOUNT BELOW SIGN #23
25	STH 64, W. OF USH 141	R5-1	30" X 30"	6.25						1			REFER TO INSTALL PLATE A4-9 FOR POST INSTALLATION
26	"	R3-1	24" X 24"	4.00						1			REFER TO INSTALL PLATE A4-9 FOR POST INSTALLATION
27	"	R1-2	36" X 31"	3.88							1		REFER TO INSTALL PLATE A4-9 FOR POST INSTALLATION
28	"	R1-54	24" X 15"	2.50									MOUNT BELOW SIGN #27
29	"	R1-2	36" X 31"	3.88								1	REFER TO INSTALL PLATE A4-9 FOR POST INSTALLATION
30	"	R6-2R	24" X 30"	5.00									MOUNT BELOW SIGN #29
31	"	R4-7	24" X 30"	5.00						1			REFER TO INSTALL PLATE A4-9 FOR POST INSTALLATION
32	"	D1-62	132" X 72"	66.00				2	1				SEE SIGN DETAIL SHEET
33	"	D1-2	72" X 30"	15.00						2			REFER TO INSTALL PLATE A4-9 FOR POST INSTALLATION, SEE SIGN DETAIL SHEET
34	STH 64, CENTRAL ISLAND WEST RAB	R6-1R	54" X 18"	6.75						2			REFER TO INSTALL PLATE A4-9 FOR POST INSTALLATION
35	"	R6-4B	60" X 24"	10.00									MOUNT BELOW SIGN #34
36	VACANT												
37	"												
38	STH 64, W. OF USH 141	D1-1	42" X 30"	8.75								1	REFER TO INSTALL PLATE A4-9 FOR POST INSTALLATION
	PAGE SUBTOTALS			345.45	0.00	25.50	5	7	2	12	6	3	

ERECTION OF TYPE II SIGNS AND SUPPORTS

SIGN NO.	LOCATION	SIGN CODE	W X H	637.2210 SIGNS TYPE II REFLECTIVE H S.F.	637.2215 FOLDING 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	634.0814 POSTS TUBULAR STEEL 2x2x14 EACH	634.0816 POSTS TUBULAR STEEL 2x2x16 EACH	SPV.0060.04 POSTS TUBULAR STEEL 2x2x18 EACH	REMARKS
39	STH 64, W. OF USH 141	R11-54F	48" X 30"		10.00								MOUNT BELOW SIGN #38
40	USH 141 SB ON-RAMP	R5-57	36" X 36"	9.00			1						
41	USH 141 SB OFF-RAMP	D4-5R	36" X 48"	12.00				1					
42	"	R5-1A	42" X 30"	8.75									MOUNT ON BACKSIDE OF SIGN #41
43	"	R5-1A	42" X 30"	8.75			1						
44	"	W3-2	36" X 36"			9.00		1					
45	"	D1-62	144" X 60"	60.00				2	1				SEE SIGN DETAIL SHEET
46	"	W2-6	36" X 36"			9.00			1				
47	"	W13-1	24" X 24"			4.00							MOUNT BELOW SIGN #46, 15 MPH
48	"	E5-1	72" X 60"	30.00				2					
49	USH 141 NB, N. OF STH 64	W4-1	48" X 48"			16.00		2					
50	USH 141 SB, S. OF STH 64	W4-1	48" X 48"			16.00		2					
51	USH 141 NB OFF-RAMP	E5-1	72" X 60"	30.00				2					
52	"	W2-6	36" X 36"			9.00			1				
53	"	W13-1	24" X 24"			4.00							MOUNT BELOW SIGN #52, 15 MPH
54	"	D1-62	144" X 60"	60.00				2	1				SEE SIGN DETAIL SHEET
55	"	W3-2	36" X 36"			9.00		1					
56	"	D4-5L	36" X 48"	12.00				1					
57	"	R5-1A	42" X 30"	8.75									MOUNT ON BACKSIDE OF SIGN #56
58	"	R5-1A	42" X 30"	8.75			1						
59	"	R1-2	48" X 42"	7.00								1	REFER TO INSTALL PLATE A4-9 FOR POST INSTALLATION
60	"	R6-2R	24" X 30"	5.00									MOUNT BELOW SIGN #59
61	"	R1-2	48" X 42"	7.00								1	REFER TO INSTALL PLATE A4-9 FOR POST INSTALLATION
62	"	R1-54	24" X 15"	2.50									MOUNT BELOW SIGN #61
63	STH 64, CENTRAL ISLAND EAST RAB	R6-1R	54" X 18"	6.75						2			REFER TO INSTALL PLATE A4-9 FOR POST INSTALLATION
64	"	R6-4B	60" X 24"	10.00									MOUNT BELOW SIGN #63
65	STH 64, E. OF USH 141	D2-2	66" X 42"	19.25						2			REFER TO INSTALL PLATE A4-9 FOR POST INSTALLATION
66	"	J4-1	24" X 36"	6.00			1						EAST STH 64, SEE PLAN SHEET
67	"	R1-2	36" X 31"	3.88							1		REFER TO INSTALL PLATE A4-9 FOR POST INSTALLATION
68	"	R6-2R	24" X 30"	5.00									MOUNT BELOW SIGN #67
69	"	R1-2	36" X 31"	3.88							1		REFER TO INSTALL PLATE A4-9 FOR POST INSTALLATION
70	"	R1-54	24" X 15"	2.50									MOUNT BELOW SIGN #69
71	STH 64, CENTRAL ISLAND EAST RAB	R6-1R	54" X 18"	6.75						2			REFER TO INSTALL PLATE A4-9 FOR POST INSTALLATION
72	"	R6-4B	60" X 24"	10.00									MOUNT BELOW SIGN #71
73	STH 64, E. OF USH 141	D1-1	42" X 30"	8.75								1	REFER TO INSTALL PLATE A4-9 FOR POST INSTALLATION
74	"	R11-54F	48" X 30"		10.00								MOUNT BELOW SIGN #73
75	USH 141 NB ON-RAMP	R5-57	36" X 36"	9.00			1						
76	STH 64, CENTRAL ISLAND EAST RAB	R6-1R	54" X 18"	6.75						2			REFER TO INSTALL PLATE A4-9 FOR POST INSTALLATION
	PAGE SUBTOTALS			368.01	20.00	76.00	5	16	4	8	2	3	

ERECTION OF TYPE II SIGNS AND SUPPORTS

SIGN NO.	LOCATION	SIGN CODE	W X H	637.2210 SIGNS TYPE II REFLECTIVE H S.F.	637.2215 FOLDING 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	634.0814 POSTS TUBULAR STEEL 2x2x14 EACH	634.0816 POSTS TUBULAR STEEL 2x2x16 EACH	SPV.0060.04 POSTS TUBULAR STEEL 2x2x18 EACH	REMARKS
77	STH 64, CENTRAL ISLAND EAST RAB	R6-4B	60" X 24"	10.00									MOUNT BELOW SIGN #76
78	STH 64, E. OF USH 141	D1-2	72" X 30"	15.00							2		REFER TO INSTALL PLATE A4-9 FOR POST INSTALLATION, SEE SIGN DETAIL SHEET
79	"	R1-2	36" X 31"	3.88							1		REFER TO INSTALL PLATE A4-9 FOR POST INSTALLATION
80	"	R6-2R	24" X 30"	5.00									MOUNT BELOW SIGN #79
81	"	R4-7	24" X 30"	5.00						1			REFER TO INSTALL PLATE A4-9 FOR POST INSTALLATION
82	"	D1-62	132" X 72"	66.00				2	1				SEE SIGN DETAIL SHEET
83	"	R1-2	36" X 31"	3.88							1		REFER TO INSTALL PLATE A4-9 FOR POST INSTALLATION
84	"	R1-54	24" X 15"	2.50									MOUNT BELOW SIGN #83
85	"	R3-1	24" X 24"	4.00						1			REFER TO INSTALL PLATE A4-9 FOR POST INSTALLATION
86	"	R5-1	30" X 30"	6.25						1			REFER TO INSTALL PLATE A4-9 FOR POST INSTALLATION
87	"	R4-7	24" X 30"	5.00						1			REFER TO INSTALL PLATE A4-9 FOR POST INSTALLATION
88	STH 64, AT 13TH ROAD	W3-2	36" X 36"			9.00		1					
89	13TH ROAD	R1-1	30" X 30"	5.18			1						
90	STH 64, E. OF 13TH ROAD	D1-62	108" X 84"	63.00				2	1				SEE SIGN DETAIL SHEET
91	"	D2-2	84" X 24"	14.00				2					SEE SIGN DETAIL SHEET
92	"	W2-6	30" X 30"	6.25				1					
93	"	W13-1	18" X 18"			2.25							MOUNT BELOW SIGN #92, 15 MPH
94	"	R2-1	24" X 30"	5.00			1						55 MPH
95	"	J1-2	48" X 51"	17.00				1					MODIFIED DUE TO END & BUSINESS PLAQUES, JCT USH 141, JCT BUSINESS USH 141
96	VACANT												
97	USH 141 SB, S. OF STH 64	R2-1	48" X 60"	20.00				2					65 MPH
98	"	J4-1	36" X 57"	14.25					1				SOUTH USH 141
99	USH 141 NB, N. OF STH 64	J4-1	36" X 57"	14.25					1				NORTH USH 141
100	"	R2-1	48" X 60"	20.00				2					65 MPH
	PAGE SUBTOTALS			305.44	0.00	11.25	2	13	4	4	4	0	
	PROJECT TOTALS			**1018.90**	**20.00**	**112.75**	**12**	**36**	**10**	**24**	**12**	**6**	

ERECTION OF PERMANENT SIGNING, TYPE I AND SIGN SUPPORTS

SIGN NO.	LOCATION	SIGN CODE	637.1220 SIGNS TYPE I REFLECTIVE SH W X H	637.1220 SIGNS TYPE I REFLECTIVE SH S.F.	635.0200 SIGN SUPPORTS STRUCT. STEEL HIGH-STRENGTH LB	636.0100 SIGN SUPPORTS CONCRETE MASONRY CY	636.0500 SIGN SUPPORTS STEEL REINFORCEMENT LB	TYPE/SIZE OF STEEL	INFO ONLY - POST LENGTH TO BE VERIFIED BY CONTRACTOR: POST NO. 1 LENGTH FT	POST NO. 2 LENGTH FT	OFFSET DISTANCE FT	DISTANCE BETWEEN POSTS (S) FT	REMARKS
201	USH 141 NB, S. OF HWY CP OVERPASS	E1-1A	192" X 162"	216.00	1067	1.6	98	2-TYPE B	27.2	30.4	30.0	9.6	SEE SIGN DETAIL SHEET
204	USH 141 SB, AT 2-LANE TO 4-LANE SPLIT	E1-1A	180" X 174"	217.50	1097	1.6	98	2-TYPE B	25.3	28.3	17.5	9.0	SEE SIGN DETAIL SHEET
205	USH 141 NB, N. OF STH 64	D2-3	228" X 84"	133.00	867	1.6	98	2-TYPE B	21.0	24.8	30.0	11.4	SEE SIGN DETAIL SHEET
206	USH 141 SB, S. OF STH 64	D2-3	180" X 84"	105.00	580	1.2	68	2-TYPE A	21.0	24.0	30.0	9.0	SEE SIGN DETAIL SHEET
	PROJECT TOTALS			**671.50**	**3611**	**6.0**	**362**						

TRAFFIC CONTROL SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	APPROX. SERVICE PERIOD DAYS	643.0300 DRUMS NO. IN SERVICE	643.0300 DRUMS DAYS	643.0715 WARNING LIGHTS TYPE C NO. IN SERVICE	643.0715 WARNING LIGHTS TYPE C DAYS	REMARKS
0010	1215+25	-	1220+00	USH 141 NB LT	75	14	1050			HORIZONTAL ALONG SHOULDER
0010	1220+00	-	1230+00	USH 141 NB LT	75	21	1575	21	1575	BEGIN TAPERING LANE
0010	1230+00	-	1238+34	USH 141 NB LT	75	8	600			BEGIN HORIZONTAL WITH LANE
0010	1273+30	-	1278+00	USH 141 SB RT	75	14	1050			HORIZONTAL ALONG SHOULDER
0010	1262+25	-	1273+30	USH 141 SB RT	75	21	1575	21	1575	BEGIN TAPERING LANE
0010	1254+24	-	1262+28	USH 141 SB RT	75	8	600			BEGIN HORIZONTAL WITH LANE
0010	1217+75	-	1222+50	USH 141 NB RT	75	14	1050			HORIZONTAL ALONG SHOULDER
0010	1222+50	-	1232+50	USH 141 NB RT	75	21	1575	21	1575	BEGIN TAPERING LANE
0010	1232+50		1241+00	USH 141 NB RT	75	8	600			BEGIN HORIZONTAL WITH LANE
0010	1274+30	-	1279+00	USH 141 SB LT	75	14	1050			HORIZONTAL ALONG SHOULDER
0010	1263+25	-	1274+30	USH 141 SB LT	75	21	1575	21	1575	BEGIN TAPERING LANE
0010	1255+24		1263+25	USH 141 SB LT	75	8	600			BEGIN HORIZONTAL WITH LANE
0010	483+28	-	485+22	STH 64	31	9	279			SE
0010	1192+93	-	1191+38	15TH RD	31	6	186			SE
0010	595+97	-	596+72	CTH B	31	6	186			WEST SMALL MEDIAN
0010	593+43	-	598+79	CTH B	31	10	310			WEST MEDIAN
0010	1019+64	-	1021+00	CTH B / SW RAMP	31	5	155			SW TRUCK APRON
0010	596+93	-	598+67	CTH B / SW RAMP	31	6	186			SW TRUCK APRON
0010	603+18	-	608+00	CTH B	31	36	1116			EAST MEDIAN
0010	1023+36	-	1024+74	CTH B / NE RAMP	31	5	155			NE
0010	603+50	-	605+41	CTH B / NE RAMP	31	8	248			NE
0010	1021+51	-	1022+88	CTH B / SE RAMP	31	5	155			SE
0010	603+25	-	605+12	CTH B / SE RAMP	31	8	248			SE
					TOTALS		16124		6300	

(CONTINUED)

TRAFFIC CONTROL SUMMARY (CONTINUED)

CATEGORY	LOCATION	APPROX. SERVICE PERIOD 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	REMARKS
0010	STH 64 WB	205	5	1025	6	1230	END OF PROJECT LIMITS
0010	STH 64 EB	205	5	1025	6	1230	START OF PROJECT LIMITS
0010	13TH RD	205	5	1025	6	1230	START OF CONSTRUCTION LIMITS
0010	NE QUAD OF STH 64 & CTH Q INTERSECTION	205	1	205	2	410	
0010	NE QUAD OF STH 64 & CTH W INTERSECTION	205	1	205	2	410	
0010	SE QUAD OF STH 64 & CTH ZZ INTERSECTION	205	1	205	2	410	
		TOTALS		3690		4920	

TRAFFIC CONTROL BARRICADES PERMANENT TYPE III

CATEGORY	STATION	LOCATION	643.0453 EACH
0010	1245+00	NE RAMP 40' RT	3
0010	1246+90	SW RAMP 40' LT	3
		TOTAL	6

TRAFFIC CONTROL ARROW BOARDS

CATEGORY	STATION	LOCATION	643.0800 DAY
0010	1223+25	USH 141 NB, W	75
0010	1215+70	USH 141 NB, W	75
0010	1270+90	USH 141 SB, E	75
0010	1277+40	USH 141 SB, E	75
		TOTAL	300

TRAFFIC CONTROL SIGNS

CATEGORY	SIGN CODE	STATION	LOCATION	643.0900 DAY	REMARKS
0010	W20-1	1177+20	USH 141 NB-1 MI S OF PROJECT START	205	ROAD WORK 1 MILE
0010	W20-5	1203+60	USH 141 NB-1/2 MI S OF PROJECT START	205	LEFT LANE CLOSED 1/2 MILE
0010	W20-5	1215+00	USH 141 NB-1500 FT S OF PROJECT START	205	LEFT LANE CLOSED 1500 FT
0010	WO4-2R	1220+00	USH 141 NB-1000FT S OF PROJECT START	205	MERGE SYMBOL
0010	W20-1	1220+00	USH 141 NB-1000FT S PF PROJECT START	205	ROAD WORK 1000 FT
0010	W20-1	1225+00	USH 141 NB-500FT S OF PROJECT START	205	ROAD WORK 500 FT
0010	G20-1	1230+00	USH 141 NB-START OF PROJECT	205	BEGIN ROAD WORK
0010	G20-2A	1267+00	USH 141 NB-500 FT N OR PROJECT END	205	END ROAD WORK
0010	W5-52R	1230+00	USH 141 NB-START OF PROJECT	205	BARRIER MARKER
0010	W013-1	1230+00	USH 141 NB-START OF PROJECT	205	SPEED LIMIT 'XX'
0010	W20-1	1322+80	USH 141 SB-1 MI N OF PROJECT START	205	ROAD WORK 1 MILE
0010	W20-5	1296+40	USH 141 SB-1/2 MI N OF PROJECT START	205	LEFT LANE CLOSED 1/2 MILE
0010	W20-5	1285+00	USH 141 SB-1500 FT N OF PS	205	LEFT LANE CLOSED 1500 FT
0010	WO4-2R	1280+00	USH 141 SB-1000FT S OF PS	205	MERGE SYMBOL
0010	W20-1	1280+00	USH 141 SB-1000FT S OF PS	205	ROAD WORK 1000 FT
0010	W20-1	1275+00	USH 141 SB-500FT S OF PS	205	ROAD WORK 500 FT
0010	G20-1	1270+00	USH 141 SB-START OF PROJECT	205	BEGIN ROAD WORK
0010	G20-2A	1228+00	USH 141 SB-500 FT S OR PROJECT END	205	END ROAD WORK
0010	WO13-1	1270+00	USH 141 SB-START OF PROJECT	205	SPEED LIMIT 'XX'
0010	W5-52R	1270+00	USH 141 SB-START OF PROJECT	205	BARRIER MARKER
0010	W20-3	550+00	STH 64 WB, 15TH RD	205	ROAD CLOSED AHEAD
0010	W20-3	545+00	STH 64 WB, 500 FT E OF PROJECT END	205	ROAD CLOSED 500 FT
0010	R11-2	540+00	STH 64 WB, END OF PROJECT	205	ROAD CLOSED
0010	W20-3	502+00	STH 64 EB, 19TH RD	205	ROAD CLOSED AHEAD
0010	W20-3	507+00	STH 64 EB, 500 FT W OF PROJECT START	205	ROAD CLOSED 500 FT
0010	R11-2	512+00	STH 64 EB, START OF PROJECT	205	ROAD CLOSED
0010	W20-3	383+00	13TH ROAD, E OF 22	205	ROAD CLOSED AHEAD
0010	W20-3	389+00	13TH ROAD, 500 FT S OF PROJECT START	205	ROAD CLOSED 500 FT
0010	R11-2	394+00	13TH ROAD, START OF PROJECT	205	ROAD CLOSED
0010	W20-1	475+00	15TH RD/STH 64	31	ROAD WORK AHEAD
0010	W20-1	491+00	15TH RD/STH 64	31	ROAD WORK AHEAD
0010	W20-1	15+00	15TH RD/STH 64	31	ROAD WORK AHEAD
0010	W20-1	1186+00	15TH RD/STH 64	31	ROAD WORK AHEAD
0010	W20-1	1026+00	CTH B	31	ROAD WORK AHEAD
0010	W20-1	1017+00	CTH B	31	ROAD WORK AHEAD
0010	W20-1	591+00	CTH B	31	ROAD WORK AHEAD
0010	W20-1	613+00	CTH B	31	ROAD WORK AHEAD
TOTAL				6193	

TRAFFIC CONTROL SIGNS FIXED MESSAGE

CATEGORY	LOCATION	643.1000 SF
0010	WEST CONST LIMITS	38.0
0010	EAST CONST LIMITS	38.0
	TOTAL	76

TRAFFIC CONTROL SIGNS PCMS

CATEGORY	LOCATION	643.1050 DAY
0010	FIELD LOCATE ON STH 64 EB	7
0010	FIELD LOCATE ON STH 64 WB	7
	TOTAL	14

TRAFFIC CONTROL DETOUR (1490-27-71)

CATEGORY	LOCATION	643.2000 EACH
0010	PROJECT	1
	TOTAL	1

TRAFFIC CONTROL COVERING SIGNS TYPE II

CATEGORY	LOCATION	643.0920 EACH	643.0920 NUMBER OF CYCLES	643.0920 NUMBER OF SIGNS	REMARKS
0010	J4-1 (EAST-64) EAST OF CTH ZZ	1	1	1	STH 64 EAST
0010	J4-1 (WEST-64) WEST OF CTH W	1	1	1	STH 65 WEST
	TOTAL	2			

TRAFFIC CONTROL DETOUR SIGNS

CATEGORY	Sign Code	LOCATION	643.3000 DAY
0010	WO 20-2-A	1000' W OF J1-1 (JCT ZZ) (ON STH 64 EB)	205
0010	MO 4-8	LT OF J1-1 (JCT ZZ)	205
0010	MO 3-2	"	205
0010	M 1-6	"	205
0010	MO 5-1-R	"	205
0010	MO 4-8	RT OF J3-1 (ZZ-RT ARROW)	205
0010	MO 3-2	"	205
0010	M 1-6	"	205
0010	MO 6-1	"	205
0010	R 11-3	SE QUAD OF STH 64 & CTH ZZ INTERSECTION	205
0010	MO 4-9-R	BELOW SIGN # 4A	205
0010	MO 4-8	200' S OF STH 64 INTERSECTION ON CTH ZZ	205
0010	MO 3-2	"	205
0010	M 1-6	"	205
0010	MO 4-8-A	MODIFY J1-2 (JCT 64; END ZZ)	205
0010	MO 4-8	200' N OF SEC 8 CHURCH RD INTERSECTION ON CTH ZZ	205
0010	MO 3-4	"	205
0010	M 1-6	"	205
0010	MO 4-8	200' S OF SEC 8 CHURCH RD INTERSECTION ON CTH ZZ	205
0010	MO 3-2	"	205
0010	M 1-6	"	205
0010	MO 4-8	ABOVE J1-2 (JCT B; JCT Z)	205
0010	MO 3-2	"	205
0010	M 1-6	"	205
0010	MO 5-1-L	"	205
0010	MO 4-8	LT OF J2-2 (B-LT & AH; Z-LT)	205
0010	MO 3-2	"	205
0010	M 1-6	"	205
0010	MO 6-1	"	205
0010	MO 4-8	200' N OF CTH B INTERSECTION ON CTH ZZ	205
0010	MO 3-4	"	205
0010	M 1-6	"	205
0010	MO 4-8	ON BACK OF J3-3 (Z-LT; ZZ-AH;B-RT) NB CTH B	205
0010	MO 3-2	"	205
0010	M 1-6	"	205
0010	MO 6-1	"	205
0010	MO 4-8	ON BACK OF J3-2 (ZZ-LT; B-RT & AH) EB CTH Z	205
0010	MO 3-4	"	205
0010	M 1-6	"	205
0010	MO 6-1	"	205
0010	MO 4-8	ABOVE J3-3 (B-LT; Z-AH; ZZ-RT) WB CTH B	205
0010	MO 3-4	"	205
0010	M 1-6	"	205
0010	MO 6-1	"	205
0010	MO 4-8	300' E OF CTH B/Z INTERSECTION ON CTH B	205
0010	MO 3-2	"	205
0010	M 1-6	"	205
		SUBTOTAL	9635

CONTINUED

TRAFFIC CONTROL DETOUR SIGNS

CATEGORY	Sign Code	LOCATION	643.3000 DAY
0010	MO 4-8	ABOVE J1-2 (JCT Z; JCT ZZ)	205
0010	MO 3-4	"	205
0010	M 1-6	"	205
0010	MO 5-1-R	"	205
0010	MO 4-8	200' W OF LENZ RD INTERSECTION ON CTH B	205
0010	MO 3-4	"	205
0010	M 1-6	"	205
0010	MO 4-8	200' E OF LENZ RD INTERSECTION ON CTH B	205
0010	MO 3-2	"	205
0010	M 1-6	"	205
0010	MO 4-8	200' W OF N 23RD RD INTERSECTION ON CTH B	205
0010	MO 3-4	"	205
0010	M 1-6	"	205
0010	MO 4-8	200' E OF N 23RD RD INTERSECTION ON CTH B	205
0010	MO 3-2	"	205
0010	M 1-6	"	205
0010	MO 4-8	300' N OF SIGN # 23	205
0010	MO 3-2	"	205
0010	M 1-6	"	205
0010	MO 5-1-L	"	205
0010	MO 4-8	LT OF J3-1 (B-LT)	205
0010	MO 3-2	"	205
0010	M 1-6	"	205
0010	MO 6-1	"	205
0010	MO 4-8	RT OF J 3-1	205
0010	MO 3-4	"	205
0010	M 1-6	"	205
0010	MO 6-1	"	205
0010	MO 4-8	200' W OF NW OFF-RAMP FROM USH 141 SB	205
0010	MO 3-4	"	205
0010	M 1-6	"	205
0010	MO 5-1-R	"	205
0010	MO 4-8	LT OF J2-2 (N-141-AH LT; E-B-AH)	205
0010	MO 3-2	"	205
0010	M 1-6	"	205
0010	MO 6-1	"	205
0010	MO 4-8	200' E OF SE OFF-RAMP FROM USH 141 NB	205
0010	MO 3-2	"	205
0010	M 1-6	"	205
0010	MO 6-1	"	205
0010	MO 4-8	RT OF J2-2 (S-141-AH LT; W-B-AH)	205
0010	MO 3-4	"	205
0010	M 1-6	"	205
0010	MO 6-1	"	205
0010	MO 4-8	75' N OF ELM ST ON CTH B	205
0010	MO 3-2	"	205
0010	M 1-6	"	205
0010	MO 5-1-R	"	205
		SUBTOTAL	9840

CONTINUED

TRAFFIC CONTROL DETOUR SIGNS

CATEGORY	Sign Code	LOCATION	643.3000 DAY
0010	MO 4-8	100' W OF MAIN ST ON CTH B	205
0010	MO 3-4	"	205
0010	M 1-6	"	205
0010	MO 4-8	ABOVE J3-3 (BUS-141-AH; CP-AH; B-RT)	205
0010	MO 3-2	"	205
0010	M 1-6	"	205
0010	MO 6-1	"	205
0010	MO 4-8	ABOVE OF D1-2 (LT-KLONDIKE; POUND-RT)	205
0010	MO 3-4	"	205
0010	M 1-6	"	205
0010	MO 6-1	"	205
0010	MO 4-8	100' E OF PARK ST INTERSECTION ON MAIN ST	205
0010	MO 3-2	"	205
0010	M 1-6	"	205
0010	MO 4-8	100' W OF PARK ST INTERSECTION ON MAIN ST	205
0010	MO 3-4	"	205
0010	M 1-6	"	205
0010	MO 5-1-L	"	205
0010	MO 4-8	100' W OF LOUIS AVE INTERSECTION ON MAIN ST	205
0010	MO 3-4	"	205
0010	M 1-6	"	205
0010	MO 4-8	100' E OF LOUIS AVE INTERSECTION ON MAIN ST	205
0010	MO 3-2	"	205
0010	M 1-6	"	205
0010	MO 4-8	ACROSS FROM SIGN # 38 ON EB CTH B	205
0010	MO 3-4	"	205
0010	M 1-6	"	205
0010	MO 4-8	LT OF M1-5 (B) @ EAST VILLAGE LIMITS EB	205
0010	MO 3-2	"	205
0010	M 1-6	"	205
0010	MO 4-8	200' W OF 7TH RD INTERSECTION ON CTH B	205
0010	MO 3-4	"	205
0010	M 1-6	"	205
0010	MO 4-8	200' E OF 7TH RD INTERSECTION ON CTH B	205
0010	MO 3-2	"	205
0010	M 1-6	"	205
0010	MO 4-8	200' W OF TOWNLINE RD INTERSECTION ON CTH B	205
0010	MO 3-4	"	205
0010	M 1-6	"	205
0010	MO 4-8	200' E OF TOWNLINE RD INTERSECTION ON CTH B	205
0010	MO 3-2	"	205
0010	M 1-6	"	205
0010	MO 4-8	200' W OF PRISTINE RD INTERSECTION ON CTH B	205
0010	MO 3-4	"	205
0010	M 1-6	"	205
0010	MO 4-8	200' E OF PRISTINE RD INTERSECTION ON CTH B	205
0010	MO 3-2	"	205
0010	M 1-6	"	205
		SUBTOTAL	9840

CONTINUED

TRAFFIC CONTROL DETOUR SIGNS

CATEGORY	Sign Code	LOCATION	643.3000 DAY
0010	MO 4-8	LT OF J1-1 (JCT W)	205
0010	MO 3-2	"	205
0010	M 1-6	"	205
0010	MO 5-1-L	"	205
0010	MO 4-8	LT OF J3-2 (W-LT & RT; B-AH) CTH B EB	205
0010	MO 3-2	"	205
0010	M 1-6	"	205
0010	MO 6-1	"	205
0010	MO 4-8	ON BACK OF J3-2 (W-LT & RT; B-AH) CTH B WB	205
0010	MO 3-2	"	205
0010	M 1-6	"	205
0010	MO 6-1	"	205
0010	MO 4-8	200' E OF CTH W INTERSECTION ON CTH B	205
0010	MO 3-4	"	205
0010	M 1-6	"	205
0010	MO 4-8	ABOVE J3-2 (B-LT & RT; W-AH)	205
0010	MO 3-4	"	205
0010	M 1-6	"	205
0010	MO 6-1	"	205
0010	MO 4-8	200' N OF CTH B INTERSECTION ON CTH W	205
0010	MO 3-2	"	205
0010	M 1-6	"	205
0010	MO 4-8	500' N OF SIGN # 49	205
0010	MO 3-4	"	205
0010	M 1-6	"	205
0010	MO 5-1-R	"	205
0010	MO 4-8	200' S OF LITTLE RIVER RD INTERSECTION ON CTH W	205
0010	MO 3-4	"	205
0010	M 1-6	"	205
0010	MO 4-8	200' N OF LITTLE RIVER RD INTERSECTION ON CTH W	205
0010	MO 3-2	"	205
0010	M 1-6	"	205
0010	MO 4-8-A	MODIFY J1-1 (JCT 64) ON CTH W NB	205
0010	M 1-6	"	205
0010	MO 4-8	200' S OF STH 64 INTERSECTION ON CTH W	205
0010	MO 3-4	"	205
0010	M 1-6	"	205
0010	MO 6-1	"	205
0010	R 11-3	NE QUAD OF STH 64 & CTH W INTERSECTION	205
0010	MO 4-9-R	BELOW SIGN # 57A	205
0010	MO 4-8	RT OF J3-1 (W-LT & RT)	205
0010	MO 3-4	"	205
0010	M 1-6	"	205
0010	MO 6-1	"	205
0010	MO 4-8	LT OF J 1-1 (JCT W)	205
0010	MO 3-4	"	205
0010	M 1-6	"	205
0010	MO 5-1-L	"	205
0010	WO 20-2-A	1000' E OF SIGN # 60 (ON STH 64 WB)	205
0010	R 11-3	NE QUAD OF STH 64 & CTH Q INTERSECTION	205
		SUBTOTAL	10250

CONTINUED

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TRAFFIC CONTROL DETOUR SIGNS

CATEGORY	Sign Code	LOCATION	643.3000 DAY
0010	M 1-6	500' N OF CROSS TRAFFIC NEXT 22 MILES SIGN ON USH 141 SB	205
0010	WO 20-2-A	"	205
0010	M 1-6	ACROSS FROM SIGN # 63 (MEDIAN SIDE)	205
0010	WO 20-2-A	"	205
0010	MO 4-8	NEAR EXISTING J1-2 (JCT 64; JCT-BUS-141)	205
0010	M 1-6	"	205
0010	MO 6-1	"	205
0010	MO 4-8	ACROSS FROM SIGN # 65 (MEDIAN SIDE)	205
0010	M 1-6	"	205
0010	MO 6-1	"	205
0010	MO 4-8	200' S OF EXISTING STH 64 INTERSECTION ON USH 141	205
0010	M 1-6	"	205
0010	MO 6-1	"	205
0010	MO 4-8	ACROSS FROM SIGN # 67 (MEDIAN SIDE)	205
0010	M 1-6	"	205
0010	MO 6-1	"	205
0010	MO 4-8	200' N OF CTH Q OVERPASS ON USH 141 SB	205
0010	M 1-6	"	205
0010	MO 6-1	"	205
0010	MO 4-8	ACROSS FROM SIGN # 69 (MEDIAN SIDE)	205
0010	M 1-6	"	205
0010	MO 6-1	"	205
0010	MO 4-8	1700' S OF TYPE 1 (B/TO CP; COLEMAN/POUND; TILT RT)	205
0010	M 1-6	"	205
0010	MO 5-2-R	"	205
0010	MO 4-8	ACROSS FROM SIGN # 73 ON SB USH 141	205
0010	M 1-6	"	205
0010	MO 5-1-R	"	205
0010	MO 4-8	1700' S OF SIGN # 73 ON USH 141 SB	205
0010	M 1-6	"	205
0010	MO 5-2-R	"	205
0010	MO 4-8	ACROSS FROM SIGN # 75 ON SB USH 141	205
0010	M 1-6	"	205
0010	MO 5-1-R	"	205
0010	MO 4-8	LT OF TYPE 1 (B/TO CP; COLEMAN/POUND; TILT RT)	205
0010	M 1-6	"	205
0010	MO 6-2	"	205
0010	MO 4-8	200' S OF STOP AHEAD SIGN ON SB HWY 141 OFF-RAMP TO CTH B	205
0010	MO 3-4	"	205
0010	M 1-6	"	205
0010	MO 5-1-R	"	205
0010	MO 4-8	ACROSS FROM SIGN # 78 (LEFT SIDE)	205
0010	M 1-6	"	205
0010	MO 5-1-L	"	205
0010	MO 4-8	LT OF J3-2 (TO-CP-LT; B-RT & LT)	205
0010	MO 3-4	"	205
0010	M 1-6	"	205
0010	MO 6-1	"	205
0010	MO 4-8	ACROSS FROM SIGN # 80 (LEFT SIDE)	205
0010	M 1-6	"	205
0010	MO 6-1	"	205
	CONTINUED	SUBTOTAL	10455

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TRAFFIC CONTROL DETOUR SIGNS

CATEGORY	Sign Code	LOCATION	643.3000 DAY
0010	M 1-6	LT OF TYPE 1 (B/TO CP; COLEMAN/POUND; EXIT 1 MILE)	205
0010	WO 20-2-A	"	205
0010	M 1-6	ACROSS FROM SIGN # 82 ON NB USH 141	205
0010	WO 20-2-A	"	205
0010	MO 4-8	1700' N OF SIGN # 82 ON USH 141 NB	205
0010	M 1-6	"	205
0010	MO 5-2-R	"	205
0010	MO 4-8	ACROSS FROM SIGN # 84 ON NB USH 141	205
0010	M 1-6	"	205
0010	MO 5-1-R	"	205
0010	MO 4-8	1700' N OF SIGN # 84 ON USH 141 NB	205
0010	M 1-6	"	205
0010	MO 5-2-R	"	205
0010	MO 4-8	ACROSS FROM SIGN # 86 ON NB USH 141	205
0010	M 1-6	"	205
0010	MO 5-1-R	"	205
0010	MO 4-8	LT OF TYPE 1 (B/TO CP; COLEMAN/POUND; TILT RT)	205
0010	M 1-6	"	205
0010	MO 6-2	"	205
0010	MO 4-8	200' S OF STOP AHEAD SIGN ON NB HWY 141 OFF-RAMP TO CTH B	205
0010	MO 3-2	"	205
0010	M 1-6	"	205
0010	MO 5-1-R	"	205
0010	MO 4-8	ACROSS FROM SIGN # 89 ON SB USH 141	205
0010	M 1-6	"	205
0010	MO 5-1-L	"	205
0010	MO 4-8	LT OF J3-3 (B-RT & LT; TO-CP-RT; BUS-141-RT)	205
0010	MO 3-2	"	205
0010	M 1-6	"	205
0010	MO 6-1	"	205
0010	MO 4-8	ACROSS FROM SIGN # 91 (LEFT SIDE)	205
0010	M 1-6	"	205
0010	MO 6-1	"	205
		SUBTOTAL	6765
		TOTAL	**56785**

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GEOTEXTILE FABRIC TYPE HR

CATEGORY	STATION	LOCATION	645.0120 SY
0010	518+92	STH 64 EB RT	4
0010	520+16	STH 64 WB LT	4
0010	520+80	STH 64 EB RT	4
0010	1+29	WRAB CIRC ROADWAY RT	4
0010	522+04	STH 64 WB LT	4
0010	521+79	STH 64 EB RT	4
0010	526+42	STH 64 WB LT	4
0010	526+55	STH 64 EB RT	4
0010	2+15	ERAB CIRC ROADWAY LT	4
0010	527+82	STH 64 EB RT	4
0010	2+81	ERAB CIRC ROADWAY LT	4
0010	1237+50	SW RAMP LT	9
0010	1246+45	USH 141 NB RT	9
0010	1245+70	USH 141 SB LT	9
0010	1238+50	SE RAMP RT	9
		TOTAL	100

RIPRAP MEDIUM

CATEGORY	STATION	LOCATION	606.0200 CY
0010	518+92	STH 64 EB RT	2
0010	520+16	STH 64 WB LT	2
0010	520+80	STH 64 EB RT	2
0010	1+29	WRAB CIRC ROADWAY RT	2
0010	522+04	STH 64 WB LT	2
0010	521+79	STH 64 EB RT	2
0010	526+42	STH 64 WB LT	2
0010	526+55	STH 64 EB RT	2
0010	2+15	ERAB CIRC ROADWAY LT	2
0010	527+82	STH 64 EB RT	2
0010	2+81	ERAB CIRC ROADWAY LT	2
0010	1237+50	SW RAMP LT	5
0010	1246+45	USH 141 NB RT	5
0010	1245+70	USH 141 SB LT	5
0010	1238+50	SE RAMP RT	5
		TOTAL	42

PAVEMENT MARKING EPOXY 4-INCH

CATEGORY	STATION	TO	STATION	LOCATION	646.0106 YELLOW LF	646.0106 WHITE LF	REMARKS
0010	527+47	-	530+08	STH 64 EB		327	EDGELINE
0010	532+78	-	546+36	STH 64 EB		1359	EDGELINE
0010	527+86	-	546+36	STH 64 WB		1918	EDGELINE
0010	520+91	-	527+36	STH 64 WB		867	EDGELINE
0010	520+68	-	527+42	STH 64 EB		871	EDGELINE
0010	511+54	-	520+27	STH 64 WB		978	EDGELINE
0010	511+52	-	518+94	STH 64 EB		976	EDGELINE
0010	1226+50	-	1243+54	SE RAMP RT		1708	EDGELINE
0010	393+00	-	398+92	13TH RD RT		592	EDGELINE
0010	393+00	-	398+05	13TH RD LT		505	EDGELINE
0010	1245+70	-	1264+56	NE RAMP E		1886	EDGELINE
0010	1248+89	-	1268+98	NW RAMP W		2003	EDGELINE
0010	1245+93	-	1227+66	SW RAMP W		1818	EDGELINE
0010	1240+25	-	1255+90	USH 141 NB RT		1565	EDGELINE
0010	1237+84	-	1256+59	USH 141 SB		1865	EDGELINE
0010	528+32	-	535+00	STH 64 WB	653		EDGELINE
0010	528+27	-	535+00	STH 64 EB	673		EDGELINE
0010	4+84	-	5+14	STH 64, E RAB	42		EDGELINE
0010	3+20	-	3+45	STH 64, E RAB	34		EDGELINE
0010	525+55	-	526+73	STH 64 WB	119		EDGELINE
0010	525+55	-	526+68	STH 64 EB	111		EDGELINE
0010	1237+26	-	1243+54	SE RAMP W	628		EDGELINE
0010	1245+71	-	1252+65	NE RAMP W	694		EDGELINE
0010	1248+89	-	1256+55	NW RAMP E	766		EDGELINE
0010	1245+97	-	1238+15	SW RAMP E	781		EDGELINE
0010	521+32	-	522+44	STH 64 EB	112		EDGELINE
0010	521+73	-	522+44	STH 64 WB	106		EDGELINE
0010	515+48	-	520+14	STH 64 WB	466		EDGELINE
0010	515+17	-	519+75	STH 64 EB	445		EDGELINE
0010	2+19	-	2+52	STH 64, W RAB	46		EDGELINE
0010	3+88	-	4+13	STH 64, W RAB	35		EDGELINE
0010	1237+00	-	1250+00	USH 141 NB LT	1300		EDGELINE
0010	1245+50	-	1255+00	USH 141 SB RT	950		EDGELINE
0010	1247+56	-	1248+68.5	USH 141 NB		38	12.5' LINE, 37.5' SKIP
0010	1246+00	-	1247+62.5	USH 141 SB		50	12.5' LINE, 37.5' SKIP
0010	534+93	-	546+36	STH 64 E	2286		DOUBLE YELLOW CENTER
0010	511+52	-	515+17	STH 64 W	730		DOUBLE YELLOW CENTER
0010	522+44	-	525+55	BRIDGE	622		DOUBLE YELLOW CENTER
0010	393+00	-	399+06	13TH RD	1212		DOUBLE YELLOW CENTER
				SUBTOTALS	12800	19350	
				TOTAL	**32150**		

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PAVEMENT MARKING EPOXY 8-INCH

CATEGORY	STATION	TO	STATION	LOCATION	646.0126 LF	REMARKS
0010	4+81	-	5+14	STH 64 EAST RAB	46	SPLITTER
0010	528+24	-	528+42	STH 64 EAST RAB	18	SPLITTER
0010	528+26	-	528+44	STH 64 EAST RAB	17	SPLITTER
0010	2+49	-	2+59	STH 64 EAST RAB	13	NE RAMP
0010	1245+00	-	1245+14	STH 64 EAST RAB	14	NE RAMP
0010	3+18	-	3+45	STH 64 EAST RAB	38	SMALL SPLITTER
0010	526+56	-	526+72	STH 64 EAST RAB	15	SMALL SPLITTER
0010	526+58	-	526+75	STH 64 EAST RAB	17	SMALL SPLITTER
0010	4+06	-	4+14	STH 64 EAST RAB	12	SE RAMP
0010	1244+20	-	1244+32	STH 64 EAST RAB	12	SE RAMP
0010	3+86	-	4+13	STH 64 WEST RAB	37	SMALL SPLITTER
0010	521+70	-	521+86	STH 64 WEST RAB	15	SMALL SPLITTER
0010	521+30	-	521+46	STH 64 WEST RAB	16	SMALL SPLITTER
0010	1+56	-	1+47	STH 64 WEST RAB	12	NW RAMP
0010	1248+00	-	1248+09	STH 64 WEST RAB	12	NW RAMP
0010	2+19	-	2+52	STH 64 WEST RAB	46	SPLITTER
0010	519+99	-	520+14	STH 64 WEST RAB	15	SPLITTER
0010	519+62	-	519+79	STH 64 WEST RAB	16	SPLITTER
0010	3+17	-	3+26	STH 64 WEST RAB	13	SW RAMP
0010	1246+78	-	1246+91	STH 64 WEST RAB	13	SW RAMP
				TOTAL	400	

PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH

CATEGORY	STATION	TO	STATION	LOCATION	646.0841.S LF	REMARKS
0010	1226+69	-	1234+76	SE RAMP	204	WHITE SKIP LINE, 3' LINE, 9' GAP
0010	1256+45	-	1259+84	NE RAMP	87	WHITE SKIP LINE, 3' LINE, 9' GAP
				TOTAL	290	

PAVEMENT MARKING CONCRETE CORRUGATED MEDIAN EPOXY

CATEGORY	STATION	TO	STATION	LOCATION	647.0856 SF
0010	596+42	-	596+70	CTH B	143
0010	597+45	-	598+28	CTH B	320
0010	603+20	-	607+32	CTH B	3214
				TOTAL	3680

PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH

CATEGORY	STATION	TO	STATION	LOCATION	646.0881.S LF	REMARKS
0010	1234+49	-	1260+58	USH 141 SB	54	WHITE, 2' LINE, 100' GAP
0010	1234+70	-	1261+64	USH 141 NB	56	WHITE, 2' LINE, 100' GAP
				TOTAL	110	

PAVEMENT MARKING PREFORMED THERMOPLASTIC 18-INCH

CATEGORY	STATION	TO	STATION	LOCATION	646.0158 LF	REMARKS
0010	4+14	-	4+50	STH 64, E RAB	16	2' SEGMENT, 2' GAP
0010	5+14	-	2+17	STH 64, E RAB	16	2' SEGMENT, 2' GAP
0010	3+45	-	3+78	STH 64, E RAB	16	2' SEGMENT, 2' GAP
0010	2+52	-	2+85	STH 64, W RAB	16	2' SEGMENT, 2' GAP
0010	4+13	-	1+13	STH 64, W RAB	16	2' SEGMENT, 2' GAP
0010	1+56	-	1+89	STH 64, W RAB	16	2' SEGMENT, 2' GAP
				TOTAL	96	

REMOVING PAVEMENT MARKINGS

CATEGORY	STATION	TO	STATION	LOCATION	646.0600 LF
0010	1239+40	-	1247+56	USH 141 NB LT	816
0010	1237+87	-	1237+90	USH 141 NB LT	3
0010	1240+40	-	1240+75	USH 141 NB RT	35
0010	1241+50	-	1247+05	USH 141 NB RT	638
0010	1249+30	-	1249+50	USH 141 NB RT	20
0010	1253+53	-	1253+73	USH 141 SB LT	20
0010	1248+05	-	1252+40	USH 141 SB LT	524
0010	1247+20	-	1252+55	USH 141 SB RT	535
0010	1245+50	-	1245+80	USH 141 SB LT	30
0010	1255+90	-	1267+00	USH 141 NB RT	1110
0010	1230+00	-	1240+20	USH 141 NB RT	1020
0010	1257+10	-	1270+00	USH 141 SB LT	1290
0010	1227+20	-	1237+30	USH 141 SB LT	1010
				TOTAL	7050

PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH

CATEGORY	STATION	TO	STATION	LOCATION	646.0843.S LF
0010	1235+09	-	1238+19	SW RAMP	310
0010	1234+80	-	1237+85	USH 141 SB LT	305
0010	1235+75	-	1237+26	SE RAMP	151
0010	1239+22	-	1240+72	USH 141 NB RT	150
0010	1252+65	-	1255+37	NE RAMP	272
0010	1255+40	-	1258+08	USH 141 NB RT	268
0010	1256+58	-	1258+62	NW RAMP	204
0010	1256+58	-	1258+64	USH 141 NB LT	206
				TOTAL	1865

PAVEMENT MARKING ISLAND NOSE EPOXY

CATEGORY	STATION	TO	STATION	LOCATION	647.0606 EACH	REMARKS
0010	521+32	-	521+37.5	STH 64 EB	1	WEST SMALL SPLITTER
0010	521+76.5	-	521+81	STH 64 EB	1	WEST SMALL SPLITTER
0010	526+22	-	526+26	STH 64 EB	1	EAST SMALL SPLITTER
0010	526+69	-	526+73	STH 64 WB	1	EAST SMALL SPLITTER
0010	517+28	-	520+33	STH 64 EB	1	WEST SPLITTER
0010	520+04	-	520+08	STH 64 WB	1	WEST SPLITTER
0010	528+33	-	528+37	STH 64 EB	1	EAST SPLITTER
0010	531+68	-	531+74	STH 64 EB	1	EAST SPLITTER
0010	596+70		596+72	CTH B	1	WEST SPLITTER
0010	597+43		597+45	CTH B	1	EAST SPLITTER
0010	603+18	-	603+20	CTH B	1	WEST SPLITTER
				TOTAL	11	

PAVEMENT MARKING DIAGONAL EPOXY 12-INCH

CATEGORY	STATION	TO	STATION	LOCATION	647.0726 YELLOW LF	647.0726 WHITE LF	REMARKS
0010	528+39	-	529+03	STH 64 EAST RAB	7	49	SPLITTER
0010	526+27	-	526+61	STH 64 EAST RAB	4	18	SMALL SPLITTER
0010	521+80	-	522+14	STH 64 WEST RAB	4	21	SMALL SPLITTER
0010	519+21	-	519+67	STH 64 WEST RAB	5	33	SPLITTER
				SUBTOTAL	20	121	
				TOTAL	140		

CONSTRUCTION STAKING STORM SEWER

CATEGORY	STATION	LOCATION	650.4000 EACH	REMARKS
0010	1237+50	SW RAMP, LT	1	3A ENDWALL
0010	1238+02	SW RAMP, LT	1	3B MH
0010	1242+49	SW RAMP, LT	1	3C ENDWALL
0010	520+16	STH 64 WB, LT	1	5A INL
0010	520+15	STH 64 WB, LT	1	5B ENDWALL
0010	518+92	STH 64 EB, RT	1	6A INLET
0010	518+91	STH 64 EB, RT	1	6B ENDWALL
0010	2+44	WEST RAB CURB	1	7A WRAB INLET
0010	3+31	WEST RAB CURB	1	8A WRAB INLET
0010	520+80	WEST RAB, RT	1	8B WRAB ENDWALL
0010	1+33	WEST RAB CURB	1	9A INLET
0010	521+14	WEST RAB CURB	1	9B ENDWALL
0010	521+78	STH 64 EB, RT	1	10A INLET
0010	521+79	STH 64 EB, RT	1	10B ENDWALL
0010	521+96	STH 64 WB, LT	1	11A INLET
0010	522+04	STH 64 WB, LT	1	11B ENDWALL
0010	526+42	STH 64 WB, LT	1	12A INLET
0010	526+42	STH 64 WB,LT	1	12B ENDWALL
0010	526+57	STH 64 EB, RT	1	13A INLET
0010	526+54	STH 64 EB, RT	1	13B ENDWALL
0010	2+77	EAST RAB CURB	1	14A INLET
0010	527+22	EAST RAB CURB	1	14B ENDWALL
0010	2+00	EAST RAB CURB	1	16A INLET
0010	527+88	EAST RAB, LT	1	16B ENDWALL
0010	4+45	EAST RAB CURB	1	15A INLET
0010	527+82	EAST RAB, LT	1	15B ENDWALL
		TOTAL	26	

CONSTRUCTION STAKING SUBGRADE

CATEGORY	STATION	TO	STATION	LOCATION	650.4500 LF
0010	1228+00	-	1244+32	SE RAMP	1632
0010	1245+00	-	1264+05	NE RAMP	1905
0010	1248+00	-	1268+57	NW RAMP	2057
0010	1228+62	-	1246+91	SW RAMP	1829
0010	512+00	-	515+00	STH 64	300
0010	515+30.5	-	522+85.5	STH 64 WB	755
0010	515+00	-	522+54	STH 64 EB	754
0010	525+50	-	534+63	STH 64 WB	913
0010	525+50	-	534+71	STH 64 EB	921
0010	534+71	-	539+00	STH 64	429
0010	393+75	-	399+38	13TH ST	563
				TOTAL	12050

CONSTRUCTION STAKING BASE

CATEGORY	STATION	TO	STATION	LOCATION	650.5000 LF
0010	1228+00	-	1244+32	SE RAMP	1632
0010	1245+00	-	1264+05	NE RAMP	1905
0010	1248+00	-	1268+57	NW RAMP	2057
0010	1228+62	-	1246+91	SW RAMP	1829
0010	525+50	-	534+63	STH 64 WB	913
0010	525+50	-	534+71	STH 64 EB	921
0010	534+71	-	539+00	STH 64	429
0010	515+00	-	522+54	STH 64 EB	754
0010	515+30.5	-	522+85.5	STH 64 WB	755
0010	512+00	-	515+00	STH 64	300
0010	393+75	-	399+38	13TH RD	563
				TOTAL	12050

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CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER

CATEGORY	STATION	TO	STATION	LOCATION	650.5500 LF	REMARKS
0010	517+38	-	522+54	STH 64 EB, S	658	
0010	525+50	-	532+78	STH 64 EB, S	888	
0010	525+50	-	530+38	STH 64 WB, N	612	
0010	518+76	-	522+54	STH 64 WB, N	574	
0010	517+35	-	519+67	STH 64 MEDIAN	521	WEST LEG
0010	519+83	-	521+25	WEST RAB	333	
0010	521+42	-	521+77	STH 64 SMALL MEDIAN	107	WEST LEG
0010	526+26	-	526+62	STH 64 SMALL MEDIAN	114	EAST LEG
0010	526+80	-	528+26	EAST RAB	333	
0010	528+41	-	531+73	STH 64 MEDIAN	715	EAST LEG
0010	1192+19	-	1193+26	15TH RD RT	107	
0010	398+63	-	399+12	13TH RD LT	82	
0010	399+04	-	399+48	13TH RD RT	68	
0010	1019+74	-	1020+33	NW RAMP RT	58	CTH B INTERCHANGE
0010	1023+13	-	1023+78	NE RAMP RT	97	CTH B INTERCHANGE
0010	1022+63	-	1023+10	SE RAMP RT	73	CTH B INTERCHANGE
				TOTAL	5340	

CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (1490-27-71)

CATEGORY	LOCATION	650.9910 LS
0010	PROJECT	1

CONSTRUCTION STAKING PIPE CULVERTS

CATEGORY	STATION	LOCATION	650.6000 EACH
0010	1238+71	SE RAMP	1
0010	522+73	STH 64 EB	1
0010	525+16	STH 64 EB	1
		TOTAL	3

CONSTRUCTION STAKING SLOPE STAKES

CATEGORY	STATION	TO	STATION	LOCATION	650.9920 LF	REMARKS
0010	1226+50	-	1244+32	SE RAMP	1782	
0010	1245+00	-	1264+05	NE RAMP	1905	
0010	1248+00	-	1268+57	NW RAMP	2057	
0010	1228+63	-	1246+91	SW RAMP	1827	
0010	525+55	-	534+63	STH 64 WB	907	EAST LEG
0010	525+48	-	534+71	STH 64 EB	894	EAST LEG
0010	534+71	-	540+18	STH 64	547	EAST LEG
0010	515+00	-	522+54	STH 64 EB	755	WEST LEG
0010	515+00	-	522+44	STH 64 WB	748	WEST LEG
0010	511+88	-	515+00	STH 64	310	WEST LEG
0010	393+75	-	399+37	13TH RD	562	
				TOTAL	12300	

CONSTRUCTION STAKING STRUCTURE LAYOUT (1490-27-71)

CATEGORY	STATION	TO	STATION	LOCATION	650.6500 LS
0010	522+54	-	525+50	OVERPASS	1
				TOTAL	1

CONDUIT RIGID NONMETALLIC SCHEDULE 40

CATEGORY	LOCATION	FROM	TO	652.0225 * 2-Inch LF	652.0235 3-Inch LF
0010	USH 141 & STH 64	CB1	LB1	90	-
0010	USH 141 & STH 64	LB1	PB1	100	-
0010	USH 141 & STH 64	PB1	DRAIN	20	-
0010	USH 141 & STH 64	PB1	LB2	10	-
0010	USH 141 & STH 64	LB2	LB3	140	-
0010	USH 141 & STH 64	PB1	PB2	-	80
0010	USH 141 & STH 64	PB2	DRAIN	20	-
0010	USH 141 & STH 64	PB2	LB4	40	-
0010	USH 141 & STH 64	LB4	LB5	90	-
0010	USH 141 & STH 64	LB5	LB6	110	-
0010	USH 141 & STH 64	LB6	PB3	20	-
0010	USH 141 & STH 64	PB3	DRAIN	20	-
0010	USH 141 & STH 64	PB3	PB8	-	70
0010	USH 141 & STH 64	PB3	SE BRIDGE PARAPET	80	-
0010	USH 141 & STH 64	SW BRIDGE PARAPET	PB4	50	-
0010	USH 141 & STH 64	PB4	DRAIN	20	-
0010	USH 141 & STH 64	PB4	PB7	-	60
0010	USH 141 & STH 64	PB4	LB8	80	-
0010	USH 141 & STH 64	LB8	LB9	110	-
0010	USH 141 & STH 64	LB9	LB10	100	-
0010	USH 141 & STH 64	LB10	PB5	10	-
0010	USH 141 & STH 64	PB5	DRAIN	20	-
0010	USH 141 & STH 64	PB5	LB11	170	-
0010	USH 141 & STH 64	PB5	PB6	-	80
0010	USH 141 & STH 64	PB6	DRAIN	20	-
0010	USH 141 & STH 64	PB6	LB12	70	-
0010	USH 141 & STH 64	LB12	LB13	80	-
0010	USH 141 & STH 64	LB13	LB14	130	-
0010	USH 141 & STH 64	LB14	PB7	40	-
0010	USH 141 & STH 64	PB7	DRAIN	20	-
0010	USH 141 & STH 64	PB7	NW BRIDGE PARAPET	50	-
0010	USH 141 & STH 64	NE BRIDGE PARAPET	PB8	80	-
0010	USH 141 & STH 64	PB8	DRAIN	20	-
0010	USH 141 & STH 64	PB8	LB16	40	-
0010	USH 141 & STH 64	LB16	CB1	30	-
0010	USH 141 & STH 64	PB8	CB1	-	70
0010	USH 141 & STH 64	CONDUIT FOR UTILITY USE		-	30
		TOTAL		**1880**	**390**

* QUANTITIES SHOWN ELSEWHERE IN PLAN

LIGHTING REMOVAL

CATEGORY	LOCATION	204.0195 REMOVING CONCRETE BASES EACH	653.0905 REMOVING PULL BOXES EACH	SPV.0105.02 REMOVING LIGHTING/BEACON BOXES LS
0010	USH 141 & STH 64	19	8	1
	TOTAL	**19**	**8**	**1**

PULL BOXES STEEL

CATEGORY	LOCATION	653.0140 24x42 -INCH EACH
0010	USH 141 & STH 64	8
	TOTAL	**8**

CONCRETE BASES

CATEGORY	LOCATION	654.0105 Type 5 EACH	SPV.0060.01 Control Cabinet EACH
0010	USH 141 & STH 64	14	1
	TOTAL	**14**	1

LIGHTING HARDWARE SUMMARY

CATEGORY	LOCATION	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0322 POLES TYPE 5 ALUMINUM EACH	657.0710 LUMINAIRE ARMS TRUSS TYPE 4.5-INCH CLAMP 12-FT EACH	659.1115 LUMINAIRES UTILITY LED-A EACH
0010	USH 141 & STH 64	14	16	16	16
	TOTAL	**14**	**16**	**16**	**16**

ELECTRICAL WIRE LIGHTING

(240 VOLT SYSTEM) Circuit	FROM	TO	10AWG 655.0615 Ungrounded Conductor (see Circuit Color) LF	12AWG 655.0610 Ungrounded Conductor (Black)/(Red) LF	655.0610 Equipment Grounding Conductor (Green) LF
A	CB1	LB16	100		
(Black)	LB16	Luminaire		100	50
	LB16	LB5	600		
	LB5	Luminaire		100	50
	CB1	LB2	480		
	LB2	Luminaire		100	50
B	CB1	LB6	420		
(Red)	LB6	Luminaire		100	50
	LB6	LB4	460		
	LB4	Luminaire		100	50
	CB1	LB1	220		
	LB1	Luminaire		100	50
	LB1	LB3	380		
	LB3	Luminaire		100	50
C	CB1	LB7	1000		
(Blue)	LB7	Luminaire		100	50
	LB7	LB9	700		
	LB9	Luminaire		100	50
	LB9	LB11	640		
	LB11	Luminaire		100	50
D	CB1	LB8	1440		
(Brown)	LB8	Luminaire		100	50
	LB8	LB10	480		
	LB10	Luminaire		100	50
E	CB1	LB15	500		
(Orange)	LB15	Luminaire		100	50
	LB15	LB13	980		
	LB13	Luminaire		100	50
F	CB1	LB14	1180		
(Yellow)	LB14	Luminaire		100	50
	LB14	LB12	480		
	LB12	Luminaire		100	50
	SUB-TOTALS		10,060	1,600	800
	PROJECT TOTAL		13,810	2,400	

ELECTRICAL WIRE LIGHTING CONT'D

(240 VOLT SYSTEM) FROM	TO	10AWG 655.0615 Equipment Grounding Conductor (Green) LF
CB1	LB1	110
LB1	LB2	140
LB2	PB1	30
LB2	LB3	160
LB3	LB4	320
LB4	PB2	60
LB4	LB5	110
LB5	LB6	130
LB6	PB3	50
LB6	LB7	380
LB7	LB8	230
LB8	PB4	100
LB8	LB9	130
LB9	LB10	120
LB10	PB5	30
LB10	LB11	210
LB11	LB12	360
LB12	PB6	90
LB12	LB13	100
LB13	LB14	150
LB14	PB7	60
LB14	LB15	350
LB15	LB16	220
LB16	PB8	60
LB16	CB1	50
	SUB TOTAL	3,750

ELECTRIC SERVICE

CATEGORY	LOCATION	654.0200 METER BREAKER PEDESTAL LS	SPV.0060.09 LIGHTING CONTROL CABINET EACH
0010	USH 141 & STH 64	1	1
	TOTAL	**1**	**1**

SAWING ASPHALT

CATEGORY	STATION	TO	STATION	LOCATION	690.0150 LF
0010	512+00			STH 64	39
0010	539+00			STH 64	30
0010	393+75			13TH ROAD	22
0010	1227+00	-	1270+50	USH 141 SB LT	4362
0010	1230+00	-	1267+50	USH 141 NB RT	3762
0010	1238+00	-	1249+00	USH 141 NB LT	1106
0010	1246+00	-	1254+00	USH 141 SB RT	806
0010	596+42	-	596+72	CTH B MEDIAN	86
0010	597+41	-	598+28	CTH B MEDIAN	194
0010	603+16	-	607+32	CTH B MEDIAN	860
0010	1192+30	-	1193+15	15TH RD / STH 64	102
				TOTAL	11400

SAWING CONCRETE

CATEGORY	STATION	LOCATION	690.0250 LF
0010	596+42	CTH B MEDIAN	19
0010	598+28	CTH B MEDIAN	12
0010	607+32	CTH B MEDIAN	24
0010	1192+30	15TH RD	3
		TOTAL	58

BARRICADE RACK

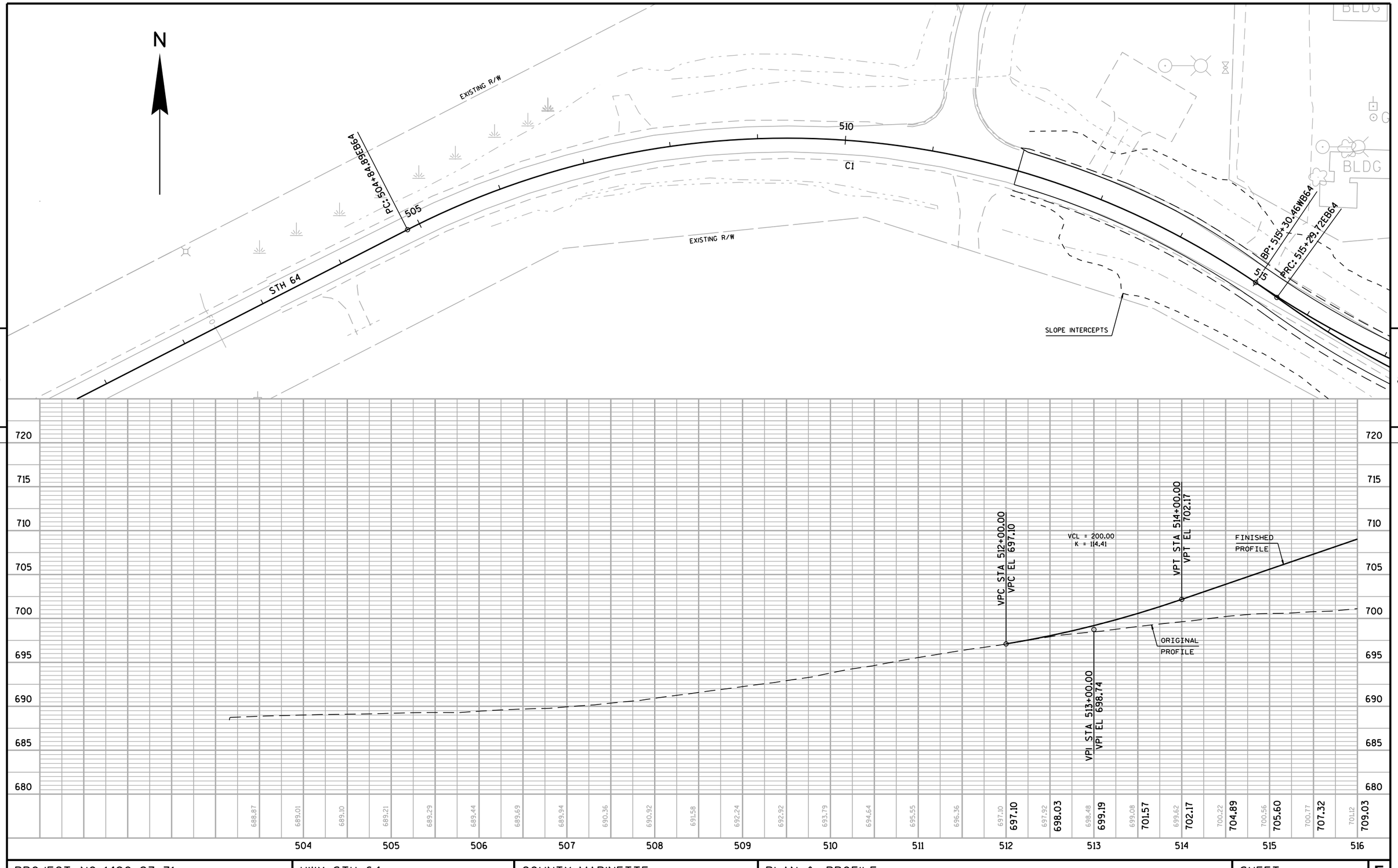
CATEGORY	STATION	LOCATION	SPV.0060.03 EACH
0010	1245+00	NE RAMP 40' RT	1
0010	1246+90	SW RAMP 40' LT	1
		TOTAL	2

LOW MAINTENANCE SEEDING

CATEGORY	STATION	TO	STATION	LOCATION	SPV.0085.01 LB
0010	1+00	-	4+35	RAB WEST	7
0010	2+00	-	5+33	RAB EAST	7
				TOTAL	15

CONCRETE SIDEWALK 4-INCH WITH STAMPED AND STAINED RELIEF

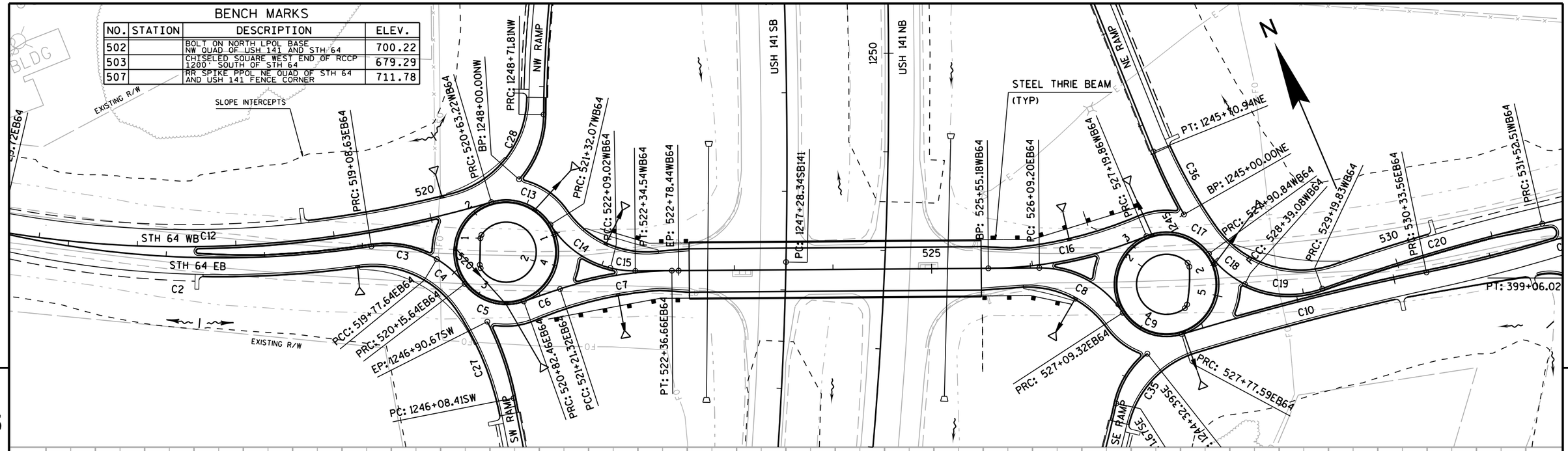
CATEGORY	STATION	TO	STATION	LOCATION	SPV.0165.01 SF
0010	1+00	-	4+35	RAB WEST	704
0010	2+00	-	5+33	RAB EAST	704
				TOTAL	1408

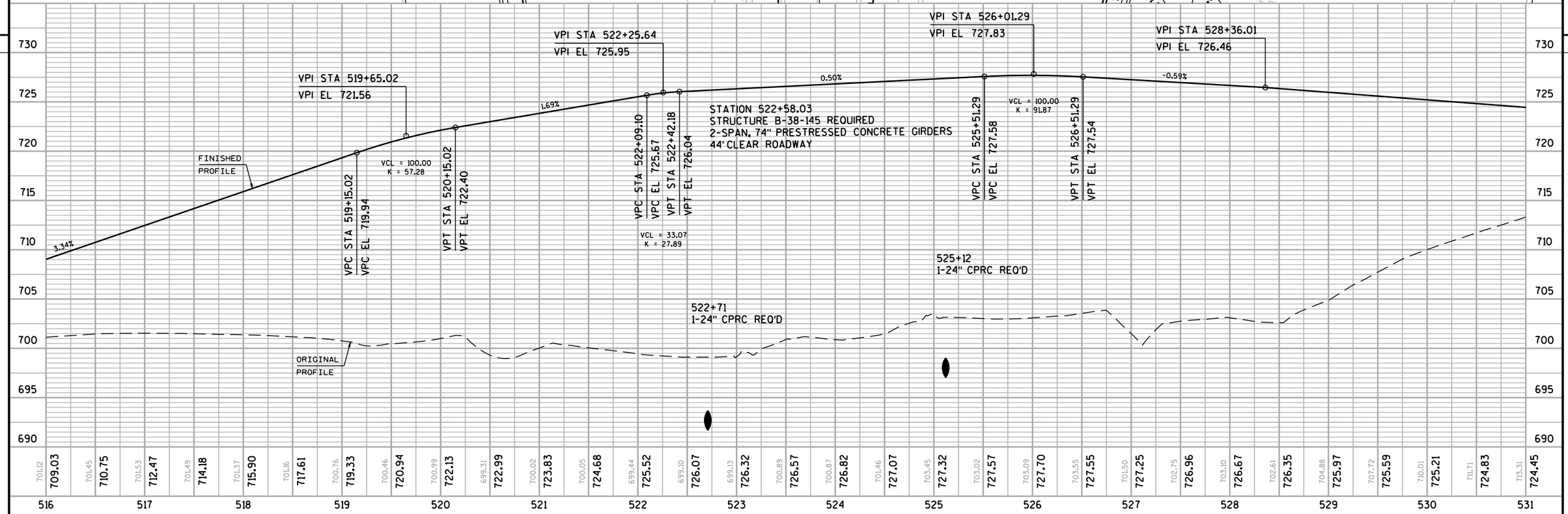


PROJECT NO: 1490-27-71	HWY: STH 64	COUNTY: MARINETTE	PLAN & PROFILE	SHEET 97 E

BENCH MARKS

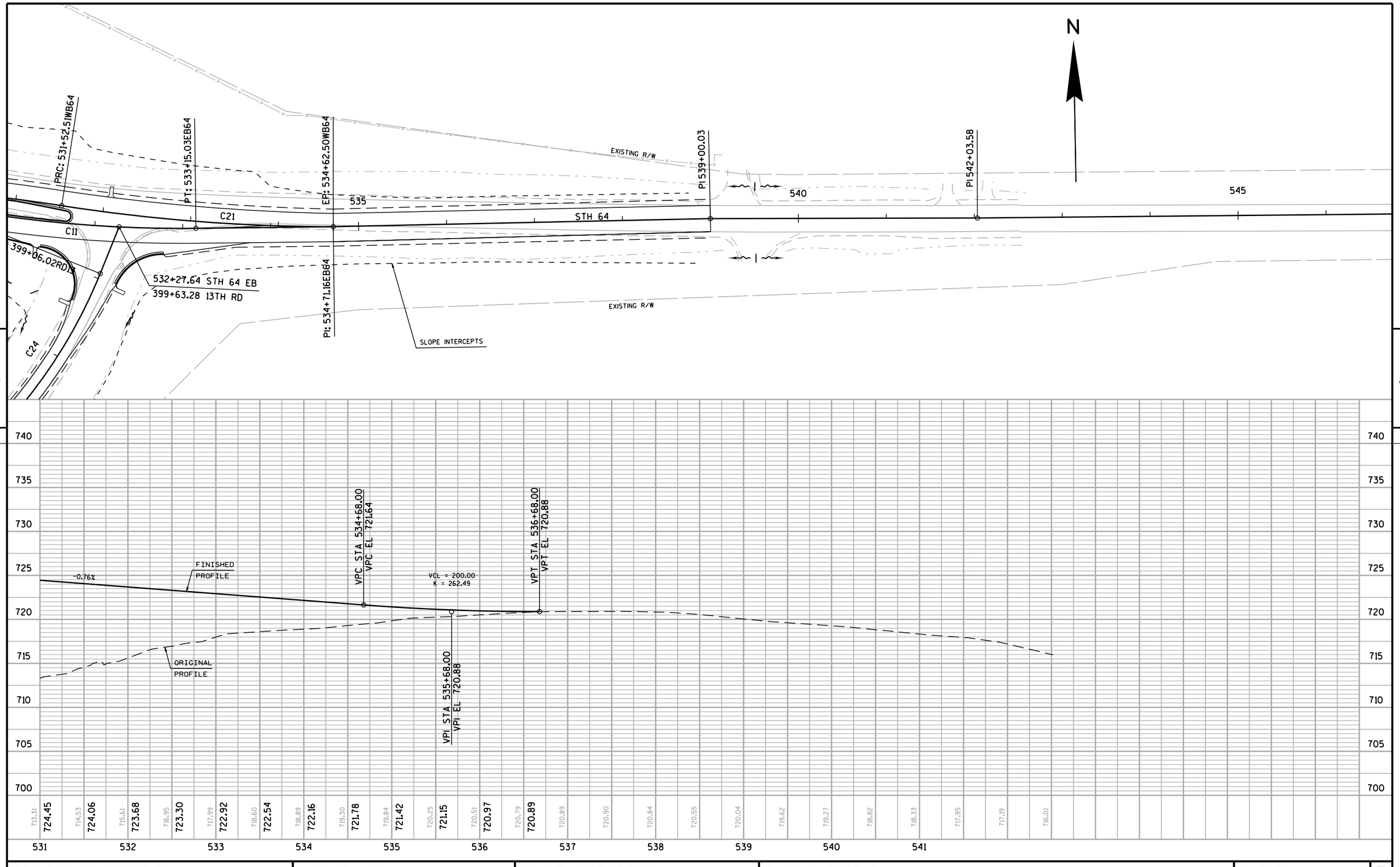
NO.	STATION	DESCRIPTION	ELEV.
502		BOLT ON NORTH LPOL BASE NW QUAD OF USH 141 AND STH 64	700.22
503		CHISELED SQUARE WEST END OF RCCP 1200' SOUTH OF STH 64	679.29
507		RR SPIKE PPOL NE QUAD OF STH 64 AND USH 141 FENCE CORNER	711.78



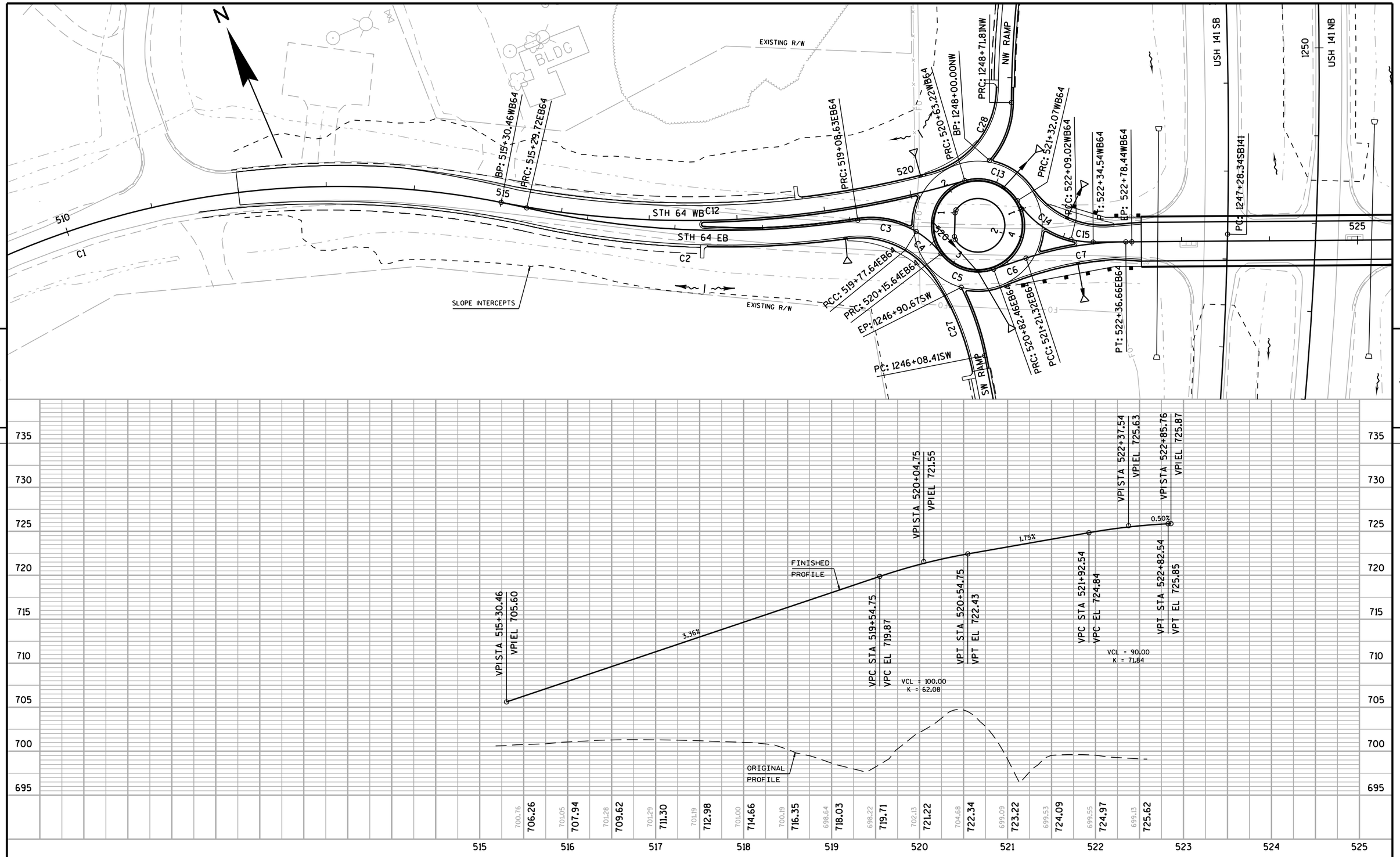


PROJECT NO: 1490-27-71	HWY: STH 64	COUNTY: MARINETTE	PLAN & PROFILE - STH 64 EB	SHEET E

FILE NAME : F:\d3_149027\050102_pp.dgn PLOT DATE : 26-FEB-2014 17:19 PLOT BY : dotqdc PLOT NAME : 050102 pp PLOT SCALE : 100:1



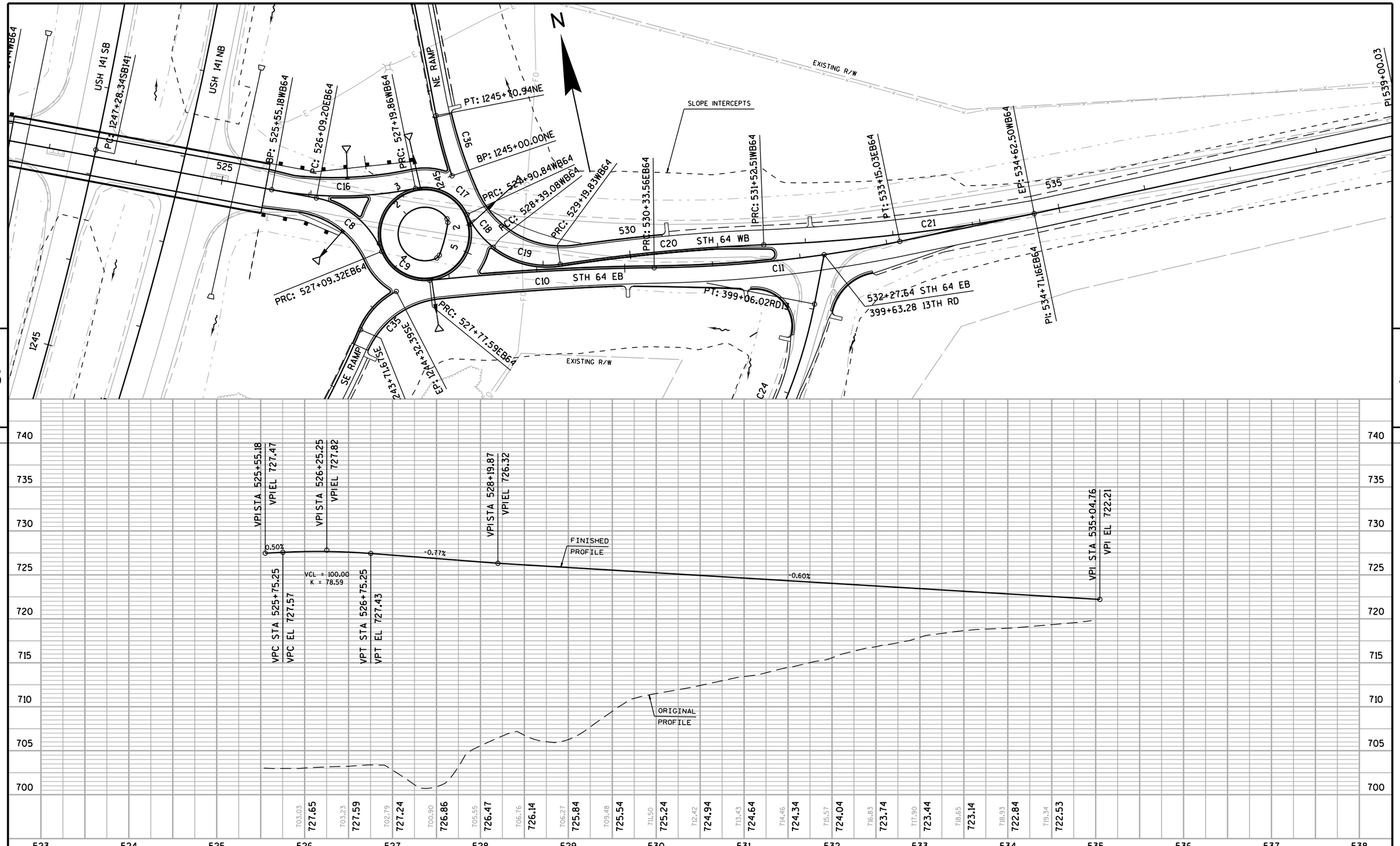
PROJECT NO: 190-27-71	HWY: STH 64	COUNTY: MARINETTE	PLAN & PROFILE	SHEET 99	E



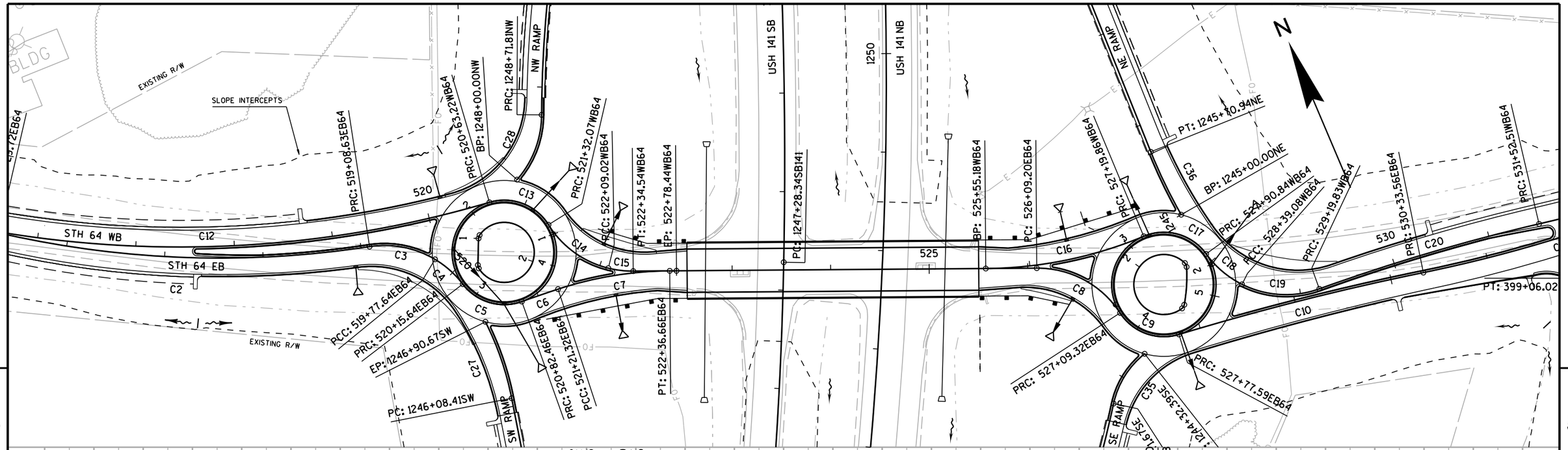
PROJECT NO: 1490-27-71	HWY: STH 64	COUNTY: MARINETTE	PLAN & PROFILE - STH 64 WESTBOUND	SHEET 100	E

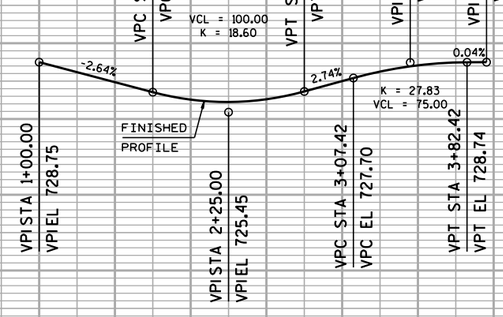
FILE NAME : F:\d3_149027\050104_pp.dgn PLOT DATE : 07-NOV-2013 07:37 PLOT BY : dotbrb PLOT NAME : 050104 pp PLOT SCALE : 100:1

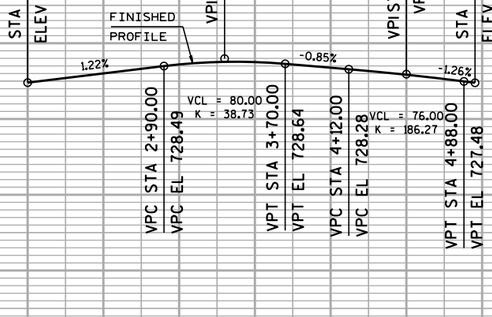
WISDOT/CADDS SHEET 45



PROJECT NO: 190-27-71	HWY: STH 64	COUNTY: MARINETTE	PLAN & PROFILE - STH 64 WESTBOUND	SHEET 101 E







PROJECT NO: 1490-27-71	HWY: STH 64	COUNTY: MARINETTE	PLAN & PROFILE - WEST & EAST ROUNDABOUT	SHEET 102 E

N

SLOPE INTERCEPTS

EXISTING R/W

BP: 1227+65.55SW

1220

1220

1225

USH 141 SB

1230

C25

1230

1225

USH 141 NB

1230

1230

C32

BP: 1226+49.50SE

EXISTING R/W

5

5

700

695

690

685

680

675

670

FINISHED PROFILE

0.22%

VPI STA 1227+23.23

VPI EL 689.00

689.06 689.17 689.28 689.39 689.49 689.60 689.71 689.82 689.93 690.04 690.15 690.26 690.36 690.47

1228 1229 1230 1231 1232 1233 1234

PROJECT NO: 1490-27-71	HWY: STH 64	COUNTY: MARINETTE	SW RAMP	SHEET 103	E

FILE NAME : F:\d3_149027\050112_pp.dgn PLOT DATE : 07-NOV-2013 07:37 PLOT BY : dotbrb PLOT NAME : 050112 pp PLOT SCALE : 100:1

WISDOT/CADDS SHEET 40

N

SLOPE INTERCEPTS

EXISTING R/W

PC: 1235+09.94SW

PT: 1241+98.97SW

PC: 1246+08.41SW

EP: 1246+90.67SW

520+15.64EB64

7.64EB64

SW RAMP

TRAFFIC CONTROL BARRICADE
TYPE III RACK
SEE SDD

C26

C27

C28

C3

C4

C5

C6

C13

C14

C15

C7

C32

1235

1240

1245

USH 141 NB

USH 141 SB

STH 64

520

PRC: 520+63.22WB64

BP: 1248+00.00NW

PRC: 1248

PRC: 520+82.46EB64

PCC: 521+21.32EB64

PRC: 521+32.07WB64

PCC: 522+09.02WB64

PT: 522+34.54WB64

PT: 522+36.66EB64

EP: 522+78.44WB64

PC: 1247+28.34SB141

VPI STA 1243+92.01
VPI EL 721.42

0.56%

VCL = 445.25
K = 151.30

VPI STA 1240+49.99
VPI EL 709.42

3.51%

VCL = 180.00
K = 104.63

VPT STA 1241+39.99
VPT EL 712.58
VPC STA 1241+69.38
VPC EL 713.61

VPT STA 1246+14.63
VPT EL 722.68

VPI STA 1247+00.10
VPI EL 723.16

VPT STA 1238+63.83
VPT EL 699.69

5.23%

VPC STA 1239+59.99
VPC EL 704.72

VPC STA 1235+36.17
VPC EL 690.77

FINISHED PROFILE

VCL = 327.66
K = 65.39

VPI STA 1237+00.00
VPI EL 691.12

ORIGINAL PROFILE

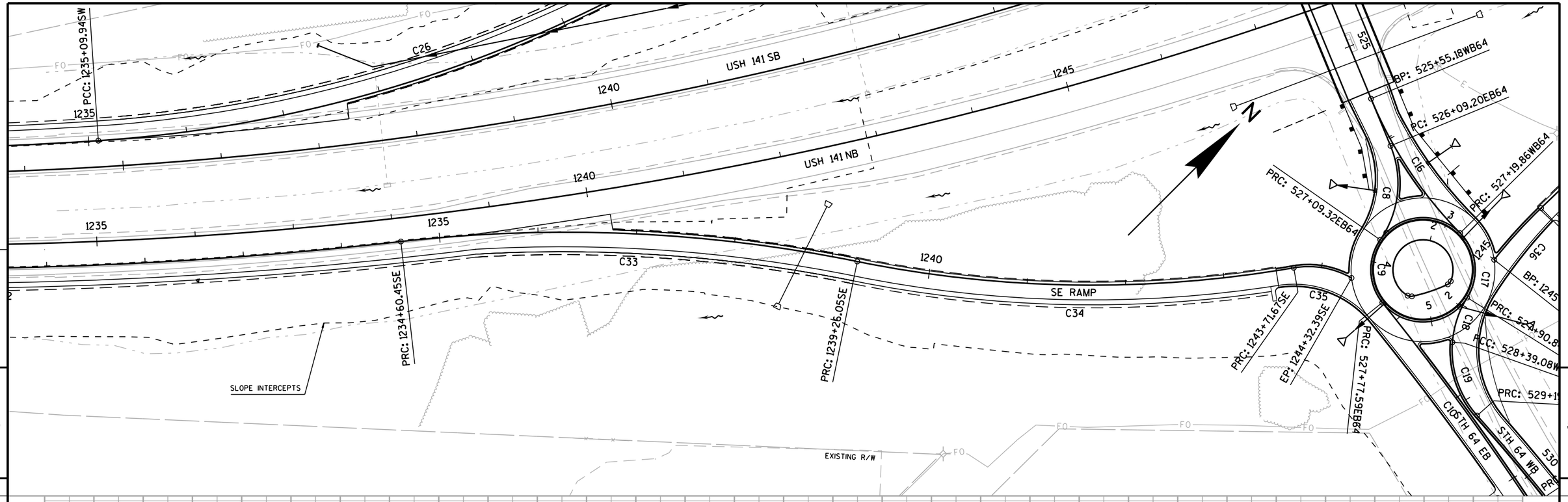
720 715 710 705 700 695 690 685 680

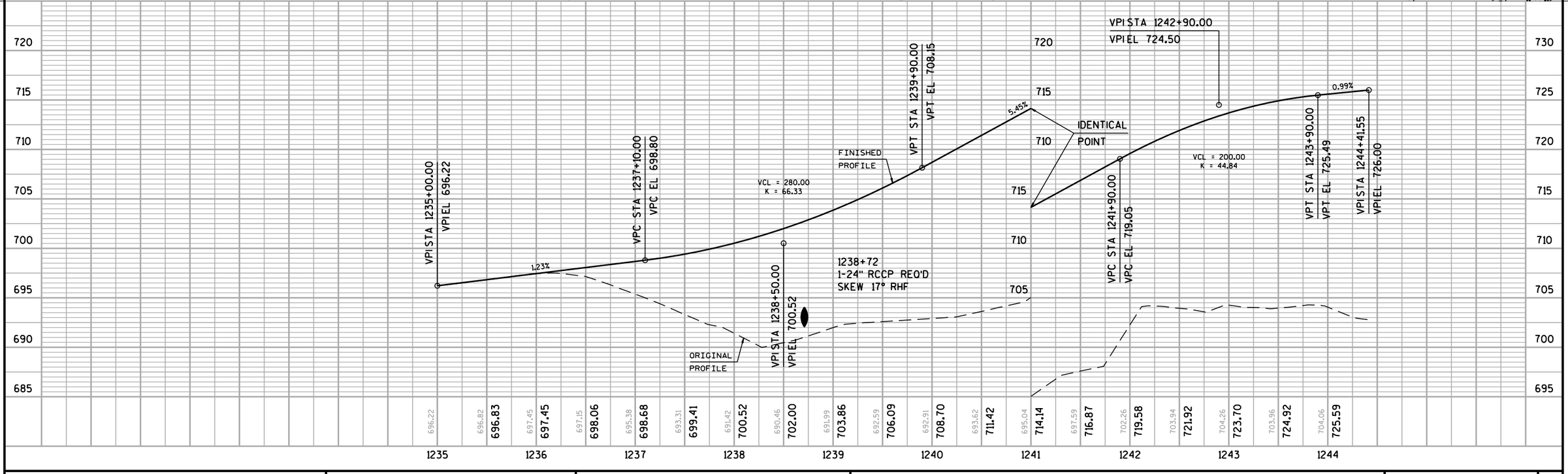
690.47 690.58 690.69 690.81 691.22 692.01 693.18 694.73 696.66 698.98 701.58 704.19 706.73 709.04 711.10 712.93 714.65 716.22 717.63 718.87 719.94 720.85 721.59 722.17 722.59 722.88 723.16

691.03 691.31 691.51 691.69 691.60 691.25 690.05 689.04 688.08 691.90 695.11 698.45 703.38 709.81 717.19 712.81 719.56 709.11 693.48 685.44 683.59 685.07 698.46 702.20

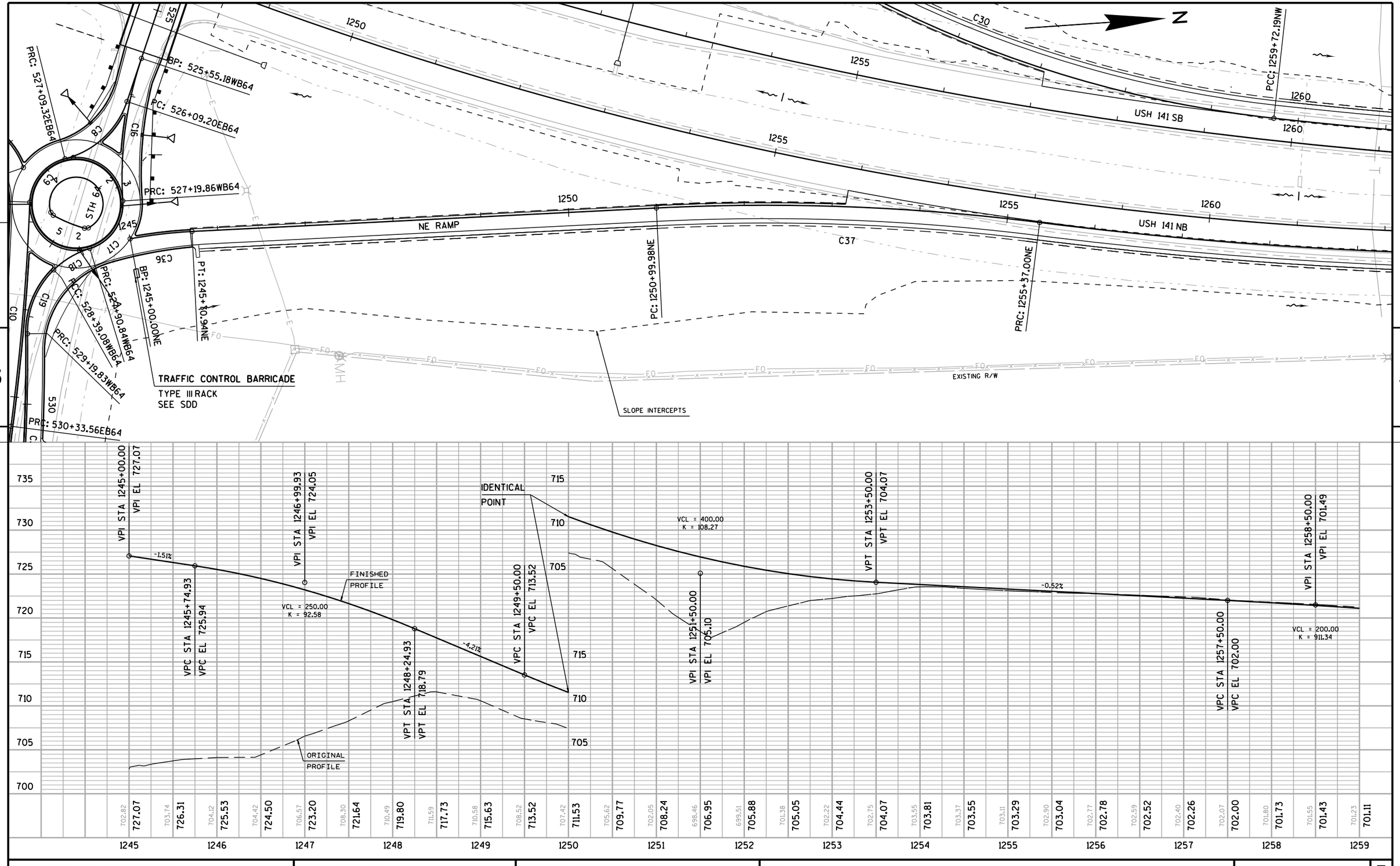
1234 1235 1236 1237 1238 1239 1240 1241 1242 1243 1244 1245 1246 1247

PROJECT NO: 1490-27-71	HWY: STH 64	COUNTY: MARINETTE	SW RAMP	SHEET 104 E

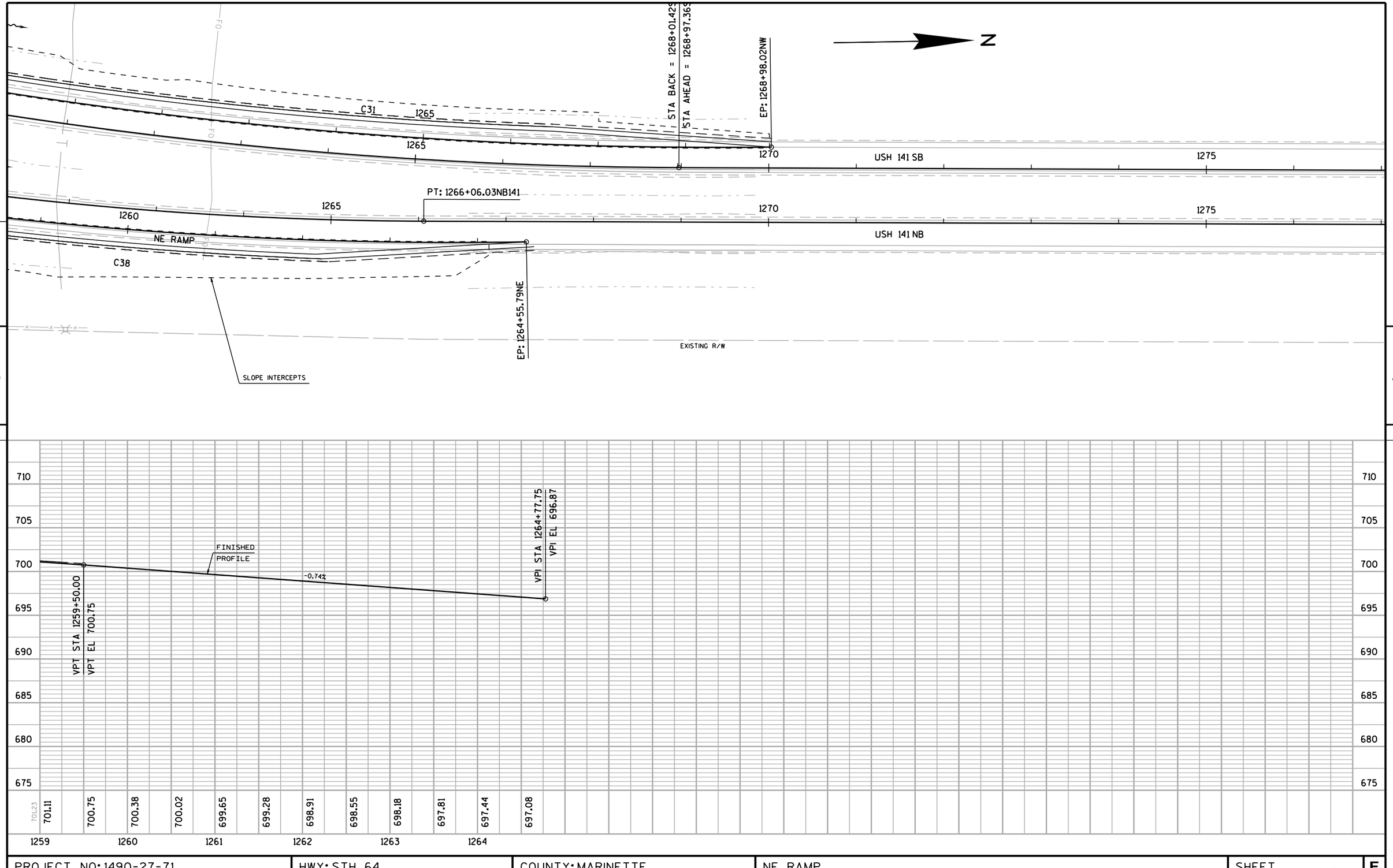




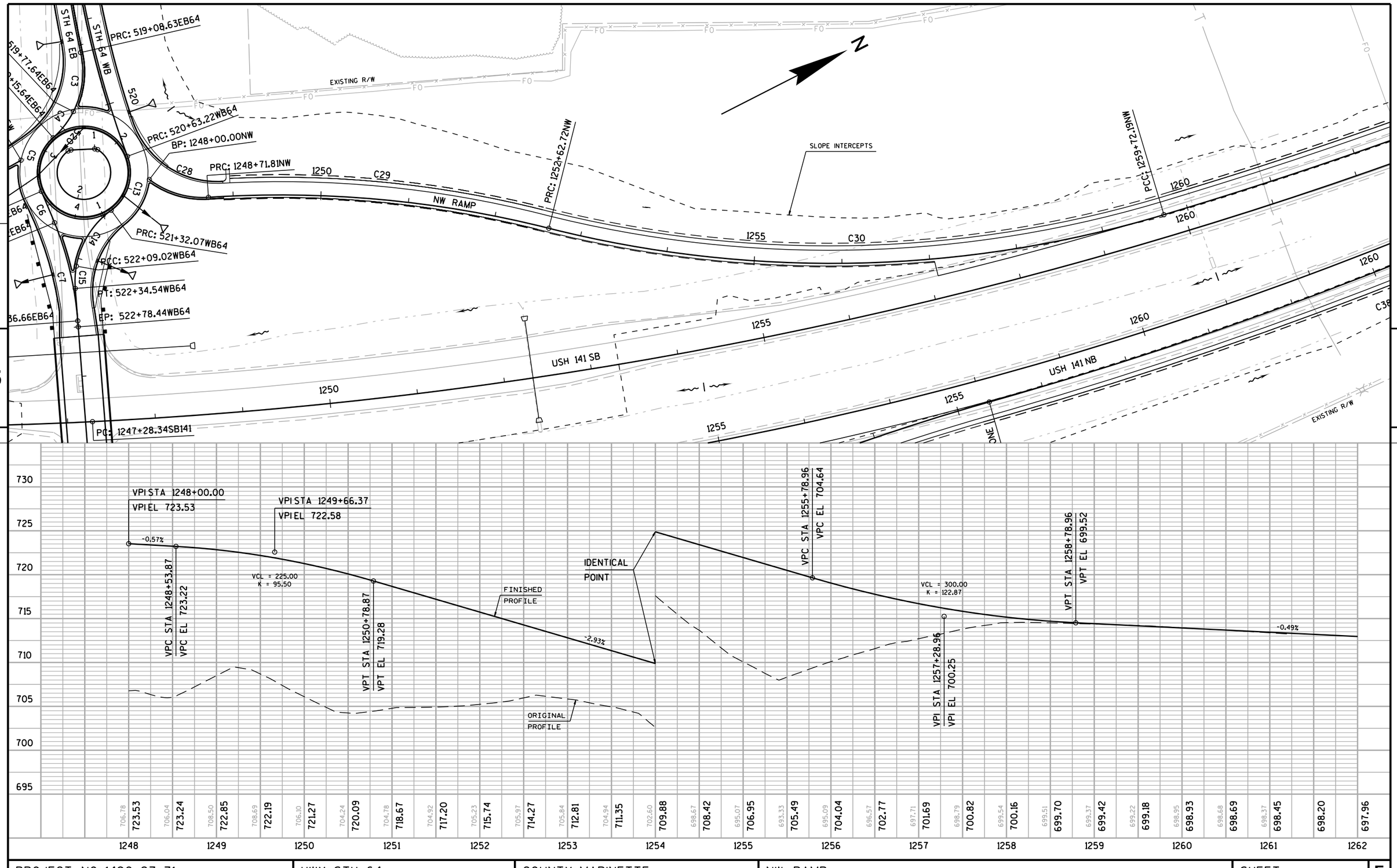
PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	SE RAMP	SHEET 105 E



PROJECT NO: 1490-27-71	HWY: STH 64	COUNTY: MARINETTE	NE RAMP	SHEET 106 E



PROJECT NO: 1490-27-71	HWY: STH 64	COUNTY: MARINETTE	NE RAMP	SHEET 107	E



PROJECT NO: 1490-27-71	HWY: STH 64	COUNTY: MARINETTE	NW RAMP	SHEET 108 E

FILE NAME : F:\d3_149027\050107_pp.dgn PLOT DATE : 07-NOV-2013 07:37 PLOT BY : dotbrb PLOT NAME : 050107 pp PLOT SCALE : 100:1

WISDOT/CADDS SHEET 40

EXISTING R/W

N

STA BACK = 1268+01.42SB141

STA AHEAD = 1268+97.36SB141

EP: 1268+98.02NW

SLOPE INTERCEPTS

C31

1265

NW RAMP

1265

1270

USH 141 SB

1275

PT: 1266+06.03NB141

1265

1270

USH 141 NB

1275

260

88

EP: 1264+55.79NE

EXISTING R/W

5

5

VPI STA 1264+60.79

VPI EL 696.69

FINISHED PROFILE

VPI STA 1269+10.40

VPI EL 691.46

VCL = 200.00

K = 295.62

-1.16%

VPC STA 1263+60.79

VPC EL 697.18

VPT STA 1265+60.79

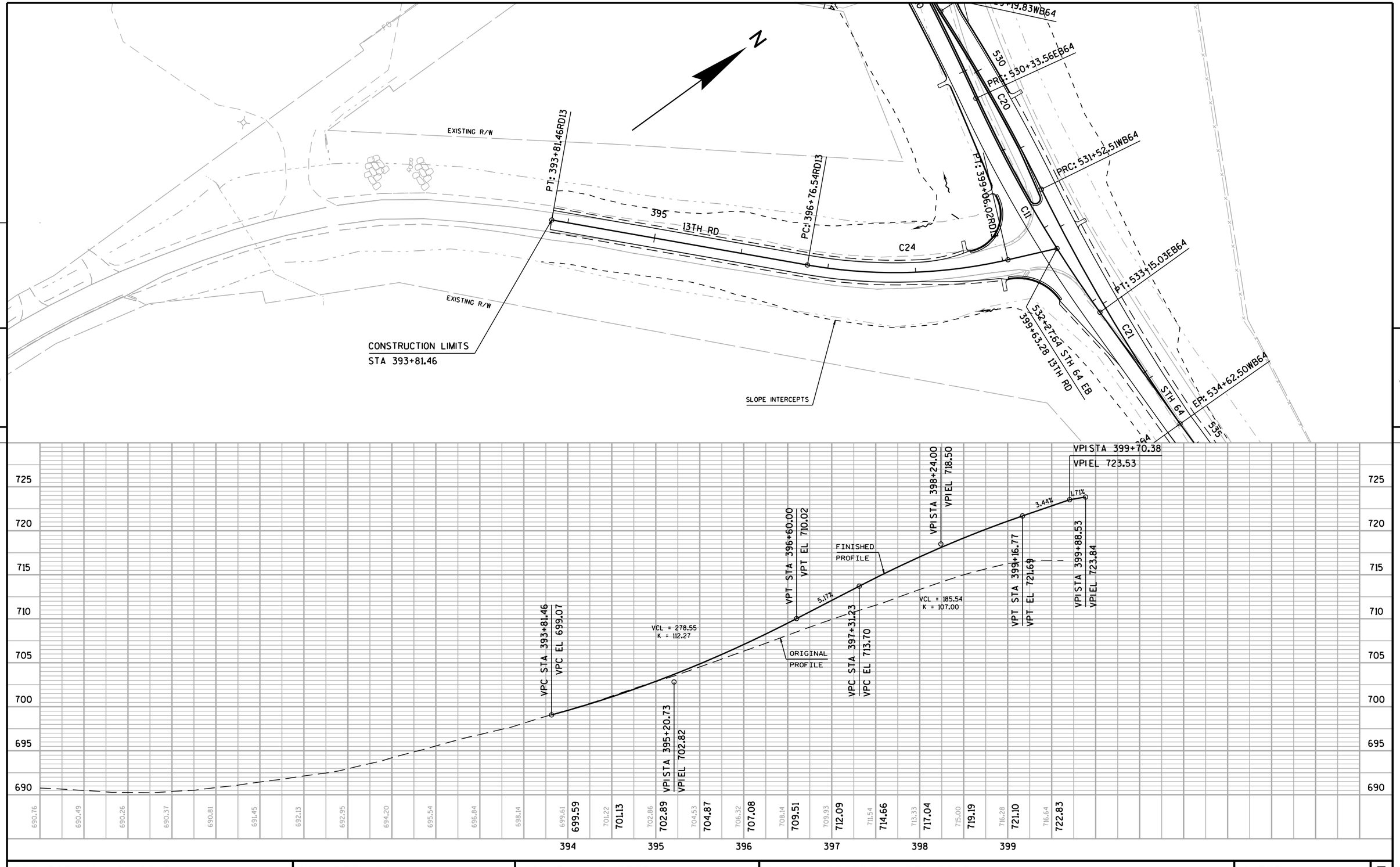
VPT EL 695.53

705	700	695	690	685	680	675	670

697.96	697.72	697.47	697.23	696.96	696.61	696.17	695.65	695.07	694.49	693.91	693.33	692.75	692.17	691.58

1262	1263	1264	1265	1266	1267	1268	1269

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	NW RAMP	SHEET 109	E



PROJECT NO: 1490-27-71	HWY: STTH 64	COUNTY: MARINETTE	PLAN & PROFILE - 13TH ROAD	SHEET 110 E

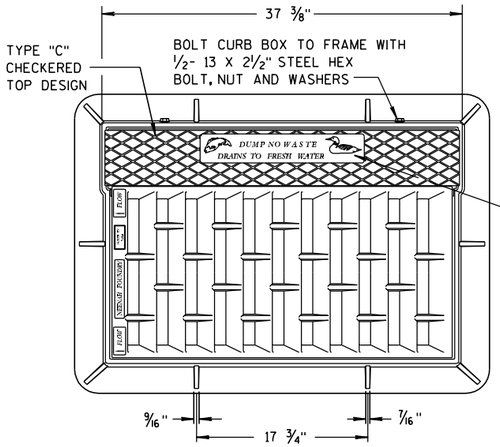
Standard Detail Drawing List

08A05-18A	INLET COVERS TYPE A, H, A-S, & H-S
08A05-18C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08A05-18D	INLET COVER, TYPE BW, Z MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-01	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C07-01	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
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
09A01-13A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
09B02-07	CONDUIT
09B04-10	PULL BOX
09C02-06	CONCRETE BASES, TYPES 1, 2 & 5
09C03-03	TRANSFORMER/PEDESTAL BASES
09D02-02	SIGNAL OR LIGHTING CONTROL CABINET
09E01-12D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E01-12G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-04	NON-FREEWAY LIGHTING UNIT POLE WIRING
11B01-05	CONCRETE CORRUGATED MEDIAN
11B02-02	CONCRETE MEDIAN NOSE
12A03-10	NAME PLATE (STRUCTURES)
13A05-05A	SHOULDER RUMBLE STRIP, MILLING
13A05-05B	SHOULDER RUMBLE STRIP, MILLING
13B02-06	CONCRETE PAVEMENT APPROACH SLAB
14A02-01	TREE PLANTING DETAIL
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"
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)
15A02-07	DELINEATOR POST, DELINEATOR BRACKET AND DELINEATOR
15A02-08	DELINEATOR POST, DELINEATOR, AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15A06-02	DELINEATOR LAYOUT
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C04-02	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C08-16E	PAVEMENT MARKING (LEFT TURN LANE)
15C08-16F	PAVEMENT MARKING (ISLANDS)
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C18-03	MEDIAN ISLAND MARKING
15C19-02C	MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY
15C31-01A	PAVEMENT MARKING (RAMPS AND GORES)

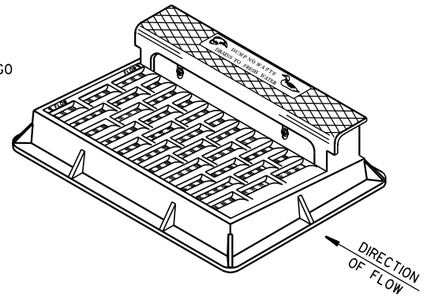
6

Standard Detail Drawing List

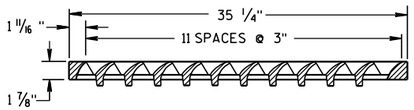
15D03-02	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. WITH BARRIER
15D04-01	TRAFFIC CONTROL, RAMP CONSTRUCTION STAGING
15D15-01	TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE
15D16-02	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D21-02	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D27-02	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D29-03	TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD
15D36-01	BARRICADE RACK

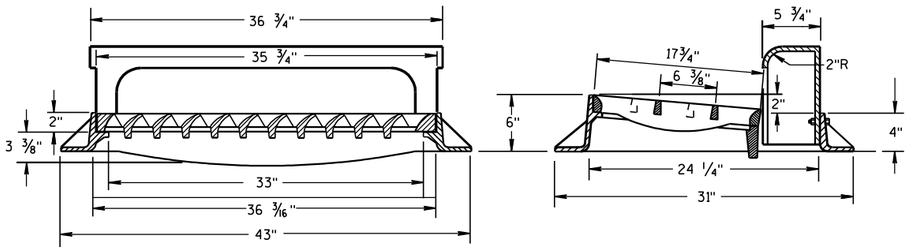


NOTE:
GRATE IS REVERSIBLE.



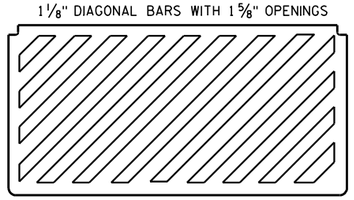
NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"





TYPE "H"

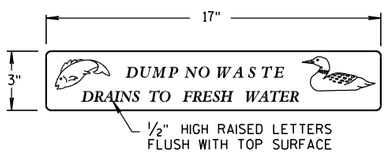
(APPROXIMATE WEIGHT 441 LBS.)
FRAME..... 181 LBS.
GRATE..... 146 LBS.
CURB BOX..... 114 LBS.



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

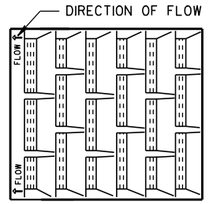
GENERAL NOTES

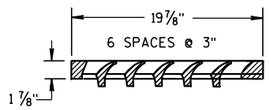
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

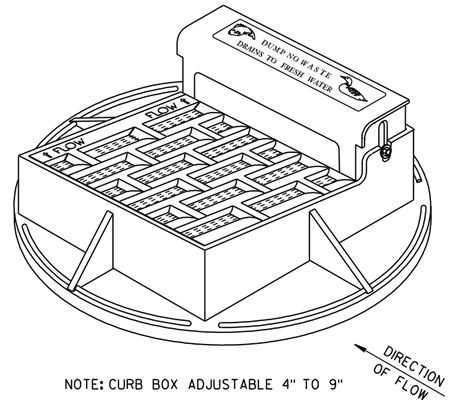
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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

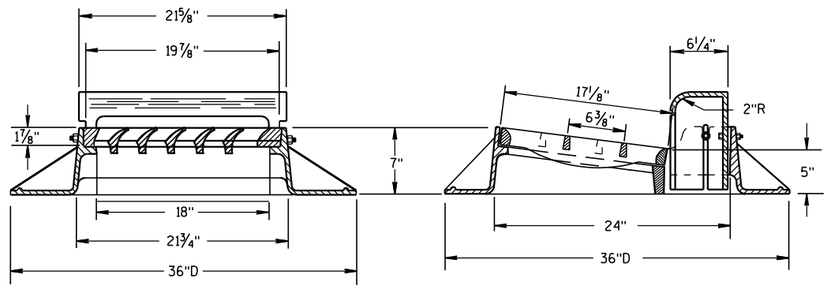
THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.





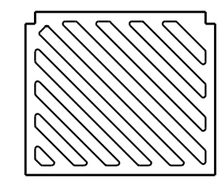


NOTE: CURB BOX ADJUSTABLE 4" TO 9"



TYPE "A"

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



SPECIAL GRATE FOR TYPE "A" COVER

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

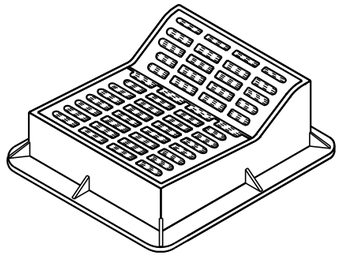
(NOTED AS TYPE A-S ON DRAINAGE TABLE)

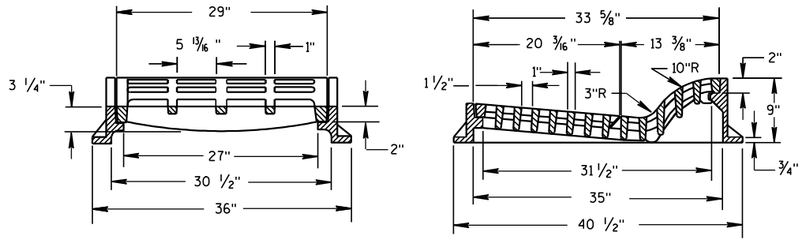
INLET COVERS
TYPE A, H, A-S, & H-S

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



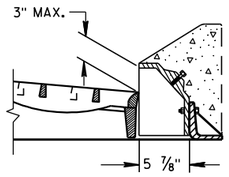


TYPE "F"

(APPROXIMATE WEIGHT 644 LBS.)

FRAME.....302 LBS.
GRATE.....160 LBS.
GRATE.....182 LBS.

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



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

(APPROXIMATE WEIGHT CURB BOX 68 LBS.)

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

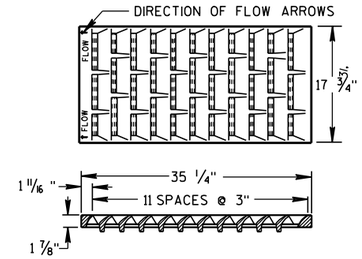
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

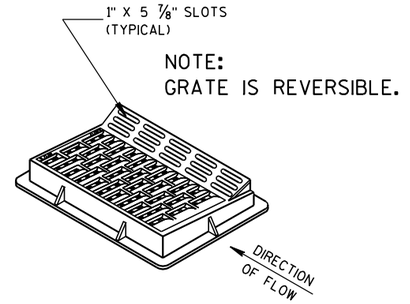
GENERAL NOTES

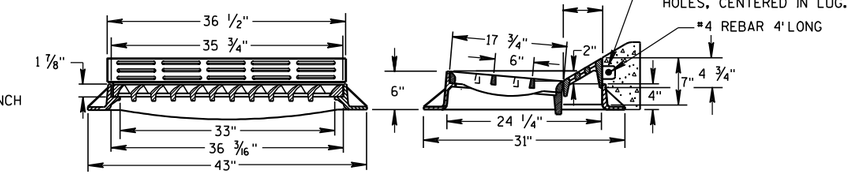
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

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







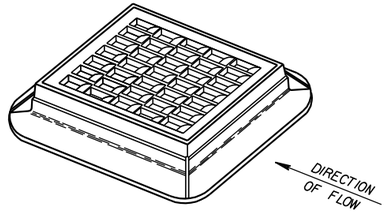
TYPE "HM"

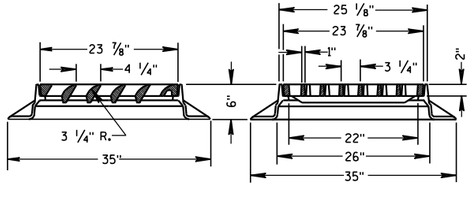
(APPROXIMATE WEIGHT 414 LBS.)

FRAME..... 181 LBS.
GRATE..... 159 LBS.
CURB BOX..... 74 LBS.

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

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

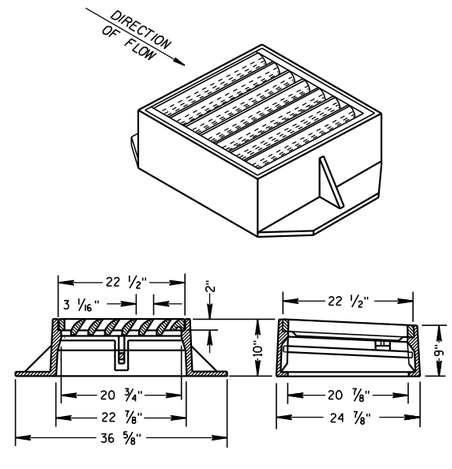




TYPE "S"

(APPROXIMATE WEIGHT 333 LBS.)

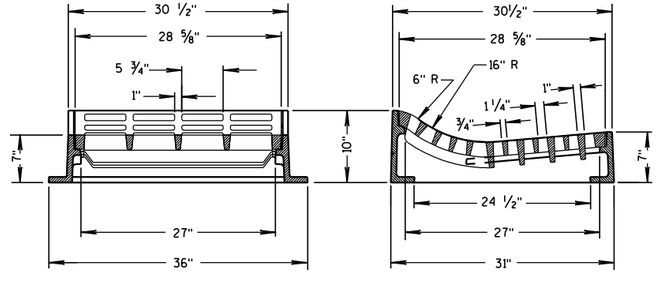
FRAME.....164 LBS.
GRATE..... 169 LBS.



TYPE "V"

(APPROXIMATE WEIGHT 410 LBS.)

FRAME..... 269 LBS.
GRATE..... 136 LBS.
SAFETY BAR..... 5 LBS.

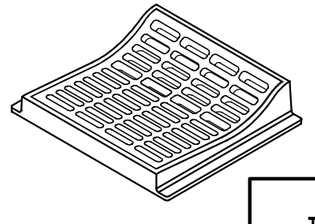


TYPE "T"

(APPROXIMATE WEIGHT 530 LBS.)

FRAME.....270 LBS.
GRATE.....260 LBS.

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



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

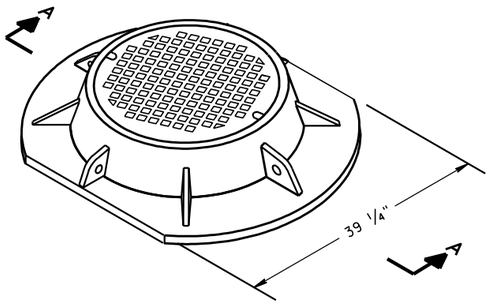
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

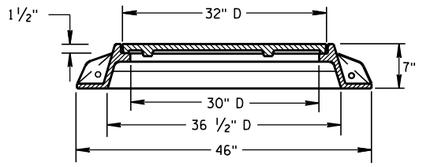
6

S.D.D. 8 A 5-18c

6

S.D.D. 8 A 5-18c



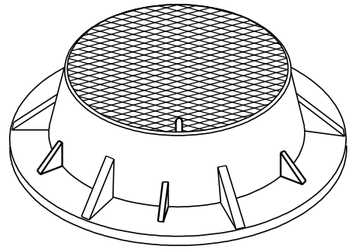


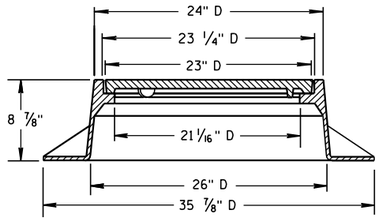
SECTION A-A

TYPE "K"

(APPROXIMATE WEIGHT 439 LBS.)

FRAME.....216 LBS.
LID.....223 LBS.

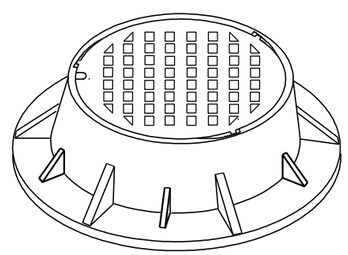


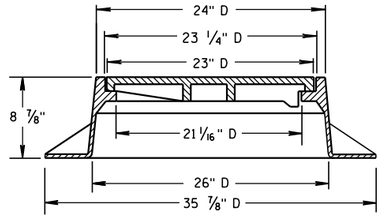


TYPE "J"

(APPROXIMATE WEIGHT 267 LBS.)

FRAME.....152 LBS.
LID.....115 LBS.





TYPE "J" SPECIAL

TYPE "B" NON-ROCKING SELF-SEAL LID

(APPROXIMATE WEIGHT 267 LBS.)

FRAME.....158 LBS.
LID.....109 LBS.

(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)

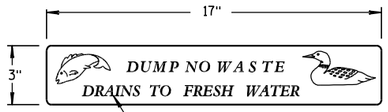
GENERAL NOTES

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

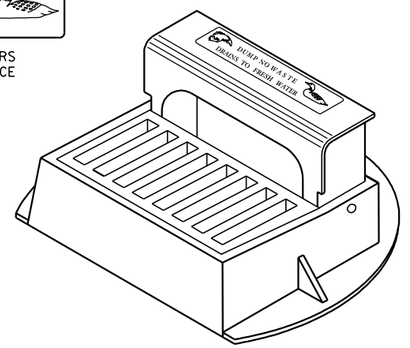
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

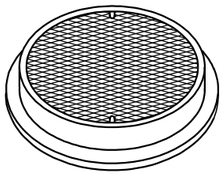
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

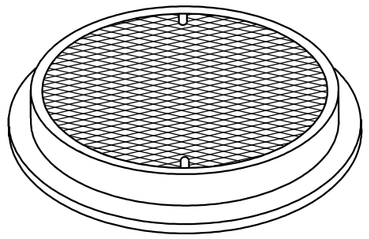
THE ACTUAL WEIGHT OF COVERS MAY VARY WITH 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.

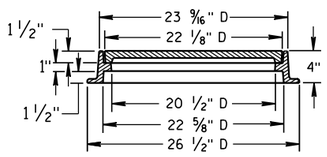


LOGO DETAIL





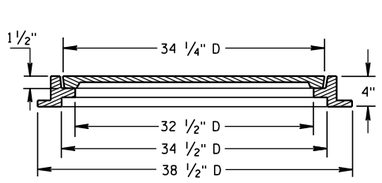




TYPE "L"

(APPROXIMATE WEIGHT 158 LBS.)

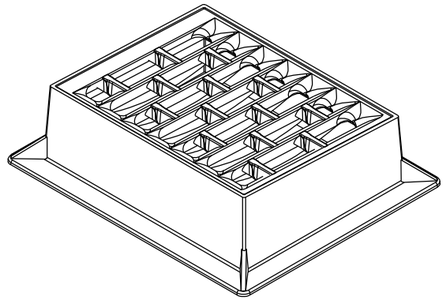
FRAME.....81 LBS.
LID.....77 LBS.

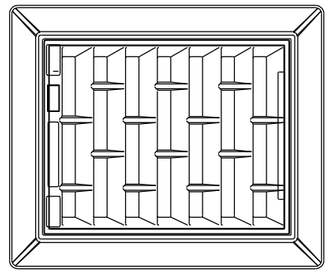


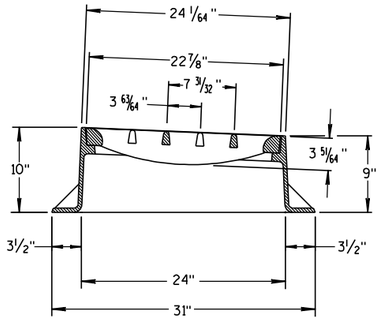
TYPE "M"

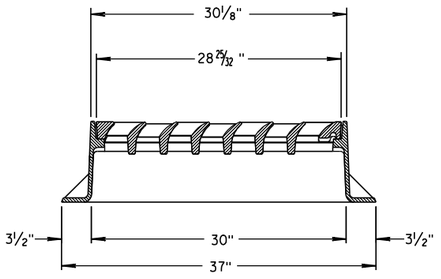
(APPROXIMATE WEIGHT 377 LBS.)

FRAME..... 125 LBS.
LID..... 252 LBS.

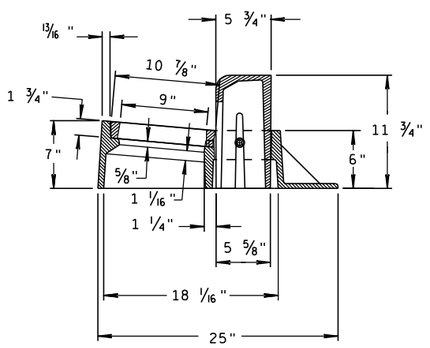


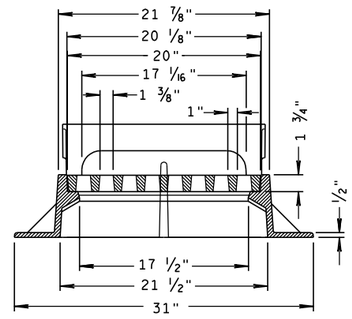






INLET COVER TYPE "BW"





INLET COVER TYPE "Z"

(APPROXIMATE WEIGHT 344 LBS.)

FRAME.....206 LBS.
GRATE..... 46 LBS.
CURB BOX..... 92 LBS.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/5/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA

115

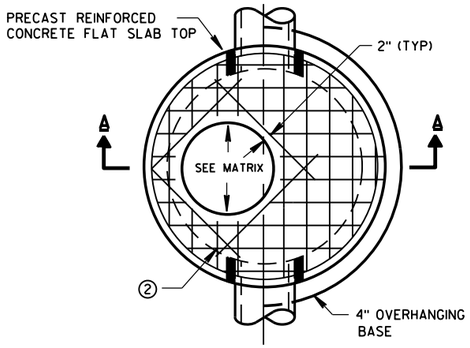
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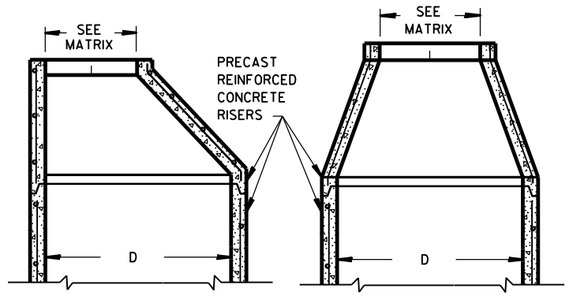
S.D.D. 8 A 5-18d

6

S.D.D. 8 A 5-18d

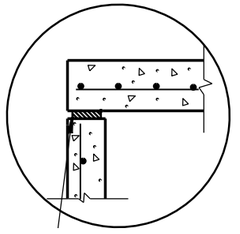


PLAN VIEW CIRCULAR OPENING

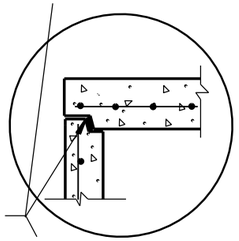


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

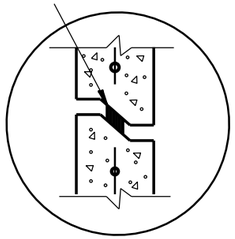


TOP WITH PLAIN END JOINT



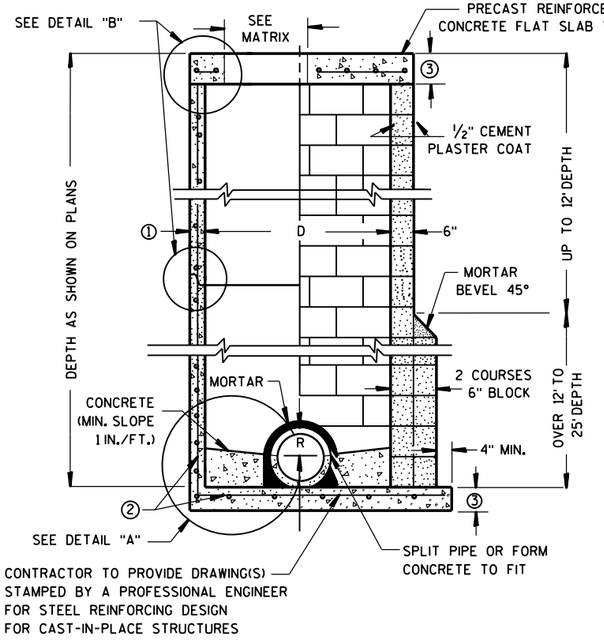
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



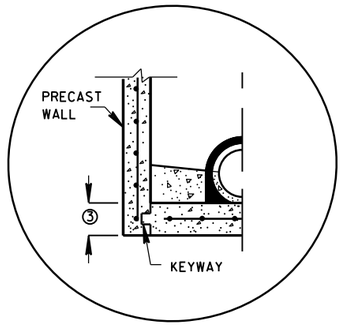
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

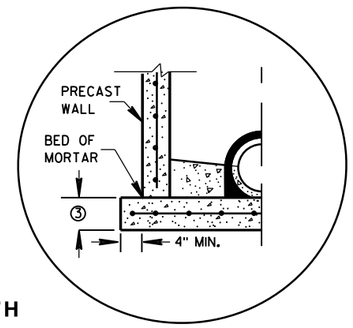


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

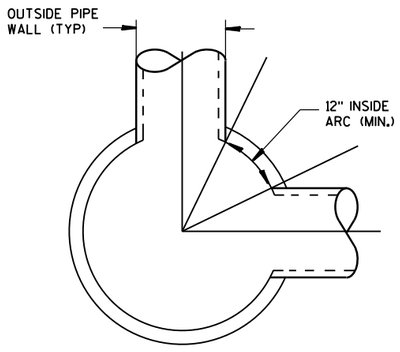


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

GENERAL NOTES

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

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

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

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

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

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES. THE CONE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

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

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

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

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

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

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

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

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

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

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

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.

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

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

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
OPENING SIZE (FT)					
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

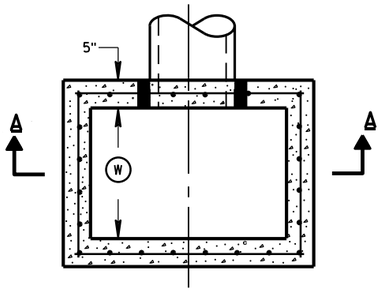
MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

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

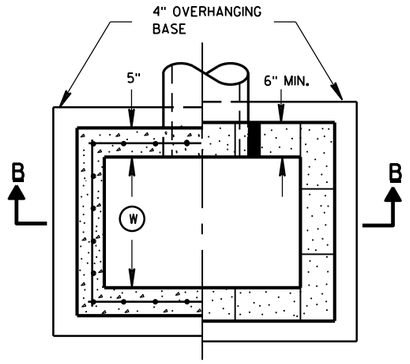
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

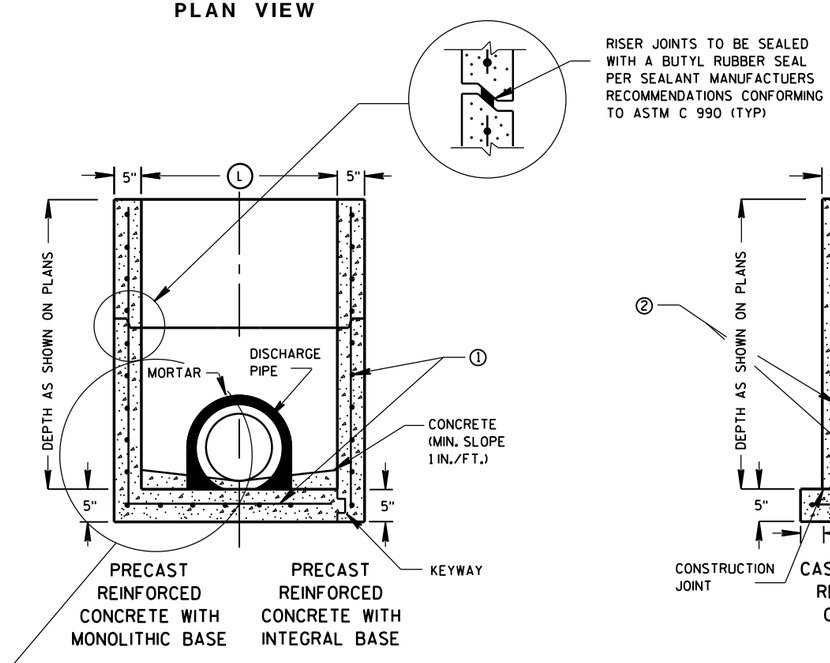
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S.D.D. 8 B 9-1



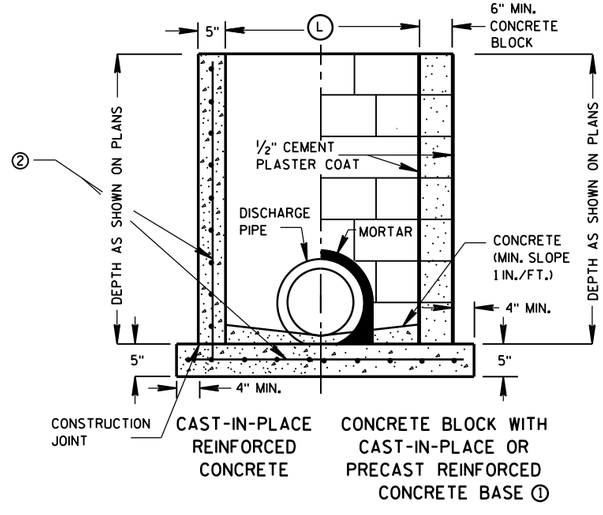
PLAN VIEW



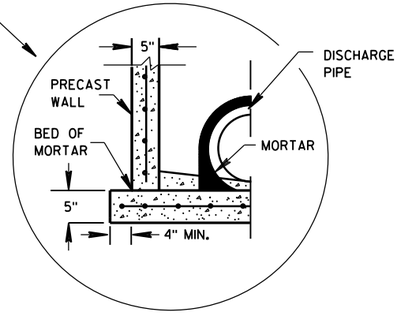
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

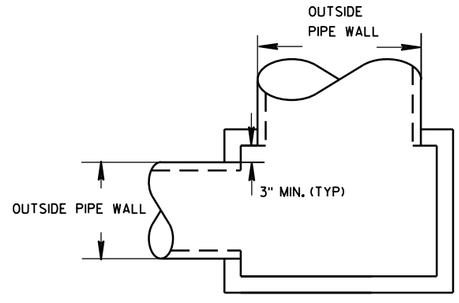
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

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

PIPE MATRIX

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



DETAIL "A"

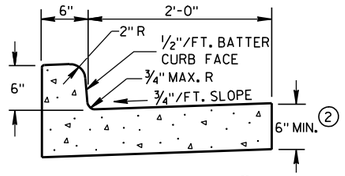
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

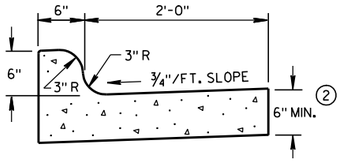
APPROVED
6/5/2012
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DE ENGINEER
FHWA

6

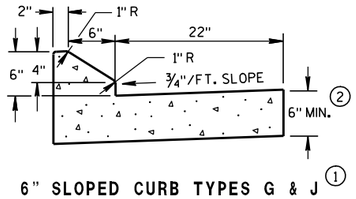
S.D.D. 8 C 7-1



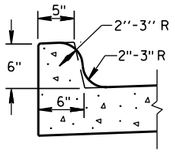
TYPES A & D (1)



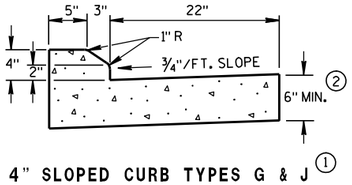
TYPES K & L (1)



6" SLOPED CURB TYPES G & J (1)

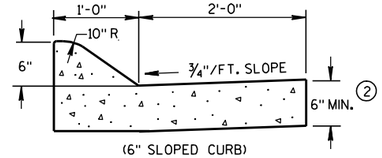


OPTIONAL CURB SHAPE FOR TYPES K & L (1)

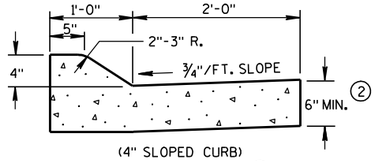


4" SLOPED CURB TYPES G & J (1)

CONCRETE CURB & GUTTER 30"

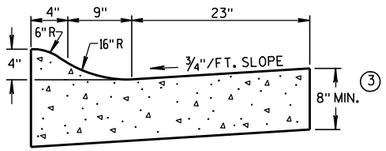


(6" SLOPED CURB)



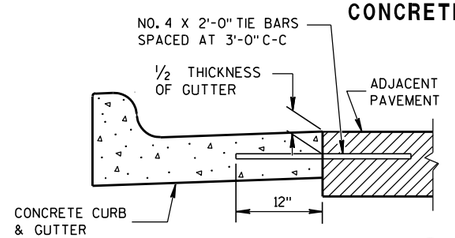
(4" SLOPED CURB)

TYPES A & D (1)

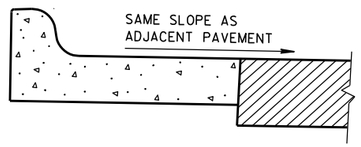


4" SLOPED CURB TYPES R & T (1) (4)

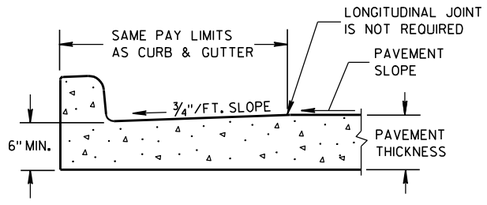
CONCRETE CURB & GUTTER 36"



TYPICAL TIE BAR LOCATION (1)



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



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER

GENERAL NOTES

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

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

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

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

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

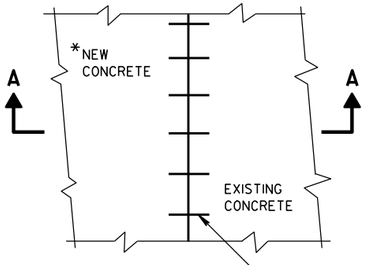
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.

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

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

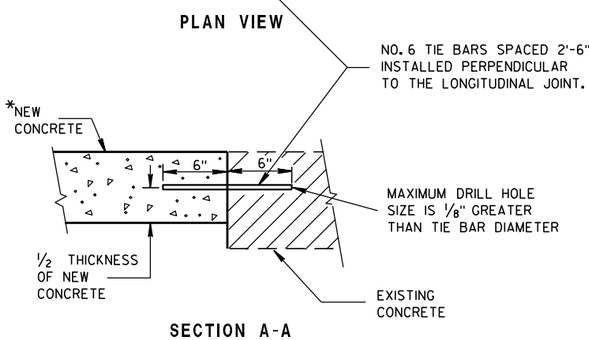
(4) THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

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



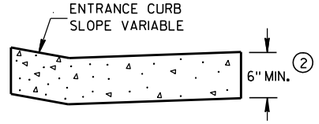
*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

PLAN VIEW

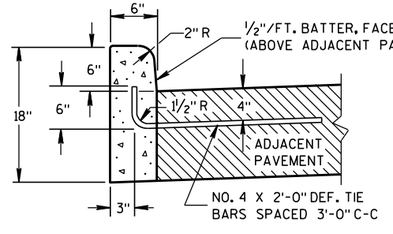


SECTION A-A

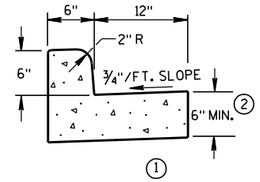
TIE BARS DRILLED INTO EXISTING PAVEMENT



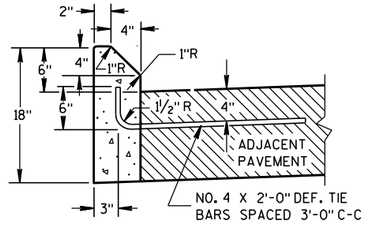
DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)



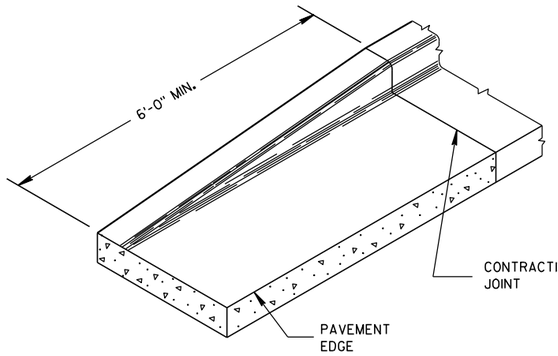
(1)
TYPES A & D



(1)
TYPES A & D
CONCRETE CURB & GUTTER 18"



(1)
TYPES G & J



END SECTION CURB & GUTTER

CONCRETE CURB

CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

ENT

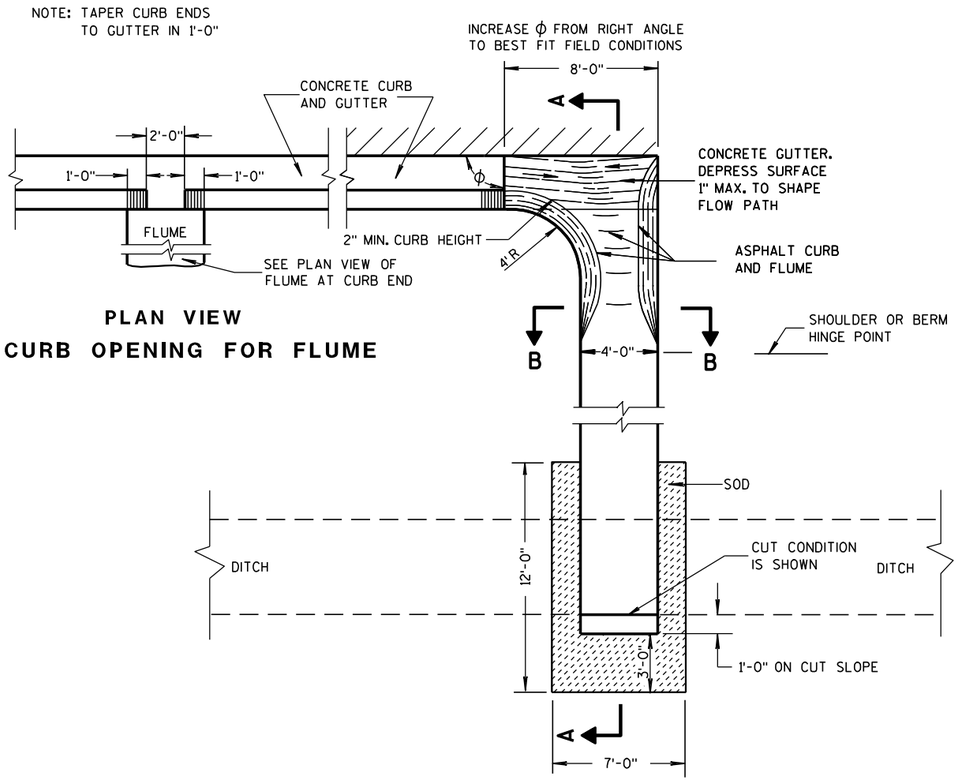
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S.D.D. 8 D 1-17

6

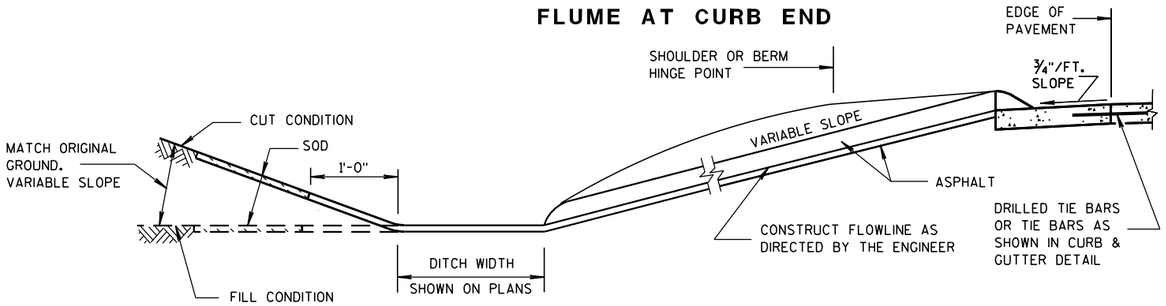
S.D.D. 8 D 1-17

ASPHALTIC FLUME

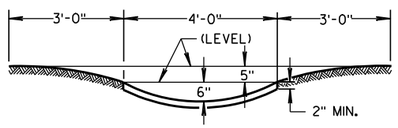


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

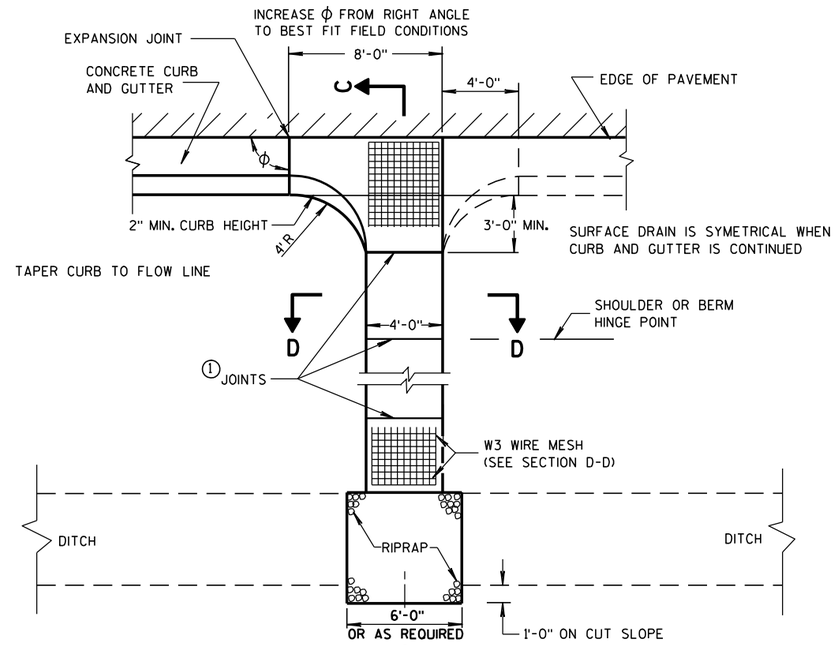
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

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

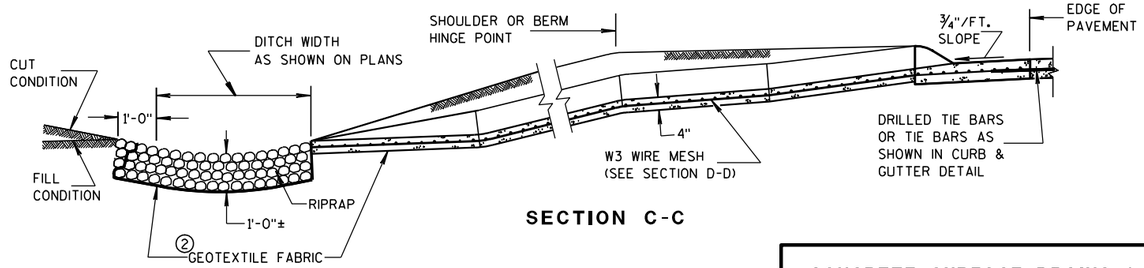
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

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

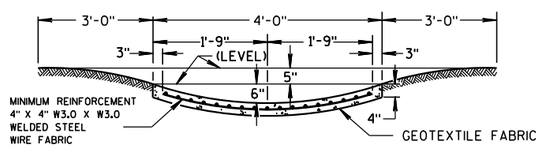
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

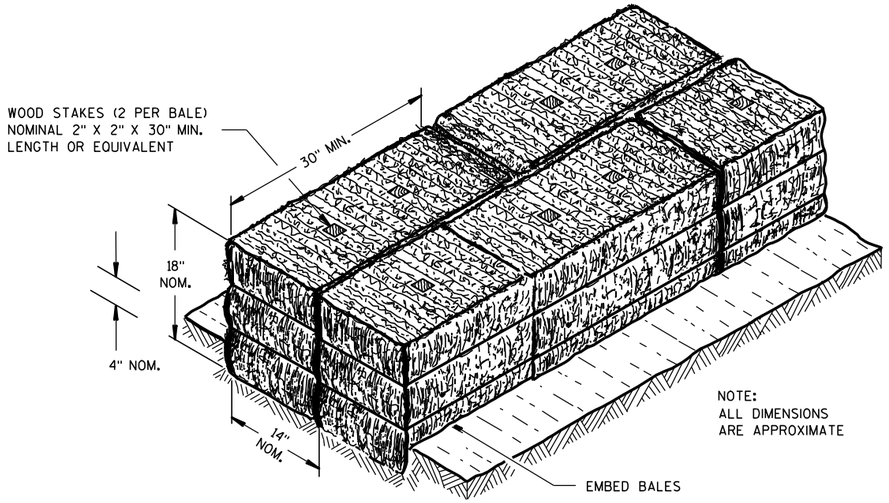
APPROVED
9-4-08 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
MENT
FHWA

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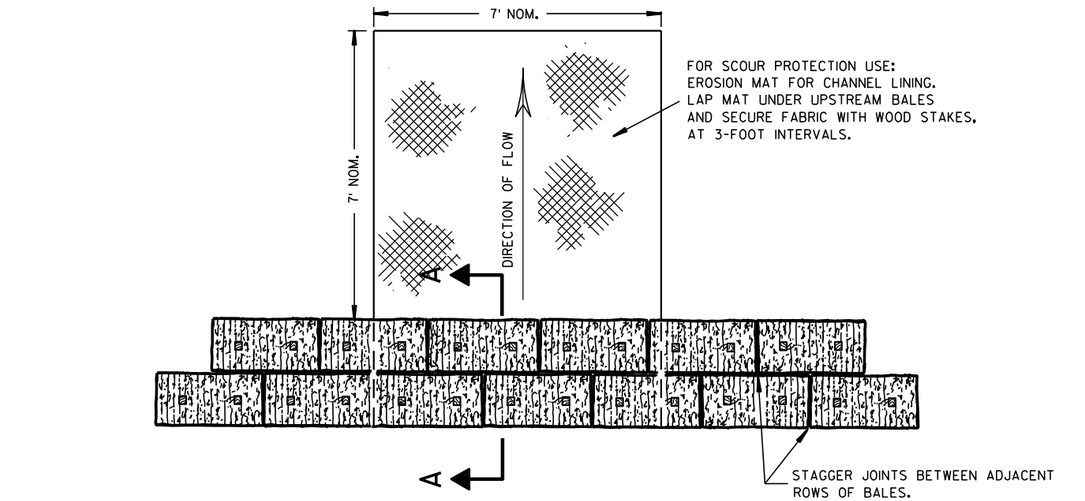
S.D.D. 8 D 4-5

6

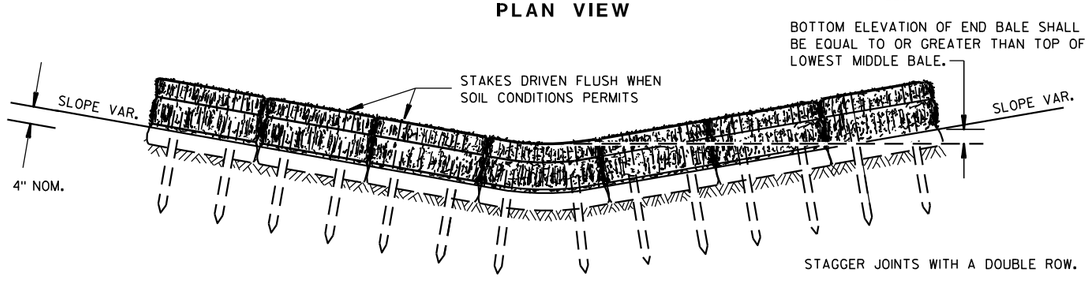
S.D.D. 8 D 4-5



SECTION A-A



PLAN VIEW



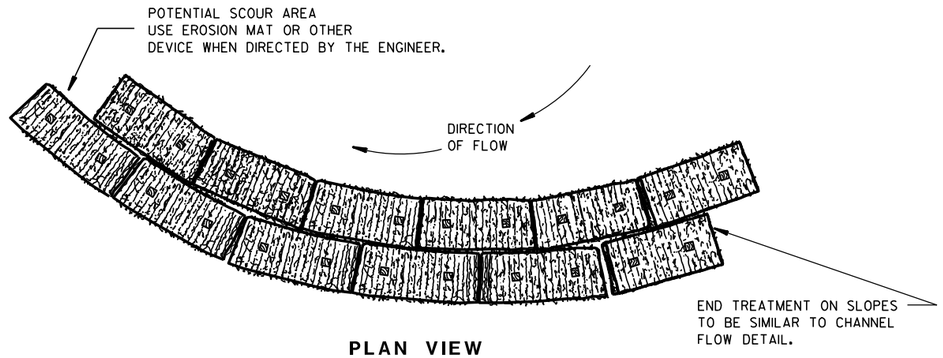
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

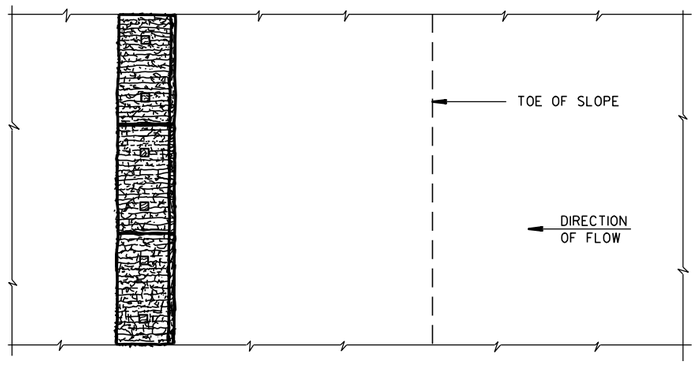
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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.

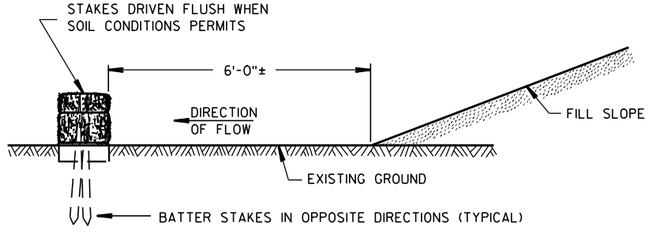


PLAN VIEW

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

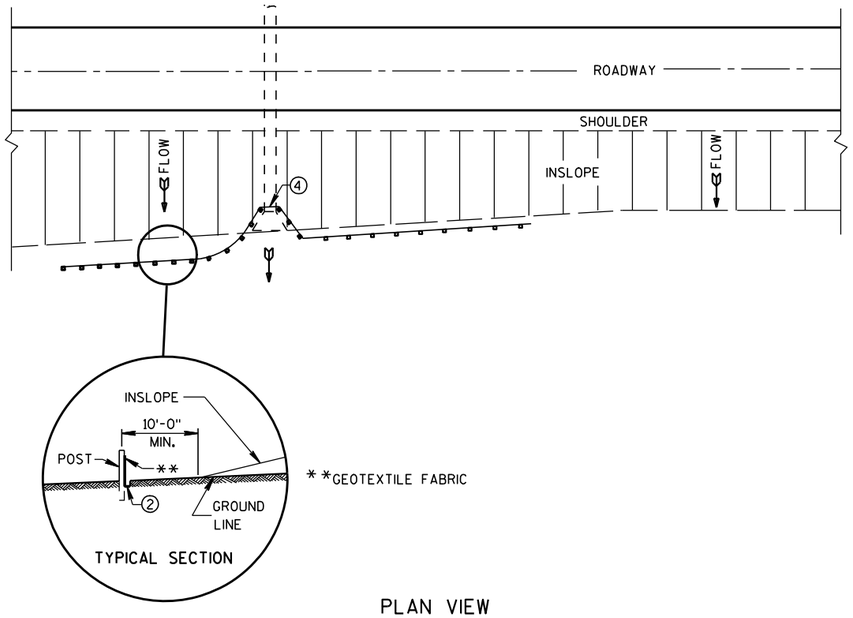
FHWA

6

S.D.D. 8 E 8-3

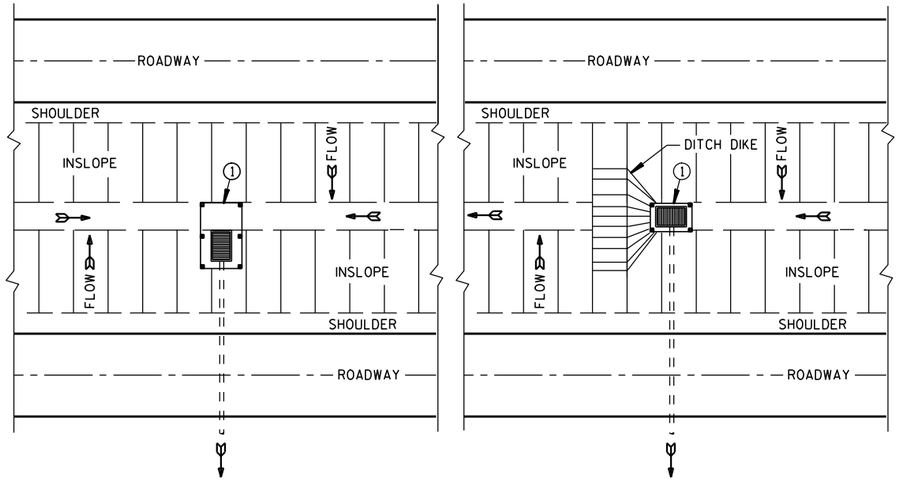
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S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



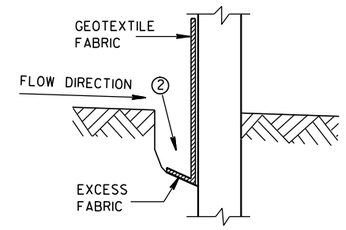
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

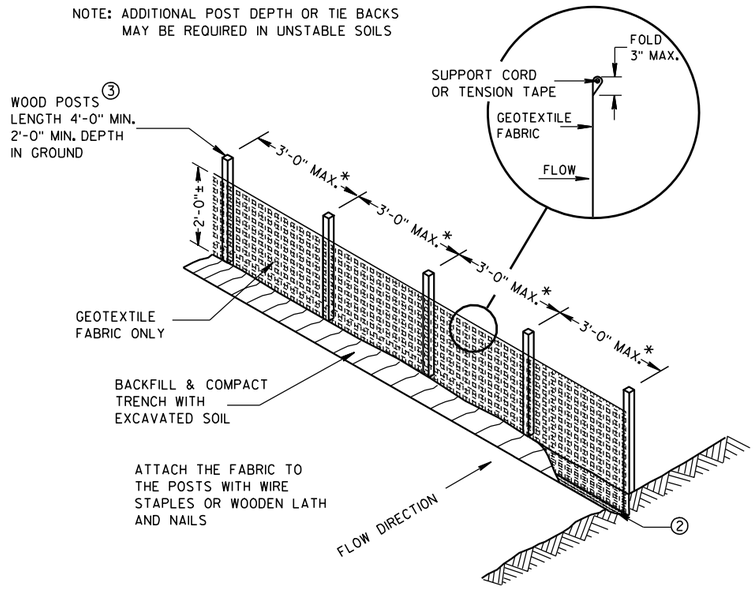
GENERAL NOTES

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

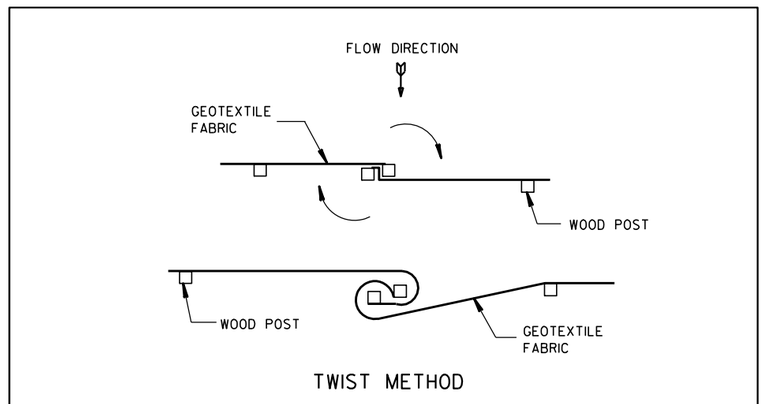
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL 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.



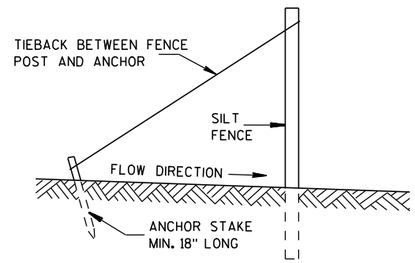
TRENCH DETAIL



SILT FENCE



JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

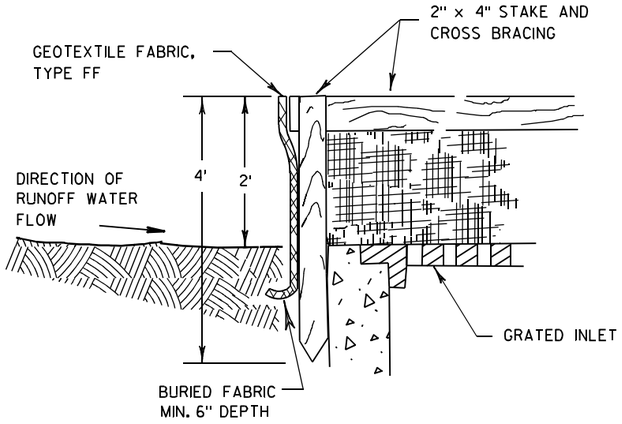
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

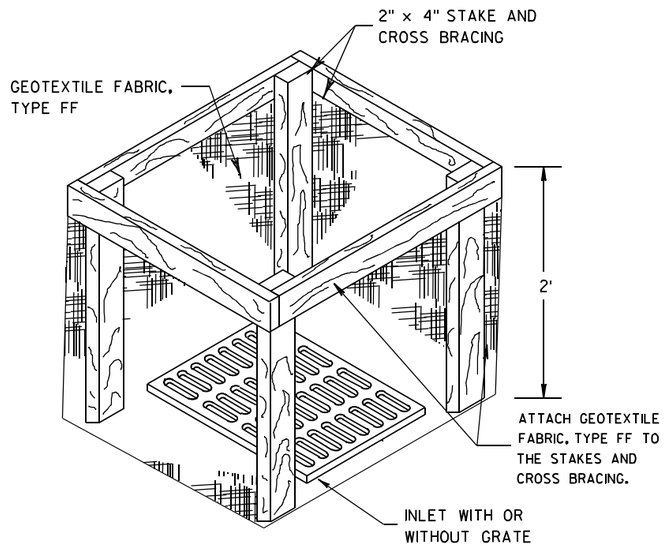
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S.D.D. 8 E 9-6

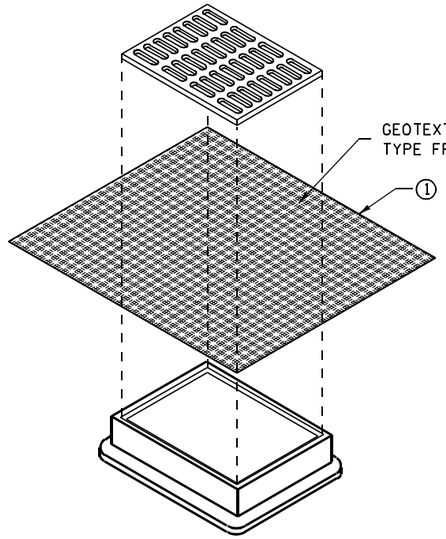
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S.D.D. 8 E 9-6



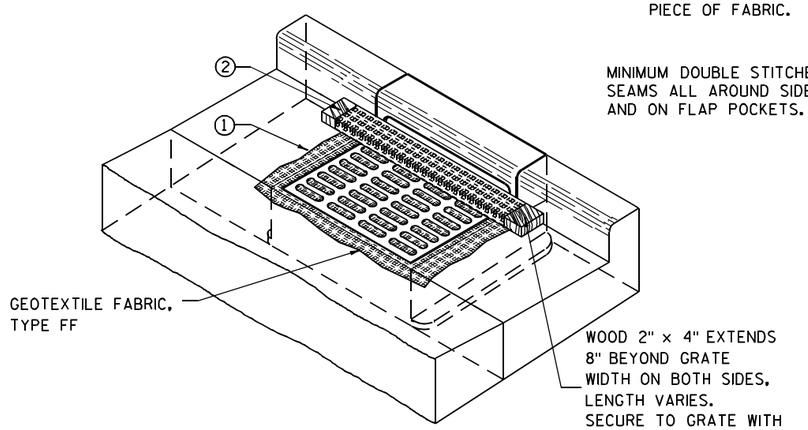


INLET PROTECTION, TYPE A

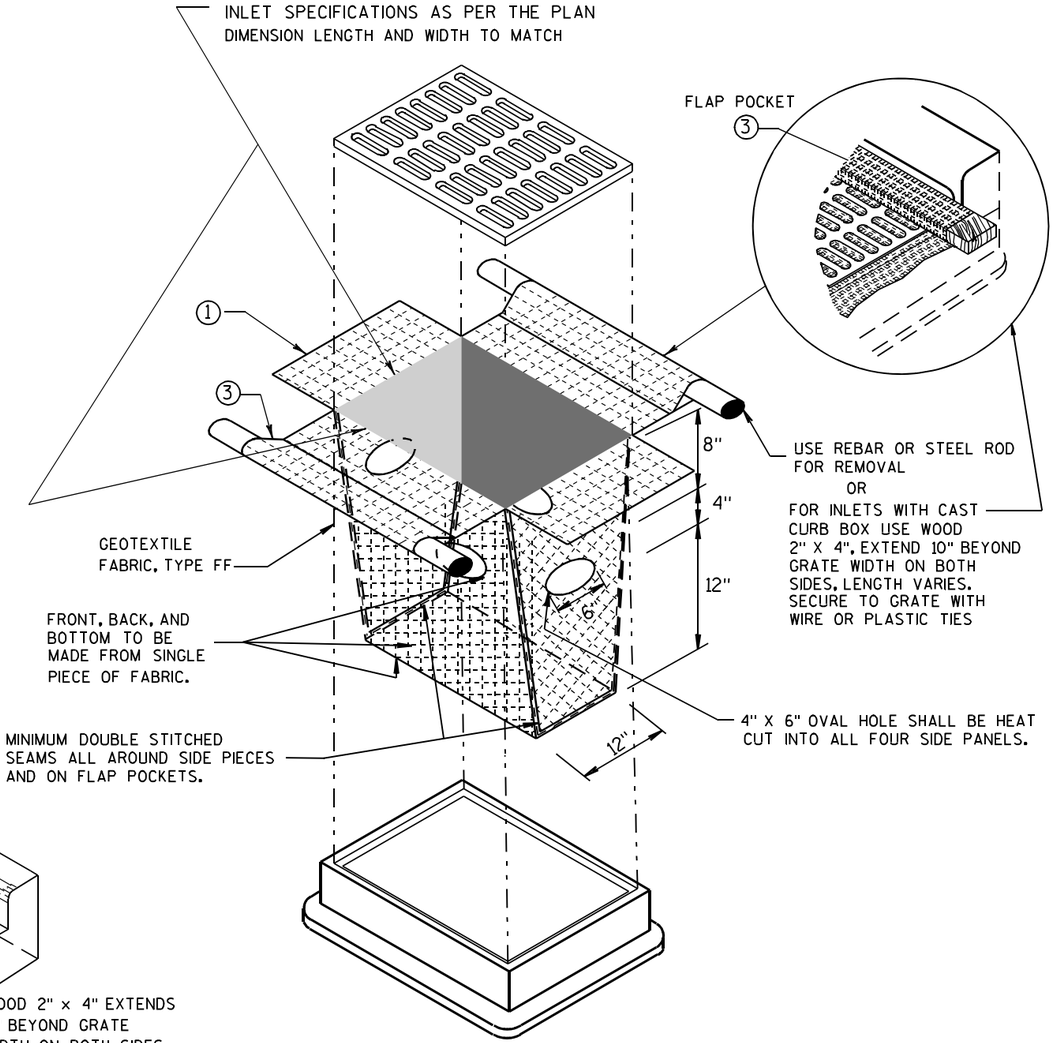


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

GENERAL NOTES

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

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

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

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

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

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

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

METAL APRON ENDWALLS

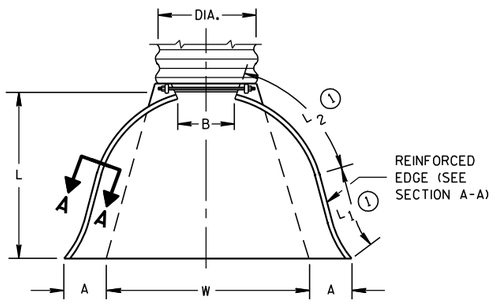
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

× EXCEPT CENTER PANEL SEE GENERAL NOTES

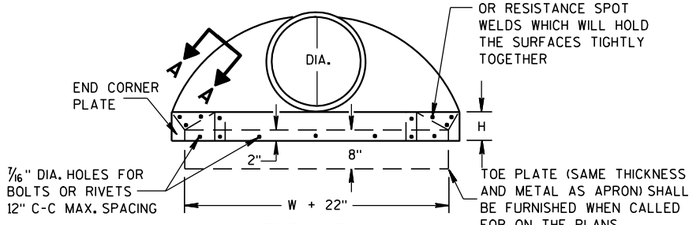
REINFORCED CONCRETE APRON ENDWALLS

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

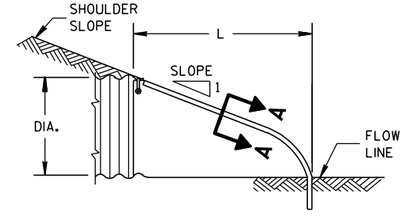
*MINIMUM
**MAXIMUM



PLAN VIEW

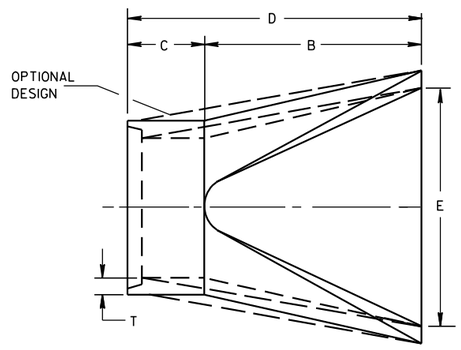


END VIEW

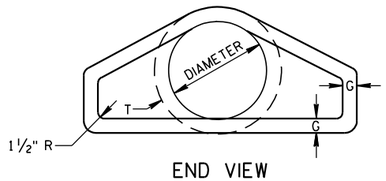


SIDE ELEVATION

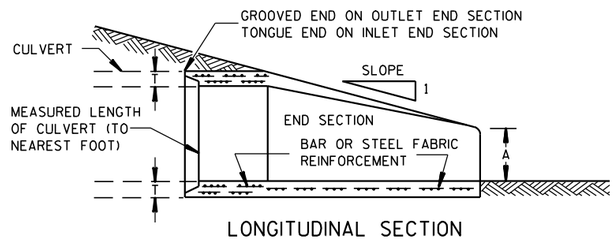
METAL ENDWALLS



PLAN

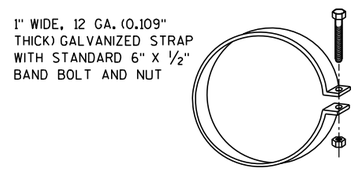


END VIEW



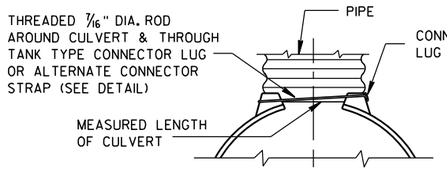
LONGITUDINAL SECTION

CONCRETE ENDWALLS

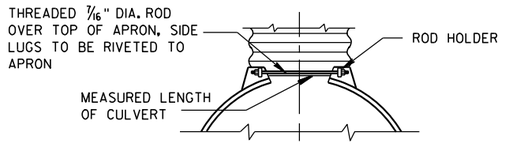


ALTERNATE FOR TYPE 1 CONNECTION

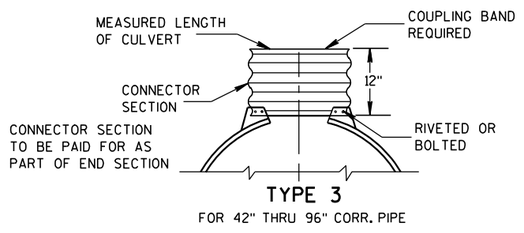
END SECTION CONNECTOR STRAP



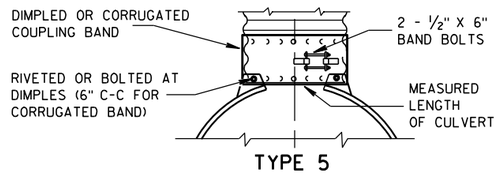
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

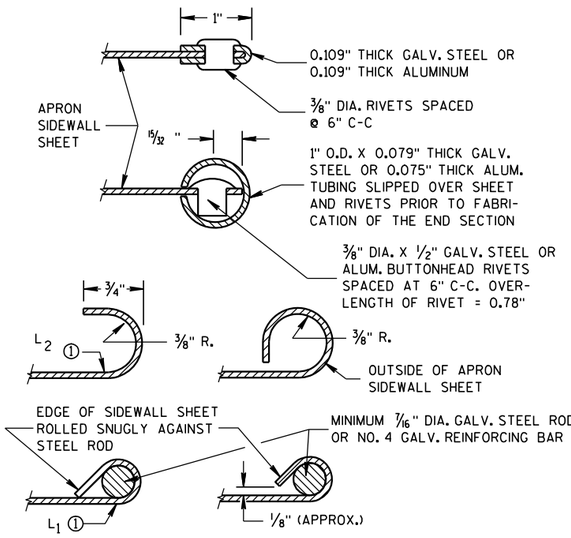
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

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

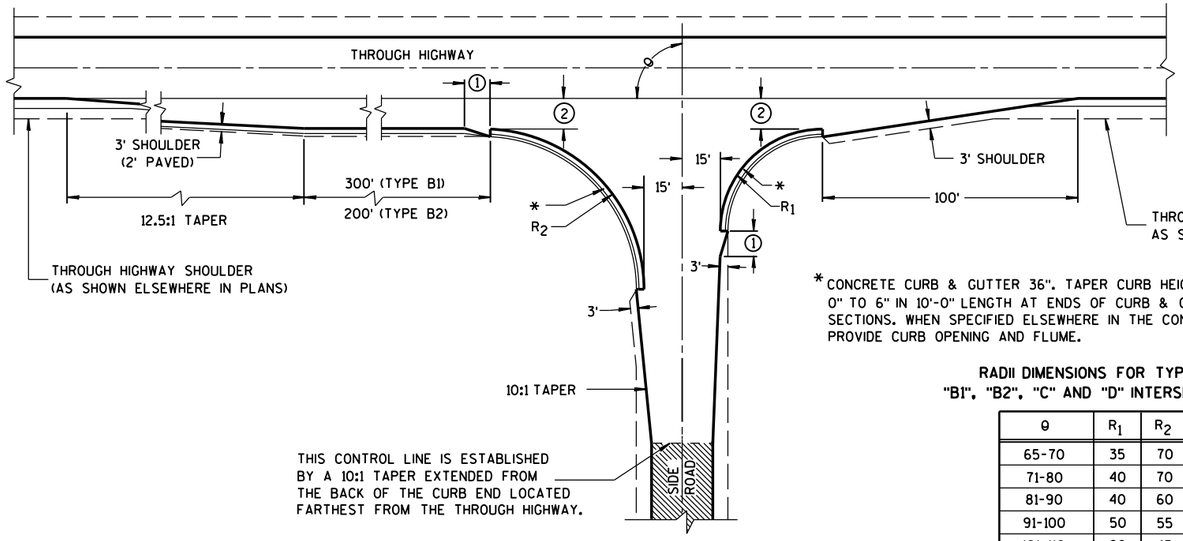
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

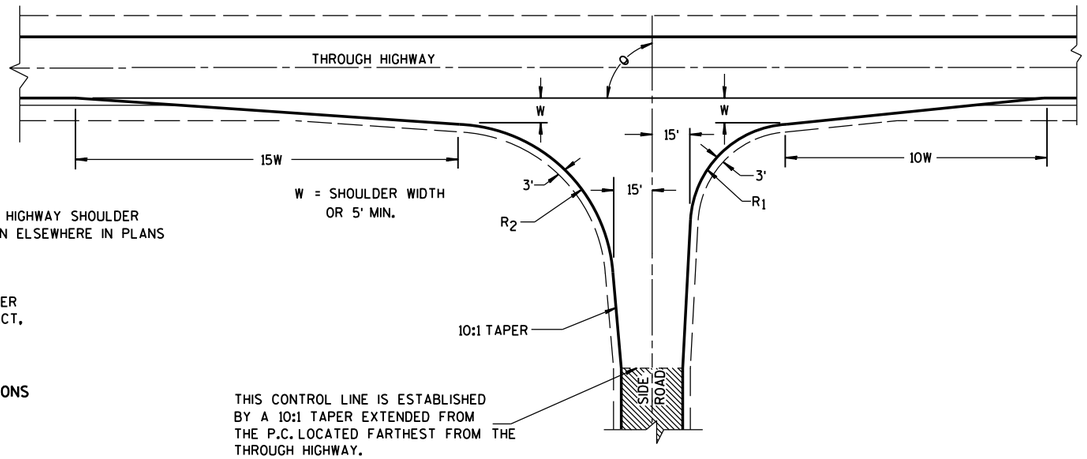


TYPE "B1" AND "B2"

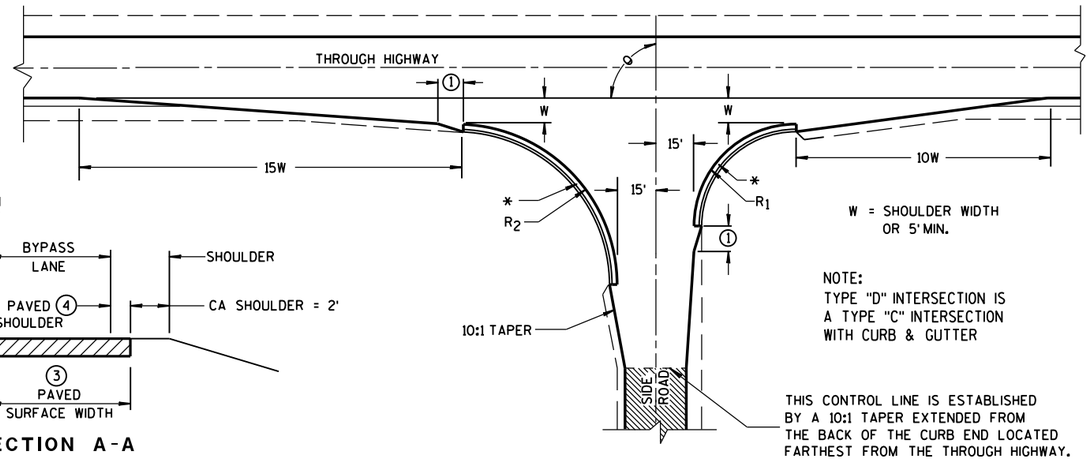
*CONCRETE CURB & GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10'-0" LENGTH AT ENDS OF CURB & GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME.

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

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



TYPE "C"



TYPE "D"

GENERAL NOTES

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

SIDE ROAD SURFACING NOTE

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

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

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

EXISTING PAVED SURFACE

BYPASS LANE

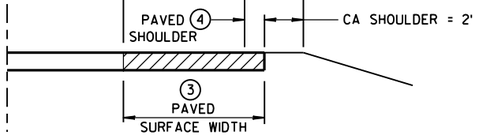
(1) 10-FT TYPICAL.

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

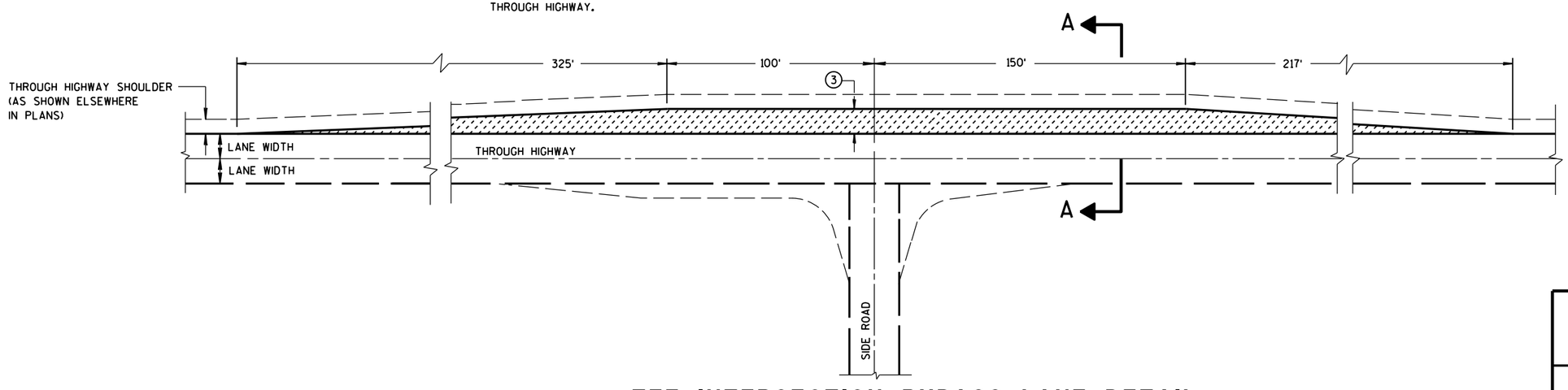
**10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.

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

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



SECTION A-A
(SHOWING BYPASS LANE AND SHOULDER)



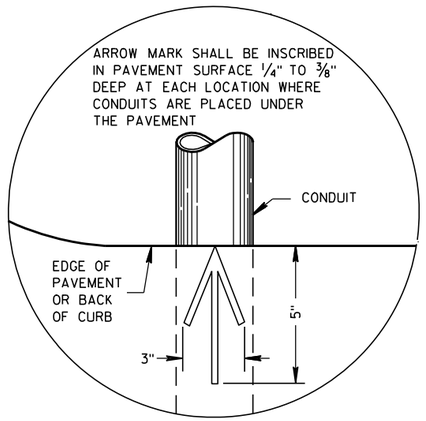
TEE INTERSECTION BYPASS LANE DETAIL

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

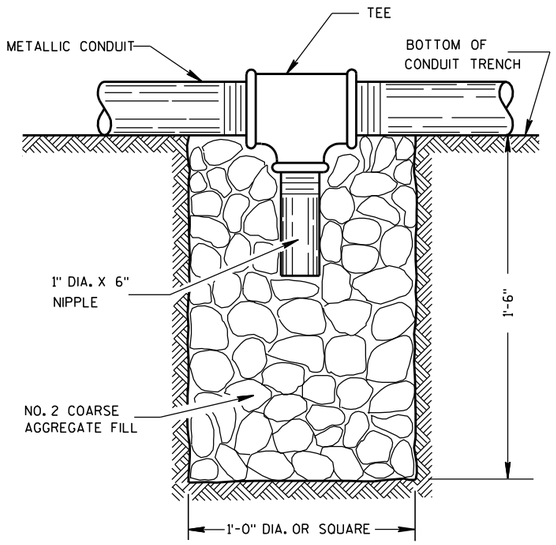
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S.D.D. 9 A 1-13a



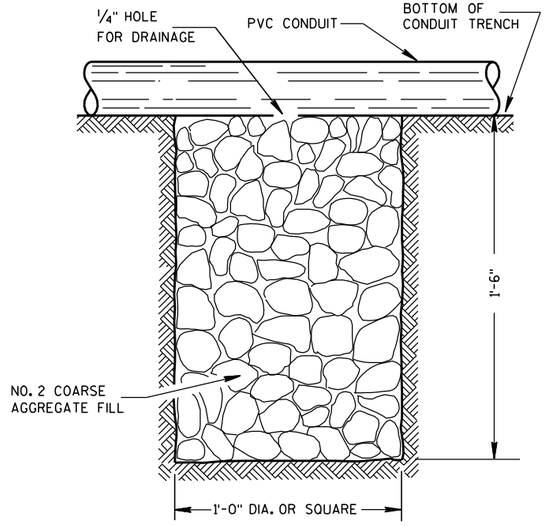
PLAN VIEW

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.

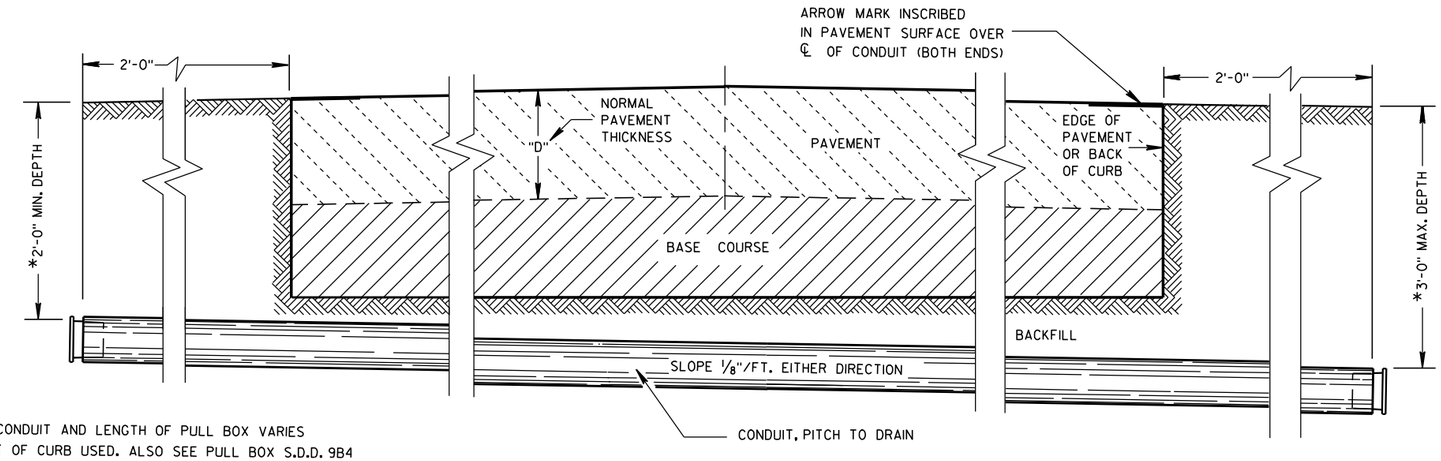
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

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

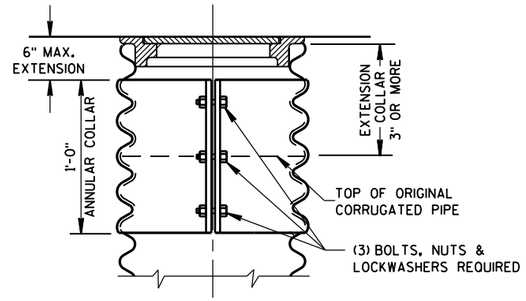
6 S.D.D. 9 B 2-7

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

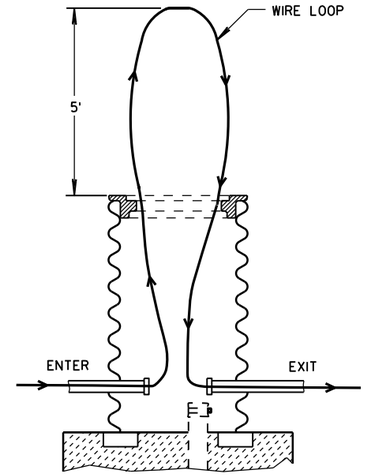
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2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

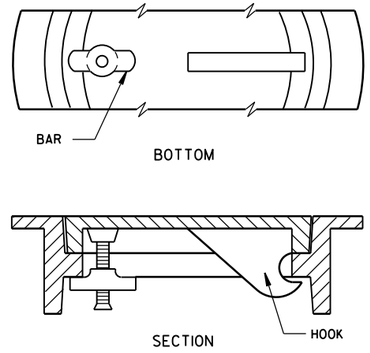
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

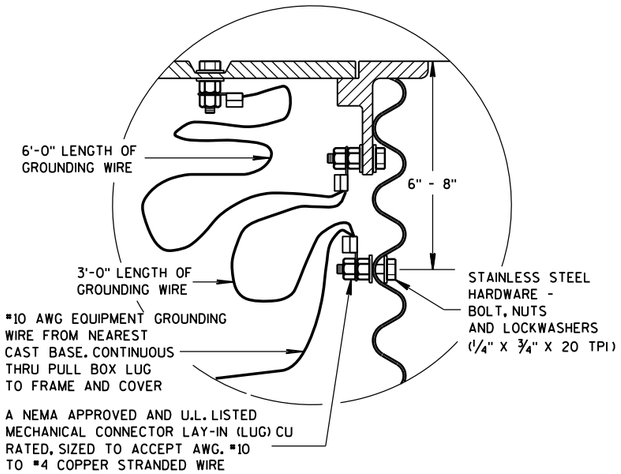


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX

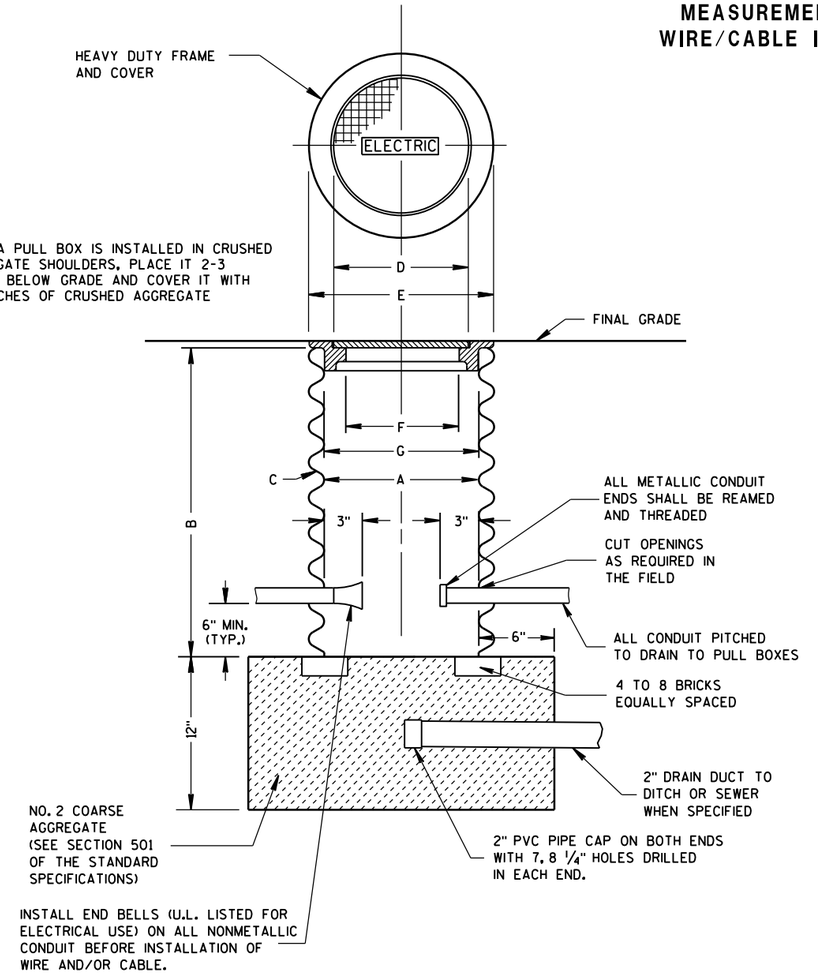


ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



PULL BOX

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.

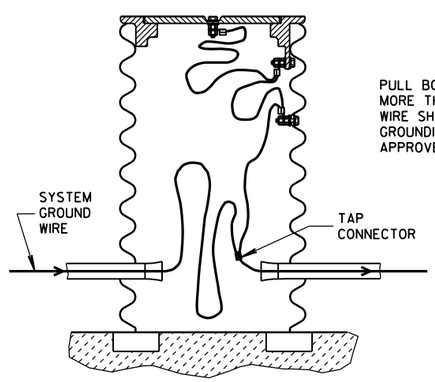
GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

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 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

PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

2-7-2013 DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL

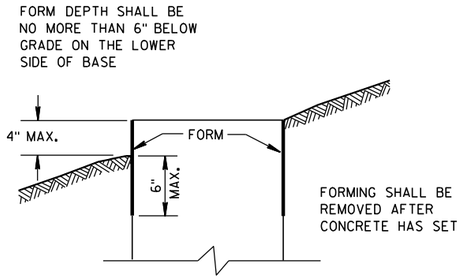
FHWA

6

S.D.D. 9 B 4-10

6

S.D.D. 9 B 4-10



FORMING DETAIL

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

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

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

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

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

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

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

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

GENERAL NOTES (CONTINUED)

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

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

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

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

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

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

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

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

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

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

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

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

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

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

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

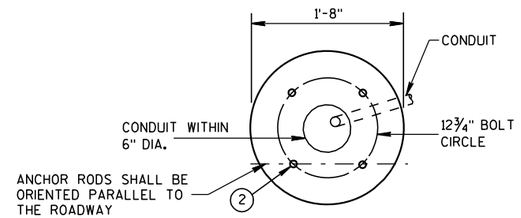
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

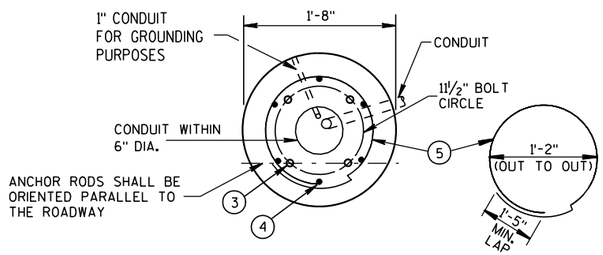
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

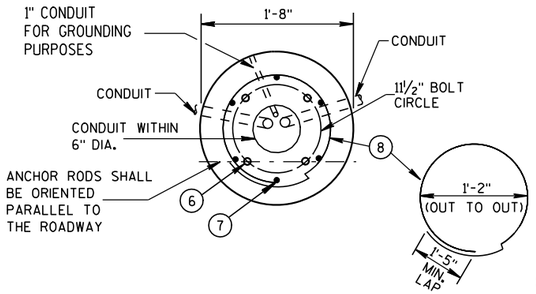
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

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

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

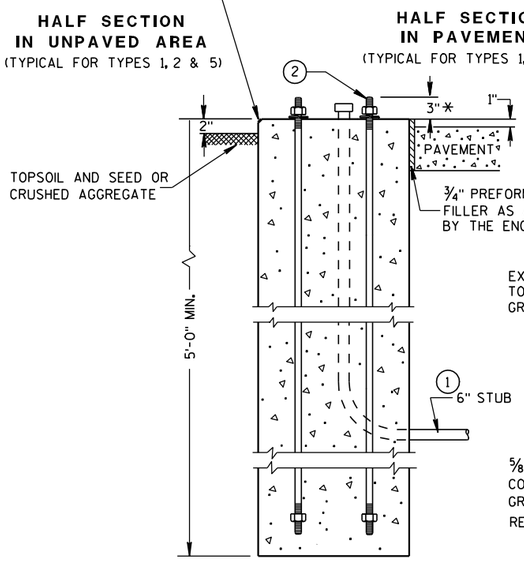






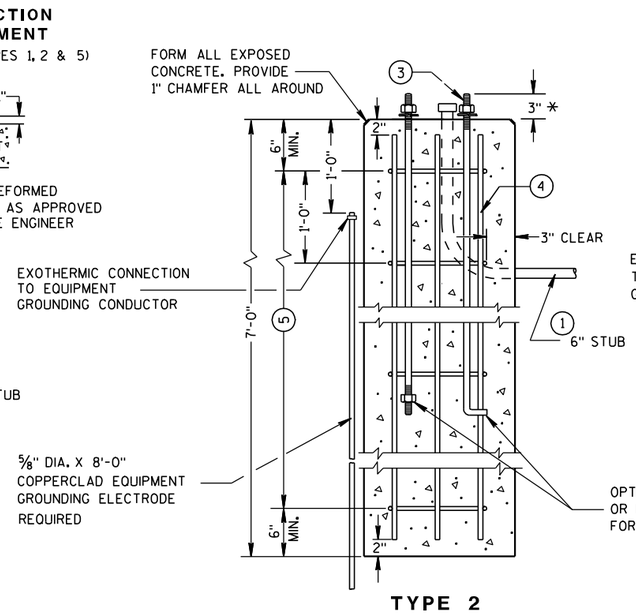
FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND

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

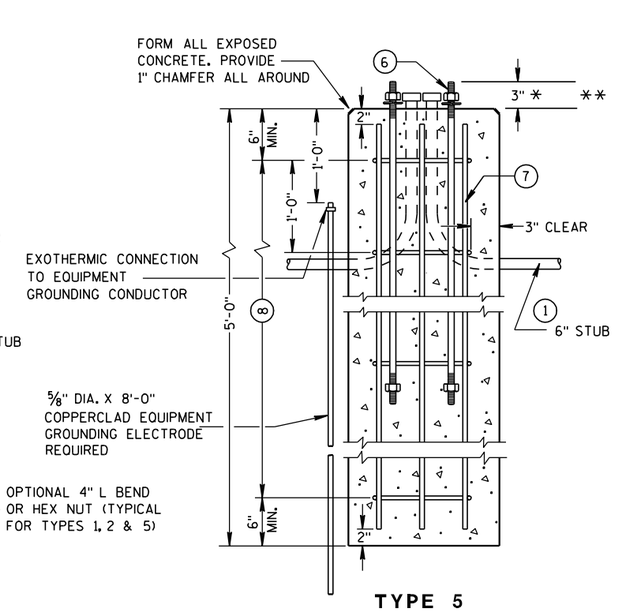


HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2 & 5)

TYPE 1



TYPE 2



TYPE 5

CONCRETE BASES

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

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

CONCRETE BASES, TYPES 1, 2 & 5

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/3/10 — DATE
/S/ Joanna L. Rush — STATE ELECTRICAL ENGI
127 — HWYS
FHWA

GENERAL NOTES

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

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 641.2.2 OF THE STANDARD SPECIFICATIONS, ASTM A-325, (92,000 YIELD) HEAVY HEX NUT AND BE GALVANIZED IN ACCORDANCE WITH ASTM A-153, CLASS C.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED AND U.L. LISTED MECHANICAL CONNECTOR (LUG) AL/CU RATED AND SIZED TO ACCEPT #10 AWG STRANDED WIRE, SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

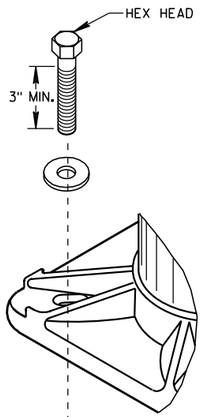
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

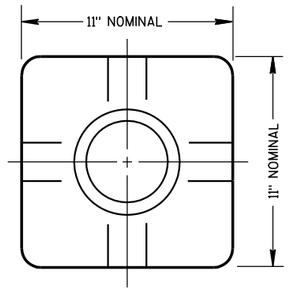
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

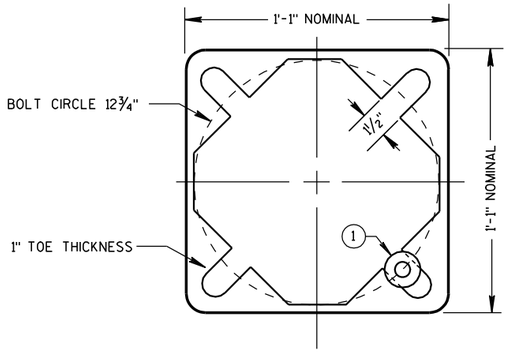
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1½", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

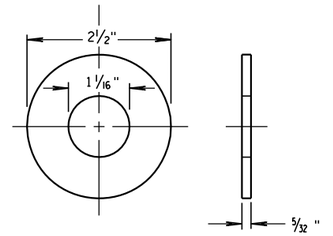




TOP VIEW
(PEDESTAL BASE)

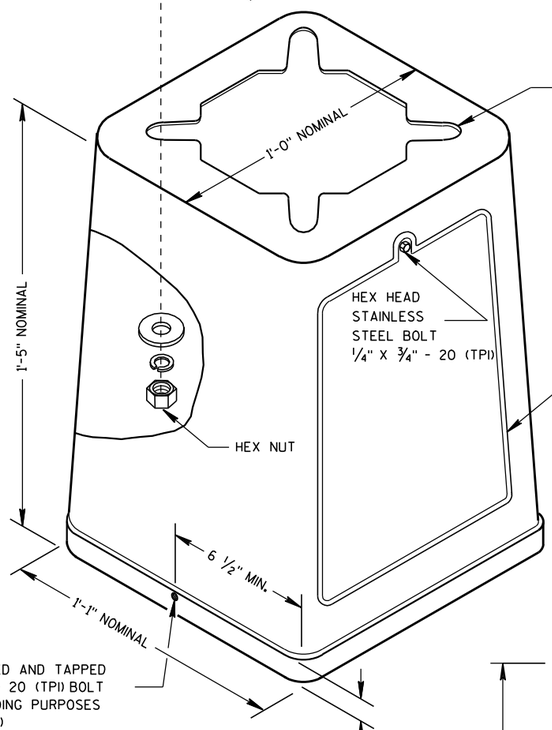


BOTTOM VIEW
(PEDESTAL BASE)

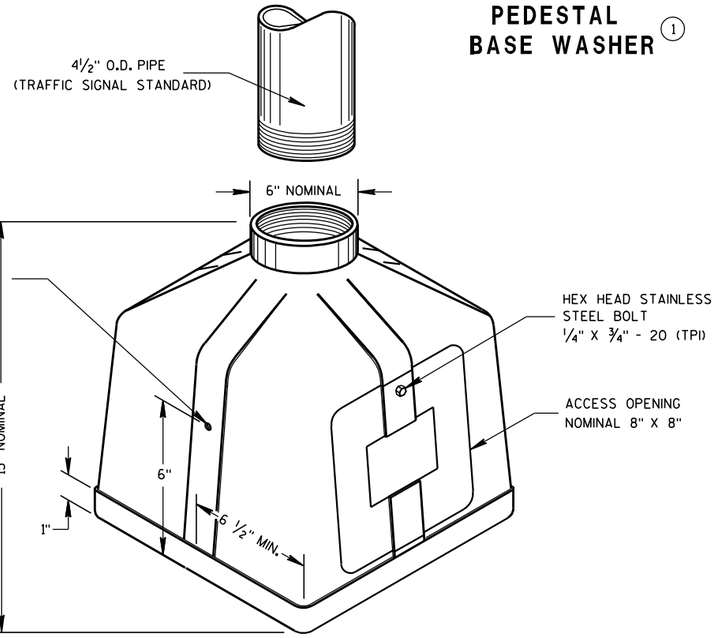


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

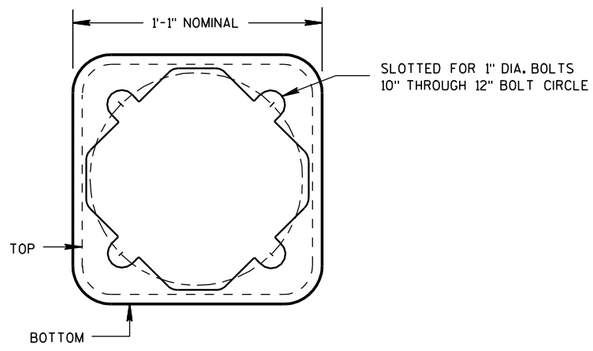


ISOMETRIC VIEW

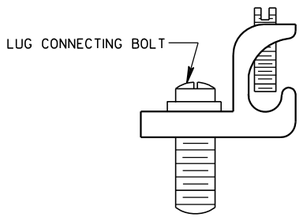


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

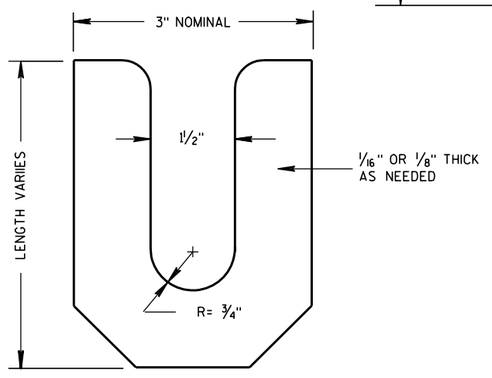


TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES



LEVELING SHIM

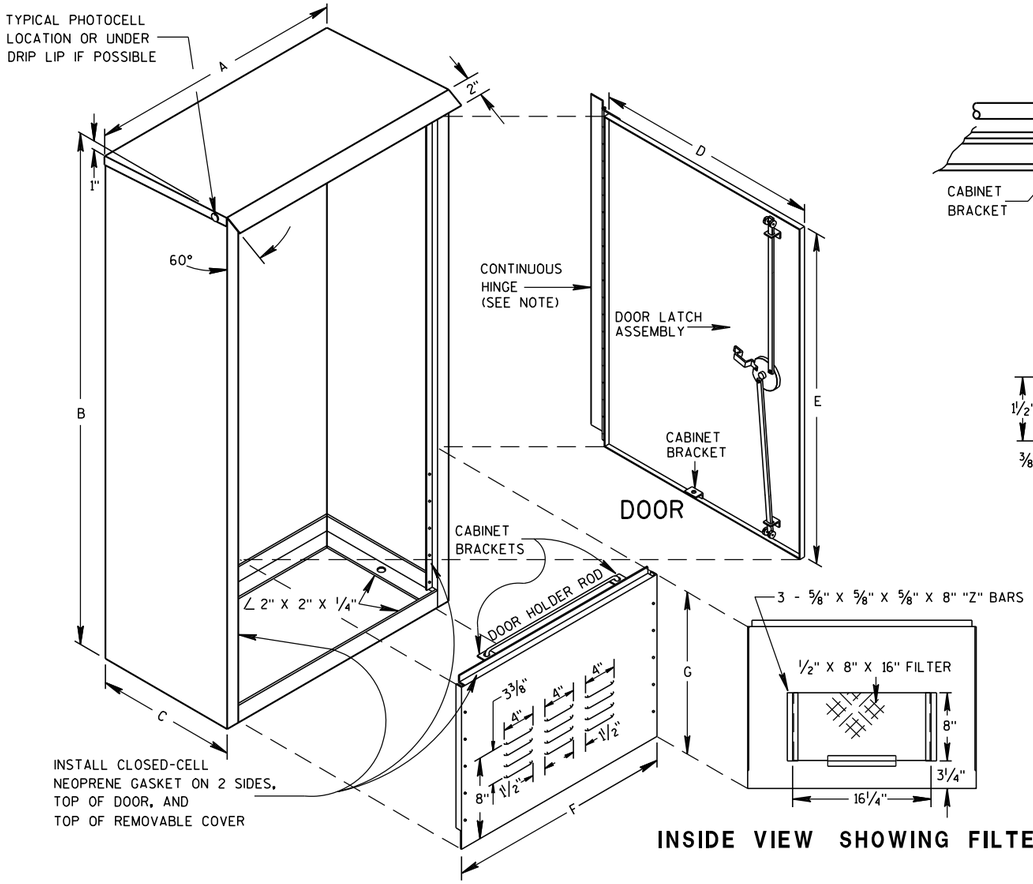
TRANSFORMER/PEDESTAL BASES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10/27/09 DATE	/S/ Joanna L. Rich STATE ELECTRICAL ENGI 128 HWYS
FHWA	

6

S.D.D. 9 C 3-3

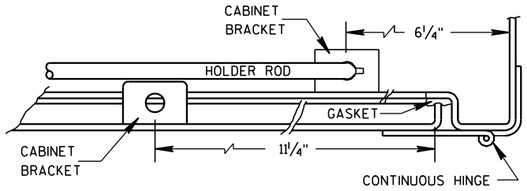
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S.D.D. 9 C 3-3

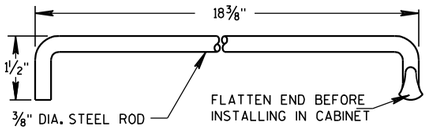


REMOVABLE COVER

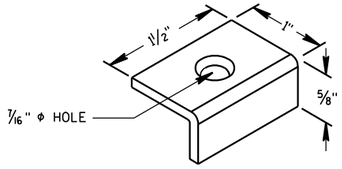
INSIDE VIEW SHOWING FILTER



HINGE & DOOR HOLDER



HOLDER ROD

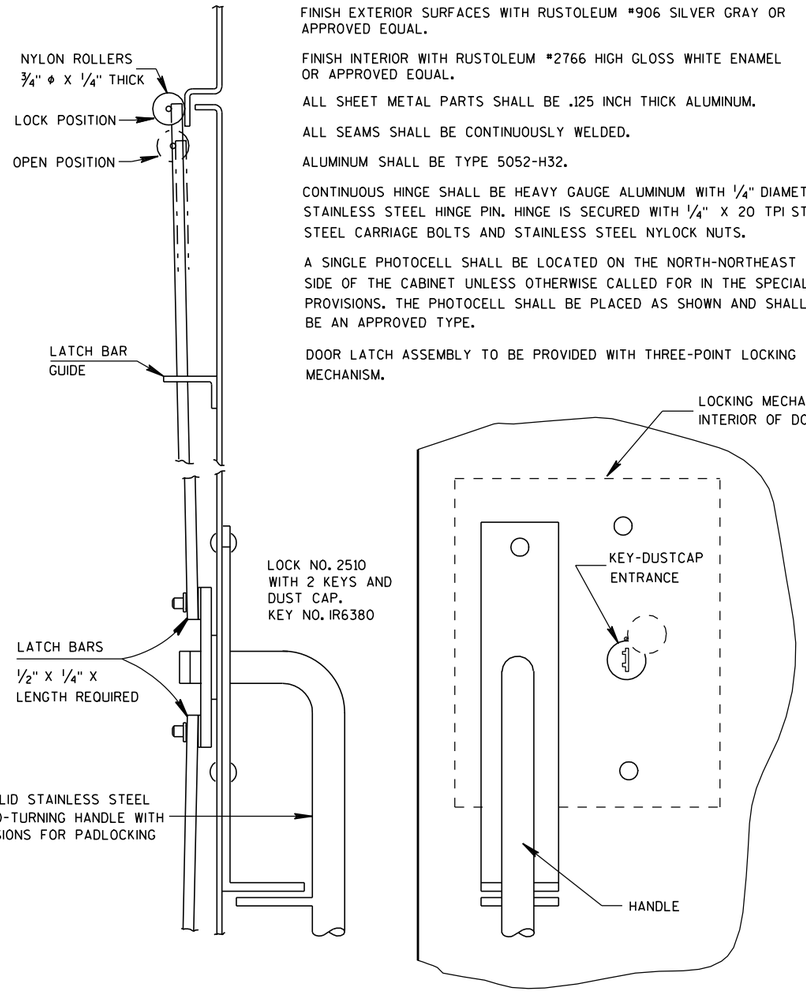


CABINET BRACKET

MOUNTING BASE

TABLE OF DIMENSIONS (INCHES)

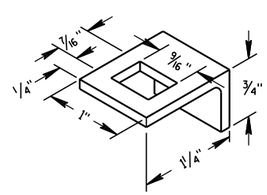
MARK	CABINET TYPE		
	3060	3860	3866
A	30	38	38
B	60	60	66
C	16 1/2	16 1/2	24
D	26 1/2	34 3/4	33 3/4
E	38 3/4	38 3/4	38 3/4
F	26 1/2	34 3/4	33 3/4
G	19	19	25
H	16 1/2	16 1/2	24
H/2	8 1/4	8 1/4	12
J	30	38	38
J/2	15	19	19
K	13 3/4	13 3/4	21 1/4
L	27 1/2	35 1/2	35 1/2



SIDE VIEW

FRONT VIEW

LATCH ASSEMBLY



LATCH BAR GUIDE

GENERAL NOTES

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

PRIME WITH PHOSPHATE TREATMENT AND PRIMER.

FINISH EXTERIOR SURFACES WITH RUSTOLEUM #906 SILVER GRAY OR APPROVED EQUAL.

FINISH INTERIOR WITH RUSTOLEUM #2766 HIGH GLOSS WHITE ENAMEL OR APPROVED EQUAL.

ALL SHEET METAL PARTS SHALL BE .125 INCH THICK ALUMINUM.

ALL SEAMS SHALL BE CONTINUOUSLY WELDED.

ALUMINUM SHALL BE TYPE 5052-H32.

CONTINUOUS HINGE SHALL BE HEAVY GAUGE ALUMINUM WITH 1/4" DIAMETER STAINLESS STEEL HINGE PIN. HINGE IS SECURED WITH 1/4" X 20 TPI STAINLESS STEEL CARRIAGE BOLTS AND STAINLESS STEEL NYLOCK NUTS.

A SINGLE PHOTOCELL SHALL BE LOCATED ON THE NORTH-NORTHEAST SIDE OF THE CABINET UNLESS OTHERWISE CALLED FOR IN THE SPECIAL PROVISIONS. THE PHOTOCELL SHALL BE PLACED AS SHOWN AND SHALL BE AN APPROVED TYPE.

DOOR LATCH ASSEMBLY TO BE PROVIDED WITH THREE-POINT LOCKING MECHANISM.

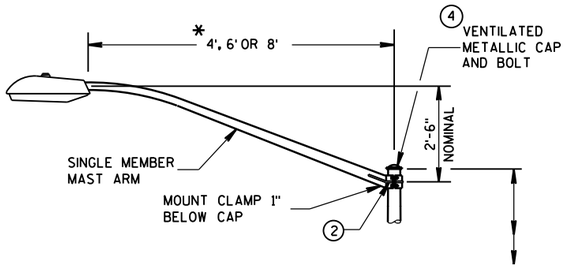
SIGNAL OR LIGHTING CONTROL CABINET

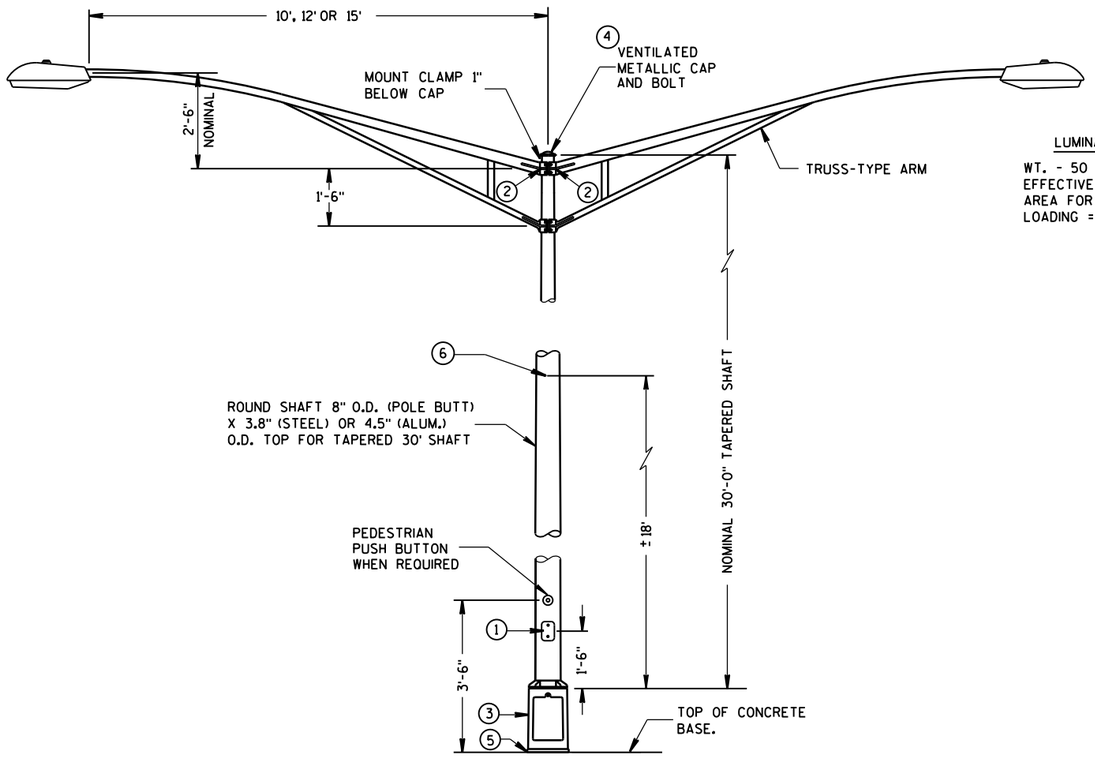
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/21/96 — DATE
/S/ Balu Ananthanarayanan — STATE ELECTRICAL ENGI
HWYS
FHWA

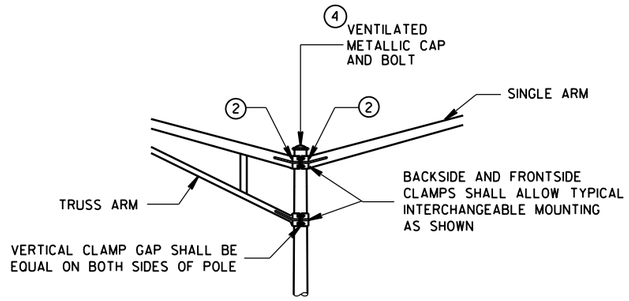
6
S.D.D. 9 D 2-2

*RISE FOR 4' ARM SHALL BE 2'-0".





TYPE 5 POLE MOUNTING CONFIGURATION
(MAXIMUM LOAD)
LIGHTING ONLY



INTERCHANGEABLE MOUNTING DETAIL

LUMINAIRE

WT. - 50 LBS.
EFFECTIVE PROJECTED
AREA FOR WIND
LOADING = 1.5 SQ. FT.

GENERAL NOTES

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

ALL TYPE 5 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL OR ALUMINUM, AS CALLED FOR IN THE CONTRACT.

TYPE 5 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

THE TYPE 5 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.188".

TYPE 5 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (.1196").

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONEECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" x 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) ¼" X ¾" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.

(2) GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1⅜" HOLE IN POLE SHAFT FOR WIRING.

(3) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

(4) FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

(5) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.

(6) INTERNAL DUMBBELL-TYPE VIBRATION DAMPER.

6

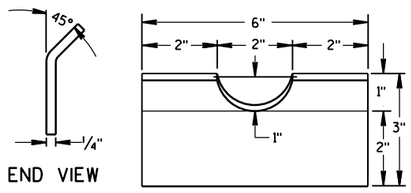
S.D.D. 9 E 1-12d

POLE MONTINGS FOR
LIGHTING UNITS, TYPE 5
(30 FEET)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

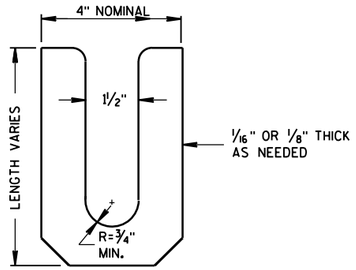
S.D.D. 9 E 1-12d



FRONT VIEW

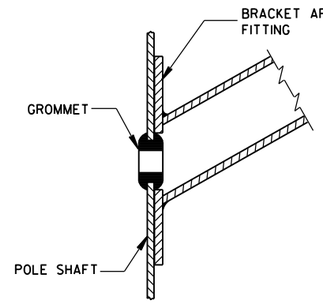
RECTANGULAR CLAMP SHIM

(4 TO A SET)

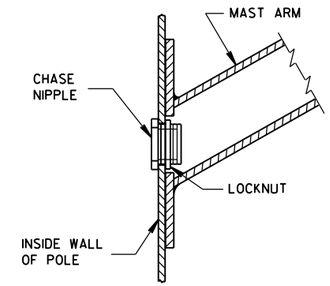


LEVELING SHIM (15)

SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

(10) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP.
6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

(11) INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)

(12) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

(13) OUTSIDE SHIM DIAMETER - (4.5" O.D. FOR LUMINAIRE MAST ARM)
(6.625" O.D. FOR TROMBONE MAST ARM)

(14) VARIABLE SHIM THICKNESS - (0.10", 0.25", 0.35", 0.53" OR 0.70")

SHIM THICKNESS FOR TROMBONE MAST ARMS MAY BE TYPICALLY 0.25", 0.35", 0.53" OR 0.70".

SHIM THICKNESS FOR LUMINAIRE MAST ARMS MAY BE TYPICALLY 0.10", 0.25" OR 0.35".

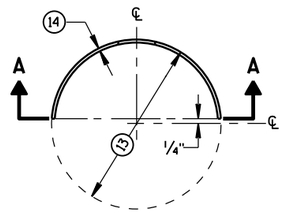
SHIM MATERIAL SHALL BE ALUMINUM ALLOY.

SHIM THICKNESS SHALL BE IMPRESSED INTO EACH SHIM. NUMERALS SHALL BE 1/4" HIGH AND LEGIBLE.

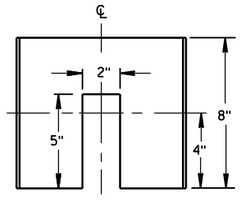
THE CONTRACTOR SHALL SUBMIT TWO COPIES OF ALL SHIM SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL.

(15) LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



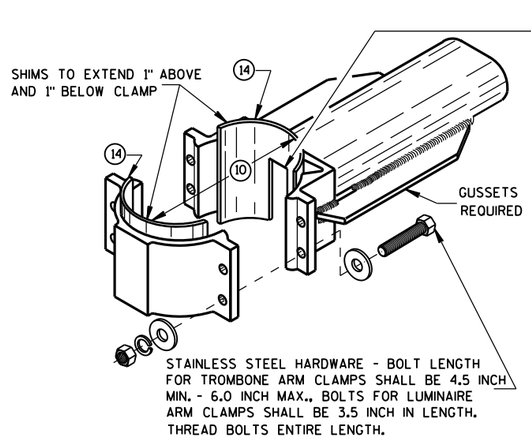
PLAN VIEW



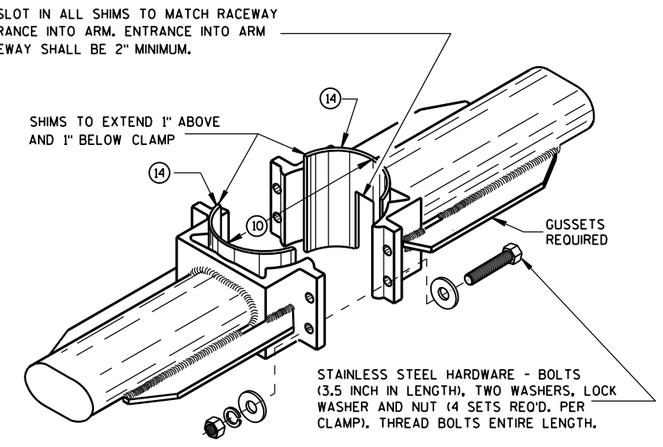
SECTION A-A

CIRCULAR CLAMP SHIM

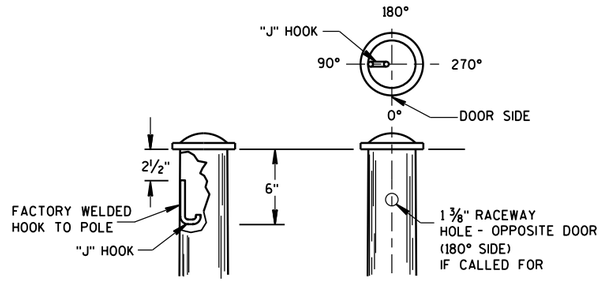
(2 TO A SET)



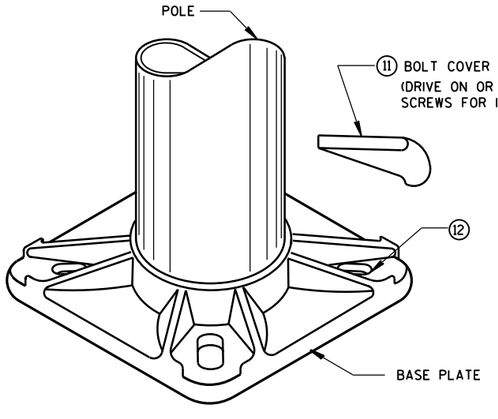
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



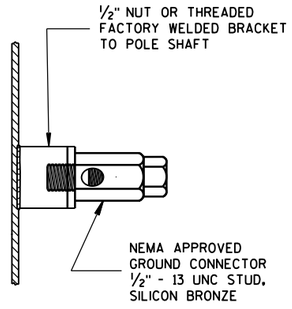
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

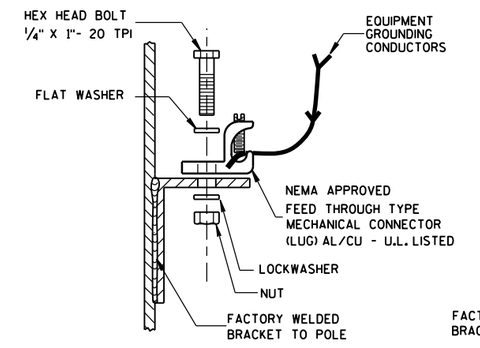


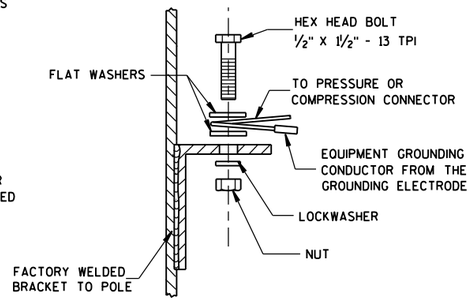
TYPICAL "J" HOOK LOCATION



BASE PLATE







TYPICAL GROUNDING CONNECTIONS

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

HARDWARE DETAILS FOR POLE MOUNTINGS

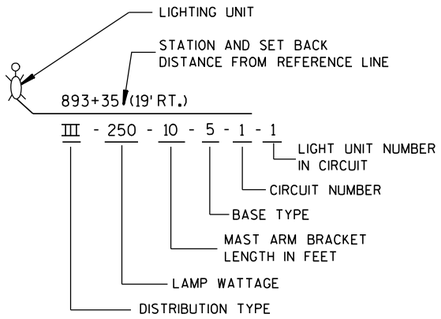
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/7/2013
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL

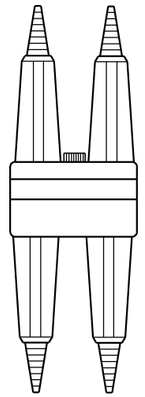
FHWA

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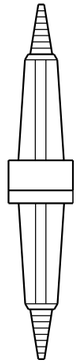
S.D.D. 9 E 1-12g



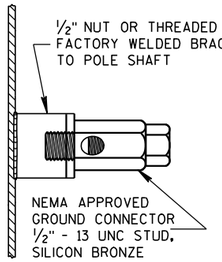
LIGHTING UNIT CODE
(TYPICAL)

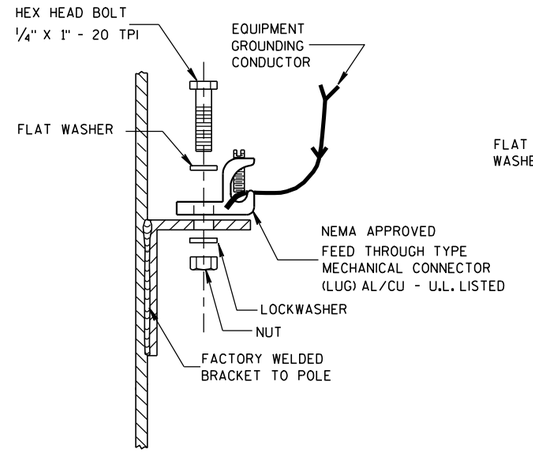


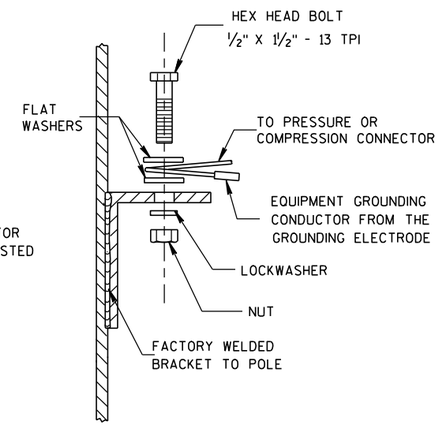
DETAIL "A"
BREAKAWY
DOUBLE POLE WITH
WATERPROOF
INSULATING BOOT



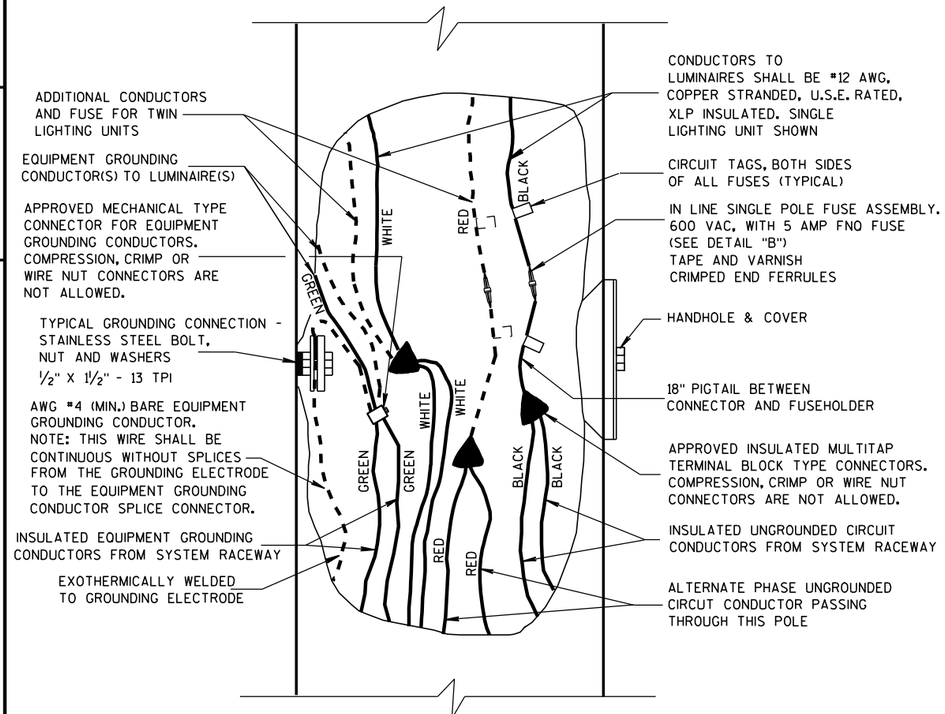
DETAIL "B"
BREAKAWY
SINGLE POLE WITH
WATERPROOF
INSULATING BOOT



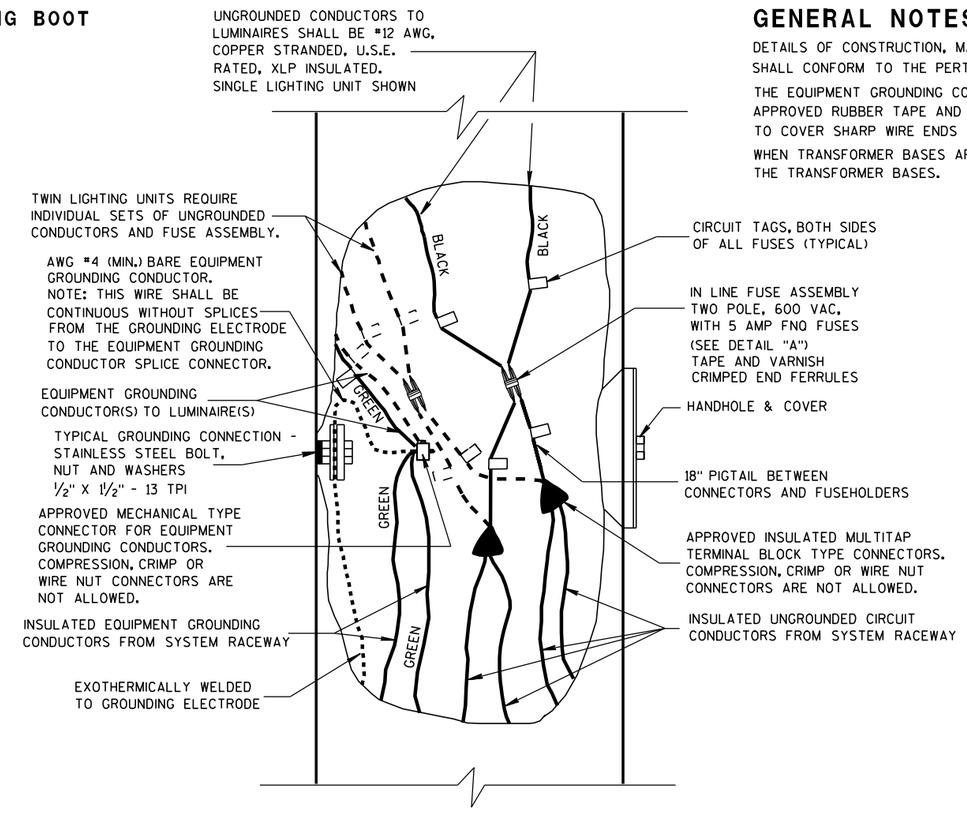




TYPICAL GROUNDING CONNECTIONS
NUT, BOLT, WASHERS AND LOCKWASHERS SHALL BE STAINLESS STEEL



3 WIRE - 120, 240 OR 480 VAC (UNGROUNDED CONDUCTOR) WITH GROUNDED CONDUCTOR AND WITH EQUIPMENT GROUNDING CONDUCTOR



2 WIRE - 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR

GENERAL NOTES

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

THE EQUIPMENT GROUNDING CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND THEN 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.

NON-FREEWAY LIGHTING UNIT POLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

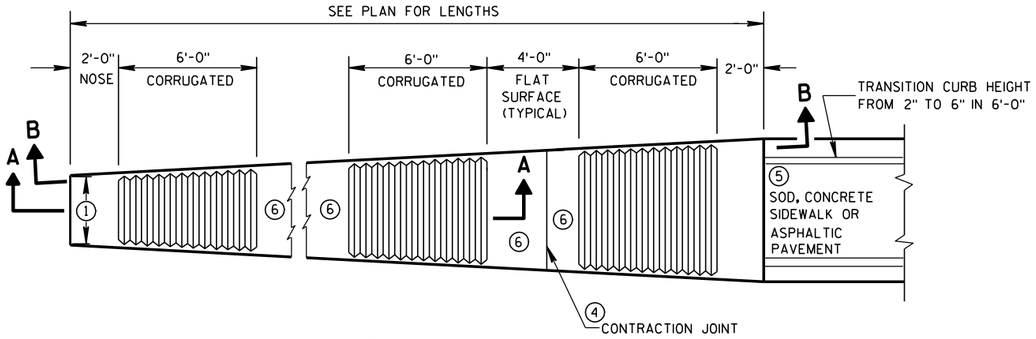
3/2/2011 — DATE

/S/ Thomas J. Gosnell — STATE ELECTRICAL ENGI

HWYS

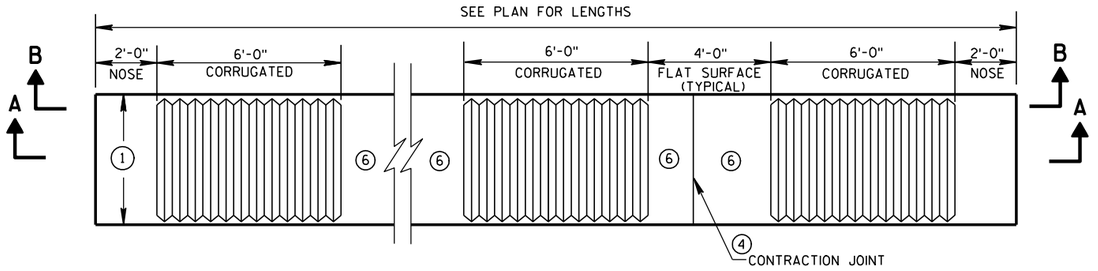
FHWA

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S.D.D. 9 E 3-4



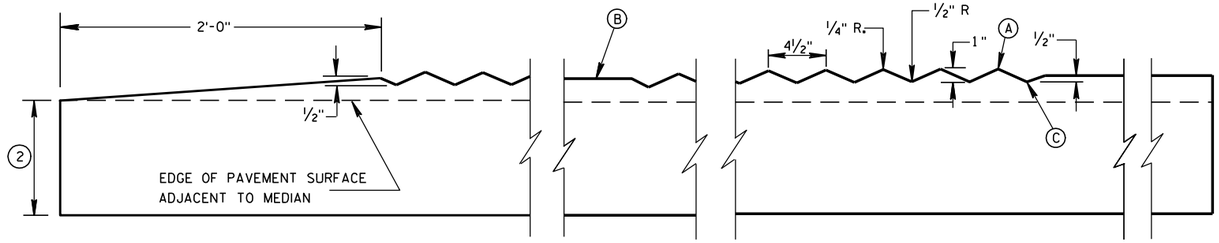
PLAN VIEW

VARIABLE WIDTH CONCRETE CORRUGATED MEDIAN



PLAN VIEW

UNIFORM WIDTH CONCRETE CORRUGATED MEDIAN



SECTION A-A

LONGITUDINAL SECTION

GENERAL NOTES

(1) SEE PLANS FOR CONSTANT OR VARIABLE WIDTH.

(2) THE DEPTH OF THE CONCRETE CORRUGATED MEDIAN SHALL BE 9-INCHES UNLESS SHOWN OTHERWISE IN THE PLAN.

ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN IN THE PLAN. TYPICAL OPTIONS ARE:

(1) NEW OR EXISTING CONCRETE PAVEMENT.

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

(3) ASPHALTIC PAVEMENT OVER BASE AGGREGATE DENSE.

(3) 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.

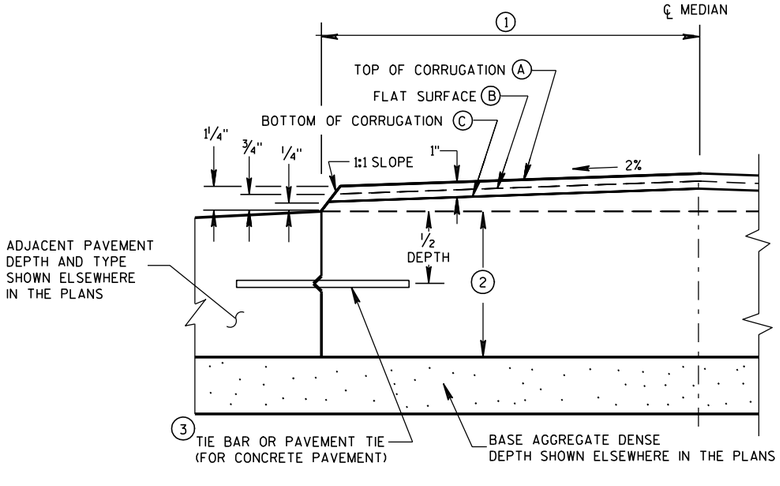
INSTALL TIE BARS TO MAINTAIN A MINIMUM OF 3-INCHES OF COVER BETWEEN THE TIE BAR AND THE CONCRETE SURFACE (BOTTOM AND TOP).

PAVEMENT TIES REQUIRED IN EXISTING CONCRETE PAVEMENT OR 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.

(4) CONCRETE CORRUGATED MEDIAN CONTRACTION JOINTS SHALL BE CONSTRUCTED TO MATCH THE JOINTS IN ADJACENT CONCRETE PAVEMENT. WHERE ADJACENT PAVEMENT IS ASPHALT WITH BASE AGGREGATE DENSE. TRANSVERSE CONTRACTION JOINTS SHALL BE PROVIDED AT 20 FOOT INTERVALS.

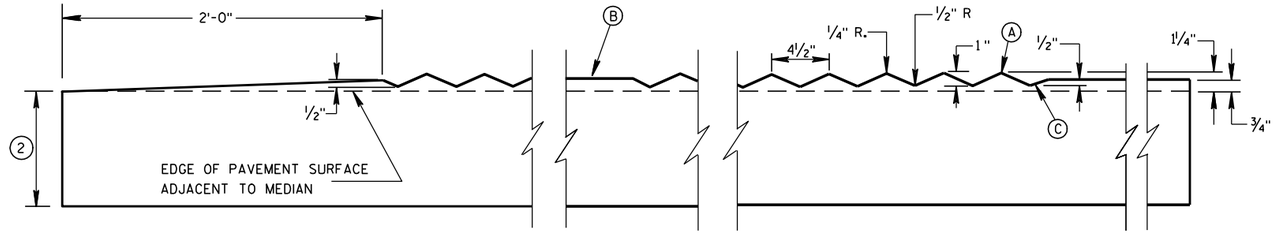
(5) SURFACE TYPE AND DETAILS ARE DEFINED ELSEWHERE IN THE PLAN.

(6) YELLOW MARKING ON FLAT SURFACE WHEN MEDIAN SEPARATES OPPOSING TRAFFIC.



HALF CROSS SECTION

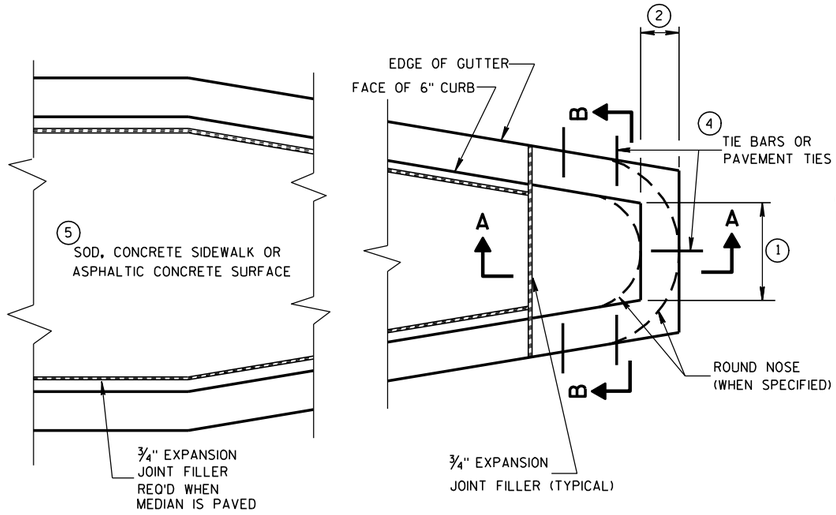
(2) CONCRETE CORRUGATED MEDIAN AND ADJACENT PAVEMENT

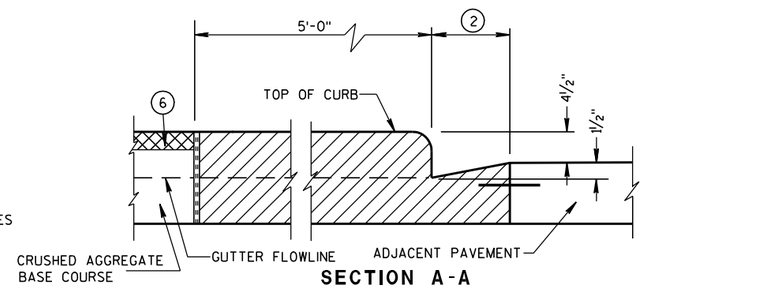


SECTION B-B

LONGITUDINAL SECTION

CONCRETE CORRUGATED MEDIAN	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
12/17/07 DATE	/S/ Jerry H. Zogg ROADWAY STANDARDS ENGINEER
FHWA	





CONCRETE MEDIAN BLUNT NOSE DETAIL

GENERAL NOTES

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

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

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

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

(1) NEW OR EXISTING CONCRETE PAVEMENT.

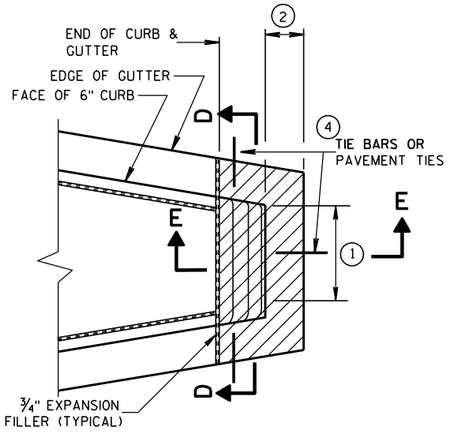
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

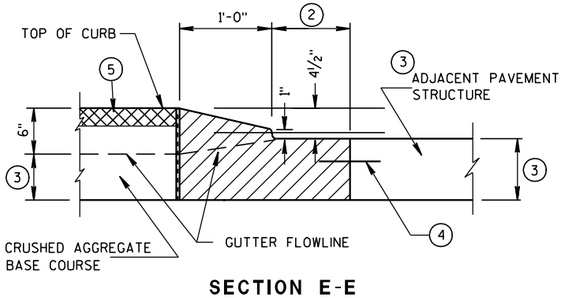
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

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

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

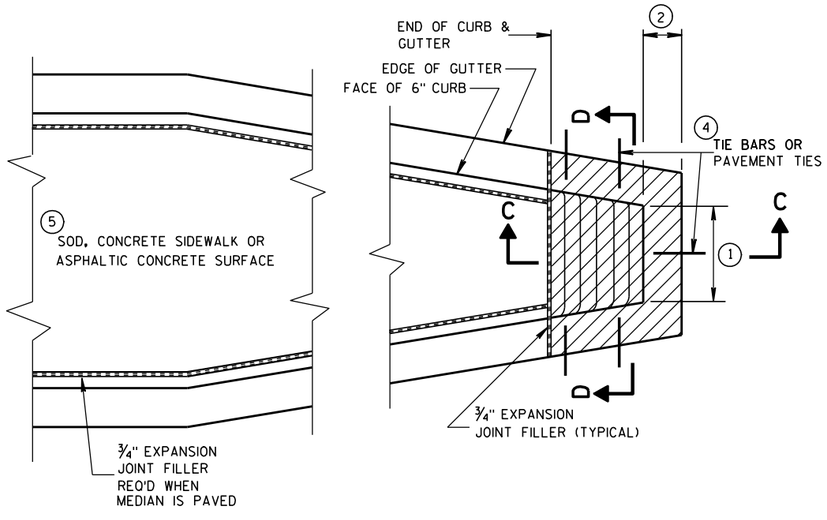
(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

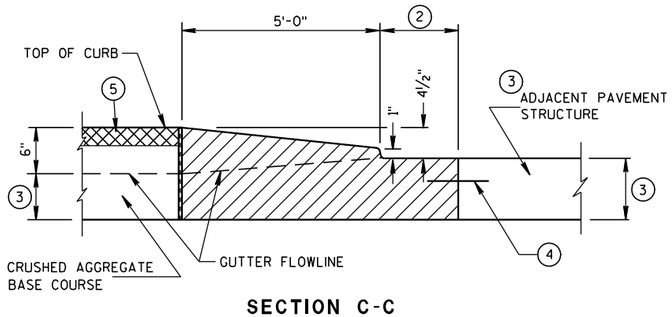




SECTION E-E

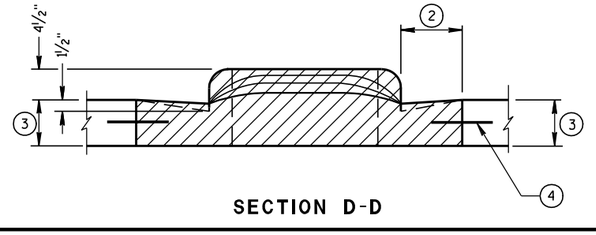
CONCRETE MEDIAN SLOPED NOSE TYPE 2





SECTION C-C

CONCRETE MEDIAN SLOPED NOSE TYPE 1



SECTION D-D

CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/8/2006
DATE

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

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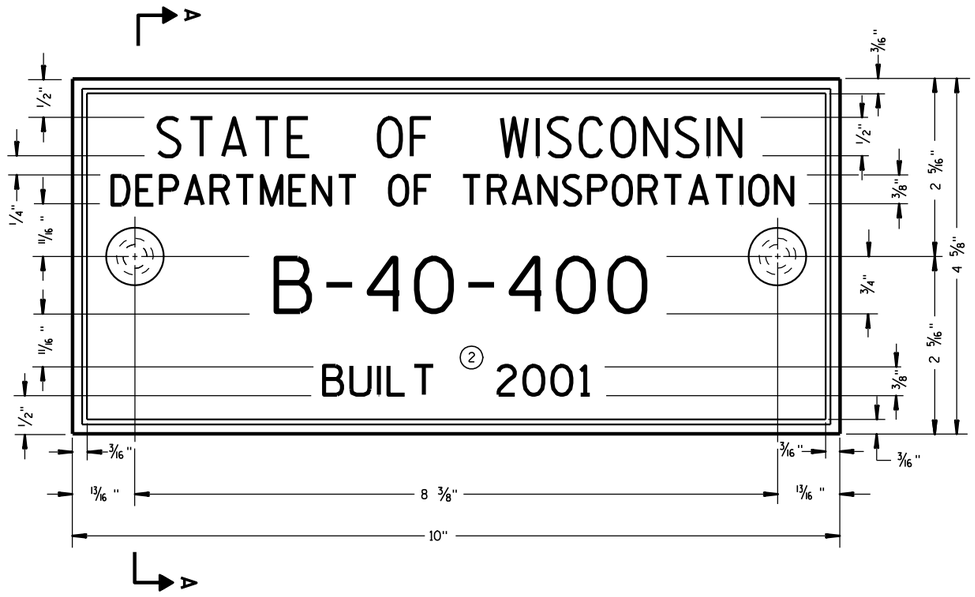
FHWA

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S.D.D. 11 B 2-2

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S.D.D. 11 B 2-2



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

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

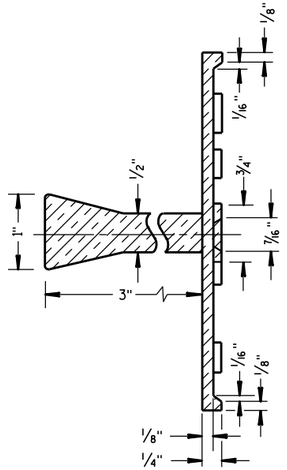
GENERAL NOTES

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

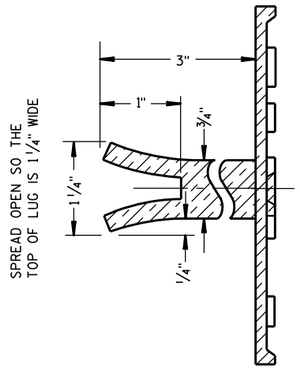
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

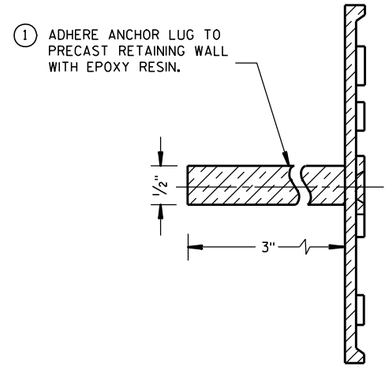
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

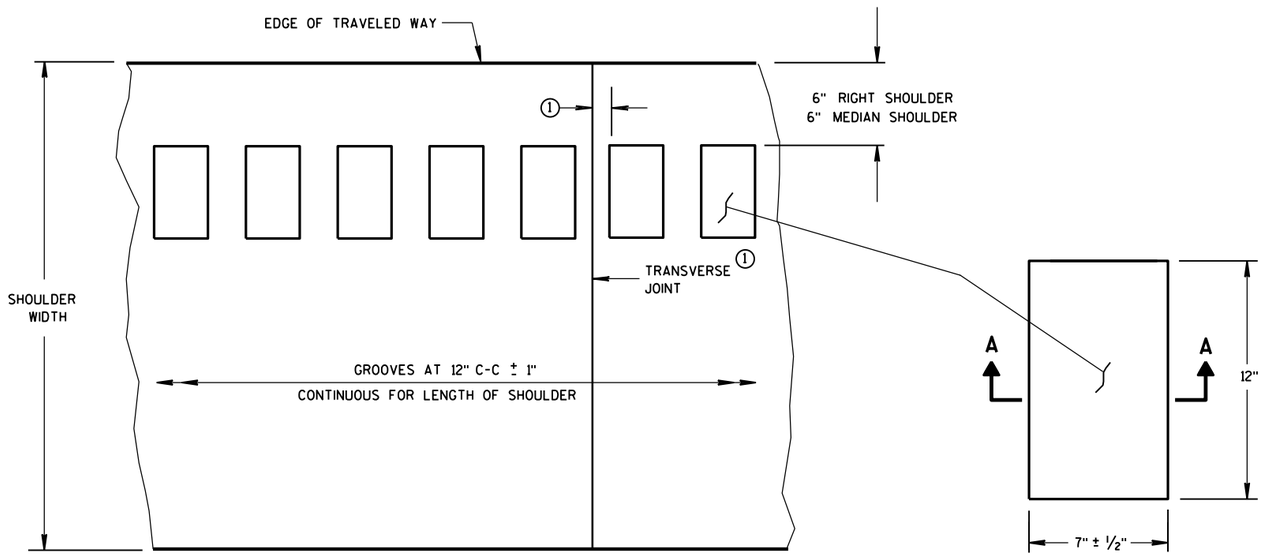
3/26/10 DATE

/S/ Scot Beck-- CHIEF STRUCTURAL DEVELOP ENGINEER

FHWA

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S.D.D. 12 A 3-10



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

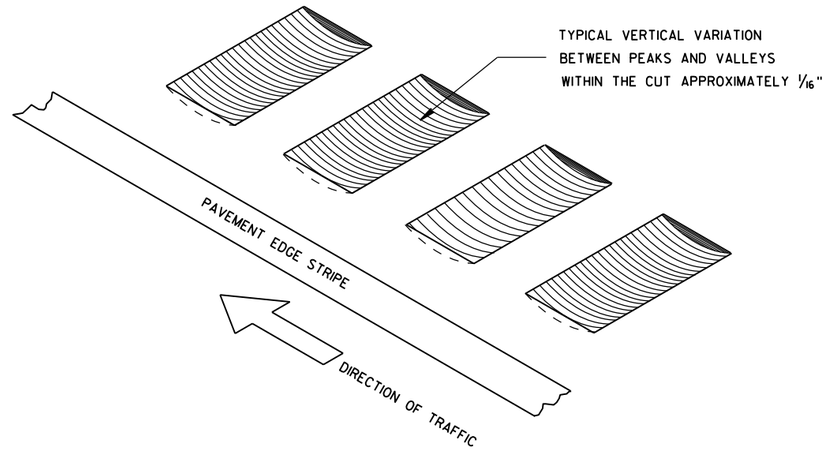
GENERAL NOTES

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

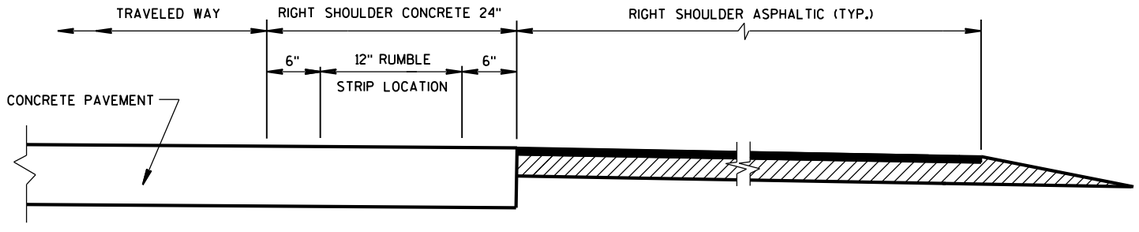
RUMBLE STRIPS ON EXPRESSWAYS

DO NOT INSTALL RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL DRIVEWAYS, PRIVATE DRIVEWAYS OR ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, BRIDGE DECKS, BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSING. THE ATTACHED STANDARD DETAIL DRAWING SHOWS THE LOCATION OF THE RUMBLE STRIPS AT INTERCHANGE AREAS.

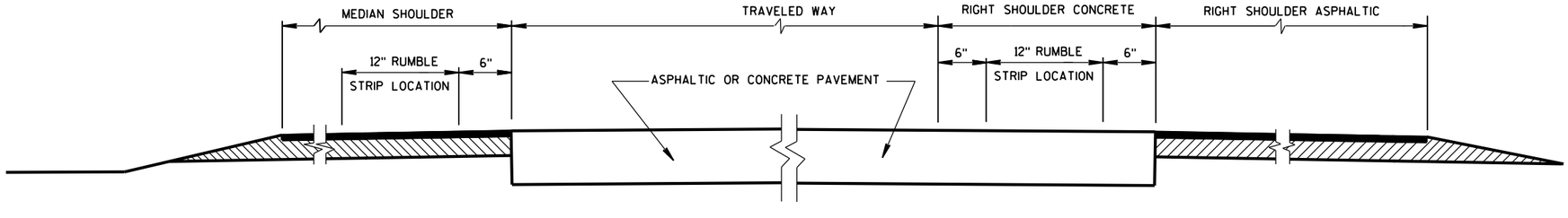
(1) CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6" AWAY FROM TRANSVERSE JOINTS.



ISOMETRIC



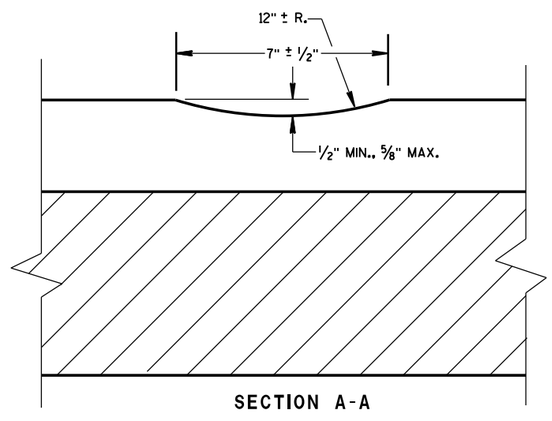
SECTION VIEW
CONCRETE PAVEMENT EXTENDS INTO RIGHT SHOULDER)



SECTION VIEW

TYPICAL LOCATIONS OF SHOULDER RUMBLE STRIPS IN RURAL DIVIDED HIGHWAYS

(ONE ROADWAY IS SHOWN)



SECTION A-A

SHOULDER RUMBLE STRIP, MILLING

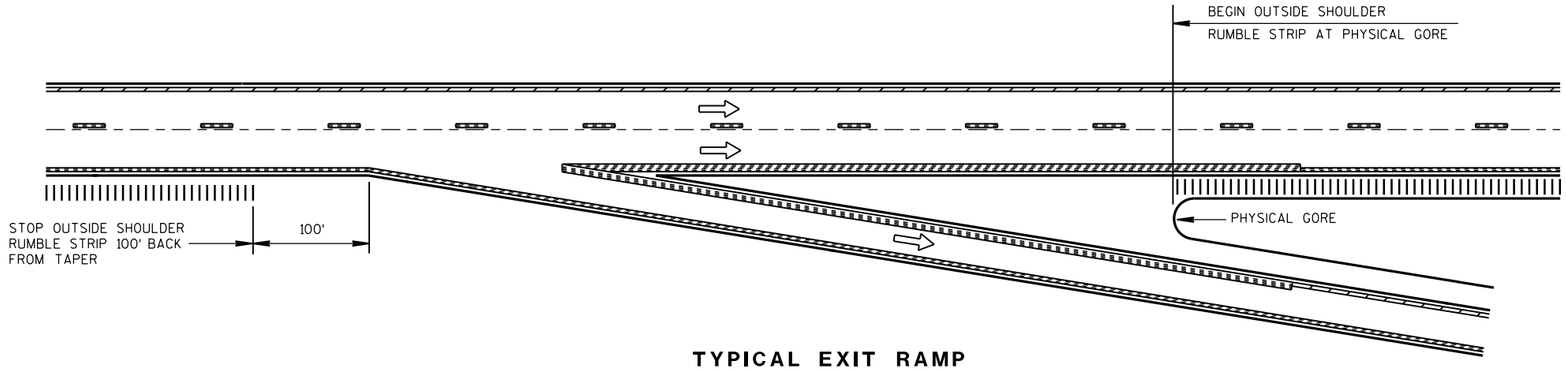
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 13 A 5-5a

6

S.D.D. 13 A 5-5a



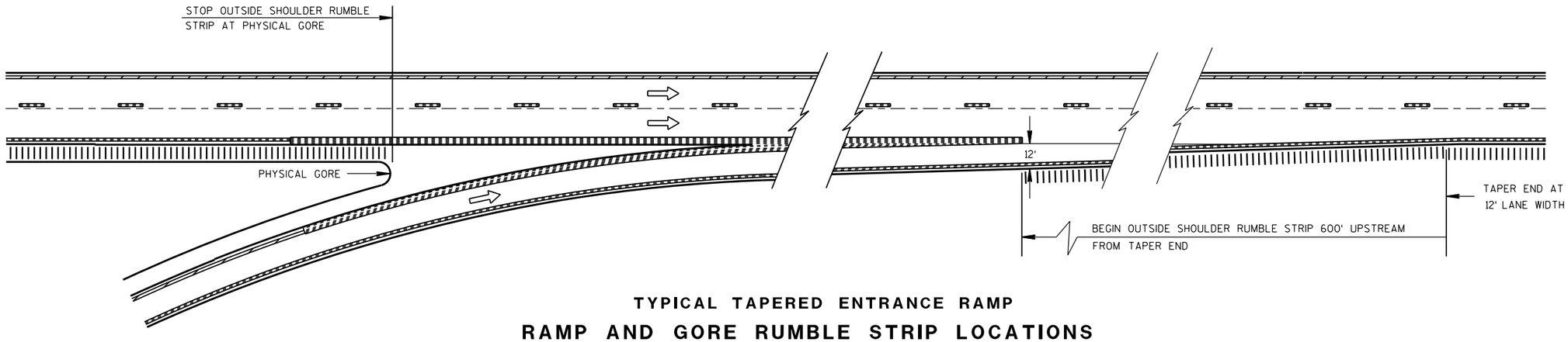
TYPICAL EXIT RAMP

NOTES:

NO RUMBLE STRIP ON EXIT, DIRECTIONAL, OR ENTRANCE RAMPS, EXCEPT NEAR THE ENTRANCE TAPER END AND ALONG THE PARALLEL RAMP AREA AS SHOWN.

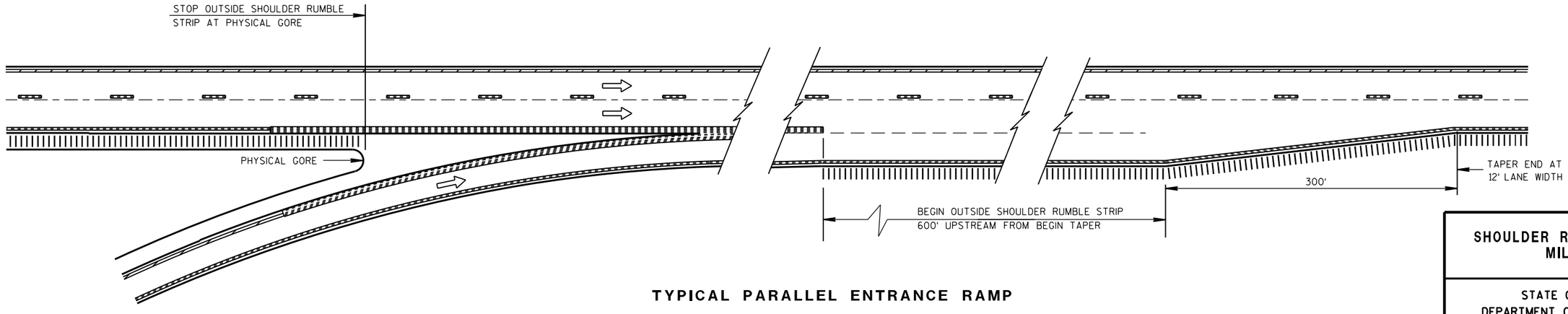
PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TYPICAL TAPERED ENTRANCE RAMP

RAMP AND GORE RUMBLE STRIP LOCATIONS



TYPICAL PARALLEL ENTRANCE RAMP

RAMP AND GORE RUMBLE STRIP LOCATIONS

SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

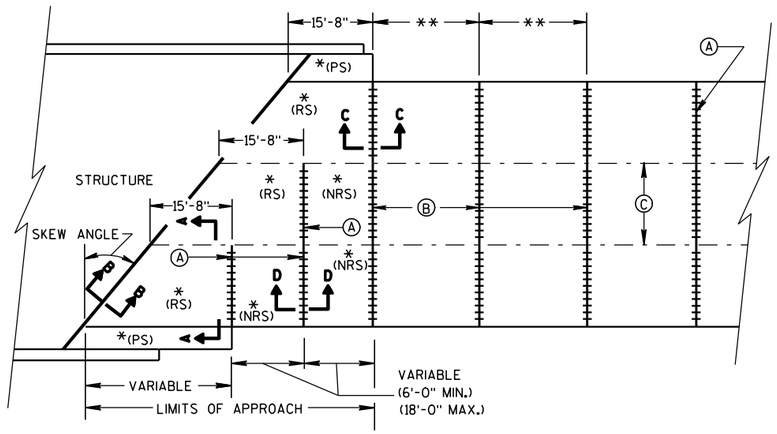
APPROVED
12/17/2012 DATE
/S/ Jerry H. Zoga
ROADWAY STANDARDS ENGINEER
FHWA

6

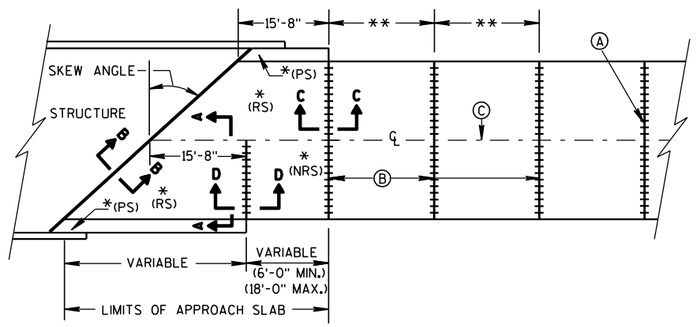
S.D.D. 13 A 5-5b

6

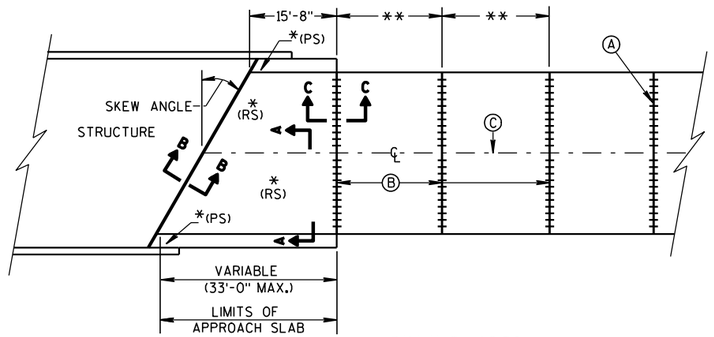
S.D.D. 13 A 5-5b



SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >30°
(PAVEMENT WIDTH ≤30')



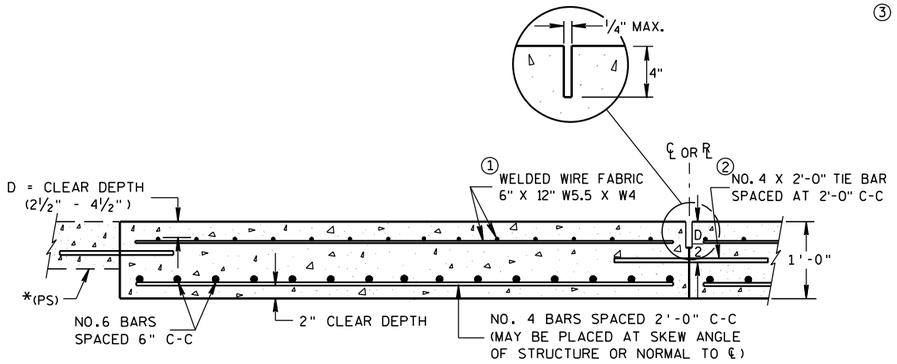
SKEWS ≤30°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

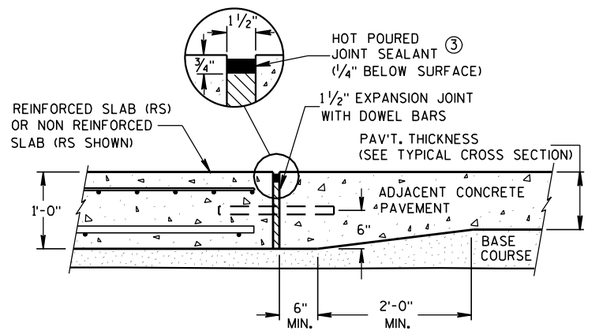
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER: CONCRETE PAVEMENT, OR CONCRETE SURFACE DRAIN
(SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

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

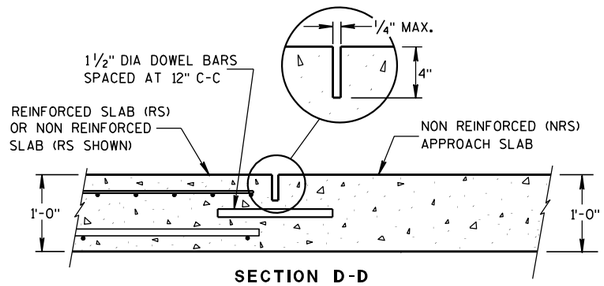
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄
(B) 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄
(C) STANDARD LONGITUDINAL JOINT AND TIE BARS.



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



SECTION D-D
CONTRACTION JOINT

GENERAL NOTES

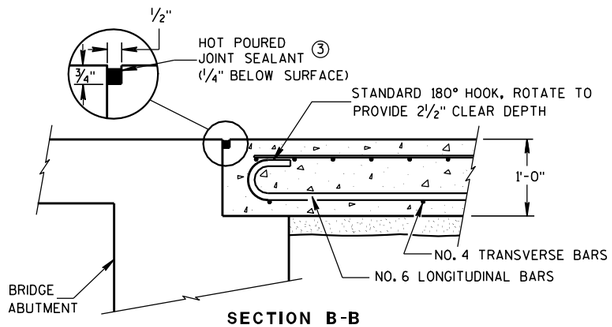
APPROACH SLABS ABUTTING AN HMA PAVEMENT OVER BASE COURSE DO NOT NEED TO BE DOWELED.

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.

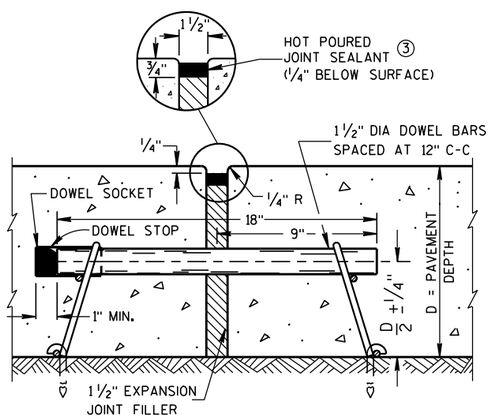
(1) THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

(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



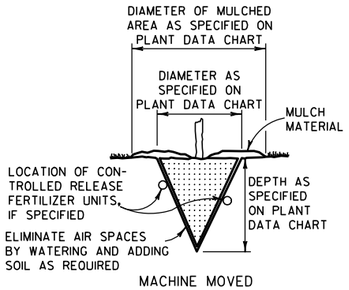
EXPANSION JOINT

CONCRETE PAVEMENT APPROACH SLAB

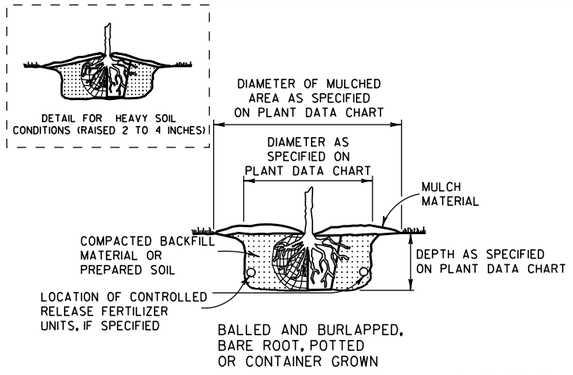
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

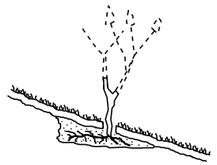
6
S.D.D. 13 B 2-6



MACHINE MOVED

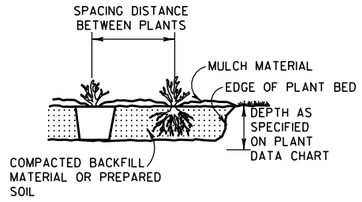


BALLED AND BURLAPPED, BARE ROOT, POTTED OR CONTAINER GROWN



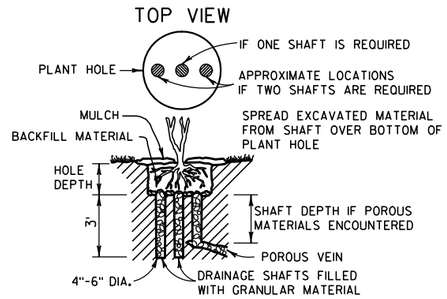
ACCOMMODATE ROOTS (SMOOTH AND STAGHORN SUMAC)

NOTE:
1) ENGINEER SHALL REQUIRE 3 SLITS IN POT TO SPEED DETERIORATION
2) METAL, PLASTIC OR OTHER NONDEGRADABLE POTS SHALL BE REMOVED PRIOR TO PLANTING



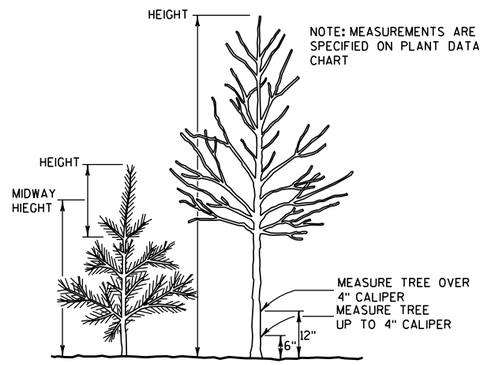
PREPARED BED (BARE ROOT AND POTTED)

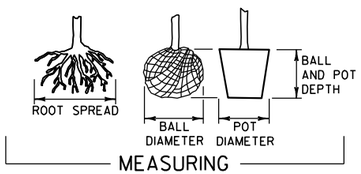
PLANTING



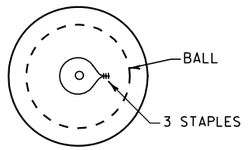
NOTE:
DRAINAGE SHAFT AS SPECIFIED ON PLANT DATA CHART

DRAINING

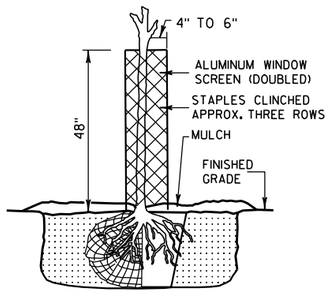




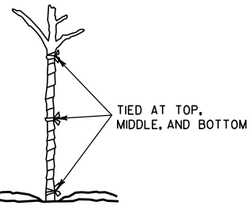
MEASURING



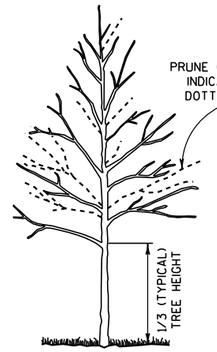
TOP VIEW



RODENT PROTECTION



WRAPPING

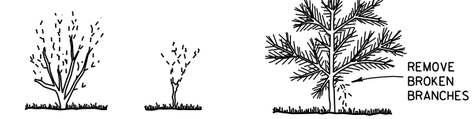


TALL DECIDUOUS TREES (ASH, MAPLE, LINDEN, OAK)

SINGLE STEMMED LOW DECIDUOUS TREES (CRABS AND OTHER SINGLE STEM TYPE)

MULTI-STEMMED LOW DECIDUOUS TREES OR LARGE SHRUBS (HAWTHORN, SERVICEBERRY)

NOTE: WHEN PRUNING, PRESERVE CHARACTER AND SHAPE OF TREE. AVOID LEAVING STUBS - REMOVE BRANCH OR TWIG BACK TO THE NEAREST CROTCH
1) PRUNE TO REMOVE DEAD AND BROKEN BRANCHES
2) PRUNE TO REMOVE BRANCHES THAT TOUCH OR ARE TOO CLOSE TO OTHER BRANCHES

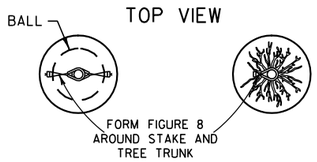


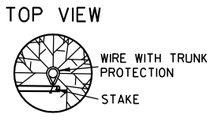
SHRUBS (GRAY DOGWOOD ARROWWOOD VIBURNUM)

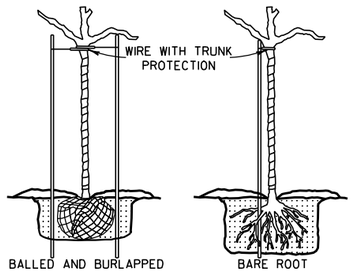
SUMAC

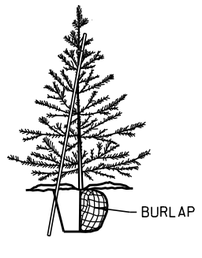
TREE TYPE EVERGREENS (PINE, SPRUCE, FIR) EVERGREENS USUALLY ARE NOT PRUNED

PRUNING



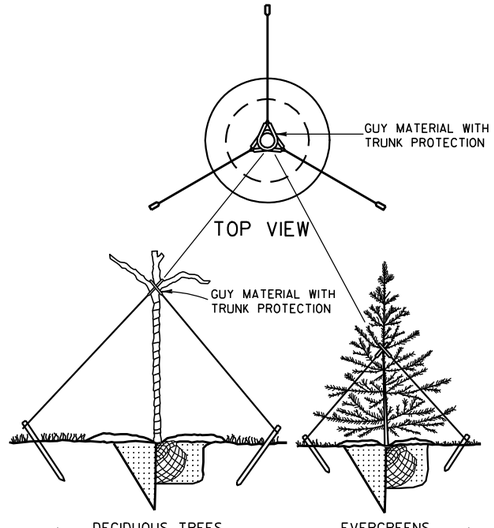






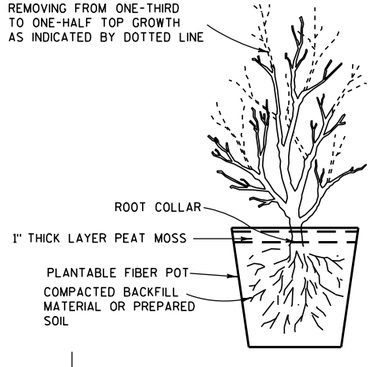
NOTE: BRACING STAKE
1) SHALL BE DRIVEN INTO THE GROUND AS CLOSE TO THE TREE AS POSSIBLE WITHOUT DAMAGING THE BRANCHES.
2) MAY BE DRIVEN AT SUCH AN ANGLE THAT IT DOES NOT PENETRATE THE BALL OR POT.
3) SHALL NOT PROTRUDE ABOVE THE TOP OF THE TREE; AND
4) SHALL HAVE A HOLE NEAR THE TOP TO HOLD THE WIRE IN PLACE.

BRACING



GUYING

PRUNE LARGER SHRUBS BY REMOVING FROM ONE-THIRD TO ONE-HALF TOP GROWTH AS INDICATED BY DOTTED LINE



POTTING

NOTES

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

BRACING, WRAPPING, GUYING, RODENT PROTECTION, FERTILIZER AND MULCH SHALL BE USED ONLY WHEN SPECIFIED ON THE PLANT DATA CHART (PART OF PLAN) OR SPECIAL PROVISIONS.

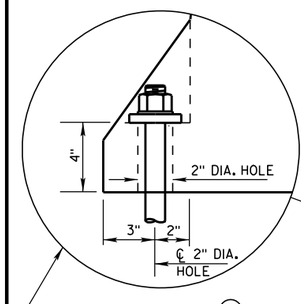
TREE PLANTING DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

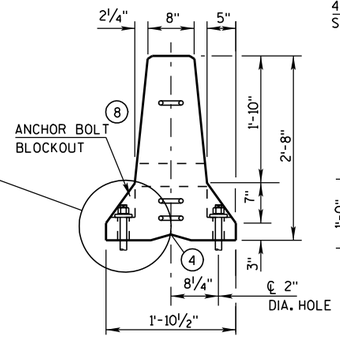
APPROVED
4/11/94 — DATE
/S/ Rory L. Rhinesmith — CHIEF METHODS DEVELOPMENT ENGINEER
FHWA

S.D.D. 14 A 2-1

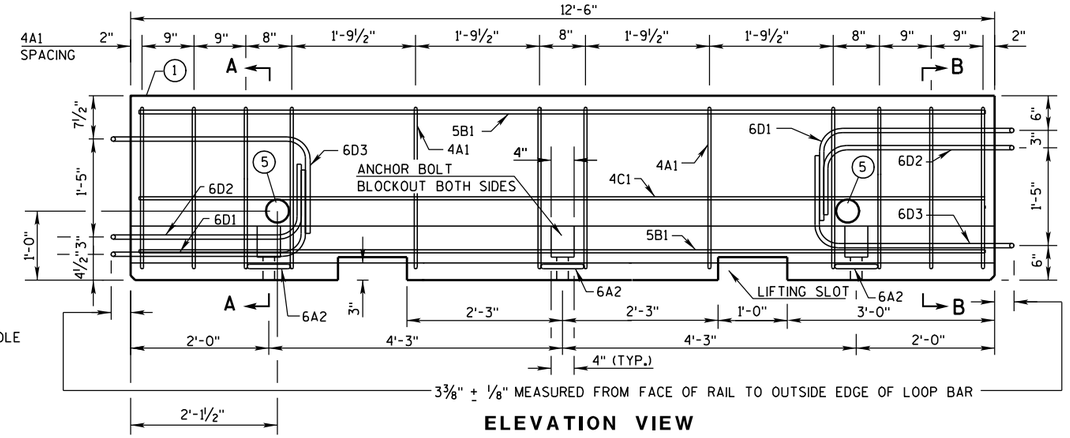
S.D.D. 14 A 2-1



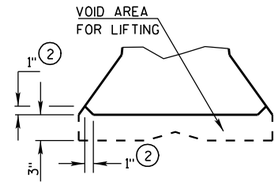
ANCHOR ON TRAFFIC SIDE (8) ONLY WHEN REQUIRED (SEE SHEET D FOR ADDITIONAL ANCHOR DETAIL)



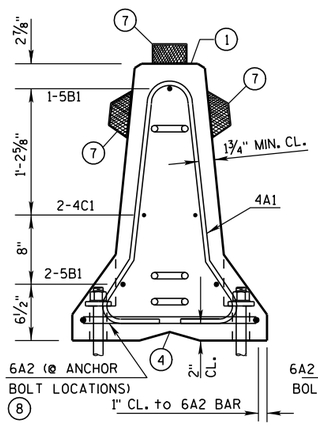
END VIEW



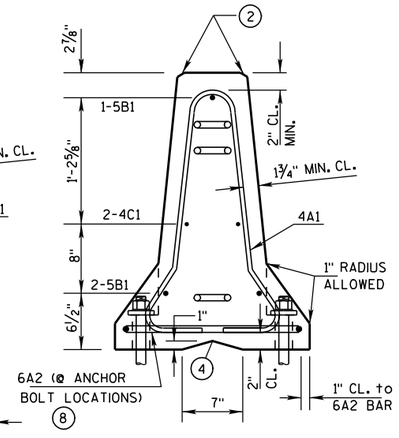
ELEVATION VIEW



DETAIL "B"
LIFTING SLOT DETAIL



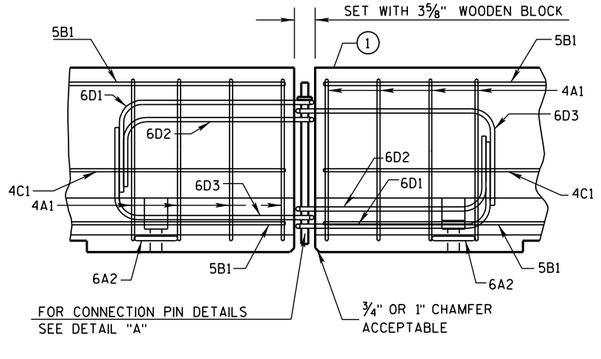
SECTION A-A
(STIRRUP PLACEMENT)



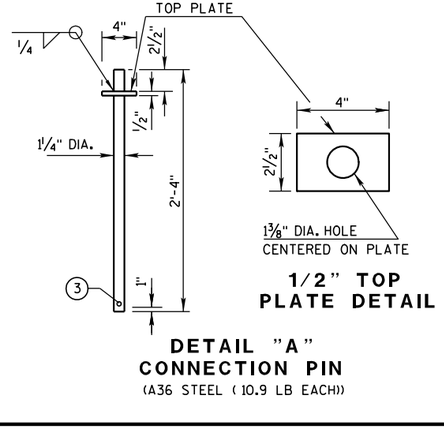
SECTION B-B
(STIRRUP PLACEMENT)

PLAN VIEW

DETAILS OF BARRIER SECTION

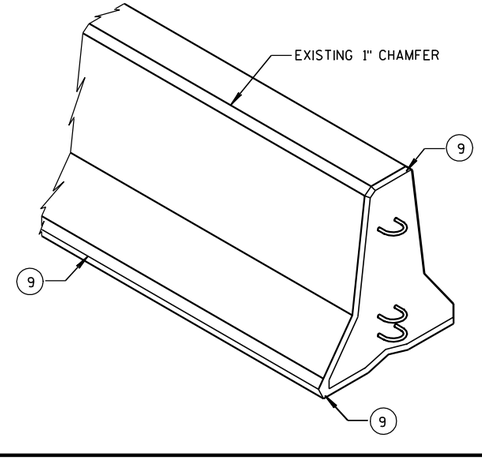


DETAILS OF BARRIER CONNECTION



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.

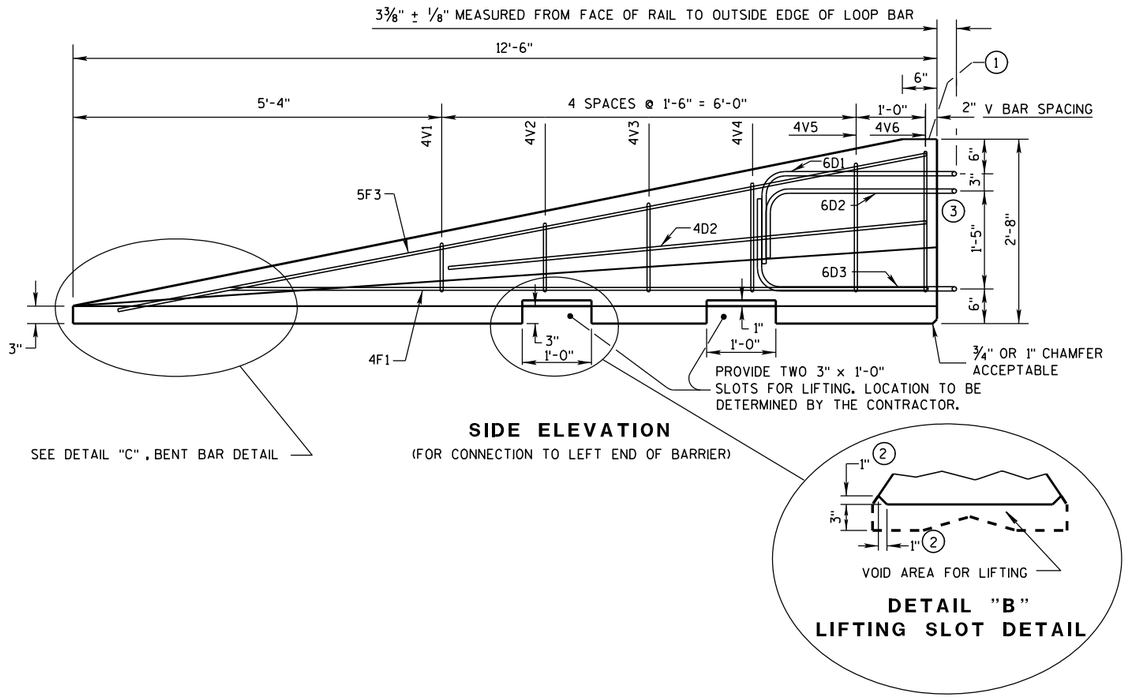
(8) SEE SHEET D FOR ANCHORING CRITERIA.

(9) 1" CHAMFER OPTIONAL.

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO.....

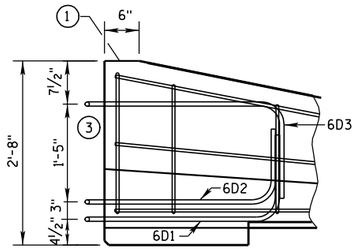
6
S.D.D. 14 B 7-13a



SIDE ELEVATION

(FOR CONNECTION TO LEFT END OF BARRIER)

DETAIL "B"
LIFTING SLOT DETAIL

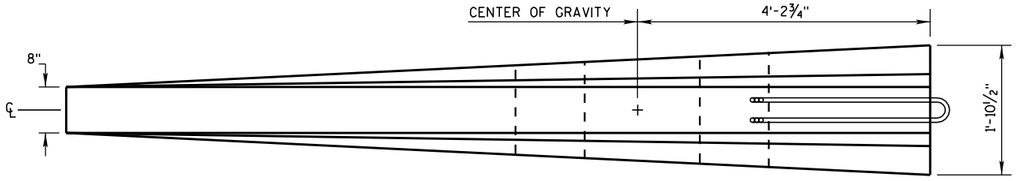


SIDE ELEVATION

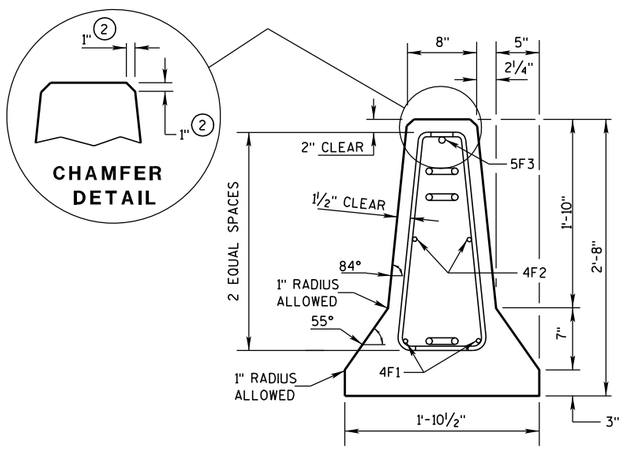
LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

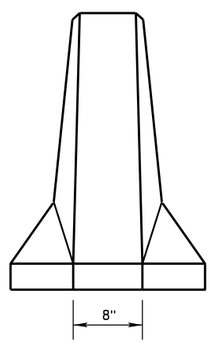
1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



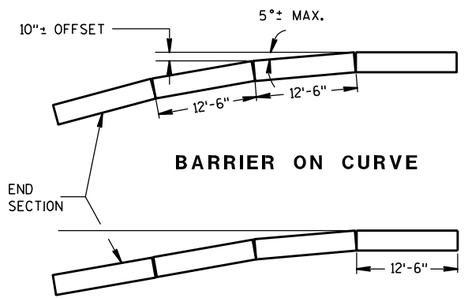
PLAN VIEW



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

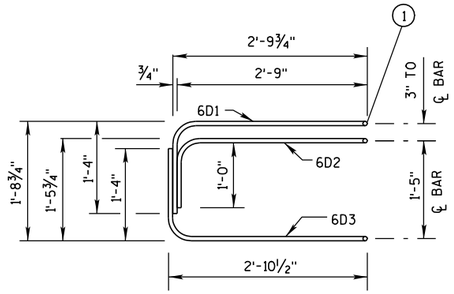
6

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

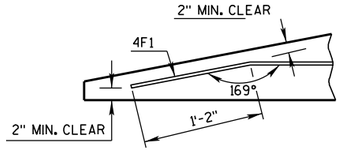
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

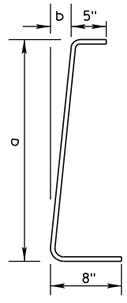
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



ELEVATION
LOOP BAR ASSEMBLY



DETAIL "C"
BENT BAR DETAIL



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

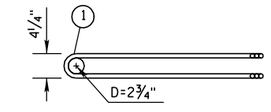
GENERAL NOTES

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

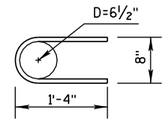
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

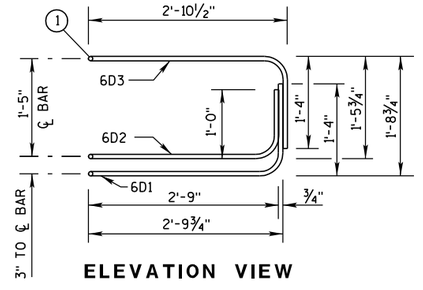
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



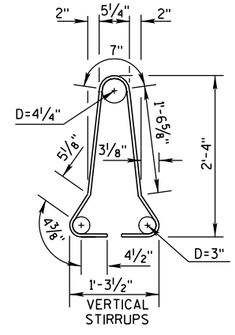
PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



6A2



ELEVATION VIEW



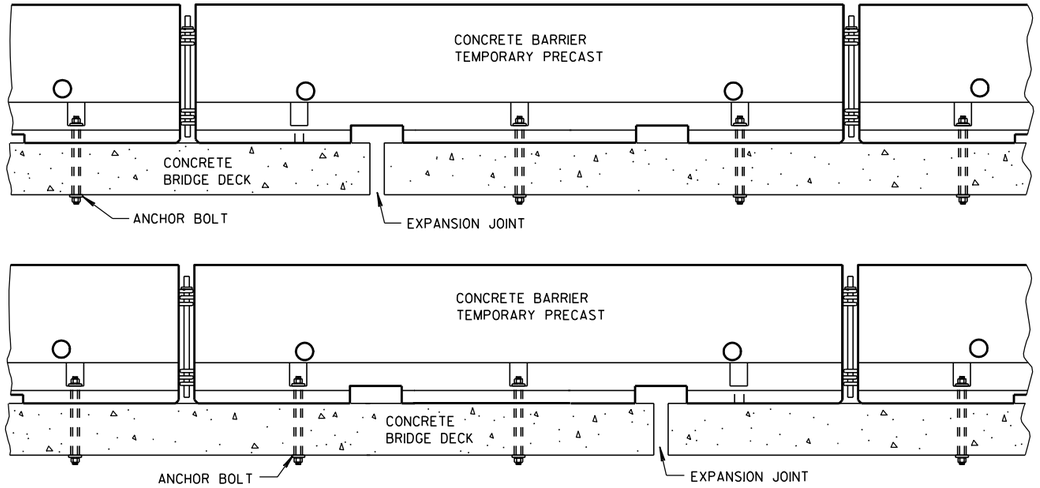
4A1

BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

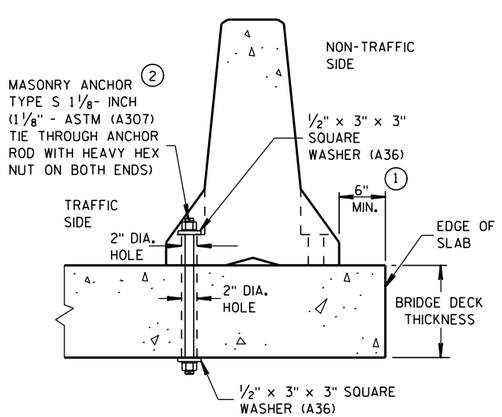
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



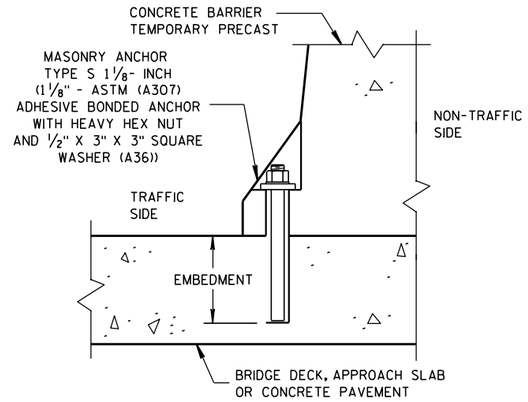
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(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

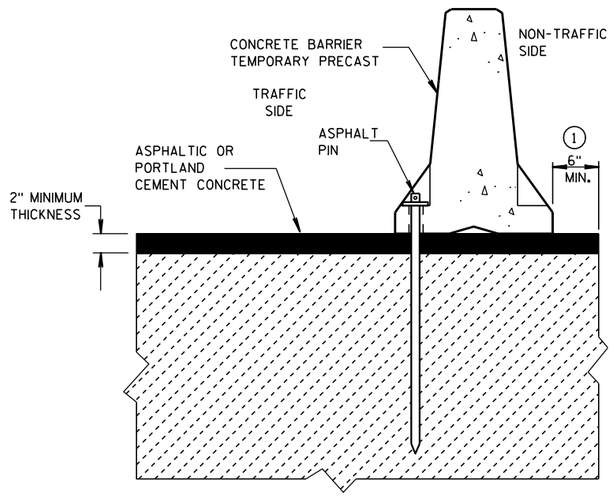
1. CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
   THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE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

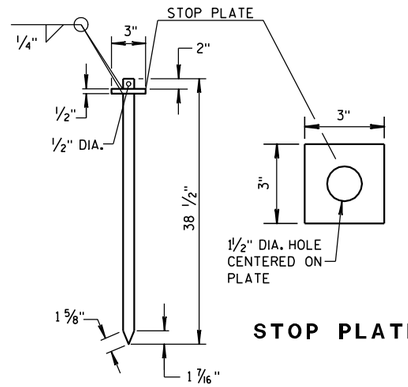
   WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED (EPOXY) ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1⅛-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE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



STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

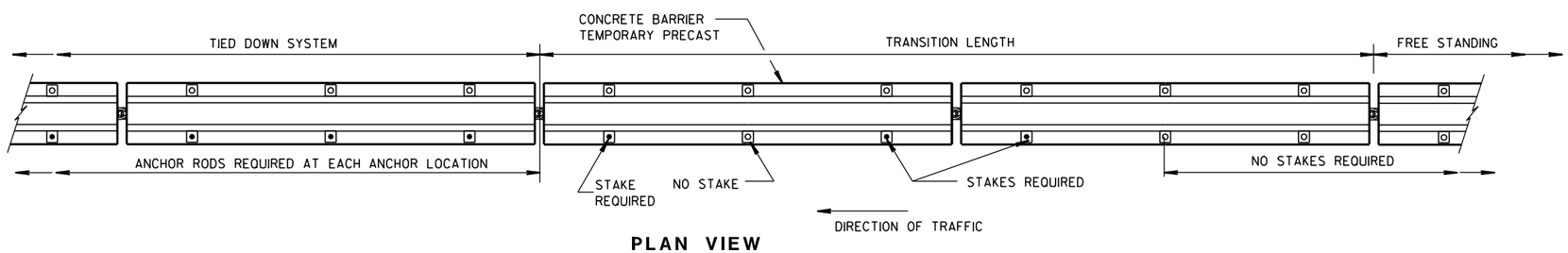
(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



ASPHALT PIN

(ASTM A36 STEEL)

STOP PLATE



PLAN VIEW

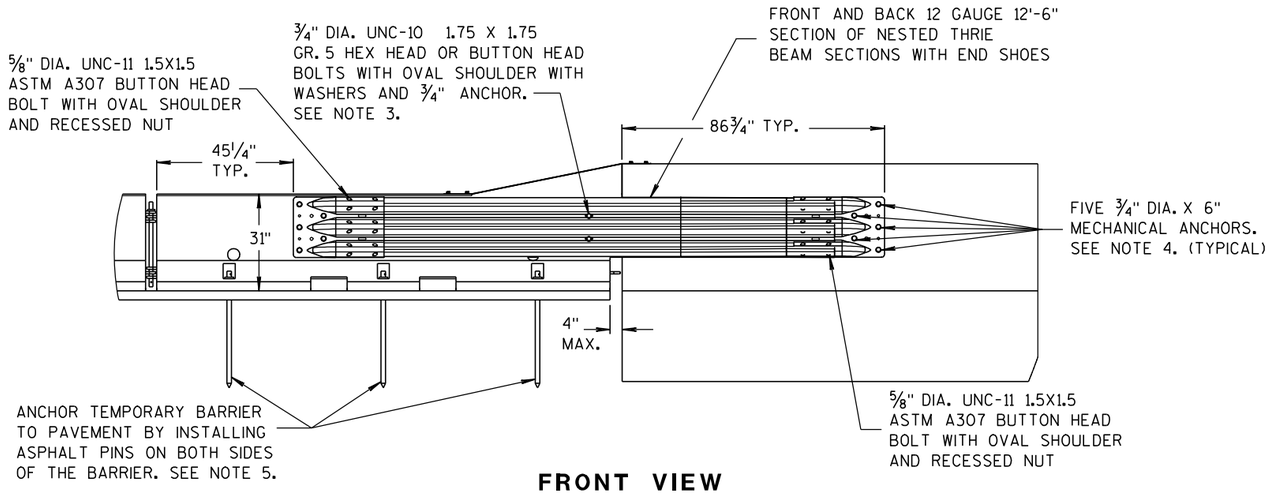
FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

(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...

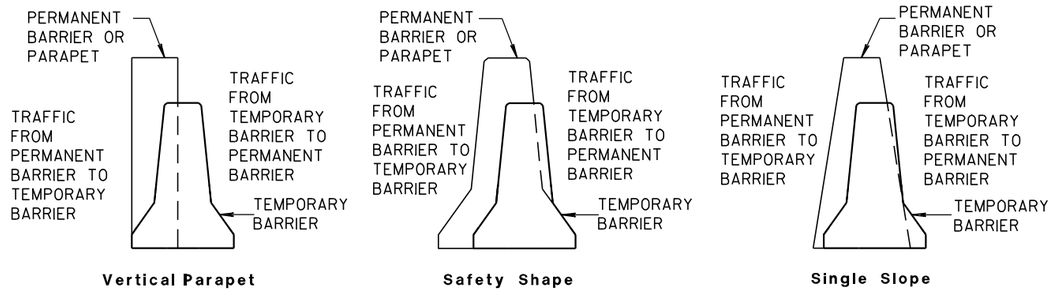
6
S.D.D. 14 B 7-13d

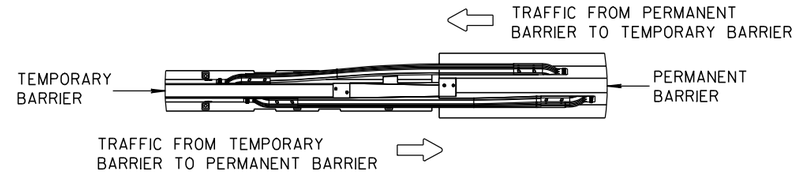


FRONT VIEW

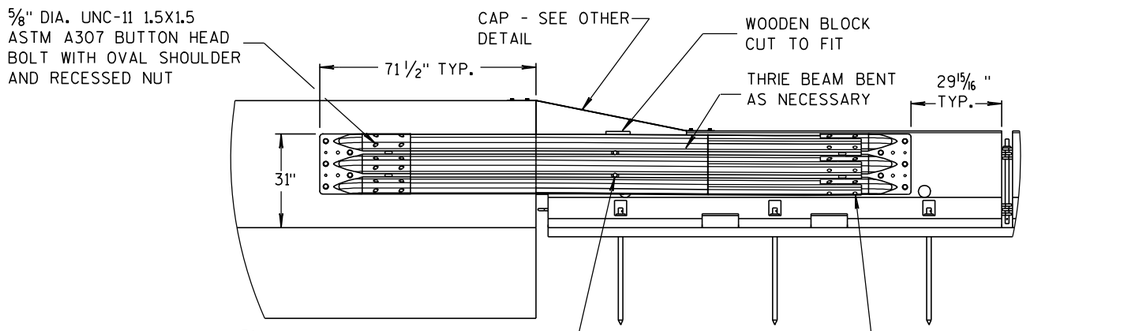
NOTES

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.

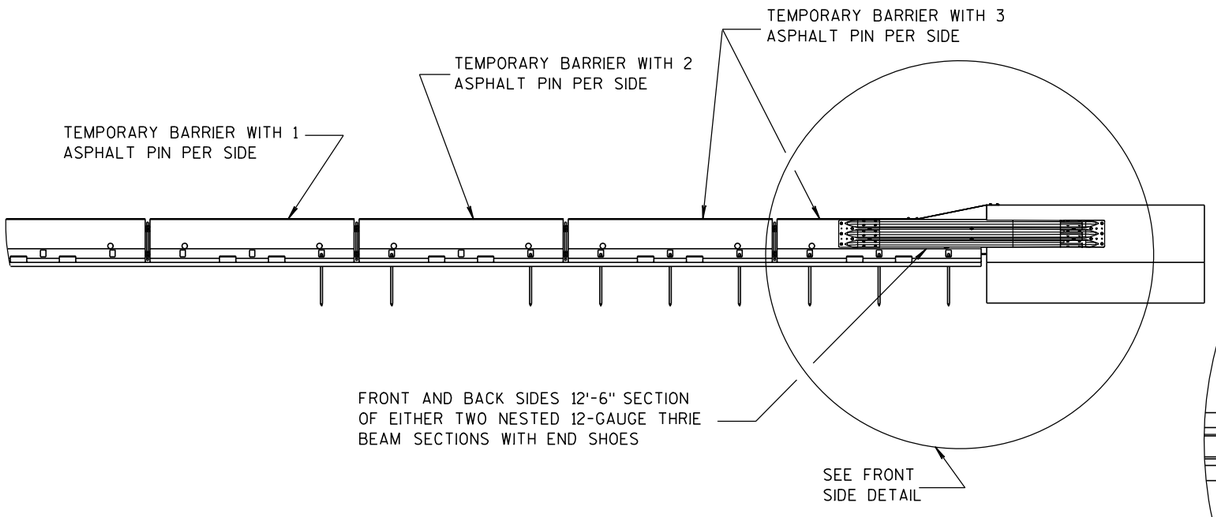




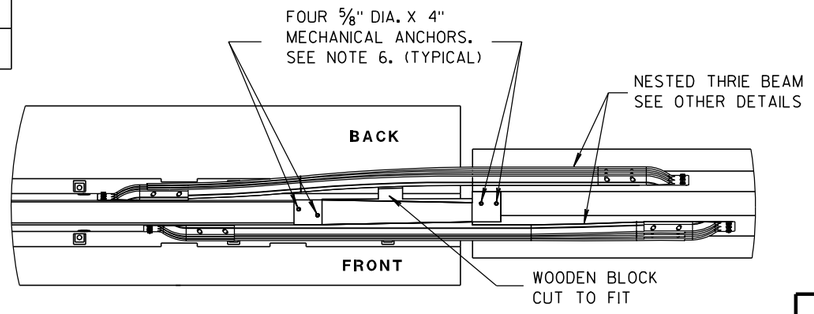
TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM



BACK VIEW



FRONT VIEW



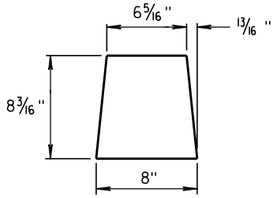
PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

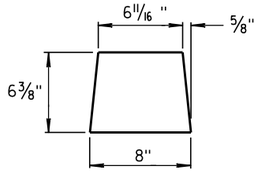
CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

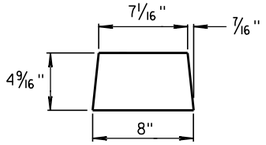
6
S.D.D. 14 B 7-13e



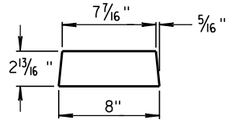
GUSSET 1



GUSSET 2

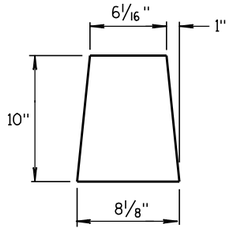


GUSSET 3

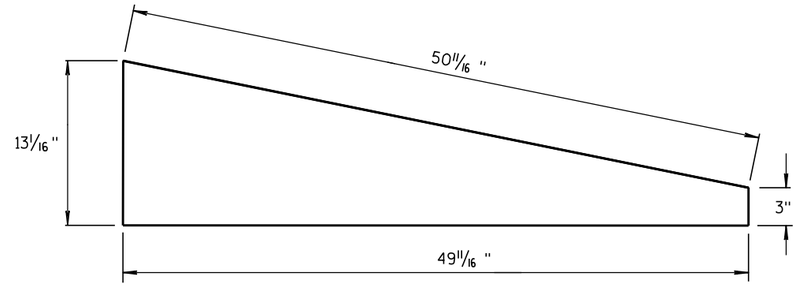


GUSSET 4

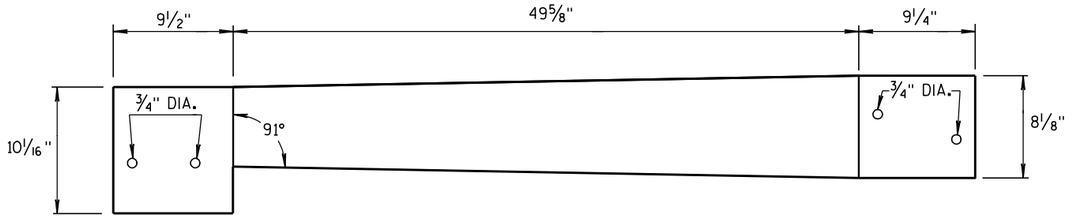
GUSSETS

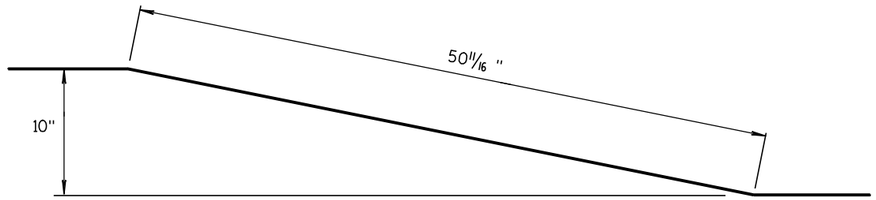


END PLATE

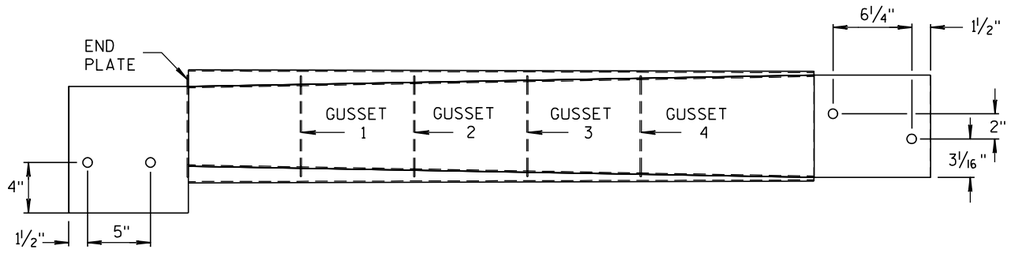


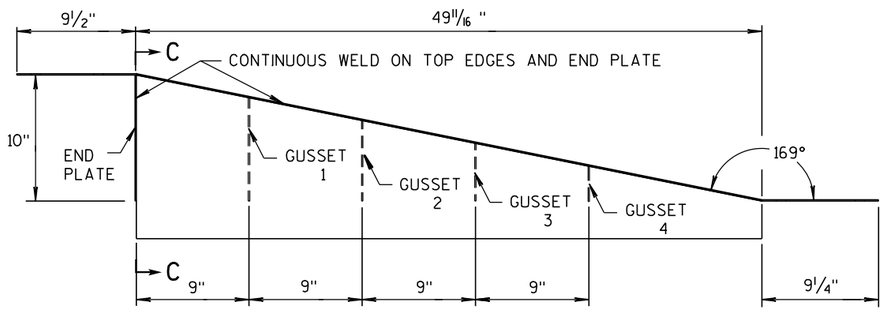
SIDE PLATE

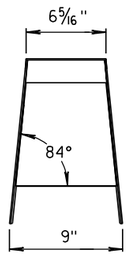




TOP PLATE







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.

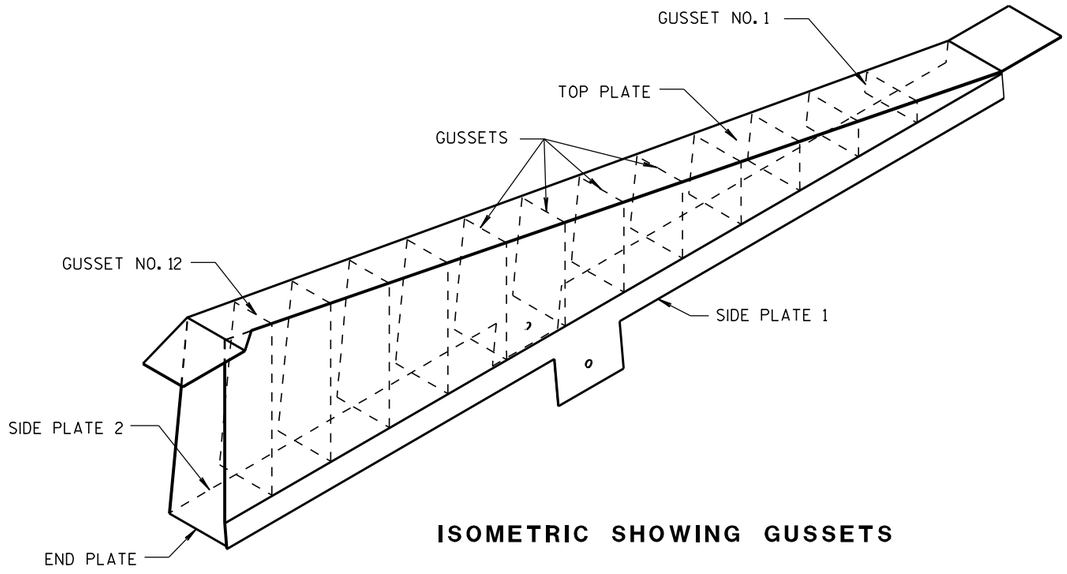
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

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

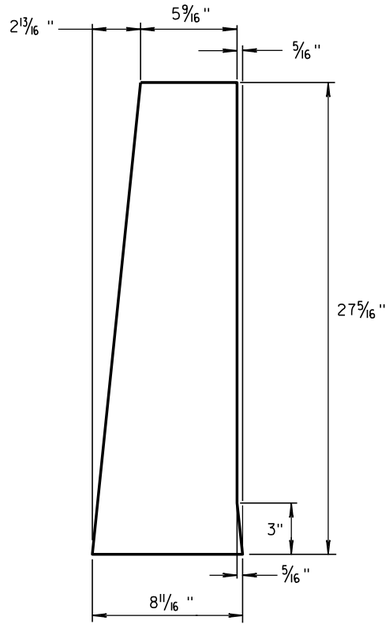
SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

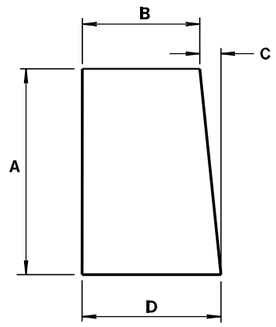


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



GUSSETS 1 - 12

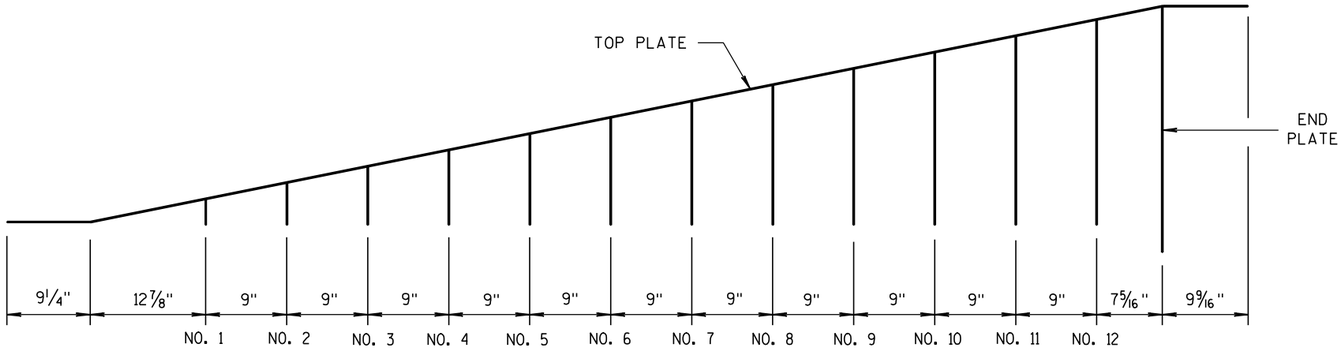
ALL GUSSETS 1/8" STEEL PLATE

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"

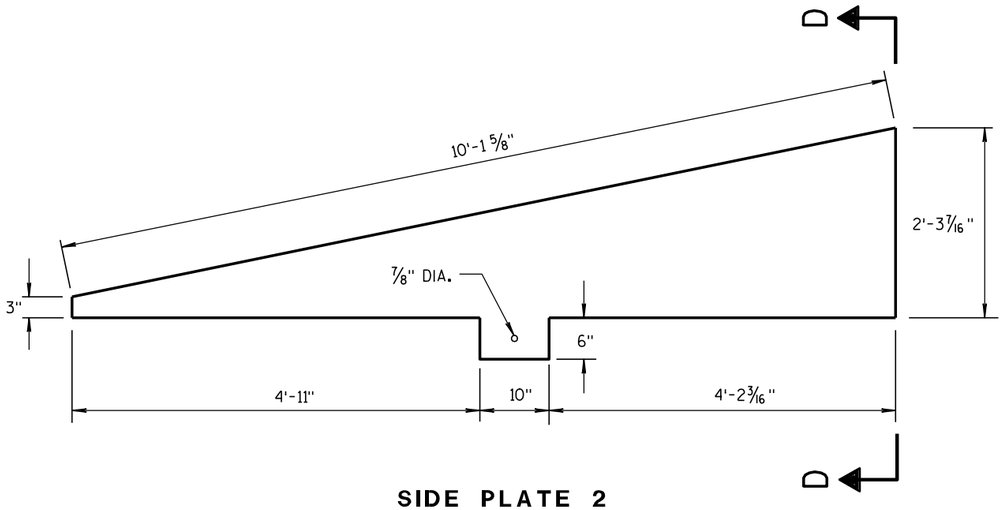
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

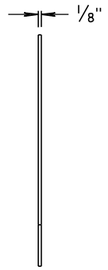
S.D.D. 14 B 7-13g

6

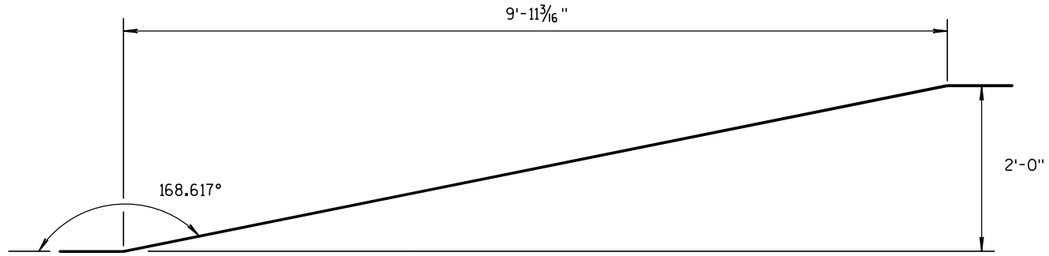
S.D.D. 14 B 7-13g



SIDE PLATE 2

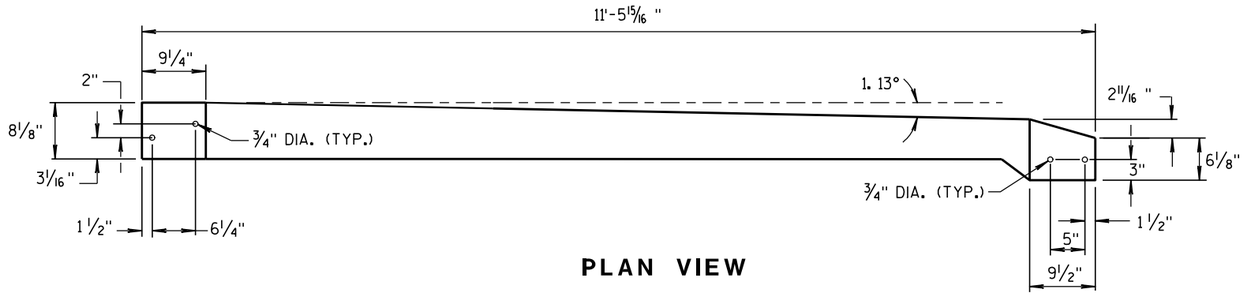


END VIEW



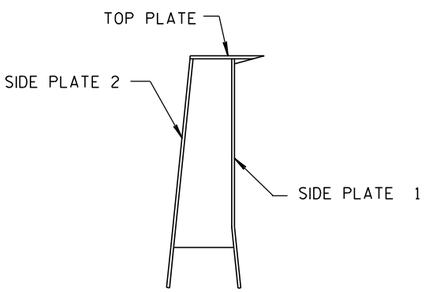
SIDE VIEW

TOP PLATE

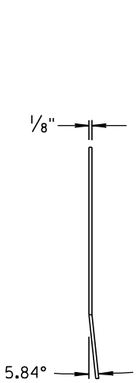


PLAN VIEW

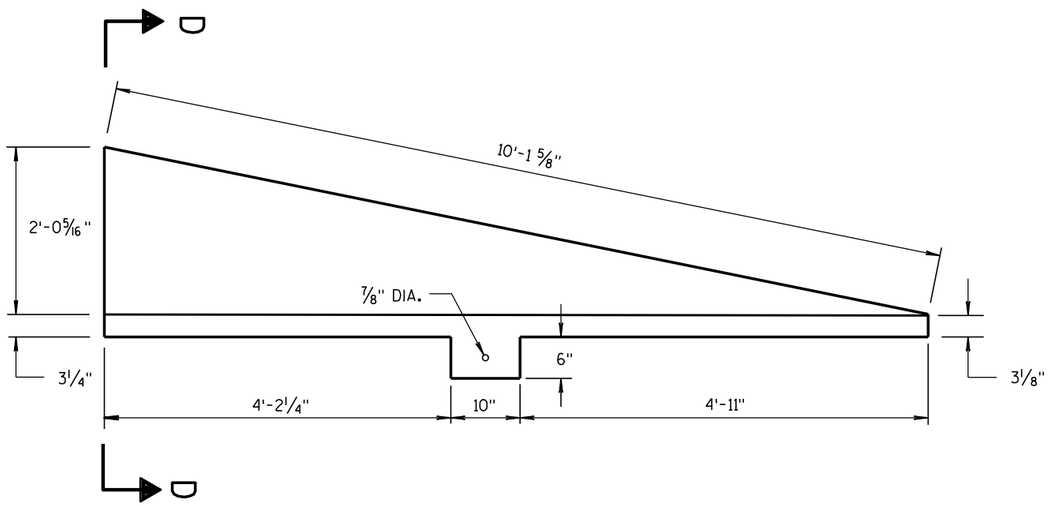
TOP PLATE



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
FHWA	147 ENT

6

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

6

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

GENERAL NOTES

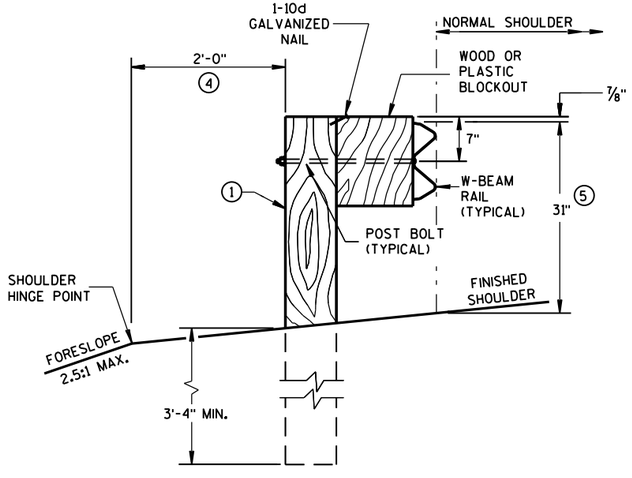
1. WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

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.

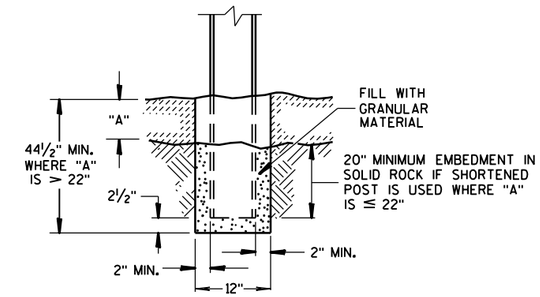
4. WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

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".



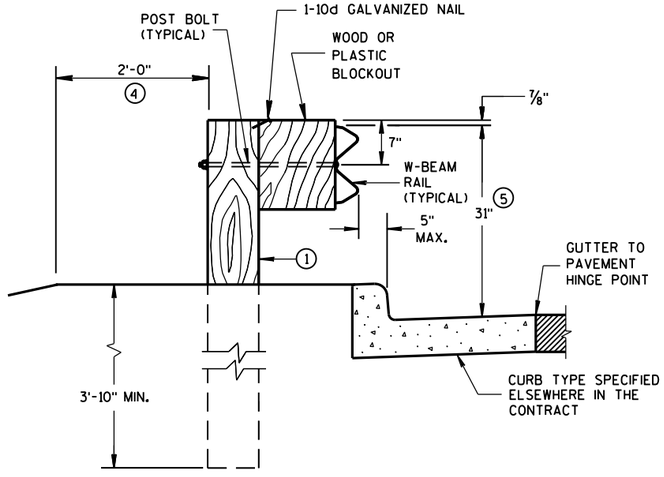
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



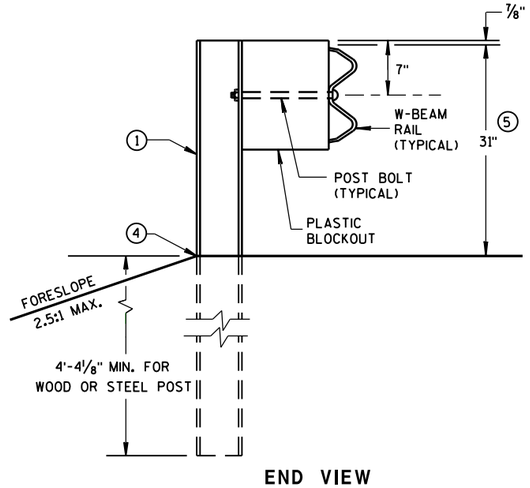
END VIEW

SETTING STEEL OR WOOD POST IN ROCK ③



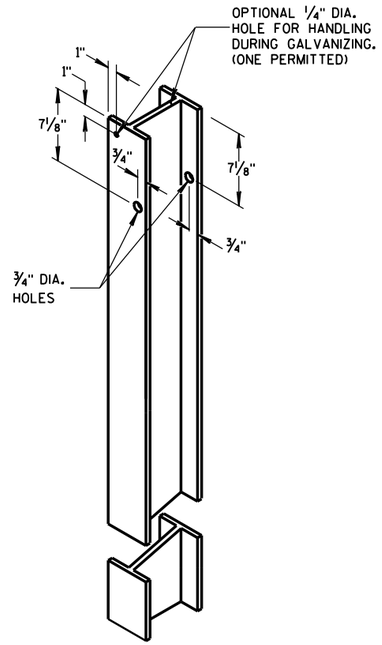
END VIEW

LOCATED ALONG A CURBED ROADWAY

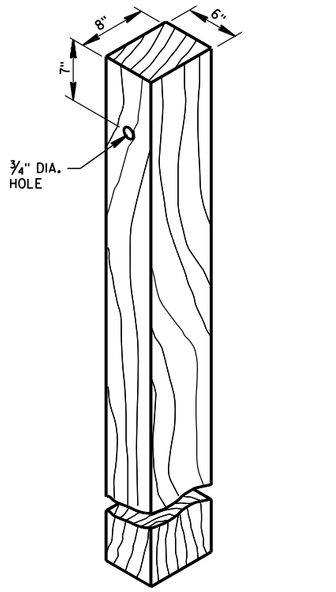


END VIEW

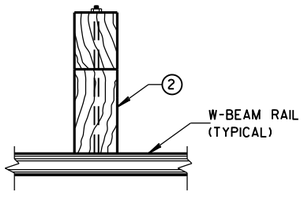
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



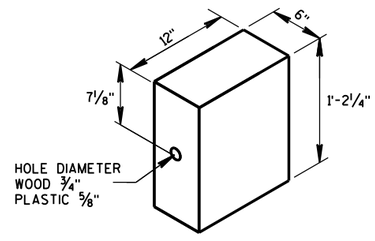
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



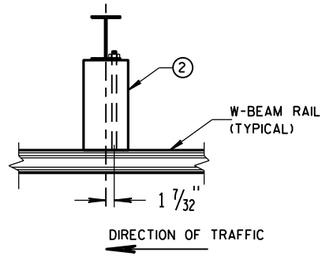
WOOD POST
(6" X 8") NOMINAL ①



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT ②

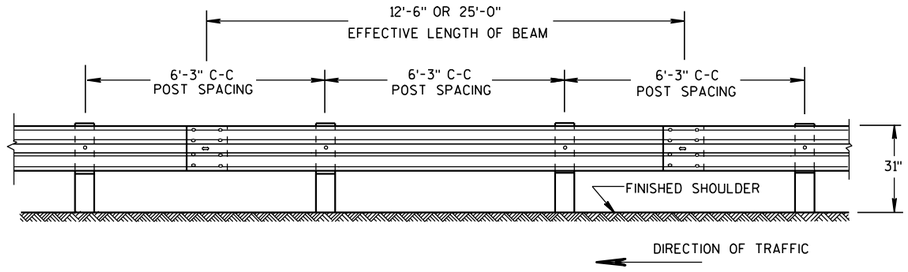


PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

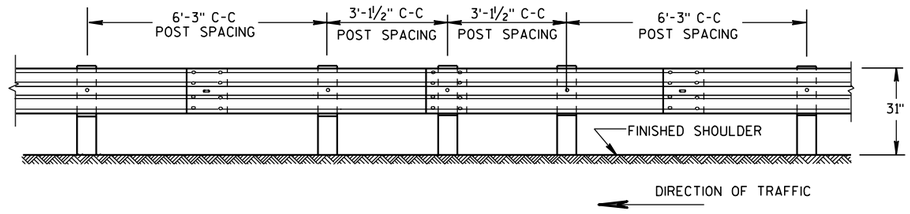
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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



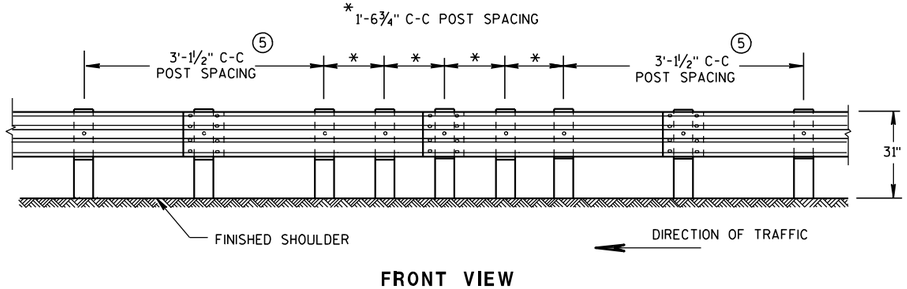
FRONT VIEW

POST SPACING STANDARD INSTALLATION



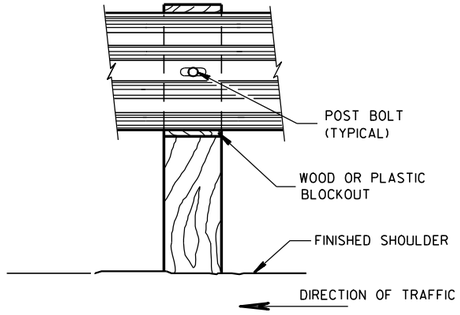
FRONT VIEW

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

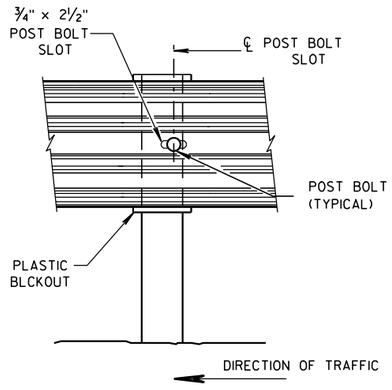


FRONT VIEW

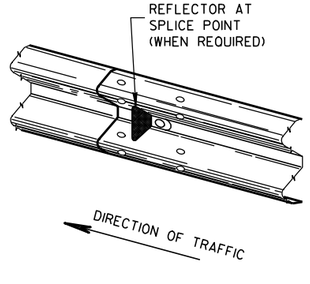
QUARTER POST SPACING (QS)

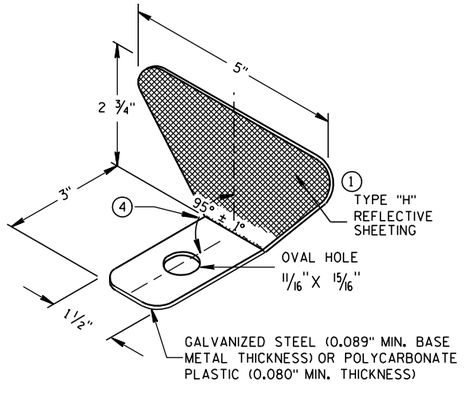


FRONT VIEW AT WOOD POST

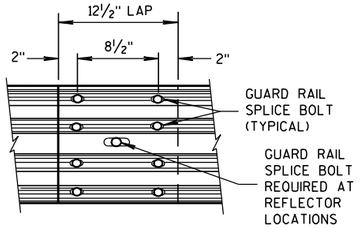


FRONT VIEW AT STEEL POST



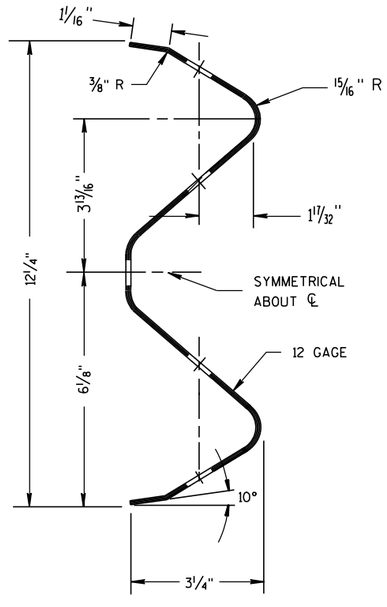


ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION ①



FRONT VIEW

MID-SPAN BEAM SPLICE



SECTION THRU W-BEAM RAIL

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

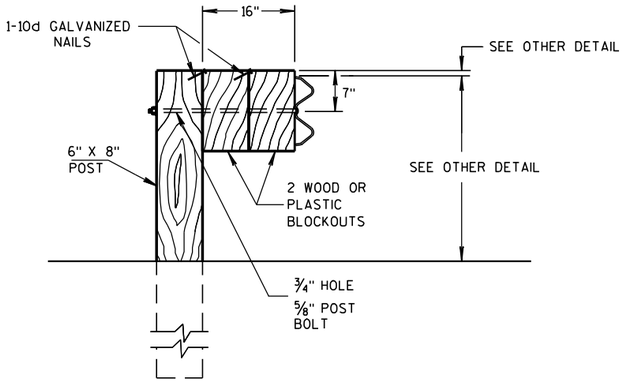
	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	1 1	3
TWO WAY TRAFFIC	< 200' > 200'	25' C-C 50' C-C	1 ③ 1	6
TWO WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	2 ④ 2	3

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

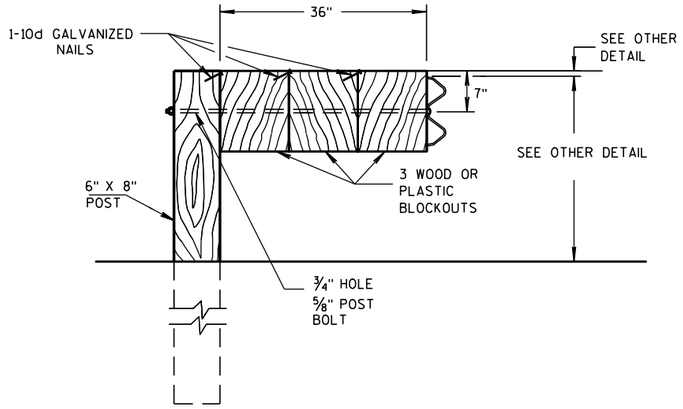
S.D.D. 14 B 42-2b

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.

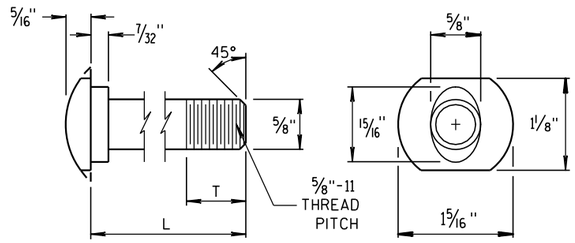


DETAIL FOR 36" BLOCKOUT DEPTH

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.

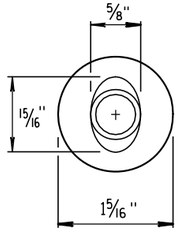
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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.

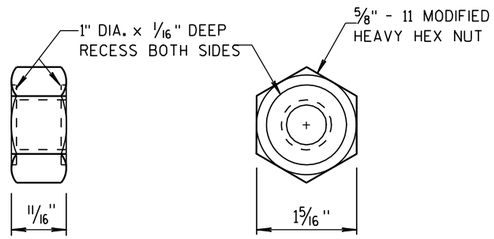


POST BOLT TABLE

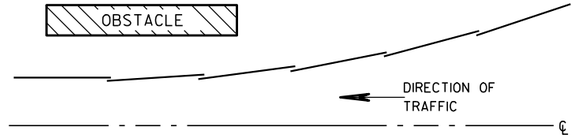
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

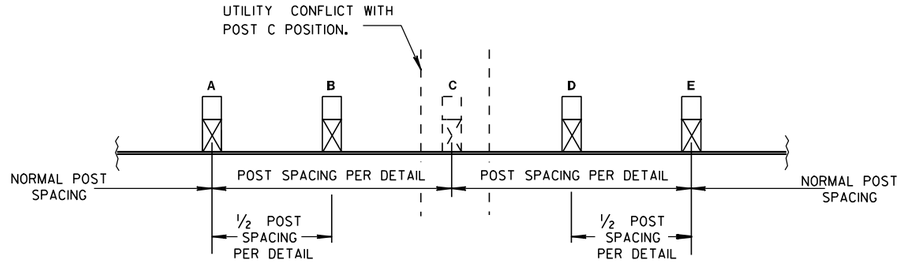


POST BOLT AND RECESS NUT

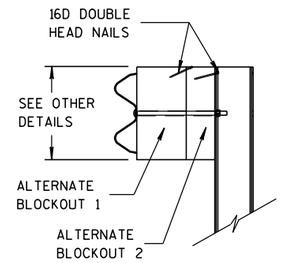


PLAN VIEW

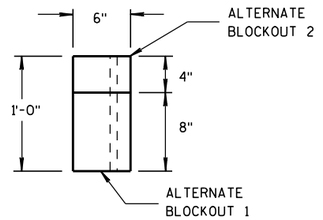
BEAM LAPPING DETAIL



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

150

ENT

6

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

6

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

GENERAL NOTES

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

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

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

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

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

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

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

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

SEE SDD 14B42 FOR MORE INFORMATION.

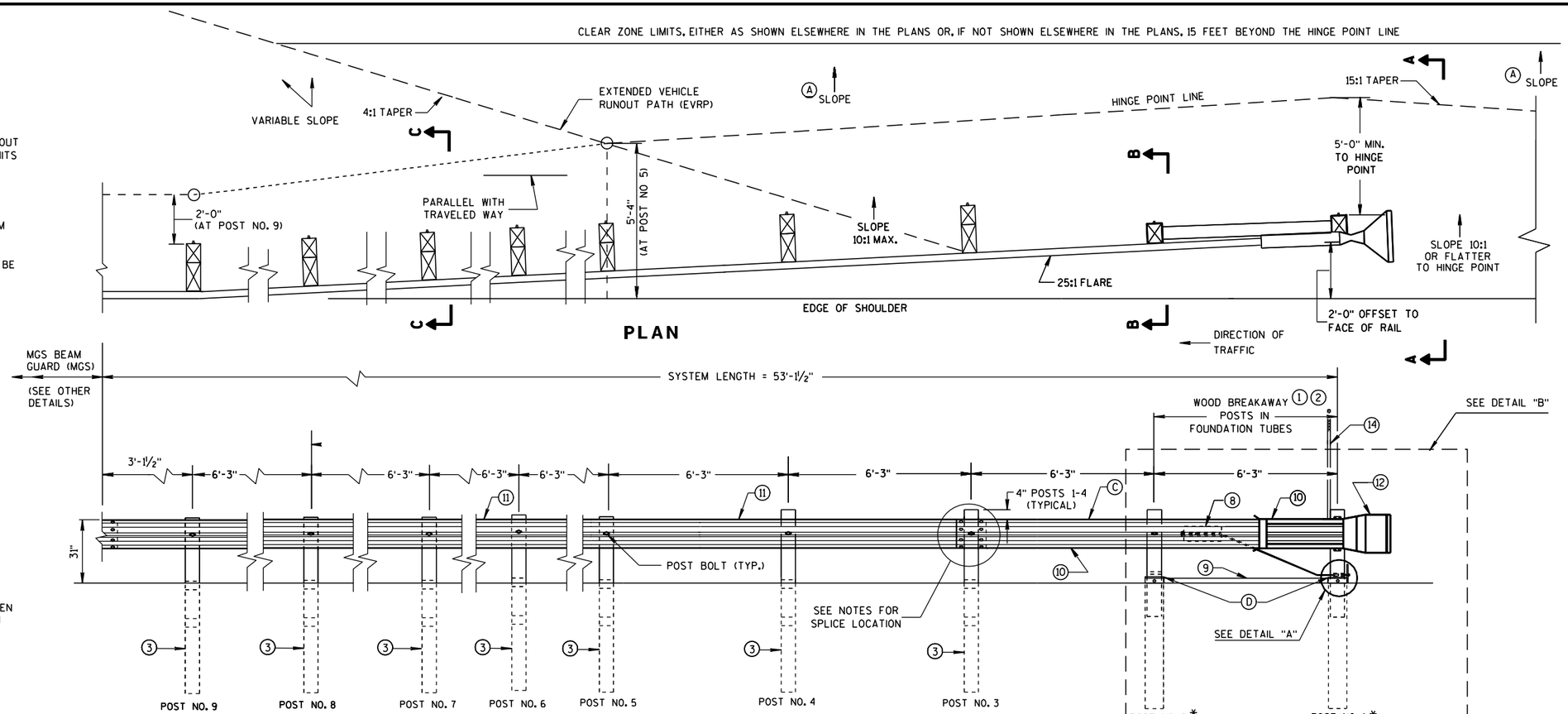
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

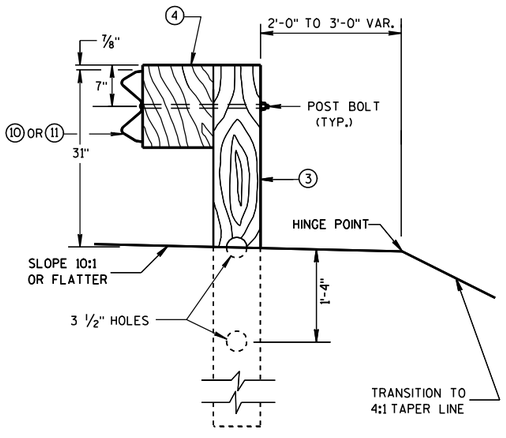
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

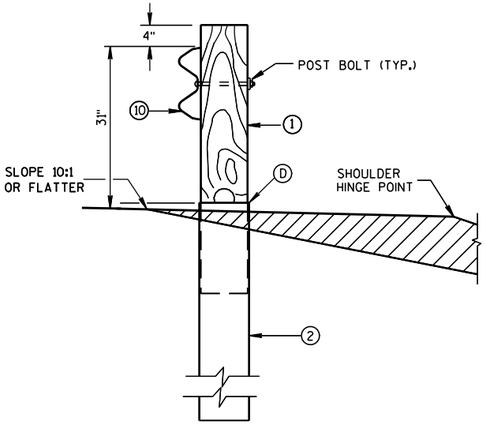
PATTERN AND COLORS ON REFLECTIVE SHEETING TYPE H ARE TO CONFORM TO OM3-L OR OM3-R OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

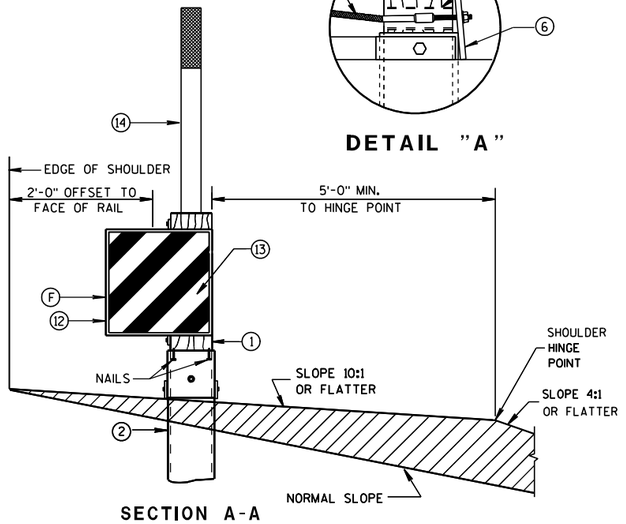




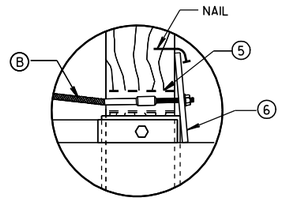
SECTION C-C
TYPICAL AT POST NOS. 3-9



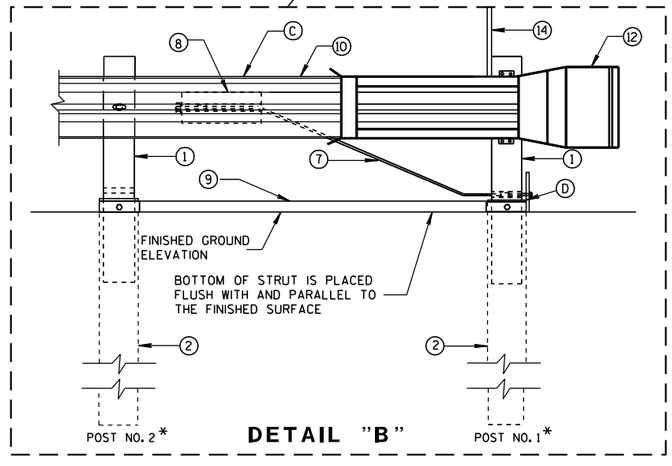
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"

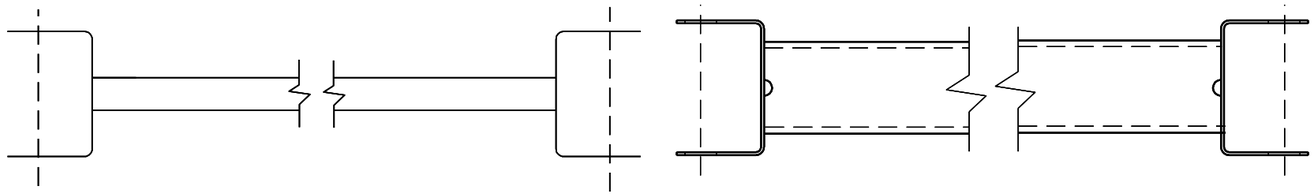


DETAIL "B"

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

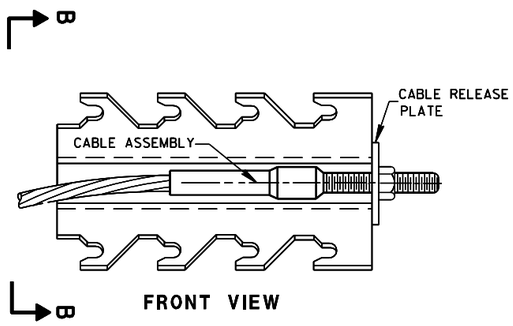
6
S.D.D. 14 B 44-1a



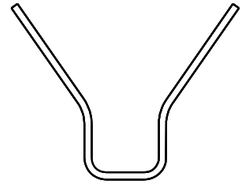
GENERIC GROUND STRUT (9) (H)

BILL OF MATERIALS

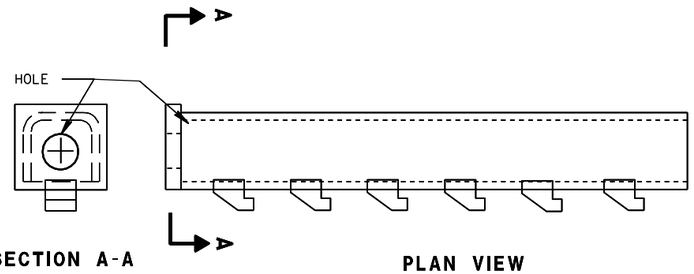
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	WOOD BREAKAWAY POST
(2)	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR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



FRONT VIEW



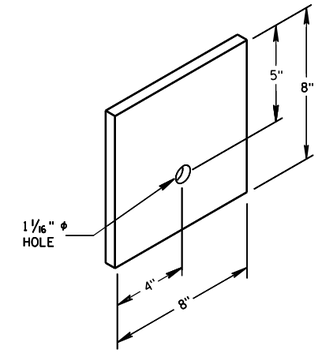
SECTION B-B



SECTION A-A

PLAN VIEW

GENERIC ANCHOR CABLE BOX (8) (H)



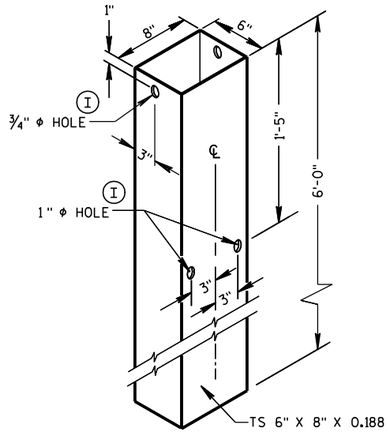
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

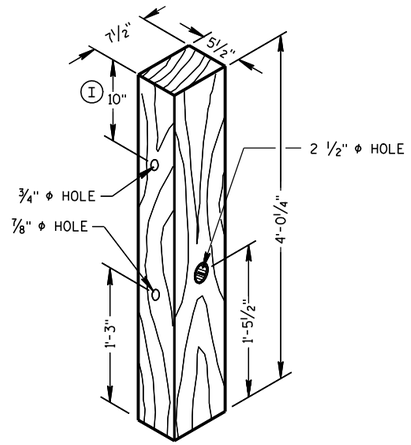
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

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

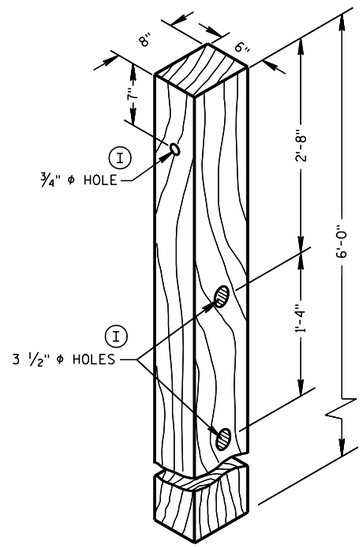


FOUNDATION TUBE (2)



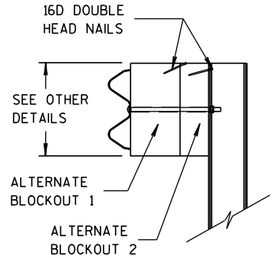
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

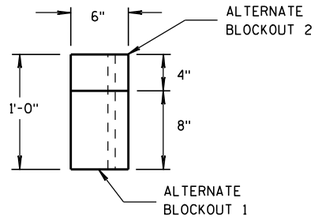


POSTS NUMBER 3-9

WOOD CRT POST (3)

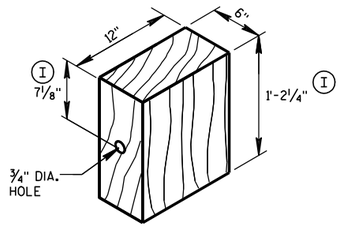


SIDE VIEW



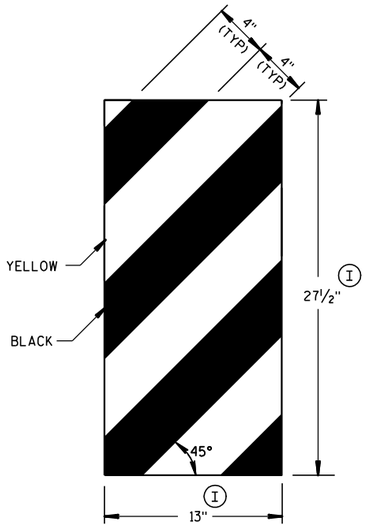
TOP VIEW

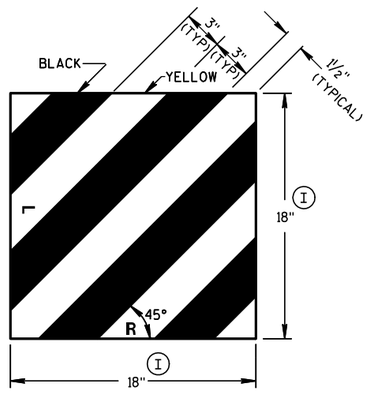
ALTERNATE WOOD BLOCKOUT DETAIL



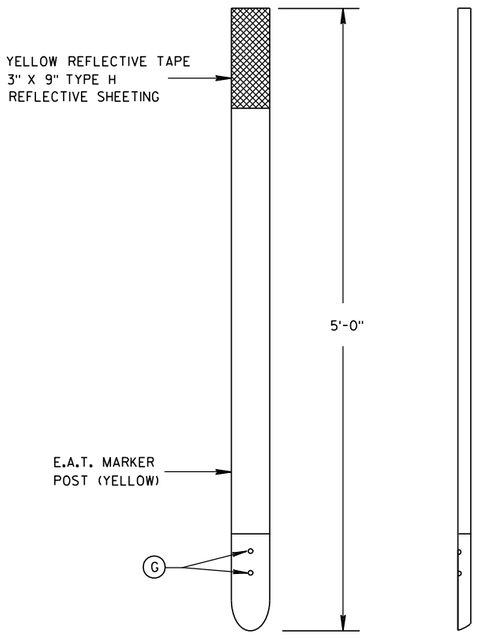
WOOD BLOCKOUT (4)

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





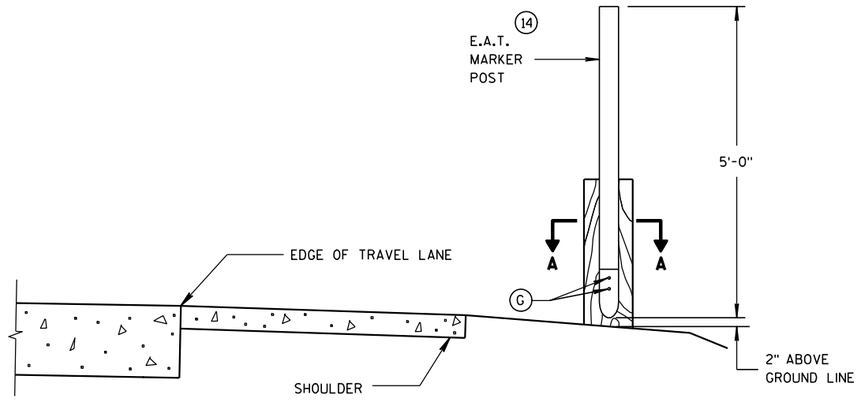
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

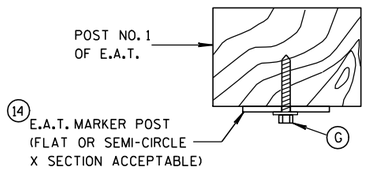
SIDE VIEW

E.A.T. MARKER POST (14)



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

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



SECTION A-A

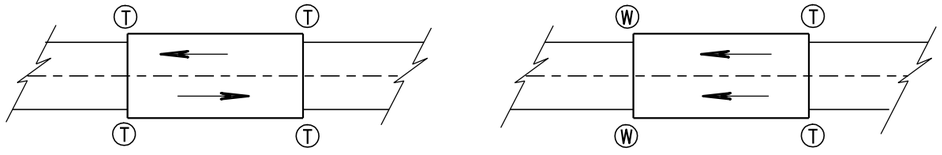
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

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



TWO WAY TRAFFIC

ONE WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

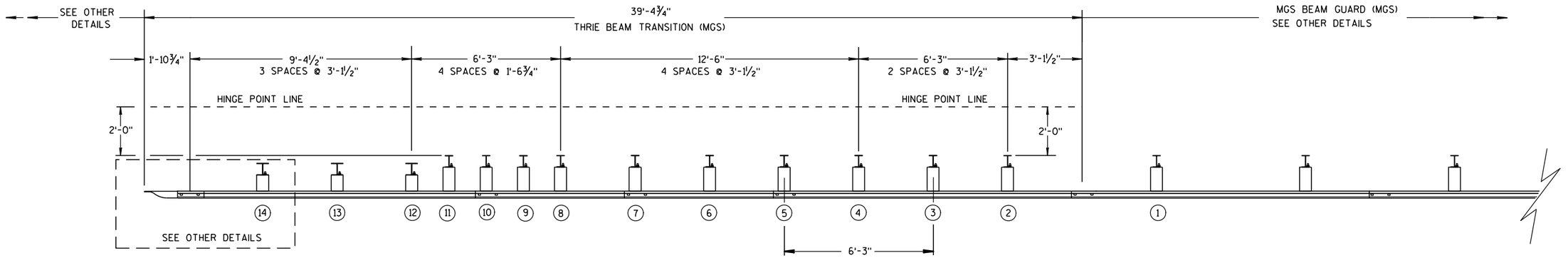
BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3.

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

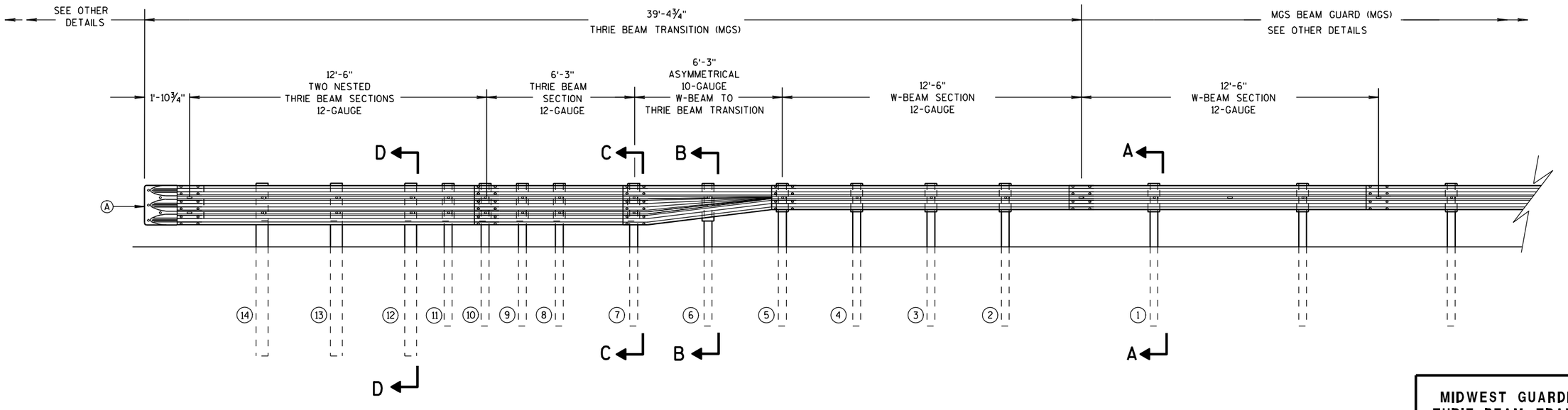
TRANSITION USES STEEL POSTS ONLY.

SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

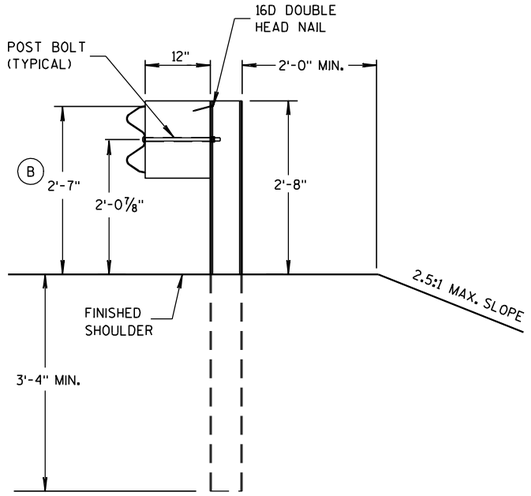
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

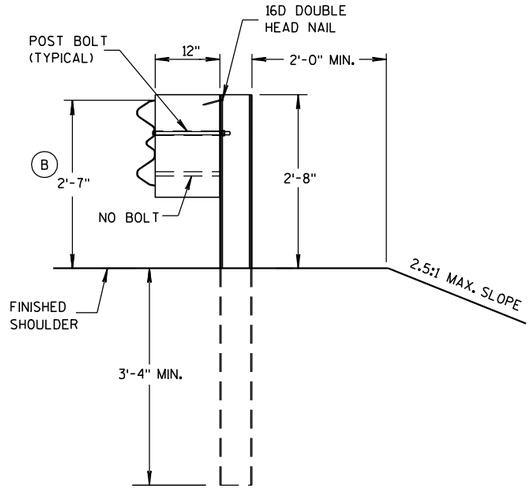
GENERAL NOTES

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



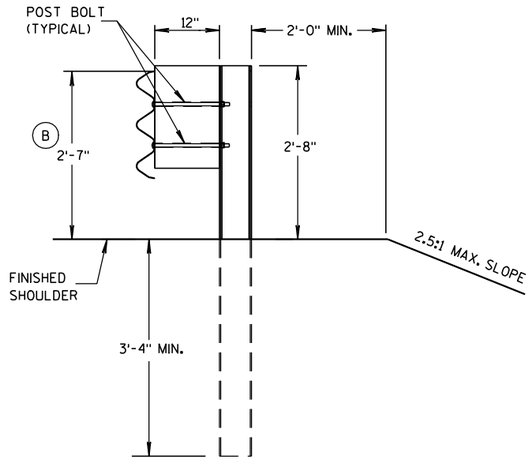
SECTION A-A

POSTS 1-5



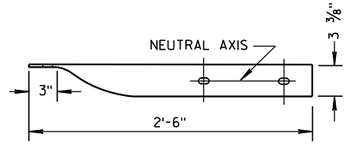
SECTION B-B

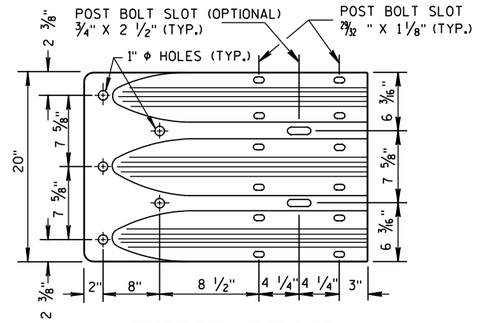
POST 6



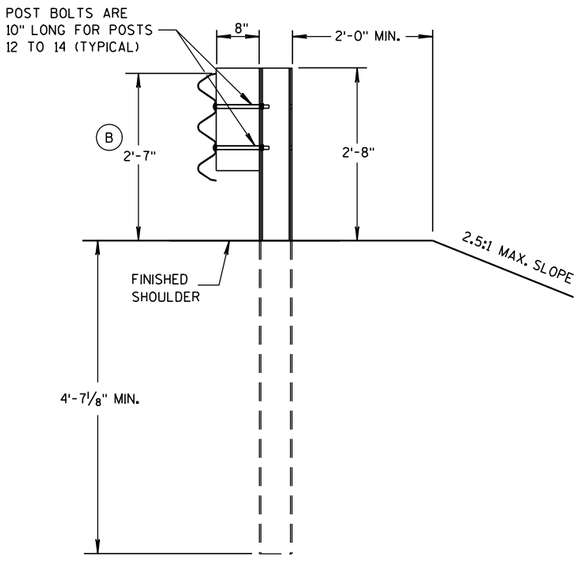
SECTION C-C

POSTS 7-11



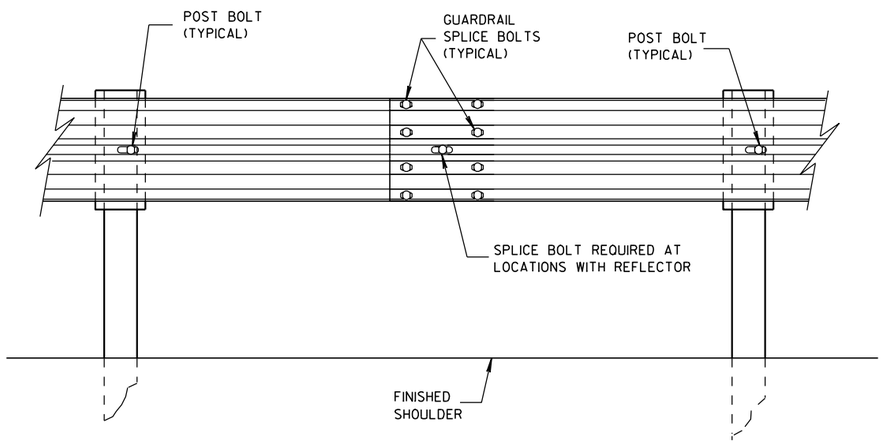


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-14



SPLICE DETAIL

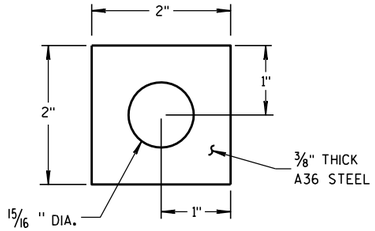
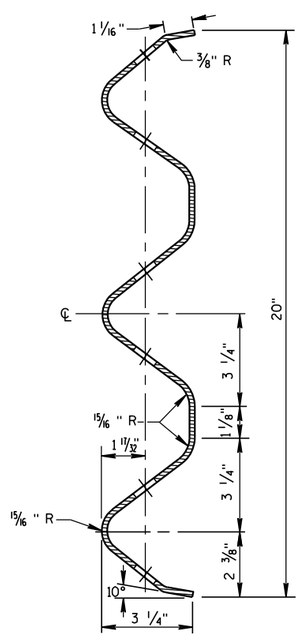


PLATE WASHER DETAIL



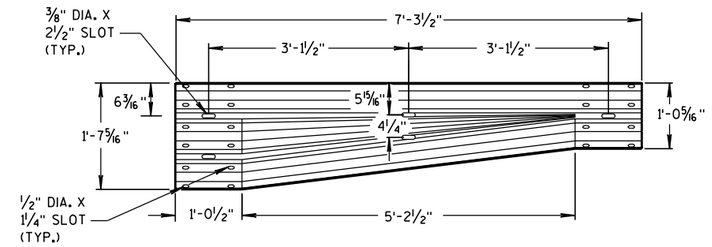
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

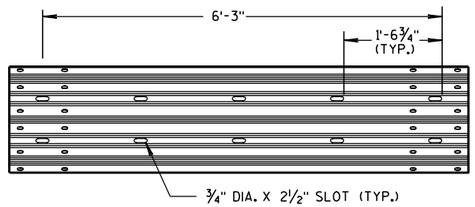
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

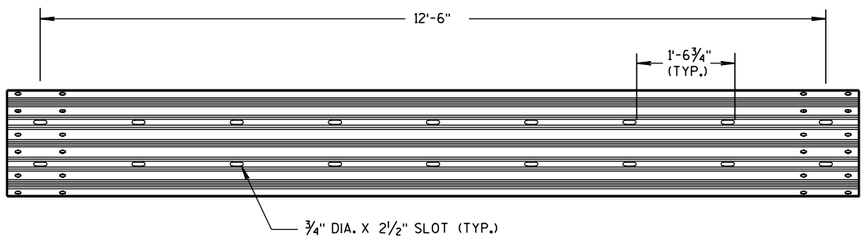
S.D.D. 14 B 45-3b



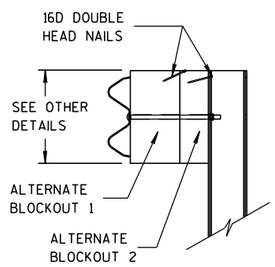
W-BEAM TO THRIE BEAM TRANSITION SECTION



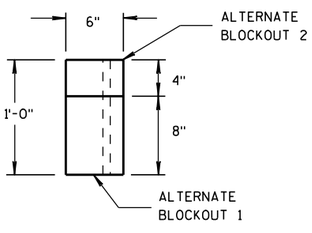
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

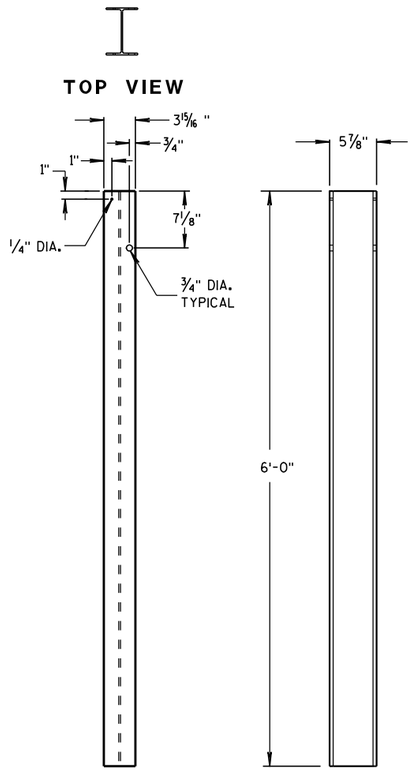


SIDE VIEW



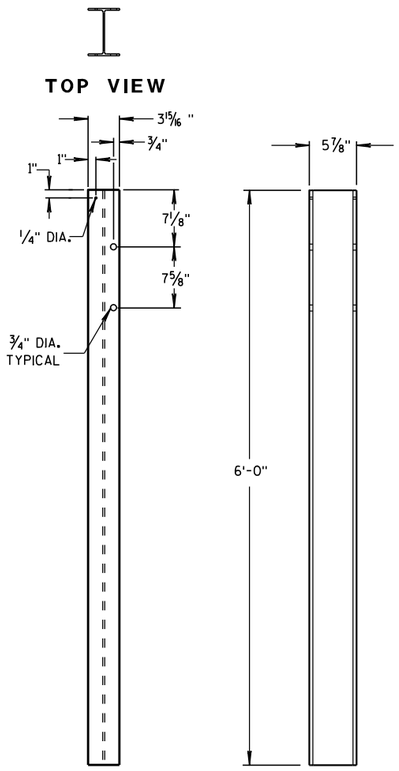
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



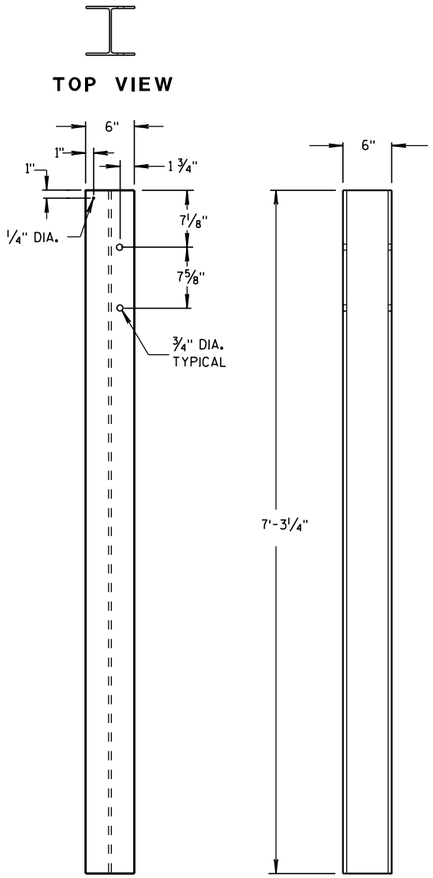
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5



FRONT VIEW SIDE VIEW

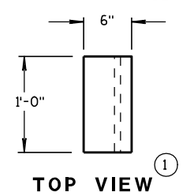
STEEL POSTS 6-11



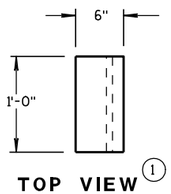
FRONT VIEW SIDE VIEW

STEEL POSTS 12-14

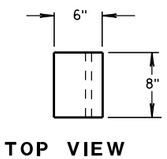
(1) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.



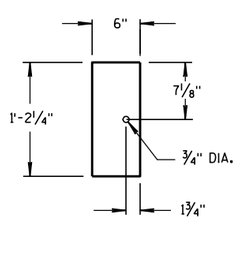
TOP VIEW (1)



TOP VIEW (1)

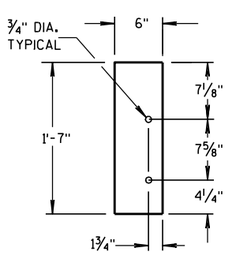


TOP VIEW



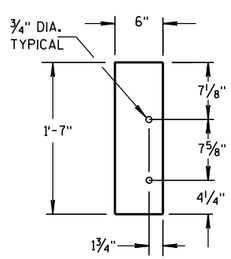
FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-11



FRONT VIEW

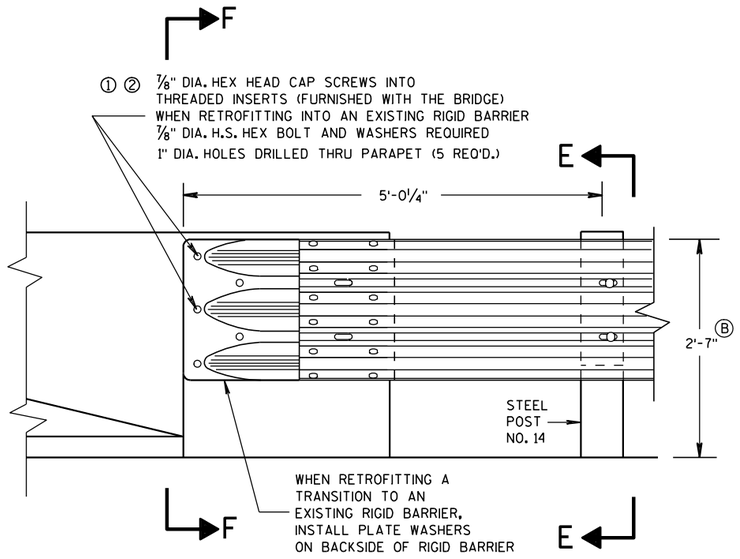
BLOCKOUT POSTS 12-14

STEEL POST SIZES

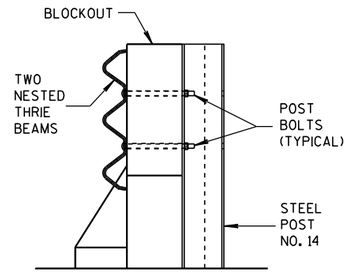
POST NUMBER	SECTION TYPE	LENGTH
1	W6x9	72"
2	W6x9	72"
3	W6x9	72"
4	W6x9	72"
5	W6x9	72"
6	W6x9	72"
7	W6x9	72"
8	W6x9	72"
9	W6x9	72"
10	W6x9	72"
11	W6x9	72"
12	W6x15	87 1/8"
13	W6x15	87 1/8"
14	W6x15	87 1/8"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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.

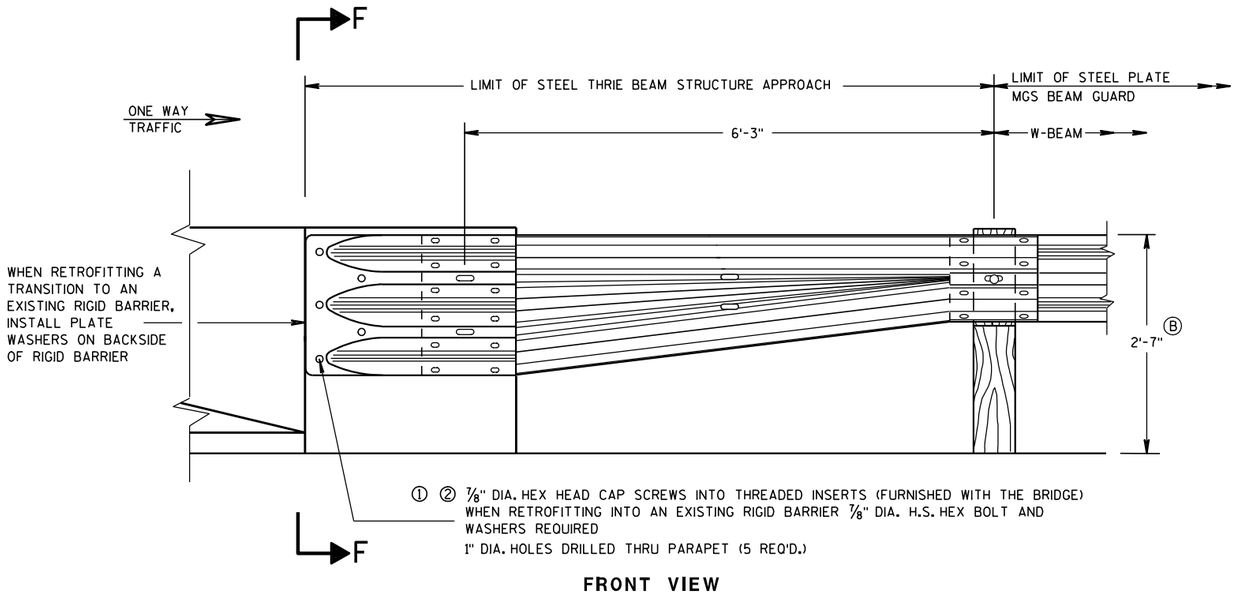
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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.

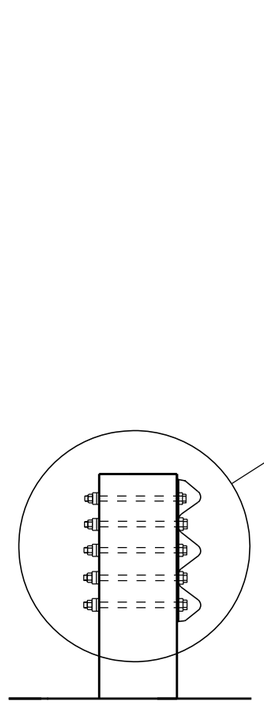
③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".

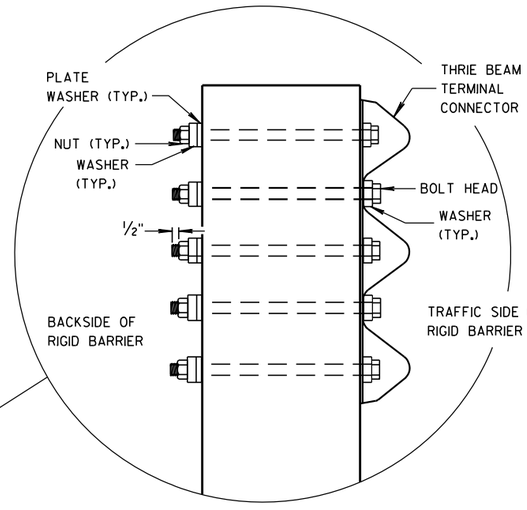
THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS



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

6

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

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

GENERAL NOTES

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

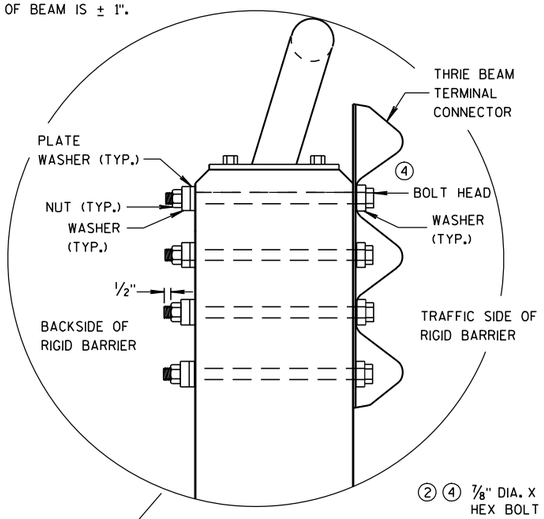
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

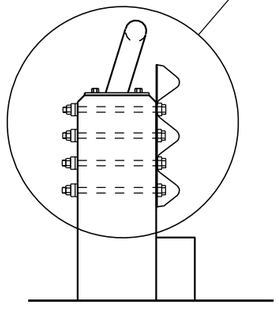
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③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2". BLOCK IS INCIDENTAL TO THE CONTRACT.

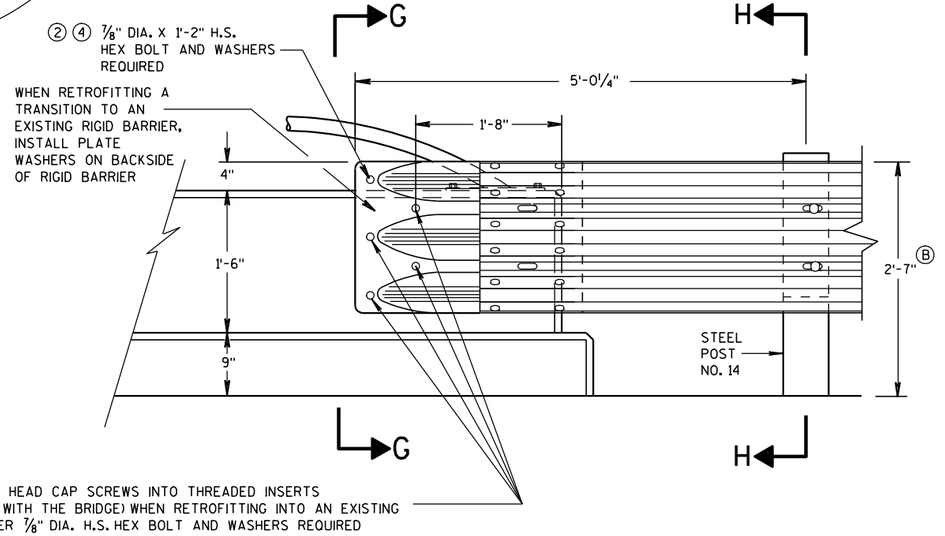
④ BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.

Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".

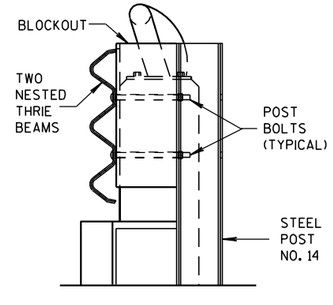




SECTION G-G

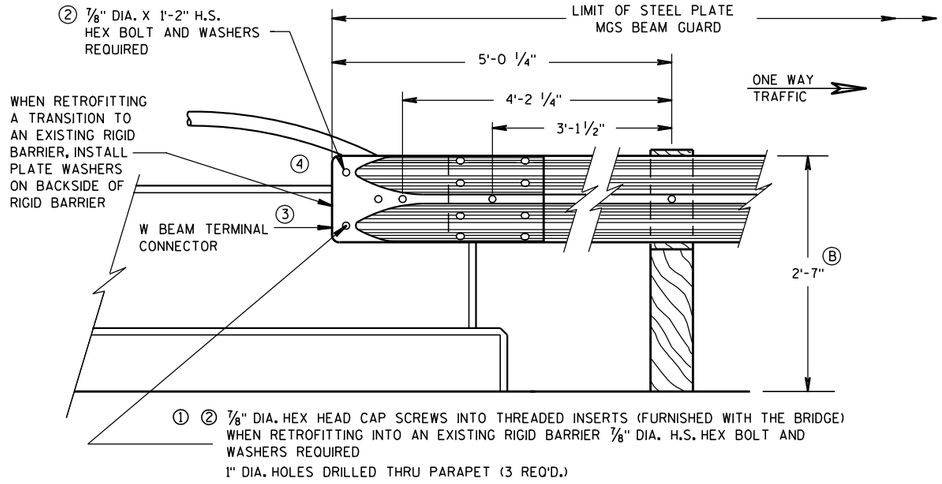


FRONT VIEW



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)

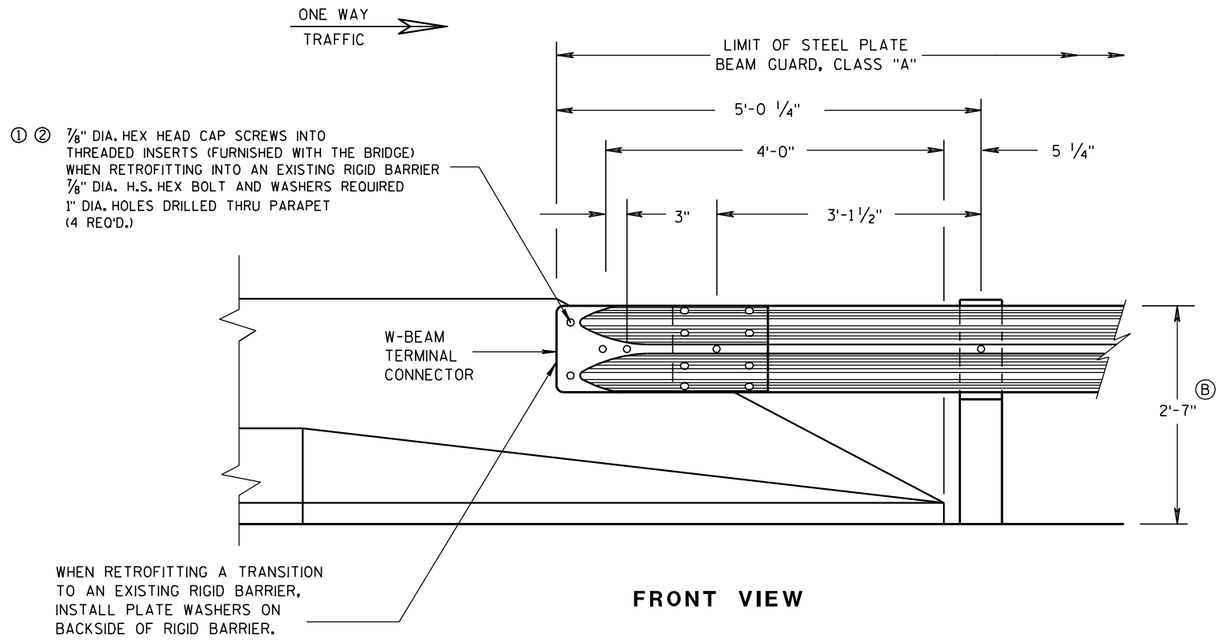
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
8-31-2012 DATE	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

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

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



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

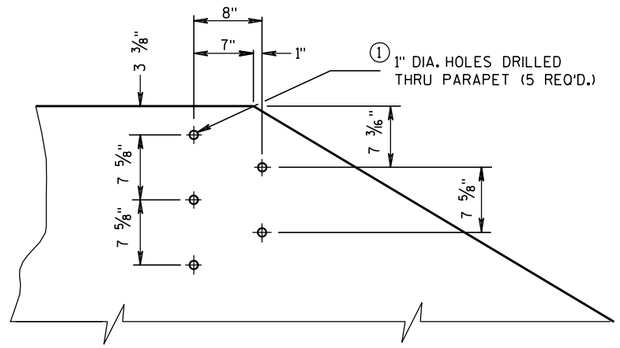
(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

GENERAL NOTES

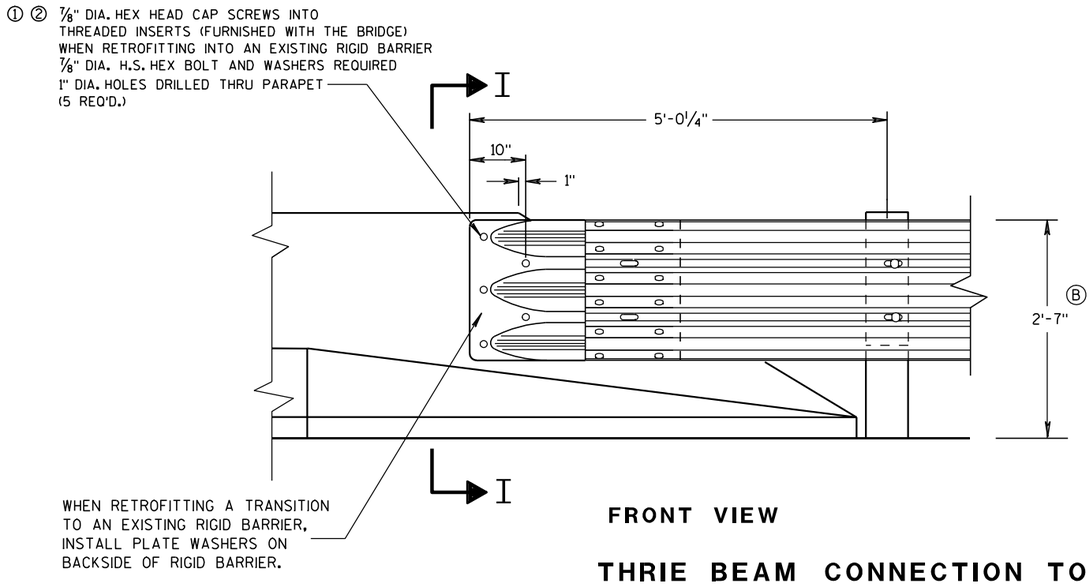
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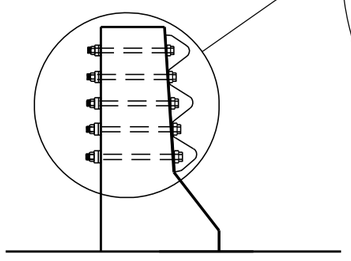
Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".



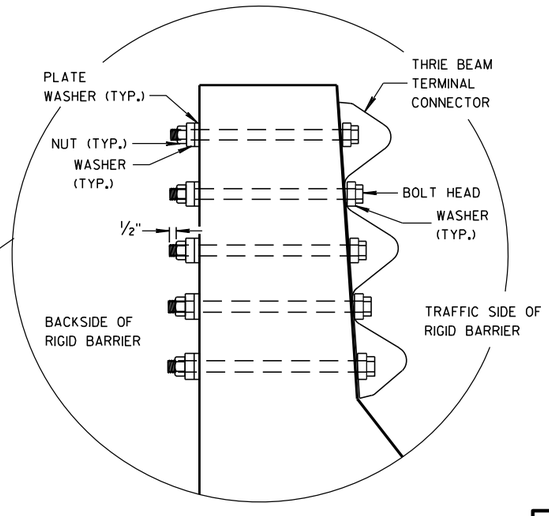
DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



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

159

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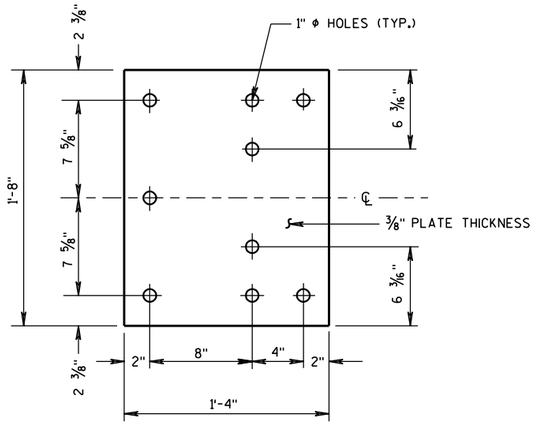
FHWA

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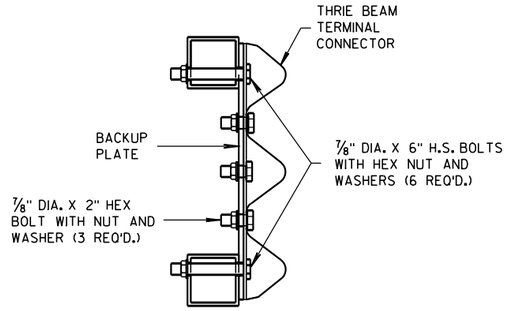
S.D.D. 14 B 45-3f

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



BACK-UP PLATE DETAIL

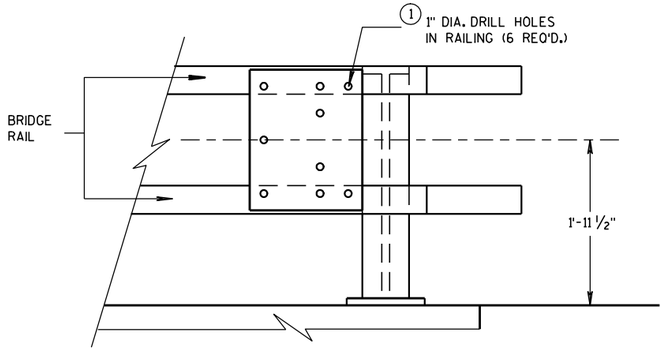


SECTION J-J

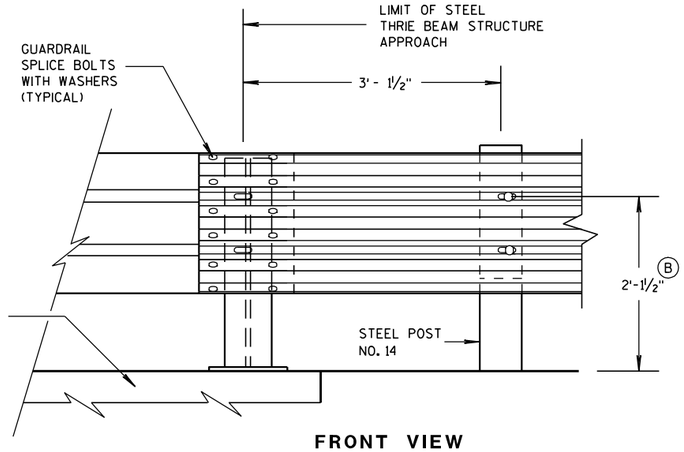
GENERAL NOTES

(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".

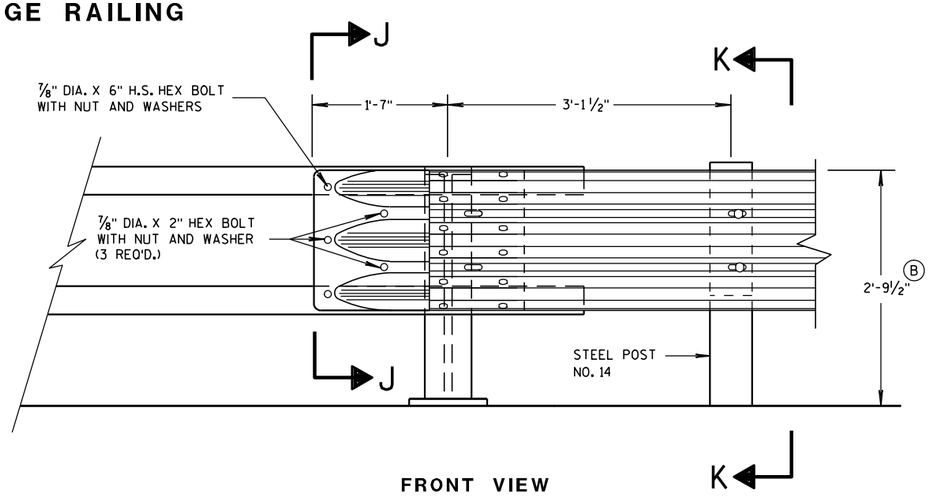


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

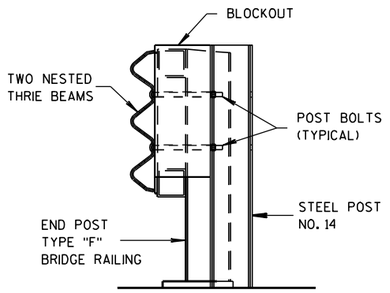


FRONT VIEW

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

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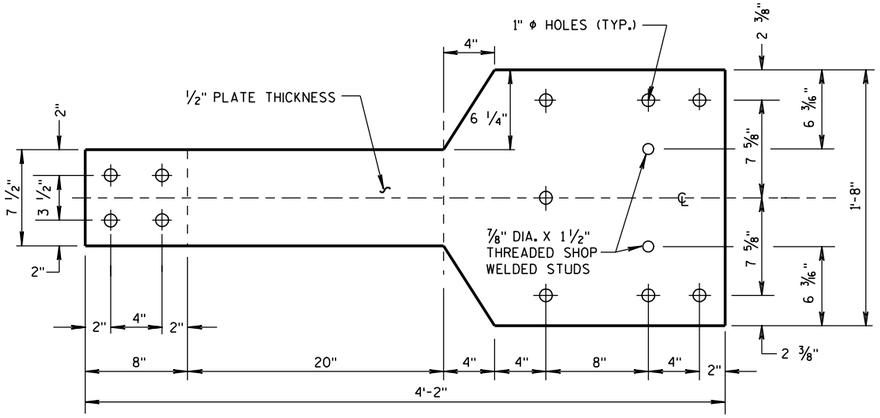
S.D.D. 14 B 45-3g

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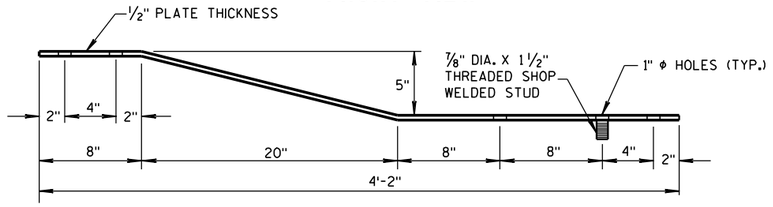
S.D.D. 14 B 45-3g

GENERAL NOTES

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

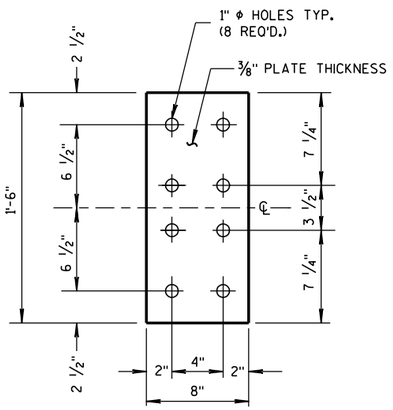


FRONT VIEW



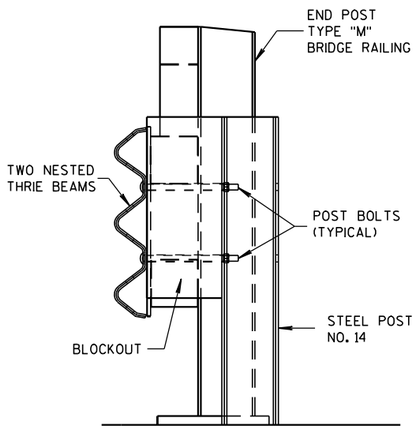
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

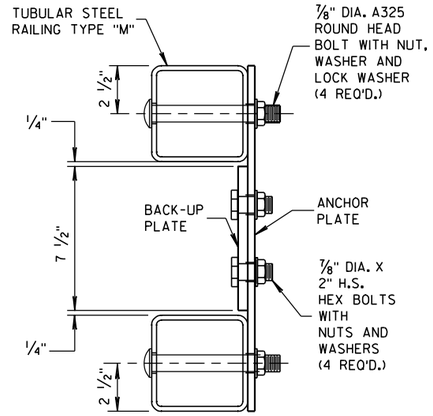


FRONT VIEW

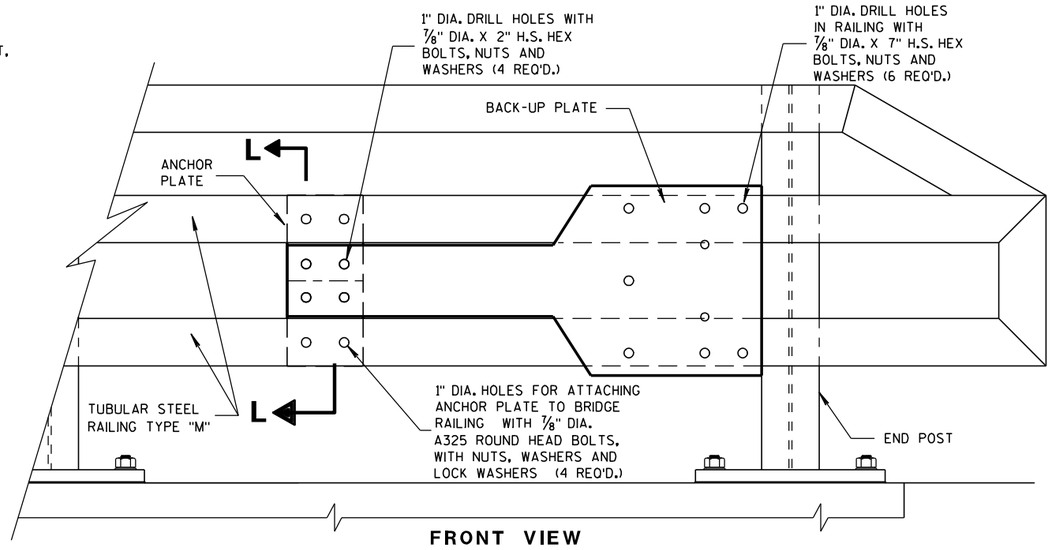
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

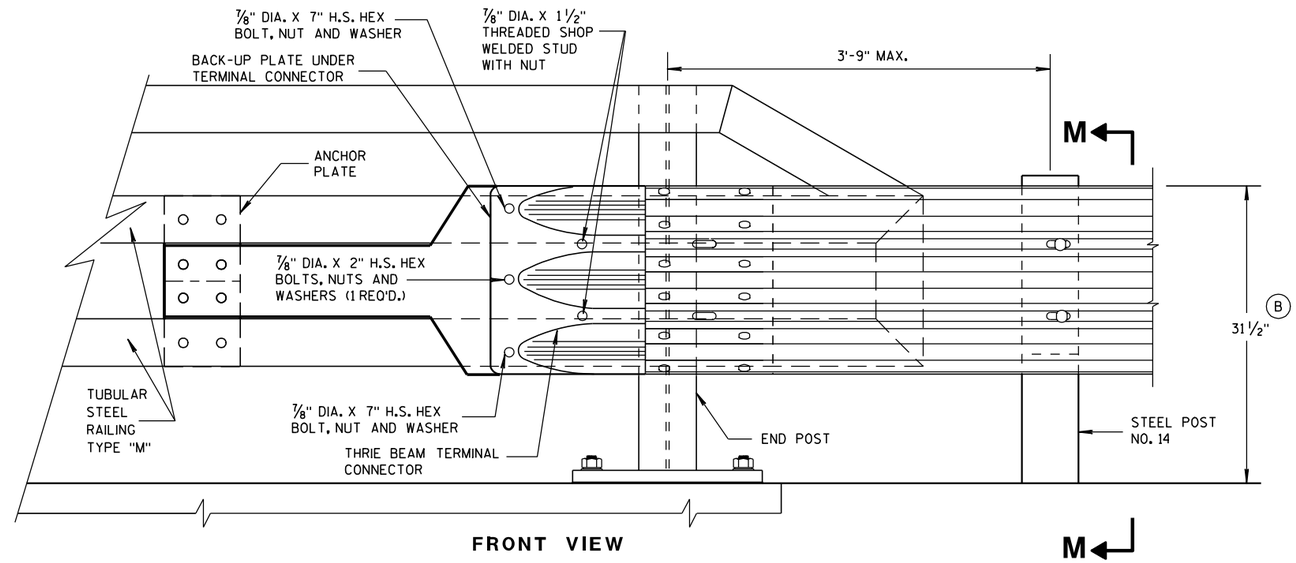


SECTION L-L

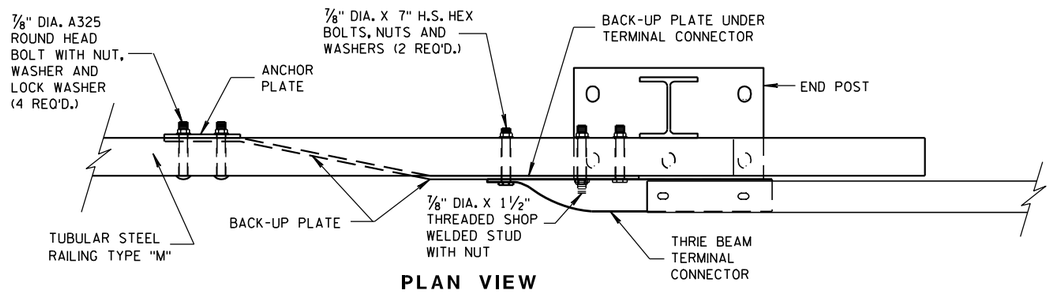


FRONT VIEW

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



FRONT VIEW



PLAN VIEW

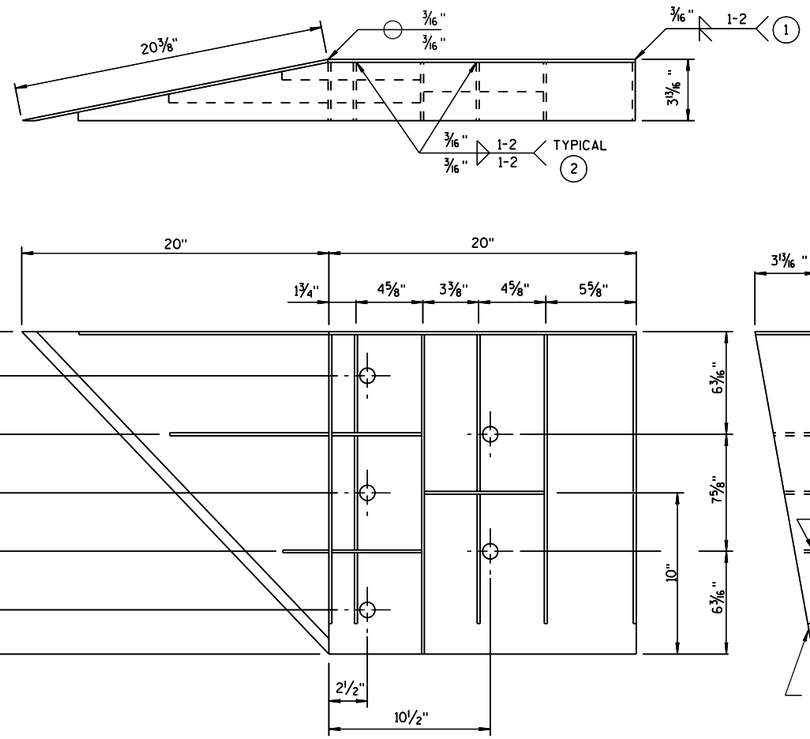
THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

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
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FHWA

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S.D. 14 B 45-3h



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

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".

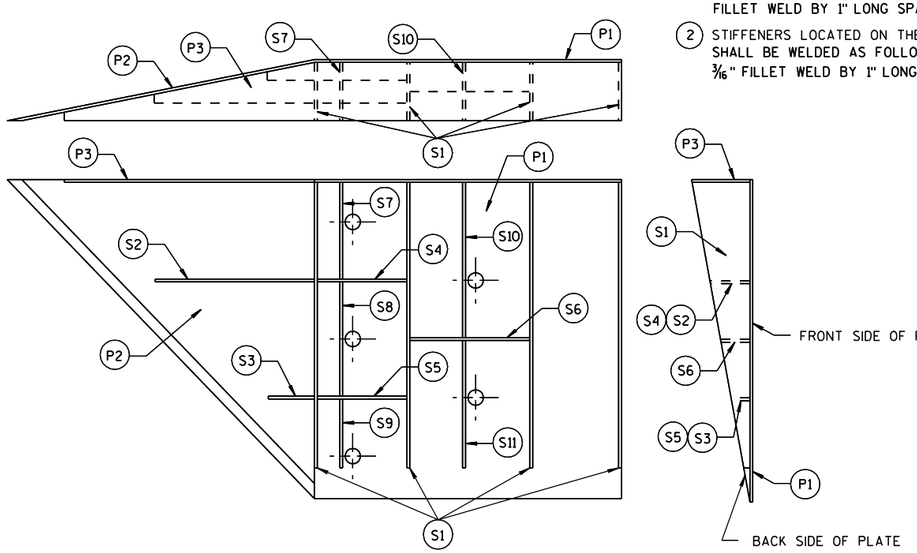


PLATE AND STIFFENER IDENTIFICATION

(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

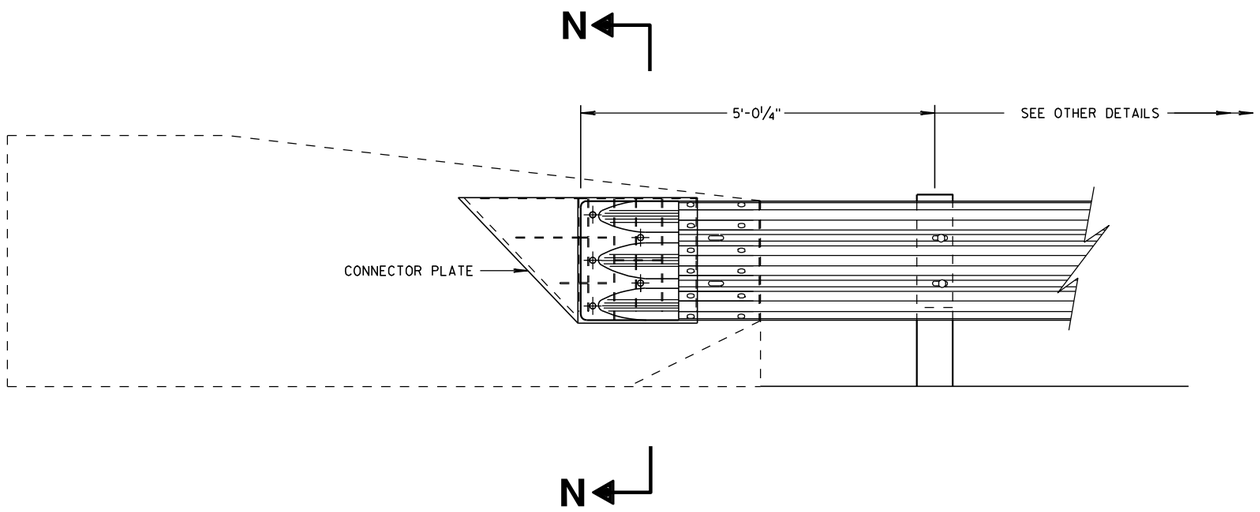
APPROVED
8/31/2012
DATE
/S/ Jerry H ...
ROADWAY STANDARDS ENGINEER
FHWA

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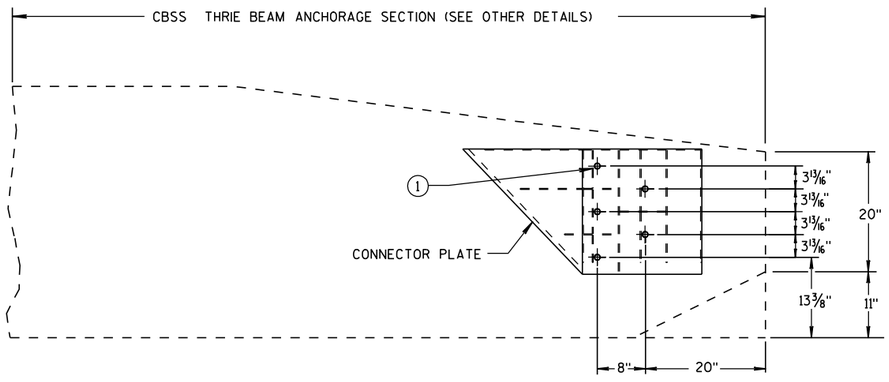
S.D.D. 14 B 45-3i

6

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



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER

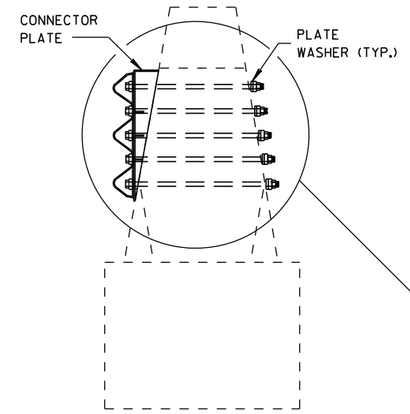


SINGLE SLOPE CONNECTION PLATE PLACEMENT

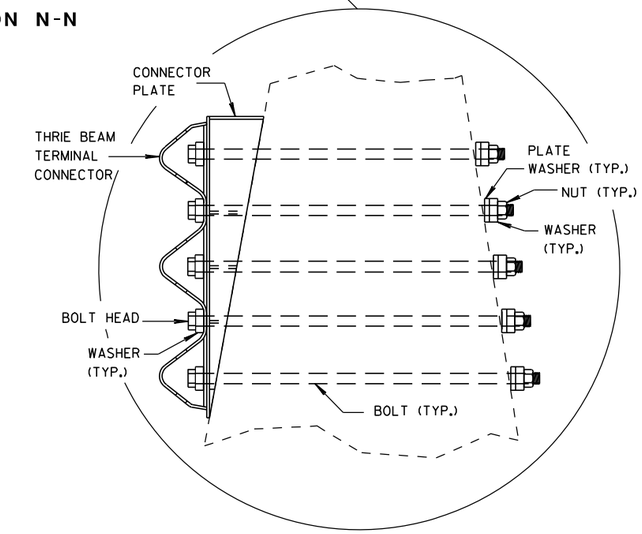
GENERAL NOTES

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

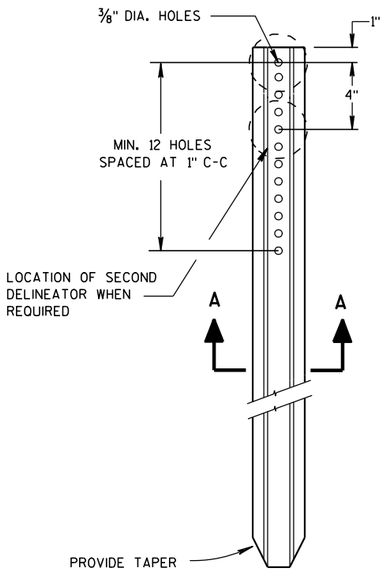
APPROVED
8/31/2012 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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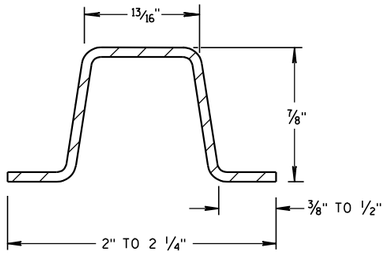
S.D.D. 14 B 45-3j

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

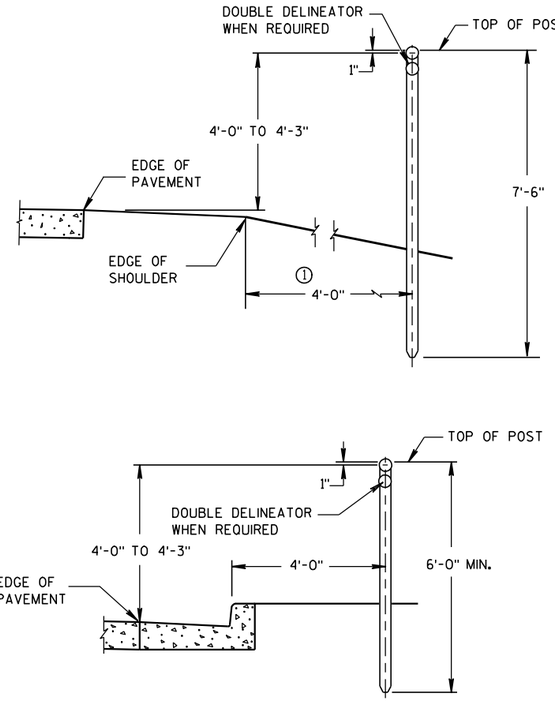


DELINEATOR POST



SECTION A-A

WEIGHT 1.12 LBS PER FT. ± 0.1 LB.

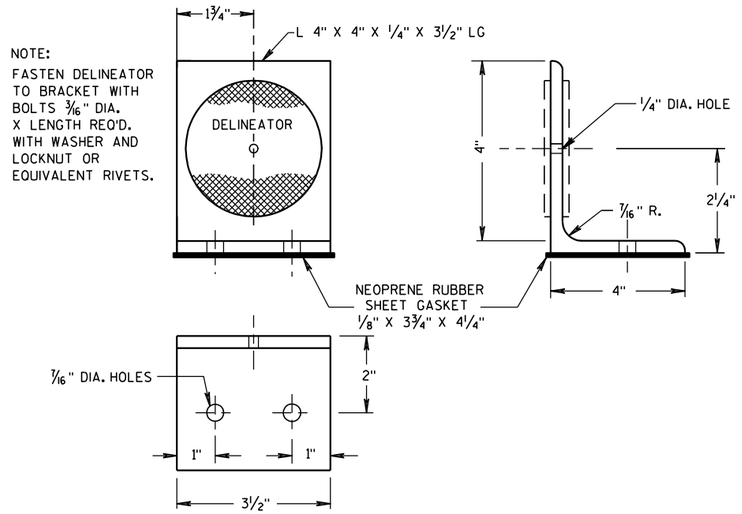


TYPICAL INSTALLATIONS OF DELINEATOR POSTS

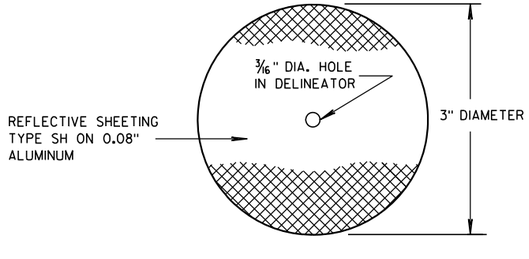
GENERAL NOTES

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

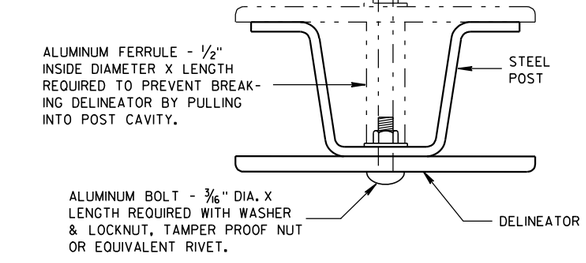
① DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.



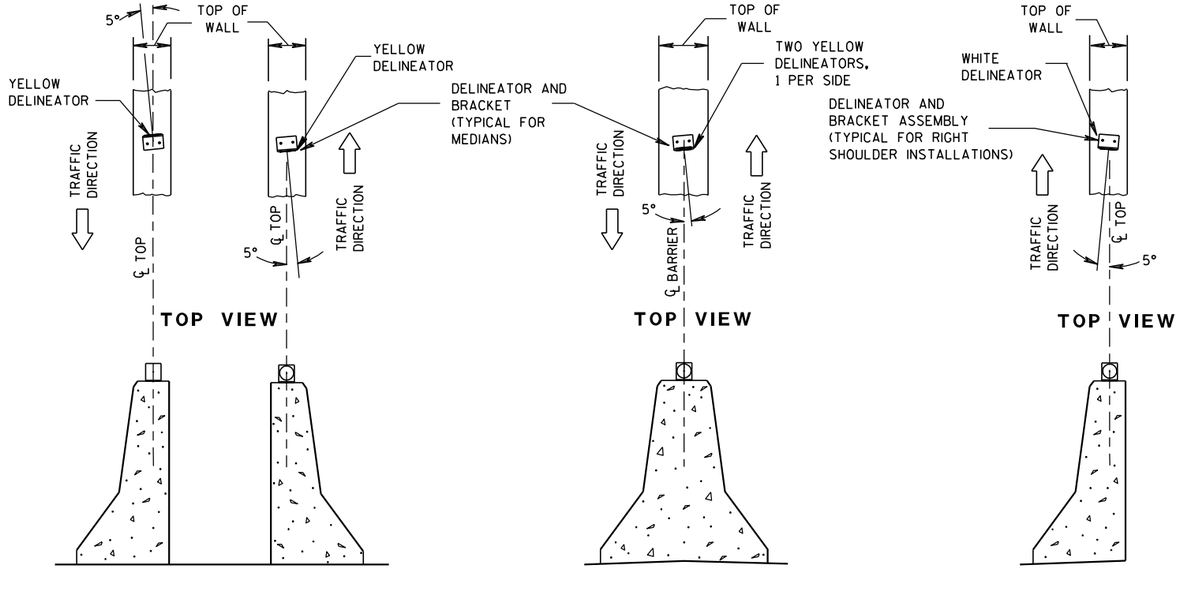
DELINEATOR BRACKET



DELINEATOR



MOUNTING DETAIL FOR DELINEATOR

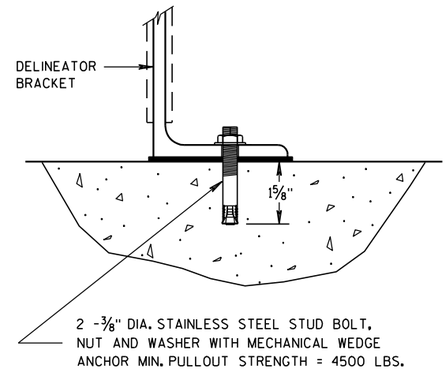


DOUBLE BARRIERS IN MEDIAN

MEDIAN BARRIER

BARRIER LOCATED TO RT. OF TRAFFIC FLOW

LOCATION AND AIMING DETAILS FOR DELINEATORS MOUNTED ON CONCRETE BARRIERS



DELINEATOR BRACKET MOUNTING DETAIL

DELINEATOR POST, DELINEATOR BRACKET AND DELINEATOR

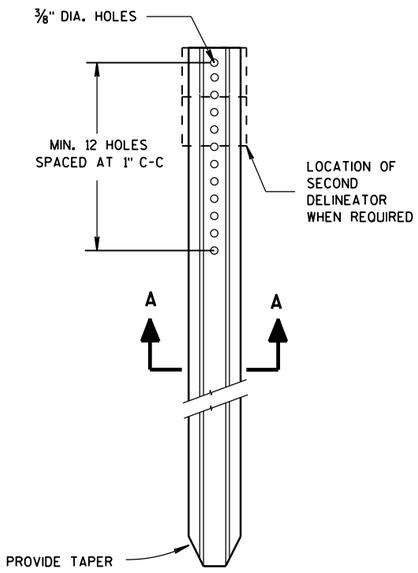
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
1/25/2011 — DATE
/S/ Thomas N. Nothdurft — STATE TRAFFIC ENGINEER

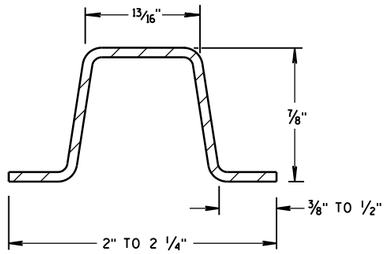
FHWA

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S.D.D. 15 A 2-7

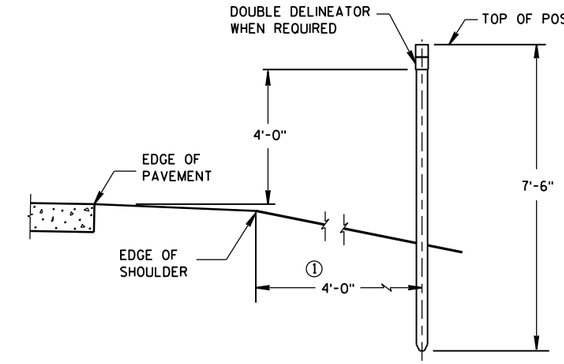


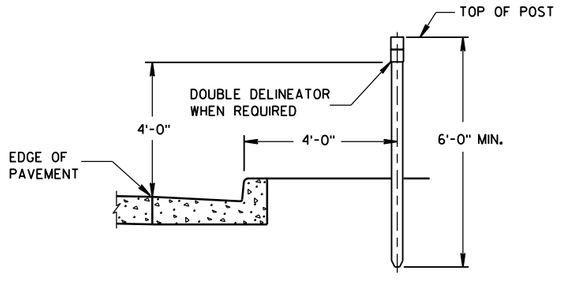
DELINEATOR POST



SECTION A-A

WEIGHT 1.12 LBS PER FT. ± 0.1 LB.



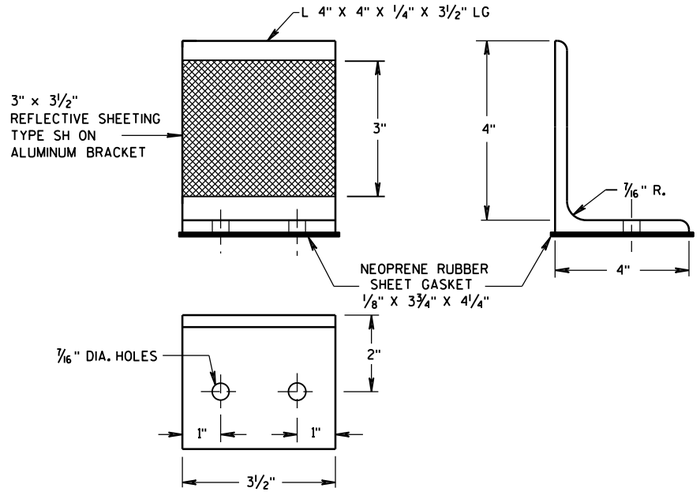


TYPICAL INSTALLATIONS OF DELINEATOR POSTS

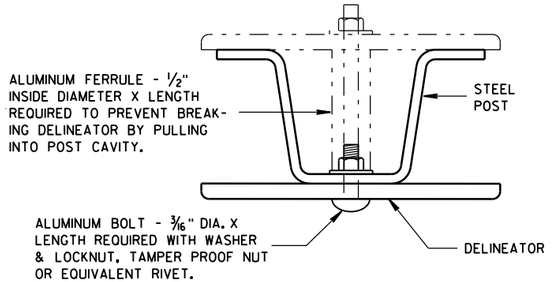
GENERAL NOTES

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

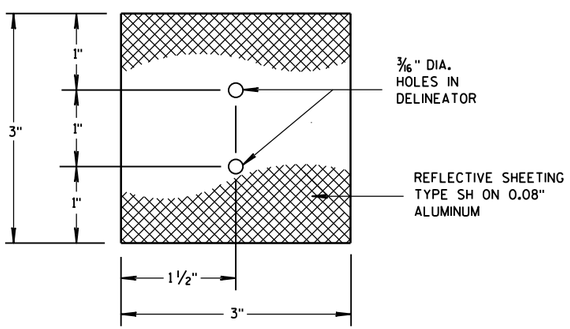
① DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.



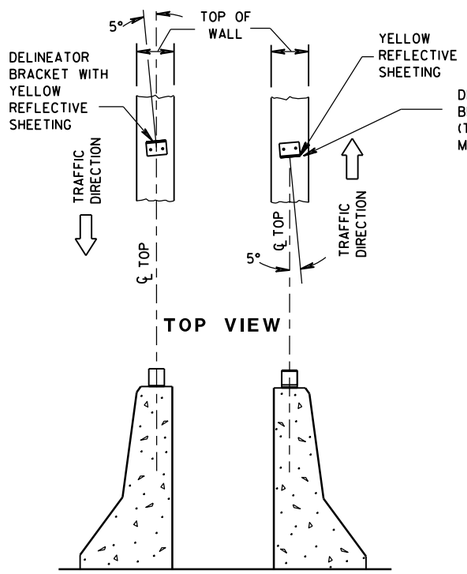
DELINEATOR BRACKET



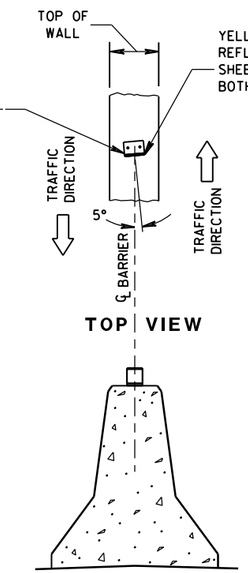
MOUNTING DETAIL FOR DELINEATOR



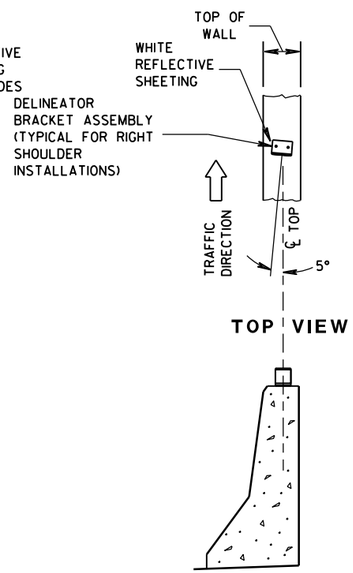
3"x 3" DELINEATOR



DOUBLE BARRIERS IN MEDIAN

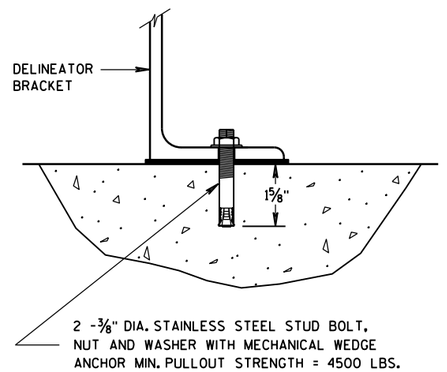


MEDIAN BARRIER



BARRIER LOCATED TO RT. OF TRAFFIC FLOW

LOCATION AND AIMING DETAILS FOR DELINEATOR BRACKETS MOUNTED ON CONCRETE BARRIERS



DELINEATOR BRACKET MOUNTING DETAIL

DELINEATOR POST, DELINEATOR, AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

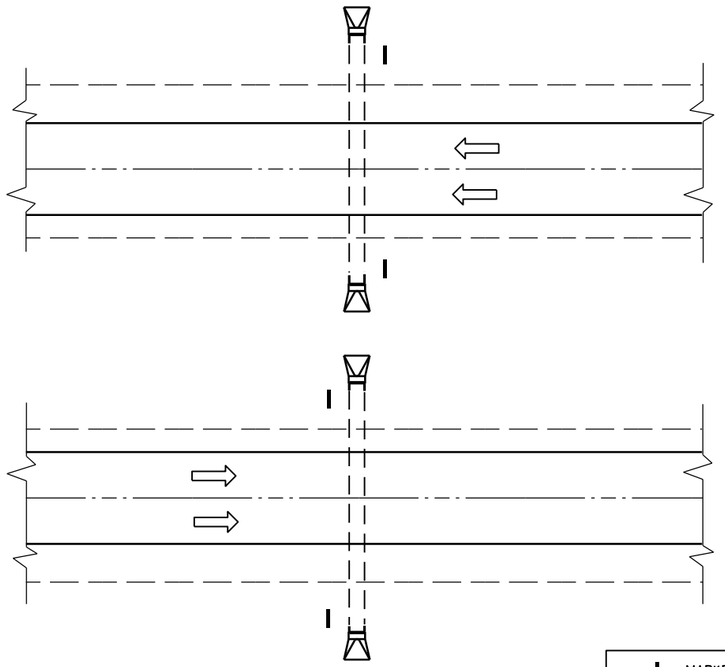
APPROVED
7/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC E
FHWA

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S.D.D. 15 A 2-8

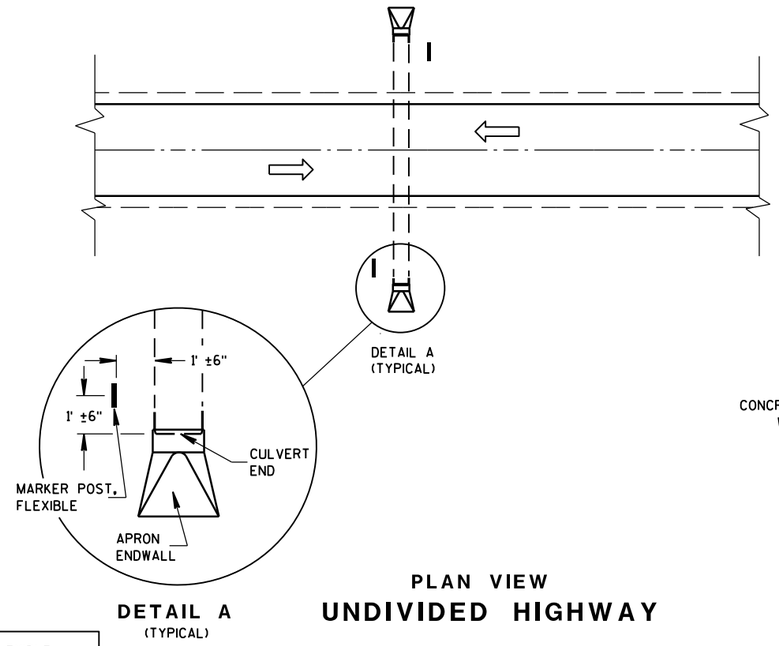
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S.D.D. 15 A 2-8



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

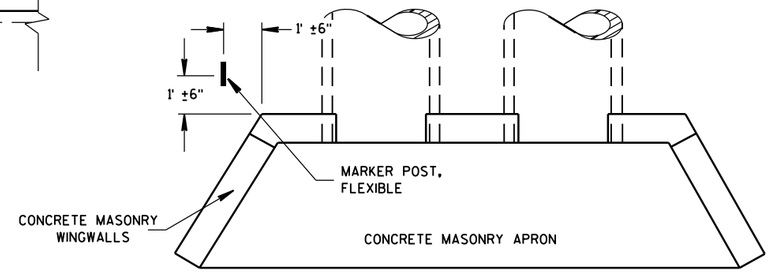
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

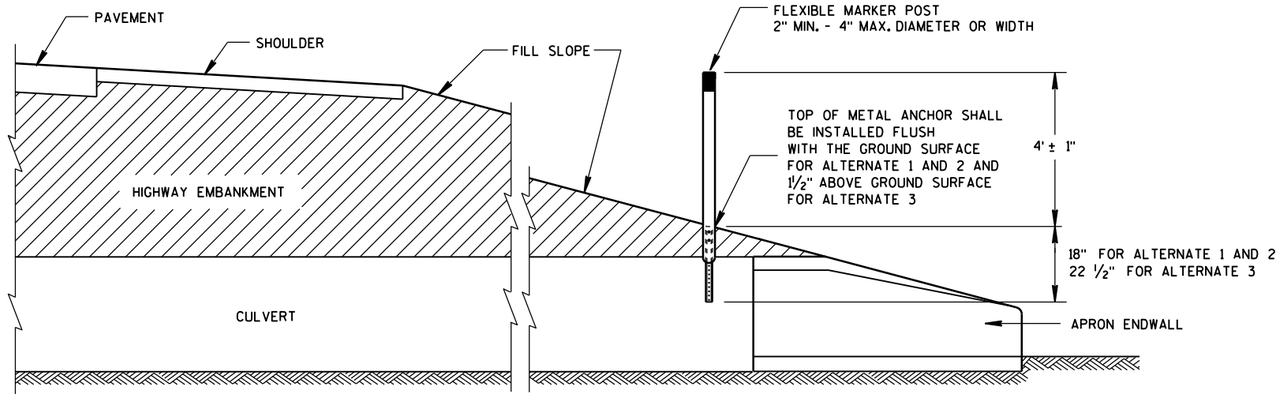
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST
FOR CULVERT END

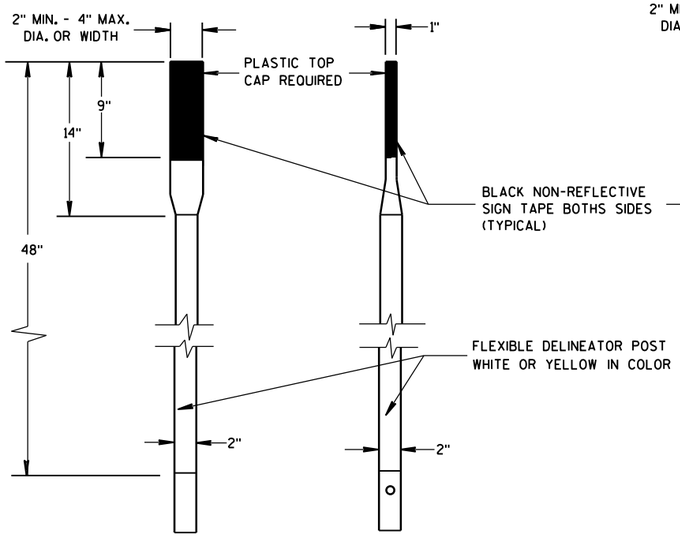
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

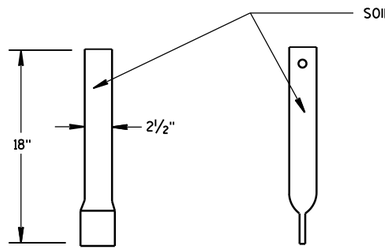
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S.D.D. 15 A 3-2a

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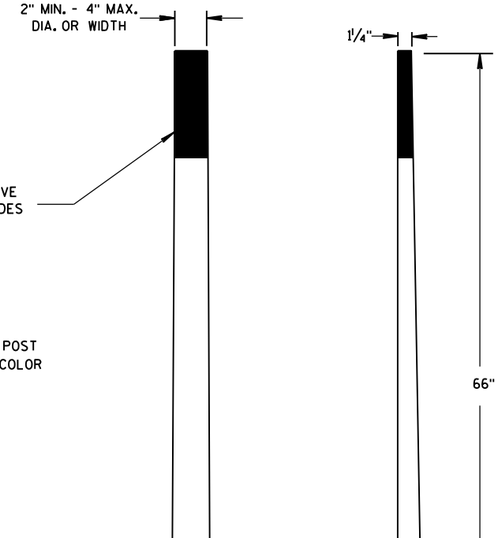
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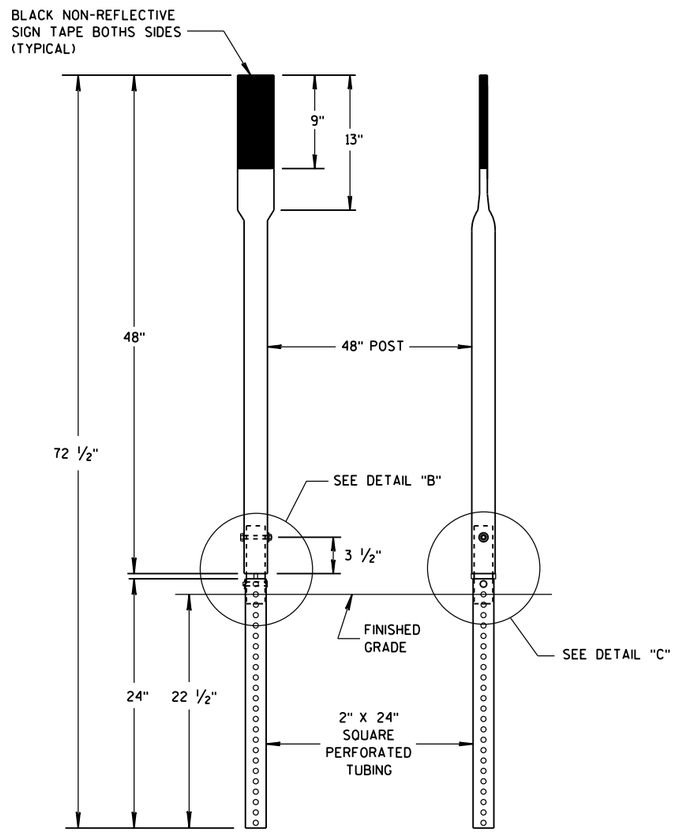
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

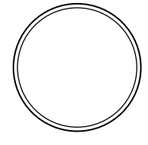
ALTERNATE 2



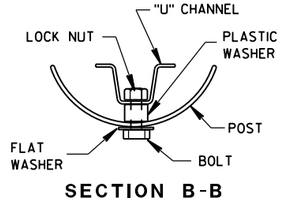
FRONT VIEW SIDE VIEW

ALTERNATE 3

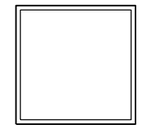
FLEXIBLE MARKER POSTS



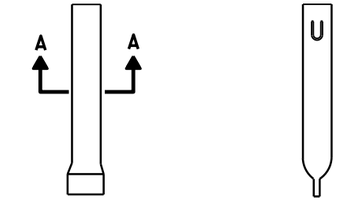
SECTION A-A



SECTION B-B

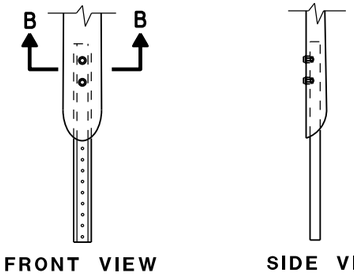


SECTION C-C



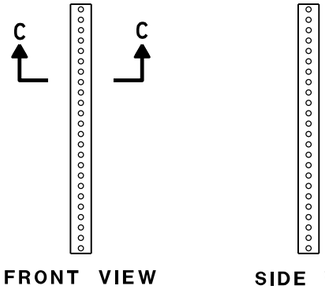
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

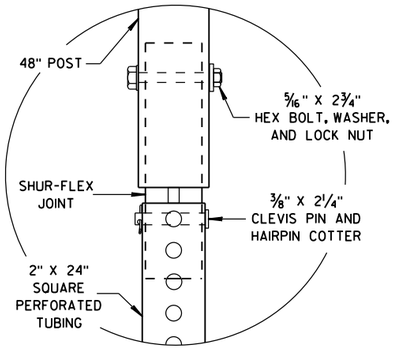
ALTERNATE 2



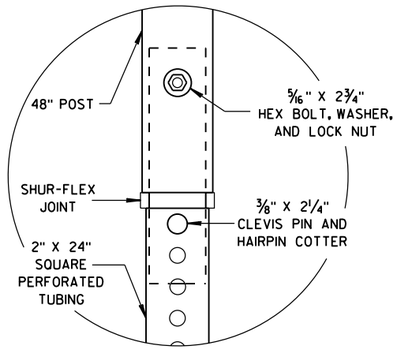
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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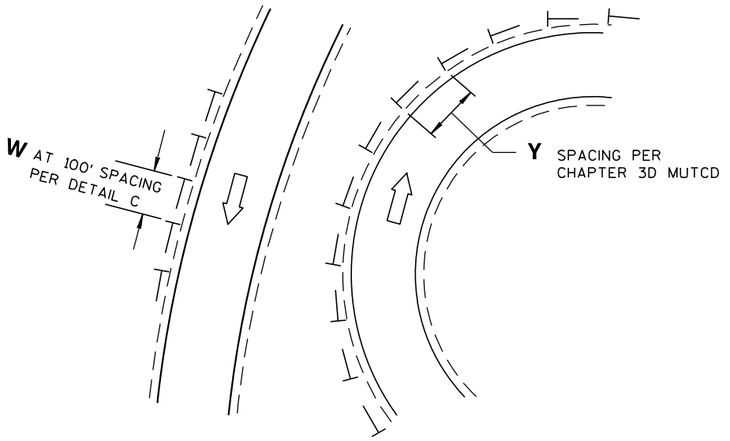
S.D.D. 15 A 3-2b

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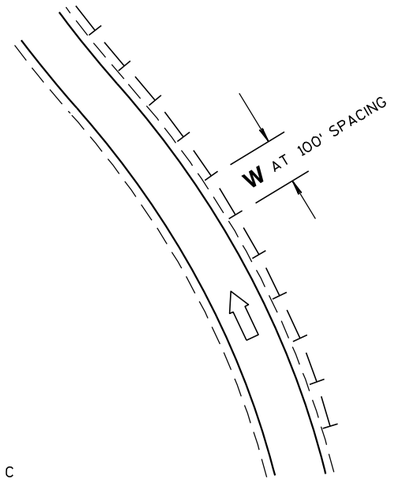
S.D.D. 15 A 3-2b

GENERAL NOTES

* USE DOUBLE DELINEATOR ALONG ACCELERATION-DECELERATION LANES AND TAPERS. USE SINGLE DELINEATOR WHEN RAMP PAVEMENT IS FULL WIDTH.



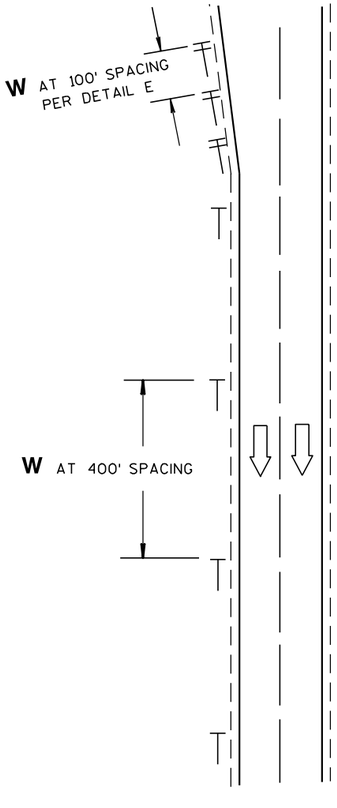
DETAIL A
DELINEATOR LAYOUT AT CURVED RAMP



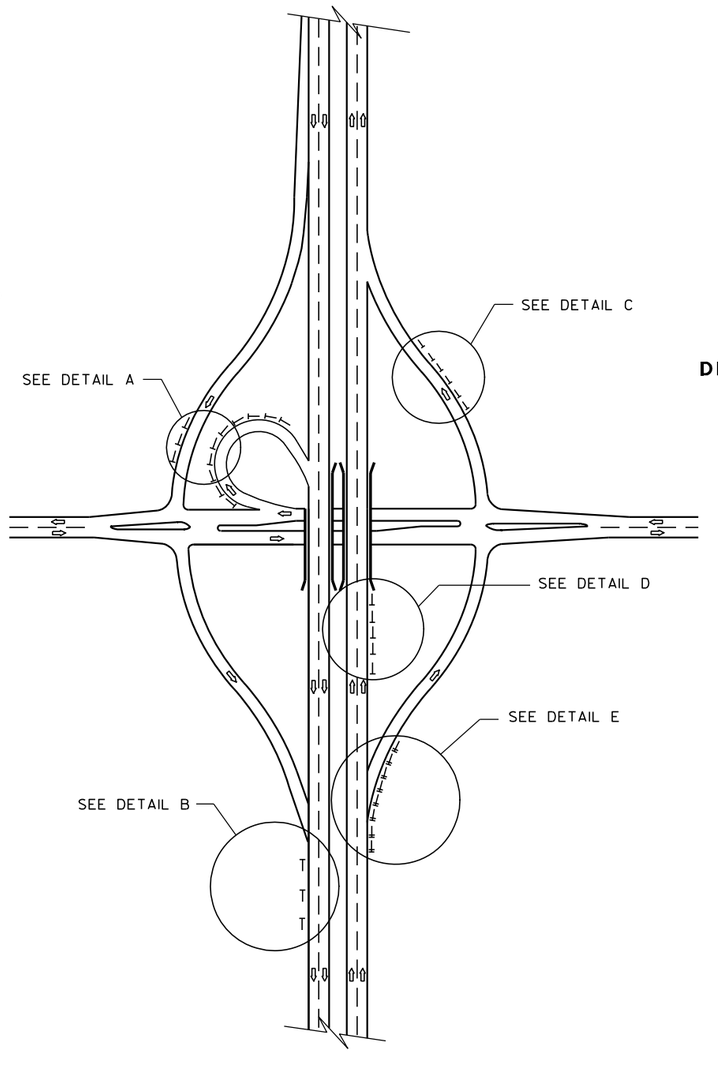
DETAIL C
DELINEATOR LAYOUT ALONG RAMP

LEGEND

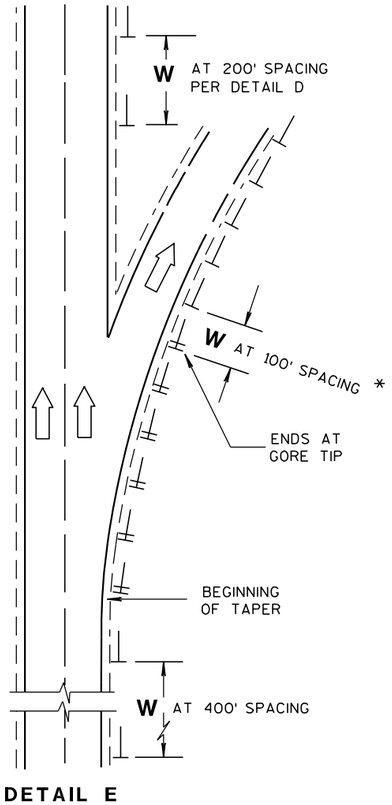
- DIRECTION OF TRAFFIC FLOW
- SINGLE DELINEATOR
- DOUBLE DELINEATOR
- W — WHITE
- Y — YELLOW



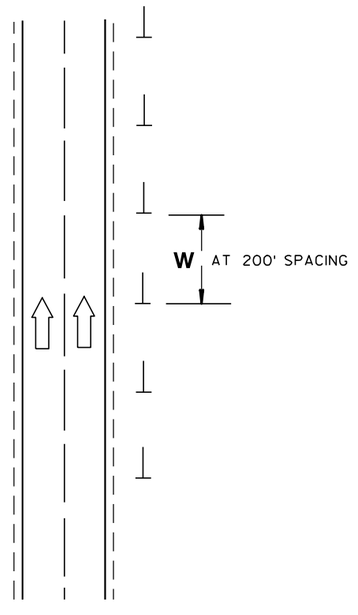
DETAIL B
DELINEATOR LAYOUT ALONG MAINLINE



DELINEATOR LAYOUT



DETAIL E
DELINEATOR LAYOUT FOR ACCELERATION - DECELERATION LANES AND TAPERS AT RAMPS



DETAIL D
DELINEATOR LAYOUT BETWEEN INTERCHANGE RAMPS

DELINEATOR LAYOUT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

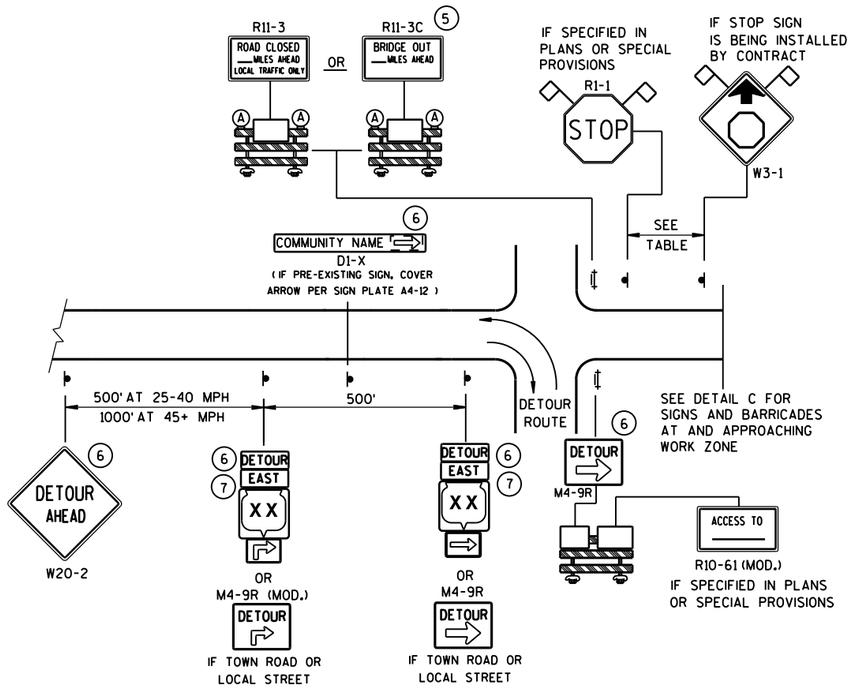
APPROVED
2/5/09 DATE
/S/ Thomas N. Nothdurft
STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 A 6-2

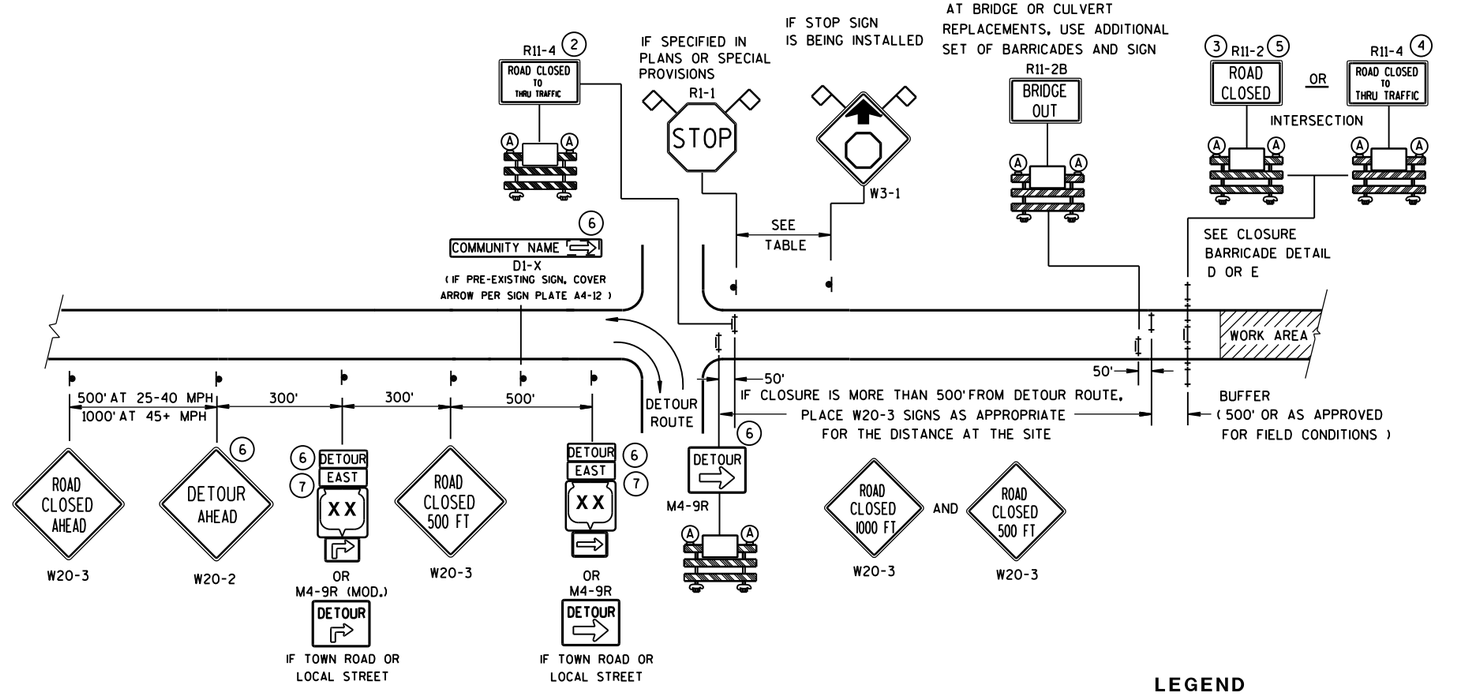
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S.D.D. 15 A 6-2



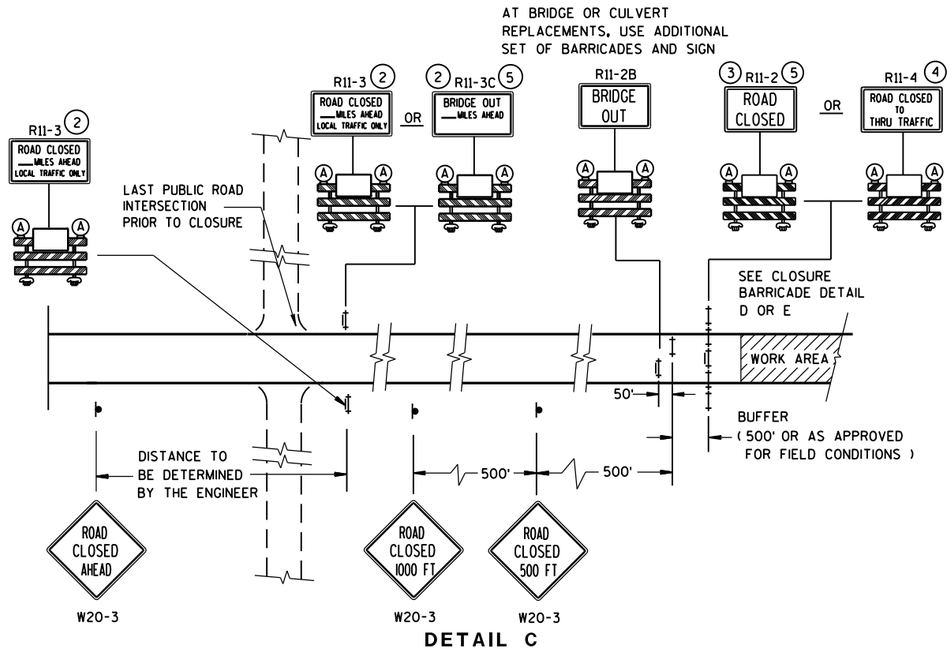
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

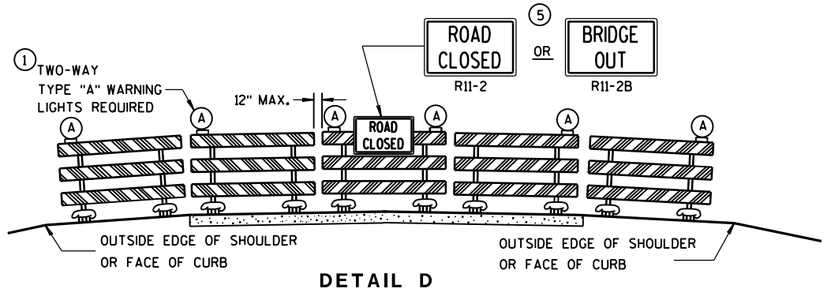
8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

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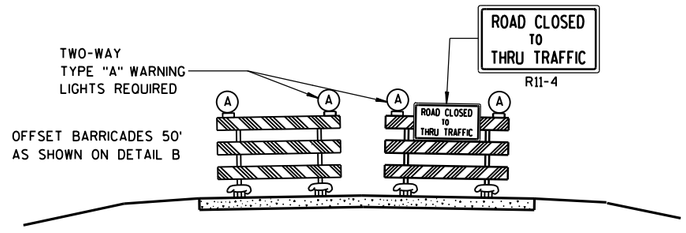
S.D.D. 15 C 2-5a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

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

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

GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

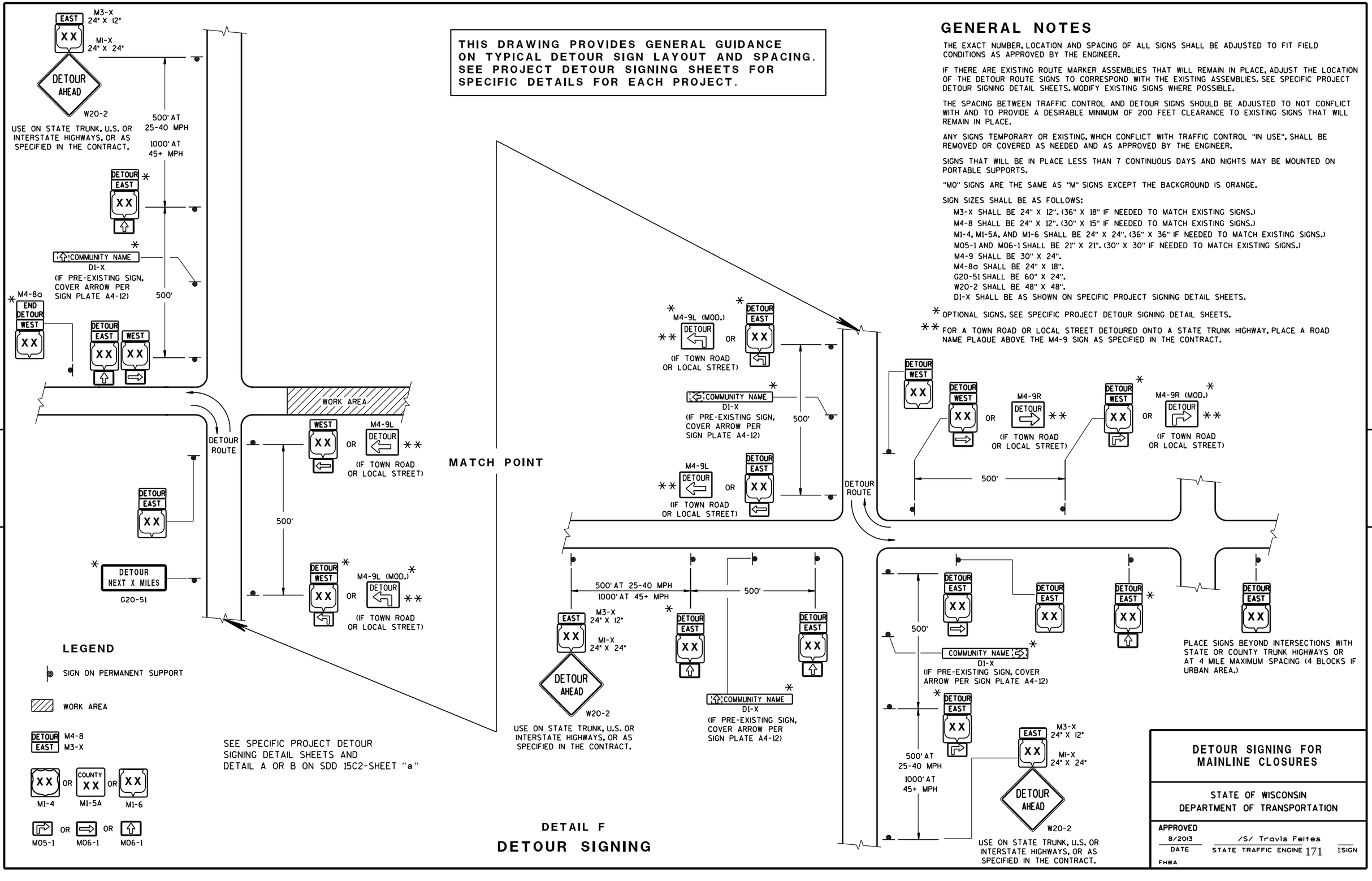
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 SHALL BE 48" X 48".
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.



DETAIL F

DETOUR SIGNING

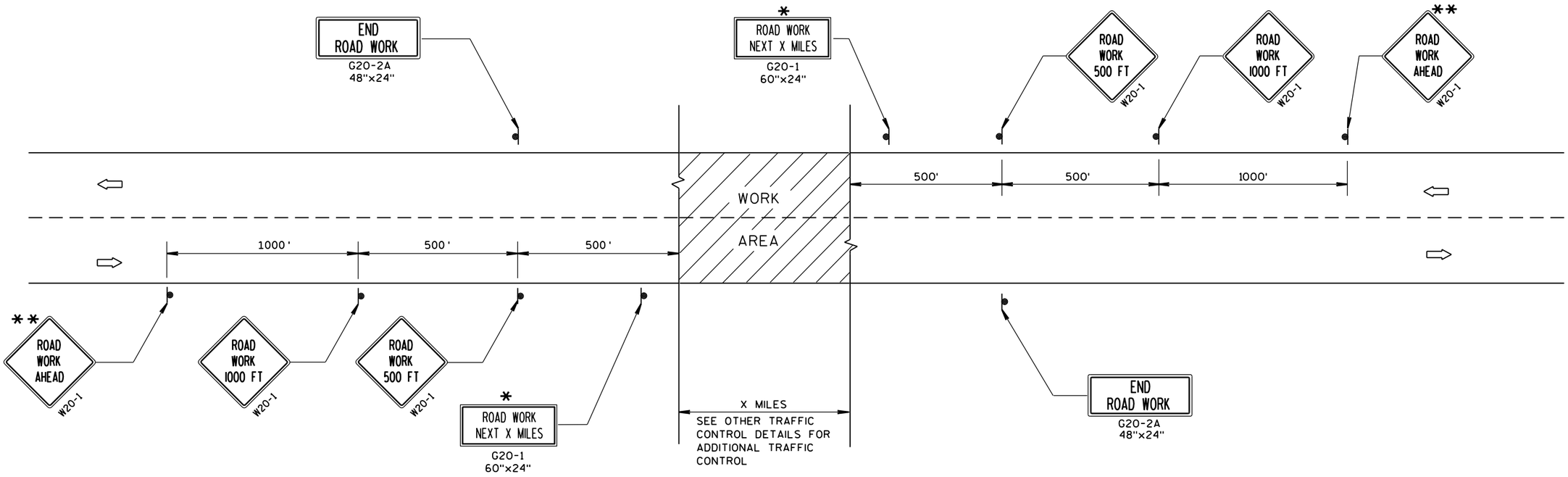
DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

6



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

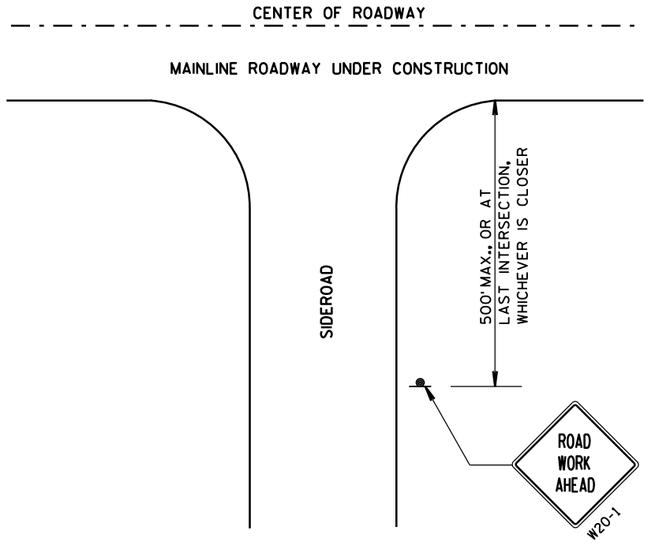
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

** PLACE ADDITIONAL W20-1 "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



LEGEND

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

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 — DATE

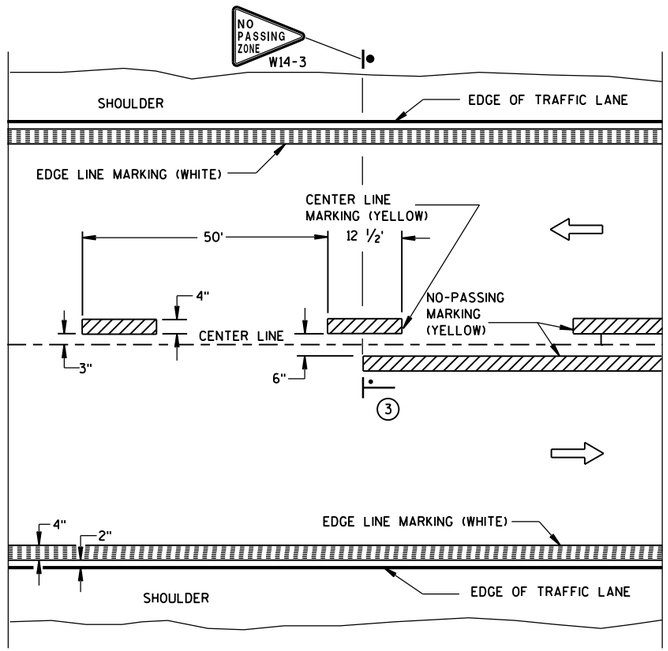
/S/ Travis Feltes — STATE TRAFFIC ENGINEER

SIGN

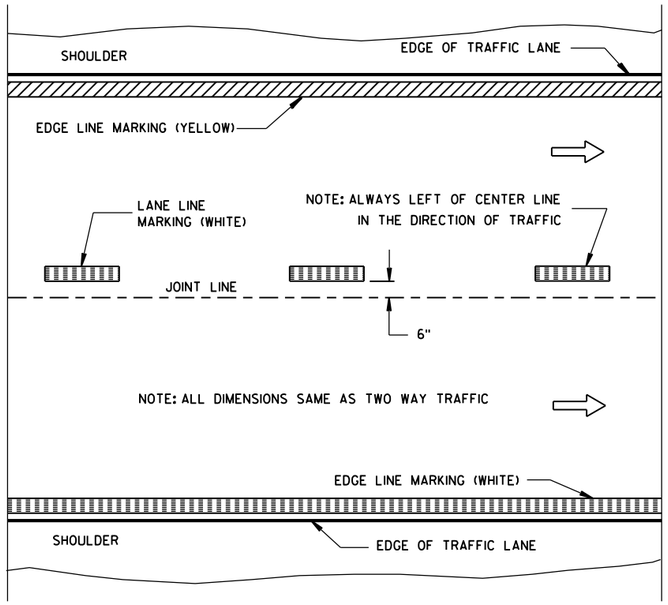
FHWA

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S.D.D. 15 C 4-2

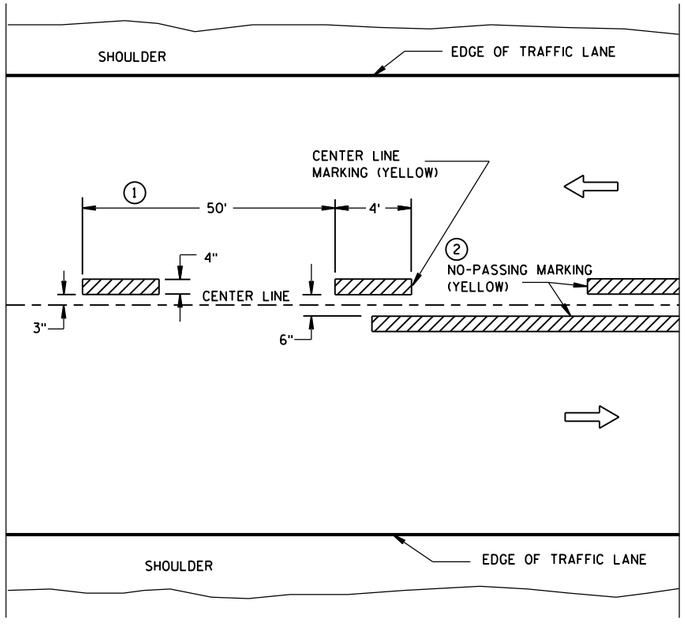


TWO WAY TRAFFIC

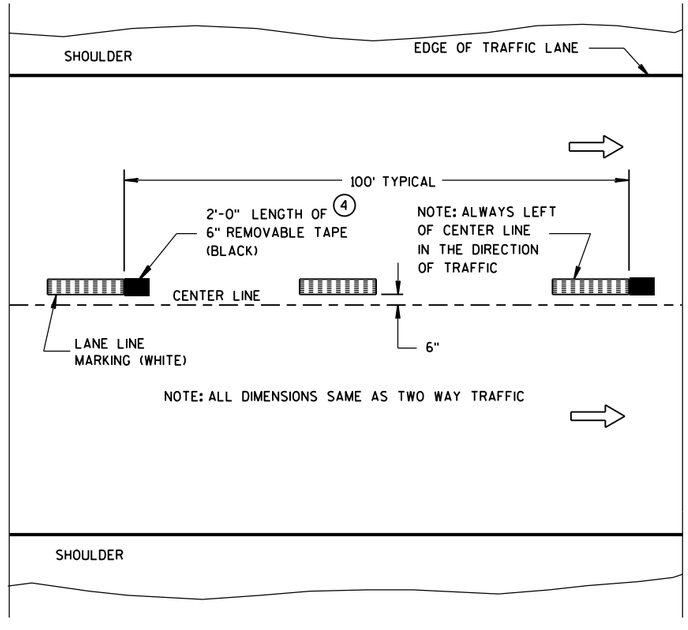


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

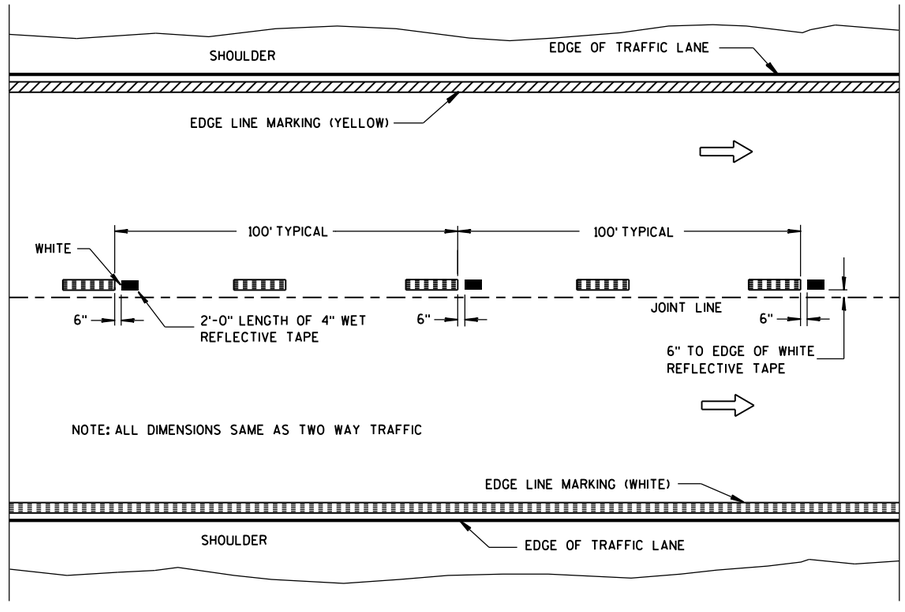
GENERAL NOTES

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

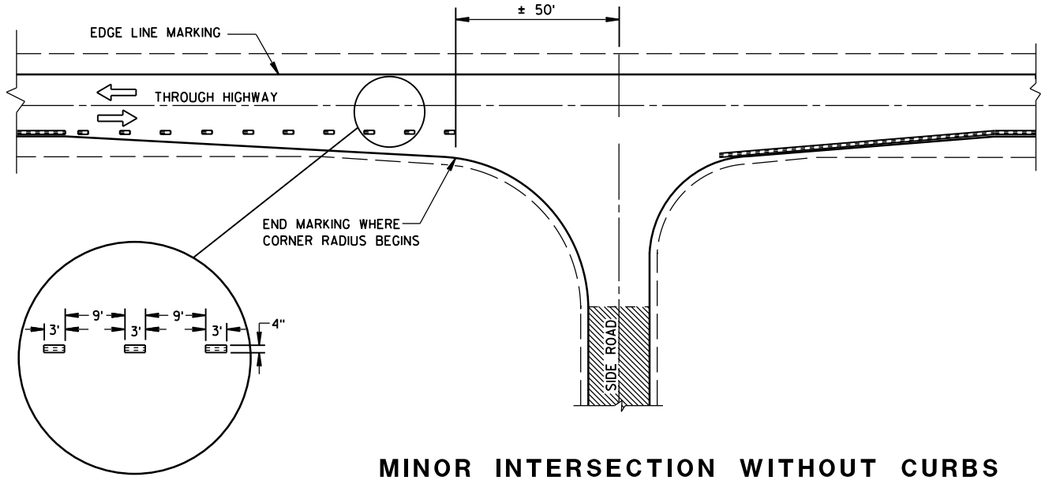
FHWA

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

6

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



MINOR INTERSECTION WITHOUT CURBS

GENERAL NOTES

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

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

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

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

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

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

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

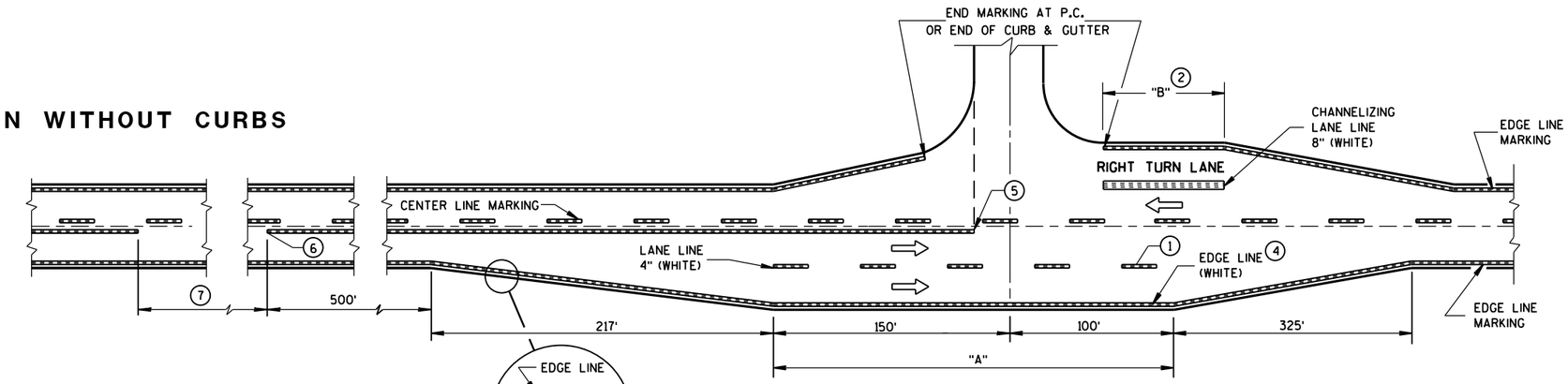
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

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

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

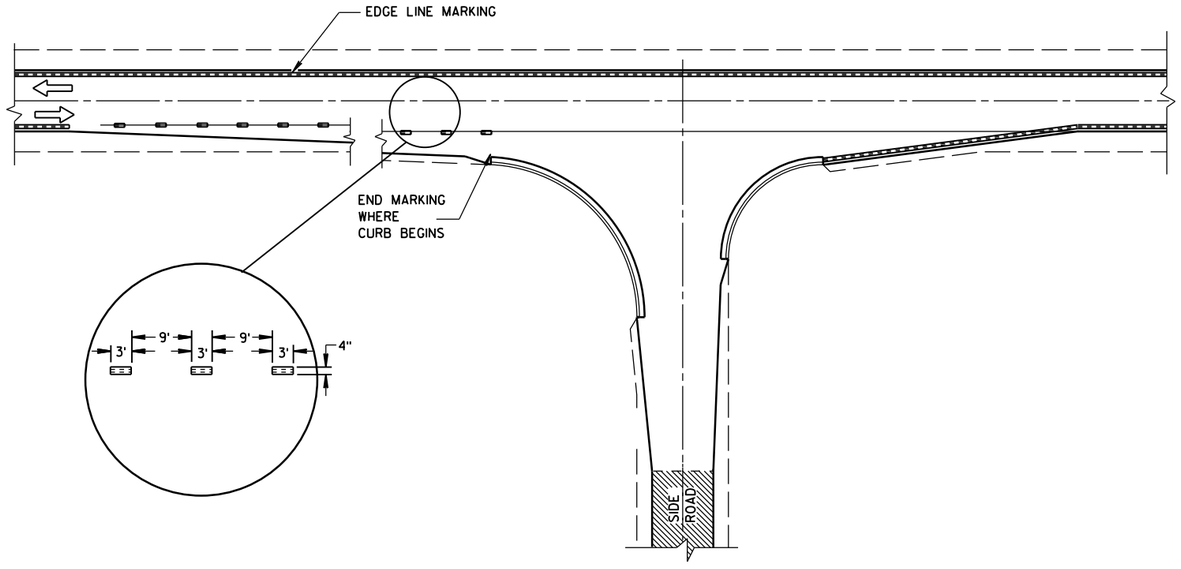
(7)

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



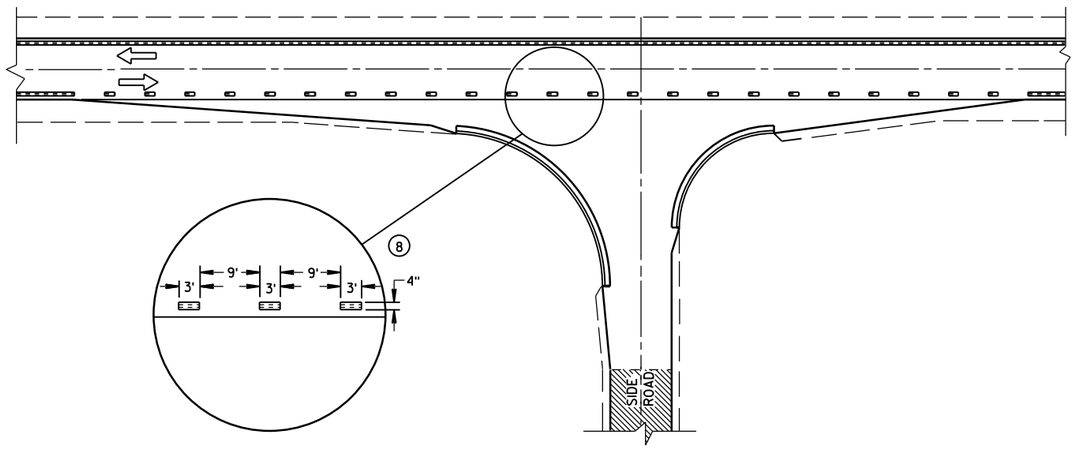
MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



MINOR INTERSECTION WITH CURBS

(TYPICAL MARKING)



MINOR INTERSECTION WITH CURBS

(3) (FOR SPECIAL CONDITIONS AS SPECIFIED)

PAVEMENT MARKING
(INTERSECTIONS)

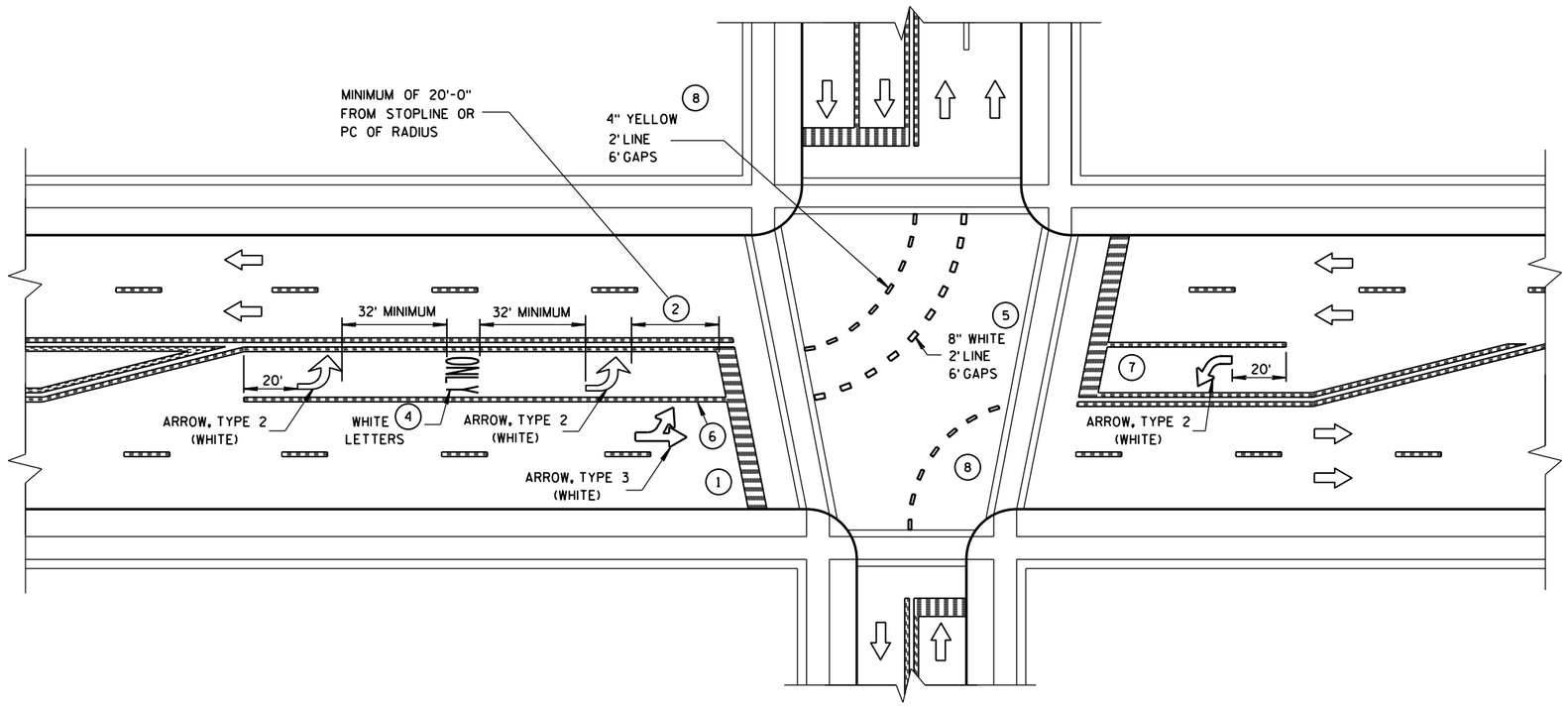
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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

6

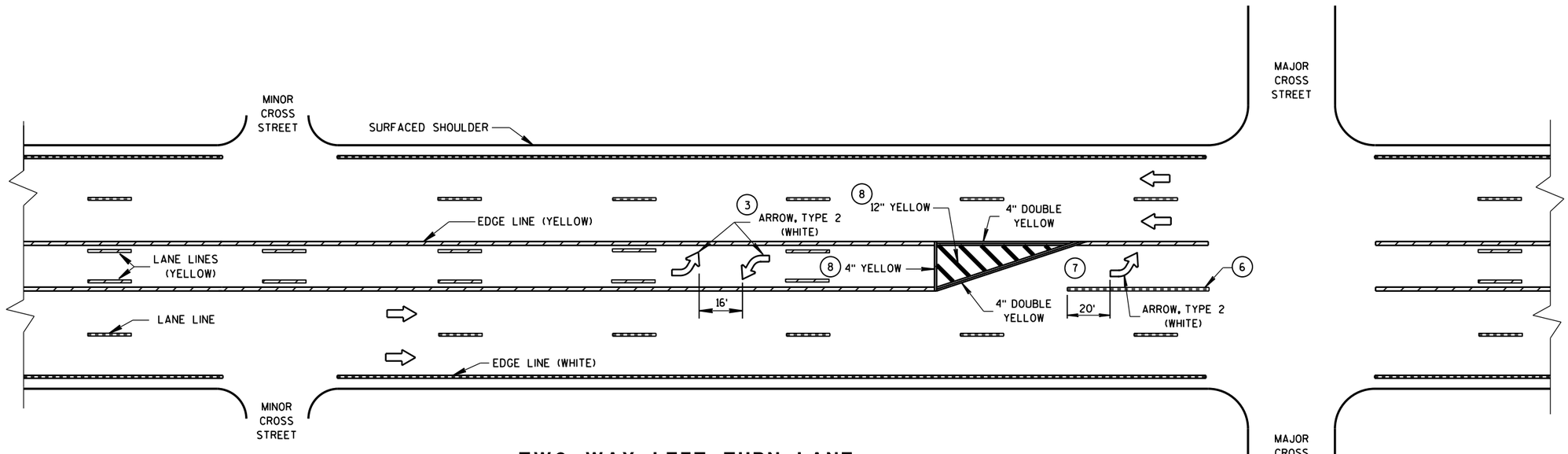
S.D.D. 15 C 8-16b



GENERAL NOTES

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

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TWO WAY LEFT TURN LANE

PAVEMENT MARKING (LEFT TURN LANE)

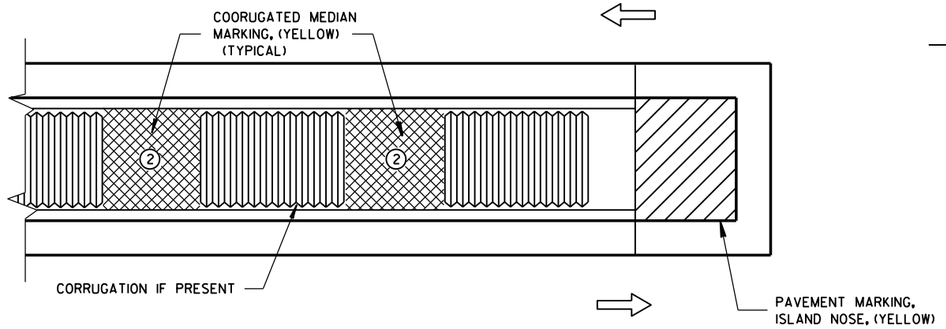
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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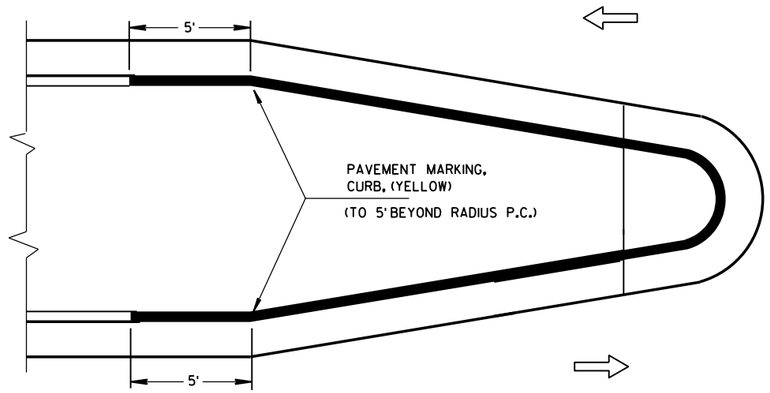
S.D.D. 15 C 8-16e

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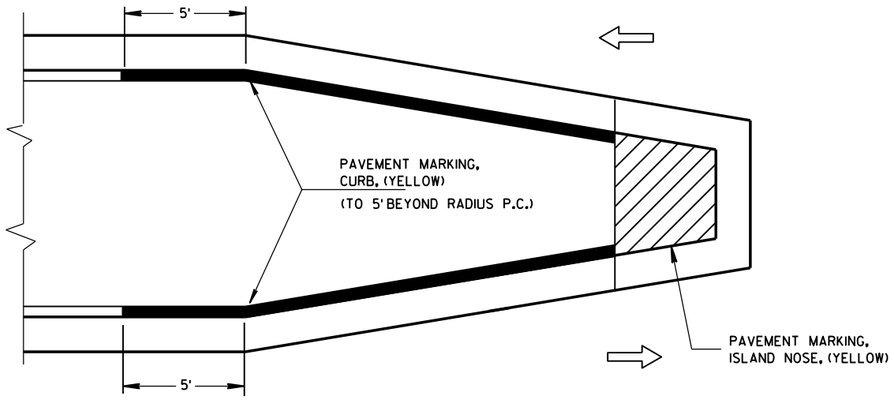
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MEDIAN ISLAND WITH SQUARE BLUNT NOSE

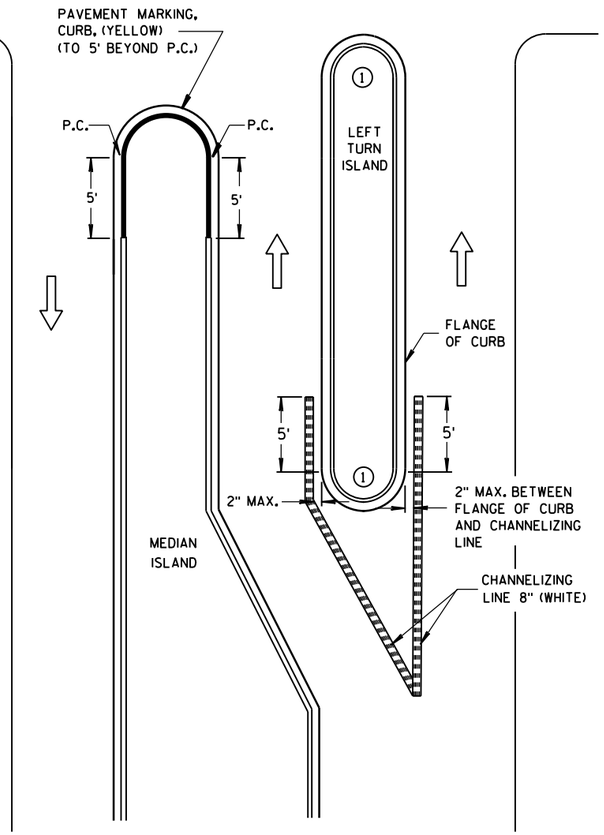


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

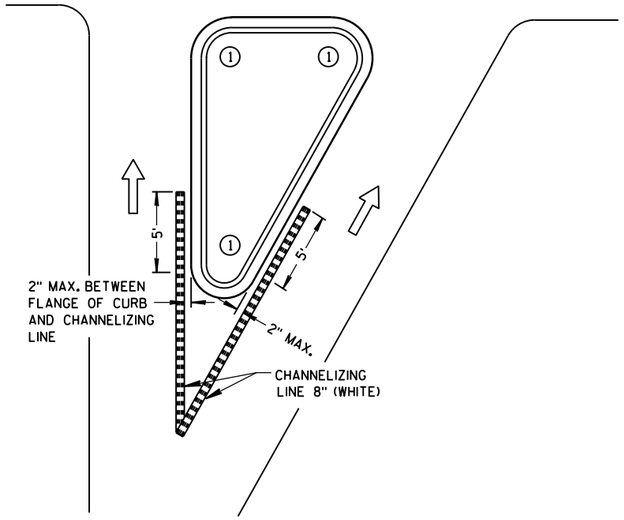


LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

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

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



RIGHT TURN ISLAND

LEGEND

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

PAVEMENT MARKING
(ISLANDS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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

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

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA

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

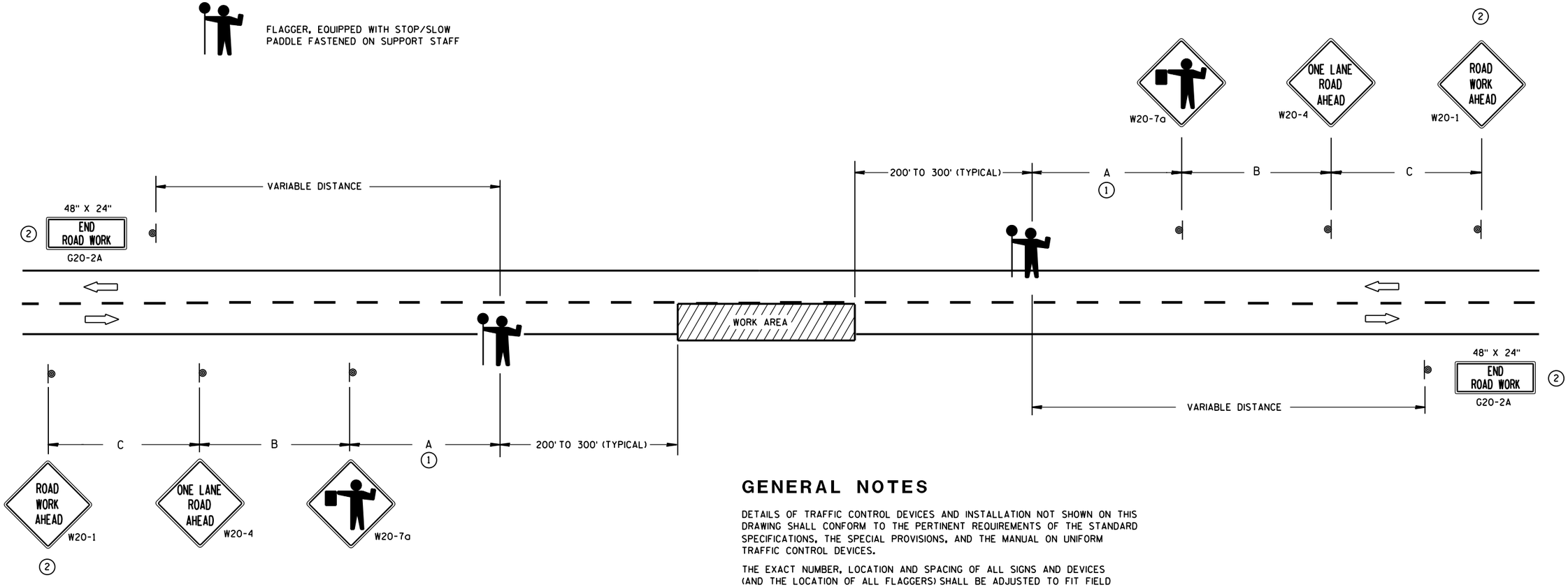
SIGN SPACING TABLE

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



W3-4

USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



(1) FOR A MOVING WORK OPERATION,
SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.

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

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

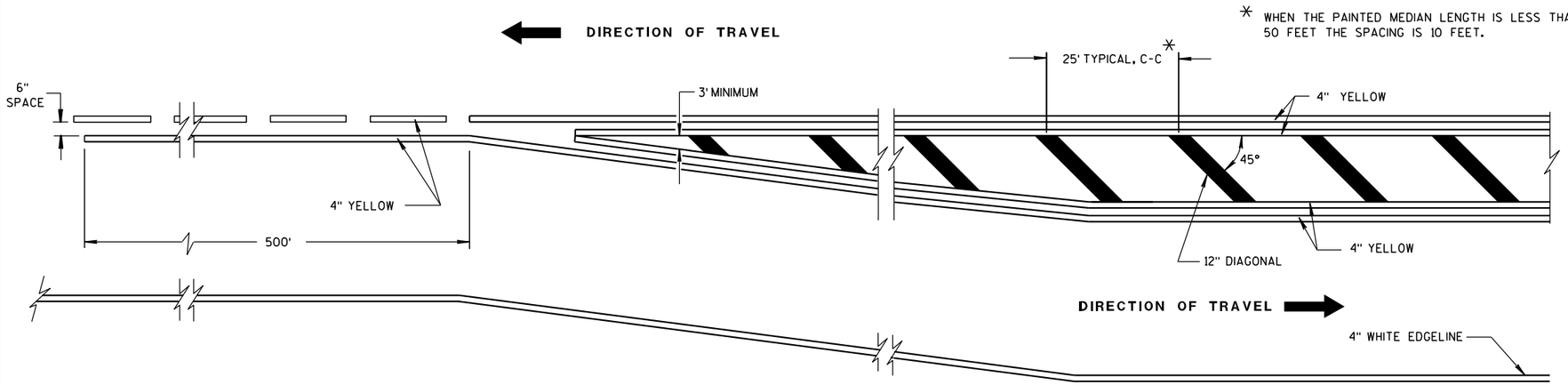
APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

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S.D.D. 15 C 12-4

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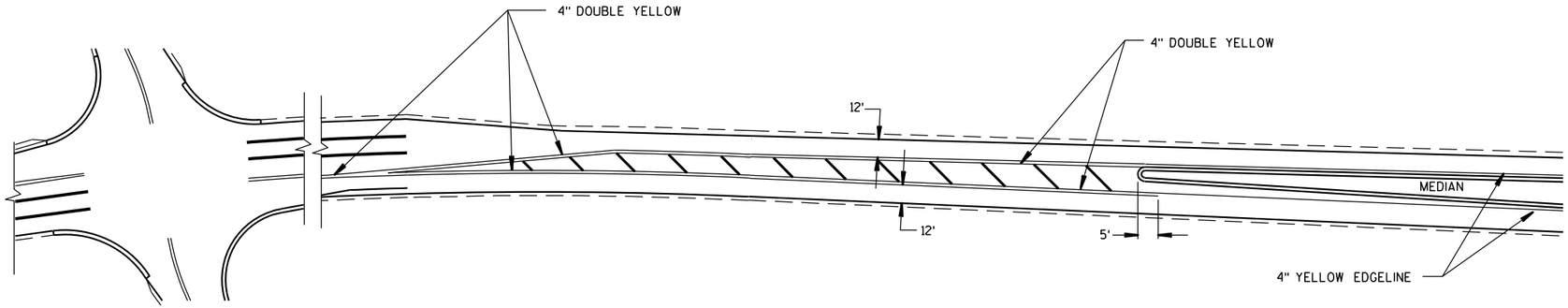
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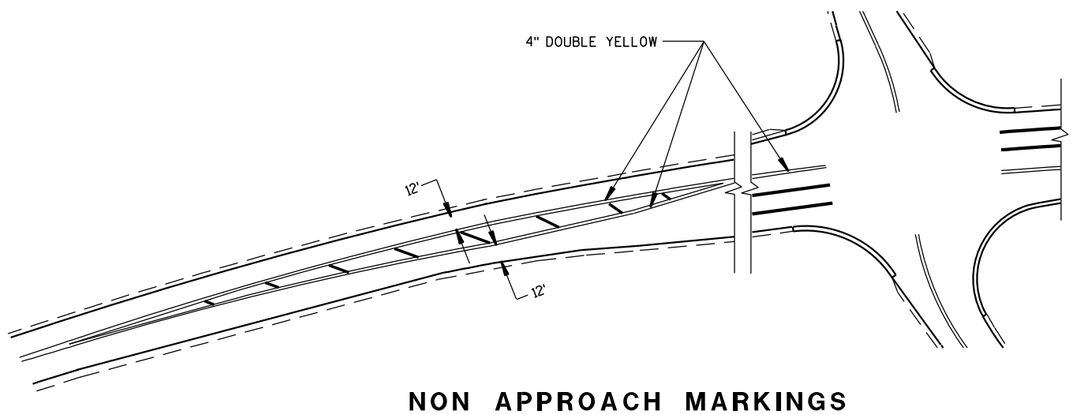
MEDIAN ISLAND DETAIL

GENERAL NOTE

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



APPROACH MARKINGS FOR OTHER MEDIAN TYPES

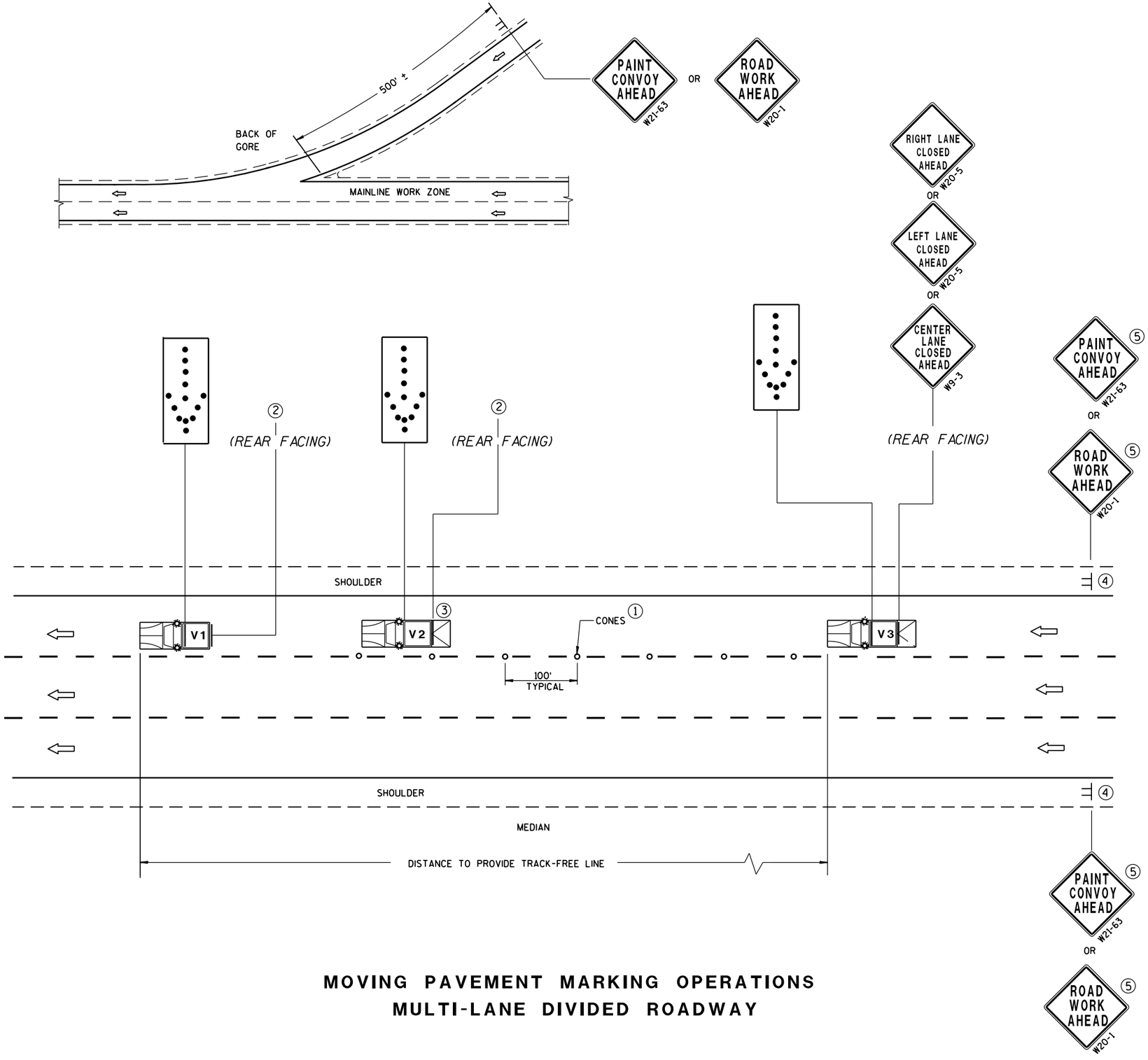


NON APPROACH MARKINGS

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

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S.D.D. 15 C 18-3



MOVING PAVEMENT MARKING OPERATIONS
MULTI-LANE DIVIDED ROADWAY

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE SPECIFIED.

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

FOR EDGELINE MARKING OR IF CONES ARE NOT USED, POSITION THE REARMOST SHADOW VEHICLE ON THE SHOULDER AS SHOWN IN THE MUTCD IF THE SHOULDER HAS ADEQUATE WIDTH. USE DOUBLE ARROWS WHEN CONVOY IS IN CENTER LANE ONLY.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

THIS DRAWING SHALL BE USED FOR EDGELINE OR LANELINE MARKING FOR MULTILANE DIVIDED ROADWAYS.

① CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

② USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.

WET PAINT W21-64 OR WET PAINT W21-64

③ OPTIONAL TRUCK-MOUNTED ATTENUATOR.

④ SIGNS SHALL BE REPEATED AFTER EVERY ON RAMP OR EVERY THREE MILES.

⑤ IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

LEGEND

V1	LEAD VEHICLE
V2	SHADOW VEHICLE
V3	TRAIL VEHICLE WITH TMA
TMA	TRUCK-MOUNTED ATTENUATOR
	SIGN ON TEMPORARY SUPPORT
	DIRECTION OF TRAFFIC
	CONES
	FLASHING ARROW PANEL (MERGE)

MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/3/2013 DATE

/S/ Travis Feltes STATE TRAFFIC EN

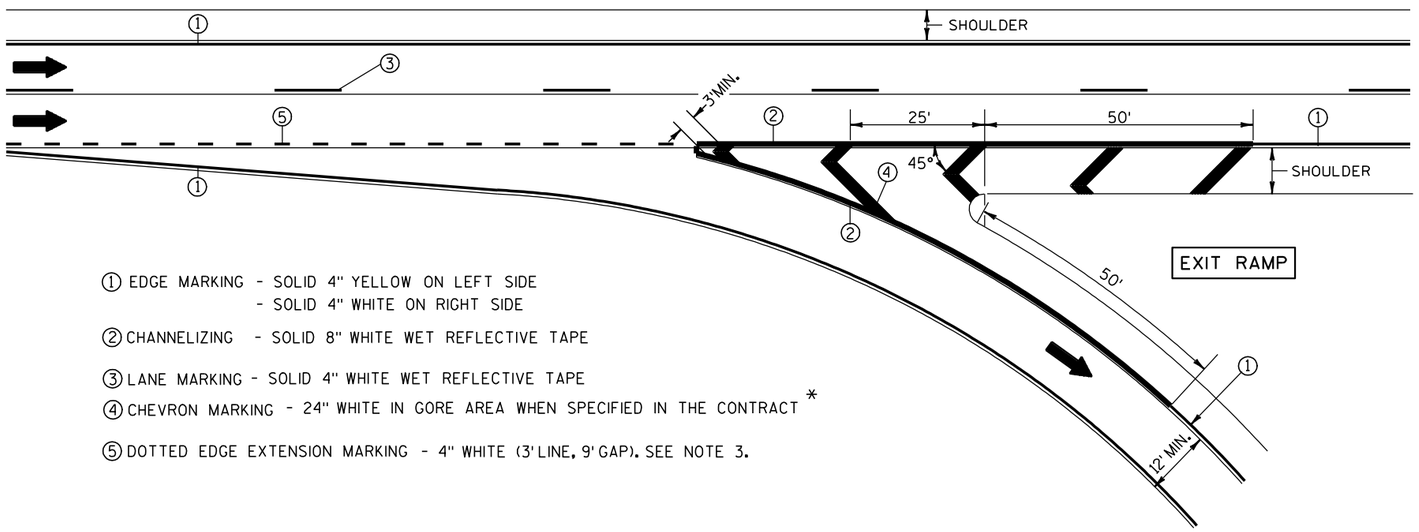
FHWA

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S.D.D. 15 C 19-2c

6

S.D.D. 15 C 19-2c



① EDGE MARKING - SOLID 4" YELLOW ON LEFT SIDE
- SOLID 4" WHITE ON RIGHT SIDE

② CHANNELIZING - SOLID 8" WHITE WET REFLECTIVE TAPE

③ LANE MARKING - SOLID 4" WHITE WET REFLECTIVE TAPE

④ CHEVRON MARKING - 24" WHITE IN GORE AREA WHEN SPECIFIED IN THE CONTRACT *

⑤ DOTTED EDGE EXTENSION MARKING - 4" WHITE (3' LINE, 9' GAP). SEE NOTE 3.

NOTES:

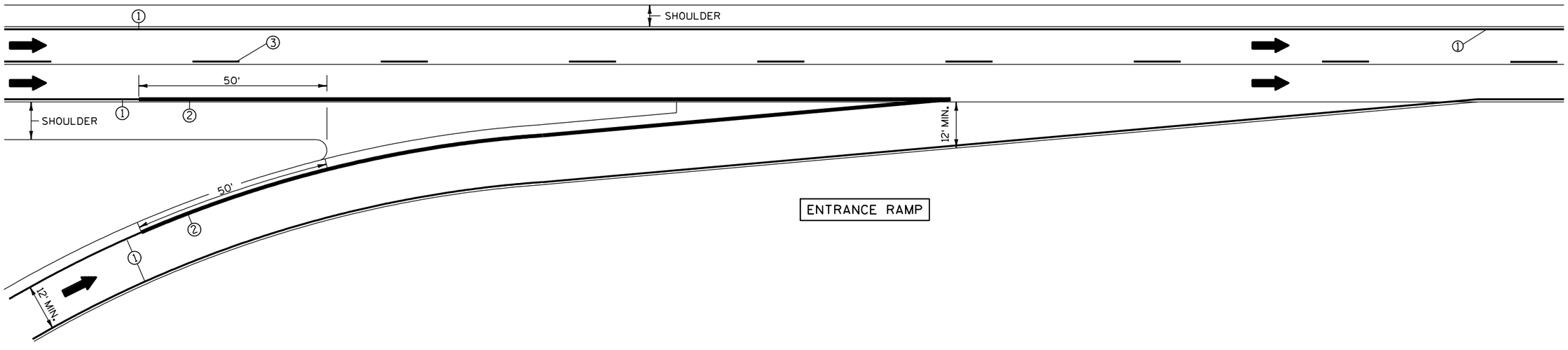
1. ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.

2. PLACE WHITE EDGE OF TAPE 6" LEFT FROM JOINT.

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

4. RETRACE EXISTING DIAGONAL MARKINGS.

* REFER TO DESIGN NOTES.



6

6

S.D.D. 15 C 31-1a

S.D.D. 15 C 31-1a

PAVEMENT MARKING (RAMPS AND GORES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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.

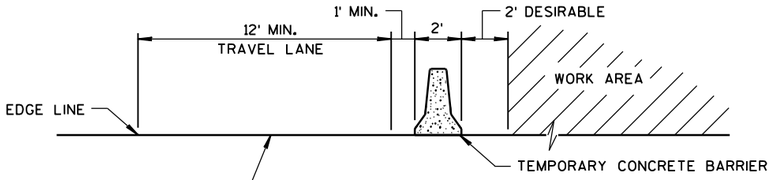
(1) CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUM TAPER.

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.

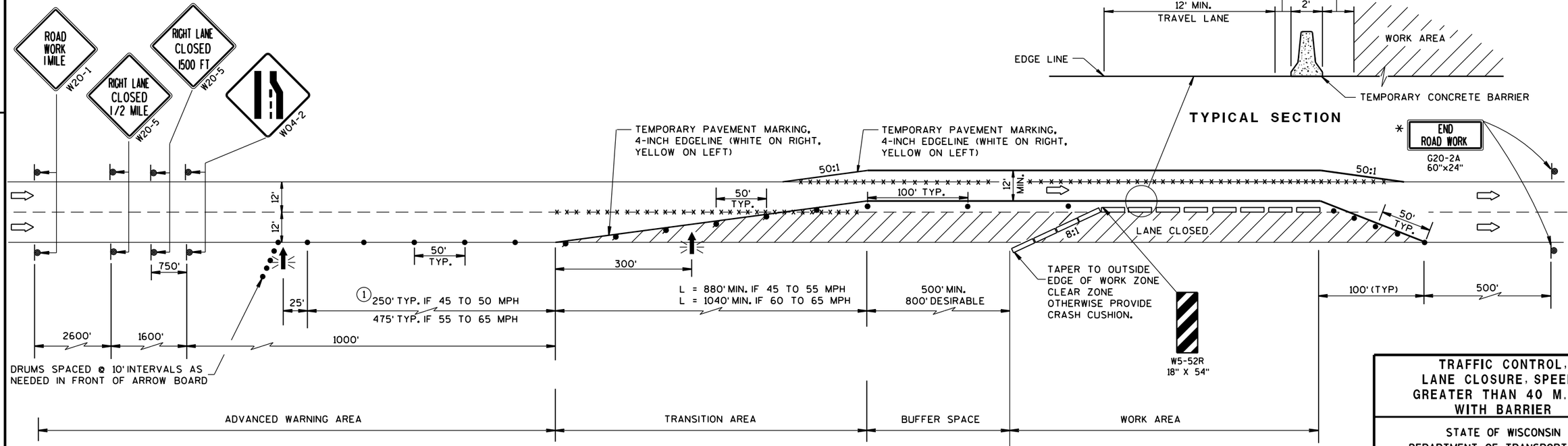
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

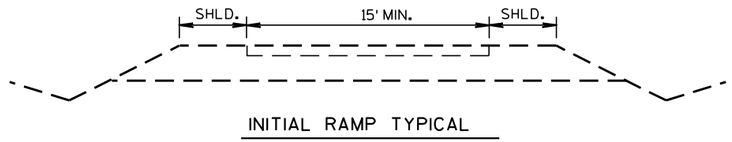
APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER — SIGN
FHWA

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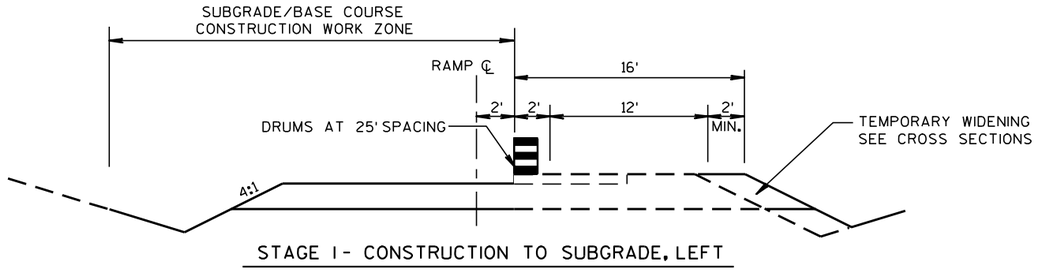
S.D.D. 15 D 3-2

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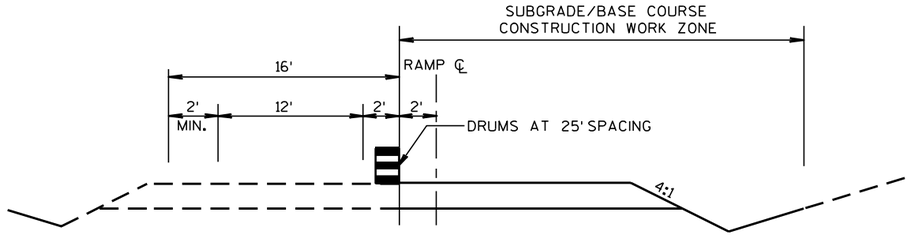
S.D.D. 15 D 3-2



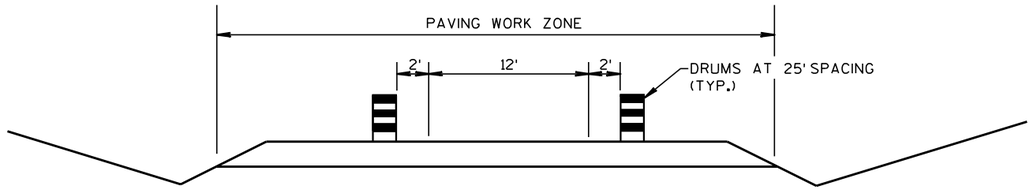
INITIAL RAMP TYPICAL



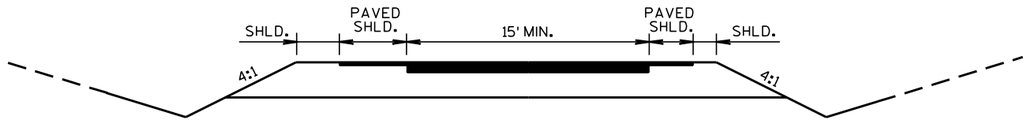
STAGE I - CONSTRUCTION TO SUBGRADE, LEFT



STAGE II - CONSTRUCTION TO SUBGRADE, RIGHT



STAGE III - TRAFFIC ON BASE COURSE



STAGE IV - PAVING

GENERAL NOTES :

WORK SHALL BE SCHEDULED FOR ALL STAGES TO MINIMIZE INCONVENIENCE TO THE TRAFFIC USING THE RAMP WHILE IT IS ONLY BASE COURSE.

IN STAGE III, A MINIMUM 12' LANE WIDTH SHALL BE DELINEATED WITH DRUMS ALONG BOTH EDGES AT ALL TIMES UNTIL PAVED AND PAVEMENT MARKINGS ARE PLACED.

TRAFFIC CONTROL, RAMP CONSTRUCTION STAGING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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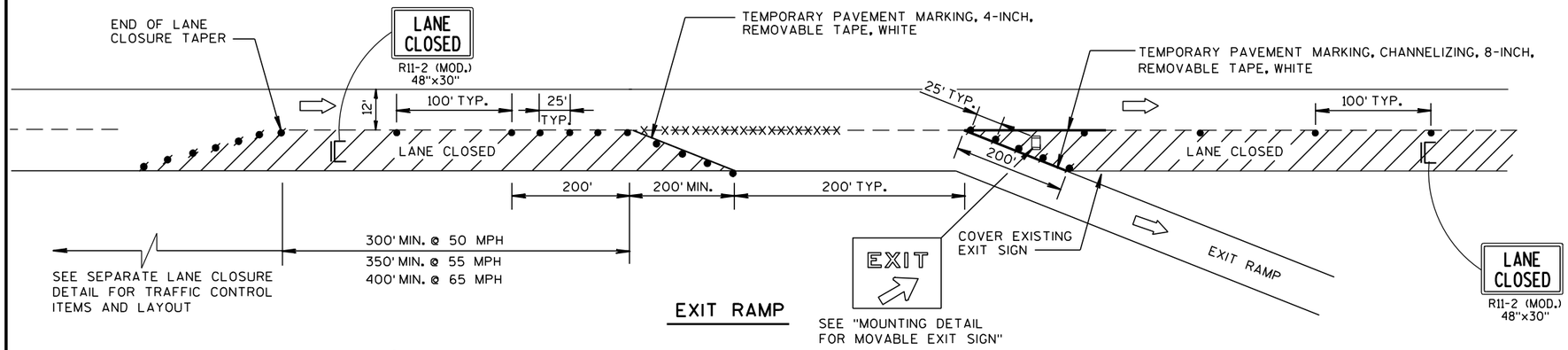
7-14-94
DATE

/S/ Chester J. [illegible]
DIRECTOR, OFFICE [illegible]

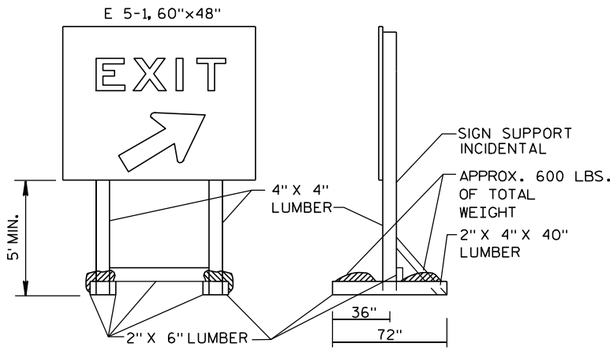
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S.D.D. 15 D 4-1

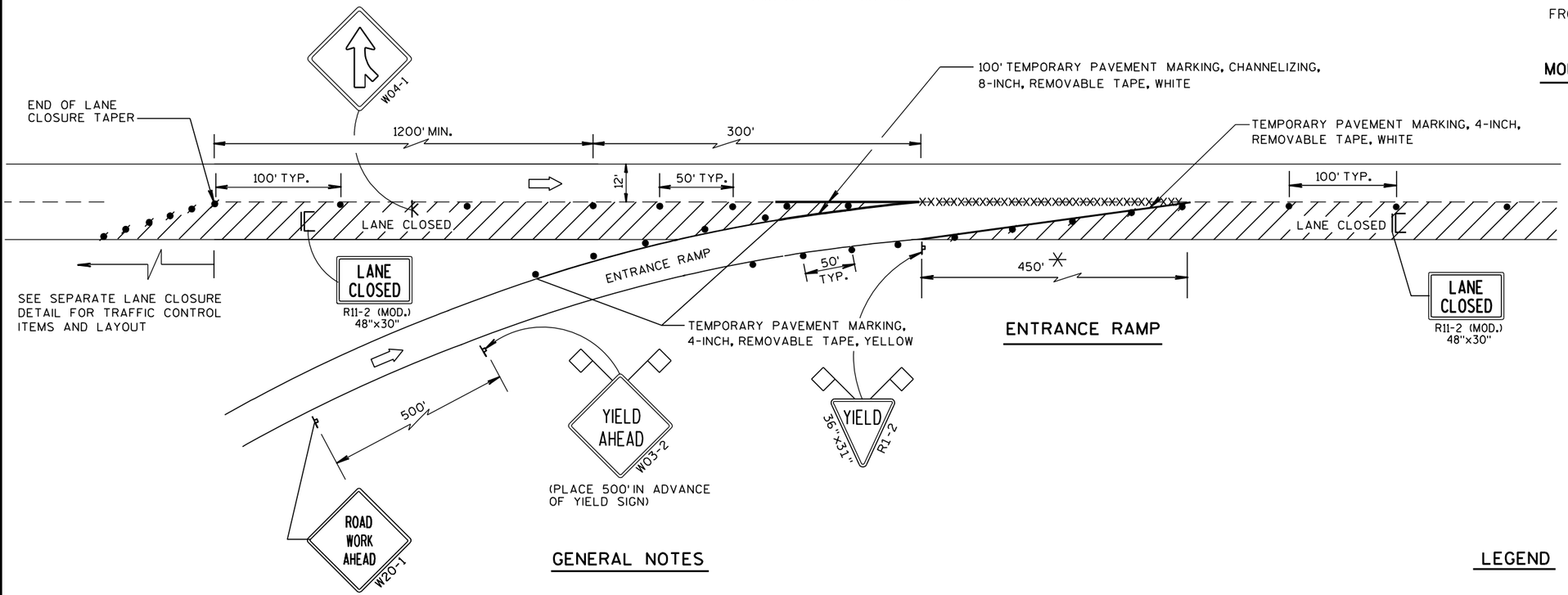


EXIT RAMP



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

S.D.D. 15 D 15-1

S.D.D. 15 D 15-1

LEGEND

TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

TRAFFIC CONTROL DRUM

SIGN ON PERMANENT SUPPORT

TYPE "A" WARNING LIGHT (FLASHING)

DIRECTION OF TRAFFIC

GENERAL NOTES

THIS RAMP CLOSURE DETAIL IS TYPICAL FOR CLOSING A RIGHT SIDE EXIT RAMP. FOR A LEFT SIDE EXIT RAMP, REVERSE THE TRAFFIC CONTROL.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

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

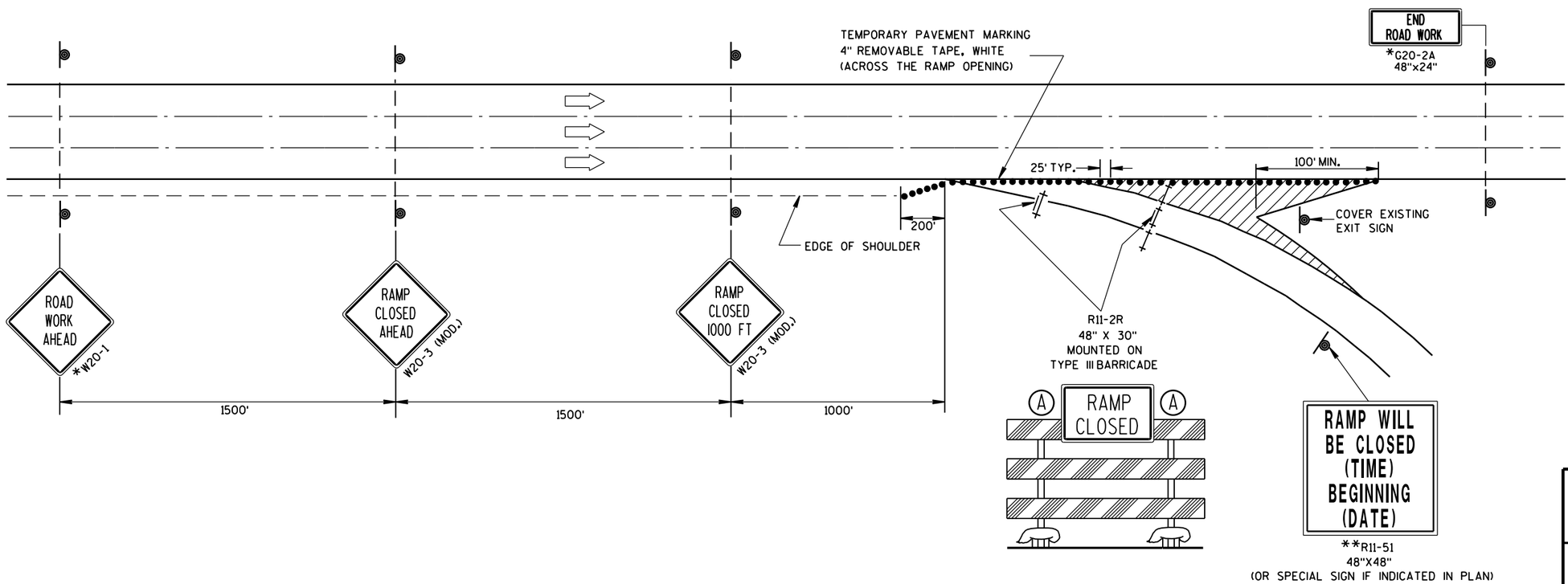
PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF RAMP CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WORK AREAS WITH A DROPOFF ALONG THE EDGE OF AN OPEN TRAVEL LANE SHALL BE LEVELED WITH TEMPORARY FILL WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE TRAVEL LANE. DRUMS SHALL BE PLACED ENTIRELY OUTSIDE THE TRAVEL LANE, ALLOWING THE FULL UNOBSTRUCTED LANE WIDTH, WHEN THE WORK IS NOT IN PROGRESS.

WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12-HOUR DURATION.

*W20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE RAMP CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

** PLACE "RAMP WILL BE CLOSED" SIGN 10 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.



TRAFFIC CONTROL,
EXIT RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013
DATE

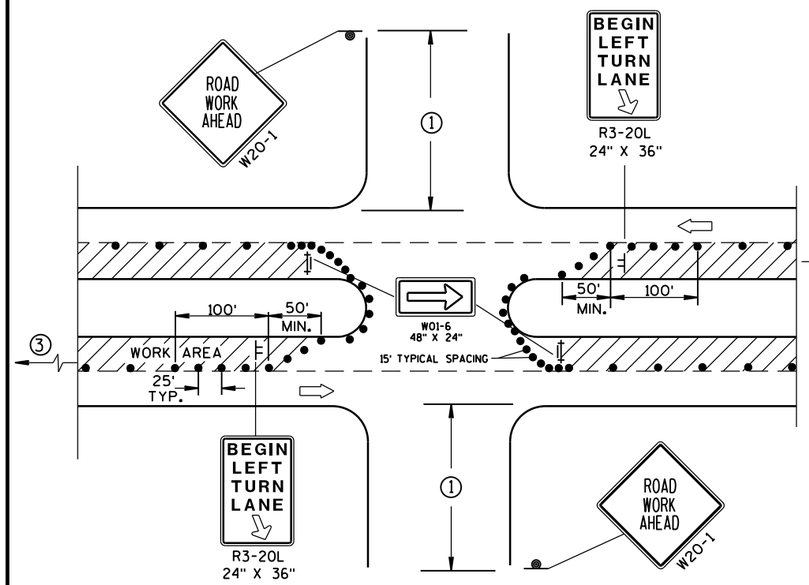
/S/ Travis Feltes
STATE TRAFFIC ENGINEER

DESIGN

FHWA

6

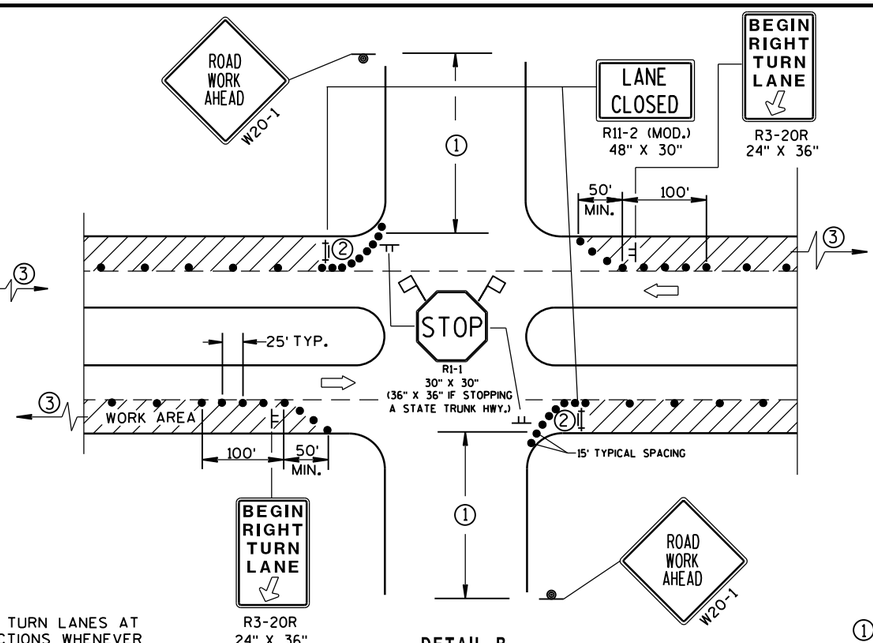
S.D.D. 15 D 16-2



DETAIL A

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.



DETAIL B

FOR RIGHT LANE CLOSURE AT INTERSECTION

GENERAL NOTES

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

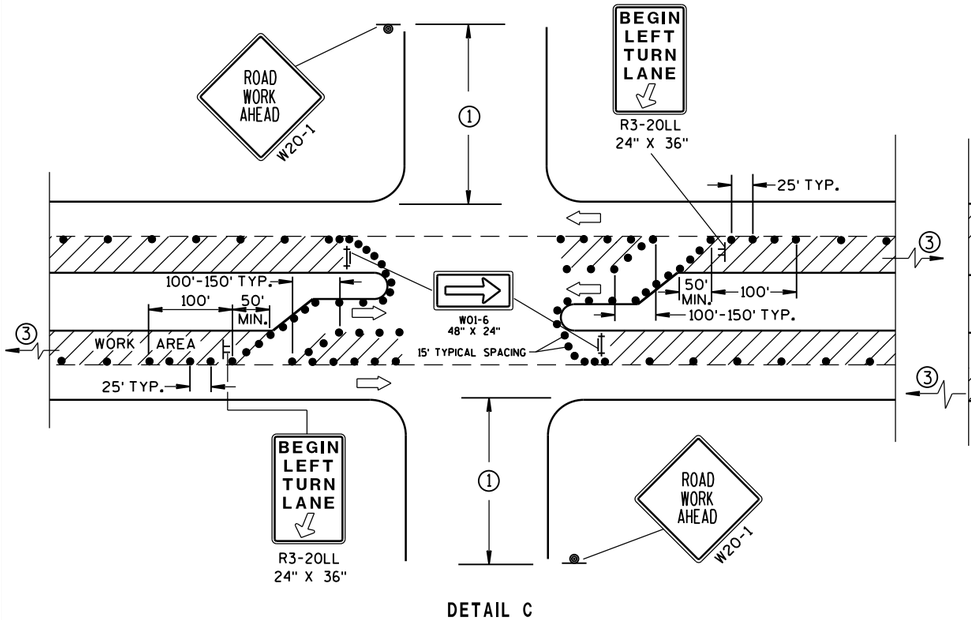
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35-40 MPH.
200' IF 25-30 MPH.

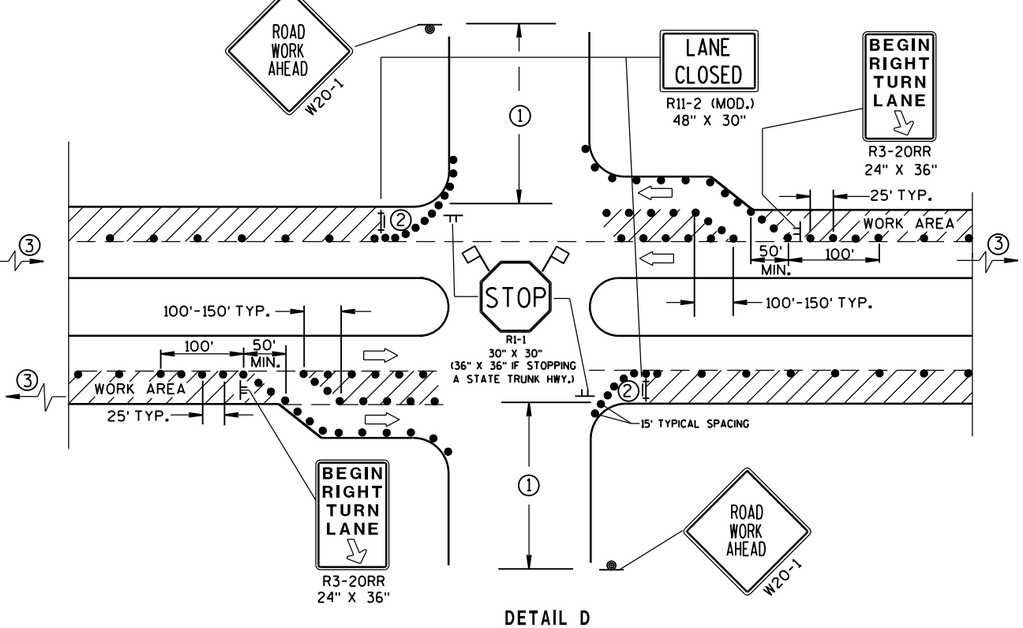
② ALSO USE BARRICADE AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.

③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.



DETAIL C

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING (WITH LEFT TURN BAY OPEN)



DETAIL D

FOR RIGHT LANE CLOSURE AT INTERSECTION (WITH RIGHT TURN BAY OPEN)

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT (5' MIN. MOUNTING HEIGHT)
- TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., (ORANGE)
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

FHWA

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S.D.D. 15 D 21-2

LEGEND

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

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

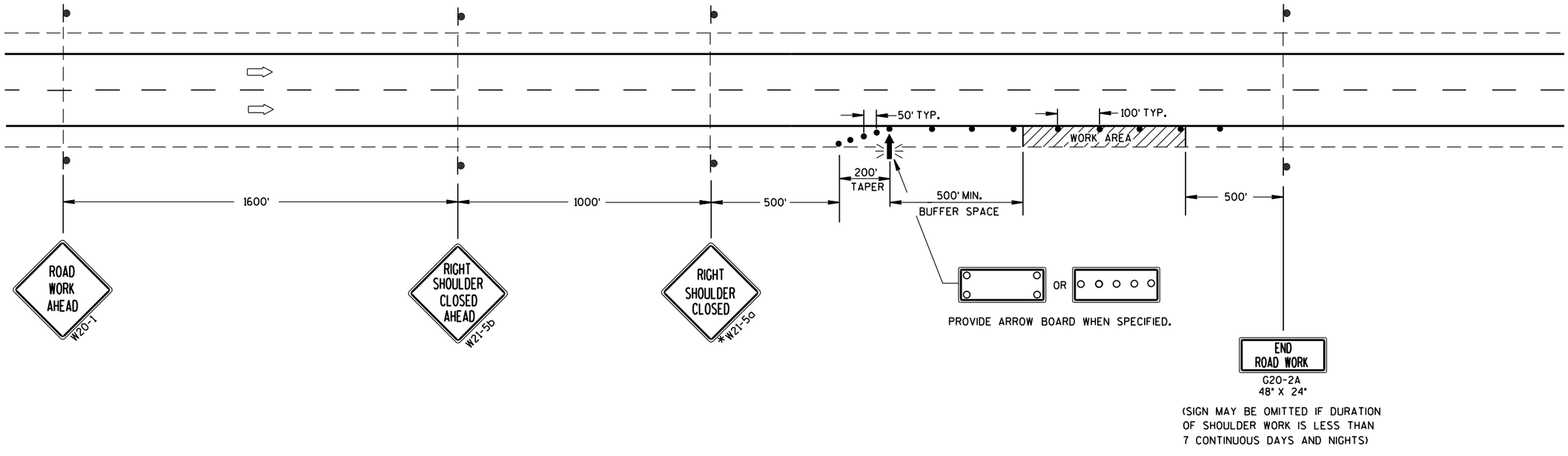
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

WHEN A 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.

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

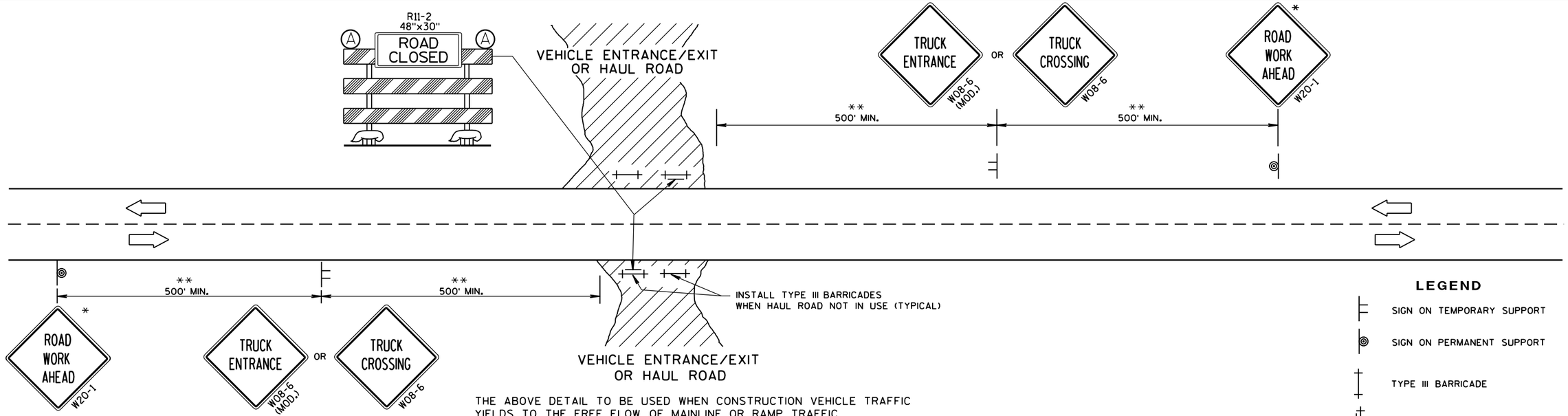
8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

6

S.D.D. 15 D 27-2



THE ABOVE DETAIL TO BE USED WHEN CONSTRUCTION VEHICLE TRAFFIC YIELDS TO THE FREE FLOW OF MAINLINE OR RAMP TRAFFIC

LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC

GENERAL NOTES

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

WHEN ACTIVITY REFLECTED BY THE SIGN IS NOT CURRENTLY TAKING PLACE, THE HIGHWAY SHALL BE RESTORED TO NORMAL CONDITION AND THE SIGNS SHALL BE REMOVED, COVERED OR TURNED AWAY FROM TRAFFIC.

WHEN A SIDE ROAD OR RAMP INTERSECTS WITHIN THE ADVANCE SIGNING AREA, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

* THESE SIGNS ARE TO BE USED ONLY WHEN VEHICLE ENTRANCE/EXIT CONDITIONS ARE SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA OR SIGNING OR AS DIRECTED BY THE ENGINEER.

** 500 FEET SHOWN IS FOR ROADWAYS WITH A NON-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350 FEET. FOR 25-30 MPH, USE 200 FEET. USE 1000 FEET/1500 FEET FOR EXPRESSWAY/FREEWAY.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

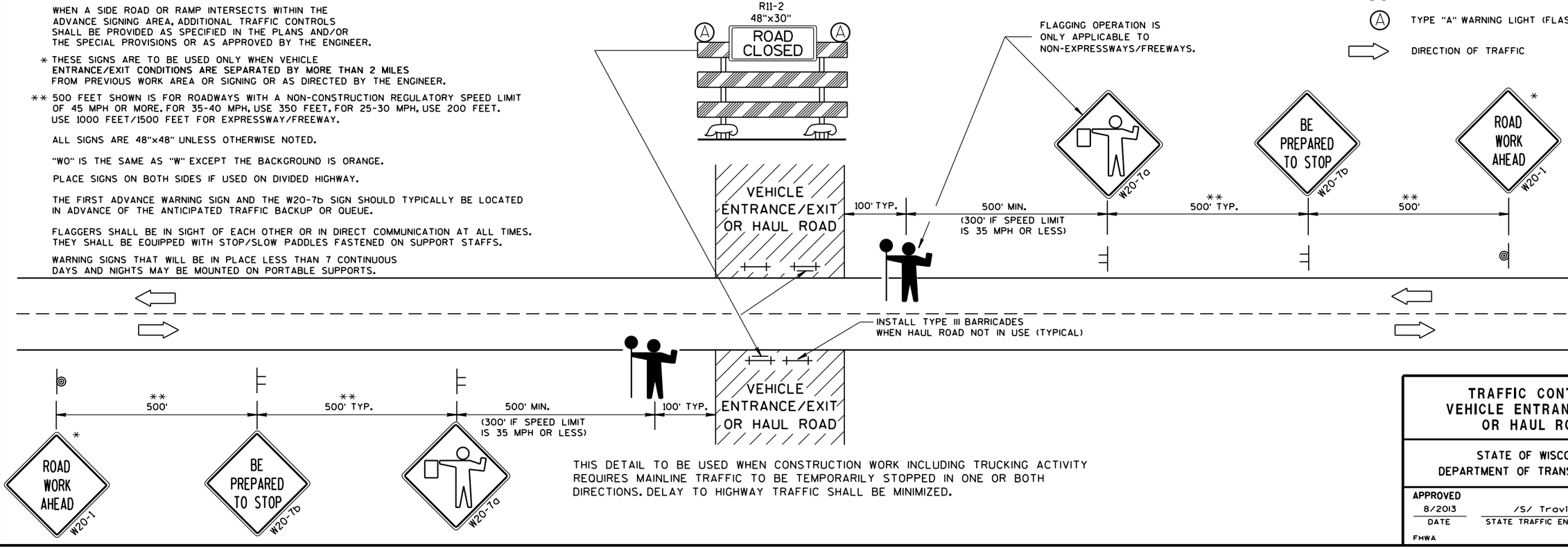
"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

PLACE SIGNS ON BOTH SIDES IF USED ON DIVIDED HIGHWAY.

THE FIRST ADVANCE WARNING SIGN AND THE W20-7b SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

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.

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



THIS DETAIL TO BE USED WHEN CONSTRUCTION WORK INCLUDING TRUCKING ACTIVITY REQUIRES MAINLINE TRAFFIC TO BE TEMPORARILY STOPPED IN ONE OR BOTH DIRECTIONS. DELAY TO HIGHWAY TRAFFIC SHALL BE MINIMIZED.

TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

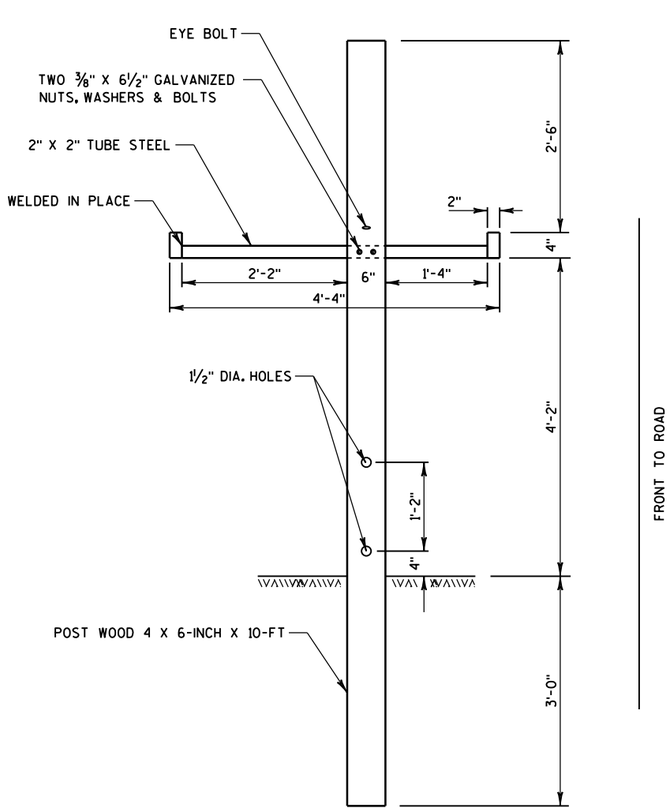
APPROVED

8/2013	/S/ Travis Feltes	
DATE	STATE TRAFFIC ENGINEER	IGN

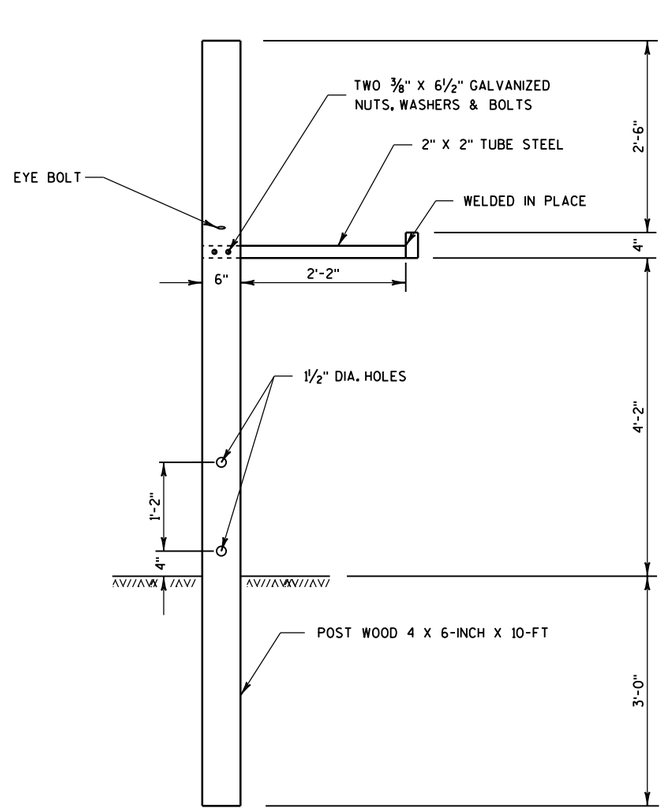
FHWA

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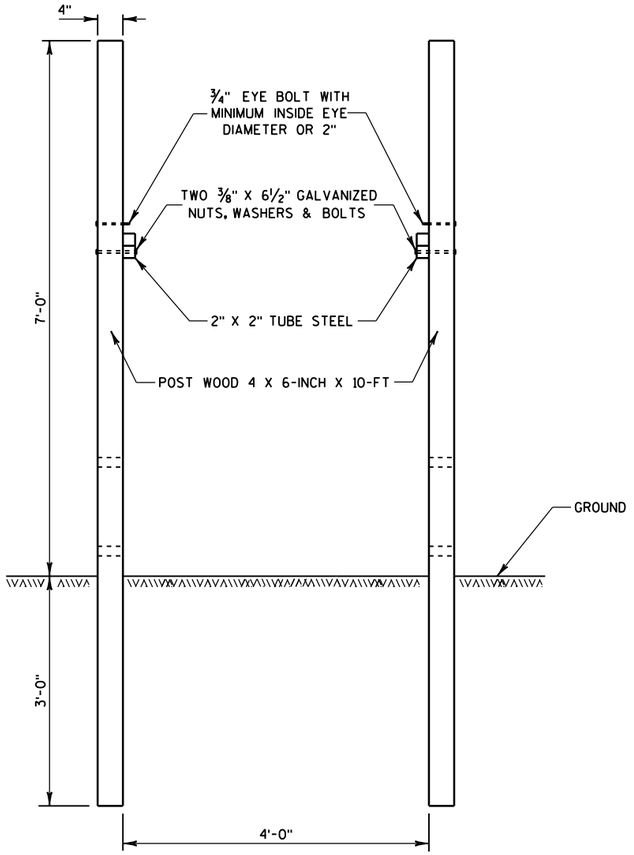
S.D.D. 15 D 29-3



SIDE VIEW
(3 BARRICADE SYSTEM)



SIDE VIEW
(2 BARRICADE SYSTEM)



FRONT VIEW

BARRICADE RACK

* LOCATE OUTSIDE CLEAR ZONE AS DIRECTED BY ENGINEER

BARRICADE RACK	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
4-30-2013 DATE	/S/ Bill Wondrachek STATE TRAFFIC I MANAGEMENT EN
FHWA	

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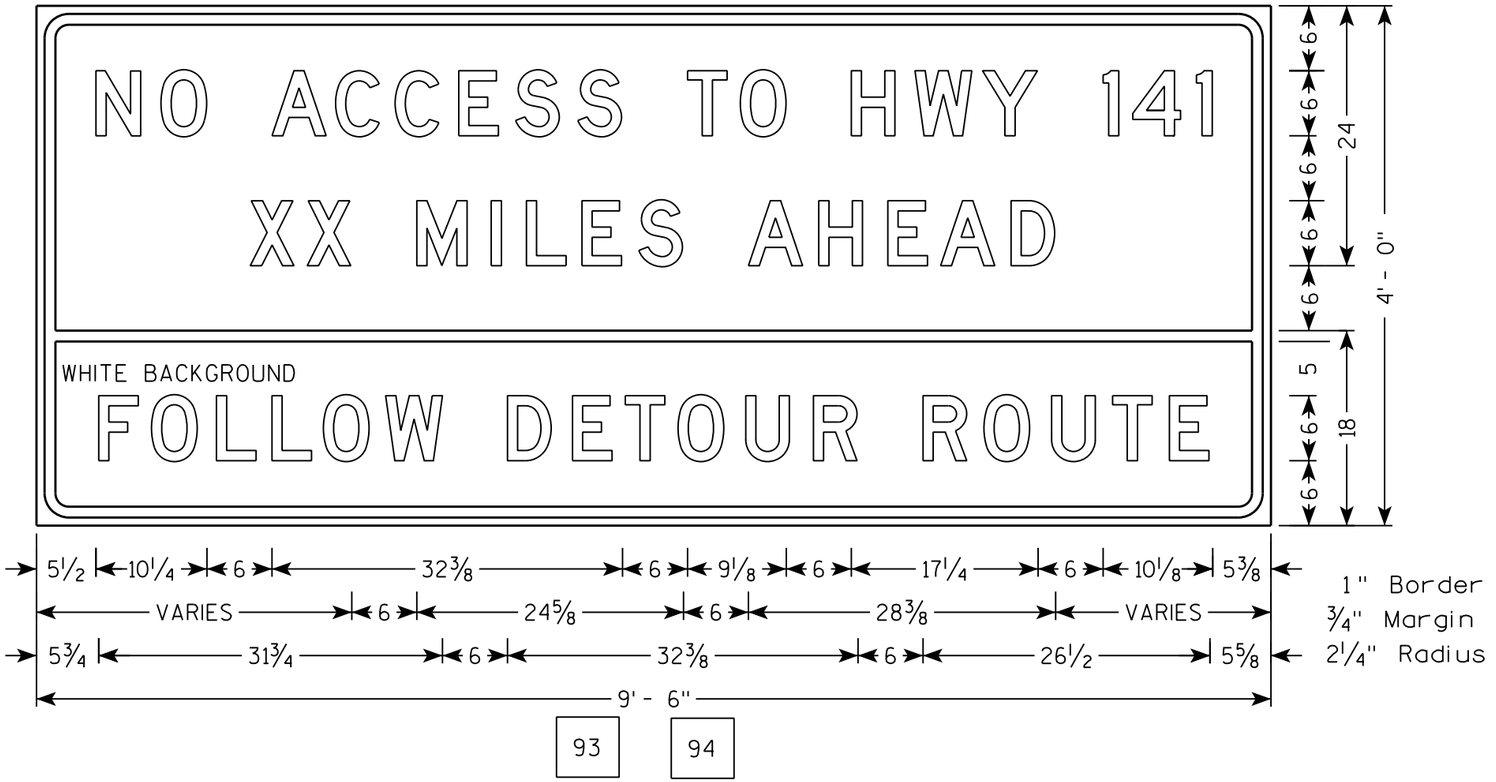
S.D.D. 15 D 36-1

6

S.D.D. 15 D 36-1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - ORANGE except as Shown
   Message - BLACK
3. Message Series - D
4. Apply correct MILES and optically center complete line

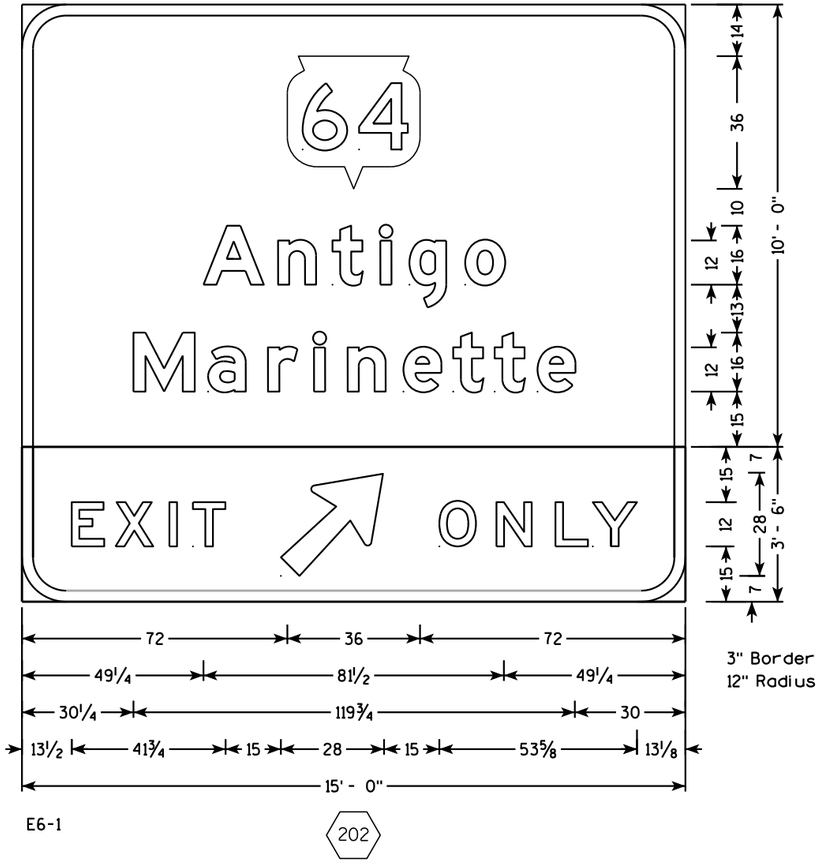


PLAN SHEET PRODUCED
BY WisDOT-NE REGION

PROJECT NO: 1490-27-71	HWY: STH 64	COUNTY: MARINETTE	TEMPORARY SIGNING	SHEET NO: 189	E

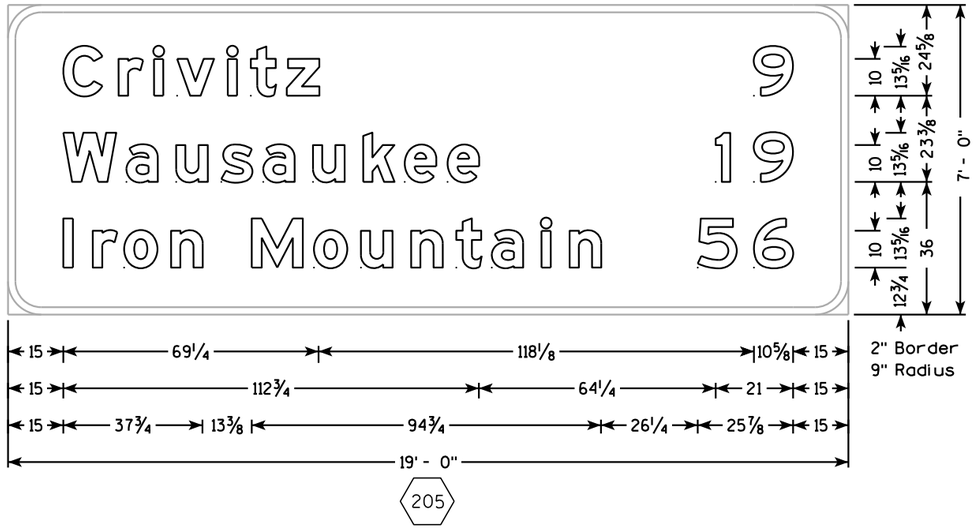
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WISDOT/CADDS SHEET 42



NOTES

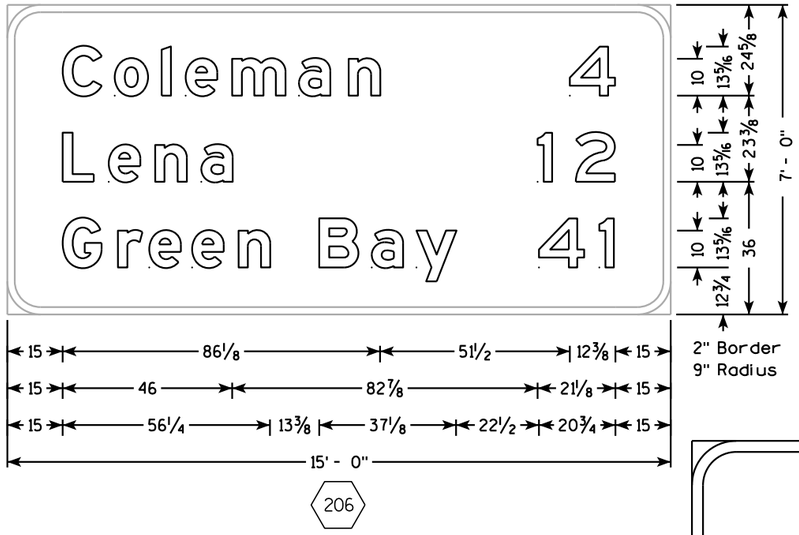
1. All Signs are Type I - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White
3. Message Series - E Modified except all cap WORDS are Series E



7

7

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	PERMANENT SIGNING	SHEET NO: 190	E

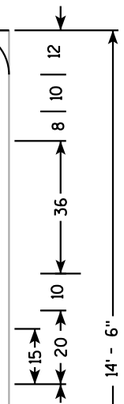


NOTES

1. All Signs are 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 except all cap WORDS are Series E



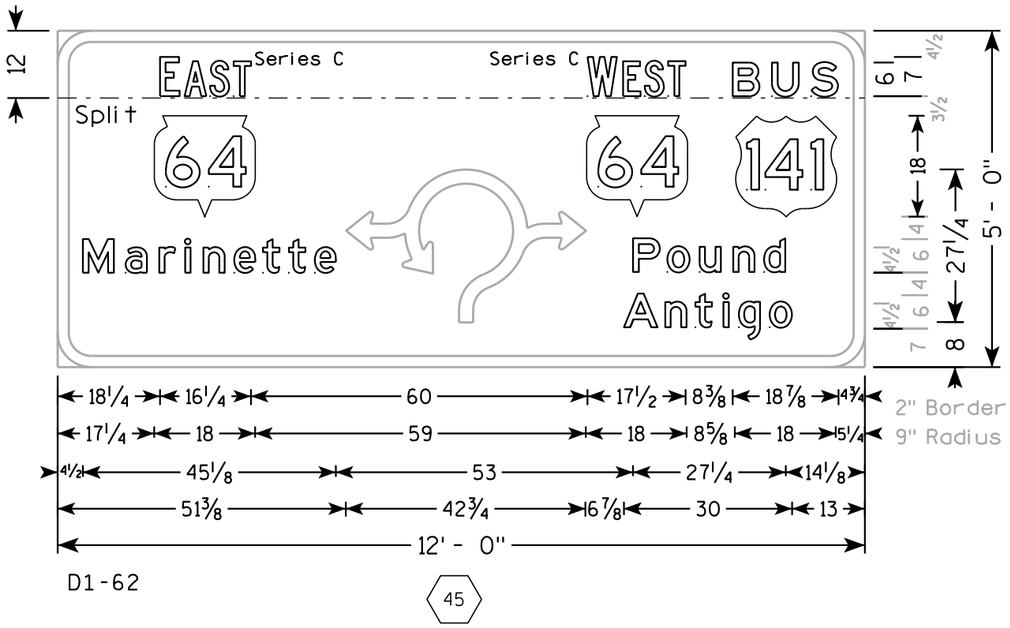




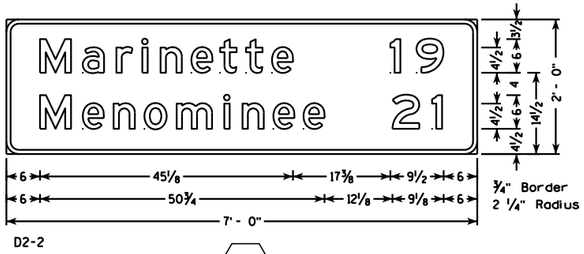
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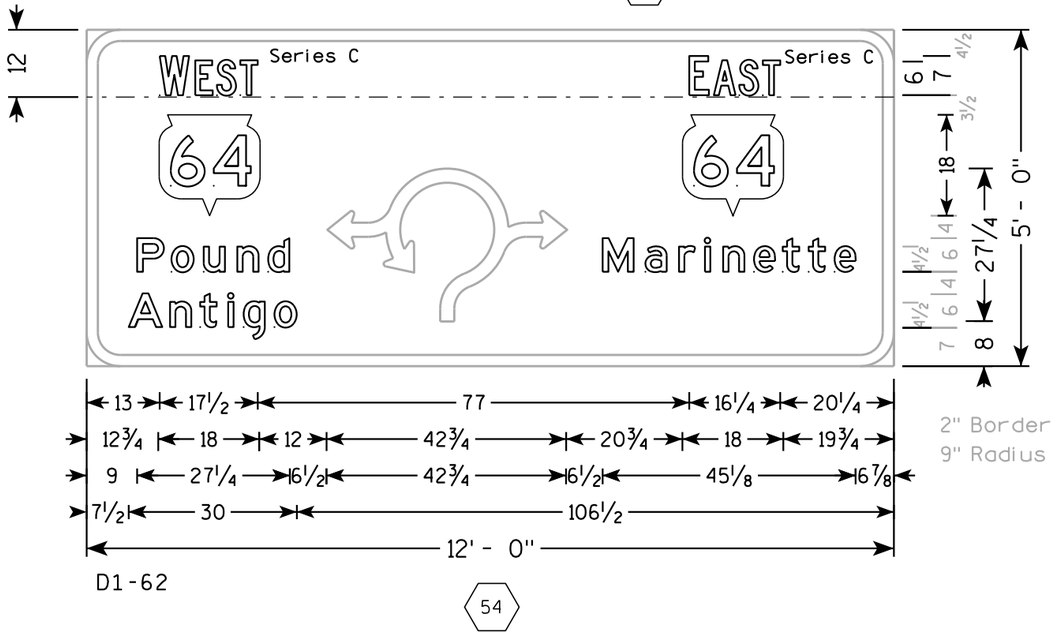


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91

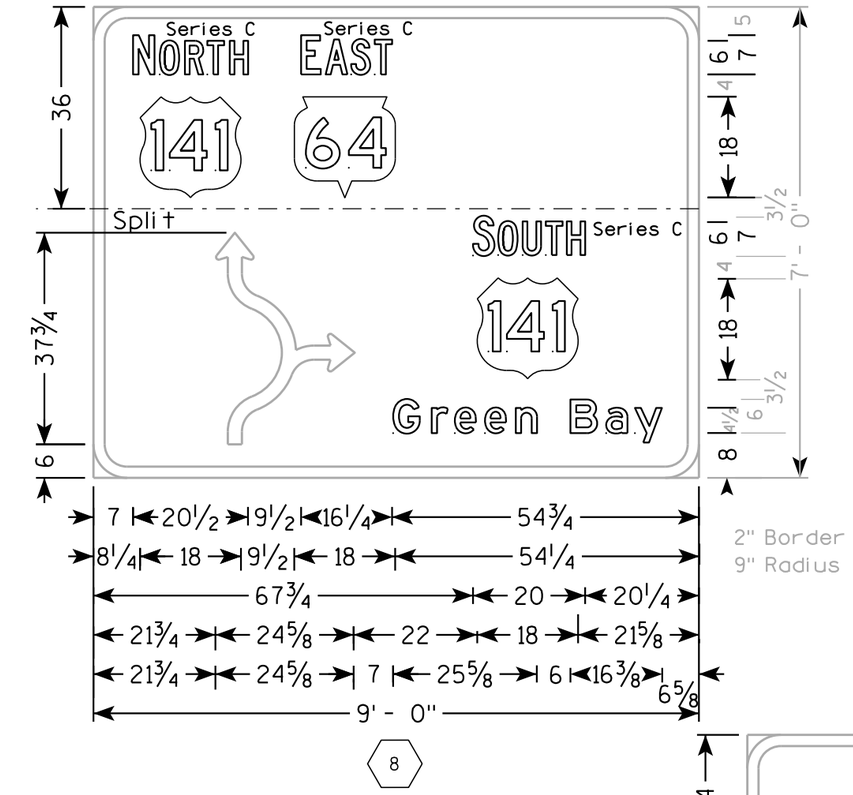
32



54

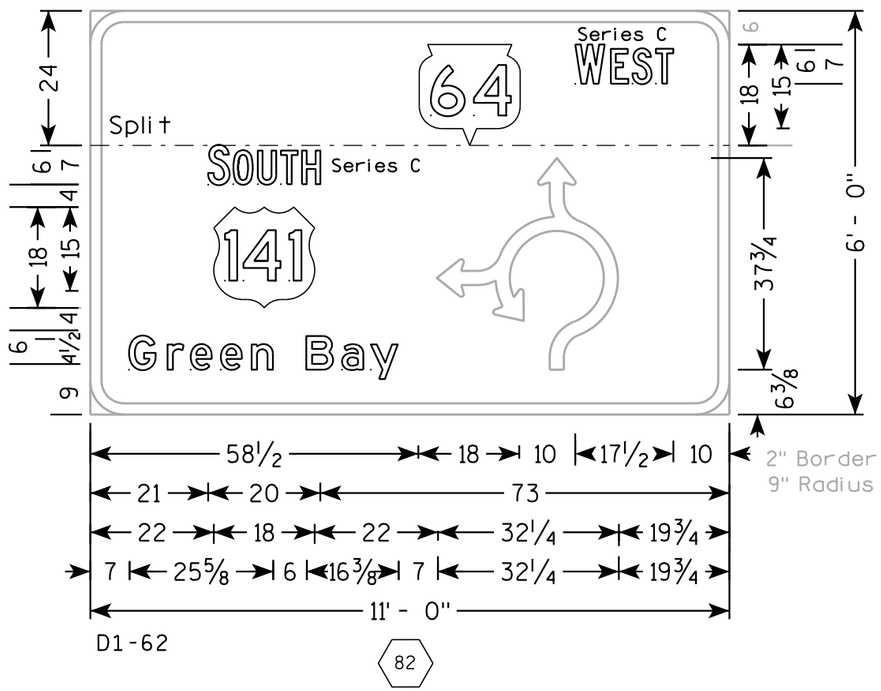
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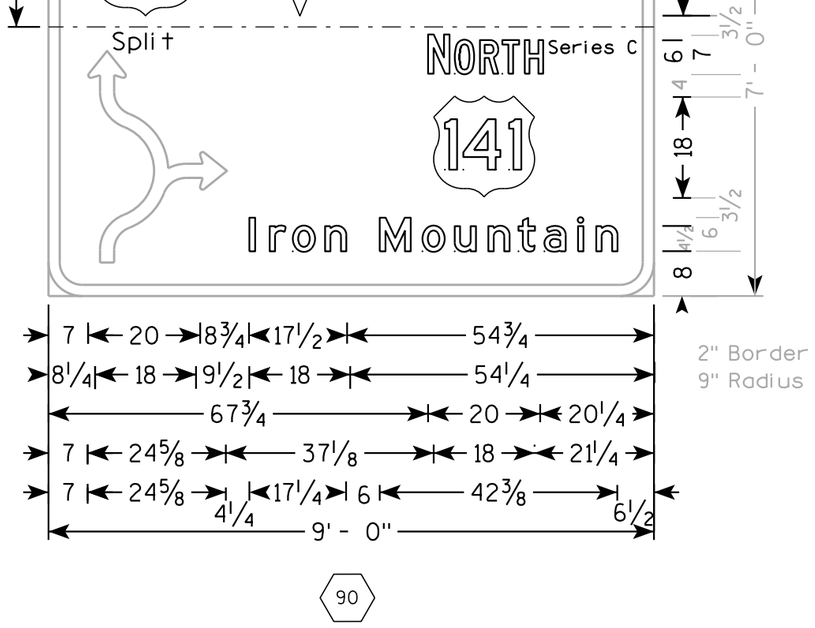
1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White
3. Message Series - E except as noted
3. For Roundabout Detail refer to Standard Plate A11-12 for dimensions.



NOTES

1. All SignsType 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 noted
3. For Roundabout Detail refer to Standard Plate A11-12 for dimensions.





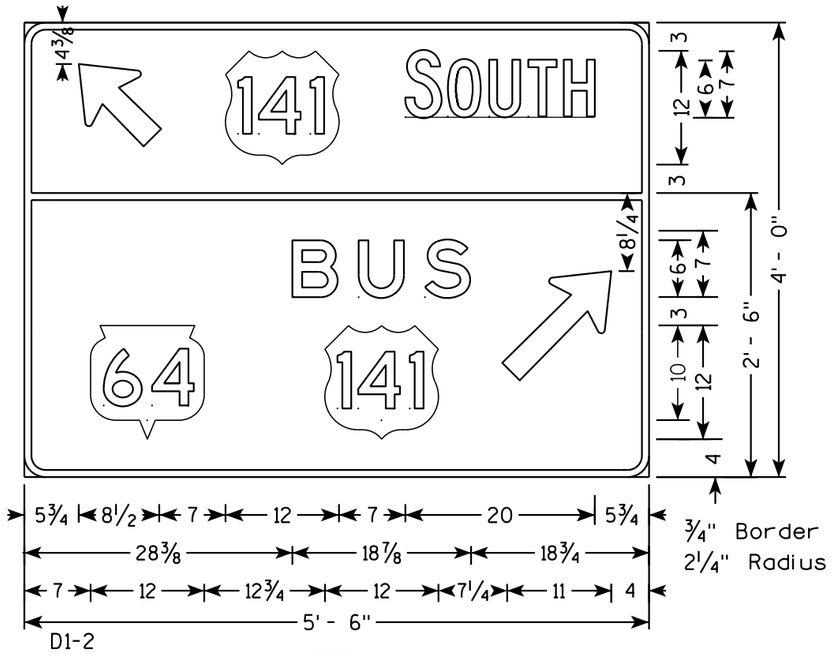
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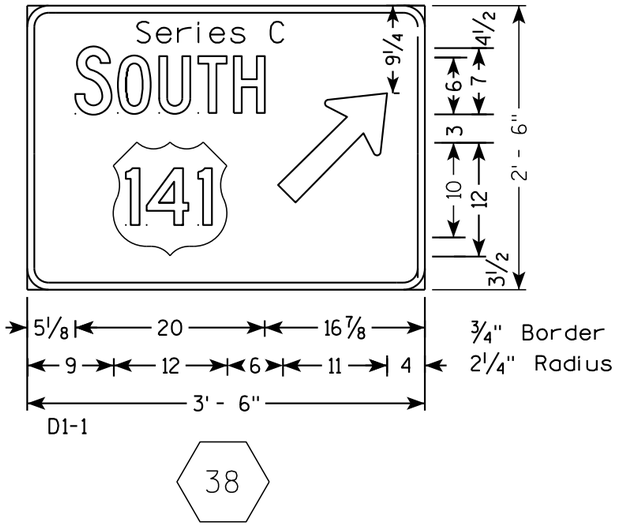
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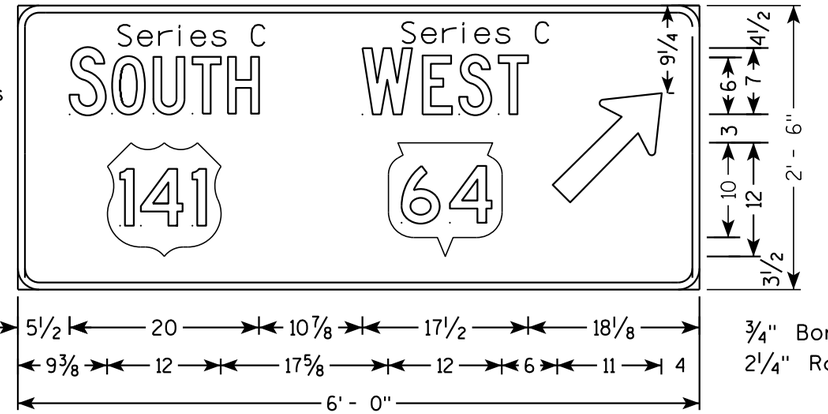
WISDOT/CADDS SHEET 42

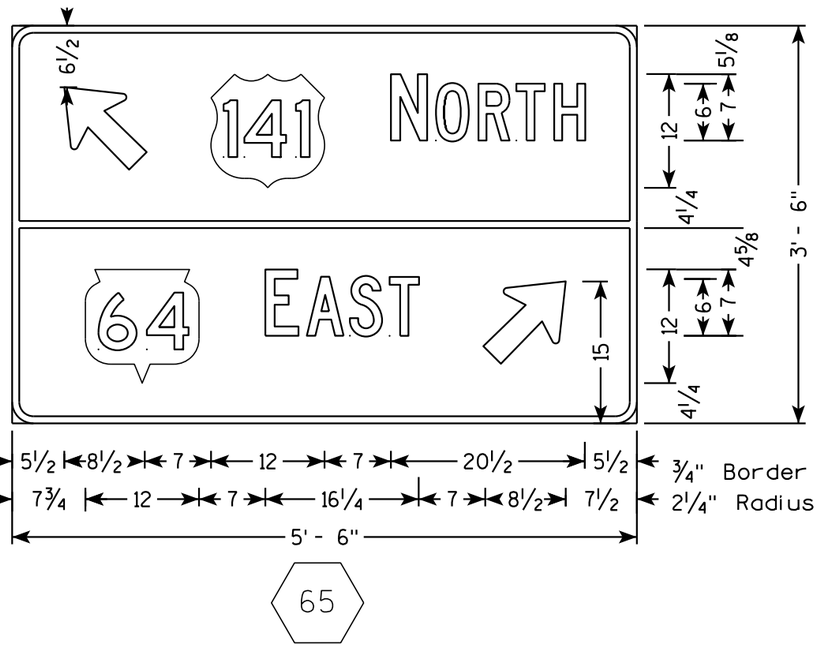
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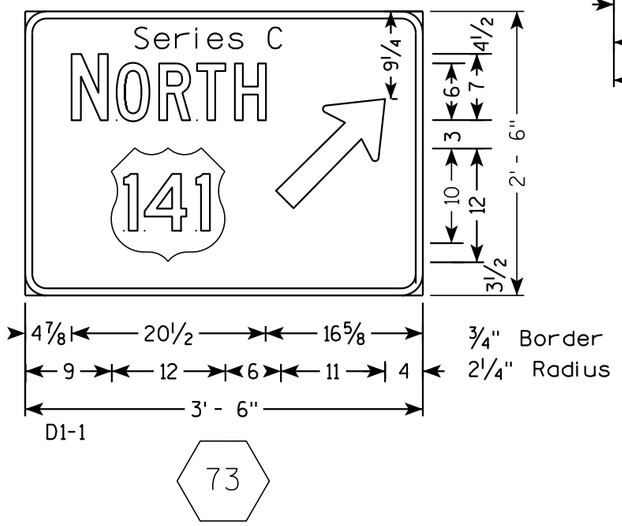
1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - GREEN
   Message - WHITE
3. Message Series - E except as Shown

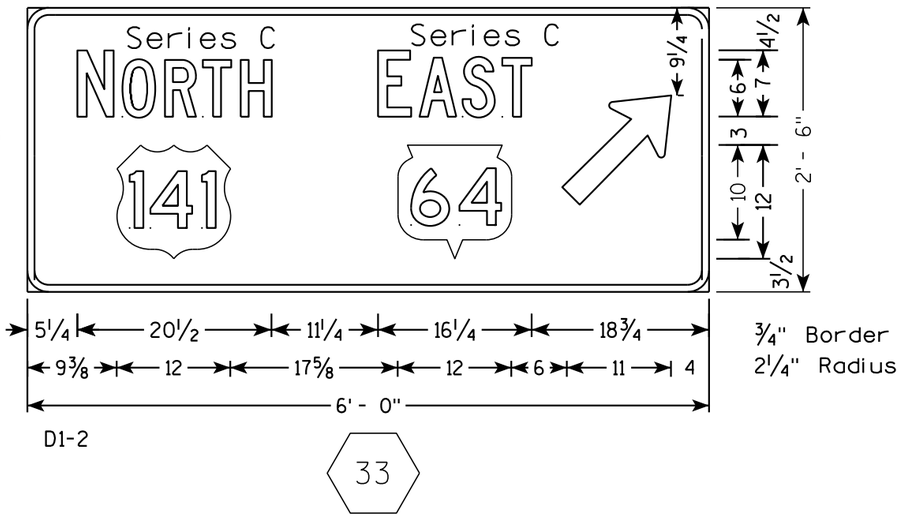












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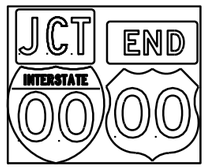
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WISDOT/CADDS SHEET 42

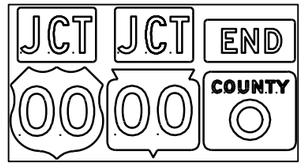
TYPICAL ASSEMBLIES



J1-1



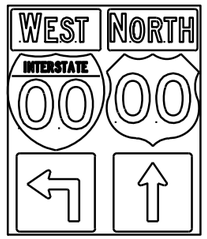
J1-2



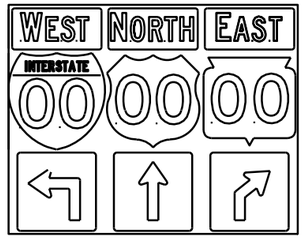
J1-3



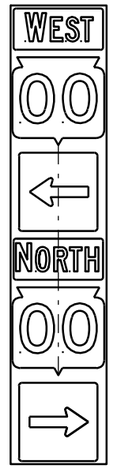
J2-1



J2-2

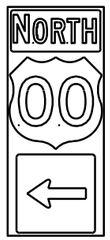


J2-3

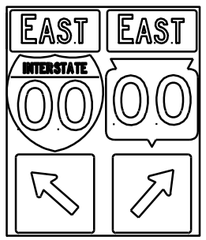


JV

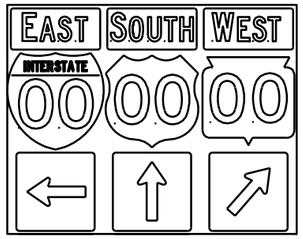
(Typical Vertical J-Assembly
See Note 10 and 11)



J3-1



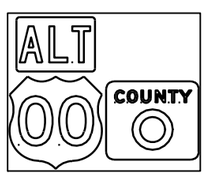
J3-2



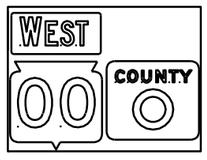
J3-3



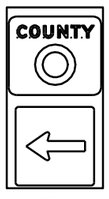
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1



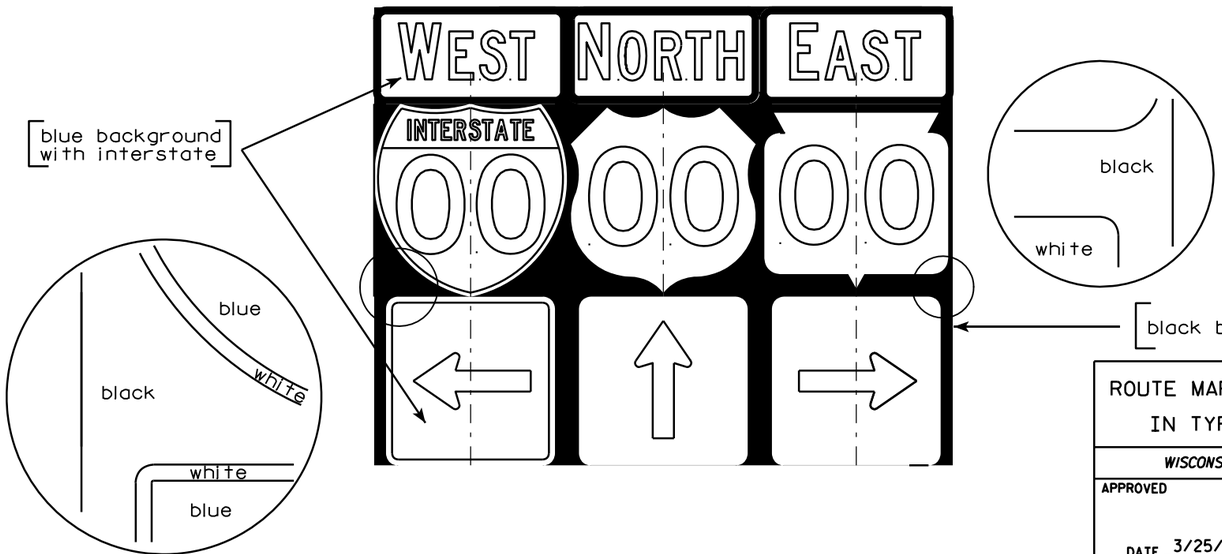
J23-1



J22-1

NOTES

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



ROUTE MARKERS & COMPONENTS IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

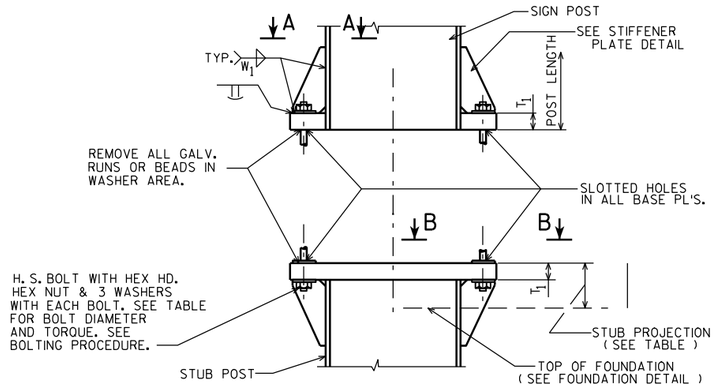
DATE 3/25/13 PLATE NO. A2-1S.7

7

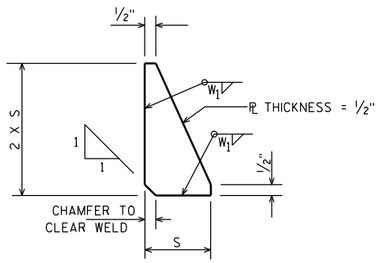
7

PROJECT NO:

SHEET NO: 195 E

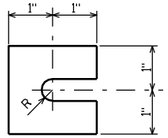


SIGN POST AND STUB POST ELEVATION



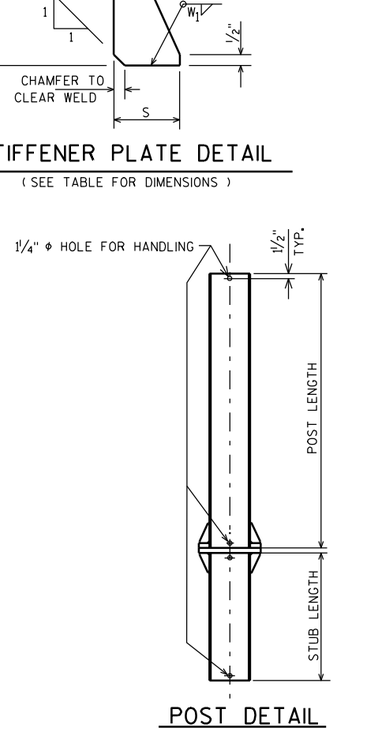
STIFFENER PLATE DETAIL

(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



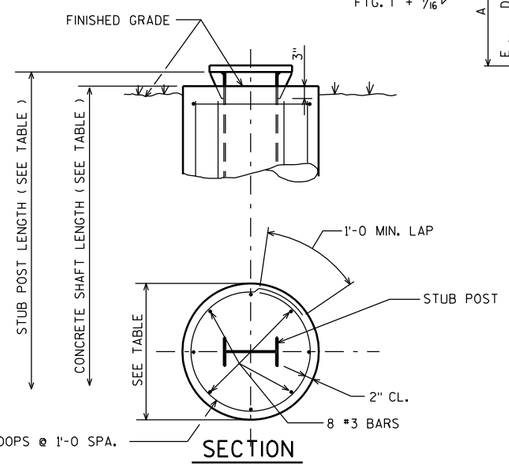
POST DETAIL

	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
E	1.0	62

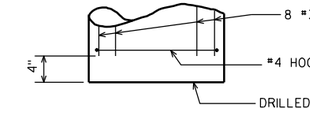
⑦

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
	E	8 @ 7'-11	9 @ 6'-3

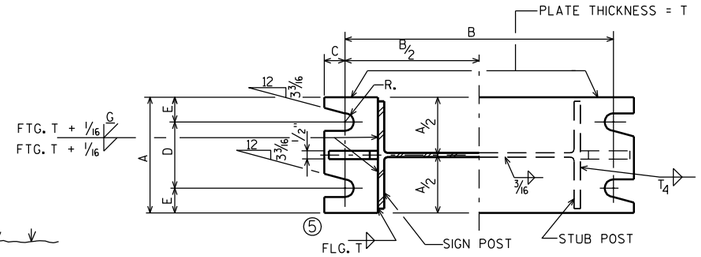
⑦



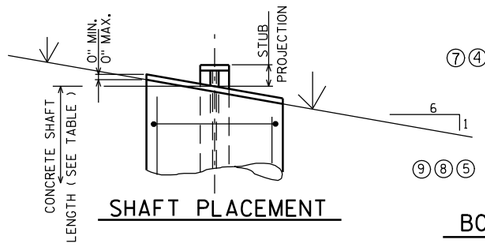
SECTION



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.

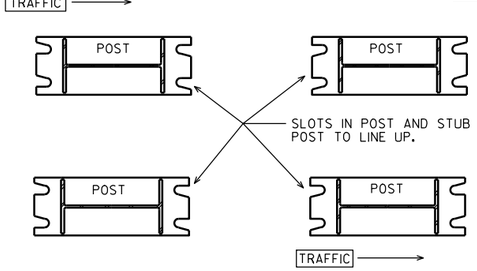
GENERAL NOTES

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" Φ @ 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 Φ	5'-0	76.0# ④
④	B	W12"X16.0 #/FT.	7/8" Φ @ 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 Φ	7'-0	146.5# ④
	C	W12"X19.0 #/FT.	7/8" Φ @ 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 Φ	7'-6	182.1#
	D	W12"X22.0 #/FT.	7/8" Φ @ 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 Φ	8'-0	210.5#
③	E	W12"X26.0 #/FT.	1" Φ @ 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 Φ	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 PL 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: 196 | 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

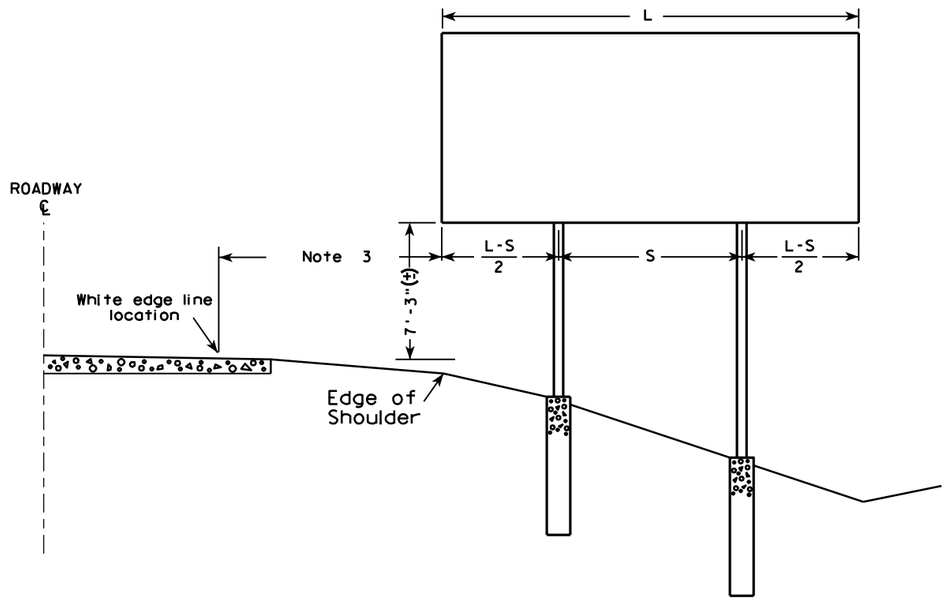
WISCONSIN DEPT OF TRANSPORTATION

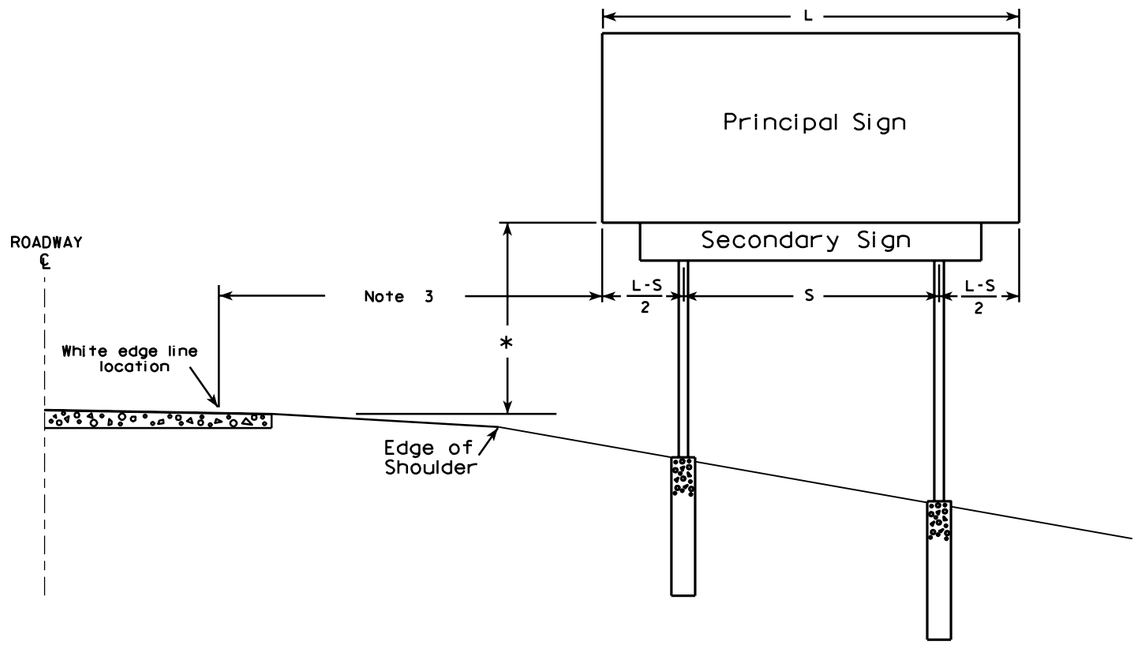
APPROVED Matthew R Rauch
for State Traffic Engineer

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

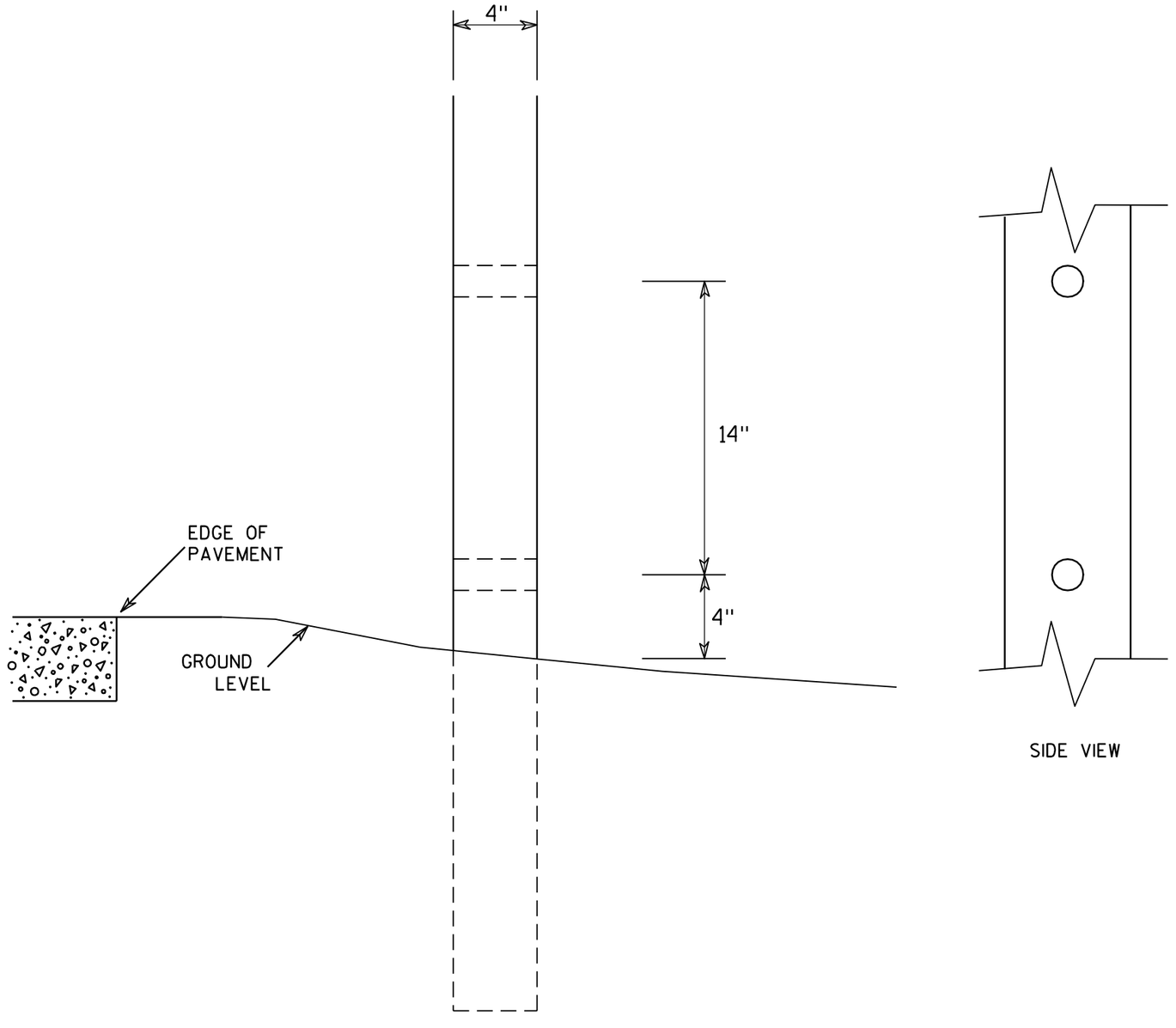
7

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



SIDE VIEW

GENERAL NOTES

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

4 X 6 WOOD POST MODIFICATIONS

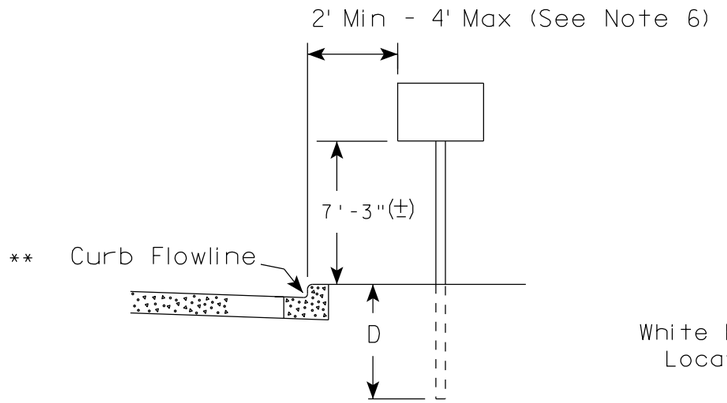
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

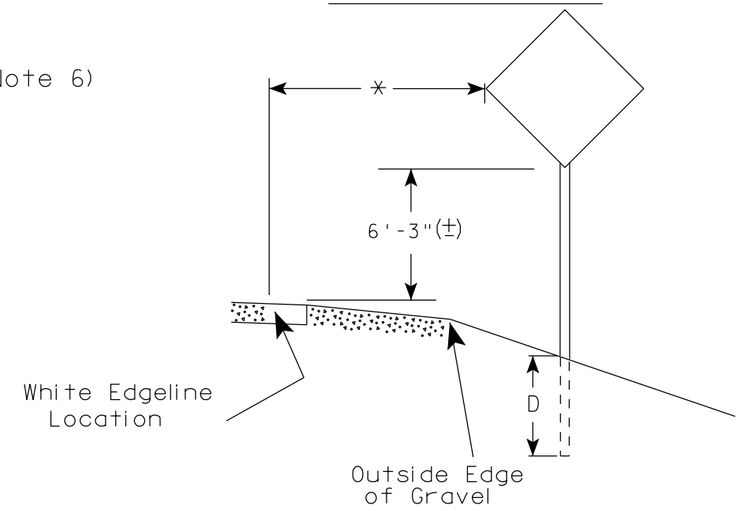
DATE 3/27/97 PLATE NO. A4-11.2

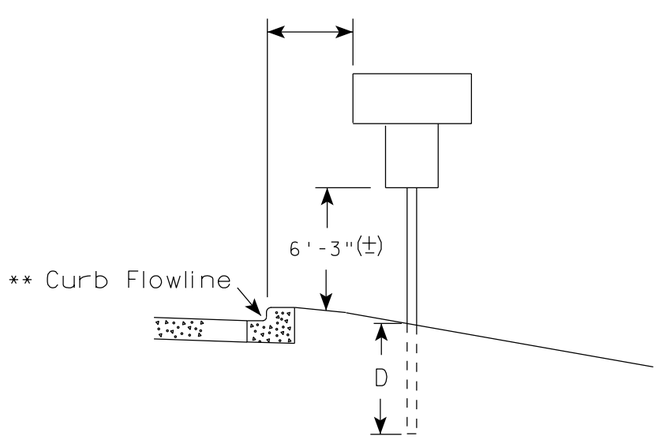
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 200	E

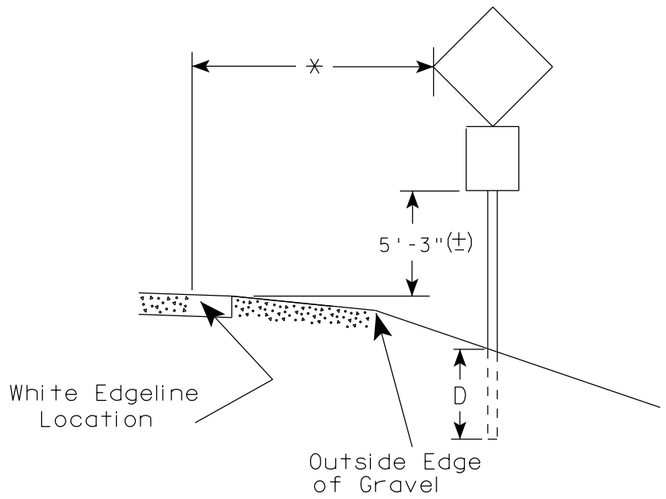
URBAN AREA



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

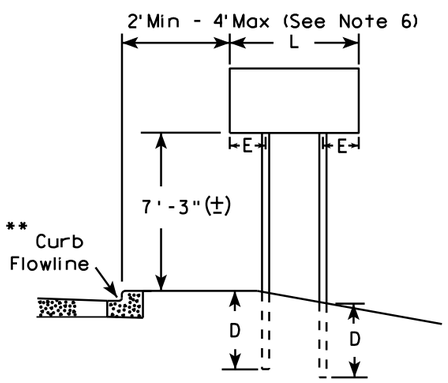
APPROVED Matthew R Rauch
for State Traffic Engineer

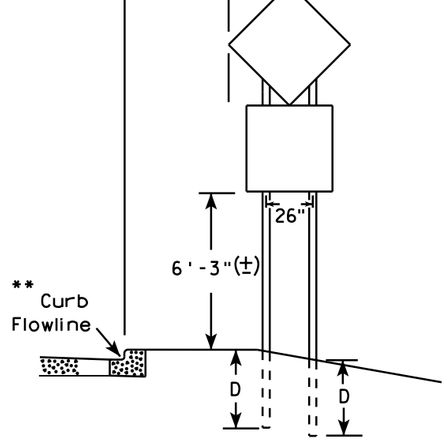
DATE 9/30/13 PLATE NO. A4-3.18

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A43.DGN PLOT DATE : 30-SEP-2013 13:25 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 99.237937:1.000000 WISDOT/CADDS SHEET 42

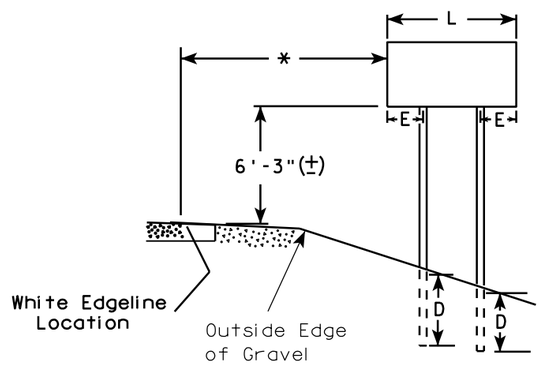
URBAN AREA

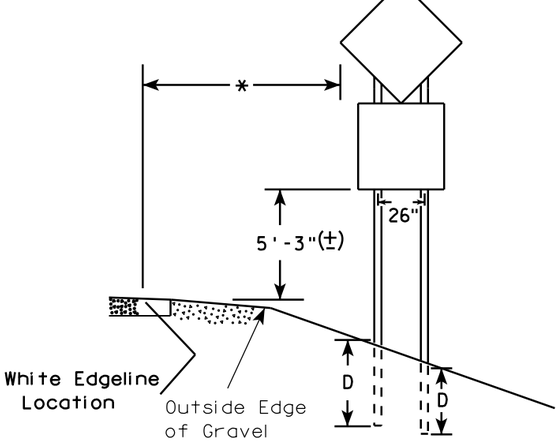




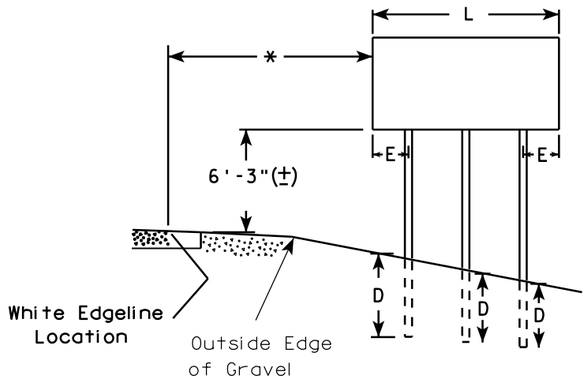
48" DIAMOND WARNING SIGN

RURAL AREA (See Note 3)





48" DIAMOND WARNING SIGN



GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series) & End of Road Markers (W5-56 & W5-56A) shall be mounted at a height of 4"-3" (±).

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

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

*** See A4-3 sign plate for signs 4' or less in width or 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

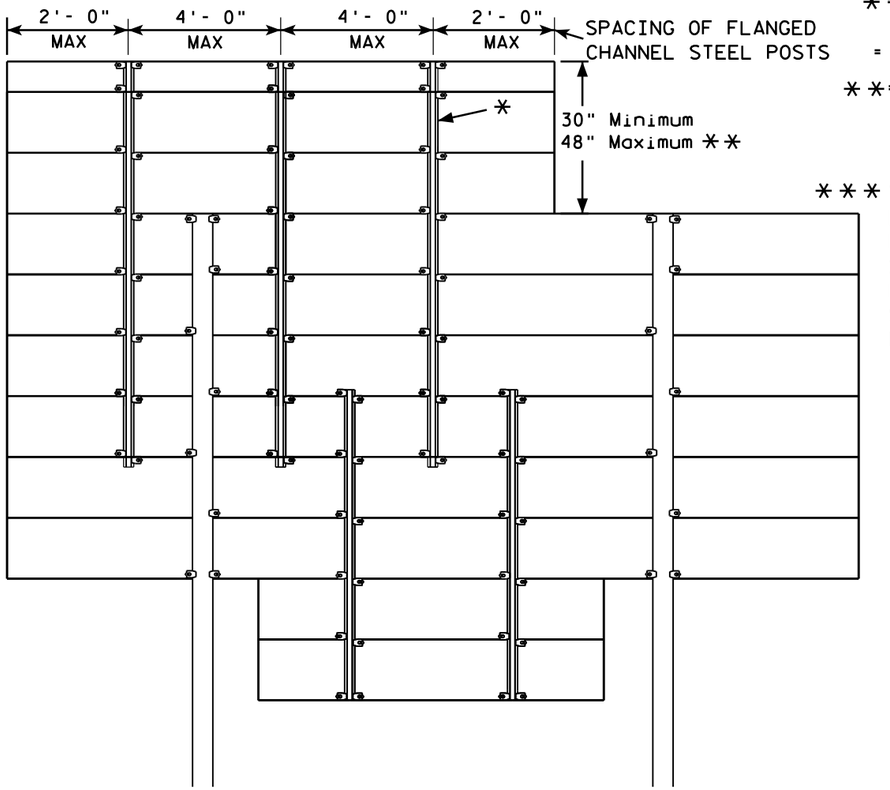
WISCONSIN DEPT OF TRANSPORTATION

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

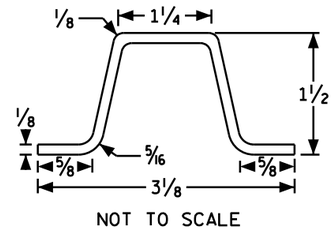


*=2.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

**=FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

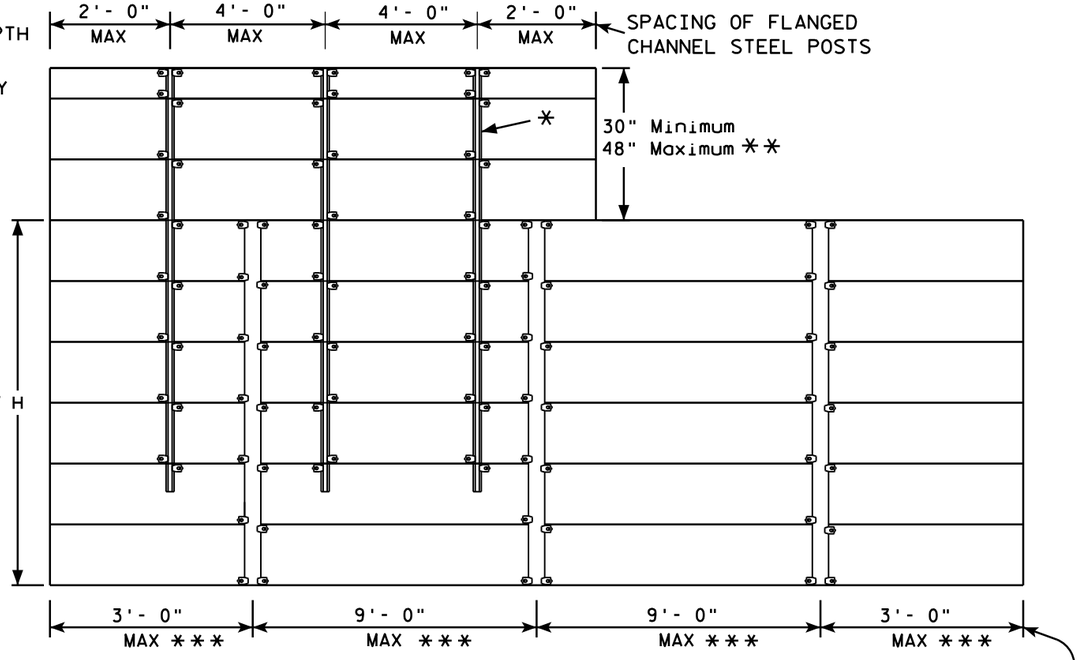
*** THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 16 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 16 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.

FLANGE CHANNEL DETAIL



NOT TO SCALE

SIGN BRIDGE MOUNTED SIGN



SPACING OF ALUMINUM SIGN SUPPORTS
5" X 3.5" X 3.7 LBS./ft.

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.

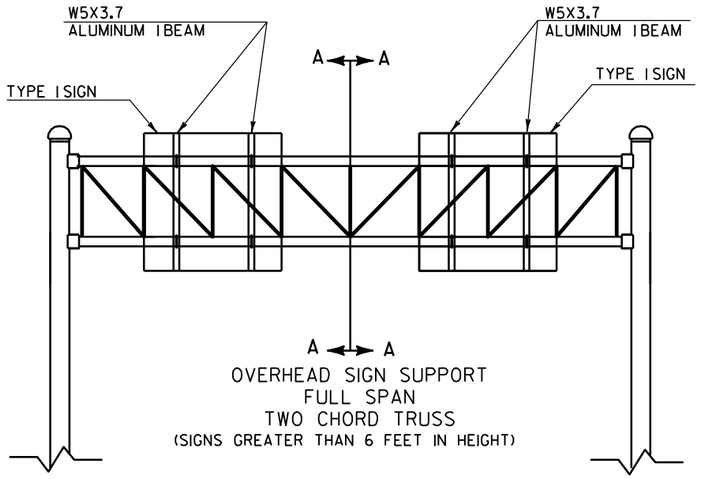
ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

WISCONSIN DEPT OF TRANSPORTATION

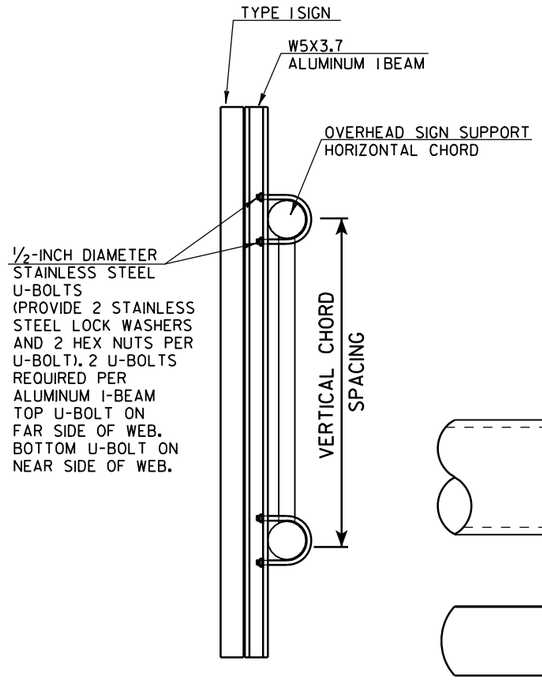
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/05/13 PLAT 203 A4-6.12

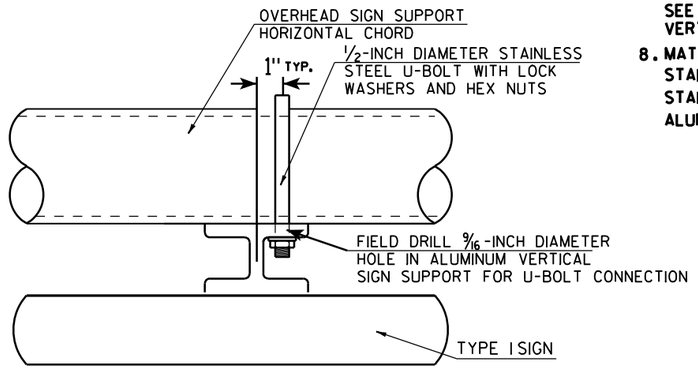
PROJECT NO: | SHEET NO: E



OVERHEAD SIGN SUPPORT
FULL SPAN
TWO CHORD TRUSS
(SIGNS GREATER THAN 6 FEET IN HEIGHT)



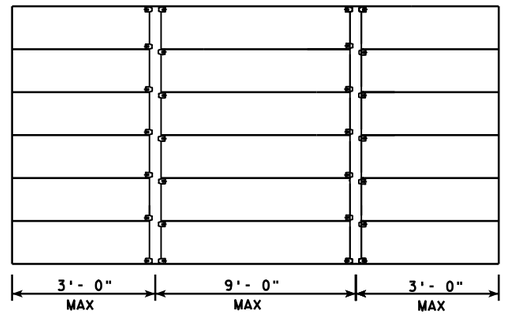
CUT SECTION A-A



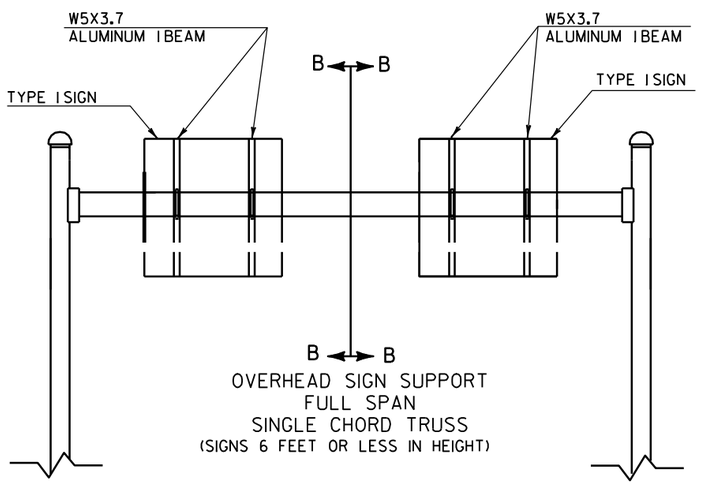
TYPICAL SIGN CONNECTION FOR
TWO CHORD TRUSS
PLAN VIEW

GENERAL NOTES

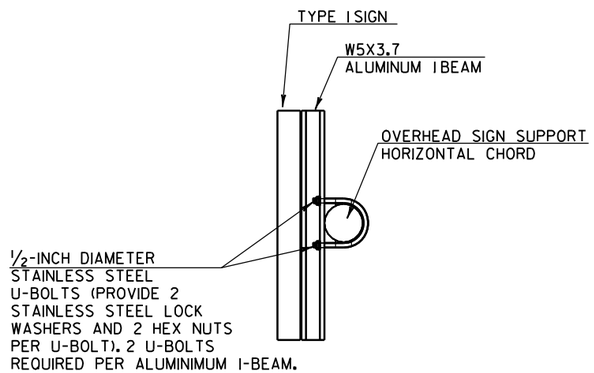
1. USE STAINLESS STEEL U-BOLTS, WASHERS, AND NUTS.
2. USE CLIPS ON EVERY EXTRUDED PANEL JOINT PER SIGN PLATE A4-6.
3. USE ALUMINUM VERTICAL SIGN SUPPORT BEAMS HAVING A 5 INCH BEAM DEPTH AND WEIGHT OF 3.7 LBS PER FOOT.
4. U-BOLTS SHALL BE STAINLESS STEEL AND MANUFACTURED TO THE PROPER SIZE TO FIT THE CHORDS OF THE OVERHEAD SIGN STRUCTURE.
5. DIAMETER OF U-BOLTS SHALL BE AS SHOWN.
6. THE LENGTH OF THE ALUMINUM VERTICAL SIGN SUPPORT BEAMS SHALL BE THE SAME AS THE HEIGHT OF THE SIGN THEY ARE SUPPORTING. BEAM LENGTHS MAY BE LONGER FOR PROPER ATTACHMENT TO CHORDS.
7. MINIMUM NUMBER OF BRACKETS PER SIGN IS TWO. SEE DETAIL BELOW FOR SPACING OF ALUMINUM VERTICAL SIGN SUPPORTS
8. MATERIAL NOTES:
   STAINLESS STEEL U-BOLTS AND LOCKWASHERS ASTM 304.
   STAINLESS STEEL HEX NUTS ASTM A276.
   ALUMINUM I-BEAMS ARE 6061-T6.



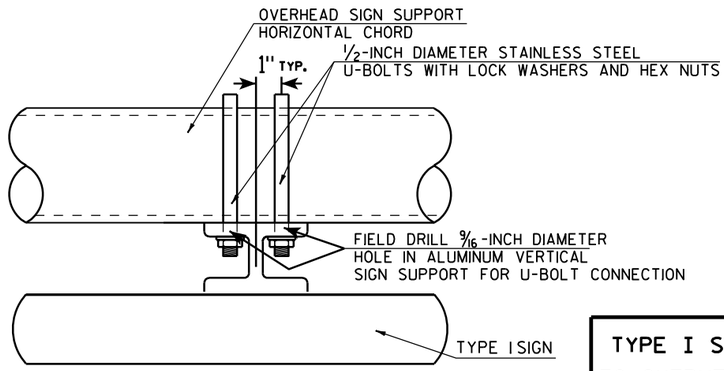
SPACING OF W5X3.7 ALUMINUM
VERTICAL SIGN SUPPORT



OVERHEAD SIGN SUPPORT
FULL SPAN
SINGLE CHORD TRUSS
(SIGNS 6 FEET OR LESS IN HEIGHT)



CUT SECTION B-B



TYPICAL SIGN CONNECTION FOR
SINGLE CHORD TRUSS
PLAN VIEW

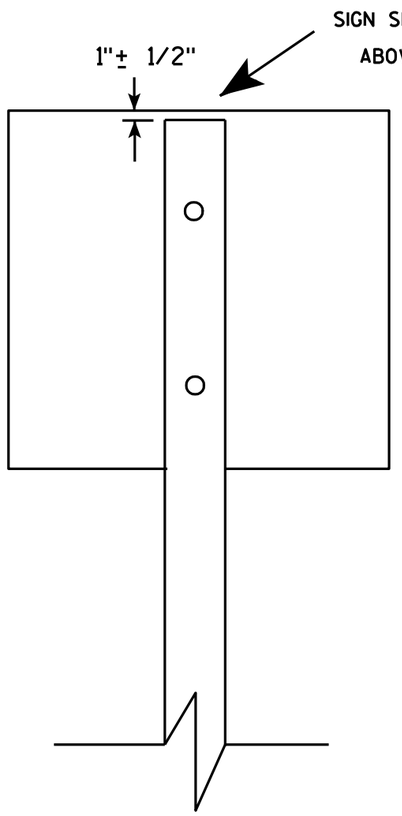
TYPE I SIGN CONNECTION TO OVERHEAD SIGN SUPPORT

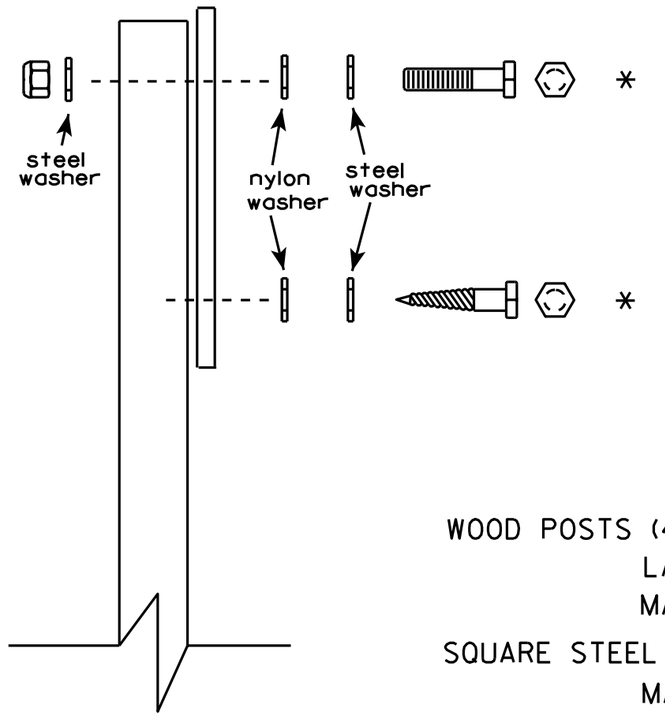
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 11/12/12 PLATE NO. A4-7.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 204	E





Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

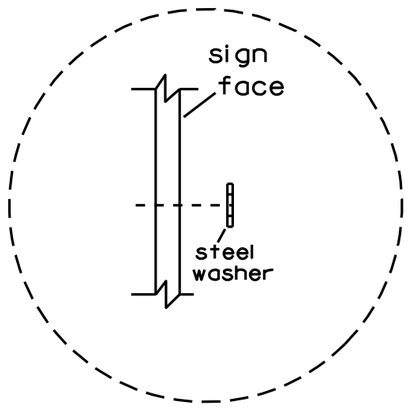
a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

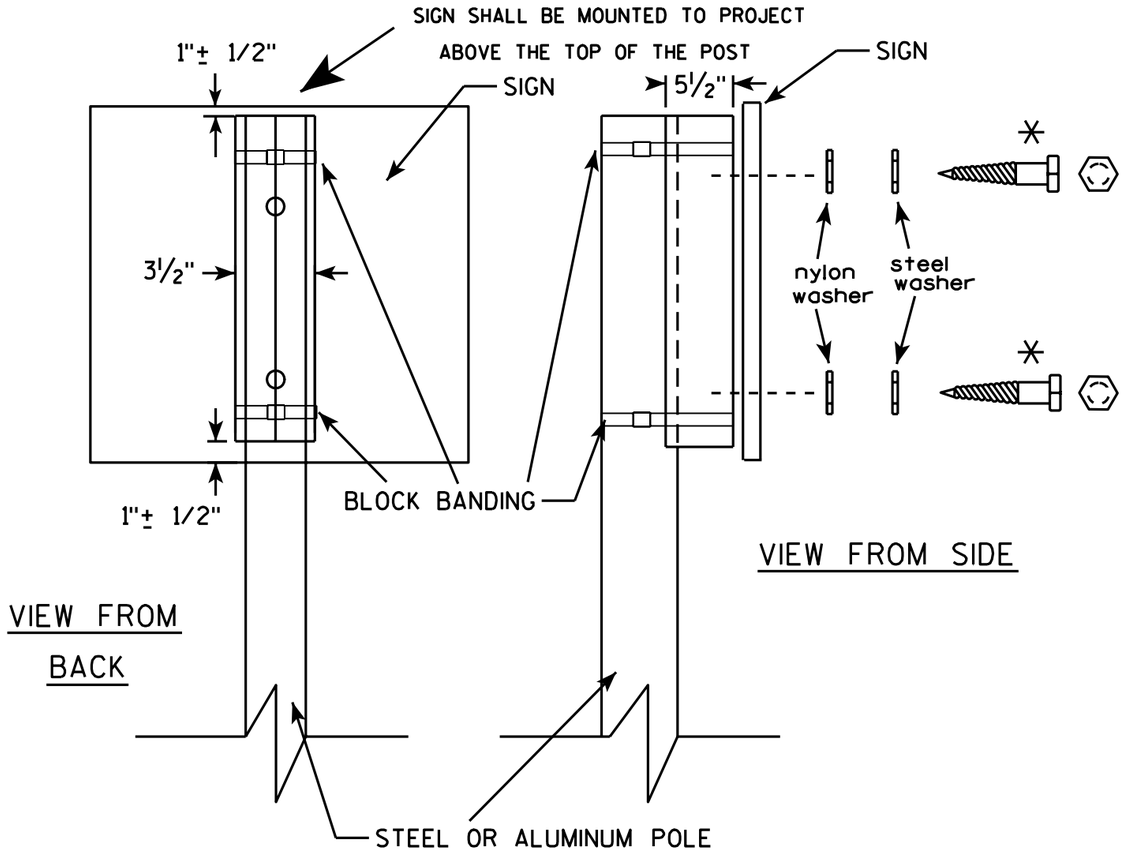
DATE 3/23/10 PLATE NO. A4-8.7

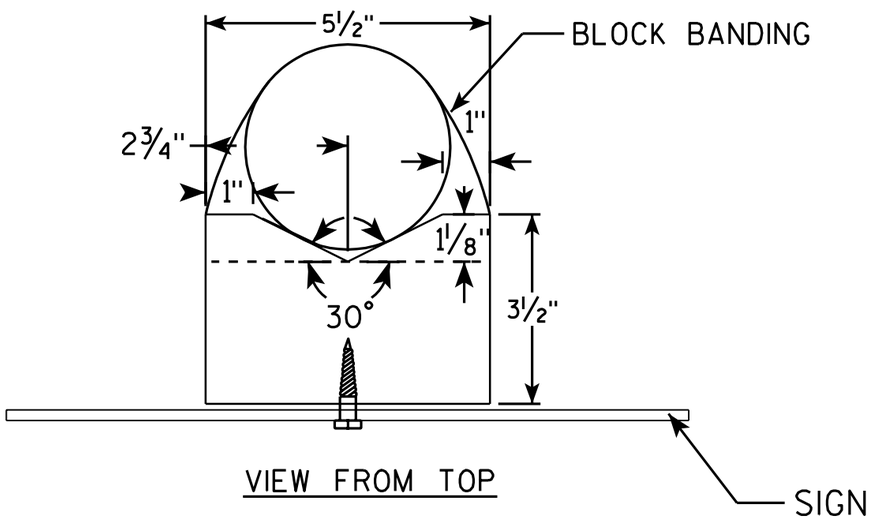
7

7

PROJECT NO:

SHEET NO: 205 E





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D, or
   b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
   c. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

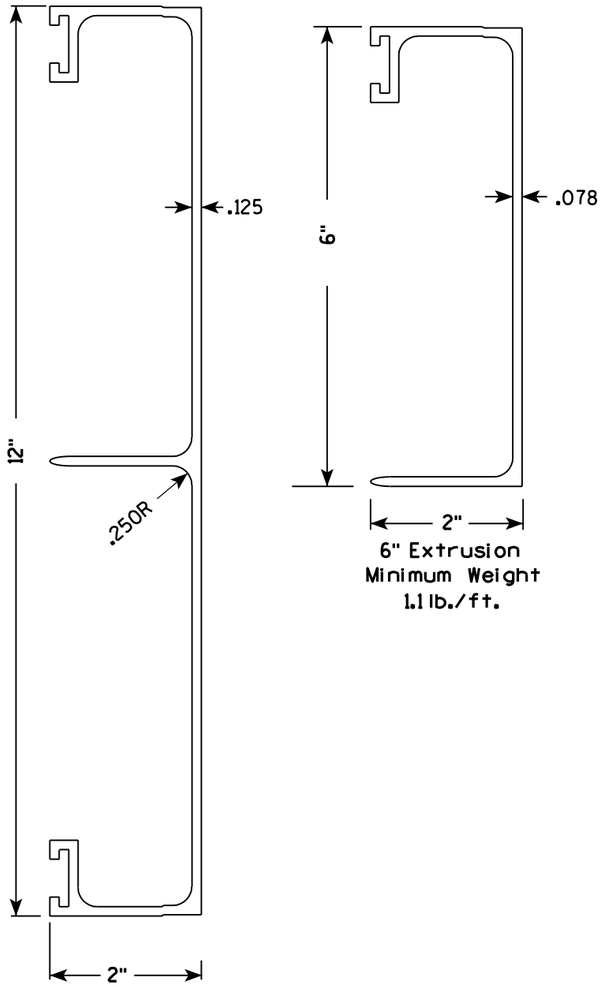
APPROVED Matthew R Rauch
for State Traffic Engineer

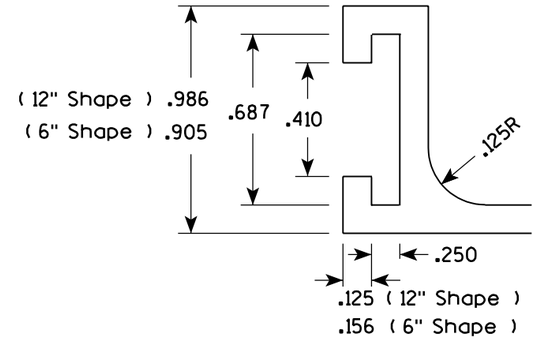
DATE 7/12/07 PLATE NO. A5-10.1

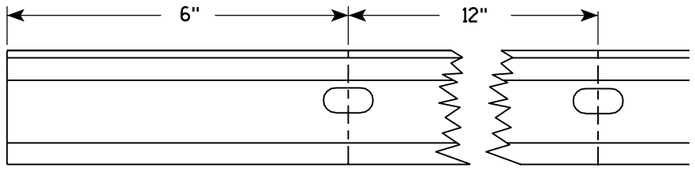
PROJECT NO:

SHEET NO: 206 E

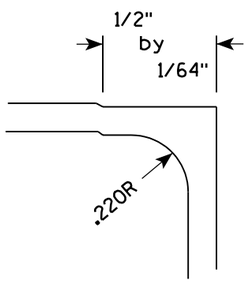
Extruded Shape







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.

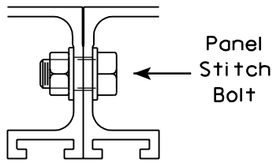


Hardware

STITCH BOLT, WASHER & NUT

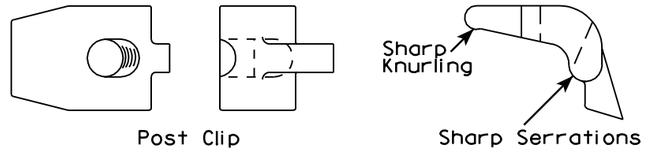
The hardware includes:

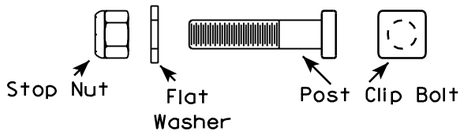
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy



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

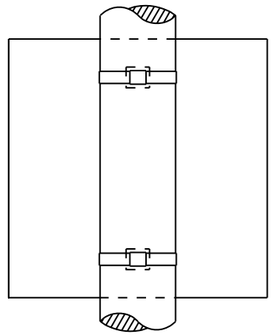
WISCONSIN DEPT OF TRANSPORTATION

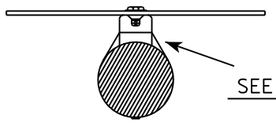
APPROVED Chester J Spang
for State Traffic Engineer

DATE 11/18/99 PLATE NO. A5-2.9

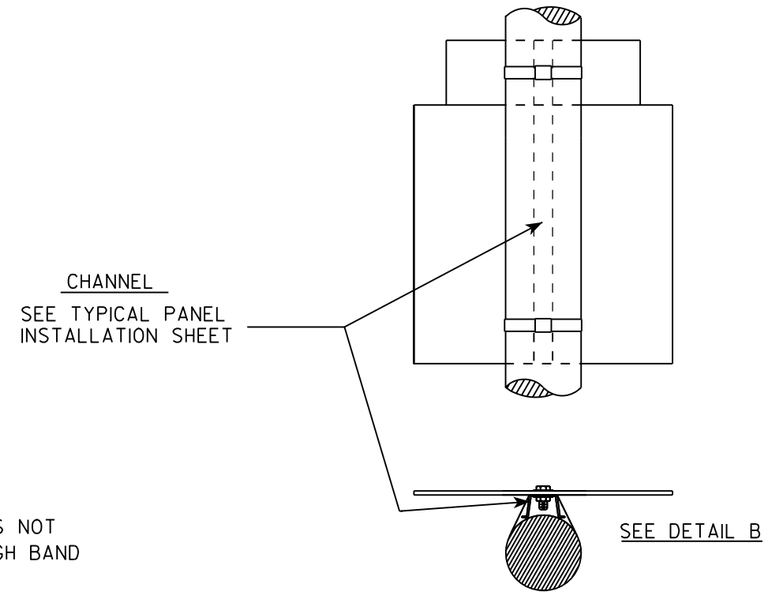
BANDING

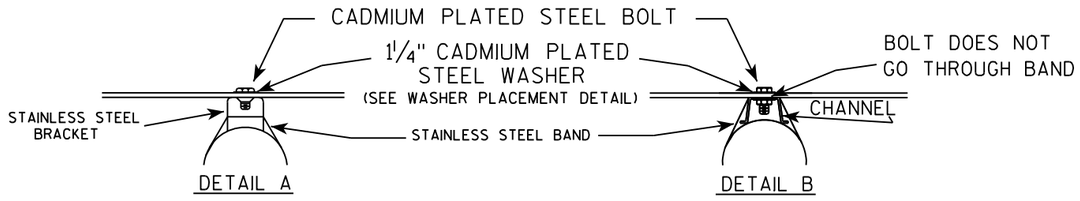
SINGLE SIGN



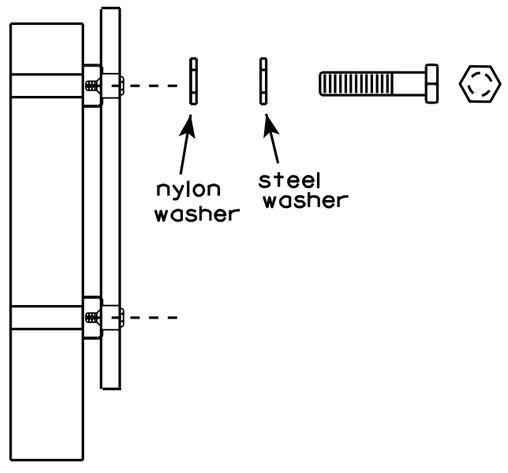


"J" ASSEMBLY





WASHER PLACEMENT



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

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.

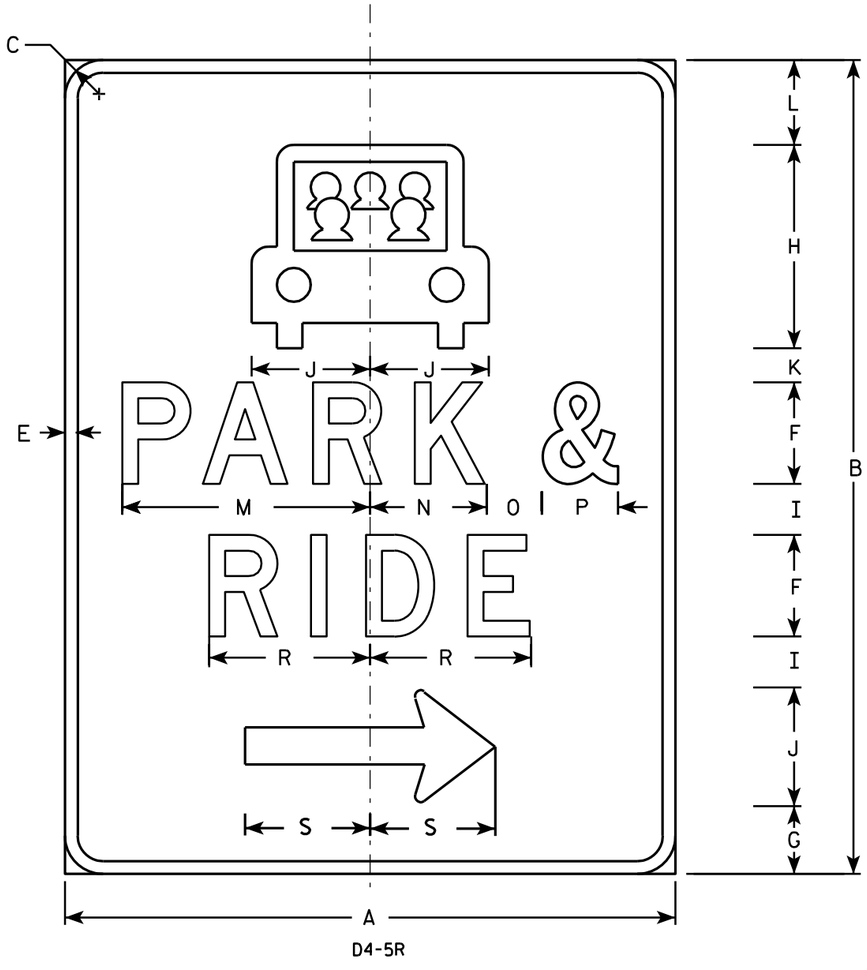
STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3

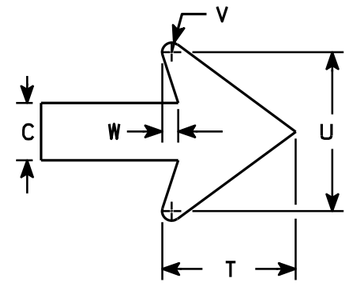
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 208	E



D4-5R

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 - 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. The D4-5L is the same as a D4-5R except the arrow is reversed.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	36	1 3/8		5/8	5	1 3/8	9	2	5	1 5/8	5	11 3/4	5 1/2	2 3/4	3 3/4		8	6 1/8	4	4 3/8	3/8	1/2				7.50
3	36	48	2 1/4		3/4	6	4	12	3	7	2	5	14 5/8	6 7/8	3 1/4	4 1/2		9 1/2	7 1/2	5 1/4	6 1/4	3/8	5/8				12.0
4																											
5																											

STANDARD SIGN
D4-5 L&R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/15/10 PLATE NO. D4-5.2

PROJECT NO:

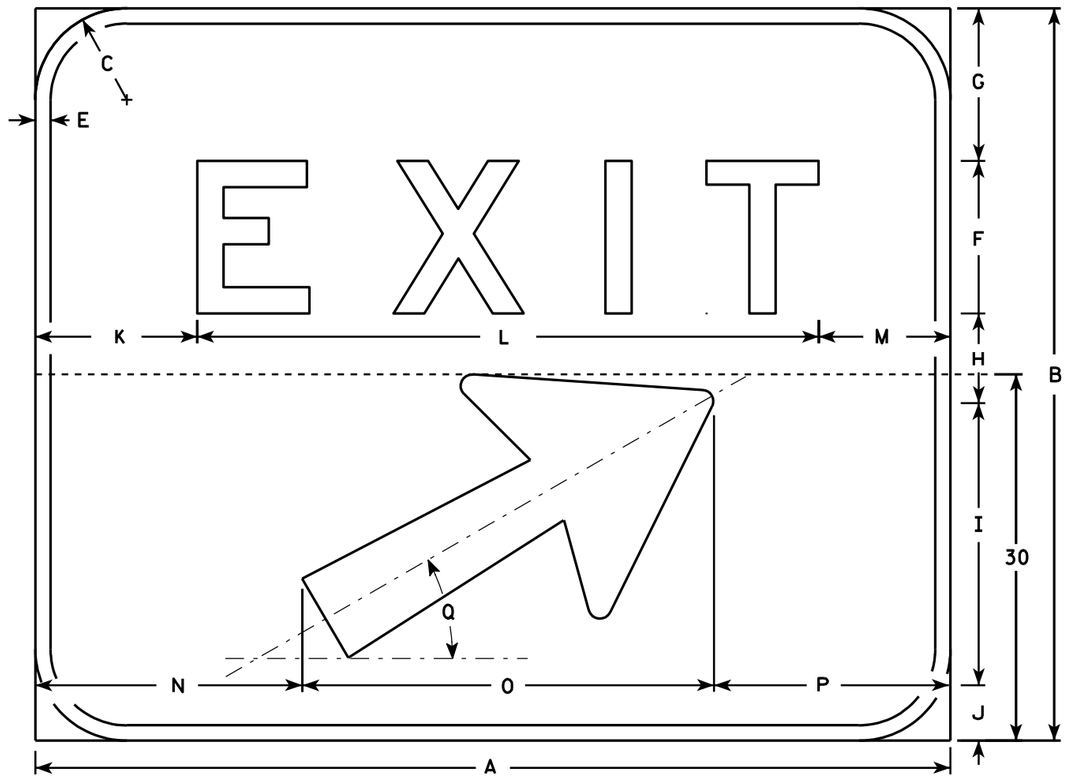
SHEET NO: 209 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\D45.DGN PLOT DATE : 15-NOV-2010 14:08 PLOT BY : dotsja

WISDOT/CADDS SHEET 42

7

7



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

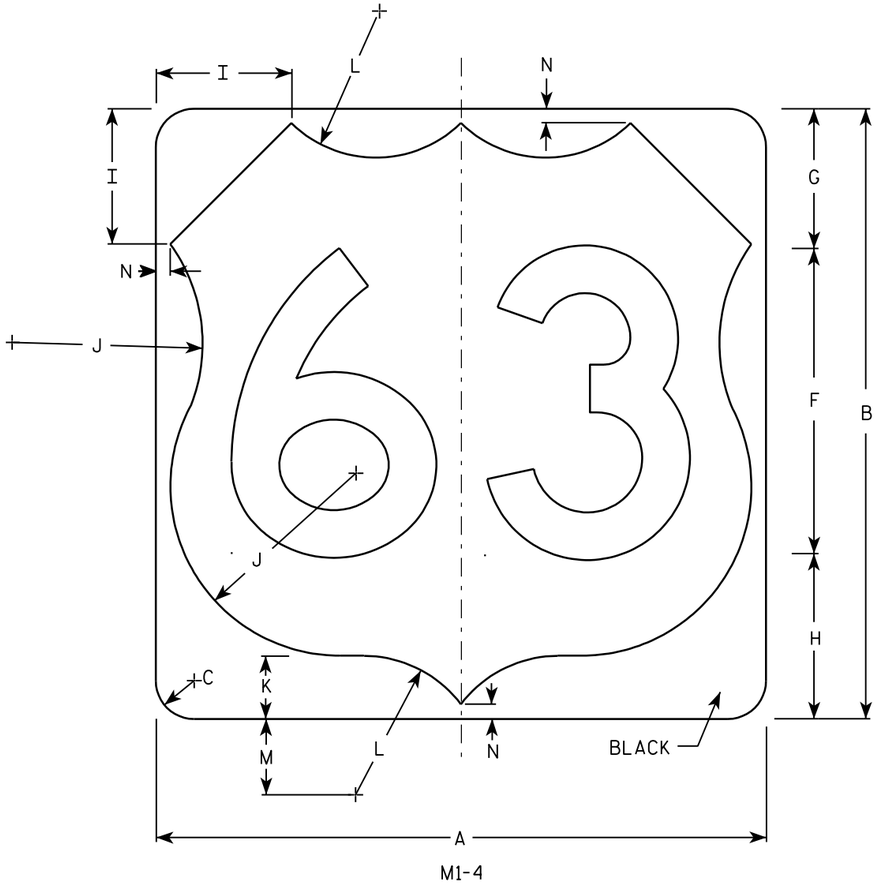
APPROVED Chester J Spang for State Traffic Engineer

DATE 6/22/00 PLATE NO. E5-1.8

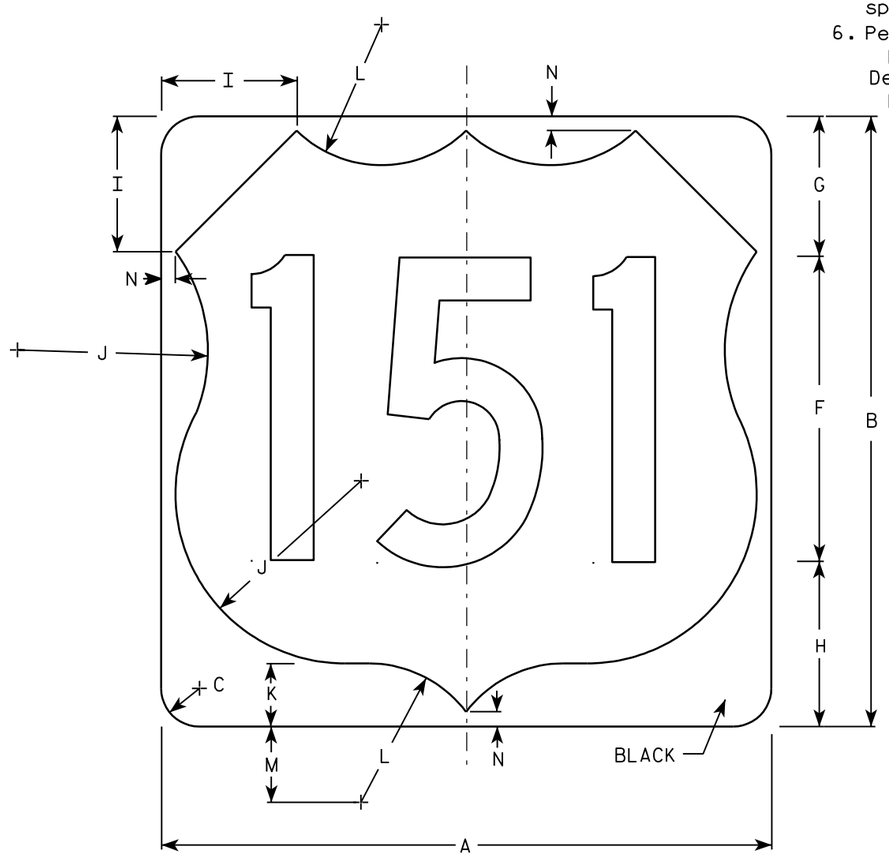
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 210	E

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 6
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and adjust spacing as per Plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or other temporary signs
   Background - Reflective



M1-4



M1-4

7

7

Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	24	24	1 1/2			12	5 1/2	6 1/2	5	7 1/2	2 1/2	5 1/2	3	1/2													4.0	.36
3	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
4	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
5	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81

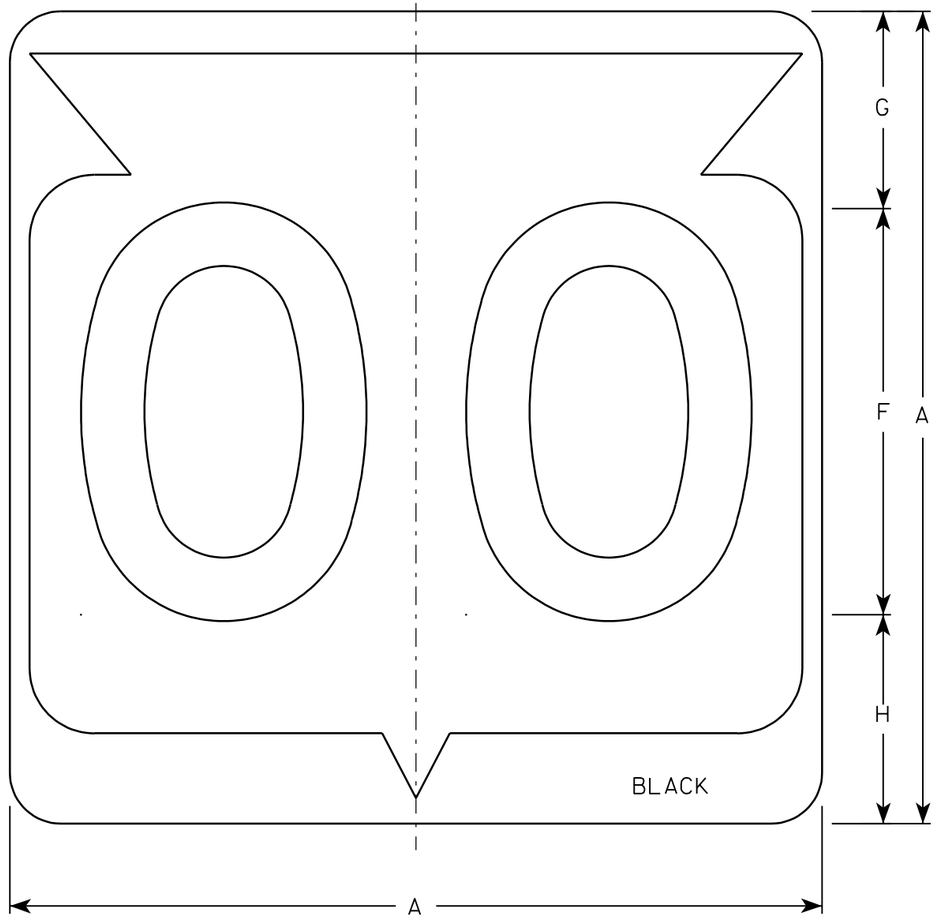
USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/25/05 PLATE NO. M1-4.9

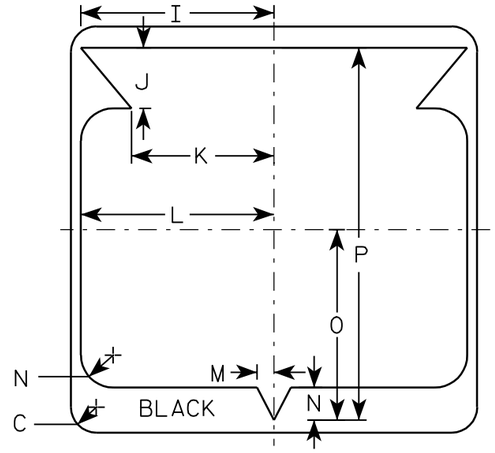
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 211	E



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

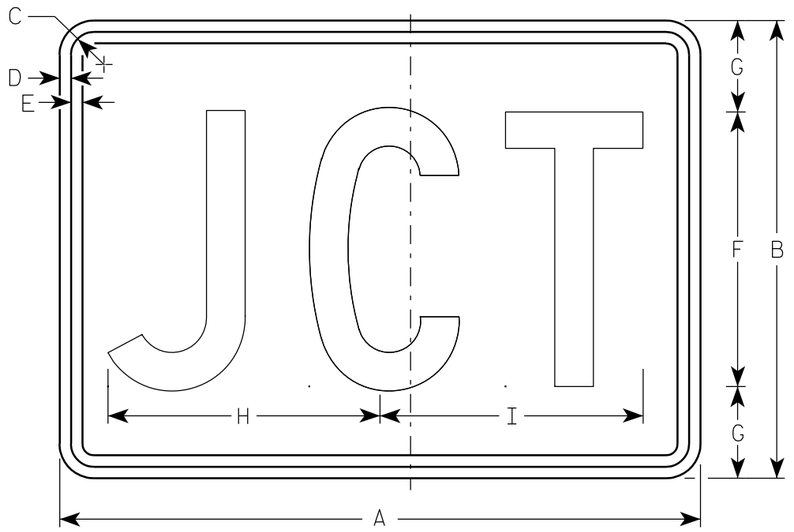
STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

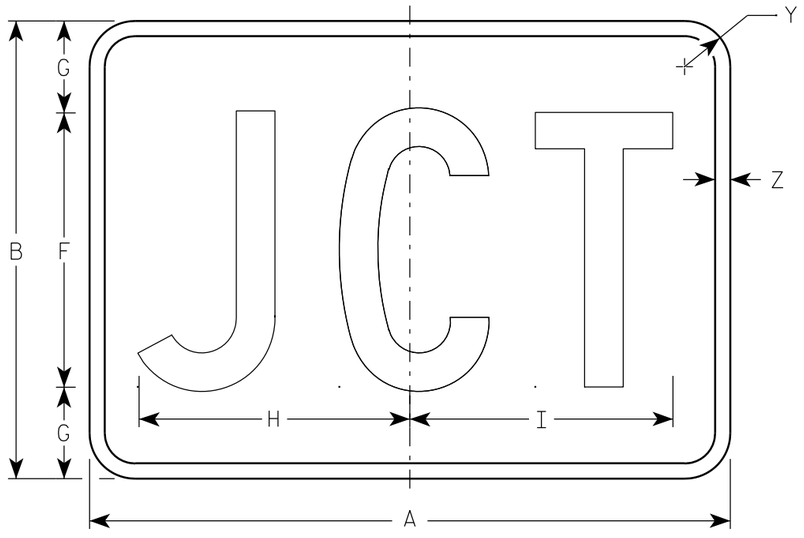
APPROVED Chester J Spang for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 212	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

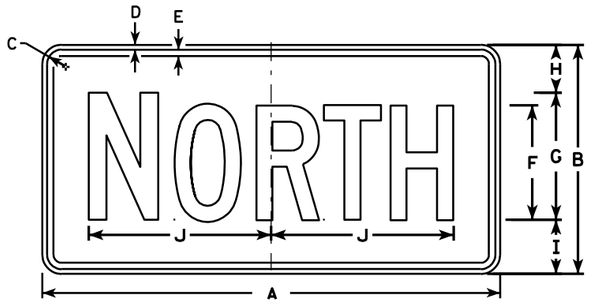
STANDARD SIGN
M2-1

WISCONSIN DEPT OF TRANSPORTATION

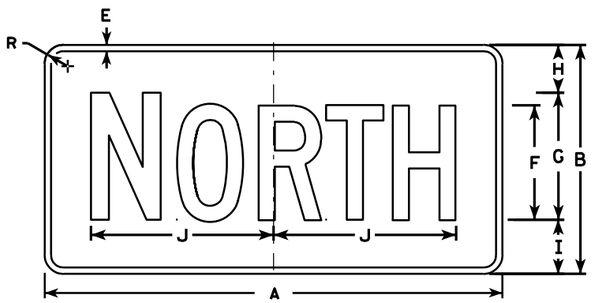
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/10 PLATE NO. M2-1.10

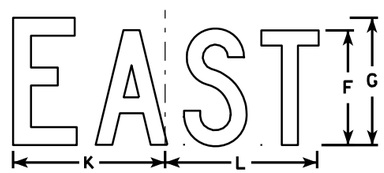
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 213	E



M3-1
MK3-1
MO3-1



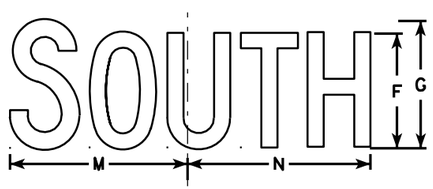
MB3-1
MG3-1
MM3-1
MN3-1



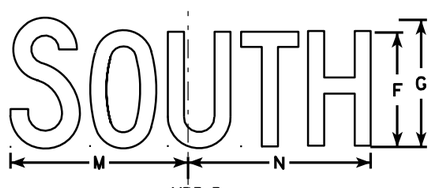
M3-2
MK3-2
MO3-2



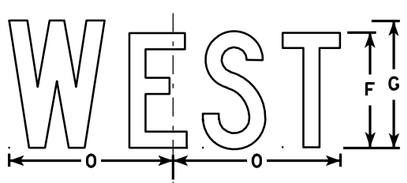
MB3-2
MG3-2
MM3-2
MN3-2



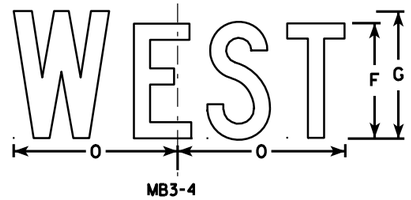
M3-3
MK3-3
MO3-3



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

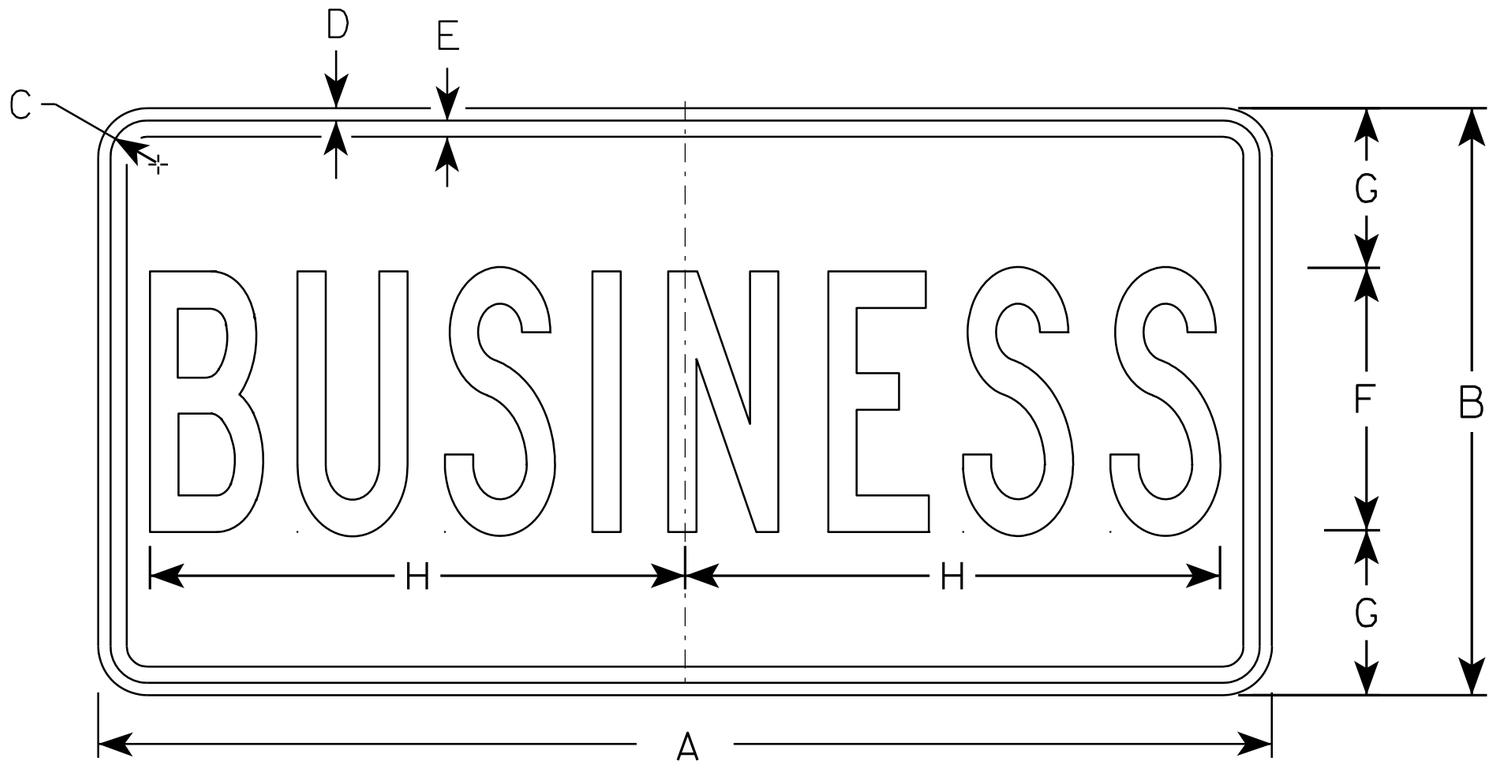
STANDARD SIGNS
M3-1 thur M3-4
SERIES

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: 214	E



M4-3

NOTES

1. Sign is Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White - See Note 5
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Permanent Signs
   Background - Type H Reflective
   Detour or other 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	12	1 1/8	3/8	3/8	5	3 1/2	9 5/8																			2.0
3	36	18	1 1/8	3/8	1/2	8	5	16 3/8																			4.5
4																											
5																											

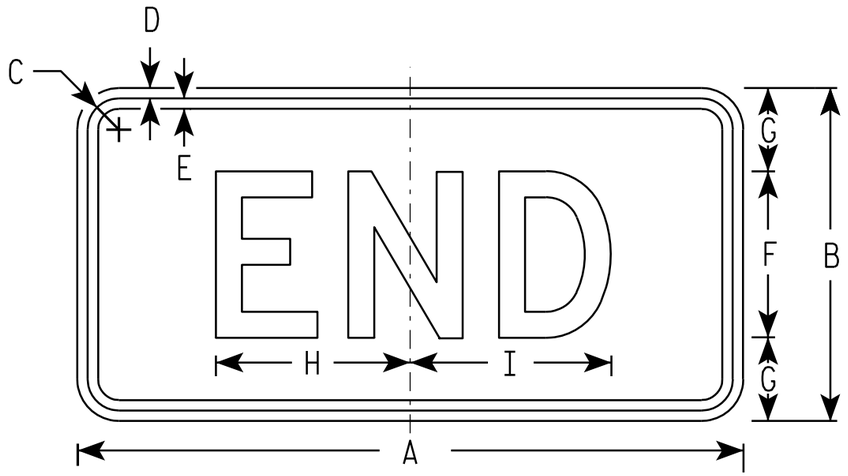
STANDARD SIGN
M4-3

WISCONSIN DEPT OF TRANSPORTATION

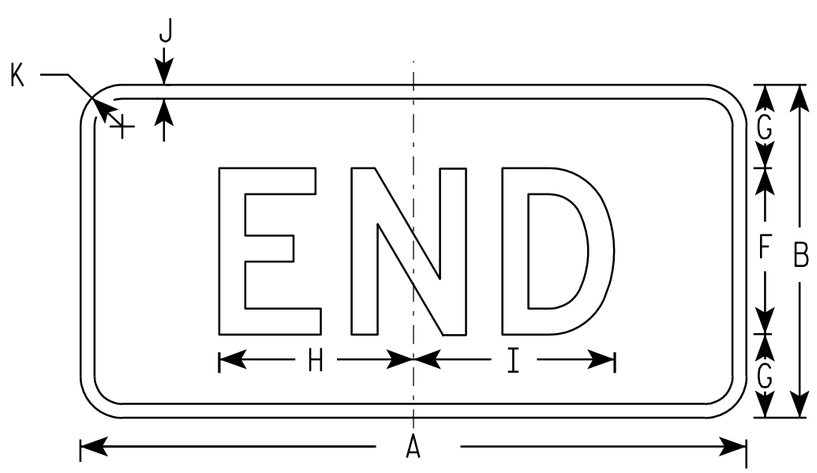
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-3.5

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 215 | 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

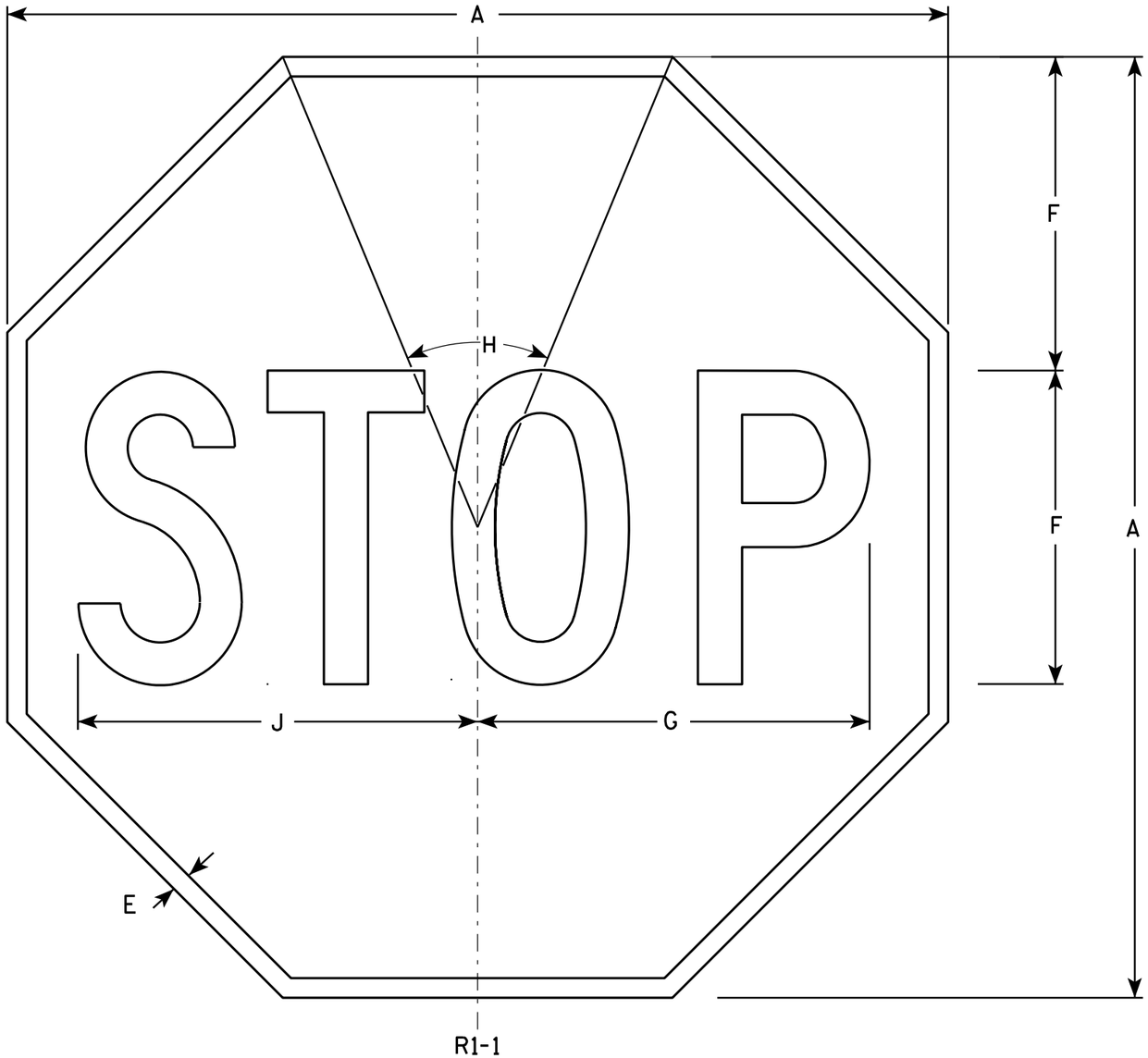
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-6.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 216 | 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



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

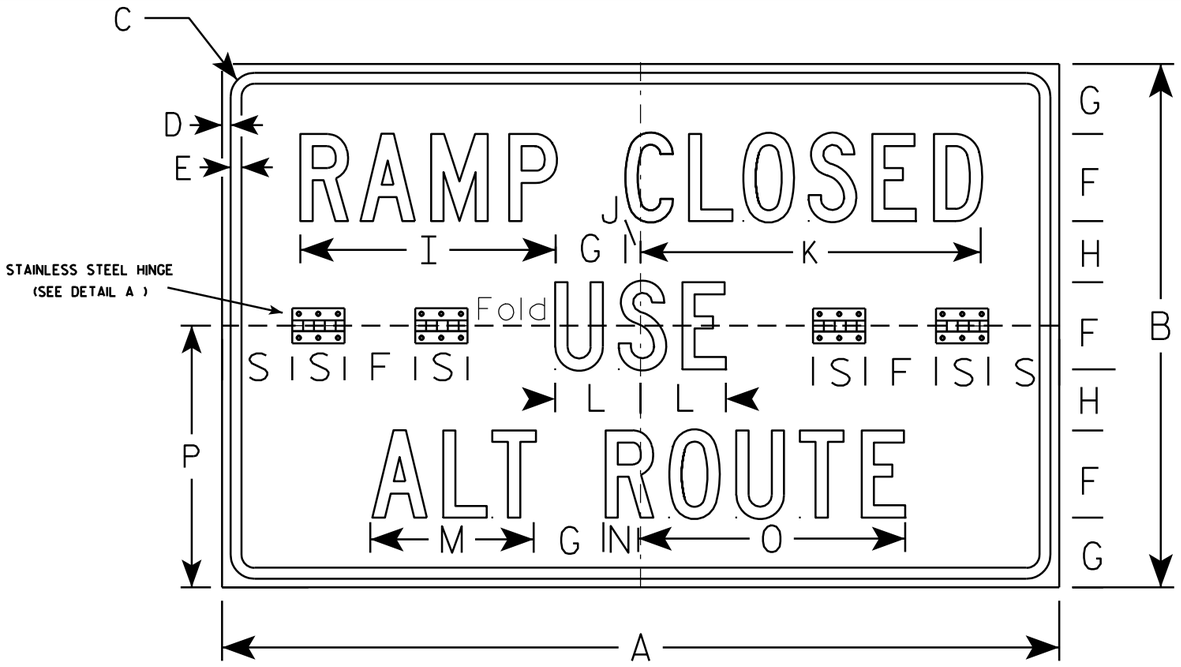
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

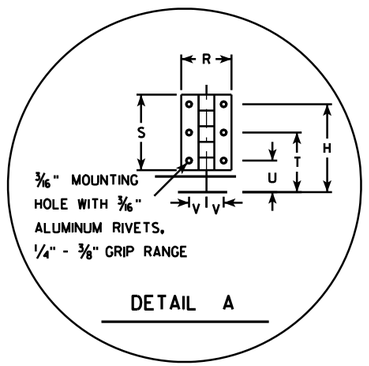
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1.12

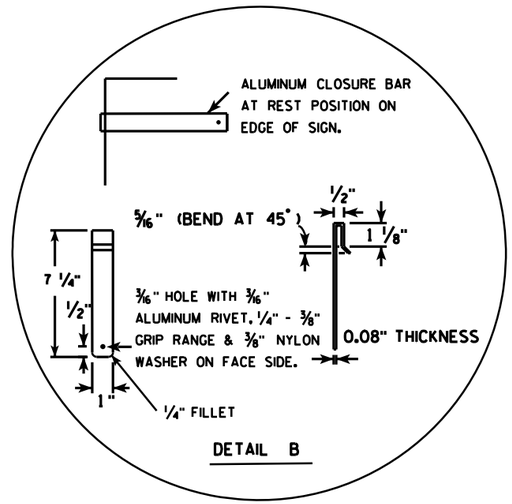
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 217	E



R11-54F



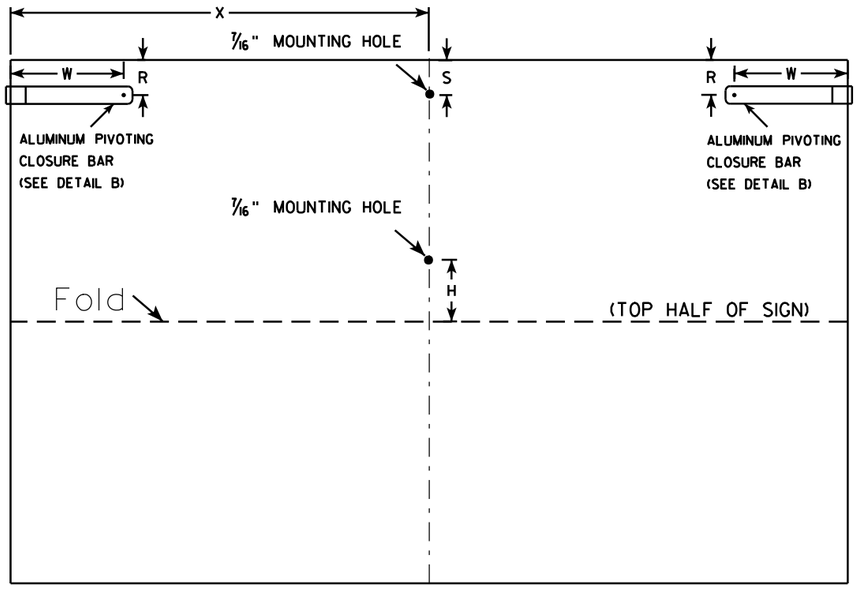
DETAIL A



DETAIL B

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - WHITE
   Message - BLACK
3. Message Series - C
4. Sign Base Material shall be aluminum corners and borders shall be rounded.
5. All hardware used on the folding sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.



(BACK VIEW)

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	5	4	3 1/2	14 5/8	7/8	19 1/2	4 7/8	9 3/8	2	15 1/4	15		2	3	2 5/8	1 1/4	11/16	6 1/2	24			10.0
2M	48	30	1 3/8	1/2	5/8	5	4	3 1/2	14 5/8	7/8	19 1/2	4 7/8	9 3/8	2	15 1/4	15		2	3	2 5/8	1 1/4	11/16	6 1/2	24			10.0
3																											
4																											
5																											

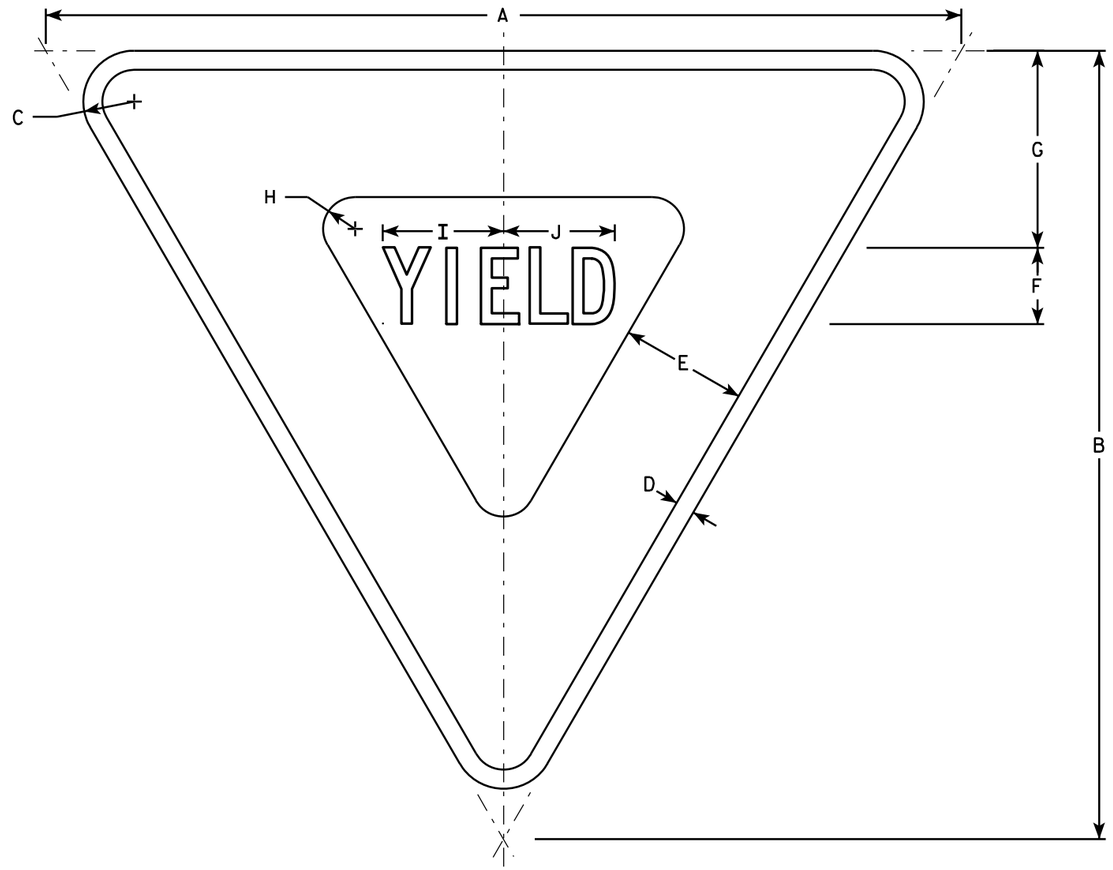
STANDARD SIGN
R11-54F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-54F.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 218	E



R1-2

NOTES

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

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

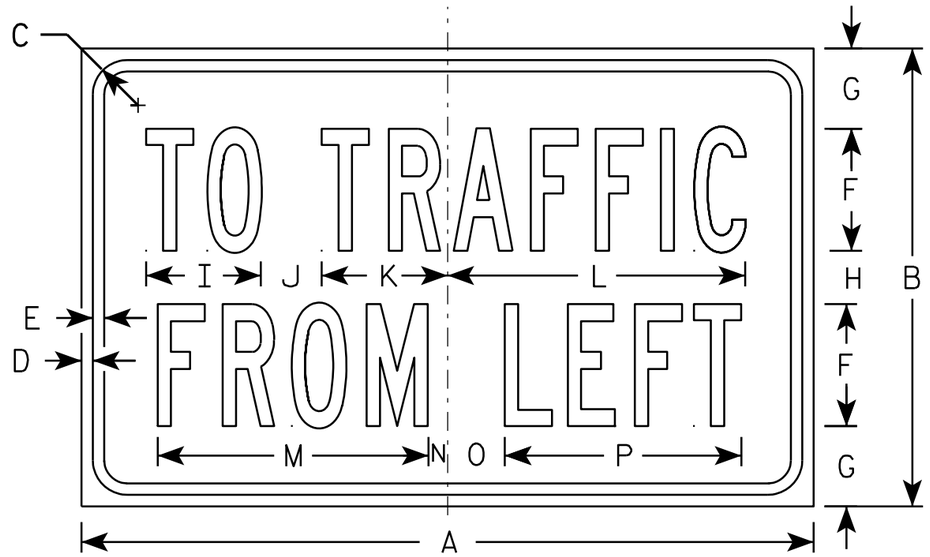
STANDARD SIGN
R1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 219 | E



R1-54

NOTES

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

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	15	1 1/8	3/8	3/8	4	2 5/8	1 3/4	3 3/4	2	4 1/8	9 3/4	8 7/8	5/8	1 7/8	7 3/4											2.5
2M	24	15	1 1/8	3/8	3/8	4	2 5/8	1 3/4	3 3/4	2	4 1/8	9 3/4	8 7/8	5/8	1 7/8	7 3/4											2.5
3																											
4																											
5																											

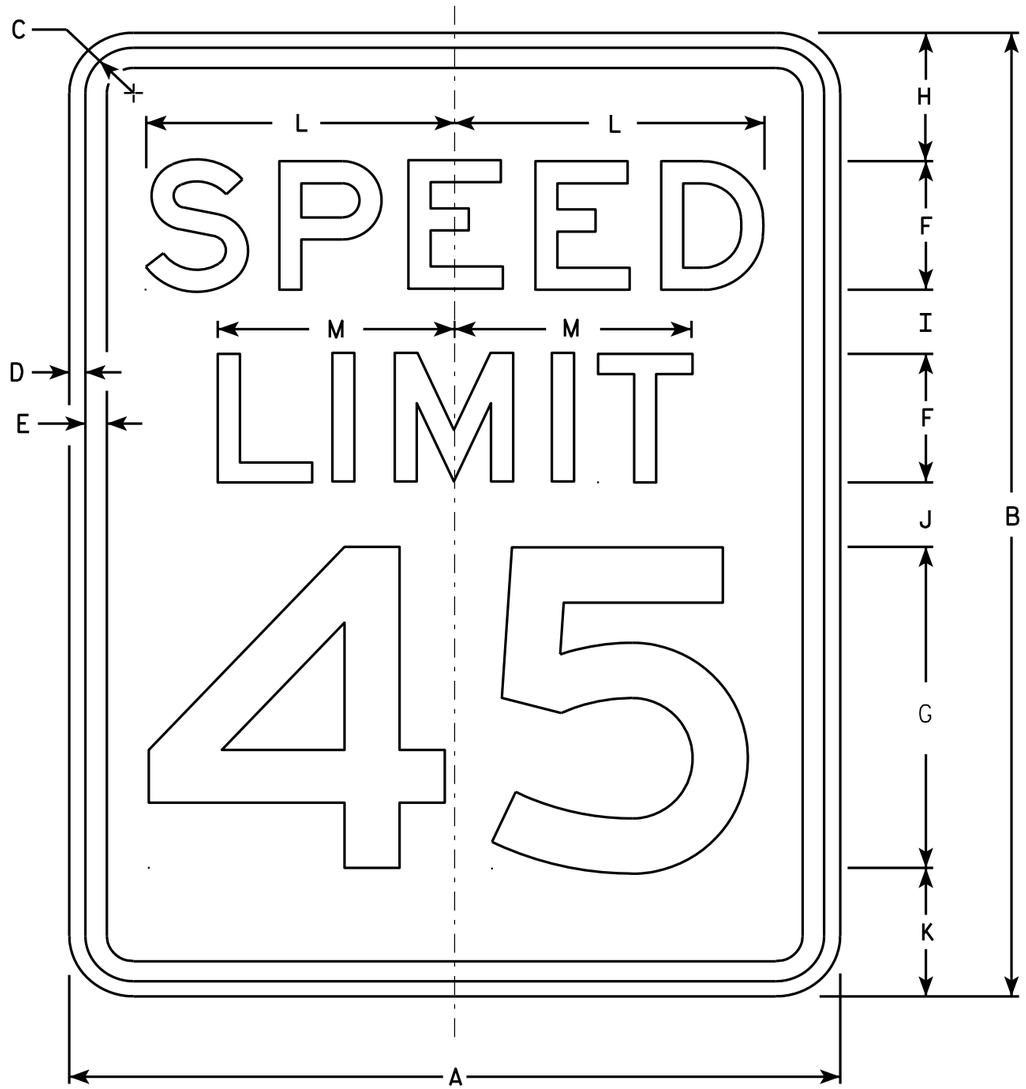
STANDARD SIGN
R1-54

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-54.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 220	E



R2-1

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

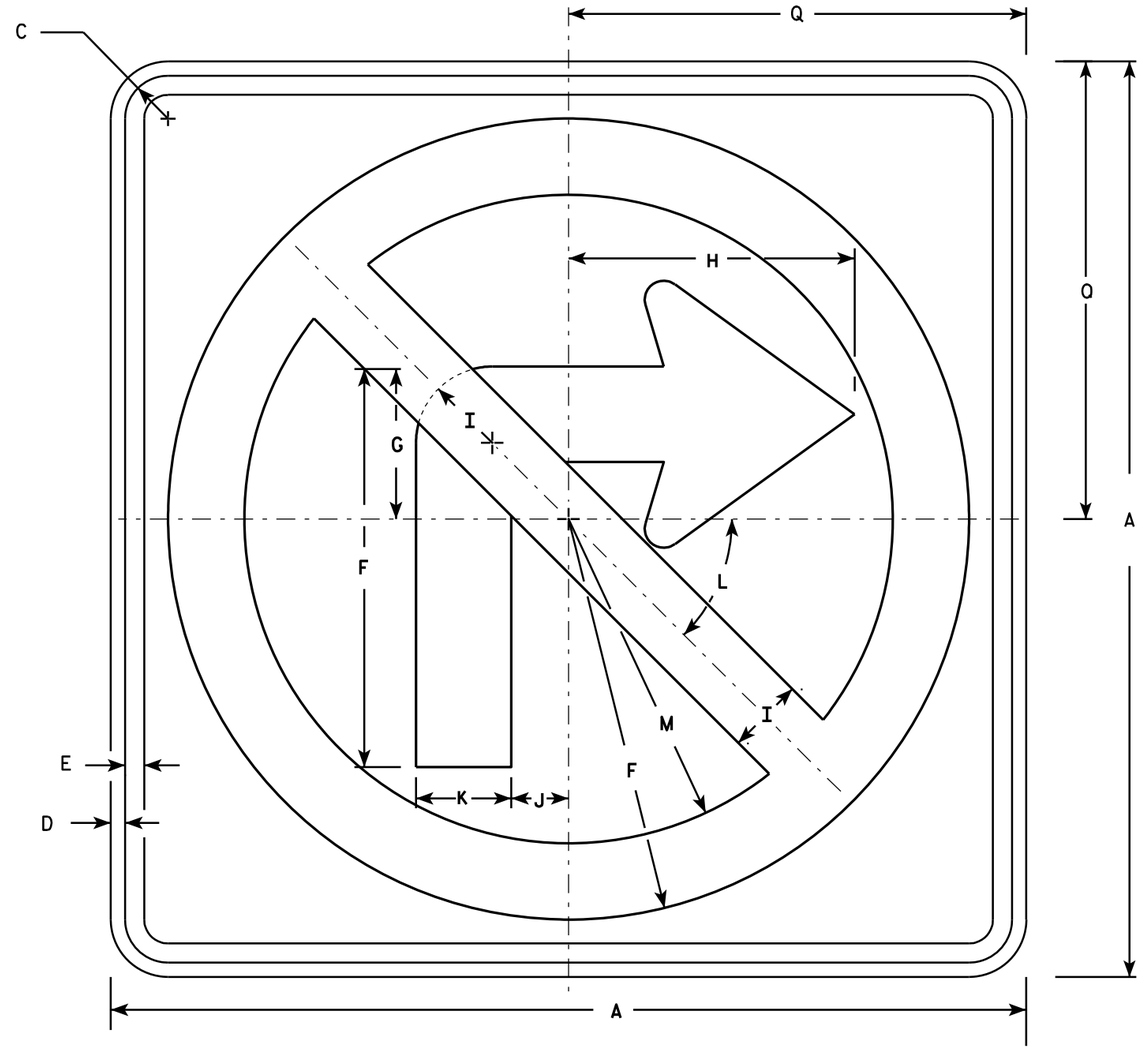
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

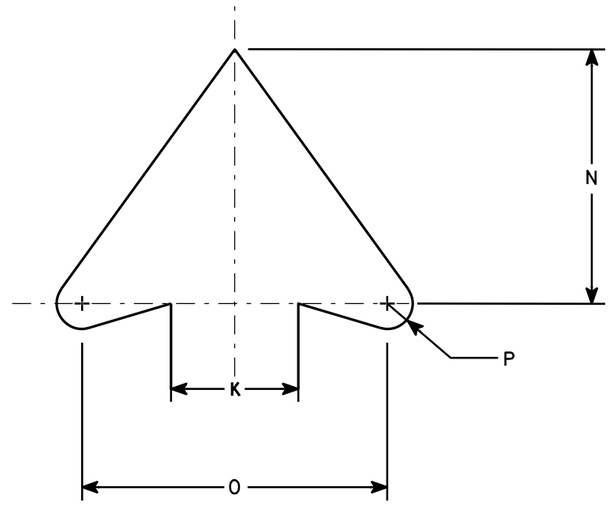
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 221 | E



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

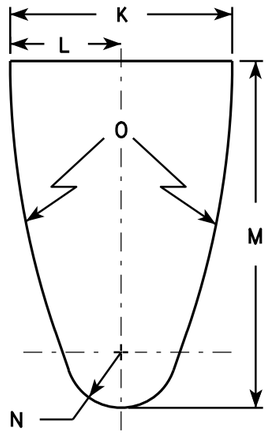
STANDARD SIGN
R3-1

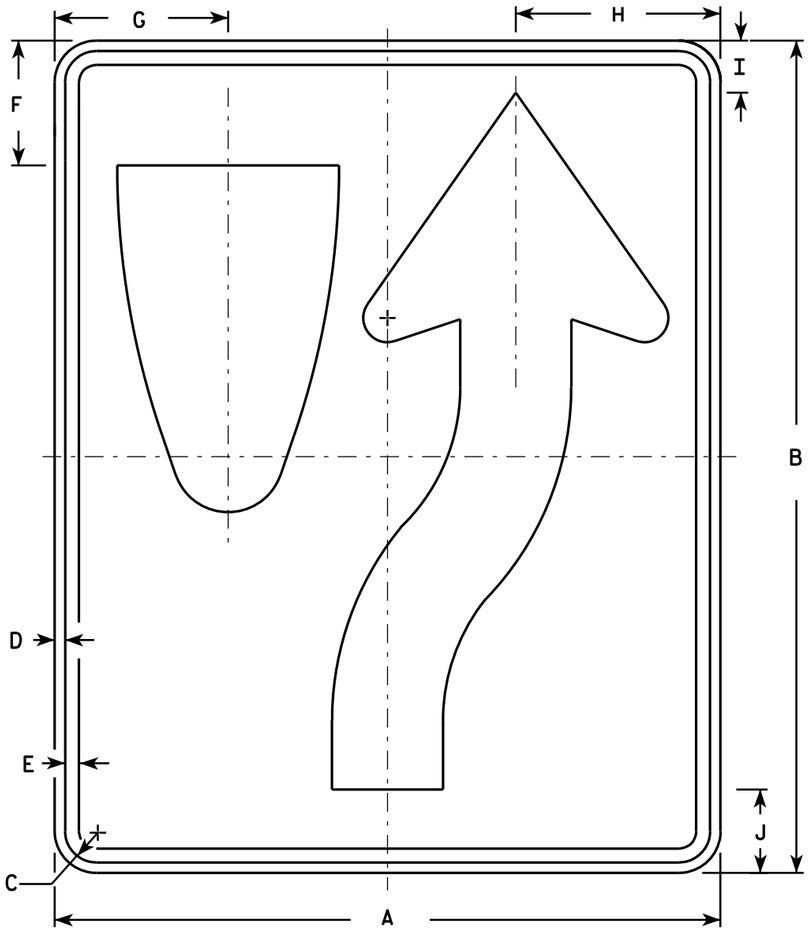
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-1.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 222	E

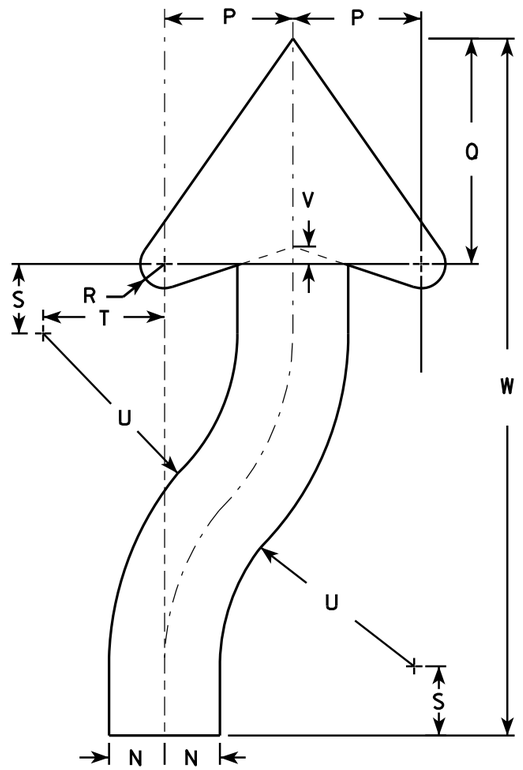




R4-7

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

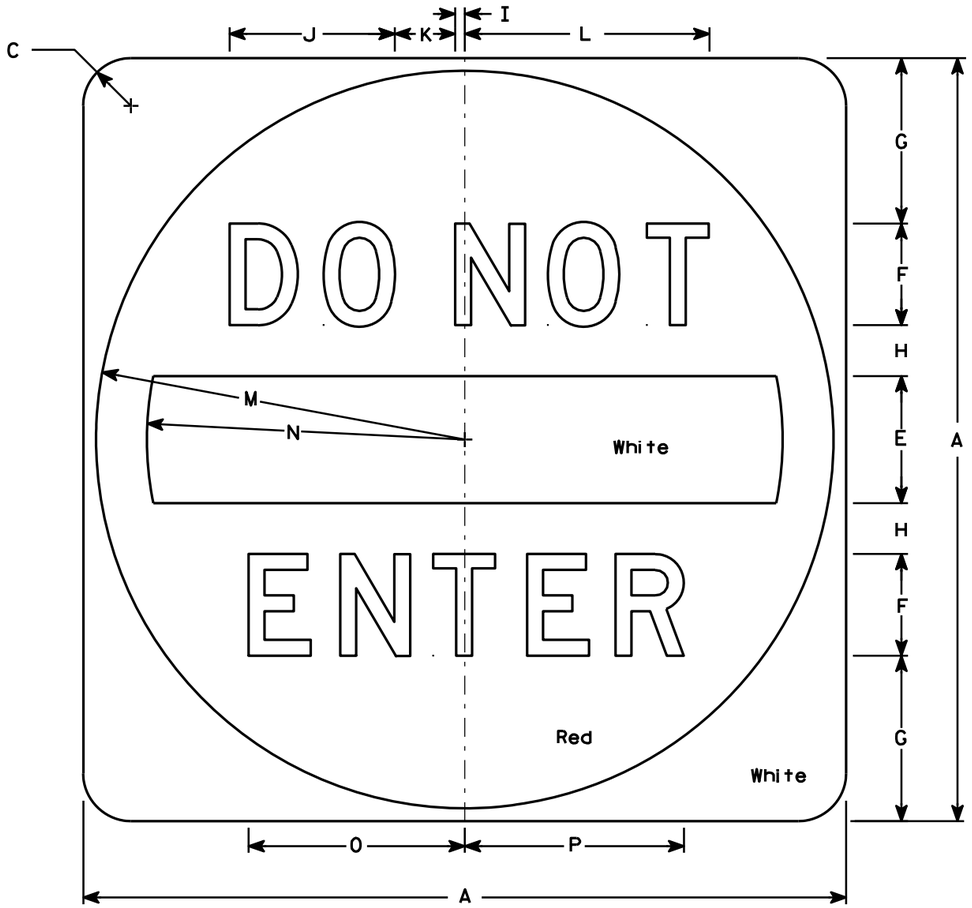
STANDARD SIGN
R4-7 & R4-8

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: 223	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

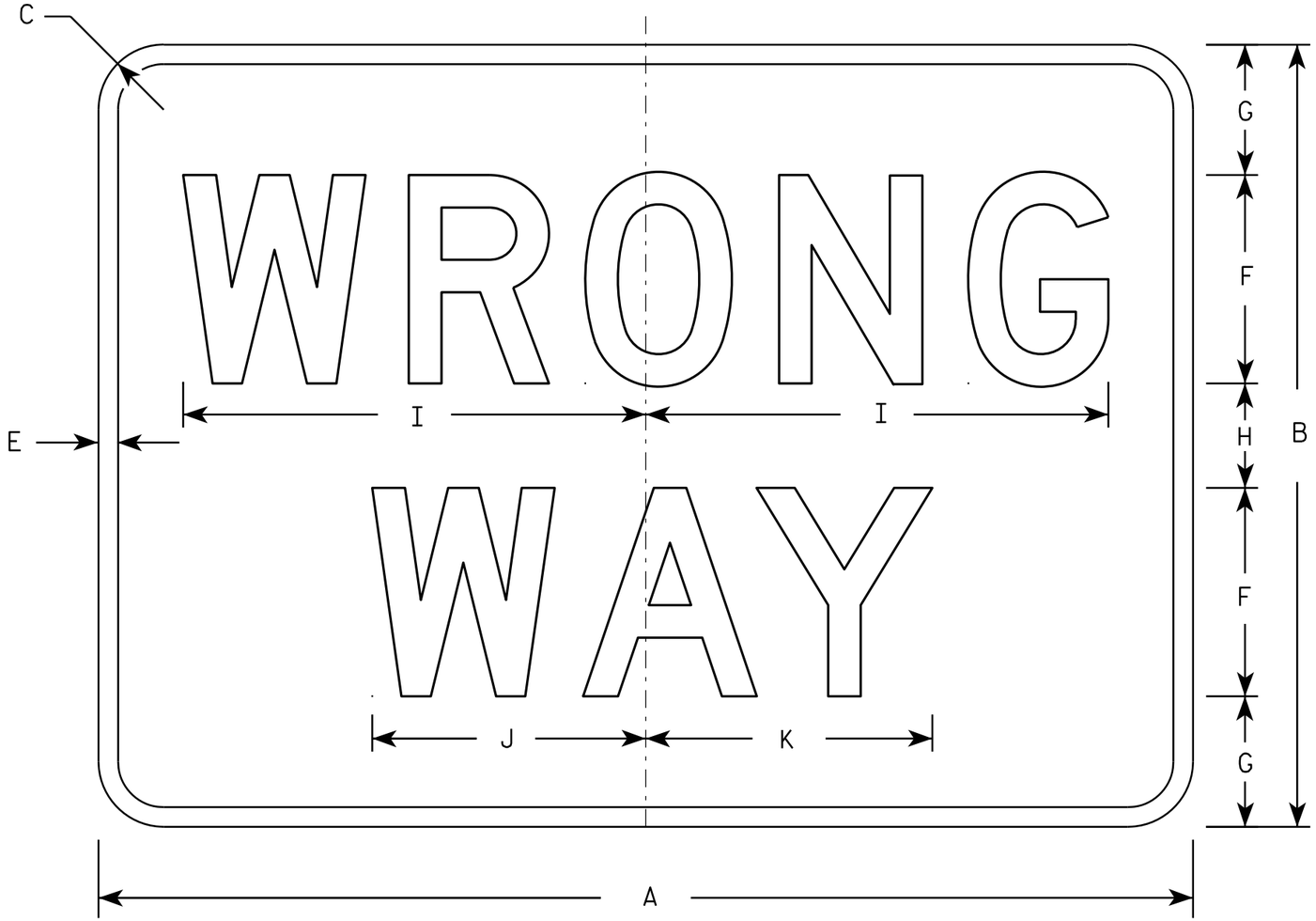
STANDARD SIGN
R5-1

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: 224 | 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: 225 | 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

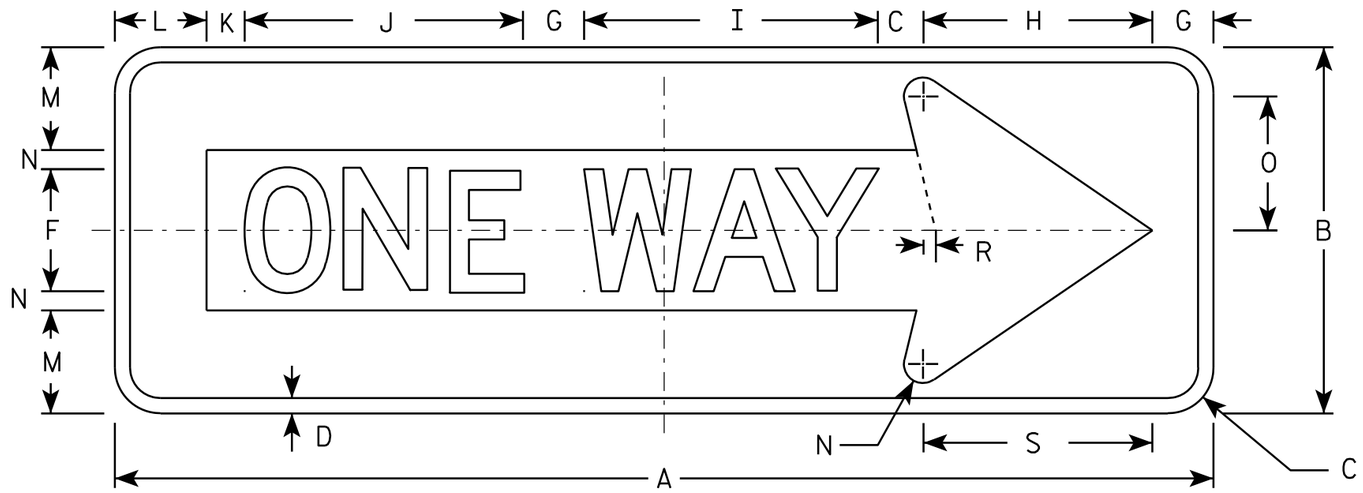
STANDARD SIGN
R5-57

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-57.10

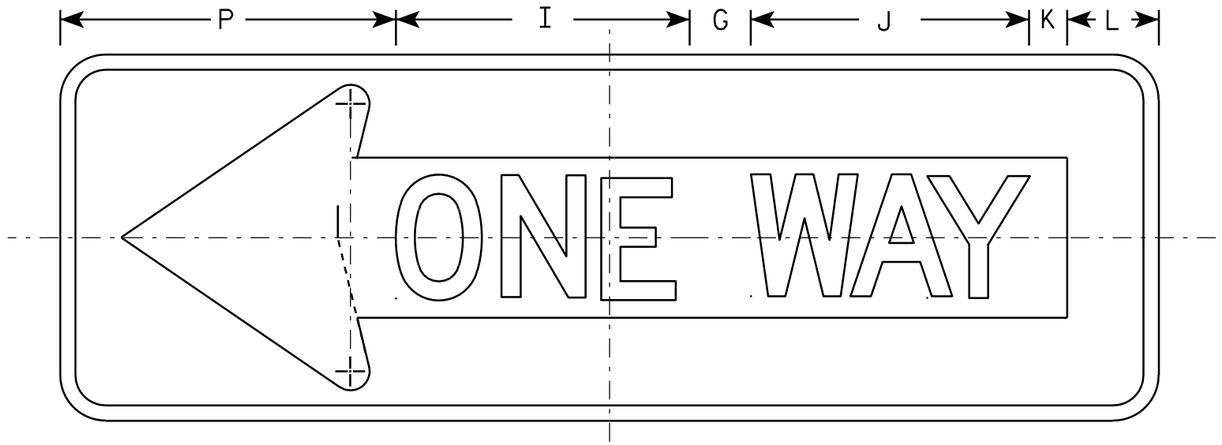
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 226 | E



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

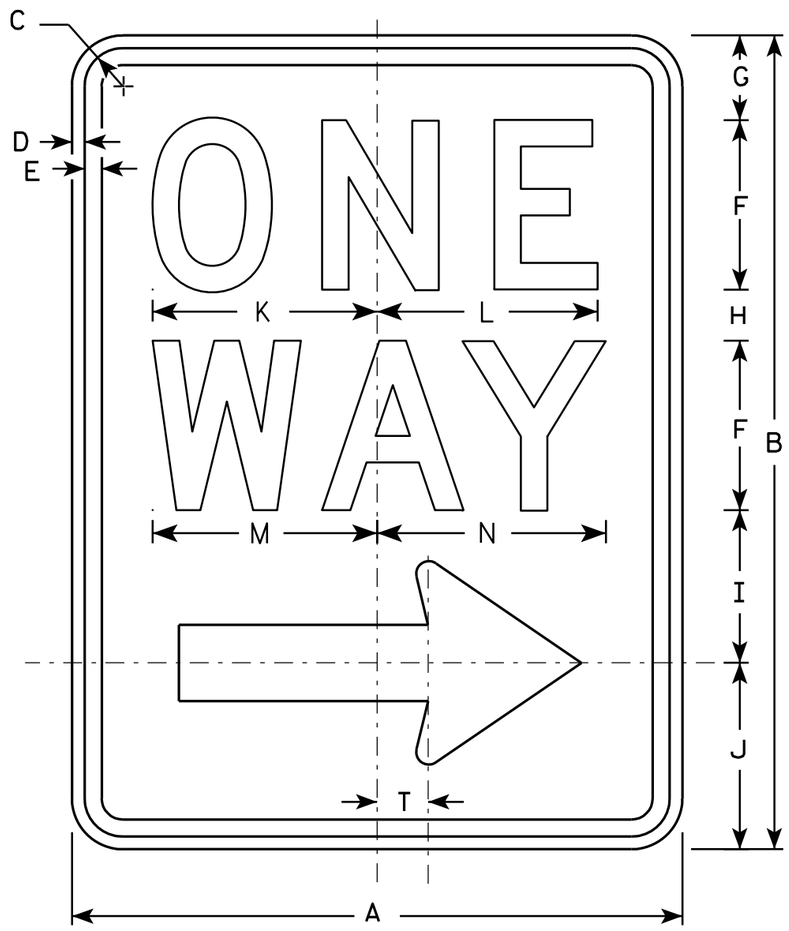
DATE 12/17/10 PLATE NO. R6-1.2

PROJECT NO:

SHEET NO: 227 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R61.DGN PLOT DATE : 17-DEC-2010 14:11 PLOT BY : dotsja

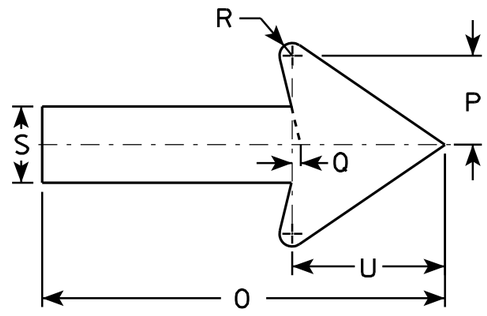
WISDOT/CADDS SHEET 42



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	O	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

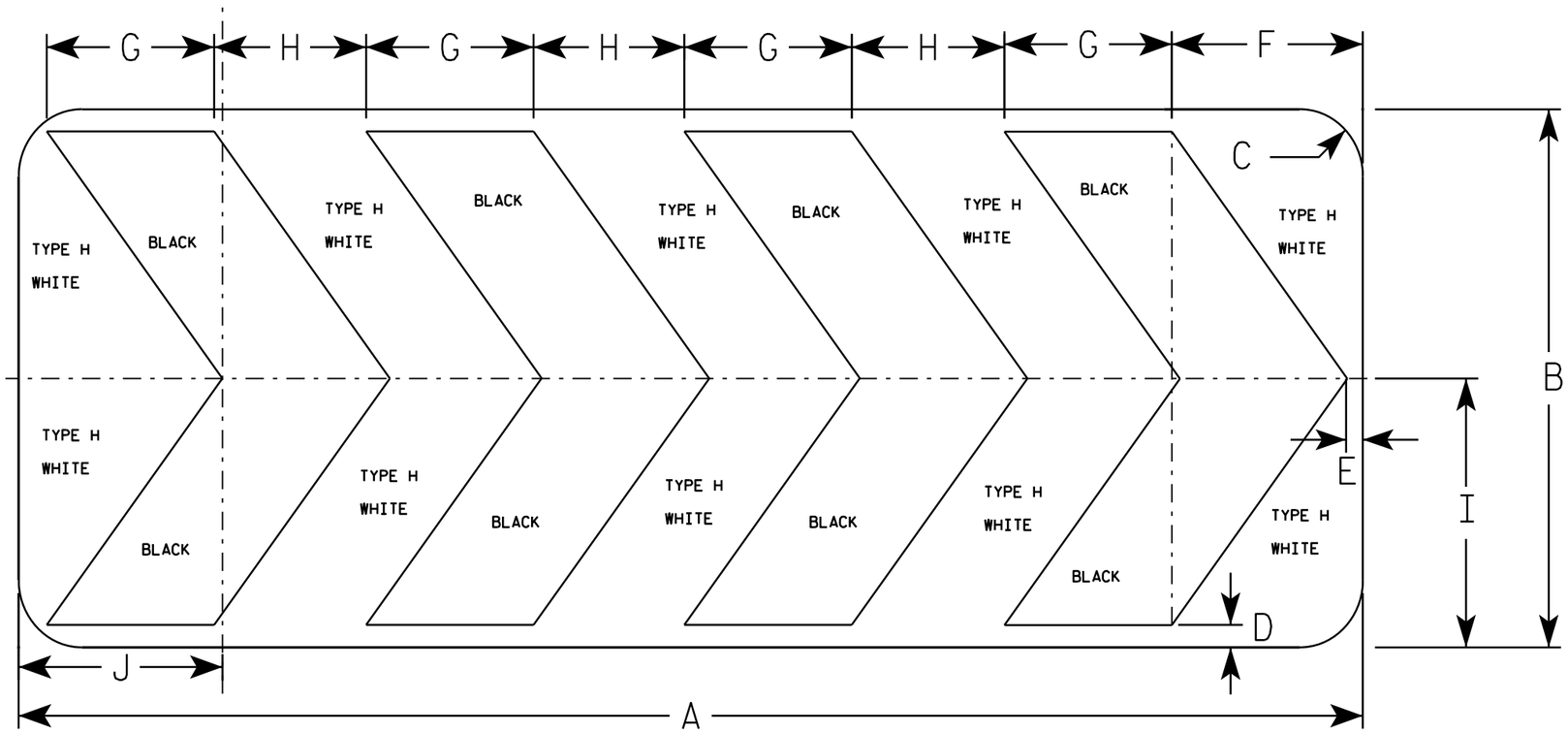
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 228	E

NOTES

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



R6-4B

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	60	24	2 1/4	1	3/4	8 1/2	7 1/2	6 3/4	12	9 1/8																	10.0
2M	60	24	2 1/4	1	3/4	8 1/2	7 1/2	6 3/4	12	9 1/8																	10.0
3																											
4																											
5																											

STANDARD SIGN
R6-4B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/03/11 PLATE NO. R6-4B.2

PROJECT NO:

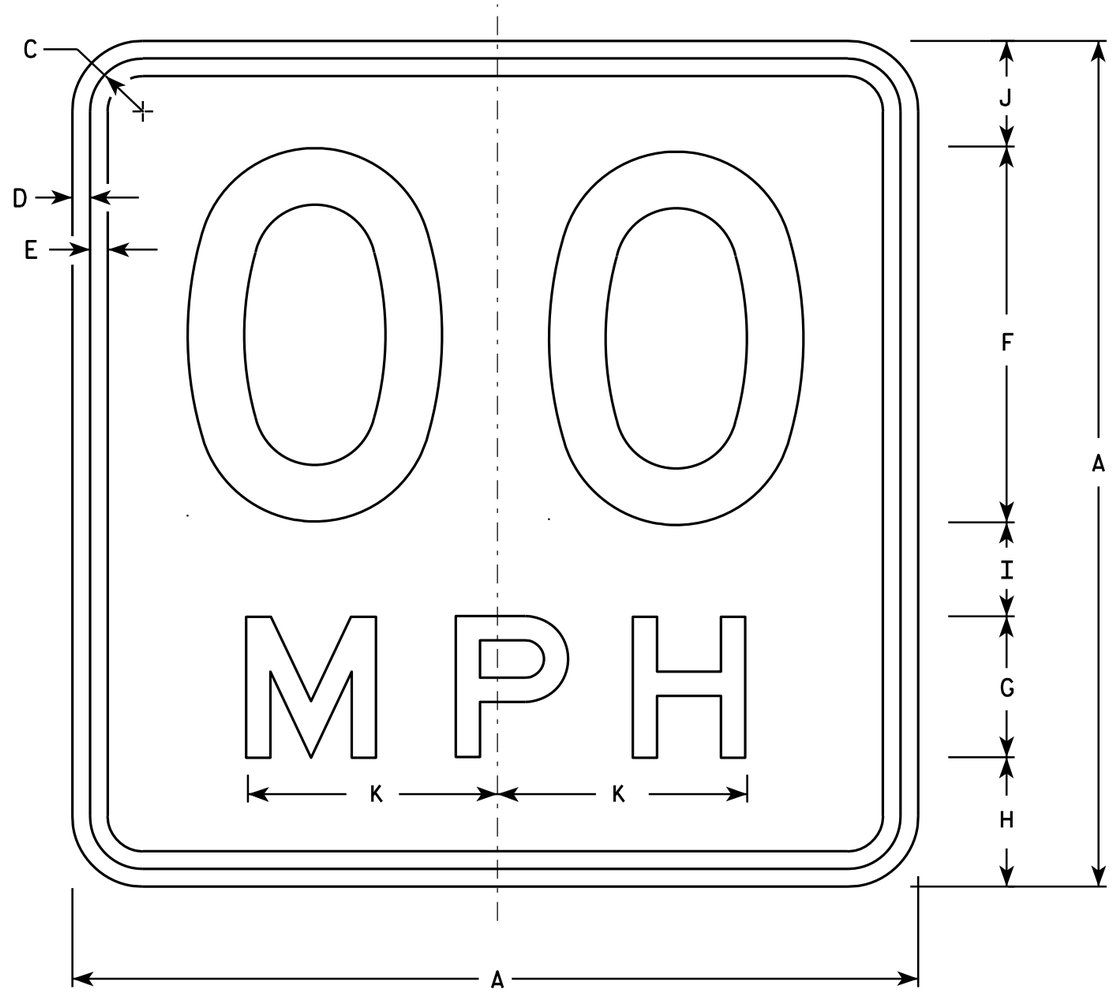
SHEET NO: 229 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R64B.DGN PLOT DATE : 03-JAN-2011 14:30 PLOT BY : dotsja

WISDOT/CADDS SHEET 42

7

7



W13-1

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

NOTES

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

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

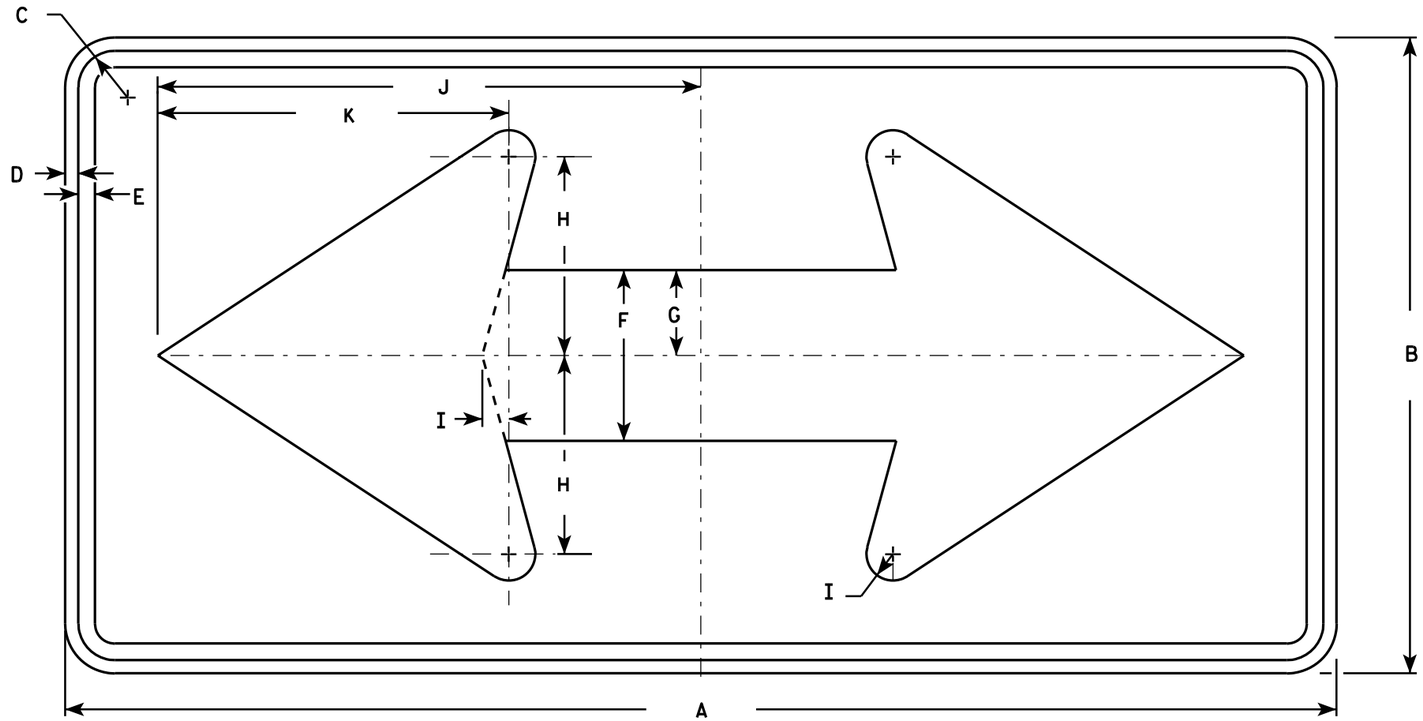
STANDARD SIGN
W13-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 230 | E



W1-7

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/8	3/8	1/2	5	2 1/2	5 3/4	3/4	15 5/8	10 1/8																4.5
2S	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
2M	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
3	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
4	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
5	96	48	2 1/4	3/4	1	13	6 1/2	15	2	41	26 1/2																32.0

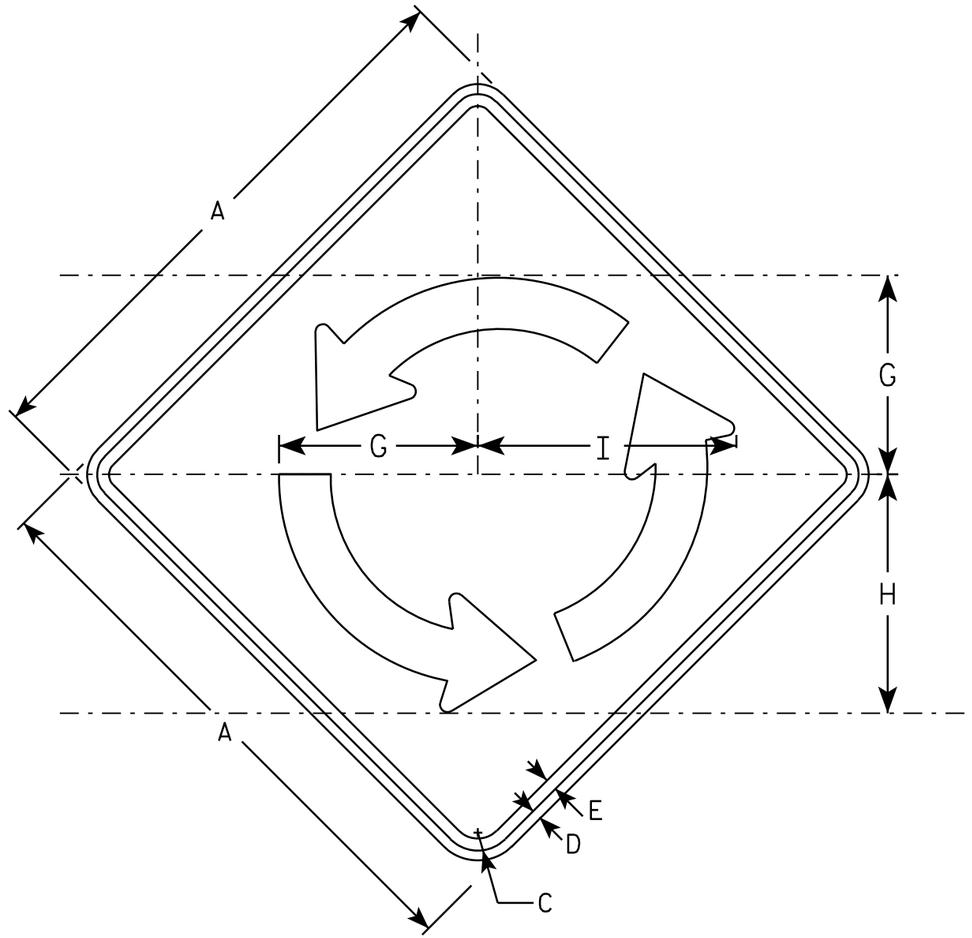
STANDARD SIGN
W1-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-7.7

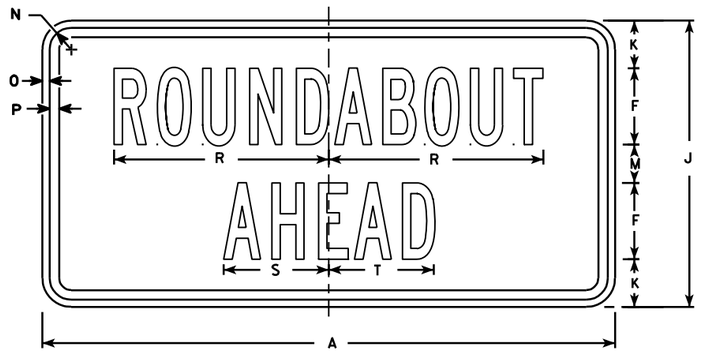
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 231 | E



W2-6

NOTES

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



W2-6P

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	W2-6 Area sq. ft.	W2-6P Area sq. ft.
1																										
2S	30		1 3/8	1/2	5/8	4	10 3/8	12 1/2	13 1/2	15	2 1/2		2	1 1/8	3/8	1/2		11 1/4	5 1/2	5 1/2					6.25	3.12
2M	30		1 3/8	1/2	5/8	4	10 3/8	12 1/2	13 1/2	15	2 1/2		2	1 1/8	3/8	1/2		11 1/4	5 1/2	5 1/2					6.25	3.12
3	36		1 5/8	5/8	3/4	5	12 1/2	15	16 1/4	18	2 5/8		2 3/4	1 1/8	3/8	1/2		14	7	6 3/4					9.00	4.50
4	48		2 1/4	3/4	1	6	16 5/8	20	16 1/4	24	4 3/8		3 5/8	1 3/8	1/2	5/8		17	8 1/4	8 1/4					16.0	8.0
5																										

STANDARD SIGN
W2-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/29/12 PLATE NO. W2-6.5

PROJECT NO:

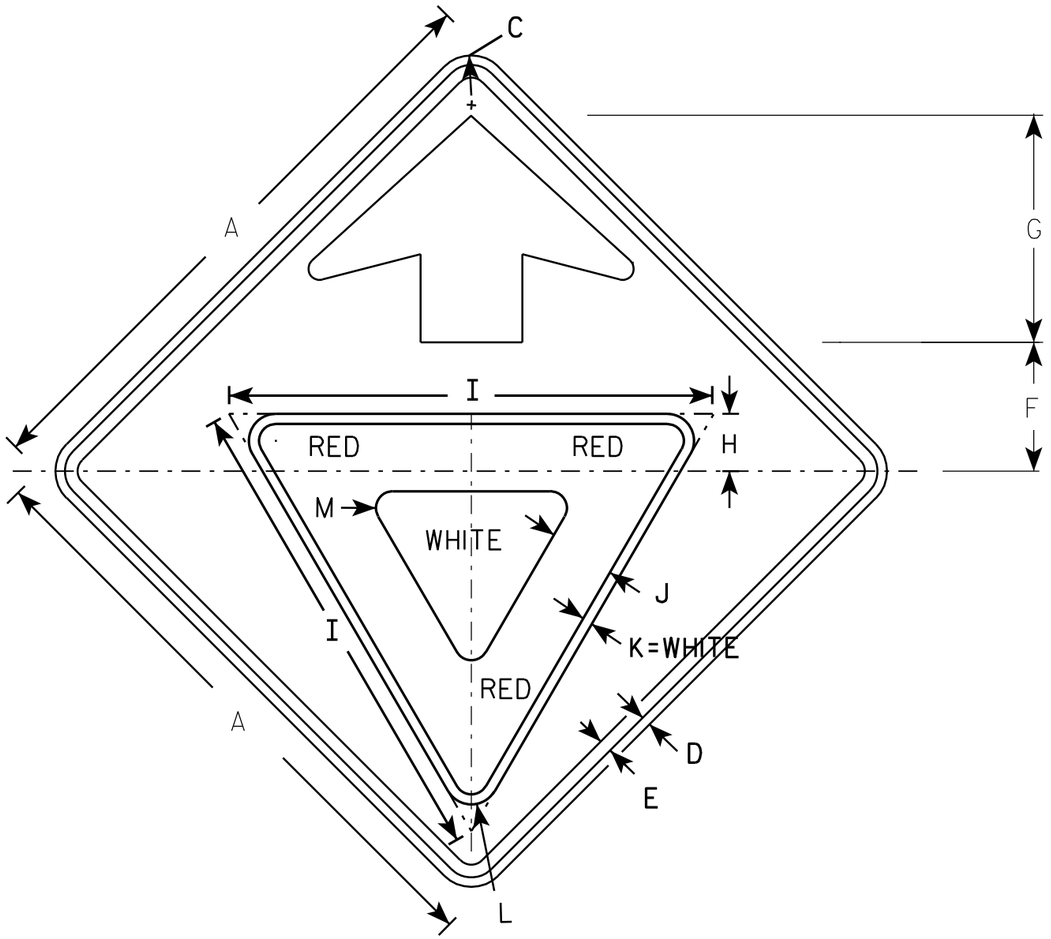
SHEET NO: 232 E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W26.DGN PLOT DATE : 29-JUN-2012 10:15 PLOT BY : mscsja

WISDOT/CADDS SHEET 42

7

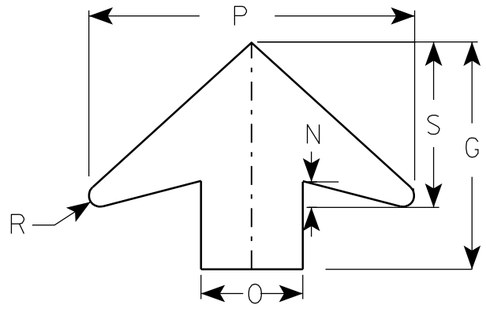
7



W3-2

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
   Yield 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	3	25	3 3/8	1/2	1 3/8	7/8	1 1/4	5	16		1/2	8								6.25
2S	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 3/8	28	3 3/4	5/8	1 1/2	1	1 5/8	6	19 1/4		5/8	9 3/4								9.0
2M	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 3/8	28	3 3/4	5/8	1 1/2	1	1 5/8	6	19 1/4		5/8	9 3/4								9.0
3	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 3/8	28	3 3/4	5/8	1 1/2	1	1 5/8	6	19 1/4		5/8	9 3/4								9.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0

STANDARD SIGN
W3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-2..9

PROJECT NO:

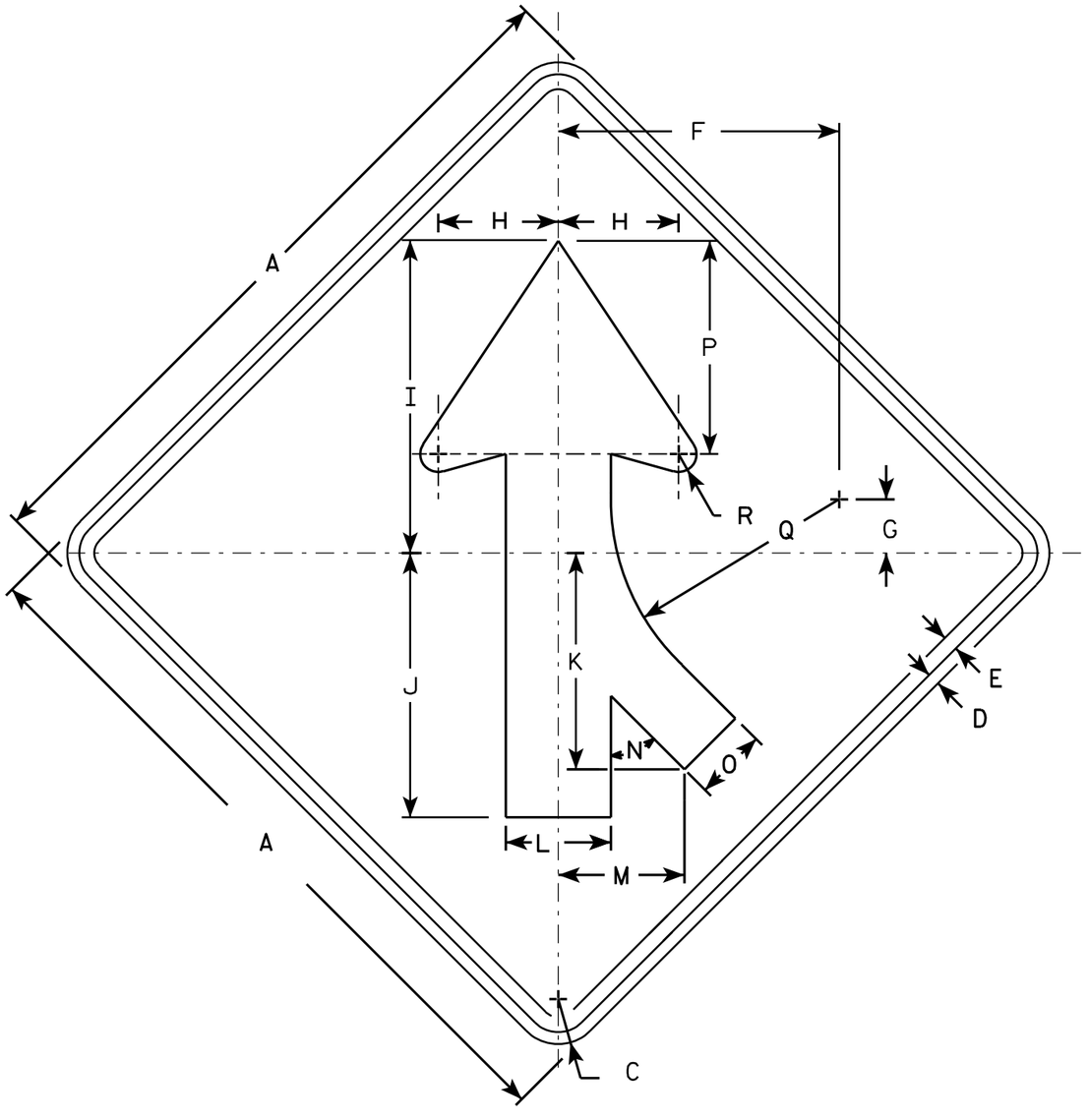
SHEET NO: 233 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W32.DGN PLOT DATE : 07-JUN-2010 13:03 PLOT BY : ditjph

WISDOT/CADDS SHEET 42

7

7



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: 234	E

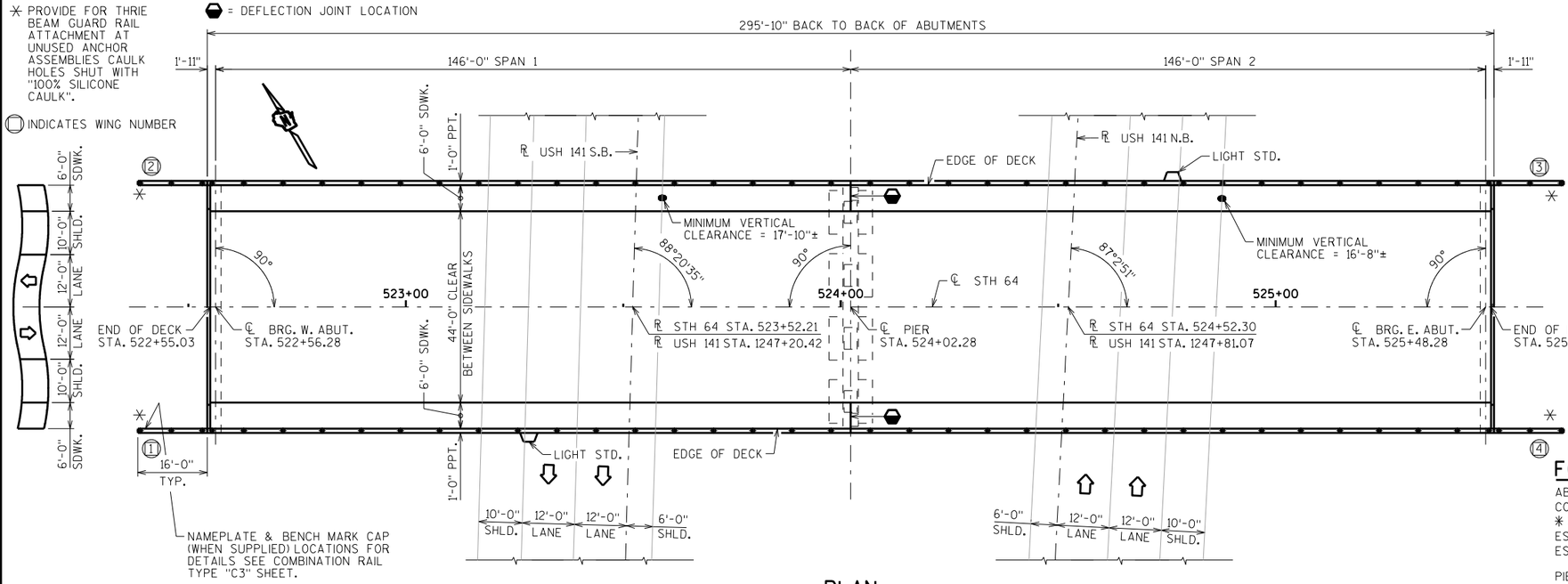
STATE PROJECT NUMBER

1490-27-71

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

⬡ INDICATES WING NUMBER

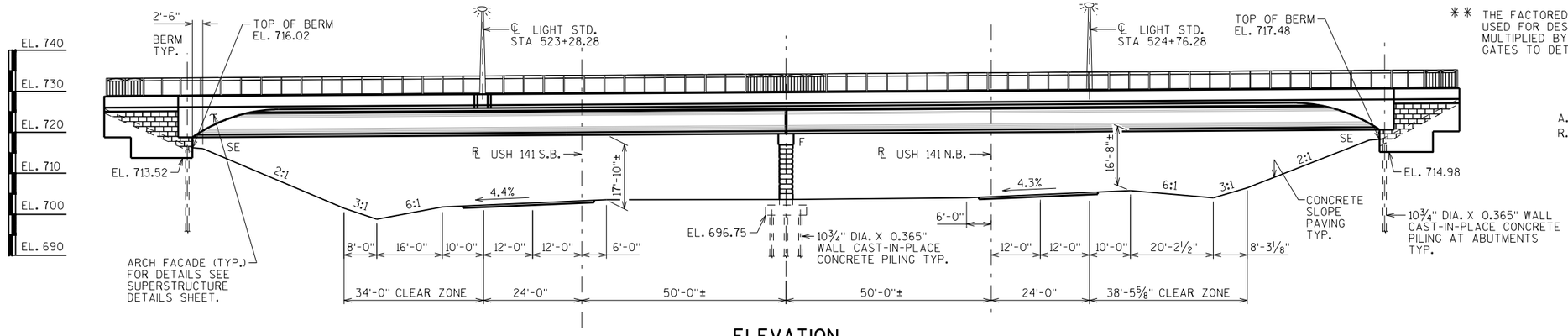
⬟ = DEFLECTION JOINT LOCATION



NAMEPLATE & BENCH MARK CAP (WHEN SUPPLIED) LOCATIONS FOR DETAILS SEE COMBINATION RAIL TYPE "C3" SHEET.

PLAN

2 SPAN - 72W" PRESTRESSED GIRDER BRIDGE



ARCH FACADE (TYP.) FOR DETAILS SEE SUPERSTRUCTURE DETAILS SHEET.

ELEVATION

NORMAL TO USH 141

DESIGN DATA

LIVE LOAD:

DESIGN LOADING; HL-93
INVENTORY RATING FACTOR: RF=1.15
OPERATING RATING FACTOR: RF=1.56
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250 (KIPS)

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

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY ——— SLAB — f'c = 4,000 P.S.I.
ALL OTHERS — f'c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT, GRADE 60 ——— fy = 60,000 P.S.I.

72W" PRESTRESSED GIRDERS, CONCRETE ——— f'c = 8,000 P.S.I.
MASONRY STRANDS- 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON 10¾" DIA. X 0.365" WALL CAST-IN-PLACE CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS ✳✳ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 50'-0" LONG (WEST ABUTMENT)
ESTIMATED 55'-0" LONG (EAST ABUTMENT).

PIER TO BE SUPPORTED ON 10¾" DIA. X 0.365" WALL CAST-IN-PLACE CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS ✳✳ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 40'-0" LONG.

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

TRAFFIC VOLUME

℞ STH 64		℞ USH 141	
A.D.T.=3000	(2034)	A.D.T.=9900	(2034)
R.D.S.=40 M.P.H.		R.D.S.=70 M.P.H.	

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. WEST ABUTMENT
5. WEST ABUTMET DETAILS
6. EAST ABUTMENT
7. EAST ABUTMENT DETAILS
8. PIER
9. PIER DETAILS
10. 72W" PRETSRESSED GIRDER DETAILS
11. 72W" PRESTRESSED GIRDER DETAILS 2
12. STEEL DIAPHRAGM
13. SUPERSTRUCTURE
14. SUPERSTRUCTURE DETAILS
15. SUPERSTRUCTURE DETAILS 2
16. PARAPET "A" ELECTRICAL WORK
17. RAILING STEEL SPECIAL
18. RAILING STEEL SPECIAL DETAILS
19. SLOPE PAVING (CONCRETE CAST-IN-PLACE)
20. ALTERNATE CONSTRUCTION JOINT

STRUCTURE DESIGN CONTACTS:
ANDREW SMITH (608) 266-0989
DAVE KIEKBUSCH (608) 266-5084

NO.	DATE	REVISION	BY

Plans Prepared By **WISDOT**
BUREAU OF STRUCTURES

ACCEPTED William C. Dreher 12/13/13
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-38-145

STH 64 OVER USH 141

COUNTY	TOWN/~~CITY/VILLAGE~~
MARINETTE	POUND

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
ADS	EMK	DDS	ADS

GENERAL PLAN

SHEET 1 OF 20

235

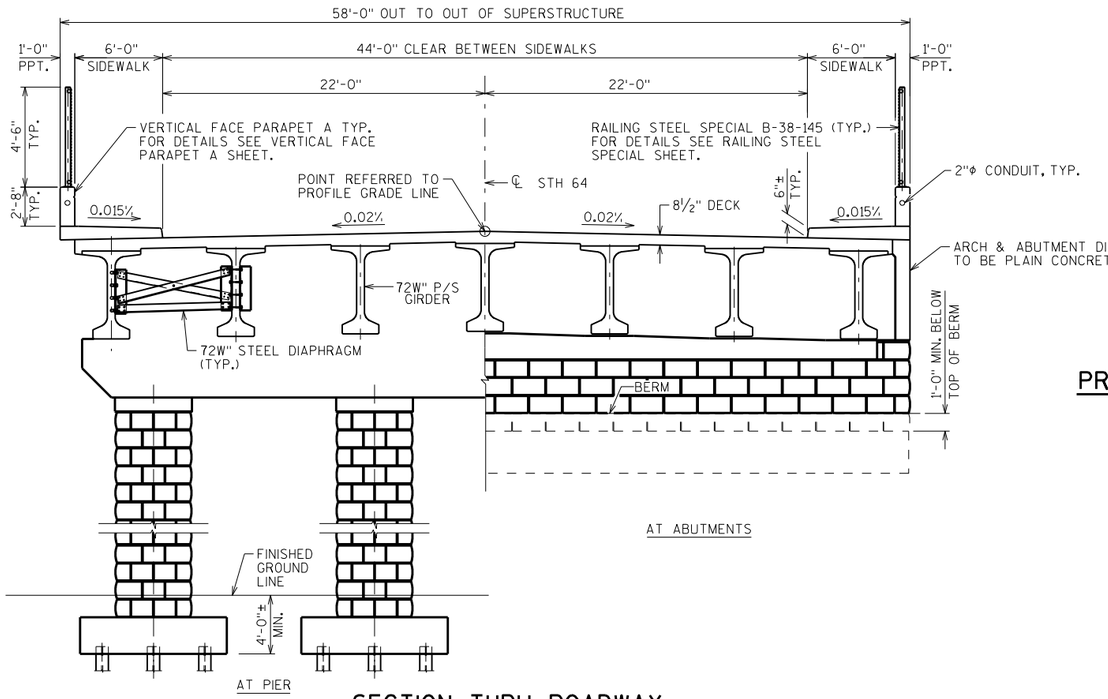
I.D. 1490-27-00

DATE: AUG. 2013

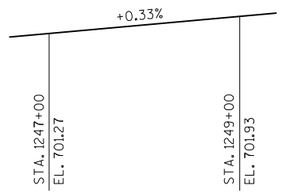
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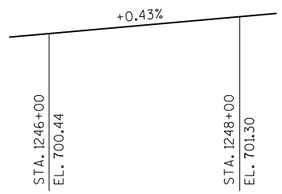
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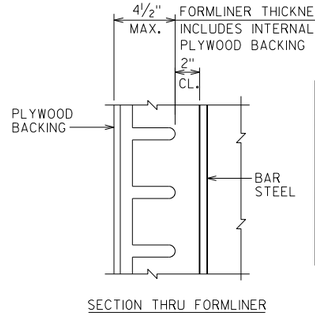
SECTION THRU ROADWAY



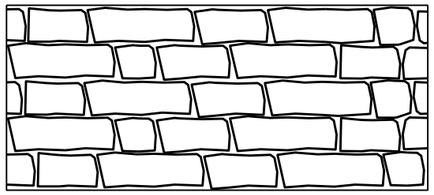
PROFILE GRADE LINE - USH 141 NB



PROFILE GRADE LINE - USH 141 SB



SECTION THRU FORMLINER



RANDOM CUT STONE
COURSE HEIGHT = 14" ± 2"
RELIEF = 3" MAX

FORMLINER DETAILS

ABUTMENT NOTES

FORMLINER COURSING ON ABUTMENTS AND WINGS SHALL BE LEVEL.

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

THE FORMLINER PATTERN SHALL BE CONTINUOUS ACROSS CONSTRUCTION JOINTS.

WRAP AROUND/MATCH FORMLINER PATTERN AT CORNERS.

PIER NOTES

FORMLINER COURSING ON PIERS SHALL BE LEVEL.

THE FORMLINER COURSING ON ALL FACES OF EACH COLUMN SHALL BE VERTICALLY ALIGNED.

SPACE ADJACENT PORTIONS OF FORMLINER ON SLOPED FACE SO THAT COURSING IS ALIGNED VERTICALLY WITH COURSING ON VERTICAL FACE.

THE FORMLINER PATTERN SHALL BE CONTINUOUS ACROSS CONSTRUCTION JOINTS.

WRAP AROUND/MATCH FORMLINER PATTERN AT CORNERS.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	WEST ABUT.	EAST ABUT.	PIER 1	TOTALS
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-38-145	LS	———	———	———	———	1
210.0100	BACKFILL STRUCTURE	CY	———	345	345	———	690
502.0100	CONCRETE MASONRY BRIDGES	CY	784	73	73	120	1,050
502.3200	PROTECTIVE SURFACE TREATMENT	SY	2,105	13	13	———	2,131
503.0172	PRESTRESSED GIRDER TYPE I 72W-INCH	LF	2,050	———	———	———	2,050
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	———	3,775	3,775	3,200	10,750
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	143,400	3,060	3,065	14,980	164,505
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	———	7	7	14	28
506.4000	STEEL DIAPHRAGMS B-38-145	EACH	24	———	———	———	24
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	———	15	15	———	30
517.1010.S	CONCRETE STAINING B-38-145	SF	5,790	———	———	———	5,790
517.1015.S	CONCRETE STAINING MULTI-COLOR B-38-145	SF	———	325	325	950	1,600
517.1050.S	ARCHITECTURAL SURFACE TREATMENT B-38-145	SF	———	325	325	950	1,600
550.2106	PILING CIP CONCRETE 10 3/4 X 0.365-INCH	LF	———	950	1045	2,080	4,075
604.0400	SLOPE PAVING CONCRETE	SY	———	310	265	———	575
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	———	260	260	———	520
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	———	2	2	———	4
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	24	———	———	———	24
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	600	23	23	———	646
653.0220	JUNCTION BOXES 18X6X6-INCH	EACH	2	———	———	———	2
657.6005.S	ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES	EACH	2	———	———	———	2
SPV.0105	RAILING STEEL SPECIAL B-38-145	LS	———	———	———	———	1
	NON-BID ITEMS		———	———	———	———	1
	FILLER	SIZE	———	———	———	———	½" & ¾"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

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

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

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

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE TOP OF DECK SURFACE, THE FRONT FACE AND THE TOP OF BOTH THE SIDEWALKS AND PARAPETS, INCLUDING PARAPETS ON ABUTMENT WINGS.

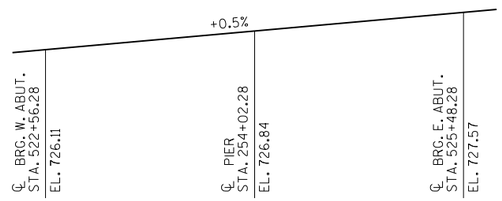
THE EXISTING GROUND LINE SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION AT THE PIERS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON SHEET 1 AND IN THE ABUTMENT DETAILS.

FORMLINER ON EXPOSED VERTICAL FACES OF WINGWALLS, ABUTMENT BODY AND PIER COLUMNS TO BE A RANDOM CUT STONE FINISH.

STAIN "ARCHITECTURAL" TREATED SURFACES TO RESEMBLE RANDOM CUT STONE (SEE THE SPECIAL PROVISIONS FOR "CONCRETE STAINING, MULTI-COLOR")

STAIN ALL EXPOSED OUTSIDE FACES AND THE UNDERSIDE OF THE EXTERIOR GIRDERS. STAIN COLOR SHALL BE REDDISH-BROWN (FEDERAL COLOR #20152). SEE SPECIAL PROVISIONS FOR "CONCRETE STAINING".



PROFILE GRADE LINE - STH 64

STATE PROJECT NUMBER

1490-27-71

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-38-145

DRAWN BY DDS | PLANS CK'D. ADS

CROSS SECTION & QUANTITIES

SHEET 2

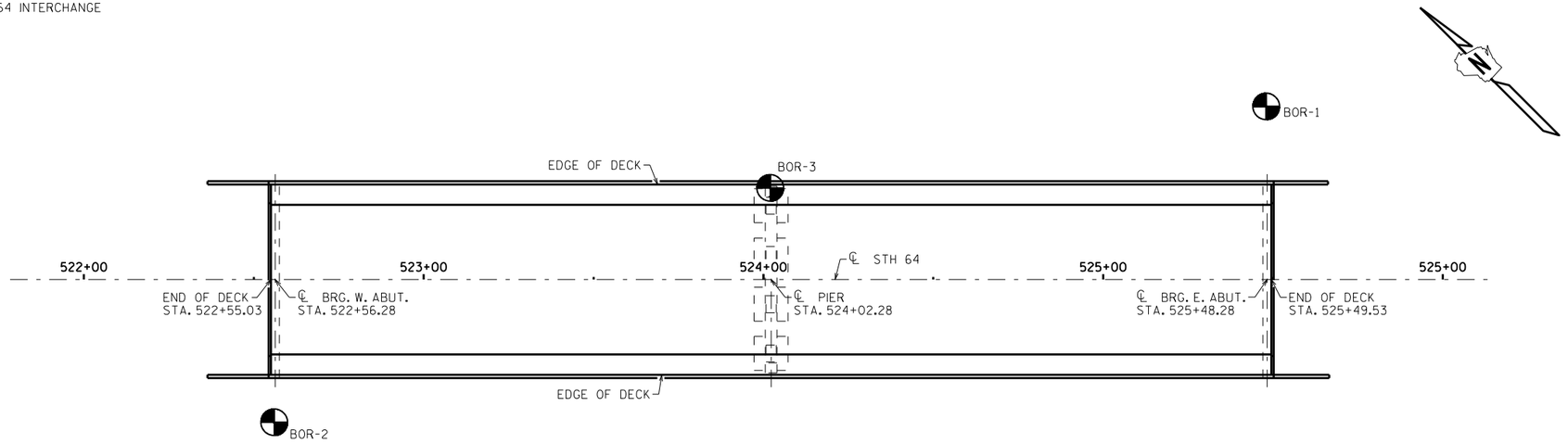
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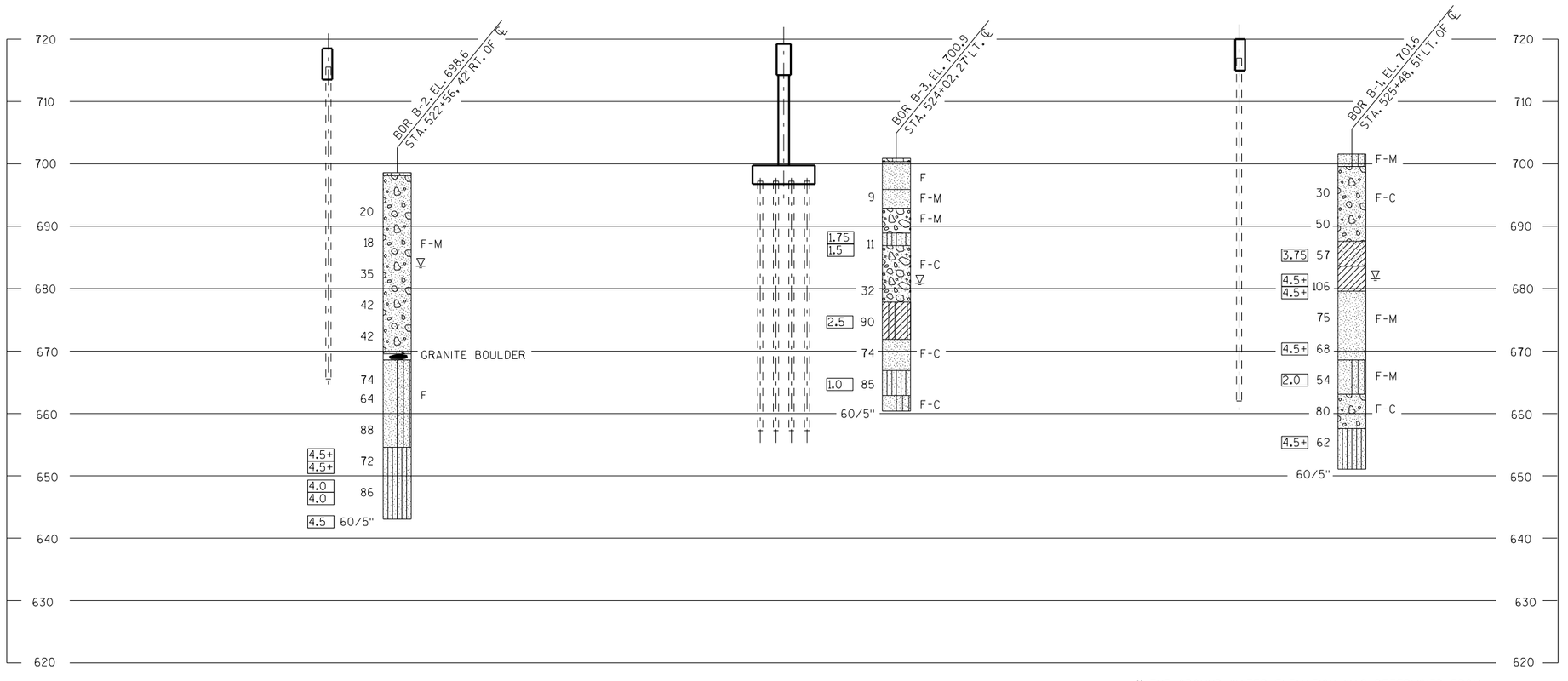
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COLEMAN - CRIVITZ
STH 64 INTERCHANGE





* THE GROUND WATER ELEVATION WAS DETERMINED FROM WHERE THE SOIL SAMPLE WAS DESCRIBED AS WET.

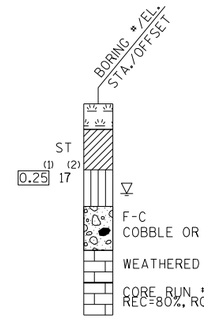
STATE PROJECT NUMBER

1490-27-71

MATERIAL SYMBOLS

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

LEGEND OF BORING



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

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

GROUND WATER ELEVATION

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

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-38-145

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SUBSURFACE EXPLORATION

SHEET 3

237

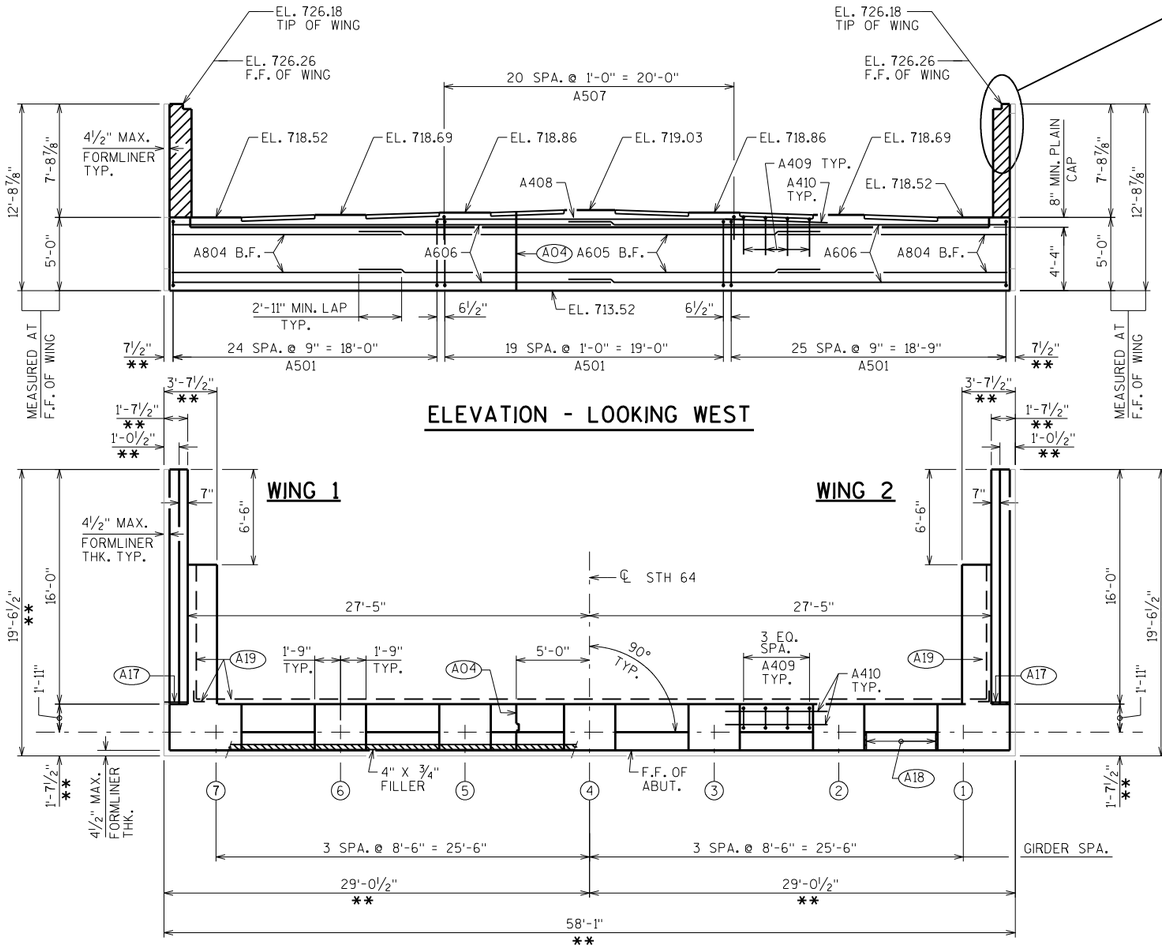
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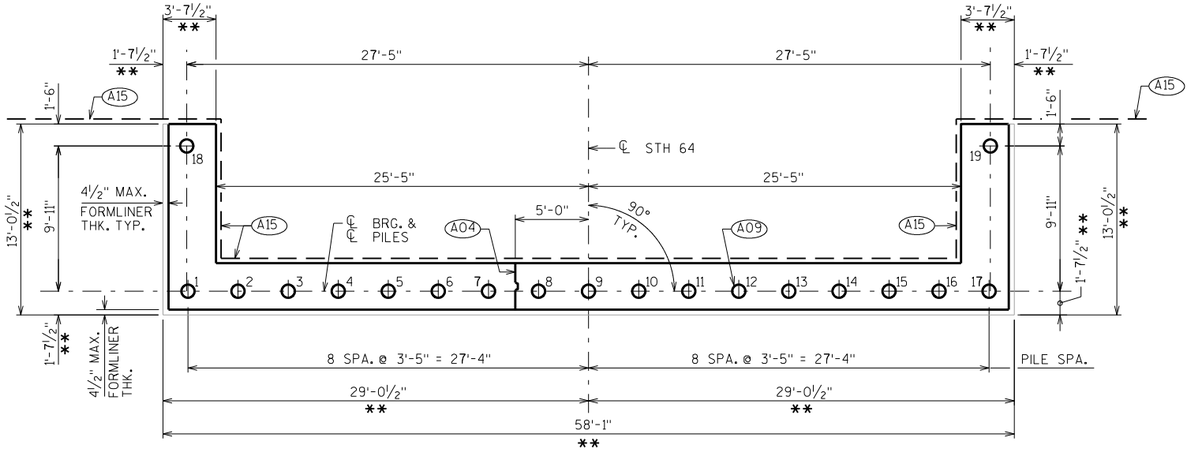
STATE PROJECT NUMBER

1490-27-71

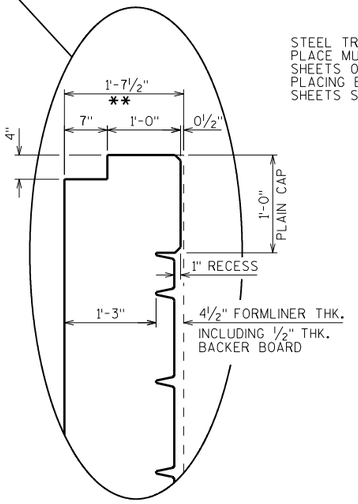


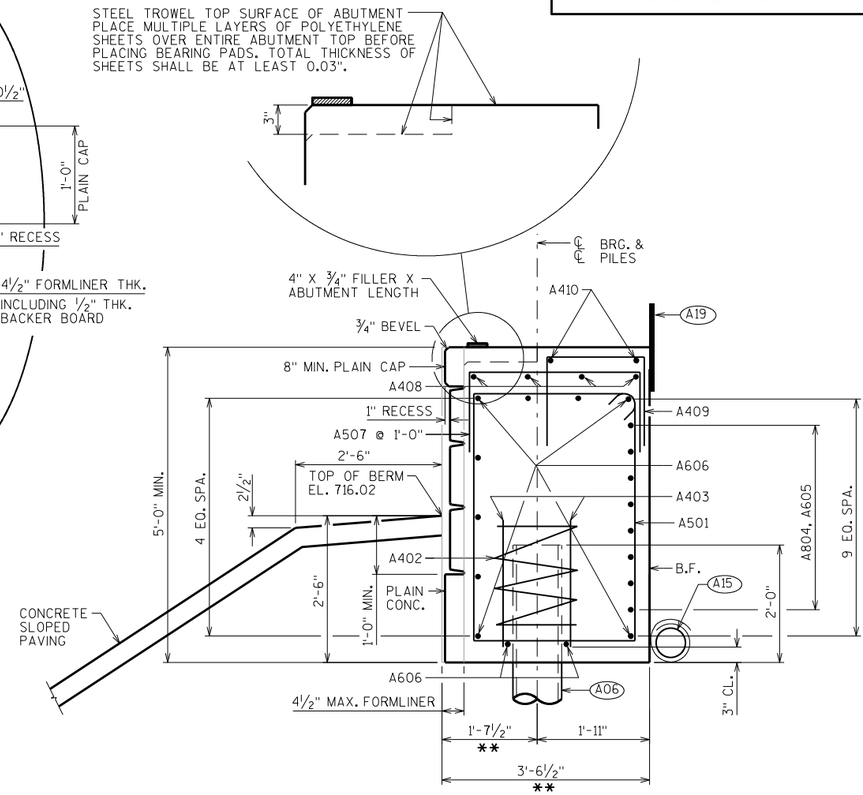
ELEVATION - LOOKING WEST

PLAN



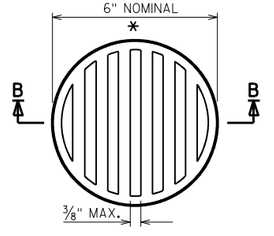
PILE PLAN



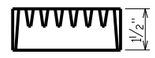


SECTION THRU BODY

** = DIMENSION INCLUDES FORMLINER THK.



RODENT SHIELD DETAIL



SECTION B-B

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

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

(A04) VERT. CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" R.M.W. @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

(A09) SUPPORT ABUTMENT ON 10.75" DIA. X 0.365" WALL CAST-IN-PLACE CONCRETE PILING, ESTIMATED 50'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE.

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

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-38-145

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WEST ABUTMENT

SHEET 4

238

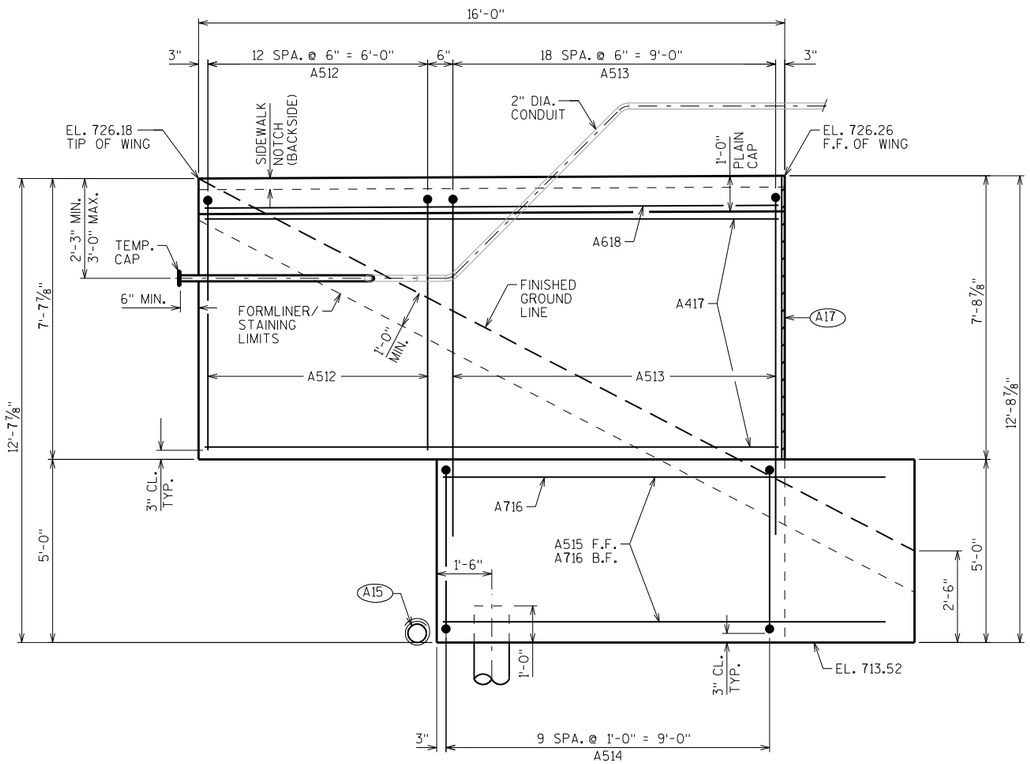
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STATE PROJECT NUMBER

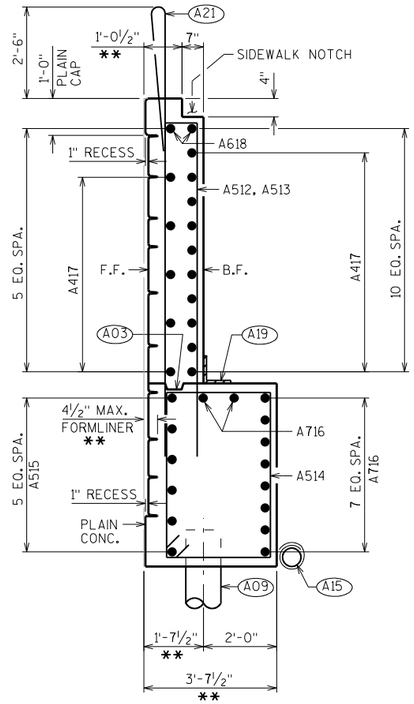
1490-27-71



ELEVATION - WING 1 SHOWN

WING 2 SIMILAR

**= DIMENSION INCLUDES FORMLINER THK.



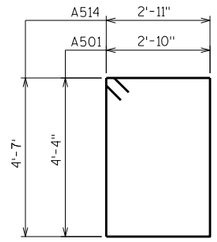
SECTION THRU WING 1

WING 2 SIMILAR

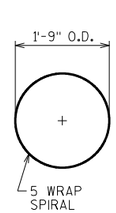
BILL OF BARS

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

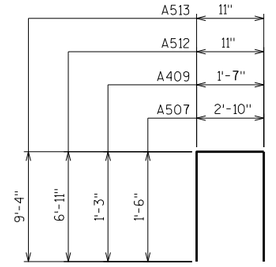
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
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A605		8	30'-10"			BODY - HORIZ. - B.F.
A606		11	57'-0"			BODY - HORIZ.
A507		21	5'-8"	X		BODY - VERT.
A408		4	20'-10"			BODY - HORIZ. - TOP
A409		24	3'-11"	X		BODY - VERT. - BETWEEN GIRDERS
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A411		NOT	USED			
A512	X	26	14'-6"	X		WINGS 1&2 - VERT.
A513	X	38	19'-4"	X		WINGS 1&2 - VERT.
A514	X	20	15'-8"	X		WINGS 1&2 - STIRRUPS
A515	X	12	12'-0"			WINGS 1&2 - HORIZ. - F.F.
A716	X	20	12'-1"			WINGS 1&2 - HORIZ.
A417	X	30	15'-8"			WINGS 1&2 - HORIZ.
A618	X	4	15'-8"			WINGS 1&2 - HORIZ.



A501, A514



A402



A507,A409,A512,A513

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" R.M.W. @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

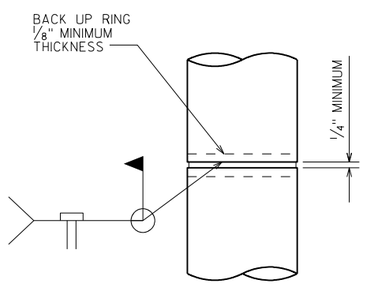
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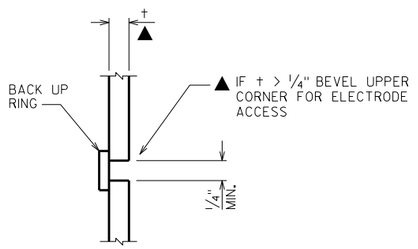
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(A21) FOR PPT. BARS & DIMENSIONS SEE "RAILING STEEL SPECIAL" SHEET.



CAST-IN-PLACE 'PIPE PILE'



C.I.P. PILE WELD DETAIL

PILE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-38-145

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WEST ABUTMENT DETAILS

SHEET 5

239

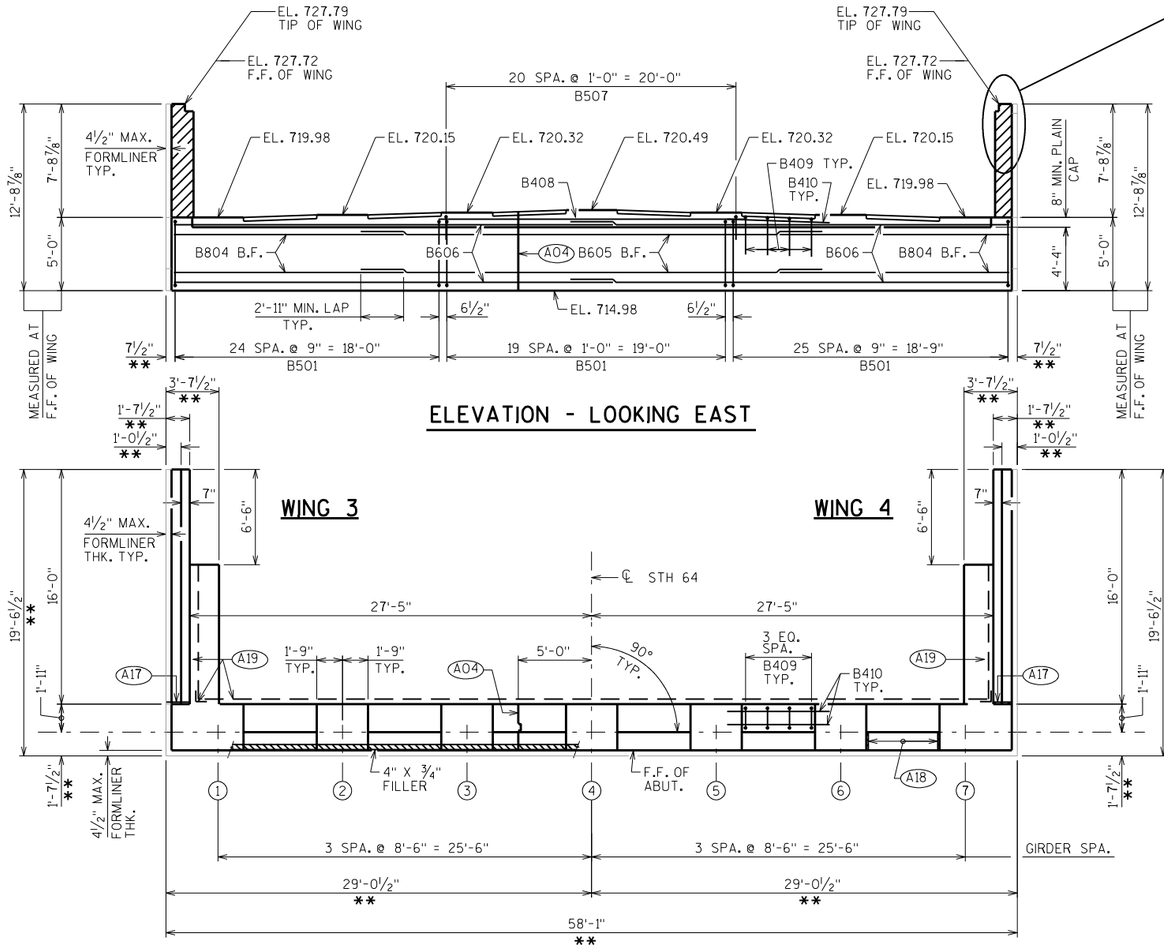
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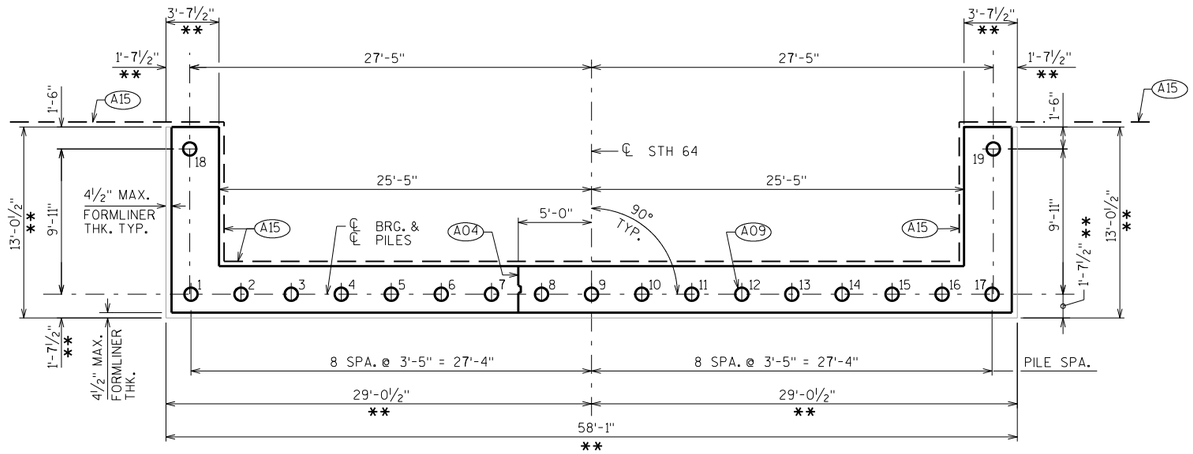
STATE PROJECT NUMBER

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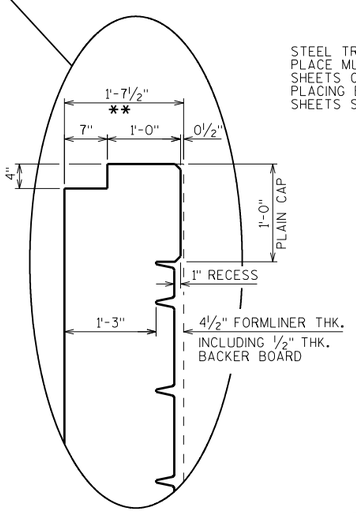


ELEVATION - LOOKING EAST

PLAN



PILE PLAN



** = DIMENSION INCLUDES FORMLINER THK.

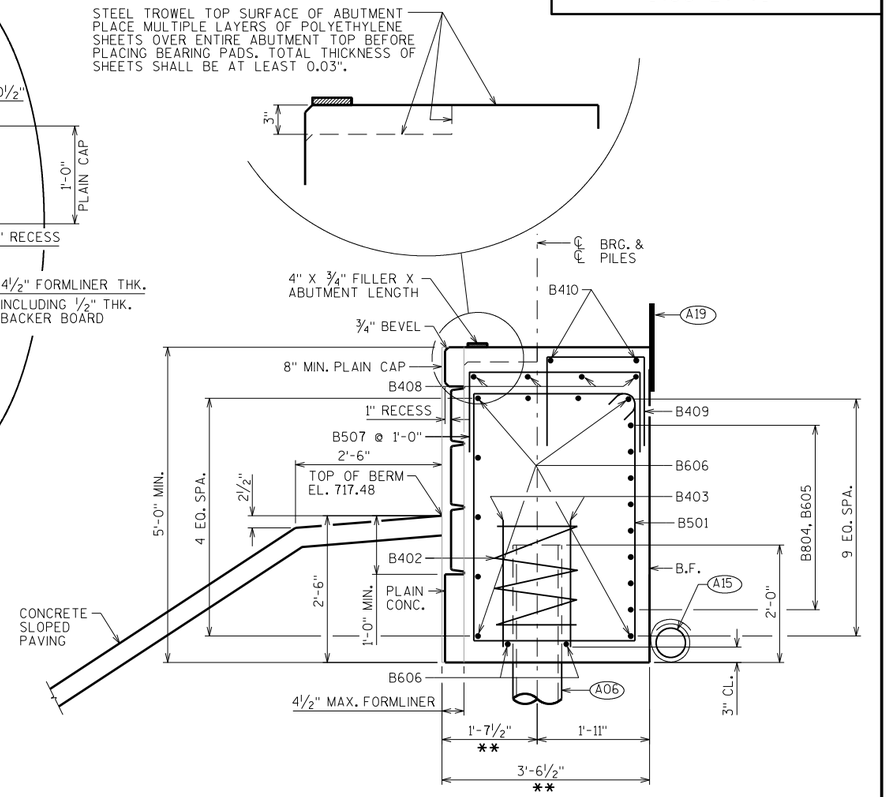
RODENT SHIELD DETAIL

SECTION B-B

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SECTION THRU BODY

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-38-145

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EAST ABUTMENT

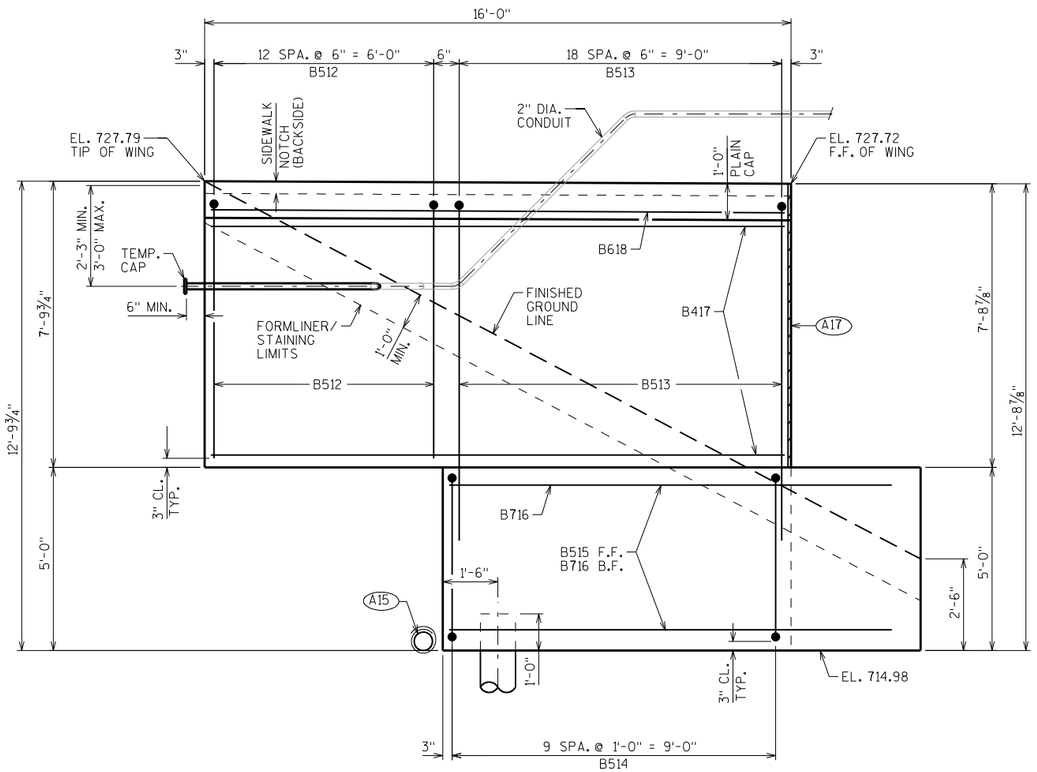
SHEET 6

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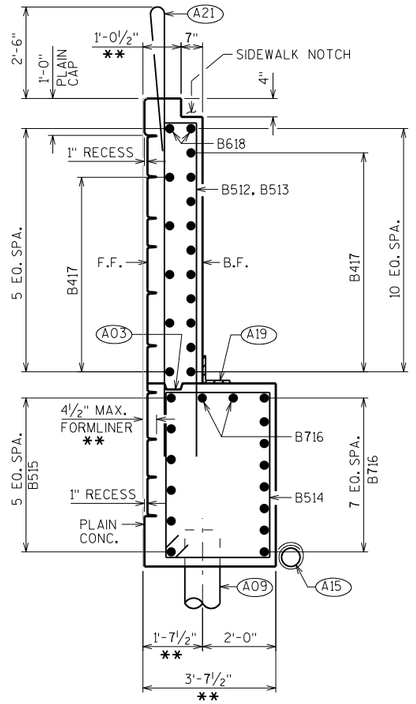
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ELEVATION - WING 3 SHOWN

WING 4 SIMILAR

**= DIMENSION INCLUDES FORMLINER THK.



SECTION THRU WING 3

WING 4 SIMILAR

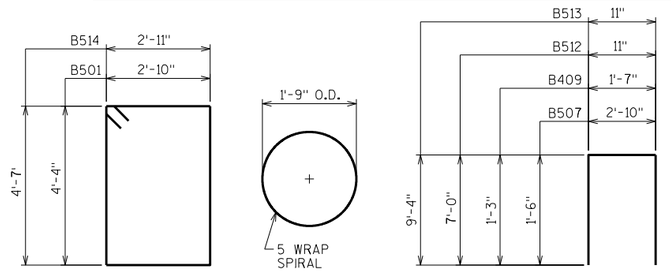
STATE PROJECT NUMBER

1490-27-71

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
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B512	X	26	14'-8"	X		WINGS 3&4 - VERT.
B513	X	38	19'-4"	X		WINGS 3&4 - VERT.
B514	X	20	15'-8"	X		WINGS 3&4 - STIRRUPS
B515	X	12	12'-0"			WINGS 3&4 - HORIZ. - F.F.
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B501, B514 B402 B507,B409,B512,B513

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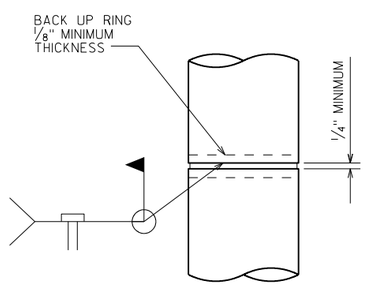
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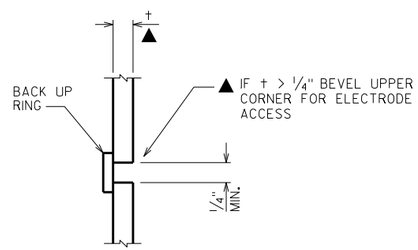
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CAST-IN-PLACE 'PIPE PILE'



C.I.P. PILE WELD DETAIL

PILE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-38-145

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EAST ABUTMENT DETAILS

SHEET 7

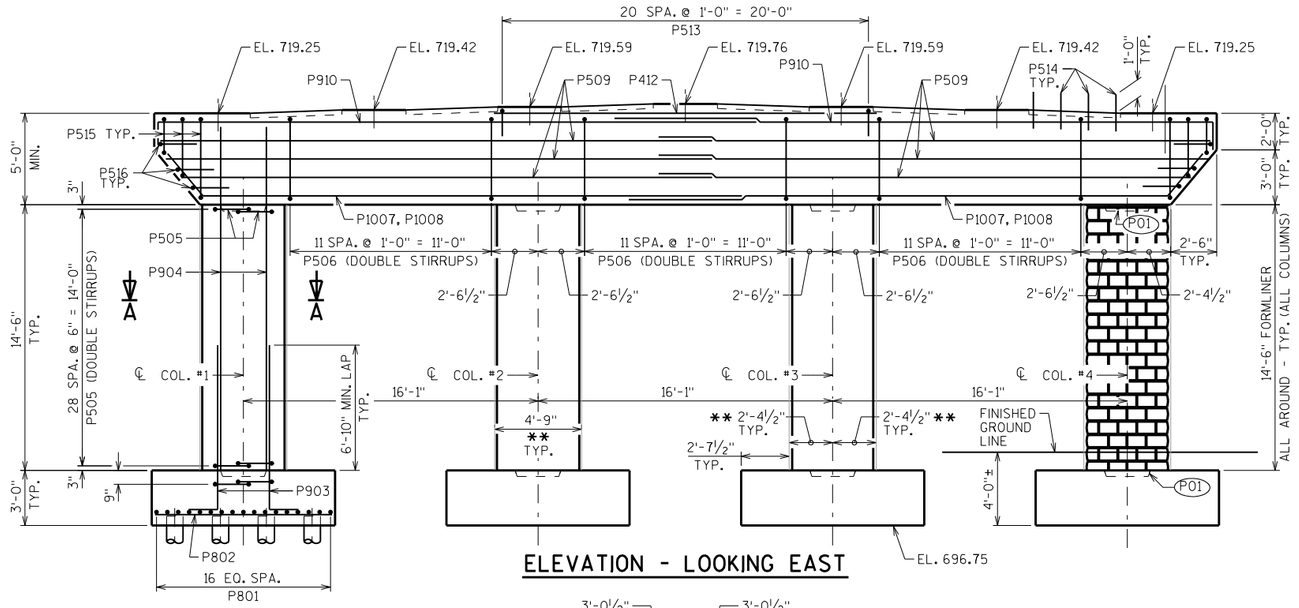
241

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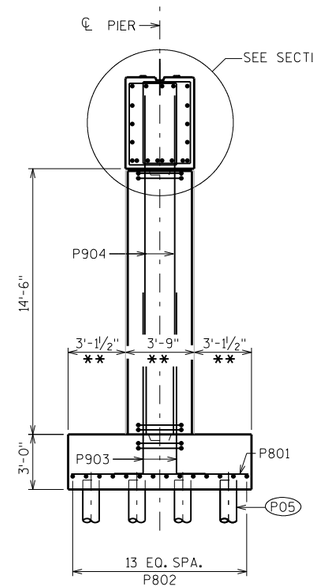
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8

STATE PROJECT NUMBER
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ELEVATION - LOOKING EAST



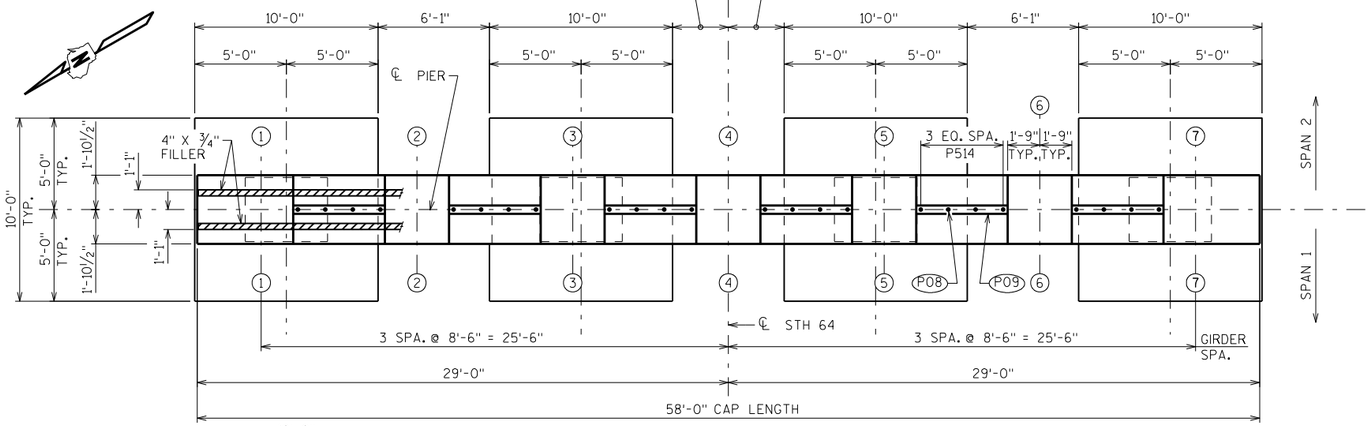
END VIEW

(P01) 2'-6" X 1'-2" X 4" DEEP CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY.

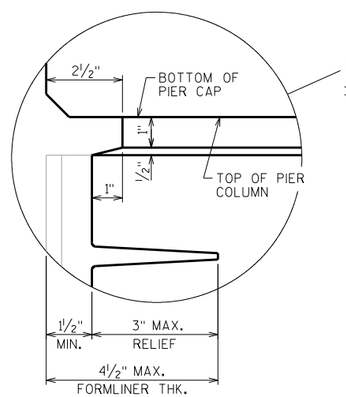
(P05) SUPPORT PIER ON 10.75" DIA. X 0.365" WALL CAST-IN-PLACE CONCRETE PILING, ESTIMATED 40'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE.

(P08) P514 BARS @ 1'-0" CTRS. BETWEEN BEAM SEATS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

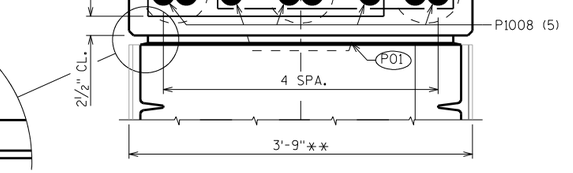
(P09) KEYED CONSTRUCTION JOINT-FORMED BY BEVELED 2 x 6 BETWEEN BEAM SEATS.



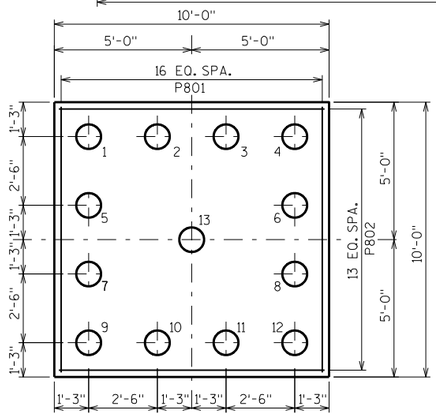
PLAN



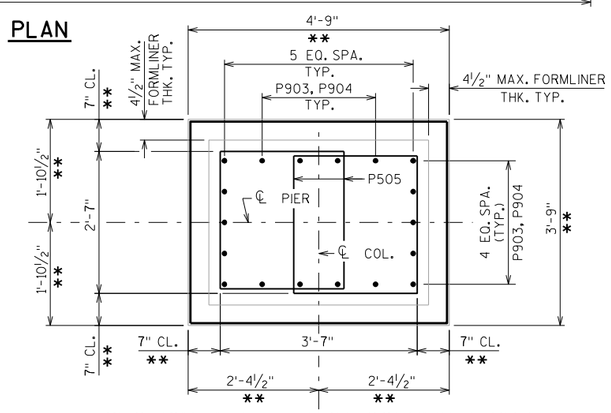
BUNDLING DETAIL



SECTION THRU CAP



FOOTING/PILE PLAN (TYP.)



SECTION A-A - THRU COLUMN (TYP.)

** = DIMENSION INCLUDES FORMLINER THK.

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STRUCTURE B-38-145

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PIER

SHEET 8

242

SCALE = 4

8

8

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BILL OF BARS

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

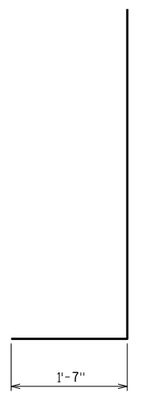
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
P801		68	9'-8"			FOOTING - HORIZ.
P802		56	9'-8"			FOOTING - HORIZ.
P903	X	72	10'-9"	X		FOOTING/COLUMN - VERT.
P904	X	72	19'-0"			COLUMN/CAP - VERT.
P505	X	240	10'-6"	X		COLUMN - STIRRUPS
P506	X	72	14'-10"	X		CAP STIRRUPS
P1007	X	6	34'-3"	X		CAP - HORIZ. - BOTTOM
P1008	X	5	52'-0"			CAP - HORIZ. - BOTTOM
P509	X	12	30'-3"			CAP - HORIZ. - SIDES
P910	X	10	34'-3"	X		CAP - HORIZ. - TOP
P411	X	NOT	USED			
P412	X	5	20'-10"			CAP - HORIZ. - TOP
P513	X	21	7'-1"	X		CAP - VERT. - TOP
P514	X	24	2'-0"			DOWEL BARS
P515	X	6	13'-11"	X	▲	CAP - VERT. - STIRUPS
P516	X	6	6'-11"	X		CAP - HORIZ. - ENDS

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

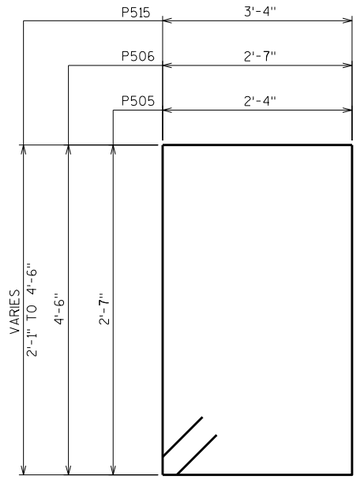
BAR SERIES TABLE

MARK	NO. REQD.	LENGTH
P515	2 SERIES OF 3	11'-6" TO 16'-4"

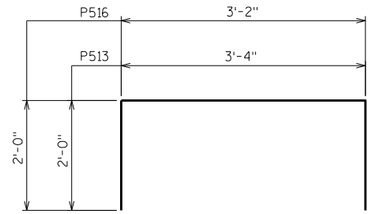
BUNDLE AND TAG EACH SERIES SEPARATELY.



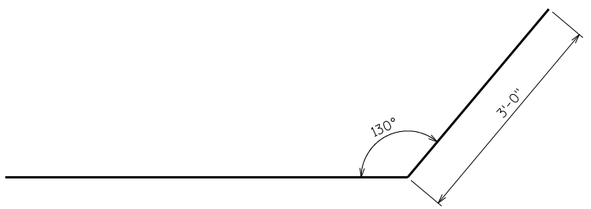
P903



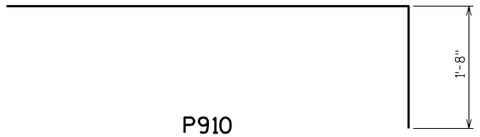
P505, P506, P515



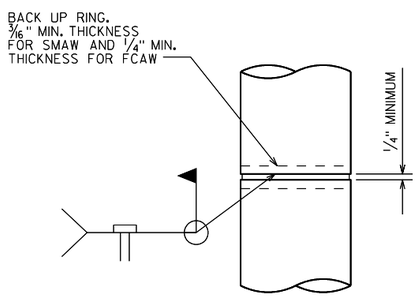
P513, P516



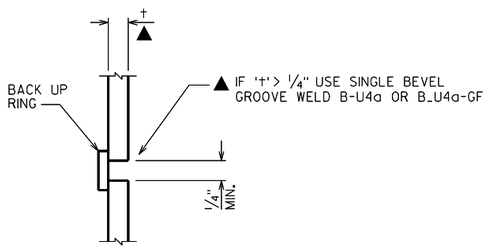
P1007



P910



CAST-IN-PLACE 'PIPE PILE'



C.I.P. PILE WELD DETAIL

PILE DETAILS

8

8

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STRUCTURES DESIGN SECTION

STRUCTURE B-38-145

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PIER DETAILS

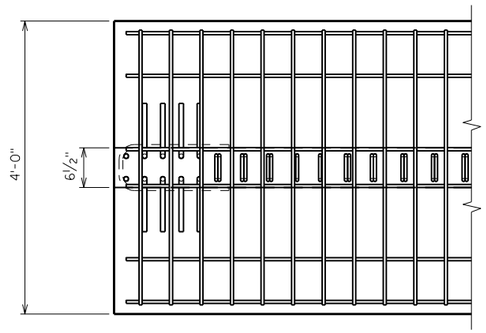
SHEET 9

243

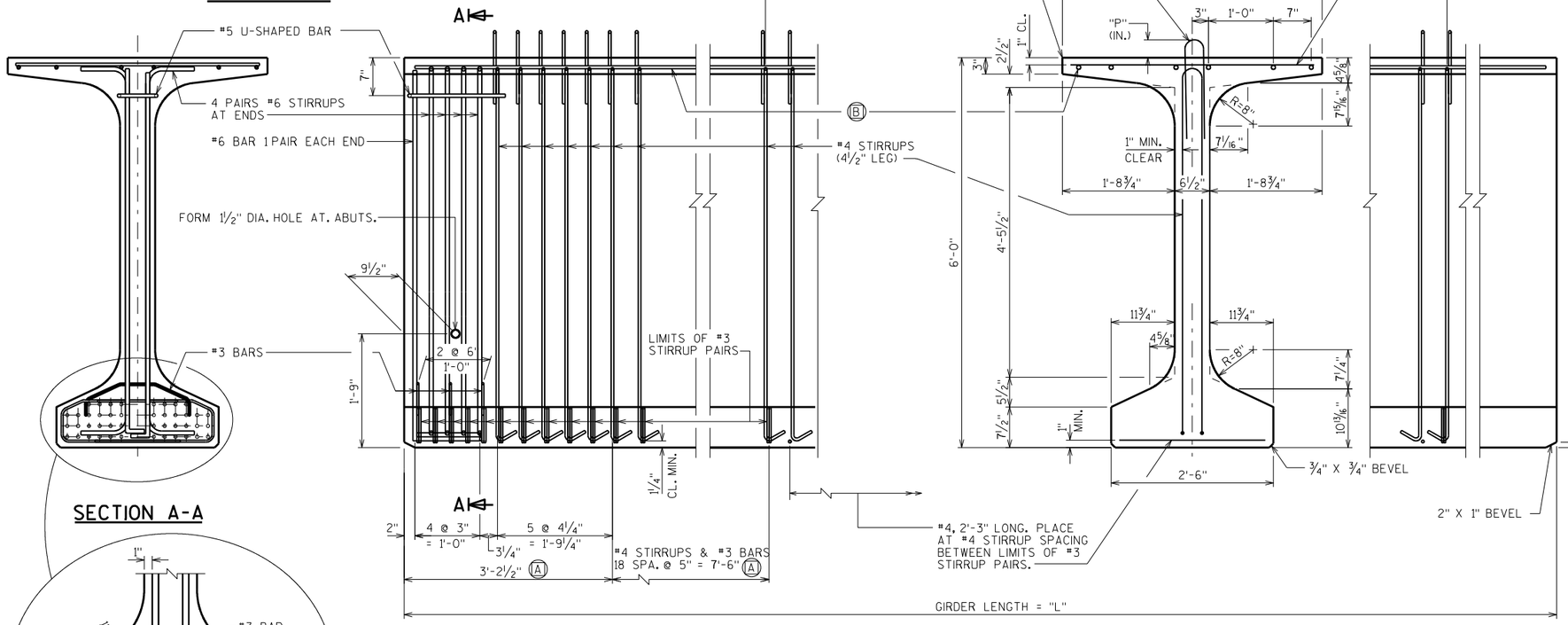
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STATE PROJECT NUMBER

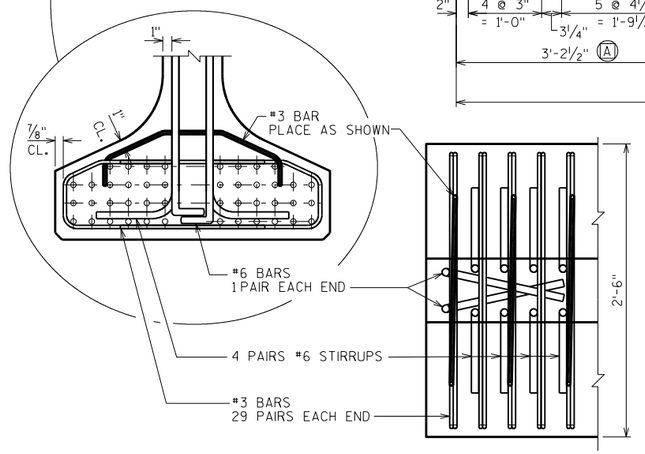
1490-27-71



TOP FLANGE



SECTION A-A

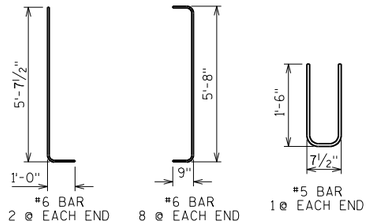


BOTTOM FLANGE

SIDE VIEW & TYP. SECTION IN SPAN

Ⓐ DETAIL TYP. AT EACH END

Ⓑ 6 #4 BARS, FULL LENGTH, MIN. LAP = 1'-11"



NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 15" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 15" OF THE TOP FLANGE.

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

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

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

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

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

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

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

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

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

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.) 1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CONC. STRGTH. f'c (p.s.i.)	"P" 1ST 1/3 OF GIRDER	"P" MID 1/3 OF GIRDER	"P" END 1/3 OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) ✳	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	UNDRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) ✳
1&2	1-7	146.38	0.9	1.7	2.3	2.7	2.8	2.7	2.3	1.7	0.9	8,000	7"	7"	7"	0.6	44	6,400	67	20.5	23.5	5		

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STATE OF WISCONSIN
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STRUCTURE B-38-145

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72W" PRESTRESSED GIRDER DETAILS

SHEET 10

244

1-13
G72W

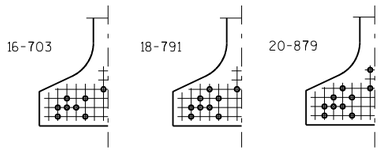
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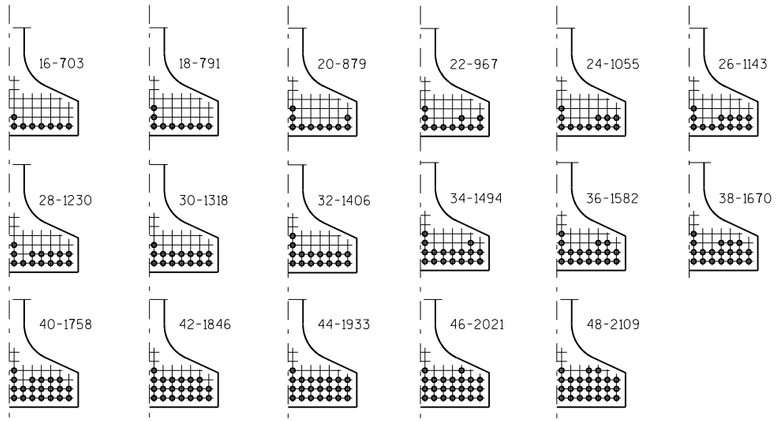
STATE PROJECT NUMBER

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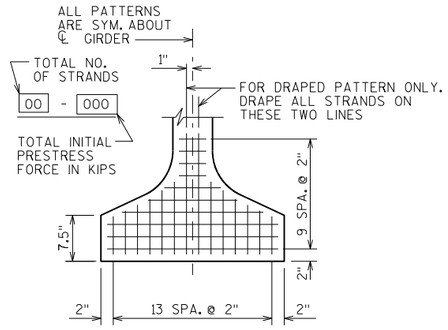
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6"Φ STRANDS

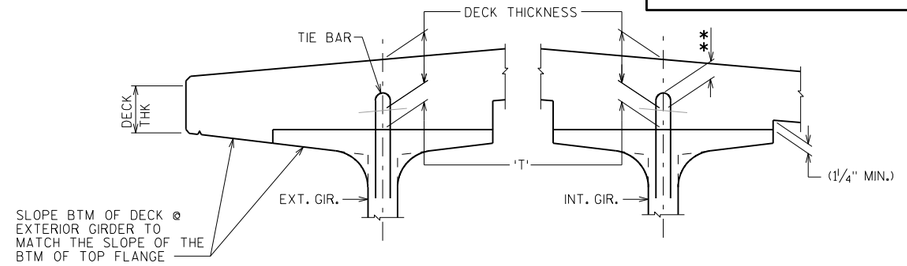


ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6"Φ STRANDS



TYP. STRAND PATTERN



DECK HAUNCH DETAIL

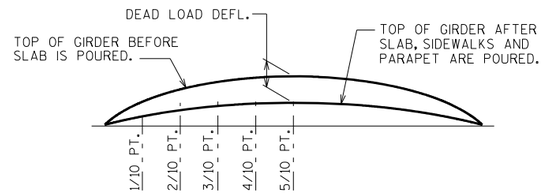
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

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

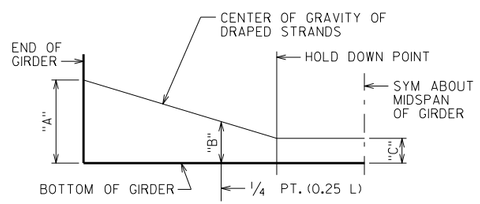
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

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

NOTE: AN AVERAGE HAUNCH ('T') OF 3¼" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



DEAD LOAD DEFLECTION DIAGRAM



DRAPED STRAND PROFILE

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

SPANS	CAMBER (IN.) *
1&2	4.27

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

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

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DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-38-145

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72W" PRESTRESSED GIRDER DETAILS 2

SHEET 11

245

G72W
5-11

8 18

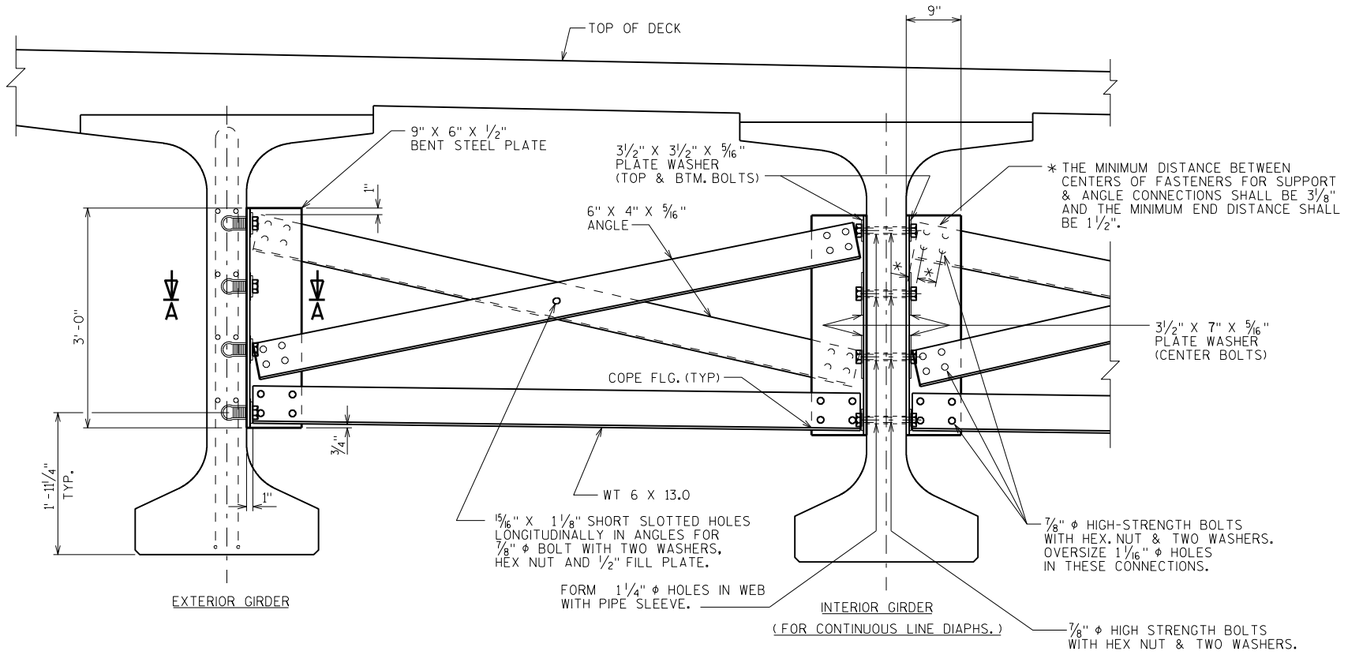
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SCALE =

STATE PROJECT NUMBER

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PART TRANSVERSE SECTION AT DIAPHRAGM

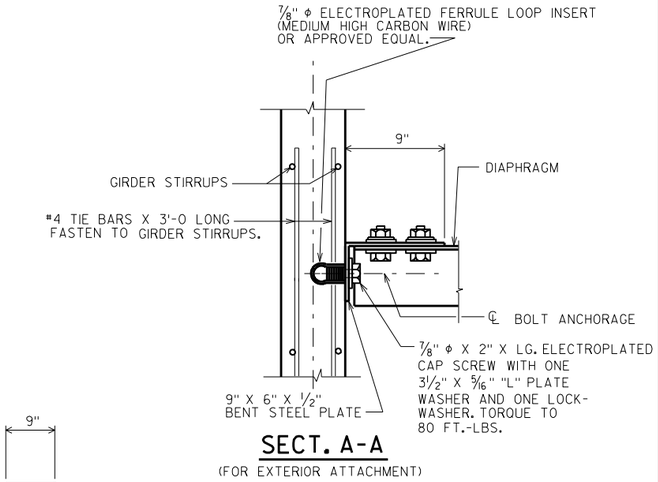
NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-38-145", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

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

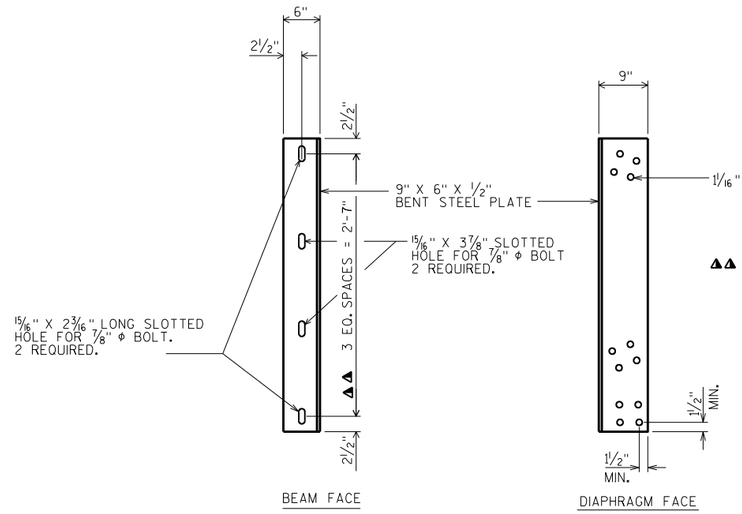
ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY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



SECT. A-A

(FOR EXTERIOR ATTACHMENT)

"L" = 3 1/2"; TOP AND BOTTOM BOLTS
"L" = 7"; CENTER BOLTS



▲▲ BOLT HOLES SHALL BE SPACED SO AS TO MISS PRESTRESSED STRANDS IN CONCRETE BEAMS.

DIAPHRAGM SUPPORT

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
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STEEL DIAPHRAGM

SHEET 12

246

01-10
GSTDIA70

8

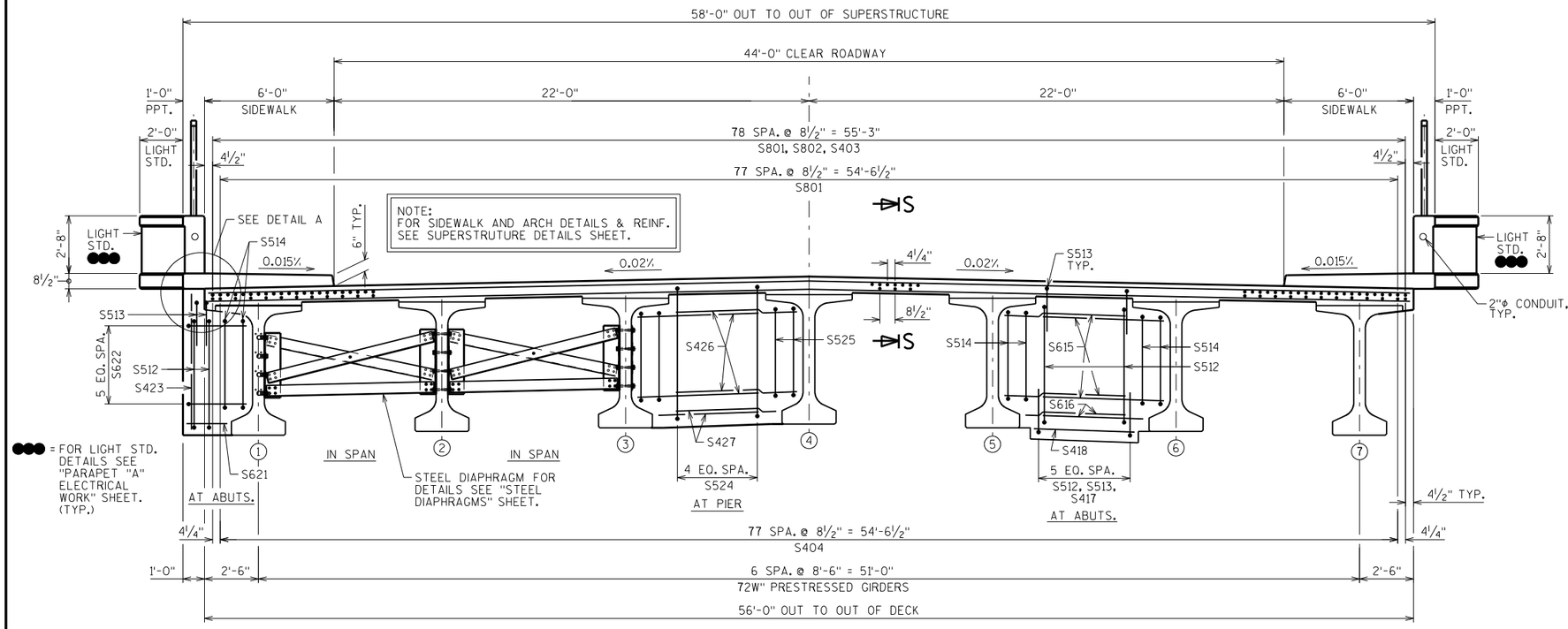
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1 2 4

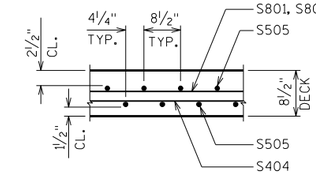
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STATE PROJECT NUMBER

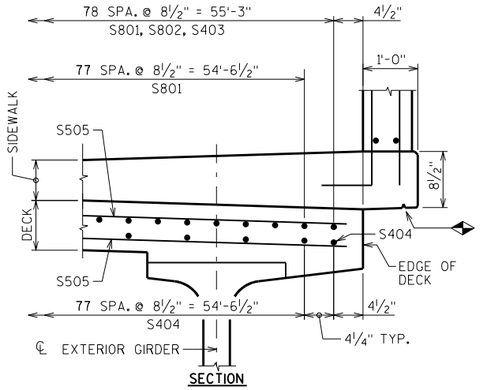
1490-27-71



CROSS SECTION THRU ROADWAY



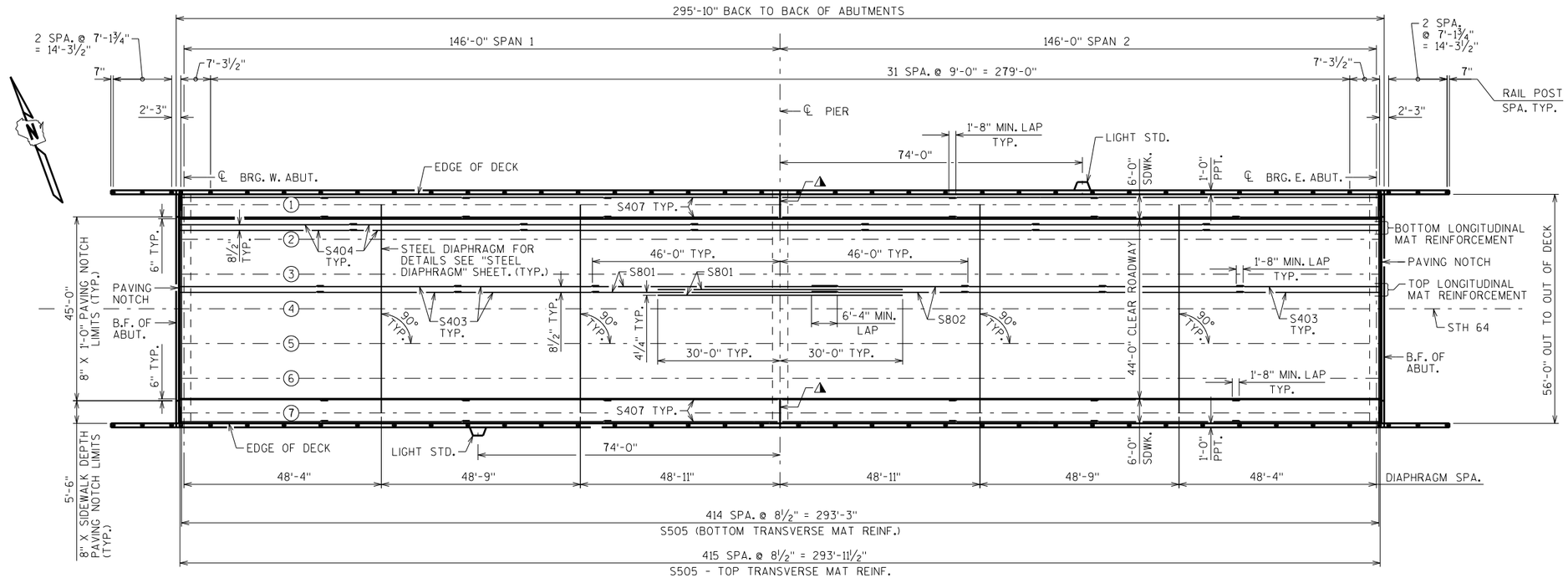
SECTION S-S



SECTION

◆ = ¾" V-GROOVE TERMINATE 2'-0" FROM FRONT FACE OF ARCHES

DETAIL A



PLAN

◭ = DEFLECTION JOINTS

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STRUCTURE B-38-145

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SUPERSTRUCTURE

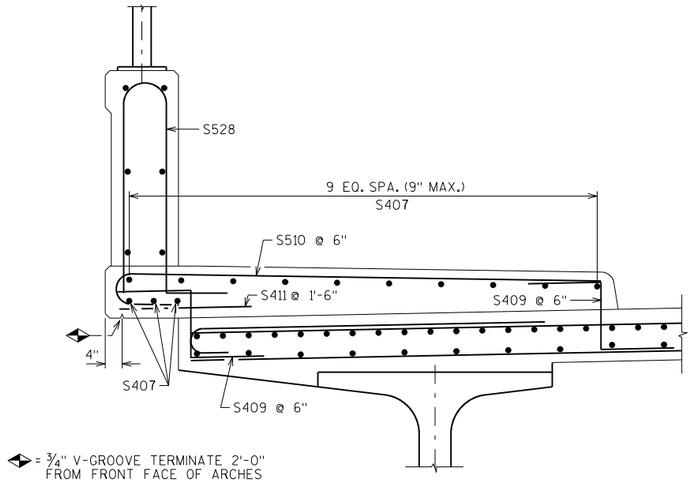
SHEET 13

247

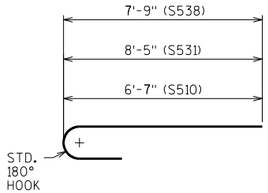
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STATE PROJECT NUMBER

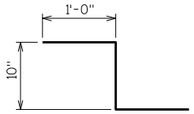
1490-27-71



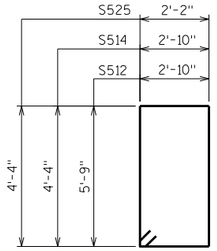
SECTION THRU SIDEWALK



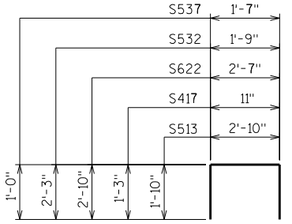
S510, S531, S538



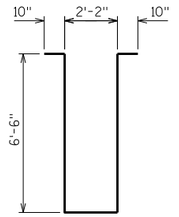
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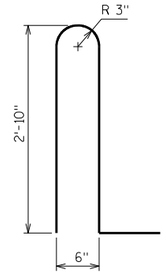
S512, S514, S525



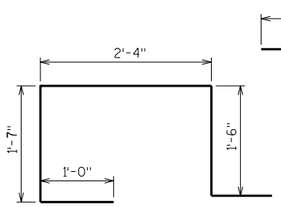
S513, S417, S622, S532, S537



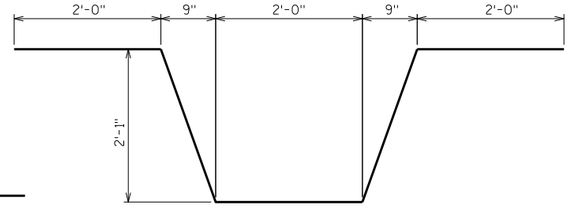
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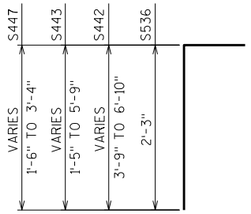
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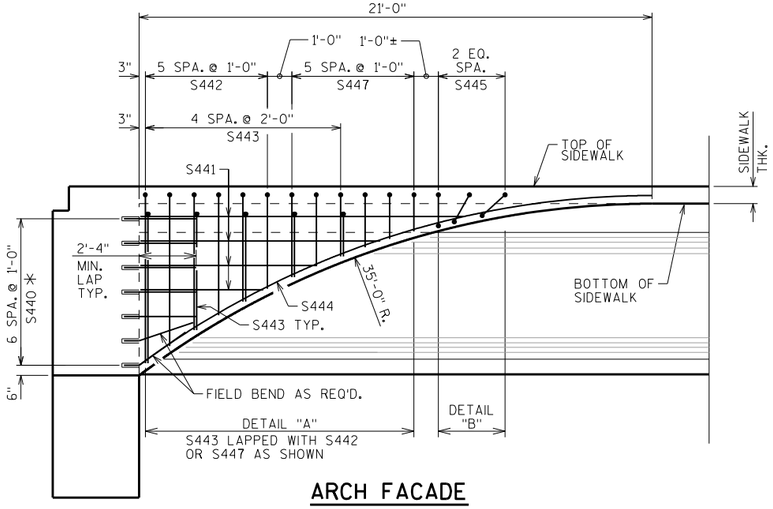
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S634



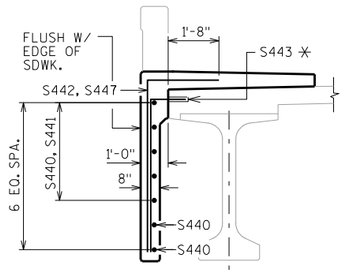
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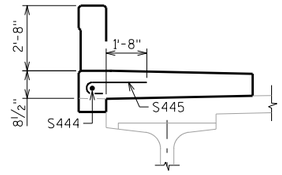
ARCH FACADE

GENERAL NOTES:
POUR ARCH WITH SIDEWALK AT ALL FOUR CORNERS

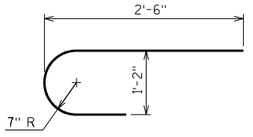
* MASONRY ANCHORS TYPE L NO. 4 BARS. MIN. PULLOUT CAPACITY OF 13 KIPS. EMBED 7.5" IN CONCRETE.



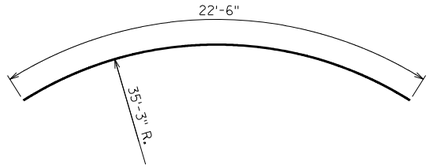
DETAIL "A"



DETAIL "B"



S445



S444

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-38-145

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SUPERSTRUCTURE DETAILS

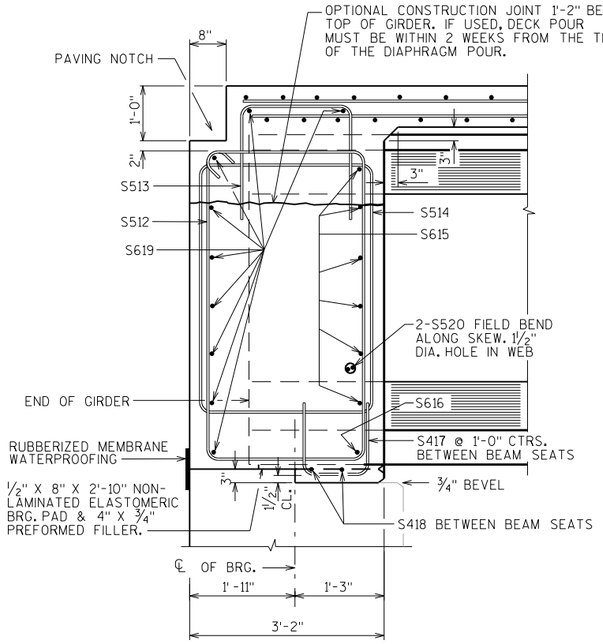
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248

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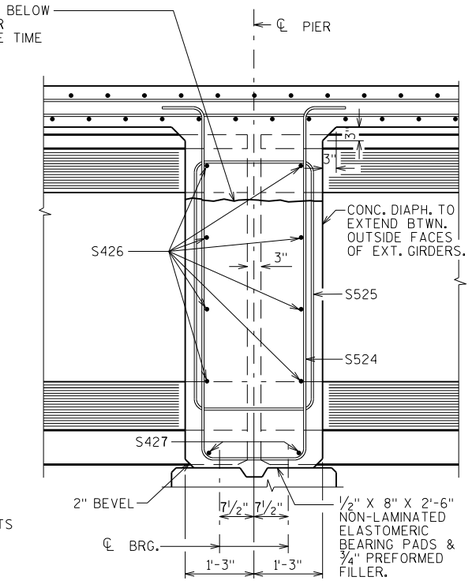
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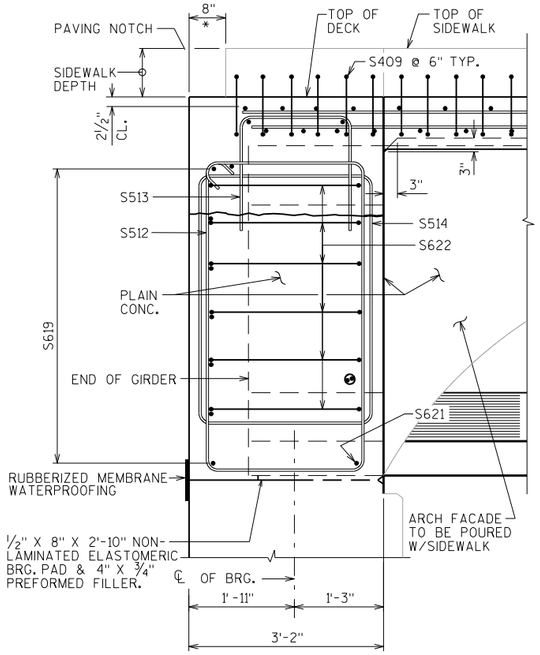


AT ABUTMENTS - BETWEEN GIRDERS

PART LONGIT. SECTION



AT PIER DIAPHRAGM



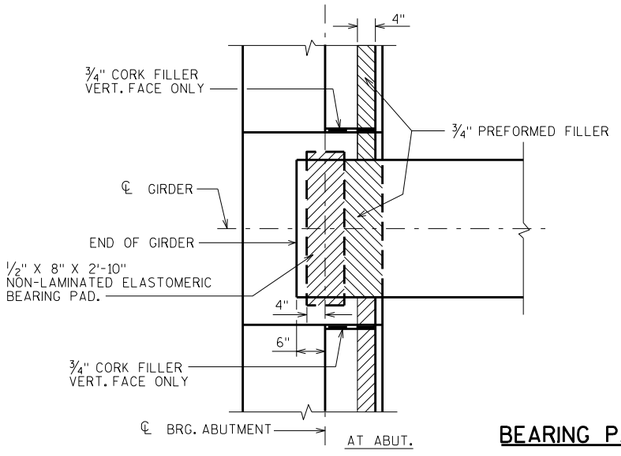
AT ABUTMENTS - DIAPHRAGM ENDS

PART LONGIT. SECTION

TOP OF DECK ELEVATIONS

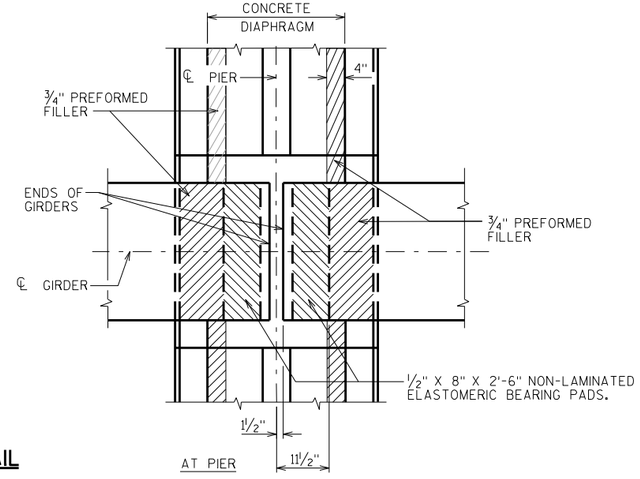
	℄ BRG. WEST ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	℄ PIER	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	℄ BRG. EAST ABUT.
EOD NORTH	725.55	725.62	725.70	725.77	725.84	725.92	725.99	726.06	726.13	726.21	726.28	726.35	726.43	726.50	726.57	726.65	726.72	726.79	726.86	726.94	727.01
GIRDER 1	725.60	725.67	725.75	725.82	725.89	725.97	726.04	726.11	726.18	726.26	726.33	726.40	726.48	726.55	726.62	726.70	726.77	726.84	726.91	726.99	727.06
GIRDER 2	725.77	725.84	725.92	725.99	726.06	726.14	726.21	726.28	726.35	726.43	726.50	726.57	726.65	726.72	726.79	726.87	726.94	727.01	727.08	727.16	727.23
GIRDER 3	725.94	726.01	726.09	726.16	726.23	726.31	726.38	726.45	726.52	726.60	726.67	726.74	726.82	726.89	726.96	727.04	727.11	727.18	727.25	727.33	727.40
GIRDER 4, ℄	726.11	726.18	726.26	726.33	726.40	726.48	726.55	726.62	726.69	726.77	726.84	726.91	726.99	727.06	727.13	727.21	727.28	727.35	727.42	727.50	727.57
GIRDER 5	725.94	726.01	726.09	726.16	726.23	726.31	726.38	726.45	726.52	726.60	726.67	726.74	726.82	726.89	726.96	727.04	727.11	727.18	727.25	727.33	727.40
GIRDER 6	725.77	725.84	725.92	725.99	726.06	726.14	726.21	726.28	726.35	726.43	726.50	726.57	726.65	726.72	726.79	726.87	726.94	727.01	727.08	727.16	727.23
GIRDER 7	725.60	725.67	725.75	725.82	725.89	725.97	726.04	726.11	726.18	726.26	726.33	726.40	726.48	726.55	726.62	726.70	726.77	726.84	726.91	726.99	727.06
EOD SOUTH	725.55	725.62	725.70	725.77	725.84	725.92	725.99	726.06	726.13	726.21	726.28	726.35	726.43	726.50	726.57	726.65	726.72	726.79	726.86	726.94	727.01

EOD = EDGE OF DECK



AT ABUT.

BEARING PAD DETAIL



AT PIER

FOR BAR BEND DETAILS SEE SUPERSTRUCTURE DETAILS SHEET.

BAR SERIES TABLE

MARK	NO. REQD.	LENGTH
S441	4 SERIES OF 4	4'-5" TO 12'-11"
S442	4 SERIES OF 6	6'-0" TO 9'-1"
S443	4 SERIES OF 5	2'-8" TO 7'-0"
S447	4 SERIES OF 6	3'-9" TO 5'-7"

BUNDLE AND TAG EACH SERIES SEPARATELY.

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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
S801	X	157	60'-0"			LONGITUDINAL - STEEL OVER PIER - TOP
S802	X	79	38-4"			LONGITUDINAL - STEEL OVER PIER - TOP
S403	X	474	35'-5"			LONGITUDINAL - HORIZ.- TOP
S404	X	560	43'-6"			LONGITUDINAL - HORIZ. - BOTTOM
S505	X	831	55'-8"			TRANSVERSE - HORIZ. - TOP & BOTTOM
S506	X	NOT	USED			———
S407	X	208	38'-6"			SIDEWALK - LONGITUDINAL
S408	X	NOT	USED			———
S409	X	2368	2'-8"	X		SIDEWALK - VERT.
S510	X	1196	7'-2"	X		SIDEWALK - VERT.
S411	X	394	1'-10"			SIDEWALK - HORIZ. - BOTTOM
S512	X	80	17'-10"	X		ABUT. DIAPH. - STIRRUP
S513	X	80	6'-3"	X		ABUT. DIAPH. - VERT.
S514	X	56	15'-0"	X		ABUT. DIAPH. - STIRRUP (AT GIRDERS)
S615	X	144	5'-5"			ABUT. DIAPH. - HORIZ. - F.F.
S616	X	24	4'-8"			ABUT. DIAPH. - HORIZ. - F.F.
S417	X	72	3'-3"	X		ABUT. DIAP. - VERT.
S418	X	24	4'-8"			ABUT. DIAPH. - HORIZ.
S619	X	18	55'-8"			ABUT. DIAPH. - HORIZ. - B.F.
S520	X	28	6'-0"			ABUT. DIAPH. - HORIZ. - THRU GIRDERS
S621	X	4	1'-11"			ABUT. DIAPH. - HORIZ. - ENDS
S622	X	24	7'-11"	X		ABUT. DIAPH. - HORIZ. - ENDS
S423	X	8	6'-5"			ABUT. DIAPH. - VERT. - ENDS
S524	X	30	16'-4"	X		PIER DIAPH. - VERT.
S525	X	24	13'-8"	X		PIER DIAPH.- STIRRUP (AT GIRDERS)
S426	X	96	4'-8"			PIER DIAPH. - HORIZ.
S427	X	24	3'-8"			PIER DIAPH. - HORIZ.
S528	X	596	6'-8"	X		PARAPET - VERT.
S429	X	96	38'-6"			PARAPET - HORIZ.
S430	X	NOT	USED			———
S531	X	8	9'-0"	X		LIGHT STD. - DECK TRANSVERSE - TOP
S532	X	8	6'-0"	X		LIGHT STD. - PARAPET VERT.
S533	X	8	6'-11"	X		LIGHT STD. - PARAPET VERT.
S634	X	14	10'-0"	X		LIGHT STD. - PARAPET HORIZ.
S535	X	8	8'-5"			LIGHT STD. - DECK TRANSVERSE - BOTTOM
S536	X	4	3'-2"	X		LIGHT STD. - PARAPET VERT.
S537	X	4	3'-5"	X		LIGHT STD. - PARAPET VERT.
S538	X	4	8'-4"	X		LIGHT STD. - DECK TRANSVERSE - TOP
S539	X	4	7'-9"			LIGHT STD. - DECK TRANSVERSE - BOTTOM
S440	X	28	3'-10"			ARCH - HORIZ.
S441	X	16	8'-8"		⚠	ARCH - HORIZ.
S442	X	24	7'-7"	X	⚠	ARCH - VERT.
S443	X	20	4'-10"	X	⚠	ARCH - VERT.
S444	X	4	22'-6"	X		ARCH - VERT.
S445	X	12	3'-7"	X		ARCH - VERT.
S546	X	12	6'-7"			LIGHT STD. - DECK TRANSVERSE - BOTTOM
S447	X	24	4'-8"	X	⚠	ARCH - VERT.

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURES DESIGN SECTION

STRUCTURE B-38-145

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SUPERSTRUCTURE DETAILS 2

SHEET 15

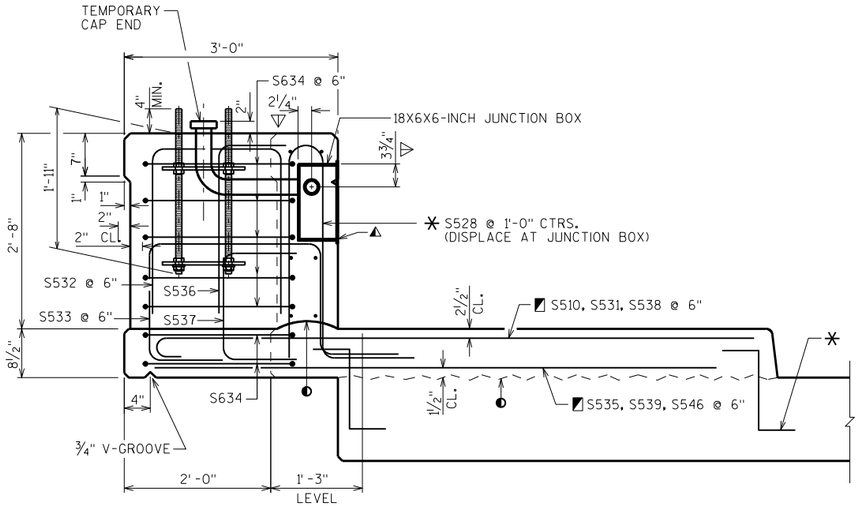
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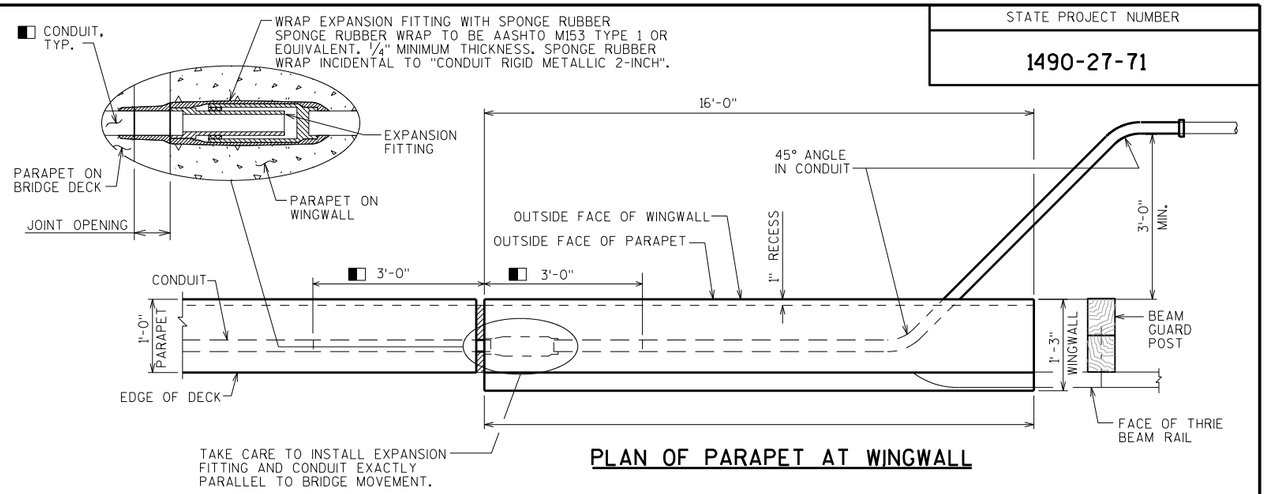
G72WDET
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SECTION A-A



PLAN OF PARAPET AT WINGWALL

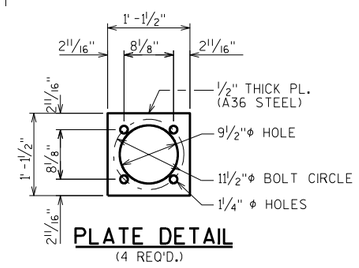
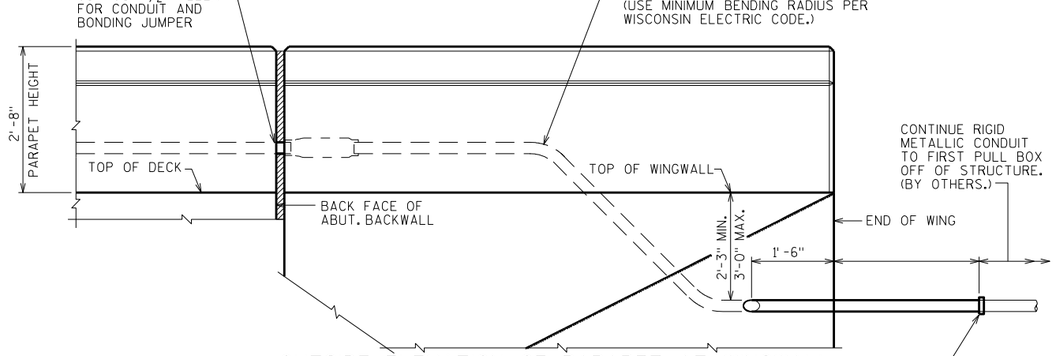
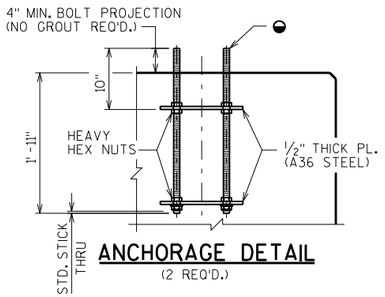


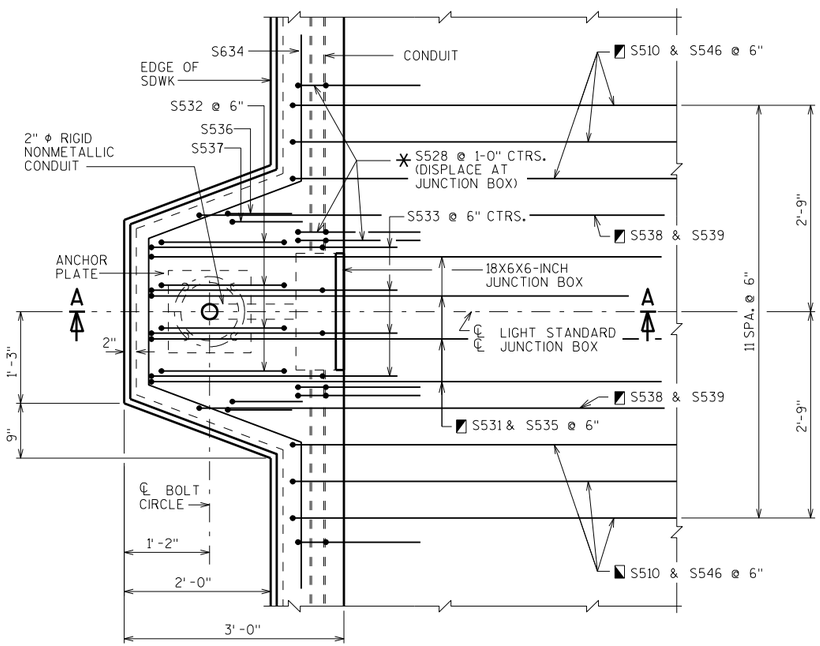
PLATE DETAIL
(4 REQ'D.)



OUTSIDE ELEVATION OF PARAPET AT WINGWALL



ANCHORAGE DETAIL
(2 REQ'D.)



PLAN AT LIGHT STANDARD

- USE RIGID METALLIC CONDUIT 3'-0" INTO PARAPET ON DECK AND WING SIDES OF THE JOINT OPENING.
- CONSTR. JT. STRIKE OFF AS SHOWN
- CUT OUT ± 1" OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.
- LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX.
- THESE BARS ARE IN ADDITION TO STANDARD TRANSVERSE BARS IN SIDEWALK.
- 1"φ THREADED ANCHOR BOLTS ASTM A449 OR AASHTO M 314-90 GR 55. HOT DIP ASTM A153, CLASS C, UPPER 8" OF BOLT INCLUDING NUTS & WASHERS. PROVIDE ENLARGED THREAD ON NUTS FOR PROPER FIT AFTER GALVANIZING. PROVIDE DOUBLE FLAT WASHERS & NUTS.
- SEE "COMBINATION RAIL TYPE C3" FOR ADDITIONAL BAR STEEL DETAILS.

NOTES

BID ITEMS SHALL BE:
"JUNCTION BOXES 18X6X6-INCH", EACH.
"ANCHOR ASSEMBLIES LIGHT POLES", EACH.
"CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH"
"CONDUIT RIGID METALLIC 2-INCH"

APPROVED MANUFACTURERS - JUNCTION BOXES:
SEE APPROVED MATERIAL LIST.

APPROVED MANUFACTURER OR EQUIVALENT - EXPANSION FITTING:
O-Z/GEDNEY TYPE AX-200 AND BONDING JUMPER (4" TOTAL CONDUIT MOVEMENT).

EXPANSION FITTINGS, ANGLES AND ADAPTER FITTINGS TO BE INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH".

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

NO.	DATE	REVISION	BY

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STRUCTURE B-38-145

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PARAPET "A" ELECTRICAL WORK

SHEET 16

250

PPTAELEC
7-13

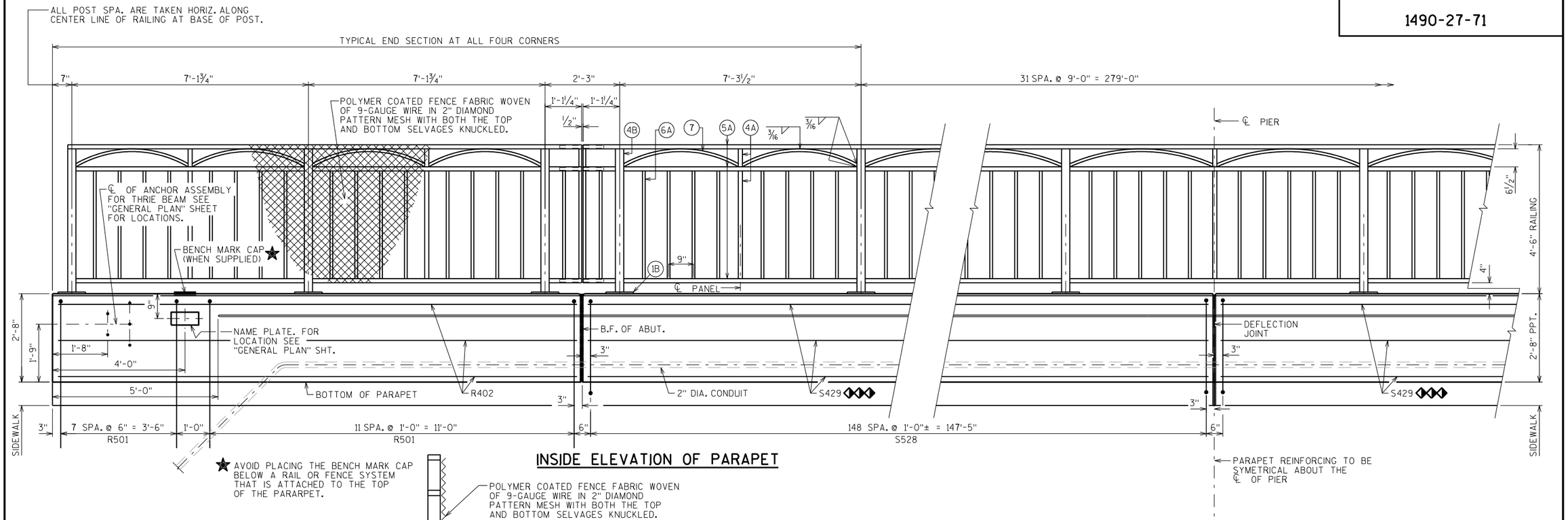
SCALE =

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ALL POST SPA. ARE TAKEN HORIZ. ALONG CENTER LINE OF RAILING AT BASE OF POST.

TYPICAL END SECTION AT ALL FOUR CORNERS

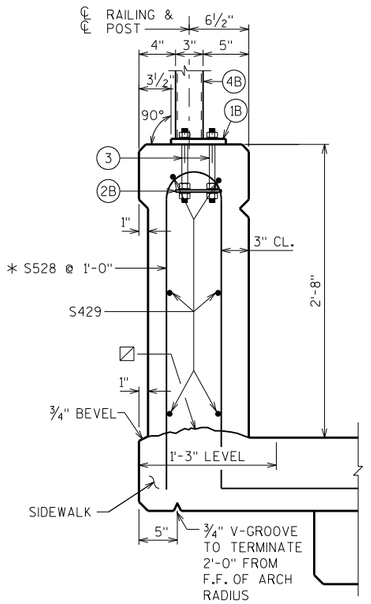


INSIDE ELEVATION OF PARAPET

★ AVOID PLACING THE BENCH MARK CAP BELOW A RAIL OR FENCE SYSTEM THAT IS ATTACHED TO THE TOP OF THE PARARPET.

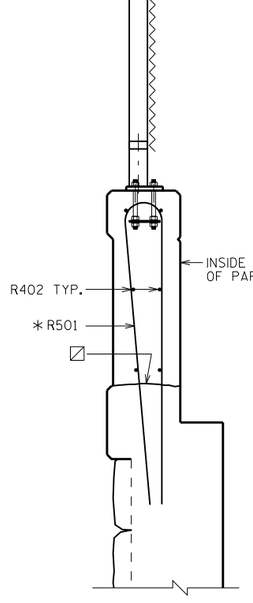
PARAPET REINFORCING TO BE SYMETRICAL ABOUT THE ℄ OF PIER

◆◆◆ OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONSTRUCTION JOINT WITH A ¾"-'V' GROOVE.

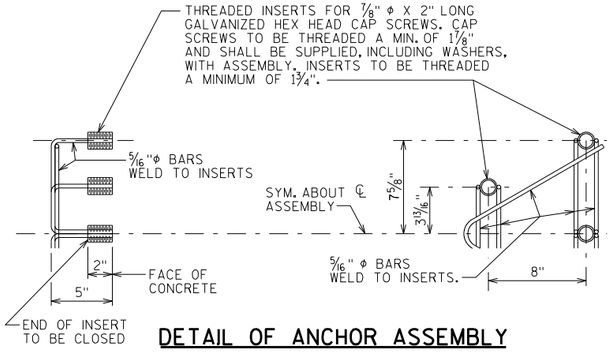


SECTION THRU PARAPET ON BRIDGE

* ADJUST LOCATIONS OF BARS TO ALLOW PLACEMENT OF ANCHOR ASSEMBLY FOR RAILING AND BEAM GUARD.



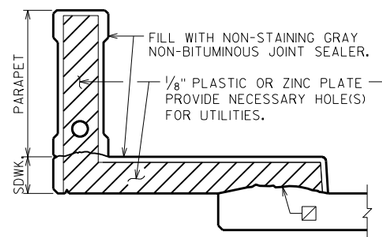
SECTION THRU WING WALL



DETAIL OF ANCHOR ASSEMBLY

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

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

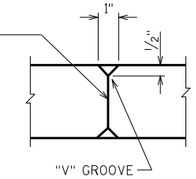


SECTION A-A

(SHOWING DEFLECTION JOINT IN PARAPET AND SIDEWALK.)

WHEN PARAPETS ARE POURED CONTINUOUSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF ⅛" ZINC OR PLASTIC PLATE CUT AS SHOWN IN SECTION A-A BY SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH AN APPROVED LIQUID BOND BREAKER AND PLATE SEPARATORS MAY BE OMITTED.

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



SECTION B-B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-38-145

DRAWN BY DDS | PLANS CK'D. ADS

RAILING STEEL SPECIAL

SHEET 17

251

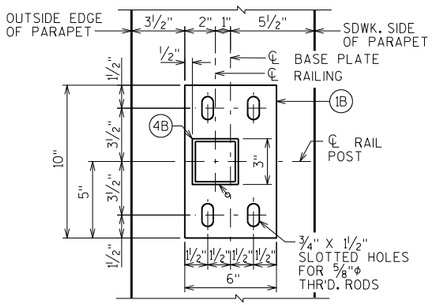
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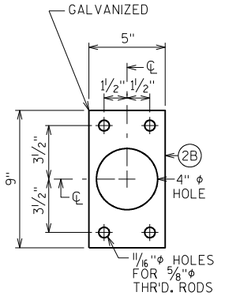
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STATE PROJECT NUMBER

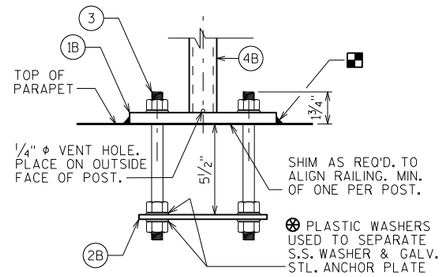
1490-27-71



TYPICAL RAIL POST BASE PLATE

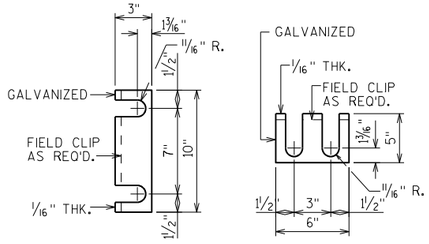


ANCHOR PLATE



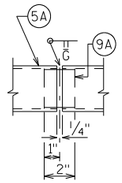
ANCHORAGE FOR RAIL POSTS

NOTE: ANCHOR PLATE NOT REQUIRED WHEN TYPE S ANCHORS ARE USED.



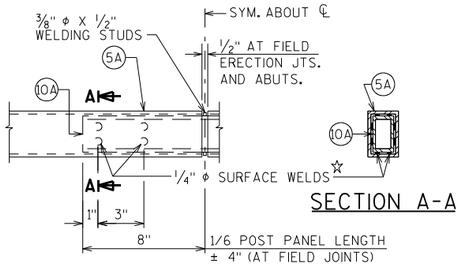
RAIL POST SHIM DETAIL

(2 SETS PER POST)



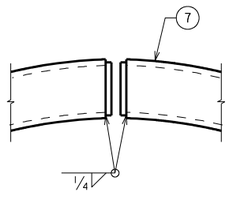
SHOP RAIL SPLICE DETAIL

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



FIELD ERECTION JOINT DETAIL

☆ MIN. ⅝" FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.

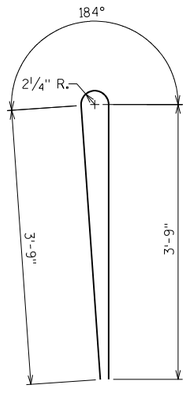


CURVED MEMBER JOINT DETAIL

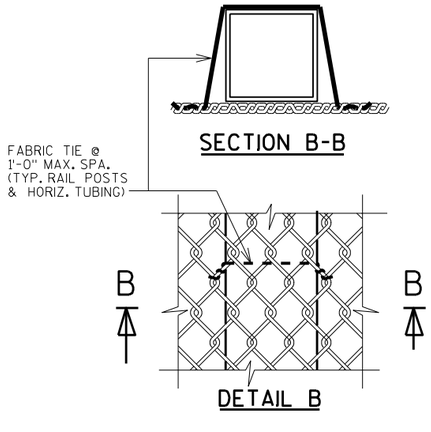
SEAL END ON CURVED MEMBERS WITH ¼" PLATE. WELD AND GRIND SMOUTH.

BILL OF BARS

BAR MARK	COAT	WEST ABUT.	EAST ABUT.	LENGTH	BENT	LOCATION
R501	X	40	40	9-6	X	PARAPET VERT. @ WINGS
R402	X	12	12	15-8		PARAPET HORIZ. @ WINGS



R501



LEGEND

(1B) PLATE ⅝" X 6" X 10" WITH ¾" X 1½" SLOTTED HOLES

(2B) ¼" X 5" X 9" ANCHOR PLATE WITH 11/16" φ HOLES FOR THR'D. RODS NO. 3.

(3) ⅝" DIA. X 9" LONG, TYPE 316 STAINLESS STEEL THREADED RODS (MIN. TENSILE STRENGTH = 70 KSI) WITH NUT AND WASHERS OF SAME ALLOY GROUP. (ALTERNATE RAIL POST ANCHORAGE - 4 EQUIV. STAINLESS STEEL CONCRETE MASONRY ANCHORS, TYPE S (EPOXY), ⅝" φ, MINIMUM PULLOUT CAPACITY OF 13 KIPS. EMBED A MIN. OF 7" FOR RAIL POSTS AND 5" FOR END RAILS.)

(4A) STRUCTURAL TUBING 3" X 1½" X 3/16". PLACE VERTICAL. WELD TO NO. 1 & 5.

(4B) STRUCTURAL TUBING 3" X 3" X 3/16". PLACE VERTICAL. WELD TO NO. 1 & 5.

(5A) STRUCTURAL TUBING 3" X 1½" X 3/16" RAILS. WELD TO NO. 1 & NO. 4. INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION & EXPANSION JOINTS.

(6A) BAR 1" X 1" PICKETS. WELD TO NO. 5. PLACE VERTICAL.

(7) BAR 1" X 1". BEND TO REQUIRED RADIUS. WELD TO NO. 4 & 5.

(9A) RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. PROVIDE "SLIDING FIT".

(10A) RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. (1'-4" @ FIELD ERECTION JTS.) (1'-4" @ STRIP SEAL EXP. JTS.)

RAILING NOTES

BID ITEM SHALL BE "RAILING STEEL SPECIAL B-38-145", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN.

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

NO. 1, 2, 6, 7, 9 AND NO. 10 SHALL CONFORM TO ASTM A709 GRADE 36. STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B (NO. 4, AND NO. 5).

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE EITHER STAINLESS STEEL OR ASTM 307. IF 307 IS USED, ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED.

ALL MATERIAL (EXCEPT NO. 3) SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS. PAINT OVER GALVANIZING WITH AN APPROVED TIE COAT AND TOP COAT AS SPECIFIED IN THE "BRIDGE SPECIAL PROVISIONS". RAILING AND ALL EXPOSED HARDWARE TO BE PAINTED BLACK, FEDERAL COLOR #27038.

FENCE FABRIC AND TIES TO BE GALVANIZED AND THEN POLYMER COATED TO MATCH THE BRIDGE RAILING.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTION.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT, AND SHALL BE GALVANIZED.

■ CAULK AROUND PERIMETER OF BASE PLATES, NO. 1, AND FILL BOLT SLOT OPENINGS IN SHIMS AND BASE PLATES WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

ALL JOINTS AND RECESSES IN CONCRETE PARAPET ARE TO BE VERTICAL.

VENT HOLES SHALL BE DRILLED IN POST AND RAIL MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS.

TOUCH-UP PAINTING TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.

THE END OF THE FABRIC SHALL BE ATTACHED TO THE POST BY MEANS OF A TENSION BAR THREADED THROUGH THE END LOOPS OF THE FABRIC AND SECURED TO THE POST WITH CLAMPS & BOLT. THE FABRIC SHALL BE STRETCHED TO REMOVE ALL SLACK.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-38-145

DRAWN BY ADS/DDS | PLANS CK'D. ADS

RAILING STEEL SPECIAL DETAILS

SHEET 18

252

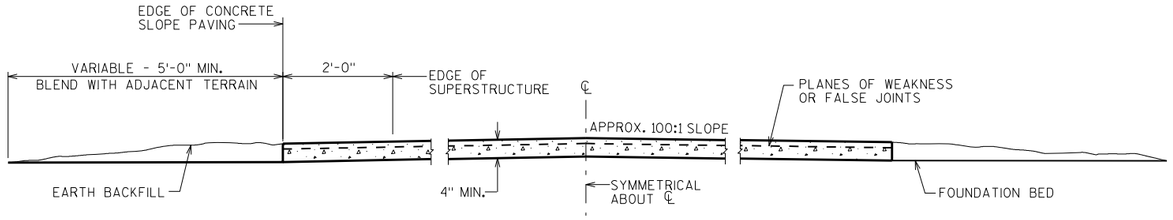
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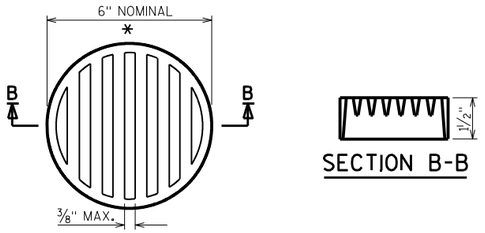
8

STATE PROJECT NUMBER

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SECTION A-A



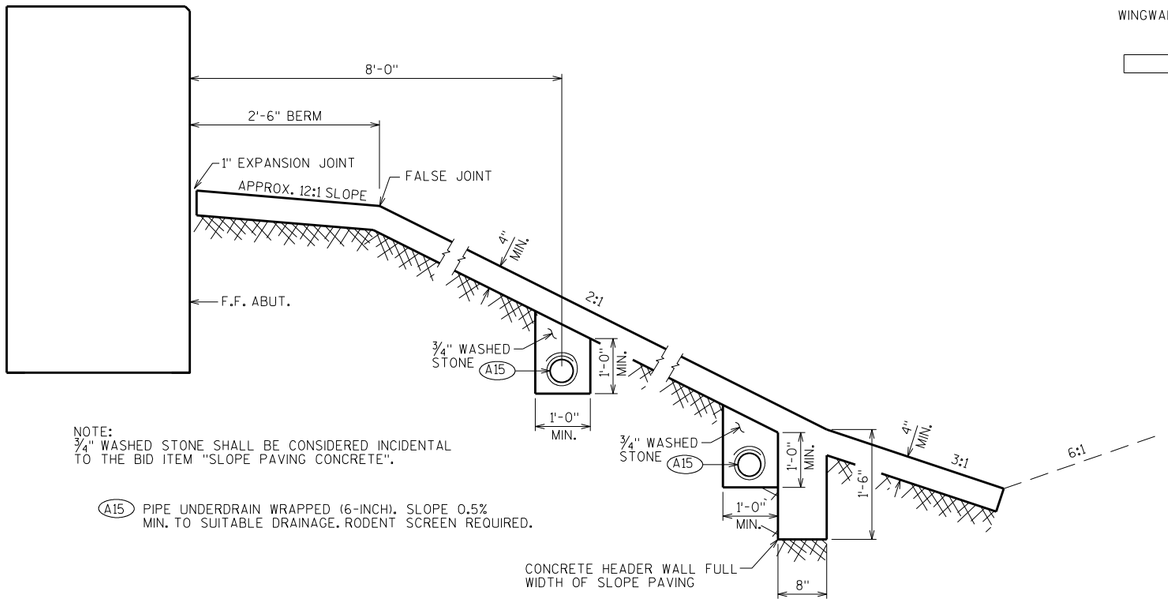
SECTION B-B

RODENT SHIELD DETAIL

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

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

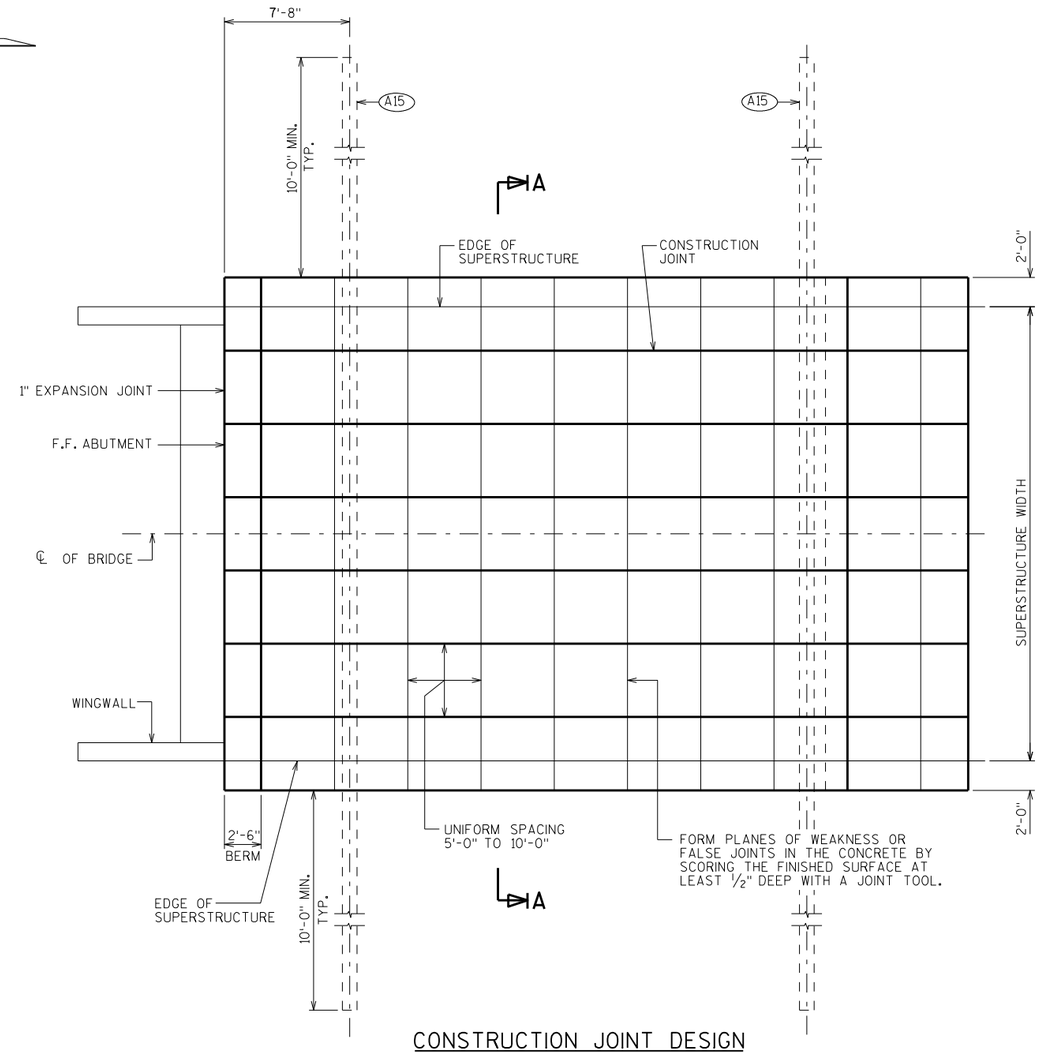
THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X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



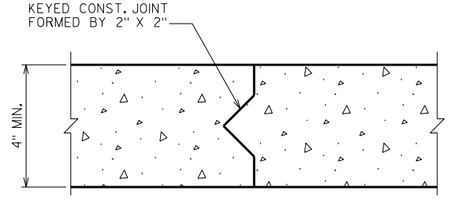
NOTE:
3/4" WASHED STONE SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "SLOPE PAVING CONCRETE".

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

TYPICAL SECTION



CONSTRUCTION JOINT DESIGN



CONSTRUCTION JOINT

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN HEREON SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-38-145

DRAWN BY DDS | PLANS CK'D. ADS

SLOPE PAVING (CONCRETE CAST-IN-PLACE)

SHEET 19

253

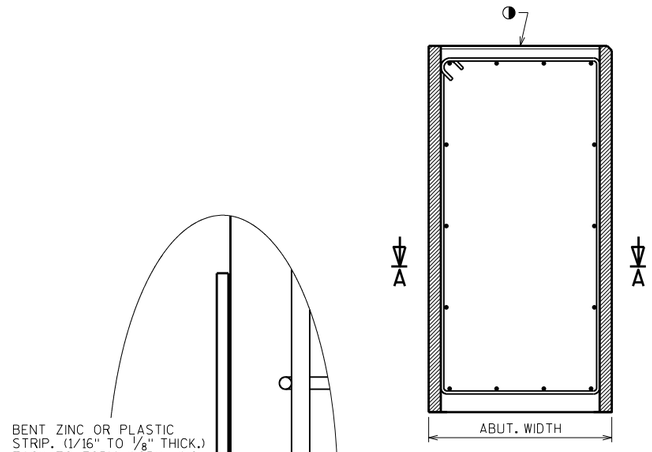
SLPPAVCIP
7-11

8

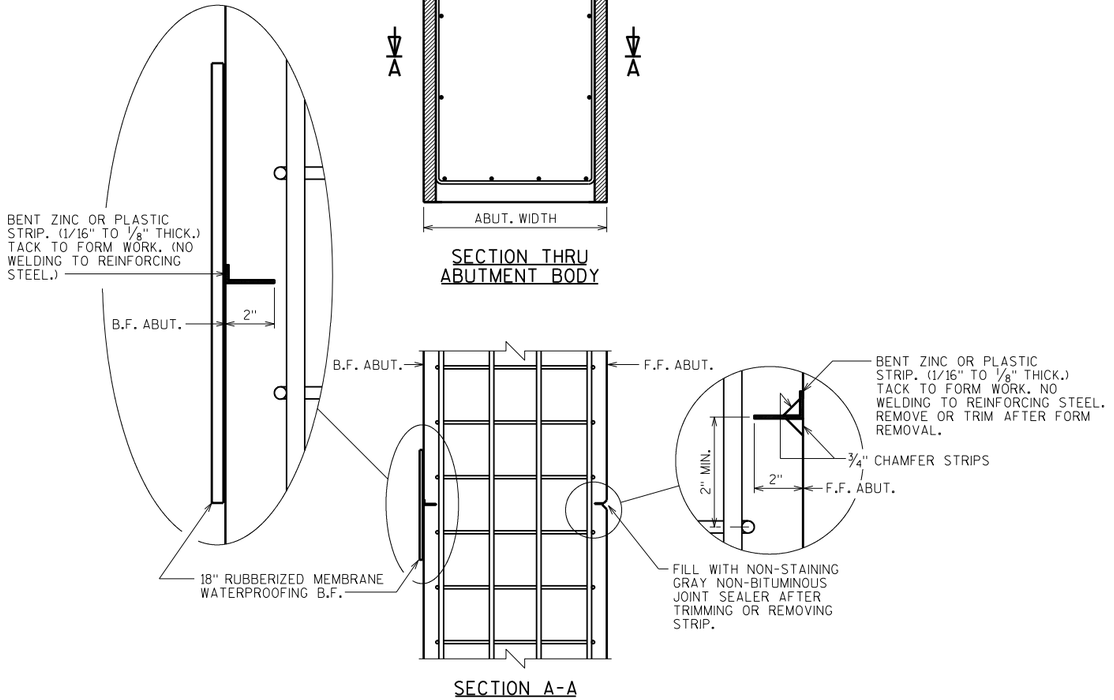
1 2 3 6

SCALE =

STATE PROJECT NUMBER
1490-27-71



SECTION THRU ABUTMENT BODY



SECTION A-A

ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

NOTES

PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.

CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.

◑ USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-38-145

DRAWN BY DDS | PLANS CK'D. ADS

ALTERNATE CONSTRUCTION JOINT

SHEET 20

254

8

8

123

SCALE =

ALTJOINT
10-08

EARTHWORK

CATEGORY	ROADWAY	STATION	TO	STATION	205.0100 EXCAVATION COMMON (1) CY CUT (2)	205.0100 EXCAVATION COMMON (1) CY EBS EXCAVATION (3)	AVAILABLE MATERIAL (5)	205.0500 MARSH EXCAVATION (6)	REDUCED MARSH IN FILL (8) Factor 0.5	UNEXPANDED FILL	EXPANDED FILL (13) Factor 1.15	MASS ORDINATE +/- (14)	WASTE	208.0100 BORROW CY
0010	NW RAMP	1248+10	-	1268+98	7,212	0	7,212	0	0	28,309	32,555	-25,343	0	25,343
0010	SW RAMP	1227+66	-	1246+82	13,084	0	13,084	3500	1750	52,251	60,089	-47,005	0	47,005
0010	STH 64 WEST	512+00	-	523+00	753	0	753	0	0	69,566	80,001	-79,248	0	79,248
		SUBTOTAL			21,049	0	21,049	3,500	1,750	150,126	172,645	-151,596	0	151,596
0010	13TH RD	391+00	-	399+30	1,447	0	1,447	0	0	2,539	2,920	-1,473	0	1,473
0010	STH 64 EAST	524+79	-	538+73	911	0	911	0	0	75,727	87,086	-86,175	0	86,175
0010	NE RAMP	1245+10	-	1264+56	15,242	0	15,242	0	0	23,061	26,520	-11,278	0	11,278
0010	SE RAMP	1226+50	-	1244+20	2,867	0	2,867	300	150	37,741	43,402	-40,535	0	40,535
		SUBTOTAL			20,467	0	20,467	300	150	139,068	159,928	-139,461	0	139,461
	GRAND TOTALS (I.D. 1490-27-71)				41,516	0	41,516	3,800	1,900	289,194	332,573	-291,057	0	291,057
		TOTAL EXCAVATION COMMON			41,516			3,800						

1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
2) Salvaged/Unusable Pavement Material is included in Cut.
3) EBS Excavation to be backfilled with Select Borrow material. Note: this is designers choice, can be backfilled with Borrow, or Cut as well.
4) Salvaged/Unusable Pavement Material
5) Available Material = Cut - Salvaged/Unusable Pavement Material
6) Marsh Excavation - to be backfilled with Select Borrow Material. Note: this is designers choice, can be backfilled with Borrow, or Cut as well. Item number 20505
7) Rock Excavation item number 205.0200
8) Reduced Marsh in Fill - Excavated Marsh material is useable in Fills outside the 1:1 slope. Marsh in Fill Reduction factor = 0.5
9) Reduced EBS in Fill - Excavated EBS material is useable in Fills outside the 1:1 slope. EBS in Fill Reduction factor = 0.8
10) Expanded Marsh Backfill - This is to be filled with Select Borrow material. Marsh Backfill Factor = 1.5. Item number 208.1100
11) Expanded EBS Backfill - This is to be filled with Select Borrow material. EBS Backfill Factor = 1.3. Item number 208.1100
12) Expanded Rock - Factor = 1.1
13) Expanded Fill. Factor = 1.15
Depending on selections: **Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced Marsh - Reduced EBS) * Fill Factor**
Or Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced EBS) * Fill Factor
Or Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced Marsh) * Fill Factor
Or Expanded Fill = (Unexpanded Fill - Rock* Rock Factor) * Fill Factor
14) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

EARTHWORK - NW RAMP

STATION	DISTANCE FT	END AREA CUT SF	END AREA FILL SF	INCREMENTAL VOLUME 205.0100 CUT CY	INCREMENTAL VOLUME 205.0100 FILL CY	CUMULATIVE VOLUME CUT CY	CUMULATIVE VOLUME 1.15 EXP. FILL CY	MASS ORDINATE CY
1248+10.00	0	0	1,008					
1248+45.00	35	0	1,551	0	2,010	0	2,312	-2,311.55
1248+50.00	5	0	2,026	0	331	0	2,692	-2,692.40
1248+55.00	5	47	1,927	4	366	4	3,113	-3,108.92
1248+60.00	5	380	1,803	40	345	44	3,511	-3,466.53
1248+65.00	5	522	1,703	84	325	127	3,884	-3,756.42
1249+00.00	35	442	1,323	625	1,961	752	6,140	-5,387.19
1249+50.00	50	350	1,244	733	2,377	1,485	8,873	-7,387.27
1250+00.00	50	372	1,411	668	2,459	2,154	11,700	-9,546.20
1250+50.00	50	440	1,454	752	2,653	2,906	14,752	-11,845.49
1251+00.00	50	479	1,209	851	2,466	3,757	17,587	-13,830.49
1251+50.00	50	440	960	851	2,008	4,607	19,896	-15,288.95
1252+00.00	50	328	748	711	1,581	5,318	21,715	-16,396.50
1252+38.06	38	189	601	364	951	5,682	22,808	-17,125.48
1252+50.00	12	154	544	76	253	5,758	23,099	-17,340.64
1252+62.72	13	122	484	65	242	5,823	23,377	-17,554.08
1253+00.00	37	128	393	173	606	5,996	24,074	-18,077.85
1253+16.05	16	124	395	75	234	6,070	24,343	-18,272.51
1253+50.00	34	98	426	139	516	6,210	24,937	-18,727.18
1254+00.00	50	55	523	142	879	6,352	25,948	-19,596.16
1254+50.00	50	36	562	85	1,004	6,437	27,103	-20,665.90
1255+00.00	50	10	545	43	1,025	6,480	28,281	-21,801.05
1255+50.00	50	6	461	15	931	6,495	29,352	-22,856.68
1256+00.00	50	10	356	15	756	6,511	30,221	-23,710.54
1256+50.00	50	6	250	15	561	6,526	30,866	-24,340.40

(CONTINUED)

EARTHWORK - NW RAMP (CONTINUED)

STATION	DISTANCE FT	END AREA CUT SF	END AREA FILL SF	INCREMENTAL VOLUME 205.0100 CUT CY	INCREMENTAL VOLUME 205.0100 FILL CY	CUMULATIVE VOLUME CUT CY	CUMULATIVE VOLUME 1.15 EXP. FILL CY	MASS ORDINATE CY
1257+00.00	50	6	161	11	380	6,537	31,303	-24,766.40
1257+50.00	50	0	95	6	236	6,543	31,575	-25,032.33
1258+00.00	50	6	43	6	127	6,549	31,721	-25,172.64
1258+50.00	50	17	17	22	55	6,571	31,785	-25,214.28
1259+00.00	50	6	19	21	34	6,592	31,824	-25,231.78
1259+18.86	19	6	18	4	13	6,596	31,839	-25,242.79
1259+50.00	31	28	19	19	22	6,615	31,863	-25,248.31
1259+72.19	22	26	23	22	18	6,637	31,884	-25,246.37
1259+97.85	26	25	32	24	26	6,662	31,914	-25,252.40
1260+00.00	2	25	32	2	3	6,663	31,917	-25,253.38
1260+50.00	50	25	19	45	47	6,709	31,971	-25,261.96
1261+00.00	50	20	11	41	27	6,750	32,002	-25,252.10
1261+50.00	50	19	11	36	20	6,786	32,025	-25,239.23
1262+00.00	50	18	12	34	21	6,820	32,050	-25,229.38
1262+50.00	50	16	15	31	24	6,852	32,078	-25,226.06
1263+00.00	50	14	18	28	30	6,880	32,112	-25,232.44
1263+50.00	50	12	22	25	37	6,905	32,154	-25,249.65
1264+00.00	50	11	25	21	43	6,926	32,204	-25,277.81
1264+50.00	50	10	27	19	48	6,946	32,259	-25,313.95
1265+00.00	50	10	28	19	50	6,964	32,318	-25,353.07
1265+50.00	50	12	27	21	50	6,985	32,375	-25,390.32
1266+00.00	50	14	25	24	48	7,009	32,431	-25,421.99
1266+50.00	50	16	25	28	46	7,037	32,485	-25,447.34
1267+00.00	50	18	18	32	39	7,069	32,530	-25,460.73
1267+50.00	50	20	2	35	19	7,105	32,551	-25,446.97
1268+00.00	50	22	0	39	3	7,143	32,555	-25,411.42
1268+50.00	50	22	0	41	0	7,184	32,555	-25,371.16
1268+72.36	22	22	0	18	0	7,202	32,555	-25,352.97
1268+96.26	24	0	0	10	0	7,212	32,555	-25,343.38
1268+98.02	2	0	0	0	0	7,212	32,555	-25,343.38
SUBTOTAL				7,212	28,309			

EARTHWORK - SW RAMP

STATION	DISTANCE FT	END AREA CUT SF	END AREA FILL SF	INCREMENTAL VOLUME 205.0100 CUT CY	INCREMENTAL VOLUME 205.0100 FILL CY	CUMULATIVE VOLUME CUT CY	CUMULATIVE VOLUME 1.15 EXP. FILL CY	MASS ORDINATE CY
1227+65.55	0	0	0					
1227+97.84	32	30	0	18	0	18	0	17.86
1228+00.00	2	29	0	2	0	20	0	20.23
1228+50.00	50	17	5	43	4	63	5	57.89
1229+00.00	50	22	4	36	8	99	14	84.91
1229+50.00	50	13	14	33	16	132	33	98.60
1230+00.00	50	12	29	23	40	154	79	75.45
1230+50.00	50	11	34	20	59	175	147	28.36
1231+00.00	50	10	35	19	65	194	221	-26.81
1231+50.00	50	10	36	18	66	212	297	-84.41
1232+00.00	50	10	35	18	66	230	372	-141.88
1232+50.00	50	10	33	18	64	249	445	-196.52
1233+00.00	50	11	31	19	59	268	514	-245.47
1233+50.00	50	12	17	21	44	289	564	-274.98
1234+00.00	50	13	22	23	36	312	605	-293.19
1234+50.00	50	15	20	26	39	337	649	-312.02
1234+77.65	28	16	19	16	20	353	672	-319.30
1235+00.00	22	18	22	14	17	367	692	-324.94
1235+09.94	10	19	25	7	9	374	702	-327.98
1235+50.00	40	26	20	33	33	407	740	-332.88
1235+63.26	13	26	21	13	10	420	752	-331.83
1236+00.00	37	20	11	31	22	451	777	-325.94
1236+50.00	50	7	53	25	60	476	845	-369.62
1237+00.00	50	0	156	7	193	482	1,068	-585.36
1237+50.00	50	0	214	0	342	482	1,461	-978.55

(CONTINUED)

EARTHWORK - SW RAMP (CONTINUED)

STATION	DISTANCE FT	END AREA CUT SF	END AREA FILL SF	INCREMENTAL VOLUME 205.0100 CUT CY	INCREMENTAL VOLUME 205.0100 FILL CY	CUMULATIVE VOLUME CUT CY	CUMULATIVE VOLUME 1.15 EXP. FILL CY	MASS ORDINATE CY
1238+00.00	50	1	377	1	547	483	2,090	-1,607.11
1238+50.00	50	6	454	6	769	489	2,975	-2,485.71
1239+00.00	50	7	497	12	881	502	3,988	-3,486.29
1239+50.00	50	93	547	93	967	594	5,100	-4,505.82
1240+00.00	50	153	639	228	1,098	822	6,363	-5,541.07
1240+50.00	50	48	690	186	1,230	1,009	7,778	-6,769.84
1241+00.00	50	74	613	113	1,206	1,122	9,165	-8,043.61
1241+45.64	46	200	403	232	858	1,354	10,152	-8,798.59
1241+50.00	4	220	381	34	63	1,388	10,225	-8,837.37
1241+98.97	49	354	69	520	407	1,908	10,694	-8,785.59
1241+98.98	0	354	69	0	0	1,908	10,694	-8,785.53
1242+00.00	1	354	63	13	2	1,921	10,696	-8,774.96
1242+50.00	50	491	63	783	117	2,704	10,831	-8,126.26
1242+52.31	2	485	69	42	6	2,746	10,837	-8,091.03
1243+00.00	48	968	4	1,284	64	4,030	10,911	-6,881.11
1243+05.64	6	940	7	199	1	4,229	10,912	-6,683.02
1243+50.00	44	1,591	1,635	2,079	1,349	6,308	12,464	-6,155.55
1243+58.98	9	1,610	1,893	532	586	6,840	13,138	-6,297.87
1244+00.00	41	1,437	2,687	2,315	3,480	9,155	17,140	-7,984.33
1244+50.00	50	351	4,267	1,655	6,439	10,811	24,544	-13,733.54
1245+00.00	50	119	5,369	435	8,922	11,245	34,804	-23,558.81
1245+50.00	50	746	4,068	801	8,737	12,046	44,852	-32,805.56
1245+80.00	30	606	3,262	751	4,072	12,797	49,534	-36,737.16
1245+80.83	1	574	3,242	18	100	12,815	49,650	-36,834.40
1245+85.00	4	405	3,117	76	491	12,891	50,214	-37,323.07
1245+90.00	5	247	2,930	60	560	12,951	50,858	-37,906.62
1245+95.00	5	121	2,725	34	524	12,985	51,460	-38,474.78
1246+00.00	5	45	2,588	15	492	13,001	52,026	-39,025.19
1246+05.00	5	31	2,581	7	479	13,008	52,576	-39,568.56
1246+08.41	3	35	2,700	4	334	13,012	52,960	-39,948.07
1246+10.00	2	38	2,747	2	160	13,014	53,144	-40,130.23
1246+60.00	50	28	2,485	52	4,601	13,066	58,435	-45,369.26
1246+80.00	20	22	1,783	16	1,321	13,083	59,954	-46,871.80
1246+81.95	2	21	1,443	2	117	13,084	60,089	-47,004.53
				SUBTOTAL		13,084	52,251	

EARTHWORK - STH 64 (WEST)

STATION	DISTANCE FT	END AREA CUT SF	END AREA FILL SF	INCREMENTAL VOLUME 205.0100 CUT CY	INCREMENTAL VOLUME 205.0100 FILL CY	CUMULATIVE VOLUME CUT CY	CUMULATIVE VOLUME 1.15 EXP. FILL CY	MASS ORDINATE CY
512+00.00	0	50	0.88					
512+50.00	50	32	11	76	11	76	13	63.33
513+00.00	50	15	64	43	69	119	92	26.84
513+50.00	50	12	203	25	247	144	377	-232.94
514+00.00	50	24	319	34	484	178	933	-755.49
514+50.00	50	33	425	53	689	231	1,725	-1,494.74
515+00.00	50	18	487	47	844	278	2,696	-2,418.15
515+30.07	30	22	660	22	638	300	3,430	-3,130.16
515+50.00	20	13	692	13	499	313	4,004	-3,691.41
516+00.00	50	7	851	18	1,429	331	5,648	-5,316.18
516+50.00	50	8	1,050	14	1,760	345	7,672	-7,326.83
517+00.00	50	7	1,280	14	2,157	359	10,153	-9,794.29
517+19.34	19	5	1,376	4	951	363	11,247	-10,883.58
517+50.00	31	3	1,612	5	1,697	368	13,198	-12,830.35
518+00.00	50	3	1,839	6	3,196	374	16,873	-16,499.45
518+50.00	50	8	2,021	10	3,574	384	20,983	-20,599.21
518+87.16	37	12	2,205	14	2,908	398	24,327	-23,929.19
518+90.00	3	13	2,222	1	233	399	24,595	-24,195.77
518+95.00	5	13	2,254	2	414	402	25,072	-24,670.09
519+00.00	5	13	2,294	2	421	404	25,556	-25,152.07
519+05.00	5	12	2,339	2	429	406	26,049	-25,643.12
519+08.60	4	20	2,373	2	314	408	26,411	-26,002.29
519+10.00	1	7	1,271	1	94	409	26,519	-26,110.16
519+50.00	40	23	2,414	33	3,577	443	30,633	-30,190.16
519+75.00	25	10	3,282	9	3,039	451	34,127	-33,676.05
520+25.00	50	0	3,882	0	7,188	451	42,394	-41,942.66
520+75.00	50	0	3,694	0	6,841	451	50,261	-49,810.13
521+25.00	50	0	3,956	0	7,326	451	58,686	-58,234.74
521+75.00	50	1	3,940	1	7,296	453	67,076	-66,623.58
521+80.00	5	8	3,809	1	718	454	67,902	-67,447.93
521+85.00	5	10	3,792	2	704	455	68,711	-68,255.67
521+86.30	1	11	3,791	1	183	456	68,921	-68,465.28
522+00.00	14	27	3,805	10	1,927	466	71,137	-70,671.34
522+14.40	14	29	3,880	15	2,050	481	73,494	-73,013.27
522+50.00	36	6	2,747	23	4,368	504	78,517	-78,013.20
522+75.34	25	251	1	121	1,290	625	80,001	-79,375.52
522+99.68	24	33	1	128	1	753	80,001	-79,248.12
			SUBTOTAL	753	69,566			

EARTHWORK - 13TH ROAD

STATION	DISTANCE FT	END AREA CUT SF	END AREA FILL SF	INCREMENTAL VOLUME 205.0100 CUT CY	INCREMENTAL VOLUME 205.0100 FILL CY	CUMULATIVE VOLUME CUT CY	CUMULATIVE VOLUME 1.15 EXP. FILL CY	MASS ORDINATE CY
391+00.00	0	83	0				0	
391+50.00	50	78	20	149	18	149	21	128.66
392+00.00	50	64	14	132	31	281	56	224.95
392+50.00	50	67	7	122	19	403	78	324.68
393+00.00	50	67	12	124	18	527	98	428.28
393+44.13	44	68	10	110	18	636	119	517.46
393+50.00	6	77	7	16	2	652	121	531.15
393+73.16	23	75	1	65	3	717	125	592.75
393+81.46	8	77	0	23	0	741	125	615.94
394+00.00	19	79	0	54	0	794	125	669.49
394+14.65	15	80	0	43	0	837	125	712.53
394+50.00	35	90	0	111	0	948	125	823.25
394+56.13	6	90	0	20	0	969	125	843.65
394+97.61	41	85	0	135	0	1,104	125	978.44
395+00.00	2	85	0	8	0	1,111	125	985.97
395+50.00	50	75	0	148	0	1,259	125	1,133.71
395+84.02	34	64	1	88	0	1,346	126	1,220.94
396+00.00	16	53	3	35	1	1,381	127	1,254.36
396+20.54	21	30	13	31	6	1,413	134	1,278.77
396+50.00	29	7	45	20	32	1,432	170	1,262.42
396+57.06	7	4	56	1	13	1,434	185	1,248.52
396+76.54	19	0	84	1	51	1,435	244	1,191.47
396+93.59	17	0	113	0	62	1,435	315	1,119.85
397+00.00	6	0	125	0	28	1,435	348	1,087.26
397+04.54	5	0	134	0	22	1,435	373	1,062.15
397+50.00	45	0	211	0	291	1,435	708	727.53
397+64.51	15	0	224	0	117	1,435	842	592.87
397+65.00	0	0	225	0	4	1,435	847	588.18
398+15.00	50	0	252	0	467	1,435	1,385	50.63
398+75.00	60	5	297	11	659	1,447	2,142	-695.86
398+78.02	3	0	445	0	41	1,447	2,190	-743.24
398+80.00	2	0	450	0	33	1,447	2,228	-781.00
398+85.00	5	0	450	0	83	1,447	2,324	-876.73
398+88.97	4	0	439	0	65	1,447	2,399	-951.95
398+90.00	1	0	435	0	17	1,447	2,418	-971.05
398+95.00	5	0	412	0	78	1,447	2,508	-1,061.25
399+00.00	5	0	370	0	72	1,447	2,591	-1,144.54
399+05.00	5	0	342	0	66	1,447	2,667	-1,220.38
399+06.02	1	0	339	0	13	1,447	2,682	-1,235.08
399+10.00	4	0	329	0	49	1,447	2,739	-1,291.71
399+15.00	5	0	291	0	57	1,447	2,805	-1,357.74
399+20.00	5	0	220	0	47	1,447	2,859	-1,412.23
399+25.00	5	0	142	0	34	1,447	2,898	-1,450.80
399+25.50	0	0	135	0	3	1,447	2,901	-1,453.73
399+30.00	5	0	71	0	17	1,447	2,920	-1,473.53
SUBTOTAL				1,447	2,539			

EARTHWORK - STH 64 (EAST)

STATION	DISTANCE FT	END AREA CUT SF	END AREA FILL SF	INCREMENTAL VOLUME 205.0100 CUT CY	INCREMENTAL VOLUME 205.0100 FILL CY	CUMULATIVE VOLUME CUT CY	CUMULATIVE VOLUME 1.15 EXP. FILL CY	MASS ORDINATE CY
524+78.87	0	531	0.00					
525+00.00	21	21	1,252	216	490	216	563	-347.45
525+50.00	50	40	3,674	57	4,560	272	5,808	-5,535.25
525+86.95	37	22	3,849	43	5,147	315	11,726	-11,411.47
525+90.00	3	0	2,277	1	346	316	12,125	-11,808.67
526+40.00	50	0	3,938	0	7,292	316	20,511	-20,194.91
526+90.00	50	0	4,324	0	8,008	316	29,720	-29,404.20
527+40.00	50	0	4,250	0	7,870	316	38,771	-38,454.85
527+65.00	25	0	4,237	0	3,923	316	43,282	-42,966.27
527+67.96	3	0	2,400	0	364	316	43,701	-43,384.34
527+70.00	2	0	4,502	0	261	316	44,001	-43,684.55
528+20.00	50	2	3,955	3	7,324	319	52,424	-52,104.61
528+45.00	25	6	3,294	6	3,050	325	55,931	-55,606.51
528+45.15	0	6	3,045	0	18	325	55,952	-55,626.79
528+50.00	5	6	2,960	1	539	326	56,572	-56,245.89
528+70.00	20	14	2,693	10	1,995	336	58,866	-58,529.24
528+74.99	5	13	2,462	2	476	339	59,413	-59,074.38
529+00.00	25	12	2,246	12	2,181	350	61,921	-61,570.84
529+50.00	50	12	2,028	22	3,958	373	66,473	-66,100.33
529+88.39	38	12	1,904	17	2,796	390	69,688	-69,297.84
530+00.00	12	12	1,871	5	812	395	70,622	-70,226.22
530+50.00	50	14	1,674	24	3,282	420	74,396	-73,976.79
530+94.32	44	10	1,541	19	2,639	439	77,431	-76,992.47
530+95.00	1	10	1,532	0	39	439	77,476	-77,036.63
531+45.00	50	7	1,161	13	2,149	452	79,948	-79,495.11
531+95.00	50	0	725	0	1,343	452	81,492	-81,039.41
532+30.00	35	1	689	1	893	453	82,518	-82,065.24
532+31.74	2	0	643	0	43	453	82,568	-82,114.49
532+33.07	1	0	642	0	32	453	82,604	-82,151.06
532+50.00	17	0	582	0	384	453	83,045	-82,592.34
532+69.67	20	0	516	0	400	453	83,505	-83,052.13
533+00.00	30	0	426	0	529	453	84,114	-83,660.76
533+50.00	50	0	319	0	690	453	84,907	-84,454.04
534+00.00	50	0	253	0	530	453	85,516	-85,063.00
534+25.80	26	0	217	0	225	453	85,775	-85,321.40
534+50.00	24	0	183	0	179	453	85,981	-85,527.72
535+00.00	50	0	122	0	283	453	86,306	-85,852.88
535+50.00	50	5	84	4	191	458	86,526	-86,068.45
536+00.00	50	23	61	25	134	483	86,681	-86,197.42
536+50.00	50	36	51	54	103	537	86,799	-86,261.84
537+00.00	50	44	38	74	82	612	86,894	-86,281.99
537+50.00	50	47	33	85	65	696	86,969	-86,272.32
538+00.00	50	47	26	87	55	783	87,032	-86,248.35
538+50.00	50	45	15	85	38	868	87,076	-86,207.37
538+73.24	23	53	5	42	9	911	87,086	-86,175.14
			SUBTOTAL	911	75,727			

EARTHWORK - NE RAMP

STATION	DISTANCE FT	END AREA CUT SF	END AREA FILL SF	INCREMENTAL VOLUME 205.0100 CUT CY	INCREMENTAL VOLUME 205.0100 FILL CY	CUMULATIVE VOLUME CUT CY	CUMULATIVE VOLUME 1.15 EXP. FILL CY	MASS ORDINATE CY
1245+10.00	0	6	1,583					
1245+15.00	5	6	1,660	1	300	1	345	-344.14
1245+20.00	5	4	1,735	1	314	2	707	-704.66
1245+70.00	50	12	2,003	21	3,708	23	4,971	-4,954.77
1245+70.94	1	29	2,218	1	73	24	5,056	-5,038.47
1245+75.00	4	29	2,245	4	336	28	5,442	-5,420.04
1246+25.00	50	55	2,164	101	4,007	130	10,050	-9,950.77
1246+70.00	45	275	1,906	458	3,177	588	13,703	-13,329.75
1246+72.90	3	236	1,738	27	196	616	13,929	-13,527.46
1247+00.00	27	129	1,489	183	1,619	798	15,790	-14,992.05
1247+50.00	50	281	888	380	2,201	1,178	18,321	-17,143.26
1248+00.00	50	561	497	780	1,283	1,958	19,796	-17,838.72
1248+50.00	50	670	263	1,140	704	3,097	20,606	-17,509.27
1249+00.00	50	610	195	1,185	425	4,282	21,095	-16,812.60
1249+07.54	8	603	194	169	54	4,452	21,157	-16,705.86
1249+50.00	42	618	164	960	282	5,412	21,482	-16,070.37
1249+60.88	11	636	154	253	64	5,664	21,556	-15,891.47
1250+00.00	39	718	166	981	232	6,645	21,823	-15,177.37
1250+14.21	14	749	174	386	90	7,031	21,926	-14,894.54
1250+50.00	36	773	204	1,009	250	8,040	22,214	-14,173.77
1250+67.54	18	751	215	495	136	8,535	22,370	-13,834.94
1250+99.98	32	704	232	874	269	9,409	22,679	-13,269.88
1251+00.00	0	704	232	1	0	9,409	22,679	-13,269.56
1251+42.86	43	612	244	1,044	378	10,454	23,113	-12,659.77
1251+50.00	7	595	242	160	64	10,613	23,187	-12,573.95

(CONTINUED)

EARTHWORK - NE RAMP (CONTINUED)

STATION	DISTANCE FT	END AREA CUT SF	END AREA FILL SF	INCREMENTAL VOLUME 205.0100 CUT CY	INCREMENTAL VOLUME 205.0100 FILL CY	CUMULATIVE VOLUME CUT CY	CUMULATIVE VOLUME 1.15 EXP. FILL CY	MASS ORDINATE CY
1252+00.00	50	540	194	1,051	404	11,664	23,652	-11,987.25
1252+50.00	50	503	142	966	312	12,630	24,010	-11,379.88
1253+00.00	50	465	99	896	223	13,526	24,266	-10,740.17
1253+50.00	50	279	61	689	147	14,215	24,436	-10,220.88
1254+00.00	50	73	31	327	85	14,541	24,533	-9,991.62
1254+50.00	50	36	8	101	36	14,643	24,574	-9,931.79
1254+94.12	44	23	7	48	12	14,690	24,589	-9,898.18
1255+00.00	6	23	9	5	2	14,695	24,591	-9,895.27
1255+37.00	37	17	33	27	29	14,723	24,623	-9,900.89
1255+50.00	13	14	44	7	18	14,730	24,645	-9,914.60
1255+65.16	15	12	54	7	28	14,737	24,676	-9,938.94
1256+00.00	35	13	62	16	75	14,753	24,763	-10,009.21
1256+50.00	50	14	61	25	114	14,778	24,894	-10,115.98
1257+00.00	50	16	60	28	113	14,806	25,024	-10,217.58
1257+50.00	50	16	57	30	109	14,836	25,149	-10,312.65
1258+00.00	50	18	56	31	105	14,867	25,269	-10,401.84
1258+50.00	50	19	62	34	109	14,901	25,394	-10,493.51
1259+00.00	50	13	43	30	97	14,931	25,506	-10,575.12
1259+50.00	50	16	88	27	121	14,957	25,645	-10,687.29
1260+00.00	50	16	74	30	150	14,987	25,817	-10,829.97
1260+50.00	50	17	64	31	128	15,018	25,964	-10,945.82
1261+00.00	50	18	57	32	112	15,050	26,092	-11,041.80
1261+50.00	50	18	52	33	100	15,083	26,207	-11,124.20
1262+00.00	50	17	49	32	93	15,116	26,314	-11,198.85
1262+50.00	50	17	38	32	80	15,147	26,407	-11,259.26
1263+00.00	50	16	24	31	57	15,178	26,472	-11,293.62
1263+50.00	50	15	11	29	32	15,207	26,508	-11,300.91
1264+00.00	50	14	0	27	10	15,235	26,520	-11,285.05
1264+27.63	28	0	0	7	0	15,242	26,520	-11,277.80
1264+50.00	22	0	0	0	0	15,242	26,520	-11,277.80
1264+55.79	6	0	0	0	0	15,242	26,520	-11,277.80
				SUBTOTAL		15,242	23,061	

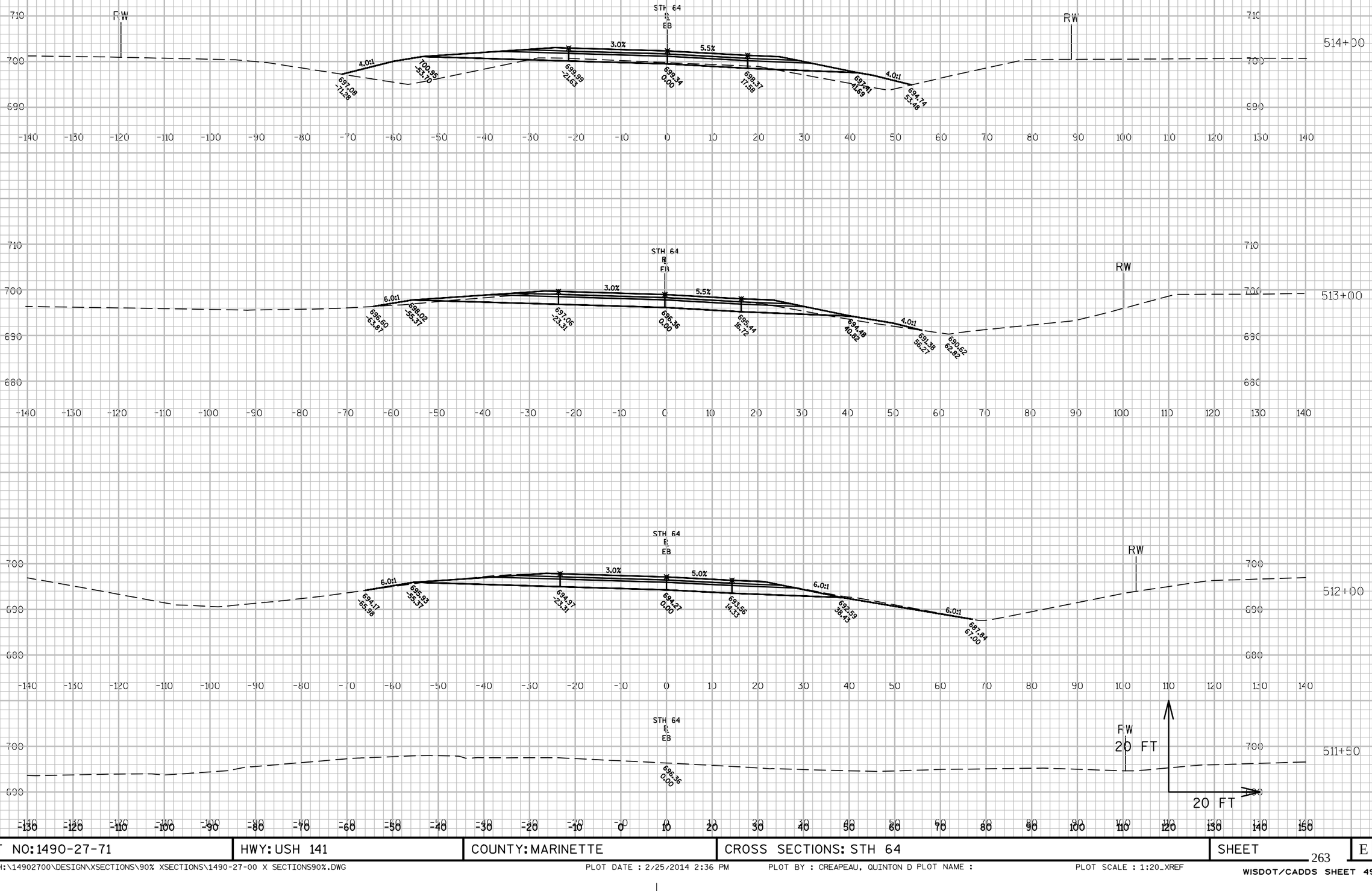
EARTHWORK - SE RAMP

STATION	DISTANCE FT	END AREA CUT SF	END AREA FILL SF	INCREMENTAL VOLUME 205.0100 CUT CY	INCREMENTAL VOLUME 205.0100 FILL CY	CUMULATIVE VOLUME CUT CY	CUMULATIVE VOLUME 1.15 EXP. FILL CY	MASS ORDINATE CY
1226+49.50	0	23	0					
1226+50.00	1	23	0	0	0	0	0	0.43
1226+79.55	30	16	0	21	0	22	0	21.66
1227+00.00	20	14	1	11	0	33	0	32.71
1227+50.00	50	12	13	24	13	57	15	42.21
1228+00.00	50	9	69	19	76	76	102	-25.84
1228+50.00	50	7	101	15	157	91	283	-191.95
1229+00.00	50	5	110	11	195	102	507	-405.40
1229+50.00	50	5	112	9	205	111	743	-632.33
1230+00.00	50	5	112	9	207	120	982	-862.06
1230+50.00	50	5	112	9	208	129	1,221	-1,092.28
1231+00.00	50	5	92	9	189	138	1,439	-1,300.52
1231+50.00	50	6	88	10	166	148	1,630	-1,481.92
1232+00.00	50	5	92	9	166	158	1,821	-1,663.56
1232+50.00	50	5	134	9	209	167	2,061	-1,894.55
1233+00.00	50	7	130	12	244	178	2,342	-2,163.58
1233+50.00	50	8	109	14	221	192	2,596	-2,403.86
1234+00.00	50	8	117	14	209	207	2,836	-2,629.62
1234+30.39	30	9	114	9	130	216	2,986	-2,769.82
1234+50.00	20	12	95	7	76	223	3,073	-2,849.91

(CONTINUED)

EARTHWORK - SE RAMP (CONTINUED)

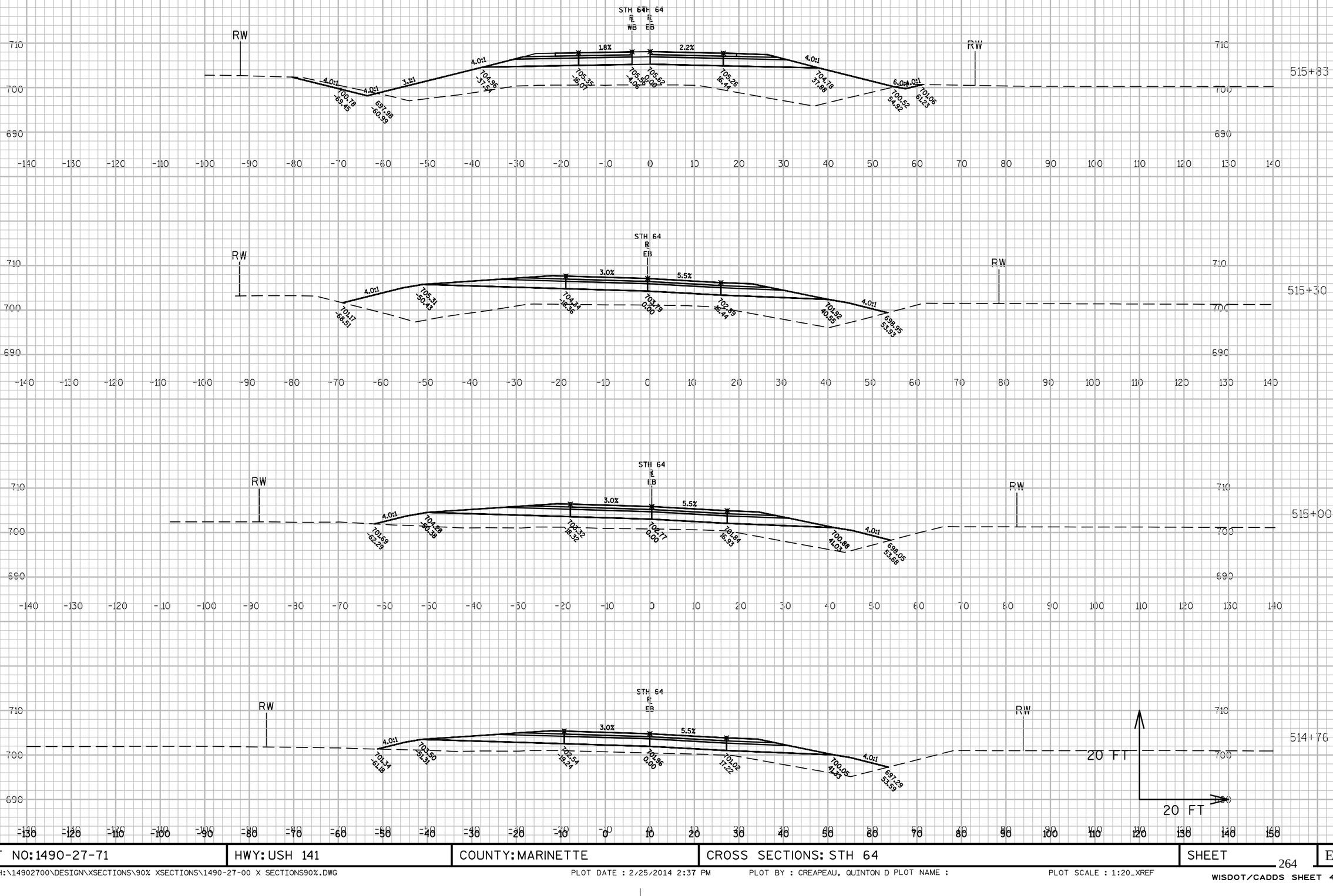
STATION	DISTANCE FT	END AREA CUT SF	END AREA FILL SF	INCREMENTAL VOLUME 205.0100 CUT CY	INCREMENTAL VOLUME 205.0100 FILL CY	CUMULATIVE VOLUME CUT CY	CUMULATIVE VOLUME 1.15 EXP. FILL CY	MASS ORDINATE CY
1234+60.45	10	14	80	5	34	228	3,112	-2,883.92
1235+00.00	40	22	35	26	84	255	3,209	-2,954.09
1235+13.36	13	22	29	11	16	265	3,227	-2,961.27
1235+50.00	37	16	33	26	42	291	3,275	-2,983.31
1236+00.00	50	6	120	20	141	312	3,437	-3,125.57
1236+50.00	50	0	199	6	296	317	3,777	-3,460.06
1237+00.00	50	1	268	2	433	319	4,275	-3,956.22
1237+50.00	50	1	332	2	556	321	4,914	-4,592.96
1238+00.00	50	6	413	6	690	327	5,707	-5,379.92
1238+50.00	50	23	597	27	935	354	6,782	-6,428.05
1238+73.14	23	95	664	50	540	404	7,404	-6,999.13
1239+00.00	27	136	736	115	697	519	8,205	-7,685.47
1239+25.31	25	133	827	126	732	645	9,047	-8,401.84
1239+26.05	1	133	830	4	23	649	9,073	-8,424.39
1239+50.00	24	142	953	122	791	771	9,982	-9,211.54
1239+78.59	29	142	1,123	150	1,099	921	11,247	-10,325.69
1240+00.00	21	127	1,239	106	936	1,028	12,324	-11,296.10
1240+31.88	32	107	1,366	138	1,538	1,166	14,092	-12,926.58
1240+50.00	18	99	1,497	69	961	1,235	15,197	-13,962.55
1240+85.17	35	99	1,756	129	2,119	1,364	17,634	-16,270.00
1241+00.00	15	99	1,815	54	981	1,418	18,762	-17,343.63
1241+38.45	38	111	1,749	149	2,538	1,567	21,681	-20,113.50
1241+50.00	12	113	1,788	48	756	1,615	22,550	-20,935.51
1242+00.00	50	111	1,782	208	3,305	1,822	26,351	-24,528.58
1242+50.00	50	122	1,651	216	3,178	2,038	30,006	-27,967.66
1243+00.00	50	132	1,949	235	3,333	2,273	33,839	-31,566.03
1243+41.29	41	362	2,051	378	3,059	2,651	37,356	-34,705.61
1243+45.00	4	326	2,044	47	281	2,698	37,680	-34,981.59
1243+70.00	25	177	2,125	164	1,967	2,862	39,942	-37,011.30
1243+71.67	2	1	2,231	5	134	2,867	40,096	-37,229.20
1243+75.00	3	0	2,256	0	277	2,867	40,415	-37,547.72
1244+20.00	45	0	1,559	0	2,598	2,867	43,402	-40,535.10
			SUBTOTAL	2,867	37,741			



9 9

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: STH 64	SHEET	E

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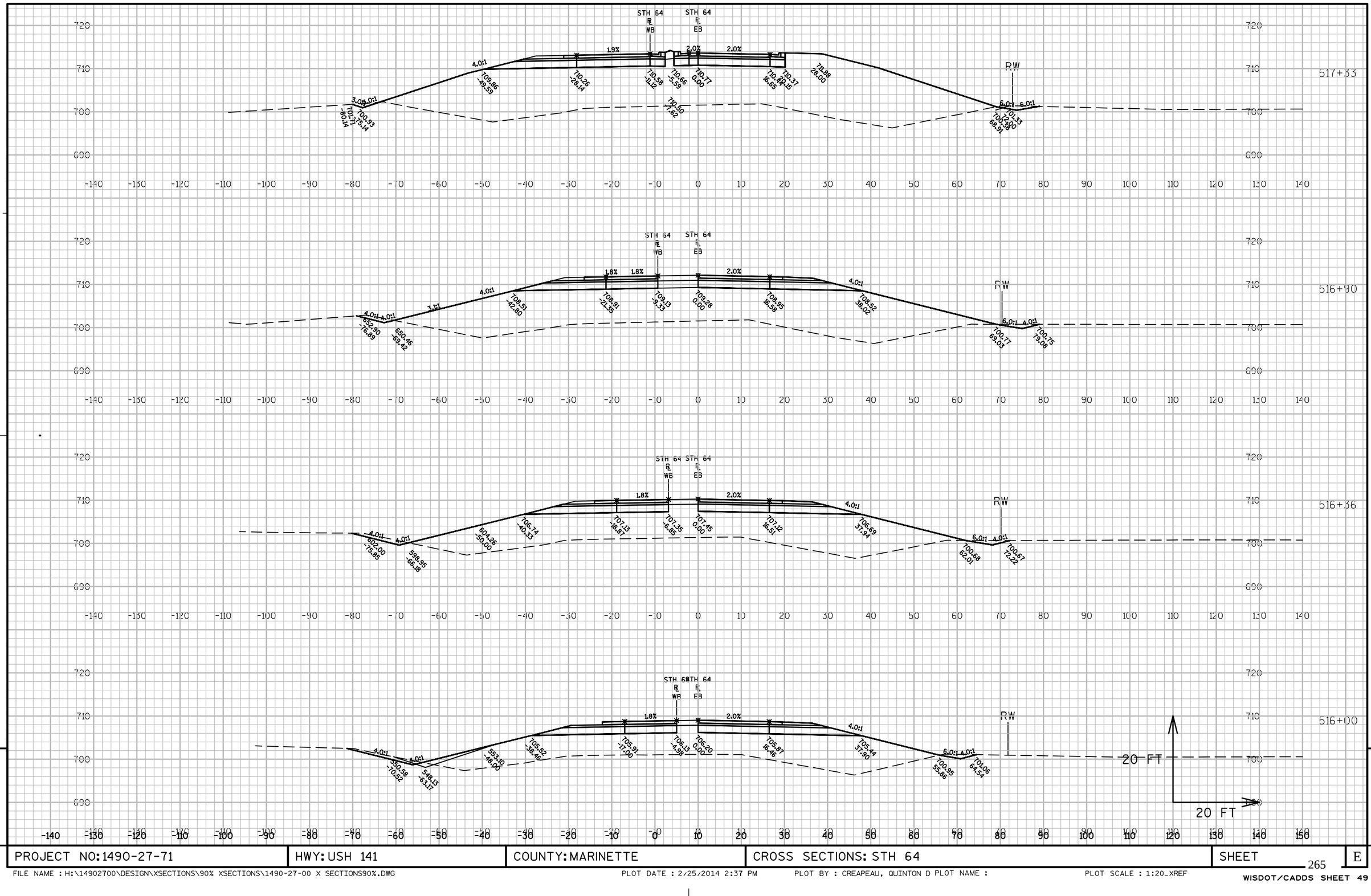
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PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: STH 64	SHEET 264	E

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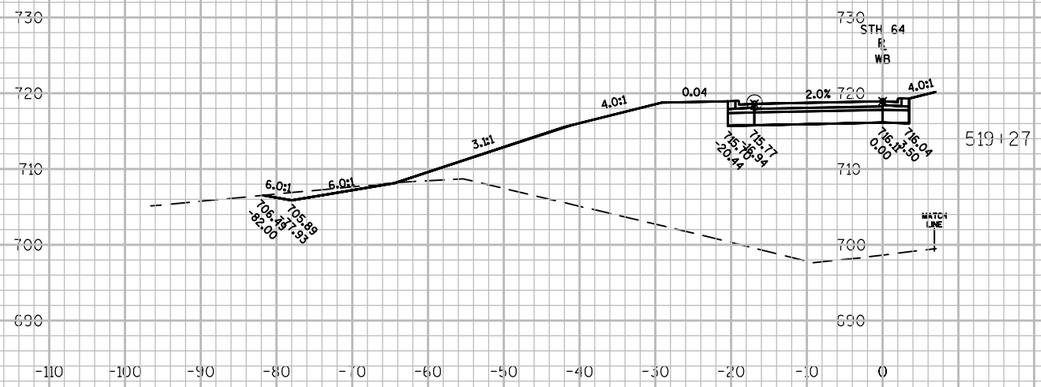
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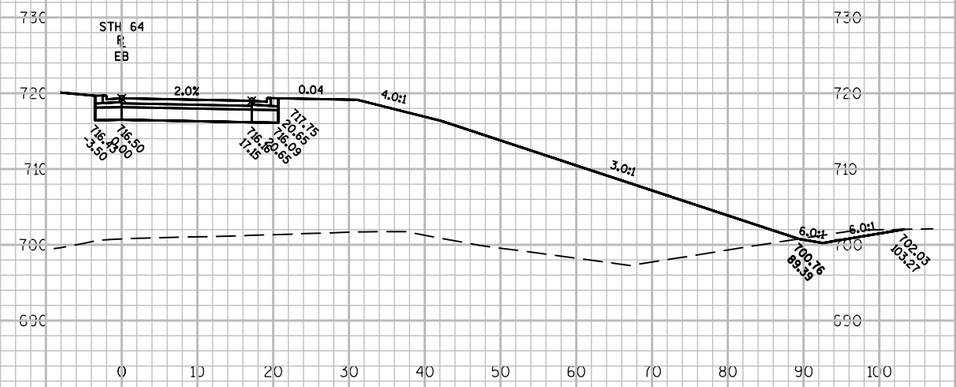
WISDOT/CADDS SHEET 49

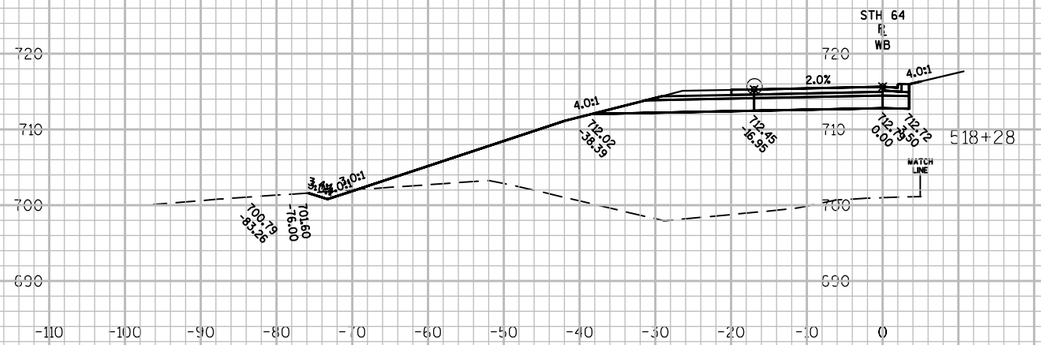


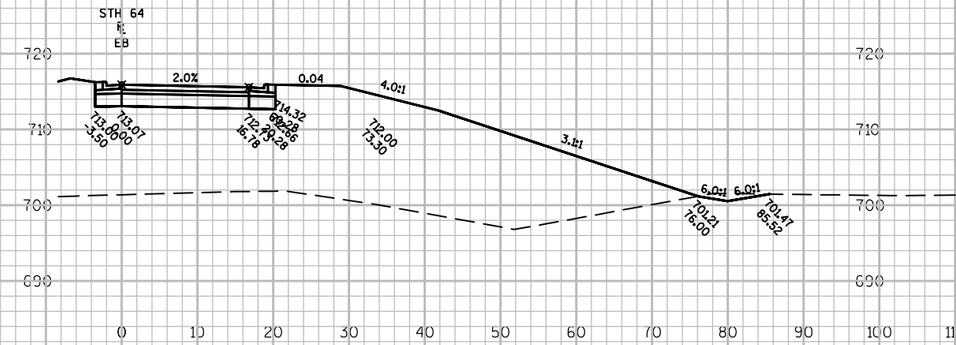
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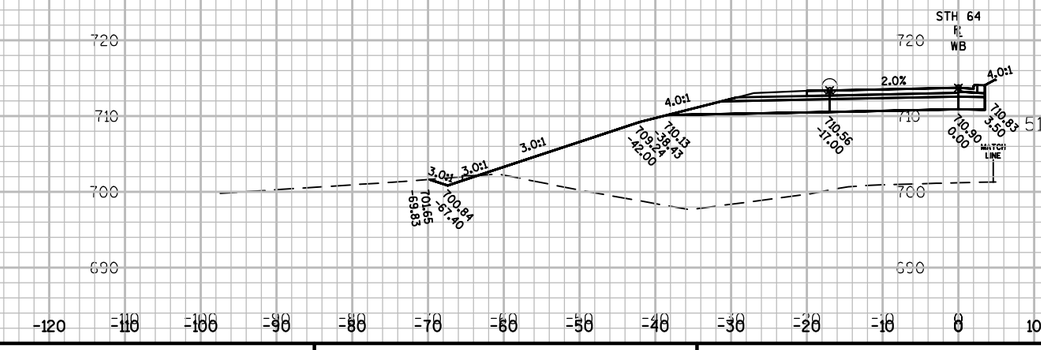
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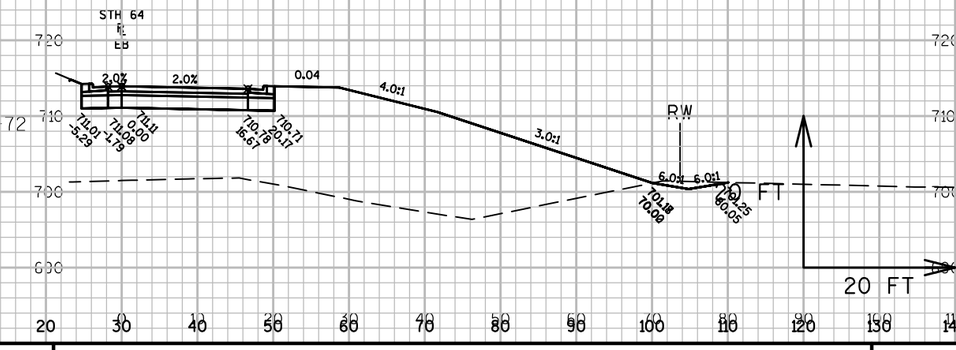












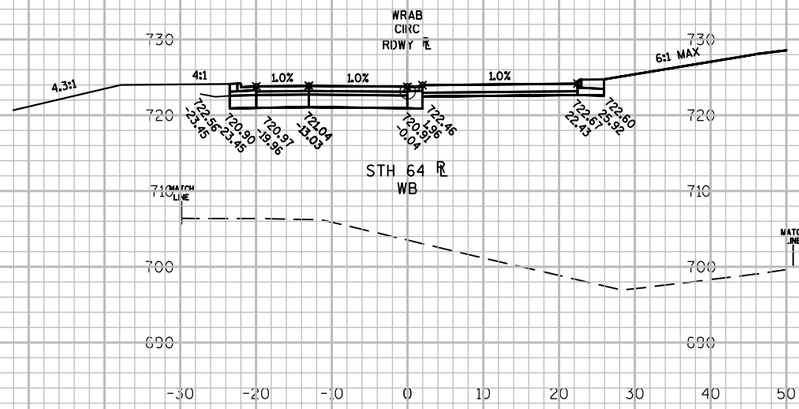
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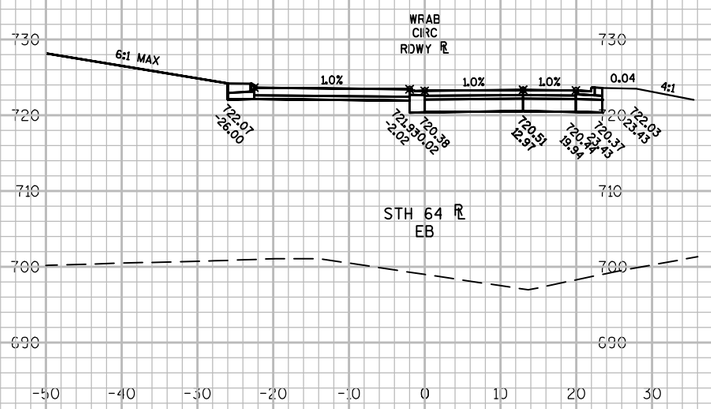
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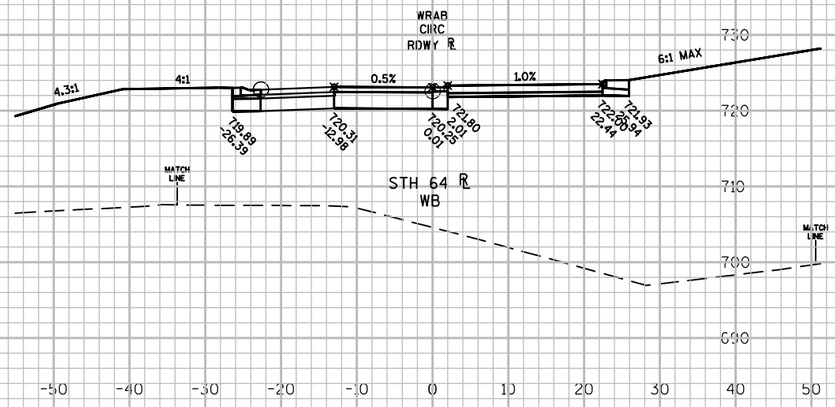
WISDOT/CADDS SHEET 49



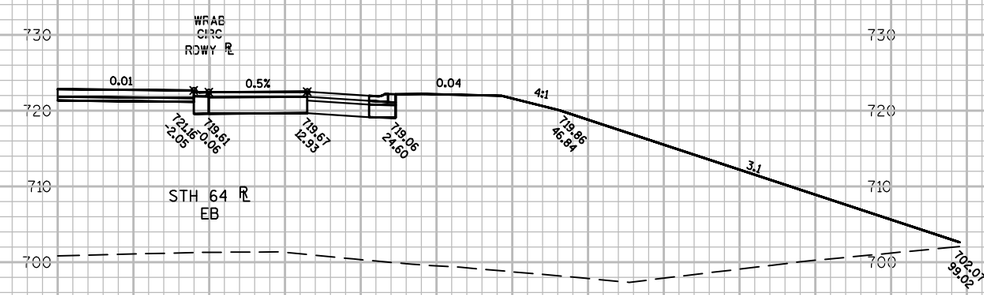
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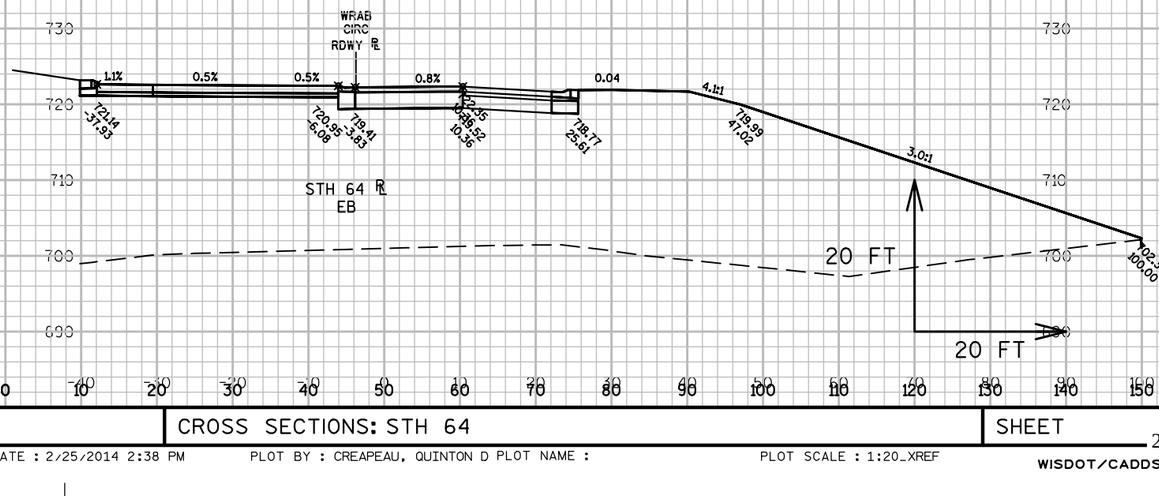
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520+63



520+16



520+00

9

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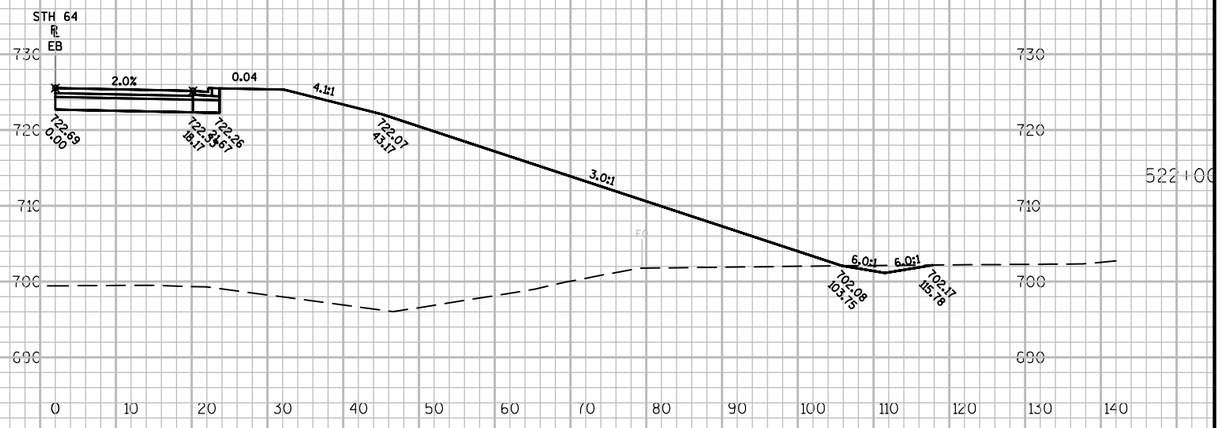
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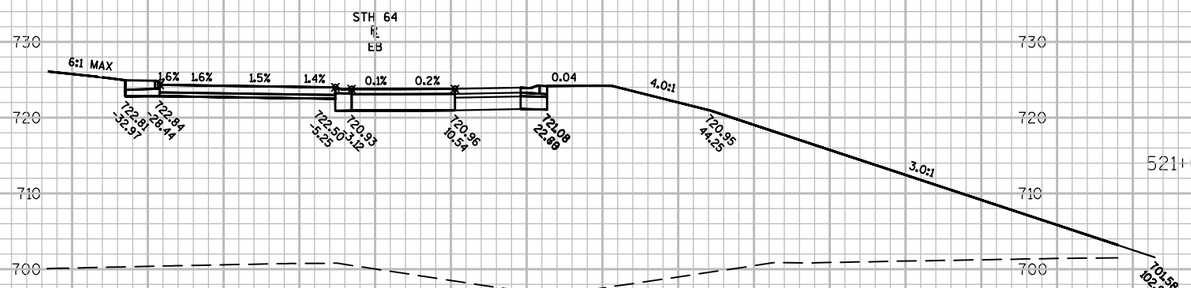
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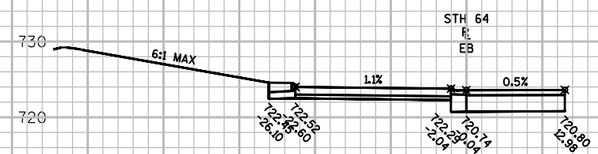
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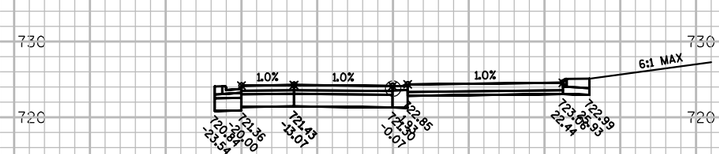
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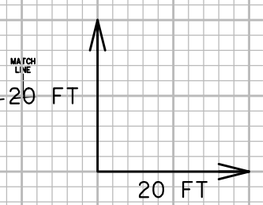
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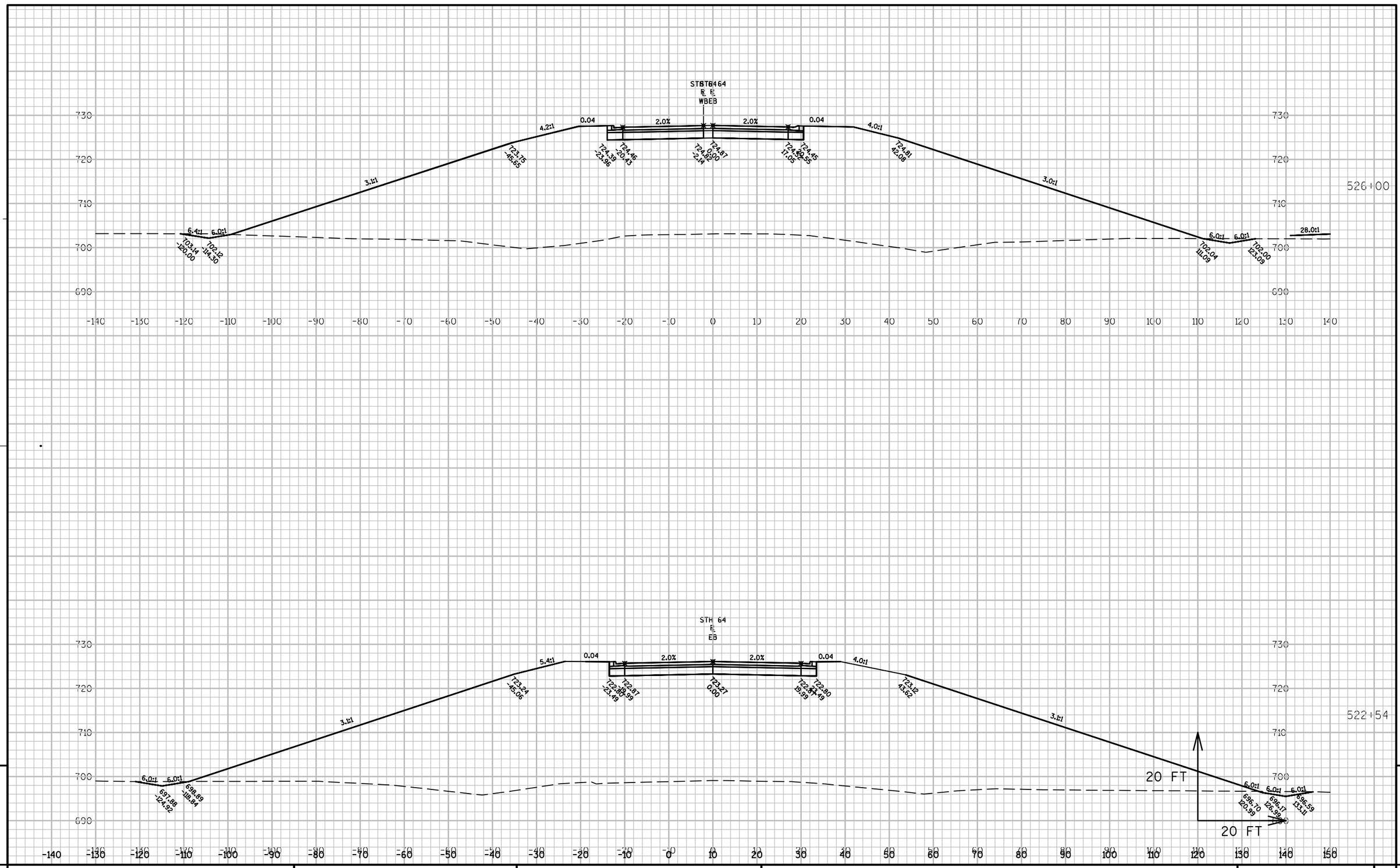


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PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: STH 64	SHEET	E

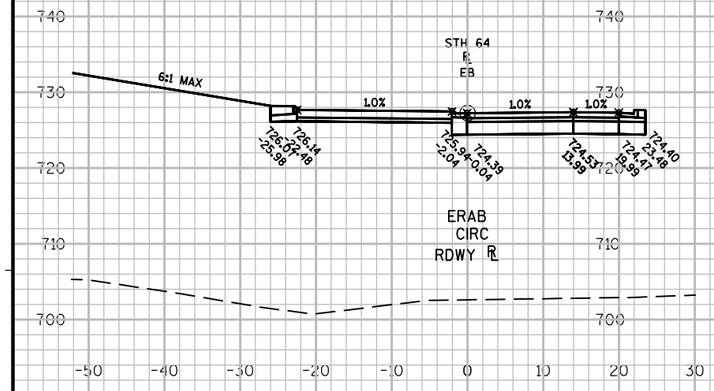
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WISDOT/CADDS SHEET 49



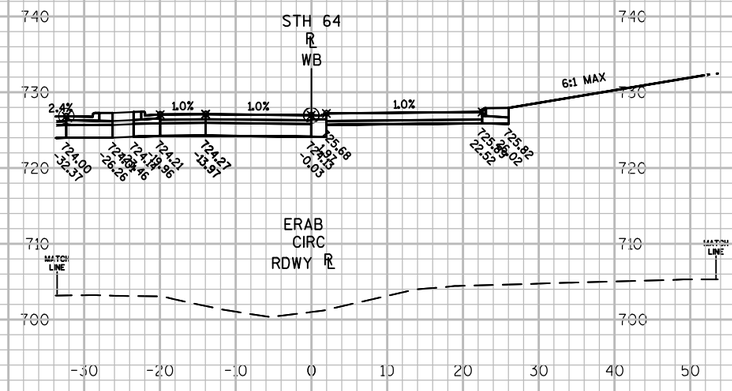
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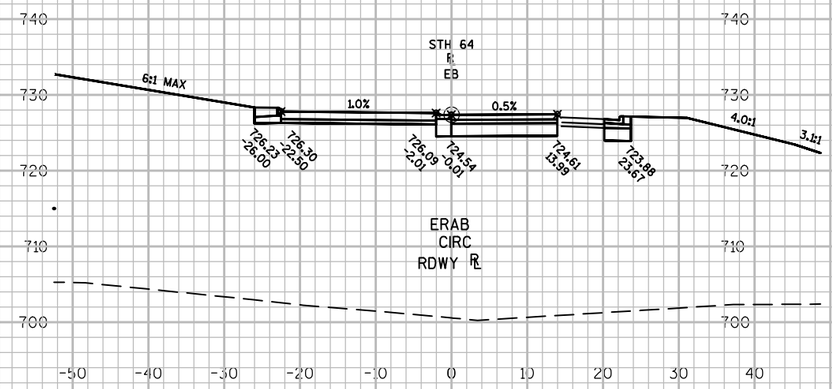
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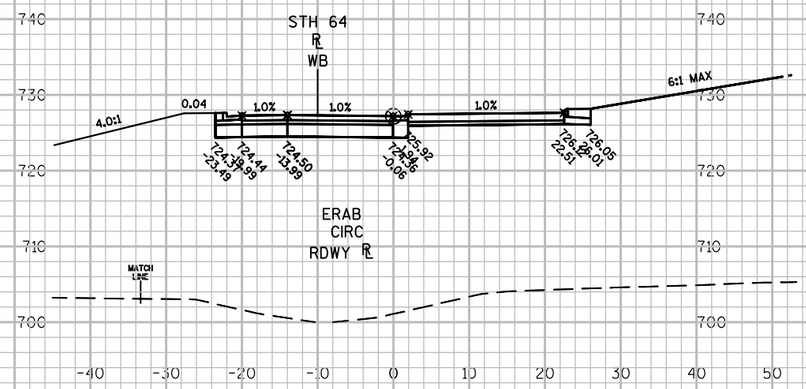
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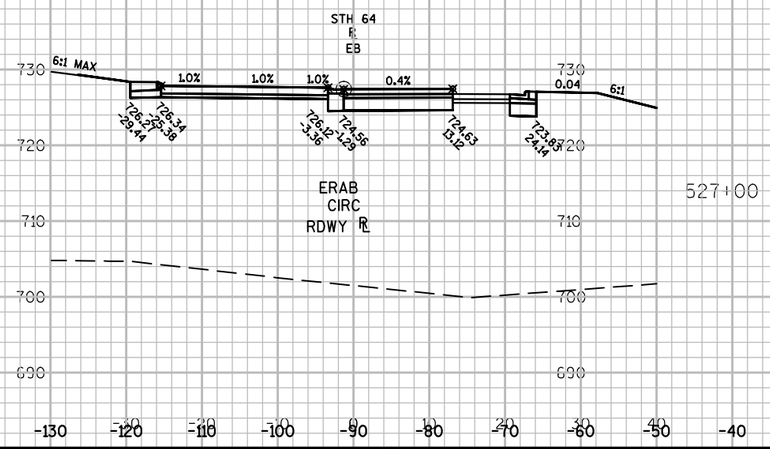
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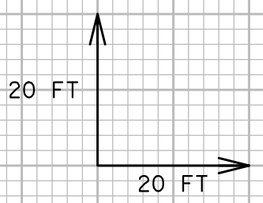
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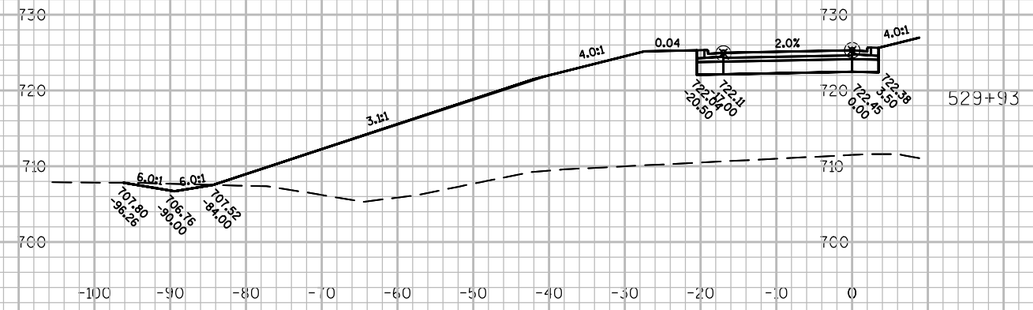
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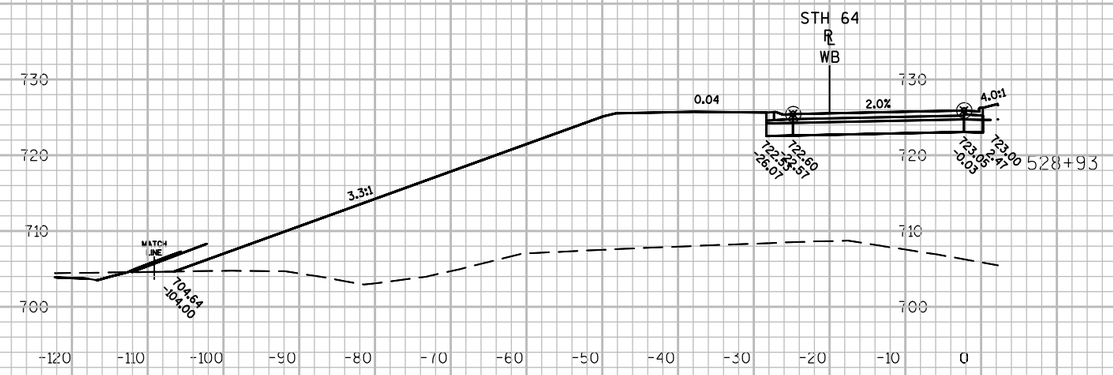


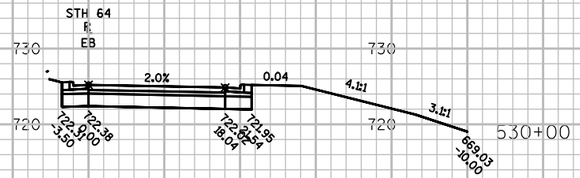
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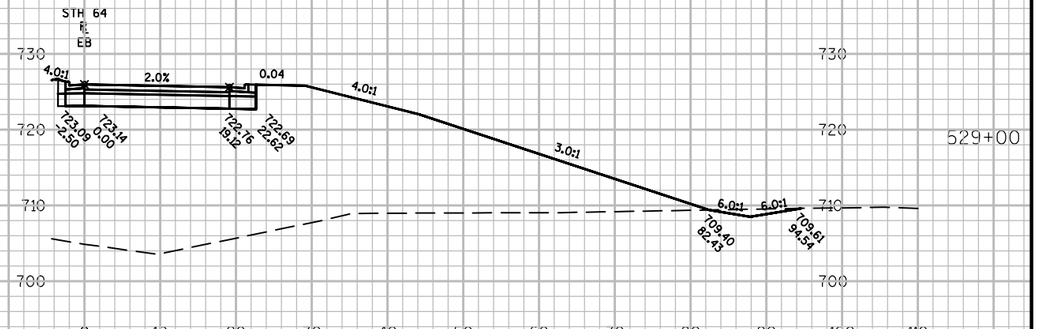
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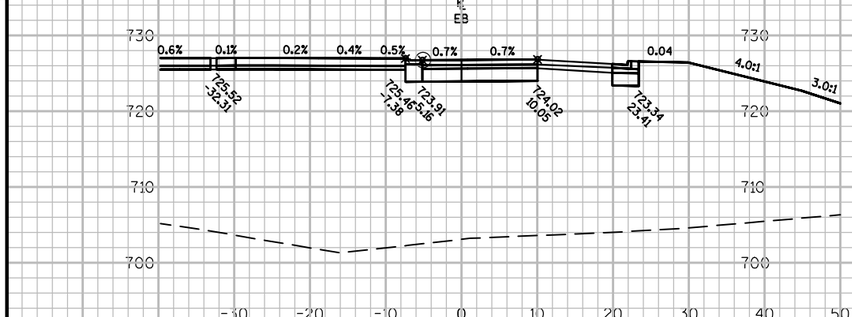
WISDOT/CADDS SHEET 49

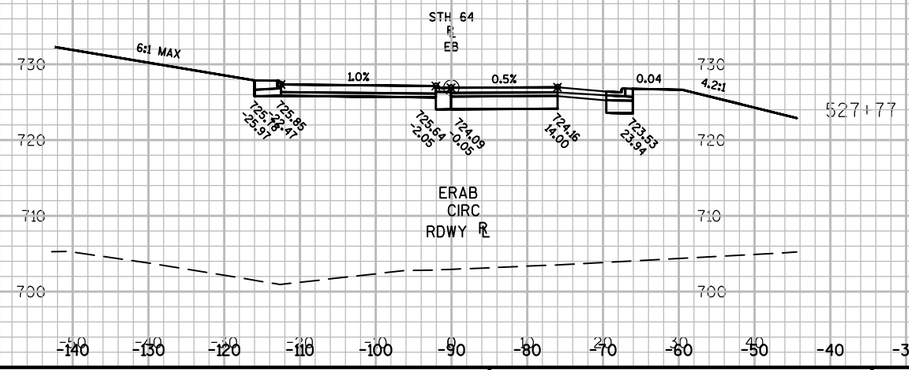














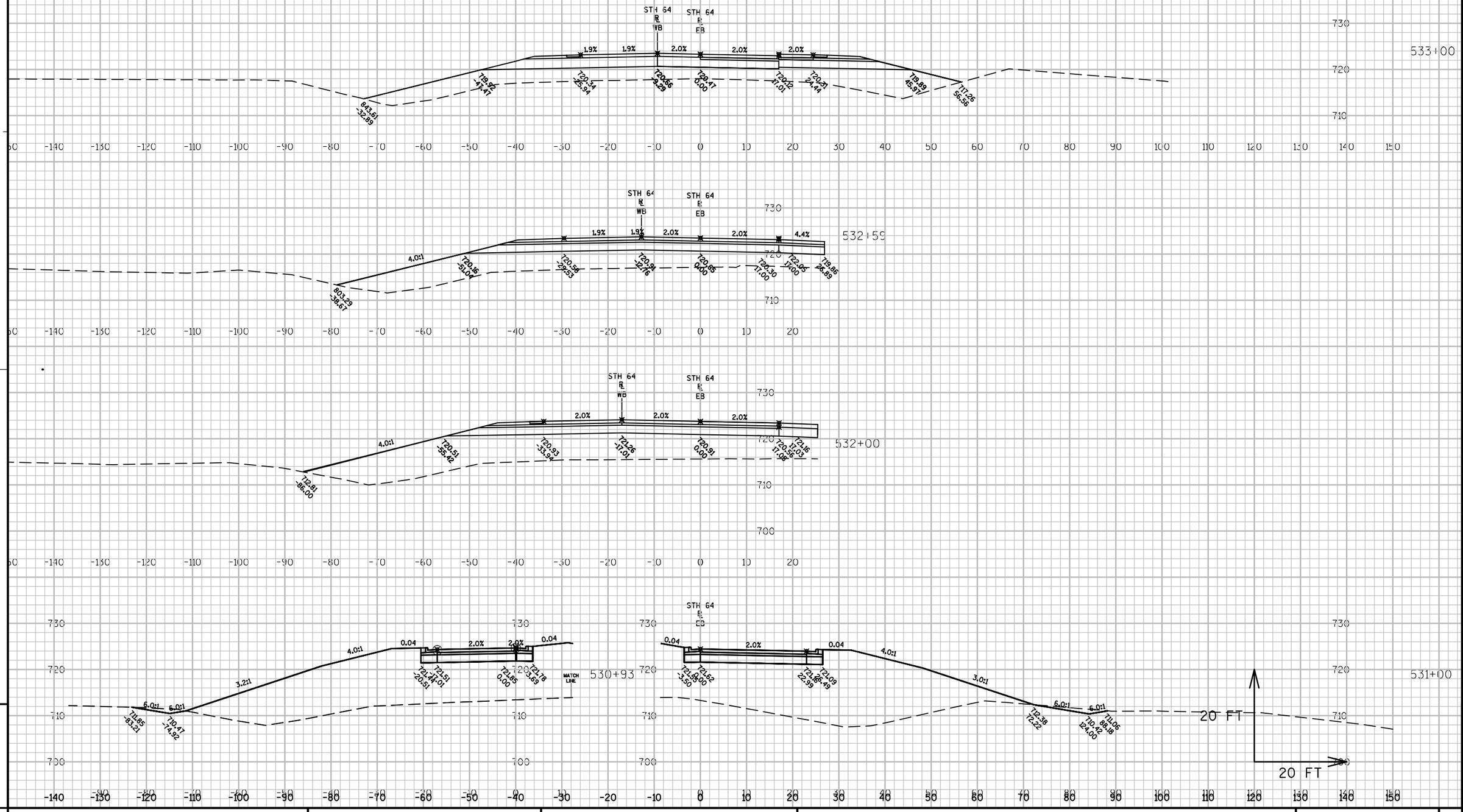
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PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: STH 64	SHEET 271	E

FILE NAME : H:\14902700\DESIGN\XSECTIONS\90% XSECTIONS\1490-27-00 X SECTIONS90%.DWG PLOT DATE : 2/25/2014 2:40 PM PLOT BY : CREAPEAU, QUINTON D PLOT NAME : PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



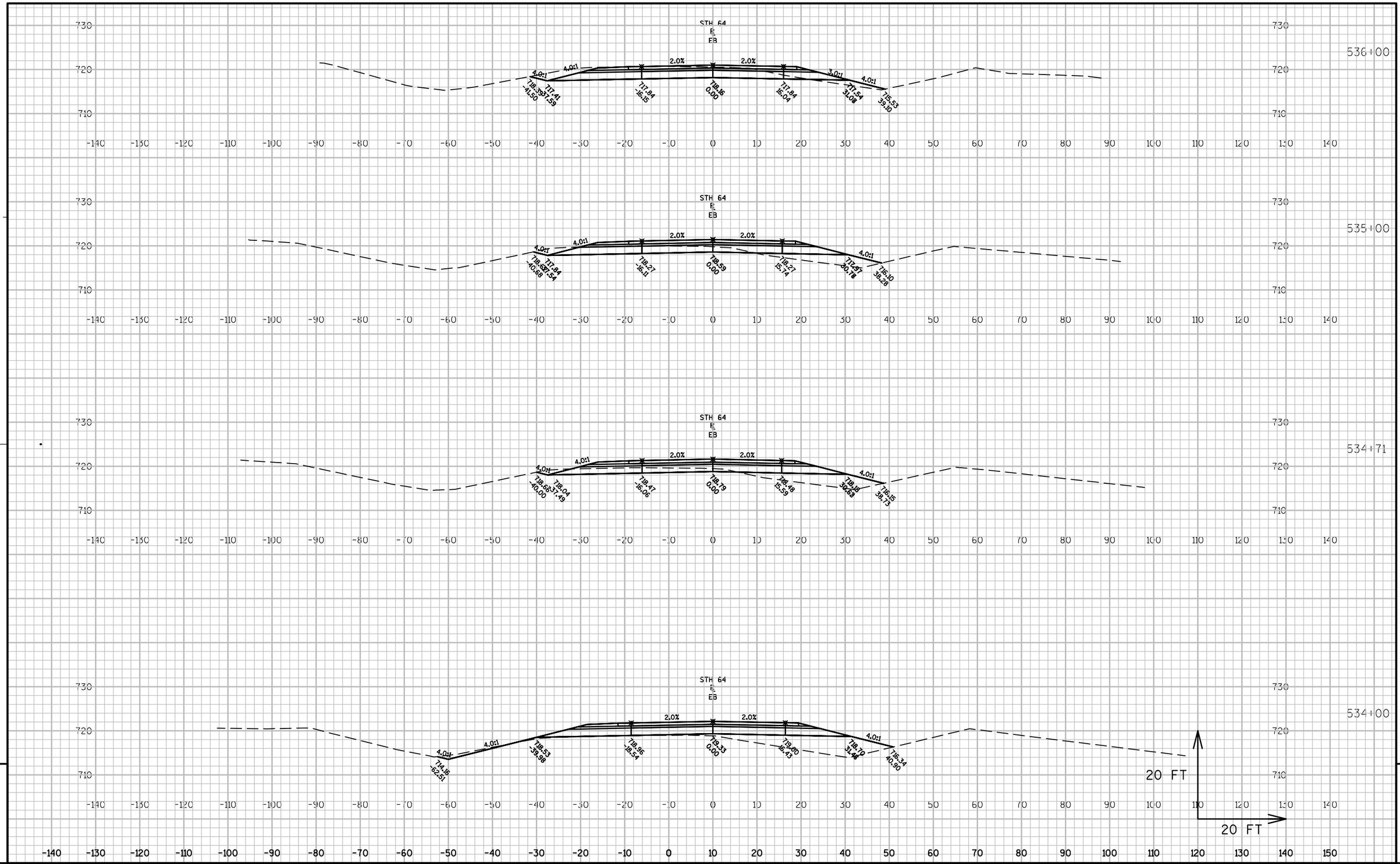
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PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: STH 64	SHEET	E

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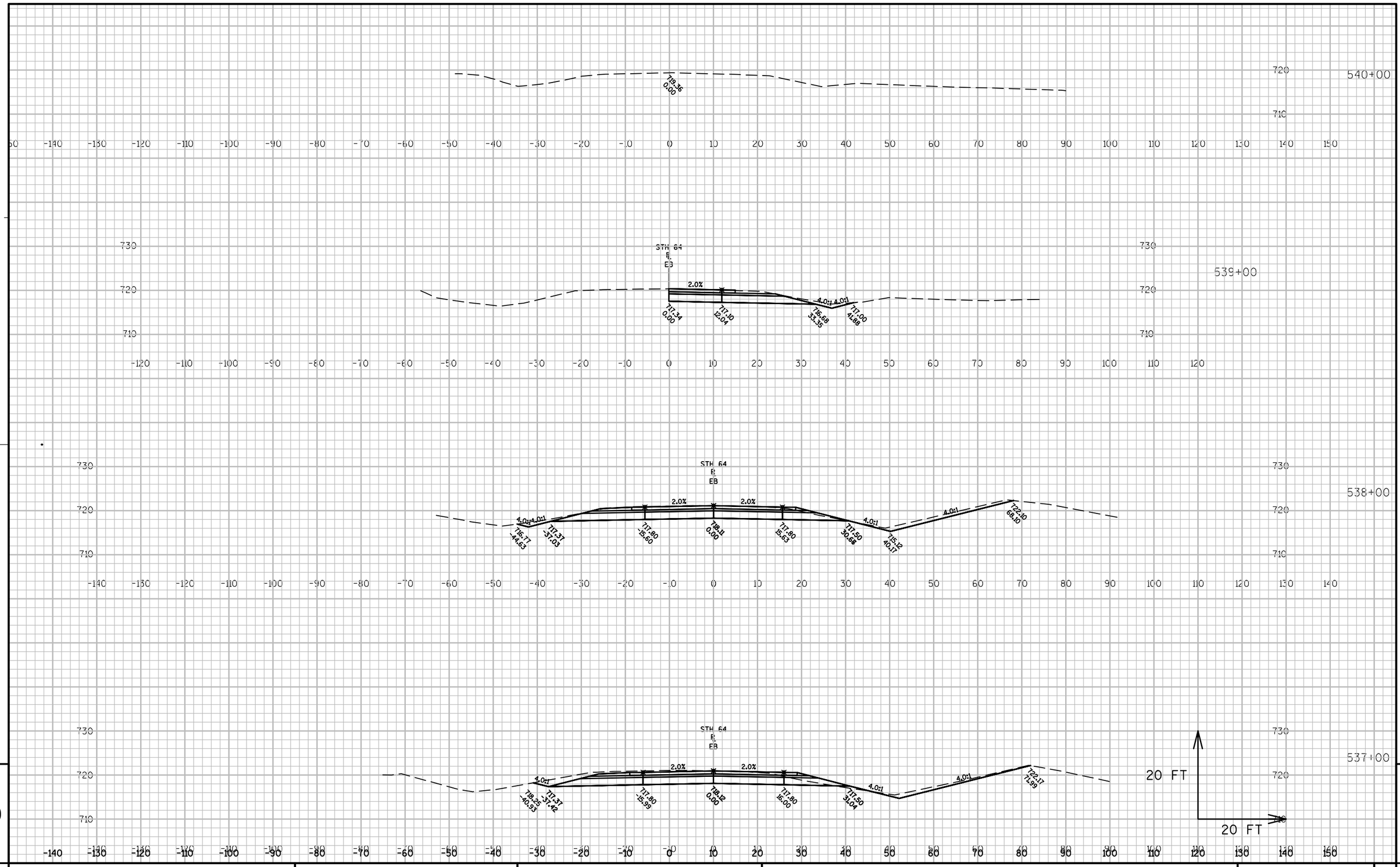
WISDOT/CADDS SHEET 49



PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: STH 64	SHEET 273	E

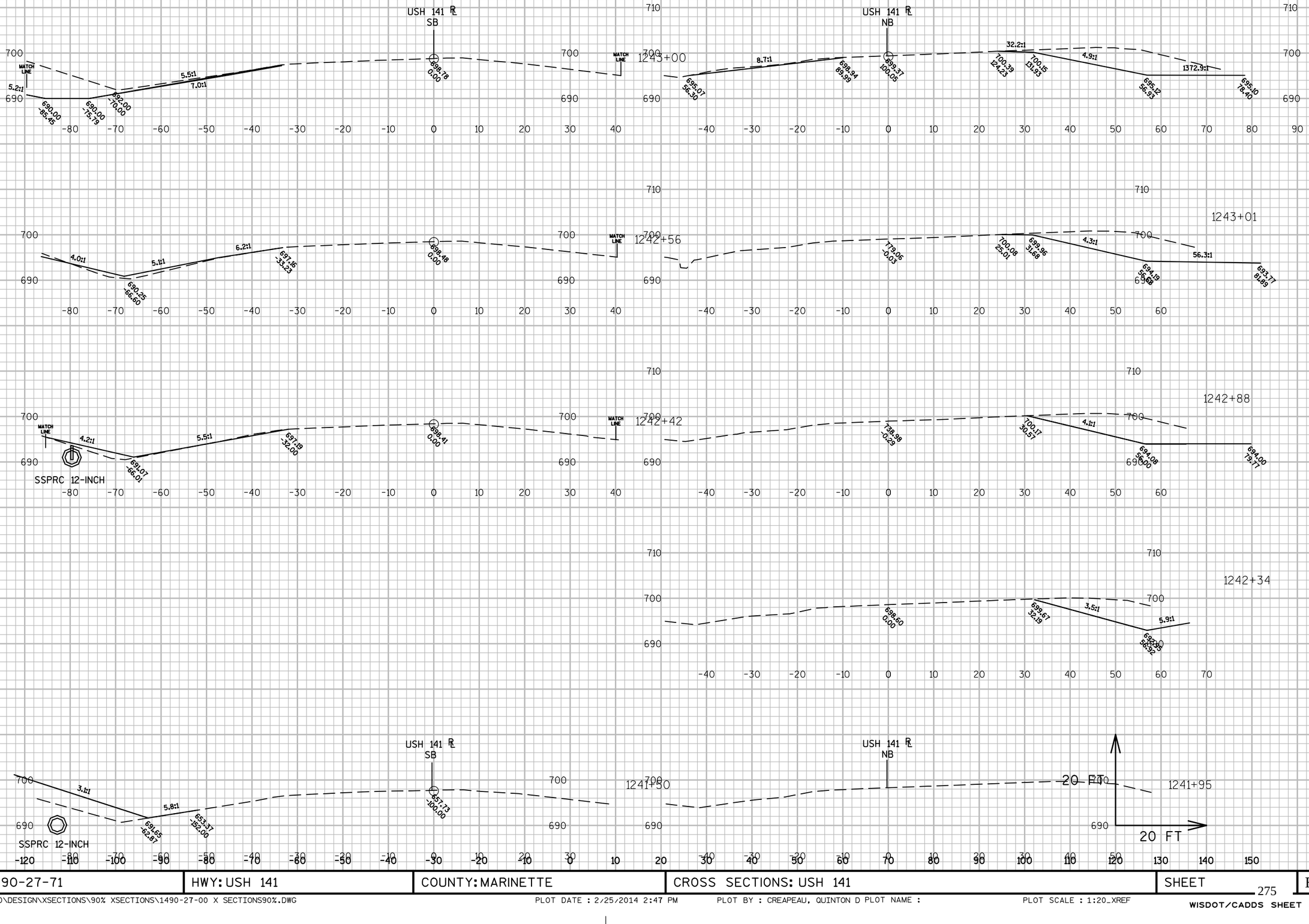
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WISDOT/CADDS SHEET 49



PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: STH 64	SHEET	E

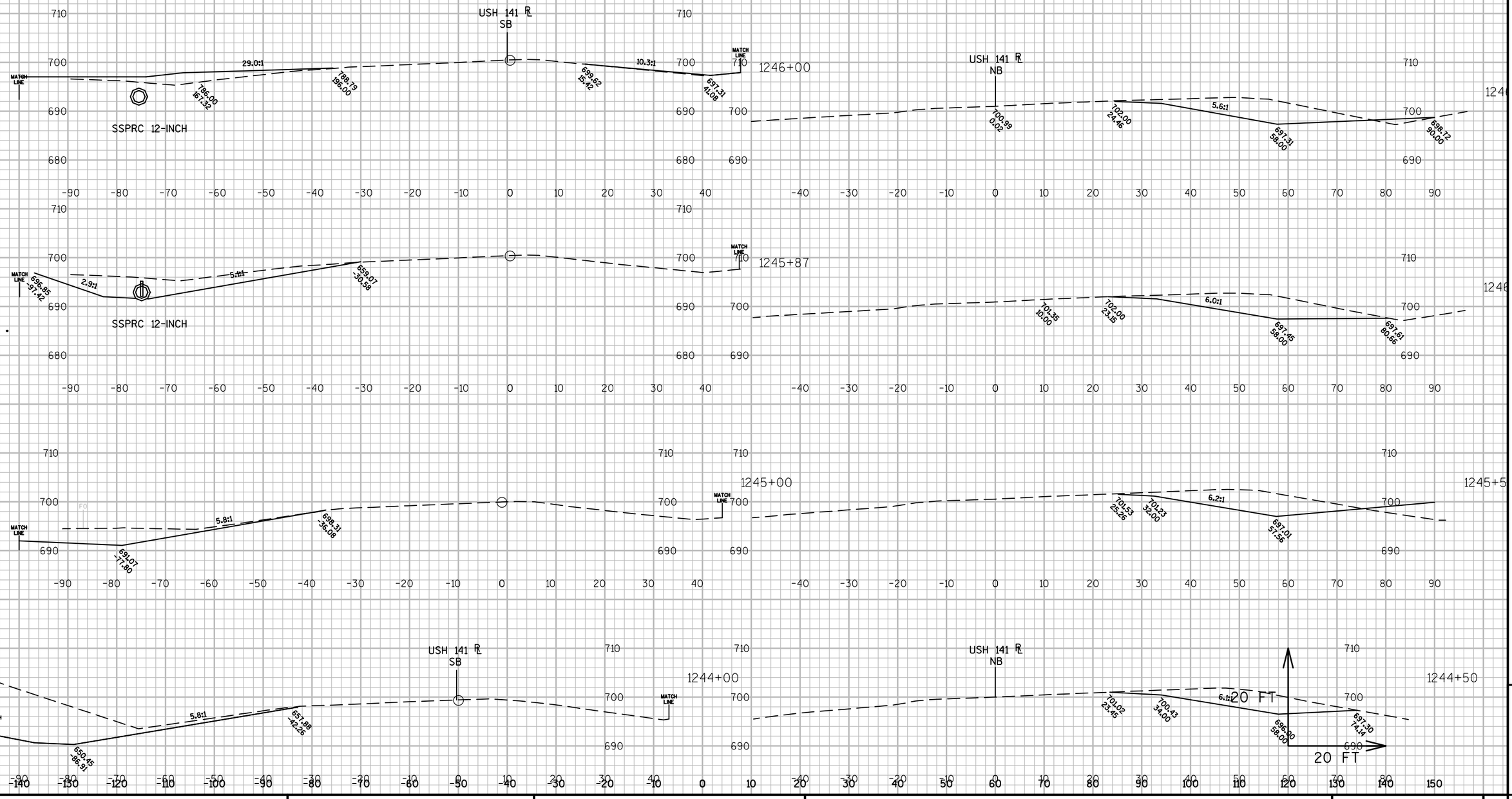
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PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: USH 141	SHEET 275	E

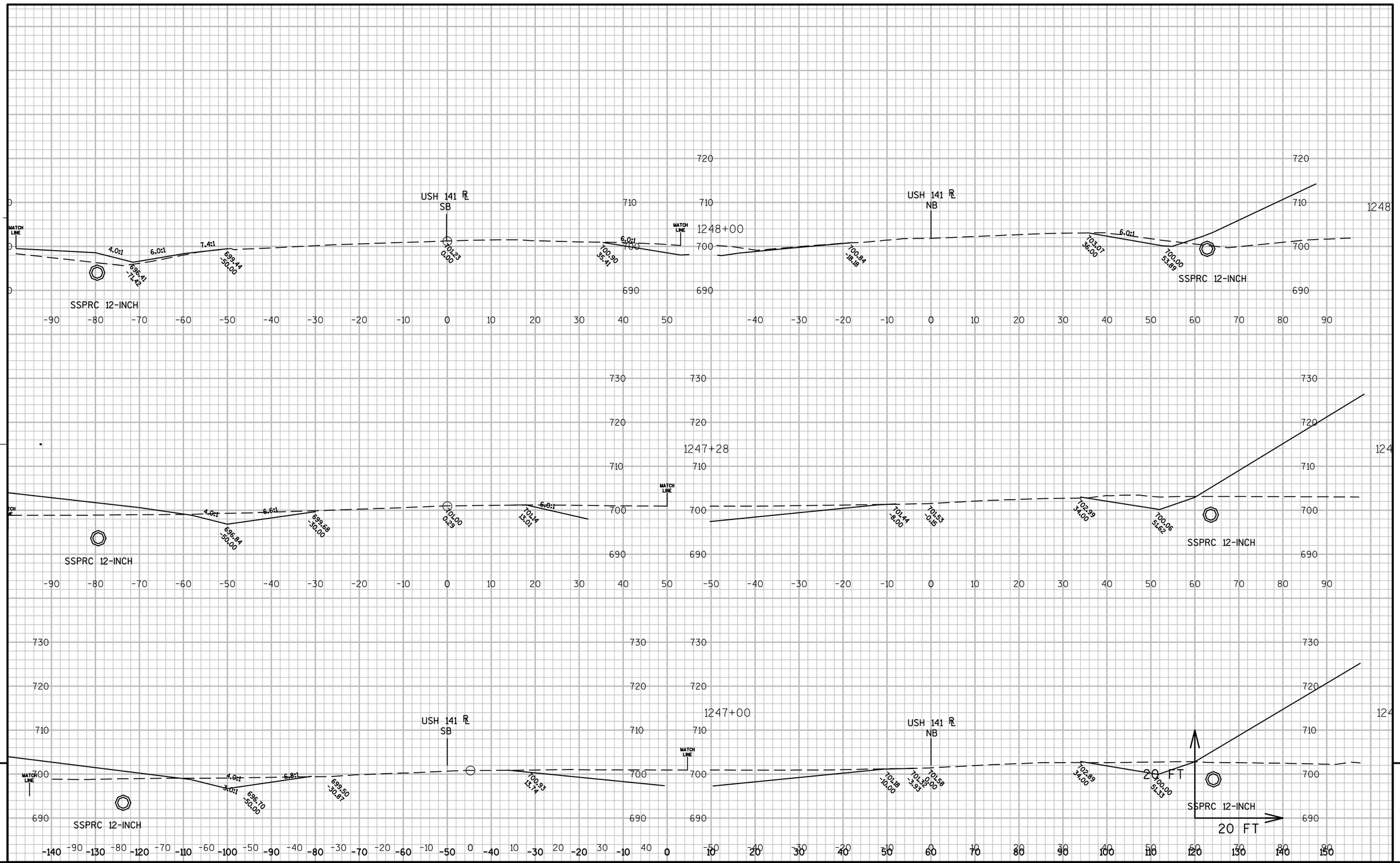
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WISDOT/CADDS SHEET 49



PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: USH 141	SHEET	E

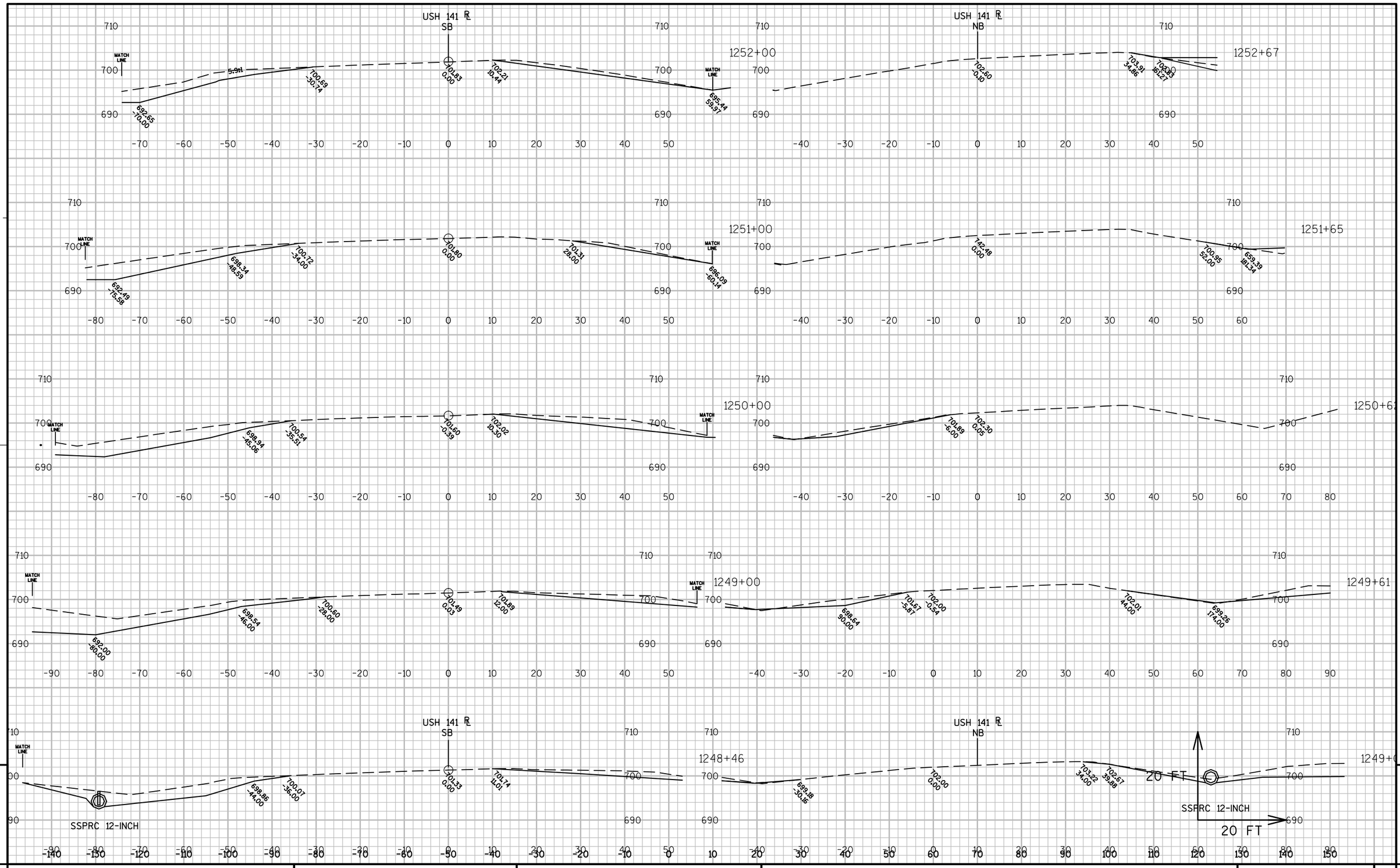
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PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: USH 141	SHEET 277	E

FILE NAME : H:\14902700\DESIGN\XSECTIONS\90% XSECTIONS\1490-27-00 X SECTIONS90%.DWG PLOT DATE : 2/25/2014 2:48 PM PLOT BY : CREAPEAU, QUINTON D PLOT NAME : PLOT SCALE : 1:20_XREF

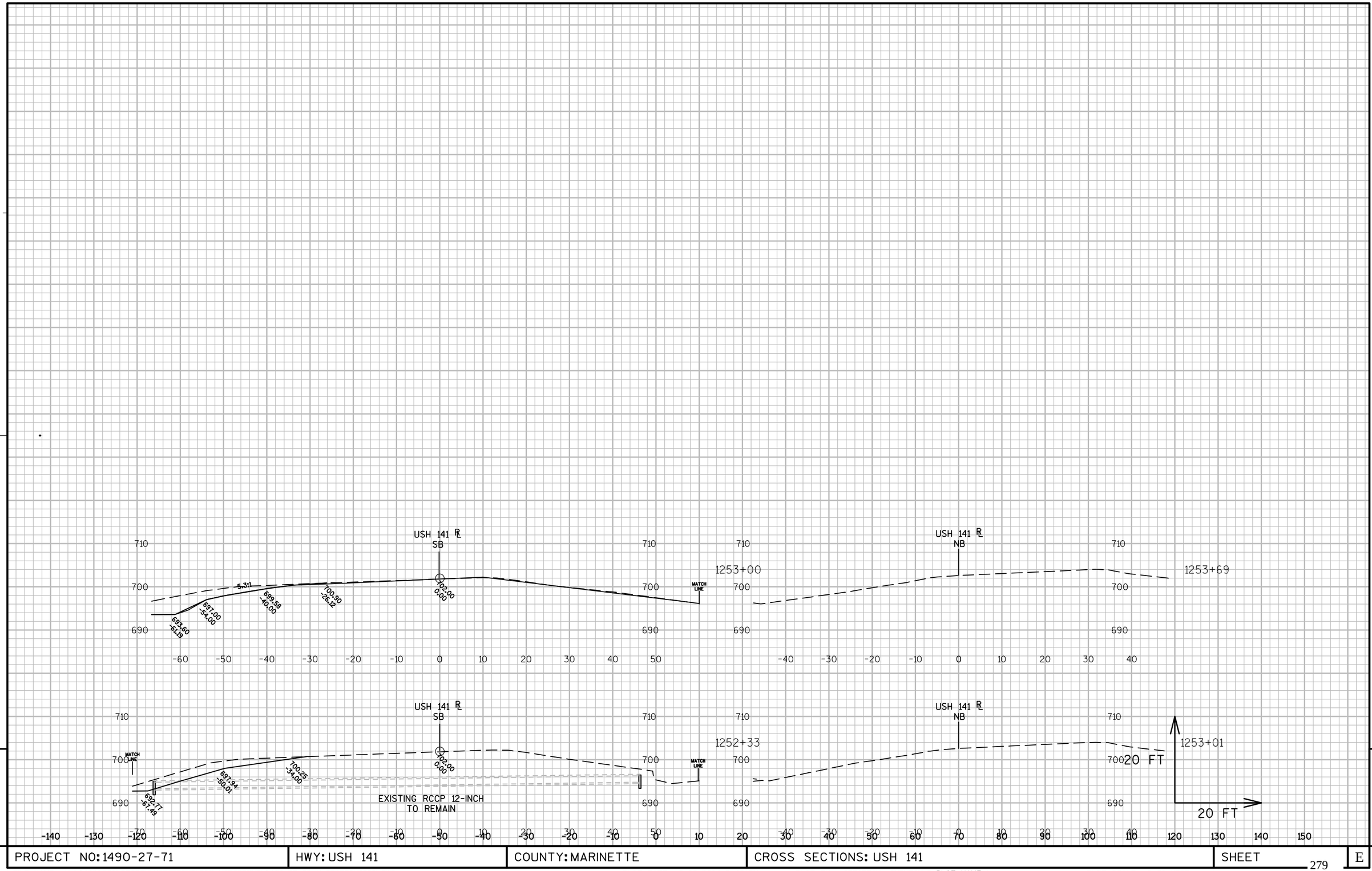
WISDOT/CADDS SHEET 49



PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: USH 141	SHEET 278	E

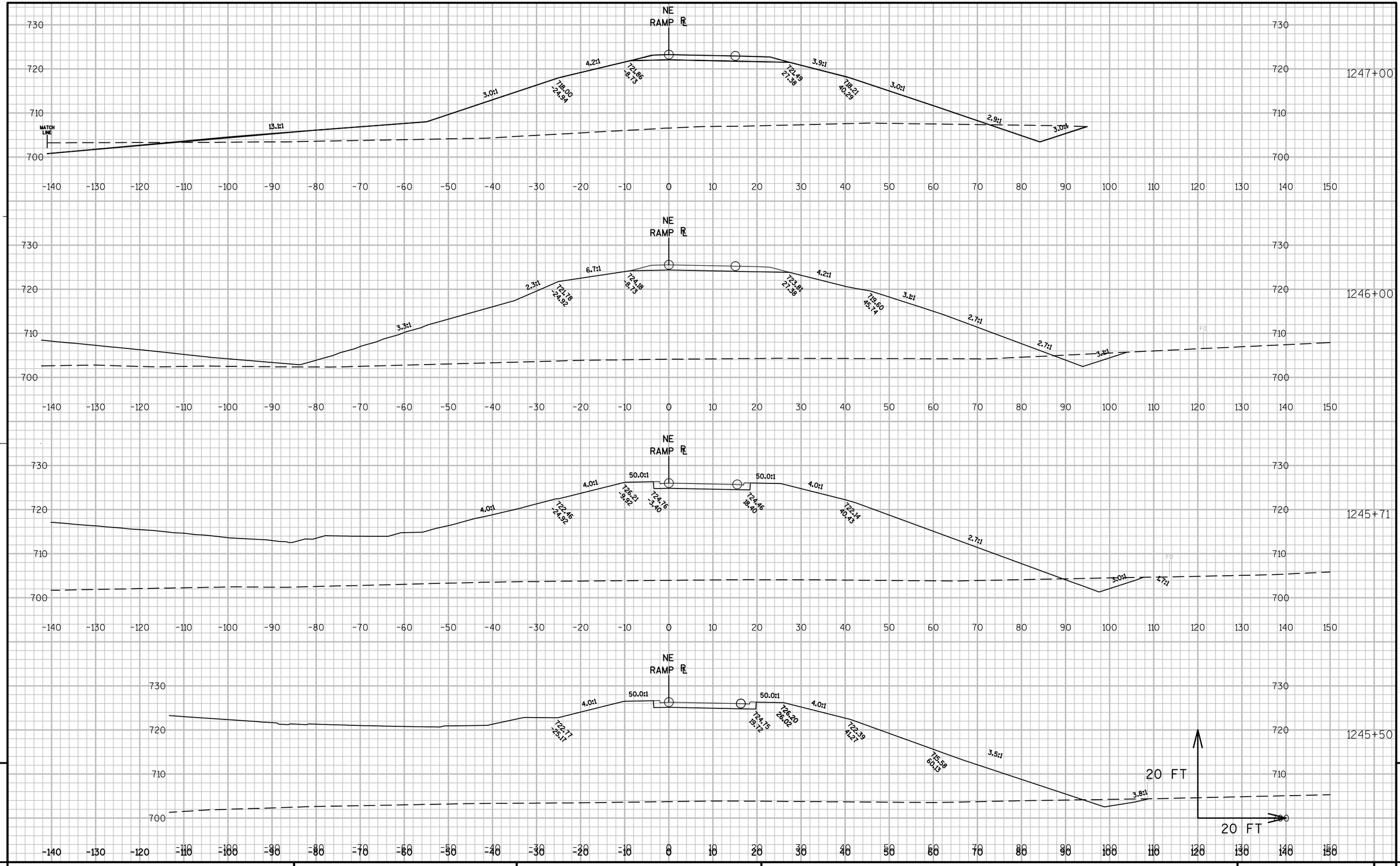
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WISDOT/CADDS SHEET 49



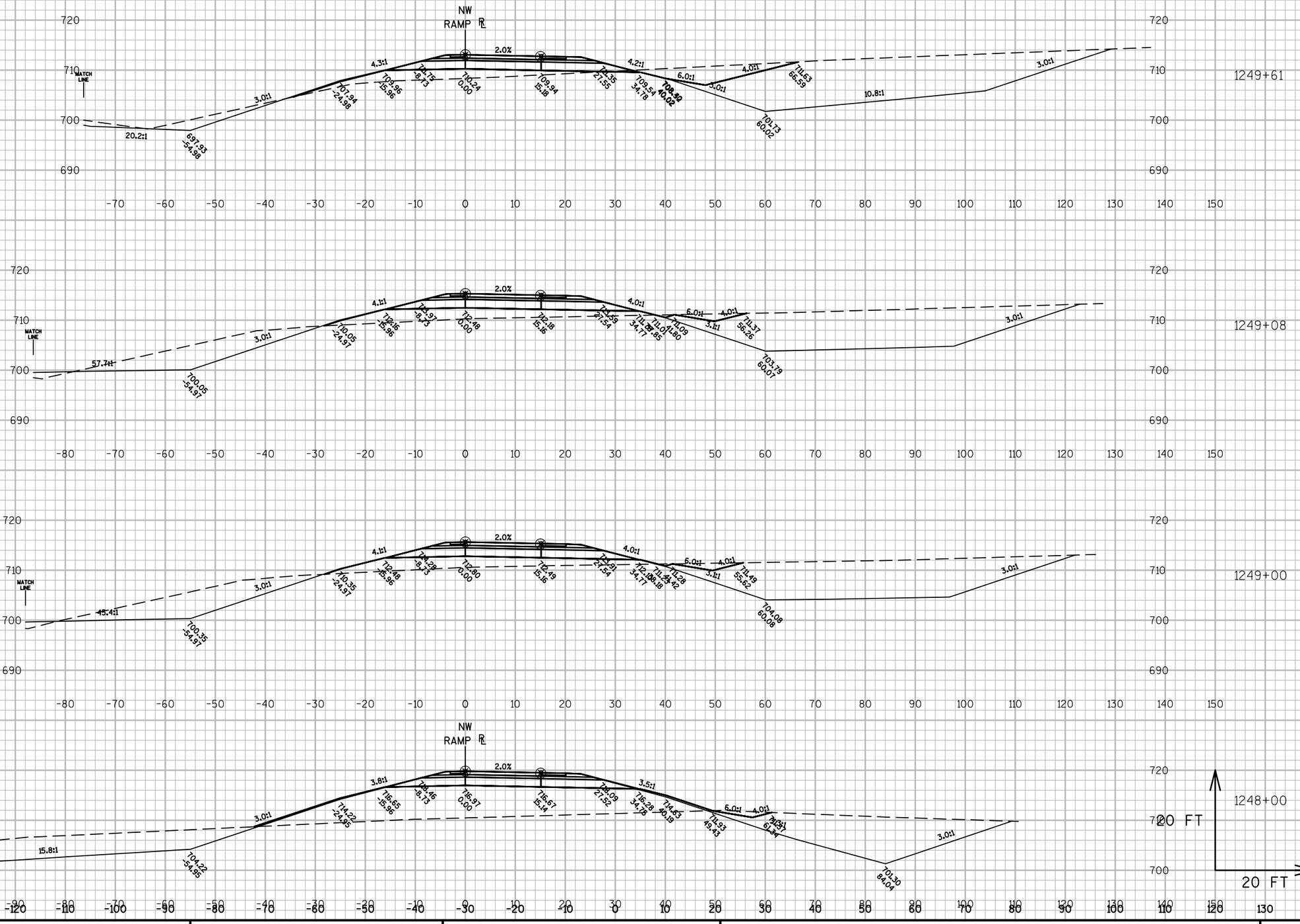
PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: USH 141	SHEET	E

FILE NAME : H:\14902700\DESIGN\XSECTIONS\90% XSECTIONS\1490-27-00 X SECTIONS90%.DWG PLOT DATE : 2/25/2014 2:49 PM PLOT BY : CREAPEAU, QUINTON D PLOT NAME : PLOT SCALE : 1:20_XREF



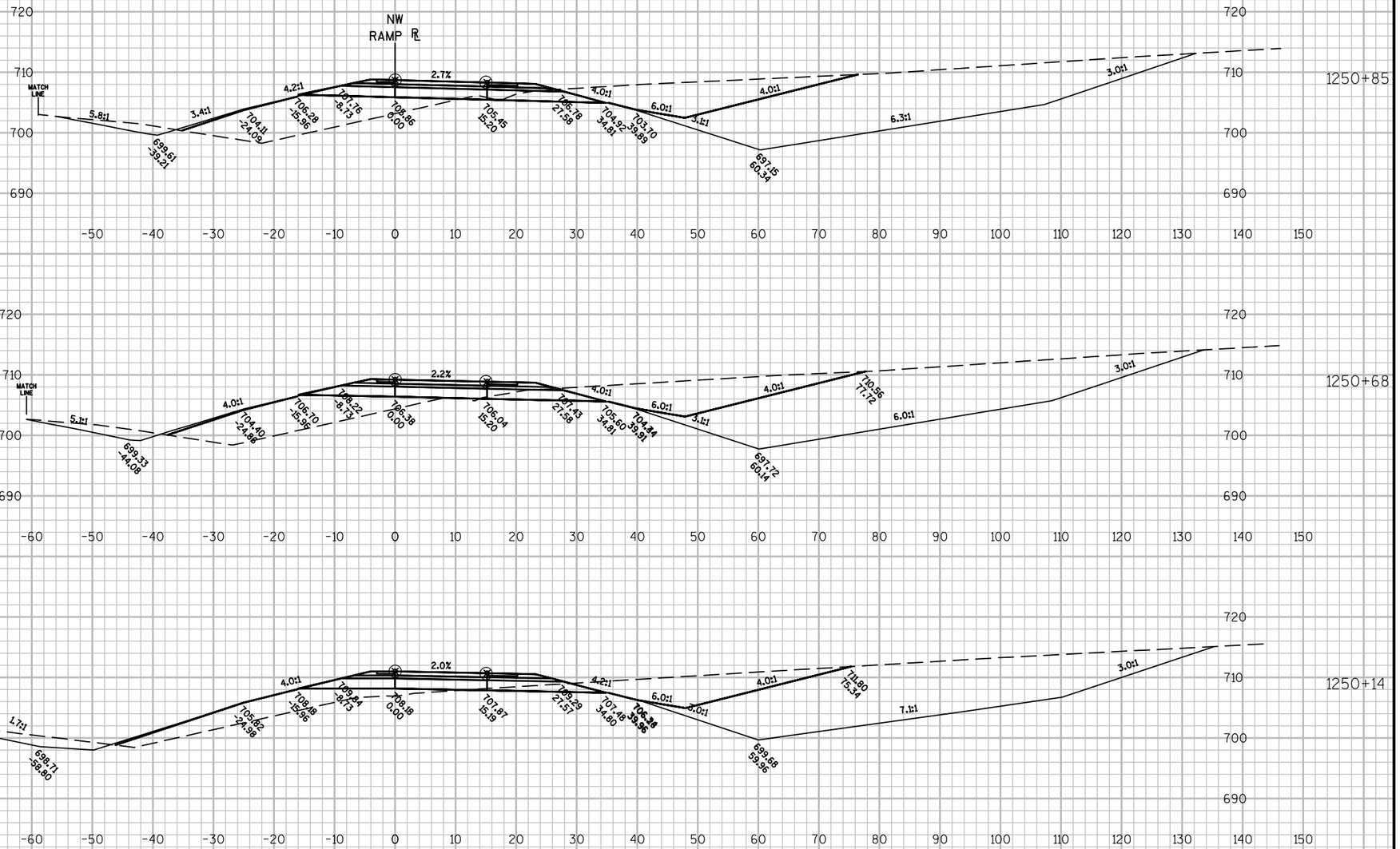
PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: NE RAMP	SHEET	E

FILE NAME : H:\14902700\DESIGN\XSECTIONS\90% XSECTIONS\1490-27-00 X SECTIONS90%.DWG PLOT DATE : 2/25/2014 2:51 PM PLOT BY : CREAPEAU, QUINTON D PLOT NAME : PLOT SCALE : 1:20_XREF



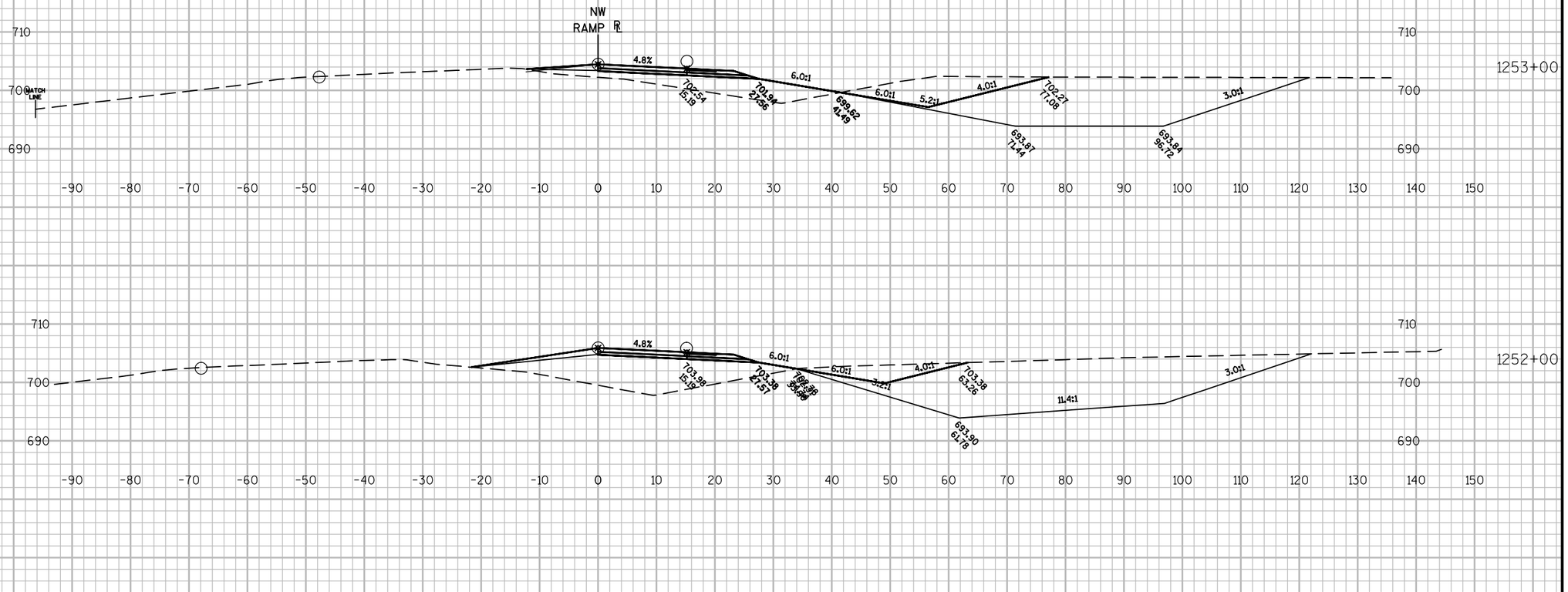
PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: NE RAMP	SHEET	E

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WISDOT/CADDS SHEET 49



PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: NE RAMP	SHEET E

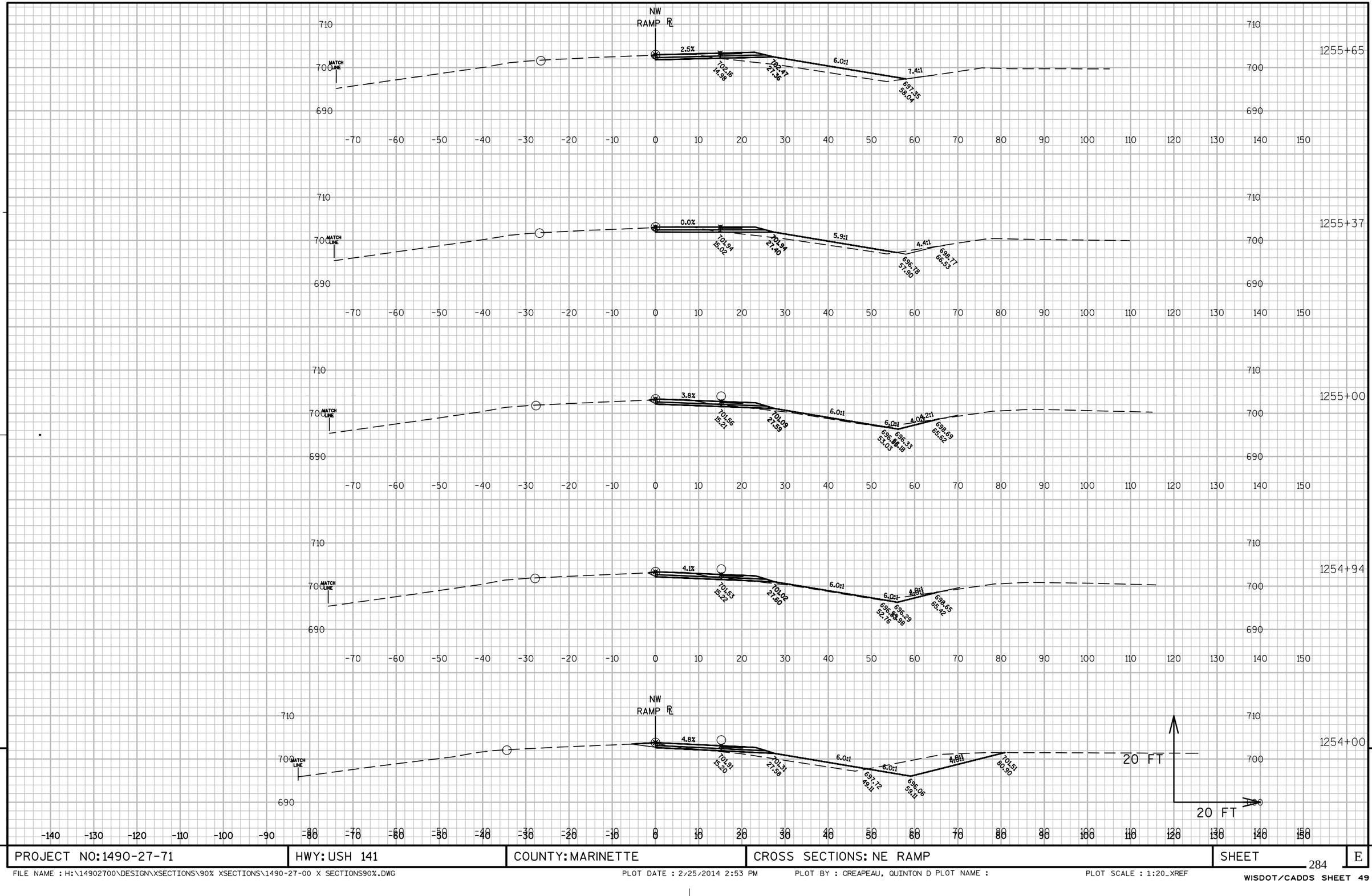
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PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: NE RAMP	SHEET 283	E

FILE NAME : H:\14902700\DESIGN\XSECTIONS\90% XSECTIONS\1490-27-00 X SECTIONS90%.DWG PLOT DATE : 2/25/2014 2:53 PM PLOT BY : CREAPEAU, QUINTON D PLOT NAME : PLOT SCALE : 1:20_XREF

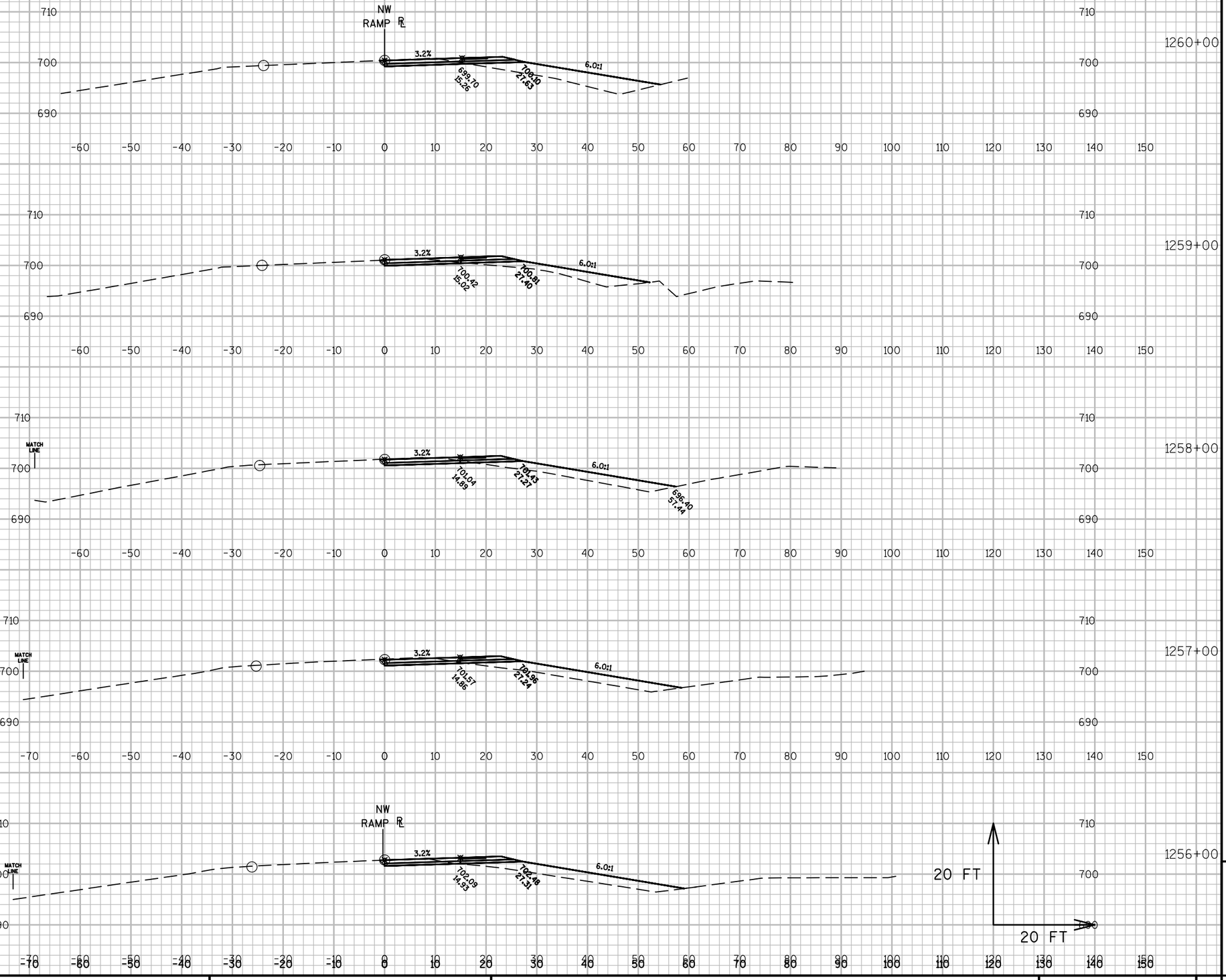
WISDOT/CADDS SHEET 49



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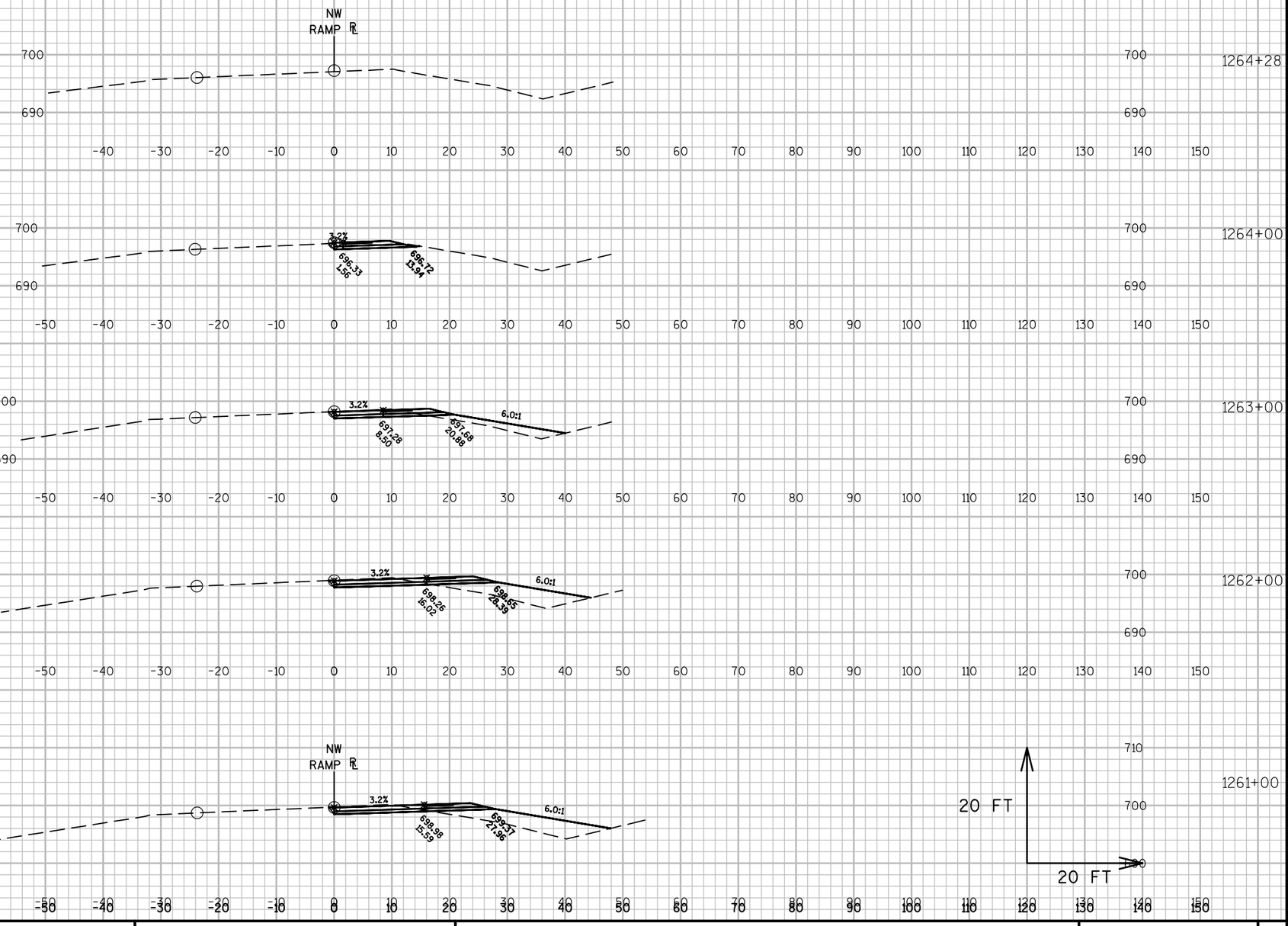
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PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: NE RAMP	SHEET 285	E

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WISDOT/CADDS SHEET 49



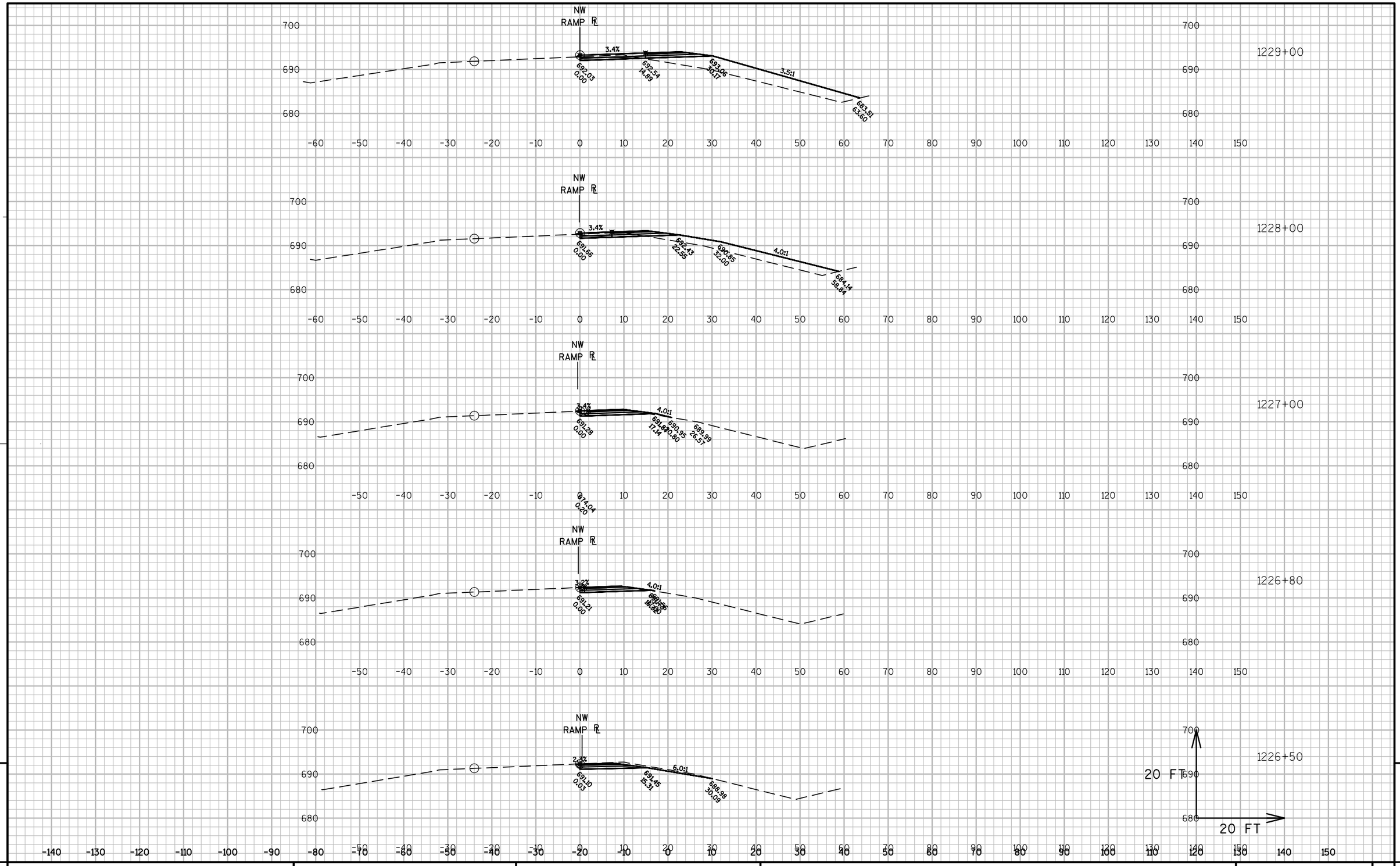
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PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: NE RAMP	SHEET	E

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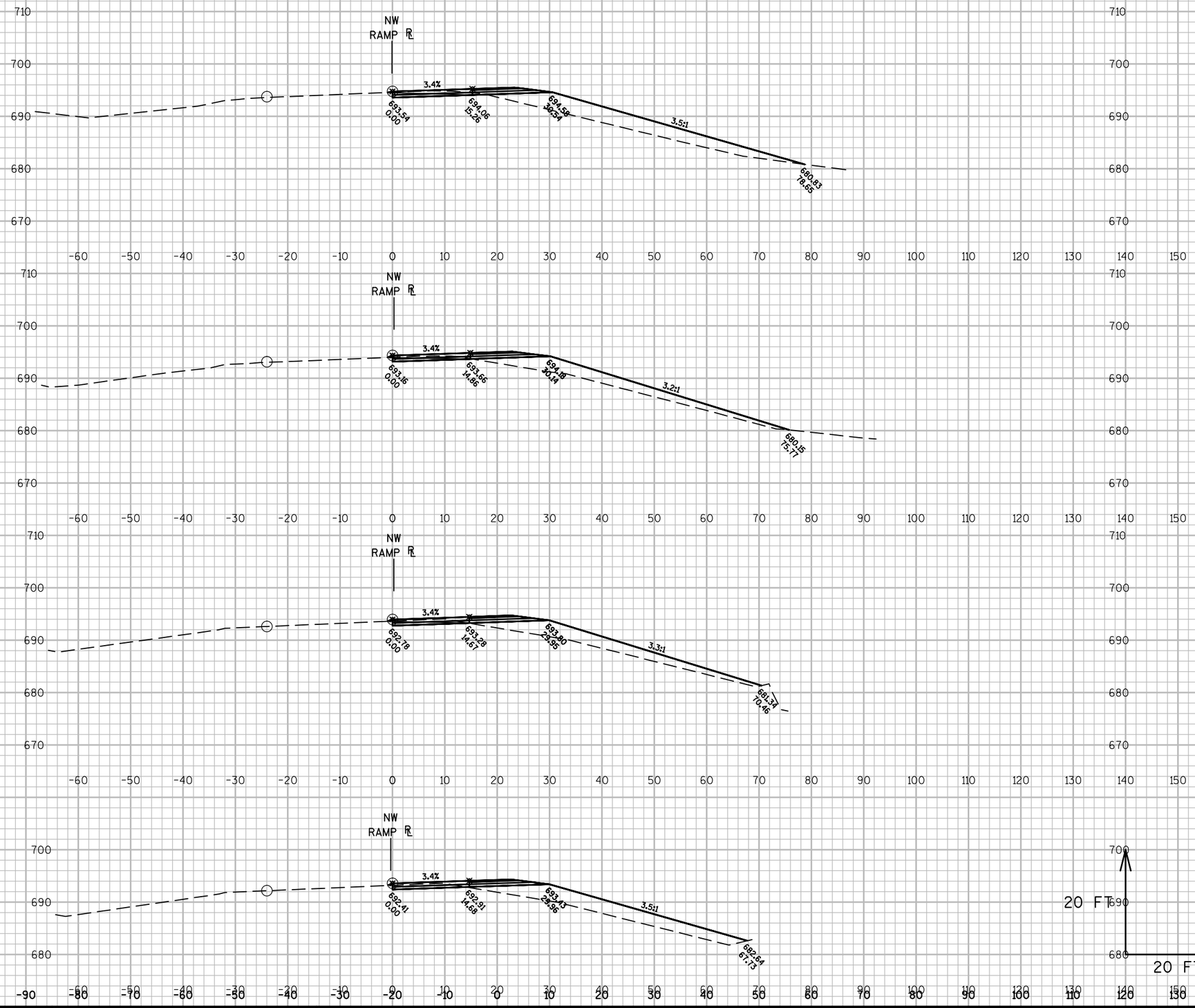
WISDOT/CADDS SHEET 49



PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: SE RAMP	SHEET 287	E

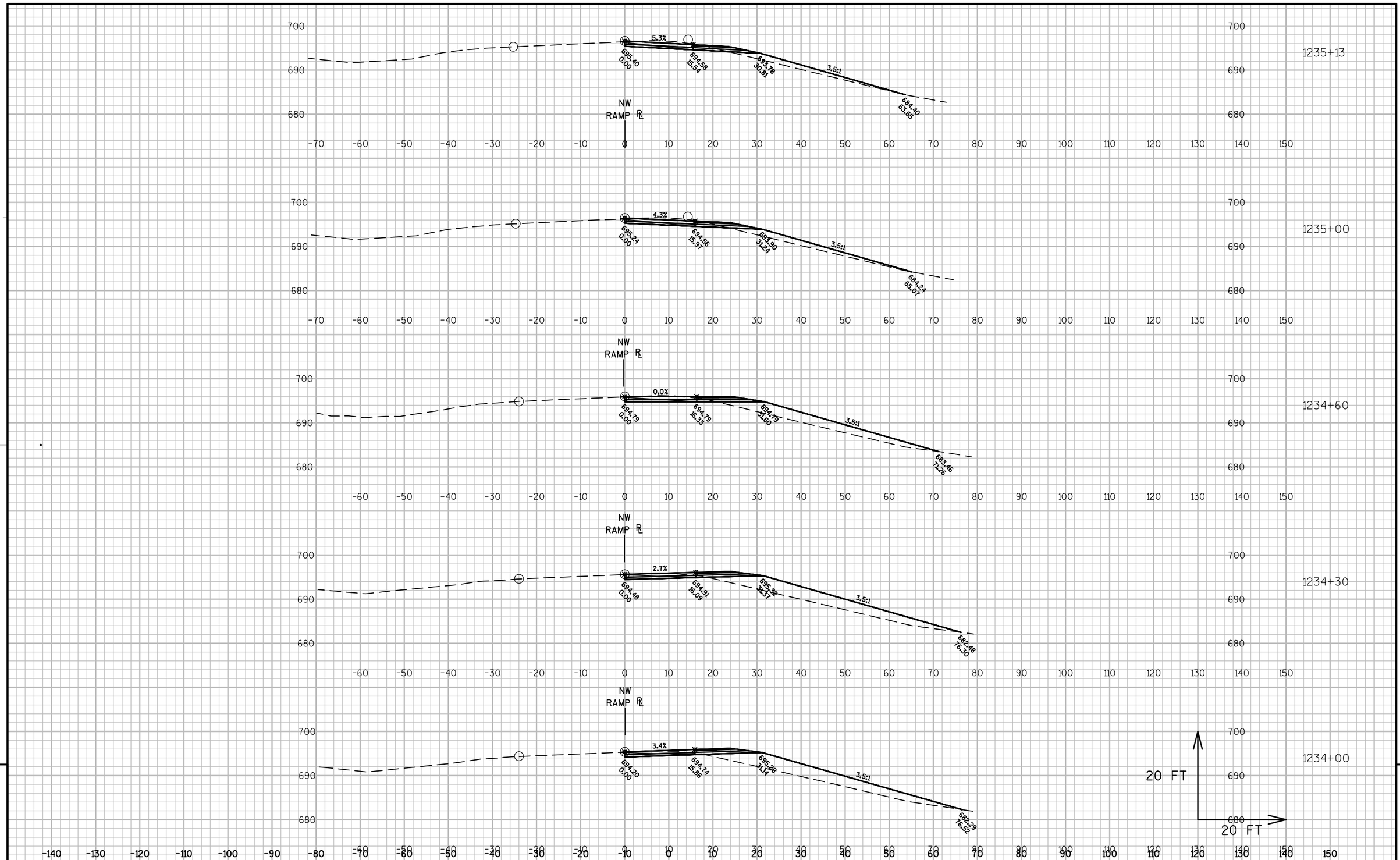
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WISDOT/CADDS SHEET 49



PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: SE RAMP	SHEET	E

FILE NAME : H:\14902700\DESIGN\XSECTIONS\90% XSECTIONS\1490-27-00 X SECTIONS90%.DWG PLOT DATE : 2/25/2014 2:55 PM PLOT BY : CREAPEAU, QUINTON D PLOT NAME : PLOT SCALE : 1:20_XREF



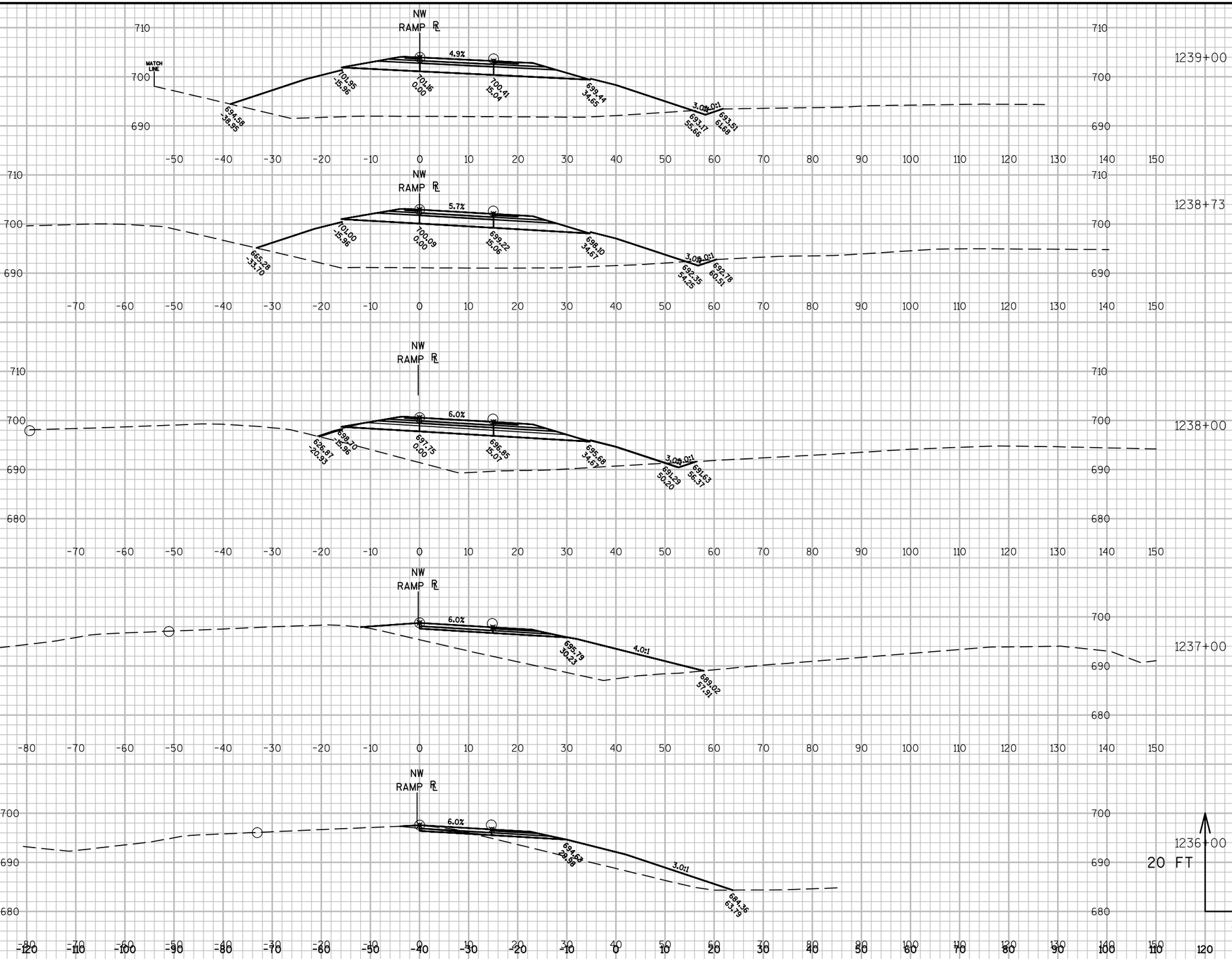
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PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: SE RAMP	SHEET	E

FILE NAME : H:\14902700\DESIGN\XSECTIONS\90% XSECTIONS\1490-27-00 X SECTIONS90%.DWG PLOT DATE : 2/25/2014 2:56 PM PLOT BY : CREAPEAU, QUINTON D PLOT NAME : PLOT SCALE : 1:20_XREF

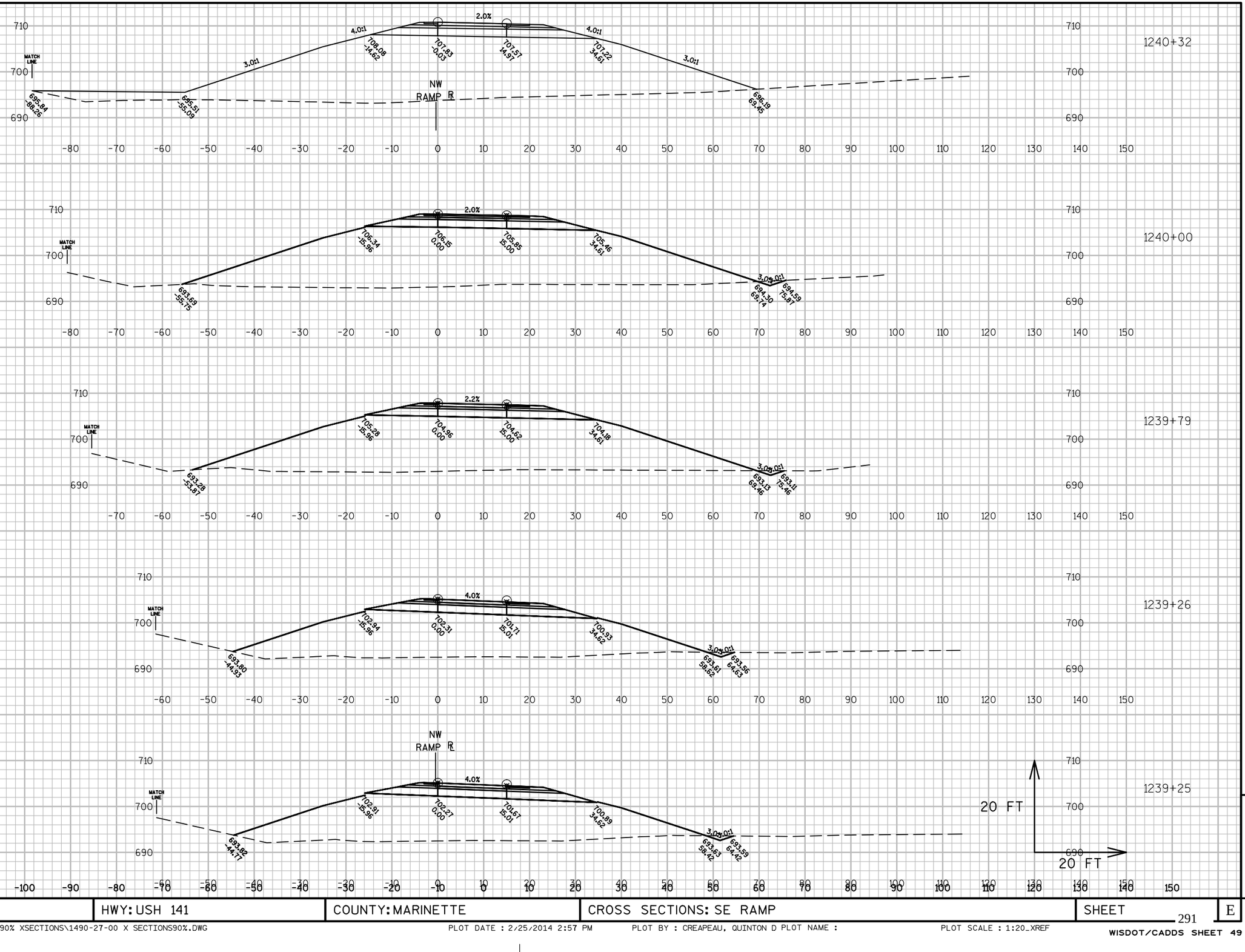
WISDOT/CADDS SHEET 49



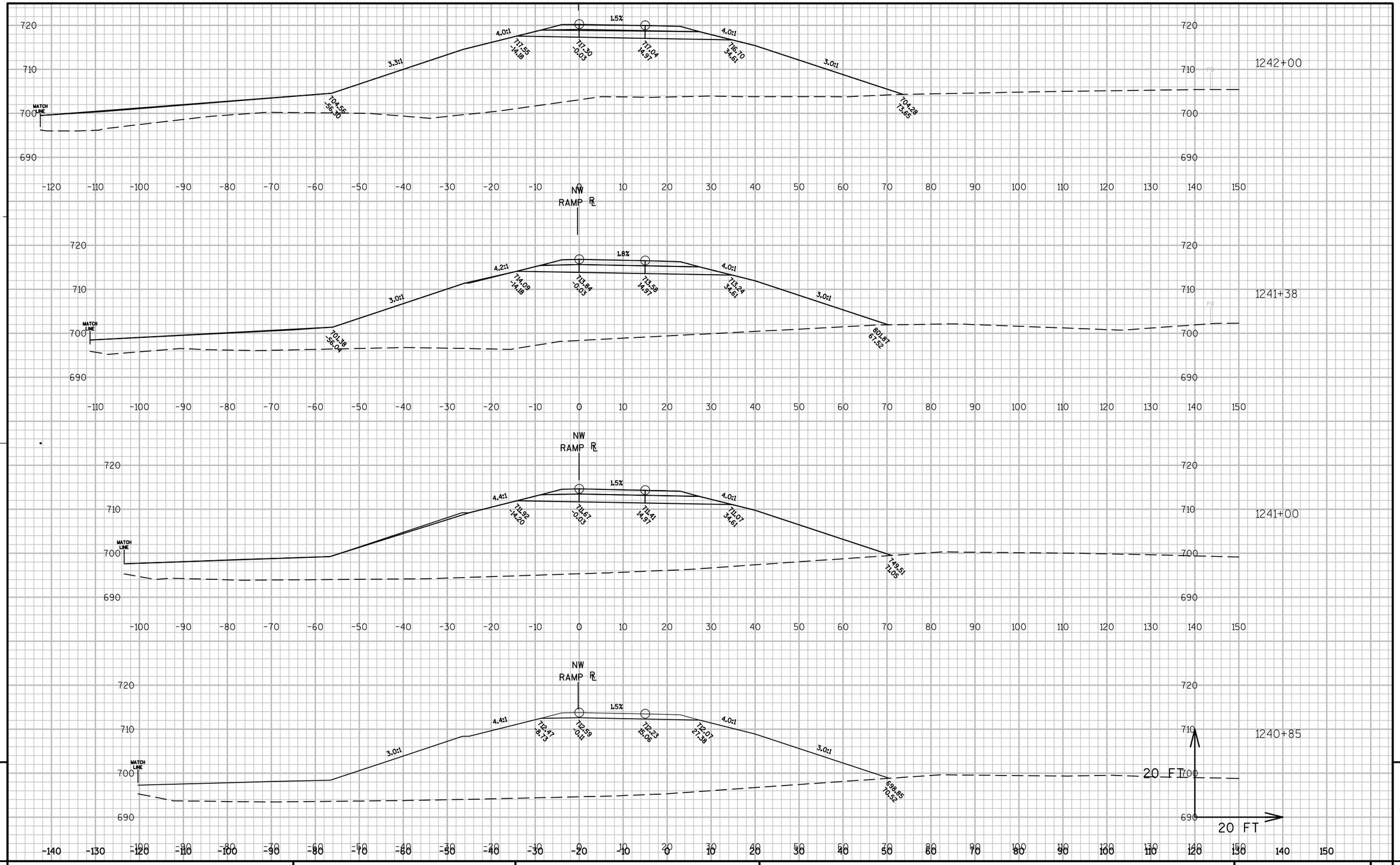
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WISDOT/CADDS SHEET 49

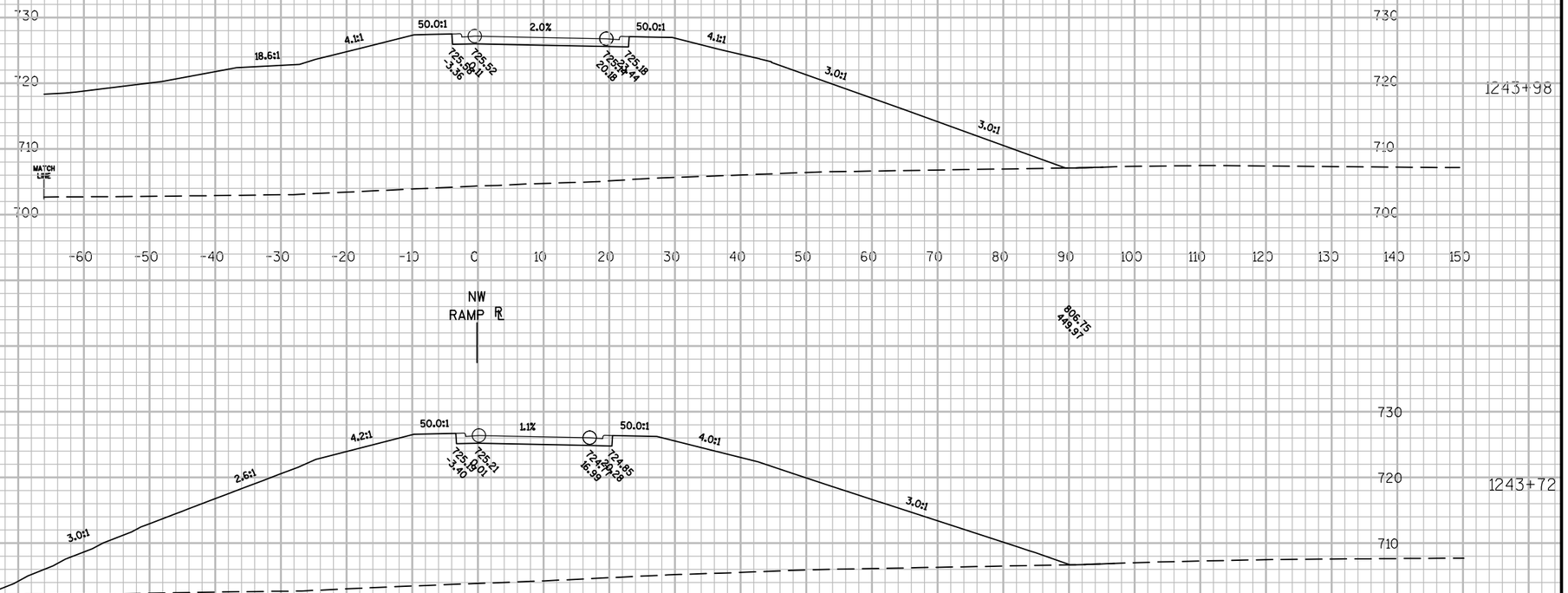


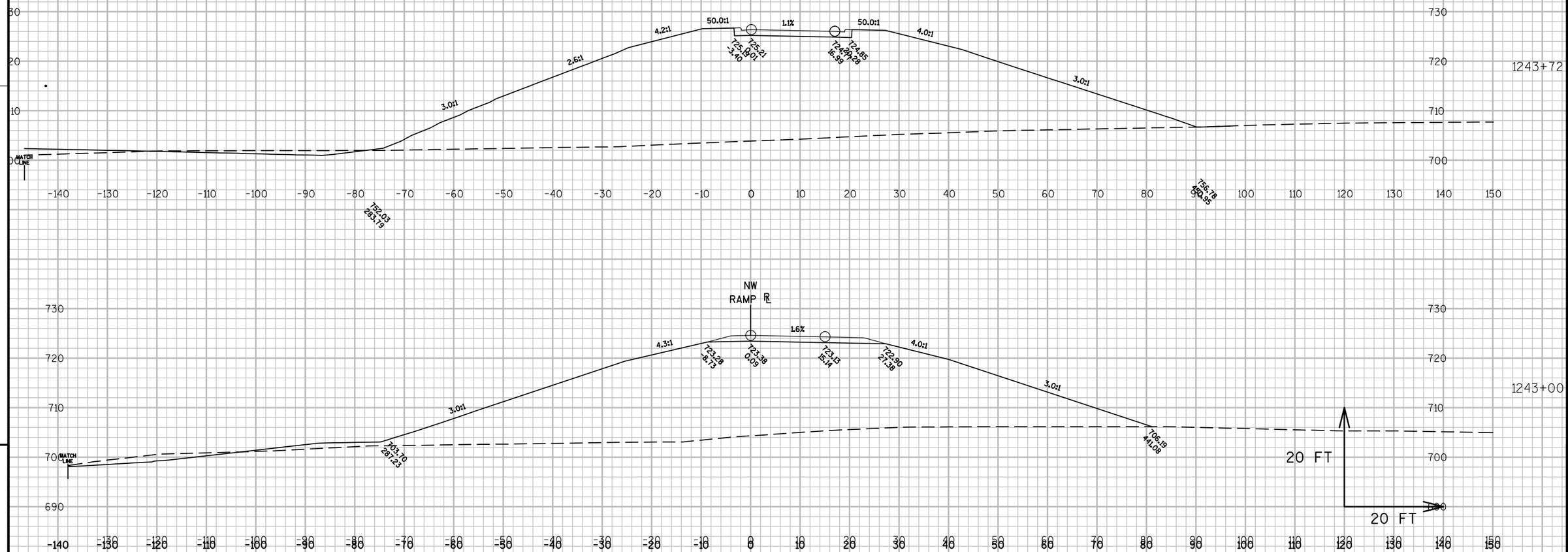
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PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: SE RAMP	SHEET	E

FILE NAME : H:\14902700\DESIGN\XSECTIONS\90% XSECTIONS\1490-27-00 X SECTIONS90%.DWG PLOT DATE : 2/25/2014 2:57 PM PLOT BY : CREAPEAU, QUINTON D PLOT NAME : PLOT SCALE : 1:20_XREF



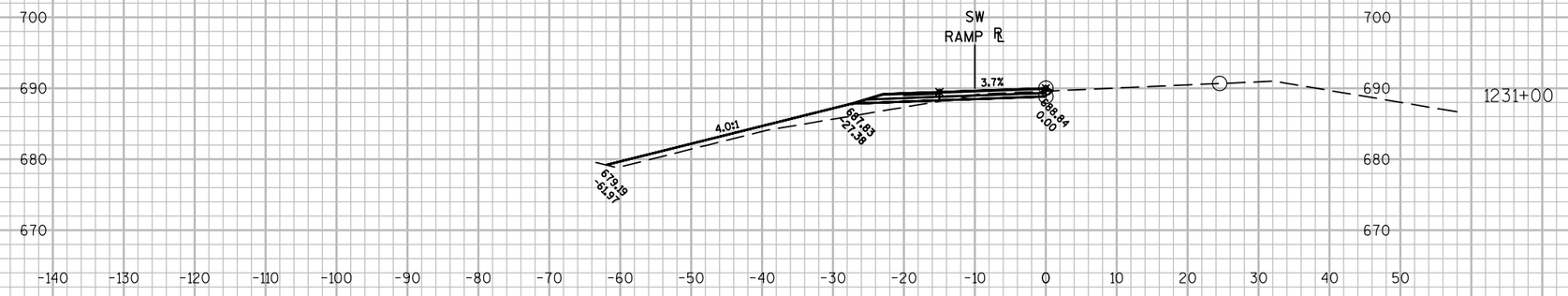


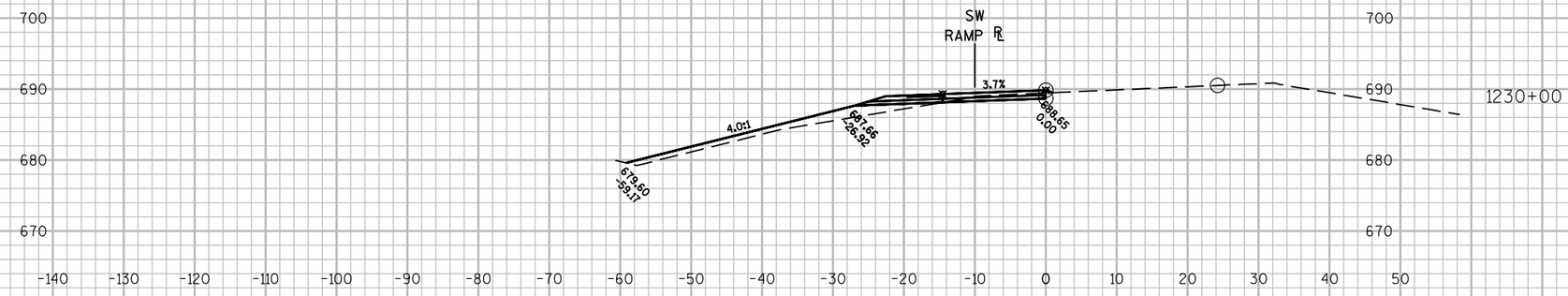
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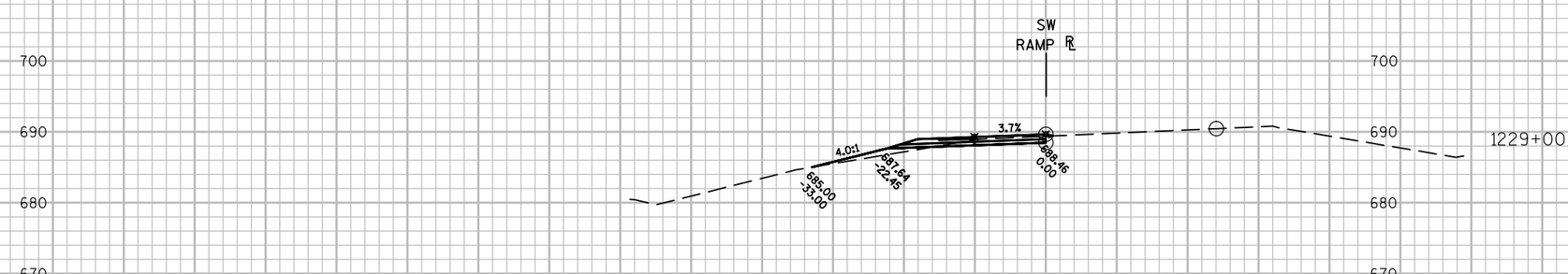
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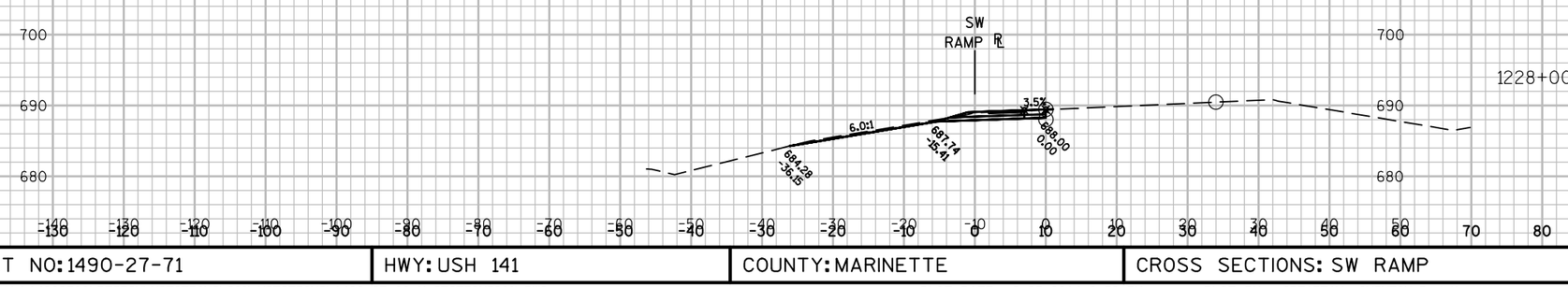
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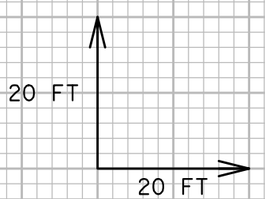
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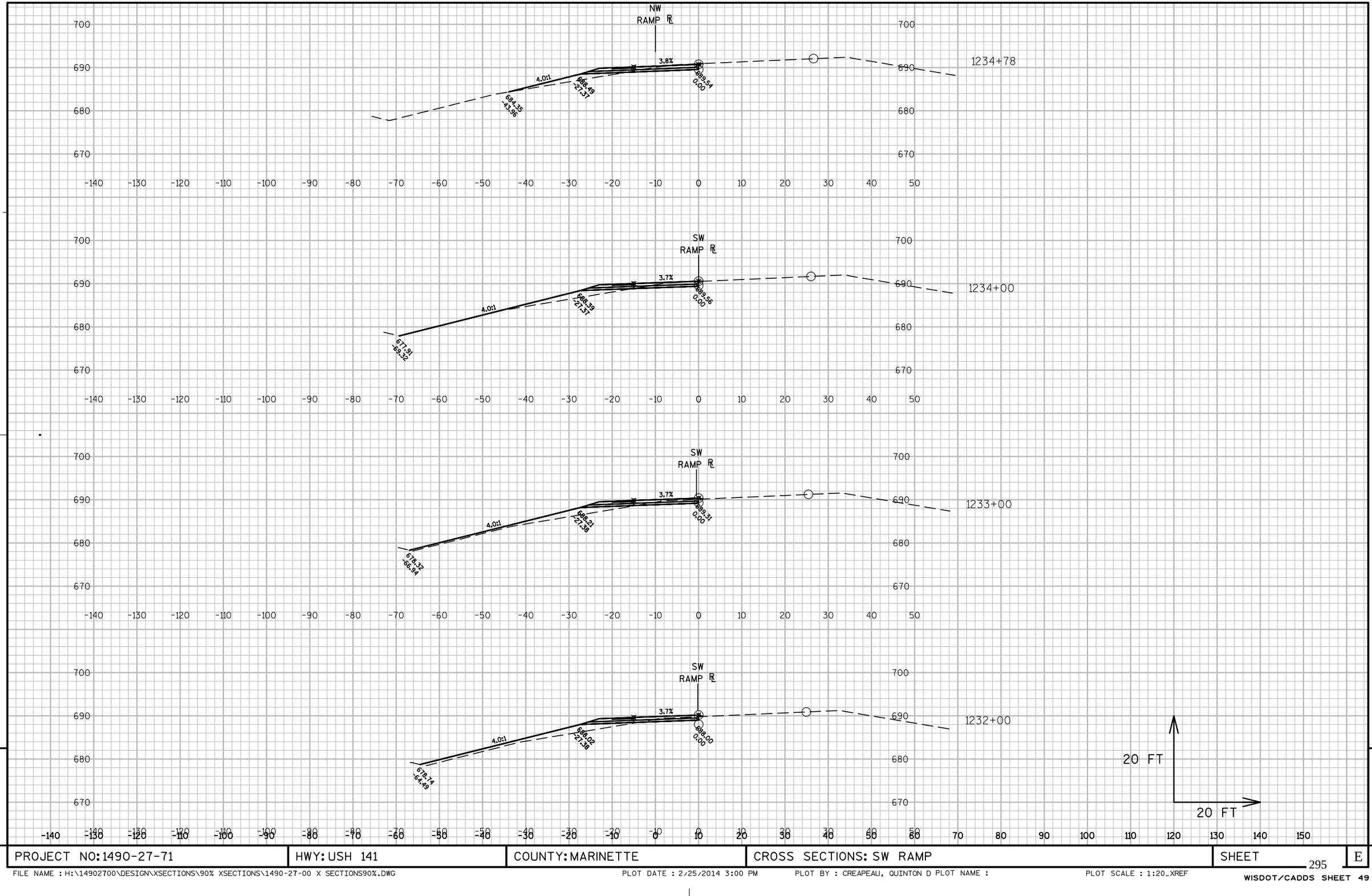






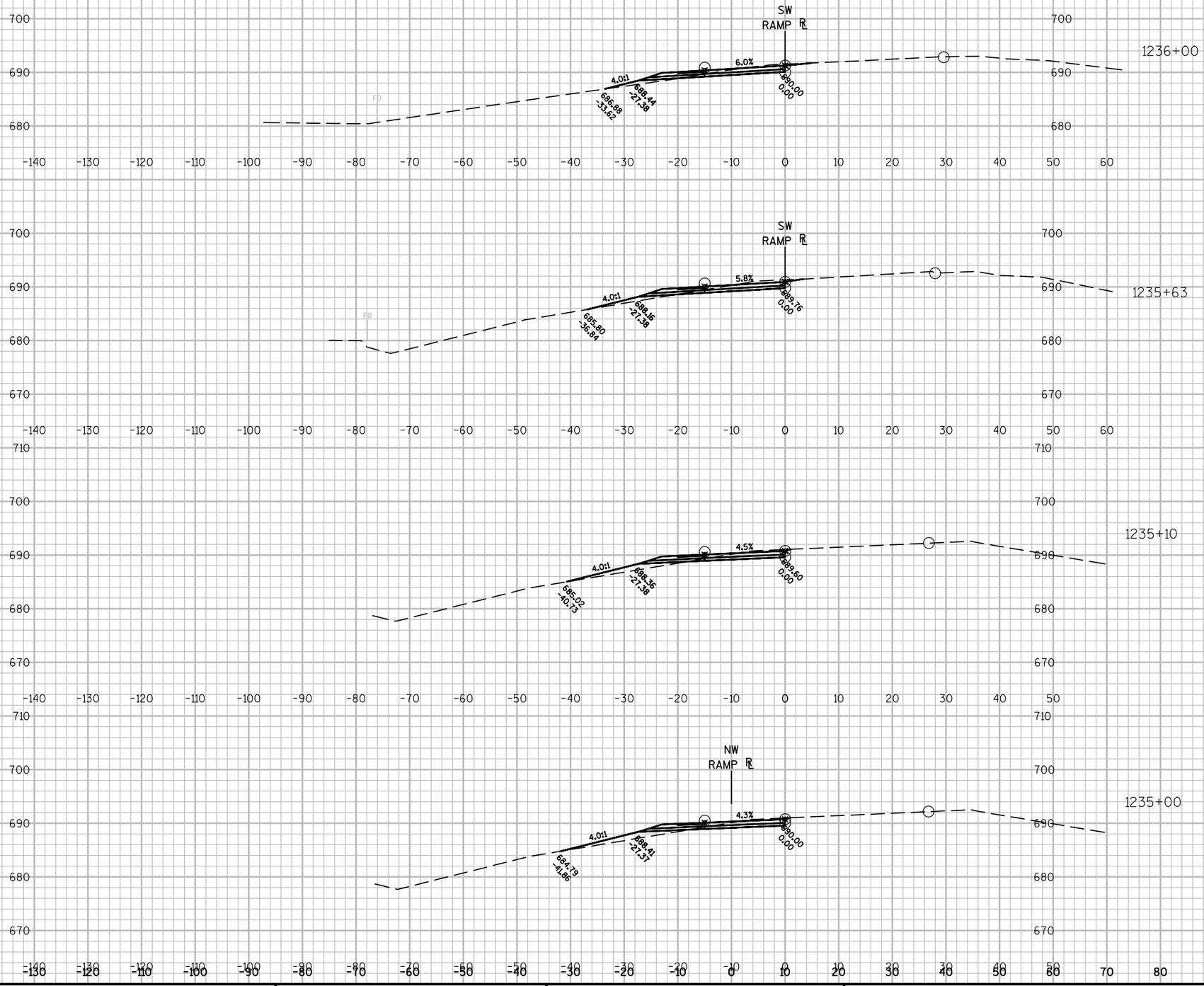
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FILE NAME : H:\14902700\DESIGN\XSECTIONS\90% XSECTIONS\1490-27-00 X SECTIONS90%.DWG PLOT DATE : 2/25/2014 2:59 PM PLOT BY : CREAPEAU, QUINTON D PLOT NAME : PLOT SCALE : 1:20_XREF



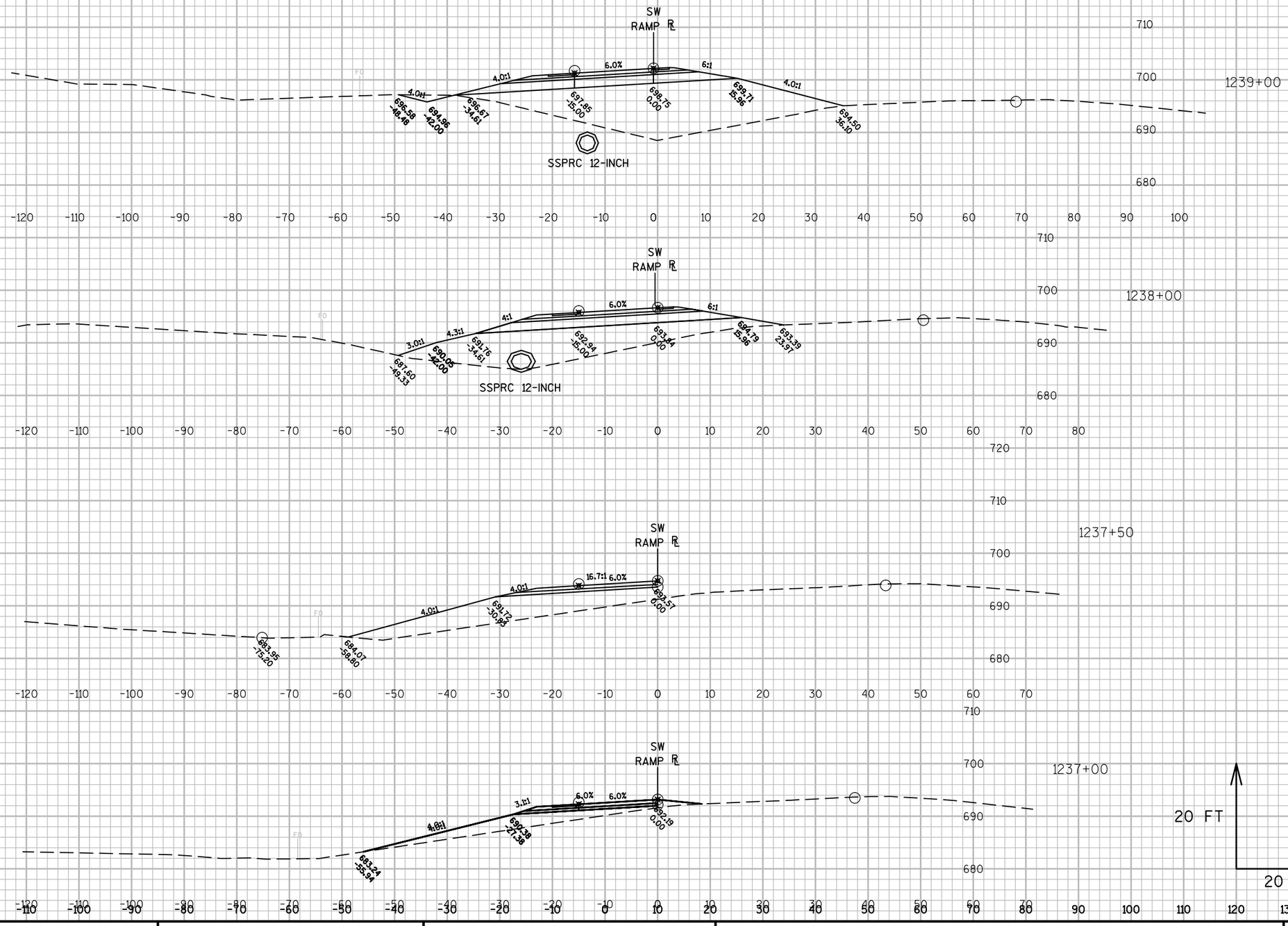
PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: SW RAMP	SHEET	E

FILE NAME : H:\14902700\DESIGN\XSECTIONS\90% XSECTIONS\1490-27-00 X SECTIONS90%.DWG PLOT DATE : 2/25/2014 3:00 PM PLOT BY : CREAPEAU, QUINTON D PLOT NAME : PLOT SCALE : 1:20_XREF



PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: SW RAMP	SHEET	E

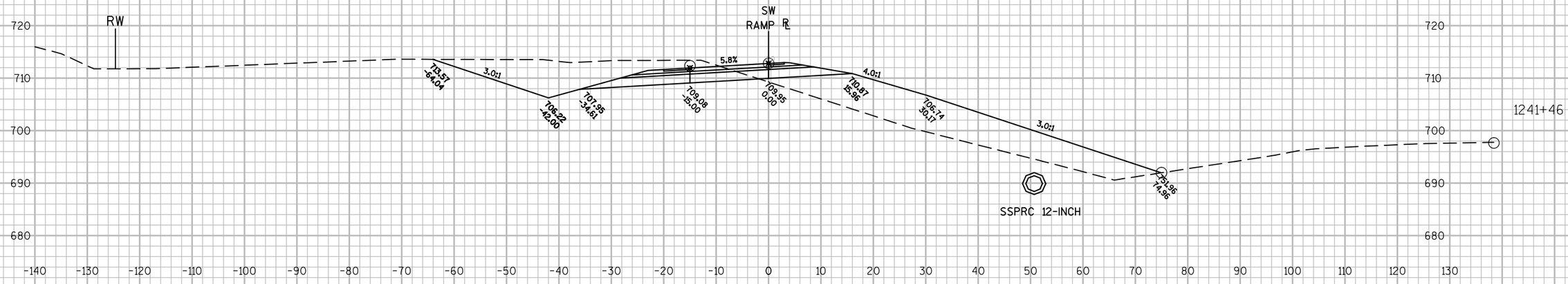
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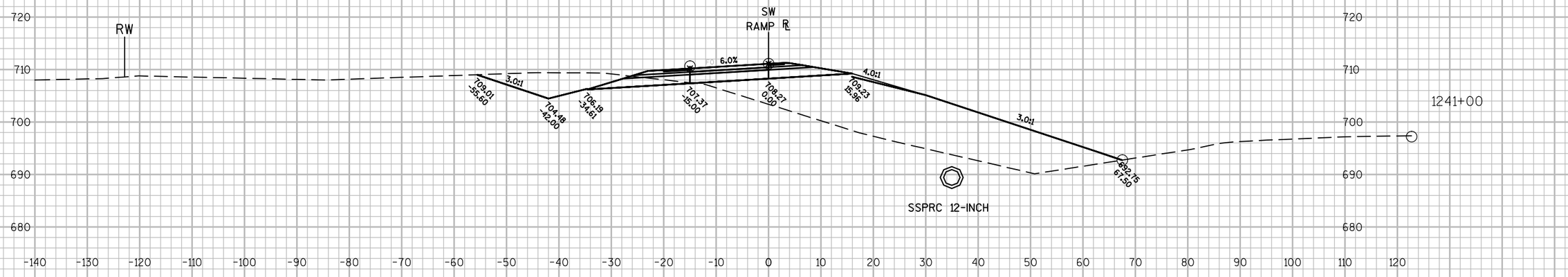


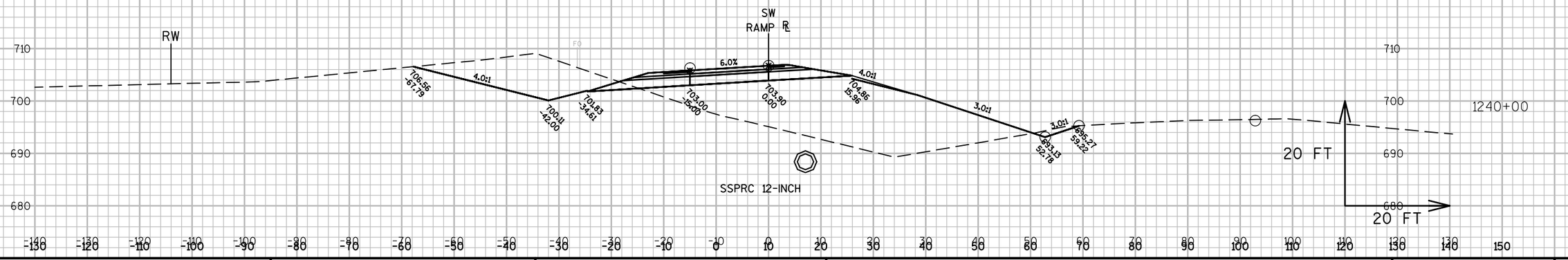
PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: SW RAMP	SHEET 297	E

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WISDOT/CADDS SHEET 49

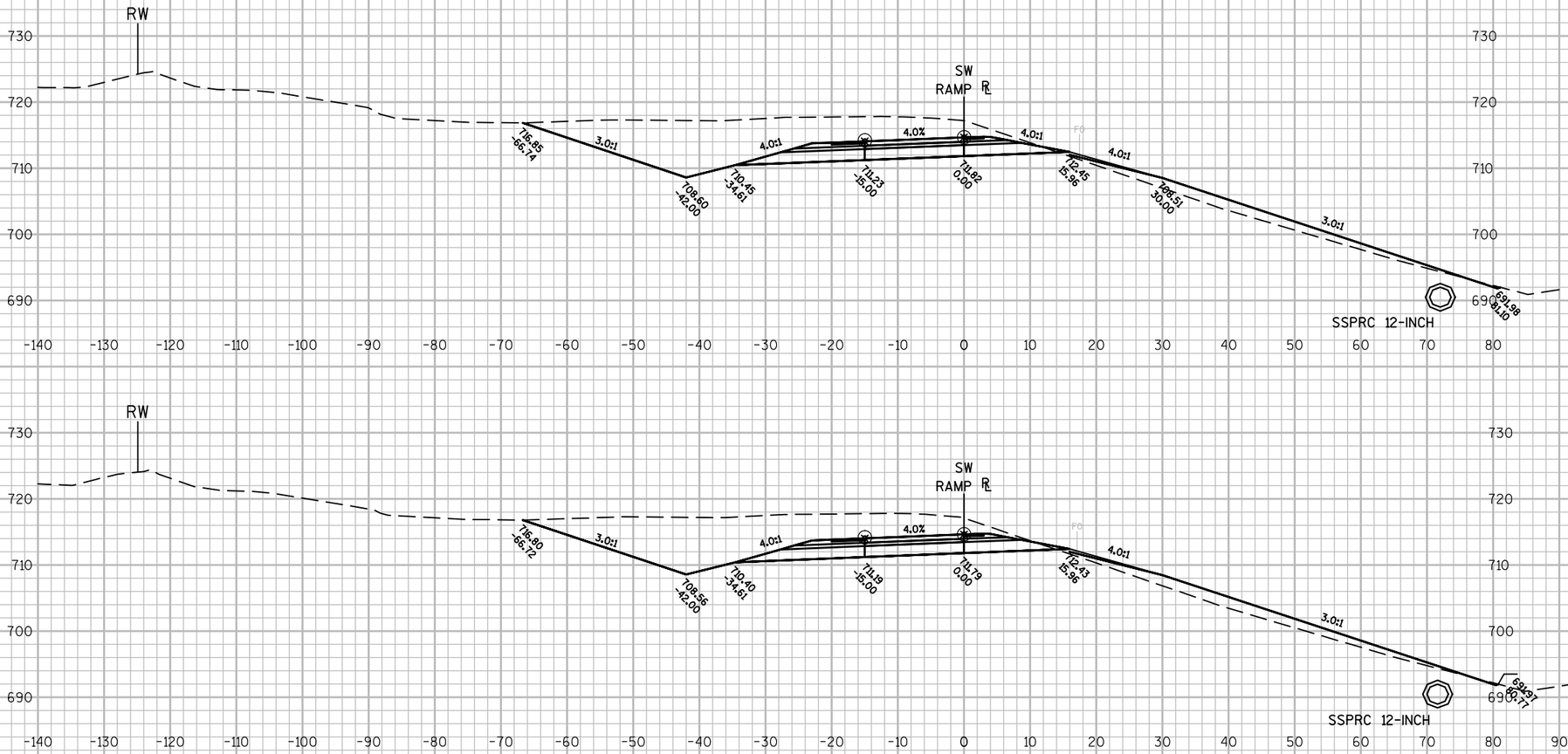






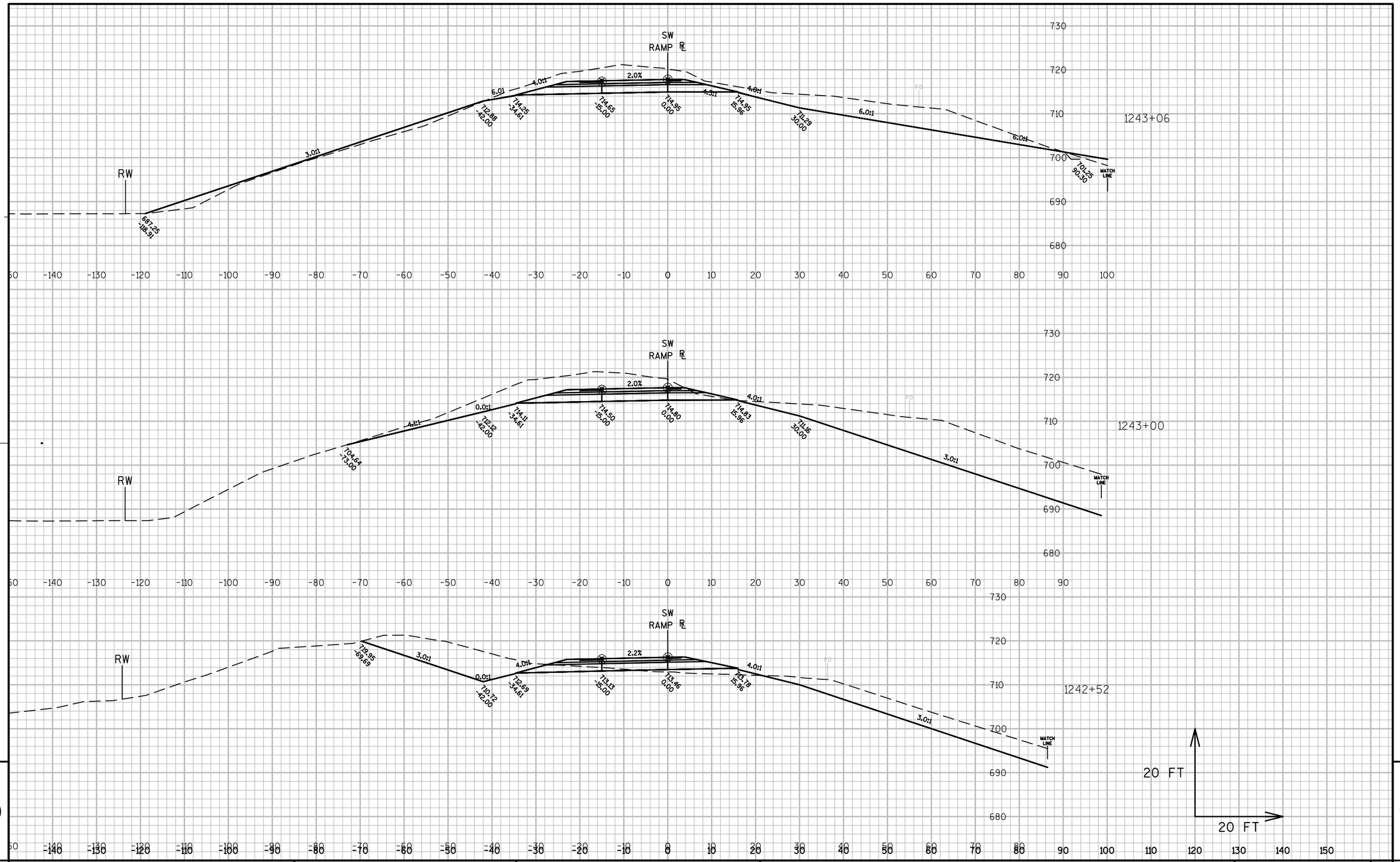
PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: SW RAMP	SHEET	E

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WISDOT/CADDS SHEET 49



PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: SW RAMP	SHEET	E

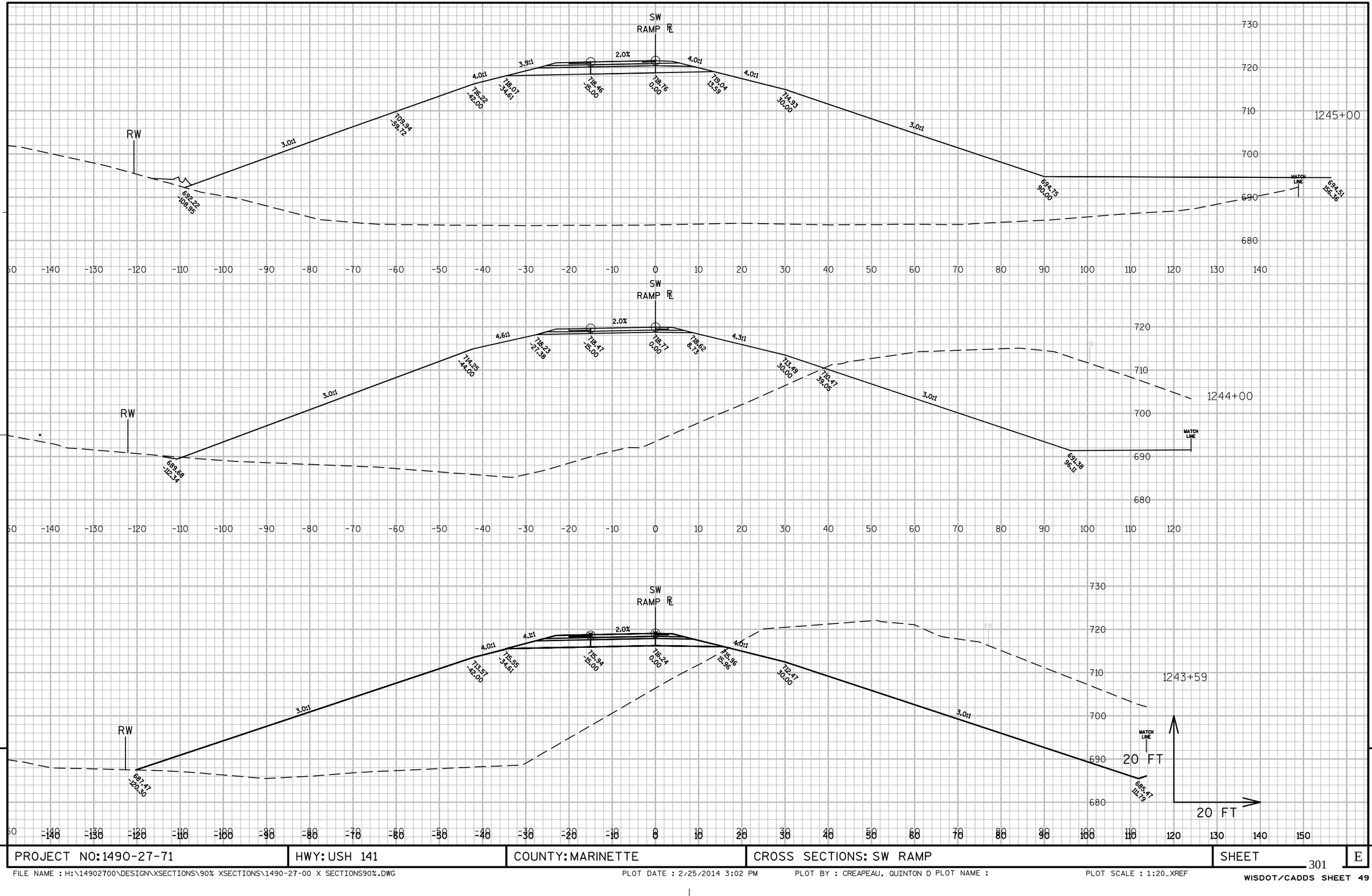
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PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: SW RAMP	SHEET	E

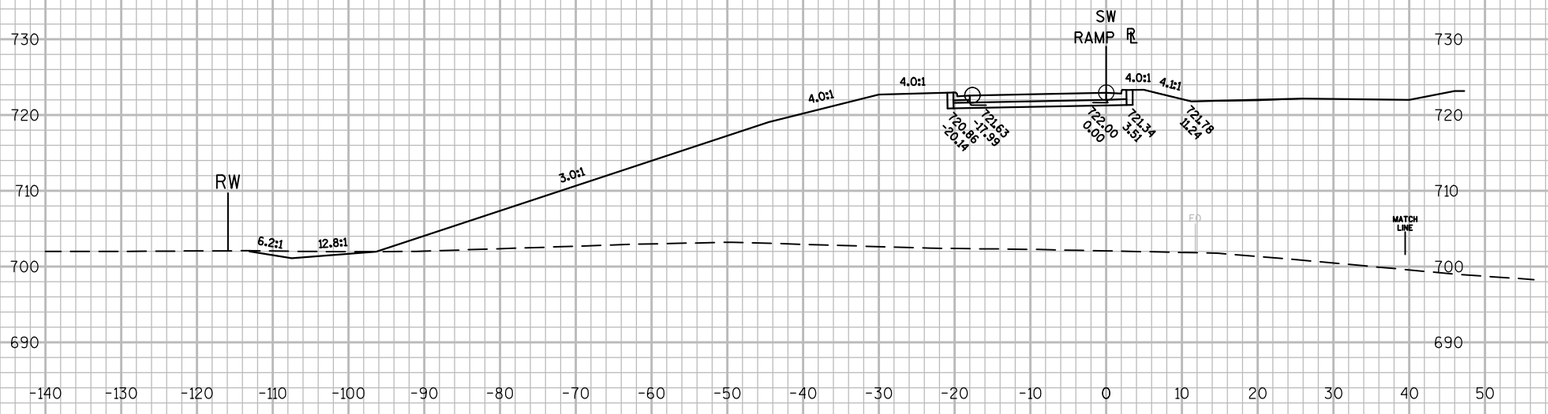
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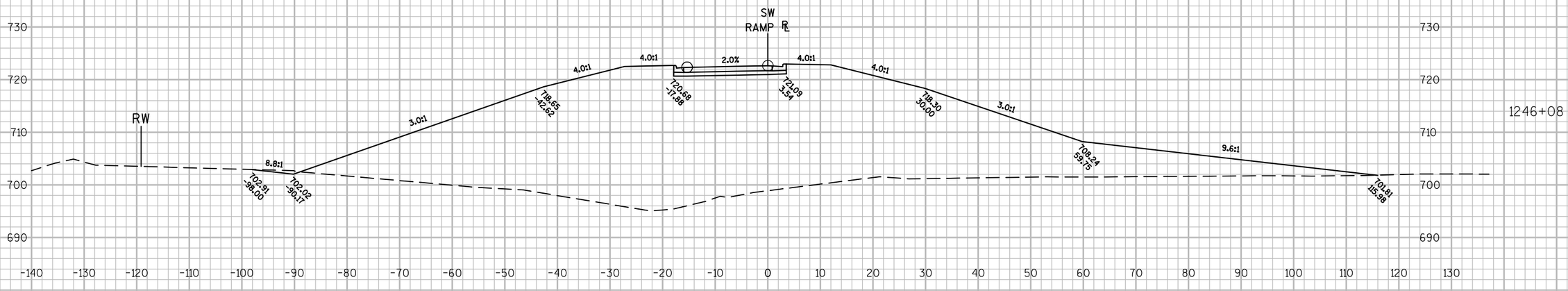
WISDOT/CADDS SHEET 49

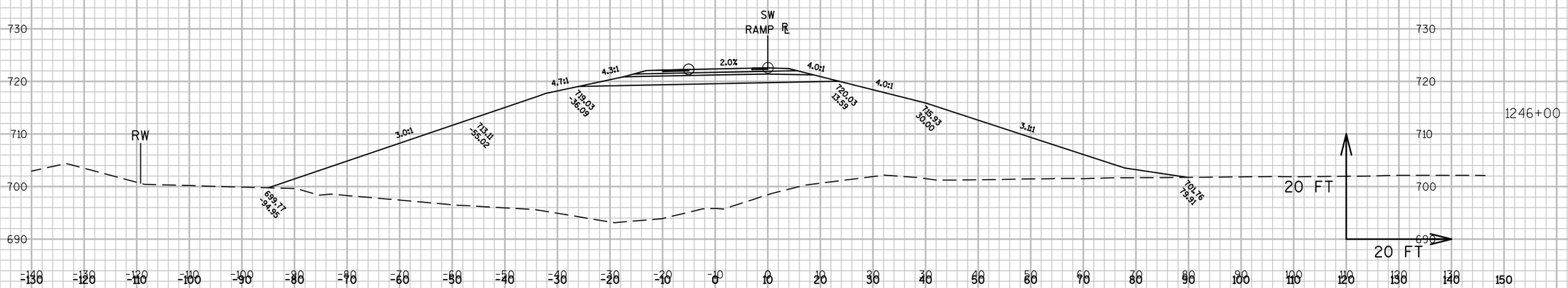


PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: SW RAMP	SHEET	E

FILE NAME : H:\14902700\DESIGN\XSECTIONS\90% XSECTIONS\1490-27-00 X SECTIONS90%.DWG PLOT DATE : 2/25/2014 3:02 PM PLOT BY : CREAPEAU, QUINTON D PLOT NAME : PLOT SCALE : 1:20_XREF



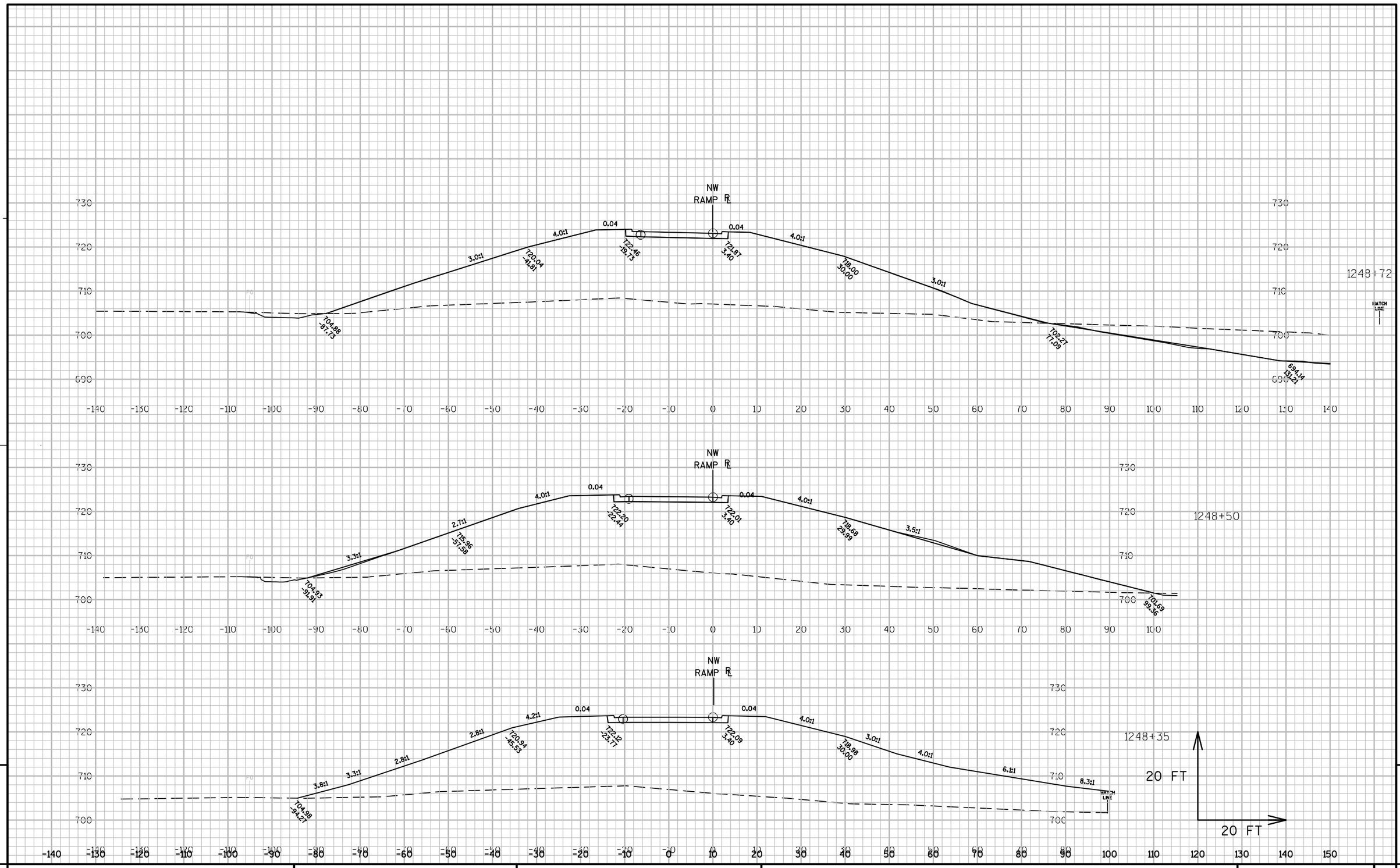




PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: SW RAMP	SHEET 302	E

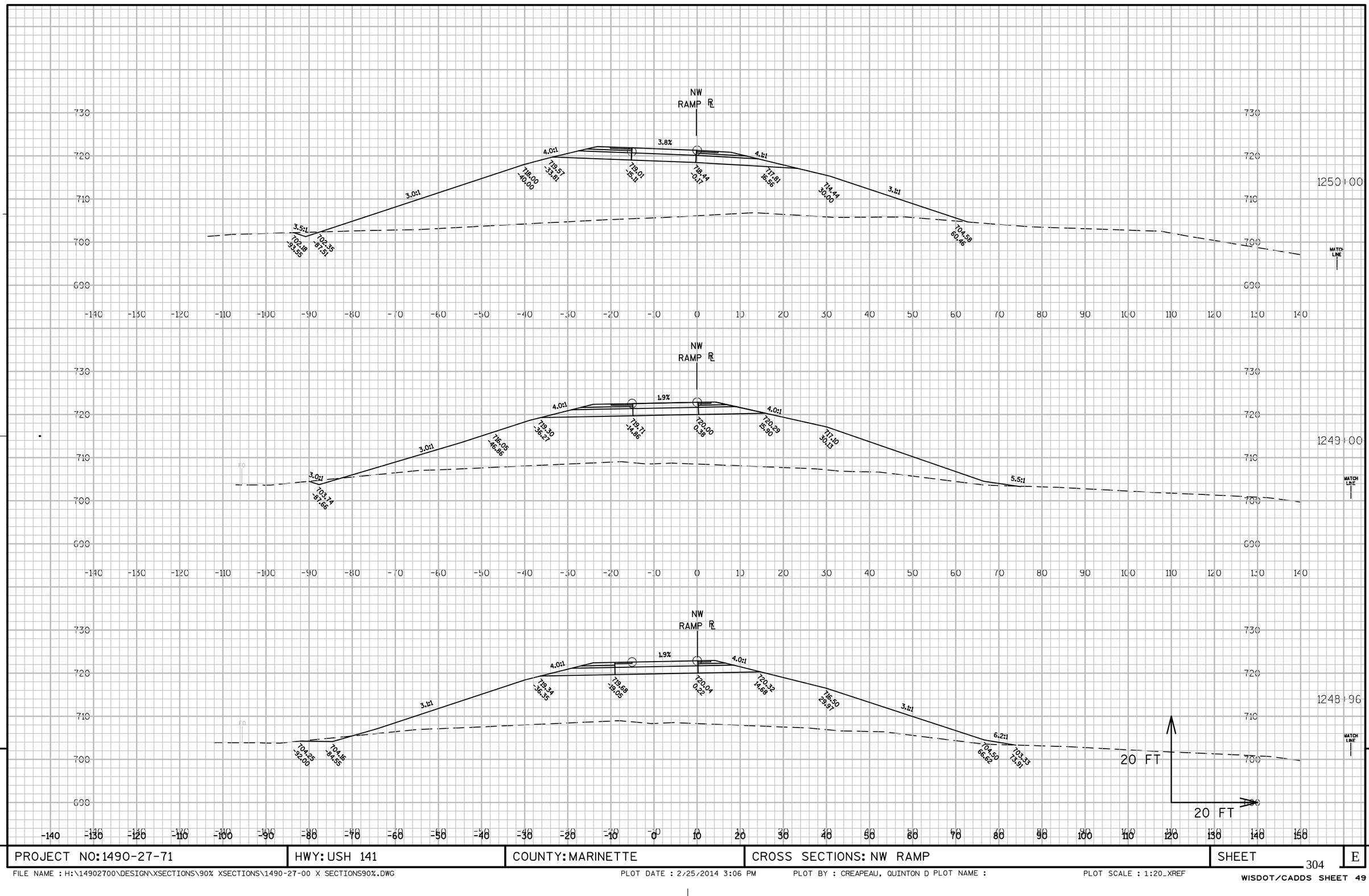
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WISDOT/CADDS SHEET 49



PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: NW RAMP	SHEET	E

FILE NAME : H:\14902700\DESIGN\XSECTIONS\90% XSECTIONS\1490-27-00 X SECTIONS90%.DWG PLOT DATE : 2/25/2014 3:05 PM PLOT BY : CREAPEAU, QUINTON D PLOT NAME : PLOT SCALE : 1:20_XREF



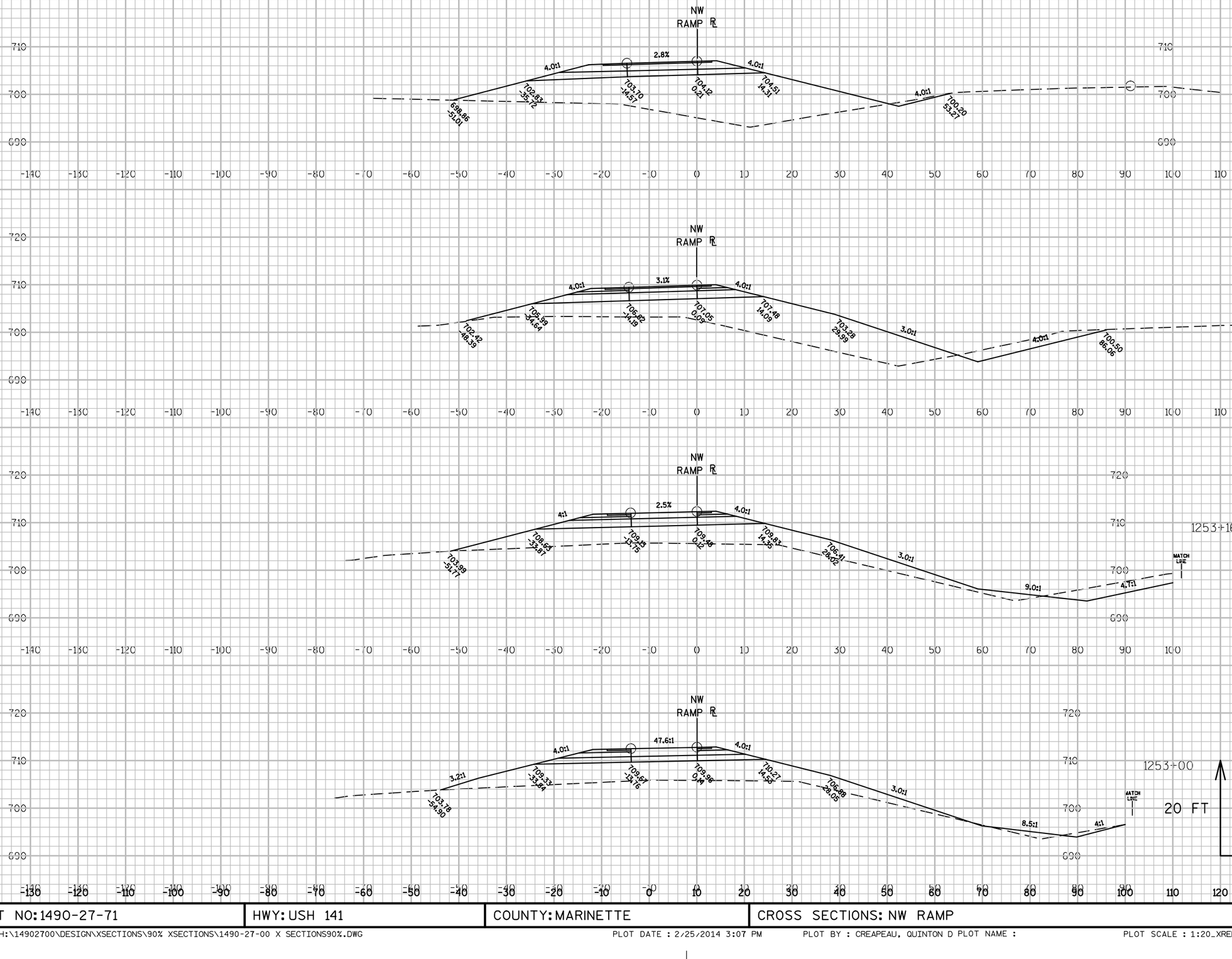
PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: NW RAMP	SHEET	E

FILE NAME : H:\14902700\DESIGN\XSECTIONS\90% XSECTIONS\1490-27-00 X SECTIONS90%.DWG PLOT DATE : 2/25/2014 3:06 PM PLOT BY : CREAPEAU, QUINTON D PLOT NAME : PLOT SCALE : 1:20_XREF
WISDOT/CADDS SHEET 49

9

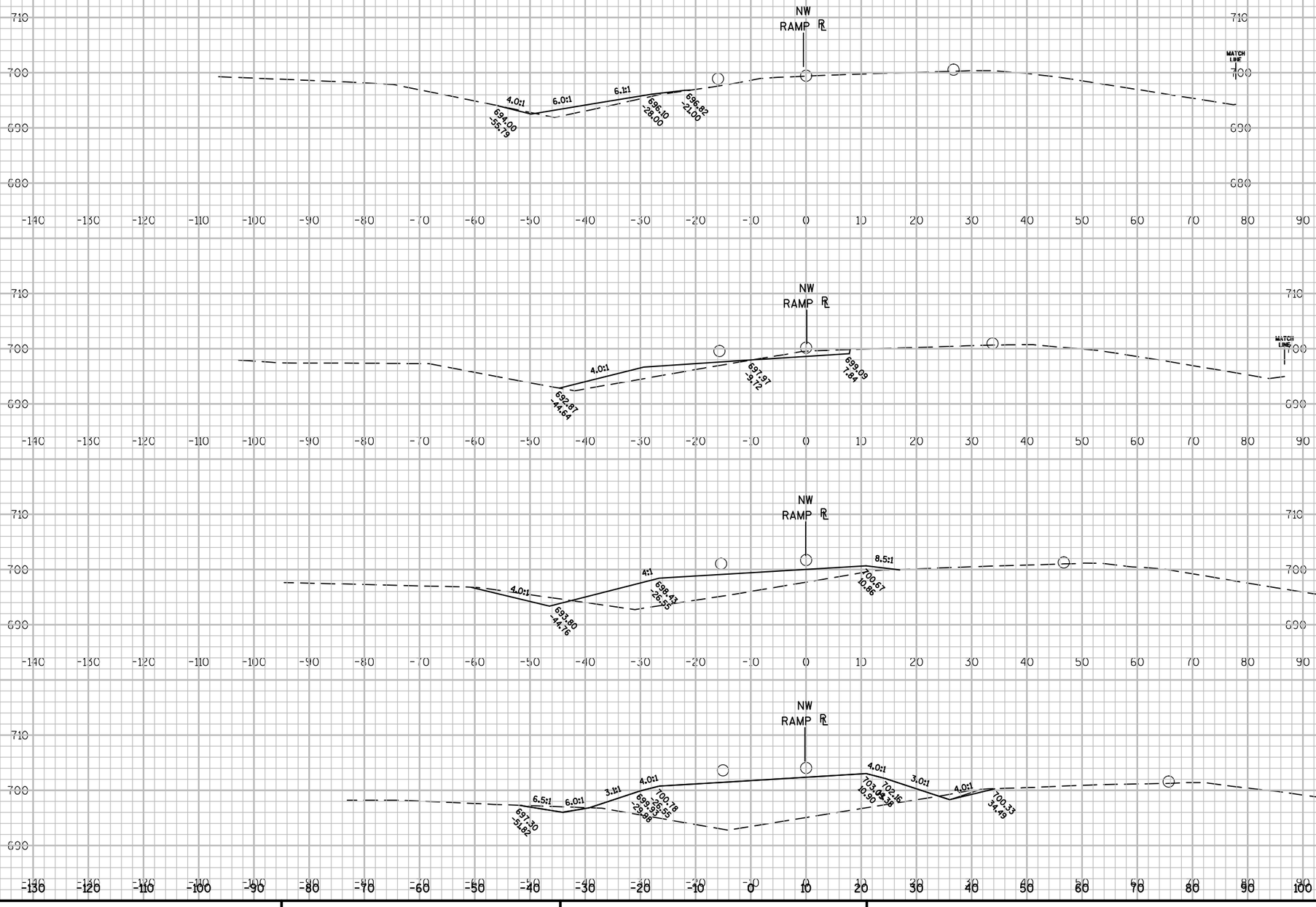
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PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: NW RAMP	SHEET	E

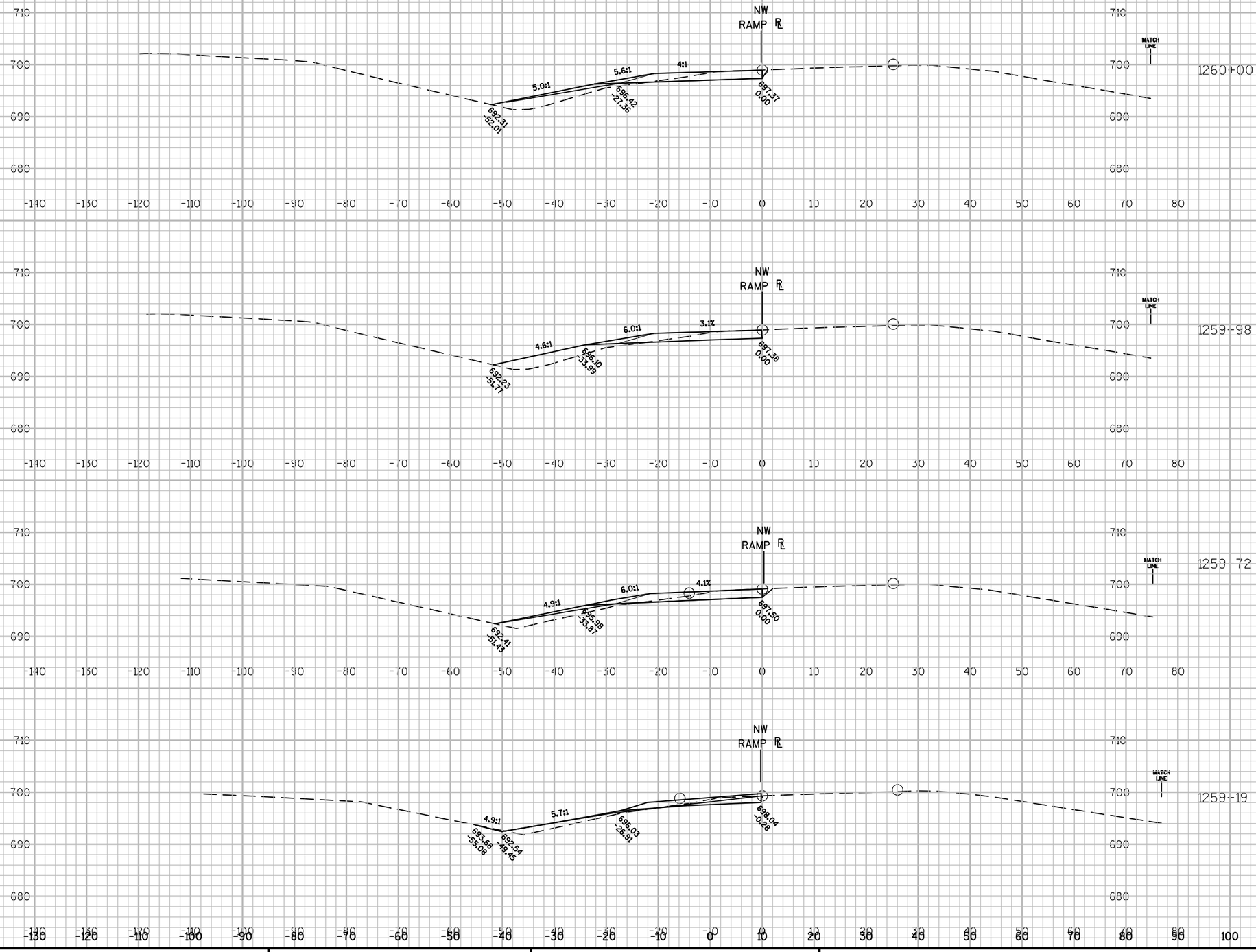


PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: NW RAMP	SHEET	E

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PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: NW RAMP	SHEET	E

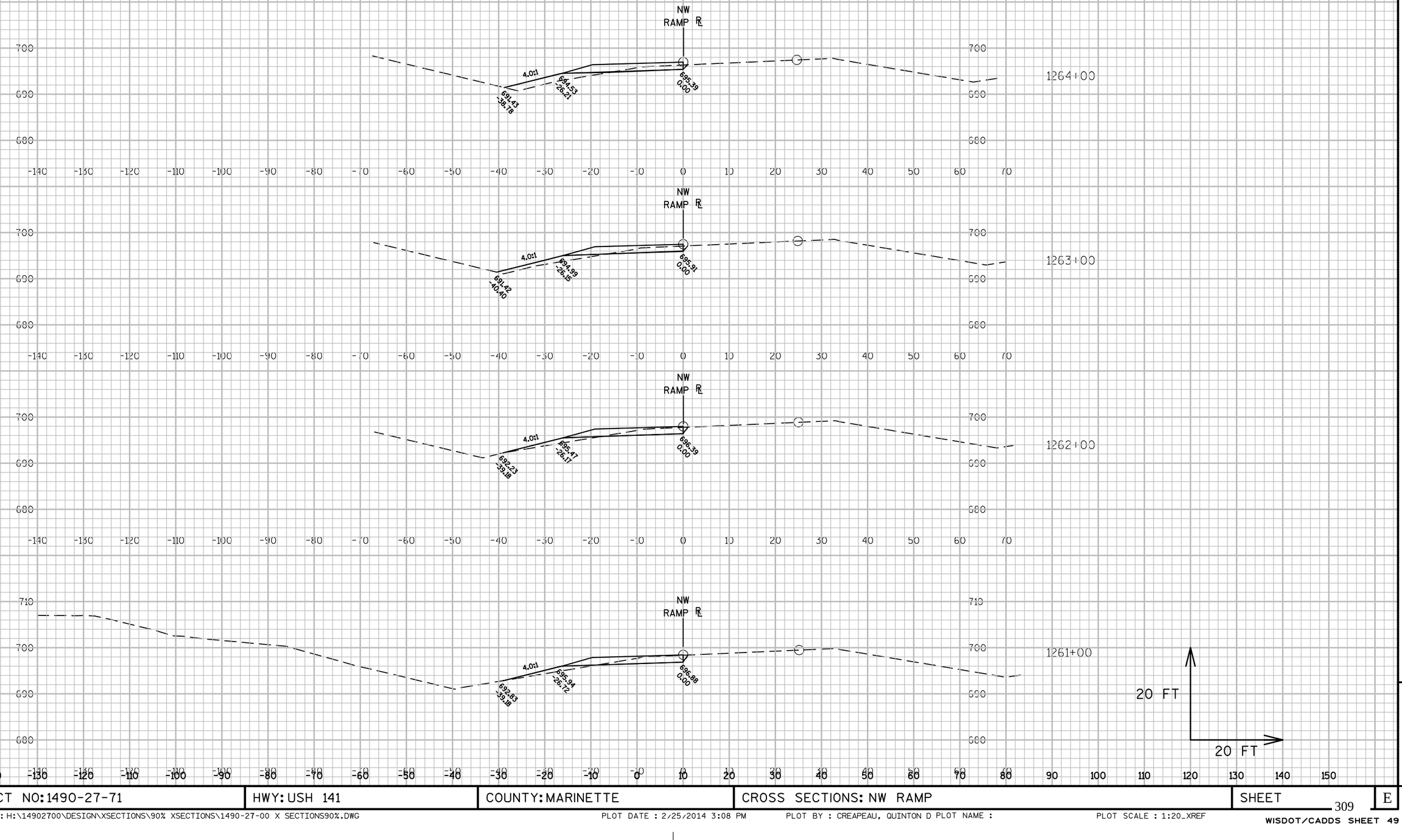


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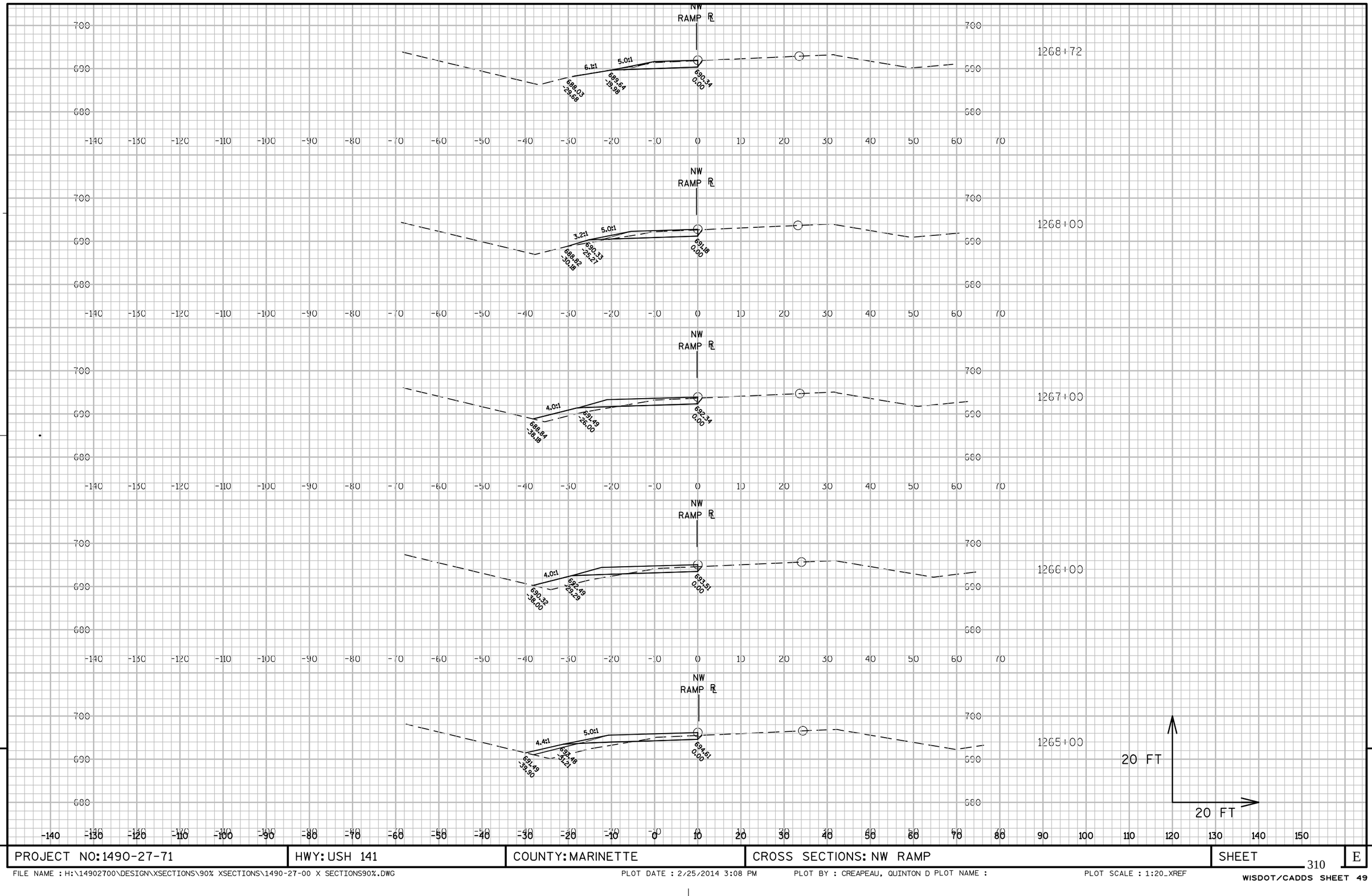
PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: NW RAMP	SHEET	E

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FILE NAME : H:\14902700\DESIGN\XSECTIONS\90% XSECTIONS\1490-27-00 X SECTIONS90%.DWG PLOT DATE : 2/25/2014 3:08 PM PLOT BY : CREAPEAU, QUINTON D PLOT NAME : PLOT SCALE : 1:20_XREF



PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: NW RAMP	SHEET	E



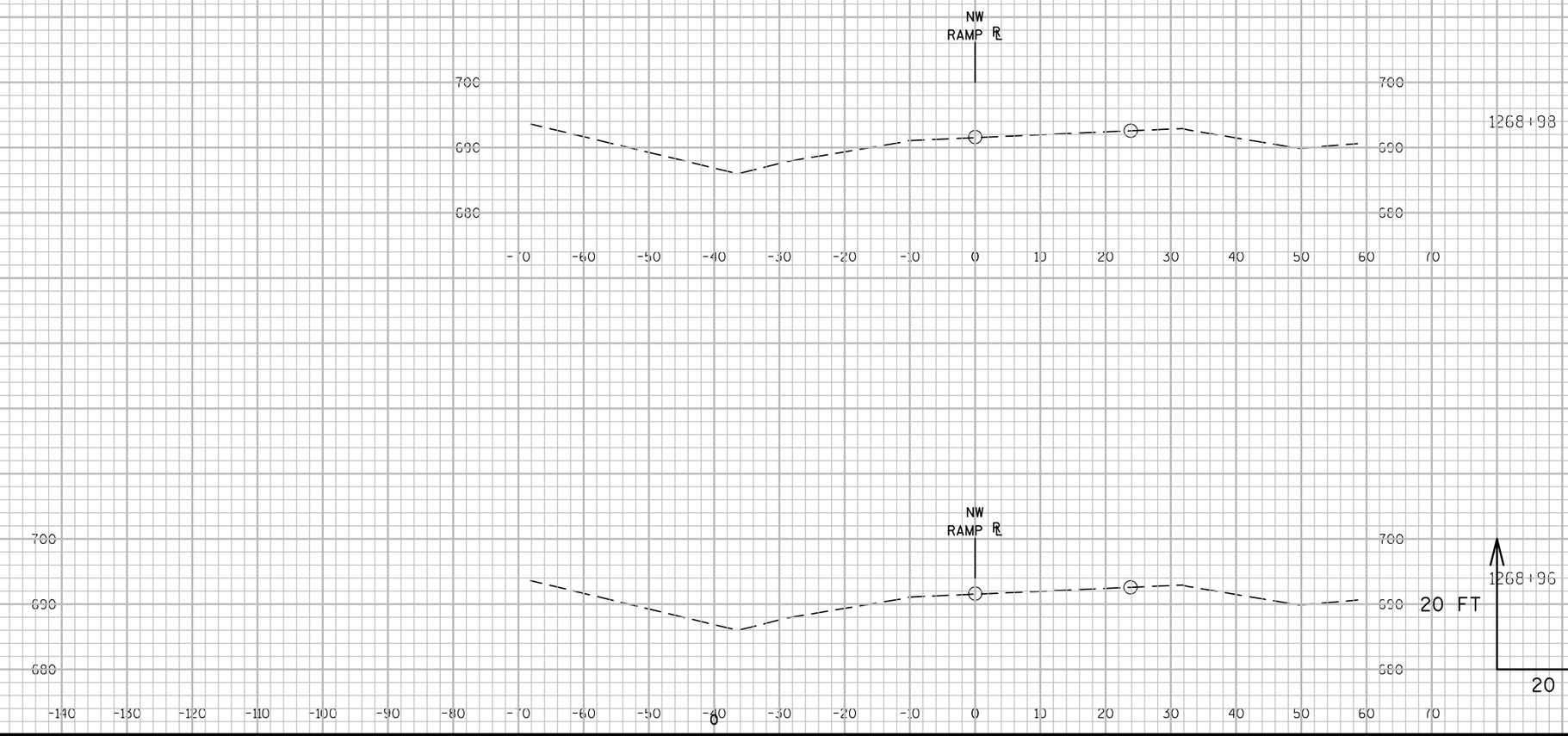
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PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: NW RAMP	SHEET	E

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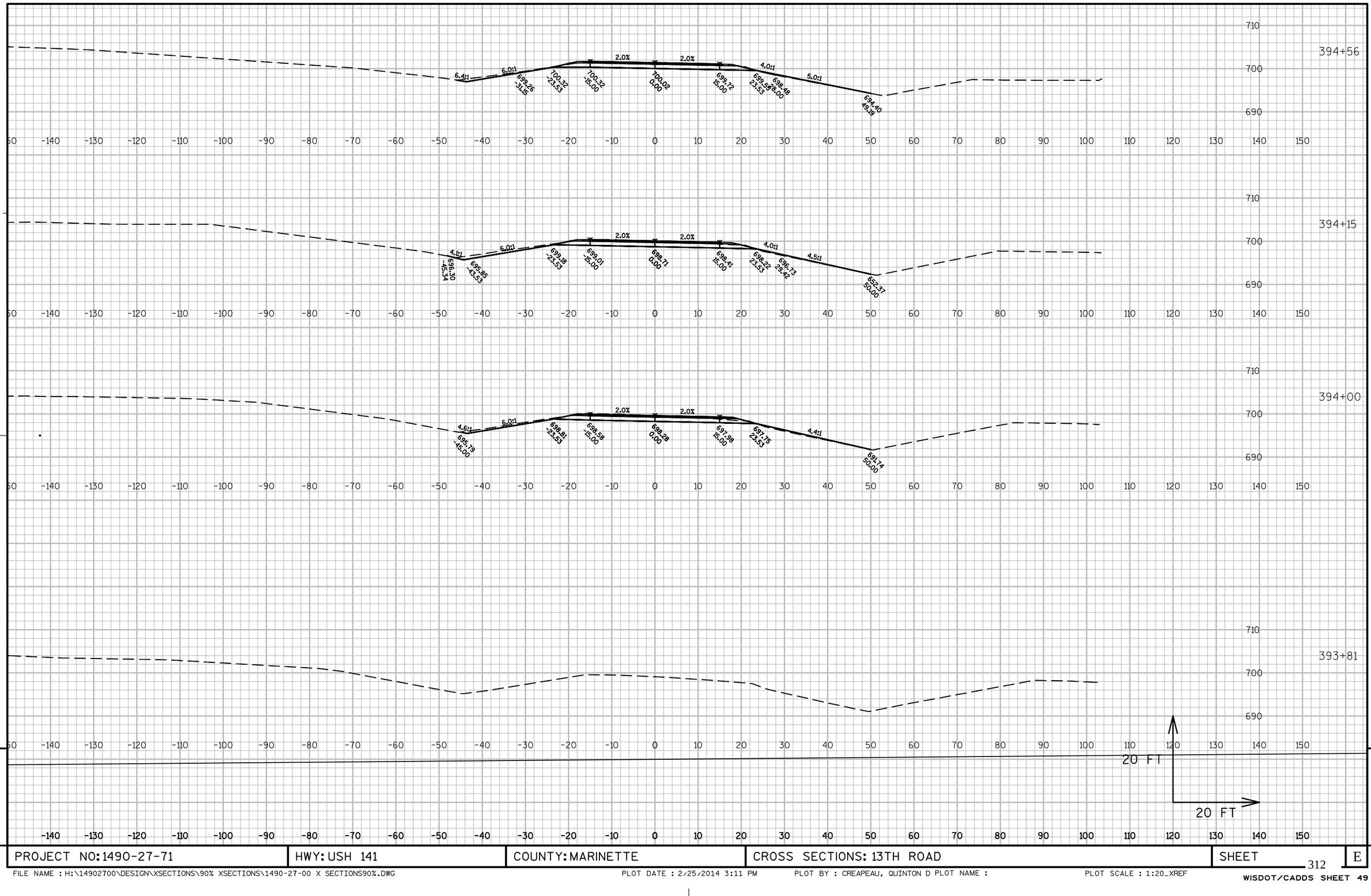
WISDOT/CADDS SHEET 49



PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: USH 141 NB - SB	SHEET	E

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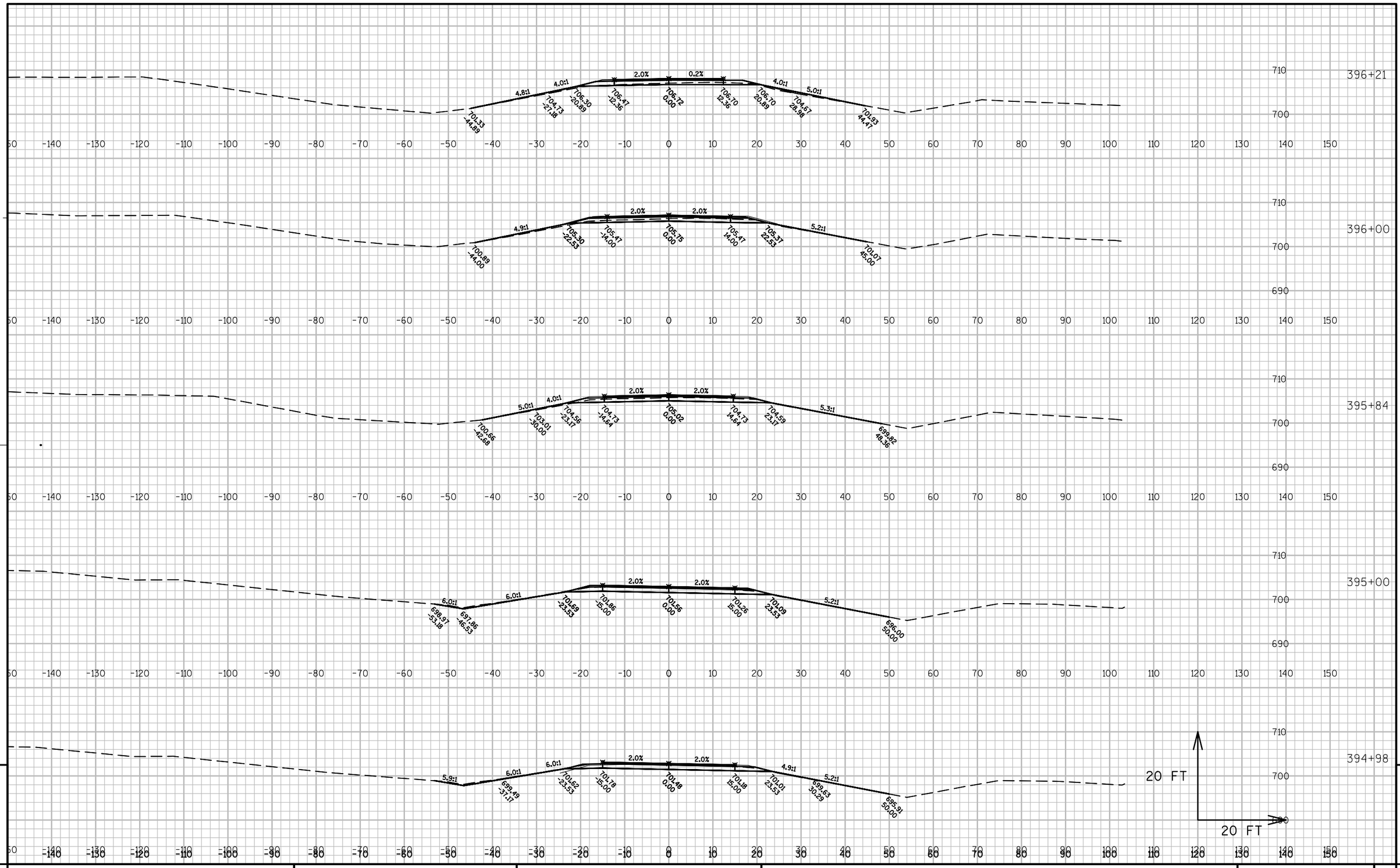
WISDOT/CADDS SHEET 49



9 9

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: 13TH ROAD	SHEET	E

FILE NAME : H:\14902700\DESIGN\XSECTIONS\90% XSECTIONS\1490-27-00 X SECTIONS90%.DWG PLOT DATE : 2/25/2014 3:11 PM PLOT BY : CREAPEAU, QUINTON D PLOT NAME : PLOT SCALE : 1:20_XREF
WISDOT/CADDS SHEET 49

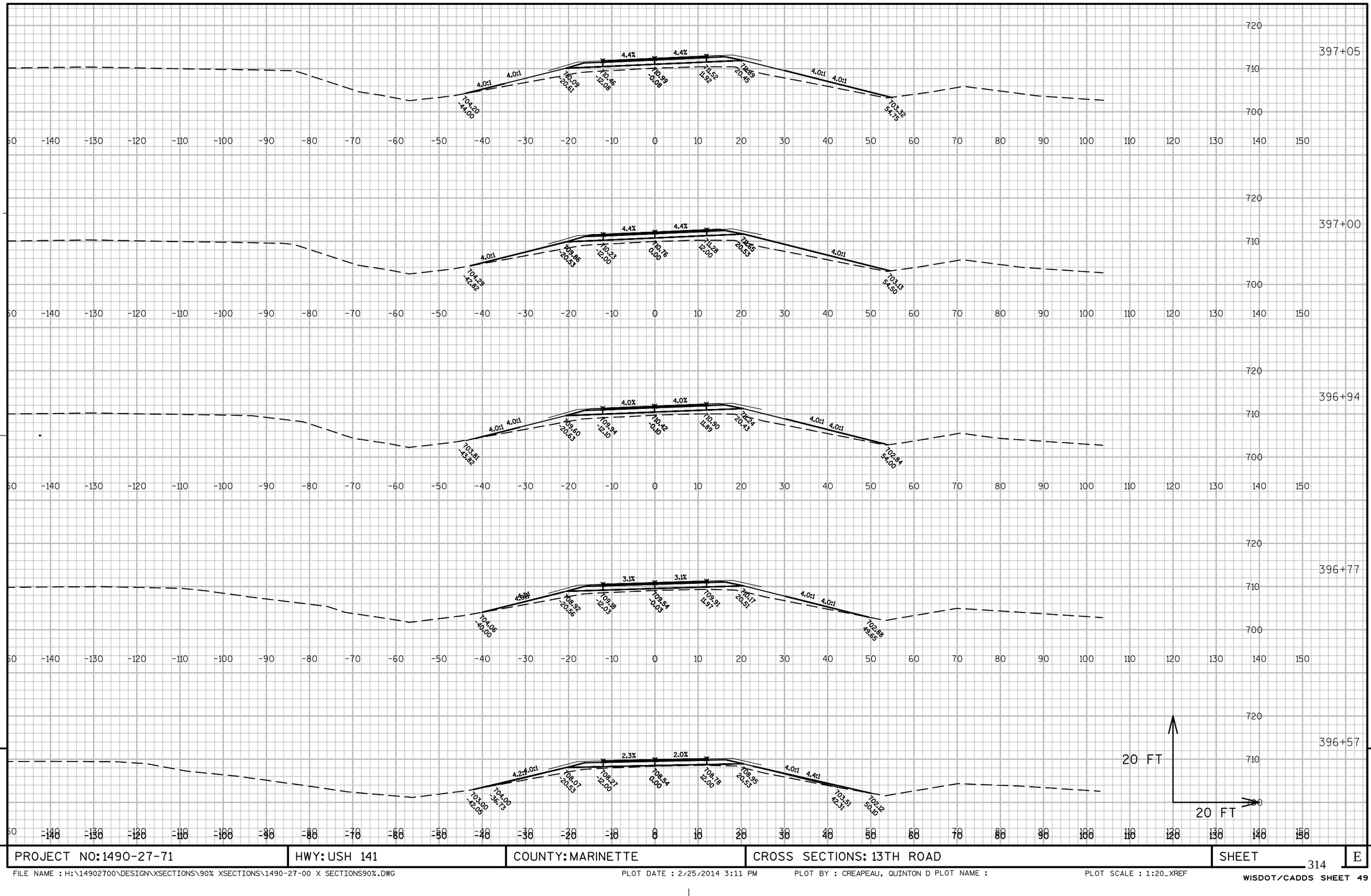


PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: 13TH ROAD	SHEET	E

313

FILE NAME : H:\14902700\DESIGN\XSECTIONS\90% XSECTIONS\1490-27-00 X SECTIONS90%.DWG PLOT DATE : 2/25/2014 3:11 PM PLOT BY : CREAPEAU, QUINTON D PLOT NAME : PLOT SCALE : 1:20_XREF

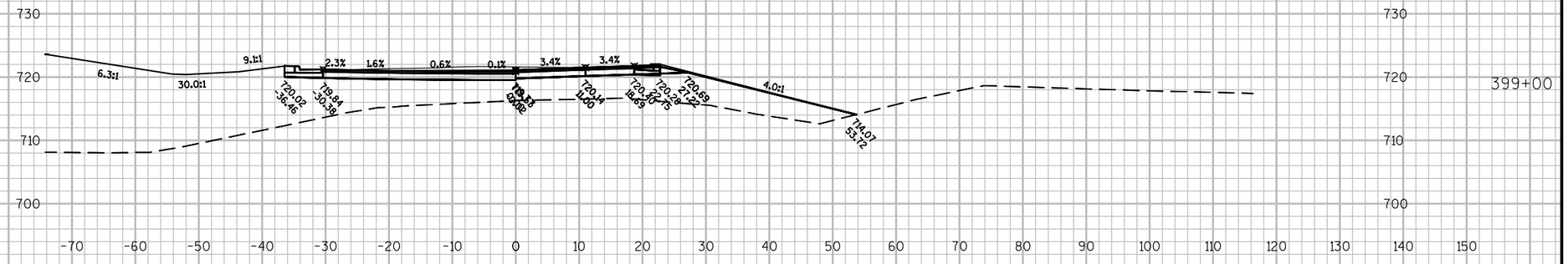
WISDOT/CADDS SHEET 49

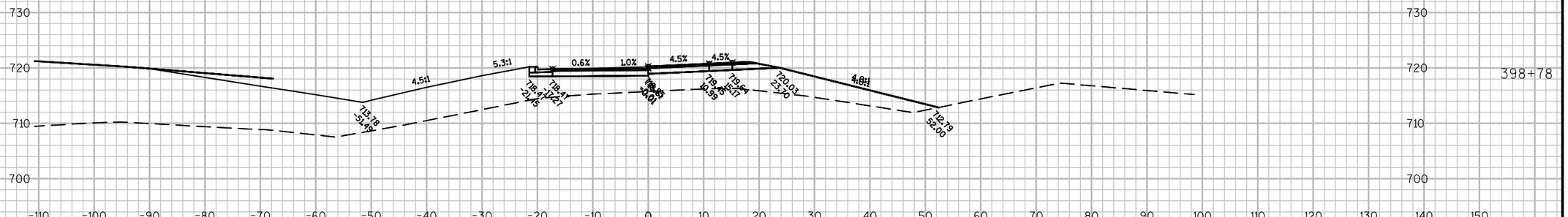


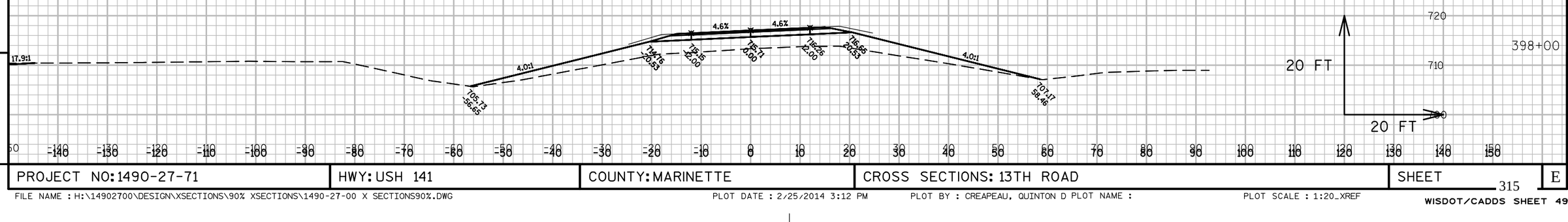
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PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: 13TH ROAD	SHEET 314	E

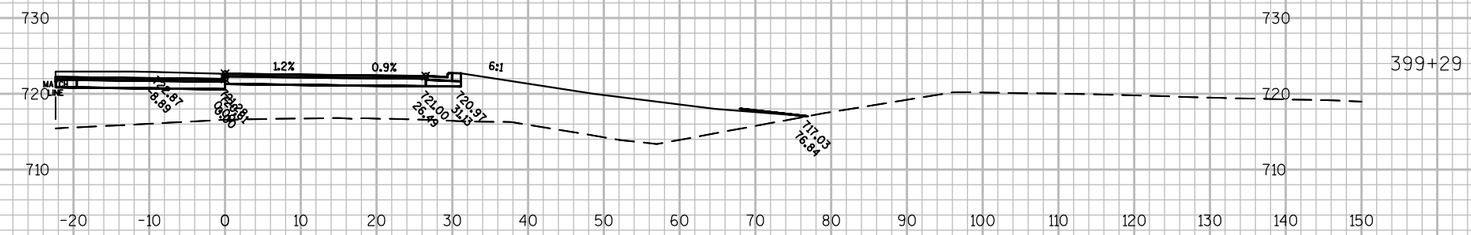


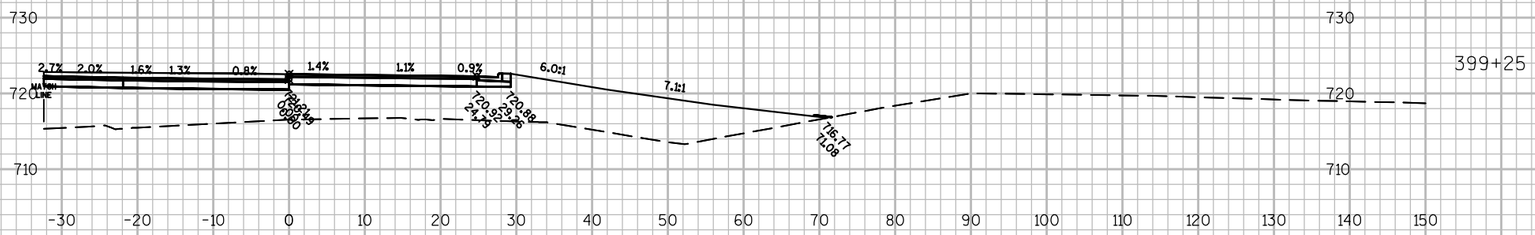


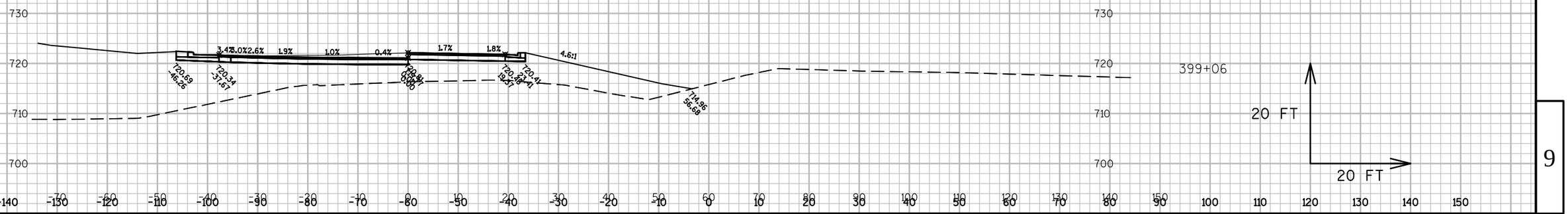


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PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: 13TH ROAD	SHEET 315	E







9

9

PROJECT NO: 1490-27-71	HWY: USH 141	COUNTY: MARINETTE	CROSS SECTIONS: 13TH ROAD	SHEET	E

FILE NAME : H:\14902700\DESIGN\XSECTIONS\90% XSECTIONS\1490-27-00 X SECTIONS90%.DWG PLOT DATE : 2/25/2014 3:12 PM PLOT BY : CREAPEAU, QUINTON D PLOT NAME : PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
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