WKE

DEC 2013

PROJECT ID: 1107-02-79

COUNTY: WASHINGTON

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 = --560

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1107-02-79	WISC 2013513	1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

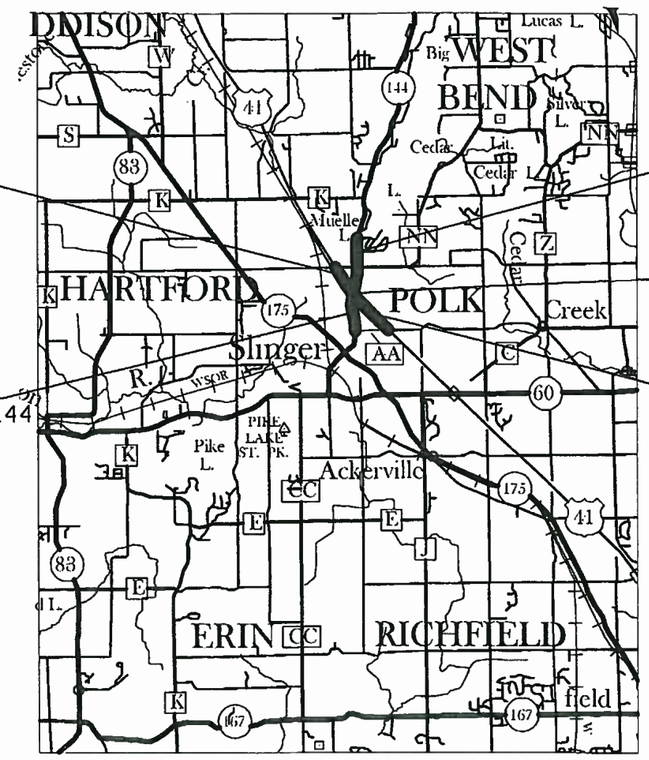
USH 41 FREEWAY MODERNIZATION

STH 144 INTERCHANGE

USH 41

WASHINGTON COUNTY

STATE PROJECT NUMBER
1107-02-79



END PROJECT
STA. 423+45.00 USH 41

END CONSTRUCTION
STA. 187+50.00 STH 144

BEGIN CONSTRUCTION
STA. 136+00.00 STH 144

STRUCTURES
B-66-110
R-66-34
R-66-35
EXISTING B-66-26 TO BE REMOVED

BEGIN PROJECT
STA. 364+55.00 USH 41
N = 493,780.78
E = 459,099.96

DESIGN DESIGNATION

	USH 41	STH 144
A.A.D.T. (2012)	35,600 - 37,200	5,700
A.A.D.T. (2032)	47,500 - 48,000	6,900 - 7,100
D.H.V. (2032)	4,750 - 4,800	690 - 710
D.D.	62/38	58/42
T. -----	7.8%	3.9%
DESIGN SPEED	70 MPH	35 - 55 MPH
ESALS	569,400	292,000

CONVENTIONAL SYMBOLS

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

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

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

LAYOUT
SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 1.172 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD 27
ELEVATIONS ARE BASED ON NGVD 1929

TO CONVERT GRID COORDINATES (X&Y) TO GROUND COORODIANTES (N&E). SUBTRACT 2,000,000 FROM THE X COORDINATE, THEN DIVIDE THE COORDINATES BY A FACTOR OF 0.9998848

ORIGINAL PLANS PREPARED BY

WISCONSIN
TIMOTHY J. MOYER
E-39623
SHEBOYGAN, WI
PROFESSIONAL ENGINEER

7/17/2013 (Date) Timothy J. Moyer (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor: KL ENGINEERING
Designer: DONOHUE & ASSOCIATES
Project Manager: DOUGLAS CAIN
Regional Examiner:
Regional Supervisor:
C.O. Examiner:

APPROVED FOR THE DEPARTMENT
DATE: 7/17/13 Douglas C. Cain (Signature)

E

FILE NAME : L:\PROJECTS\11609\DWG\010101_TI.DWG PLOT DATE : 7/17/2013 9:14 AM PLOT BY : MOYER, TIM PLOT NAME : ----------

WISDOT/CADDS SHEET 10

2

GENERAL NOTES

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

THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. SLINGER WATER UTILITY AND VILLAGE OF SLINGER ARE NOT MEMBERS OF DIGGERS HOTLINE AND MUST BE CONTACTED SEPARATELY.

ALL PRIVATE EXISTING UTILITIES ARE TO BE ADJUSTED BY THE UTILITIES CONCERNED.

EXCAVATION BELOW SUBGRADE (EBS) IF DETERMINED BY THE ENGINEER SHALL BE PAID FOR AS EXCAVATION COMMON. THE LOCATION OF EBS WILL BE DETERMINED BY THE ENGINEER. SUCH EBS IS NOT USED TO BALANCE YARDAGE.

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

CONCRETE CURB AND GUTTER GRADES ARE TO THE FLANGE. DISTANCES SHOWN FOR CURB AND GUTTER RADII ARE MEASURED TO THE FLANGE.

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

THE CONCRETE PAVEMENT REMOVAL QUANTITY INCLUDES DRIVEWAYS AND INTEGRAL CURB AND GUTTER AND IS INCLUDED IN THE EXCAVATION COMMON QUANTITY.

TRANSVERSE JOINTS IN CONCRETE WALKS SHALL BE CONSTRUCTED AT INTERVALS EQUAL TO THE WIDTH OF THE CONCRETE WALK UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

CONCRETE SIDEWALK TO BE REMOVED TO NEAREST JOINT OR AS DIRECTED BY THE ENGINEER. MINIMUM LENGTH OF SLAB NOT TO BE LESS THAN 3 FEET, OR HALF THE WIDTH WHICHEVER IS GREATER.

1 / 2" - INCH FELT EXPANSION JOINT MATERIAL REQUIRED BETWEEN BACK OF CURB AND FRONT OF WALK.

THE EXACT LOCATION OF DRIVEWAYS AND PRIVATE ENTRANCES IS TO BE DETERMINED BY THE ENGINEER AND REPLACED IN KIND.

RE-TOPSOIL OF GRADED AREAS, AS DESIGNATED BY THE ENGINEER, IMMEDIATELY AFTER GRADING IS COMPLETED WITHIN THOSE AREAS. SEED, FERTILIZE, AND MULCH/EROSION MAT TOP-SOILED AREAS, AS DESIGNATED BY THE ENGINEER, WITHIN FIVE (5) CALENDAR DAYS AFTER PLACEMENT OF TOPSOIL IF GRADED AREAS ARE LEFT EXPOSED FOR MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THOSE AREAS WITH TEMPORARY SEED.

STOCK PILE EXCESS MATERIAL OR SPOILS ON UPLAND AREAS AWAY FROM WETLANDS, FLOODPLAINS AND WATERWAYS. STOCKPILED SOIL SHALL BE PROTECTED AGAINST EROSION. IF STOCKPILED MATERIAL IS LEFT FOR MORE THAN FOURTEEN (14) DAYS, SEED THE STOCKPILE WITH TEMPORARY SEED.

EROSION CONTROL BMP'S ARE AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTORS ECIP AND BY THE ENGINEER. EROSION CONTROL BMP'S SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE BMP IS NO LONGER REQUIRED.

PIPE ELEVATIONS AS SHOWN ON THE PLANS MAY BE ADJUSTED BY THE ENGINEER TO FIT EXISTING FIELD CONDITIONS.

CROSS SECTIONS SHOWN INCLUDE THE THICKNESS OF TOPSOIL WHERE REQUIRED. SALVAGED TOPSOIL SHALL BE PLACED WITH 4-INCH MINIMUM DEPTH. TOPSOIL UNDER SOD SHALL BE PLACED WITH 6-INCH MINIMUM DEPTH.

TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

STORAGE OF ANY MATERIAL IN WETLANDS WILL NOT BE PERMITTED.

VILLAGE OWNED STREET SIGNS WILL BE INSPECTED FOR DAMAGE OR DEFECT BY THE VILLAGE BEFORE REMOVAL. ANY DEFECTED OR DAMAGED SIGNS WILL BECOME PROPERTY OF THE VILLAGE. NEW SIGNS WILL BE FURNISHED AND DELIVERED TO THE FIELD OFFICE FOR INSTALLATION BY THE CONTRACTOR.

CONTACT SCOTT SCHMIDT, WASHINGTON COUNTY ENGINEER / SURVEYOR, AT 262-335-6881 TO PERPETUATE THE SECTION CORNER 7 DAYS PRIOR TO START OF CONSTRUCTION AND 7 DAYS PRIOR TO SECTION CORNER REPLACEMENT.

HMA PAVEMENT SHALL BE CONSTRUCTED WITH THE FOLLOWING LAYERS AND GRADATIONS:

NOM SIZE	MAX GRADATION	
3 1/2 IN	1 3/4 UPPER LAYER	12.5 mm
	1 3/4 LOWER LAYER	12.5 mm
5 IN	2 UPPER LAYER	12.5 mm
	3 LOWER LAYER	19.0 mm
6 IN	2 1/2 UPPER LAYER	12.5 mm
	3 1/2 LOWER LAYER	19.0 mm

GENERAL NOTES

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
PAVING DETAILS
INFIELD GRADING DETAILS
CROSS SECTION MATCHLINE DETAIL
EROSION CONTROL
STORM SEWER AND CULVERTS
PERMANENT SIGNING
PAVEMENT MARKING
TRAFFIC CONTROL AND CONSTRUCTION STAGING
DETOUR PLAN
FENCING PLAN
ALIGNMENT DIAGRAM
MR. TOM WONDRA

UTILITIES

SEND ALL CORRESPONDENCE TO:
MR. DAN SANDE, PROJECT MANAGER
WE ENERGIES (ELECTRIC)
333 W. EVERETT ST, - A299
MILWAUKEE, WI 53203
PHONE: (414) 221-4578
FAX: (414) 221-2336
dan.sande@we-energies.com
FIELD CONTACT IS ALAN SCHMIDT
262-338-7662
alan.schmidt@we-energies.com

SEND ALL CORRESPONDENCE TO:
MR. DAN SANDE, PROJECT MANAGER
WE ENERGIES (GAS)
333 W. EVERETT ST, - A299
MILWAUKEE, WI 53203
PHONE: (414) 221-4578
FAX: (414) 221-2336
dan.sande@we-energies.com
FIELD CONTACT IS PAUL OSMANSKI
414-944-5796
paul.osmanski@we-energies.com

MR. TOM HARYCKI
CHARTER COMMUNICATIONS
2312 CONTINENTAL DRIVE
WEST BEND, WI 53095
PHONE: (262) 306-8756, EXT. 20702
FAX: (262) 306-9021
tharycki@chartercom.com

MR. RYAN OSNESS
FRONTIER - WISCONSIN
118 DIVISION STREET
PLYMOUTH, WI 530730
PHONE: (920-893-7455
ryan.d.osness@ftr.com

MR. JEFF MADSEN
WISDOT STOC
433 W. PAUL AVE, SUITE 300
MILWAUKEE, WI 53203-3007
PHONE: (414) 225-3723
JEFFREY.MADSEN@DOT.WI.GOV

MR. JOHN HAUG TRAFFIC ENGINEERING SUPERVISOR
WISDOT SIGNALS
141 NW BARSTOW
WAUKESHA, WI 53187-0798
PHONE: (262) 521-5356
JOHN.HAUG@DOT.WI.GOV

MR. JAMES HAGGERTY, ENGINEER
SLINGER, VILLAGE OF
300 SLINGER ROAD
SLINGER, WI 53086-0227
PHONE: (262) 644-5265
FAX: (262) 644-6341
jhaggerty@wppisys.org

MR. MATT PFEIFER, SE REGION LIGHTING ENGINEER
WISDOT TRAFFIC LIGHTING
141 NW BARSTOW ST
WAUKESHA, WI 53187
PHONE: (262) 548-8778
MATTHEW.PFEIFER@DOT.WI.GOV

MR. MIKE OLSEN
ATC MANAGEMENT, INC.
801 O'KEEFE ROAD
DEPERE, WI 54115-6113
PHONE: (920) 338-6582

MR. LUCK SCHUETTE
KOCH PETROLEUM GROUP LP
PO BOX 64596
ST. PAUL, MN 55164
PHONE: (651) 437-0877

MR. CLIFF SEROWSKI
WISDOT ATR PULL BOXES
935 S. 60TH STREET
WEST ALLIS, WI 53214
PHONE: (414) 266-1157
CLIFFORD.SEROWSKI@DOT.WI.GOV

OTHER CONTACTS

WASHINGTON COUNTY

MR. TOM WONDRA
COUNTY HIGHWAY COMMISSIONER
COUNTY OF WASHINGTON
900 LANG STREET
WEST BEND, WI 53090
PHONE: (262) 335-4437

DNR

MR MIKE THOMPSON
WDNR SE REGION
2300 N MARTIN LUTHER KING DR
MILWAUKEE, WI 53212
PHONE: (414) 263-8648

STATE PATROL

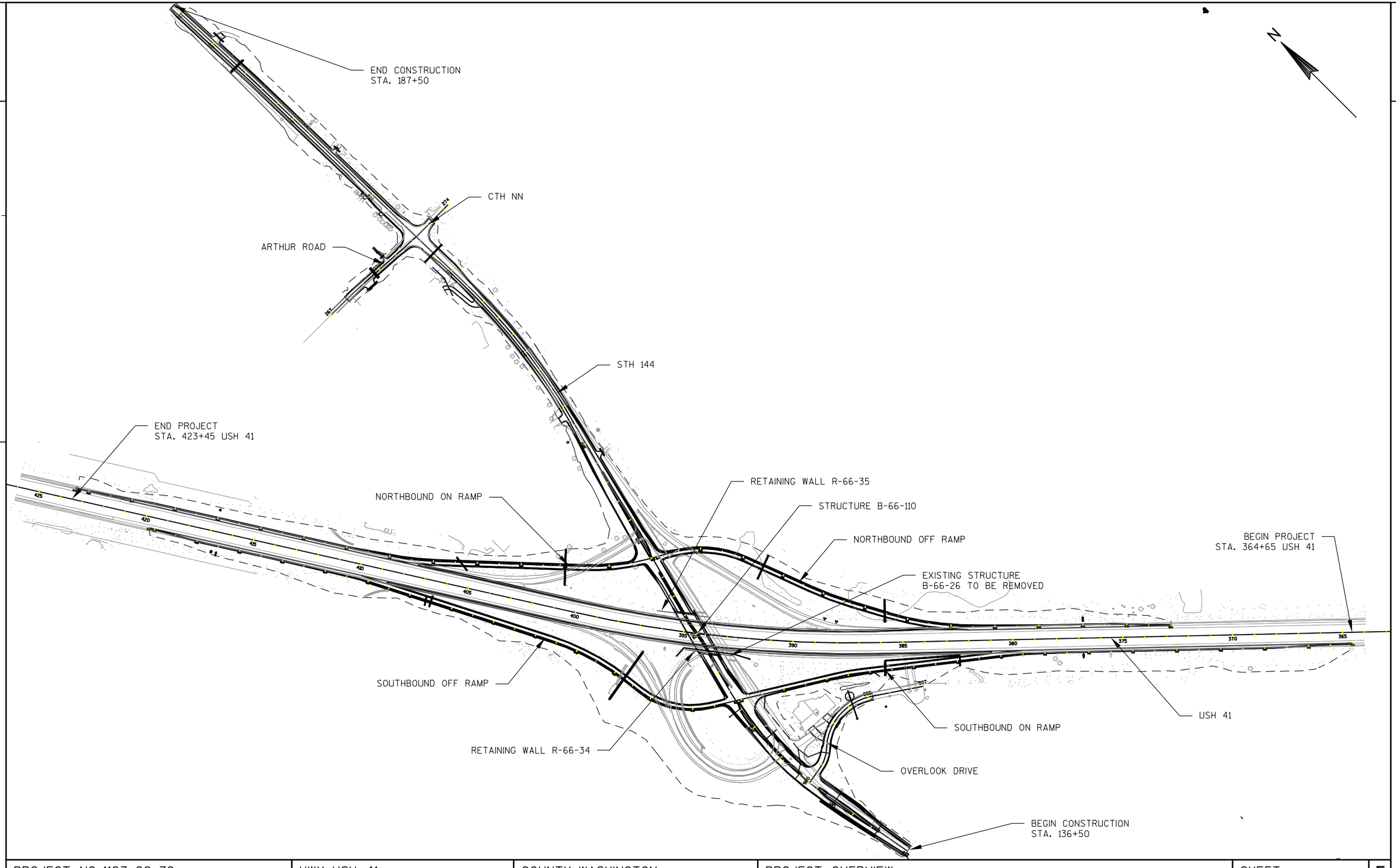
SGT. CEDRIC REMBERT
WISCONSIN STATE PATROL
21115 E. MORELAND BLVD
WAUKESHA, WI 53186
PHONE: (262) 785-4700 EXT. 2003
EMAIL: CEDRIC.REMBERT@DOT.WI.GOV

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

TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

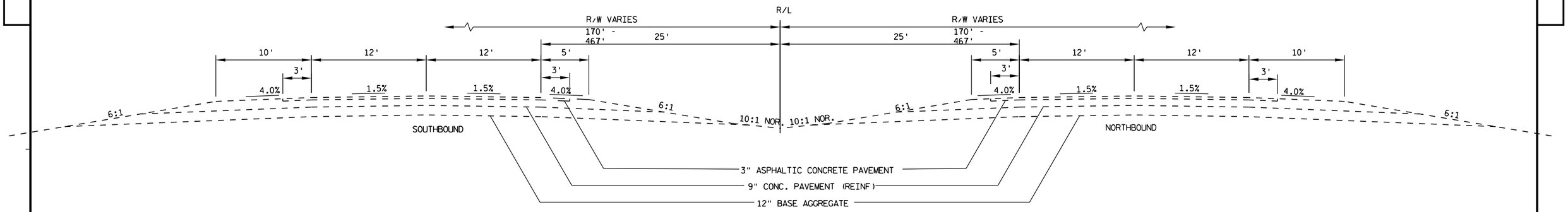
WISCONSIN STATUTE 182.0175 (1974) REQUIRES MINIMUM OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE



PROJECT NO:1107-02-79	HWY:USH 41	COUNTY:WASHINGTON	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : L:\PROJECTS\11609\DWG\020201_PO.DWG PLOT DATE : 7/27/2013 8:34 AM PLOT BY : MOYER, TIM PLOT NAME : ----------

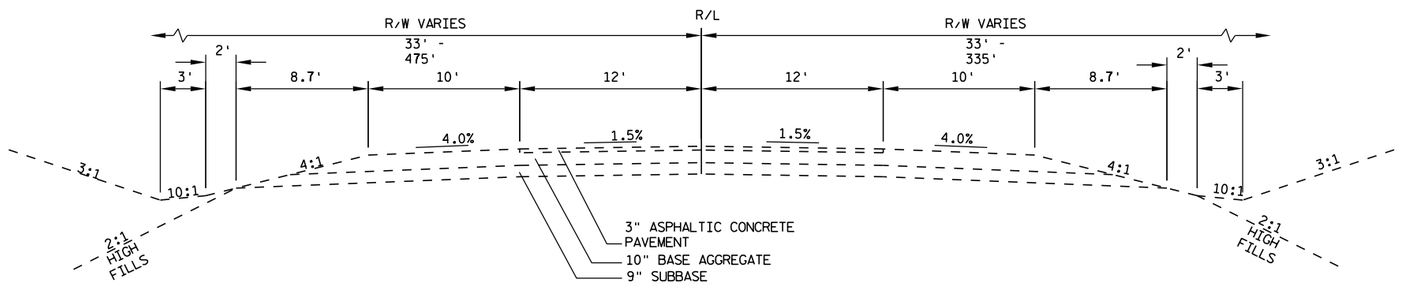
WISDOT/CADDS SHEET 42



EXISTING TYPICAL SECTION

USH 41

STA. 361+50 - STA. 423+50

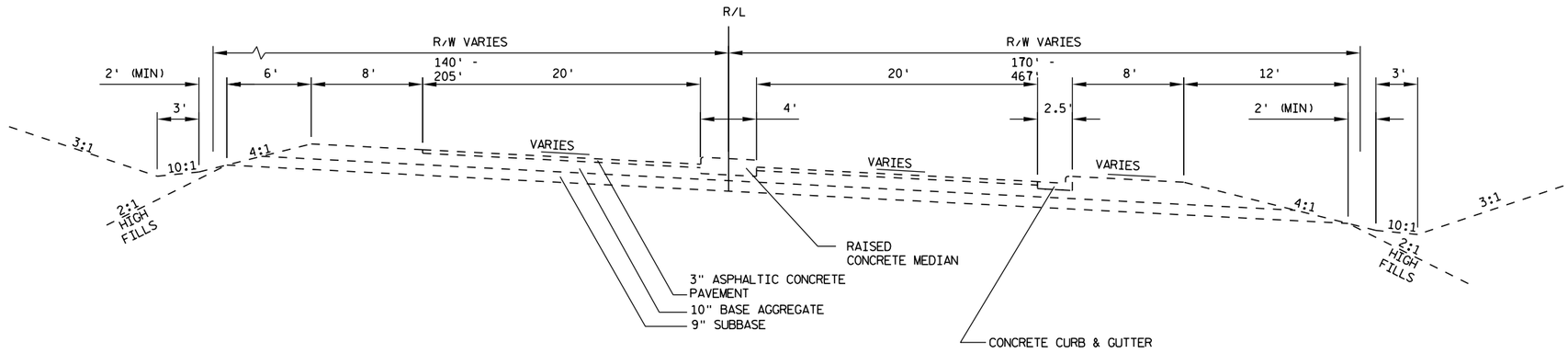


EXISTING TYPICAL SECTION

STH 144

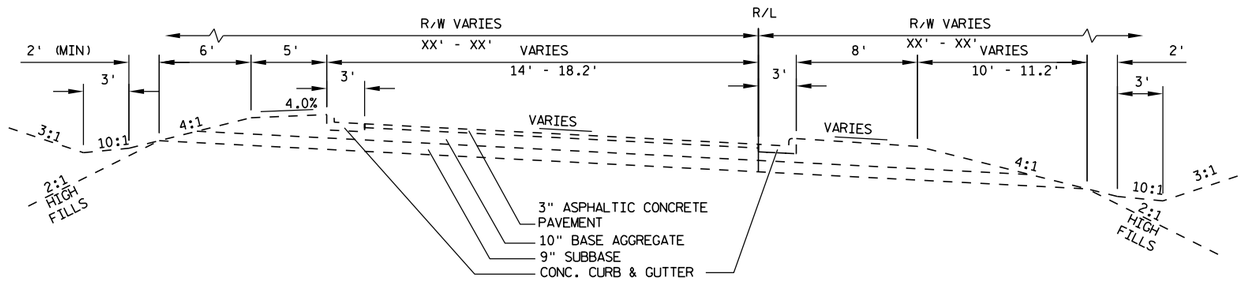
STA. 136+00 AH - STA. 187+50

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	EXISTING TYPICAL SECTIONS	SHEET 4 E



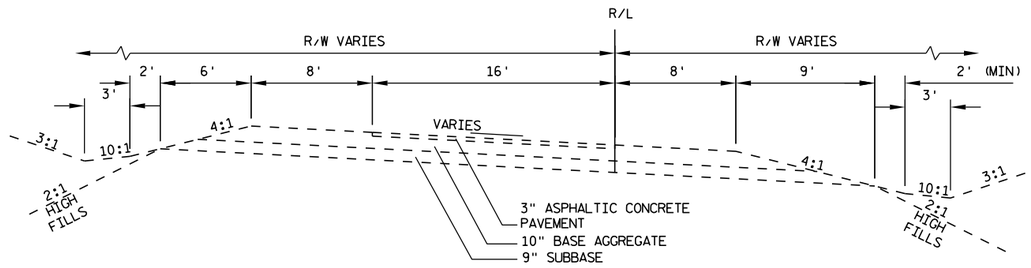
EXISTING RAMP TYPICAL SECTION

LOOP RAMP AND SB OFF
STA. 143+00 - STA. 147+85.25 (LT)



EXISTING TYPICAL SECTION

SB ON RAMP SECTION WITH CURB AND GUTTER ON EACH SIDE
STH 144 STA. 147+85.25 - STA. 149+21.99



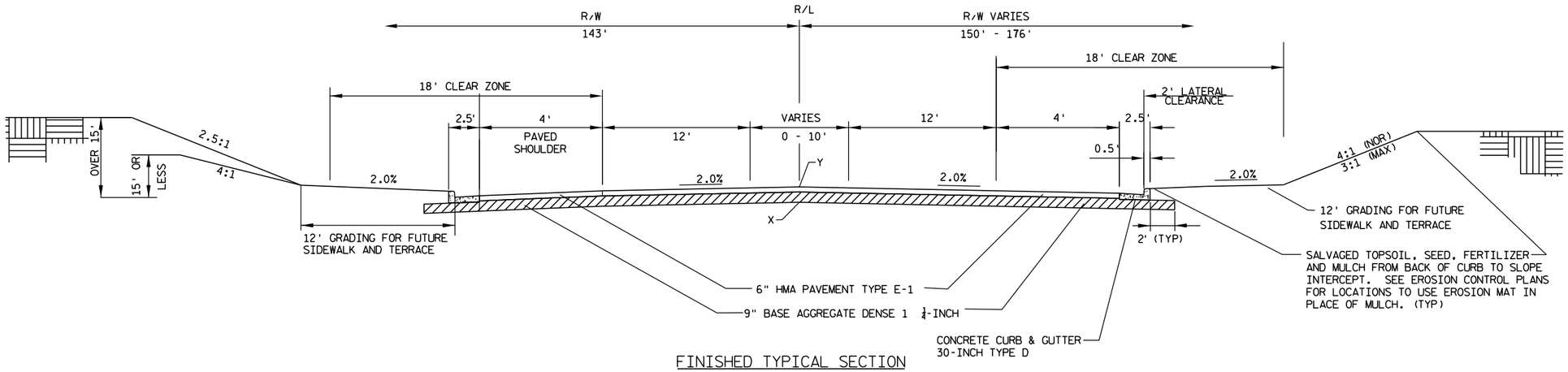
EXISTING TYPICAL SECTION

NB RAMP SECTION WITH NO CURB AND GUTTER
USH 41
STA. 387+55 - STH 395+39
STA. 397+80 - 402+93

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	EXISTING TYPICAL SECTIONS	SHEET 5 E

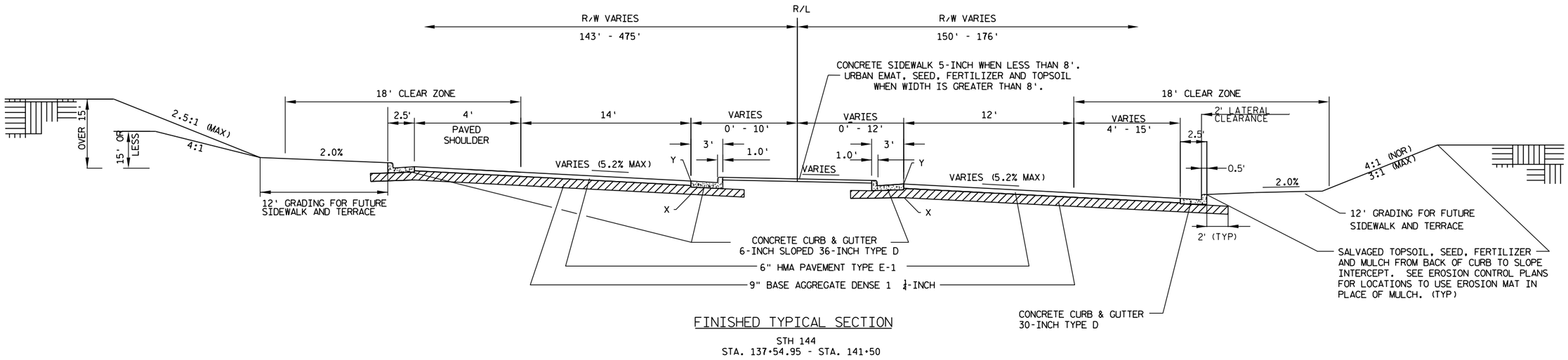
FILE NAME : L:\Projects\11609\Dwg\020301_ts.dgn PLOT DATE : 07/24/13 PLOT BY : tmoyer PLOT NAME : _____ PLOT SCALE : 1:10

WISDOT/CADDS SHEET 42



FINISHED TYPICAL SECTION

STH 144
STA. 136+00 - STA. 137+54.95



FINISHED TYPICAL SECTION

STH 144
STA. 137+54.95 - STA. 141+50

X POINT REFERRED TO ON CROSS SECTION
Y POINT REFERRED TO ON PROFILE

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	FINISHED TYPICAL SECTIONS	SHEET 6 E

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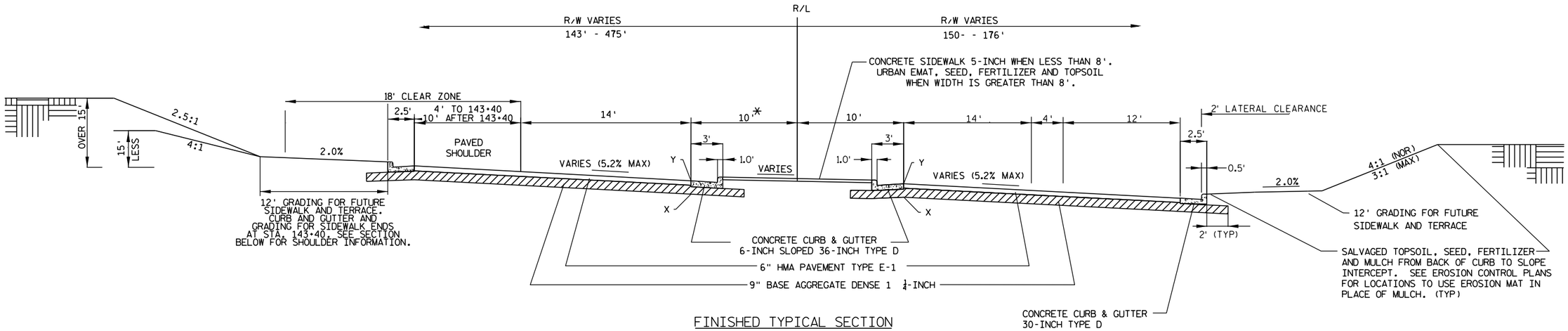
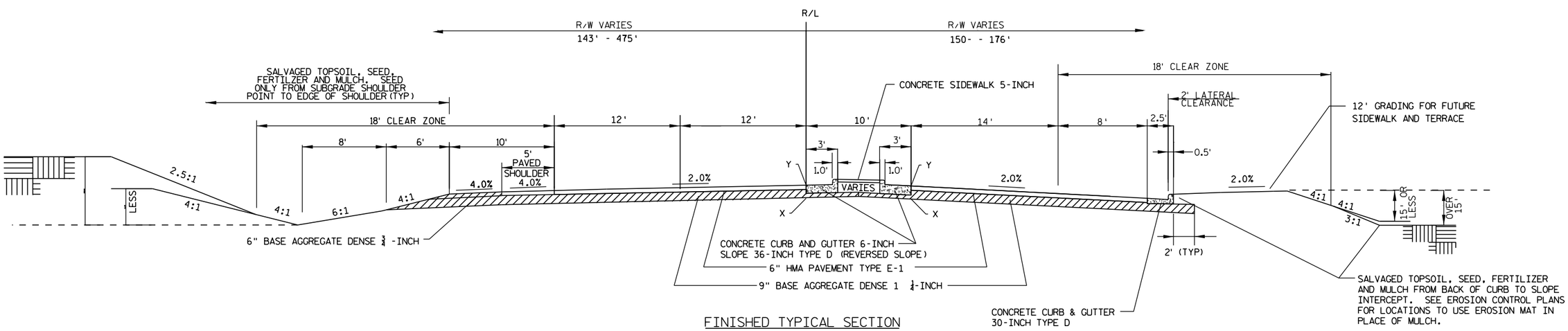


FINISHED TYPICAL SECTION

STH 144
STA. 141+50 - STA. 146+50

* VARIES - SEE PAVING DETAILS FOR TURN LANE LOCATIONS AND MEDIAN OFFSETS.



FINISHED TYPICAL SECTION

STH 144
STA. 146+50 - STA. 148+57.25

X POINT REFERRED TO ON CROSS SECTION
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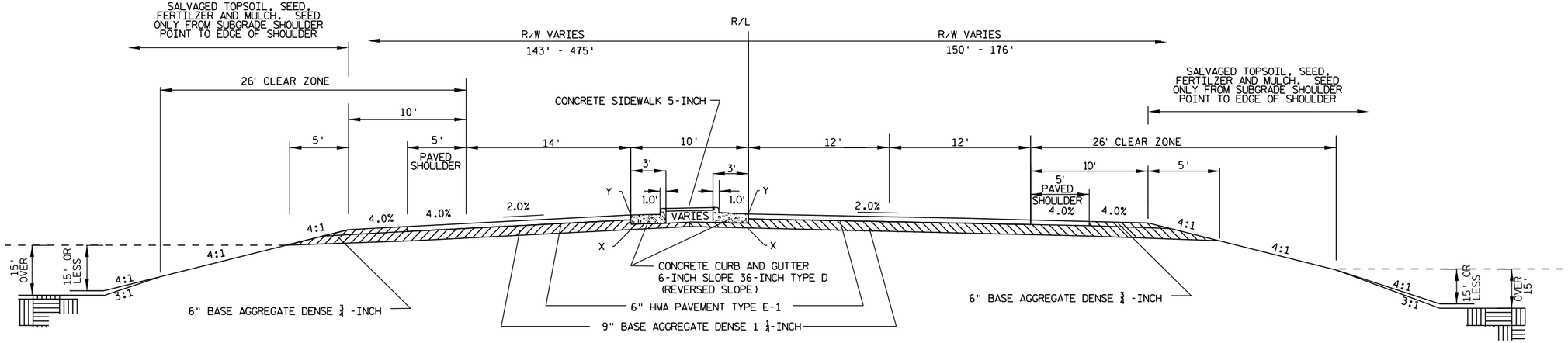
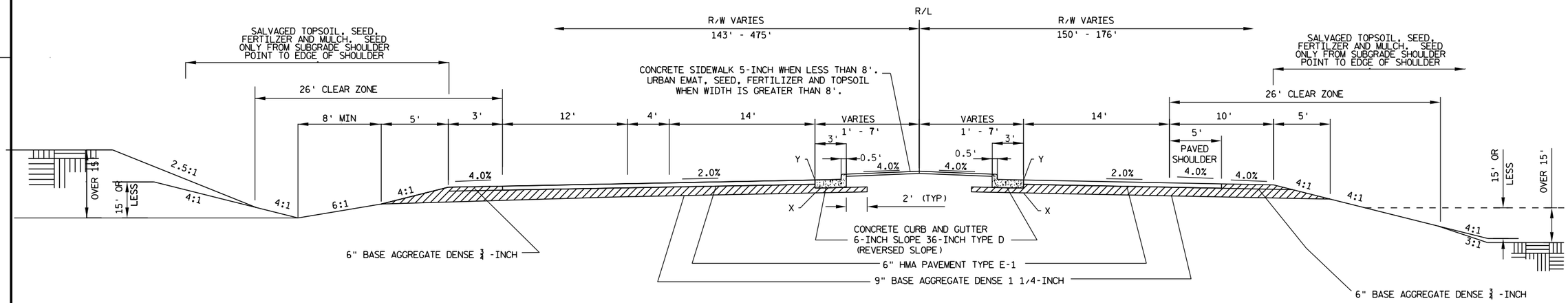
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	FINISHED TYPICAL SECTIONS	SHEET 7 E



FINISHED TYPICAL SECTION

STH 144
STA. 151+32.75 - STA. 154+00.00



FINISHED TYPICAL SECTION

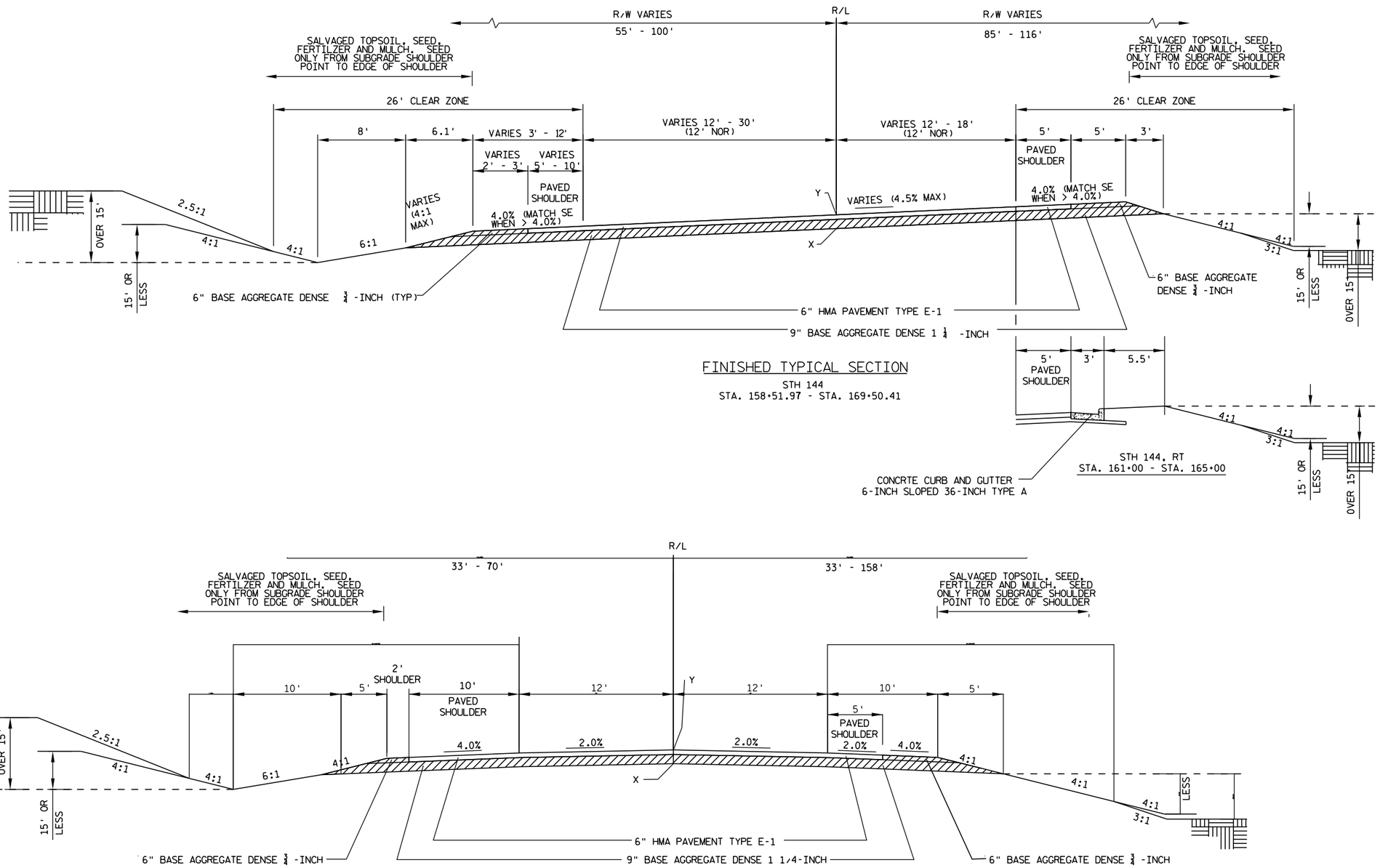
STH 144
STA. 154+00.00 - STA. STA. 158+51.97

X POINT REFERRED TO ON CROSS SECTION
Y POINT REFERRED TO ON PROFILE

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	FINISHED TYPICAL SECTIONS	SHEET 8 E

FILE NAME : L:\Projects\11609\Dwg\020301_ts.dgn PLOT DATE : 07/24/13 PLOT BY : tmoyer PLOT NAME : _____ PLOT SCALE : 1:10

WISDOT/CADDS SHEET 42



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	FINISHED TYPICAL SECTIONS	SHEET 9 E

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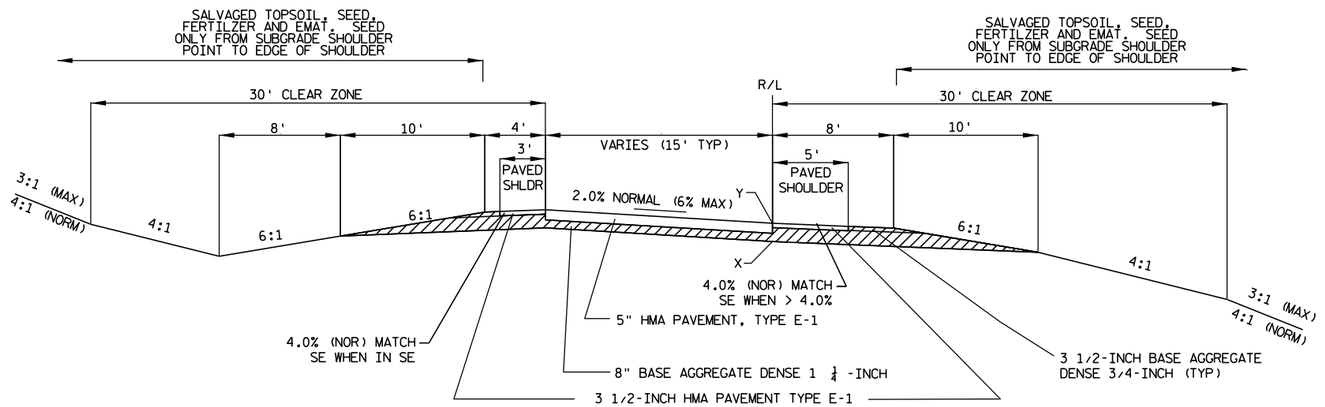
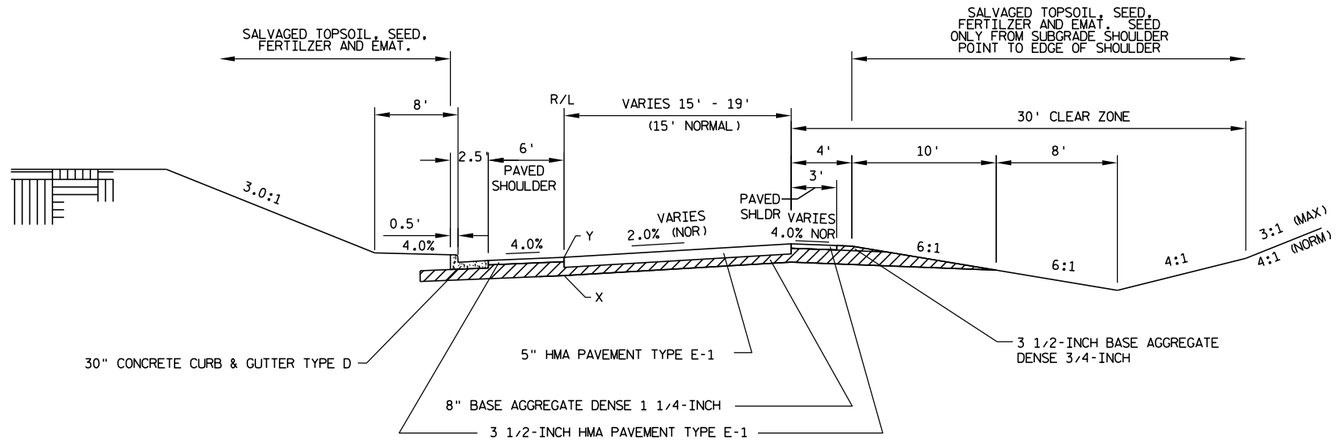


FINISHED TYPICAL SECTION

RAMPS

SB OFF RAMP - ROATED 180 DEGREES - STA. 800+00 - STA. 817+00
SB ON RAMP - ROTATED 180 DEGREES - STA. 716+50 - STA. 721+90
NB OFF RAMP - STA. 511+00 - STA. 524+00
NB ON RAMP - STA. 600+50 TO STA. 611+00



FINISHED TYPICAL SECTION

RAMPS

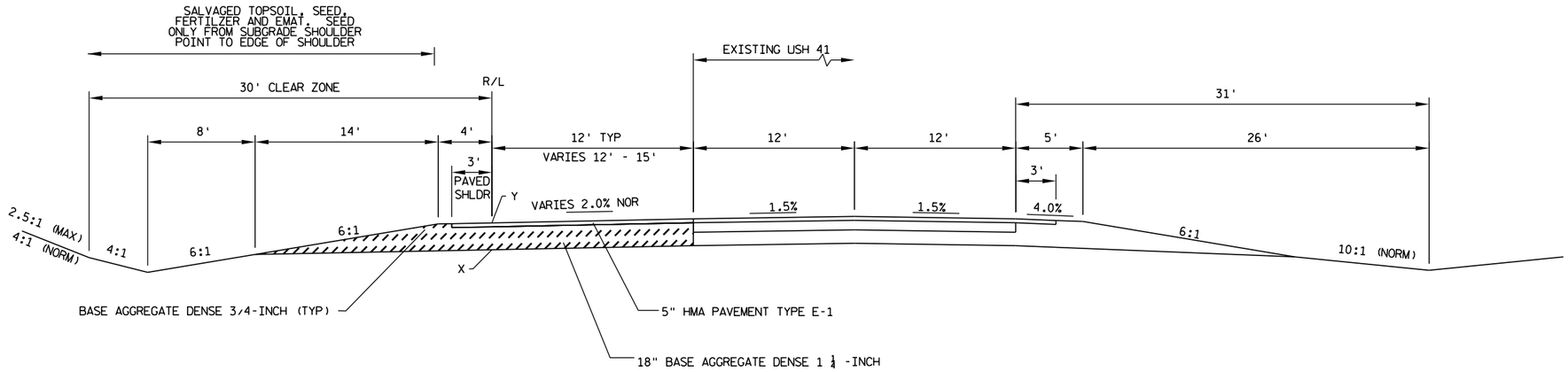
SB ON RAMP - STA. 721+90 - STA. 727+50

X POINT REFERRED TO ON CROSS SECTION
Y POINT REFERRED TO ON PROFILE

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	FINISHED TYPICAL SECTIONS	SHEET 10 E

FILE NAME : L:\Projects\11609\Dwg\020301_ts.dgn PLOT DATE : 07/24/13 PLOT BY : tmoyer PLOT NAME : _____ PLOT SCALE : 1:10

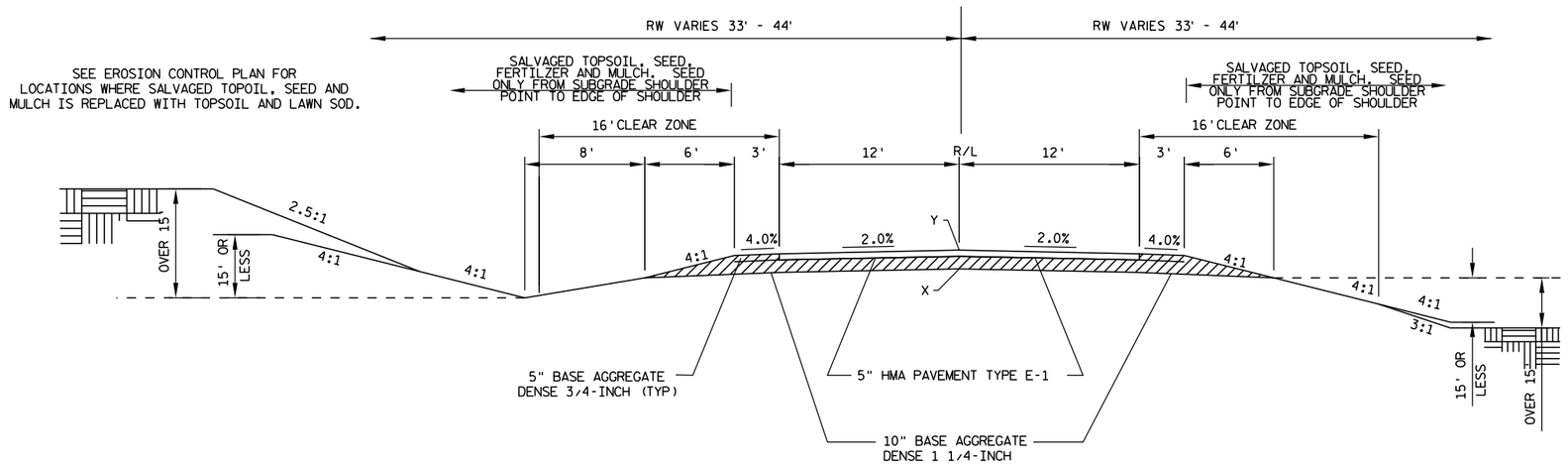
WISDOT/CADDS SHEET 42



FINISHED TYPICAL SECTION

RAMP GORES AND TAPERS

SB OFF RAMP - STA. 817+00 - STA. 828+25.70
SB ON RAMP - STA. 700+00 - STA. 716+50
NB OFF RAMP - ROTATED 180 DEGREES - STA. 500+00 - STA. 511+00
NB ON RAMP - ROTATED 180 DEGREES- STA. 611+00 - 626+64.62



FINISHED TYPICAL SECTION

ARTHUR ROAD & CTH NN

STA. 268+00.00 - STA. 272+02.75

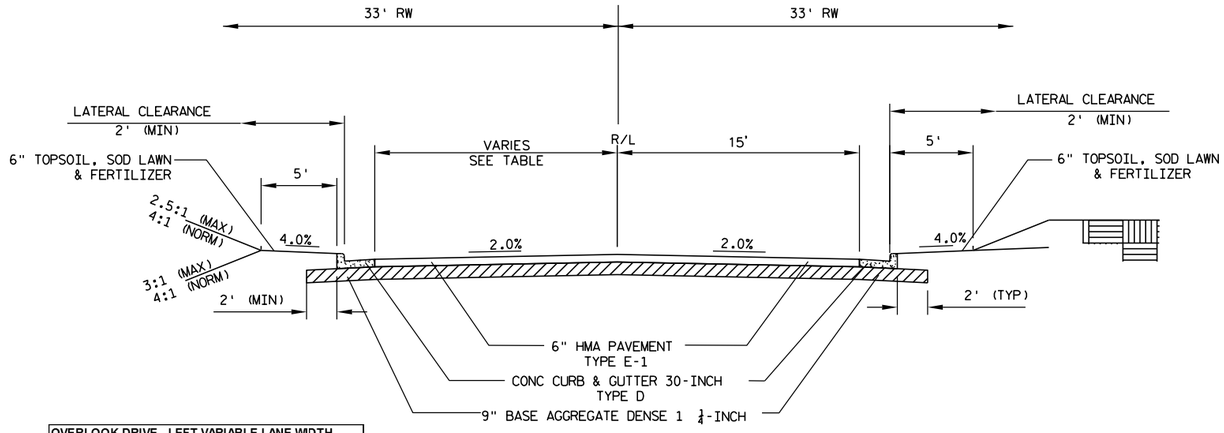
SEE EROSION CONTROL PLAN FOR LOCATIONS WHERE SALVAGED TOPOIL, SEED AND MULCH IS REPLACED WITH TOPSOIL AND LAWN SOD.

X POINT REFERRED TO ON CROSS SECTION
Y POINT REFERRED TO ON PROFILE

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	FINISHED TYPICAL SECTIONS	SHEET 11 E

FILE NAME : L:\Projects\11609\Dwg\020301_ts.dgn PLOT DATE : 07/24/13 PLOT BY : tmoyer PLOT NAME : _____ PLOT SCALE : 1:10

WISDOT/CADDS SHEET 42

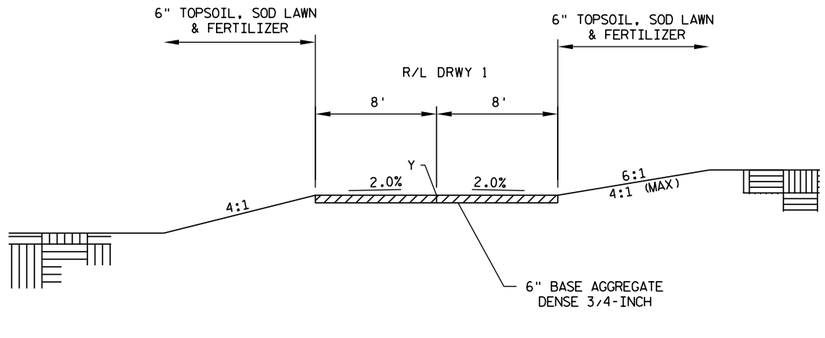


OVERLOOK DRIVE - LEFT VARIABLE LANE WIDTH		
FROM	TO	WIDTH
901+39	901+63.13	22'
901+63.13	901+73.13	TAPER FROM 22' TO 20'
901+73.13	903+25.92	20'
903+25.92	903+76.02	TAPER FROM 20' TO 15'
903+76.02	905+21	15'

FINISHED TYPICAL SECTION

OVERLOOK DRIVE

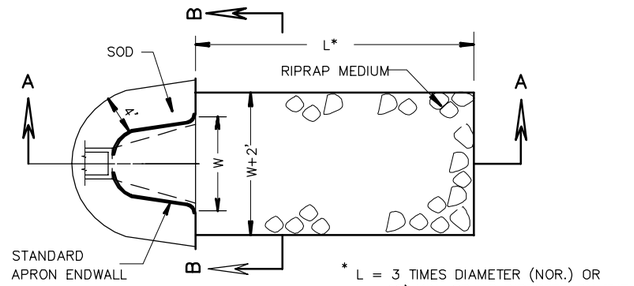
STA. 901+39 – STA. 905+21



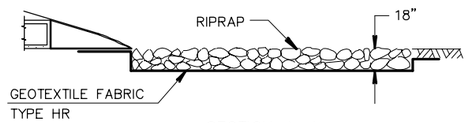
FINISHED TYPICAL SECTION

DRIVEWAY AT STA. 168+00

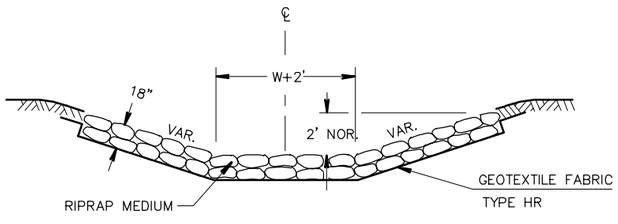
X POINT REFERRED TO ON CROSS SECTION
Y POINT REFERRED TO ON PROFILE
① SEED & FERTILIZE
② SALVAGED TOPSOIL & MULCH



* L = 3 TIMES DIAMETER (NOR.) OR 10' MIN. OR AS DIRECTED BY THE ENGINEER

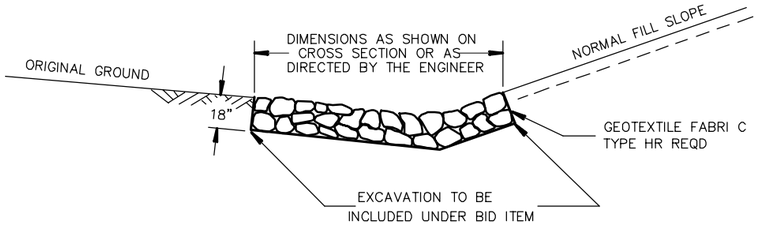


SECTION A–A



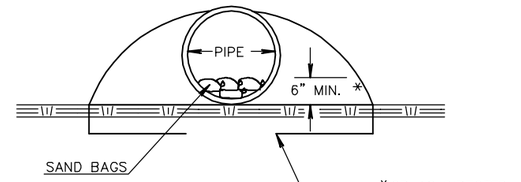
SECTION B–B

RIPRAP AND GEOTEXTILE FABRIC DETAIL AT APRON ENDWALLS



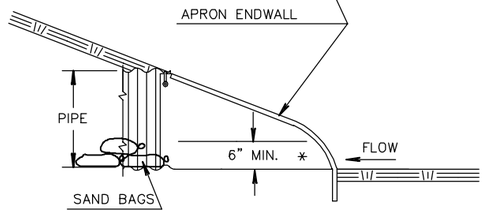
DETAIL FOR RIPRAP MEDIUM IN DITCHES

ESTIMATED BAG SIZE 24"X12"X6"	
PIPE SIZE	ESTIMATED NUMBER OF ROCK BAGS
12-INCH	1
15-INCH	2
18-INCH	2
14X23-INCH	3
24-INCH	3
30-INCH	5
36-INCH	7
42-INCH	8



END VIEW

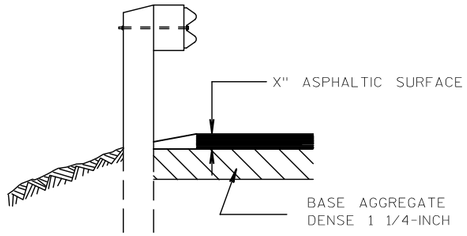
*OR AS DIRECTED BY THE ENGINEER

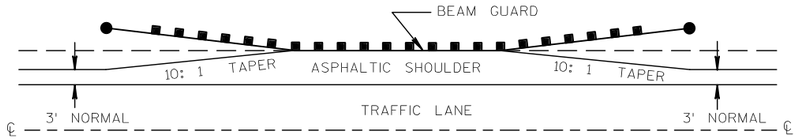


SIDE VIEW

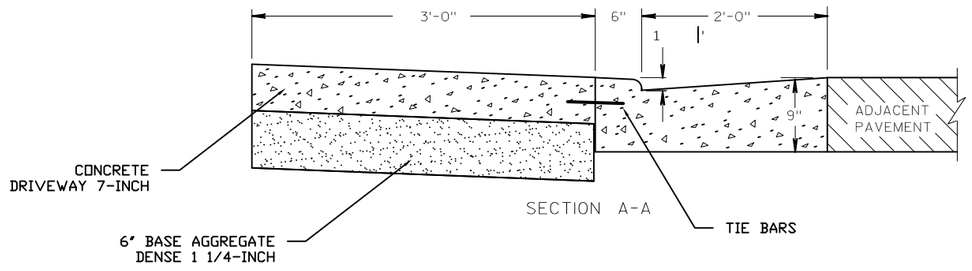
CULVERT PIPE DITCH CHECK

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CONSTRUCTION DETAILS	SHEET 13	E

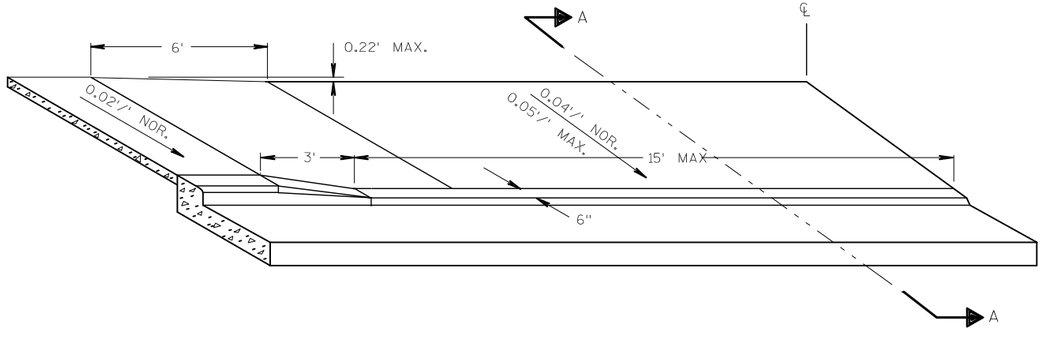




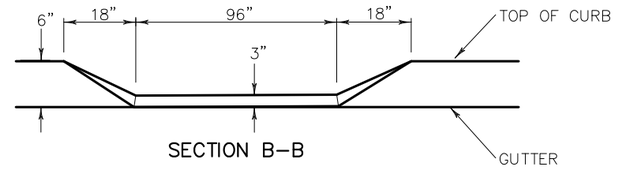
DETAIL FOR ASPHALTIC SHOULDER AT BEAM GUARD



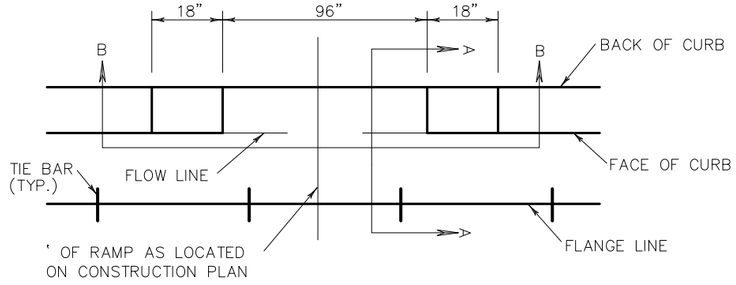
SECTION A-A



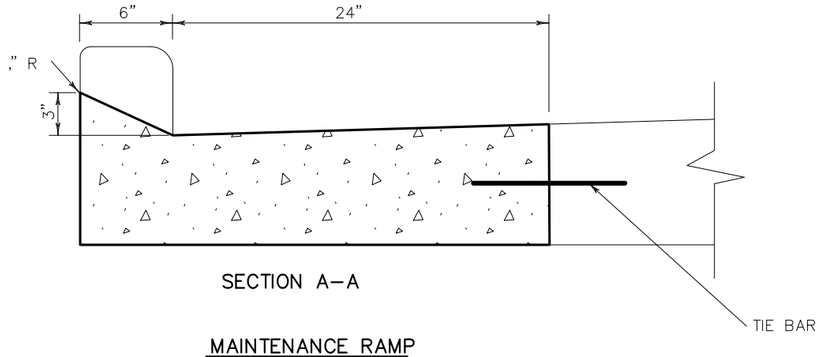
ENTRANCE (HALF SECTION)



SECTION B–B



PLAN VIEW



SECTION A–A

MAINTENANCE RAMP

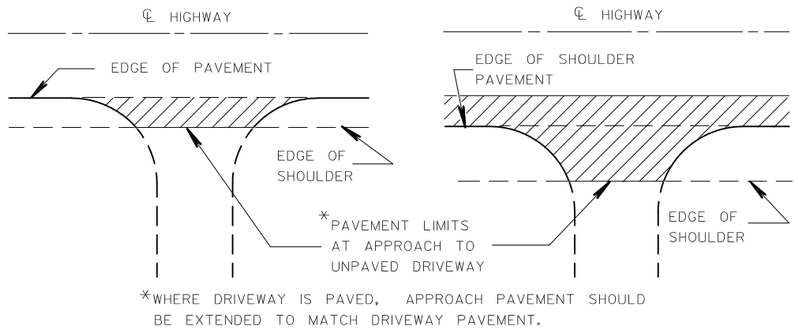
LOCATIONS AS NOTED ON THE PLANS

NOTE: PAID FOR AS CONCRETE CURB AND GUTTER, TYPE A OR D, WHERE TYPE A REQUIRES TIE BARS. MEASUREMENT FOR PAYMENT SHALL BE TAKEN ALONG THE GUTTER LINE.

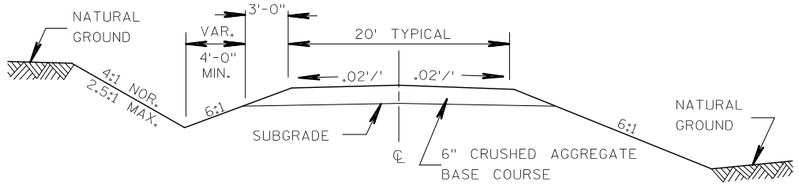
2

DRIVEWAY WIDTHS

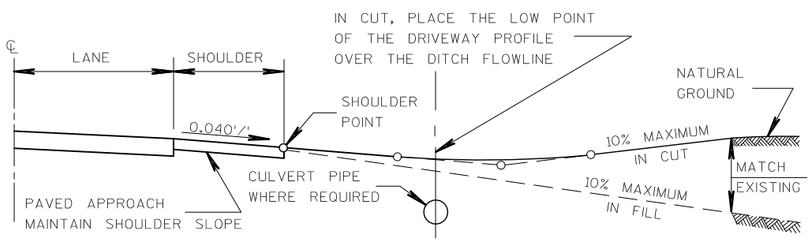
COMMERCIAL - 35'
RESIDENTIAL - 12' MIN, 24' MAX
MATCH EXISTING WIDTH AT TIE IN POINT.



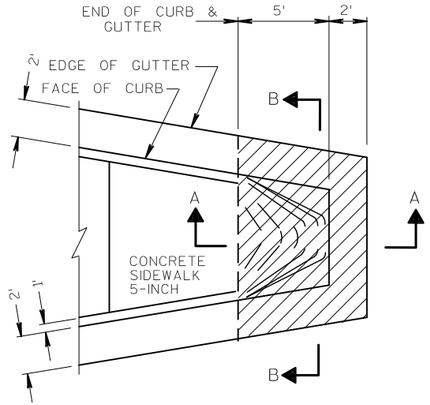
RURAL DRIVEWAY INTERSECTION DETAIL

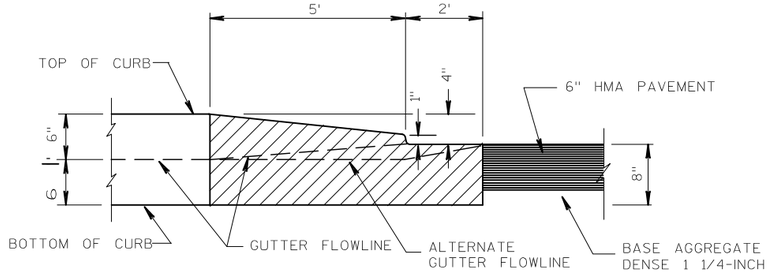


TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE

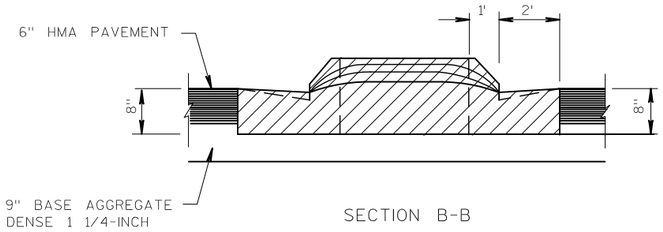


TYPICAL DRIVEWAY PROFILES



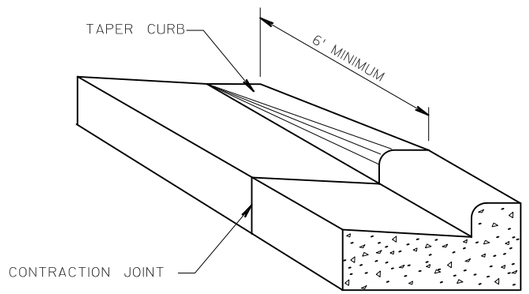


SECTION A-A

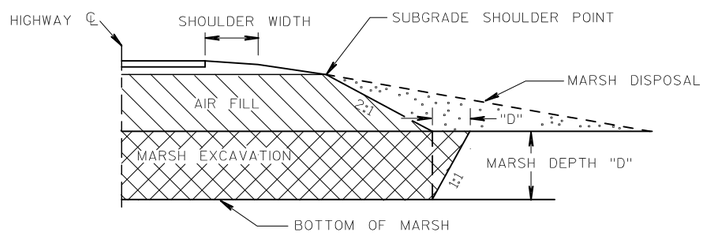


SECTION B-B

CONCRETE MEDIAN NOSE DETAIL

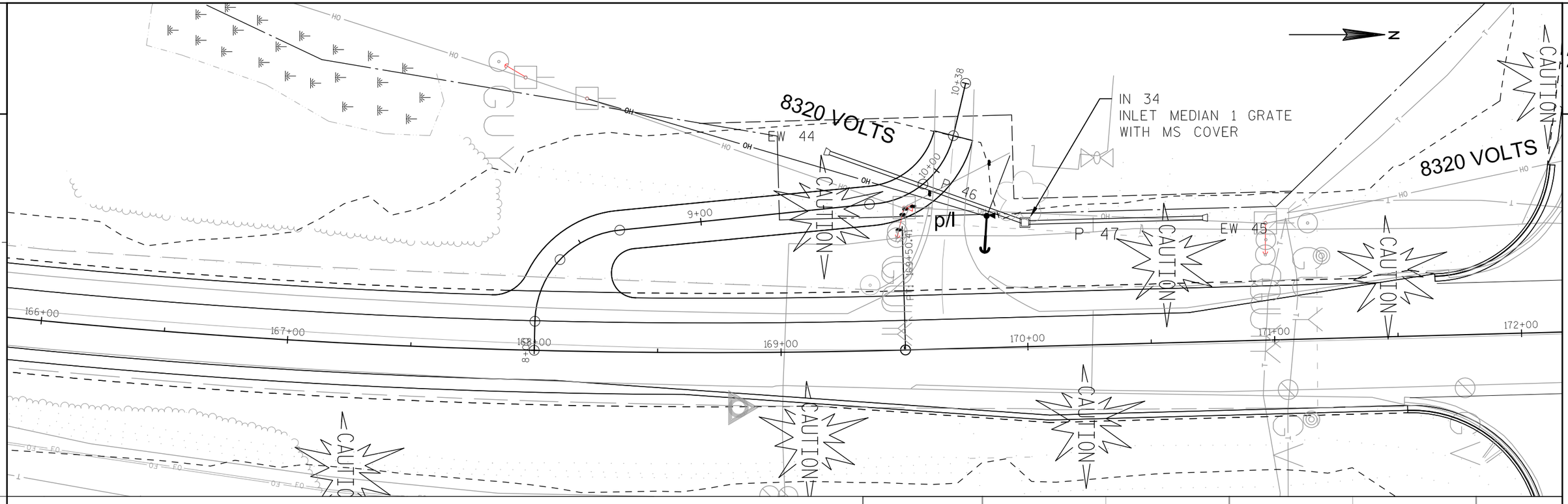


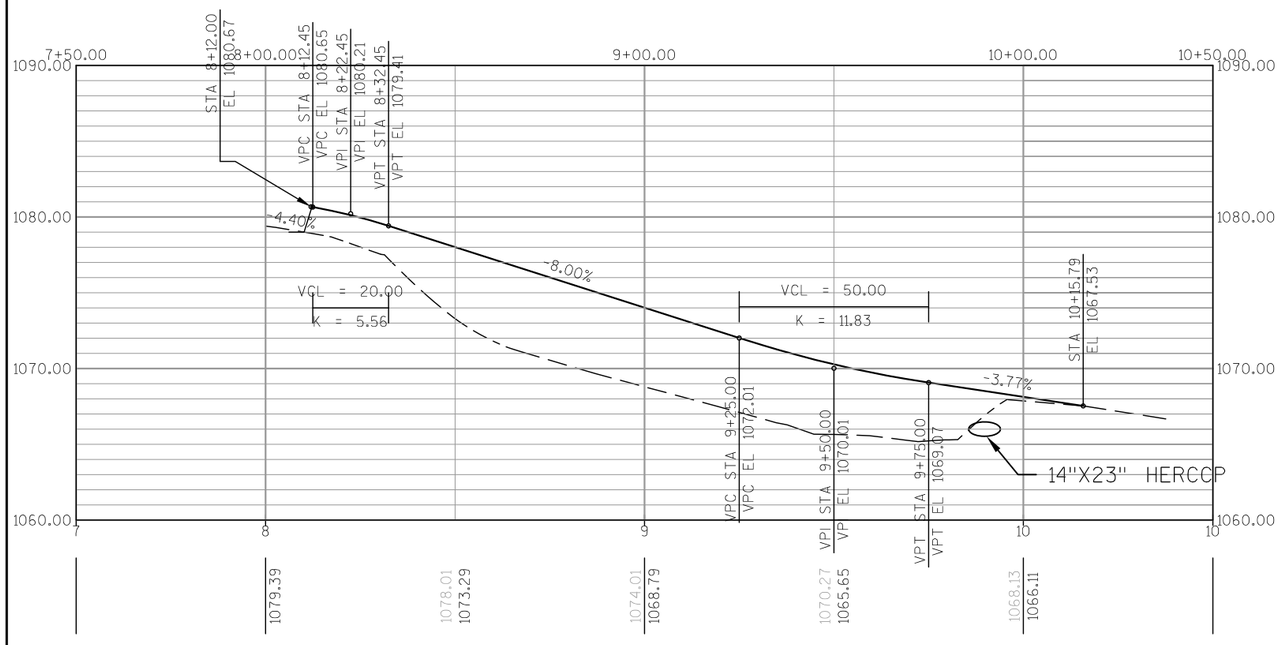
DETAIL OF CURB & GUTTER TERMINI

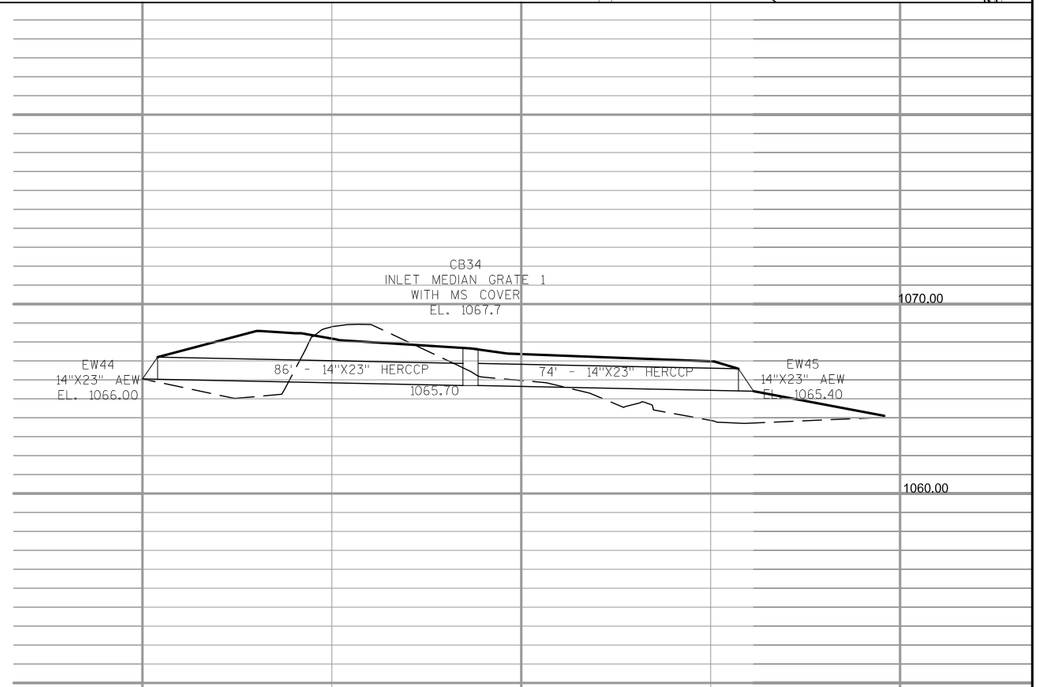


TYPICAL MARSH EXCAVATION

2





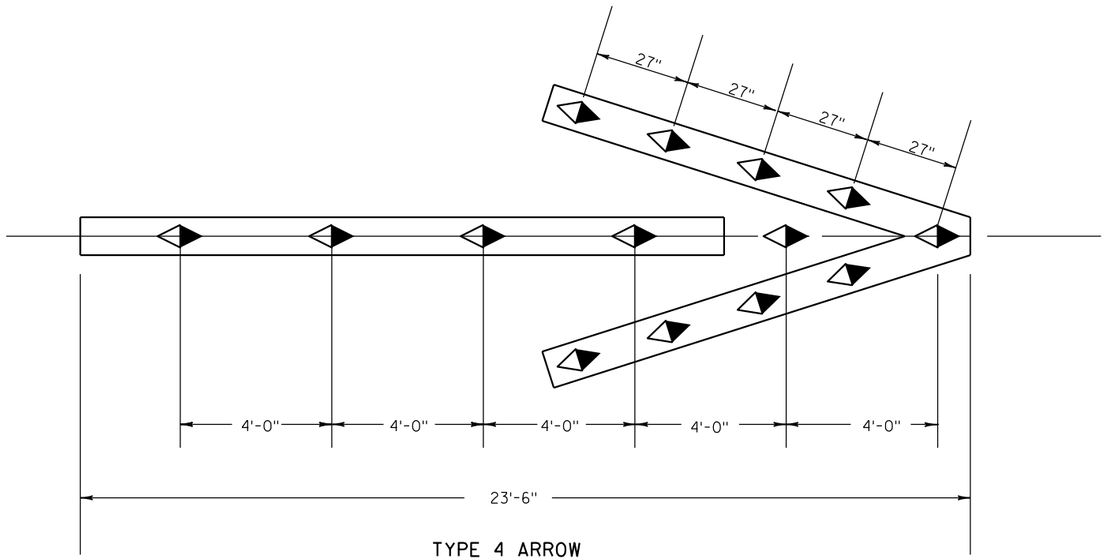


PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CONSTRUCTION DETAIL: DRIVEWAY AND CULVERT AT 168+00	SHEET 16	E

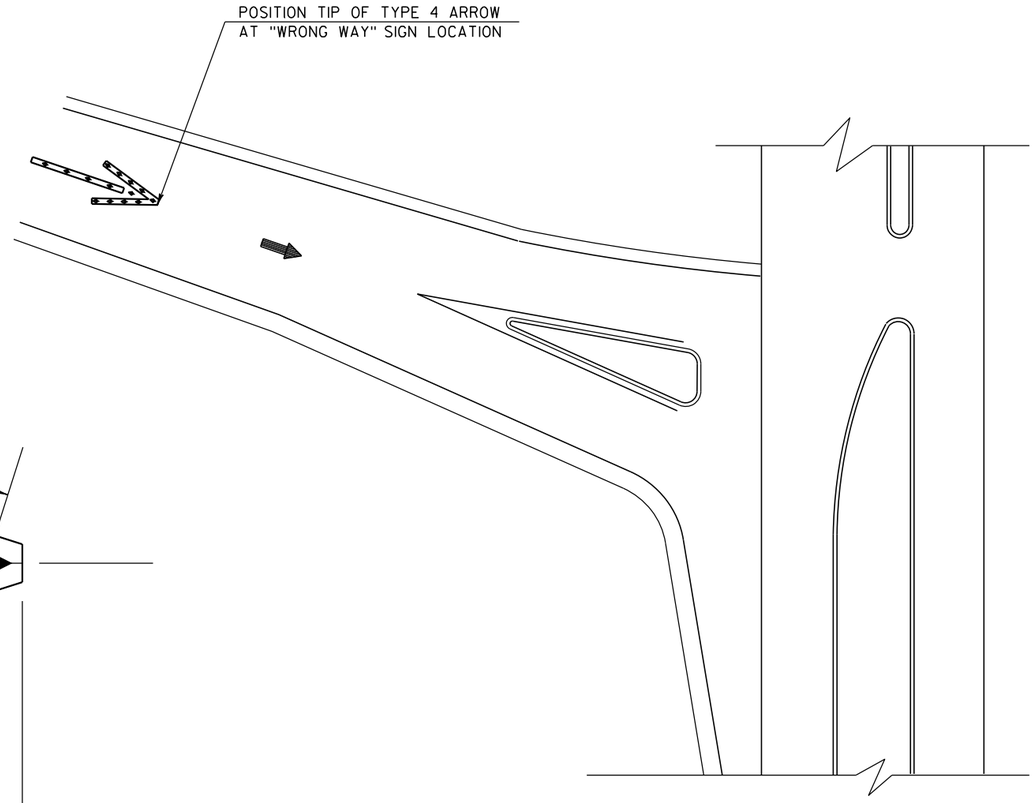
2

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CONSTRUCTION DETAIL: PROPOSED POND	SHEET 17	E

2



TYPE 4 ARROW
NEW INSTALLATION



EXIT RAMP
PLAN VIEW

GENERAL NOTES

MARKER REFLECTORS INSTALLED IN TYPE 4 ARROWS BEFORE APPLICATION OF THE ARROW MARKING MATERIAL SHALL BE MASKED TO PREVENT COATING.

MARKERS SHALL NOT BE LOCATED DIRECTLY OVER LONGITUDNAL JOINTS. PLACE MARKERS ADJACENT TO THE JOINT LINE TO AVOID TEMPERATURE AND SHRINKAGE AND / OR BREAKAGE OF CONCRETE.

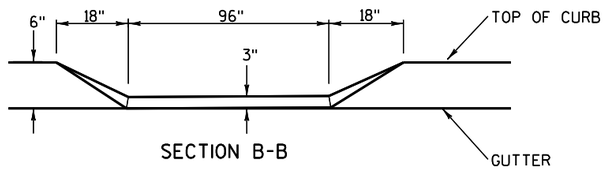
LEGEND

TWO WAY REFLECTOR (OPAQUE WHITE / REFLECTIVE RED REFLECTOR)

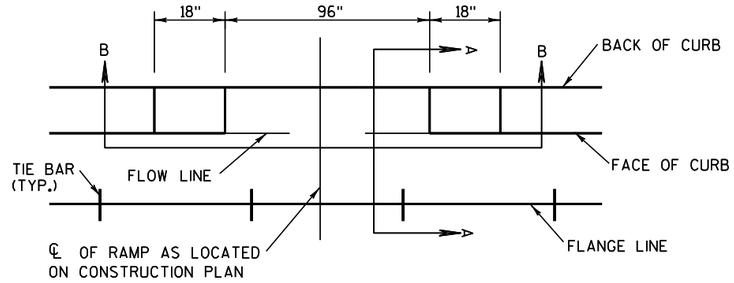
DIRECTION OF TRAVEL

(RAMPS & ARROWS)

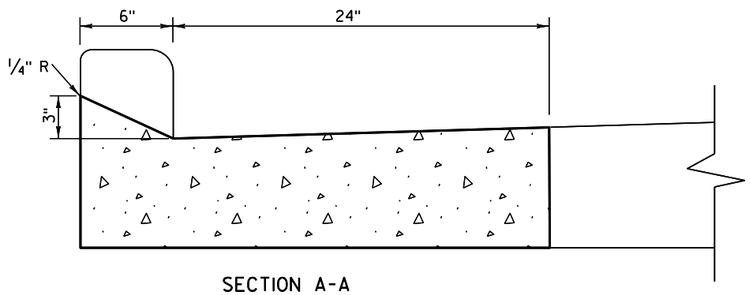
2



SECTION B-B



PLAN VIEW



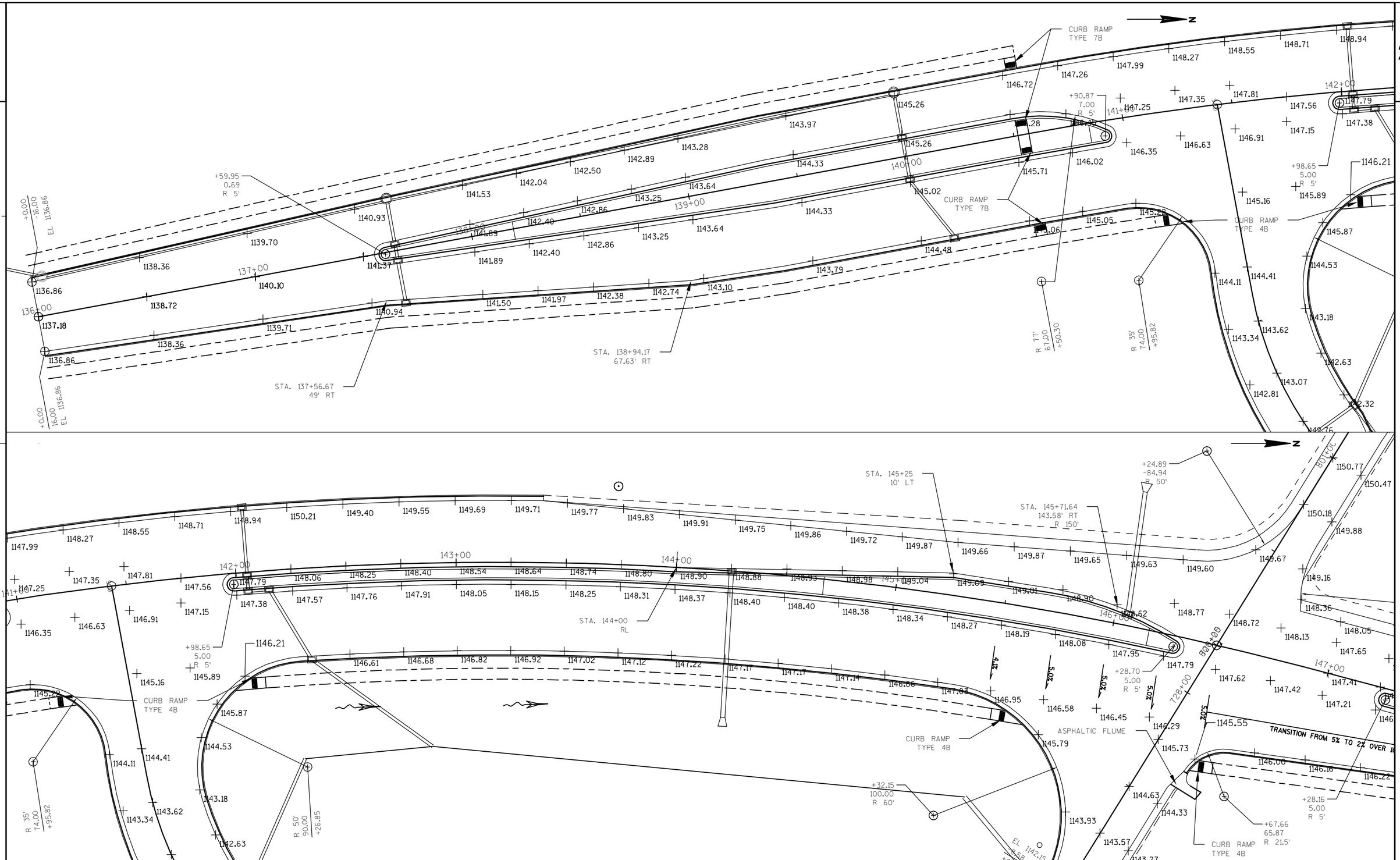
SECTION A-A

MAINTENANCE RAMP

LOCATIONS AS NOTED ON THE PLANS

NOTE: PAID FOR AS CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D. MEASUREMENT FOR PAYMENT SHALL BE TAKEN ALONG THE GUTTER LINE.

2



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PAVEMENT GRADES: STH 144	SHEET 20	E

2

80TH

1150.72 1150.47 1150.18 1149.88 1149.67 1149.16

+28.13
-40.00
R 50'

STA. 148+52
CONCRETE PAVEMENT
APPROACH SLAB

1148.36 1147.30 1146.90 1146.17 1145.88 1145.54 1145.16

1148.72 1148.13 1147.65 1147.16 1146.92 1146.41 1146.12 1145.78 1145.40

80TH

147+00 148+00 149+00 150+00 151+00 152+00

1147.41 1147.06 1146.95 1146.65 1146.36 1146.02 1145.64

1147.62 1147.42 1147.21 1146.96 1146.71 1146.41 1146.12 1145.78 1145.44

TRANSITION FROM 5% TO 2% OVER 100'

5.0%

2.0%

1145.55 1145.28 1145.96 1145.67 1145.08 1144.99

1146.00 1146.16 1146.22

+28.16
5.00
R 5'

147+67.30
32.5' RT

REVERSE SLOPE
CURB AND GUTTER

+67.66
65.87
R 21.5'

ASPHALTIC FLUME

44.33

1144.47 1144.79 1144.71

1140.24 1140.60

1139.45 1138.37 1137.25

1139.93 1138.85 1137.77

1139.69 1138.61 1137.53

1139.45 1138.37 1137.29

STA. 151+46
CONCRETE PAVEMENT
APPROACH SLAB

REVERSE SLOPE
CURB AND GUTTER

1131.70

1133.28 1132.54 1132.00

1133.66 1133.29

1134.06 1134.33 1133.80 1133.25 1132.70 1132.02 1131.42 1130.22 1129.02 1127.81 1126.43 1125.05 1123.68 1122.67

REVERSE SLOPE
CURB AND GUTTER

1134.87

1137.25 1136.13

+23.14
-4.87
R 5'

1135.42 1134.88

1137.53 1136.46

153+00

1137.77 1136.70 1135.62 1135.08 1134.54

1137.53 1136.46 1135.38 1134.84 1134.30

154+00

+13.55
-5.00
R 5'

1134.34

1133.77 1133.23 1132.63 1132.02 1130.82 1129.62 1128.41 1127.03 1125.65 1124.28 1123.19

155+00 156+00 157+00 158+00

1133.77 1133.23 1132.63 1132.02 1130.82 1129.62 1128.41 1127.03 1125.65 1124.28 1123.19

224+00

1137.29 1136.22 1135.14 1134.52 1133.94 1133.31 1132.85 1132.26 1131.70 1130.54 1129.34 1128.13 1126.75 1125.37 1124.00 1122.91

1133.59 1133.67 1133.89

EL 1133.38
-15.00
+64.76

+34.97
23.17
EL 1130.79

1133.06 1133.54

+35.25
82.17
R 50'

1132.53

STA. 157+65.80
35.32' LT

STA. 158+52

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PAVEMENT GRADES: STH 144	SHEET	E

FILE NAME : L:\PROJECTS\11609\DWG\021201_PD.DWG PLOT DATE : 9/3/2008 9:36 AM PLOT BY : MOYER, TIM PLOT NAME : ----------

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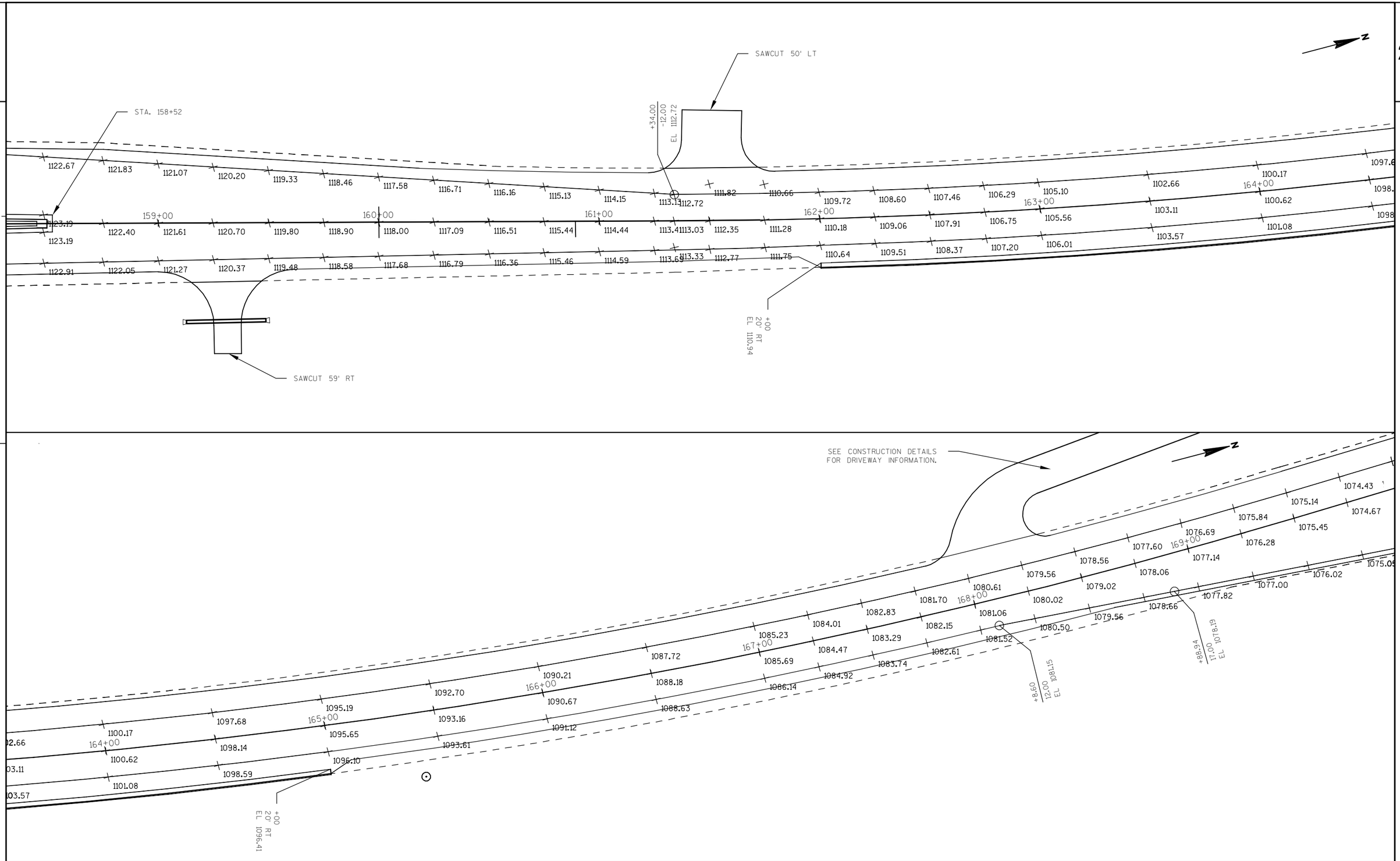
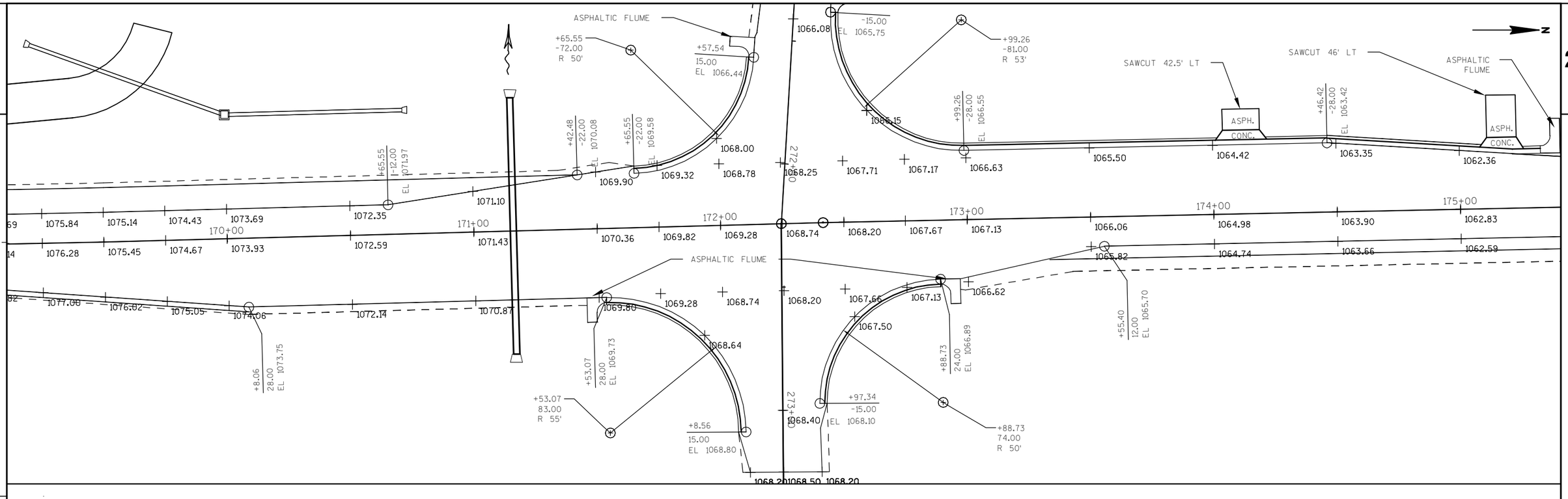
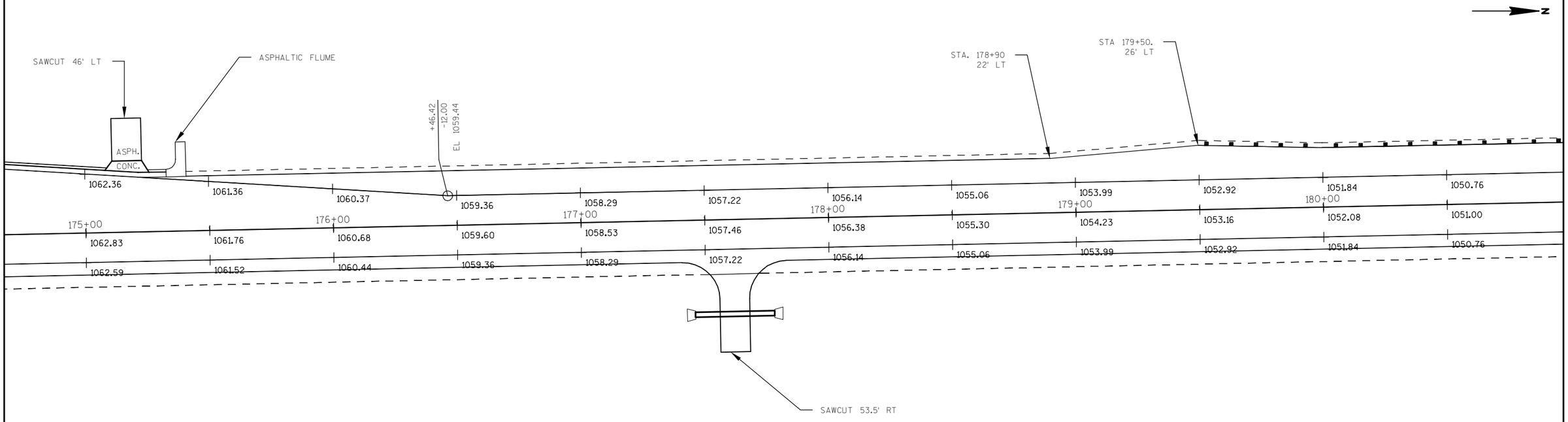


PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PAVEMENT GRADES: STH 144	SHEET -22	E





PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PAVEMENT GRADES: STH 144	SHEET	E

FILE NAME : L:\PROJECTS\11609\DWG\021201_PD.DWG PLOT DATE : 9/3/2008 9:36 AM PLOT BY : MOYER, TIM PLOT NAME : ----------

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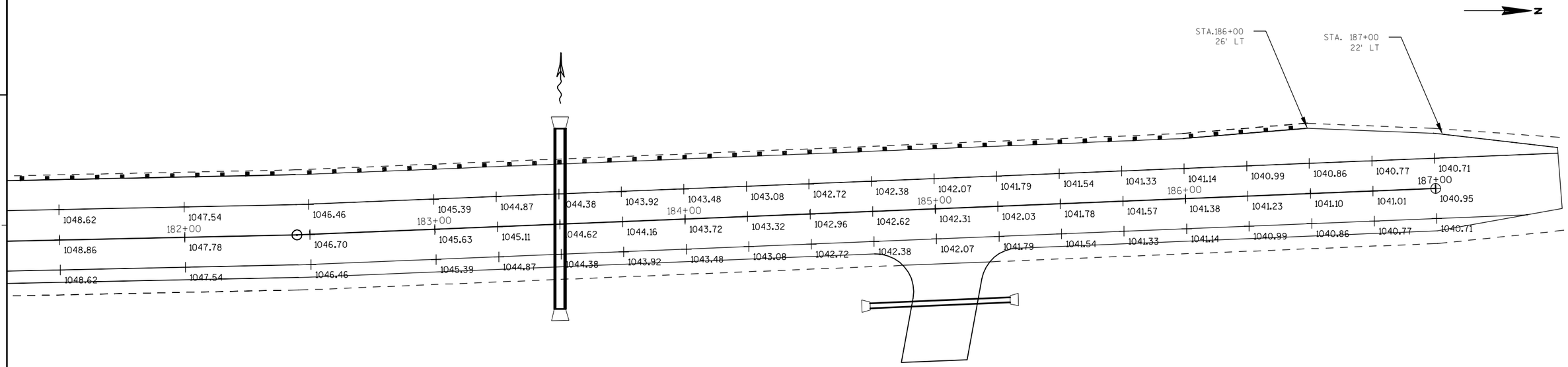
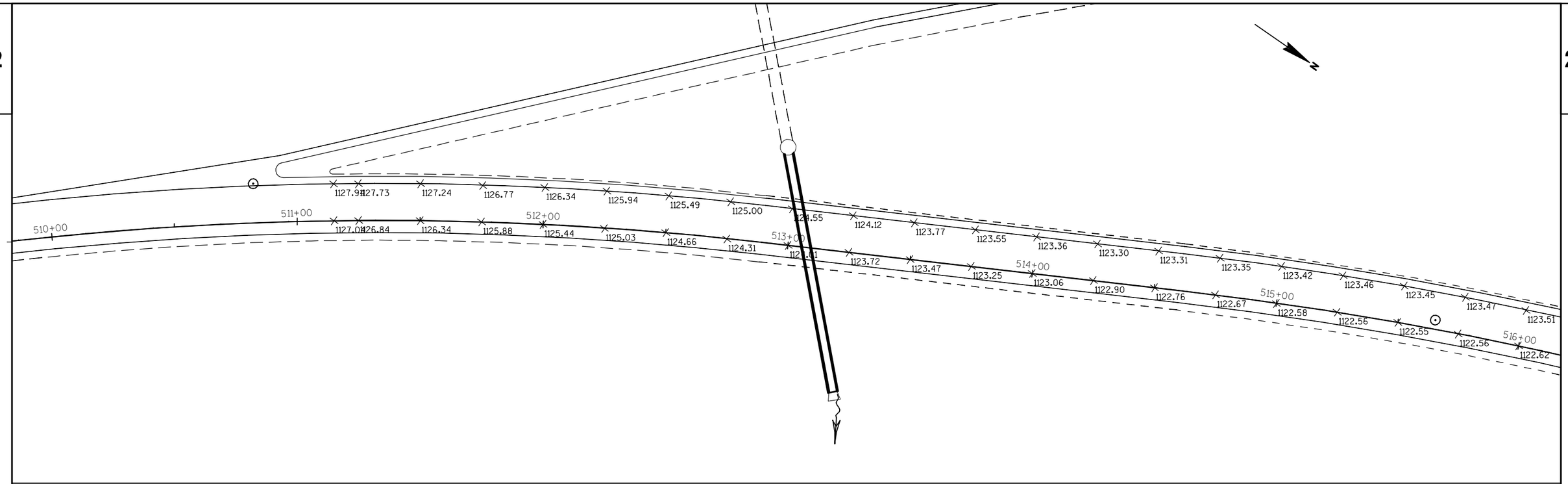
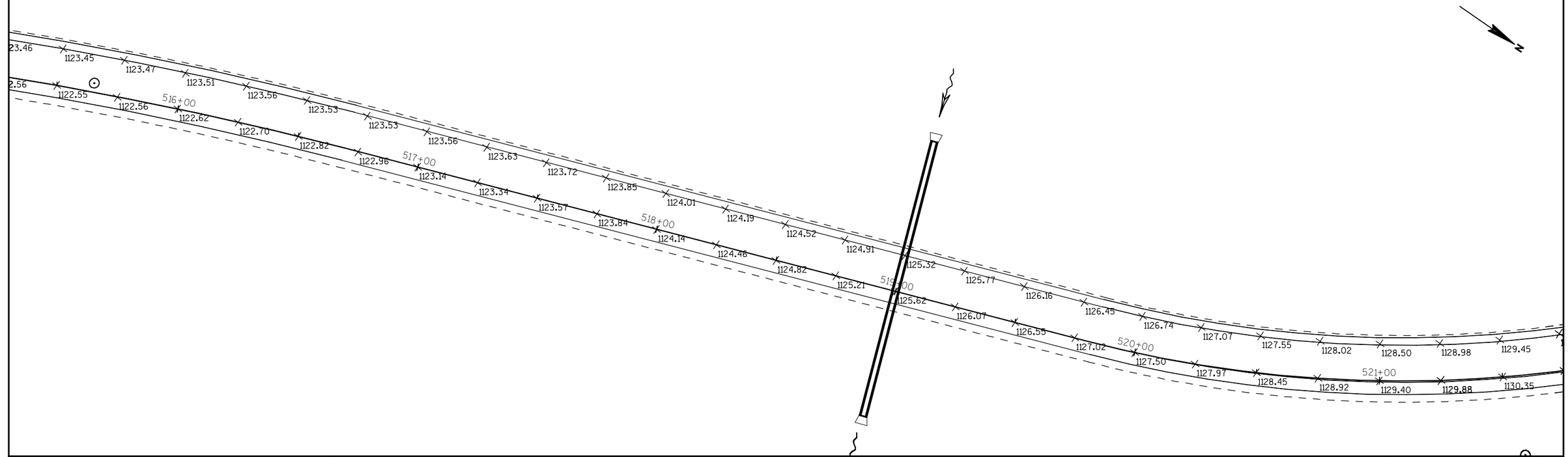


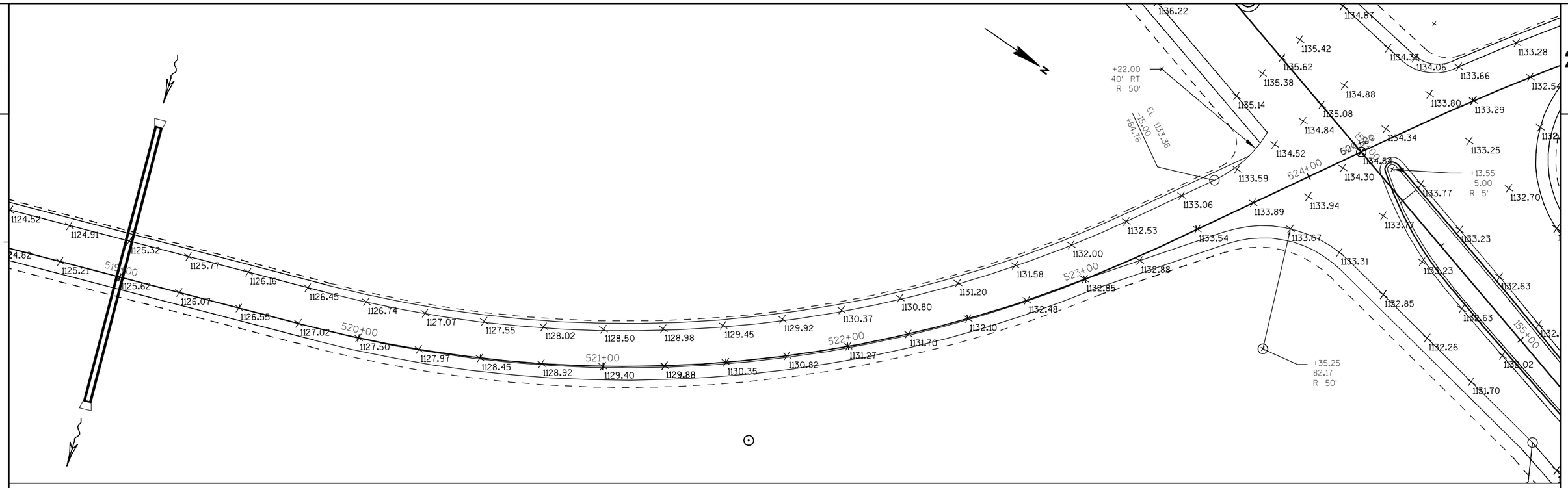
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PAVEMENT GRADES: STH 144	SHEET 24	E

2



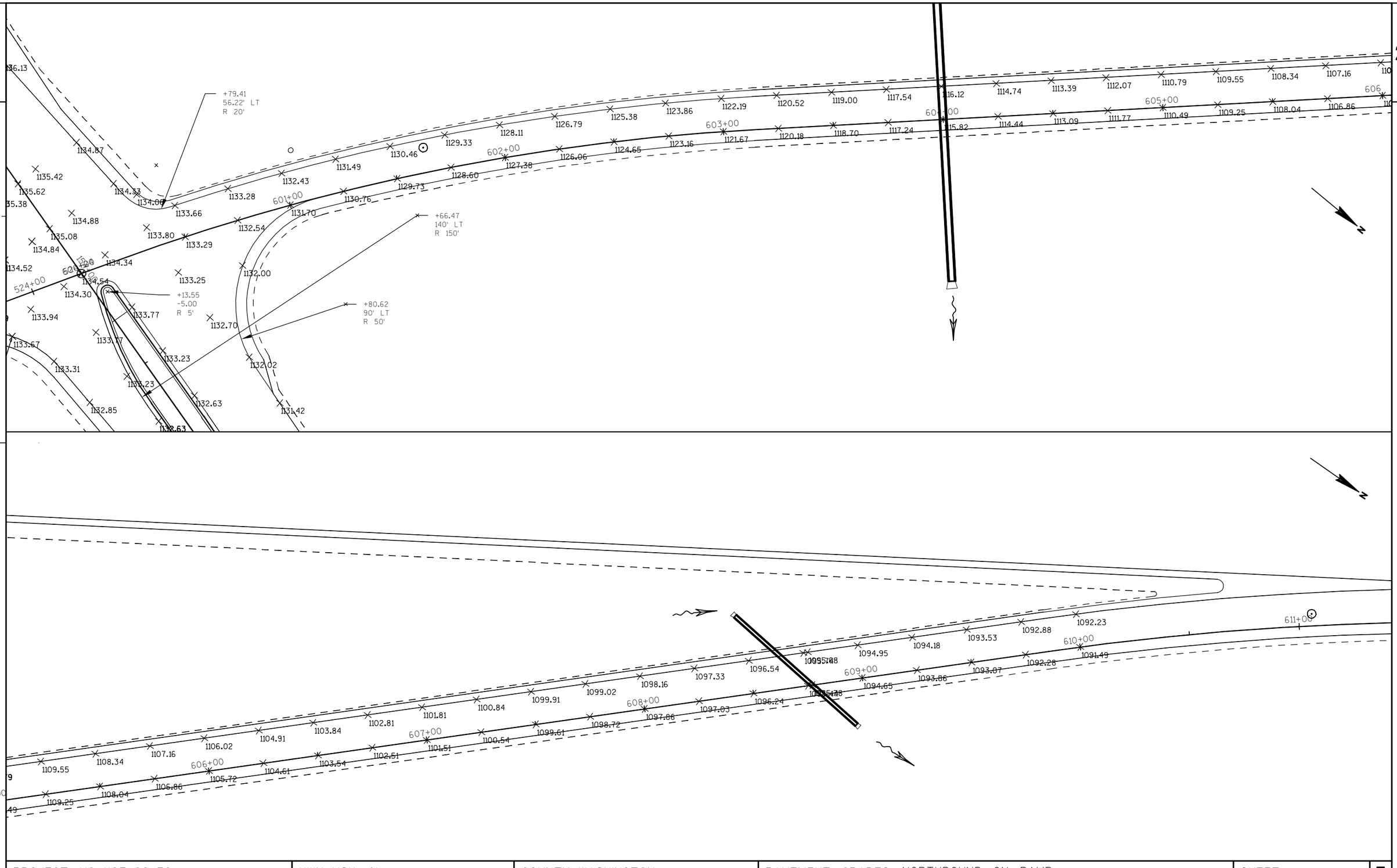


PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PAVEMENT GRADES: NORTHBOUND OFF RAMP	SHEET 25	E



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PAVEMENT GRADES: NORTHBOUND OFF RAMP	SHEET 26	E

2



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PAVEMENT GRADES: NORTHBOUND ON RAMP	SHEET	E

FILE NAME : L:\PROJECTS\11609\DWG\021201_PD.DWG PLOT DATE : 9/3/2008 9:36 AM PLOT BY : MOYER, TIM PLOT NAME : ----------

2

717+00 718+00 719+00 720+00 721+00 722+00 723+00 724+00 725+00 726+00 727+00 728+00

509+00

R 60'

+13.24
5.00
EL 1139.17

+84.67
9.58
EL 1142.15

+67.66
65.87
R 21.5'

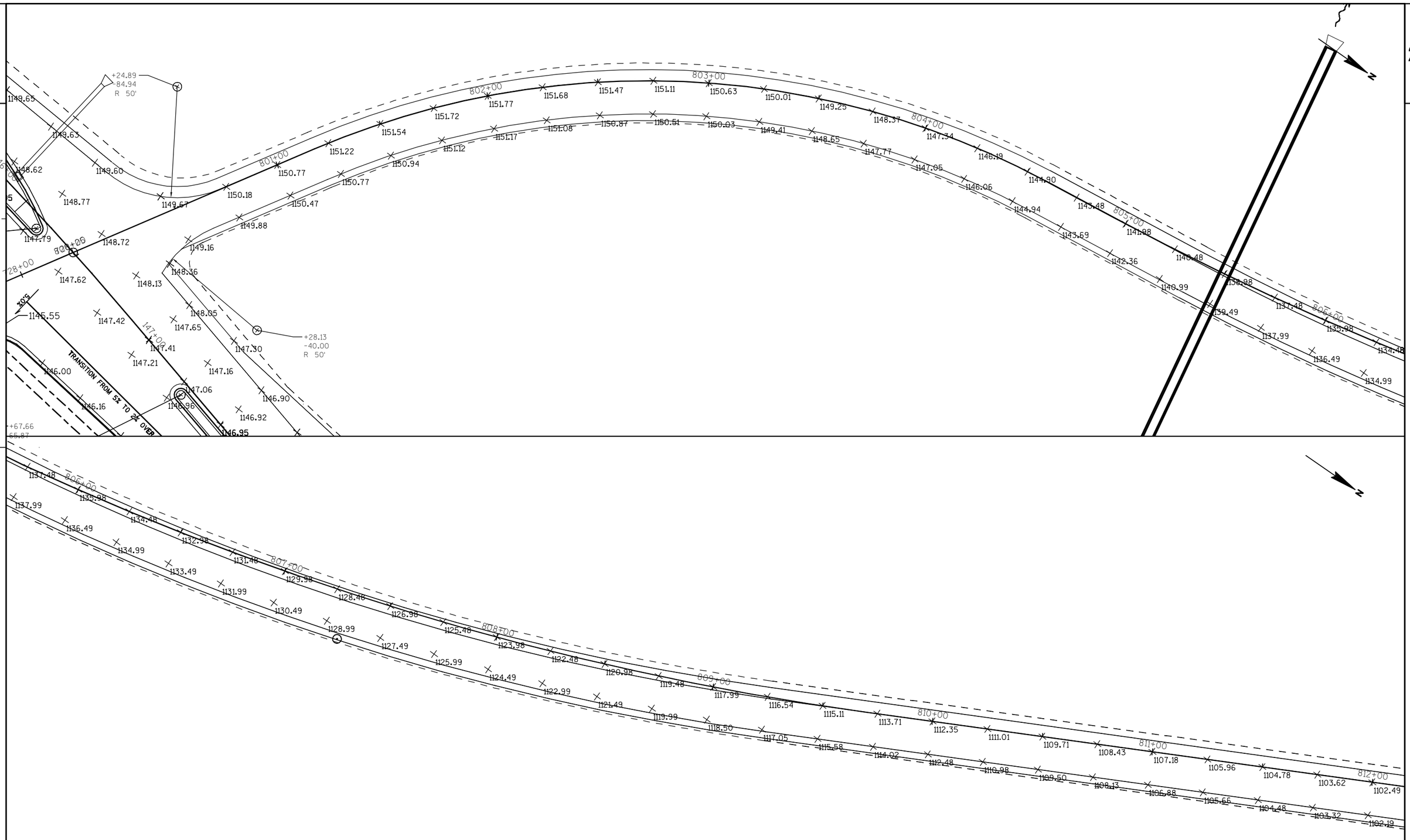
+28.70
5.00
R 5'

+28.16
5.00
R 5'

TRANSITION FROM

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PAVEMENT GRADES: SOUTHBOUND ON RAMP	SHEET 28	E

2


+24.89
-84.94
R 50'
1149.65
1149.63
1148.62
1149.60
1149.67
1148.77
1147.79
1148.72
1147.62
1148.13
1148.36
1149.16
1149.88
1150.18
1150.47
1150.77
1150.94
1151.12
1151.17
1151.08
1150.87
1150.51
1150.03
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1147.77
1147.05
1146.06
1144.94
1143.69
1142.36
1140.99
1139.49
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1136.49
1134.99
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1131.99
1130.49
1128.99
1127.49
1125.99
1124.49
1122.99
1121.49
1119.99
1118.50
1117.05
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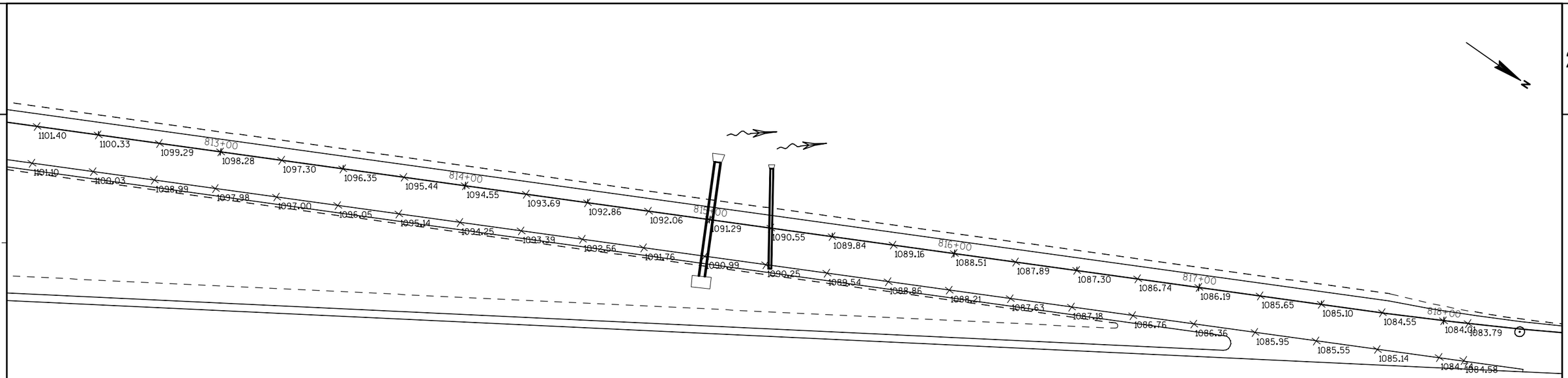
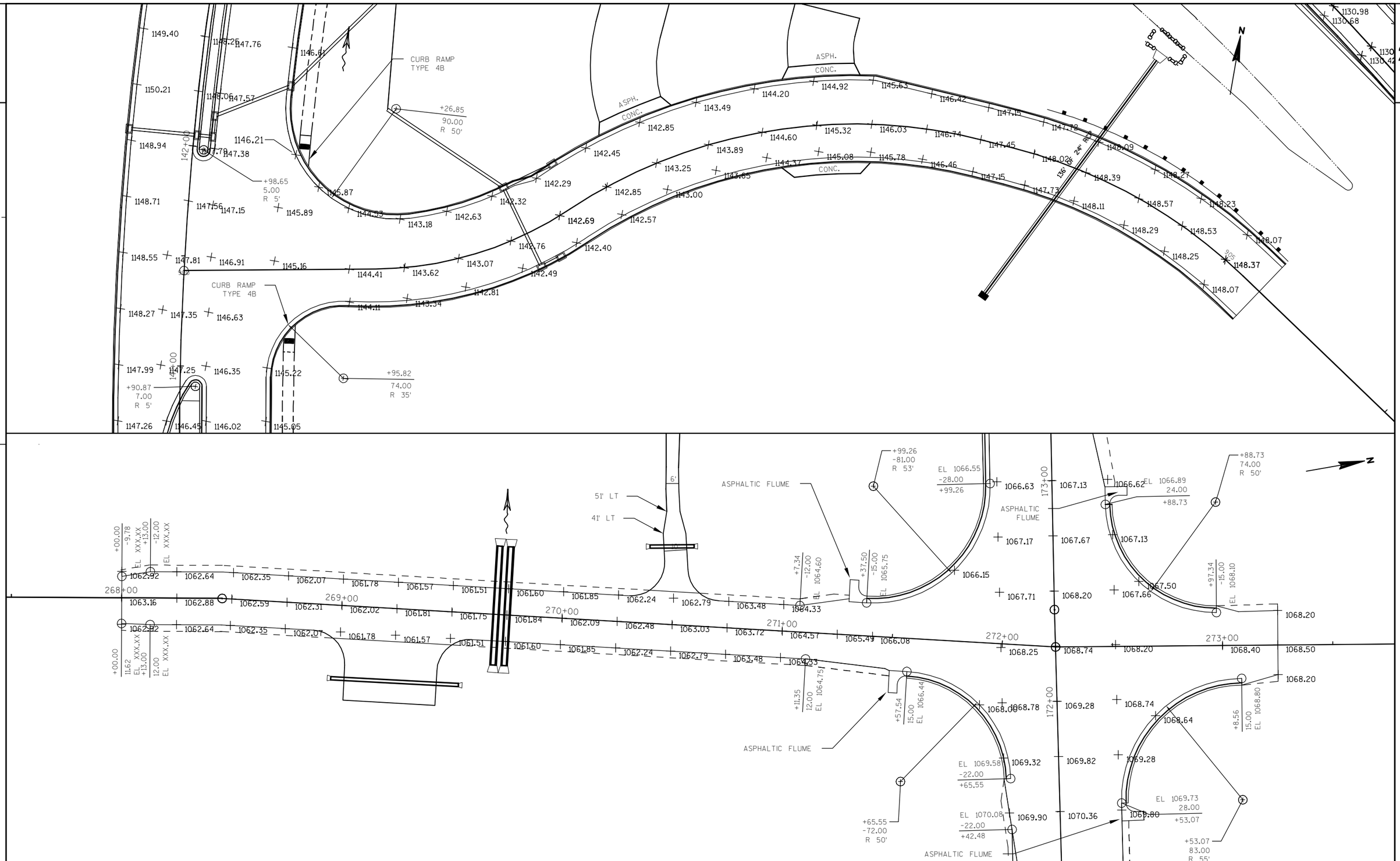
1150.18



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PAVEMENT GRADES: SOUTHBOUND OFF RAMP	SHEET 30	E



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PAVEMENT GRADES: OVERLOOK AND ARTHUR RD	SHEET 31	E

FILE NAME : L:\PROJECTS\11609\DWG\021201_PD.DWG PLOT DATE : 9/3/2008 9:36 AM PLOT BY : MOYER, TIM PLOT NAME : ----------

WISDOT/CADDS SHEET 42

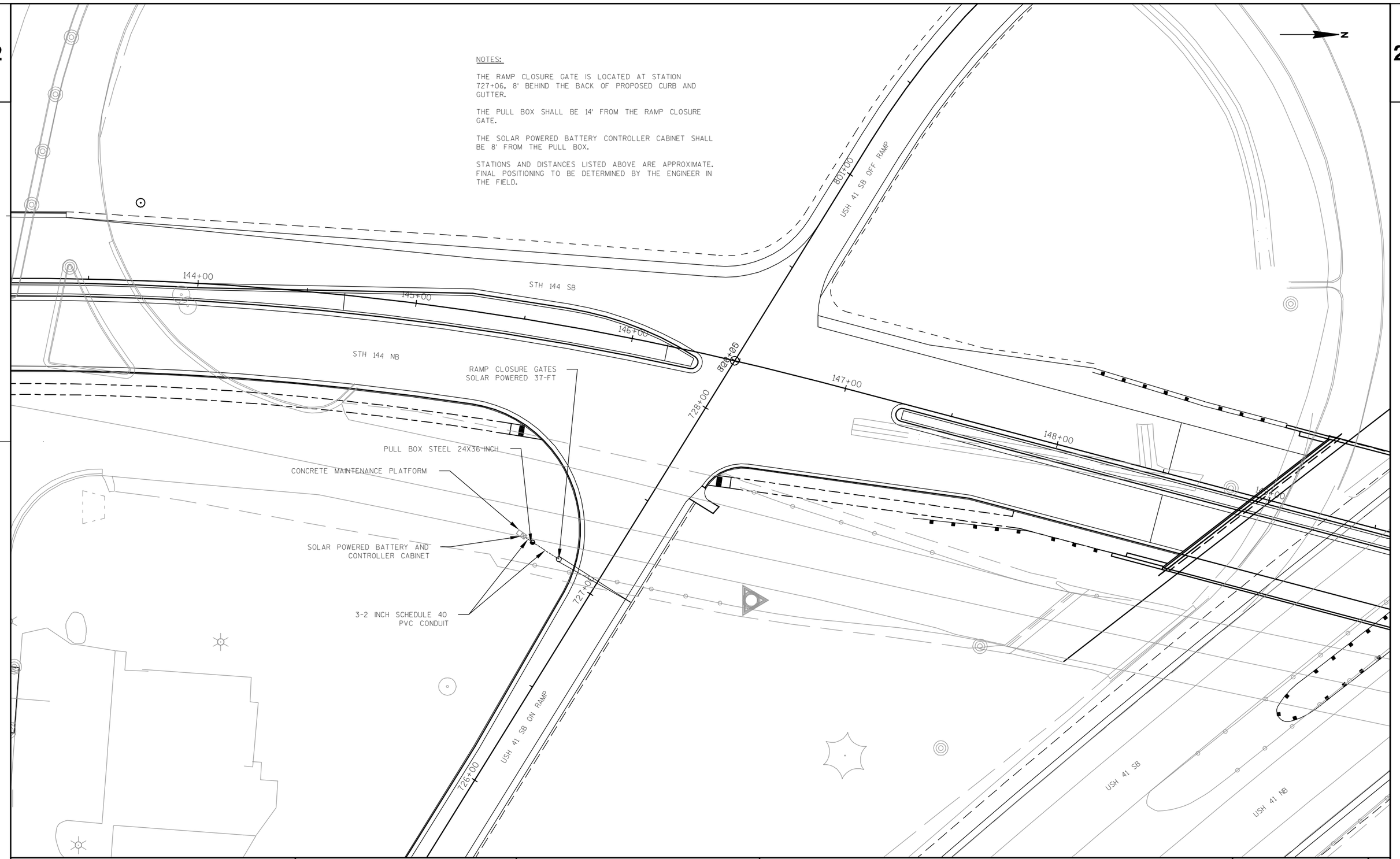
NOTES:

THE RAMP CLOSURE GATE IS LOCATED AT STATION 727+06, 8' BEHIND THE BACK OF PROPOSED CURB AND GUTTER.

THE PULL BOX SHALL BE 14' FROM THE RAMP CLOSURE GATE.

THE SOLAR POWERED BATTERY CONTROLLER CABINET SHALL BE 8' FROM THE PULL BOX.

STATIONS AND DISTANCES LISTED ABOVE ARE APPROXIMATE. FINAL POSITIONING TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

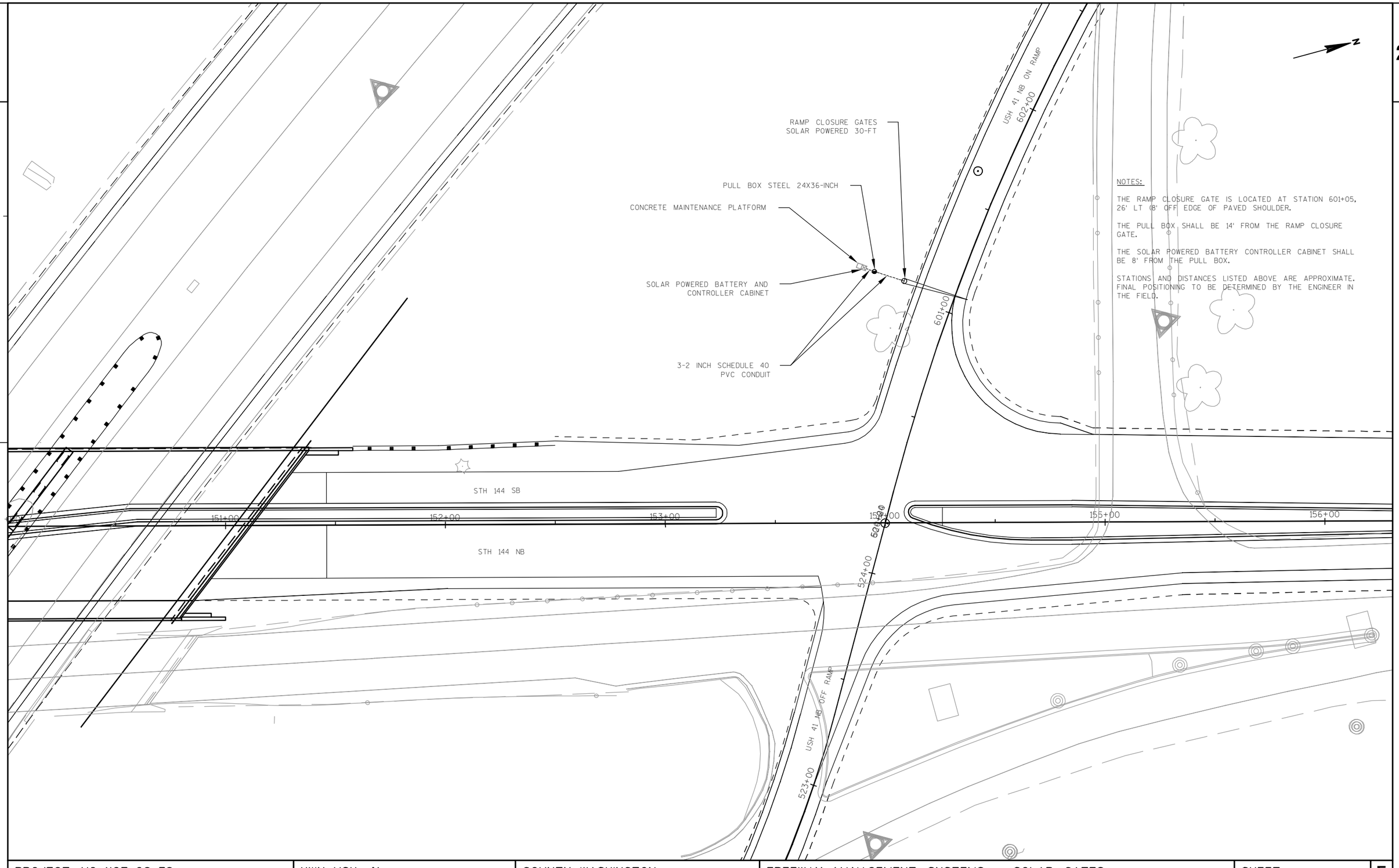


PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	FREEWAY MANAGEMENT SYSTEMS - SOLAR GATES	SHEET 32	E

FILE NAME : L:\PROJECTS\11609\DWG\021401_FM.DWG PLOT DATE : 9/3/2008 9:36 AM PLOT BY : MOYER, TIM PLOT NAME : ----------

WISDOT/CADDS SHEET 42

2



NOTES:

THE RAMP CLOSURE GATE IS LOCATED AT STATION 601+05, 26' LT (8' OFF EDGE OF PAVED SHOULDER.

THE PULL BOX SHALL BE 14' FROM THE RAMP CLOSURE GATE.

THE SOLAR POWERED BATTERY CONTROLLER CABINET SHALL BE 8' FROM THE PULL BOX.

STATIONS AND DISTANCES LISTED ABOVE ARE APPROXIMATE. FINAL POSITIONING TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	FREEWAY MANAGEMENT SYSTEMS - SOLAR GATES	SHEET	E

FILE NAME : L:\PROJECTS\11609\DWG\021401_FM.DWG PLOT DATE : 9/3/2008 9:36 AM PLOT BY : MOYER, TIM PLOT NAME : ----------

2

2

N

USH 41 NB

USH 41 SB

SB OFF RAMP

SB ON RAMP

STH 144

8320 VOLTS

120 VOLTS

aband cable

CAUTION

PROJECT NO:1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	INFIELD CONTOURS NB OFF AND SB ON	SHEET 34	E

FILE NAME : L:\PROJECTS\11609\DWG\021601_CM.DWG PLOT DATE : 9/3/2008 9:36 AM PLOT BY : MOYER, TIM PLOT NAME : _____ PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

2

610
NB ON RAMP
605
620
1130
520
1125
NB OFF RAMP
405
USH 41 NB
400
USH 41 SB
SB OFF RAMP
810
1105
395
1110
1115
1120
1125
1130
1135
1140
1145
805
STH 144
SB ON RAMP
800
8320 VOLTS
CAUTION

PROJECT NO:1107-02-79	HWY:USH 41	COUNTY:WASHINGTON	INFIELD CONTOURS SB OFF	SHEET 35	E

FILE NAME : L:\PROJECTS\11609\DWG\021602_CM.DWG PLOT DATE : 4/23/2013 11:37 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 100'_XREF

2

2

STH 144

CAUTION

SB OFF RAMP

SLOPE INTERCEPT

ROW

ROW

SLOPE INTERCEPT

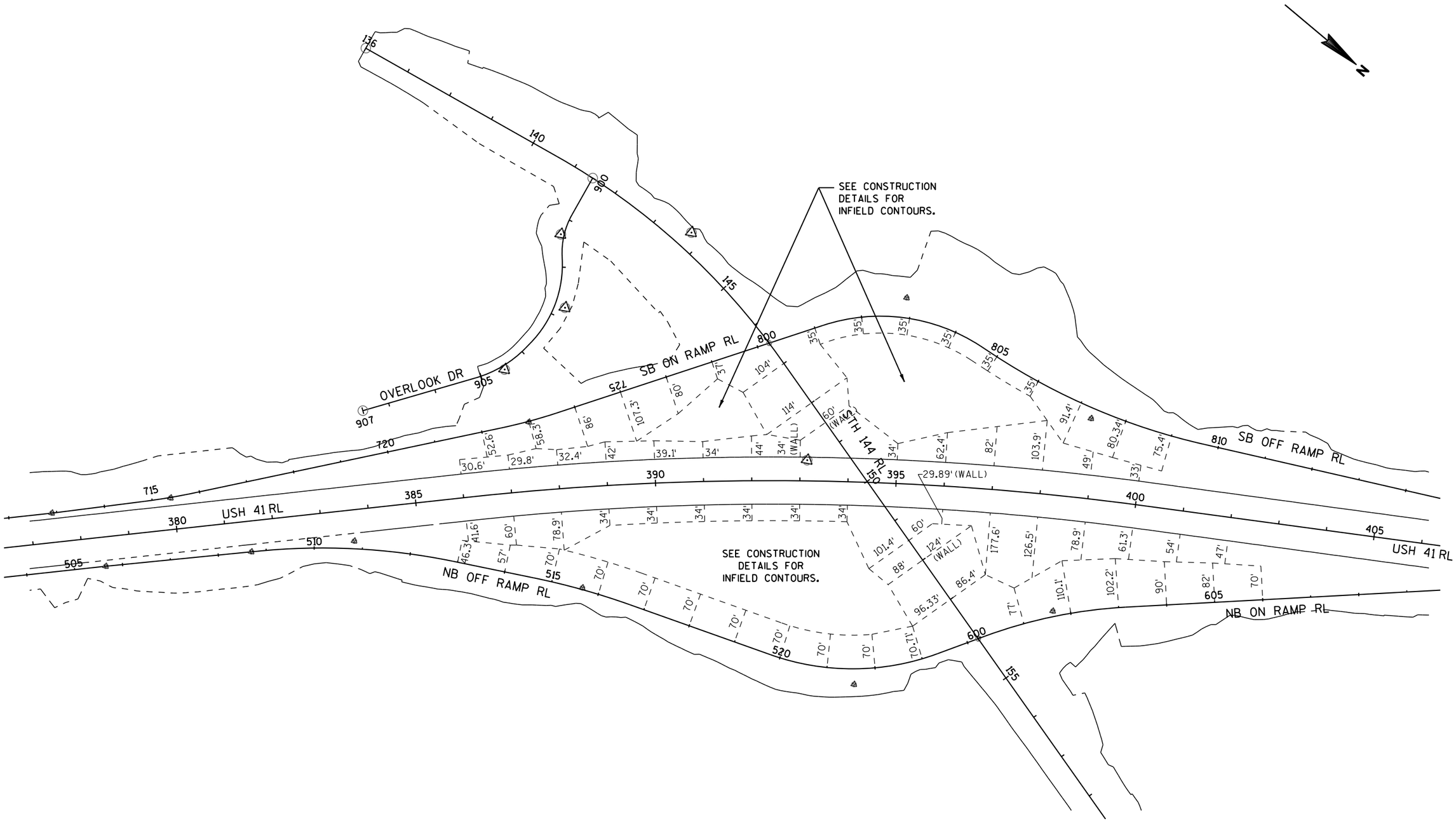
ROW

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	EXISTING SOUTHBOUND OFF RAMP REMOVAL	SHEET	E

FILE NAME : L:\PROJECTS\11609\DWG\021602_CM.DWG PLOT DATE : 4/23/2013 11:37 AM PLOT BY : MOYER, TIM PLOT NAME : _____ PLOT SCALE : 1" = 50'_XREF

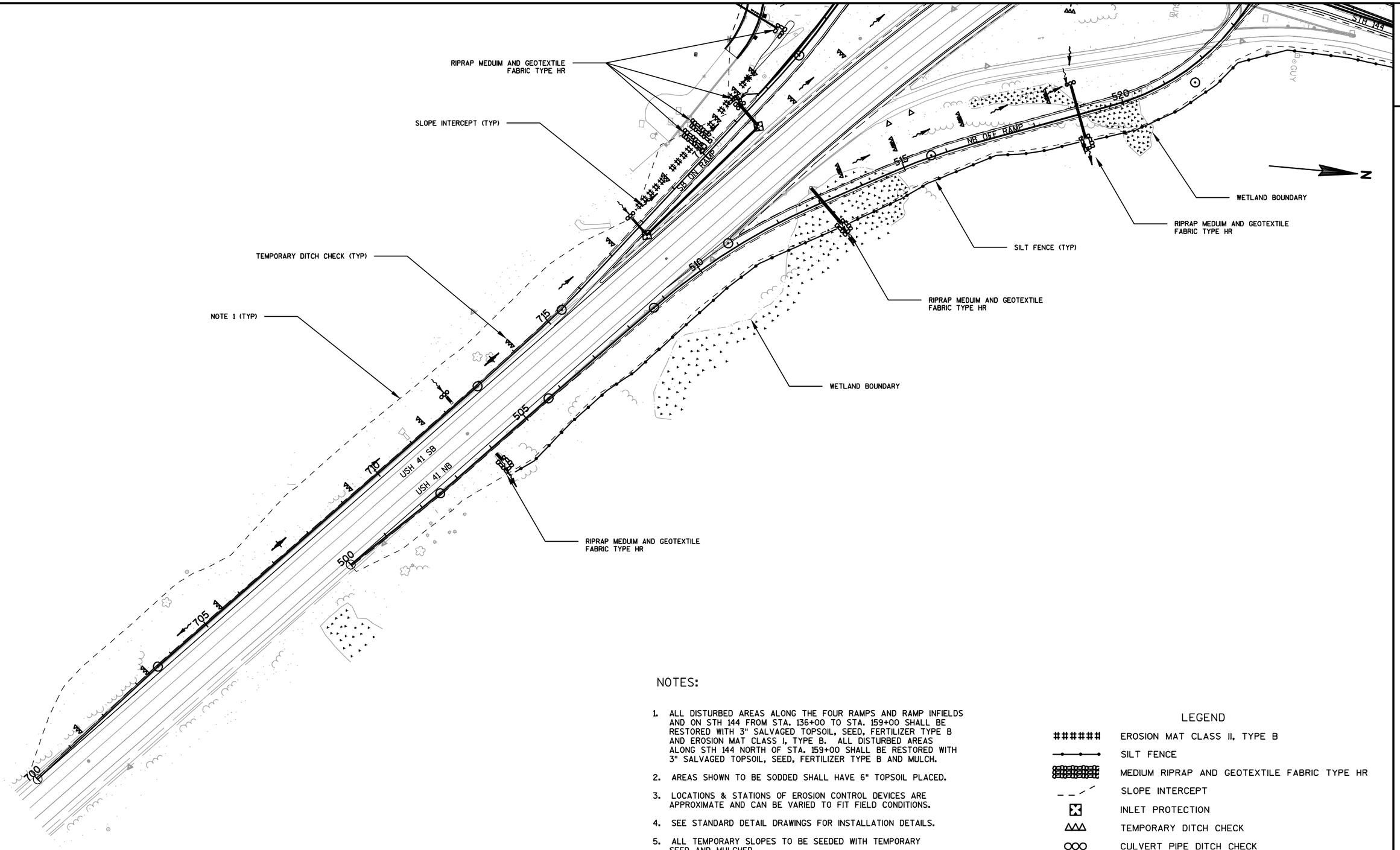
WISDOT/CADDS SHEET 42

2



PROJECT NO: 1107-02-79	HWY: USH 41 RL	COUNTY: WASHINGTON	CROSS SECTION MATCH LINE DIAGRAM	SCALE, FEET 0 100 200	SHEET 37	E

FILE NAME : L:\Projects\11609\Dwg\021701_xm.dgn PLOT DATE : 07/26/13 PLOT BY : tmoyer PLOT NAME : PLOT SCALE : 1:200



NOTES:

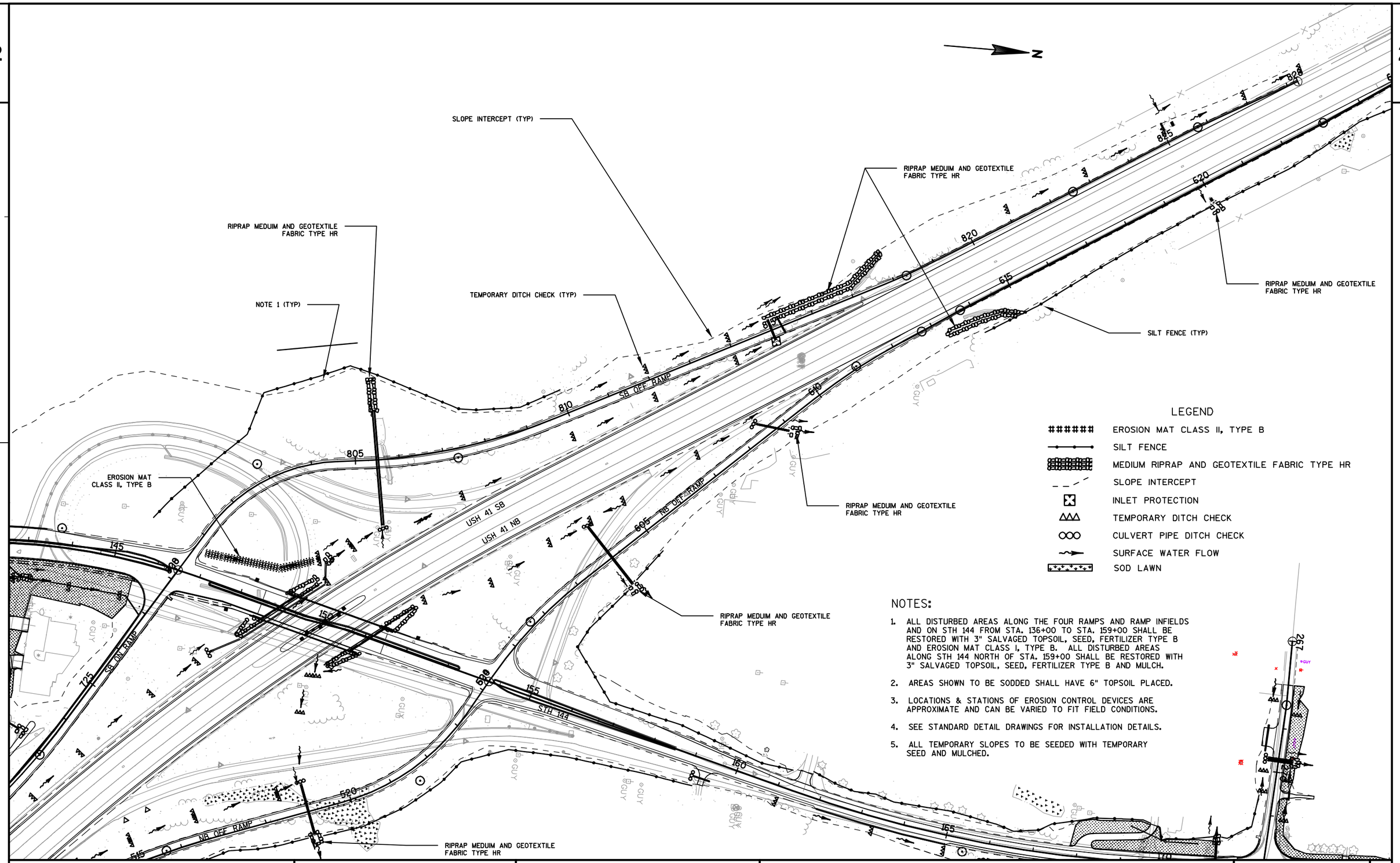
1. ALL DISTURBED AREAS ALONG THE FOUR RAMPS AND RAMP INFIELDS AND ON STH 144 FROM STA. 136+00 TO STA. 159+00 SHALL BE RESTORED WITH 3" SALVAGED TOPSOIL, SEED, FERTILIZER TYPE B AND EROSION MAT CLASS I, TYPE B. ALL DISTURBED AREAS ALONG STH 144 NORTH OF STA. 159+00 SHALL BE RESTORED WITH 3" SALVAGED TOPSOIL, SEED, FERTILIZER TYPE B AND MULCH.
2. AREAS SHOWN TO BE SODDED SHALL HAVE 6" TOPSOIL PLACED.
3. LOCATIONS & STATIONS OF EROSION CONTROL DEVICES ARE APPROXIMATE AND CAN BE VARIED TO FIT FIELD CONDITIONS.
4. SEE STANDARD DETAIL DRAWINGS FOR INSTALLATION DETAILS.
5. ALL TEMPORARY SLOPES TO BE SEEDED WITH TEMPORARY SEED AND MULCHED.

LEGEND

- ###### EROSION MAT CLASS II, TYPE B
- SILT FENCE
- MEDIUM RIPRAP AND GEOTEXTILE FABRIC TYPE HR
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW
- SOD LAWN

PROJECT NO:1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	EROSION CONTROL	SHEET 38	E

2


N
SLOPE INTERCEPT (TYP)
RIPRAP MEDUIM AND GEOTEXTILE FABRIC TYPE HR
RIPRAP MEDUIM AND GEOTEXTILE FABRIC TYPE HR
TEMPORARY DITCH CHECK (TYP)
NOTE 1 (TYP)
SILT FENCE (TYP)
RIPRAP MEDUIM AND GEOTEXTILE FABRIC TYPE HR
EROSION MAT CLASS II, TYPE B
RIPRAP MEDUIM AND GEOTEXTILE FABRIC TYPE HR
RIPRAP MEDUIM AND GEOTEXTILE FABRIC TYPE HR
SB OFF RAMP
NB OFF RAMP
SB ON RAMP
NB OFF RAMP
USH 41 SB
USH 41 NB
STH 144
805
810
815
820
825
830
835
840
845
850
855
860
865
870
875
880
885
890
895
900
905
910
915
920
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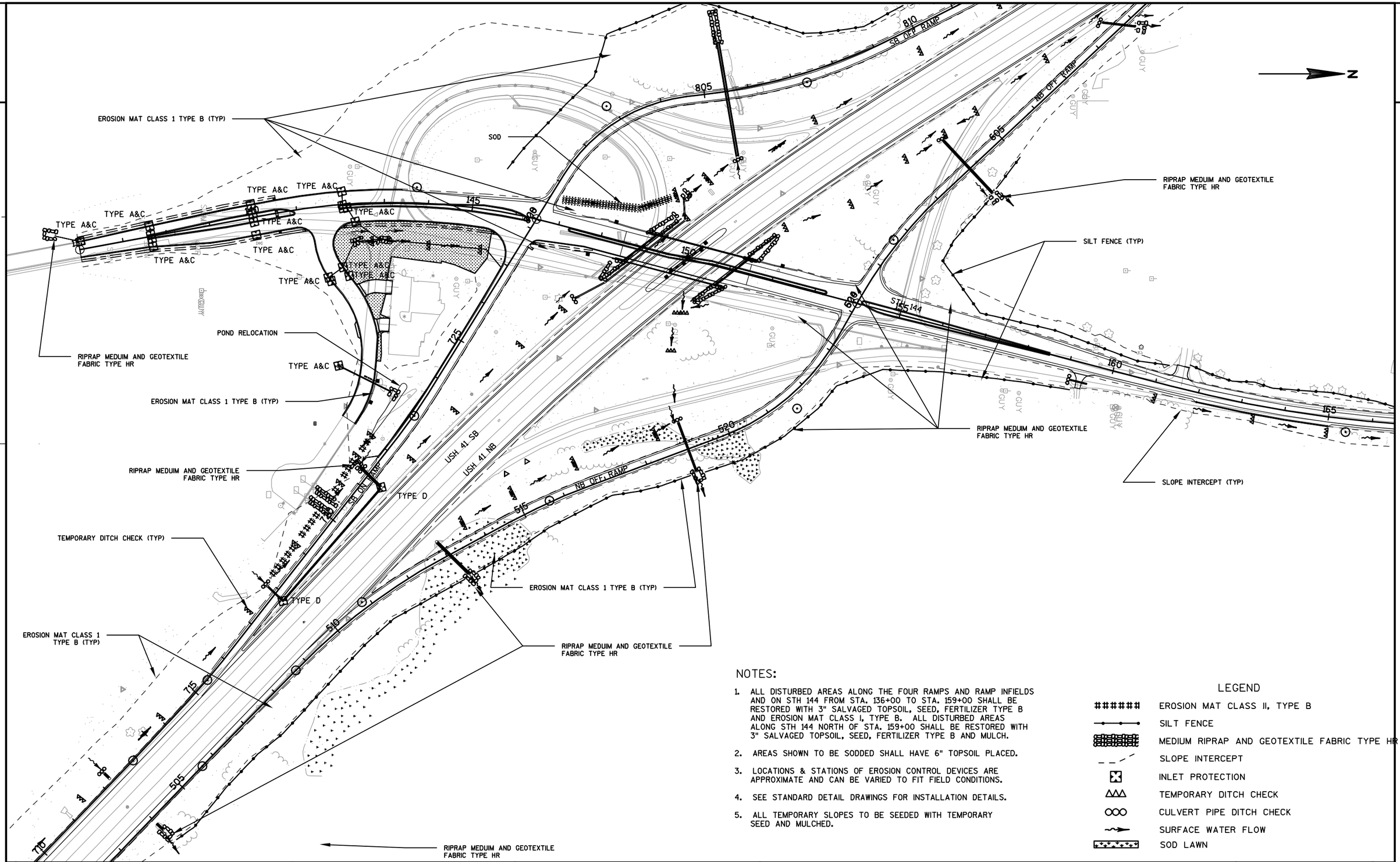
975
980
985
990
995
1000

2



NOTES:

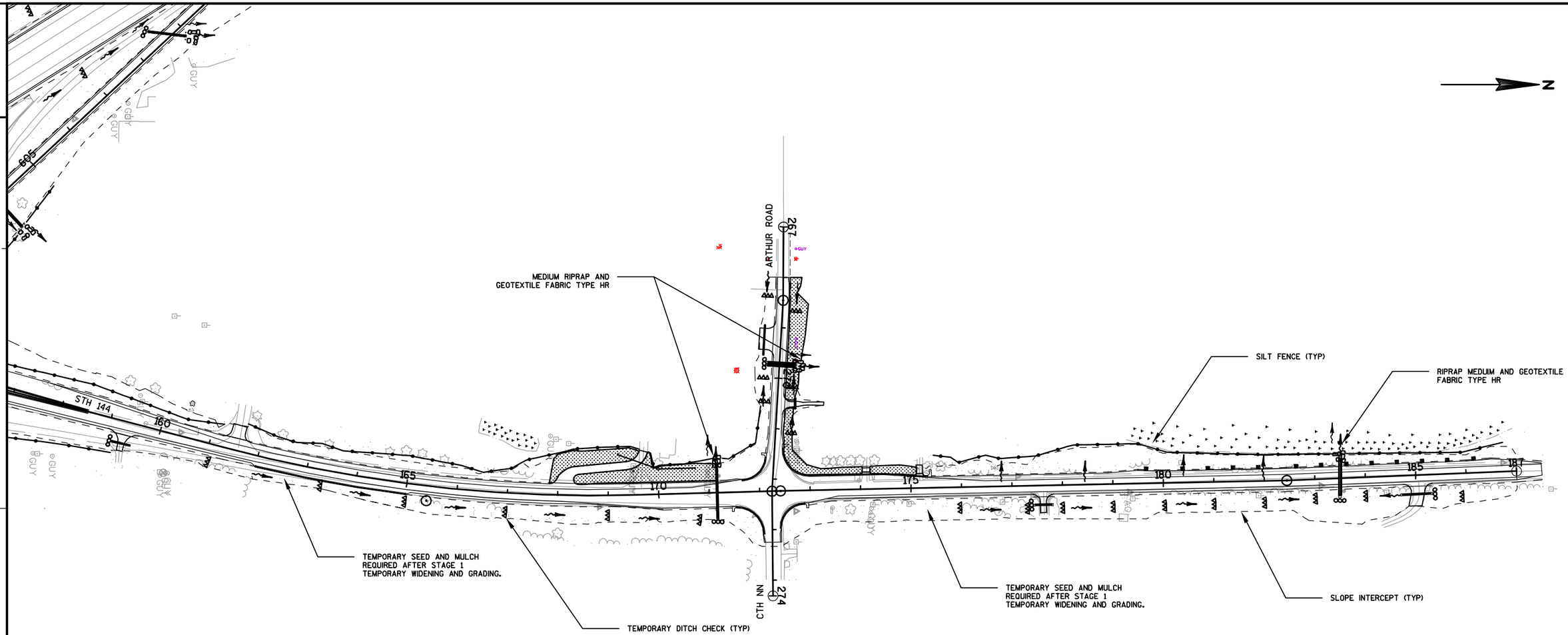
1. ALL DISTURBED AREAS ALONG THE FOUR RAMPS AND RAMP INFIELDS AND ON STH 144 FROM STA. 136+00 TO STA. 159+00 SHALL BE RESTORED WITH 3" SALVAGED TOPSOIL, SEED, FERTILIZER TYPE B AND EROSION MAT CLASS I, TYPE B. ALL DISTURBED AREAS ALONG STH 144 NORTH OF STA. 159+00 SHALL BE RESTORED WITH 3" SALVAGED TOPSOIL, SEED, FERTILIZER TYPE B AND MULCH.
2. AREAS SHOWN TO BE SODDED SHALL HAVE 6" TOPSOIL PLACED.
3. LOCATIONS & STATIONS OF EROSION CONTROL DEVICES ARE APPROXIMATE AND CAN BE VARIED TO FIT FIELD CONDITIONS.
4. SEE STANDARD DETAIL DRAWINGS FOR INSTALLATION DETAILS.
5. ALL TEMPORARY SLOPES TO BE SEEDED WITH TEMPORARY SEED AND MULCHED.

LEGEND

- ####### EROSION MAT CLASS II, TYPE B
- SILT FENCE
- MEDIUM RIPRAP AND GEOTEXTILE FABRIC TYPE HR
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW
- SOD LAWN

PROJECT NO:1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	EROSION CONTROL	SHEET 40	E

2



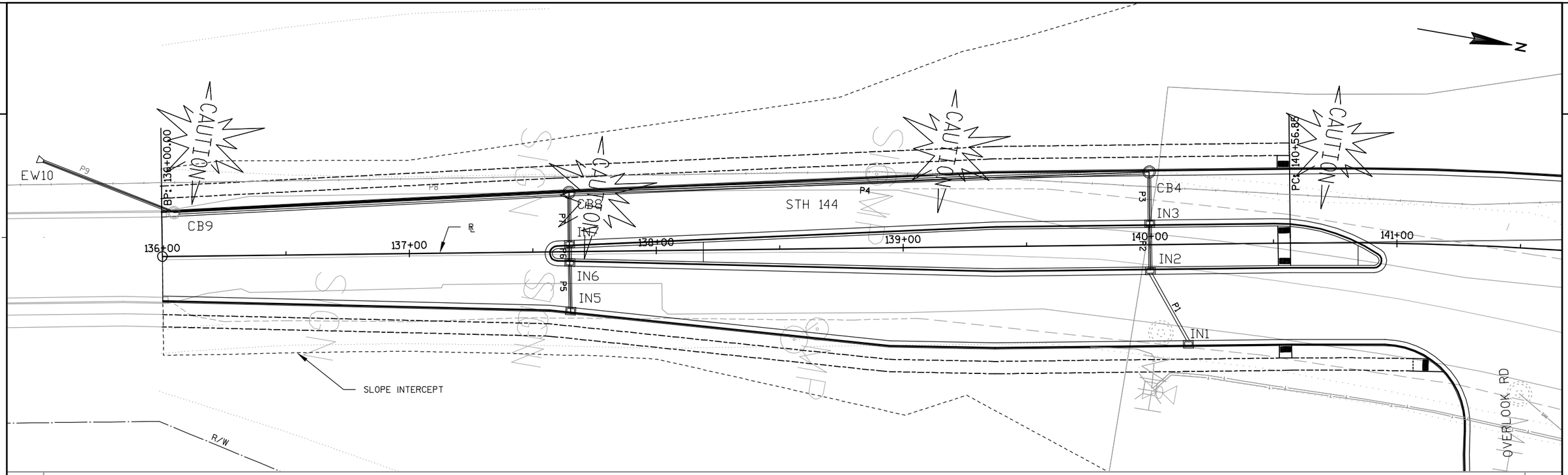
NOTES:

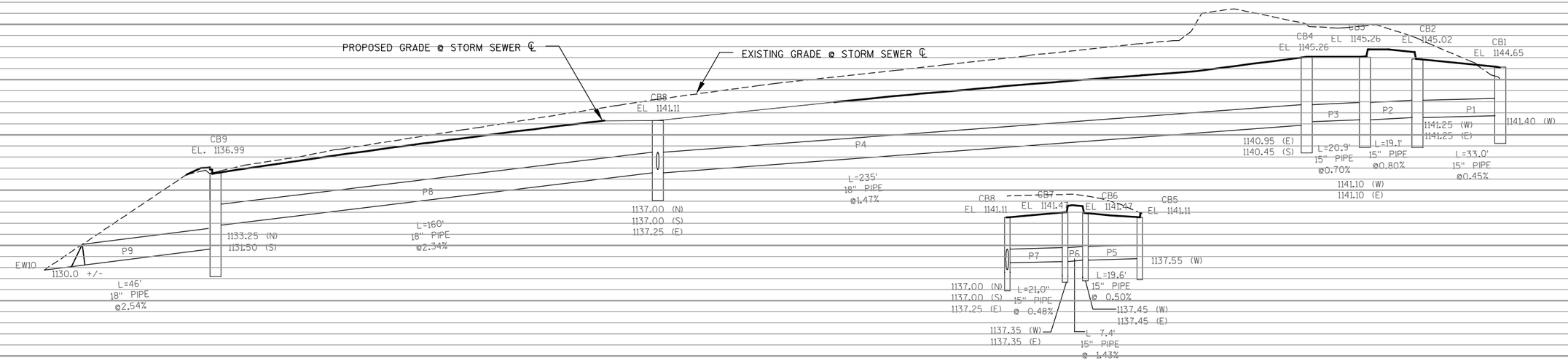
1. ALL DISTURBED AREAS ALONG THE FOUR RAMPS AND RAMP INFIELDS AND ON STH 144 FROM STA. 136+00 TO STA. 159+00 SHALL BE RESTORED WITH 3" SALVAGED TOPSOIL, SEED, FERTILIZER TYPE B AND EROSION MAT CLASS I, TYPE B. ALL DISTURBED AREAS ALONG STH 144 NORTH OF STA. 159+00 SHALL BE RESTORED WITH 3" SALVAGED TOPSOIL, SEED, FERTILIZER TYPE B AND MULCH.
2. AREAS SHOWN TO BE SODDED SHALL HAVE 6" TOPSOIL PLACED.
3. LOCATIONS & STATIONS OF EROSION CONTROL DEVICES ARE APPROXIMATE AND CAN BE VARIED TO FIT FIELD CONDITIONS.
4. SEE STANDARD DETAIL DRAWINGS FOR INSTALLATION DETAILS.
5. ALL TEMPORARY SLOPES TO BE SEEDED WITH TEMPORARY SEED AND MULCHED.

LEGEND

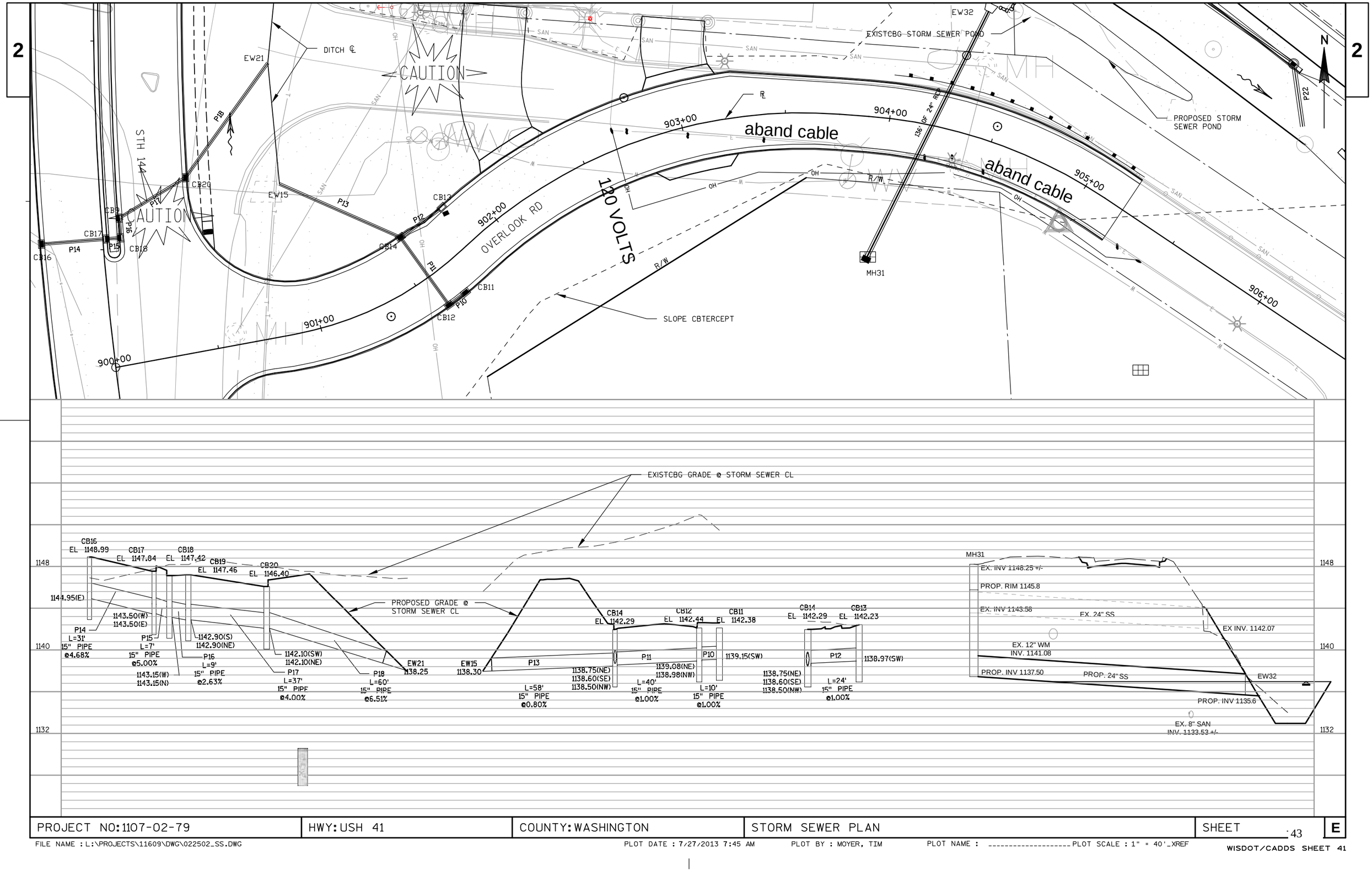
- ####### EROSION MAT CLASS II, TYPE B
- SILT FENCE
- MEDIUM RIPRAP AND GEOTEXTILE FABRIC TYPE HR
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW
- SOD LAWN

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	EROSION CONTROL	SHEET 41	E

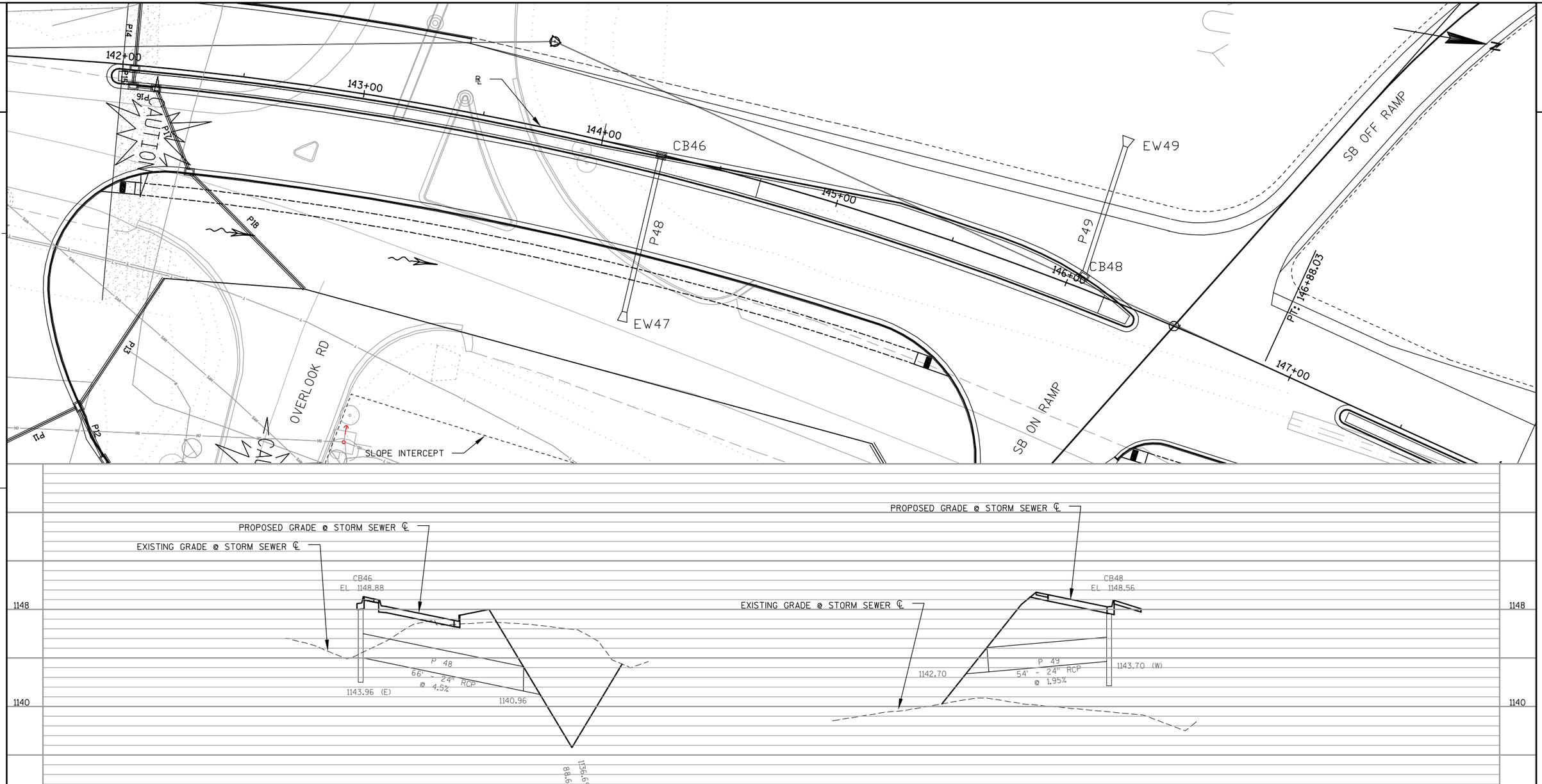




PROJECT NO:1107-02-79	HWY:USH 41	COUNTY:WASHINGTON	STORM SEWER PLAN	SHEET 42	E



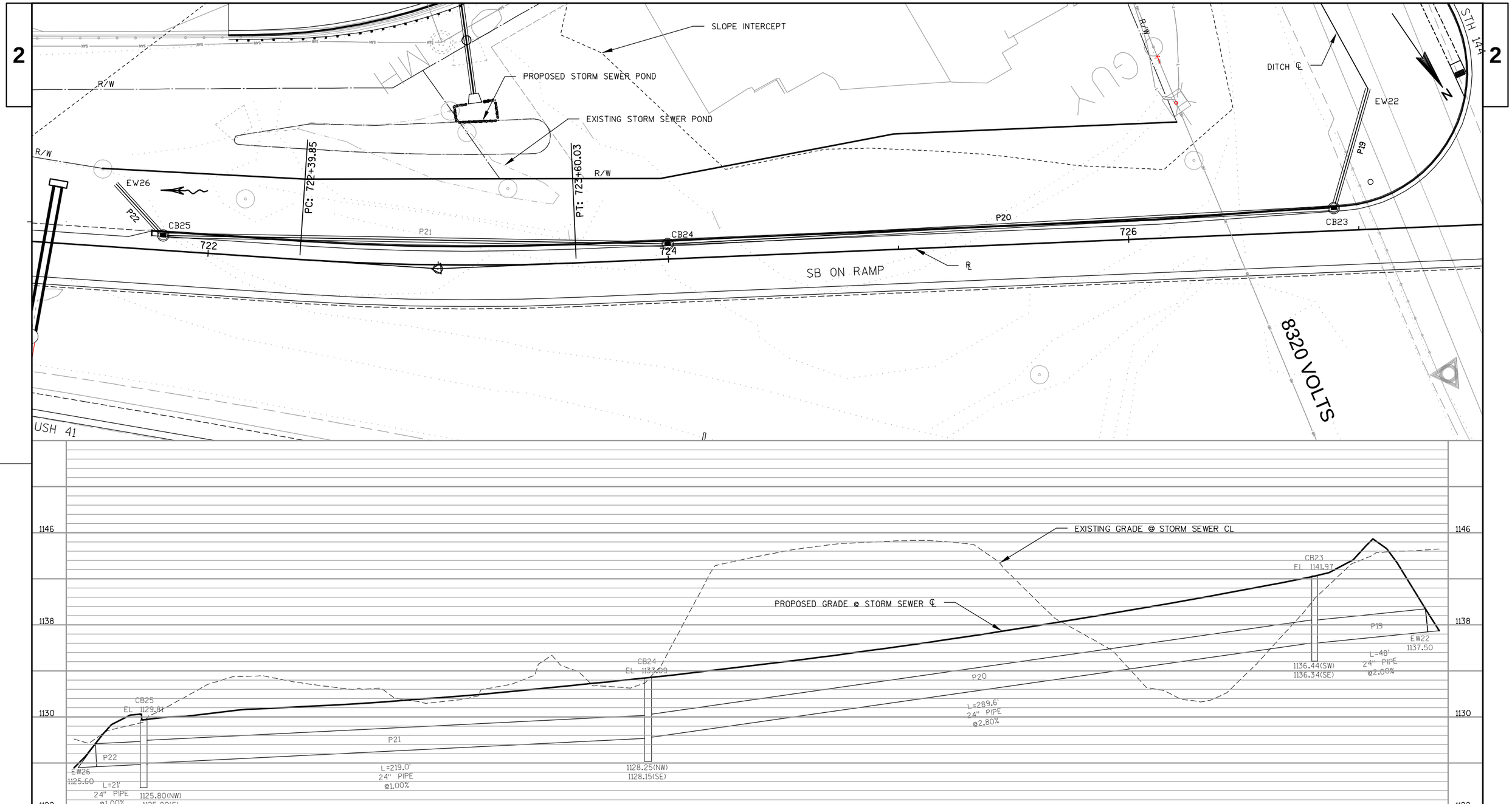
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	STORM SEWER PLAN	SHEET 43	E



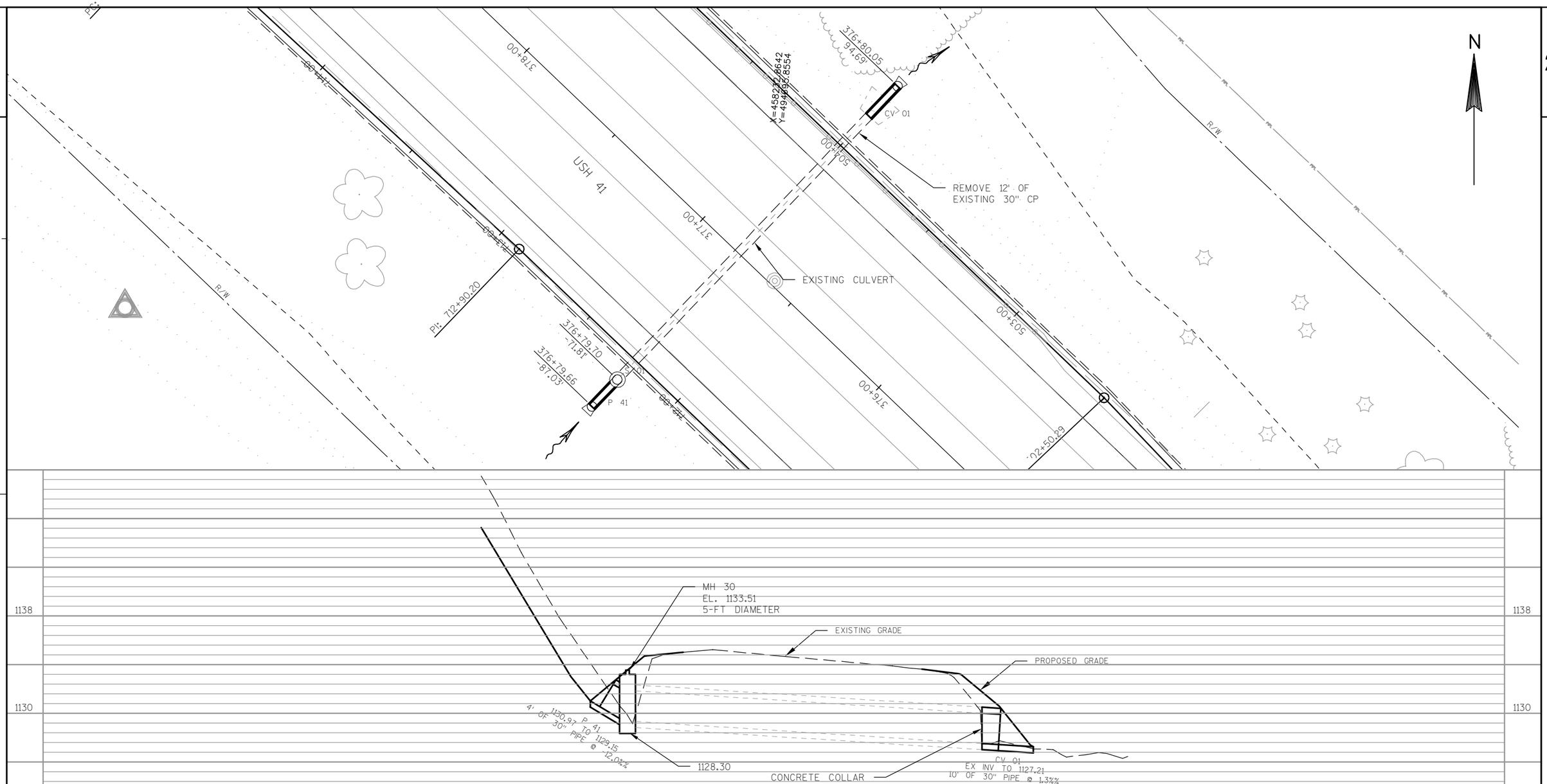
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	STORM SEWER PLAN	SHEET 44	E

FILE NAME : L:\PROJECTS\11609\DWG\022501_SS.DWG PLOT DATE : 7/27/2013 7:45 AM PLOT BY : MOYER, TIM PLOT NAME : _____ PLOT SCALE : 1" = 40'_XREF

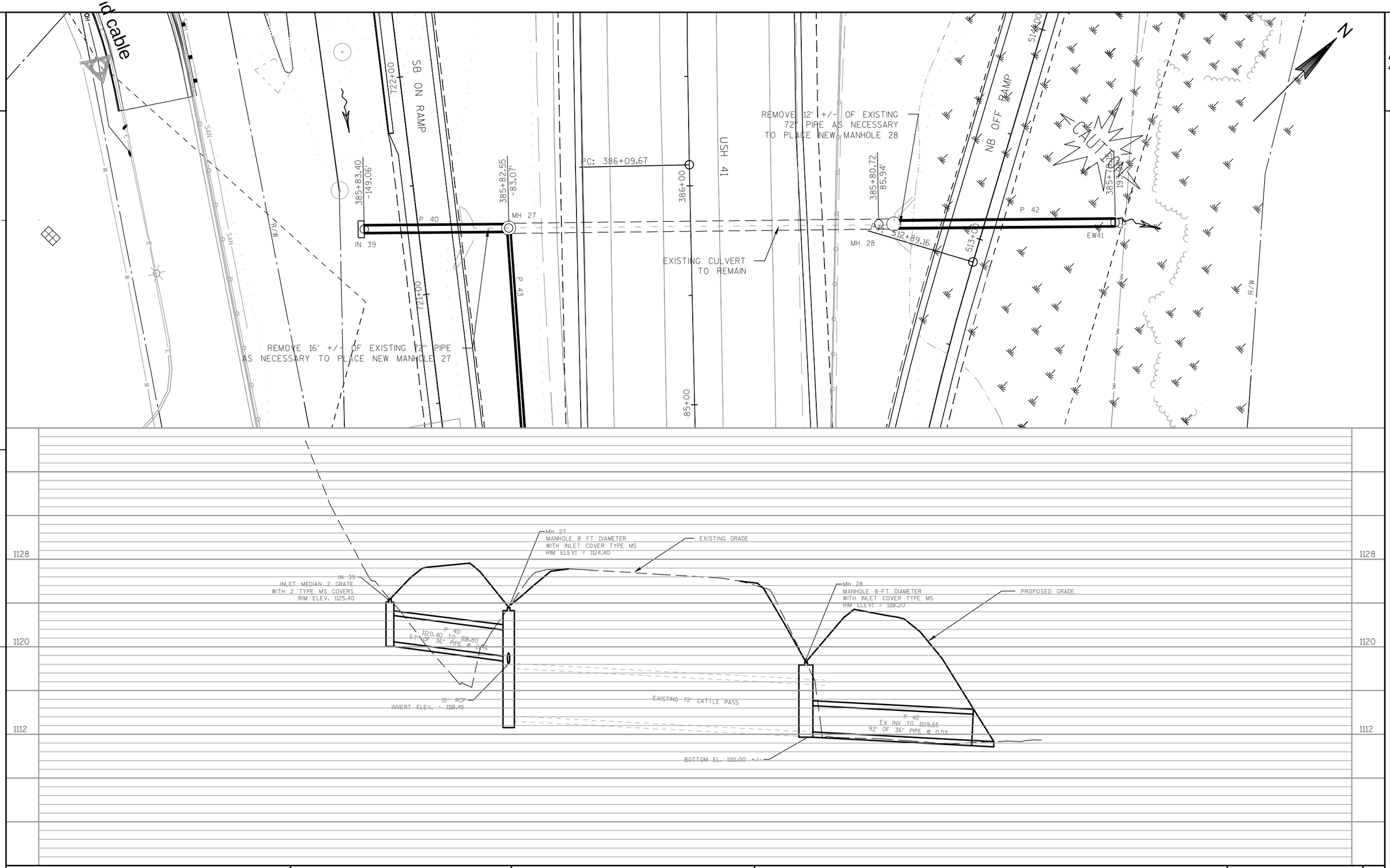
WISDOT/CADDS SHEET 41



PROJECT NO:1107-02-79	HWY:USH 41	COUNTY:WASHINGTON	STORM SEWER PLAN	SHEET 45	E



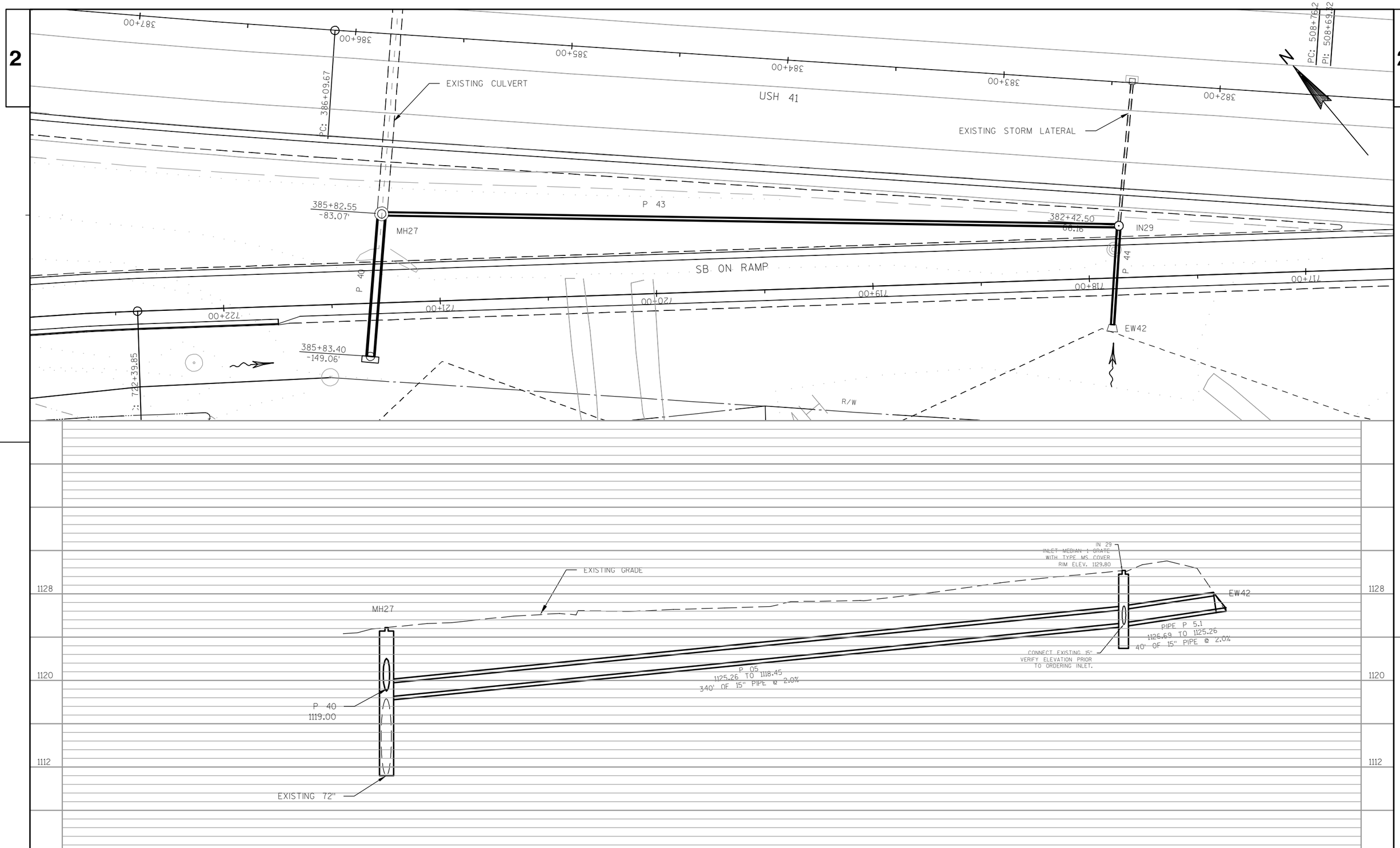
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CULVERT PLAN - STA. 376+79	SHEET 46	E



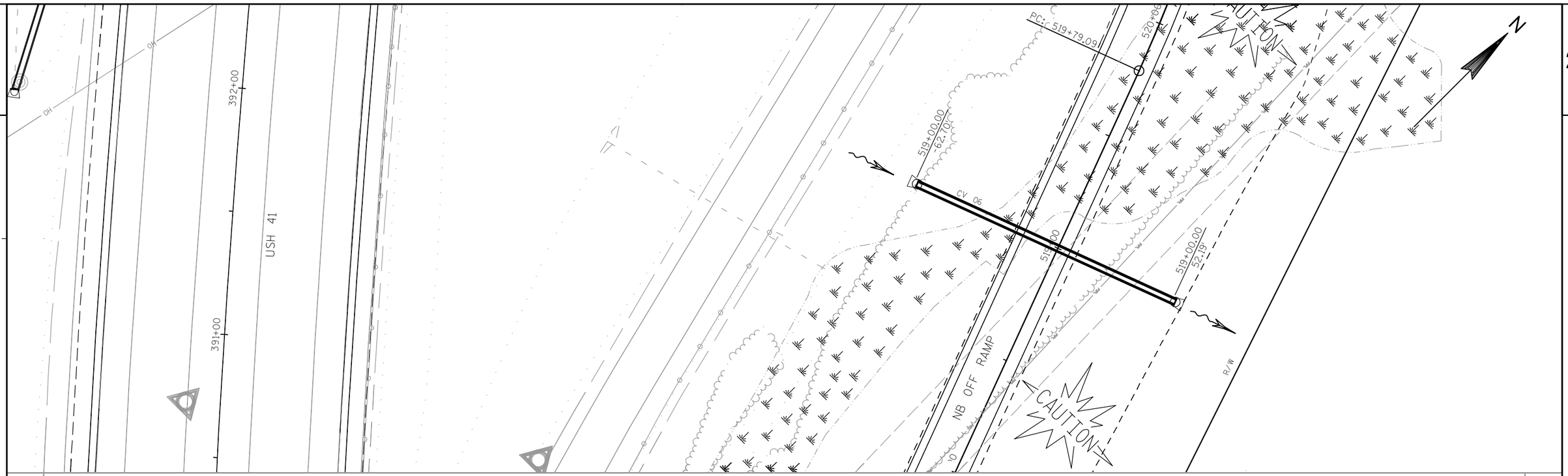
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CULVERT PLAN - STA. 385+80	SHEET 47	E

FILE NAME : L:\PROJECTS\11609\DWG\022504_SS.DWG PLOT DATE : 8/23/2013 9:50 AM PLOT BY : MOYER, TIM PLOT NAME : ----------

WISDOT/CADDS SHEET 41



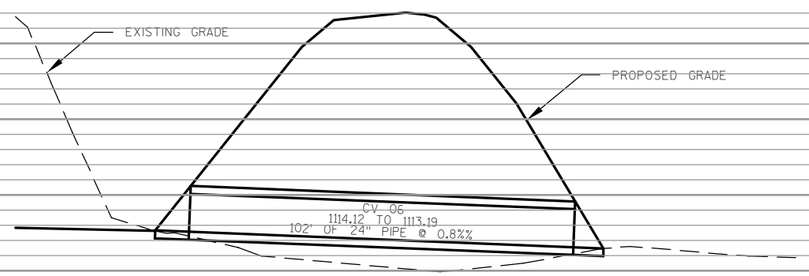
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CULVERT PLAN - STA. 382+42 TO STA. 385+82	SHEET 48	E



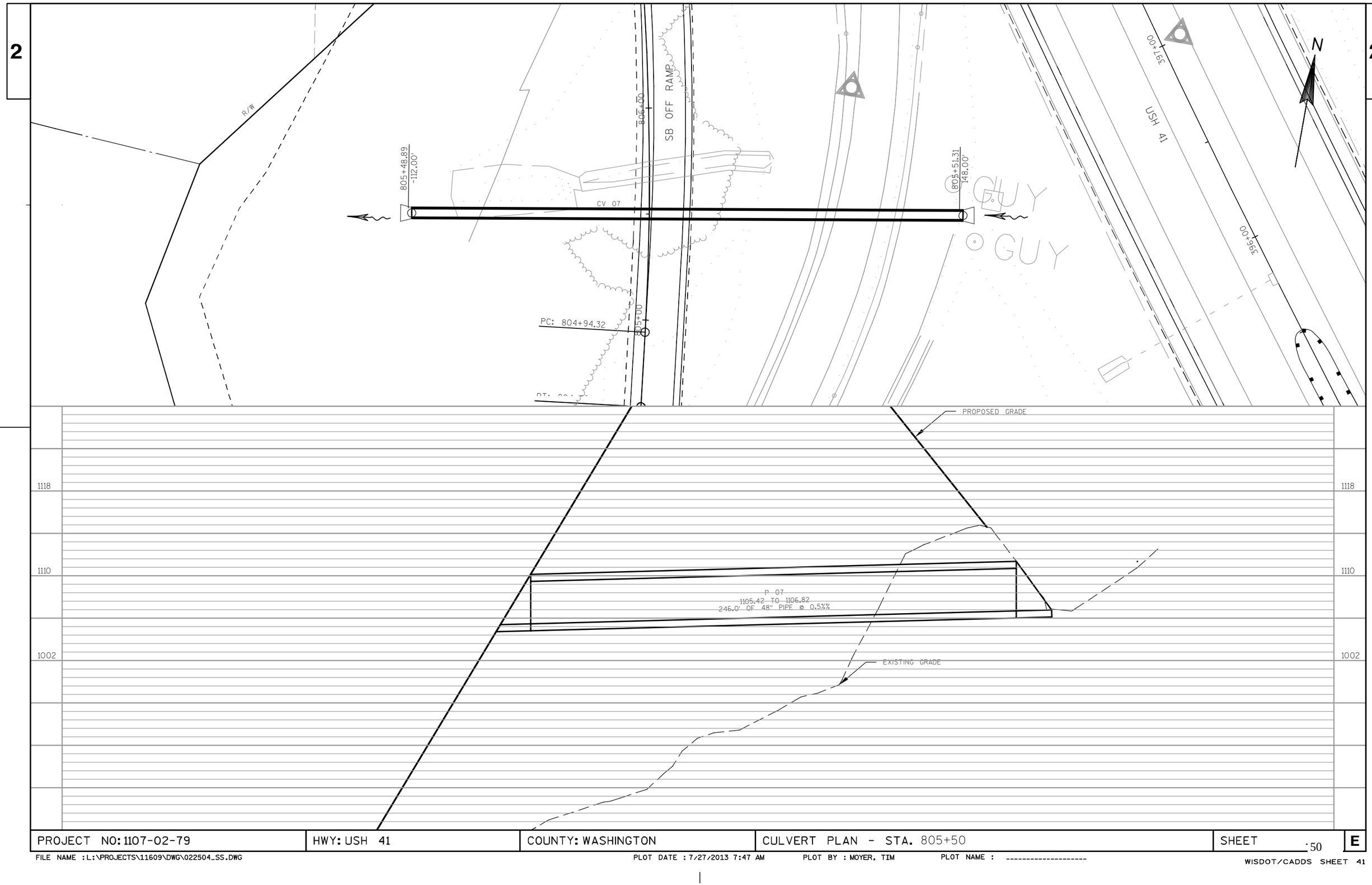
1128

1120

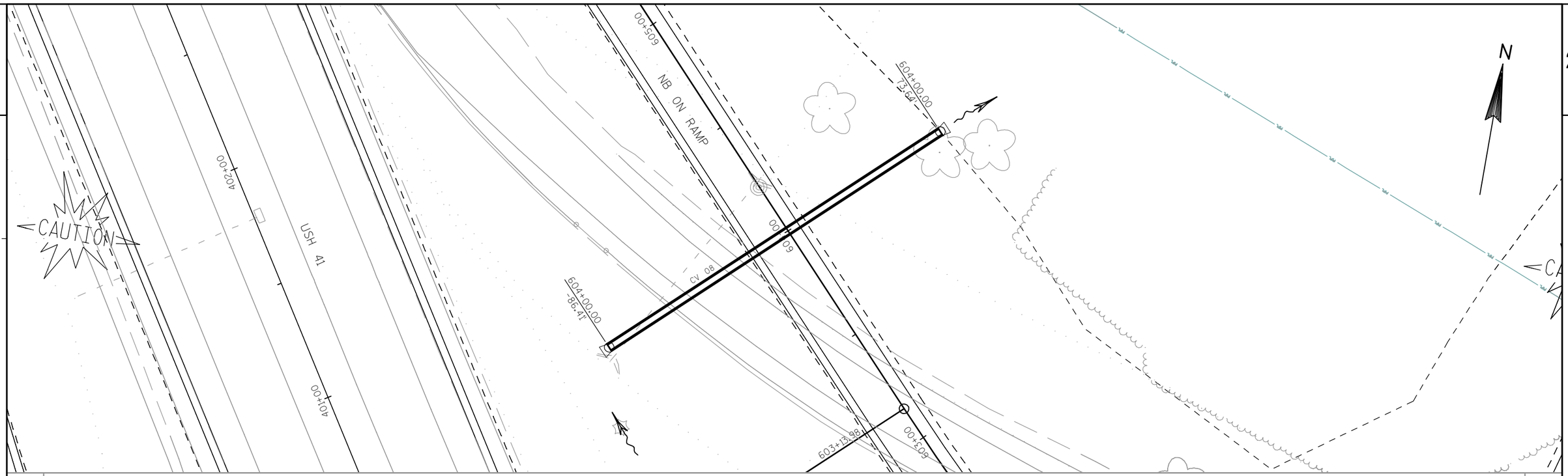
1112

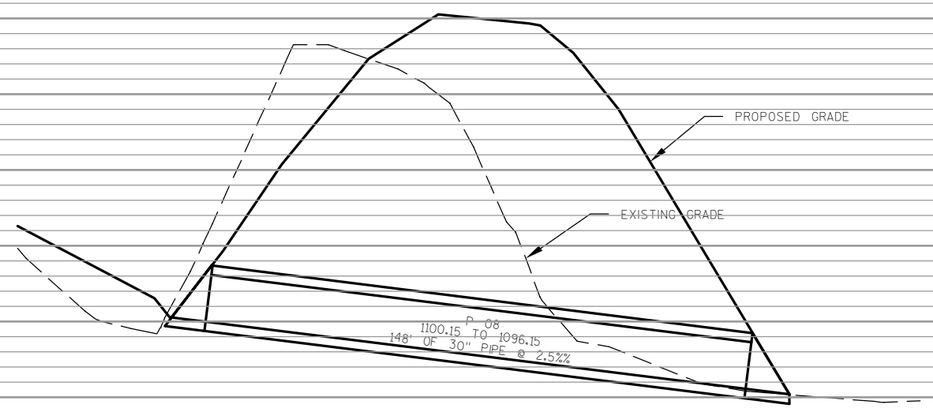


PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CULVERT PLAN - STA. 519+00	SHEET 49	E



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CULVERT PLAN - STA. 805+50	SHEET 50	E



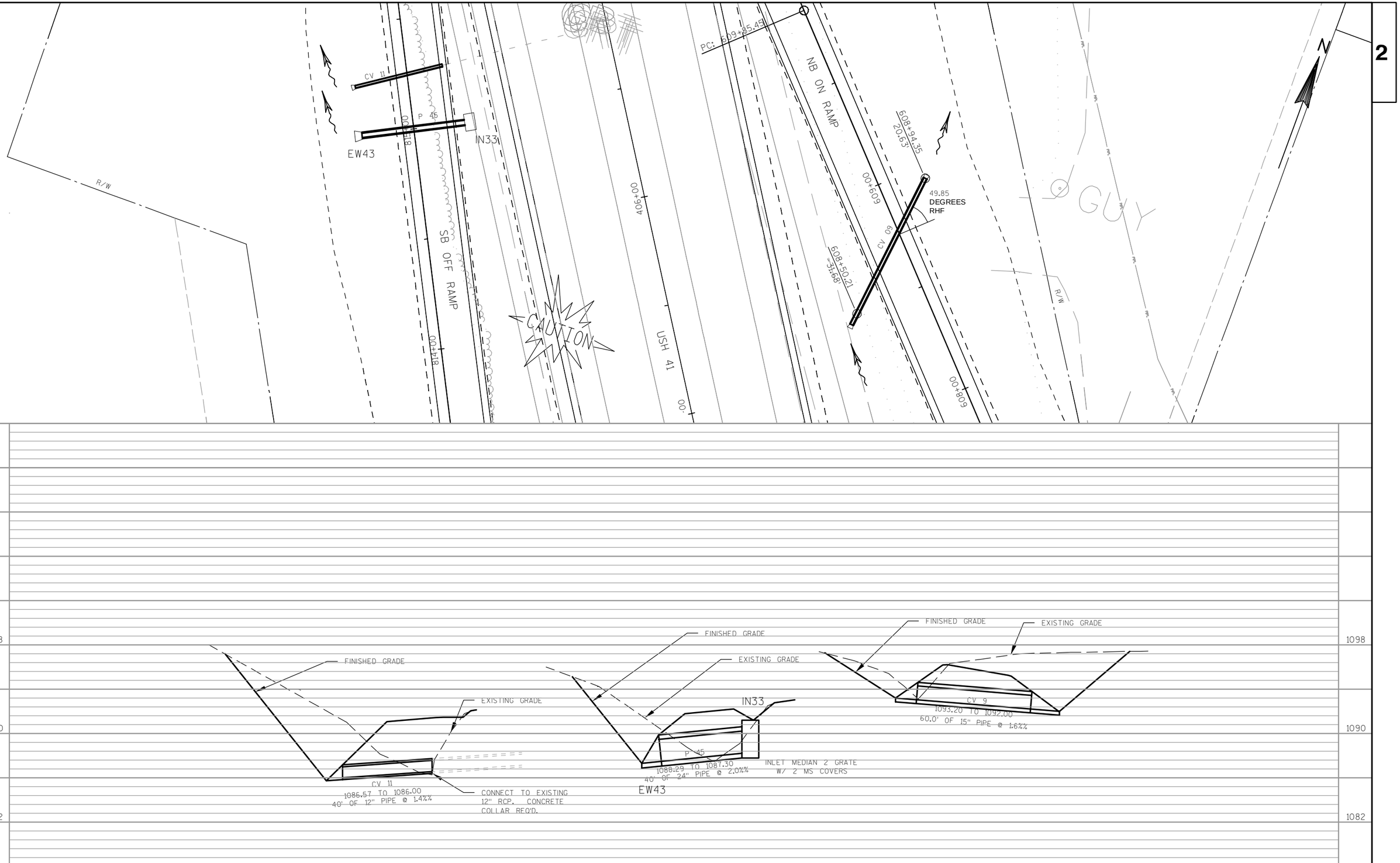


1116 1108 1100

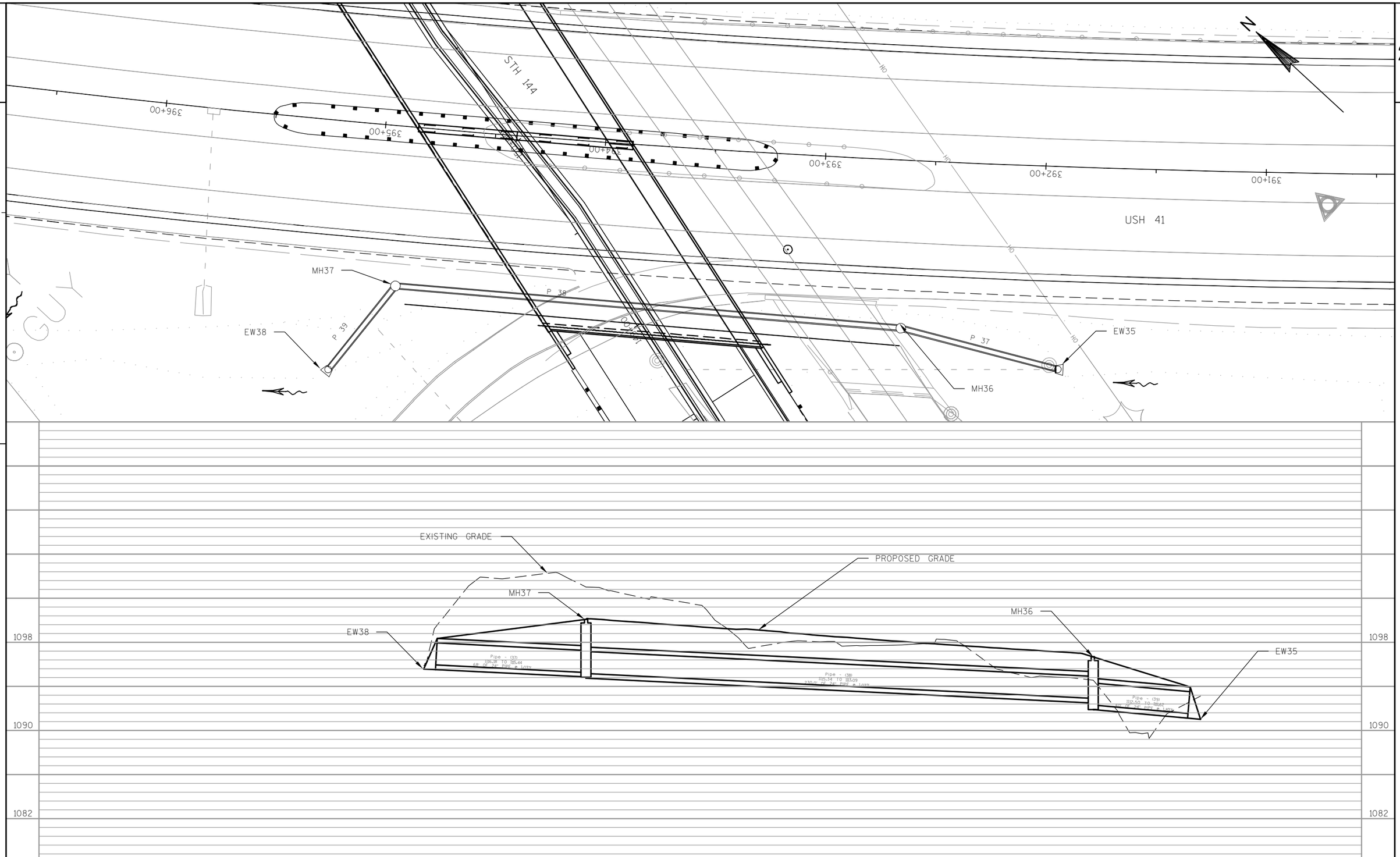
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CULVERT PLAN - STA. 604+00	SHEET	E

FILE NAME : L:\PROJECTS\11609\DWG\022504_SS.DWG PLOT DATE : 7/27/2013 7:47 AM PLOT BY : MOYER, TIM PLOT NAME : ----------

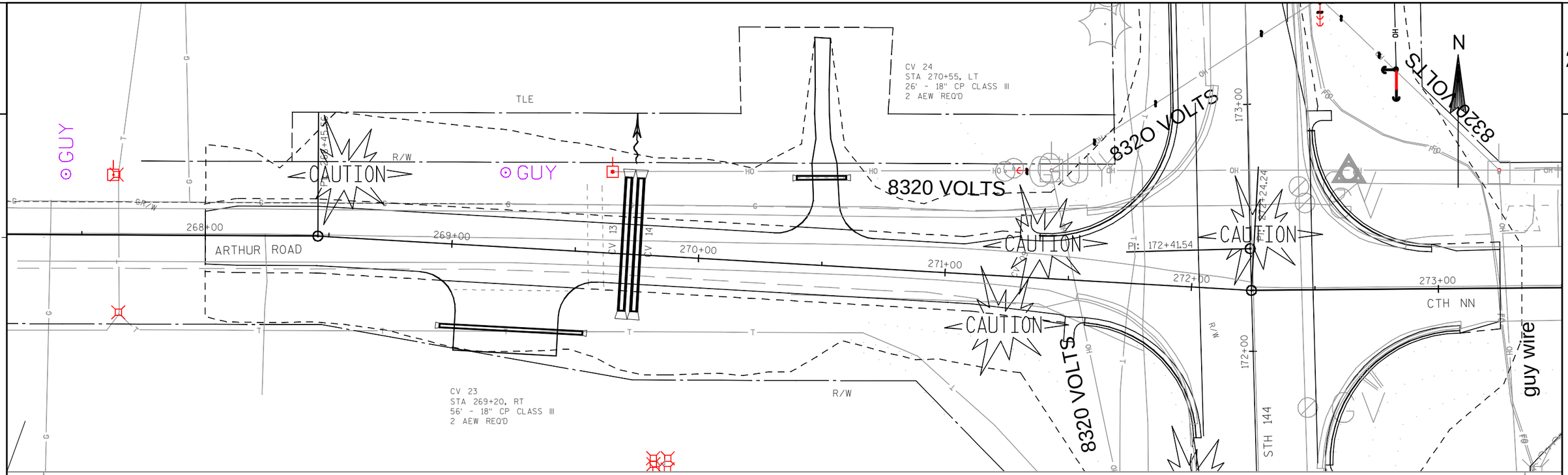
WISDOT/CADDS SHEET 41

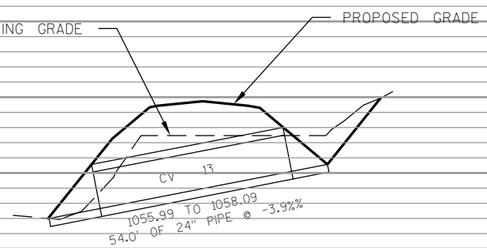


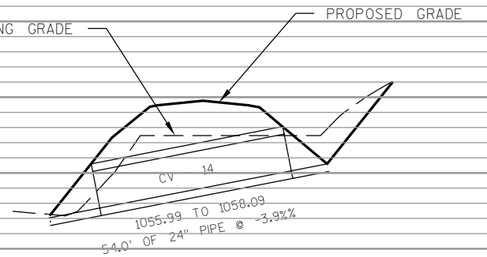
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CULVERT PLAN - STA. 815+00, 815+26 AND 608+75	SHEET 52	E



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CULVERT PLAN - STA. 149+11	SHEET 53	E







PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CULVERT PLAN - STA. 269+70 AND 269+75	SHEET 54	E

2

2

LEGEND

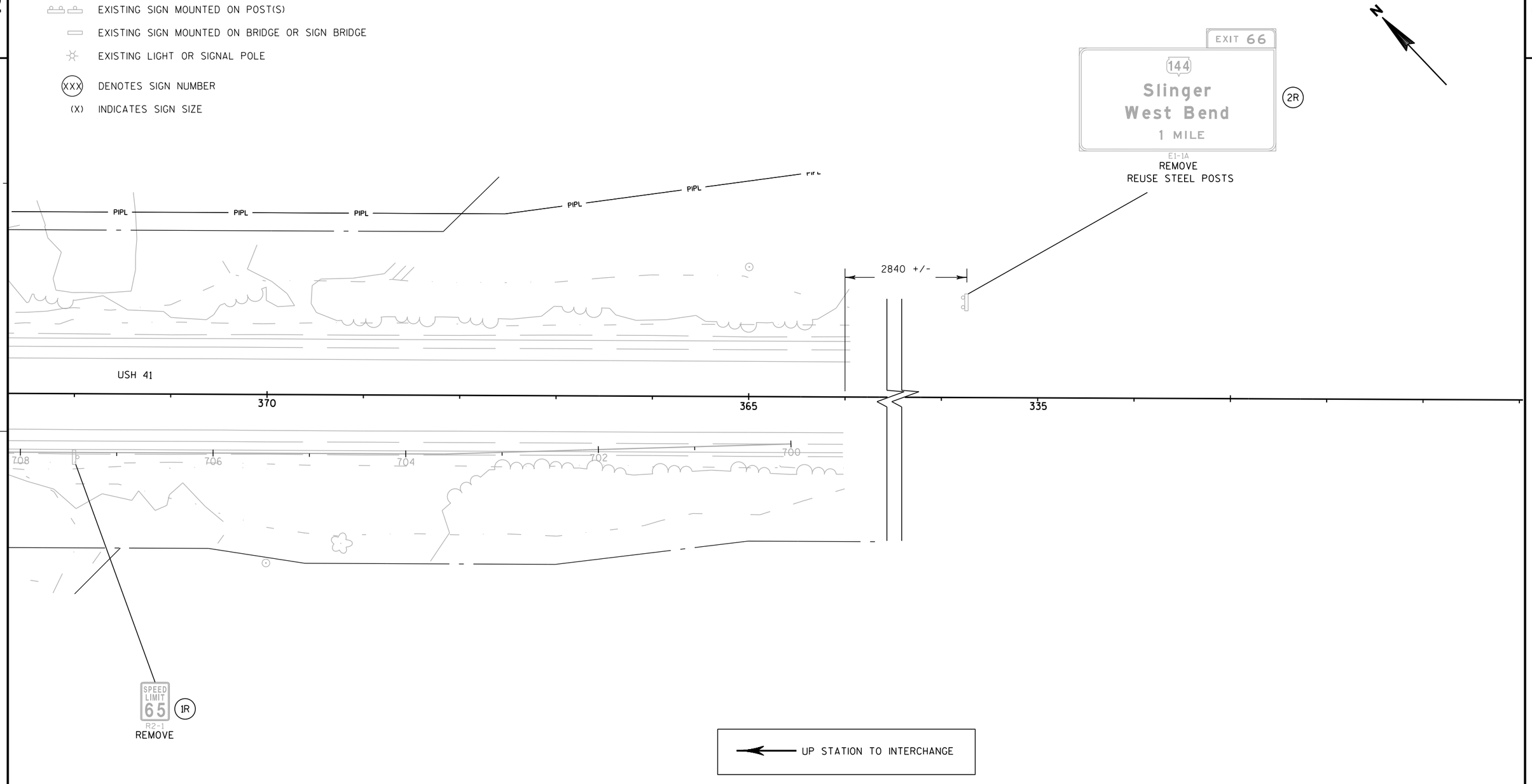
EXISTING SIGN MOUNTED ON POST(S)

EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE

EXISTING LIGHT OR SIGNAL POLE

(XXX) DENOTES SIGN NUMBER

(X) INDICATES SIGN SIZE



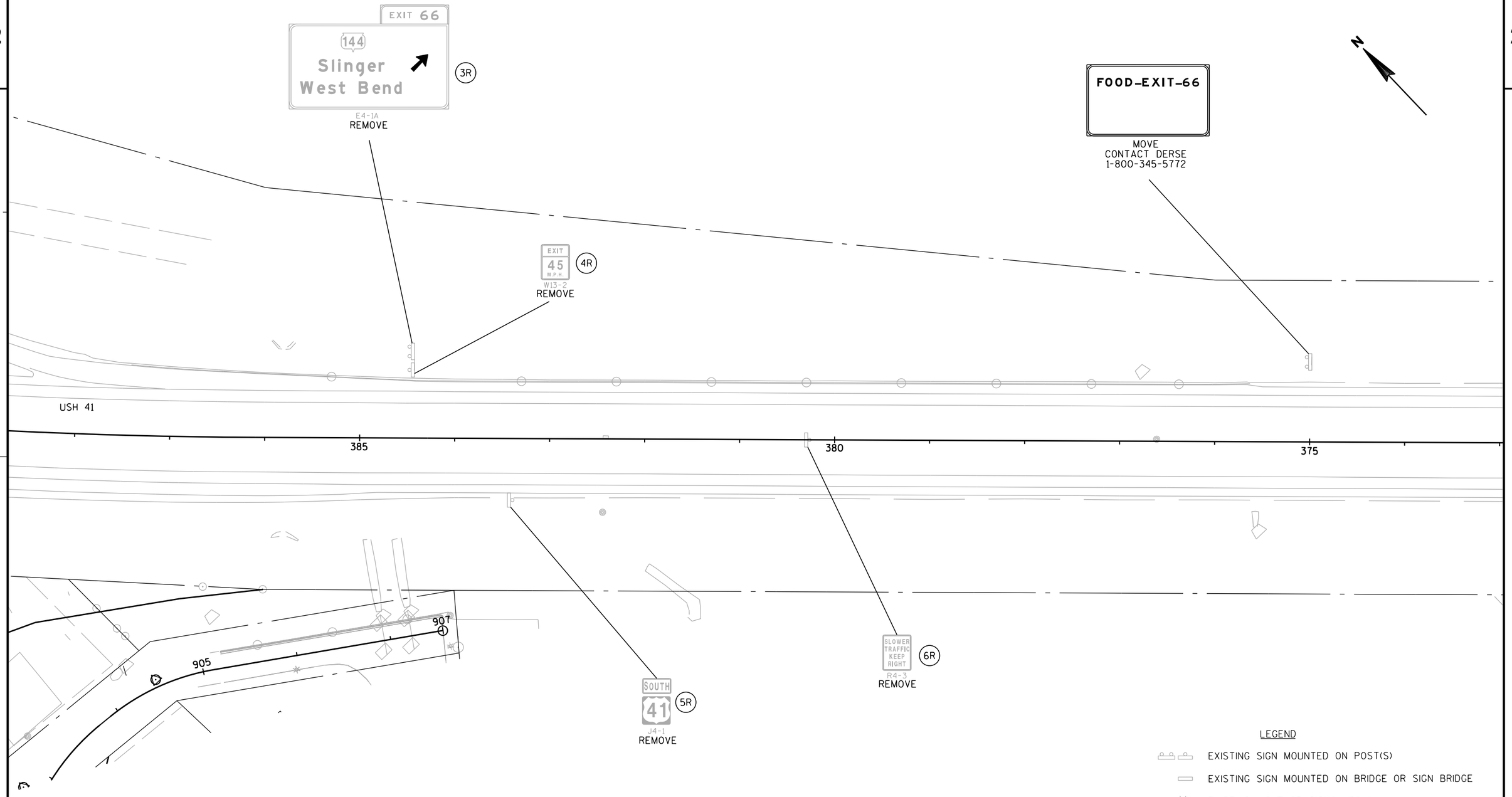
SHEET 1 OF 15

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	SIGNING REMOVAL PLAN	SHEET 55	E

FILE NAME : J:\projects\d2_11070241\Sign\023101_ps.dgn PLOT DATE : 15-JUL-2013 06:17 PLOT BY : MSCMWB PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2



LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

SHEET 2 OF 15

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	SIGNING REMOVAL PLAN	SHEET 56 E

FILE NAME : J:\projects\d2_11070241\Sign\023102_ps.dgn PLOT DATE : 15-JUL-2013 06:17 PLOT BY : MSCMWB PLOT NAME : PLOT SCALE : 100:1

2

2

MATCHLINE SEE SHEET 9

USH 41NB ON RAMP

USH 41

400

395

390

USH 41

STH 144

USH 41SB OFF RAMP

USH 41SB ON RAMP

USH 41NB OFF RAMP

KETTLE MORAINE SCENIC DR.

7R
W5-52R
REMOVE

17R
8R
W4-1
REMOVE

Ski Area
D7-82
Little Switzerland
D7-82B
MOVE
SEE PERMANENT SIGN PLAN

FOOD
MOVE
CONTACT DERSE
1-800-345-5772

Slinger Speedway
MOVE
SEE PERMANENT SIGN PLAN

Slinger
West Bend
12R
D1-2
REMOVE

11R
EXIT 66
E5-1A
REMOVE

9R
13R
WRONG WAY
R5-1A
REMOVE

10R
W3-1
REMOVE

15R
EXIT 66
E5-1A
REMOVE

16R
W3-1
REMOVE

18R
W5-52R
REMOVE

19R
W1-6
REMOVE

Ski Area
D7-82
Little Switzerland
D7-82B
MOVE
SEE PERMANENT SIGN PLAN

MATCHLINE SEE SHEET 7

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

SHEET 3 OF 15

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	SIGNING REMOVAL PLAN	SHEET 57	E

FILE NAME : J:\projects\d2_11070241\Sign\023103_ps.dgn PLOT DATE : 15-JUL-2013 06:17 PLOT BY : MSCMWB PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

2

SPEED LIMIT 65
R2-1
20R
REMOVE

NORTH 41
J4-1
21R
REMOVE

USH 41

USH 41 NB ON RAMP

415

410

405

USH 41

FOOD-EXIT-66

MOVE
CONTACT DERSE
1-800-345-5772

22R
EXIT 30 M.P.H.
W13-2
REMOVE

EXIT 66
144
Slinger
West Bend
23R
E4-1A
REMOVE

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

SHEET 4 OF 15

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	SIGNING REMOVAL PLAN	SHEET 58	E

FILE NAME : J:\projects\d2_11070241\Sign\023104_ps.dgn PLOT DATE : 15-JUL-2013 06:18 PLOT BY : MSCMWB PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

EXIT 68

K

EAST–WEST

3/4 MILE

98R

E1-1A

REMOVE

REUSE STEEL POSTS

USH 41

446

425

420

2010 +/-

EXIT 66

144

Slinger

3/4 MILE

24R

E1-1A

REMOVE

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE

EXISTING LIGHT OR SIGNAL POLE

(XXX) DENOTES SIGN NUMBER

(X) INDICATES SIGN SIZE

SHEET 5 OF 15

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	SIGNING REMOVAL PLAN	SHEET 59	E

2

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE

EXISTING LIGHT OR SIGNAL POLE

(XXX) DENOTES SIGN NUMBER

(X) INDICATES SIGN SIZE

N

SPEED LIMIT 30 — 101R — R2-1 — REMOVE

102R — S3-1 — REMOVE

REDUCED SPEED AHEAD — 27R

00 M.P.H. — 28R

NO PARKING ANY TIME — 29R — R7-1D — REMOVE

NO ENGINE BRAKING EXCEPT IN EMERGENCY — R10-64 — MOVE SEE PERMANENT SIGNING PLAN

STH 144

136 137 138 139

STH 144

JCT 41 144 — 99R — J1-2 — REMOVE

SPEED LIMIT 45 — 100R — R2-1 — REMOVE

NO PARKING ANY TIME — 25R — R7-1D — REMOVE

26R — West Bend / Fond du Lac / Milwaukee — E1-1A — REMOVE

2

SHEET 6 OF 15

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	SIGNING REMOVAL PLAN	SHEET 60	E

FILE NAME : J:\projects\d2_11070241\Sign\023106_ps.dgn PLOT DATE : 15-JUL-2013 06:18 PLOT BY : MSCMWB PLOT NAME : PLOT SCALE : 40:1

2

2

N

31R
KETTLE MORAINE SCENIC DRIVE
M1-97
REMOVE

Parking Restrictions
MOVE
SEE PERMANENT SIGNING PLAN

103R
TREE CITY USA
Arbor Day Foundation
REMOVE AND RETURN TO VILLAGE
SIGN NOT PERMITTED

Slinger
POPULATION 4,798
32R
I2-3
REMOVE

33R
NO PARKING ANY TIME
R7-1L
REMOVE

38R
39R
DO NOT ENTER
R5-1
REMOVE

41R
NORTH 144
SOUTH 144
J3-2
REMOVE

MATCHLINE SEE SHEET 8

34R
DO NOT ENTER
R5-1
REMOVE

35R
YIELD
R1-2
REMOVE

NORTH 41
40R
J3-1
REMOVE

USH 41 SB OFF RAMP

USH 41 SB ON RAMP

RAMP 25 M.P.H.
47R
W13-3
REMOVE

48R
YIELD
R1-2
REMOVE

140
141
142
143
144
145

STH 144

36R
STOP
R1-1
REMOVE

37R
R4-7
REMOVE

END
M4-6
144
MOVE
SEE PERMANENT SIGNING PLAN

57R
NO PARKING ANY TIME
R7-1D
REMOVE

NORTH 144
56R
J3-1
REMOVE

55R
NO PARKING ANY TIME
R7-1D
REMOVE

SOUTH 41
52R
J3-1
REMOVE

OVERLOOK DR

53R
NOT A THRU STREET
REMOVE

STOP
54R
R1-1
REMOVE

NA
FEET
STR
ME
MOVE BY VILLAGE

SOUTH 41
51R
J3-1
REMOVE

SOUTH 41
49R
J3-1
REMOVE

50R
SPEED LIMIT 45
R2-1
REMOVE

STH 144

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

SHEET 7 OF 15

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	SIGNING REMOVAL PLAN	SHEET 61	E

FILE NAME : J:\projects\d2_11070241\Sign\023107_ps.dgn PLOT DATE : 15-JUL-2013 06:18 PLOT BY : MSCMWB PLOT NAME : PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

N

USH 41 SB OFF RAMP

USH 41 SB ON RAMP

43R

West Bend
Slinger

E1-1A
REMOVE

45R

W1-6
REMOVE

MATCHLINE SEE SHEET 7

42R

WRONG WAY

R5-1A
REMOVE

Slinger Speedway

MOVE
SEE PERMANENT SIGN PLAN

FOOD

MOVE
CONTACT DERSE
1-800-345-5772

MATCHLINE SEE SHEET 9

46R

W1-6
REMOVE

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- (XXX) DENOTES SIGN NUMBER
- 53R (X) INDICATES SIGN SIZE

SHEET 8 OF 15

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	SIGNING REMOVAL PLAN	SHEET 62 E

FILE NAME : J:\projects\d2_11070241\Sign\023108_ps.dgn PLOT DATE : 15-JUL-2013 06:18 PLOT BY : MSCMWB PLOT NAME : PLOT SCALE : 40:1

2

N

USH 41 SB OFF RAMP

USH 41 SB ON RAMP

43R

West Bend
Slinger

E1-1A
REMOVE

45R

W1-6
REMOVE

MATCHLINE SEE SHEET 7

Slinger
Speedway

MOVE
SEE PERMANENT
SIGN PLAN

FOOD

MOVE
CONTACT DERSE
1-800-345-5772

WRONG
WAY

42R

R5-1A
REMOVE

MATCHLINE SEE SHEET 9

46R

W1-6
REMOVE

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- (XXX) DENOTES SIGN NUMBER
- 53R (X) INDICATES SIGN SIZE

SHEET 8 OF 15

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	SIGNING REMOVAL PLAN	SHEET 63 E

FILE NAME : J:\projects\d2_11070241\Sign\023108_ps.dgn PLOT DATE : 15-JUL-2013 06:18 PLOT BY : MSCMWB PLOT NAME : PLOT SCALE : 40:1

MATCHLINE SEE SHEET 8

N

58R Milwaukee → D1-1

59R W5-52L REMOVE

62R W5-52R REMOVE

SOUTH 41 63R J2-1 REMOVE

146 147 148 149 150 151

USH 41

KETTLE MORAINE SCENIC DR.

STH 144

SOUTH 41 60R J2-1 REMOVE

61R W5-52R REMOVE

64R W5-52L REMOVE

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

SHEET 9 OF 15

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	SIGNING REMOVAL PLAN	SHEET 64	E

FILE NAME : J:\projects\d2_11070241\Sign\023109_ps.dgn PLOT DATE : 15-JUL-2013 06:18 PLOT BY : MSCMWB PLOT NAME : PLOT SCALE : 40:1

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE

EXISTING LIGHT OR SIGNAL POLE

(XXX) DENOTES SIGN NUMBER

(X) INDICATES SIGN SIZE

N

69R W4-1 REMOVE

70R STOP R1-1 REMOVE

74R NORTH 41 J3-1 REMOVE

USH 41 NB ON RAMP

75R NORTH 41 J3-1 REMOVE

152 153 155 156 157

STH 144

STH 144

USH 41 NB OFF RAMP

65R Fond du Lac D1-1 REMOVE

66R DO NOT ENTER R5-1 REMOVE

68R W5-52L REMOVE

67R DO NOT ENTER R5-1 REMOVE

71R NORTH 144 J3-1 REMOVE

72R CHECK TURN SIGNAL REMOVE

73R DO NOT ENTER R5-1 REMOVE

76R YIELD R1-2 REMOVE

77R WRONG WAY R5-1A REMOVE

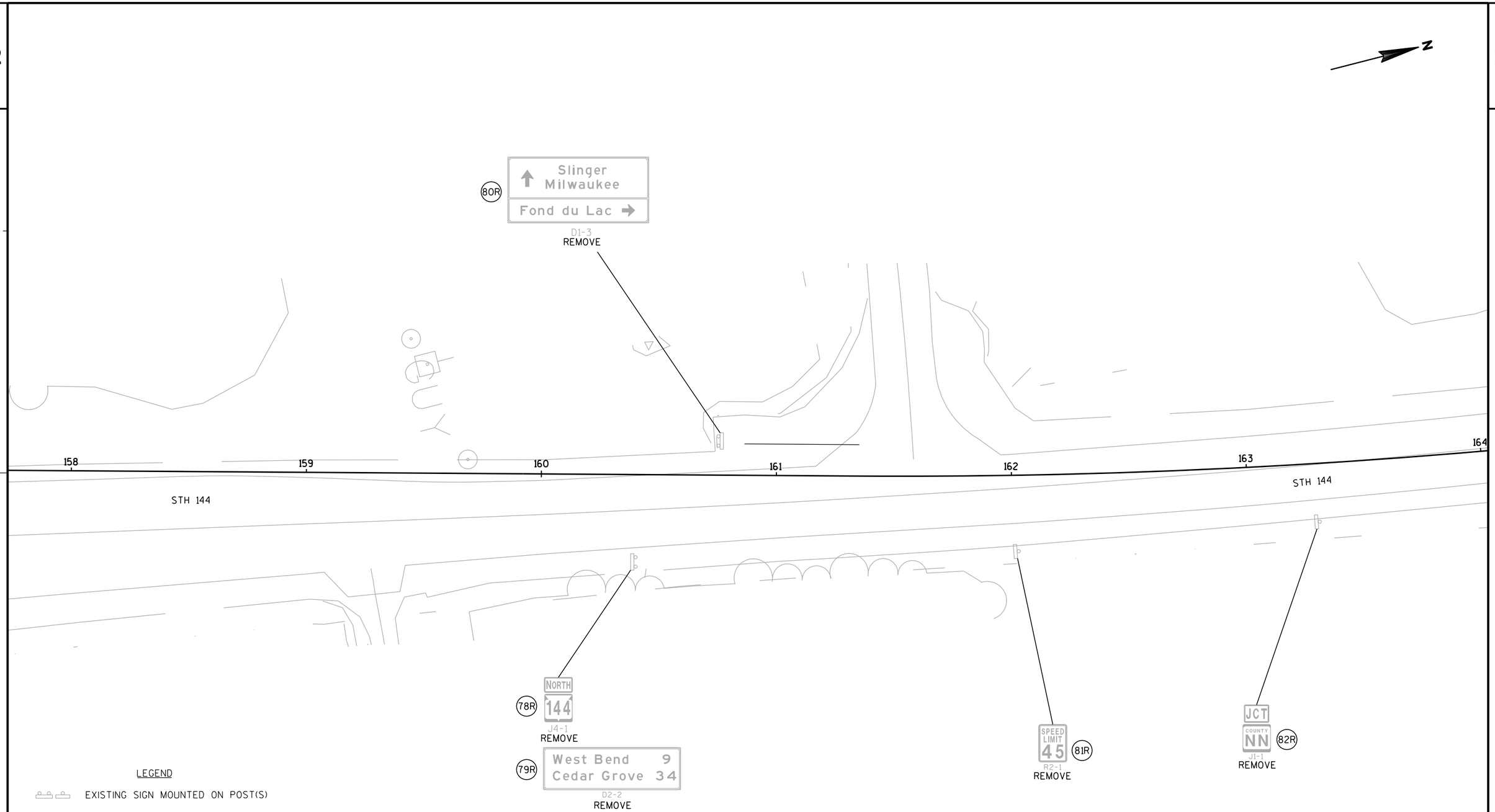
SHEET 10 OF 15

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	SIGNING REMOVAL PLAN	SHEET 65	E

FILE NAME : J:\projects\d2_11070241\Sign\023110_ps.dgn PLOT DATE : 15-JUL-2013 06:18 PLOT BY : MSCMWB PLOT NAME : PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2



LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

2

SHEET 11 OF 15

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	SIGNING REMOVAL PLAN	SHEET 66	E

2

N

83R

SOUTH 41 NORTH 41

J2-2

REMOVE

84R

SPEED LIMIT 45

R2-1

REMOVE

164 STH 144 165 166 167 168 169 STH 144 170

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE

EXISTING LIGHT OR SIGNAL POLE

(XXX) DENOTES SIGN NUMBER

(X) INDICATES SIGN SIZE

SHEET 12 OF 15

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	SIGNING REMOVAL PLAN	SHEET 67	E

2

N

ARTHUR RD

STOP
R1-1
90R
REMOVE

DEAD END
W14-1
91R
REMOVE

COUNTY NN
J3-1
92R
REMOVE

STH 144

171 172 173 174 175 176

STH 144

CTH NN

COUNTY NN
J3-1
85R
REMOVE

STOP
R1-1
86R
88R
REMOVE

144
J3-1
89R
REMOVE

COUNTY NN
J4-1
87R
REMOVE

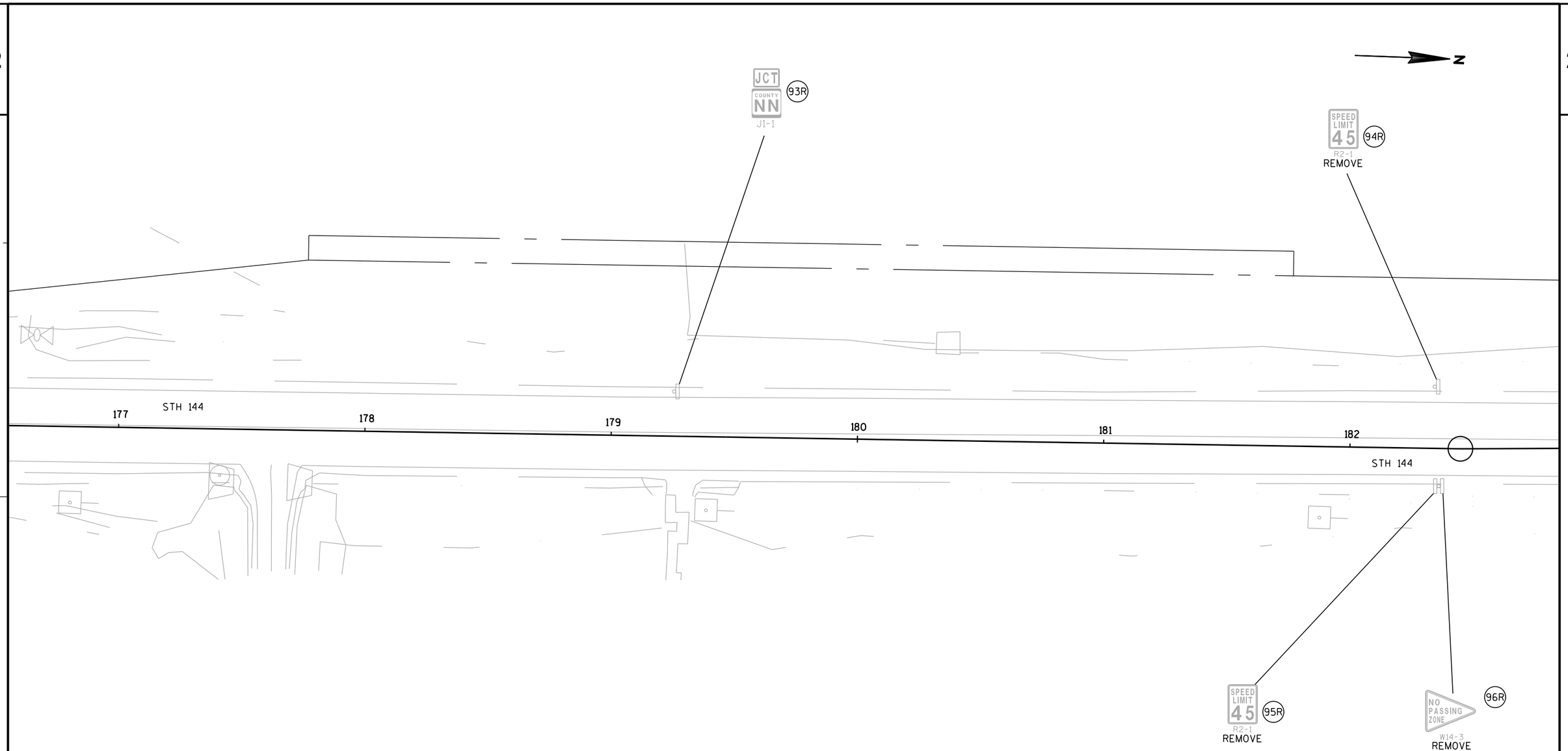
LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

SHEET 13 OF 15

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	SIGNING REMOVAL PLAN	SHEET 68	E

FILE NAME : J:\projects\d2_11070241\Sign\023113_ps.dgn PLOT DATE : 15-JUL-2013 06:18 PLOT BY : MSCMWB PLOT NAME : PLOT SCALE : 40:1



LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

SHEET 14 OF 15

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	SIGNING REMOVAL PLAN	SHEET 69	E

2

N

STH 144

183 184 185 186 187

STH 144

97R

W2-2
REMOVE

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE

EXISTING LIGHT OR SIGNAL POLE

(XXX) DENOTES SIGN NUMBER

(X) INDICATES SIGN SIZE

SHEET 15 OF 15

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	SIGNING REMOVAL PLAN	SHEET 70	E

FILE NAME : J:\projects\d2_11070241\Sign\023115_ps.dgn PLOT DATE : 15-JUL-2013 06:18 PLOT BY : MSCMWB PLOT NAME : PLOT SCALE : 40:1

E1-5A

7A EXIT 66

144

Slinger
West Bend

7

E4-1A

1A EXIT 66

144

1

Slinger
West Bend
1 MILE

E1-1A
TYPE I
REUSE STEEL POSTS

2840 +/-

500

USH 41

370 365 360

708 706 704 702 700

SOUTH
MB3-3
INTERSTATE
41
2
M1-1

41
M1-4
J4-2(3)

COVER WITH BLACK PANEL
OF SAME MATERIAL

SLOWER TRAFFIC KEEP RIGHT
3
R4-3(5)
IN MEDIAN

SPEED LIMIT
65
4
R2-1(5)

Slinger Speedway
NEXT SIGNAL
ESTR

UP STATION TO INTERCHANGE

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

SHEET 1 OF 14

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET 71	E

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

N

EXIT 66 ↗

5

E5-1A

516 514 512 510 508 506 504 502

USH 41 NB OFF RAMP

USH 41

385 380 375

USH 41 SB ON RAMP

722 720 718 716 714 712 710 124

907

905

6

W4-1(5)

SHEET 2 OF 14

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET 72	E

FILE NAME : J:\projects\d2_11070241\Sign\023202_ps.dgn PLOT DATE : 15-JUL-2013 06:18 PLOT BY : MSCMWB PLOT NAME : PLOT SCALE : 100:1

2

PEDESTRIANS BICYCLES NON MOTORIZED TRAFFIC MOTOR BICYCLES PROHIBITED
R5-57(5)
8

SEE SHEET 9 FOR ADDITIONAL SIGNS AT THIS INTERSECTION

W1-6(2S)
9

WRONG WAY
R5-1A(3)
10
11

13
← Slinger
West Bend →
D1-2

W3-1(3)
14

STH 144

USH 41 NB ON RAMP

USH 41 NB OFF RAMP

NOTE: SIGNS 12, 12A, 15, 22, 23, 23A ARE RESPONSIBILITY OF OWNER TRAFFIC GENERATOR. DO NOT REPLACE.

USH 41

← FOOD
MOVE
CONTACT DERSE
1-800-345-5772

Ski Area →
D7-82
12

Little Switzerland
D7-82B
MOVE
12A

Slinger Speedway
MOVE
SEE PERMANENT SIGN PLAN
15

USH 41

USH 41 SB OFF RAMP

23
Ski Area →
D7-82
23A
Little Switzerland
D7-82B
MOVE

W3-1(3)
24

Slinger Speedway
MOVE
22

NORTH
M3-1
144
M1-6
M5-1L
J2-1(2S)
21

KETTLE MORAINE SCENIC DR.

WRONG WAY
R5-1A(3)
18
19

USH 41 SB ON RAMP

SEE SHEET 8 FOR ADDITIONAL SIGNS AT THIS INTERSECTION

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

20
← West Bend
Slinger →
D1-2

W1-6(2S)
17

FOOD →
MOVE
CONTACT DERSE
1-800-345-5772

PEDESTRIANS BICYCLES NON MOTORIZED TRAFFIC MOTOR BICYCLES PROHIBITED
R5-57(5)
16

SHEET 3 OF 14

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET 73	E

FILE NAME : J:\projects\d2_11070241\Sign\023203_ps.dgn PLOT DATE : 15-JUL-2013 06:18 PLOT BY : MSCMWB PLOT NAME : PLOT SCALE : 100:1

2

SPEED LIMIT 65 (25)
R2-1(5)

NORTH
MB3-1
ALTERNATE 41 (26)
M1-1
41
M1-4
J4-2(3)

COVER WITH BLACK PANEL OF SAME MATERIAL

W4-1(5) (27)

620 618 616 614 612 610 608 606

USH 41

USH 41 SB OFF RAMP

415 410 405

USH 41

824 822 820 818 816 814 812

USH 41 SB OFF RAMP

EXIT 66 (28)
E5-1A

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

2

Slinger Speedway
NEXT RIGHT
ESTR

E1-5P
31A EXIT 68
K
EAST-WEST
3/4 MILE
31
E1-1A
TYPE I
REUSE STEEL POSTS
REPLACE CONNECTOR BOLTS

N

626 624 622

USH 41

460 455 425 420

3160 +/-

828 826

E1-5P
30A EXIT 66
144
Slinger
West Bend
3/4 MILE
30
E1-1A
TYPE I

E1-5P
32A EXIT 66
144
Slinger
West Bend
32
E4-1A
TYPE I

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

SHEET 5 OF 14

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET 75	E

2

N

33 W6-3(2S)

34 SPEED LIMIT 30 R2-1(3)

35 S3-1(2)

38 DO NOT ENTER R5-1(3)

39 R4-7(2S)

40 W5-54(2S)

41 NO ENGINE BRAKING EXCEPT IN EMERGENCY R10-64 MOVE

36 NO PARKING ANY TIME R7-1D(2S)

141 WRONG WAY R5-1A(3)

60'

90'

KETTLE MORAINE SCENIC DRIVE

136

137

138

139

KETTLE MORAINE SCENIC DRIVE

115'

125'

46 W6-1(2S)

45 SPEED LIMIT 30 R2-1(2S)

44 JCT MB2-1 INTERSTATE 41 M1-1 J1-1(2S)

128 JCT M2-1 41 M1-4 J1-1(2S)

43 NO PARKING ANY TIME R7-1D(2S)

42 BEGIN RIGHT TURN LANE R3-20R(2S)

COVER WITH BLACK PANEL OF SAME MATERIAL

TWO SEPARATE SIGNS TO ALLOW FOR REMOVAL OF USH 41 IN 5 YEARS

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

SHEET 6 OF 14

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET 76	E

NOTE: DO NOT PLACE STREET NAME SIGNS ON TOP OF STOP SIGNS.

N

47 NO PARKING ANY TIME R7-1D(2S)

48 W6-2(2S)

49 R4-7(2M)

50 ONE WAY R6-2L(2S)

51 R4-7(2M)

52 Slinger POPULATION 5,068 I2-3(2)

53 Parking Restrictions MOVE

155 SPEED LIMIT 30 R2-1(2S)

54 KETTLE MORAINE SCENIC DRIVE M1-97(2)

KETTLE MORAINE SCENIC DRIVE

140 141 142 143 144 145

906

902

OVERLOOK DR

STH 144

KETTLE MORAINE SCENIC DRIVE

64 ONLY ONLY R3-8D(2S)

63 DO NOT ENTER R5-1(2S)

62 NO OUTLET W14-2(2S)

59 STOP R1-1(3)

60 DIVIDED HIGHWAY R6-3A(2S)

58 RIGHT LANE MUST TURN RIGHT R3-7R(3)

57 West Bend Fond du Lac / Milwaukee D1-3

129 NORTH M3-1 SOUTH M3-3 41 M1-4 41 M1-4 M6-1 M5-1R J2-2(2S)

61 NORTH MB3-1 SOUTH MB3-3 41 M1-1 41 M1-1 MB6-1 MB5-1R J2-2(2S)

COVER WITH BLACK PANEL OF SAME MATERIAL

56 SOUTH MB3-3 41 M1-1 MB6-1 J3-1(2S)

130 SOUTH M3-3 41 M1-4 M6-1 J3-1(2S)

55 DO NOT ENTER R5-1(2M)

COVER WITH BLACK PANEL OF SAME MATERIAL

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

SHEET 7 OF 14

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET 77 E

2

NORTH
M3-1
144
M1-6
M6-1
J3-1(2S)
66

STOP
R1-1(3)
DIVIDED HIGHWAY
R6-3(2S)
67
68

DO NOT ENTER
R5-1(3)
144

MATCHLINE SEE SHEET 3

ONE WAY
R6-2L(2S)
65

SPEED LIMIT 30
R2-1(2S)
156

STH 144

USH 41 SB OFF RAMP

STOP
R1-1(3)
DIVIDED HIGHWAY
R6-3(2S)
69
70

DO NOT ENTER
R5-1(3)
71

WRONG WAY
R5-1A(2S)
72

DO NOT ENTER
R5-1(2M)
73

R3-1(2M)
74

SOUTH
M3-3
144
M1-6
M6-1
J3-1(2S)
132

END
M4-6
144
M1-6
J1-1(2)
MOVE
138

NORTH
MB3-1
INTERSTATE
41
M1-1
MB5-1L
J2-1(2S)
80

COVER WITH BLACK PANEL OF SAME MATERIAL

WRONG WAY
R5-1A(2S)
75

NO PARKING ANY TIME
R7-1D(2M)
142

146
147
148
149
150
151

728

USH 41

STH 144

USH 41 SB ON RAMP

SOUTH
MB3-3
INTERSTATE
41
M1-1
MB6-1
J3-1(2S)
79

R4-7(2S)
81
82

MATCHLINE SEE SHEET 3

COVER WITH BLACK PANEL OF SAME MATERIAL

RAMP CLOSED
USE
ALT ROUTE
R11-54F(2S)
151

RAMP CLOSED
USE
ALT ROUTE
R11-54F(2S)
152

NORTH
M3-1
131
41
M1-4
M5-1L
J2-1(2S)

78
Fond du Lac
E1-1A

W5-52R(3)
4' HEIGHT
77

NO PARKING ANY TIME
R7-1D(2M)
143

SPEED LIMIT 45
R2-1(2S)
157

WRONG WAY
R5-1A(2S)
76

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

SHEET 8 OF 14

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET 78	E

FILE NAME : J:\projects\d2_11070241\Sign\023208_ps.dgn PLOT DATE : 15-JUL-2013 06:19 PLOT BY : MSCMWB PLOT NAME : PLOT SCALE : 40:1

2

84 Milwaukee
D1-1

133 SOUTH M3-3 / 41 M1-4 / M5-1L J2-1(2)

85 SOUTH MB3-3 / INTERSTATE 41 M1-1 / MB5-1L J2-1(2S)

COVER WITH BLACK PANEL OF SAME MATERIAL

COVER WITH BLACK PANEL OF SAME MATERIAL

RAMP CLOSED / USE / ALT ROUTE 153 154
R11-54F(2S)

USH 41 NB ON RAMP

134 NORTH M3-1 / 41 M1-4 / M6-1 J3-1(2)

90 NORTH MB3-1 / INTERSTATE 41 M1-1 / MB6-1 J3-1(2)

89 DO NOT ENTER
R5-1(2M)

158 SPEED LIMIT 30
R2-1(2S)

83 W5-52R3 4' HEIGHT

86 NORTH MB3-1 / INTERSTATE 41 M1-1 / MB6-1 J3-1(2)

87 88
R4-7(2M)

COVER WITH BLACK PANEL OF SAME MATERIAL

ONLY

STH 144

152 153 154 155 156 157

ONE WAY 145
R6-2L(2S)

524

DO NOT ENTER 146
R5-1(3)

STH 144

WRONG WAY 147
R5-1A(3)

102 R3-1(2M)

135 NORTH M3-1 / 41 M1-4 / M6-1 J3-1(2)

101 DO NOT ENTER
R5-1(2M)

DO NOT ENTER 99
R5-1(3)

WRONG WAY 100
R5-1A(2S)

3' MOUNTING HEIGHT

USH 41 NB OFF RAMP

STOP 95 97
R1-1(3)

DIVIDED HIGHWAY 96 98
R6-3(2S)

NORTH M3-1 / 144 M1-6 / M6-1 J3-1(2) 94

ONE WAY 93
R6-2L(2S)

92
R3-2(2M)

NORTH M3-1 / 144 M1-6 / J4-1(2) 91

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

SHEET 9 OF 14

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET 79 E

2

N

148
R3-4(2S)

103
R4-7(2S)

104
W5-54(2S)

139
SPEED LIMIT 30
W3-5(2S)

Slinger
Milwaukee
Fond du Lac
105
D1-3

106
W6-1(2S)

STH 144

158 159 160 161 162 163 164

STH 144

DO NOT ENTER
110
R5-1(3)

109
West Bend 9
Cedar Grove 34
D2-2

108
W6-3(2S)

SPEED LIMIT 45
107
R2-1(2S)

149
JCT
M2-1
COUNTY NN
M1-5A
J1-1(2S)

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

SHEET 10 OF 14

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET 80	E

2

N

SOUTH
MB3-3
INTERSTATE 41
M1-1
MB6-1
J2-2(2S)

NORTH
MB3-1
INTERSTATE 41
M1-1
MB5-1R
111

COVER WITH BLACK PANEL OF SAME MATERIAL

SPEED LIMIT 45
R2-1(2S)
112

JCT
MB2-1
INTERSTATE 41
M1-1
J1-1(2S)
113

COVER WITH BLACK PANEL OF SAME MATERIAL

JCT
M2-1
41
M1-4
J1-1(2)
136

164 STH 144 165 166 167 168 169 170 STH 144

COUNTY NN
M1-5A
M5-1R
J2-1(2S)
150

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

SHEET 11 OF 14

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET 81	E

2

2

N

114 STOP
R1-1(3)

DEAD END 115
W14-1(2S)

COUNTY NN 116
M1-5A
M6-1
J3-1(2S)

ARTHUR RD

STH 144

171 172 173 174 175 176

STH 144

NA EET STR ME
MOVE BY OTHERS

COUNTY NN 121
M1-5A
M6-1
J3-1(2S)

120 STOP
R1-1(3)

CTH NN

118 STOP
R1-1(3)

SOUTH NORTH 117
M3-3 M3-1
144 144
M1-6 M1-6
M6-1 M6-1
J3-2(2S)

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

119 COUNTY NN
M1-5A
J4-1(2S)

274

NOTE: DO NOT PLACE STREET NAME SIGNS ON TOP OF STOP SIGNS.

SHEET 12 OF 14

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET 82 E

FILE NAME : J:\projects\d2_11070241\Sign\023212_ps.dgn PLOT DATE : 15-JUL-2013 06:19 PLOT BY : MSCMWB PLOT NAME : PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

N

122 COUNTY NN M1-5A
M5-1L
J2-1(2S)

JCT M2-1
123 COUNTY NN M1-5A
J1-1(2S)

SPEED LIMIT 45 124
R2-1(2S)

STH 144

177 178 179 180 181 182

STH 144

SPEED LIMIT 45 126
R2-1(2S)

NO PASSING ZONE 125
W14-3(2S)

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

NOTE: "NO PASSING ZONE" PERMANENT SIGNS SHALL BE LOCATED AFTER PASSING ZONES HAVE BEEN ESTABLISHED.

SHEET 13 OF 14

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET 83	E

2

N

2

183 STH 144 184 185 186 187

STH 144

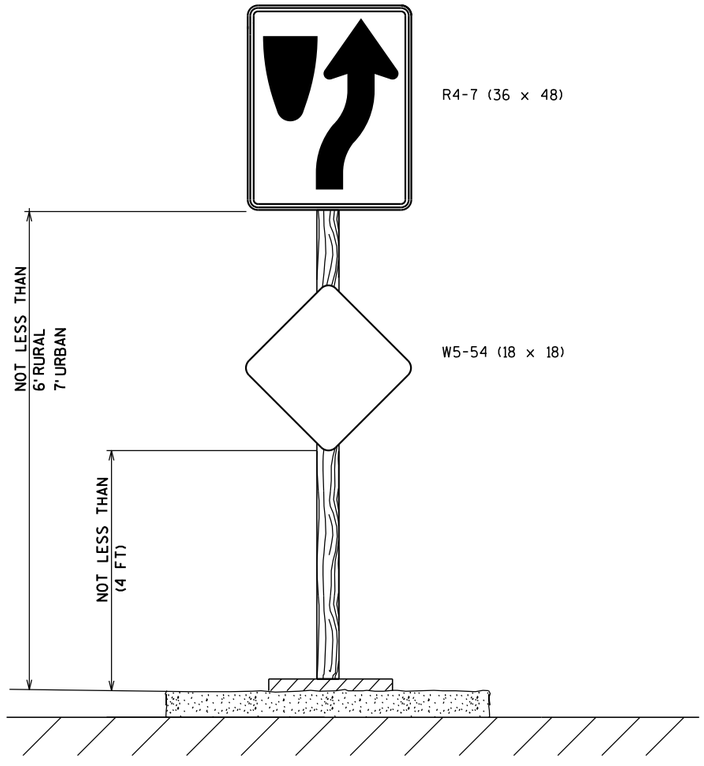
127

W2-2(2S)

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

2



TYPICAL INSTALLATION FOR
TRANSITION TO DIVIDED HIGHWAY
OR OTHER SPECIAL NEEDS AREAS

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	TYPICAL DETAIL - SIGN ON MEDIAN NOSE	SHEET 85	E

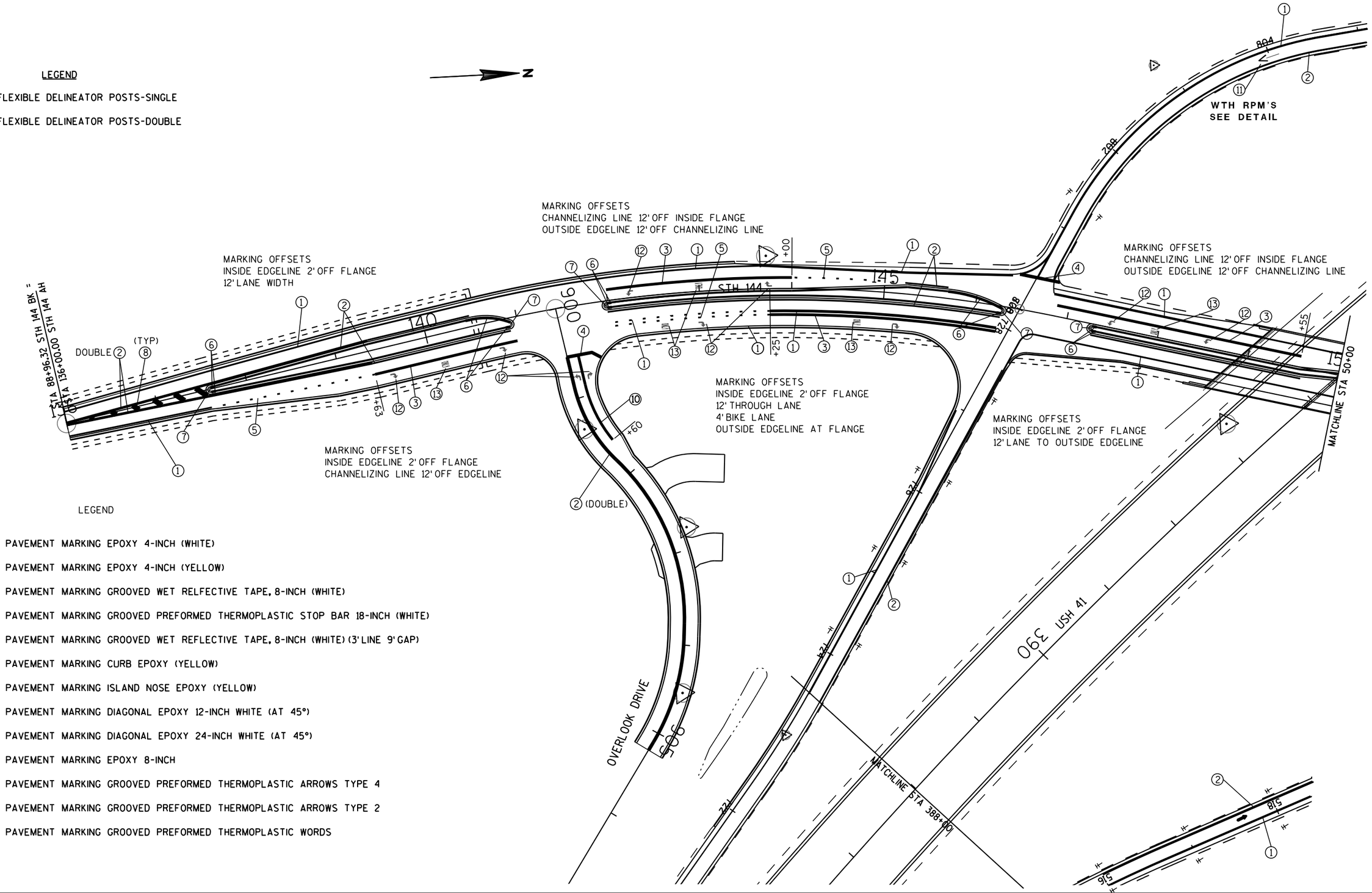
2

2

LEGEND

⊣ FLEXIBLE DELINEATOR POSTS-SINGLE

⊣⊢ FLEXIBLE DELINEATOR POSTS-DOUBLE



LEGEND

① PAVEMENT MARKING EPOXY 4-INCH (WHITE)

② PAVEMENT MARKING EPOXY 4-INCH (YELLOW)

③ PAVEMENT MARKING GROOVED WET RELFECTIVE TAPE, 8-INCH (WHITE)

④ PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP BAR 18-INCH (WHITE)

⑤ PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE, 8-INCH (WHITE) (3' LINE 9' GAP)

⑥ PAVEMENT MARKING CURB EPOXY (YELLOW)

⑦ PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)

⑧ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH WHITE (AT 45°)

⑨ PAVEMENT MARKING DIAGONAL EPOXY 24-INCH WHITE (AT 45°)

⑩ PAVEMENT MARKING EPOXY 8-INCH

⑪ PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 4

⑫ PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2

⑬ PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PAVEMENT MARKING	SCALE, FEET 0 50 100	SHEET 86	E

2

LEGEND

① PAVEMENT MARKING EPOXY 4-INCH (WHITE)
② PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
③ PAVEMENT MARKING GROOVED WET RELFECTIVE TAPE, 8-INCH (WHITE)
④ PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP BAR 18-INCH (WHITE)
⑤ PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE, 8-INCH (WHITE) (3' LINE 9' GAP)
⑥ PAVEMENT MARKING CURB EPOXY (YELLOW)
⑦ PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
⑧ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH WHITE (AT 45°)
⑨ PAVEMENT MARKING DIAGONAL EPOXY 24-INCH WHITE (AT 45°)
⑩ PAVEMENT MARKING EPOXY 8-INCH
⑪ PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 4
⑫ PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2
⑬ PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS

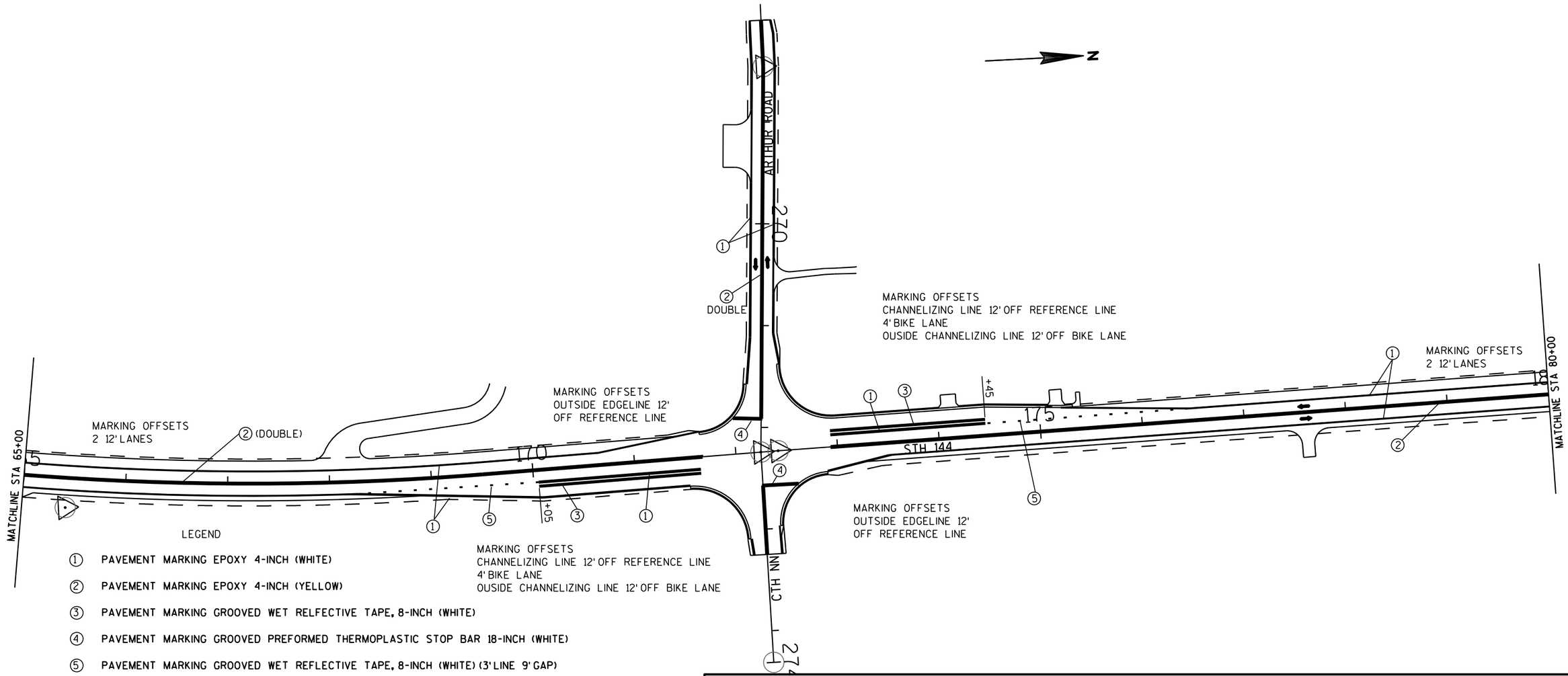
⊣ FLEXIBLE DELINEATOR POSTS-SINGLE
⊣⊢ FLEXIBLE DELINEATOR POSTS-DOUBLE

MATCHLINE STA 403+00
MATCHLINE STA 50+00
MATCHLINE STA 65+00
USH 41
STH 144
MARKING OFFSETS
INSIDE EDGELINE LINE 2' OFF FLANGE
OUTSIDE EDGELINE 12' OFF INSIDE EDGELINE
MARKING OFFSETS
INSIDE EDGELINE 2' OFF FLANGE
12' THROUGH LANE
4' BIKE LANE
OUTSIDE EDGELINE 12' OFF BIKE LANE
MARKING OFFSETS
CHANNELIZING LINE 12' OFF INSIDE FLANGE
OUTSIDE EDGELINE 12' OFF CHANNELIZING LINE
MARKING OFFSETS
INSIDE EDGELINE 2' OFF INSIDE FLANGE
OUTSIDE EDGELINE 12' OFF INSIDE EDGELINE LINE
INSIDE EDGELINE NOT
REQUIRED PER SDD
(TYP)
DOUBLE
MARKING OFFSETS
2 12' LANES
(DOUBLE)
WTH RPM'S
SEE DETAIL
N

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PAVEMENT MARKING	SCALE, FEET 0 50 100	SHEET 87	E

FILE NAME : L:\Projects\11609\Dwg\023202_pm.dgn PLOT DATE : 07/26/13 PLOT BY : tmoyer PLOT NAME : PLOT SCALE : 1:100
WISDOT/CADDS SHEET 42

2



LEGEND

① PAVEMENT MARKING EPOXY 4-INCH (WHITE)

② PAVEMENT MARKING EPOXY 4-INCH (YELLOW)

③ PAVEMENT MARKING GROOVED WET RELFECTIVE TAPE, 8-INCH (WHITE)

④ PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP BAR 18-INCH (WHITE)

⑤ PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE, 8-INCH (WHITE) (3' LINE 9' GAP)

⑥ PAVEMENT MARKING CURB EPOXY (YELLOW)

⑦ PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)

⑧ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH WHITE (AT 45°)

⑨ PAVEMENT MARKING DIAGONAL EPOXY 24-INCH WHITE (AT 45°)

⑩ PAVEMENT MARKING EPOXY 8-INCH

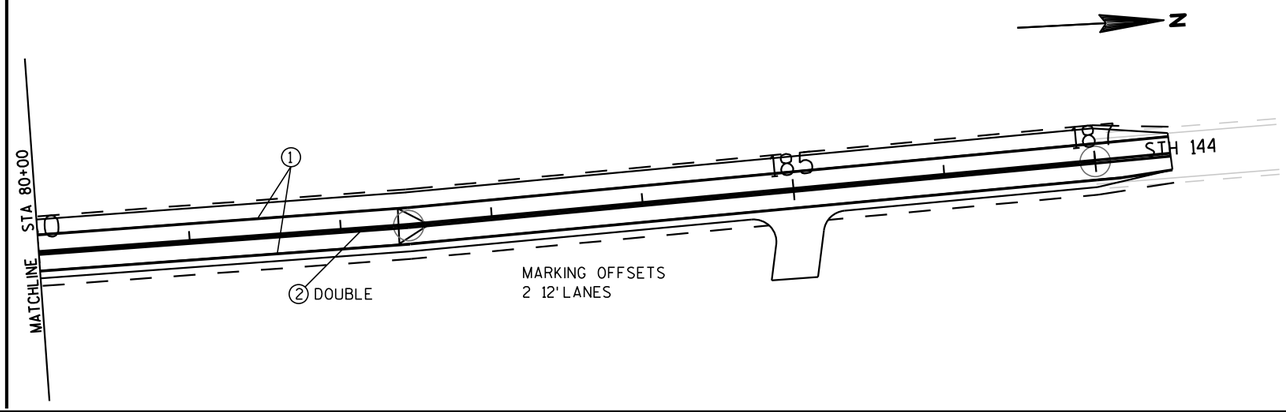
⑪ PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 4

⑫ PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2

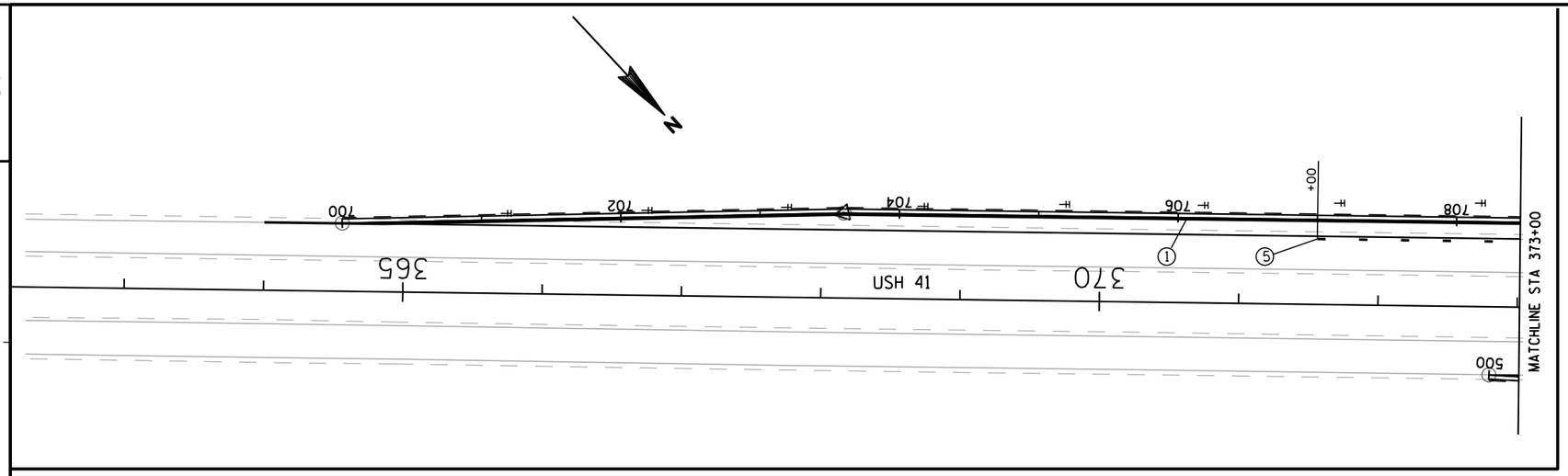
⑬ PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS

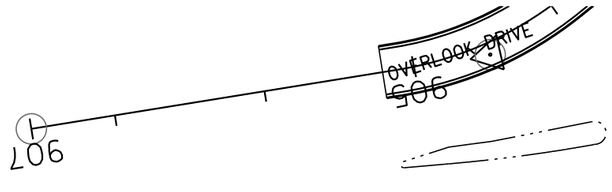
⊣ FLEXIBLE DELINEATOR POSTS-SINGLE

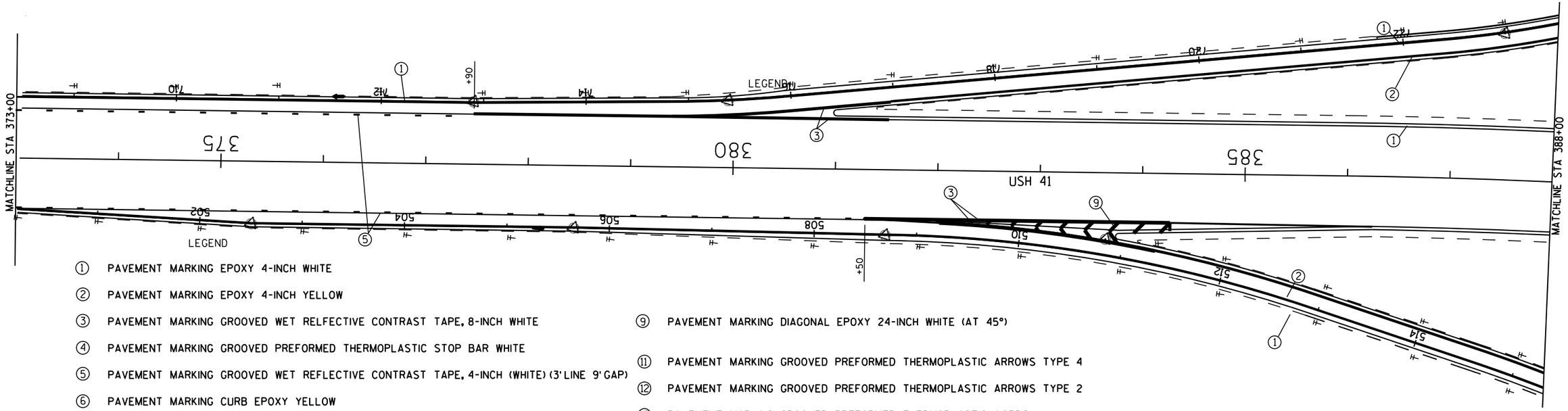
⊣⊢ FLEXIBLE DELINEATOR POSTS-DOUBLE



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PAVEMENT MARKING	SCALE, FEET 0 50 100	SHEET 88	E







LEGEND

① PAVEMENT MARKING EPOXY 4-INCH WHITE

② PAVEMENT MARKING EPOXY 4-INCH YELLOW

③ PAVEMENT MARKING GROOVED WET RELFECTIVE CONTRAST TAPE, 8-INCH WHITE

④ PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP BAR WHITE

⑤ PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE, 4-INCH (WHITE) (3'LINE 9'GAP)

⑥ PAVEMENT MARKING CURB EPOXY YELLOW

⑦ PAVEMENT MARKING ISLAND NOSE EPOXY YELLOW

⑧ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH WHITE (AT 45°)

⑨ PAVEMENT MARKING DIAGONAL EPOXY 24-INCH WHITE (AT 45°)

⑪ PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 4

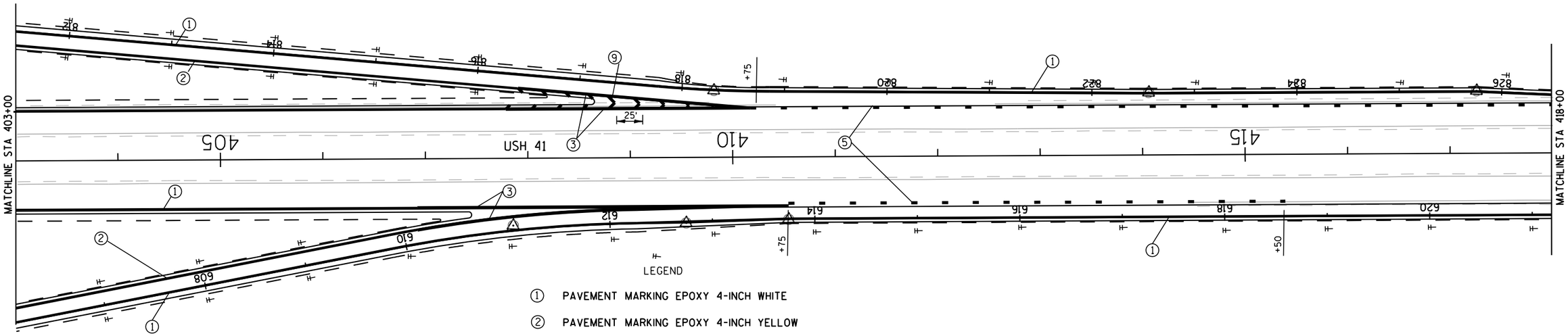
⑫ PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2

⑬ PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS

⊣ FLEXIBLE DELINEATOR POSTS-SINGLE

⊣⊢ FLEXIBLE DELINEATOR POSTS-DOUBLE

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PAVEMENT MARKING	SCALE, FEET 0 50 100	SHEET 89	E



① PAVEMENT MARKING EPOXY 4-INCH WHITE

② PAVEMENT MARKING EPOXY 4-INCH YELLOW

③ PAVEMENT MARKING GROOVED WET RELFECTIVE CONTRAST TAPE, 8-INCH WHITE

④ PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP BAR WHITE

⑤ PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE, 4-INCH (WHITE) (3' LINE 9' GAP)

⑥ PAVEMENT MARKING CURB EPOXY YELLOW

⑦ PAVEMENT MARKING ISLAND NOSE EPOXY YELLOW

⑧ PAVEMENT MARKING DIAGONAL EPOXY 12-INCH WHITE (AT 45°)

⑨ PAVEMENT MARKING DIAGONAL EPOXY 24-INCH WHITE (AT 45°)

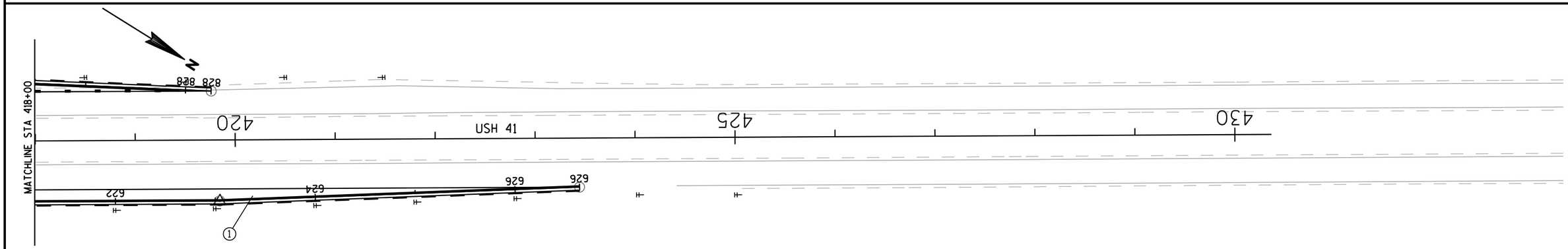
⑪ PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 4

⑫ PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2

⑬ PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS

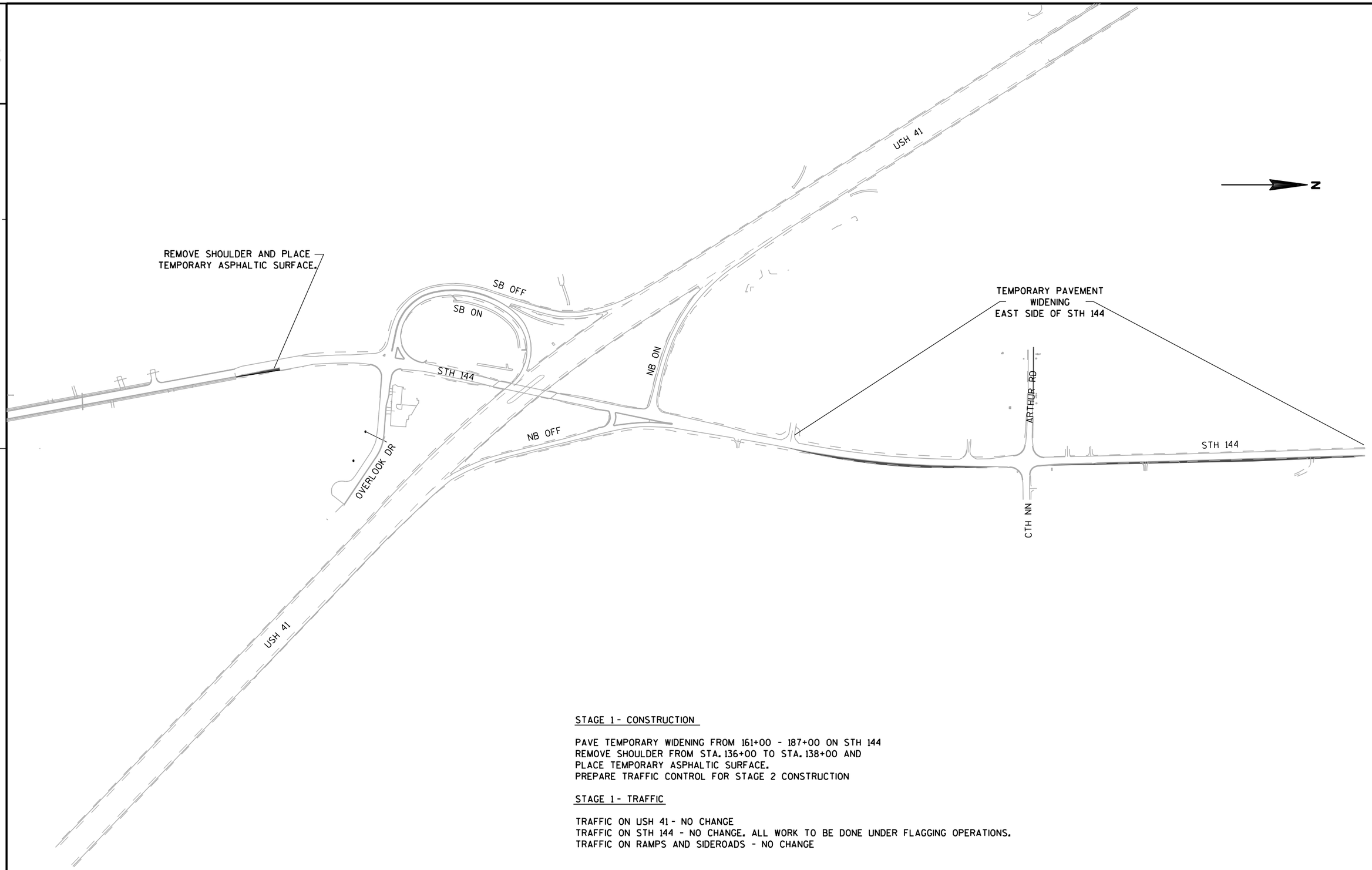
⊣ FLEXIBLE DELINEATOR POSTS-SINGLE

⊣⊢ FLEXIBLE DELINEATOR POSTS-DOUBLE



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PAVEMENT MARKING	SCALE, FEET 0 50 100	SHEET 90	E

2



STAGE 1 - CONSTRUCTION

PAVE TEMPORARY WIDENING FROM 161+00 - 187+00 ON STH 144
REMOVE SHOULDER FROM STA. 136+00 TO STA. 138+00 AND
PLACE TEMPORARY ASPHALTIC SURFACE.
PREPARE TRAFFIC CONTROL FOR STAGE 2 CONSTRUCTION

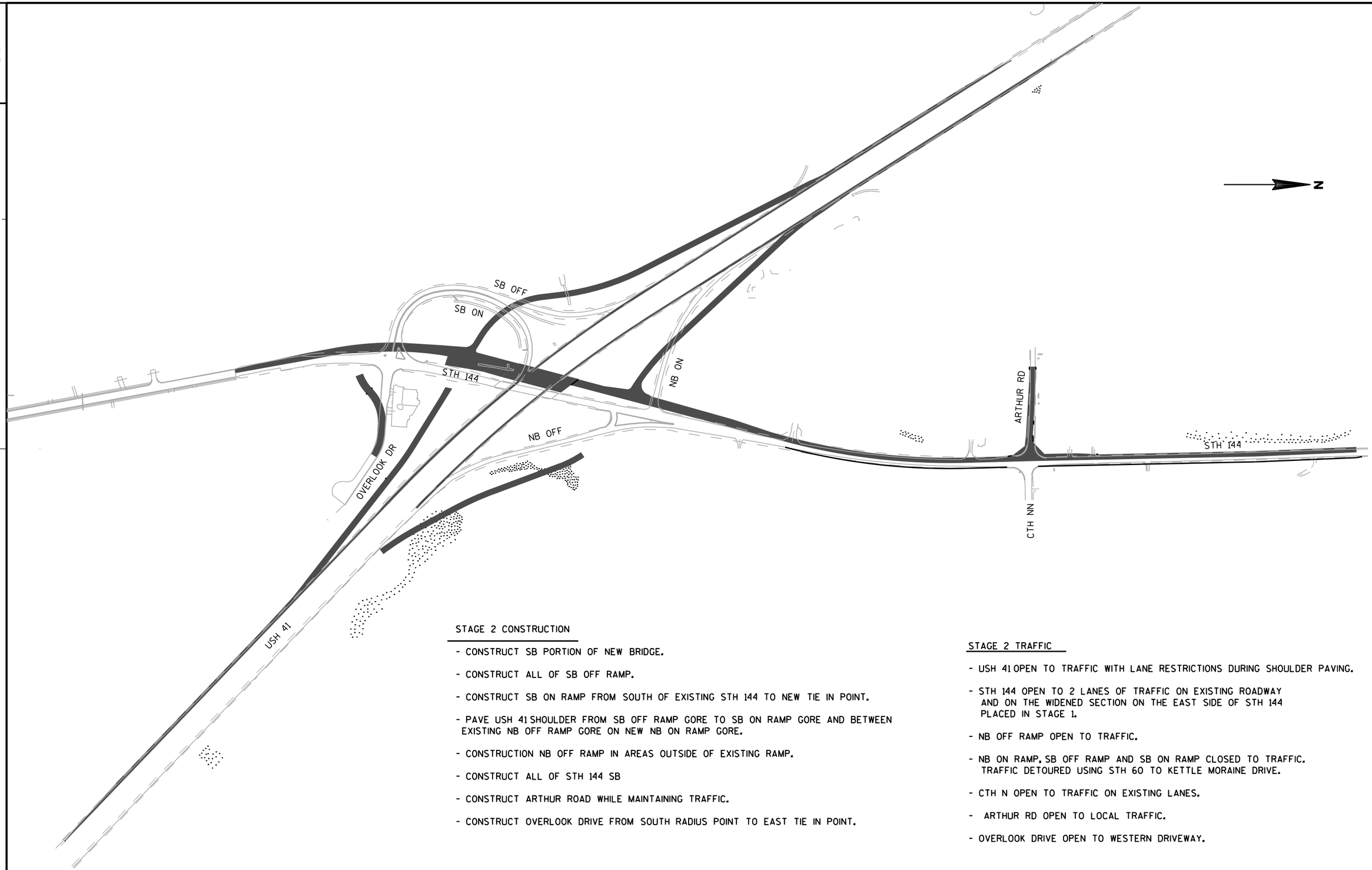
STAGE 1 - TRAFFIC

TRAFFIC ON USH 41 - NO CHANGE
TRAFFIC ON STH 144 - NO CHANGE. ALL WORK TO BE DONE UNDER FLAGGING OPERATIONS.
TRAFFIC ON RAMPS AND SIDEROADS - NO CHANGE

PROJECT NO: 1107-02-79	HWY: USH 41 / STH 144	COUNTY: WASHINGTON	TRAFFIC CONTROL OVERVIEW - STAGE 1	SHEET E

FILE NAME : L:\Projects\11609\Dwg\025001_tc.dgn PLOT DATE : 07/26/13 PLOT BY : tmoyer PLOT NAME : _____ PLOT SCALE : 1:400

2



STAGE 2 CONSTRUCTION

- CONSTRUCT SB PORTION OF NEW BRIDGE.
- CONSTRUCT ALL OF SB OFF RAMP.
- CONSTRUCT SB ON RAMP FROM SOUTH OF EXISTING STH 144 TO NEW TIE IN POINT.
- PAVE USH 41 SHOULDER FROM SB OFF RAMP GORE TO SB ON RAMP GORE AND BETWEEN EXISTING NB OFF RAMP GORE ON NEW NB ON RAMP GORE.
- CONSTRUCTION NB OFF RAMP IN AREAS OUTSIDE OF EXISTING RAMP.
- CONSTRUCT ALL OF STH 144 SB
- CONSTRUCT ARTHUR ROAD WHILE MAINTAINING TRAFFIC.
- CONSTRUCT OVERLOOK DRIVE FROM SOUTH RADIUS POINT TO EAST TIE IN POINT.

STAGE 2 TRAFFIC

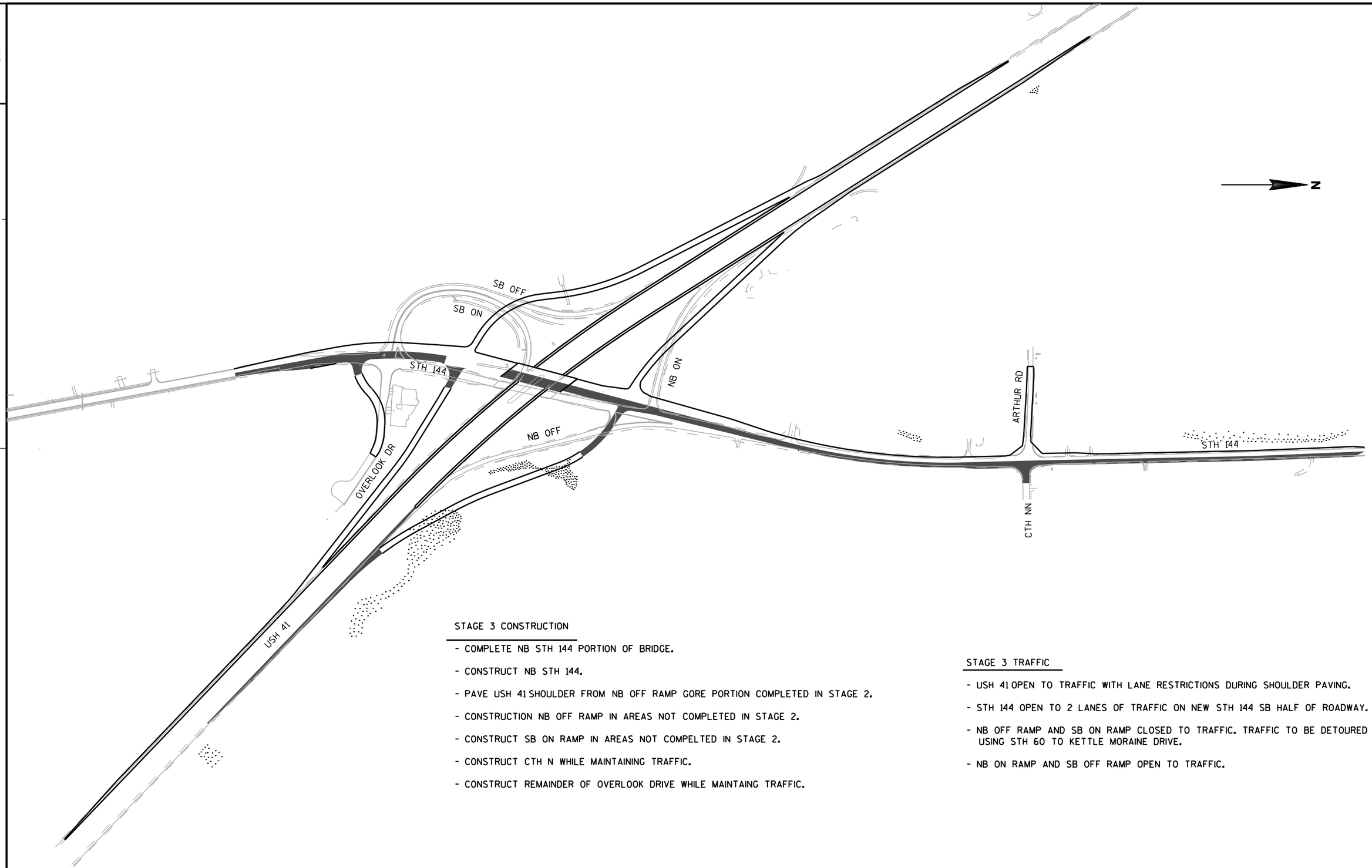
- USH 41 OPEN TO TRAFFIC WITH LANE RESTRICTIONS DURING SHOULDER PAVING.
- STH 144 OPEN TO 2 LANES OF TRAFFIC ON EXISTING ROADWAY AND ON THE WIDENED SECTION ON THE EAST SIDE OF STH 144 PLACED IN STAGE 1.
- NB OFF RAMP OPEN TO TRAFFIC.
- NB ON RAMP, SB OFF RAMP AND SB ON RAMP CLOSED TO TRAFFIC. TRAFFIC DETOURED USING STH 60 TO KETTLE MORAINE DRIVE.
- CTH N OPEN TO TRAFFIC ON EXISTING LANES.
- ARTHUR RD OPEN TO LOCAL TRAFFIC.
- OVERLOOK DRIVE OPEN TO WESTERN DRIVEWAY.

PROJECT NO: 1107-02-79	HWY: USH 41 / STH 144	COUNTY: WASHINGTON	TRAFFIC CONTROL OVERVIEW - STAGE 2	SHEET E

FILE NAME : L:\Projects\11609\Dwg\025002_tc.dgn PLOT DATE : 07/26/13 PLOT BY : tmoyer PLOT NAME : _____ PLOT SCALE : 1:400

WISDOT/CADDS SHEET 42

2



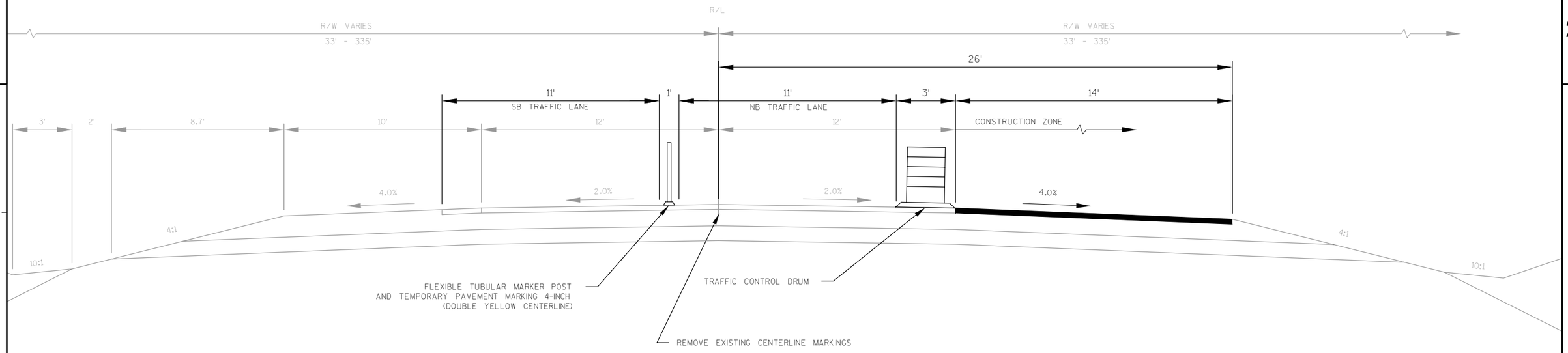
STAGE 3 CONSTRUCTION

- COMPLETE NB STH 144 PORTION OF BRIDGE.
- CONSTRUCT NB STH 144.
- PAVE USH 41 SHOULDER FROM NB OFF RAMP GORE PORTION COMPLETED IN STAGE 2.
- CONSTRUCTION NB OFF RAMP IN AREAS NOT COMPLETED IN STAGE 2.
- CONSTRUCT SB ON RAMP IN AREAS NOT COMPELTED IN STAGE 2.
- CONSTRUCT CTH N WHILE MAINTAINING TRAFFIC.
- CONSTRUCT REMAINDER OF OVERLOOK DRIVE WHILE MAINTAING TRAFFIC.

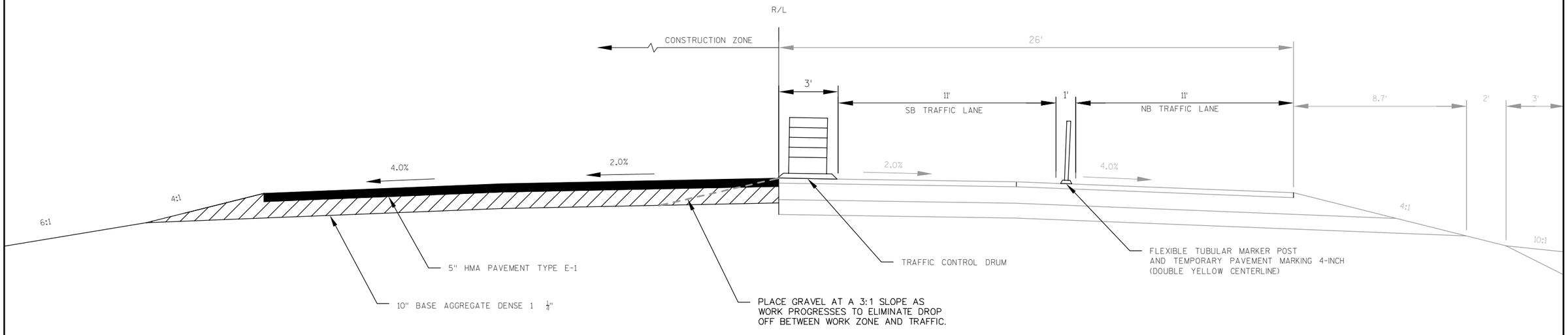
STAGE 3 TRAFFIC

- USH 41 OPEN TO TRAFFIC WITH LANE RESTRICTIONS DURING SHOULDER PAVING.
- STH 144 OPEN TO 2 LANES OF TRAFFIC ON NEW STH 144 SB HALF OF ROADWAY.
- NB OFF RAMP AND SB ON RAMP CLOSED TO TRAFFIC. TRAFFIC TO BE DETOURED USING STH 60 TO KETTLE MORAINE DRIVE.
- NB ON RAMP AND SB OFF RAMP OPEN TO TRAFFIC.

PROJECT NO: 1107-02-79	HWY: USH 41 / STH 144	COUNTY: WASHINGTON	TRAFFIC CONTROL OVERVIEW - STAGE 3	SHEET 93 E

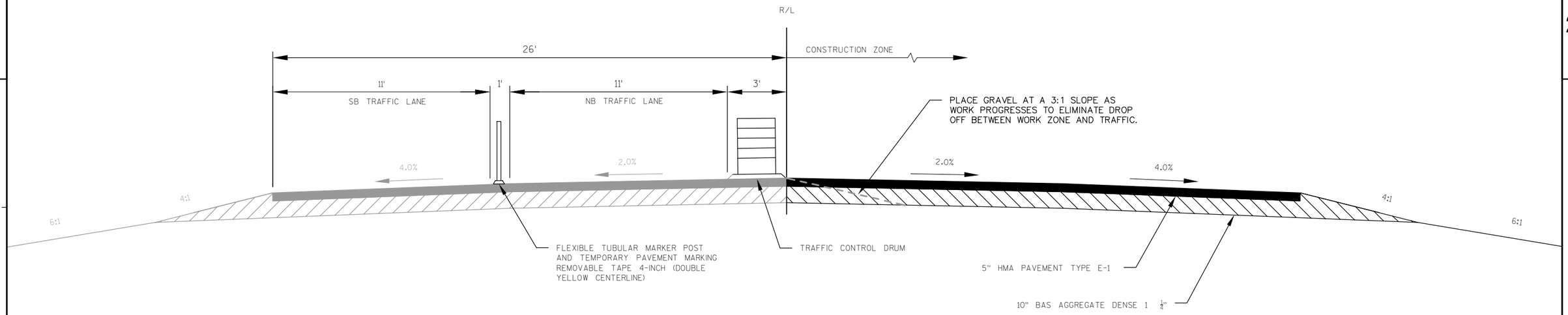


STAGE 1 - STH 144

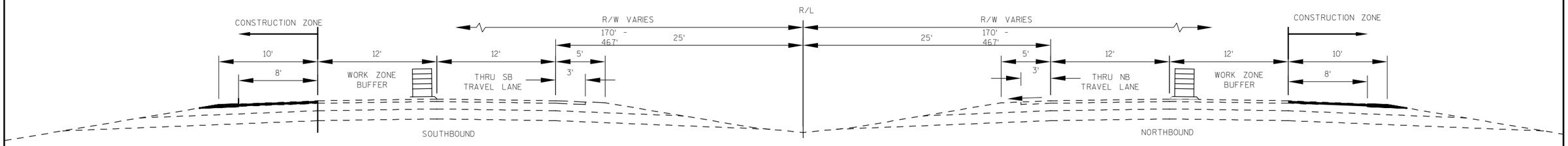


STAGE 2 - STH 144

PROJECT NO: 1107-02-79	HWY: USH 41 / STH 144	COUNTY: WASHINGTON	TRAFFIC CONTROL TYPICALS	SHEET 94	E



STAGE 3 - STH 144



USH 41 - SHOULDER PAVING BETWEEN GORES

WORK ON SHOULDERS MUST BE COMPLETED DURING OFF PEAK HOURS. DRUMS SHALL BE REMOVED FROM USH 41 TO THE OUTSIDE SHOULDER AT THE EDGE OF THE THRU TRAVEL LANE EACH WORKING DA PRIOR TO PEAK TRAVEL TIMESY. DROP OF AT THE EDGE OF TRAVEL LANE MAY NOT EXCEED 6 INCHES.

PROJECT NO: 1107-02-79	HWY: USH 41 / STH 144	COUNTY: WASHINGTON	TRAFFIC CONTROL TYPICALS	SHEET 95	E

EXISTING PAVEMENT MARKINGS TO REMAIN IN THIS AREA. NO TEMPORARY PAVEMENT MARKINGS ARE REQUIRED.

SEE STANDARD DETAIL DRAWINGS FOR FOR PLACEMENT AND SPACING OF ADVANCED SIGNING.

W06-3
DO NOT PASS
R4-1
24"_x_30"

W06-3
25 M.P.H.
W013-1
36" x 36"

ROAD WORK AHEAD
W20-1

SB OFF
SB ON

RAMP CLOSED BEGINNING
①

SEE FIXED MESSAGE SIGN DETAIL FOR ADDITIONAL INFORMATION

PLACE AT STA. 603+00 ON NB ON RAMP

REMOVE EXISTING SHOULDER
PLACE ASPHALTIC SURFACE TEMPORARY

W06-3
35 M.P.H.
W013-1
36" x 36"

W06-3
DO NOT PASS
R4-1
24"_x_30"

NB OFF

OVERLOOK DR

USH 41

STH 144

LEGEND

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

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 1	SCALE, FEET 0 50. 100	SHEET	E

FILE NAME : L:\Projects\11609\Dwg\026101_S1.dgn PLOT DATE : 5:42:15 AM PLOT BY : tmoyer PLOT NAME : _____ PLOT SCALE : 1:100

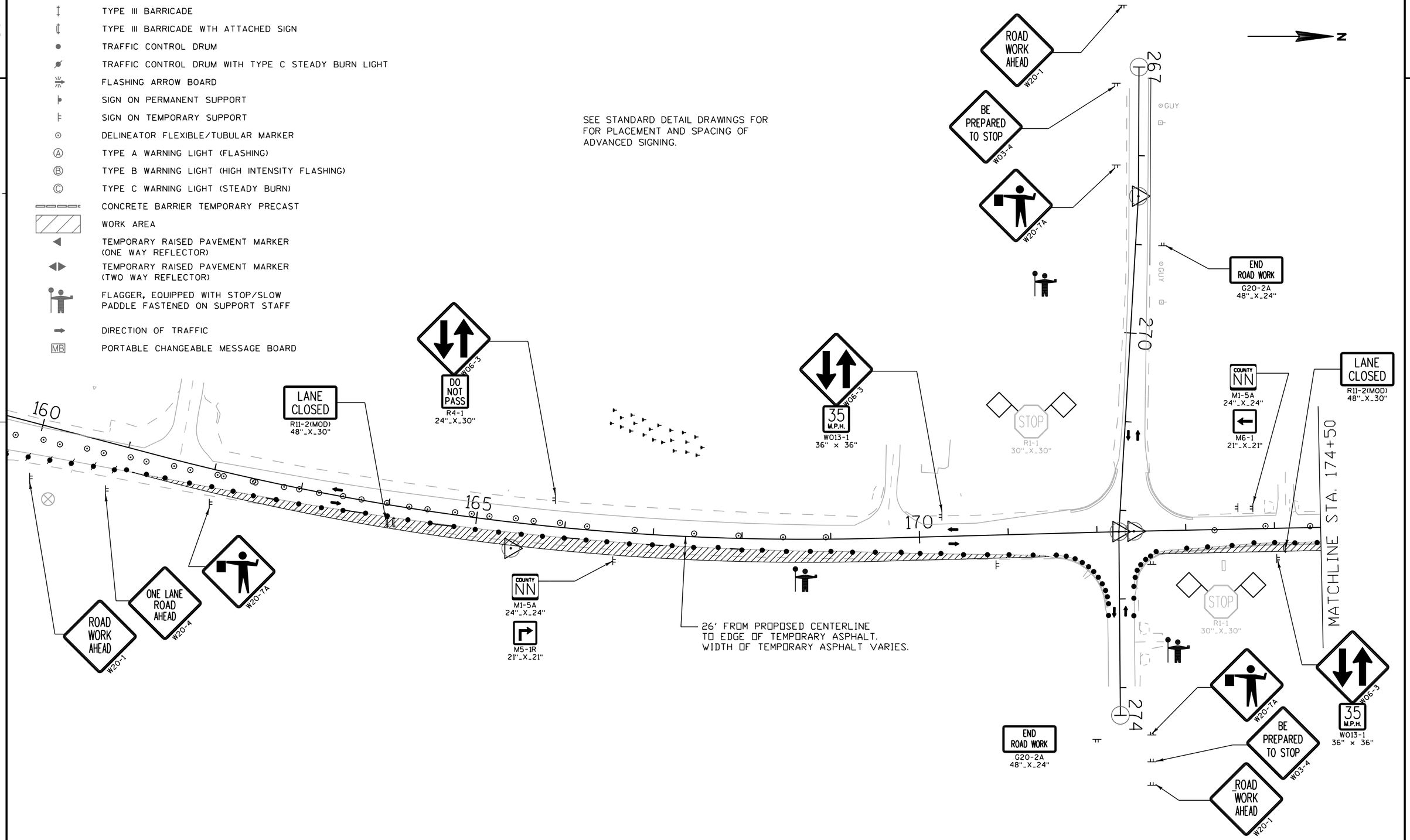
WISDOT/CADDS SHEET 42

2

LEGEND

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

SEE STANDARD DETAIL DRAWINGS FOR FOR PLACEMENT AND SPACING OF ADVANCED SIGNING.



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 1 SCALE, FEET 0 50 100	SHEET 97 E

FILE NAME : L:\Projects\11609\Dwg\026102_S1.dgn PLOT DATE : 07/26/13 PLOT BY : tmoyer PLOT NAME : _____ PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

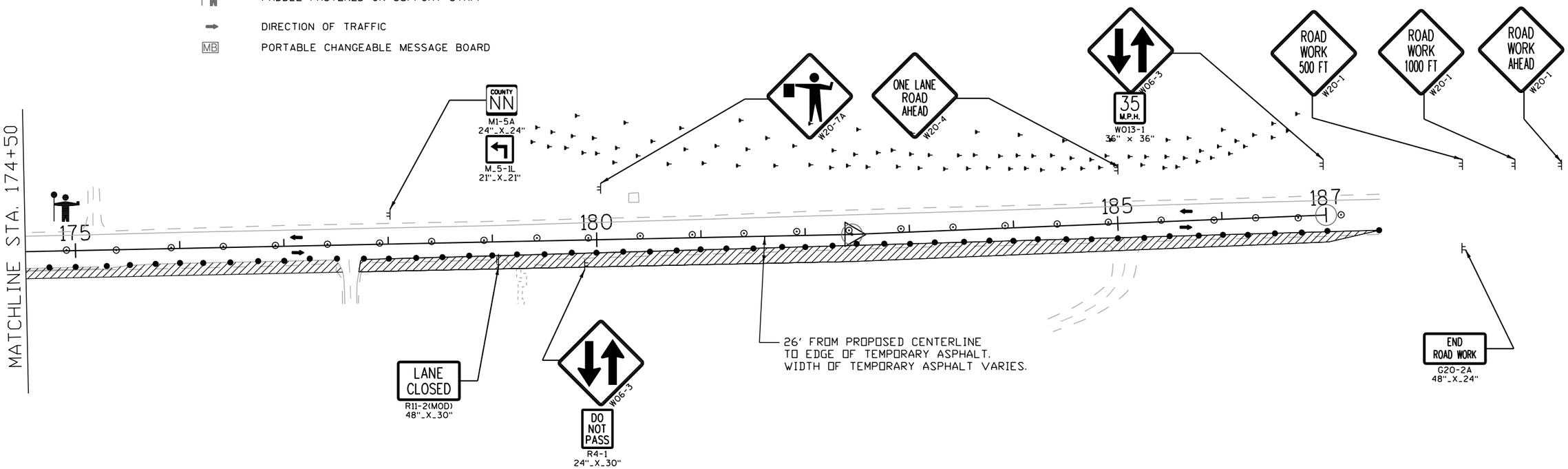
LEGEND

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

N

SEE STANDARD DETAIL DRAWINGS FOR FOR PLACEMENT AND SPACING OF ADVANCED SIGNING.

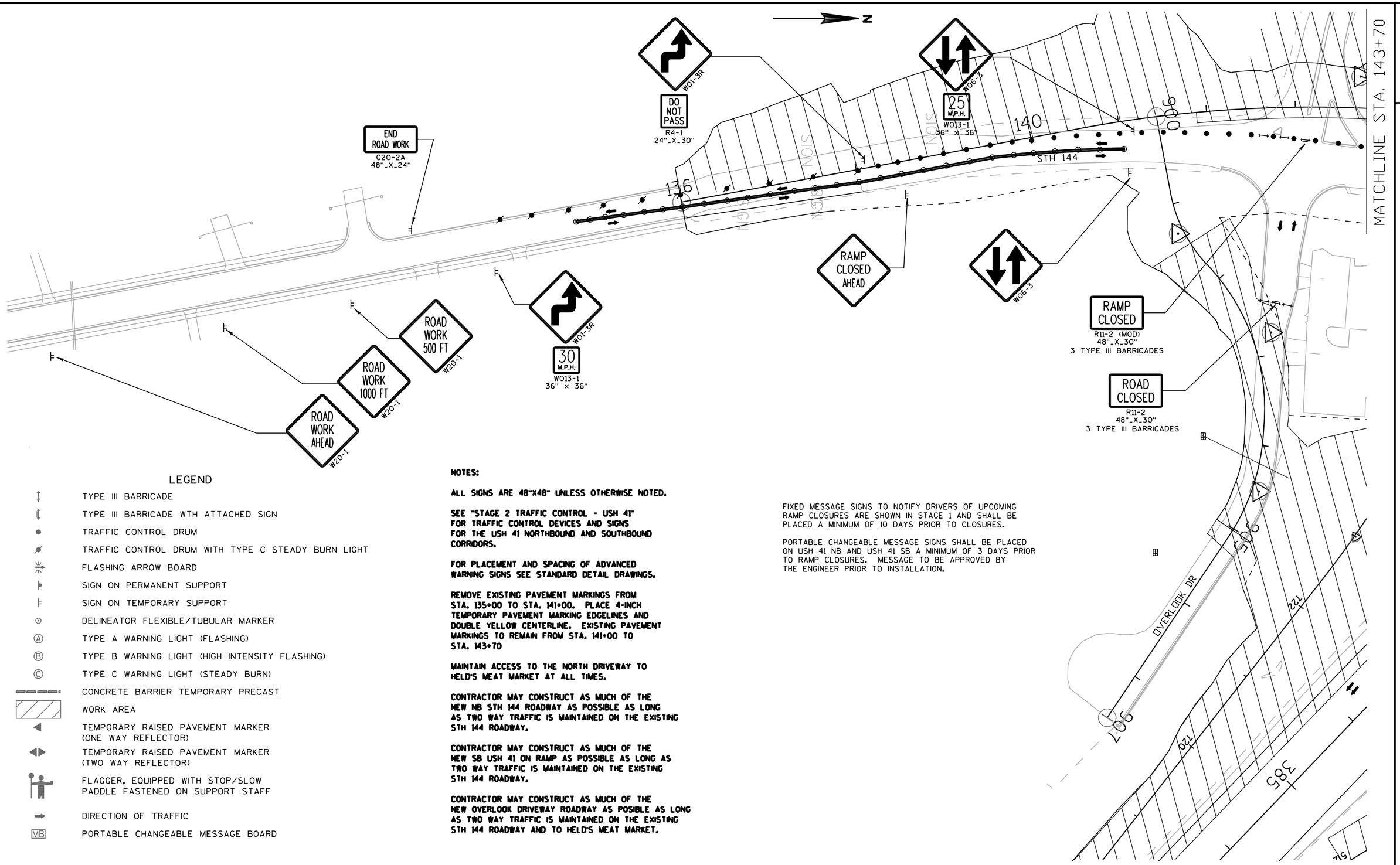
EXISTING PAVEMENT MARKINGS TO REMAIN IN THIS AREA. NO TEMPORARY PAVEMENT MARKINGS ARE REQUIRED.



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 1	SCALE, FEET 0 50 100	SHEET	E

FILE NAME : L:\Projects\11609\Dwg\026103_S1.dgn PLOT DATE : 07/26/13 PLOT BY : tmoyer PLOT NAME : _____ PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42



LEGEND

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

NOTES:

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

SEE "STAGE 2 TRAFFIC CONTROL - USH 41" FOR TRAFFIC CONTROL DEVICES AND SIGNS FOR THE USH 41 NORTHBOUND AND SOUTHBOUND CORRIDORS.

FOR PLACEMENT AND SPACING OF ADVANCED WARNING SIGNS SEE STANDARD DETAIL DRAWINGS.

REMOVE EXISTING PAVEMENT MARKINGS FROM STA. 135+00 TO STA. 141+00. PLACE 4-INCH TEMPORARY PAVEMENT MARKING EDGELINES AND DOUBLE YELLOW CENTERLINE. EXISTING PAVEMENT MARKINGS TO REMAIN FROM STA. 141+00 TO STA. 143+70

MAINTAIN ACCESS TO THE NORTH DRIVEWAY TO HELD'S MEAT MARKET AT ALL TIMES.

CONTRACTOR MAY CONSTRUCT AS MUCH OF THE NEW NB STH 144 ROADWAY AS POSSIBLE AS LONG AS TWO WAY TRAFFIC IS MAINTAINED ON THE EXISTING STH 144 ROADWAY.

CONTRACTOR MAY CONSTRUCT AS MUCH OF THE NEW SB USH 41 ON RAMP AS POSSIBLE AS LONG AS TWO WAY TRAFFIC IS MAINTAINED ON THE EXISTING STH 144 ROADWAY.

CONTRACTOR MAY CONSTRUCT AS MUCH OF THE NEW OVERLOOK DRIVEWAY ROADWAY AS POSIBLE AS LONG AS TWO WAY TRAFFIC IS MAINTAINED ON THE EXISTING STH 144 ROADWAY AND TO HELD'S MEAT MARKET.

FIXED MESSAGE SIGNS TO NOTIFY DRIVERS OF UPCOMING RAMP CLOSURES ARE SHOWN IN STAGE 1 AND SHALL BE PLACED A MINIMUM OF 10 DAYS PRIOR TO CLOSURES.

PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE PLACED ON USH 41 NB AND USH 41 SB A MINIMUM OF 3 DAYS PRIOR TO RAMP CLOSURES. MESSAGE TO BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2 SCALE, FEET 0 50 100	SHEET 99	E

2

MATCHLINE STA. 143+70

MATCHLINE STA. 159+00

STH 144

USH 41

NB OFF

NB ON

145 150 155

390 395

716 724 728 800 508 512 516 520 522 524 600 602 604

DO NOT PASS
R4-1
24"_X_30"

W06-3

RAMP CLOSED AHEAD

35 M.P.H.
W013-1
36" × 36"

RAMP CLOSED
R11-2 (MOD)
48"_X_30"
3 TYPE III BARRICADES

LANE CLOSED
R11-2 (MOD)

W04-1

STOP
R1-1
30"_X_30"

FIXED MESSAGE SIGNS TO NOTIFY DRIVERS OF UPCOMING RAMP CLOSURES ARE SHOWN IN STAGE 1 AND SHALL BE PLACED A MINIMUM OF 10 DAYS PRIOR TO CLOSURES.

PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE PLACED ON USH 41 NB AND USH 41 SB A MINIMUM OF 3 DAYS PRIOR TO RAMP CLOSURES. MESSAGE TO BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.

NOTES:

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

SEE "STAGE 2 TRAFFIC CONTROL - USH 41" FOR TRAFFIC CONTROL DEVICES AND SIGNS FOR THE USH 41 NORTHBOUND AND SOUTHBOUND CORRIDORS.

FOR PLACEMENT AND SPACING OF ADVANCED WARNING SIGNS SEE STANDARD DETAIL DRAWINGS.

CONTRACTOR MAY CONSTRUCT AS MUCH OF THE NEW NB USH 41 OFF RAMP AS POSSIBLE AS LONG AS ACCESS IS MAINTAINED TO THE EXISTING OFF RAMP.

LEGEND

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

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2 SCALE, FEET 0 50 100	SHEET 100	E

2

LEGEND

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

NOTES:

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

FOR PLACEMENT AND SPACING OF ADVANCED WARNING SIGNS SEE STANDARD DETAIL DRAWINGS.

REMOVE EXISTING PAVEMENT MARKINGS FROM STA. 161+00 TO STA. 187+00. PLACE 4-INCH TEMPORARY EDGELINES AND DOUBLE YELLOW CENTERLINE.

LOCAL ACCESS MUST BE MAINTAINED TO PRPERTIES ALONG ARTHUR ROAD AT ALL TIMES DURING CONSTRUCTION.

MAINTAIN ACCESS TO ADJACENT PROPERTIES AT ALL TIMES DURING CONSTRUCTION.

N

MATCHLINE STA. 159+00

RAMP CLOSED AHEAD

DO NOT PASS R4-1 24"_X_30"

35 M.P.H. W013-1 36" x 36"

W06-3

160

STH 144

165

F

DO NOT PASS R4-1 24"_X_30"

COUNTY NN M1-5A 24"_X_24"

M5-1R 21"_X_21"

35 M.P.H. W013-1 36" x 36"

170

LANE CLOSED R11-2 (MOD)

ROAD CLOSED LOCAL TRAFFIC ONLY R11-4(MOD) 60"_X_30"

ROAD WORK AHEAD W20-1

267

GUY

END ROAD WORK G20-2A 48"_X_24"

ARTHUR RD

270

COUNTY NN M1-5A 24"_X_24"

M6-1 21"_X_21"

STOP R1-1 30"_X_30"

CTH NN

274

END ROAD WORK G20-2A 48"_X_24"

ROAD WORK AHEAD W20-1

MATCHLINE STA. 174+50

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2	SCALE, FEET 0 50 100	SHEET 101	E

2

LEGEND

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

N

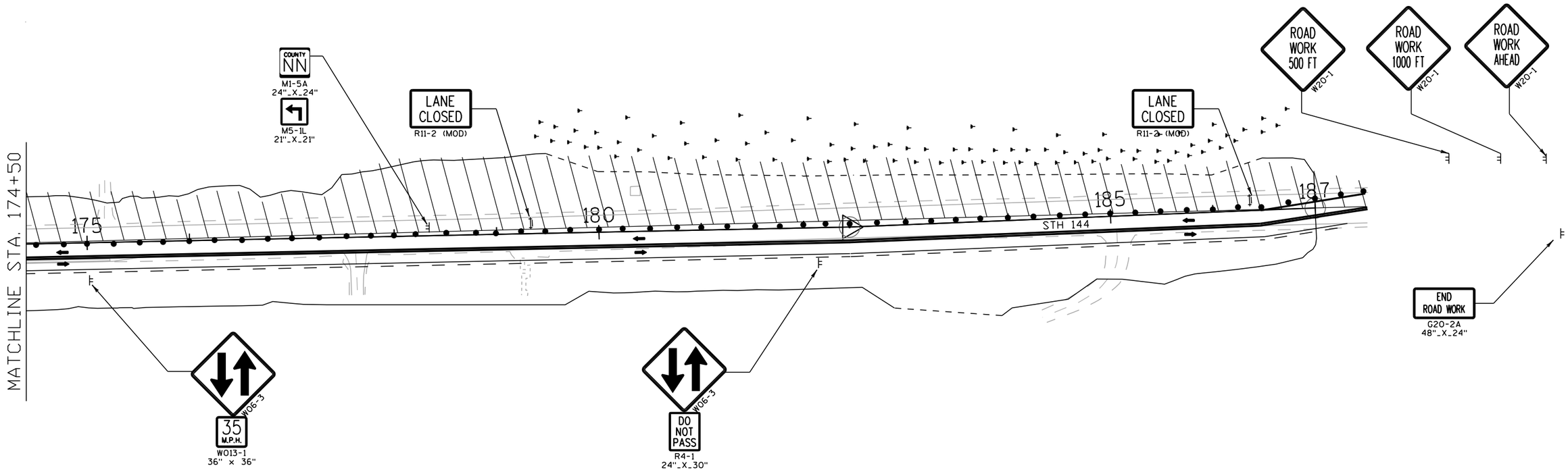
NOTES:

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

FOR PLACEMENT AND SPACING OF ADVANCED WARNING SIGNS SEE STANDARD DETAIL DRAWINGS.

REMOVE EXISTING PAVEMENT MARKINGS FROM STA. 161+00 TO STA. 187+00 AND PLACE 4-INCH TEMPORARY EDGELINES AND DOUBLE YELLOW CENTERLINES.

MAINTAIN ACCESS TO ADJACENT PROPERTIES AT ALL TIMES DURING CONSTRUCTION.



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2 SCALE, FEET 0 50 100	SHEET 102 E

FILE NAME : L:\Projects\11609\Dwg\026204_s2.dgn PLOT DATE : 07/26/13 PLOT BY : tmoyer PLOT NAME : _____ PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

LEGEND

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

NOTES:

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

SEE "STAGE 2 TRAFFIC CONTROL - STH 144" FOR TRAFFIC CONTROL DEVICES AND SIGNS FOR THE STH 144 CORRIDOR.

CONTRACTOR MAY COMPLETE AS MUCH WORK ON THE NEW NB OFF RAMP AS POSSIBLE WHILE MAINTAINING ACCESS ON THE EXISTING OFF RAMP.

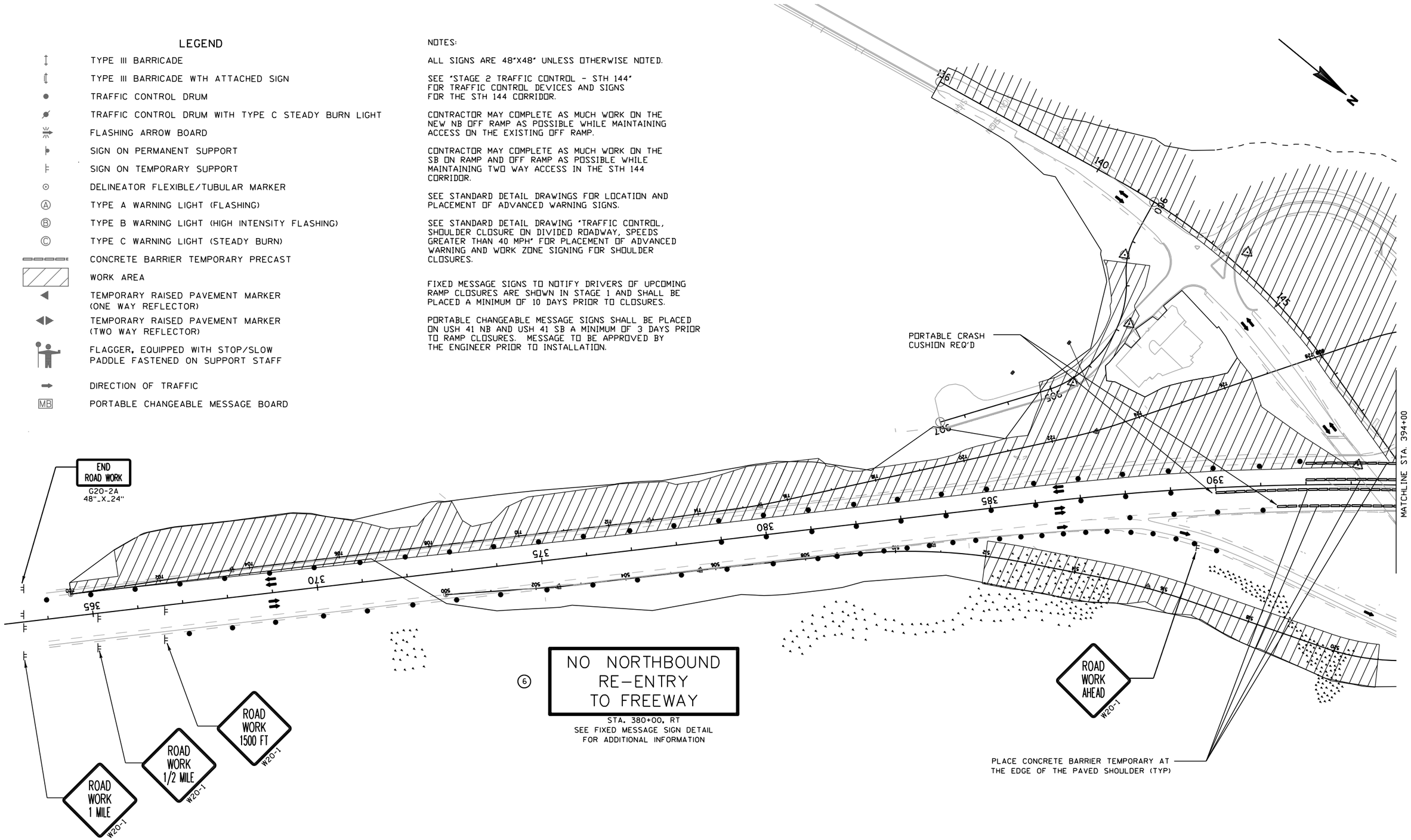
CONTRACTOR MAY COMPLETE AS MUCH WORK ON THE SB ON RAMP AND OFF RAMP AS POSSIBLE WHILE MAINTAINING TWO WAY ACCESS IN THE STH 144 CORRIDOR.

SEE STANDARD DETAIL DRAWINGS FOR LOCATION AND PLACEMENT OF ADVANCED WARNING SIGNS.

SEE STANDARD DETAIL DRAWING "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH" FOR PLACEMENT OF ADVANCED WARNING AND WORK ZONE SIGNING FOR SHOULDER CLOSURES.

FIXED MESSAGE SIGNS TO NOTIFY DRIVERS OF UPCOMING RAMP CLOSURES ARE SHOWN IN STAGE 1 AND SHALL BE PLACED A MINIMUM OF 10 DAYS PRIOR TO CLOSURES.

PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE PLACED ON USH 41 NB AND USH 41 SB A MINIMUM OF 3 DAYS PRIOR TO RAMP CLOSURES. MESSAGE TO BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2 SCALE, FEET 0 100 200	SHEET E

FILE NAME : L:\Projects\11609\Dwg\026205_s2.dgn PLOT DATE : 07/26/13 PLOT BY : tmoyer PLOT NAME : _____ PLOT SCALE : 1:200

WISDOT/CADDS SHEET 42

2

NOTES:

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

SEE "STAGE 2 TRAFFIC CONTROL - STH 144" FOR TRAFFIC CONTROL DEVICES AND SIGNS FOR THE STH 144 CORRIDOR.

CONTRACTOR MAY COMPLETE AS MUCH WORK ON THE NEW NB OFF RAMP AS POSSIBLE WHILE MAINTAINING ACCESS ON THE EXISTING OFF RAMP.

CONTRACTOR MAY COMPLETE AS MUCH WORK ON THE SB ON RAMP AND OFF RAMP AS POSSIBLE WHILE MAINTAINING TWO WAY ACCESS IN THE STH 144 CORRIDOR.

CONTRACTOR MAY COMPLETE AS MUCH WORK ON THE NEW NB ON RAMP AS POSSIBLE WHILE MAINTAINING TWO WAY ACCES IN THE STH 144 CORRIDOR.

SEE STANDARD DETAIL DRAWINGS FOR LOCATION AND PLACEMENT OF ADVANCED WARNING SIGNS.

SEE STANDARD DETAIL DRAWING "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH" FOR PLACEMENT OF ADVANCED WARNING AND WORK ZONE SIGNING FOR SHOULDER CLOSURES.

FIXED MESSAGE SIGNS TO NOTIFY DRIVERS OF UPCOMING RAMP CLOSURES ARE SHOWN IN STAGE 1 AND SHALL BE PLACED A MINIMUM OF 10 DAYS PRIOR TO CLOSURES.

PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE PLACED ON USH 41 NB AND USH 41 SB A MINIMUM OF 3 DAYS PRIOR TO RAMP CLOSURES. MESSAGE TO BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.

LEGEND

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

N

MATCHLINE STA. 394+00

PORTABLE CRASH CUSHION REQ'D

RAMP CLOSED
R11-2(MOD)
48"_X_30"

ROAD WORK 1 MILE
W20-1

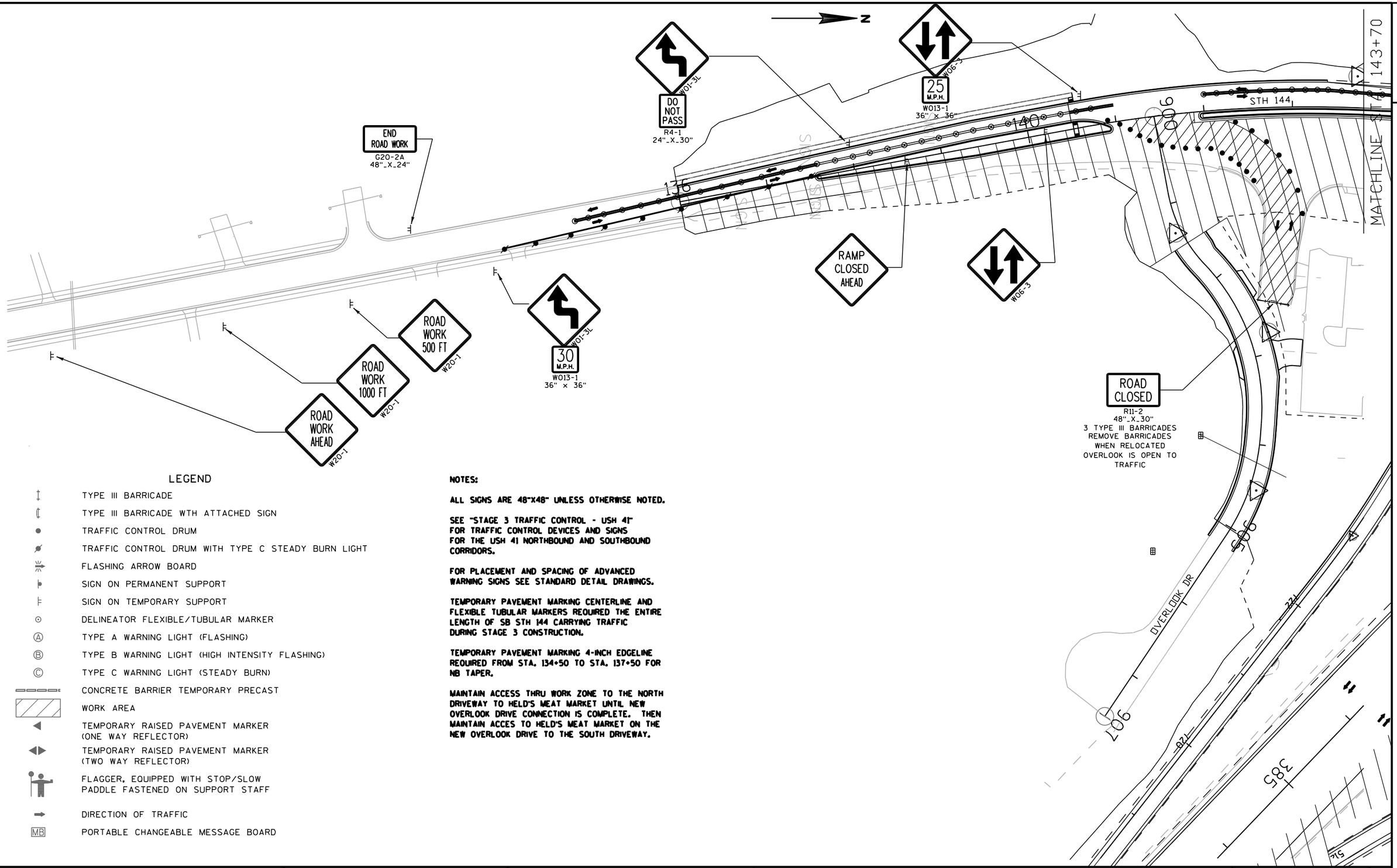
ROAD WORK 1/2 MILE
W20-1

ROAD WORK 1500 FT
W20-1

PLACE CONCRETE BARRIER TEMPORARY AT THE EDGE OF THE PAVED SHOULDER (TYP)

END ROAD WORK
G20-2A
48"_X_24"

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2 SCALE, FEET 0 100 200	SHEET 104 E



LEGEND

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

NOTES:

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

SEE "STAGE 3 TRAFFIC CONTROL - USH 41" FOR TRAFFIC CONTROL DEVICES AND SIGNS FOR THE USH 41 NORTHBOUND AND SOUTHBOUND CORRIDORS.

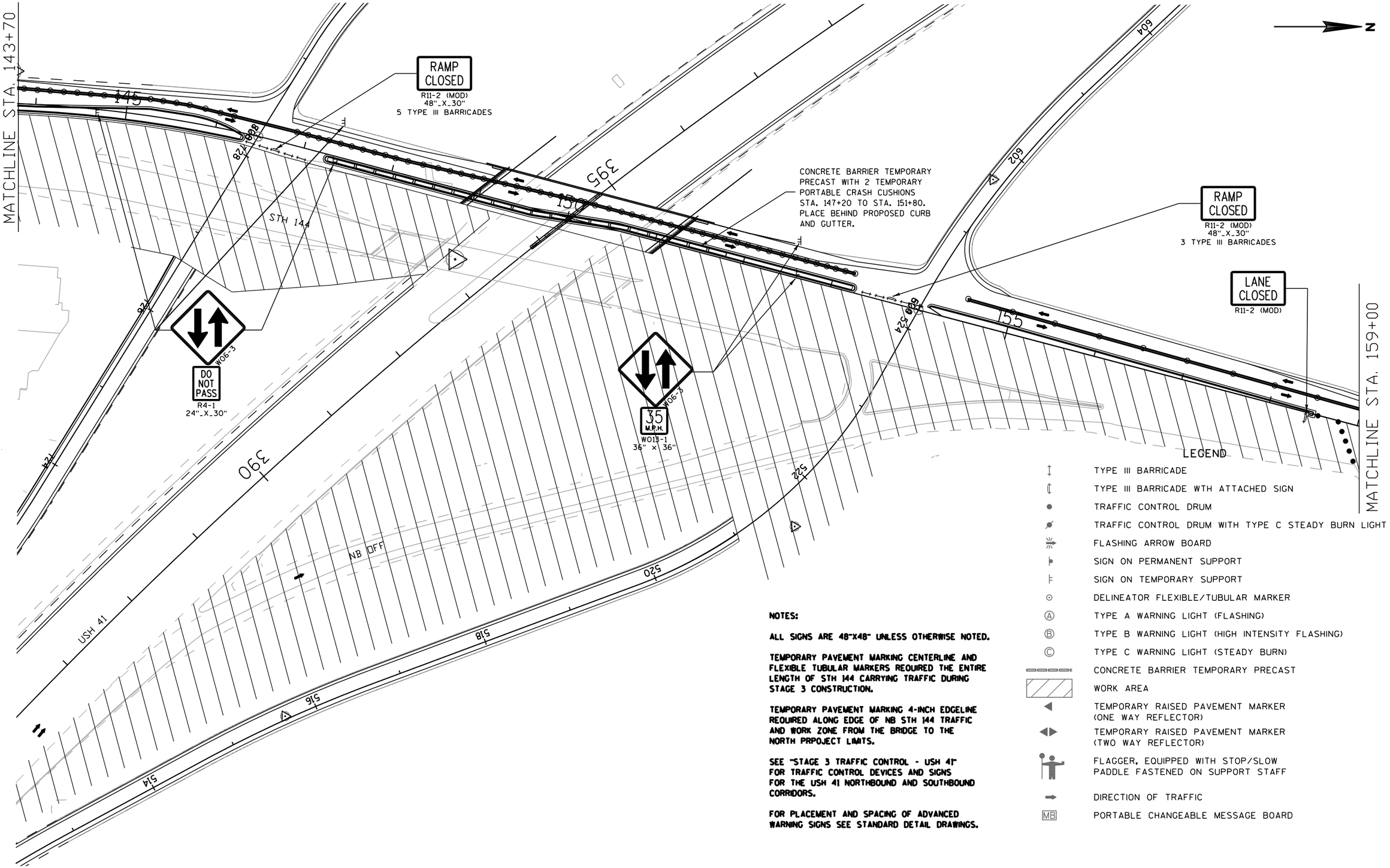
FOR PLACEMENT AND SPACING OF ADVANCED WARNING SIGNS SEE STANDARD DETAIL DRAWINGS.

TEMPORARY PAVEMENT MARKING CENTERLINE AND FLEXIBLE TUBULAR MARKERS REQUIRED THE ENTIRE LENGTH OF SB STH 144 CARRYING TRAFFIC DURING STAGE 3 CONSTRUCTION.

TEMPORARY PAVEMENT MARKING 4-INCH EDGELINE REQUIRED FROM STA. 134+50 TO STA. 137+50 FOR NB TAPER.

MAINTAIN ACCESS THRU WORK ZONE TO THE NORTH DRIVEWAY TO HELD'S MEAT MARKET UNTIL NEW OVERLOOK DRIVE CONNECTION IS COMPLETE. THEN MAINTAIN ACCES TO HELD'S MEAT MARKET ON THE NEW OVERLOOK DRIVE TO THE SOUTH DRIVEWAY.

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 3 SCALE, FEET 0 50 100	SHEET 105 E



LEGEND

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

NOTES:

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

TEMPORARY PAVEMENT MARKING CENTERLINE AND FLEXIBLE TUBULAR MARKERS REQUIRED THE ENTIRE LENGTH OF STH 144 CARRYING TRAFFIC DURING STAGE 3 CONSTRUCTION.

TEMPORARY PAVEMENT MARKING 4-INCH EDGELINE REQUIRED ALONG EDGE OF NB STH 144 TRAFFIC AND WORK ZONE FROM THE BRIDGE TO THE NORTH PRPOJECT LIMITS.

SEE "STAGE 3 TRAFFIC CONTROL - USH 41" FOR TRAFFIC CONTROL DEVICES AND SIGNS FOR THE USH 41 NORTHBOUND AND SOUTHBOUND CORRIDORS.

FOR PLACEMENT AND SPACING OF ADVANCED WARNING SIGNS SEE STANDARD DETAIL DRAWINGS.

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 3	SCALE, FEET 0 50 100	SHEET E

FILE NAME : L:\Projects\11609\Dwg\026302_s3.dgn PLOT DATE : 07/26/13 PLOT BY : tmoyer PLOT NAME : _____ PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

LEGEND

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

NOTES:

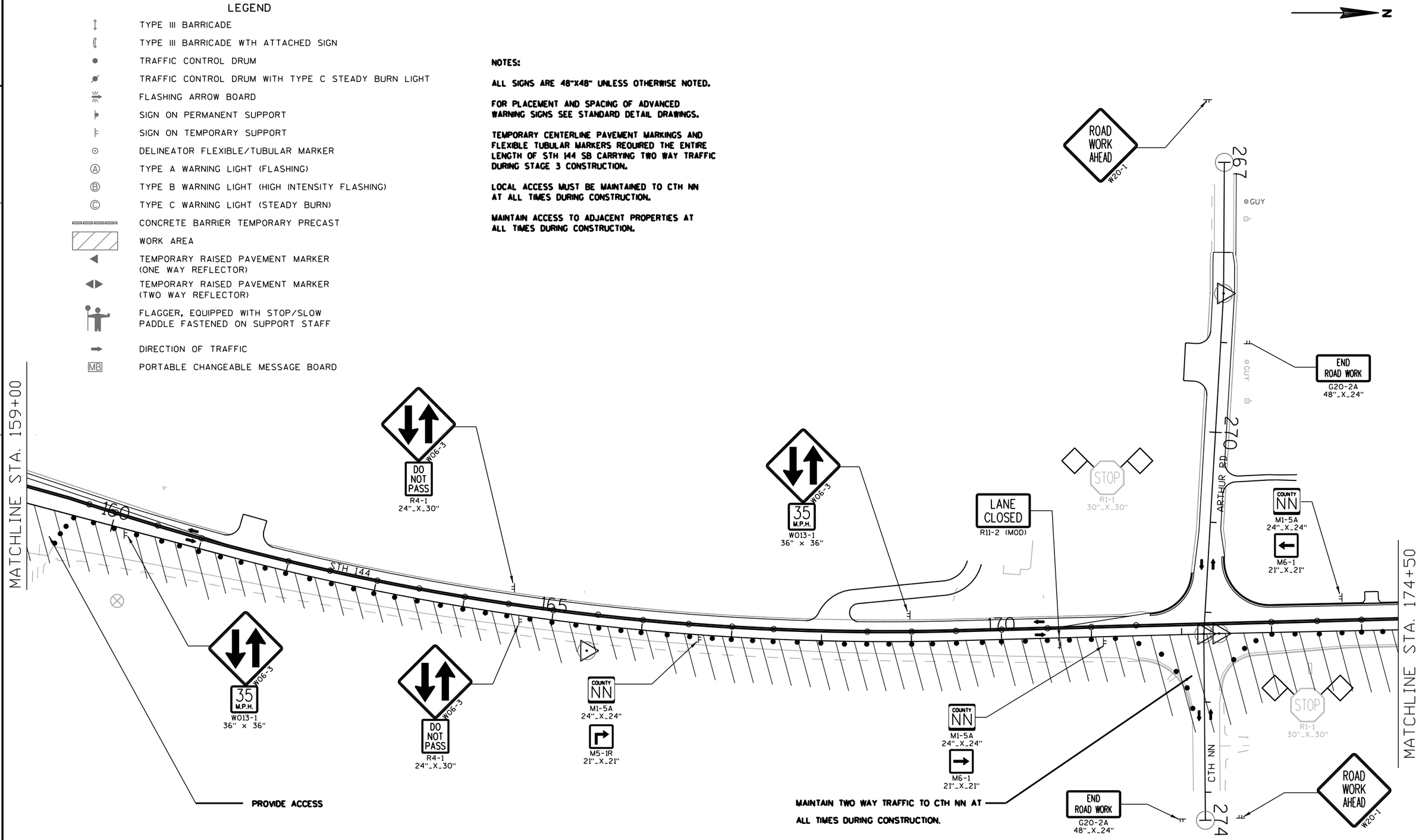
ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

FOR PLACEMENT AND SPACING OF ADVANCED WARNING SIGNS SEE STANDARD DETAIL DRAWINGS.

TEMPORARY CENTERLINE PAVEMENT MARKINGS AND FLEXIBLE TUBULAR MARKERS REQUIRED THE ENTIRE LENGTH OF STH 144 SB CARRYING TWO WAY TRAFFIC DURING STAGE 3 CONSTRUCTION.

LOCAL ACCESS MUST BE MAINTAINED TO CTH NN AT ALL TIMES DURING CONSTRUCTION.

MAINTAIN ACCESS TO ADJACENT PROPERTIES AT ALL TIMES DURING CONSTRUCTION.



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 3 SCALE, FEET 0 50 100	SHEET 107 E

FILE NAME : L:\Projects\11609\Dwg\026303_s3.dgn PLOT DATE : 07/26/13 PLOT BY : tmoyer PLOT NAME : _____ PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

LEGEND

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

NOTES:

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

SEE "STAGE 3 TRAFFIC CONTROL - STH 144" FOR TRAFFIC CONTROL DEVICES AND SIGNS FOR THE STH 144 CORRIDOR.

CONTRACTOR MAY OPEN THE SB ON RAMP AND NB OFF RAMP TO TRAFFIC WHEN NEW RAMP CONSTRUCTION IS COMPLETE. COORDINATE SIGNING WITH STH 144 WORK ZONES AND WITH DETOUR SIGNING BEFORE RAMPS ARE OPENED.

SEE STANDARD DETAIL DRAWING "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH" FOR PLACEMENT OF ADVANCED WARNING AND WORK ZONE SIGNING FOR SHOULDER CLOSURES.

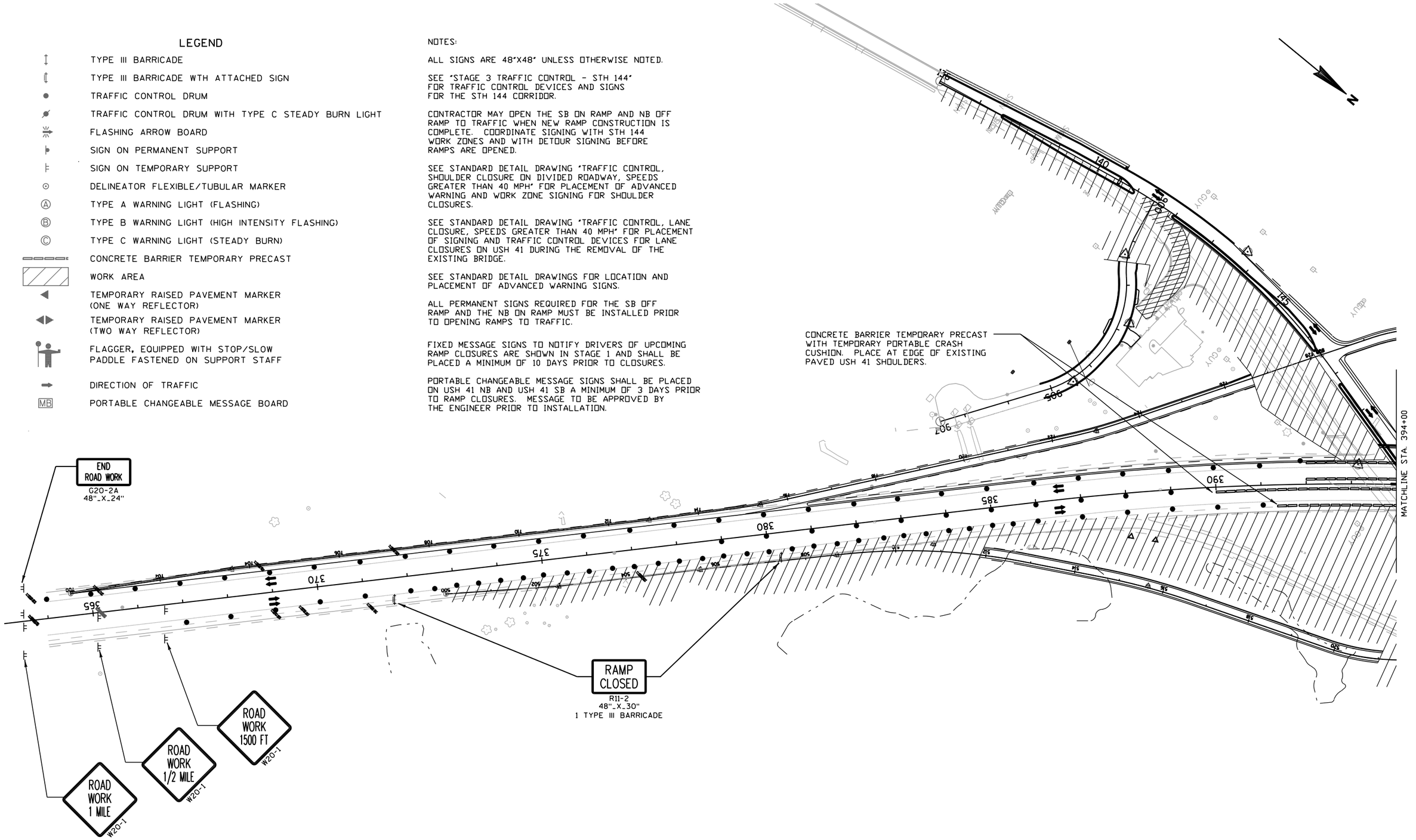
SEE STANDARD DETAIL DRAWING "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 MPH" FOR PLACEMENT OF SIGNING AND TRAFFIC CONTROL DEVICES FOR LANE CLOSURES ON USH 41 DURING THE REMOVAL OF THE EXISTING BRIDGE.

SEE STANDARD DETAIL DRAWINGS FOR LOCATION AND PLACEMENT OF ADVANCED WARNING SIGNS.

ALL PERMANENT SIGNS REQUIRED FOR THE SB OFF RAMP AND THE NB ON RAMP MUST BE INSTALLED PRIOR TO OPENING RAMPS TO TRAFFIC.

FIXED MESSAGE SIGNS TO NOTIFY DRIVERS OF UPCOMING RAMP CLOSURES ARE SHOWN IN STAGE 1 AND SHALL BE PLACED A MINIMUM OF 10 DAYS PRIOR TO CLOSURES.

PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE PLACED ON USH 41 NB AND USH 41 SB A MINIMUM OF 3 DAYS PRIOR TO RAMP CLOSURES. MESSAGE TO BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.



NOTES:

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

SEE "STAGE 3 TRAFFIC CONTROL - STH 144" FOR TRAFFIC CONTROL DEVICES AND SIGNS FOR THE STH 144 CORRIDOR.

CONTRACTOR MAY OPEN THE SB ON RAMP AND NB OFF RAMP TO TRAFFIC WHEN NEW RAMP CONSTRUCTION IS COMPLETE. COORDINATE SIGNING WITH STH 144 WORK ZONES AND WITH DETOUR SIGNING BEFORE RAMPS ARE OPENED.

CONTRACTOR MAY COMPLETE AS MUCH WORK ON THE NEW NB ON RAMP AS POSSIBLE WHILE MAINTAINING TWO WAY ACCES IN THE STH 144 CORRIDOR.

SEE STANDARD DETAIL DRAWINGS FOR LOCATION AND PLACEMENT OF ADVANCED WARNING SIGNS.

SEE STANDARD DETAIL DRAWING "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH" FOR PLACEMENT OF ADVANCED WARNING AND WORK ZONE SIGNING FOR SHOULDER CLOSURES.

SEE STANDARD DETAIL DRAWING "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 MPH" FOR PLACEMENT OF SIGNING AND TRAFFIC CONTROL DEVICES FOR LANE CLOSURES ON USH 41 DURING THE REMOVAL OF THE EXISTING BRIDGE.

ALL PERMANENT SIGNS REQUIRED FOR THE SB OFF RAMP AND THE NB ON RAMP MUST BE INSTALLED PRIOR TO OPENING RAMPS TO TRAFFIC.

FIXED MESSAGE SIGNS TO NOTIFY DRIVERS OF UPCOMING RAMP CLOSURES ARE SHOWN IN STAGE 1 AND SHALL BE PLACED A MINIMUM OF 10 DAYS PRIOR TO CLOSURES.

PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE PLACED ON USH 41 NB AND USH 41 SB A MINIMUM OF 3 DAYS PRIOR TO RAMP CLOSURES. MESSAGE TO BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.

LEGEND

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

N

CONCRETE BARRIER TEMPORARY PRECAST WITH TEMPORARY PORTABLE CRASH CUSHION. PLACE AT EDGE OF EXISTING PAVED USH 41 SHOULDERS.

MATCHLINE STA. 394+00

ROAD WORK 1 MILE W20-1

ROAD WORK 1/2 MILE W20-1

ROAD WORK 1500 FT W20-1

(5) NO SOUTHBOUND RE-ENTRY TO FREEWAY

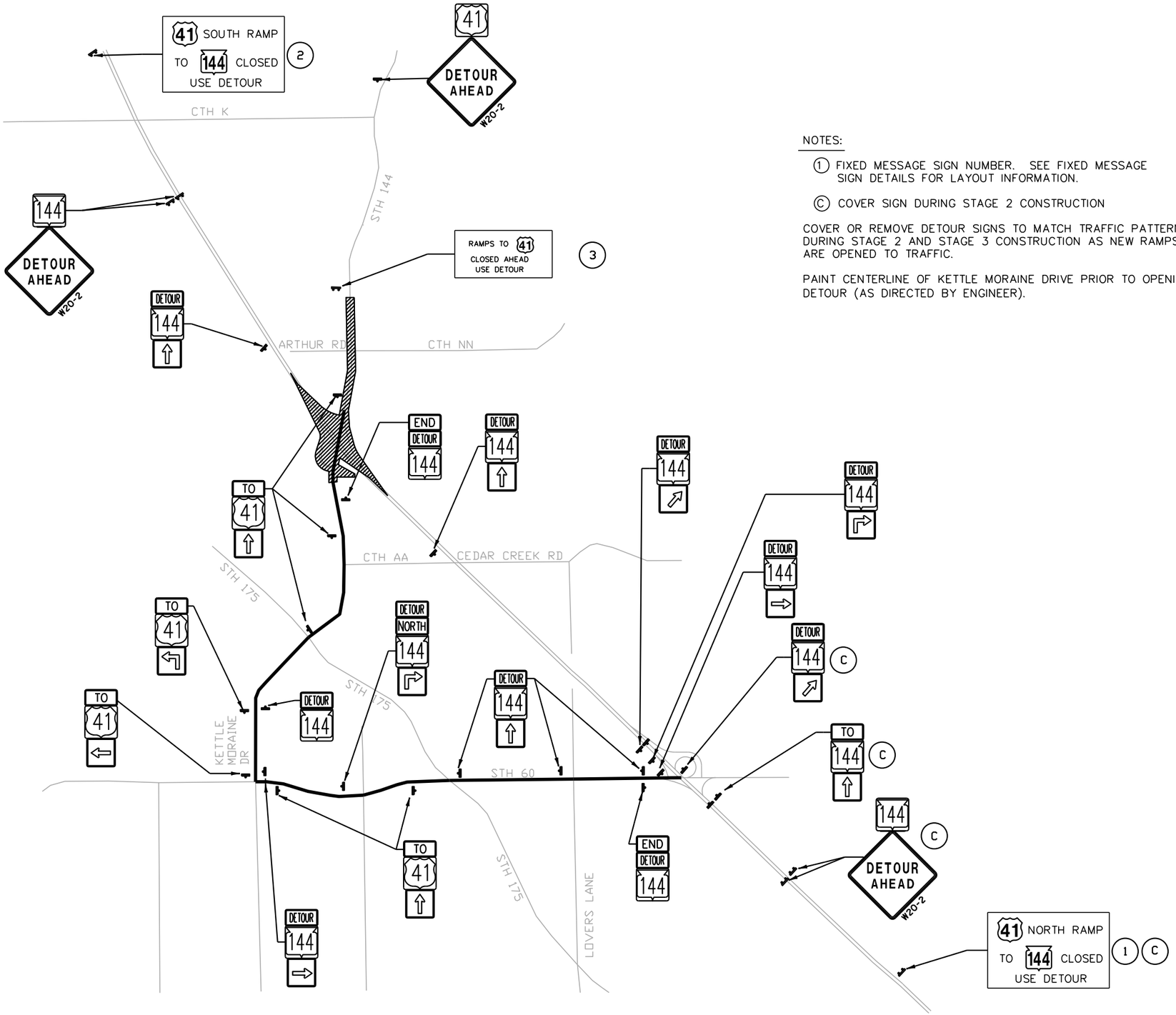
STA. 422+00, LT
SEE FIXED MESSAGE SIGN DETAILS FOR ADDITIONAL INFORMATION.

END ROAD WORK
G20-2A
48"_X_24"

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 3 SCALE, FEET 0 100 200	SHEET 109 E

FILE NAME : L:\Projects\11609\Dwg\026306_s3.dgn PLOT DATE : 07/26/13 PLOT BY : tmoyer PLOT NAME : _____ PLOT SCALE : 1:200

WISDOT/CADDS SHEET 42



NOTES:

1. (1) FIXED MESSAGE SIGN NUMBER. SEE FIXED MESSAGE SIGN DETAILS FOR LAYOUT INFORMATION.
2. (C) COVER SIGN DURING STAGE 2 CONSTRUCTION

COVER OR REMOVE DETOUR SIGNS TO MATCH TRAFFIC PATTERNS DURING STAGE 2 AND STAGE 3 CONSTRUCTION AS NEW RAMPS ARE OPENED TO TRAFFIC.

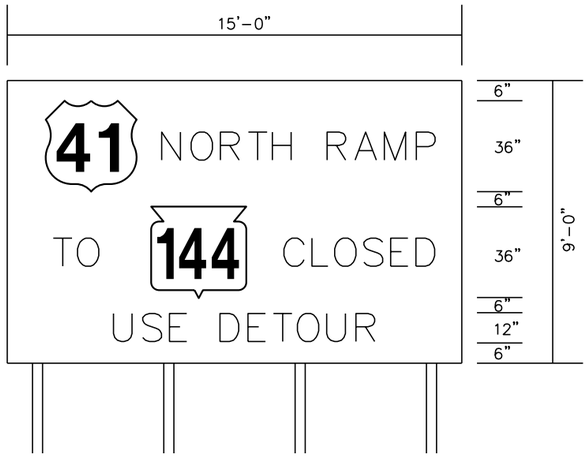
PAINT CENTERLINE OF KETTLE MORAINE DRIVE PRIOR TO OPENING DETOUR (AS DIRECTED BY ENGINEER).

N

SIGN LEGEND

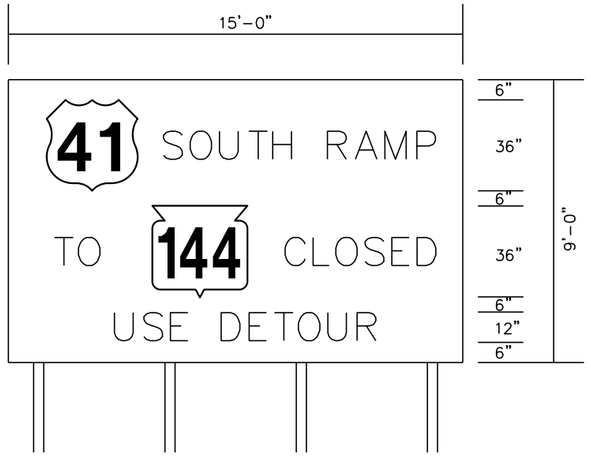
- DETOUR — M4-8 — 24" X 12" (STANDARD) 36" X 18" (FREEWAY)
- TO — M4-5 — 24" X 12" (STANDARD) 30" X 15" (FREEWAY)
- 41 — M1-4 — 24" X 24" (STANDARD) 36" X 36" (FREEWAY)
- 144 — M1-6 — 24" X 24" (STANDARD) 36" X 36" (FREEWAY)
- NORTH — M3-1 — 24" X 12"
- SOUTH — M3-3 — 24" X 12"
- M6-1L ORANGE AND BLACK — 21" X 21" (STANDARD) 30" X 30" (FREEWAY)
- M6-1R ORANGE AND BLACK — 21" X 21" (STANDARD) 30" X 30" (FREEWAY)
- M6-3 ORANGE AND BLACK — 21" X 21" (STANDARD) 30" X 30" (FREEWAY)
- M6-2L ORANGE AND BLACK — 21" X 21" (STANDARD) 30" X 30" (FREEWAY)
- M6-2R ORANGE AND BLACK — 21" X 21" (STANDARD) 30" X 30" (FREEWAY)
- M5-1L (ORANGE AND BLACK) — 21" X 21" (STANDARD) 30" X 30" (FREEWAY)
- M5-1R (ORANGE AND BLACK) — 21" X 21" (STANDARD) 30" X 30" (FREEWAY)

PROJECT NO: 1180-02-79	HWY: USH 41	COUNTY: WASHINGTON	TRAFFIC DETOUR PLAN	SHEET 110 E



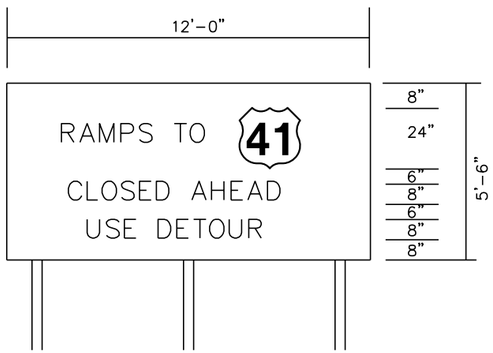
1

12" LETTERS.
ALL CAPS



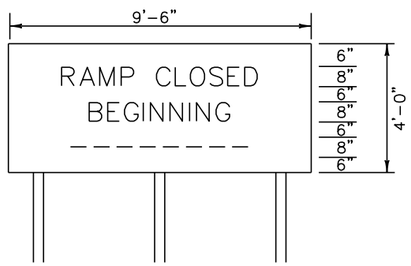
2

12" LETTERS.
ALL CAPS



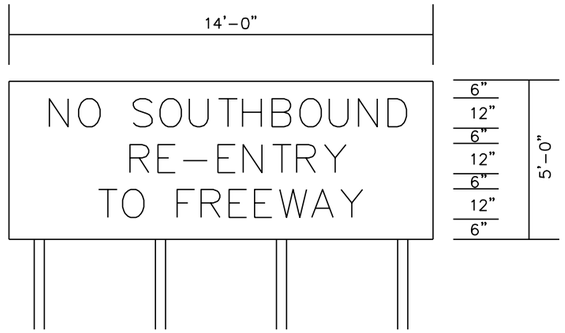
3

8" LETTERS.
ALL CAPS



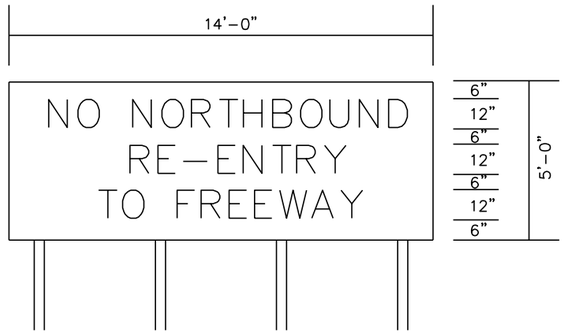
4

8" LETTERS.
ALL CAPS



5

12" LETTERS.
ALL CAPS



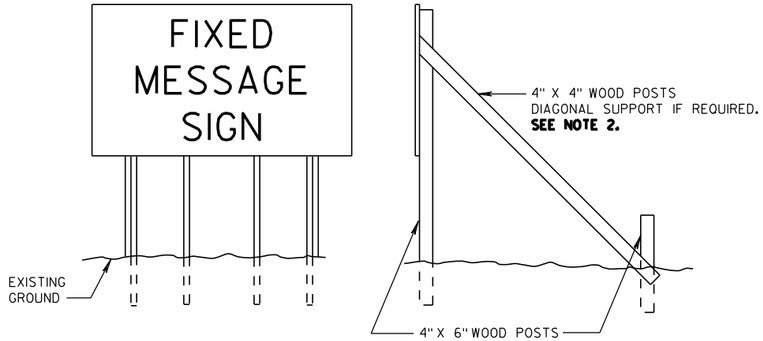
6

12" LETTERS.
ALL CAPS

NOTES:

1. ALL SIGNS TO HAVE STANDARD REFLECTIVE SHEETING - REFERENCE "WISDOT STANDARD SPECIFICATION FOR ROAD AND BRIDE CONSTRUCTION" LATEST EDITION.
2. AFTER SIGNS HAVE BEEN LCOATED IN THE FIELD, BUT BEFORE INSTALLATION, THE SIGNING AND MARKING SUPERVISOR SHALL VERIFY EACH SIGN LOCATION.
3. ALL SIGNS TO BE MOUNTED ON WOODEN POSTS SUPPORTS (2"X6"). THE NUMBER OF POSTS REQUIRED FOR EACH LAYOUT IS SHOWN. STEEL POSTS (2"X2") MAY BE USED FOR SIGNS ON SURFACE STREETS. SIGNS WHERE NO POSTS ARE SHOWN TO BE MOUNTED ON EXISTING SIGNS.
4. POSTS SHALL MEET THE BREAKAWAY REQUIREMENTS OF SECTION 643.2.9.1 OF THE STANDARD SPECIFICATIONS AND SIGN PLATE A4-11.
5. SIGNS ON THIS SHEET TO BE PAID UNDER THE TEM "TRAFFIC CONTROL SIGNS FIXED MESSAGE".
6. SIGNS SHALL BE BLACK NON-REFLECTIVE MESSAGE ON ORANGE REFLECTIVE BACKGROUND UNLESS OTHERWISE NOTED.
7. ALL SIGNS SHALL HAVE CAPITAL LETTERS AND NUMERALS:
   12" CAPS SHALL BE SERIES "D".
   8" CAPS SHALL BE SERIES "D".
   6" CAPS SHALL BE SERIES "C".
8. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ENGINEER FOR REVIEW PRIOR TO MANUFACTURING.
9. BEGINNING DATE SIGNS SHALL BE CONSIDERED AS PART OF THE FIXED MESSAGE SIGN BUT SHALL BE MODIFIED TO FIT THE START DATE.
10. SIGN BASE MATERIAL SHALL BE ACCORDING TO SECTION 637.2.1.2.
11. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.
12. CONTRACTOR SHALL LOCATE FIXED MESSAGE SIGNS A MINIMUM OF 400' FROM ANY EXISTING TYPE "I" SIGN.
13. COVER DETOUR SIGNING WHEN NOT IN USE.
14. SIGNS TO BE PLACED 10 DAYS PRIOR TO CONSTRUCTION.

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	FIXED MESSAGE SIGNS	SHEET 111	E



FRONT VIEW

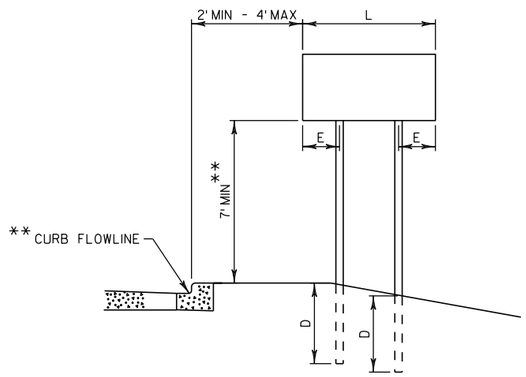
SIDE VIEW

NOTES

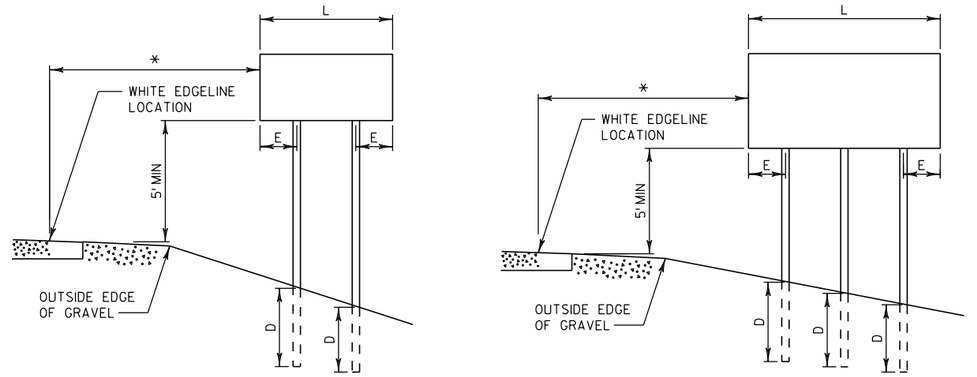
1. SEE TRAFFIC CONTROL SHEETS FOR SIGN LOCATIONS.
2. TWO DIAGONAL SUPPORTS TO BE INCLUDED FOR EACH SIGN OVER 12' LONG AND HIGHER THAN 8'. DIAGONAL SUPPORTS TO BE AFFIXED TO THE OUTSIDE SUPPORTS AND TO BE INCIDENTAL TO THE "TRAFFIC CONTROL FIXED MESSAGE SIGN" ITEM. IF DIAGONAL SUPPORTS ARE USED, SIGN TO BE SHIELDED BEHIND CONCRETE BARRIER OR PLACED OUTSIDE THE CLEAR ZONE.
3. SEE TABLES BELOW FOR REQUIRED NUMBER OF POSTS.

* 6' FROM EDGE OF A PAVED SHOULDER OR 12' FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) OR 2' FROM OUTSIDE EDGE OF GRAVEL, WHICHEVER IS GREATER UNLESS DIRECTED BY PROJECT ENGINEER. SEE NOTE 2 FOR OFFSET REQUIREMENTS WHERE DIAGONAL SUPPORTS ARE USED.

** 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. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5' MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.



URBAN AREA



RURAL 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"

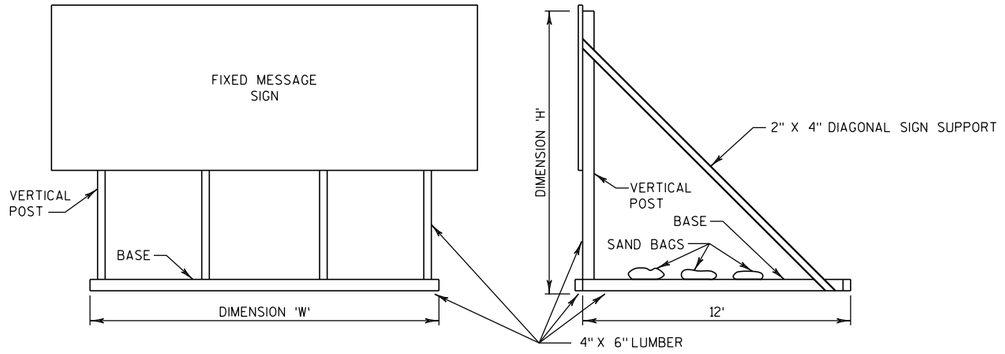
SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" AND GREATER	12"

POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'

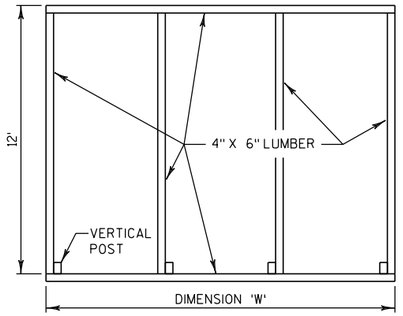
NOTE TO DESIGNERS: SHOW POSTS ON FMS SIGN DETAILS.

POST MOUNTING DETAIL FOR TRAFFIC CONTROL FIXED MESSAGE SIGNS



FRONT VIEW

SIDE VIEW



BASE PLAN VIEW

ANTICIPATED DIMENSIONS & POSTS REQUIRED

(FOR INFORMATION ONLY, CONTRACTOR IS TO VERIFY)

SIGN NO.	'W' (FT)	'H' (FT)	NO. OF POSTS OF HEIGHT 'H'
?	?	?	?
?	?	?	?
?	?	?	?

NOTE TO DESIGNER :
FILL IN SIGN NUMBERS, DIMENSIONS, AND NUMBER OF POSTS. USE SIGN PLATE LISTED BELOW (NOTE #5) TO DETERMINE NUMBER OF POSTS NEEDED.

NOTES

1. SEE TRAFFIC CONTROL SHEETS FOR SIGN LOCATIONS.
2. TWO DIAGONAL SUPPORTS SHALL BE INCLUDED AND AFFIXED TO THE OUTSIDE SUPPORTS.
3. DIAGONAL SUPPORTS, VERTICAL POSTS AND BASE LUMBER ARE ALL INCLUDED IN THE "FIXED MESSAGE SIGN PORTABLE SUPPORT" ITEM.
4. PROVIDE AN ADEQUATE NUMBER OF SAND BAGS TO HOLD THE SIGN IN PLACE. SAND BAGS ARE INCLUDED IN THE "FIXED MESSAGE SIGN PORTABLE SUPPORT" ITEM.
5. SEE "TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS" SIGN PLATE FOR ADDITIONAL REQUIREMENTS.

101007

FIXED MESSAGE SIGN PORTABLE SUPPORT

NOTE TO DESIGNER: When using this detail drawing, include the corresponding corridor specification

NOTE TO DESIGNER:
Edit notes, labels and table as applicable to your project.

2

2

STH 144

USH 41

STA 141+00 STH 144
141'LT
BEGIN FENCE

STA 144+50 STH 144
472'LT

STA 147+13.4 STH 144
463.5'LT

STA 397+87.2 USH 41
483.7'LT

STA 398+32.6 USH 41
434.6'LT

STA 398+66.7 USH 41
325.6'LT

STA 401+23 USH 41
208.6'LT

STA 408+88 USH 41
148'LT

STA 421+12 USH 41
148'LT +/-
END NEW FENCE
MATCH EXISTING

STA 144+39 STH 144
160.2'RT
END FENCE

STA 44+95 STH 144
273.75'LT

STA 374+45 USH 41
137'LT

STA 376+45 USH 41
137'LT

STA 374+25 USH 41
157'LT

STA 376+65 USH 41
157'LT

STA 370+60 USH 41
157'LT

STA 369+60 USH 41
172'LT

STA 367+00 USH 41
172'LT

STA 365+00 USH 41
148'LT /-
BEGIN NEW FENCE
MATCH EXISTING

STA 389+25.2 USH 41
237'LT

STA 388+33.7 USH 41
197'LT

STA 386+87 USH 41
167.5'LT

STA 386+00 USH 41
157'LT

STA 376+00 USH 41
104.5'RT

STA 368+18 USH 41
167'RT

STA 704+00 SB ON RAMP 15' VEHICLE GATE
OPENING REQUIRED, COORDINATE EXACT LOCATION
WITH ENGINEER AND PROPERTY OWNER.

STA 365+00 USH 41
211'RT +/-
BEGIN NEW FENCE
MATCH EXISTING

STA 389+52.4 USH 41
340.2 RT

STA 153+90 STH 144
335'RT

STA 386+00 USH 41
258.8'RT

STA 158+94 STH 144
216.9'RT
END FENCE

STA 403+93.5 USH 41
166'RT

STA 158+77 STH 144
125.9'RT
BEGIN FENCE

STA 414+17 USH 41
166'RT

STA 420+05 USH 41
197'RT +/-
END NEW FENCE
MATCH EXISTING

—x——x——x——x——x——x——x— WOVEN WIRE FENCE, 54-INCH HEIGHT
(SEE SDD FOR WOVEN WIRE FENCE DETAIL)

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	FENCING PLAN	SCALE, FEET 0 200 400	SHEET 114	E

FILE NAME : L:\Projects\11609\Dwg\027101_fn.DGN PLOT DATE : 07/26/13 PLOT BY : tmoyer PLOT NAME : PLOT SCALE : 1:400

WISDOT/CADDS SHEET 42

2

STH 144									
Number	Start Northing	Start Easting	Length	Bearing	Radius	PI Northing	PI Easting	End Northing	End Easting
L25	494508.68	456966.39	456.85	N10° 28' 50.83"W				494957.91	456883.28
C11	494957.91	456883.28			1432	495273.35	456824.93	495583.5583	456906.69
L26	495583.56	456906.69	1445.97	N14° 45' 59.93"E				496981.77	457275.25
C12	496981.77	457275.25			2865	497379.19	457380.00	497790.0292	457368.80
L27	497790.03	457368.80	291.13	N1° 33' 41.77"W				498081.05	457360.87
L28	498081.05	457360.87	1003.31	N1° 11' 37.86"W				499084.14	457339.96
L29	499084.14	457339.96	455.15	N2° 20' 22.90"W				499538.91	457321.38

Overlook Rd									
Number	Start Northing	Start Easting	Length	Bearing	Radius	PI Northing	PI Easting	End Northing	End Easting
L33	495043.35	456870.13	87.09	N79° 31' 09.17"E				495059.19	456955.77
C13	495059.19	456955.77			160	495067.74	457002.01	495099.9614	457036.28
L34	495099.96	457036.28	2.13	N46° 45' 35.44"E				495101.42	457037.82
C14	495101.42	457037.82			235	495172.46	457113.37	495164.5368	457216.76
L35	495164.54	457216.76	14.02	S85° 37' 11.66"E				495163.47	457230.74
C15	495163.47	457230.74			235	495158.75	457292.28	495124.4009	457343.57
L36	495124.40	457343.57	245.11	S56° 11' 07.81"E				494987.99	457547.22

STH 41 SB - Off Ramp STH 144									
Number	Start Northing	Start Easting	Length	Bearing	Radius	PI Northing	PI Easting	End Northing	End Easting
L19	495544.56	456897.00	118.20	N58° 12' 16.01"W				495606.84	456796.54
C8	495606.84	456796.54			380	495703.19	456641.11	495884.7694	456619.43
L20	495884.77	456619.43	35.24	N6° 48' 28.91"W				495919.76	456615.26
C9	495919.76	456615.26			1340	496158.09	456586.80	496371.7244	456477.40
L21	496371.72	456477.40	807.52	N27° 07' 05.27"W				497090.47	456109.31
C10	497090.47	456109.31			1350	497138.81	456084.55	497185.0066	456055.99
L23	497185.01	456055.99	370.01	N31° 43' 32.41"W				497499.73	455861.42
L24	497499.73	455861.42	320.00	N32° 17' 54.99"W				497770.22	455690.44
L22	497770.22	455690.44	250.29	N29° 33' 01.87"W				497987.95	455567.00

STH 41 SB - On Ramp STH 144									
Number	Start Northing	Start Easting	Length	Bearing	Radius	PI Northing	PI Easting	End Northing	End Easting
L8	493746.04	459065.38	360.20	N48° 08' 16.93"W				493986.42	458797.12
L9	493986.42	458797.12	930.00	N46° 13' 43.98"W				494629.77	458125.56
L10	494629.77	458125.56	193.45	N47° 15' 45.60"W				494761.06	457983.47
C4	494761.06	457983.47			1350	494798.52	457942.93	494832.5365	457899.48
L11	494832.54	457899.48	645.87	N51° 36' 41.42"W				495230.67	457390.90
C5	495230.67	457390.90			1100	495267.74	457343.54	495299.4338	457292.42
L12	495299.43	457292.42	465.24	N58° 12' 16.01"W				495544.56	456897.00

STH 41 NB - On Ramp STH 144									
Number	Start Northing	Start Easting	Length	Bearing	Radius	PI Northing	PI Easting	End Northing	End Easting
L13	496272.01	457088.16	14.91	N60° 14' 00.07"W				496279.42	457075.22
C6	496279.42	457075.22			1000	496354.22	456944.44	496464.2251	456841.50
L14	496464.23	456841.50	671.47	N43° 05' 52.31"W				496954.53	456382.72
C7	496954.53	456382.72			1350	497042.73	456300.19	497144.1868	456234.62
L16	497144.19	456234.62	47.97	N32° 52' 17.57"W				497184.48	456208.58
L17	497184.48	456208.58	100.04	N34° 01' 01.08"W				497267.40	456152.62
L18	497267.40	456152.62	930.00	N32° 17' 54.99"W				498053.51	455655.69
L15	498053.51	455655.69	360.20	N34° 12' 27.94"W				498351.40	455453.18

STH 41 NB - Off Ramp STH 144									
Number	Start Northing	Start Easting	Length	Bearing	Radius	PI Northing	PI Easting	End Northing	End Easting
L4	494387.11	458537.87	250.29	N43° 28' 30.86"W				494568.72	458363.65
L6	494568.72	458365.65	315.00	N46° 13' 43.98"W				494786.63	458138.18
L7	494786.63	458138.18	304.03	N45° 39' 48.62"W				494999.11	457920.73
L5	494999.11	457920.73	6.93	N45° 57' 06.50"W				495003.93	457915.75
C3	495003.93	457915.75			1350	495148.60	457766.18	495331.5937	457667.13
L2	495331.59	457667.13	170.95	N28° 25' 37.02"W				495481.93	457585.75
C1	495481.93	457585.75			1500	495574.16	457535.82	495672.4470	457499.22
L3	495672.45	457499.22	309.56	N28° 25' 40.11"W				495962.54	457391.17
C2	495962.54	457391.17			510	496135.57	457326.73	496227.2431	457166.44
L1	496227.24	457166.44	90.18	N60° 14' 00.07"W				496272.01	457088.16

Aurthur - CTH NN									
Number	Start Northing	Start Easting	Length	Bearing	Radius	PI Northing	PI Easting	End Northing	End Easting
L30	498086.91	456837.73	145.56	S89° 41' 42.89"E				498086.14	456983.29
L31	498086.14	456983.29	378.68	S86° 40' 13.88"E				498064.14	457361.33
L32	498064.14	457361.33	206.93	N89° 30' 23.03"E				498065.93	457568.25

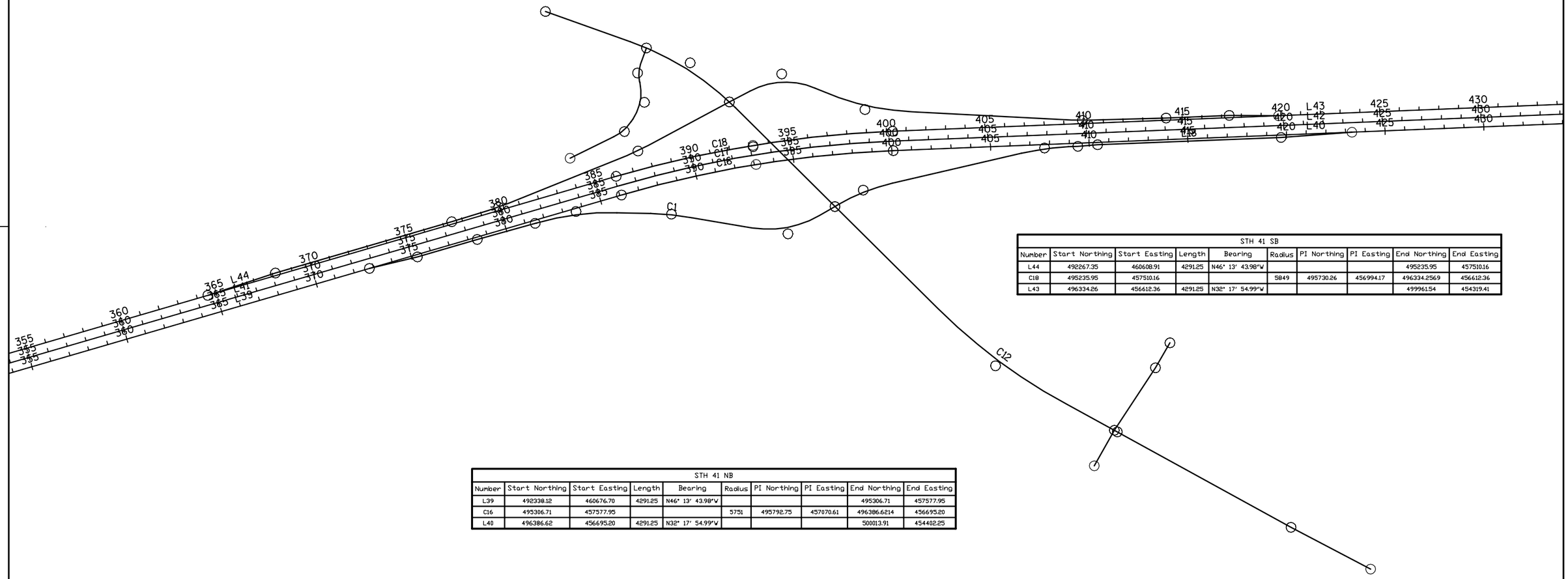
CONTROL POINTS

PT NO	X	Y	DESCRIPTION
100	457321.48	495112.25	¾" RB KL CAP
101	457006.33	495552.15	⅝" RB KL CAP
102	457228.02	496230.05	⅝" RB KL CAP
103	457244.72	496893.04	⅝" RB KL CAP
104	457392.15	497722.39	⅝" RB KL CAP
105	457400.70	498111.71	DOT DISK IN CONC
106	457331.12	498550.45	⅝" RB KL CAP
107	457304.47	499512.02	⅝" RB KL CAP
108	459020.76	493943.84	⅝" RB KL CAP
109	458485.40	494455.38	⅝" RB KL CAP
110	457963.77	494605.66	⅝" RB KL CAP
111	457802.83	495116.62	⅝" RB KL CAP
112	457330.64	495679.06	⅝" RB KL CAP
113	457212.92	495594.73	⅝" RB KL CAP
114	456839.31	496102.01	⅝" RB KL CAP
115	456623.79	496682.17	⅝" RB KL CAP
116	456368.28	496532.96	⅝" RB KL CAP
117	456147.36	497004.50	⅝" RB KL CAP
118	456111.05	497336.62	⅝" RB KL CAP
119	455778.13	497627.87	⅝" RB KL CAP
120	455457.30	498376.82	⅝" RB KL CAP
121	455355.93	498319.31	⅝" RB KL CAP
122	457350.02	499151.77	⅝" RB KL CAP
123	457363.34	498772.27	⅝" RB KL CAP
124	456631.60	495760.23	⅝" RB KL CAP
125	456691.10	496050.28	⅝" RB KL CAP
126	457032.21	496418.20	⅝" RB KL CAP

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	ALIGNMENT DIAGRAM - RAMPS, SIDEROADS AND STH 144	SHEET 115	E

2

STH 41									
Number	Start Northing	Start Easting	Length	Bearing	Radius	PI Northing	PI Easting	End Northing	End Easting
L41	492302.73	460642.80	4291.25	N46° 13' 43.98"W				495271.33	457544.05
C17	495271.33	457544.05			5800	495761.50	457032.39	496360.4392	456653.78
L42	496360.44	456653.78	4291.25	N32° 17' 54.99"W				499987.73	454360.83



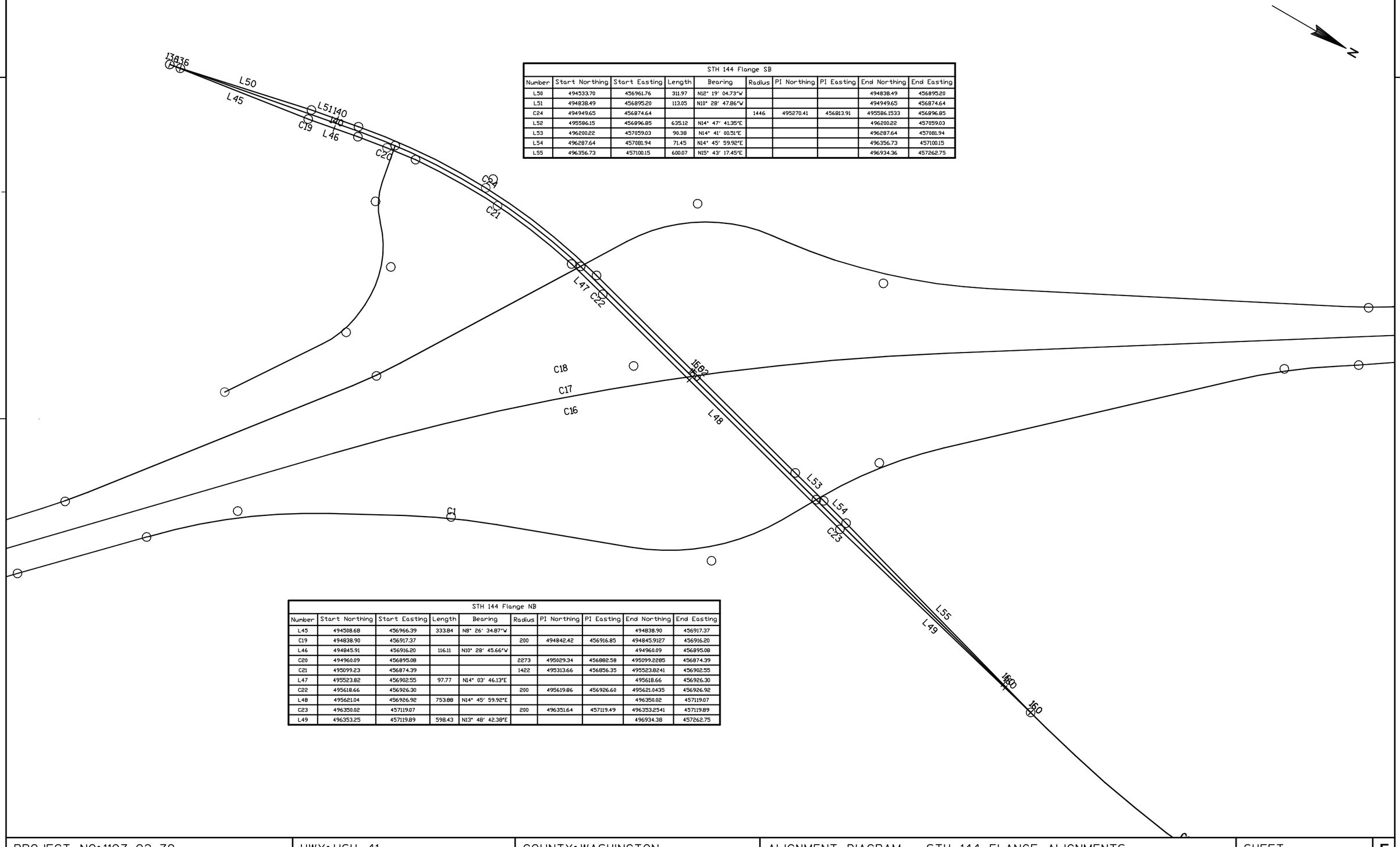
STH 41 SB									
Number	Start Northing	Start Easting	Length	Bearing	Radius	PI Northing	PI Easting	End Northing	End Easting
L44	492267.35	460608.91	4291.25	N46° 13' 43.98"W				495235.95	457510.16
C18	495235.95	457510.16			5849	495730.26	456994.17	496334.2569	456612.36
L43	496334.26	456612.36	4291.25	N32° 17' 54.99"W				499961.54	454319.41

STH 41 NB									
Number	Start Northing	Start Easting	Length	Bearing	Radius	PI Northing	PI Easting	End Northing	End Easting
L39	492338.12	460676.70	4291.25	N46° 13' 43.98"W				495306.71	457577.95
C16	495306.71	457577.95			5751	495792.75	457070.61	496386.6214	456695.20
L40	496386.62	456695.20	4291.25	N32° 17' 54.99"W				500013.91	454402.25

PROJECT NO:1107-02-79	HWY:USH 41	COUNTY:WASHINGTON	ALIGNMENT DIAGRAM - USH 41 AND SHOULDERS	SHEET	E

FILE NAME : L:\PROJECTS\11609\DWG\027202_AD.DWG PLOT DATE : 7/26/2013 6:04 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1 IN:500 FT

2



STH 144 Flange SB									
Number	Start Northing	Start Easting	Length	Bearing	Radius	PI Northing	PI Easting	End Northing	End Easting
L50	494533.70	456961.76	311.97	N12° 19' 04.73"W				494838.49	456895.20
L51	494838.49	456895.20	113.05	N10° 28' 47.86"W				494949.65	456874.64
C24	494949.65	456874.64			1446	495270.41	456813.91	495586.1533	456896.85
L52	495586.15	456896.85	635.12	N14° 47' 41.35"E				496200.22	457059.03
L53	496200.22	457059.03	90.38	N14° 41' 00.51"E				496287.64	457081.94
L54	496287.64	457081.94	71.45	N14° 45' 59.92"E				496356.73	457100.15
L55	496356.73	457100.15	600.07	N15° 43' 17.45"E				496934.36	457262.75

STH 144 Flange NB									
Number	Start Northing	Start Easting	Length	Bearing	Radius	PI Northing	PI Easting	End Northing	End Easting
L45	494508.68	456966.39	333.84	N8° 26' 34.87"W				494838.90	456917.37
C19	494838.90	456917.37			200	494842.42	456916.85	494845.9127	456916.20
L46	494845.91	456916.20	116.11	N10° 28' 45.66"W				494960.09	456895.08
C20	494960.09	456895.08			2273	495029.34	456882.58	495099.2285	456874.39
C21	495099.23	456874.39			1422	495313.66	456856.35	495523.8241	456902.55
L47	495523.82	456902.55	97.77	N14° 03' 46.13"E				495618.66	456926.30
C22	495618.66	456926.30			200	495619.86	456926.60	495621.0435	456926.92
L48	495621.04	456926.92	753.88	N14° 45' 59.92"E				496350.02	457119.07
C23	496350.02	457119.07			200	496351.64	457119.49	496353.2541	457119.89
L49	496353.25	457119.89	598.43	N13° 48' 42.38"E				496934.38	457262.75

PROJECT NO:1107-02-79	HWY:USH 41	COUNTY:WASHINGTON	ALIGNMENT DIAGRAM - STH 144 FLANGE ALIGNMENTS	SHEET	E

FILE NAME : L:\PROJECTS\11609\DWG\027203_AD.DWG PLOT DATE : 7/26/2013 6:04 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

DATE 17SEP13 — 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	1107-02-79 QUANTITY
0010	201.0105	CLEARING	STA	60.000	60.000
0020	201.0205	GRUBBING	STA	60.000	60.000
0030	203.0100	REMOVING SMALL PIPE CULVERTS	EACH	18.000	18.000
0040	203.0200	REMOVING OLD STRUCTURE (STATION) 01. 513+00	LS	1.000	1.000
0050	203.0200	REMOVING OLD STRUCTURE (STATION) 02. 721+50	LS	1.000	1.000
0060	203.0200	REMOVING OLD STRUCTURE (STATION) 03. 150+00	LS	1.000	1.000
0070	204.0100	REMOVING PAVEMENT	SY	200.000	200.000
0080	204.0150	REMOVING CURB & GUTTER	LF	3,800.000	3,800.000
0090	204.0165	REMOVING GUARDRAIL	LF	5,905.000	5,905.000
0100	204.0220	REMOVING INLETS	EACH	2.000	2.000
0110	205.0100	EXCAVATION COMMON	CY	118,787.000	118,787.000
0120	205.0400	EXCAVATION MARSH	CY	11,500.000	11,500.000
0130	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 01. B-66-110	LS	1.000	1.000
0140	208.0100	BORROW	CY	182,972.000	182,972.000
0150	209.0100	BACKFILL GRANULAR	CY	18,000.000	18,000.000
0160	210.0100	BACKFILL STRUCTURE	CY	935.000	935.000
0170	213.0100	FINISHING ROADWAY (PROJECT) 01. 1107-02-79	EACH	1.000	1.000
0180	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	2,100.000	2,100.000
0190	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	54,450.000	54,450.000
0200	415.0410	CONCRETE PAVEMENT APPROACH SLAB	SY	420.000	420.000
0210	416.0170	CONCRETE DRIVEWAY 7-INCH	SY	75.000	75.000
0220	416.0610	DRILLED TIE BARS	EACH	8.000	8.000
0230	440.4410.S	INCENTIVE IRI RIDE	DOL	8,500.000	8,500.000
0240	455.0115	ASPHALTIC MATERIAL PG64-22	TON	960.000	960.000
0250	455.0605	TACK COAT	GAL	2,730.000	2,730.000
0260	460.1101	HMA PAVEMENT TYPE E-1	TON	17,340.000	17,340.000
0270	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	11,100.000	11,100.000
0280	465.0120	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	TON	270.000	270.000
0290	465.0125	ASPHALTIC SURFACE TEMPORARY	TON	1,150.000	1,150.000
0300	465.0315	ASPHALTIC FLUMES	SY	32.500	32.500
0310	465.0400	ASPHALTIC SHOULDER RUMBLE STRIP	LF	26,670.000	26,670.000
0320	502.0100	CONCRETE MASONRY BRIDGES	CY	1,214.000	1,214.000
0330	502.3200	PROTECTIVE SURFACE TREATMENT	SY	2,080.000	2,080.000
0340	503.0155	PRESTRESSED GIRDER TYPE I 54W-INCH	LF	1,933.000	1,933.000
0350	505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	29,520.000	29,520.000
0360	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	197,015.000	197,015.000
0370	506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	36.000	36.000
0380	506.4000	STEEL DIAPHRAGMS (STRUCTURE) 01. B-66-110	EACH	32.000	32.000
0390	513.4090	RAILING TUBULAR SCREENING (STRUCTURE) 01. B-66-110	LS	1.000	1.000
0400	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	48.000	48.000
0410	520.0118	CULVERT PIPE CLASS III 18-INCH	LF	321.000	321.000
0420	520.1018	APRON ENDWALLS FOR CULVERT PIPE 18-INCH	EACH	16.000	16.000
0430	520.4024	CULVERT PIPE TEMPORARY 24-INCH	LF	12.000	12.000
0440	520.4030	CULVERT PIPE TEMPORARY 30-INCH	LF	12.000	12.000
0450	520.8000	CONCRETE COLLARS FOR PIPE	EACH	2.000	2.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1107-02-79 QUANTITY
0460	522.0112	CULVERT PIPE REINFORCED CONCRETE CLASS III 12-INCH	LF	40.000	40.000
0470	522.0115	CULVERT PIPE REINFORCED CONCRETE CLASS III 15-INCH	LF	60.000	60.000
0480	522.0124	CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH	LF	210.000	210.000
0490	522.0130	CULVERT PIPE REINFORCED CONCRETE CLASS III 30-INCH	LF	111.000	111.000
0500	522.0136	CULVERT PIPE REINFORCED CONCRETE CLASS III 36-INCH	LF	148.000	148.000
0510	522.0142	CULVERT PIPE REINFORCED CONCRETE CLASS III 42-INCH	LF	66.000	66.000
0520	522.0148	CULVERT PIPE REINFORCED CONCRETE CLASS III 48-INCH	LF	246.000	246.000
0530	522.1012	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH	EACH	1.000	1.000
0540	522.1015	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 15-INCH	EACH	5.000	5.000
0550	522.1018	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH	EACH	1.000	1.000
0560	522.1024	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH	EACH	12.000	12.000
0570	522.1030	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH	EACH	3.000	3.000
0580	522.1036	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 36-INCH	EACH	4.000	4.000
0590	522.1042	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 42-INCH	EACH	2.000	2.000
0600	522.1048	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 48-INCH	EACH	2.000	2.000
0610	523.0514	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 14X23-INCH	EACH	2.000	2.000
0620	550.1120	PILING STEEL HP 12-INCH X 53 LB	LF	2,985.000	2,985.000
0630	601.0409	CONCRETE CURB & GUTTER 30-INCH TYPE A	LF	16.000	16.000
0640	601.0411	CONCRETE CURB & GUTTER 30-INCH TYPE D	LF	3,134.000	3,134.000
0650	601.0555	CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE A	LF	133.000	133.000
0660	601.0557	CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D	LF	4,402.000	4,402.000
0670	602.0410	CONCRETE SIDEWALK 5-INCH	SF	6,195.000	6,195.000
0680	602.0505	CURB RAMP DETECTABLE WARNING FIELD YELLOW	SF	64.000	64.000
0690	603.8000	CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	LF	1,660.000	1,660.000
0700	603.8125	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	LF	1,660.000	1,660.000
0710	604.0400	SLOPE PAVING CONCRETE	SY	64.000	64.000
0720	606.0200	RIPRAP MEDIUM	CY	820.000	820.000
0730	608.0315	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH	LF	777.000	777.000
0740	608.0318	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH	LF	441.000	441.000
0750	608.0324	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH	LF	227.000	227.000
0760	608.0336	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH	LF	1,011.000	1,011.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1107-02-79 QUANTITY
0770	610.0114	STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 14X23-INCH	LF	160.000	160.000
0780	611.0530	MANHOLE COVERS TYPE J	EACH	3.000	3.000
0790	611.0624	INLET COVERS TYPE H	EACH	14.000	14.000
0800	611.0627	INLET COVERS TYPE HM	EACH	7.000	7.000
0810	611.0642	INLET COVERS TYPE MS	EACH	9.000	9.000
0820	611.1003	CATCH BASINS 3-FT DIAMETER	EACH	17.000	17.000
0830	611.1004	CATCH BASINS 4-FT DIAMETER	EACH	6.000	6.000
0840	611.2004	MANHOLES 4-FT DIAMETER	EACH	2.000	2.000
0850	611.2005	MANHOLES 5-FT DIAMETER	EACH	2.000	2.000
0860	611.2008	MANHOLES 8-FT DIAMETER	EACH	2.000	2.000
0870	611.3901	INLETS MEDIAN 1 GRATE	EACH	2.000	2.000
0880	611.3902	INLETS MEDIAN 2 GRATE	EACH	2.000	2.000
0890	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	785.000	785.000
0900	614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	4.000	4.000
0910	614.0220	STEEL THRIE BEAM BULLNOSE TERMINAL	EACH	2.000	2.000
0920	614.0230	STEEL THRIE BEAM	LF	275.000	275.000
0930	614.0305	STEEL PLATE BEAM GUARD CLASS A	LF	62.500	62.500
0940	614.0380	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL TEMPORARY	EACH	1.000	1.000
0950	614.0396	GUARDRAIL MOW STRIP ASPHALT	SY	350.000	350.000
0960	614.0905	CRASH CUSHIONS TEMPORARY	EACH	6.000	6.000
0970	614.2300	MGS GUARDRAIL 3	LF	650.000	650.000
0980	614.2500	MGS THRIE BEAM TRANSITION	LF	118.200	118.200
0990	614.2610	MGS GUARDRAIL TERMINAL EAT	EACH	5.000	5.000
1000	616.0100	FENCE WOVEN WIRE (HEIGHT) 01. 54 INCH	LF	11,650.000	11,650.000
1010	616.0329	GATES CHAIN LINK (WIDTH) 01. 15-FT	EACH	1.000	1.000
1020	618.0100	MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 01. 1107-02-79	EACH	1.000	1.000
1030	619.1000	MOBILIZATION	EACH	1.000	1.000
1040	620.0300	CONCRETE MEDIAN SLOPED NOSE	SF	185.000	185.000
1050	621.0100	LANDMARK REFERENCE MONUMENTS	EACH	10.000	10.000
1060	623.0200	DUST CONTROL SURFACE TREATMENT	SY	141,450.000	141,450.000
1070	624.0100	WATER	MGAL	790.000	790.000
1080	625.0100	TOPSOIL	SY	8,220.000	8,220.000
1090	625.0500	SALVAGED TOPSOIL	SY	225,000.000	225,000.000
1100	627.0200	MULCHING	SY	65,500.000	65,500.000
1110	628.1504	SILT FENCE	LF	8,500.000	8,500.000
1120	628.1520	SILT FENCE MAINTENANCE	LF	8,500.000	8,500.000
1130	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	8.000	8.000
1140	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	8.000	8.000
1150	628.2002	EROSION MAT CLASS I TYPE A	SY	920.000	920.000
1160	628.2004	EROSION MAT CLASS I TYPE B	SY	145,000.000	145,000.000
1170	628.2023	EROSION MAT CLASS II TYPE B	SY	350.000	350.000
1180	628.7005	INLET PROTECTION TYPE A	EACH	24.000	24.000
1190	628.7015	INLET PROTECTION TYPE C	EACH	24.000	24.000
1200	628.7504	TEMPORARY DITCH CHECKS	LF	1,400.000	1,400.000
1210	628.7555	CULVERT PIPE CHECKS	EACH	100.000	100.000
1220	628.7560	TRACKING PADS	EACH	6.000	6.000
1230	629.0210	FERTILIZER TYPE B	CWT	150.500	150.500
1240	630.0120	SEEDING MIXTURE NO. 20	LB	6,425.000	6,425.000
1250	630.0200	SEEDING TEMPORARY	LB	3,312.000	3,312.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1107-02-79 QUANTITY
1260	630.0300	SEEDING BORROW PIT	LB	1,000.000	1,000.000
1270	631.1000	SOD LAWN	SY	7,300.000	7,300.000
1280	633.0200	DELINEATORS FLEXIBLE	EACH	153.000	153.000
1290	633.0500	DELINEATOR REFLECTORS	EACH	211.000	211.000
1300	633.1000	DELINEATOR BRACKETS	EACH	211.000	211.000
1310	633.5100	MARKERS ROW	EACH	11.000	11.000
1320	633.5200	MARKERS CULVERT END	EACH	27.000	27.000
1330	634.0618	POSTS WOOD 4X6-INCH X 18-FT	EACH	129.000	129.000
1340	634.0622	POSTS WOOD 4X6-INCH X 22-FT	EACH	11.000	11.000
1350	635.0200	SIGN SUPPORTS STRUCTURAL STEEL HS	LB	4,000.000	4,000.000
1360	635.0300	SIGN SUPPORTS REPLACING BASE CONNECTION BOLTS	EACH	4.000	4.000
1370	636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	9.800	9.800
1380	636.0500	SIGN SUPPORTS STEEL REINFORCEMENT	LB	794.000	794.000
1390	637.1220	SIGNS TYPE I REFLECTIVE SH	SF	1,144.000	1,144.000
1400	637.2210	SIGNS TYPE II REFLECTIVE H	SF	1,052.553	1,052.553
1410	637.2215	SIGNS TYPE II REFLECTIVE H FOLDING	SF	40.000	40.000
1420	637.2230	SIGNS TYPE II REFLECTIVE F	SF	197.500	197.500
1430	638.2102	MOVING SIGNS TYPE II	EACH	9.000	9.000
1440	638.2601	REMOVING SIGNS TYPE I	EACH	5.000	5.000
1450	638.2602	REMOVING SIGNS TYPE II	EACH	95.000	95.000
1460	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	102.000	102.000
1470	638.3100	REMOVING STRUCTURAL STEEL SIGN SUPPORTS	EACH	6.000	6.000
1480	642.5401	FIELD OFFICE TYPE D 01. 1107-02-79	EACH	1.000	1.000
1490	643.0200	TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE (PROJECT) 01. 1107-02-79	DAY	225.000	225.000
1500	643.0300	TRAFFIC CONTROL DRUMS	DAY	61,100.000	61,100.000
1510	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	5,300.000	5,300.000
1520	643.0500	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS	EACH	220.000	220.000
1530	643.0600	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES	EACH	220.000	220.000
1540	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	10,500.000	10,500.000
1550	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	7,500.000	7,500.000
1560	643.0800	TRAFFIC CONTROL ARROW BOARDS	DAY	450.000	450.000
1570	643.0900	TRAFFIC CONTROL SIGNS	DAY	17,700.000	17,700.000
1580	643.0920	TRAFFIC CONTROL COVERING SIGNS TYPE II	EACH	12.000	12.000
1590	643.1000	TRAFFIC CONTROL SIGNS FIXED MESSAGE	SF	628.000	628.000
1600	643.1050	TRAFFIC CONTROL SIGNS PCMS	DAY	50.000	50.000
1610	643.2000	TRAFFIC CONTROL DETOUR (PROJECT) 01. 1107-02-79	EACH	1.000	1.000
1620	643.3000	TRAFFIC CONTROL DETOUR SIGNS	DAY	16,500.000	16,500.000
1630	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	1,700.000	1,700.000
1640	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	59,711.000	59,711.000
1650	646.0126	PAVEMENT MARKING EPOXY 8-INCH	LF	100.000	100.000
1660	646.0600	REMOVING PAVEMENT MARKINGS	LF	28,310.000	28,310.000
1670	646.0841.S	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH	LF	723.000	723.000
1680	646.0843.S	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH	LF	2,151.000	2,151.000
1690	646.0883.S	PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH	LF	2,062.000	2,062.000
1700	647.0456	PAVEMENT MARKING CURB EPOXY	LF	250.000	250.000
1710	647.0606	PAVEMENT MARKING ISLAND NOSE EPOXY	EACH	8.000	8.000
1720	647.0726	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH	LF	150.000	150.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1107-02-79 QUANTITY
1730	647.0746	PAVEMENT MARKING DIAGONAL EPOXY 24-INCH	LF	275.000	275.000
1740	648.0100	LOCATING NO-PASSING ZONES	MI	1.000	1.000
1750	649.0200	TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH	LF	18,850.000	18,850.000
1760	649.0400	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	LF	9,550.000	9,550.000
1770	650.4000	CONSTRUCTION STAKING STORM SEWER	EACH	47.000	47.000
1780	650.4500	CONSTRUCTION STAKING SUBGRADE	LF	16,450.000	16,450.000
1790	650.5000	CONSTRUCTION STAKING BASE	LF	16,450.000	16,450.000
1800	650.5500	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER	LF	8,685.000	8,685.000
1810	650.6000	CONSTRUCTION STAKING PIPE CULVERTS	EACH	25.000	25.000
1820	650.6500	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 01. B-66-110	LS	1.000	1.000
1830	650.6500	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 02. R-66-34	LS	1.000	1.000
1840	650.6500	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 03. R-66-35	LS	1.000	1.000
1850	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 1107-02-79	LS	1.000	1.000
1860	650.9920	CONSTRUCTION STAKING SLOPE STAKES	LF	16,450.000	16,450.000
1870	652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	160.000	160.000
1880	653.0135	PULL BOXES STEEL 24X36-INCH	EACH	2.000	2.000
1890	654.0105	CONCRETE BASES TYPE 5	EACH	2.000	2.000
1900	654.0220	CONCRETE CONTROL CABINET BASES TYPE 10	EACH	2.000	2.000
1910	655.0615	ELECTRICAL WIRE LIGHTING 10 AWG	LF	400.000	400.000
1920	657.0100	PEDESTAL BASES	EACH	2.000	2.000
1930	657.0255	TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE	EACH	2.000	2.000
1940	657.0425	TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT	EACH	2.000	2.000
1950	662.2030.S	RAMP CLOSURE GATES SOLAR 30-FT	EACH	1.000	1.000
1960	662.2037.S	RAMP CLOSURE GATES SOLAR 37-FT	EACH	1.000	1.000
1970	662.3030.S	RAMP CLOSURE GATE ARMS STOCKPILE 30-FT	EACH	1.000	1.000
1980	662.3037.S	RAMP CLOSURE GATE ARMS STOCKPILE 37-FT	EACH	1.000	1.000
1990	662.4000.S	RAMP CLOSURE GATE FLASHERS STOCKPILE	EACH	4.000	4.000
2000	690.0150	SAWING ASPHALT	LF	8,695.000	8,695.000
2010	690.0250	SAWING CONCRETE	LF	6.000	6.000
2020	715.0415	INCENTIVE STRENGTH CONCRETE PAVEMENT	DOL	500.000	500.000
2030	715.0502	INCENTIVE STRENGTH CONCRETE STRUCTURES	DOL	7,284.000	7,284.000
2040	ASP.1T0A	ON-THE-JOB TRAINING APPRENTICE AT $5. 00/HR	HRS	4,000.000	4,000.000
2050	ASP.1T0G	ON-THE-JOB TRAINING GRADUATE AT $5.00/HR	HRS	4,000.000	4,000.000
2060	SPV.0060	SPECIAL 01. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2	EACH	18.000	18.000
2070	SPV.0060	SPECIAL 02. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 4	EACH	2.000	2.000
2080	SPV.0060	SPECIAL 03. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS	EACH	9.000	9.000
2090	SPV.0060	SPECIAL 04. RAISED PAVEMENT MARKERS	EACH	28.000	28.000
2100	SPV.0090	SPECIAL 01. FENCE CHAIN LINK POLYMER-COATED 6-FT	LF	285.000	285.000
2110	SPV.0090	SPECIAL 02. PAVEMENT MARKING GROOVED PREFORMED GROOVED THERMOPLASTIC STOP LINE18-INCH	LF	175.000	175.000
2120	SPV.0090	SPECIAL 04. CONSTRUCTION STAKING FENCE	LF	11,650.000	11,650.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1107-02-79 QUANTITY
2130	SPV.0105	SPECIAL 01. RAILING PIPE GALVANIZED R-66-34	LS	1.000	1.000
2140	SPV.0105	SPECIAL 02. RAILING PIPE GALVANIZED R-66-35	LS	1.000	1.000
2150	SPV.0165	SPECIAL 01. TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD	SF	2,130.000	2,130.000
2160	SPV.0165	SPECIAL 02. WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD	SF	5,920.000	5,920.000

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CLEARING AND GRUBBING

LOCATION FROM	LOCATION TO	DESCRIPTION	ITEM NO. 201.0105 CLEARING STA.	ITEM NO. 201.0205 GRUBBING STA.
506+00	507+00	NB OFF RAMP	1	1
514+00	522+00	NB OFF RAMP	8	8
603+50	604+50	NB ON RAMP	1	1
614+25	615+25	NB ON RAMP	1	1
701+00	704+00	SB ON RAMP	3	3
706+00	710+00	SB ON RAMP	4	4
713+00	714+00	SB ON RAMP	1	1
803+00	810+00	SB OFF RAMP	7	7
811+00	825+00	SB OFF RAMP	14	14
155+00	159+00	STH 144 LEFT	4	4
165+00	167+00	STH 144 RIGHT	2	2
167+00	168+00	STH 144 LEFT	1	1
174+00	184+00	STH 144 LEFT AND RIGHT	10	10
184+00	187+00	STH 144 RIGHT	3	3
TOTALS			60	60

REMOVING SMALL PIPE CULVERTS, ITEM NO. 203.0100

STATION	LOCATION	DESCRIPTION	EACH
513+00	LT	72" X 12' CCP - RIGHT OF USH 41 NB	1
721+50	RT	72" X 16' CCP - LEFT OF USH 41 SB	1
518+50	LT	30" X 101' CCP - UNDER OLD NB OFF RAMP	1
605+00	LT	30" X 95' CMCP - UNDER OLD NB ON RAMP	1
805+80	RT	30" X 87' RCCP - UNDER OLD SB OFF RAMP	1
142+92	RT	4" X 123' PVC - OVERLOOK CULVERT	1
148+24	RT	24" X 160' CP - CROSS CULVERT	1
159+32	RT	18" X 30' CMCP - DRIVEWAY CULVERT	1
169+98	LT	18" X 99' CMCP - DRIVEWAY CULVERT	1
171+16	RT	30" X 37' CMCP - CROSS CULVERT STAGE 1	0.5
171+16	LT	30" X 37' CMCP - CROSS CULVERT STAGE 2	0.5
174+13	LT	24" X 25' CMCP - DRIVEWAY CULVERT	1
175+18	LT	24" X 24' CMCP - DRIVEWAY CULVERT	1
177+62	RT	24" X 28' CMCP - DRIVEWAY CULVERT	1
183+59	RT	24" X 36' CMCP - CROSS CULVERT STAGE 1	0.5
183+59	LT	24" X 36' CMCP - CROSS CULVERT STAGE 2	0.5
269+24	RT	24" X 46' CMCP - DRIVEWAY CULVERT	1
269+54	RL	12" X 41' CMCP - CROSS CULVERT	1
269+60	RL	12" X 41' CMCP - CROSS CULVERT	1
270+50	LT	18" X 20' CMCP - DRIVEWAY CULVERT	1
TOTALS			18

REMOVING OLD STRUCTURES

STATION LCOATION	ITEM NO.	TITLE	TYPE	LS
513+00, LT	203.0200.01	REMOVING OLD STRUCTURE STATION 513+00	72" CULVERT	1
721+50, RT	203.0200.02	REMOVING OLD STRUCTURE STATION 721+50	72" CULVERT	1

REMOVING PAVEMENT, ITEM NO. 204.0100

STATION FROM	STATION TO	DESCRIPTION	SY
143+15	803+00, LT	LOOP RAMP - RAISED MEDIAN	200
TOTALS			200

REMOVING CURB & GUTTER, ITEM NO. 204.0150

STATION FROM	STATION TO	DESCRIPTION	LF
171+51	273+08	INTERSECTION - SW RADIUS	90
171+71	271+54	INTERSECTION - SE RADIUS	80
271+56	173+06	INTERSECTION - NW RADIUS	80
172+86	175+19	INTERSECTION NE RADIUS TO NORTH	300
142+74	142+83	ISLAND	30
143+29	143+72	ISLAND	160
144+70	149+75	LOOP RAMP	1150
152+80	153+10	NB OFF TO 144 SB	155
153+60	156+20	ISLAND BETWEEN 144 AND OFF RAMPS	820
900+65, LT	905+21, RT	OVERLOOK DR	480
901+00, LT	905+21, LT	OVERLOOK DR	455
TOTALS			3800

REMOVING GUARDRAIL, ITEM NO. 204.0165

STATION FROM	STATION TO	DESCRIPTION	LF
392+26	395+74	USH 41 MEDIAN	500
143+20, LT	806+70, RT	SB OFF RAMP - RT	880
804+20	806+70, RT	SB OFF RAMP - LT	225
502+50, RT	513+00, LT	NB OFF RAMP	1050
384+50, RT	389+00	NB OFF RAMP - GORE	435
517+50, LT	522+50, RT	NB OFF RAMP	550
600+50, RT	601+80, RT	SB ON RAMP - RIGHT	435
600+00, RT	606+00, LT	SB ON RAMP - LEFT	625
146+50, RT	148+35, RT	EXISTING BRIDGE - SW QUADRANT	185
145+50, RT	148+15, RT	EXISTING BRIDGE - SE QUADRANT	265
150+80, RT	155+00, RT	EXISTING BRIDGE - NW QUADRANT	425
150+80, RT	152+80, RT	EXISTING BRIDGE - NE QUADRANT	220
904+10, LT	905+21, LT	OVERLOOK DRIVE	110
TOTALS			5905

REMOVING INLETS, ITEM NO. 204.0220

LOCATION STATION	LOCATION OFFSET	DESCRIPTION	EACH
154+36	RT	MEDIAN ISLAND	1
156+10	RT	MEDIAN ISLAND	1
TOTALS			2

GRANULAR BACKFILL, ITEM NO. 209.0100

LOCATION FROM	LOCATION TO	DESCRIPTION	C.Y.
512+00	515+00	MARSH BACKFILL	12,025
518+30	522+00	MARSH BACKFILL	5,225
VARIOUS		CROSS CULVERTS	750
TOTALS			18,000

BASE AGGREGATE

STATION FROM	STATION TO	DESCRIPTION	ITEM NO. 305.0110 BASE AGGREGATE DENSE 3/4-INCH TONS	ITEM NO. 305.0125 BASE AGGREGATE DENS 1 1/4-INCH TONS
500+00	523+95	NB OFF RAMP	280	8,380
600+28	626+65	NB ON RAMP	310	7,375
700+00	721+75	SB ON RAMP	255	6,400
721+75	727+93	SB ON RAMP - C&G SECTION	50	1,300
800+35	828+25	SB OFF RAMP	330	7,250
136+00	137+55	STH 144	0	420
137+55	138+95	STH 144	0	470
138+95	140+95	STH 144	0	745
140+95	141+95	STH 144	0	470
141+95	144+00	STH 144	5	915
144+00	145+20	STH 144	15	515
145+20	146+30	STH 144	15	510
146+30	147+25	STH 144	10	495
147+25	147+70	STH 144	5	200
147+70	STRUCTURE	STH 144	10	460
STRUCTURE	153+25	STH 144	25	1,050
153+25	154+10	STH 144	10	460
154+10	158+50	STH 144	90	1,950
158+50	161+34	STH 144	60	1,000
161+34	162+00	STH 144	15	200
162+00	165+00	STH 144	10	860
165+00	168+00	STH 144	45	900
168+00	170+10	STH 144	30	700
170+10	172+90	STH 144	20	1,065
172+90	173+55	STH 144	10	245
173+55	175+25	STH 144	15	610
175+25	187+50	STH 144	175	3,700
900+50	905+21	OVERLOOK	0	1,200
268+00	271+95	CTH NN	50	950
272+50	273+25	ARTHUR	5	155
TRAFFIC CONTROL		TEMPORARY CONNECTIONS	0	2,000
161+00	187+50	TEMPORARY WIDENING		1,000
DRIVEWAYS		12 LOCATIONS	255	500
TOTALS			2100	54,450

DRILLED TIE BARS, ITEM NO. 416.0610

LOCATION STATION	LOCATION OFFSET	DESCRIPTION	EACH
136+00	LT AND RT	CURB AND GUTTER	4
905+21	LT AND RT	CURB AND GUTTER	4
TOTALS			8

CONCRETE PAVEMENT APPROACH SLAB, ITEM NO. 415.0410

LOCATION FROM	LOCATION TO	DESCRIPTION	SY
148+52.40	148+95.41	SOUTH APPROACH	235
151+09.41	151+45.90	NORTH APPROACH	185
TOTALS			420

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PROJECT NO: 1107-02-79 | HWY: USH 41 | COUNTY: WASHINGTON | MISCELLANEOUS QUANTITIES | SHEET 124 | E

EARTHWORK SUMMARY TABLE

DIVISION	FROM/TO STATION	LOCATION	COMMON EXCAVATION ITEM # 205.0100		UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	MARSH EXCAVATION (6)	REDUCED MARSH IN FILL (8)	EXPANDED MARSH BACKFILL (10)	UNEXPANDED FILL	EXPANDED FILL (13)	MASS ORDINATE +/- (14)	WASTE	BORROW	COMMENTS
			CUT (2)	EBS EXCAVATION (3)			ITEM # 205.0500	FACTOR 0.60	FACTOR 1.50		FACTOR 1.25			ITEM # 208.0100	
1	161+00 - 182+50	STH 144 WIDENING	8100	0	0	8100	0	0	0	2906	3633	4468	4468		
DIVISION 1 SUBTOTAL			8100	0	0	8100	0	0	0	2906	3633	4468	4468	0	
2	136+00 - 148+50	STH 144	12120	0	0	12120	0	0	0	19965	24956	-12836			
	900+50 - 905+21	OVERLOOK	7025	0	0	7025	0	0	0	9	11	7014			
	800+50 - 827+50	SB OFF RAMP *	7360	0	0	7360	0	0	0	121560	151950	-144590			
	700+50 - 727+50	SB ON RAMP *	22190	0	0	22190	0	0	0	8848	11060	11130			
		LOOP RAMP REMOVAL	31920	0	0	31920	0	0	0	50	63	31858			
DIVISION 2 SUBTOTAL			80615	0	0	80615	0	0	0	150432	188040	-107425	0	107425	
3	151+50 - 187+50	STH 144 **	1400	0	0	1400	0	0	0	36900	46125	-44725			
	500+50 - 524+00	NB OFF ***	16500	0	0	16500	11500	6900	17250	37956	38820	-22320			
	600+50 - 626+50	NB ON ***	11620	0	0	11620	0	0	0	18572	23215	-11595			
	268+00 - 271+41	ARTHUR*	482	0	0	482	0	0	0	635	794	-312			
	8+12 - 10+15	168+00 DRIVEWAY	70	0	0	70	0	0	0	906	1133	-1063			
DIVISION 3 SUBTOTAL			30072	0	0	30072	11500	6900	17250	94969	110086	-80014	0	80014	
TOTAL			118787	0	0	118787	11500	6900	17250	248307	301759	-182972	0	-182972	
TOTAL EXCAVATION COMMON			118787												

1) EXCAVATION COMMON IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM # 205.0100
2) SALVAGED / UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
3) EBS EXCAVATION TO BE BACKFILLED WITH BORROW OR CUT MATERIAL. ITEM # 208.0100 FOR BORROW.
4) SALVAGED / UNUSABLE PAVEMENT MATERIAL.
5) AVAILABLE MATERIAL = CUT - SALVAGED / UNUSABLE PAVEMENT MATERIAL.
6) MARSH EXCAVATION - TO BE BACKFILLED WITH GRANULAR BACKFILL. ITEM # 209.0100.
8) REDUCED MARSH IN FILL - EXCAVATED MARSH MATERIAL IS USUABLE IN FILLS OUTSIDE THE 1:1 SLOPE. MARSH IN FILL REDUCTION FACTOR = 0.6.
10) EXPANDED MARSH BACKFILL - THIS IS TO BE FILLED WITH GRANULAR BACKFILL. MARSH BACKFILL FACTOR = 1.5. ITEM # 209.0100.
13) Expanded Fill. Factor = 1.25
14) THE MASS ORDINATE +/- QUANTITY CALCULATED FOR THE DIVISION. PULS QUANTITY INDICATS AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

* = USH 41 SB SHOULDER AND RAMP INFIELD EARTHWORK INCLUDED IN SB ON AND OFF RAMP VOLUMES.
** = CTH NN EARTHWORK INCLUDED IN STH 144 VOLUMES.
*** = USH 41 NB SHOULDER AND RAMP INFIELD EARTHWORK INCLUDED IN NB ON AND OFF RAMP VOLUMES.

CONCRETE DRIVWAY 7-INCH, ITEM NO. 416.0170		
LOCATION		SY
STATION	OFFSET	
174+10	LT	11
175+10	LT	10
902+25	LT	18
903+00	LT	18
903+00	RT	18
TOTALS		75

HMA PAVEMENT

STATION FROM	STATION TO	DESCRIPTION	ITEM NO. 455.0115 ASPHALTIC MATERIAL PG64-22 TONS	ITEM NO. 455.0605 TACK COAT GAL	ITEM NO. 460.1101 HMA PAVEMENT TYPE E-1 TONS	ITEM NO. 465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TONS	ITEM NO. 465.0125 ASPHALTIC SURFACE TEMPORARY TONS	ITEM NO. 465.0400 ASPHALTIC SHOULDER RUMBLE STRIP LF
161+00	187+50	TEMPORARY WIDENING	---	---	---	---	700	---
500+00	523+95	NB OFF RAMP	73	220	1,320	---	---	4,000
600+28	626+65	NB ON RAMP	76	235	1,385	---	---	3,500
700+00	721+75	SB ON RAMP	60	185	1,090	---	---	2,650
721+75	727+93	SB ON RAMP	23	75	420	---	---	625
800+35	828+25	SB OFF RAMP	90	270	1,625	---	---	4,425
383+75	407+25	USH 41 NB SHOULDER BETWEEN GORES	51	130	915	---	---	2,400
381+25	408+25	USH 41 SB SHOULDER BETWEEN GORES	55	150	990	---	---	2,700
136+00	137+55	STH 144 BOTH DIRECTIONS	17	46	310	---	---	---
137+55	138+95	STH 144 NB	6	17	110	---	---	---
137+55	140+95	STH 144 SB	9	25	165	---	---	---
138+95	140+95	STH 144 NB	11	30	200	---	---	---
140+95	141+95	STH 144 BOTH DIRECTIONS	9	23	150	---	---	---
141+95	146+30	STH 144 NB	27	73	480	---	---	---
141+95	144+00	STH 144 SB	12	32	210	---	---	---
144+00	145+20	STH 144 SB	6	16	105	---	---	120
145+20	146+30	STH 144 SB	7	18	121	---	---	110
146+30	147+25	STH 144 BOTH DIRECTIONS	15	41	272	---	---	---
147+25	STRUCTURE	STH 144 NB	8	21	139	---	---	---
147+25	STRUCTURE	STH 144 SB	11	30	200	---	---	175
STRUCTURE	153+25	STH 144 NB	14	38	250	---	---	225
STRUCTURE	153+25	STH 144 SB	10	28	185	---	---	225
153+25	154+10	STH 144 BOTH DIRECTIONS	12	33	218	---	---	160
154+10	158+50	STH 144 NB	18	50	327	---	---	440
154+10	158+50	STH 144 SB	27	74	485	---	---	440
158+50	161+34	STH 144 BOTH DIRECTIONS	40	109	715	---	---	565
161+34	162+00	STH 144 BOTH DIRECTIONS	5	15	97	---	---	90
162+00	165+00	STH 144 BOTH DIRECTIONS	26	70	462	---	---	300
165+00	168+00	STH 144 BOTH DIRECTIONS	24	65	430	---	---	600
168+00	170+10	STH 144 BOTH DIRECTIONS	19	52	350	---	---	300
170+10	172+90	STH 144 BOTH DIRECTIONS	28	78	514	---	---	---
172+90	173+55	STH 144 BOTH DIRECTIONS	6	17	108	---	---	---
173+55	175+25	STH 144 BOTH DIRECTIONS	15	41	272	---	---	170
175+25	187+50	STH 144 BOTH DIRECTIONS	97	266	1,755	---	---	2,450
900+50	905+21	OVERLOOK	33	91	600	---	---	---
268+00	271+95	CTH NN	16	53	290	---	---	---
272+50	273+25	ARTHUR	4	13	75	---	---	---
TEMPORARY CONNECTIONS		TRAFFIC CONTROL STAGING CONNECTIONS	---	---	---	---	450	---
DRIVEWAYS		11 LOCATIONS	---	---	---	270	---	---
TOTALS			960	2,730	17,340	270	1,150	26,670

STORM SEWER PIPE SUMMARY

PIPE NUMBER	FROM	TO	ITEM NO. 608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH L.F.	ITEM NO. 608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH L.F.	ITEM NO. 608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-ICNH L.F.	ITEM NO. 608.0336 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH L.F.	ITEM NO. 610.0114 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 14X23-INCH L.F.	INVERT ELEVATION	DISCHARGE ELEVATION	PIPE SLOPE
P1	CB1	CB2	33	---	---	---	---	1141.40	1141.25	0.45%
P2	CB2	CB3	19	---	---	---	---	1141.25	1141.10	0.79%
P3	CB3	CB4	21	---	---	---	---	1141.10	1140.95	0.71%
P4	CB4	CB8	---	235	---	---	---	1140.45	1137.00	1.47%
P5	CB5	CB6	20	---	---	---	---	1137.55	1137.45	0.50%
P6	CB6	CB7	7	---	---	---	---	1137.45	1137.35	1.43%
P7	CB7	CB8	21	---	---	---	---	1137.35	1137.25	0.48%
P8	CB8	CB9	---	160	---	---	---	1137.00	1133.25	2.34%
P9	CB8	EW10	---	46	---	---	---	1131.50	1130.00	3.26%
P10	CB11	CB12	10	---	---	---	---	1139.15	1139.08	0.70%
P11	CB12	CB14	40	---	---	---	---	1138.98	1138.60	0.95%
P12	CB13	CB14	24	---	---	---	---	1138.97	1138.75	0.92%
P13	CB14	EW15	58	---	---	---	---	1138.50	1138.30	0.34%
P14	CB16	CB17	31	---	---	---	---	1144.95	1143.50	4.68%
P15	CB17	CB18	7	---	---	---	---	1143.50	1143.15	5.00%
P16	CB18	CB19	9	---	---	---	---	1143.15	1142.90	2.78%
P17	CB19	CB20	37	---	---	---	---	1142.90	1142.10	2.16%
P18	CB20	EW21	60	---	---	---	---	1142.10	1138.25	6.42%
P19	EW22	CB23	---	---	---	48	---	1137.50	1136.44	2.21%
P20	CB23	CB24	---	---	---	289	---	1136.34	1128.25	2.80%
P21	CB24	CB25	---	---	---	219	---	1128.15	1125.80	1.07%
P22	CB25	EW26	---	---	---	21	---	1125.80	1125.60	0.95%
P37	EW37	MH38	---	---	---	68	---	1116.18	1115.44	1.00%
P38	MH38	MH39	---	---	---	230	---	1115.34	1113.09	1.00%
P39	MH39	EW40	---	---	---	40	---	1112.50	1111.62	1.80%
P40	IN39	MH27	---	---	67	---	---	1120.40	1118.80	2.40%
P41	EW40	MH30	---	---	---	4	---	1130.97	1129.15	12.00%
P42	MH28	EW41	---	---	---	92	---	1110.00 +/-	1109.55	0.50%
P43	IN29	MH27	340	---	---	---	---	1125.26	1118.45	2.00%
P44	EW42	IN29	40	---	---	---	---	1126.69	1125.26	2.00%
P45	IN33	EW43	---	---	40	---	---	1088.29	1087.30	2.00%
P46	EW44	IN32	---	---	---	---	86	1066.00	1065.70	0.35%
P47	IN34	EW45	---	---	---	---	74	1065.70	1065.40	0.40%
P48	CB46	EW47	---	---	66	---	---	1143.96	1140.96	4.50%
P49	CB47	EW49	---	---	54	---	---	1143.70	1142.70	1.85%
TOTALS			777	441	227	1011	160			

ASPHALTIC FLUMES, ITEM NO. 465.0315

STATION	LOCAITON	ROADWAY	SY
727+65	RT	SB ON RAMP	6.5
171+50	RT	STH 144	6.5
172+95	RT	STH 144	6.5
271+30	LT	ARTHUR RD	6.5
271+50	RT	ARTHUR RD	6.5
TOTAL			32.5

CONCRETE SIDEWALK 4-INCH, ITEM NO. 602.0410 AND CURB RAMP DETECTABLE WARNING FIELD YELLOW, ITEM NO. 602.0505

STATION	LOCAITON	ROADWAY	ITEM NO. 602.0410 CONCRETE SIDEWALK 5-INCH SF	ITEM NO. 602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF
137+57 - 138+18	MEDIAN	STH 144	361	---
140+53	LEFT	STH 144	25	8
140+53	MEDIAN	STH 144	80	16
140+53	RIGHT	STH 144	25	8
140+84 - 140+91	MEDIAN	STH 144	47	---
141+10	RIGHT	STH 144 @ OVERLOOK	45	8
142+00	RIGHT	STH 144 @ OVERLOOK	45	8
142+00 - 153+23	MEDIAN	STH 144	4,492	---
145+00	RIGHT	STH 144 @ SB ON RAMP	45	8
146+68	RIGHT	STH 144 @ SB ON RAMP	45	8
154+12 - 154+26	MEDIAN	STH 144	85	---
156+65 - 158+45	MEDIAN	STH 144	900	---
TOTAL			6,195	64

MARKERS CULVERT END, ITEM NO. 633.5200

PIPE / CULVERT OR ENDWALL NUMBER	EACH
CV1	1
CV2	1
CV3	1
CV4	1
CV5.1	1
CV6	2
CV7	2
CV8	2
CV9	2
CV10	1
CV11	1
CV15	1
CV19	1
CV21	1
CV22	1
EW10	1
EW15	1
EW21	1
EW22	1
EW26	1
EW32	1
EW35	1
EW38	1
TOTALS	27

CONCRETE CURB AND GUTTER

STATION	-	STATION	ROADWAY	ITEM NO. 601.0409 CONCRETE CURB AND GUTTER 30-INCH TYPE A LF	ITEM NO. 601.0411 CONCRETE CURB AND GUTTER 30-INCH TYPE D LF	ITEM NO. 601.0555 CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE A LF	ITEM NO. 601.0557 CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D LF
700+00	-	727+93	SB OFF	0	615	0	0
136+00	-	STRUCTURE	STH 144	16	1,574	73	1,837
STRUCTURE	-	187+50	STH 144		0	60	2,235
900+50	-	905+21	OVERLOOK	0	945	0	0
268+50	-	271+95	CTH NN	0	0	0	165
272+50	-	273+25	ARTHUR	0	0	0	165
TOTAL				16	3,134	133	4,402

DRAINAGE STRUCTURES

STRUCTURE NUMBER	STATION	LOCATION	STRUCTURE	TYPE	COVER TYPE, DIRECTION	RIM OR GRATE ELEVATION	LOWEST FLOWLINE ELEVATION	SUMP DEPTH	DEPTH	REMARKS
CB1	140+15	40' RT	CB	3-FOOT	H, LT	1144.65	1141.40	2.00	4.47	FLAT TOP SLAB FOR TYPE H INLET COVER
CB2	140+00	11' RT	CB	3-FOOT	HM, LT	1145.02	1141.25	2.00	4.99	FLAT TOP SLAB FOR TYPE H INLET COVER
CB3	140+00	9' LT	CB	3-FOOT	HM, RT	1145.26	1141.10	2.00	5.38	FLAT TOP SLAB FOR TYPE H INLET COVER
CB4	140+00	29' LT	CB	4-FOOT	H, RT	1145.26	1140.45	2.00	6.03	FLAT TOP SLAB FOR TYPE H INLET COVER
CB5	137+65	23.4' RT	CB	3-FOOT	H, LT	1141.11	1137.55	2.00	4.78	FLAT TOP SLAB FOR TYPE H INLET COVER
CB6	137+65	4.6' RT	CB	3-FOOT	HM, LT	1141.47	1137.45	2.00	5.24	FLAT TOP SLAB FOR TYPE H INLET COVER
CB7	137+65	3.2' LT	CB	3-FOOT	HM, RT	1141.47	1137.35	2.00	5.34	FLAT TOP SLAB FOR TYPE H INLET COVER
CB8	137+65	23.5' LT	CB	4-FOOT	H, RT	1141.11	1137.00	2.00	5.33	FLAT TOP SLAB FOR TYPE H INLET COVER
CB9	136+05	17.71' lt	CB	3-FOOT	H, RT	1136.99	1131.50	2.00	6.71	FLAT TOP SLAB FOR TYPE H INLET COVER
EW10	135+50	40' LT	EW	18"	---	---	1130.00 +/-	---	---	
CB11	901+67	16' RT	CB	3-FOOT	H, LT	1142.38	1139.15	2.00	4.45	FLAT TOP SLAB FOR TYPE H INLET COVER
CB12	901+58	16' RT	CB	3-FOOT	H, RT	1142.44	1138.98	2.00	4.68	FLAT TOP SLAB FOR TYPE H INLET COVER
CB13	901+84	17.2' LT	CB	3-FOOT	H, RT	1142.33	1138.97	2.00	4.58	FLAT TOP SLAB FOR TYPE H INLET COVER
CB14	901+58	23'LT	CB	4-FOOT	H, LT	1142.29	1138.50	2.00	5.01	FLAT TOP SLAB FOR TYPE H INLET COVER
CB15	901+37	45.5' LT	EW	15"	---	---	1138.30	---	---	
CB16	142+05	29' LT	CB	3-FOOT	H, RT	1148.94	1144.95	2.00	5.21	FLAT TOP SLAB FOR TYPE H INLET COVER
CB17	142+05	1' RT	CB	3-FOOT	HM, LT	1147.59	1143.50	2.00	5.31	FLAT TOP SLAB FOR TYPE H INLET COVER
CB18	142+05	9' RT	CB	3-FOOT	HM, LT	1147.17	1143.15	2.00	5.24	FLAT TOP SLAB FOR TYPE H INLET COVER
CB19	142+15	9' RT	CB	3-FOOT	HM, LT	1147.23	1142.90	2.00	5.55	FLAT TOP SLAB FOR TYPE H INLET COVER
CB20	142+30	41' RT	CB	3-FOOT	H, LT	1146.12	1142.10	2.00	5.24	FLAT TOP SLAB FOR TYPE H INLET COVER
EW21	142+65	65.6' RT	EW	15"	---	---	1138.25	---	---	
EW22	726+97	32.7' LT	EW	24"	---	---	1137.50	---	---	
CB23	726+90	9.4' LT	CB	4-FOOT	H, RT	1141.97	1136.34	2.00	6.85	FLAT TOP SLAB FOR TYPE H INLET COVER
CB24	724+00	6' LT	CB	4-FOOT	H, RT	1133.09	1128.15	2.00	6.16	FLAT TOP SLAB FOR TYPE H INLET COVER
CB25	721+80	6' LT	CB	4-FOOT	H, RT	1129.81	1125.80	2.00	5.23	FLAT TOP SLAB FOR TYPE H INLET COVER - NO ADJUSTING RINGS
EW26	721+58.2	27.4' LT	EW	24"	---	---	1125.60	---	---	
MH27	385+82.55	83.07' LT	MANHOLE	8-FOOT	MS	1124.40	1111.00	0.00	13.40	MODIFY FLAT TOP SLAB TO ACCOMMODATE TYPE MS COVER
MH28	385+80.72	85.94' RT	MANHOLE	8-FOOT	MS	1118.20	1110.00	0.00	8.20	MODIFY FLAT TOP SLAB TO ACCOMMODATE TYPE MS COVER
IN29	382+42.5	66.1' LT	INLET	MEDIAN 1 GRATE	MS	1129.80	1125.26	2.00	6.54	
MH30	376+79.70	71.81' LT	MH	5-FOOT	J	1133.51	1128.30	0.00	4.21	
MH31	903+95	68' RT	MANHOLE	5-FOOT	MS	1145.80	1137.50	0.00	8.30	PLACE ADJUSTING RINGS FROM 1145.8 TO EXISTING GRADE AT 1148.25 +/-
EW32	904+35	59' LT	EW	24"	---	---	1135.60	---	---	
IN33	815+00	24.5	INLET	MEDIAN 2 GRATE	2 MS	1091.71	1088.29	0.00	3.42	
IN34	170+00	50' LT	INLET	MEDIAN 1 GRATE	MS	1067.70	1065.70	0.00	2.00	
EW35	391+90	92' LT	EW	24"	---	---	1116.18	---	---	
MH36	392+62	76' LT	MANHOLE	4-FOOT	J	1120.60	1115.34	0.00	4.26	
MH37	394+90	72.3' LT	MANHOLE	4-FOOT	J	1117.28	1112.50	0.00	3.78	
EW38	395+18	114.8' LT	EW	24"	---	---	1111.62	---	---	
IN39	385+83.40	149.06' LT	INLET	MEDIAN 2 GRATE	2 MS	1125.40	1120.00	0.00	5.40	
EW40	376+79.66	87.03' LT	EW	36"	---	---	1130.97	---	---	
EW41	385+79.15	193.98' RT	EW	36"	---	---	1109.55	---	---	
EW42	717+90	21.5' LT	EW	15"	---	---	1125.26	---	---	
EW43	815+00	23.5' LT	EW	24"	---	---	1088.29	---	---	
EW44	169+21	80.4' LT	EW	14" X 23"	---	---	1066.00	---	---	
EW45	170+72	50' LT	EW	14" X 23"	---	---	1065.40	---	---	
CB46	144+25	RL	CB	4-FOOT	HM	1148.88	1143.96	2.00	6.14	FLAT TOP SLAB FOR TYPE H INLET COVER
EW47	144+25	66' RT	EW	24"	---	---	1140.96	---	---	
CB48	146+05	5.3' LT	CB	4-FOOT	HM	1148.56	1143.70	2.00	6.08	FLAT TOP SLAB FOR TYPE H INLET COVER
EW49	146+05	61' LT	EW	24"	---	---	1142.70	---	---	

DEPTH OF STRUCTURE INCLUDES A 2' SUMP BELOW LOWEST FLOWLINE WHEN A SUMP IS INDICATED.
STRUCTURE DEPTH SUBTRACTED FOR FRAME AND RINGS .

DEPTH FOR FRAME AND RINGS FOR:

MANHOLE COVER TYPE J = 1.00' (INCLUDES 0.25' FOR ADJUSTING RINGS.)
INLET COVER TYPE H AND TYPE HM = 0.78' (INCLUDES 0.25' FOR ADJUSTING RINGS.)
INLET COVER TYPE MS = 0.00

DRAINAGE STRUCTURE SUMMARY TABLE

ITEM NO.	DESCRIPTION	EACH
522.1015	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 15-INCH	3 *
522.1018	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH	1
522.1024	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH	6 *
522.1036	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 36-INCH	2 *
523.0514	APRON ENDWALLS FOR CULVERT PIPE RCHE 14X23-INCH	2
611.1003	CATCH BASINS 3-FT DIAMETER	17
611.1004	CATCH BASINS 4-FT DIAMETER	6
611.2004	MANHOLES 4-FOOT DIAMETER	2
611.2005	MANHOLES 5-FOOT DIAMETER	2
611.2008	MANHOLES 8-FOOT DIAMETER	2
611.3901	INLETS MEDIAN 1 GRATE	2
611.3902	INLETS MEDIAN 2 GRATE	2
611.0530	MANHOLE COVERS TYPE J	3
611.0624	INLET COVERS TYPE H	14
661.0627	INLET COVERS TYPE HM	7
611.0642	INLET COVERS TYPE MS	9
650.4000	CONSTRUCTION STAKING STORM SEWER SYSTEM	47

* ADDITIONAL QUANTITIES SHOWN IN CROSS CULVERT AND ENDWALL TABLE.

CONCRETE BARRIER TEMPORARY PRECAST DELIVERED AND INSTALLED AND CRASH CUSHIONS TEMPORARY

STATION	-	STATION	ROADWAY	ITEM NO. 603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	ITEM NO. 603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF	ITEM NO. 614.0905 CRASH CUSHIONS TEMPORARY EACH
390+15	-	396+15	USH 41, RT	600	600	2
391+90	-	397+90	USH 41 LT	600	600	2
147+20	-	151+80	STH 144	460	460	2
TOTAL				1,660	1,660	6

RIPRAP AND GEOTEXTILE FABRIC

LOCATION	ROADWAY	ITEM NO. 606.0200 RIPRAP MEDIUM CY	ITEM NO. 645.0120 GEOTEXTILE FABRIC TYPE HR SY
504+00	NB OFF RAMP RT	4	8
513+20	NB OFF RAMP RT	4	8
519+00	NB OFF RAMP RT	4	8
604+00	NB ON RAMP RT	4	8
609+00	NB ON RAMP RT	4	8
613+00 - 615+00	NB ON RAMP RT	145	300
620+00	NB ON RAMP RT	4	8
721+05	SB ON RAMP LT	10	24
721+40	SB ON RAMP LT	10	24
721+35	SB ON RAMP LT	4	8
805+50	SB OFF RAMP LT	55	120
815+00 - 818+00	SB OFF RAMP LT	240	500
904+25	DETENTION BASIN	4	8
135+50	STH 144, LT	5	10
142+25	STH 144, RT	4	8
143+00	SRH 144, RT	4	8
171+20	STH 144, LT	4	8
183+50	STH 144, LT	4	8
269+50	ARTHUR	8	16
BRIDGE ABUTMENTS AT RETAINING WALLS		250	500
UNDISTRIBUTED		49	110
TOTAL		820	1,700

CULVERT PIPE TEMPORARY

STATION	LOCATION	ROADWAY	ITEM NO. 520.4024 CULVERT PIPE TEMPORARY 24-INCH LF	ITEM NO. 520.4030 CULVERT PIPE TEMPORARY 30-INCH LF
171+16	RT	STH 144	---	12
183+59	RT	STH 144	12	---
TOTAL			12	12

CROSS CULVERTS AND ENDWALLS

PIPE / CULVERT NUMBER	DESCRIPTION	ITEM NO. 520.8000 CONCRTE COLLAR FOR PIPES EACH	ITEM NO. 522.0112	ITEM NO. 522.0115	ITEM NO. 522.0124	ITEM NO. 522.1030	ITEM NO. 522.0136	ITEM NO. 522.0142	ITEM NO. 522.0148	ITEM NO. 522.1012	ITEM NO. 522.1015	ITEM NO. 522.1024	ITEM NO. 522.1030	ITEM NO. 522.1036	ITEM NO. 522.1042	ITEM NO. 522.1048
			CULVERT PIPE REINFORCED CONCRETE CLASS III							APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE						
			12-INCH LF	15-INCH LF	24-INCH LF	30-INCH LF	36-INCH LF	42-INCH LF	48-INCH LF	12-INCH EACH	15-INCH EACH	24-INCH EACH	30-INCH EACH	36-INCH EACH	42-INCH EACH	48-INCH EACH
CV1	EXTENSION STA. 504+00	1	---	---	---	10	---	---	---	---	---	---	1	---	---	---
CV6	NEW CULVERT - STA. 519+00	0	---	---	102	---	---	---	---	---	---	2	---	---	---	---
CV7	NEW CULVERT - STA. 805+50	0	---	---	---	---	---	---	246	---	---	---	---	---	---	2
CV8	NEW CULVERT - STA. 604+00	0	---	---	---	---	148	---	---	---	---	---	---	2	---	---
CV9	NEW CULVERT - STA. 608+80	0	---	60	---	---	---	---	---	---	2	---	---	---	---	---
CV11	EXTENSION STA. 815+25	1	40	---	---	---	---	---	---	1	---	---	---	---	---	---
CV15	171+07	0	---	---	---	101	---	---	---	---	---	---	2	---	---	---
CV19	183+50	0	---	---	---	---	---	66	---	---	---	---	---	---	2	---
CV21	269+65	0	---	---	54	---	---	---	---	---	---	2	---	---	---	---
CV22	269+70	0	---	---	54	---	---	---	---	---	---	2	---	---	---	---
	TOTALS	**2**	**40**	**60**	**210**	**111**	**148**	**66**	**246**	**1**	**2 ***	**6 ***	**3**	**2 ***	**2**	**2**

DRIVEWAY CULVERTS AND ENDWALLS

PIPE / CULVERT NUMBER	DESCRIPTION	ITEM NO. 520.0118 CULVERT PIPE CLASS III 18-INCH LF	ITEM NO. 522.1018 APRON ENDWALLS FOR CULVERT PIPE 18-INCH EACH
CV12	159+30, RT	30	2
CV13	161+50, LT	45	2
CV16	174+10, LT	30	2
CV17	175+20, LT	30	2
CV18	177+60, RT	30	2
CV20	185+00, RT	74	2
CV23	269+20, RT	56	2
CV24	270+55, LT	26	2
	TOTALS	**321**	**16**

* ADDITIONAL QUANTITIES SHOWN IN STRUCTURE SUMMARY TABLE.

BEAM GUARD QUANTITIES

STATION FROM	STATION TO	LOCATION	ITEM NO. 614.0305 STEEL PLATE BEAM GUARD CLASS A LF	ITEM NO. 614.0380 STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL EACH	ITEM NO. 614.0220 STEEL THRIE BEAM BULLNOSE TERMINAL EACH	ITEM NO. 614.0230 STEEL THRIE BEAM LF	ITEM NO. 614.0396 GUARDRAIL MOW STRIP ASPHALT SY	ITEM NO. 614.2300 MGS GUARDRAIL 3 LF	ITEM NO. 614.2500 MGS THRIE BEAM TRANSITION LF	ITEM NO. 614.2610 MGS GUARDRAIL TERMINAL EAT EACH
393+23	395+60	USH 41 MEDIAN	---	---	2	275	---	---	---	---
STRUCTURE	152+50.42	STH 144, LT	---	---	---	---	30	---	39.40	1
147+45	STRUCTURE	STH 144, RT	---	---	---	---	30	---	39.40	1
148+07	STRUCTURE	STH 144, LT	---	---	---	---	30	---	39.40	1
179+57	187+03	STH 144, LT	---	---	---	---	220	650	---	2
904+00	905+25	OVERLOOK	62.5	1	---	---	40	---	---	---
TOTALS			62.5	1	2	275	350	650	118.2	5

CONCRETE MEDIAN SLOPE NOSE, ITEM NO. 620.0300

STATION	LOCATION	SF
137+55	CL	20
140+95	CL	25
142+00	RT	20
146+25	CL	25
147+25	RT	25
153+25	LT	25
154+10	CL	25
158+50	CL	20
TOTALS		185

MARKERS ROW, ITEM NO. 633.5100

RW POINT NO.	STATION	OFFSET	LOCATION	EACH
1006	390+37.91	273.82' LT	USH 41	1
1014	389+24.47	240.63' LT	USH 41	1
1011	388+3307	200.35' LT	USH 41	1
1012	386+86.39	170.66' LT	USH 41	1
422	386+01.13	160.05' LT	USH 41	1
1000	396+20.22	516.47' LT	USH 41	1
1003	397+89.16	485.82' LT	USH 41	1
1001	398+34.79	435.51' LT	USH 41	1
1002	398+69.33	326.57' LT	USH 41	1
1009	394+04.24	515.38' RT	USH 41	1
1008	389+50.53	344.13' RT	USH 41	1
TOTALS				11

DUST CONTROL SURFACE TREATMENT, ITEM NO. 623.020 AND WATER, ITEM NO. 624.0100

CONSTRUCTION STAGE	ITEM NO. 623.0200 DUST CONTROL SURFACE TREATMENT SY	ITEM NO. 624.0100 WATER MGAL
1A	1500	10
1B	59400	330
2A	39400	220
2B	0	0
C	22700	130
UNDISTRIEUTED	18450	100
TOTAL	141450	790

FENCE WOVEN WIRE (54-INCH), GATES CHAIN LINK (15-FT) AND CONSTRUCTION STAKING FENCE

LOCATION FROM	LOCATION TO	DESCRIPTION	ITEM NO. 616.0010 FENCE WOVEN WIRE 54-INCH LF	ITEM NO. 616.0329 GATES CHAIN LINK (15-FT) EACH	ITEM NO. SPV.0090.04 CONSTRUCTION STAKING FENCE LF
365+00, USH 41 LT	144+39, STH 144 LT	SB OFF RAMP	3,530	---	3,530
141+00, STH 144 LT	421+12, USH 41 LT	SB ON RAMP	2,685	1	2,685
365+00, USH 41 RT	158+94, STH 144 RT	NB OFF RAMP	3,330	---	3,330
158+77, STH 144 LT	420+05, USH 41 RT	NB ON RAMP	2,105	---	2,105
TOTALS			11,650	1	11,650

TRACKING PADS, ITEM NO. 628.7560

LOCATION	DESCRIPTION	EACH
UNDISTRIBUTED	BORROW PIT	2
UNDISTRIBUTED	PROJECT SITE	4
TOTALS		6

LANDMARK REFERENCE MONUMENTS, ITEM NO. 621.0100

STATION	OFFSET	LOCATION	DESCRIPTION	EACH
SECTION CORNERS & WITNESS MONUMENTS				
388+16.01	50.41' RT	USH 41		5
172+41.11	RL	STH 144		5
TOTALS				10

EROSION CONTROL ITEMS

LOCATION	ROADWAY	ITEM NO. 625.0100 TOPSOIL SY	ITEM NO. 631.1000 LAWN SOD SY	ITEM NO. 625.0500 SALVAGED TOPSOIL SY	ITEM NO. 627.0200 MULCHING SY	ITEM NO. 628.1504 SILT FENCE LF	ITEM NO. 628.1420 SILT FENCE MAINTENANCE LF	ITEM NO. 628.2002 EROSION MAT URBAN CLASS 1 TYPE A SY	ITEM NO. 628.2004 EROSION MAT CLASS 1 TYPE B SY	ITEM NO. 628.2023 EROSION MAT CLASS II TYPE B SY	ITEM NO. 628.7005 INLET PROTECTION TYPE A EACH	ITEM NO. 628.7015 INLET PROTECTION TYPE C EACH	ITEM NO. 629.0210 FERTILIZER TYPE B CWT	ITEM NO. 630.0120 SEEDING MIXTURE NO. 20 LB	ITEM NO. 630.0200 SEEDING TEMPORARY LB	ITEM NO. 630.0300 SEEDING BORROW PITS LB	ITEM NO. 628.7555 CULVERT PIPE CHECKS EACH
500+00 - 523+95, RT	NB OFF	0	0	11,600	0	2,000	2,000	0	11,600	0	0	0	7.3	313	156	0	0
511+00 - 523+95, LT	NB OFF AND INFIELD	0	0	22,000	0	0	0	0	22,000	0	0	0	13.9	595	297	0	5
600+35 - 626+65, RT	NB ON	0	0	12,700	0	1,700	1,700	0	12,700	0	0	0	8.0	342	171	0	0
600+35 - 610+50, LT	NB ON AND INFIELD	0	0	13,000	0	0	0	0	13,000	0	0	0	8.2	352	176	0	8
700+00 - 727+93, LT	SB ON	0	0	18,700	0	0	0	0	18,700	0	4	4	11.8	505	252	0	14
716+75 - 727+93, RT	SB ON AND INFIELD	0	0	10,500	0	0	0	0	10,500	0	2	2	6.6	283	141	0	0
800+35 - 828+25, LT	SB OFF	0	0	30,000	0	900	900	0	30,000	0	0	0	18.9	810	405	0	14
800+35 - 816+50, RT	SB OFF AND INFIELD	0	0	17,600	0	0	0	0	17,600	100	0	0	11.1	476	238	0	0
136+00 - 146+50, LT	STH 144	0	0	7,400	0	0	0	0	7,400	0	6	6	4.6	199	99	0	0
136+00 - 141+00, MEDIAN	STH 144	410	0	0	0	0	0	410	0	0	0	0	0.3	11	6	0	0
136+00 - 141+00, RT	STH 144	0	0	1,000	0	0	0	0	1,000	0	4	4	0.6	28	14	0	0
142+00 - 145+50, RT	STH 144	3,350	3,350	0	0	0	0	0	0	0	3	3	2.1	90	45	0	3
144+65 - 146+15 MEDIAN	STH 144	205	0	0	0	0	0	205	0	0	0	0	0.1	5	3	0	0
154+00 - 172+00, RT	STH 144	0	0	6,100	6,100	400	400	0	0	0	0	0	3.9	165	83	0	3
154+25 O 156+60 MEDIAN	STH 144	305	0	0	0	0	0	305	0	0	0	0	0.2	8	4	0	0
154+50 - 172+00, LT	STH 144	0	0	5,700	5,700	1,700	1,700	0	0	0	0	0	3.6	152	76	0	14
172+75 - 187+50, RT	STH 144	0	0	5,500	5,500	0	0	0	0	0	0	0	3.5	148	74	0	14
172+75 - 187+50, LT	STH 144	500	500	4,750	4,750	1,200	1,200	0	0	0	0	0	3.3	142	71	0	0
900+50 - 905+21, RT	OVERLOOK	800	800	0	0	0	0	0	0	0	3	3	0.5	22	11	0	0
900+50 - 905+21, LT	OVERLOOK	650	650	0	0	0	0	0	0	0	2	2	0.4	17	9	0	0
268+00 - 271+75, RT	ARTHUR / CTH NN	925	925	0	0	100	100	0	0	0	0	0	0.6	25	12	0	8
268+00 - 271+75, LT	ARTHUR / CTH NN	905	905	0	0	0	0	0	0	0	0	0	0.6	24	12	0	2
159+00 - 187+00, RT	TEMP WIDENING	0	0	0	3,000	0	0	0	0	0	0	0	0.0	0	100	0	0
UNDISTRIBUTED	BORROW PITS	0	0	40,000	40,000	0	0	0	0	0	0	0	30.0	1,400	700	1,000	0
UNDISTRIBUTED		170	170	18,450	450	500	500	0	500	250	0	0	10.6	313	157	0	15
TOTAL		8,220	7,300	225,000	65,500	8,500	8,500	920	145,000	350	24	24	150.5	6,425	3,312	1,000	100

TEMPORARY DITCH CHECKS, ITEM NO. 628.7504

LOCATION	DESCRIPTION	LF
137+00	STH 144 LT AND RT	30
139+00	STH 144 LT	15
141+00	STH 144 LT	15
143+00 - 145+00	STH 144 RT	45
146+00 - 147+50	STH 144 LT	30
155+00 - 163+00	STH 144 RT	75
161+00 - 171+00	STH 144 RT	90
171+00	STH 144 RT	15
174+00 - 175+00	STH 144 LT	30
176+00 - 185+50	STH 144 RT	150
383+00 - 385+00	USH 41 RT	30
387+00 - 405+00	USH 41 LT	90
400+00 - 404+00	USH 41 LT	45
401+00 - 404+00	USH 41 RT	30
500+00 - 523+00	NB OFF RAMP RT	45
515+00 - 523+00	NB OFF RAMP LT	60
613+00 - 626+00	NB ON RAMP RT	75
700+00 - 720+00	SB ON RAMP LT	135
813+00 - 815+00	SB OFF RAMP LT	75
270+00 - 271+00	ARTHUR RD LT AND RT	30
UNDISTRIBUTED		290
TOTALS		1400

3

DELINEATORS FLEXIBLE, DELINEATORS BRACKETS AND DELINEATORS POSTS

LOCATION FROM - TO	DESCRIPTION	ITEM NO. 633.0200 DELINEATORS FLEXIBLE EACH	ITEM NO. 633.0500 DELINEATOR REFLECTORS EACH	ITEM NO. 633.1000 DELINEATOR BRACKETS EACH	REFLECTOR COLOR
500+00 - 523+95, RT	NB OFF RAMP	24	37	37	WHITE
511+00 - 523+95, LT	NB OFF RAMP	15	15	15	YELLOW
601+00 - 626+65, RT	NB ON RAMP	27	43	43	WHITE
601+00 - 610+00, LT	NB ON RAMP	9	9	9	YELLOW
701+00 - 727+00, LT	SB ON RAMP	26	43	43	WHITE
718+00 - 727+00, RT	SB ON RAMP	9	9	9	YELLOW
801+00 - 816+00, RT	SB OFF RAMP	16	16	16	YELLOW
801+00 - 828+00, LT	SB OFF RAMP	27	39	39	WHITE
TOTALS		**153**	**211**	**211**	

TRAFFIC CONTROL ITEMS

STAGE	DAYS IN SERVICE	ITEM NO. 643.0200 TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE NO.	ITEM NO. 643.0300 TRAFFIC CONTROL DRUMS NO.	ITEM NO. 643.0300 TRAFFIC CONTROL DRUMS DAYS	ITEM NO. 643.0420 TRAFFIC CONTROL BARRICADES TYPE III NO.	ITEM NO. 643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAYS	ITEM NO. 643.0420 TRAFFIC CONTROL SIGNS NO.	ITEM NO. 643.0420 TRAFFIC CONTROL SIGNS DAYS	ITEM NO. 643.0500 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS NO.	ITEM NO. 643.0600 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES NO.	ITEM NO. 643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A NO.	ITEM NO. 643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAYS	ITEM NO. 643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C NO.	ITEM NO. 643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAYS	ITEM NO. 643.0800 TRAFFIC CONTROL ARROW BOARDS NO.	ITEM NO. 643.0800 TRAFFIC CONTROL ARROW BOARDS DAYS
1	20	20	140	2,800	3	60	55	1,100	60	60	6	120	12	240	---	---
2	105	105	287	30,135	25	2,625	85	8,925	30	30	50	5,250	30	3,150	2	210
3	100	100	257	25,700	25	2,500	75	7,500	110	110	50	5,000	30	3,000	2	200
UNDISTRIBUTED				365		115		175	20	20		130		60	---	40
PROJECT TOTALS		**225**		**59,000** *		**5,300**		**17,700**	**220**	**220**		**10,500**		**6,450** *		**450**

*ADDITIONAL QUANTITIES SHOWN IN TRAFFIC CONTROL DETOUR TABLE BELOW.

TRAFFIC CONTROL DETOUR ITEMS

STAGE	DAYS IN SERVICE	ITEM NO. 643.3000 TRAFFIC CONTROL DETOUR SIGNS NO.	ITEM NO. 643.3000 TRAFFIC CONTROL DETOUR SIGNS DAYS	ITEM NO. 643.0300 TRAFFIC CONTROL DRUMS NO.	ITEM NO. 643.0300 TRAFFIC CONTROL DRUMS DAYS	ITEM NO. 643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C NO.	ITEM NO. 643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAYS	ITEM NO. 643.1050 TRAFFIC CONTROL SIGNS PCMS NO.	ITEM NO. 643.1050 TRAFFIC CONTROL SIGNS PCMS DAYS
2	105	80	8,400	10	1,050	5	525	2	20
3	100	80	8,000	10	1,000	5	500	2	20
UNDISTRIBUTED			100		50		25	---	10
PROJECT TOTALS			**16,500**		* **2,100**		* **1,050**		**50**

*ADDITIONAL QUANTITIES SHOWN IN TRAFFIC CONTROL TABLE ABOVE.

TRAFFIC CONTROL SIGNS FIXED MESSAGE, ITEM NO. 643.1000

STAGE	MESSAGE	SIZE	ITEM NO. 643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF
1	RAMP CLOSED BEGINNING "DATE" (4 SIGNS)	9.5' X 4'	152
2	NO NORTHBOUND RE-ENTRY TO FREEWAY	14' X 5'	70
2&3	41 NORTH RAMP TO 144 CLOSED USE DETOUR	15' X 9'	135
2&3	41 SOUTH RAMP TO 144 CLOSED USE DETOUR	15' X 9'	135
2&3	RAMPS TO 41 CLOSED AHEAD USE DETOUR	12' X 5.5'	66
3	NO SOUTHBOUND RE-ENTRY TO FREEWAY	14' X 5'	70
PROJECT TOTALS			**628**

PAVEMENT MARKING EPOXY 4-INCH, ITEM NO. 646.0106

LOCATION FROM	LOCATION TO	DESCRIPTION	WHITE LF	YELLOW LF
136+00	137+50	NB EDGELINE	150	---
136+00	143+50	SB EDGELINE	750	---
136+00	137+50	2 DOUBLE YELLOW CENTERLINES	---	600
137+50	141+00	MEDIAN EDGELINES	---	700
139+30	141+00	THRU EDGELINE AT TURN LANE	170	---
142+00	146+20	NB MEDIAN EDGELINE	---	420
143+50	146+20	SB EDGELINE	270	---
142+20	145+25	NB EDGELINE	305	---
142+00	143+75	NB SKIPS AT THRU LANE EDGELINE	---	36
143+75	146+25	THRU EDGELINE AT TURN LANE	250	---
145+25	145+75	SB MEDIAN EDGELINE	---	50
146+50	153+90	NB EDGELINE	740	---
146+90	153+90	SB EDGELINE	740	---
147+30	149+50	NB MEDIAN EDGELINE	---	220
150+50	153+20	SB MEDIAN EDGELINE	---	280
154+50	158+50	MEDIAN EDGELINES	---	800
154+00	156+90	THRU EDGELINE AT TURN LANE	290	---
154+00	171+75	SB EDGELINE	1,775	---
154+00	171+50	NB EDGELINE	1,750	---
158+50	161+00	2 DOUBLE YELLOW CENTERLINES	---	1,000
161+00	171+70	DOUBLE YELLOW CENTERLINE	---	2,140
170+05	171+70	THRU EDGELINE AT TURN LANE	165	---
172+95	174+50	THRU EDGELINE AT TURN LANE	155	---
172+90	187+50	NB EDGELINE	1,460	---
172+95	187+50	DOUBLE YELLOW CENTERLINE	---	2,910
175+50	187+50	SB EDGELINE	1,200	---
500+00	523+90	NB OFF RIGHT EDGELINE	2,390	---
511+30	523+90	NB OFF LEFT EDGELINE	---	1,260
600+50	626+50	NB ON RIGHT EDGELINE	2,600	---
600+50	610+05	NB ON LEFT EDGELINE	---	945
700+00	727+00	SB ON RIGHT EDGELINE	2,700	---
717+00	728+00	SB ON LEFT EDGELINE	---	1,100
800+50	828+25	SB OFF RIGHT EDGELINE	2,775	---
800+50	816+50	SB OFF LEFT EDGELINE	---	1,600
384+20	407+00	NB USH 41 RIGHT EDGELINE	2,280	---
381+50	407+75	USH 41 SB RIGHT EDGELINE	2,625	---
268+00	271+95	CTH NN DOUBLE YELLOW CENTERLINE	---	790
268+00	271+60	CTH NN RIGHT EDGELINE	360	---
268+00	271+40	CTH NN LEFT EDGELINE	340	---
272+50	273+25	ARTHUR RD DOUBLE YELLOW CENTERLINE	---	150
273+00	273+25	ARTHUR RD LEFT EDGELINE	25	---
273+10	273+25	ARTHUR RD RIGHT EDGELINE	15	---
900+60	905+25	OVERLOOK DR DOUBLE YELLOW CENTERLINE	---	930
STH 60	136+00	KETTLE MORAINE DR - DETOUR ROUTE	---	17,500
SUBTOTALS			26,280	33,431
TOTALS			59,711	

REMOVING PAVEMENT MARKINGS, ITEM NO. 646.0600

LOCATION FROM	LOCATION TO	DESCRIPTION	LF
136+00	140+64	STAGE 1 - STH 144	650
160+18	187+00	STAGE 1 - STH 144	2600
UNDISTRIBUTED		STAGE 1	1000
143+40	148+00	STAGE 2 - STH 144 RT	510
152+00	155+00	STAGE 2 - STH 144 RT	330
136+00	187+50	STAGE 2 - STH 144	11325
136+00	147+40	STAGE 2 - STH 144 LT	1160
136+00	146+10	STAGE 2 - STH 144 RT	1175
147+30	153+10	STAGE 2 - STH 144 LT	640
146+48	153+14	STAGE 2 - STH 144 RT	895
153+00	172+10	STAGE 2 - STH 144 RT	2240
154+86	185+60	STAGE 2 - STH 144 LT	3380
172+30	188+30	STAGE 2 - STH 144 RT	1845
CTH NN			260
ARTHUR RD			40
NB OFF RAMP			260
TOTALS			**28310**

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TEMPORARY PAVEMENT MARKINGS

LOCATION FROM	LOCATION TO	DESCRIPTION	ITEM NO. 649.0200 TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH LF	ITEM NO. 649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH LF
136+00	141+00	STAGE 1 - CENTERLINE	1,025	---
160+00	187+00	STAGE 1 CENTERLINE	5,400	---
UNDISTRIBUTED		STAGE 1	1,200	200
135+00	141+00	STAGE 2 - CENTERLINE	1,000	200
134+50	145+00	STAGE 2 - LEFT EDGELINE	1,000	150
154+00	187+00	STAGE 2 - CENTERLINE	6,600	---
187+00	188+90	STAGE 2 END TAPERS	---	380
CTH NN / ARTHUR RD		INTERSECTION	---	---
UNDISTRIBUTED		STAGE 2	1,500	100
135+00	141+00	STAGE 3 - CENTERLINE	1,000	200
134+50	137+00	STAGE 3 - RIGHT EDGELINE	---	250
142+00	153+50	STAGE 3 - CENTERLINE	---	2,300
154+50	187+00	STAGE 3 - CENTERLINE	---	4,500
187+00	188+90	STAGE 2 END TAPERS	---	380
CTH NN / ARTHUR RD		INTERSECTION	---	---
UNDISTRIBUTED		STAGE 3	125	890
TOTALS			**18,850**	**9,550**

PAVEMENT MARKING EPOXY 8-INCH, PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH AND 8-INCH, AND PAVEMENT MARKING GROOVED WET FEFLECTIVE TAPE AND 8-INCH

LOCATION FROM	LOCATION TO	DESCRIPTION	ITEM NO. 646.0126 PAVEMENT MARKING EPOXY 8-INCH LF	ITEM NO. 646.0841.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH LF	ITEM NO. 646.0843.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH LF	ITEM NO. 646.0883.S PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH LF
900+55	901+55	OVERLOOK	100	---	---	---
137+50	139+30	NB SKIPS	---	---	---	36
139+30	141+00	NB STH 144 @ OVERLOOK	---	---	---	170
142+00	144+00	SB STH 144 @ OVERLOOK	---	---	---	200
142+00	143+75	NB SKIPS	---	---	---	36
143+75	146+25	NB STH 144 @ SB USH 41 ON RAMP	---	---	---	250
144+00	145+25	SB SKIPS	---	---	---	27
146+90	149+50	SB STH 144 @ SB USH 41 ON RAMP	---	---	---	260
150+60	153+20	NB STH 144 @ NB USH 41 ON RAMP	---	---	---	260
154+00	156+90	SB STH 144 @ NB USH 41 ON RAMP	---	---	---	290
156+90	161+00	SB SKIPS	---	---	---	102
168+50	171+05	NB SKIPS	---	---	---	63
170+05	171+70	NB STH 144 @ CTH NN	---	---	---	165
172+95	174+50	SB STH 144 @ CTH NN	---	---	---	155
174+50	176+40	SB SKIPS	---	---	---	48
500+00	508+50	NB OFF RAMP ENTRANCE	---	---	171	---
508+50	511+30	NB USH 41 OFF @ GORE	---	282	---	---
508+50	384+20	USH 41 @ NB OFF GORE	---	---	300	---
610+05	613+80	NB USH 41 ON @ GORE	---	---	375	---
613+80	618+50	NB USH 41 CN SKIPS	---	126	---	---
407+00	409+50	USH 41 @ NB ON GORE	---	---	250	---
707+00	712+90	USH 41 SB CN SKIPS	---	123	---	---
712+90	716+90	SB ON @ GORE	---	---	400	---
379+50	381+50	USH 41 SB @ SB ON GORE	---	---	200	---
816+50	818+75	SB OFF @ GORE	---	---	225	---
818+75	828+25	SB OFF RAMP ENTRANCE	---	192	---	---
407+80	410+10	USH 41 SB @ SB OFF GORE	---	---	230	---
TOTALS			**100**	**723**	**2,151**	**2,062**

PAVEMENT MARKING WORDS GROOVED PREFORMED THRMOPLASTIC , ARROWS TYPE 2, ARROWS TYPE 4 AND WRODS

LOCATION FROM - TO	DESCRIPTION	ITEM NO. SPV.0060.01 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2 EACH	ITEM NO. SPV.0060.02 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 4 EACH	ITEM NO. SPV.0060.03 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS EACH	ITEM NO. SPV.0060.04 RAISED PAVEMENT MARKERS EACH
139+30 - 141+00	NB STH 144 @ OVERLOOK	2	---	1	---
142+00 - 144+00	SB STH 144 @ OVERLOOK	2	---	1	---
142+20 - 145+25	NB STH 144 @ SB ON RAMP	2	---	2	---
146+90 - 149+50	SB STH 144 @ SB ON RAMP	2	---	1	---
150+60 - 153+20	NB STH 144 @ NB ON RAMP	2	---	1	---
154+00 - 156+90	SB STH 144 @ NB ON RAMP	2	---	1	---
170+05 - 171+70	NB STH 144 @ CTH NN	2	---	1	---
172+95 - 154+50	SB STH 144 @ CTH NN	2	---	1	---
521+00	NB OFF RAMP	---	1	---	14
804+50	SB OFF RAMP	---	1	---	14
901+75	OVERLOOK DR	2	---	---	---
TOTALS		**18**	**2**	**9**	**28**

PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 18-INCH, ITEM NO. SPV.0090.02

LOCATION	DESCRIPTION	LF
271+95	CTH NN	28
272+50	ARTHUR RD	28
523+80	NB OFF RAMP	40
800+40	SB OFF RAMP	37
900+60	OVERLOOK DR	42
TOTALS		**175**

PAVEMENT MARKING ISLAND NOSE AND CURB EPOXY

LOCATION	DESCRIPTION	ITEM NO. 647.0455 PAVEMENT MARKING EPOXY CURB LF	ITEM NO.647.0606 PAVEMENT MARKING EPOXY ISLAND NOSE EACH
137+50	MEDIAN	10	1
140+90	MEDIAN	60	1
142+00	MEDIAN	10	1
146+25	MEDIAN	70	1
147+25	MEDIAN	10	1
153+25	MEDIAN	10	1
154+25	MEDIAN	70	1
158+50	MEDIAN	10	1
TOTALS		**250**	**8**

PAVEMENT MARKING DIAGONAL

LOCATION FROM	LOCATION TO	DESCRIPTION	ITEM NO. 647.0726 PAVEMENT MARKING DIAGONAL EPOXY 12-INCH LF	ITEM NO. 647.0746 PAVEMENT MARKING DIAGONAL EPOXY 24-INCH LF
136+00	137+50	STH 144 MEDIAN	75	---
158+50	161+00	STH 144 MEDIAN	75	---
508+50	511+30	NB OFF RAMP GORE	---	150
816+50	818+70	SB OFF RAMP GORE	---	125
TOTALS			**150**	**275**

FTMS - RAMP CLOSURE GATES SOLAR POWERED

STATION	GATE NO.	LOCAITON	ITEM NO. 652.0225 CONDUIT RIGID NON-METTLIC SCHEDULE 40 2-INCH LF	ITEM NO. 653.0135 PULL BOX STEEL 24X36-INCH EACH	ITEM NO. 654.0105 CONCRETE BASES TYPE 5 EACH	ITEM NO. 654.0220 CONCRETE CONTROL CABINET BASES TYPE 10 EACH	ITEM NO. 655.0615 ELECTRICAL WIRE LIGHTING 10 AWG LF	ITEM NO. 657.0100 PEDESTAL BASES EACH	ITEM NO. 657.0255 TRANSFORMER BASE BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	ITEM NO. 657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	ITEM NO. 662.2030.S RAMP CLOSURE GATES SOLAR POWERED 30-FT EACH	ITEM NO. 662.2037.S RAMP CLOSURE GATES SOLAR POWERED 37-FT EACH	ITEM NO. 662.3030.S RAMP CLOSURE GATE ARMS STOCKPILE 30-FT EACH	ITEM NO. 662.3037.S RAMP CLOSURE GATE ARMS STOCKPILE 37-FT EACH	ITEM NO. 662.4000.S RAMP CLOSURE GATE FLASHERS STOCKPILE EACH
601+05, LT	G66-02	NB ON RAMP	80	1	1	1	200	1	1	1	1	---	1	---	2
727+06, LT	G66-01	SB ON RAMP	80	1	1	1	200	1	1	1	---	1	---	1	2
TOTAL			160	2	2	2	400	2	2	2	1	1	1	1	4

CONSTRUCTION STAKING

STATION	-	STATION	ROADWAY	ITEM NO. 650.4500 SUBGRADE LF	ITEM NO. 650.5000 BASE LF	ITEM NO. 650.5500 CURB GUTTER AND CURB AND GUTTER LF	ITEM NO. 650.6000 PIPE CULVERTS EACH	ITEM NO. 650.9920 SLOPE STAKES LF
500+00	-	523+95	NB OFF	2395	2395	0	3	2395
600+28	-	626+65	NB ON	2637	2637	0	2	2637
700+00	-	727+93	SB OFF	2793	2793	615	3	2793
800+35	-	828+26	SB ON	2791	2791	0	3	2791
136+00	-	STRUCTURE	STH 144	1295	1295	4500	1	1295
STRUCTURE	-	187+50	STH 144	3648	3648	2295	9	3648
900+50	-	905+21	OVERLOOK	471	471	945	0	471
268+50	-	271+95	CTH NN	345	345	165	4	345
272+50	-	273+25	ARTHUR	75	75	165	0	75
TOTAL				16450	16450	8685	25	16450

SAWING ASPHALT AND CONCRETE

STATION	-	STATION	ROADWAY	ITEM NO. 690.0150 SAWING ASPHALT LF	ITEM NO. 690.0250 SAWING CONCRETE LF
136+00	-		STH 144	32	0
177+60	-		STH 144	16	0
187+50	-		STH 144	30	0
364+75	-	402+20	USH 41 LT	3,745	0
372+90	-	388+45	USH 41 RT	1,555	0
402+50	-	423+45	USH 41 RT	2,095	0
408+50	-	419+90	USH 41 LT	1,140	0
268+00	-		ARTHUR	24	0
275+25	-		CTH NN	30	0
905+21	-		OVERLOOK	28	6
TOTAL				8,695	6

TYPE I & II SIGN REMOVAL **CATEGORY CODE 0010** **USH 41 1107-02-79**

SIGN NO.	SIGN CODE	SIGN MESSAGE	638.2602 REM SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]	REMARKS / NEW SIGN LOCATION
1R	R2-1	--	1	1	--	--	--
2R	E1-1A	[144] SLINGER - WEST BEND - 1 MILE	--	--	1	--	REUSE STEEL POSTS
3R	E4-1A	[144] SLINGER - WEST BEND	--	--	1	2	--
4R	W13-2	--	1	1	--	--	--
5R	J4-1	EXISTING ASSEMBLY	1	1	--	--	--
6R	R4-3	--	1	1	--	--	--
7R	W5-52R	--	1	1	--	--	--
8R	W4-1R	--	1	1	--	--	--
9R	R5-1A	--	1	1	--	--	--
10R	W3-1	--	1	--	--	--	--
11R	E5-1A	EXIT 66	1	2	--	--	--
12R	D1-2	--	1	2	--	--	--
13R	R5-1A	--	1	--	--	--	--
14R	NOT USED	--	--	--	--	--	--
15R	R5-1A	EXIT 66	1	2	--	--	--
16R	W3-1	--	1	1	--	--	--
17R	W4-1R	--	1	1	--	--	--
18R	W5-52R	--	1	1	--	--	--
19R	W1-6	--	1	1	--	--	--
20R	R2-1	--	1	1	--	--	--
21R	J4-1	EXISTING ASSEMBLY	1	1	--	--	--
22R	W13-2	--	1	1	--	--	--
23R	E4-1A	[144] SLINGER - WEST BEND	--	--	1	2	--
24R	E1-1A	[144] SLINGER - 3/4 MILE	--	--	1	2	--
25R	R7-1D	--	1	1	--	--	--
26R	D1-3	--	1	2	--	--	--
27R	--	REDUCED SPEED AHEAD	1	1	--	--	--
28R	--	30 MPH	1	--	--	--	--
29R	R7-1D	--	1	--	--	--	--
30R	NOT USED	--	--	--	--	--	--

TYPE I & II SIGN REMOVAL **CATEGORY CODE 0010** **USH 41 1107-02-79**

SIGN NO.	SIGN CODE	SIGN MESSAGE	638.2602 REM SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]	REMARKS / NEW SIGN LOCATION
31R	M1-97	--	1	1	--	--	--
32R	I2-3	--	1	2	--	--	--
33R	R7-1L	--	1	1	--	--	--
34R	R5-1	--	1	1	--	--	--
35R	R1-2	--	1	--	--	--	--
36R	R1-1	--	1	1	--	--	--
37R	R4-7	--	1	1	--	--	--
38R	R5-1	--	1	1	--	--	--
39R	R5-1	--	1	1	--	--	--
40R	J3-1	EXISTING ASSEMBLY	1	--	--	--	--
41R	J3-2	EXISTING ASSEMBLY	1	--	--	--	--
42R	R5-1A	--	1	--	--	--	--
43R	D1-2	--	1	2	--	--	--
44R	NOT USED	--	--	--	--	--	--
45R	W1-6	--	1	1	--	--	--
46R	W1-6	--	1	1	--	--	--
47R	W13-3	--	1	1	--	--	--
48R	R1-2	--	1	1	--	--	--
49R	J3-1	EXISTING ASSEMBLY	1	1	--	--	--
50R	R2-1	--	1	1	--	--	--
51R	J3-1	EXISTING ASSEMBLY	1	1	--	--	--
52R	J3-1	EXISTING ASSEMBLY	1	1	--	--	--
53R	W14-1B	--	1	1	--	--	--
54R	R1-1	--	1	1	--	--	--
55R	R7-1D	--	1	1	--	--	--
56R	J3-1	EXISTING ASSEMBLY	1	1	--	--	--
57R	R7-1D	--	1	1	--	--	--
58R	D1-1	--	1	2	--	--	--
59R	W5-52L	--	1	1	--	--	--
60R	J2-1	EXISTING ASSEMBLY	1	1	--	--	--

TYPE I & II SIGN REMOVAL **CATEGORY CODE 0010** **USH 41 1107-02-79**

SIGN NO.	SIGN CODE	SIGN MESSAGE	638.2602 REM SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]	REMARKS / NEW SIGN LOCATION
61R	W5-52R	--	1	1	--	--	--
62R	W5-52R	--	1	1	--	--	--
63R	J2-1	EXISTING ASSEMBLY	1	1	--	--	--
64R	W5-52L	--	1	1	--	--	--
65R	D1-1	--	1	2	--	--	--
66R	R5-1	--	1	1	--	--	--
67R	R5-1	--	1	1	--	--	--
68R	W5-52L	--	1	--	--	--	--
69R	W4-1R	--	1	1	--	--	--
70R	R1-1	--	1	1	--	--	--
71R	J3-1	EXISTING ASSEMBLY	1	1	--	--	--
72R	--	CHECK TURN SIGNAL	1	1	--	--	--
73R	R5-1	--	1	1	--	--	--
74R	J3-1	EXISTING ASSEMBLY	1	1	--	--	--
75R	J3-1	EXISTING ASSEMBLY	1	1	--	--	--
76R	R1-2	--	1	1	--	--	--
77R	R5-1A	--	1	--	--	--	--
78R	J4-1	EXISTING ASSEMBLY	1	--	--	--	--
79R	D2-2	--	1	2	--	--	--
80R	D1-3	--	1	2	--	--	--
81R	R2-1	--	1	1	--	--	--
82R	J1-1	EXISTING ASSEMBLY	1	1	--	--	--
83R	J2-2	EXISTING ASSEMBLY	1	2	--	--	--
84R	R2-1	--	1	1	--	--	--
85R	J3-1	EXISTING ASSEMBLY	1	1	--	--	--
86R	R1-1	--	1	1	--	--	--
87R	J4-1	EXISTING ASSEMBLY	1	1	--	--	--
88R	R1-1	--	1	1	--	--	--
89R	J3-1	EXISTING ASSEMBLY	1	1	--	--	--
90R	R1-1	--	1	1	--	--	--

TYPE I & II SIGN REMOVAL **CATEGORY CODE 0010** **USH 41 1107-02-79**

SIGN NO.	SIGN CODE	SIGN MESSAGE	638.2602 REM SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]	REMARKS / NEW SIGN LOCATION
91R	W14-1	--	1	1	--	--	--
92R	J3-1	EXISTING ASSEMBLY	1	1	--	--	--
93R	J1-1	EXISTING ASSEMBLY	1	1	--	--	--
94R	R2-1	--	1	1	--	--	--
95R	R2-1	--	1	1	--	--	--
96R	W14-3	--	1	--	--	--	--
97R	W2-2R	--	1	1	--	--	--
98R	E1-1A	[K] EAST - WEST - 3/4 MILE	--	--	1	--	REUSE STEEL POSTS - SHEET 5 OF 15
99R	J1-2	EXISTING ASSEMBLY	1	1	--	--	SHEET 6 OF 15
100R	R2-1	--	1	1	--	--	SHEET 6 OF 15
101R	R2-1	--	1	1	--	--	SHEET 6 OF 15
102R	S3-1	--	1	1	--	--	SHEET 6 OF 15
103R	--	TREE CITY USA	1	--	--	--	REMOVE AND RETURN TO VILLAGE - SHT 7
TOTALS			95	93	5	6	

TYPE I & II PERMANENT SIGNING — **CATEGORY 0010** — **USH 41 1107-02-79**

SIGN NO.	SIGN CODE	SIGN TYPE	SIGN MESSAGE	TYPE II SIGN SIZE W [IN.] x [IN.]	637.2210 SIGNS TYPE II REFLC H [SF]	637.2215 SIGNS TYPE II REFLC H FOLDING [SF]	637.2230 SIGNS TYPE II REFLC F [SF]	638.3000 REM SMALL SIGN SUP [EA]	634.0618 WOOD POSTS 4"X6"X18' [EA]	634.0622 WOOD POSTS 4"X6"X22' [EA]	638.2102 MOVE SIGNS TYPE II [EA]	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [FT] x [FT]	637.1220 SIGNS TYPE I REFLC SH [SF]	STEEL POST TYPE	636.0100 SIGN SUPPORTS CONCRETE MASONRY [CY]	636.0500 SIGN SUPPORTS STEEL REINF [LBS]	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS [EST LBS]	635.0300 SIGN SUPPORTS REPLACING BASE CONN. BOLTS [EA]	INFO ONLY-POST LENGTHS TO BE VERIFIED BY CONTRACTOR: POST NO 1 LENGTH [FT]	POST NO 2 LENGTH [FT]	OFF SET DISTANCE [FT]	DIST BTWN POSTS "S" [FT]
1	E1-1A	I	[144] SLINGER WEST BEND 1 MILE	-- x --	--	--	--	--	--	--	--	--	--	REUSE STEEL POSTS	17 x 13.5	229.500	--	--	--	--	2	--	--	--	--
1A	E1-5P	I	EXIT 66	-- x --	--	--	--	--	--	--	--	--	--	--	9 x 2.5	22.500	--	--	--	--	--	--	--	--	--
2	J4-2(3)	II	--	36 x 90	22.500	--	--	--	--	1	--	1	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
	MB3-3		--	36 x 18																					
	M1-1		I-41	36 x 36																					
	M1-4		USH 41	36 x 36																					
3	R4-3(5)	II	--	48 x 60	20.000	--	--	--	--	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
4	R2-1(5)	II	65 MPH	48 x 60	20.000	--	--	--	--	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
5	E5-1A	II	EXIT 66	72 x 60	30.000	--	--	--	--	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
6	W4-1(5)	II	--	48 x 48	--	--	16.000	--	--	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
7	E4-1A	I	[144] SLINGER WEST BEND [A]	-- x --	--	--	--	--	--	--	--	--	--	--	20 x 11	220.000	B	1.6	98	1000	--	--	--	--	--
7A	E1-5P	I	EXIT 66	-- x --	--	--	--	--	--	--	--	--	--	--	9 x 2.5	22.500	--	--	--	--	--	--	--	--	--
8	R5-57(5)	II	--	36 x 36	9.000	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
9	W1-6(2S)	II	--	48 x 24	--	--	8.000	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
10	R5-1A(3)	II	--	42 x 30	8.750	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
11	R5-1A(3)	II	--	42 x 30	8.750	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
12	D7-82	II	--	-- x --	--	--	--	1	1	--	1	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
12A	D7-82B	II	LITTLE SWITZERLAND	-- x --	--	--	--	--	--	--	1	--	#12	--	-- x --	--	--	--	--	--	--	--	--	--	--
13	D1-2	II	[A] SLINGER WEST BEND [A]	78 x 30	16.250	--	--	--	2	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
14	W3-1(3)	II	--	36 x 36	--	--	9.000	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
15	--	II	SLINGER SPEEDWAY [A]	-- x --	--	--	--	2	2	--	1	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
16	R5-57(5)	II	--	36 x 36	9.000	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
17	W1-6(2S)	II	--	48 x 24	--	--	8.000	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
18	R5-1A(3)	II	--	42 x 30	8.750	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
19	R5-1A(3)	II	--	42 x 30	8.750	--	--	--	--	--	--	--	#20	BACK OF SIGN #20	-- x --	--	--	--	--	--	--	--	--	--	--
20	D1-2	II	[A] WEST BEND SLINGER [A]	78 x 30	16.250	--	16.250	--	--	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
21	J2-1(2S)	II	--	24 x 57	9.500	--	9.500	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
	M3-1		--	24 x 12																					
	M1-6		STH 144	24 x 24																					
	M5-1L		--	21 x 21																					
22	--	II	SLINGER SPEEDWAY [A]	-- x --	--	--	--	2	2	--	1	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
23	D7-82	II	--	-- x --	--	--	--	1	1	--	1	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
23A	D7-82A	II	LITTLE SWITZERLAND	-- x --	--	--	--	--	--	--	1	--	#23	--	-- x --	--	--	--	--	--	--	--	--	--	--
24	W3-1(3)	II	--	36 x 36	--	--	9.000	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
25	R2-1(5)	II	65 MPH	48 x 60	20.000	--	--	--	--	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
26	J4-2(3)	II	--	36 x 90	22.500	--	--	--	--	1	--	1	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
	MB3-1		--	36 x 18																					
	M1-1		I-41	36 x 36																					
	M1-4		USH 41	36 x 36																					
27	W4-1(5)	II	--	48 x 48	--	--	16.000	--	--	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
28	E5-1A	II	EXIT 66	72 x 60	30.000	--	--	--	--	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
29	**NOT USED**	--	--	-- x --	--	--	--	--	--	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
30	E1-1A	I	[144] SLINGER WEST BEND 3/4 MILE	-- x --	--	--	--	--	--	--	--	--	--	--	17 x 13.5	229.500	B	1.6	98	1000	--	--	--	--	--
30A	E1-5P	I	EXIT 66	-- x --	--	--	--	--	--	--	--	--	--	--	9 x 2.5	22.500	--	--	--	--	--	--	--	--	--

SIGN NO.	SIGN CODE	SIGN TYPE	SIGN MESSAGE	TYPE II SIGN SIZE W x H [IN.]	637.2210 SIGNS TYPE II REFLC H [SF]	637.2215 SIGNS TYPE II REFLC H FOLDING [SF]	637.2230 SIGNS TYPE II REFLC F [SF]	638.3000 REM SMALL SIGN SUP [EA]	634.0618 WOOD POSTS 4"X6"X18' [EA]	634.0622 WOOD POSTS 4"X6"X22' [EA]	638.2102 MOVE SIGNS TYPE II [EA]	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W x H [FT]	637.1220 SIGNS TYPE I REFLC SH [SF]	STEEL POST TYPE	636.0100 SIGN SUPPORTS CONCRETE MASONRY [CY]	636.0500 SIGN SUPPORTS STEEL REINF [LBS]	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS [EST LBS]	635.0300 SIGN SUPPORTS REPLACING BASE CONN. BOLTS [EA]	INFO ONLY-POST LENGTHS TO BE VERIFIED BY CONTRACTOR: POST NO 1 LENGTH [FT]	POST NO 2 LENGTH [FT]	OFF SET DISTANCE [FT]	DIST BTWN POSTS "S" [FT]
31	E1-1A	I	[K] EAST - WEST 3/4 MILE	-- x --	--	--	--	--	--	--	--	--	--	REUSE STEEL POSTS	15 x 9	135.000	--	--	--	--	2	--	--	--	--
31A	E1-5P	I	EXIT 68	-- x --	--	--	--	--	--	--	--	--	--	--	8 x 2.5	20.000	--	--	--	--	--	--	--	--	--
32	E4-1A	I	[144] SLINGER WEST BEND [A]	-- x --	--	--	--	--	--	--	--	--	--	--	20 x 11	220.000	B	1.6	98	1000	--	--	--	--	--
32A	E1-5P	I	EXIT 66	-- x --	--	--	--	--	--	--	--	--	--	--	9 x 2.5	22.500	--	--	--	--	--	--	--	--	--
33	W6-3(2S)	II	--	36 x 36	--	--	9.000	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
34	R2-1(2S)	II	30 MPH	24 x 30	5.000	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
35	S3-1(2)	II	--	36 x 36	--	--	9.000	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
36	R7-1D(2S)	II	--	18 x 24	3.000	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
37	**NOT USED**	--	--	-- x --	--	--	--	--	--	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
38	R5-1(2S)	II	--	30 x 30	6.250	--	--	--	--	--	--	--	#37	BACK OF SIGN #37	-- x --	--	--	--	--	--	--	--	--	--	--
39	R4-7(2S)	II	--	24 x 30	5.000	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
40	W5-54(2S)	II	--	18 x 18	--	--	2.250	--	--	--	--	--	#39	4' MOUNTING HEIGHT	-- x --	--	--	--	--	--	--	--	--	--	--
41	R10-64	II	--	-- x --	--	--	--	1	1	--	1	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
42	R3-20R(2S)	II	--	24 x 36	6.000	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
43	R7-1D(2S)	II	--	18 x 24	3.000	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
44	J1-1(2S)	II	--	24 x 39	6.500	--	--	--	1	--	--	1	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
	MB2-1	II		21 x 15																					
	M1-1	II		24 x 24																					
45	R2-1(2S)	II	30 MPH	24 x 30	5.000	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
46	W6-1(2S)	II	--	36 x 36	--	--	9.000	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
47	R7-1D(2S)	II	--	18 x 24	3.000	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
48	W6-2(2S)	II	--	36 x 36	--	--	9.000	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
49	R4-7(2S)	II	--	24 x 30	5.000	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
50	R6-2L(2S)	II	--	24 x 30	5.000	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
51	R4-7(2S)	II	--	24 x 30	5.000	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
52	I2-3(2)	II	SLINGER POPULATION 5,068	60 x 24	10.000	--	--	--	2	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
53	--	II	PARKING RESTRICTION	-- x --	--	--	--	1	1	--	1	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
54	M1-97(2)	II	--	24 x 24	4.000	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
55	R5-1(2S)	II	--	30 x 30	6.250	--	--	--	--	--	--	--	#56	BACK OF SIGN #56	-- x --	--	--	--	--	--	--	--	--	--	--
56	J3-1(2S)	II	--	24 x 57	9.500	--	--	--	1	--	--	1	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
	MB3-3	II	--	24 x 12																					
	M1-1	II	I-41	24 x 24																					
	MB6-1	II		21 x 21																					
57	D1-3	II	[A] WEST BEND FOND DU LAC MILWAUKEE [A]	84 x 36	21.000	--	--	--	2	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
58	R3-7R(3)	II	--	36 x 36	9.000	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
59	R1-1(3)	II	--	36 x 36	7.460	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
60	R6-3A(2S)	II	--	30 x 24	5.000	--	--	--	--	--	--	--	#59	--	-- x --	--	--	--	--	--	--	--	--	--	--
61	J2-2(2S)	II	--	48 x 57	19.000	--	--	--	2	--	--	1	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
	MB3-1	II	--	24 x 12																					
	M1-1	II	I-41	24 x 24																					
	MB6-1	II	--	21 x 21																					
	MB3-3	II	--	24 x 12																					
	M1-1	II	I-41	24 x 24																					
	MB5-1R	II	--	21 x 21																					
62	W14-2(2S)	II	--	30 x 30	--	--	6.250	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
63	R5-1(2S)	II	--	30 x 30	6.250	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
64	R3-8D(2S)	II	--	30 x 36	7.500	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
65	R6-2L(2S)	II	--	24 x 30	5.000	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--

SIGN NO.	SIGN CODE	SIGN TYPE	SIGN MESSAGE	TYPE II SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLC H [SF]	637.2215 SIGNS TYPE II REFLC H FOLDING [SF]	637.2230 SIGNS TYPE II REFLC F [SF]	638.3000 REM SMALL SIGN SUP [EA]	634.0618 WOOD POSTS 4"X6"X18' [EA]	634.0622 WOOD POSTS 4"X6"X22' [EA]	638.2102 MOVE SIGNS TYPE II [EA]	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [FT] x H [FT]	637.1220 SIGNS TYPE I REFLC SH [SF]	STEEL POST TYPE	636.0100 SIGN SUPPORTS CONCRETE MASONRY [CY]	636.0500 SIGN SUPPORTS STEEL REINF [LBS]	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS [EST LBS]	635.0300 SIGN SUPPORTS REPLACING BASE CONN. BOLTS [EA]	INFO ONLY-POST LENGTHS TO BE VERIFIED BY CONTRACTOR: POST NO 1 LENGTH [FT]	POST NO 2 LENGTH [FT]	OFF SET DISTANCE [FT]	DIST BTWN POSTS "S" [FT]
66	J3-1(2S)	II	--	24 x 57	9.500	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
	M3-1	II	--	24 x 12																					
	M1-6	II	STH 144	24 x 24																					
	M6-1	II	--	21 x 21																					
67	R1-1(3)	II	--	36 x 36	7.460	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
68	R6-3(2S)	II	--	30 x 24	5.000	--	--	--	--	--	--	--	#67	--	-- x --	--	--	--	--	--	--	--	--	--	--
69	R1-1(3)	II	--	36 x 36	7.460	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
70	R6-3(2S)	II	--	30 x 24	5.000	--	--	--	--	--	--	--	#69	--	-- x --	--	--	--	--	--	--	--	--	--	--
71	R5-1(3)	II	--	36 x 36	9.000	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
72	R5-1A(2S)	II	--	36 x 24	6.000	--	--	--	--	--	--	--	#71	3' MOUNTING HEIGHT	-- x --	--	--	--	--	--	--	--	--	--	--
73	R5-1(2M)	II	--	36 x 36	9.000	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
74	R3-1(2M)	II	--	36 x 36	9.000	--	--	--	--	--	--	--	#73	BACK OF SIGN #73	-- x --	--	--	--	--	--	--	--	--	--	--
75	R5-1A(2S)	II	--	36 x 24	6.000	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
76	R5-1A(2S)	II	--	36 x 24	6.000	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
77	W5-52R(3)	II	--	18 x 54	--	--	6.750	--	1	--	--	--	--	4' MOUNTING HEIGHT	-- x --	--	--	--	--	--	--	--	--	--	--
78	D1-1	II	[A] FOND DU LAC	90 x 15	9.375	--	--	--	2	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
79	J3-1(2S)	II	--	24 x 57	9.500	--	--	--	1	--	--	1	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
	MB3-3	II	--	24 x 12																					
	M1-1	II	I-41	24 x 24																					
	MB6-1	II	--	21 x 21																					
80	J2-1(2S)	II	--	24 x 57	9.500	--	--	--	1	--	--	1	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
	MB3-1	II	--	24 x 12																					
	M1-1	II	I-41	24 x 24																					
	MB5-1L	II	--	21 x 21																					
81	R4-7(2S)	II	--	24 x 30	5.000	--	--	--	--	--	--	--	#79	BACK OF SIGN #79	-- x --	--	--	--	--	--	--	--	--	--	--
82	R4-7(2S)	II	--	24 x 30	5.000	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
83	W5-52R(3)	II	--	18 x 54	--	--	6.750	--	1	--	--	--	--	4' MOUNTING HEIGHT	-- x --	--	--	--	--	--	--	--	--	--	--
84	D1-1	II	[A] MILWAUKEE	78 x 15	8.125	--	--	--	2	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
85	J2-1(2S)	II	--	24 x 57	9.500	--	--	--	1	--	--	1	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
	MB3-3	II	--	24 x 12																					
	M1-1	II	I-41	24 x 24																					
	MB5-1L	II	--	21 x 21																					
86	J3-1(2S)	II	--	24 x 57	9.500	--	--	--	1	--	--	1	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
	MB3-1	II	--	24 x 12																					
	M1-1	II	I-41	24 x 24																					
	MB6-1	II	--	21 x 21																					
87	R4-7(2S)	II	--	24 x 30	5.000	--	--	--	--	--	--	--	#86	BACK OF #86	-- x --	--	--	--	--	--	--	--	--	--	--
88	R4-7(2S)	II	--	24 x 30	5.000	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
89	R5-1(2M)	II	--	36 x 36	9.000	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
90	J3-1(2S)	II	--	24 x 57	9.500	--	--	--	--	--	--	1	#89	BACK OF #89	-- x --	--	--	--	--	--	--	--	--	--	--
	MB3-1	II	--	24 x 12																					
	M1-1	II	I-41	24 x 24																					
	MB6-1	II	--	21 x 21																					
91	J4-1(2)	II	--	24 x 36	6.000	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
	M3-1	II	--	24 x 12																					
	M1-6	II	STH 144	24 x 24																					
92	R3-2(2M)	II	--	36 x 36	9.000	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
93	R6-2L(2S)	II	--	24 x 30	5.000	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
94	J3-1(2S)	II	--	24 x 57	9.500	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
	M3-1	II		24 x 12																					
	M1-6	II	STH 144	24 x 24																					
	M6-1	II		21 x 21																					
95	R1-1(3)	II	--	36 x 36	7.460	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
96	R6-3(2S)	II	--	30 x 24	5.000	--	--	--	--	--	--	--	#95	--	-- x --	--	--	--	--	--	--	--	--	--	--
97	R1-1(3)	II	--	36 x 36	9.000	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
98	R6-3(2S)	II	--	30 x 24	5.000	--	--	--	--	--	--	--	#97	--	-- x --	--	--	--	--	--	--	--	--	--	--
99	R5-1(3)	II	--	36 x 36	9.000	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--

SIGN NO.	SIGN CODE	SIGN TYPE	SIGN MESSAGE	TYPE II SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLC H [SF]	637.2215 SIGNS TYPE II REFLC H FOLDING [SF]	637.2230 SIGNS TYPE II REFLC F [SF]	638.3000 REM SMALL SIGN SUP [EA]	634.0618 WOOD POSTS 4"X6"X18' [EA]	634.0622 WOOD POSTS 4"X6"X22' [EA]	638.2102 MOVE SIGNS TYPE II [EA]	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [FT] x H [FT]	637.1220 SIGNS TYPE I REFLC SH [SF]	STEEL POST TYPE	636.0100 SIGN SUPPORTS CONCRETE MASONRY [CY]	636.0500 SIGN SUPPORTS STEEL REINF [LBS]	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS [EST LBS]	635.0300 SIGN SUPPORTS REPLACING BASE CONN. BOLTS [EA]	INFO ONLY-POST LENGTHS TO BE VERIFIED BY CONTRACTOR: POST NO 1 LENGTH [FT]	POST NO 2 LENGTH [FT]	OFF SET DISTANCE [FT]	DIST BTWN POSTS "S" [FT]
100	R5-1A(2S)	II	--	36 x 24	6.000	--	--	--	--	--	--	--	#99	3' MOUNTING HEIGHT	-- x --	--	--	--	--	--	--	--	--	--	--
101	R5-1(2M)	II	--	36 x 36	9.000	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
102	R3-1(2M)	II	--	36 x 36	9.000	--	--	--	--	--	--	--	#101	BACK OF SIGN #101	-- x --	--	--	--	--	--	--	--	--	--	--
103	R4-7(2S)	II	--	24 x 30	5.000	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
104	W5-54(2S)	II	--	18 x 18	--	--	2.250	--	--	--	--	--	#103	4' MOUNTING HEIGHT	-- x --	--	--	--	--	--	--	--	--	--	--
105	D1-3	II	[A] SLINGER MILWAUKEE FOND DU LAC [A]	90 x 36	22.500	--	--	--	2	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
106	W6-1(2S)	II	--	36 x 36	--	--	9.000	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
107	R2-1(2S)	II	45 MPH	24 x 30	5.000	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
108	W6-3(2S)	II	--	36 x 36	--	--	9.000	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
109	D2-2	II	WEST BEND 9 CEDAR GROVE 34	96 x 24	16.000	--	--	--	2	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
110	R5-1(3)	II	--	36 x 36	9.000	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
111	J2-2(2S)	II	--	48 x 57	19.000	--	--	--	1	--	--	1	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
	MB3-3	II	--	24 x 12																					
	M1-1	II	I-41	24 x 24																					
	MB6-1	II	--	21 x 21																					
	MB3-1	II	--	24 x 12																					
	M1-1	II	I-41	24 x 24																					
	MB5-1R	II	--	21 x 21																					
112	R2-1(2S)	II	45 MPH	34 x 30	7.083	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
113	J1-1(2S)	II	--	24 x 39	6.500	--	--	--	1	--	--	1	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
	MB2-1	II	--	21 x 15																					
	M1-1	II	I-41	24 x 24																					
114	R1-1(3)	II	--	36 x 36	7.460	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
115	W14-1(2S)	II	--	30 x 30	--	--	6.250	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
116	J3-1(2S)	II	--	24 x 45	7.500	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
	M1-5A	II	CTH NN	24 x 24																					
	M6-1	II	--	21 x 21																					
117	J3-2(2S)	II	--	48 x 57	19.000	--	--	--	2	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
	M3-3	II	--	24 x 12																					
	M1-6	II	STH 144	24 x 24																					
	M6-1	II	--	21 x 21																					
	M3-1	II	--	24 x 12																					
	M1-6	II	STH 144	24 x 24																					
	M6-1	II	--	21 x 21																					
118	R1-1(3)	II	--	36 x 36	7.460	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
119	J4-1(2S)	II	--	24 x 24	4.000	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
	M1-5A	II	CTH NN	24 x 24																					
120	R1-1(3)	II	--	36 x 36	7.460	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
121	J3-1(2S)	II	--	24 x 45	7.500	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
	M1-5A	II	CTH NN	24 x 24																					
	M6-1	II	--	21 x 21																					
122	J2-1(2S)	II	--	24 x 45	7.500	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
	M1-5A	II	CTH NN	24 x 24																					
	M5-1L	II	--	21 x 21																					
123	J1-1(2S)	II	--	24 x 39	6.500	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
	M2-1	II	--	21 x 15																					
	M1-5A	II	CTH NN	24 x 24																					
124	R2-1(2S)	II	45 MPH	24 x 30	5.000	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
125	W14-3(2S)	II	--	48 x 36	--	--	6.000	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
126	R2-1(2S)	II	45 MPH	24 x 30	5.000	--	--	--	--	--	--	--	#125	BACK OF #125	-- x --	--	--	--	--	--	--	--	--	--	--
127	W2-2R(2S)	II	--	30 x 30	--	--	6.250	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--

SIGN NO.	SIGN CODE	SIGN TYPE	SIGN MESSAGE	TYPE II SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLC H [SF]	637.2215 SIGNS TYPE II REFLC H FOLDING [SF]	637.2230 SIGNS TYPE II REFLC F [SF]	638.3000 REM SMALL SIGN SUP [EA]	634.0618 WOOD POSTS 4"X6"X18' [EA]	634.0622 WOOD POSTS 4"X6"X22' [EA]	638.2102 MOVE SIGNS TYPE II [EA]	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [FT] x H [FT]	637.1220 SIGNS TYPE I REFLC SH [SF]	STEEL POST TYPE	636.0100 SIGN SUPPORTS CONCRETE MASONRY [CY]	636.0500 SIGN SUPPORTS STEEL REINF [LBS]	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS [EST LBS]	635.0300 SIGN SUPPORTS REPLACING BASE CONN. BOLTS [EA]	INFO ONLY-POST LENGTHS TO BE VERIFIED BY CONTRACTOR: POST NO 1 LENGTH [FT]	POST NO 2 LENGTH [FT]	OFF SET DISTANCE [FT]	DIST BTWN POSTS "S" [FT]
128	J1-1(2S)	II	--	24 x 39	6.500	--	--	--	1	--	--	--	--	SHEET 6 OF 14	-- x --	--	--	--	--	--	--	--	--	--	--
	M2-1	II	--	21 x 15																					
	M1-4	II	USH 41	24 x 24																					
129	J2-2(2S)	II	--	48 x 57	19.000	--	--	--	2	--	--	--	--	SHEET 7 OF 14	-- x --	--	--	--	--	--	--	--	--	--	--
	M3-1	II	--	24 x 12																					
	M1-4	II	USH 41	24 x 24																					
	M6-1	II	--	21 x 21																					
	M3-3	II	--	24 x 12																					
	M1-4	II	USH 41	24 x 24																					
	M5-1R	II	--	21 x 21																					
130	J3-1(2S)	II	--	24 x 57	9.500	--	--	--	1	--	--	--	--	SHEET 7 OF 14	-- x --	--	--	--	--	--	--	--	--	--	--
	M3-3	II	--	24 x 12																					
	M1-4	II	USH 41	24 x 24																					
	M6-1	II		21 x 21																					
131	J2-1(2S)	II	--	24 x 57	9.500	--	--	--	1	--	--	--	--	SHEET 8 OF 14	-- x --	--	--	--	--	--	--	--	--	--	--
	M3-1	II	--	24 x 12																					
	M1-4	II	USH 41	24 x 24																					
	M5-1L	II	--	21 x 21																					
132	J3-1(2S)	II	--	24 x 57	9.500	--	--	--	1	--	--	--	--	SHEET 8 OF 14	-- x --	--	--	--	--	--	--	--	--	--	--
	M3-3	II	--	24 x 12																					
	M1-4	II	USH 41	24 x 24																					
	M6-1	II	--	21 x 21																					
133	J2-1(2S)	II	--	24 x 57	9.500	--	--	--	1	--	--	--	--	SHEET 9 OF 14	-- x --	--	--	--	--	--	--	--	--	--	--
	M3-3	II	--	24 x 12																					
	M1-4	II	USH 41	24 x 24																					
	M5-1L	II	--	21 x 21																					
134	J3-1(2S)	II	--	24 x 57	9.500	--	--	--	1	--	--	--	--	SHEET 9 OF 14	-- x --	--	--	--	--	--	--	--	--	--	--
	M3-1	II	--	24 x 12																					
	M1-4	II	USH 41	24 x 24																					
	M6-1	II	--	21 x 21																					
135	J3-1(2S)	II	--	24 x 57	9.500	--	--	--	1	--	--	--	--	SHEET 9 OF 14	-- x --	--	--	--	--	--	--	--	--	--	--
	M3-1	II	--	24 x 12																					
	M1-4	II	USH 41	24 x 24																					
	M6-1	II	--	21 x 21																					
136	J1-1(2S)	II	--	24 x 36	6.000	--	--	--	1	--	--	--	--	SHEET 11 OF 14	-- x --	--	--	--	--	--	--	--	--	--	--
	M2-1	II	--	24 x 12																					
	M1-4	II	USH 41	24 x 24																					
137	**NOT USED**	--	--	-- x --	--	--	--	--	--	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--
138	J1-1(2S)	II	--	-- x --	--	--	--	1	1	--	1	--	--	SHEET 8 OF 14	-- x --	--	--	--	--	--	--	--	--	--	--
	M4-6	II	--	-- x --																					
	M1-6	II	STH 144	-- x --																					
139	W3-5(2S)	II	30 MPH	36 x 36	--	--	9.000	--	1	--	--	--	--	SHEET 10 OF 14	-- x --	--	--	--	--	--	--	--	--	--	--
140	R3-4(2S)	II	--	24 x 24	4.000	--	--	--	--	--	--	--	#39	BACK OF SIGN #39 - SHEET 6 OF 14	-- x --	--	--	--	--	--	--	--	--	--	--
141	R5-1A(3)	II	--	42 x 30	8.750	--	--	--	--	--	--	--	#41	BACK OF SIGN #41 - SHEET 6 OF 14	-- x --	--	--	--	--	--	--	--	--	--	--
142	R7-1D(2S)	II	--	24 x 30	5.000	--	--	--	--	--	--	--	#75	ANGLE AS SHOWN - SHEET 8 OF 14	-- x --	--	--	--	--	--	--	--	--	--	--
143	R7-1D(2S)	II	--	24 x 30	5.000	--	--	--	--	--	--	--	#76	ANGLE AS SHOWN - SHEET 8 OF 14	-- x --	--	--	--	--	--	--	--	--	--	--
144	R5-1(3)	II	--	36 x 36	9.000	--	--	--	--	--	--	--	#66	BACK OF SIGN #66 - SHEET 8 OF 14	-- x --	--	--	--	--	--	--	--	--	--	--
145	R6-2L(2S)	II	--	24 x 30	5.000	--	--	--	1	--	--	--	--	SHEET 9 OF 14	-- x --	--	--	--	--	--	--	--	--	--	--
146	R5-1(3)	II	--	36 x 36	9.000	--	--	--	--	--	--	--	#94	BACK OF SIGN #94 - SHEET 9 OF 14	-- x --	--	--	--	--	--	--	--	--	--	--
147	R5-1A(3)	II	--	42 x 30	8.750	--	--	--	--	--	--	--	#91	BACK OF SIGN #91 - SHEET 9 OF 14	-- x --	--	--	--	--	--	--	--	--	--	--
148	R3-4(2S)	II	--	24 x 24	4.000	--	--	--	--	--	--	--	#103	BACK OF SIGN #103 - SHEET 10 OF 14	-- x --	--	--	--	--	--	--	--	--	--	--
149	J1-1(2S)	II	--	24 x 39	6.500	--	--	--	1	--	--	--	--	SHEET 10 OF 14	-- x --	--	--	--	--	--	--	--	--	--	--
	M2-1	II	--	21 x 15																					
	M1-5A	II	CTH NN	24 x 24																					

TYPE I & II PERMANENT SIGNING **CATEGORY 0010** **USH 41 1107-02-79**

SIGN NO.	SIGN CODE	SIGN TYPE	SIGN MESSAGE	TYPE II SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLC H [SF]	637.2215 SIGNS TYPE II REFLC H FOLDING [SF]	637.2230 SIGNS TYPE II REFLC F [SF]	638.3000 REM SMALL SIGN SUP [EA]	634.0618 WOOD POSTS 4"X6"X18' [EA]	634.0622 WOOD POSTS 4"X6"X22' [EA]	638.2102 MOVE SIGNS TYPE II [EA]	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [FT] x H [FT]	637.1220 SIGNS TYPE I REFLC SH [SF]	STEEL POST TYPE	636.0100 SIGN SUPPORTS CONCRETE MASONRY [CY]	636.0500 SIGN SUPPORTS STEEL REINF [LBS]	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS [EST LBS]	635.0300 SIGN SUPPORTS REPLACING BASE CONN. BOLTS [EA]	INFO ONLY-POST LENGTHS TO BE VERIFIED BY CONTRACTOR: POST NO 1 LENGTH [FT]	POST NO 2 LENGTH [FT]	OFF SET DISTANCE [FT]	DIST BTWN POSTS "S" [FT]
150	J2-1(2S)	II	--	24 x 45	7.500	--	--	--	1	--	--	--	--	SHEET 11 OF 14	-- x --	--	--	--	--	--	--	--	--	--	--
	M1-5A	II	CTH NN	24 x 24																					
	M5-1R	II	--	21 x 21																					
151	R11-54F(2S)	II	--	48 x 30	--	10.000	--	--	2	--	--	--	--	SHEET 8 OF 14	-- x --	--	--	--	--	--	--	--	--	--	--
152	R11-54F(2S)	II	--	48 x 30	--	10.000	--	--	2	--	--	--	--	SHEET 8 OF 14	-- x --	--	--	--	--	--	--	--	--	--	--
153	R11-54F(2S)	II	--	48 x 30	--	10.000	--	--	2	--	--	--	--	SHEET 9 OF 14	-- x --	--	--	--	--	--	--	--	--	--	--
154	R11-54F(2S)	II	--	48 x 30	--	10.000	--	--	2	--	--	--	--	SHEET 9 OF 14	-- x --	--	--	--	--	--	--	--	--	--	--
155	R2-1(2S)	II	30 MPH	24 x 30	5.000	--	--	--	1	--	--	--	--	SHEET 7 OF 14	-- x --	--	--	--	--	--	--	--	--	--	--
156	R2-1(2S)	II	30 MPH	24 x 30	5.000	--	--	--	1	--	--	--	--	SHEET 8 OF 14	-- x --	--	--	--	--	--	--	--	--	--	--
157	R2-1(2S)	II	45 MPH	24 x 30	5.000	--	--	--	--	--	--	--	--	SHEET 8 OF 14	-- x --	--	--	--	--	--	--	--	--	--	--
158	R2-1(3)	II	30 MPH	36 x 48	12.000	--	--	--	1	--	--	--	--	SHEET 9 OF 14	-- x --	--	--	--	--	--	--	--	--	--	--
	UNDISTRIBUTED				--	--	--	--	--	--	--	--	--	--				5	500	1000	--				
	TOTALS				1052.553	40.000	197.500	9	129	11	9	12				1144.00		9.8	794	4000	4				

3

SHEET 6 OF 6

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	MISCELLANEOUS QUANTITIES	SHEET:	E

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
1107-02-23		
FEDERAL PROJECT NUMBER	4.01	5

PLAT OF RIGHT-OF-WAY REQUIRED FOR

U.S.H. 41 FREEWAY CONVERSION

S.T.H. 144 INTERCHANGE

C.T.H. AA TO ARTHUR ROAD

USH 41 WASHINGTON CO.

CONSTRUCTION PROJECT NUMBER

1107-02-79

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	REFERENCE LINE	R/L
ACCESS RIGHTS	AR	RELEASE OF RIGHTS	ROR
ACRES	AC.	REMAINING	REM.
AND OTHERS	ET.AL.	RIGHT-OF-WAY	R/W
CENTERLINE	C/L	SECTION	SEC.
CERTIFIED SURVEY MAP	CSM	STATION	STA.
CORNER	COR.	TEMPORARY LIMITED EASEMENT	TLE
DOCUMENT	DOC.	VOLUME	V.
EASEMENT	EASE.	**CURVE DATA**	
HIGHWAY EASEMENT	H.E.	LONG CHORD	LCH
LAND CONTRACT	LC	LONG CHORD BEARING	LCB
MONUMENT	MON.	RADIUS	R
PAGE	P.	DEGREE OF CURVE	D
PERMANENT LIMITED EASEMENT	PLE	CENTRAL ANGLE OR DELTA	DELTA
PROPERTY LINE	PL	LENGTH OF CURVE	L
RECORDED AS	(100')	TANGENT	TAN

CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN	⌀ (1" UNLESS NOTED)	PROPOSED R/W LINE	
		EXISTING H.E. LINE	
R/W MONUMENT	○ ●(SET)	PROPERTY LINE	
R/W STANDARD	△ ▲(SET)	LOT & TIE LINES	
SIGN	ISIGN	SLOPE INTERCEPTS	
SECTION CORNER MONUMENT	◍	CORPORATE LIMITS	
SECTION CORNER SYMBOL	(SEC)	NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)	
FEE (HATCH VARIES)		NO ACCESS (BY ACQUISTION)	
TEMPORARY LIMITED EASEMENT		NO ACCESS (BY STATUTORY AUTHORITY)	
PERMANENT LIMITED EASEMENT		SECTION LINE	
R/W BOUNDARY POINT	RWB20	QUARTER LINE	
PARCEL NUMBER	102	SIXTEENTH LINE	
UTILITY PARCEL NUMBER	92	EXISTING CENTERLINE	
SIGN NUMBER (OFF PREMISE)	21-1	PROPOSED REFERENCE LINE	
BUILDING		PARALLEL OFFSET	

CONVENTIONAL UTILITY SYMBOLS

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

END RELOCATION ORDER

STA. 410+00.00

1737.31' N. OF AND 1303.46' W. OF THE E. 1/4 CORNER OF SEC 7. T10N, R19E

N=497,188.96

E=456,130.04

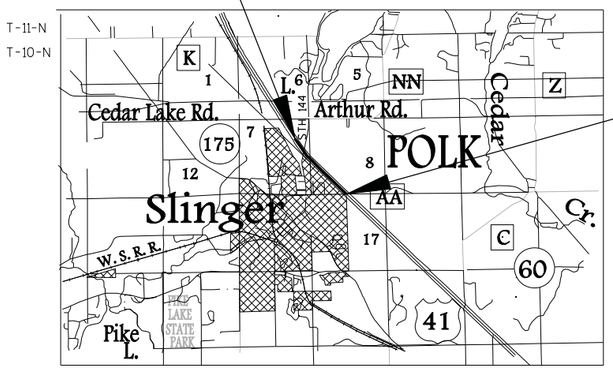
BEGIN RELOCATION ORDER

STA. 370+00.00

1272.91' S. AND 1293.86' E. OF THE W. 1/4 CORNER OF SEC 8. T10N, R19E

N=494,157.79

E=458,706.41



NOTES

COORDINATES AND BEARINGS ON THIS PLAT ARE ORIENTED TO THE WISCONSIN COORDINATE SYSTEM SOUTH ZONE, (NAD27).

ALL PLAT DISTANCES ARE GROUND LENGTH AND MAY BE CONVERTED TO GRID LENGTH BY MULTIPLYING THE DISTANCE BY THE GRID FACTOR PROVIDED ON THIS DETAIL SHEET.

TO CONVERT PROJECT GRID COORDINATES FOR GROUND USE, DIVIDE BY THE FOLLOWING GRID FACTOR: 0.9998856

RIGHT OF WAY MONUMENTS ARE TYPE 2 AND ARE PLACED PRIOR TO OR AT THE TIME OF LAND TITLE TRANSFER.

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

N

LAYOUT

SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.758 MI.

KL Engineering

I HEREBY CERTIFY THAT THIS PLAT WAS MADE FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

THOMAS J. HAGEN S-2496 REGISTERED PROFESSIONAL ENGINEER STATE OF WISCONSIN

JULY 11, 2011

REVISION DATE
SEPTEMBER 29, 2011
APRIL 10, 2012
FEBRUARY 14, 2013

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED FOR THE DEPARTMENT

DATE: 02/14/13 Robert J. Duffeck (Signature)

FILE NAME : G:\DONOHUE\D0200913\rw\040101_rt.dgn PLOT DATE : 2/18/2013 PLOT BY : KL Engineering PLOT NAME : PLOT SCALE :

PROJECT NUMBER 1107-02-23 CONSTRUCTION NUMBER 1107-02-79 USH 41

USH 41 1107-02-23 4.01

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSED ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE DEPARTMENT.

PARCEL NUMBER	SHEET NUMBER	OWNER	INTEREST REQUIRED	TOTAL ACRES	R/W REQ'D NEW	R/W REQ'D ACRES EXISTING	R/W REQ'D TOTAL	TOTAL REMAIN ACRES	T.L.E. ACRES	P.L.E. ACRES	SHEET NUMBER
1 (2)	4.04	MILDRED S. HAYES IRREVOCABLE TRUST & WILLIAM M. HAYES	FEE,T.L.E.	9.99	0.28		0.28	9.71	0.22		4.04
2 (2)	4.04	HELD MEAT PRODUCTS, INC.	FEE	1.28	0.49		0.49	0.79			4.04
3 (3)	4.05	STATE OF WI. DEPT. OF NATURAL RESOURCES	FEE	38.44	0.30		0.30	38.14			4.05
4	4.05	DOUGLAS J. NEY	FEE	1.86	0.37		0.37	1.49			4.05
5	4.05	GREGORY R. & LINDA D. BRAUN	FEE	1.59	0.09		0.09	1.50			4.05
6	4.05	JACKLIN INVESTMENTS, LLC	T.L.E.	---	---		---	---	0.003		4.05
202 (4)	4.04	HELD MEAT PRODUCTS, INC.	TLE	0.79	---		---	0.79	0.17		4.04
30	4.05	WE ENERGIES - ELECTRIC	CONVEYANCE OF RIGHTS								4.04
31	4.05	FRONTIER	CONVEYANCE OF RIGHTS								4.05
32	4.05	KOCH REFINING COMPANY	CONVEYANCE OF RIGHTS								4.05
33	4.04	VILLAGE OF SLINGER - WATER	CONVEYANCE OF RIGHTS								4.05

4

4

REVISION DATE
SEPT 29, 2011
APRIL 10, 2012
FEB 14, 2013

DATE JULY 1, 2011

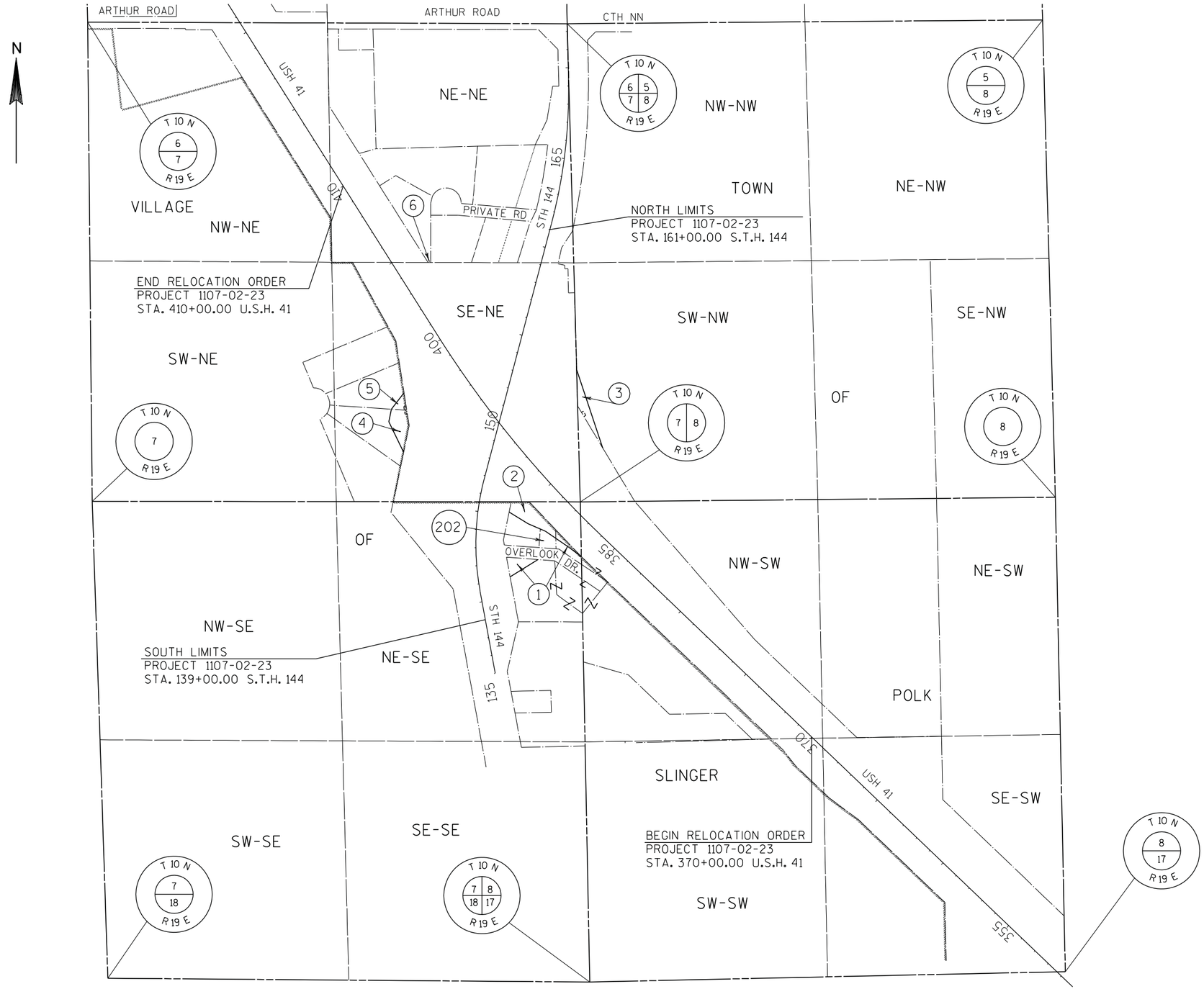
SCALE, FEET
0 N/A

HWY: USH 41
COUNTY: WASHINGTON

STATE R/W PROJECT NUMBER 1107-02-23
CONSTRUCTION PROJECT NUMBER 1107-02-79

PLAT SHEET 4.02
PS&E SHEET 144

E



4

4

REVISION DATE SEPT. 29,2011 APRIL 10, 2012 FEB 14, 2013	DATE JULY 1, 2011	NOT TO SCALE	HWY: USH 41	STATE R/W PROJECT NUMBER 1107-02-23	PLAT SHEET 4.03	
			COUNTY: WASHINGTON	CONSTRUCTION PROJECT NUMBER 1107-02-79	PS&E SHEET 145	E

FILE NAME : g:\donohue\do200913\rw\040301_r1.dgn PLOT DATE : 2/18/2013 PLOT BY : KL Engineering PLOT NAME : PLOT SCALE :

PROJECT NUMBER 1107-02-23 CONSTRUCTION NUMBER 1107-02-79 USH 41

MATCH LINE SHEET 4.05

S 89°56'29" E 2683.79' BETWEEN CORNERS

2304.63'

390+70.74
227.32'

1" IP

98.73'

390+06.72
154.00'

1" IP

280.43'

77.76'
TO TAN.

S 46°13'44" E
260.77' ON TAN.

2313.56'

STA. 388+64.66

N 89°26'33" E 2613.03' BETWEEN CORNERS

299.47'

386+00.02
262.99'

T 10 N
7 8
7 8
R 19 E

BRASS CAP MON.
Y 495,451.65
X 457,433.50

T 10 N
8
R 19 E

BRASS CAP MON.
Y 495,477.07
X 460,046.41

N

N 43°28'33" W
211.22'

388+00.95
153.44'

DETAIL A

1" IP

N 43°28'33" W
205.08'
N 55°50'43" W
84.56'

301.86'

PC 386+09.67

N 52°48'07" W
88.10'

OUT LOT 1,
CSM 4566
V. 30,
P. 310

SLOPE
INTERCEPTS

HELD MEAT PRODUCTS, INC.

N 58°12'21" W
123.03'

PI 143+77.65

156.91'

N 11°47'39" E

57.75'

390+37.91
273.82'
RWB1006

B

LOT 1,
CSM 4566
V. 30,
P. 310

389+24.47
240.63'
RWB1014

N 10°28'51" W
28.08

285.73'

N 85°42'39" W 300.85'

30"

15.12'

386+01.13
160.05'
RWB422

1" IP

TLE- SLOPES

OVERLOOK DRIVE

N 85°42'39" W 265.98'

N 66°34'21" W
103.07'

173.23'

10.15'

S 58°01'03" W
180.03'

92.75'

N 56°04'09" W
301.25'

N 46°13'44" W
201.12'

384+00.00
160.05'
TLE336

SLOPE
INTERCEPTS

N 55°50'43" W
69.69'

RWB359

388+75.75
453.24'

387+91.00
514.09'

PC 140+56.85

387+54.31
338.72'
RWB361

LOT 3,
CSM 4566
V. 30,
P. 310

N 56°04'09" W
324.40'

386+86.39
170.66'
RWB1012

T 10 N
7
R 19 E

BRASS CAP MON.
Y 495,454.39
X 454,749.71

NO ACCESS BY
PROJECT F 03-1(67)

VILLAGE

℄ STH 144

140

360.99'

251.48'

S 10°28'51" W

LOT 2,
CSM 4566
V. 30,
P. 310

HAYES, ET AL.

388+33.07
200.35'
RWB1011

P.L.

OF

STORMWATER DETENTION CROSS EASEMENT
AGREEMENT, RECORDED AS DOC# 1138896.
AFFECTS PARCELS 1 AND 2, OVER
LOT 1 AND OUT LOT 1 OF CSM 4566.

NE-SE

OF

NW-SW

NE-SW

SIXTEENTH LINE

℄ USH 41

N 40°54'47" W 1004.33'

376+00.00
169.95'

SLOPE
INTERCEPTS

380'

N 46°13'44" W

N 46°13'44" W 1248.44'

N 46°13'44" W 515.44'

315'

370+84.57
169.95'

TOWN

POLK

LOT 1,
CSM 4567
V. 30,
P. 306

SLINGER

P.L.

LOT 2,
CSM 4567
V. 30,
P. 306

N 01°08'21" W 2641.96' BETWEEN CORNERS

2340.10'

330'

371+51.57
160.05'

SIXTEENTH LINE

SIXTEENTH LINE

O.H.E.

DETAIL A

N 01°08'21" W
46.09'

57.67'

387+15.68
216.50'
TLE338

SOUTH LIMITS
PROJECT 1107-02-23

STA. 139+00.00
Y 494,803.68
X 456,911.81

210'

BEGIN RELOCATION ORDER
PROJECT 1107-02-23

STA. 370+00.00
Y 494,157.80
X 458,706.41

IRON PLUG
Y 492,810.21
X 457,486.03

T 10 N
7 8
18 17
R 19 E

RWB1011

388+33.07
200.35'

30' PRIVATE
DRAINAGE
EASEMENT

S 66°34'21" E
31.17'

S 55°50'43" E
69.69'

TLE2001
388+60.84
212.38'

TLE2000
387+66.98
186.46'

202

N 04°02'17" E 102.34'

30'

N 01°08'21" W
57.67'

TLE2002
387+95.34
288.56'

N 85°42'39" W 94.89'

387+26.74
226.33'
TLE349

PARCEL 202 TLE
DETAIL B
NOT TO SCALE

30 WE ENERGIES - ELECTRIC
V. 494, P. 435 AS DOC. 320309
V. 610, P. 465 AS DOC. 373521
PARCEL 2

31 FRONTIER
V. 494, P. 435 AS DOC. 320309
PARCEL 2

33 VILLAGE OF SLINGER - WATER
NO RECORDED EASEMENT
PARCEL 1

CURVE DATA STH 144
PI STA. 143+77.65
Y: 495,273.355
X: 456,824.927
Δ = 25°14'51" RT.
D = 04°00'00"
R = 1432.39'
T = 320.80'
L = 631.18'
PC STA. 140+56.85
PT STA. 146+88.03
AH TAN = N 14°46'00" E

CURVE DATA USH 41
PI STA. 393+18.24
Y: 495,761.504
X: 457,032.389
Δ = 13°55'49" RT.
D = 00°59'16"
R = 5800.00'
T = 708.57'
L = 1410.15'
PC STA. 386+09.67
PT STA. 400+19.82
AH TAN = N 32°17'55" W

BEARING BASIS

COORDINATES AND BEARINGS ON THIS PLAT ARE ORIENTED TO THE WISCONSIN COORDINATE SYSTEM SOUTH ZONE, (NAD27).

ALL PLAT DISTANCES ARE GROUND LENGTH AND MAY BE CONVERTED TO GRID LENGTH BY MULTIPLYING THE DISTANCE BY THE GRID FACTOR PROVIDED ON THIS DETAIL SHEET.

FOR THE LATEST ACCESS/DRIVEWAY INFORMATION CONTACT THE PLANNING DEPARTMENT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN WAUKESHA.

◆◆◆ EXISTING ACCESS CONTROL AS SHOWN IS FROM PREVIOUS PROJECTS 1107-02-22 AND F03-1(67).

HIGHWAY	RECORD	WIDTH	DATE
S.T.H. 144	PREVIOUS PROJECT F03-1(67)	VARIES	1957
U.S.H. 41	PREVIOUS PROJECT F03-1(4)	VARIES	1952
U.S.H. 41	PREVIOUS PROJECT 1104-03-21	VARIES	1974
OVERLOOK DRIVE	CSM 4566	66'	1995

REVISION DATE
SEPT 29, 2011
APRIL 10, 2012
FEB 14, 2013

DATE JULY 1, 2011

GRID FACTOR 0.9998856

SCALE, FEET
0 100 200

HWY: USH 41

COUNTY: WASHINGTON

STATE R/W PROJECT NUMBER 1107-02-23

CONSTRUCTION PROJECT NUMBER 1107-02-79

PLAT SHEET 4.04

PS&E SHEET 146

E

FILE NAME : g:\donohue\do200913\rw\040401_rp.dgn

PLOT DATE : 2/18/2013

PLOT BY : KL Engineering

PLOT NAME :

PLOT SCALE :

PROJECT NUMBER 1107-02-23 CONSTRUCTION NUMBER 1107-02-79 USH 41

4

HIGHWAY	RECORD	WIDTH	DATE
S.T.H. 144	PREVIOUS PROJECT F03-1(67)	VARIES	1957
U.S.H. 41	PREVIOUS PROJECT F03-1(4)	VARIES	1952
U.S.H. 41	PREVIOUS PROJECT 1104-03-21	VARIES	1974
OVERLOOK DRIVE	CSM 4566	66'	1995

BEARING BASIS

COORDINATES AND BEARINGS ON THIS PLAT ARE ORIENTED TO THE WISCONSIN COORDINATE SYSTEM SOUTH ZONE, (NAD27).

ALL PLAT DISTANCES ARE GROUND LENGTH AND MAY BE CONVERTED TO GRID LENGTH BY MULTIPLYING THE DISTANCE BY THE GRID FACTOR PROVIDED ON THIS DETAIL SHEET.

FOR THE LATEST ACCESS/DRIVEWAY INFORMATION CONTACT THE PLANNING DEPARTMENT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN WAUKESHA.

◆◆◆ EXISTING ACCESS CONTROL AS SHOWN IS FROM PREVIOUS PROJECTS 1107-02-22 AND F03-1(67).

END RELOCATION ORDER
PROJECT 1107-02-23
STA. 410+00.00
Y 497,188.96
X 457,130.04

NORTH LIMITS
PROJECT 1107-02-23
STA. 161+00.00
Y 496,948.90
X 457,266.58

BRASS CAP MON.
Y 498,082.04
X 457,361.78

BRASS CAP MON.
Y 495,454.39
X 454,749.71

BRASS CAP MON.
Y 495,451.65
X 457,433.50

BRASS CAP MON.
Y 495,477.07
X 460,046.41

PARCEL 6 TLE DETAIL

CURVE DATA STH 144
PI STA. 165+44.99
Y: 497,379.191
X: 457,380.002
Δ = 16°19'42" LT.
D = 02°00'00"
R = 2864.78'
T = 410.99'
L = 816.41'
PC STA. 161+34.00
PT STA. 169+50.41
AH TAN = N 01°33'42" W

CURVE DATA STH 144
PI STA. 143+77.65
Y: 495,273.355
X: 456,824.927
Δ = 25°14'51" RT.
D = 04°00'00"
R = 1432.39'
T = 320.80'
L = 631.18'
PC STA. 140+56.85
PT STA. 146+88.03
BK TAN = N 10°28'51" W

CURVE DATA USH 41
PI STA. 393+18.24
Y: 495,761.504
X: 457,032.389
Δ = 13°55'49" RT.
D = 00°59'16"
R = 5800.00'
T = 708.57'
L = 1410.15'
PC STA. 386+09.67
PT STA. 400+19.82
AH TAN = N 46°13'44" W

30 WE ENERGIES - ELECTRIC
V. 1536, P. 532 AS DOC. 700752
PARCEL 6

31 FRONTIER
V. 1536, P. 532 AS DOC. 700752
PARCEL 6

32 KOCH REFINING COMPANY
V. 986, P. 184 AS DOC. 528112
V. 986, P. 180 AS DOC. 528111
V. 986, P. 176 AS DOC. 528110
V. 986, P. 172 AS DOC. 528109
V. 986, P. 168 AS DOC. 528108
V. 986, P. 164 AS DOC. 528107
PARCEL 3

MATCH LINE SHEET 4.04

REVISION DATE	DATE JULY 1, 2011	SCALE, FEET	HWY: USH 41	STATE R/W PROJECT NUMBER 1107-02-23	PLAT SHEET 4.05	
SEPT. 29,2011 APRIL 10, 2012 FEB 14, 2013	GRID FACTOR 0.9998856	0 100 200	COUNTY: WASHINGTON	CONSTRUCTION PROJECT NUMBER 1107-02-79	PS&E SHEET 147	E

FILE NAME : g:\donohue\do200913\rw\040501_rp.dgn PLOT DATE : 2/18/2013 PLOT BY : KL Engineering PLOT NAME : PLOT SCALE : PROJECT NUMBER 1107-02-23 CONSTRUCTION NUMBER 1107-02-79 USH 41

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
2480-05-21		
FEDERAL PROJECT NUMBER	4.1	

PLAT OF RIGHT-OF-WAY REQUIRED FOR

STH 144

USH 41 TO PLEASANT VALLEY ROAD

STH 144 WASHINGTON CO.

CONSTRUCTION PROJECT NUMBER
1107-02-79

CONVENTIONAL ABBREVIATIONS

ACCESS POINT	AP	LAND CONTRACT	LC
ACCESS RIGHTS	AR	LENGTH OF CURVE	L
ACRES	AC.	LONG CHORD	LCH
AHEAD	AH	LONG CHORD BEARING	LCB
AND OTHERS	et al.	MONUMENT	MON.
BACK	BK	OUTLOT	OL
BARN	B	PAGE	P.
CENTERLINE	℄	PROPERTY LINE	PL
CENTRAL ANGLE OR DELTA	DELTA	QUIT CLAIM DEED	QCD
CERTIFIED SURVEY MAP	CSM	RADIUS	R
COMMERCIAL	C	REFERENCE LINE	℄
CONSTRUCTION PERMIT	CP	RIGHT-OF-WAY	R/W
CORNER	COR.	SECTION	SEC.
DEED	(D)	SECTION LINE	S/L
DEGREE OF CURVE	D	SEVERED	SEV.
DIST. BETWEEN 1/4CORNERS	(DIST)	SHED	S
DOCUMENT	DOC.	STATION	STA.
EASEMENT	EASE.	TANGENT	TAN
ESTATE	EST	TEMPORARY LIMITED EASEMENT	TLE
GARAGE	G	TRANSIT LINE	℄
HOUSE	H	VOLUME	V.

CONVENTIONAL SYMBOLS

BRIDGE		STATE LINE, COUNTY LINE, TOWN/RANGE LINE	
BUILDING	(Label)	SECTION LINE	
FOUND 1" IRON PIPE/PIN UNLESS NOTED	⌀	QUARTER LINE	
R/W MONUMENT	○	SIXTEENTH LINE	
R/W STANDARD	▲	PROPOSED REFERENCE LINE	
GAS PUMP ISLAND	GP	EXISTING CENTERLINE	
WELL	⊙WELL	PROPOSED R/W LINE	
SEPTIC PUMP	⊙SP	EXISTING R/W LINE	
SEPTIC TANK	⊙ST	PROPERTY LINE	
SEPTIC VENT	⊙SEPV	LOT & TIE LINES	
SIGN	SIGN	SLOPE INTERCEPTS	
		EXISTING EASEMENT	
FEE (HATCHING)		CORPORATE LIMITS	
		NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)	
TEMPORARY LIMITED EASEMENT		NO ACCESS (BY ACQUISITION)	
PERMANENT LIMITED EASEMENT		NO ACCESS (BY STATUTORY AUTHORITY)	
PARALLEL OFFSET			

CONVENTIONAL UTILITY SYMBOLS

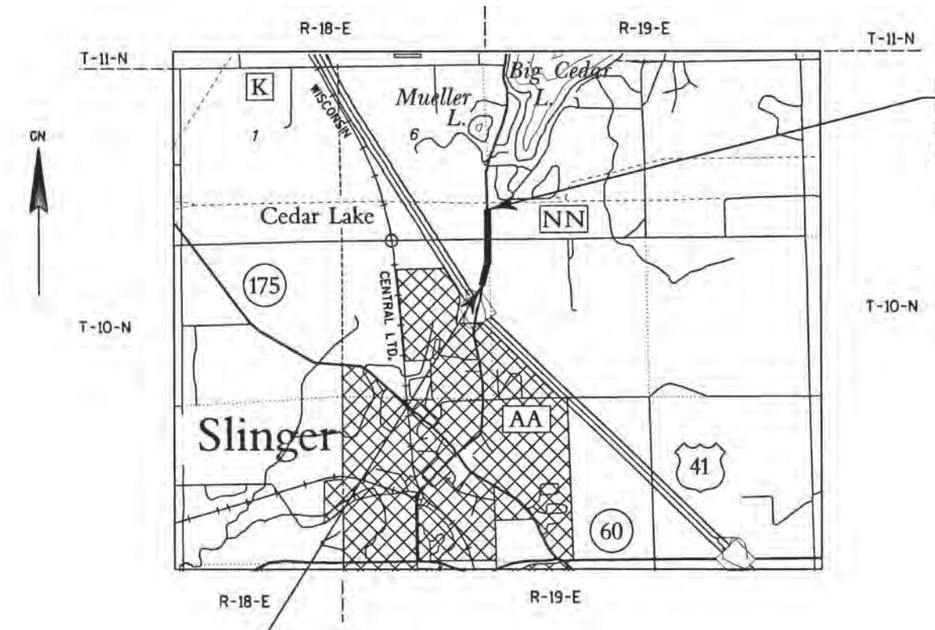
			COMPENSABLE		NON-COMPENSABLE
WATER	W	POWER POLE		OR	
GAS	G	TELEPHONE POLE		OR	
TELEPHONE	T	LIGHT POLE		OR	
OVERHEAD TRANSMISSION LINES	OH	UTILITY PEDESTAL	(LABEL)	OR	
ELECTRIC	E				
CABLE TELEVISION	TV	ELECTRIC TOWER		OR	
FIBER OPTIC	FO				
SANITARY SEWER	SAN				
STORM SEWER	SS				

NOTES

COORDINATES AND BEARINGS ON THIS PLAT ARE ORIENTED TO THE WISCONSIN COORDINATE SYSTEM SOUTH ZONE (NORTH AMERICAN DATUM OF 1927). ALL PLAT DISTANCES ARE GROUND LENGTH AND MAY BE CONVERTED TO GRID LENGTH BY MULTIPLYING THE DISTANCE BY THE GRID FACTOR PROVIDED ON THE DETAIL SHEETS.

RIGHT OF WAY MONUMENTS ARE TYPE 2 AND ARE PLACED PRIOR TO OR AT THE TIME OF LAND TITLE TRANSFER, BY WISCONSIN D.O.T. DISTRICT 2 SURVEY.

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



END RELOCATION ORDER
STA. 189+00.00
963.03' SOUTH AND 20.07' EAST OF THE EAST 1/4 CORNER OF SECTION 6-10-19

BEGIN RELOCATION ORDER
STA. 161+34.01
1099.26' SOUTH AND 85.62' WEST OF THE NORTHEAST OF SECTION 7-10-19

LAYOUT
SCALE: 0 1/2 MILE

TOTAL NET LENGTH OF CENTERLINE STH 144 = 0.524 MILE

ORIGINAL PLANS PREPARED BY
KAPUR & ASSOCIATES, INC.
CONSULTING ENGINEERS
MILWAUKEE, WISCONSIN
414.351.6668

5/13/03 (Date)
(Signature)

REVISION DATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED FOR DISTRICT OFFICE
DATE: June 3, 2003 Robert J. Duffield (Signature)

E

FILE NAME : E:\DOT2\270US41\SURVEY\ARTrd\270_040101_RT.dgn PLOT DATE : 05/13/2003

SCHEDULE OF LANDS & INTERESTS REQUIRED

AREAS SHOWN IN THE TOTAL ACRES COLUMN MAY BE APPROXIMATE AND ARE DERIVED FROM TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED.

(C) CALCULATED

PARCEL NUMBER	SHEET NUMBER	OWNER	INTEREST REQUIRED	TOTAL ACRES	R/W REQUIRED NEW ACRES	R/W REQUIRED EXISTING ACRES	R/W REQUIRED TOTAL ACRES	TOTAL REMAIN ACRES	TLE TEMP. ACRES	PLE PERM. ACRES	PARCEL NUMBER
1	4.4	HJSG ENTERPRISE LLP.	FEE, TLE	14.33	0.08		0.08	14.25	0.10	-	1
2	4.4, 4.5	MELVIN AND EVA JANE OBERMEYER	FEE, TLE	(c) 1.24	0.08	0.37	0.45	0.79	0.08	-	2
3	4.5	MICHAEL J. FEITER	FEE	0.42	0.03	0.08	0.11	0.31		-	3
4	4.4, 4.5	CATHERINE M. KUEPPER	FEE, PLE, TLE	(c) 23.16	0.71	1.18	1.89	21.27	0.17	0.01	4
5	4.4, 4.5	ST. LUKE LUTHERAN CHURCH	FEE, TLE	(c) 6.31	0.23	0.10	0.33	5.98	0.11	-	5
6	4.5	CHRISTOPHER F. AND CHERYL A. POPE	FEE, TLE	(c) 7.71	0.13		0.13	7.58	0.02	-	6
7	4.5	EMIL F. AND SHARON A. NEIDINGER	FEE	(c) 0.84	0.06		0.06	0.78		-	7
20	4.4, 4.5	WE ENERGIES (ELECTRIC)	CONVEYANCE OF RIGHTS								20
21	4.4, 4.5	VERIZON	CONVEYANCE OF RIGHTS								21
22	4.5	AMERICAN TRANSMISSION CO.	CONVEYANCE OF RIGHTS								22

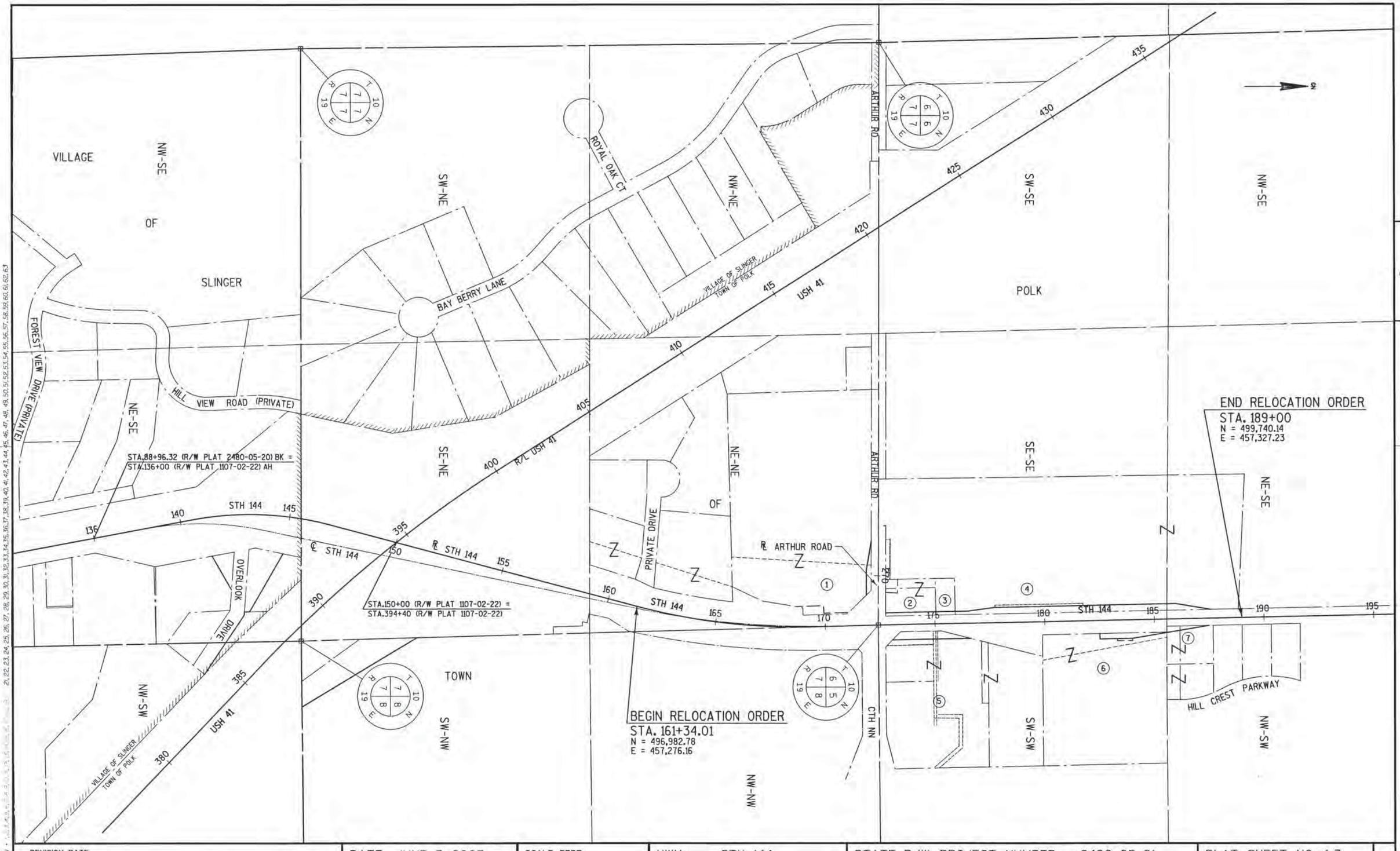
4

LEVELS ON - 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

REVISION DATE	DATE JUNE 3, 2003		HWY: STH 144	STATE R/W PROJECT NUMBER 2480-05-21	PLAT SHEET NO: 4.2	
			COUNTY: WASHINGTON	CONSTRUCTION PROJECT NUMBER 1107-02-79	PS&E SHEET NO:	E

FILE NAME : E:\DOT2\270US41\SURVEY\ARTrd\270_040201_RS.dgn PLOT DATE : 08/08/2003

WISDOT/CADDS SHEET 60



4

REVISION DATE	DATE JUNE 3, 2003	SCALE. FEET 0 200 400	HWY: STH 144	STATE R/W PROJECT NUMBER 2480-05-21	PLAT SHEET NO: 4.3	
			COUNTY: WASHINGTON	CONSTRUCTION PROJECT NUMBER 1107-02-79	PS&E SHEET NO:	E

LEVELS ON : 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

FILE NAME : E:\DOT2\270US41\SURVEY\ARTrd\270_040301_RL.dgn PLOT DATE : 08/08/2003

WISDOT/CADDS SHEET 70

BEARING BASIS:

COORDINATES AND BEARINGS ON THIS PLAT ARE ORIENTED TO THE WISCONSIN COORDINATE SYSTEM SOUTH ZONE, (NORTH AMERICAN DATUM OF 1927). ALL PLAT DISTANCES ARE GROUND LENGTH AND MAY BE CONVERTED TO GRID LENGTH BY MULTIPLYING THE DISTANCE BY THE GRID FACTOR PROVIDED ON THIS DETAIL SHEET.

BEGIN RELOCATION ORDER
STA. 161+34.01
N= 496,982.78
E= 457,276.16
Y= 496,925.92
X= 2,457,223.85

CONCRETE MON. W/BRASS CAP
N= 495,451.65
E= 457,433.50

CONCRETE MON. W/BRASS CAP
N= 498,090.47
E= 454,724.52

CONCRETE MON. W/BRASS CAP
172+41.54
N = 498,082.04
E = 457,361.78

CONCRETE MON. W/BRASS CAP
N= 498,102.92
E= 459,975.97

PI 267+50
N= 498,086.43
E= 456,888.12

PI 268+45.17
N= 498,086.14
E= 456,983.29

STA. 172+24.63 ℞ STH 144 =
STA. 272+24.71 ℞ ARTHUR ROAD
N=498065.13
E=457362.24

℄ CURVE DATA

PI	= 165+45.00
N	= 497,380.19
E	= 457,380.92
DELTA	= 16°19'42" (LT)
D	= 02°00'00"
TAN	= 410.99'
LCH	= 813.66'
LCB	= N06°36'09"E
L	= 816.42'
R	= 2864.79'
PC	= 161+34.01
PT	= 168+50.42

℄ CURVE DATA

PI	= 165+75.92/20.33'
N	= 497,414.96
E	= 457,375.68
DELTA	= 12°57'30" (LT)
D	= 01°30'00"
TAN	= 433.81'
LCH	= 862.07'
LCB	= N05°17'07"E
L	= 863.91'
R	= 3819.83'
PC	= 161+44.05/8.82'
PT	= 170+08.13/1.50'

CURVE C1

R	= 3929.83'
L	= 888.79'
LCH	= 886.90'
LCB	= S05°17'07"W

① HJSG ENTERPRISES LLC.
PARCEL 2

② OBERMEYER

③ MATCHLINE 174+00

④ KUEPPER

⑤ ST. LUKE LUTHERAN CHURCH

⑳ WE ENERGIES (ELECTRIC)
PARCEL 1
V.316,P.628
DOC. 242272
V.1029,P.223
DOC. 544115

㉑ VERIZON, INC.
PARCEL 1
V.1029,P.223
DOC. 544115
V.344,P.438
DOC. 254243
V.316,P.628
DOC. 242272

Note:
The center line of existing right of way is based on WDOT field notes by H.C. Pepper in 1935. Descriptions developed in conjunction with R/W Project F03-1(67) were based on an undocumented Section line location. The centerline as established coincides with offsets to existing structures located in the field.

BASIS OF EXISTING RIGHT-OF-WAY

HIGHWAY	RECORD	WIDTH	DATE
STH 144	R/W PROJECT F03-1(67)	VARIES	1958
STH 144	R/W PROJECT NO. 2436	VARIES	1936
ARTHUR RD	STATE STATUTE 80.01(2)	66'	NONE
CTH NN	R/W PROJECT 2733-1-71 (VISION CORNER) PARCEL 5	VARIES	1976
ARTHUR RD	CSM 3354 V. 20, P. 89	33'(SOUTH)	1989

REVISION DATE	DATE JUNE 3, 2003	SCALE: FEET 0 50 100	HWY: STH 144	STATE R/W PROJECT NUMBER 2480-05-21	PLAT SHEET NO: 4.4
	GRID FACTOR 0.9998856		COUNTY: WASHINGTON	CONSTRUCTION PROJECT NUMBER 1107-02-79	PS&E SHEET NO: E

LEVELS ON - 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,

FILE NAME : e:\DOT2\270US41\SURVEY\ARTrd\270_040401_RP.dgn PLOT DATE : 08/08/2003

WISDOT/CADDS SHEET 75

BASIS OF EXISTING RIGHT-OF-WAY

HIGHWAY	RECORD	WIDTH	DATE
STH 144	R/W PROJECT F03-1(67)	VARIES	1958
STH 144	R/W PROJECT NO. 2436	VARIES	1936
STH 144	WARRANTY DEED DOC. 695878 (PARCEL 6)	VARIES	1995
STH 144	CSM 17	33'(EAST)	1961
STH 144	CSM 2038	33'(EAST)	1978

Note:
The center line of existing right of way is based on WDOT field notes by H.C. Pepper in 1935. Descriptions developed in conjunction with R/W Project F03-1(67) were based on an undocumented Section line location. The centerline as established coincides with offsets to existing structures located in the field.

BEARING BASIS:

COORDINATES AND BEARINGS ON THIS PLAT ARE ORIENTED TO THE WISCONSIN COORDINATE SYSTEM SOUTH ZONE. (NORTH AMERICAN DATUM OF 1927). ALL PLAT DISTANCES ARE GROUND LENGTH AND MAY BE CONVERTED TO GRID LENGTH BY MULTIPLYING THE DISTANCE BY THE GRID FACTOR PROVIDED ON THIS DETAIL SHEET.

GN

SE-SE

④ KUEPPER

NE-SE

④ KUEPPER

END RELOCATION ORDER
STA. 189+00
N= 499,740.14
E= 457,327.23
Y= 499,682.97
X= 2,457,274.91

TOWN

TLE FOR SLOPES

SLOPE INTERCEPT

185' TRANSMISSION LINE EASEMENT

② OBERMEYER

③ FEITER

MATCHLINE

174+00

OF

STH 144

℄ = S/L STH 144 (2621.70')

SEE DETAIL

⑤ ST. LUKE LUTHERAN CHURCH

⑥ POPE

⑦ NEIDINGER
(ACCESS TO HILLCREST PARKWAY)

SOLD JULY 21, 1995 V.1520, P.111 DOC. 695878

SW-SW

LOT 1

CSM 3748 V.23 P.250

CSM 2038 V.10 P.293

CONCRETE MON. W/BRASS CAP
N = 498,082.04
E = 457,361.78

CONCRETE MON. W/BRASS CAP
N= 498,102.92
E= 459,975.97

CONCRETE MON. W/BRASS CAP
N = 500,703.17
E = 457,307.16

12' ELECTRIC EASEMENT

8' TELEPHONE EASEMENT

POLK

DETAIL
NOT TO SCALE

SHOWN "RESERVED" ON CSM 17

LOT 4

LOT 3

CSM 17 V.349, P.137

NW-SW

HILL CREST PARKWAY

⑳ WE ENERGIES (ELECTRIC)
PARCEL 5
V.812,P.24
DOC. 461053

㉑ VERIZON, INC.
PARCEL 5
V.806,P.156
DOC. 458874

㉒ AMERICAN TRANSMISSION CO.
PARCEL 4 (EASEMENT ASSIGNMENT)
DOC. 873216
(V.443,P.361)
PARCEL 6 (EASEMENT ASSIGNMENT)
DOC. 873216
(V.443,P361).
(V.145,P.225)
PARCEL 7 (EASEMENT ASSIGNMENT)
DOC. 873216
(V.145,P.229)

185' TRANSMISSION LINE EASEMENT

REVISION DATE	DATE JUNE 3, 2003	SCALE, FEET 0 50 100	HWY: STH 144	STATE R/W PROJECT NUMBER 2480-05-21	PLAT SHEET NO: 4.5	
	GRID FACTOR 0.9998856		COUNTY: WASHINGTON	CONSTRUCTION PROJECT NUMBER 1107-02-79	PS&E SHEET NO:	E

FILE NAME : E:\DOT2\270US41\SURVEYS\ARTrd\270_040402_RP.dgn PLOT DATE : 08/08/2003

CONVENTIONAL ABBREVIATIONS

ACCESS POINT	AP	LAND CONTRACT	LC
ACCESS RIGHTS	AR	LENGTH OF CURVE	L
ACRES	AC.	LONG CHORD	LCH
AHEAD	AH	LONG CHORD BEARING	LCB
AND OTHERS	et al.	MONUMENT	MON.
BACK	BK	OUTLOT	OL
BARN	B	PAGE	P.
CENTERLINE	℄	PROPERTY LINE	PL
CENTRAL ANGLE OR DELTA	DELTA	QUIT CLAIM DEED	QCD
CERTIFIED SURVEY MAP	C.S.M.	RADIUS	R
COMMERCIAL	C	REFERENCE LINE IS CENTER LINE OF PROPOSED MEDIAN	ℝ
CONSTRUCTION PERMIT	CP	REMAINING	REM.
CORNER	COR.	RIGHT-OF-WAY	R/W
DEED	(D)	SECTION	SEC.
DEGREE OF CURVE	D	SECTION LINE	S/L
DIST. BETWEEN 1/4 CORNERS	(DIST)	SEVERED	SEV.
DOCUMENT	DOC.	SHED	S
EASEMENT	EASE.	STATION	STA.
ESTATE	EST	TANGENT	TAN
GARAGE	G	TEMPORARY LIMITED EASEMENT	TLE
HOUSE	H	TRANSIT LINE	℄
		VOLUME	V.

CONVENTIONAL SYMBOLS

BRIDGE

BUILDING (LABEL)

FOUND 1" IRON PIPE/PIN UNLESS NOTED ⌀/●

R/W MONUMENT ●

R/W STANDARD ▲

GAS PUMP ISLAND G.P.

WELL ⊙WELL

SEPTIC PUMP ⊙SP

SEPTIC TANK ⊙ST

SEPTIC VENT ⊙SEPV

SIGN |SIGN

FEE (HATCHING)

TEMPORARY LIMITED EASEMENT

PERMANENT LIMITED EASEMENT

PARALLEL OFFSET

STATE LINE, COUNTY LINE, TOWN/RANGE LINE

SECTION LINE

QUARTER LINE

SIXTEENTH LINE

PROPOSED REFERENCE LINE

EXISTING CENTERLINE

PROPOSED R/W LINE

EXISTING R/W LINE

PROPERTY LINE

LOT & TIE LINES

SLOPE INTERCEPTS

EXISTING EASEMENT

CORPORATE LIMITS

NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)

NO ACCESS (BY ACQUISITION)

NO ACCESS (BY STATUTORY AUTHORITY)

CONVENTIONAL UTILITY SYMBOLS

			COMPENSABLE		NON-COMPENSABLE
WATER	W	POWER POLE	●	OR	⌀
GAS	G	TELEPHONE POLE	◪	OR	⌀
TELEPHONE	T	LIGHT POLE	✳	OR	✳
OVERHEAD TRANSMISSION LINES	OH	UTILITY PEDESTAL	(LABEL)✕	OR	✕
ELECTRIC	E	ELECTRIC TOWER	⊠	OR	⊠
CABLE TELEVISION	TV				
FIBER OPTIC	FO				
SANITARY SEWER	SAN				
STORM SEWER	SS				

NOTES

COORDINATES AND BEARINGS ON THIS PLAT ARE ORIENTED TO THE WISCONSIN COORDINATE SYSTEM SOUTH ZONE (NORTH AMERICAN DATUM OF 1927). ALL PLAT DISTANCES ARE GROUND LENGTH AND MAY BE CONVERTED TO GRID LENGTH BY MULTIPLYING THE DISTANCE BY THE GRID FACTOR PROVIDED ON THE DETAIL SHEETS.

RIGHT OF WAY MONUMENTS ARE TYPE 2 AND ARE PLACED PRIOR TO OR AT THE TIME OF LAND TITLE TRANSFER, BY WISCONSIN D.O.T. DISTRICT 2 SURVEY.

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

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
1107-02-22	4.0	
FEDERAL PROJECT NUMBER		

PLAT OF RIGHT-OF-WAY REQUIRED FOR

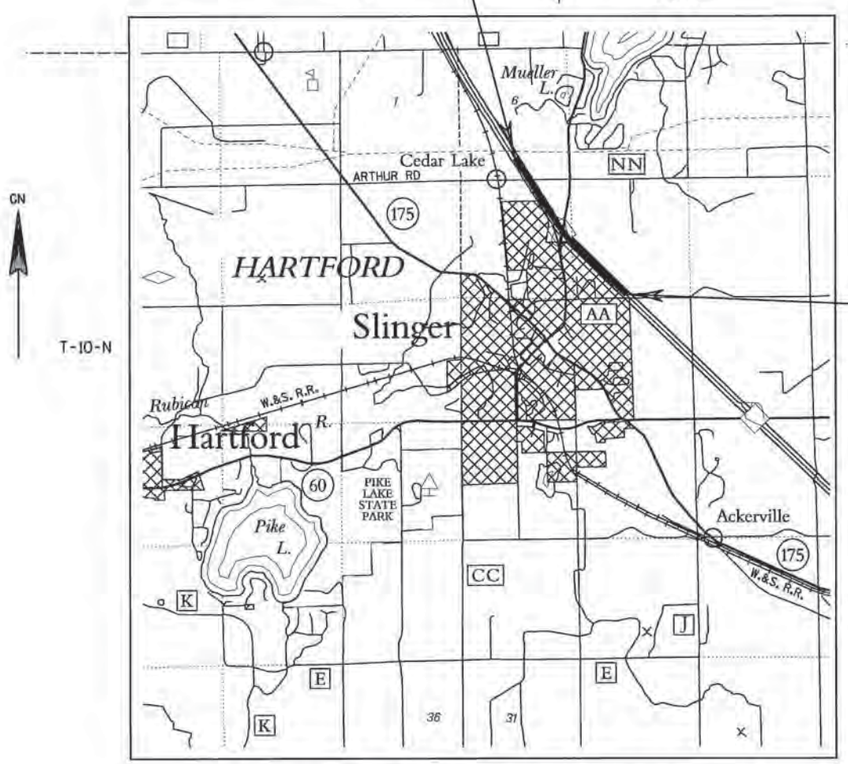
USH 41 FREEWAY MODERNIZATION
STH 144 INTERCHANGE
CTH AA TO ARTHUR ROAD

USH 41 WASHINGTON CO.

CONSTRUCTION PROJECT NUMBER
1107-02-79

END RELOCATION ORDER
STA. 424+74.03
344.32' NORTH OF AND 617.86' EAST OF THE SOUTH 1/4 CORNER OF SECTION 6, T10N, R19E

BEGIN RELOCATION ORDER
STA. 355+00.00
252.99' NORTH AND 311.46' WEST OF THE SOUTH 1/4 CORNER OF SECTION 8, T10N, R19E



LAYOUT
SCALE: 0 1 MILE

TOTAL NET LENGTH OF CENTERLINE = 1.321 MILE

ORIGINAL PLANS PREPARED BY
KAPUR & ASSOCIATES, INC.
CONSULTING ENGINEERS
MILWAUKEE, WISCONSIN
414.351.6668

WISCONSIN ANTHONY J. GROMACKI S-2090 JACKSON WI LAND SURVEYOR

7/1/94 (Date)

REVISION DATE
AUG 18, 1995
JUNE 3, 1996
JULY 28, 1997
JUNE 13, 2003

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED FOR DISTRICT OFFICE
DATE: 8-2-94 Raepl Beiermeister (Signature)

E

SCHEDULE OF LANDS & INTERESTS REQUIRED

AREAS SHOWN IN THE TOTAL ACRES COLUMN MAY BE APPROXIMATE AND ARE DERIVED FROM TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED.

PARCEL NUMBER	SHEET NUMBER	OWNER	INTEREST REQUIRED	TOTAL ACRES	R/W REQUIRED NEW ACRES	R/W REQUIRED EXISTING ACRES	R/W REQUIRED TOTAL ACRES	TOTAL REMAINING ACRES	TLE ACRES	PLE ACRES	PARCEL NUMBER
1 (5)	4.4	BEATRICE M. ZUERN et al.	FEE, PLE	114.68	1.25		1.25	113.43	-	0.007	1
2 (5)	4.4	MILDRED M. HAYES TRUST, TRUSTEE WILLIAM M. HAYES	FEE	3.32	0.49		0.49	2.83	-	-	2
3 (5)	4.4	HELD MEAT PRODUCTS, INC.	FEE	1.28	0.68		0.68	0.60	-	-	3
4	4.4, 4.5	WILLIAM M. HAYES, et al. HERITAGE HILLS	FEE, TLE	84.28	1.20		1.20	83.08	0.10	-	4
5 (2)											5
6	4.5	H.J.S.G. ENTER PRISES	TLE						0.05		6
7 (4)											7
8 (5)	4.4	JOHN AND PAULETTE TODD	PLE							0.006	8
9 (5)	4.4	HERBERT AND SHERLEY PETERS	PLE							0.006	9
30 (5)	4.4	WE ENERGIES (electric)	CONVEYANCE OF RIGHTS								30
31 (5)	4.4	VERIZON	CONVEYANCE OF RIGHTS								31
32	4.4	KOCH PIPELINE	CONVEYANCE OF RIGHTS								32
33 (5)	4.4	VILLAGE OF SLINGER	CONVEYANCE OF RIGHTS								33

4

LEVELS ON - 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

REVISION DATE	DATE	SCALE, FEET	HWY: USH 41	STATE R/W PROJECT NUMBER 1107-02-22	PLAT SHEET NO: 4.1	
AUG 18, 1995 JUNE 3, 1996 JULY 28, 1997 JUNE 13, 2003	AUGUST 2, 1994		COUNTY: WASHINGTON	CONSTRUCTION PROJECT NUMBER 1107-02-79	PS&E SHEET NO:	E

FILE NAME : E:\DOT2\270US41\SURVEY\270DGN\270I_040201_RS.dgn PLOT DATE : 06/19/2003

WISDOT/CADDS SHEET 60

VILLAGE OF SLINGER

TOWN OF POLK

WINTER LN.

FOREST VIEW DRIVE (PRIVATE)

HILL VIEW ROAD (PRIVATE)

BAY BERRY LANE

OVERLOOK DRIVE

PRIVATE DR

ARTHUR ROAD

STH 144

USH 41

U.S.H 41

CTH NN

VILLAGE OF SLINGER / TOWN OF POLK

SW-SE | NW-SE | SW-NE | NW-NE | SE-SE | NE-SE | SE-NE | NE-NE | SW-SW | NW-SW | SW-NW | NW-SW | SE-NE | NE-NE

EQUATION

STA. 88+96.32 (R/W PLAT 2480-05-20) BK =
STA. 136+00.00 (R/W PLAT 1107-02-22) AH

SEE R/W PLAT 2480-05-21
STA. 161+34.01

BEGIN RELOCATION ORDER
STA. 355+00.00
N = 493120.10
E = 459789.53

END RELOCATION ORDER
STA. 424+74.03
N = 498,434.80
E = 455,342.38

REVISION DATE AUG 18, 1995 JUNE 13, 2003 JUN 3, 1996 JULY 28, 1997	DATE AUG 2, 1994 GRID FACTOR 0.9998856	SCALE, FEET 0 300 600	HWY: USH 41 COUNTY: WASHINGTON	STATE R/W PROJECT NUMBER 1107-02-22 CONSTRUCTION PROJECT NUMBER 1107-02-79	PLAT SHEET NO: 4.2 PS&E SHEET NO: E

FILE NAME : E:\DOT2\270US41\SURVEY\270DGN\270I_040301_RL.dgn PLOT DATE : 06/19/2003

BASIS OF EXISTING RIGHT-OF-WAY

HIGHWAY	RECORD	WIDTH	DATE
USH 41	PREVIOUS PROJECT 1104-03-21	VARIES	1974
USH 41	PREVIOUS PROJECT 1107-02-27	VARIES	1993
CTH AA	PREVIOUS PROJECT 1104-03-21	VARIES	1974
USH 41	PREVIOUS PROJECT F03-1(4)	VARIES	1952

CONCRETE MON. W/BRASS CAP
N= 492,810.21
E= 457,486.03

BEARING BASIS

COORDINATES AND BEARINGS ON THIS PLAT ARE ORIENTED TO THE WISCONSIN COORDINATE SYSTEM SOUTH ZONE, (NORTH AMERICAN DATUM OF 1927). ALL PLAT DISTANCES ARE GROUND LENGTH AND MAY BE CONVERTED TO GRID LENGTH BY MULTIPLYING THE DISTANCE BY THE GRID FACTOR PROVIDED ON THIS DETAIL SHEET.

BEGIN
RELOCATION ORDER
STA. 355+00 USH 41
N= 493,120.09
E= 459,789.54
Y= 493,063.71
X= 2,459,736.95

IRON PLUG
351+00.07/32.78' RT
N= 492,867.10
E= 460,101.00

CONCRETE MON. W/BRASS CAP
N= 492,885.25
E= 462,711.09

CONCRETE MON. W/BRASS CAP
N= 495,477.07
E= 460,046.41

CTH AA
SIXTEENTH LINE
VILLAGE OF SLINGER
TOWN OF POLK
USH 41
SB ON RAMP
SE RAMP
SLOPE INTERCEPT
MATCHLINE 376+00
LOT 1
CSM 4567
DOC. 702111
V.30,P.310
LOT 2
D.O.T. OWNED
D.O.T. OWNED
NE-NW
SW-NE
SE-SW
MS-MS
MS-MN
SE-MS
NE-MN
TOWN OF POLK

REVISION DATE AUG 18, 1995 JUNE 13, 2003 JUNE 3, 1996 JULY 28, 1997	DATE AUG 2, 1994	SCALE, FEET 0 100 200	HWY: USH 41	STATE R/W PROJECT NUMBER 1107-02-22	PLAT SHEET NO: 4.3
	GRID FACTOR 0.9998856		COUNTY: WASHINGTON	CONSTRUCTION PROJECT NUMBER 1107-02-79	PS&E SHEET NO:

FILE NAME : E:\DOT2\270US41\SURVEY\270DGN\270I_040401_RP.dgn PLOT DATE : 06/19/2003

WISDOT/CADDS SHEET 75

SEE R/W PLAT 2480-05-20
STA. 88+96.32 BK
STA. 136+00 AH

BEARING BASIS

COORDINATES AND BEARINGS ON THIS PLAT ARE ORIENTED TO THE WISCONSIN COORDINATE SYSTEM SOUTH ZONE, (NORTH AMERICAN DATUM OF 1927). ALL PLAT DISTANCES ARE GROUND LENGTH AND MAY BE CONVERTED TO GRID LENGTH BY MULTIPLYING THE DISTANCE BY THE GRID FACTOR PROVIDED ON THIS DETAIL SHEET.

STH 144 CURVE DATA

PI	= 143+77.65
N	= 495,274.35
E	= 456,825.84
DELTA	= 25°14'49" (RT)
D	= 04°00'00"
TAN	= 320.79'
LCH	= 626.08'
LCB	= N02°08'36"E
L	= 631.17'
R	= 1432.39'
PC	= 140+56.85
PT	= 146+88.02

USH 41 CURVE DATA

PI	= 393+18.42
N	= 495,761.60
E	= 457,032.21
DELTA	= 13°55'49" (RT)
D	= 01°00'00"
TAN	= 699.96'
LCH	= 1393.60'
LCB	= N39°15'50"W
L	= 1393.03'
R	= 5729.58'
PC	= 386+18.46
PT	= 400+11.48

SOLD 11/2006
DOC. 1143173
0.68 AC

HELD

DETAIL OF OUTLOT 1

PARCEL 1 DETAIL FOR PLE NOT TO SCALE

PARCEL 8 & 9 DETAIL FOR PLE NOT TO SCALE

BASIS OF EXISTING RIGHT-OF-WAY

HIGHWAY	RECORD	WIDTH	DATE
USH 41	PREVIOUS PROJECT 1104-03-21	VARIES	1974
STH 144	PREVIOUS PROJECT F03-1(67)	VARIES	1958
USH 41	PREVIOUS PROJECT F03-1(4)	VARIES	1952
OVERLOOK DRIVE	CSM 4566	66'	1995

℄ CURVE DATA

PI	= 141+08.59/0'
N	= 495,009.80
E	= 456,874.78
DELTA	= 22°14'41"
D	= 04°00'00"
TAN	= 281.61'
LCH	= 552.63'
LCB	= N00°38'32"E
L	= 556.18'
R	= 1432.39'
PC	= 138+27.00/0'
PT	= 143+88.33/70.30'

OVERLOOK DRIVE CURVE DATA

PI	= 42+81.17
N	= 495,070.42
E	= 457,005.70
DELTA	= 33°15'23"
D	= 28°38'52"
TAN	= 59.73'
LCH	= 114.46'
LCB	= N62°43'45"E
L	= 116.09'
R	= 200.00'
PC	= 42+21.44
PT	= 43+37.53

OVERLOOK DRIVE CURVE DATA

PI	= 44+27.56
N	= 495,174.26
E	= 457,113.61
DELTA	= 48°28'08"
D	= 28°38'52"
TAN	= 90.03'
LCH	= 164.19'
LCB	= N70°20'07"E
L	= 169.19'
R	= 200.00'
PC	= 43+37.53
PT	= 45+06.72

CURVE C1
DELTA= 01°26'23"
R = 5729.58'
L = 143.97'
LCH = 143.97'
LCB = N45°30'32"W

CURVE C2
DELTA= 16°20'37"
R = 1432.39'
L = 408.59'
LCH = 407.21'
LCB = N01°10'49"E

CONCRETE MON. W/BRASS CAP
N= 495,477.07
E= 460,046.41

CONC. MON. W/BRASS CAP
388+16.01/50.41'
N= 495,451.65
E= 457,433.50

CONC. MON. W/BRASS CAP
N= 495,454.39
E= 454,749.71

CSM 4962
V.34 P.152
DOC. 778033
LOT 15

CSM 4962
V.34 P.152
DOC. 778033
LOT 14

8 TODD

CSM 4962
V.34 P.152
DOC. 778033
LOT 13

9 PETERS

CSM 4962
V.34 P.152
DOC. 778033
LOT 12

CSM 4961
V.34 P.148
DOC. 778082
LOT 11

LOT 10

CSM 4566
DOC. 702110
V.30,P.306
LOT 2

CSM 4566
DOC. 702110
V.30,P.306
LOT 1

CSM 4567
DOC. 702111
V.30,P.310
LOT 1

LOT 3

2 HAYES 8' WATER EASEMENT

3 HELD

4 HAYES, et al.
ACQUIRED BY V. 1650 P. 30,
DOC. 733347, 11/18/1996

1 ZUERN et al.
PARCEL 1

30' WIDE LANDSCAPE EASEMENT PER CSM 4962

ELEC. EASEMENT 6' WIDE

ELEC. & TELEPHONE EASEMENT 10' WIDE

GAS EASEMENT 30' WIDE

PLE FOR DRAINAGE

SLOPE INTERCEPT

GAP IN LEGAL DESCRIPTION

OVERLOOK DRIVE

ACQUIRED BY PROJECT F03-1(67)

ACQUIRED BY PROJECT 1104-03-21

SEE DETAIL

VILLAGE OF SLINGER

TOWN OF POLK

TOWN OF SLINGER

D.O.T. OWNED

SB ON RAMP

NB ON RAMP

SB OFF RAMP

NB OFF RAMP

USH 41

STH 144

SIXTEENTH LINE

MATCHLINE 376+00

MATCHLINE 405+03.26

MATCHLINE 159+11.29

30 WE ENERGIES (electric)
PARCEL 3
V.493,P.679 DOC. 320021
V.610,P.465 DOC. 373521
V.494,P.435 DOC. 320309

31 VERIZON
PARCEL 3
V.493,P.679 DOC. 320021
V.494,P.435 DOC. 320309

32 KOCH PIPELINE EASEMENT
PARCEL 1
V.986,P.164 DOC. 528107
V.986,P.177 DOC. 528110
V.986,P.184 DOC. 528112

33 VILLAGE OF SLINGER
PARCEL 2
CSM 4566 V.30,P.306 DOC. 702110

AGRICULTURE DRIVEWAY FROM PROJECT F03 1(67)

REVISION DATE AUG 18, 1995 JUNE 13, 2003 JUNE 3, 1996 JULY 28, 1997	DATE AUG 2, 1994 GRID FACTOR 0.9998856	SCALE, FEET 0 100 200	HWY: USH 41 COUNTY: WASHINGTON	STATE R/W PROJECT NUMBER 1107-02-22 CONSTRUCTION PROJECT NUMBER 1107-02-79	PLAT SHEET NO: 4.4 PS&E SHEET NO: E

FILE NAME : E:\DOT2\270US41\SURVEY\270DGN\270I_040402_RP.dgn PLOT DATE : 06/19/2003

WISDOT/CADDS SHEET 75

LEVELS ON - 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

BEARING BASIS

COORDINATES AND BEARINGS ON THIS PLAT ARE ORIENTED TO THE WISCONSIN COORDINATE SYSTEM SOUTH ZONE, (NORTH AMERICAN DATUM OF 1927). ALL PLAT DISTANCES ARE GROUND LENGTH AND MAY BE CONVERTED TO GRID LENGTH BY MULTIPLYING THE DISTANCE BY THE GRID FACTOR PROVIDED ON THIS DETAIL SHEET.

MATCHLINE 405+03.26

MATCHLINE 159+11.29

ACQUIRED BY PROJECT F03-1(67)

SIXTEENTH LINE

S89°52'47"E

435 406+79.13 276.92'

434 406+17.57 180'

449 403+95.29 170'

158+77.96 126.80'

159+31.85 90.02'

30' WIDE LANDSCAPE EASEMENT PER CSM 4961

LOT 10

CSM 4961 V.34 P.148 DOC. 778082 LOT 9

CSM 4961 V.34 P.148 DOC. 778082 LOT 8

CSM 4960 V.34 P.144 DOC. 778081 LOT 7

LOT 6

VILLAGE OF SLINGER

NW-NE

BAY BERRY LANE

S55°41'42"W

N59°32'55"E

114.81'

408+38.88 180'

4 HAYES, et al

TLE ACQUIRED BY V.1650, P. 30, DOC. 733347, 11/18/1996

TLE FOR SLOPES

161.12'

30'

436 408+88.33 150'

410+00 150', 180'

33.01'

SLOPE INTERCEPT

CSM 4960 V.34 P.144 DOC. 778081 LOT 5

CSM 4959 V.34 P.140 DOC. 778080 LOT 4

LOT 2

CONCRETE MON. W/CAST IRON PIPE
N= 498,090.47
E= 454,724.52

N 32°17'55" W

NB ON RAMP

1175.18'

410'

SB OFF RAMP

CSM 4960 OUTLOT 1

VILLAGE OF SLINGER
TOWN OF POLK

N 32°17'55" W

PL

LOT 3

N59°31'59"E

CSM 4959 V.34 P.140 DOC. 778080 LOT 1

4

PARCEL 2 CSM 3303

C

G

H

SOLD 0.53 AC DOC. 763611 VOL. 1760 PG 509 DEC 3, 1992

OUTLOT 1

PARCEL 1 CSM 2866 16/72 DOC. 487363

PRIVATE DR.

I.E

160+95.14 116.81'

160 N 14°46'00"E

EXISTING ℄ STH 144

160+21.72 85.31'

161+23.86 115.59'

161+49.21 101.59'

℄ PC 161+44.05 8.82'

161+89.10 100'

PARCEL 2 CSM 3785 24/22 DOC. 588931

PARCEL 1 CSM 3785 24/22 DOC. 588931

USH 41

℄ USH 41

415

1020.50'

170'

1063.51'

55

SEE R/W PLAT 2480-05-21
STA. 161+34.01

SLOPE INTERCEPT

442 421+90.12 273.35'

443 422+51.24 294.88'

440 421+11.59 150'

B

S

C

H

G

N89°49'01"W

ROAD CLOSED

ARTHUR ROAD

33'

33'

N 89°49'01" W 146.28'

40'

42+79.08 277.16'

N00°10'59"E

289.77'

424+78.84 150' 444

448 414+15.79 170'

℄ CURVE DATA

PI = 165+45.00
N = 497,380.19
E = 457,380.92
DELTA = 16°19'42" (LT)
D = 02°00'00"
TAN = 410.99'
LCH = 813.66'
LCB = N06°36'09"E
L = 816.42'
R = 2864.79'
PC = 161+34.01
PT = 169+50.42

PARCEL 1 CSM 3354 24/22 DOC. 588931

NE-NE

N 01°03'15" W

515.23'

D.O.T. OWNED

420+63.51 S/L = ℄

420

837.21'

(2633.27')

417+76.75 388.99'

420+07.32 200' 445

N 89°49'01" W

N 89°49'01" W 280.97'

50'

ROAD CLOSED

418+56.43 437.02' 446

425

150'

200'

430

SOLD 0.782 AC DOC. 778343 MAY 4, 1998

SLOPE INTERCEPT

167+07.73 114.05' N5

6 HJSG

PARCEL 2 CSM 3354 20/89 DOC. 539969

℄ STH 144

165

PI ℄ 165+45.00

PI ℄ 165+75.92

(2651.37')

S/L

PI ℄ 169+50.42 S/L = ℄

C3

168+98.11 88.54' 135

136 168+98.79 54.54'

I.P.

225.70'

TELE EASEMENT

200'

ELEC. & TELE. EASEMENT 5' WIDE

110'

170

55'

171+11.97 65.00'

N 44°15'52" W 152.70'

171+01.14 55.00' 68

170+07.43 108.50

171+48.87 103.41'

171+63.08 123.89'

NO1°41'38"W 141.44'

NO1°41'38"W ℄

NO1°33'42"W R

170+08.13 1.50'

PT ℄ 170+08.13

N89°35'50"E

CONCRETE MON. W/BRASS CAP
N= 498,082.04
E= 457,361.78

30 WE ENERGIES (electrical)

PARCEL 6 V.316,P.628 DOC. 242272

31 VERIZON

PARCEL 6 V.316,P.628 DOC. 242272 V.344,P.428 DOC. 254243

OF

POLK

SIXTEENTH LINE

℄ CURVE DATA

PI = 165+75.92/20.33'
N = 497,414.96
E = 457,375.68
DELTA = 12°57'30" (LT)
D = 01°30'00"
TAN = 433.81'
LCH = 862.07'
LCB = N05°17'07"E
L = 863.91'
R = 3819.83'
PC = 161+44.05/8.82'
PT = 170+08.13/1.50'

CURVE C3

R = 3929.83'
L = 888.79'
LCH = 886.90'
LCB = S05°17'07"W

END RELOCATION ORDER
STA. 424+74.03
N= 498,434.79
E= 455,342.38
Y= 498,377.77
X= 2,455,290.29

3S-MS

SE-SE

BASIS OF EXISTING RIGHT-OF-WAY

HIGHWAY	RECORD	WIDTH	DATE
USH 41	PREVIOUS PROJECT 1104-03-21	VARIES	1974
STH 144	PREVIOUS PROJECT F03-1(67)	VARIES	1952
USH 41	PREVIOUS PROJECT F03-1(4)	VARIES	1958
ARTHUR ROAD	PREVIOUS PROJECT F03-1(67)	VARIES	1958

REVISION DATE
AUG 18, 1995
JUNE 3, 1996
JULY 28, 1997
JUNE 13, 2003

DATE AUG 2, 1994

GRID FACTOR 0.9998856

SCALE, FEET 0 100 200

HWY: USH 41

COUNTY: WASHINGTON

STATE R/W PROJECT NUMBER 1107-02-22

CONSTRUCTION PROJECT NUMBER 1107-02-79

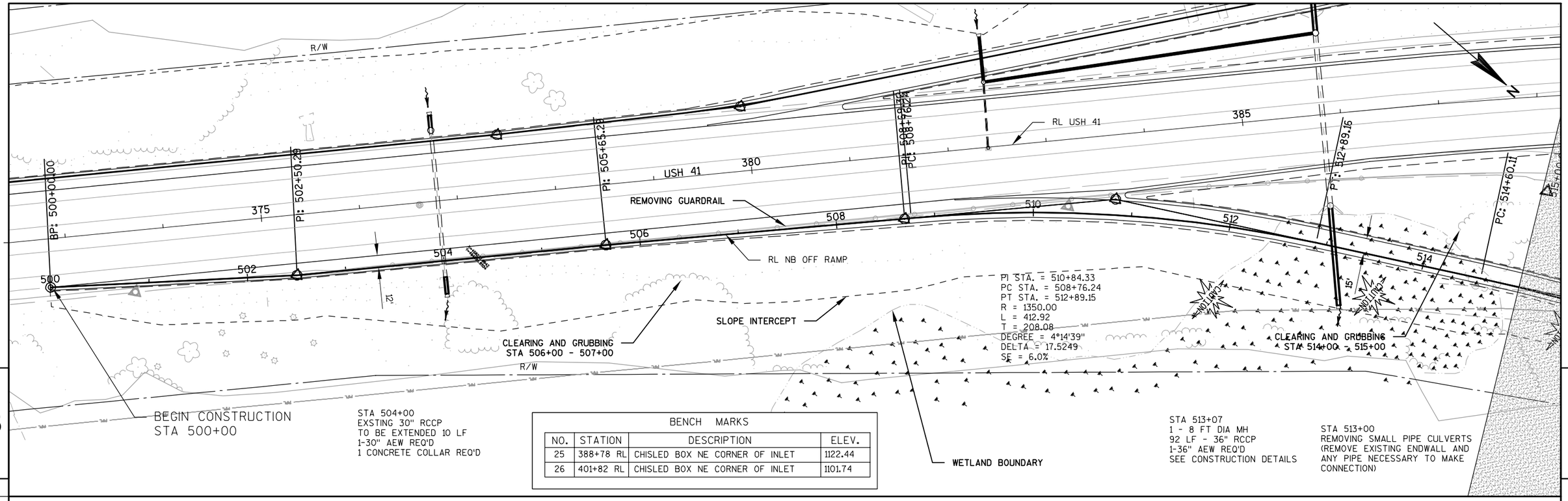
PLAT SHEET NO: 4.5

PS&E SHEET NO:

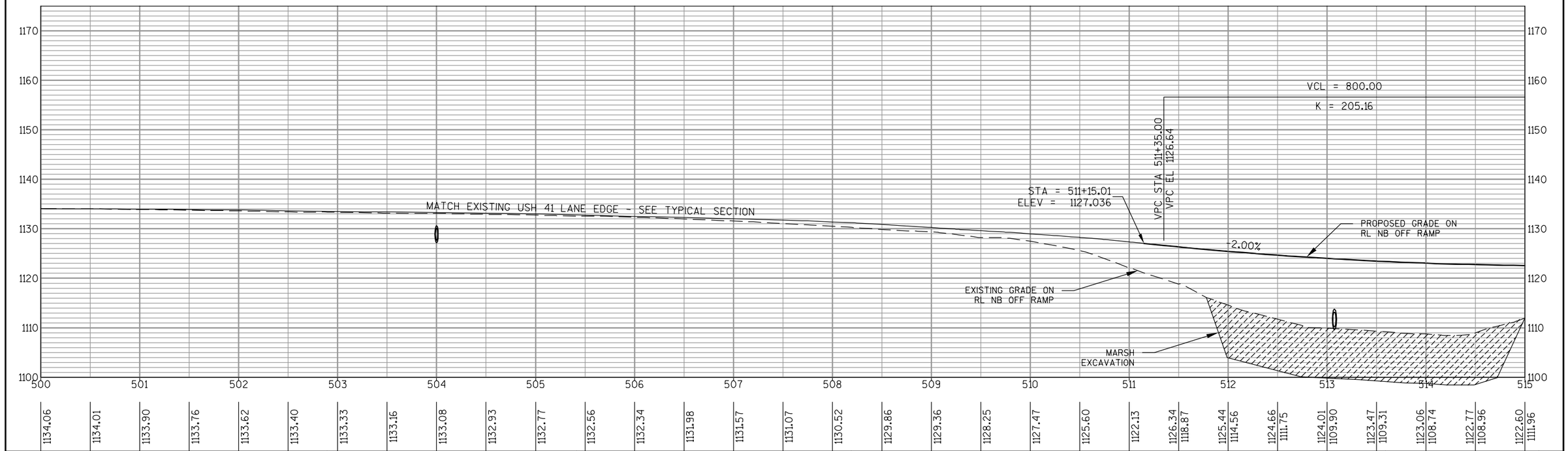
FILE NAME : e:\DOT2\270US41\SURVEY\270DGN\2701_040403_RP.dgn PLOT DATE : 02/23/2004

WISDOT/CADDS SHEET 75

LEVELS ON • 1,2,3,4,5,6,7,8,9,10,11,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45



BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEV.
25	388+78 RL	CHISLED BOX NE CORNER OF INLET	1122.44
26	401+82 RL	CHISLED BOX NE CORNER OF INLET	1101.74

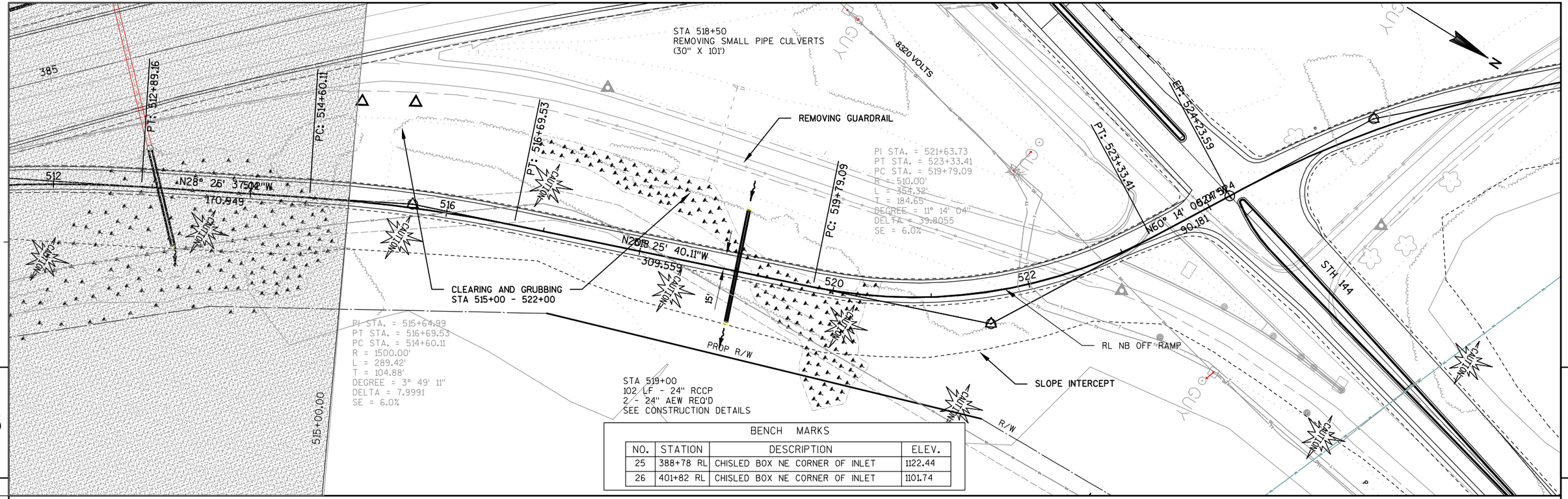


1134.06 1134.01 1133.90 1133.76 1133.62 1133.40 1133.33 1133.16 1133.08 1132.93 1132.77 1132.56 1132.34 1131.98 1131.57 1131.07 1130.52 1129.86 1129.36 1128.25 1127.47 1125.60 1122.13 1126.34 1118.87 1125.44 1114.56 1124.66 1111.75 1124.01 1109.90 1123.47 1109.31 1123.06 1108.74 1122.77 1108.96 1122.60 1111.96

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PLAN AND PROFILE - NB OFF RAMP, 1 OF 2	SHEET 159	E

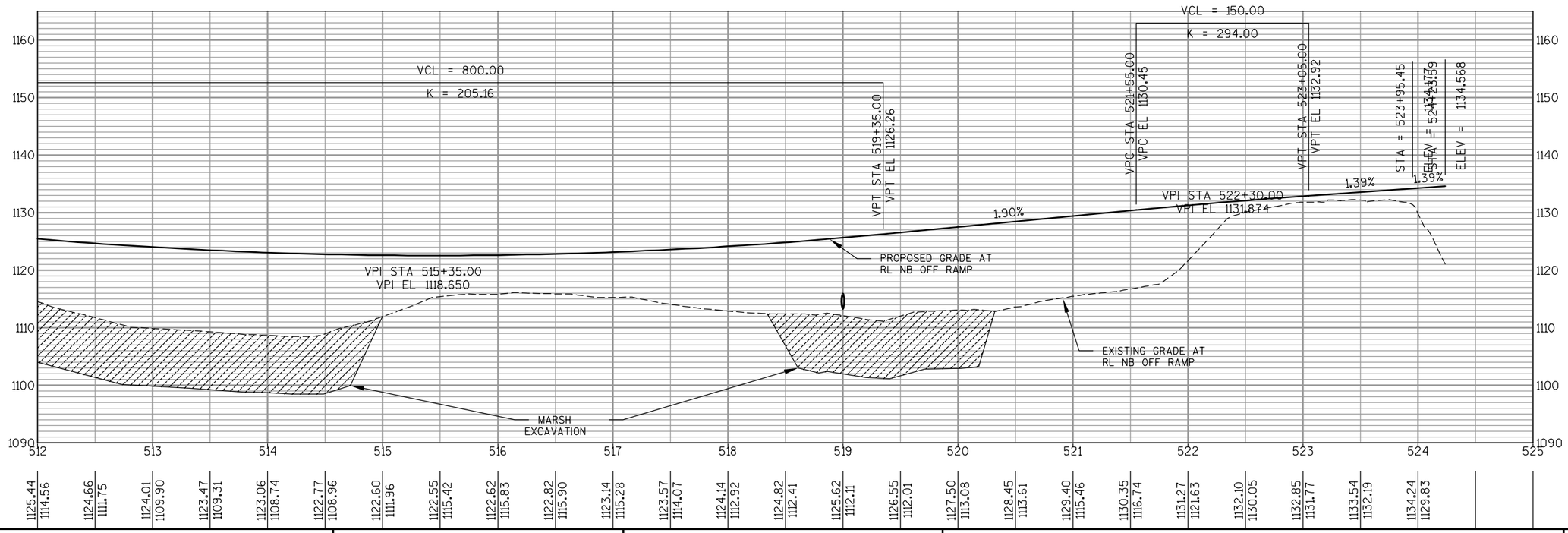
FILE NAME : L:\PROJECTS\11609\DWG\050101_PP.DWG PLOT DATE : 8/23/2013 11:19 AM PLOT BY : MOYER, TIM PLOT NAME : _____ PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 44



BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
25	388+78 RL	CHISLED BOX NE CORNER OF INLET	1122.44
26	401+82 RL	CHISLED BOX NE CORNER OF INLET	1101.74



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PLAN AND PROFILE - NB OFF RAMP, 2 OF 2	SHEET 160	E

PI STA. = 601+65.57
PC STA. = 603+13.98
PT STA. = 600+14.91
R = 1000.00'
L = 299.07'
T = 150.66'
DEGREE = 5° 43' 46"
DELTA = 17.1355
SE = 4.9%

RAMP CLOSURE GATES SOLAR POWERED 30-FT, STA. 601+05, LT
SEE CONSTRUCTION DETAILS.

BM 26

USH 41

RL USH 41

REMOVING GUARDRAIL

PT: 603+13.98

PC: 609+85.45

PT: 612+26.41

PI: 612+74.38

PI: 613+74.43

BP: 600+00.00

PC: 600+14.91

RL NB ON RAMP

N43° 05' 52.31"W
671.473

SLOPE INTERCEPT

CLEARING AND GRUBBING
STA 614+25 - 615+25

PI STA. = 611+06.25
PC STA. = 612+26.41
PT STA. = 609+85.45
R = 1350.00'
L = 240.95'
T = 120.80'
DEGREE = 4°14'39"
DELTA = 10.2263
SE = 6.0%

CLEARING AND GRUBBING
STA 603+50 - 604+50

REMOVING GUARDRAIL

STA 604+00
148 LF - 30" RCCP REQ'D
2 - 30" AEW
SEE CONSTRUCTION DETAILS

STA 604+00
REMOVE SMALL PIPE CULVERTS
(30" X 95" CMCP)

STA 608+76
60 LF - 15" RCCP REQ'D
2-15" RCAEW
SEE CONSTRUCTION DETAILS

STH 144

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
26	401+82 RL	CHISLED BOX NE CORNER OF INLET	1101.74
27	416+58 RL	CHISLED BOX NE CORNER OF INLET	1063.30

STA = 600+00.00
ELEV = 1134.56

VCL = 230.00
K = 66.15

VPC STA 600+28.57
VPC ELI 1133.86

-2.4%

VPI STA 601+43.57
VPI EL 1131.000

VPT STA 602+58.57
VPT EL 1124.14

-5.96%

VPC STA 603+37.14
VPC EL 1119.46

PROPOSED GRADE ON
RL NB ON RAMP

VCL = 500.00
K = 178.69

VPI STA 605+87.14
VPI EL 1104.553

VPT STA 608+37.14
VPT EL 1096.64

EXISTING GRADE ON
RL NB ON RAMP

-3.16%

STA = 610+09.97
ELEV = 1091.174

1150 1140 1130 1120 1110 1100 1090 1080 1075

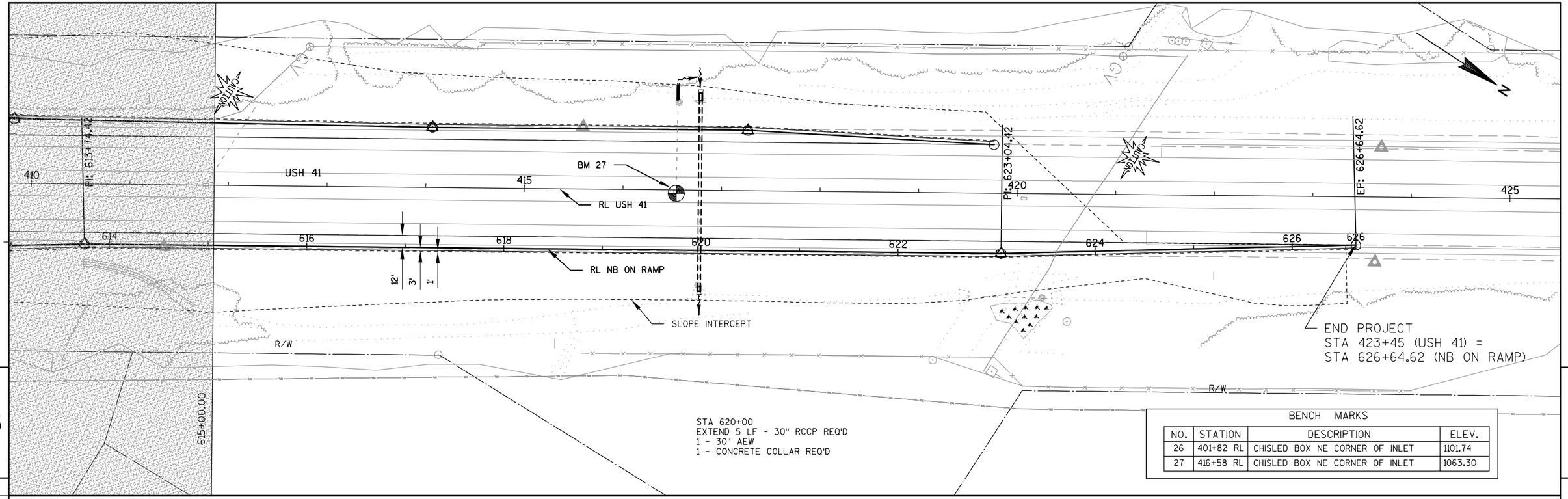
600 605 610 615

1134.57	1131.70	1127.38	1121.67	1115.82	1110.49	1105.72	1101.51	1097.86	1094.65	1091.49	1088.49	1086.95	1082.75	1081.79	1079.04
1121.05	1112.16	1110.77	1119.60	1105.03	1104.43	1108.02	1100.73	1098.40	1096.50	1091.80					

PROJECT NO:1107-02-79	HWY:USH 41	COUNTY:WASHINGTON	PLAN AND PROFILE - NB ON RAMP, 1 OF 2	SHEET 161	E

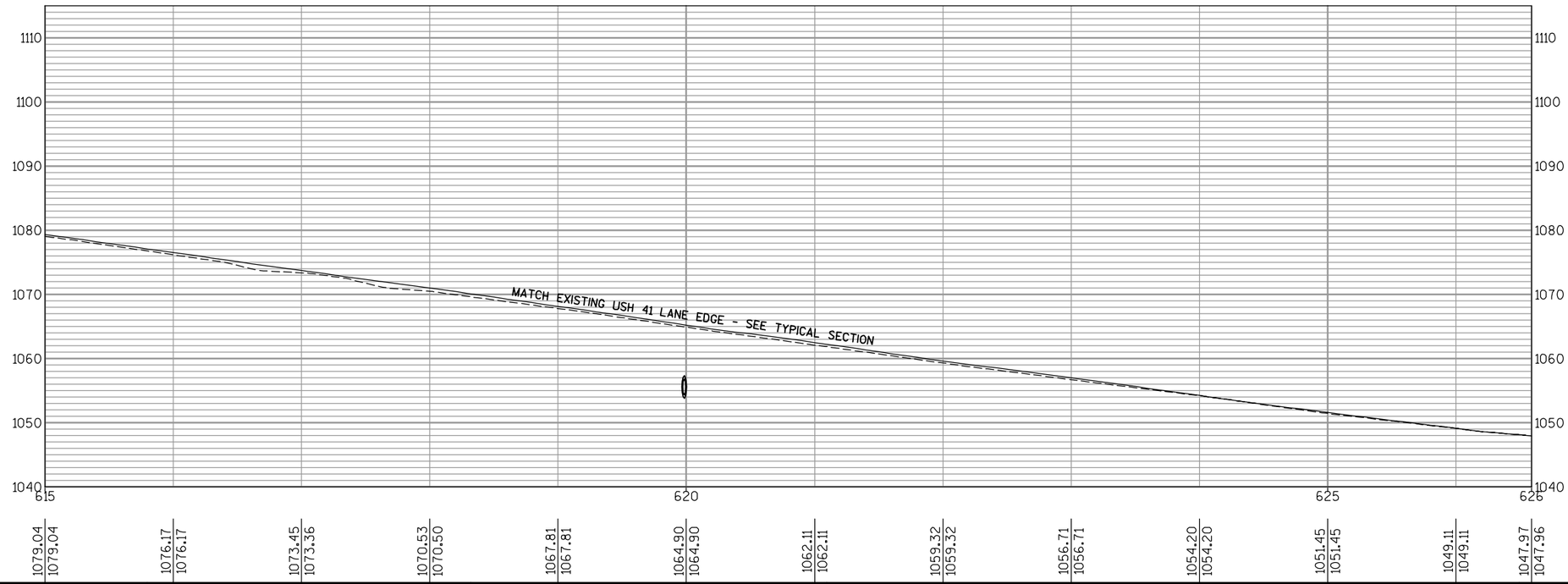
FILE NAME : L:\PROJECTS\11609\DWG\050103_PP.DWG PLOT DATE : 7/26/2013 2:06 PM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

WISDOT/CADDS SHEET 44



BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
26	401+82 RL	CHISLED BOX NE CORNER OF INLET	1101.74
27	416+58 RL	CHISLED BOX NE CORNER OF INLET	1063.30



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PLAN AND PROFILE - NB ON RAMP, 2 OF 2	SHEET 162	E

BEGIN PROJECT
STA 361+55 (USH 41) =
STA 700+00 (SB ON RAMP)

BP: 700+00.00

CLEARING AND GRUBBING
STA 701+00 - 704+00

PI: 703+60.20

SLOPE INTERCEPT

R/W

STA 712+24
EXISTING 30" RCCP TO REMAIN
PLACE 1 4-FT DIA MH AT END OF
EXISTING PIPE AND EXTEND WITH
4 LF - 30 RCCP
1-30" AEW REQ'D
SEE CONSTRUCTION DETAILS

CLEARING AND GRUBBING
STA 713+00 - 714+00

PI: 712+90.20

PC: 714+83.65

715+00.00

CLEARING AND GRUBBING
STA 706+00 - 710+00

12'
3'
1'

RL SB ON RAMP

700 702 704 706 708 710 712 714

365 370 375

USH 41

RL USH 41

715+00.00

5

5

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
25	388+78 RL	CHISLED BOX NE CORNER OF INLET	1122.44
26	401+82 RL	CHISLED BOX NE CORNER OF INLET	1101.74

1170 1160 1150 1140 1130 1120 1110 1100

MATCH EXISTING USH 41 LANE EDGE - SEE TYPICAL SECTION

700 705 710 715

1131.39 1132.23 1133.00 1133.61 1134.05 1134.58 1134.93 1135.09 1135.21 1135.25 1135.17 1135.00 1134.61 1134.17 1133.36 1132.56

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PLAN AND PROFILE - SB ON RAMP, 1 OF 2	SHEET 163	E

PI STA. = 715+38.85
PC STA. = 715+93.98
PT STA. = 714+83.65
R = 1350.00'
L = 110.32'
T = 55.19'
DEGREE = 4°14'39"
DELTA = 4.6822
SE = 6.0%

STA 721+50
REMOVING SMALL PIPE CULVERTS
(REMOVE EXISTING ENDWALL AND
ANY PIPE NECESARRY TO MAKE
CONNECTION)

STA 721+30
1 - 8 FT DIA MH
67 LF - 36"RCCP REQ'D
AND 1 INLET MEDIAN 2 GRATE
SEE CONSTRUCTION DETAILS

STA 717+88
1 - INLET MEDIAN 1 GRATE W/TYPE MS COVER
40 LF - 15" RCCP
1-15" AEW REQ'D
SEE CONSTRUCTION DETAILS

EXISTING POND

GRADING FOR FUTURE SIDEWALK

RAMP CLOSURE GATE SOLAR
37-FT, STA. 727+06, LT
SEE CONSTRUCTION DETAILS.

SLOPE INTERCEPT

BEGIN CONCRETE CURB
& GUTTER 30-INCH TYPE D

PC: 722+39.85

PT: 723+60.03

136' OF 24" RCP

PROP R/W

R/W

RL SB ON RAMP

PROPOSED POND
BOTTOM EL. 1133.00
SEE CONSTRUCTION
DETAILS.

RL USH 41

BM 25

PI STA. = 723+00.00
PC STA. = 723+60.03
PT STA. = 722+39.85
R = 1100.00'
L = 120.18'
T = 60.15'
DEGREE = 5° 12' '31"
DELTA = 6.2596
SE = 4.9%

PC: 714+83.65

PT: 715+93.98

EP: 728+25.27

albany cable

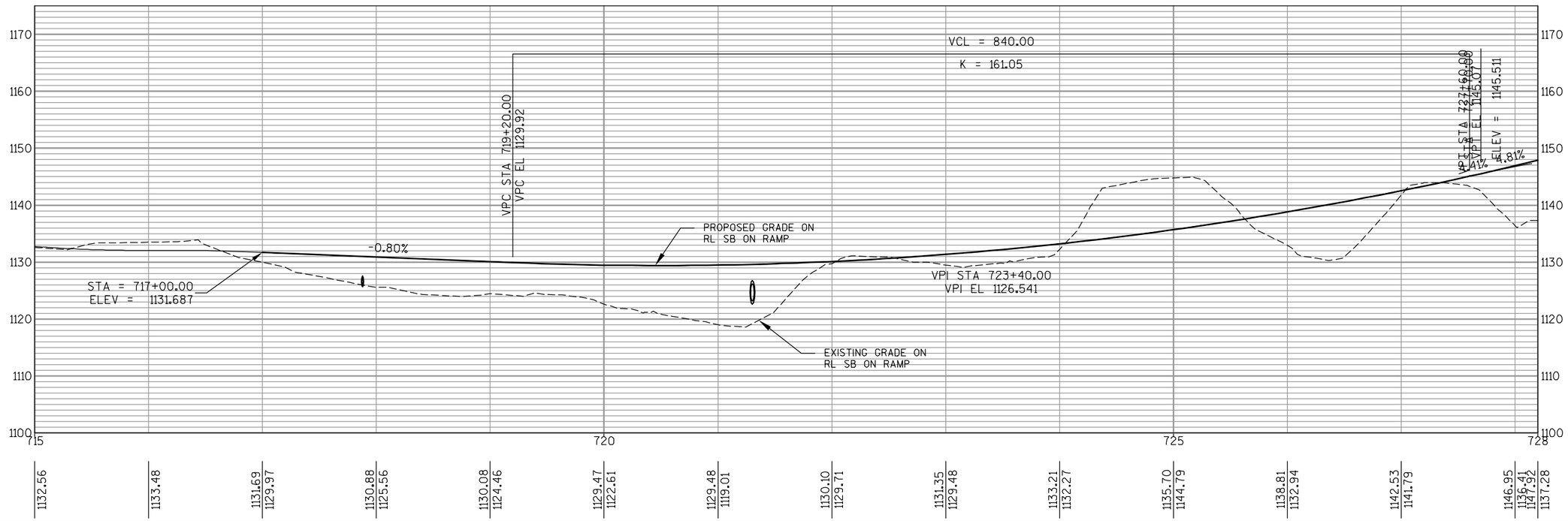
8320 VOLTS

USH 41

STH 144

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
25	388+78 RL	CHISLED BOX NE CORNER OF INLET	1122.44
26	401+82 RL	CHISLED BOX NE CORNER OF INLET	1101.74



PROJECT NO:1107-02-79	HWY:USH 41	COUNTY:WASHINGTON	PLAN AND PROFILE - SB ON RAMP, 2 OF 2	SHEET 164	E

REMOVING GUARDRAIL

STA 805+80
REMOVING SMALL PIPE CULVERT
30" X 87'

REMOVING CURB & GUTTER

REMOVING PAVEMENT
STA 143+15 - 803+00
LOOP RAMP - RAISED MEDIAN

STA 805+50
246 LF - 36" RCCP REQ'D
2 - 36" AEW REQ'D
SEE CONSTRUCTION DETAILS

PI STA. = 807+34.33
PT STA. = 809+69.32
PC STA. = 804+94.32
R = 1340.00'
L = 475.00'
T = 240.02'
DEGREE = 4° 16' 33"
DELTA = 20.3101
SE = 3.4%

BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEV.
25	388+78 RL	CHISLED BOX NE CORNER OF INLET	1122.44
26	401+82 RL	CHISLED BOX NE CORNER OF INLET	1101.74

PC: 801+18.20

PT: 804+59.07

PC: 804+94.32

BP: 800+00.00

PI STA. = 803+01.07
PT STA. = 804+59.07
PC STA. = 801+18.20
R = 380.00'
L = 340.87'
T = 182.87'
DEGREE = 15° 04' 40"
DELTA = 51.3964
SE = 4.0%

SLOPE INTERCEPT

PT: 809+69.32

CLEARING AND GRUBBING
STA 811+00 - 825+00

R/W

RL SB OFF RAMP

CLEARING AND GRUBBING
STA 803+00 - 810+00

CAUTION

RL USH 41

BM 26

STH 144

USH 41

800+00.00

815+00.00

VCL = 450.00
K = 47.60
VPI STA 802+51.84
VPI EL 1156.866

VPC STA 800+26.84
VPC EL 1149.10

VPT STA 804+76.84
VPT EL 1143.36

PROPOSED GRADE ON
RL SB OFF RAMP

-6.00%

EXISTING GRADE ON
RL SB OFF RAMP

VPC STA 808+51.84
VPC EL 1120.86

VCL = 800.00
K = 212.23

VPI STA 812+51.84
VPI EL 1096.860

1148.17 1137.24 | 1151.06 1133.38 | 1151.93 1128.77 | 1150.69 1123.78 | 1147.36 1112.95 | 1141.97 1098.43 | 1135.97 1095.44 | 1129.97 1096.62 | 1123.97 1100.06 | 1118.03 1105.25 | 1112.49 1111.23 | 1107.42 1110.13 | 1102.83 1107.99 | 1098.70 1096.93 | 1095.05 1091.90 | 1091.87 1088.35

PROJECT NO:1107-02-79	HWY:USH 41	COUNTY:WASHINGTON	PLAN AND PROFILE - SB OFF RAMP, 1 OF 2	SHEET 165	E

FILE NAME : L:\PROJECTS\11609\DWG\050107_PP.DWG PLOT DATE : 7/26/2013 2:08 PM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 44

STA. 815+00
40 LF - 24" RCCP
1 INLET MEDIAN 2 GRATE
W/ 2 MS COVERS REQ'D
1 - 24" AEW REQ'D
SEE CONSTRUCTION DETAILS

STA. 815+26
EXTEND 40 LF - 12" RCCP
1 - 12" AEW REQ'D
1 CONC. COLLAR REQUIED
SEE CONSTRUCTION DETAILS

PI STA. = 818+31.15
PT STA. = 818+85.40
PC STA. = 817+76.84
R = 1350.00'
L = 108.56'
T = 54.31'
DEGREE = 4° 14' 39"
DELTA = 4.6075
SE = 5.4%

STA. 825+00
EXTEND 15 LF - 12" RCCP
1 - 12" AEW REQ'D
1 CONC. COLLAR REQUIED

STA. 825+27
EXTEND 10 LF - 30" RCCP
1 - 30" AEW REQ'D
1 CONC. COLLAR REQUIED

END CONSTRUCTION
STA 828+25.70

SLOPE INTERCEPT

CLEARING AND GRUBBING
STA 811+00 - 825+00

R/W

RL SB OFF RAMP

RL USH 41

USH 41

BM 27

815+00.00

PC: 817+76.84

PT: 818+85.40

PI: 822+55.41

PI: 825+75.41

EP: 828+25.70

2

3

1

CAUTION

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
26	401+82 RL	CHISLED BOX NE CORNER OF INLET	1101.74
27	416+58 RL	CHISLED BOX NE CORNER OF INLET	1063.30

VCL = 800.00
K = 212.23

VPT STA 816+51.84
VPT EL 1087.94

STA = 818+00.00
STA = 818+10.38
ELEV = 1084.630
ELEV = 1084.200

-2.23%

-4.14%

MATCH EXISTING USH 41 LANE EDGE - SEE TYPICAL SECITON

1120 1110 1100 1090 1080 1070 1060 1050

814 815 820 825 828

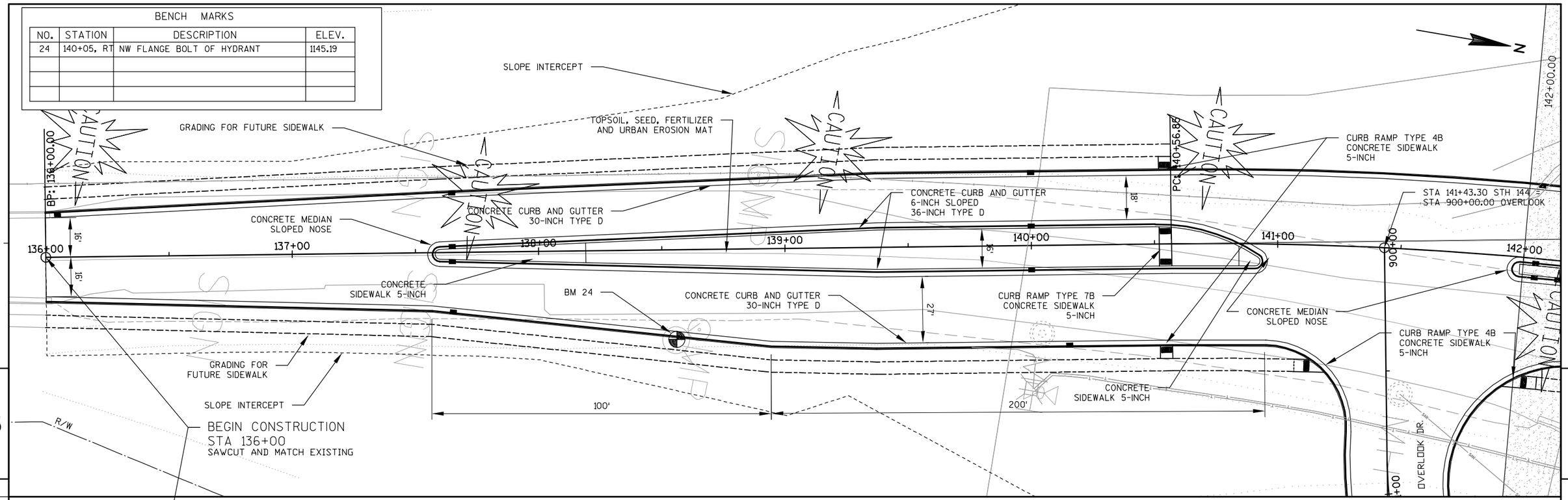
1093.40 1090.11 | 1091.87 1088.35 | 1089.16 1084.96 | 1086.86 1083.23 | 1084.63 1082.85 | 1081.19 | 1078.86 | 1076.57 | 1074.15 | 1071.60 | 1069.05 | 1066.44 | 1063.66 | 1061.58 | 1059.31

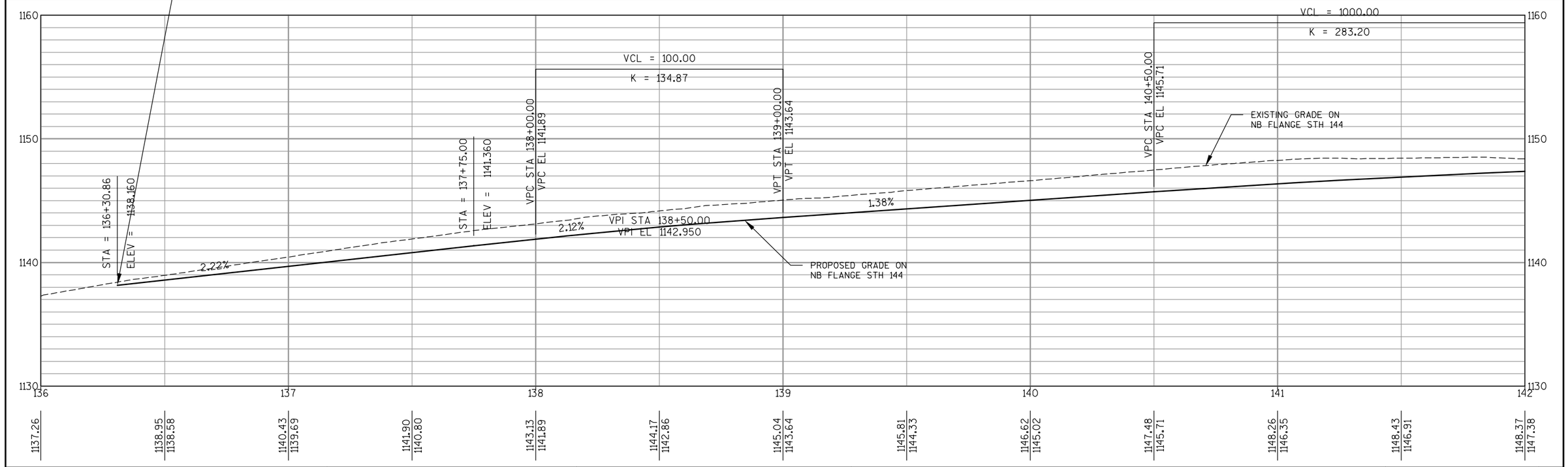
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PLAN AND PROFILE - SB OFF RAMP, 2 OF 2	SHEET 166	E

FILE NAME : L:\PROJECTS\11609\DWG\050108_PP.DWG PLOT DATE : 7/26/2013 2:08 PM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

WISDOT/CADDS SHEET 44

BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEV.
24	140+05, RT	NW FLANGE BOLT OF HYDRANT	1145.19





PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PLAN AND PROFILE - STH 144 - STA 136+00 TO 142+00	SHEET 167	E

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
24	140+05, RT	NW FLANGE BOLT OF HYDRANT	1145.19

PI STA = 143+77.64
PT STA = 146+88.03
PC STA = 140+56.85
R = 1432.39'
L = 613.18'
T = 320.80'
DEGREE = 4° 00' 00"
DELTA = 24.2474
SE = 4.1%

REMOVING PAVEMENT (RAISED MEDIAN)
CONCRETE SIDEWALK 5-INCH
RL STH 144
REMOVING CURB & GUTTER
CONCRETE CURB AND GUTTER 30-INCH TYPE D
CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D
TOPSOIL, SEED, FERTILIZER AND URBAN EROSION MAT
CURB RAMP TYPE 4B CONCRETE SIDEWALK 5-INCH
RL SB OFF RAMP
STA 146+41.84 STH 144 = STA 800+00.00 SB OFF RAMP = STA 728+25.27 SB ON RAMP
CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D (REVERSE SLOPE)
PT: 146+88.03
15: 1 TAPER
CONCRETE SIDEWALK 5-INCH
CONCRETE MEDIAN SLOPED NOSE
CONCRETE CURB AND GUTTER 30-INCH TYPE D
CONCRETE SIDEWALK 5-INCH
STA. 147+98 41.5' RT
STA. 147+45 49.3' RT
REMOVING GUARDRAIL
STA. 147+45 TO STRUCTURE INSTALL MGS GUARDRAIL TERMINAL EAT AND MGS THRIE BEAM TRANSITION
RL SB ON RAMP
GRADING FOR FUTURE SIDEWALK
STA 142+92
REMOVING SMALL PIPE CULVERT
(4" X 123' PVC - OVERLOOK CULVERT)
REMOVING CURB & GUTTER
REMOVING GUARDRAIL
CAUTION
28'
30'
24'
22.5'
5'
5'
142+00
143+00
144+00
145+00
146+00
147+00
148+00
142+00.00
148+00.00
N

VCL = 1000.00
K = 283.20
VPI STA 145+50.00
VPI EL 1152.600
PROPOSED GRADE ON NB FLANGE STH 144
PROPOSED DITCH PROFILE SEE CROSS SECTIONS
EXISTING GRADE ON NB FLANGE STH 144

1160
1150
1140
1135

142 143 144 145 146 147 148

1148.37	1148.35	1148.64	1148.20	1145.02	1145.60	1143.63	1140.90	1139.13	1136.85	1132.79	1128.59	1125.96
1147.38	1147.76	1148.05	1148.25	1148.37	1148.40	1148.34	1148.19	1147.95	1147.62	1147.21	1146.71	1146.12

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PLAN AND PROFILE - STH 144 - STA 142+00 TO 148+00	SHEET 168	E

FILE NAME : L:\PROJECTS\11609\DWG\050110_PP.DWG PLOT DATE : 7/26/2013 2:09 PM PLOT BY : MOYER, TIM PLOT NAME : _____ PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 44

STA 148+25
REMOVING SMALL PIPE CULVERT

STA. 148+07 TO STRUCTURE. INSTALL
MGS GUARDRAIL TERMINAL EAT
AND MGS THRIE BEAM TRANSITION

STA. 148+60
34' LT

15: 1 TAPER

STA. 148+07
36' LT

STRUCTURE B-66-110
SEE STRUCTURE PLANS

STEEL THRIE BEAM
BULLNOSE TERMINAL

STEEL THRIE BEAM

395

R-66-35
SEE STRUCTURE PLANS

STRUCTURE - 152+50
STEEL THRIE BEAM TRANSISTION
AND MGS GUARDRAIL TERMINAL EAT

CONCRETE CURB AND GUTTER
6-INCH SLOPED 36-INCH
TYPE A (REVERSE SLOPE)
ALONG APPROACH SLAB

154+60.00

24'
34'
10'
24'
14'

148+00 149+00 150+00 151+00 152+00 153+00 154+00

STA 149+56.40

CONCRETE
SIDEWALK
5-INCH

STA. 151+97
34' LT

STA. 152+50
36' LT

CONCRETE MEDIAN
SLOPED NOSE

14'
10'
24'
68'
8'
34'
8'
24'

STA 150+56.40

RL STH 144

CONCRETE CURB AND GUTTER
6-INCH SLOPED 36-INCH
TYPE D (REVERSE SLOPE)

STA. 154+00.00 STH 144 =
STA. 524+23.59 NB OFF RAMP =
STA. 600+00.00 NB ON RAMP

CONCRETE STRUCTURE
APPROACH SLAB

R-66-34
SEE STRUCTURE PLANS

REMOVING
GUARDRAIL

CONCRETE CURB AND GUTTER
6-INCH SLOPED 36-INCH
TYPE D (REVERSE SLOPE)

REMOVING GUARDRAIL

RL NB OFF RAMP

REMOVING CURB & GUTTER

348+00.00

CONCRETE CURB AND GUTTER
30-INCH TYPE A
ALONG APPROACH SLAB

CONCRETE CURB AND GUTTER
6-INCH SLOPED 36-INCH
TYPE A (REVERSE SLOPE)
ALONG APPROACH SLAB

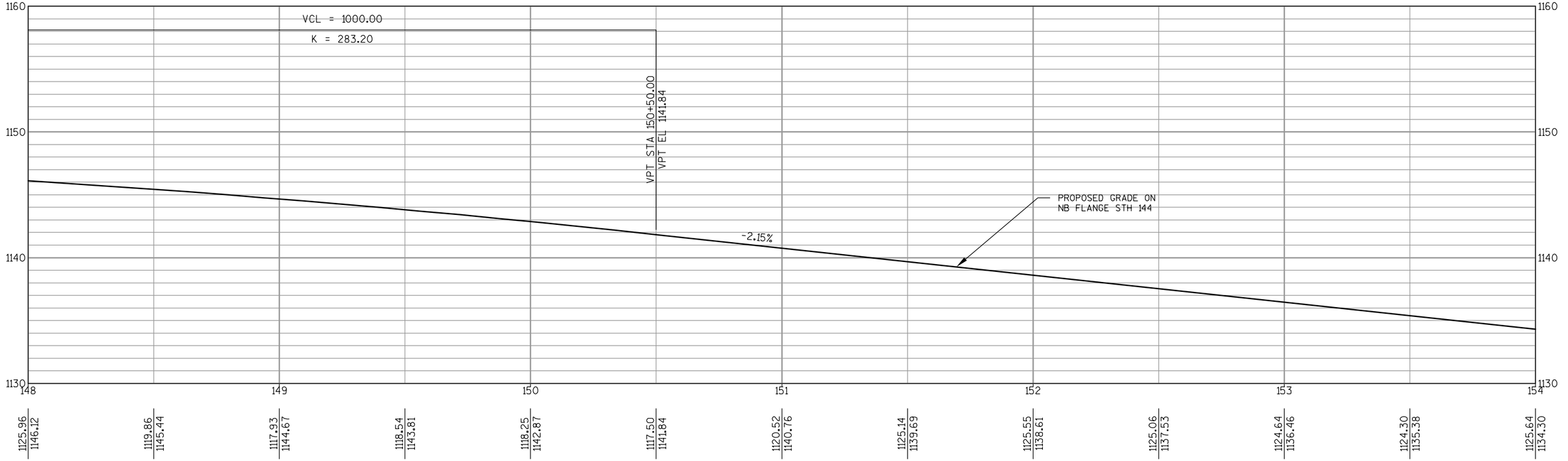
REMOVE OLD STRUCTURE
B-56-0026

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
25	388+78 RL	CHISLED BOX NE CORNER OF INLET	1122.44
26	401+82 RL	CHISLED BOX NE CORNER OF INLET	1101.74

5

5



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PLAN AND PROFILE - STH 144 - STA 148+00 TO 154+00	SHEET 169	E

RL NB ON RAMP

SLOPE INTERCEPT

CLEARING AND GRUBBING
STA 155+00 - 159+00

CONCRETE MEDIAN
SLOPED NOSE

CONCRETE
SIDEWALK
5-INCH

3'

30'

CONCRETE
SIDEWALK
5-INCH

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

CONCRETE MEDIAN
SLOPED NOSE

154+00 155+00 156+00 157+00 158+00 159+00

STA. 154+00.00 STH 144 =
STA. 524+23.59 NB OFF RAMP =
STA. 600+00.00 NB ON RAMP

TOPSOIL, SEED, FERTILIZER
AND UBRAN EROSION MAT

14'

RL STH 144

+34.97
23.17' RT

5'

5'

REMOVING INLETS

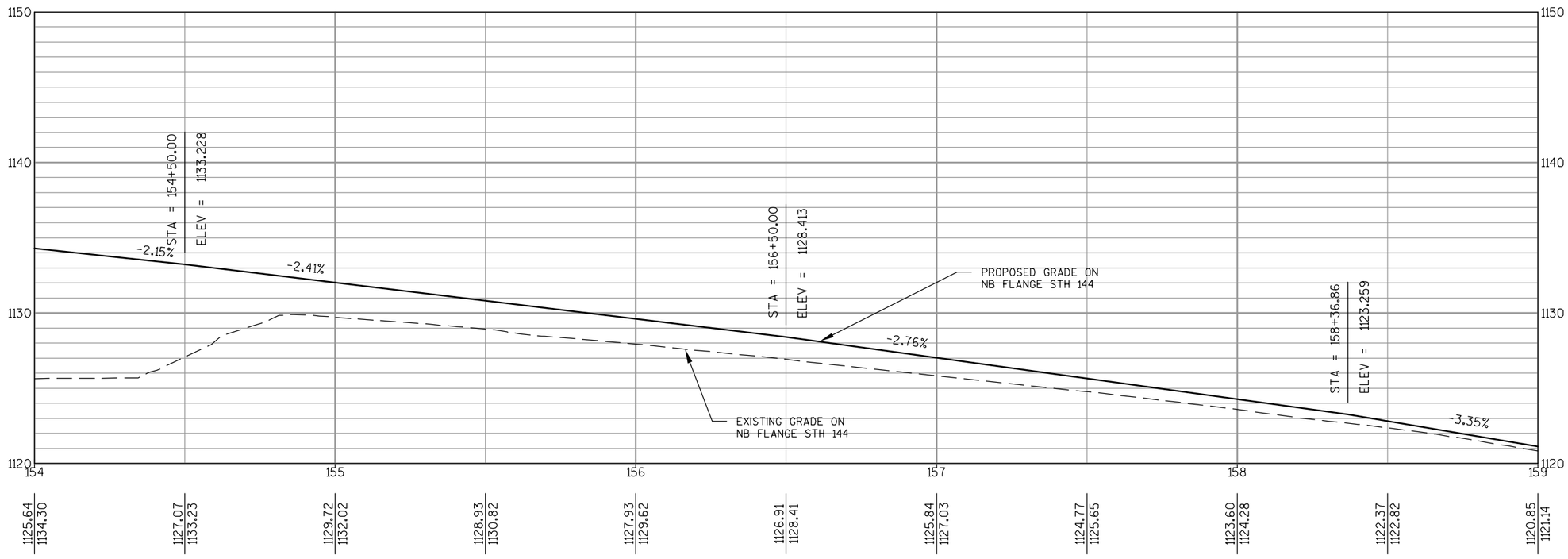
154+80.00

REMOVING CURB & GUTTER

SLOPE INTERCEPT

BENCH MARKS

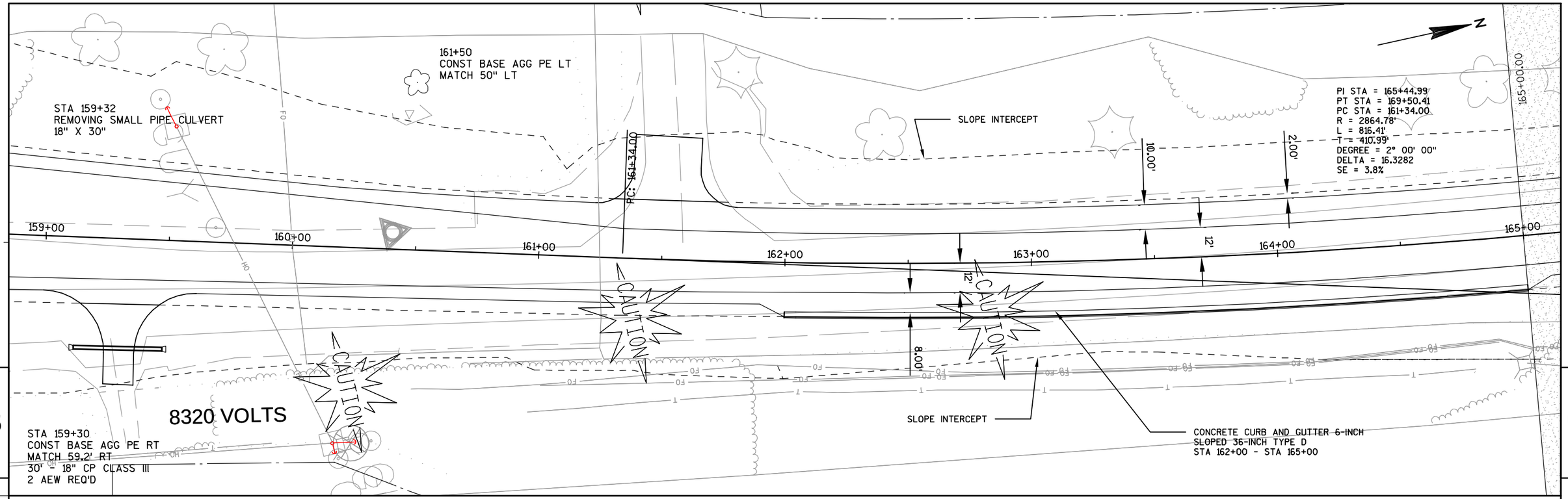
NO.	STATION	DESCRIPTION	ELEV.
25	388+78 RL	CHISLED BOX NE CORNER OF INLET	1122.44
26	401+82 RL	CHISLED BOX NE CORNER OF INLET	1101.74



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PLAN AND PROFILE - STH 144 - STA 154+00 TO 159+00	SHEET 170	E

FILE NAME : L:\PROJECTS\11609\DWG\050112_PP.DWG PLOT DATE : 7/26/2013 2:10 PM PLOT BY : MOYER, TIM PLOT NAME : _____ PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 44



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PLAN & PROFILE - STH 144 - STA 159+00 TO 165+00	SHEET 171	E

FILE NAME : L:\PROJECTS\11609\DWG\050113_PP.DWG PLOT DATE : 7/26/2013 2:11 PM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 44

CLEARING AND GRUBBING
STA 167+00 - 168+00

SLOPE INTERCEPT

8320 VOLTS

STA 168+00
CONST BASE AGG PE LT
SEE CONSTRUCTION DETAIL FOR
DWY PROFILE AND CULVERT INFO

CAUTION

p/l

R/W

PT: 169+50.41

N1° 33'17"00"W
291.132

165+00 166+00 167+00 168+00 169+00 170+00 171+00

2' 10' 12' 12' 5' 5' 28'

3' (2' PAVED)

PI STA = 165+44.99
PT STA = 169+50.41
PC STA = 161+34.00
R = 2864.78'
L = 816.41'
T = 410.99'
DEGREE = 2° 00' 00"
DELTA = 16.3282
SE = 3.8%

CLEARING AND GRUBBING
STA 165+00 - 167+00

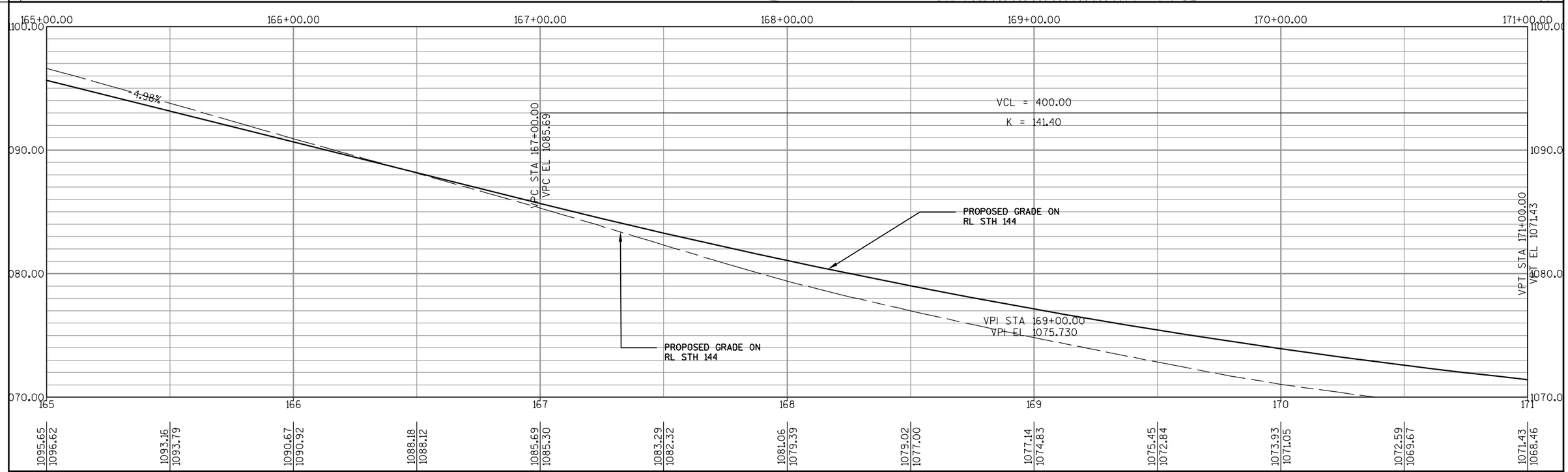
SLOPE INTERCEPT

STA 169+98
REMOVING SMALL PIPE CULVERTS
18" X 99'

5

5

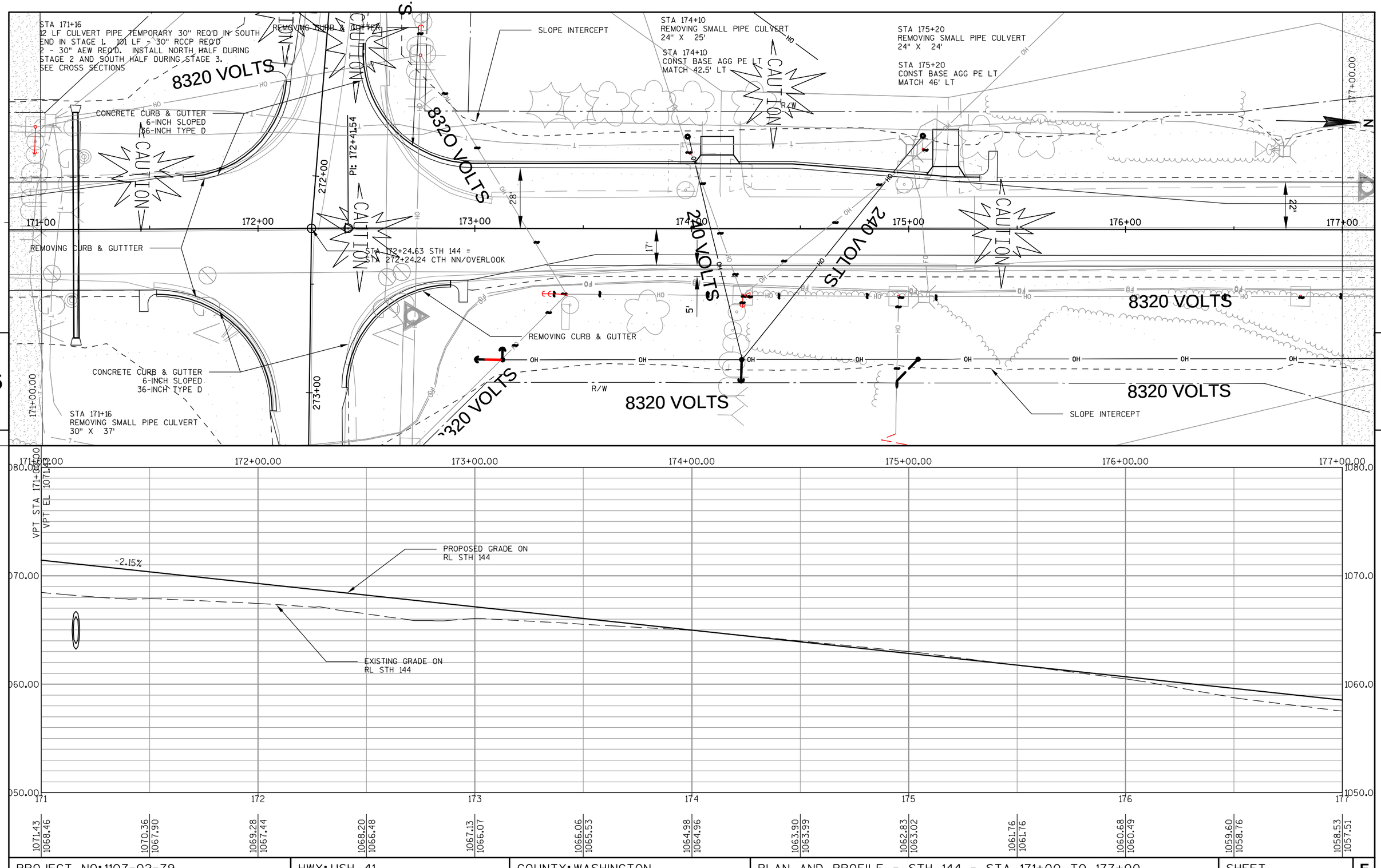
165+00.00



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PLAN AND PROFILE - STA 144 - STA 165+00 TO 171+00	SHEET 172	E

FILE NAME : L:\PROJECTS\11609\DWG\050114_PP.DWG PLOT DATE : 7/26/2013 2:11 PM PLOT BY : MOYER, TIM PLOT NAME : _____ PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 44



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PLAN AND PROFILE - STH 144 - STA 171+00 TO 177+00	SHEET 173	E

FILE NAME : L:\PROJECTS\11609\DWG\050115_PP.DWG PLOT DATE : 7/26/2013 4:09 PM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 44

TLE

R/W

WETLAND BOUNDARY

N

178+90
22' LT

180+00
22' LT

SLOPE INTERCEPT

MGS GUARDRAIL 3K

PI 182+44.85

183+00.60

2'

CAUTION

24'

5'

17'

MGS TERMINAL EAT

177+00 178+00 179+00 180+00 181+00 182+00 183+00

8320 VOLTS

8320 VOLTS

8320 VOLTS

8320 VOLTS

OH HO RO

177+00.00

STA 177+60, RT
CONST BASE AGG PE LT
MATCH 53.4" RT
CV 18
30' - 18" CP CLASS III
2 AEW REQ'D

REMOVING SMALL PIPE CULVERT
24" X 28'

SLOPE INTERCEPT

R/W

5

5

177+00.00 178+00.00 179+00.00 180+00.00 181+00.00 182+00.00 183+00.00

1070.00
1060.00
1050.00
1040.00

-2.15%

PROPOSED GRADE ON
RL STH 144

EXISTING GRADE ON
RL STH 144

VCL = 400.00
K = 204.29

VPC STA 183+00.00
VPC EL 1045.63

177 178 179 180 181 182 183

1058.53 1057.51 | 1057.46 1055.73 | 1056.38 1053.93 | 1055.30 1051.91 | 1054.23 1049.88 | 1053.16 1047.97 | 1052.08 1046.06 | 1051.00 1044.62 | 1049.93 1043.18 | 1048.86 1042.45 | 1047.78 1041.73 | 1046.70 1041.45 | 1045.63 1041.23

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PLAN AND PROFILE - STH 144 - STA 177+00 TO 183+00	SHEET 174	E

FILE NAME : L:\PROJECTS\11609\DWG\050116_PP.DWG PLOT DATE : 7/26/2013 2:12 PM PLOT BY : MOYER, TIM PLOT NAME : _____ PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 44

STA 183+59
12 LF CULVER PIPE
TEMPORARY 24-INCH REQ'D
REMOVING SMALL PIPE CULVERT
24" X 36'

STA 183+50
66 LF - 42" RCCP REQ'D
2-42" AEW REQ'D
SEE CROSS SECTIONS

TRANSMISSION
10 VOLTS

R/W

WETLAND BOUNDARY

SLOPE INTERCEPT
186+50
22' LT

187+00
22' LT

MGS GUARDRAIL 3K

PI: 182+44.85

EP: 187+00.00

N

SAWCUT AND
MATCH EXISTING

182+00 183+00 184+00 185+00 186+00 187+00

CAUTION

MGS TERMINAL EAT

8320 VOLTS

8320 VOLTS

8320 VOLTS

8320

CLEARING AND GRUBBING
STA 184+00 - 187+00

SLOPE INTERCEPT

183+00.00

R/W

STA 185+00
CONST BASE AGG PE LT
MATCH 60.7' RT
CV 20
74' - 24" CP CLASS III
2 AEW REQ'D

STA 185+00
REMOVE EXISTING CP

END CONSTRUCTION
STA 187+50

182+00.00 183+00.00 184+00.00 185+00.00 186+00.00 187+00.00

1060.00
1050.00
1040.00
1030.00

VCL = 400.00

K = 204.29

VPC STA 183+00.00
VPC EL 1045.63

VPT STA 187+00.00
VPT EL 1040.95

-2.15%

-0.19%

PROPOSED GRADE ON
RL STH 144

VPI STA 185+00.00
VPI EL 1041.330

EXISTING GRADE ON
RL STH 144

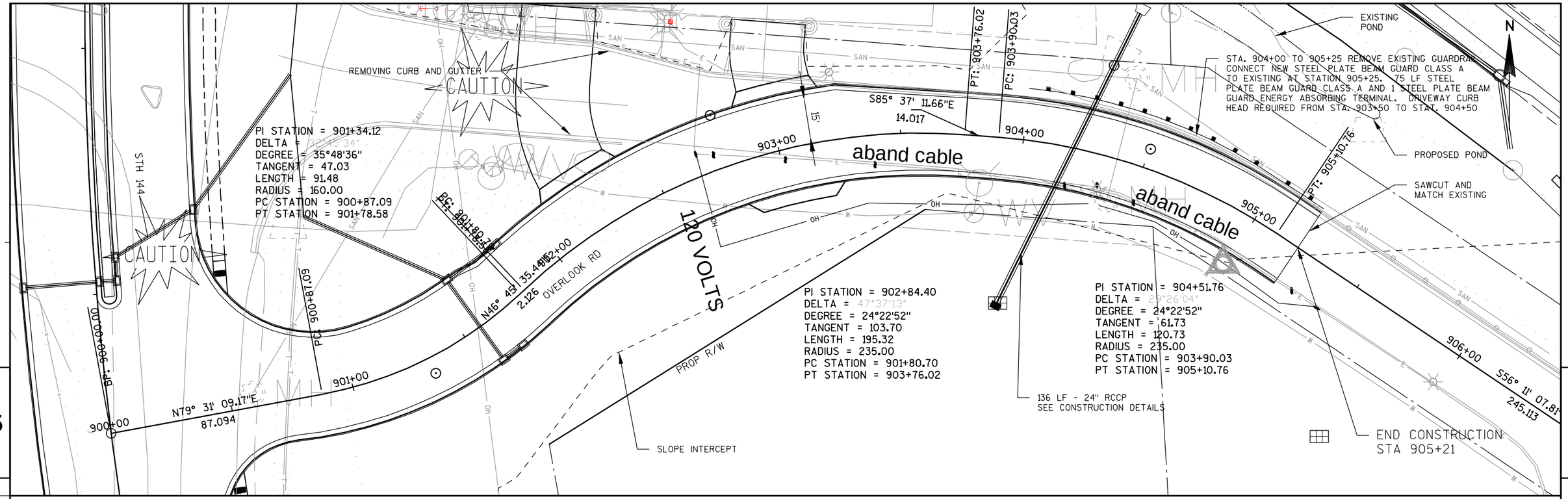
182 183 184 185 186 187

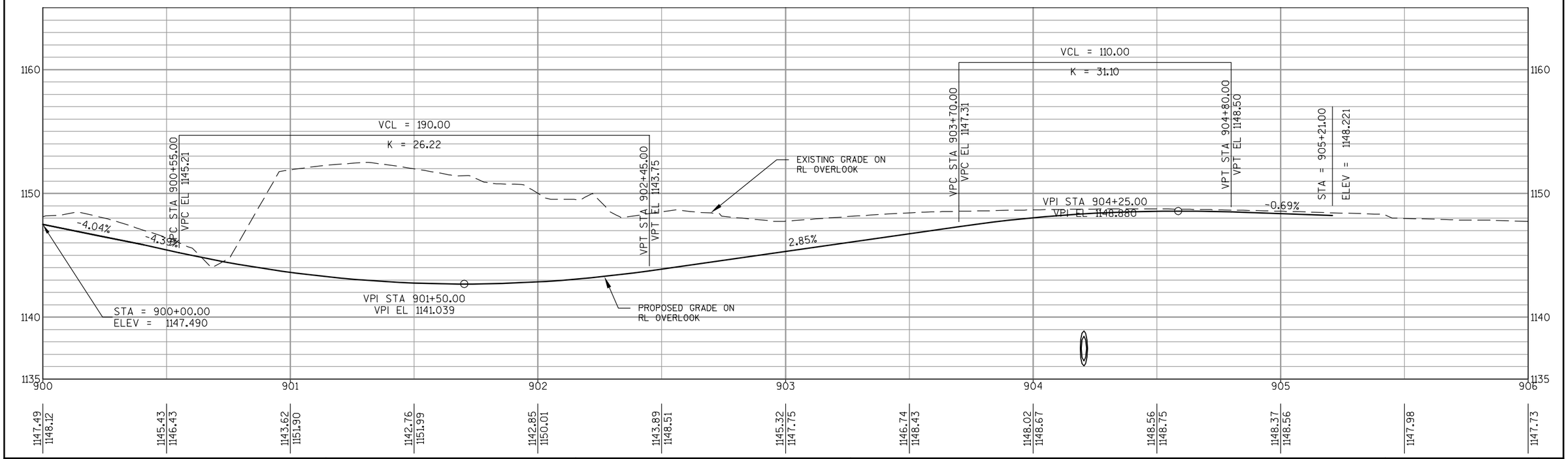
1047.78 1041.73
1046.70 1041.45
1045.63 1041.23
1044.62 1040.72
1043.72 1041.07
1042.96 1039.43
1042.31 1041.14
1041.78 1040.38
1041.38 1041.04
1041.10 1040.86
1040.95 1040.67

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PLAN AND PROFILE - STH 144 - STA 183+00 TO 187+00	SHEET 175	E

FILE NAME : L:\PROJECTS\11609\DWG\050117_PP.DWG PLOT DATE : 7/26/2013 4:08 PM PLOT BY : MOYER, TIM PLOT NAME : _____ PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 44





PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	PLAN & PROFILE - OVERLOOK DRIVE	SHEET 176	E

BEGIN CONSTUCTION
STA 268+00

SLOPE INERCEPT

STA 270+55
REMOVING SMALL PIPE CULVERTS
18" X 20'

STA 270+55, LT
CONST BASE AGG PE LT
MATCH 92' LT
CV 24 - 26' - 18" CP CLASS III
2 AEW REQ'D

TLE

PI: 268+45.56

R/W

GUY

GUY

CAUTION

8320 VOLTS

8320 VOLTS

8320 VOLTS

8320 VOLTS

CAUTION

CAUTION

CAUTION

CAUTION

PI: 172+41.54

PI: 272+24.24

173+00

172+00

268+00

269+00

270+00

271+00

272+00

273+00

RL ARTHUR ROAD

R/W

guy wire

REMOVING ASPHALTIC
SURFACE BUTT JOINTS

REMOVING ASPHALTIC
SURFACE BUTT JOINTS

STA 269+15
REMOVING SMALL PIPE CULVERT
24" X 46'

STA 269+15, RT
CONST BASE AGG PE LT
MATCH 42.8' RT
CV 23 - 56' - 18" CP CLASS III
2 AEW REQ'D

STA 269+54
REMOVING SMALL PIPE CULVERT
12" X 41'

STA 269+60
REMOVING SMALL PIPE CULVERT
12" X 41'

STA 269+70
54 LF - 24" RCCP REQ'D
2-24" AEW REQ'D
SEE CROSS SECTIONS

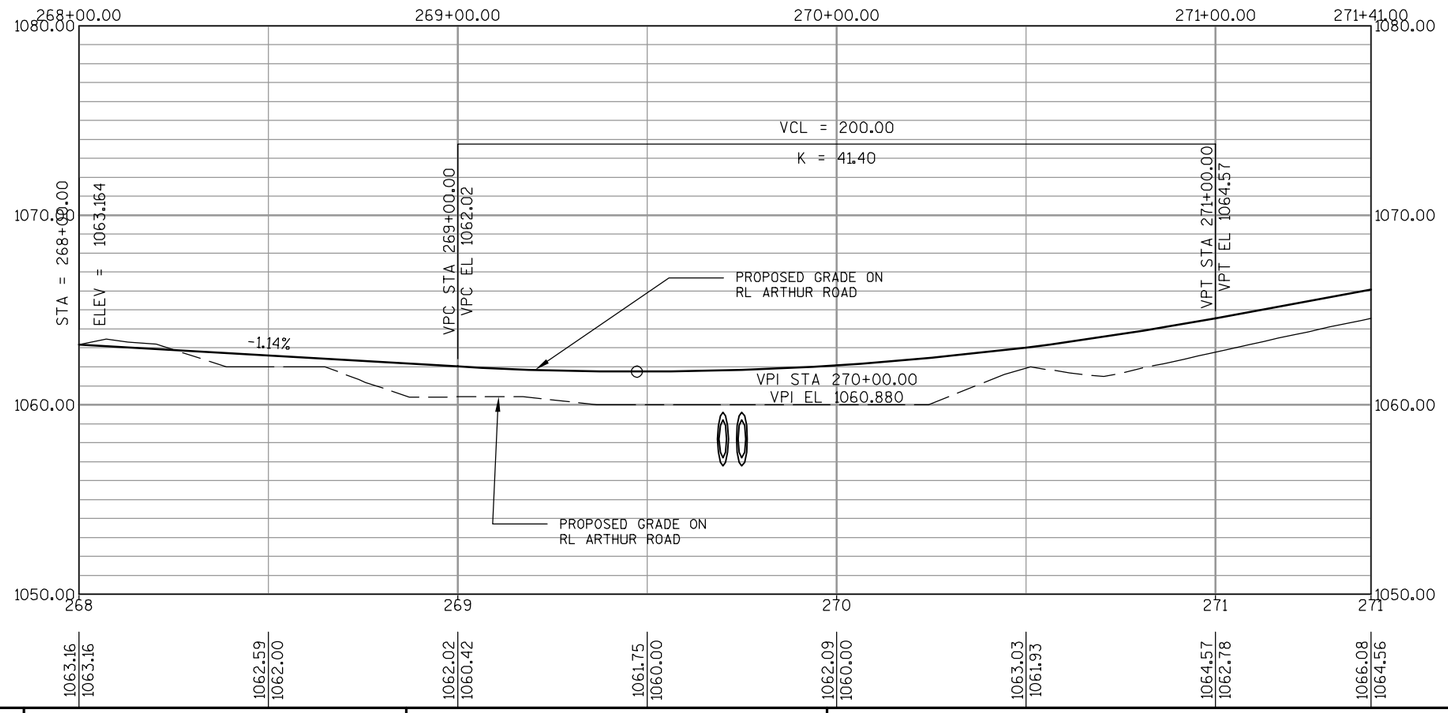
STA 269+75
54 LF - 24" RCCP REQ'D
2-24" AEW REQ'D
SEE CROSS SECTIONS

RL STH144

N

5

5



PROJECT NO:11072-02-79	HWY: USH 41	COUNTY: WASHINGTON	PLAN & PROFILE - ARTHUR/CTH NN	SHEET 177	E

FILE NAME : L:\PROJECTS\11609\DWG\050119_PP.DWG PLOT DATE : 7/26/2013 2:13 PM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 44

Standard Detail Drawing List

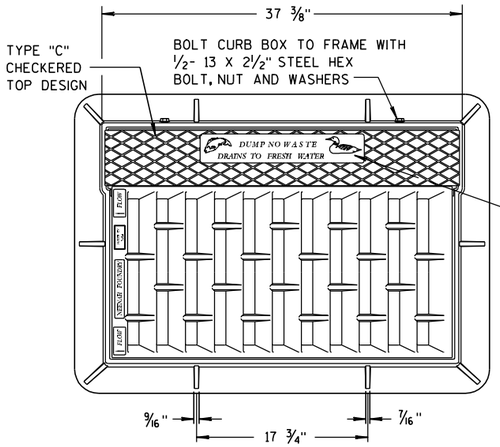
08A05-18A	INLET COVERS TYPE A, H, A-S, & H-S
08A05-18B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-18C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08A05-18D	INLET COVER, TYPE BW, Z MANHOLE COVERS, TYPE K, J, J-S, L & M
08A08-01	CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER
08B09-01	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C08-01	INLETS MEDIAN 1 AND 2 GRATE
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D05-15A	CURB RAMPS TYPES 1 AND 1-A
08D05-15B	CURB RAMPS TYPES 2 AND 3
08D05-15C	CURB RAMPS TYPES 4A AND 4A1
08D05-15D	CURB RAMPS TYPE 4B AND 4B1
08D05-15E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09A01-13A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
09A01-13B	AT-GRADE SIDE ROAD INTERSECTION, TYPE "A1" & "A2"
09B02-07	CONDUIT
09B04-10	PULL BOX
09C02-06	CONCRETE BASES, TYPES 1, 2 & 5
09C03-03	TRANSFORMER/PEDESTAL BASES
09C11-03	CONCRETE BASE TYPE 10
09E03-04	NON-FREEWAY LIGHTING UNIT POLE WIRING
11B02-02	CONCRETE MEDIAN NOSE
12A03-10	NAME PLATE (STRUCTURES)
12A04-03	STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES & OVERHEAD SIGN SUPPORTS & TRAFFIC SIGNALS
13A05-05A	SHOULDER RUMBLE STRIP, MILLING
13A05-05B	SHOULDER RUMBLE STRIP, MILLING
13B02-06	CONCRETE PAVEMENT APPROACH SLAB
13C01-16	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
14B07-13A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B08-01A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B15-07A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-07B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-07C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B18-06A	STEEL PLATE BEAM GUARD, CLASS "A" (AT BRIDGES, OBSTACLES AND SIDEROADS/DRIVEWAYS)
14B26-02A	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-02B	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-02C	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-02D	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-02E	STEEL THRIE BEAM BULLNOSE TERMINAL
14B28-02	GUARDRAIL MOW STRIP
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)

6

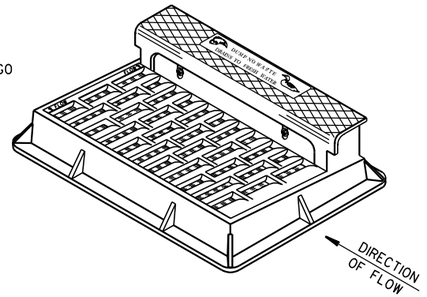
Standard Detail Drawing List

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)
15A01-11	MARKER POST FOR RIGHT-OF-WAY
15A02-07	DELINEATOR POST, DELINEATOR BRACKET AND DELINEATOR
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15A06-02	DELINEATOR LAYOUT
15B01-08A	FENCE WOVEN WIRE
15B01-08B	FENCE WOVEN WIRE
15B03-12A	CHAIN LINK FENCE
15B03-12B	CHAIN LINK FENCE
15B12-01A	PIPE GATE DETAILS
15B12-01B	PIPE GATE DETAILS
15C02-04C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-01	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C04-01	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-01	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-12B	PAVEMENT MARKING WORDS
15C07-12C	PAVEMENT MARKING ARROWS
15C08-15F	PAVEMENT MARKING (ISLANDS, STOP LINE & CROSS WALK)
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C08-16E	PAVEMENT MARKING (LEFT TURN LANE)
15C08-16F	PAVEMENT MARKING (ISLANDS)
15C11-05	FLEXIBLE TUBULAR MARKER POST, ANCHOR & BASES
15C12-03	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C18-03	MEDIAN ISLAND MARKING
15C19-01A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C19-01B	MOVING PAVEMENT MARKING OPERATION MULTI-LANE UNDIVIDED ROADWAY
15C19-01C	MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY
15C21-05	SIGNING AND MARKING FOR TWO LANE TO FOUR LANE DIVIDED TRANSITIONS
15C29-03F	PAVEMENT MARKING FOR SHARED LANE 35 MPH OR LESS
15C31-01A	PAVEMENT MARKING (RAMPS AND GORES)
15C31-01D	PAVEMENT MARKING FOR PARALLEL ON-RAMP AND PARALLEL OFF-RAMP
15C33-01	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D03-01	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. WITH BARRIER
15D06-02	TRAFFIC CONTROL, TWO LANE TWO WAY OPERATION
15D16-01	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D34-01A	RAMP GATE SOLAR POWER
15D34-01B	RAMP GATE SOLAR POWER
15D34-01C	RAMP GATE SOLAR POWER
15D34-01D	RAMP GATE SOLAR POWER
16A01-06	LANDMARK REFERENCE MONUMENTS AND COVERS

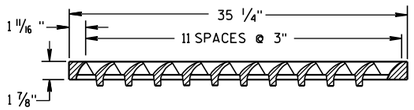
6

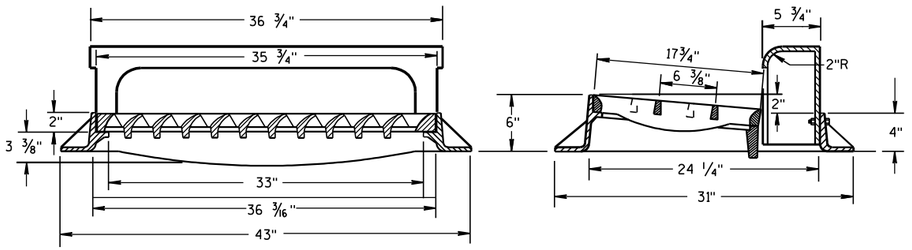


NOTE:
GRATE IS REVERSIBLE.



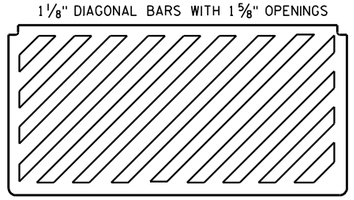
NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"





TYPE "H"

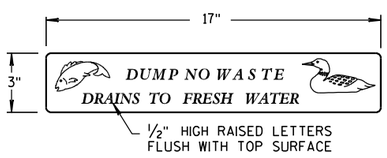
(APPROXIMATE WEIGHT 441 LBS.)
FRAME..... 181 LBS.
GRATE..... 146 LBS.
CURB BOX..... 114 LBS.



SPECIAL GRATE FOR TYPE "H" COVER

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

(NOTED AS TYPE H-S ON DRAINAGE TABLE)



LOGO DETAIL

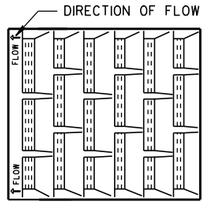
GENERAL NOTES

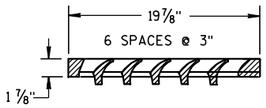
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

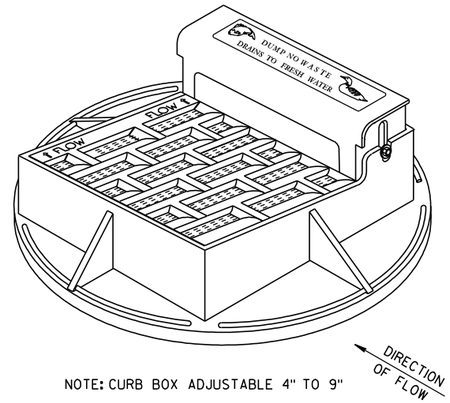
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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

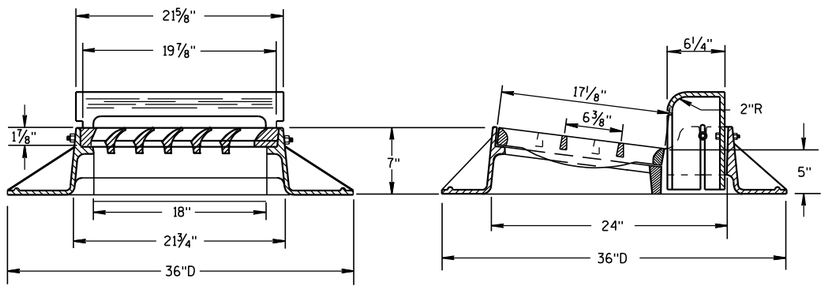
THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.





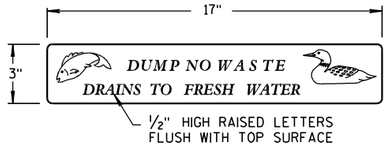


NOTE: CURB BOX ADJUSTABLE 4" TO 9"



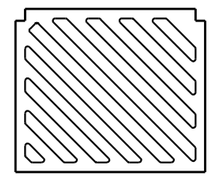
TYPE "A"

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



LOGO DETAIL

NOTE:
GRATE IS REVERSIBLE.



SPECIAL GRATE FOR TYPE "A" COVER

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

(NOTED AS TYPE A-S ON DRAINAGE TABLE)

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/5/2012 DATE

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

180

FHWA

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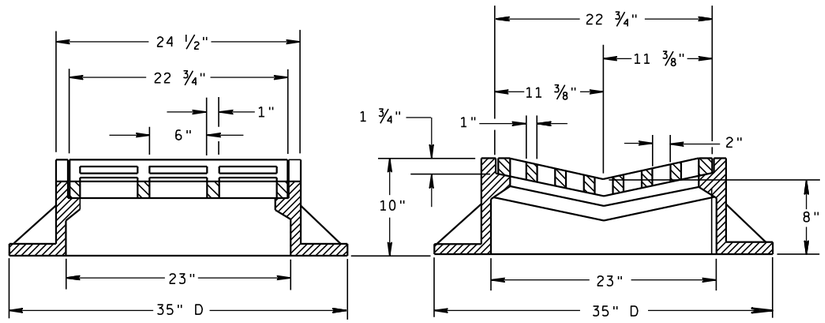
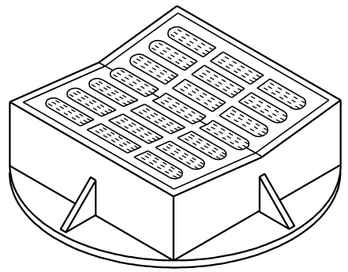
S.D.D. 8 A 5-18a

6

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

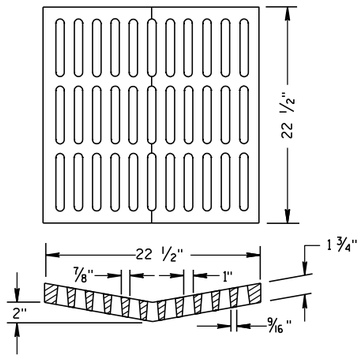




TYPE "B"

(APPROXIMATE WEIGHT 405 LBS.)

FRAME..... 294 LBS.
GRATE..... 111 LBS.

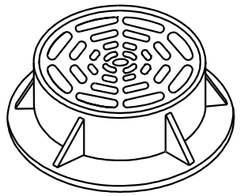


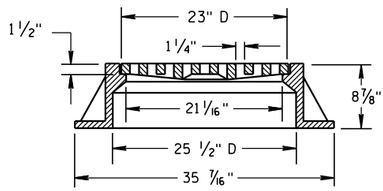
ALTERNATIVE GRATE FOR TYPE "B" COVER

(APPROXIMATE GRATE WEIGHT 134 LBS.)

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.

NOTED AS TYPE B-A ON THE DRAINAGE TABLE





TYPE "C"

(APPROXIMATE WEIGHT 259 LBS.)

FRAME..... 152 LBS.
GRATE..... 107 LBS.

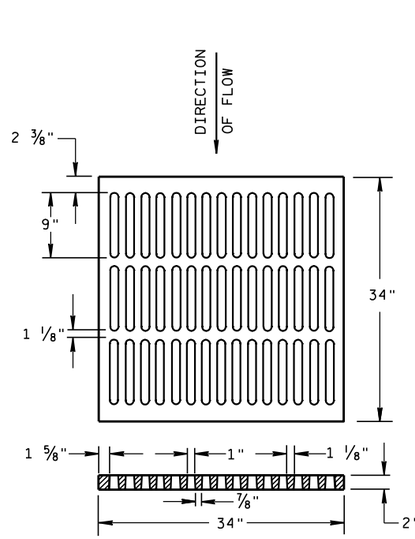
GENERAL NOTES

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.

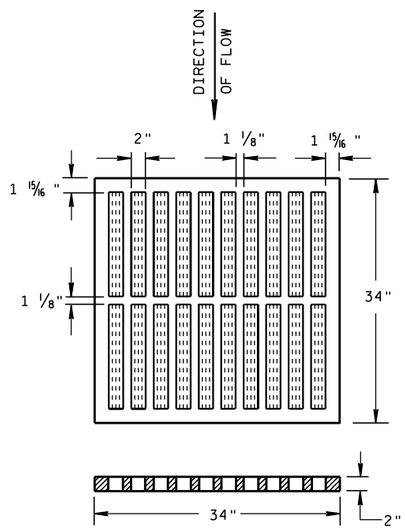


ALTERNATIVE TYPE "MS"

(APPROXIMATE GRATE WEIGHT 329 LBS.)

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED

NOTED AS TYPE MS-A ON THE DRAINAGE TABLE

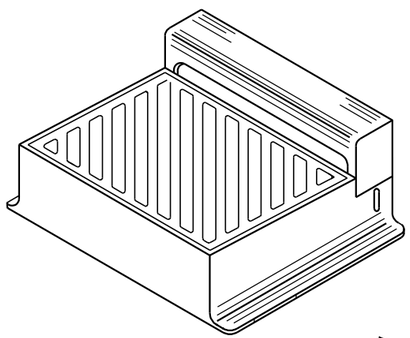


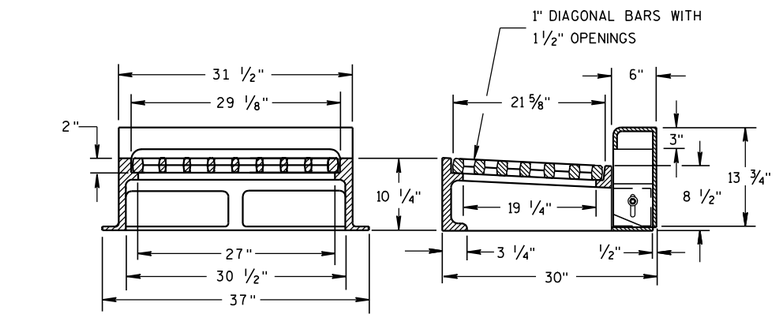
TYPE "MS"

(APPROXIMATE GRATE WEIGHT 268 LBS.)

USE ON FREEWAYS AND EXPRESSWAYS

NOTED AS TYPE MS ON DRAINAGE TABLE





NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

DIRECTION OF FLOW

DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.

TYPE "WM"

(APPROXIMATE WEIGHT 648 LBS.)

FRAME..... 355 LBS.
GRATE..... 156 LBS.
CURB BOX..... 137 LBS.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/5/2012
DATE

/S/ Jerry H. Zaas
ROADWAY STANDARDS ENGINEER

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FHWA

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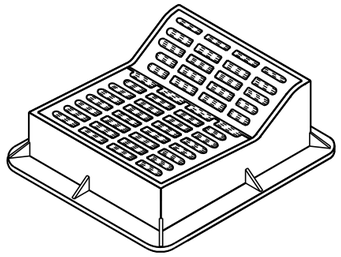
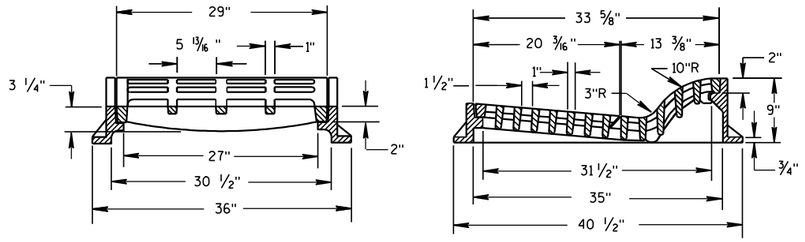
S.D.D. 8 A 5-18b

6

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



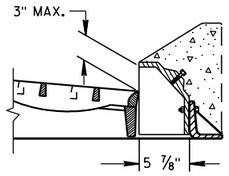


TYPE "F"

(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

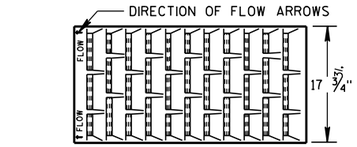
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

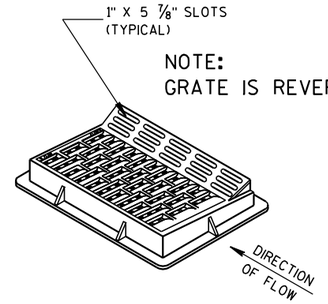
GENERAL NOTES

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.

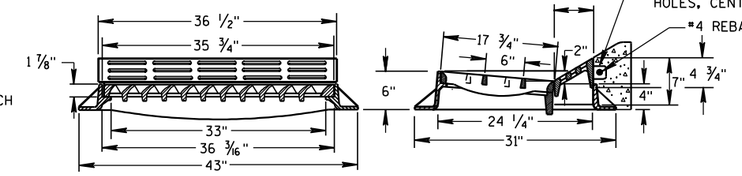
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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





NOTE:
GRATE IS REVERSIBLE.

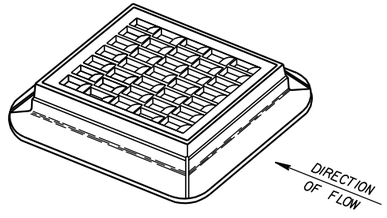


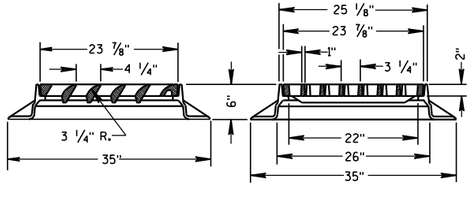
TYPE "HM"

(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

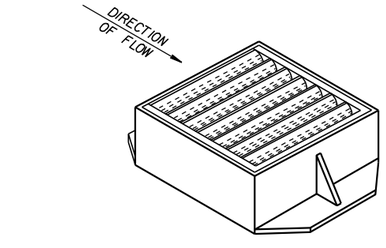


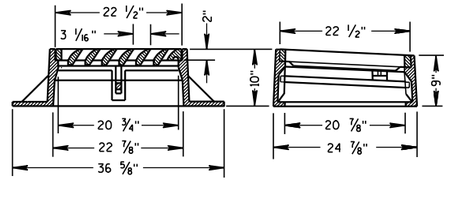


TYPE "S"

(APPROXIMATE WEIGHT 333 LBS.)

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

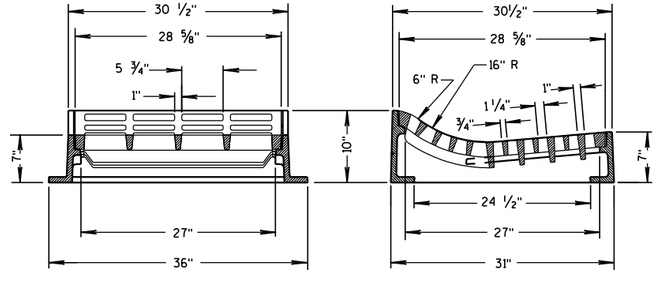




TYPE "V"

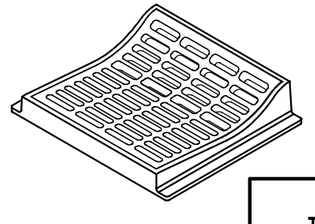
(APPROXIMATE WEIGHT 410 LBS.)

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

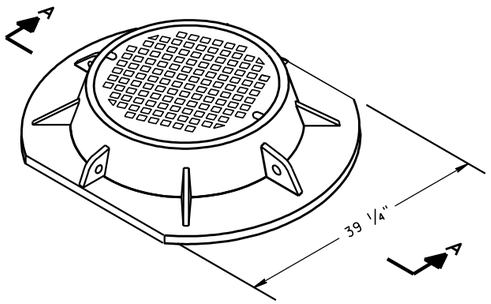
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

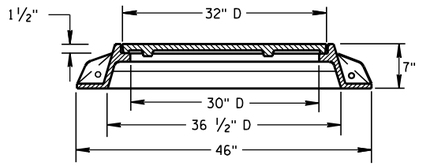
6

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

6

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



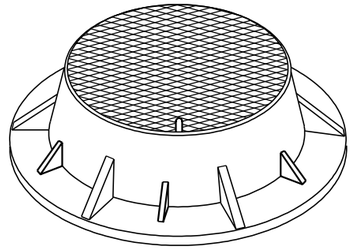


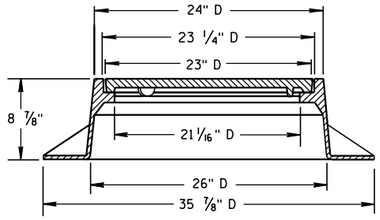
SECTION A-A

TYPE "K"

(APPROXIMATE WEIGHT 439 LBS.)

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

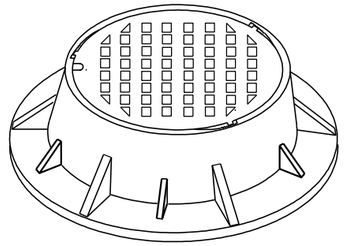


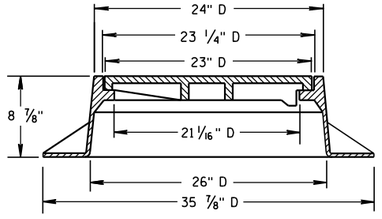


TYPE "J"

(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)

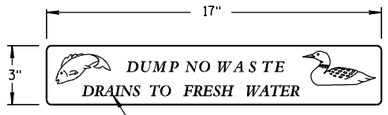
GENERAL NOTES

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.

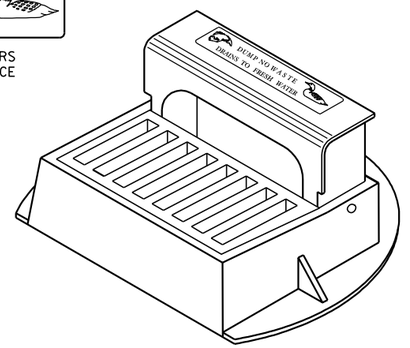
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

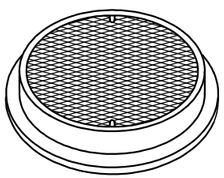
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

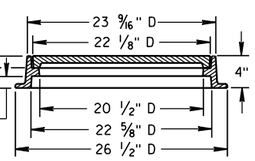
THE ACTUAL WEIGHT OF COVERS MAY VARY WITH 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.



LOGO DETAIL



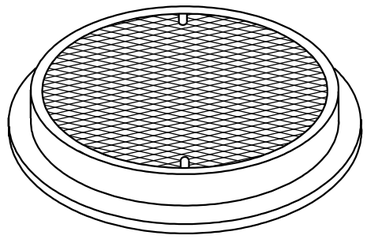


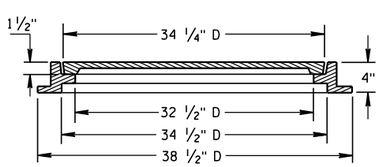


TYPE "L"

(APPROXIMATE WEIGHT 158 LBS.)

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

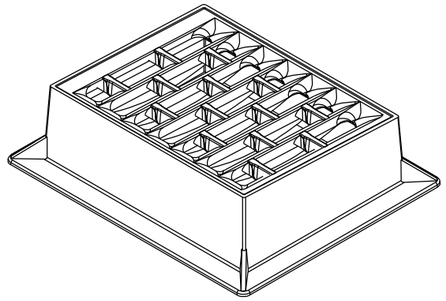


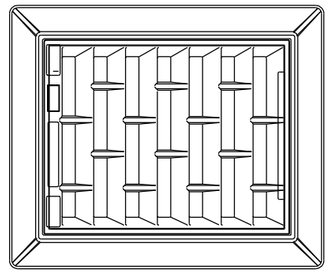


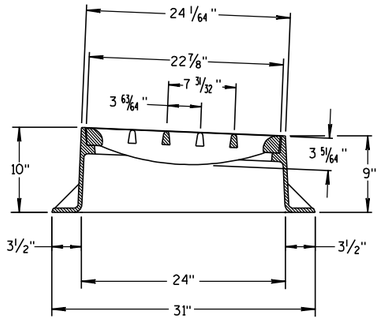
TYPE "M"

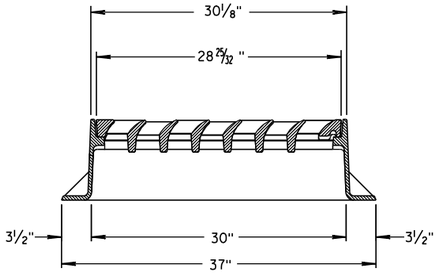
(APPROXIMATE WEIGHT 377 LBS.)

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

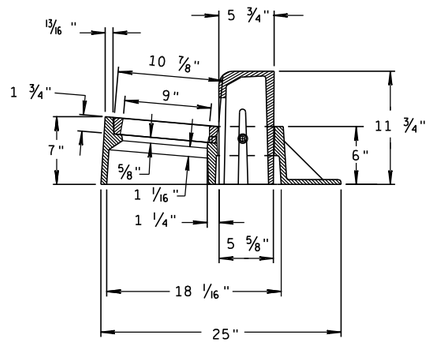


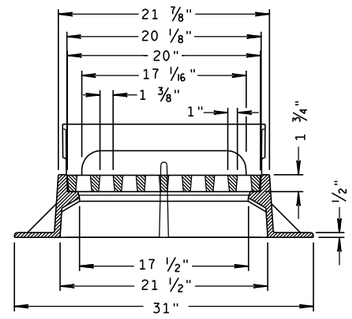






INLET COVER TYPE "BW"





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

NT

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

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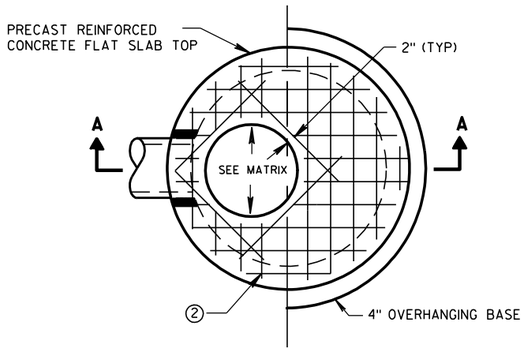
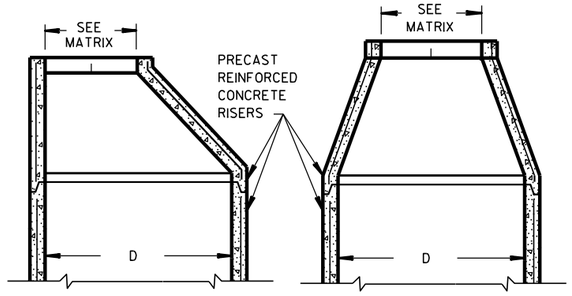
S.D.D. 8 A 5-18d

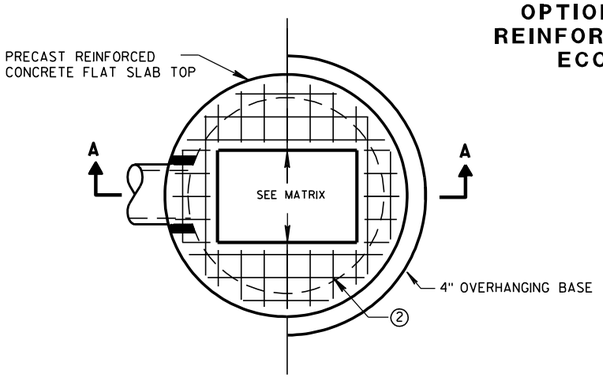


PLAN VIEW CIRCULAR OPENING

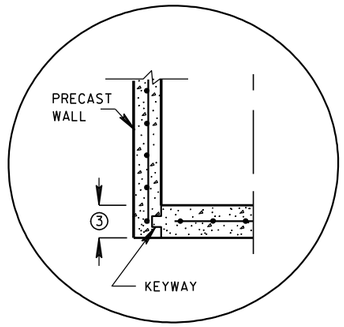


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

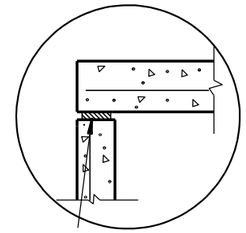
OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



PLAN VIEW RECTANGULAR OPENING

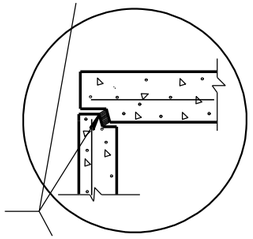


PRECAST REINFORCED
CONCRETE WITH INTEGRAL BASE OPTION

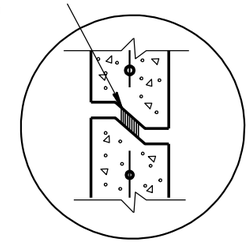


TOP WITH PLAIN END JOINT

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

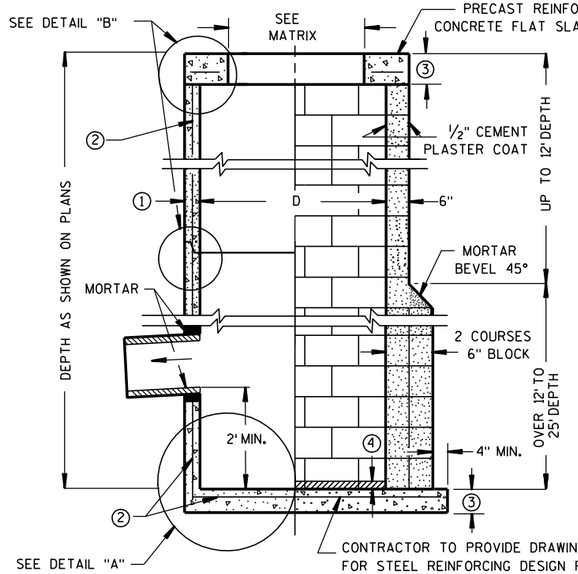


TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

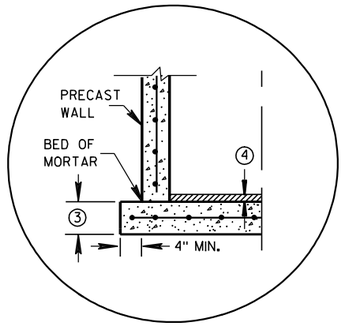


CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES

SECTION A-A

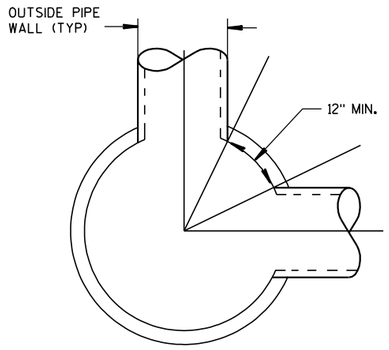
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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



SEPERATE 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 CATCH BASIN UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

CATCH BASIN COVER OPENING MATRIX

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

PIPE MATRIX

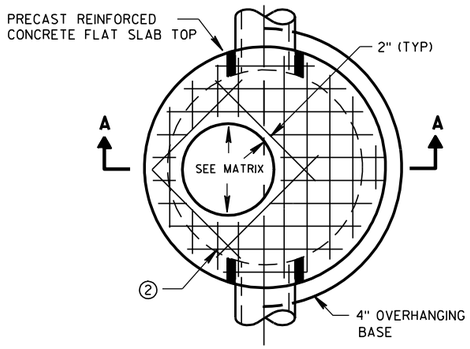
CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	30

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

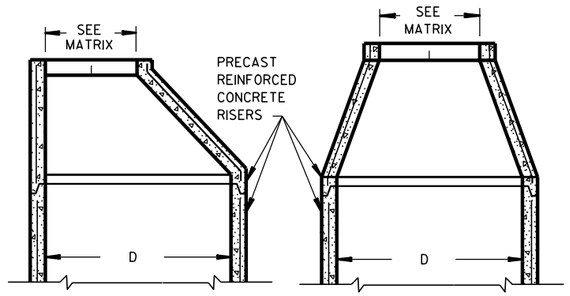
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

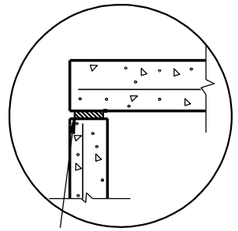


PLAN VIEW CIRCULAR OPENING

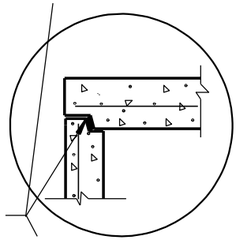


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

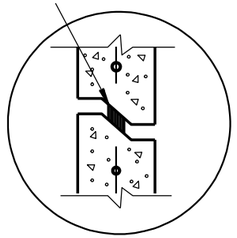


TOP WITH PLAIN END JOINT



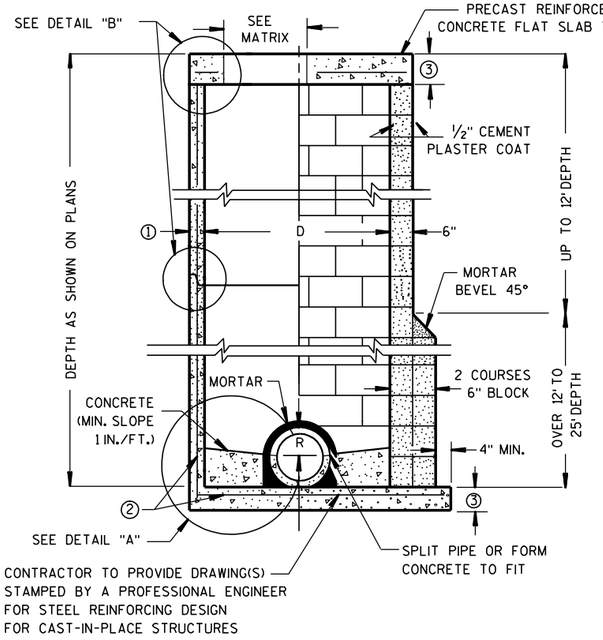
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



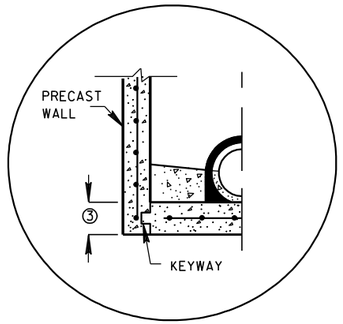
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

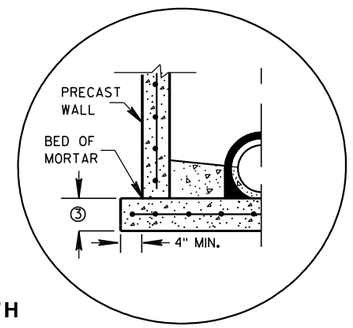


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

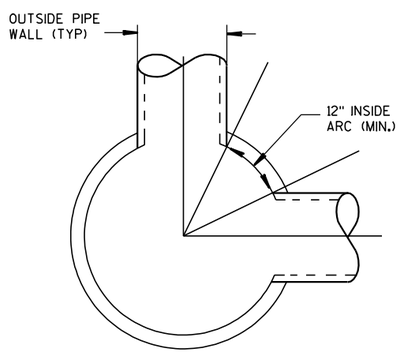


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPERATE 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 SEPERATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

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

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

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

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

MANHOLE COVER OPENING MATRIX

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

PIPE MATRIX

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/5/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

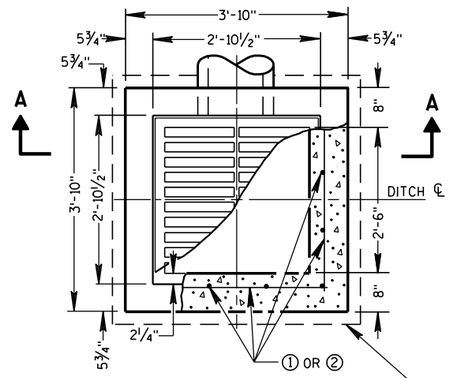
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

6

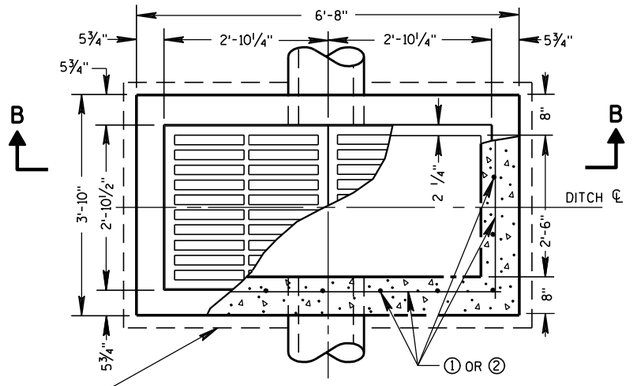
S.D.D. 8 B 9-1

6

S.D.D. 8 B 9-1

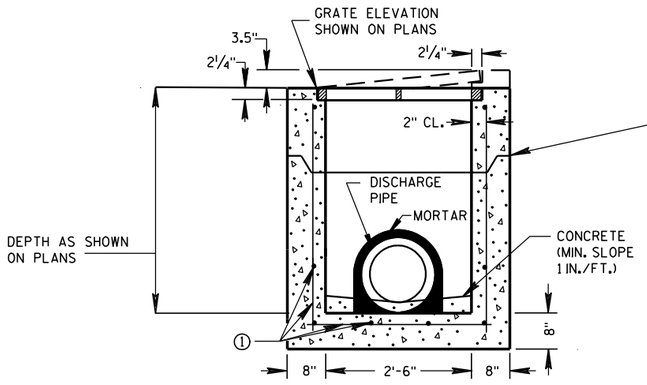


PLAN VIEW

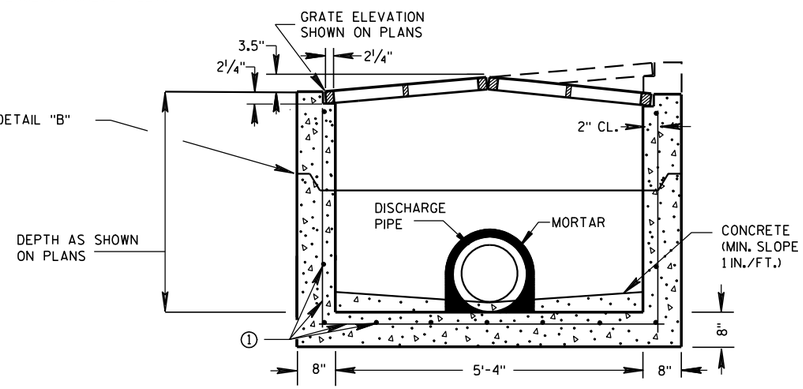


PLAN VIEW

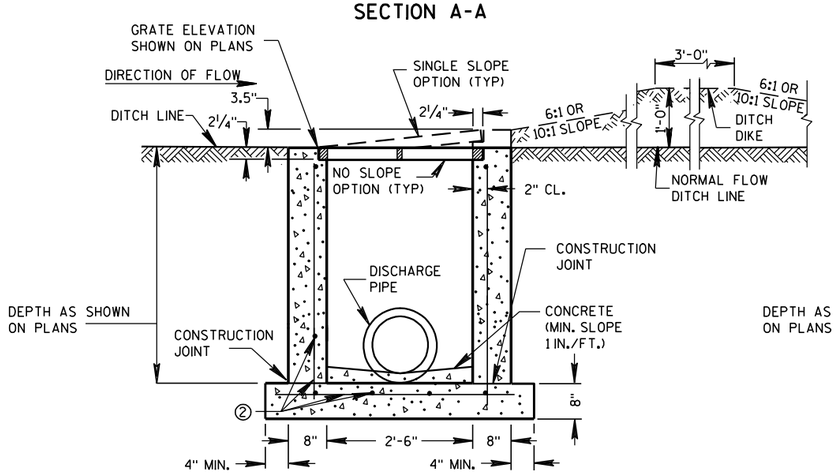
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



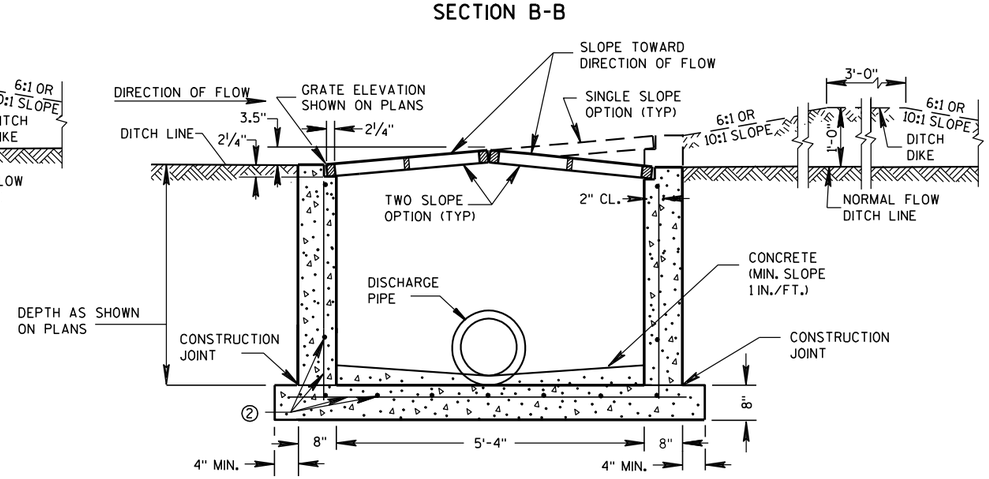
PRECAST REINFORCED CONCRETE SECTION A-A



PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

GENERAL NOTES

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

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

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 1G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

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.

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

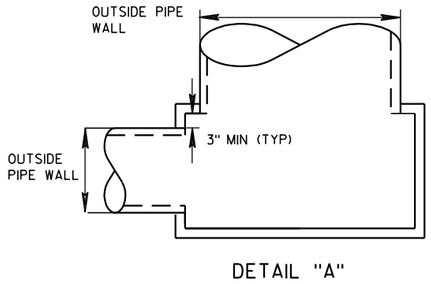
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST 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.

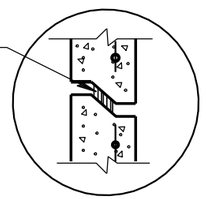
PIPE MATRIX

	MAXIMUM INSIDE PIPE DIAMETER	
INLET SIZE	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42



DETAIL "A"

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



DETAIL "B"

INLETS MEDIAN 1 GRATE

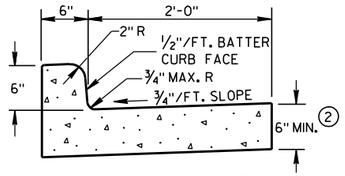
INLETS MEDIAN 2 GRATE

INLETS MEDIAN 1 AND 2 GRATE

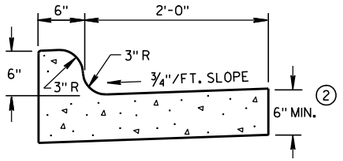
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

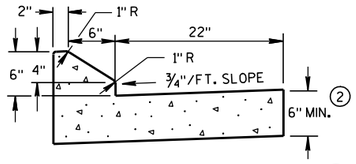
6
S.D.D. 8 C 8-1



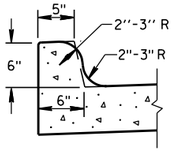
TYPES A & D (1)



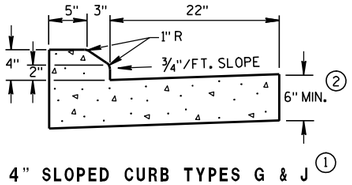
TYPES K & L (1)



6" SLOPED CURB TYPES G & J (1)

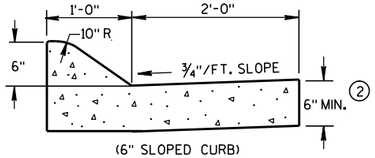


OPTIONAL CURB SHAPE FOR TYPES K & L (1)

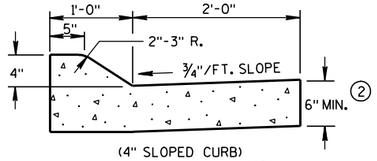


4" SLOPED CURB TYPES G & J (1)

CONCRETE CURB & GUTTER 30"

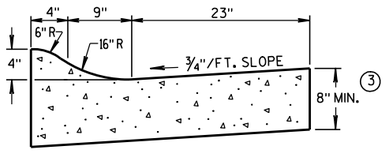


(6" SLOPED CURB)



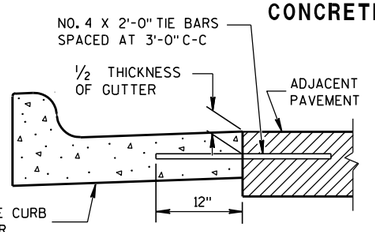
(4" SLOPED CURB)

TYPES A & D (1)

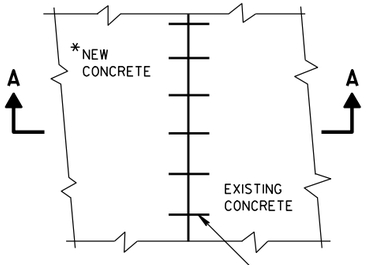


4" SLOPED CURB TYPES R & T (1) (4)

CONCRETE CURB & GUTTER 36"

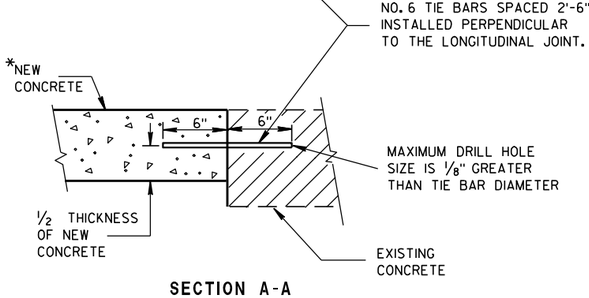


TYPICAL TIE BAR LOCATION (1)



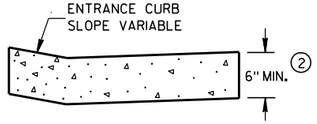
*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

PLAN VIEW



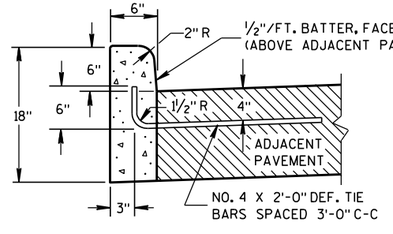
SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT



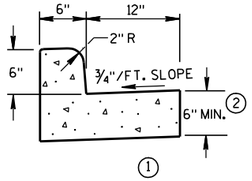
DRIVEWAY ENTRANCE CURB

(WHEN DIRECTED BY THE ENGINEER)



(1)

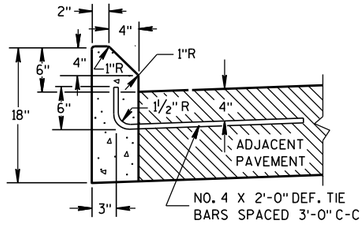
TYPES A & D



(1)

TYPES A & D

CONCRETE CURB & GUTTER 18"



(1)

TYPES G & J

CONCRETE CURB

(5)

REVERSE SLOPE GUTTER

(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

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

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

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

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

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

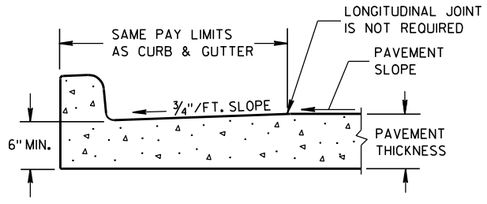
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.

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

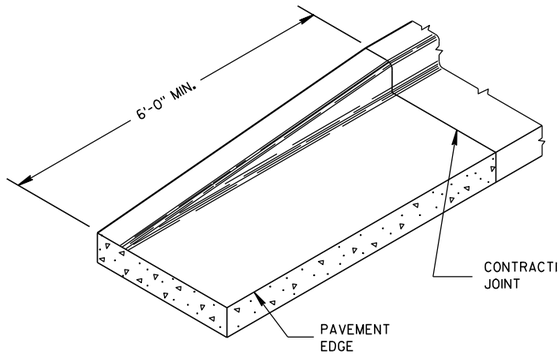
(3) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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

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



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

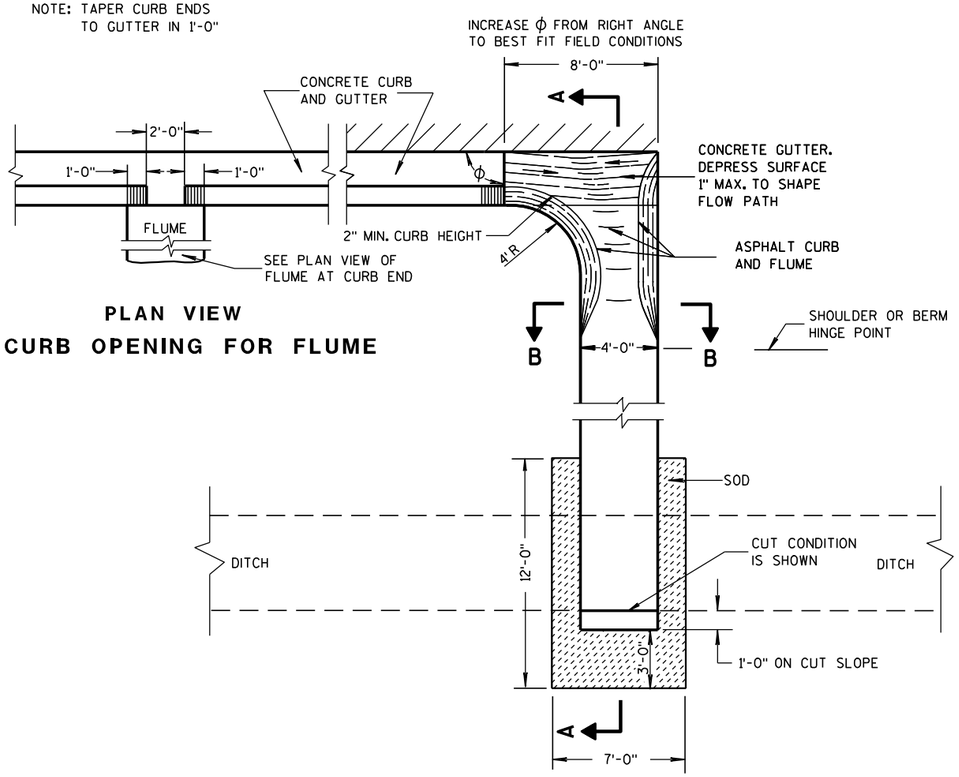
APPROVED
9/4/08 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

FHWA

6

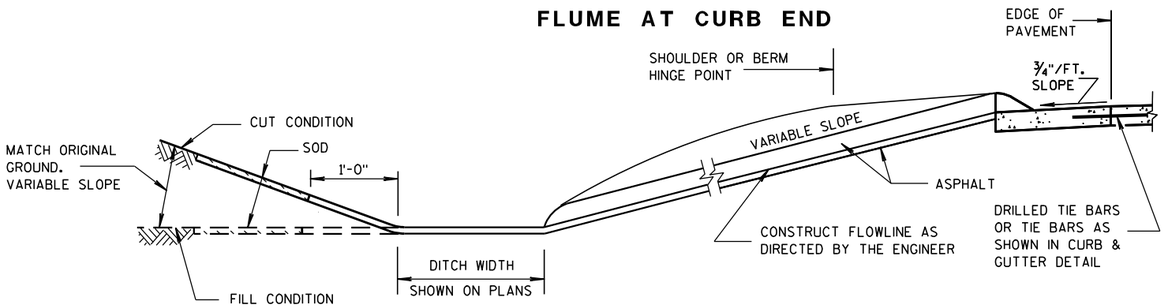
S.D.D. 8 D 1-17

ASPHALTIC FLUME

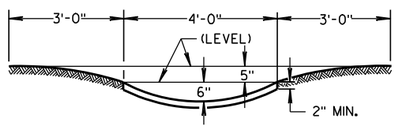


PLAN VIEW
CURB OPENING FOR FLUME

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.

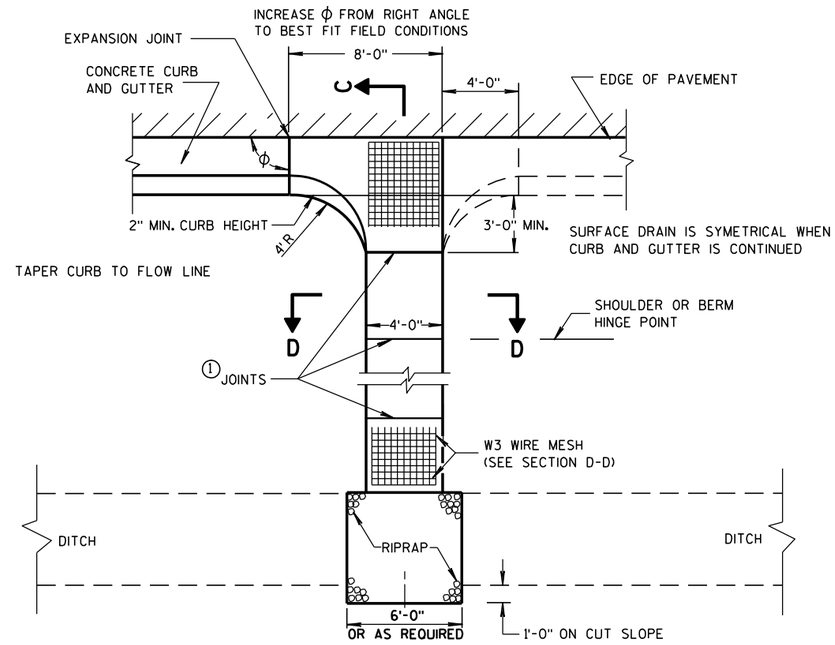
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

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.

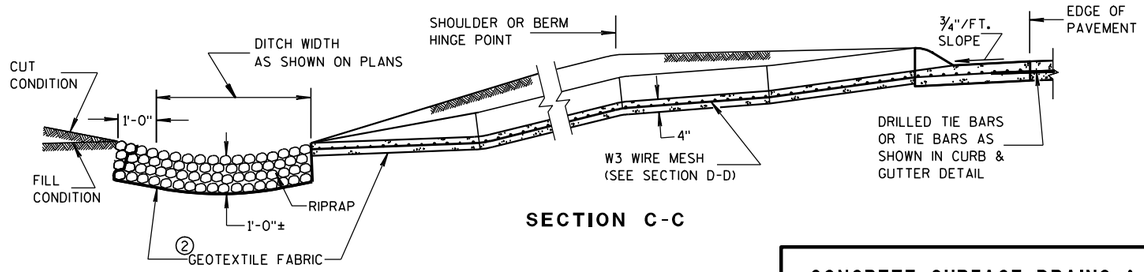
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

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

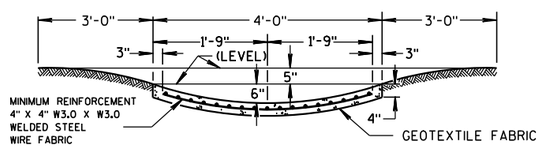
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

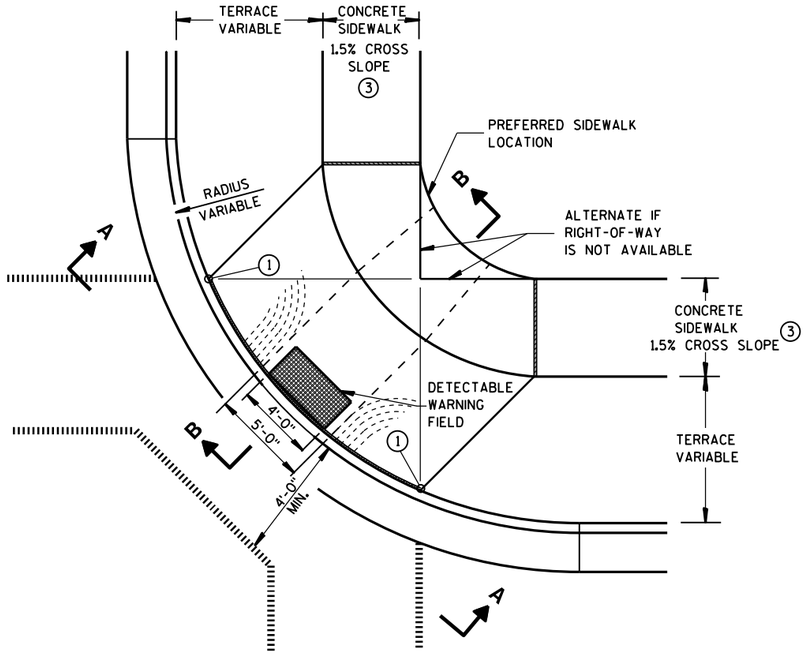
APPROVED
9-4-08 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 8 D 4-5

6

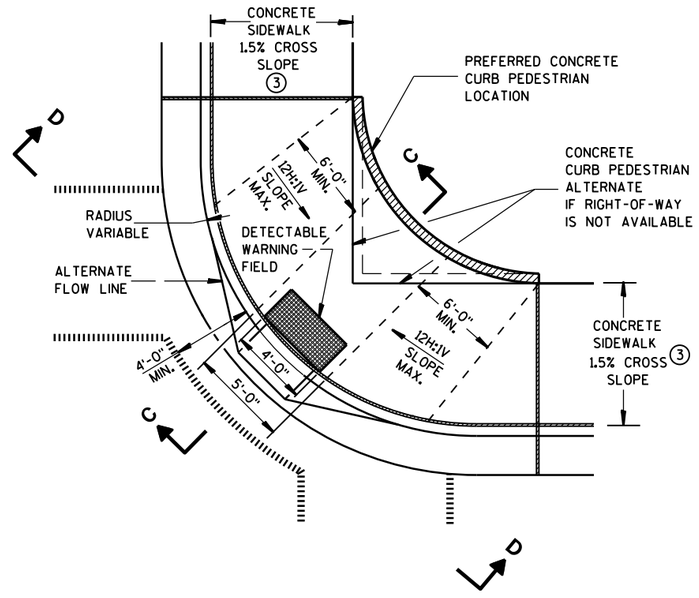
S.D.D. 8 D 4-5



PLAN VIEW

TYPE 1 RAMP

(CENTER OF CORNER RADIUS)



PLAN VIEW

TYPE 1-A RAMP

(NO TERRACE)

GENERAL NOTES

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

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

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

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

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

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

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

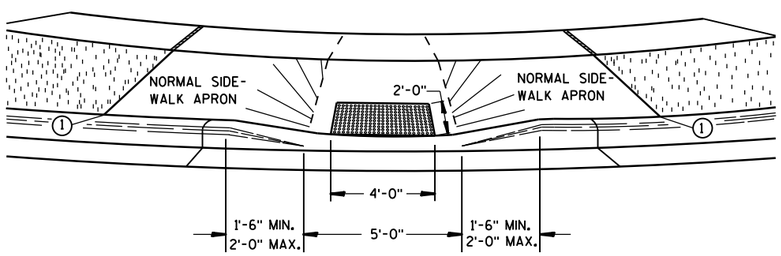
① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.

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

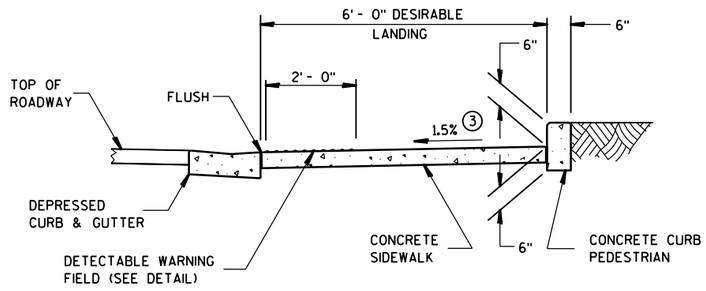
③ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

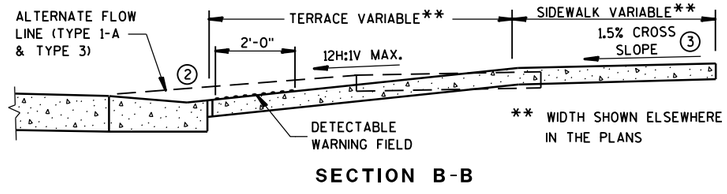
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



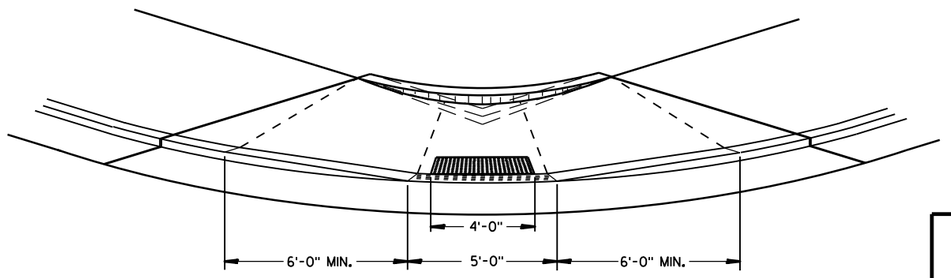
VIEW A-A



SECTION C-C



SECTION B-B



VIEW D-D

CURB RAMPS TYPES 1 AND 1-A

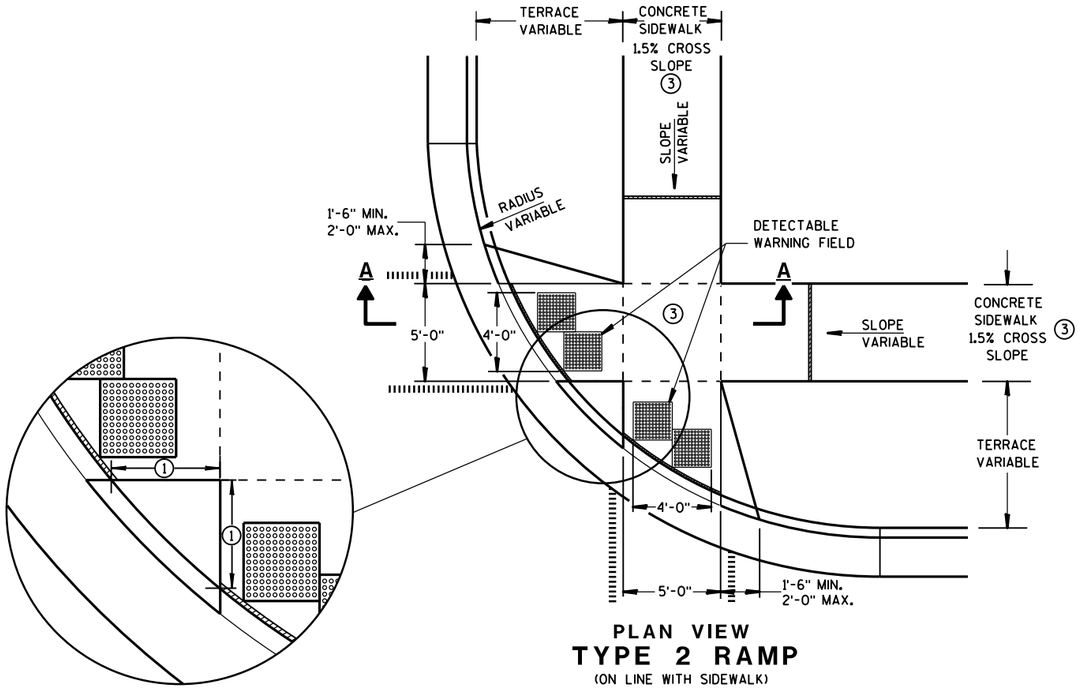
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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

6

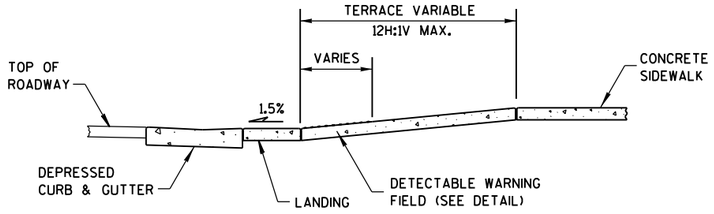
S.D.D. 8 D 5-15a



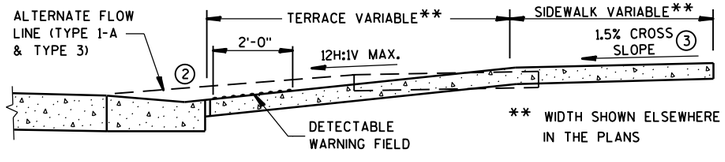
PLAN VIEW

TYPE 2 RAMP

(ON LINE WITH SIDEWALK)



SECTION A-A



SECTION B-B

GENERAL NOTES

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

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

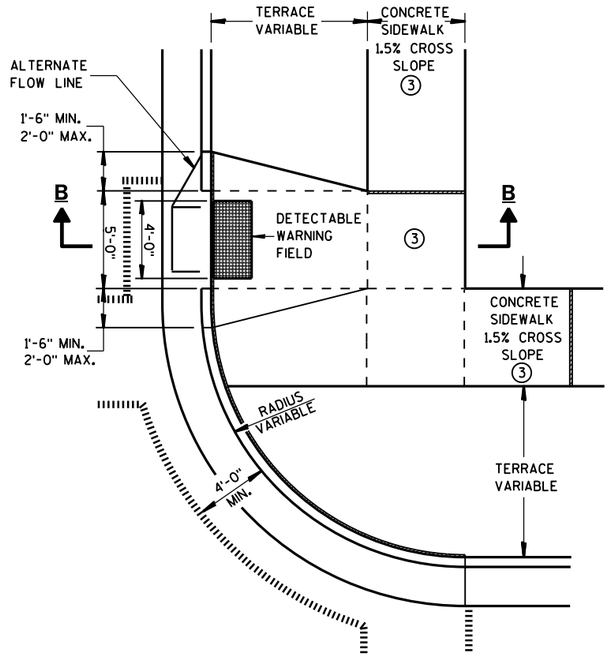
① WHEN THIS DISTANCE IS LESS THAN 6'-0" IT MAY BE DIFFICULT TO ACHIEVE A 12H:1V SLOPE, OR FLATTER, ON THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 12H:1V SLOPE, OR FLATTER, ON RAMP. 2" MINIMUM CURB HEIGHT.

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

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

LEGEND

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



PLAN VIEW

TYPE 3 RAMP

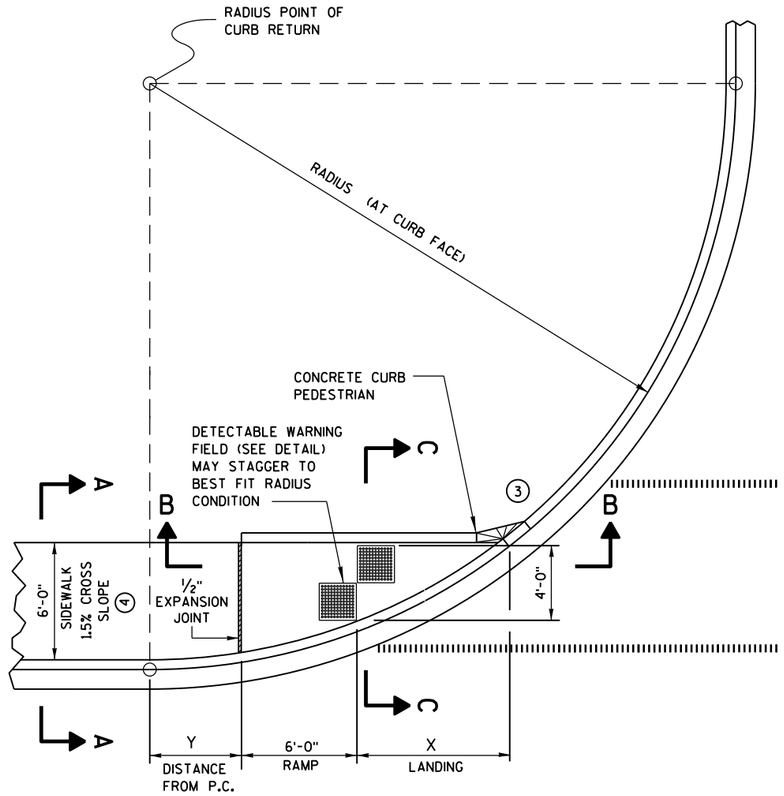
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS TYPES 2 AND 3

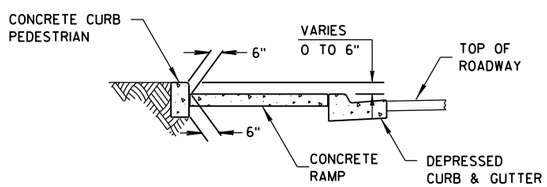
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

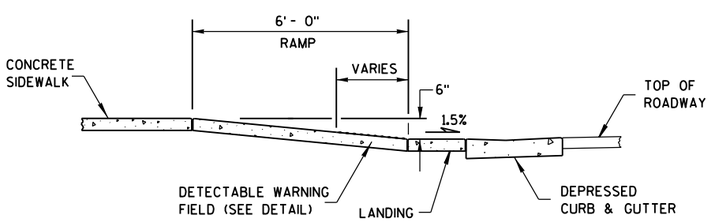
S.D.D. 8 D 5-15b



CURB RAMP TYPE 4A
PLAN VIEW



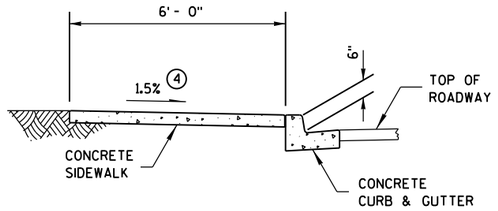
SECTION C-C FOR TYPE 4A



SECTION B-B FOR TYPE 4A

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

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A

GENERAL NOTES

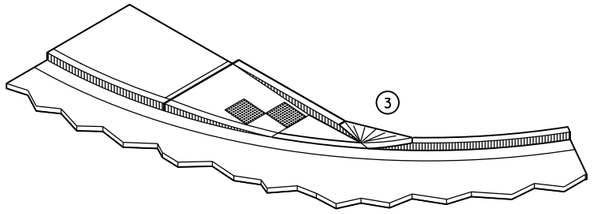
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

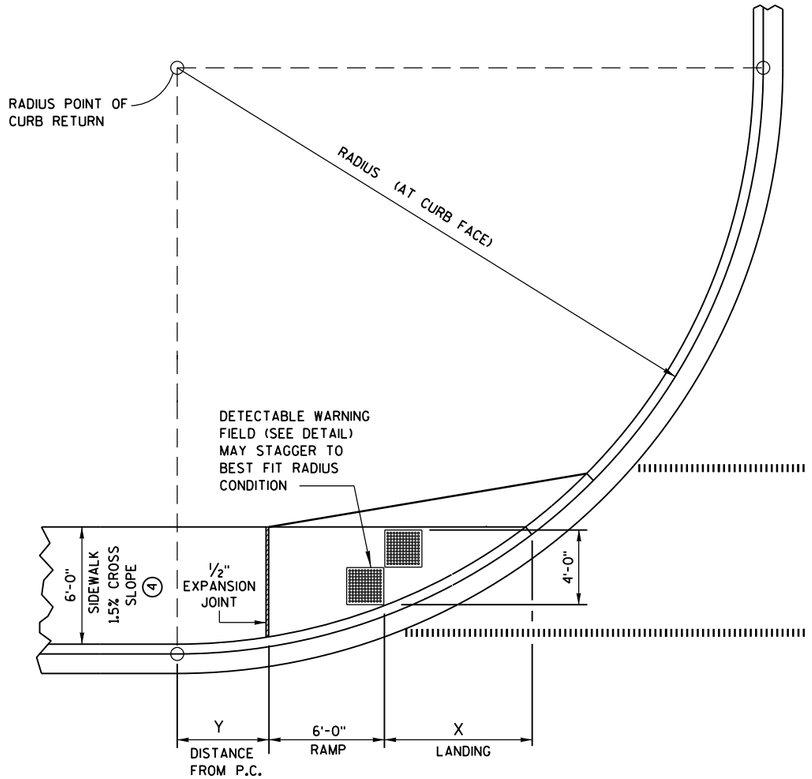
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

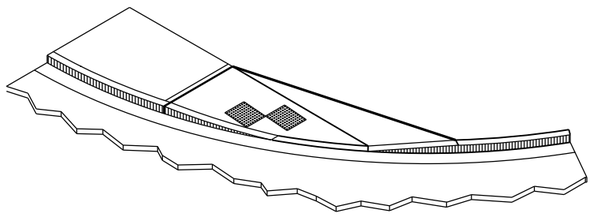
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



ISOMETRIC VIEW FOR TYPE 4A



CURB RAMP TYPE 4A1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

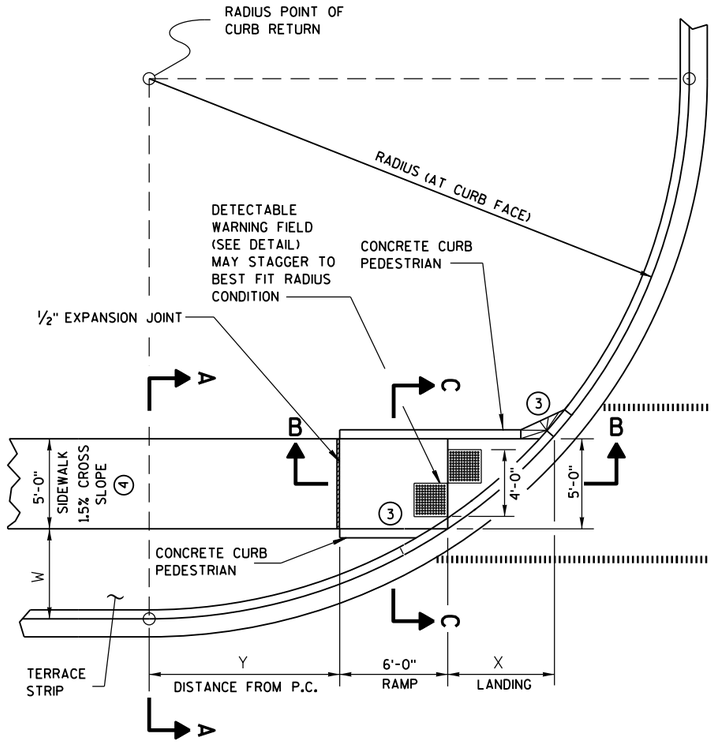
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

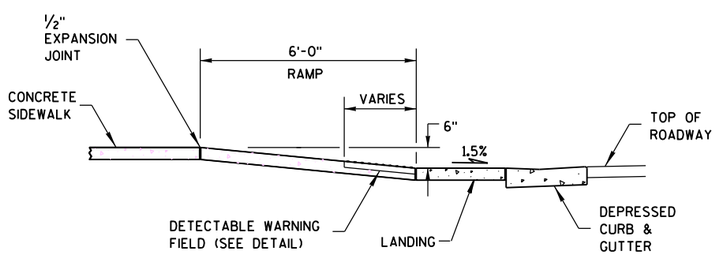
6

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

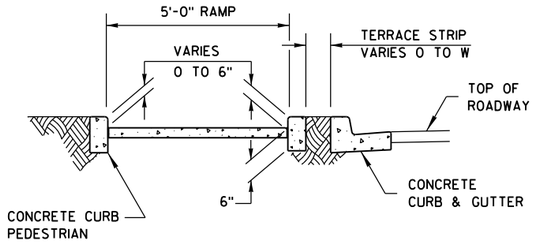


CURB RAMP TYPE 4B
PLAN VIEW

SECTION A-A FOR TYPE 4B



SECTION B-B FOR TYPE 4B



SECTION C-C FOR TYPE 4B

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

PAVEMENT MARKING CROSSWALK (WHITE)

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

INTERMEDIATE RADII CAN BE INTERPOLATED

GENERAL NOTES

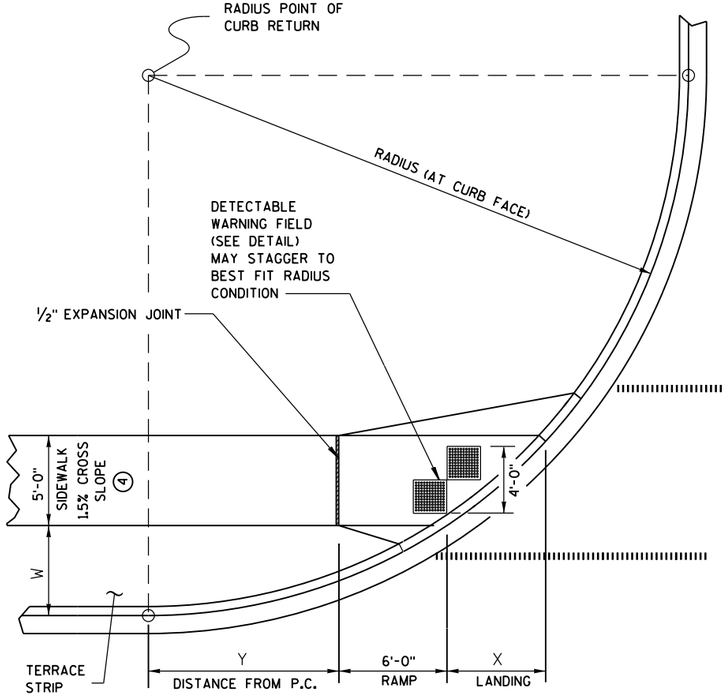
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

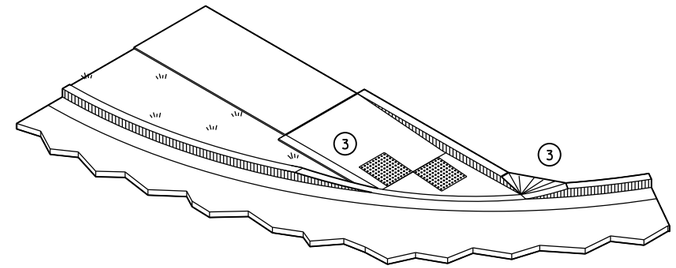
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

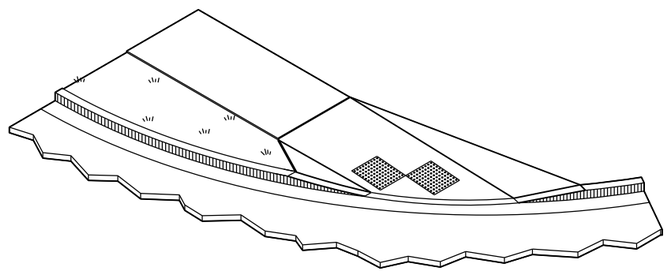
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



CURB RAMP TYPE 4B1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4B



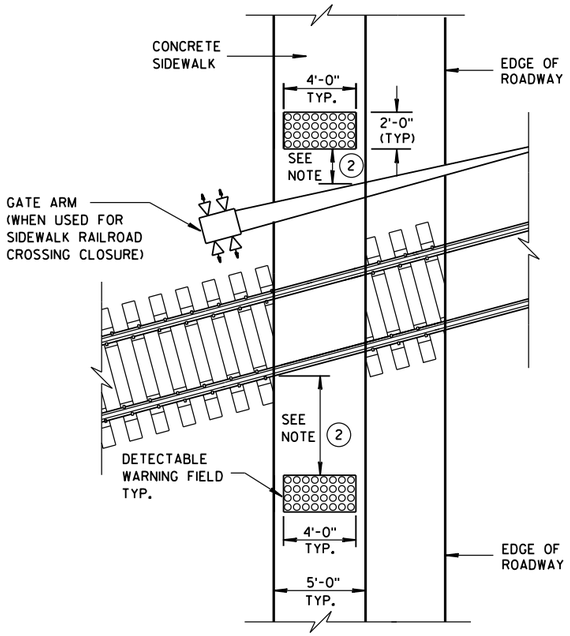
ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS TYPE 4B AND 4B1

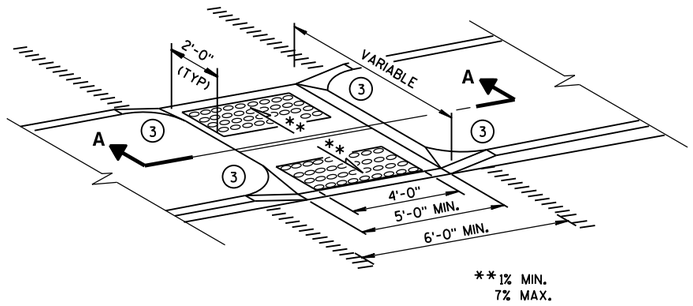
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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



TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING



MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5

GENERAL NOTES

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

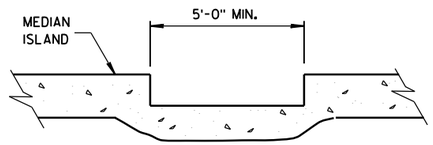
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

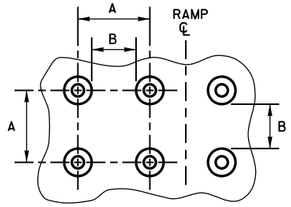
(2) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET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

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

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



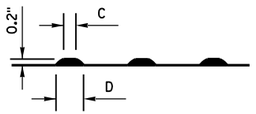
SECTION A-A



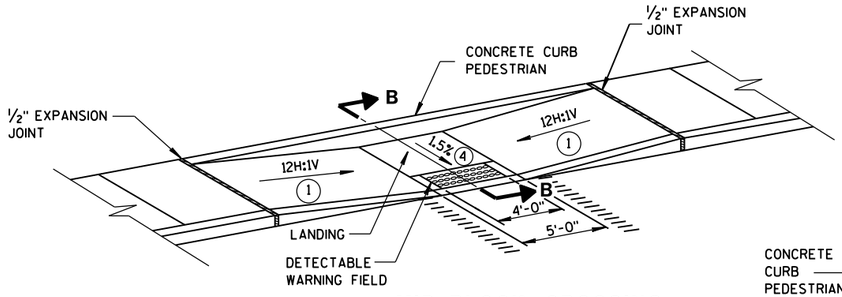
PLAN VIEW

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

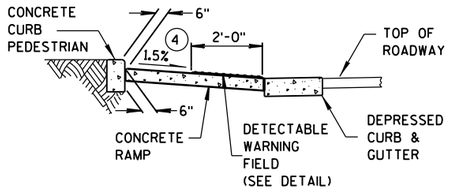
* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



ELEVATION VIEW

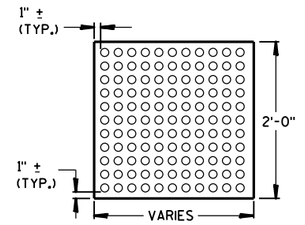


MID-BLOCK CROSSING
TYPE 7A



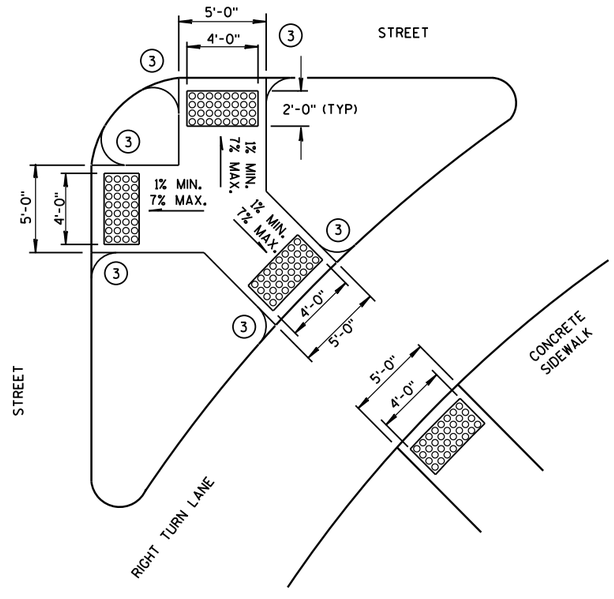
SECTION B-B

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL

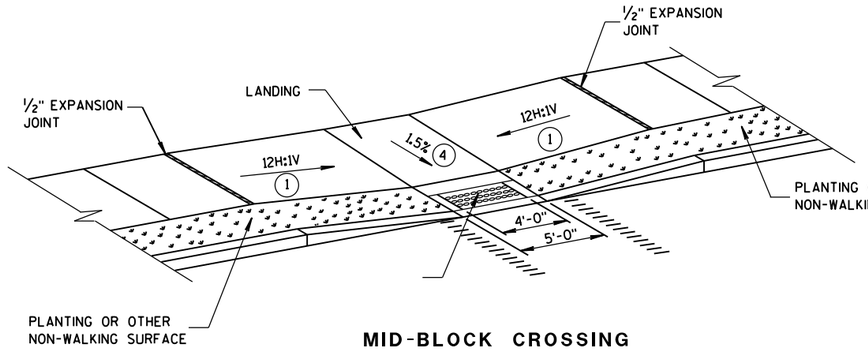


PLAN VIEW

DETECTABLE WARNING FIELD (TYPICAL)



TYPE 6
DETECTABLE WARNING AT ISLANDS



MID-BLOCK CROSSING
TYPE 7B

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

LEGEND

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

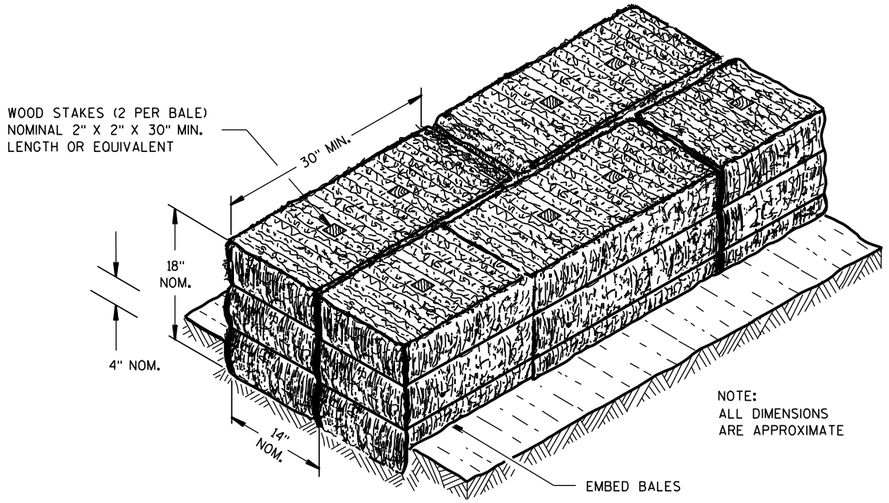
CURB RAMPS
TYPES 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

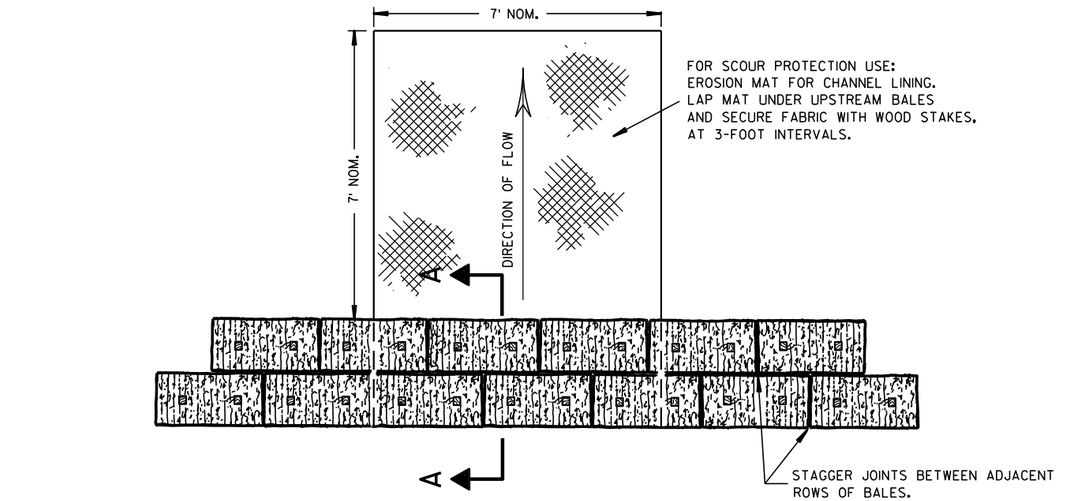
APPROVED
2-6-2013 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

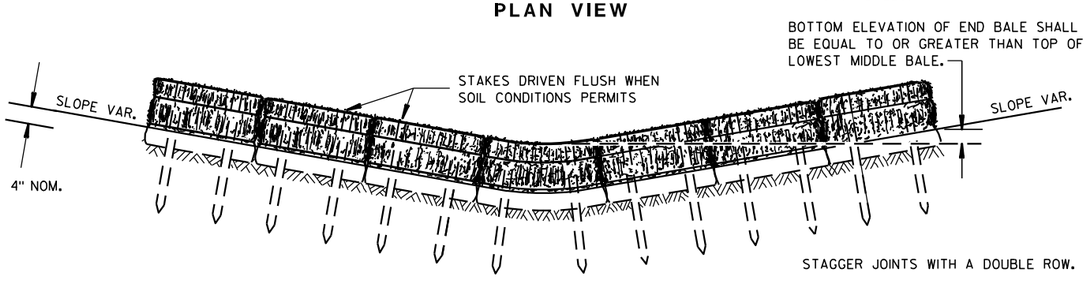
S.D.D. 8 D 5-15e



SECTION A-A



PLAN VIEW



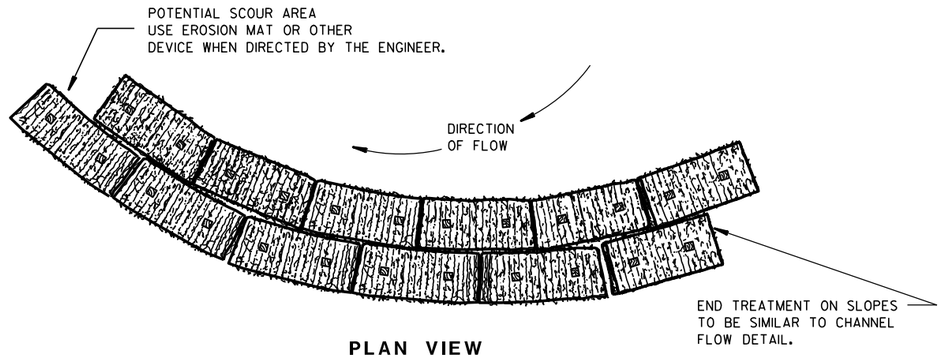
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

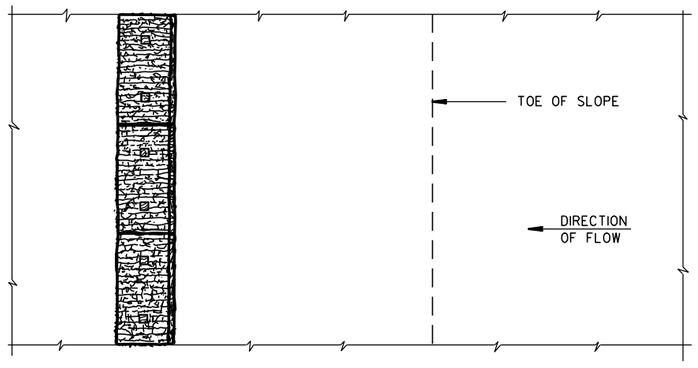
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

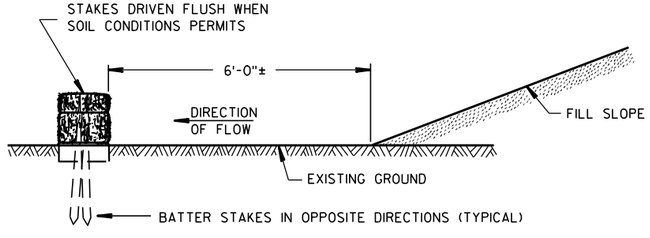


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

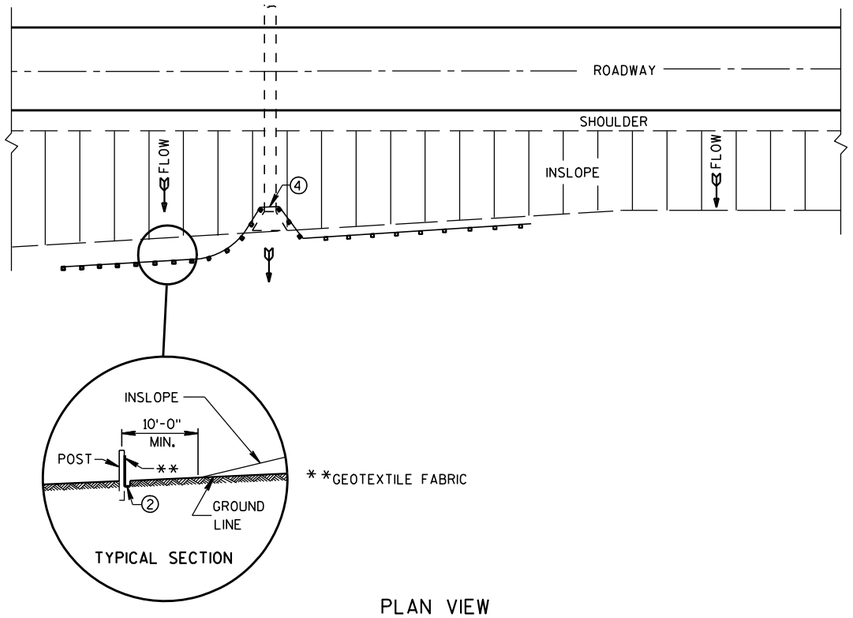
6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

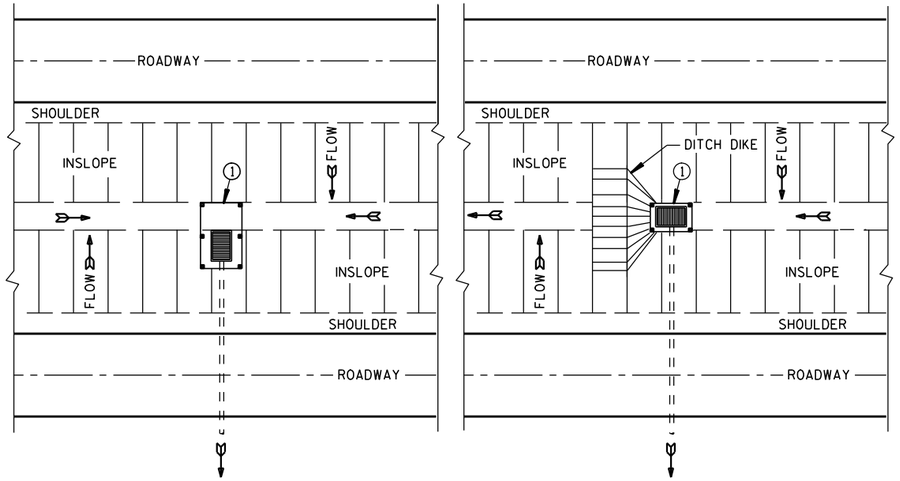
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



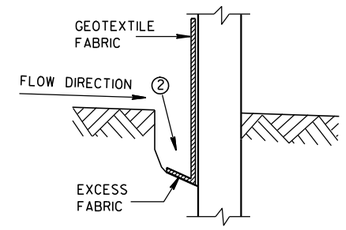
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

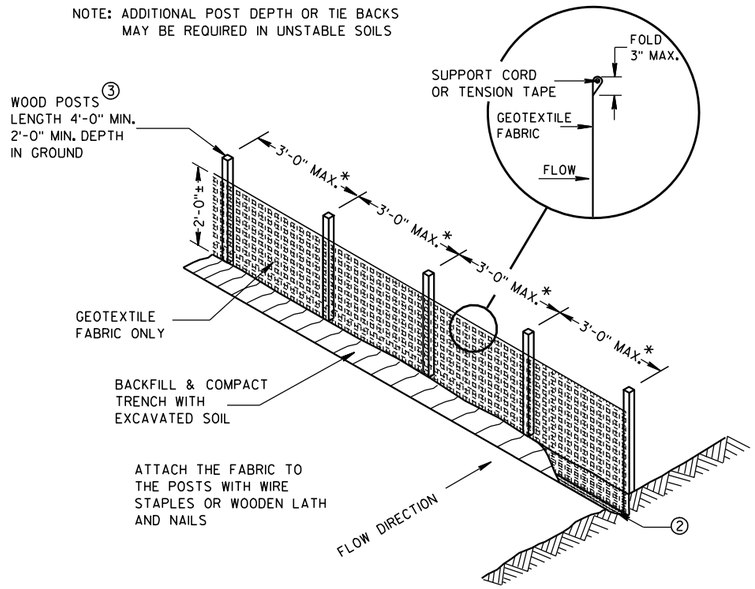
GENERAL NOTES

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

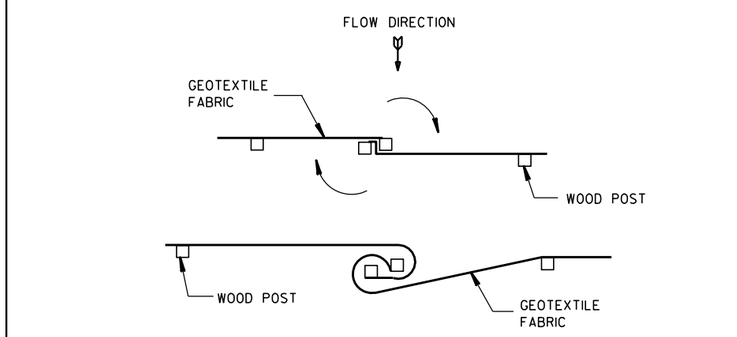
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



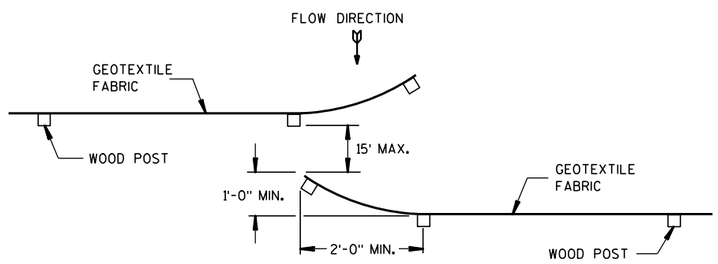
TRENCH DETAIL



SILT FENCE

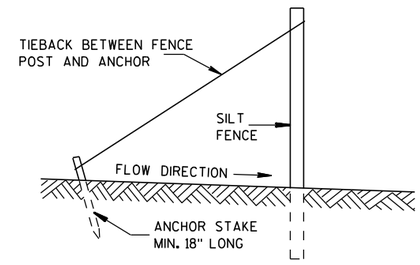


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

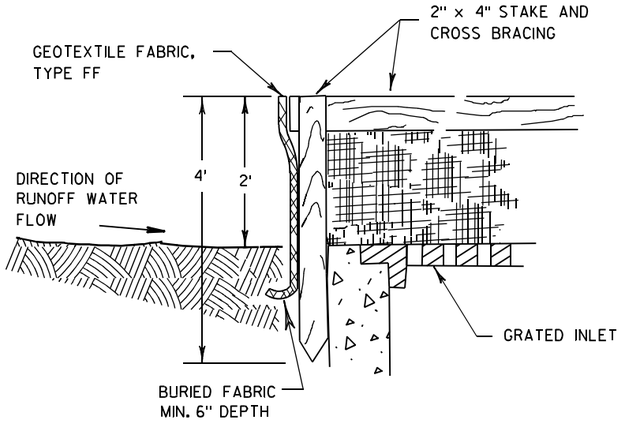
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

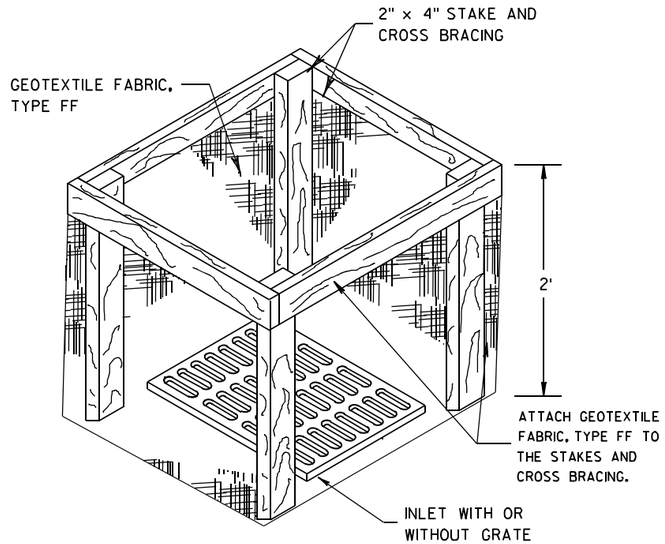
6

S.D.D. 8 E 9-6

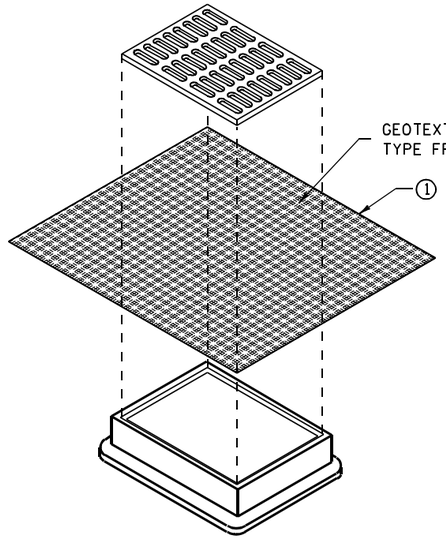
6

S.D.D. 8 E 9-6



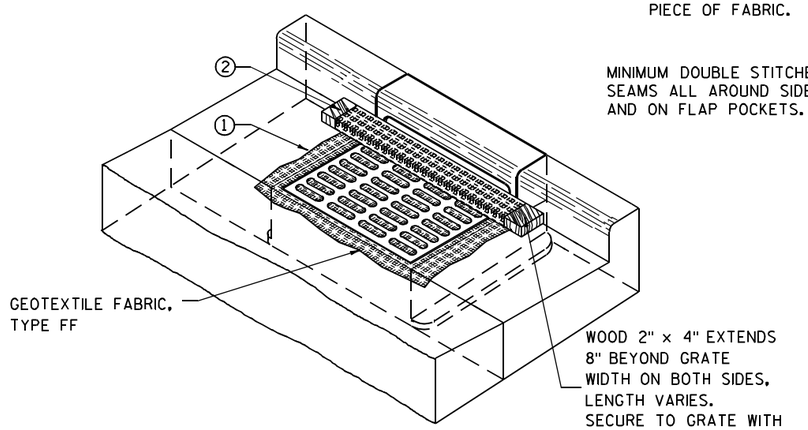


INLET PROTECTION, TYPE A

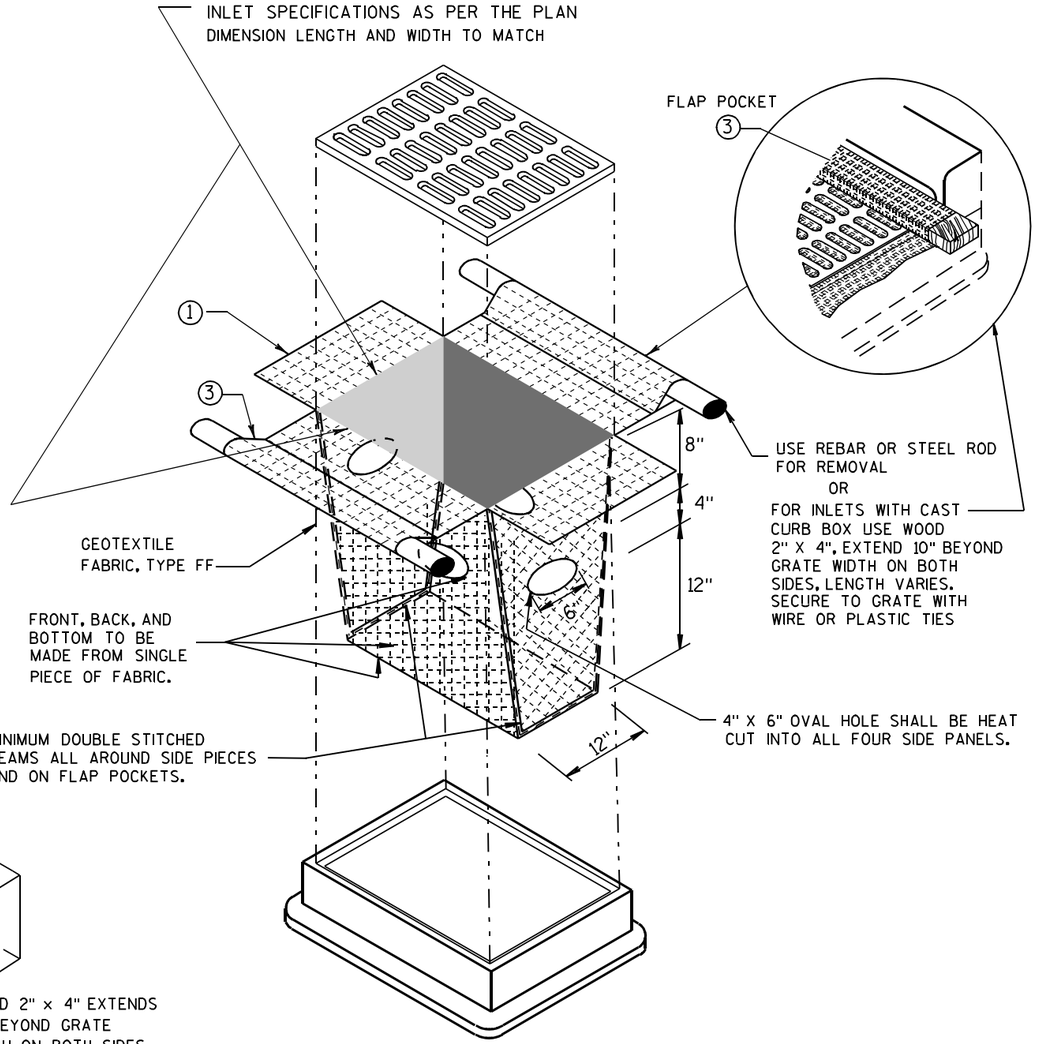


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

GENERAL NOTES

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

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

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

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

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

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

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

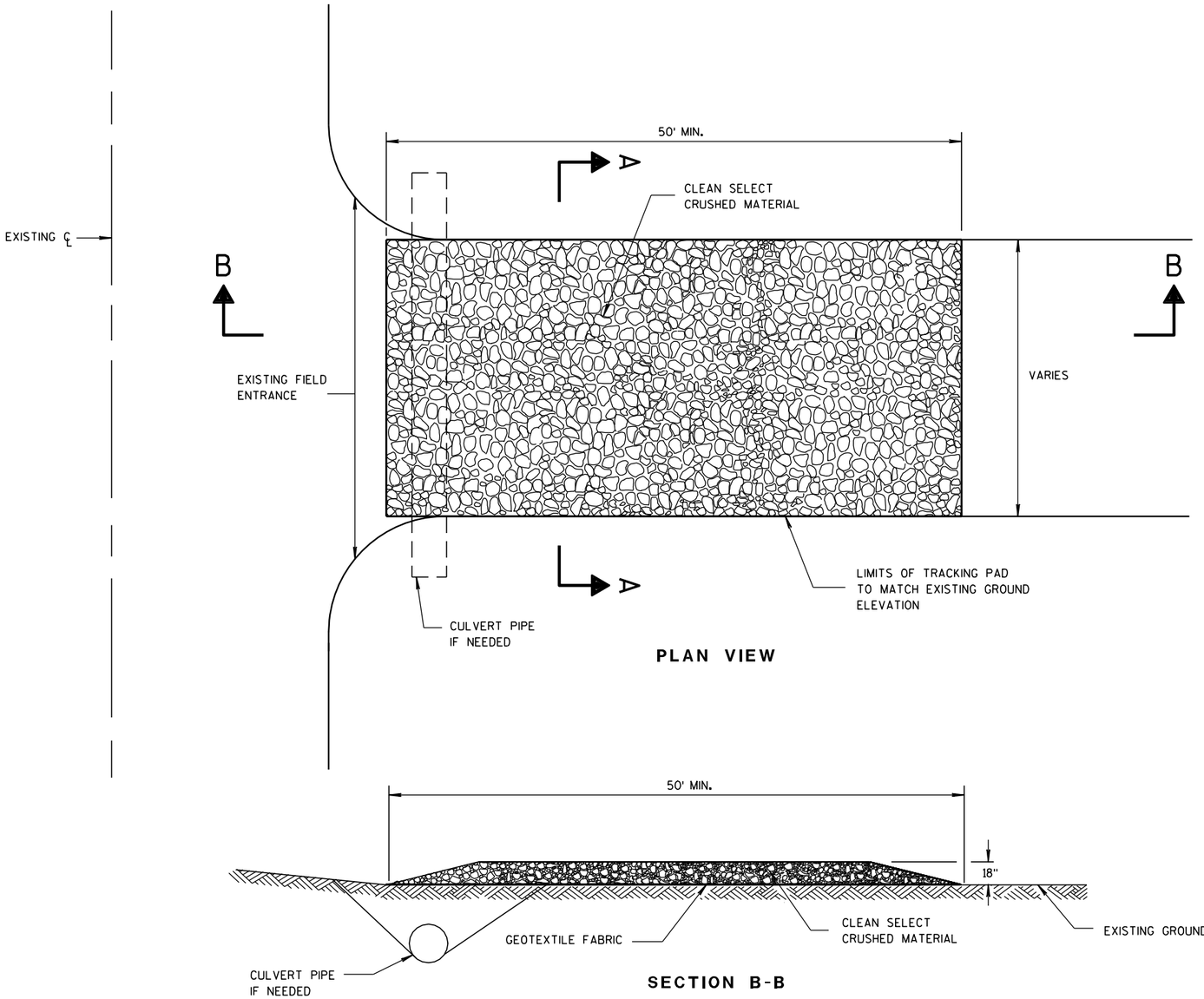
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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



PLAN VIEW

SECTION B-B

GENERAL NOTES

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

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

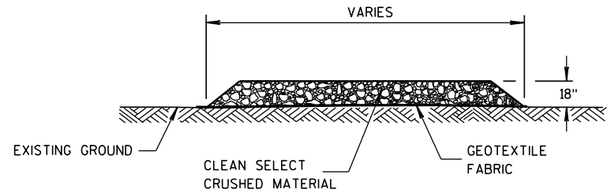
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

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

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

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

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



SECTION A-A

TRACKING PAD

TRACKING PAD	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 3/24/2011 DATE FHWA	/S/ Jerry H. Zoda ROADWAY STANDARDS ENGINEER

6

S.D.D. 8 E 14-1

6

S.D.D. 8 E 14-1

METAL APRON ENDWALLS

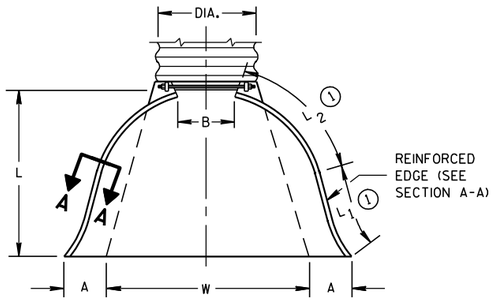
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

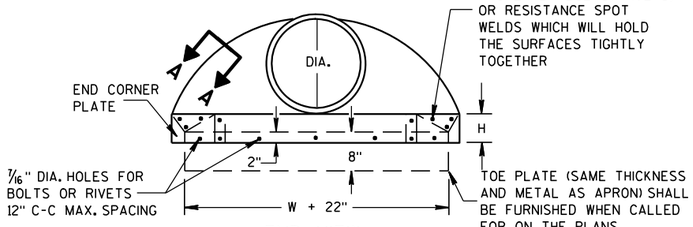
REINFORCED CONCRETE APRON ENDWALLS

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

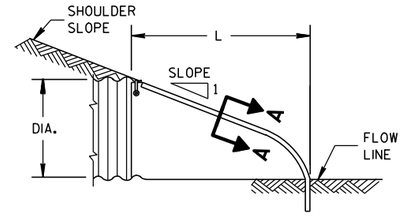
*MINIMUM
**MAXIMUM



PLAN VIEW

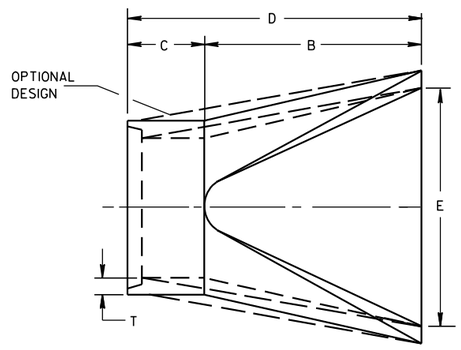


END VIEW

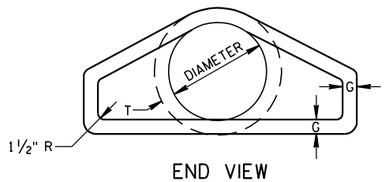


SIDE ELEVATION

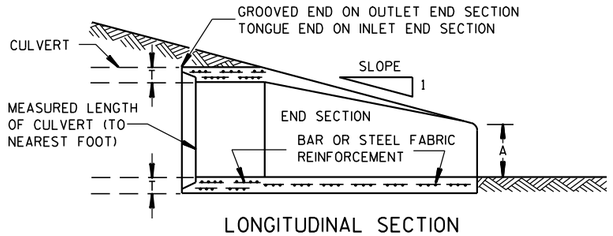
METAL ENDWALLS



PLAN

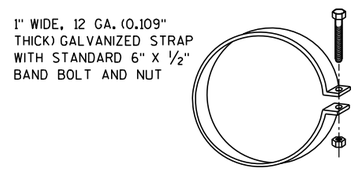


END VIEW



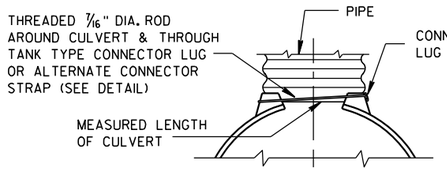
LONGITUDINAL SECTION

CONCRETE ENDWALLS

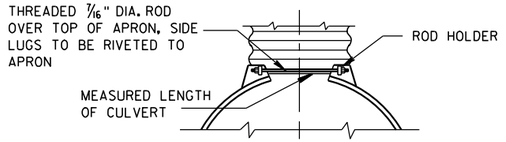


ALTERNATE FOR TYPE 1 CONNECTION

END SECTION CONNECTOR STRAP

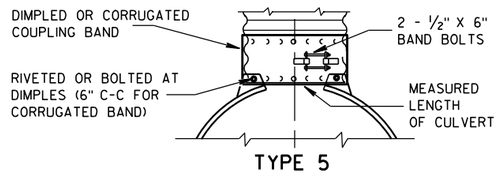


TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

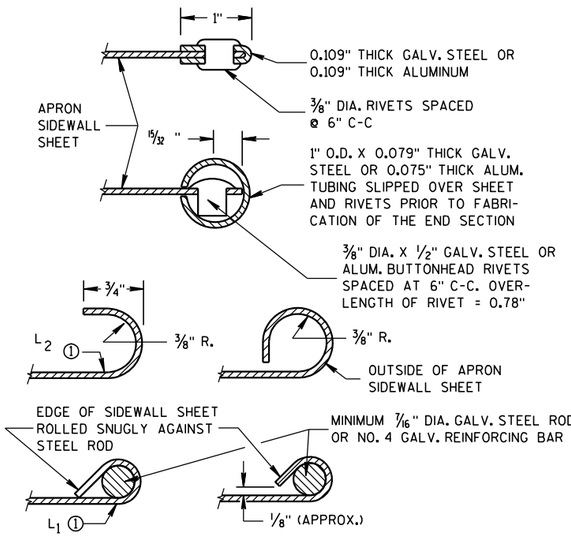
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

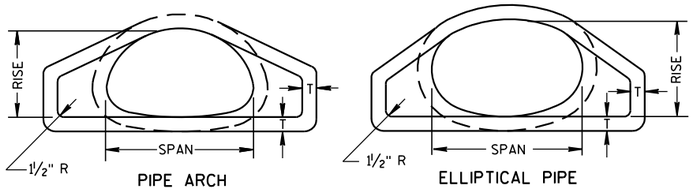
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

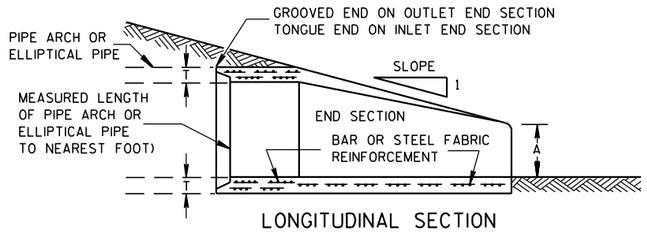
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

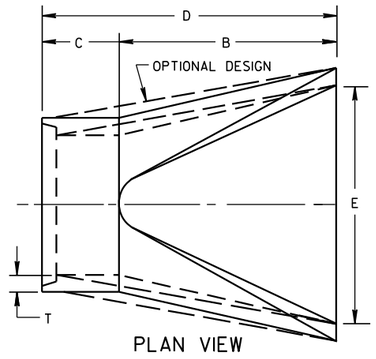
6
S.D.D. 8 F 1-11



END VIEW

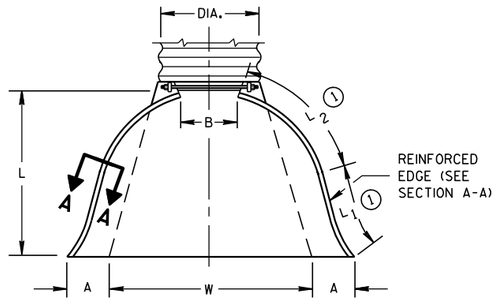


LONGITUDINAL SECTION

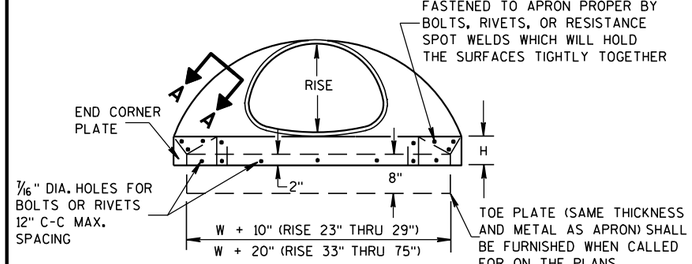


PLAN VIEW

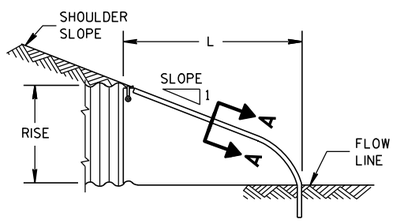
CONCRETE ENDWALLS



PLAN VIEW

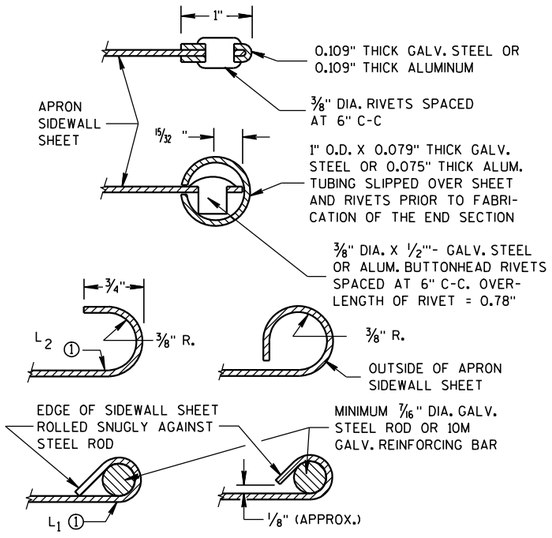


END VIEW



SIDE ELEVATION

METAL ENDWALLS



SECTION A-A

2- ⅔" X ½" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1½")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
15	17	13	.064	.060	7	9	6	19	14	16	30	2½ to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19⅜	36	2½ to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21¾	42	2½ to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27½	48	2½ to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37⅝	60	2½ to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45⅜	75	2½ to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54¾	85	2½ to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2½ to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72¾	102	2¼ to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82¼	114	2¼ to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

3" X 1" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1½")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
48	53	41	.109	.105	18	26	12	63	24	72¾	90	2½ to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82¼	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1½ to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1½ to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1½ to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1½ to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1½ to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1½ to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL SEE GENERAL NOTES

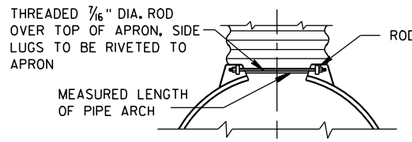
REINFORCED CONCRETE PIPE ARCH

EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	29	18	3	8½	39	33	72	48	3 to 1
30	36	22	3½	9½	50	46	96	60	3 to 1
36	44	27	4	11⅛	60	36	96	72	3 to 1
42	51	31	4½	15 13/16	60	36	96	78	3 to 1
48	58	36	5	21	60	36	96	84	3 to 1
54	65	40	5½	25½	60	36	96	90	3 to 1
60	73	45	6	31	60	36	96	96	3 to 1
72	88	54	7	31	60	39	99	120	2 to 1
84	102	62	8	28½	83	19	102	144	2 to 1

REINFORCED CONCRETE ELLIPTICAL PIPE

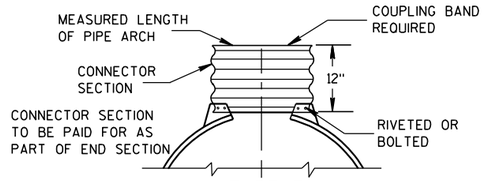
EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48	6½	30	60	36	96	96	2½ to 1

**NOMINAL SIZE



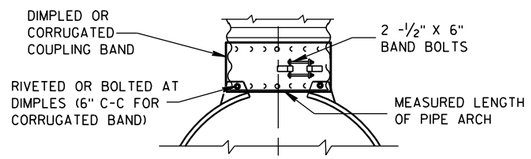
TYPE 2

FOR 17" X 13" THRU 112" X 75" PIPE ARCH



TYPE 3

FOR 64" X 43" THRU 112" X 75" PIPE ARCH



TYPE 5

ALTERNATE FOR:

ALL SIZES CORRUGATED PIPE ARCHES

NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL.

CONNECTION DETAILS

GENERAL NOTES

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

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

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH 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 ARCH 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 77" X 52" THROUGH 112" X 75" 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 ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL 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 2-1

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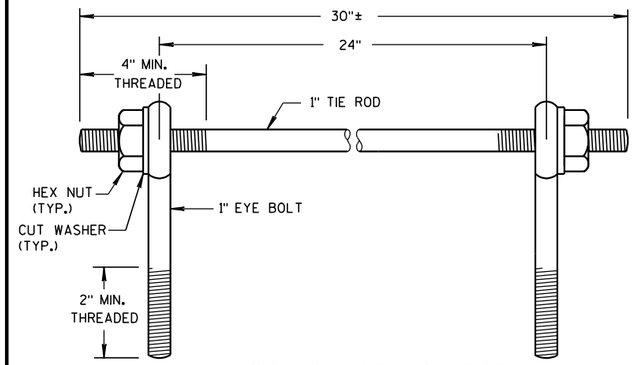
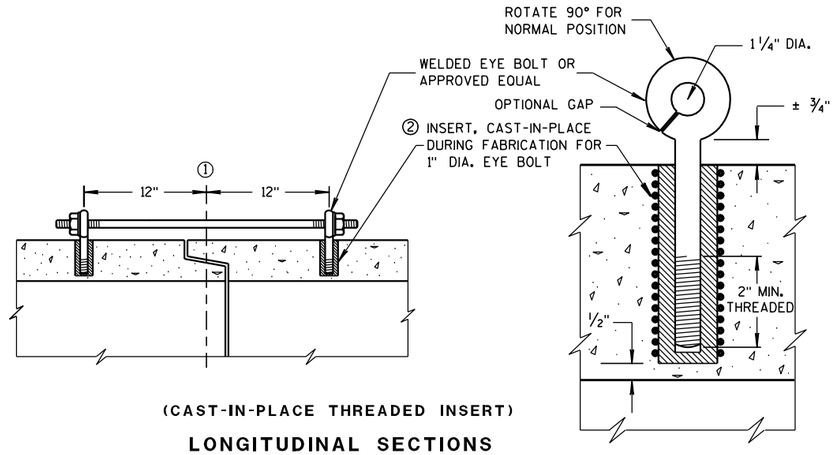
S.D.D. 8 F 2-1



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

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

GENERAL NOTES

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

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

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

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

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

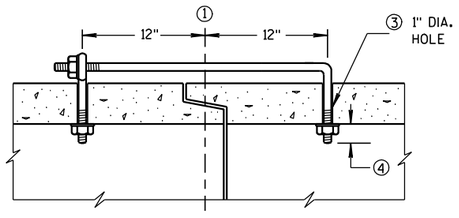
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

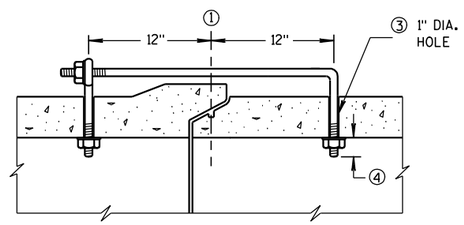
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

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



(TONGUE & GROOVE PIPE)

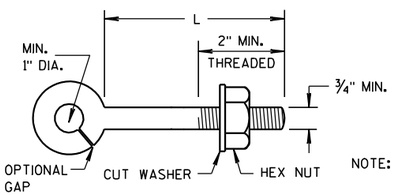


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

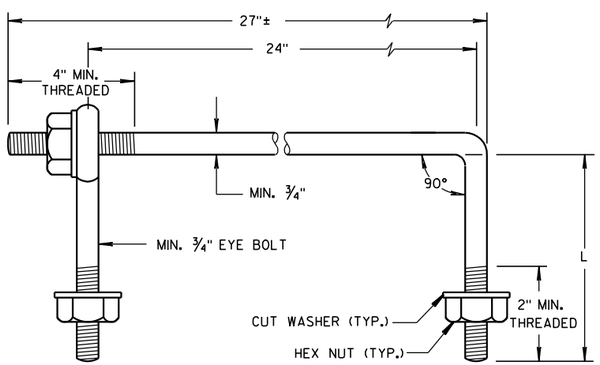
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

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



EYE BOLT AND TIE ROD

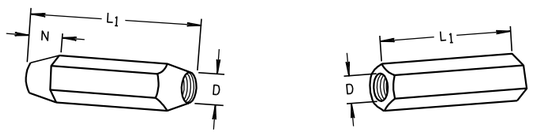
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

ADJUSTABLE TIE ROD TABLE

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

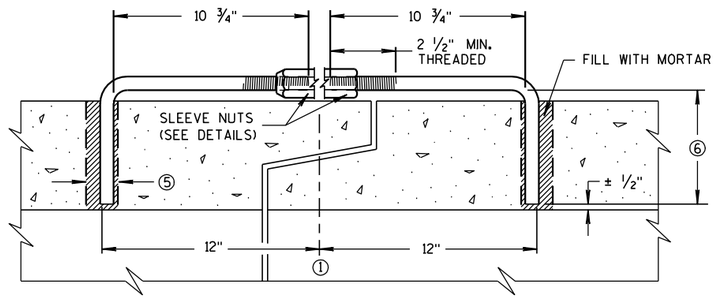
DIMENSIONS SHOWN ARE IN INCHES



TAPERED PLAIN

RIGHT AND LEFT THREADS

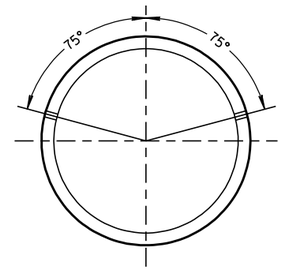
SLEEVE NUTS



LONGITUDINAL SECTION

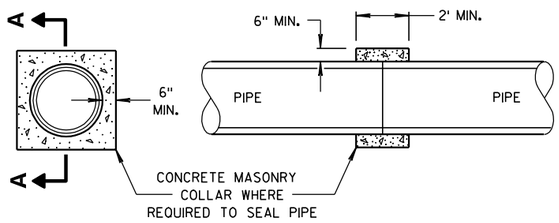
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
200
FHWA

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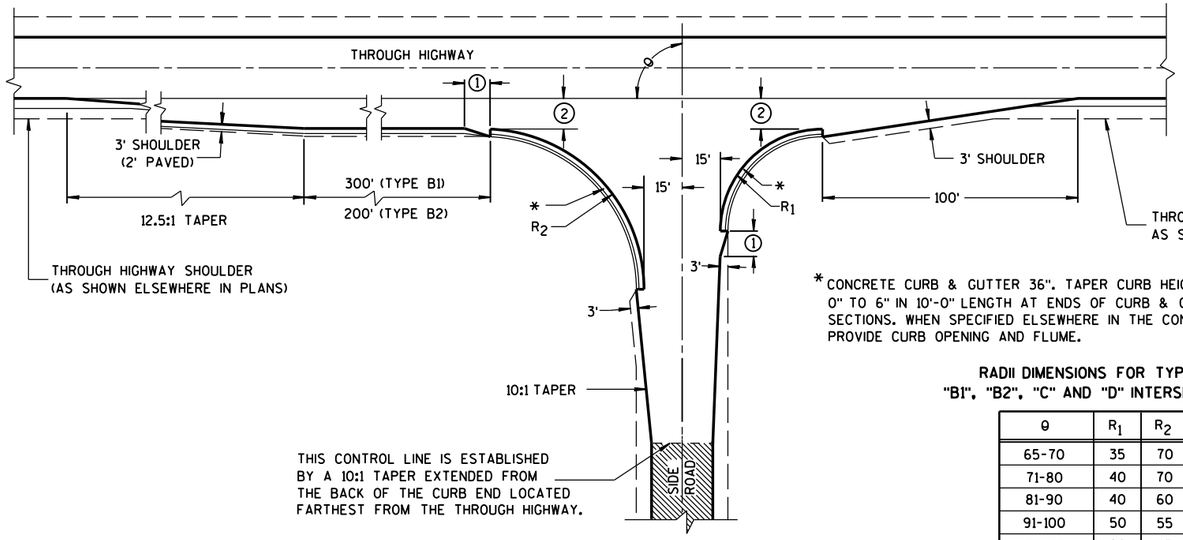
S.D.D. 8 F 4-7

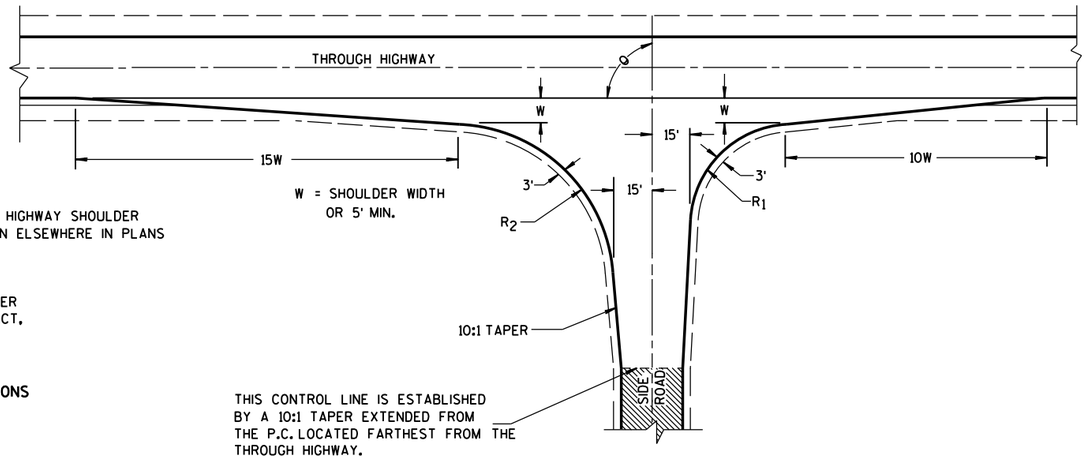


TYPE "B1" AND "B2"

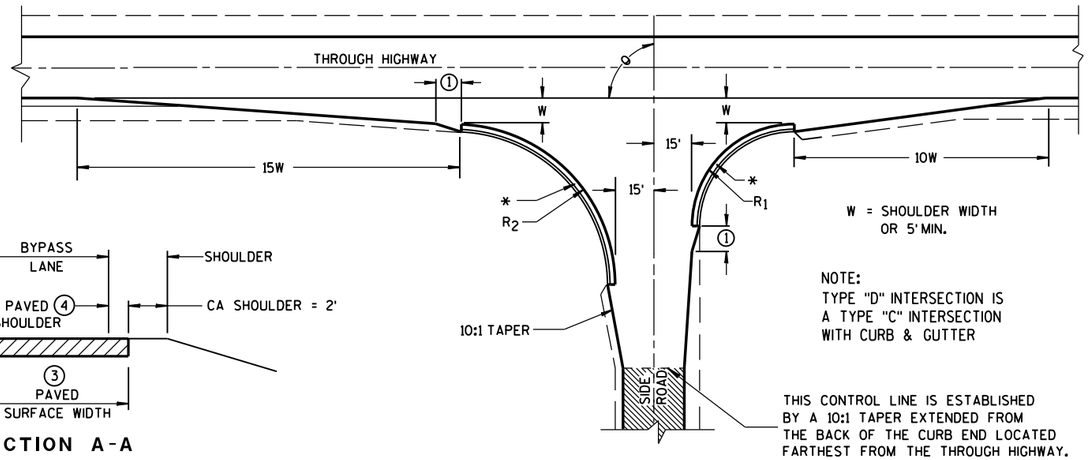
*CONCRETE CURB & GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10'-0" LENGTH AT ENDS OF CURB & GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME.

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

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



TYPE "C"



TYPE "D"

GENERAL NOTES

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

SIDE ROAD SURFACING NOTE

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

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

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

EXISTING PAVED SURFACE

BYPASS LANE

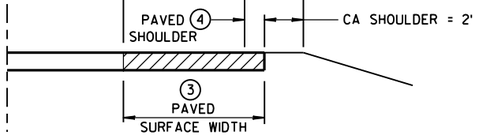
(1) 10-FT TYPICAL.

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

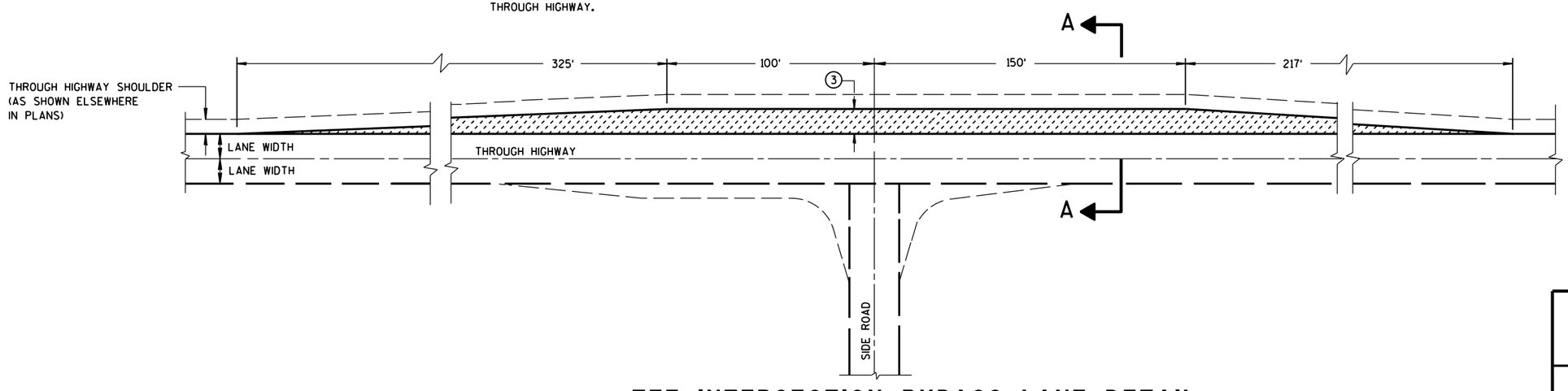
**10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.

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

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



SECTION A-A
(SHOWING BYPASS LANE AND SHOULDER)

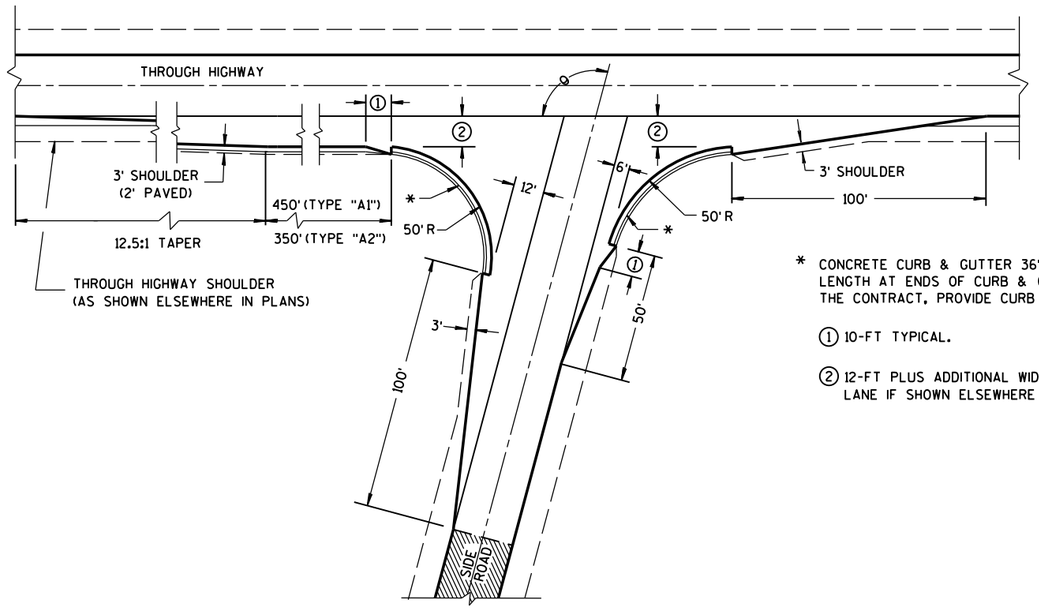


TEE INTERSECTION BYPASS LANE DETAIL

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 9 A 1-13a



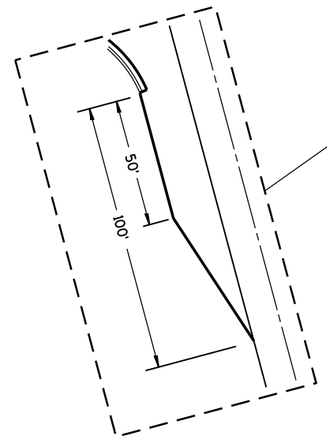
θ = MORE THAN 80°

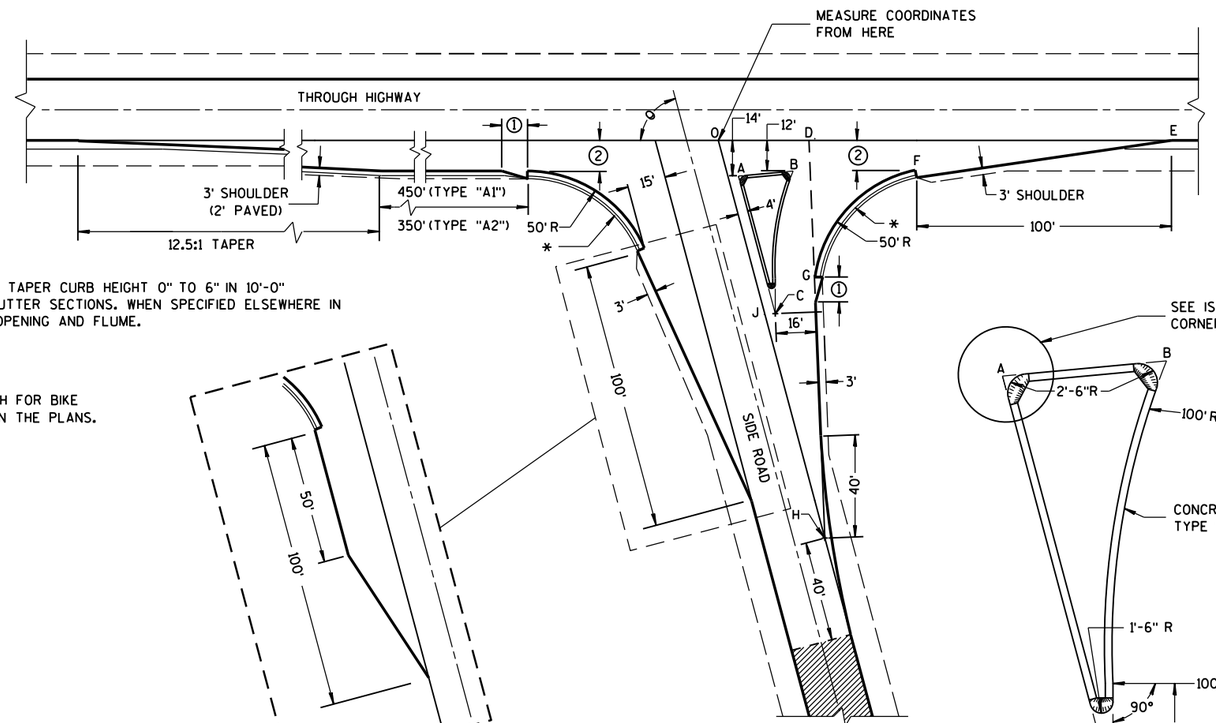
* CONCRETE CURB & GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10'-0" LENGTH AT ENDS OF CURB & GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME.

① 10-FT TYPICAL.

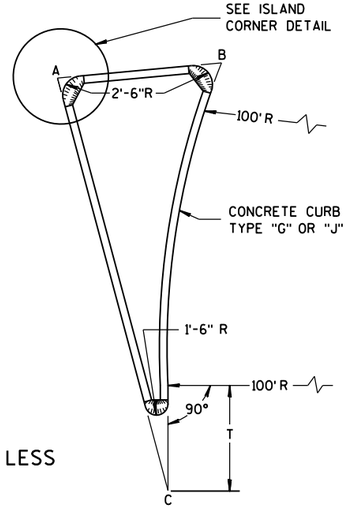
② 12-FT PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLANS.

EXISTING PAVED SURFACE

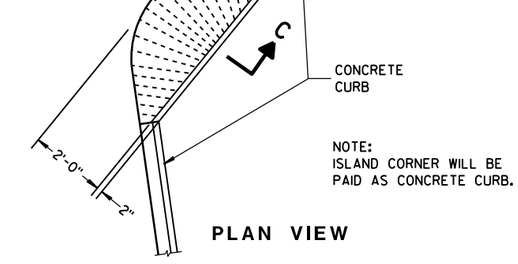




θ = ACUTE ANGLES 80° OR LESS

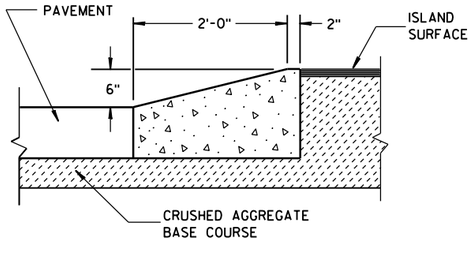


SIDE ROAD WIDENING AND TAPER REQUIRED WHERE THE THROUGH HIGHWAY CARRIES TWO-WAY TRAFFIC
θ = ACUTE ANGLES 70° OR LESS



NOTE:
ISLAND CORNER WILL BE PAID AS CONCRETE CURB.

PLAN VIEW



SECTION C-C

ISLAND CORNER DETAIL

(TO BE CONSTRUCTED AT ALL ISLAND CORNERS)

TABLE OF DIMENSIONS FOR
VARIABLE SIDE ROAD INTERSECTION ANGLES
(INTERPOLATE VALUES FOR ANGLES NOT SHOWN)

ANGLE θ DEGREES	COORDINATES IN FEET (MEASURED FROM POINT "O") X / Y								LENGTH IN FEET				
	A	B	C	D	E	F	G	H	AB	AC	T	OJ	OH
60	12.7 / -14.0	44.9 / -12.0	46.4 / -72.4	41.9 / 0.0	205.0 / 0.0	104.6 / -12.0	64.0 / -75.5	85.0 / -147.1	32.3	67.4	4.9	85.9	169.9
65	10.9 / -14.0	39.0 / -12.0	37.8 / -71.6	39.4 / 0.0	196.1 / 0.0	95.7 / -12.0	54.1 / -71.5	70.5 / -151.3	28.2	63.6	8.5	80.9	166.9
70	9.4 / -14.0	33.9 / -12.0	29.8 / -70.1	37.4 / 0.0	188.3 / 0.0	87.8 / -12.0	45.6 / -67.5	56.1 / -154.2	24.6	59.7	11.5	76.1	164.1
75	7.9 / -14.0	29.3 / -12.0	22.3 / -67.9	35.7 / 0.0	181.2 / 0.0	80.7 / -12.0	38.2 / -63.4	41.8 / -155.9	21.5	55.8	13.8	71.4	161.4
80	6.5 / -14.0	25.4 / -12.0	15.6 / -65.2	34.4 / 0.0	174.8 / 0.0	74.4 / -12.0	31.8 / -59.3	27.6 / -156.5	18.9	52.0	15.6	66.9	158.9

TYPE "A1" & "A2" SIDE ROAD INTERSECTION DETAILS

AT-GRADE SIDE ROAD INTERSECTION, TYPE "A1" & "A2"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

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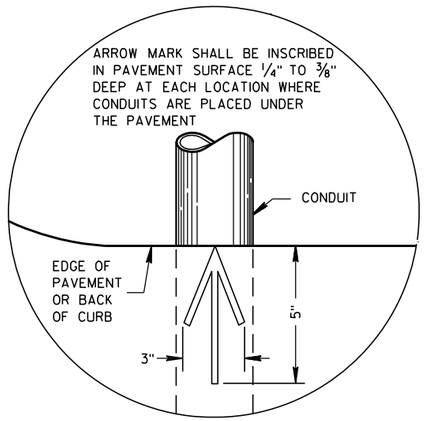
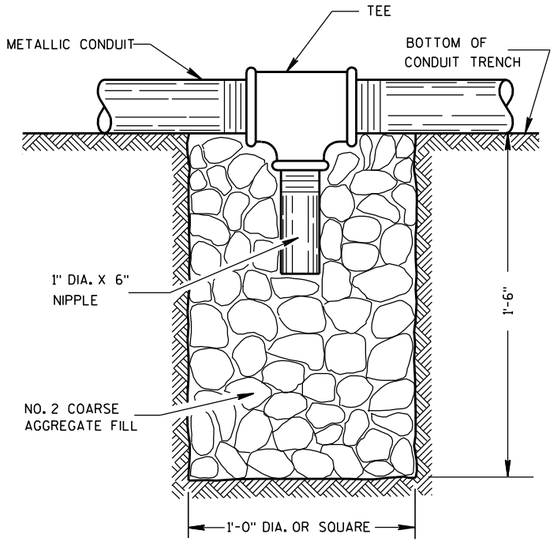


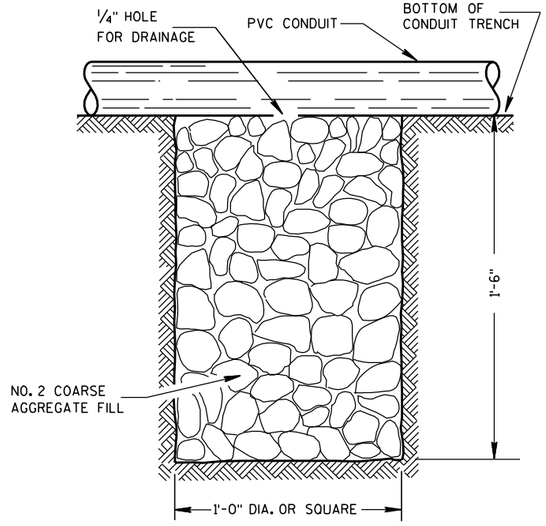
PLAN VIEW

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.

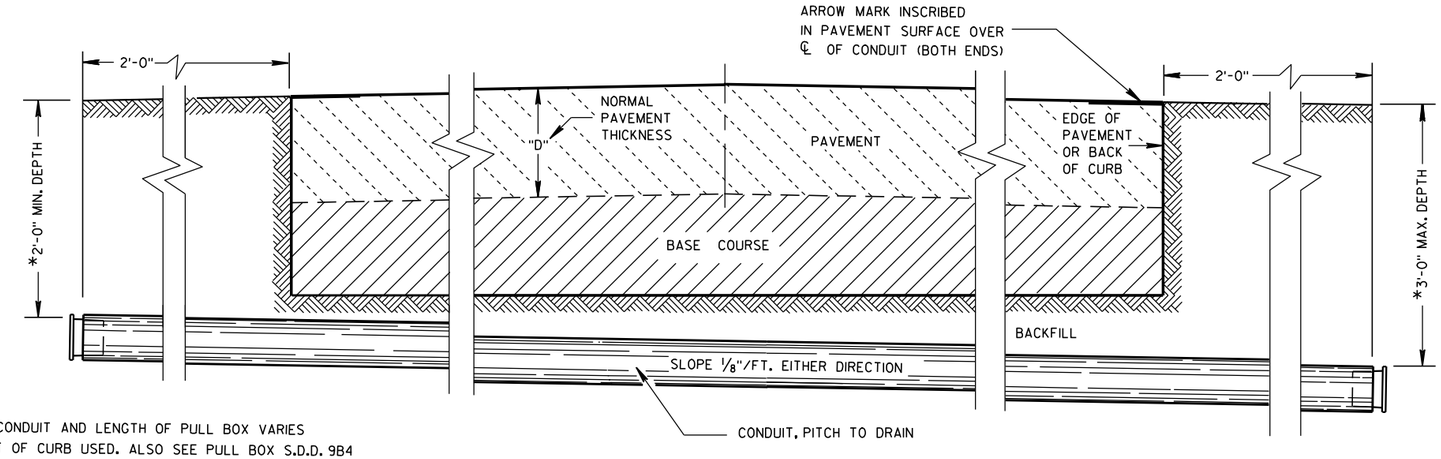
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

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

203

HWYS

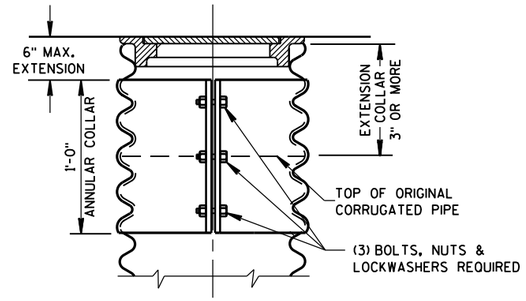
FHWA

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

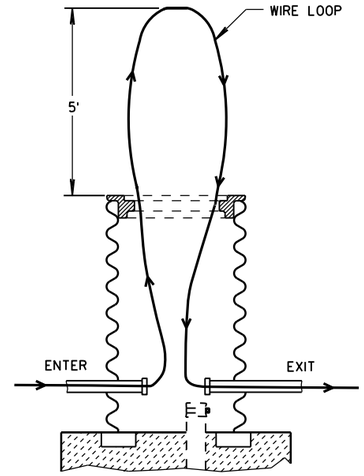
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2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

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

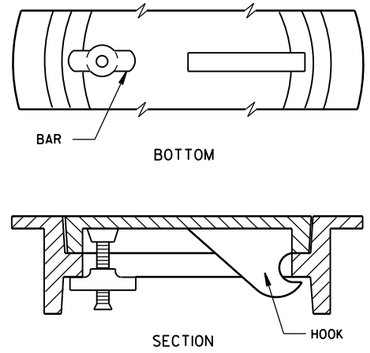
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

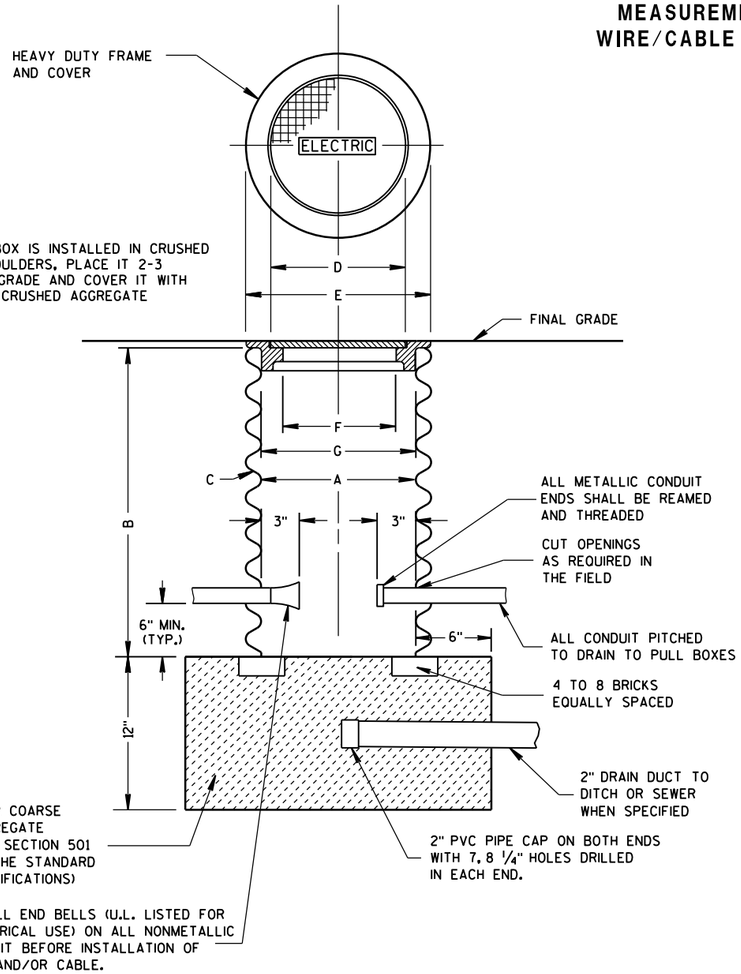


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



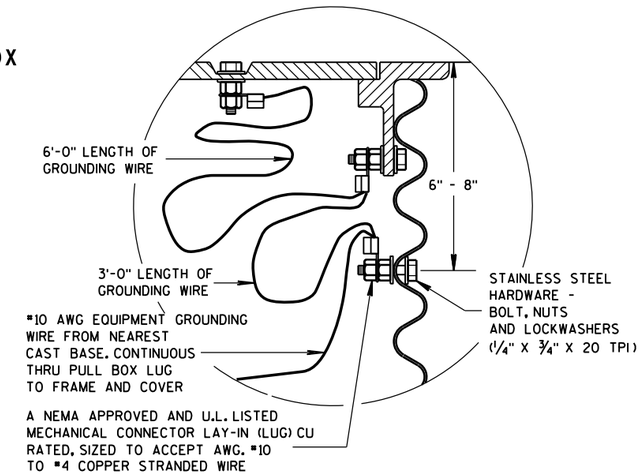
ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE

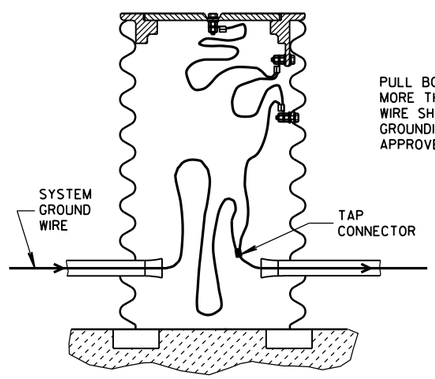


WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

PULL BOX



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



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

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

GENERAL NOTES

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

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

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

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

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

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

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

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

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

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

PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

2-7-2013 — DATE

/S/ Ahmet Demirbilek — STATE ELECTRICAL

FHWA

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S.D.D. 9 B 4-10

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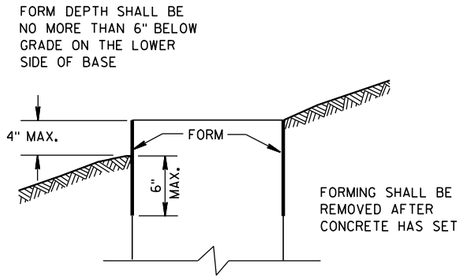
S.D.D. 9 B 4-10



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.

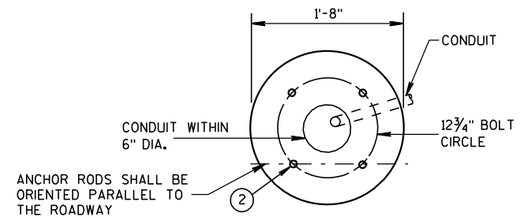
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

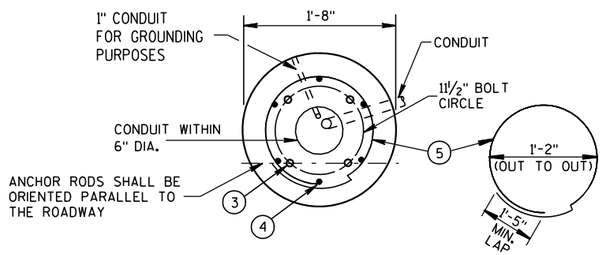
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

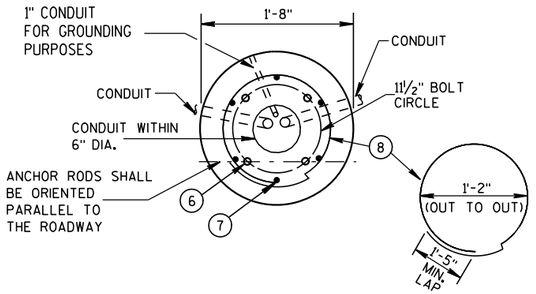
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

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

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

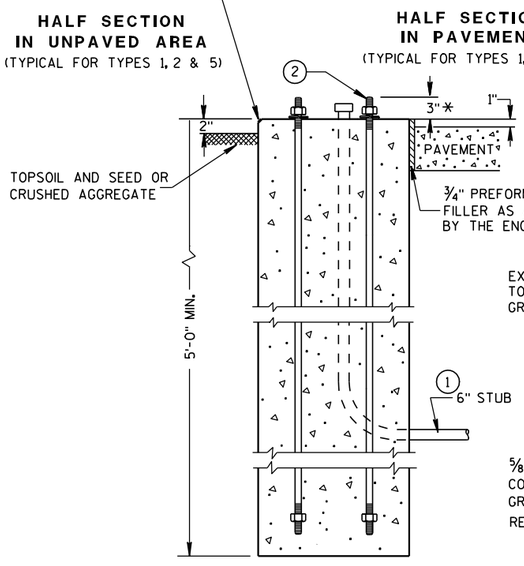






FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND

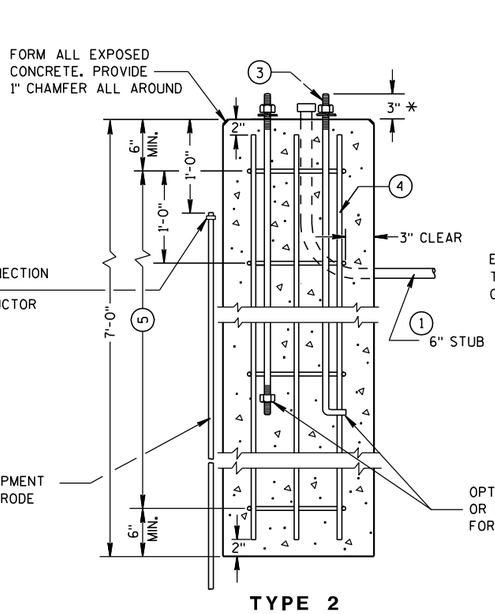
HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2 & 5)



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

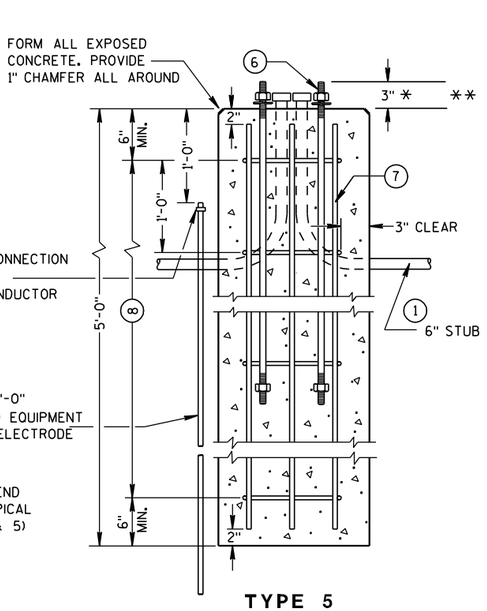
TYPE 1

FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND



TYPE 2

FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND



TYPE 5

CONCRETE BASES

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

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

CONCRETE BASES, TYPES 1, 2 & 5

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/3/10 — DATE
/S/ Joanna L. Rush — STATE ELECTRICAL ENGI
205
HWYS
FHWA

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S.D.D. 9 C 2-6

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.

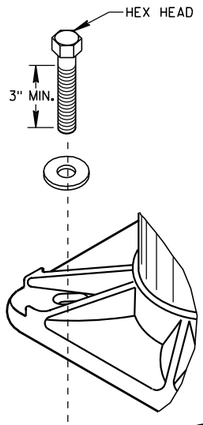
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

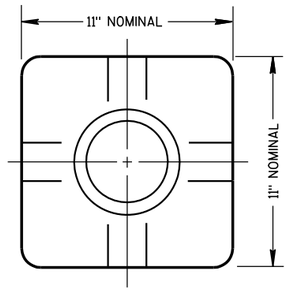
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

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

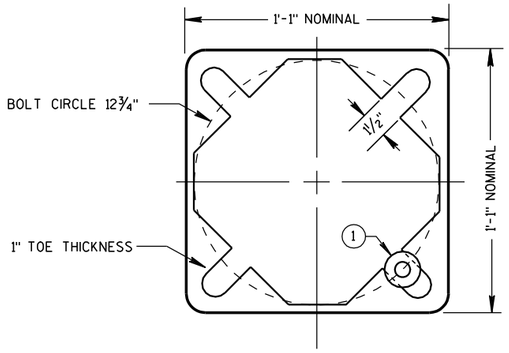
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1½", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

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

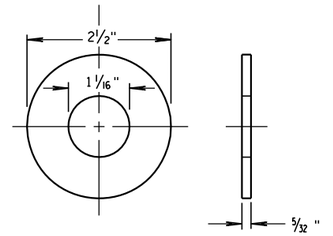




TOP VIEW
(PEDESTAL BASE)

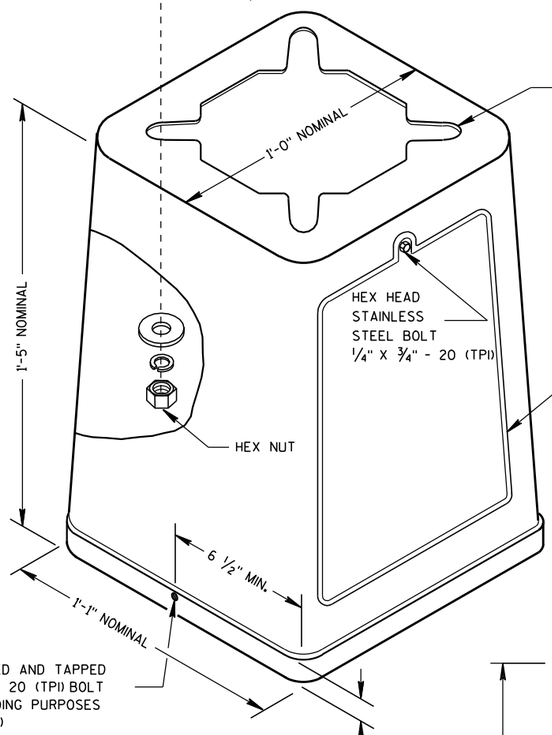


BOTTOM VIEW
(PEDESTAL BASE)

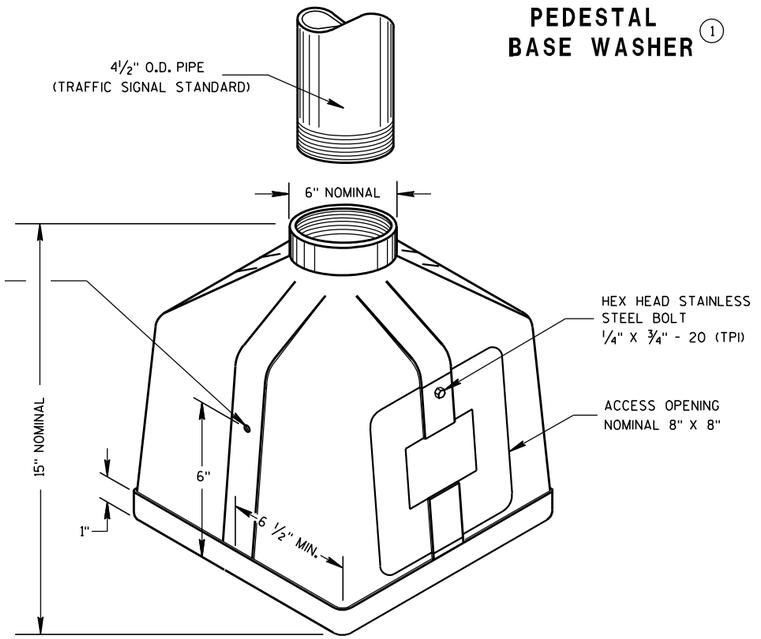


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

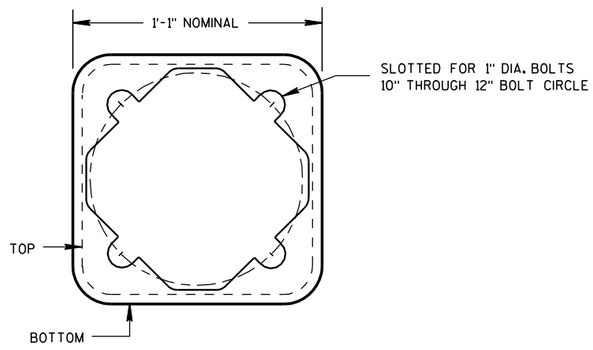


ISOMETRIC VIEW

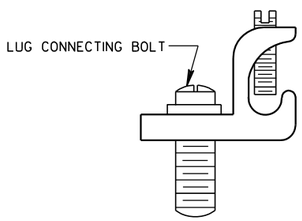


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

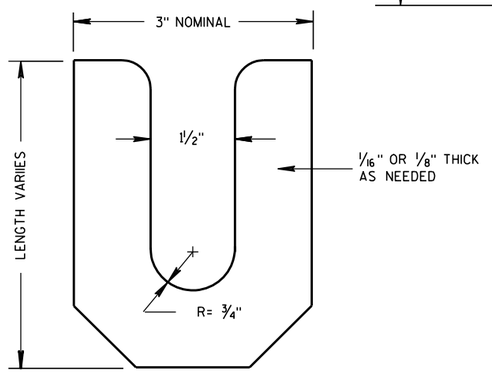


TYPICAL MECHANICAL CONNECTOR LUG

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
206
HWYS
FHWA

6

S.D.D. 9 C 3-3

6

S.D.D. 9 C 3-3

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 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 4 INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL END INSTALLED. ALL CONDUIT SHALL BE SLOPED TO PULL BOX.

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. CONDUIT IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

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).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL ENTER THE BASE 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.

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

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

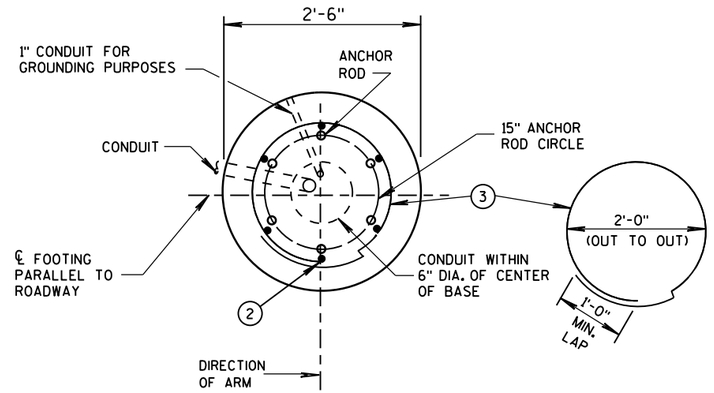
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

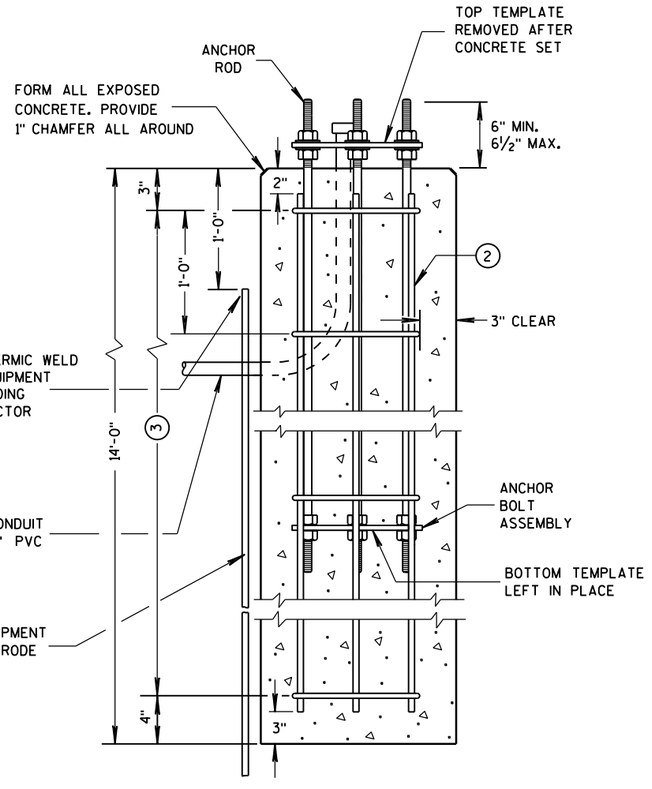
(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES, (GREATER THAN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

(2) (6) NO. 6 X 13'-7" BAR STEEL REINFORCEMENT.

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

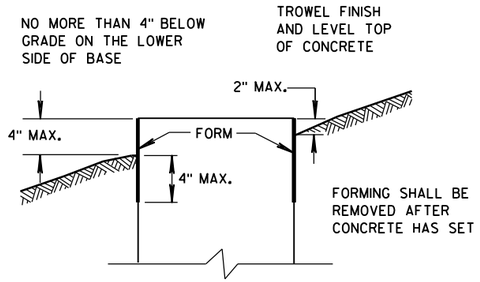
CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, AASHTO M314 GRADE 55	fy=55,000 p.s.i.
TEMPLATES, ASTM, A709 GRADE 36	fy=36,000 p.s.i.



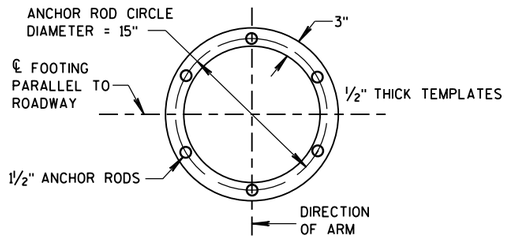


CONCRETE BASE TYPE 10
(FOR TYPE 9 & 10 POLES)

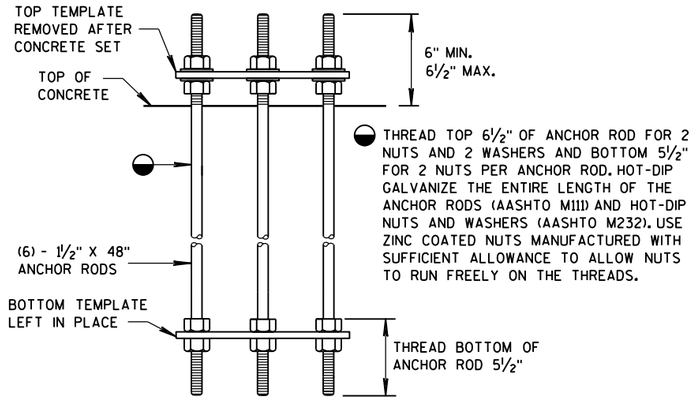
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION. SEE S.D.D. 9C13-1 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.



FORMING DETAIL



TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 10 ANCHOR ASSEMBLY

QUANTITY REQUIREMENTS	
APPROX. CUBIC YARDS OF CONCRETE	2.5
LBS. OF HOOP BAR STEEL	69
LBS. OF VERTICAL BAR STEEL	122

CONCRETE BASE TYPE 10

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
1-16-2013 DATE
/S/ Ahmet Demirbilek STATE ELECTRICAL
FHWA

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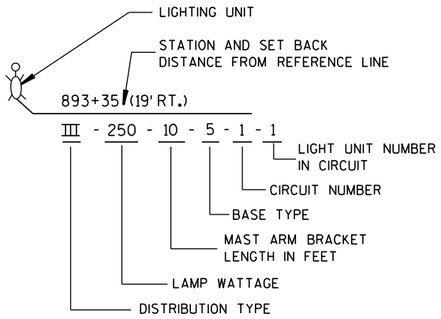
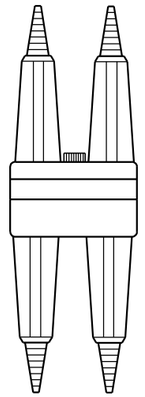
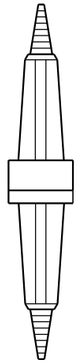
S.D.D. 9 C 11-3



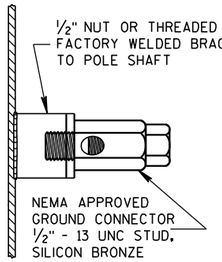
LIGHTING UNIT CODE
(TYPICAL)

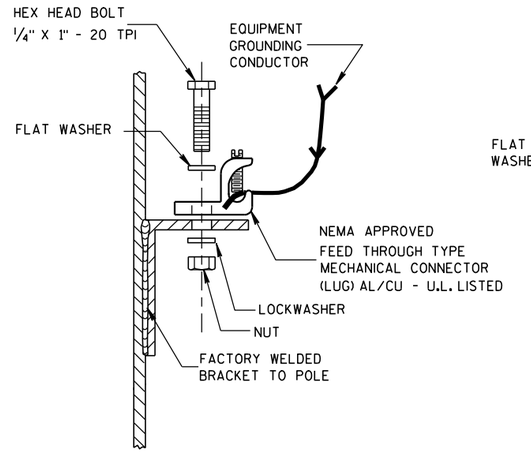


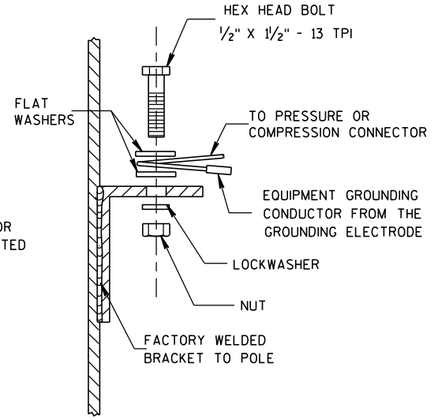
DETAIL "A"
BREAKAWAY
DOUBLE POLE WITH
WATERPROOF
INSULATING BOOT



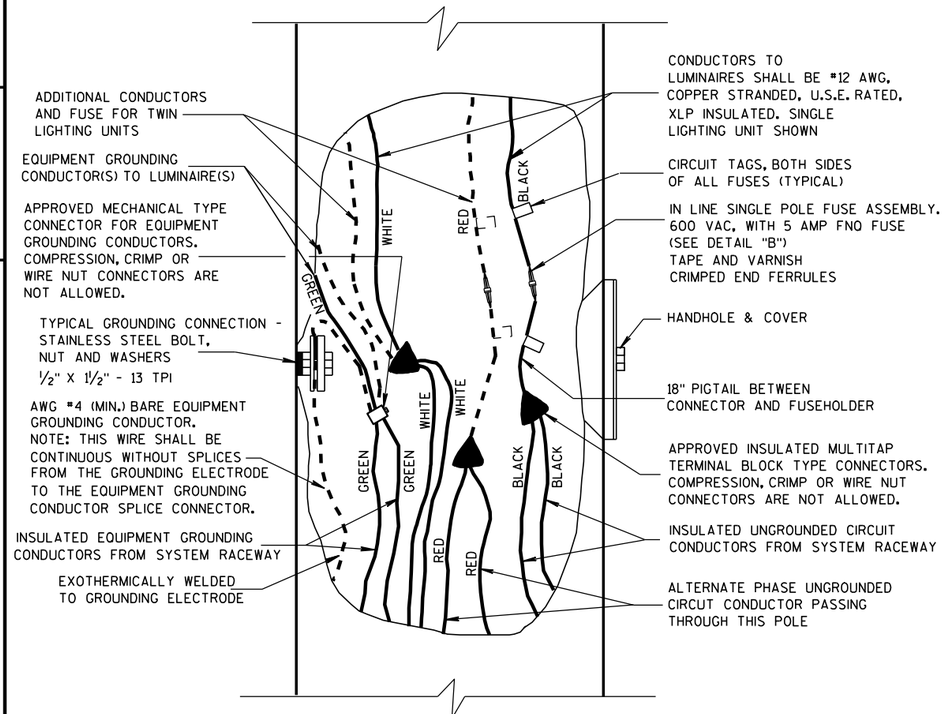
DETAIL "B"
BREAKAWAY
SINGLE POLE WITH
WATERPROOF
INSULATING BOOT



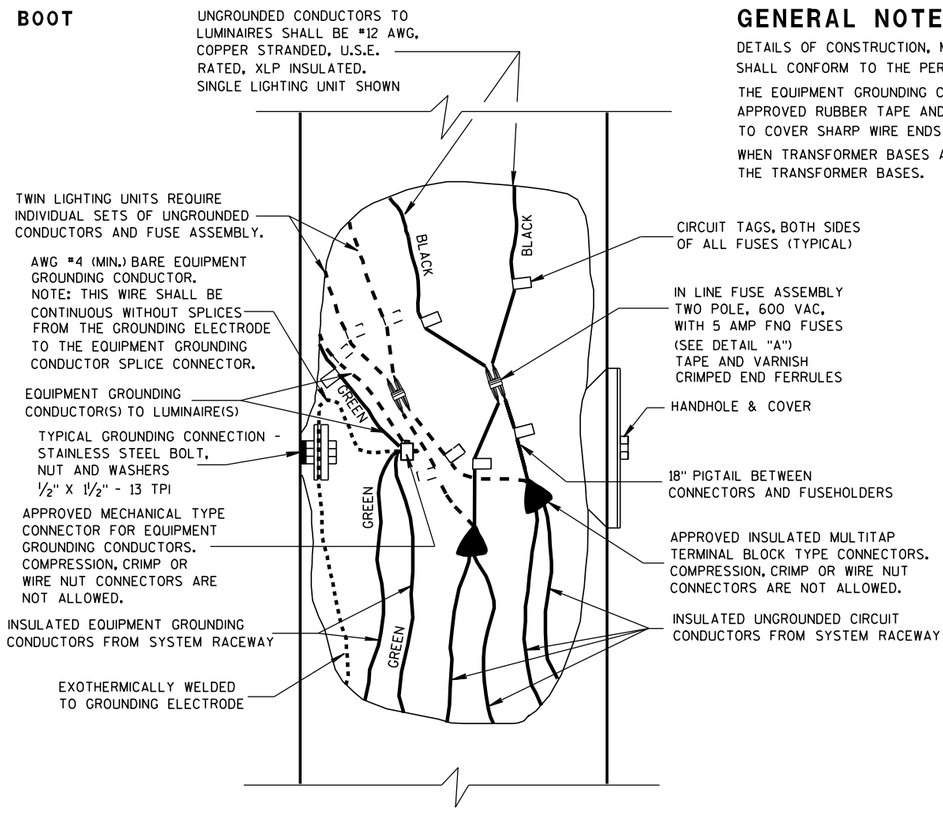




TYPICAL GROUNDING CONNECTIONS
NUT, BOLT, WASHERS AND LOCKWASHERS SHALL BE STAINLESS STEEL



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

208

HWYS

FHWA

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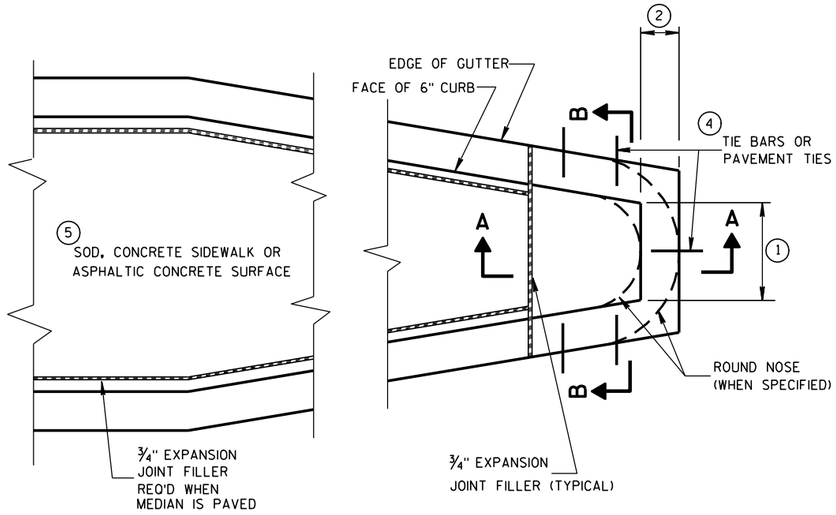
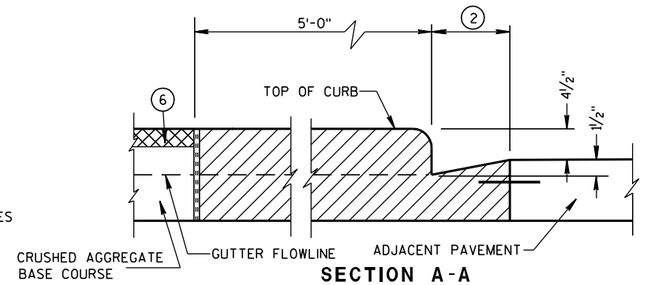
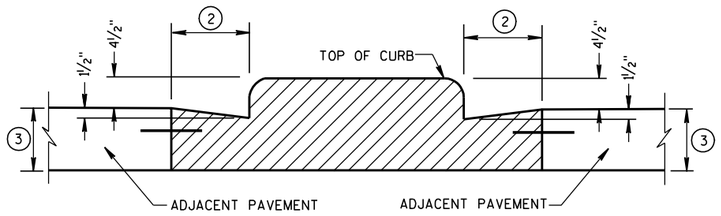
S.D.D. 9 E 3-4





SECTION A-A



SECTION B-B

CONCRETE MEDIAN BLUNT NOSE DETAIL

GENERAL NOTES

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

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

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

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

(1) NEW OR EXISTING CONCRETE PAVEMENT.

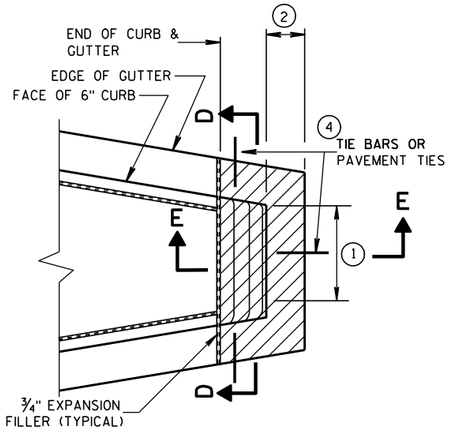
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

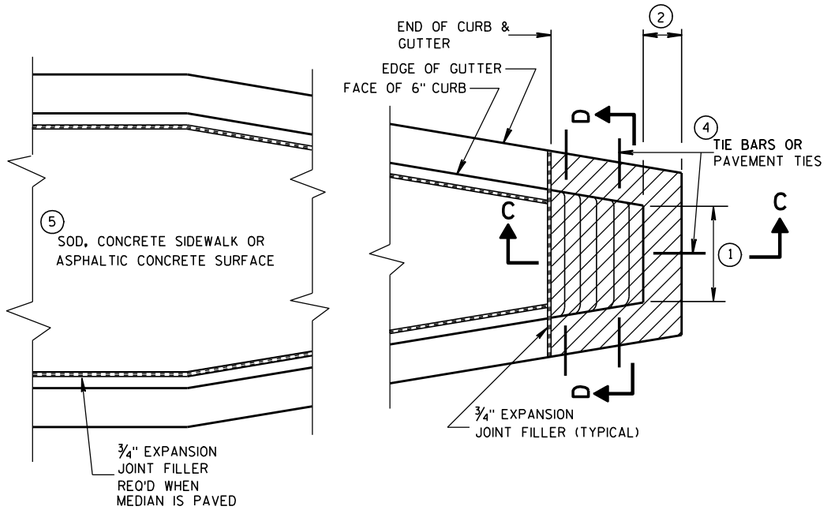
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

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

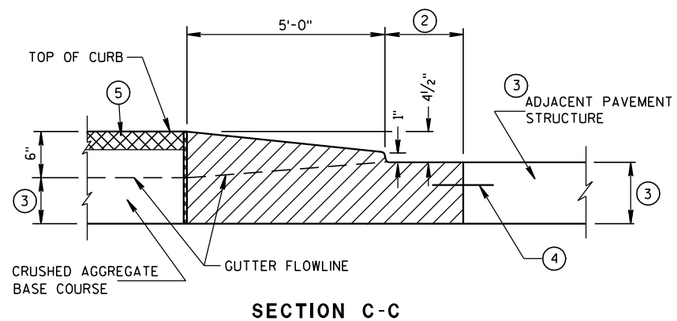
PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

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

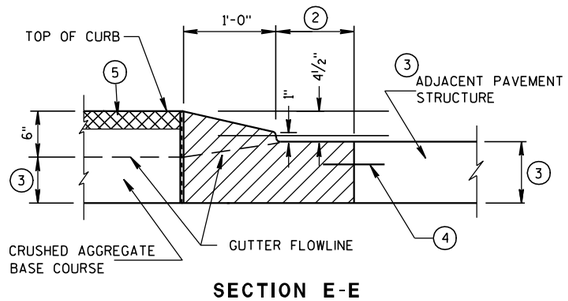




CONCRETE MEDIAN SLOPED NOSE TYPE 1

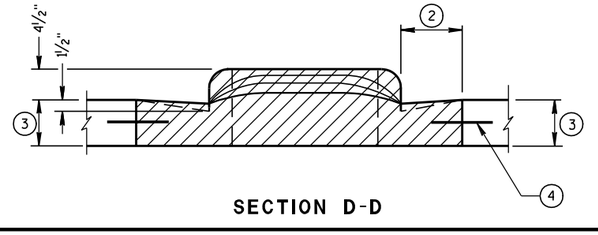


SECTION C-C



SECTION E-E

CONCRETE MEDIAN SLOPED NOSE TYPE 2



SECTION D-D

CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/8/2006
DATE

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

209

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FHWA

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S.D.D. 11 B 2-2

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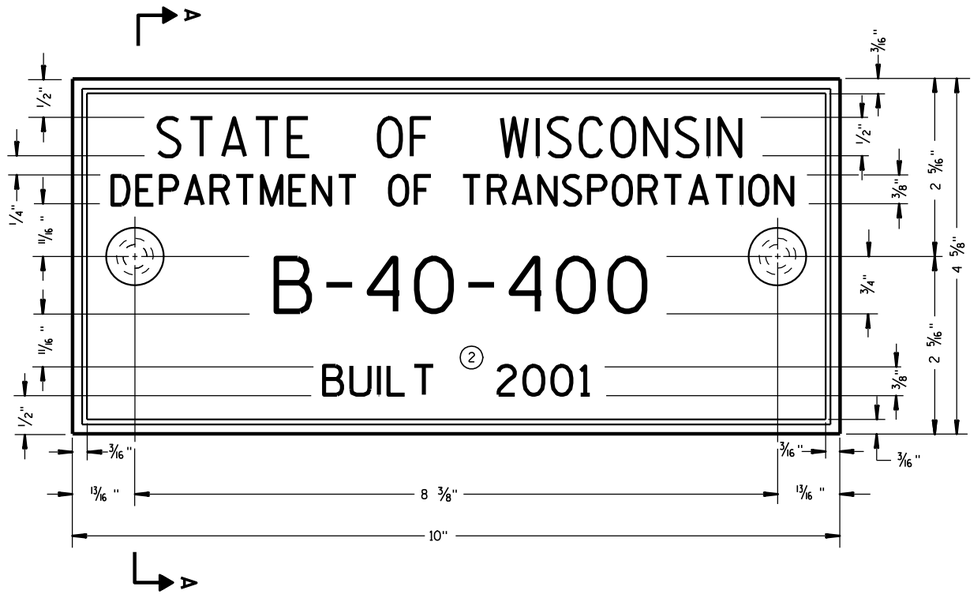
S.D.D. 11 B 2-2



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)

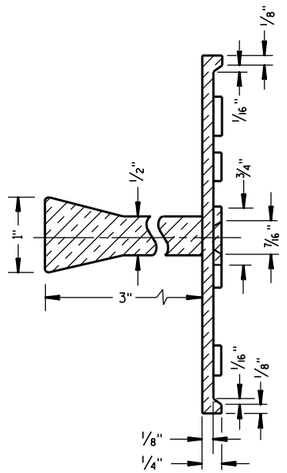
GENERAL NOTES

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

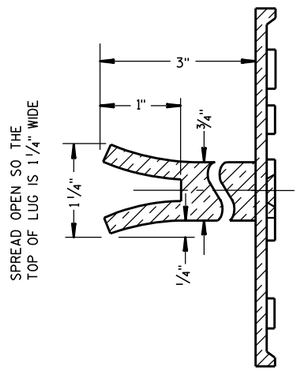
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

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



SECTION A-A



ALTERNATE LUG

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

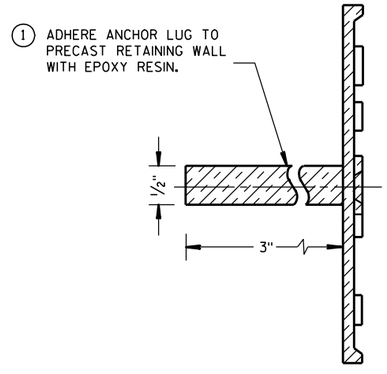
COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

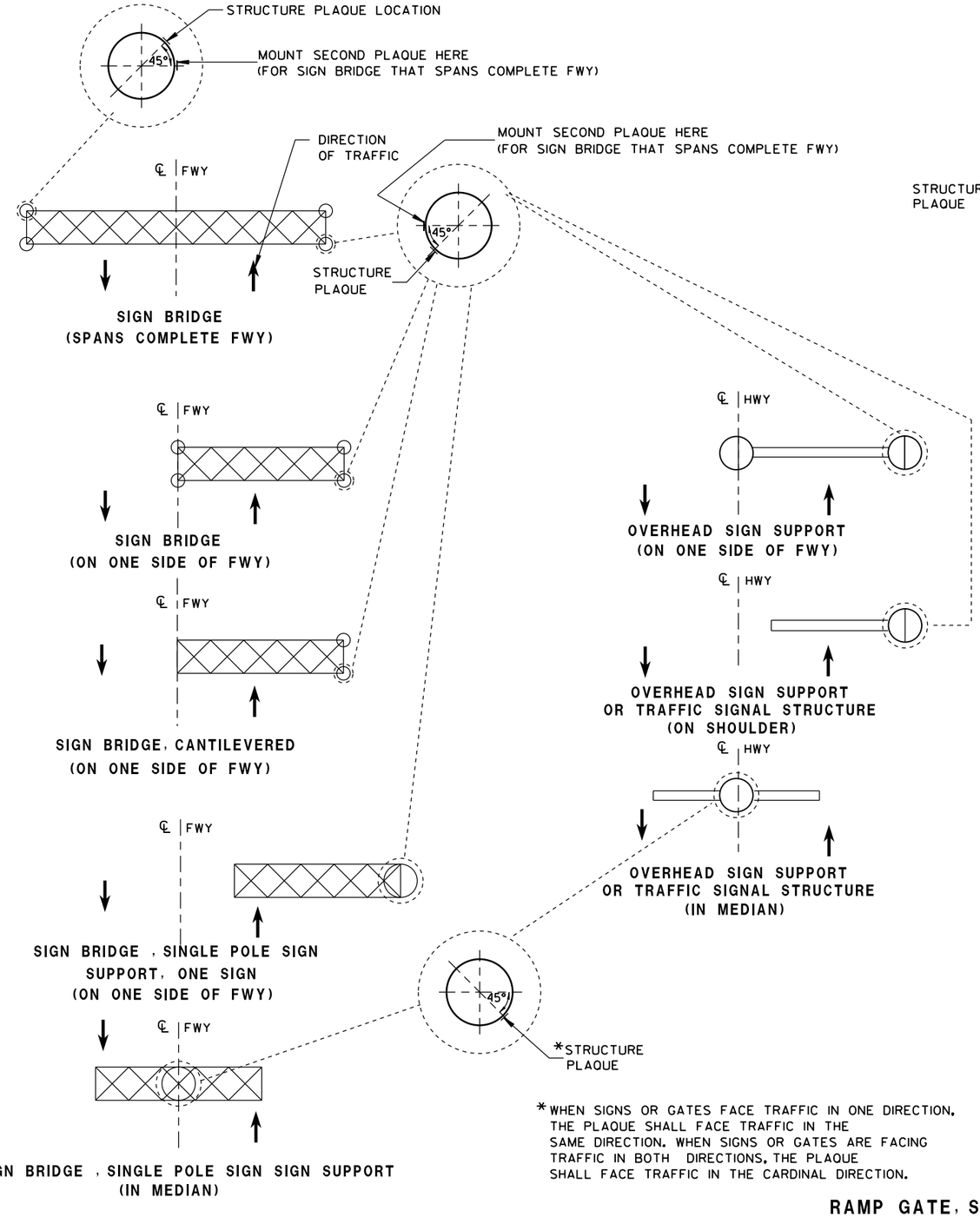
NUMBERING DESIGNATION MULTI-UNIT STRUCTURES



ALTERNATE LUG

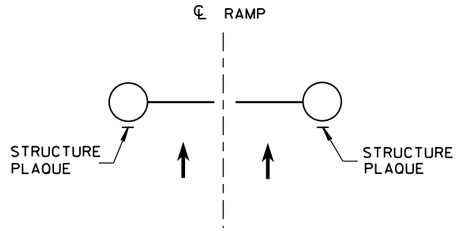
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
3/26/10 DATE	/S/ Scot Beck CHIEF STRUCTURAL DEVELOPMENT ENGINEER
FHWA	

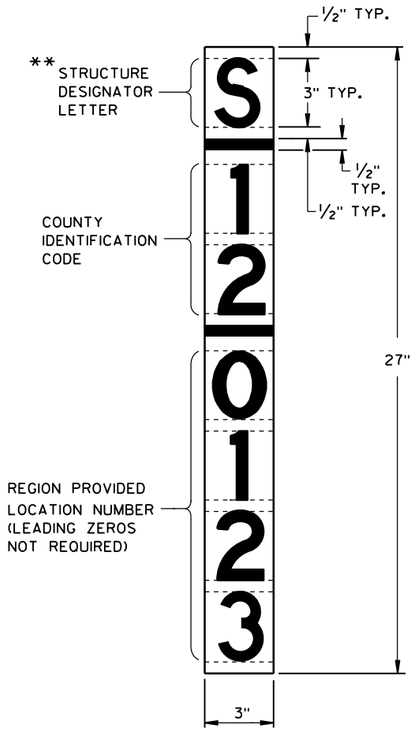


LOCATION OF RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT & TRAFFIC SIGNAL STRUCTURE PLAQUES

*WHEN SIGNS OR GATES FACE TRAFFIC IN ONE DIRECTION, THE PLAQUE SHALL FACE TRAFFIC IN THE SAME DIRECTION. WHEN SIGNS OR GATES ARE FACING TRAFFIC IN BOTH DIRECTIONS, THE PLAQUE SHALL FACE TRAFFIC IN THE CARDINAL DIRECTION.



RAMP GATE
(ACROSS FWY ON-RAMP)



** LETTER "G" UTILIZED FOR RAMP GATES. LETTER "S" UTILIZED FOR SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, AND TRAFFIC SIGNALS.

RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT AND TRAFFIC SIGNAL STRUCTURE PLAQUE FOR SIGN BRIDGES AND OVERHEAD SIGN SUPPORT WHICH ARE NOT STRUCTURE MOUNTED

GENERAL NOTES

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

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

IF THE PROPOSED SIGN BRIDGE OR OVERHEAD SIGN SUPPORT IS REPLACING AN EXISTING SIGN BRIDGE OR OVERHEAD SIGN SUPPORT, A NEW IDENTIFICATION PLAQUE WILL BE REQUIRED.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

GALVANIZED STEEL SHAFT - 3 STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

ALUMINUM SHAFTS - 3 ALUMINUM POP RIVETS

MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

PLAQUE MATERIALS:

BASE - SHEET ALUMINUM, 0.060" THICK.

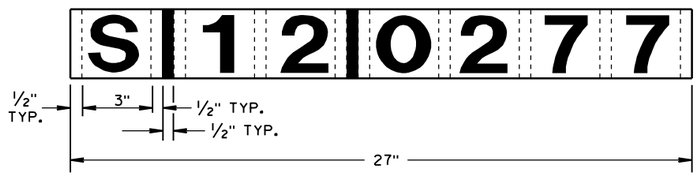
FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETROREFLECTIVE

LINES - BLACK, ½" WIDE, SELF-ADHESIVE

CHARACTERS:- BLACK, SELF ADHESIVE, SERIES "D", SIZE AS SHOWN.

FOR SIGN BRIDGES, STRUCTURE MOUNTED, THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY AS SHOWN ON THE DRAWING. THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY TO THE BACK OF THE SIGN, BETWEEN THE ALUMINUM EXTRUSIONS, NEAR THE TOP LEFT HAND CORNER OF THE SIGN. THE BASE MATERIAL SHALL BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE ALUMINUM SURFACE. PRIOR TO ADHERING THE MATERIAL, THE ALUMINUM SURFACE SHALL BE SMOOTH, CLEAN AND DRY.

WHERE SIGN BRIDGE ILLUMINATION IS PROVIDED, THE STRUCTURE MUST ALSO HAVE A SIGN BRIDGE CIRCUIT PLAQUE AS SHOWN IN THE ELECTRICAL DETAILS.



IDENTIFICATION PLAQUE FOR SIGN BRIDGE, STRUCTURE MOUNTED

STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, & TRAFFIC SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/4/2012 DATE
/S/ Travis Feltes STATE TRAFFIC ENGINEER
FHWA

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S.D.D. 12 A 4-3

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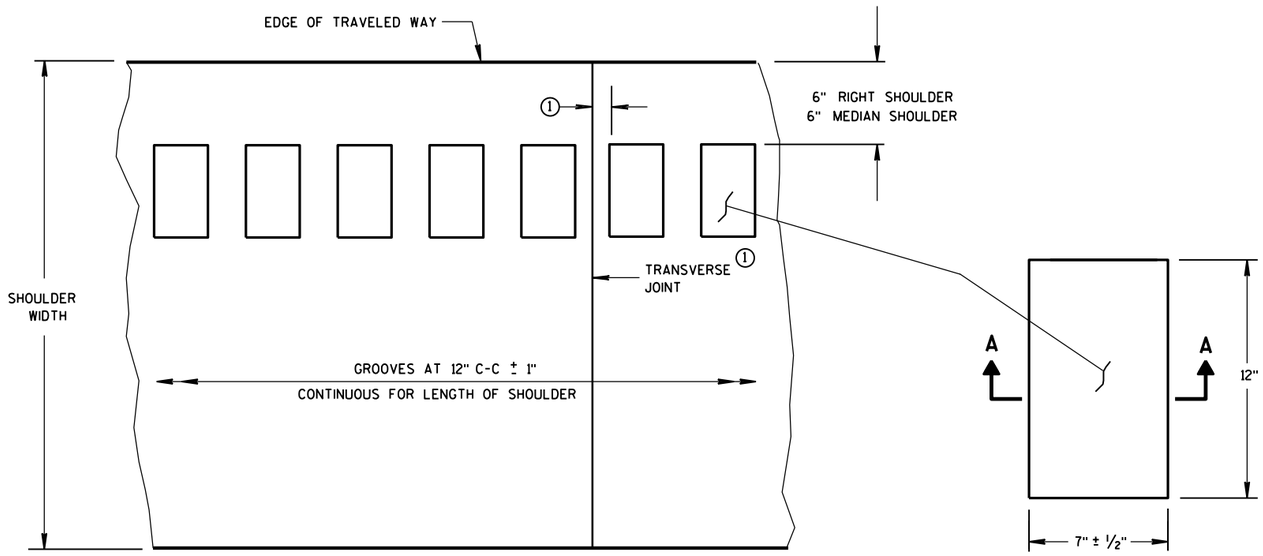
S.D.D. 12 A 4-3



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

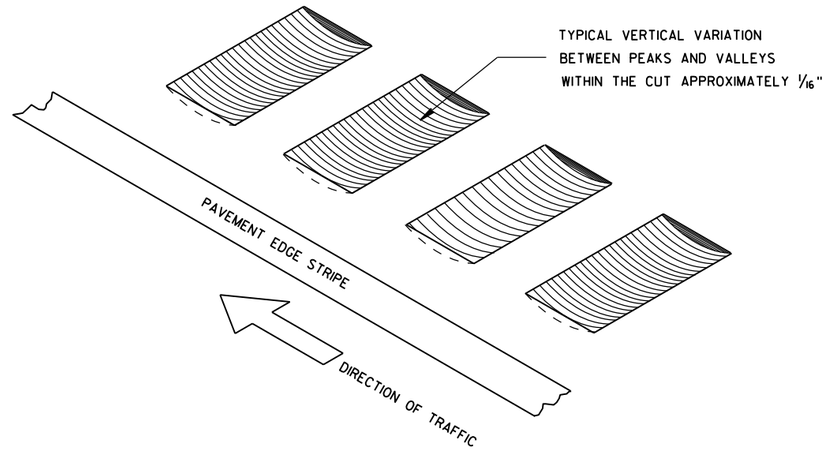
GENERAL NOTES

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

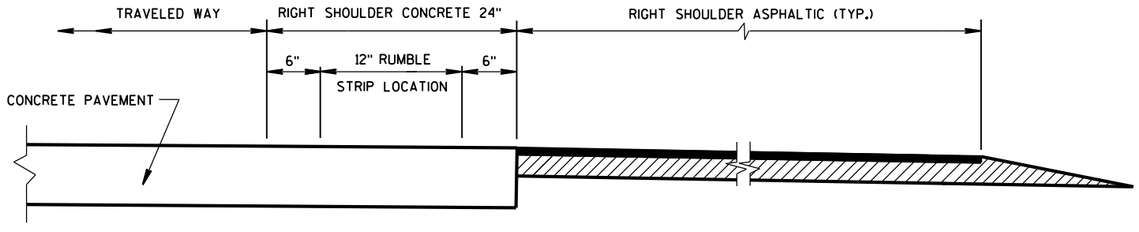
RUMBLE STRIPS ON EXPRESSWAYS

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.

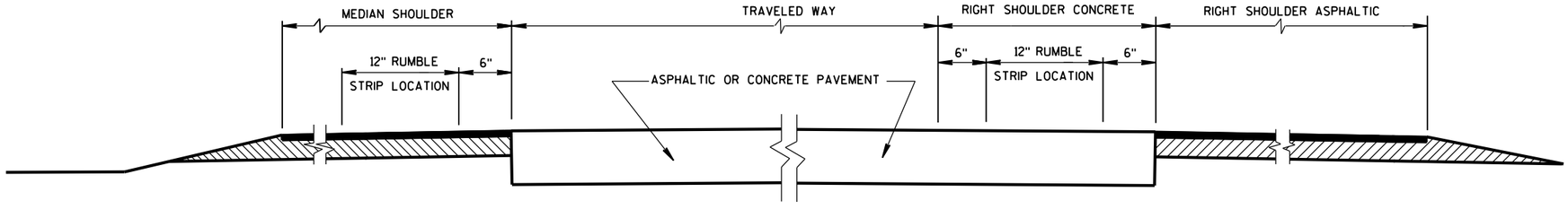
(1) CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6" AWAY FROM TRANSVERSE JOINTS.



ISOMETRIC



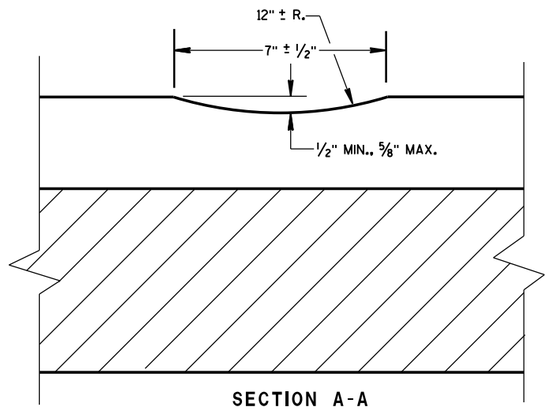
SECTION VIEW
CONCRETE PAVEMENT EXTENDS INTO RIGHT SHOULDER)



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

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

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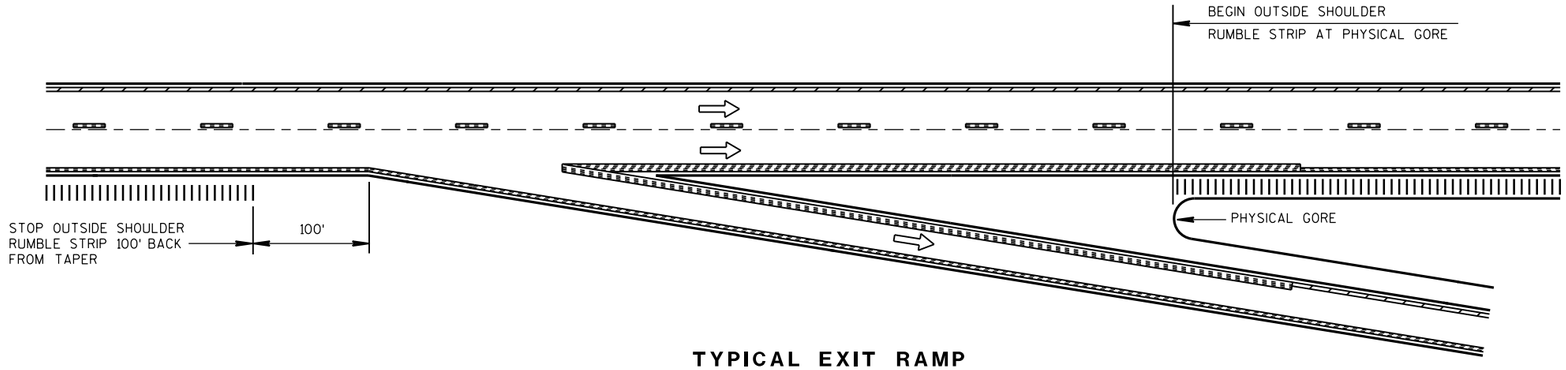
S.D.D. 13 A 5-5a



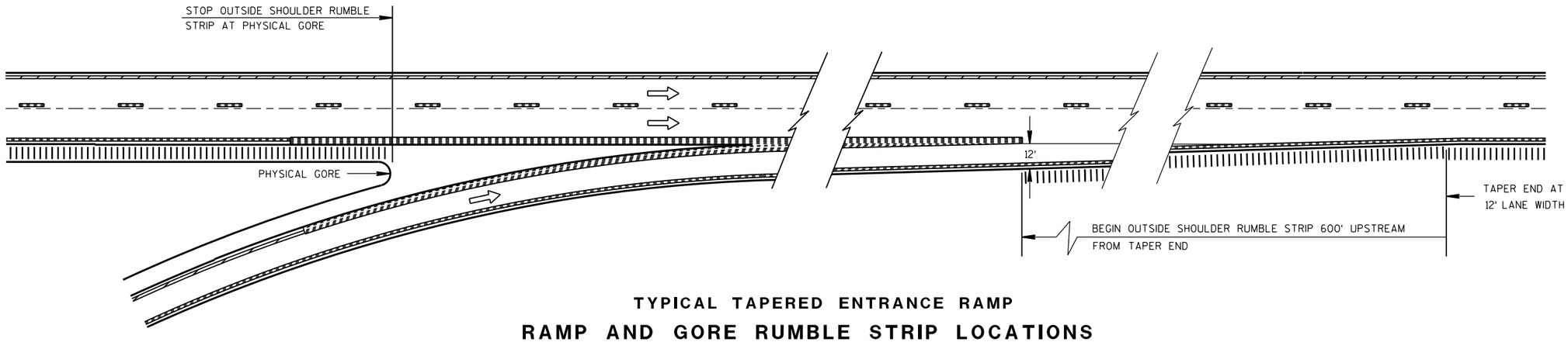
TYPICAL EXIT RAMP

NOTES:

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

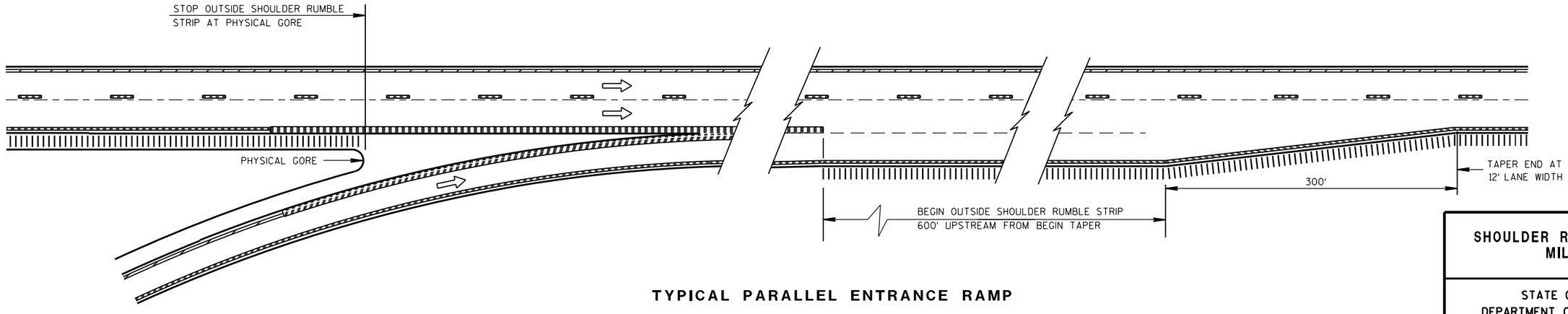
PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

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

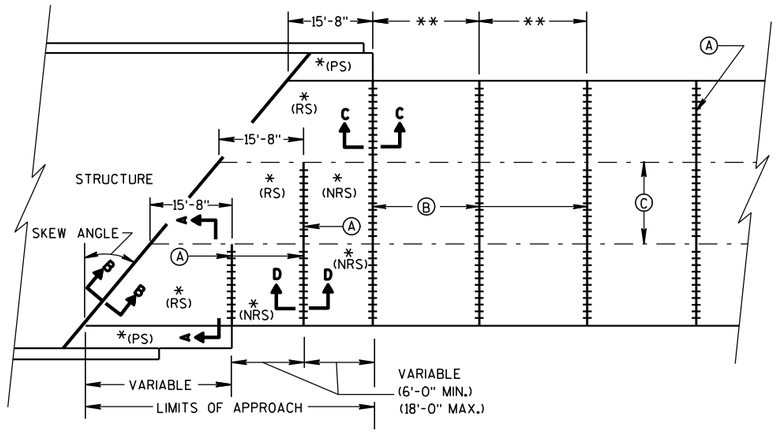
SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

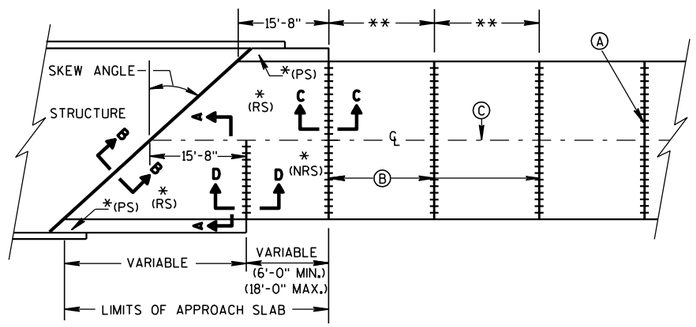
APPROVED
12/17/2012 — DATE
/S/ Jerry H. Zoga — ROADWAY STANDARDS ENGINEER
FHWA

6

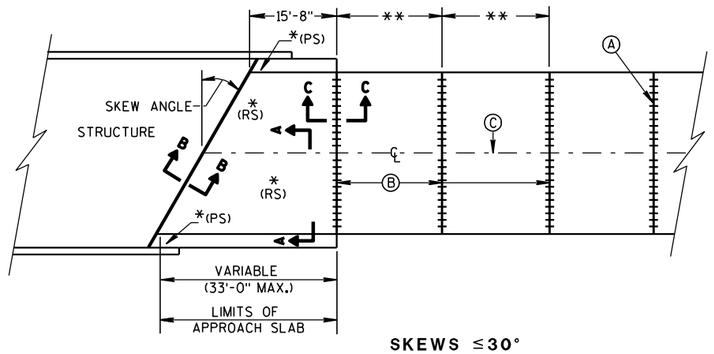
S.D.D. 13 A 5-5b



SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >30°
(PAVEMENT WIDTH ≤30')



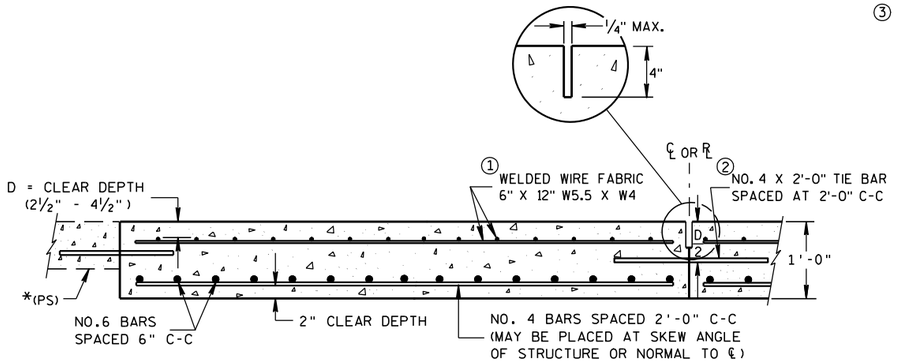
SKEWS ≤30°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

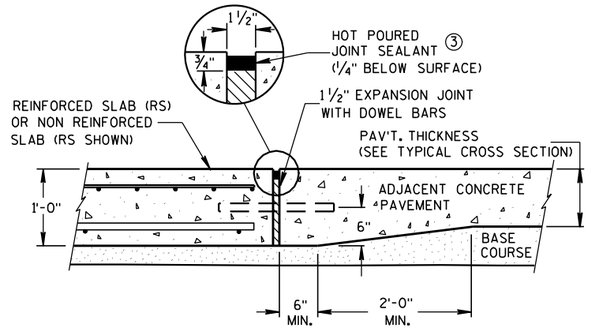
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER: CONCRETE PAVEMENT, OR CONCRETE SURFACE DRAIN
(SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

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

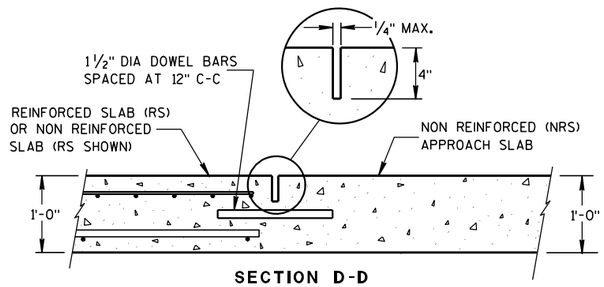
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄
(B) 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄
(C) STANDARD LONGITUDINAL JOINT AND TIE BARS.



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



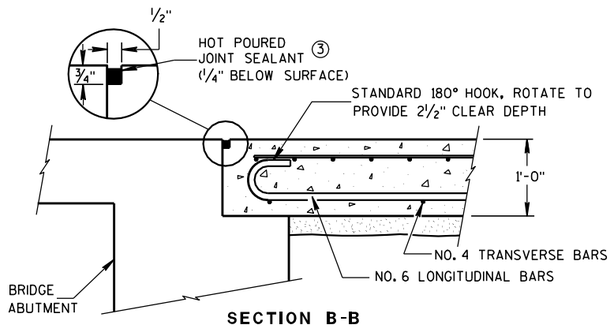
SECTION D-D
CONTRACTION JOINT

GENERAL NOTES

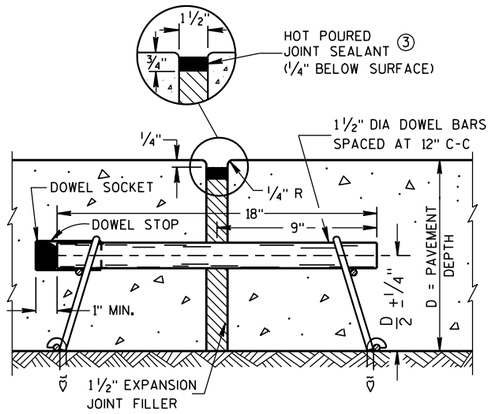
APPROACH SLABS ABUTTING AN HMA PAVEMENT OVER BASE COURSE DO NOT NEED TO BE DOWELED.

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

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



SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT



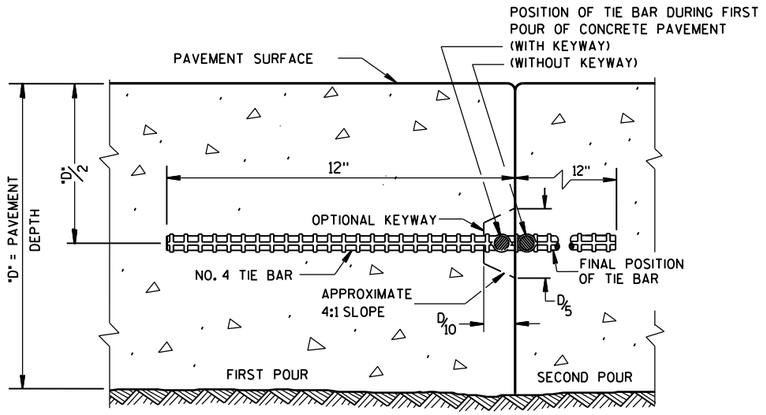
EXPANSION JOINT

CONCRETE PAVEMENT APPROACH SLAB

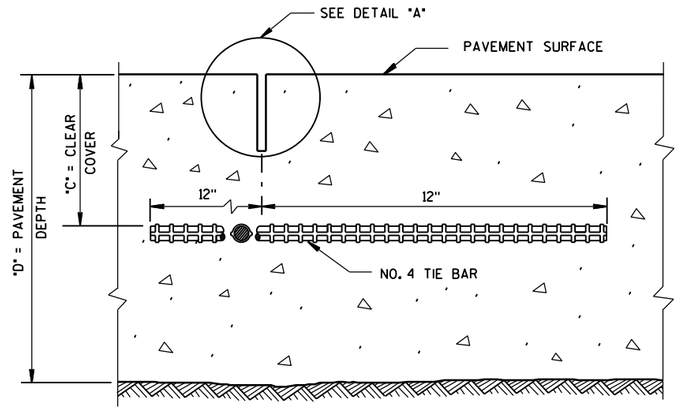
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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



CONSTRUCTION JOINT



SAWED JOINT

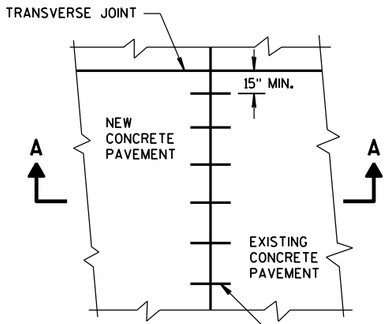
GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

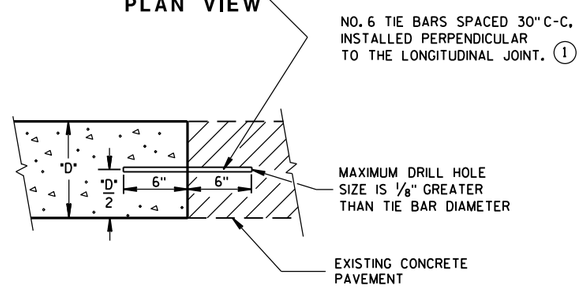
CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

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

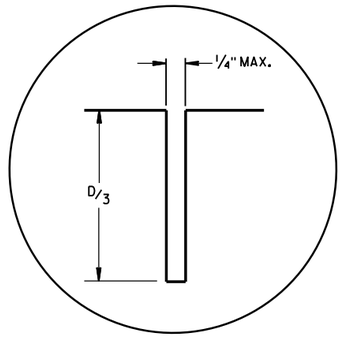


PLAN VIEW



SECTION A-A

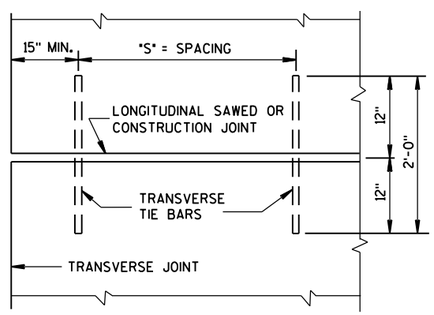
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT



DETAIL "A"

TIE BAR TABLE

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



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

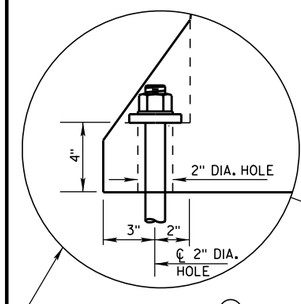
5-3-2013
DATE

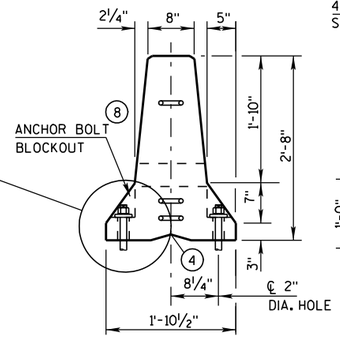
/S/ Deb Bischoff
PAVEMENT POLICY & DE ENGINEER

FHWA

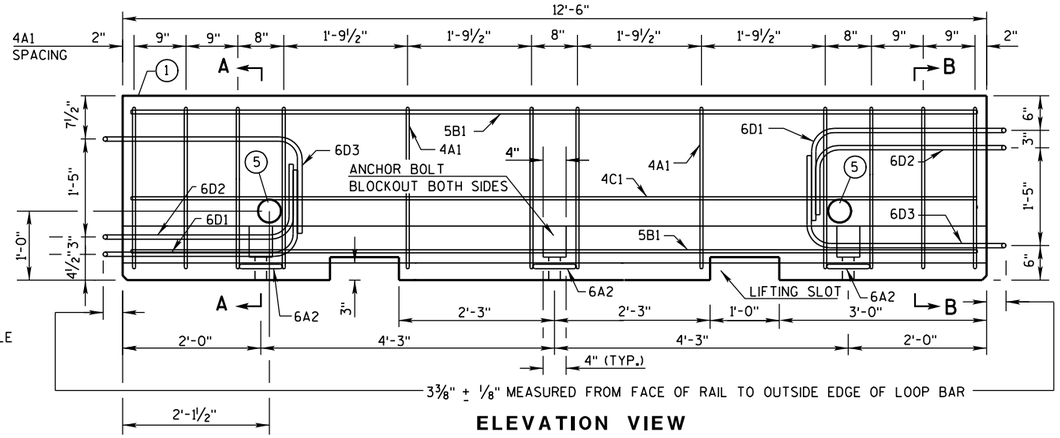
6

S.D.D. 13 C 1-16

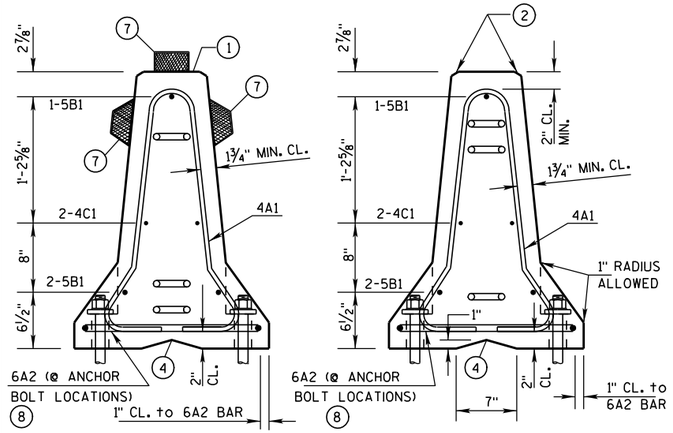




END VIEW

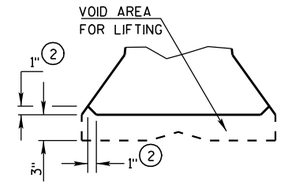


ELEVATION VIEW

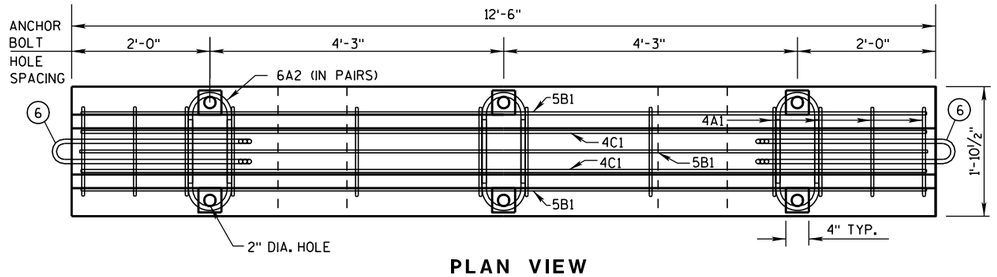


SECTION A-A
(STIRRUP PLACEMENT)

SECTION B-B
(STIRRUP PLACEMENT)

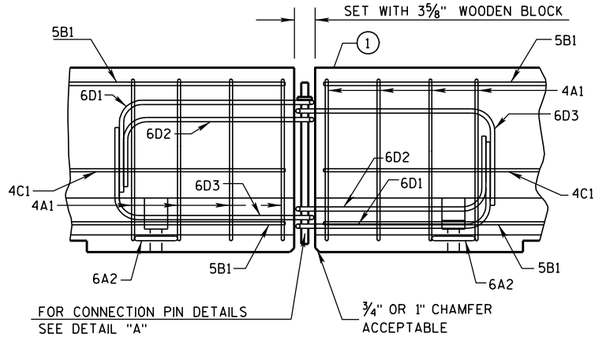


DETAIL "B"
LIFTING SLOT DETAIL

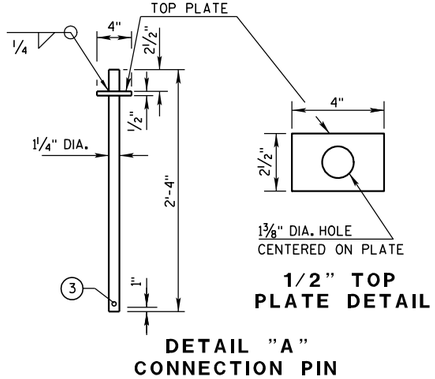


PLAN VIEW

DETAILS OF BARRIER SECTION

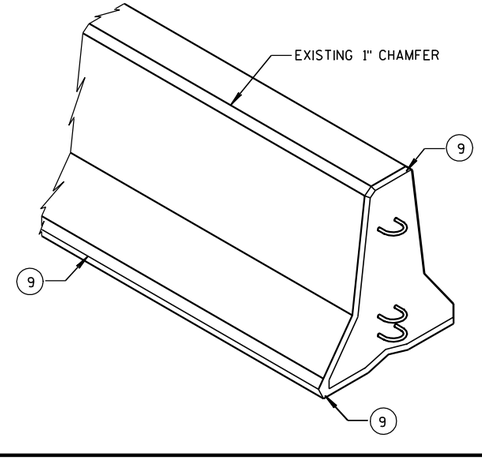


DETAILS OF BARRIER CONNECTION



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...

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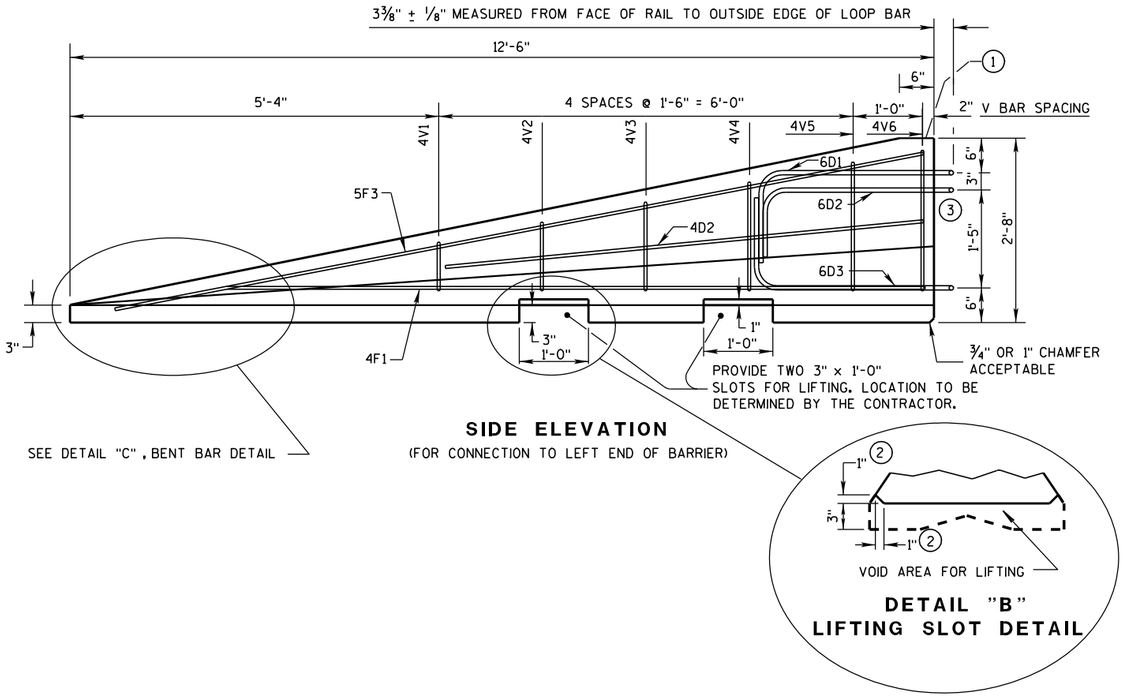
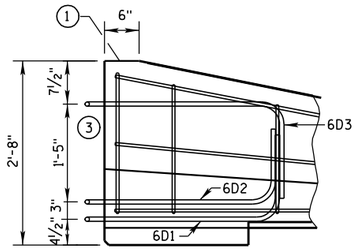
S.D.D. 14 B 7-13a



SIDE ELEVATION

(FOR CONNECTION TO LEFT END OF BARRIER)

DETAIL "B"
LIFTING SLOT DETAIL

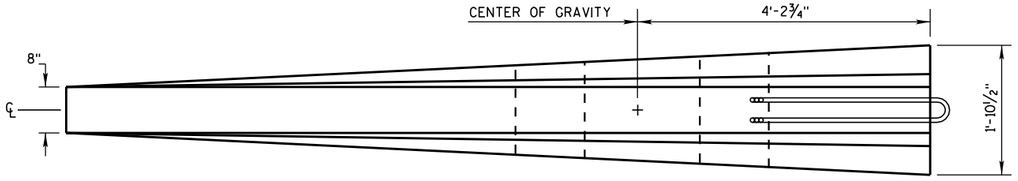


SIDE ELEVATION

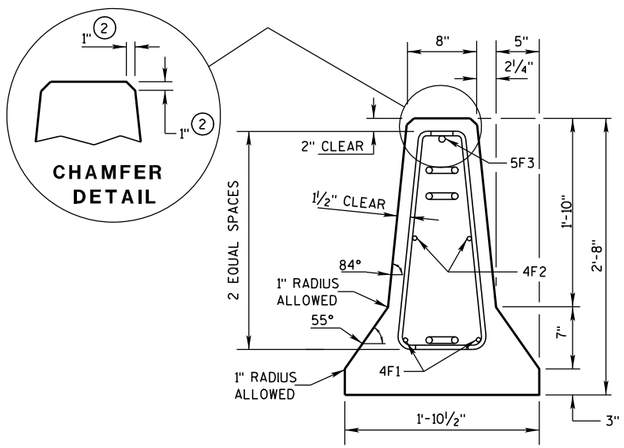
LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

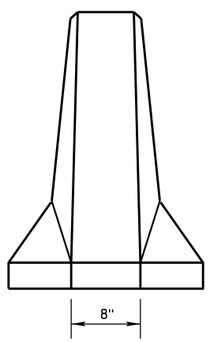
1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



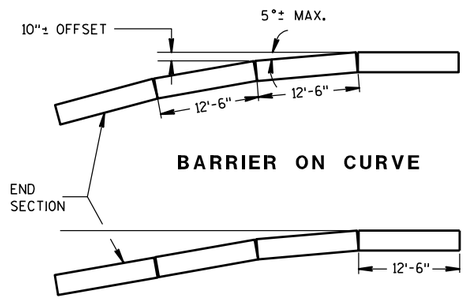
PLAN VIEW



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

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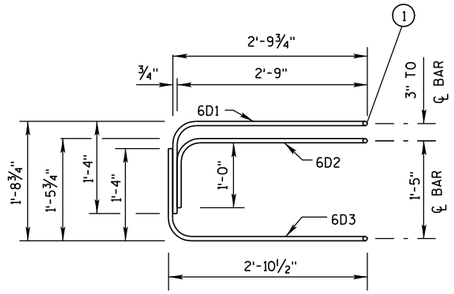
S.D.D. 14 B 7-13b

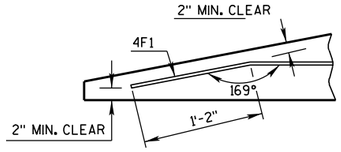
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

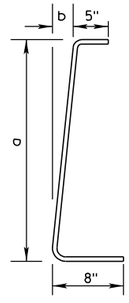
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



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

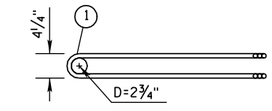
GENERAL NOTES

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

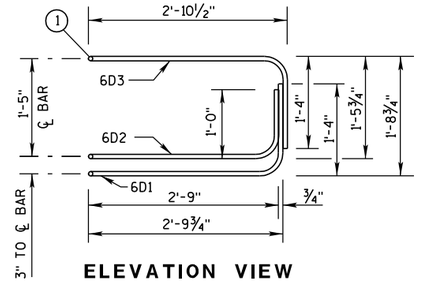
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

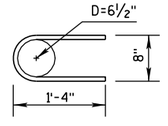
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



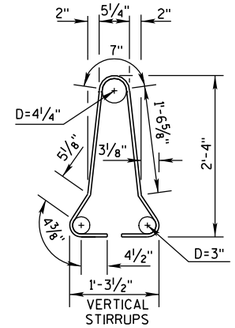
PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



ELEVATION VIEW



6A2



4A1

BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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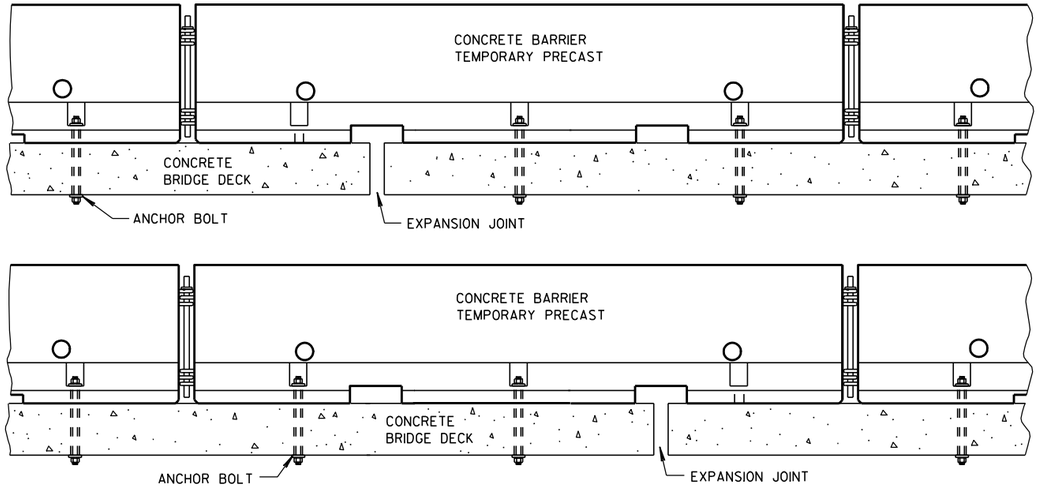
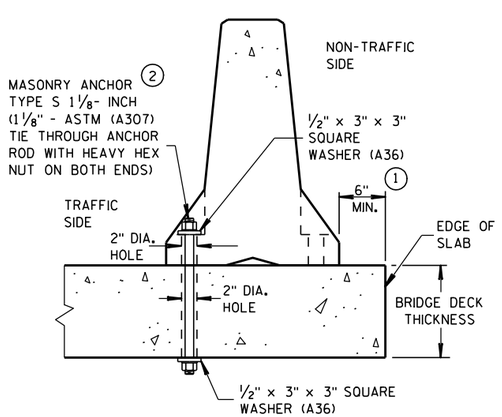
S.D.D. 14 B 7-13c



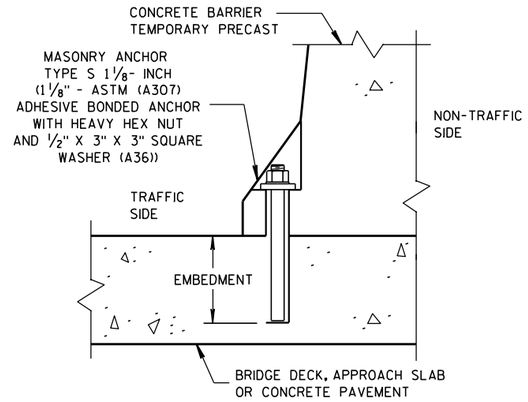
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(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

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

GENERAL NOTES

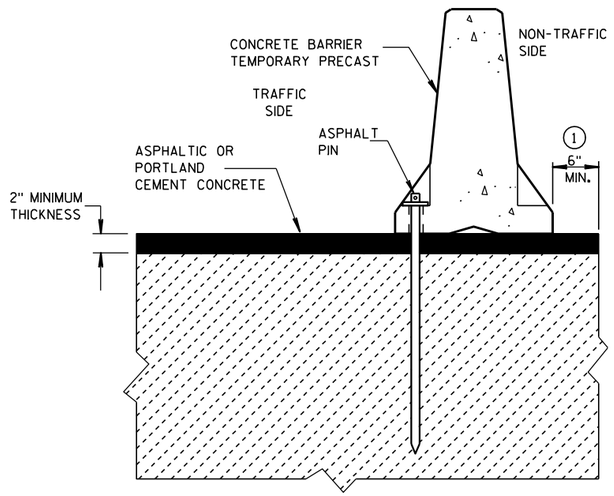
1. CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
   THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE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

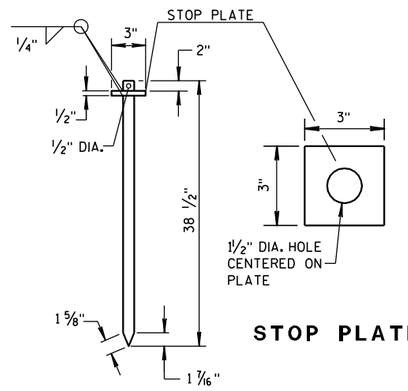
   WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED (EPOXY) ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1⅛-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE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

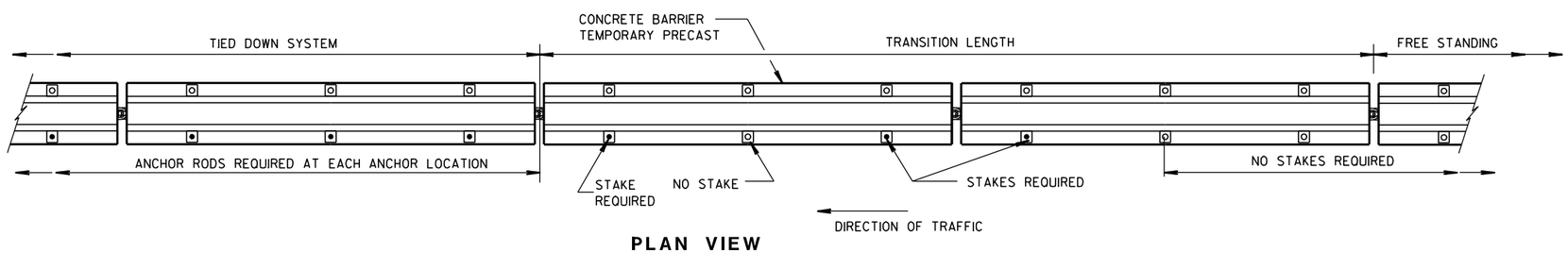
(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



STOP PLATE

ASPHALT PIN

(ASTM A36 STEEL)



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...

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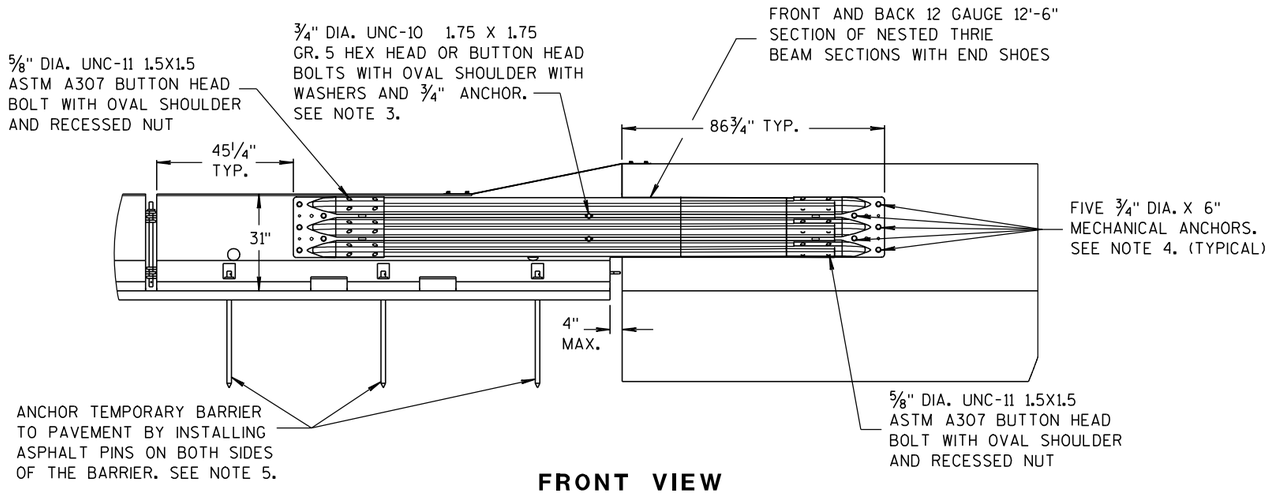
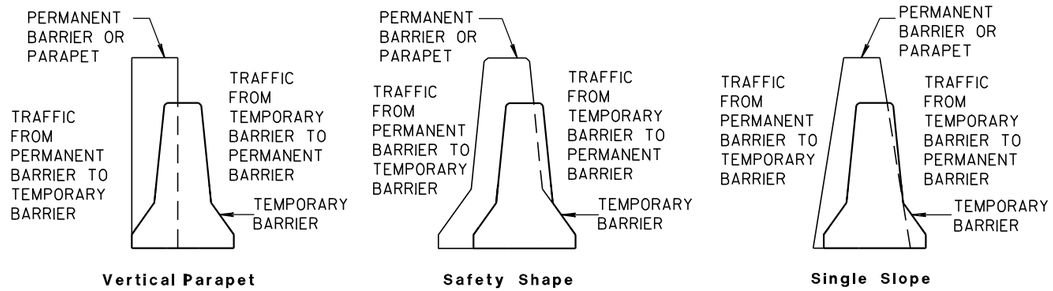
S.D.D. 14 B 7-13d



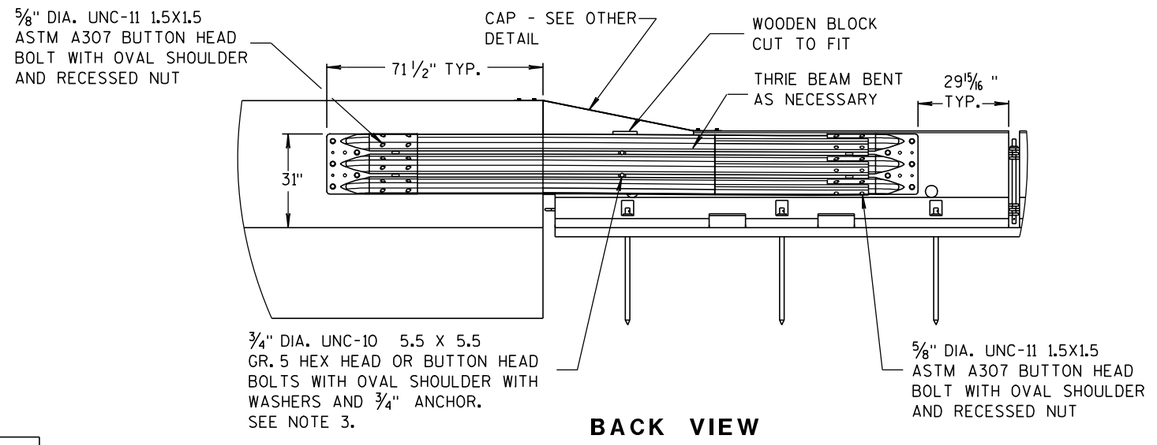
FRONT VIEW

NOTES

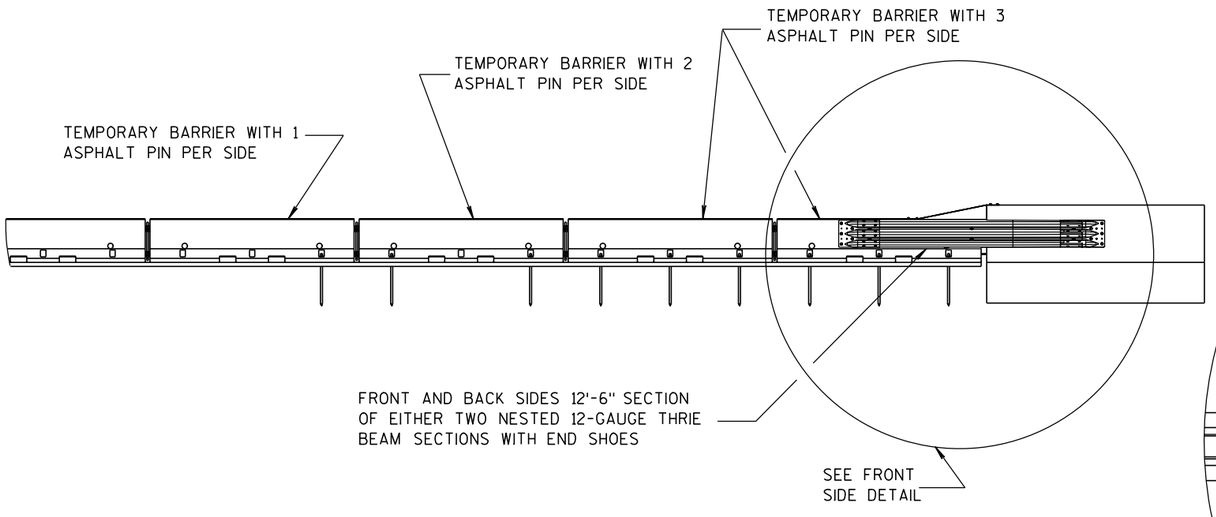
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15¼" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 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.



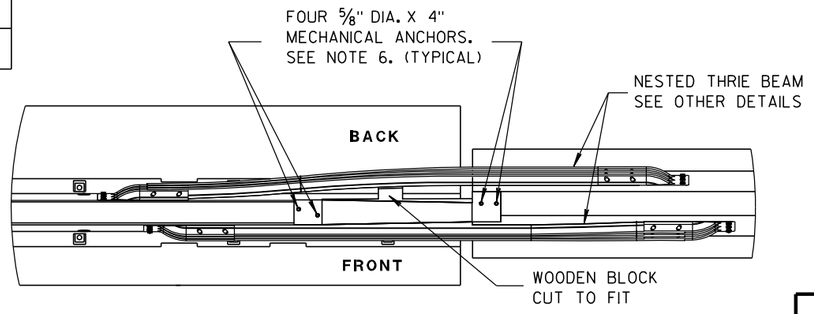
TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM



BACK VIEW



FRONT VIEW



PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
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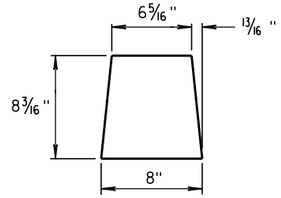
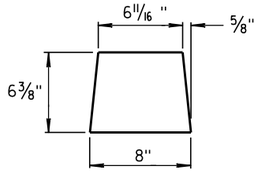
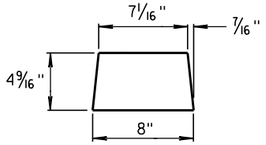


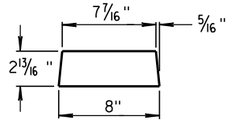
GUSSET 1



GUSSET 2

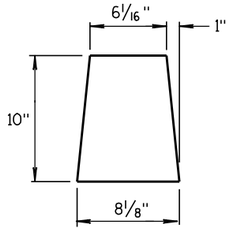


GUSSET 3

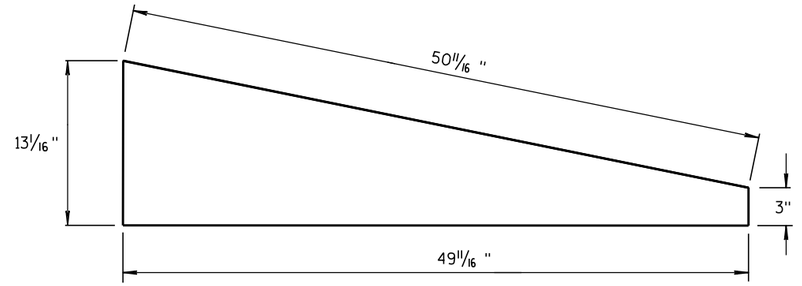


GUSSET 4

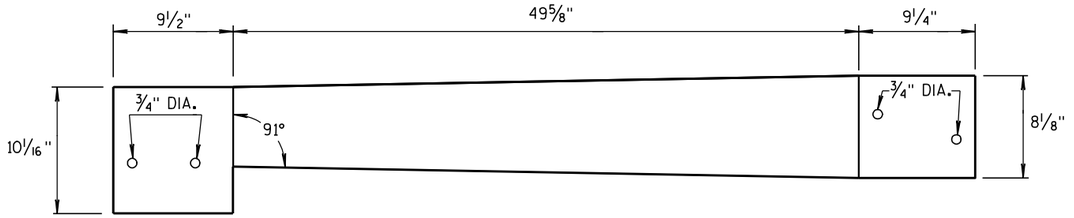
GUSSETS

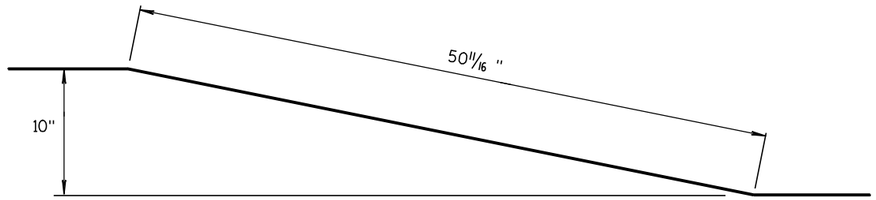


END PLATE

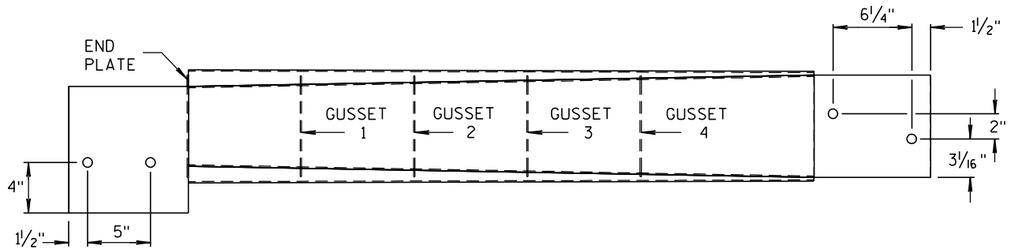


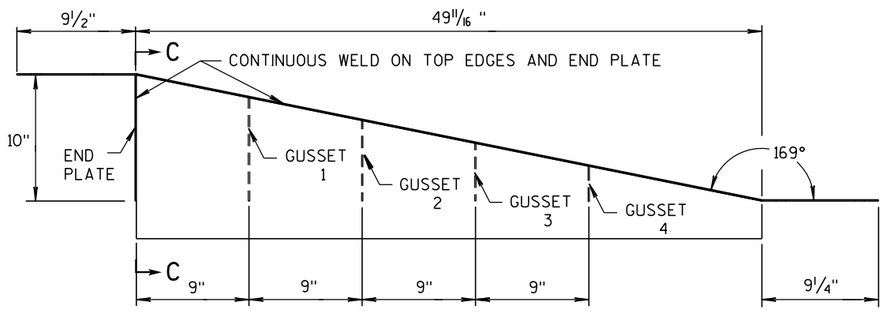
SIDE PLATE

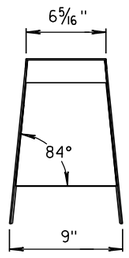




TOP PLATE







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"

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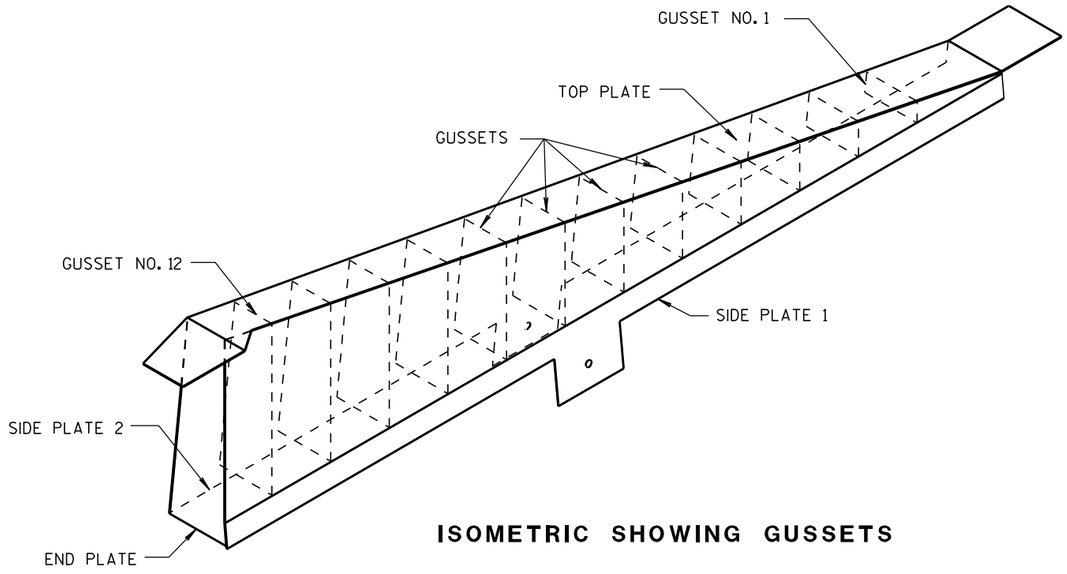
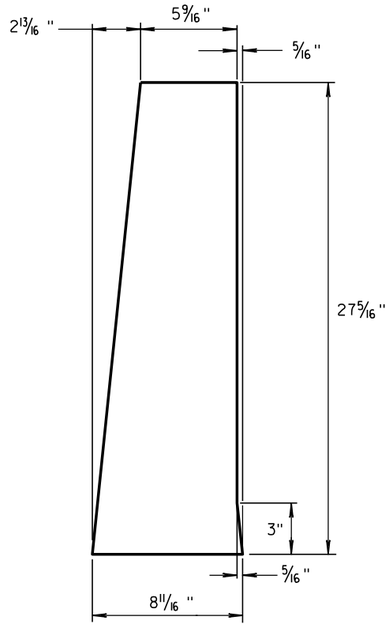
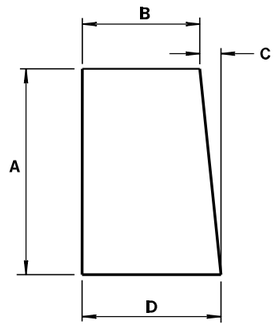


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



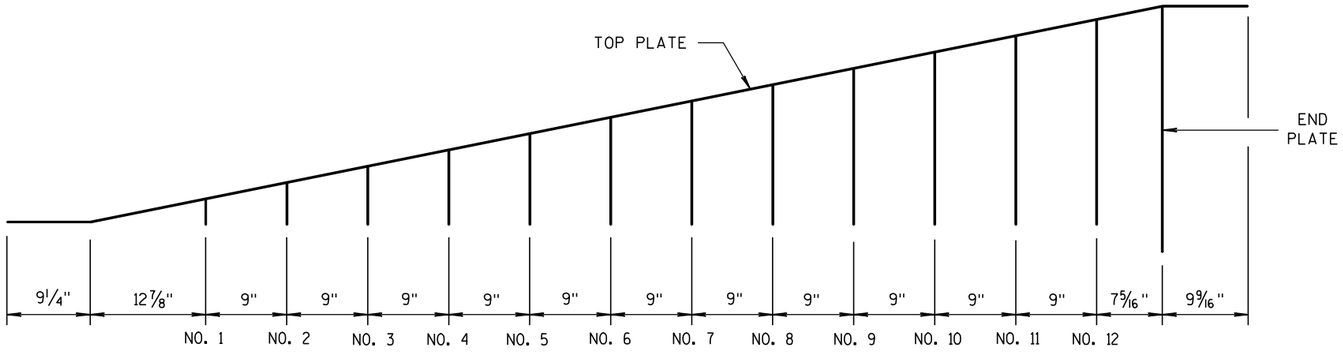
GUSSETS 1 - 12

ALL GUSSETS 1/8" STEEL PLATE

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

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

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



GUSSET LOCATION

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

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

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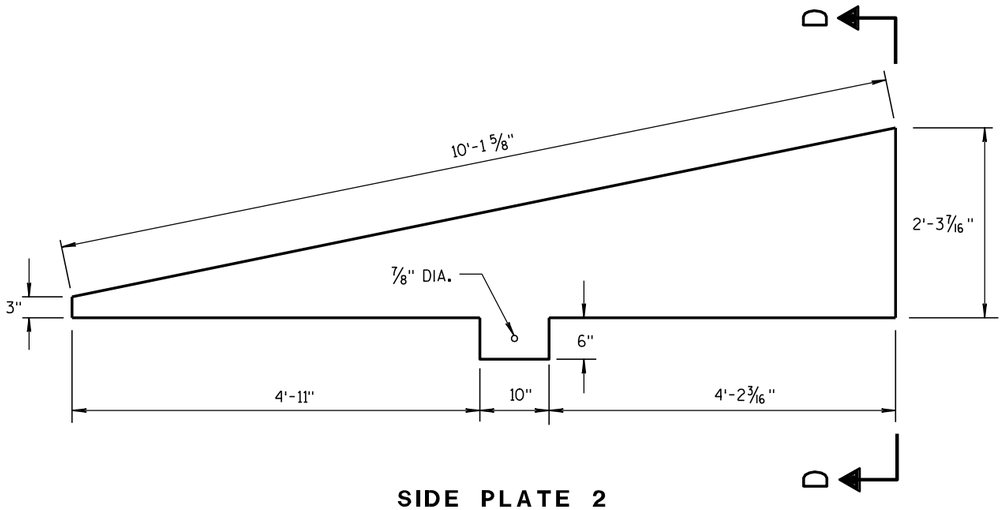
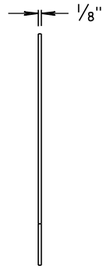
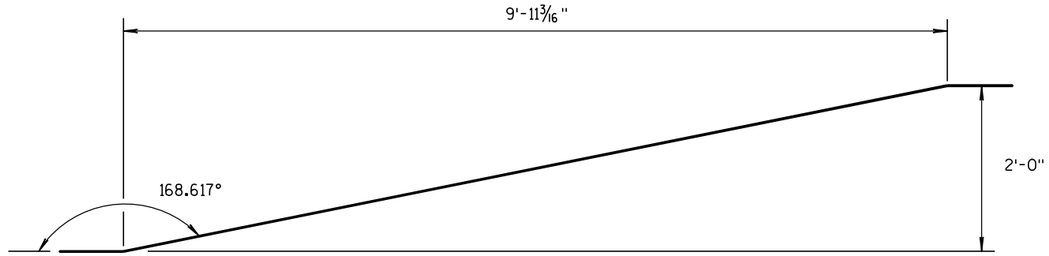


SIDE PLATE 2

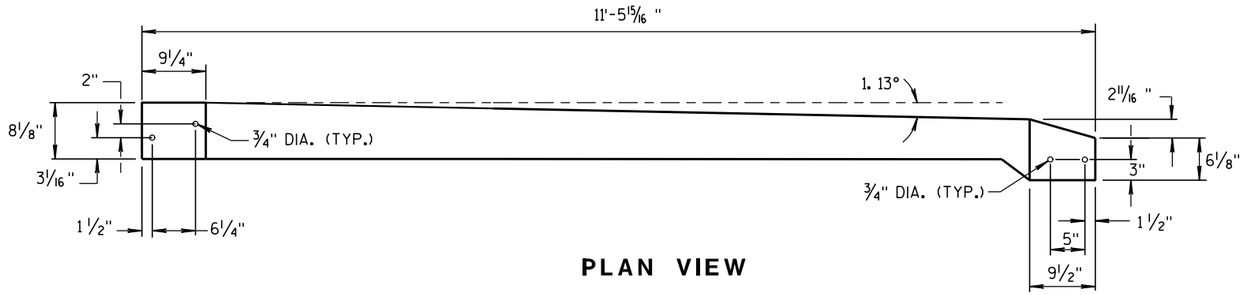


END VIEW



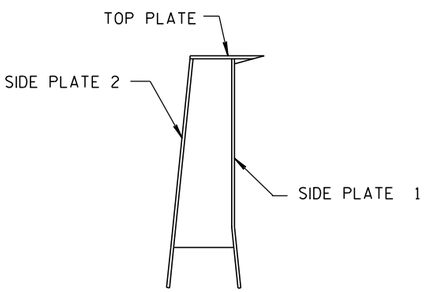
SIDE VIEW

TOP PLATE

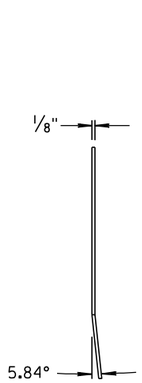


PLAN VIEW

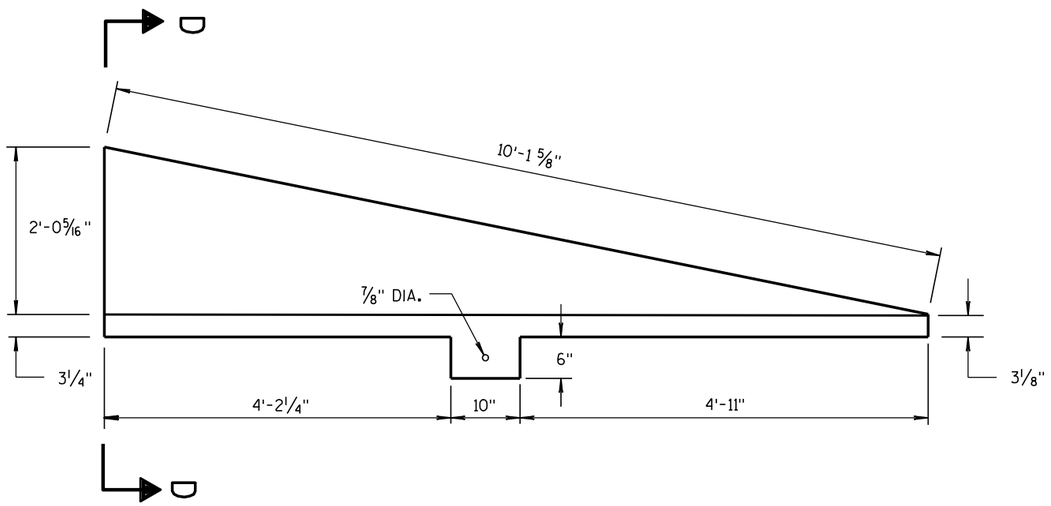
TOP PLATE



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	223 ENT

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

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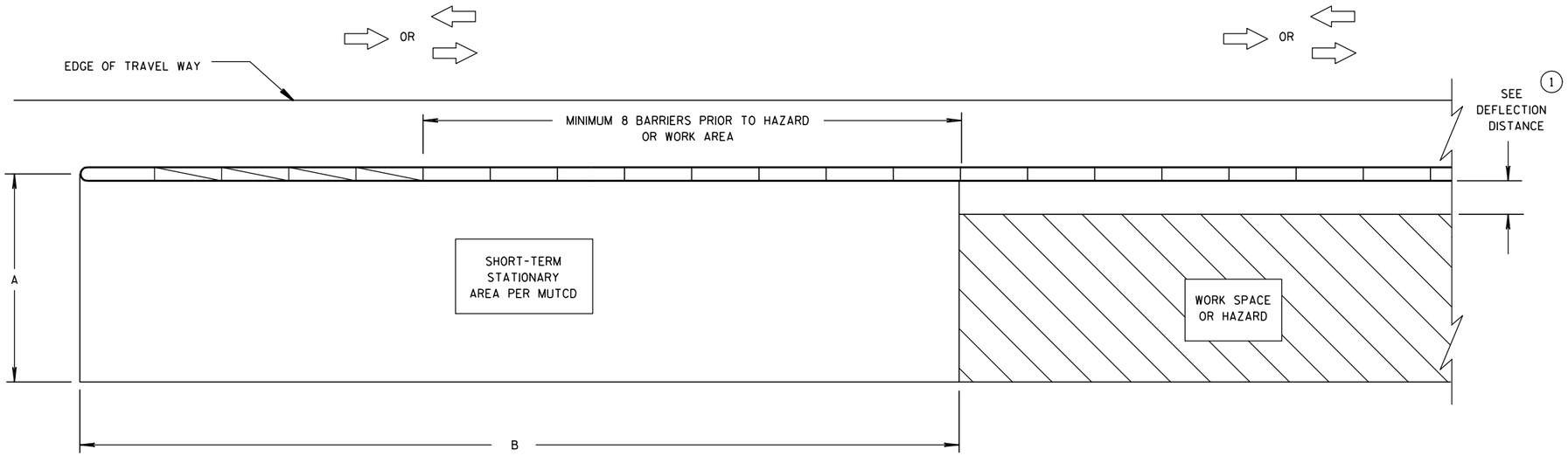
S.D.D. 14 B 7-13h



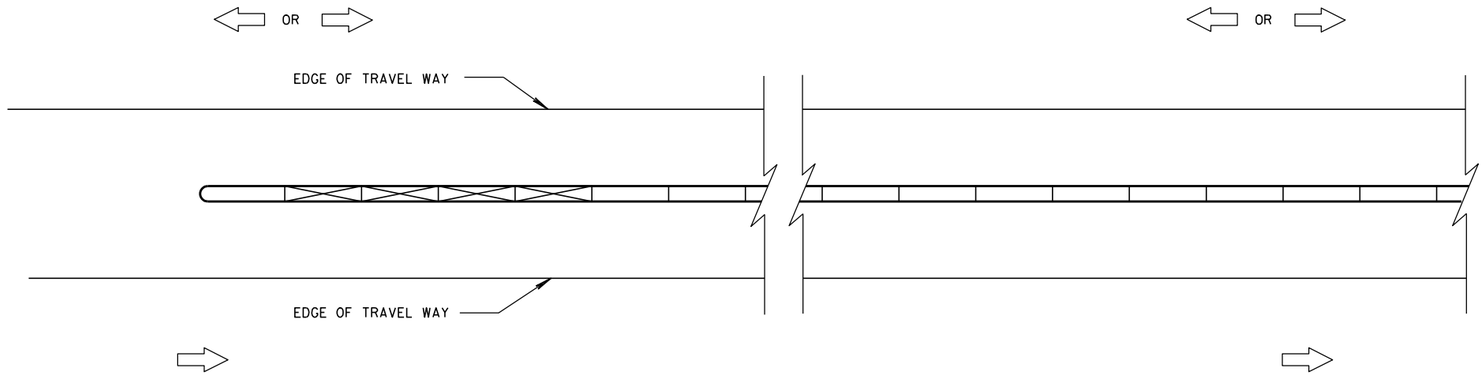
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

DIMENSION A TABLE (2)

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

DIMENSION B TABLE (2)

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



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

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

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

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

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

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

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

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

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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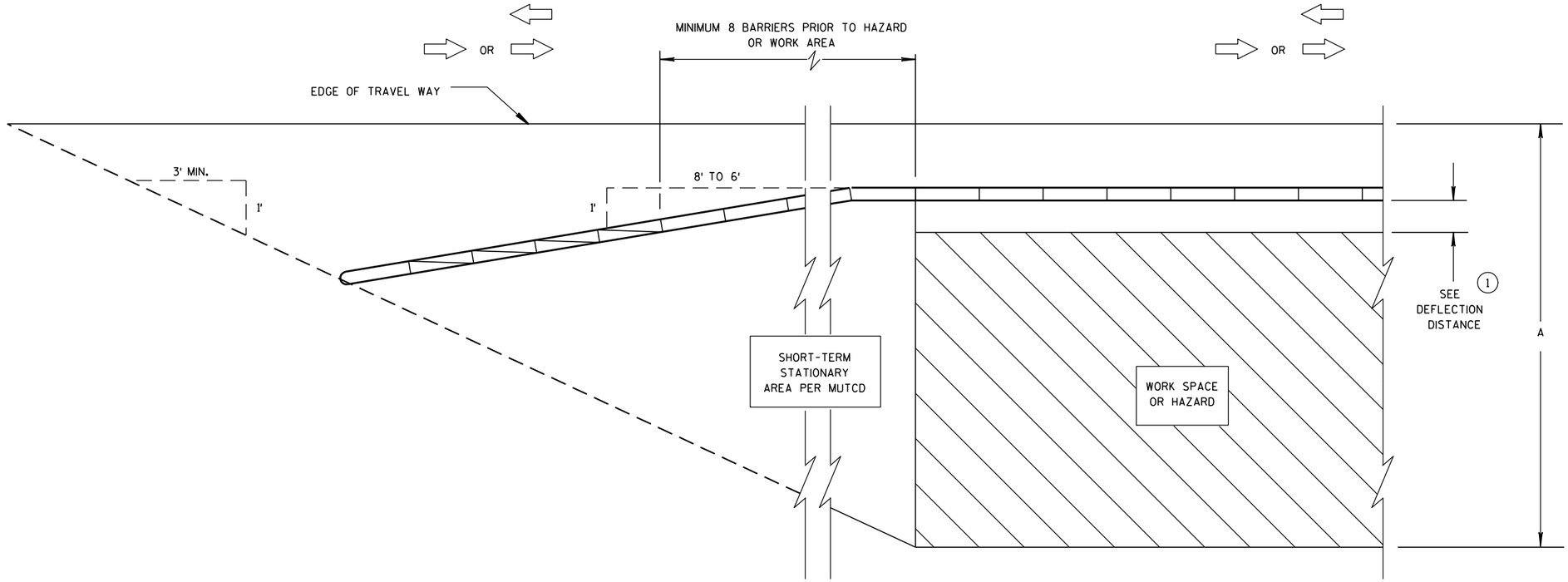
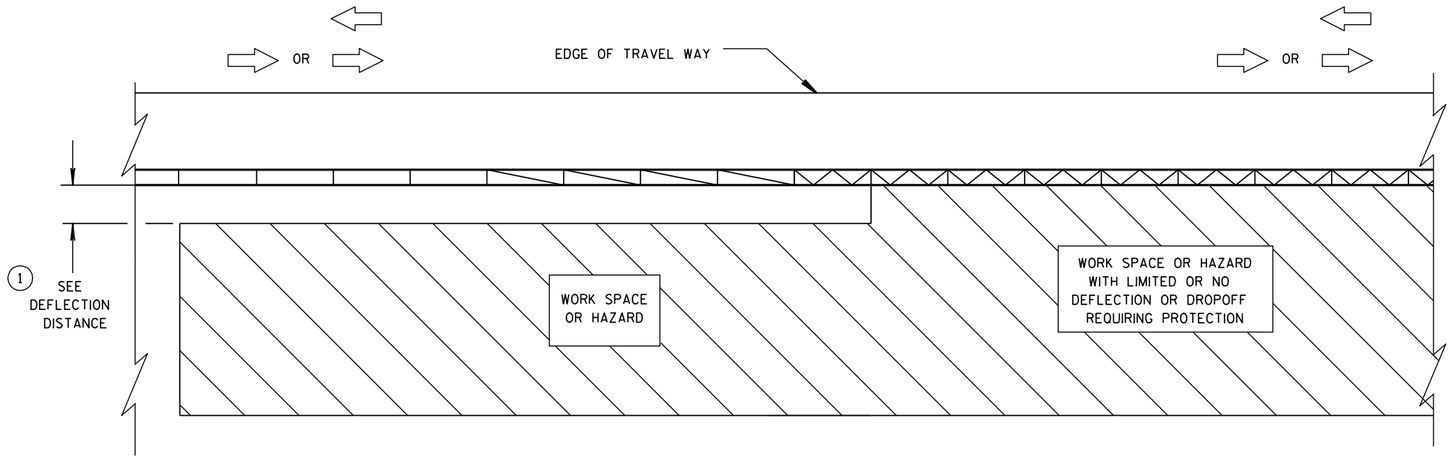
S.D.D. 14 B 8-1a



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



TRANSITION FROM FREE STANDING TEMPORARY BARRIER TO ANCHORED BARRIER

LEGEND

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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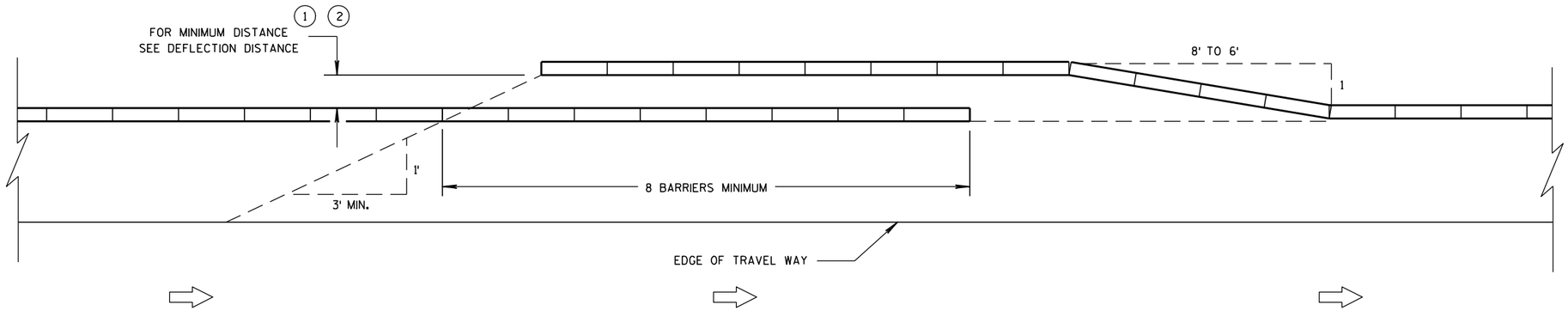
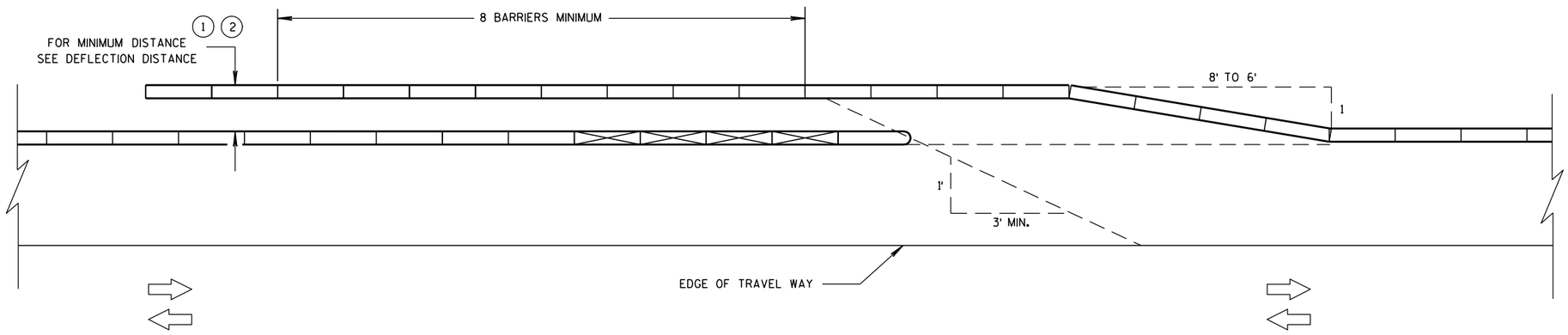
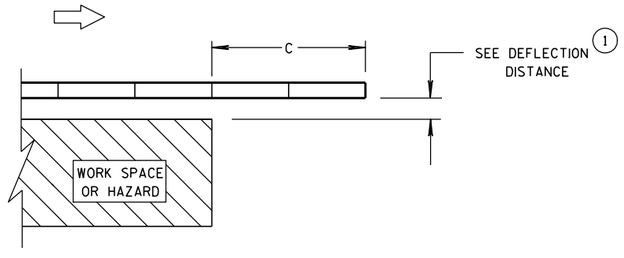
S.D.D. 14 B 8-1b



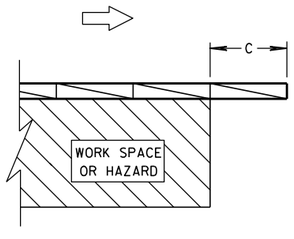
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

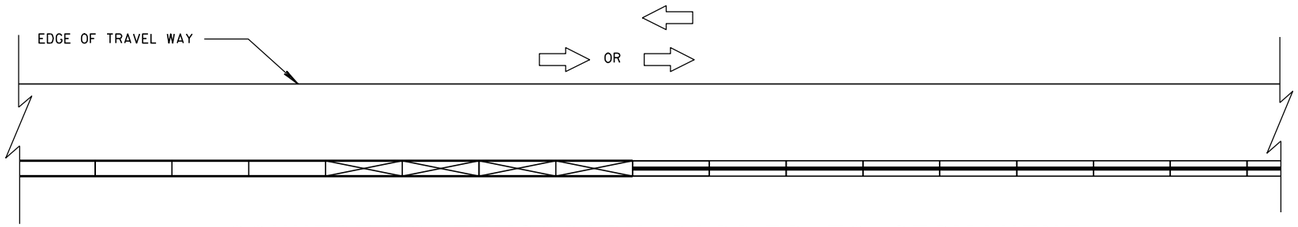
LEGEND

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

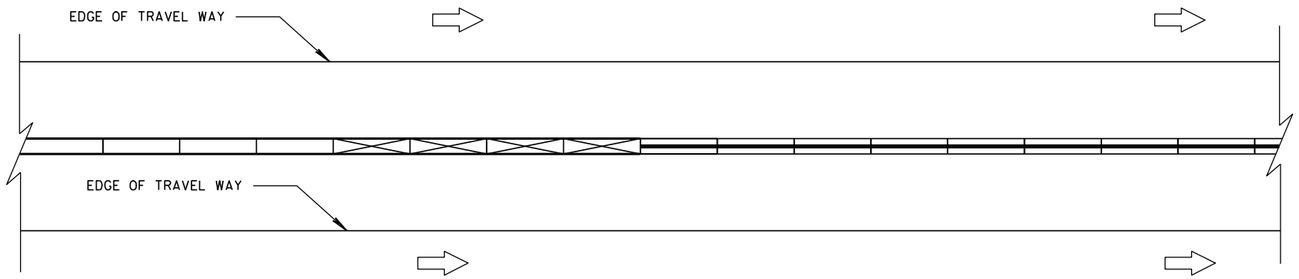
CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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



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

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

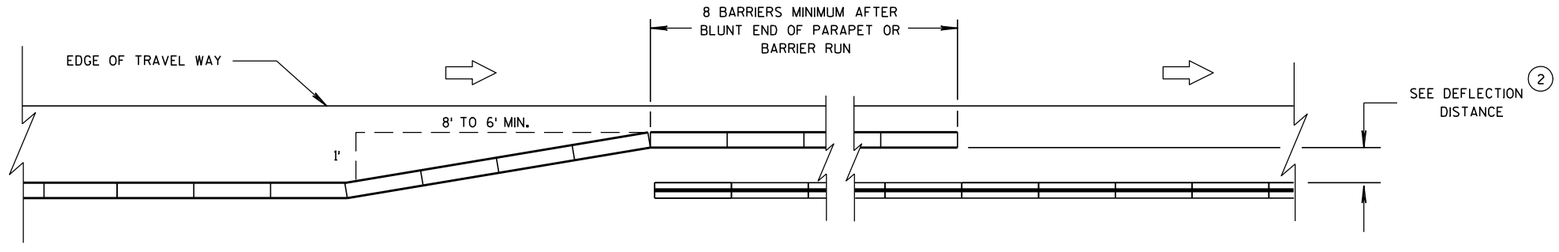
SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

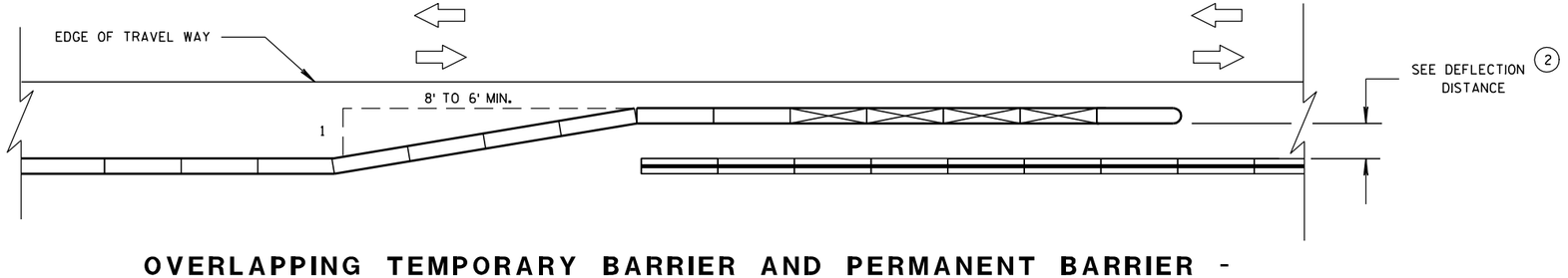
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER - ONE WAY TRAFFIC



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER - TWO WAY TRAFFIC

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

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LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

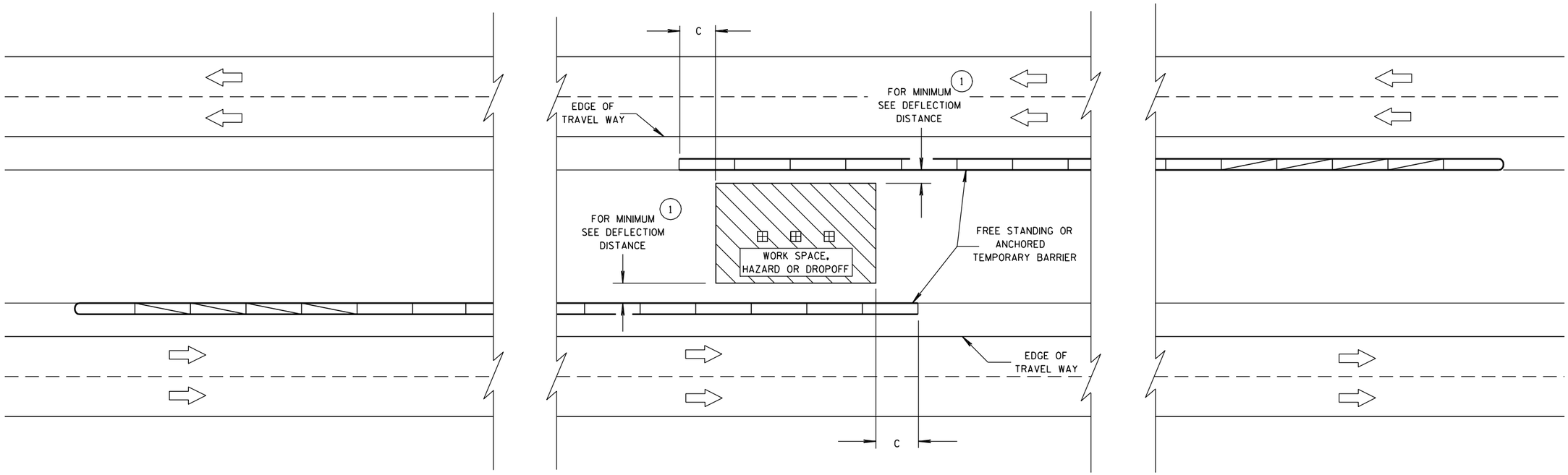
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE (2)

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



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINNER

228

FHWA

6

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GENERAL NOTES

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

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

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

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

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

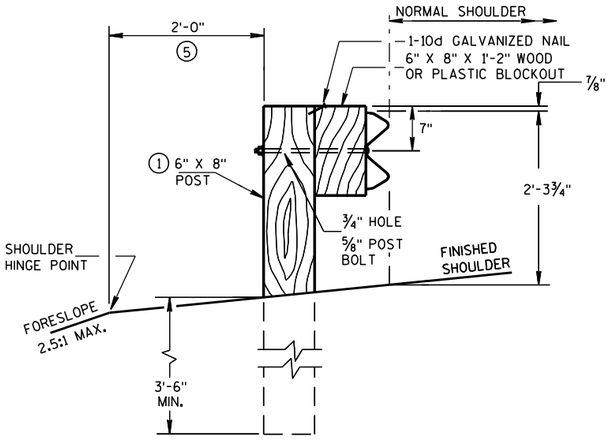
(4) USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.

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

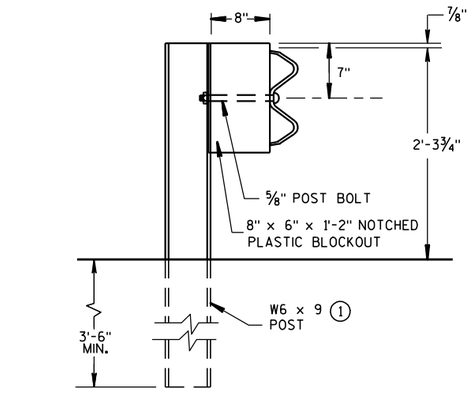
(6) IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2½ INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN YHE HOLE. BACKFILL WITH MATERIAL EXCAVATED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

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

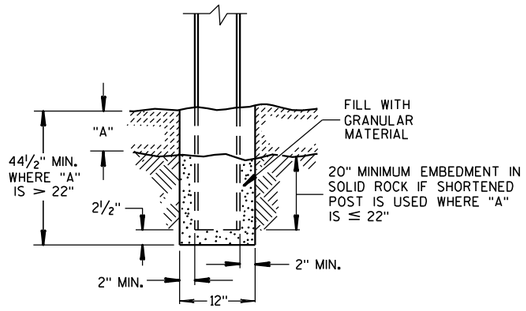
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



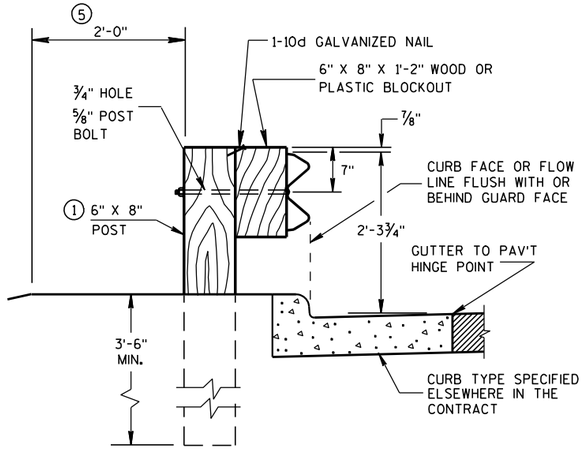
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



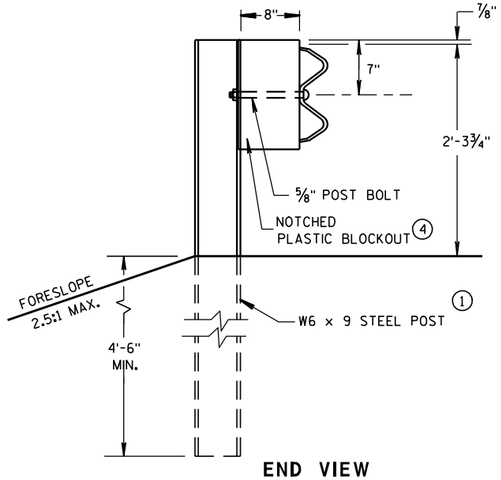
END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION



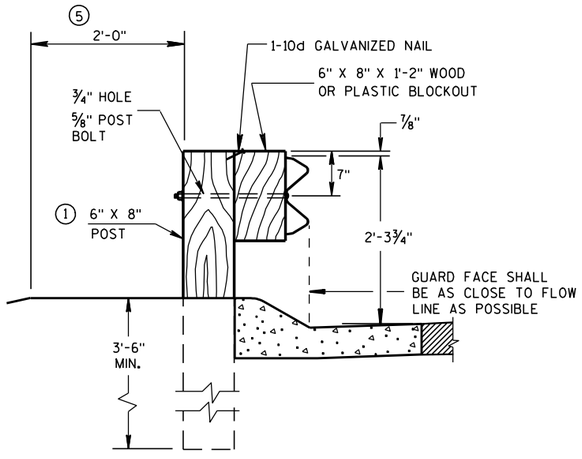
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (6)



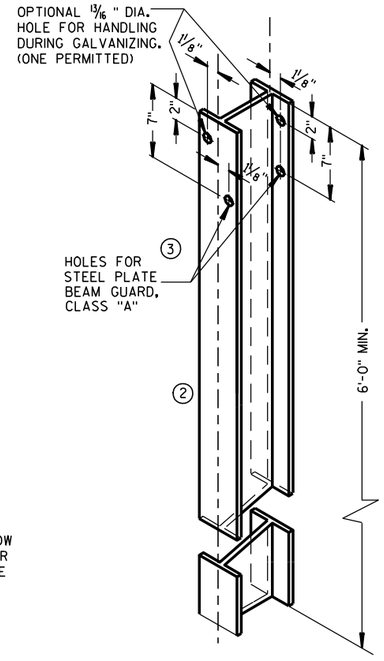
END VIEW
LOCATED ALONG A CURBED ROADWAY



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

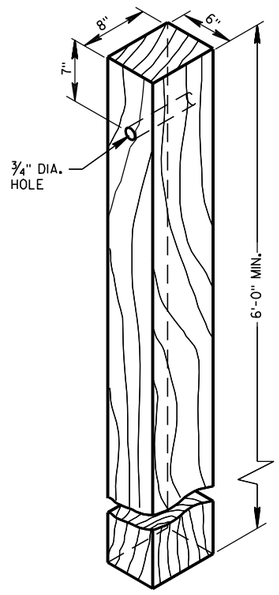


END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY

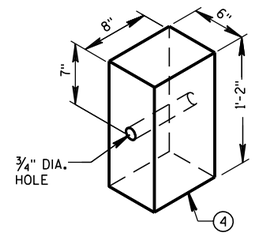


STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) (1)

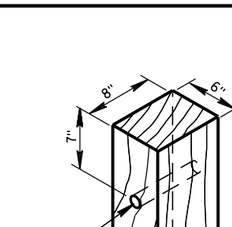
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



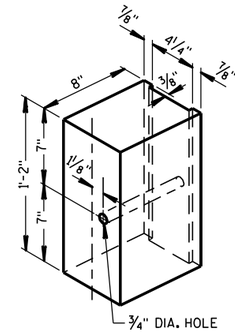
WOOD POST
(6"X8") NOMINAL



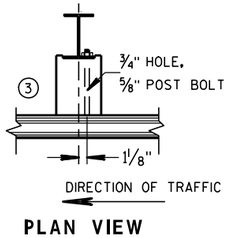
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



TYPICAL NOTCHED
PLASTIC BLOCKOUT (1)
FOR STEEL POSTS



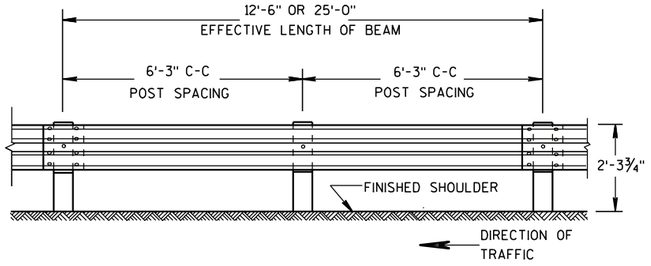
PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

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

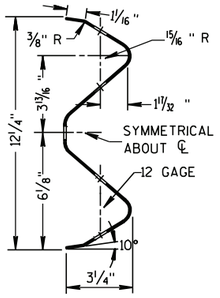
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

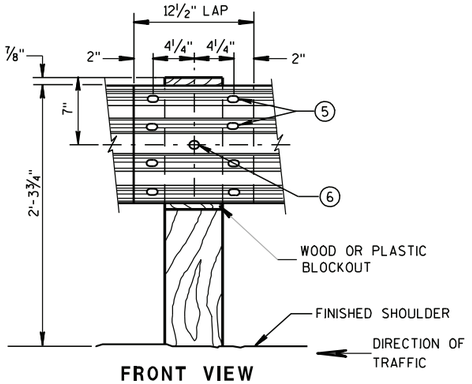


FRONT VIEW

POST SPACING STANDARD INSTALLATION



SECTION THRU W BEAM

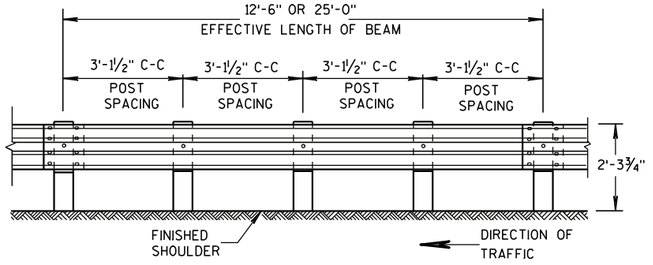


FRONT VIEW

BEAM SPLICE AT WOOD POST AND POST MOUNTING DETAIL

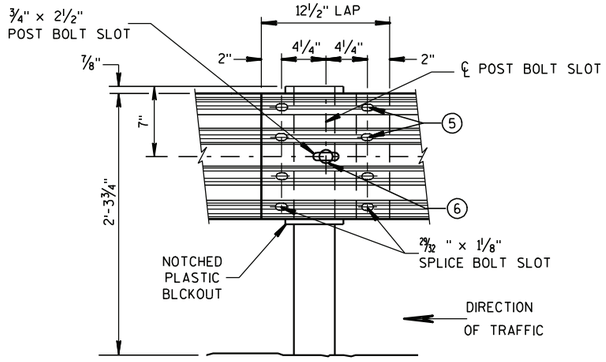
GENERAL NOTES

1. PROVIDE TYPE "H" SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH TYPE "H" YELLOW REFLECTIVE SHEETING.
2. DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
3. REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
4. PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.
5. 8 - 5/8" ϕ X 2 " BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.
6. 5/8" ϕ X 1'-6" BUTTON HEAD BOLT AND AND RECESS NUT WITH ROUND WASHER UNDER NUT.



FRONT VIEW

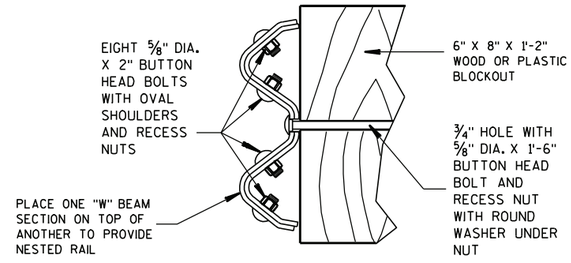
POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)



FRONT VIEW

BEAM SPLICE AT STEEL POST

TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD

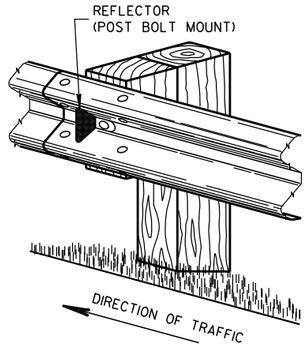


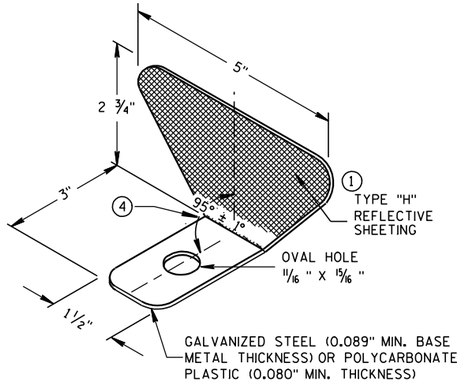
NESTED W BEAM (NW)

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

REFLECTOR SPACING (2)

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





ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION (1)

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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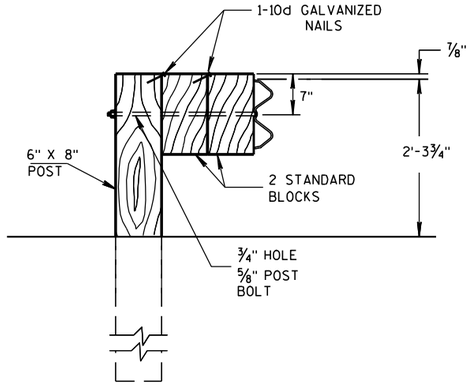
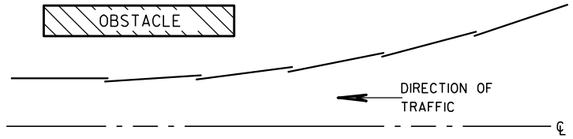
S.D.D. 14 B 15-7b

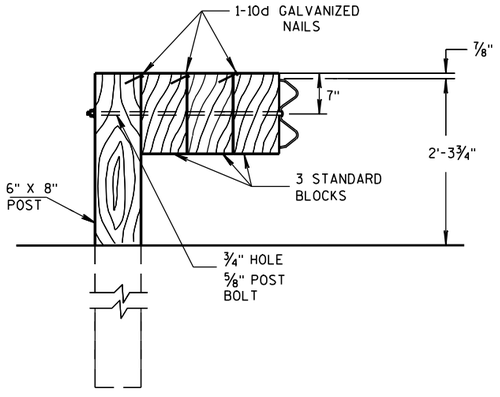


DETAIL FOR DOUBLE BLOCKS

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

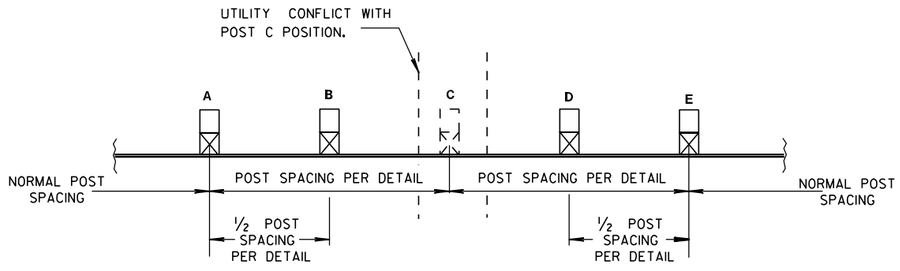


PLAN VIEW
BEAM LAPPING DETAIL



DETAIL FOR TRIPLE BLOCKS

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



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

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

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/23/11
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

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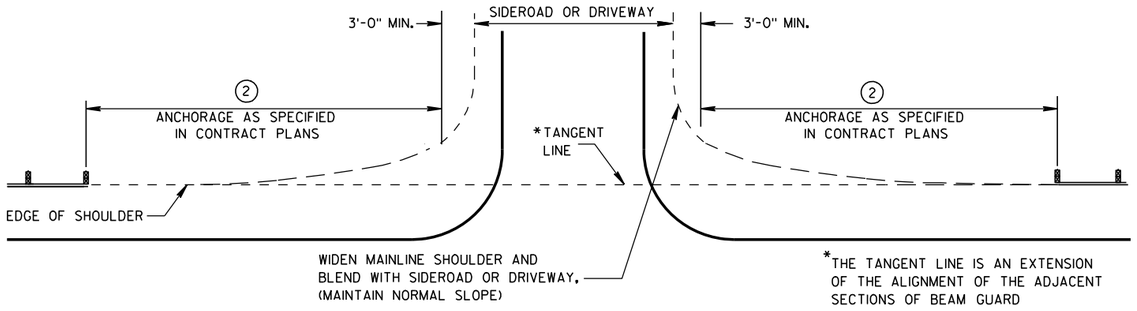
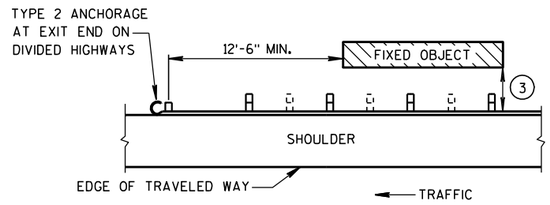
S.D.D. 14 B 15-7c



BEAM GUARD AT SIDEROADS OR DRIVEWAYS



BEAM GUARD AT OBSTACLES EXIT END - ONE WAY TRAFFIC

GENERAL NOTES

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

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

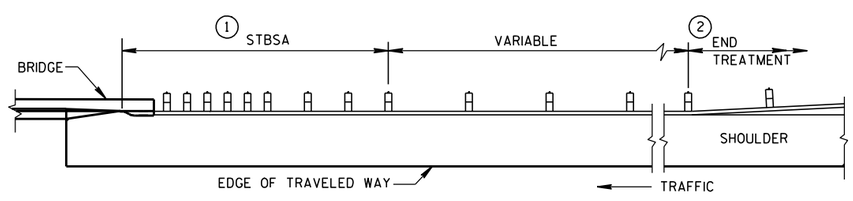
THE LOCATIONS AND LENGTHS OF BEAM GUARD ARE SHOWN ELSEWHERE IN THE PLAN.

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

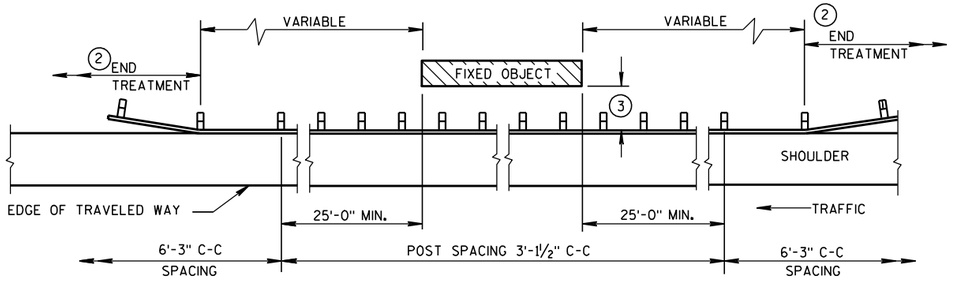
(2) USE AN APPROVED END TREATMENT FOR THE TRAFFIC APPROACH SIDE OF BRIDGE/OBSTACLES. USE TYPE 2 ANCHORAGE ONLY AT THE DOWNSTREAM ENDS OF BEAM GUARD LOCATED ALONG ROADWAYS WITH ONE WAY TRAFFIC.

(3)

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

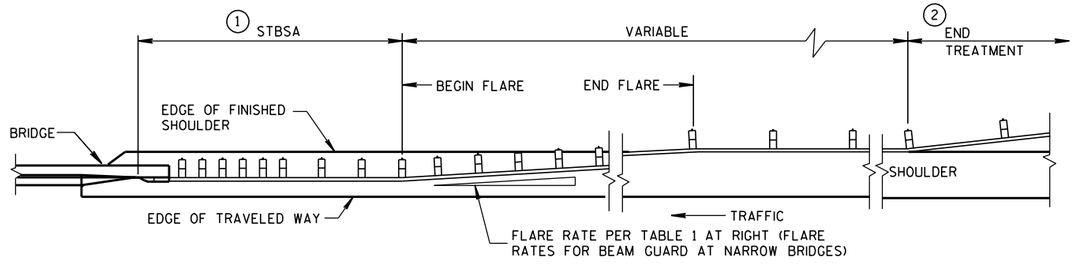


BEAM GUARD AT FULL WIDTH BRIDGES



BEAM GUARD AT OBSTACLES - TWO WAY TRAFFIC

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



BEAM GUARD AT NARROW BRIDGES

(FLARED TO SHOULDER EDGE, THEN PARALLEL TO ROADWAY)

TABLE 1
FLARE RATES FOR BEAM GUARD AT NARROW BRIDGES

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

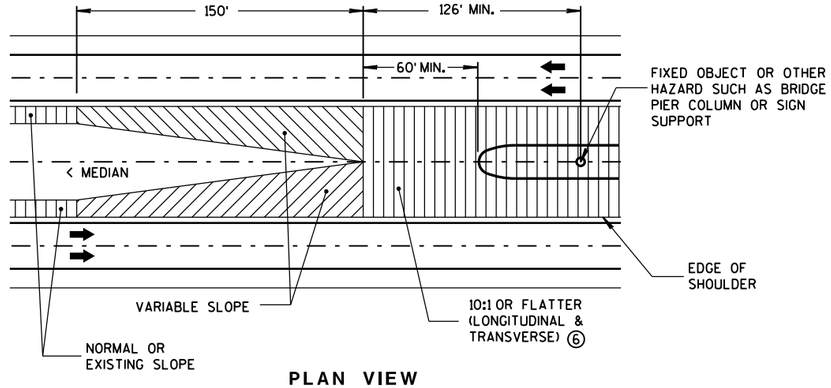
8-21-07
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

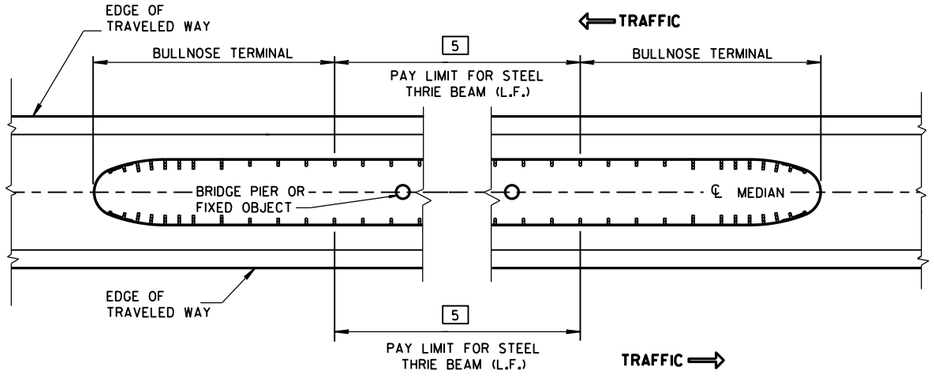
6

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

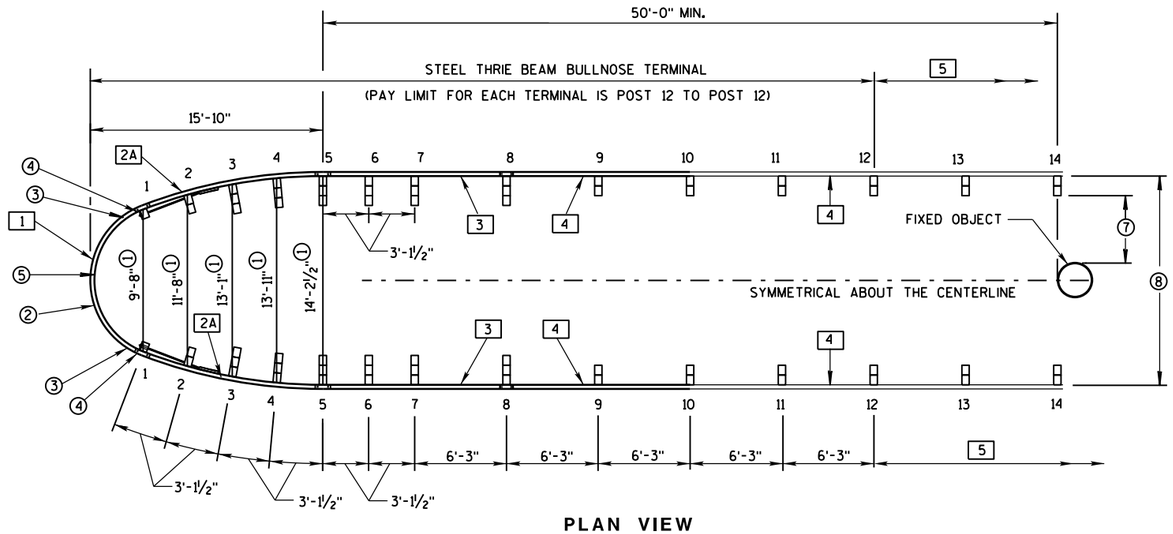


PLAN VIEW

GRADING AT BULLNOSE
(ALL INSTALLATIONS)

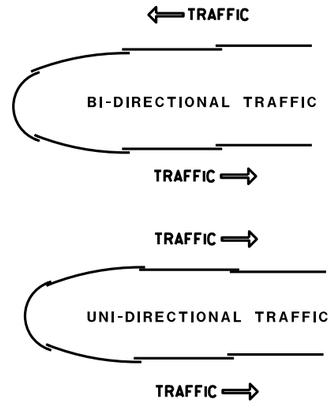


MEDIAN HAZARD PROTECTION PAY LIMITS



PLAN VIEW

TYPICAL BULLNOSE LAYOUT



LAPPING DETAIL
(ALL INSTALLATIONS)

GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.

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

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

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

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

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

ALL THRIE BEAM SHALL BE 12-GAUGE.

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

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

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

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

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

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

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

③ NOSE CABLE W/SWAGGED END BUTTONS.

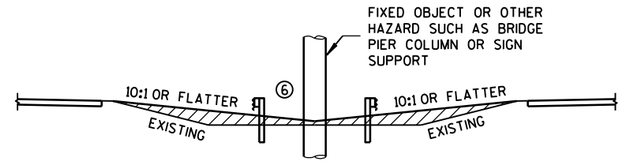
④ NOSE CABLE ANCHOR PLATE (BACKSIDE OF SPLICE).

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

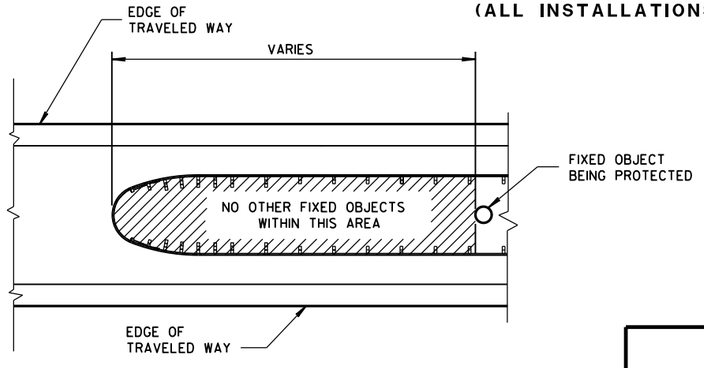
⑥ PROVIDE SUITABLE DRAINAGE WHEN MEDIAN GRADING IMPEDES NORMAL FLOW.

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

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



MEDIAN GRADING SECTION
(ALL INSTALLATIONS)

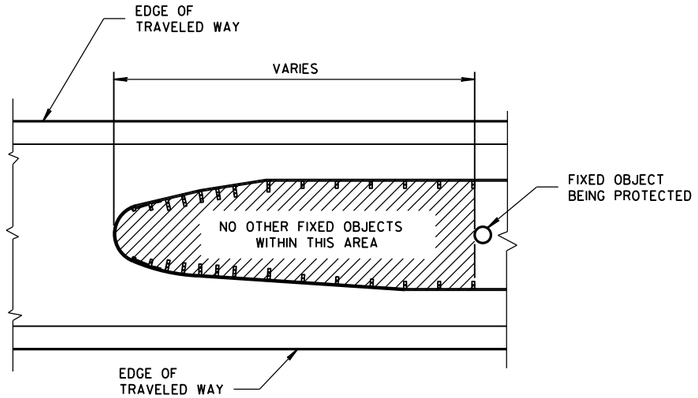


HAZARD FREE AREA INSIDE BULLNOSE

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 14 B 26-2a



HAZARD FREE
AREA INSIDE BULLNOSE

GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.

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

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

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

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

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

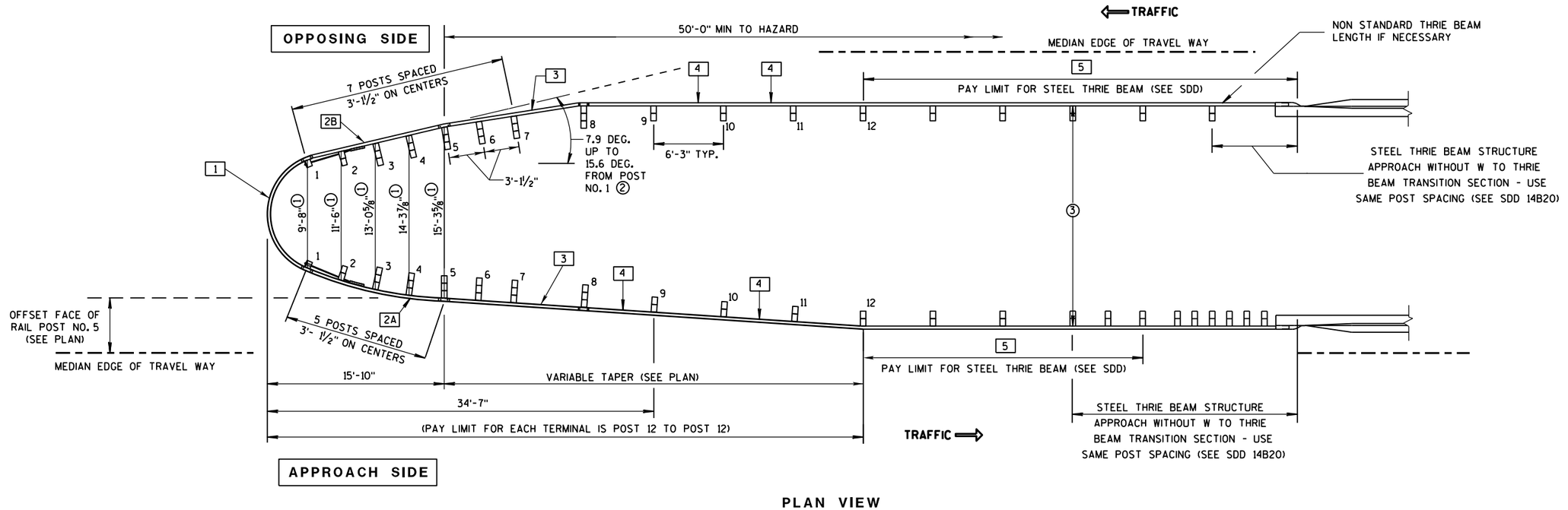
[4] UNBENT STANDARD THRIE-BEAM RAIL NO. 4, (POST 8 TO POST 10 & POST 10 TO POST 12)

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

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

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

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



PLAN VIEW

WIDENED BULLNOSE DESIGN

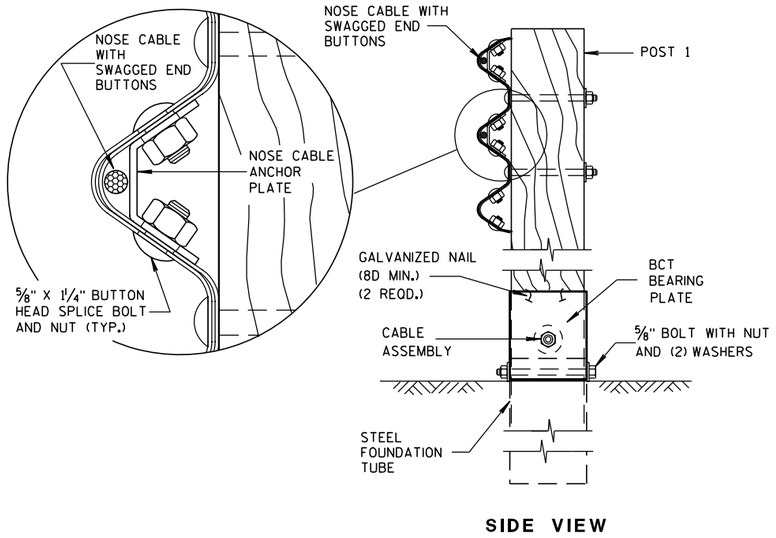
(INSTALLATION AT TWIN BRIDGES WITH BI-DIRECTIONAL TRAFFIC SHOWN)

STEEL THRIE BEAM
BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

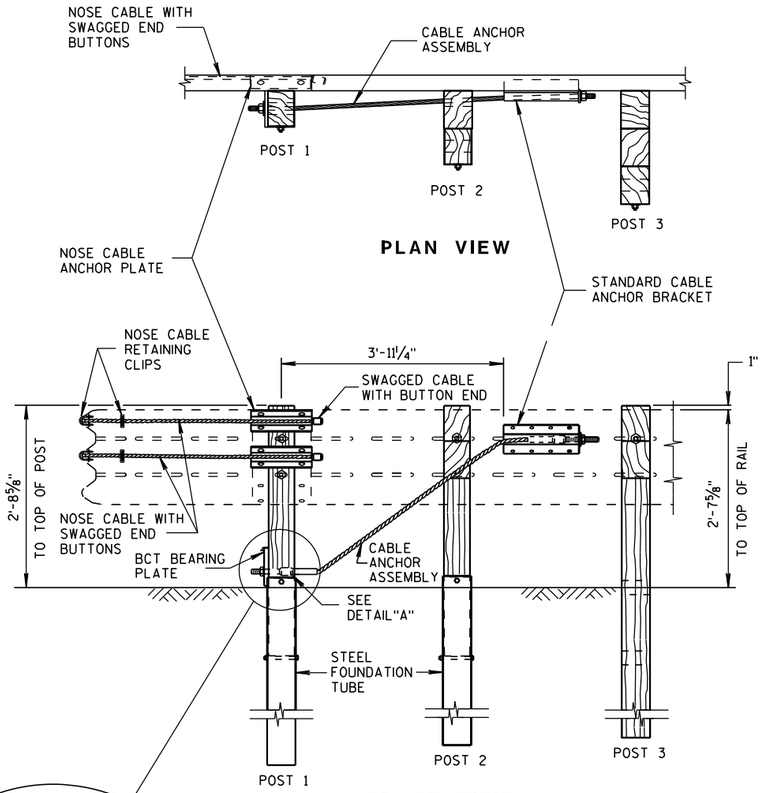
6

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



SIDE VIEW

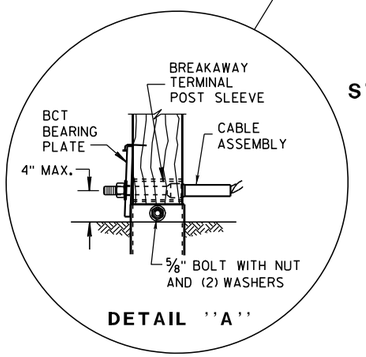
NOSE CABLE ASSEMBLY AT POST NO. 1



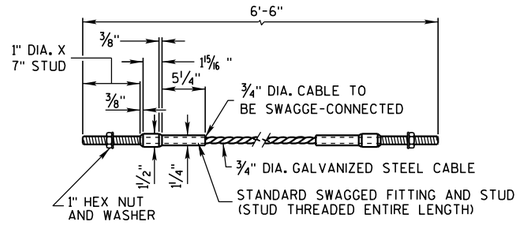
PLAN VIEW

FRONT VIEW

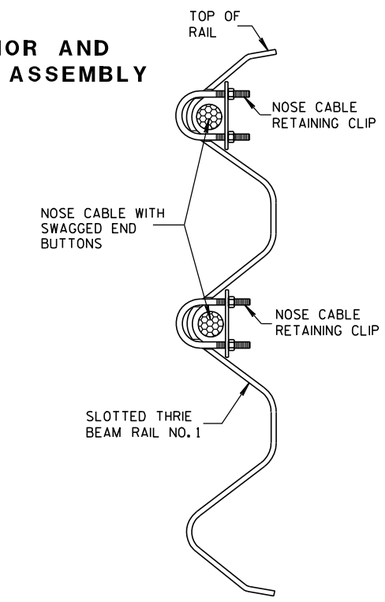
NOSE CABLE ANCHOR AND STANDARD BRACKET ASSEMBLY



DETAIL ''A''



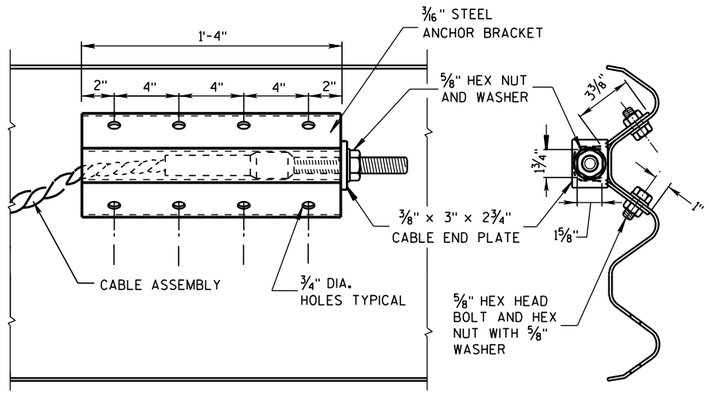
DETAILS OF CABLE ANCHOR ASSEMBLY



PLACEMENT OF NOSE CABLE RETAINING CLIP

GENERAL NOTES

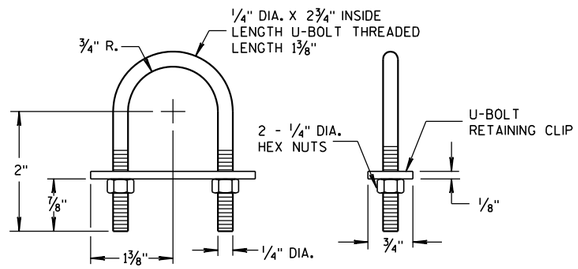
SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.



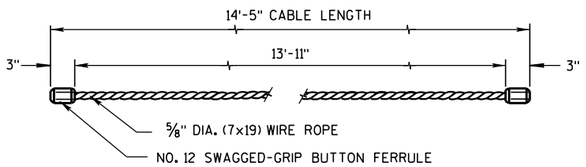
FRONT VIEW

END VIEW

DETAILS OF CABLE ANCHOR BRACKET

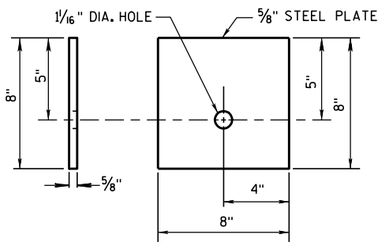


NOSE CABLE RETAINING CLIP

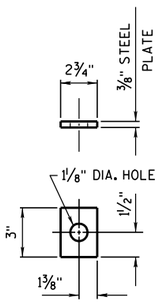


NOSE CABLE WITH SWAGGED END BUTTONS

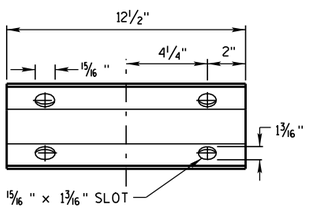
TO PULL OFF SWAGGED GRIP BUTTON FERRULE FROM WIRE ROPE REQUIRES A FORCE EQUAL TO 98% OF THE WIRE ROPE'S BREAKING STRENGHT.



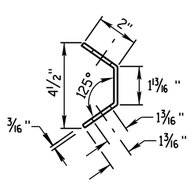
BCT BEARING PLATE



CABLE END PLATE



ELEVATION VIEW



END VIEW

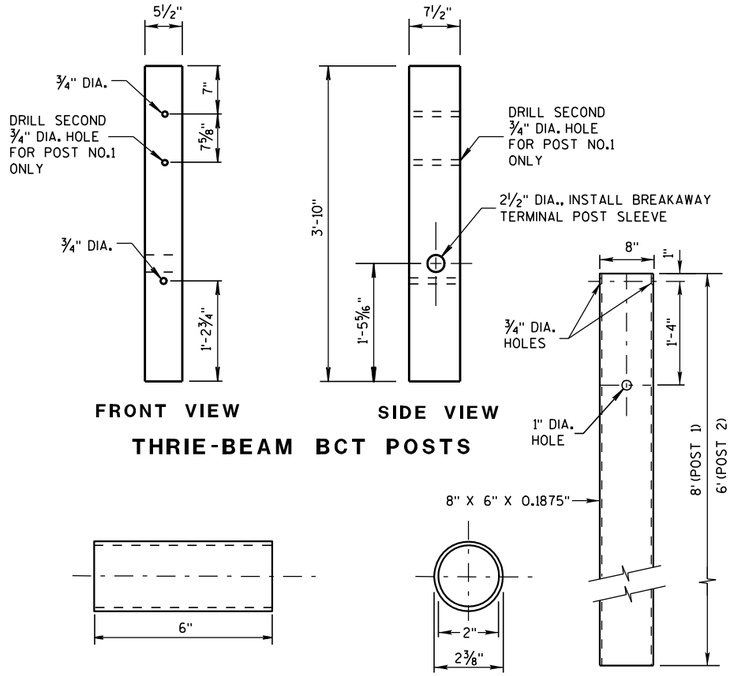
NOSE CABLE ANCHOR PLATE

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

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

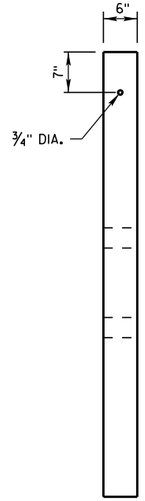
6
S.D.D. 14 B 26-2c

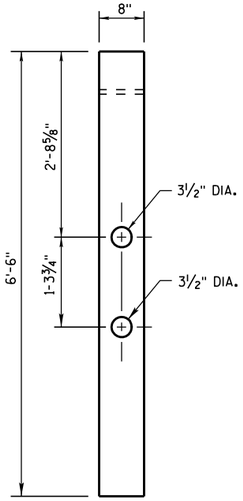


THRIE-BEAM BCT POSTS

BREAKAWAY TERMINAL POST SLEEVE

STEEL FOUNDATION TUBE

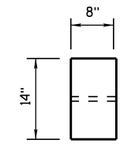


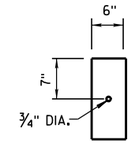


THRIE-BEAM CRT WOOD POSTS

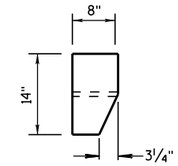
GENERAL NOTES

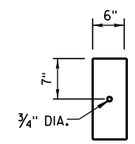
SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.



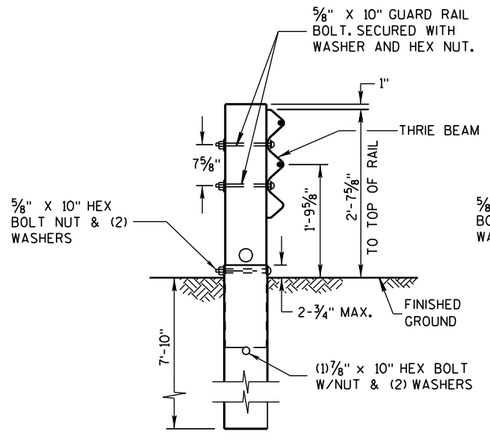


STANDARD WOOD BLOCK



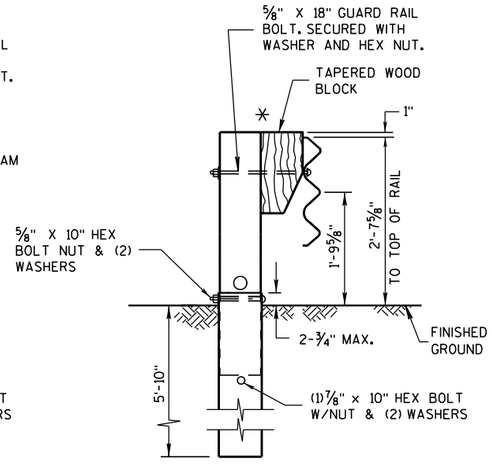


TAPERED WOOD BLOCK



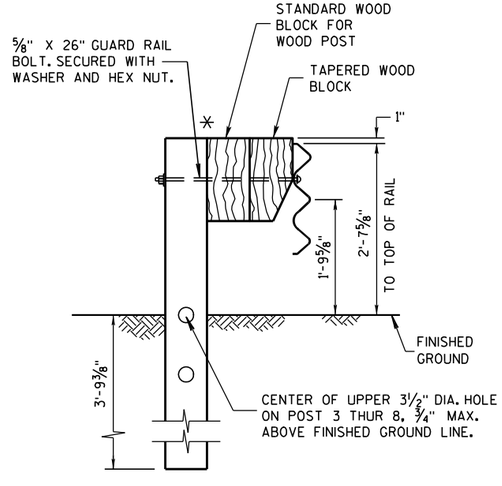
THRIE-BEAM BCT POST
(WITH 8'-0" FOUNDATION TUBE)

POST NO. 1



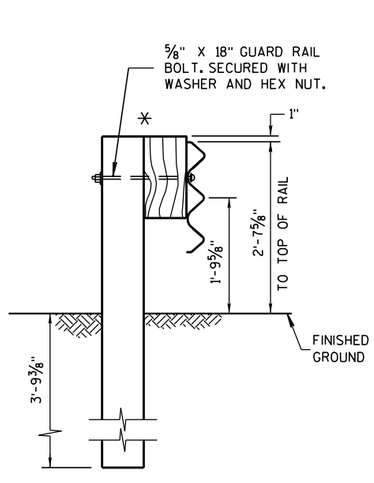
THRIE-BEAM BCT POST
(WITH 6'-0" FOUNDATION TUBE AND 1'-2" TAPERED BLOCK)

POST NO. 2



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

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



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

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

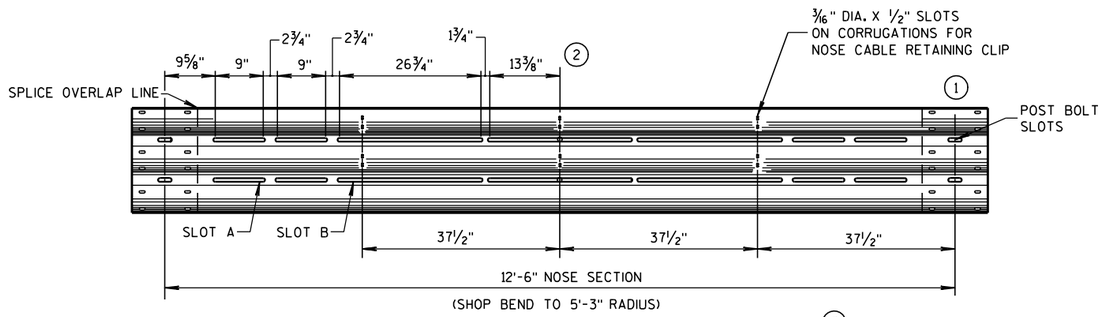
* IF NEEDED DUE TO AN UNDERGROUND OBSTACLE ADD 1 ADDITIONAL STANDARD BLOCKOUT TO POST.

STEEL THRIE BEAM BULLNOSE TERMINAL

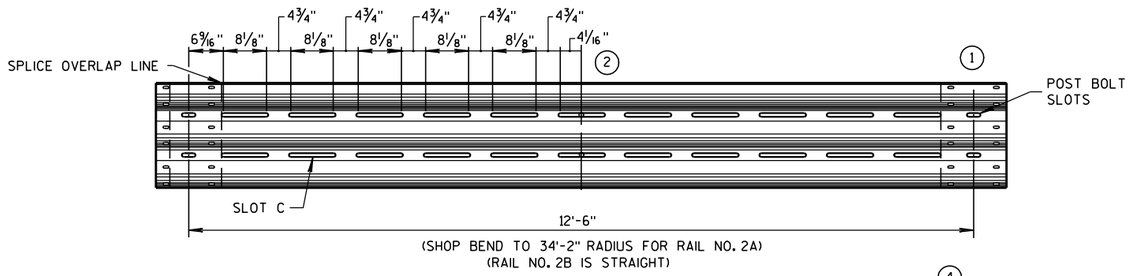
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

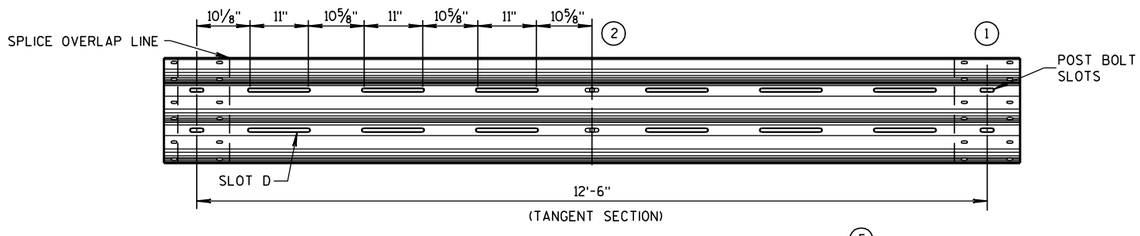
S.D.D. 14 B 26-2d



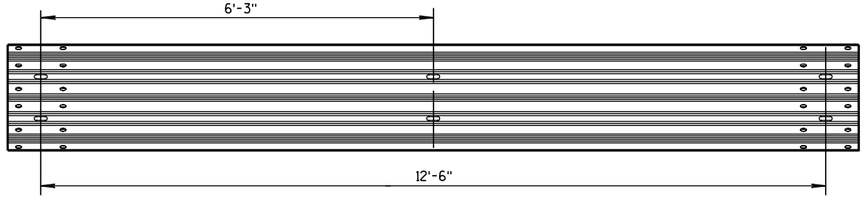
SLOTTED THRIE BEAM RAIL NO. 1 (3)



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



SLOTTED THRIE BEAM RAIL NO. 3 (5)



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

GENERAL NOTES

SEE STANADRD DETAIL DRAWINGS 14 B 26a-e.

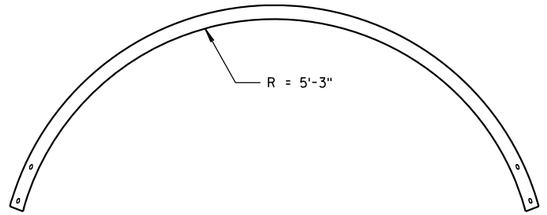
(1) SLOTTED THRIE BEAM RAIL DIMENSIONS SHOWN ARE BEFORE BENDING TO THE RADIUS SHOWN.

(2) SLOT SIZE AND SPACING SYMMETRIC.

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

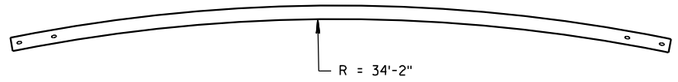
(4) SLOTTED THRIE BEAM RAIL NO. 2A, 12'-6", SHOP BEND TO R=34'-2".
SLOTTED THRIE BEAM RAIL NO. 2B, 12'-6", RAIL IS STRAIGHT.

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



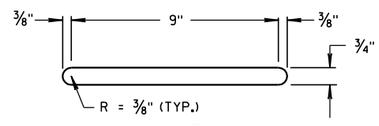
PLAN VIEW

SLOTTED THRIE BEAM RAIL NO. 1

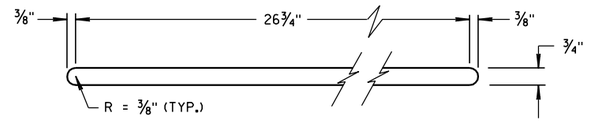


PLAN VIEW

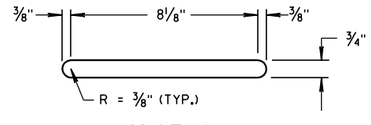
SLOTTED THRIE BEAM RAIL NO. 2A



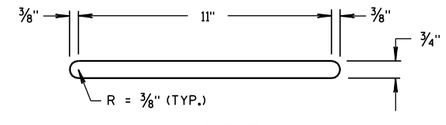
SLOT A



SLOT B



SLOT C



SLOT D

SLOT DETAILS

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9-16-2010 — DATE

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

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FHWA

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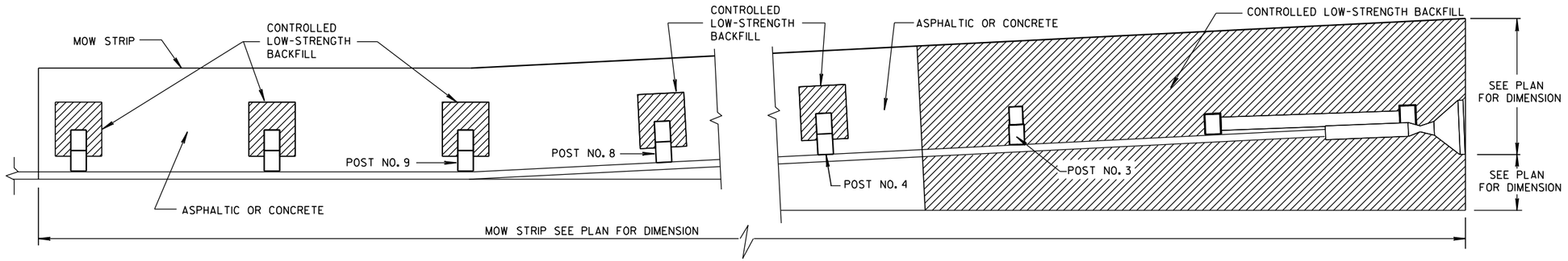
S.D.D. 14 B 26-2e

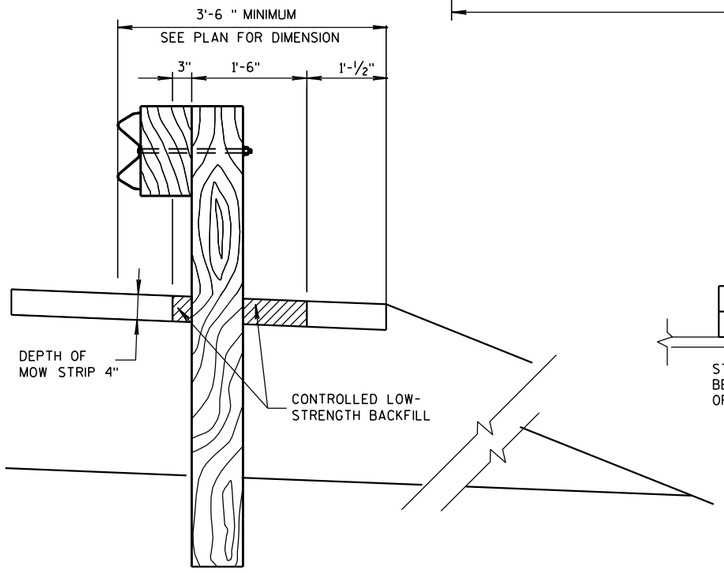
6

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

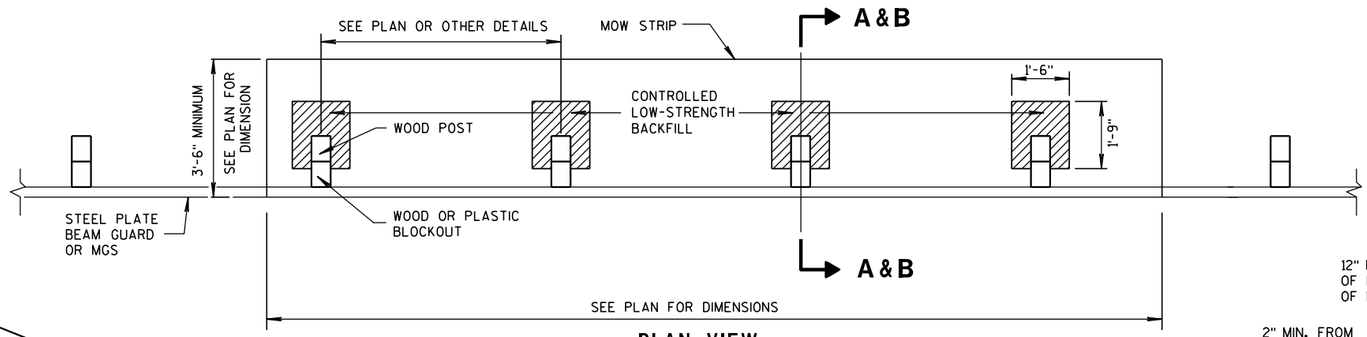


PLAN VIEW

MOW STRIP FOR STEEL PLATE BEAM GUARD ENERGY ABORBING TERMINAL

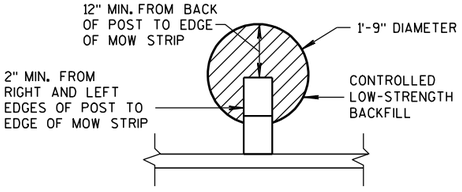


SECTION A-A

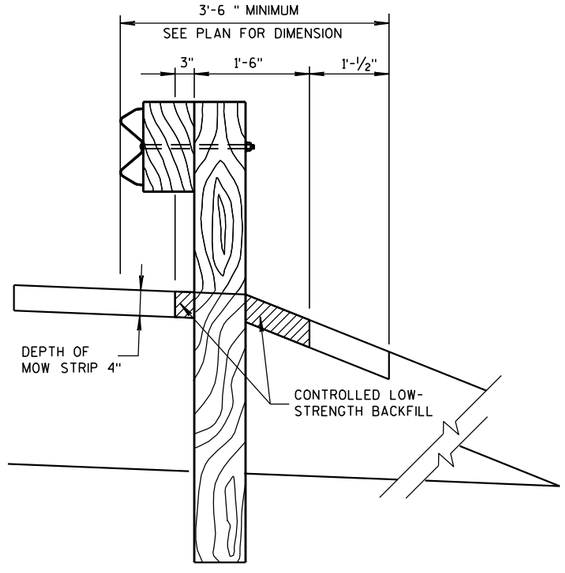


PLAN VIEW

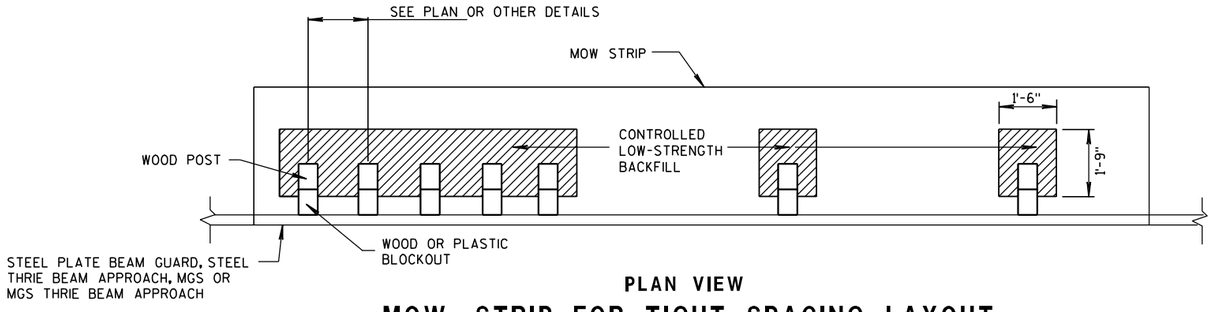
MOW STRIP FOR TYPICAL BLOCKOUT LAYOUT



ALTERNATIVE HMA
MOW STRIP DESIGN

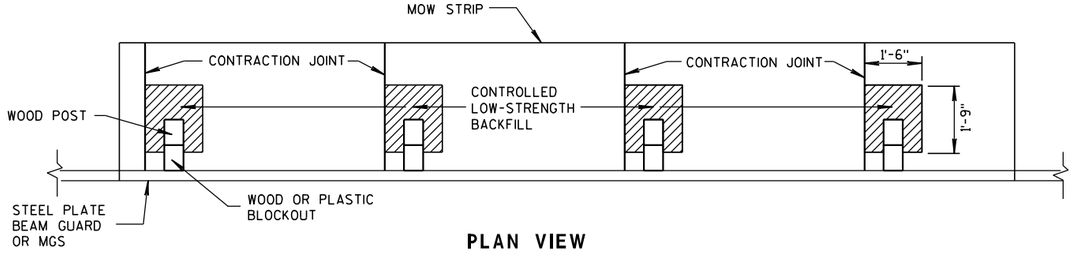


SECTION B-B



PLAN VIEW

MOW STRIP FOR TIGHT SPACING LAYOUT



PLAN VIEW

JOINT PLACEMENT FOR CONCRETE MOW STRIP

GUARDRAIL MOW STRIP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

1/27/12
DATE

/S/ Jerry H. Zaas
ROADWAY STANDARDS 1238
ENGINEER

FHWA

6

S.D.D. 14 B 28-2

6

S.D.D. 14 B 28-2

GENERAL NOTES

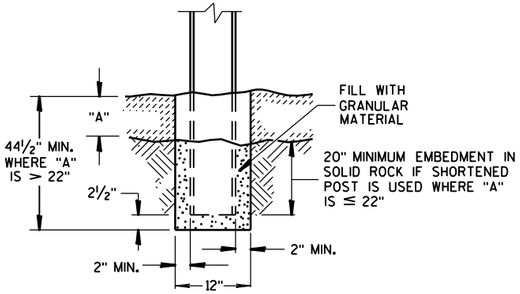
1. WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

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.

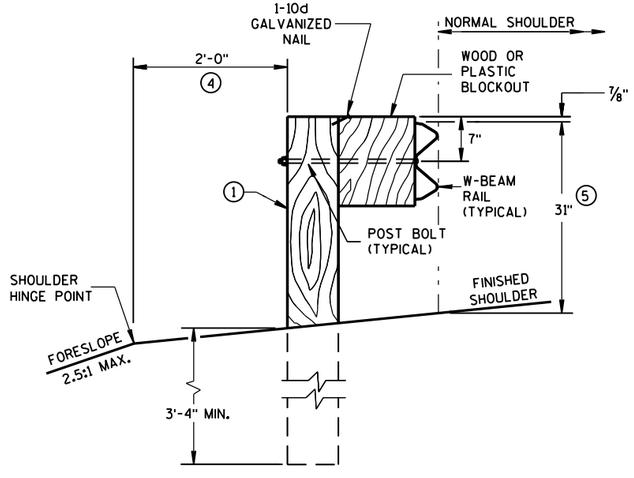
3. IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO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

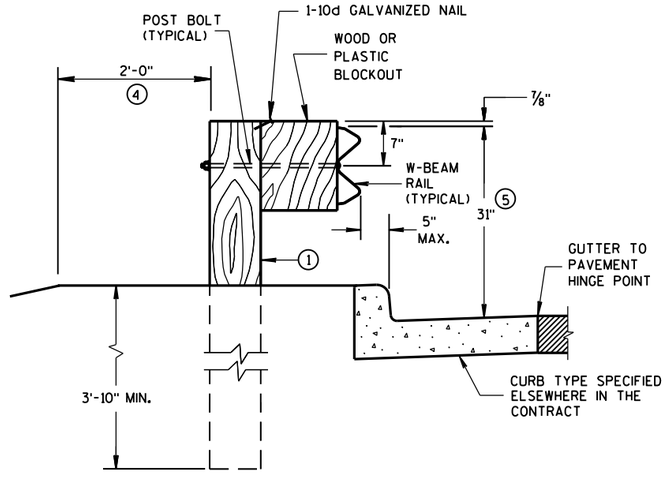


END VIEW
SETTING STEEL OR WOOD POST IN ROCK ③



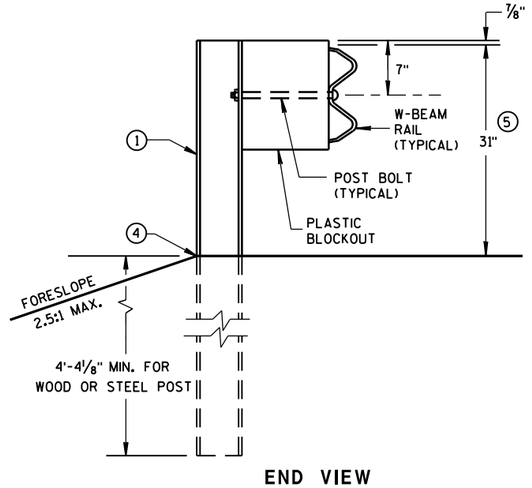
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



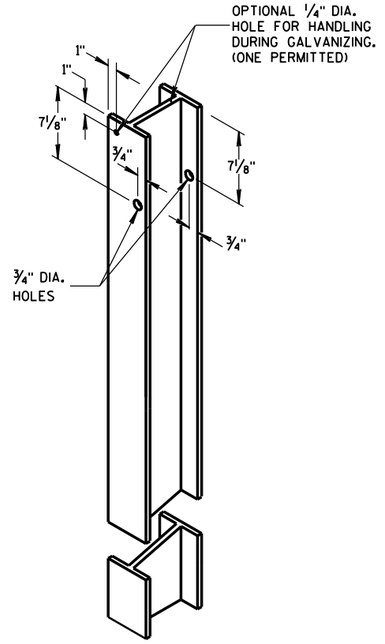
END VIEW

LOCATED ALONG A CURBED ROADWAY

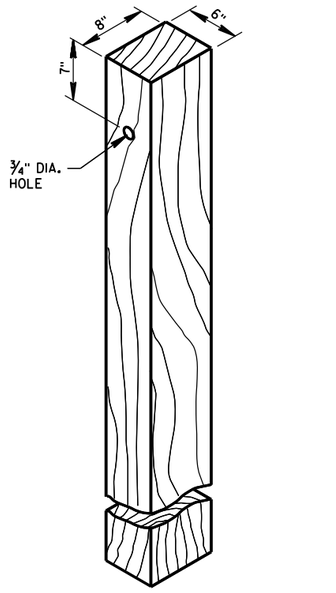


END VIEW

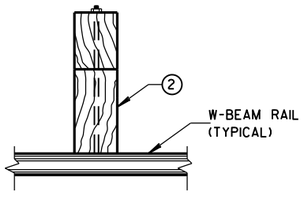
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



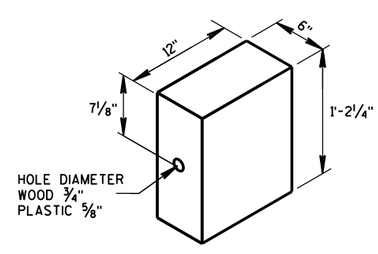
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



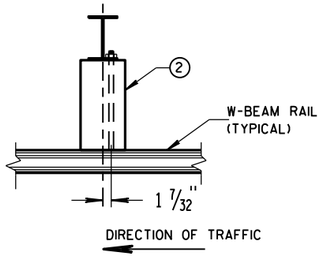
WOOD POST
(6" X 8") NOMINAL ①



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT ②

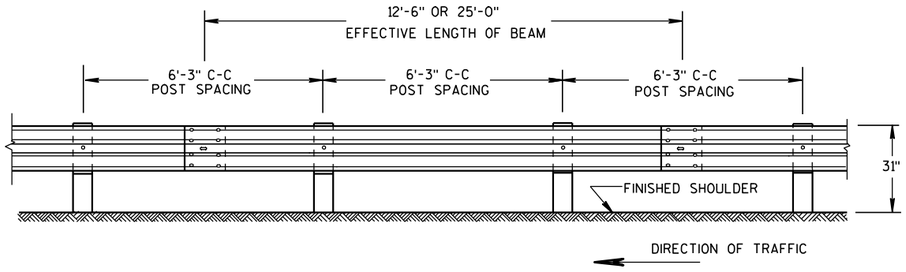


PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

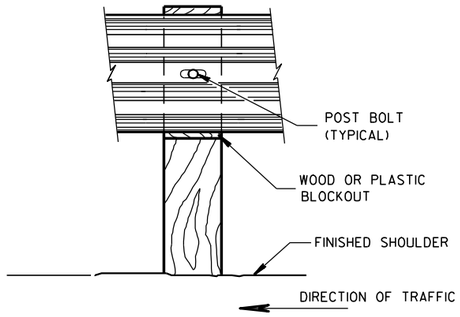
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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



FRONT VIEW

POST SPACING STANDARD INSTALLATION



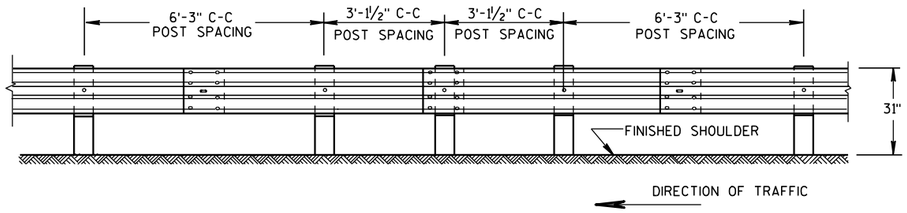
FRONT VIEW AT WOOD POST

GENERAL NOTES

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

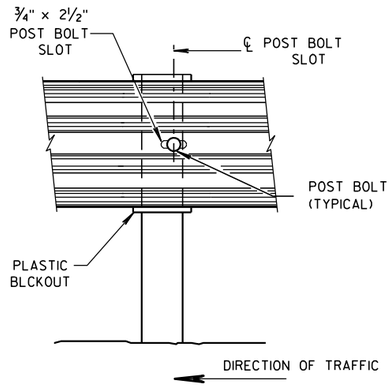
POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

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

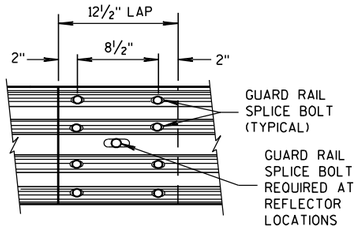


FRONT VIEW

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

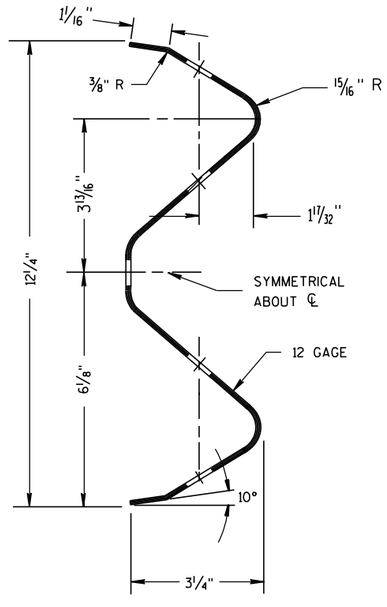


FRONT VIEW AT STEEL POST

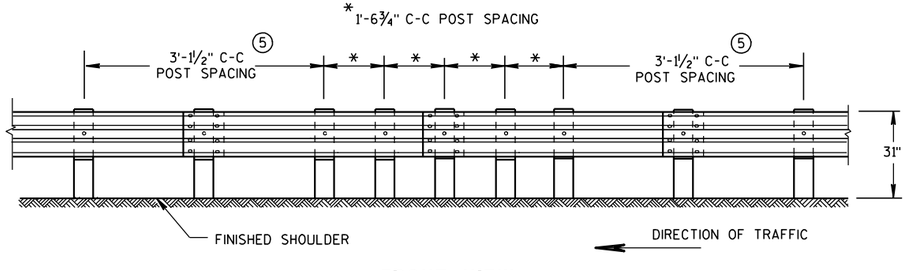


FRONT VIEW

MID-SPAN BEAM SPLICE

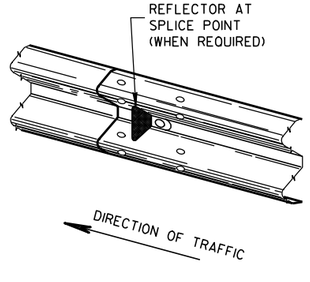


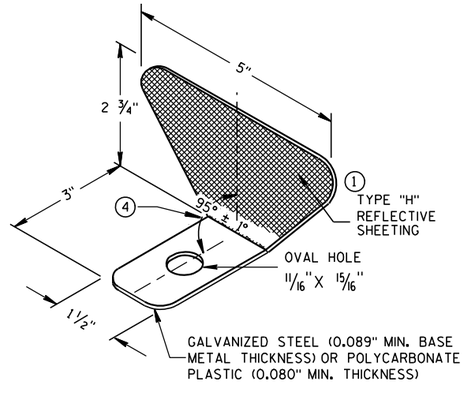
SECTION THRU W-BEAM RAIL



FRONT VIEW

QUARTER POST SPACING (QS)





ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION ①

REFLECTOR SPACING ②

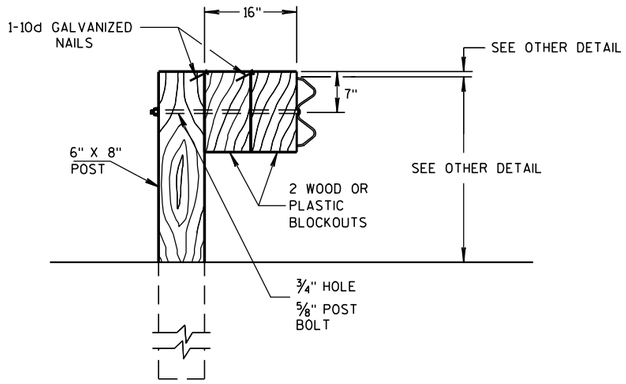
	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	1 1	3
TWO WAY TRAFFIC	< 200' > 200'	25' C-C 50' C-C	1 1 ③	6
TWO WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	2 2 ④	3

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

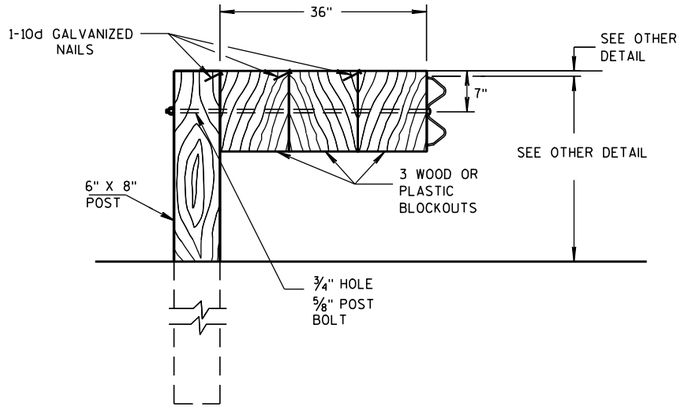
S.D.D. 14 B 42-2b

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



DETAIL FOR 16" BLOCKOUT DEPTH

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

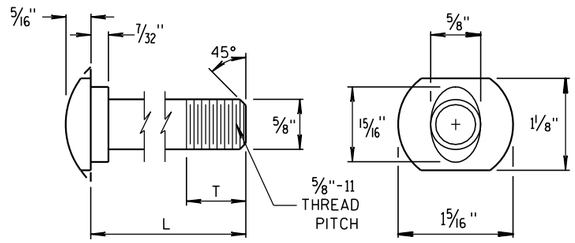


DETAIL FOR 36" BLOCKOUT DEPTH

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

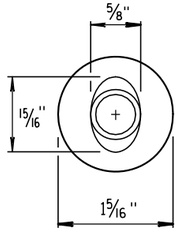
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

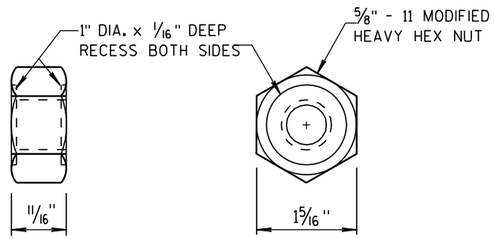


POST BOLT TABLE

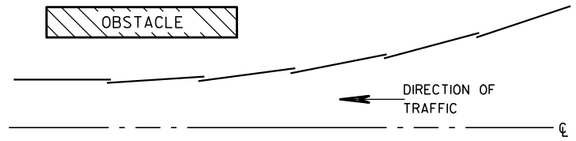
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

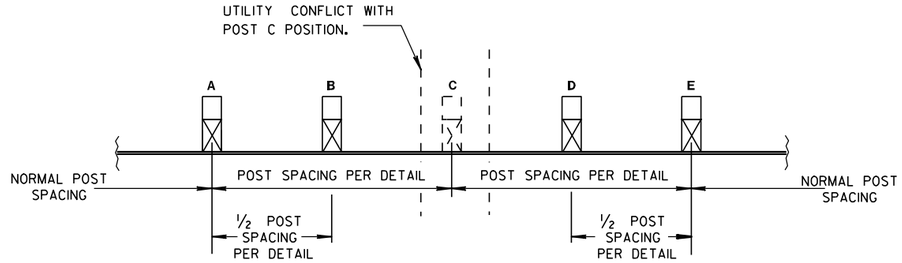


POST BOLT AND RECESS NUT

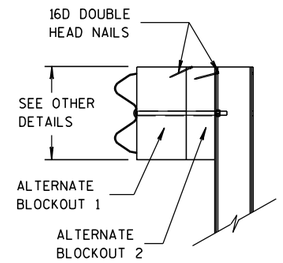


PLAN VIEW

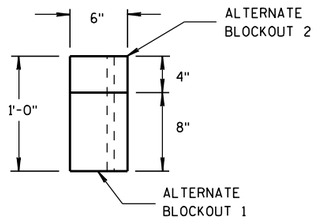
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/15/2011
DATE

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

FHWA

ENT

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

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

GENERAL NOTES

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

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

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

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

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

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

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

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

SEE SDD 14B42 FOR MORE INFORMATION.

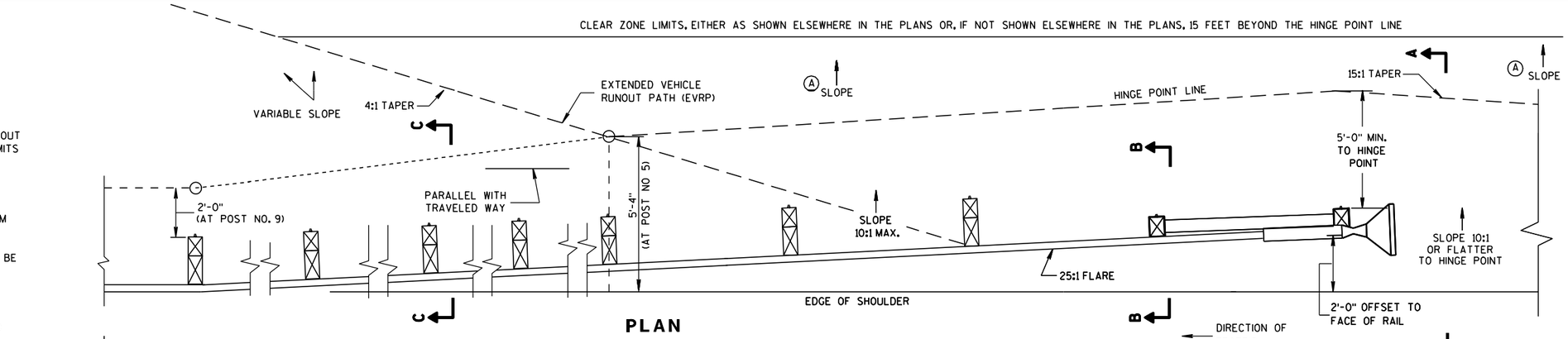
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

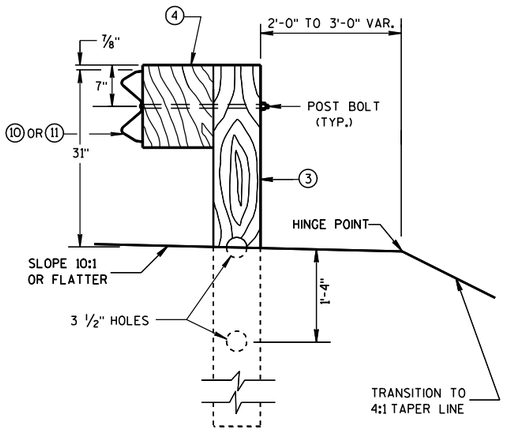
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

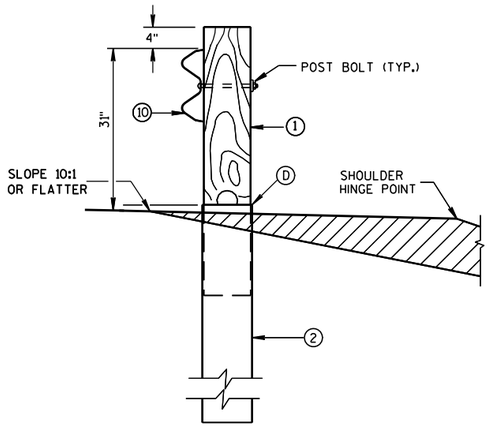
PATTERN AND COLORS ON REFLECTIVE SHEETING TYPE H ARE TO CONFORM TO OM3-L OR OM3-R OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

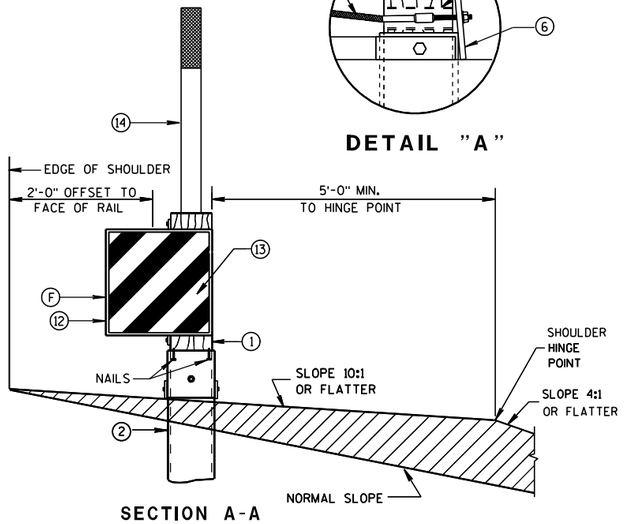




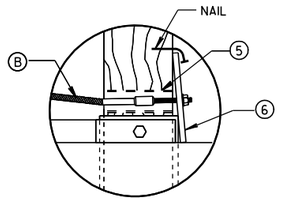
SECTION C-C
TYPICAL AT POST NOS. 3-9



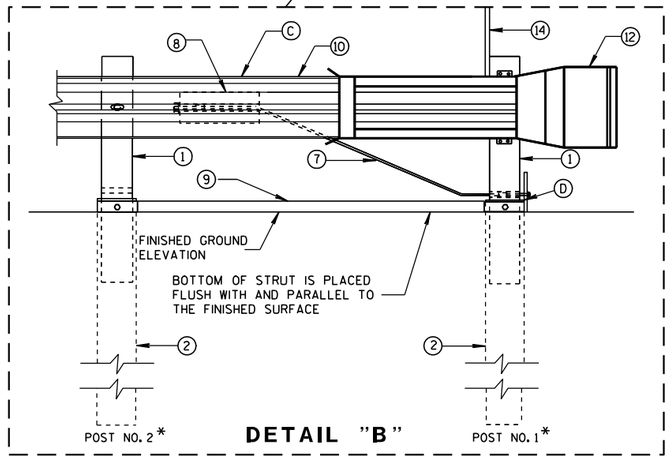
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



DETAIL "B"

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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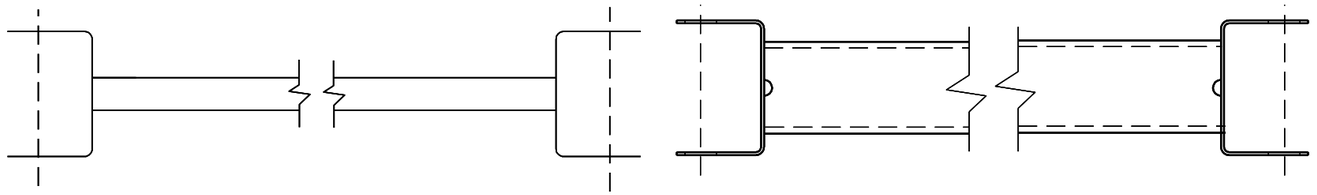
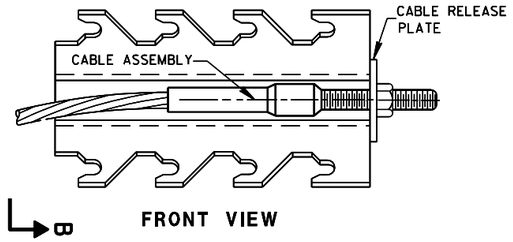


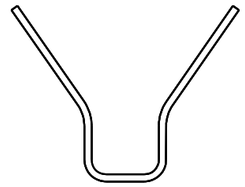
GENERIC GROUND STRUT (9) (H)

BILL OF MATERIALS

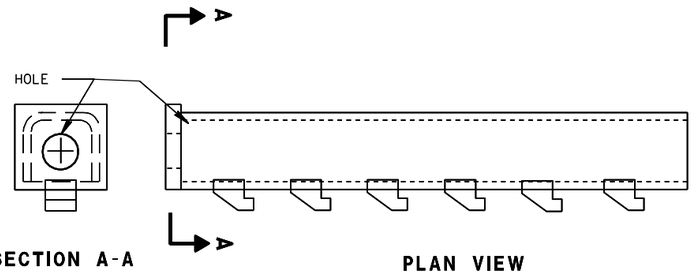
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	WOOD BREAKAWAY POST
(2)	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR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



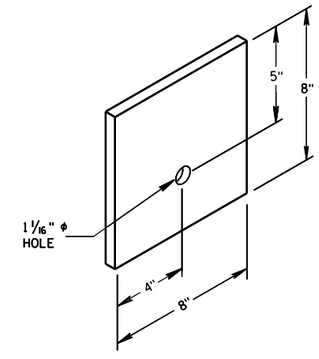
SECTION B-B



SECTION A-A

PLAN VIEW

GENERIC ANCHOR CABLE BOX (8) (H)

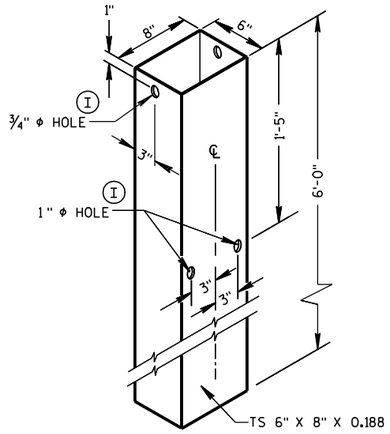


BEARING PLATE (6)

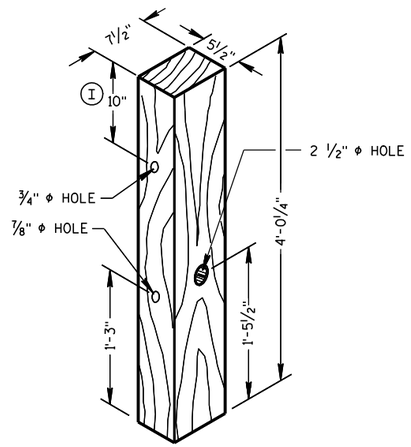
MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

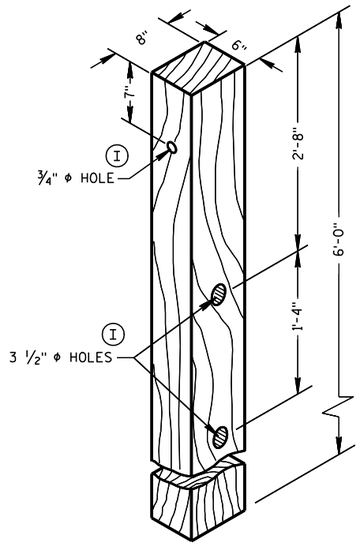


FOUNDATION TUBE (2)



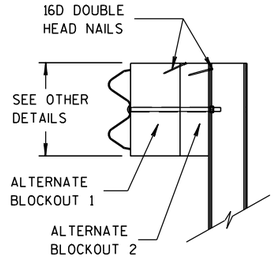
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

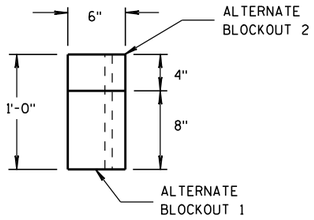


POSTS NUMBER 3-9

WOOD CRT POST (3)

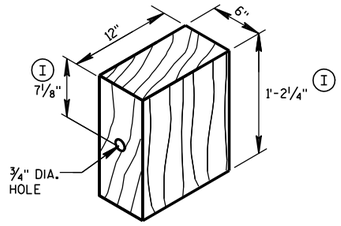


SIDE VIEW



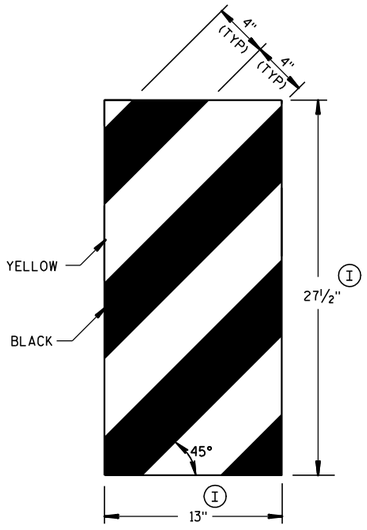
TOP VIEW

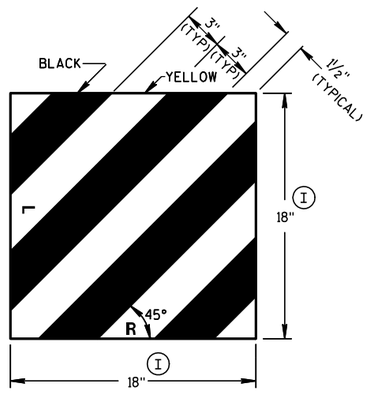
ALTERNATE WOOD BLOCKOUT DETAIL



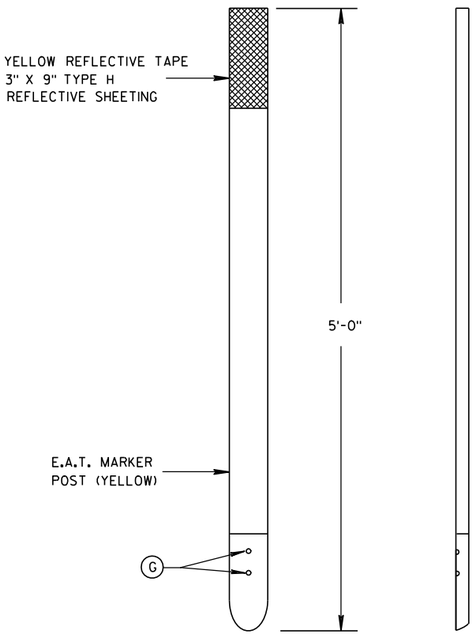
WOOD BLOCKOUT (4)

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



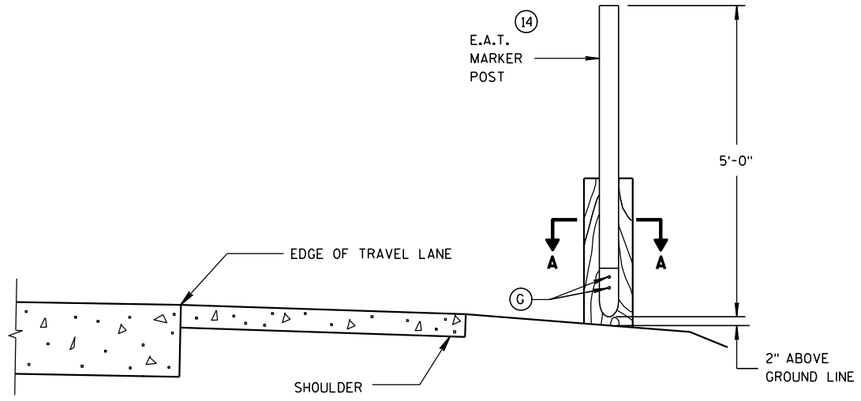


GENERIC REFLECTIVE SHEETING (13) (H)



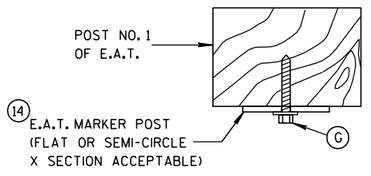
FRONT VIEW SIDE VIEW

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

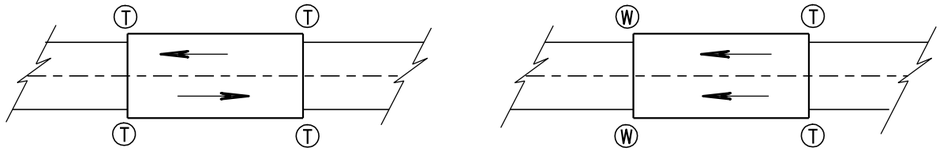
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

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

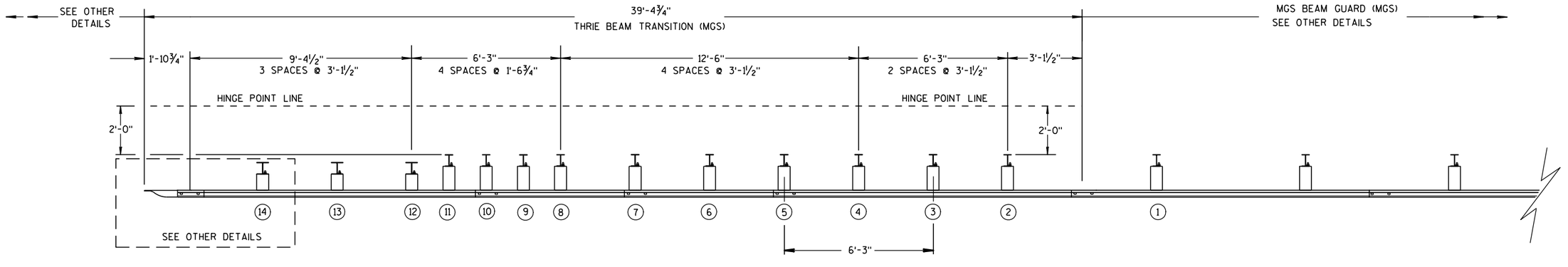
BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3.

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

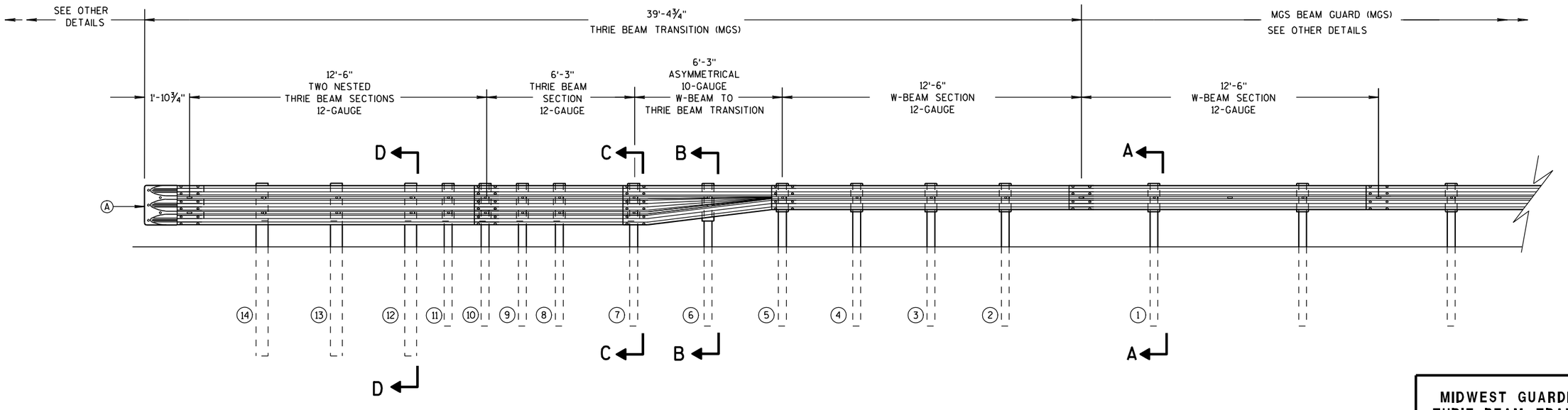
TRANSITION USES STEEL POSTS ONLY.

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

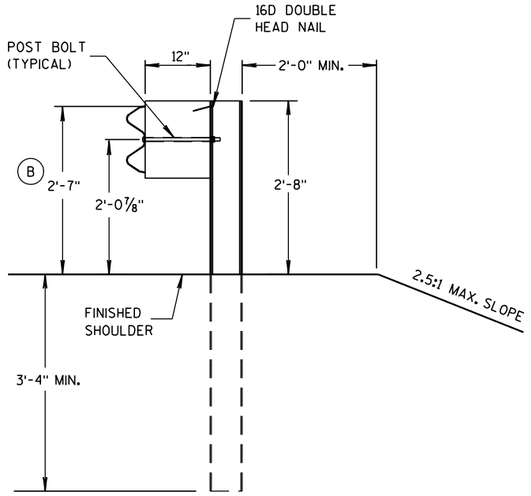
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

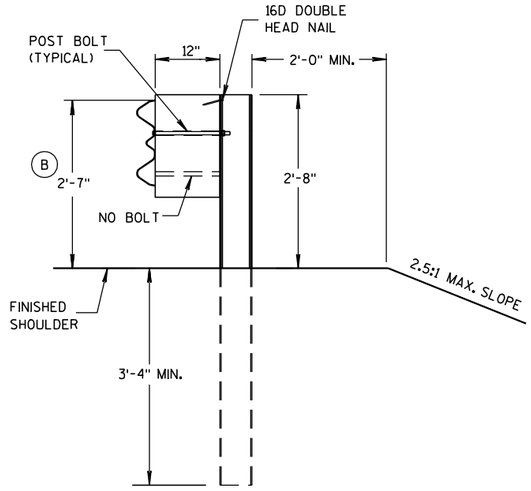
GENERAL NOTES

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



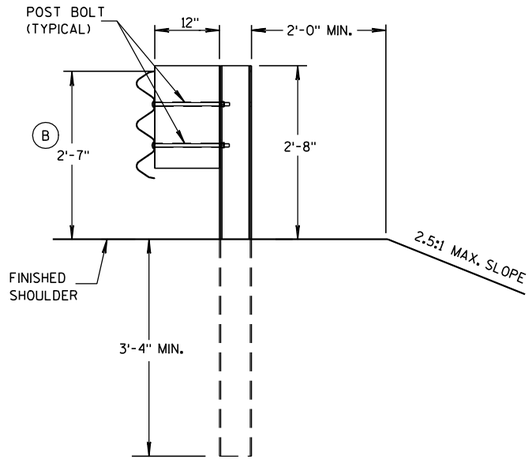
SECTION A-A

POSTS 1-5



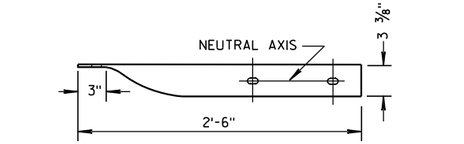
SECTION B-B

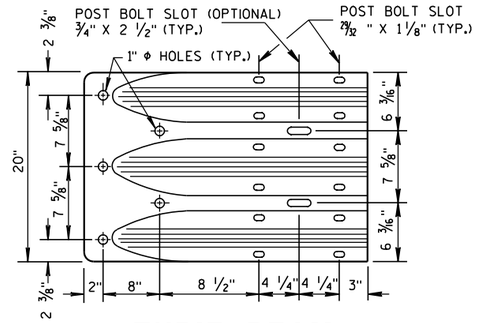
POST 6



SECTION C-C

POSTS 7-11





THRIE BEAM TERMINAL CONNECTOR

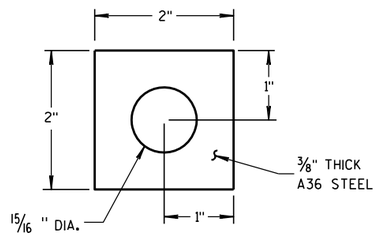
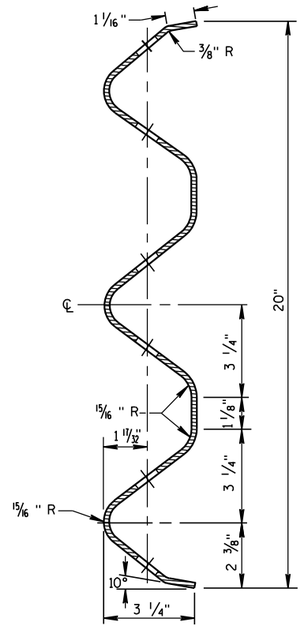
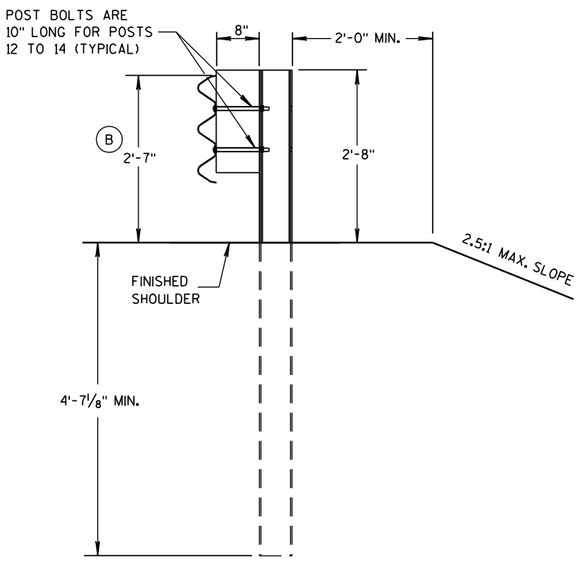


PLATE WASHER DETAIL

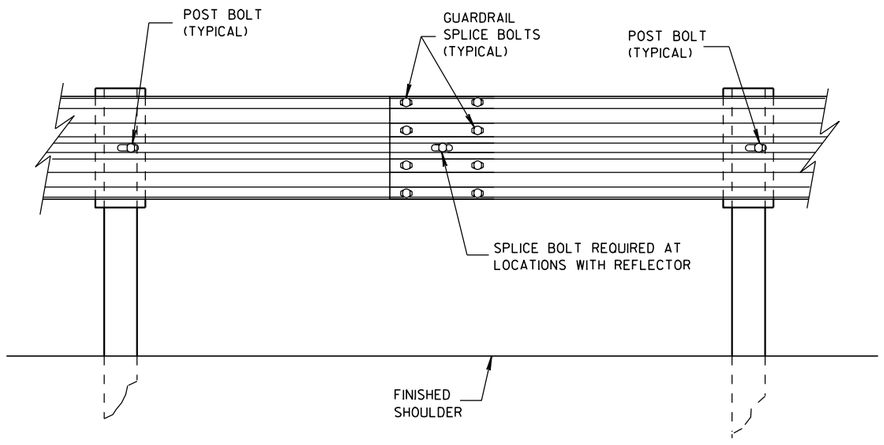


SECTION THRU THRIE BEAM RAIL ELEMENT



SECTION D-D

POSTS 12-14



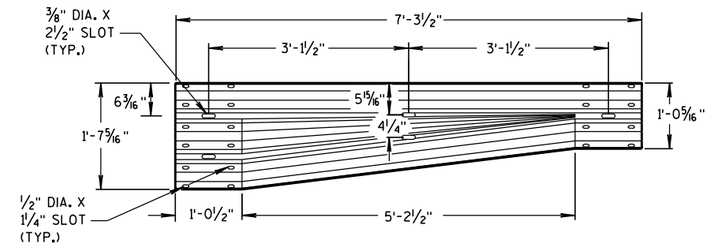
SPLICE DETAIL

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

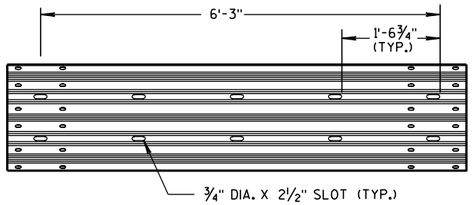
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

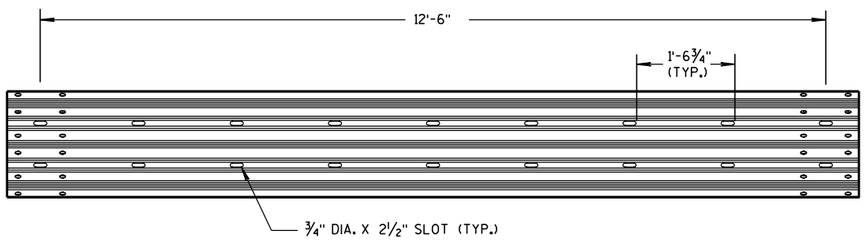
S.D.D. 14 B 45-3b



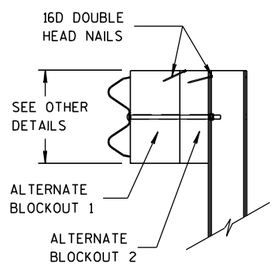
W-BEAM TO THRIE BEAM TRANSITION SECTION



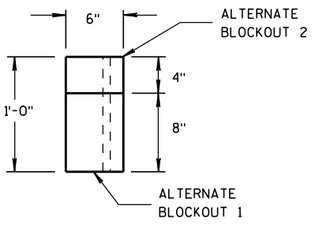
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

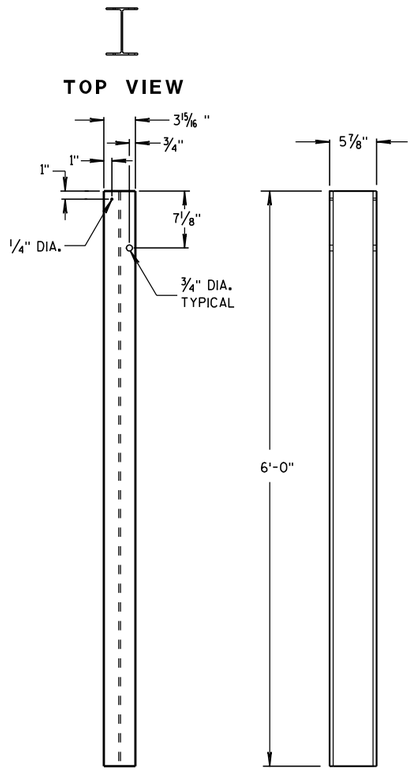


SIDE VIEW

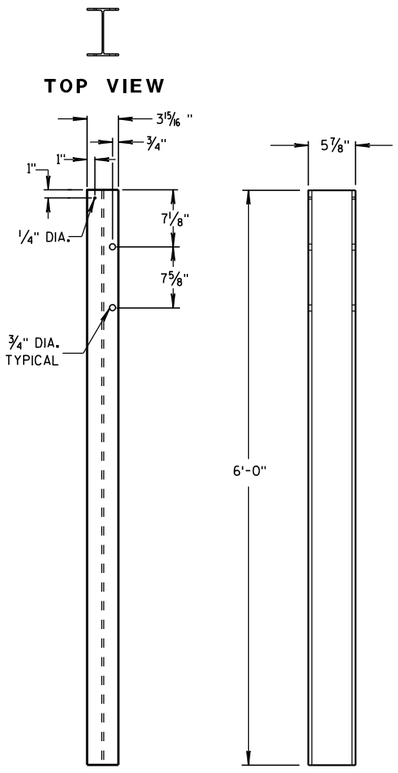


TOP VIEW

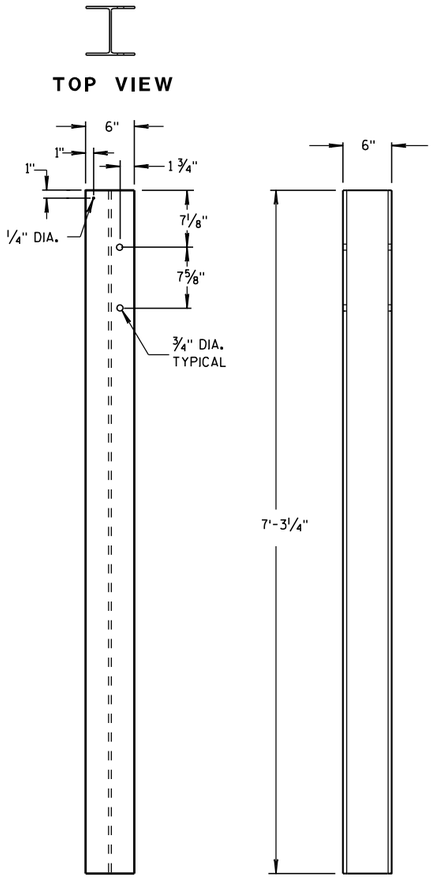
ALTERNATE WOOD BLOCKOUT DETAIL



STEEL POSTS 1-5

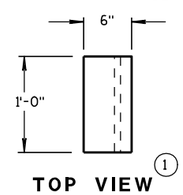


STEEL POSTS 6-11

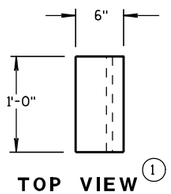


STEEL POSTS 12-14

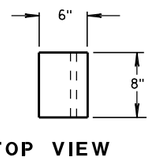
1 WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.



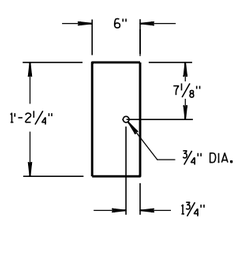
TOP VIEW (1)



TOP VIEW (1)

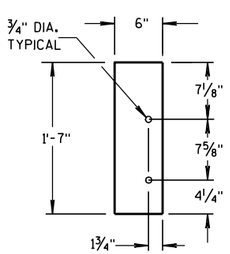


TOP VIEW



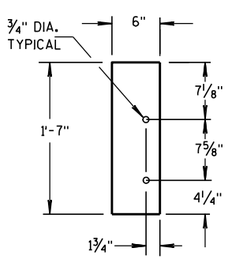
FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-11



FRONT VIEW

BLOCKOUT POSTS 12-14

STEEL POST SIZES

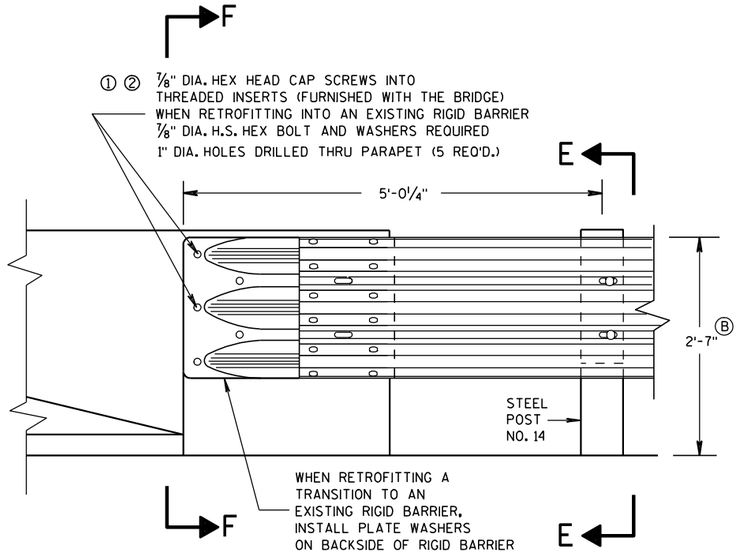
POST NUMBER	SECTION TYPE	LENGTH
1	W6x9	72"
2	W6x9	72"
3	W6x9	72"
4	W6x9	72"
5	W6x9	72"
6	W6x9	72"
7	W6x9	72"
8	W6x9	72"
9	W6x9	72"
10	W6x9	72"
11	W6x9	72"
12	W6x15	87 1/8"
13	W6x15	87 1/8"
14	W6x15	87 1/8"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

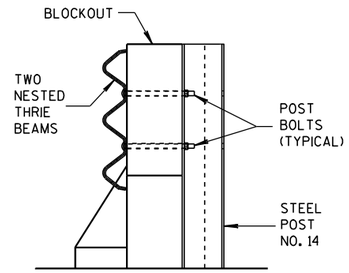
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

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



FRONT VIEW



SECTION E-E

GENERAL NOTES

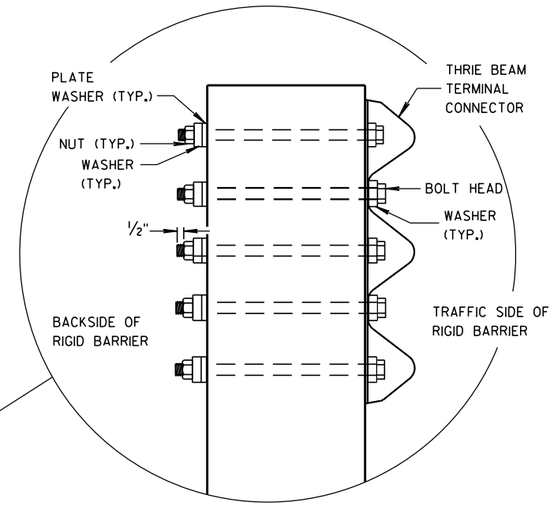
THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

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

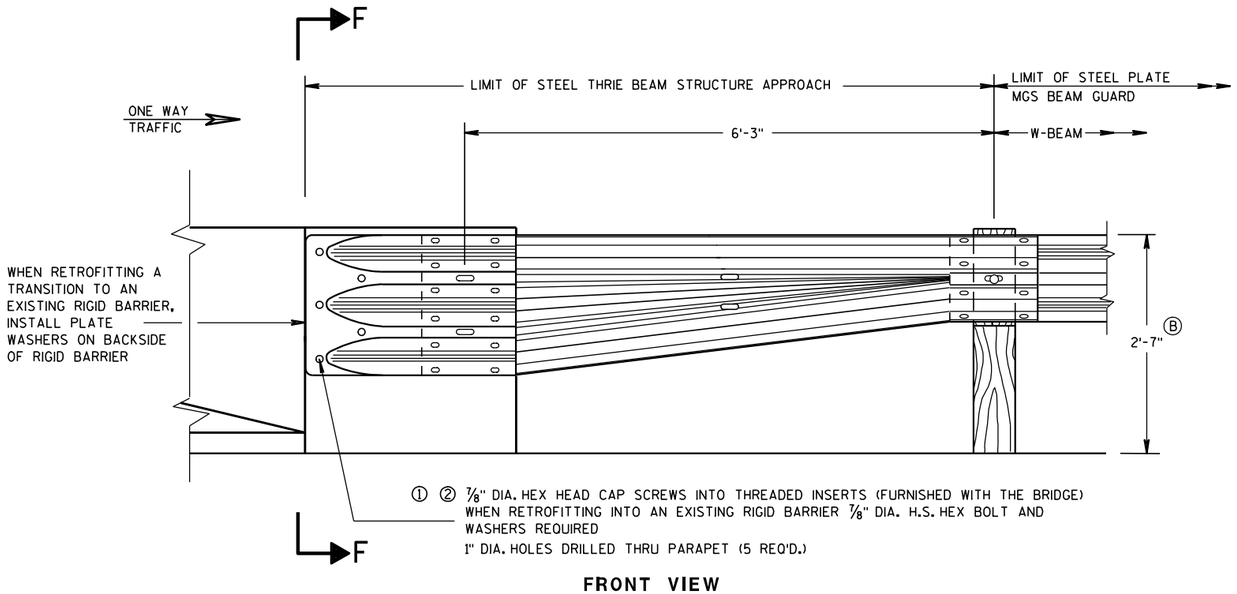
② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE.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

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

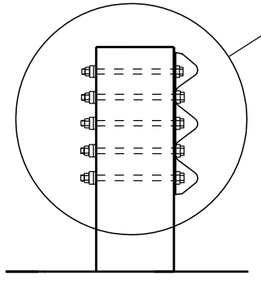
Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".



THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS



FRONT VIEW



SECTION F-F

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012 — DATE

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

FHWA

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

GENERAL NOTES

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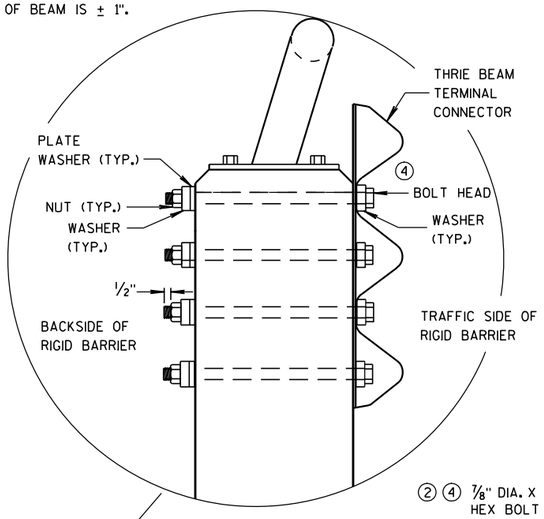
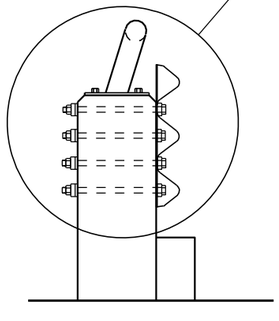
③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2". BLOCK IS INCIDENTAL TO THE CONTRACT.

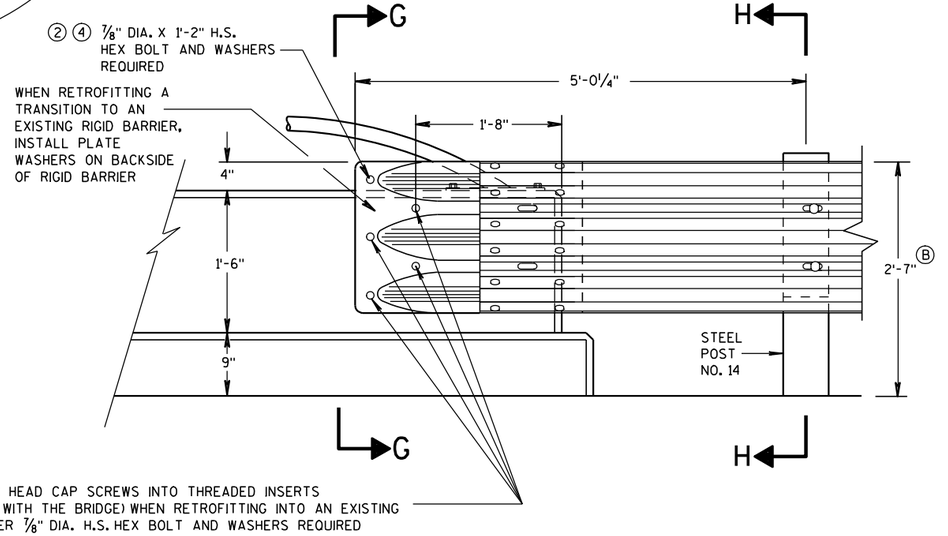
④ BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.

Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".

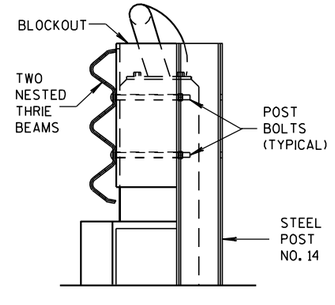




SECTION G-G

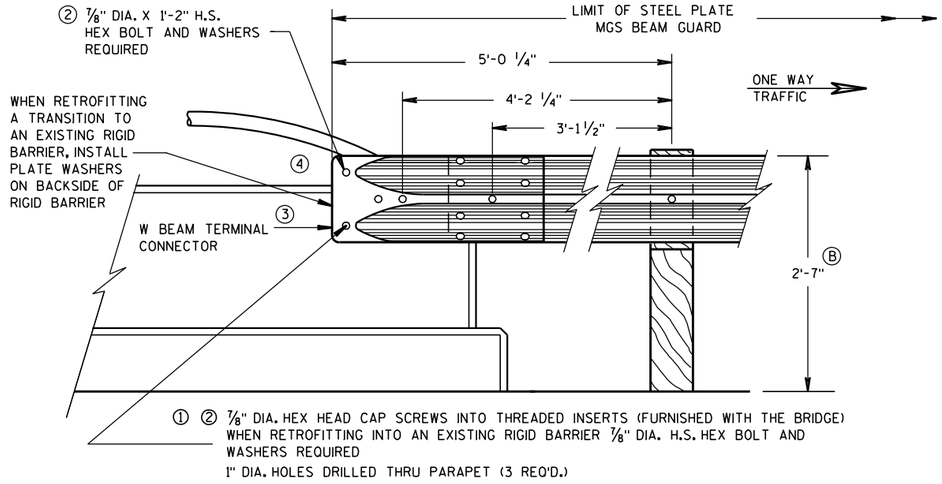


FRONT VIEW



SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

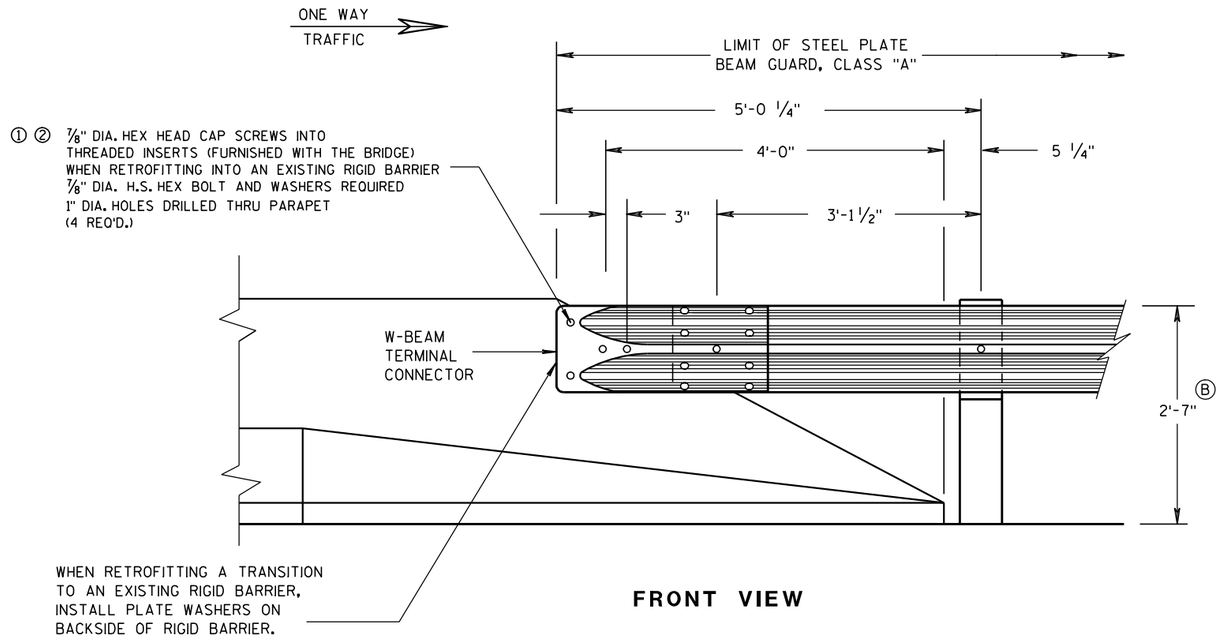


FRONT VIEW

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	



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

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

GENERAL NOTES

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

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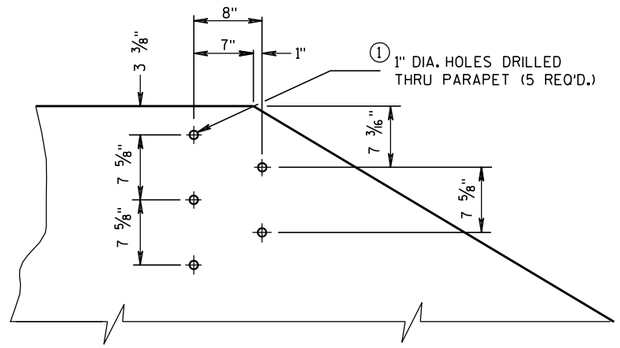
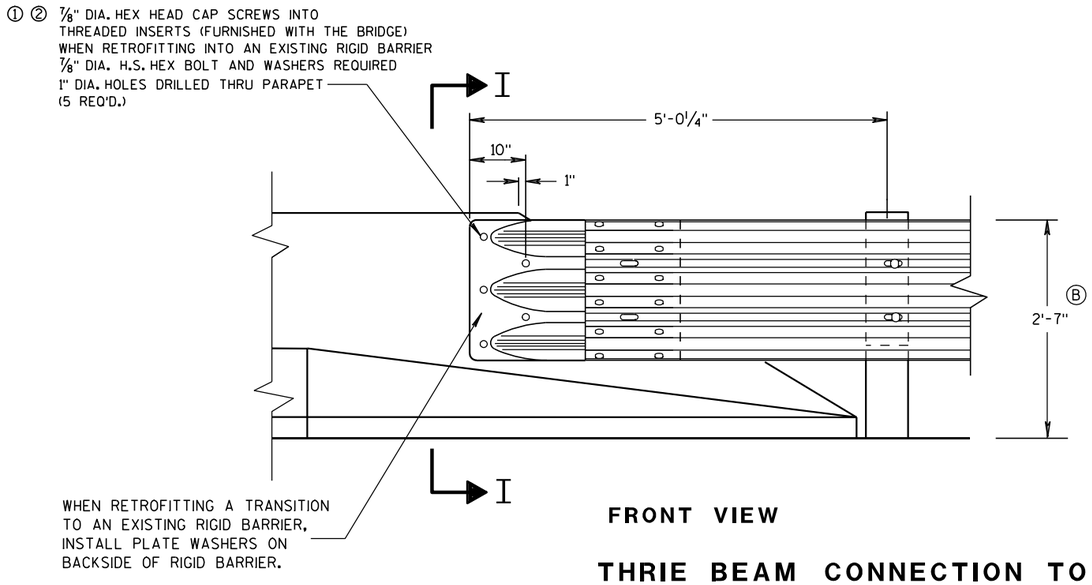
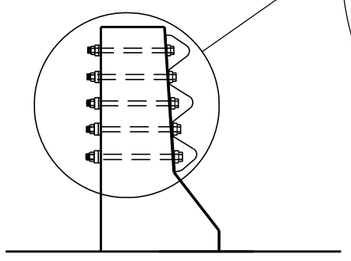
Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".



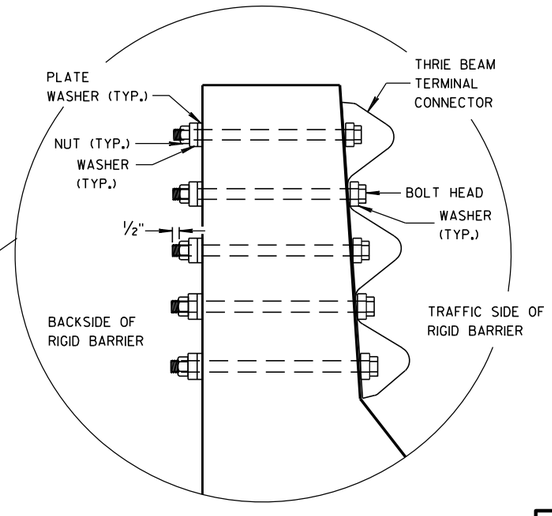
DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



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

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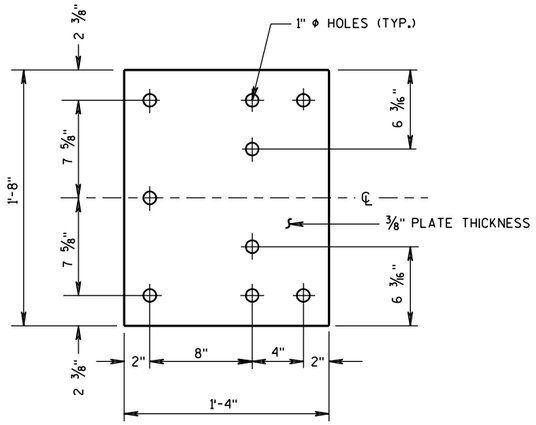
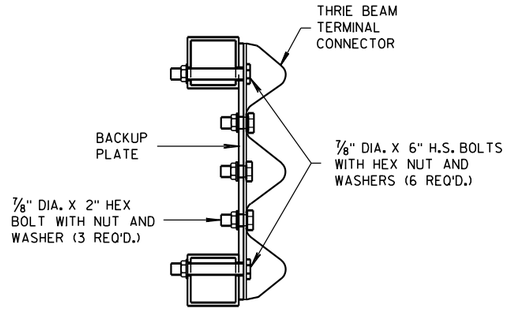


BACK-UP PLATE DETAIL

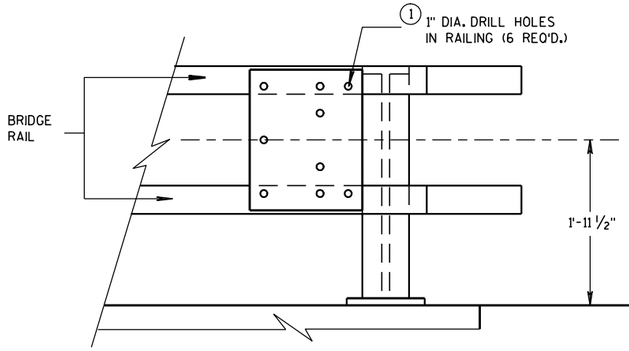


SECTION J-J

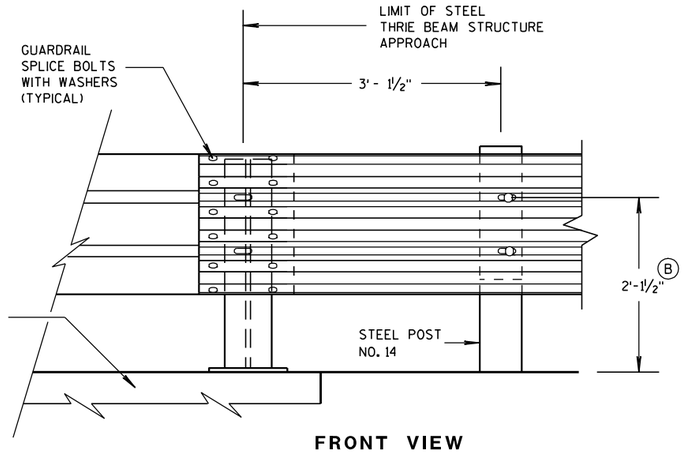
GENERAL NOTES

(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".

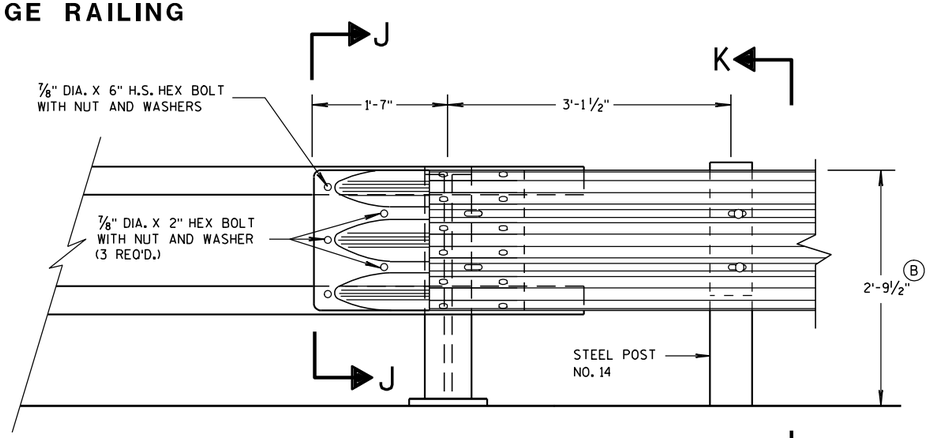


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

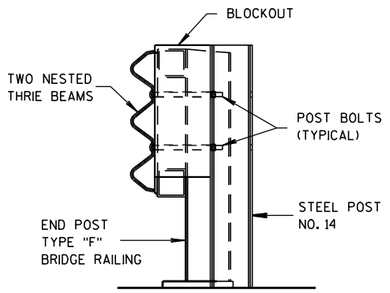


FRONT VIEW

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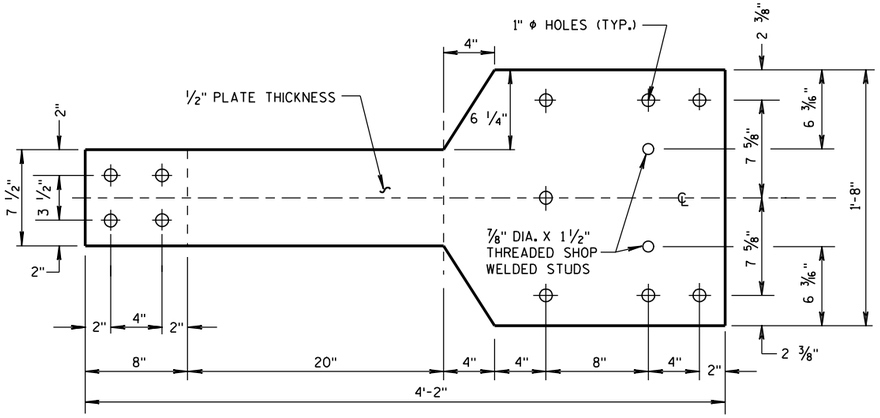
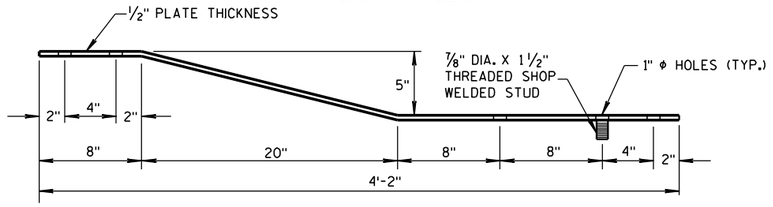
S.D.D. 14 B 45-3g

GENERAL NOTES

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

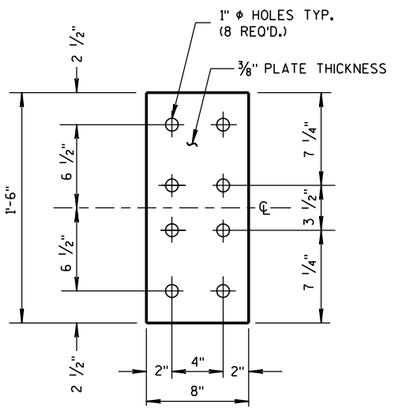


FRONT VIEW



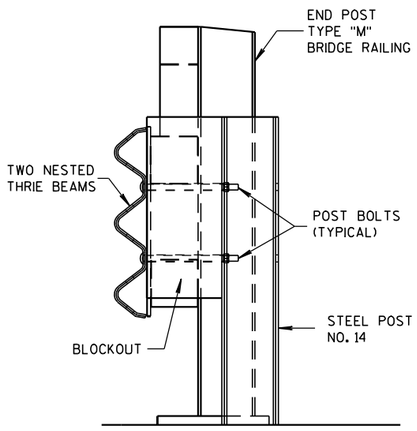
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

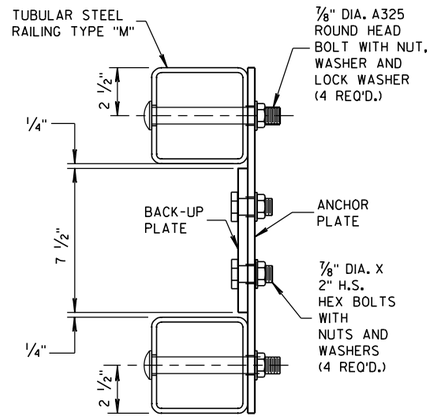


FRONT VIEW

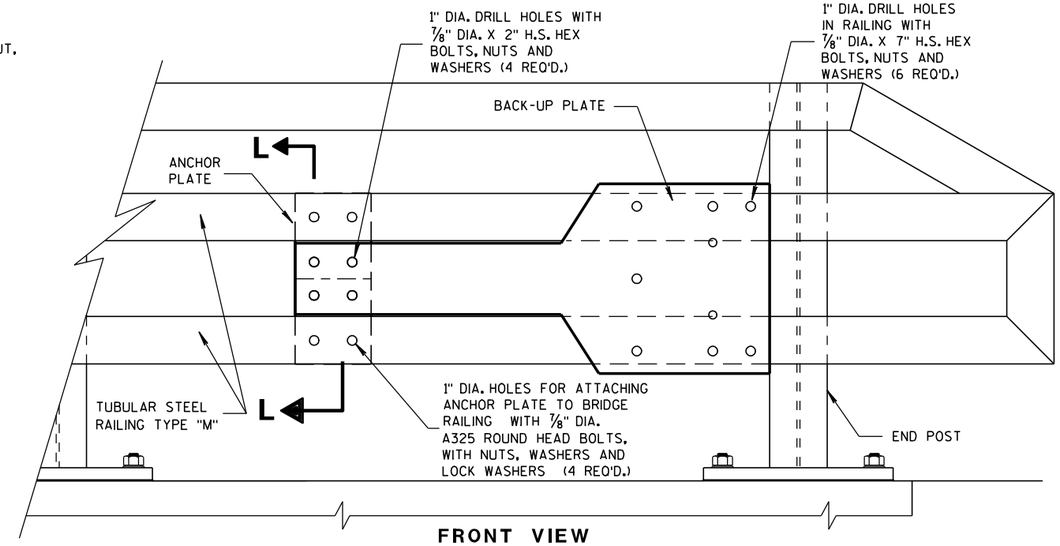
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

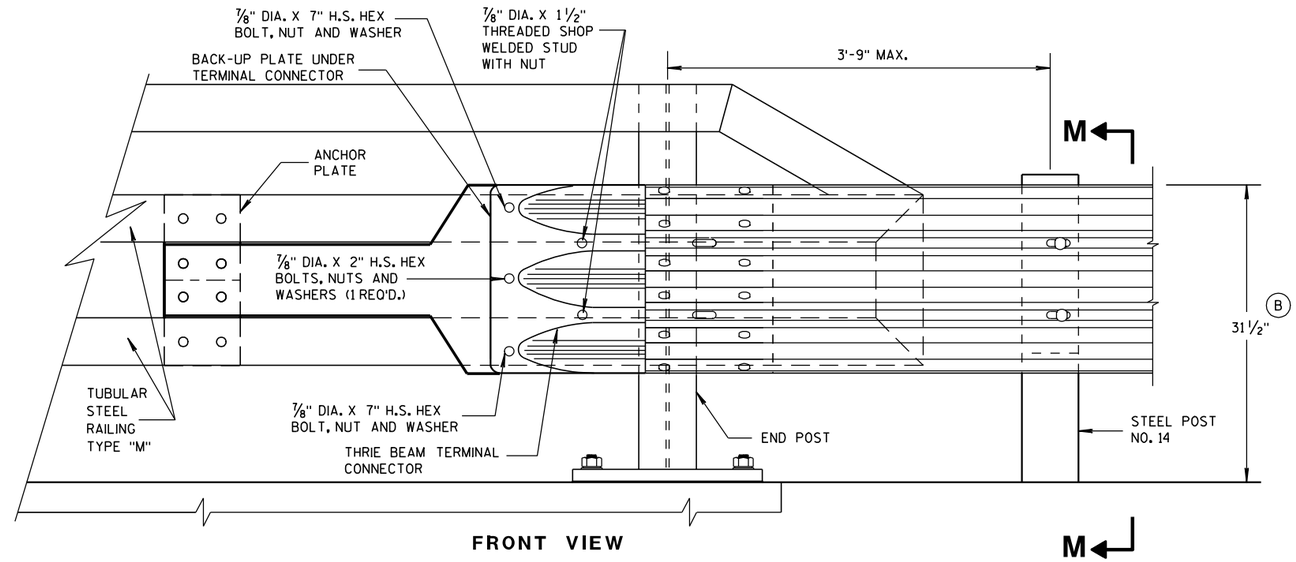


SECTION L-L

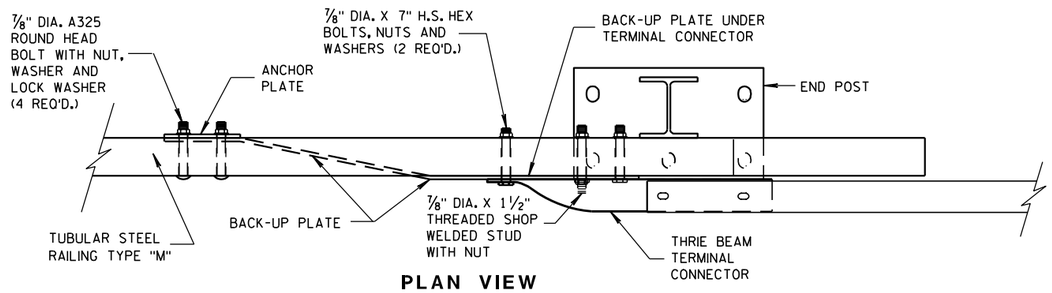


FRONT VIEW

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

FHWA

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S.D. 14 B 45-3h

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S.D. 14 B 45-3h

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

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

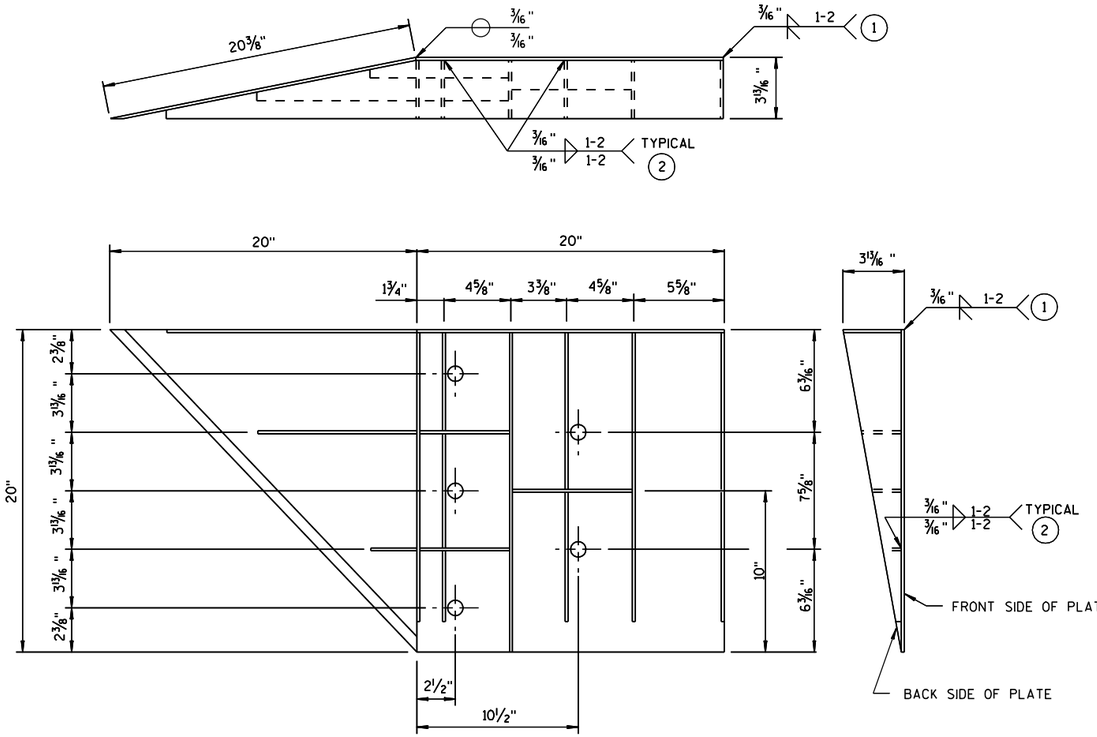
FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

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

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



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

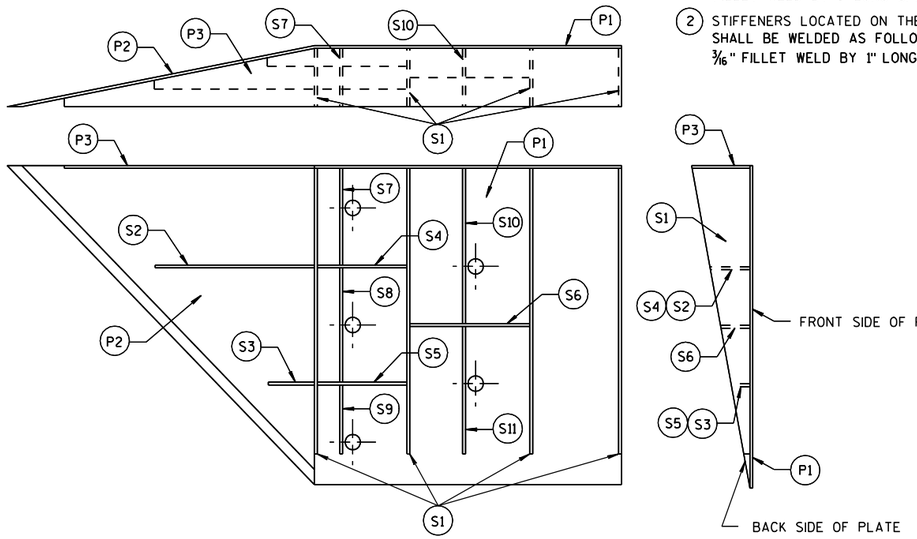


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

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

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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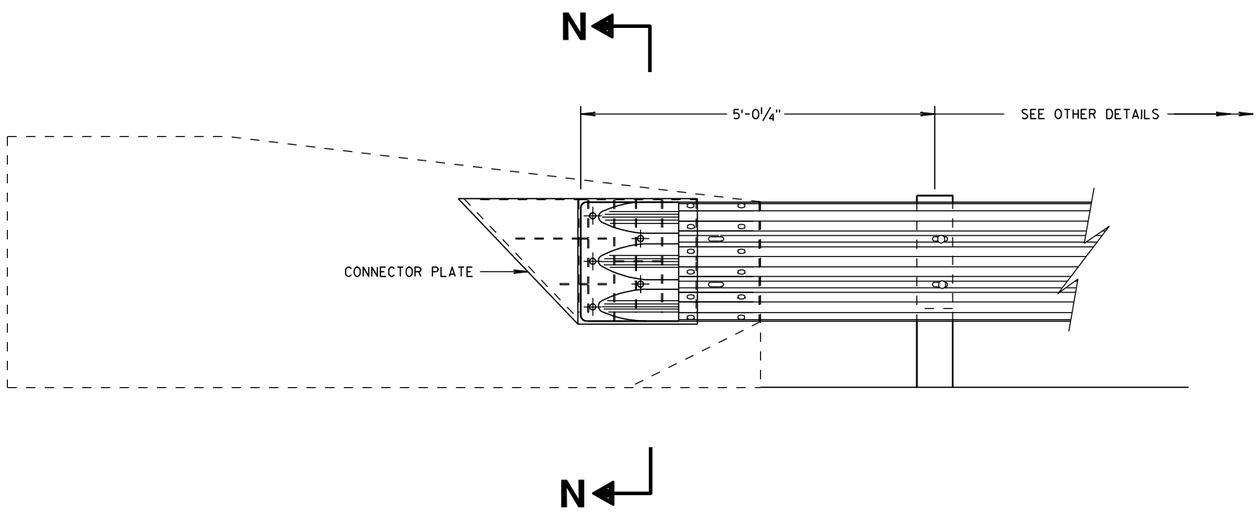
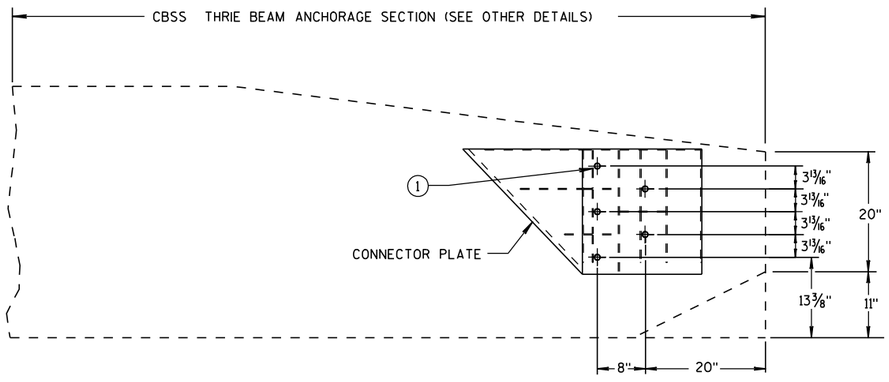
S.D.D. 14 B 45-3i



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.

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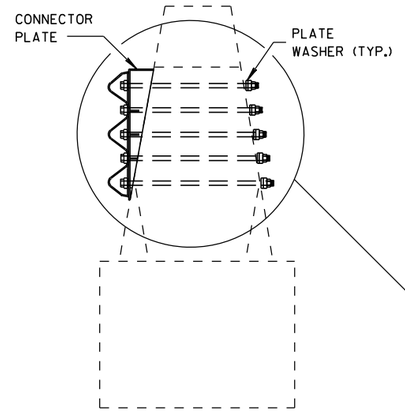
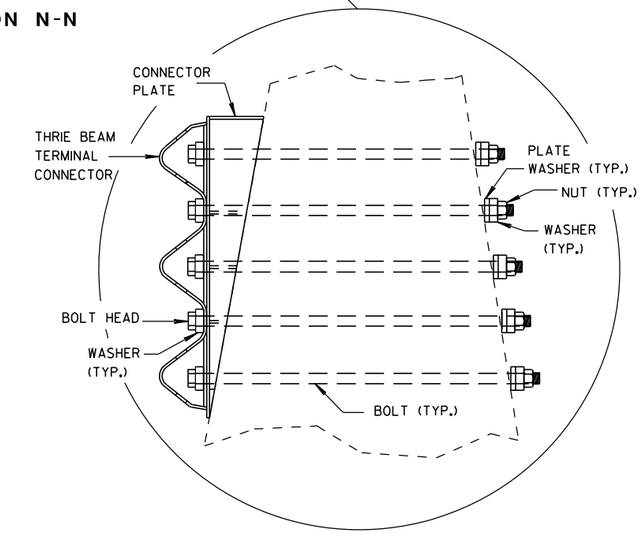


SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012
DATE

/S/ Jerry H. [illegible]
ROADWAY STANDARDS [illegible]254
ENGINEER

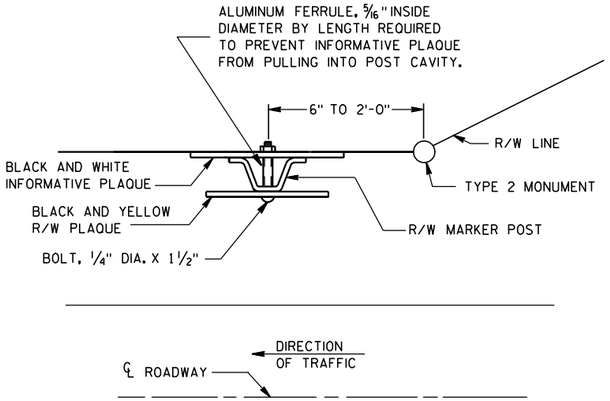
FHWA

6

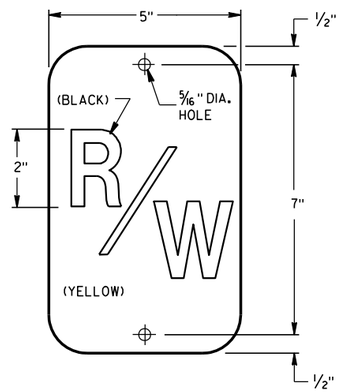
S.D.D. 14 B 45-3j

6

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

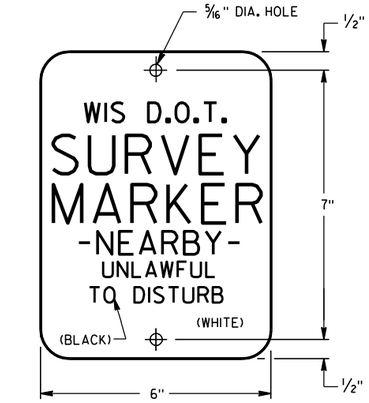


PLAN VIEW



R/W PLAQUE

THE RIGHT-OF-WAY PLAQUE AND INFORMATIVE PLAQUE WILL BE FURNISHED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION.



INFORMATIVE PLAQUE

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.

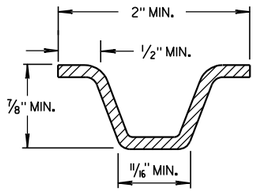
A STEEL MARKER POST FOR RIGHT-OF-WAY SHALL BE PLACED IN THE RIGHT-OF-WAY, WITH THE BACK OF THE POST ON THE LONGER RIGHT-OF-WAY TANGENT, 6 INCHES TO 24 INCHES FROM EACH TYPE 2 MONUMENT TO SERVE AS A GUARD POST, AND AT OTHER LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

THE "R/W" PLAQUE SHALL FACE THE ROADWAY AND THE INFORMATIVE PLAQUE SHALL FACE AWAY FROM THE ROADWAY. R/W AND INFORMATIVE PLAQUES WILL BE FURNISHED BY THE DEPARTMENT OF TRANSPORTATION.

STEEL MARKER POSTS SHALL MEET THE MINIMUM MATERIAL REQUIREMENTS FOR STEEL DELINEATOR POSTS; EXCEPT POSTS PAINTED WITH FEDERAL YELLOW ENAMEL NEED NOT BE ZINC COATED.

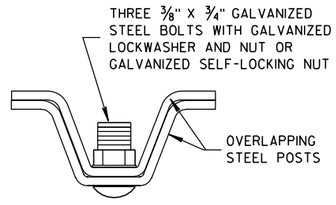
(1) IN AREAS OF SOLID ROCK, DRILL A BORE HOLE 2" GREATER THAN THE WIDEST DIMENSION OF THE POST CROSS SECTION INTO THE ROCK TO A MINIMUM DEPTH OF 12 INCHES. CUT OR SPLICE THE POST SO THAT A MINIMUM LENGTH OF 3' 10" PROTRUDES ABOVE THE GROUND. BLOW OUT THE BORE HOLE IN THE ROCK USING COMPRESSED AIR.

FILL THE BORE HOLE WITH CEMENT GROUT, OR EQUIVALENT, DEPENDING ON THE STABILITY OF THE ROCK.

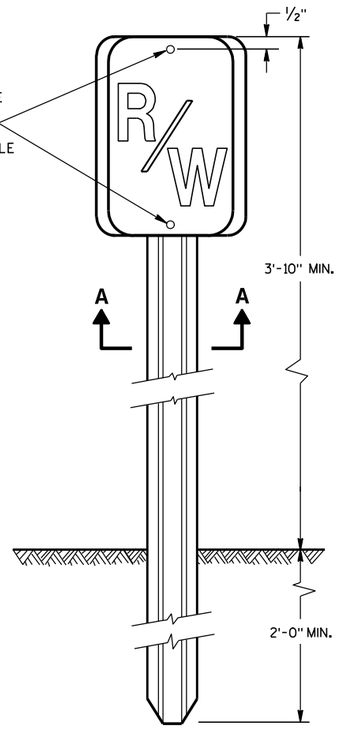


MIN. WEIGHT 1.12 LB./FT.

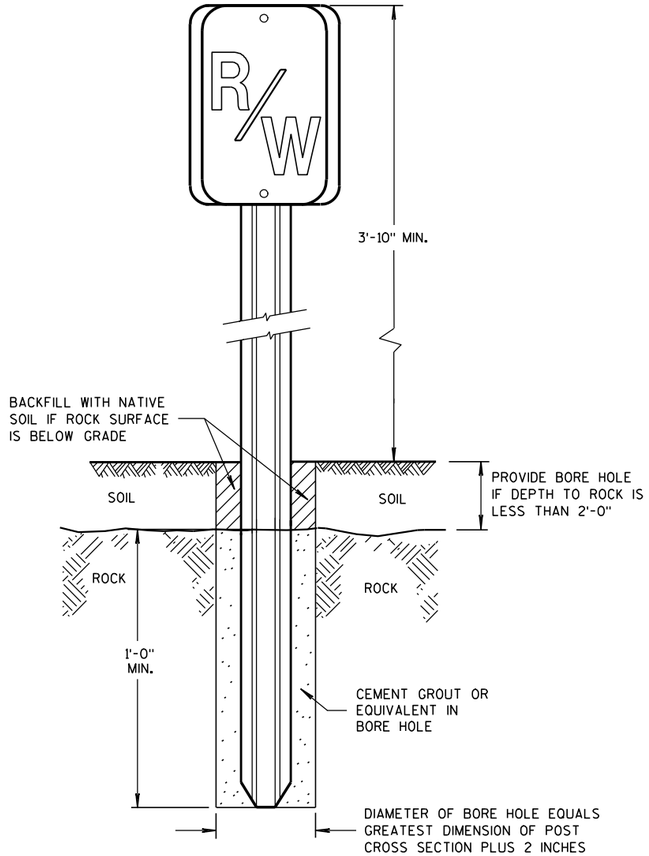
SECTION A-A



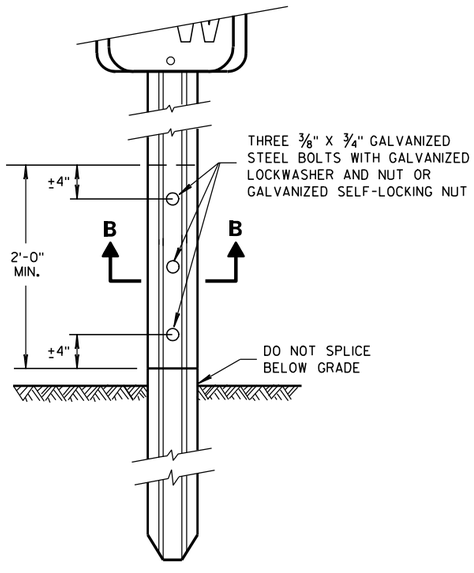
SECTION B-B



FRONT VIEW
STEEL MARKER POST



FRONT VIEW
ROCK INSTALLATION (1)



FRONT VIEW
SPLICE DETAIL

MARKER POST FOR RIGHT-OF-WAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/27/09 DATE
/S/ Ray Kumapayi
CHIEF SURVEYING AND MAPPING ENGINEER

FHWA

6

S.D.D. 15 A 1-11

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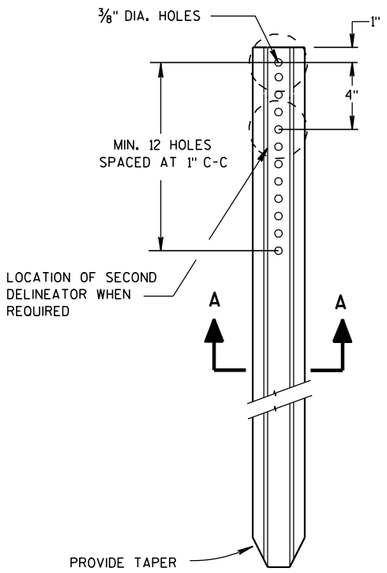
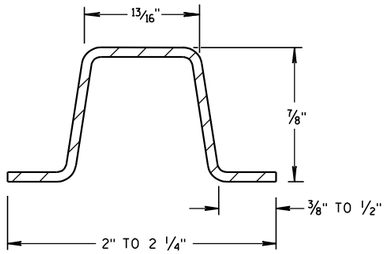
S.D.D. 15 A 1-11

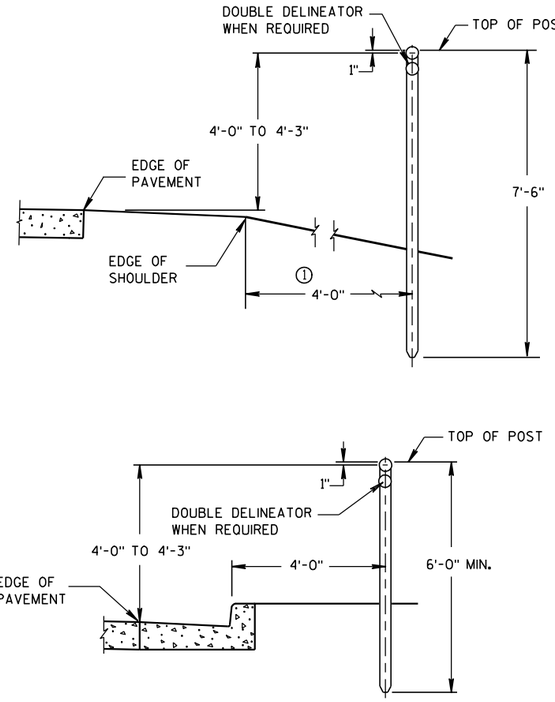


DELINEATOR POST



SECTION A-A

WEIGHT 1.12 LBS PER FT. ± 0.1 LB.

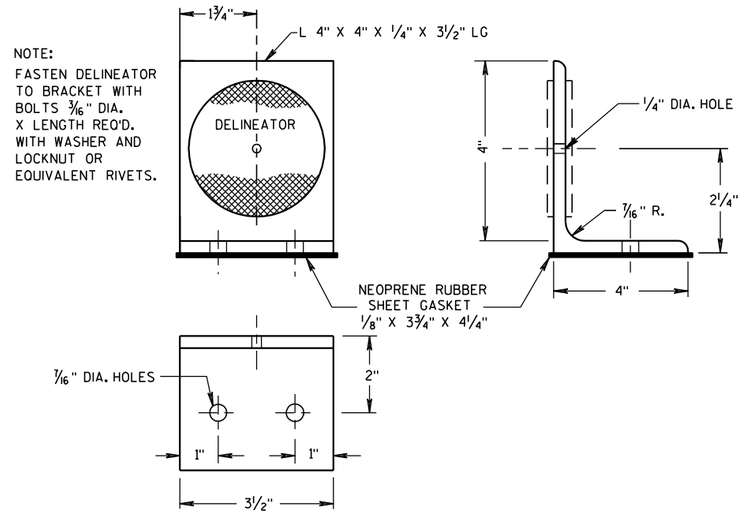


TYPICAL INSTALLATIONS OF DELINEATOR POSTS

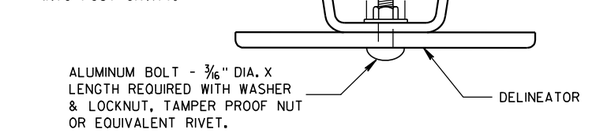
GENERAL NOTES

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

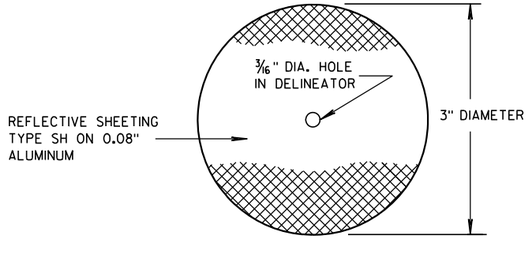
① DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.



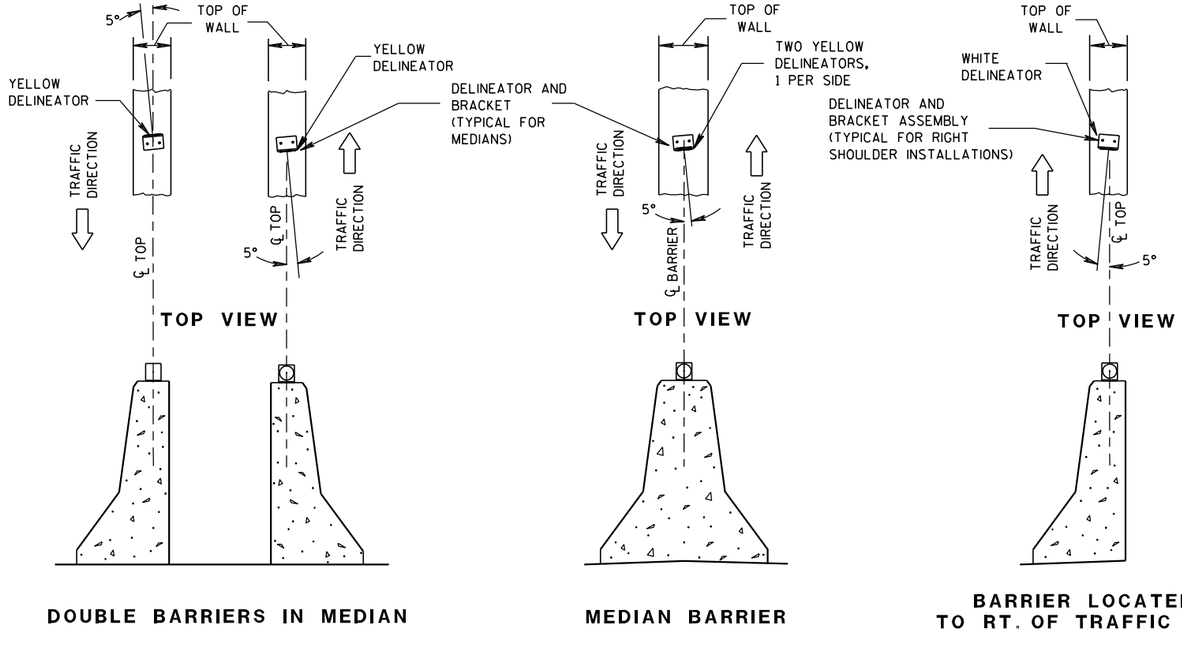
DELINEATOR BRACKET



MOUNTING DETAIL FOR DELINEATOR



DELINEATOR

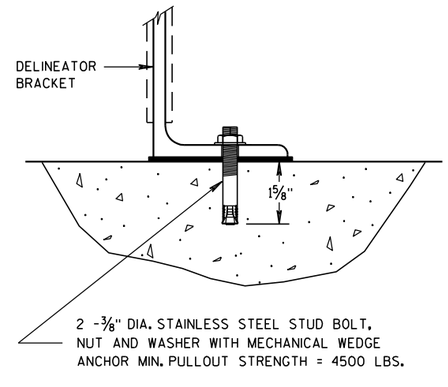


DOUBLE BARRIERS IN MEDIAN

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

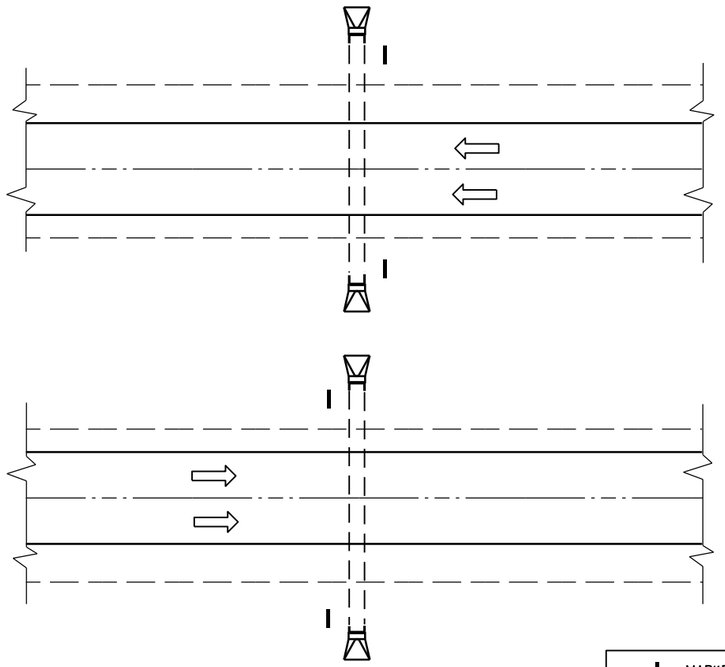
FHWA

6

S.D.D. 15 A 2-7

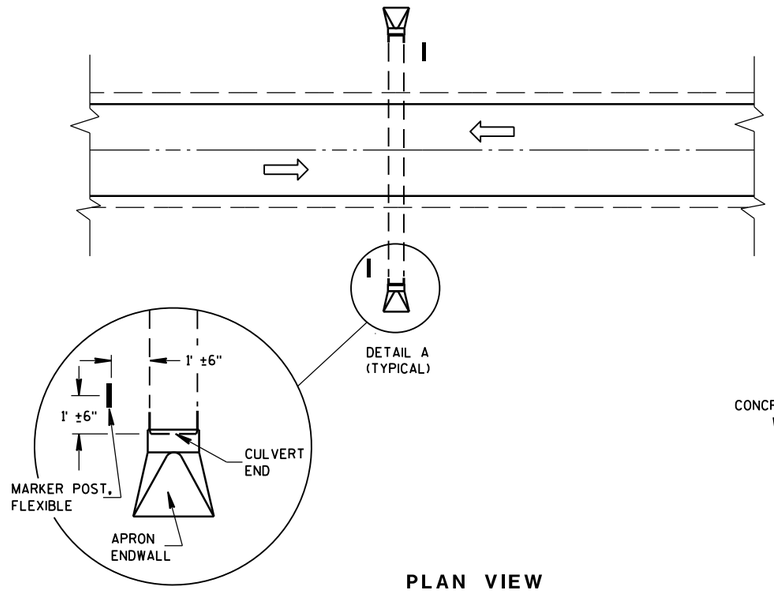
6

S.D.D. 15 A 2-7



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

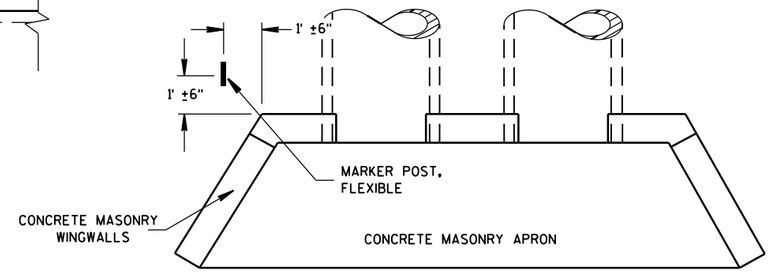
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

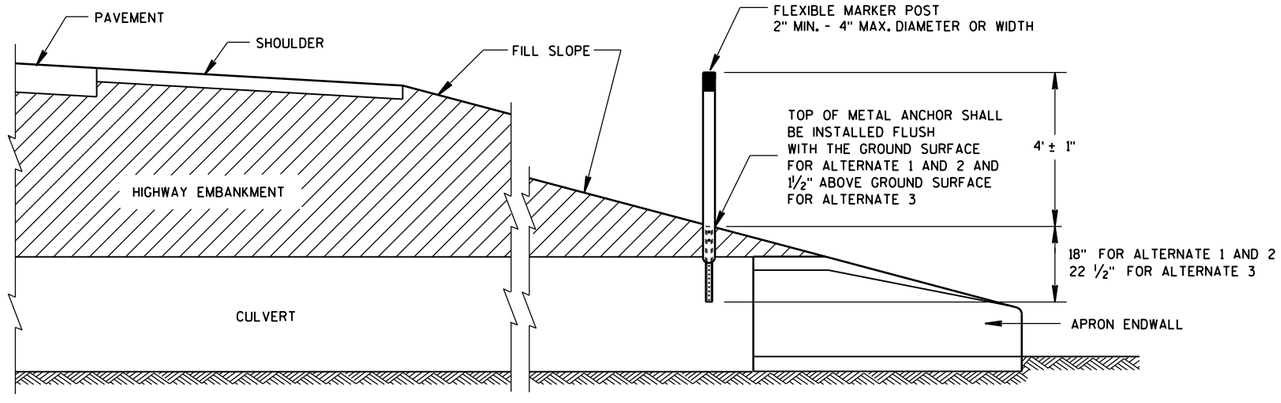
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



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

6

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

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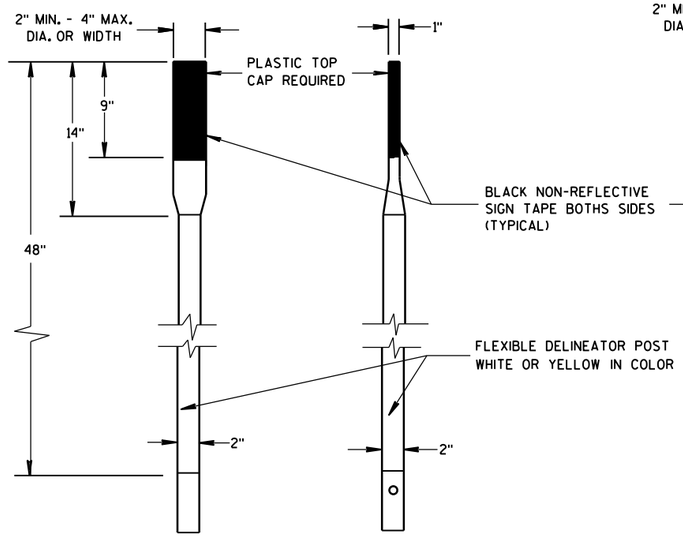
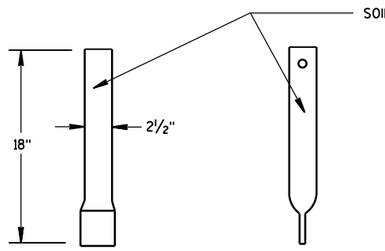
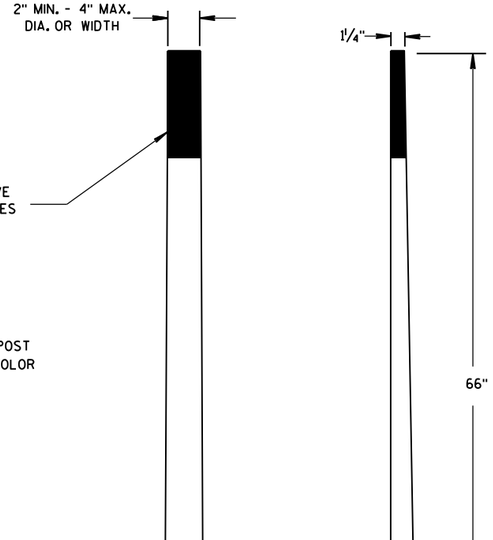
S.D.D. 15 A 3-2a





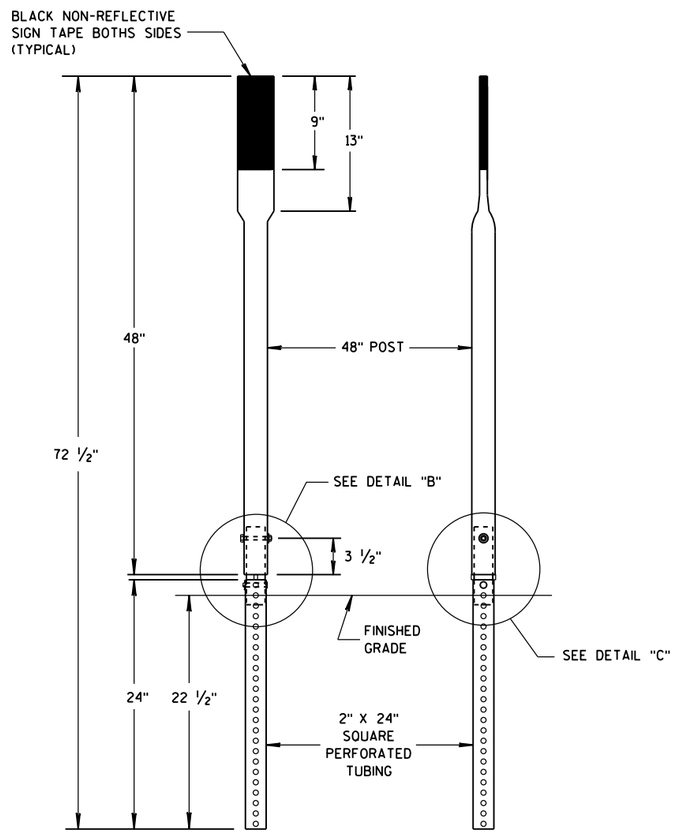
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

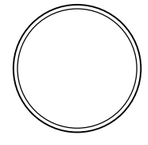
ALTERNATE 2



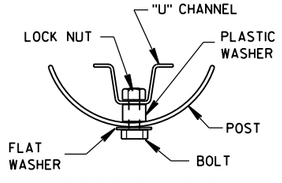
FRONT VIEW SIDE VIEW

ALTERNATE 3

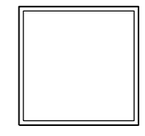
FLEXIBLE MARKER POSTS



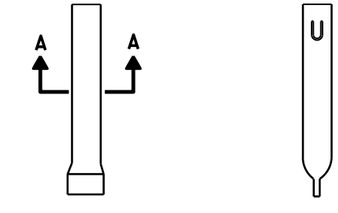
SECTION A-A



SECTION B-B

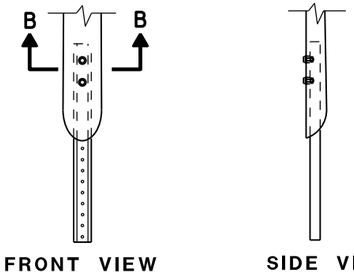


SECTION C-C



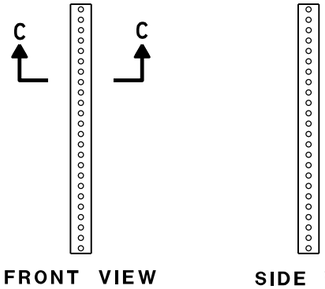
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

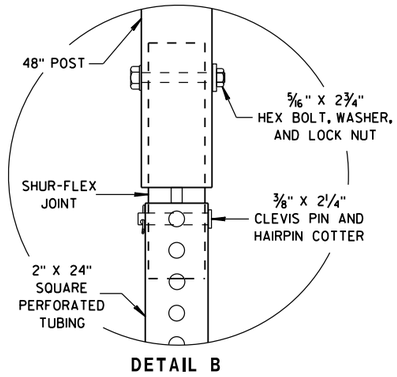
ALTERNATE 2



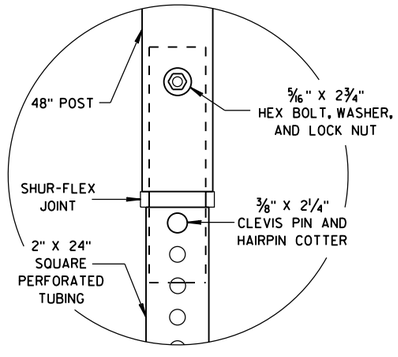
FRONT VIEW SIDE VIEW

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

6

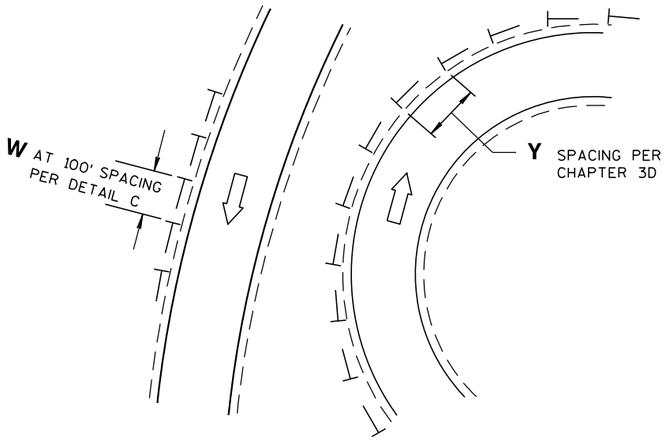
S.D.D. 15 A 3-2b

6

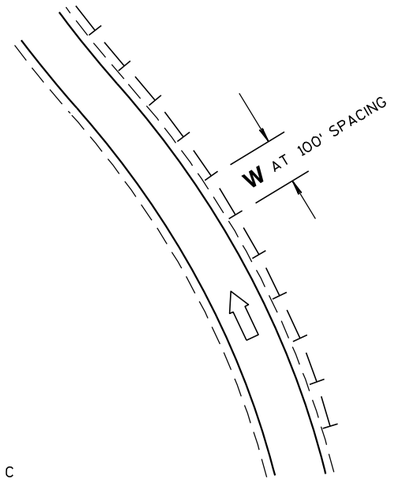
S.D.D. 15 A 3-2b

GENERAL NOTES

* USE DOUBLE DELINEATOR ALONG ACCELERATION-DECELERATION LANES AND TAPERS. USE SINGLE DELINEATOR WHEN RAMP PAVEMENT IS FULL WIDTH.



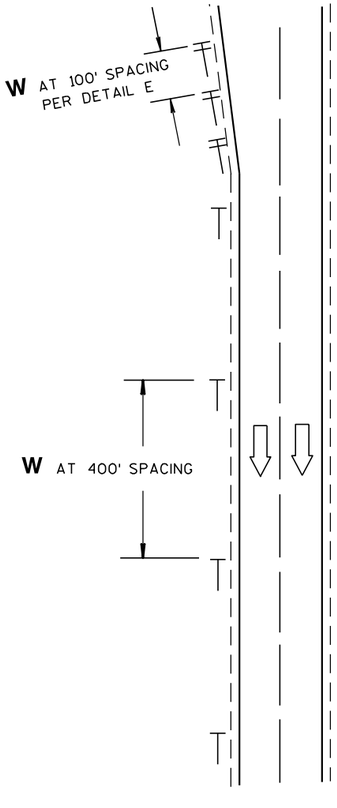
DETAIL A
DELINEATOR LAYOUT AT CURVED RAMP



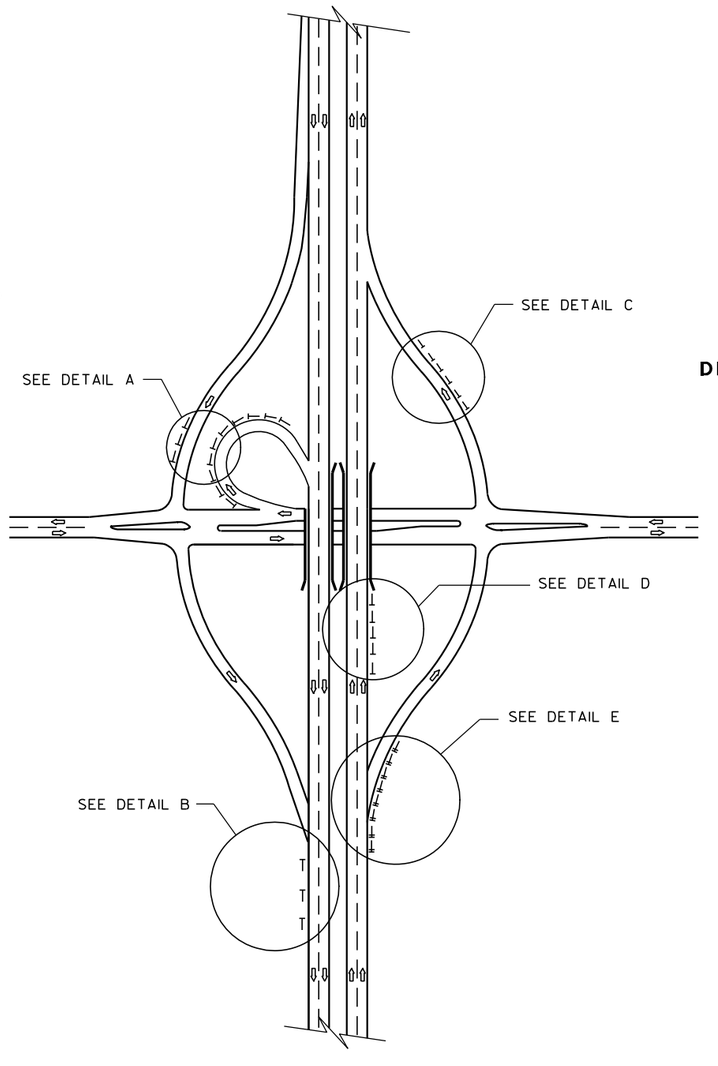
DETAIL C
DELINEATOR LAYOUT ALONG RAMP

LEGEND

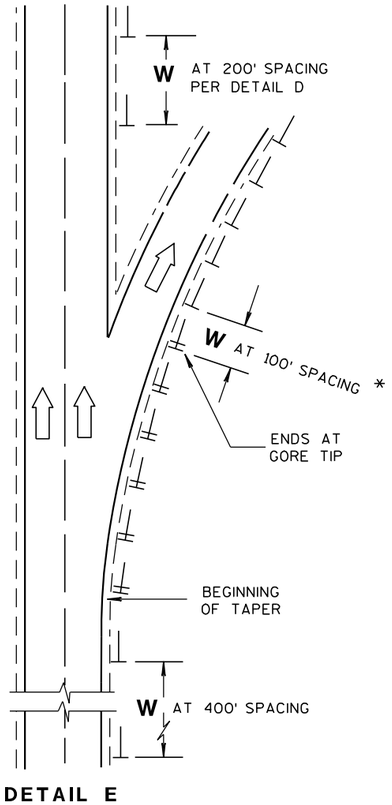
- DIRECTION OF TRAFFIC FLOW
- SINGLE DELINEATOR
- DOUBLE DELINEATOR
- W — WHITE
- Y — YELLOW



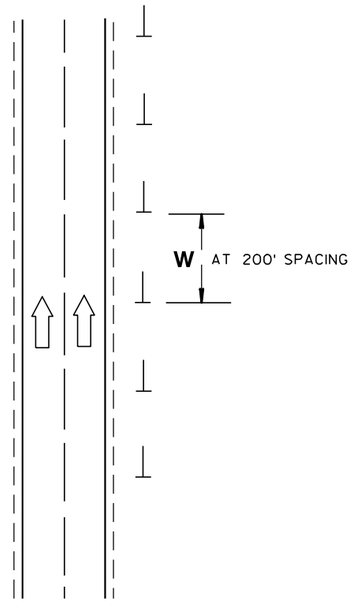
DETAIL B
DELINEATOR LAYOUT ALONG MAINLINE



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

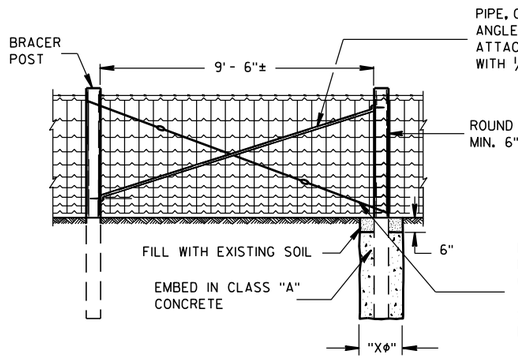
S.D.D. 15 A 6-2

6

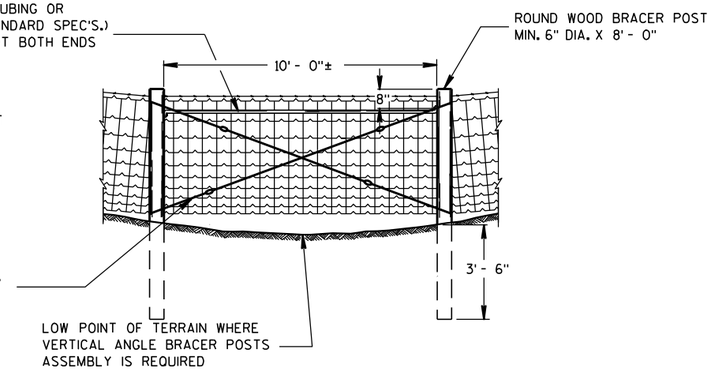
S.D.D. 15 A 6-2

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

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



PULL OR STRETCHER POSTS ASSEMBLY



VERTICAL ANGLE BRACER POSTS ASSEMBLY

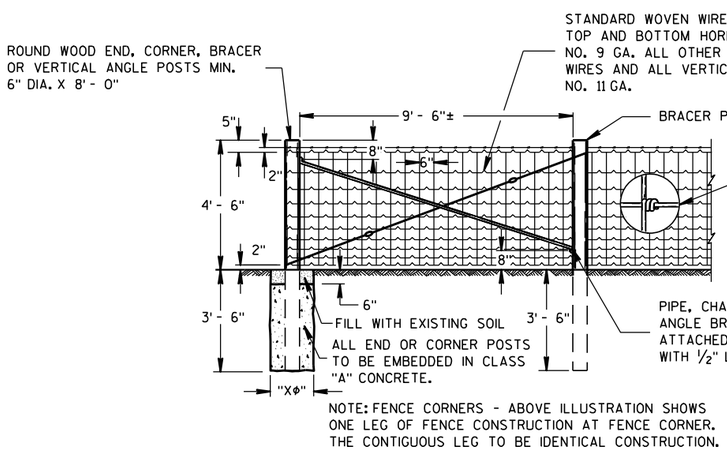
GENERAL NOTES

"XΦ" = DIAMETER OF THE POST PLUS 12".

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

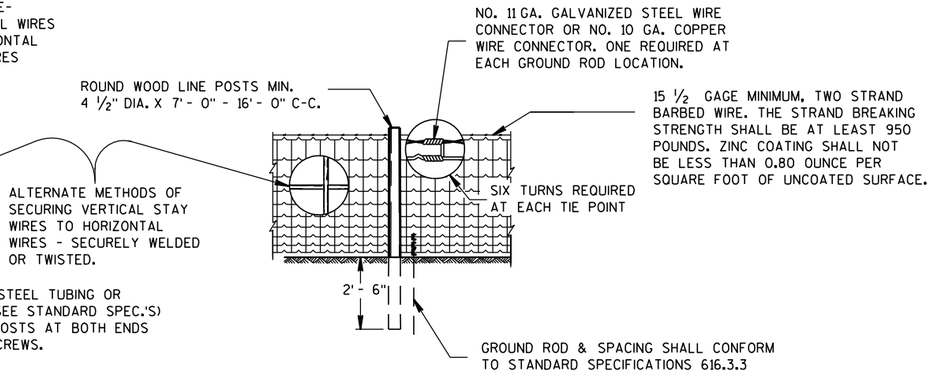
DO NOT STAPLE WIRE TIGHT TO THE LINE POSTS. ALLOW MOVEMENT OF WIRE FOR EXPANSION AND CONTRACTION. STAPLE ARRANGEMENT SHALL BE THE SAME FOR ALL OTHER POSTS EXCEPT THAT THEY SHALL BE DRIVEN TIGHT TO POSTS. ALL STAPLES SHALL BE 2" X 9 GAGE AND SHALL BE MANUFACTURED FROM GALVANIZED WIRE OR HOT DIP GALVANIZED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

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



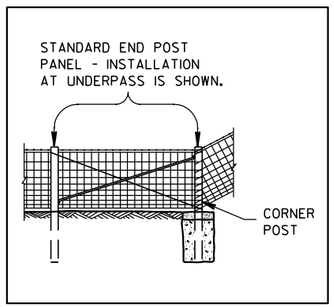
NOTE: FENCE CORNERS - ABOVE ILLUSTRATION SHOWS ONE LEG OF FENCE CONSTRUCTION AT FENCE CORNER. THE CONTIGUOUS LEG TO BE IDENTICAL CONSTRUCTION.

END OR CORNER POSTS ASSEMBLY

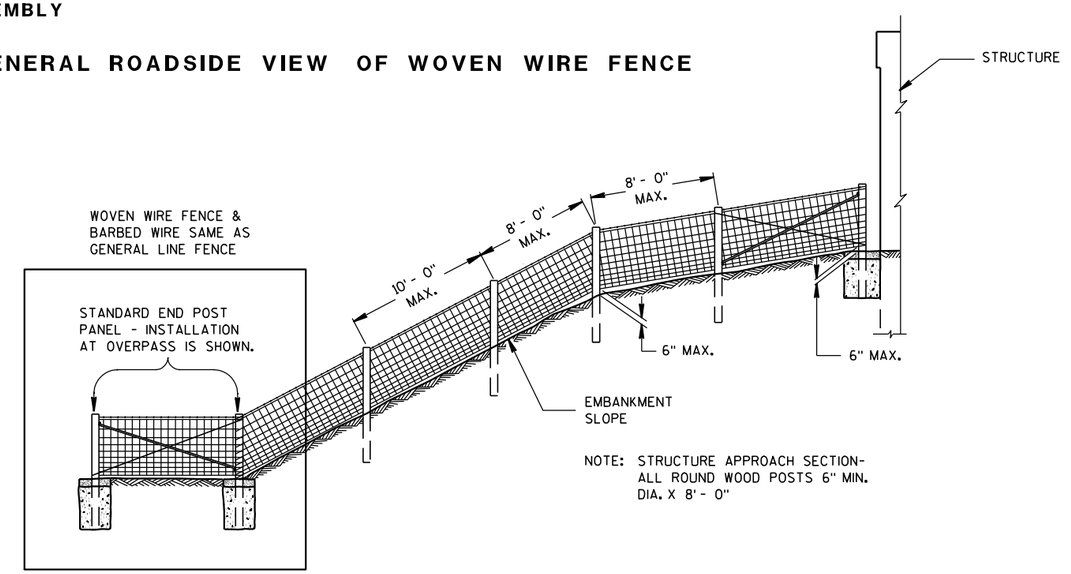


LINE FENCE CONSTRUCTION

GENERAL ROADSIDE VIEW OF WOVEN WIRE FENCE



ALTERNATE FENCE DESIGN AT STRUCTURE



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

FENCE DESIGN AT STRUCTURE APPROACH

FENCE WOVEN WIRE

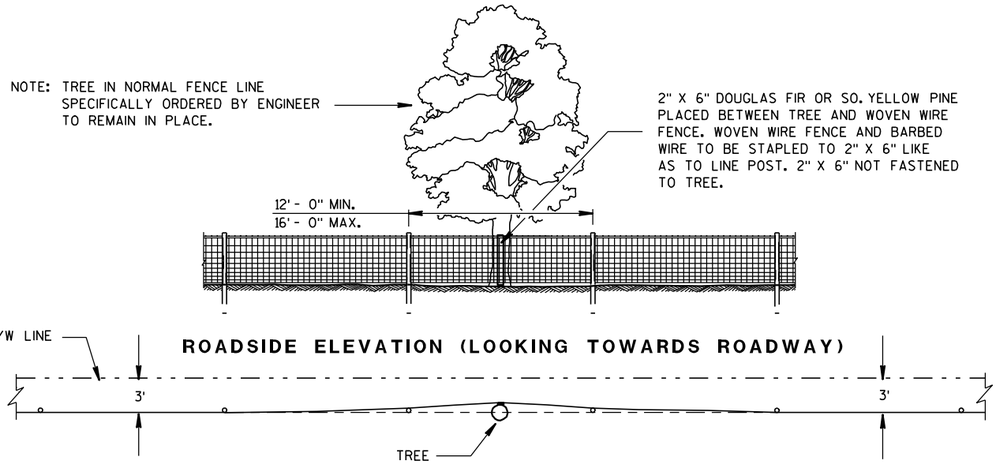
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

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

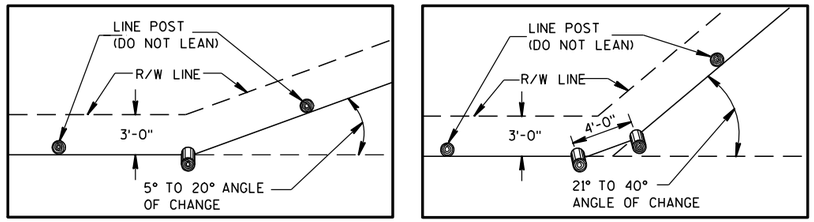
6

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



PLAN VIEW

FENCE DESIGN AT TREES REMAINING IN NORMAL FENCE LINE



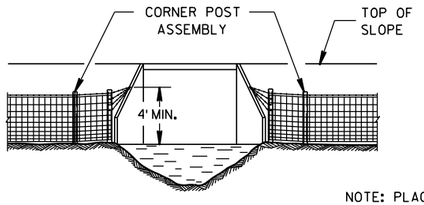
PLAN VIEW
SINGLE POST CORNER

PLAN VIEW
DOUBLE POST CORNER

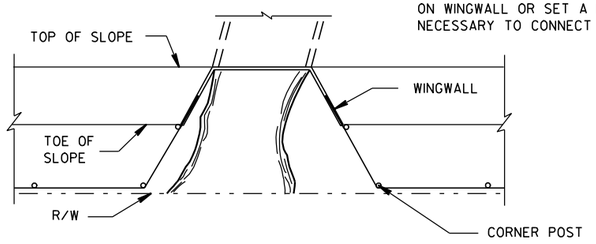
RIGHT OF WAY LINE CHANGE 40° AND LESS

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

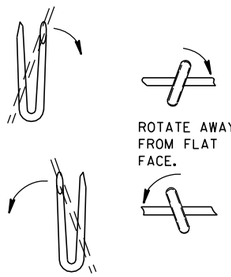
WHEN THE RIGHT OF WAY LINE CHANGE IS MORE THAN 40° USE THE CORNER OR STRETCHER POSTS ASSEMBLY.



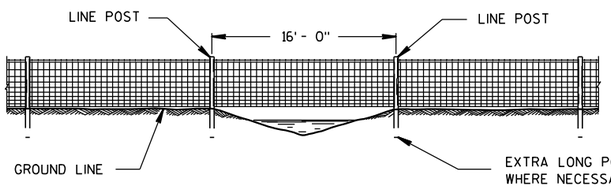
NOTE: PLACE A MINIMUM OF 4 STRANDS OF BARBED WIRE, 6" MAXIMUM CENTERS IN FAN SHAPE CONNECTED TO AN EYE BOLT ON WINGWALL OR SET A LONE POST WHEN NECESSARY TO CONNECT BARBED WIRE.



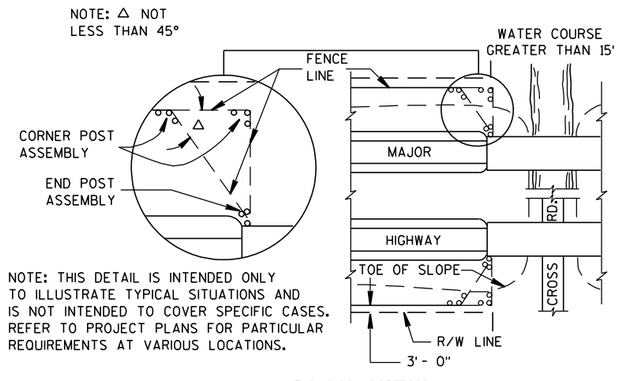
FENCE INSTALLATION TO WINGWALLS



LINE POST

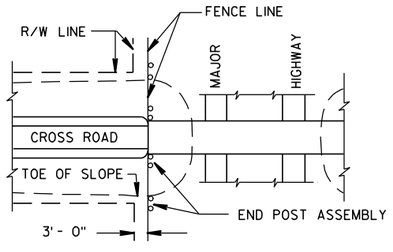


FENCE CONSTRUCTION OVER STREAM COURSES OF 15 FT. OR LESS IN WIDTH



PLAN VIEW

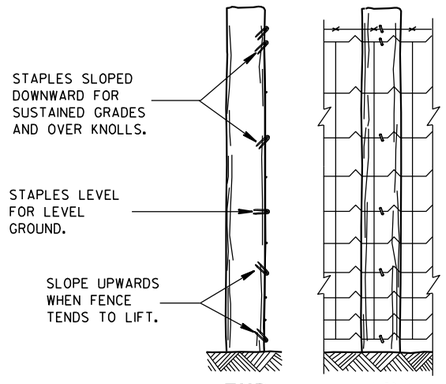
MAJOR HIGHWAY OVERPASS OR STREAM COURSE CROSSING OF GREATER THAN 15 FT. IN WIDTH



PLAN VIEW

MAJOR HIGHWAY UNDERPASS

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



END ELEVATION **FARM SIDE ELEVATION**

FENCE MOUNTING DETAIL

FENCE LOCATION AT STRUCTURES

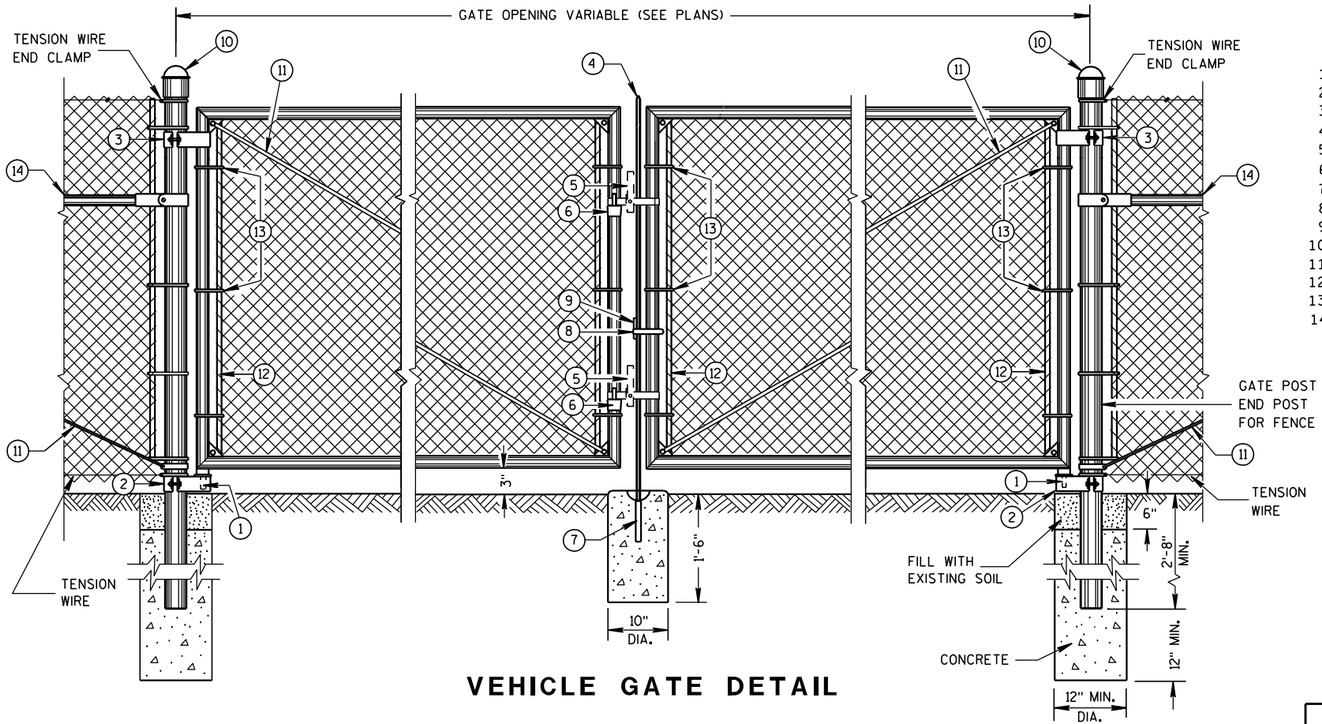
FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

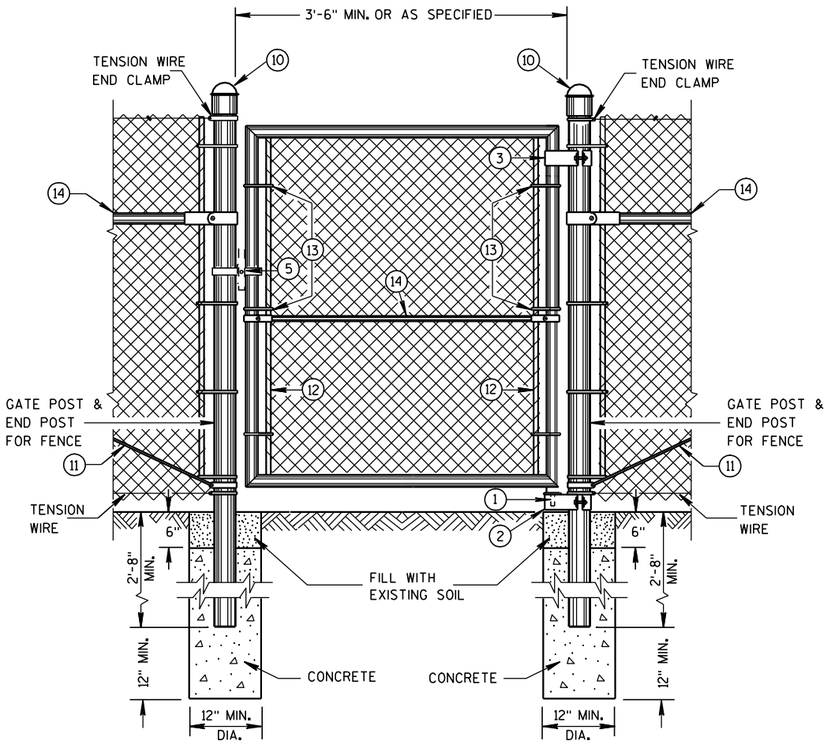
APPROVED
4/4/2008 DATE
/S/ Jerry H. [illegible] ROADWAY STANDARDS ENGINEER
FHWA

6

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



VEHICLE GATE DETAIL



PEDESTRIAN GATE DETAIL

LEGEND

1. STRAIGHT PLUG
2. BOTTOM HINGE
3. TOP HINGE
4. PLUNGER ROD
5. FULCRUM LATCH
6. FORK CATCH *
7. PLUNGER ROD CATCH
8. LOCK KEEPER GUIDE
9. LOCK KEEPER
10. DOME TOPS
11. TRUSS RODS
12. TENSION BAR
13. TENSION BANDS
14. BRACE RAIL

*NOT REQUIRED ON SINGLE SWING PEDESTRIAN GATE

GENERAL NOTES

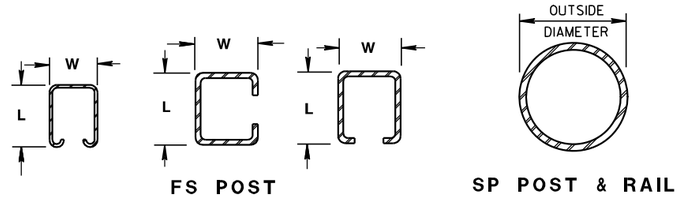
FENCE POSTS INSTALLED ON CONCRETE WALLS SHALL BE ANCHORED INTO EMBEDDED METAL SLEEVES OR CORED HOLE BY FILLING THE ANNULAR SPACE WITH PEA GRAVEL FOLLOWED BY AN EPOXY RESIN ADHESIVE. THE EPOXY RESIN ADHESIVE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 235, CLASS A, B OR C.

USE FENCE FABRIC KNUCKLED AT BOTH SELVAGES.

FOR LEAF GATES GREATER THAN 8 FEET WIDE, INSTALL INTERIOR VERTICAL BRACE RAIL AT 8 FOOT INTERVALS.

FOR FABRIC HEIGHTS GREATER THAN 8 FEET, INSTALL INTERIOR HORIZONTAL BRACE RAILS TO LEAF GATE.

MAXIMUM SAG FOR OUTER GATE MEMBER SHALL NOT EXCEED THE GREATER OF 1% OF THE LEAF GATE WIDTH OR 2 INCHES.



CROSS SECTIONS OF POSTS AND RAILS

SHAPE, SIZE AND WEIGHT REQUIREMENTS FOR FORMED STEEL FENCE POST

POST TYPE	LENGTH (L) INCH	WIDTH (W) INCH	WEIGHT LBS/FT
FS1	1.625	1.25	1.35
FS2†	1.875	1.625	1.850
FS2	1.875	1.625	2.400
FS3	2.250	1.700	2.780

SHAPE, SIZE AND WEIGHT REQUIREMENTS FOR ROUND STEEL FENCE POST

POST TYPE	OUTSIDE DIMENSION INCH	WALL THICKNESS INCH	WEIGHT LBS/FT
SP1	1.660	0.140	2.270
SP2	1.900	0.145	2.720
SP3	2.375	0.154	3.650
SP4	2.875	0.203	5.800
SP5	4.000	0.226	9.120
SP6	6.625	0.280	18.990
SP7	8.625	0.322	28.580

REQUIRED FENCE POST SIZES

USE	FABRIC HEIGHTS FEET	POST TYPE
TERMINAL POSTS **	LESS THAN OR EQUAL TO 6 FT.	SP3
	GREATER THAN OR EQUAL TO 6 FT.	SP4
LINE POSTS	LESS THAN OR EQUAL TO 6 FT.	SP2
	LESS THAN OR EQUAL TO 8 FT.	SP3
	GREATER THAN OR EQUAL TO 8 FT.	SP4
	LESS THAN OR EQUAL TO 8 FT.	FS2 OR FS2†
	GREATER THAN OR EQUAL TO 8 FT.	FS3

REQUIRED POST SIZE FOR GATES

USE	LEAF WIDTHS FEET	POST TYPE
GATES	LESS THAN OR EQUAL TO 6 FT.	SP4
	LESS THAN OR EQUAL TO 13 FT.	SP5
	LESS THAN OR EQUAL TO 18 FT.	SP6
	LESS THAN OR EQUAL TO 23 FT.	SP7

BRACE RAIL TYPES

USE		TYPE
BRACE RAIL		SP1 OR FS1

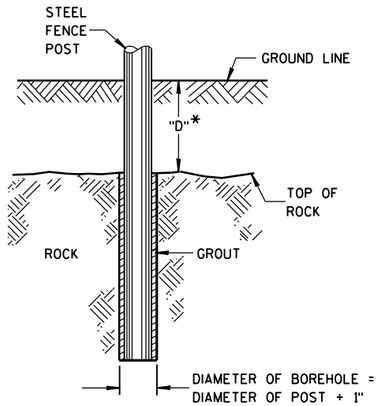
** INCLUDES END, CORNER, ANGLE, INTERSECTION AND INTERMEDIATE BRACED POSTS

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

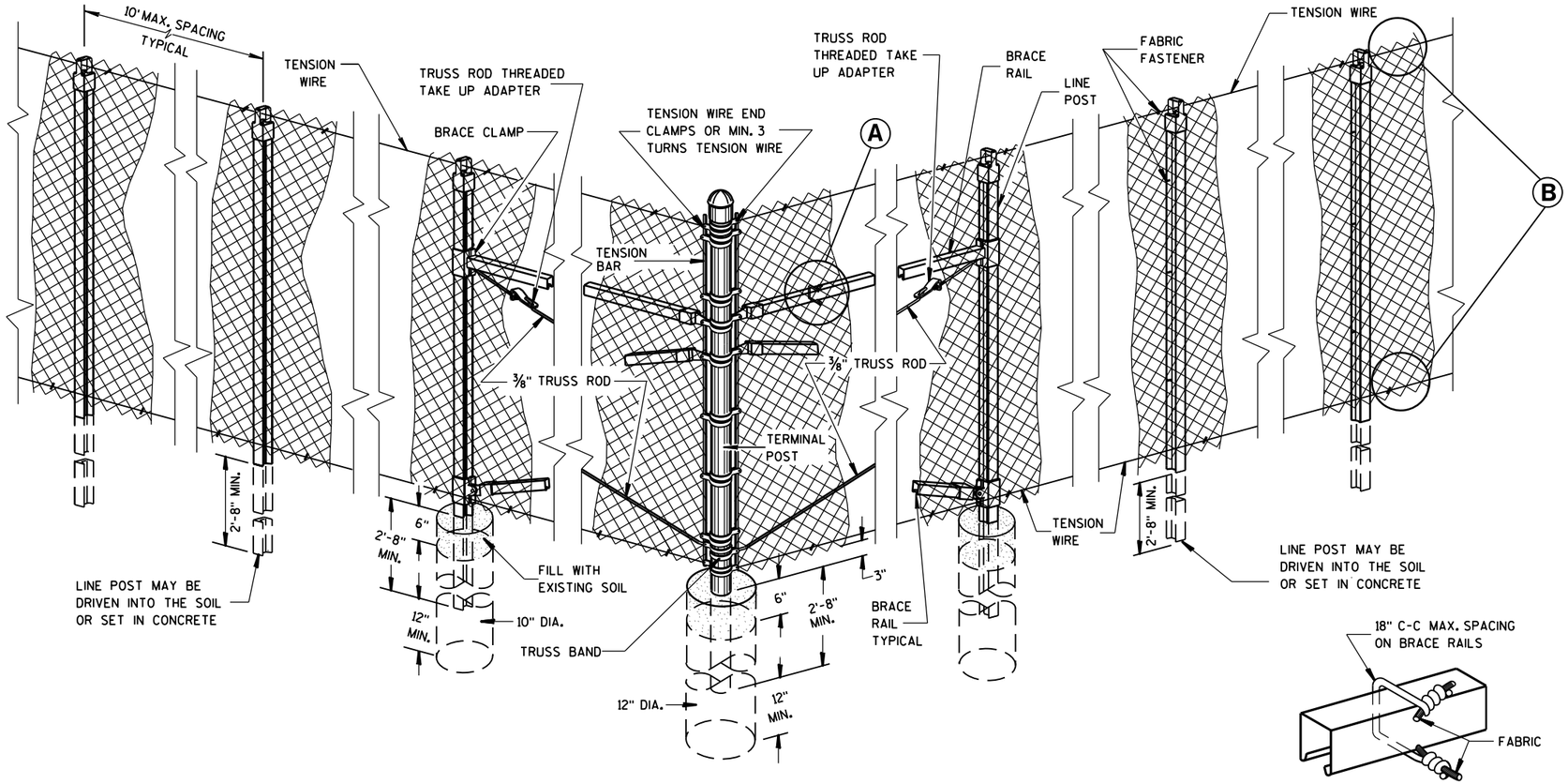
6

S.D.D. 15 B 3-12a

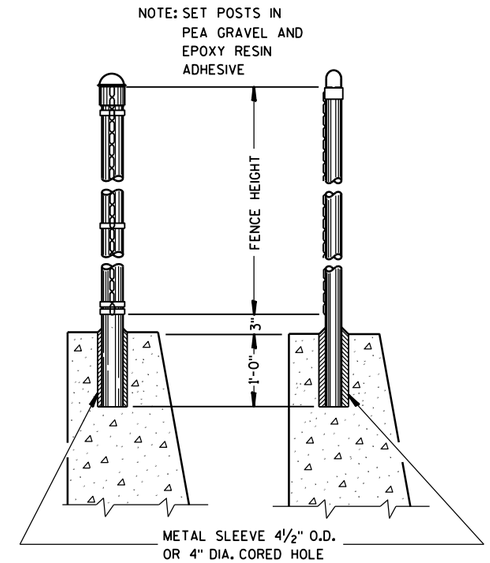


*IF "D" IS LESS THAN 2'-6", DRILL ROCK AND INSTALL GROUT

ROCK INSTALLATION OF LINE POST

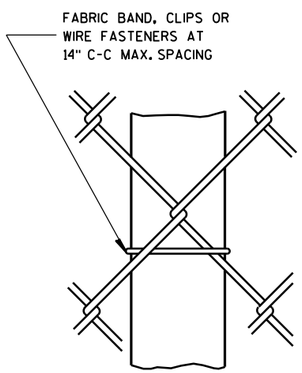


END, CORNER, ANGLE INTERSECTION & INTERMEDIATE BRACED POSTS



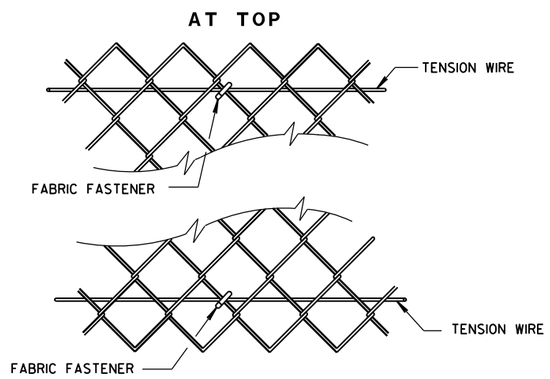
END POST & CORNER POST LINE POST

DETAILS OF FENCE ON WALL



LINE POST

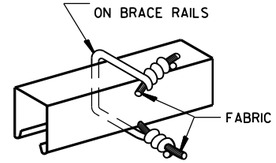
FABRIC FASTENER



AT BOTTOM

SELVAGES

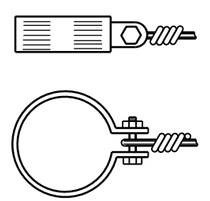
Ⓑ



BRACE RAIL

FABRIC FASTENER

Ⓐ



TENSION WIRE END CLAMP

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/19/2010
DATE
/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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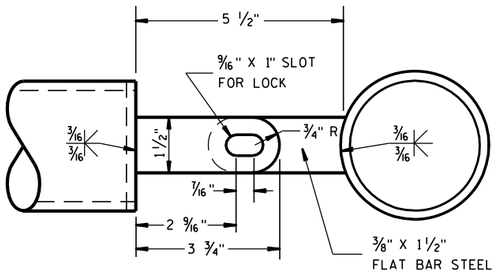
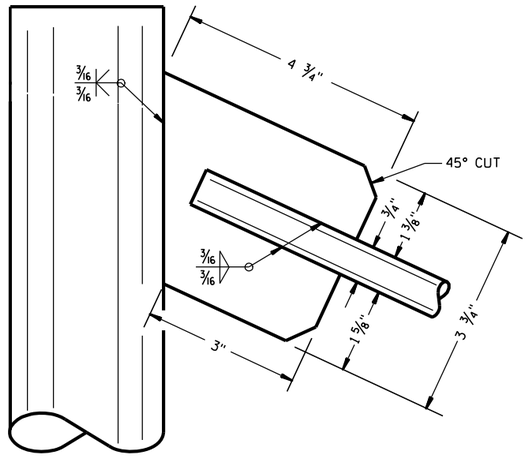
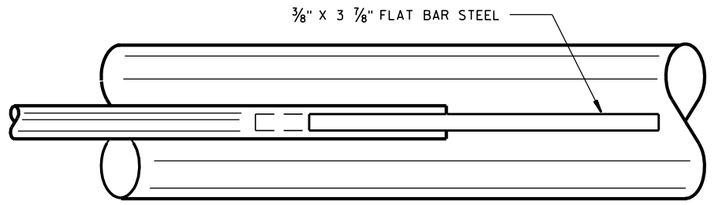
S.D.D. 15 B 3-12b



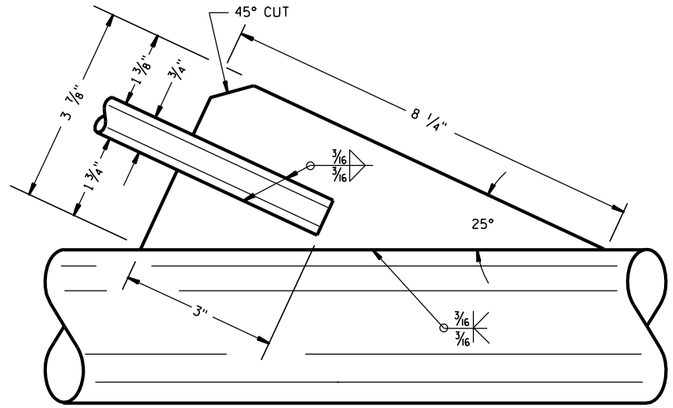
PLAN VIEW
DETAIL A



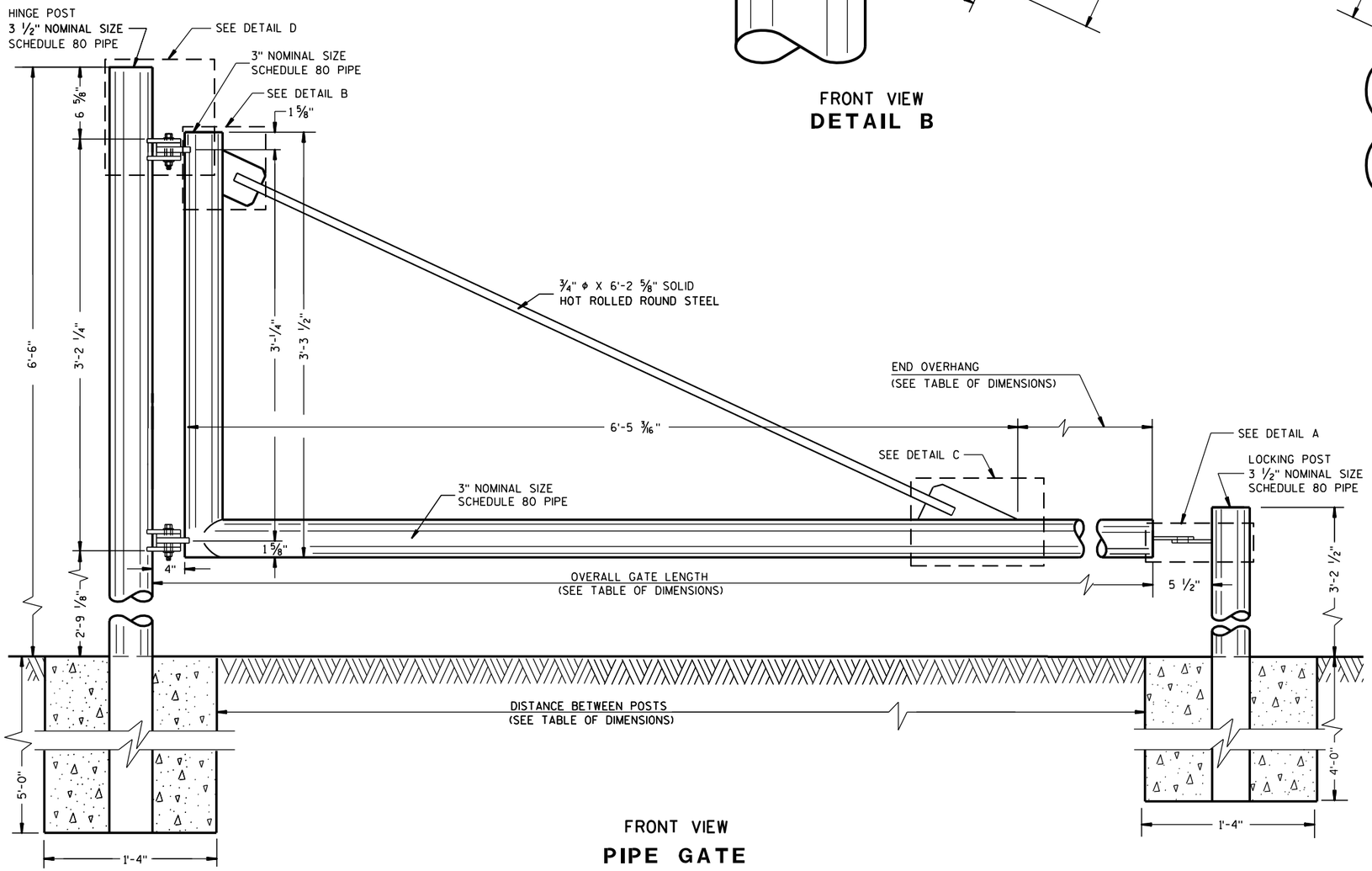
FRONT VIEW
DETAIL B



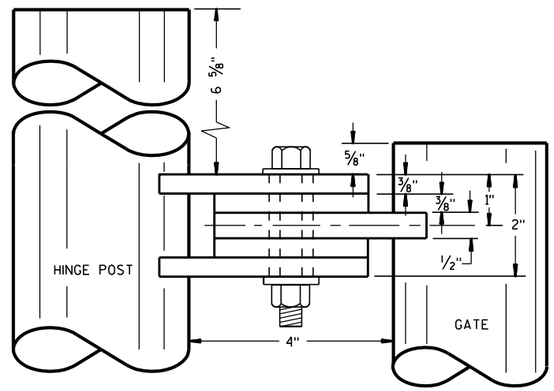
PLAN VIEW



FRONT VIEW
DETAIL C



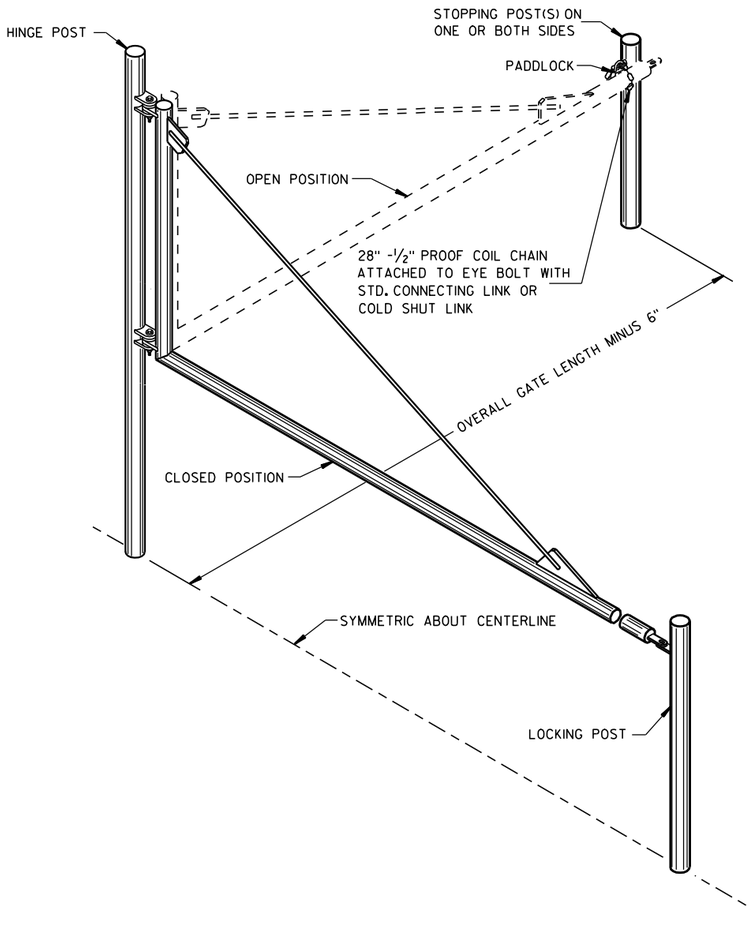
FRONT VIEW
PIPE GATE



FRONT VIEW
DETAIL D

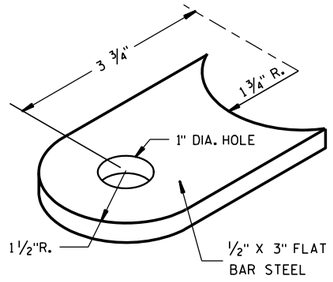
PIPE GATE DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



ISOMETRIC VIEW

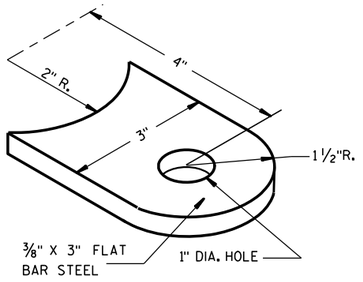
PIPE GATE PARTIAL LAYOUT (ONE SIDE ONLY)



ISOMETRIC VIEW

SWING ARM BRACKET

2 REQUIRED



ISOMETRIC VIEW

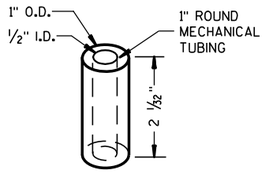
POST BRACKET

4 REQUIRED

ISOMETRIC VIEW

SPACING RING

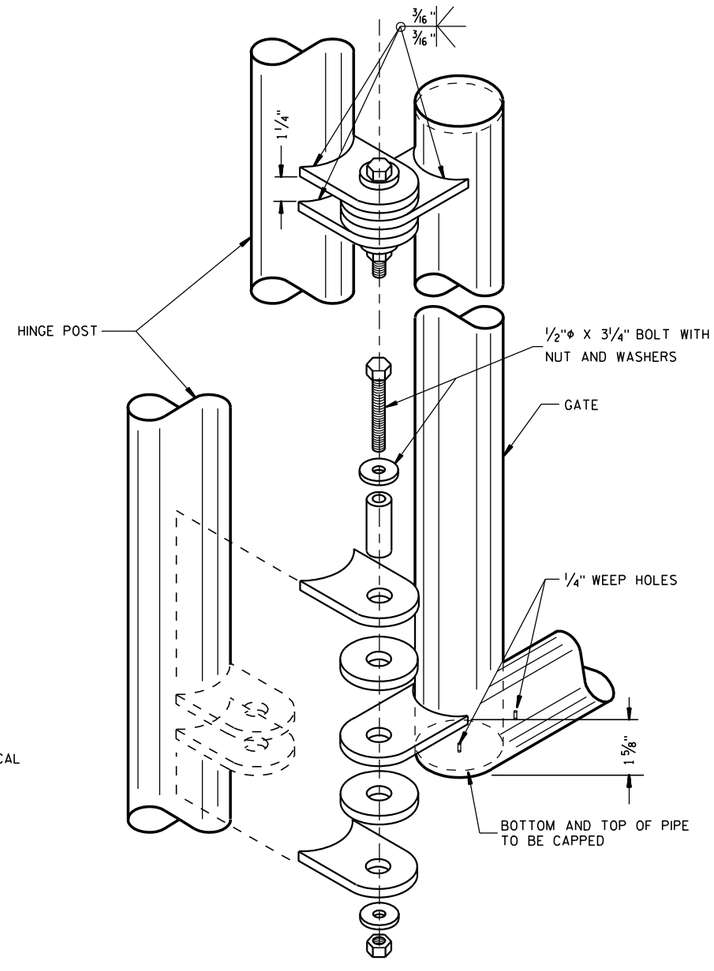
4 REQUIRED



ISOMETRIC VIEW

SLEEVE

2 REQUIRED



ISOMETRIC VIEW

HINGE ASSEMBLY

GENERAL NOTES

ALL PIPE POSTS SHALL HAVE OPEN BOTTOMS.

ALL OTHER EXPOSED ENDS SHALL BE CAPPED AND SEALED TO PREVENT WATER FROM ENTERING.

ALL STEEL BRACKETS SHALL BE ASTM A36.

ALL UNITS SHALL BE SHOP FABRICATED.

BOTH POSTS SHALL BE PLACED IN CONCRETE IN ACCORDANCE WITH THE DETAILED PLANS.

ALL METAL SHALL BE CLEANED BY SANDBLASTING TO A SSPC-10, COMMERCIAL BLAST FINISH.

ALL METAL SHALL BE PAINTED WITH A ZINC RICH PRIMER AND ONE COAT OF EPOXY FINISH PAINT. A SECOND FINISH COAT SHALL BE FIELD APPLIED AFTER INSTALLATION.

GATE LOCK CAN BE MASTER KEYED AND SHALL HAVE THE FOLLOWING MINIMUM DIMENSIONS: SHACKLE DIA. OF ⅜", VERTICAL CLEARANCE OF 1½", HORIZONTAL CLEARANCE OF 1 1/32".

HINGE BOLT THREADS SHALL BE PEINED OR SPOT WELDED IN PLACE TO PREVENT REMOVAL.

HOLE IN HINGE BRACKETS SHALL BE LARGE ENOUGH SO THAT 1" OD PIPE COLLAR JUST SLIDES THROUGH OPENING.

ALL BOLTS, WASHERS AND NUTS SHALL BE UNL ASTM A325.

(TABLE OF DIMENSIONS)

SINGLE GATE

CLEAR WIDTH	END OVERHANG	DISTANCE BETWEEN POSTS	OVERALL GATE LENGTH
10'-0"	3'-5 ¼"	10'-7 ¼"	9'-9 ¾"
12'-0"	5'-5 ¼"	12'-7 ¼"	11'-9 ¾"

IF CLEAR WIDTH GREATER THAN 12'-0" THAN USE DUAL OPENING GATES.

DUAL OPENING GATES

CLEAR WIDTH	END OVERHANG	DISTANCE BETWEEN POSTS	OVERALL GATE LENGTH
14'-0"	3 ¼"	14'-7"	7'-¾"
16'-0"	1'- 3 ¼"	16'-7"	8'-¾"
18'-0"	2'- 3 ¼"	18'-7"	9'-¾"

DESIGN NOTE:

GATE SIZE SHALL BE SPECIFIED AS THE CLEAR WIDTH OF OPENING.

PIPE GATE DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
1/5/94 — DATE
/S/ Rory L. Rhinesmith — CHIEF METHODS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 15 B 12-1b

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.

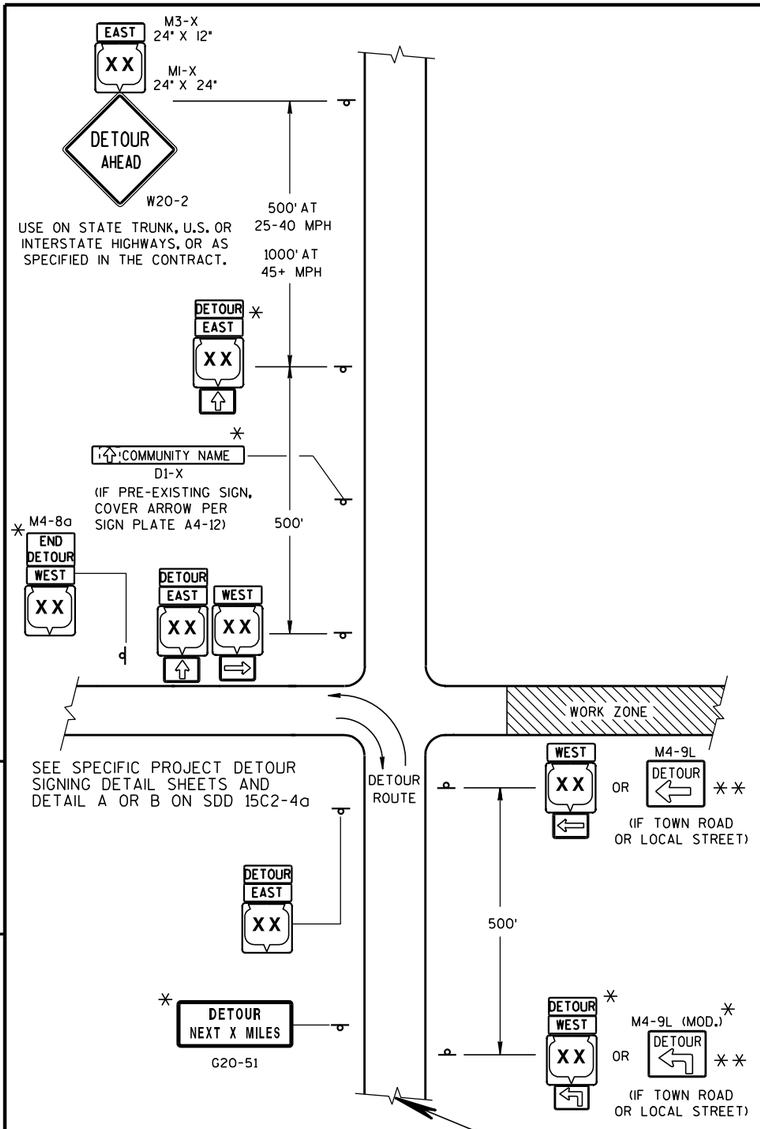
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

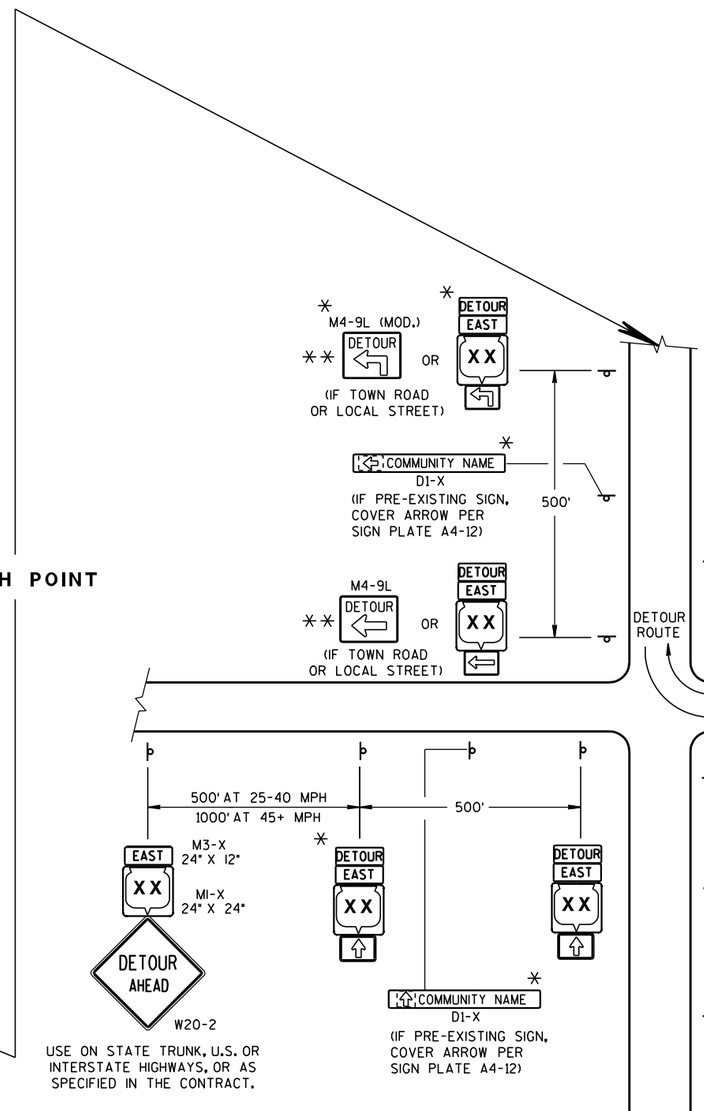
SIGN SIZES SHALL BE AS FOLLOWS:

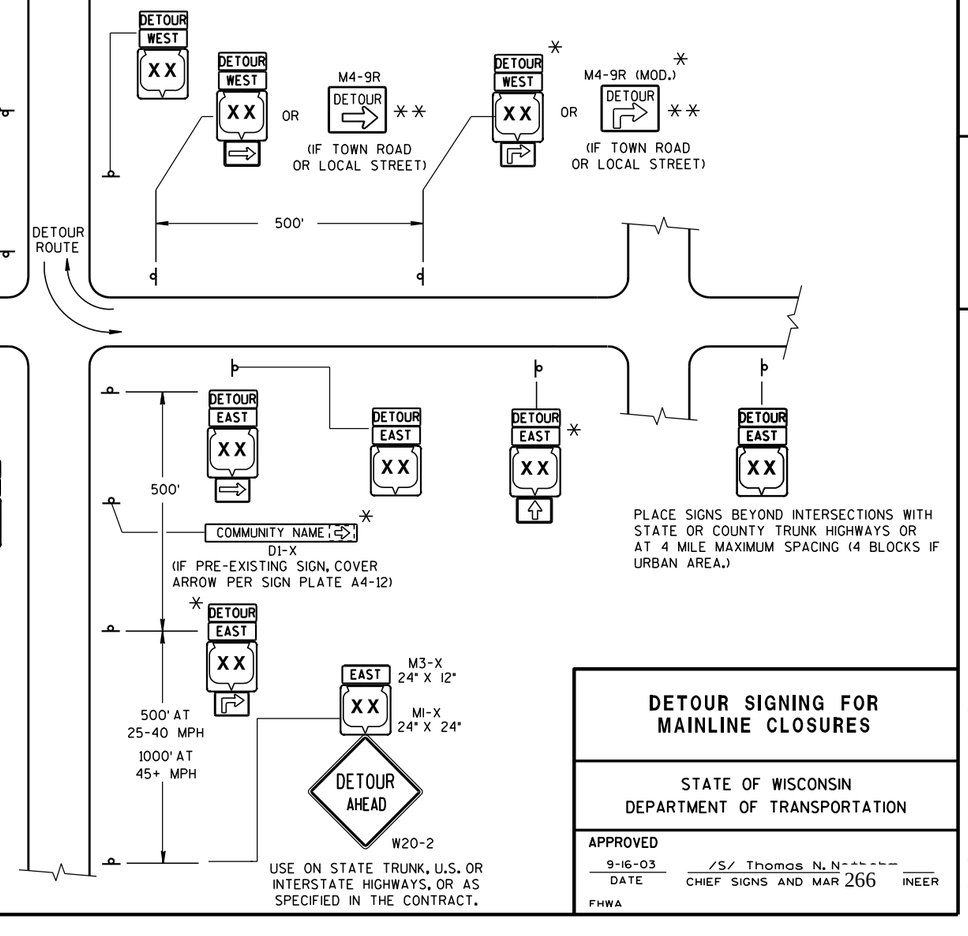
M3-X AND M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
M4-9 SHALL BE 30" X 24".
M4-8a SHALL BE 24" X 18".
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.







LEGEND

- POST MOUNTED SIGN
- WORK ZONE
- DETOUR EAST — M4-8 / M3-X
- XX OR COUNTY XX OR XX — M1-4 / M1-5A / M1-6
- MO5-1 OR MO6-1 OR MO6-1

DETAIL F

DETOUR SIGNING

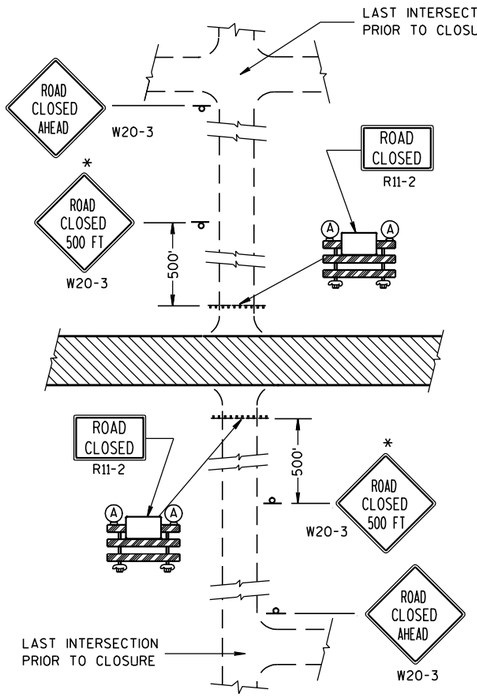
DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9-16-03 DATE
/S/ Thomas N. Nottbusch CHIEF SIGNS AND MARKINGS ENGINEER
FHWA

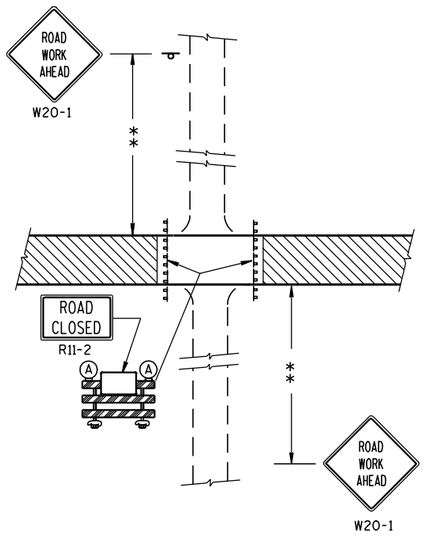
6

S.D.D. 15 C 2-4c



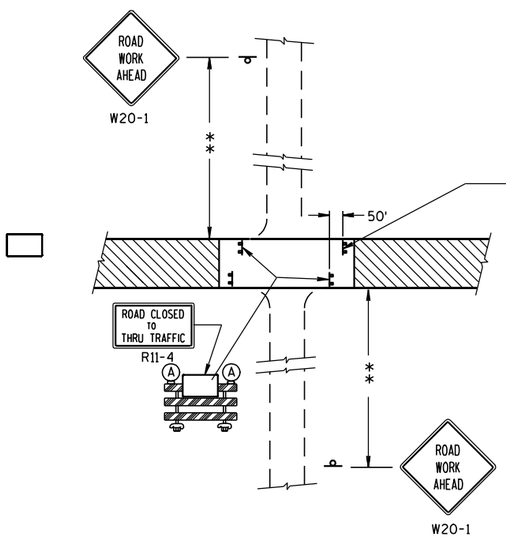
DETAIL 1

(NO ACCESS TO PROJECT)



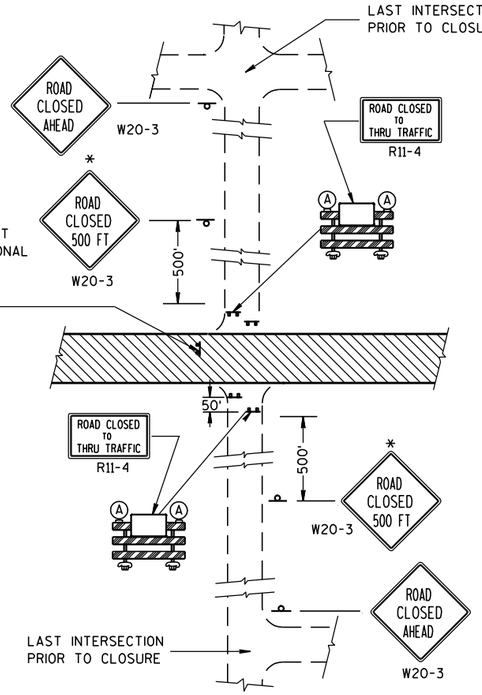
DETAIL 2

(PUBLIC CROSS-TRAFFIC MAINTAINED. NO ACCESS TO PROJECT).



DETAIL 3

(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS).



DETAIL 4

(CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

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

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

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

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

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

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

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

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

THE REFLECTIVE SHEETING USED ON R11-2, R11-3 AND R11-4 SIGNS SHALL COMPLY WITH SUBSECTION 637.2.2.2 OF THE STANDARD SPECIFICATIONS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

*OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FT. OR LESS FROM THE WORK ZONE.

**500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

LEGEND

- POST MOUNTED WARNING SIGN
- TYPE III BARRICADES
- (A) TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

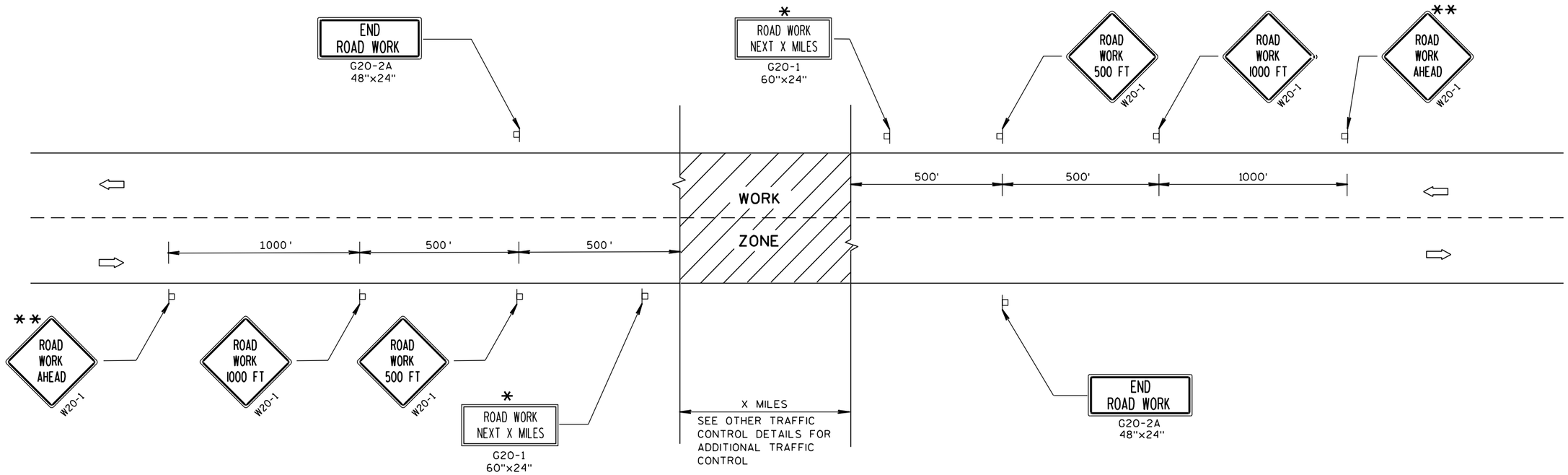
9-16-03
DATE

/S/ Thomas N. N[illegible]
CHIEF SIGNS AND MAR[illegible] ENGINEER

FHWA

6

S.D.D. 15 C 3-1



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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.

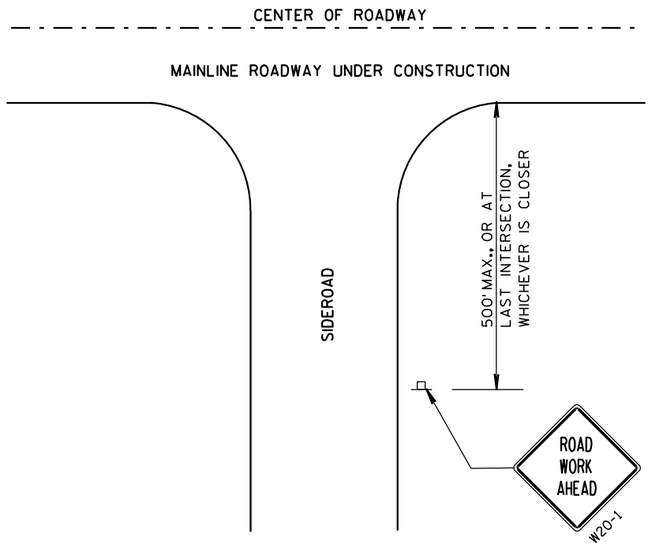
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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 OR SIGNING.

TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



LEGEND

POST MOUNTED SIGN

DIRECTION OF TRAFFIC FLOW

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

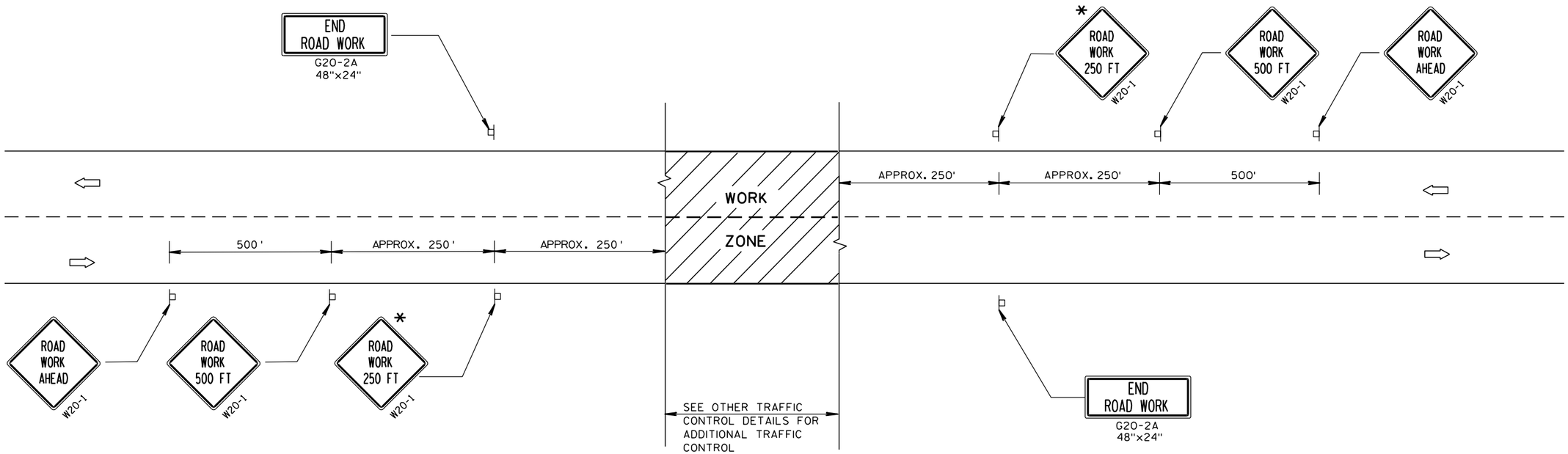
5/23/00 DATE

/S/ Chester J. [illegible] CHIEF SIGNS AND MARKING ENGINEER

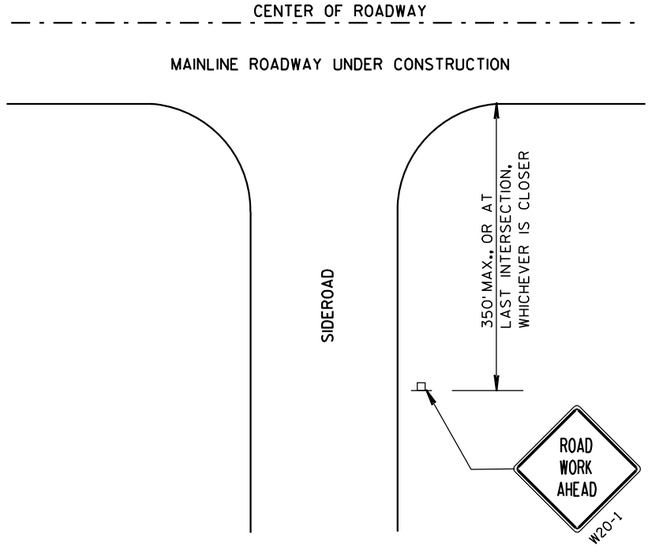
FHWA

S.D.D. 15 C 4-1

6
S.D.D. 15 C 4-1



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



GENERAL NOTES

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

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

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

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

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

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

LEGEND

POST MOUNTED SIGN

DIRECTION OF TRAFFIC FLOW

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/23/00
DATE

/S/ Chester J. [illegible]
CHIEF SIGNS AND MARKING ENGINEER

FHWA

6

S.D.D. 15 C 5-1

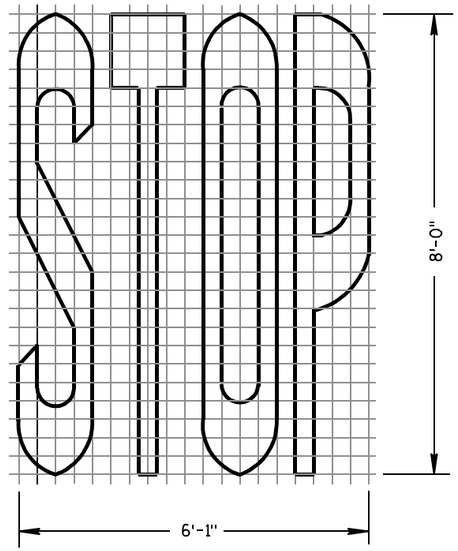
6

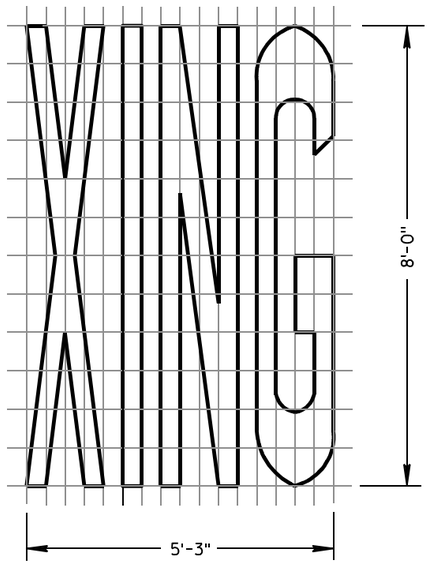
S.D.D. 15 C 5-1

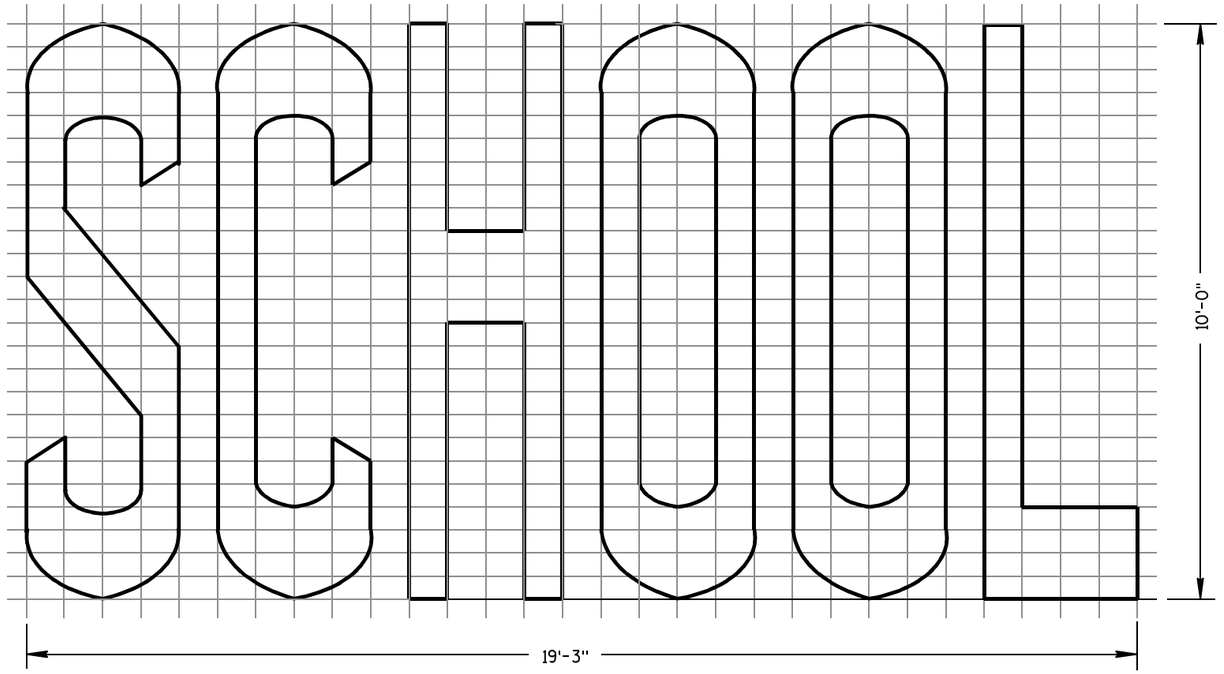
GENERAL NOTES

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

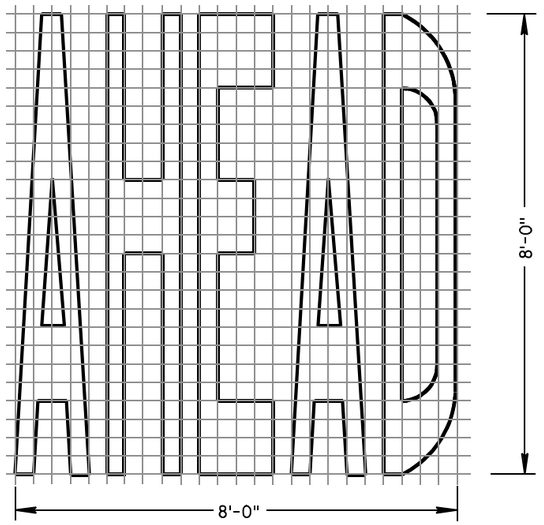
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES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

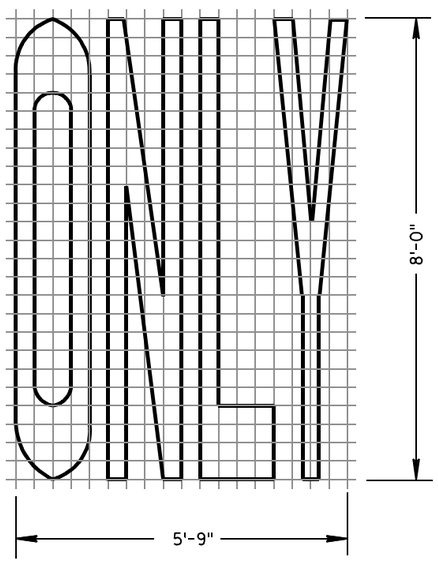


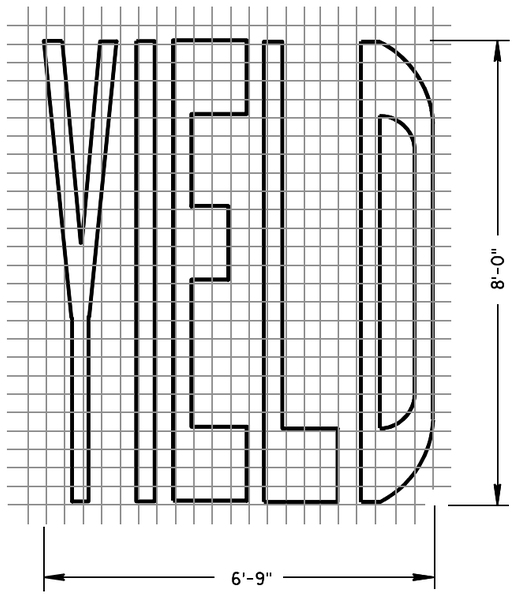


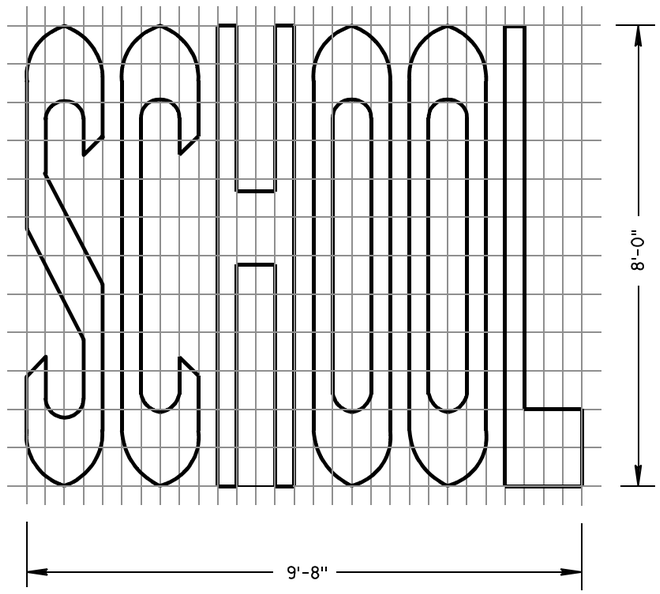


TWO-LANE









SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-1-11 DATE — /S/ Thomas N. Nothohm STATE TRAFFIC ENGINEER

FHWA

6

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

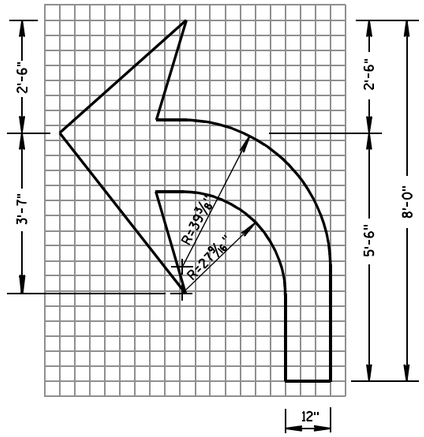
6

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

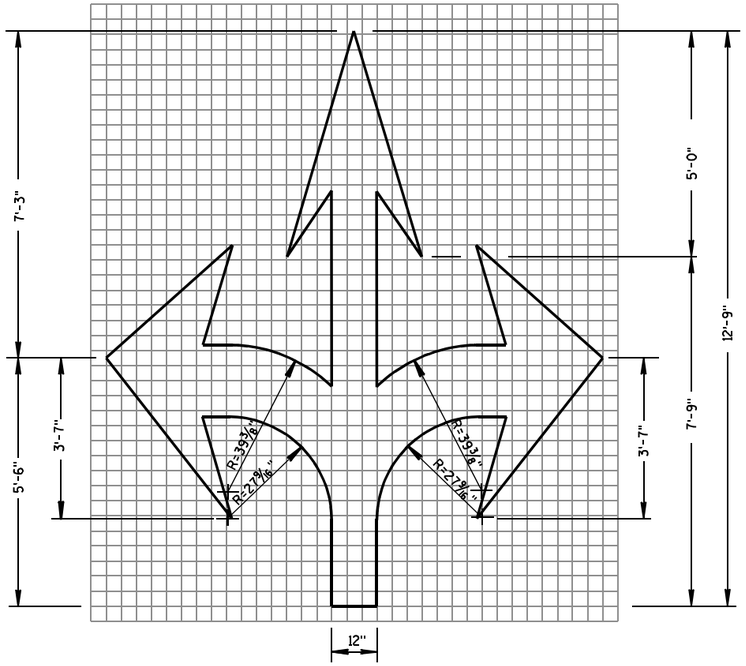
GENERAL NOTES

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

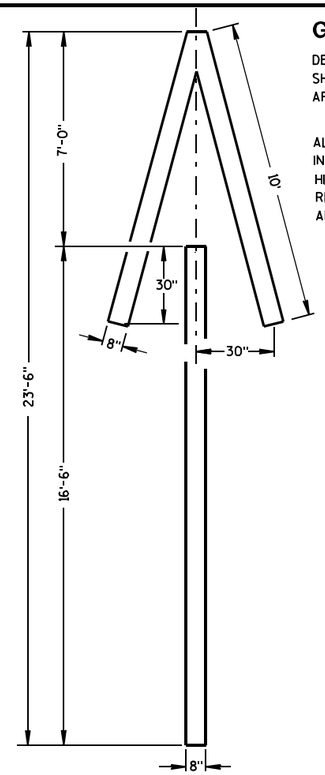
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES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



TYPE 2



TYPE 6



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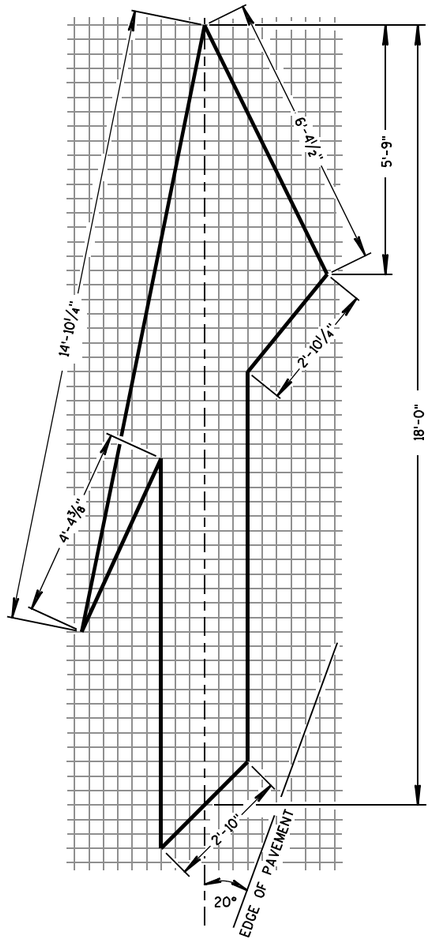
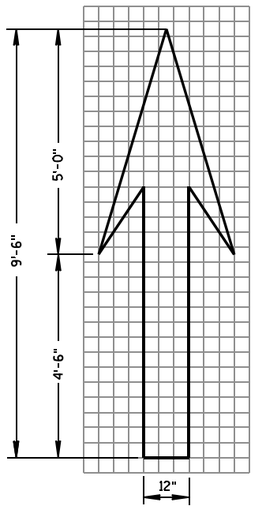
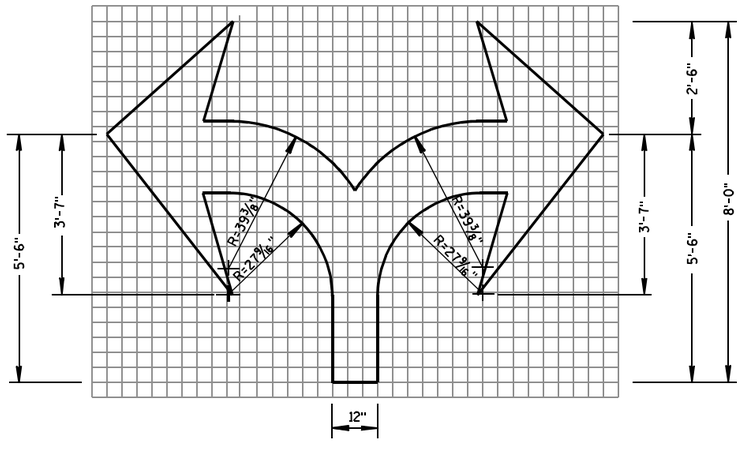


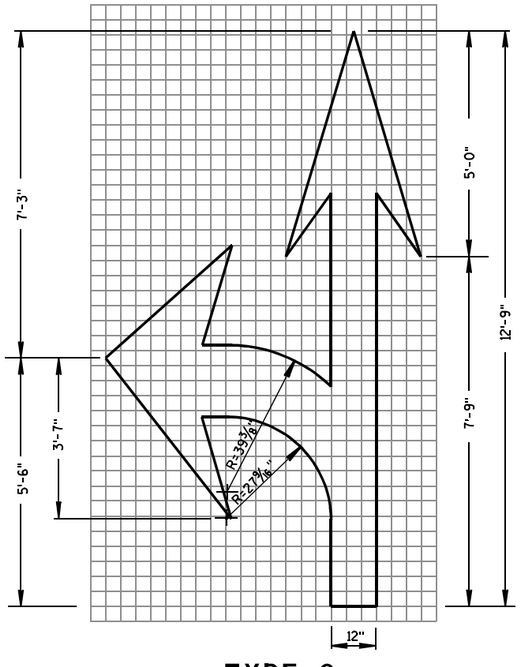
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/1/11 — DATE

/S/ Thomas N. Nothdurft — STATE TRAFFIC ENGINEER

FHWA

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

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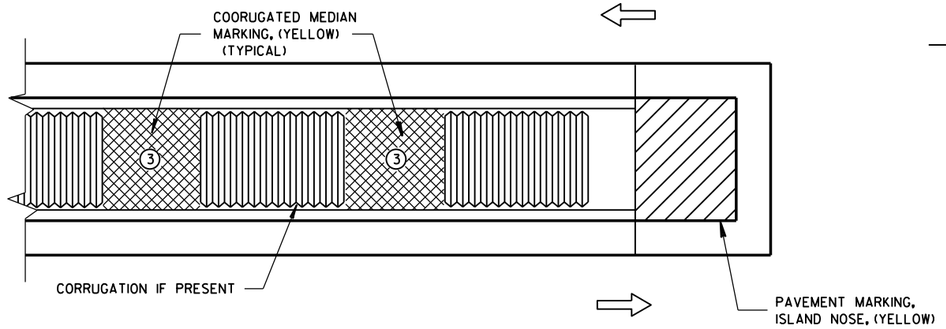
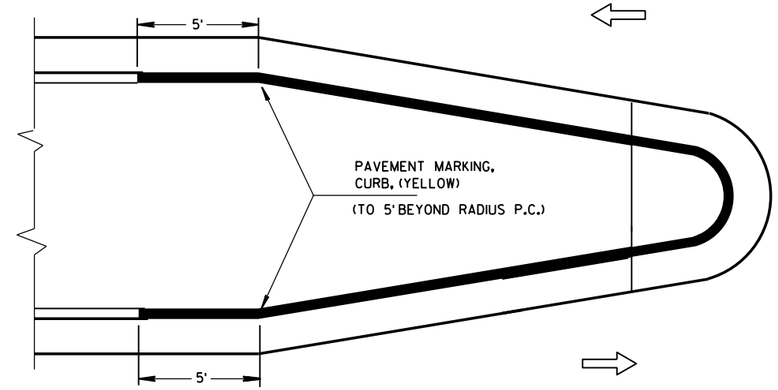
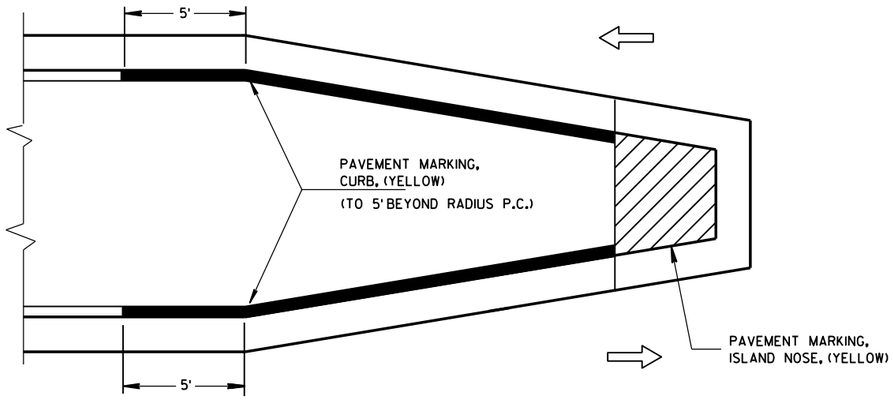
S.D.D. 15 C 7-12c



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

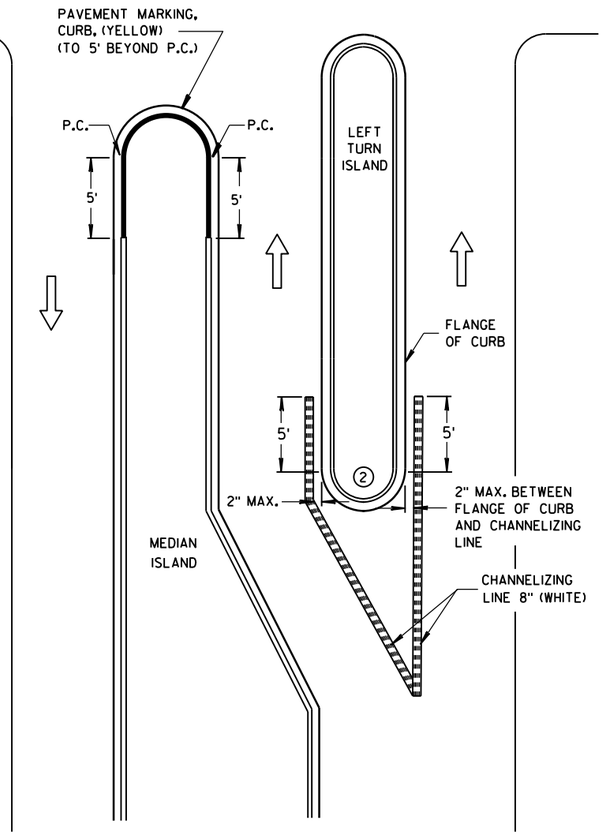


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

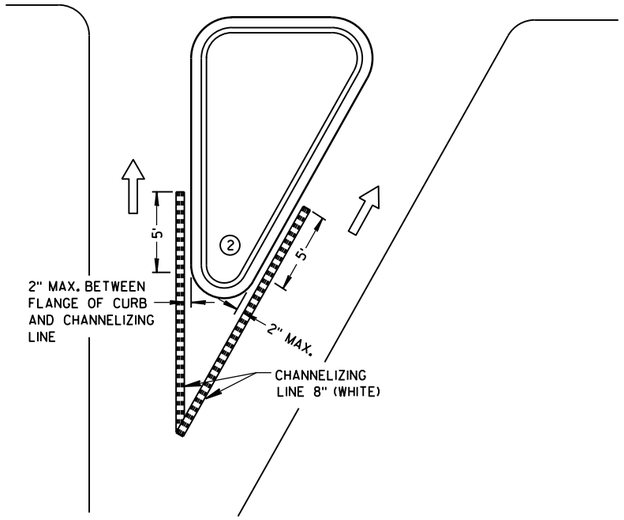
TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS



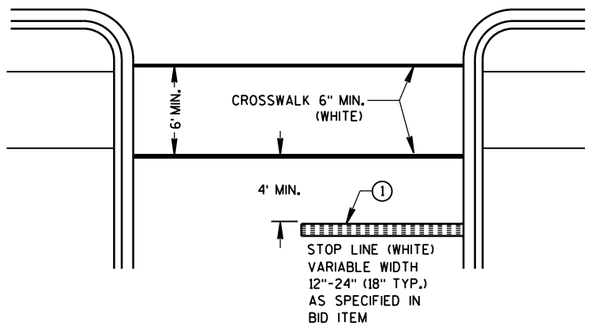
LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

1. STOP LINE IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
2. DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.
3. 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



STOP LINE AND CROSSWALK

LEGEND

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

PAVEMENT MARKING
(ISLANDS, STOP LINE &
CROSS WALK)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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

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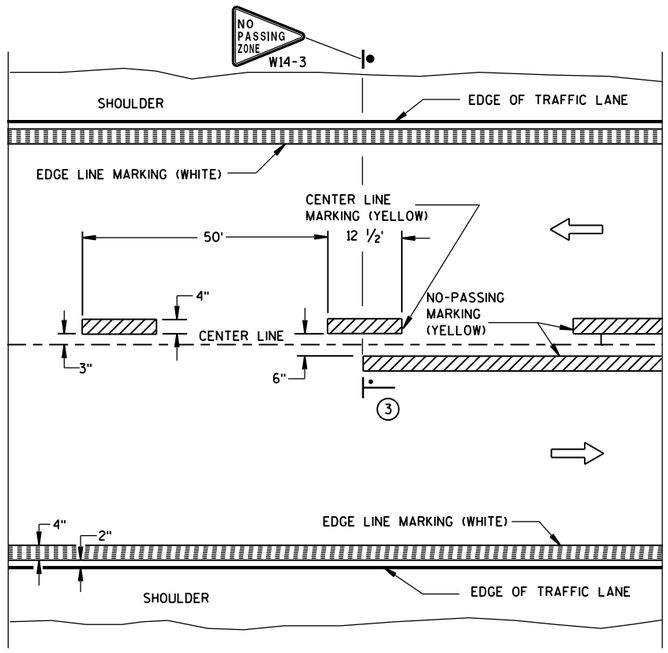
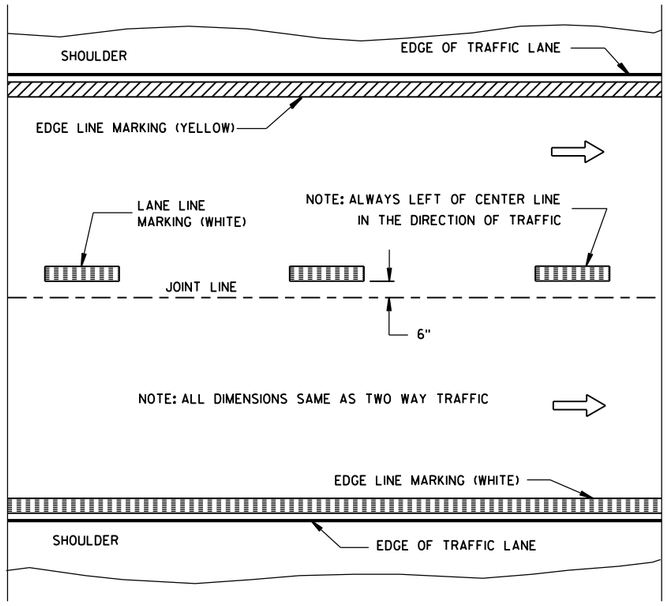
S.D.D. 15 C 8-15f

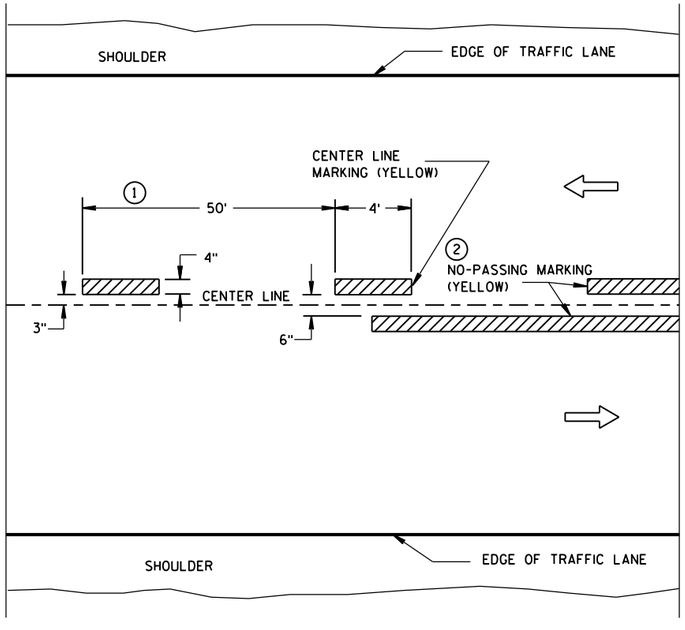


TWO WAY TRAFFIC

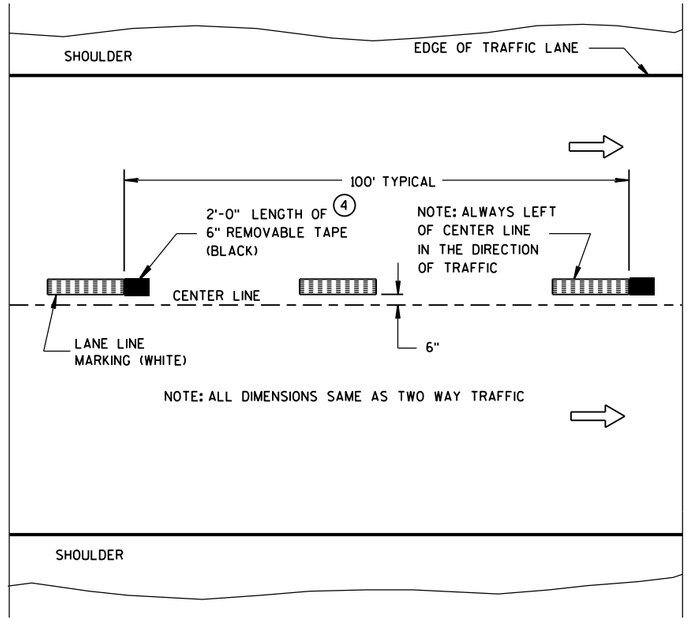


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

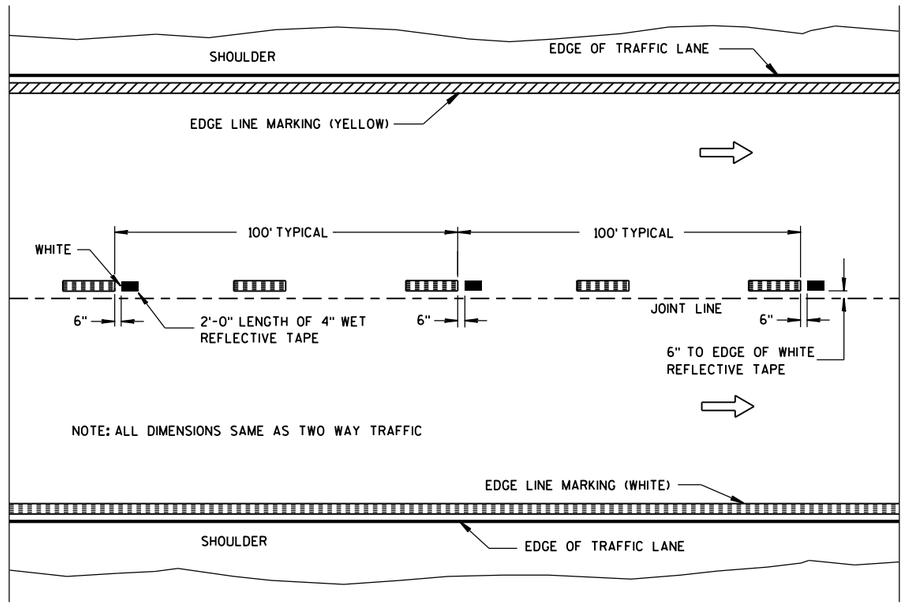
GENERAL NOTES

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

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

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



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

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

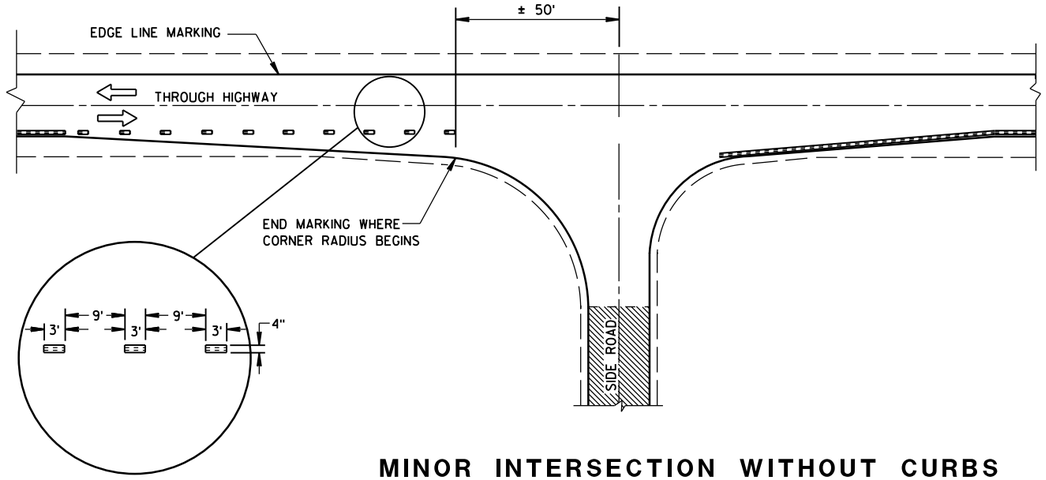
APPROVED
5-13-2013 DATE
/S/ Travis Feltes STATE TRAFFIC E
FHWA

6

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

6

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



MINOR INTERSECTION WITHOUT CURBS

GENERAL NOTES

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

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

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

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

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

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

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

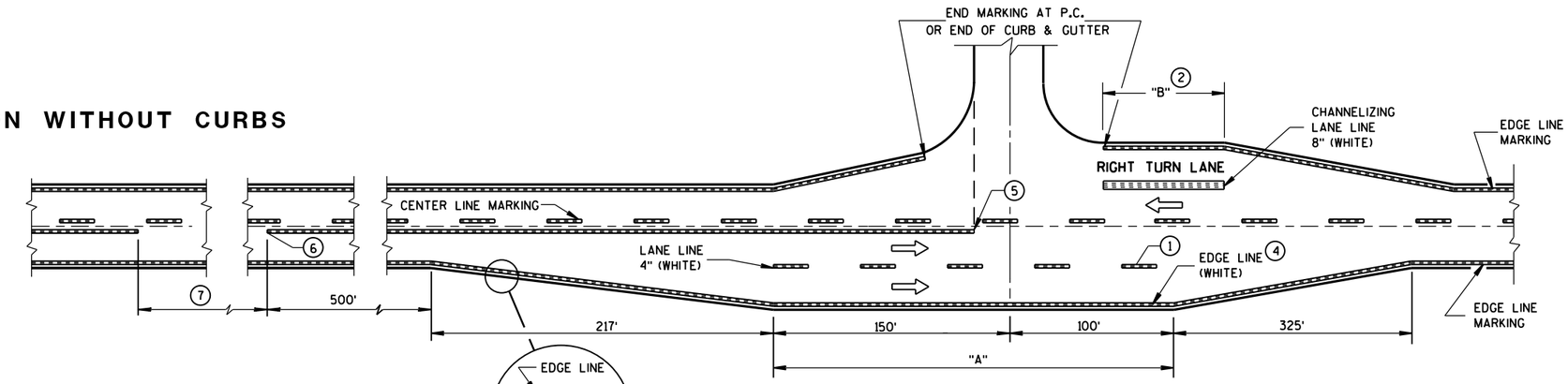
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

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

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

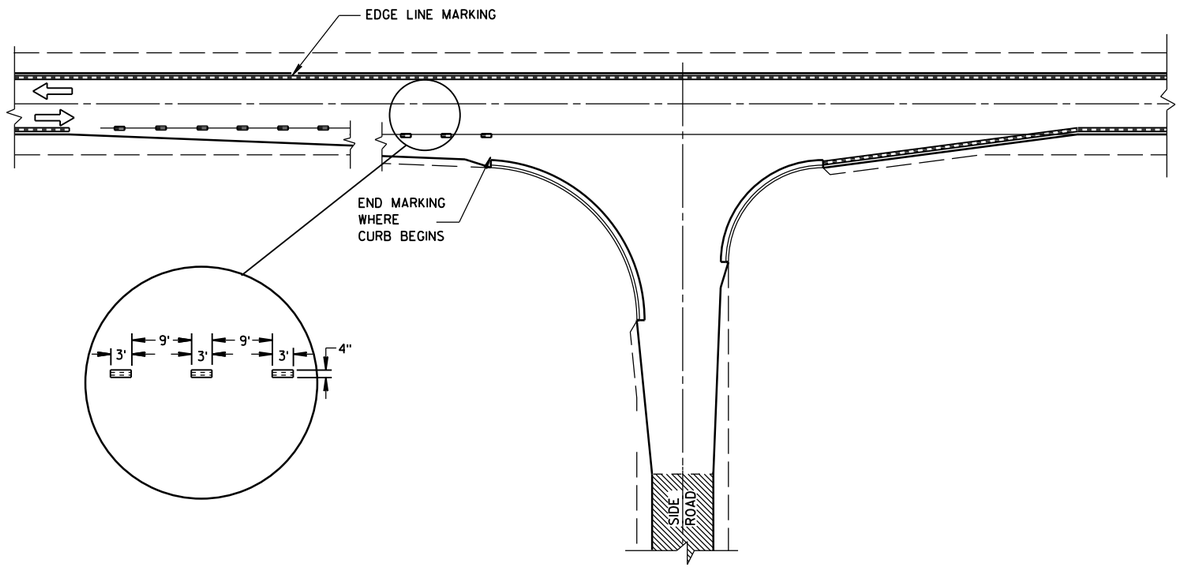
(7)

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



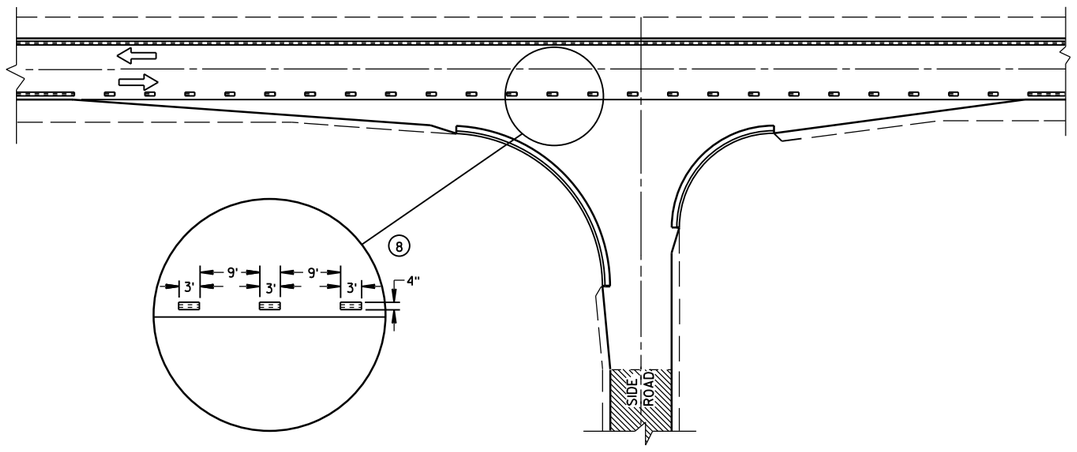
MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



MINOR INTERSECTION WITH CURBS

(TYPICAL MARKING)



MINOR INTERSECTION WITH CURBS

(3) (FOR SPECIAL CONDITIONS AS SPECIFIED)

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

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

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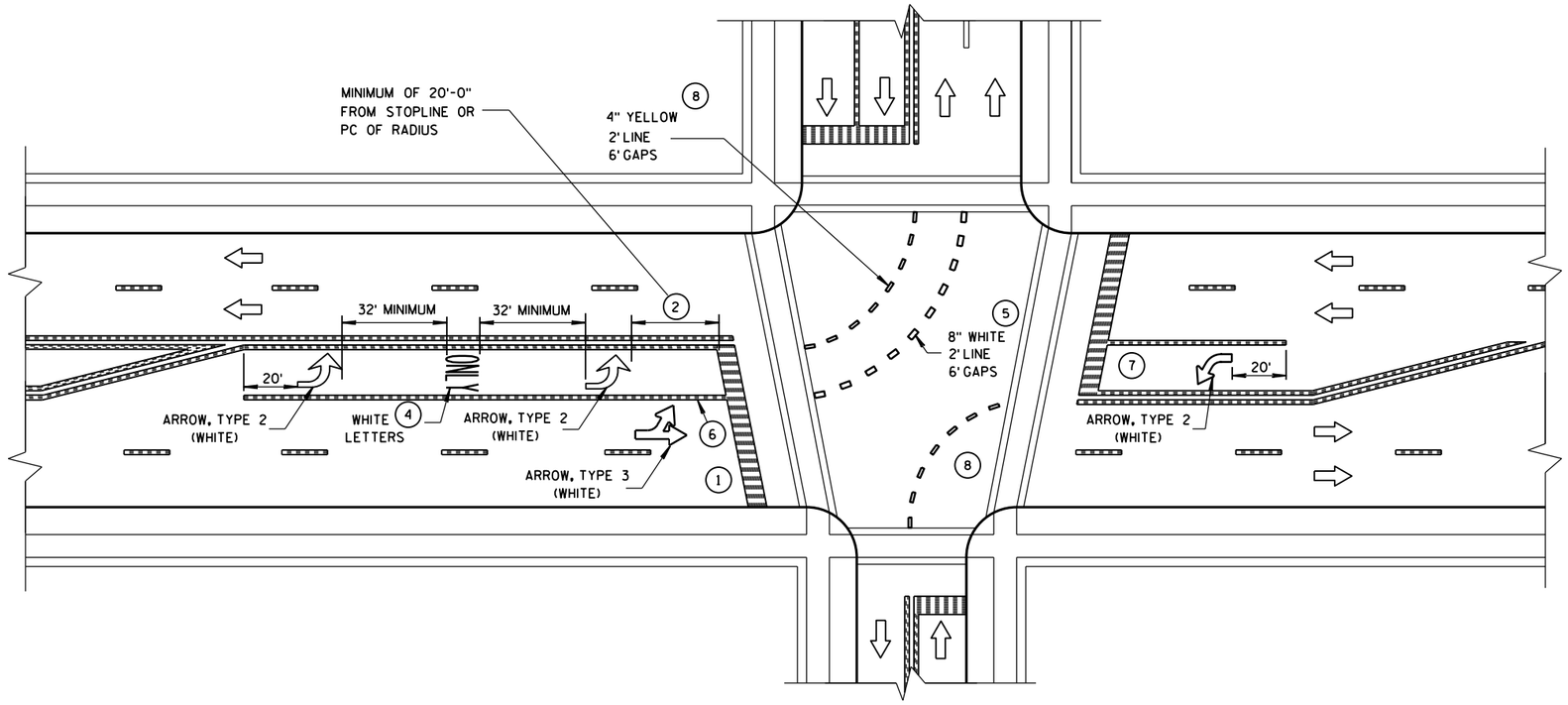
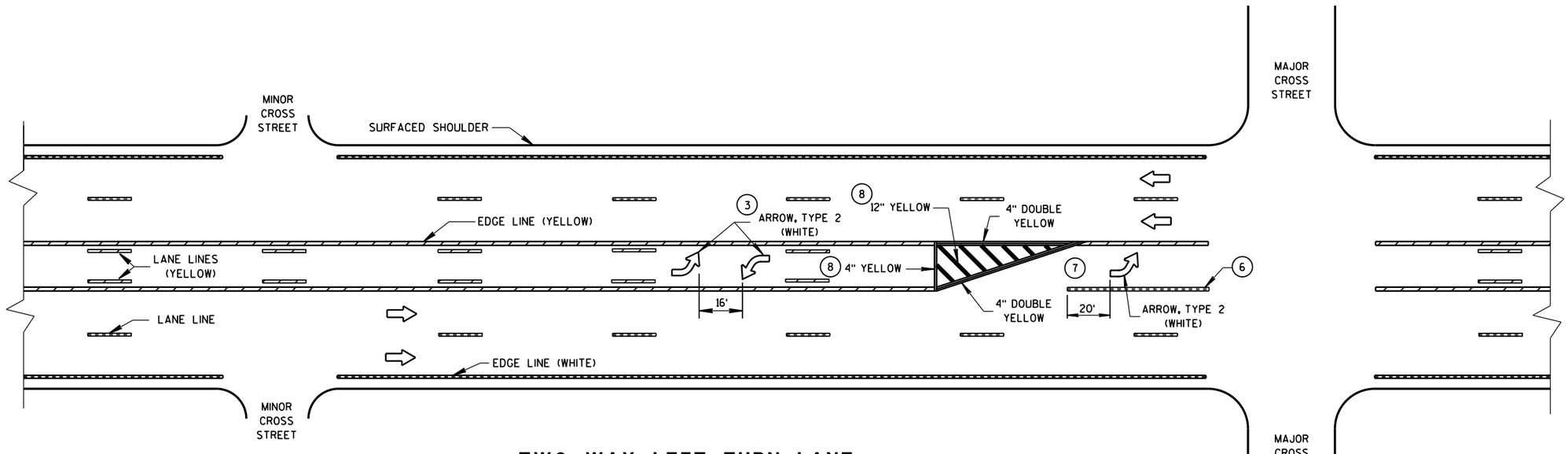
S.D.D. 15 C 8-16b



GENERAL NOTES

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

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TWO WAY LEFT TURN LANE

PAVEMENT MARKING (LEFT TURN LANE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

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

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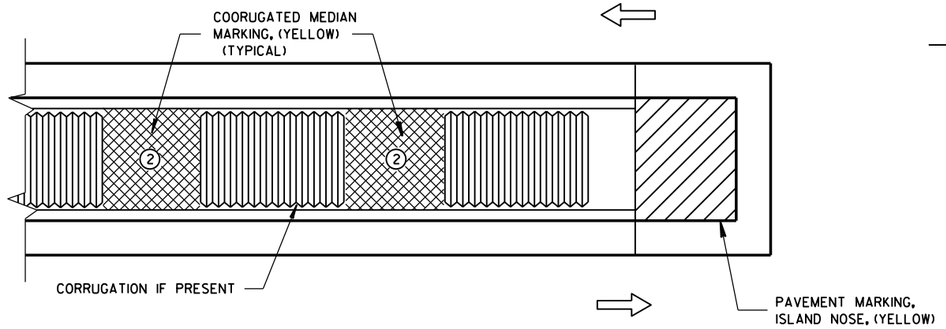
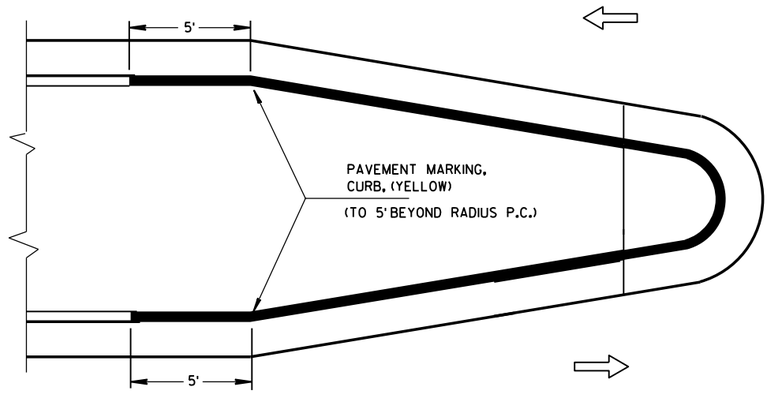
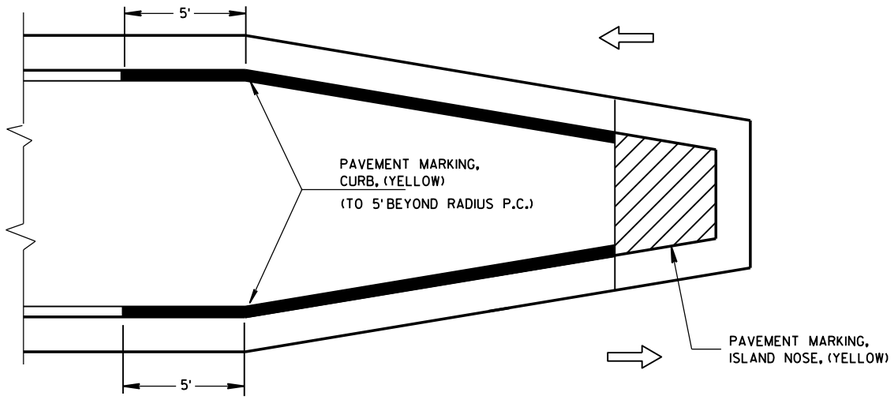
S.D.D. 15 C 8-16e



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

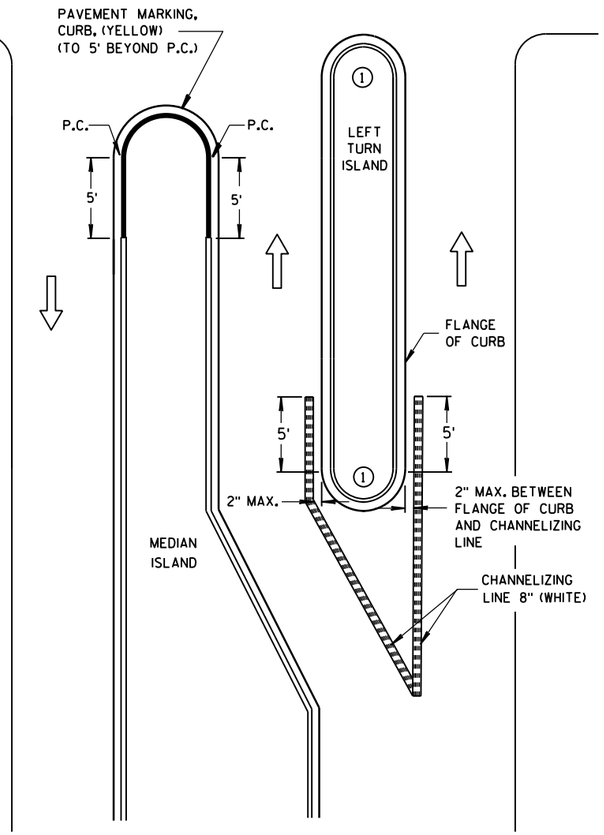


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

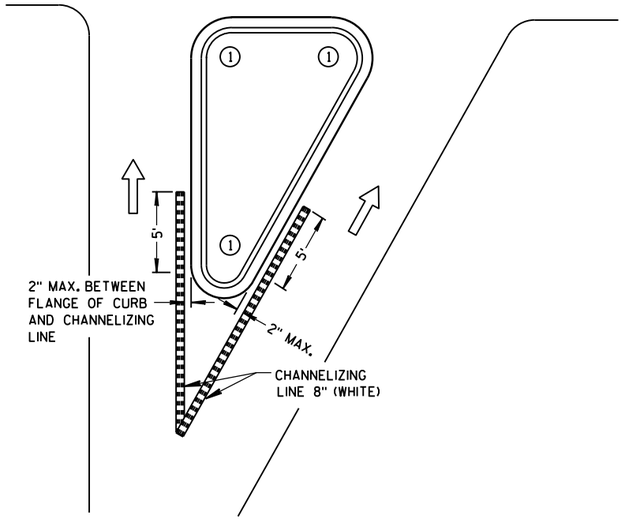


LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

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

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



RIGHT TURN ISLAND

LEGEND

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

PAVEMENT MARKING
(ISLANDS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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

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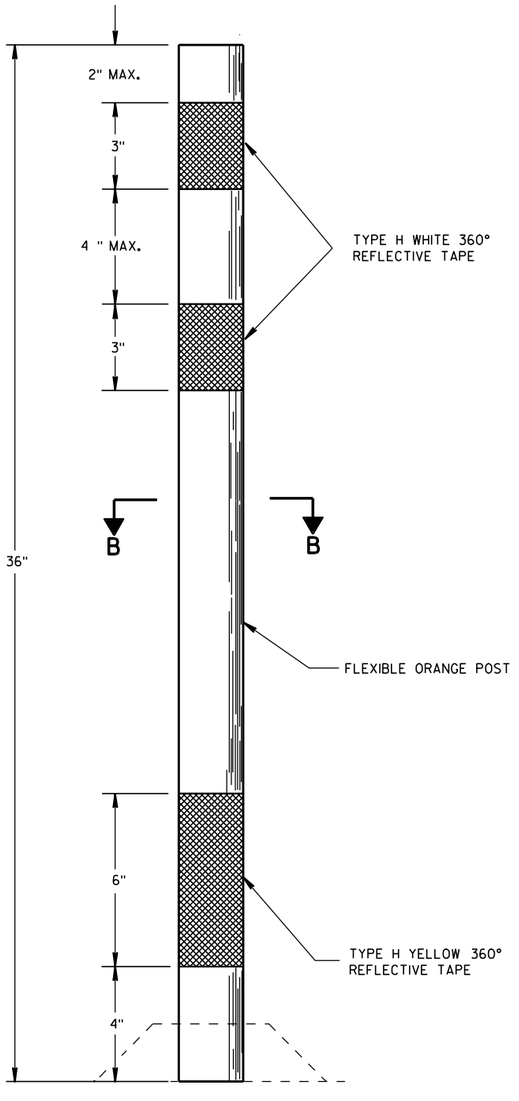
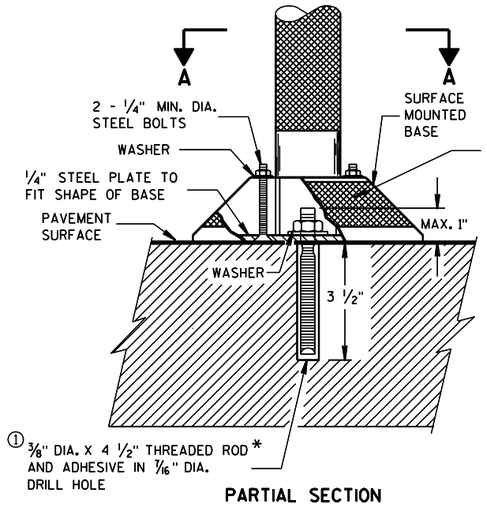
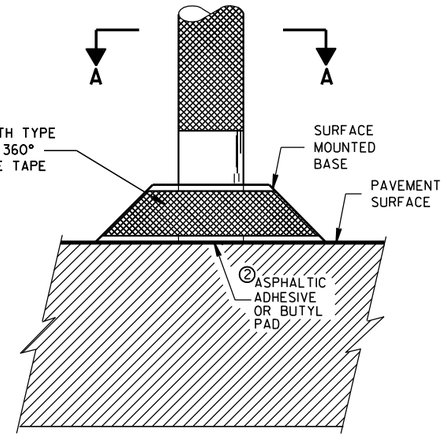
S.D.D. 15 C 8-16f



FLEXIBLE TUBULAR MARKER POST



PARTIAL SECTION TO SHOW BOLTS



POST BASES ON NEW OR EXISTING PAVEMENT

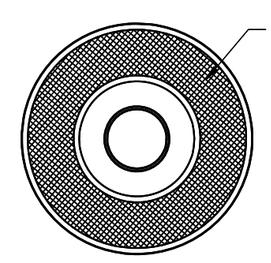
GENERAL NOTES

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

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

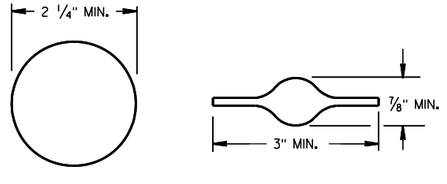
① THREADED ROD SHALL BE MACHINED DOWN TO 0.280 INCH DIA. 1 1/4 INCHES FROM THE TOP.

② THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.



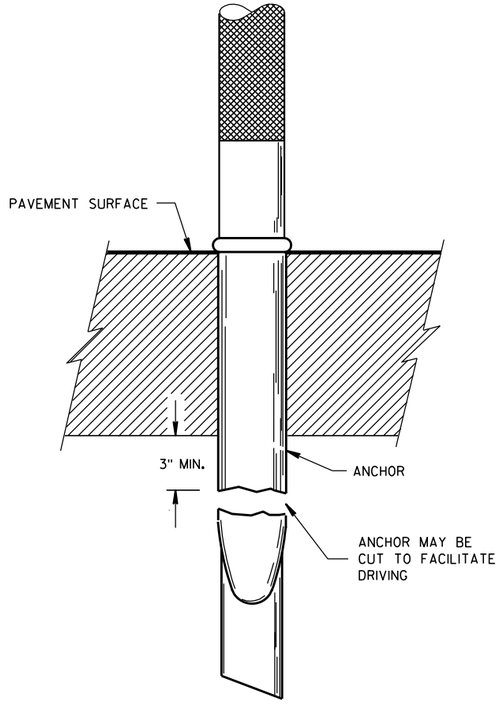
SECTION A-A

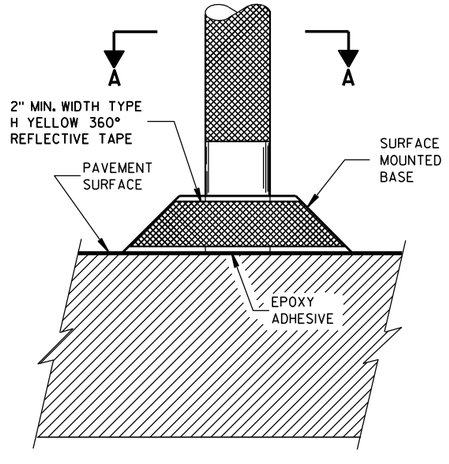
SURFACE MOUNTED BASE



SECTION B-B

ALTERNATIVE SHAPES





POST ANCHOR AND BASE ON PAVEMENT WHICH WILL BE REMOVED

FLEXIBLE TUBULAR MARKER POST, ANCHOR & BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

2/17/94 DATE

/S/ Chester J. [illegible] DIRECTOR, OFFICE O 277

FHWA

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S.D.D. 15 C 11-5

6

S.D.D. 15 C 11-5

TWO-LANE ROADWAY

SYMBOLS

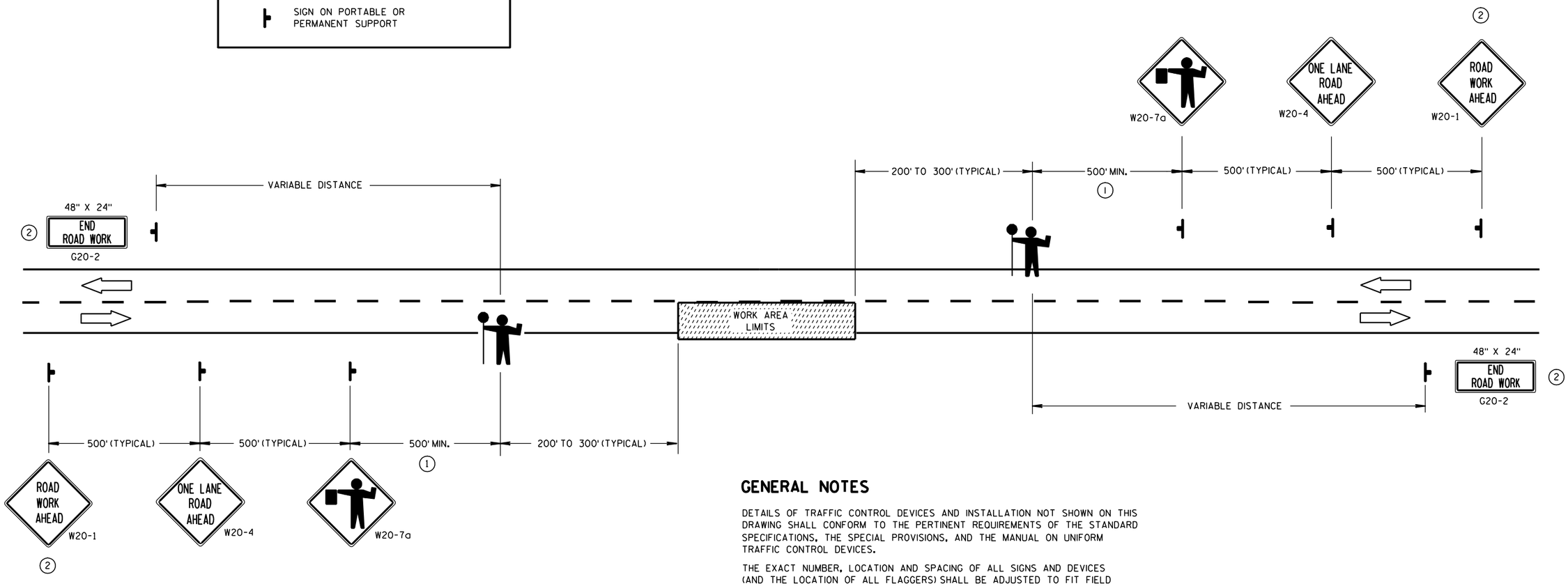
WORK AREA

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

SIGN ON PORTABLE OR PERMANENT SUPPORT

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, THE "FLAGGER AHEAD", THE "ROAD WORK AHEAD" AND THE ONE LANE ROAD AHEAD" SIGNS SHALL BE COVERED OR REMOVED AND THE HIGHWAY RESTORED TO NORMAL OPERATION.

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

9/5/06 — DATE

/S/ Thomas N. Nathaam — STATE TRAFFIC ENGINEER

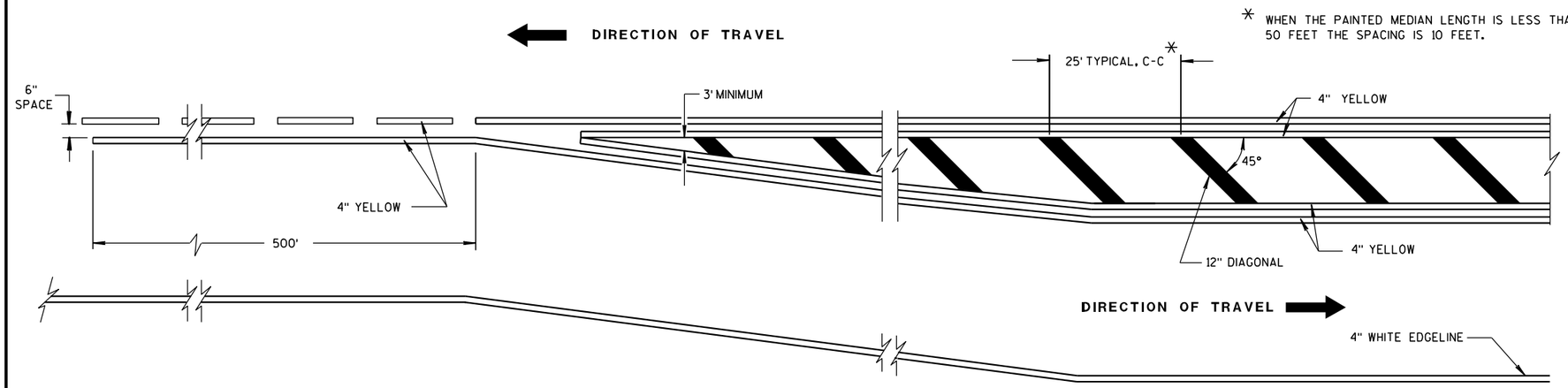
FHWA

6

S.D.D. 15 C 12-3

6

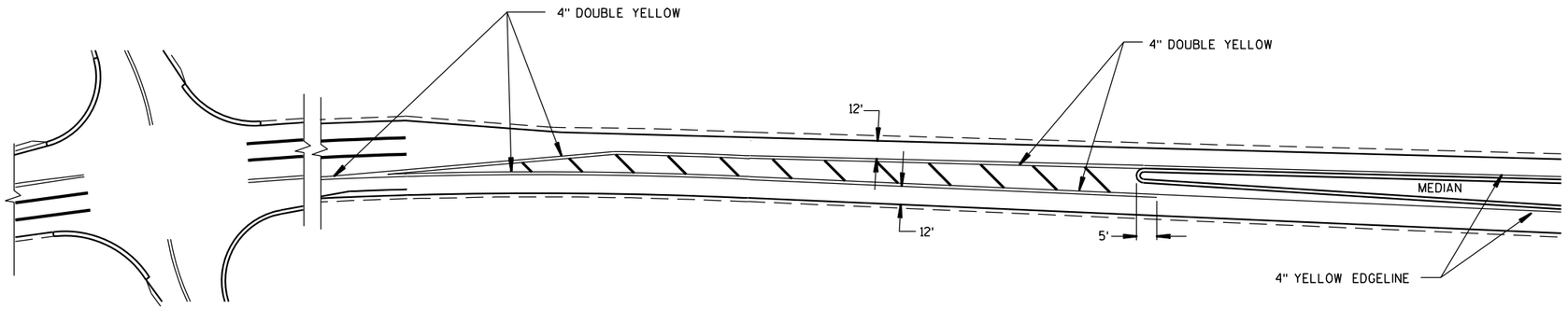
S.D.D. 15 C 12-3



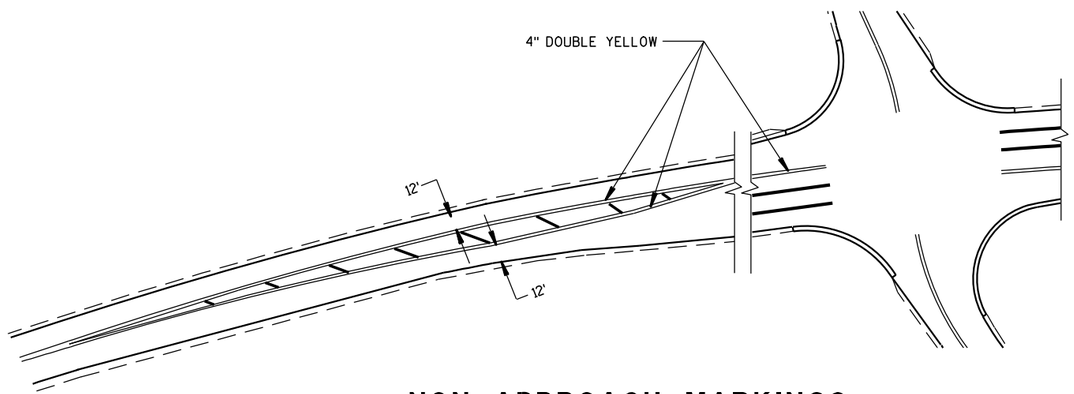
MEDIAN ISLAND DETAIL

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 279 IGN
FHWA	

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S.D.D. 15 C 18-3

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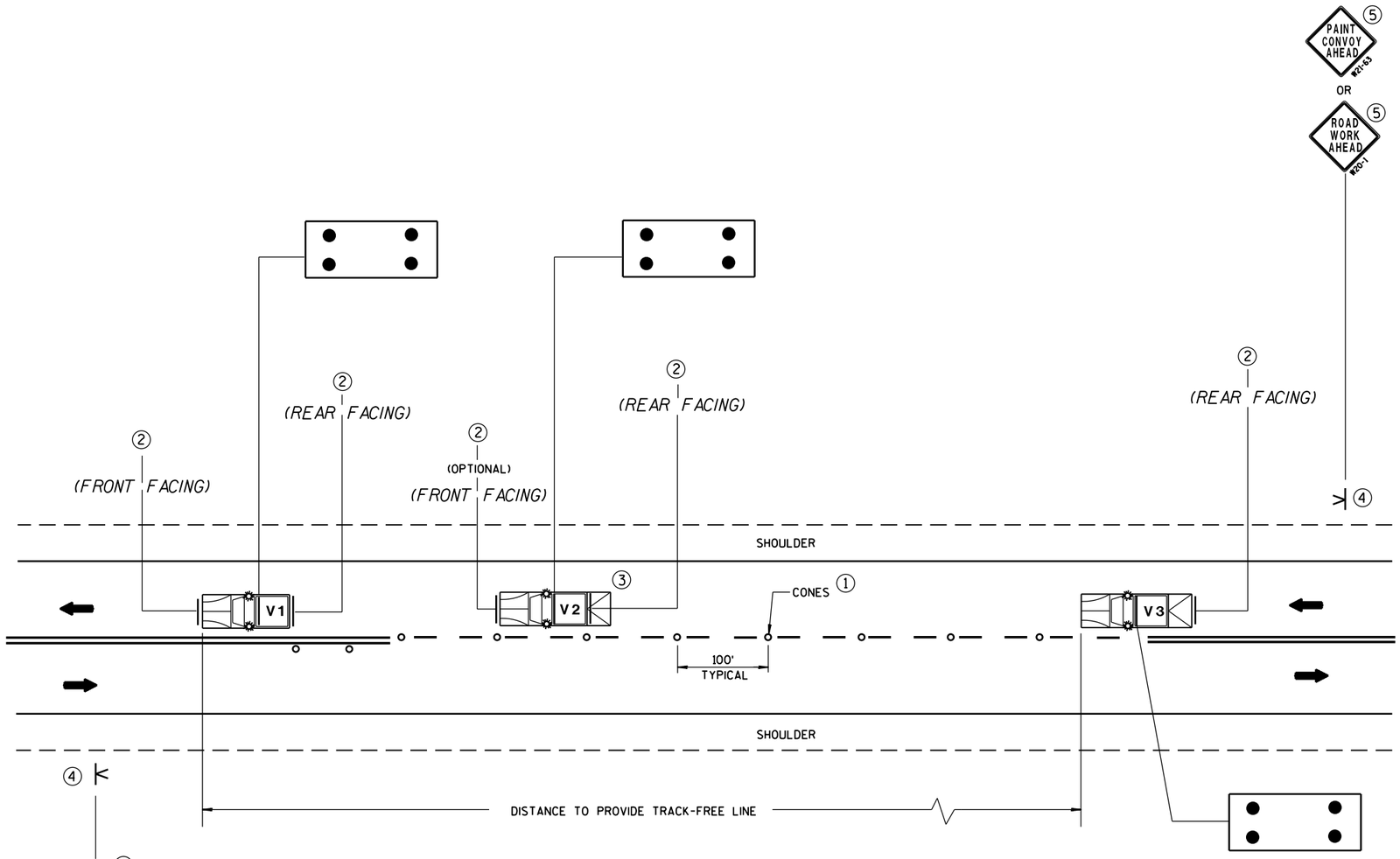
S.D.D. 15 C 18-3



GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE SPECIFIED.

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE MARKING.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

(1) CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

(2) USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.

WET PAINT W21-64 OR WET PAINT W21-64

(3) OPTIONAL TRUCK-MOUNTED ATTENUATOR.

(4) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

(5) IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

LEGEND

V1	LEAD VEHICLE
V2	SHADOW VEHICLE
V3	TRAIL VEHICLE WITH TMA
TMA	TRUCK-MOUNTED ATTENUATOR
	SIGN ON PORTABLE SUPPORT
	DIRECTION OF TRAVEL
	CONES
	FLASHING ARROW PANEL (CAUTION)

MOVING PAVEMENT MARKING OPERATIONS
TWO-LANE TWO-WAY ROADWAY

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
12/6/2011 DATE	/S/ Thomas N. Notbohm STATE TRAFFIC ENGINEER
FHWA	

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S.D.D. 15 C 19-1a

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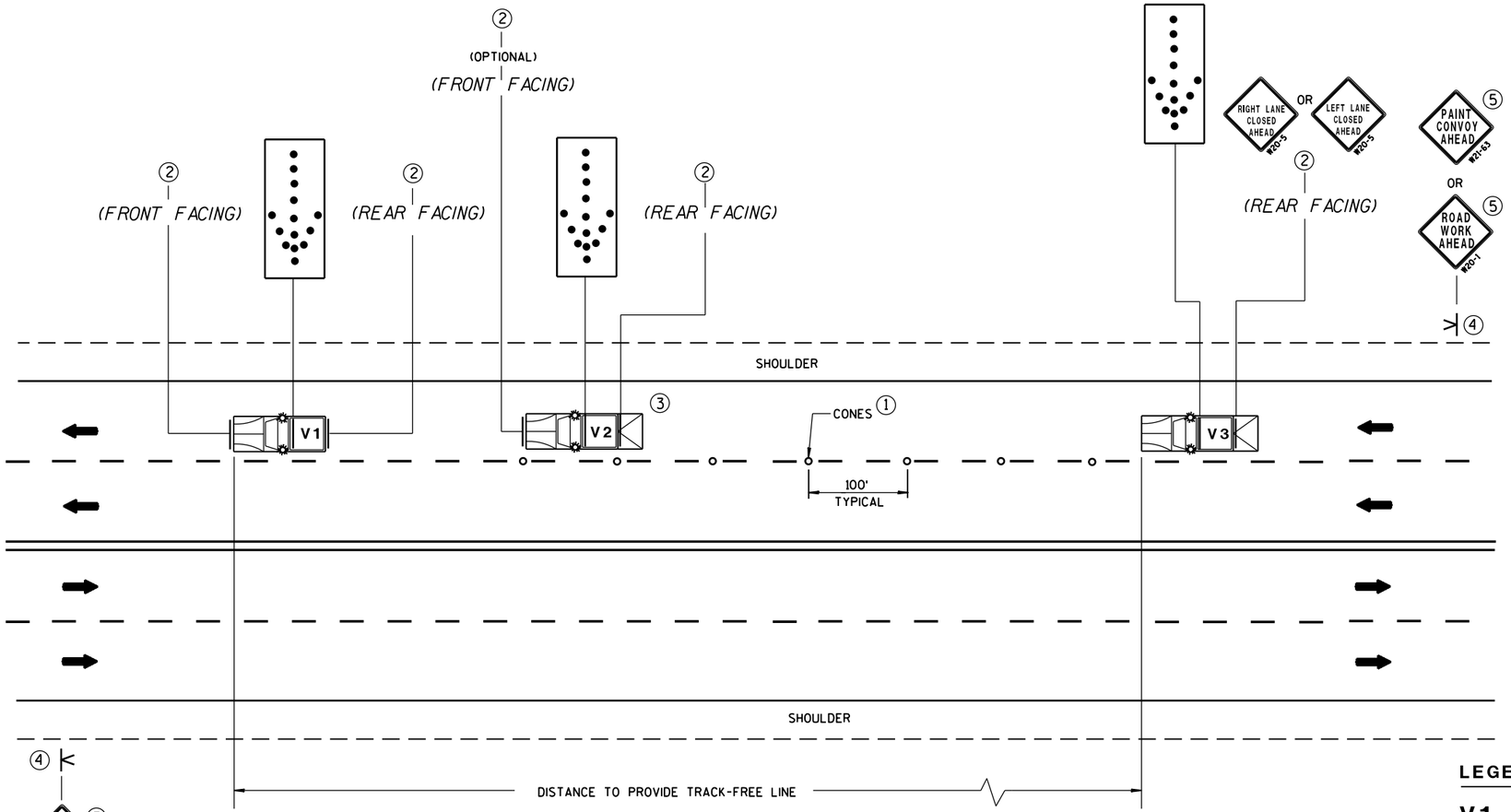
S.D.D. 15 C 19-1a



MOVING PAVEMENT MARKING OPERATIONS
MULTI-LANE UNDIVIDED 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.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE OR LANELINE MARKING FOR MULTILANE UNDIVIDED 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 APPROXIMATELY EVERY THREE MILES.

(5) IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

LEGEND

V1	LEAD VEHICLE
V2	SHADOW VEHICLE
V3	TRAIL VEHICLE WITH TMA
TMA	TRUCK-MOUNTED ATTENUATOR
	SIGN ON PORTABLE SUPPORT
	DIRECTION OF TRAVEL
	CONES
	FLASHING ARROW PANEL (MERGE)

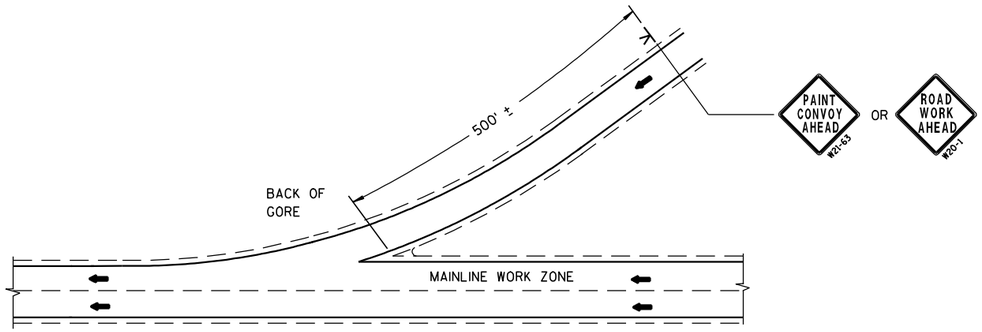
MOVING PAVEMENT MARKING OPERATION
MULTI-LANE UNDIVIDED ROADWAY

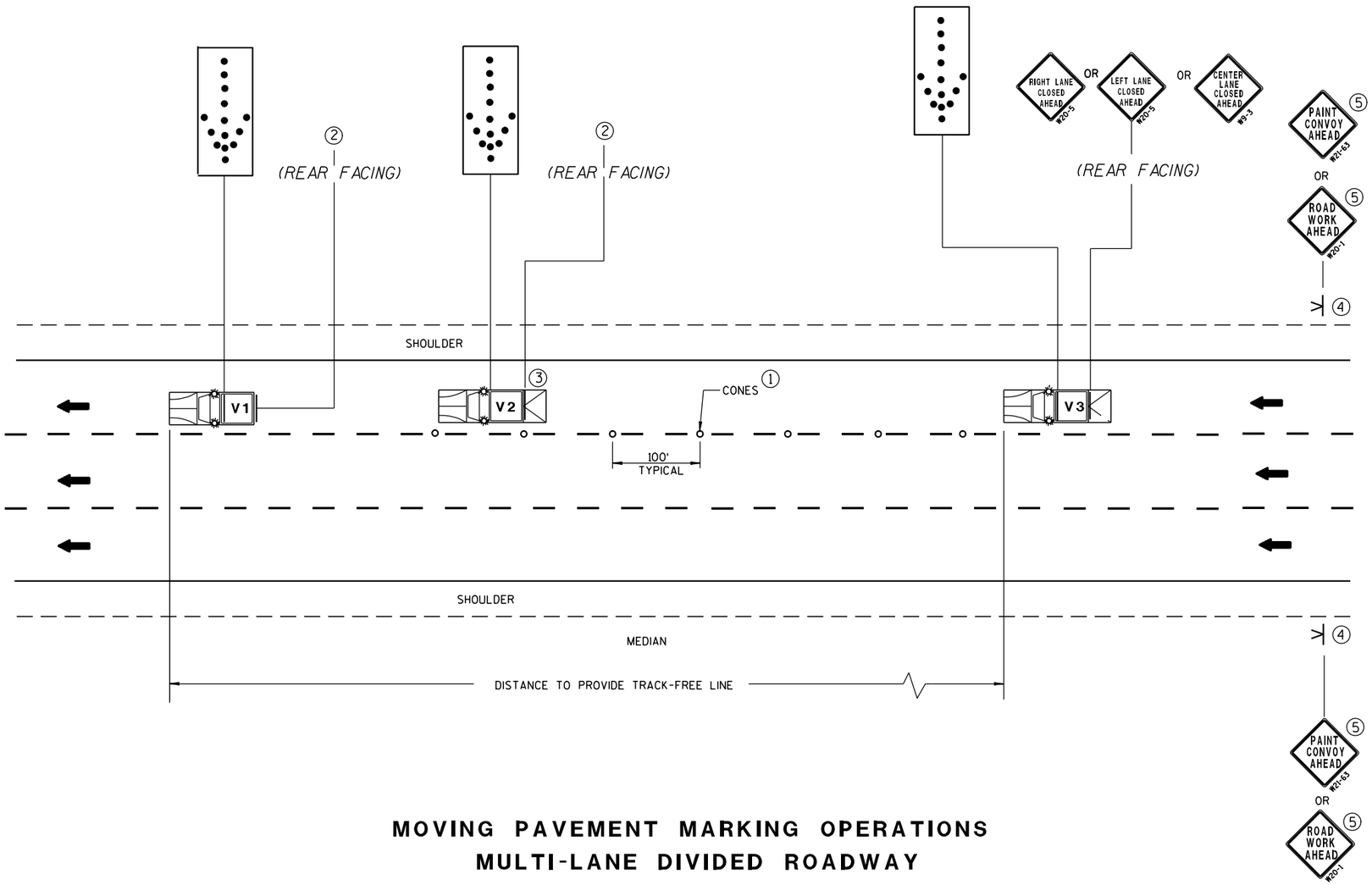
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/6/2011 DATE
/S/ Thomas N. Notbohm STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 C 19-1b





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 PORTABLE SUPPORT
	DIRECTION OF TRAVEL
	CONES
	FLASHING ARROW PANEL (MERGE)

MOVING PAVEMENT MARKING OPERATION
MULTI-LANE DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

12/6/2011 DATE

/S/ Thomas N. Nothohm
STATE TRAFFIC ENGINEER

282 SIGN

FHWA

6

S.D.D. 15 C 19-1c

6

S.D.D. 15 C 19-1c

GENERAL NOTES

SIGNING AND MARKING IS SHOWN AS TYPICAL PLACEMENT. FIELD CONDITIONS MAY DICTATE CHANGES IN SIGNING AND MARKING PLACEMENT.

A DISTANCE DEPENDENT ON SPEED (SEE TABLE)

(1) WRONG WAY PREVENTION SIGNS ARE DISCUSSED IN T G M 2-15-12

(2) REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT

SYMBOLS

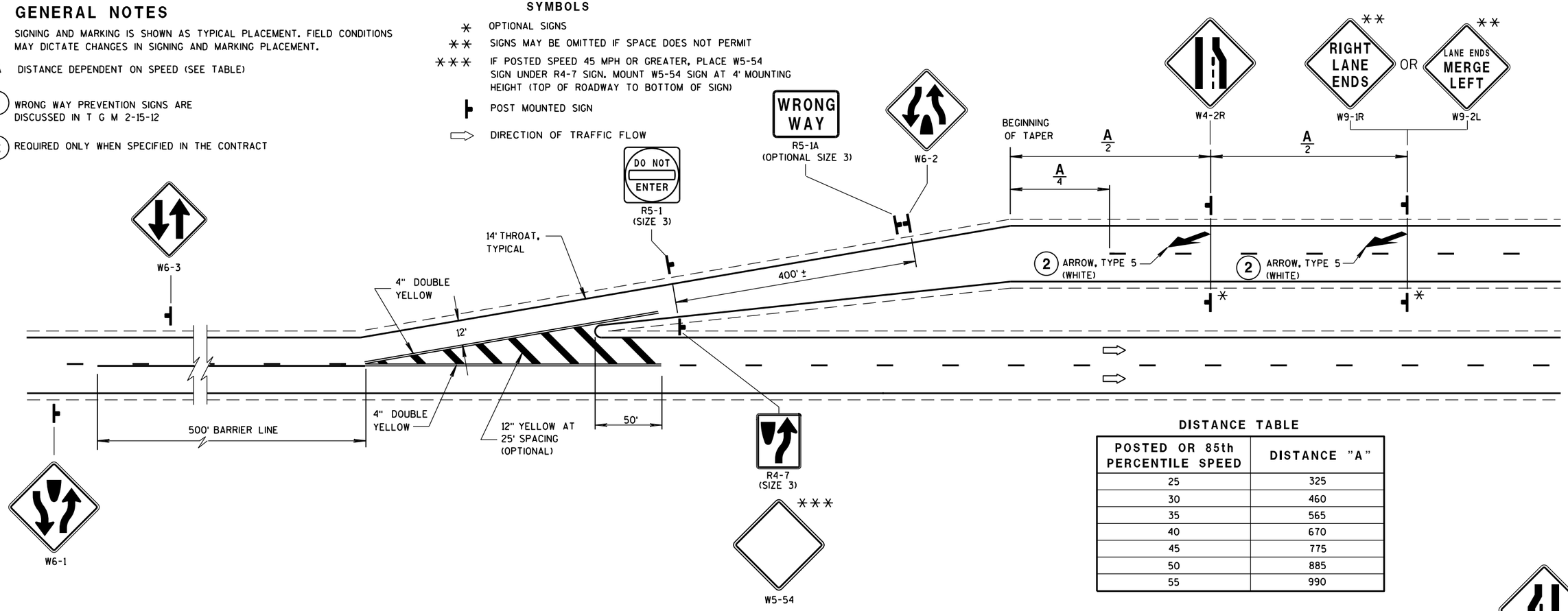
* OPTIONAL SIGNS

** SIGNS MAY BE OMITTED IF SPACE DOES NOT PERMIT

*** IF POSTED SPEED 45 MPH OR GREATER, PLACE W5-54 SIGN UNDER R4-7 SIGN. MOUNT W5-54 SIGN AT 4' MOUNTING HEIGHT (TOP OF ROADWAY TO BOTTOM OF SIGN)

POST MOUNTED SIGN

DIRECTION OF TRAFFIC FLOW



DISTANCE TABLE

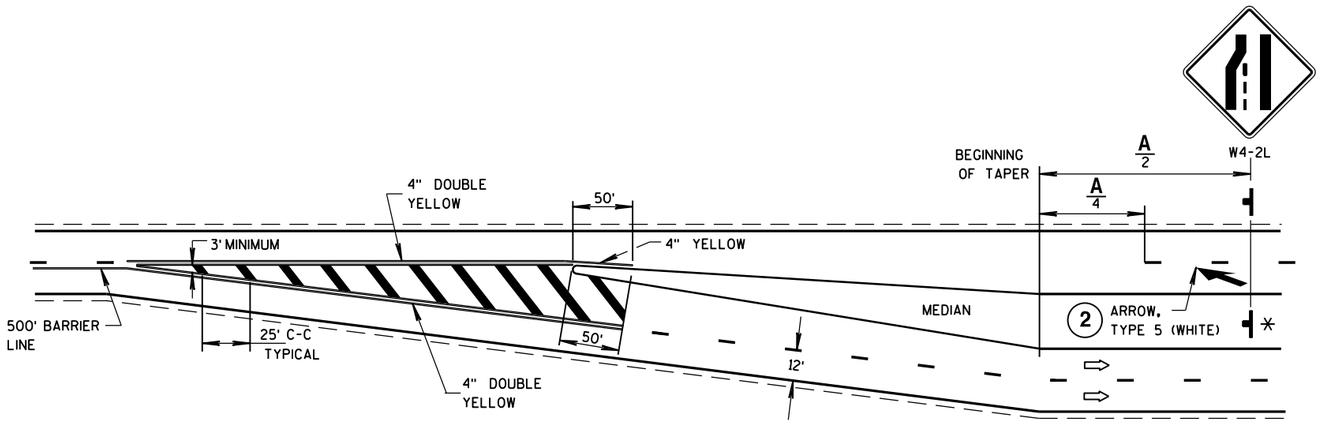
POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
25	325
30	460
35	565
40	670
45	775
50	885
55	990

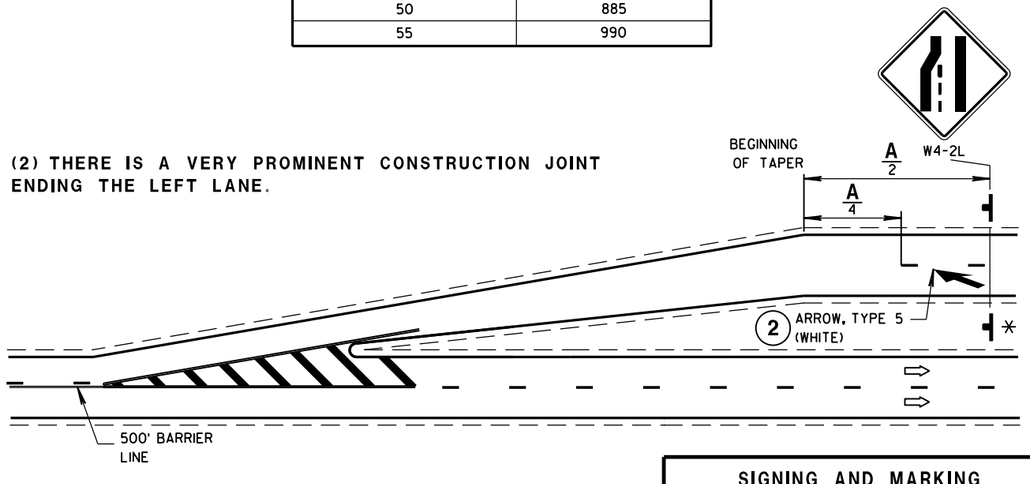
USE W4-2L IF :

(1) THE LEFT LANE IS PUSHED TO THE RIGHT:

OR

(2) THERE IS A VERY PROMINENT CONSTRUCTION JOINT ENDING THE LEFT LANE.





SIGNING AND MARKING
TWO LANE TO FOUR LANE DIVIDED TRANSITIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

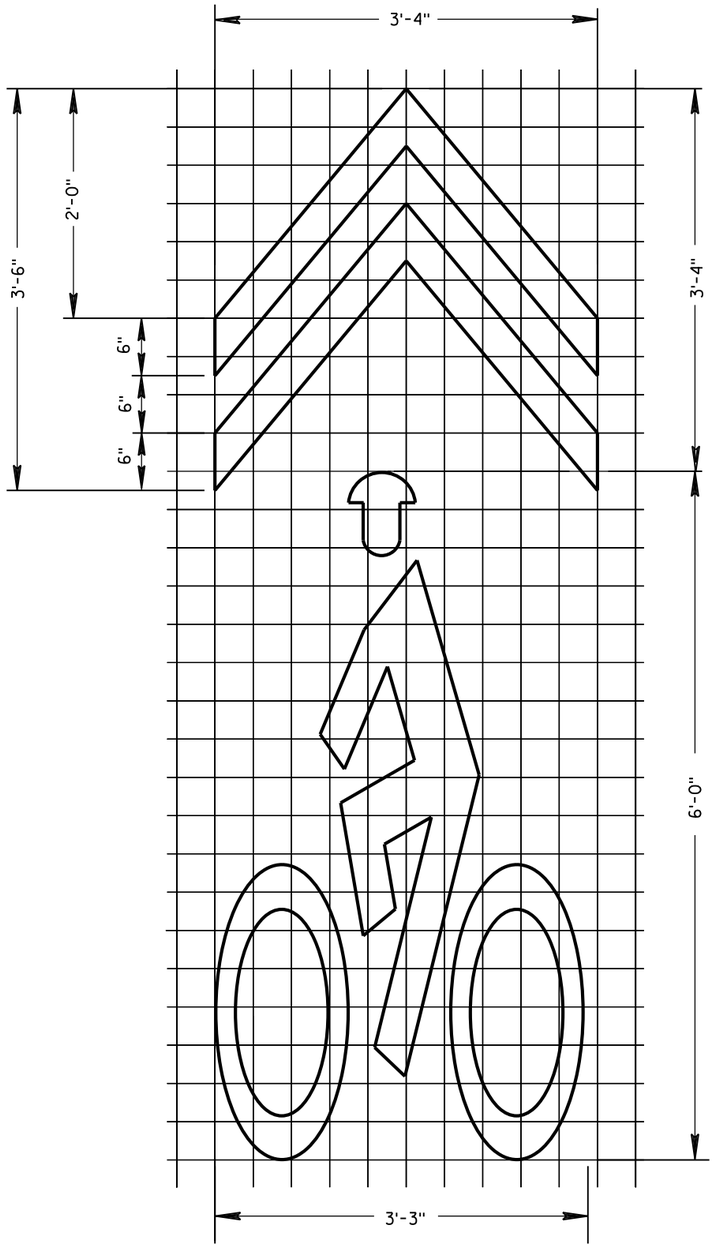
5/3/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC EN

FHWA

6

S.D.D. 15 C 21-5



BIKE SYMBOL FOR SHARED LANE

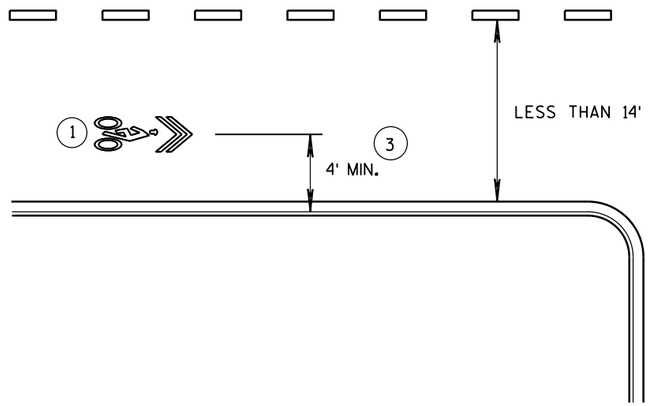
GENERAL NOTES

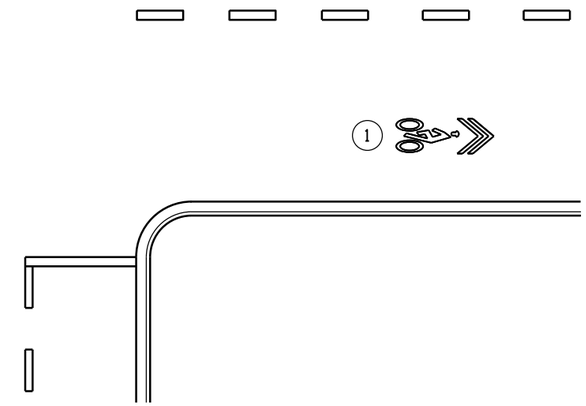
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES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

(1) SPACED A MAXIMUM OF 250 FEET.

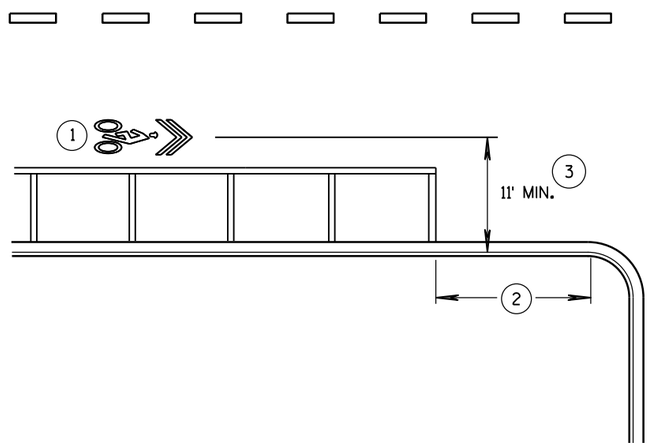
(2) 20 FOOT MINIMUM FROM CURB RADIUS.

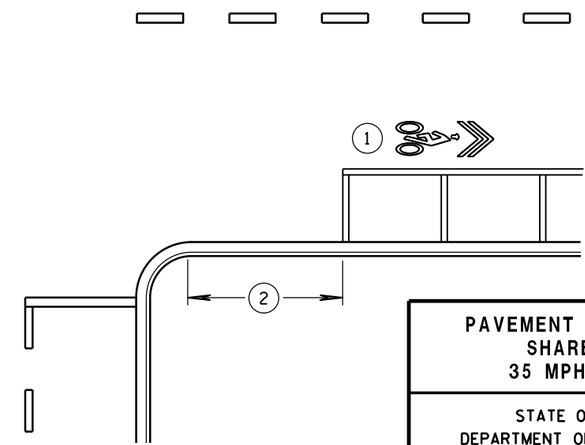
(3) OR TO EDGE OF PAVEMENT WITHOUT CURB.





WITHOUT PARKING





WITH PARKING

PAVEMENT MARKING FOR
SHARED LANE
35 MPH OR LESS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-30-2013
DATE

/S/ Travis Feltes
STATE TRAFFIC EN

FHWA

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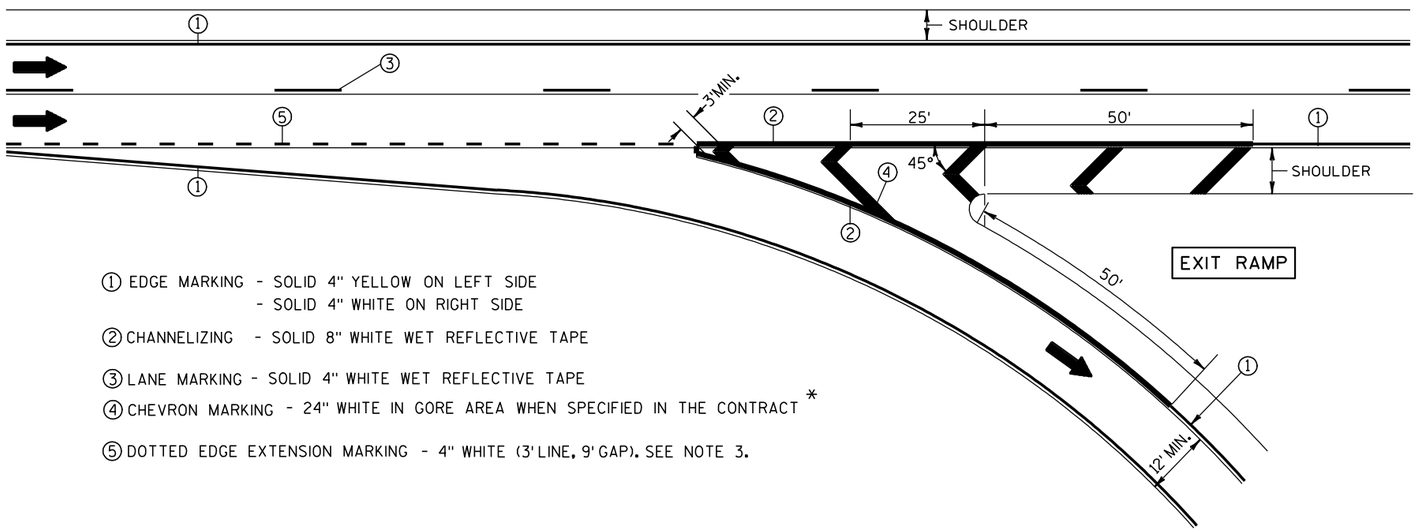
S.D.D. 15 C 29-3f

6

S.D.D. 15 C 29-3f



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:

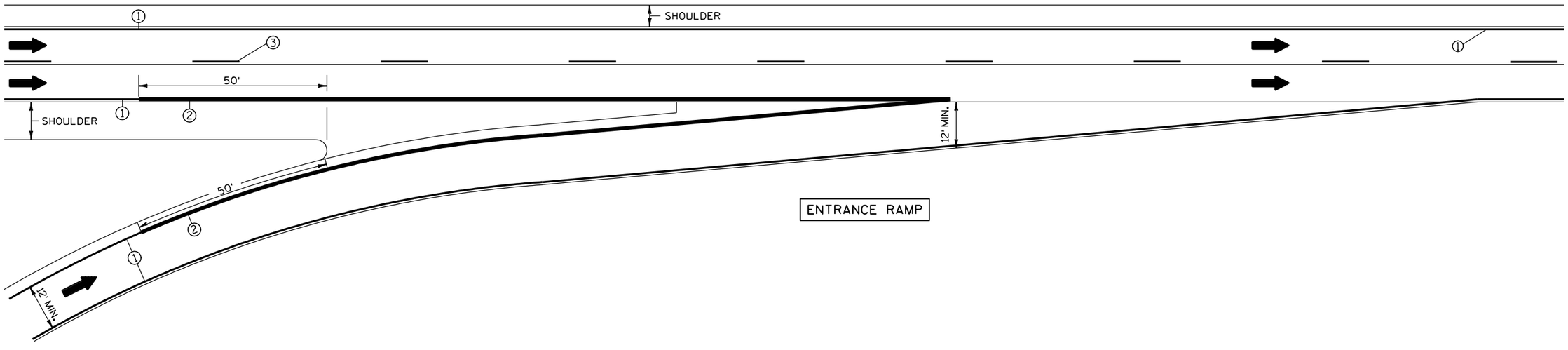
1. ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.

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.



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S.D.D. 15 C 31-1a

PAVEMENT MARKING
(RAMPS AND GORES)

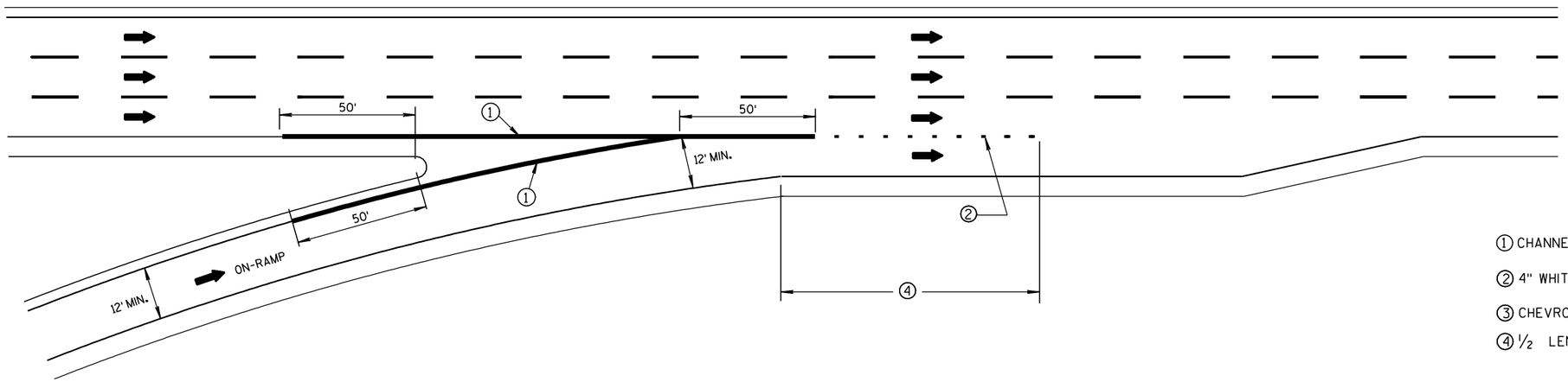
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 15 C 31-1a

NOTES:

1. AHEAD 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. RETRACE EXISTING DIAGONAL MARKINGS.



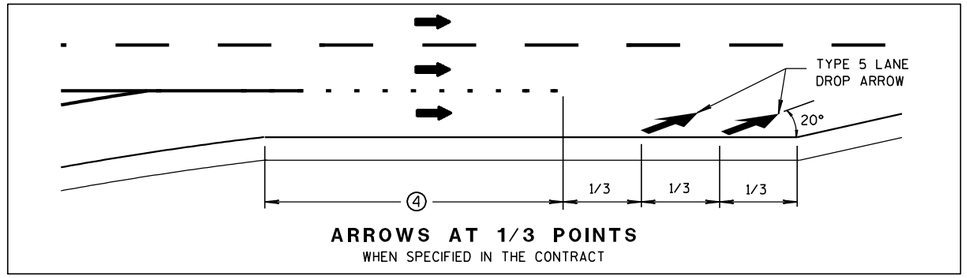
① CHANNELIZING - SOLID 8" WHITE WET REFLECTIVE TAPE IN GORE AREA.

② 4" WHITE (3' LINE, 9' GAP).

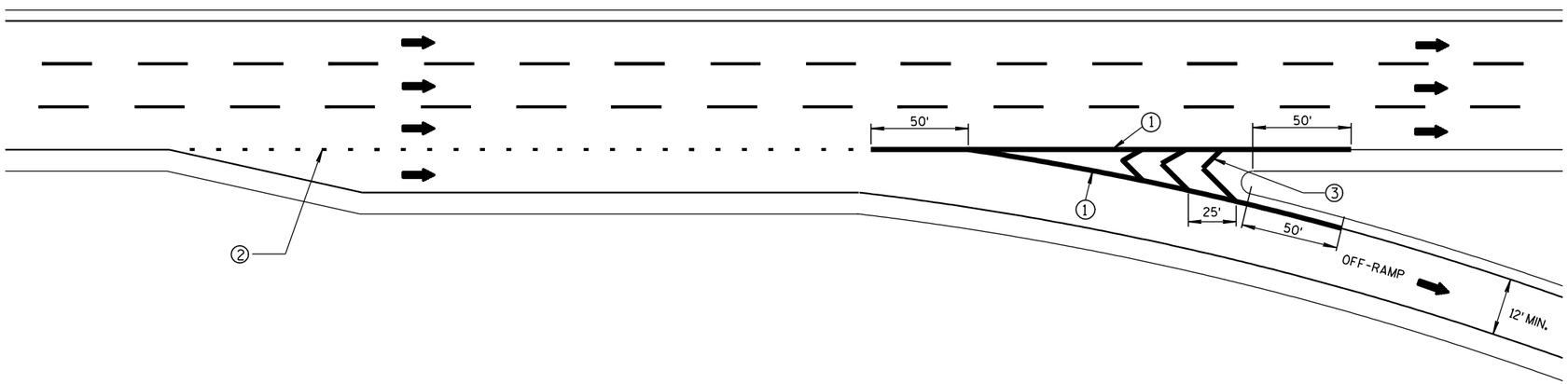
③ CHEVRON MARKING - 24" WHITE WHEN SPECIFIED IN THE CONTRACT.

④ ½ LENGTH OF FULL WIDTH ACCELERATION LANE.

SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL ENTRANCE-RAMP



ARROWS AT 1/3 POINTS
WHEN SPECIFIED IN THE CONTRACT



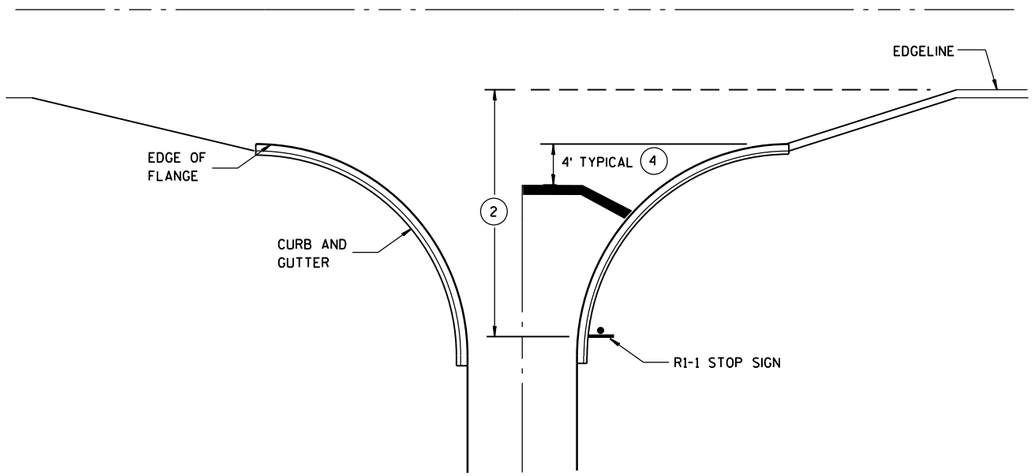
SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL EXIT-RAMP

PAVEMENT MARKING FOR PARALLEL ON-RAMP AND PARALLEL OFF-RAMP

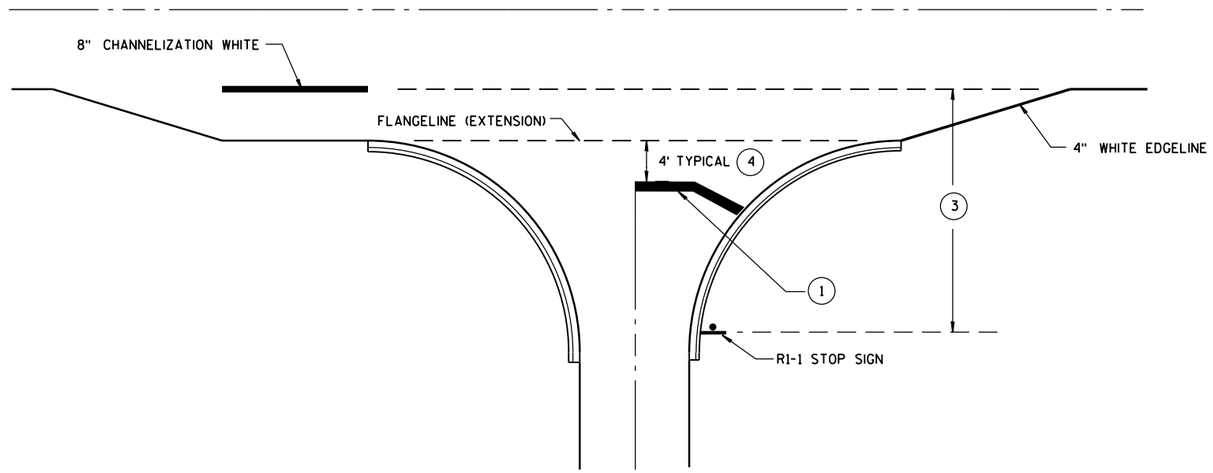
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/23/2011 DATE
/S/ Thomas N. Nothnagel STATE TRAFFIC ENGINEER 286 SIGN
FHWA

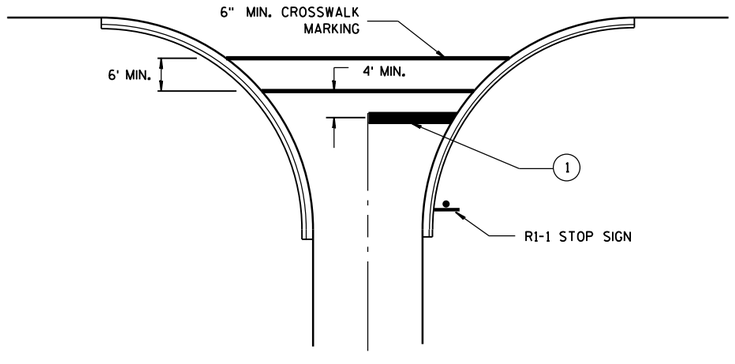
6
S.D.D. 15 C 31-1d



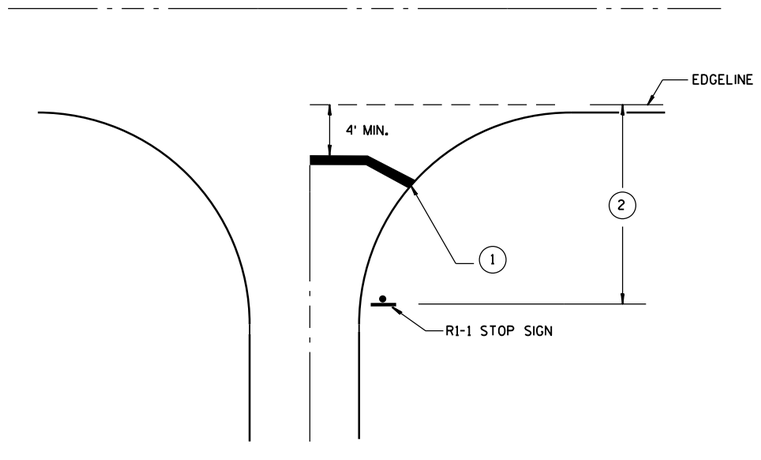
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

GENERAL NOTES

1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE THAN NO STOP LINE IS REQUIRED.
3. IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
4. MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES.

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4/30/2013
DATE

/S/ Travis Feltes
STATE TRAFFIC E

FHWA

6

S.D.D. 15 C 33-1

LEGEND

- POST WITH ATTACHED SIGN
- DRUM WITH WARNING LIGHT (TYPE C)
- DRUM
- ARROW BOARD
- REMOVING PAVEMENT MARKING
- TEMPORARY PRECAST CONCRETE BARRIER
- DIRECTION OF TRAFFIC
- WORK ZONE

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 AND 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 DRUMS.

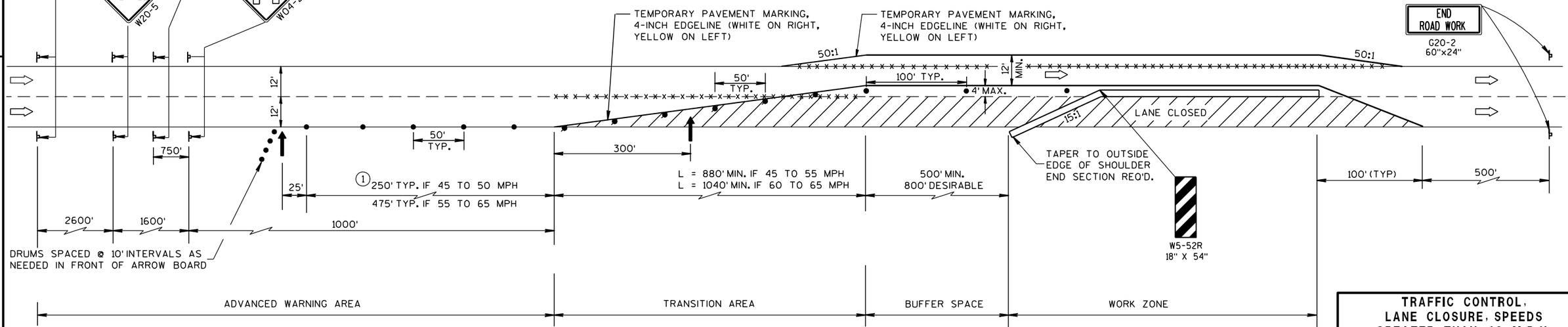
FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 7 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.

NO EQUIPMENT OR MATERIAL SHALL BE LOCATED WITHIN THE WORK ZONE OTHER THAN BEHIND THE PRECAST CONCRETE BARRIER.



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7-14-94 DATE
/S/ Chester J. [illegible]
DIRECTOR, OFFICE OF 288 IC
FHWA

6

S.D.D. 15 D 3-1

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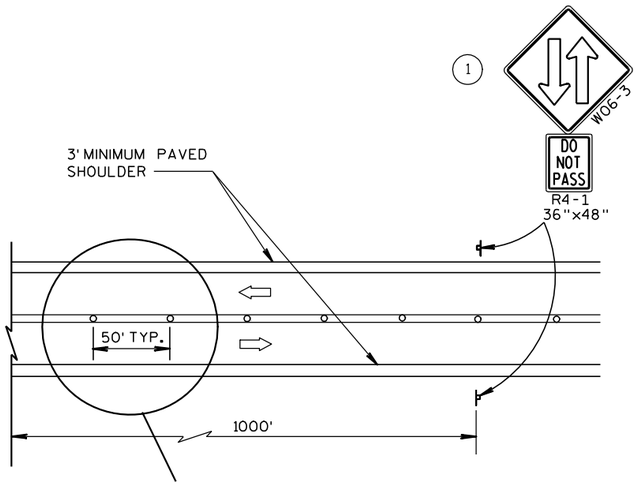
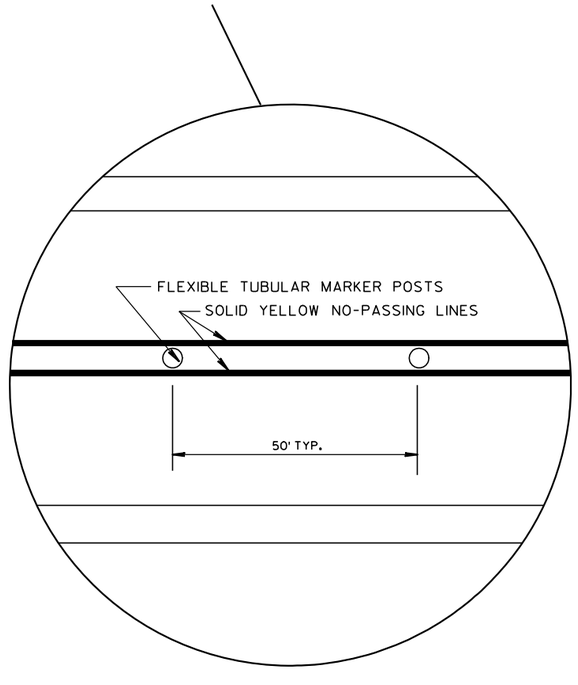
S.D.D. 15 D 3-1



TWO LANE, TWO WAY OPERATION



LEGEND

- POST WITH ATTACHED SIGN
- FLEXIBLE TUBULAR MARKER AND BASE
- DIRECTION OF TRAFFIC

GENERAL NOTES :

ALL SIGNS ARE 48"x48" UNLESS OTHERS NOTED.

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

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

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

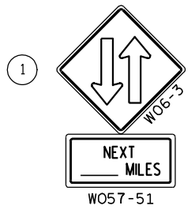
THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.

A SINGLE ROW OF FLEXIBLE TUBULAR MARKERS ON CENTERLINE EXTEND FOR THE ENTIRE LENGTH OF TWO-WAY TRAFFIC @ 50' SPACING.

COVER EXISTING CENTERLINE STRIPE WITH TEMPORARY PAVEMENT MARKING, 4-INCH DOUBLE YELLOW.

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.



W057-51
48"x24"

R4-1
36"x48"

THE W06-3 WITH THE W057-51 SHALL BE LOCATED 200' BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP AND/OR 500' BEYOND ANY SIDEROAD. THE W06-3 WITH THE R4-1 SHALL BE LOCATED 1000' BEYOND THE W06-3 AND THE W057-51 AND THE SIGNS SHALL BE ALTERNATED WITH ONE MILE INTERVALS BETWEEN W06-3 SIGNS.

TRAFFIC CONTROL, TWO LANE TWO WAY OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12-4-95
DATE

/S/ Chester J. [illegible]
DIRECTOR, OFFICE OF

FHWA

6

S.D.D. 15 D 6-2

SYMBOLS

IC/C	TYPE III BARRICADE (8' EQUIVALENT) WITH/WITHOUT SIGN
•	DRUM
⊢	POST MOUNTED SIGN
(A)	WARNING LIGHT, TYPE A (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.

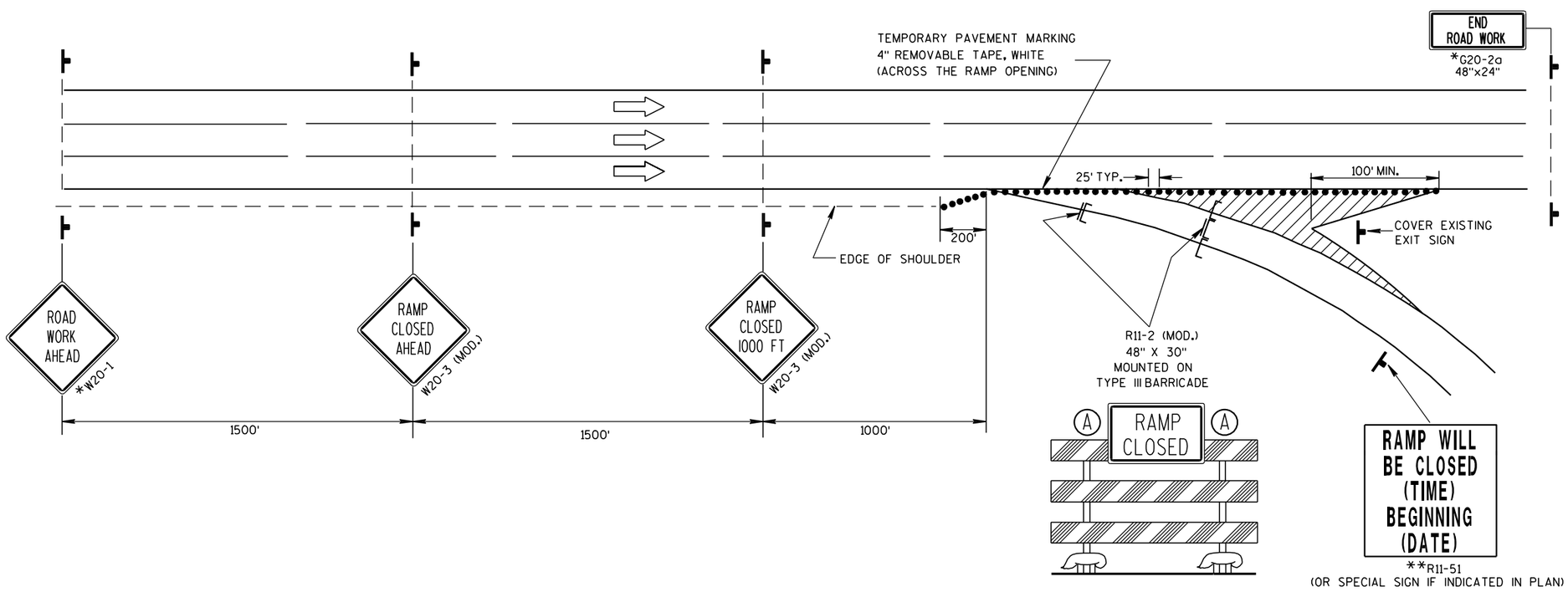
PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF RAMP CLOSURE IS TO BE IN PLACE FOR 7 OR MORE CONTINUOUS DAYS AND NIGHTS.

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.

**USE THE "RAMP WILL BE CLOSED" SIGN IF INDICATED IN MISCELLANEOUS QUANTITIES. PLACE 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

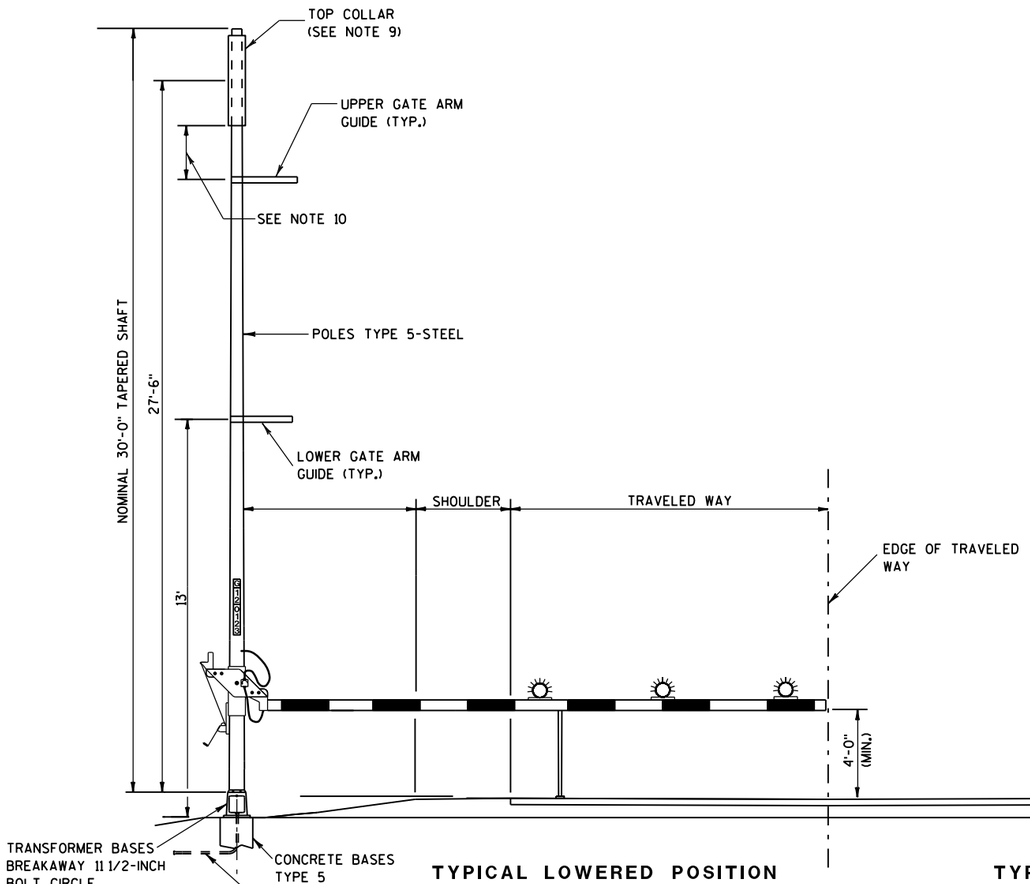
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/23/2000
DATE

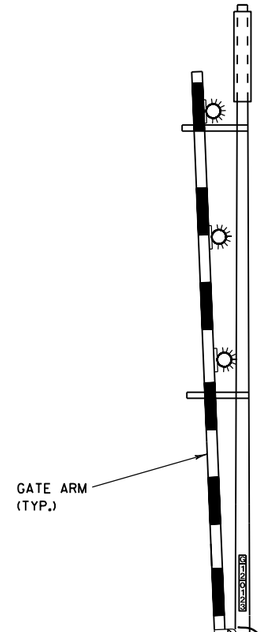
/S/ Chester J. [illegible]
CHIEF SIGNS AND MAR 290 INEER

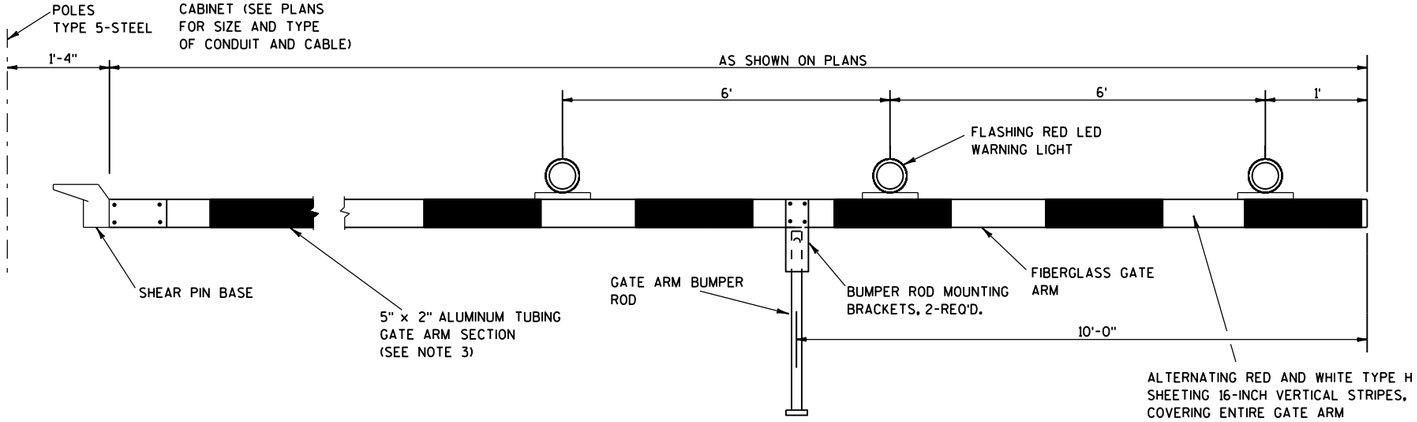
FHWA



TYPICAL LOWERED POSITION

TYPICAL RAISED POSITION



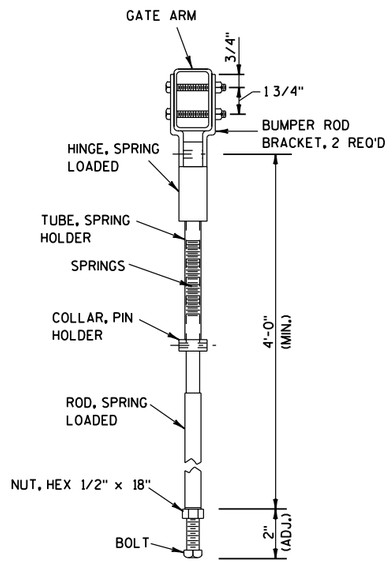


GATE DETAIL

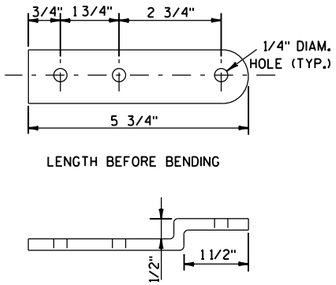
(SOLAR POWER OPTION)

GENERAL NOTES

1. THE LOCATION OF RAMP CLOSURE GATES AND MOUNTING HEIGHT OF GATE ARM PIVOT SHALL BE VERIFIED BY THE ENGINEER.
2. HEIGHT OF GATE ARM GUIDES MAY BE VARIED AS REQUIRED FOR WARNING LIGHT CLEARANCE.
3. FIBERGLASS/ALUMINUM GATE ARM AND SHEAR PIN BASE SHALL BE SUPPLIED BY THE SAME VENDOR.
4. GATE ARM TO BE MOUNTED ON PROPOSED POLE AS INDICATED ON THE PLANS. PROPOSED POLE SHALL BE TYPE 5 POLE.
5. LOCATION OF THE CONCRETE BASE AND LENGTH OF THE GATE ARM WILL BE VERIFIED BY THE ENGINEER TO ENSURE ADEQUATE COVERAGE OF THE TRAVELED LANE.
6. GATE PIVOTS, SUPPORTS AND GUIDES, AND ALL ASSOCIATED HARDWARE SHALL BE GALVANIZED. ALL ROUGH EDGES AND BURRS SHALL BE GROUND SMOOTH PRIOR TO GALVANIZING.
7. ALL EXPOSED BOLT THREADS SHALL BE PAINTED WITH TWO COATS OF ZINC RICH PAINT CONFORMING WITH THE REQUIREMENTS OF ASTM A 780.
8. ANY FIELD DAMAGE TO THE GALVANIZING SHALL BE REPAIRED WITH TWO COATS OF ZINC RICH PAINT CONFORMING WITH THE REQUIREMENTS OF ASTM A 780.
9. A STANDARD LIGHTING LUMINAIRE ARM MAY BE MOUNTED TO THE TYPE 5 POLE IN LIEU OF THE TOP COLLAR.
10. UPPER GATE ARM GUIDE IS TO BE INSTALLED 6 TO 12-INCHES BELOW THE BOTTOM OF THE TOP COLLAR.



GATE ARM BUMPER ROD DETAIL



BUMPER ROD MOUNTING
BRACKET DETAIL

RAMP GATE
SOLAR POWER

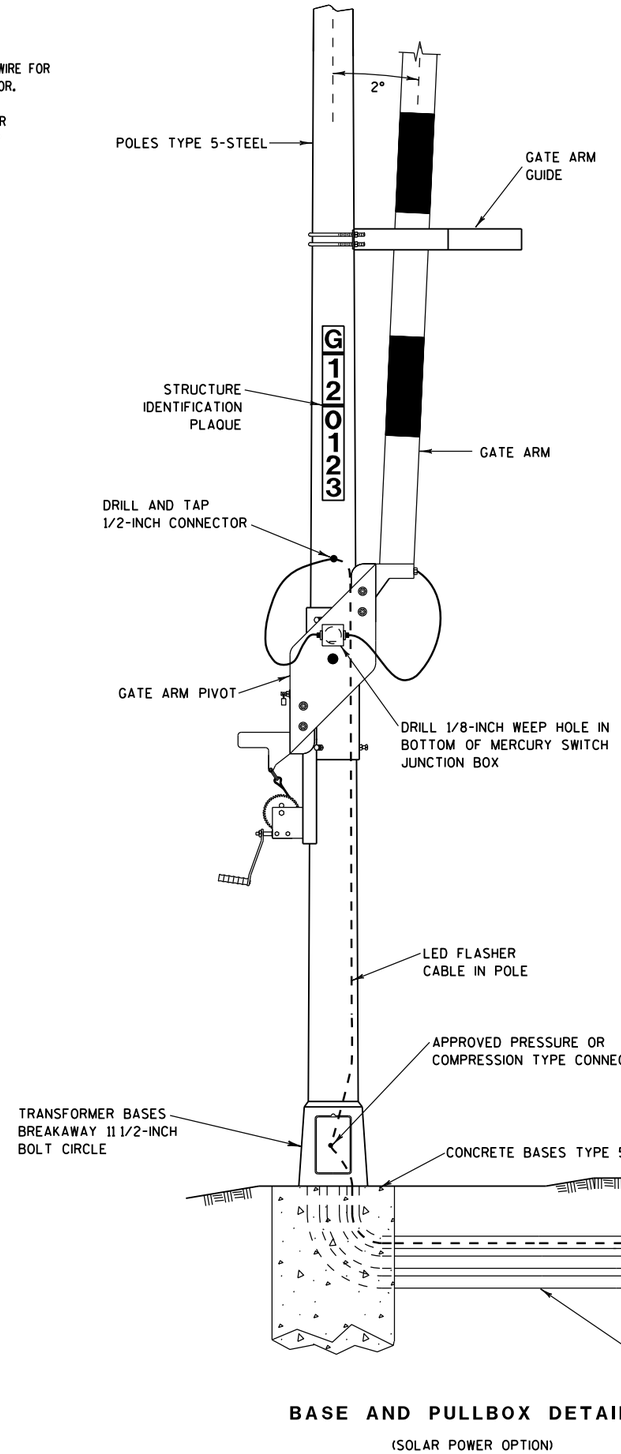
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 15 D 34-1a

WIRING NOTES

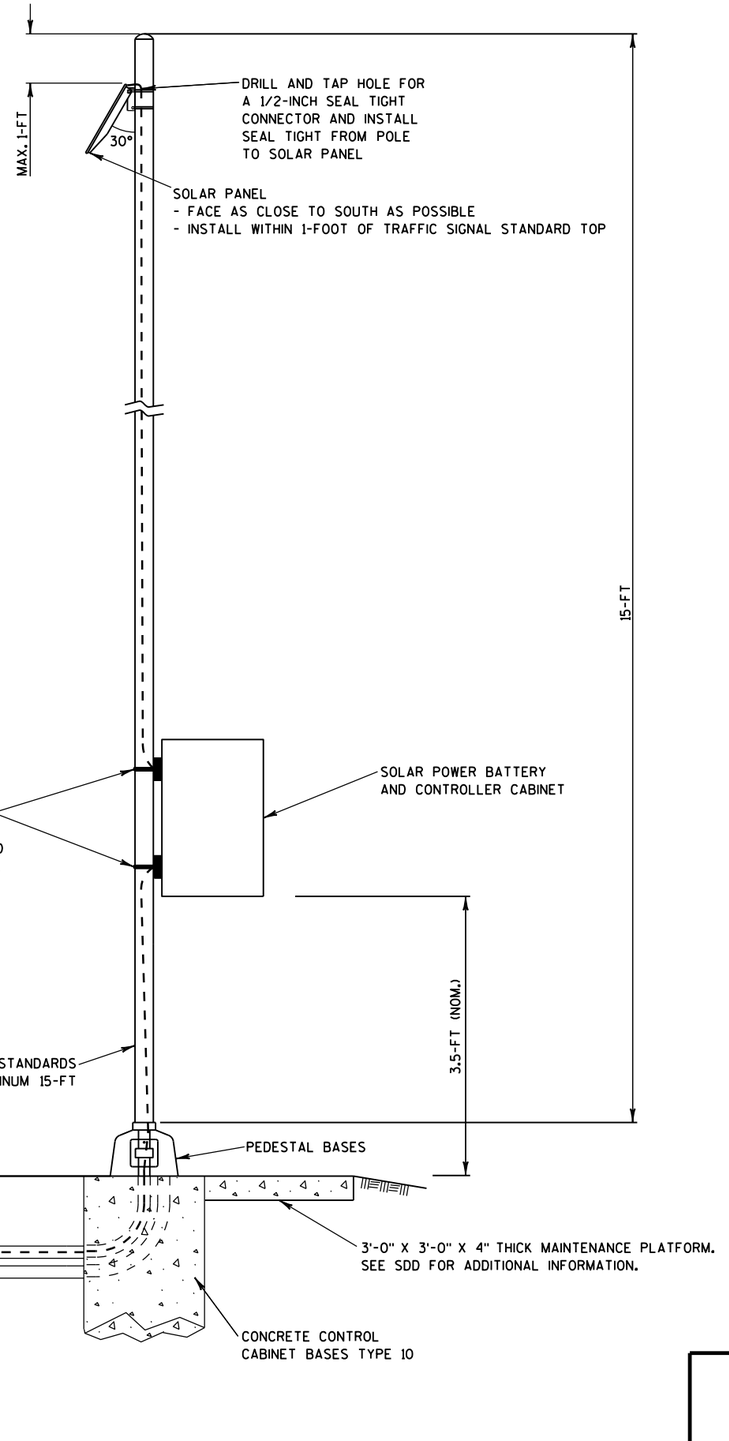
1. WIRING FROM SOLAR PANEL TO CABINET SHALL BE BLUE #10 XLP WIRE FOR POSITIVE CONDUCTOR AND WHITE #10 XLP FOR NEGATIVE CONDUCTOR.

2. WIRING FROM CABINET TO GATE ARM SHALL BE WHITE #10 XLP FOR COMMON, RED #10 XLP FOR FLASHER CIRCUIT 1, AND BLUE #10 XLP FOR FLASHER CIRCUIT 2.



BASE AND PULLBOX DETAIL

(SOLAR POWER OPTION)

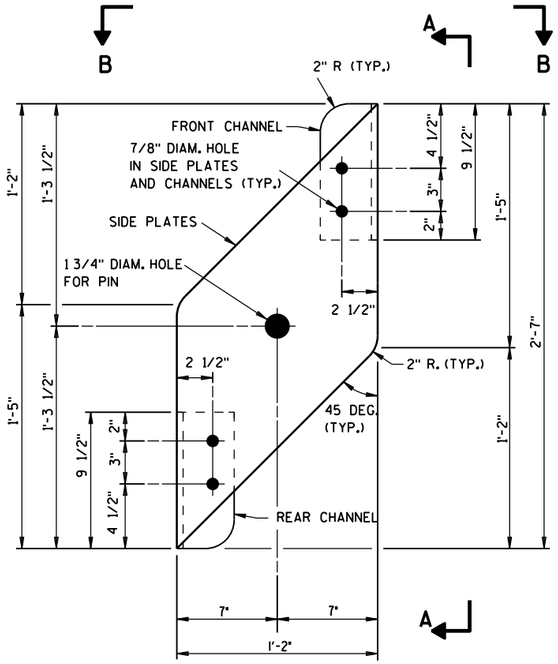


RAMP GATE
SOLAR POWER

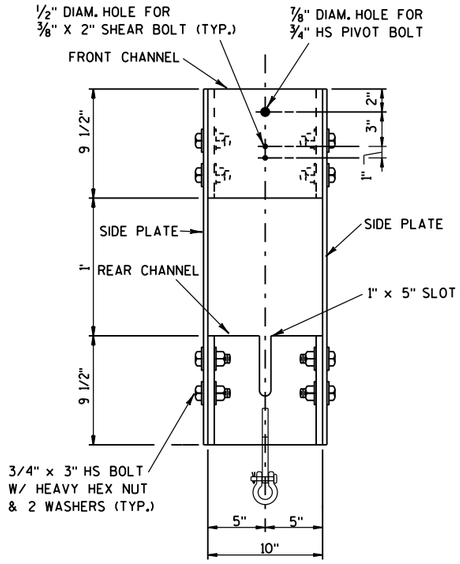
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

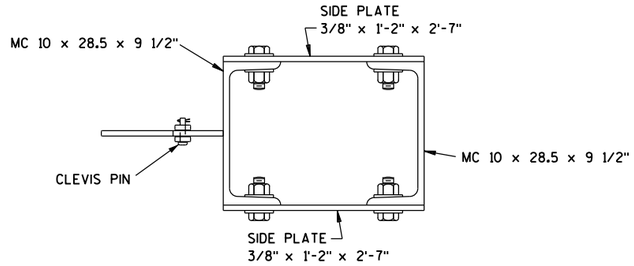
S.D.D. 15 D 34-1b



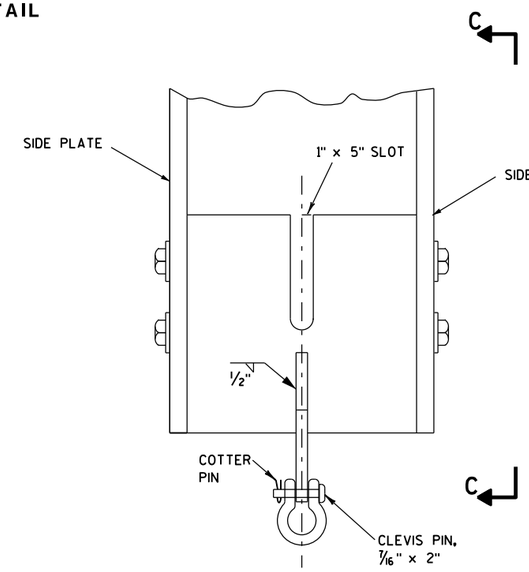
SIDE PLATE DETAIL



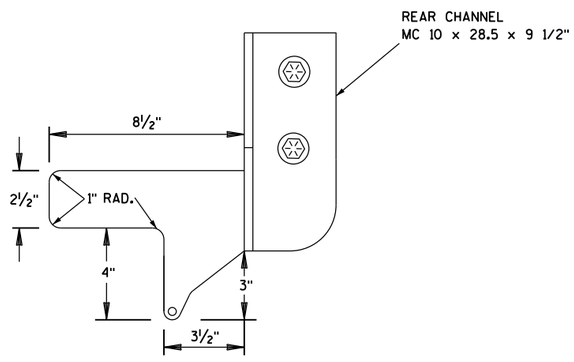
SECTION A-A



SECTION B-B



YOKE ASSEMBLY DETAIL



SECTION C-C

RAMP GATE
SOLAR POWER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 15 D 34-1c

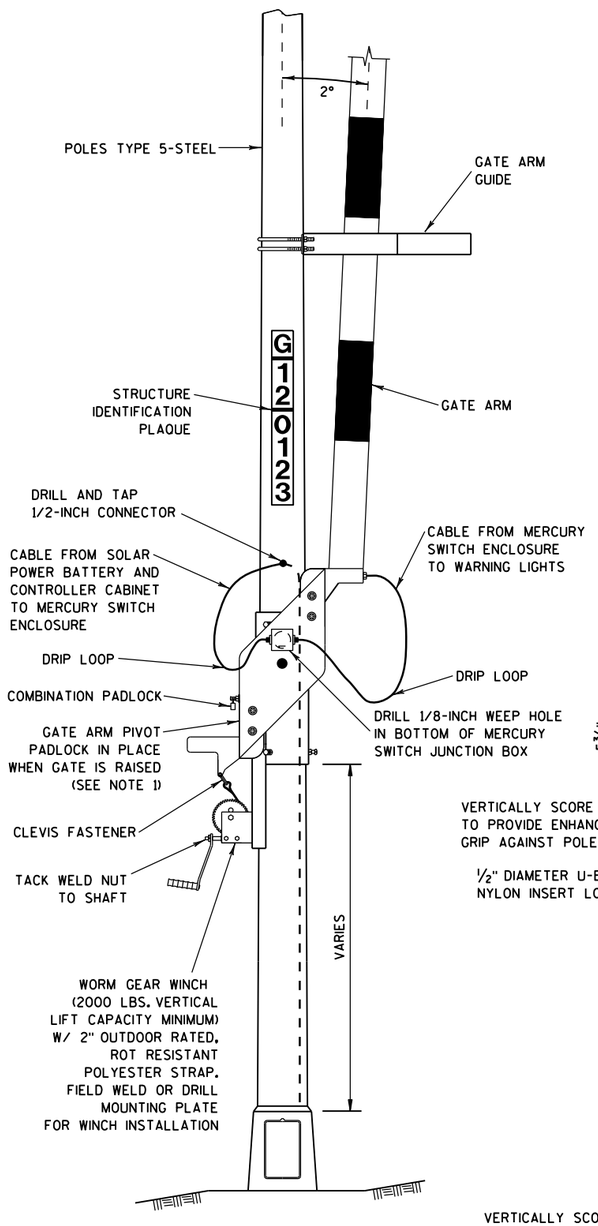
GENERAL NOTES

1. WHEN THE GATE IS FULLY RAISED, THE NUT AND WASHER SHALL BE PLACED SNUGLY AGAINST THE OUTSIDE OF THE REAR CHANNEL AND PADLOCKED IN PLACE.

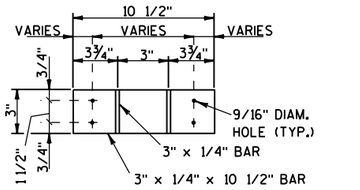
2. WHEN THE GATE IS FULLY LOWERED, THE NUT AND WASHER SHALL BE PLACED SNUGLY AGAINST THE INSIDE OF THE REAR CHANNEL AND PADLOCKED INTO PLACE.

3. ANTI-SEIZE LUBRICATING MATERIAL SHALL BE USED ON ALL BOLT THREADS BEFORE INSTALLATION.

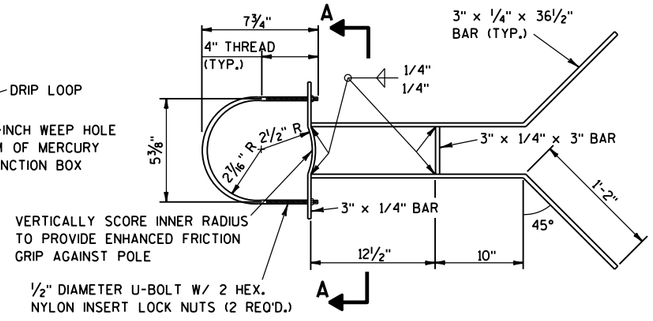
4. ALL BOLTS SHALL BE GALVANIZED AND CONFORM TO ASTM A307, GRADE A, UNLESS DESIGNATED AS HS (HIGH STRENGTH), WHICH SHALL CONFORM TO ASTM A325. BOLTS OF 1/2" NOMINAL DIAMTER OR LESS MAY BE STAINLESS STEEL.



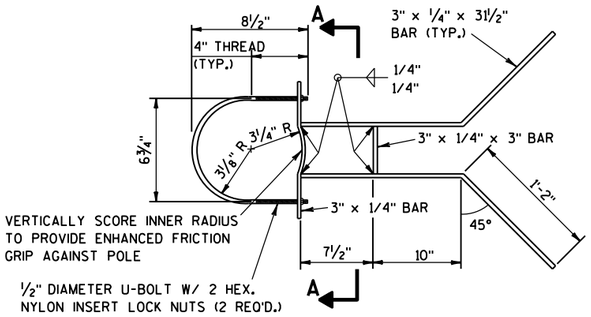
GATE PIVOT ASSEMBLY



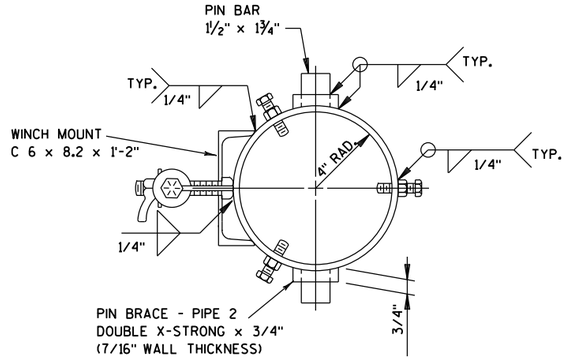
SECTION A-A
U-BOLTS NOT SHOWN



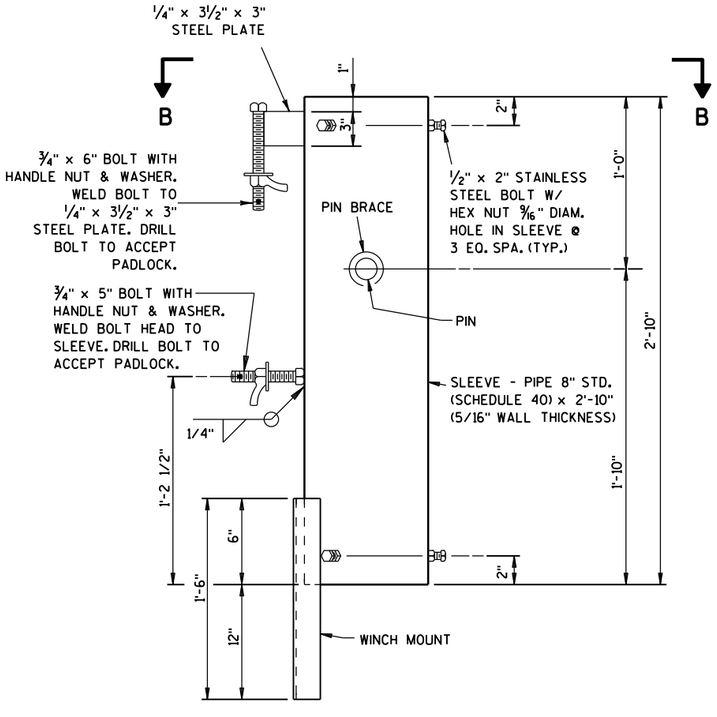
UPPER GATE ARM GUIDE DETAIL



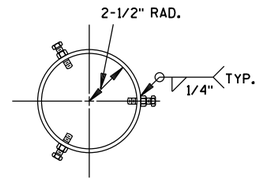
LOWER GATE ARM GUIDE DETAIL



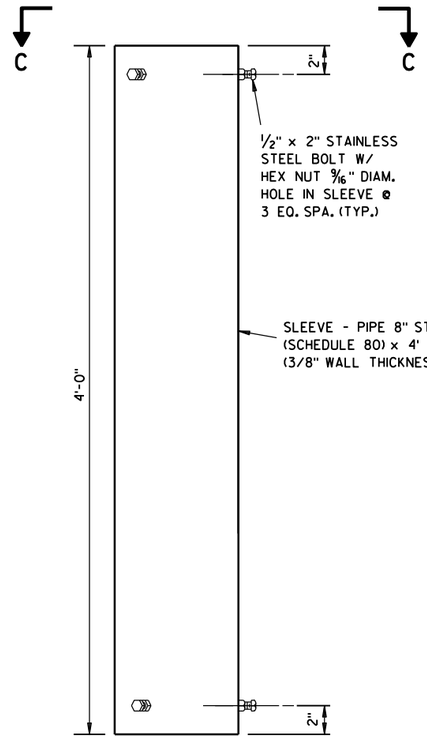
SECTION B-B



PIVOT SLEEVE DETAIL



SECTION C-C



TOP COLLAR

RAMP GATE
SOLAR POWER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

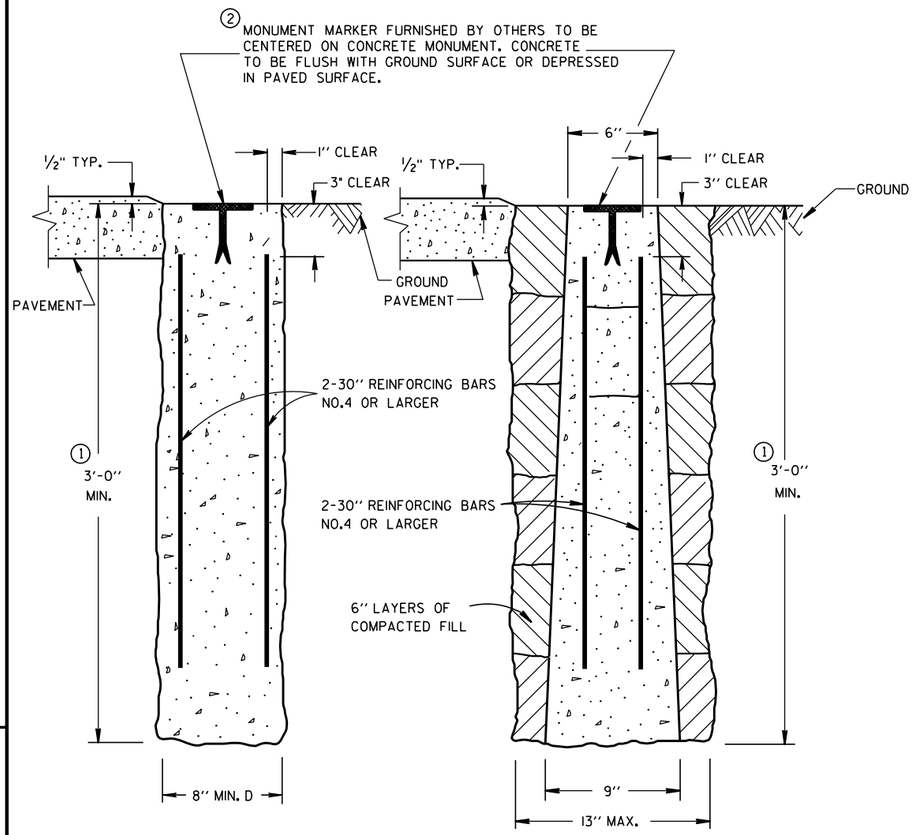
APPROVED
4-30-2013
DATE
/S/ Bill Wondrachek
STATE TRAFFIC OPERATIONS MANAGEMENT ENGINEER
FHWA

6

S.D.D. 15 D 34-1d

6

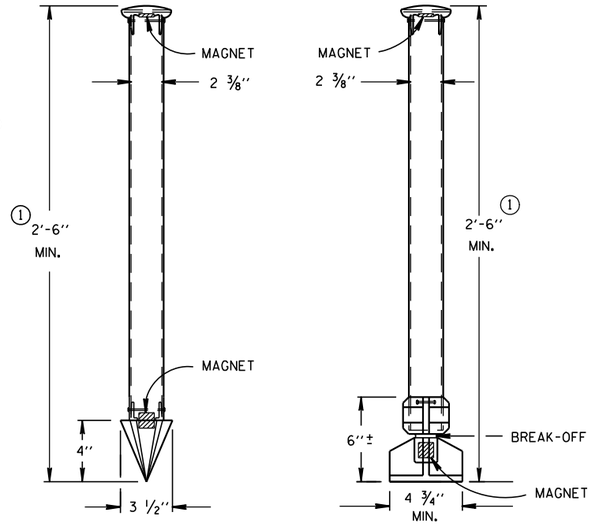
S.D.D. 15 D 34-1d



CAST-IN-PLACE PRECAST

CONCRETE MONUMENTS

TYPE A



ALUMINUM MONUMENTS

(INCLUDES MARKER)

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.

DETAILED DRAWINGS OF PROPOSED ALTERNATE DESIGNS FOR METAL MONUMENTS OR MONUMENT COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

INSTALLED METAL MONUMENTS MUST BE EASILY DETECTED WITH A DIP NEEDLE. INSERT PERMANENT MAGNETS SHALL BE ATTACHED NEAR THE TOP AND BOTTOM OF THOSE MONUMENTS CONSTRUCTED OF A METAL ALLOY WHICH IS NOT ATTRACTIVE TO A DIP NEEDLE.

THE CAST IRON MONUMENT COVER SHALL BE A "NON-ROCKING" TYPE. ADJUSTMENT OF THE COVER TO GRADE MAY BE ACCOMPLISHED BY THE USE OF MORTAR AND BRICK, OR BY EITHER PRECAST OR CAST-IN-PLACE REINFORCED CONCRETE GRADE RINGS.

MONUMENTS SHALL BE LOCATED AND PLACED AT THE DIRECTION OF THE ENGINEER.

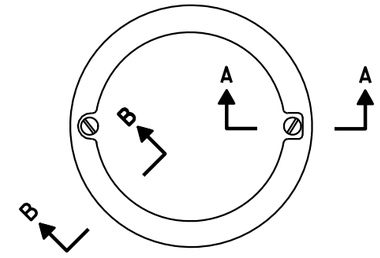
ALUMINUM MONUMENTS AND MONUMENT COVERS SHALL BE MADE FROM AN ALUMINUM AND MAGNESIUM ALLOY AS DETERMINED BY THE MANUFACTURER.

THE MONUMENT COVERS DETAILED ON THIS DRAWING ARE NOT EQUAL ALTERNATES. MONUMENT COVERS SHALL BE CAST IRON UNLESS ALUMINUM IS SPECIFIED ELSEWHERE IN THE CONTRACT.

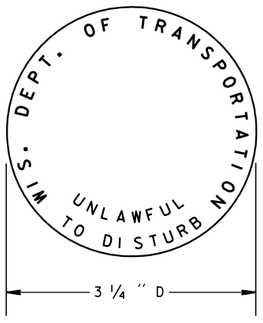
MONUMENT SHALL BE CAST-IN-PLACE CONCRETE UNLESS PRECAST CONCRETE OR ALUMINUM MONUMENTS ARE SPECIFIED IN THE CONTRACT OR PERMITTED BY THE ENGINEER.

① MINIMUM LENGTH SHALL BE 4'-0" FOR MONUMENTS INSTALLED IN PAVED AREAS.

② AN OFFICIAL COUNTY MONUMENT MARKER SUPPLIED BY A COUNTY MAY BE REQUIRED FOR SOME SECTION CORNERS AND WITNESS MONUMENTS INSTEAD OF THIS WIS DOT MARKER.

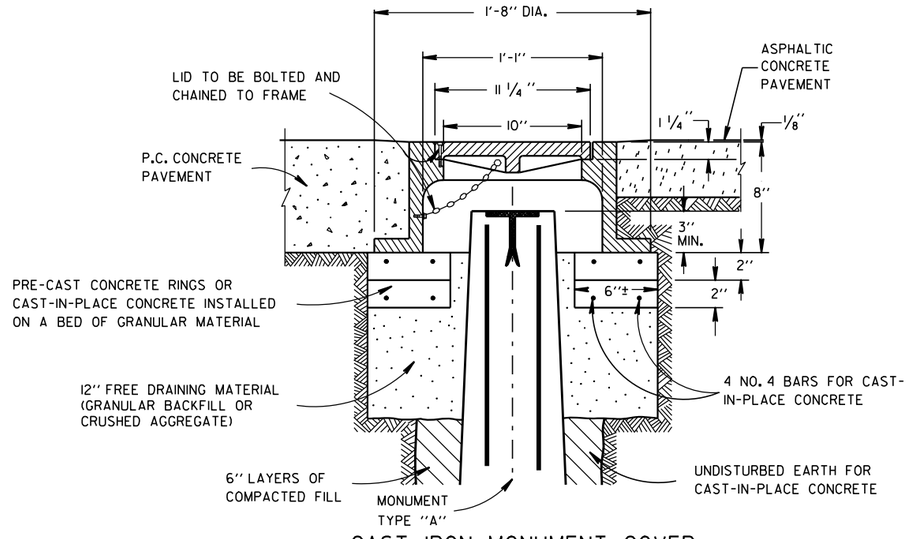


TOP VIEW



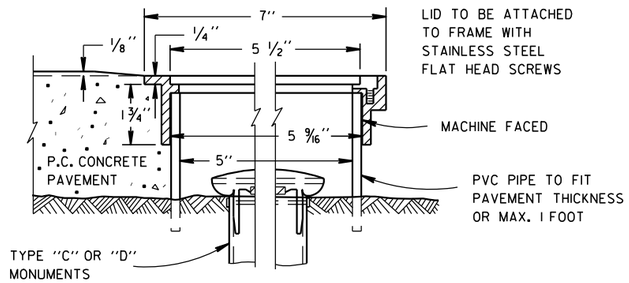
② WIS DOT MONUMENT MARKER LOGO

FOR TYPES "A", "C" & "D"



CAST IRON MONUMENT COVER

(APPROXIMATE WEIGHT - 95 LBS.)



SECTION B-B SECTION A-A

ALUMINUM MONUMENT COVER

(APPROXIMATE WEIGHT 2 LBS)

(FOR CONCRETE PAVEMENT ONLY)

LANDMARK REFERENCE MOUNMENTS AND COVERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

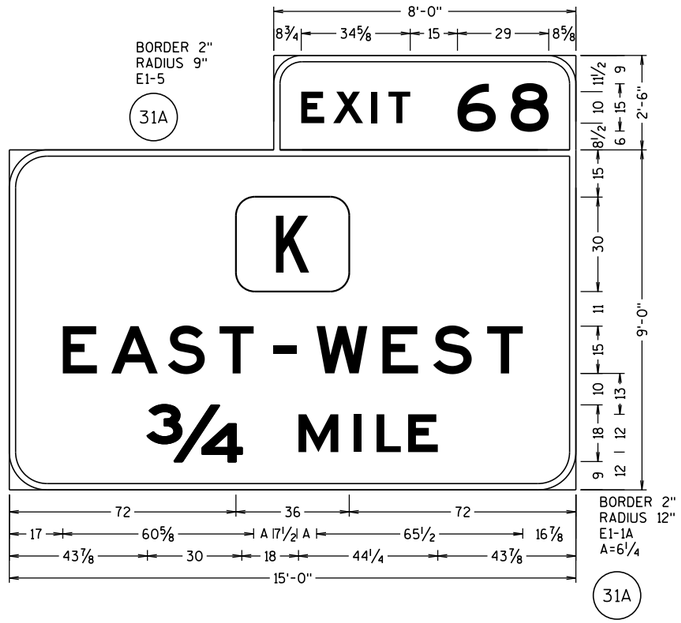
APPROVED
9/22/1999 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 16 A 1-6

6

S.D.D. 16 A 1-6



GENERAL NOTES:

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

2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE I".

3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND, "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE TYPE SH REFLECTIVE SHEETING.

4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.

5. TYPE II SIGNS ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE "SERIES E.

6. TYPE I SIGNS - ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE SERIES "E" MODIFIED. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE SERIES "E" MODIFIED. ALL CAP WORDS ARE "SERIES E"

7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.

8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.

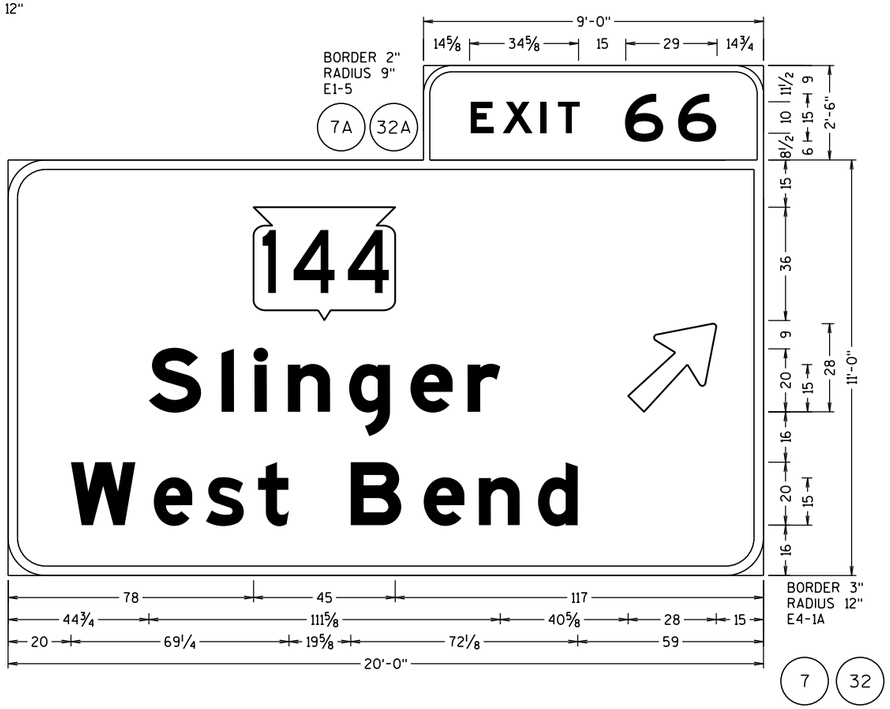
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.

10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10

11. DO NOT SCALE.

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	SIGNING DETAIL - TYPE I SIGNS	SCALE: 0 ½" 1"	SHEET 296	E

FILE NAME : J:\projects\d2_11070241\Sign\070101_ms.dgn PLOT DATE : 02-JUL-2013 14:20 PLOT BY : MSCMWB PLOT NAME : PLOT SCALE : 48.125:1
WISDOT/CADDS SHEET 47



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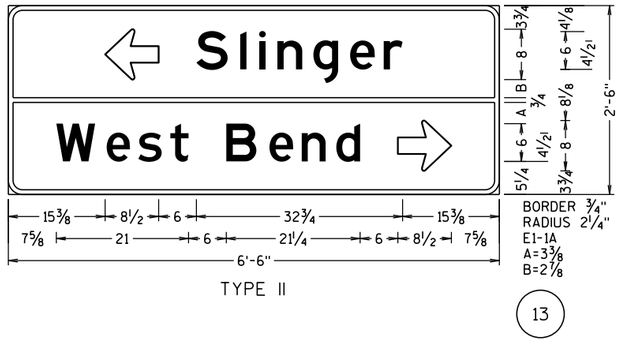
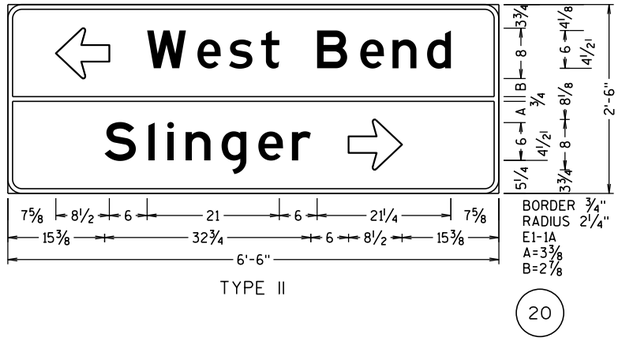
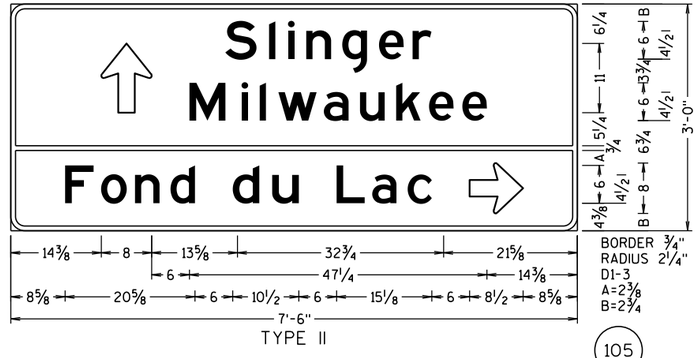
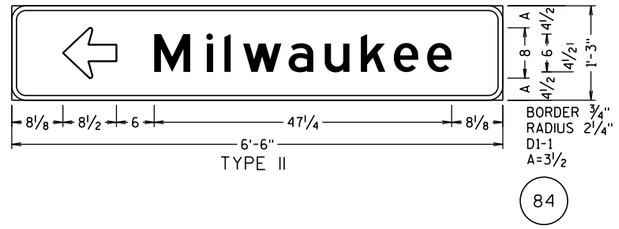
10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10

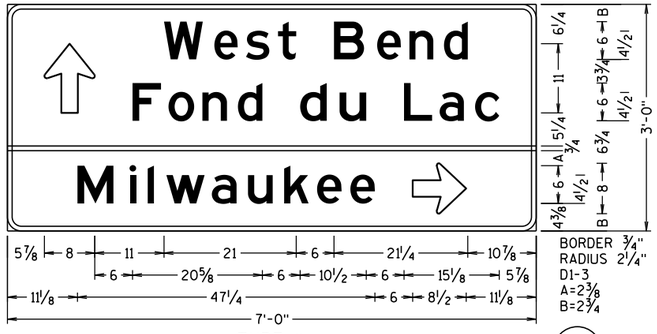
11. DO NOT SCALE.

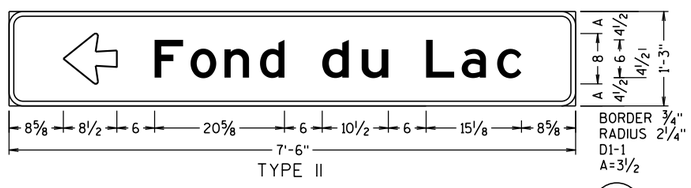


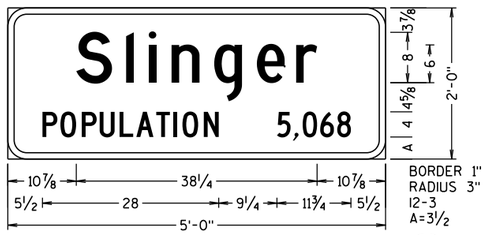


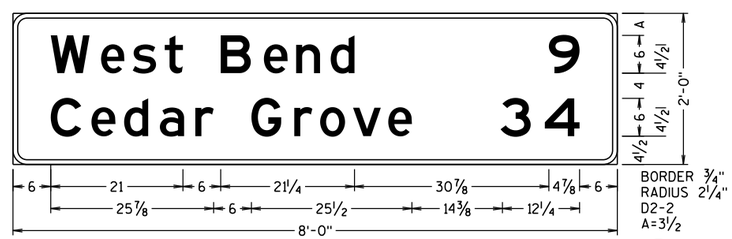












GENERAL NOTES:

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

2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE I".

3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND, "TYPE H MESSAGE MATERIAL". TYPE I SIGNS SHALL HAVE TYPE SH REFLECTIVE SHEETING.

4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.

5. TYPE II SIGNS ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE "SERIES E.

6. TYPE I SIGNS - ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE SERIES "E" MODIFIED. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE SERIES "E" MODIFIED. ALL CAP WORDS ARE "SERIES E"

7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.

8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.

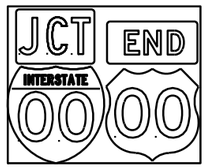
9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.

10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10

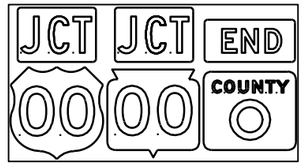
11. DO NOT SCALE.

TYPICAL ASSEMBLIES

J1-1

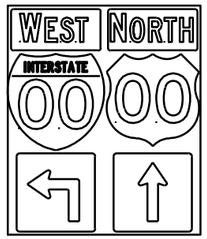


J1-2

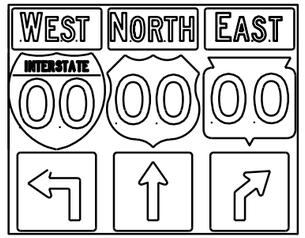


J1-3

J2-1



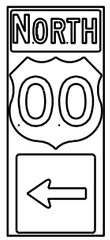
J2-2



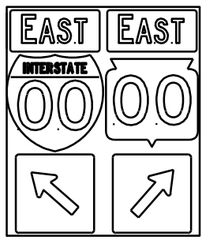
J2-3

JV

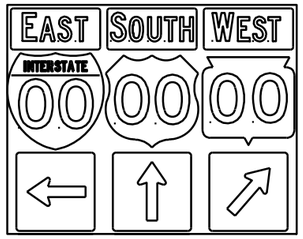
(Typical Vertical J-Assembly
See Note 10 and 11)



J3-1

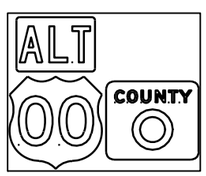


J3-2

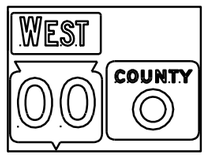


J3-3

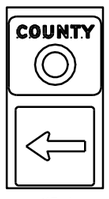
J4-1



J4-2



J4-2



J13-1

J12-1

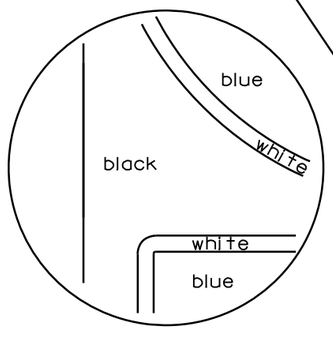
J32-1

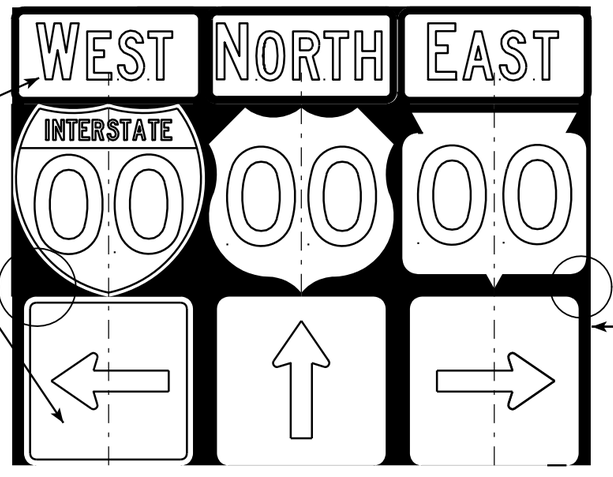
J33-1

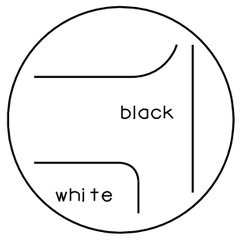
J23-1

J22-1

blue background
with interstate







black background

NOTES

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

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/25/13 PLATE NO. A2-1S.7

7

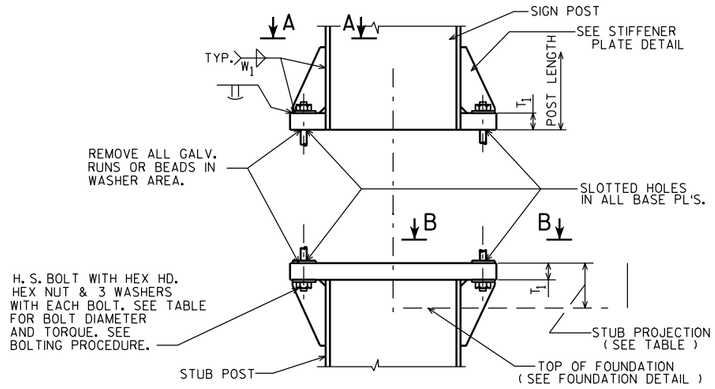
7

PROJECT NO:

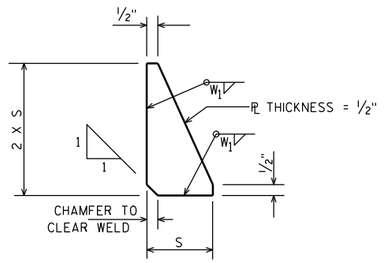
SHEET NO: 299 E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 25-MAR-2013 11:33 PLOT BY : mscsja PLOT NAME :

WISDOT/CADDS SHEET 42

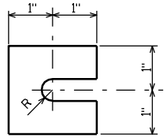


SIGN POST AND STUB POST ELEVATION



STIFFENER PLATE DETAIL

(SEE TABLE FOR DIMENSIONS)



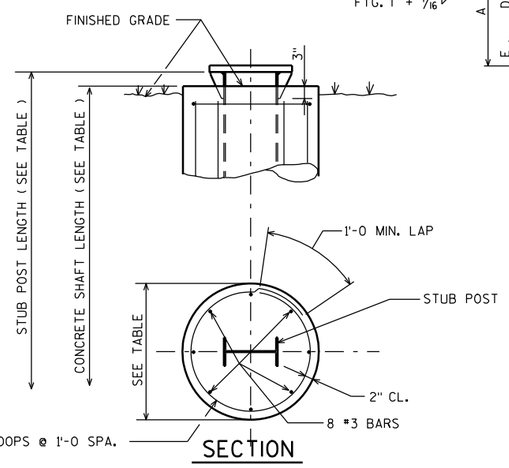
FURNISH 2 @ .012" ± THICK AND 2 @ .032" ± THICK SHIMS PER POST. SHIMS SHALL BE FABRICATED FROM BRASS SHIM STOCK OR STRIP CONFORMING TO A.S.T.M.- B36.

SHIM DETAIL

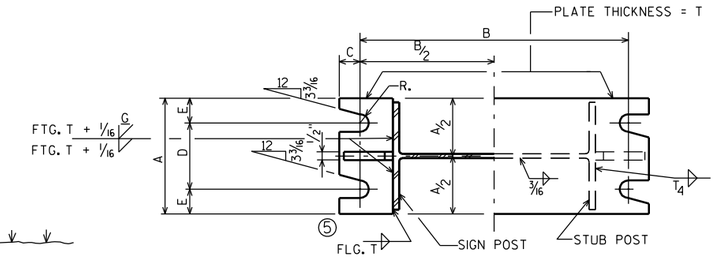
	QUANTITIES FOR 1 FOOTING	
	CONC. MASONRY C.Y.	REINF. STEEL LBS.
A	0.6	34
B	0.8	49
C	0.9	50
D	0.9	56
⑦ E	1.0	62

REINF.	TYPE	#3	#4
	A	8 @ 4'-5	5 @ 6'-3
	B	8 @ 6'-5	7 @ 6'-3
	C	8 @ 6'-11	7 @ 6'-3
	D	8 @ 7'-5	8 @ 6'-3
⑦	E	8 @ 7'-11	9 @ 6'-3

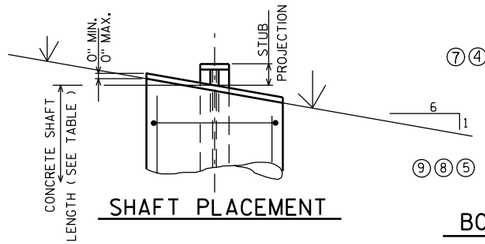
POST DETAIL



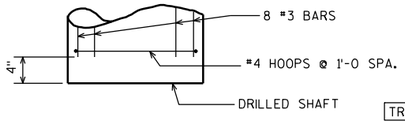
SECTION



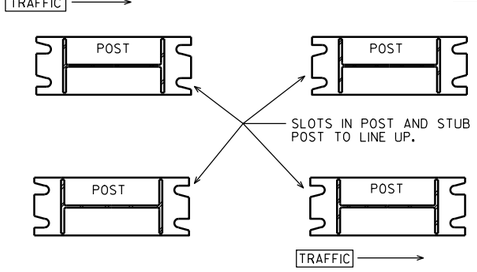
SECTION A-A SECTION B-B



SHAFT PLACEMENT



FOUNDATION DETAIL



POST SLOT ORIENTATION ⑦

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.

	TYPE	DIMENSION: POST SIZE	BASE CONNECTION DATA TABLE: BOLT SIZE & TORQUE	A	B	C	D	E	T_1	T_4	W_1	R	S	FOUNDATION DATA: STUB LENGTH	STUB PROJECTION	SHAFT DIAMETER	SHAFT LENGTH	② 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 ℄ 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

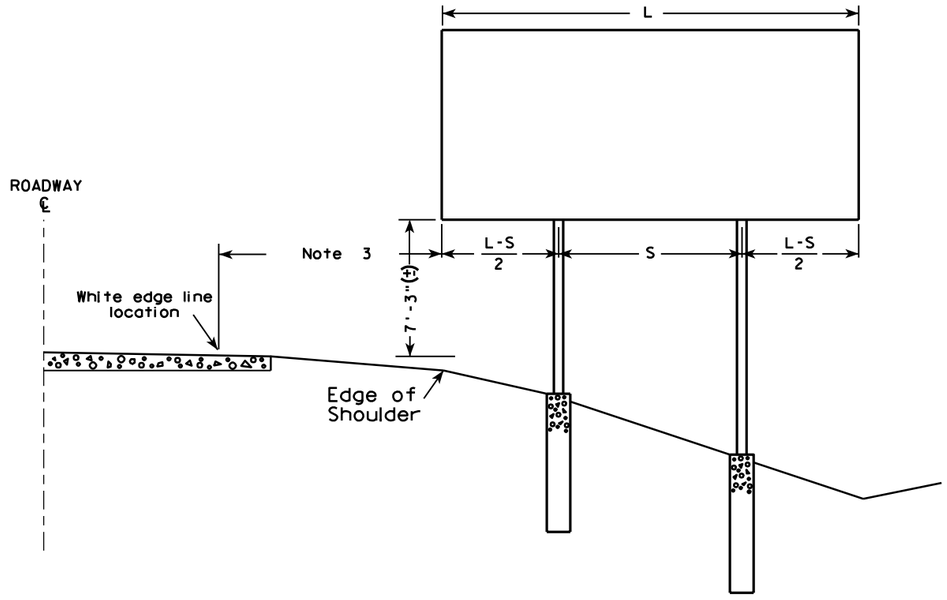
TYPE A, B, C, D, & E

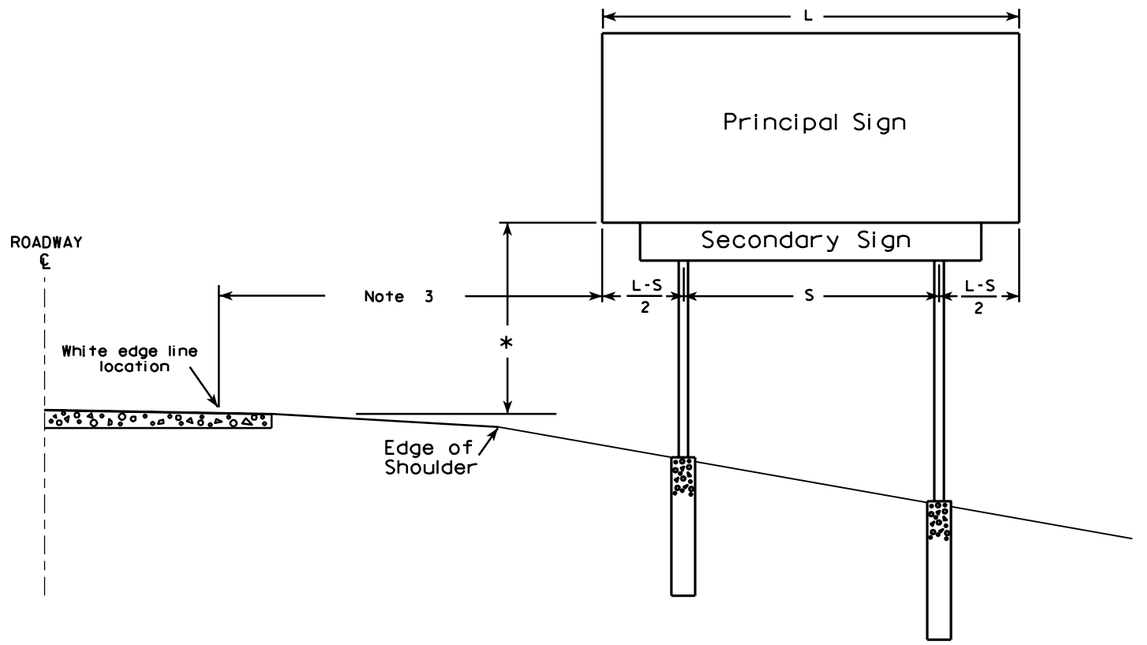
CONST. SPEC. 2011 | DRAWN BY JPH | PLANS CK'D.

FTG. & SIGN SUPPORT DETAILS GROUND MOUNT BREAK-AWAY SIGNS

SHEET

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 300 | E





GENERAL NOTES

1. For a 2 post installation, S equals 3L/5, but shall not be less than 9 ft.
2. For a 3 post installation, S equals 5L/7, but shall not be less than 18 ft., and the space between any two posts shall not be less than 9 ft.
3. Unless noted in the plan, the sign offset distance shall be a minimum of 17'-6", desirable 30'-0".
4. The (±) tolerance shown on this sheet is 3 in.
5. The vertical sign height clearance detailed is measured from the bottom of the sign to the near edge of pavement.
6. Post lengths shown in the miscellaneous quantities are estimated lengths. The contractor shall verify post lengths at the time of final grading.
7. Refer to the Traffic Guidelines Manual for further guidance on minimum vertical clearance requirements.

* Clearance is 8'-3"(±) when the secondary sign is 3 ft. or less in height. For secondary signs larger than 3 ft., the clearance to the bottom of the secondary sign shall be 5'-3"(±).

7

7

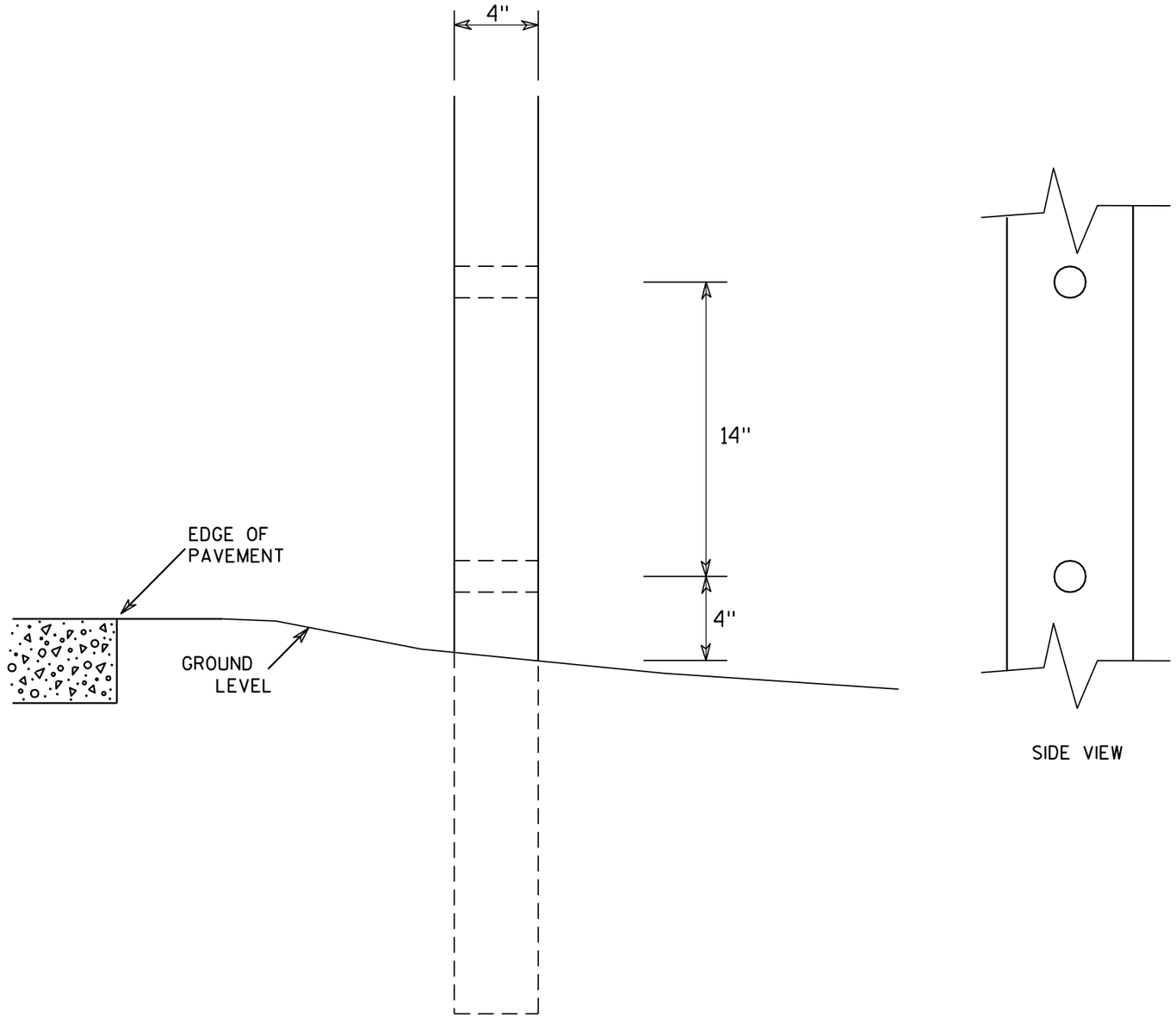
TYPICAL INSTALLATION
OF TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/02/08 PLATE NO. A4-1.9

PROJECT NO:				SHEET NO: 301	E



SIDE VIEW

GENERAL NOTES

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

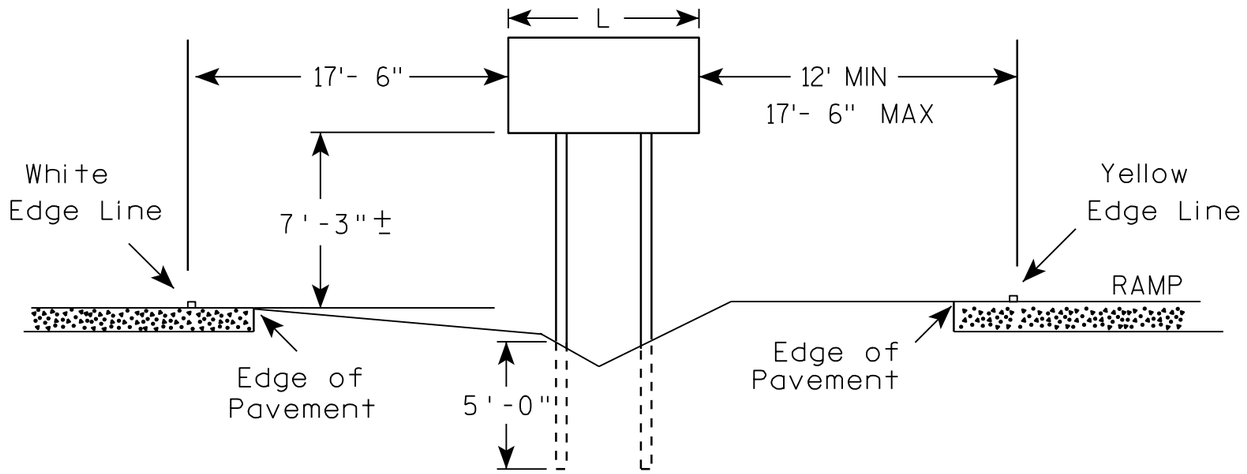
4 X 6 WOOD POST MODIFICATIONS

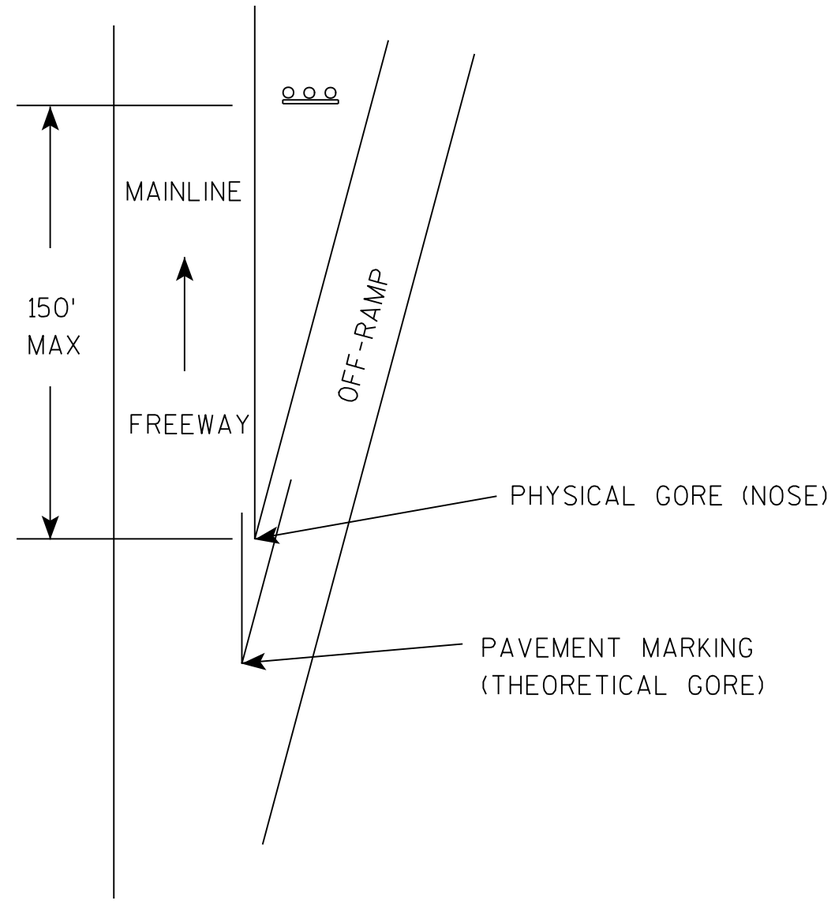
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 302	E





GENERAL NOTES

1. The 150 foot distance from the physical gore (where pavement ends) will normally provide the offsets as shown.

2. If roadway geometrics permit, the sign may be closer than the 150 foot distance as long as the offsets are maintained.

3. At no time shall the location be greater than 150 feet. If the normal offsets cannot be maintained, they can be reduced to 6 feet from the edge of the paved shoulder (both freeway and ramp).

4. The offset from edge of sign to the yellow edge line on the ramp is shown as a minimum of 12 feet and a maximum of 17 feet, 6 inches. Preference is adhering to the maximum rather than the minimum dimension.

5. When L is equal to or exceeds 9 feet, use 3 posts as per A4-4.

6. The (∓) tolerance for the mounting height is 3 inches.

7

7

TYPICAL INSTALLATION
OF TYPE II SIGNS ON
WOOD POSTS IN GORE

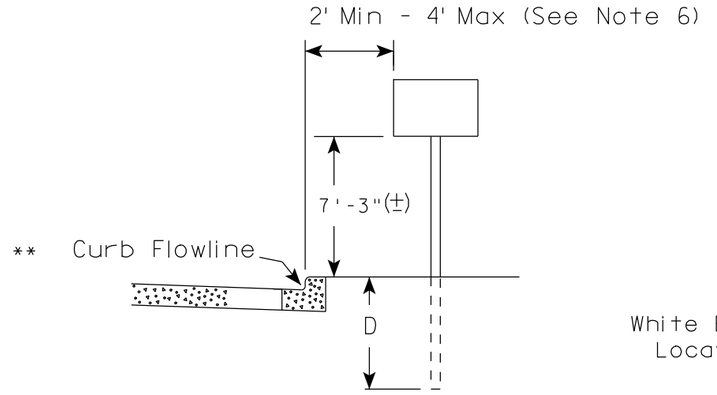
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spagg
for State Traffic Engineer

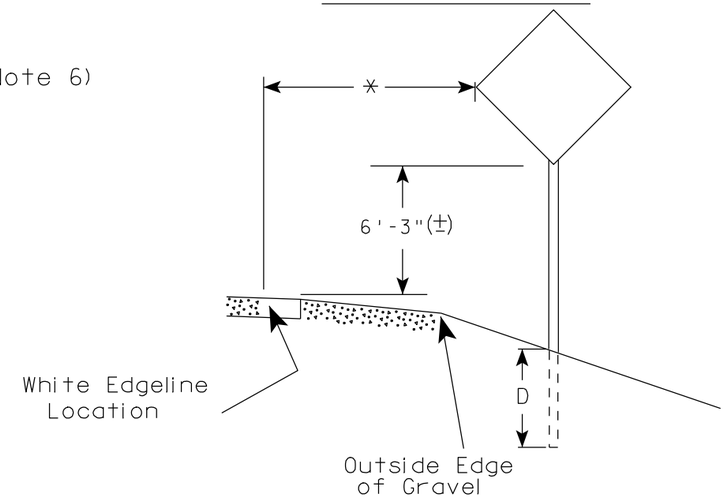
DATE 4/4/00 PLATE NO. A4-2.2

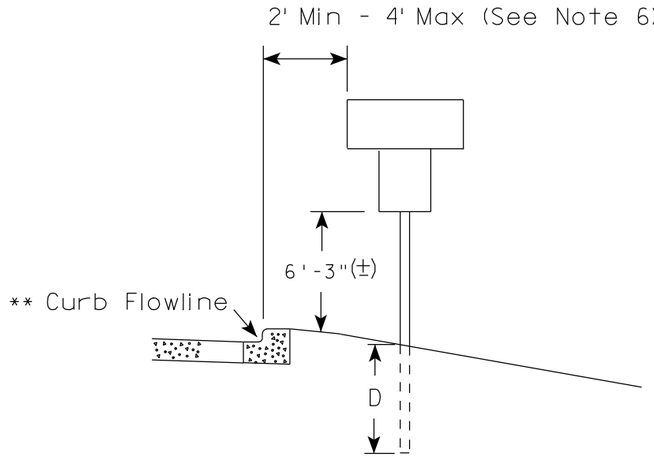
PROJECT NO: | SHEET NO: 303 | E

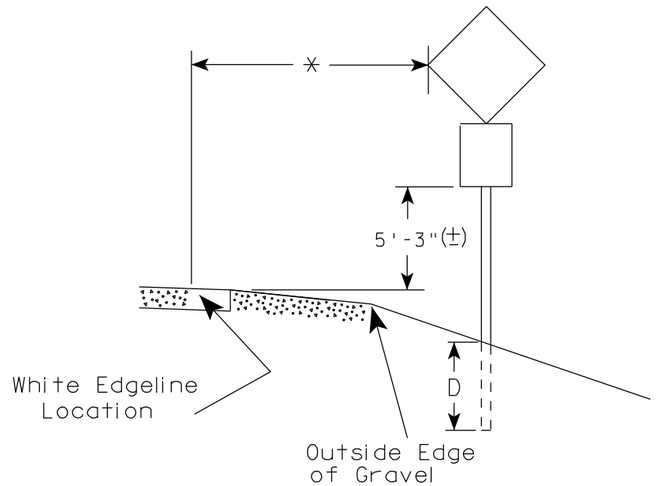
URBAN AREA



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 or larger than 20 sq. ft. 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

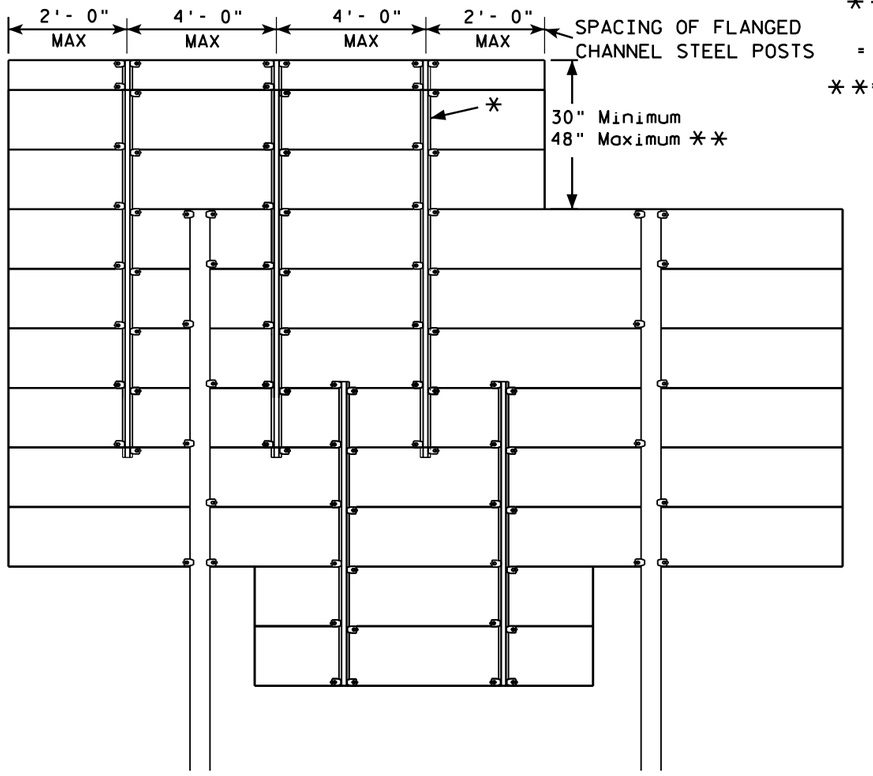
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/24/2013 PLATE NO. A4-3.17

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 304	E

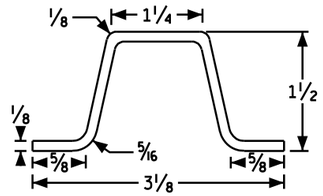
GROUND MOUNTED SIGN



*=2.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

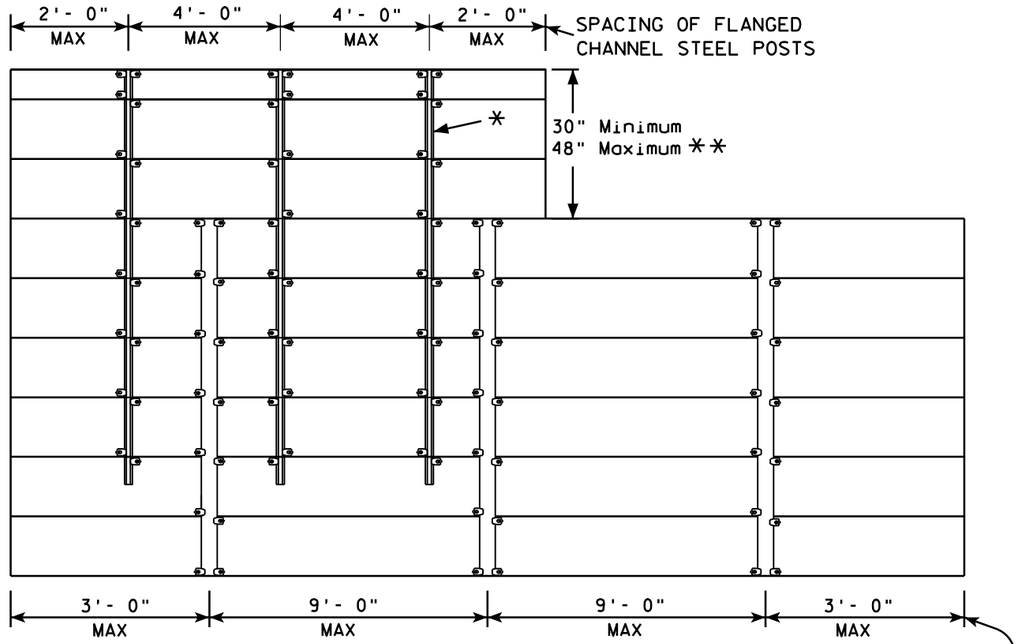
**=FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

FLANGE CHANNEL DETAIL



NOT TO SCALE

SIGN BRIDGE MOUNTED SIGN



GENERAL NOTES

1. Flanged channel steel posts shall conform to size and material above, and shall be considered as incidental to other items in the contract.
2. Number of Flanged channel steel supports varies with length of panel and shall be spaced as shown:

   PANEL LENGTH 8'-0" OR LESS = 2 CHANNELS
   PANEL LENGTH 9'- 0" - 12'- 0" = 3 CHANNELS
   PANEL LENGTH 13'- 0" OR MORE = 4 CHANNELS

   If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.
3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER PANEL shall be aligned with the left edge of the guide sign.
4. If the bolt holes in the top panel (EXIT NUMBER), or sub panel (NEXT EXIT) line up with holes in main sign panel, stitch bolts shall be used in addition to the channels.
5. Provide post clips for each sign as shown. (Please note the differences between a ground mounted versus Sign bridge mounted sign as far as number of clips required on the main supports or beams)

7

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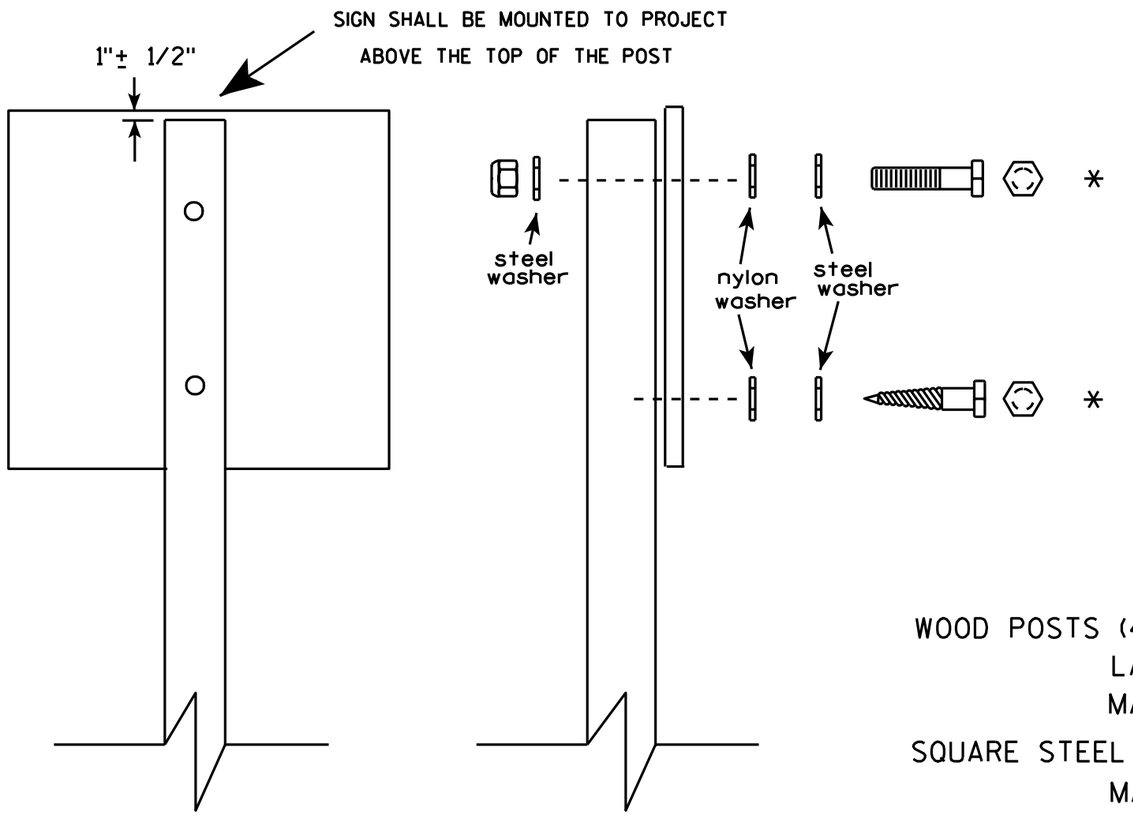
ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. A4-6.11

PROJECT NO:				SHEET NO: 305	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

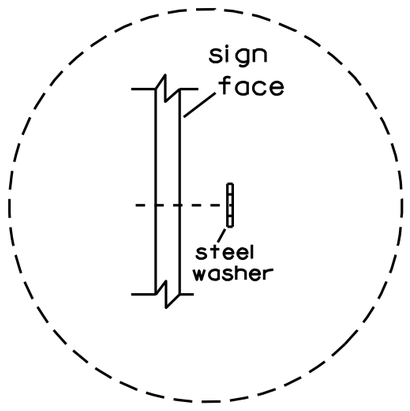
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

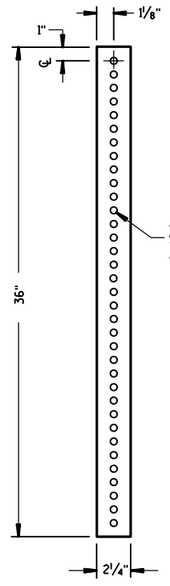
7

7

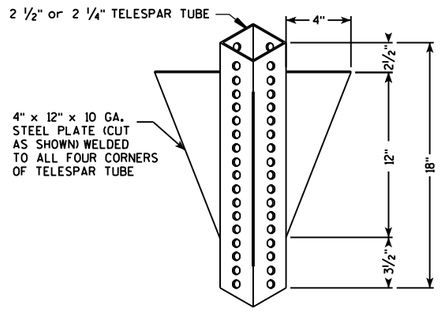
PROJECT NO: | SHEET NO: 306 | E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

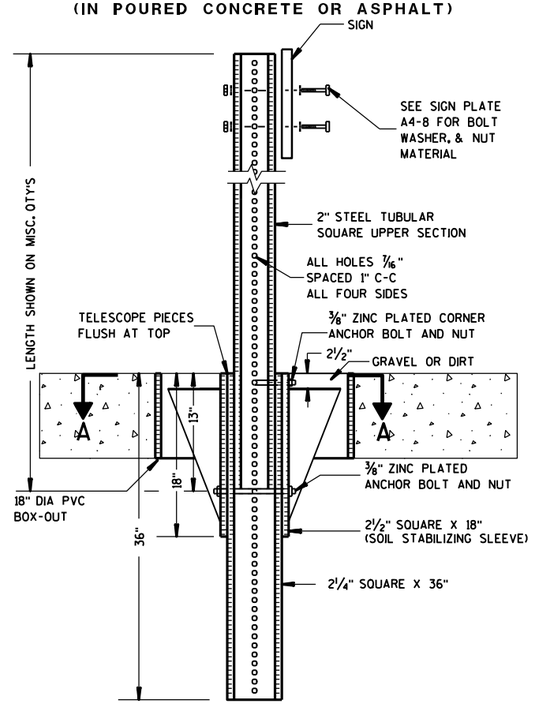
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



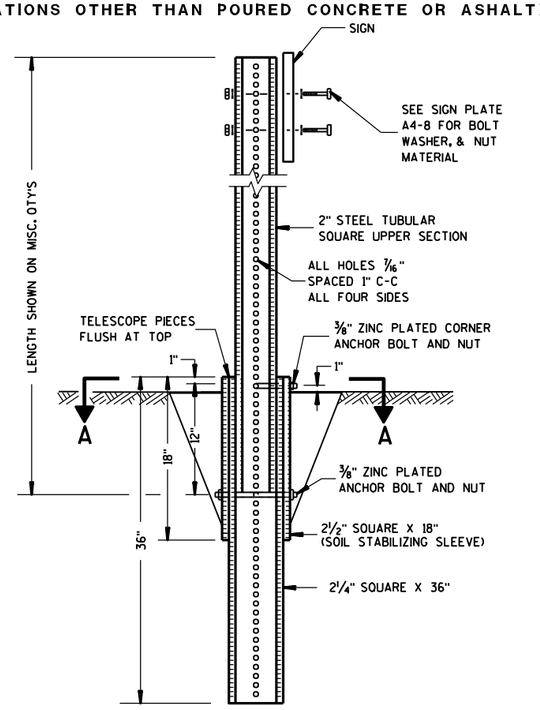
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

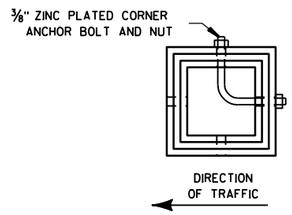


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

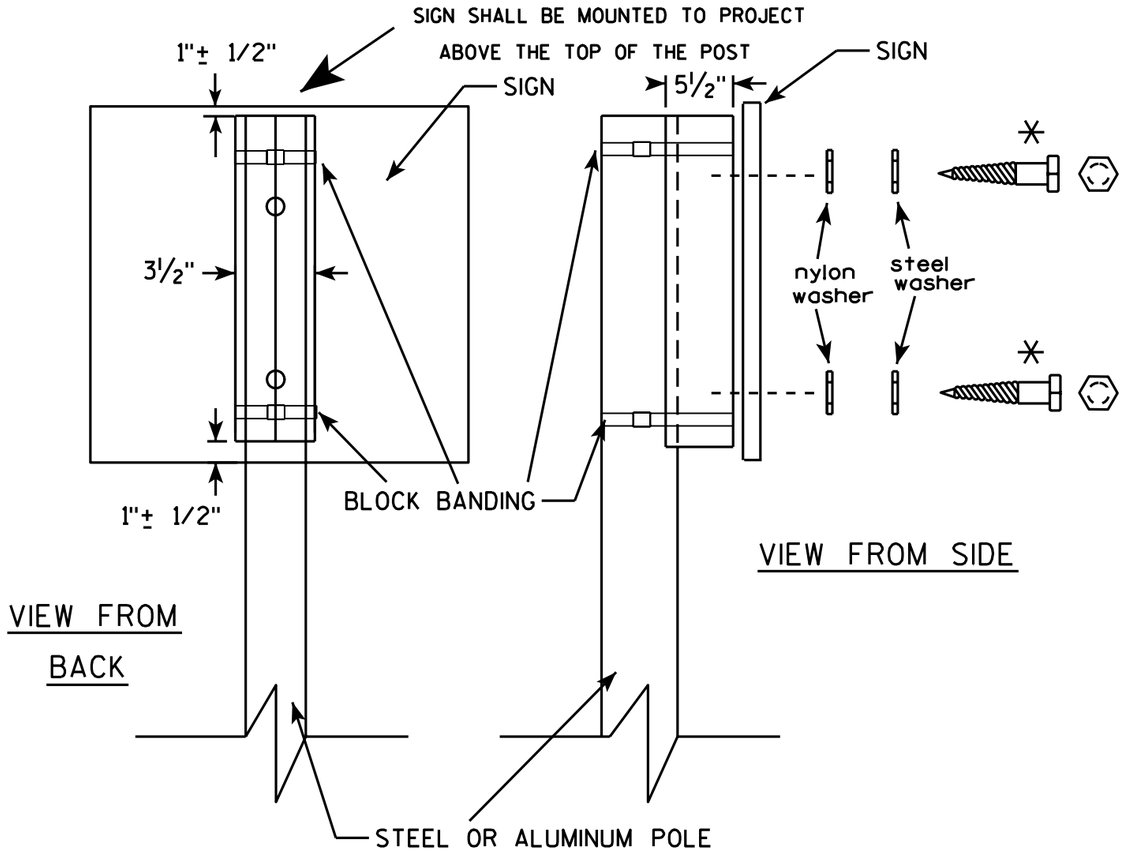
TUBULAR STEEL SIGN POST A4-9

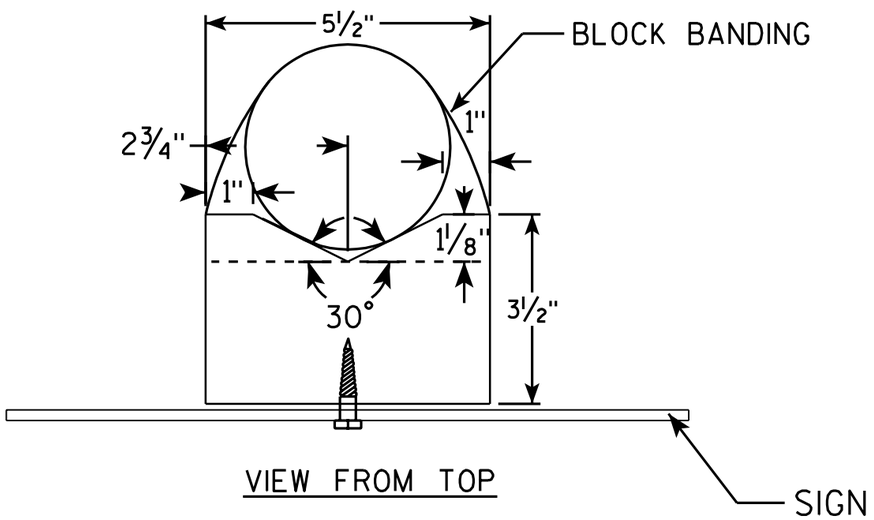
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/30/12 PLATE NO. A4-9.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 307	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

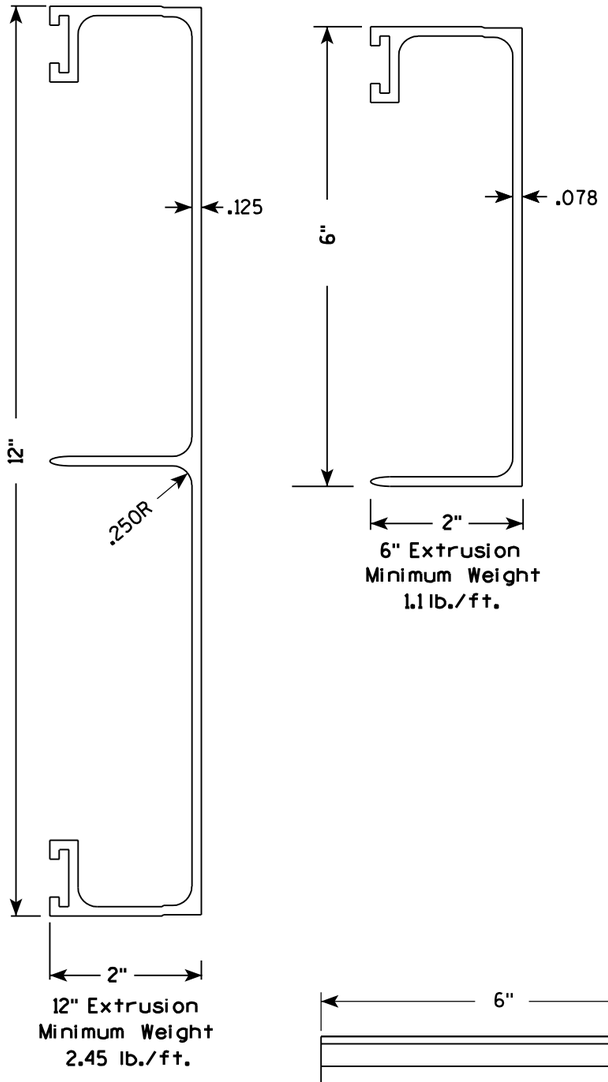
APPROVED Matthew R Rauch
for State Traffic Engineer

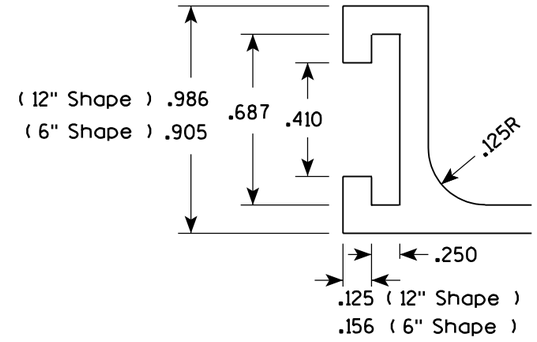
DATE 7/12/07 PLATE NO. A5-10.1

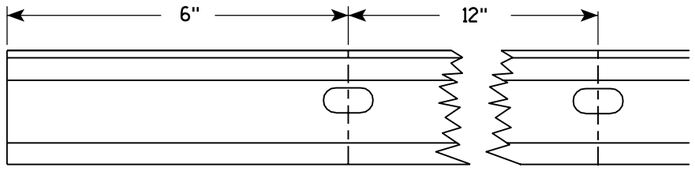
PROJECT NO:

SHEET NO: 308 E

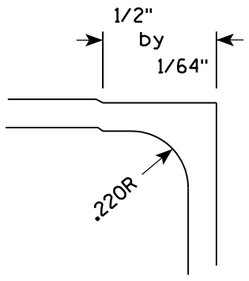
Extruded Shape







Punch 7/16" x 7/8" oval holes beginning 6" in from end of extrusion 12" CC on both edges of 6" and 12" panels.

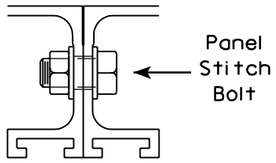


Hardware

STITCH BOLT, WASHER & NUT

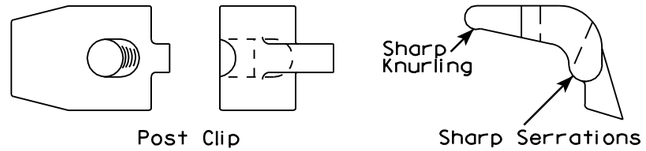
The hardware includes:

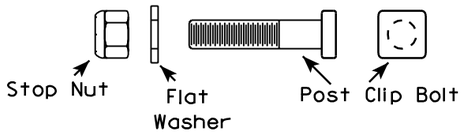
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy



POST CLIP, POST CLIP BOLT, WASHER & NUT

Post Clip shall be Alum. Alloy 356-T6
Post Clip Bolt shall be Stainless Steel.
Flat washer shall be 3/8" X .091, Stainless Steel.
Stop nut shall be stainless steel.





NOTES

1. The contractor may select any brand of extrusion that conforms to the illustrations or meets with the approval of the engineer, but all extrusions used on this contract shall be of the same brand.
2. Panel Stitch Bolts shall be used to assemble adjacent panels. Maximum stitch bolt spacing shall be 24" C-C, and a minimum of 4 bolts shall be used to connect any two extrusions.
3. Post Clips shall be used to attach the sign panel to the sign support.

ALUMINUM EXTRUSIONS FOR TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spagg
for State Traffic Engineer

DATE 11/18/99 PLATE NO. A5-2.9

7

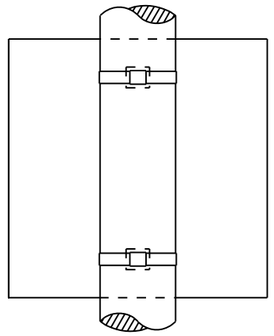
7

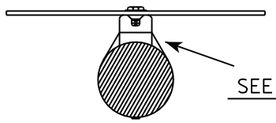
PROJECT NO:

SHEET NO: 309 E

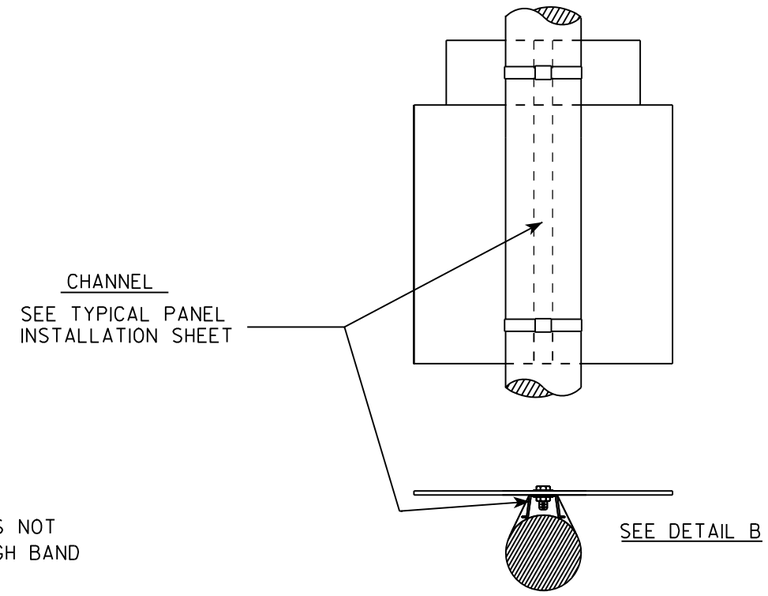
BANDING

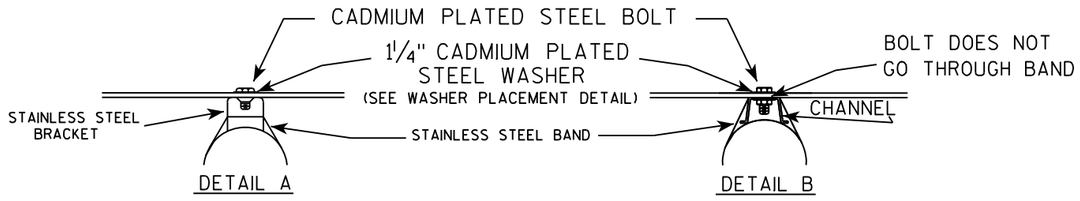
SINGLE SIGN



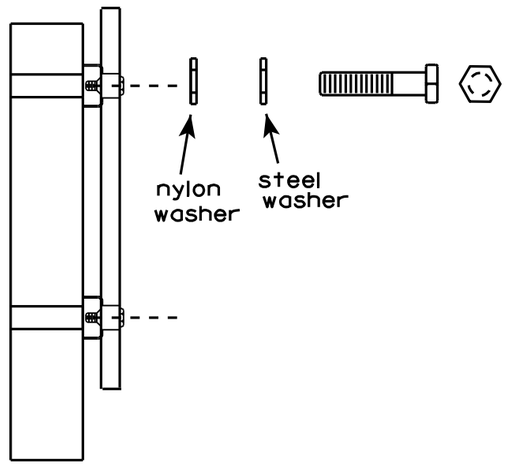


"J" ASSEMBLY





WASHER PLACEMENT



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

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.

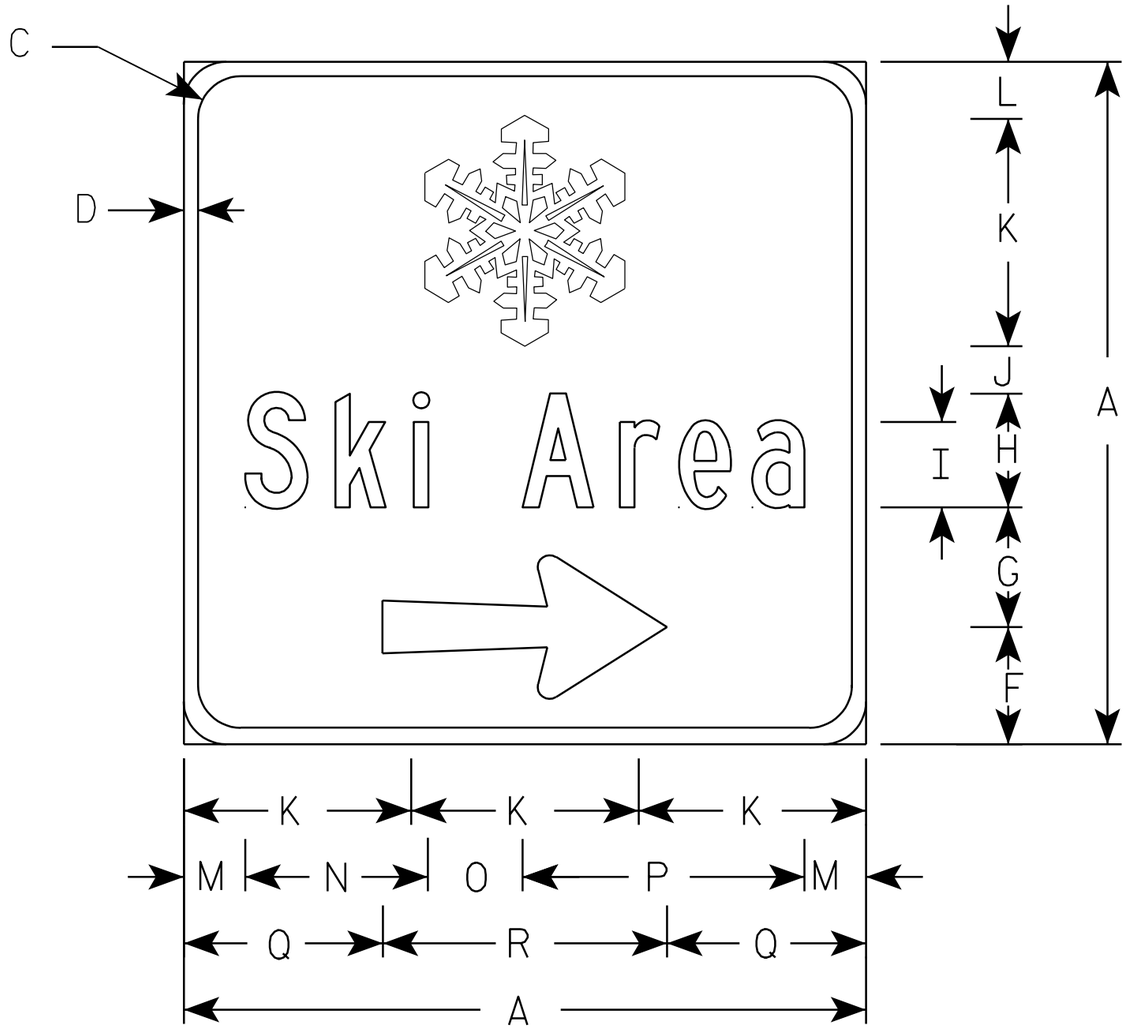
STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 310	E



D7-82

NOTES

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

Metric equivalent for this sign is:

SIZE	
1	
2	900 mm X 900 mm
3	
4	
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	36		2 1/4	3/4		6 1/4	6 3/8	6	4 1/2	2 1/2	12	3	3 1/4	9 5/8	5	14 7/8	10 1/2	15									9.0	0.81
3																												
4																												
5																												

STANDARD SIGN
D7-82

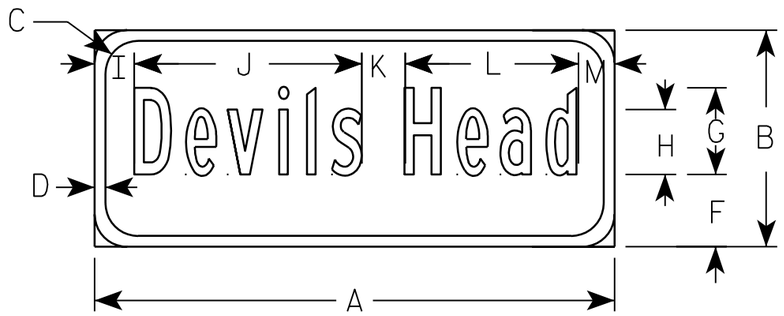
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/04/05 PLATE NO. D7-82.1

PROJECT NO:

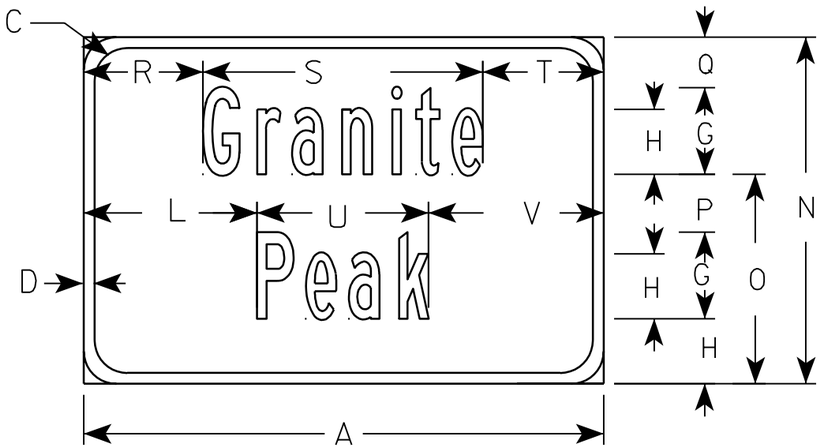
SHEET NO: 311 E



D7-82A

NOTES

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



D7-82B

7

7

Metric equivalent for this sign is:

SIZE	D7-82A
1	
2	900 mm X 375 mm
3	
4	
5	

Metric equivalent for this sign is:

SIZE	D7-82B
1	
2	900 mm X 600 mm
3	
4	
5	

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	D7-82A Area sq. ft.	D7-82A Area m2	D7-82B Area sq. ft.	D7-82B Area m2
1																														
2	36	15	2 1/4	3/4		5	6	4 1/2	2 3/4	15 3/4	3	12	2 1/2	24	14 1/2	4	3 1/2	8 1/4	19 3/8	8 3/8	11 7/8	12 1/8					3.75	0.33	6.0	0.54
3																														
4																														
5																														

STANDARD SIGN
D7-82A&B

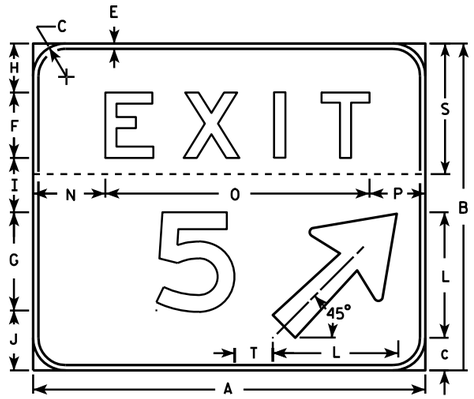
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

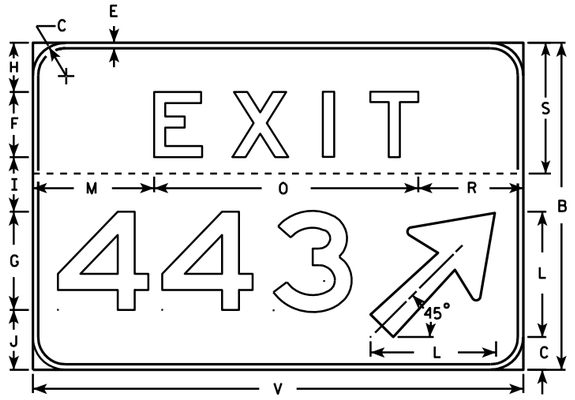
DATE 10/07/05 PLATE NO. D7-82A&B.1

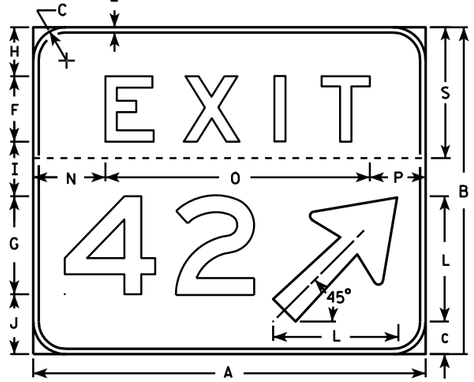
PROJECT NO:

SHEET NO: 312 E

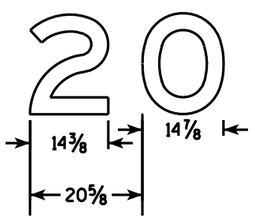


NOTE: T diminision shall be measured from the back of the number to the front of the arrow





EXAMPLE FOR USING SPACING CHART



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 the border shall be rounded as shown.
5. Base material for this sign shall be plywood and shall be split into two seperate pieces as shown on each detail by the dashed line (----------).
6. Arrow is Type "A" from sign plate A1-1.
7. Substitute appropriate message, space per the table and adjust placement on sign to achieve proper balance.
8. As per the Standard Spec's, these signs shall not have a vertical joint.

SPACING CHART FOR 18" NUMERALS

NUMBERS	WIDTH	0	1	2	3	4	5	6	7	8	9	A	B	C
0	14 7/8	21 5/8	21 5/8	21 1/4	20 3/8	21 1/4	21 1/4	21 5/8	19 7/8	22 1/8	21 5/8			
1	5 7/8	14	14	14	13 1/8	12 1/8	14	14	12 1/4	14	14			
2	14 3/8	20 5/8	21 1/8	20 5/8	19 3/4	20 1/4	20 5/8	20 5/8	18 7/8	21 1/8	20 5/8			
3	14 3/8	20 3/4	21 1/8	20 3/4	20 1/4	19 3/4	20 3/4	20 3/4	19 3/8	21 1/8	20 3/4			
4	16 5/8	22 7/8	22	22 1/2	21 5/8	21 5/8	22 7/8	22 7/8	20 5/8	23 3/8	22 7/8			
5	14 1/4	20 5/8	20 5/8	20 1/8	18 3/4	18 3/4	20 5/8	20 5/8	18 3/8	20 5/8	20 5/8			
6	14 1/2	21 1/4	20 3/4	20 3/4	19 7/8	19 1/2	20 3/8	20 3/4	19	20 3/4	20 3/8			
7	14 3/8	19 3/4	19 3/4	20 1/4	19 3/4	17	19 3/4	20 5/8	18 7/8	20 5/8	19 3/4			
8	14 1/4	21 1/2	21 1/2	20 5/8	19 1/4	19 3/4	20 5/8	21 1/2	19 5/8	21 1/2	20 5/8			
9	14 1/2	21 1/4	21 1/4	20 7/8	20	20 7/8	20 7/8	21 1/4	19 1/2	21 3/4	21 1/4			
A	18	19 3/4	19 3/4	20 1/4	19 3/4	17	19 3/4	20 5/8	18 7/8	20 5/8	19 3/4	21 5/8	23 7/8	23
B	14 1/4	21 1/2	21 1/2	20 5/8	19 1/4	19 3/4	20 5/8	21 1/2	19 5/8	21 1/2	20 5/8	19 1/2	22 3/8	21 1/2
C	14 1/4	21 1/4	21 1/4	20 7/8	20	20 7/8	20 7/8	21 1/4	19 1/2	21 3/4	21 1/4	18 3/8	21	19 3/4

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
2																										
3																										
4																										
5	72	60	6		1	12	18	9	10	11	8 7/8	23	22 1/4	13 1/4	48 1/2	10 1/4		19 1/4	24	7		90		96	7 1/2	

1-2 Digit Bid Area	3 Digit Bid Area
Sq. Ft.	
30	37.5

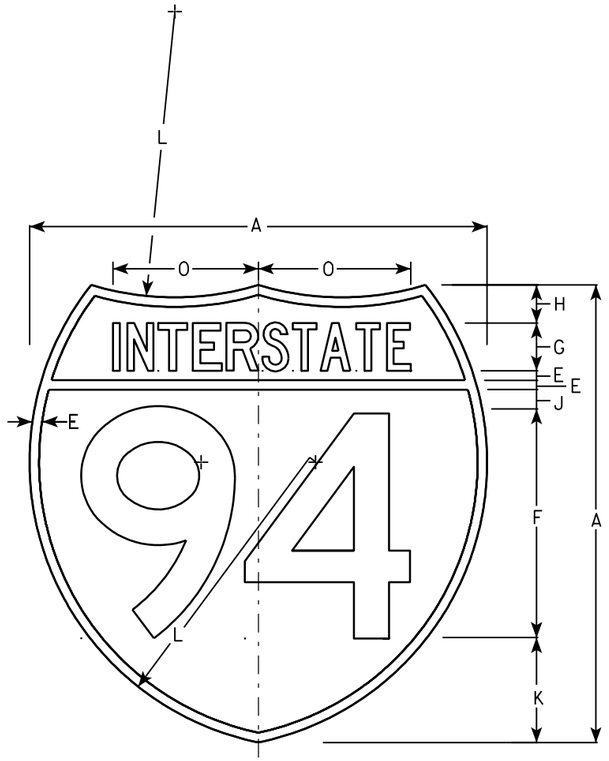
STANDARD SIGN
E5-1A

WISCONSIN DEPT OF TRANSPORTATION

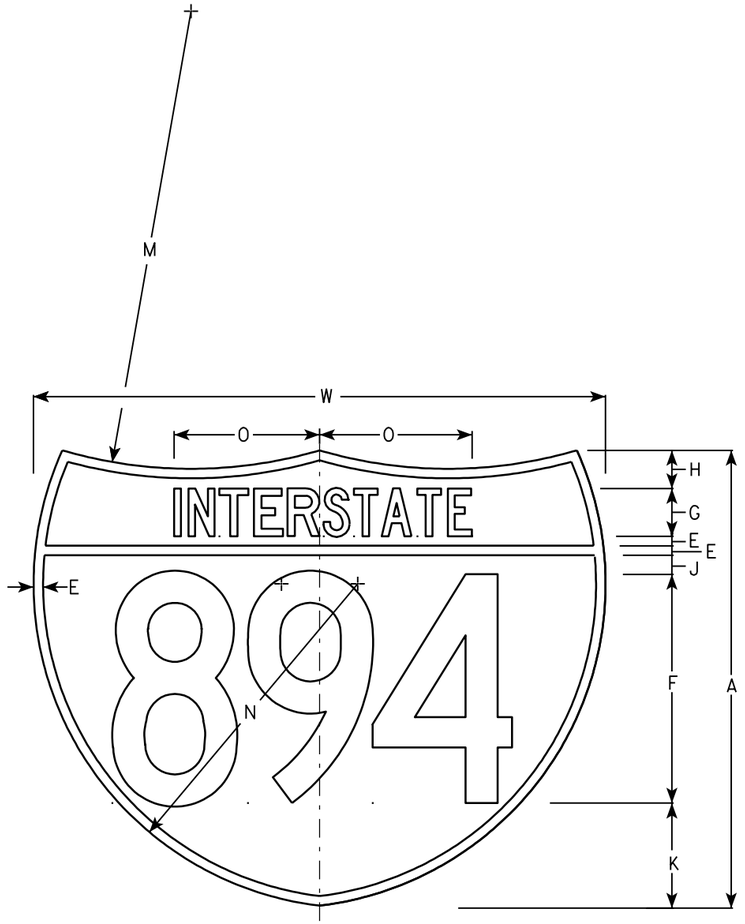
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 5/11/10 PLATE NO. E5-1A.12

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 313 | E



M1-1



M1-1A

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Top Red - Bottom Blue (See Note 6)
   Message - White - See Note 6
3. Message Series - See note 5
4. Substitute appropriate numerals & ajust spacing as per plate A10-1.
5. M1-1 - Numerals - D
   Interstate - C
   M1-1A - All copy - C
6. Permanent Signs
   Message - Type H Reflective
   Detour or other temporary signs
   Background - Reflective
   Message - Reflective

Metric equivalent for these signs are:

SIZE	M1-1	SIZE	M1-1A
1			
2	600 mm X 600 mm	2	600 mm X 750 mm
3	900 mm X 900 mm	3	900 mm X 1125 mm
4	900 mm X 900 mm	4	900 mm X 1125 mm
5	900 mm X 900 mm	5	900 mm X 1125 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	M1-1 Area sq. ft.	M1-1A Area sq. ft.	M1-1 Area m2	M1-1A Area m2
1																													
2	24				1/2	12	2 1/2	2		1	5 1/2	15	24	17	7 7/8								30			3.13	3.91	.36	.46
3	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
4	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
5	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05

INTERSTATE ROUTE MARKER
M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

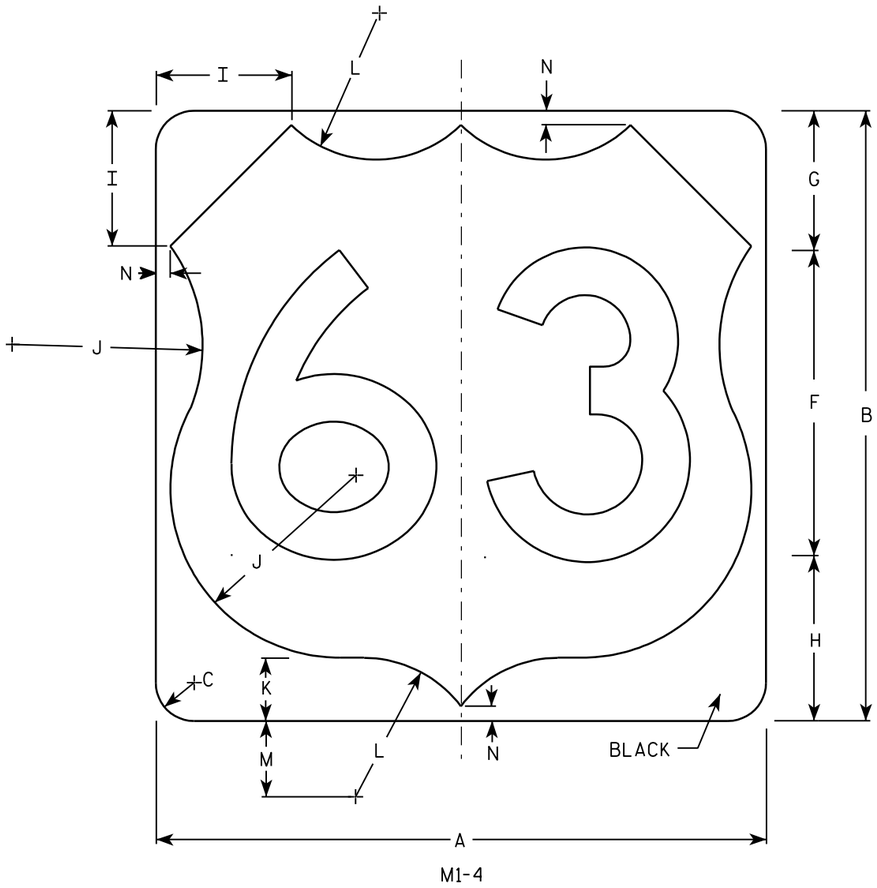
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/23/05 PLATE NO. M1-1.8

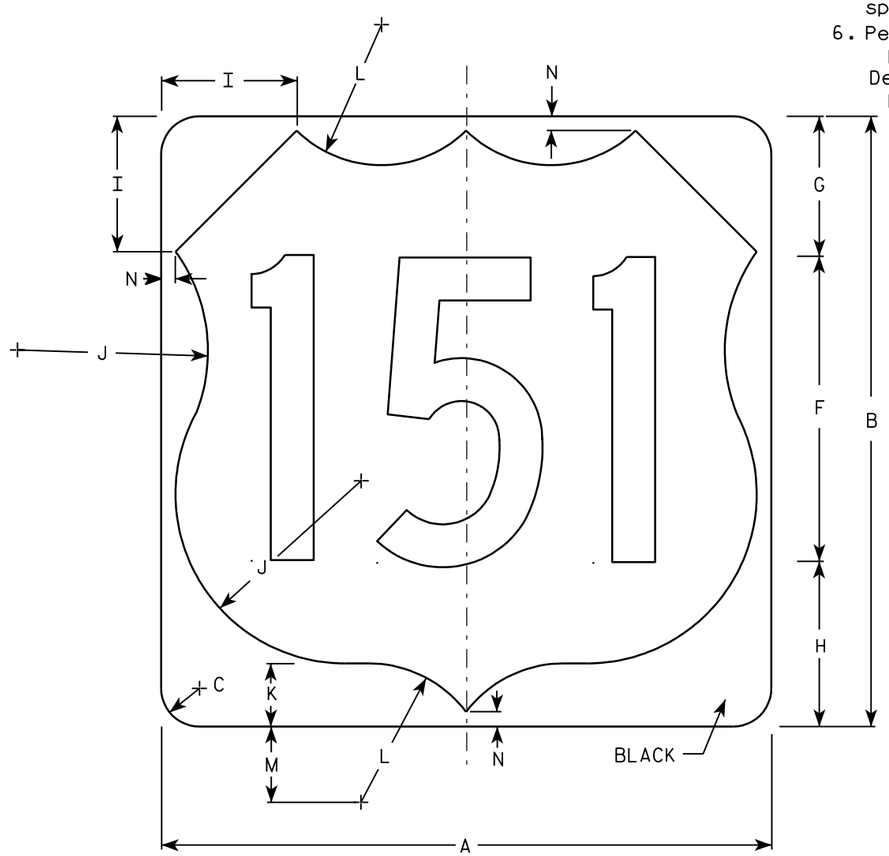
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 314	E

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

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

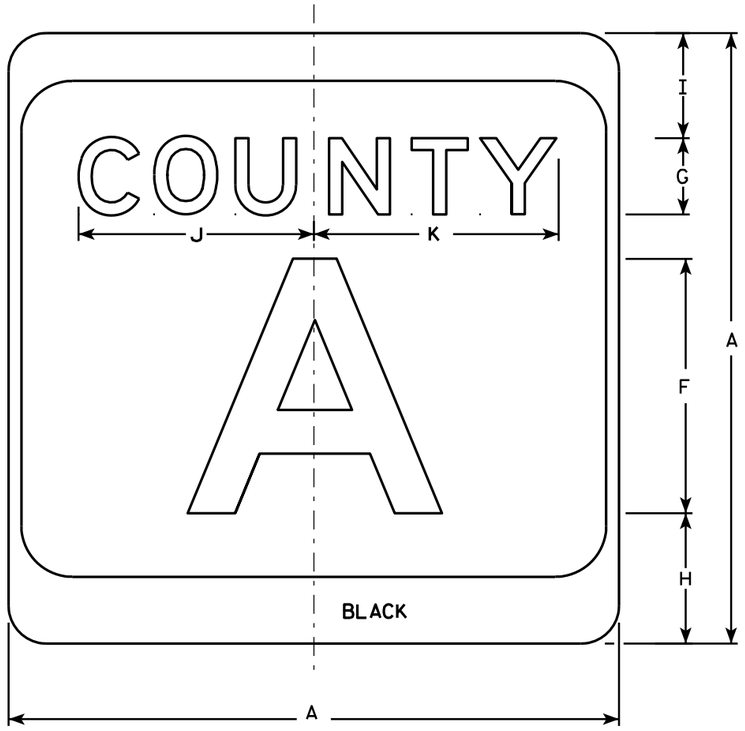
USH MARKER
M1-4 FOR ASSEMBLIES

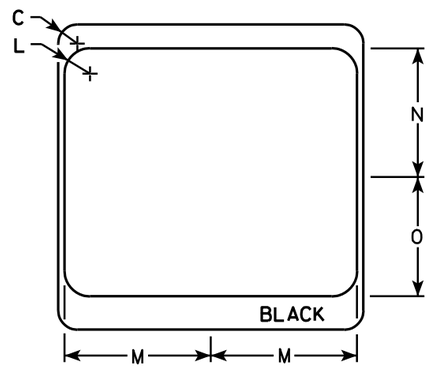
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/25/05 PLATE NO. M1-4.9

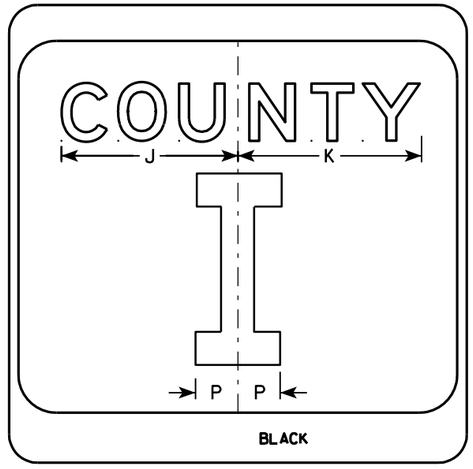
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 315 | E

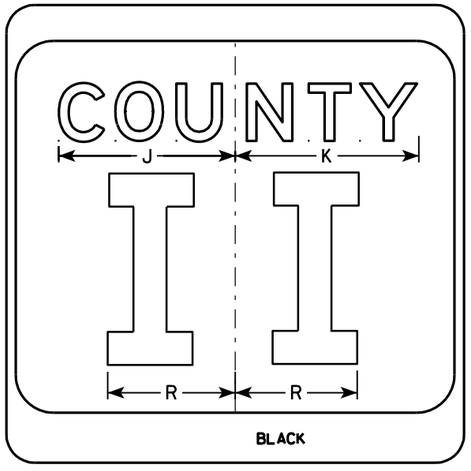




NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 7
   Message - Black
3. Message Series - see Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Message Series E for 1 letter.
   Message Series D for 2 letters unless message is too big then Series C.
   Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective





SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

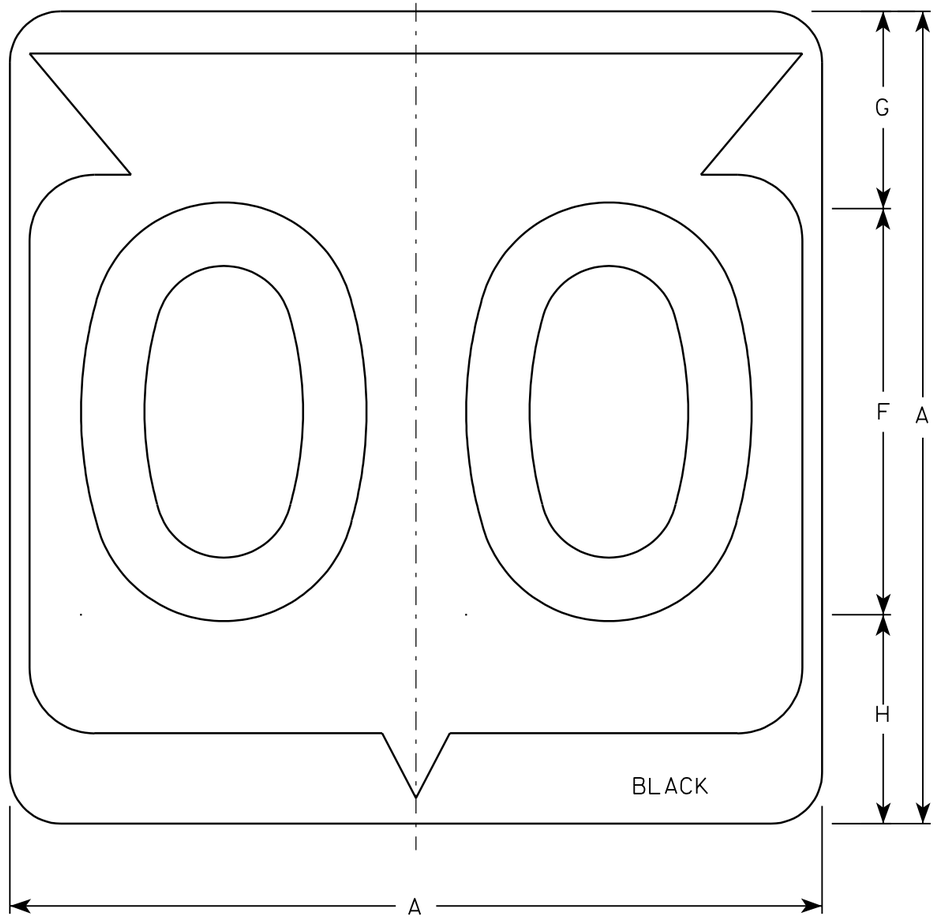
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

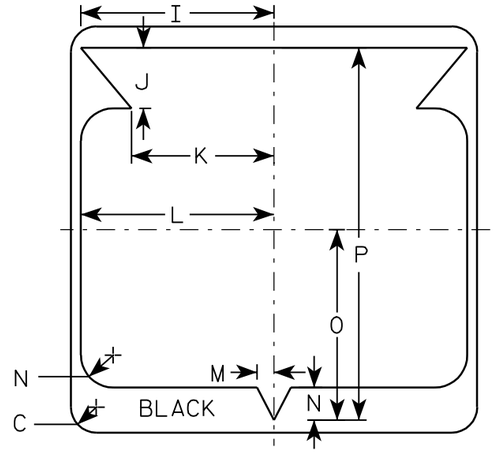
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 316	E



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

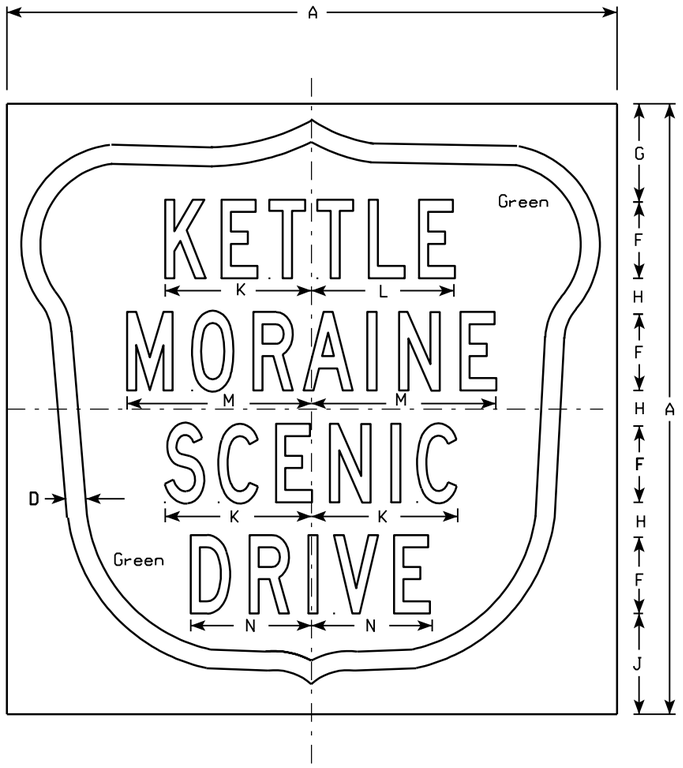
STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

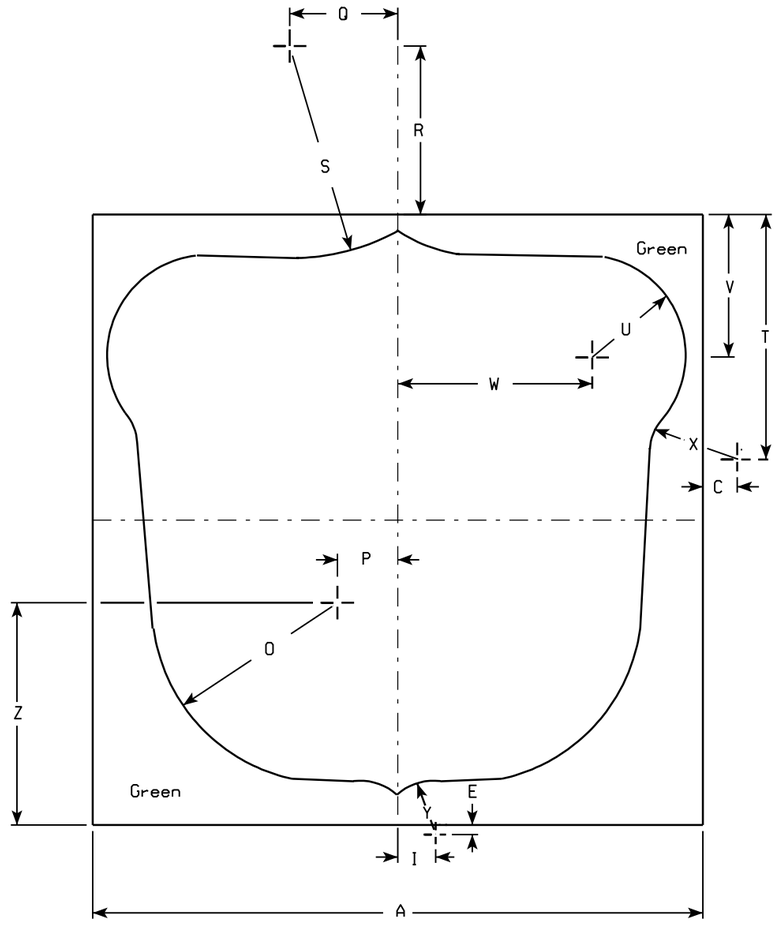
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 317	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 - Green
   Message - White - Type H Reflective
3. Message Series - B
4. Corners may be square or rounded when base material is plywood. When base material is metal, the corners shall be rounded.

7

Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	
4	900 mm X 900 mm
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	24		1 3/8	3/4	3/8	3	3 7/8	1 3/8	1 1/2	4	5 3/4	5 5/8	7 1/4	4 3/4	7 1/4	2 3/8	4 1/4	6 5/8	8 1/2	9 5/8	3 7/8	5 5/8	7 5/8	3 1/2	2 1/8	8 3/4	4.00	0.36
3																												
4	36		1 1/2	1 1/8	3/4	5	5 1/4	1 5/8	2 1/4	5 7/8	9 1/8	9	11 3/4	7 3/8	10 3/4	3 5/8	6 3/8	9 7/8	14 1/8	14 3/8	5 3/4	8 3/8	11 3/8	5 1/8	3 1/2	13 1/8	9.00	0.81
5																												

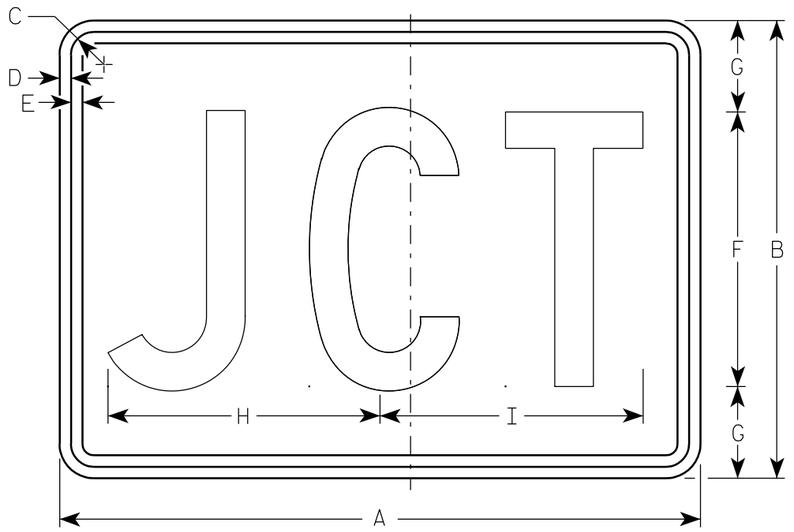
STANDARD SIGN
M1-97

WISCONSIN DEPT OF TRANSPORTATION

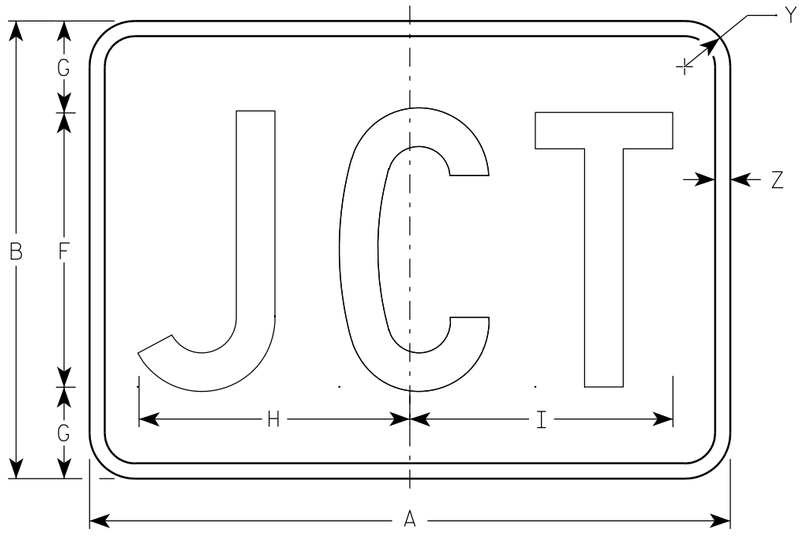
APPROVED Chester J Spang for State Traffic Engineer

DATE 1/30/02 PLATE NO. M1-97.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 318	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

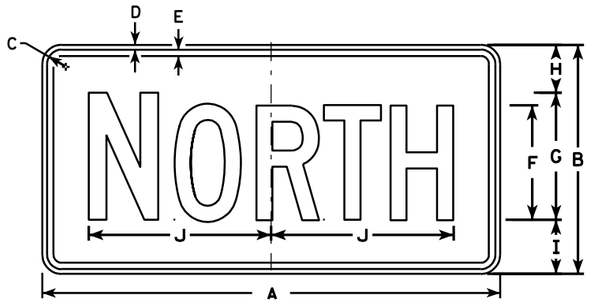
STANDARD SIGN
M2-1

WISCONSIN DEPT OF TRANSPORTATION

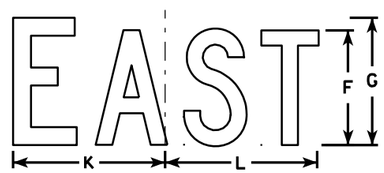
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/10 PLATE NO. M2-1.10

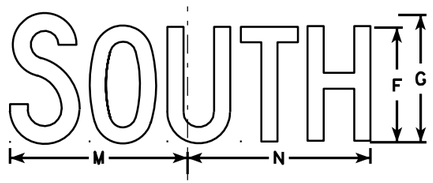
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 319	E



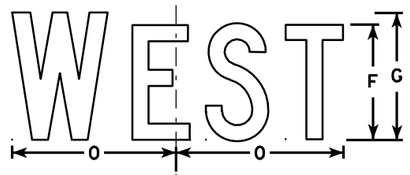
M3-1
MK3-1
MO3-1



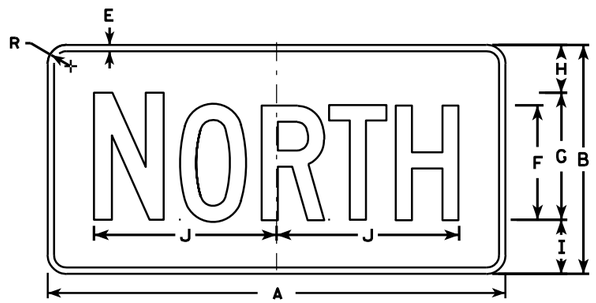
M3-2
MK3-2
MO3-2



M3-3
MK3-3
MO3-3

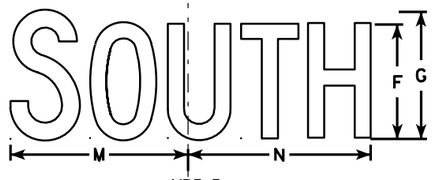


M3-4
MK3-4
MO3-4

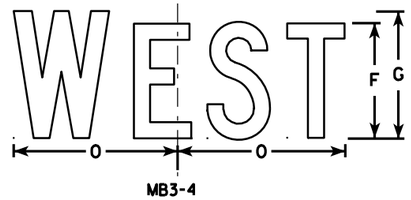


MB3-1
MG3-1
MM3-1
MN3-1

MB3-2
MG3-2
MM3-2
MN3-2



MB3-3
MG3-3
MM3-3
MN3-3



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

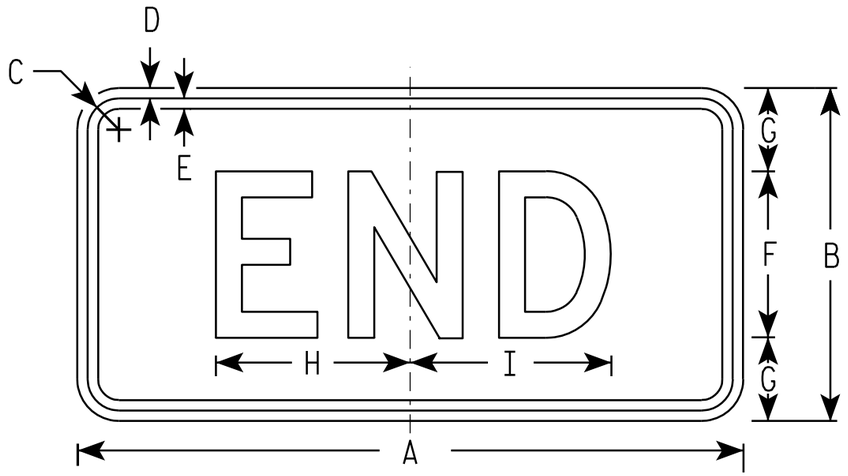
STANDARD SIGNS
M3-1 thur M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

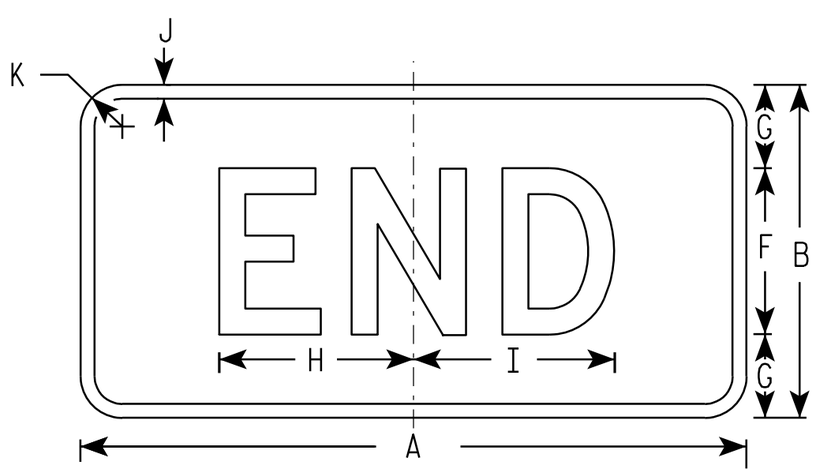
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 11/10/10 PLATE NO. M3-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 320	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

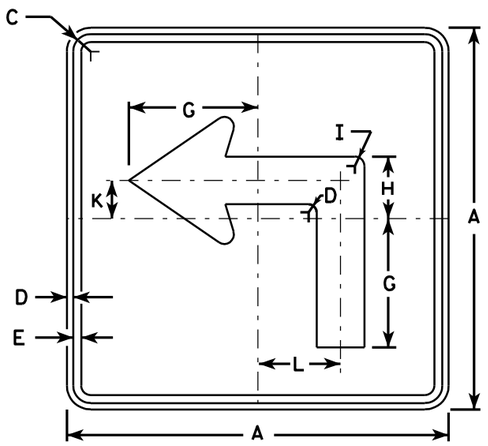
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-6.7

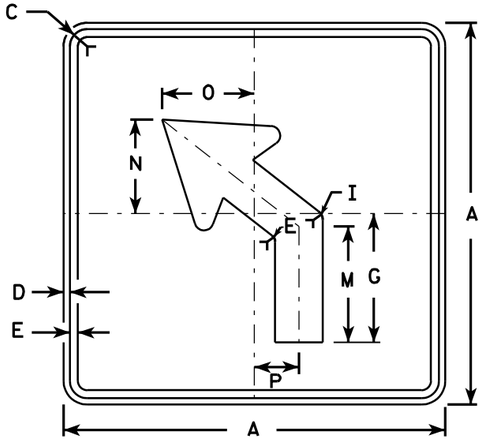
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 321 | E

7

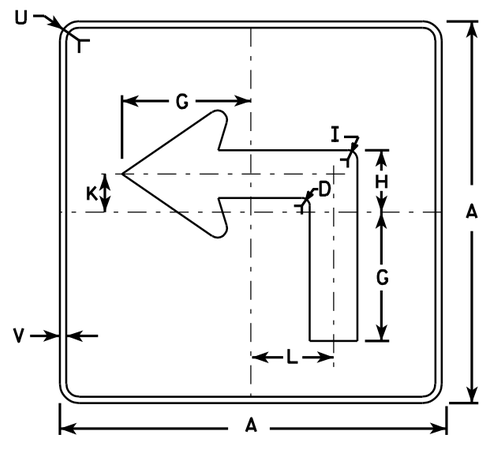
FILE NAME : C:\Users\PROJECTS\tr_stdplate\M46.DGN PLOT DATE : 10-NOV-2010 12:57 PLOT BY : ditjph PLOT NAME : PLOT SCALE : 5.462457:1.000000
WISDOT/CADDS SHEET 42



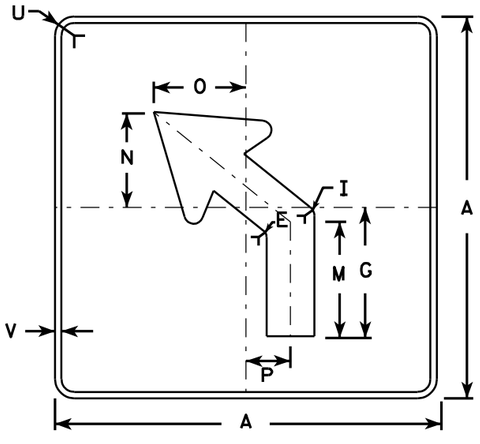
M5-1L
MK5-1L
MM5-1L
MO5-1L
MP5-1L
MR5-1L



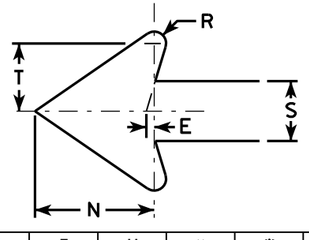
M5-2L
MK5-2L
MM5-2L
MO5-2L
MP5-2L
MR5-2L



MB5-1L
MG5-1L
MN5-1L



MB5-2L
MG5-2L
MN5-2L



NOTES

1. Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M5-1 and M5-2 Background - White - Type H Reflective
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White - Type H Reflective
   MG5-1 and MG5-2 Background - Green
   Message - White - Type H Reflective
   MK5-1 and MK5-2 Background - Green
   Message - White Type H Reflective
   MM5-1 and MM5-2 Background - White - Type H Reflective
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White - Type H Reflective
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White - Type H Reflective
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow - Type H Reflective
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 1/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 1/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 1/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

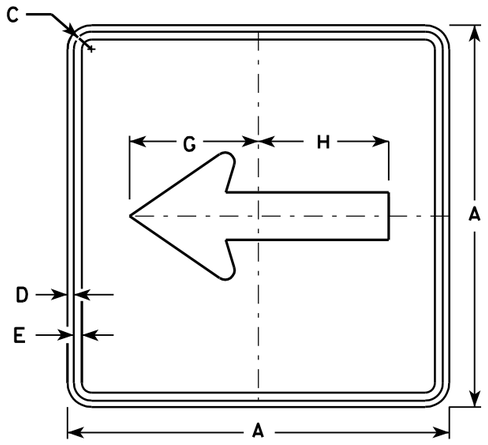
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

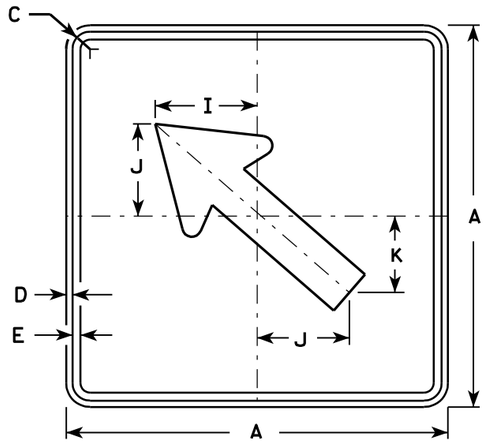
APPROVED Matthew R Rauch
for State Traffic Engineer

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

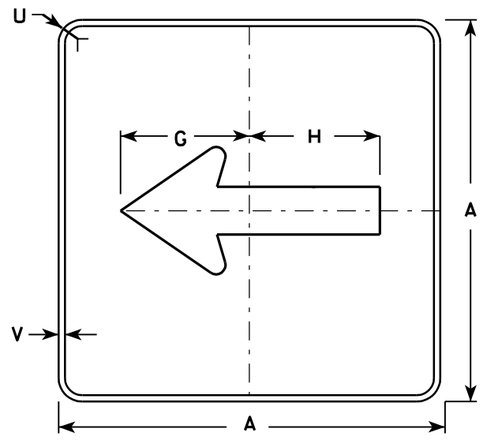
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 322 | E



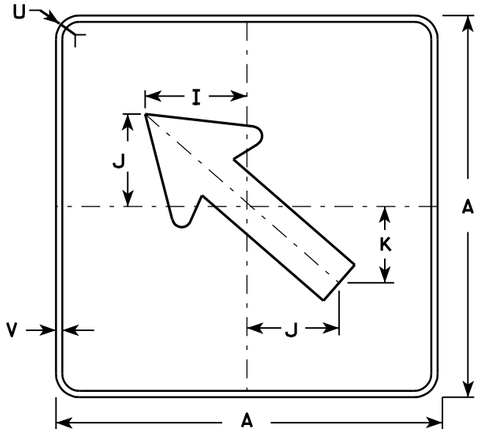
M6-1
MK6-1
MM6-1
MO6-1
MP6-1
MR6-1



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



MB6-1
MG6-1
MN6-1



MB6-2
MG6-2
MN6-2

NOTES

1. Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White - Type H Reflective
   Message - Black

   MB6-1 and MB6-2 Background - Blue
   Message - White - Type H Reflective

   MG6-1 and MG6-2 Background - Green
   Message - White - Type H Reflective

   MK6-1 and MK6-2 Background - Green
   Message - White - Type H Reflective

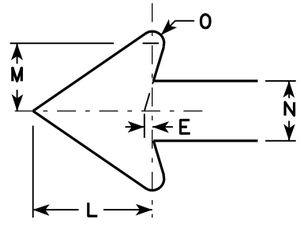
   MM6-1 and MM6-2 Background - White - Type H Reflective
   Message - Green

   MN6-1 and MN6-2 Background - Brown
   Message - White - Type H Reflective

   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black

   MP6-1 and MP6-2 Background - White - Type H Reflective
   Message - Blue

   MR6-1 and MR6-2 Background - Brown
   Message - Yellow - Type H Reflective



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

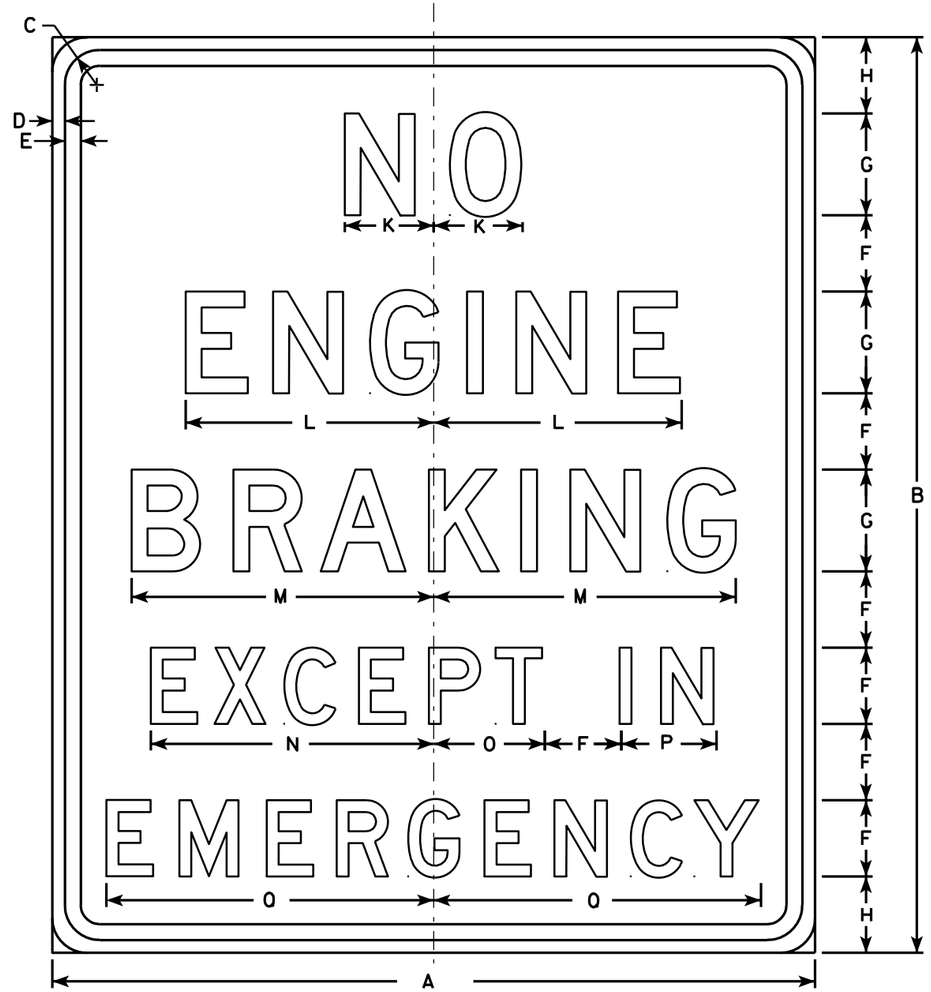
STANDARD SIGN M6-1 & M6-2 SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/29/13 PLATE NO. M6-1.13

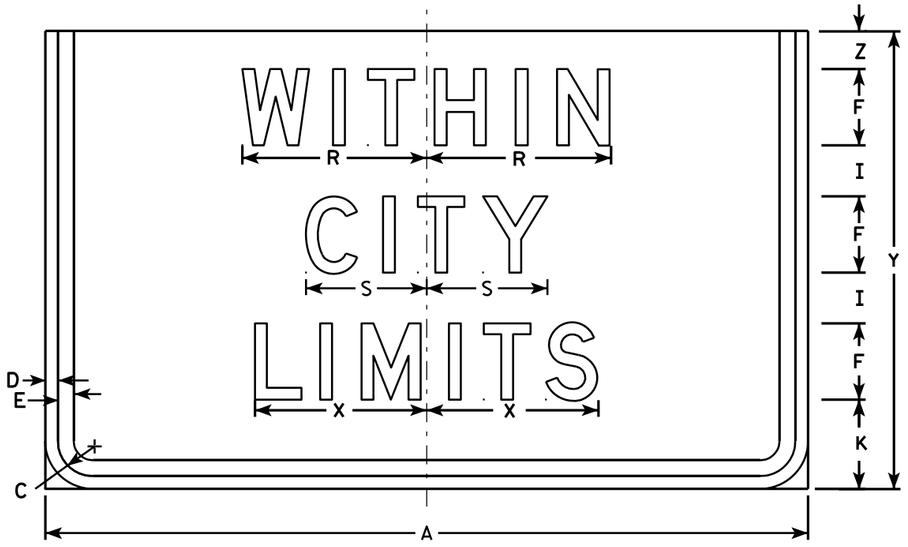
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 323 | E



R10-64

NOTES

1. Signs are 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 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. Line 2 of R10-64F is Series C for "TOWNSHIP" Only



R10-64F

Area sq. ft.
3.75
7.0

VILLAGE
V
V

TOWNSHIP
U
U

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	36	1 3/8	1/2	5/8	3	4	3	2		3 1/2	9 3/4	11 7/8	11 1/8	4 3/8	3 3/4	12 7/8	7 1/4	4 3/4		8 1/4	8 3/4	5/8	6 3/4	18	1 1/2	7.5
2S	30	36	1 3/8	1/2	5/8	3	4	3	2		3 1/2	9 3/4	11 7/8	11 1/8	4 3/8	3 3/4	12 7/8	7 1/4	4 3/4		8 1/4	8 3/4	5/8	6 3/4	18	1 1/2	7.5
2M	30	36	1 3/8	1/2	5/8	3	4	3	2		3 1/2	9 3/4	11 7/8	11 1/8	4 3/8	3 3/4	12 7/8	7 1/4	4 3/4		8 1/4	8 3/4	5/8	6 3/4	18	1 1/2	7.5
3	42	48	1 3/8	1/2	5/8	4	5	4 1/2	3		4	12 1/4	14 7/8	14 1/8	5 1/4	4 3/4	16 1/4	9	6		11	11 1/4	1 1/2	8 1/2	24	2	14.0
4																											
5																											

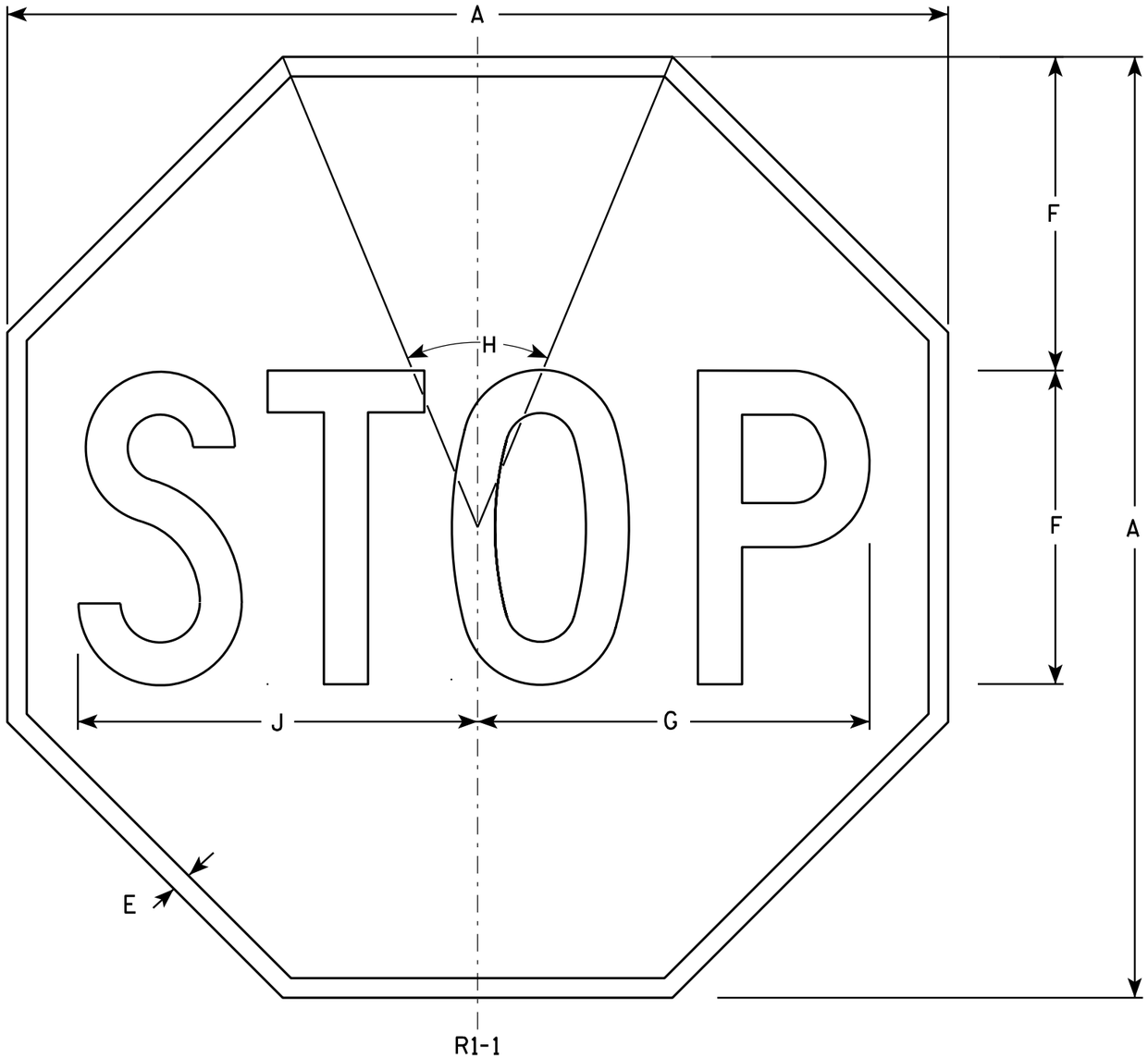
STANDARD SIGN
R10-64 & R10-64F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/4/11 PLATE NO. R10-64.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 324	E



NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24				3/8	8	10	45°		10 1/4																	3.31
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

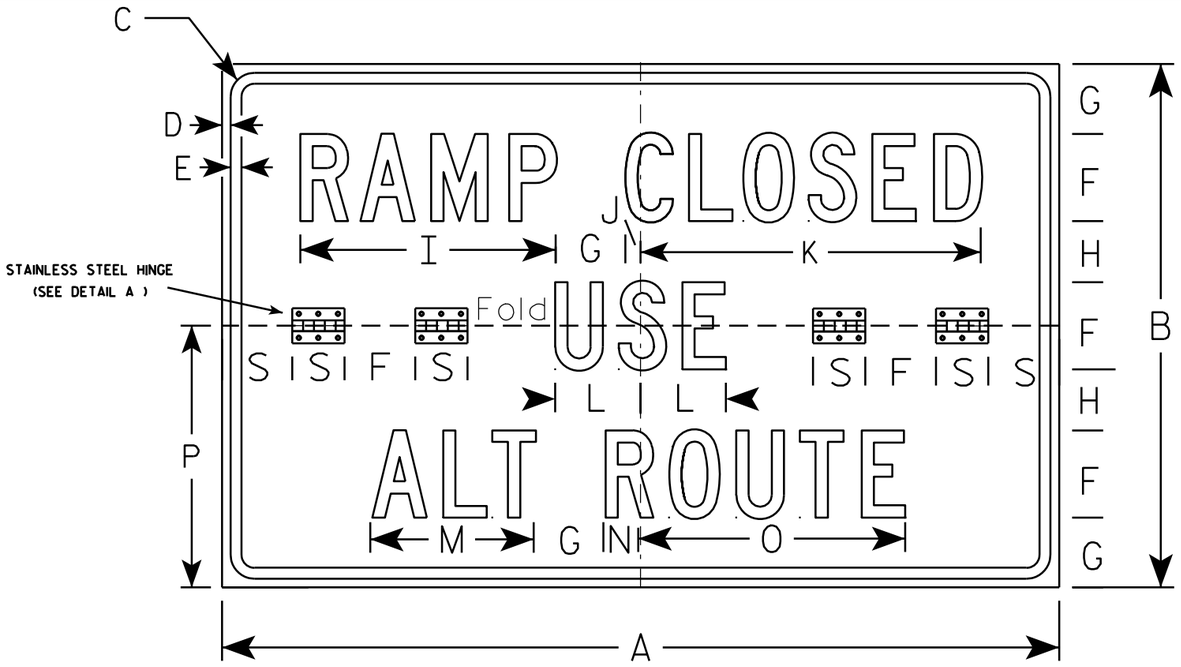
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

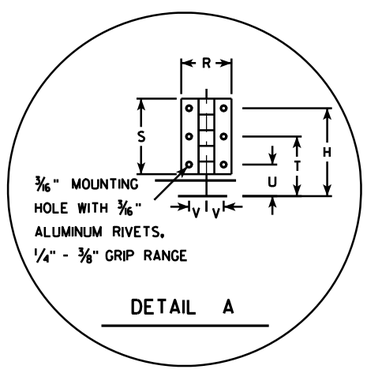
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1.12

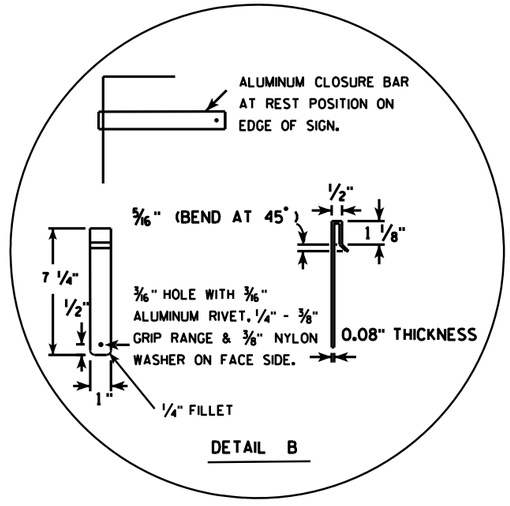
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 325	E



R11-54F



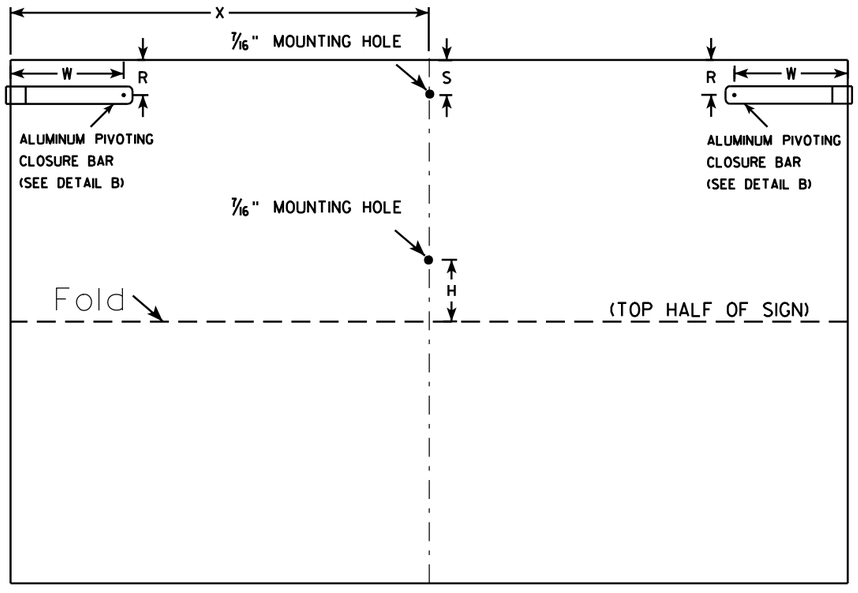
DETAIL A



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																											

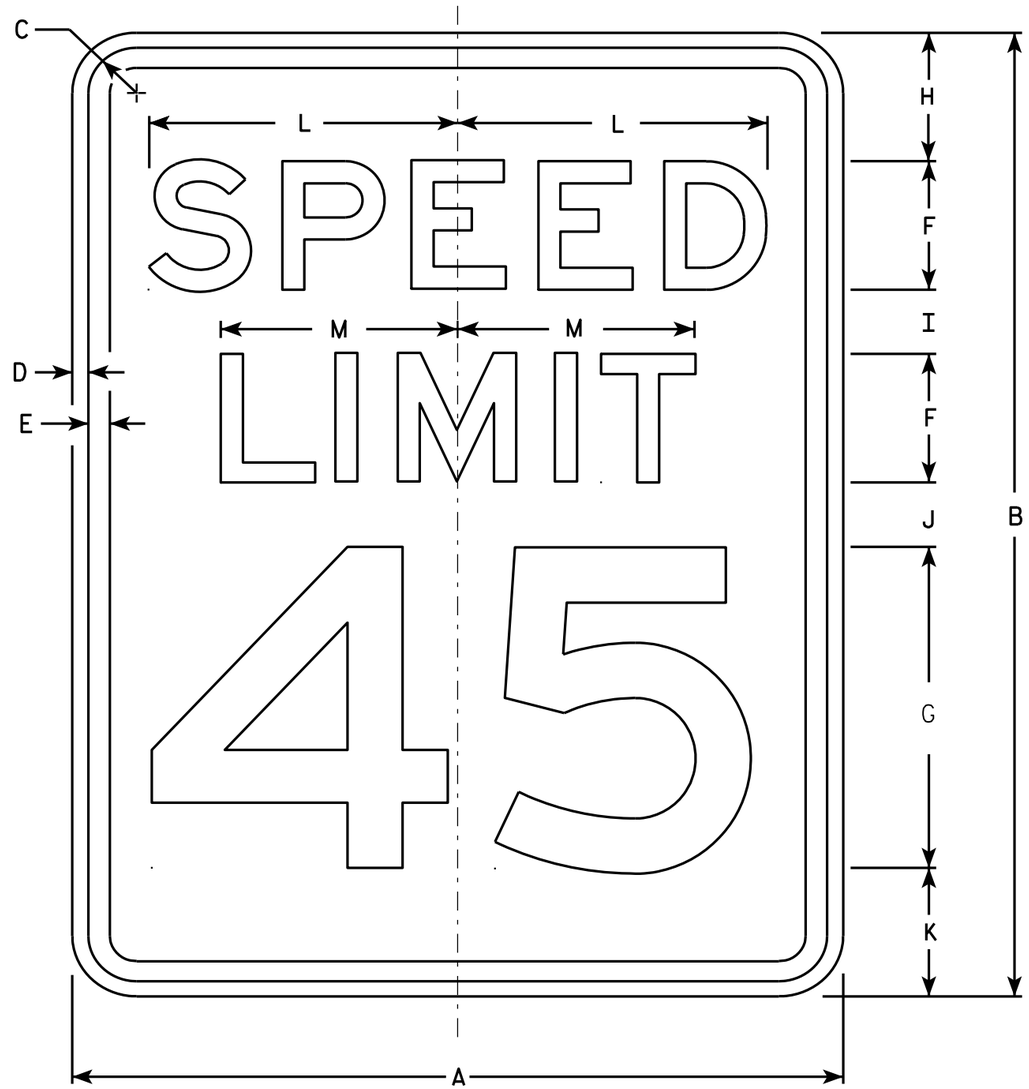
STANDARD SIGN
R11-54F

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: 326	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

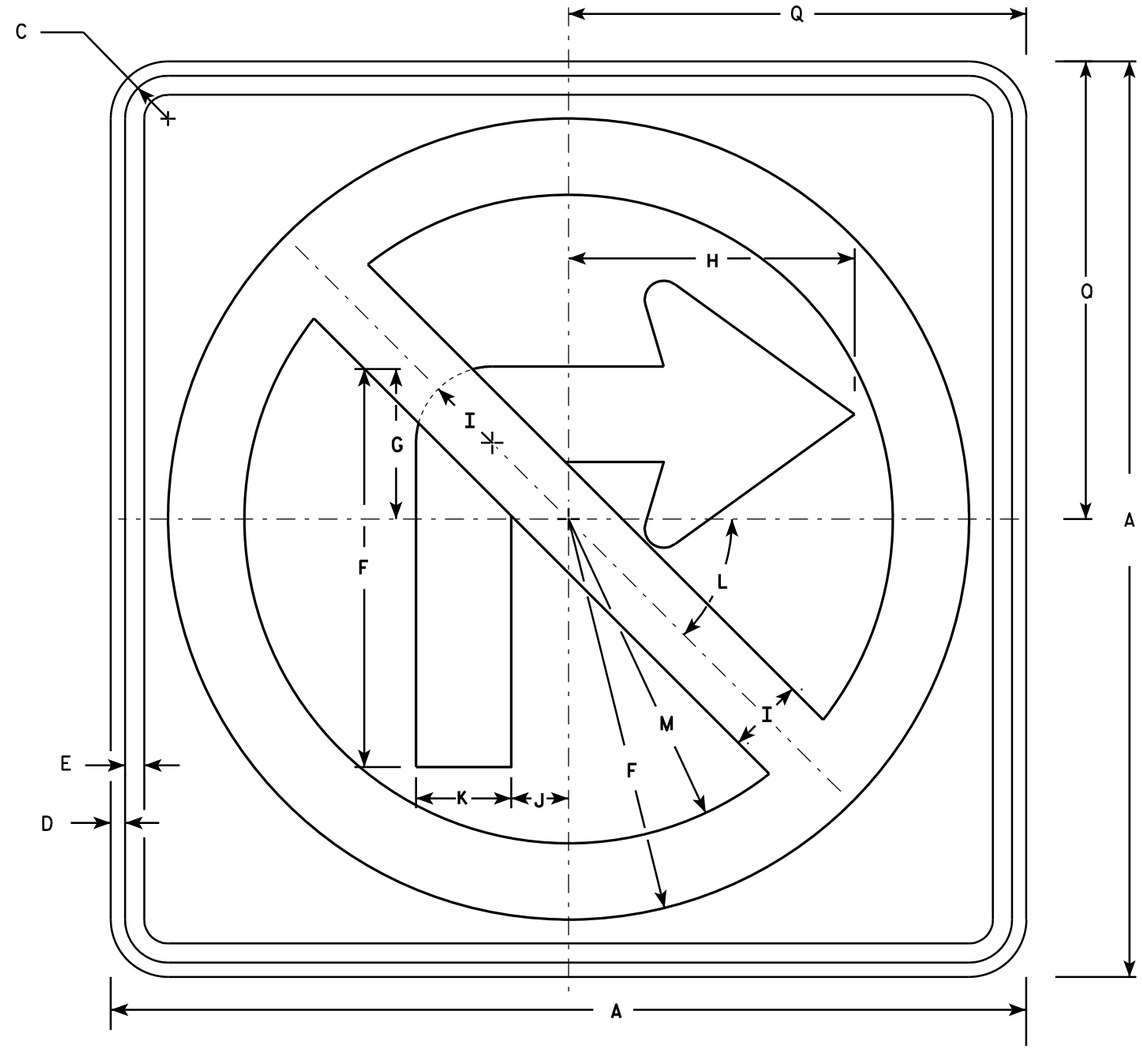
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

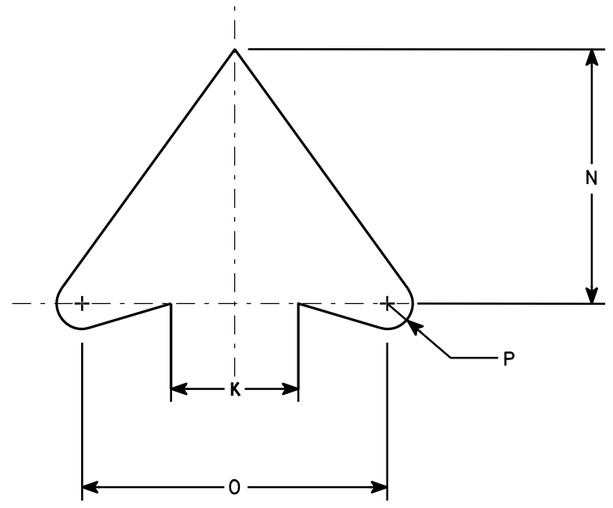
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 327	E



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

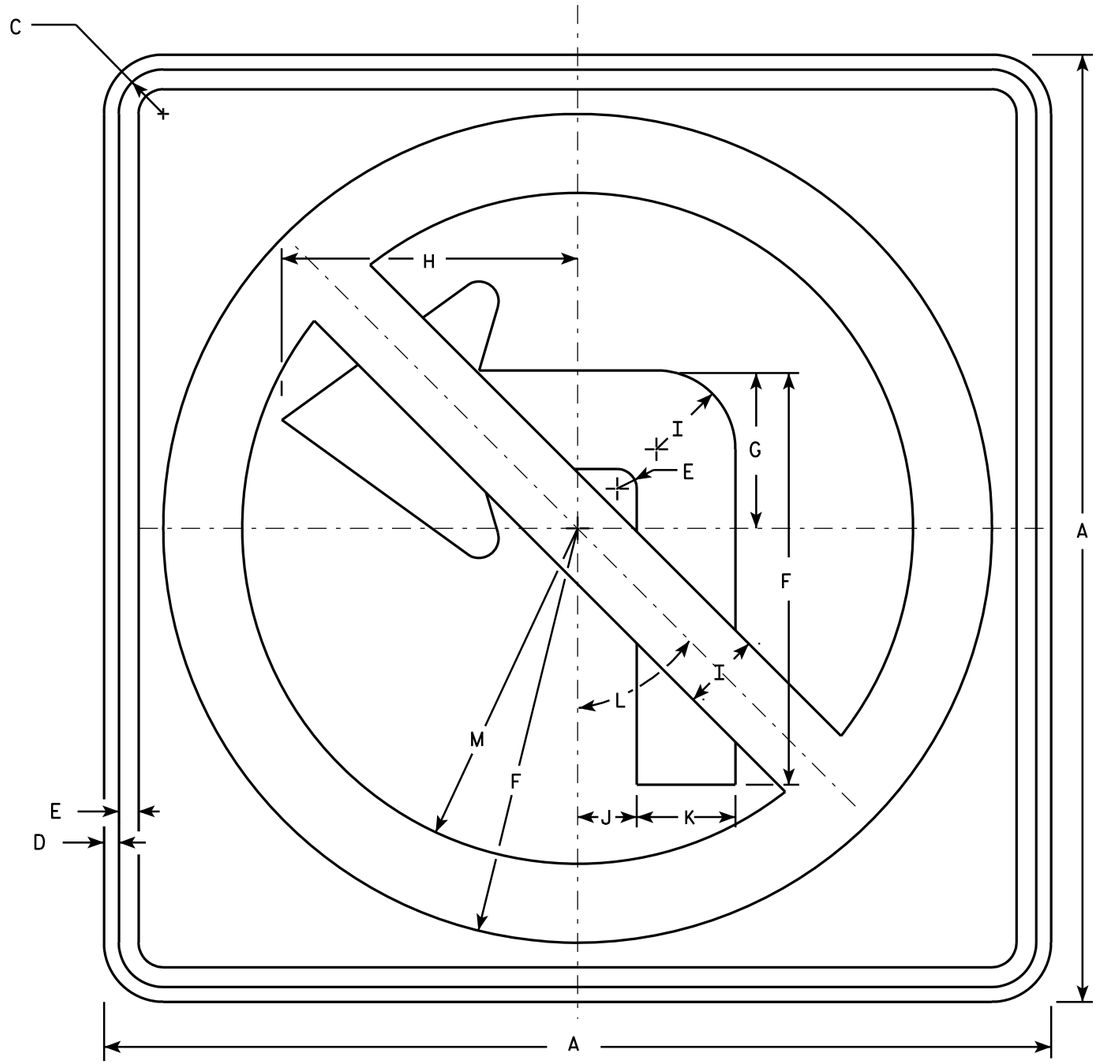
STANDARD SIGN
R3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-1.5

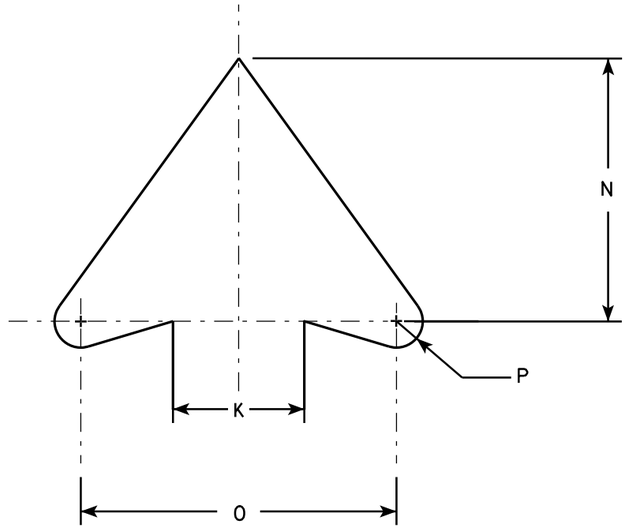
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 328	E



R3-2

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 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											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											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											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											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											9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1											16.0

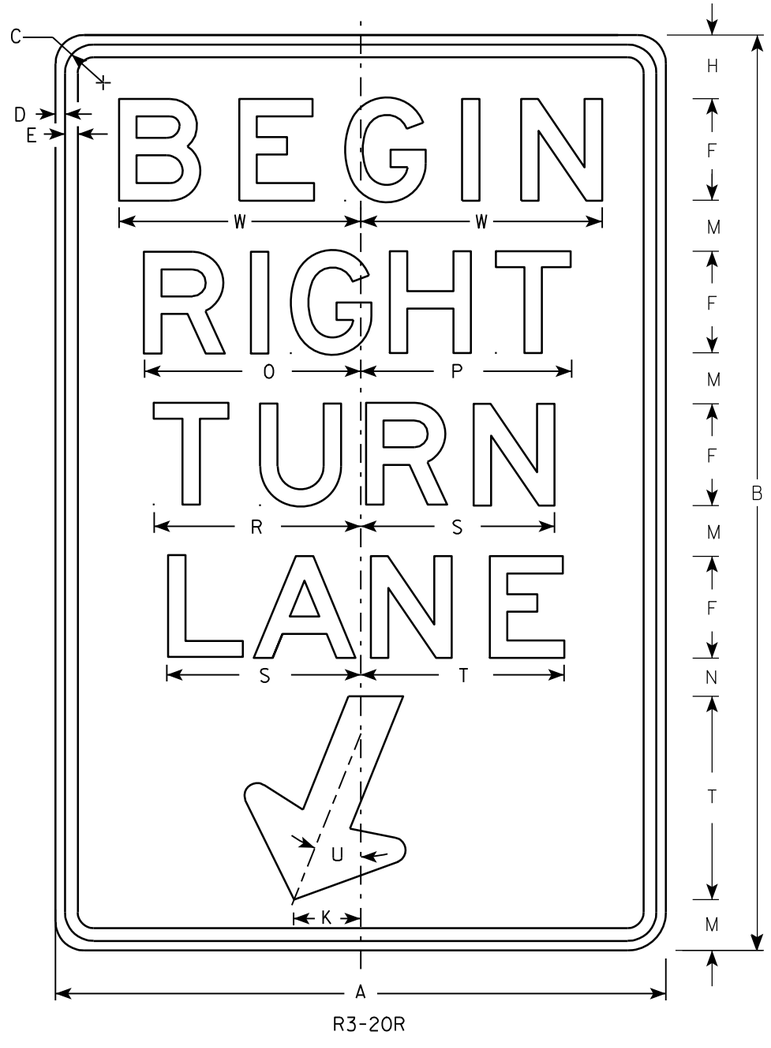
STANDARD SIGN
R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-2.10

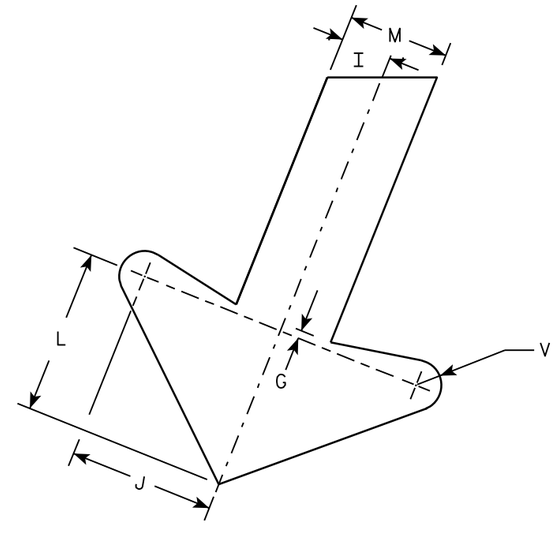
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 329	E



R3-20R

NOTES

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



ARROW DETAIL

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

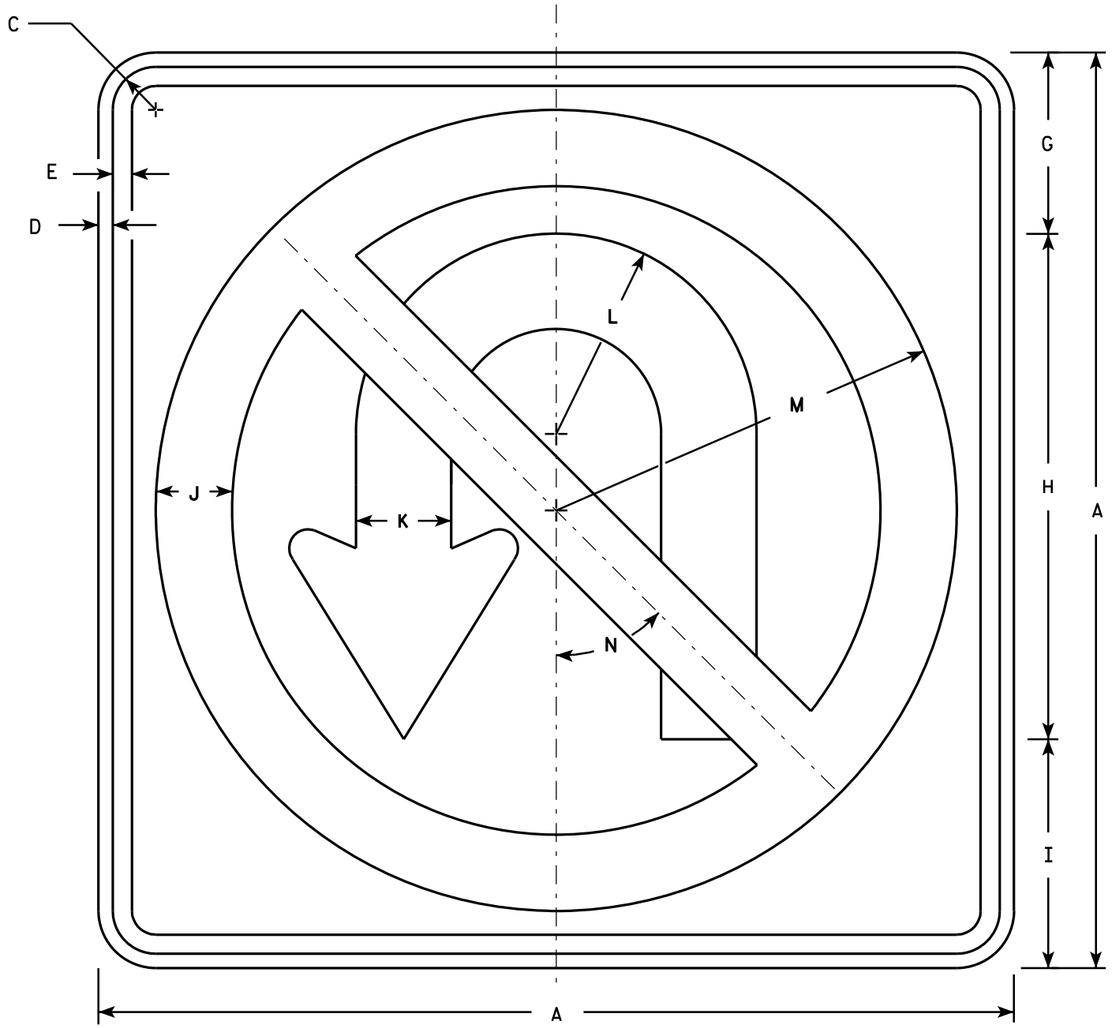
STANDARD SIGN
R3-20R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20R.6

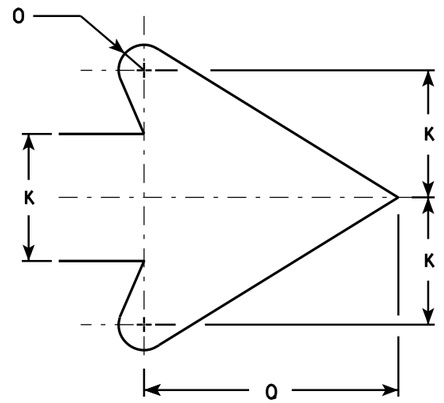
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 330 | E



R3-4

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																											
2S	24		1 1/8	3/8	1/2		4 3/4	13 1/4	6	2	2 1/2	5 1/4	10 1/2	45°	1/2		5										4.0
2M	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0
3	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0
4	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0
5	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0

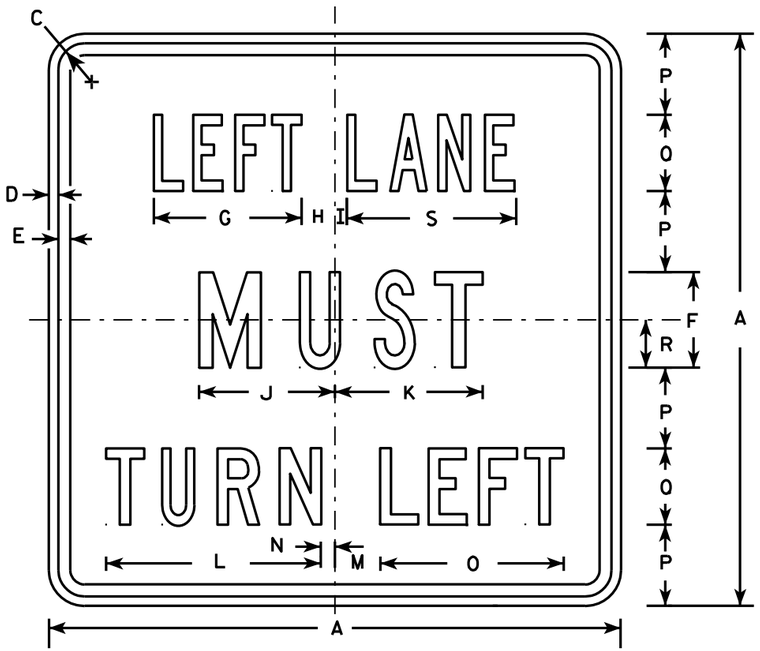
STANDARD SIGN
R3-4

WISCONSIN DEPT OF TRANSPORTATION

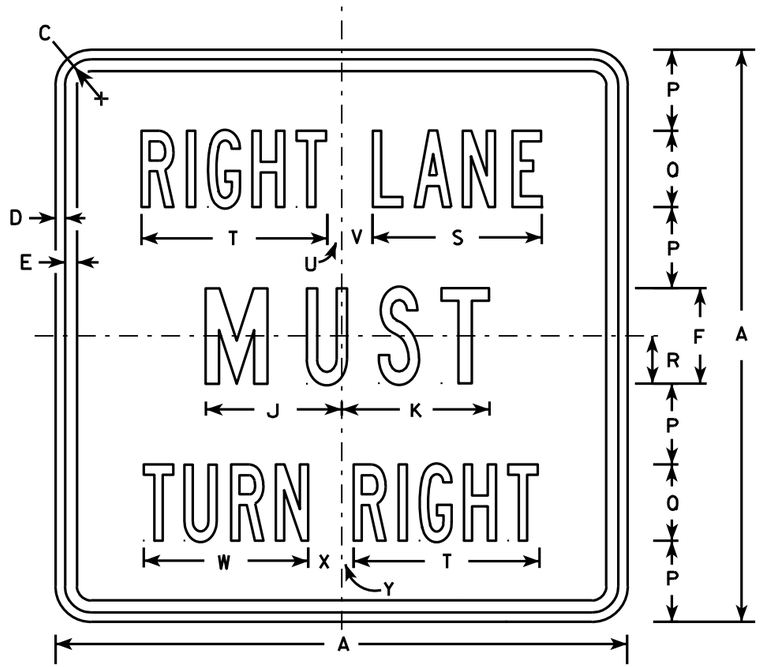
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-4.11

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 331	E



R3-7L



R3-7R

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 - Line 1 is Series B.
   Line 2 is Series C.
   Line 3 on plate R3-7R is Series B and Series C on plate R3-7L.
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		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2S	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2M	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
3	36		1 5/8	5/8	3/4	6	9 5/8	2	1 1/8	8 3/4	9	13 1/2	3 7/8	1 1/2	12 1/2	5	5	3	10 5/8	12	7/8	2 1/4	10 5/8	2 1/8	1		9.00
4	48		2 1/4	3/4	1	8	13 1/2	2 3/8	1 1/2	11 1/2	11 7/8	17 3/4	3 5/8	2 1/2	16 3/8	6 1/2	7	4	14 3/8	16 7/8	5/8	3 1/4	15 1/8	2 3/4	1 1/8		16.00
5																											

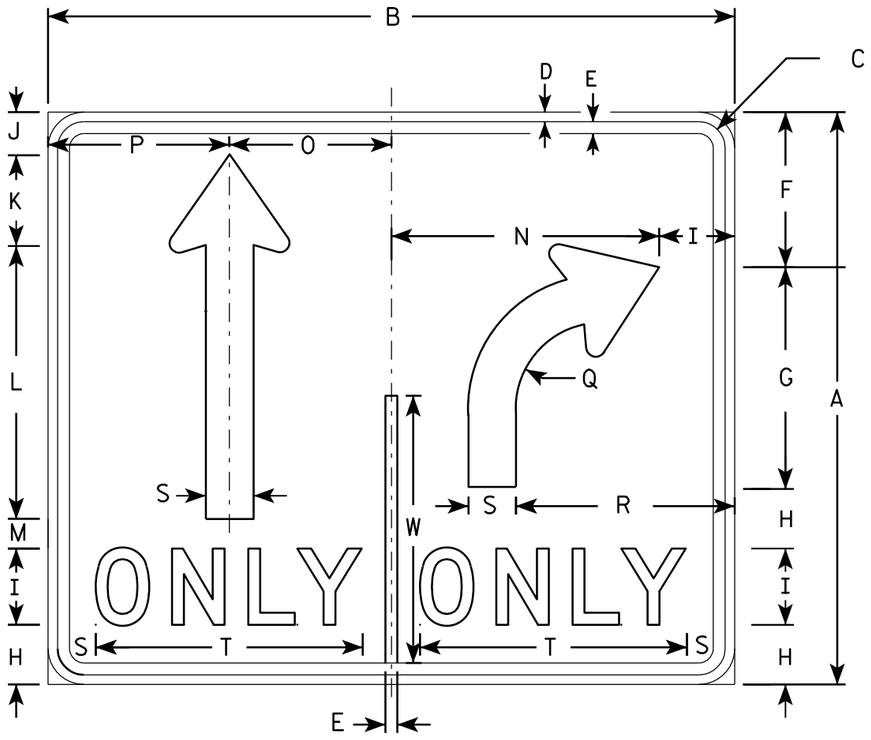
STANDARD SIGN
R3-7L & R3-7R

WISCONSIN DEPT OF TRANSPORTATION

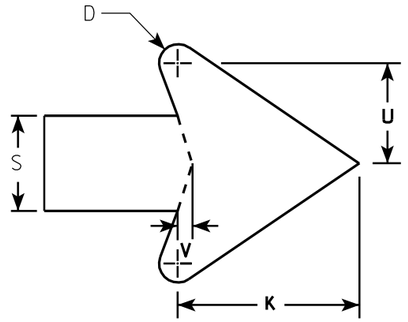
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-7.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 332 | E



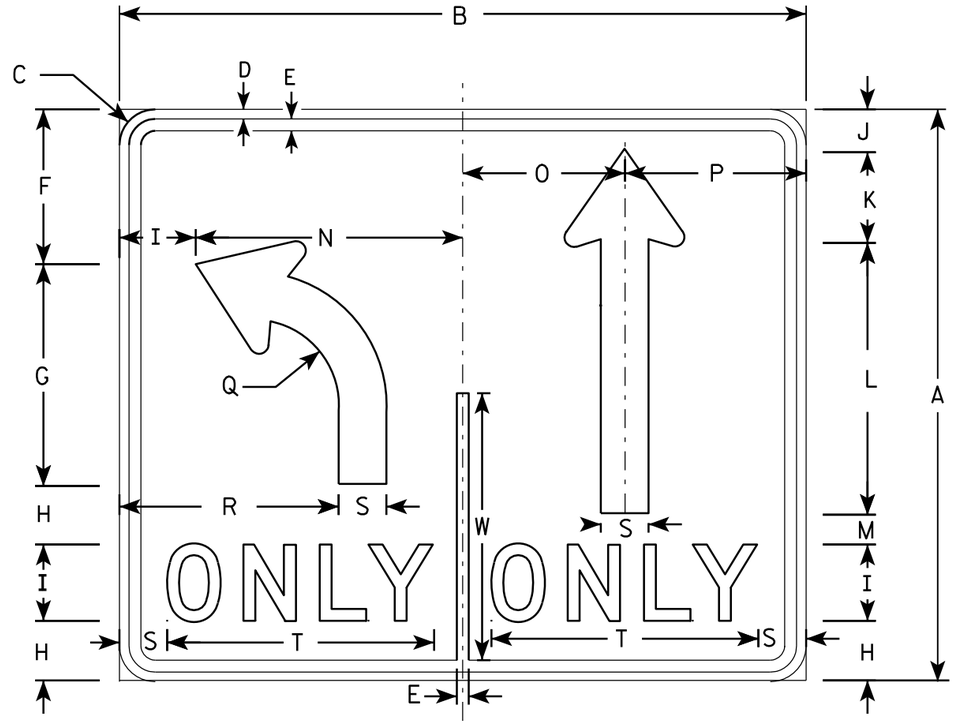
R3-8D



ARROW DETAIL

NOTES

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



R3-8E

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	36	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	2 1/4	4 3/4	14 1/4	1 5/8	14	8 1/2	9 1/2	4 1/2	11 1/2	2 1/2	14	2 5/8	3/8	14				7.5
2M	30	36	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	2 1/4	4 3/4	14 1/4	1 5/8	14	8 1/2	9 1/2	4 1/2	11 1/2	2 1/2	14	2 5/8	3/8	14				7.5
3																											
4	48	54	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	3 1/2	7 1/8	21 1/2	4 3/4	21	12 3/4	14 1/4	7 1/4	17 1/8	3 3/4	20 5/8	4	5/8	22 3/8				18.0
5	48	54	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	3 1/2	7 1/8	21 1/2	4 3/4	21	12 3/4	14 1/4	7 1/4	17 1/8	3 3/4	20 5/8	4	5/8	22 3/8				18.0

STANDARD SIGN
R3-8D & R3-8E

WISCONSIN DEPT OF TRANSPORTATION

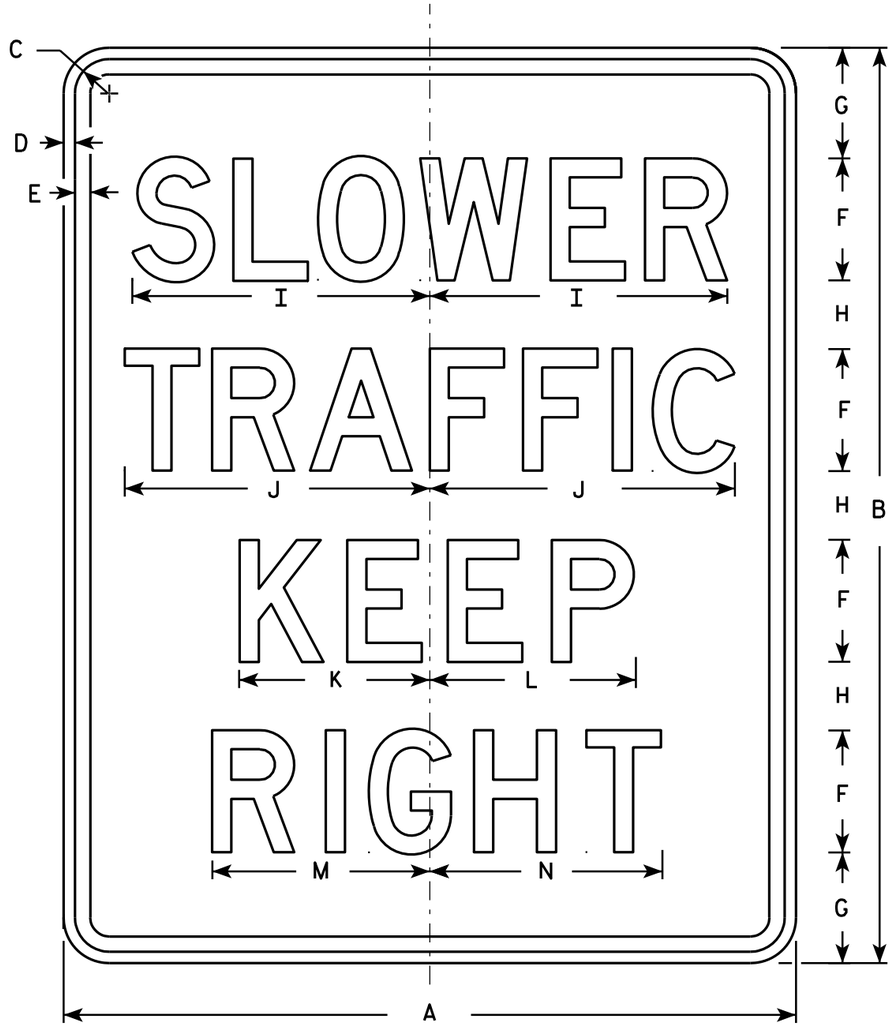
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-8D.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 333 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R38D.DGN PLOT DATE : 18-MAR-2011 12:47 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 7.945391:1.000000

WISDOT/CADDS SHEET 42



R4-3

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	30	1 1/8	3/8	1/2	4	3 5/8	2 1/4	9 3/4	10	6 1/4	6 3/4	7 1/8	7 5/8													5.0
2M	24	30	1 1/8	3/8	1/2	4	3 5/8	2 1/4	9 3/4	10	6 1/4	6 3/4	7 1/8	7 5/8													5.0
3	36	48	1 5/8	5/8	3/4	6	6	4	14 5/8	15	9 3/8	10	10 3/4	11 3/8													12.0
4	36	48	1 5/8	5/8	3/4	6	6	4	14 5/8	15	9 3/8	10	10 3/4	11 3/8													12.0
5	48	60	2 1/4	3/4	1	8	7 1/4	4 1/2	19 1/2	20	12 1/2	13 1/2	14 1/4	15 1/4													20.0

STANDARD SIGN
R4-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-3.8

PROJECT NO:

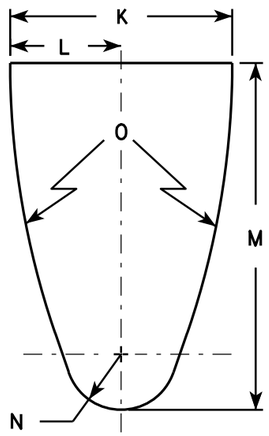
SHEET NO: 334 E

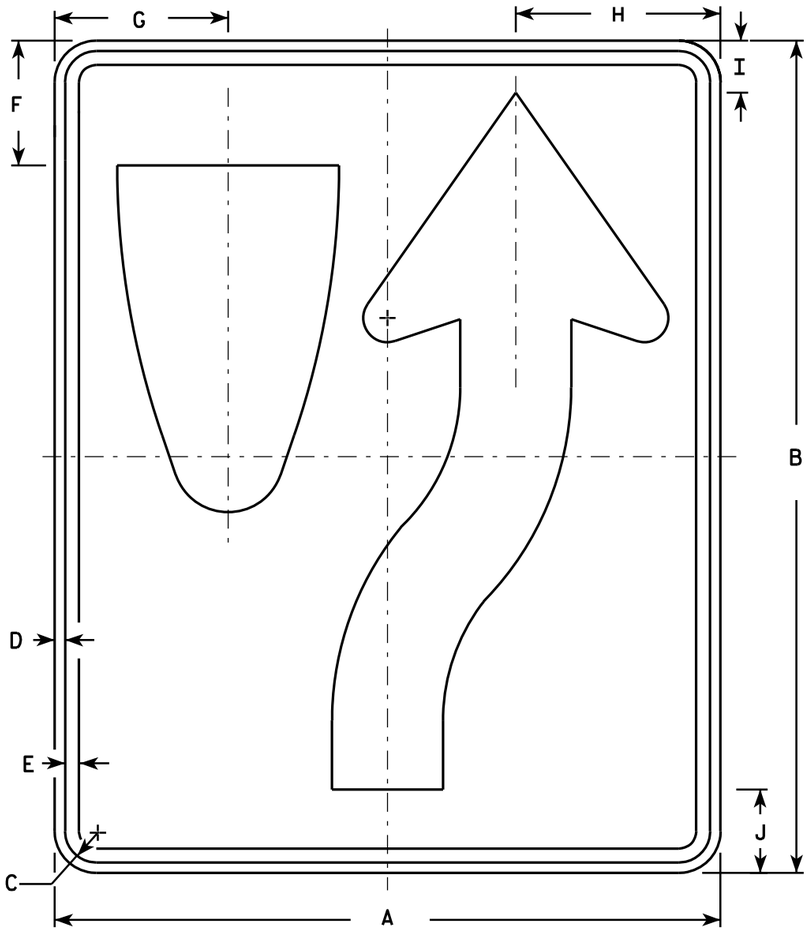
FILE NAME : C:\Users\PROJECTS\tr_stdplate\R43.DGN PLOT DATE : 25-MAR-2011 13:40 PLOT BY : mscsja

WISDOT/CADDS SHEET 42

7

7

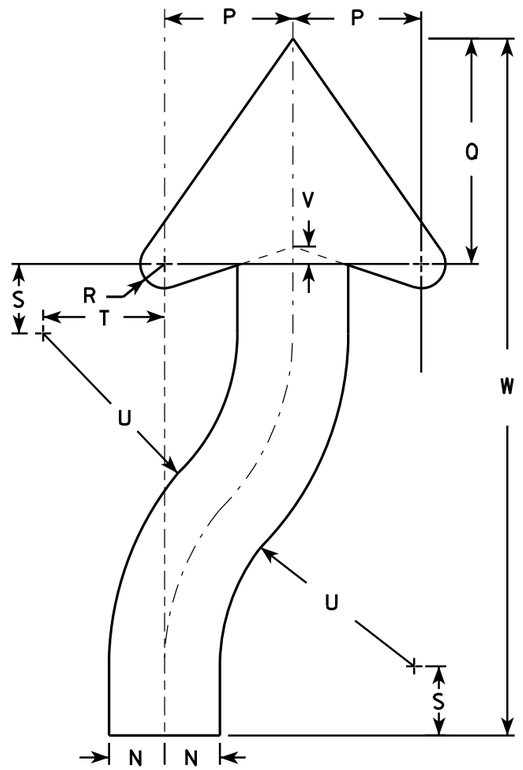




R4-7

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

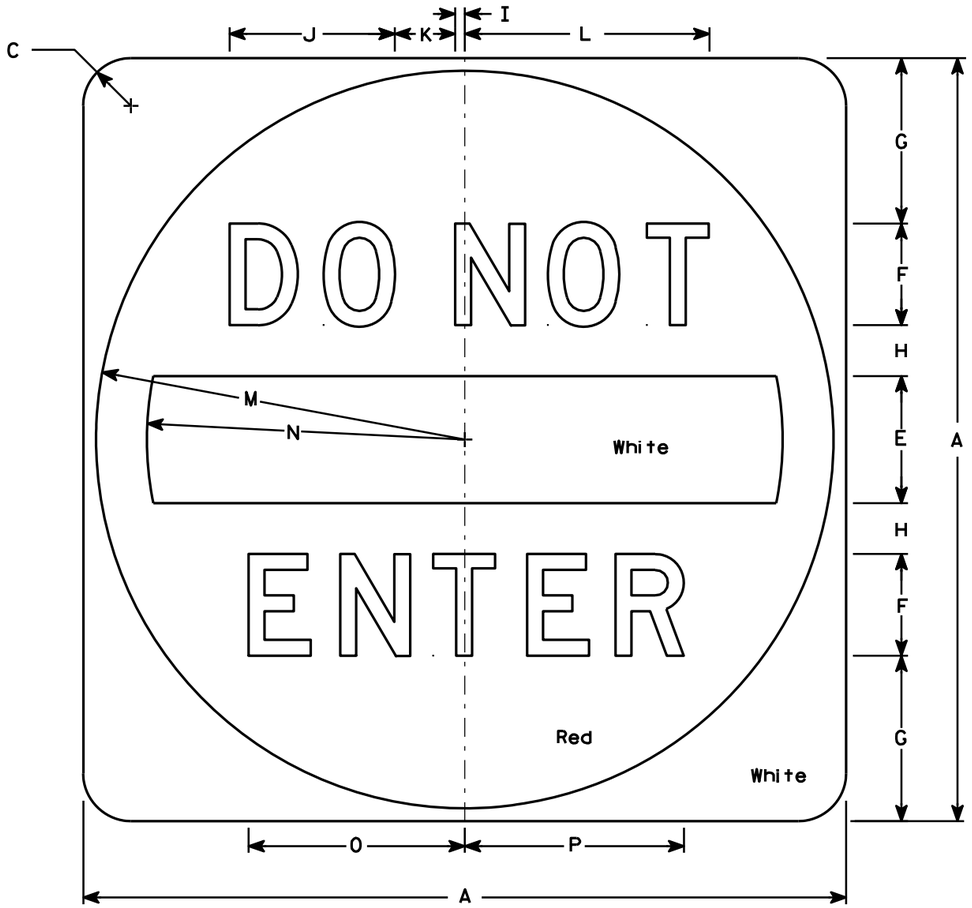
STANDARD SIGN
R4-7 & R4-8

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: 335	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

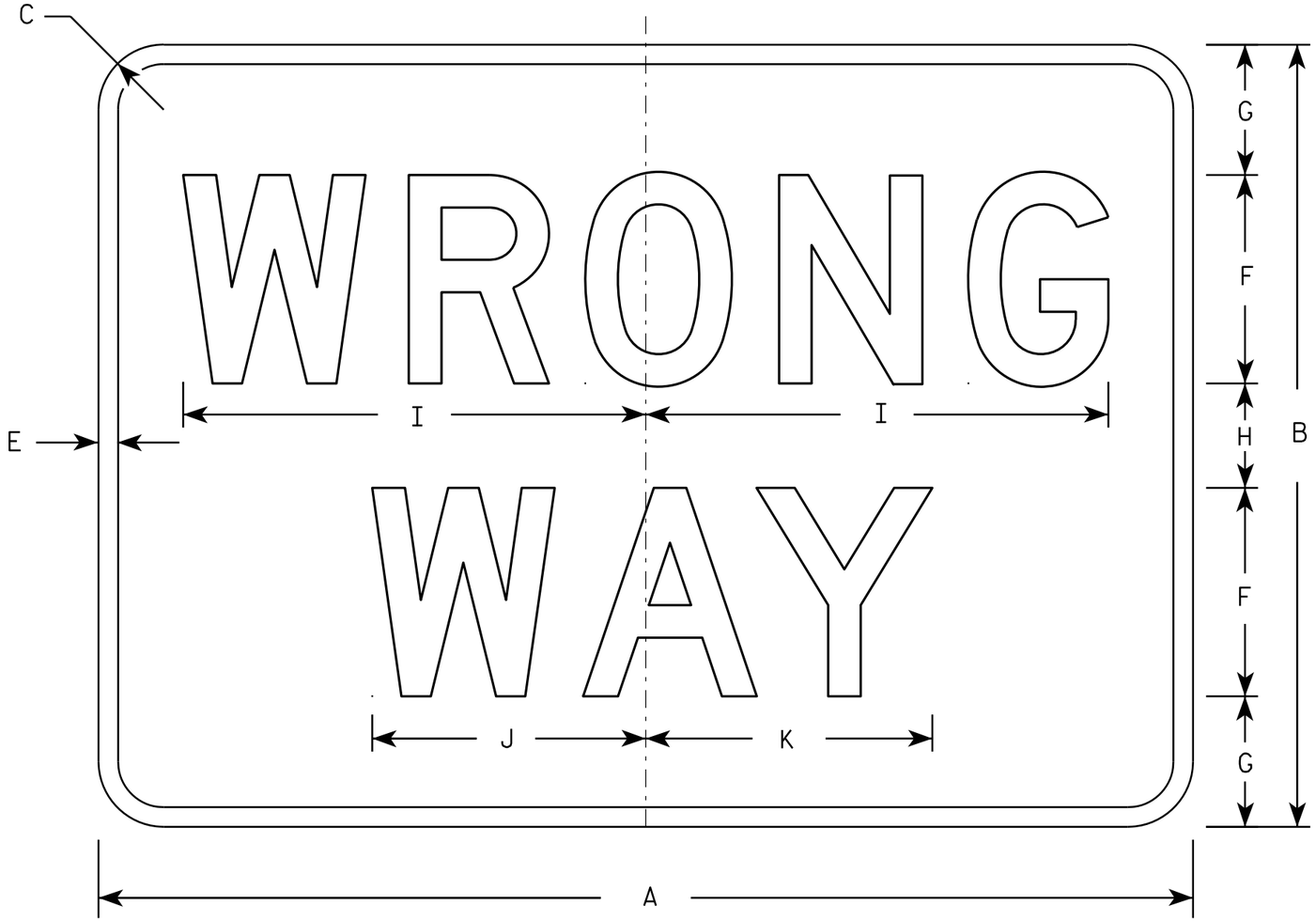
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1.15

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 336 | E

7



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: 337 | 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

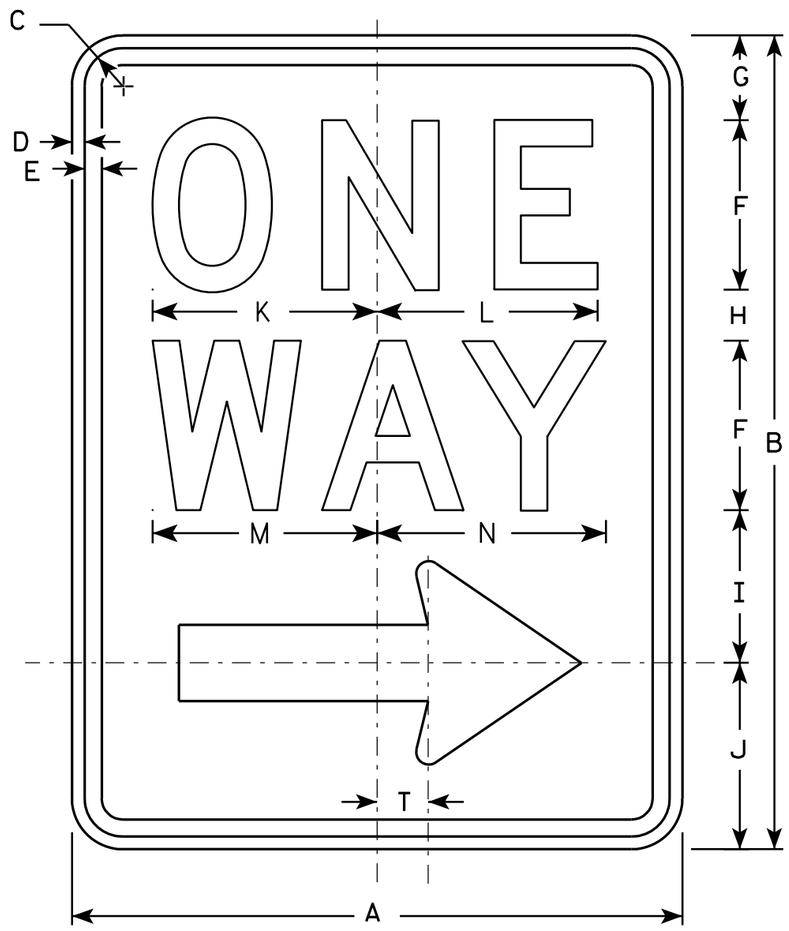
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 338 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R557.DGN PLOT DATE : 29-MAR-2011 14:38 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.959043:1.000000

WISDOT/CADDS SHEET 42

7

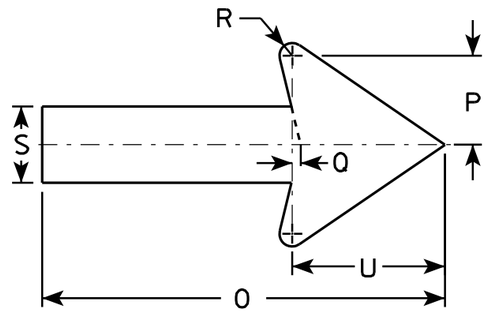
7



R6-2R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R6-2L same as R6-2R except arrow points to the left.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

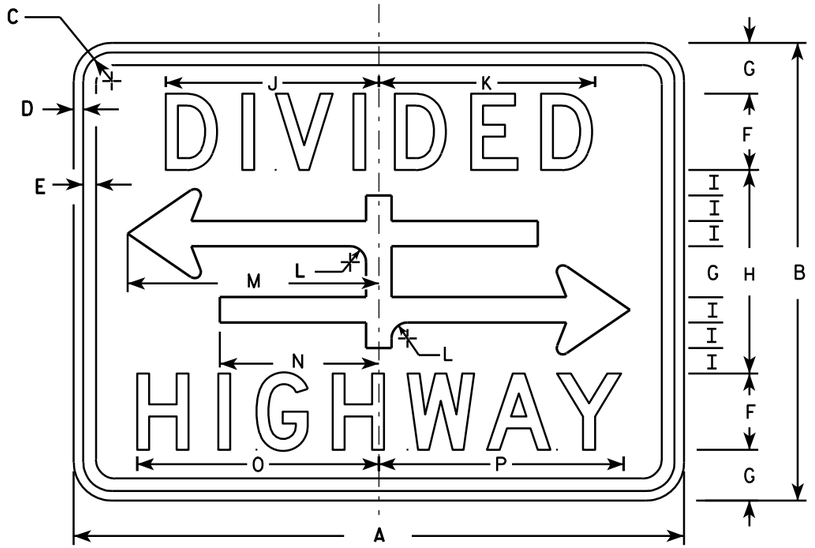
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

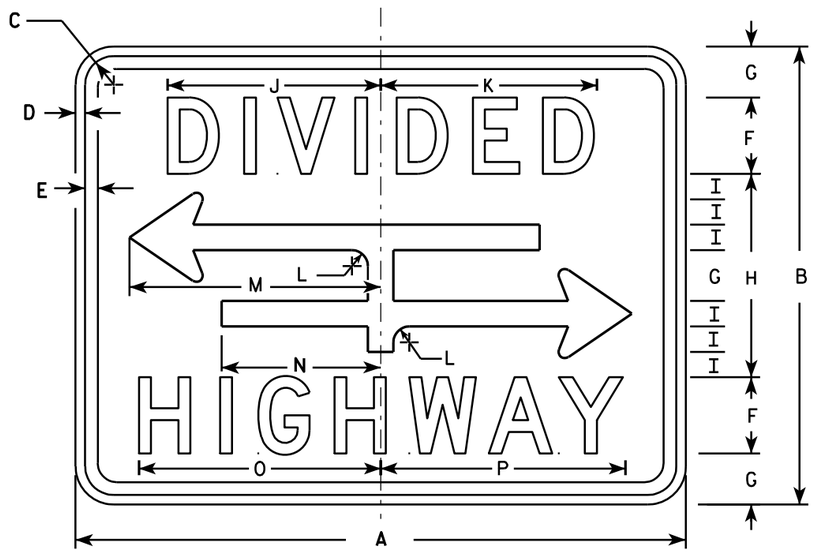
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 339	E



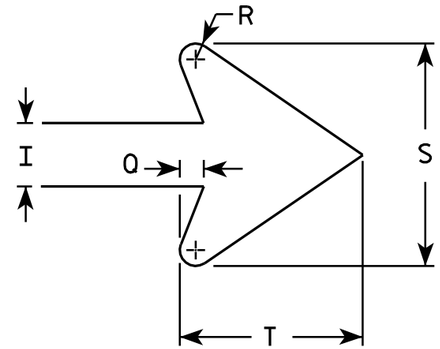
R6-3

NOTES

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



R6-3A



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24	18	1 1/8	3/8	3/8	3	2	8	1	8 3/8	8 1/2	5/8	9 7/8	6 1/4	9 1/2	9 5/8	3/8	1/4	3 1/2	2 3/4							3.0
2S	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
2M	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
3																											
4																											
5																											

STANDARD SIGN
R6-3 & R6-3A

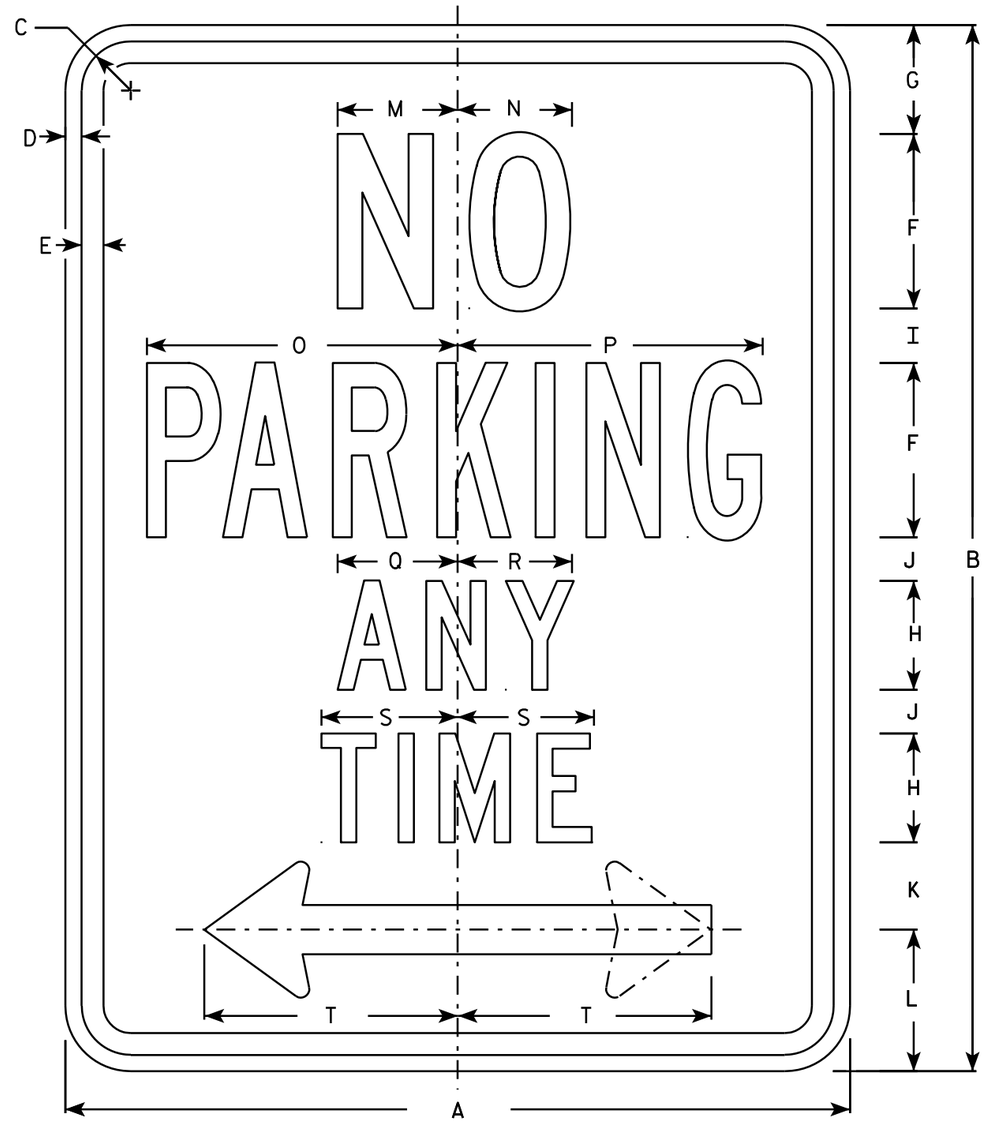
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R6-3.5

PROJECT NO:

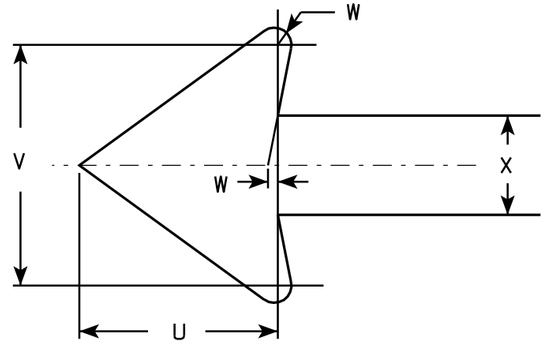
SHEET NO: 340 E



R7-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Red
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1, 3 and 4 are series C, line 2 is series B.
6. R7-1D (double arrow)
   R7-1L (left arrow)
   R7-1R (right arrow)



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

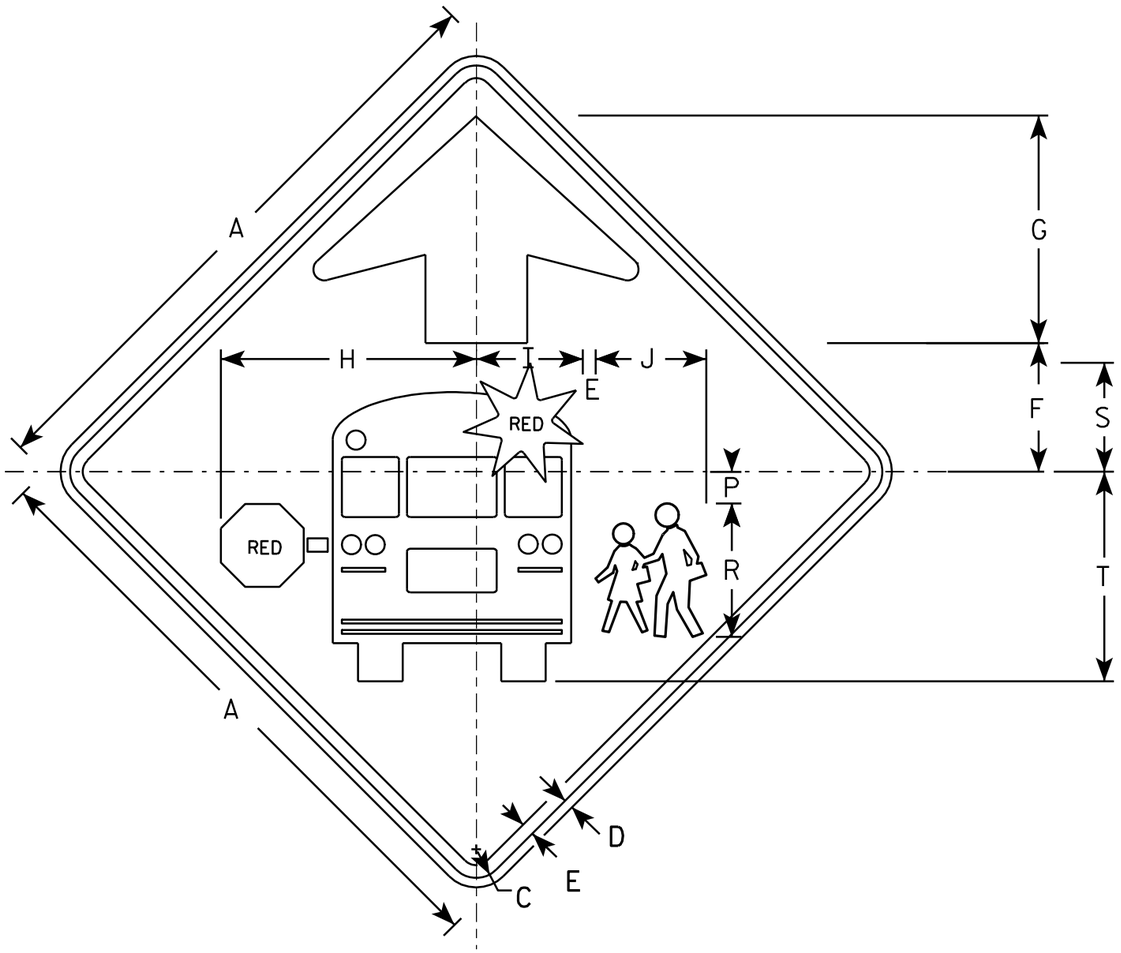
STANDARD SIGN
R7-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

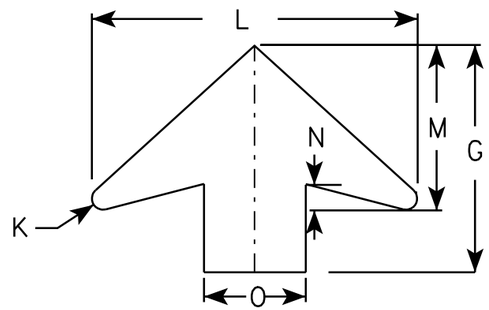
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 341 | E



S3-1

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - YELLOW-GREEN
   Message - BLACK except as noted
   Circles except PEDS- RED BACKGROUND
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	6 1/4	11 1/4	12 1/2	5 1/4	5 1/2	1/2	16	8	1 1/4	5	1 1/2		6 5/8	5 3/8	10 3/8							6.25
2	36		1 5/8	5/8	3/4	7 1/2	13 1/2	15 1/8	6 1/4	6 1/2	5/8	19 1/4	9 3/4	1 5/8	6	1 7/8		7 7/8	6 3/8	12 3/8							9.0
3	48		2 1/4	3/4	1	10	17 7/8	20 1/8	8 3/8	8 3/4	7/8	25 5/8	13	2	8	2 1/2		10 1/2	8 1/2	16 1/2							16.0
4	48		2 1/4	3/4	1	10	17 7/8	20 1/8	8 3/8	8 3/4	7/8	25 5/8	13	2	8	2 1/2		10 1/2	8 1/2	16 1/2							16.0
5																											

STANDARD SIGN
S3-1

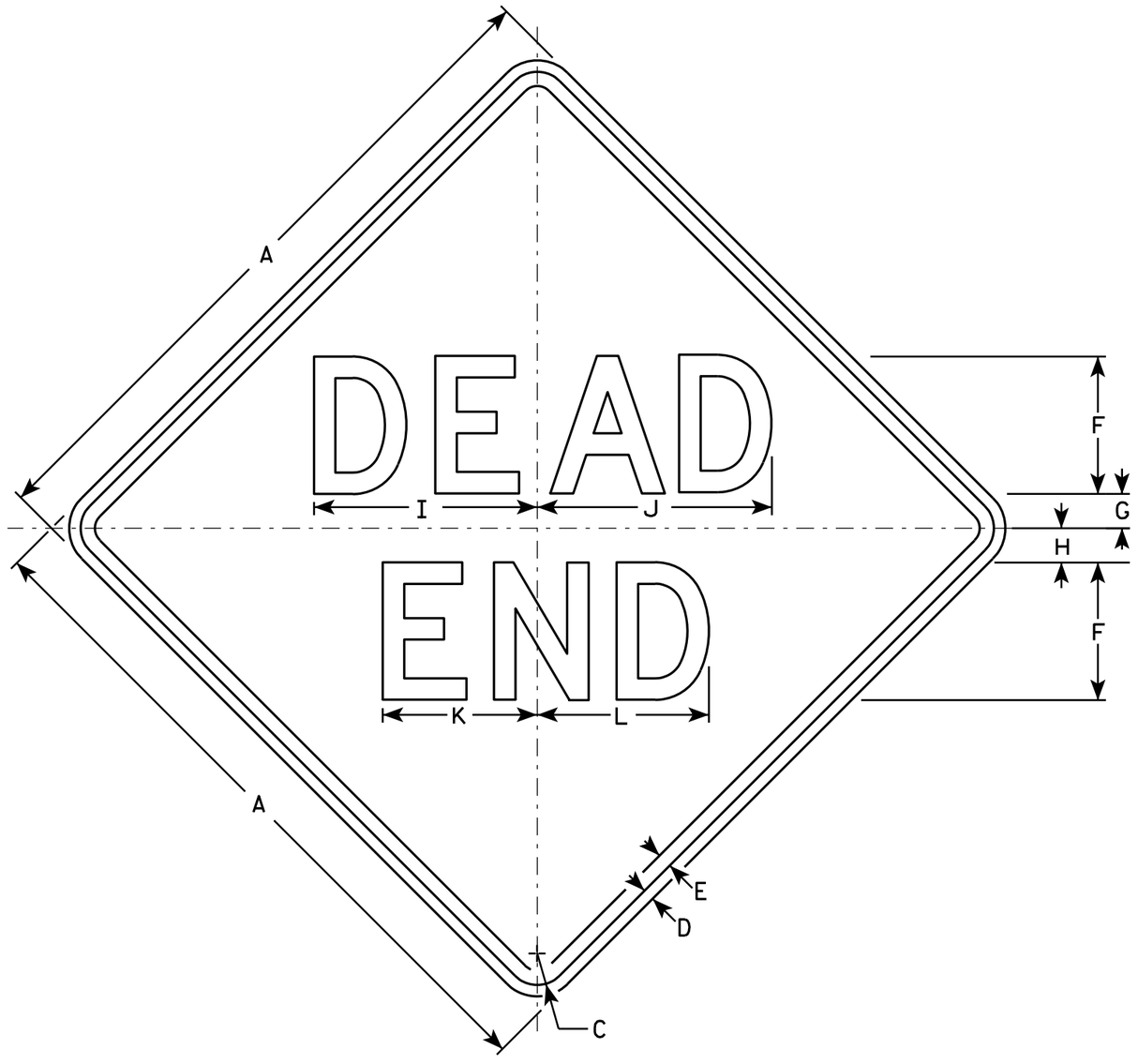
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:

SHEET NO: 342 E



W14-1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - 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	24		1 1/8	3/8	1/2	5	1	2	8 1/4	8 5/8	5 5/8	6 1/4															4.0
2S	30		1 3/8	1/2	5/8	6	1 1/2	2 1/2	9 3/4	10 1/4	6 3/4	7 1/2															6.25
2M	30		1 3/8	1/2	5/8	6	1 1/2	2 1/2	9 3/4	10 1/4	6 3/4	7 1/2															6.25
3	36		1 5/8	5/8	3/4	7	2	3	11 3/8	12	7 7/8	8 3/4															9.0
4																											
5																											

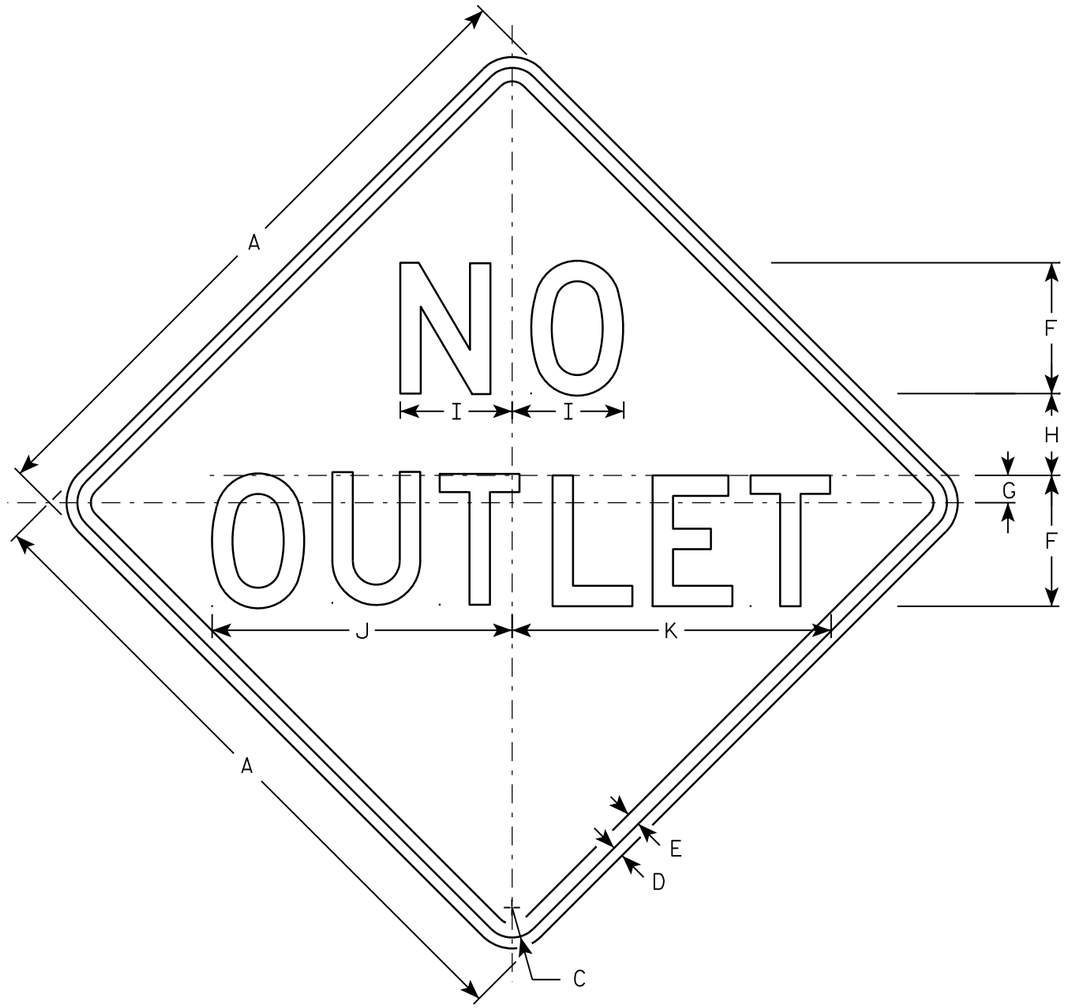
STANDARD SIGN
W14-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W14-1.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 343	E



W14-2

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - YELLOW
   Message - BLACK
3. 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	24		1 1/8	3/8	1/2	5	1	2 3/4	4 1/8	11 3/4	12 3/8																4.0
2S	30		1 3/8	1/2	5/8	6	1 1/4	3 3/4	5 1/8	13 3/4	14 5/8																6.25
2M	30		1 3/8	1/2	5/8	6	1 1/4	3 3/4	5 1/8	13 3/4	14 5/8																6.25
3	36		1 5/8	5/8	3/4	7	1 3/8	4 5/8	6	16 1/8	17 1/8																9.0
4																											
5																											

STANDARD SIGN
W14-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W14-2.3

PROJECT NO:

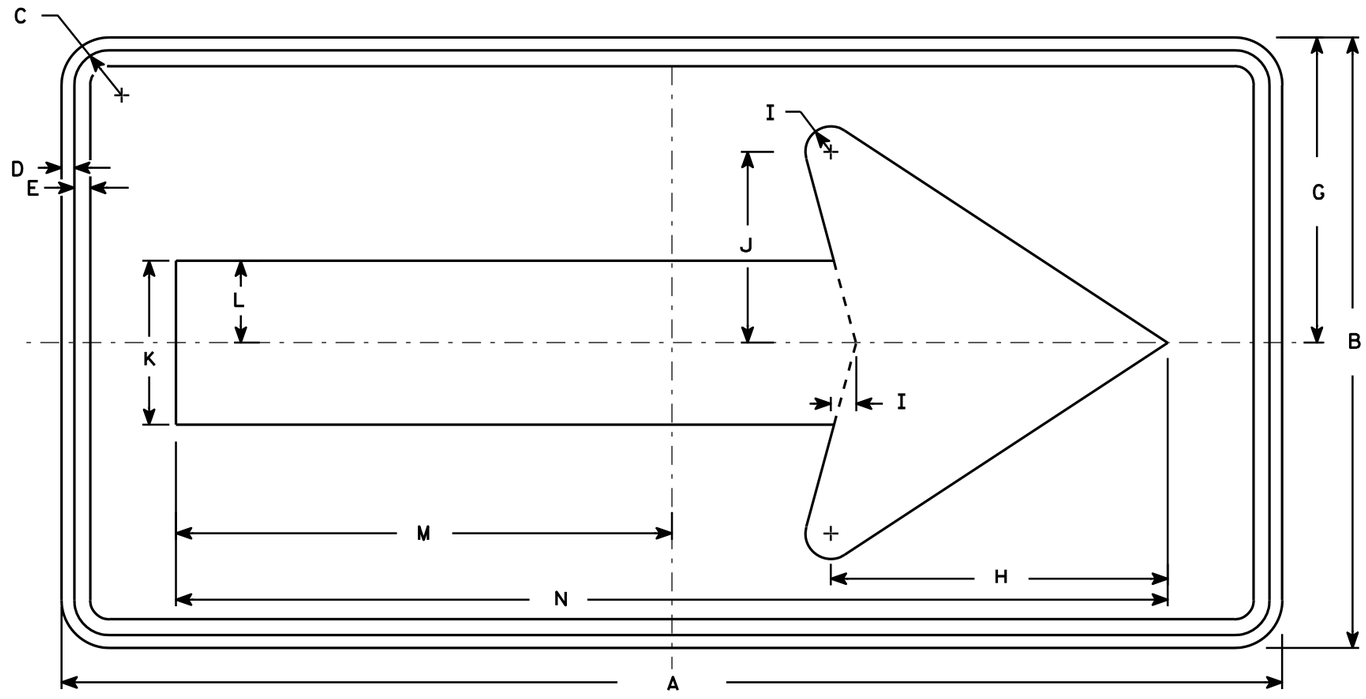
SHEET NO: 344 E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W142.DGN PLOT DATE : 13-MAR-2013 13:30 PLOT BY : mscj9h

WISDOT/CADDS SHEET 42

7

7



W1-6

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/8	3/8	3/8		9	10	3/4	5 5/8	4 3/4	2 3/8	14 5/8	29 1/4													4.5
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	96	48	2 1/4	3/4	1		24	26 1/2	2	15	13	6 1/2	39	78													32.0

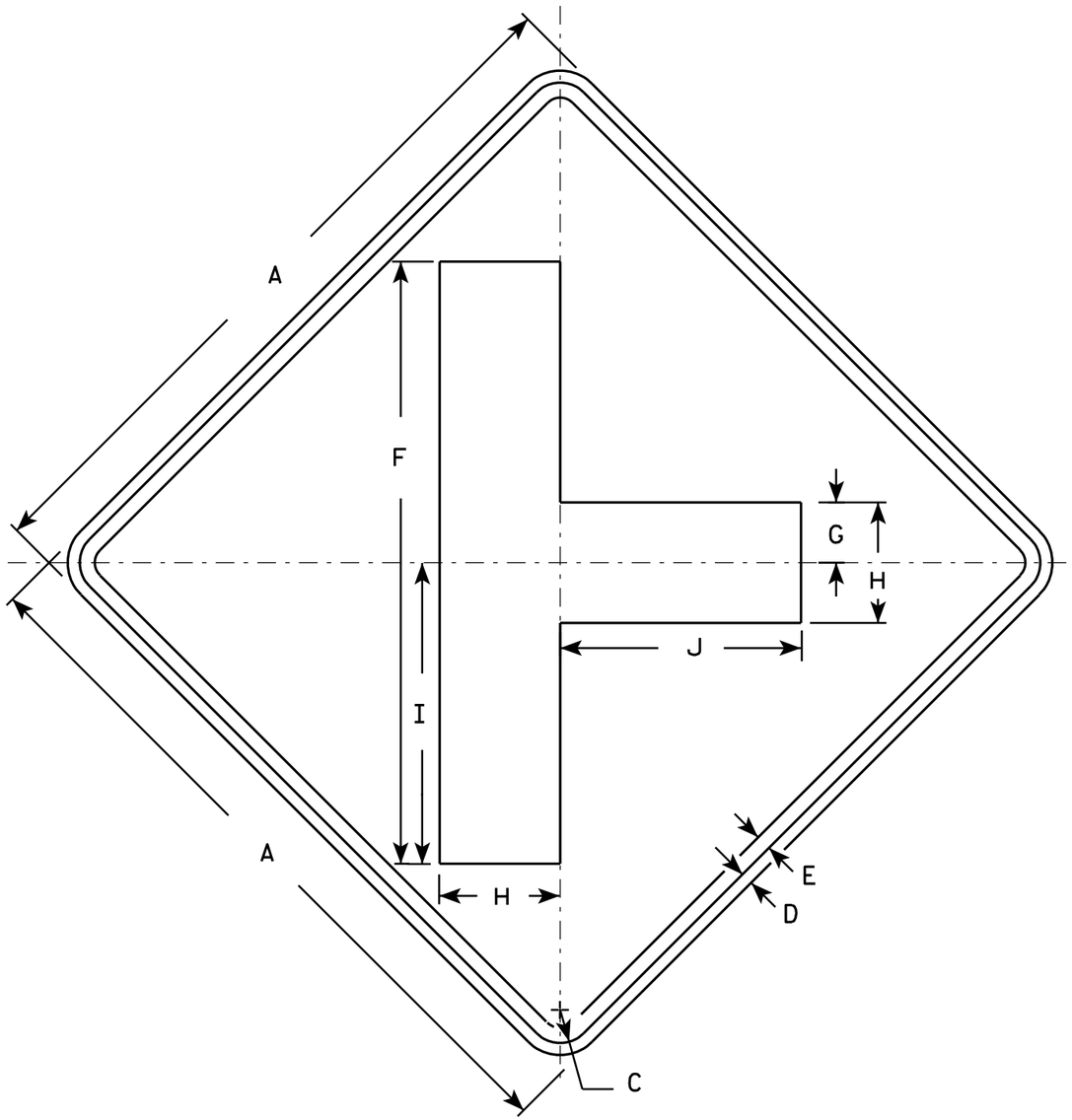
STANDARD SIGN
W1-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 345



W2-2

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	20	2	4	10	8																	4.0
2S	30		1 3/8	1/2	5/8	25	2 1/2	5	12 1/2	10																	6.25
2M	30		1 3/8	1/2	5/8	25	2 1/2	5	12 1/2	10																	6.25
3	36		1 5/8	5/8	3/4	30	3	6	15	12																	9.0
4	48		2 1/4	3/4	1	40	4	8	20	16																	16.0
5																											

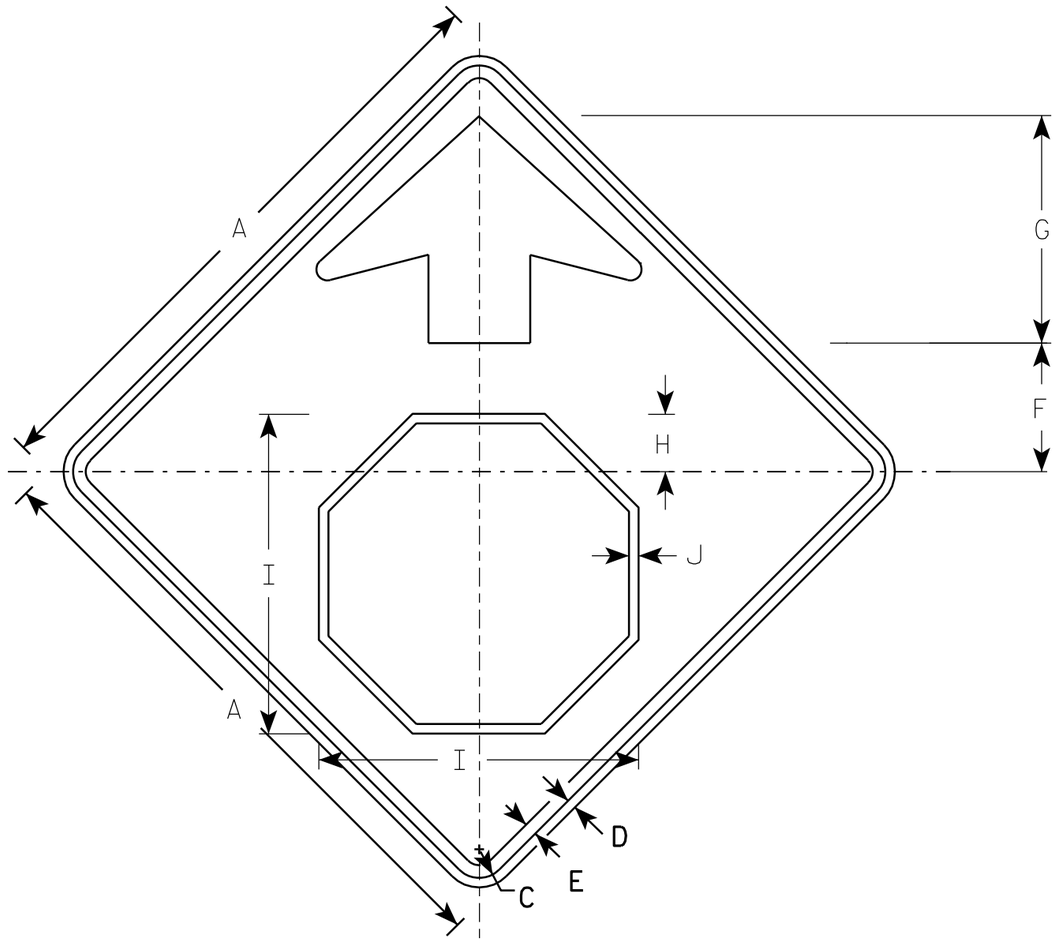
STANDARD SIGN
W2-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W2-2.6

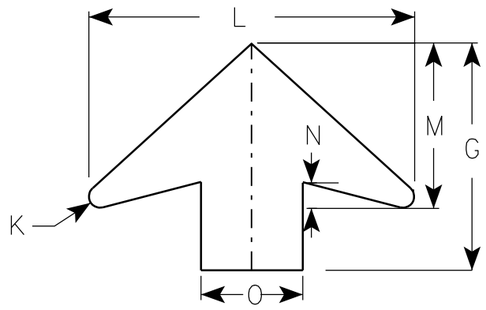
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 346	E



W3-1

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - YELLOW
   Arrow & Border - BLACK
   Stop Symbol - WHITE BORDER ON RED BACKGROUND



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	6 1/4	11 1/4	2 7/8	15 3/4	1/2	1/2	16	8	1 1/4	5												6.25
2S	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
2M	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
3	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0

STANDARD SIGN
W3-1

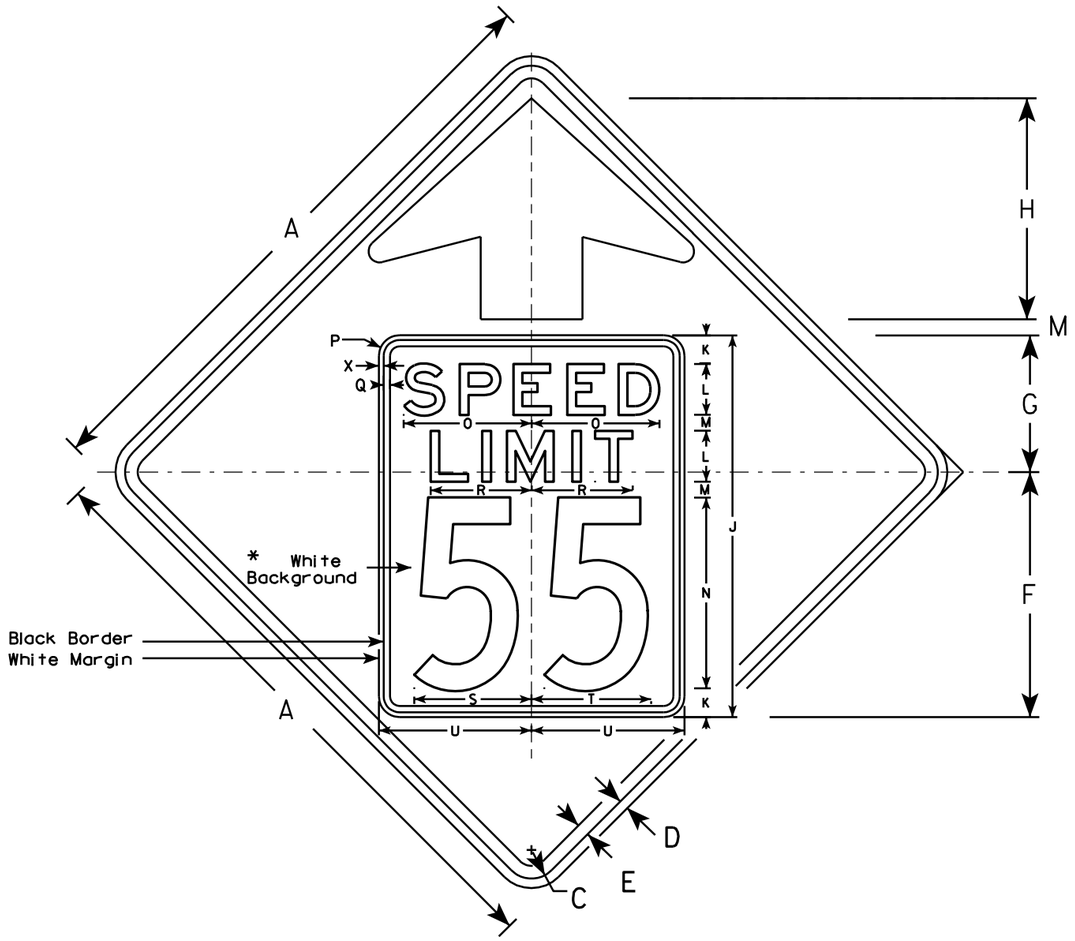
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-1.12

PROJECT NO:

SHEET NO: 347 E

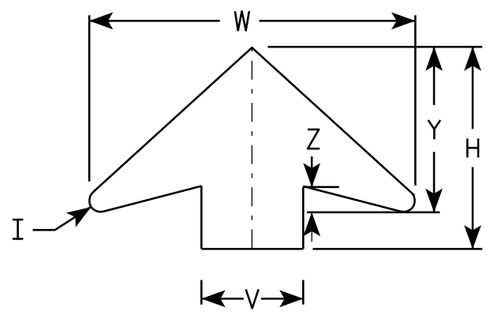


W3-5

NOTES

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

*Speed Limit Sign shall have a White Background



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
2M	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
3	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
4	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
5	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0

STANDARD SIGN
W3-5

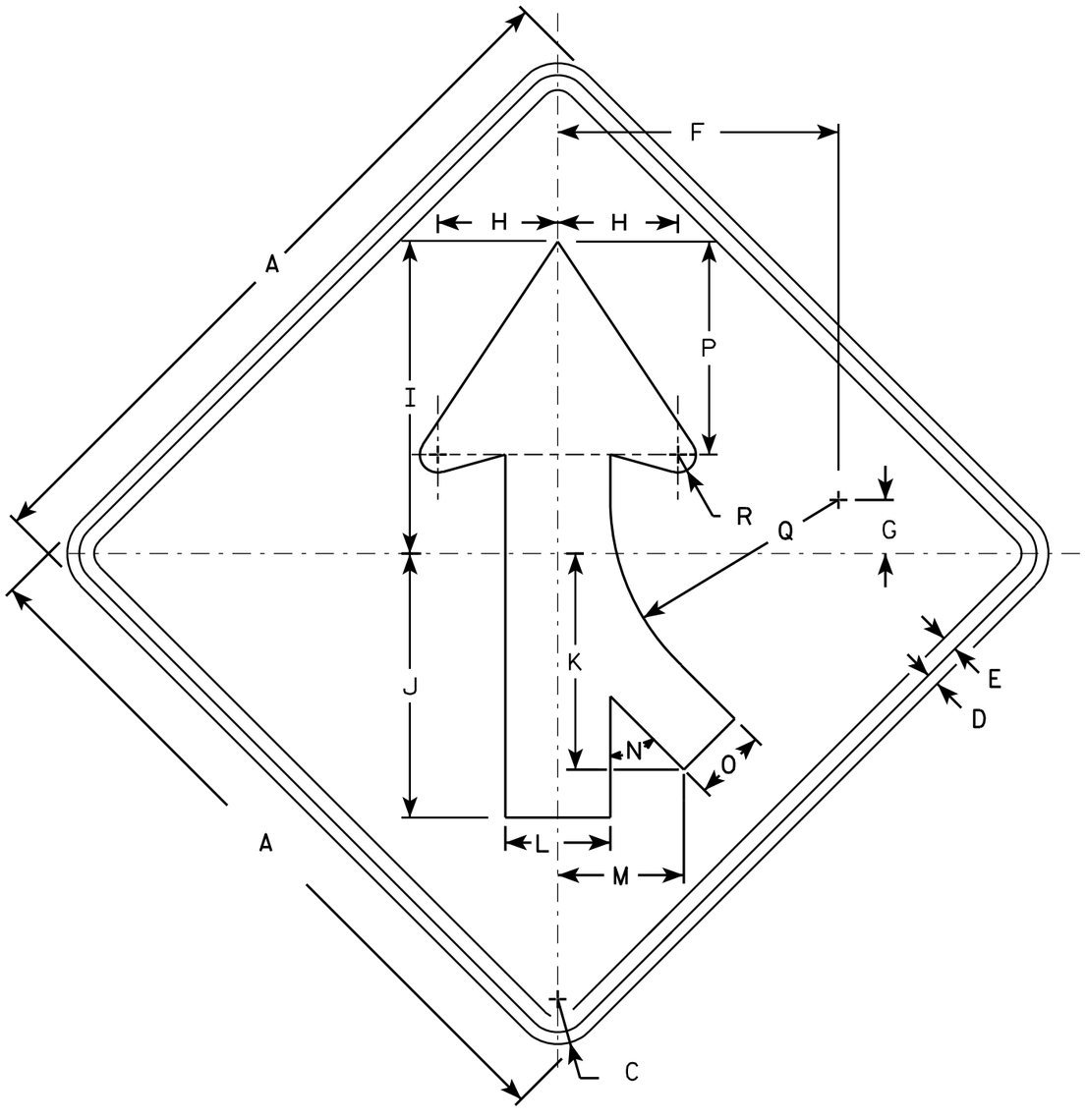
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:

SHEET NO: 348 E



W4-1 R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W4-1L is the same as W4-1R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	11 5/8	2 1/2	5	13	11	9	4 3/8	5 1/4	45°	3	8 7/8	9 1/2	3/4									6.25
2S	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
2M	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
3	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
4	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
5	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0

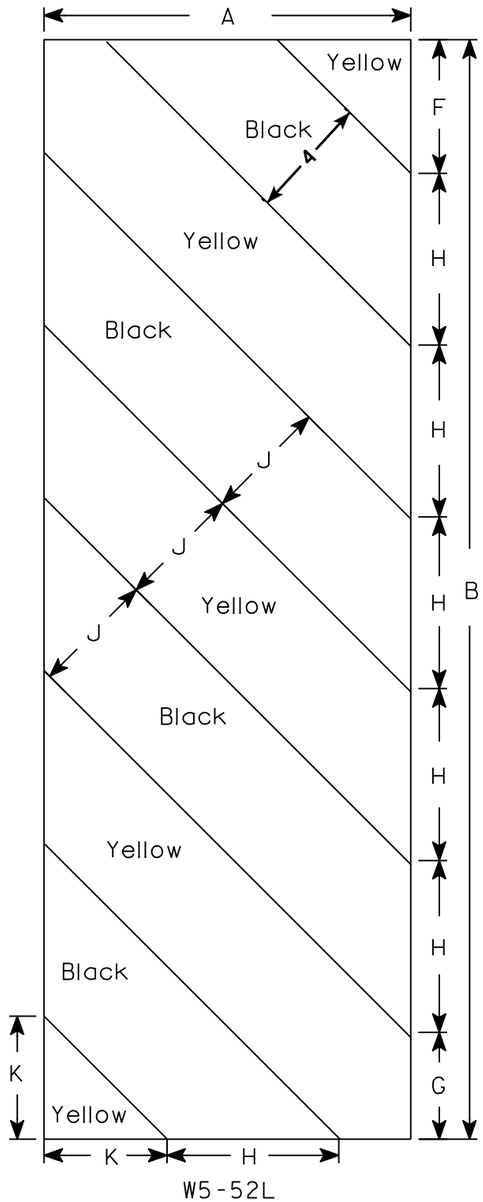
STANDARD SIGN
W4-1

WISCONSIN DEPT OF TRANSPORTATION

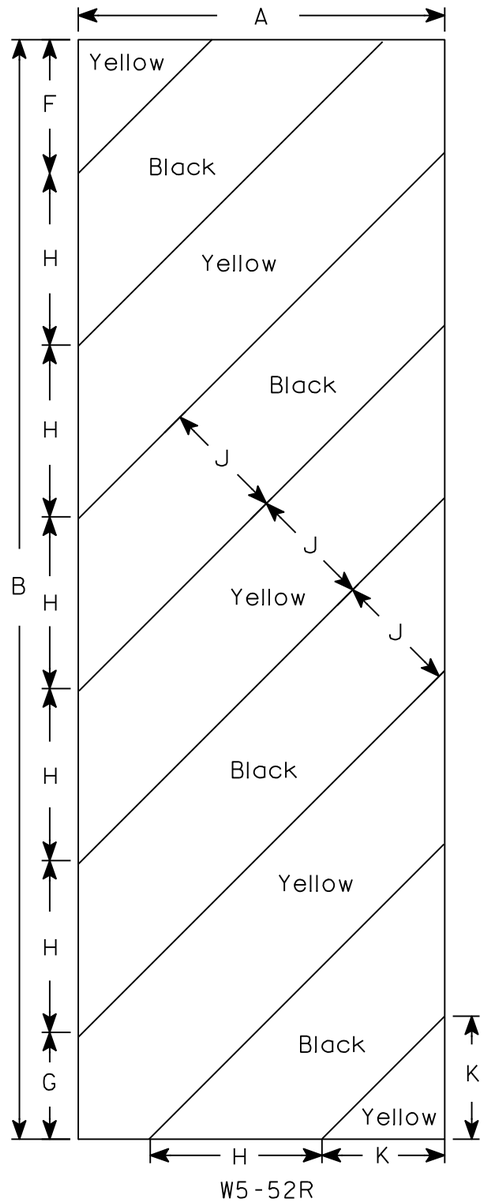
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W4-1.14

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 349	E



W5-52L



W5-52R

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

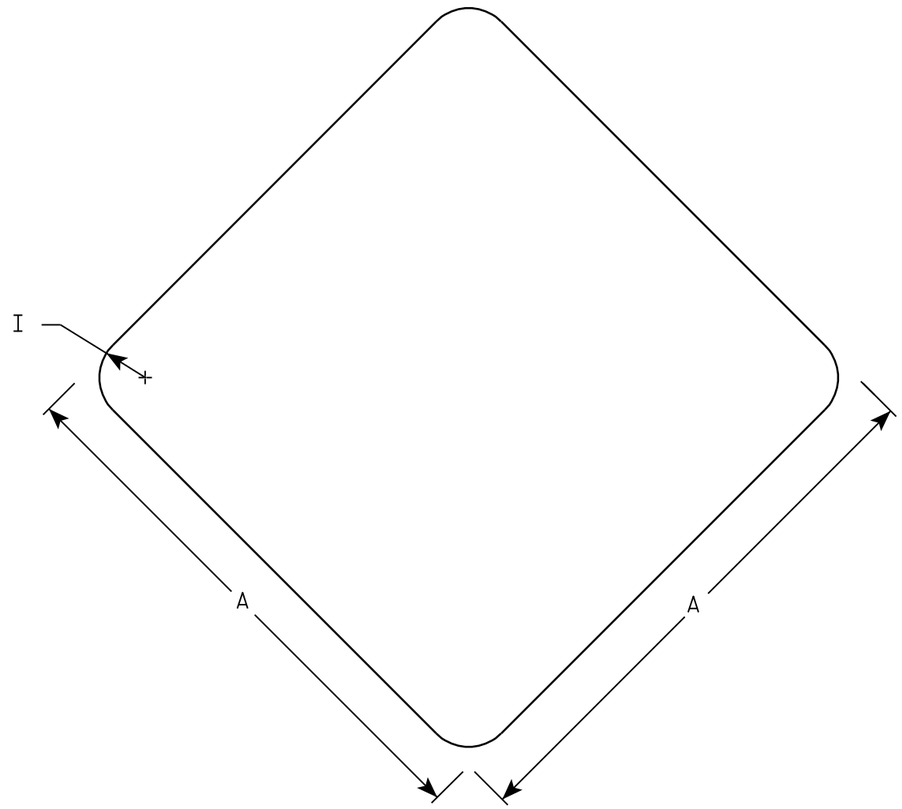
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 350 | E



W5-54

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
3. Corners may be square or rounded when base material is plywood. When base material is metal the corners 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	12								1																		1.0
2S	18								1 ½																		2.25
2M	18								1 ½																		2.25
3																											
4																											
5																											

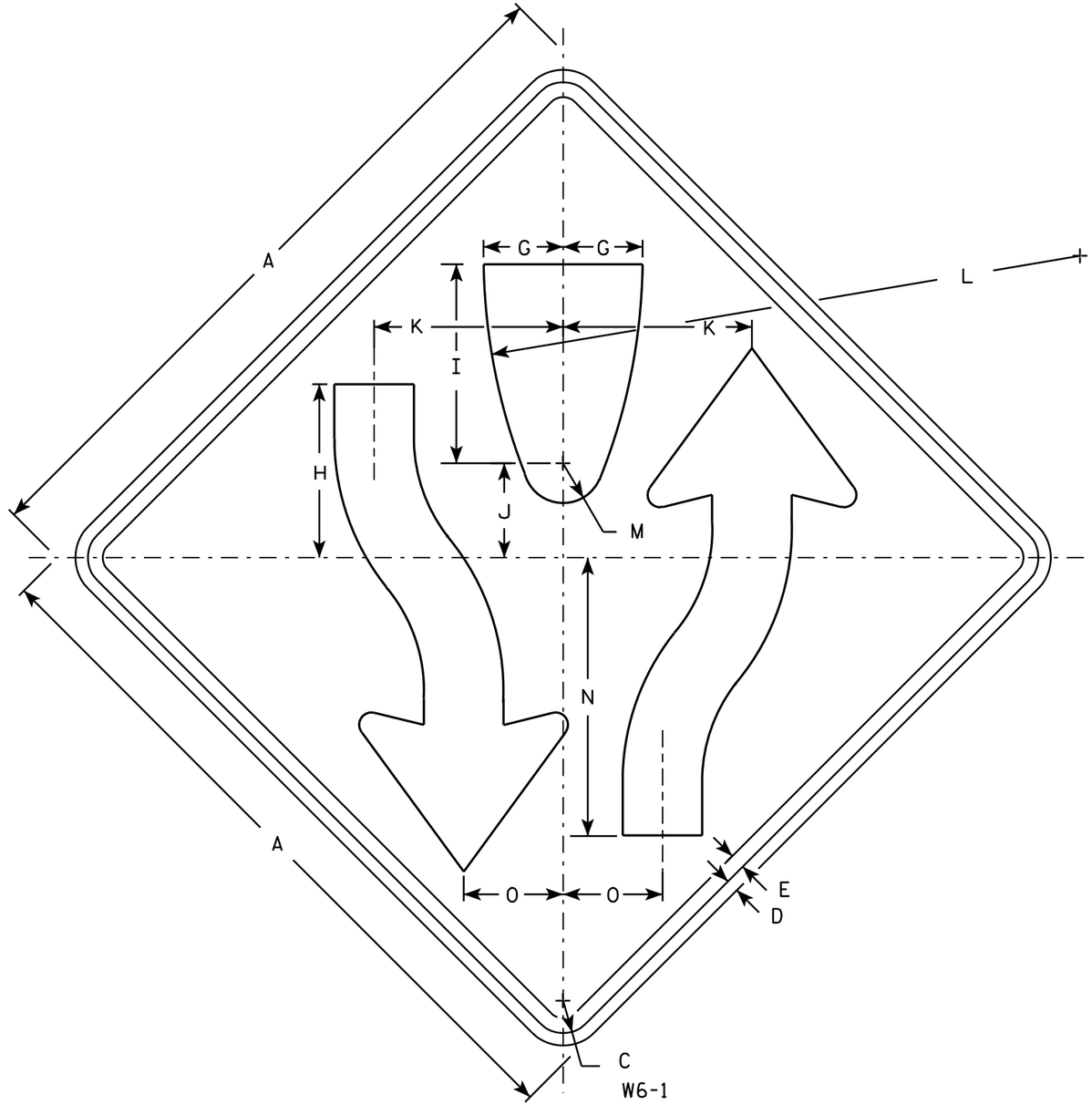
STANDARD SIGN
W5-54

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

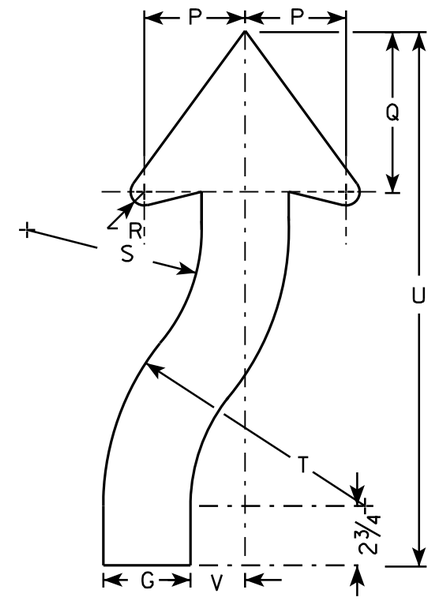
DATE 11/3/10 PLATE NO. W5-54.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 351 | E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W6-2 same as W6-1 but is rotated 180° when mounted.



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		3 1/4	8	8 1/4	4 1/8	7 7/8	25	1 3/4	11 5/8	4 1/8	3 7/8	6 3/4	5/8	6 5/8	9 7/8	21 5/8	2					6.25
2S	36		1 5/8	5/8	3/4		4	8 3/4	10	4 3/4	9 1/2	30	2	14	5	4 5/8	7 3/8	7/8	8	12	24 1/2	2 1/2					9.0
2M	36		1 5/8	5/8	3/4		4	8 3/4	10	4 3/4	9 1/2	30	2	14	5	4 5/8	7 3/8	7/8	8	12	24 1/2	2 1/2					9.0
3																											
4	48		2 1/4	3/4	1		5 3/8	11 5/8	13 3/8	6 3/8	12 5/8	40	2 5/8	18 5/8	6 5/8	6 1/4	9 7/8	1 1/4	10 5/8	16	32 5/8	3 3/8					16.0
5	48		2 1/4	3/4	1		5 3/8	11 5/8	13 3/8	6 3/8	12 5/8	40	2 5/8	18 5/8	6 5/8	6 1/4	9 7/8	1 1/4	10 5/8	16	32 5/8	3 3/8					16.0

STANDARD SIGN
W6-1 & W6-2

WISCONSIN DEPT OF TRANSPORTATION

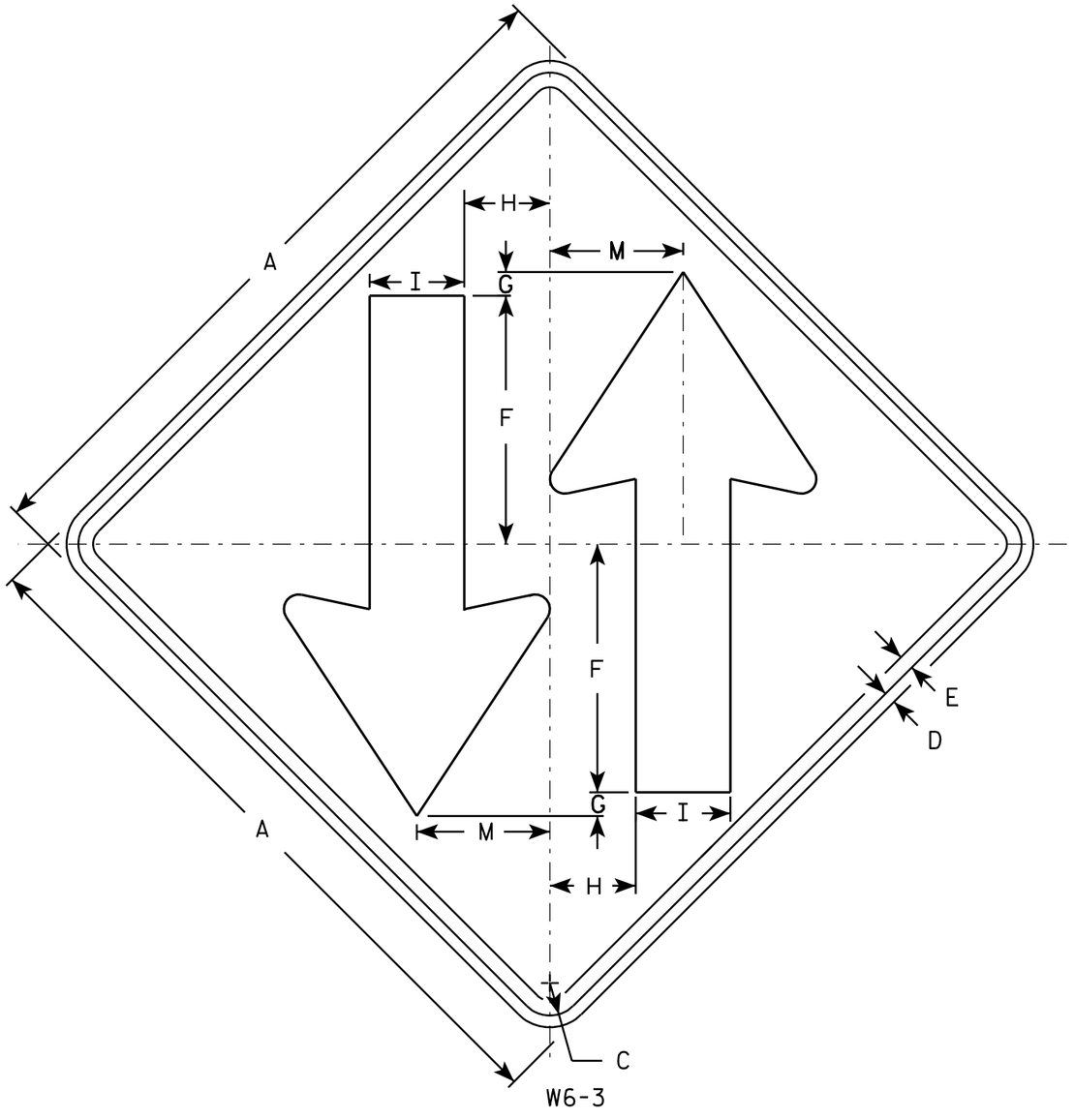
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W6-1.14

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 352	E

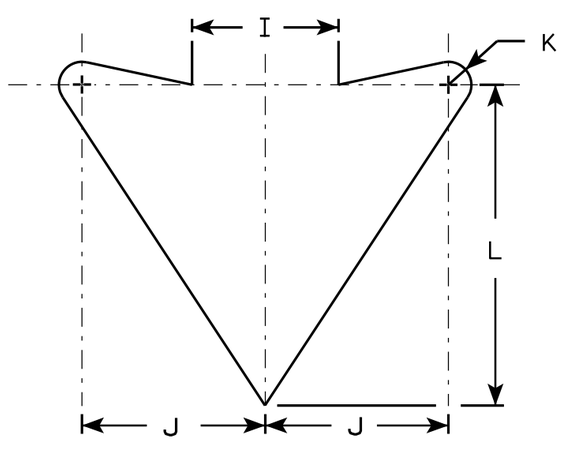
7

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W61.DGN PLOT DATE : 12-MAR-2013 14:02 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 6.946657:1.000000
WISDOT/CADDS SHEET 42



NOTES

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



ARROW DETAIL

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

STANDARD SIGN
W6-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

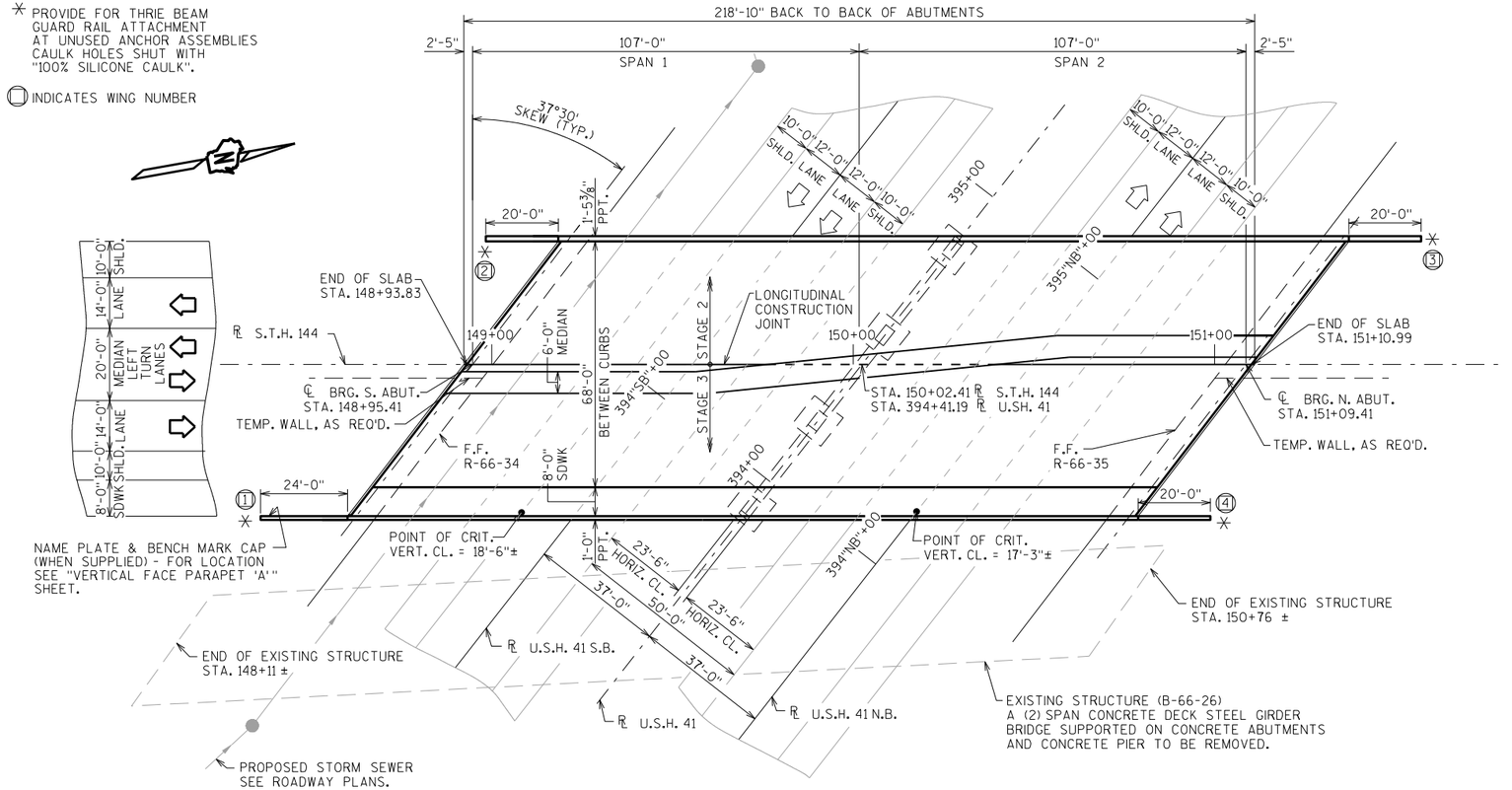
DATE 03/12/13 PLATE NO. W6-3.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 353	E

STATE PROJECT NUMBER
1107-02-79

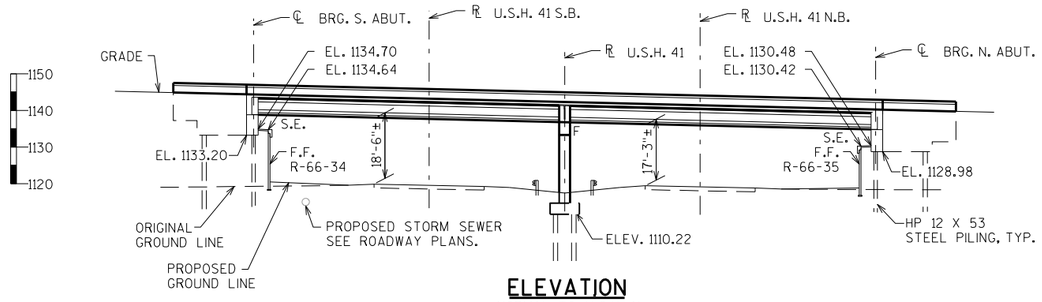
✳ PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK".

⬡ INDICATES WING NUMBER



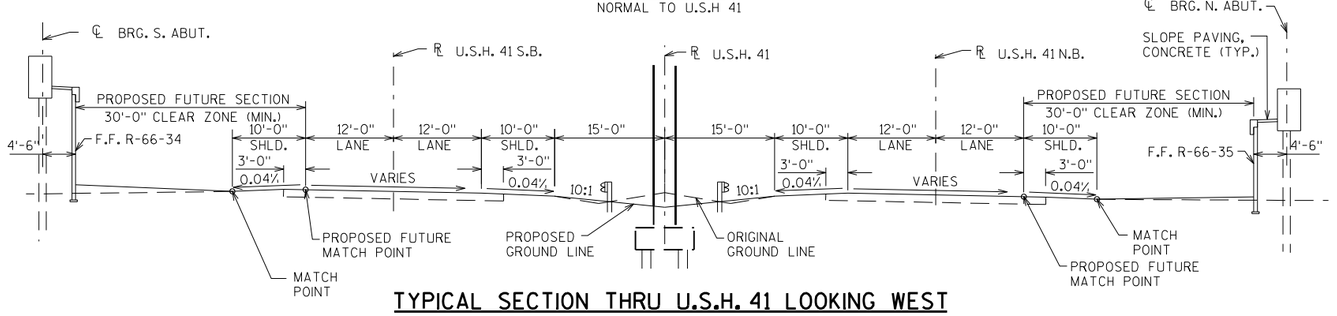
PLAN

2 SPAN-54W" PRESTRESSED GIRDERS



ELEVATION

NORMAL TO U.S.H 41



TYPICAL SECTION THRU U.S.H. 41 LOOKING WEST

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF= 1.07
OPERATING RATING FACTOR: RF= 1.39
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 230 (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 OTHER — f'c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60 — fy = 60,000 P.S.I.
54W" PRESTRESSED GIRDERS, CONCRETE MASONRY — f'c = 8,000 P.S.I.
STRANDS- 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

FOUNDATION DATA

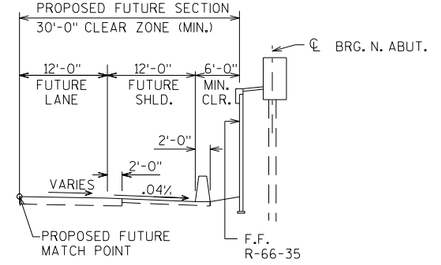
ABUTMENTS TO BE SUPPORTED ON HP 12 X 53 STEEL PILING
DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 200 TONS ✳✳ PER PILE
AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 60'-0" LONG AT THE SOUTH ABUTMENT AND
ESTIMATED 45'-0" LONG AT THE NORTH ABUTMENT.

PIER TO BE SUPPORTED ON HP 12 X 53 STEEL PILING
DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 200 TONS ✳✳ PER PILE
AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 30'-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

S.T.H. 144	U.S.H. 41
A.D.T.= 7,100 (2032)	A.D.T.= 48,000 (2032)
R.D.S.= 40 M.P.H.	R.D.S.= 70 M.P.H.



FUTURE SECTION

NORTH ABUTMENT SHOWN
SOUTH ABUTMENT SIMILAR

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. SOUTH ABUTMENT DETAILS
6. NORTH ABUTMENT
7. NORTH ABUTMENT DETAILS
8. PIER
9. PIER DETAILS
10. 54W" PRESTRESSED GIRDER
11. 54W" PRESTRESSED GIRDER DETAILS
12. STEEL DIAPHRAGM
13. SUPERSTRUCTURE
14. SUPERSTRUCTURE DIAPHRAGM DETAILS @ SIDEWALK
15. SUPERSTRUCTURE BAR DETAILS
16. SUPERSTRUCTURE DETAILS
17. SUPERSTRUCTURE DETAILS 2
18. RAIL POST SPACING
19. VERTICAL FACE PARAPET "A"
20. SLOPED FACE PARAPET LF
21. ORNAMENTAL PROTECTIVE SCREENING
22. ALTERNATE CONSTRUCTION JOINT

STRUCTURE DESIGN CONTACTS:

JAMES LUEBKE	(608) 266-5098
LAURA SHADEWALD	(608) 267-9592

NO.	DATE	REVISION	BY

Plans Prepared By **WISDOT**
BUREAU OF STRUCTURES

ACCEPTED William C. Dreher LLS — 9/17/13
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-66-110

S.T.H. 144 OVER U.S.H. 41

COUNTY	TOWN ~~CITY/VILLAGE~~
WASHINGTON	POLK

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
JDL	BLB	WWR	DDS

GENERAL PLAN

SHEET 1 OF 22

354

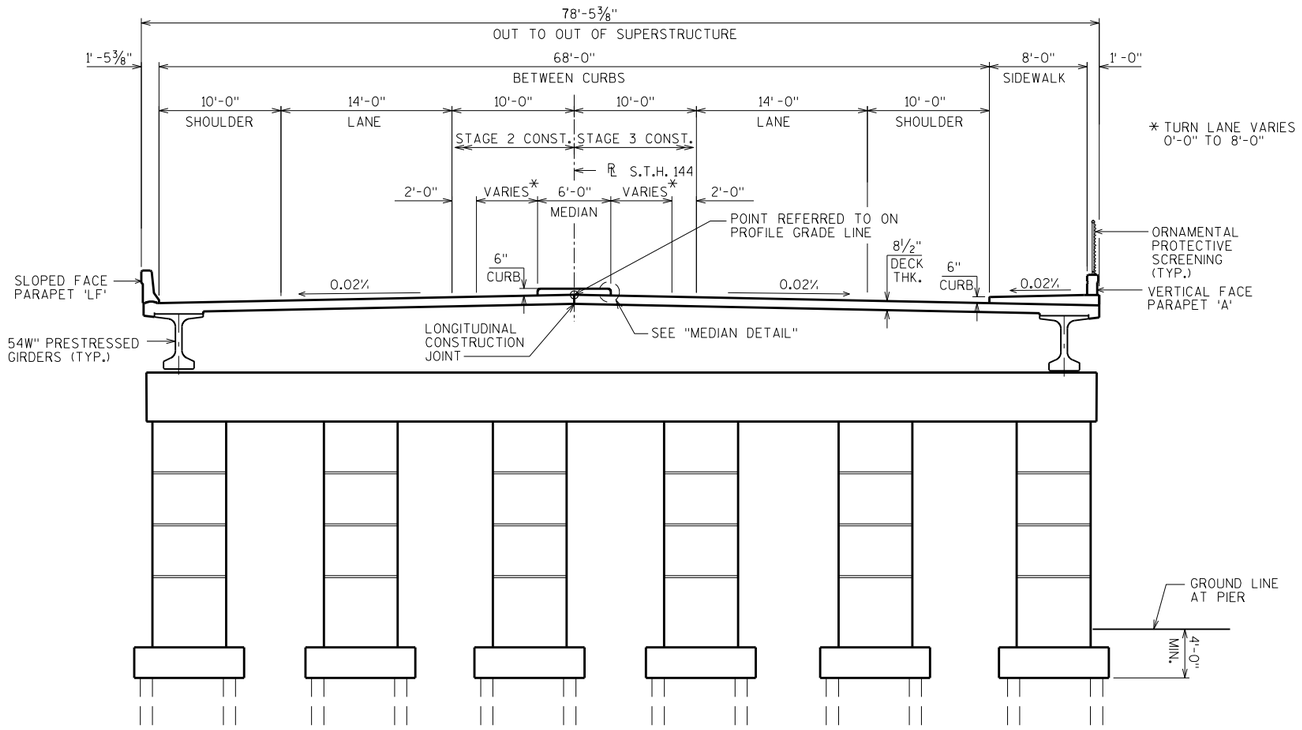
I.D. 1107-02-01

DATE: APRIL 2013

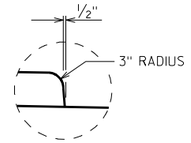
SCALE =

STATE PROJECT NUMBER

1107-02-79

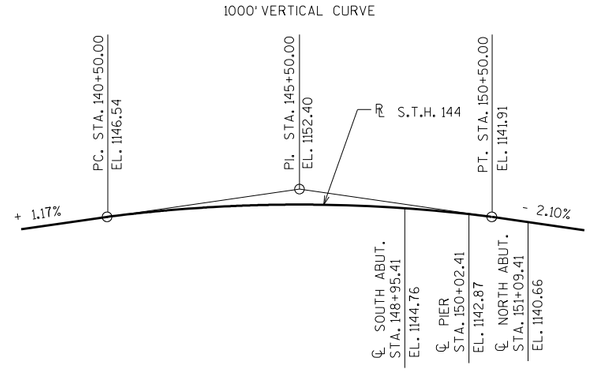


CROSS SECTION THRU ROADWAY LOOKING NORTH



MEDIAN DETAIL

BRIDGE MEDIAN DETAIL TO TRANSITION INTO SLOPED CURB (5'-0" MINIMUM TRANSITION) BEYOND BRIDGE LIMITS. SEE ROADWAY PLANS.



PROFILE GRADE LINE S.T.H. 144

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	SOUTH ABUT.	NORTH ABUT.	PIER	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 150+00	LS	———	———	———	———	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-66-110	LS	———	———	———	———	1
210.0100	BACKFILL STRUCTURE	CY	———	465	470	———	935
502.0100	CONCRETE MASONRY BRIDGES	CY	782	104	100	228	1,214
502.3200	PROTECTIVE SURFACE TREATMENT	SY	2,080	———	———	———	2,080
503.0155	PRESTRESSED GIRDER TYPE I 54W-INCH	LF	1,933	———	———	———	1,933
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	———	7,520	6,900	15,100	29,520
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	145,215	4,695	3,795	43,310	197,015
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	———	9	9	18	36
506.4000	STEEL DIAPHRAGMS B-66-110	EACH	32	———	———	———	32
513.4090	RAILING TUBULAR SCREENING B-66-110	LS	———	———	———	———	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	———	24	24	———	48
550.1120	PILING STEEL HP 12-INCH X 53 LB	LF	———	1,020	765	1,200	2,985
604.0400	SLOPE PAVING CONCRETE	SY	———	32	32	———	64
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	———	140	135	———	275
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EA	———	2	2	———	4
SPV.0165	TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD	SF	———	1,100	1,030	———	2,130
	NON-BID ITEMS						
	FILLER	SIZE	———	———	———	———	½"&¾"&1"

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.

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 ABUTMENT DETAILS

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE TOP OF DECK SURFACE, THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS AT ABUTMENT WINGS.

CONSTRUCTION STAGING CORRESPONDS WITH ROADWAY PLANS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-66-110

DRAWN BY JDL | PLANS CK'D. DDS

CROSS SECTION & QUANTITIES

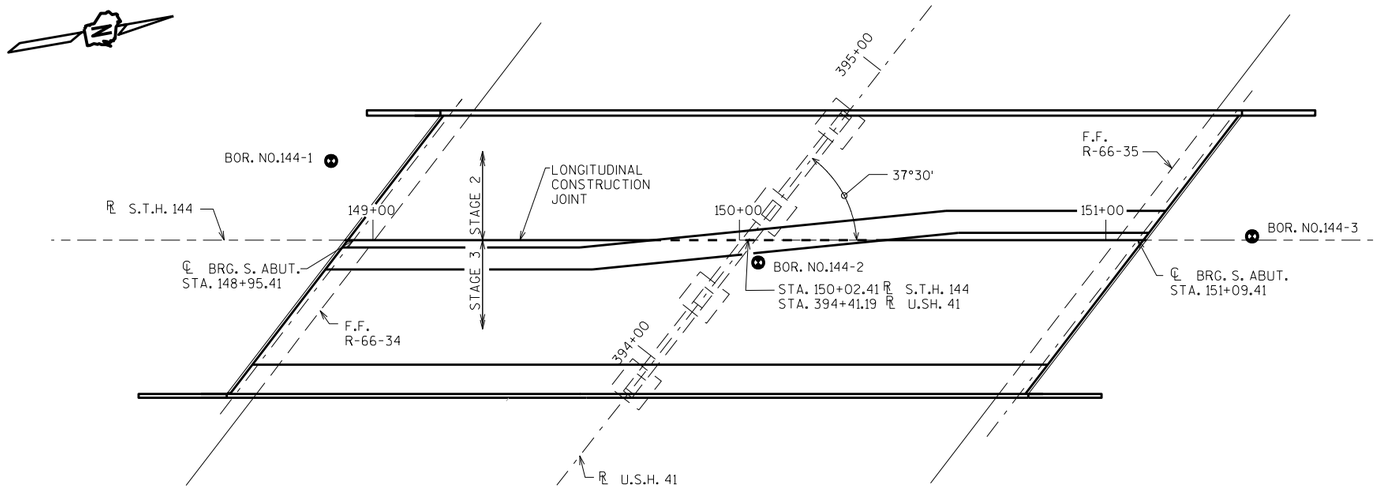
SHEET 2

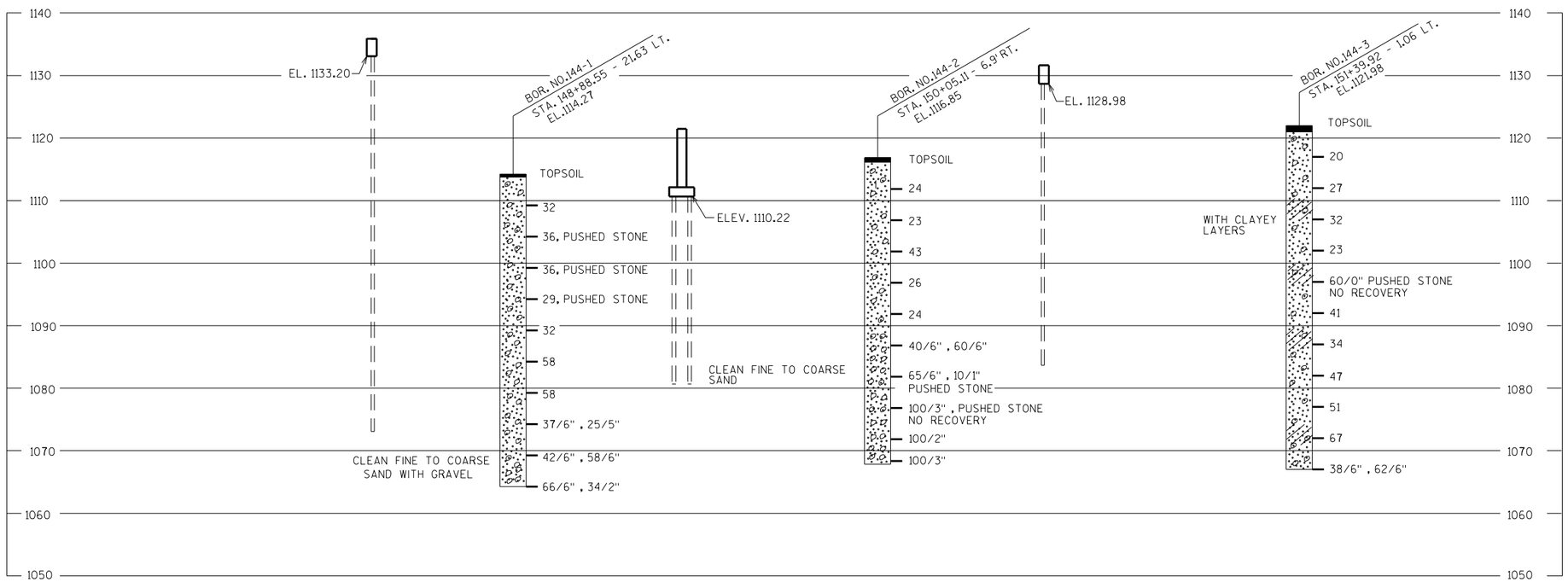
355

8

8

SCALE = 6





STATE PROJECT NUMBER

1107-02-79

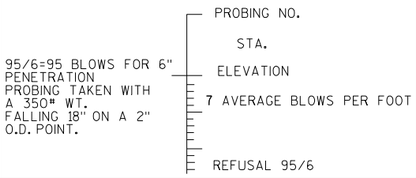
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

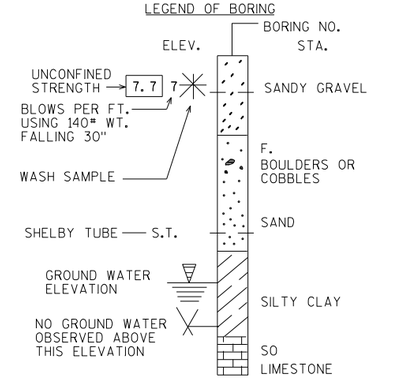
MATERIAL SYMBOLS

TOPSOIL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-66-110

DRAWN BY WWR | PLANS CK'D. DDS

SUBSURFACE EXPLORATION

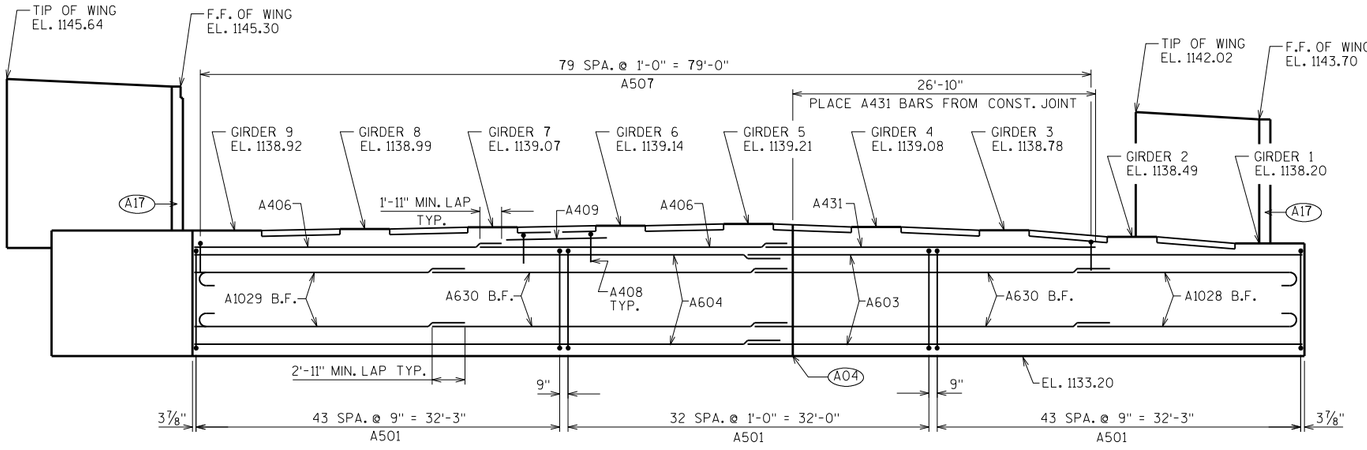
SHEET 3

356

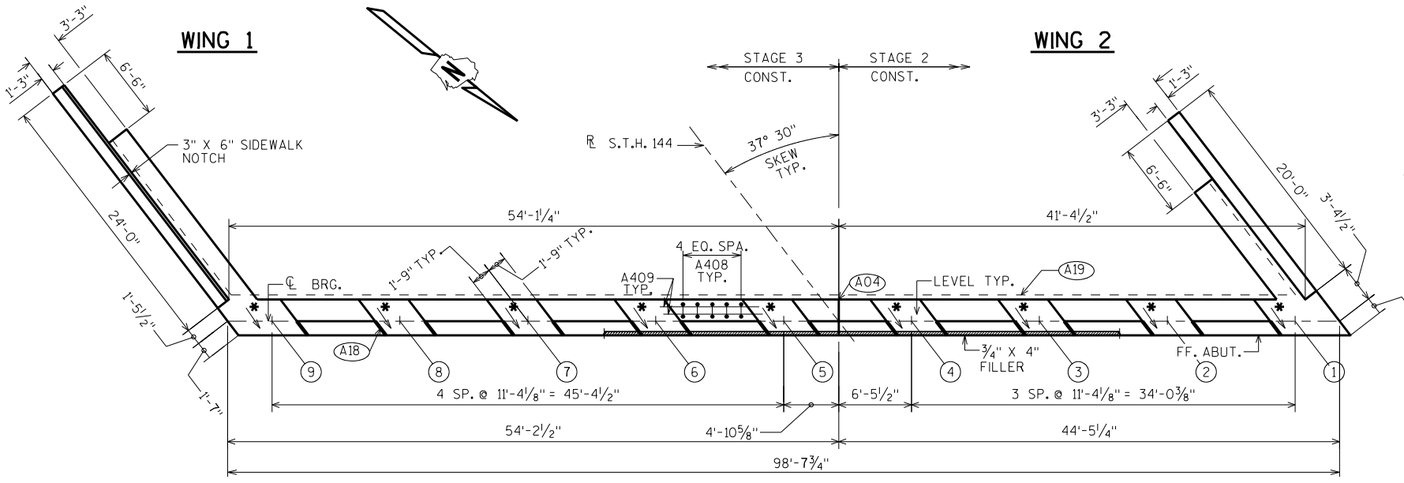
FILE=
SCALE =

STATE PROJECT NUMBER

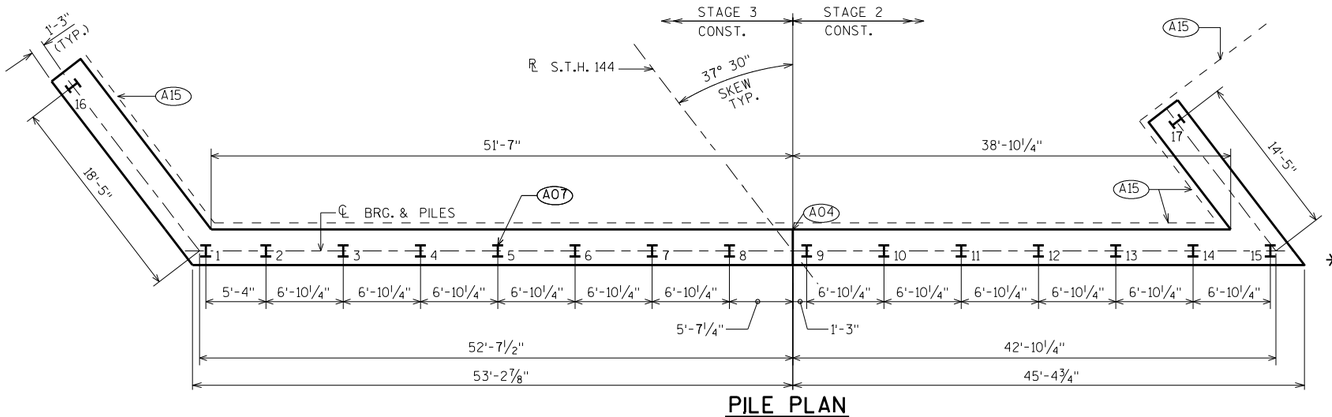
1107-02-79



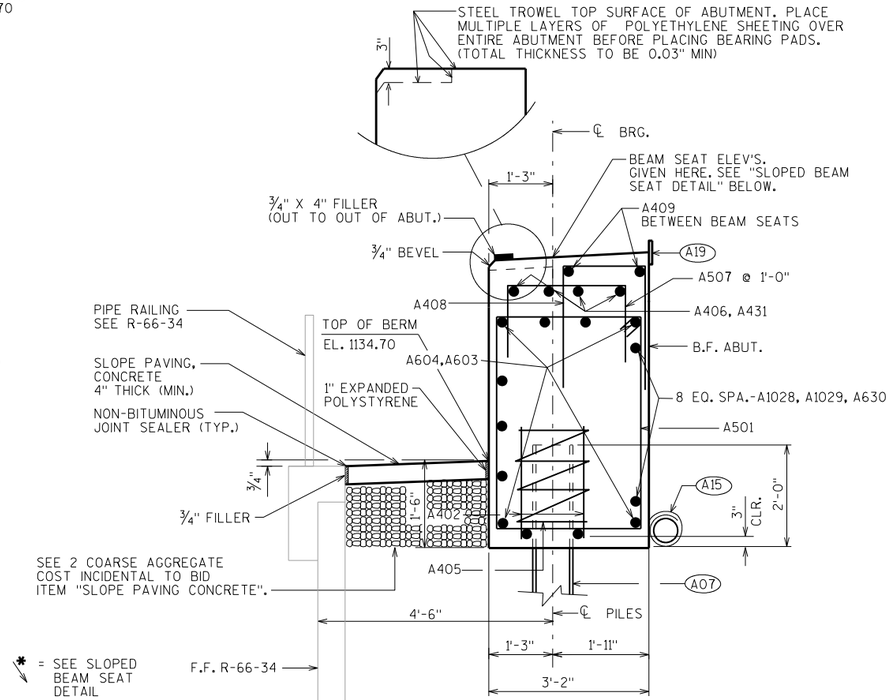
ELEVATION LOOKING SOUTH



PLAN

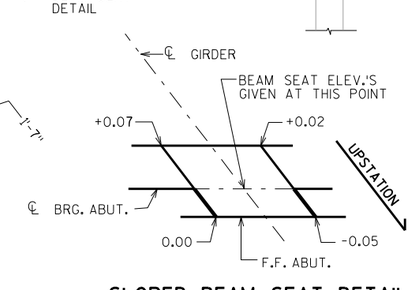


PILE PLAN

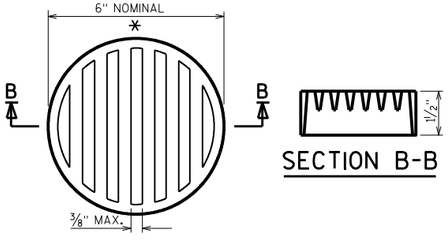


SECTION THRU BODY

* = SEE SLOPED BEAM SEAT DETAIL



SLOPED BEAM SEAT DETAIL



SECTION B-B

(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.

(A07) SUPPORT ABUTMENT ON HP 12 x 53 STEEL PILING. ESTIMATED 60 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 200 TONS PER PILE.

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

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

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

THE RODENT SCREEN 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 SCREEN TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SCREEN SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH SHEET METAL SCREWS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-66-110

DRAWN BY WWR | PLANS CK'D. DDS

SOUTH ABUTMENT

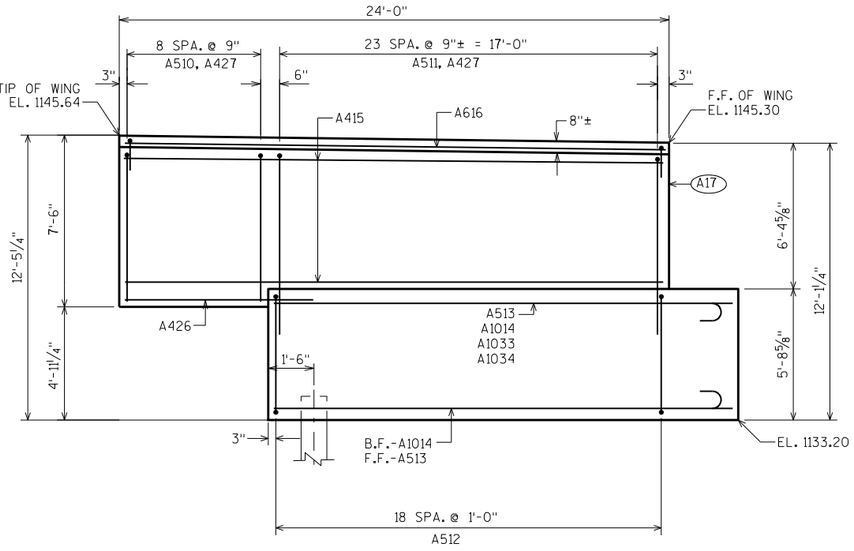
SHEET 4

357

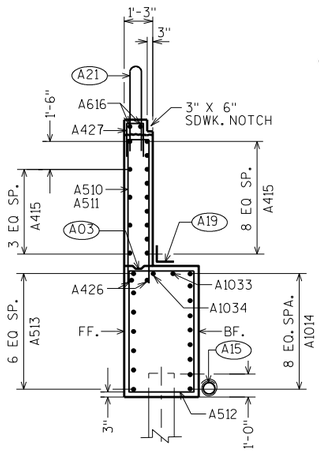
SCALE =

8

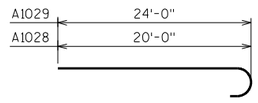
8



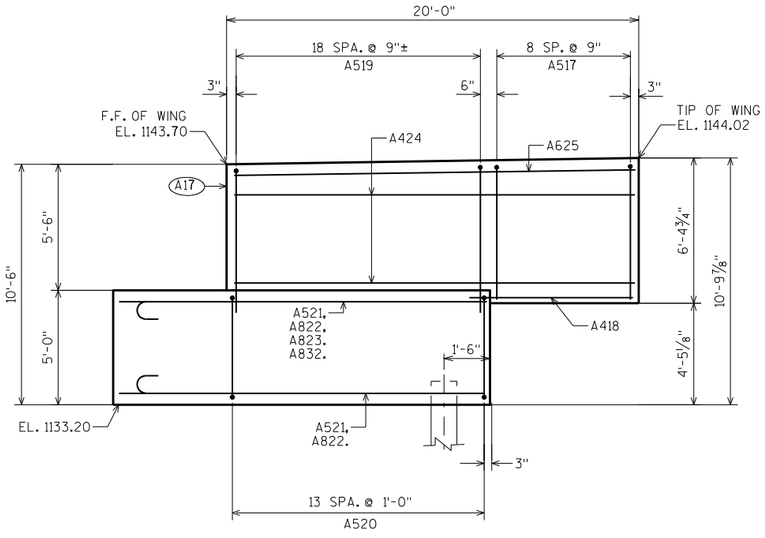
WING 1 ELEVATION



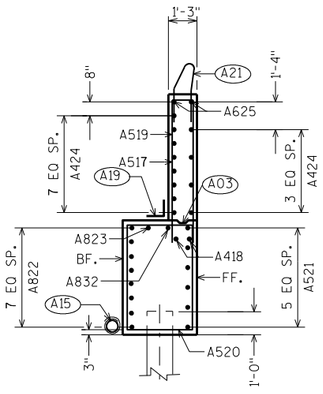
WING 1 SECTION



A1028, A1029



WING 2 ELEVATION

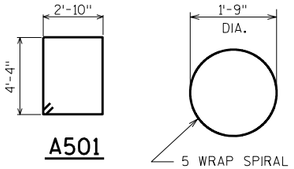


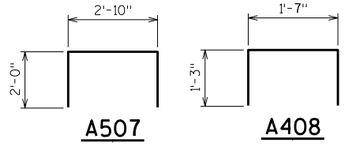
WING 2 SECTION

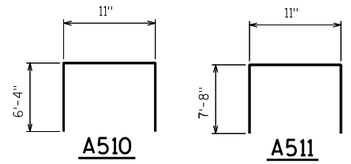
A03 OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 × 6. (18" R.M.W. @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

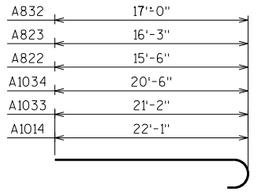
A17 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

A21 FOR PPT. BARS & DIMENSION SEE PARAPET SHEETS





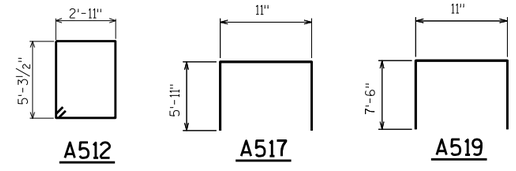


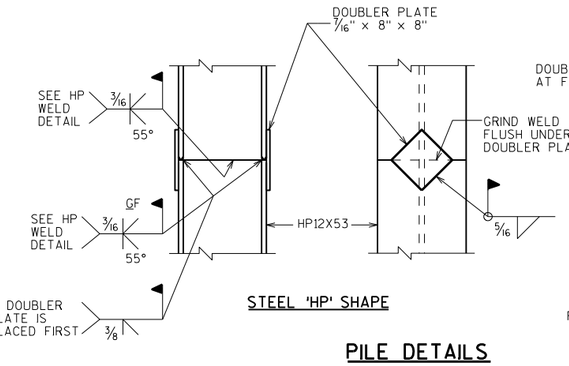


A1014, A1033, A1034, A822, A823, A832

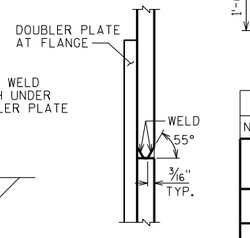
BAR SERIES TABLE

MARK	NO. REQD.	LENGTH
A431	1 SERIES OF 4	29'-3" TO 31'-4"





STEEL 'HP' SHAPE



HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

PILE DETAILS

STATE PROJECT NUMBER

1107-02-79

BILL OF BARS

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

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		121	15'-0"	X		BODY-STIRRUPS
A402		30	2'-3"			PILES- 2 PER BODY PILE
A603		11	57'-8"			BODY-HORIZONTAL-STAGE 3
A604		11	43'-5"			BODY-HORIZONTAL-STAGE 2
A405		15	28'-0"	X		PILES-1 PER BODY PILE
A406		8	27'-4"			BODY-HORZ. OVER GIRS. 3-9
A507		80	6'-9"	X		BODY-TOP OVER GIRS. 3-9
A408		40	3'-11"	X		BODY-BETWEEN BEAM SEATS
A409		16	6'-7"			BODY-HORZ. EXT
A510	X	9	13'-4"	X		WING 1-VERTICAL
A511	X	24	16'-0"	X		WING 1-VERTICAL
A512	X	19	17'-1"	X		WING 1-STIRRUP
A513	X	7	19'-11"			WING 1-HORIZONTAL
A1014	X	9	23'-6"	X		WING 1-HORIZONTAL
A415	X	13	23'-8"			WING 1-HORIZONTAL
A616	X	2	23'-8"			WING 1-HORIZONTAL
A517	X	9	12'-6"	X		WING 2-VERTICAL
A418	X	2	7'-9"			WING 2-HORIZONTAL
A519	X	19	15'-8"	X		WING 2-VERTICAL
A520	X	13	15'-8"	X		WING 2-STIRRUP
A521	X	6	17'-5"			WING 2-HORIZONTAL
A822	X	8	16'-5"	X		WING 2-HORIZONTAL
A823	X	1	17'-2"	X		WING 2-HORIZONTAL
A424	X	12	19'-8"			WING 2-HORIZONTAL
A625	X	2	19'-8"			WING 2-HORIZONTAL
A426	X	2	7'-9"			WING 1-HORIZONTAL
A427	X	33	3'-6"	X		WING 1-VERTICAL
A1028		9	21'-5"	X		BODY-HORIZONTAL-B.F.
A1029		9	25'-5"	X		BODY-HORIZONTAL-B.F.
A630		18	31'-6"			BODY-HORIZONTAL-B.F.
A431		4	30'-4"		▲	BODY-HORIZONTAL
A832	X	1	17'-11"	X		WING 2-HORIZONTAL
A1033	X	1	22'-7"	X		WING 1-HORIZONTAL
A1034	X	1	21'-11"	X		WING 1-HORIZONTAL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-66-110

DRAWN BY WWR | PLANS CK'D. DDS

SOUTH ABUTMENT DETAILS

SHEET 5

358

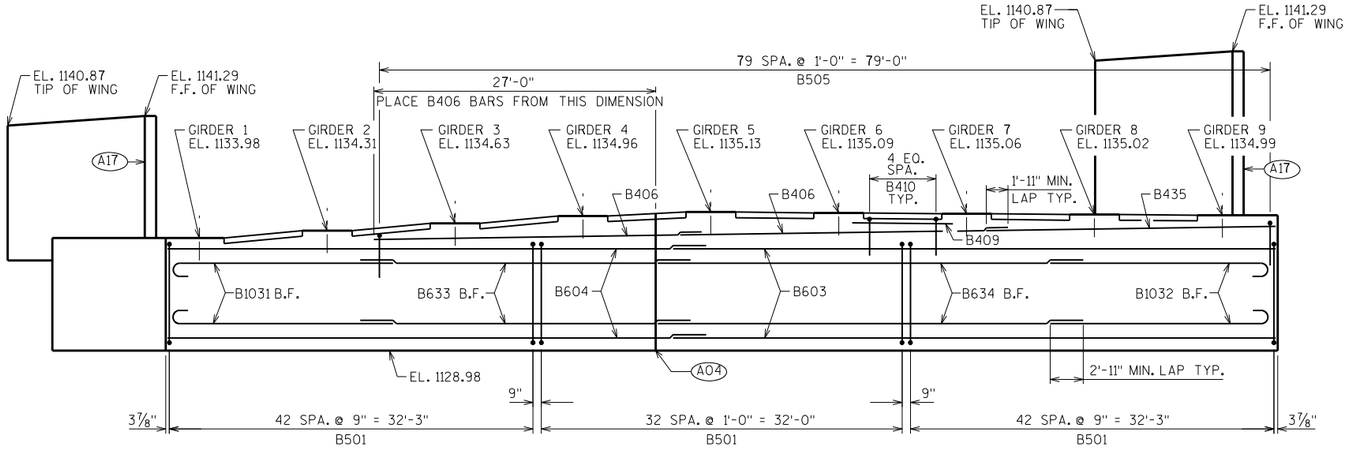
8

8

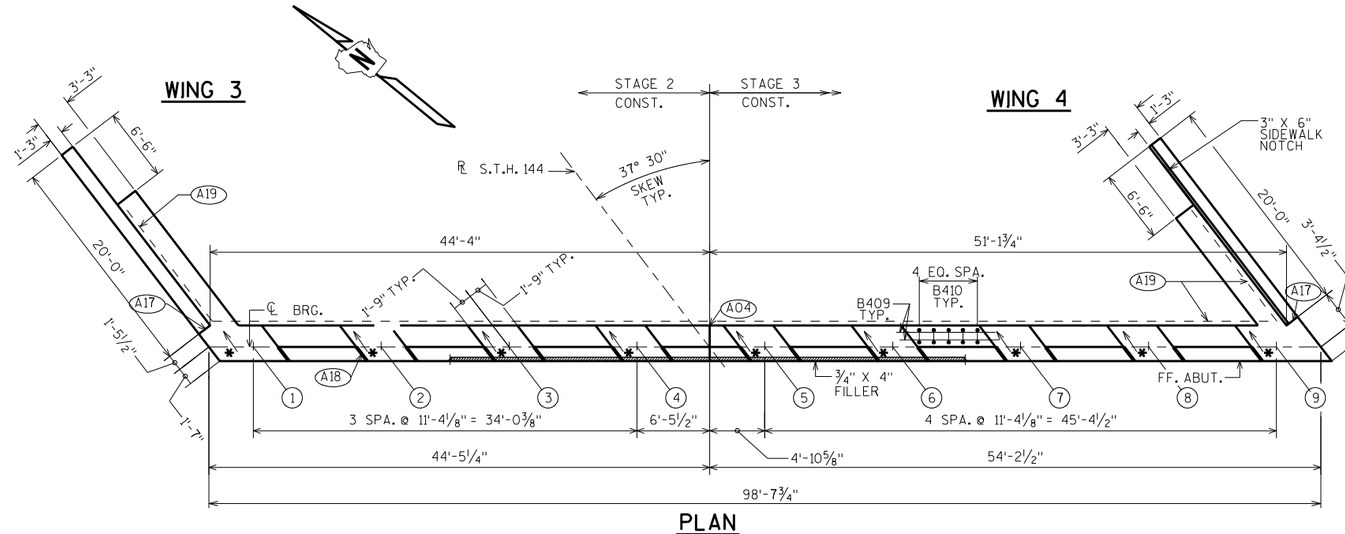
SCALE =

STATE PROJECT NUMBER

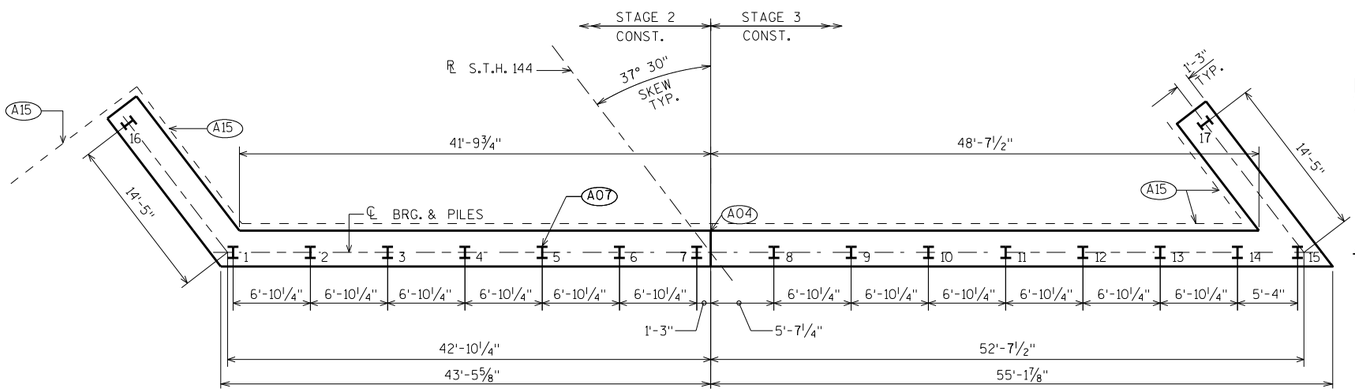
1107-02-79



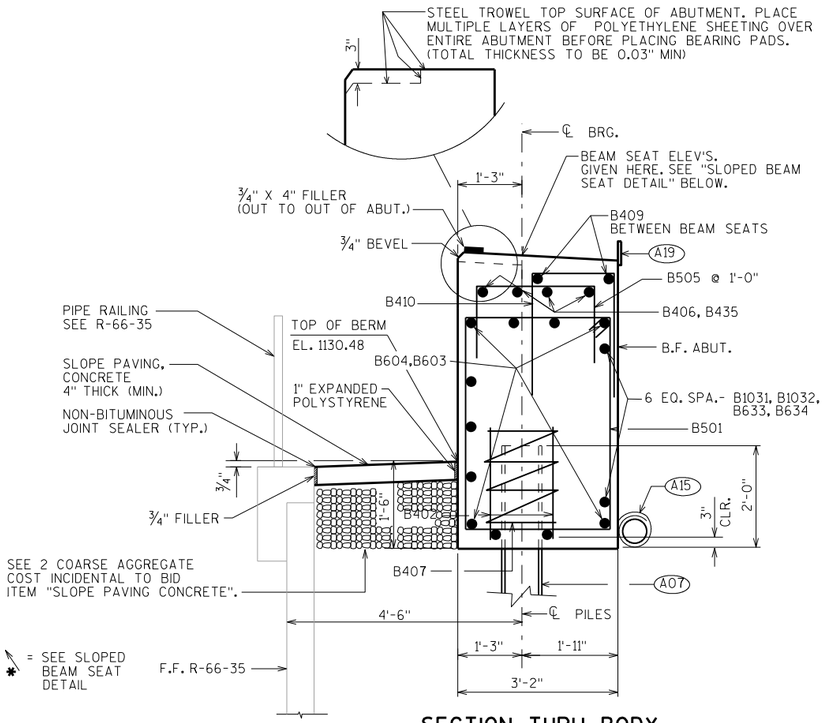
ELEVATION LOOKING NORTH



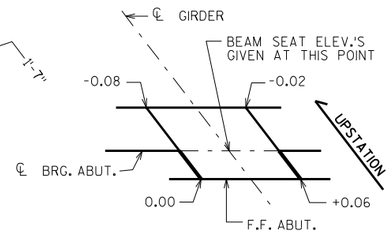
PLAN



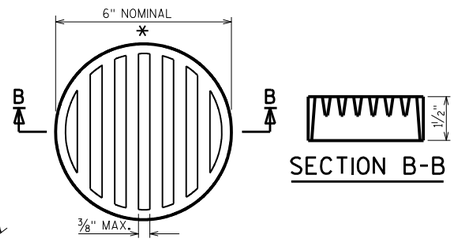
PILE PLAN



SECTION THRU BODY



SLOPED BEAM SEAT DETAIL



SECTION B-B

(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.

(A07) SUPPORT ABUTMENT ON HP 12 x 53 STEEL PILING, ESTIMATED 45 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 200 TONS PER PILE.

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

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

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

THE RODENT SCREEN 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 SCREEN TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SCREEN SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH SHEET METAL SCREWS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-66-110

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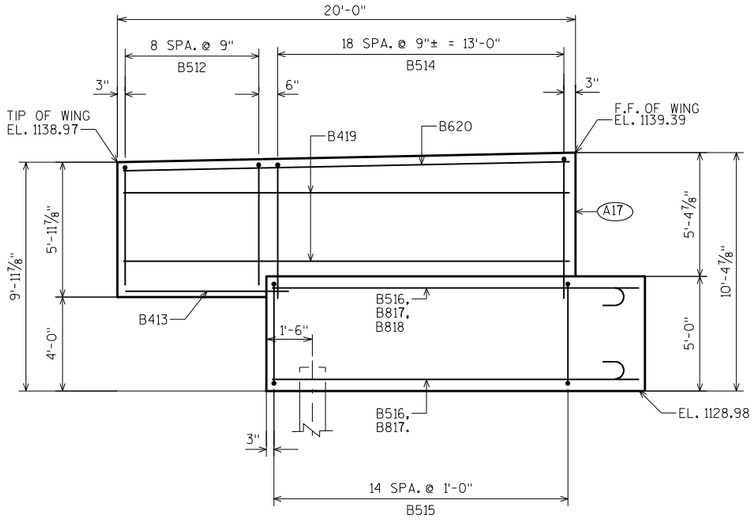
NORTH ABUTMENT

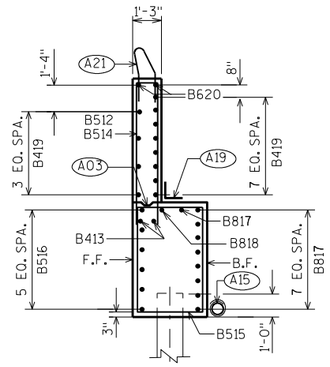
SHEET 6

359

SCALE =



WING 3 ELEVATION



WING 3 SECTION

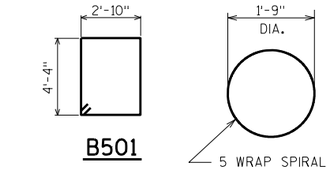
(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" R.M.W. @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

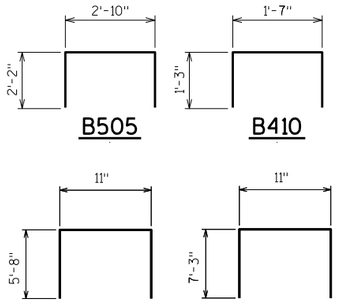
(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SCREEN REQUIRED.

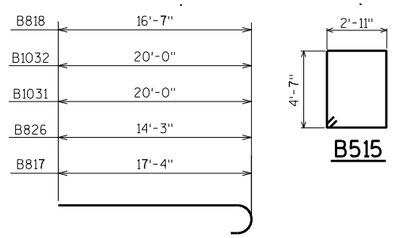
(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

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

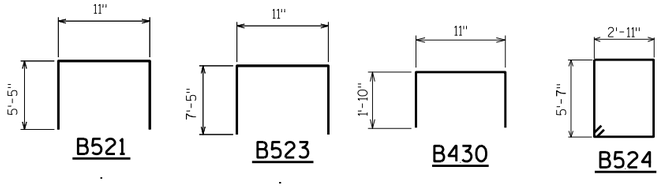
(A21) FOR PPT. BARS & DIMENSION SEE PARAPET SHT.







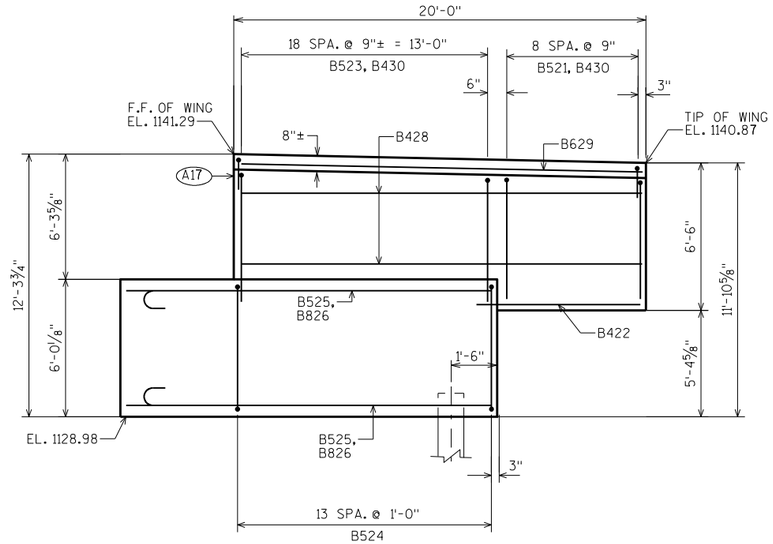
B817, B826, B1031, B1032, B818



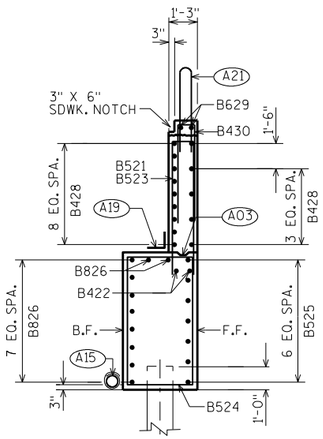
BILL OF BARS

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

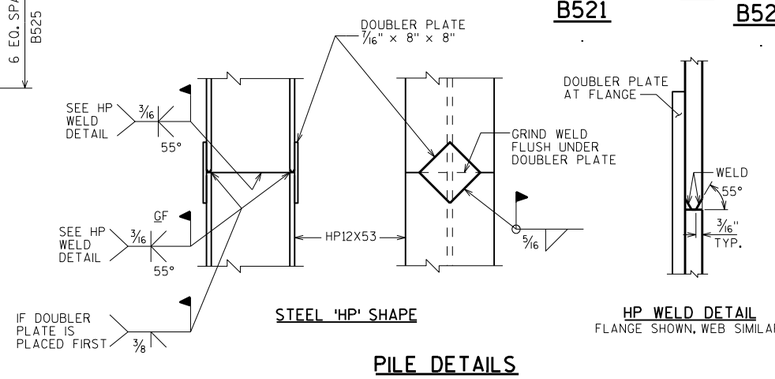
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501		121	15'-0"	X		BODY-STIRRUPS
B402		30	2'-3"			PILES- 2 PER BODY PILE
B603		11	53'-2"			BODY-HORIZONTAL-STAGE 3
B604		11	47'-11"			BODY-HORIZONTAL-STAGE 2
B505		80	6'-11"	X		BODY-VERT.
B406		8	29'-1"			BODY-HORIZONTAL
B407		15	28'-0"	X		PILES-1 PER BODY PILE
———		NOT	USED			
B409		16	9'-6"			BODY-HORIZONTAL
B410		40	4'-0"	X		BODY-BETWEEN BEAM SEATS
———		NOT	USED			
B512	X	9	12'-0"	X		WING 3-VERTICAL
B413	X	2	7'-9"			WING 3-HORIZONTAL
B514	X	19	15'-2"	X		WING 3-VERTICAL
B515	X	15	15'-8"	X		WING 3-STIRRUP
B516	X	6	15'-11"			WING 3-HORIZONTAL
B817	X	9	18'-3"	X		WING 3-HORIZONTAL
B818	X	1	17'-6"	X		WING 3-HORIZONTAL
B419	X	12	19'-8"			WING 3-HORIZONTAL
B620	X	2	19'-8"			WING 3-HORIZONTAL
B521	X	9	11'-6"	X		WING 4-VERTICAL
B422	X	2	7'-9"			WING 4-HORIZONTAL
B523	X	19	15'-6"	X		WING 4-VERTICAL
B524	X	14	17'-8"	X		WING 4-STIRRUP
B525	X	7	17'-5"			WING 4-HORIZONTAL
B826	X	10	15'-2"	X		WING 4-HORIZONTAL
———		NOT	USED			
B428	X	13	19'-8"			WING 4-HORIZONTAL
B629	X	2	19'-8"			WING 4-HORIZONTAL
B430	X	28	4'-5"	X		WING 4-VERTICAL
B1031		7	21'-5"	X		BODY-HORIZONTAL B.F.-STAGE 2
B1032		7	21'-5"	X		BODY-HORIZONTAL B.F.-STAGE 3
B633		7	31'-6"			BODY-HORIZONTAL B.F.-STAGE 2
B634		7	35'-6"			BODY-HORIZONTAL B.F.-STAGE 3
B435		4	27'-5"			BODY-HORIZONTAL B.F.-STAGE 3



WING 4 ELEVATION



WING 4 SECTION



STEEL 'HP' SHAPE

HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR

PILE DETAILS

STATE PROJECT NUMBER

1107-02-79

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-66-110

DRAWN BY WWR | PLANS CK'D. DDS

NORTH ABUTMENT DETAILS

SHEET 7

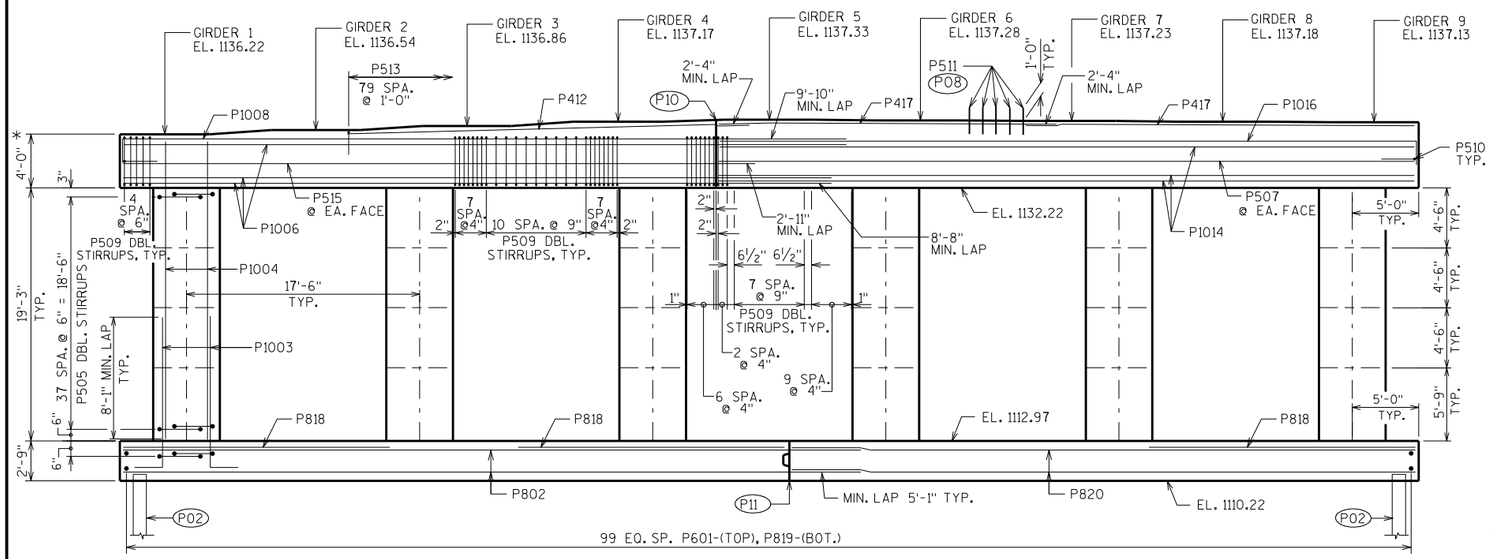
360

8

SCALE =

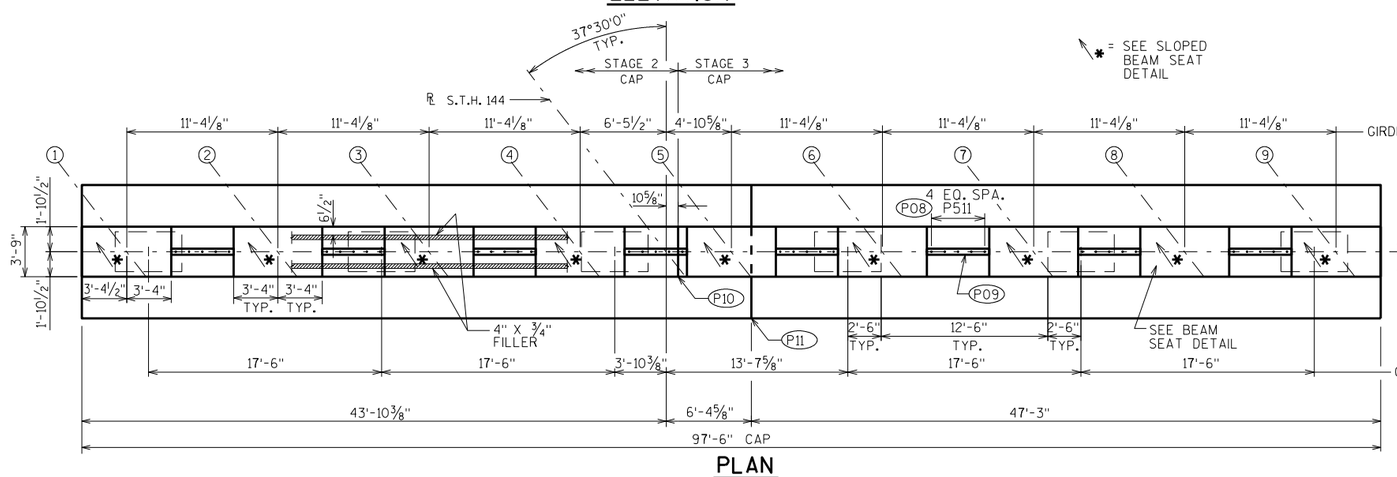
STATE PROJECT NUMBER

1107-02-79

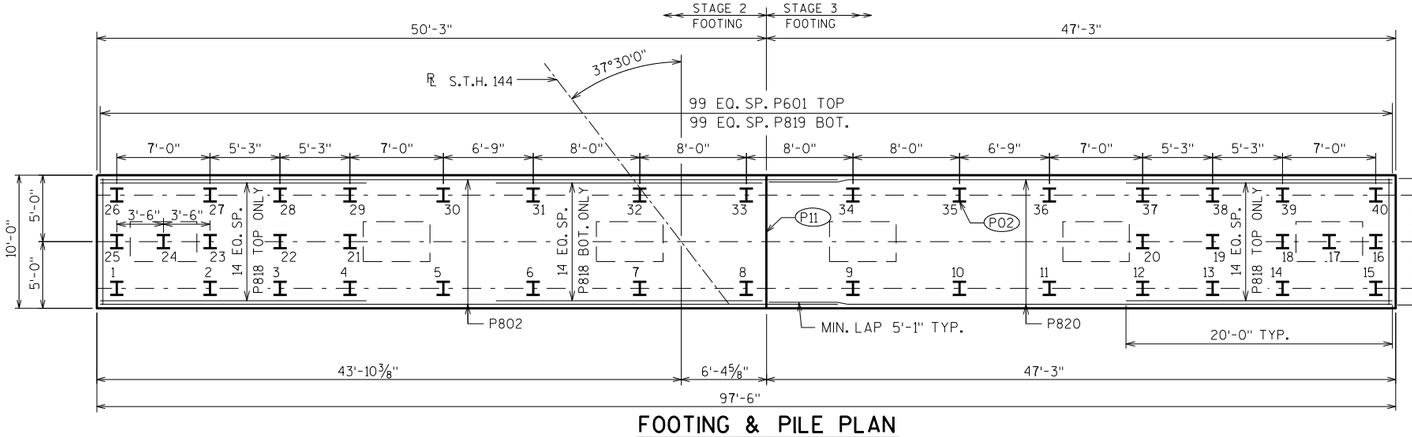


* DIMENSION TAKEN AT ℄ PIER

ELEVATION

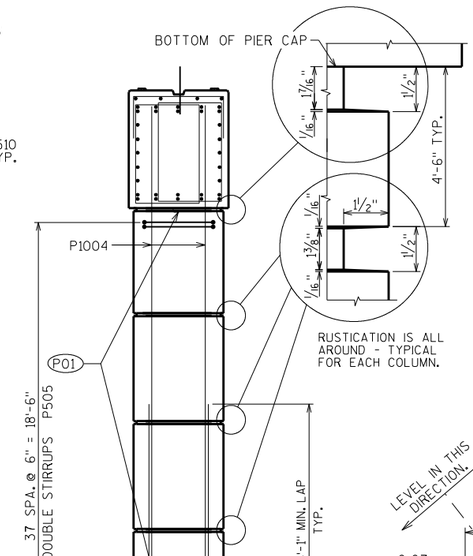


PLAN

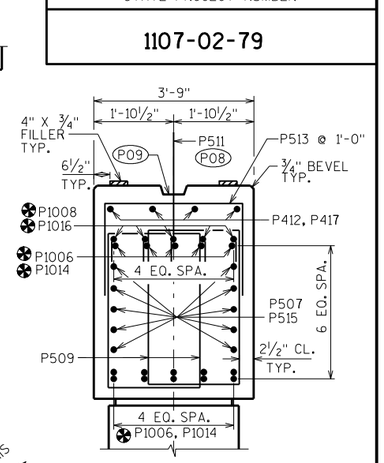


FOOTING & PILE PLAN

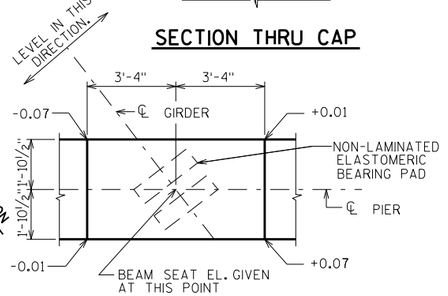
* = SEE SLOPED BEAM SEAT DETAIL



END VIEW

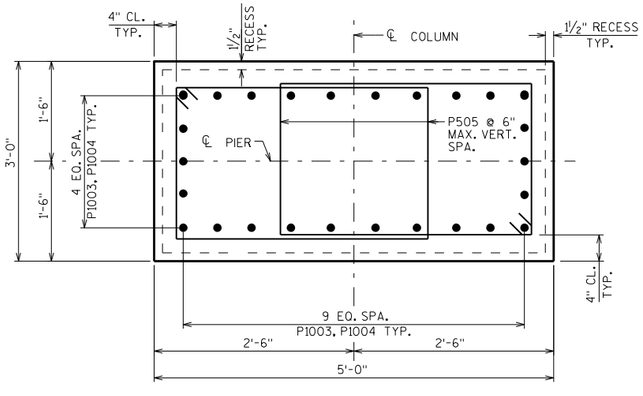


SECTION THRU CAP



BEAM SEAT DETAIL @ PIER

(SHOWN AT INTERIOR GIRDER, EXTERIOR GIRDER SIMILAR)



SECTION THRU COLUMN

BUNDLING DETAIL

(P01) 1'-3" X 2'-6" X 4" CONSTRUCTION JOINT FORMED BY BEVELED KEYWAY.

(P02) SUPPORT PIER ON HP 12 x 53 STEEL PILING, ESTIMATED 30'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 200 TONS PER PILE.

(P08) 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.

(P10) VERT. CONST. JOINT FORMED BY SURFACED BEVELED 2 X 6 X 2'-0 KEYWAY

(P11) VERT. CONST. JOINT FORMED BY SURFACED BEVELED 2 X 10 X 6'-0 KEYWAY

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-66-110

DRAWN BY WWR | PLANS CK'D. DDS

PIER

SHEET 8

361

SCALE = 5.50

8

8

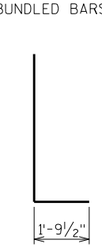
STATE PROJECT NUMBER
1107-02-79

BILL OF BARS

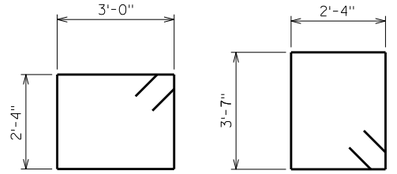
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

	BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
	P601		100	9'-6"			FOOTING-HORIZ.-TOP-TRANS.
	P802		32	55'-2"			FOOTING-HORIZ.-TOP & BOT.-LONGIT.-STAGE 2
	P1003	X	156	11'-9"	X		COLUMN-VERT.
	P1004	X	156	22'-9"			COLUMN-VERT.
	P505	X	468	11'-4"	X		SHAFT-HORIZ.-STIRRUPS
✠	P1006	X	15	53'-3"			CAP-HORIZ.-BTM.-STAGE 2
	P507	X	10	52'-3"			CAP-HORIZ.-SIDES-STAGE 3
✠	P1008	X	5	55'-11"	X		CAP-HORIZ.-TOP-STAGE 2
	P509	X	268	12'-6"	X		CAP-VERT.-STIRRUPS
	P510	X	8	5'-11"	X		CAP-HORIZ.-ENDS
	P511	X	40	2'-0"			CAP-VERT.-DOWELS
	P412	X	4	30'-5"			CAP-HORIZ TOP-STAGE 2
	P513	X	80	7'-5"	X		CAP-VERT U-BAR
✠	P1014	X	15	52'-3"			CAP-HORIZ.-BTM-STAGE 3
	P515	X	10	47'-6"			CAP-HORIZ.-SIDES-STAGE 2
✠	P1016	X	5	54'-1"	X		CAP-HORIZ.-TOP-STAGE 3
	P417	X	4	27'-5"			CAP-HORIZ.-TOP-STAGE 3
	P818		45	20'-0"			FOOTING-HORIZ.-TOP-LONGIT.
	P819		100	9'-6"			FOOTING-HORIZ.-BOT.-TRANS.
	P820		32	47'-1"			FOOTING-HORIZ.-TOP & BOT.-LONGIT.-STAGE 3

✠ BUNDLED BARS

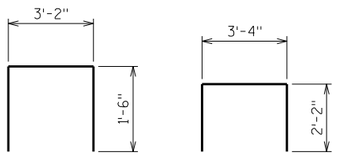


P1003

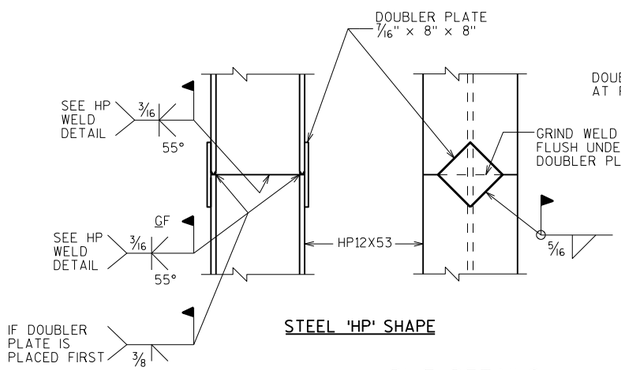


P505 P509

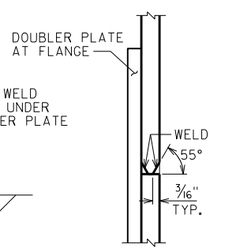
P1008, P1016



P510 P513



STEEL 'HP' SHAPE



HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR

PILE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-66-110

DRAWN BY WWR | PLANS CK'D. DDS

PIER DETAILS

SHEET 9

362

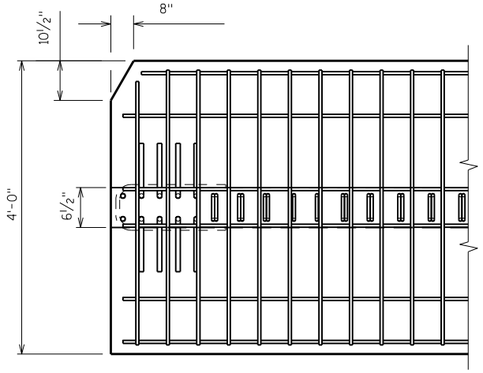
SCALE = 5.50

8

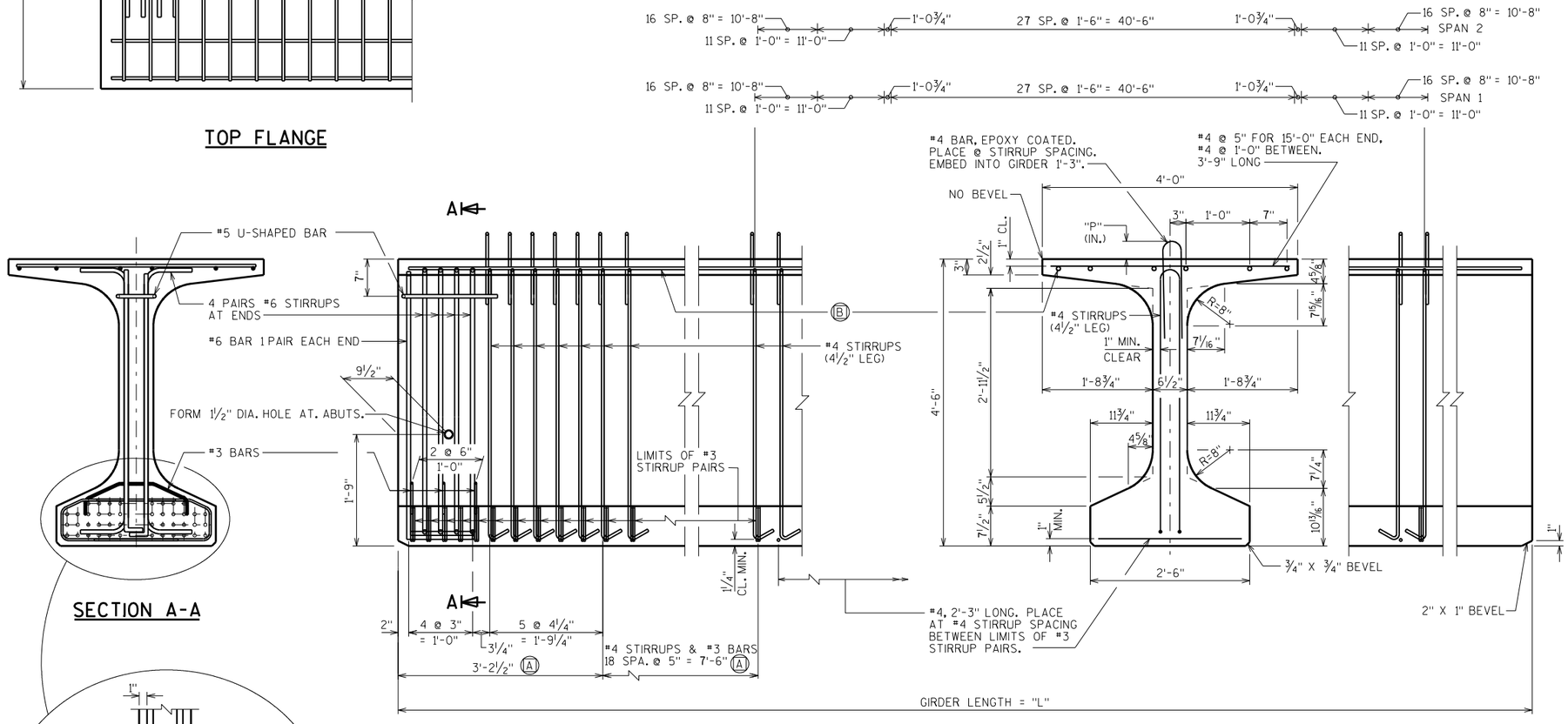
8

STATE PROJECT NUMBER

1107-02-79



TOP FLANGE

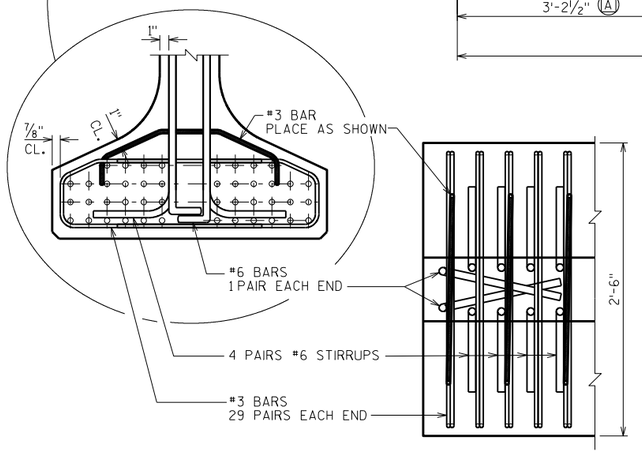


SIDE VIEW & TYP. SECTION IN SPAN

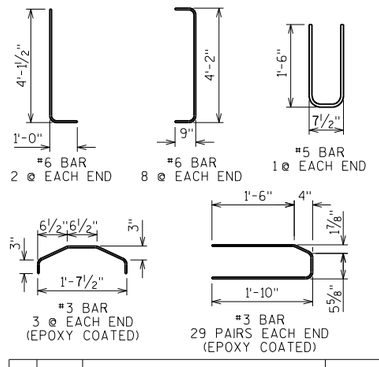
Ⓐ DETAIL TYP. AT EACH END

Ⓑ 6 #4 BARS, FULL LENGTH, MIN. LAP = 1'-11"

SECTION A-A



BOTTOM FLANGE



GIRDER NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY FOR BONDING TO THE SLAB, 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. IF THE FABRICATOR WANTS TO BUILD A BAR STEEL CAGE BY WELDING LONGITUDINAL REINFORCEMENT TO THE #4 STIRRUPS, ONE OPTION IS AVAILABLE:

USE ASTM A706, GRADE 60 REINFORCEMENT AND THE STIRRUP SPACING AS SHOWN ON THE PLANS.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT CHIEF, (608)266-5161.

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	ALL	107.38	0.5	1.0	1.4	1.6	1.7	1.6	1.4	1.0	0.5	8000	7	7	7	0.60	30	6400	50	15.5	18.5	4	0	0
2	ALL	107.38	0.5	1.0	1.4	1.6	1.7	1.6	1.4	1.0	0.5	8000	7	7	7	0.60	30	6400	50	15.5	18.5	4	0	0

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-66-110

DRAWN BY WWR | PLANS CK'D. DDS

54W" PRESTRESSED GIRDER

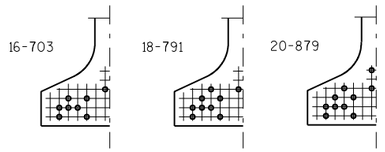
SHEET 10

363

SCALE =

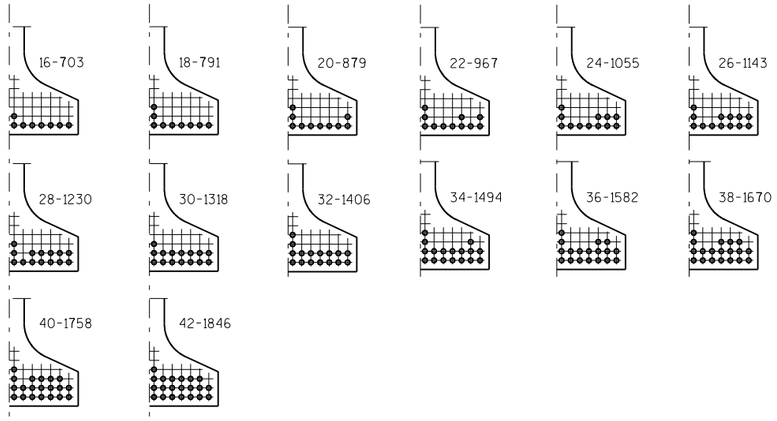
STATE PROJECT NUMBER

1107-02-79



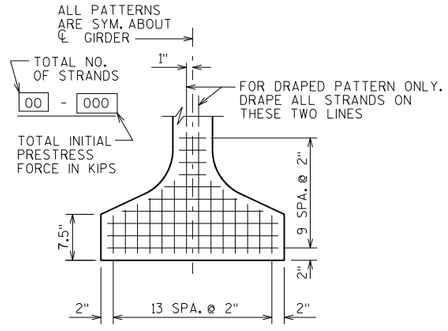
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6"Φ STRANDS

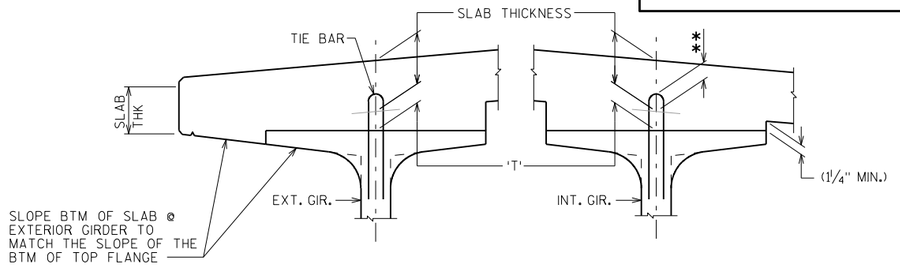


ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6"Φ STRANDS



TYP. STRAND PATTERN



SLAB HAUNCH DETAIL

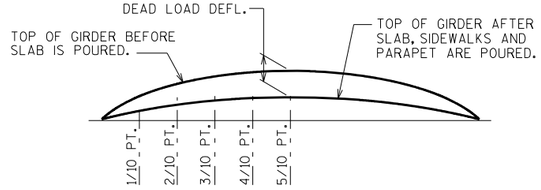
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN SLAB THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

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

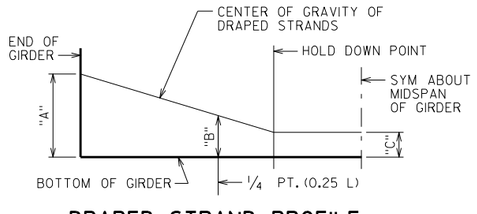
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

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

NOTE: AN AVERAGE HAUNCH ('T') OF 3" 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.

SPAN	CAMBER (IN.) *
1	2.7
2	2.7

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

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-66-110

DRAWN BY WWR | PLANS CK'D. DDS

54W" PRESTRESSED GIRDER DETAILS

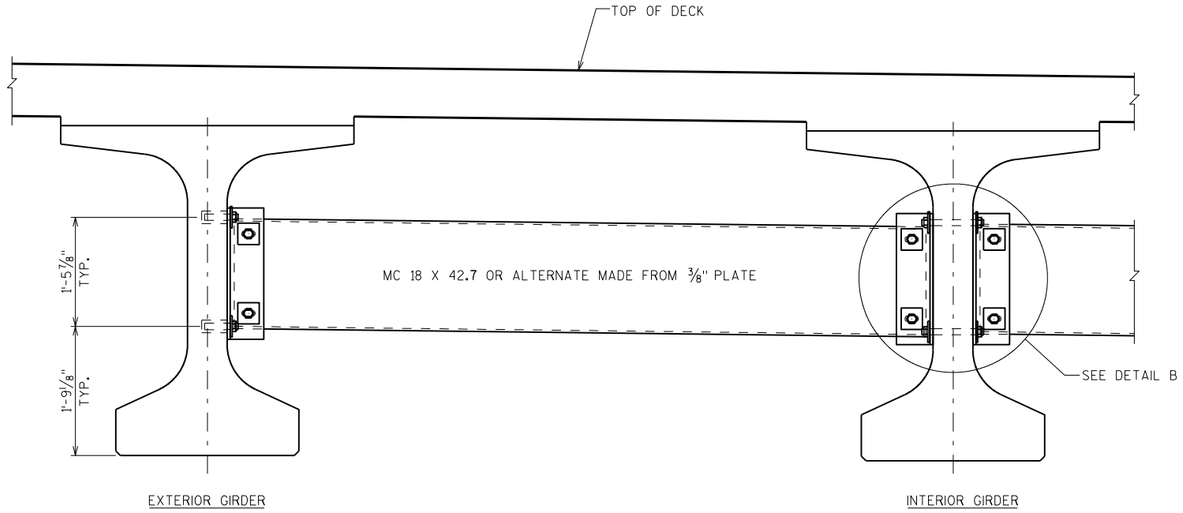
SHEET 11

364

SCALE =

STATE PROJECT NUMBER

1107-02-79



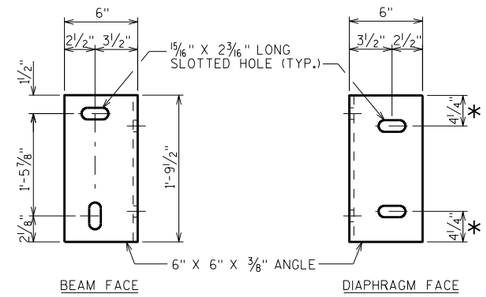
PART TRANSVERSE SECTION AT DIAPHRAGM

NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-66-110", EACH.

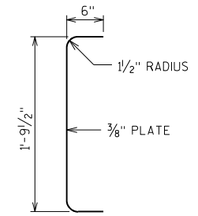
EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT. ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

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.

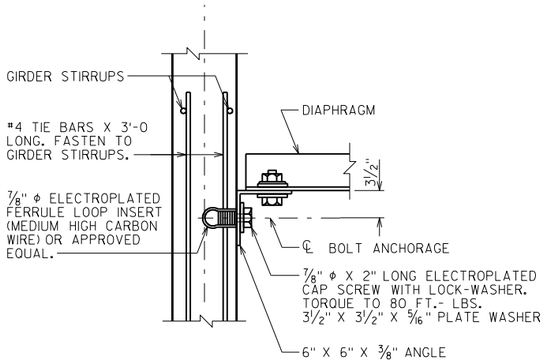


DIAPHRAGM SUPPORT

* 2½" FOR ALTERNATE PLATE DIAPHRAGM

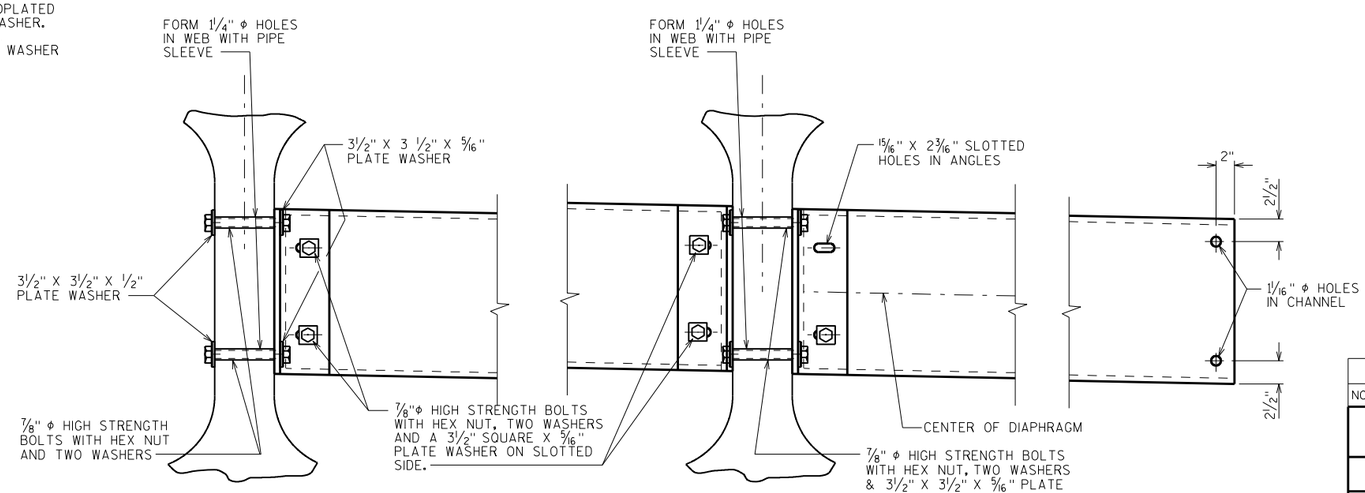


SECTION THRU ALTERNATE DIAPHRAGM



SECTION A-A

(FOR EXTERIOR ATTACHMENT)



(FOR STAGGERED DIAPHRAGM)

(FOR CONTINUOUS LINE OF DIAPHRAGMS)

DETAIL B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-66-110

DRAWN BY WWR | PLANS CK'D. DDS

STEEL DIAPHRAGM

SHEET 12

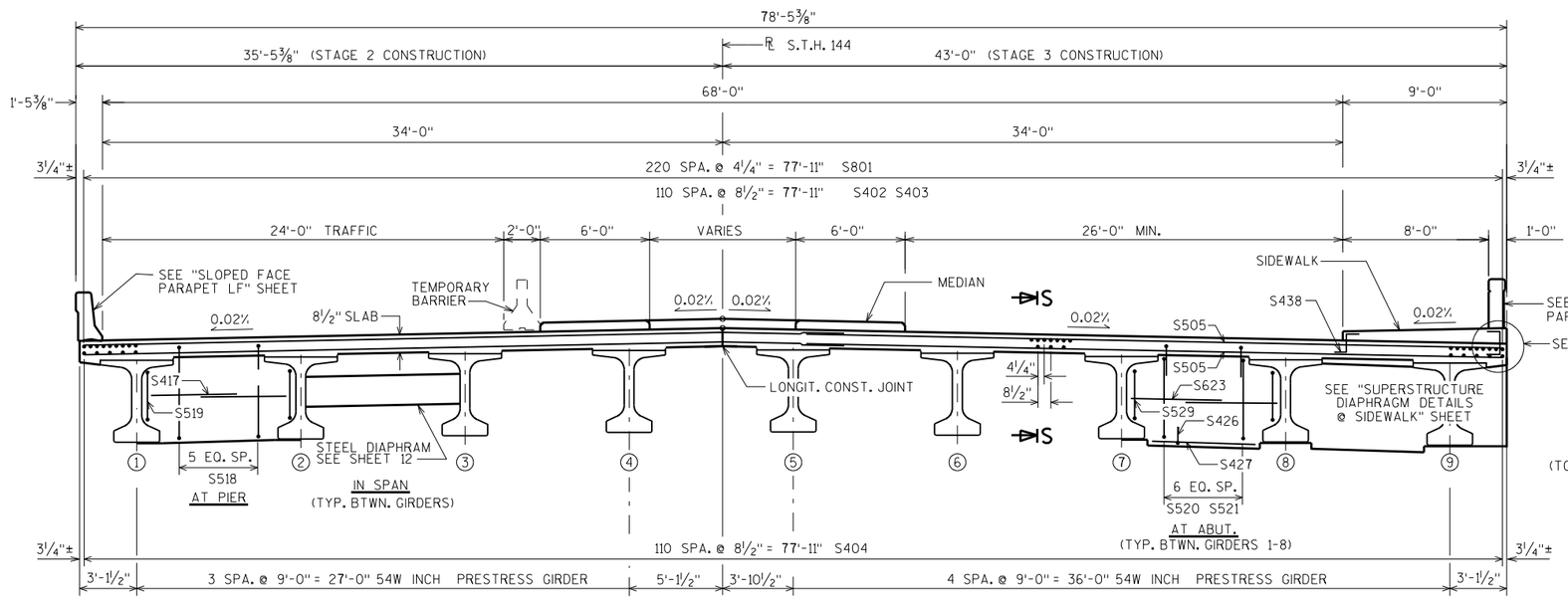
365

8

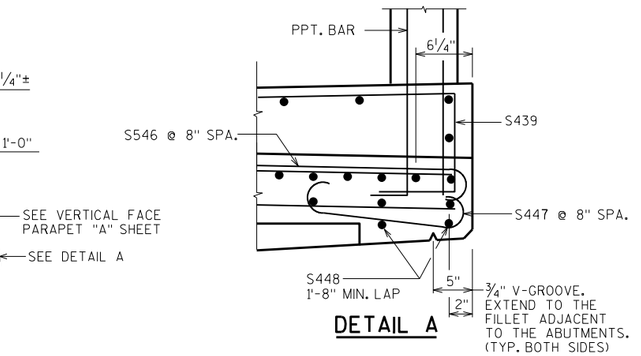
8

SCALE =

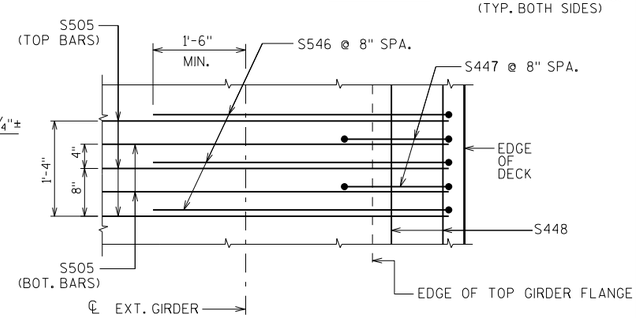
STATE PROJECT NUMBER
1107-02-79



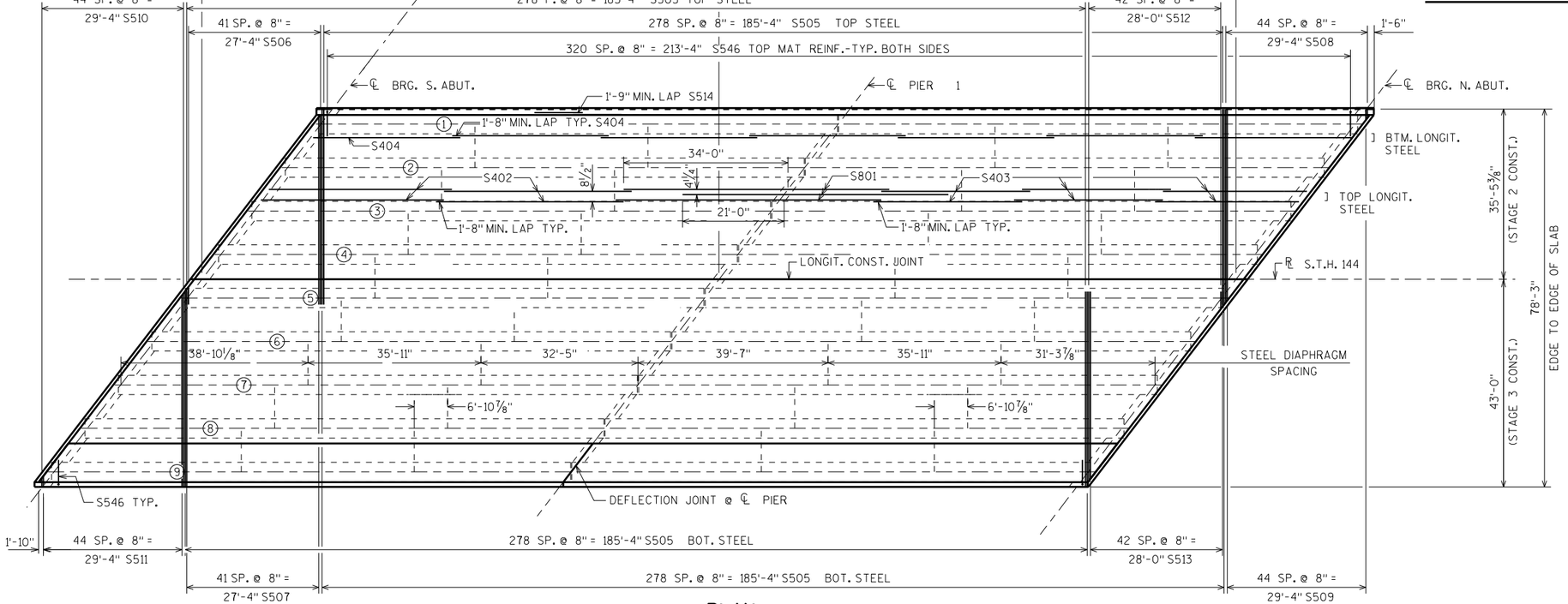
CROSS SECTION THRU ROADWAY
(LOOKING NORTH)



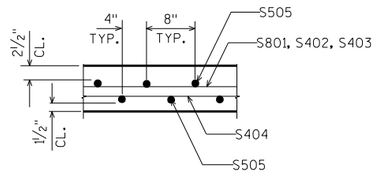
DETAIL A



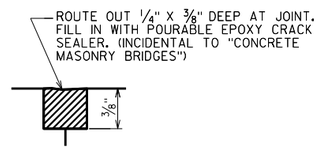
ADDITIONAL REINFORCEMENT DETAIL



PLAN
(MEDIAN AND TEMP. BARRIER NOT SHOWN)



SECTION S-S
(TRANSVERSE BAR SERIES NOT SHOWN)



LONGITUDINAL CONSTRUCTION JOINT DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-66-110

DRAWN BY WWR | PLANS CK'D. DDS

SUPERSTRUCTURE

SHEET 13

366

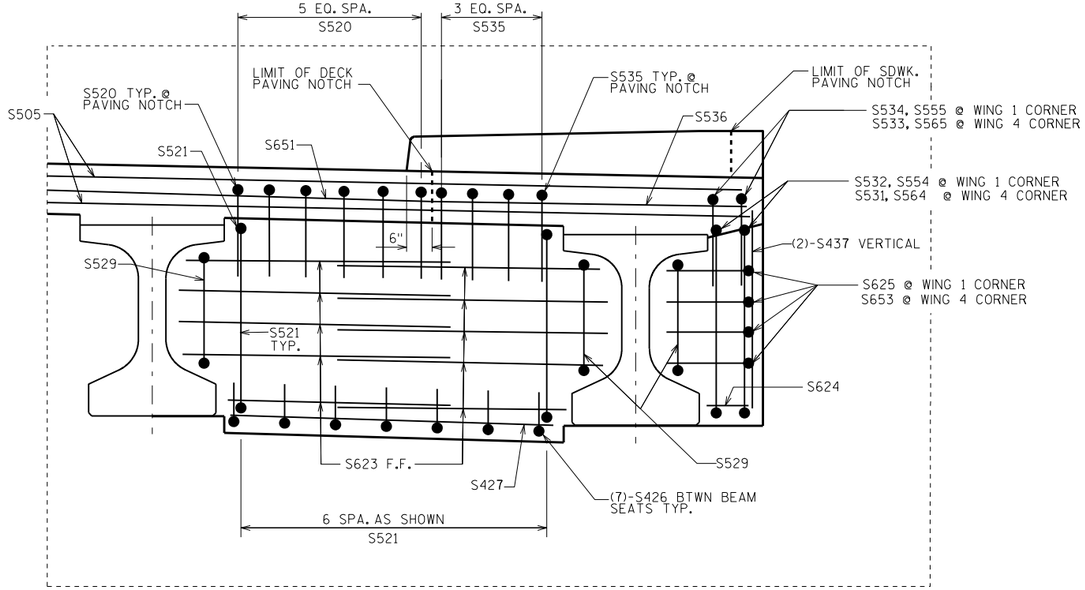
8

8

SCALE =

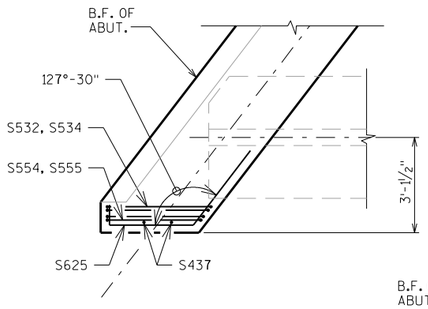
STATE PROJECT NUMBER

1107-02-79

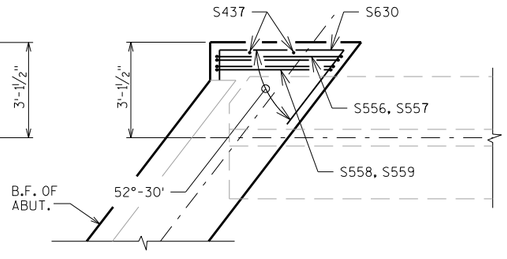


AT ABUT.

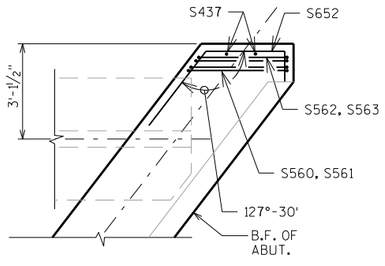
DIAPHRAGM DETAILS @ SIDEWALK



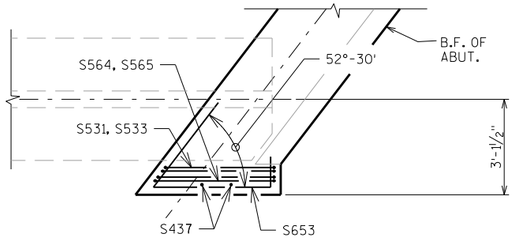
WING 1 PLAN



WING 2 PLAN



WING 3 PLAN



WING 4 PLAN

ABUTMENT DIAPHRAGM END DETAILS - PLAN VIEWS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-66-110

DRAWN BY WWR | PLANS CK'D. DDS

SUPERSTRUCTURE DIAPHRAGM DETAILS @ SIDEWALK

SHEET 14

367

SCALE =

8

8

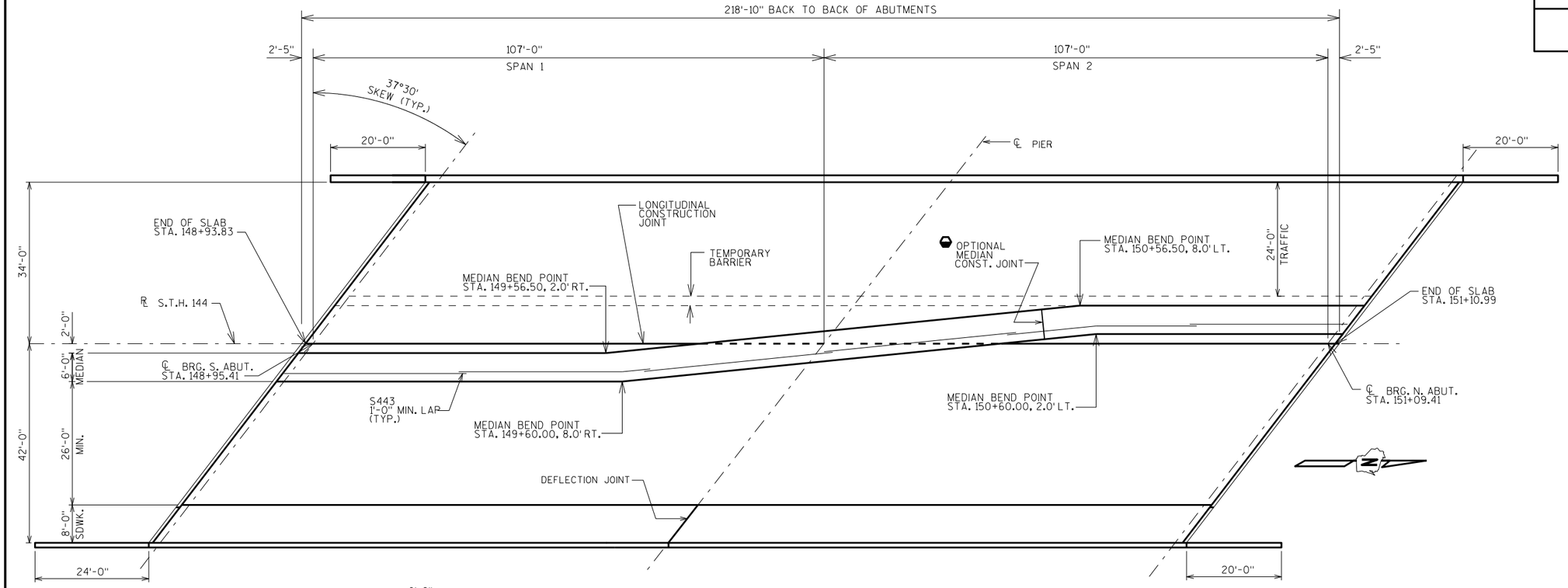
STATE PROJECT NUMBER

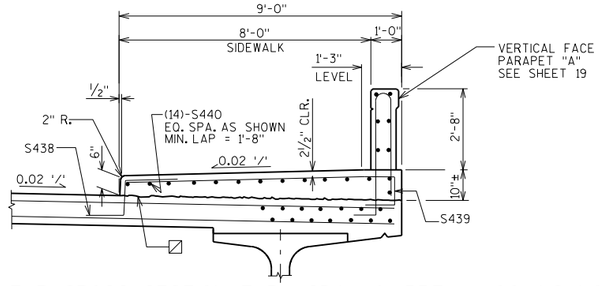
1107-02-79

☆ ROUGH FLOAT SURFACE, OR SAME FINISH AS EXPOSED DECK. DO NOT APPLY PROTECTIVE SURFACE TREATMENT TO THIS AREA.

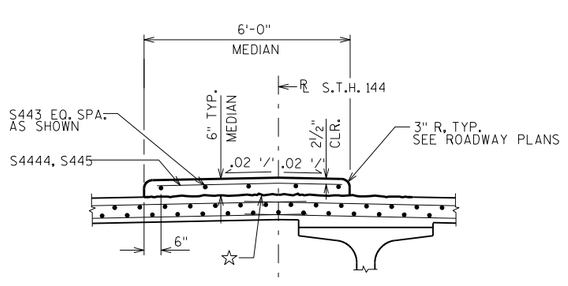
▨ HORIZ. CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH.

OPTIONAL MEDIAN CONST. JOINT FOR MEDIAN POUR DURING STAGE 2 CONSTRUCTION. DO NOT PLACE OVER LONGITUDINAL CONSRTUCTION JOINT.

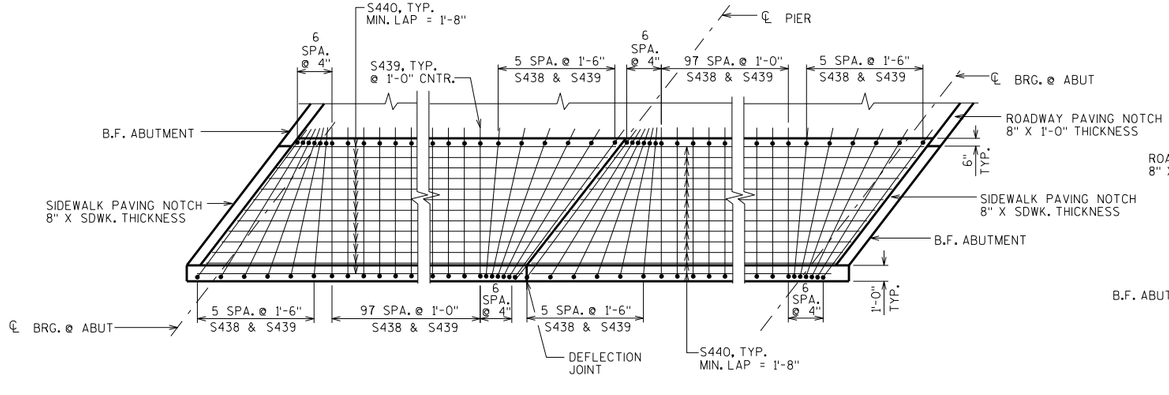




TYP. CROSS SECTION THRU SDWK. & PPT. - LOOKING NORTH

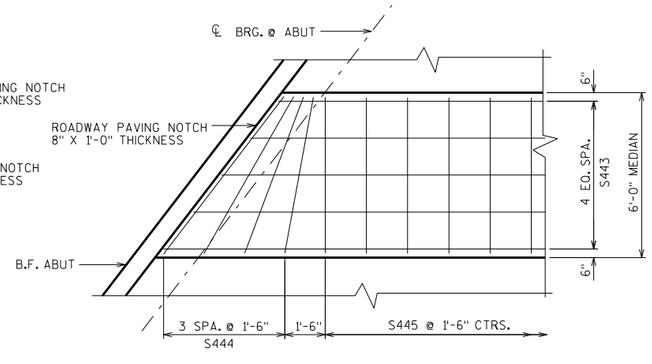


TYP. CROSS SECTION THRU MEDIAN - LOOKING NORTH



PART PLAN SHOWING SDWK. REINF.

FLARE TRANS. REINF. AT ENDS AND AT DEFLECTION JOINT.



PART PLAN SHOWING MEDIAN REINF.

FLARE TRANS. REINF. AT ENDS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-66-110

DRAWN BY WWR | PLANS CK'D. DDS

SUPERSTRUCTURE BAR DETAILS

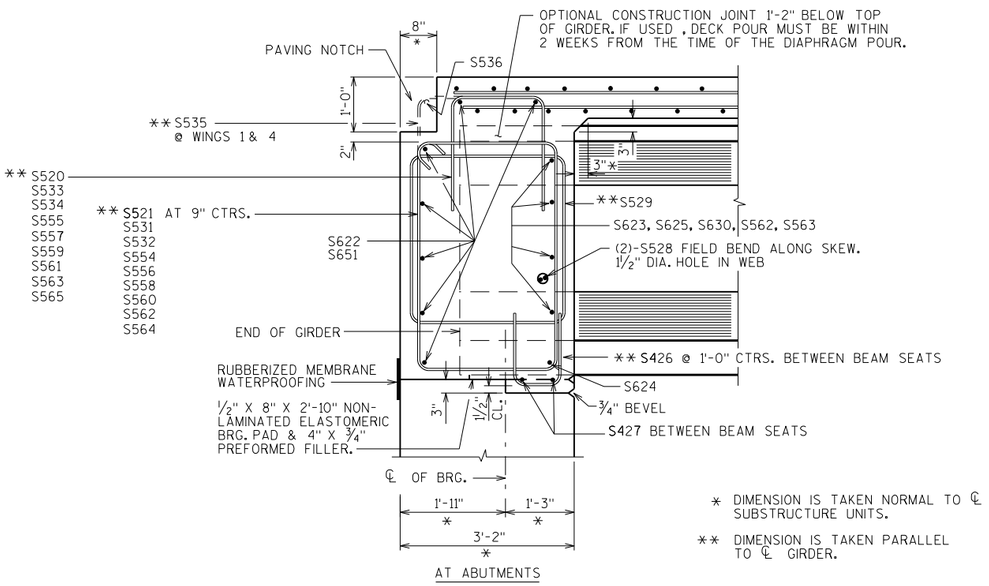
SHEET 15

368

SCALE =

STATE PROJECT NUMBER

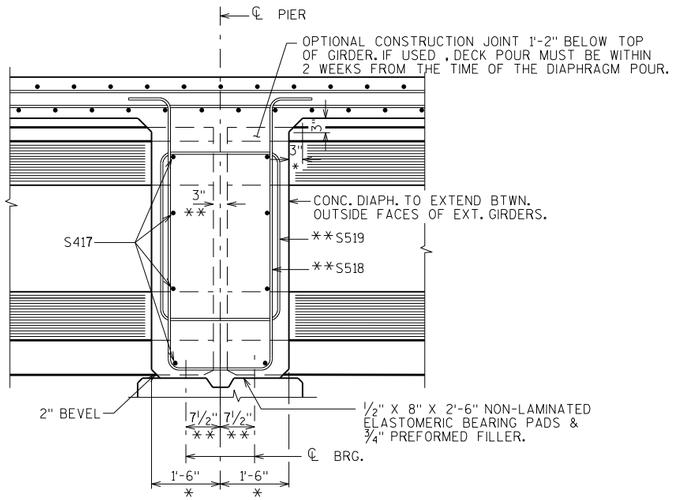
1107-02-79



* DIMENSION IS TAKEN NORMAL TO ℄ SUBSTRUCTURE UNITS.

** DIMENSION IS TAKEN PARALLEL TO ℄ GIRDER.

PART LONGIT. SECTION



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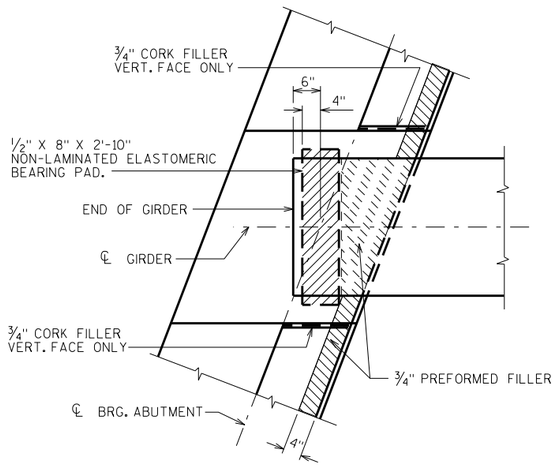
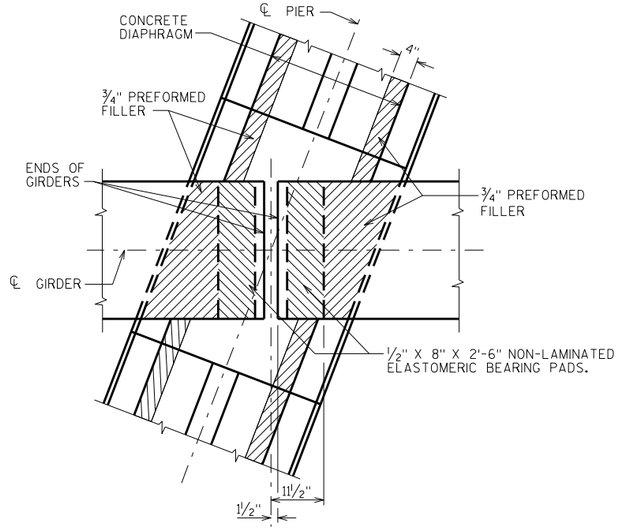




BEARING PAD DETAIL

TOP OF DECK ELEVATIONS

	S. 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	N. ABUT.
EOD	1143.66	1143.47	1143.29	1143.10	1142.91	1142.71	1142.51	1142.31	1142.10	1141.89	1141.67	1141.45	1141.23	1141.01	1140.78	1140.56	1140.33	1140.11	1139.89	1139.66	1139.44
GIR. 1	1143.72	1143.54	1143.35	1143.16	1142.97	1142.78	1142.58	1142.37	1142.17	1141.95	1141.74	1141.52	1141.30	1141.08	1140.85	1140.63	1140.40	1140.18	1139.95	1139.73	1139.50
GIR. 2	1144.01	1143.83	1143.65	1143.47	1143.28	1143.08	1142.89	1142.68	1142.48	1142.27	1142.06	1141.84	1141.62	1141.40	1141.18	1140.95	1140.73	1140.50	1140.28	1140.05	1139.83
GIR. 3	1144.31	1144.13	1143.95	1143.77	1143.58	1143.39	1143.19	1142.99	1142.79	1142.59	1142.38	1142.16	1141.95	1141.72	1141.50	1141.28	1141.05	1140.83	1140.60	1140.38	1140.15
GIR. 4	1144.60	1144.42	1144.25	1144.07	1143.88	1143.69	1143.50	1143.30	1143.10	1142.90	1142.69	1142.48	1142.27	1142.05	1141.83	1141.60	1141.38	1141.15	1140.93	1140.70	1140.48
GIR. 5	1144.73	1144.56	1144.39	1144.21	1144.02	1143.84	1143.65	1143.46	1143.26	1143.06	1142.85	1142.64	1142.43	1142.21	1141.99	1141.77	1141.55	1141.32	1141.10	1140.87	1140.65
GIR. 6	1144.66	1144.49	1144.32	1144.14	1143.96	1143.78	1143.59	1143.40	1143.21	1143.01	1142.80	1142.60	1142.39	1142.17	1141.96	1141.74	1141.51	1141.29	1141.06	1140.84	1140.61
GIR. 7	1144.59	1144.42	1144.25	1144.08	1143.90	1143.72	1143.53	1143.34	1143.15	1142.96	1142.76	1142.55	1142.34	1142.13	1141.92	1141.70	1141.48	1141.25	1141.03	1140.80	1140.58
GIR. 8	1144.51	1144.35	1144.18	1144.01	1143.83	1143.66	1143.47	1143.29	1143.10	1142.90	1142.70	1142.50	1142.30	1142.09	1141.88	1141.66	1141.44	1141.22	1140.99	1140.77	1140.54
GIR. 9	1144.44	1144.28	1144.11	1143.94	1143.77	1143.59	1143.41	1143.23	1143.04	1142.85	1142.65	1142.45	1142.25	1142.04	1141.83	1141.62	1141.40	1141.18	1140.96	1140.73	1140.51
EOD	1144.41	1144.25	1144.09	1143.92	1143.74	1143.57	1143.39	1143.21	1143.02	1142.83	1142.63	1142.44	1142.23	1142.03	1141.82	1141.61	1141.39	1141.17	1140.94	1140.72	1140.50

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-66-110

DRAWN BY WWR | PLANS CK'D. DDS

SUPERSTRUCTURE DETAILS

SHEET 16

369

8

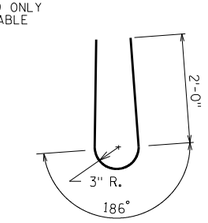
8

SCALE =

BILL OF BARS

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

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S801	X	221	55'-0"			LONGITUDINAL CONTINUITY
S402	X	222	38'-11"			LONGITUDINAL TOP
S403	X	333	30'-10"			LONGITUDINAL TOP
S404	X	777	32'-5"			LONGITUDINAL BOTTOM
S505	X	1116	40'-5"			TRANSVERSE-TOP & BOTTOM
S506	X	42	21'-11"		⚠	TRANSVERSE-TOP
S507	X	42	21'-6"		⚠	TRANSVERSE-BOTTOM
S508	X	45	20'-10"		⚠	TRANSVERSE-TOP
S509	X	45	21'-3"		⚠	TRANSVERSE-BOTTOM
S510	X	45	20'-7"		⚠	TRANSVERSE-TOP
S511	X	45	21'-0"		⚠	TRANSVERSE-BOTTOM
S512	X	43	21'-9"		⚠	TRANSVERSE-TOP
S513	X	43	21'-3"		⚠	TRANSVERSE-BOTTOM
S514	X	30	37'-11"			PARAPET LF-HORIZ.
S515	X	328	4'-10"	X		PARAPET LF-VERT.
S516	X	326	4'-2"	X		PARAPET LF-VERT.
S417	X	128	5'-9"			PIER DIAPHRAGM-HORIZ.
S518	X	48	14'-6"	X		PIER DIAPHRAGM-VERT.
S519	X	16	12'-8"	X		PIER DIAPHRAGM-STIRRUP @ GIRDER
S520	X	124	6'-4"	X		ABUT. DIAPHRAGM-VERT.
S521	X	126	16'-1"	X		ABUT. DIAPHRAGM-STIRRUP
S622	X	14	48'-2"			ABUT. DIAPHRAGM-HORIZ. @ B.F. (STAGE 2)
S623	X	160	6'-2"			ABUT. DIAPHRAGM-HORIZ.
S624	X	4	1'-11"			ABUT. DIAPHRAGM-ENDS
S625	X	4	6'-2"	X		ABUT. DIAPHRAGM
S426	X	112	3'-6"	X		ABUT. DIAPHRAGM-VERT.
S427	X	32	7'-6"			ABUT. DIAPHRAGM-HORIZ.
S528	X	36	6'-0"			ABUT. DIAPHRAGM-HORIZ. THRU GIRDER
S529	X	36	13'-0"	X		ABUT. DIAPHRAGM-STIRRUP @ GIRDER
S630	X	4	7'-10"	X		ABUT. DIAPHRAGM
S531	X	1	16'-4"	X		ABUT. DIAPHRAGM
S532	X	1	16'-0"	X		ABUT. DIAPHRAGM
S533	X	1	7'-3"	X		ABUT. DIAPHRAGM
S534	X	1	7'-1"	X		ABUT. DIAPHRAGM
S535	X	8	7'-2"	X		ABUT. DIAPHRAGM-VERT.
S536	X	2	10'-2"			ABUT. DIAPHRAGM-PAVING NOTCH
S437	X	8	5'-2"			ABUT. DIAPHRAGM-ENDS
S438	X	220	5'-7"	X		SIDEWALK-TRANSVERSE
S439	X	220	10'-3"	X		SIDEWALK-TRANSVERSE
S440	X	84	37'-6"			SIDEWALK-LONGIT.
S541	X	219	9'-2"	X		PARAPET A-VERT.
S442	X	36	37'-7"			PARAPET A-LONGIT.
S443	X	30	38'-11"			MEDIAN-LONGIT.
S444	X	8	6'-6"		⚠	MEDIAN-TRANS.
S445	X	146	5'-8"			MEDIAN-TRANS.
S546	X	642	5'-1"	X		DECK-TRANSVERSE-TOP
S547	X	642	2'-9"	X		DECK-TRANSVERSE EDGE HAUNCH
S448	X	24	37'-10"			DECK-LONGIT. EDGE HAUNCH
		NOT	USED			
S550	X	2	4'-7"	X		PARAPET LF - VERT. - AT PAVING NOTCH
S651	X	14	53'-0"			ABUT. DIAPH. - HORIZ. B.F.-STAGE 3
S652	X	4	6'-0"	X		ABUT. DIAPH. - HORIZ. - ENDS
S653	X	4	7'-7"	X		ABUT. DIAPH. - HORIZ. - ENDS
S554	X	1	15'-4"	X		ABUT. DIAPH. - STIRRUP - WING 1 - ENDS
S555	X	1	6'-11"	X		ABUT. DIAPH. - VERT. - WING 1 - ENDS
S556	X	1	17'-4"	X		ABUT. DIAPH. - STIRRUP - WING 2 - ENDS
S557	X	1	7'-11"	X		ABUT. DIAPH. - VERT. - WING 2 - ENDS
S558	X	1	16'-8"	X		ABUT. DIAPH. - STIRRUP - WING 2 - ENDS
S559	X	1	7'-7"	X		ABUT. DIAPH. - VERT. - WING 2 - ENDS
S560	X	1	15'-8"	X		ABUT. DIAPH. - STIRRUP - WING 3 - ENDS
S561	X	1	7'-1"	X		ABUT. DIAPH. - VERT. - WING 3 - ENDS
S562	X	1	15'-0"	X		ABUT. DIAPH. - STIRRUP - WING 3 - ENDS
S563	X	1	6'-9"	X		ABUT. DIAPH. - VERT. - WING 3 - ENDS
S564	X	1	17'-0"	X		ABUT. DIAPH. - STIRRUP - WING 4 - ENDS
S565	X	1	7'-9"	X		ABUT. DIAPH. - VERT. - WING 4 - ENDS



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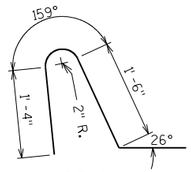

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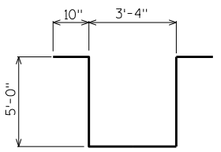

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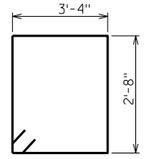

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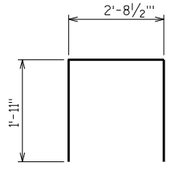

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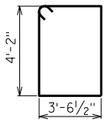

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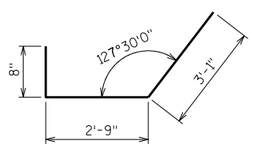

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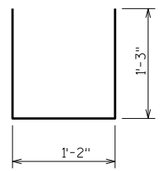

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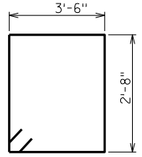

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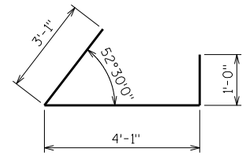

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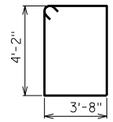

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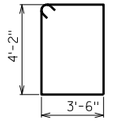


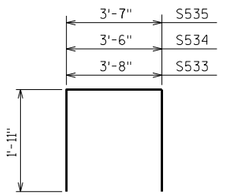
S532

BAR SERIES TABLE

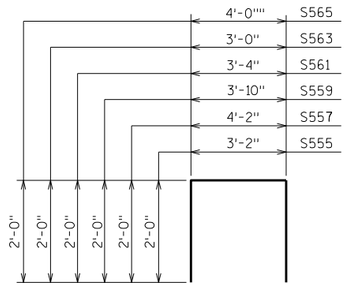
BUNDLE AND TAG EACH SERIES SEPARATELY

MARK	NO. REQD.	LENGTH
S506	1 SERIES OF 42	4'-1" TO 39'-9"
S507	1 SERIES OF 42	3'-8" TO 39'-3"
S508	1 SERIES OF 45	1'-8" TO 39'-11"
S509	1 SERIES OF 45	2'-1" TO 40'-4"
S510	1 SERIES OF 45	1'-5" TO 39'-8"
S511	1 SERIES OF 45	1'-10" TO 40'-1"
S512	1 SERIES OF 43	3'-6" TO 40'-0"
S513	1 SERIES OF 43	3'-0" TO 39'-6"
S444	2 SERIES OF 4	5'-9" TO 7'-2"

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



S533, S534, S535



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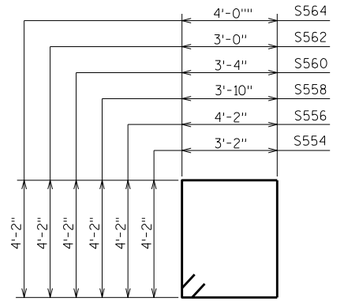

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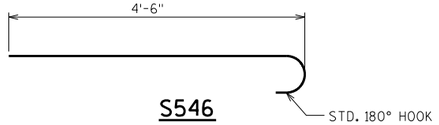

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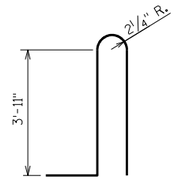
S439



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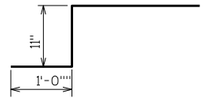

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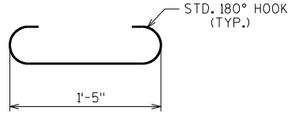

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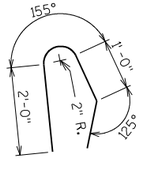

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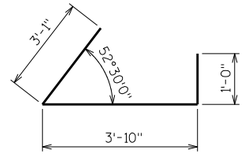

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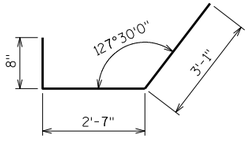


S652

STATE PROJECT NUMBER

1107-02-79

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-66-110

DRAWN BY WWR | PLANS CK'D. DDS

SUPERSTRUCTURE DETAILS 2

SHEET 17

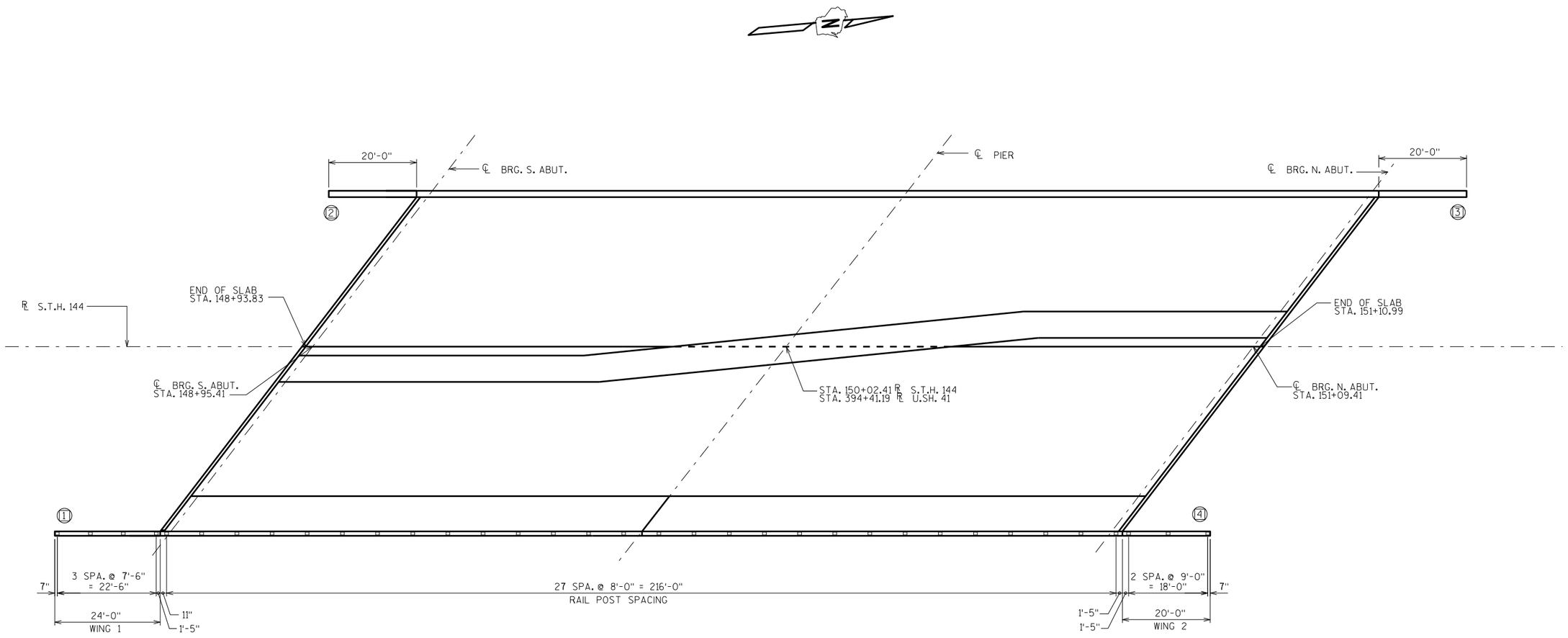
370

SCALE =

8

8

STATE PROJECT NUMBER
1107-02-79



PLAN

8

(1) INDICATES WING NUMBER

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-66-110

DRAWN BY WWR | PLANS CK'D. DDS

RAIL POST SPACING

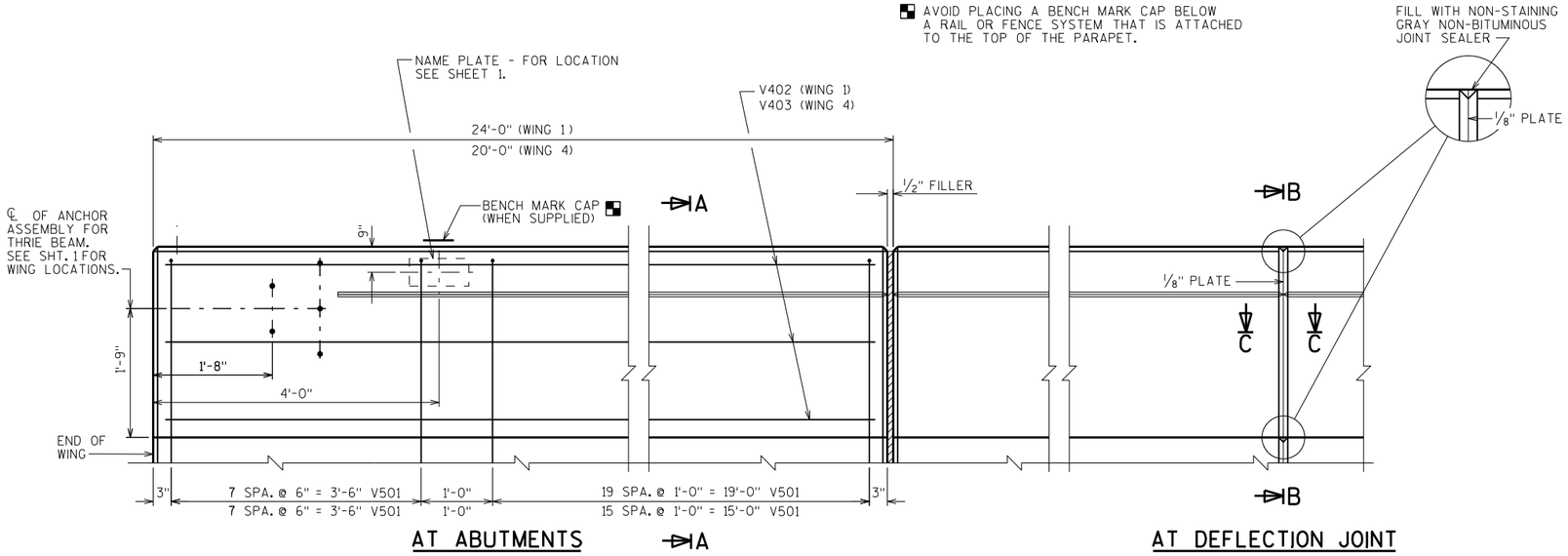
SHEET 18

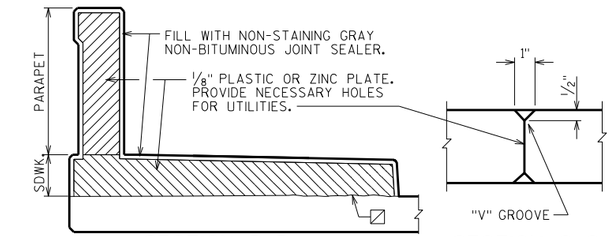
371

SCALE =

STATE PROJECT NUMBER

1107-02-79



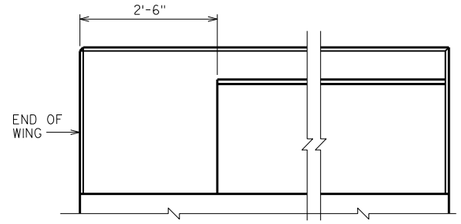


SECTION B-B

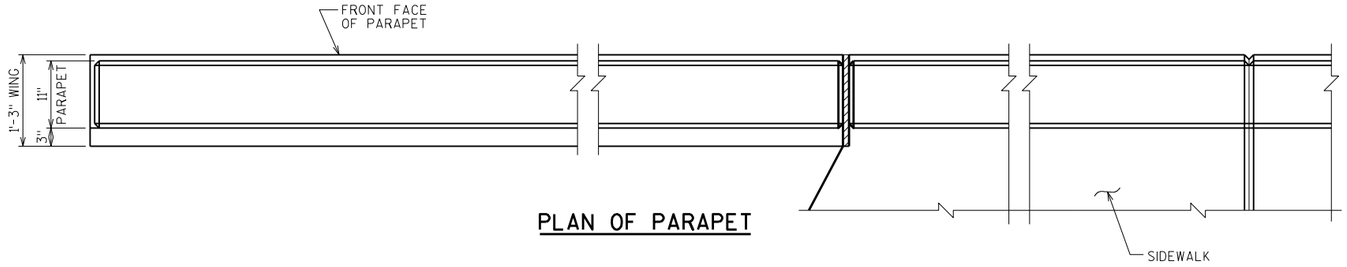
SECTION C-C

(SHOWING DEFLECTION JOINT IN PARAPET AND SIDEWALK.)

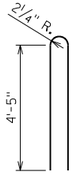
WHEN PARAPETS ARE POURED CONTINUOUSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF 1/8" ZINC OR PLASTIC PLATE CUT AS SHOWN IN SECTION B-B BY SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH AN APPROVED LIQUID BOND BREAKER AND PLATE SEPARATORS MAY BE OMITTED.



FRONT FACE OF PARAPET



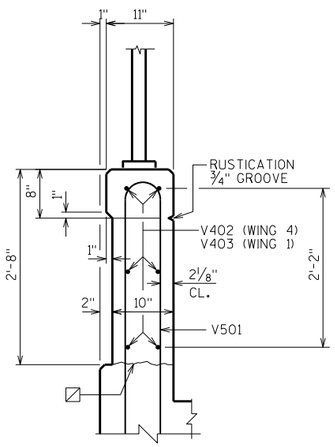
PLAN OF PARAPET



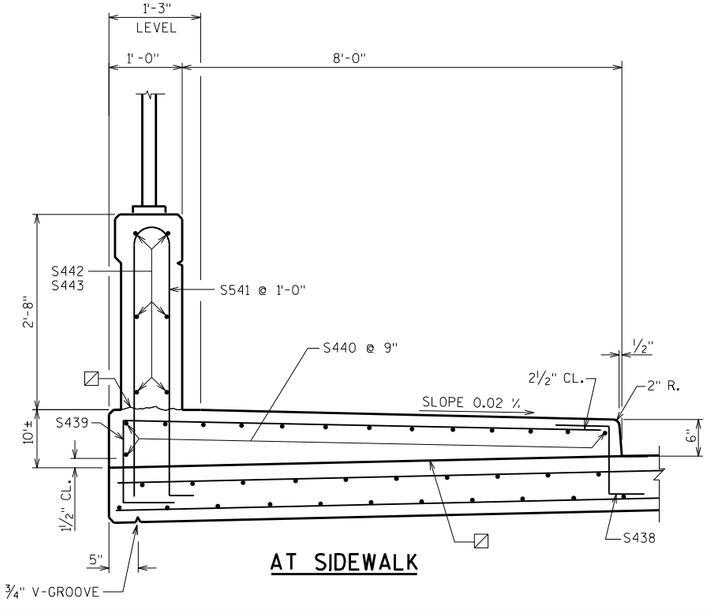
V501

BILL OF BARS

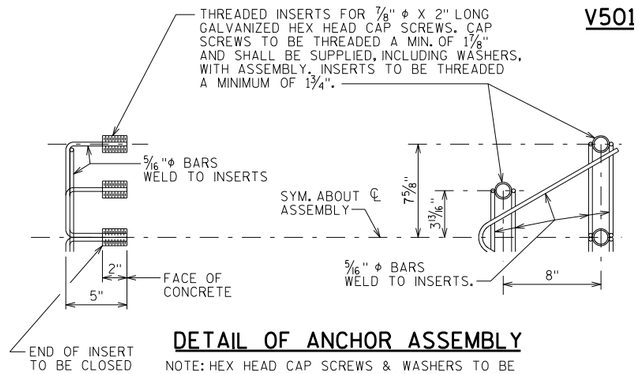
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
V501	X	52	9'-5"	X		PARAPET VERT.
V402	X	6	19'-8"			PARAPET HORIZ.
V403	X	6	23'-8"			PARAPET HORIZ.



SECTION A-A



AT SIDEWALK



DETAIL OF ANCHOR ASSEMBLY

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

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

CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH. FOR DECK POUR, MATCH BRIDGE X-SLOPE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-66-110

DRAWN BY WWR | PLANS CK'D. DDS

VERTICAL FACE PARAPET "A"

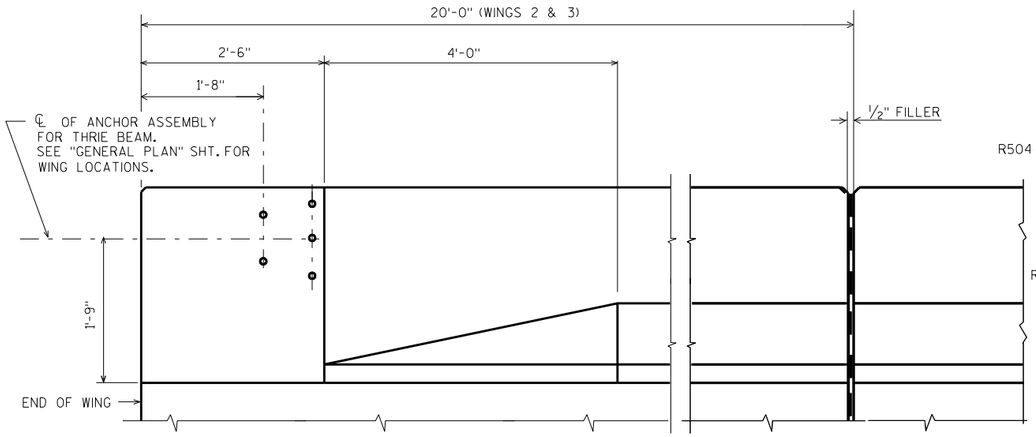
SHEET 19

372

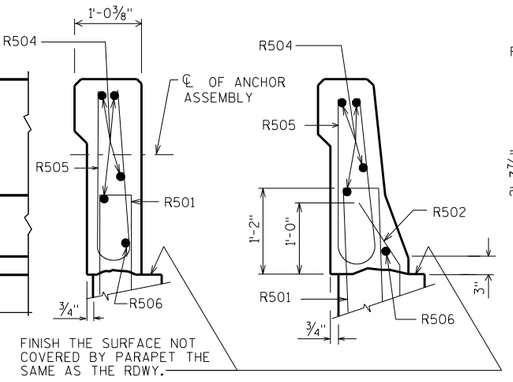
SCALE =

STATE PROJECT NUMBER

1107-02-79

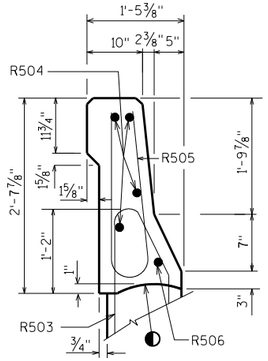


INSIDE ELEVATION



SECTION A

SECTION B

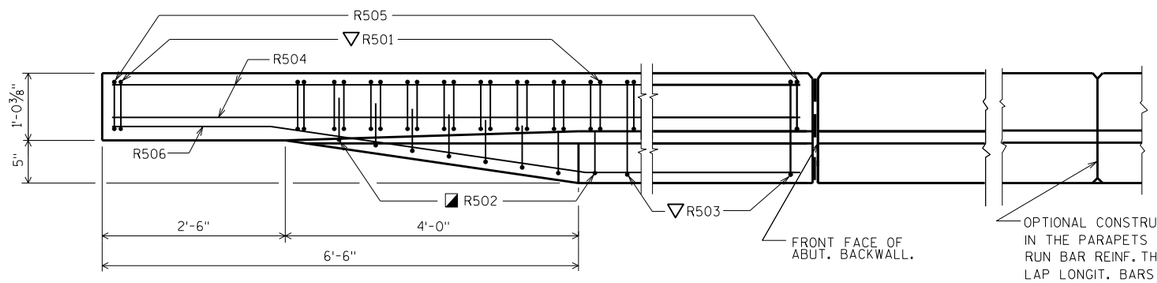


SECTION C

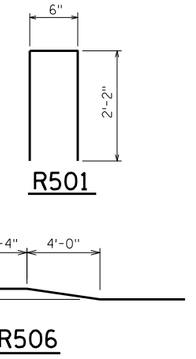
BILL OF BARS

FOR ABUTMENT PARAPETS

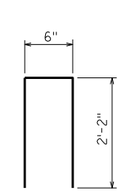
BAR MARK	COAT	S. ABUT.	N. ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	14	14	4'-7"	X		PARAPET VERT.
R502	X	8	8	2'-4"	X		PARAPET VERT.
R503	X	20	20	4'-7"	X		PARAPET VERT.
R504	X	4	4	19'-8"			PARAPET HORIZ.
R505	X	34	34	4'-10"	X		PARAPET VERT.
R506	X	1	1	19'-8"	X		PARAPET HORIZ.



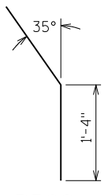
PLAN



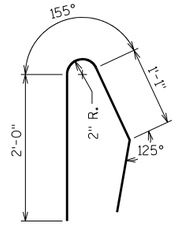
R506



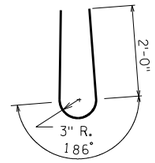
R501



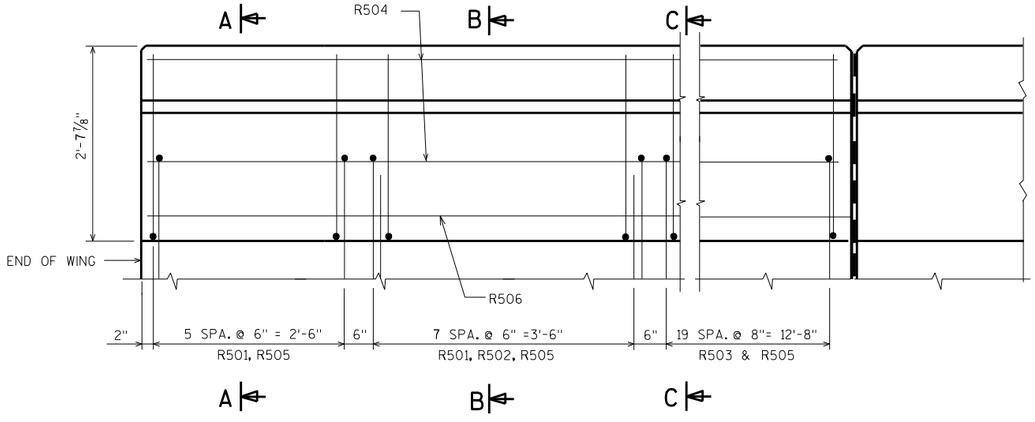
R502



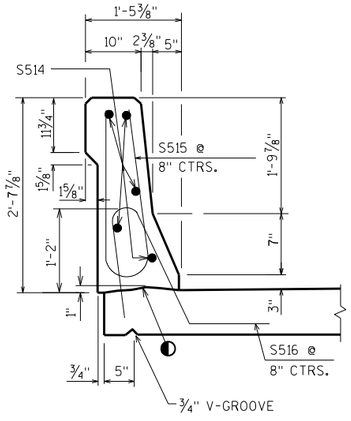
R503



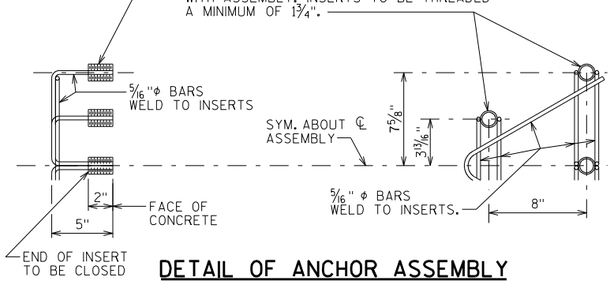
R505



OUTSIDE ELEVATION



SECTION THRU PARAPET ON BRIDGE



DETAIL OF ANCHOR ASSEMBLY

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

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

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

◪ R502 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE R502 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▽ R501 AND R503 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-66-110

DRAWN BY: WWR | PLANS CK'D.: DDS

SLOPED FACE PARAPET LF

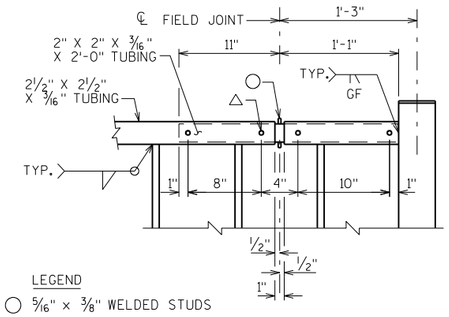
SHEET 20

373

SCALE =

8

8

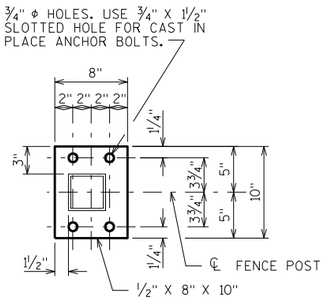


LEGEND

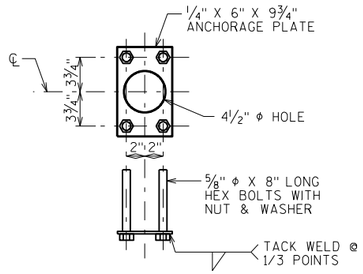
○ 5/16" x 3/8" WELDED STUDS

△ WELD BEAD ON EACH SIDE OF TUBE. GRIND BEADS SO THAT SLEEVE FITS FREELY INSIDE THE 2½" x 2½" TUBE.

RAILING EXPANSION JOINT DETAIL

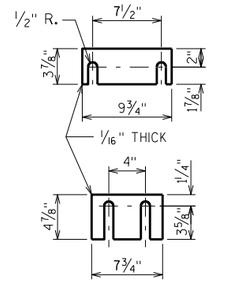


BASE PLATE



ANCHORAGE DETAIL

⅝" ϕ CONCRETE MASONRY ANCHOR, TYPE S EPOXY, 7" MINIMUM EMBEDMENT WITH A MINIMUM PULLOUT OF 20 KIPS MAY BE SUBSTITUTED FOR ⅝" CAST IN PLACE ANCHOR BOLTS. ANCHORAGE PLATE NOT REQUIRED WHEN TYPE S ANCHORS ARE USED.



SHIM PLATE DETAILS

TWO SHIMS OF EACH SIZE REQUIRED PER POST

STATE PROJECT NUMBER

1107-02-79

NOTES

BID ITEM SHALL BE "RAILING TUBULAR SCREENING B-66-110" WHICH SHALL INCLUDE ALL 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 CUT.

RAILS AND POSTS TO BE ASTM A500, GRADE B. BASE PLATES AND SHIMS TO BE ASTM A709, GRADE 36. ALL GALVANIZED AFTER FABRICATION.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET POSTS NORMAL TO GRADE.

ALL POST SPA. ARE TAKEN HORIZ. ALONG CENTER LINE OF RAILING AT BASE OF POST.

SHIMS SHALL BE USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT.

CAULK AROUND PERIMETER OF BASE PLATES AND FILL PORTION OF SLOTTED HOLES AROUND ANCHOR BOLTS WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

CUT BOTTOM OF POST TO MAKE VERTICAL IN TRANSVERSE DIRECTION.

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.

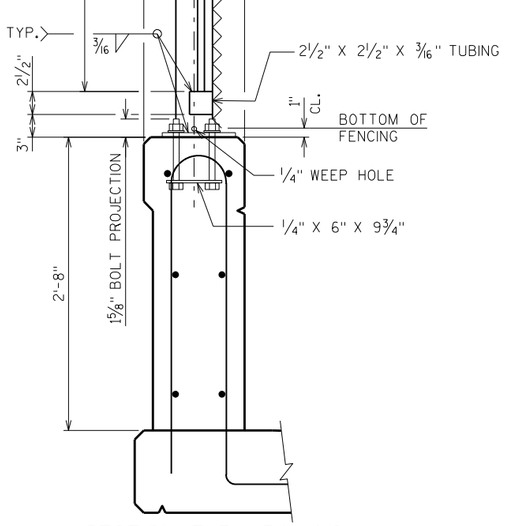
RAILING TO BE PAINTED AND FENCE FABRIC AND TIES TO BE VINYL COATED. FEDERAL COLOR NO. 27038.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE NOT MORE THAN 3 POSTS.

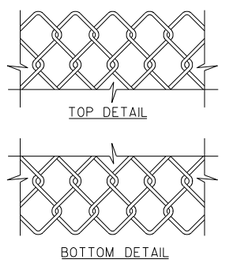
THE END OF THE FABRIC SHALL BE ATTACHED TO THE POST BY MEANS OF A TENSION BAR THREADED THROUGH THE END LOOPS OF THE FABRIC AND SECURED TO THE POST WITH CLAMPS & BOLT. THE FABRIC SHALL BE STRETCHED TO REMOVE ALL SLACK.

VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING.

ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING ALL STEEL RAILING POSTS AND STEEL TUBING SHALL BE GIVEN A #6 BLAST CLEANING BY SSPC SPECIFICATIONS. PAINT OVER GALVANIZING WITH APPROVED TIE COAT AND TOPCOAT.

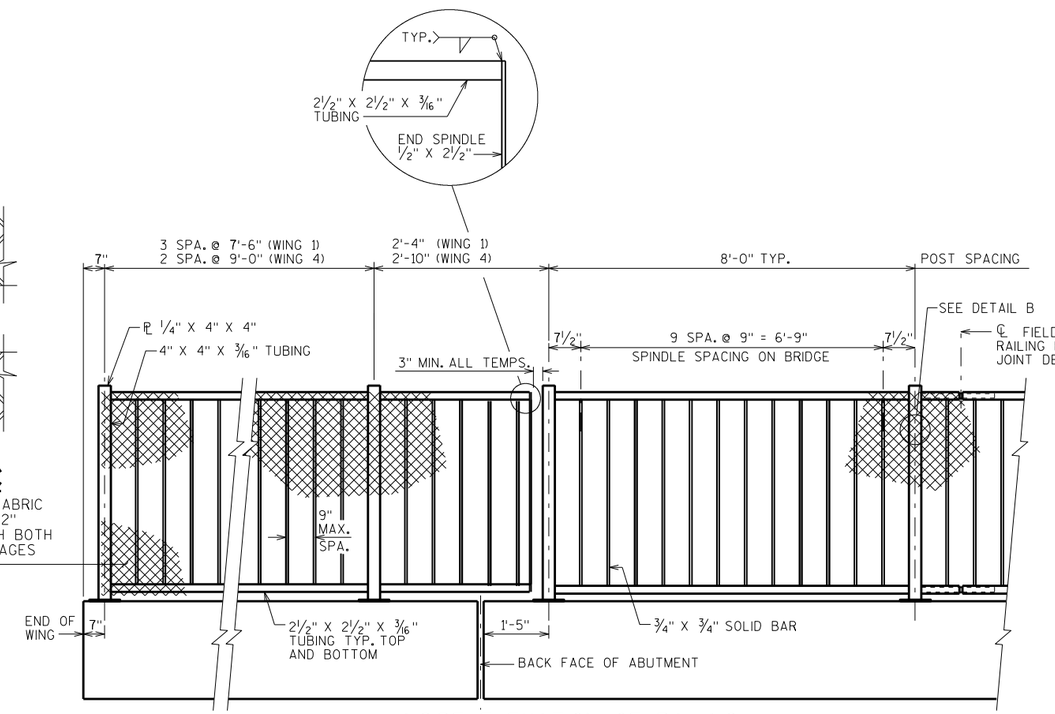


SECTION THRU RAILING

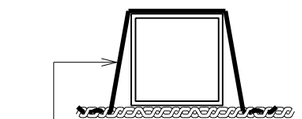


FENCE FABRIC

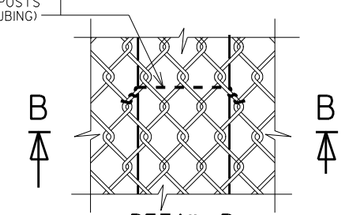
5'-0" VINYL COATED FENCE FABRIC WOVEN OF 9-GAUGE WIRE IN 2" DIAMOND PATTERN MESH WITH BOTH THE TOP AND BOTTOM SELVAGES KNUCKLED.



INSIDE ELEVATION OF RAILING



SECTION B-B



DETAIL B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-66-110

DRAWN BY WWR | PLANS CK'D. DDS

ORNAMENTAL PROTECTIVE SCREENING

SHEET 21

374

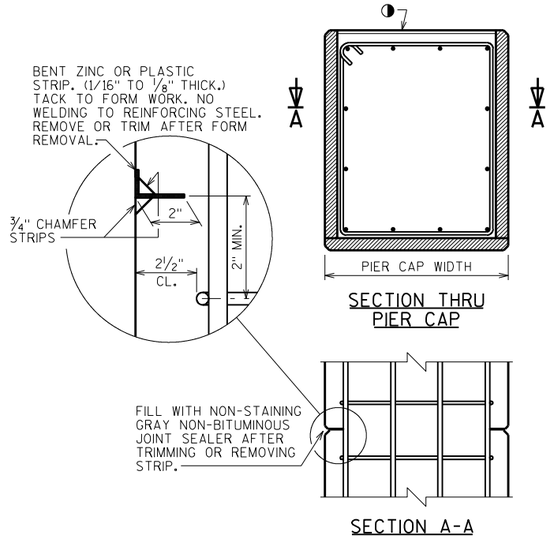
SCALE =

8

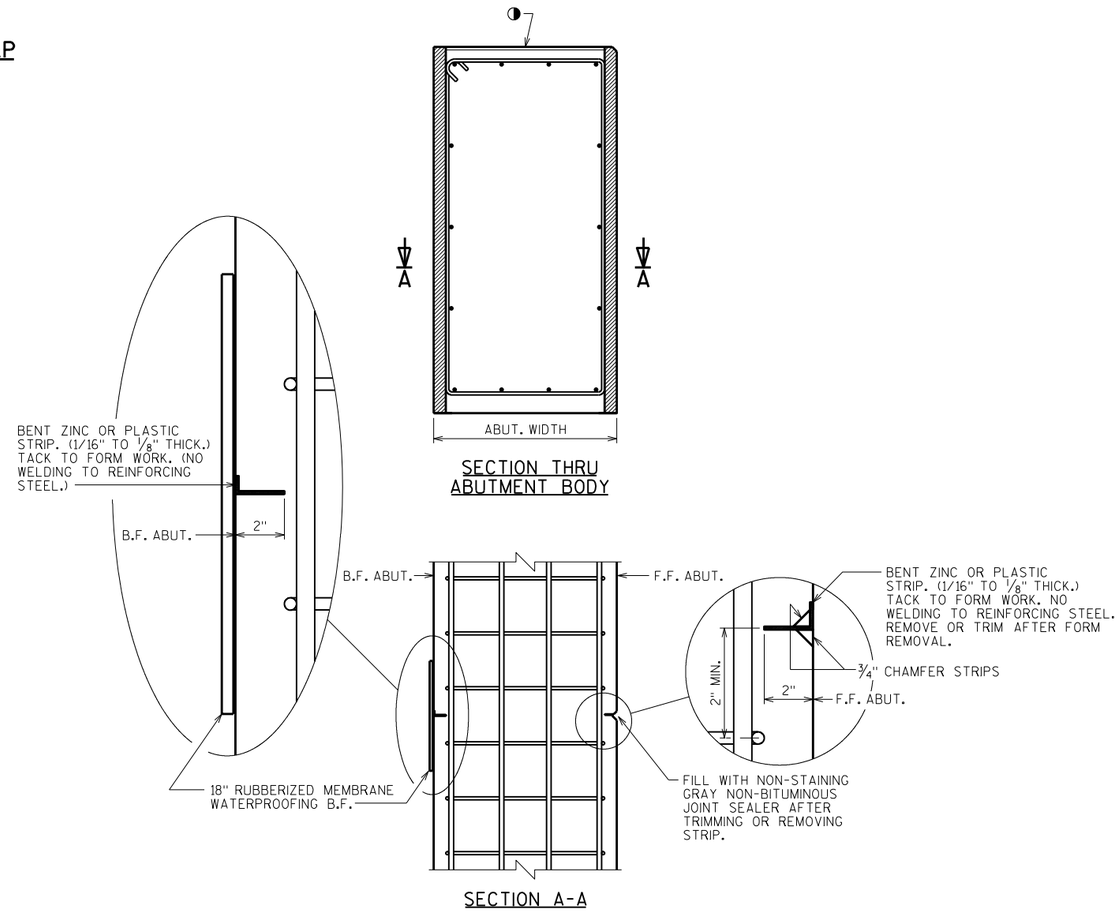
8

STATE PROJECT NUMBER

1107-02-79



ALTERNATE CONSTRUCTION JOINT AT PIER CAP



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-66-110

DRAWN BY WWR | PLANS CK'D. DDS

ALTERNATE CONSTRUCTION JOINT

SHEET 22

375

8

8

123 6

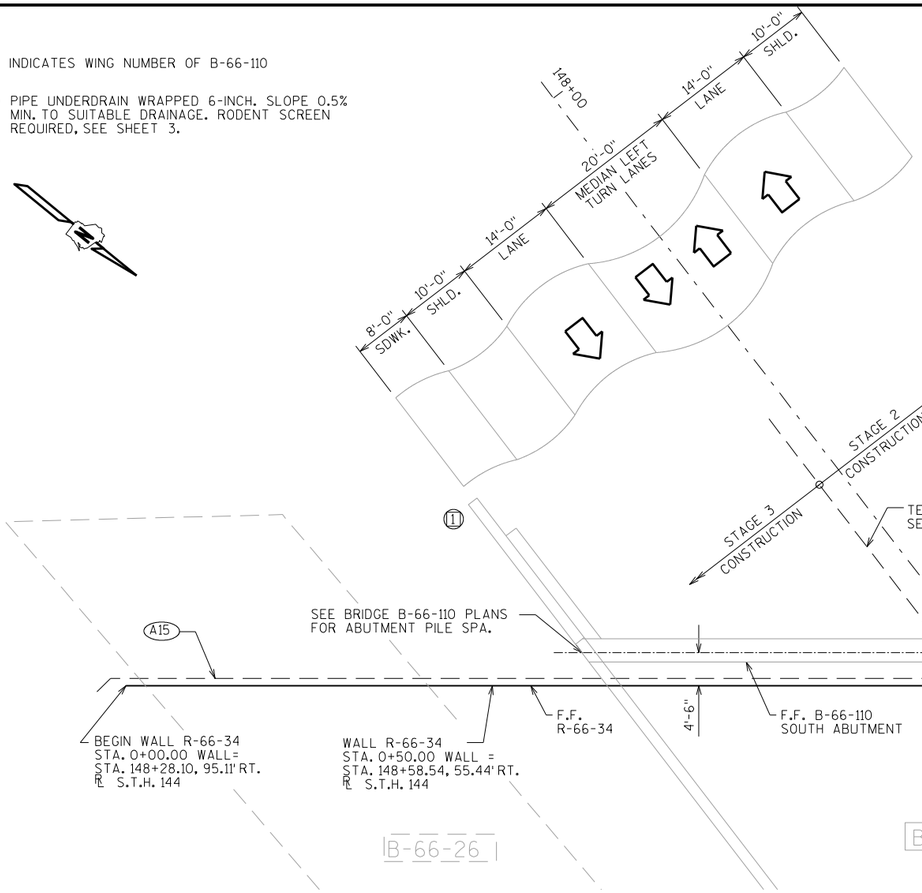
SCALE =

STATE PROJECT NUMBER

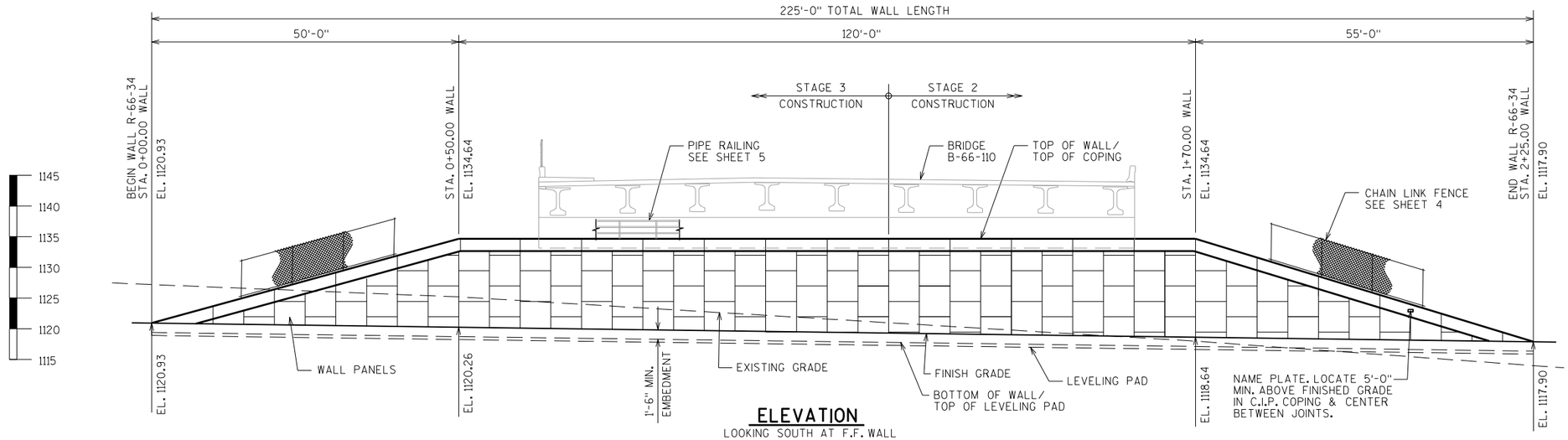
1107-02-79

(1) INDICATES WING NUMBER OF B-66-110

(A15) PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SCREEN REQUIRED, SEE SHEET 3.



PLAN
M.S.E. RETAINING WALL



ELEVATION
LOOKING SOUTH AT F.F. WALL

DESIGN DATA

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS AND SHOP DRAWINGS FOR THE RETAINING WALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS SHALL BE INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD."

PLANS, ELEVATIONS AND DETAILS SHOWN ON THESE DRAWING ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE RETAINING WALL SHALL BE DESIGNED USING THE ELEVATIONS GIVEN ON SHEET 2.

DESIGN FOR RETAINING WALL TO PROVIDE FOR FINISHED GRADE SLOPED BEHIND WALL AS SHOWN ON SHEET 3.

DESIGN RETAINING WALL FOR A LIVE LOAD SURCHARGE LOAD OF 240 PSF.

DESIGN THE MSE WALL IN FRONT OF THE ABUTMENT BODY TO RESIST THE FORCE FROM ALL HORIZONTAL EARTH PRESSURE ACTING ON THE BACK OF THE ABUTMENT BELOW THE BEAM SEATS AND A LIVE LOAD SURCHARGE OF 240 PSF.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST VALUES.

ALLOWABLE WALL SYSTEMS

WALL CONCRETE PANEL M.S.E. LRFD

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY CAST-IN-PLACE COPING —— f'c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT, GRADE 60 ———— fy = 60,000 P.S.I.

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. NOTES & QUANTITIES
3. WALL DETAILS
4. CHAIN LINK FENCE DETAILS
5. PIPE RAILING DETAILS
6. SUBSURFACE EXPLORATION

STRUCTURE DESIGN CONTACT:

JAMES LUEBKE (608) 266-5098

LAURA SHADEWALD (608) 267-9592

NO.	DATE	REVISION	BY

Plans Prepared By WISDOT

BUREAU OF STRUCTURES

ACCEPTED William C. Dreher LLS 8/16/13

CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE R-66-34

RETAINING WALL FOR S.T.H. 144 OVER U.S.H. 41 SB

COUNTY WASHINGTON | ~~TOWN/CITY~~/VILLAGE SLINGER

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
JDL	ARC	JDL	ARC

GENERAL PLAN & ELEVATION

SHEET 1 OF 6

376

I.D. 1107-02-01A

DATE: APRIL '13

SCALE = 1:5

STATE PROJECT NUMBER

1107-02-79

SOIL PARAMETERS

SOIL DESCRIPTION	FRICTION ANGLE (DEGREES)	COHESION (PSF)	UNIT WEIGHT (PCF)
GRANULAR BACKFILL WITHIN THE WALL IN THE REINFORCING ZONE	30	0	120
FILL BEHIND & BELOW THE REINFORCING ZONE	31	0	120
B-144-1, 148+88.55			
SILT, BROWN, SOME SAND, WITH GRAVEL, TRACE COBBLES (ELEVATION 1114.3 FT- 1087.0 FT)	34	0	130
SILT, BROWN, SOME SAND, WITH GRAVEL, TRACE COBBLES (ELEVATION 1087.0 FT - 1079.0 FT)	36	0	135
SILT, BROWN, SOME SAND, WITH GRAVEL, TRACE COBBLES (ELEVATION 1079.0 FT - 1065.8 FT)	0	25,000	135
SAND, FINE TO COURSE, SOME GRAVEL (ELEVATION 1065.8 FT AND BELOW)	0	25,000	135

THE MSE WALL WITH PRECAST CONCRETE PANELS WILL ACHIEVE THE EXTERNAL STABILITY REQUIREMENTS IF THE SLIDING AND BEARING RESISTANCE REQUIREMENTS ARE MET. WALL EXTERNAL STABILITY EVALUATION TABLE PRESENTS THE MINIMUM LENGTH OF THE REINFORCEMENT AT THE SPECIFIC LOCATIONS. THE RATIO OF EXPOSED WALL HEIGHT TO REINFORCEMENT LENGTH SHOULD BE INCREASED TO 1.08 IF THE ABUTMENT AND WING WALLS ARE LOCATED ABOVE THE WALL AND TO 1.10 IF THE SLOPE ABOVE THE WALL IS GREATER THAN OR EQUAL TO 2.3H:1V.

THE CONTRACTOR SHOULD REMOVE THE TOPSOIL AND REPLACE THE EXCAVATED SOIL WITH GRANULAR FILL.

THE BACKFILL BEHIND THE MSE WALL WITH PRECAST CONCRETE FACING SHOULD BE GRANULAR AND FREE DRAINING.

THE SOUTHEAST REGION SOILS ENGINEER SHOULD REVIEW THE SUBSURFACE CONDITIONS PRIOR TO CONSTRUCTION OF THE WALL.

WALL EXTERNAL STABILITY EVALUATION

DIMENSIONS			
WALL HEIGHT (FEET)[1]	13.0	17.4	14.6
EXPOSED WALL HEIGHT (FEET)	11.5	15.9	13.1
LENGTH OF REINFORCEMENT (FEET)[2]	14.3	18.7	10.2
LENGTH OF REIN./WALL HEIGHT	1.10	1.08	0.70
WALL STATION	0+40	1+60	1+80
BORING USED	B-144-1	B-144-1	B-144-1
CAPACITY TO DEMAND RATIO (CDR)[4]			
SLIDING (CDR > 1.0)	1.0	1.0	1.3
ECCENTRICITY (CDR > 1.0)	1.9	1.2	1.2
GLOBAL STABILITY (CDR > 1.0)	NA[3]	1.3	NA[3]
BEARING RESISTANCE (CDR > 1.0)	1.7	1.1	1.9
REQUIRED BEARING RESISTANCE (PSF)	7,000	7,000	7,000

1. THE WALL HEIGHT INCLUDES AN EMBEDMENT OF 1.5 FEET.
2. THE LENGTH OF REINFORCEMENT IS THE MINIMUM REQUIRED LENGTH AT THAT LOCATION.
3. NA NOT APPLICABLE. GLOBAL SLOPE STABILITY WAS EVALUATED AT THE CRITICAL WALL LOCATION.
4. CDR REQUIREMENTS AND LOAD AND RESISTANCE FACTORS ARE PRESENTED IN CHAPTER 14 OF THE BRIDGE MANUAL.

NOTES: THE TYPICAL WALL SECTION USED IN THE ANALYSES HAD AN EXPOSED HEIGHT THAT VARIES FROM 11.5 FEET TO 15.9 FEET. THE FOLLOWING ASSUMPTIONS ARE ALSO INCLUDED IN THE ANALYSES:

1. THE SLOPE IN FRONT OF THE WALL IS HORIZONTAL.
2. THE SLOPE IN BACK OF THE WALL RANGES FROM HORIZONTAL TO 2.3H:1V.
3. GROUNDWATER WAS NOT OBSERVED IN THE BORINGS.
4. THE GRANULAR BACKFILL IS FREE DRAINING AND WILL NOT BECOME SATURATED.
5. THE MINIMUM EMBEDMENT DEPTH IS 1.5 FEET.
6. A SURCHARGE LOAD OF 240 PSF IS INCLUDED TO MODEL PEDESTRIAN AND LIGHTWEIGHT CONSTRUCTION EQUIPMENT.
7. AN ADDITIONAL SURCHARGE LOAD EQUIVALENT TO THE WEIGHT OF THE SOIL BEHIND THE ABUTMENT IS ALSO INCLUDED IN THE DESIGN.
8. GLOBAL STABILITY FACTOR OF SAFETY WAS DETERMINED BY THE COMPUTER PROGRAM XSTABL
9. BEARING RESISTANCE IS DETERMINED BY TERZAGHI'S BEARING CAPACITY EQUATION.
10. SETTLEMENT OF THE FOUNDATION ON COHESIONLESS AND COHESIVE SOIL IS BASED UPON METHODS DESCRIBED IN THE FHWA SOILS AND FOUNDATIONS MANUAL.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BEVEL ALL EXPOSED EDGES OF CONCRETE ¾" UNLESS NOTED OTHERWISE.

BAR STEEL REINFORCEMENT SHALL HAVE 2" CLEAR COVER UNLESS OTHERWISE SHOWN OR NOTED.

ALL WALL STATIONING AND OFFSETS ARE GIVEN AT THE FRONT FACE OF THE WALL (R-66-34).

THE EXISTING GROUND LINE IS THE UPPER LIMIT OF EXCAVATION FOR STRUCTURES.

COORDINATE THE CONSTRUCTION OF RETAINING WALL R-66-34 WITH THE SOUTH ABUTMENT OF BRIDGE B-66-110.

THE REMOVAL OF THE EXISTING STRUCTURE IS INCLUDED IN A LUMP SUM PAY ITEM FOR BRIDGE B-66-110.

ALL BAR STEEL REINFORCEMENT IN CAST-IN-PLACE CONCRETE IS TO BE EPOXY COATED.

THE PLAN QUANTITY FOR THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF WALL TO THE TOP OF LEVELING PAD, SET A CONSTANT DEPTH OF 1'-6" BELOW FINISHED GRADE.

SEE BRIDGE PLANS B-66-110 FOR TEMPORARY WALL QUANTITES. QUANTITIES BASED ON PROVIDING INSTALLATIONS FOR STAGE 2 CONSTRUCTION AS REQUIRED.

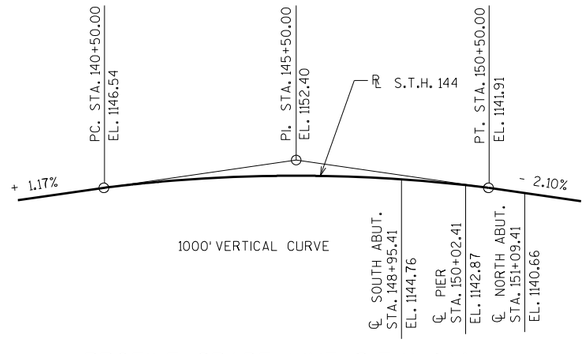
GEOMETRY TABLE

WALL STATION	℄ S.T.H 144 STATION	℄ S.T.H 144 OFFSET TO F.F. WALL	TOP OF WALL EL.	FINISH GRADE EL. @ F.F. WALL
0+00.00	148+28.10	95.11' RT	1120.93	1120.93
0+20.00	148+40.28	79.24' RT	1126.41	1120.66
0+40.00	148+52.45	63.38' RT	1131.90	1120.39
0+50.00	148+58.54	55.44' RT	1134.64	1120.26
0+60.00	148+64.63	47.51' RT	1134.64	1120.12
0+80.00	148+76.80	31.64' RT	1134.64	1119.85
1+00.00	148+88.98	15.78' RT	1134.64	1119.58
1+20.00	149+01.15	0.09' LT	1134.64	1119.31
1+40.00	149+13.33	15.96' LT	1134.64	1119.04
1+60.00	149+25.50	31.83' LT	1134.64	1118.78
1+70.00	149+31.59	39.76' LT	1134.64	1118.64
1+80.00	149+37.68	47.69' LT	1131.60	1118.51
2+00.00	149+49.85	63.56' LT	1125.51	1118.24
2+20.00	149+62.03	79.43' LT	1119.42	1117.97
2+25.00	149+65.07	83.39' LT	1117.90	1117.90

NOTE: ALL WALL STATIONING & OFFSETS ARE GIVEN AT THE FRONT FACE OF THE WALL.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	245
SPV.0090	FENCE CHAIN LINK POLYMER-COATED 6-FT	LF	133
SPV.0105	RAILING PIPE GALVANIZED R-66-34	LS	1
SPV.0165	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD	SF	2960
	NON-BID ITEMS		
	PRE-FORMED JOINT FILLER	SIZE	¾"
	POLYSTYRENE	SIZE	1"
	NON-BITUMINOUS JOINT SEALER	——	——



PROFILE GRADE LINE S.T.H. 144

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE R-66-34

DRAWN BY JDL | PLANS CK'D. ARC

NOTES & QUANTITIES

SHEET 2

377

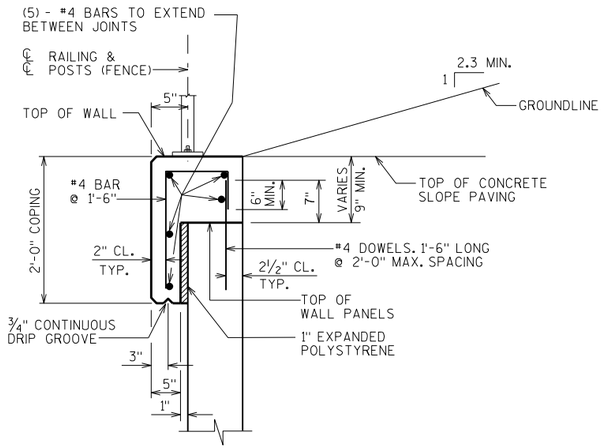
SCALE = 6

8

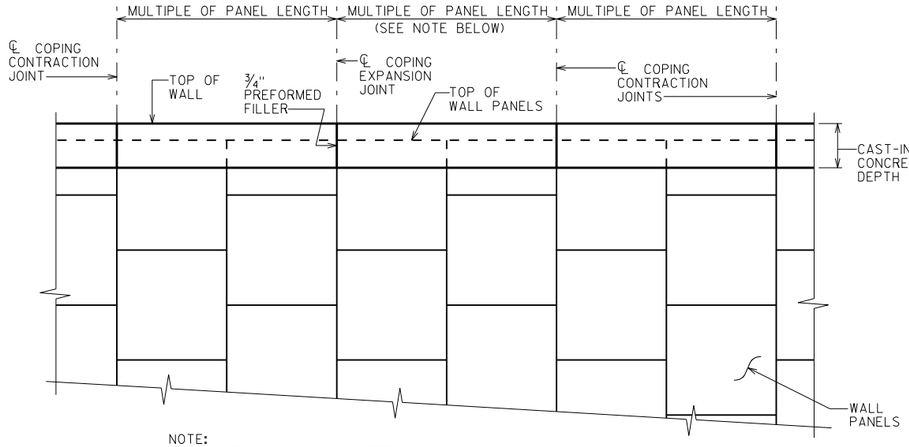
8

STATE PROJECT NUMBER

1107-02-79



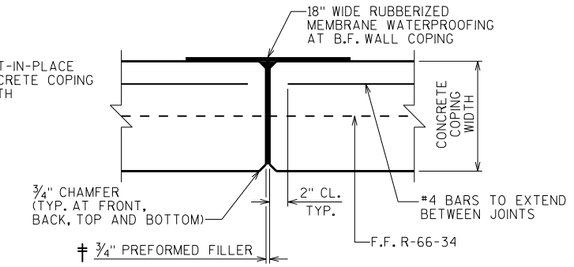
CAST-IN-PLACE CONCRETE COPING DETAIL



NOTE:
ALL JOINTS SHALL BE LOCATED AS SHOWN ON WALL ELEVATIONS AND MUST COINCIDE WITH PANEL JOINTS ON FRONT FACE.

CAST-IN-PLACE COPING PARTIAL ELEVATION

LOOKING AT F.F. WALL



COPING EXPANSION JOINT

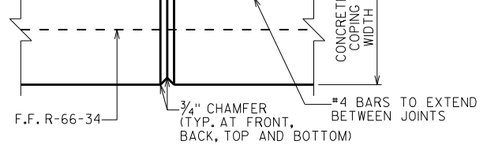
DO NOT RUN BAR STEEL THRU JOINT

MAXIMUM SPACING OF JOINTS SHALL BE 50'-0" AND MUST LINE UP WITH THE WALL PANELS' JOINTS.

‡ SEAL ALL EXPOSED HORIZ. AND VERT. SURFACES OF FILLER WITH A NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONC.)

RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM TOP OF COPING TO 6" BELOW TOP OF WALL PANELS.

ALL EXPANSION JOINTS TO EXTEND THE FULL DEPTH OF COPING.

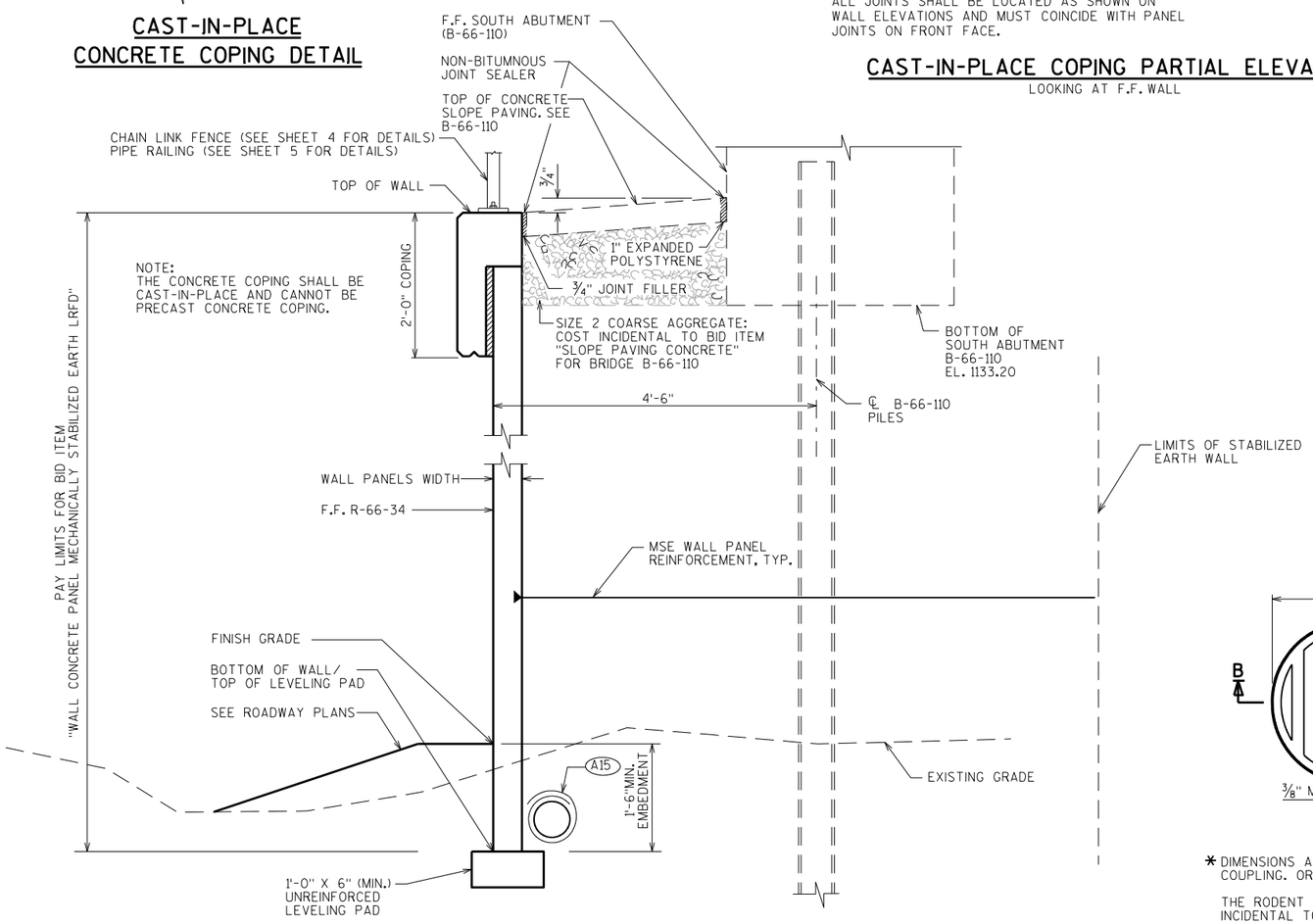


COPING CONTRACTION JOINT

DO NOT RUN BAR STEEL THRU JOINT

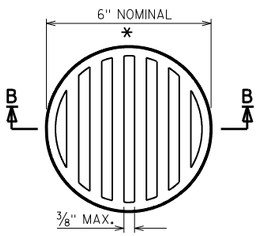
MAXIMUM SPACING OF JOINTS SHALL BE 12'-0" AND MUST LINE UP WITH THE WALL PANELS' JOINTS.

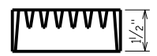
ALL CONTRACTION JOINTS TO EXTEND THE FULL DEPTH OF COPING



TYPICAL SECTION THRU WALL

LOOKING EAST





SECTION B-B

RODENT SCREEN DETAIL

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

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

THE RODENT SCREEN 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 SCREEN TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SCREEN SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH SHEET METAL SCREWS.

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE R-66-34

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WALL DETAILS

SHEET 3

378

SCALE = 6

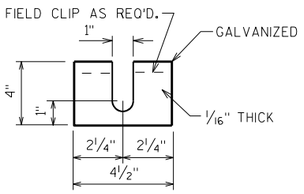
8

8

STATE PROJECT NUMBER
1107-02-79

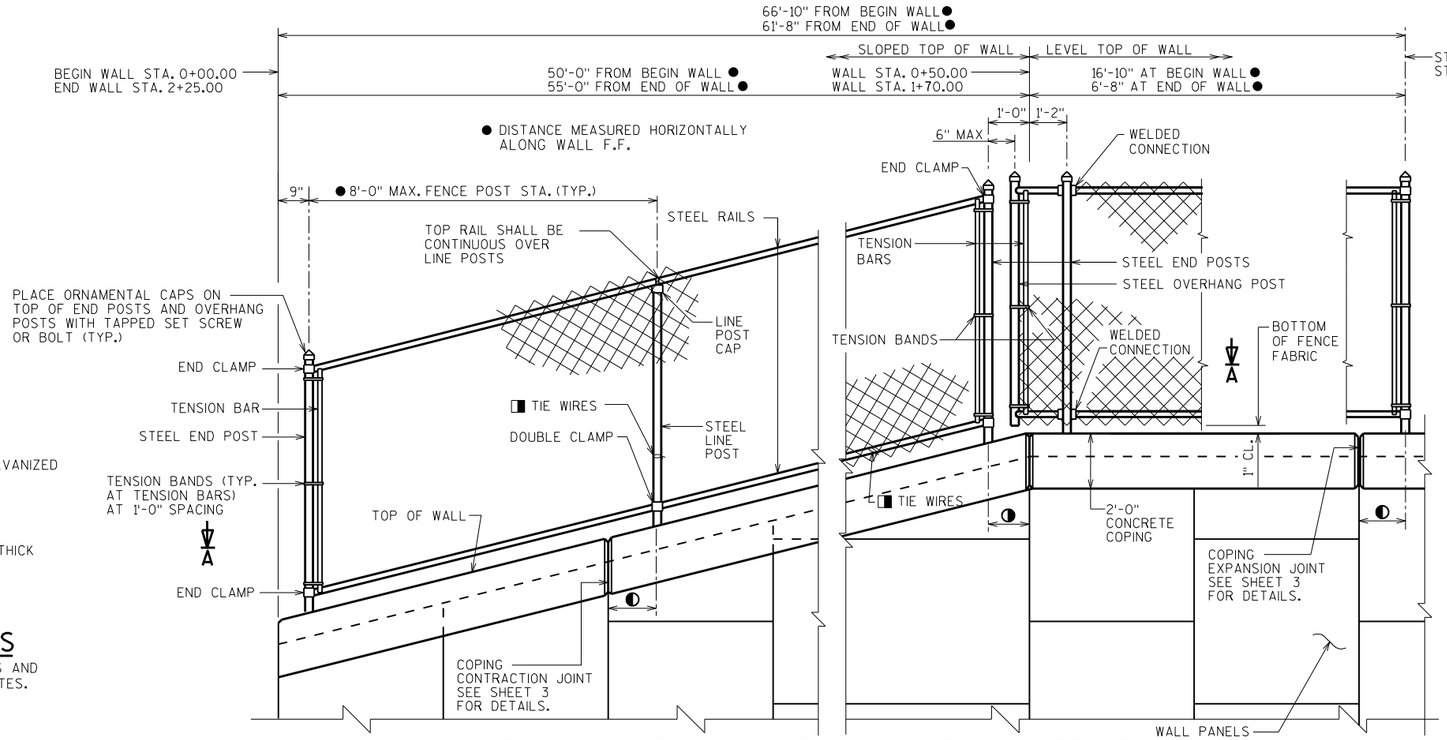
FENCE MEMBER SIZE & WEIGHT

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



POST SHIM DETAILS

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



◐ 1'-0" MIN. DISTANCE REQUIRED BETWEEN THE ℄ OF COPING JOINTS (BOTH EXPANSION AND CONTRACTION JOINTS) AND THE ℄ OF FENCE POSTS

PARTIAL ELEVATION OF WALL COPING & FENCE

(LOOKING SOUTH AT F.F. WALL)

NOTES

POSTS ARE TO BE SET VERTICAL.

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

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

THE COLOR OF POLYMER-COATING FOR THIS STRUCTURE SHALL BE BLACK IN ACCORDANCE WITH ASTM F934.

THE BID ITEM SHALL BE "FENCE CHAIN LINK POLYMER-COATED 6-FT.", LF.

COMPLETE ANY REQUIRED WELDING OF COMPONENTS BEFORE GALVANIZING.

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

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

ALL POST SPACINGS ARE MEASURED HORIZONTALLY ALONG THE C/L OF THE POST.

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

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

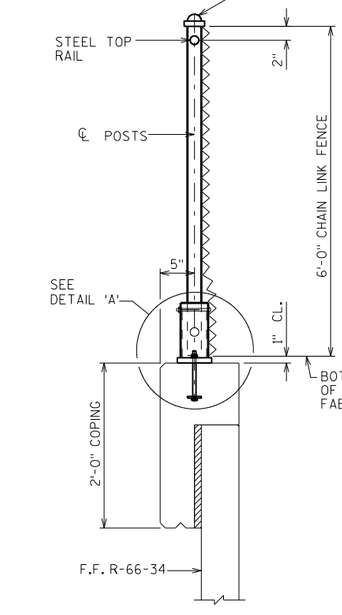
◭ 1/2" DIA. X 6 7/8" LONG GALVANIZED HEX BOLT WITH NUT & WASHER. TYPE "S", 1/2" DIA. CONCRETE MASONRY ANCHORS MAY BE SUBSTITUTED FOR 1/2" DIA. BOLTS. ANCHOR PLATE NOT REQUIRED WHEN TYPE "S" ANCHORS ARE USED. SEE ☆

☆ 1/2" DIA. CONCRETE MASONRY ANCHOR, TYPE "S", 6" MIN. EMBEDMENT (EPOXY ANCHORED) INTO CONCRETE AND MINIMUM PULLOUT CAPACITY OF 10 KIPS. ANCHOR, WASHER AND NUT SHALL BE GALVANIZED.

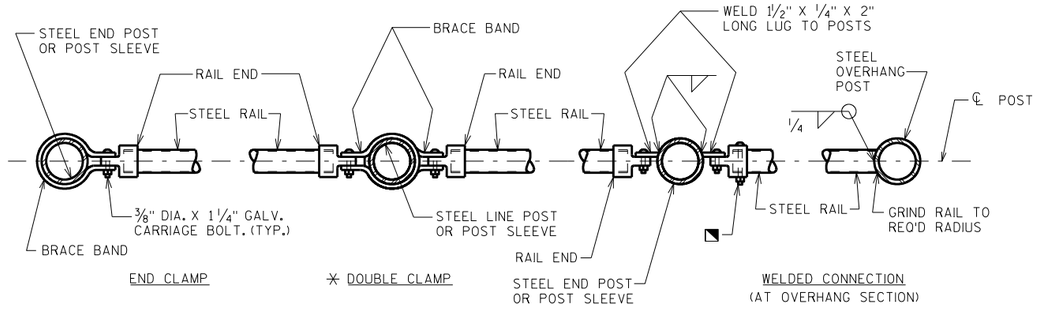
◨ ATTACH FABRIC TO RAILS, AND TO POSTS WITHOUT TENSION BANDS, WITH TIE WIRES (ROUND, 9-GAGE) SPACED AT 1'-0".

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

MINIMUM LENGTH OF TOP RAIL BETWEEN SPLICES SHALL BE 20'-0". LOCATE SPLICES NEAR 1/4 POINT OF POST SPACING.

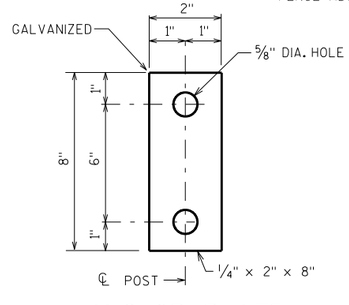


SECTION THRU FENCE

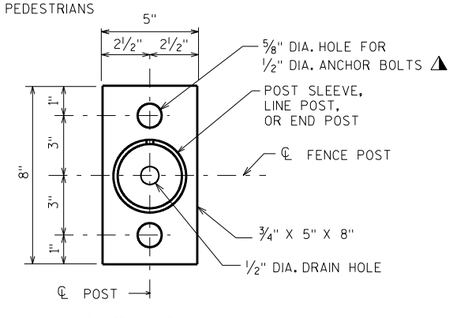


SECTION A-A

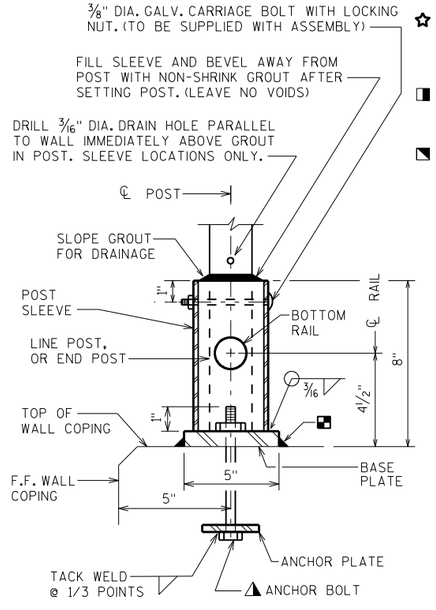
NOTE: PLACE ALL BOLT HEADS ON SIDE OF FENCE ADJACENT TO PEDESTRIANS



ANCHOR PLATE



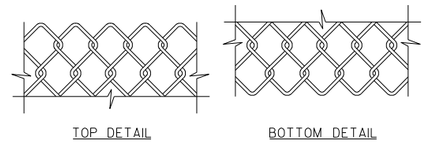
BASE PLATE



DETAIL 'A'

UNIT SHALL BE GALVANIZED AFTER FABRICATION

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



FENCE FABRIC

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE R-66-34

DRAWN BY JDL | PLANS CK'D. ARC

CHAIN LINK FENCE DETAILS

SHEET 4

379

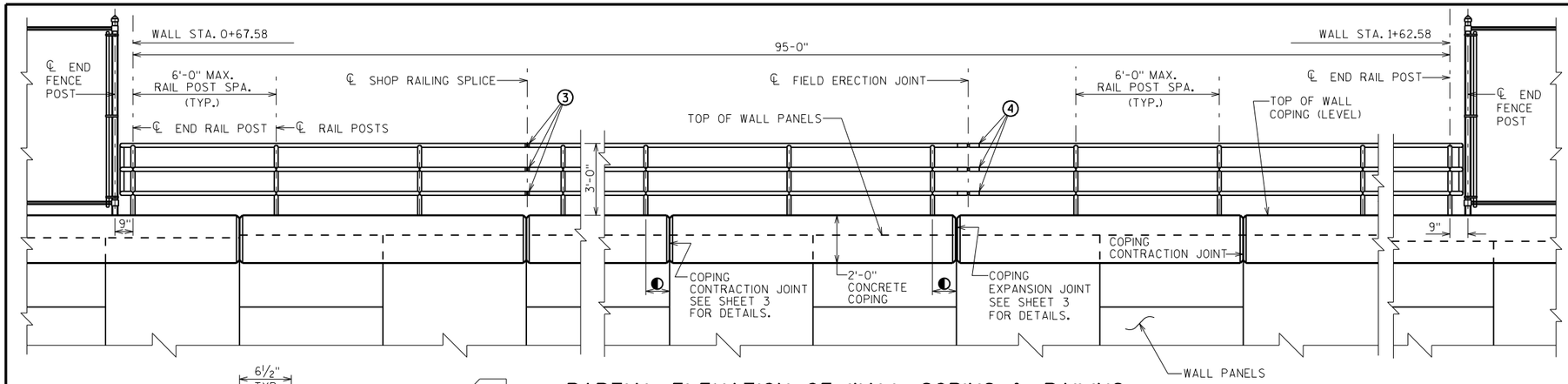
SCALE = 5.33333

8

8

STATE PROJECT NUMBER

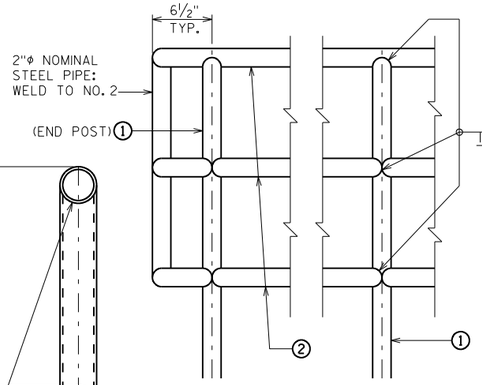
1107-02-79



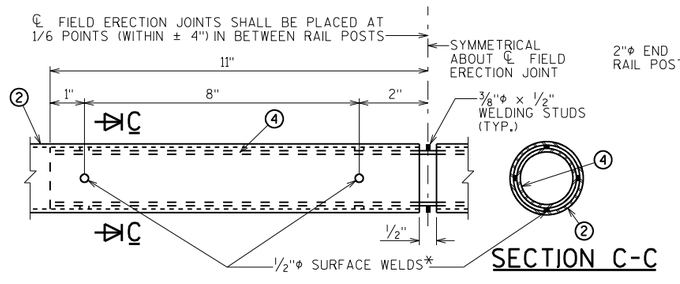
PARTIAL ELEVATION OF WALL COPING & RAILING

LOOKING SOUTH AT F.F. WALL

◐ 1'-0" MIN. DISTANCE REQUIRED BETWEEN THE ℄ OF COPING JOINTS (BOTH EXPANSION AND CONTRACTION JOINTS) AND THE ℄ OF RAIL POSTS



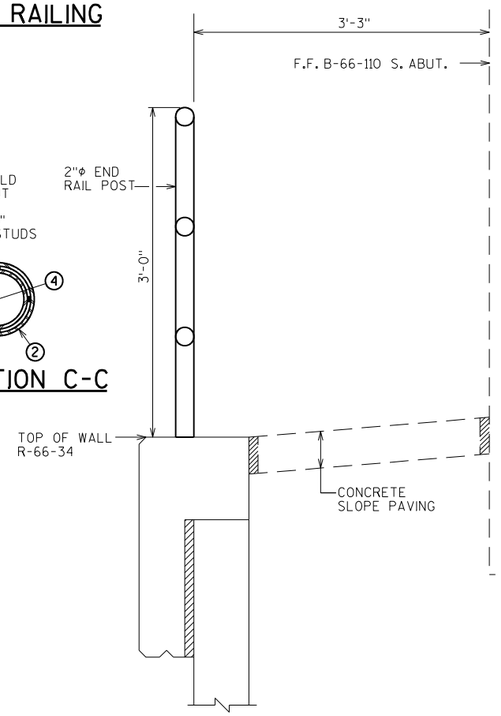
PART ELEVATION OF RAILING



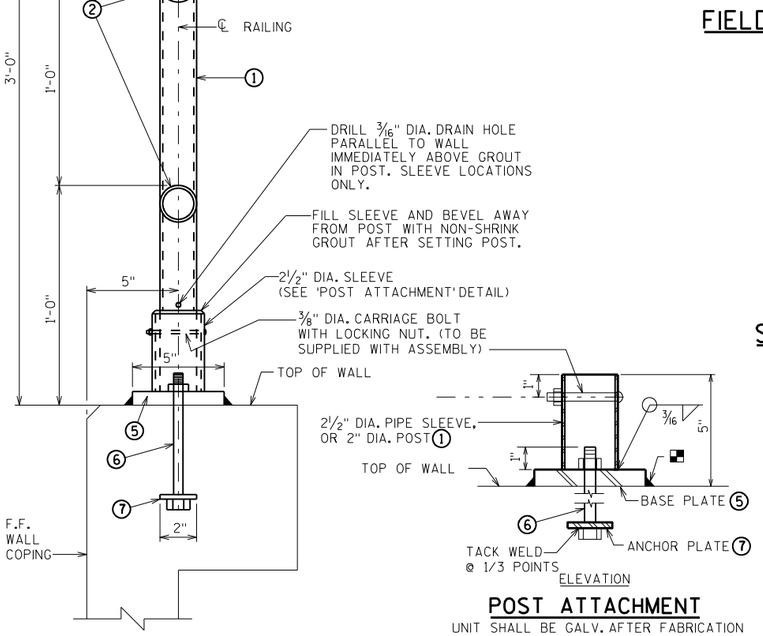
SECTION C-C

FIELD ERECTION JOINT DETAIL

*MIN. ⅝" FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.



SECTION THRU WALL AT ABUT.

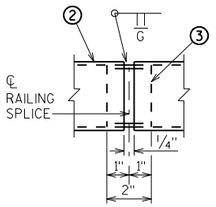


SECTION THRU RAILING

POST ATTACHMENT

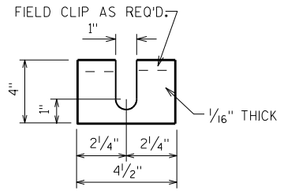
UNIT SHALL BE GALV. AFTER FABRICATION

NOTE:
IN LIEU OF USING THE 2½"φ SLEEVE, THE 2"φ RAIL POST MAY BE WELDED TO THE BASE PLATE.



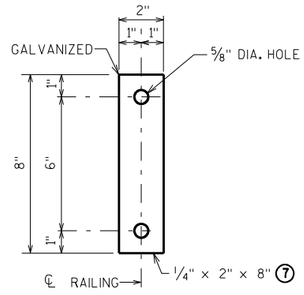
SHOP RAILING SPLICE DETAIL

(LOCATION MUST BE SHOWN ON THE SHOP DRAWINGS)

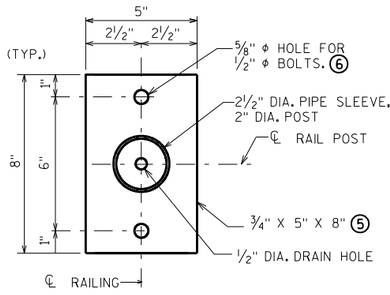


POST SHIM DETAILS

SHIMS REQUIRED ONLY WHEN POSTS ARE WELDED TO BASE PLATES. PROVIDE 4 SHIMS PER POST.



ANCHOR PLATE



BASE PLATE

LEGEND

① 2"φ NOMINAL STEEL PIPE FOR POSTS: CUT BOTTOM OF POST TO MATCH TOP OF CONCRETE. POSTS ARE TO BE SET VERTICAL.

② 2"φ NOMINAL STEEL PIPE FOR RAILS: WELD TO NO. 1

③ 1½"φ PIPE SLEEVE FOR NO. 2. PROVIDE "SLIDING FIT" WITH A MINIMUM OUT TO OUT DIMENSION OF 2 1/16".

④ 1½"φ PIPE SLEEVE x 1'-10" LONG FOR NO. 2. PROVIDE ½"φ SURFACE WELDS ON ALL SIDES AS SHOWN. GRIND WELDS TO FIT FREE INTO I.D. OF NO. 2. PROVIDE ⅜"φ x ½" WELDING STUDS ON TOP AND BOTTOM SURFACES AT CENTERLINE.

⑤ PLATE ¾" x 5" x 8", WITH ⅝"φ HOLE FOR ANCHOR BOLTS NO. 6. WELD TO NO. 1. OR PIPE SLEEVE AS SHOWN.

⑥ ½" DIA. X 6⅞" LONG GALVANIZED HEX BOLT WITH NUT & WASHER. TYPE "S", ½" DIA. CONCRETE MASONRY ANCHORS MAY BE SUBSTITUTED FOR ½" DIA. BOLTS. ANCHOR PLATE NOT REQUIRED WHEN TYPE "S" ANCHORS ARE USED. SEE ☆

☆ ½" DIA. CONCRETE MASONRY ANCHOR, TYPE "S", 6" MIN. EMBEDMENT (EPOXY ANCHORED) INTO CONCRETE AND MINIMUM PULLOUT CAPACITY OF 10 KIPS. ANCHOR, WASHER AND NUT SHALL BE GALVANIZED.

⑦ ¼" x 2" x 8" FLAT BAR, WITH ⅝"φ HOLES FOR ANCHOR BOLTS NO. 6.

NOTES

BID ITEM SHALL BE "RAILING PIPE GALVANIZED R-66-34", WHICH INCLUDES ALL ITEMS SHOWN.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS.

FIELD ERECTION JOINTS MUST BE PLACED IN BETWEEN RAIL POSTS WHERE THERE IS ALSO A CONCRETE COPING EXPANSION JOINT IN BETWEEN RAIL POSTS.

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

ALL MATERIAL 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 SPECIAL PROVISIONS. THE RAILING SHALL BE PAINTED FEDERAL COLOR NO. 27038.

DRILL DRAIN HOLES PRIOR TO GALVANIZING.

ALL MATERIALS USED IN FABRICATION SHALL BE MADE FROM MATERIALS CONFORMING TO A.S.T.M. DESIGNATION A709 GRADE 36 UNLESS NOTED OTHERWISE.

STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.

ALL RAILS, POSTS AND SLEEVES ARE STANDARD WEIGHT PIPE, SCHEDULE 40.

PLACE ALL NUTS ON OUTSIDE OF POSTS.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING.

■ CAULK AROUND PERIMETER OF BASE PLATES AND FILL PORTION OF SLOTTED HOLES AROUND ANCHOR BOLTS IN POST SHIMS AND BASE PLATES WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER.

TOUCH-UP PAINTING TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE R-66-34

DRAWN BY JDL | PLANS CK'D. ARC

PIPE RAILING DETAILS

SHEET 5

380

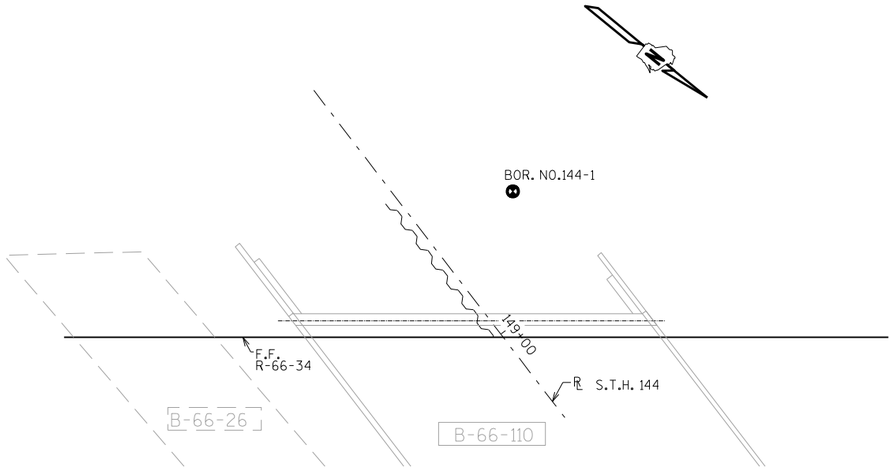
SCALE =

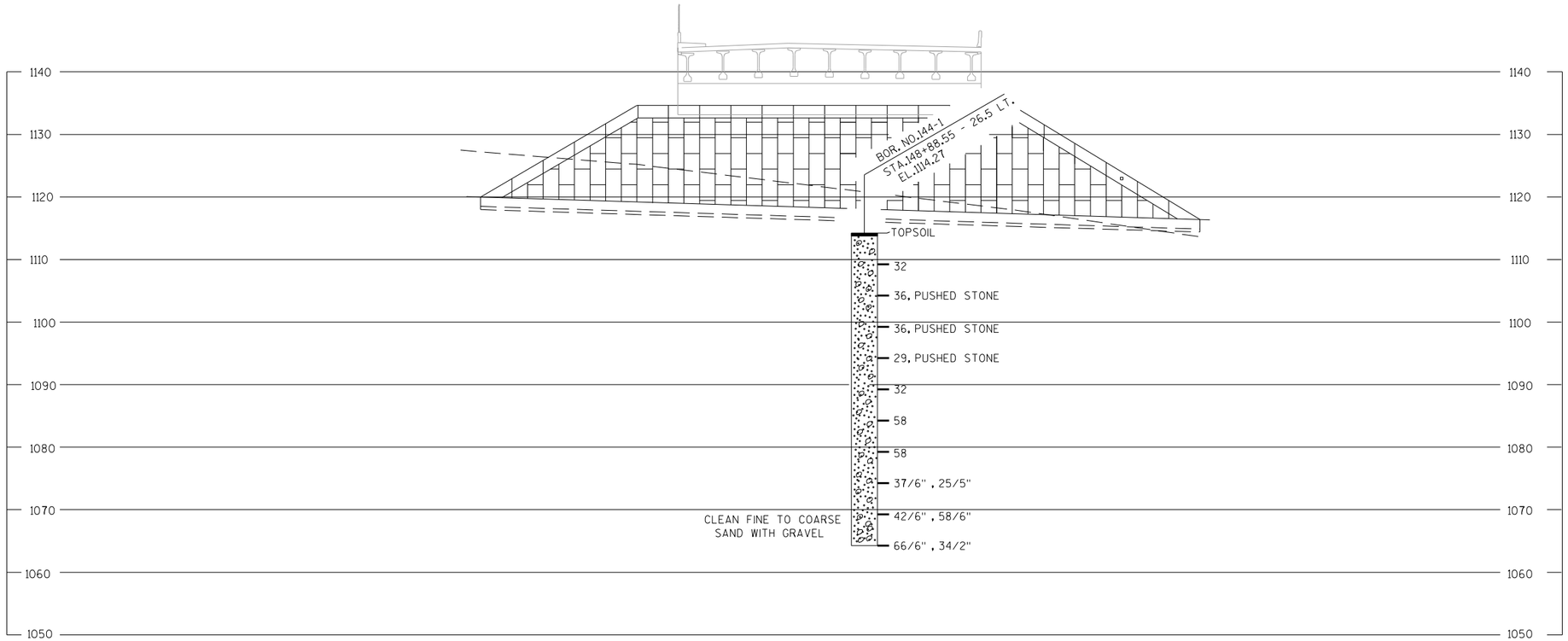
8

8

B-66-110 SOUTH ABUTMENT WALL
USH 41 FREEWAY MODERNIZATION

BORING #	DATE COMPLETED
144-1	12/19/92
144-2	12/19/92
144-3	11/22/92
BORINGS COMPLETED BY: SES INC.	





STATE PROJECT NUMBER

1107-02-79

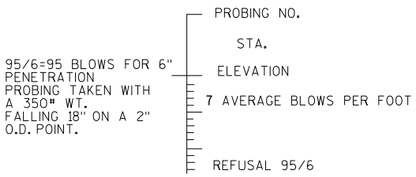
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

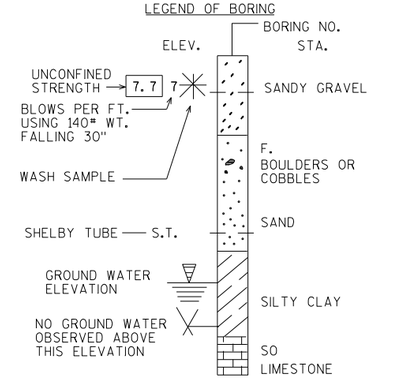
MATERIAL SYMBOLS

TOPSOIL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE R-66-34

DRAWN BY BW/PR | PLANS CK'D. ARC

SUBSURFACE EXPLORATION

SHEET 6

381

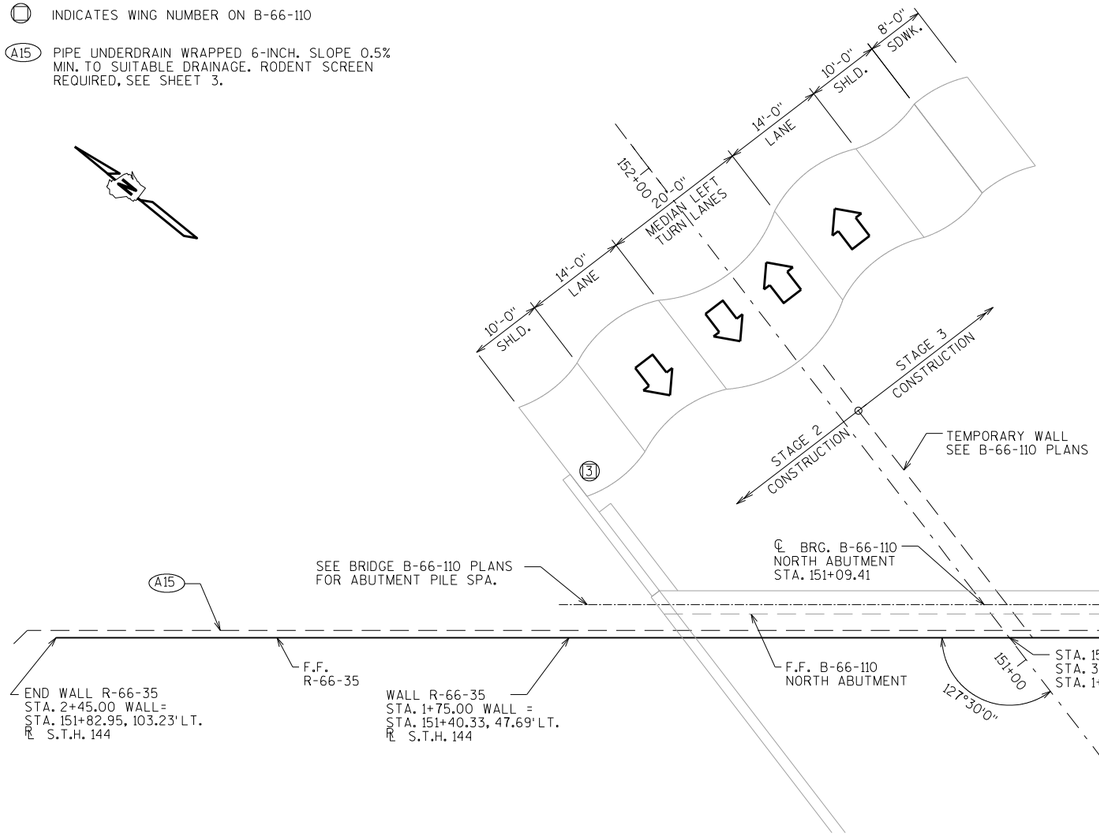
FILE=
SCALE = 20

STATE PROJECT NUMBER

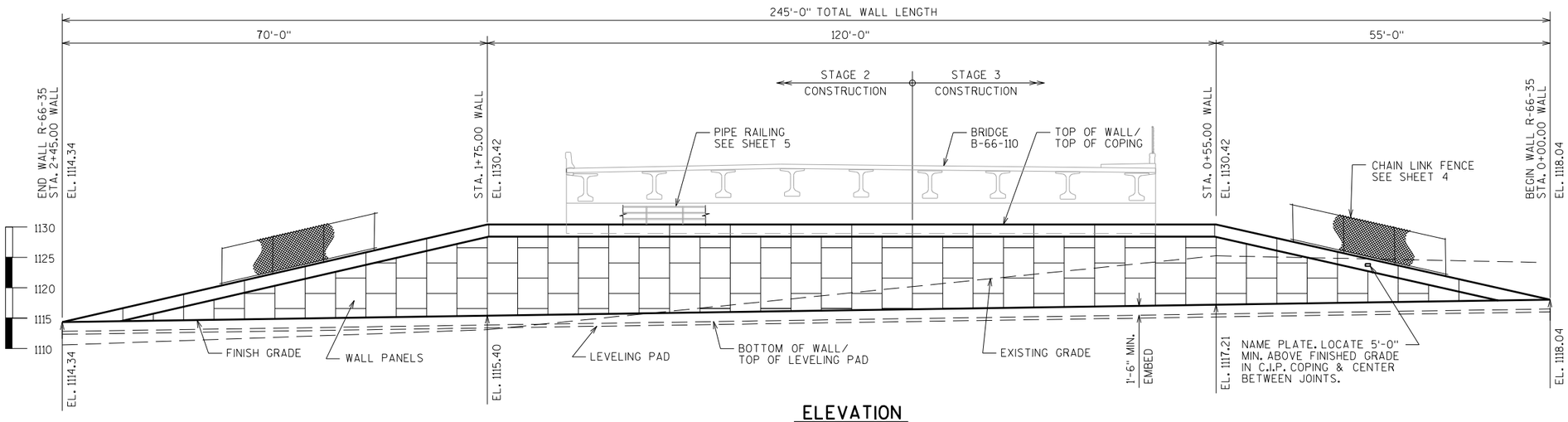
1107-02-79

(3) INDICATES WING NUMBER ON B-66-110

(A15) PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SCREEN REQUIRED, SEE SHEET 3.



PLAN
M.S.E. RETAINING WALL



ELEVATION
LOOKING NORTH AT F.F. WALL

DESIGN DATA

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS AND SHOP DRAWINGS FOR THE RETAINING WALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS SHALL BE INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD."

PLANS, ELEVATIONS AND DETAILS SHOWN ON THESE DRAWING ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE RETAINING WALL SHALL BE DESIGNED USING THE ELEVATIONS GIVEN ON SHEET 2.

DESIGN FOR RETAINING WALL TO PROVIDE FOR FINISHED GRADE SLOPED BEHIND WALL AS SHOWN ON SHEET 3.

DESIGN RETAINING WALL FOR A LIVE LOAD SURCHARGE LOAD OF 240 PSF.

DESIGN THE MSE WALL IN FRONT OF THE ABUTMENT BODY TO RESIST THE FORCE FROM ALL HORIZONTAL EARTH PRESSURE ACTING ON THE BACK OF THE ABUTMENT BELOW THE BEAM SEATS AND A LIVE LOAD SURCHARGE OF 240 PSF.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST VALUES.

ALLOWABLE WALL SYSTEMS

WALL CONCRETE PANEL M.S.E. LRFD

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY CAST-IN-PLACE COPING —— f'c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT, GRADE 60 ———— fy = 60,000 P.S.I.

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. NOTES & QUANTITIES
3. WALL DETAILS
4. CHAIN LINK FENCE DETAILS
5. PIPE RAILING DETAILS
6. SUBSURFACE EXPLORATION

STRUCTURE DESIGN CONTACT:

JAMES LUEBKE (608) 266-5098

LAURA SHADEWALD (608) 267-9592

NO.	DATE	REVISION	BY

Plans Prepared By WISDOT

BUREAU OF STRUCTURES

ACCEPTED William C. Dreher LLS — CHIEF STRUCTURES DESIGN ENGINEER — 8/16/13 DATE

STRUCTURE R-66-35

RETAINING WALL FOR S.T.H. 144 OVER U.S.H. 41 NB

COUNTY WASHINGTON — ~~TOWN/CITY/~~VILLAGE SLINGER

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
JDL	ARC	JDL	ARC

GENERAL PLAN & ELEVATION

SHEET 1 OF 6

382

I.D. 1107-02-01B

DATE: APRIL '13

SCALE = 15

8

8

STATE PROJECT NUMBER

1107-02-79

SOIL PARAMETERS

SOIL DESCRIPTION	FRICTION ANGLE (DEGREES)	COHESION (PSF)	UNIT WEIGHT (PCF)
GRANULAR BACKFILL WITHIN THE WALL IN THE REINFORCING ZONE	30	0	120
FILL BEHIND THE REINFORCING ZONE	31	0	120
B-144-3			
SILT, BROWN, SOME SAND, WITH GRAVEL, TRACE COBBLES (ELEVATION 1122.0 FT- 1110.0 FT)	34	0	130
SILT, BROWN, SOME SAND, WITH GRAVEL, TRACE COBBLES (ELEVATION 1110.0 FT 1086.0 FT)	36	0	135
SILT, BROWN, SOME SAND, WITH GRAVEL, TRACE COBBLES (ELEVATION 1086.0 FT AND BELOW)	0	25,000	135

THE MSE WALL WITH PRECAST CONCRETE PANELS WILL ACHIEVE THE EXTERNAL STABILITY REQUIREMENTS IF THE SLIDING AND BEARING RESISTANCE REQUIREMENTS ARE MET. WALL EXTERNAL STABILITY EVALUATION TABLE PRESENTS THE MINIMUM LENGTH OF THE REINFORCEMENT AT THE SPECIFIC LOCATIONS. THE RATIO OF EXPOSED WALL HEIGHT TO REINFORCEMENT LENGTH SHOULD BE INCREASED TO 1.13 IF THE ABUTMENT AND WING WALLS ARE LOCATED ABOVE THE WALL AND TO 1.06 IF THE SLOPE ABOVE THE WALL IS GREATER THAN OR EQUAL TO 2.3H:1V.

THE CONTRACTOR SHOULD REMOVE THE TOPSOIL AND REPLACE THE EXCAVATED SOIL WITH GRANULAR FILL.

THE BACKFILL BEHIND THE MSE WALL WITH PRECAST CONCRETE FACING SHOULD BE GRANULAR AND FREE DRAINING.

THE SOUTHEAST REGION SOILS ENGINEER SHOULD REVIEW THE SUBSURFACE CONDITIONS PRIOR TO CONSTRUCTION OF THE WALL.

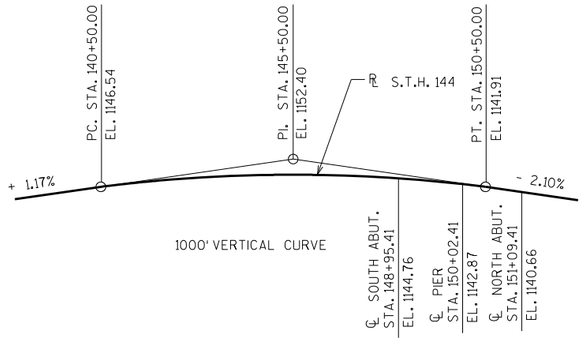
WALL EXTERNAL STABILITY EVALUATION

DIMENSIONS			
WALL HEIGHT (FEET)[1]	11.1	16.3	15.4
EXPOSED WALL HEIGHT (FEET)	9.6	14.8	13.9
LENGTH OF REINFORCEMENT (FEET)[2]	8.0	18.3	16.3
LENGTH OF REIN./WALL HEIGHT	NA[3]	1.13	1.06
WALL STATION	0+40	1+60	1+80
BORING USED	B-144-3	B-144-3	B-144-3
CAPACITY TO DEMAND RATIO (CDR)[4]			
SLIDING (CDR > 1.0)	1.3	1.0	1.0
ECCENTRICITY (CDR > 1.0)	1.3	1.2	1.8
GLOBAL STABILITY (CDR > 1.0)	NA[5]	1.4	NA[5]
BEARING RESISTANCE (CDR > 1.0)	2.5	1.2	1.4
REQUIRED BEARING RESISTANCE (PSF)	7,000	7,000	7,000

1. THE WALL HEIGHT INCLUDES AN EMBEDMENT OF 1.5 FEET.
2. THE LENGTH OF REINFORCEMENT IS THE MINIMUM REQUIRED LENGTH AT THAT LOCATION.
3. NA THE MINIMUM LENGTH OF REINFORCEMENT OF 8 FEET CONTROLS OVER 0.70 RATIO.
4. CDR REQUIREMENTS AND LOAD AND RESISTANCE FACTORS ARE PRESENTED IN CHAPTER 14 OF THE BRIDGE MANUAL.
5. NA NOT APPLICABLE, GLOBAL SLOPE STABILITY WAS EVALUATED AT THE CRITICAL WALL LOCATION.

NOTES: THE TYPICAL WALL SECTION USED IN THE ANALYSES HAD AN EXPOSED HEIGHT THAT VARIES FROM 9.6 FEET TO 14.8 FEET. THE FOLLOWING ASSUMPTIONS ARE ALSO INCLUDED IN THE ANALYSES:

1. THE SLOPE IN FRONT OF THE WALL IS HORIZONTAL.
2. THE SLOPE IN BACK OF THE WALL RANGES FROM HORIZONTAL TO 2.3H:1V.
3. GROUNDWATER WAS NOT OBSERVED IN THE BORINGS.
4. THE GRANULAR BACKFILL IS FREE DRAINING AND WILL NOT BECOME SATURATED.
5. THE MINIMUM EMBEDMENT DEPTH IS 1.5 FEET.
6. A SURCHARGE LOAD OF 240 PSF IS INCLUDED TO MODEL PEDESTRIAN AND LIGHTWEIGHT CONSTRUCTION EQUIPMENT.
7. AN ADDITIONAL SURCHARGE LOAD EQUIVALENT TO THE WEIGHT OF THE SOIL BEHIND THE ABUTMENT IS ALSO INCLUDED IN THE DESIGN.
8. GLOBAL STABILITY FACTOR OF SAFETY WAS DETERMINED BY THE COMPUTER PROGRAM XSTABL
9. BEARING RESISTANCE IS DETERMINED BY TERZAGHI'S BEARING CAPACITY EQUATION.
10. SETTLEMENT OF THE FOUNDATION ON COHESIONLESS AND COHESIVE SOIL IS BASED UPON METHODS DESCRIBED IN THE FHWA SOILS AND FOUNDATIONS MANUAL.



PROFILE GRADE LINE S.T.H. 144

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BEVEL ALL EXPOSED EDGES OF CONCRETE ¾" UNLESS NOTED OTHERWISE.

BAR STEEL REINFORCEMENT SHALL HAVE 2" CLEAR COVER UNLESS OTHERWISE SHOWN OR NOTED.

ALL WALL STATIONING AND OFFSETS ARE GIVEN AT THE FRONT FACE OF THE WALL (R-66-35).

THE EXISTING GROUND LINE IS THE UPPER LIMIT OF EXCAVATION FOR STRUCTURES.

COORDINATE THE CONSTRUCTION OF RETAINING WALL R-66-35 WITH THE NORTH ABUTMENT OF BRIDGE B-66-110.

THE REMOVAL OF THE EXISTING STRUCTURE IS INCLUDED IN A LUMP SUM PAY ITEM FOR BRIDGE B-66-110.

ALL BAR STEEL REINFORCEMENT IN CAST-IN-PLACE CONCRETE IS TO BE EPOXY COATED.

THE PLAN QUANTITY FOR THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF WALL TO THE TOP OF LEVELING PAD, SET A CONSTANT DEPTH OF 1'-6" BELOW FINISHED GRADE.

SEE BRIDGE PLANS B-66-110 FOR TEMPORARY WALL QUANTITES. QUANTITIES BASED ON PROVIDING INSTALLATIONS FOR STAGE 2 CONSTRUCTION AS REQUIRED.

GEOMETRY TABLE

WALL STATION	℄ S.T.H 144 STATION	℄ S.T.H. 144 OFFSET TO F.F. WALL	TOP OF WALL EL.	FINISH GRADE EL. @ F.F. WALL
0+00.00	150+33.80	91.14' RT	1118.04	1118.04
0+20.00	150+45.98	75.28' RT	1122.54	1117.74
0+40.00	150+58.15	59.41' RT	1127.04	1117.44
0+55.00	150+67.28	47.51' RT	1130.42	1117.21
0+60.00	150+70.33	43.54' RT	1130.42	1117.13
0+80.00	150+82.50	27.68' RT	1130.42	1116.83
1+00.00	150+94.68	11.81' RT	1130.42	1116.53
1+20.00	151+06.85	4.06' LT	1130.42	1116.23
1+40.00	151+19.03	19.93' LT	1130.42	1115.93
1+60.00	151+31.20	35.79' LT	1130.42	1115.62
1+75.00	151+40.33	47.69' LT	1130.42	1115.40
1+80.00	151+43.38	51.66' LT	1129.27	1115.32
2+00.00	151+55.55	67.53' LT	1124.68	1115.02
2+20.00	151+67.73	83.39' LT	1120.08	1114.72
2+40.00	151+79.90	99.26' LT	1115.49	1114.42
2+45.00	151+82.95	103.23' LT	1114.34	1114.34

NOTE: ALL WALL STATIONING & OFFSETS ARE GIVEN AT THE FRONT FACE OF THE WALL.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	265
SPV.0090	FENCE CHAIN LINK POLYMER-COATED 6-FT	LF	152
SPV.0105	RAILING PIPE GALVANIZED R-66-35	LS	1
SPV.0165	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD	SF	2960
	NON-BID ITEMS		
	PRE-FORMED JOINT FILLER	SIZE	¾"
	POLYSTYRENE	SIZE	1"
	NON-BITUMINOUS JOINT SEALER	—	—

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE R-66-35

DRAWN BY JDL | PLANS CK'D. ARC

NOTES & QUANTITIES

SHEET 2

383

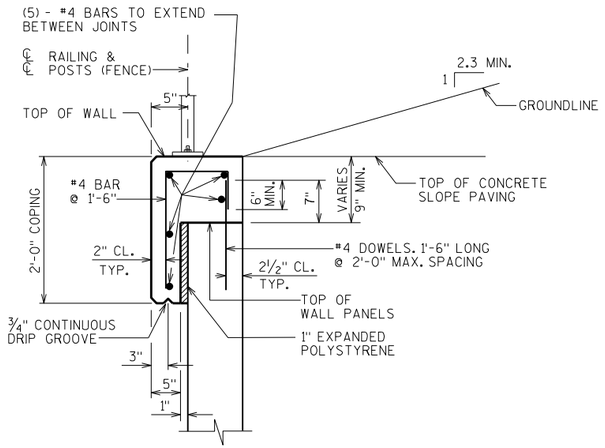
SCALE = 6

8

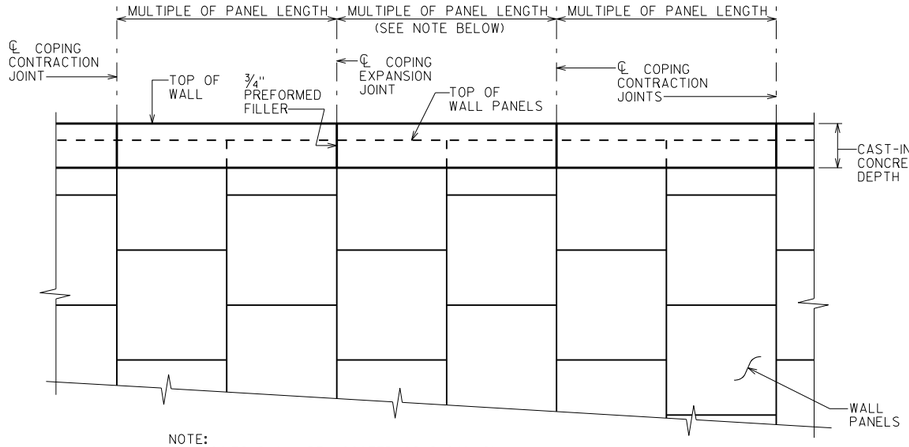
8

STATE PROJECT NUMBER

1107-02-79



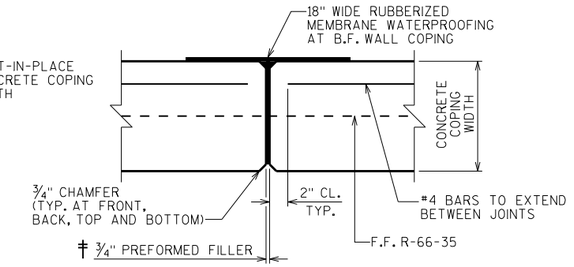
CAST-IN-PLACE CONCRETE COPING DETAIL



NOTE:
ALL JOINTS SHALL BE LOCATED AS SHOWN ON WALL ELEVATIONS AND MUST COINCIDE WITH PANEL JOINTS ON FRONT FACE.

CAST-IN-PLACE COPING PARTIAL ELEVATION

LOOKING AT F.F. WALL



COPING EXPANSION JOINT

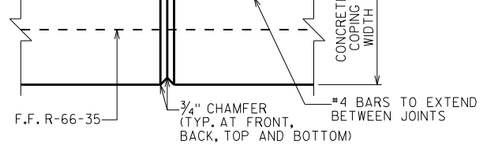
DO NOT RUN BAR STEEL THRU JOINT

MAXIMUM SPACING OF JOINTS SHALL BE 50'-0" AND MUST LINE UP WITH THE WALL PANELS' JOINTS.

‡ SEAL ALL EXPOSED HORIZ. AND VERT. SURFACES OF FILLER WITH A NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONC.)

RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM TOP OF COPING TO 6" BELOW TOP OF WALL PANELS.

ALL EXPANSION JOINTS TO EXTEND THE FULL DEPTH OF COPING.

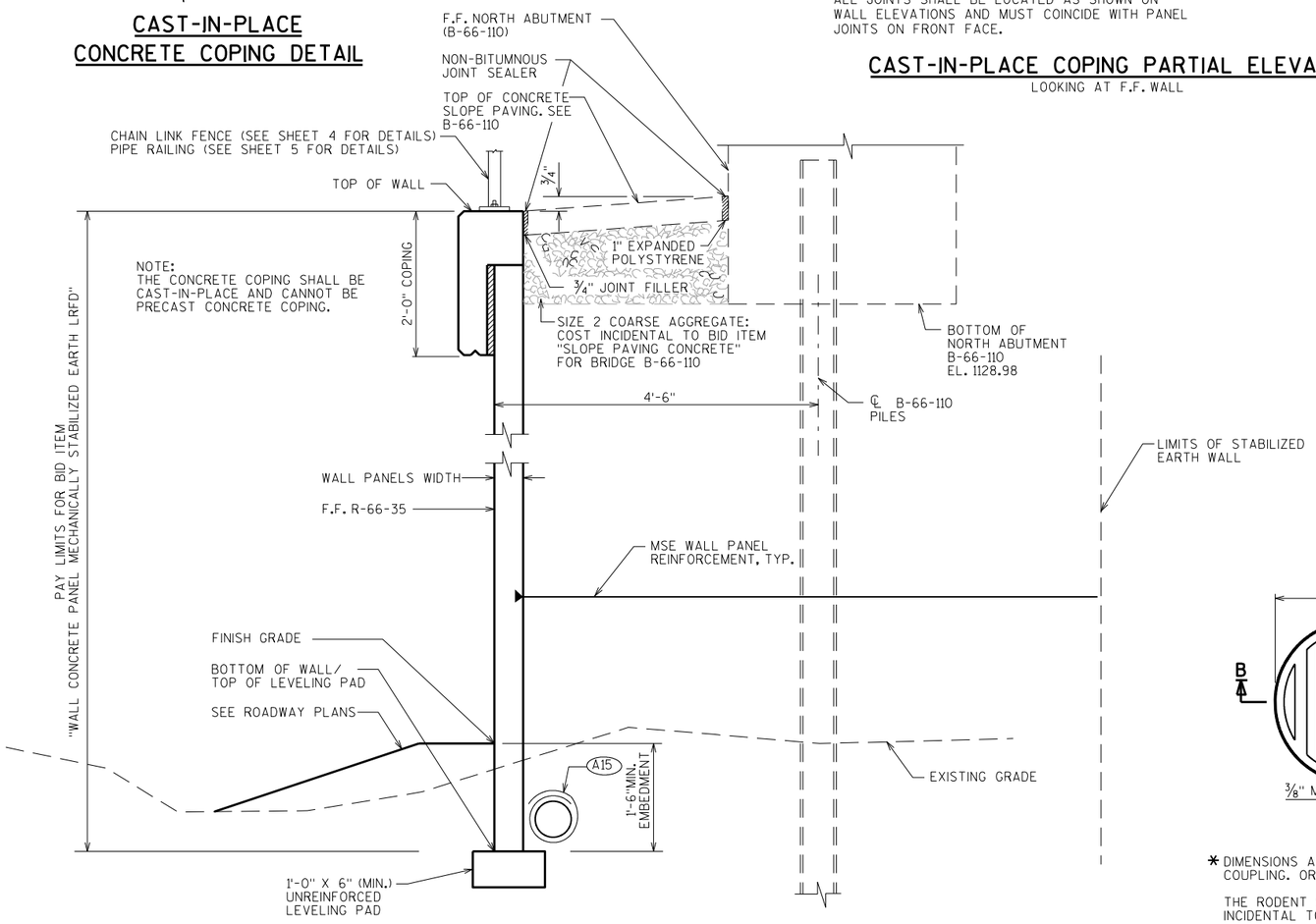


COPING CONTRACTION JOINT

DO NOT RUN BAR STEEL THRU JOINT

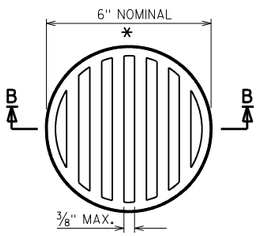
MAXIMUM SPACING OF JOINTS SHALL BE 12'-0" AND MUST LINE UP WITH THE WALL PANELS' JOINTS.

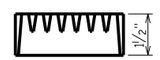
ALL CONTRACTION JOINTS TO EXTEND THE FULL DEPTH OF COPING



TYPICAL SECTION THRU WALL

LOOKING WEST





SECTION B-B

RODENT SCREEN DETAIL

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

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

THE RODENT SCREEN 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 SCREEN TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SCREEN SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH SHEET METAL SCREWS.

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE R-66-35

DRAWN BY JDL | PLANS CK'D. ARC

WALL DETAILS

SHEET 3

384

SCALE = 6

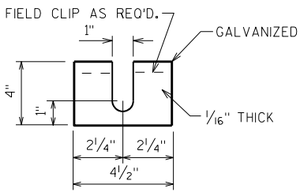
8

8

STATE PROJECT NUMBER
1107-02-79

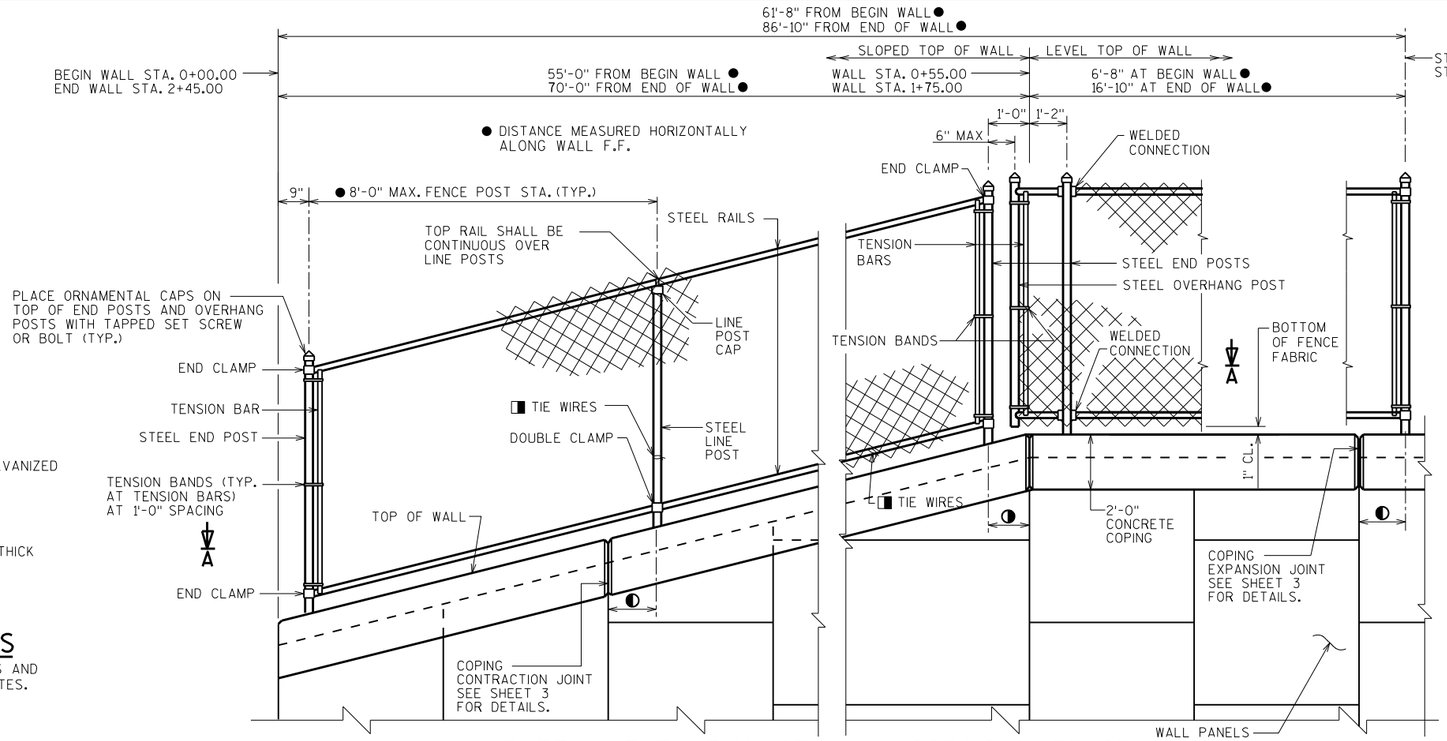
FENCE MEMBER SIZE & WEIGHT

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



POST SHIM DETAILS

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



◐ 1'-0" MIN. DISTANCE REQUIRED BETWEEN THE ℄ OF COPING JOINTS (BOTH EXPANSION AND CONTRACTION JOINTS) AND THE ℄ OF FENCE POSTS

PARTIAL ELEVATION OF WALL COPING & FENCE

(LOOKING NORTH AT F.F. WALL)

NOTES

POSTS ARE TO BE SET VERTICAL.

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

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

THE COLOR OF POLYMER-COATING FOR THIS STRUCTURE SHALL BE BLACK IN ACCORDANCE WITH ASTM F934.

THE BID ITEM SHALL BE "FENCE CHAIN LINK POLYMER-COATED 6-FT.", LF.

COMPLETE ANY REQUIRED WELDING OF COMPONENTS BEFORE GALVANIZING.

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

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

ALL POST SPACINGS ARE MEASURED HORIZONTALLY ALONG THE C/L OF THE POST.

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

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

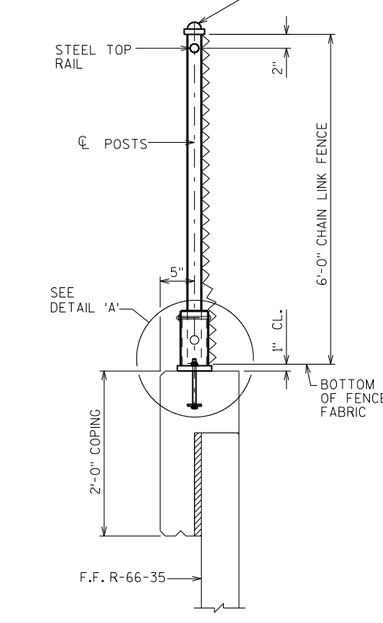
◭ 1/2" DIA. X 6 7/8" LONG GALVANIZED HEX BOLT WITH NUT & WASHER. TYPE "S", 1/2" DIA. CONCRETE MASONRY ANCHORS MAY BE SUBSTITUTED FOR 1/2" DIA. BOLTS. ANCHOR PLATE NOT REQUIRED WHEN TYPE "S" ANCHORS ARE USED. SEE ☆

☆ 1/2" DIA. CONCRETE MASONRY ANCHOR, TYPE "S", 6" MIN. EMBEDMENT (EPOXY ANCHORED) INTO CONCRETE AND MINIMUM PULLOUT CAPACITY OF 10 KIPS. ANCHOR, WASHER AND NUT SHALL BE GALVANIZED.

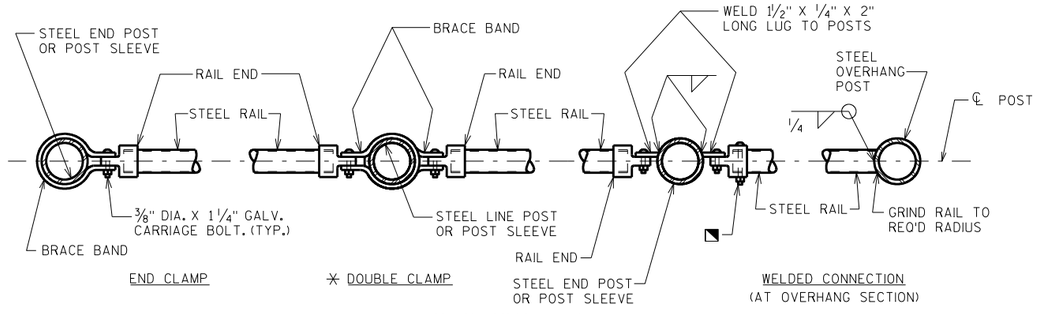
◨ ATTACH FABRIC TO RAILS, AND TO POSTS WITHOUT TENSION BANDS, WITH TIE WIRES (ROUND, 9-GAGE) SPACED AT 1'-0".

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

MINIMUM LENGTH OF TOP RAIL BETWEEN SPLICES SHALL BE 20'-0". LOCATE SPLICES NEAR 1/4 POINT OF POST SPACING.

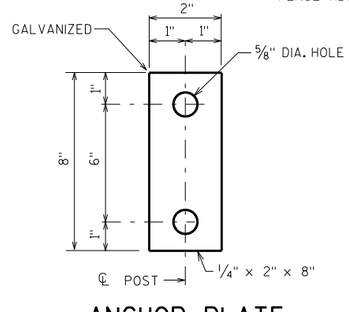


SECTION THRU FENCE

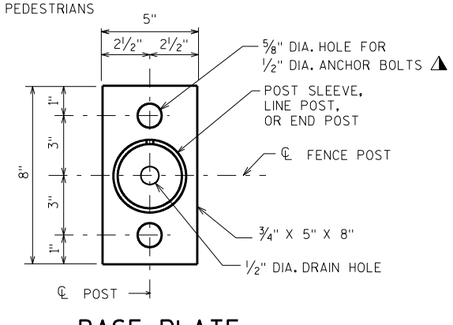


SECTION A-A

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



ANCHOR PLATE

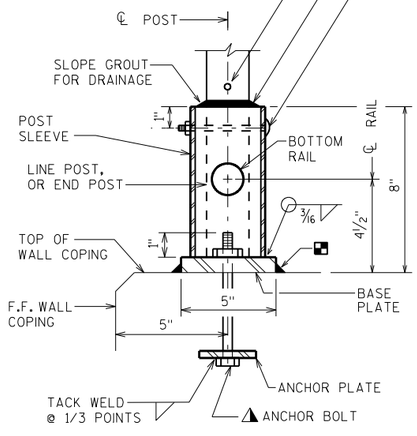


BASE PLATE

3/8" DIA. GALV. CARRIAGE BOLT WITH LOCKING NUT. (TO BE SUPPLIED WITH ASSEMBLY)

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

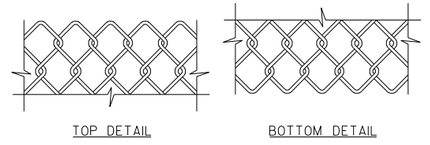
DRILL 3/16" DIA. DRAIN HOLE PARALLEL TO WALL IMMEDIATELY ABOVE GROUT IN POST. SLEEVE LOCATIONS ONLY.



DETAIL 'A'

UNIT SHALL BE GALVANIZED AFTER FABRICATION

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



FENCE FABRIC

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE R-66-35

DRAWN BY JDL | PLANS CK'D. ARC

CHAIN LINK FENCE DETAILS

SHEET 4

385

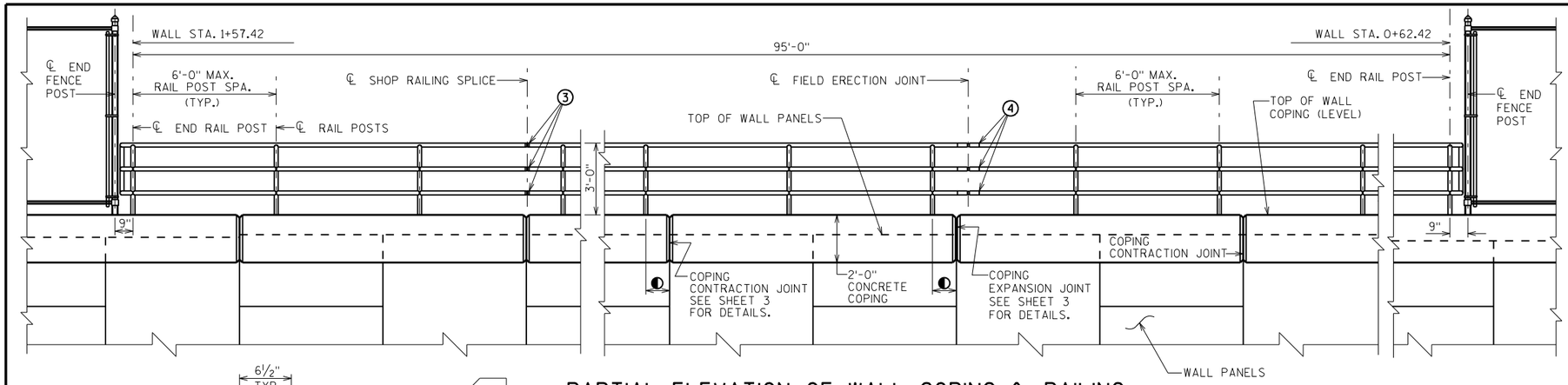
SCALE = 5.33333

8

8

STATE PROJECT NUMBER

1107-02-79



PARTIAL ELEVATION OF WALL COPING & RAILING

LOOKING NORTH AT F.F. WALL

◐ 1'-0" MIN. DISTANCE REQUIRED BETWEEN THE ℄ OF COPING JOINTS (BOTH EXPANSION AND CONTRACTION JOINTS) AND THE ℄ OF RAIL POSTS

LEGEND

① 2"φ NOMINAL STEEL PIPE FOR POSTS: CUT BOTTOM OF POST TO MATCH TOP OF CONCRETE. POSTS ARE TO BE SET VERTICAL.

② 2"φ NOMINAL STEEL PIPE FOR RAILS: WELD TO NO. 1

③ 1½"φ PIPE SLEEVE FOR NO. 2. PROVIDE "SLIDING FIT" WITH A MINIMUM OUT TO OUT DIMENSION OF 2 1/16".

④ 1½"φ PIPE SLEEVE x 1'-10" LONG FOR NO. 2. PROVIDE ½"φ SURFACE WELDS ON ALL SIDES AS SHOWN. GRIND WELDS TO FIT FREE INTO I.D. OF NO. 2. PROVIDE ⅜"φ x ½" WELDING STUDS ON TOP AND BOTTOM SURFACES AT CENTERLINE.

⑤ PLATE ¾" x 5" x 8", WITH ⅝"φ HOLE FOR ANCHOR BOLTS NO. 6. WELD TO NO. 1. OR PIPE SLEEVE AS SHOWN.

⑥ ½" DIA. X 6⅞" LONG GALVANIZED HEX BOLT WITH NUT & WASHER. TYPE "S", ½" DIA. CONCRETE MASONRY ANCHORS MAY BE SUBSTITUTED FOR ½" DIA. BOLTS. ANCHOR PLATE NOT REQUIRED WHEN TYPE "S" ANCHORS ARE USED. SEE ☆

☆ ½" DIA. CONCRETE MASONRY ANCHOR, TYPE "S", 6" MIN. EMBEDMENT (EPOXY ANCHORED) INTO CONCRETE AND MINIMUM PULLOUT CAPACITY OF 10 KIPS. ANCHOR, WASHER AND NUT SHALL BE GALVANIZED.

⑦ ¼" x 2" x 8" FLAT BAR, WITH ⅝"φ HOLES FOR ANCHOR BOLTS NO. 6.

NOTES

BID ITEM SHALL BE "RAILING PIPE GALVANIZED R-66-35", WHICH INCLUDES ALL ITEMS SHOWN.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS.

FIELD ERECTION JOINTS MUST BE PLACED IN BETWEEN RAIL POSTS WHERE THERE IS ALSO A CONCRETE COPING EXPANSION JOINT IN BETWEEN RAIL POSTS.

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

ALL MATERIAL 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 SPECIAL PROVISIONS. THE RAILING SHALL BE PAINTED FEDERAL COLOR NO. 27038.

DRILL DRAIN HOLES PRIOR TO GALVANIZING.

ALL MATERIALS USED IN FABRICATION SHALL BE MADE FROM MATERIALS CONFORMING TO A.S.T.M. DESIGNATION A709 GRADE 36 UNLESS NOTED OTHERWISE.

STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.

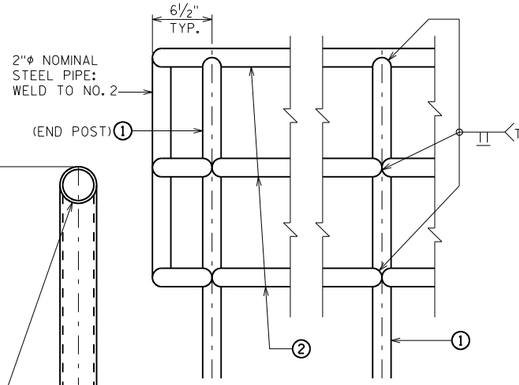
ALL RAILS, POSTS AND SLEEVES ARE STANDARD WEIGHT PIPE, SCHEDULE 40.

PLACE ALL NUTS ON OUTSIDE OF POSTS.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING.

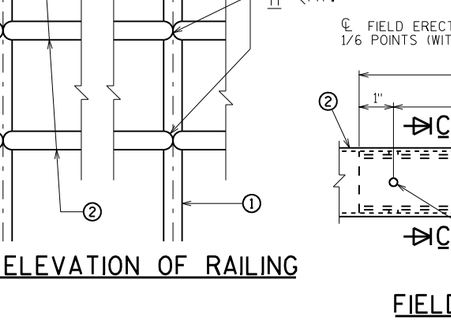
▪ CAULK AROUND PERIMETER OF BASE PLATES AND FILL PORTION OF SLOTTED HOLES AROUND ANCHOR BOLTS IN POST SHIMS AND BASE PLATES WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER.

TOUCH-UP PAINTING TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.



PART ELEVATION OF RAILING

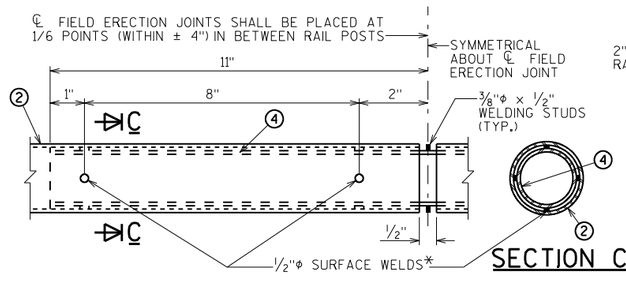
SECTION THRU RAILING



POST ATTACHMENT

UNIT SHALL BE GALV. AFTER FABRICATION

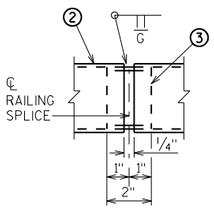
NOTE:
IN LIEU OF USING THE 2½"φ SLEEVE, THE 2"φ RAIL POST MAY BE WELDED TO THE BASE PLATE.



FIELD ERECTION JOINT DETAIL

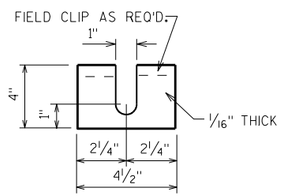
*MIN. ⅝" FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.

SECTION C-C



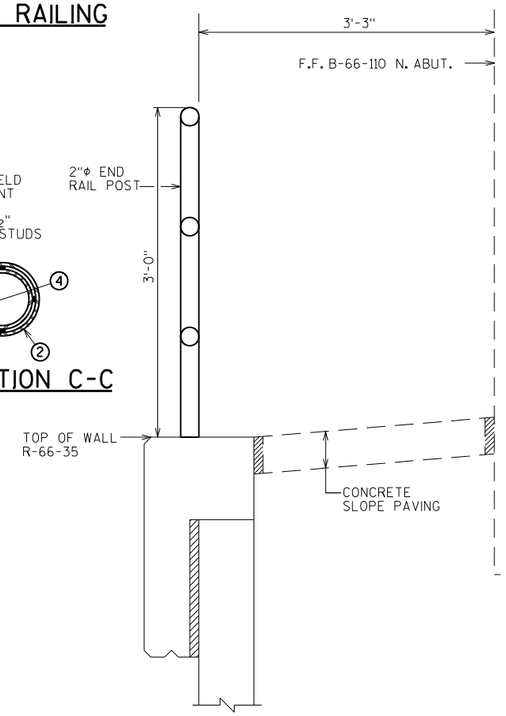
SHOP RAILING SPLICE DETAIL

(LOCATION MUST BE SHOWN ON THE SHOP DRAWINGS)

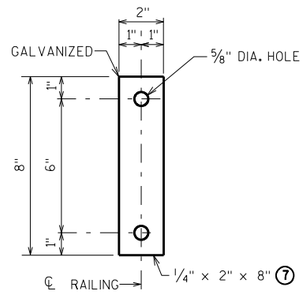


POST SHIM DETAILS

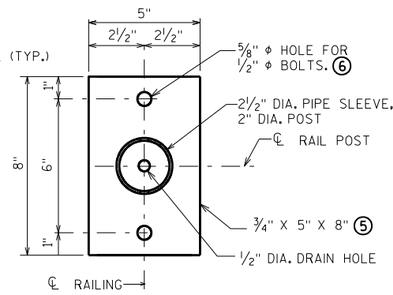
SHIMS REQUIRED ONLY WHEN POSTS ARE WELDED TO BASE PLATES. PROVIDE 4 SHIMS PER POST.



SECTION THRU WALL AT ABUT.



ANCHOR PLATE



BASE PLATE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE R-66-35

DRAWN BY JDL | PLANS CK'D. ARC

PIPE RAILING DETAILS

SHEET 5

386

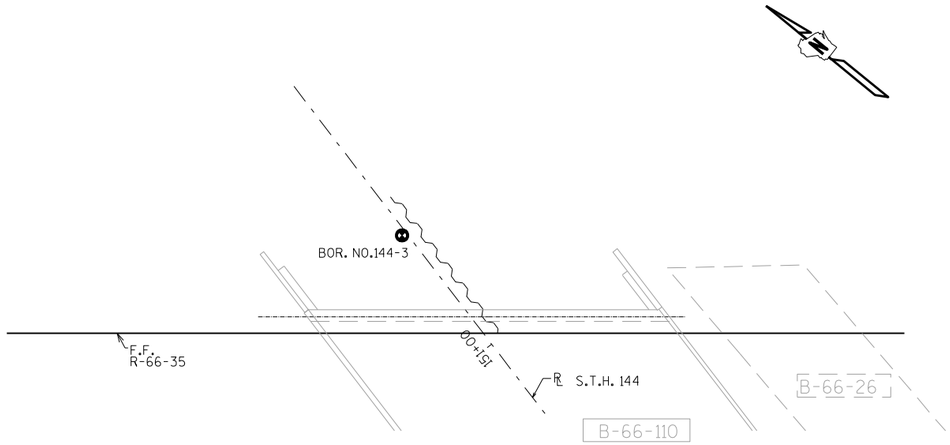
SCALE =

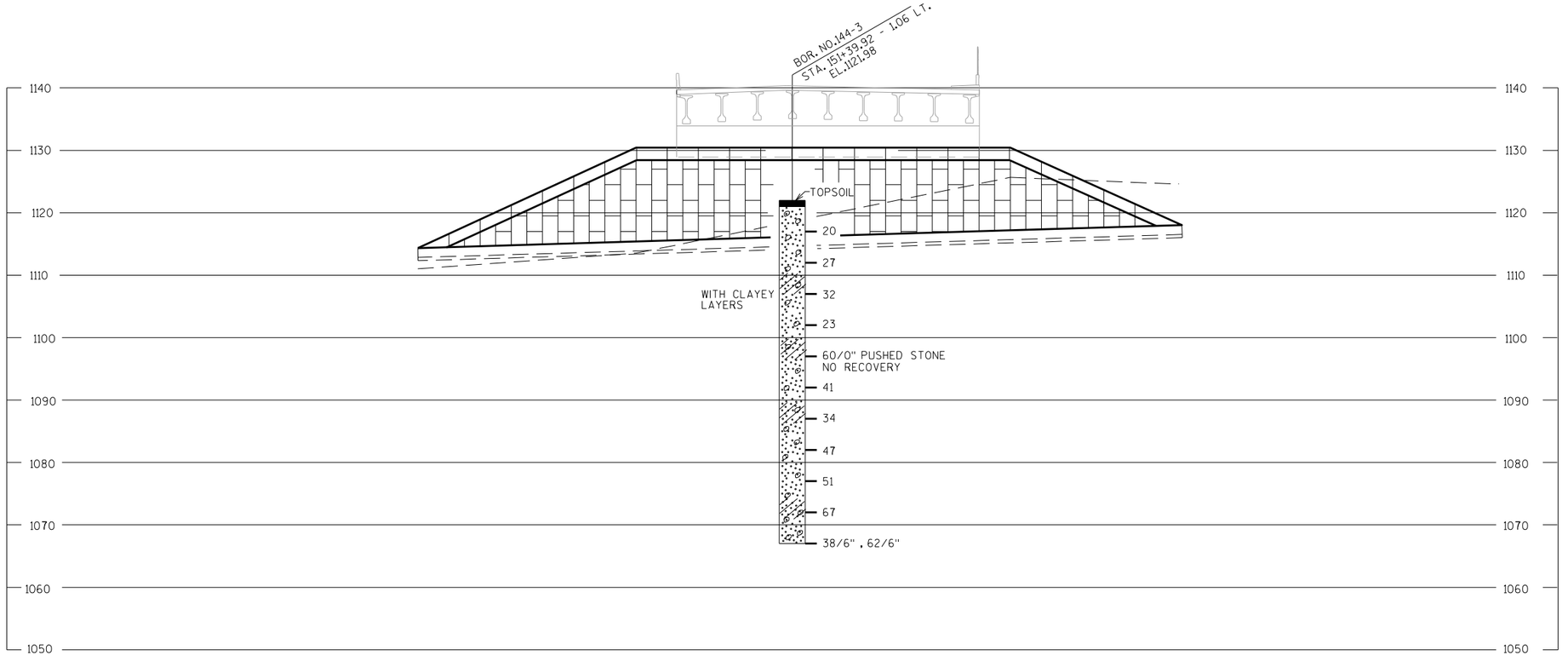
8

8

B-66-110 NORTH ABUTMENT WALL
USH 41 FREEWAY MODERNIZATION

BORING #	DATE COMPLETED
144-1	12/19/92
144-2	12/19/92
144-3	11/22/92
BORINGS COMPLETED BY: SES INC.	





STATE PROJECT NUMBER

1107-02-79

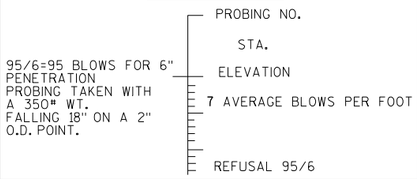
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

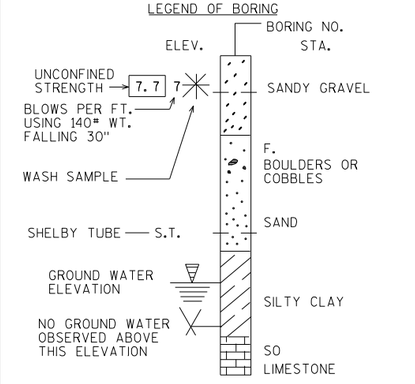
MATERIAL SYMBOLS

TOPSOIL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE R-66-35

DRAWN BY BW/PR PLANS CK'D. ARC

SUBSURFACE EXPLORATION

SHEET 6

387

FILE=
SCALE = 20

STH 144 TEMPORARY WIDENING

STA. 161+00 TO STA. 187+50

STATION	EXCAVATION COMMON CY	FILL CY
161+00.00	0.00	0.00
161+50.00	24.95	13.74
162+00.00	26.86	24.55
162+50.00	29.58	21.67
163+00.00	32.73	12.78
163+50.00	34.44	9.70
164+00.00	34.67	15.30
164+50.00	32.96	30.16
165+00.00	30.01	41.90
165+50.00	27.32	77.82
166+00.00	25.45	81.07
166+50.00	21.23	80.24
167+00.00	15.93	131.21
167+50.00	15.28	140.18
168+00.00	17.13	132.90
168+50.00	17.75	131.90
169+00.00	16.72	111.32
169+50.00	18.33	90.86
170+00.00	25.91	81.65
170+50.00	31.46	80.84
171+00.00	31.81	92.84
171+50.00	38.69	86.60
172+00.00	50.35	66.91
172+50.00	58.57	57.73
173+00.00	121.71	33.44
173+50.00	236.54	11.20
174+00.00	321.77	3.94
174+50.00	319.00	0.22
175+00.00	241.60	8.71
175+50.00	131.38	73.54
176+00.00	86.52	101.69
176+50.00	138.20	49.85
177+00.00	206.69	19.73
177+50.00	241.50	17.94
178+00.00	320.96	27.26
178+50.00	431.80	37.69
179+00.00	424.20	48.49
179+50.00	399.66	57.66
180+00.00	382.31	65.79
180+50.00	399.23	70.78
181+00.00	502.21	72.54
181+50.00	561.89	70.61
182+00.00	492.10	67.30
182+50.00	297.22	66.98
183+00.00	105.06	83.32
183+50.00	114.40	73.48
184+00.00	115.41	55.31
184+50.00	212.52	53.06
185+00.00	254.01	53.66
185+50.00	164.32	41.86
186+00.00	117.16	14.70
186+50.00	48.78	6.82
187+00.00	45.78	4.62
187+50.00	0.00	0.00

STH 144

SOUTH END OF PROJECT TO BRIDGE
STA. 136+00 TO STA. 148+50

STATION	EXCAVATION COMMON CY	FILL CY
136+00.00	0.00	0.00
136+50.00	137.59	93.70
137+00.00	164.54	85.83
137+50.00	230.09	57.59
138+00.00	297.69	30.83
138+50.00	363.52	15.00
139+00.00	422.96	11.30
139+16.96	163.74	5.92
139+50.00	377.85	14.67
139+58.43	98.98	6.68
140+00.00	260.48	25.43
140+41.35	560.71	64.31
140+50.00	138.68	17.12
140+82.82	592.36	53.33
140+84.89	46.38	2.90
141+00.00	389.81	26.93
141+50.00	1091.11	48.06
142+00.00	602.87	40.83
142+50.00	437.87	126.48
143+00.00	733.70	109.63
143+50.00	732.22	34.26
144+00.00	588.80	174.54
144+50.00	484.26	253.06
145+00.00	458.89	335.19
145+50.00	416.39	763.06
146+00.00	190.09	1238.52
146+50.00	93.43	1755.19
146+59.97	283.44	2206.44
146+62.05	16.66	97.44
147+00.00	276.34	1537.80
147+03.51	28.09	145.43
147+44.97	403.62	2327.43
147+50.00	60.71	391.64
147+86.44	501.27	2416.40
148+00.00	227.42	967.87
148+27.90	206.68	2229.16
148+50.00	40.46	2254.71

STH 144

BRIDGE TO NORTH END OF PROJECT
STA. 151+50 TO STA. 171+00

STATION	EXCAVATION COMMON CY	FILL CY
151+50.00	0.00	0.00
151+97.00	512.04	2759.60
152+00.00	29.42	179.37
152+25.00	176.99	1335.65
152+50.00	111.44	1102.18
153+00.00	195.93	1978.24
153+50.00	156.02	2199.81
154+00.00	73.43	1973.70
154+50.00	275.74	1886.67
155+00.00	673.89	1238.98
155+50.00	552.41	359.26
156+00.00	304.07	810.46
156+50.00	272.13	1030.93
157+00.00	240.28	876.20
157+50.00	226.20	704.17
158+00.00	218.70	562.69
158+50.00	194.91	488.61
159+00.00	169.81	417.31
159+30.00	96.89	188.28
159+50.00	64.78	103.48
159+77.24	88.45	118.25
160+00.00	70.79	79.18
160+25.13	75.28	68.15
160+50.00	71.94	54.63
160+73.03	66.44	34.93
161+00.00	88.45	25.15
161+20.92	78.44	8.28
161+50.00	109.56	0.00
161+64.03	78.37	0.00
162+00.00	253.93	0.00
162+50.00	263.80	0.00
163+00.00	214.81	0.00
163+50.00	244.35	0.00
164+00.00	271.76	0.00
164+50.00	290.93	0.00
165+00.00	286.67	0.00
165+50.00	289.44	0.00
166+00.00	253.06	0.00
166+50.00	186.85	0.00
167+00.00	155.74	1.94
167+50.00	83.70	79.91
168+00.00	20.28	209.07
168+50.00	7.87	278.98
169+00.00	4.72	325.46
169+20.38	2.44	147.96

STH 144

BRIDGE TO NORTH END OF PROJECT CONT'D
STA. 151+50 TO STA. 187+50

STATION	EXCAVATION COMMON CY	FILL CY
169+50.00	2.17	123.00
169+63.48	2.58	101.88
170+00.00	11.44	303.95
170+11.38	3.36	98.21
170+50.00	10.91	356.85
170+59.27	2.93	81.95
171+00.00	17.24	375.91
171+07.17	3.99	70.52
171+50.00	23.97	389.95
172+00.00	11.94	234.91
172+50.00	3.33	72.78
173+00.00	30.46	33.15
173+50.00	287.59	9.91
174+00.00	521.02	3.52
174+10.00	106.96	0.20
174+50.00	416.44	0.00
175+00.00	375.74	0.28
175+10.00	52.74	0.06
175+50.00	224.30	0.00
176+00.00	256.20	20.37
176+50.00	236.94	55.00
177+00.00	295.56	39.44
177+50.00	257.31	62.31
177+60.00	121.30	143.80
178+00.00	182.69	291.39
178+50.00	290.93	522.96
179+00.00	250.46	758.52
179+50.00	196.39	972.13
180+00.00	130.56	1125.19
180+50.00	105.28	1196.11
181+00.00	143.06	1178.15
181+50.00	164.35	1108.80
182+00.00	118.06	1024.35
182+50.00	35.19	926.11
183+00.00	0.00	820.09
183+50.00	60.28	753.43
184+00.00	85.65	607.50
184+50.00	55.37	454.91
185+00.00	88.52	300.00
185+50.00	153.06	156.48
186+00.00	159.44	111.57
186+50.00	156.48	98.80
187+00.00	147.59	119.26
187+50.00	103.70	60.00

OVERLOOK DR

STA. 900+50 TO STA. 905+21

STATION	EXCAVATION COMMON CY	FILL CY
900+50.00	0.00	0.00
901+00.00	1132.87	7.04
901+50.00	1831.94	0.00
902+00.00	1530.37	0.00
902+25.00	527.78	0.00
902+50.00	394.31	0.00
903+00.00	558.98	0.00
903+50.00	325.00	0.00
904+00.00	332.96	0.00
904+25.00	160.51	0.00
904+50.00	79.03	0.46
905+00.00	105.83	1.85
905+21.00	43.67	0.39

ARTHUR RD

STA. 268+00 TO STA. 271+41

STATION	EXCAVATION COMMON CY	FILL CY
268+00.00	0.00	0.00
268+50.00	208.26	42.14
269+00.00	108.59	128.80
269+15.00	20.73	49.62
269+50.00	31.66	96.12
270+00.00	51.12	104.48
270+50.00	45.91	62.42
271+00.00	7.91	73.04
271+41.00	7.89	78.42

DRIVEWAY - STA. 168+00

STA. 8+12 TO STA. 10+15

STATION	EXCAVATION COMMON CY	FILL CY
8+12.00	0.00	0.00
8+25.00	18.45	8.20
8+50.00	13.68	138.13
8+75.00	5.60	232.86
9+00.00	6.98	166.68
9+25.00	2.09	123.68
9+50.00	0.09	96.22
9+75.00	0.20	82.74
10+00.00	12.86	48.21
10+15.00	9.60	9.90

NB ON RAMP

STA. 600+50 TO STA. 626+50

STATION	EXCAVATION COMMON CY	FILL CY
600+50.00	0.00	0.00
601+00.00	138.89	3000.00
602+00.00	428.89	2870.46
602+70.29	497.83	3128.61
603+00.00	46.09	786.34
603+30.07	16.22	685.39
603+71.29	85.72	1088.32
604+00.00	139.36	840.68
604+12.52	81.60	372.36
604+74.35	639.75	1576.18
605+00.00	339.16	418.31
606+00.00	1289.81	682.96
607+00.00	710.37	95.93
607+34.56	49.71	43.43
608+00.00	195.60	46.22
608+14.56	72.56	5.81
608+67.90	290.43	16.37
608+77.00	63.02	0.74
609+00.00	154.48	4.64
609+21.23	151.32	7.39
610+00.00	902.65	13.31
610+01.23	15.29	0.00
610+27.90	428.50	0.00
611+00.00	1113.47	0.00
611+63.25	834.63	0.00
611+89.91	283.45	0.00
612+00.00	103.71	0.00
612+69.91	530.44	0.00
613+00.00	159.78	1.72
613+23.25	98.35	3.36
613+76.58	156.84	28.07
614+00.00	38.18	28.13
614+56.58	63.44	126.98
615+00.00	48.65	134.26
616+00.00	112.41	337.22
617+00.00	110.93	355.93
618+00.00	106.30	346.48
619+00.00	107.04	307.41
620+00.00	112.96	255.56
621+00.00	108.52	350.74
622+00.00	106.48	413.15
623+00.00	115.56	187.96
624+00.00	138.33	12.22
625+00.00	144.44	0.00
626+00.00	186.48	0.00
626+50.00	102.96	0.00

NB OFF RAMP

STA. 500+50 TO STA. 524+00

STATION	EXCAVATION COMMON CY	FILL CY	EXCAVATION MARSH CY
500+50.00	0.00	0	0.00
501+00.00	59.07	2.59	0.00
502+00.00	218.89	22.41	0.00
503+00.00	299.44	61.11	0.00
504+00.00	195.56	156.48	0.00
505+00.00	222.22	150.00	0.00
506+00.00	223.89	281.11	0.00
506+35.71	41.87	204.80	0.00
507+00.00	70.28	538.55	0.00
507+15.71	16.89	170.10	0.00
507+69.04	55.26	609.70	0.00
508+00.00	32.78	375.27	0.00
508+22.37	23.71	276.14	0.00
509+00.00	88.54	942.93	0.00
509+02.37	2.40	22.34	0.00
509+29.04	33.35	277.95	0.00
510+00.00	98.74	390.89	0.00
511+00.00	147.41	378.52	0.00
512+00.00	88.52	1387.22	0.00
512+19.57	5.19	466.93	66.70
512+36.36	2.79	419.50	174.80
512+63.03	4.25	803.45	605.00
513+00.00	16.86	1281.50	1233.30
513+43.03	3.66	825.28	1560.70
513+52.91	1.83	426.49	359.30
513+96.36	6.44	1762.93	1560.70
514+00.00	0.52	164.11	143.70
514+06.24	0.77	247.53	212.20
514+49.69	5.41	1688.55	1344.40
514+86.24	10.89	1253.37	673.30
515+00.00	13.76	417.34	80.40
515+12.91	40.10	358.49	0.00
515+29.69	81.85	405.10	0.00
516+00.00	376.83	1351.52	0.00
516+16.73	156.06	276.39	0.00
516+43.39	370.00	489.70	0.00
517+00.00	791.67	1105.38	0.00
517+23.39	379.07	468.77	0.00
517+76.73	1099.26	1297.91	0.00
517+95.68	460.93	567.92	0.00
518+00.00	132.50	156.30	0.00
518+30.06	800.56	951.39	0.00
518+56.68	657.41	838.89	125.00
518+97.34	1051.85	1405.26	407.40
519+00.00	78.89	107.73	31.10
519+10.06	262.96	367.19	100.00
519+38.01	736.30	1077.95	295.60
519+99.01	1604.07	2444.63	1061.90
520+00.00	26.30	40.50	24.30
520+19.34	464.44	777.45	460.90
521+00.00	1680.00	3360.75	975.00
522+00.00	1570.74	3045.37	0.00
522+93.14	1099.12	988.56	0.00
523+00.00	70.00	7.83	0.00
523+13.47	133.56	2.26	0.00
523+74.47	355.61	29.37	0.00
524+00.00	0.00	28.54	0.00

SB OFF RAMP

STA. 800+50 TO STA. 827+50

STATION	EXCAVATION COMMON CY	FILL CY
800+50.00	0.00	0.00
800+66.74	0.00	531.91
801+00.00	0.00	1832.42
801+27.74	0.00	2350.34
801+48.08	0.00	1885.19
802+00.00	0.00	5796.56
803+00.00	0.00	16145.37
803+18.21	5.53	3440.73
803+80.21	38.12	11239.45
804+00.00	12.30	3558.59
804+08.23	4.92	1378.70
804+21.55	7.99	2068.49
804+28.57	4.30	1026.69
804+62.88	20.90	4765.16
804+89.57	16.60	3759.10
805+00.00	6.76	1536.58
805+14.55	8.61	1958.24
805+30.23	9.84	2246.58
805+50.00	12.30	2810.81
805+70.90	12.91	3920.08
806+00.00	17.83	6143.06
806+31.90	19.67	5994.84
807+00.00	41.81	10907.83
808+00.00	61.48	11102.41
809+00.00	57.22	6475.19
809+28.17	15.61	1054.87
809+79.84	28.79	1169.23
810+00.00	21.59	249.30
810+21.17	49.89	219.84
810+62.50	219.73	355.86
811+00.00	385.98	258.61
811+24.50	342.09	143.29
812+00.00	1325.50	332.71
813+00.00	1045.37	377.78
813+56.00	63.99	285.91
814+00.00	32.92	229.94
815+00.00	247.41	401.11
815+25.84	105.56	78.56
816+00.00	212.92	219.44
816+05.84	5.69	13.38
816+59.18	52.90	139.80
817+00.00	23.76	127.25
817+12.51	4.09	48.51
817+92.51	36.44	608.15
818+00.00	4.06	85.08
818+19.18	16.04	201.29
818+22.14	3.69	31.69
818+48.81	32.60	217.73
819+00.00	72.80	181.52
819+28.81	135.18	9.02
819+82.14	706.00	0.00
820+00.00	318.33	0.00
820+35.47	434.97	0.00
821+00.00	280.34	106.29
821+15.47	16.97	46.58
822+00.00	97.12	275.15
823+00.00	114.81	335.93
824+00.00	115.56	292.78
825+00.00	134.44	296.48
826+00.00	125.93	227.78
827+00.00	107.59	64.81
827+50.00	63.24	0.00

SB ON RAMP

STA. 700+50 TO STA. 727+50

STATION	EXCAVATION COMMON CY	FILL CY
700+50.00	0.00	0.00
701+00.00	59.63	0.00
702+00.00	959.07	0.00
703+00.00	1834.26	0.00
704+00.00	1810.00	0.00
705+00.00	1894.26	0.00
706+00.00	1757.22	0.00
707+00.00	1000.00	0.00
708+00.00	393.33	0.00
709+00.00	201.67	13.70
710+00.00	402.78	13.70
711+00.00	559.63	18.52
712+00.00	638.15	55.37
712+24.00	206.62	21.20
712+43.12	172.51	12.70
713+00.00	520.18	9.92
713+23.12	198.74	1.24
713+76.45	395.24	2.94
714+00.00	162.09	1.02
714+29.78	210.44	1.22
715+00.00	638.94	1.43
715+09.78	114.98	0.00
715+36.45	367.85	0.00
715+41.17	83.43	0.00
715+67.84	482.11	0.00
716+00.00	574.81	0.00
716+47.84	687.11	0.00
717+00.00	441.52	16.76
717+01.17	3.09	0.65
717+54.50	86.37	98.34
718+00.00	12.01	190.47
718+34.50	9.13	190.84
719+00.00	24.06	373.64
720+00.00	62.96	853.70
720+69.11	49.71	826.85
721+00.00	25.78	486.76
721+30.95	29.91	552.03
721+72.18	78.28	594.50
722+00.00	83.69	273.93
722+13.40	52.70	99.50
722+73.18	237.44	413.33
723+00.00	78.45	216.70
723+26.69	110.90	224.55
723+86.47	222.67	405.11
724+00.00	39.39	61.68
724+27.69	254.00	82.70
724+68.92	764.42	82.30
725+00.00	685.39	52.44
725+30.75	516.95	56.60
726+00.00	873.11	753.25
726+50.00	348.43	1116.85
727+00.00	120.28	650.65
727+50.00	653.98	21.57

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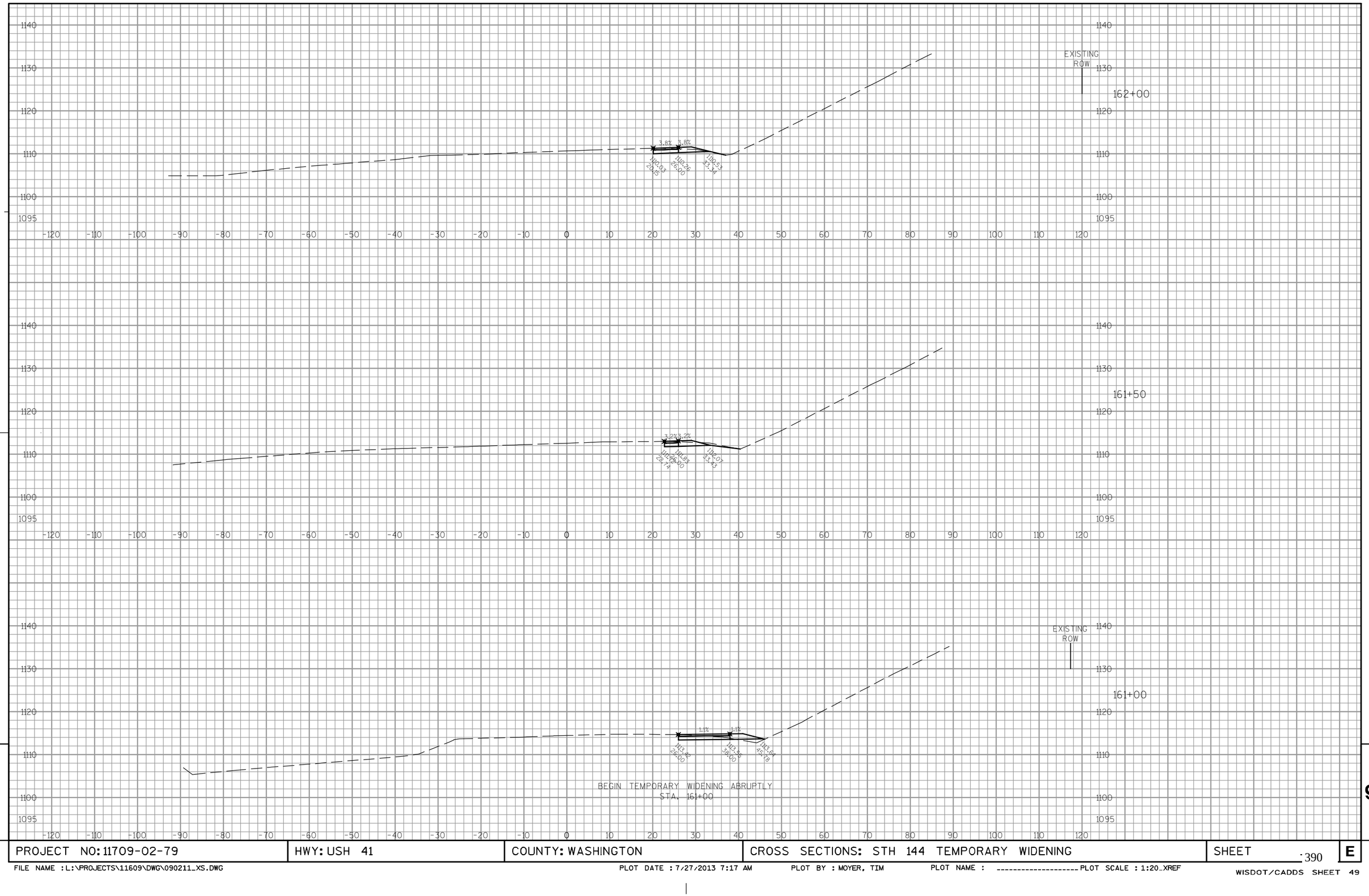

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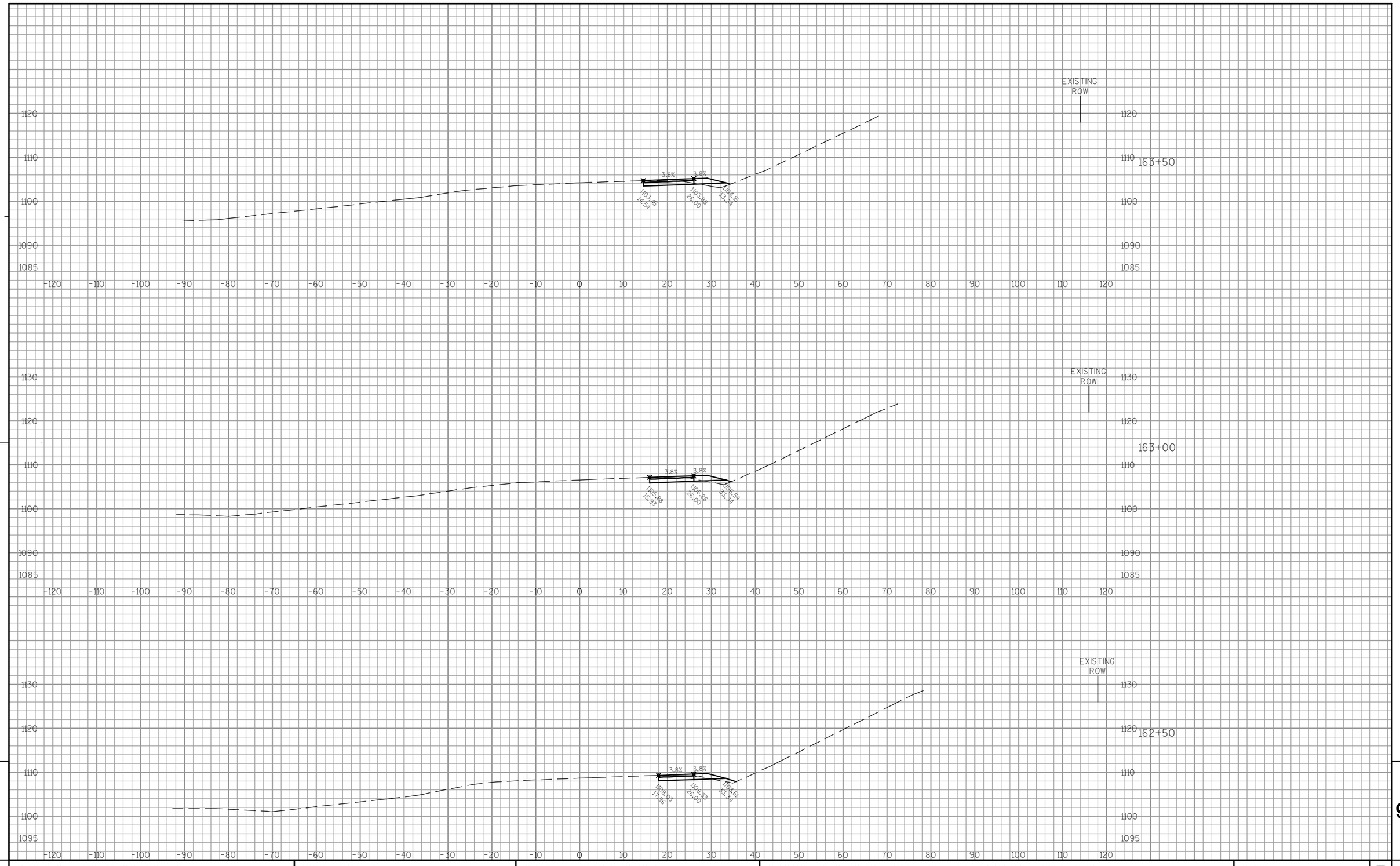
WISDOT/CADDS SHEET 49



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PROJECT NO: 11709-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144 TEMPORARY WIDENING	SHEET	E

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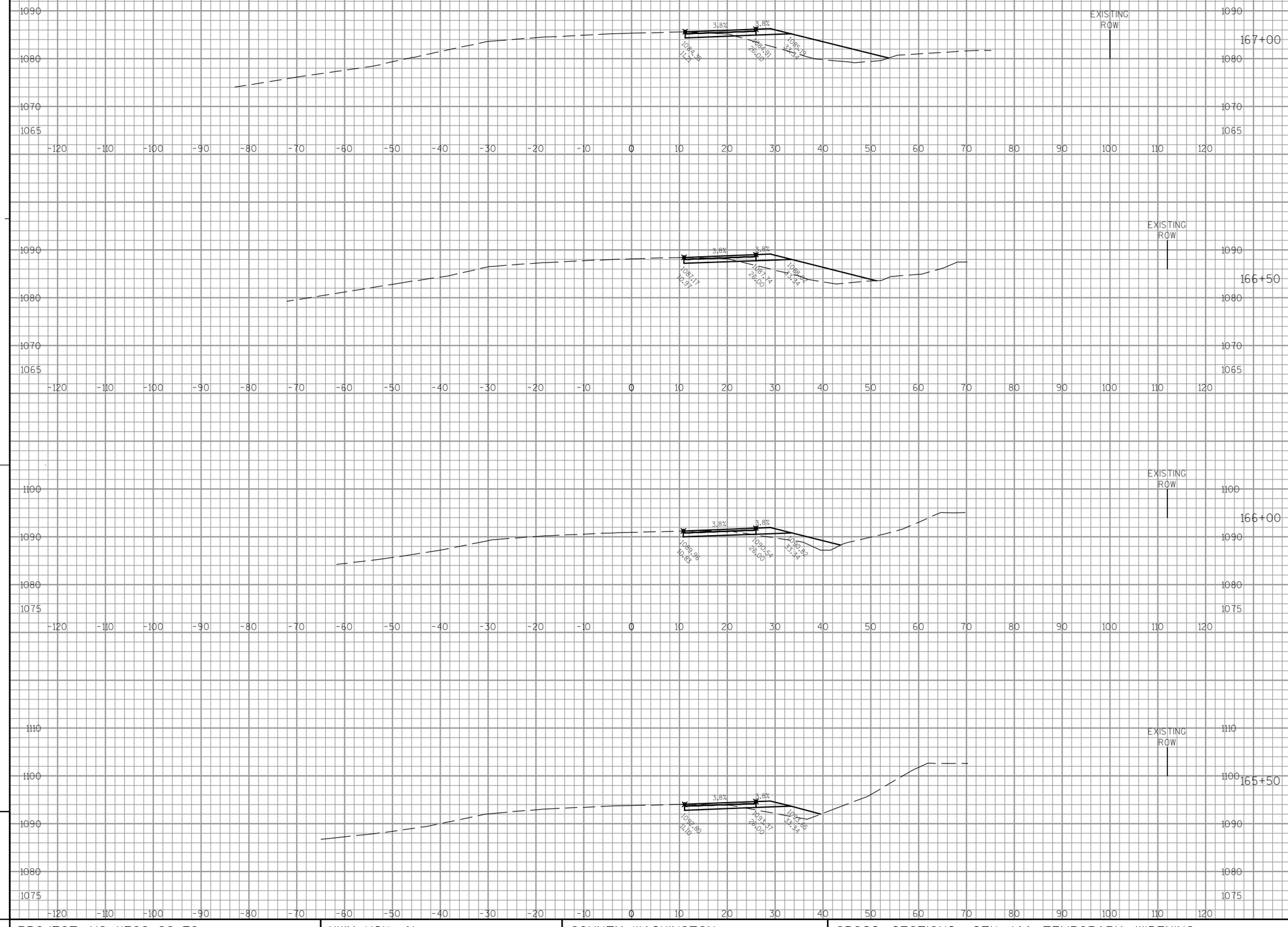

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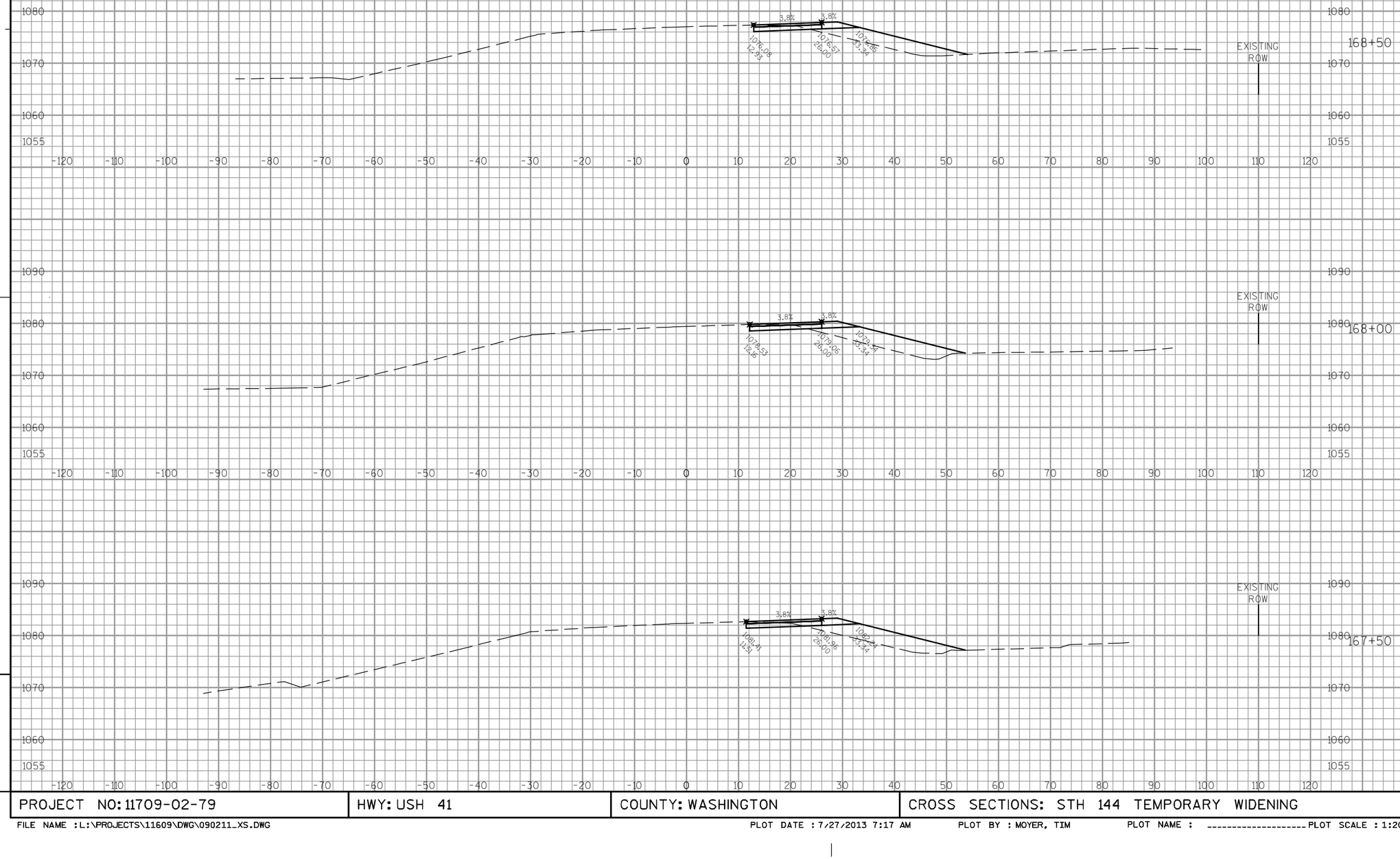

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PROJECT NO: 11709-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144 TEMPORARY WIDENING	SHEET	E

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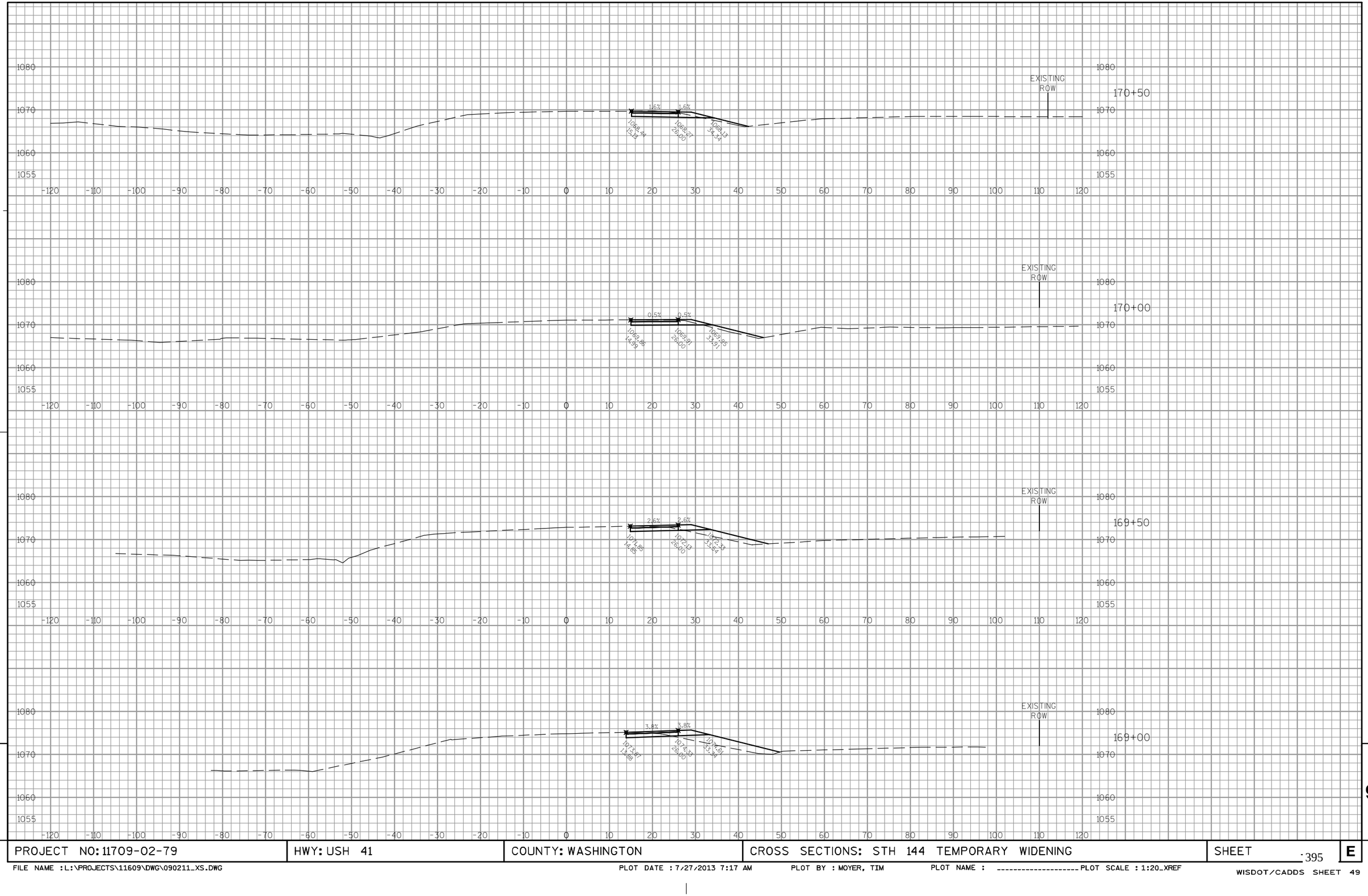

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PROJECT NO: 11709-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144 TEMPORARY WIDENING	SHEET	E

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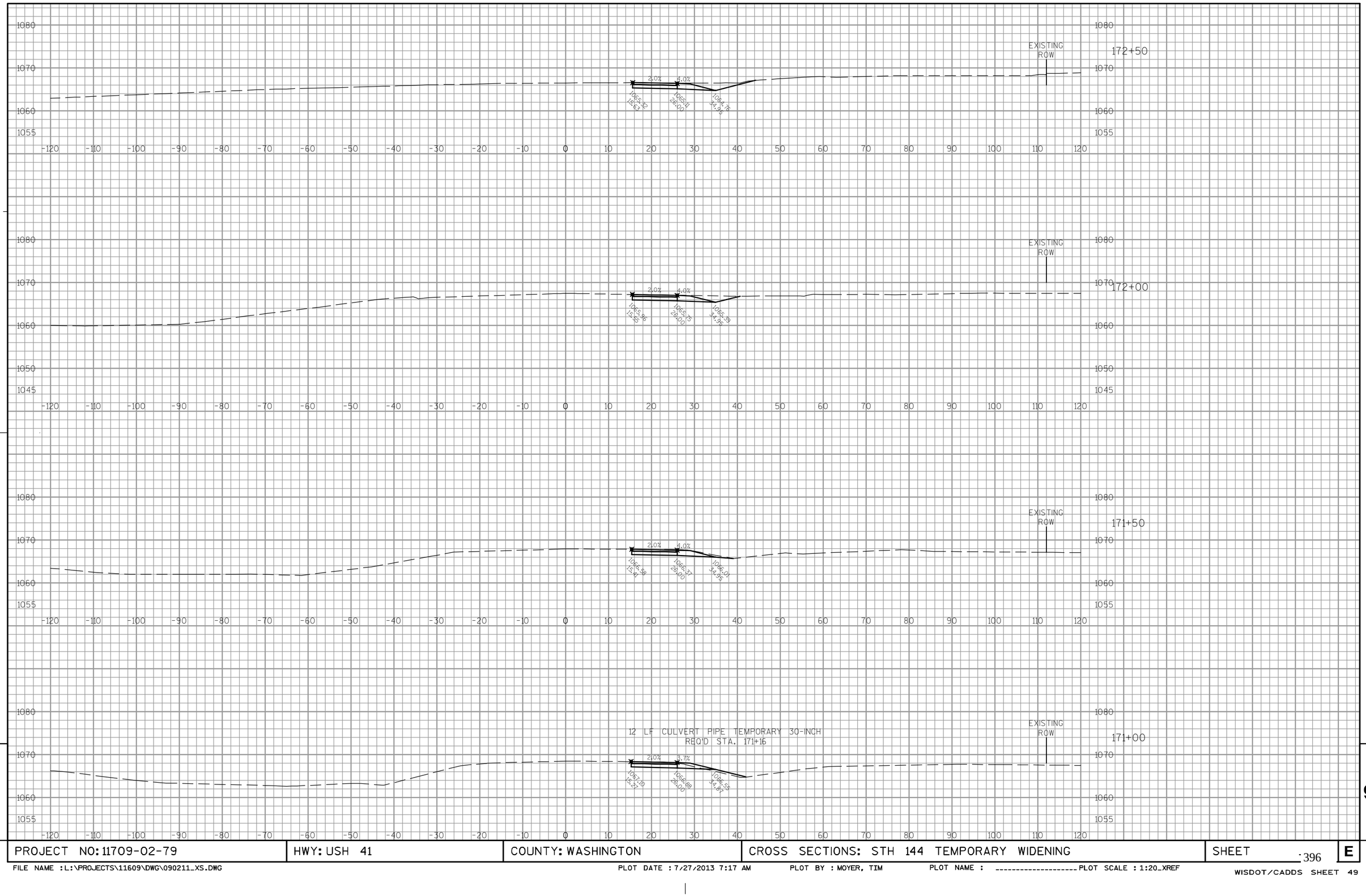

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PROJECT NO: 11709-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144 TEMPORARY WIDENING	SHEET	E

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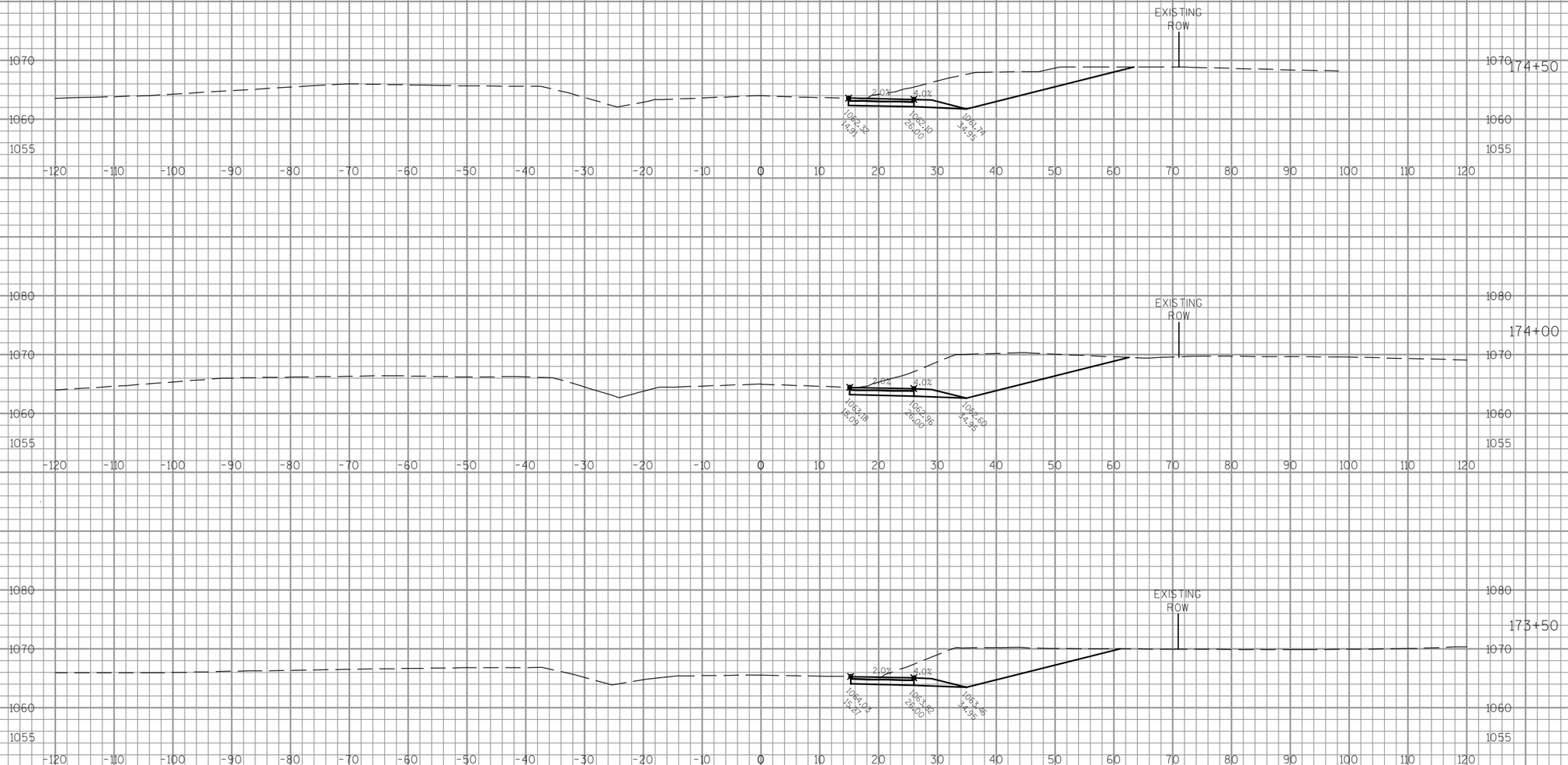

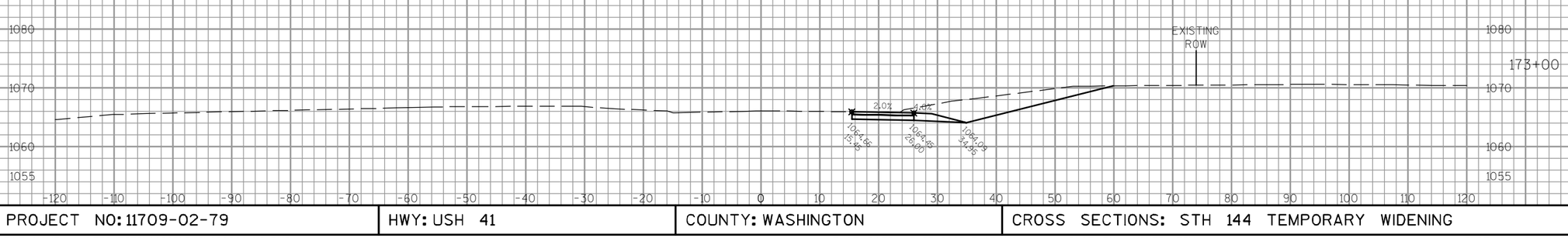

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PROJECT NO: 11709-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144 TEMPORARY WIDENING	SHEET	E

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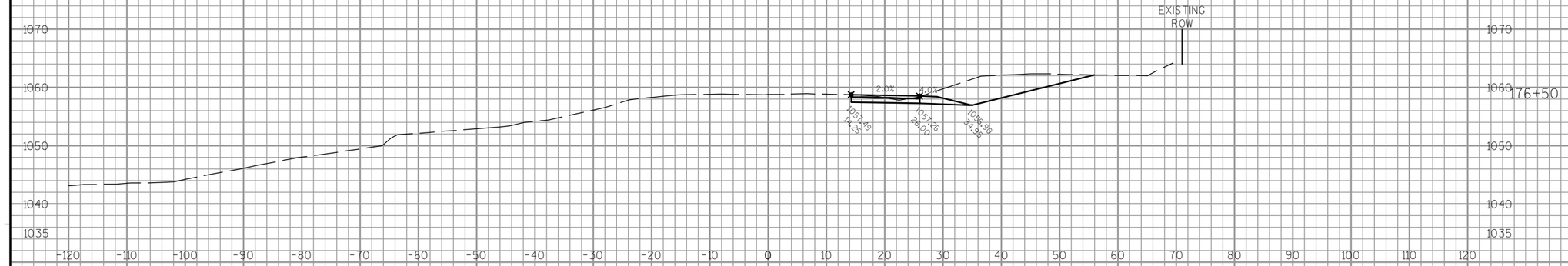
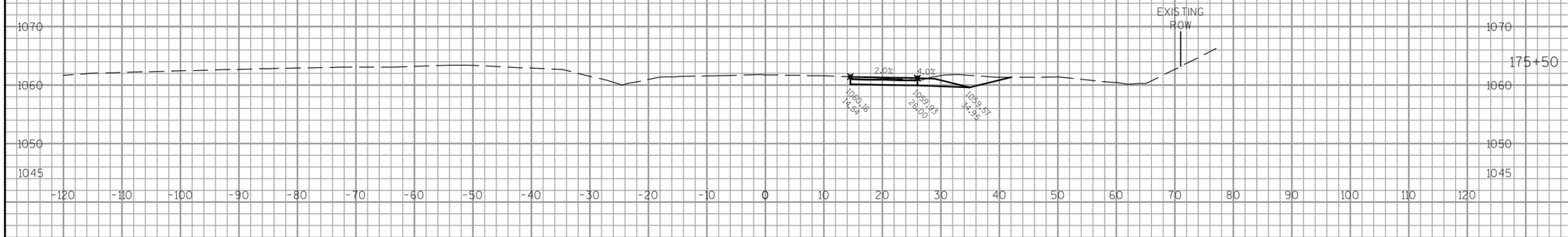
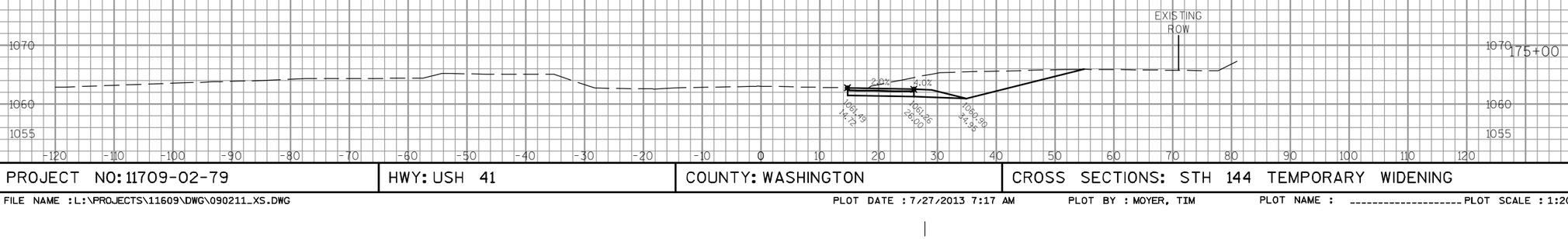
WISDOT/CADDS SHEET 49







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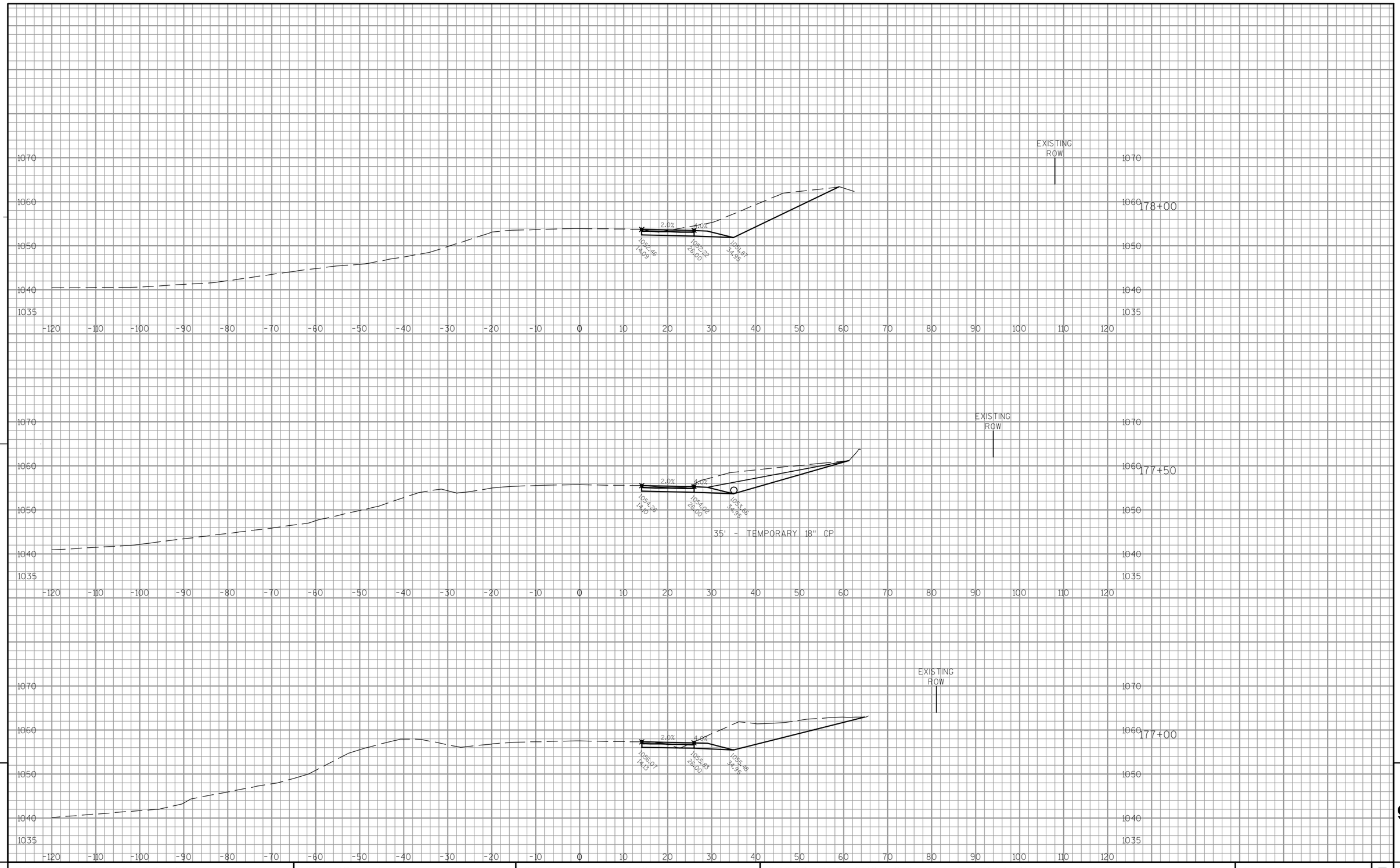
PROJECT NO: 11709-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144 TEMPORARY WIDENING	SHEET	E

FILE NAME :L:\PROJECTS\11609\DWG\090211_XS.DWG PLOT DATE : 7/27/2013 7:17 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



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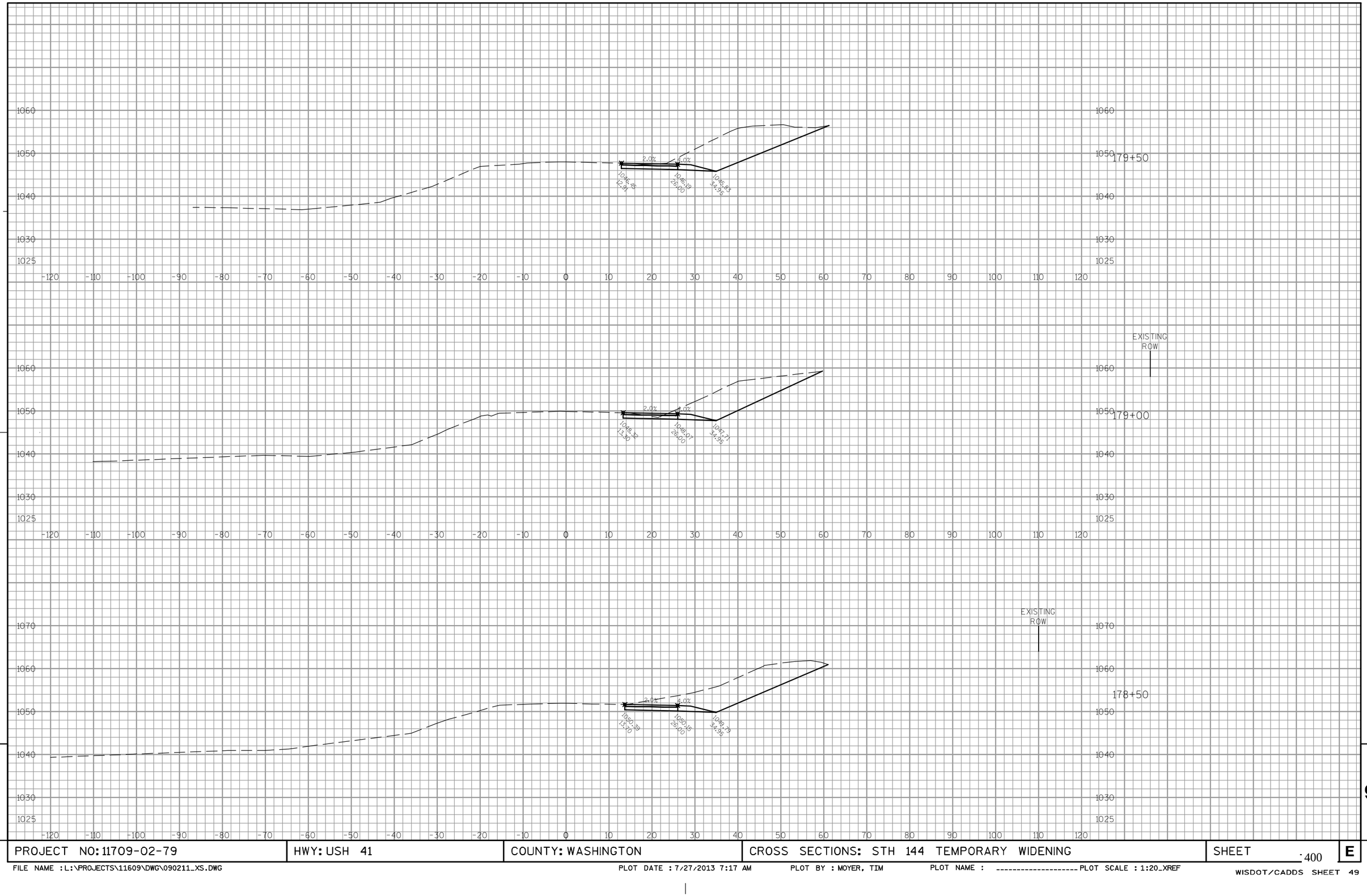
PROJECT NO: 11709-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144 TEMPORARY WIDENING	SHEET	E

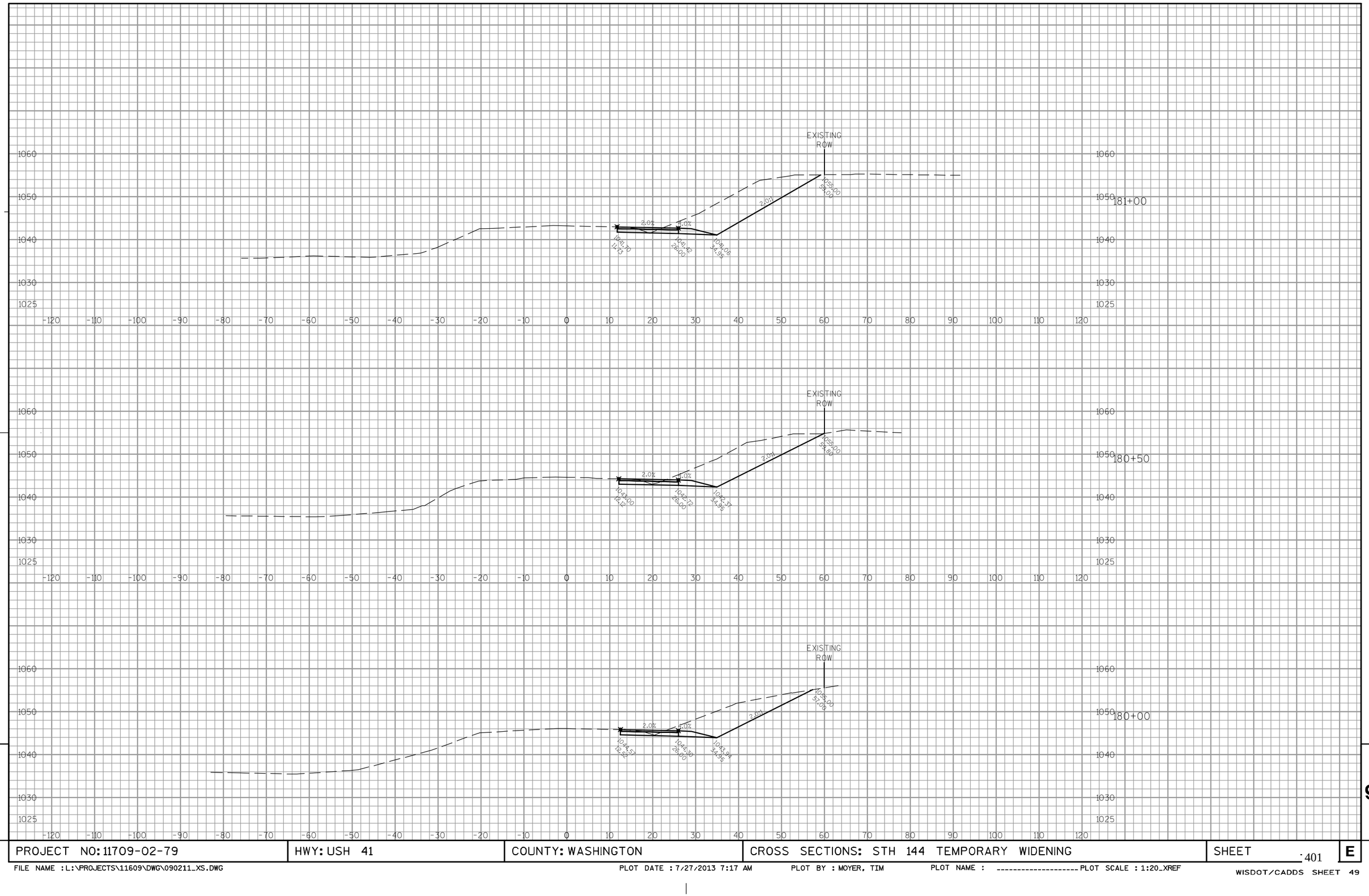
FILE NAME : L:\PROJECTS\11609\DWG\090211_XS.DWG PLOT DATE : 7/27/2013 7:17 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF



PROJECT NO: 11709-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144 TEMPORARY WIDENING	SHEET 400 E

FILE NAME : L:\PROJECTS\11609\DWG\090211_XS.DWG PLOT DATE : 7/27/2013 7:17 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



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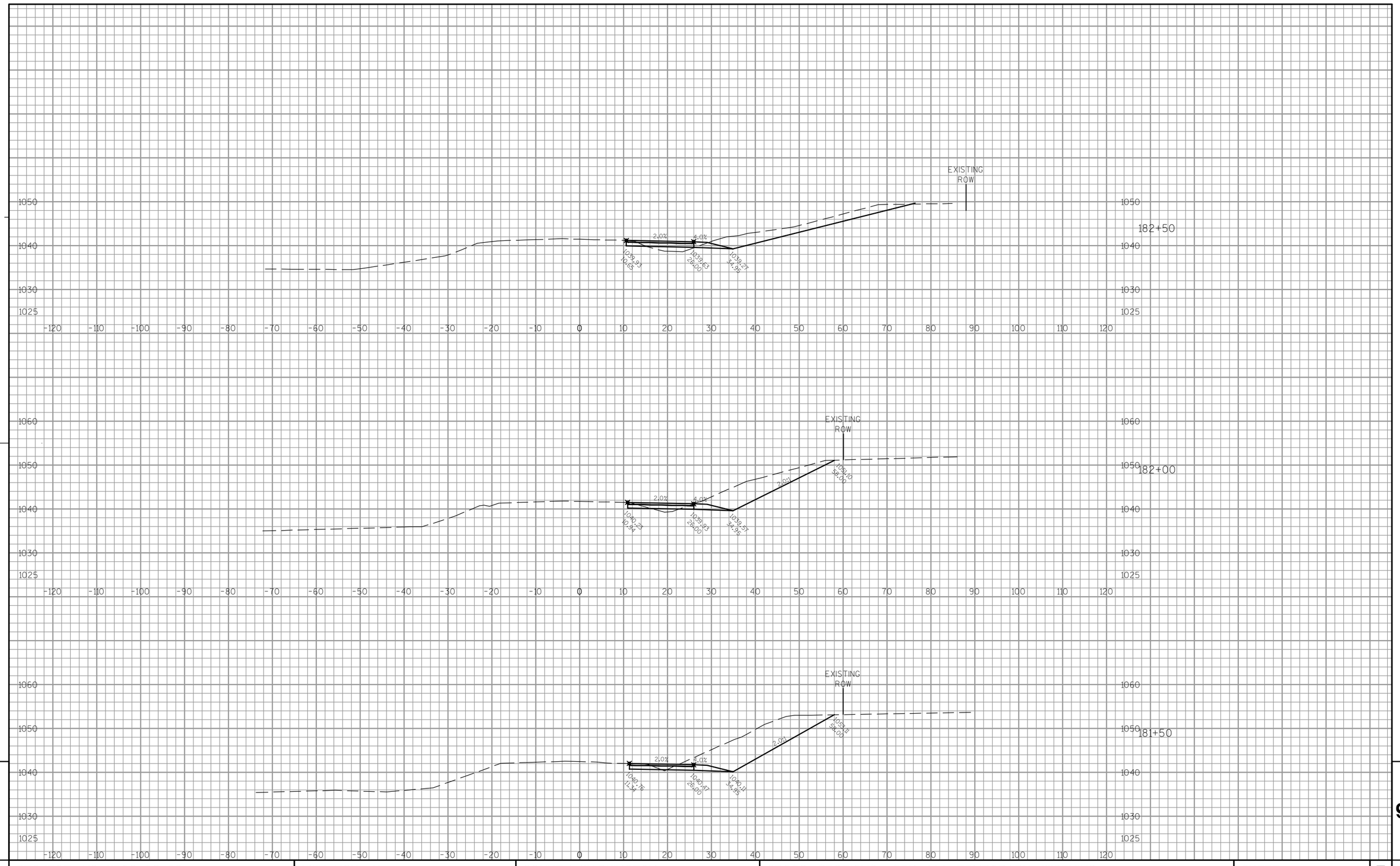
PROJECT NO: 11709-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144 TEMPORARY WIDENING	SHEET	E

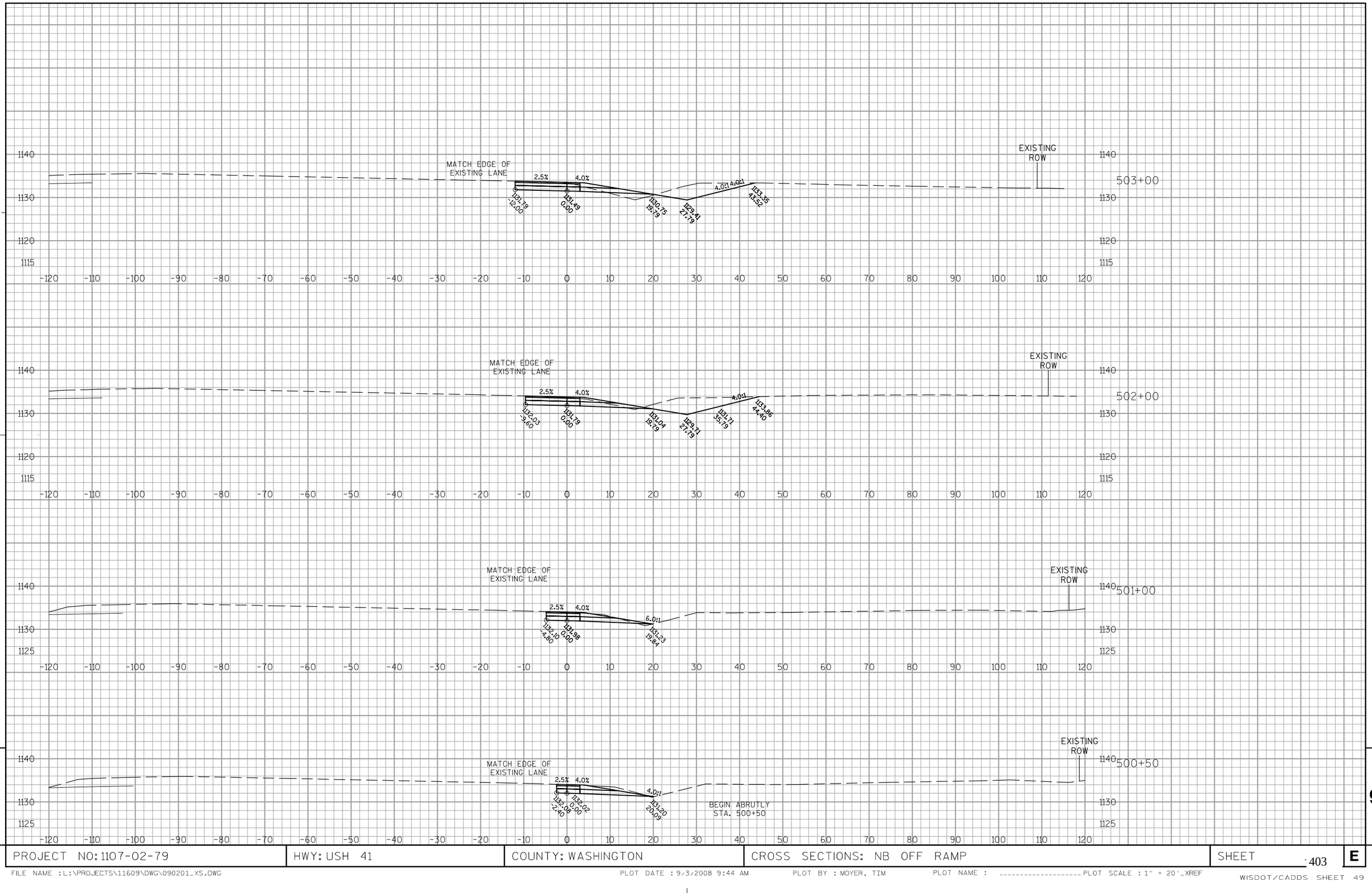
FILE NAME : L:\PROJECTS\11609\DWG\090211_XS.DWG PLOT DATE : 7/27/2013 7:17 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF



PROJECT NO: 11709-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144 TEMPORARY WIDENING	SHEET 402	E

FILE NAME : L:\PROJECTS\11609\DWG\090211_XS.DWG PLOT DATE : 7/27/2013 7:17 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



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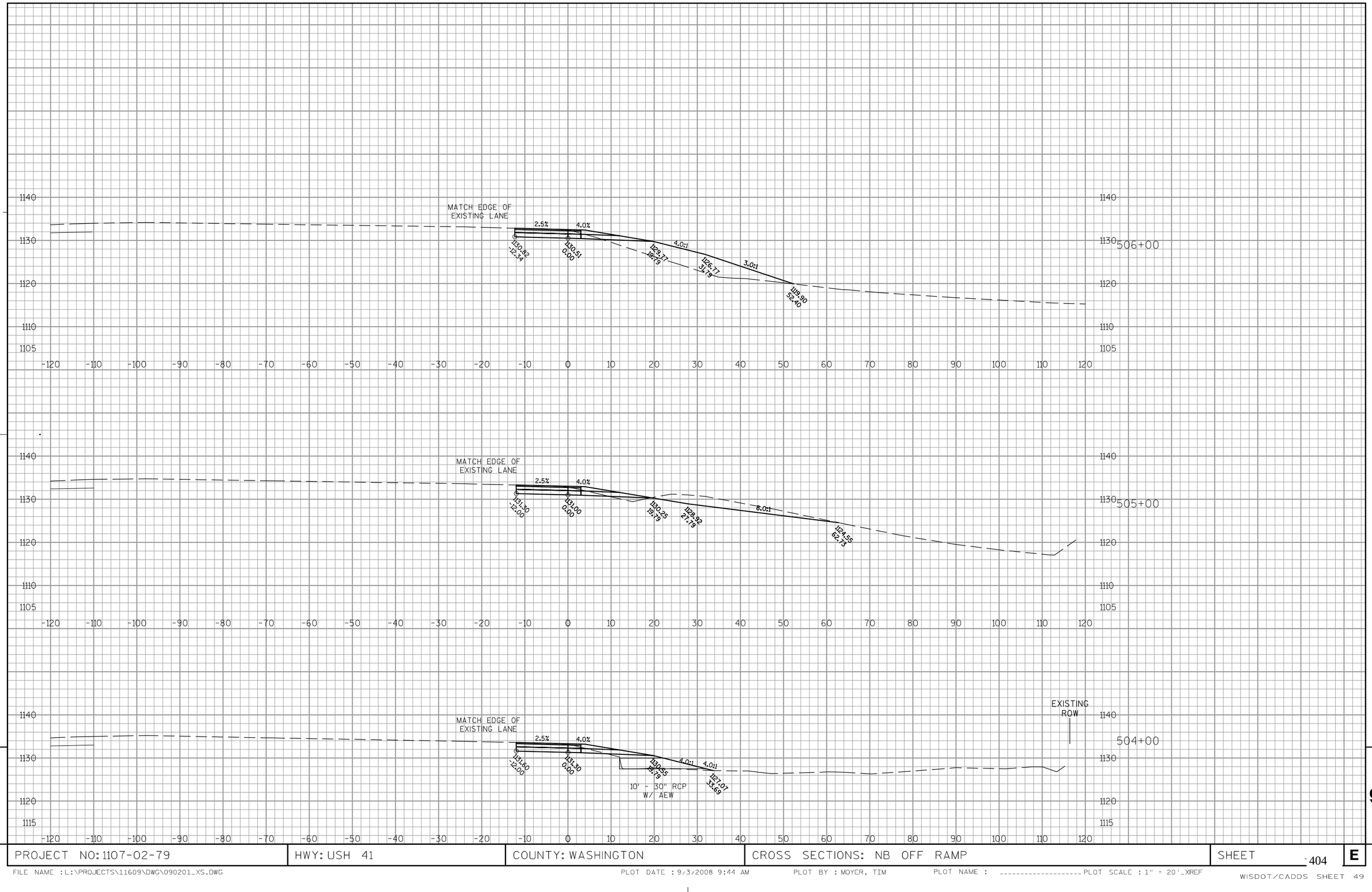
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NB OFF RAMP	SHEET 403	E



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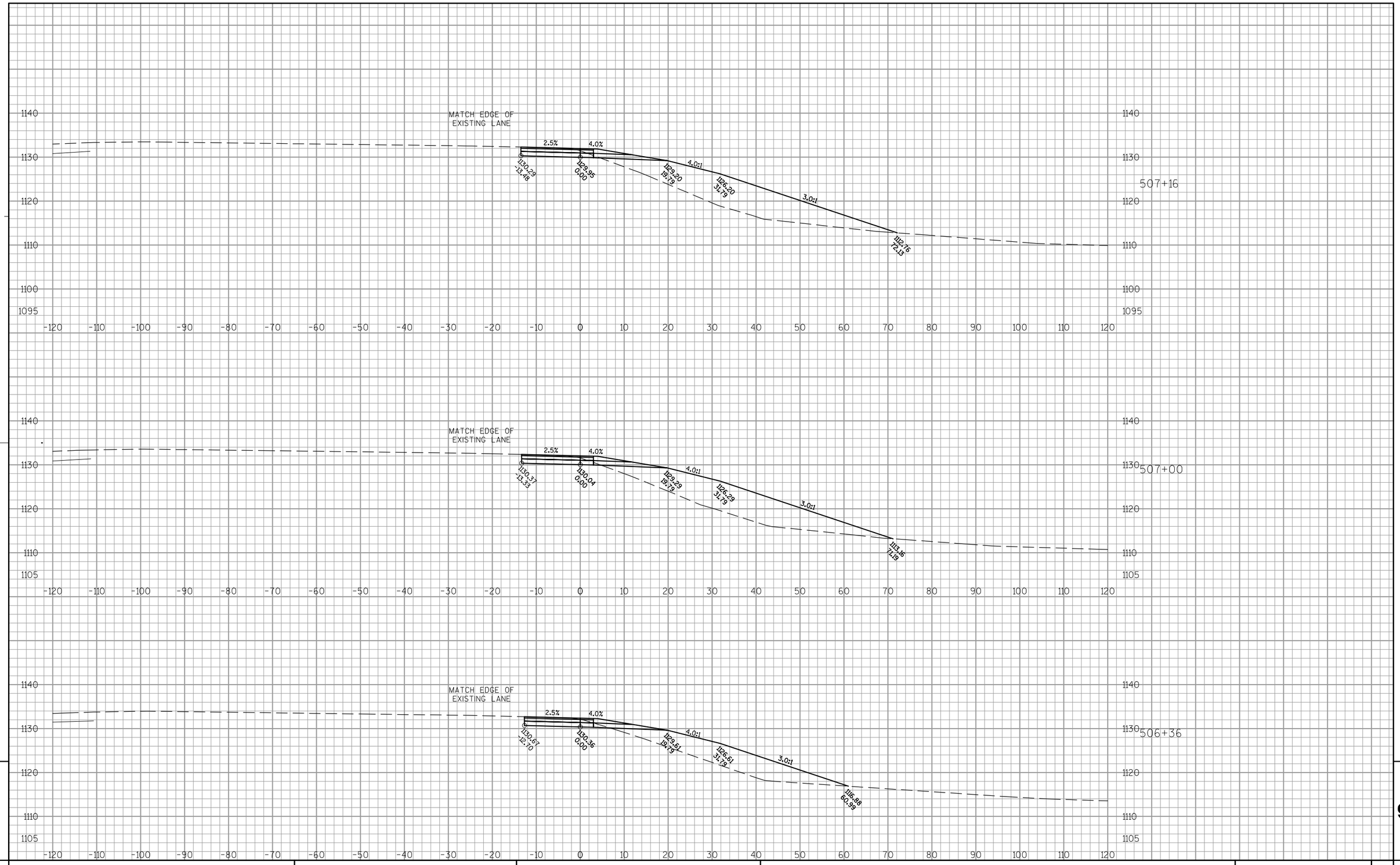
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NB OFF RAMP	SHEET 404	E

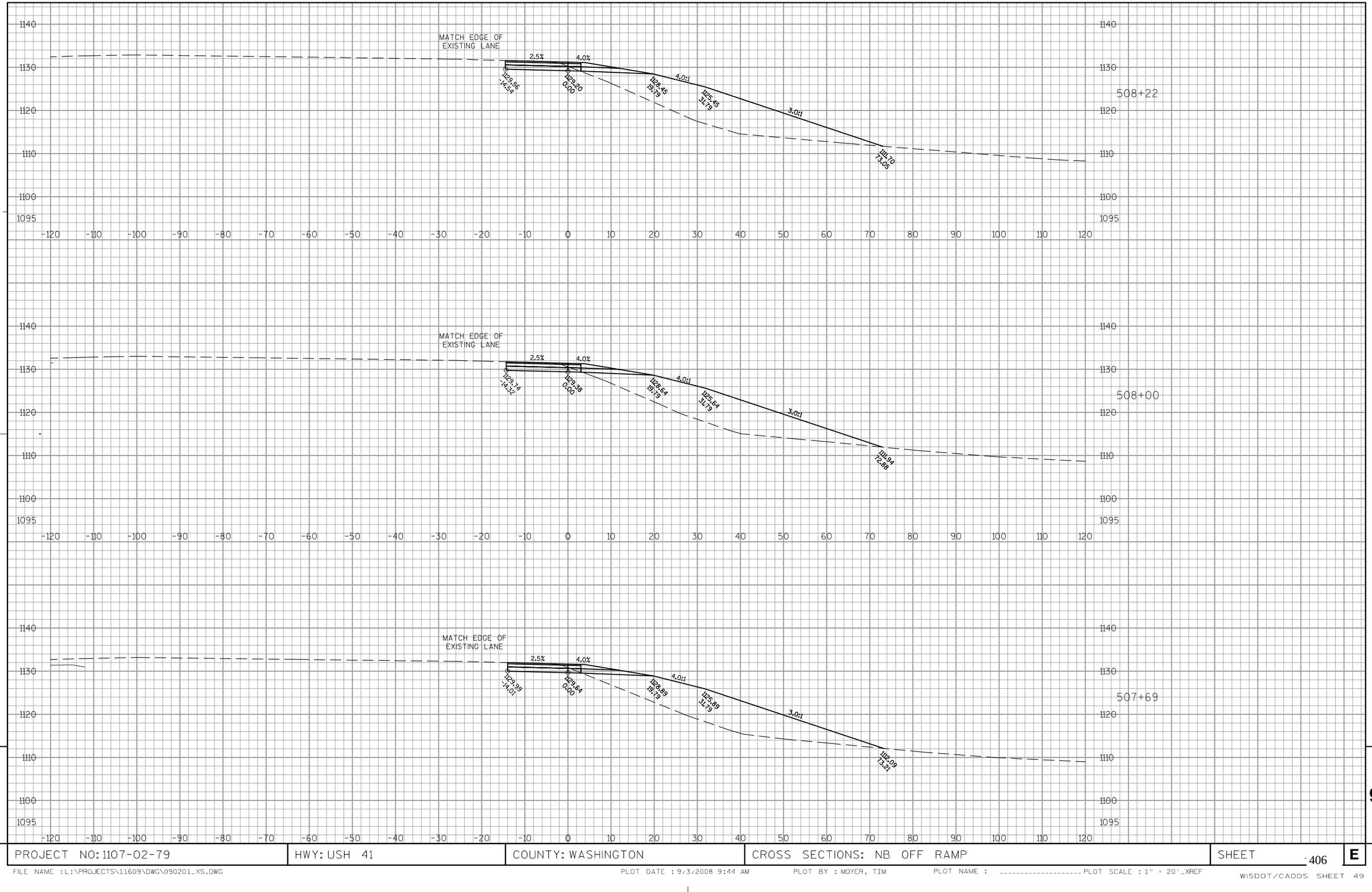
FILE NAME : L:\PROJECTS\11609\DWG\090201_XS.DWG PLOT DATE : 9/3/2008 9:44 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NB OFF RAMP	SHEET 405 E

FILE NAME : L:\PROJECTS\11609\DWG\090201_XS.DWG PLOT DATE : 9/3/2008 9:44 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF



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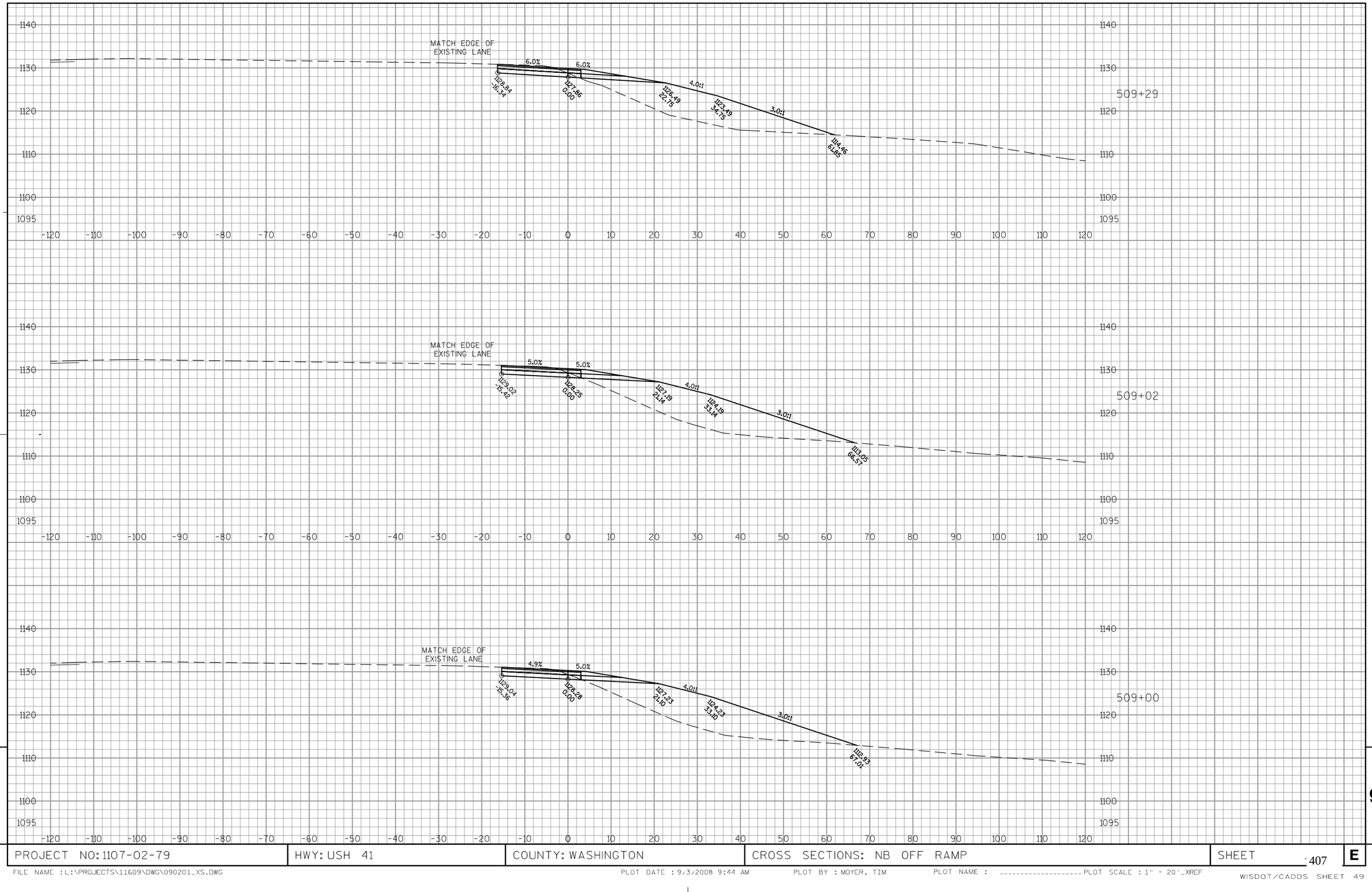
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NB OFF RAMP	SHEET 406	E



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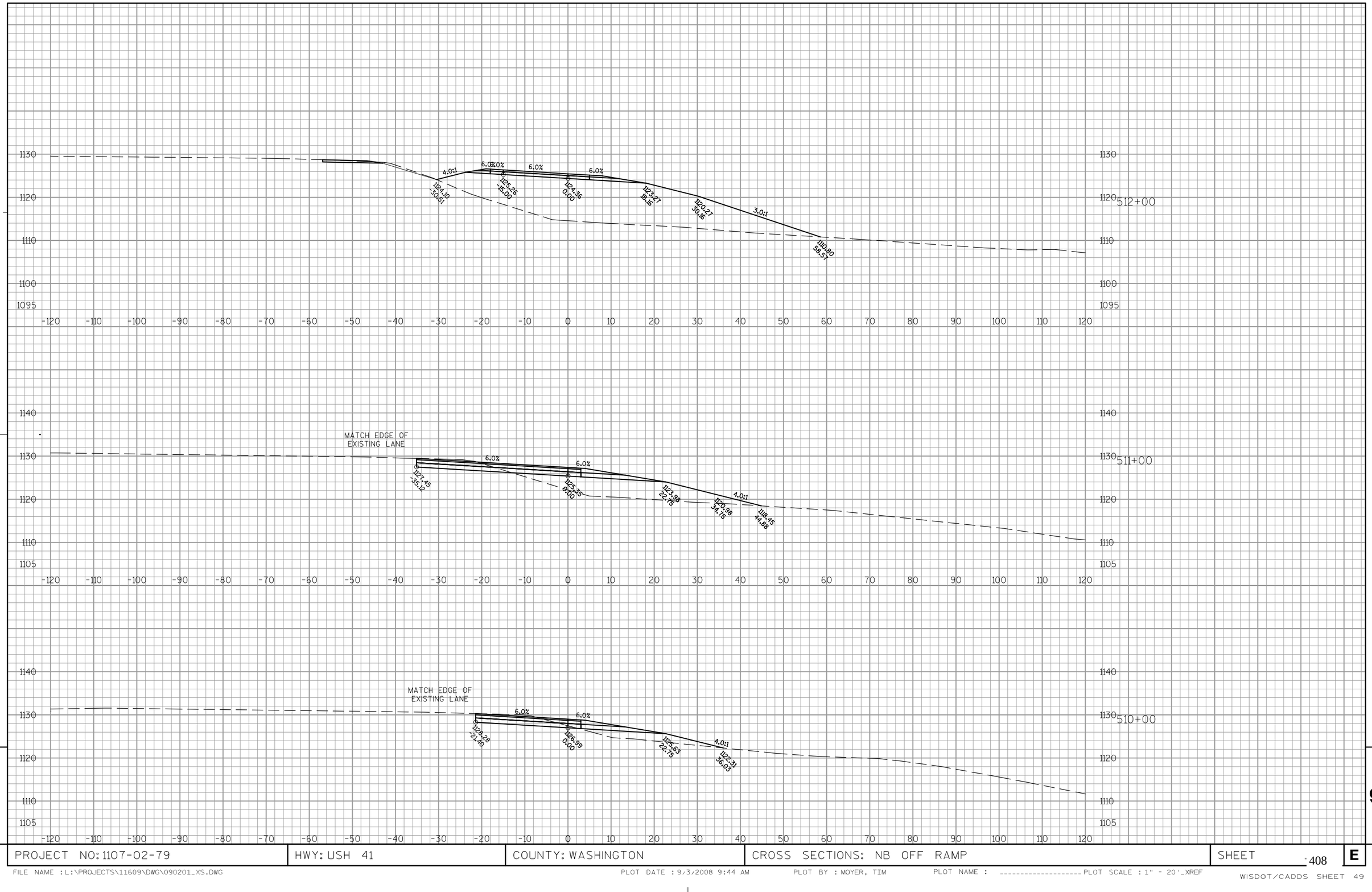
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NB OFF RAMP	SHEET 407	E

FILE NAME : L:\PROJECTS\11609\DWG\090201_XS.DWG PLOT DATE : 9/3/2008 9:44 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NB OFF RAMP	SHEET 408 E

FILE NAME : L:\PROJECTS\11609\DWG\090201_XS.DWG PLOT DATE : 9/3/2008 9:44 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49

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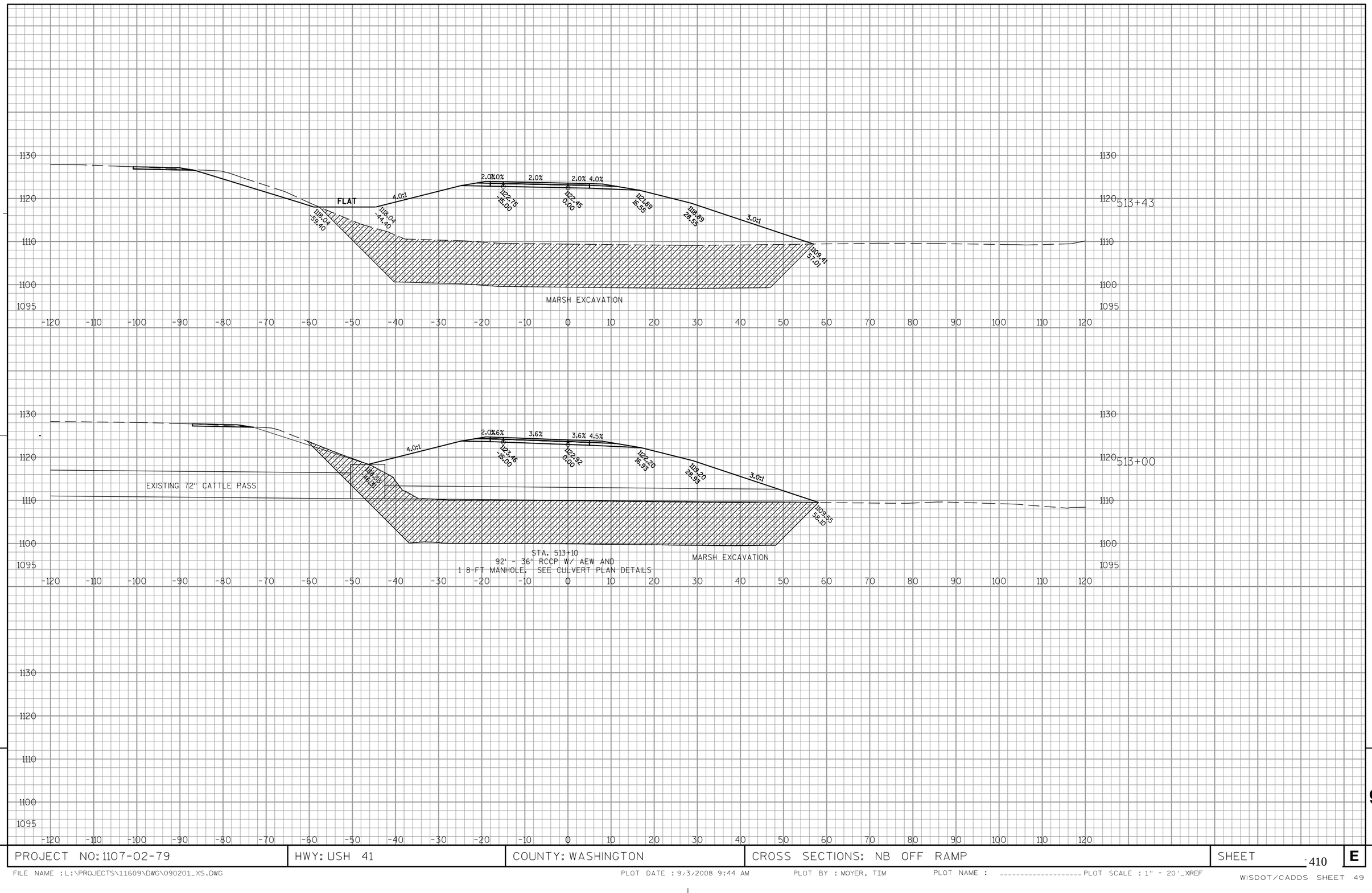
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NB OFF RAMP	SHEET 409	E

FILE NAME : L:\PROJECTS\11609\DWG\090201_XS.DWG PLOT DATE : 9/3/2008 9:44 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NB OFF RAMP	SHEET 410 E

FILE NAME : L:\PROJECTS\11609\DWG\090201_XS.DWG PLOT DATE : 9/3/2008 9:44 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49

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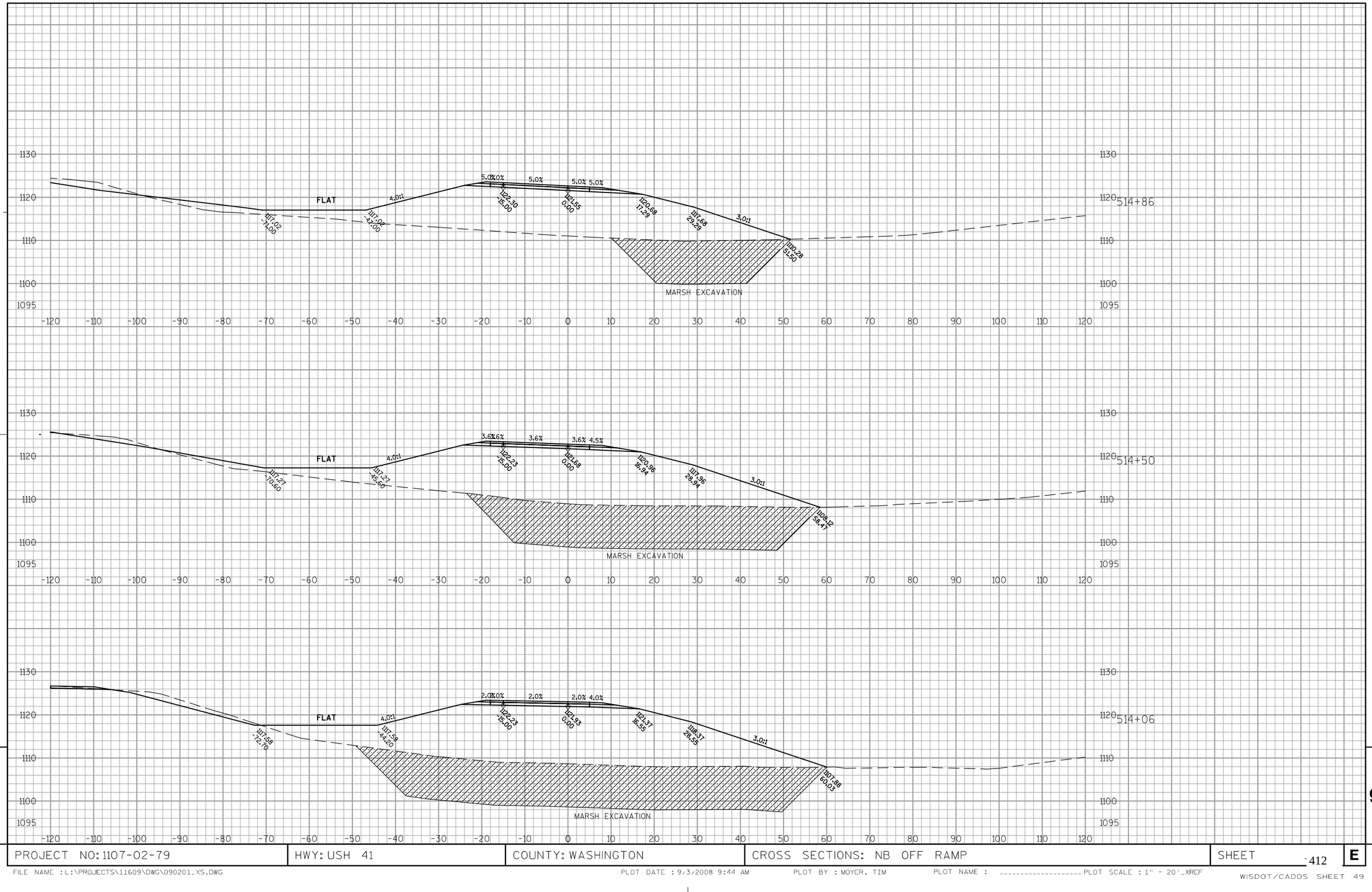
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NB OFF RAMP	SHEET 411	E

FILE NAME : L:\PROJECTS\11609\DWG\090201_XS.DWG PLOT DATE : 9/3/2008 9:44 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



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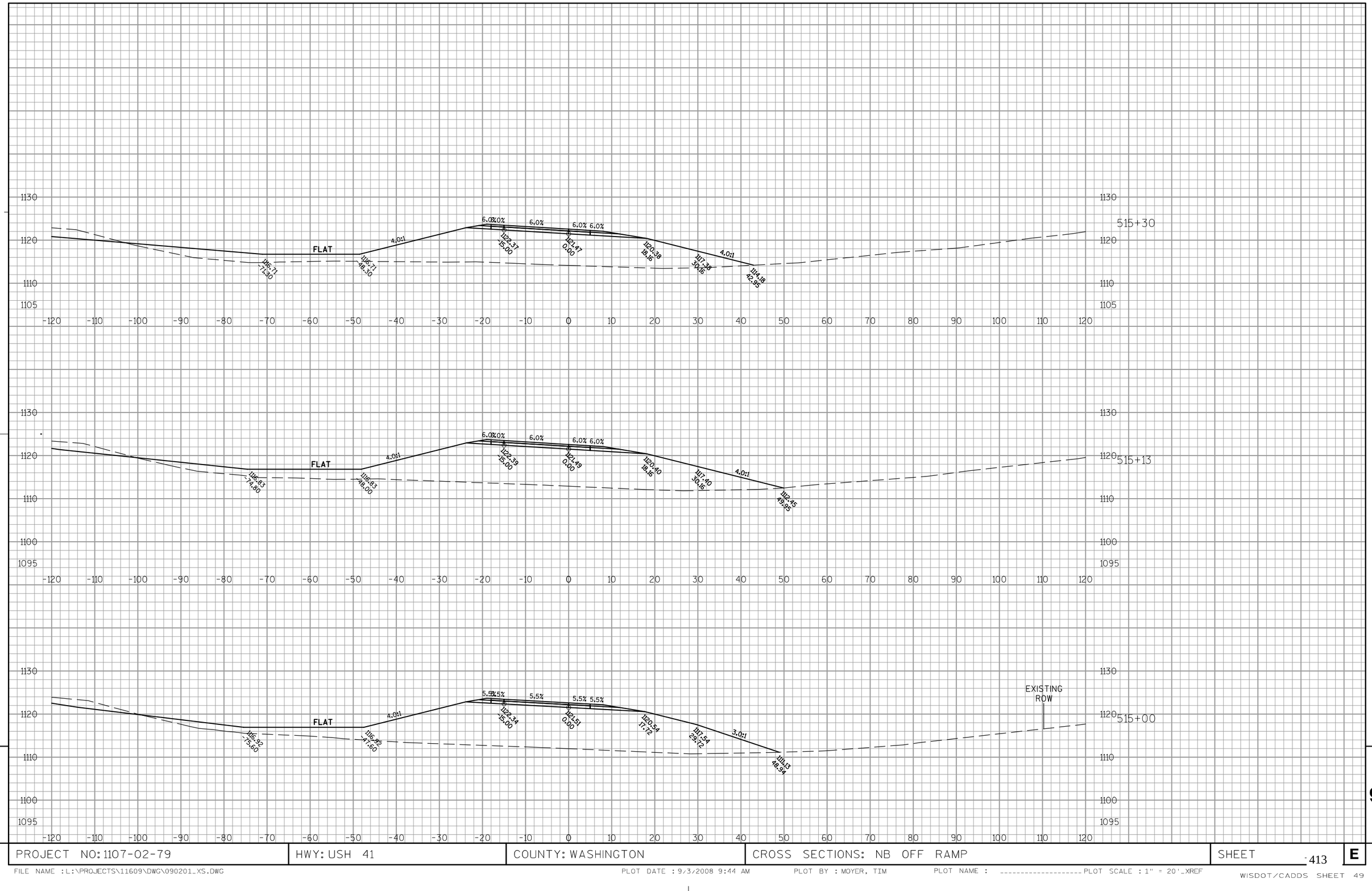
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NB OFF RAMP	SHEET 412	E

FILE NAME : L:\PROJECTS\11609\DWG\090201_XS.DWG PLOT DATE : 9/3/2008 9:44 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF

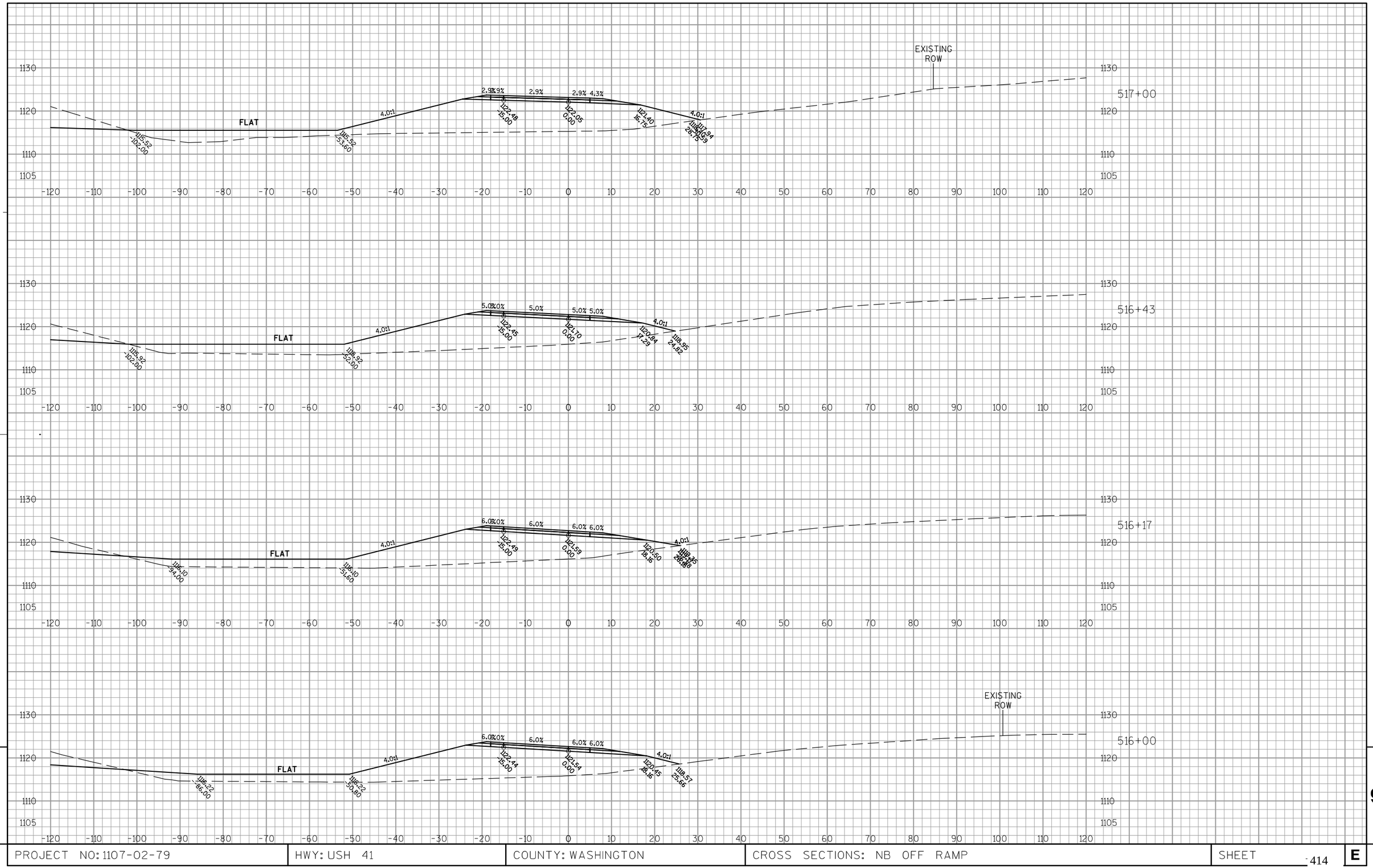
WISDOT/CADDS SHEET 49



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NB OFF RAMP	SHEET 413 E

FILE NAME : L:\PROJECTS\11609\DWG\090201_XS.DWG PLOT DATE : 9/3/2008 9:44 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF

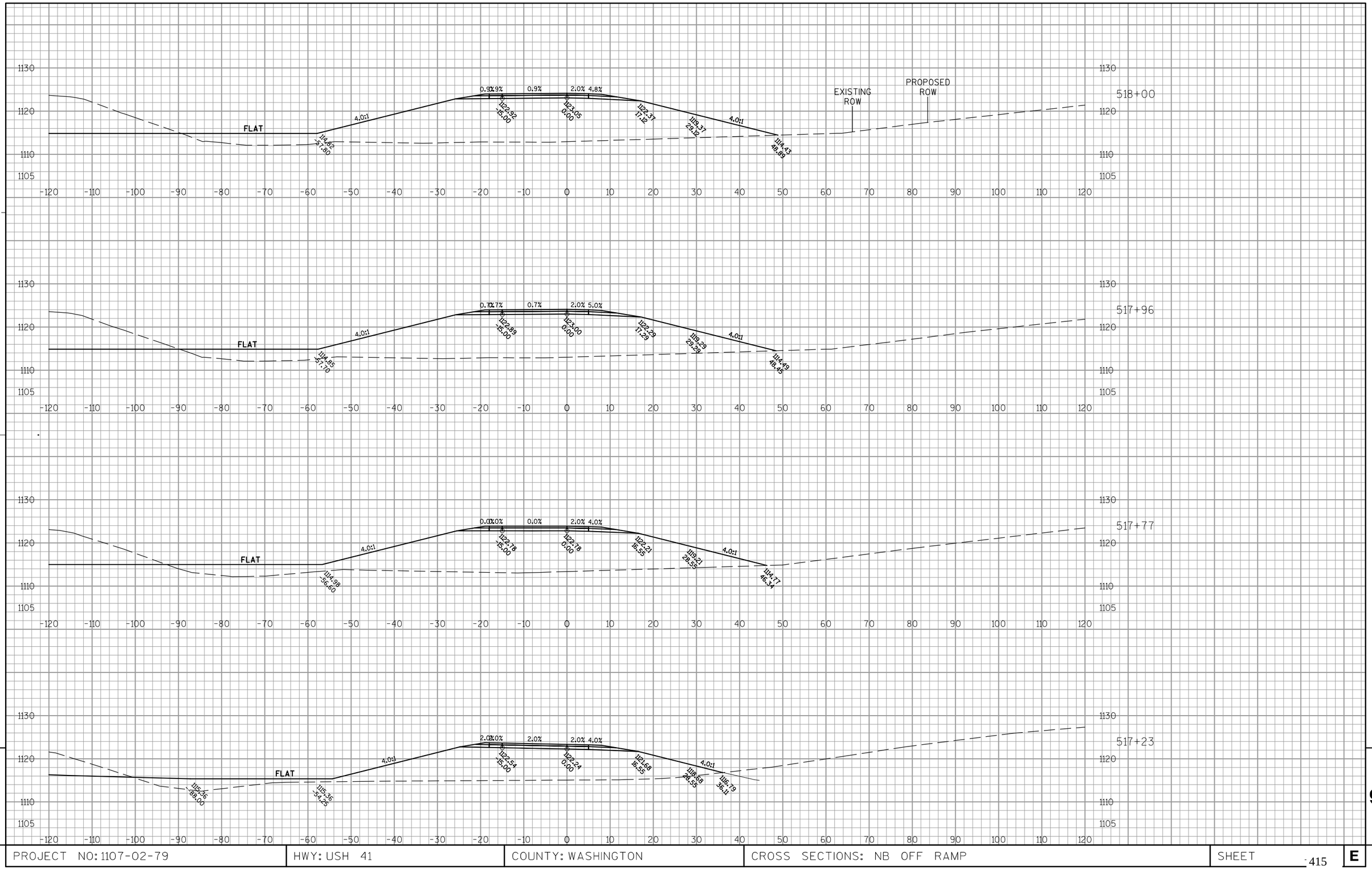
WISDOT/CADDS SHEET 49



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NB OFF RAMP	SHEET 414 E

FILE NAME : L:\PROJECTS\11609\DWG\090201_XS.DWG PLOT DATE : 9/3/2008 9:44 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



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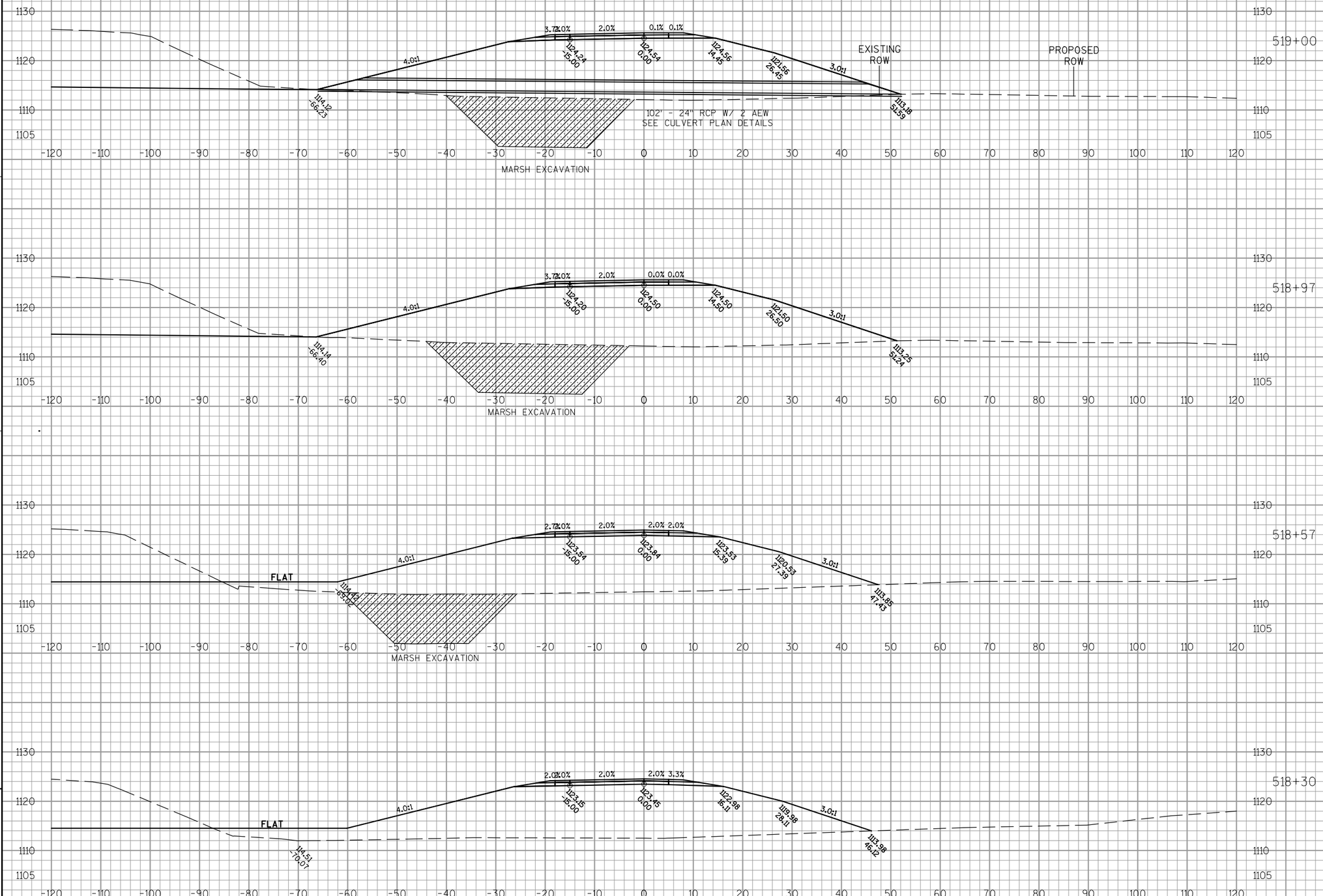
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NB OFF RAMP	SHEET 415	E

FILE NAME : L:\PROJECTS\11609\DWG\090201_XS.DWG PLOT DATE : 9/3/2008 9:44 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF

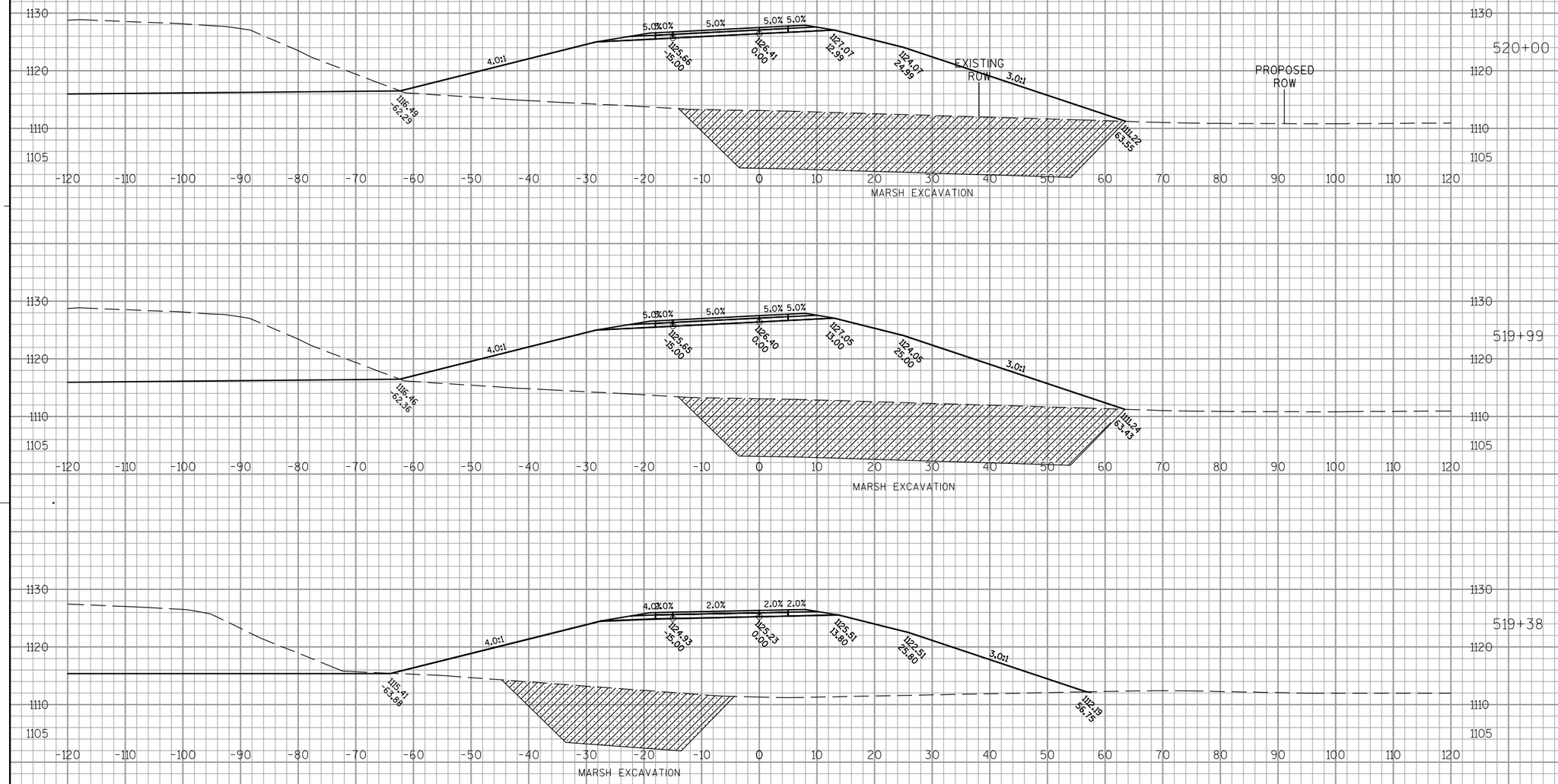
WISDOT/CADDS SHEET 49



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NB OFF RAMP	SHEET 416 E

FILE NAME : L:\PROJECTS\11609\DWG\090201_XS.DWG PLOT DATE : 9/3/2008 9:44 AM PLOT BY : MOYER, TIM PLOT NAME : _____ PLOT SCALE : 1" = 20'_XREF

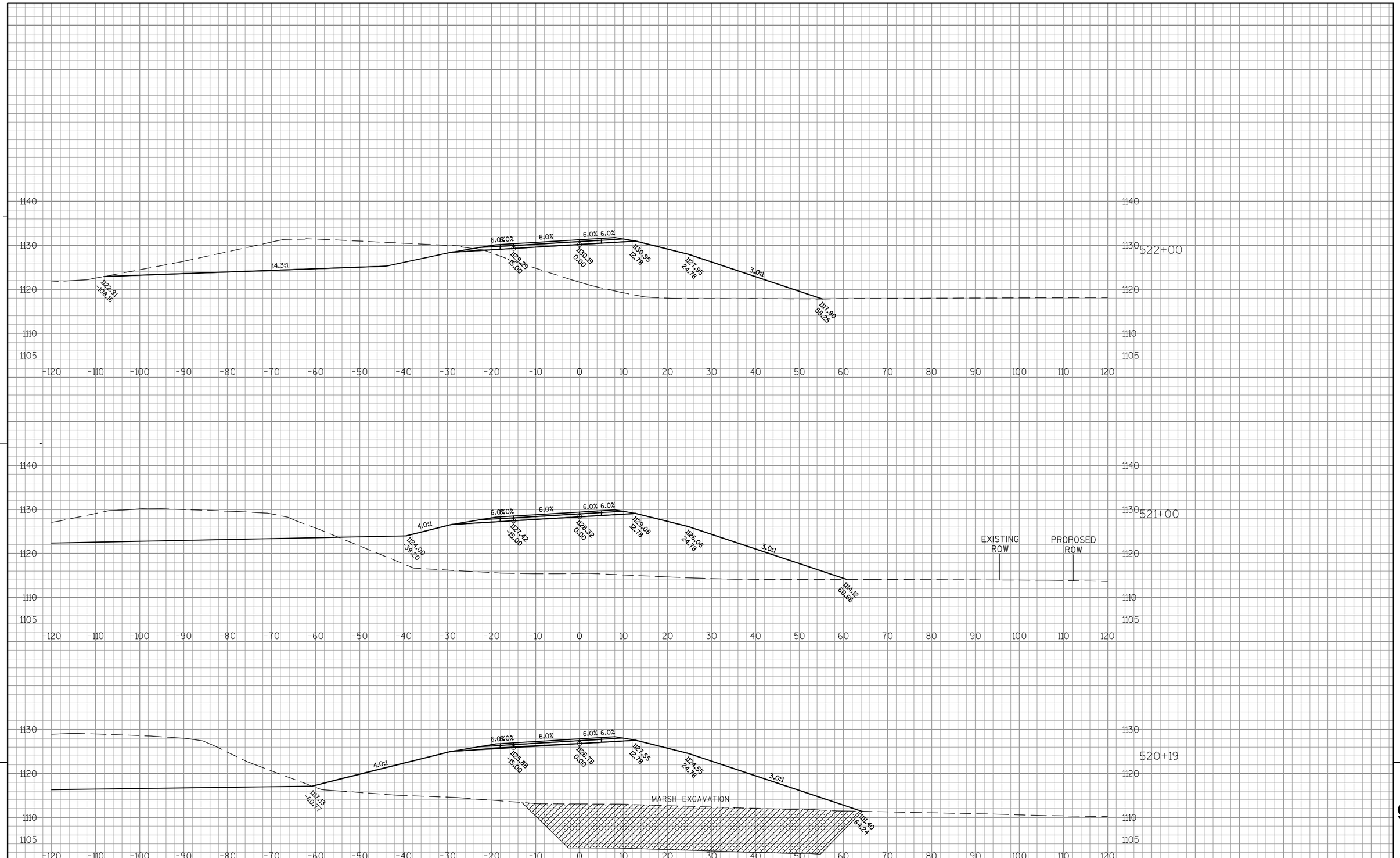
WISDOT/CADDS SHEET 49



PROJECT NO: 1107-02-79	HWY: USH 41	MARSH EXCAVATION	COUNTY: WASHINGTON	CROSS SECTIONS: NB OFF RAMP	SHEET 417 E

FILE NAME : L:\PROJECTS\11609\DWG\090201_XS.DWG PLOT DATE : 9/3/2008 9:44 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



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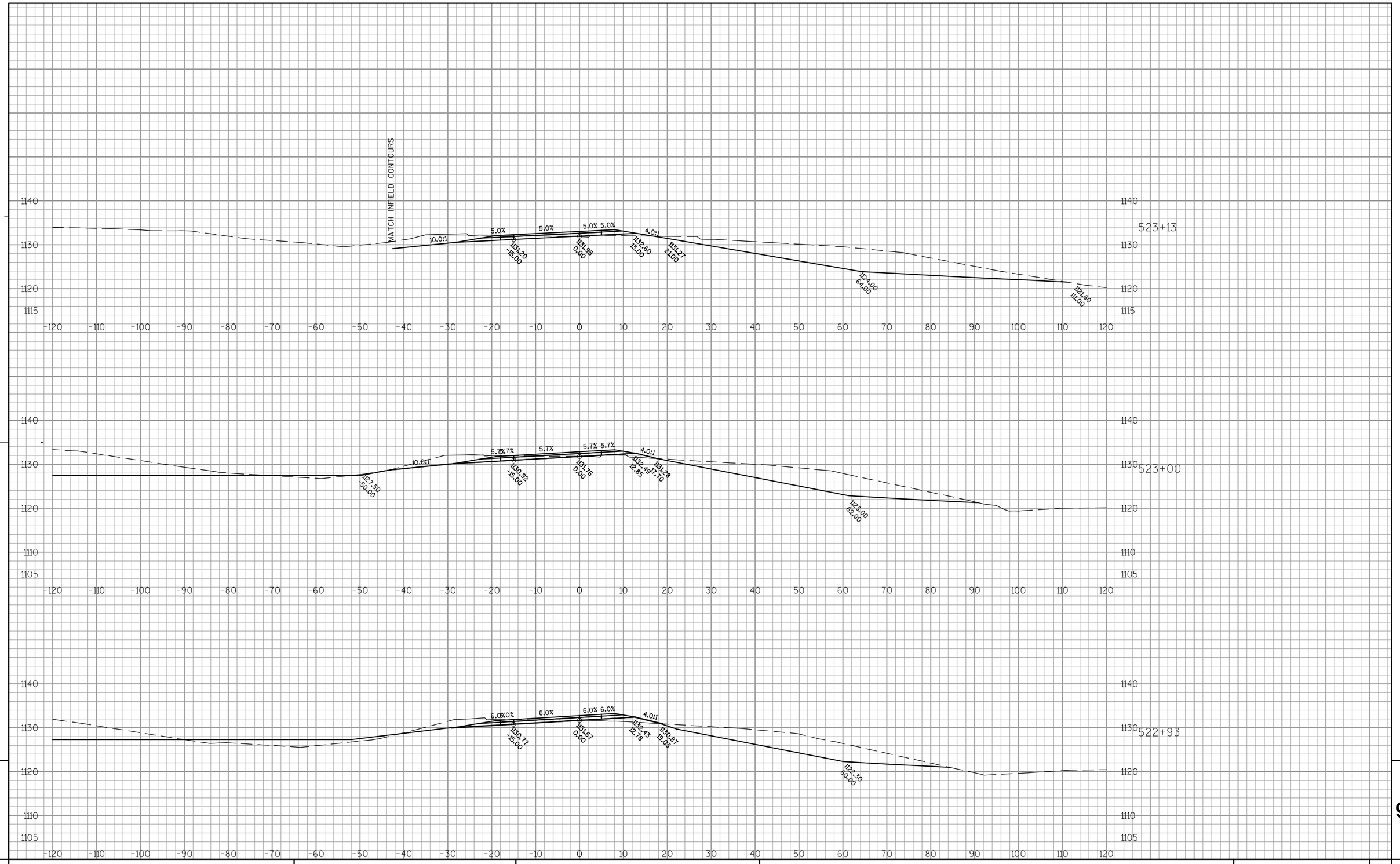
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NB OFF RAMP	SHEET 418	E

FILE NAME : L:\PROJECTS\11609\DWG\090201_XS.DWG PLOT DATE : 9/3/2008 9:44 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF

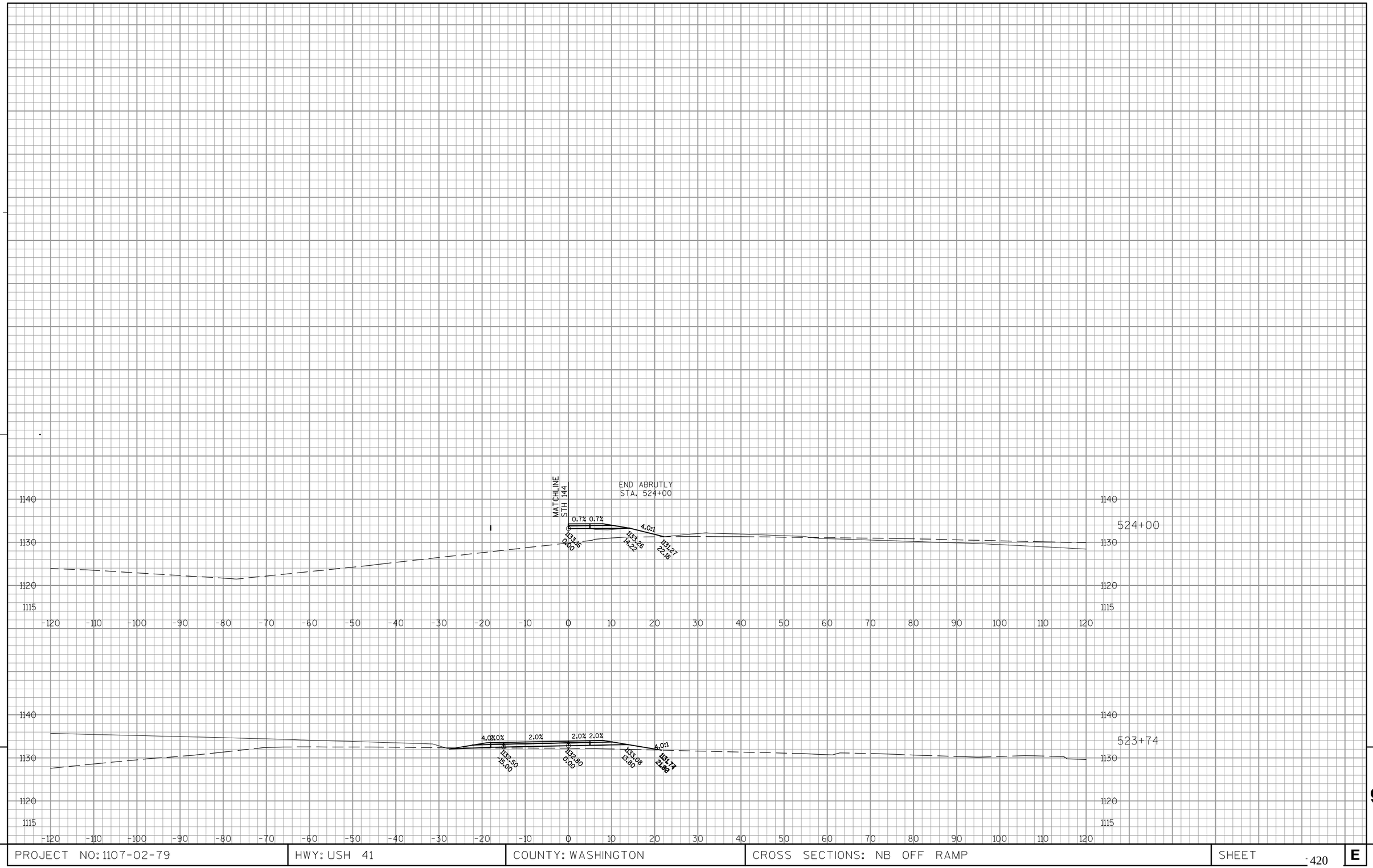
WISDOT/CADDS SHEET 49



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NB OFF RAMP	SHEET 419 E

FILE NAME : L:\PROJECTS\11609\DWG\090201_XS.DWG PLOT DATE : 9/3/2008 9:44 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



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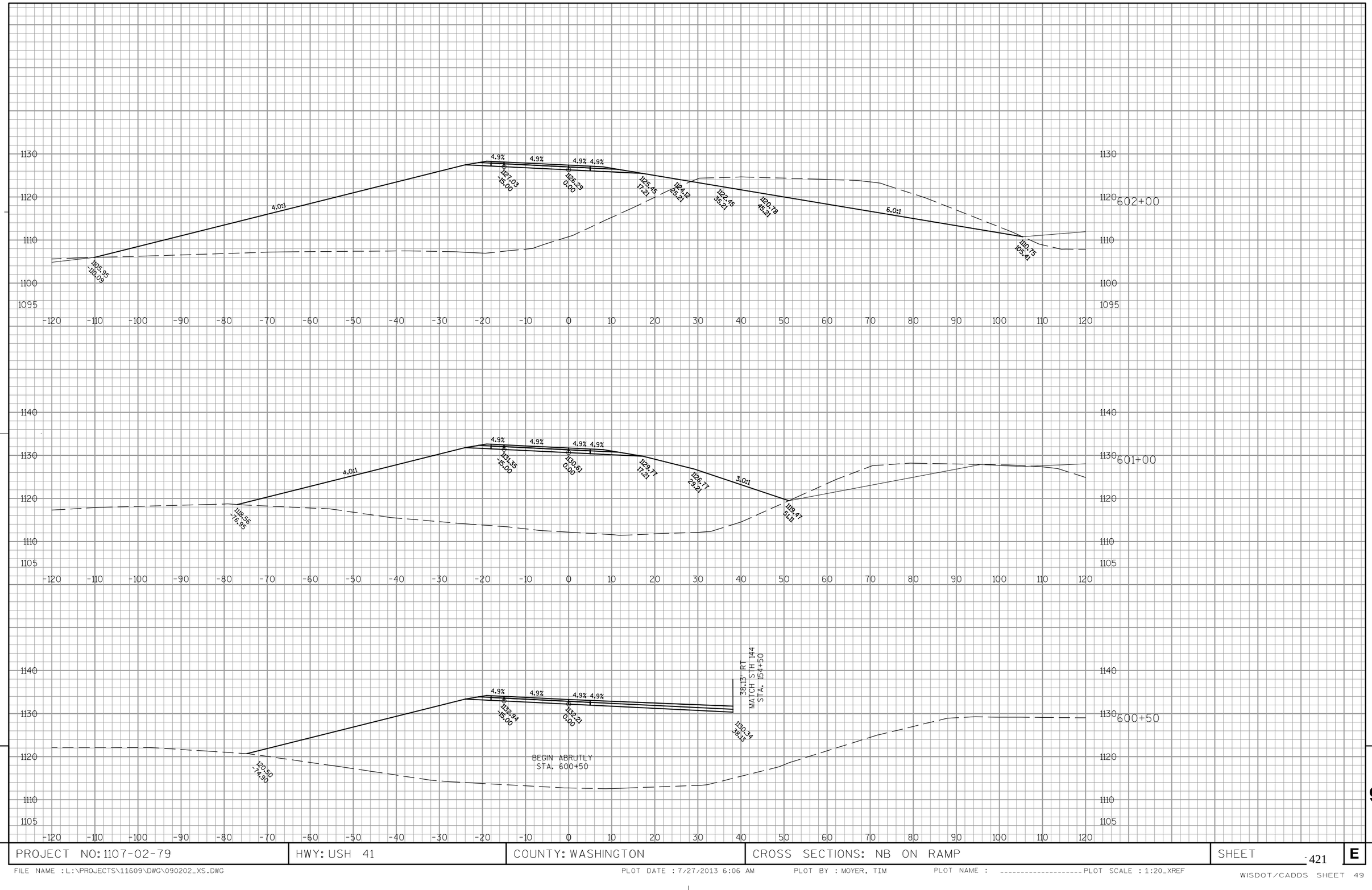
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NB OFF RAMP	SHEET 420	E

FILE NAME : L:\PROJECTS\11609\DWG\090201_XS.DWG PLOT DATE : 9/3/2008 9:44 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF

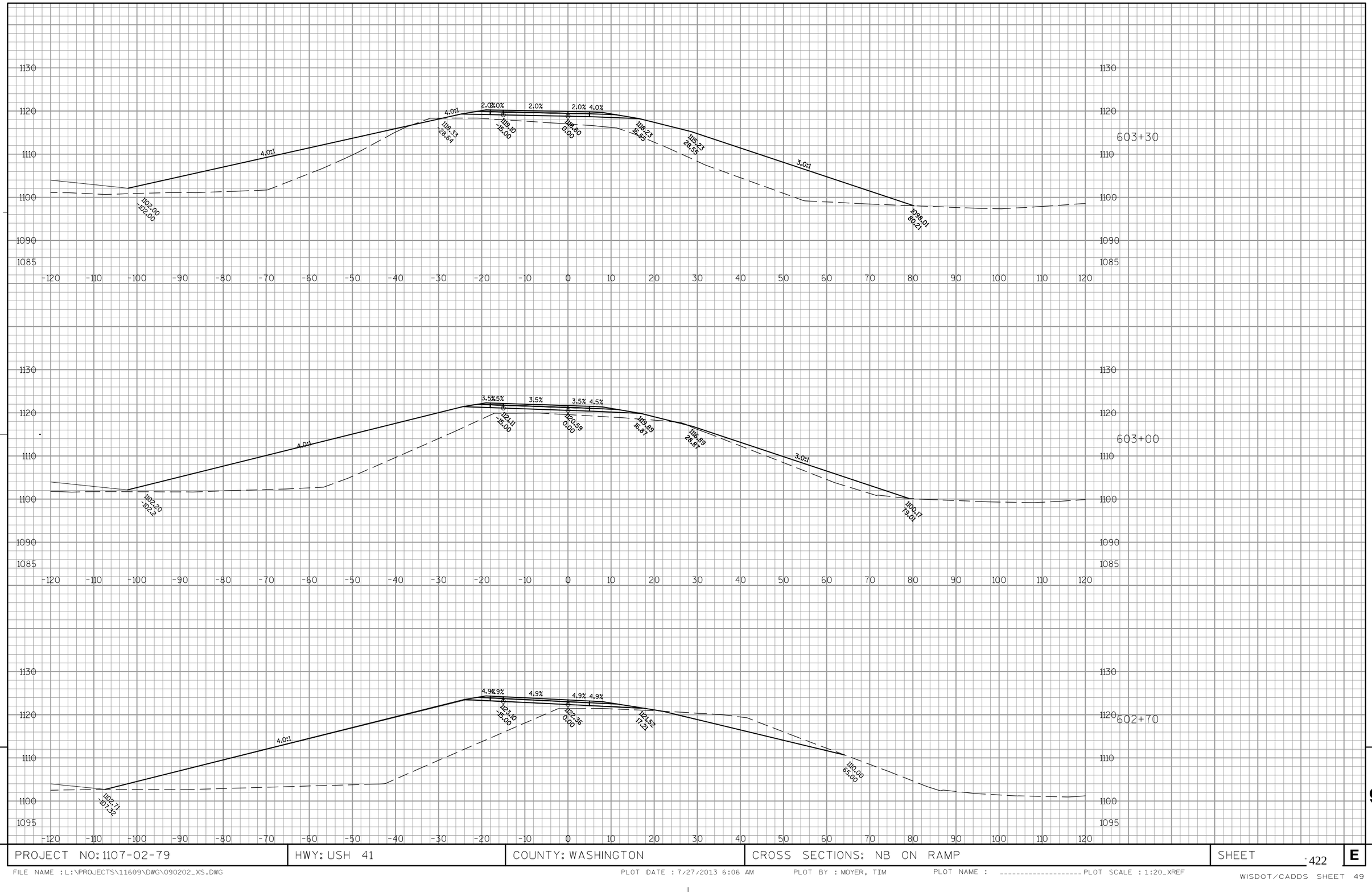
WISDOT/CADDS SHEET 49



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NB ON RAMP	SHEET 421 E

FILE NAME : L:\PROJECTS\11609\DWG\090202_XS.DWG PLOT DATE : 7/27/2013 6:06 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



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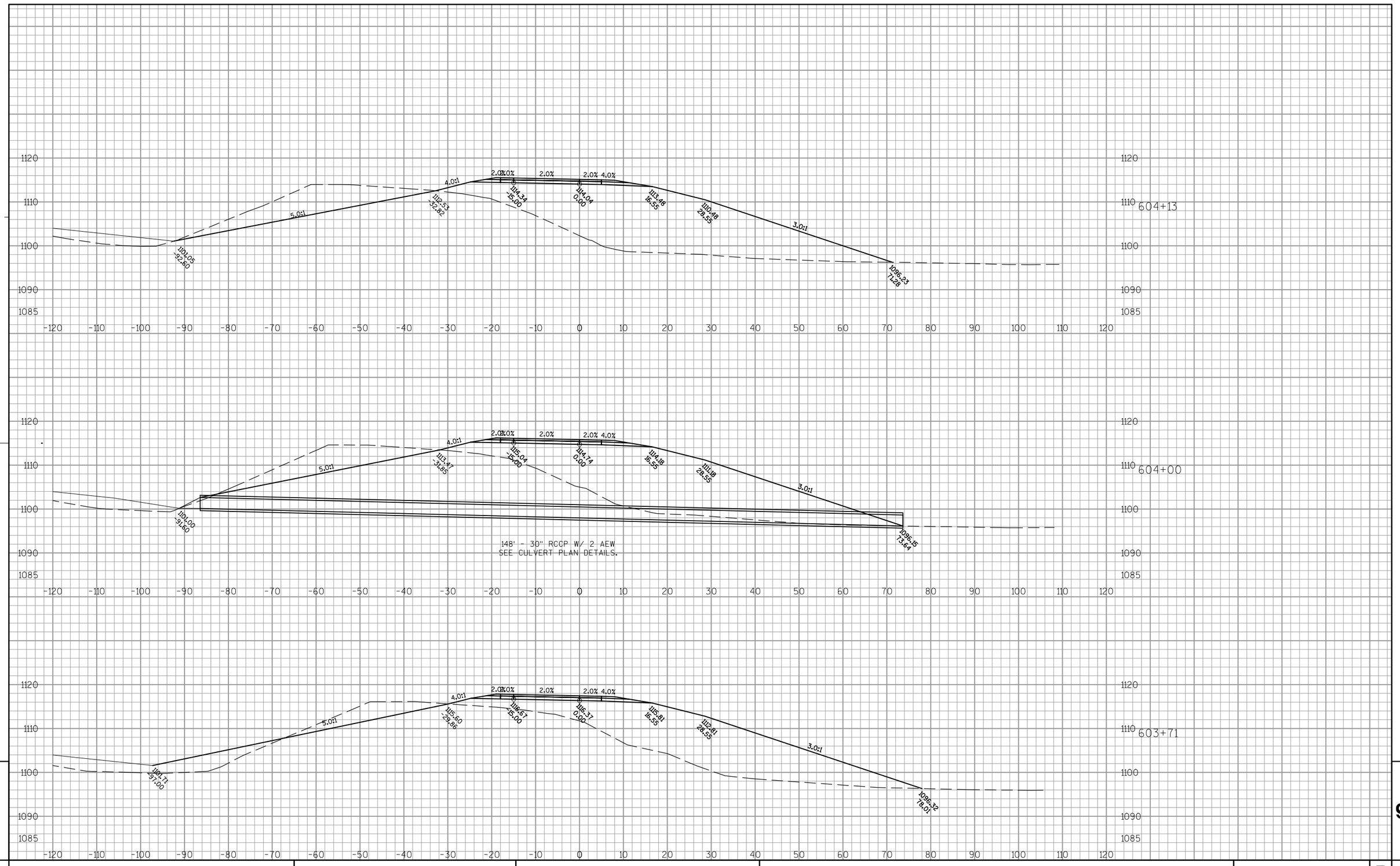
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NB ON RAMP	SHEET 422	E

FILE NAME : L:\PROJECTS\11609\DWG\090202_XS.DWG PLOT DATE : 7/27/2013 6:06 AM PLOT BY : MOYER, TIM PLOT NAME : _____ PLOT SCALE : 1:20_XREF



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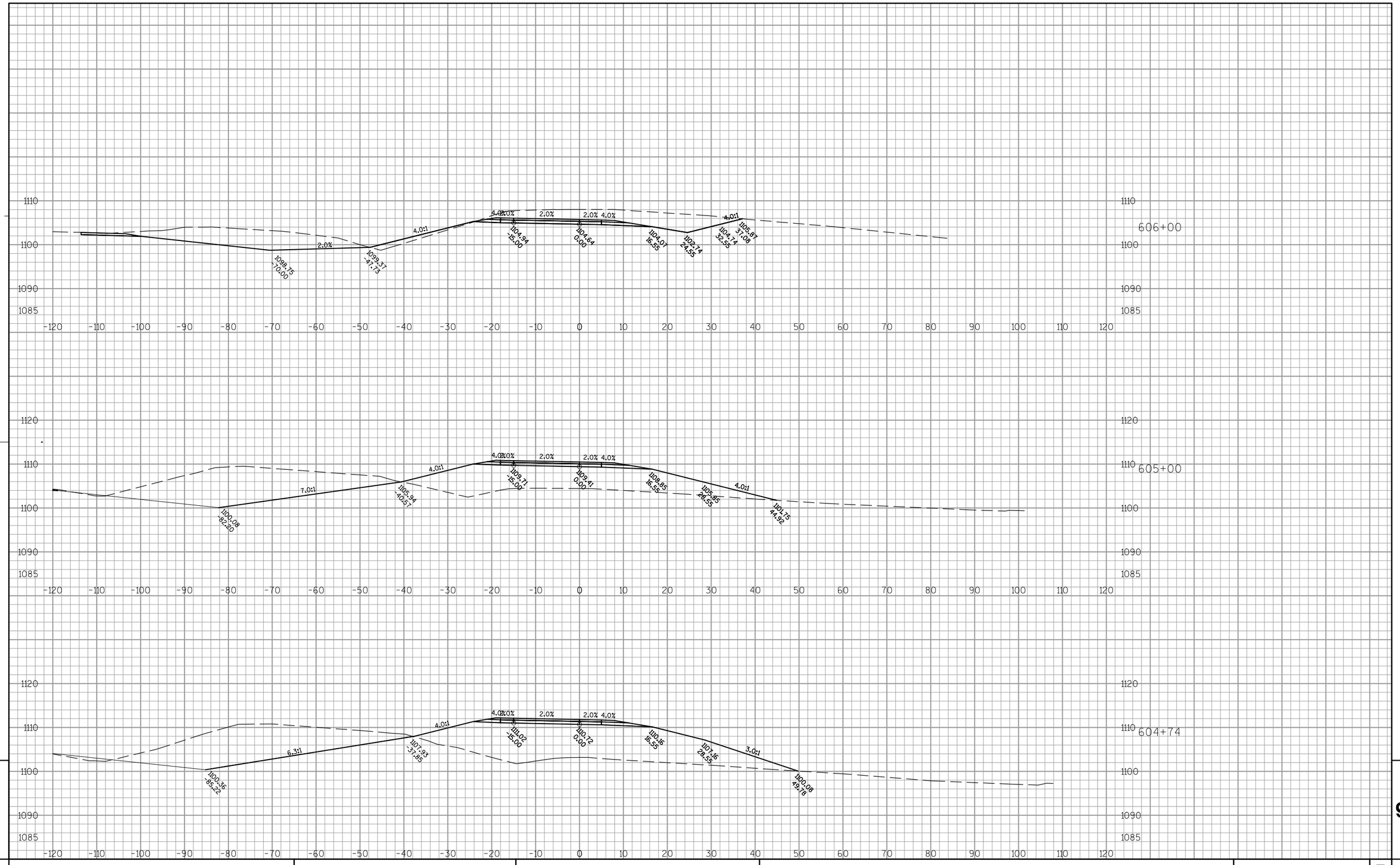
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NB ON RAMP	SHEET 423	E

FILE NAME : L:\PROJECTS\11609\DWG\090202_XS.DWG PLOT DATE : 7/27/2013 6:06 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



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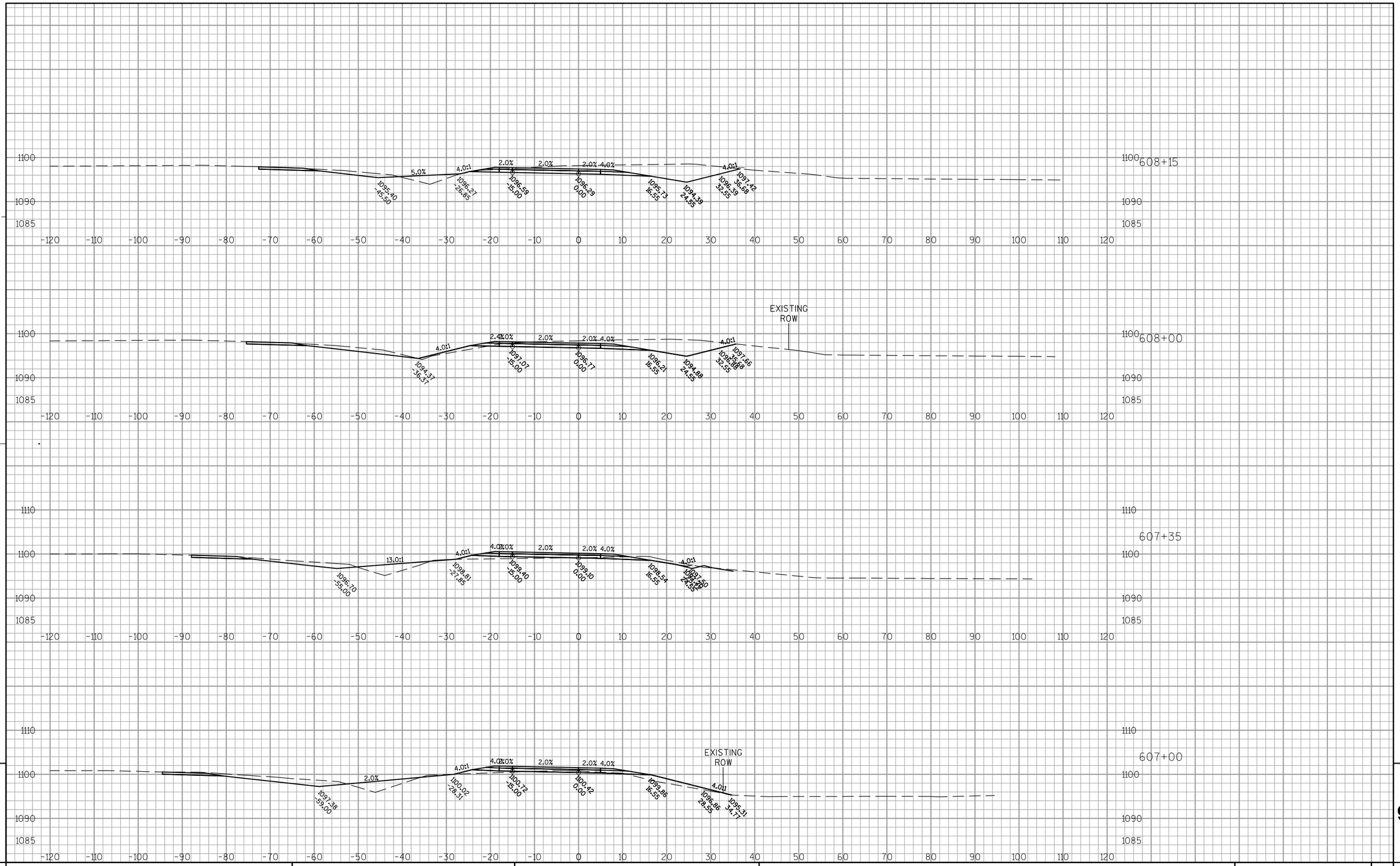
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NB ON RAMP	SHEET 424	E



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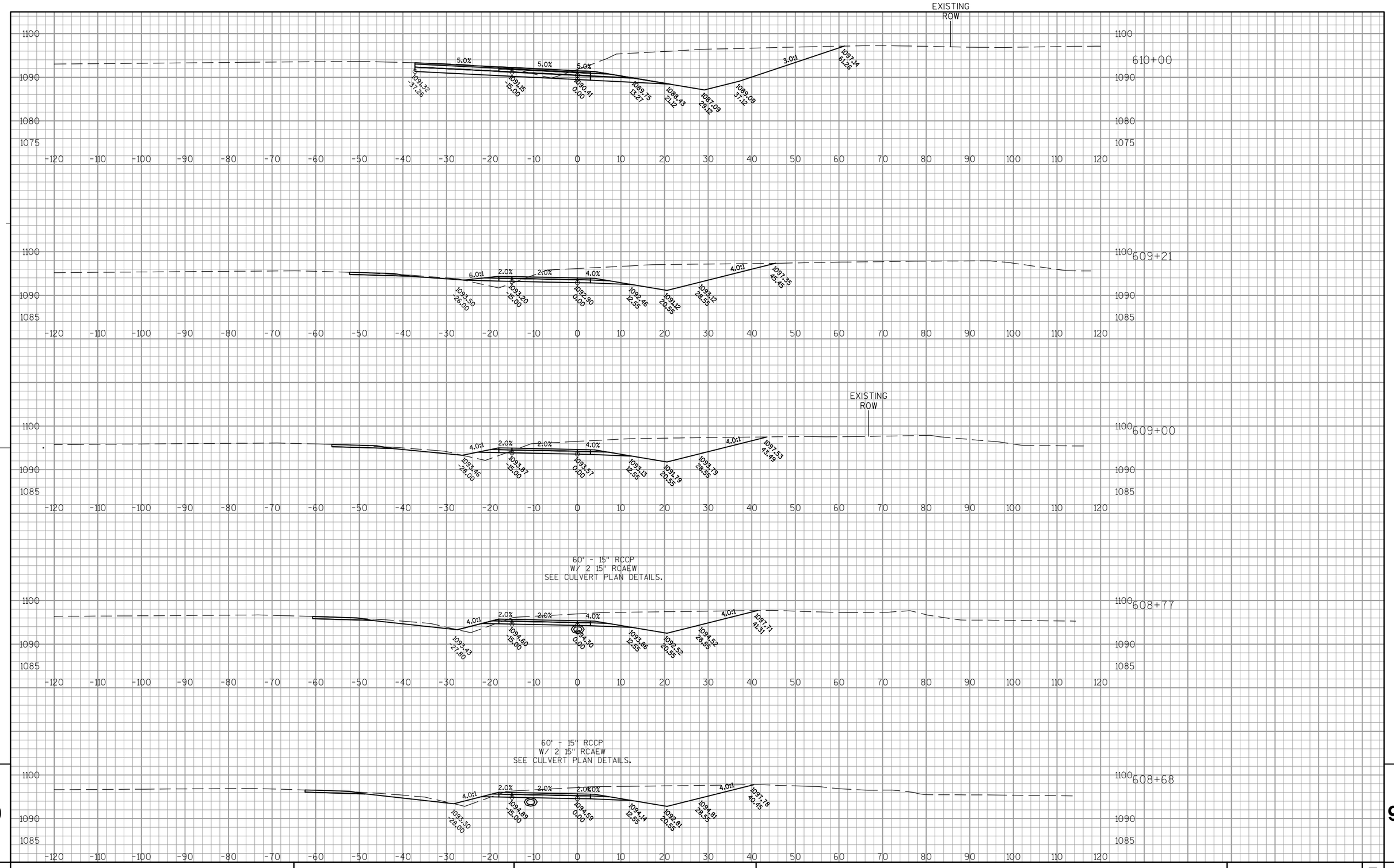
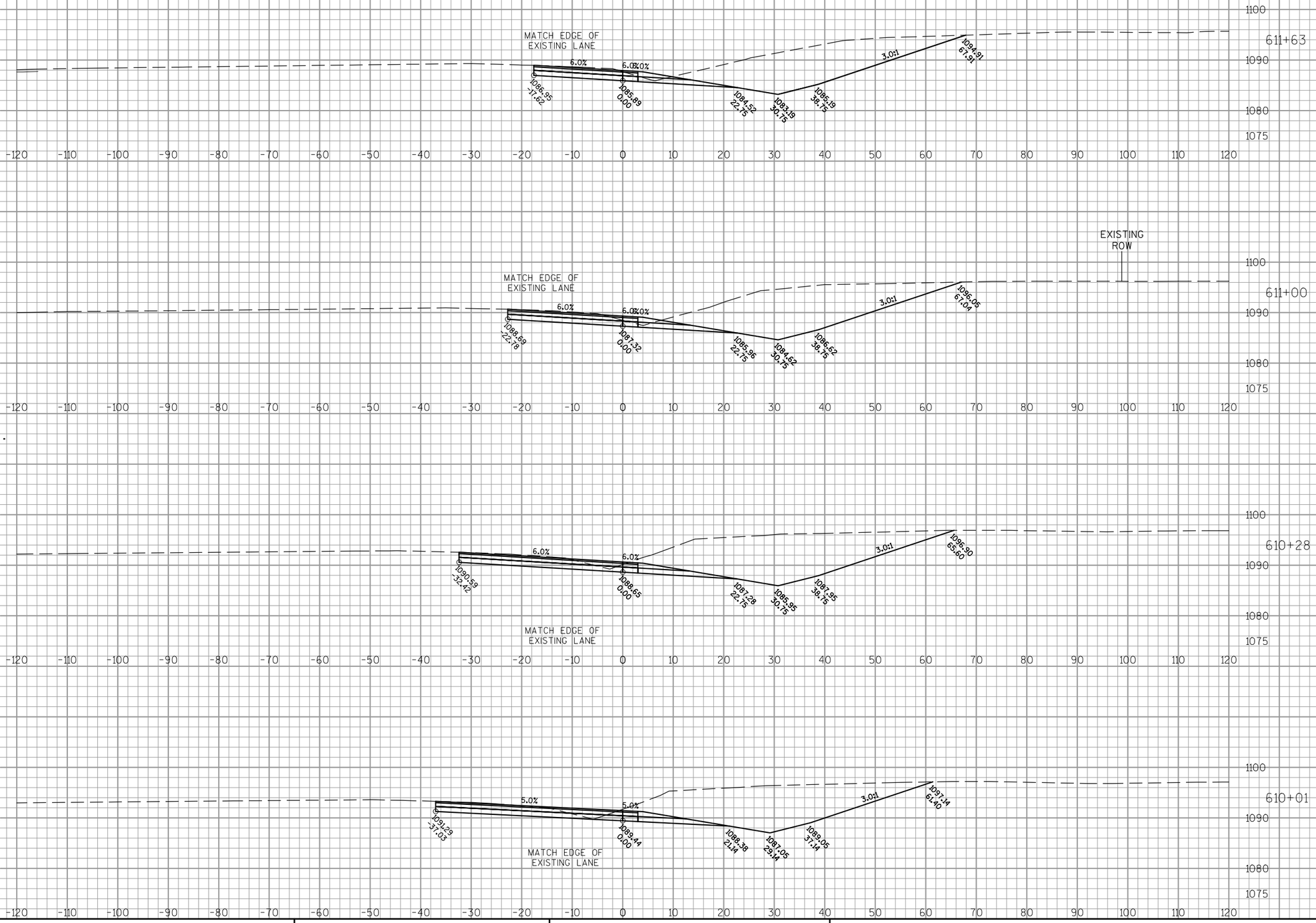
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NB ON RAMP	SHEET 425	E



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NB ON RAMP	SHEET 426 E

FILE NAME : L:\PROJECTS\11609\DWG\090202_XS.DWG PLOT DATE : 7/27/2013 6:07 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



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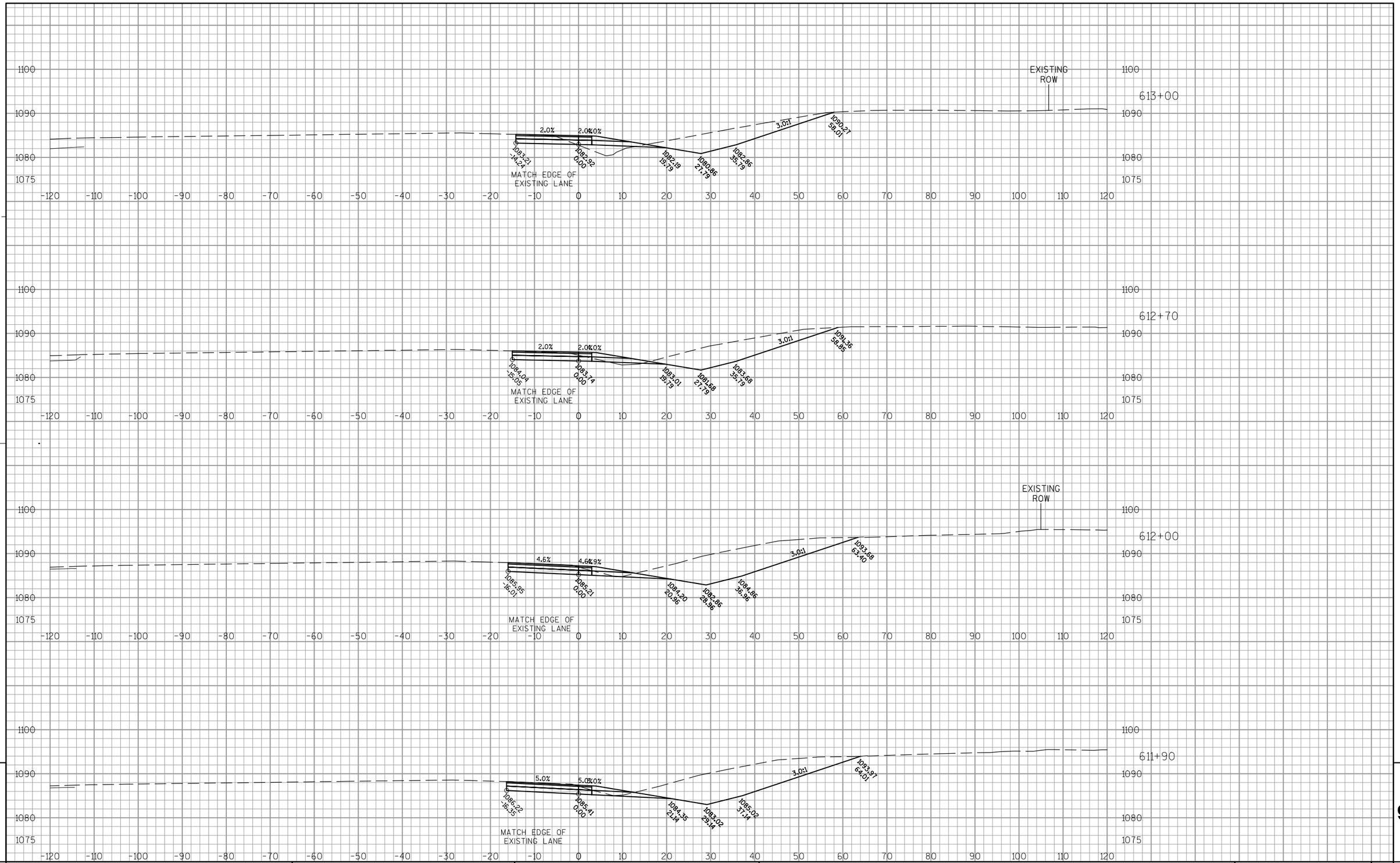
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NB ON RAMP	SHEET 427	E

FILE NAME : L:\PROJECTS\11609\DWG\090202_XS.DWG PLOT DATE : 7/27/2013 6:08 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF



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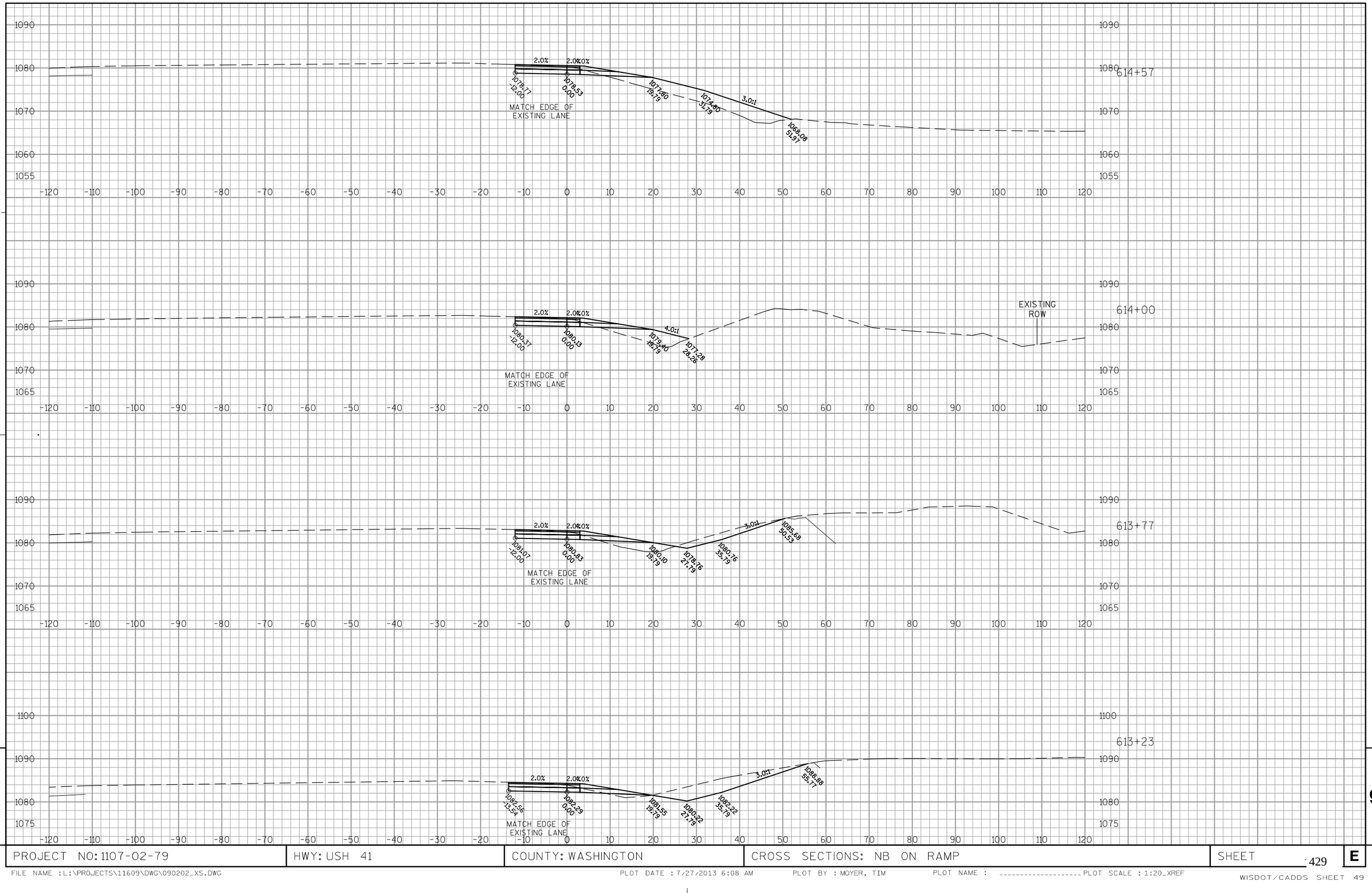
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NB ON RAMP	SHEET 428	E



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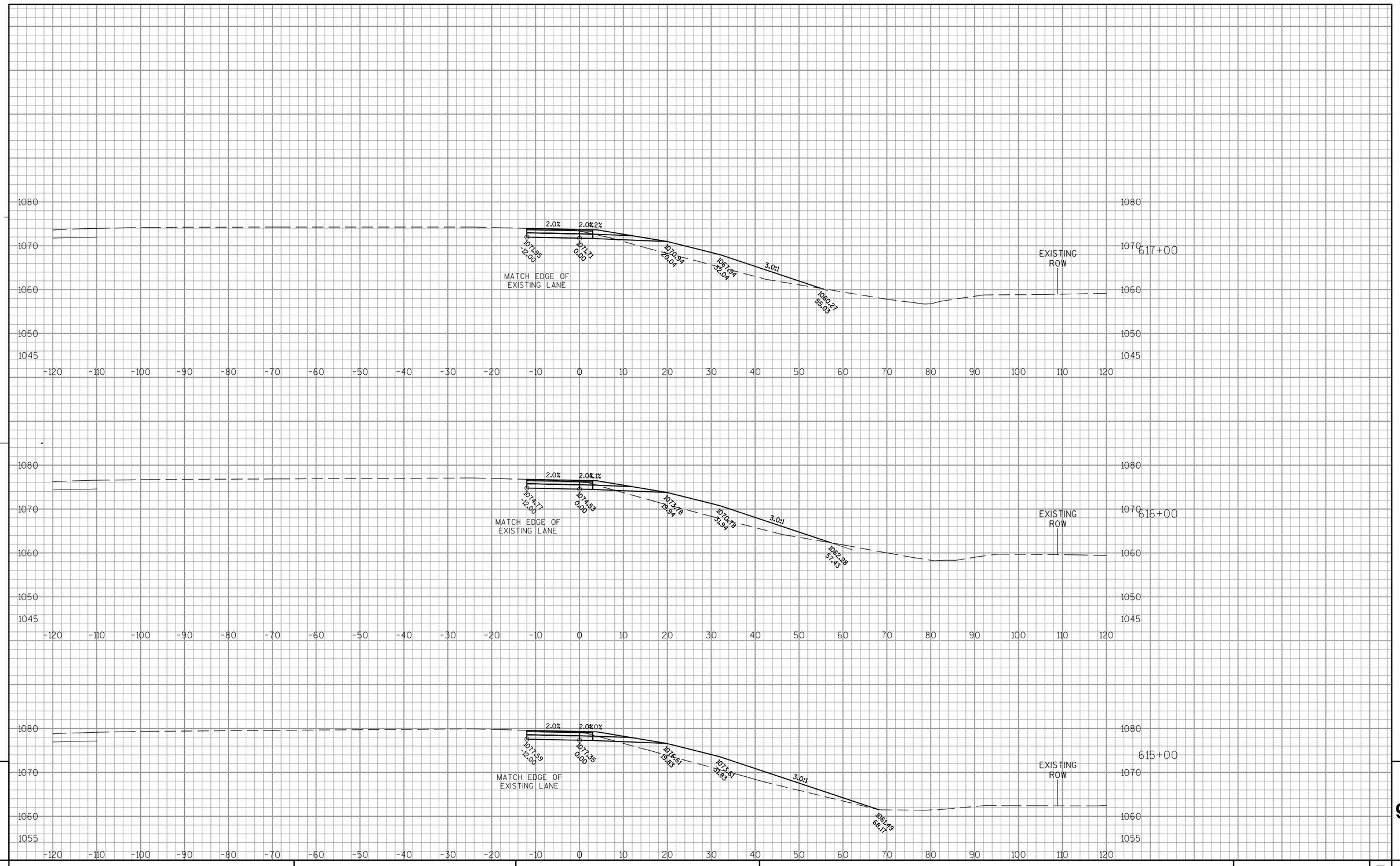
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NB ON RAMP	SHEET 429	E



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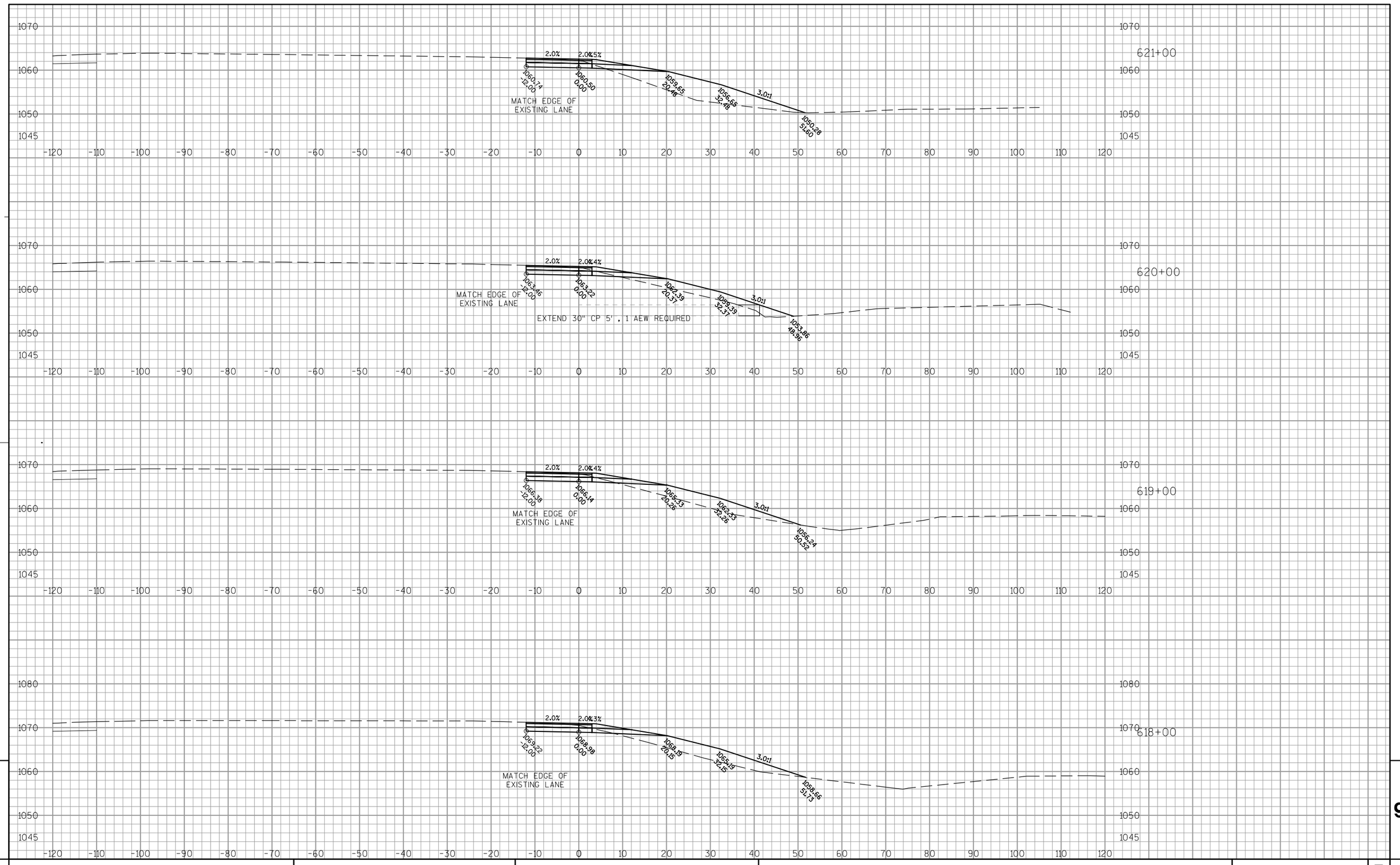
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NB ON RAMP	SHEET 430	E



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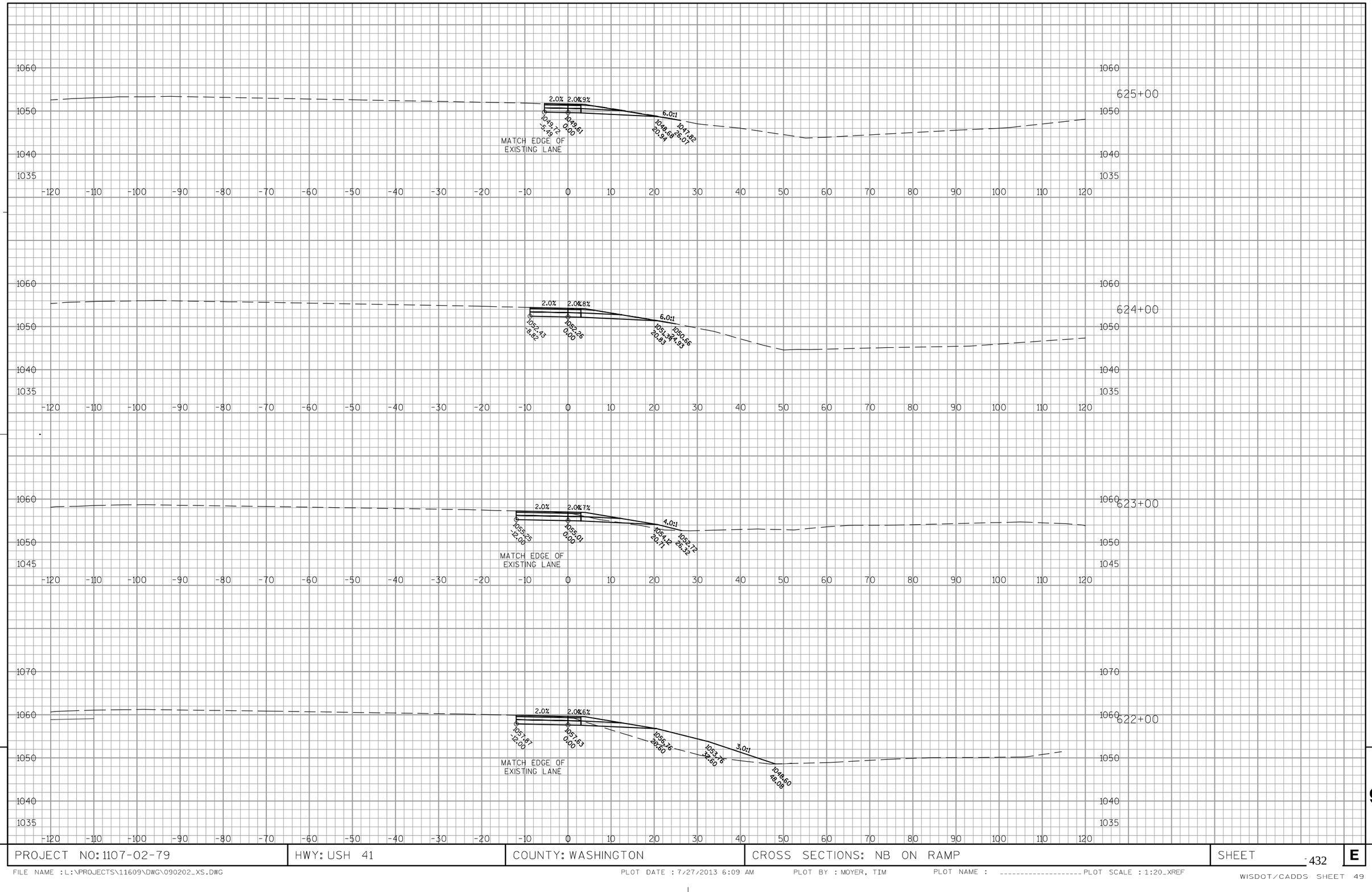
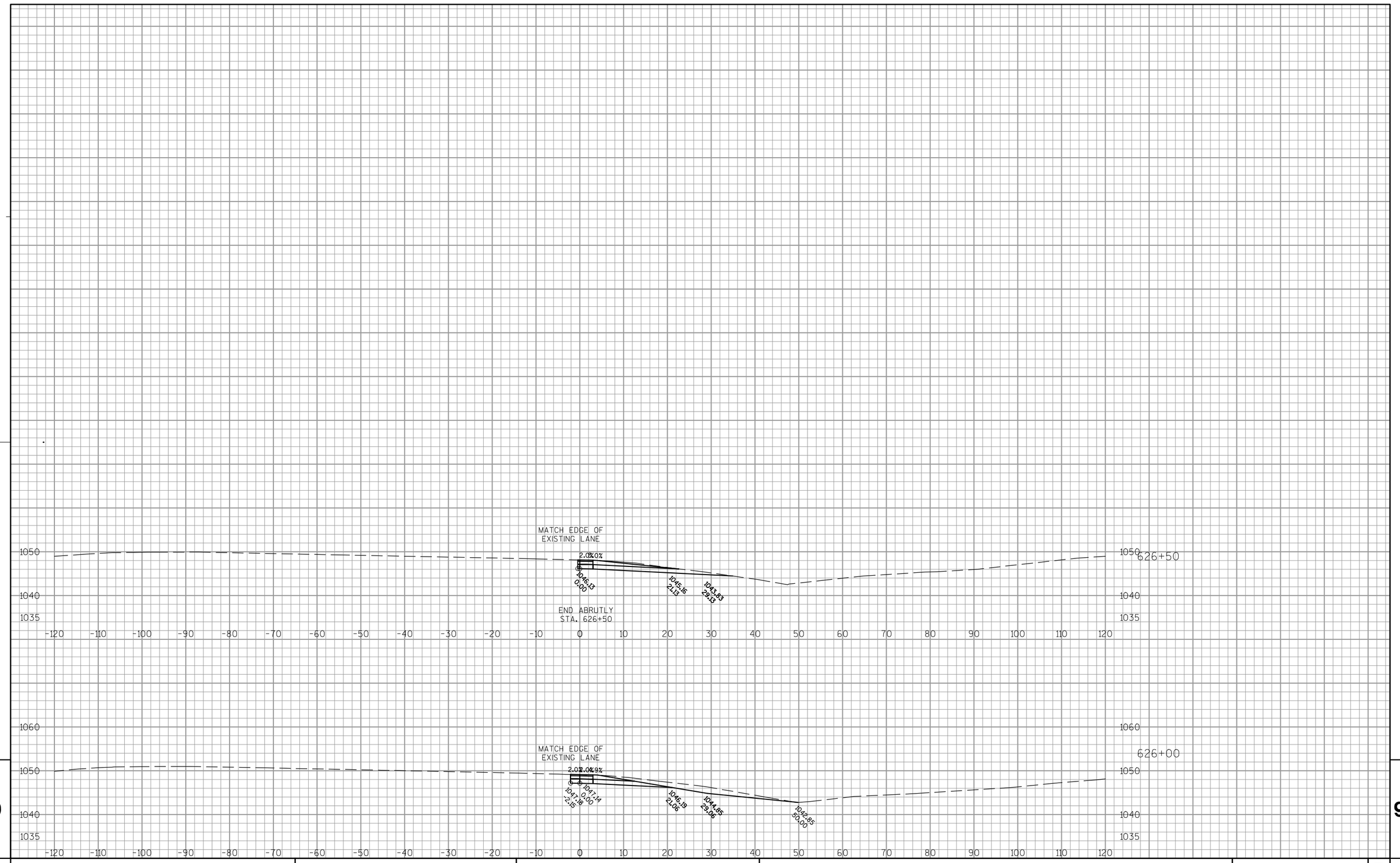
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NB ON RAMP	SHEET 431	E



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NB ON RAMP	SHEET 432 E

FILE NAME : L:\PROJECTS\11609\DWG\090202_XS.DWG PLOT DATE : 7/27/2013 6:09 AM PLOT BY : MOYER, TIM PLOT NAME : PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



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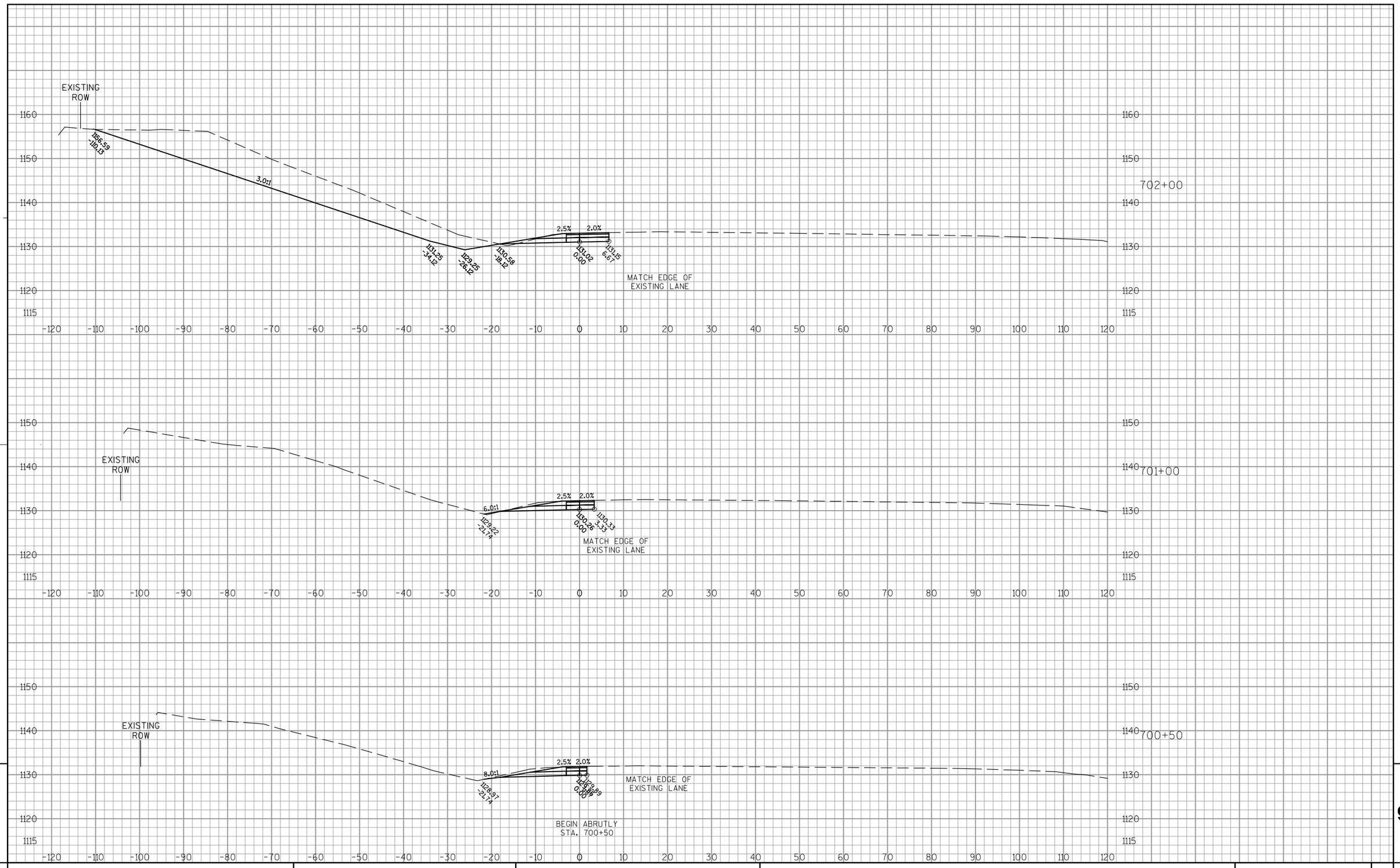
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NB ON RAMP	SHEET 433	E



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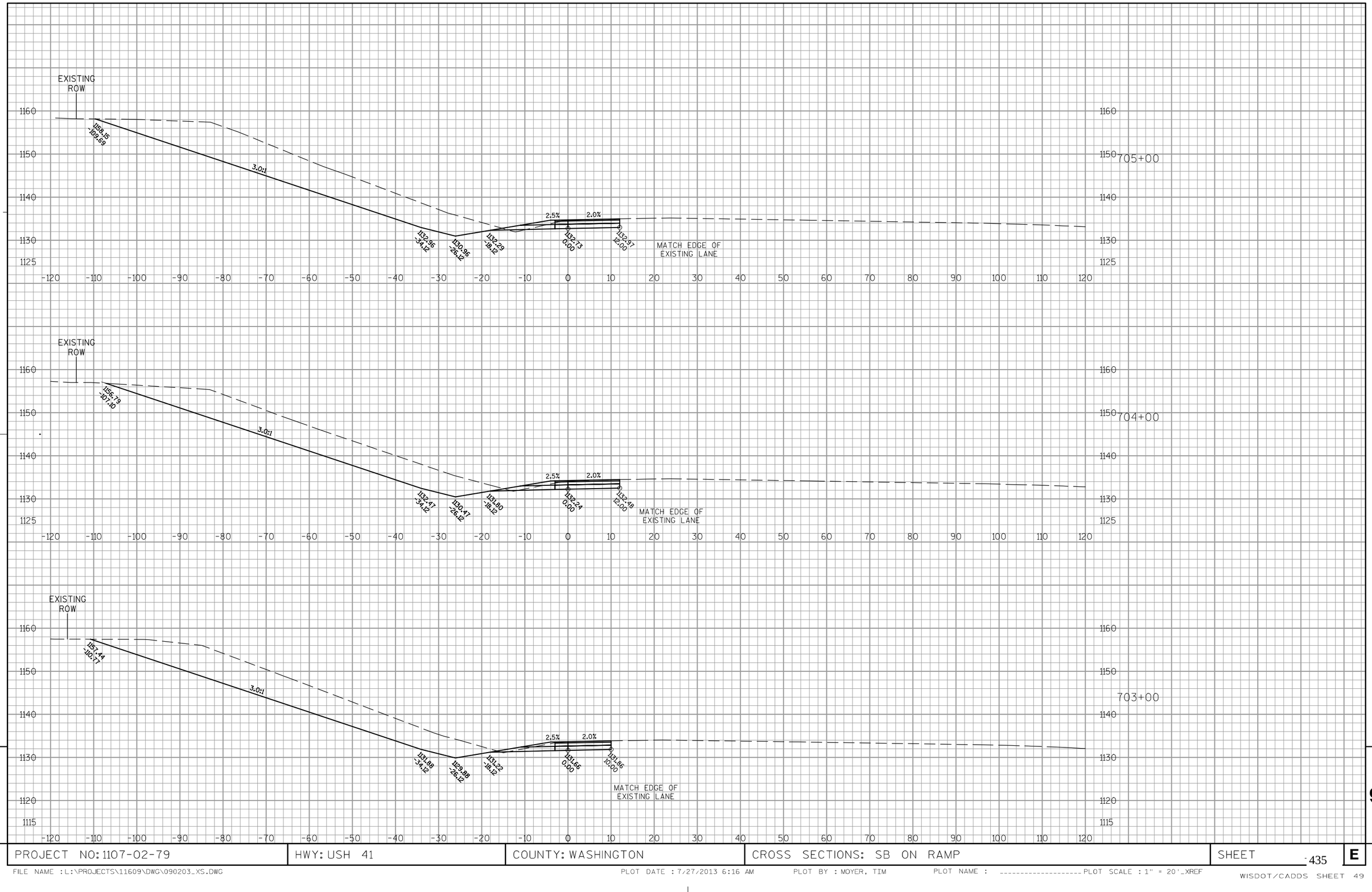
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB ON RAMP	SHEET 434	E

FILE NAME : L:\PROJECTS\11609\DWG\090203_XS.DWG PLOT DATE : 7/27/2013 6:15 AM PLOT BY : MOYER, TIM PLOT NAME : _____ PLOT SCALE : 1" = 20'_XREF

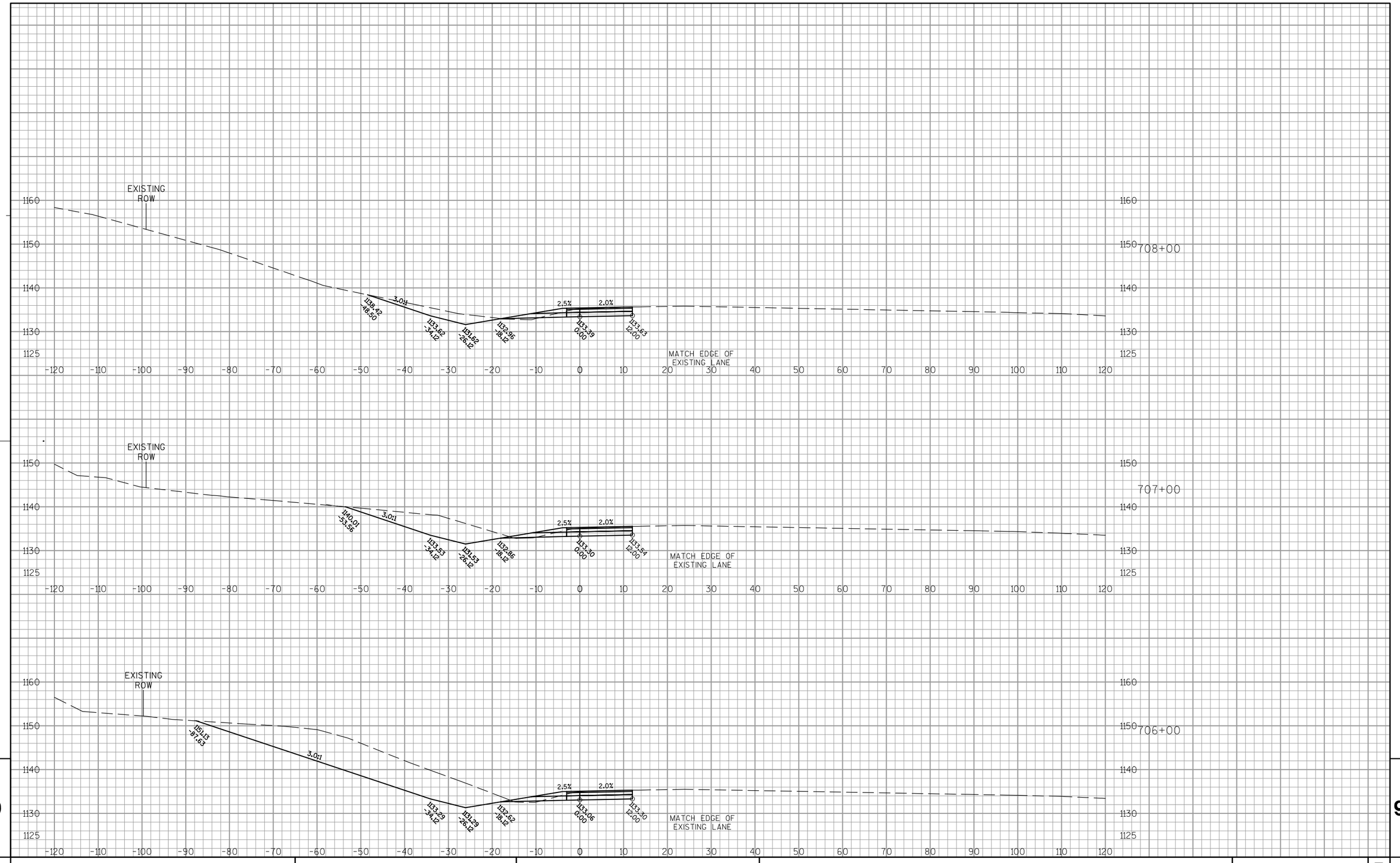
WISDOT/CADDS SHEET 49



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB ON RAMP	SHEET 435 E

FILE NAME : L:\PROJECTS\11609\DWG\090203_XS.DWG PLOT DATE : 7/27/2013 6:16 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



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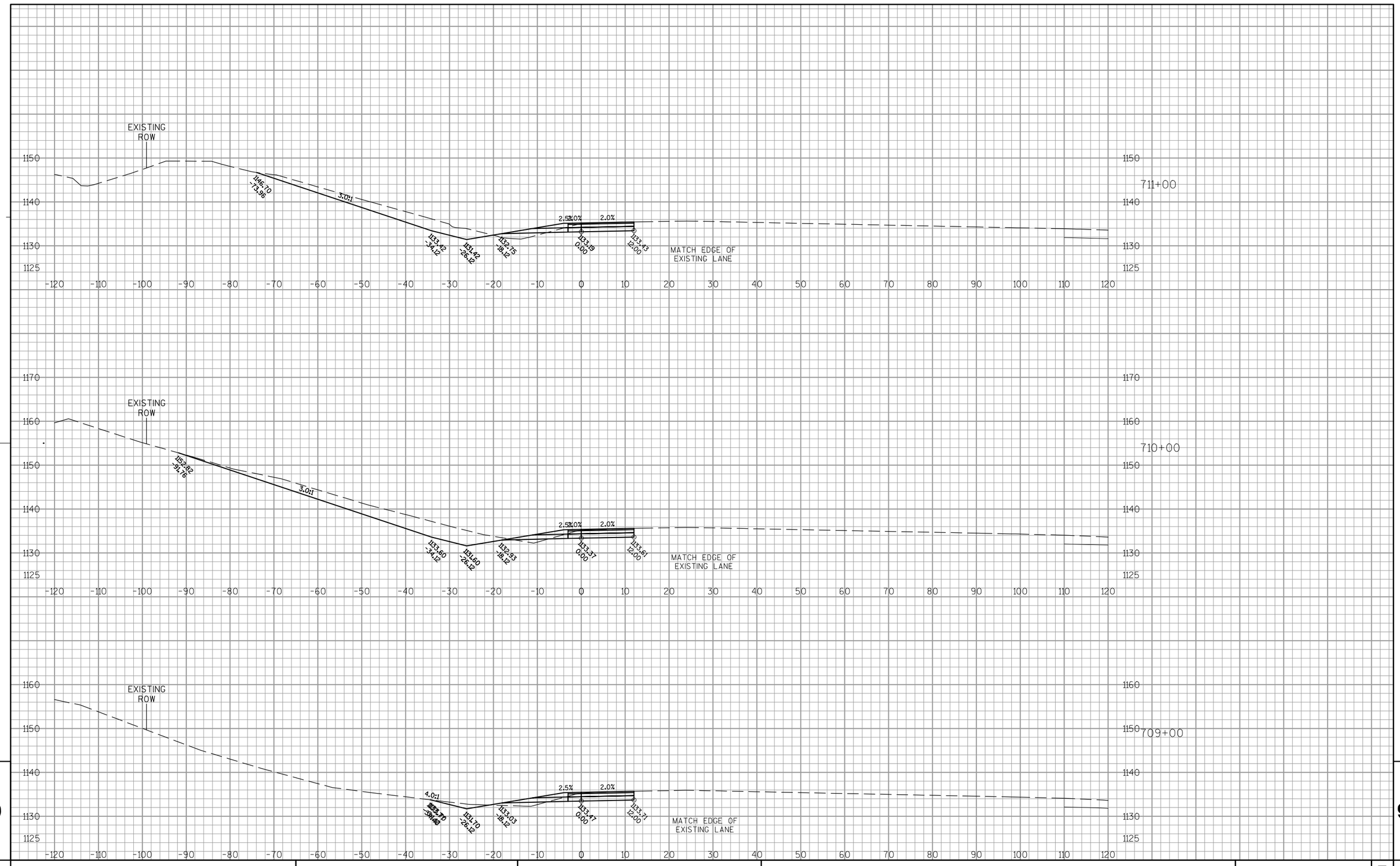
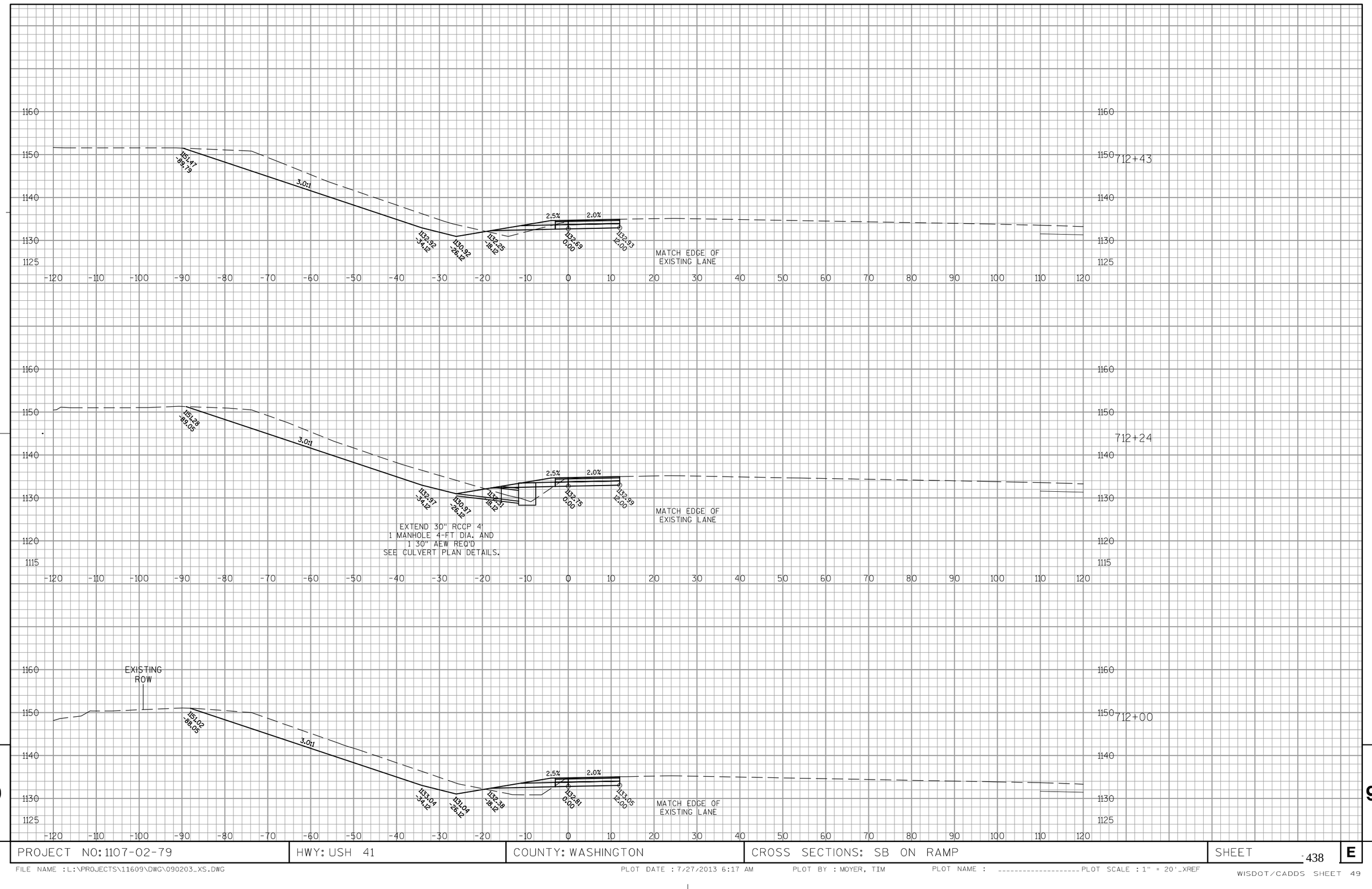
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB ON RAMP	SHEET 436	E



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB ON RAMP	SHEET 437	E

FILE NAME : L:\PROJECTS\11609\DWG\090203_XS.DWG PLOT DATE : 7/27/2013 6:16 AM PLOT BY : MOYER, TIM PLOT NAME : _____ PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



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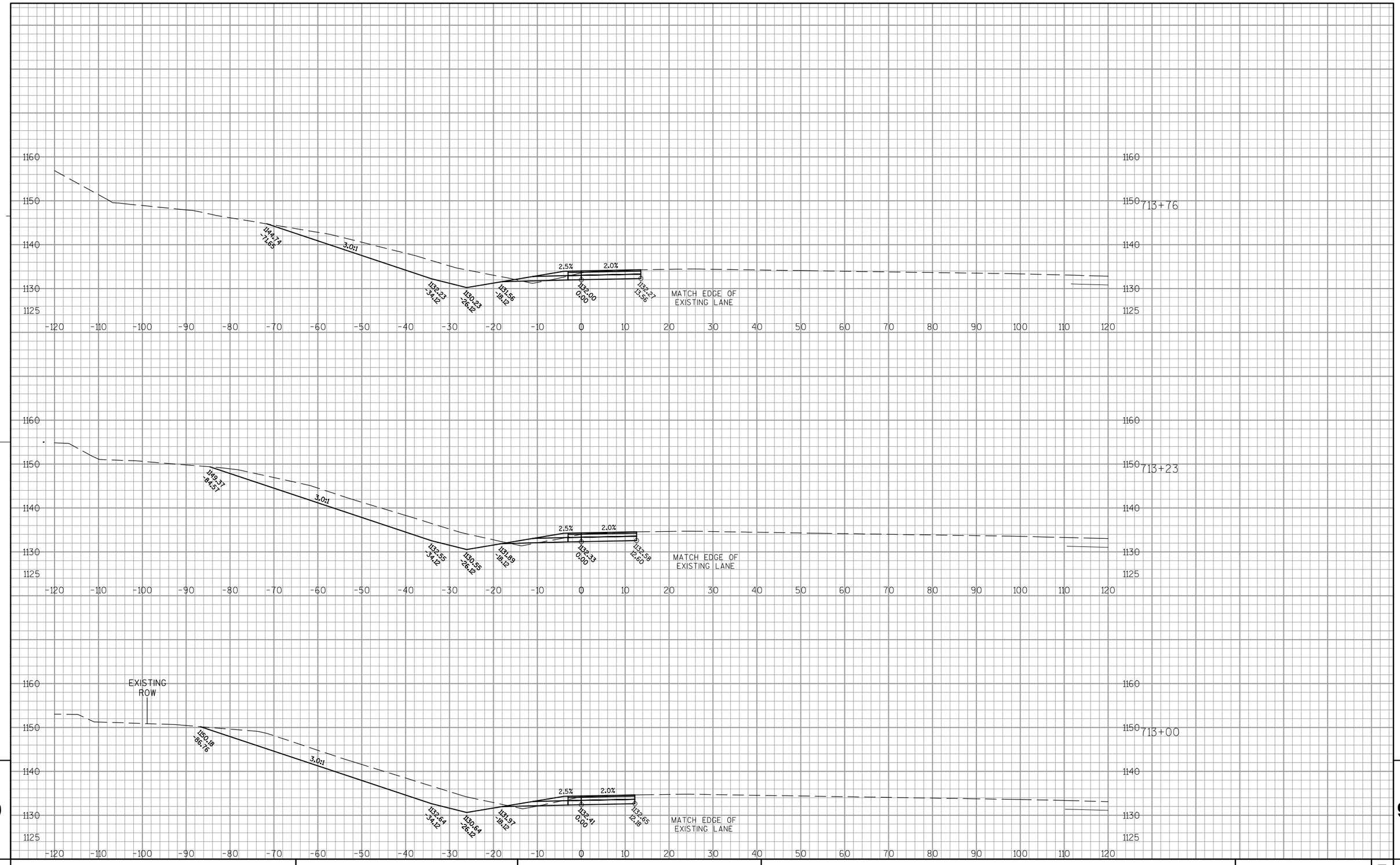
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB ON RAMP	SHEET 438	E



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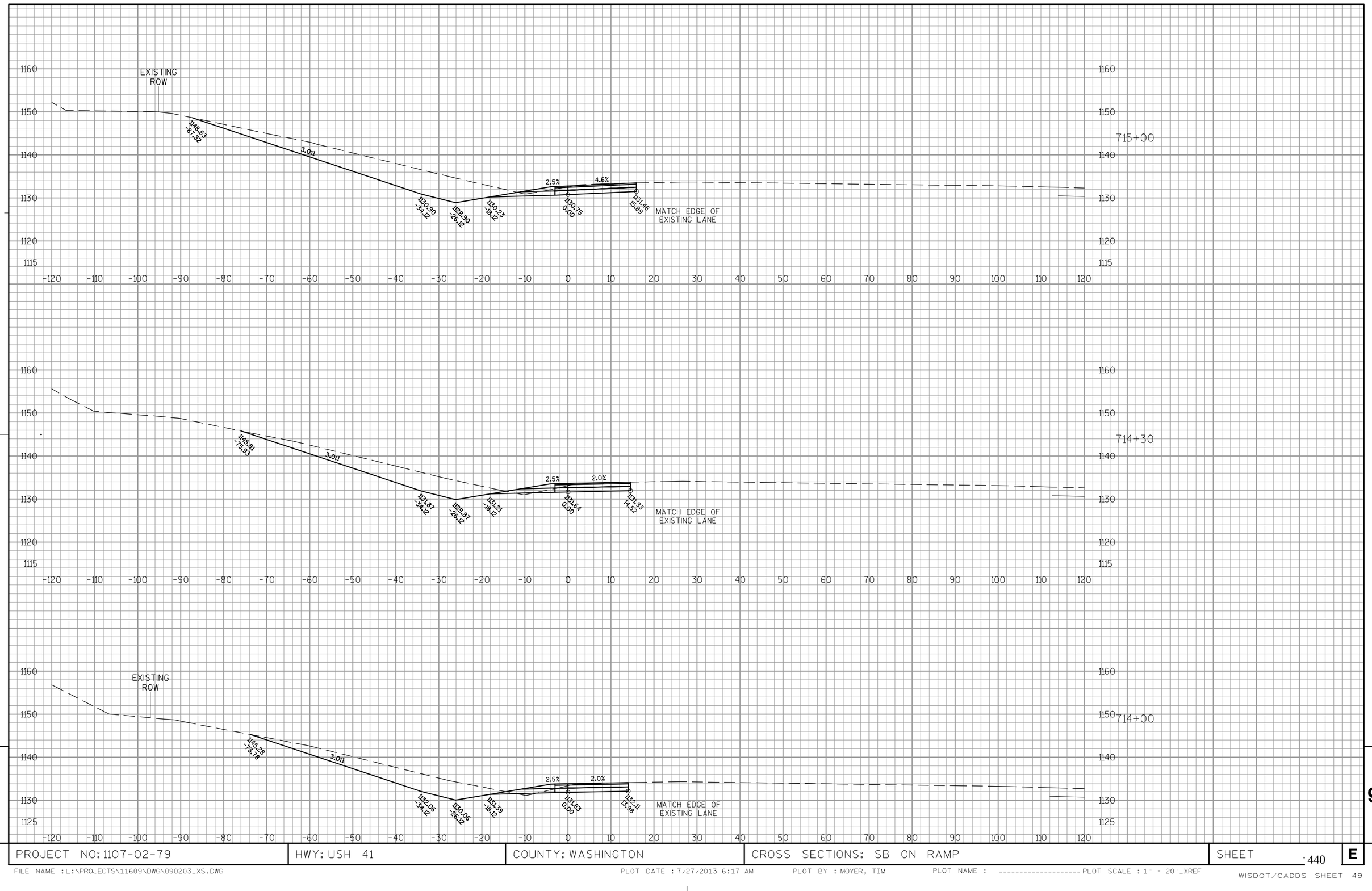
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB ON RAMP	SHEET 439	E



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PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB ON RAMP	SHEET 440	E

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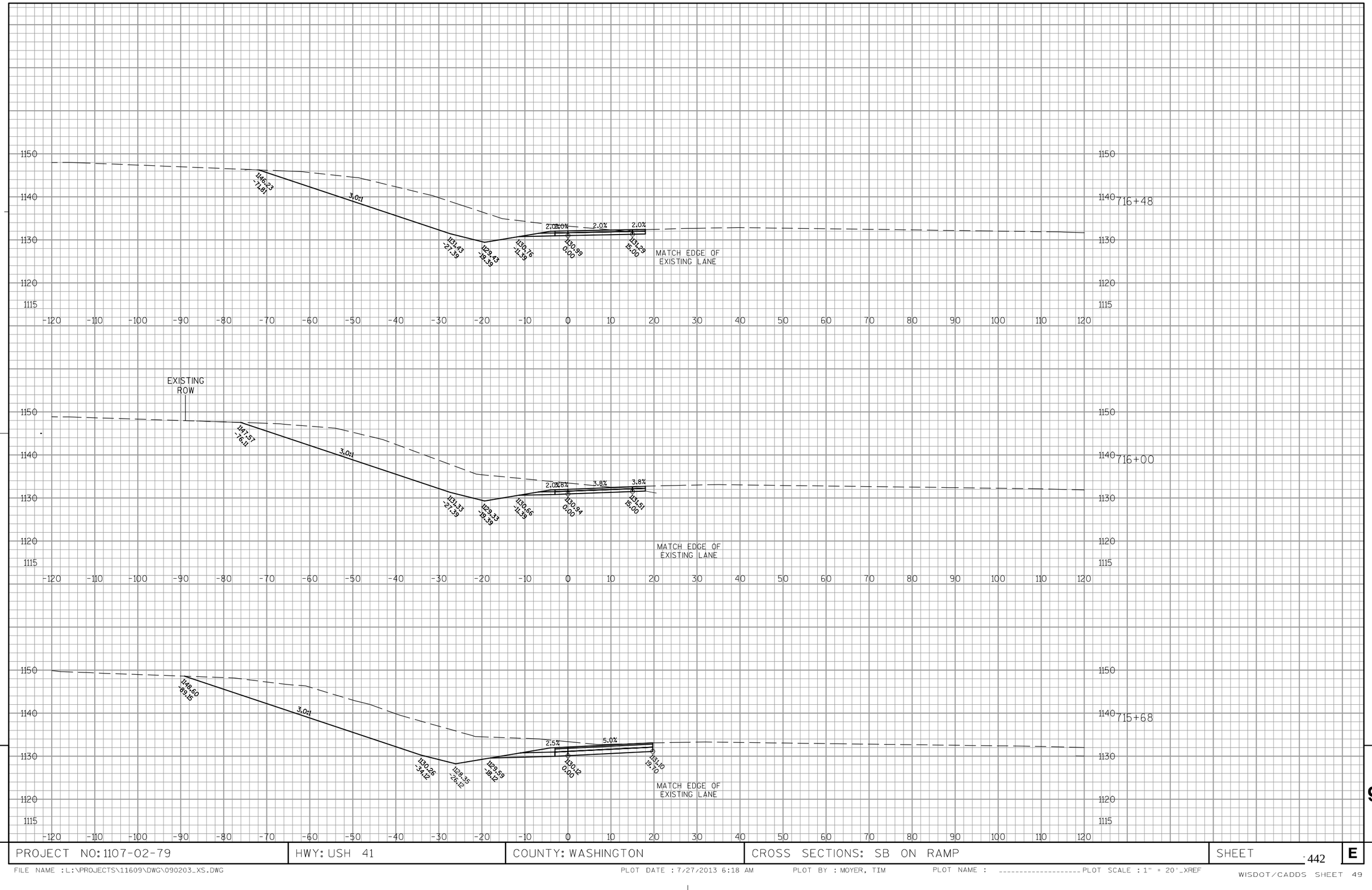
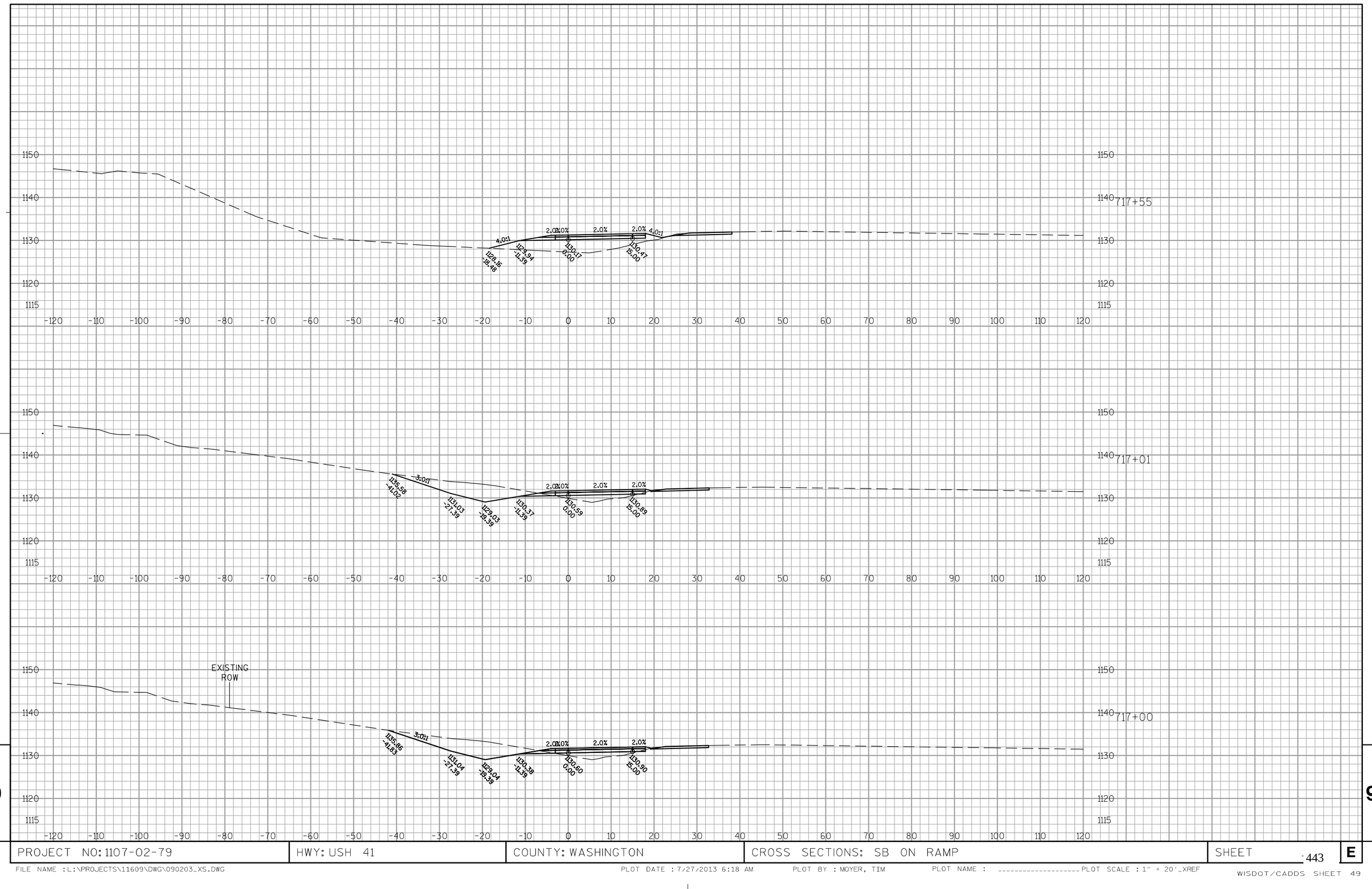
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB ON RAMP	SHEET 441	E



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB ON RAMP	SHEET 442	E

FILE NAME : L:\PROJECTS\11609\DWG\090203_XS.DWG PLOT DATE : 7/27/2013 6:18 AM PLOT BY : MOYER, TIM PLOT NAME : _____ PLOT SCALE : 1" = 20'_XREF

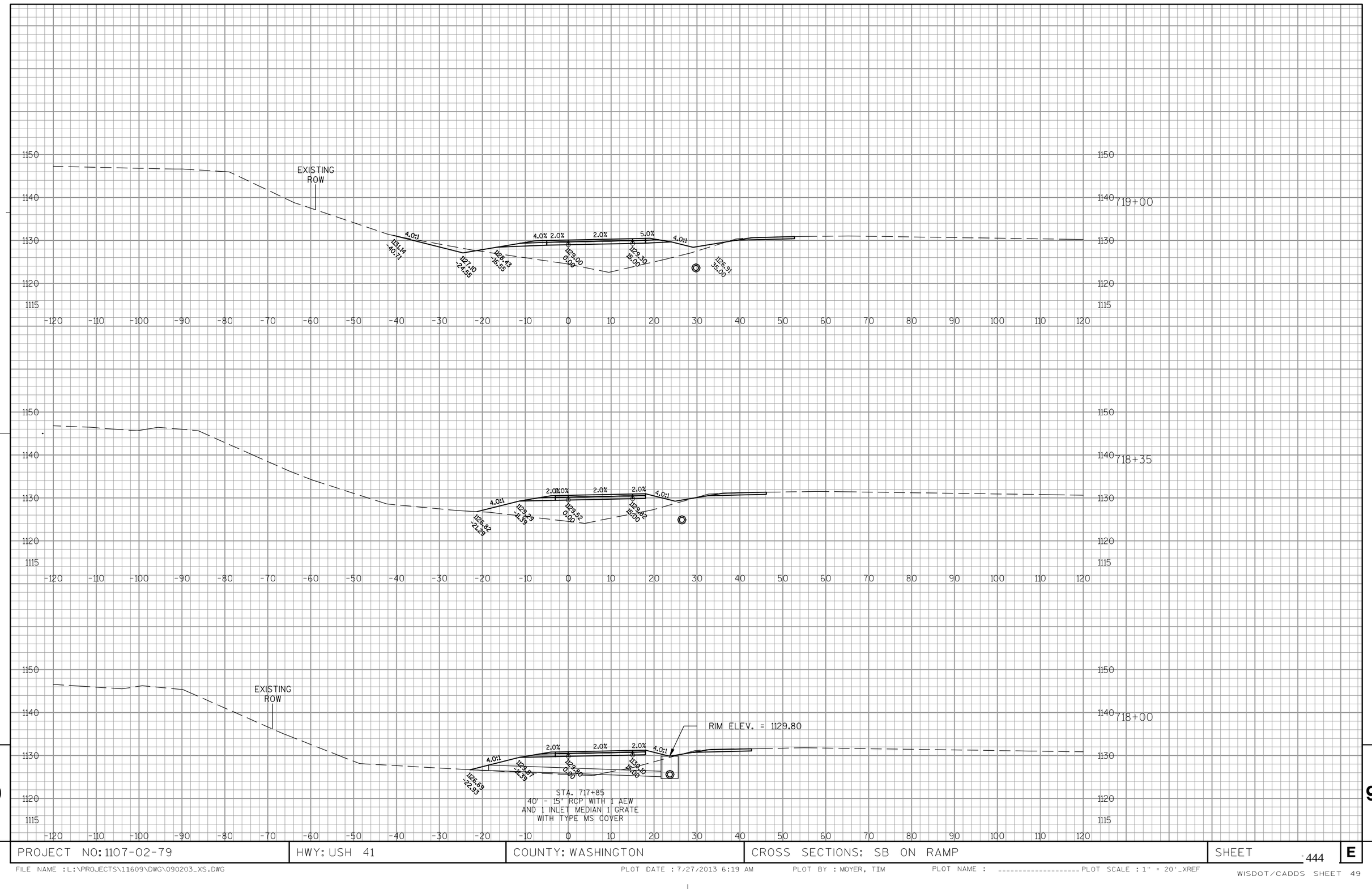
WISDOT/CADDS SHEET 49



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB ON RAMP	SHEET 443	E

FILE NAME : L:\PROJECTS\11609\DWG\090203_XS.DWG PLOT DATE : 7/27/2013 6:18 AM PLOT BY : MOYER, TIM PLOT NAME : _____ PLOT SCALE : 1" = 20'_XREF

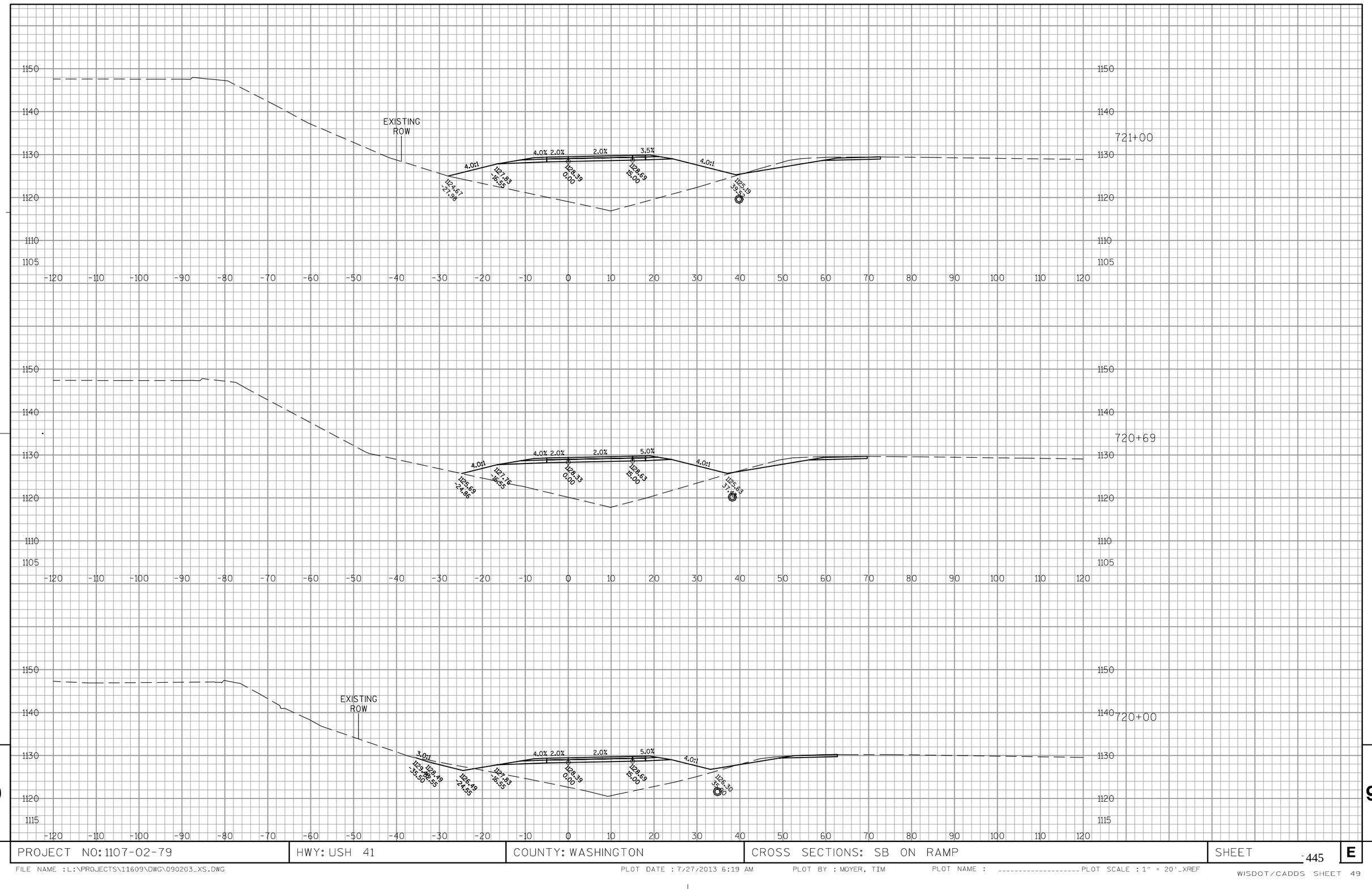
WISDOT/CADDS SHEET 49



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB ON RAMP	SHEET 444 E

FILE NAME : L:\PROJECTS\11609\DWG\090203_XS.DWG PLOT DATE : 7/27/2013 6:19 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



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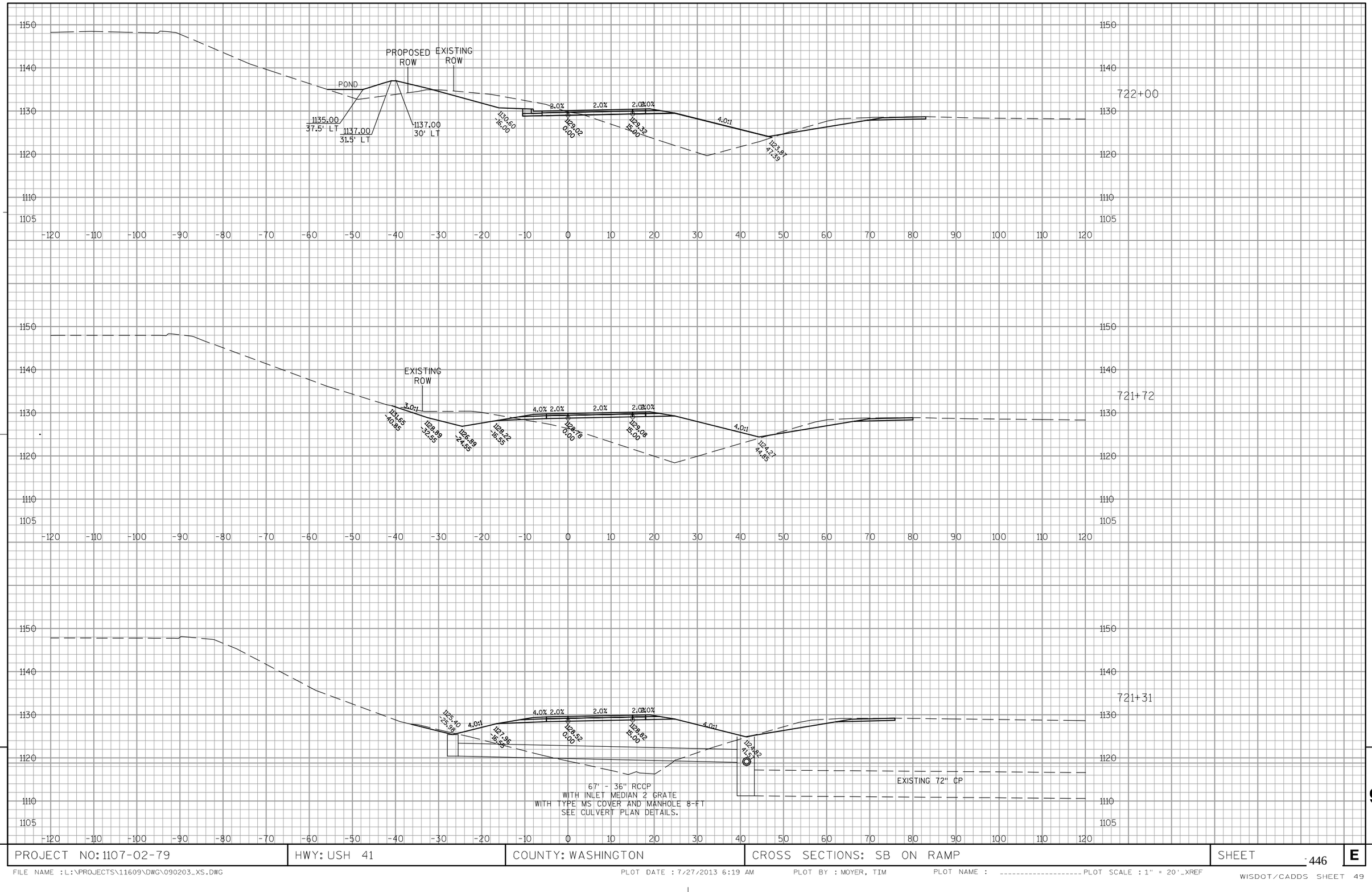
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB ON RAMP	SHEET 445	E

FILE NAME : L:\PROJECTS\11609\DWG\090203_XS.DWG PLOT DATE : 7/27/2013 6:19 AM PLOT BY : MOYER, TIM PLOT NAME : _____ PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



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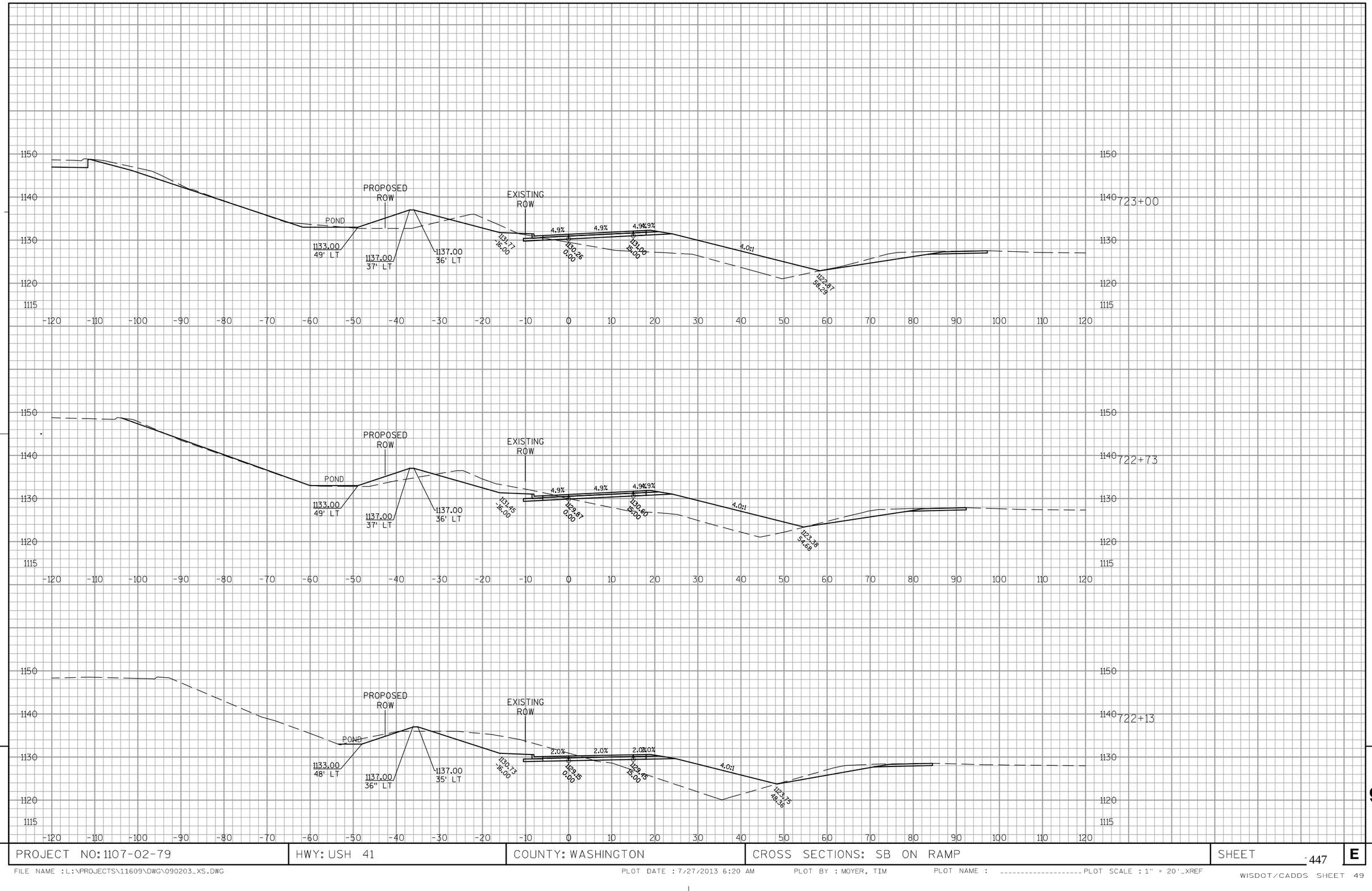
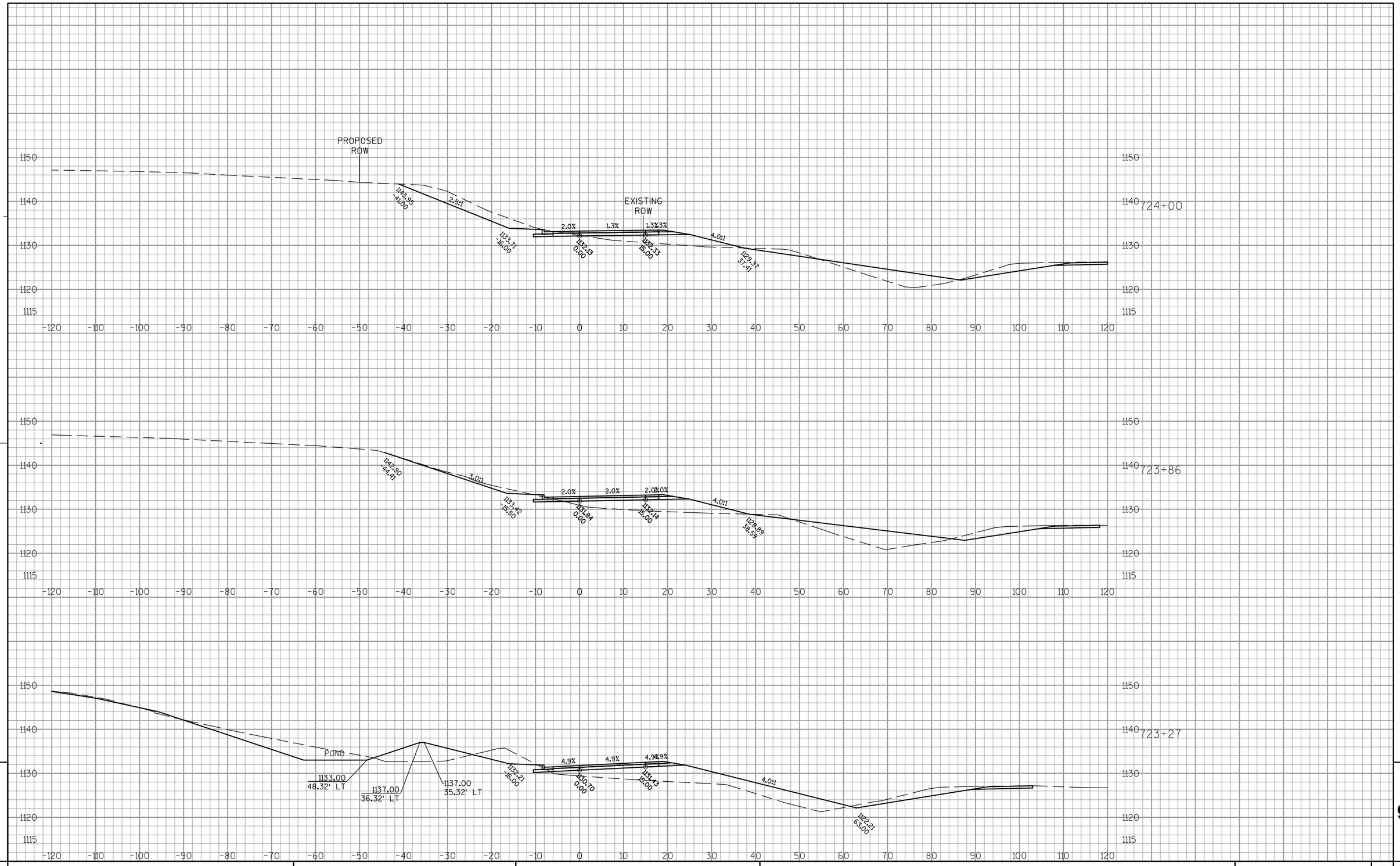
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB ON RAMP	SHEET 446	E



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB ON RAMP	SHEET 447	E

FILE NAME : L:\PROJECTS\11609\DWG\090203_XS.DWG PLOT DATE : 7/27/2013 6:20 AM PLOT BY : MOYER, TIM PLOT NAME : _____ PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



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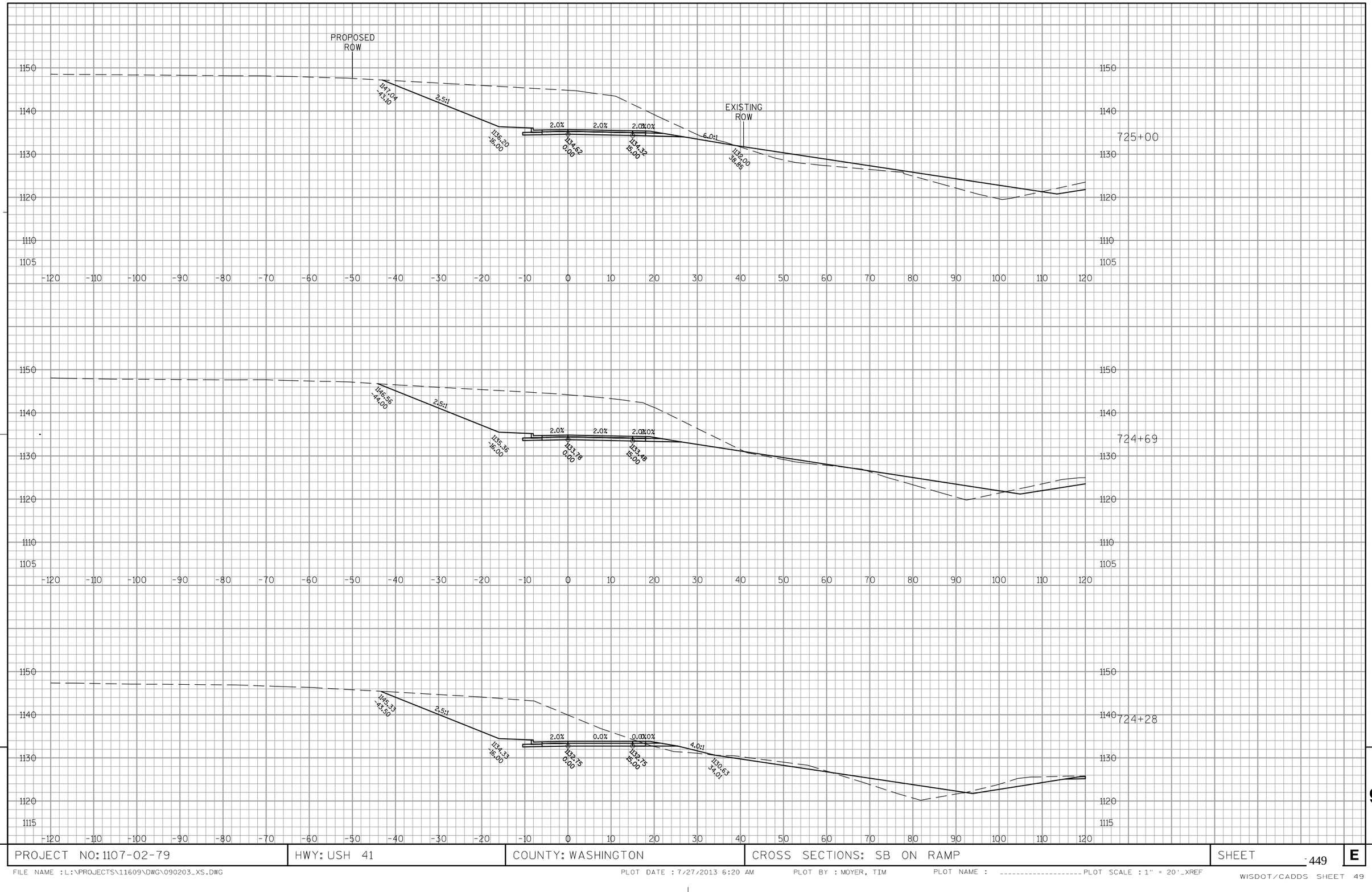
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB ON RAMP	SHEET 448	E



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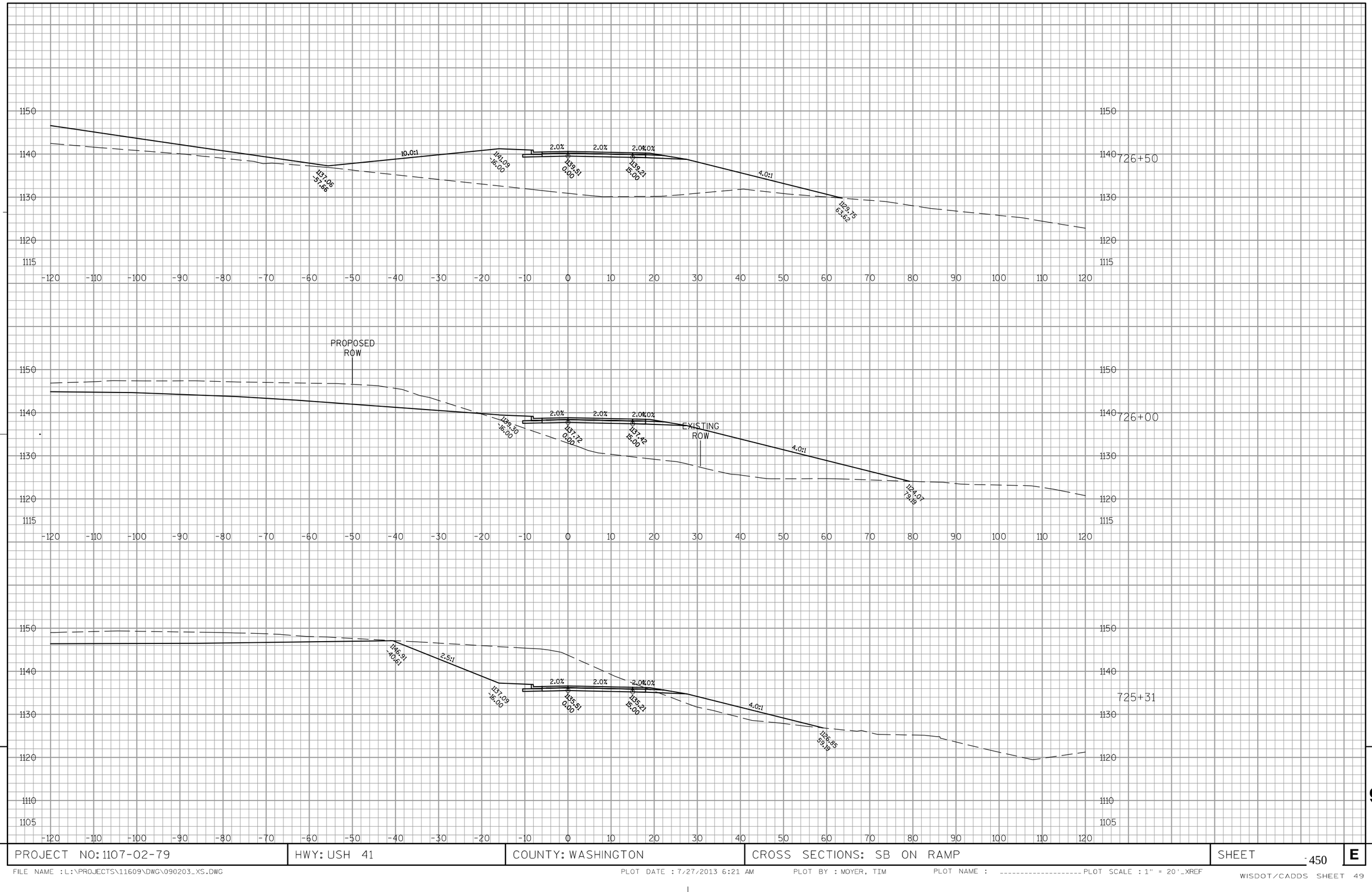
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB ON RAMP	SHEET	E

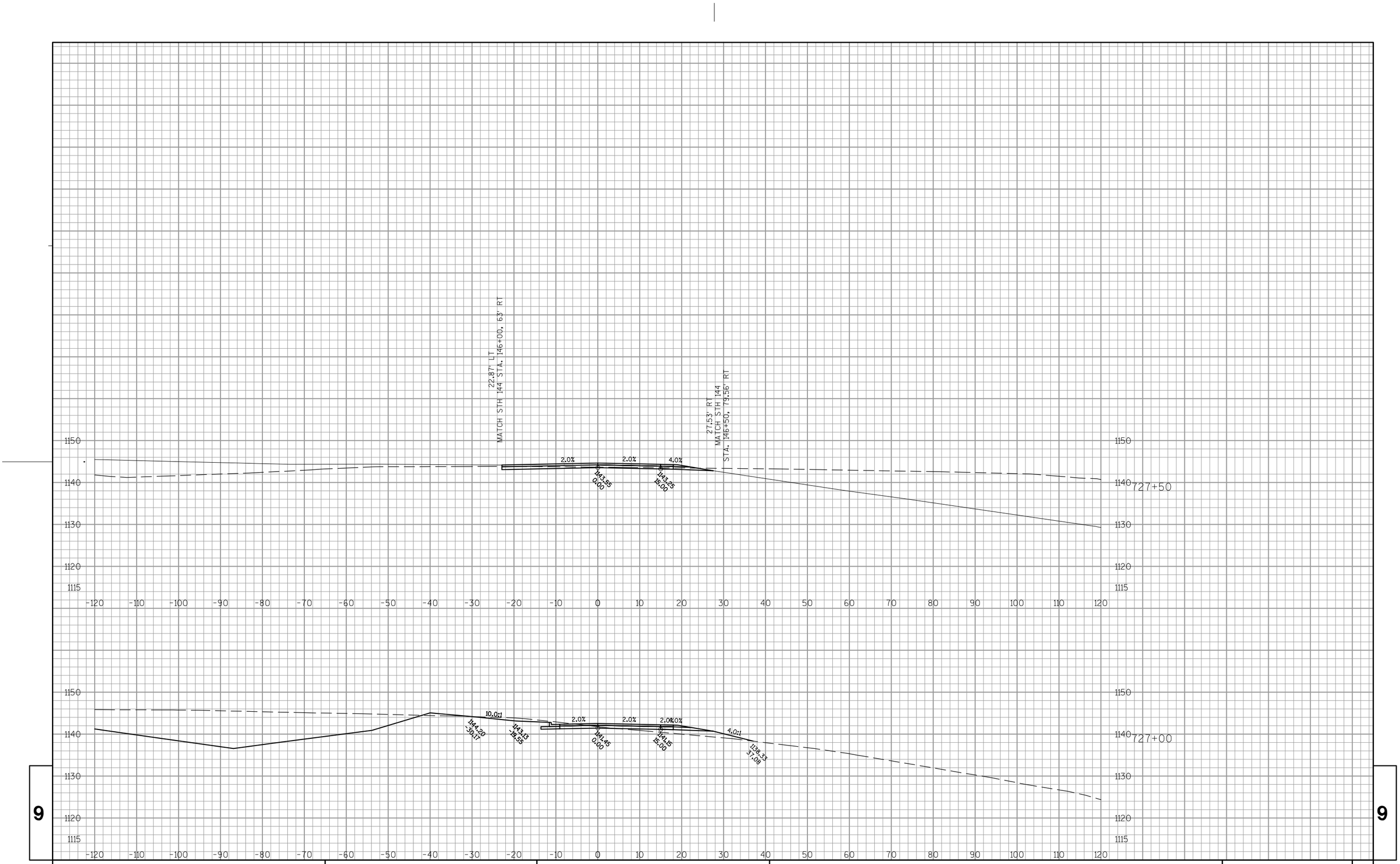
FILE NAME : L:\PROJECTS\11609\DWG\090203_XS.DWG PLOT DATE : 7/27/2013 6:20 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF
WISDOT/CADDS SHEET 49



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB ON RAMP	SHEET 450 E

FILE NAME : L:\PROJECTS\11609\DWG\090203_XS.DWG PLOT DATE : 7/27/2013 6:21 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



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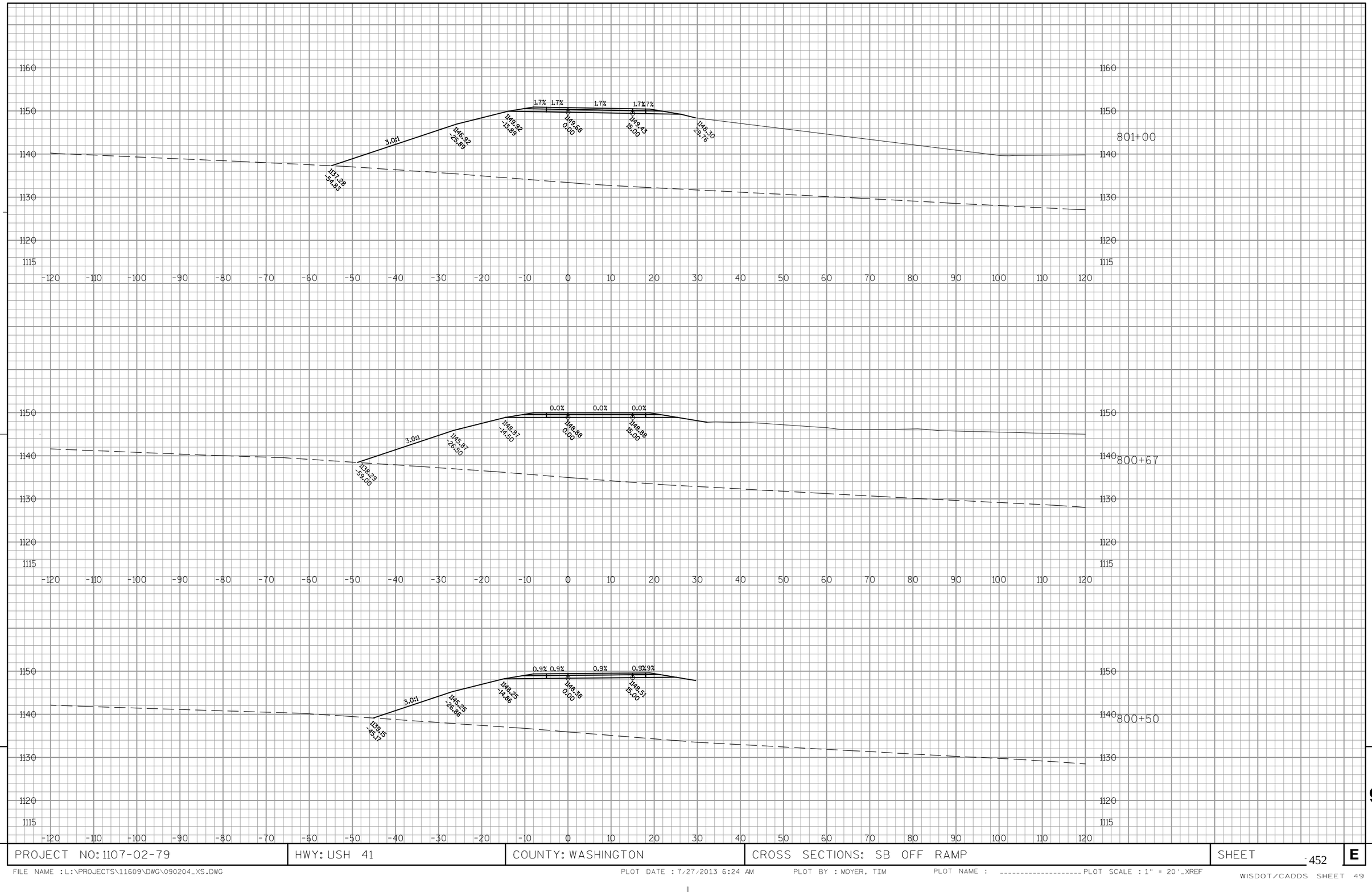
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB ON RAMP	SHEET 451	E

FILE NAME : L:\PROJECTS\11609\DWG\090203_XS.DWG PLOT DATE : 7/27/2013 6:21 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



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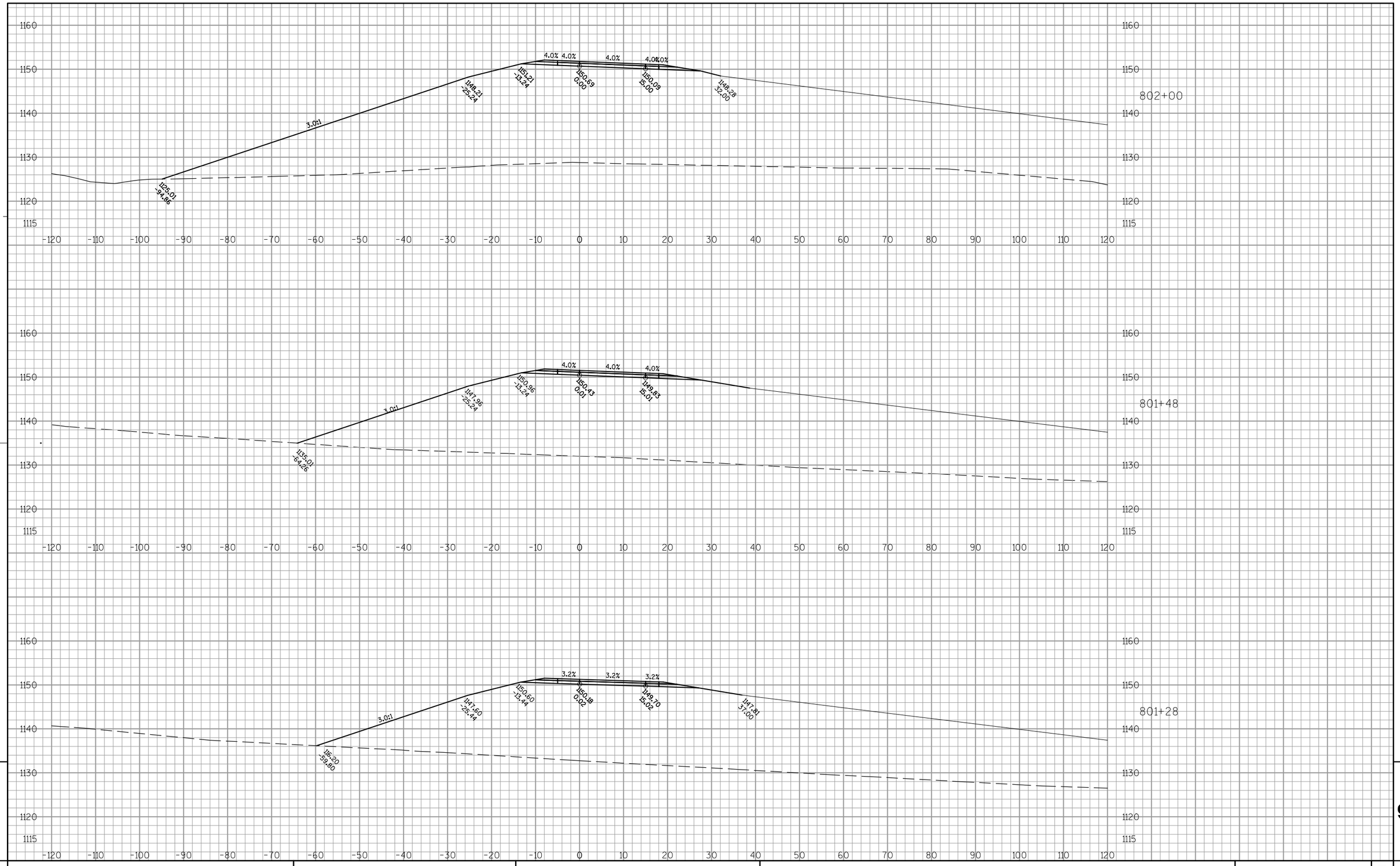
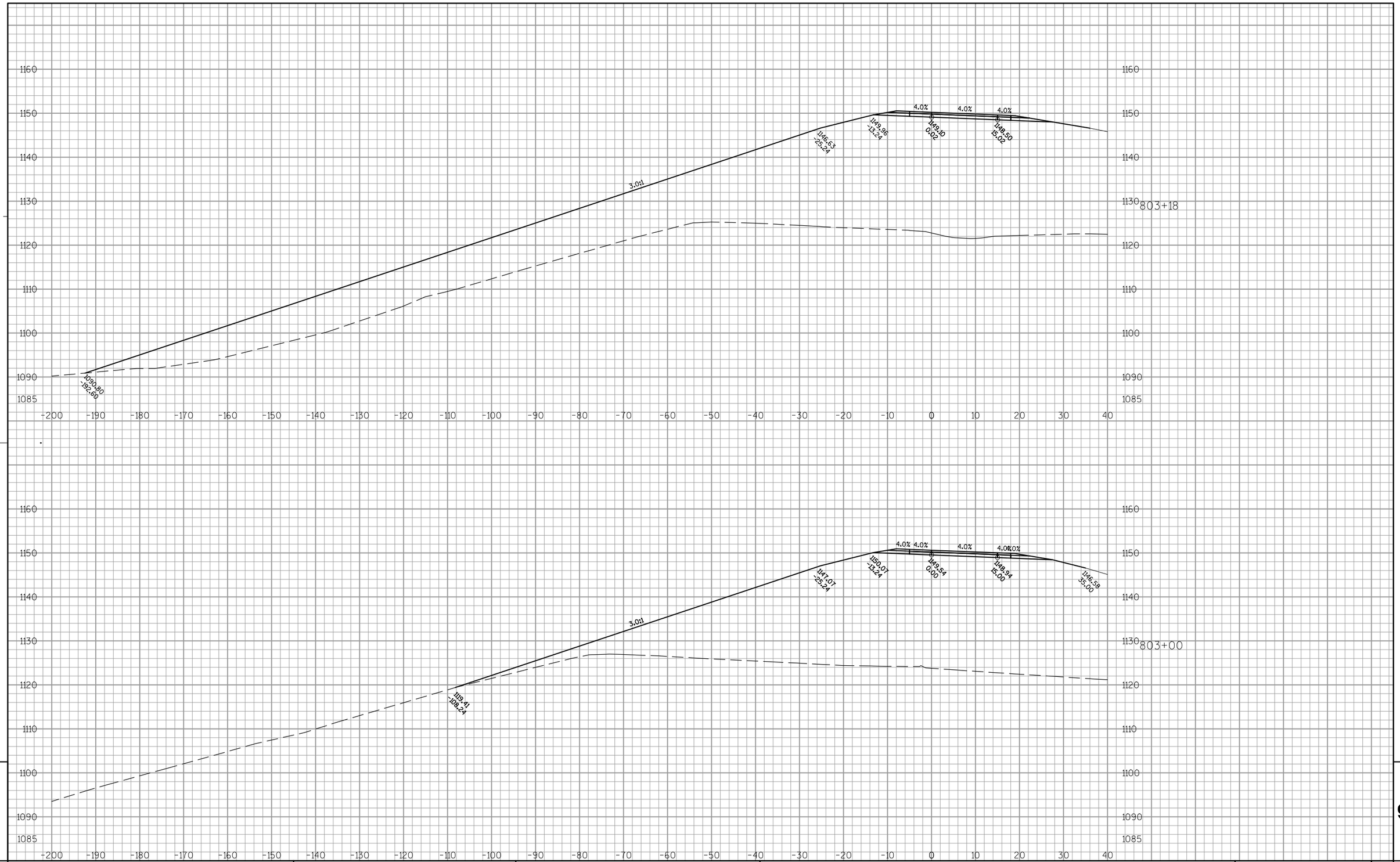
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB OFF RAMP	SHEET 452	E



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB OFF RAMP	SHEET 453	E

FILE NAME : L:\PROJECTS\11609\DWG\090204_XS.DWG PLOT DATE : 7/27/2013 6:24 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF

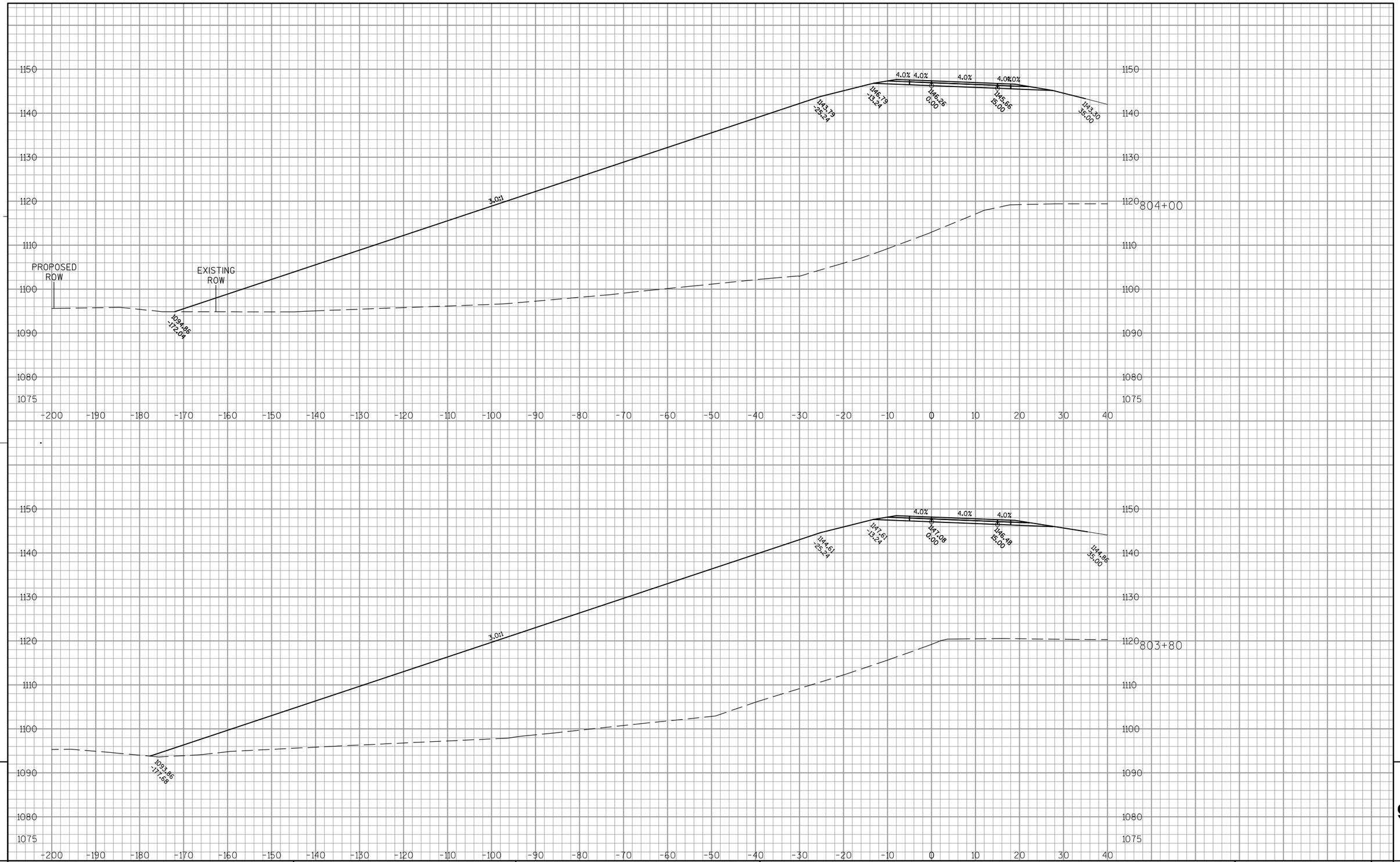
WISDOT/CADDS SHEET 49



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB OFF RAMP	SHEET 454 E

FILE NAME : L:\PROJECTS\11609\DWG\090204_XS.DWG PLOT DATE : 7/27/2013 6:24 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF

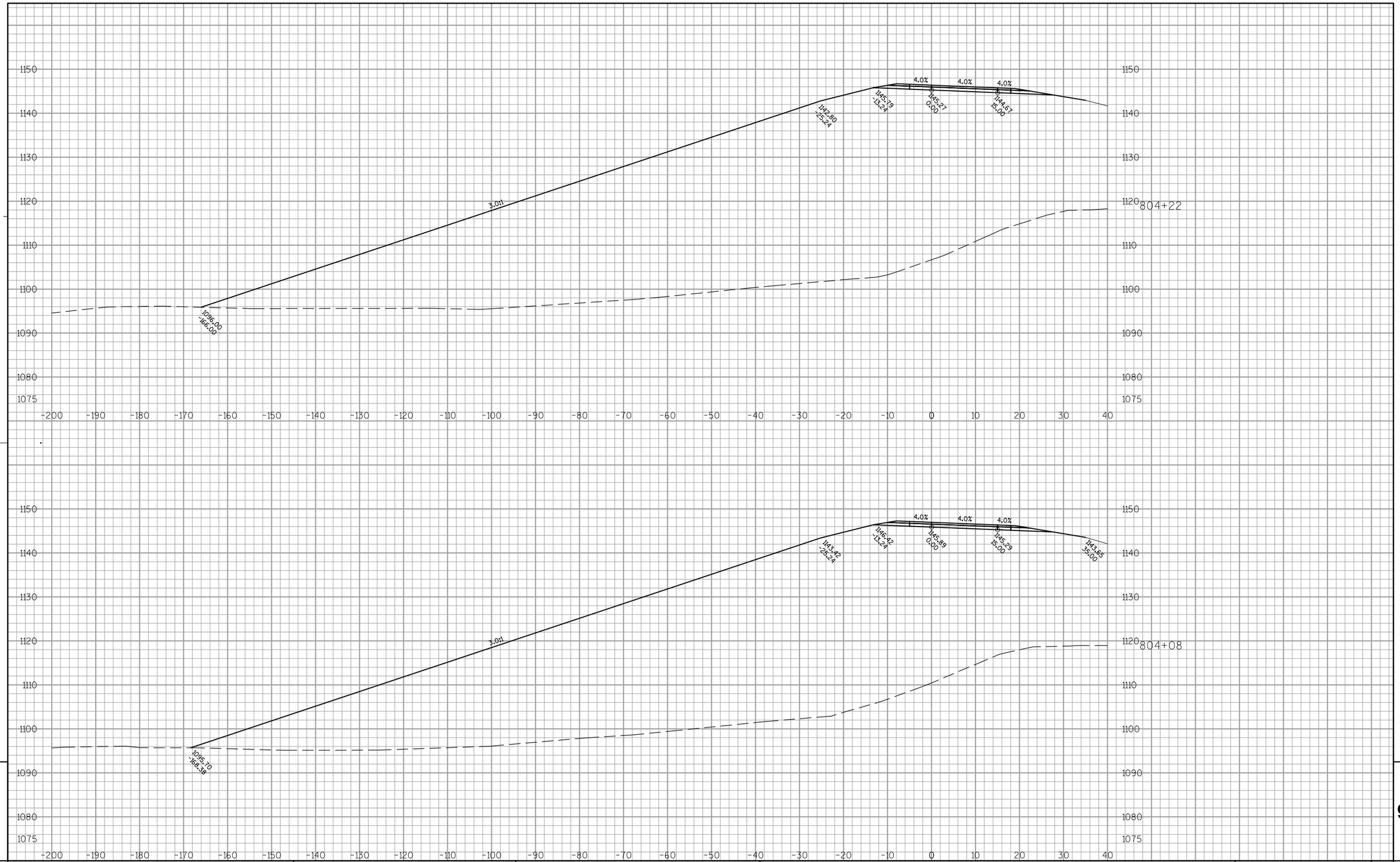
WISDOT/CADDS SHEET 49



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB OFF RAMP	SHEET 455 E

FILE NAME : L:\PROJECTS\11609\DWG\090204_XS.DWG PLOT DATE : 7/27/2013 6:25 AM PLOT BY : MOYER, TIM PLOT NAME : _____ PLOT SCALE : 1" = 20'_XREF

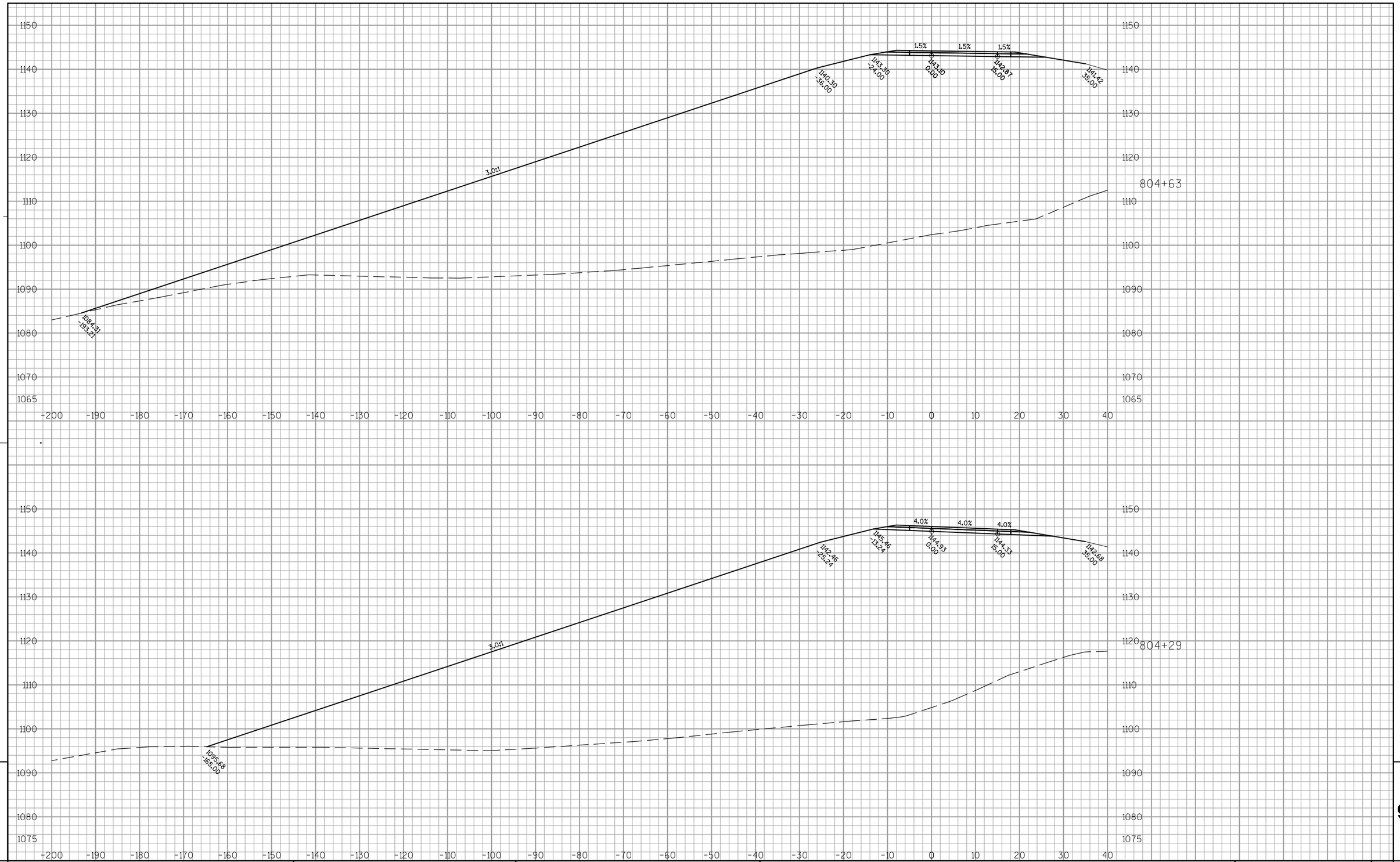
WISDOT/CADDS SHEET 49



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB OFF RAMP	SHEET 456 E

FILE NAME : L:\PROJECTS\11609\DWG\090204_XS.DWG PLOT DATE : 7/27/2013 6:25 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



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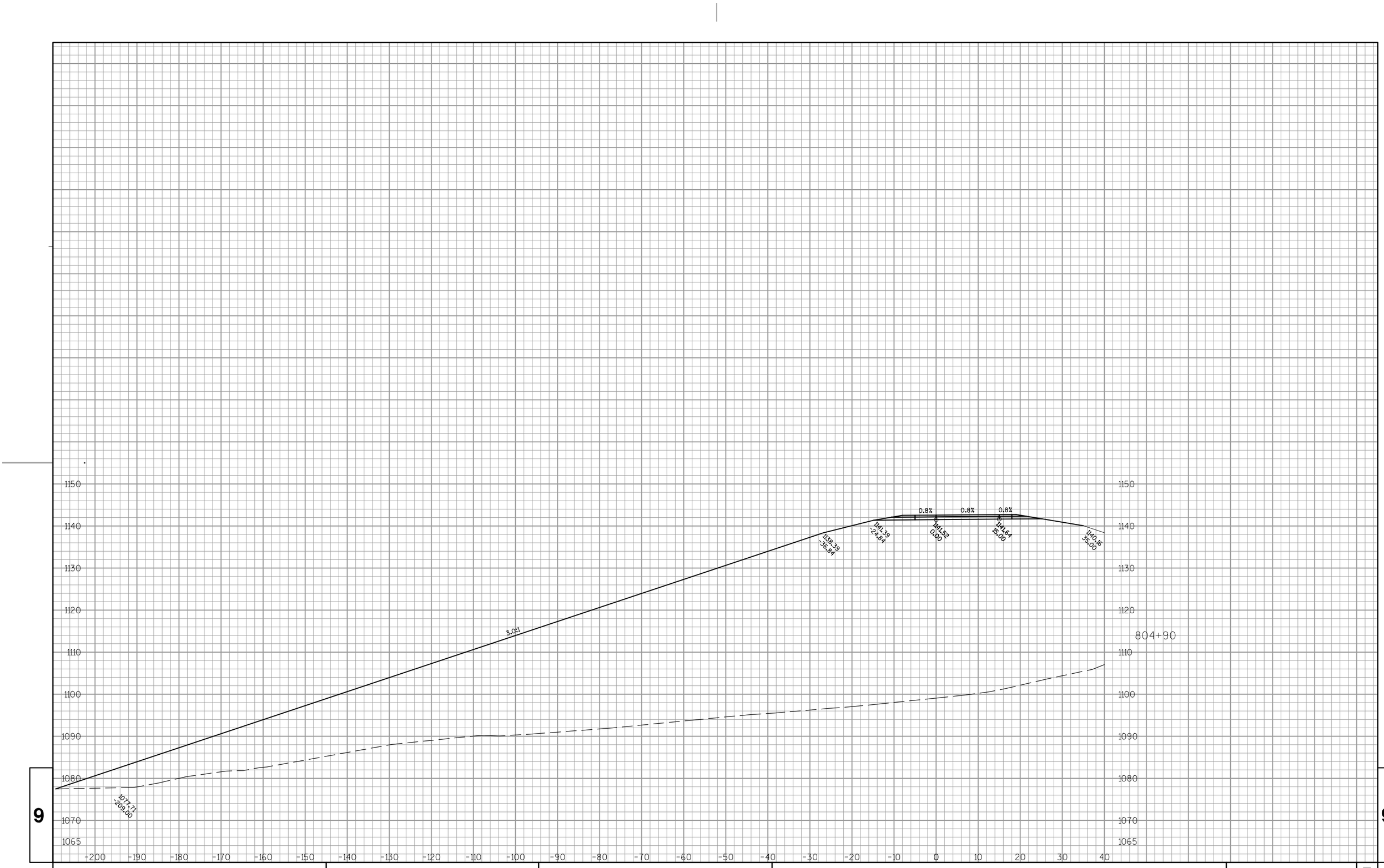
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB OFF RAMP	SHEET 457	E

FILE NAME : L:\PROJECTS\11609\DWG\090204_XS.DWG PLOT DATE : 7/27/2013 6:25 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



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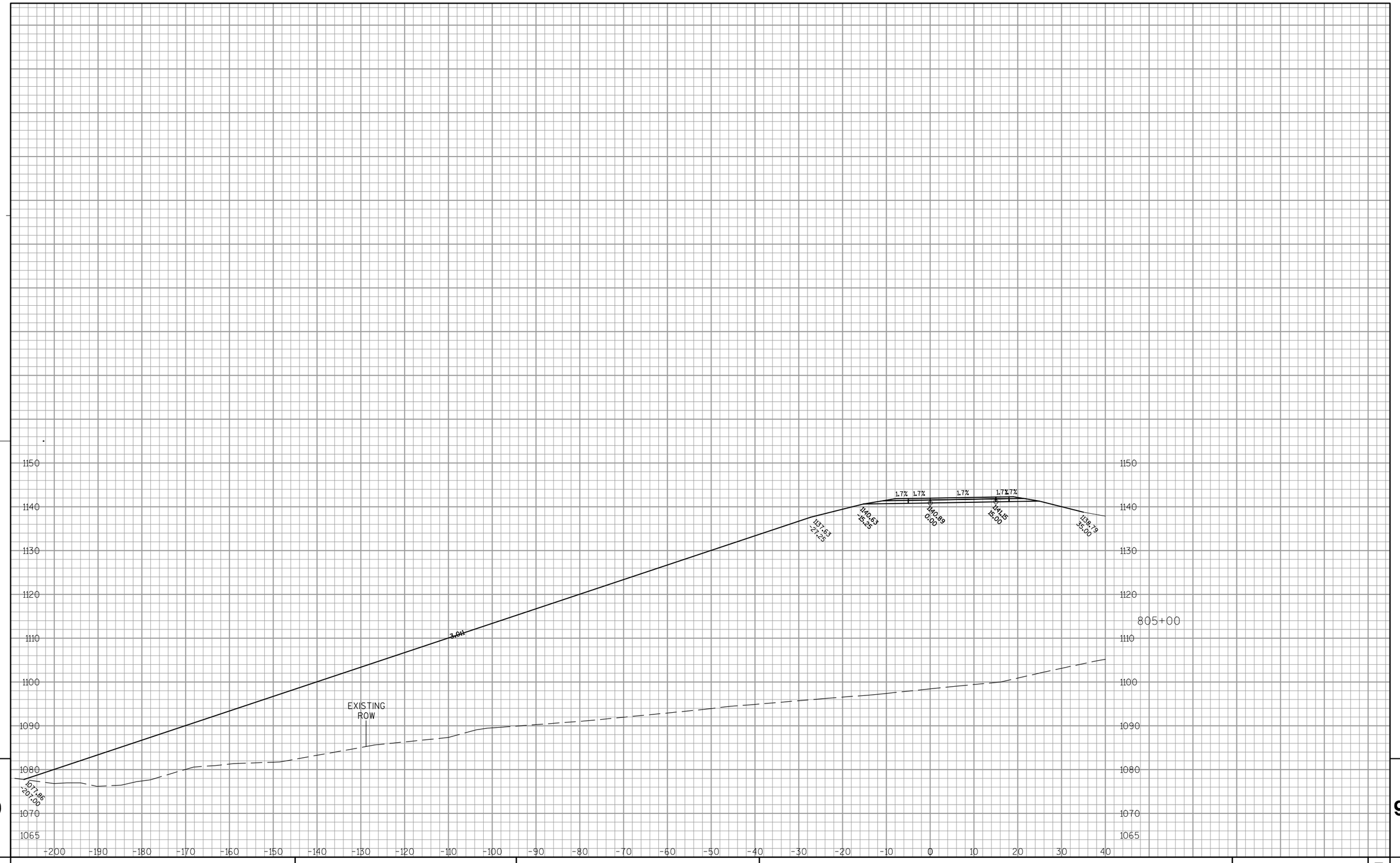
PROJECT NO: 1107-02-79 | HWY: USH 41 | COUNTY: WASHINGTON | CROSS SECTIONS: SB OFF RAMP | SHEET 458 | E

FILE NAME : L:\PROJECTS\11609\DWG\090204_XS.DWG PLOT DATE : 7/27/2013 6:26 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



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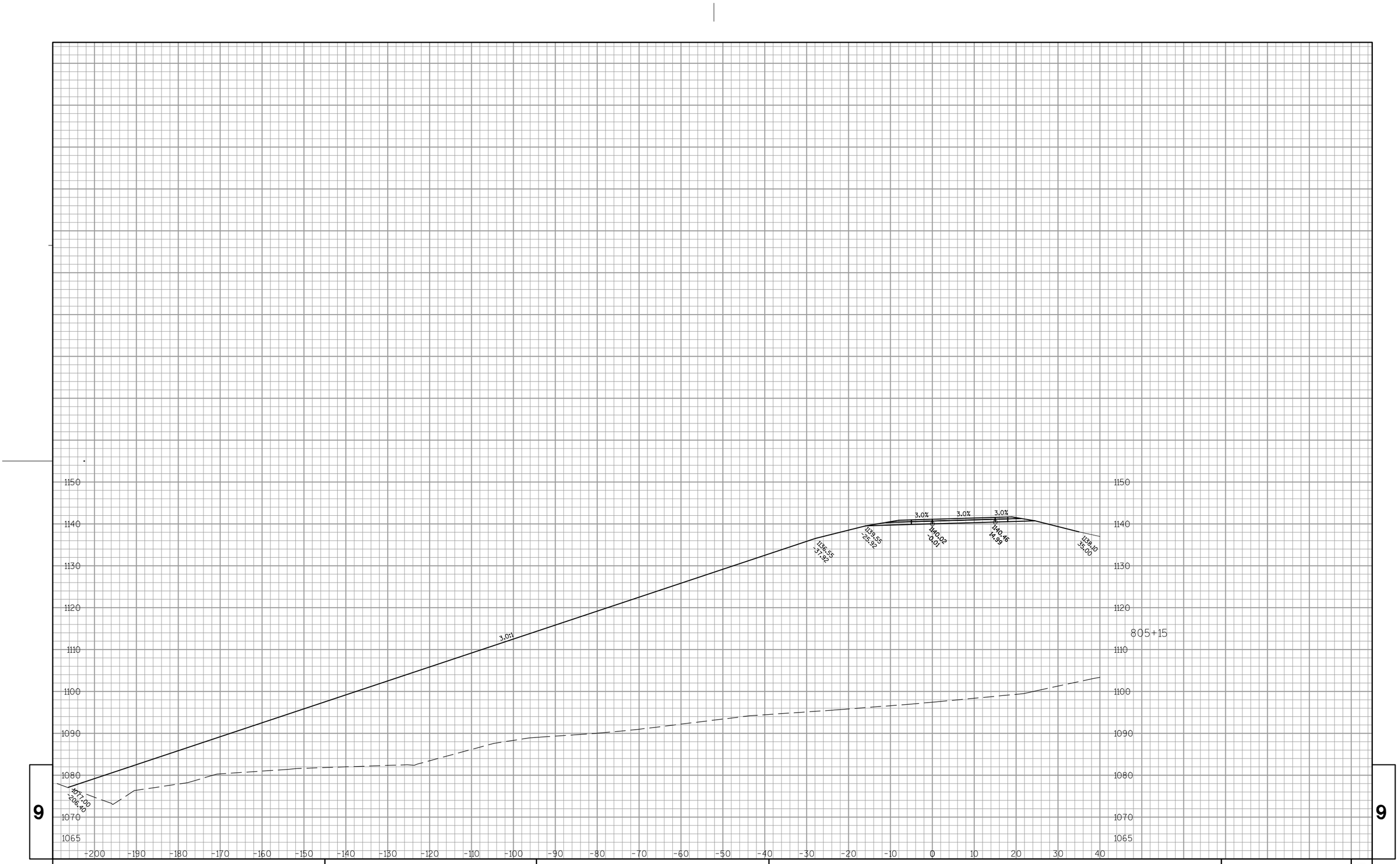
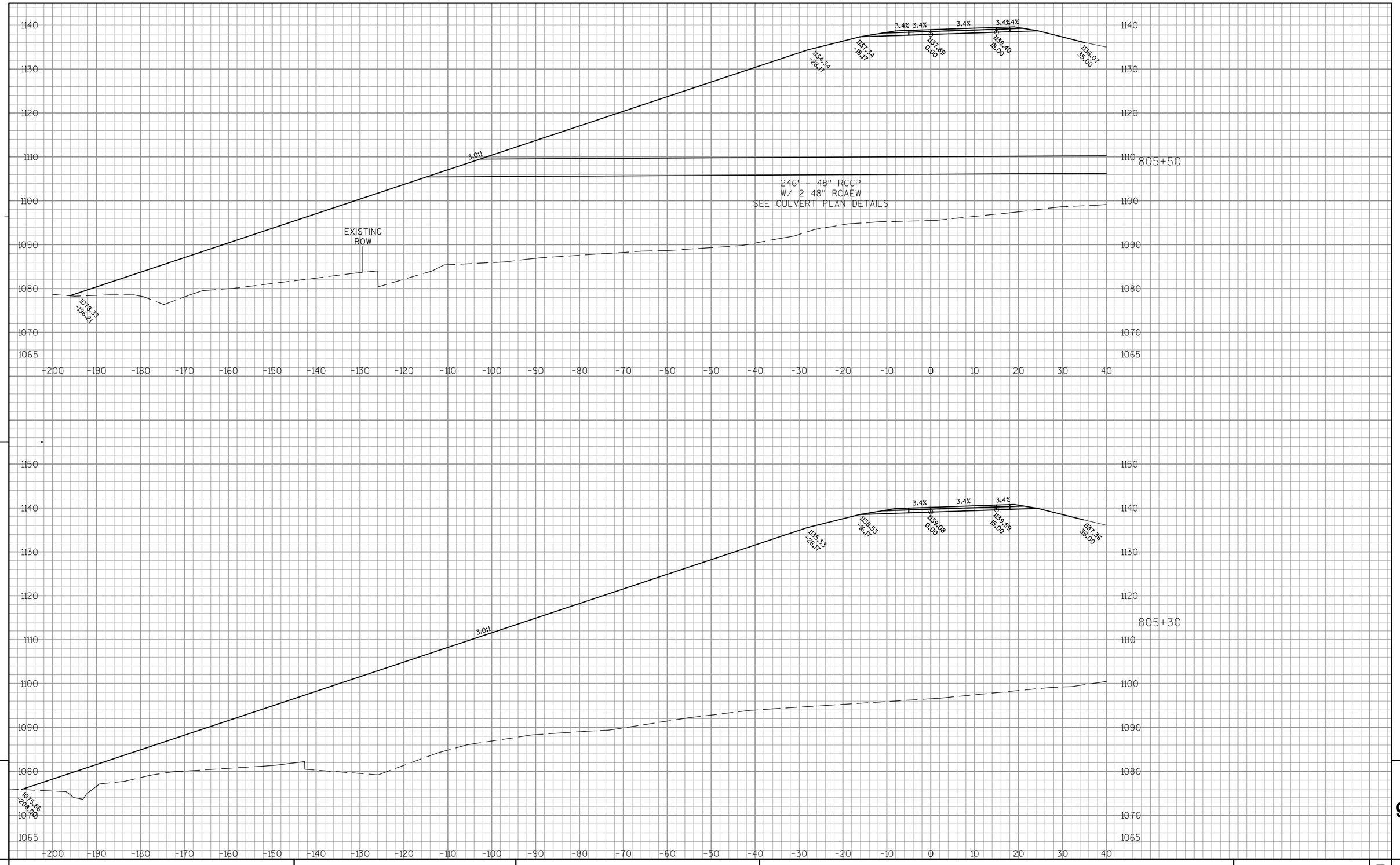
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB OFF RAMP	SHEET 459	E

FILE NAME : L:\PROJECTS\11609\DWG\090204_XS.DWG PLOT DATE : 7/27/2013 6:26 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB OFF RAMP	SHEET 460	E



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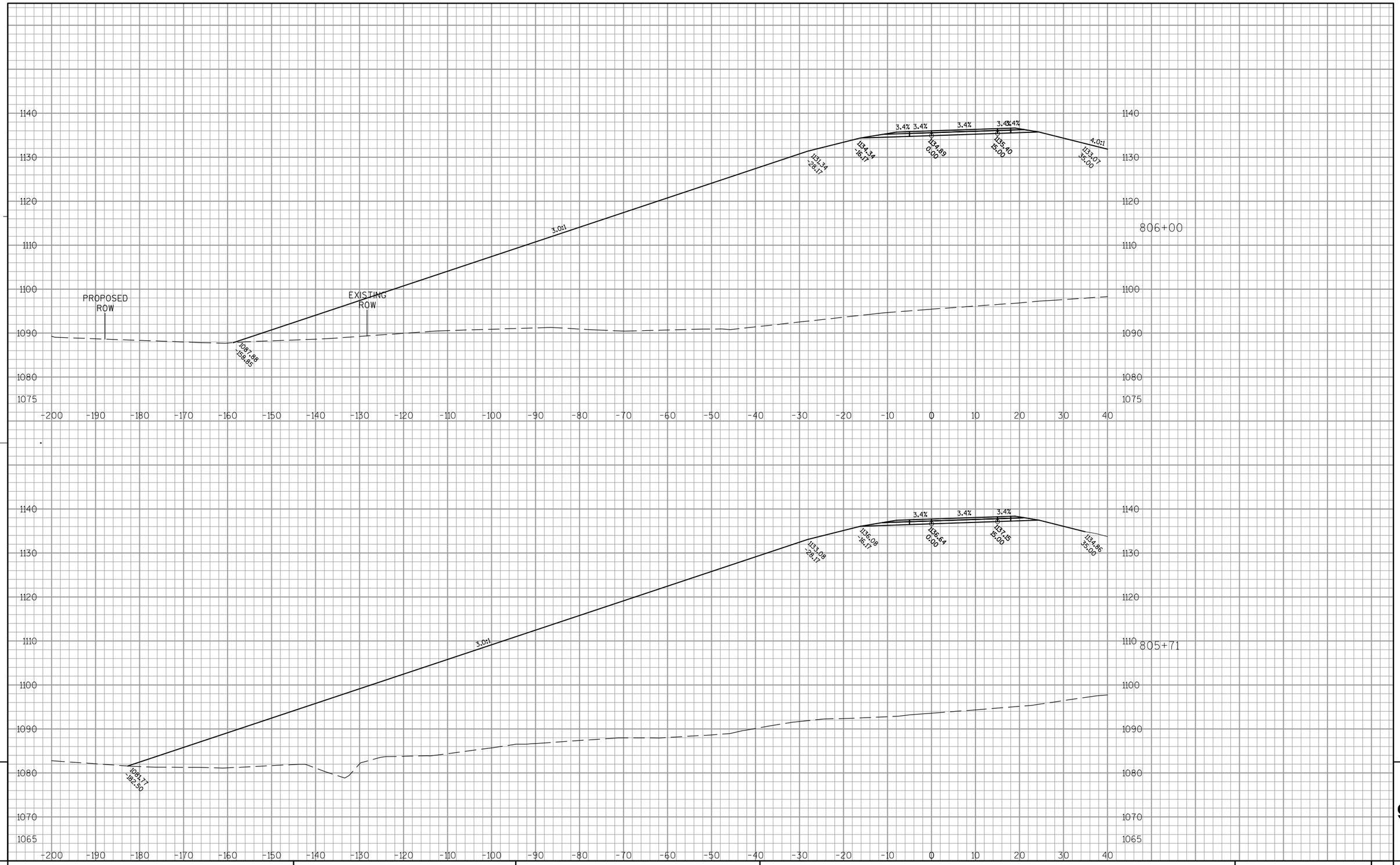
PROJECT NO: 1107-02-79 | HWY: USH 41 | COUNTY: WASHINGTON | CROSS SECTIONS: SB OFF RAMP | SHEET 461 | E

FILE NAME : L:\PROJECTS\11609\DWG\090204_XS.DWG PLOT DATE : 7/27/2013 6:27 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



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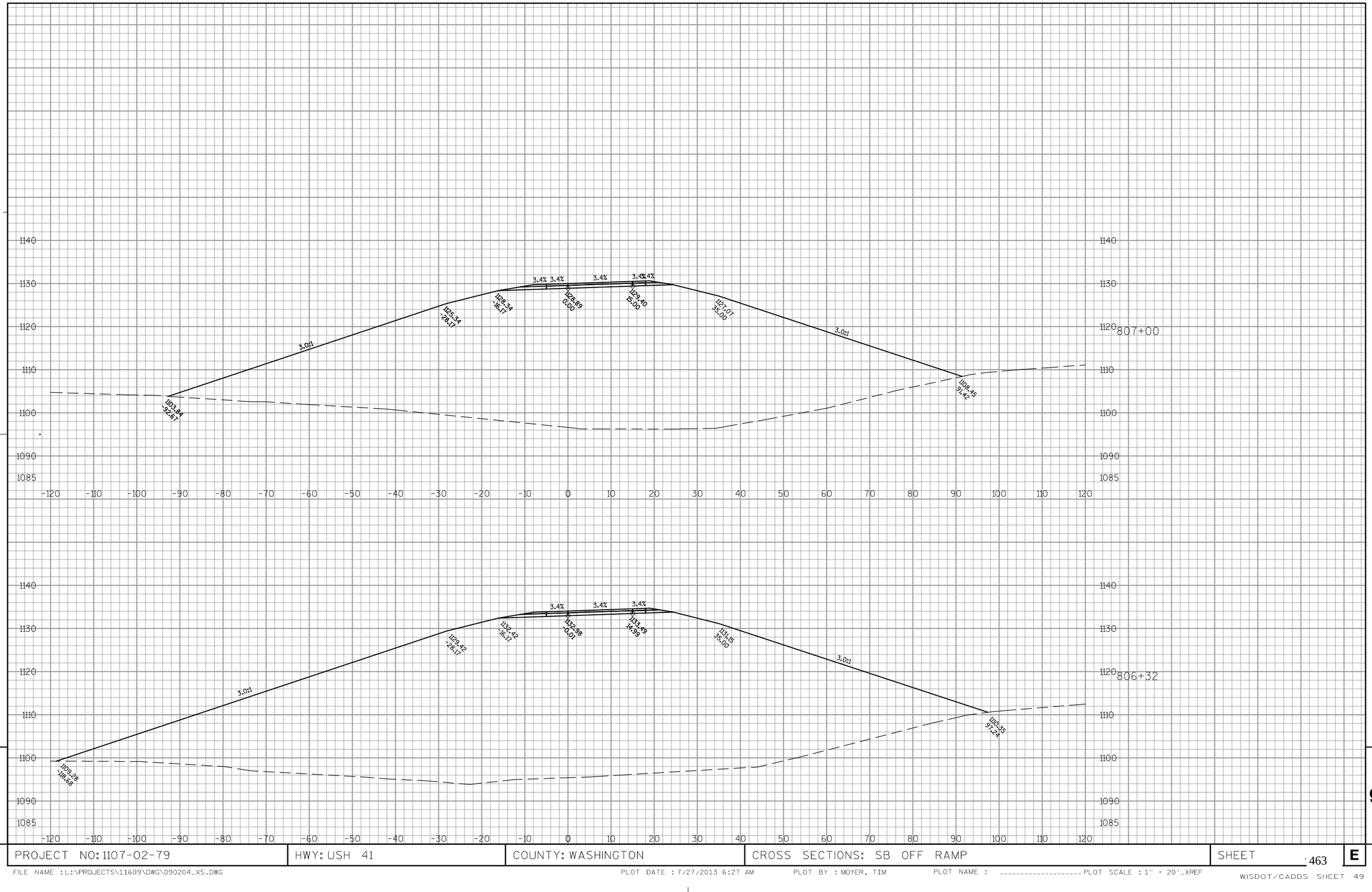
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB OFF RAMP	SHEET	E

FILE NAME : L:\PROJECTS\11609\DWG\090204_XS.DWG PLOT DATE : 7/27/2013 6:27 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



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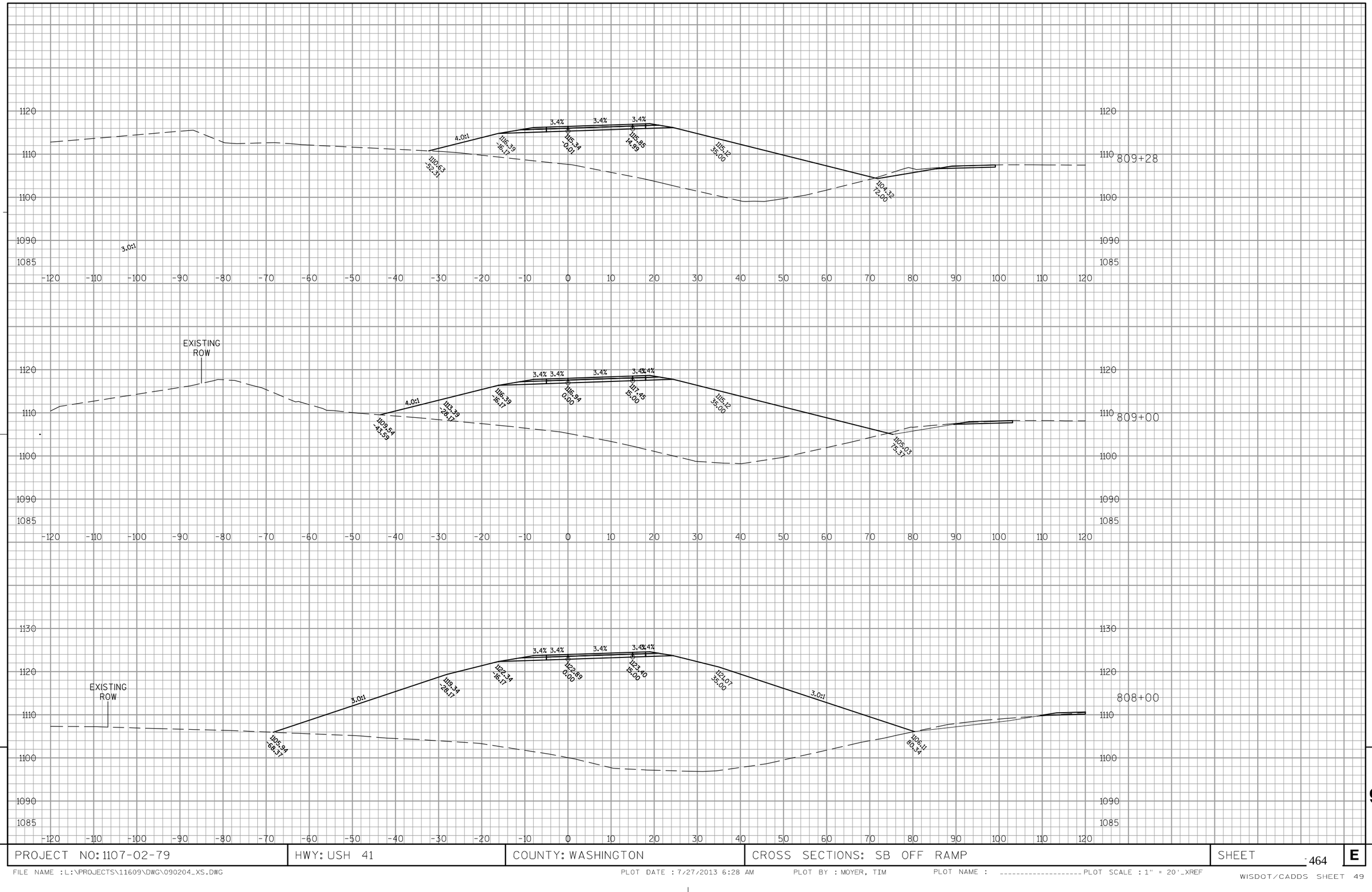
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB OFF RAMP	SHEET 463	E

FILE NAME : L:\PROJECTS\11609\DWG\090204_XS.DWG PLOT DATE : 7/27/2013 6:27 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



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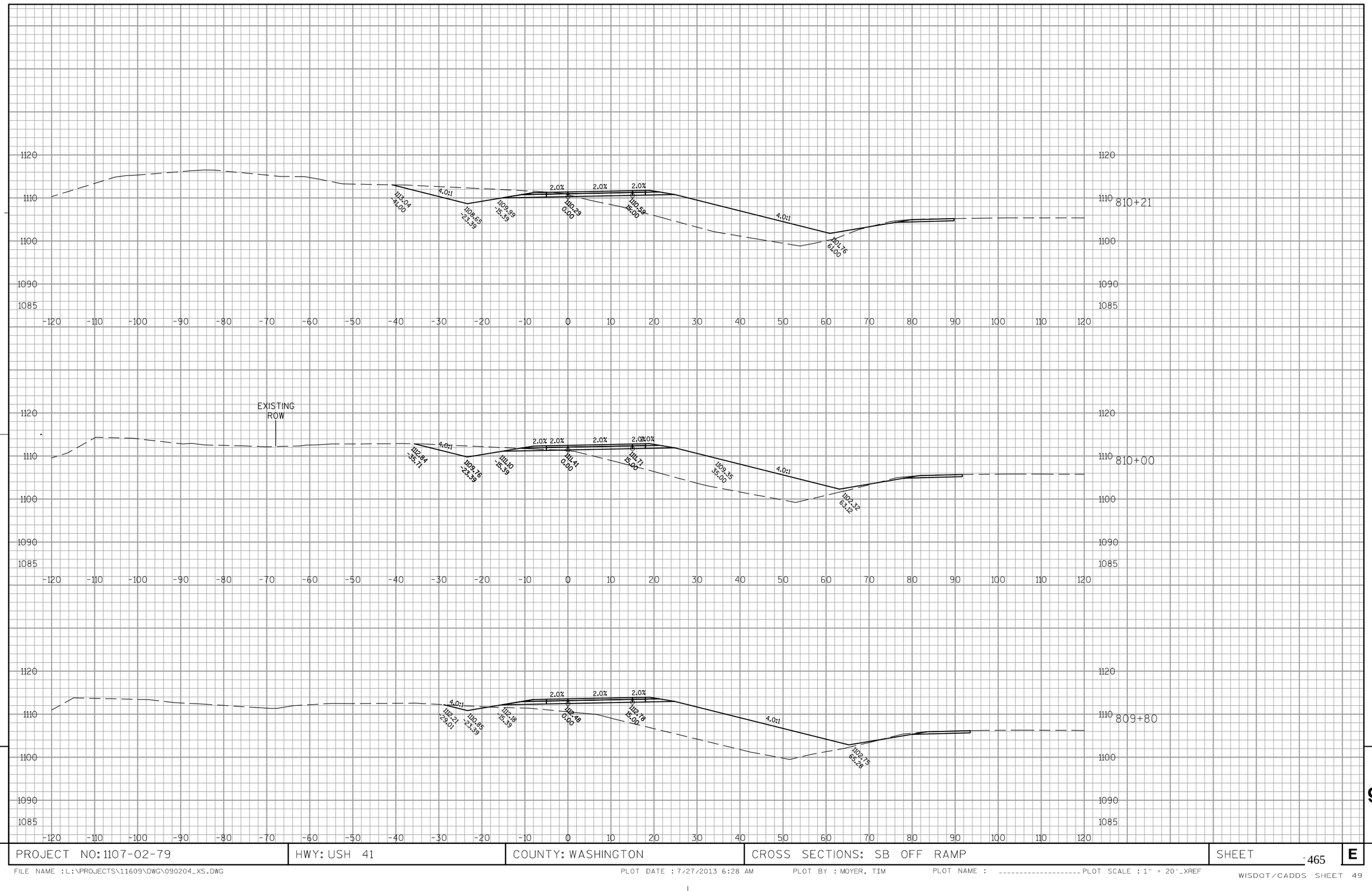
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB OFF RAMP	SHEET 464	E



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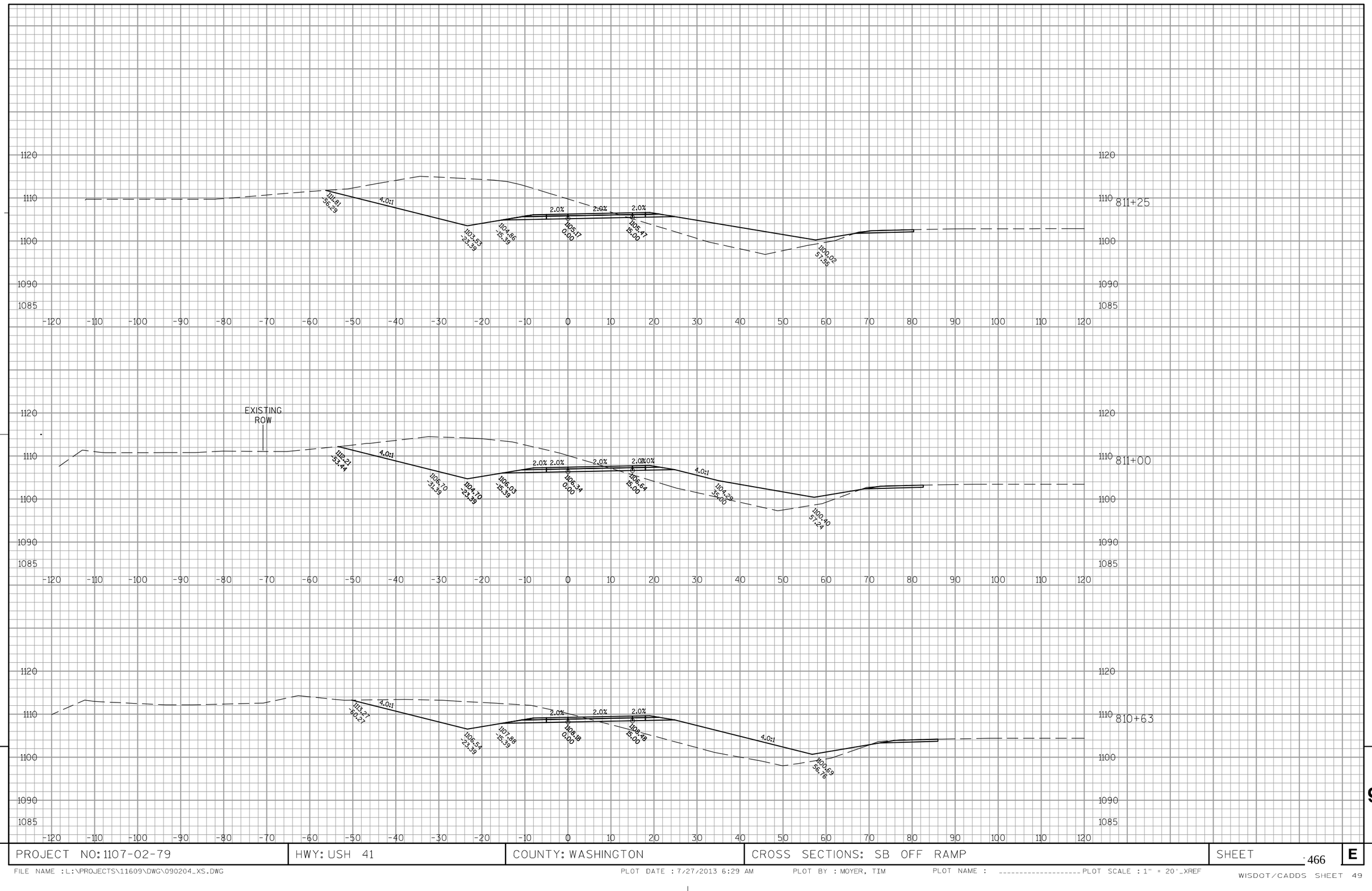
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB OFF RAMP	SHEET 465	E



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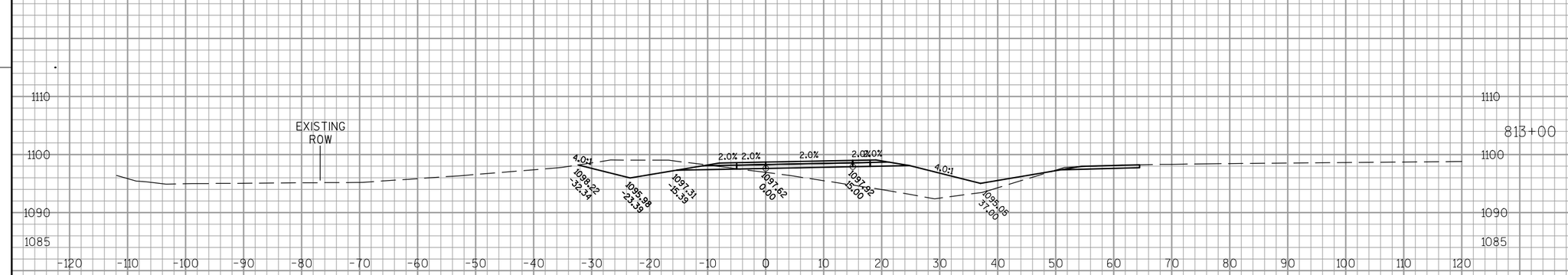
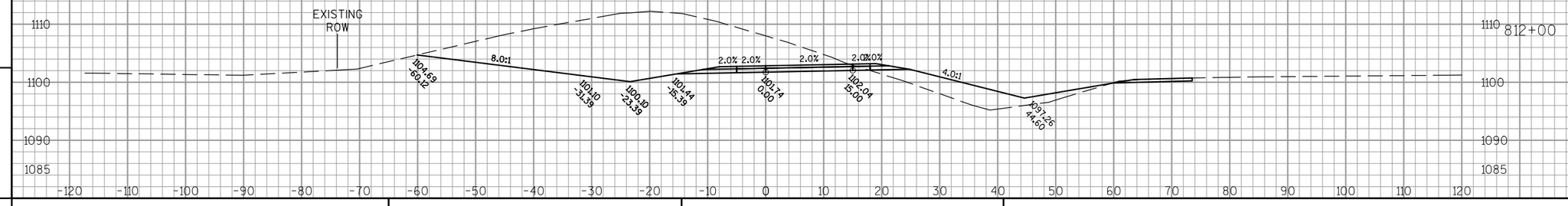
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB OFF RAMP	SHEET 466	E

FILE NAME : L:\PROJECTS\11609\DWG\090204_XS.DWG PLOT DATE : 7/27/2013 6:29 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49





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PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB OFF RAMP	SHEET 467	E

FILE NAME : L:\PROJECTS\11609\DWG\090204_XS.DWG PLOT DATE : 7/27/2013 6:29 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF

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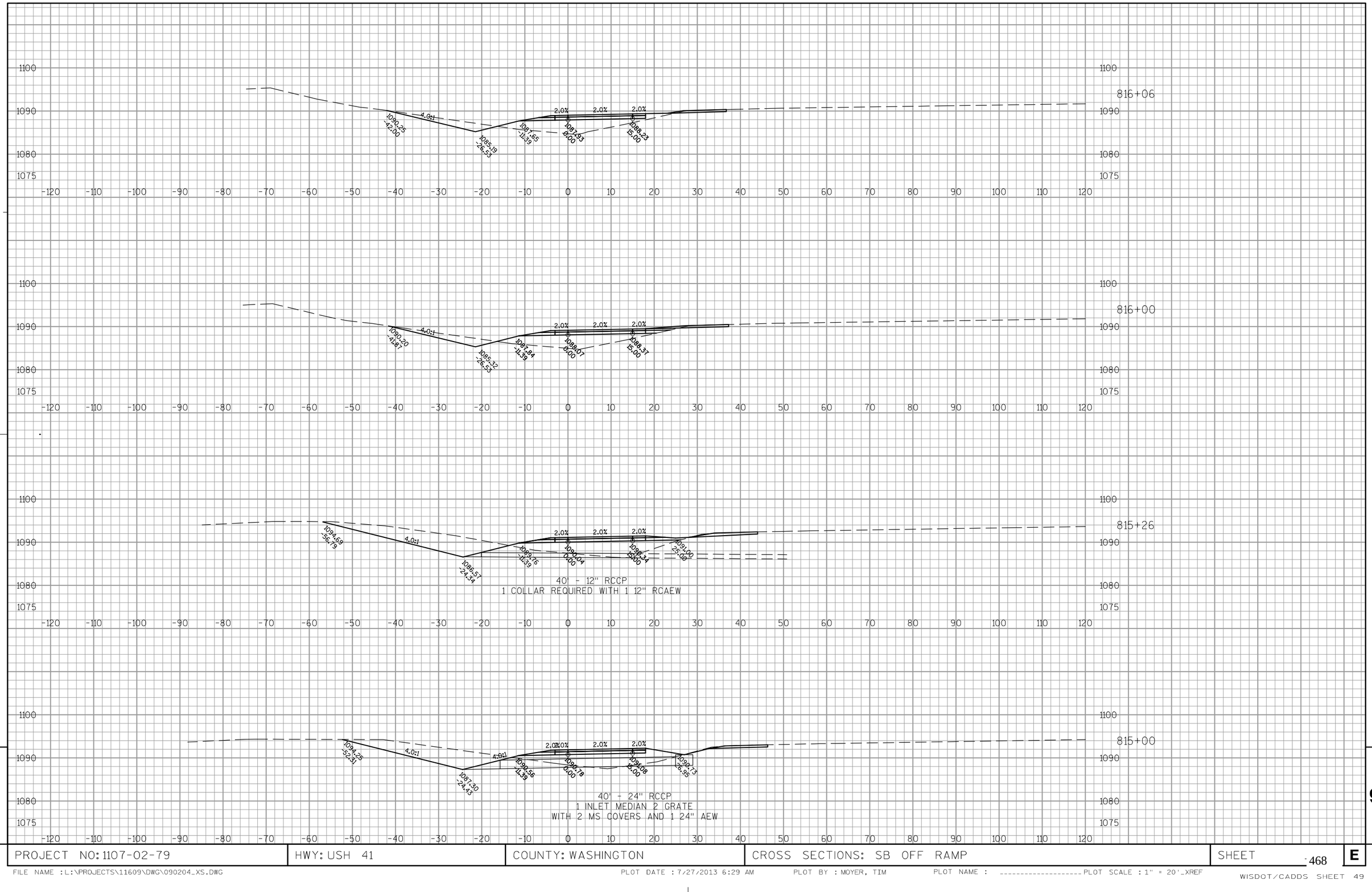

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PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB OFF RAMP	SHEET 468	E

FILE NAME : L:\PROJECTS\11609\DWG\090204_XS.DWG PLOT DATE : 7/27/2013 6:29 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF

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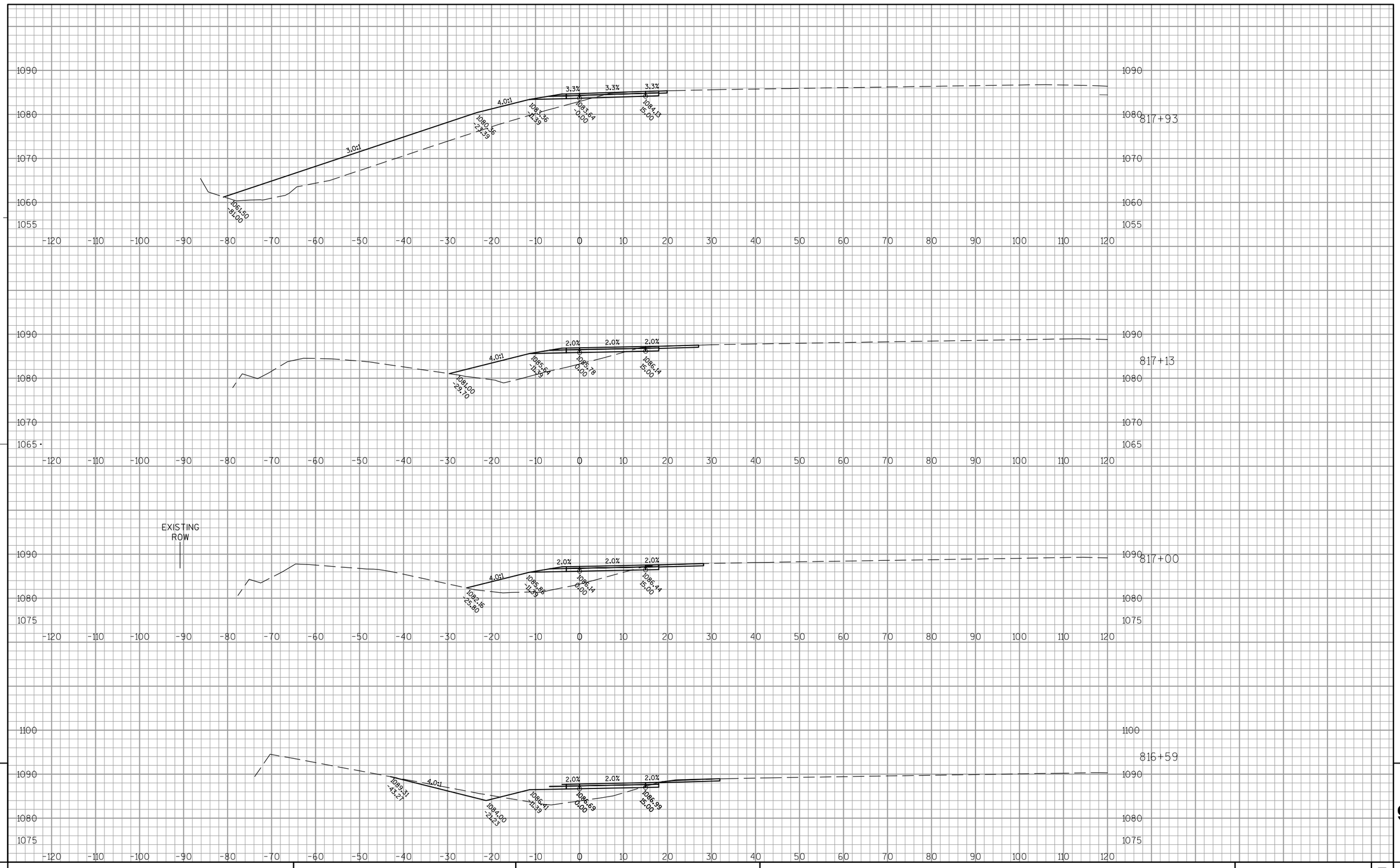

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB OFF RAMP	SHEET 469 E

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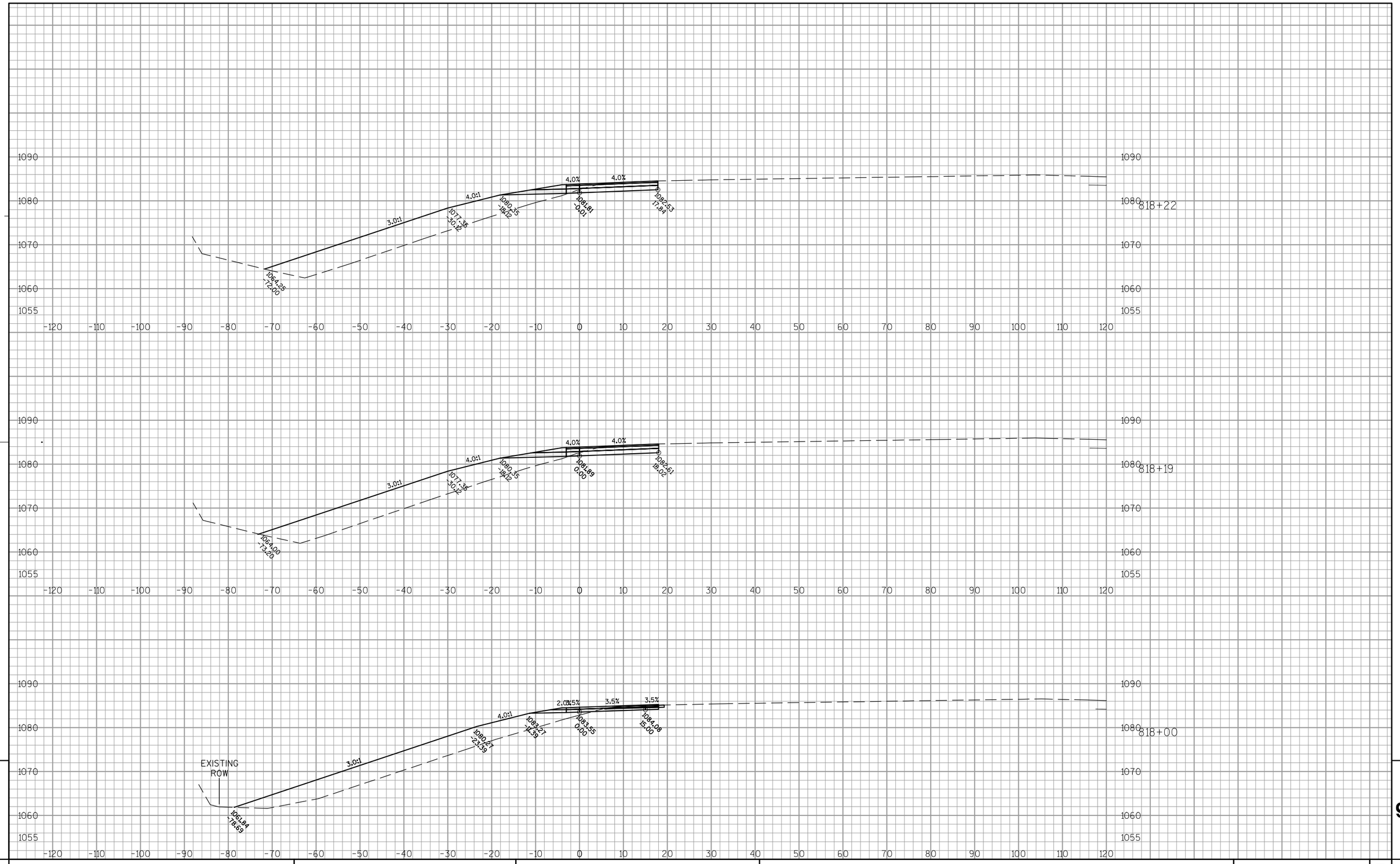

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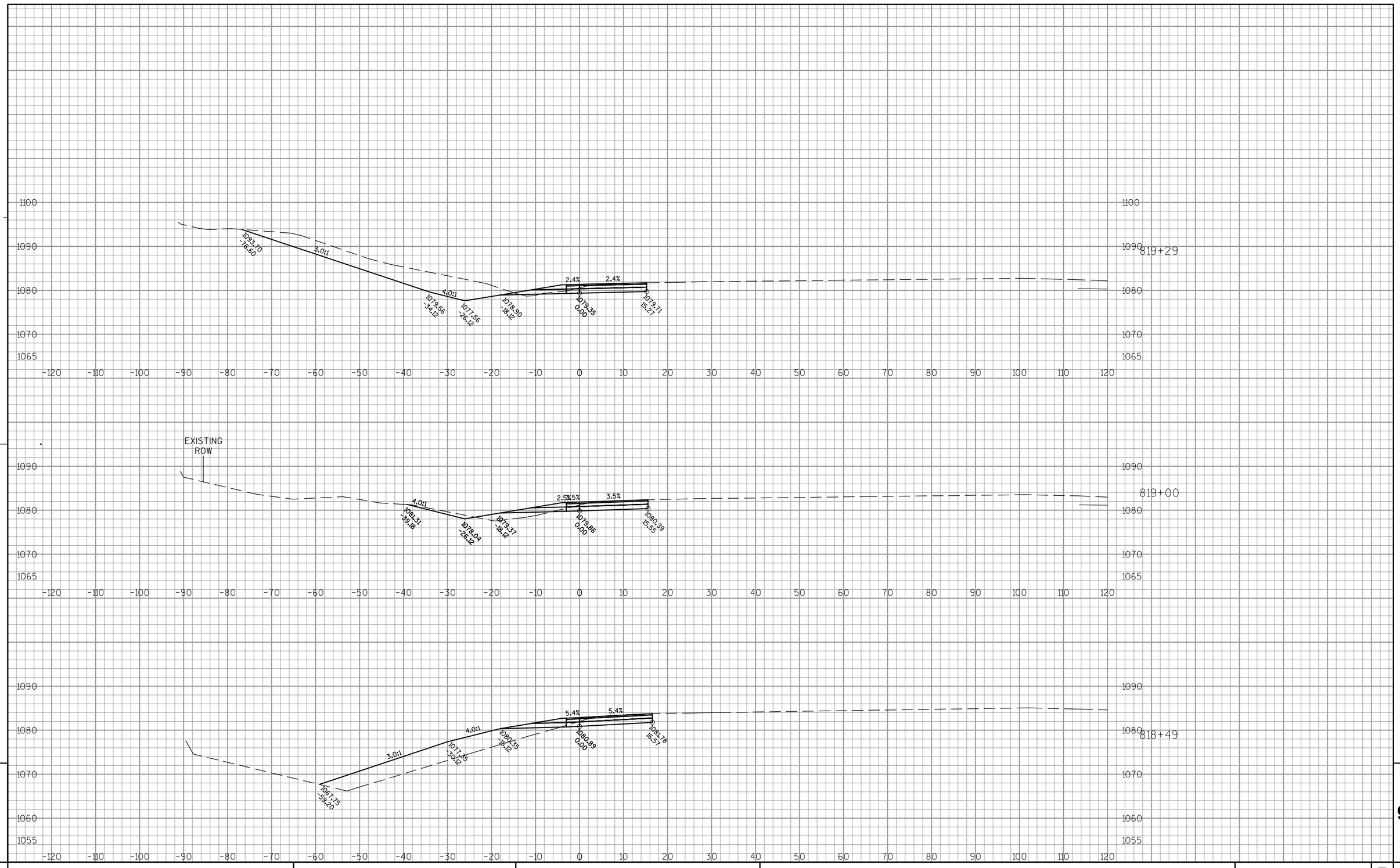
PROJECT NO: 1107-02-79 | HWY: USH 41 | COUNTY: WASHINGTON | CROSS SECTIONS: SB OFF RAMP | SHEET 470 | E

FILE NAME : L:\PROJECTS\11609\DWG\090204_XS.DWG PLOT DATE : 7/27/2013 6:30 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



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PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB OFF RAMP	SHEET 471	E

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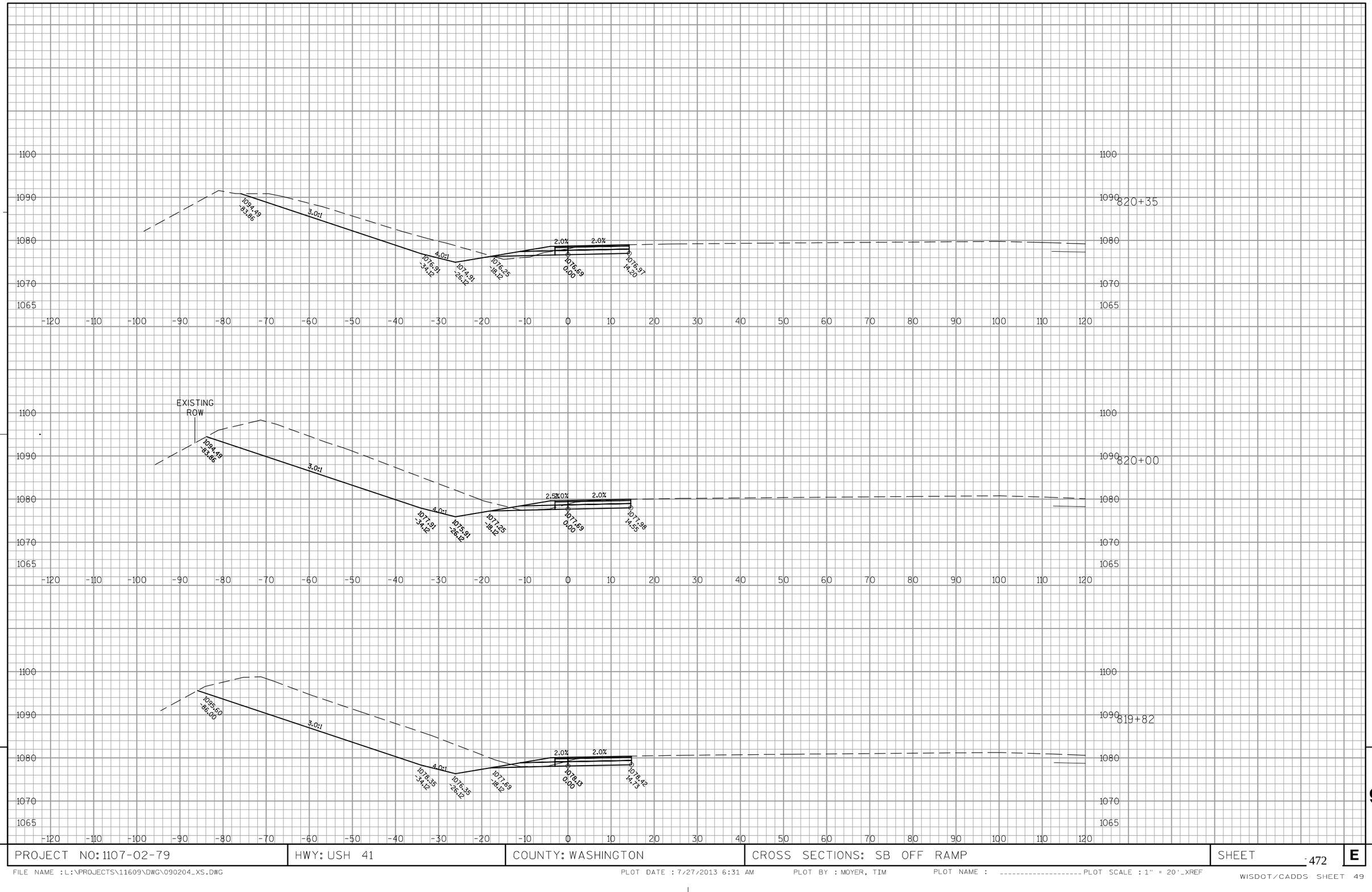
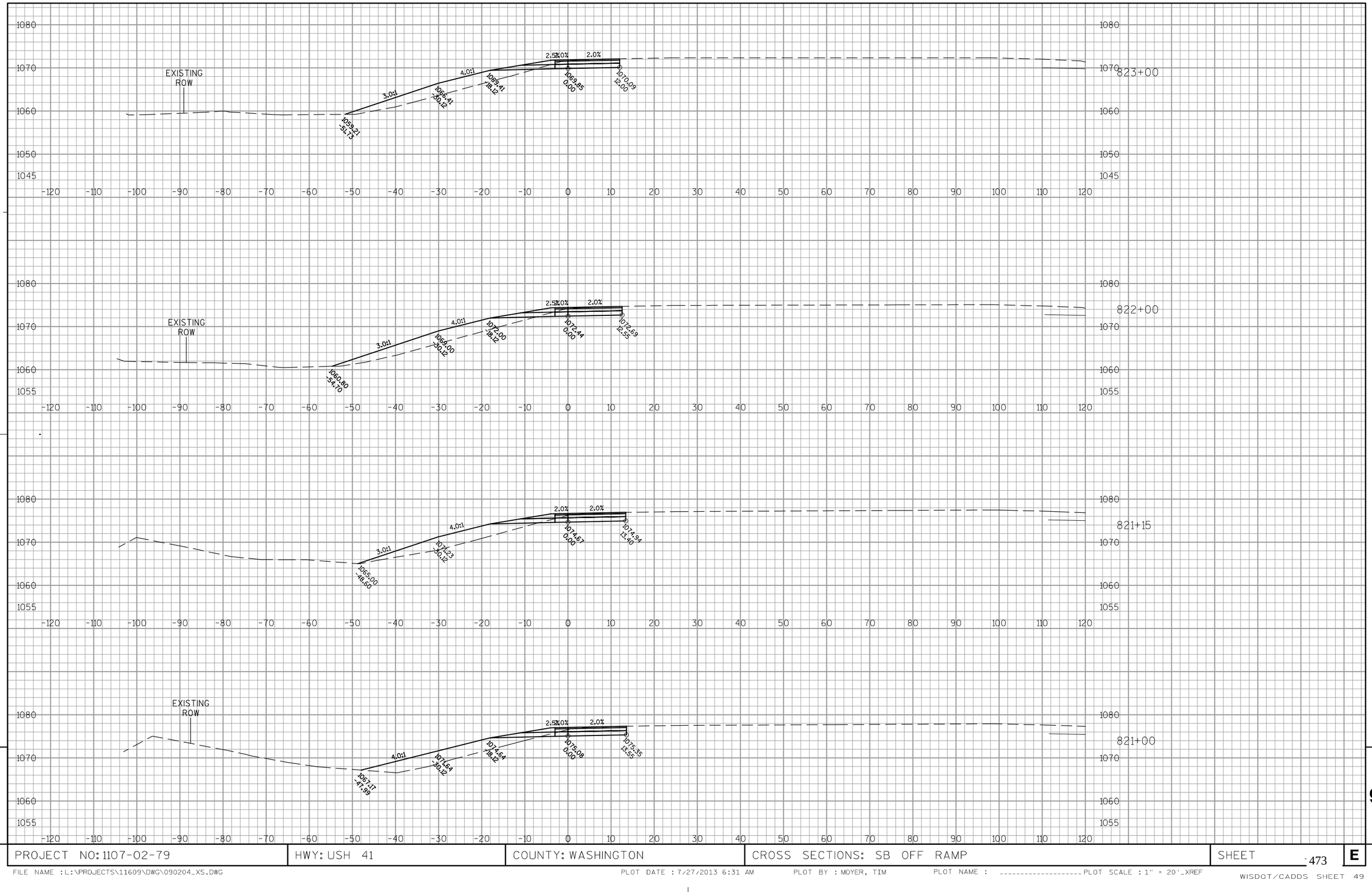
WISDOT/CADDS SHEET 49



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB OFF RAMP	SHEET 472 E

FILE NAME : L:\PROJECTS\11609\DWG\090204_XS.DWG PLOT DATE : 7/27/2013 6:31 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB OFF RAMP	SHEET 473	E

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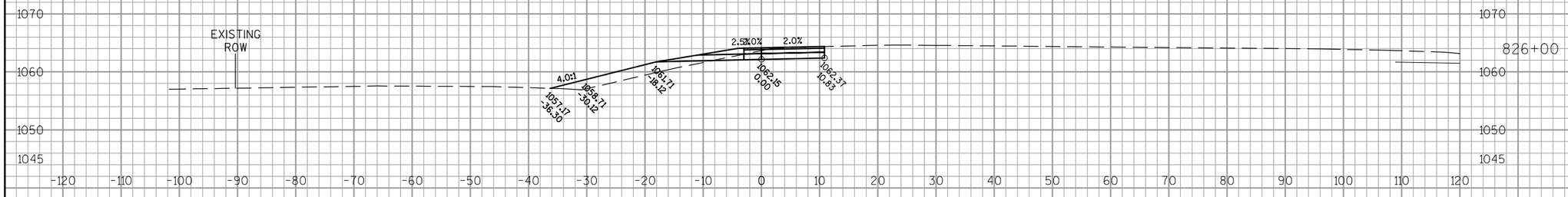
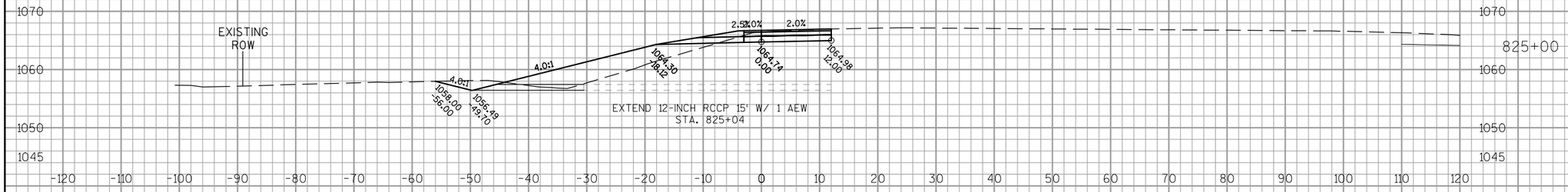
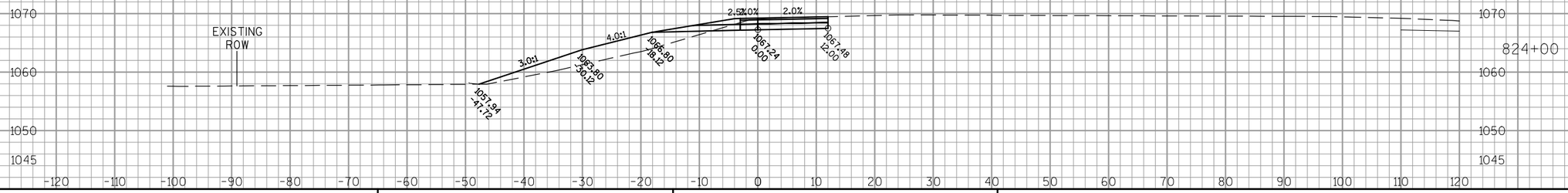
WISDOT/CADDS SHEET 49



EXTEND 30-INCH RCCP 8' W/ 1AEW
STA. 827+27
SEE CULVERT PLAN DETAILS





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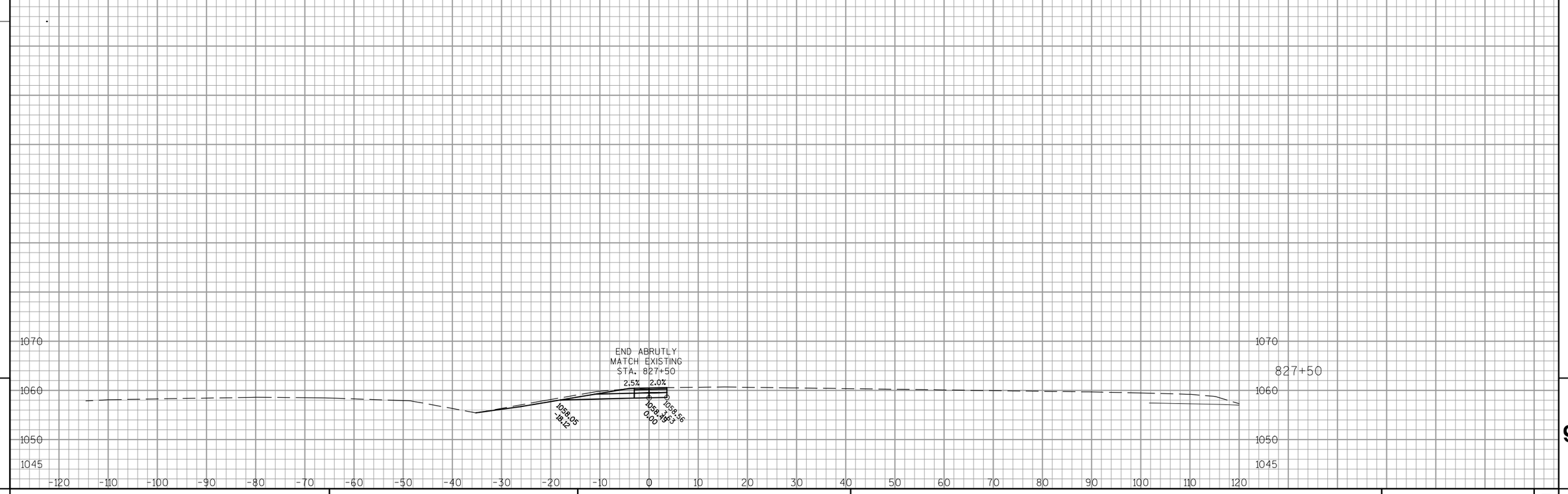
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB OFF RAMP	SHEET 474	E



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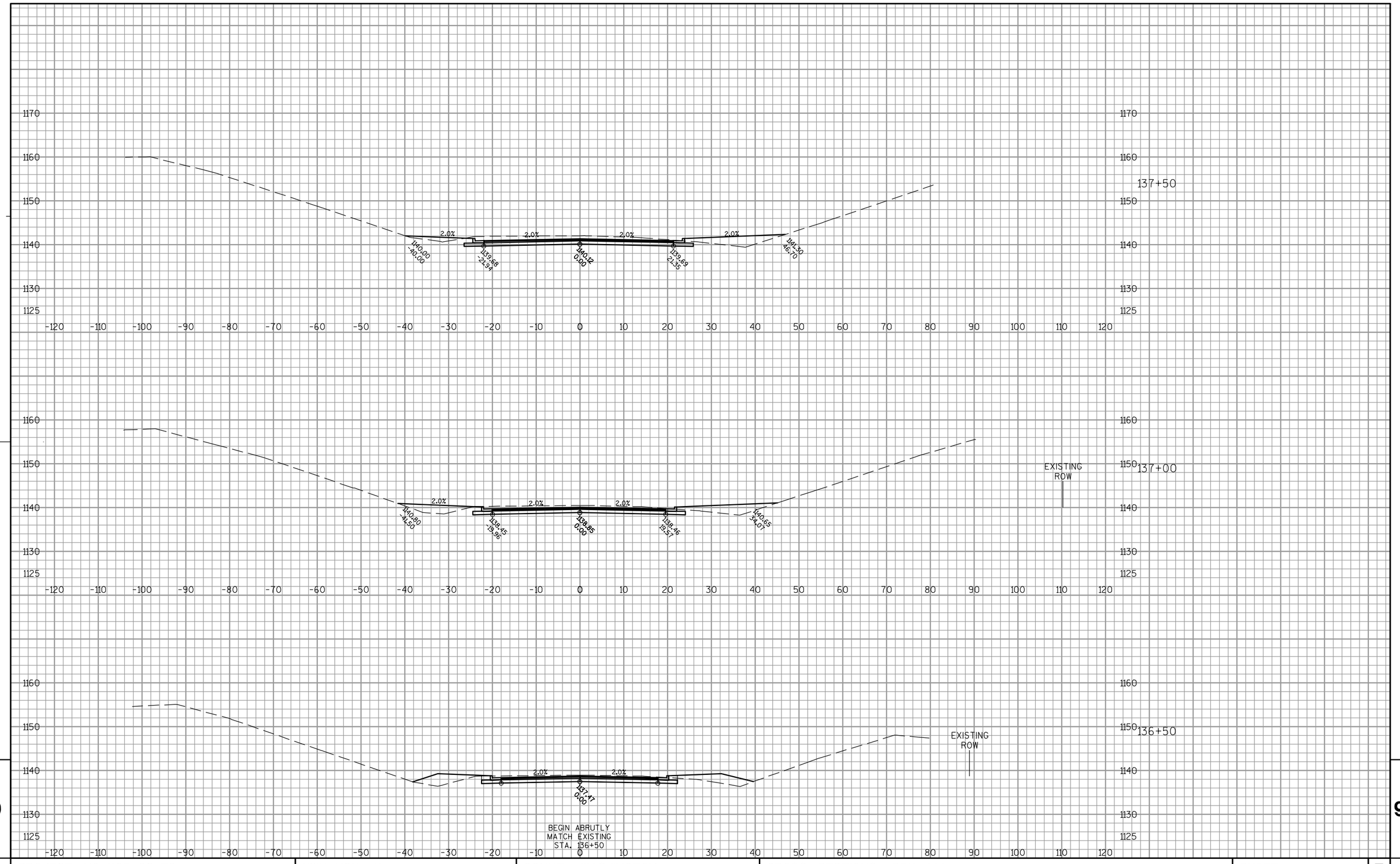
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: SB OFF RAMP	SHEET 475	E



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET 476	E

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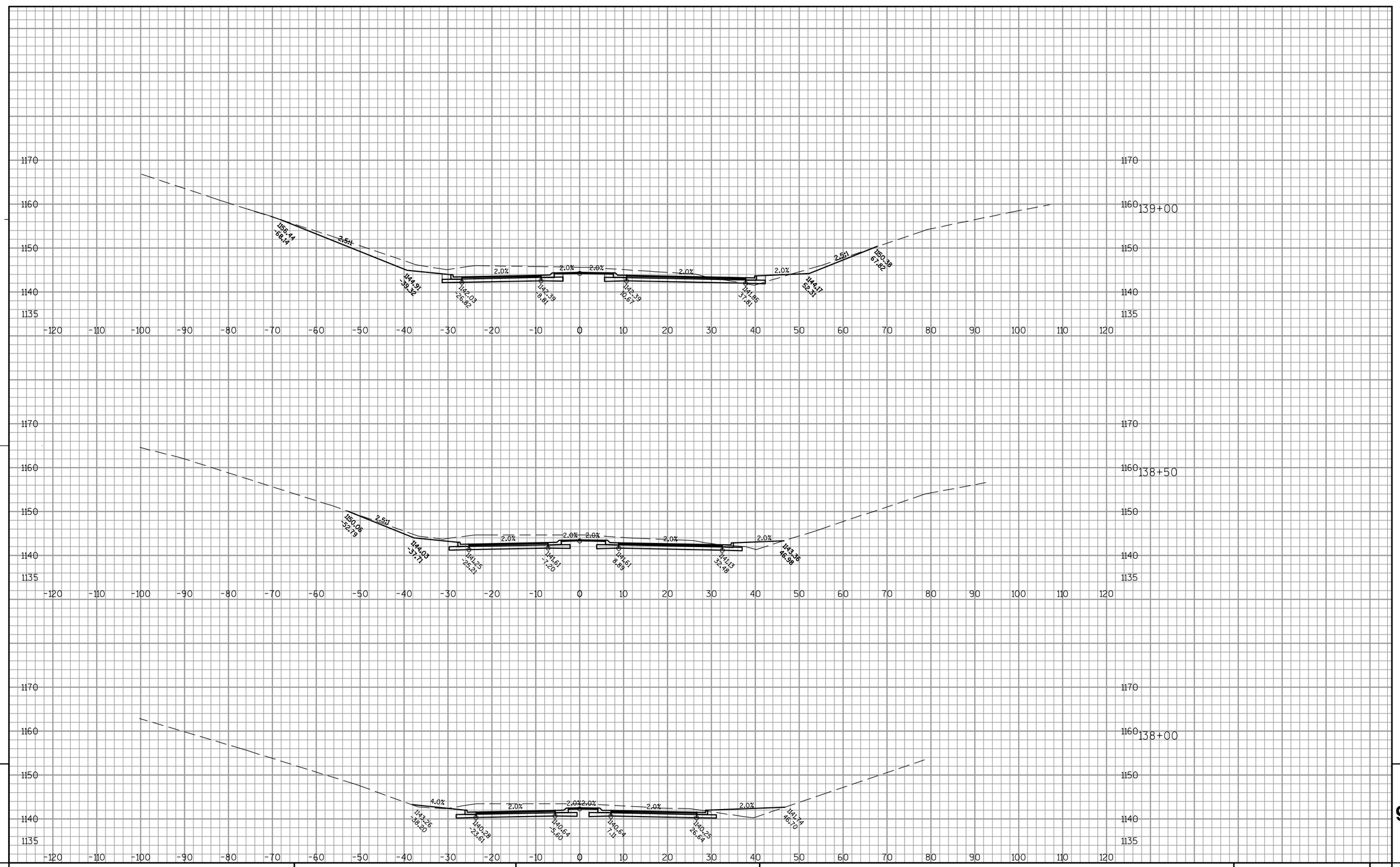
WISDOT/CADDS SHEET 49



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET 477 E

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WISDOT/CADDS SHEET 49

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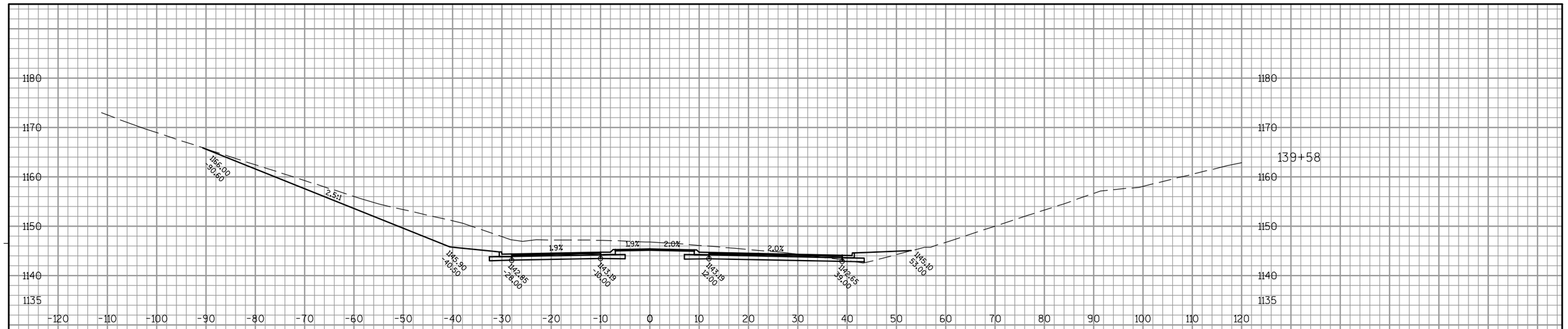

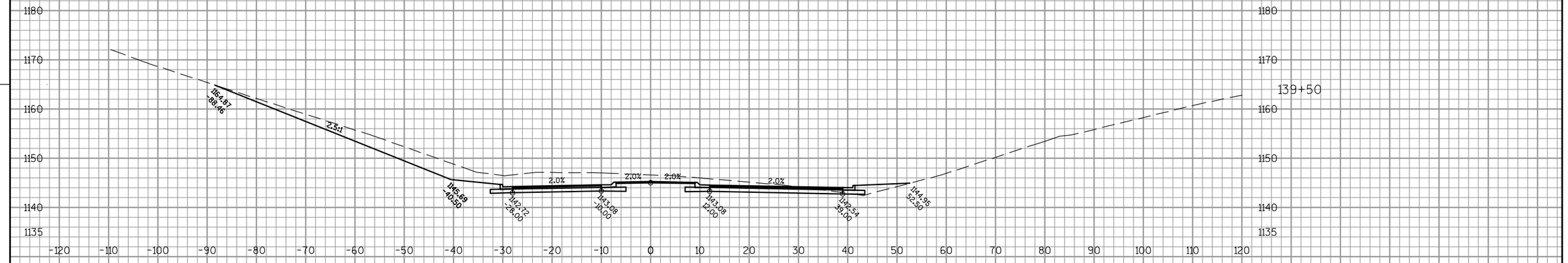

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PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET 478	E

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WISDOT/CADDS SHEET 49

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PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET 479	E

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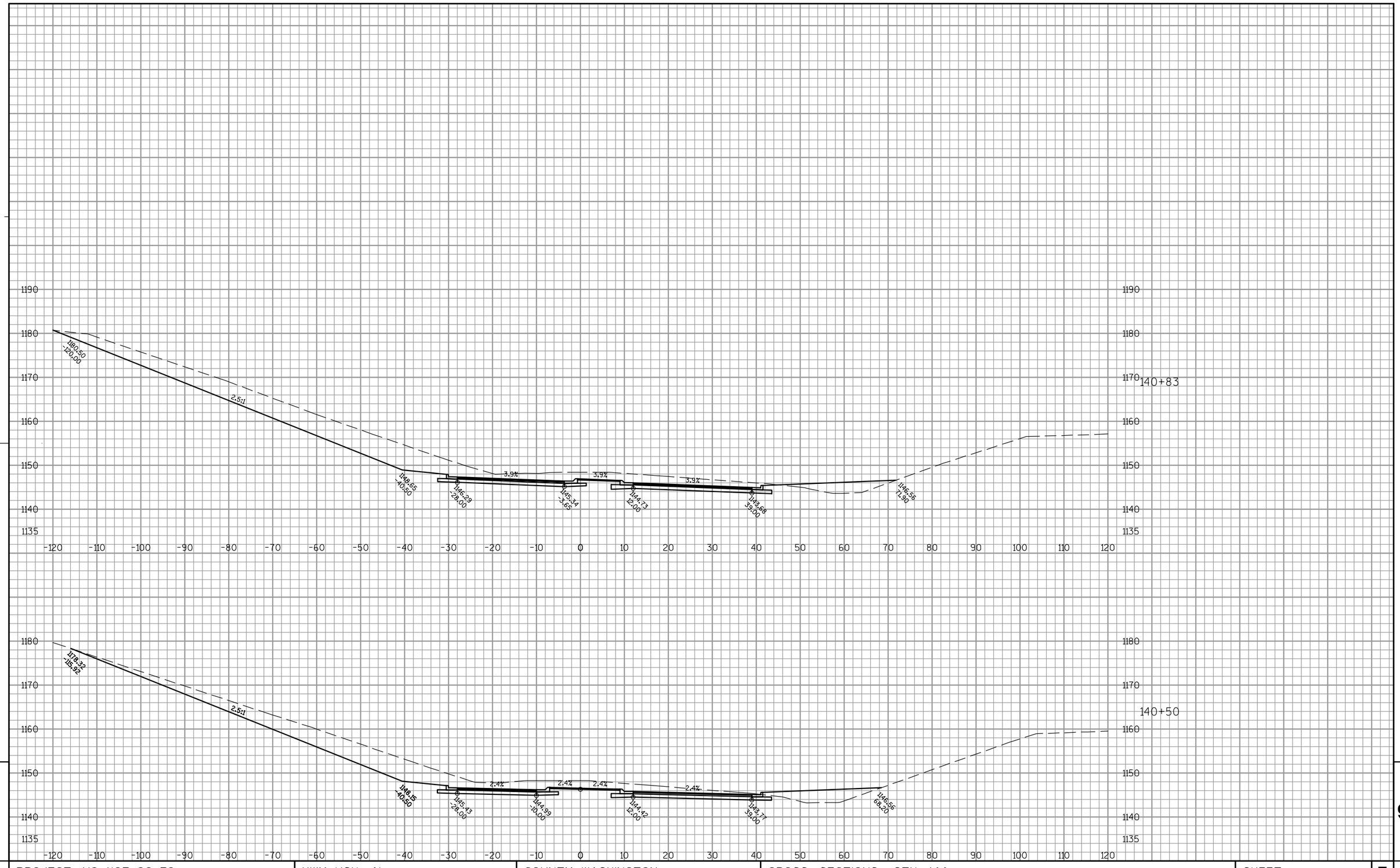
WISDOT/CADDS SHEET 49



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PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET 480	E

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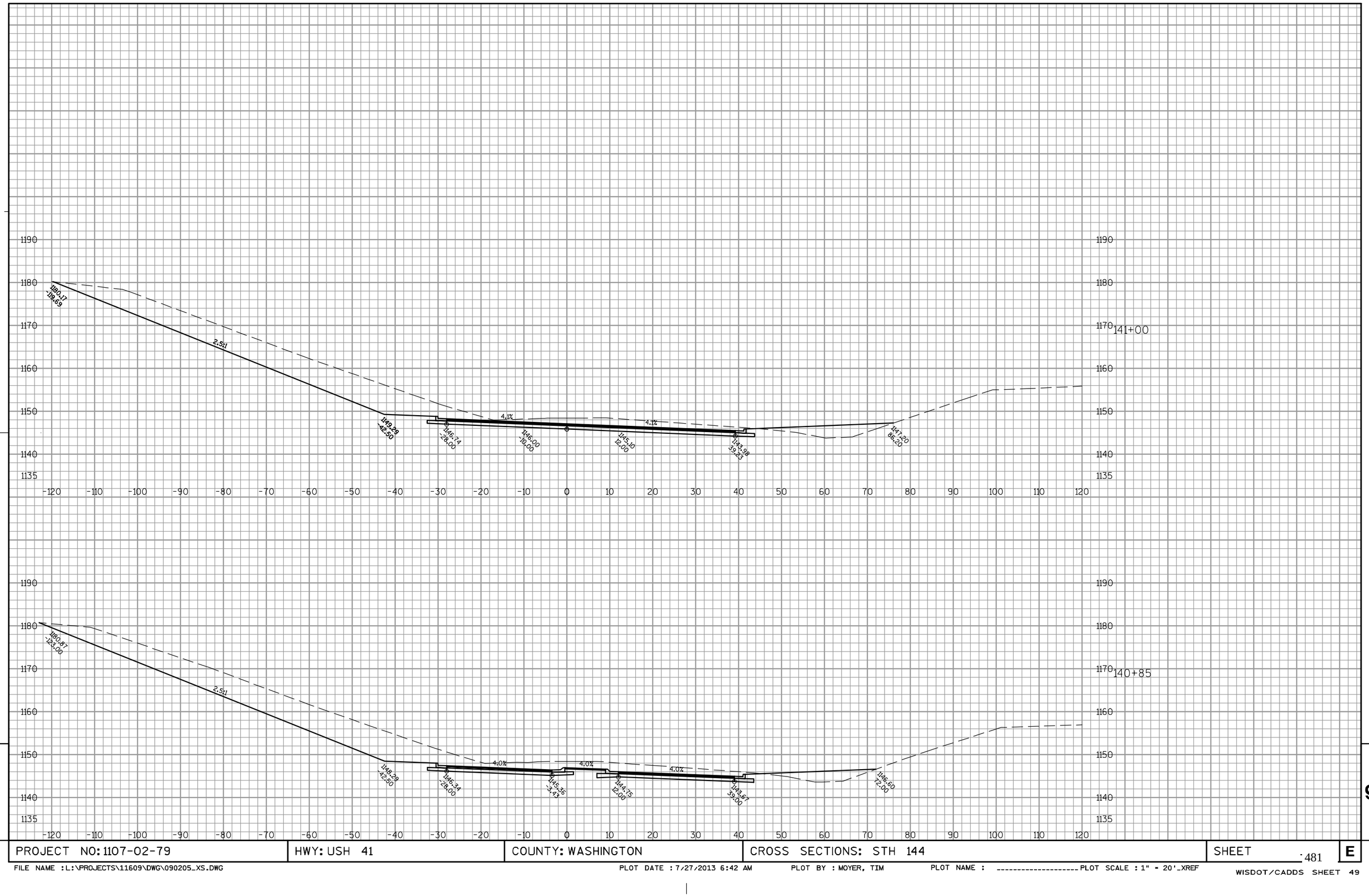

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PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET	E

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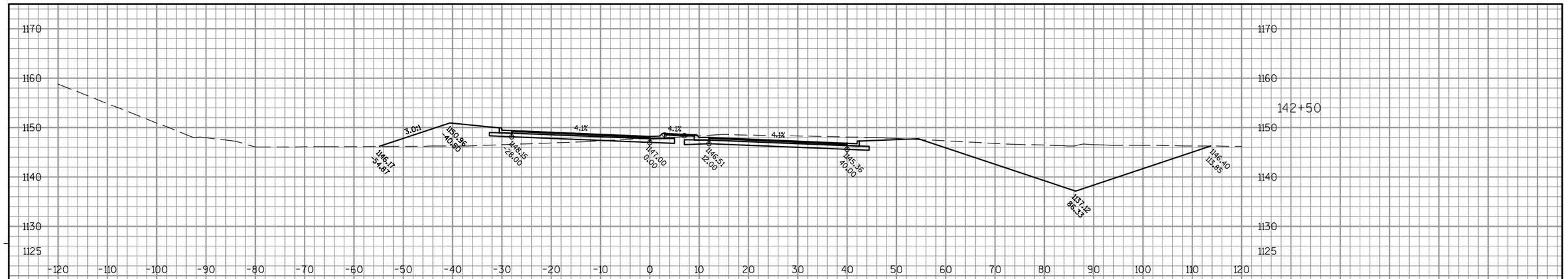
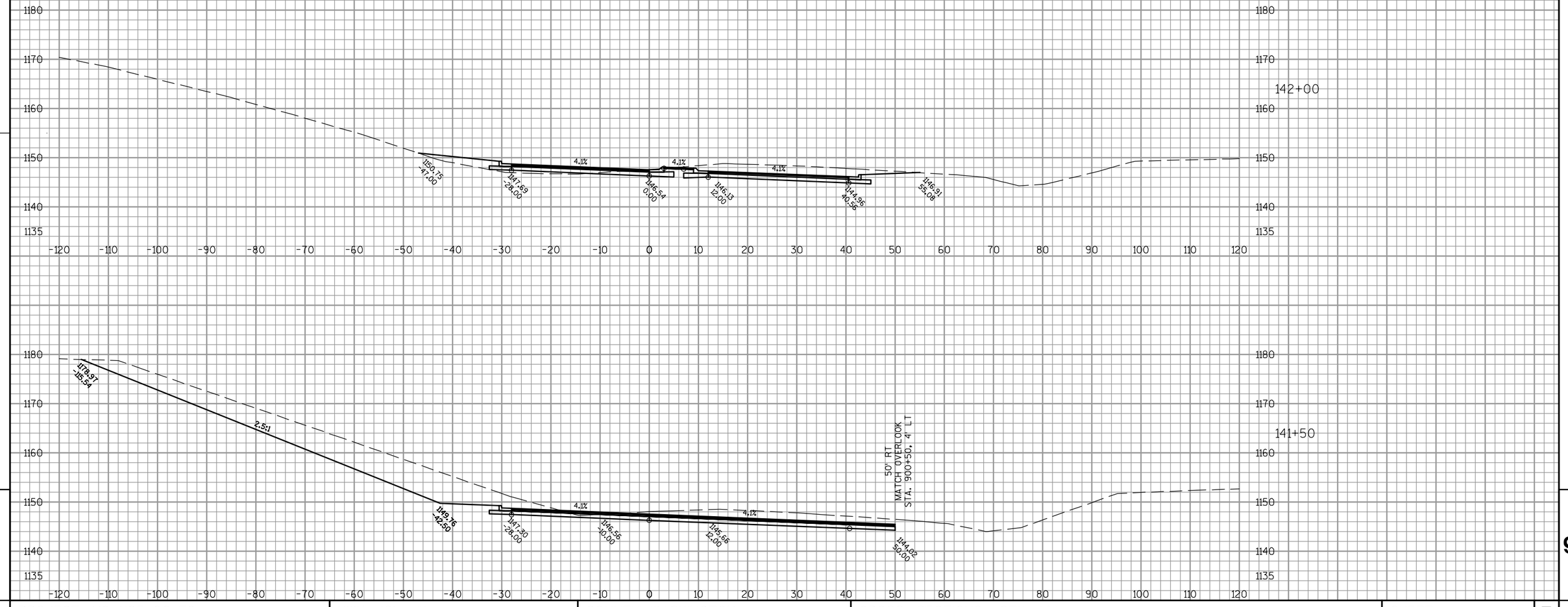
WISDOT/CADDS SHEET 49





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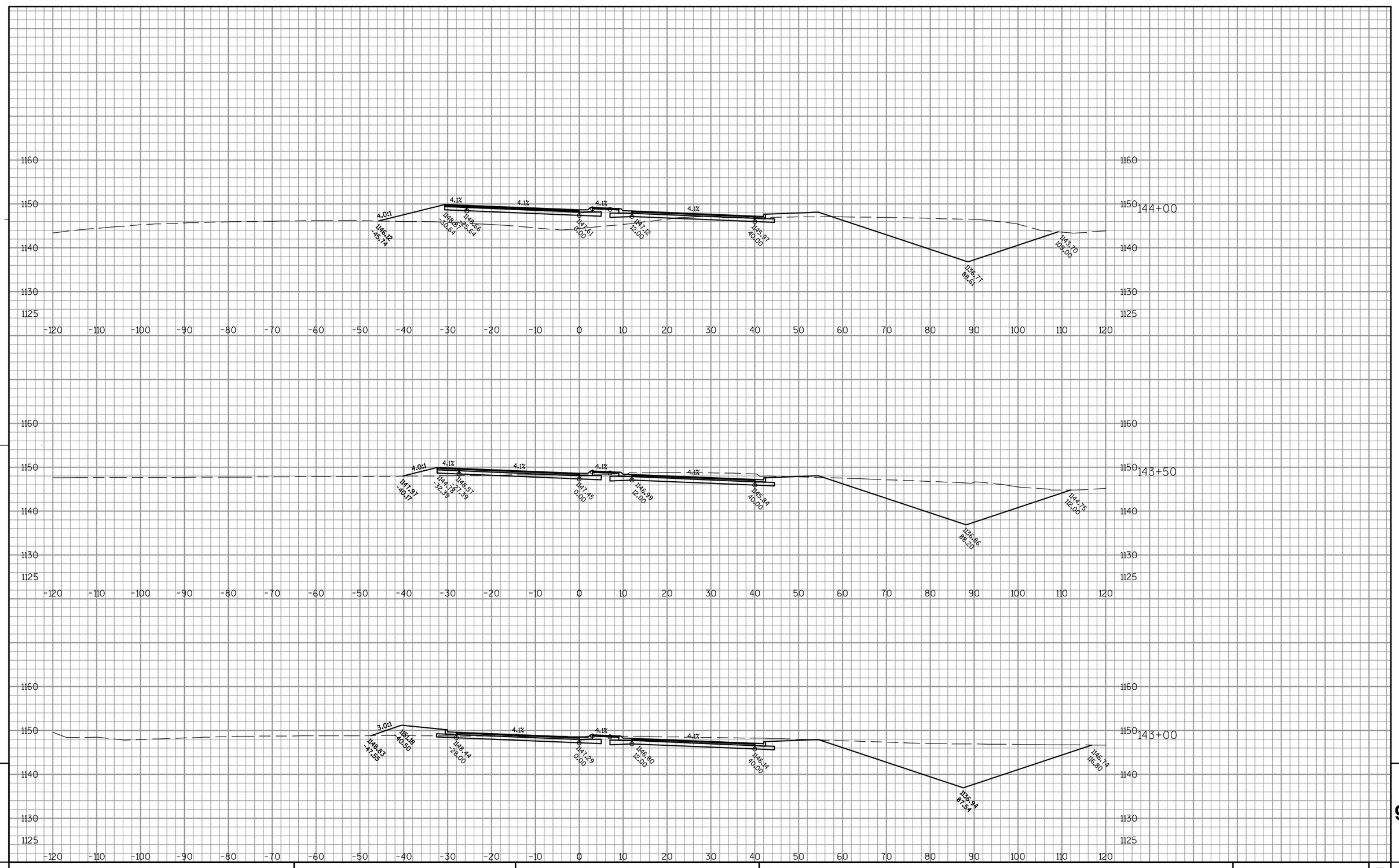
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET 482	E



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET 483 E

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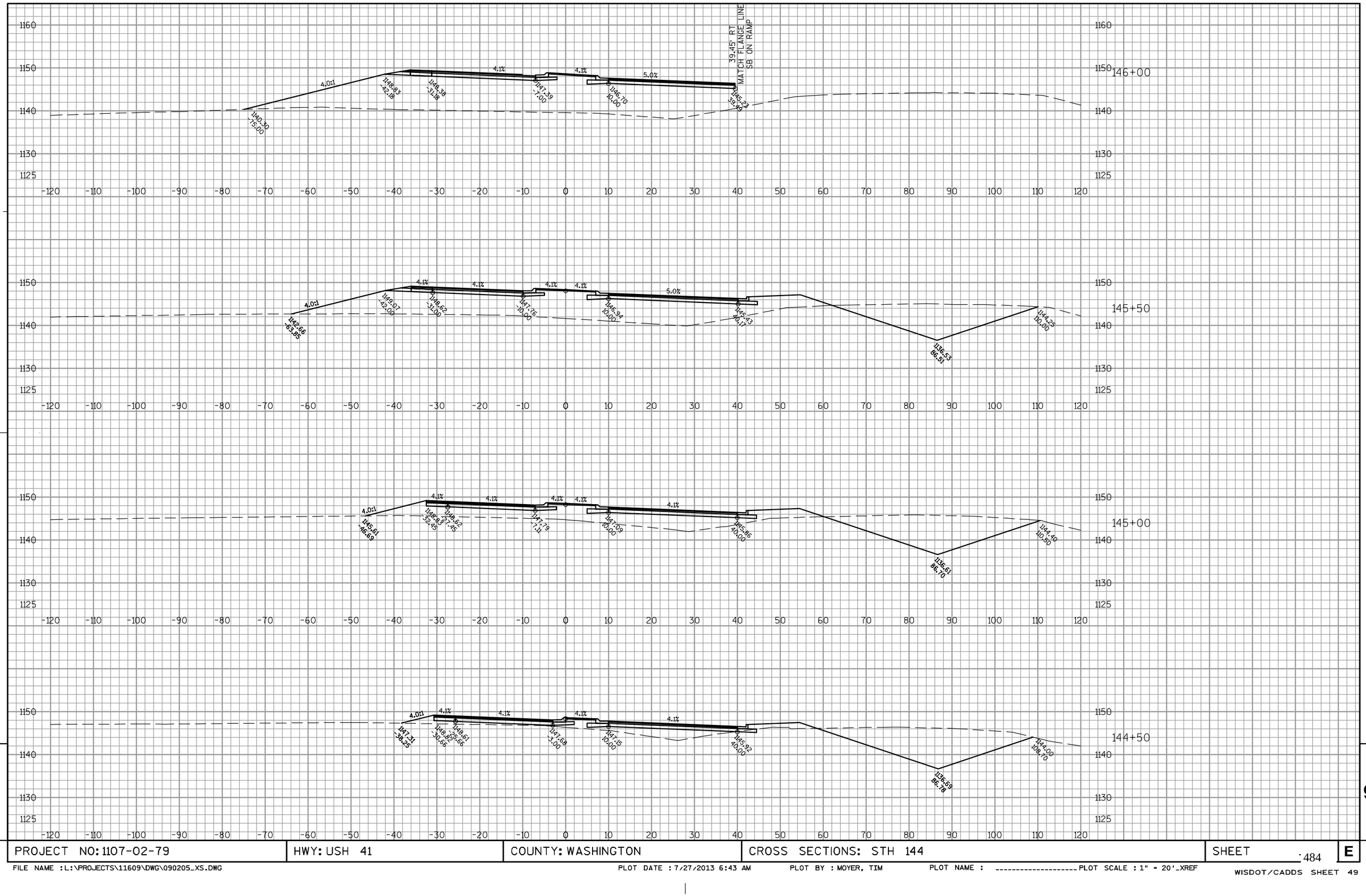
WISDOT/CADDS SHEET 49



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET 484 E

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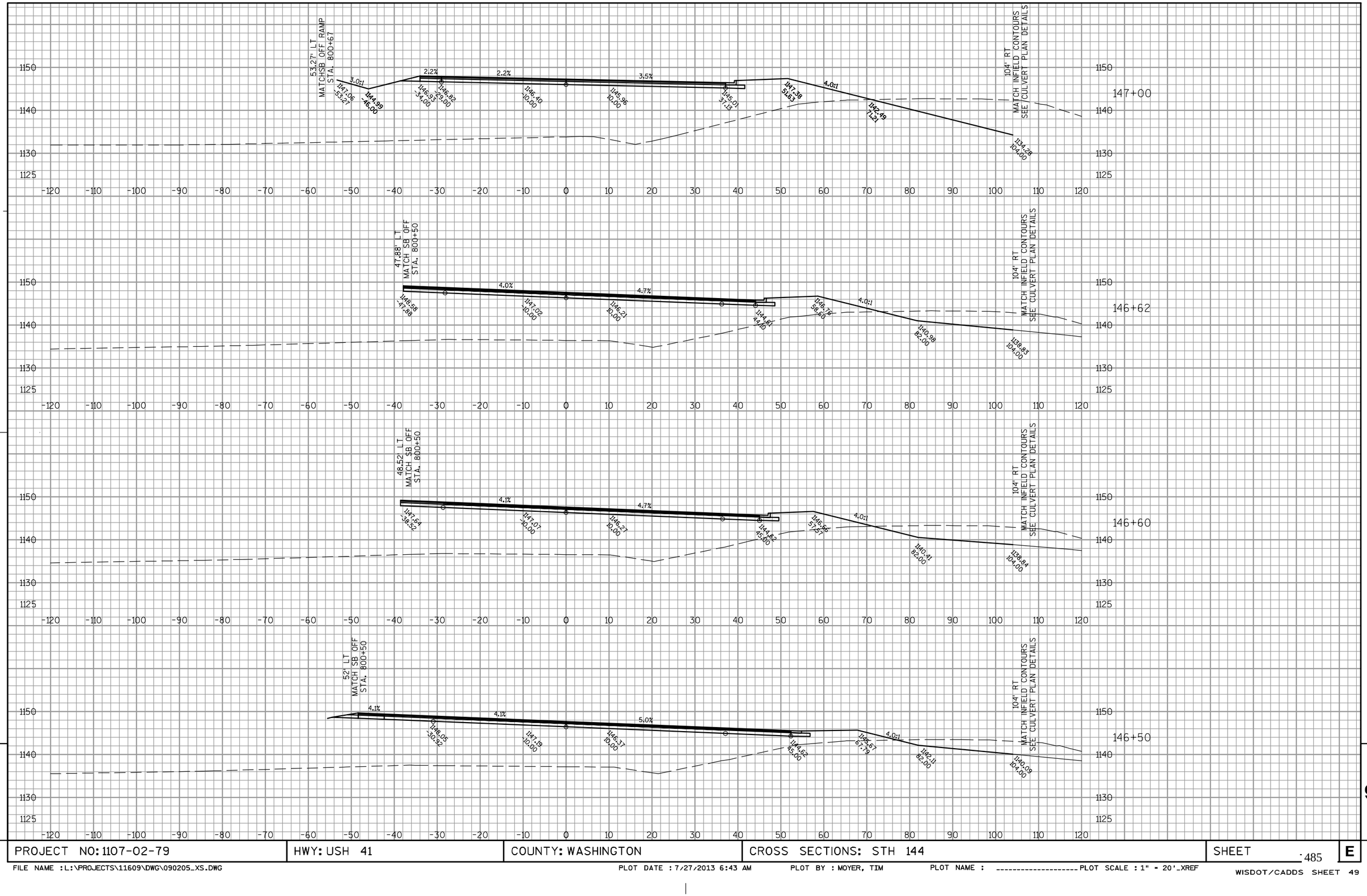
WISDOT/CADDS SHEET 49



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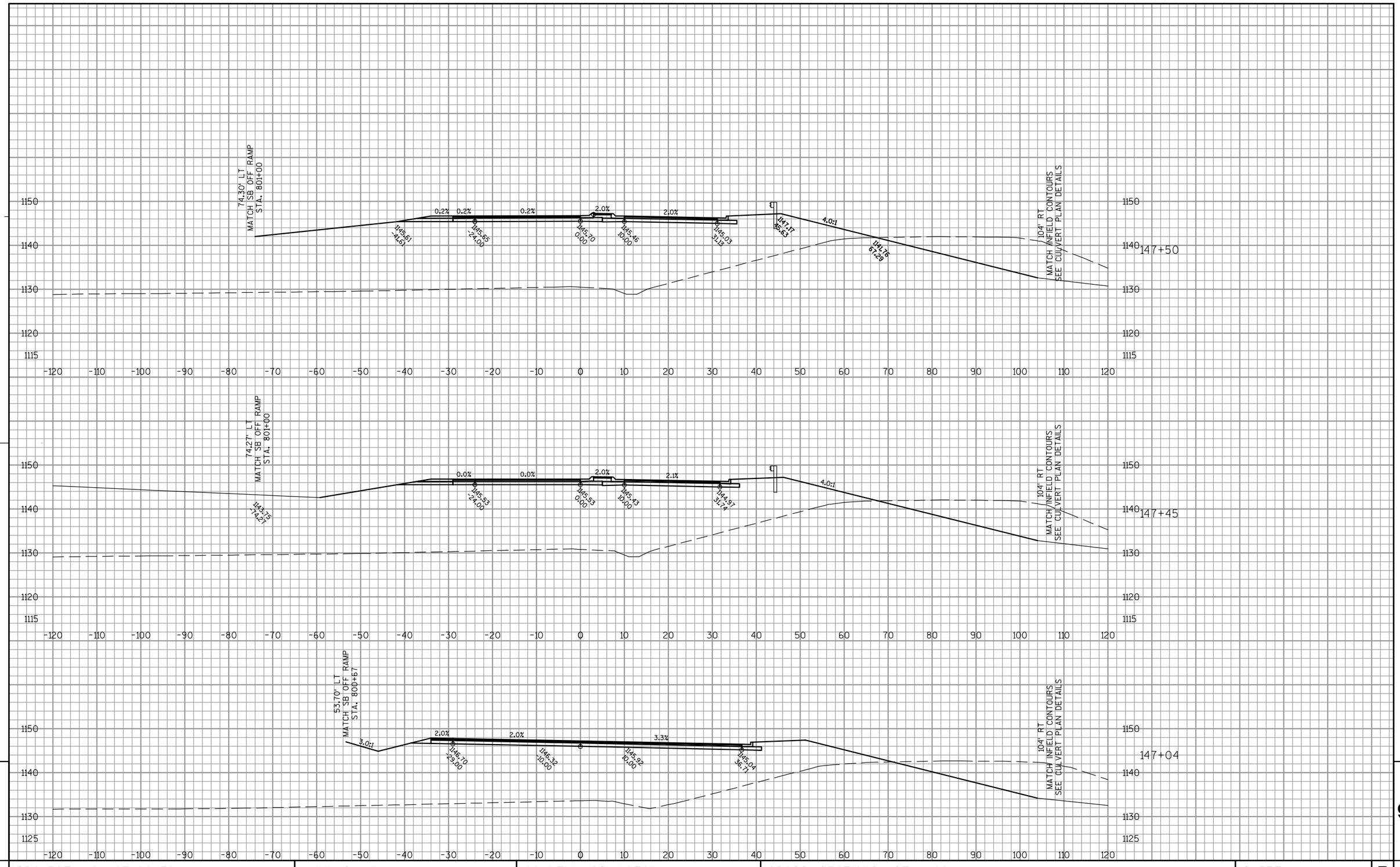
WISDOT/CADDS SHEET 49



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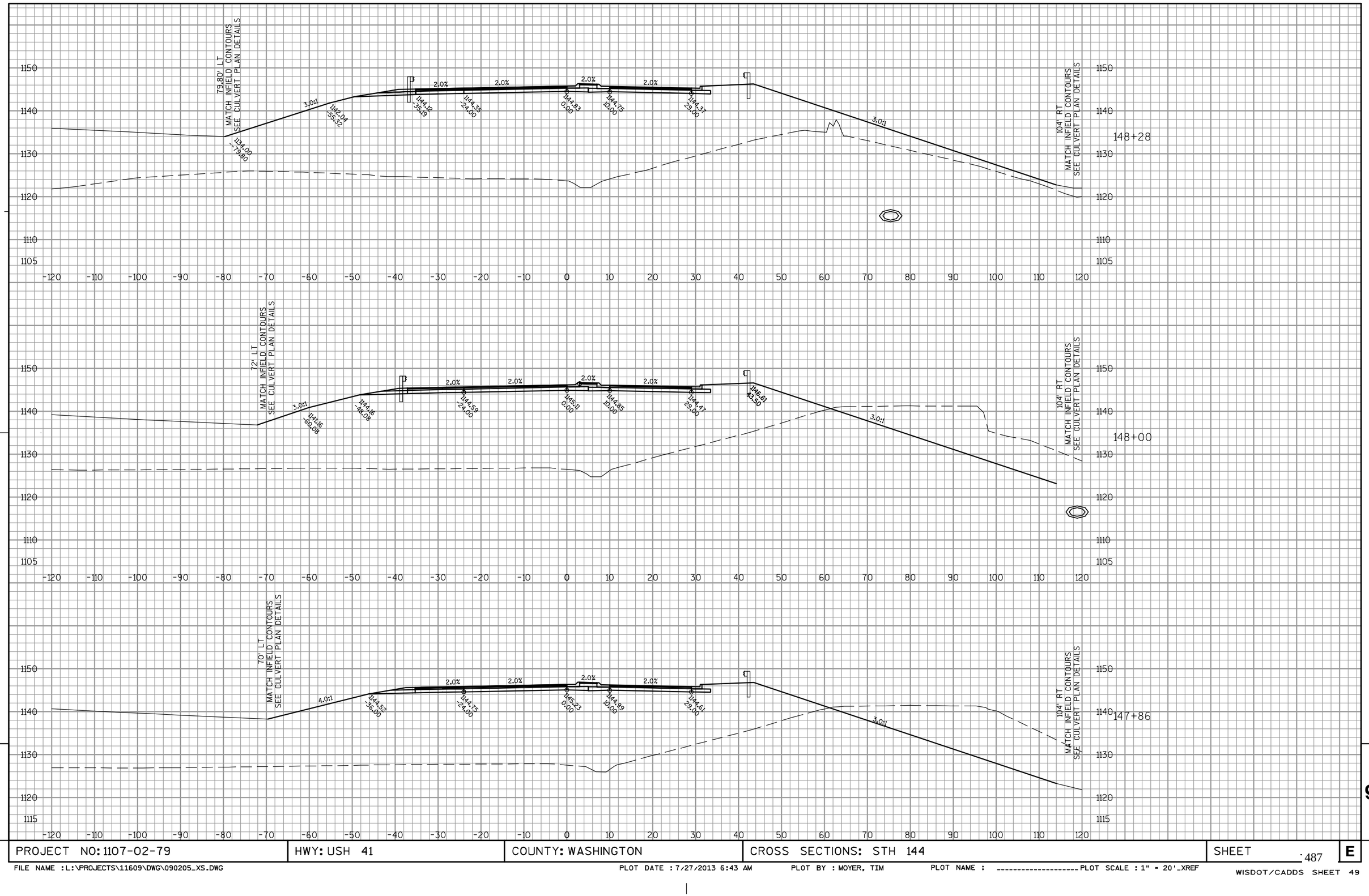

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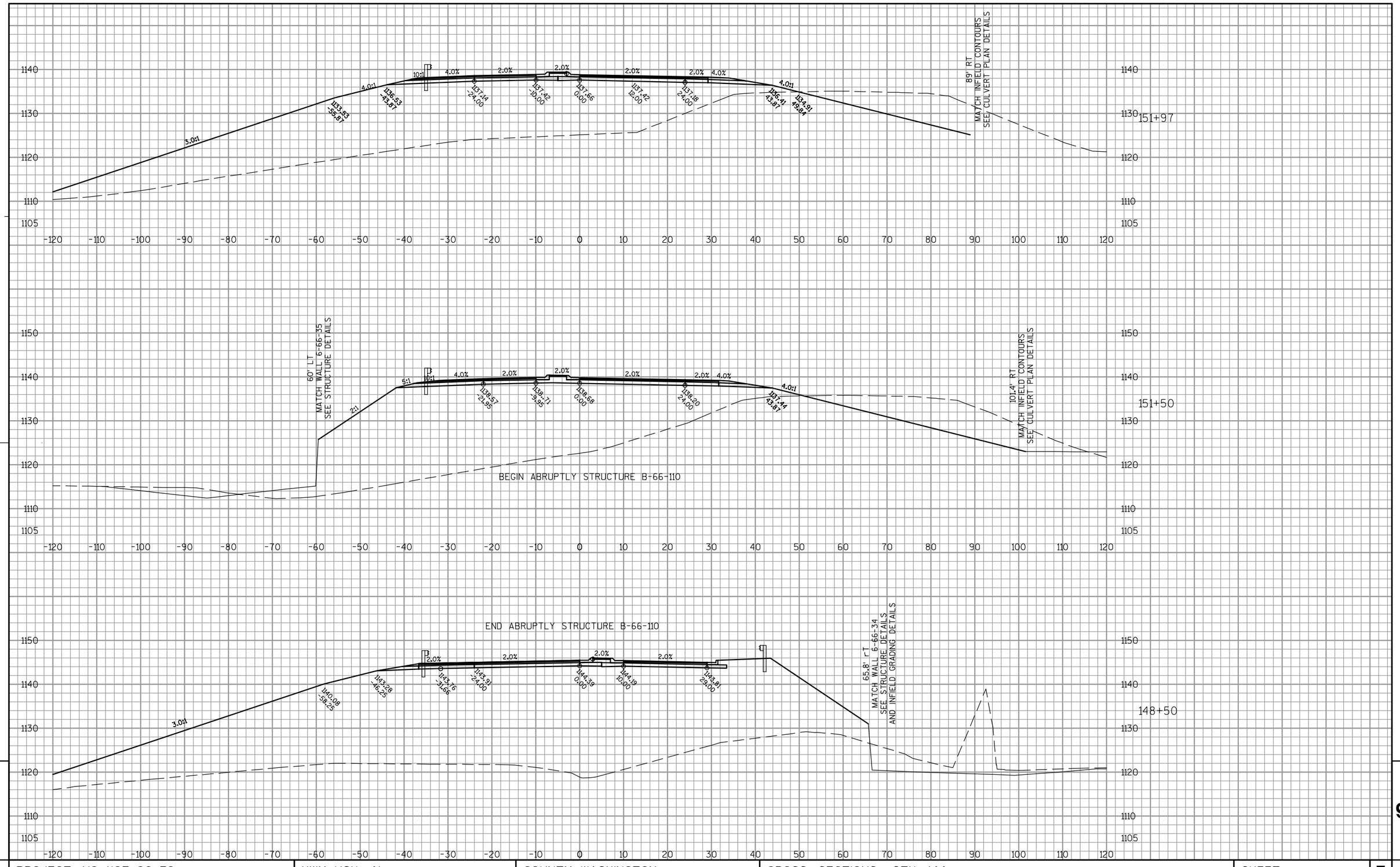
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET 487	E



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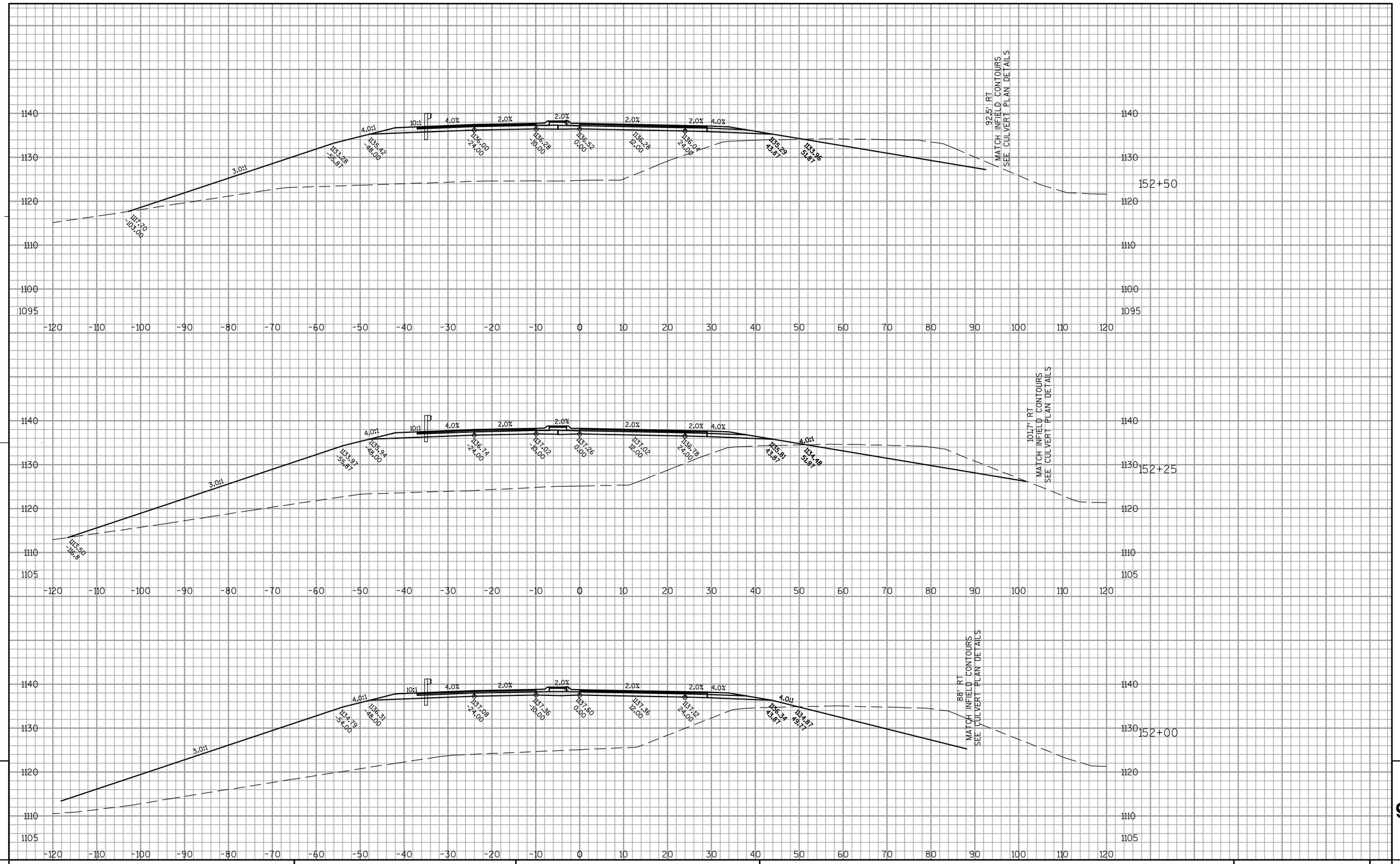

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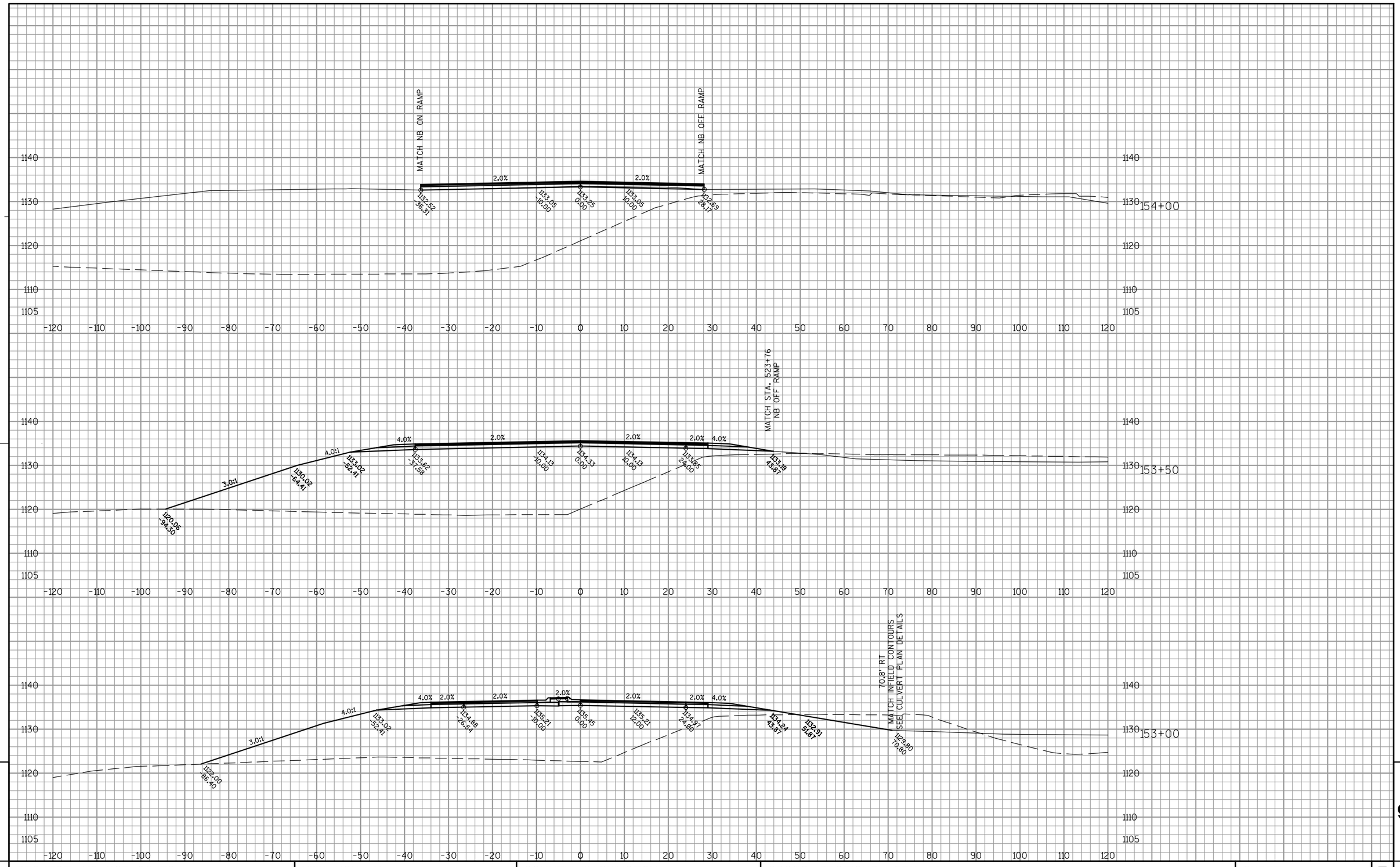
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET 489	E



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PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET 490	E

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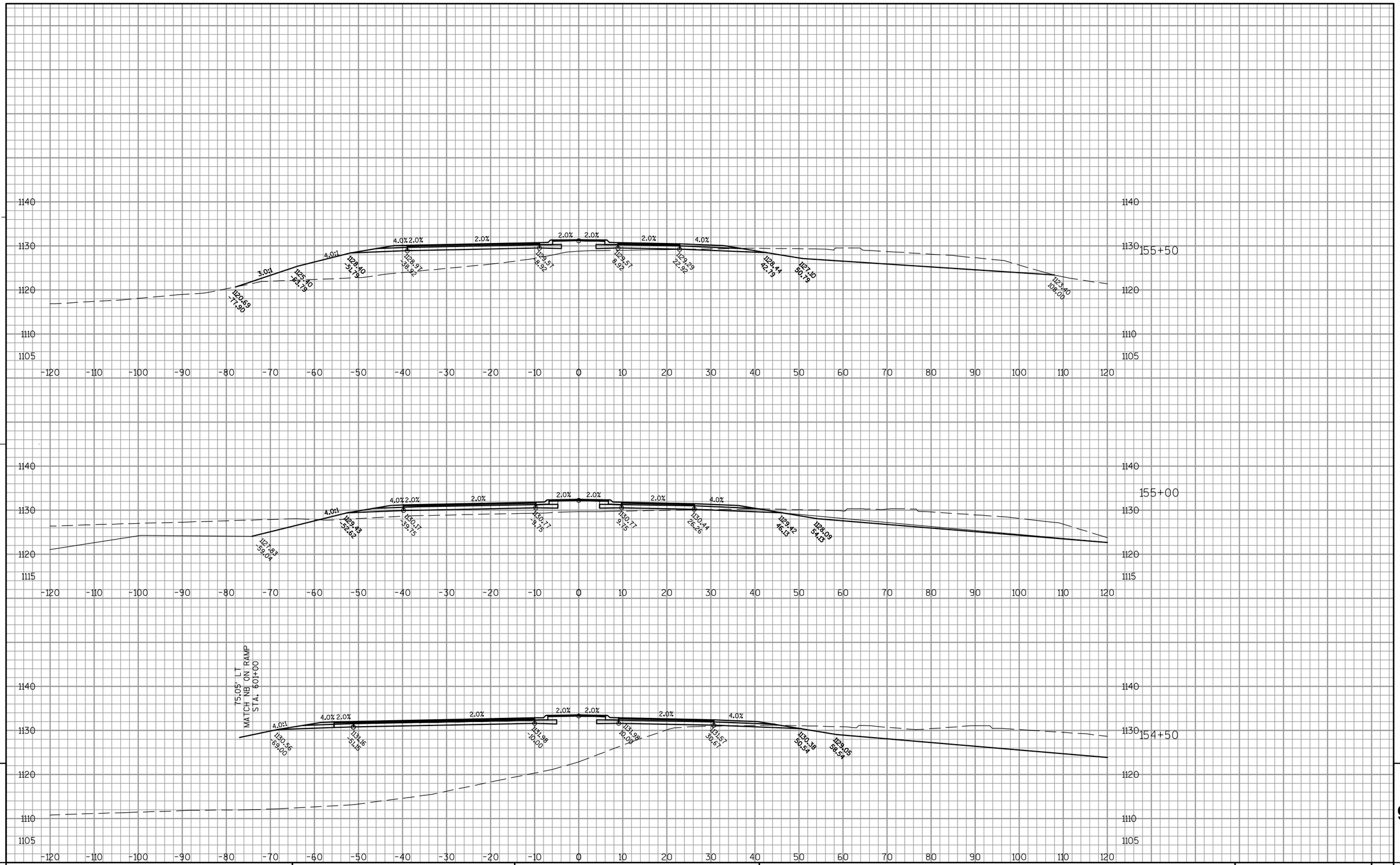
WISDOT/CADDS SHEET 49



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PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET 491	E

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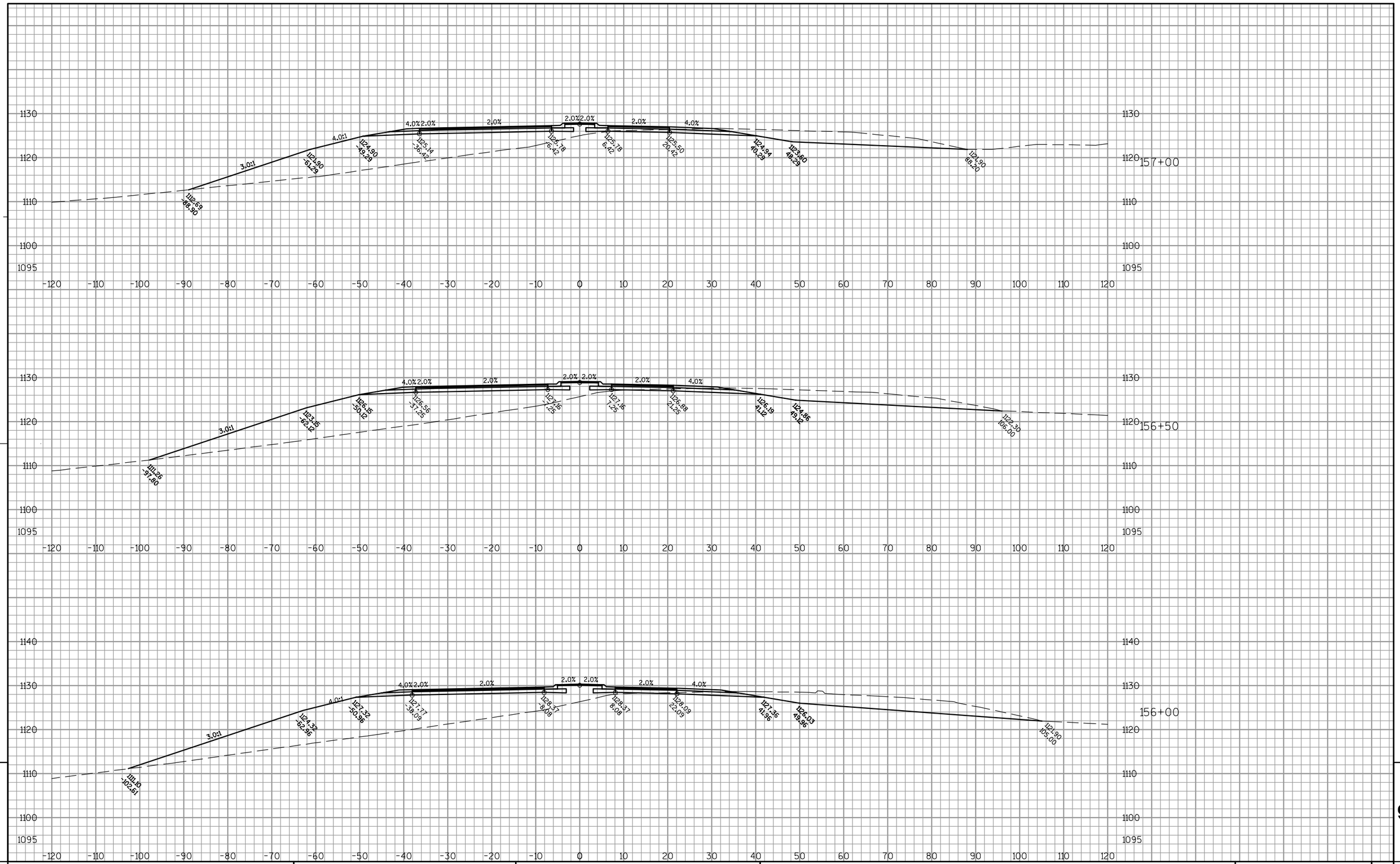

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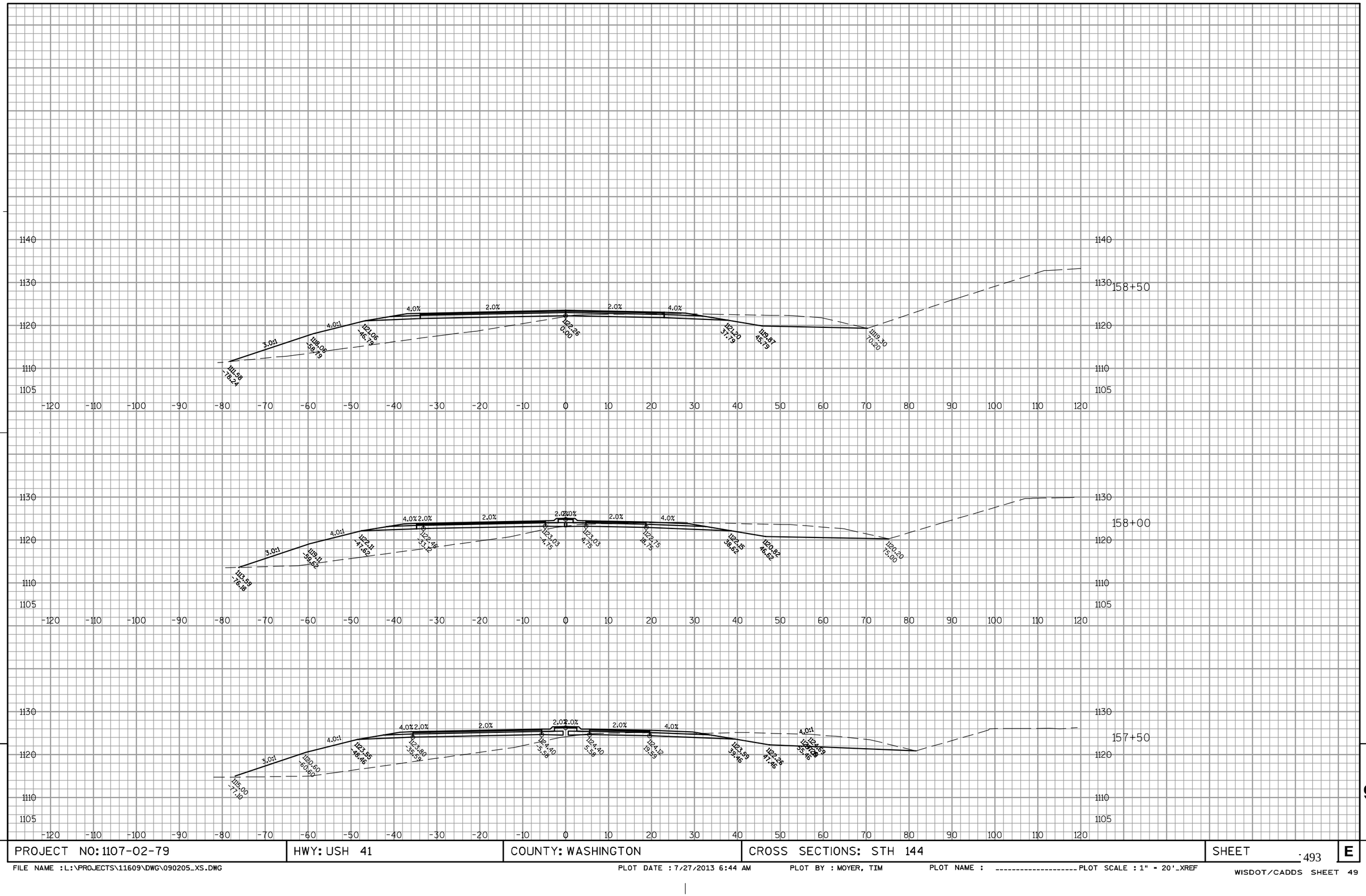

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PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET	E

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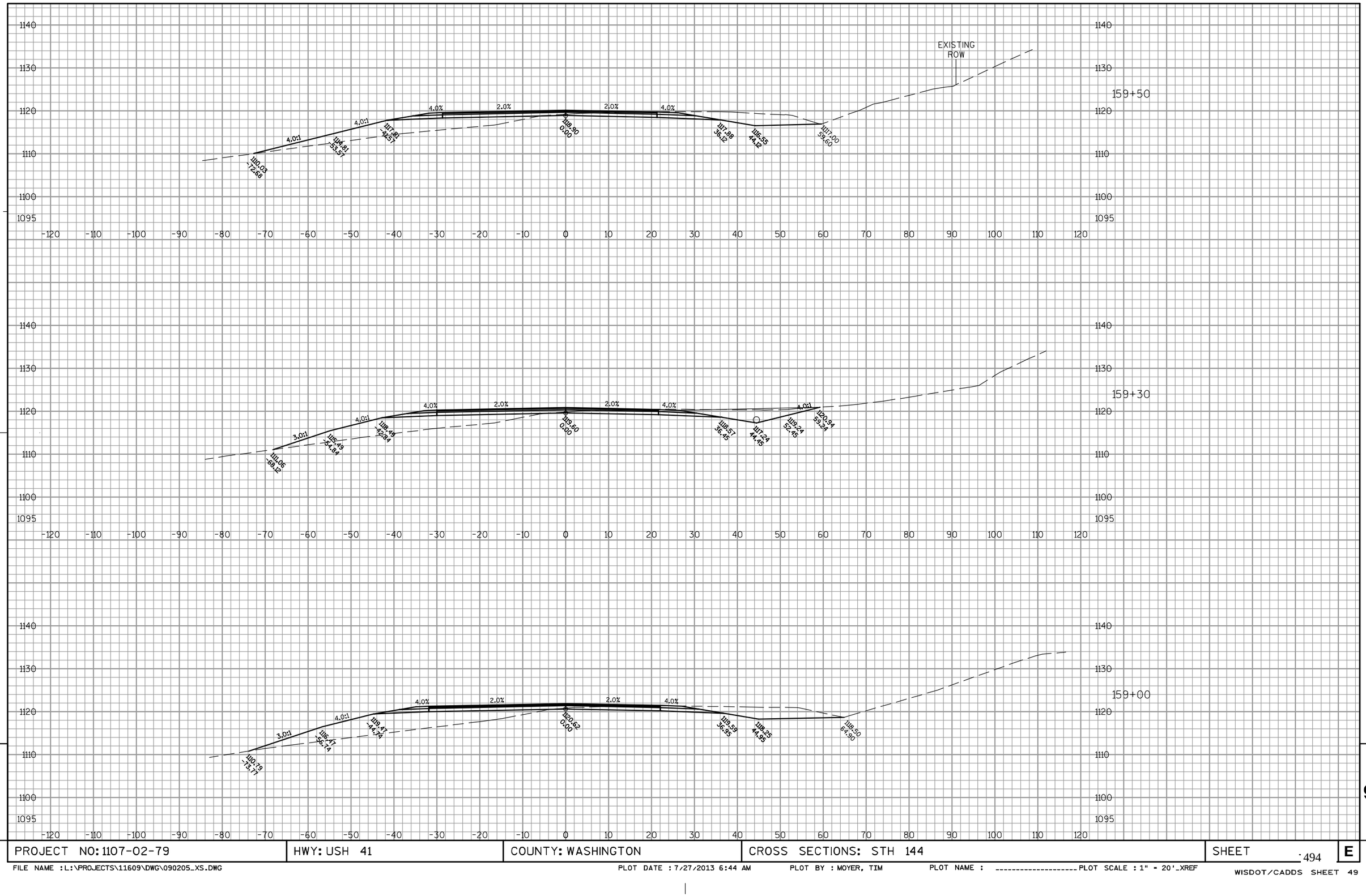

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET 494 E

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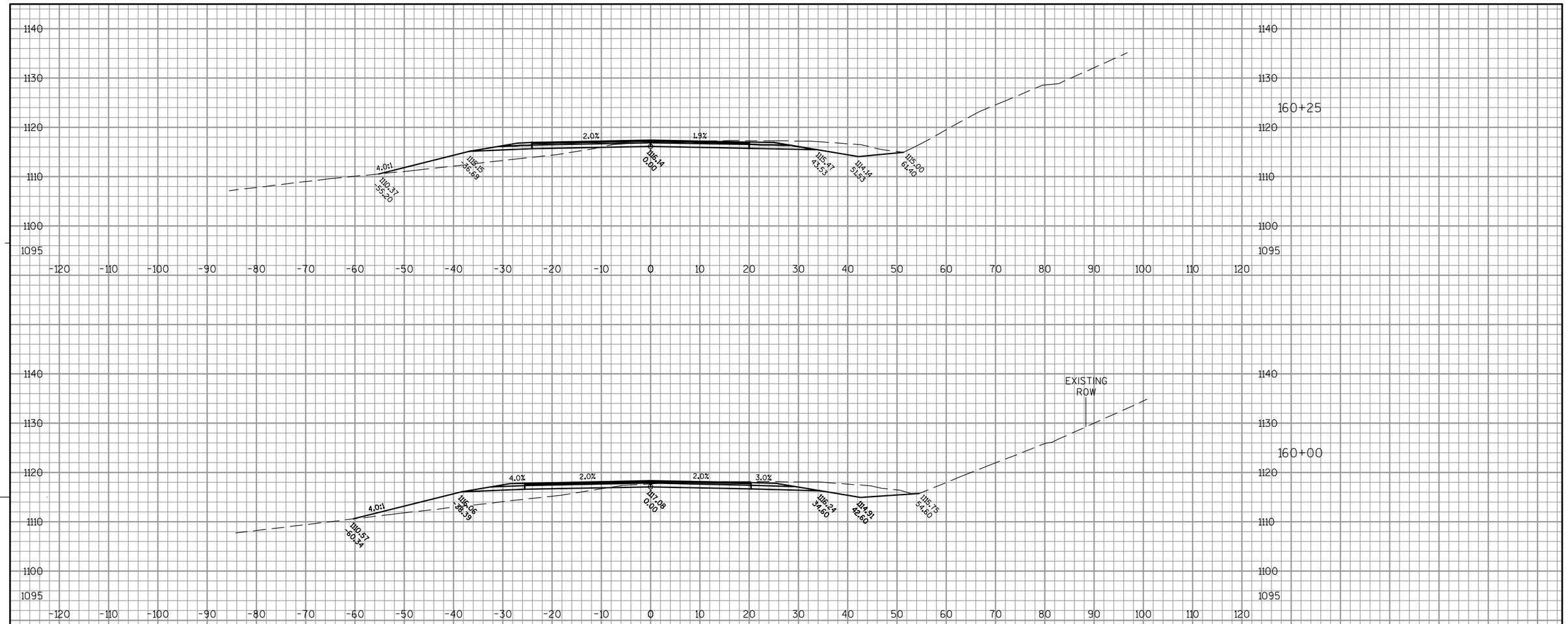

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PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET 495	E

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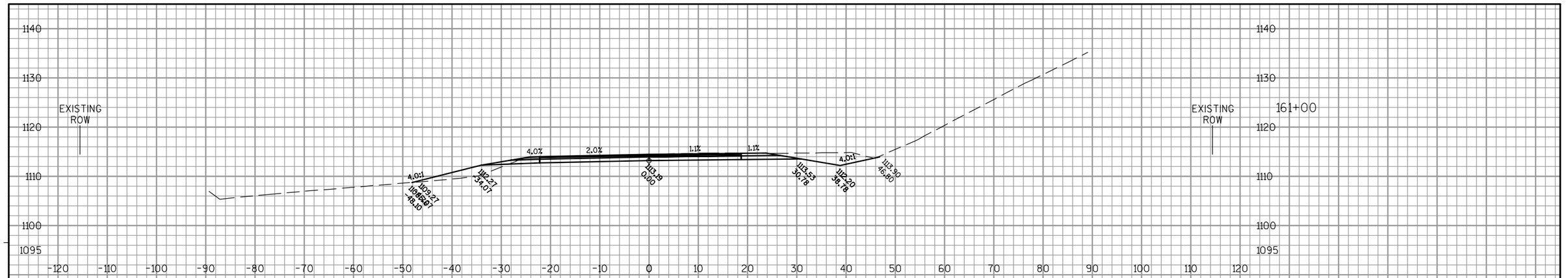

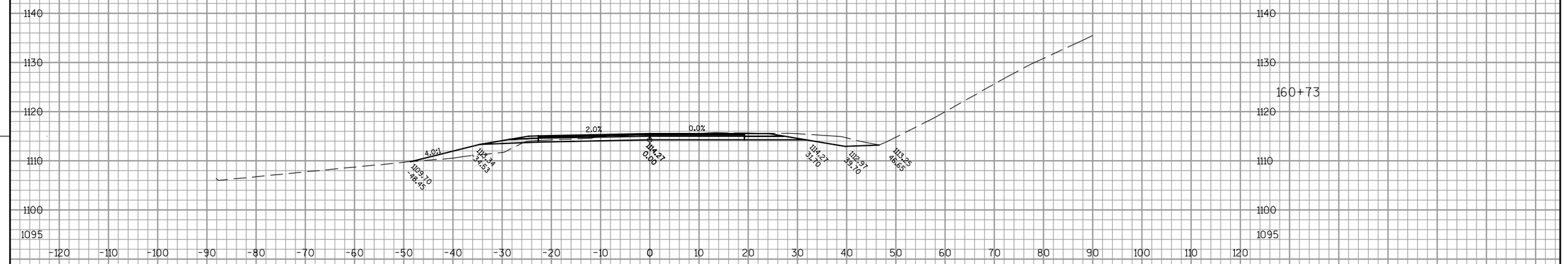

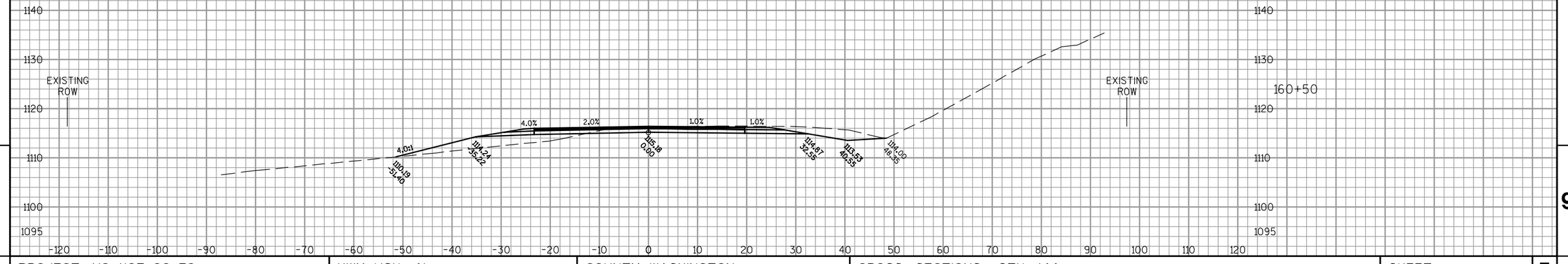

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PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET 496	E

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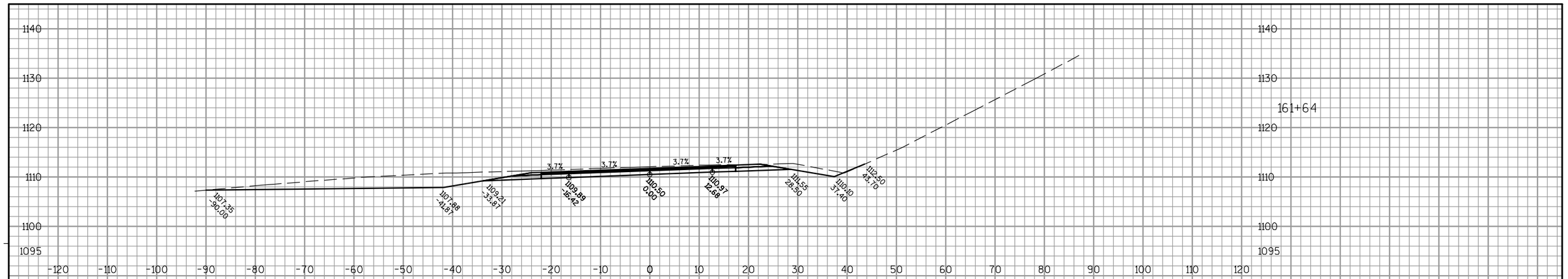
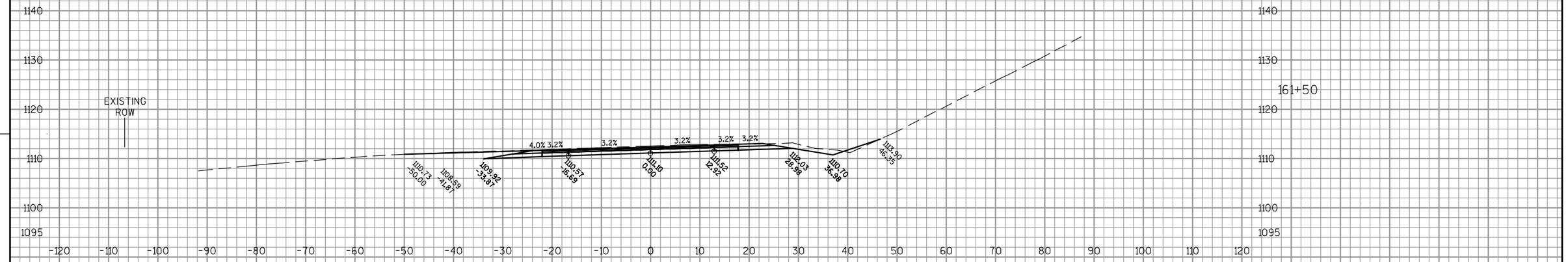
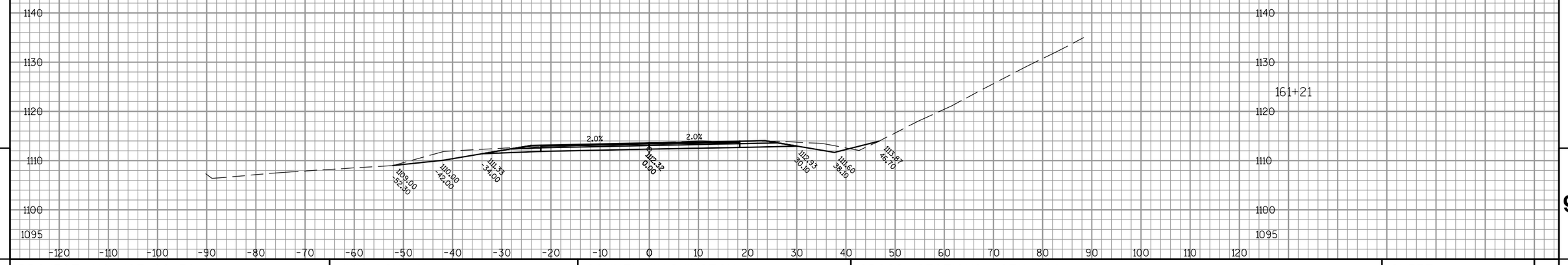
WISDOT/CADDS SHEET 49







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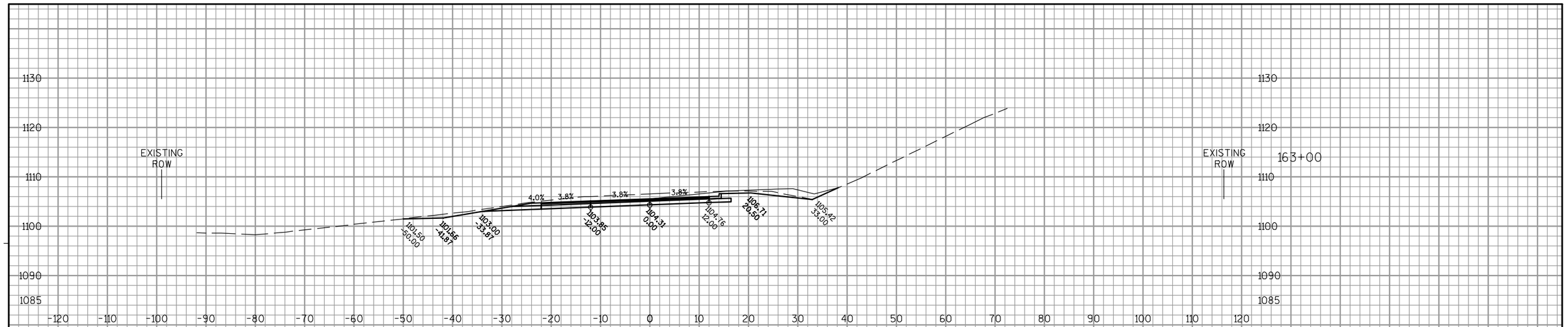
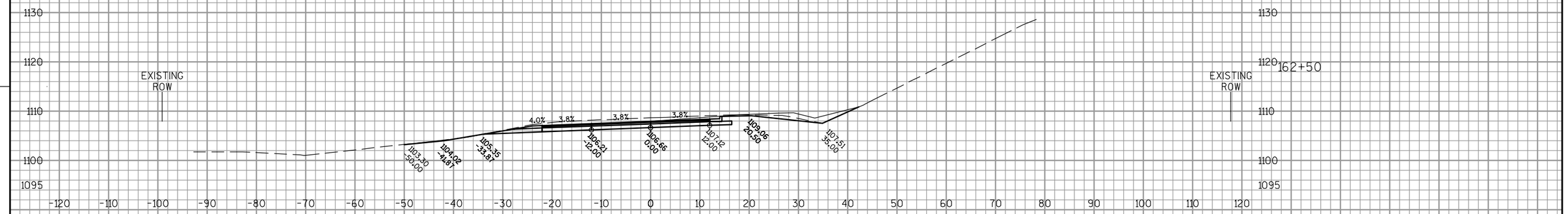
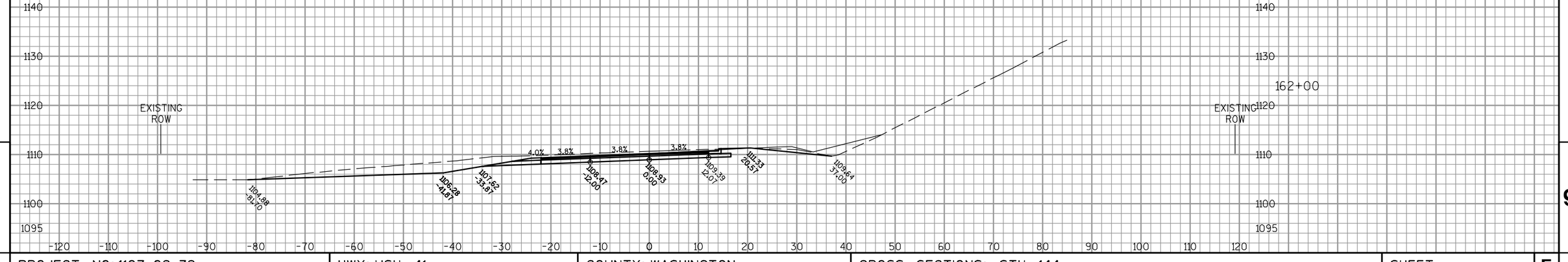
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET 497	E







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PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET 498	E

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WISDOT/CADDS SHEET 49

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET 499	E

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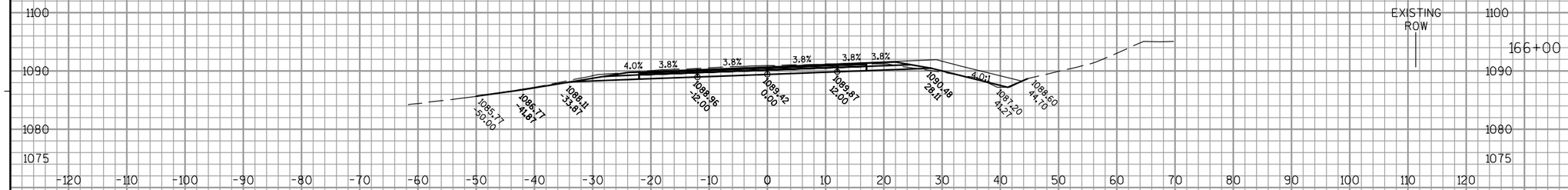
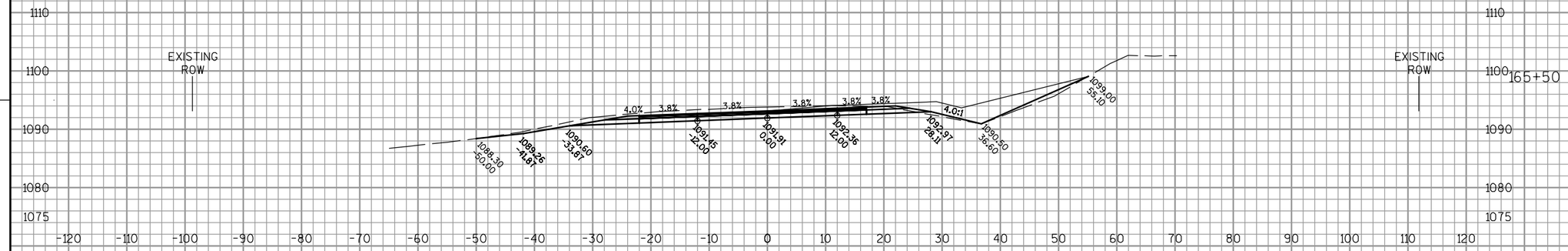
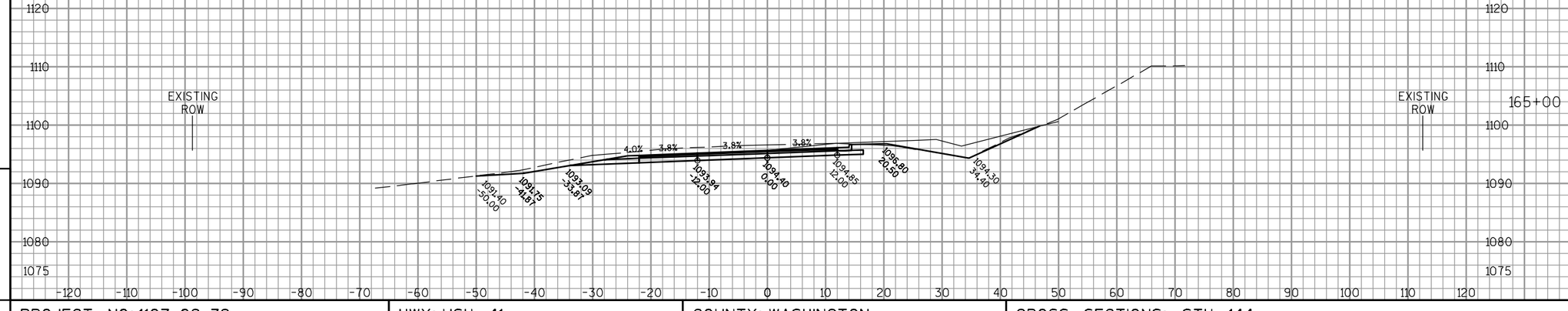
WISDOT/CADDS SHEET 49







PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET 500	E

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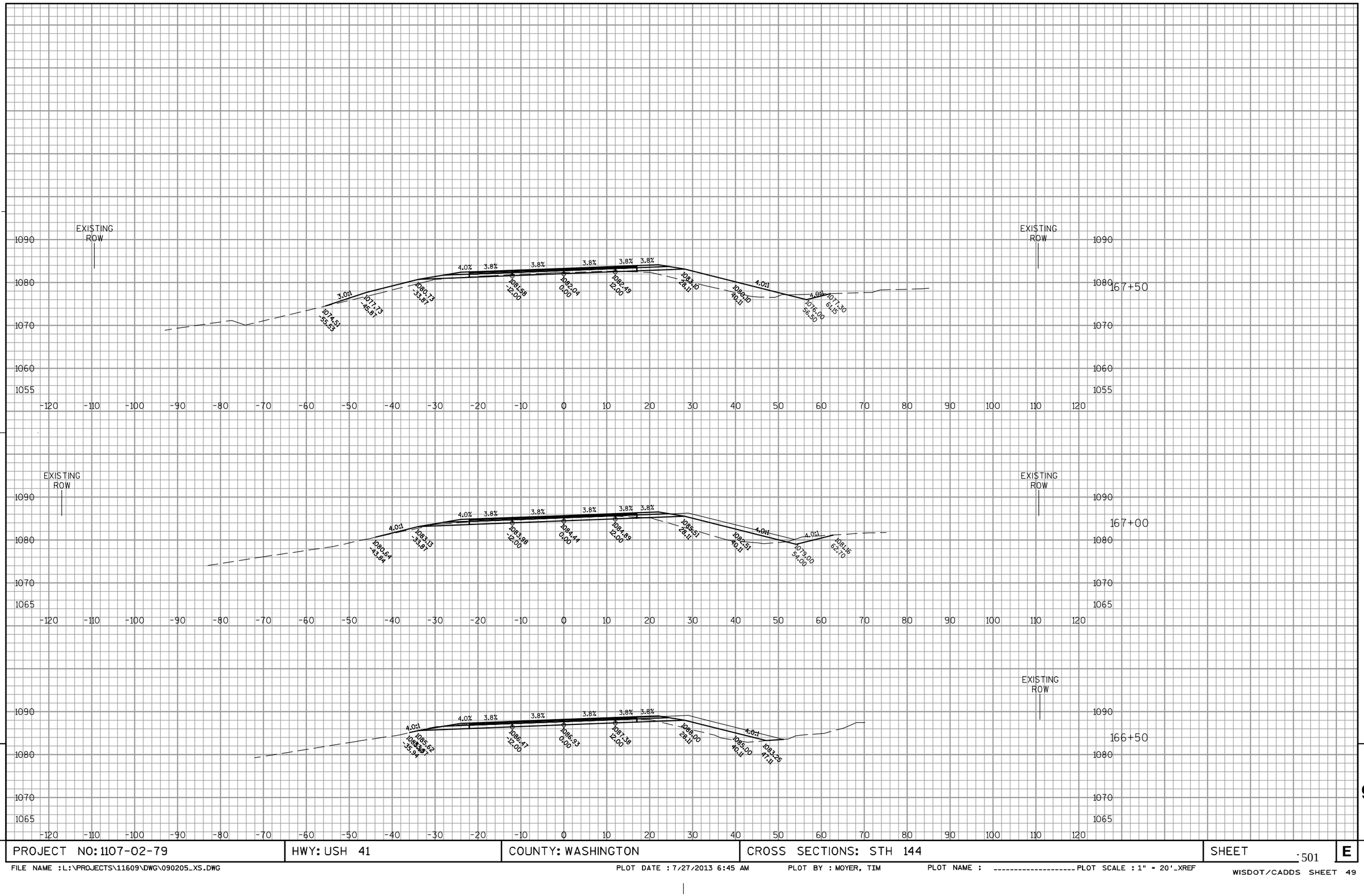
WISDOT/CADDS SHEET 49



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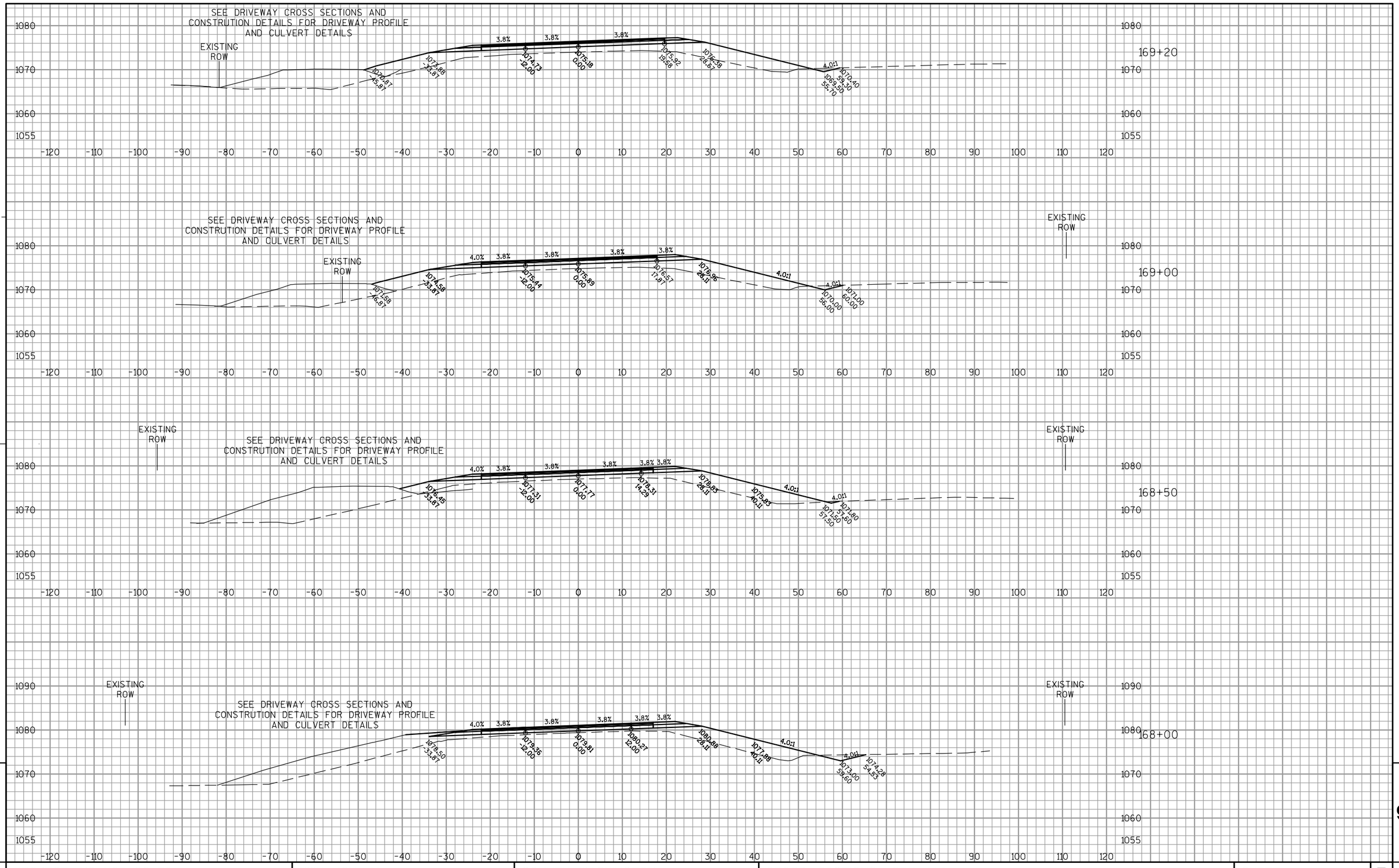
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET	E

FILE NAME : L:\PROJECTS\11609\DWG\090205_XS.DWG PLOT DATE : 7/27/2013 6:45 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET 502 E

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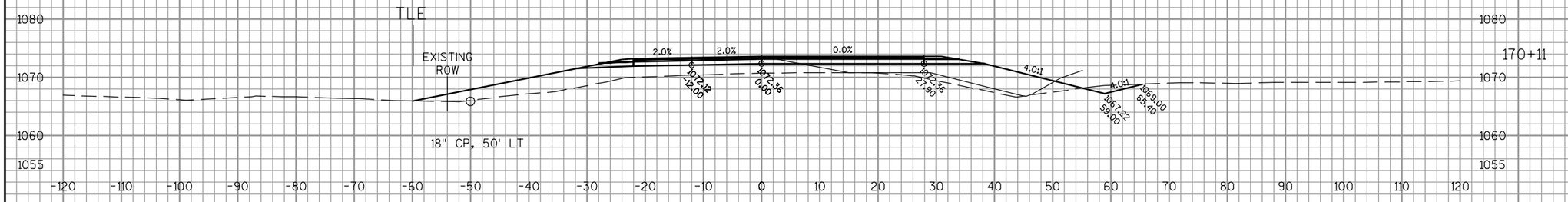
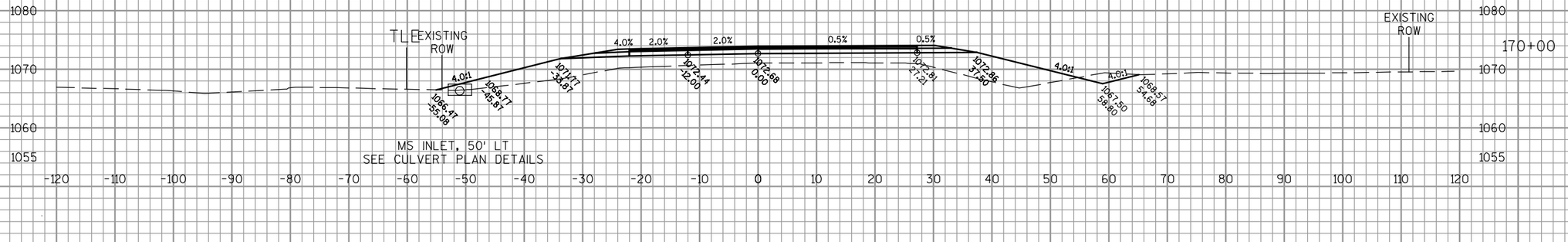
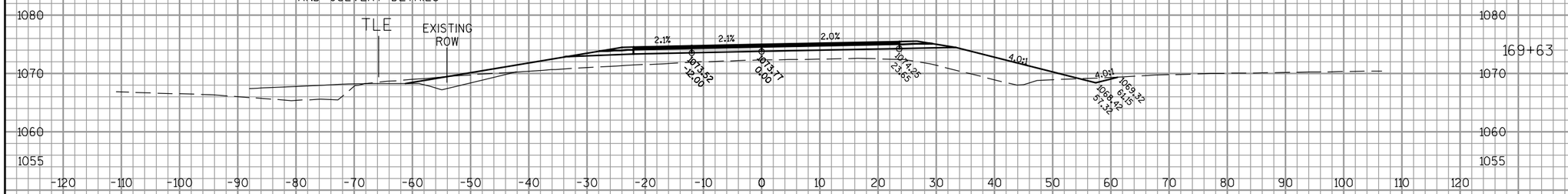
WISDOT/CADDS SHEET 49



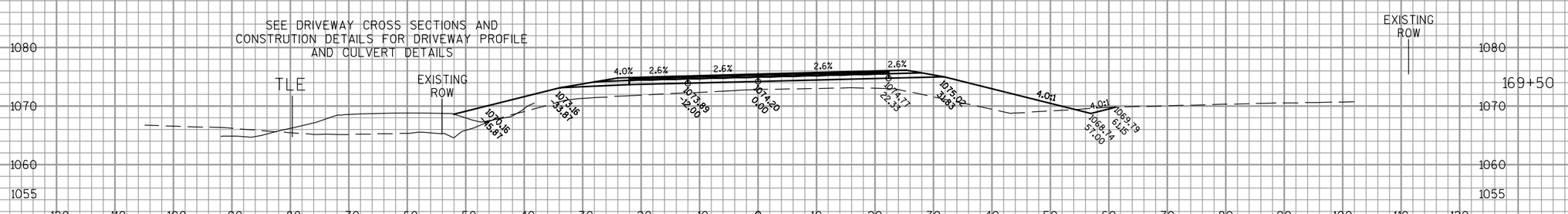
SEE DRIVEWAY CROSS SECTIONS AND CONSTRUTION DETAILS FOR DRIVEWAY PROFILE AND CULVERT DETAILS



SEE DRIVEWAY CROSS SECTIONS AND CONSTRUTION DETAILS FOR DRIVEWAY PROFILE AND CULVERT DETAILS



SEE DRIVEWAY CROSS SECTIONS AND CONSTRUTION DETAILS FOR DRIVEWAY PROFILE AND CULVERT DETAILS



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PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET	E

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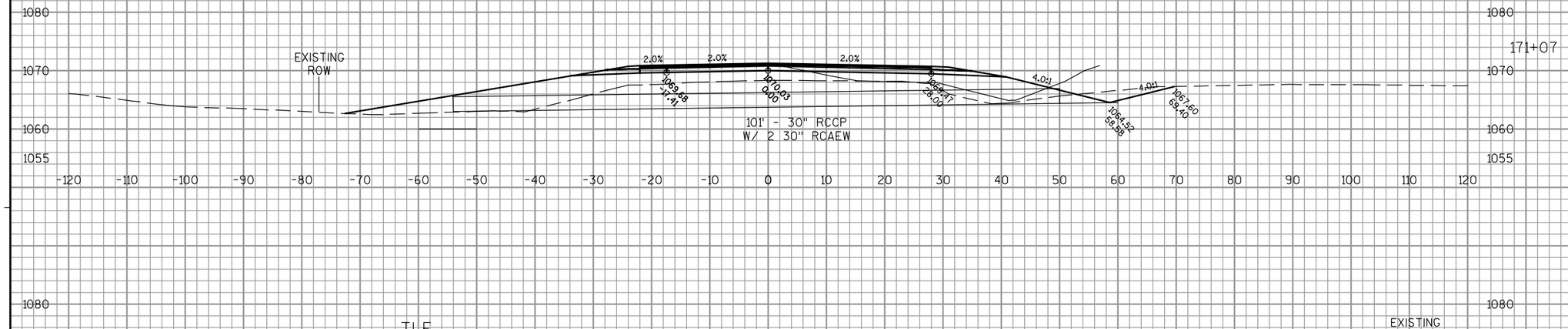

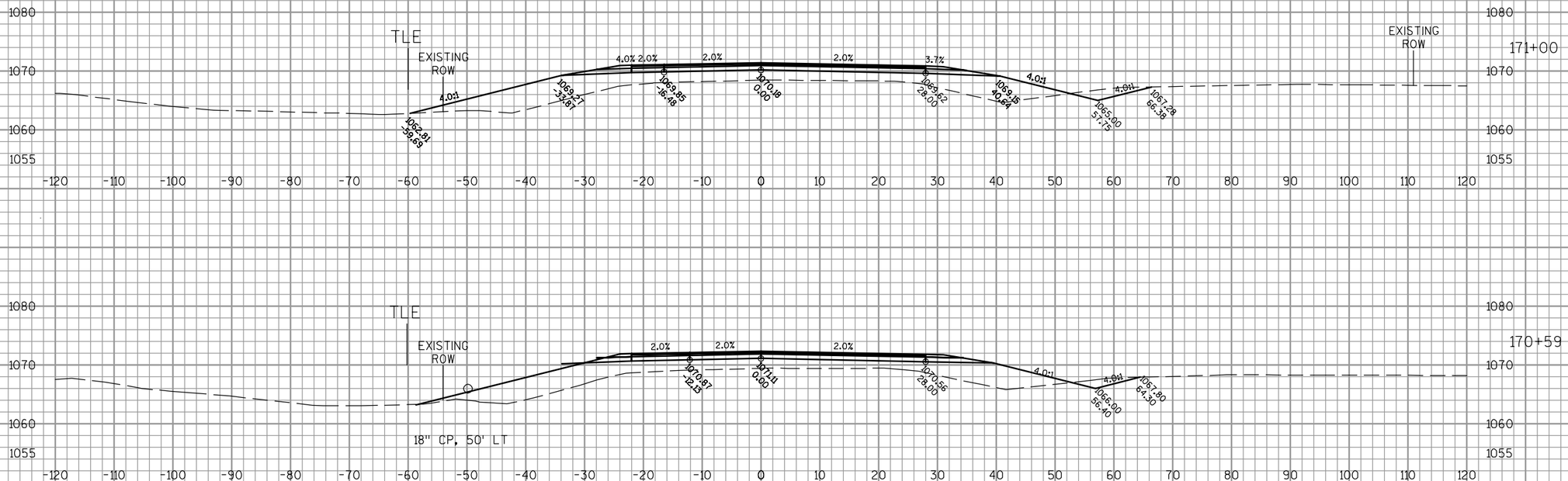

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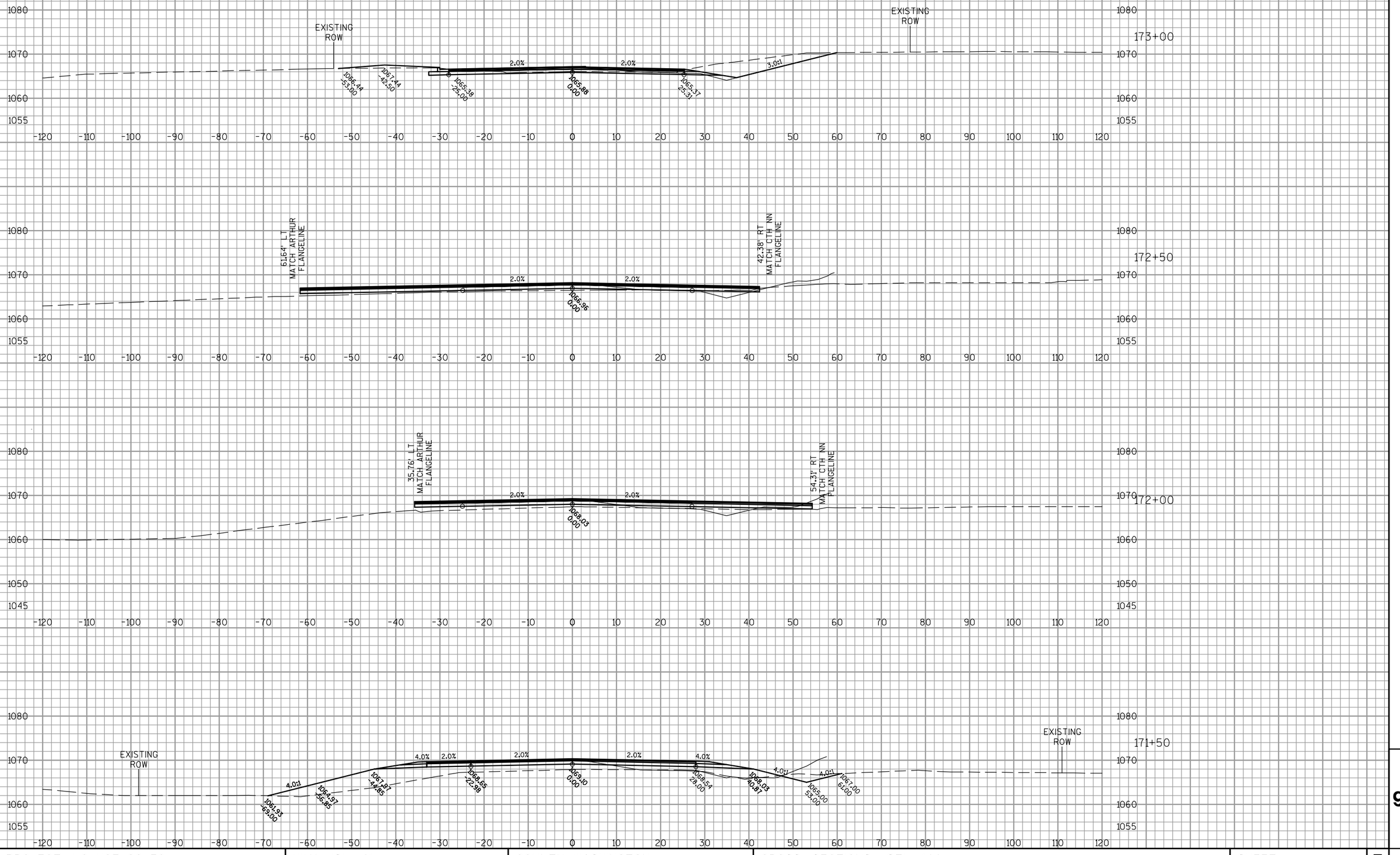
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET	E

FILE NAME : L:\PROJECTS\11609\DWG\090205_XS.DWG PLOT DATE : 7/27/2013 6:45 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



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PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET 505	E

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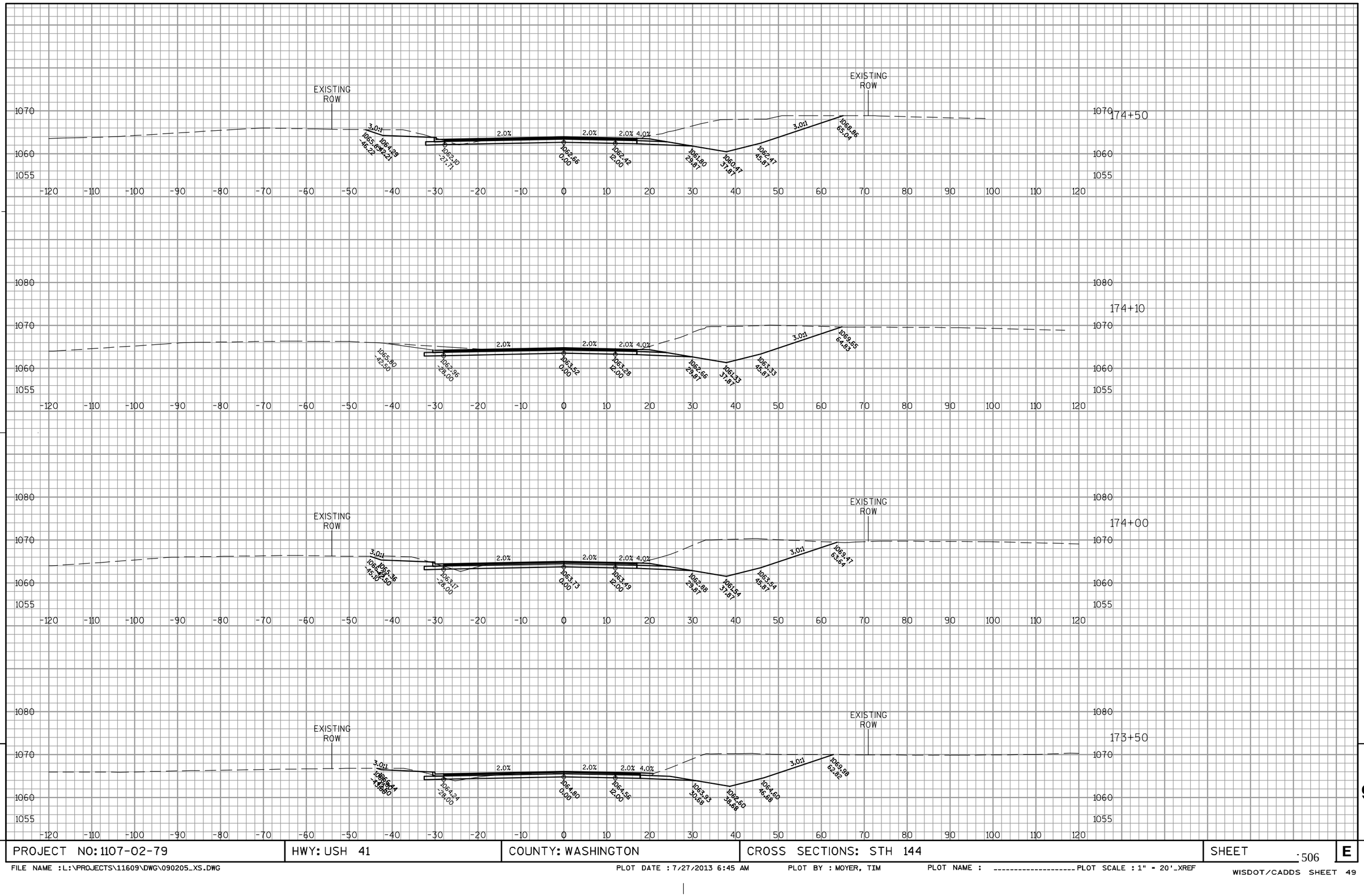

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PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET 506	E

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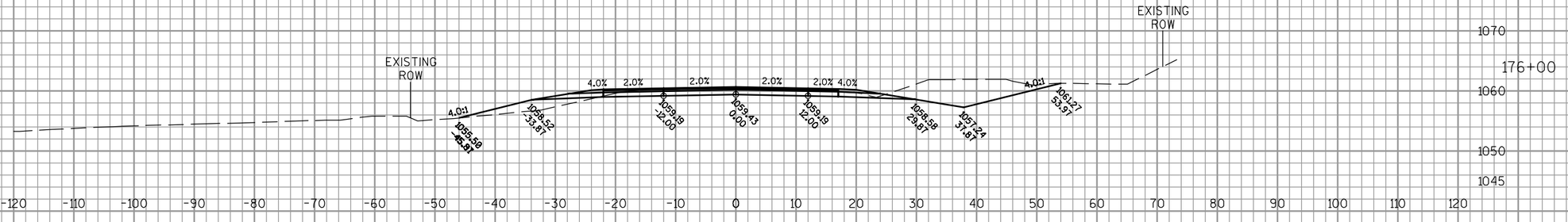
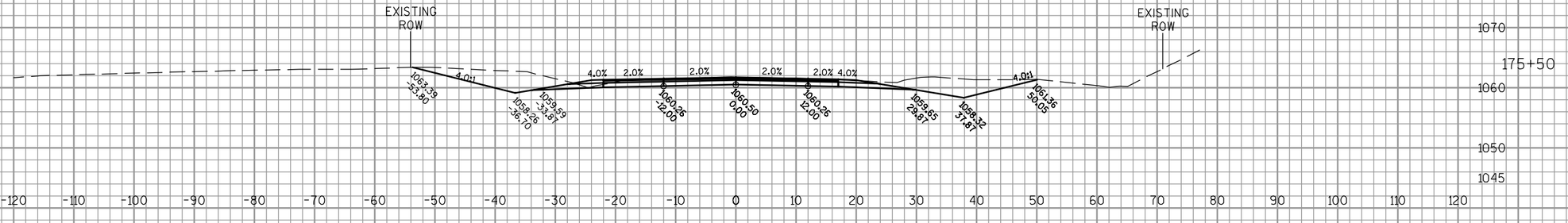
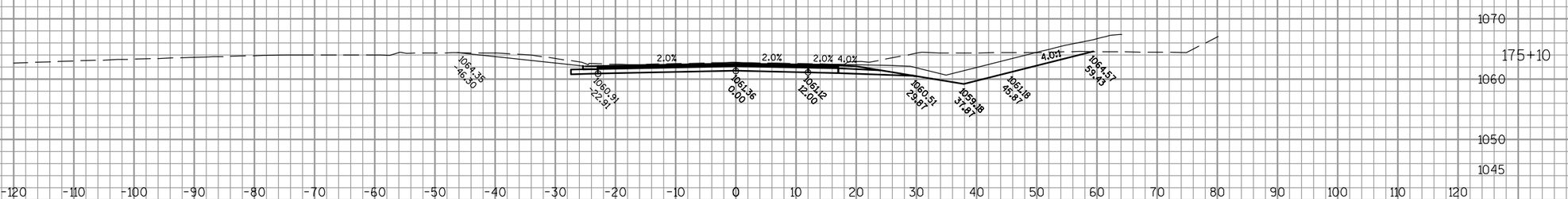
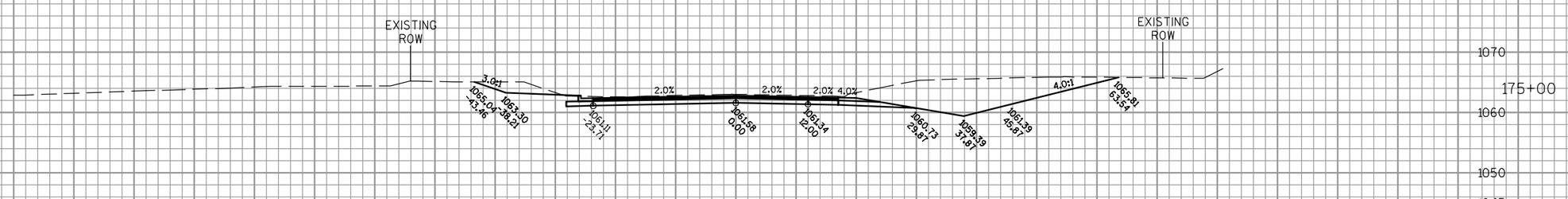
WISDOT/CADDS SHEET 49









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PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET	E

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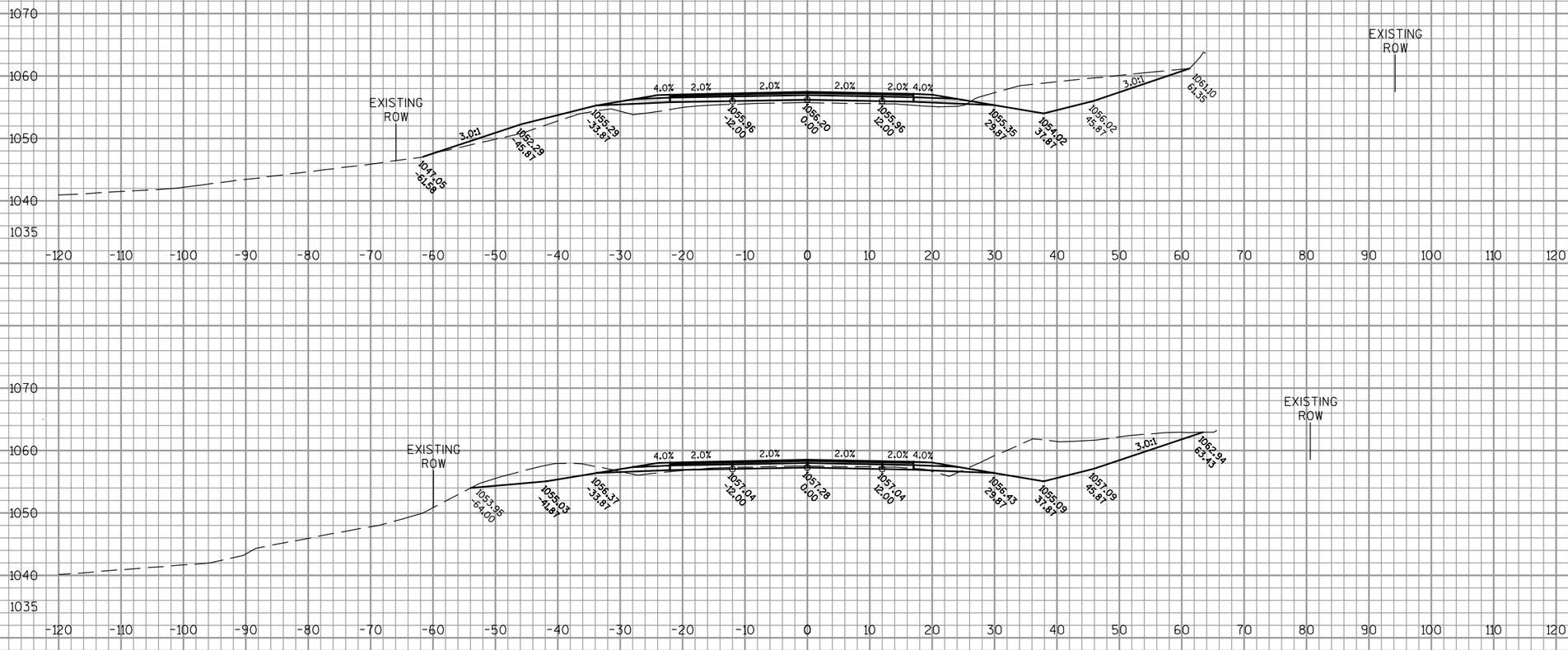
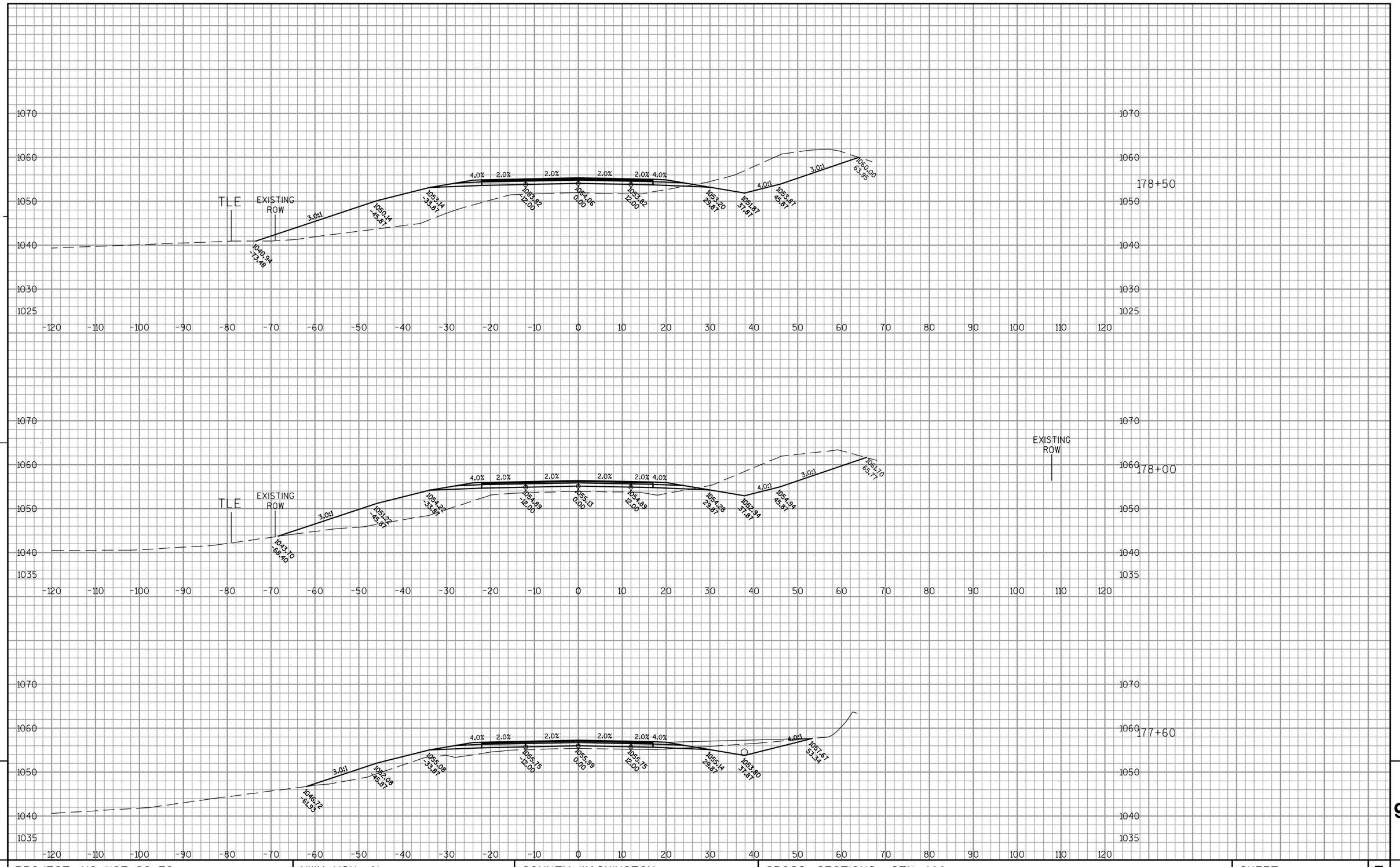


PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET 508 E



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET 509	E

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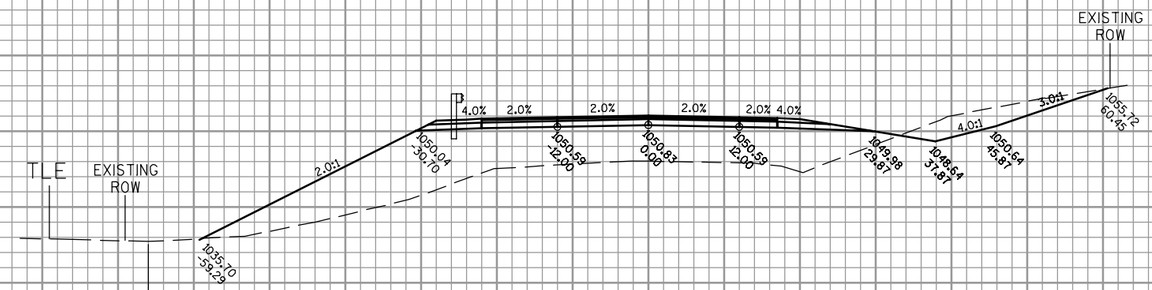
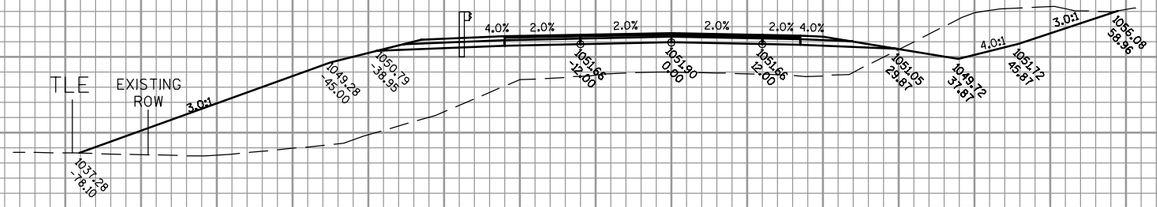
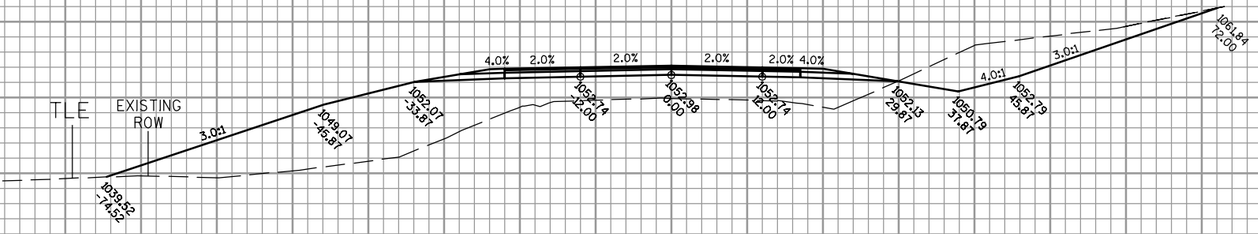
WISDOT/CADDS SHEET 49







PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET 510	E

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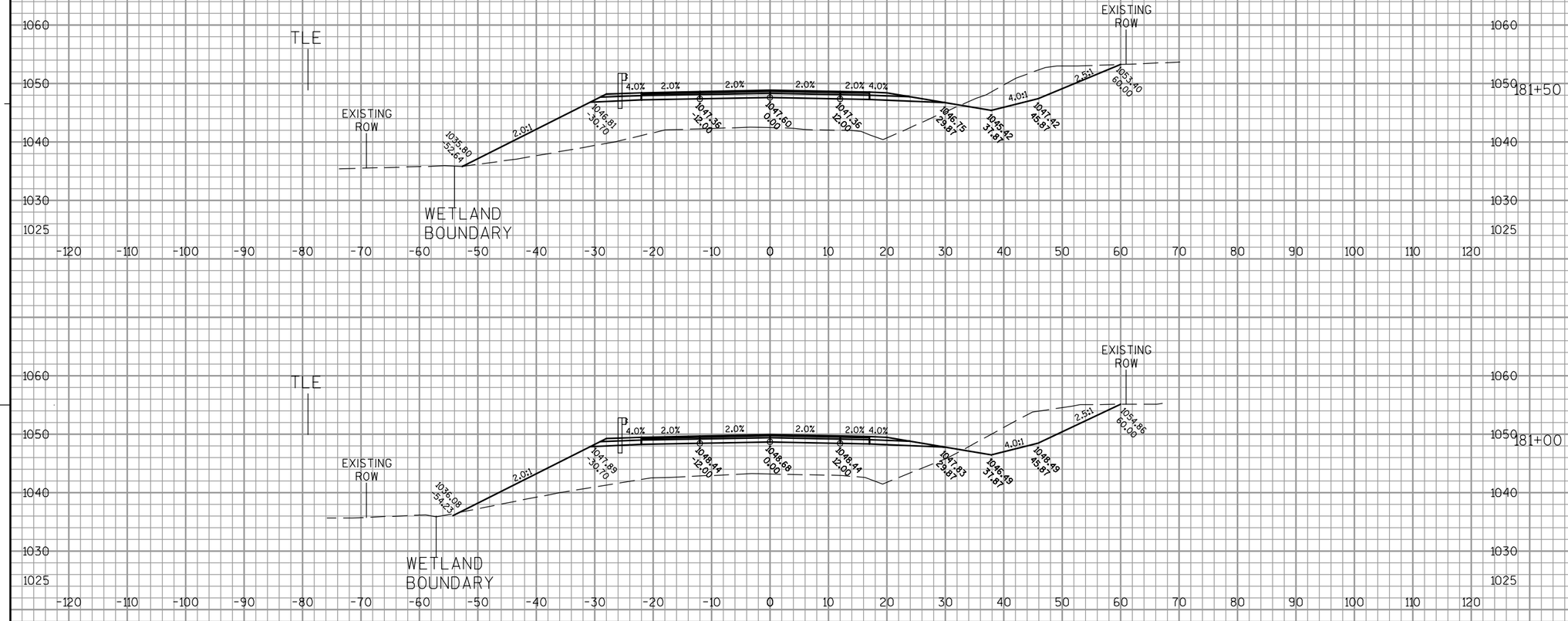
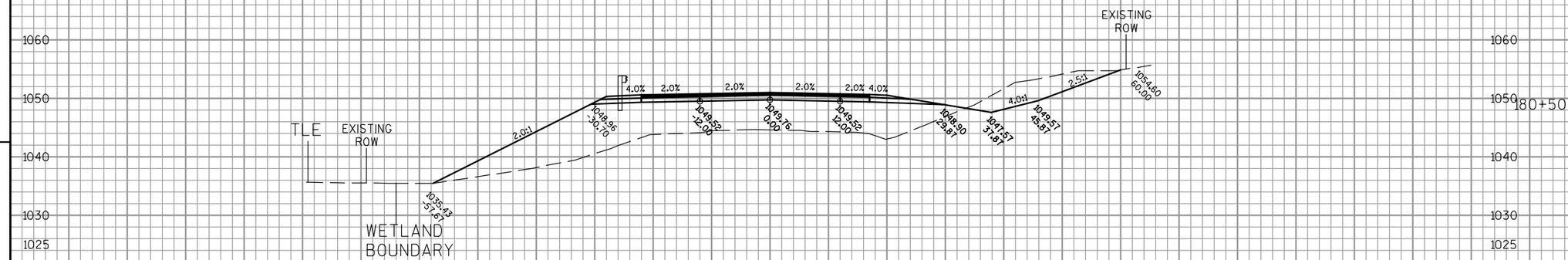
WISDOT/CADDS SHEET 49





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PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET 511	E

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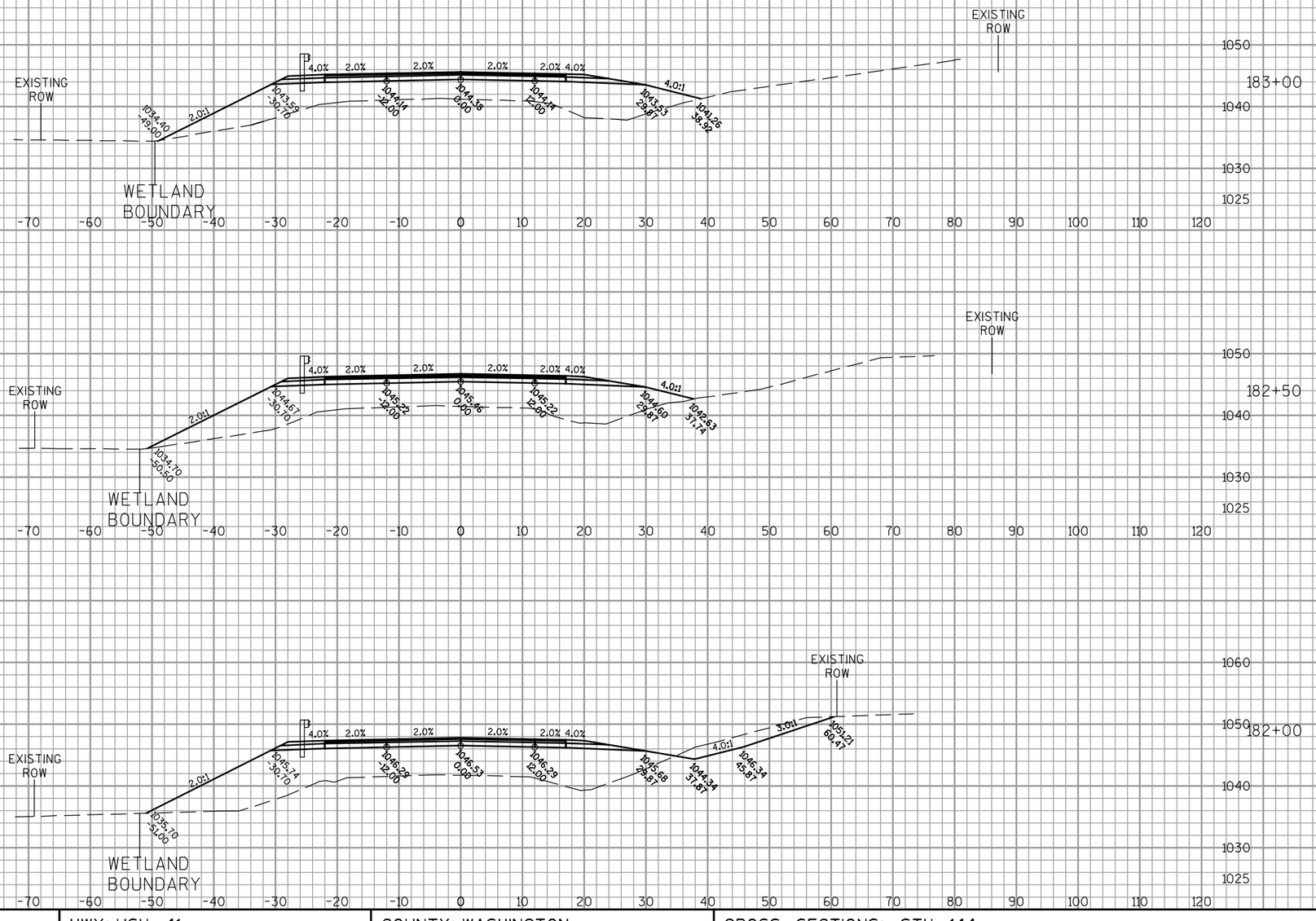

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PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET 512	E

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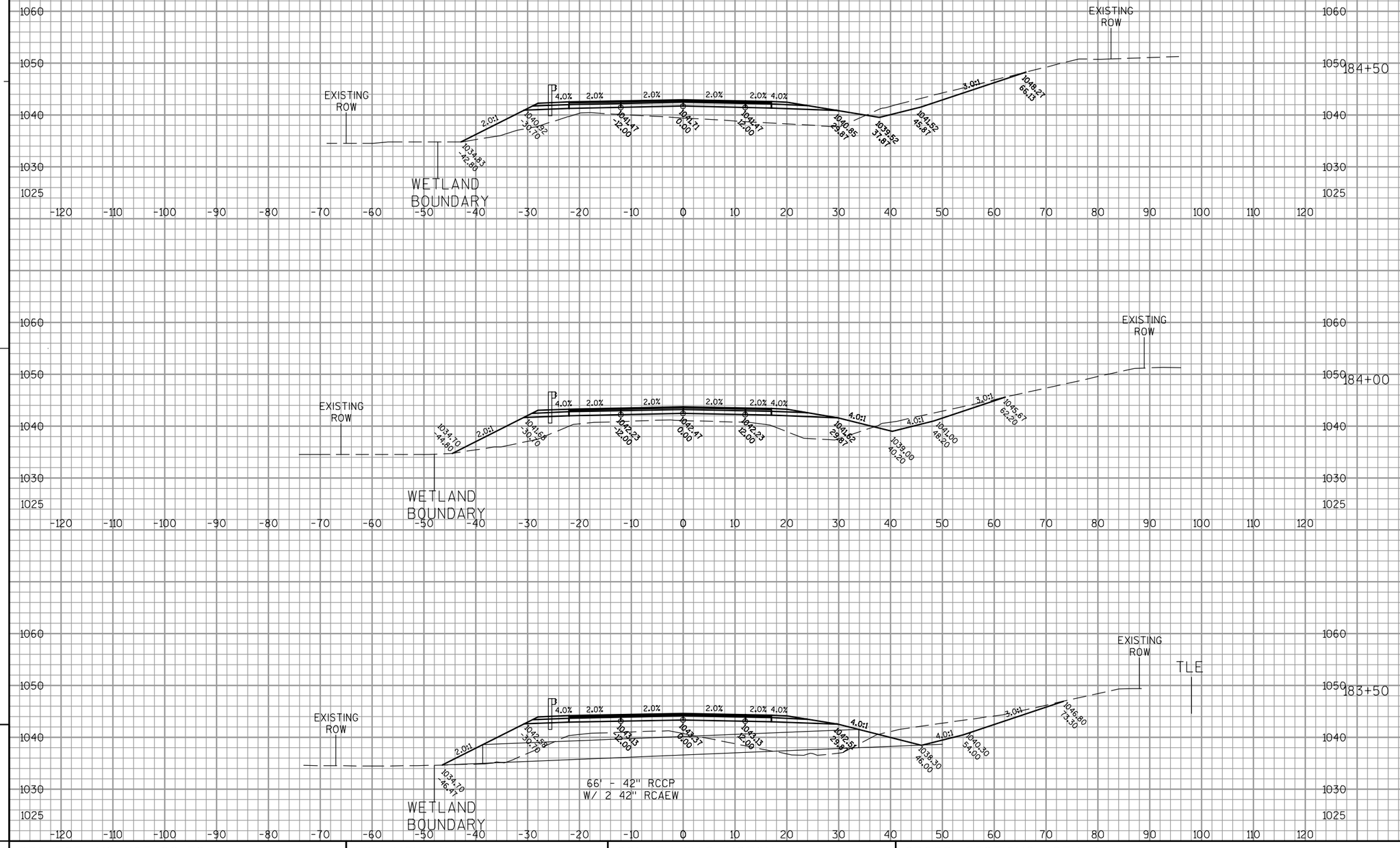

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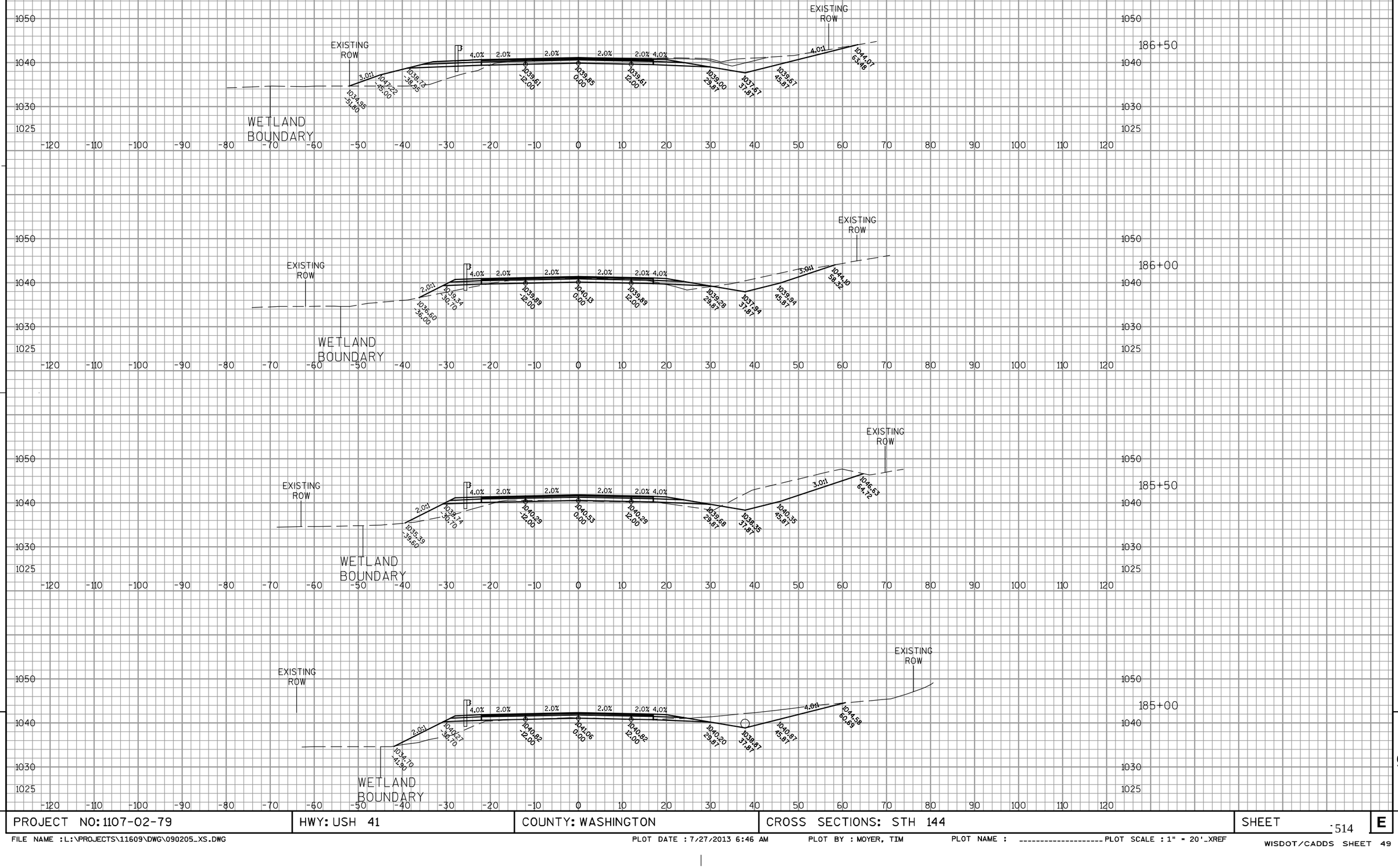
WISDOT/CADDS SHEET 49



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PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET	E

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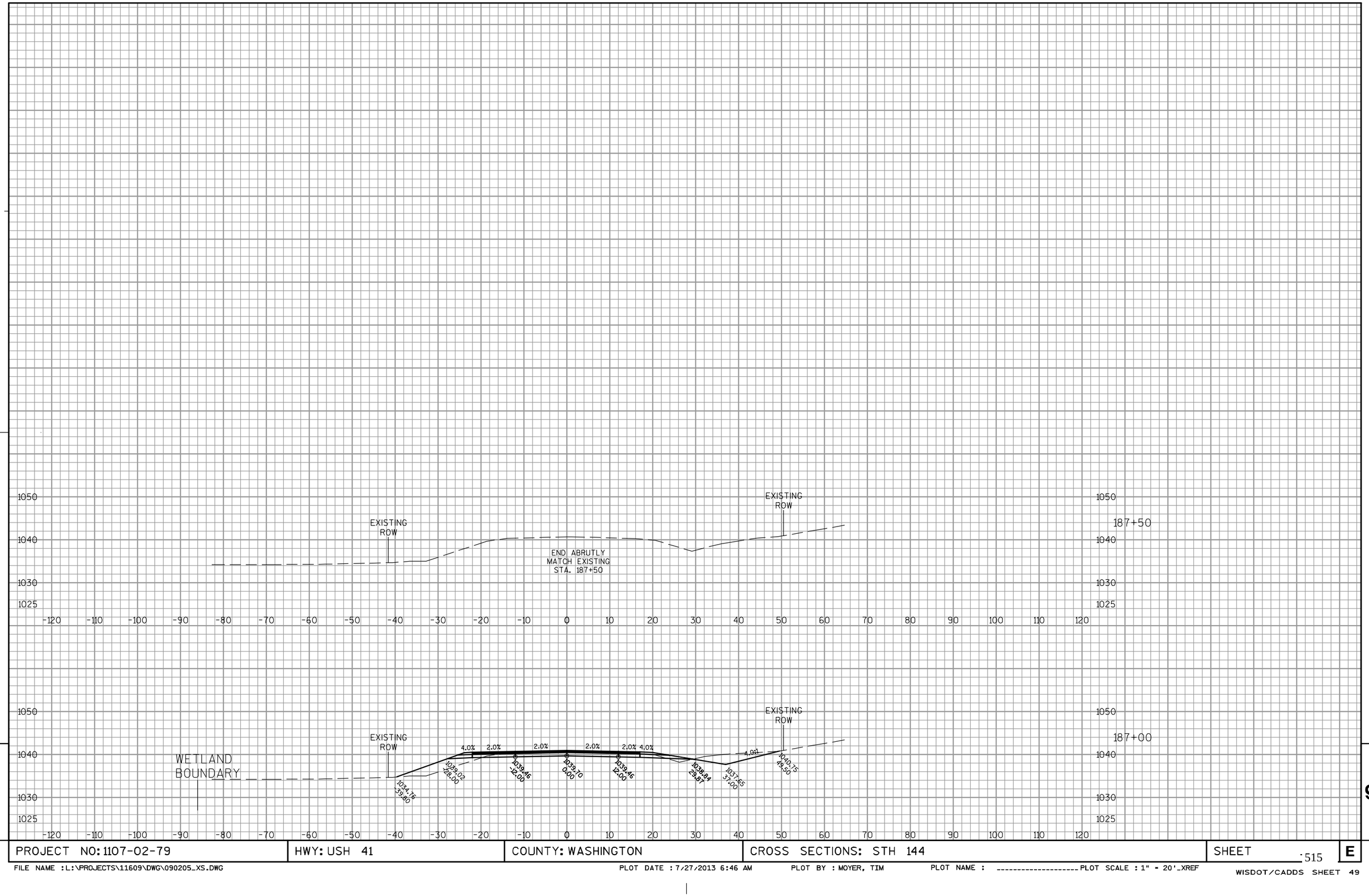
WISDOT/CADDS SHEET 49



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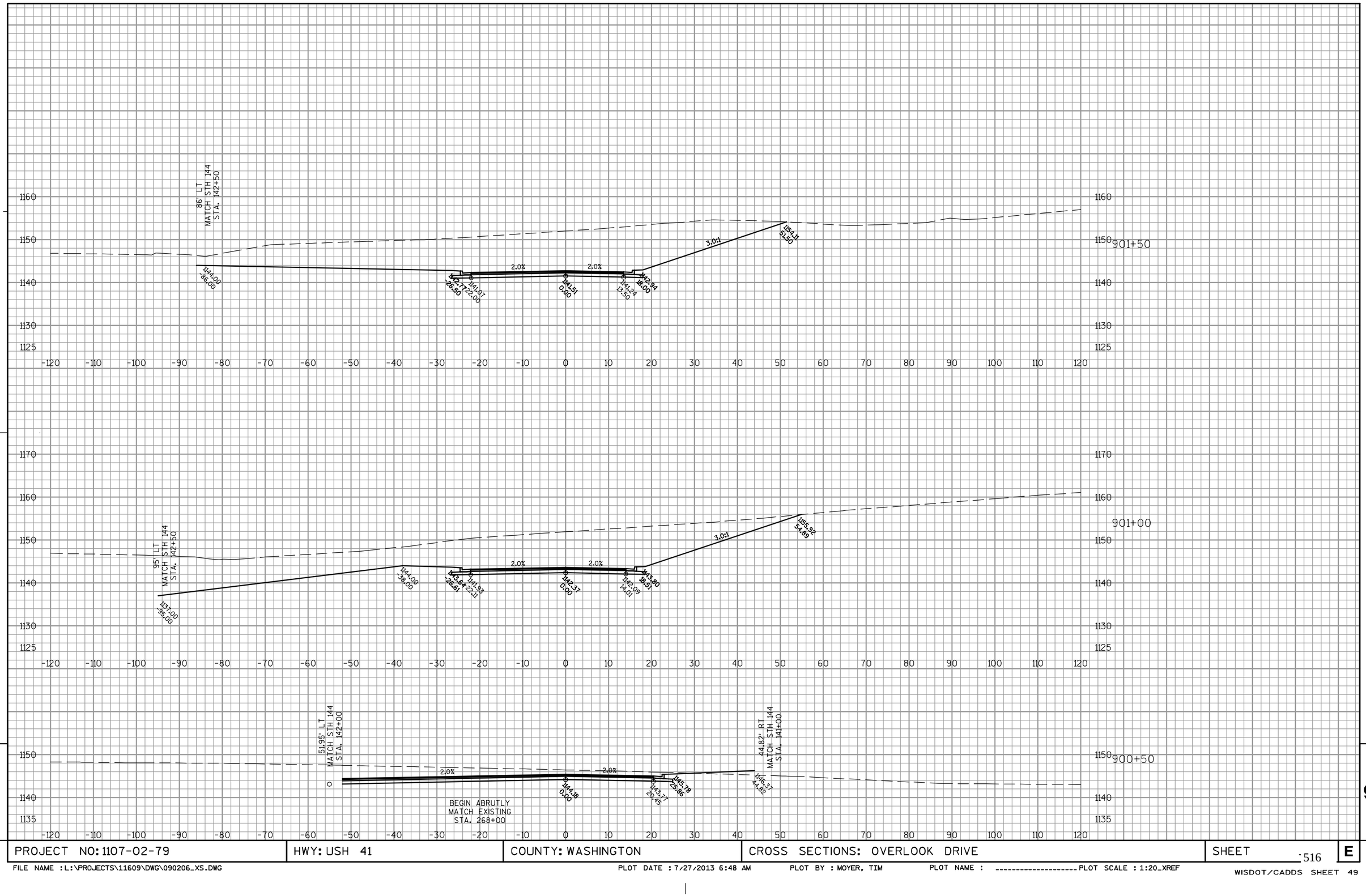
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: STH 144	SHEET	E

FILE NAME :L:\PROJECTS\11609\DWG\090205_XS.DWG PLOT DATE : 7/27/2013 6:46 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1" = 20'_XREF



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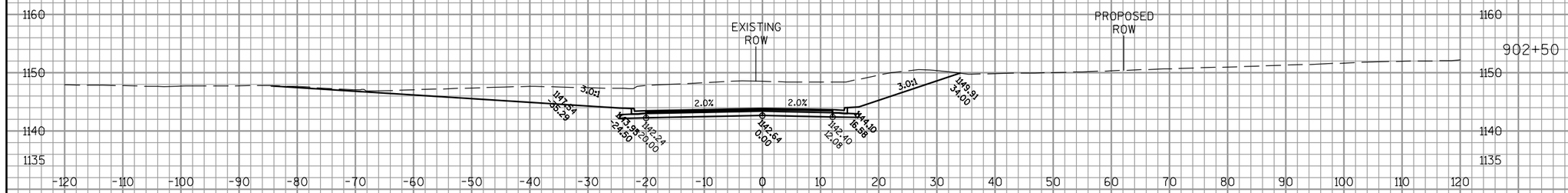
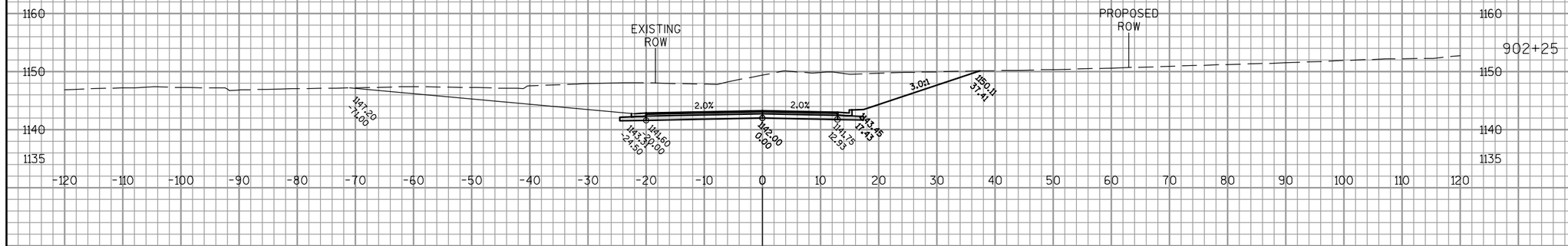
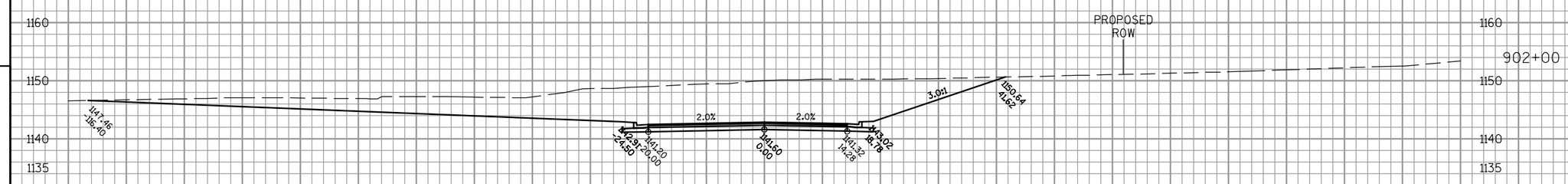
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: OVERLOOK DRIVE	SHEET 516	E

FILE NAME : L:\PROJECTS\11609\DWG\090206_XS.DWG PLOT DATE : 7/27/2013 6:48 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49







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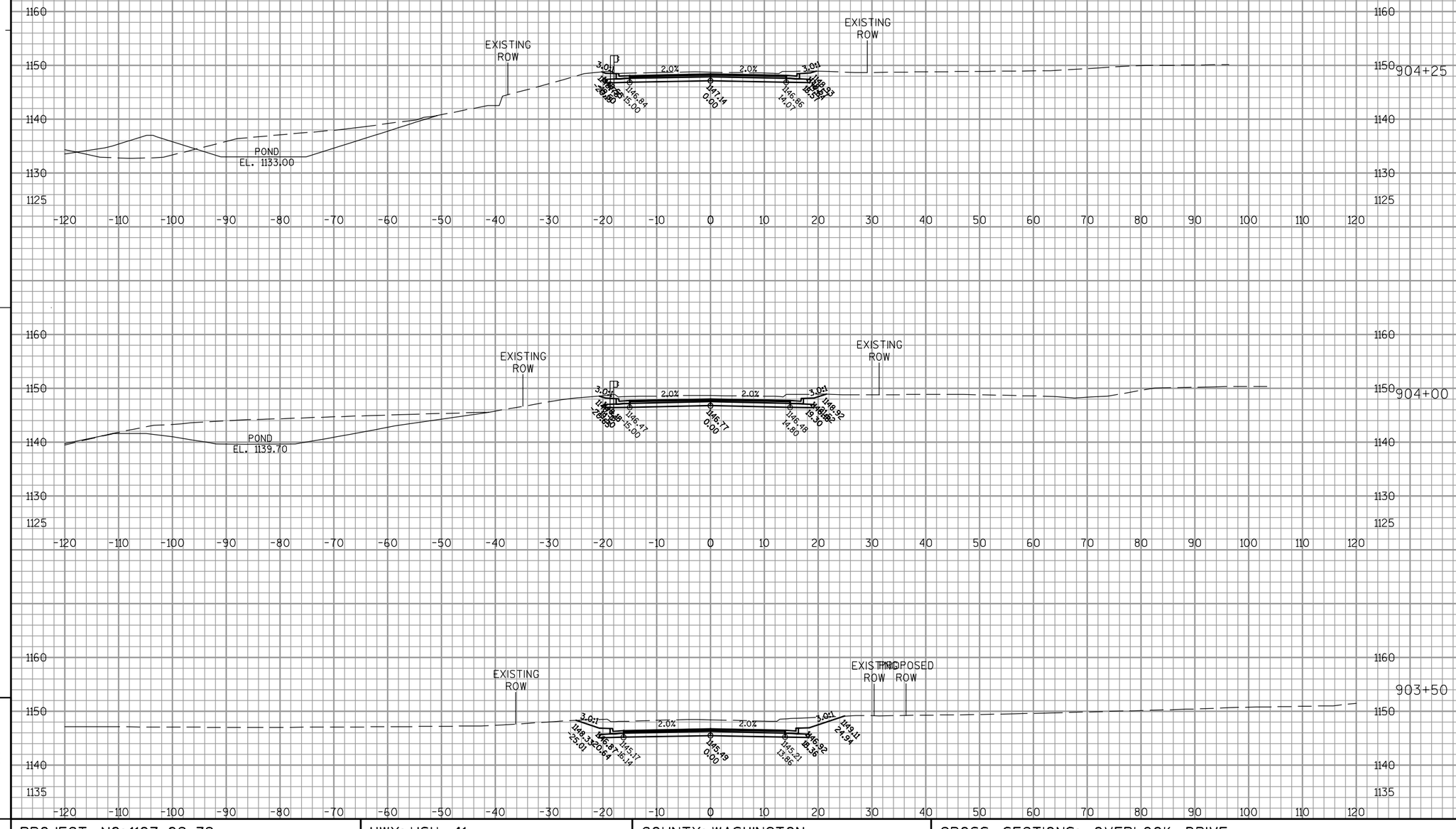
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: OVERLOOK DRIVE	SHEET 517	E



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PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: OVERLOOK DRIVE	SHEET 518	E

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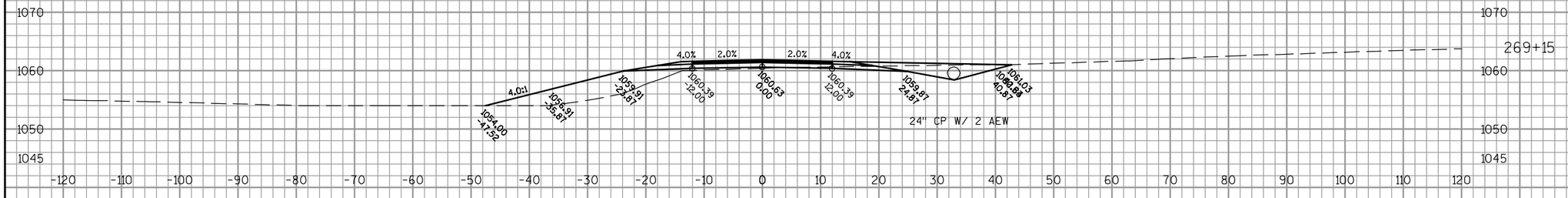
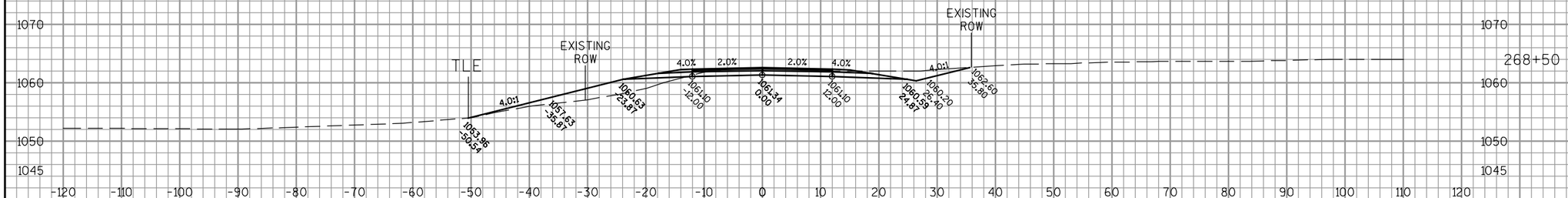
WISDOT/CADDS SHEET 49

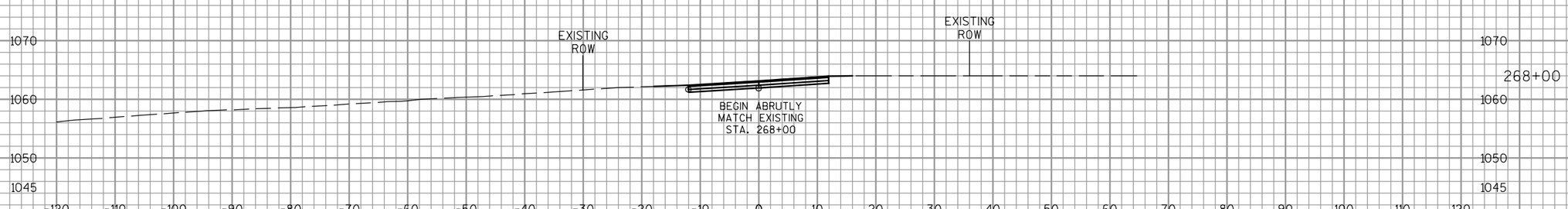
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: OVERLOOK DRIVE	SHEET 519	E

FILE NAME : L:\PROJECTS\11609\DWG\090206_XS.DWG PLOT DATE : 7/27/2013 6:48 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49







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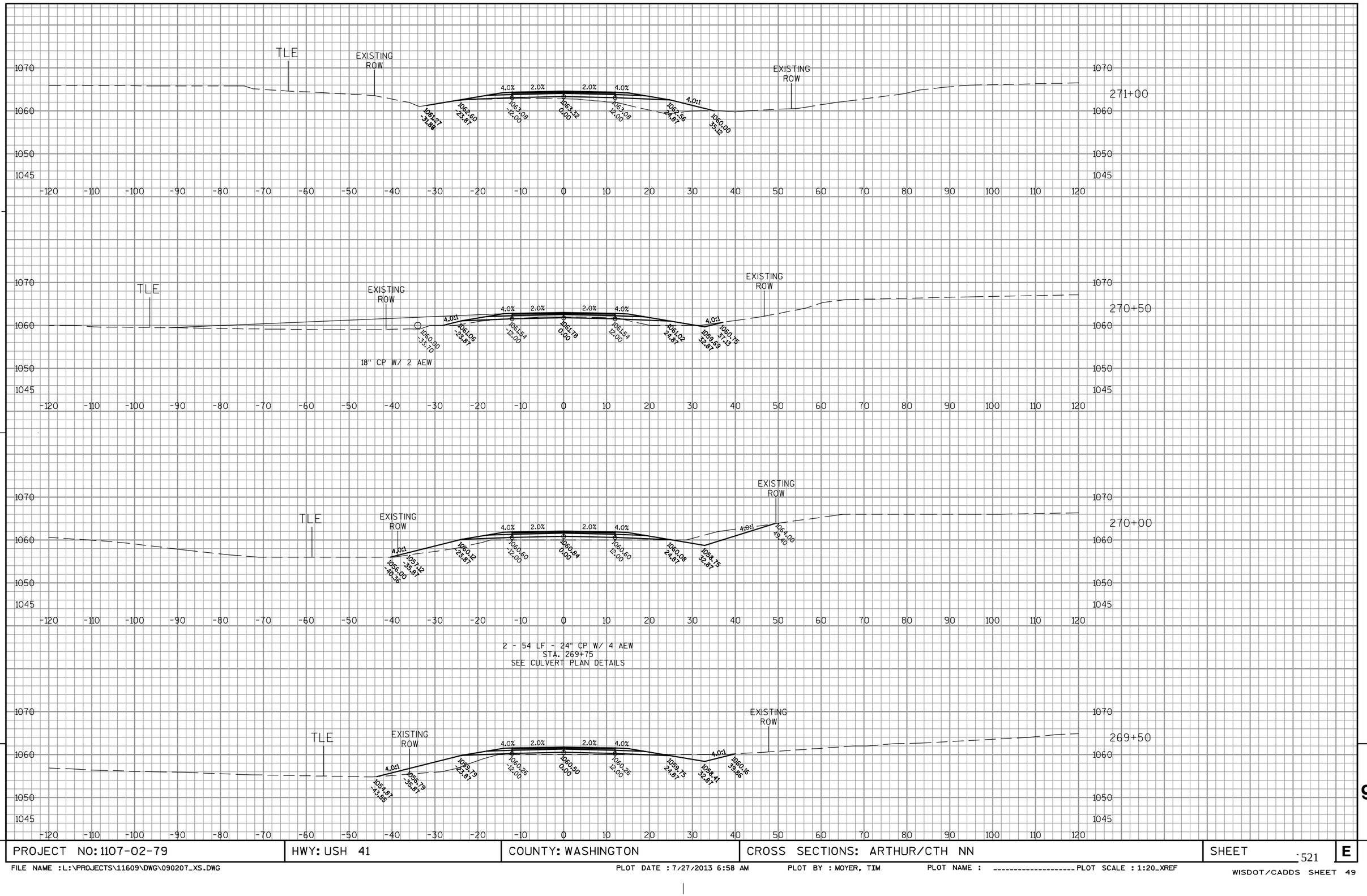
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: ARTHUR/CTH NN	SHEET 520	E

FILE NAME : L:\PROJECTS\11609\DWG\090207_XS.DWG PLOT DATE : 7/27/2013 6:58 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



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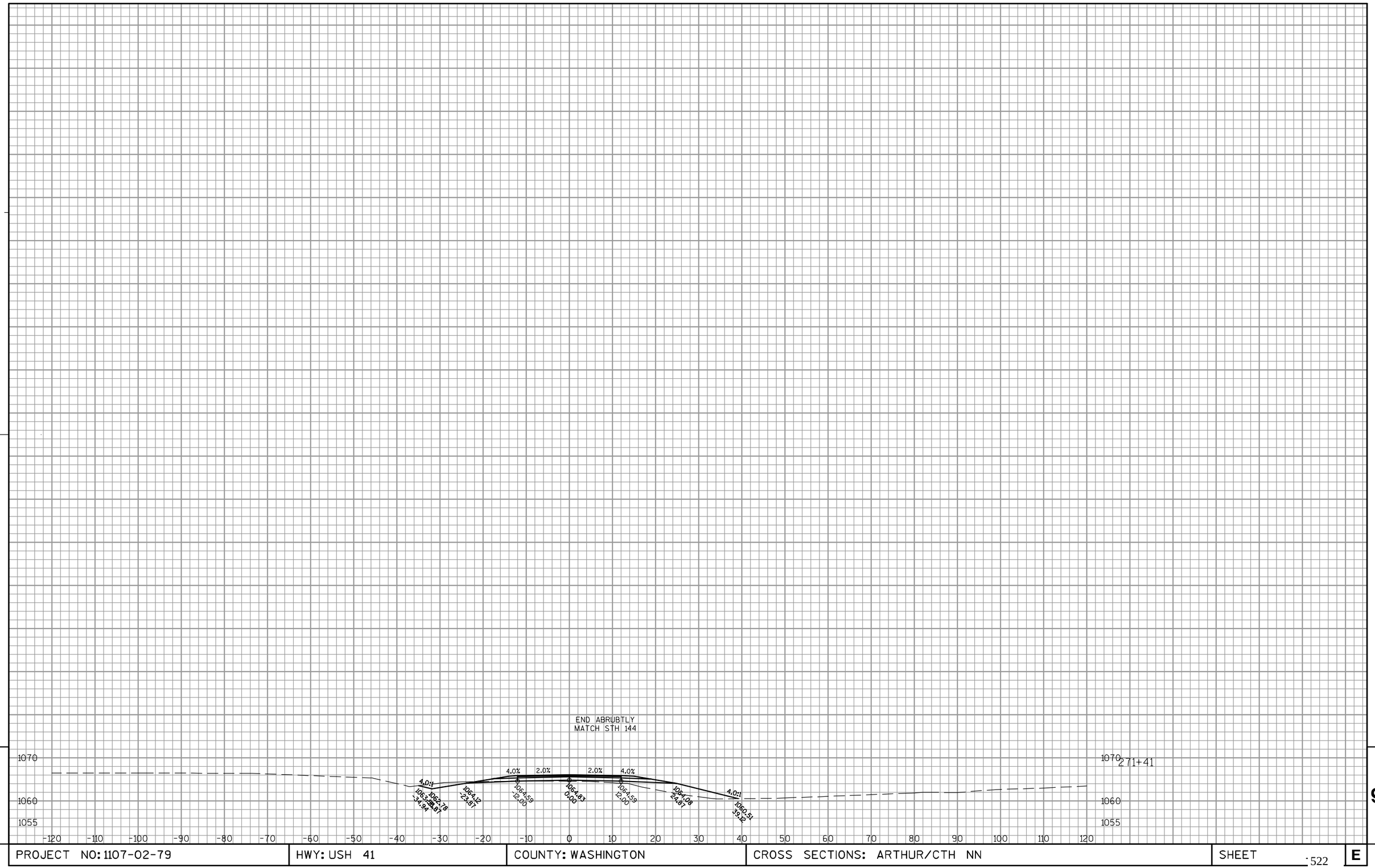
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: ARTHUR/CTH NN	SHEET 521	E

FILE NAME : L:\PROJECTS\11609\DWG\090207_XS.DWG PLOT DATE : 7/27/2013 6:58 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



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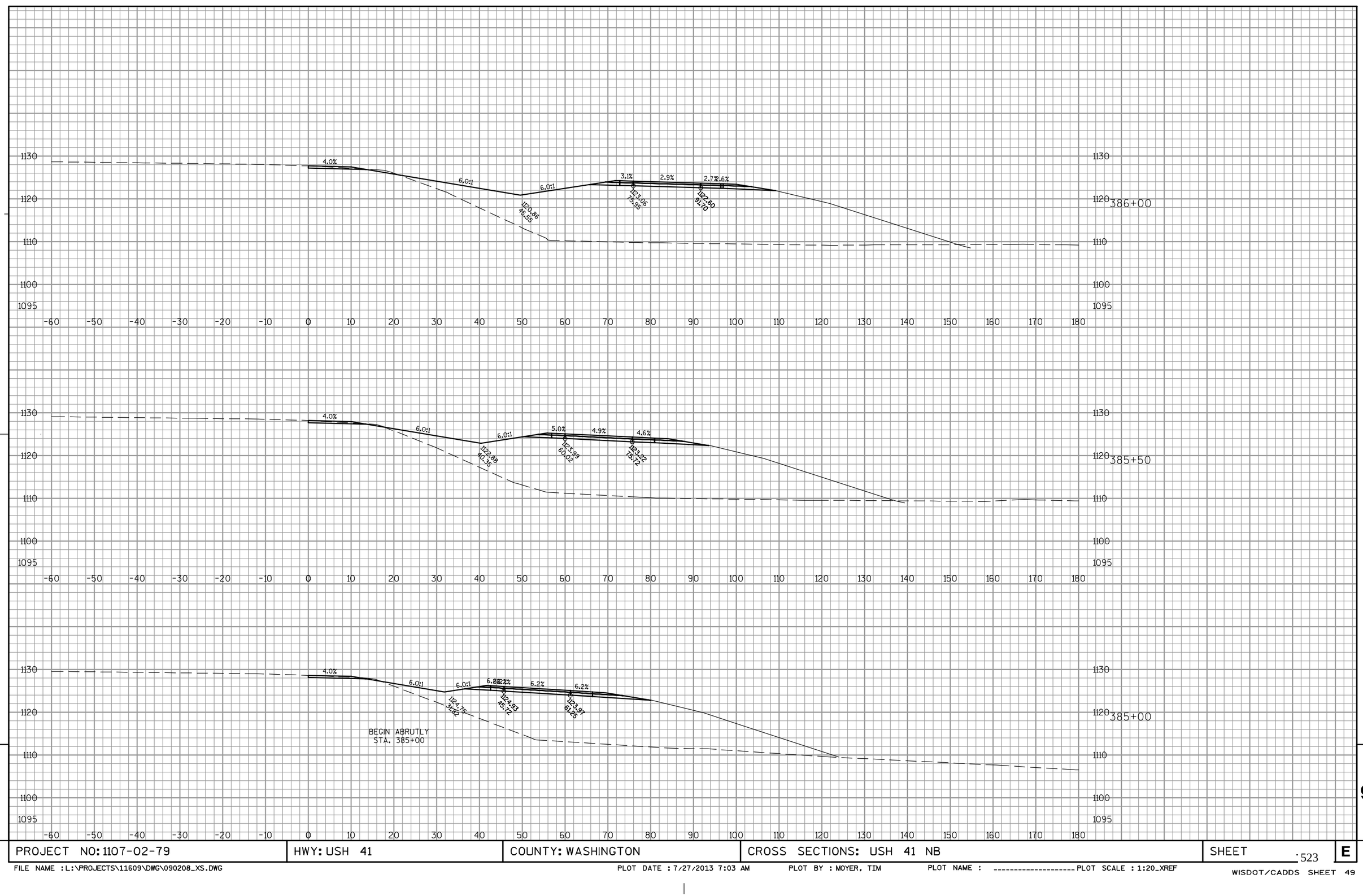
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: ARTHUR/CTH NN	SHEET	E

FILE NAME : L:\PROJECTS\11609\DWG\090207_XS.DWG PLOT DATE : 7/27/2013 6:59 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



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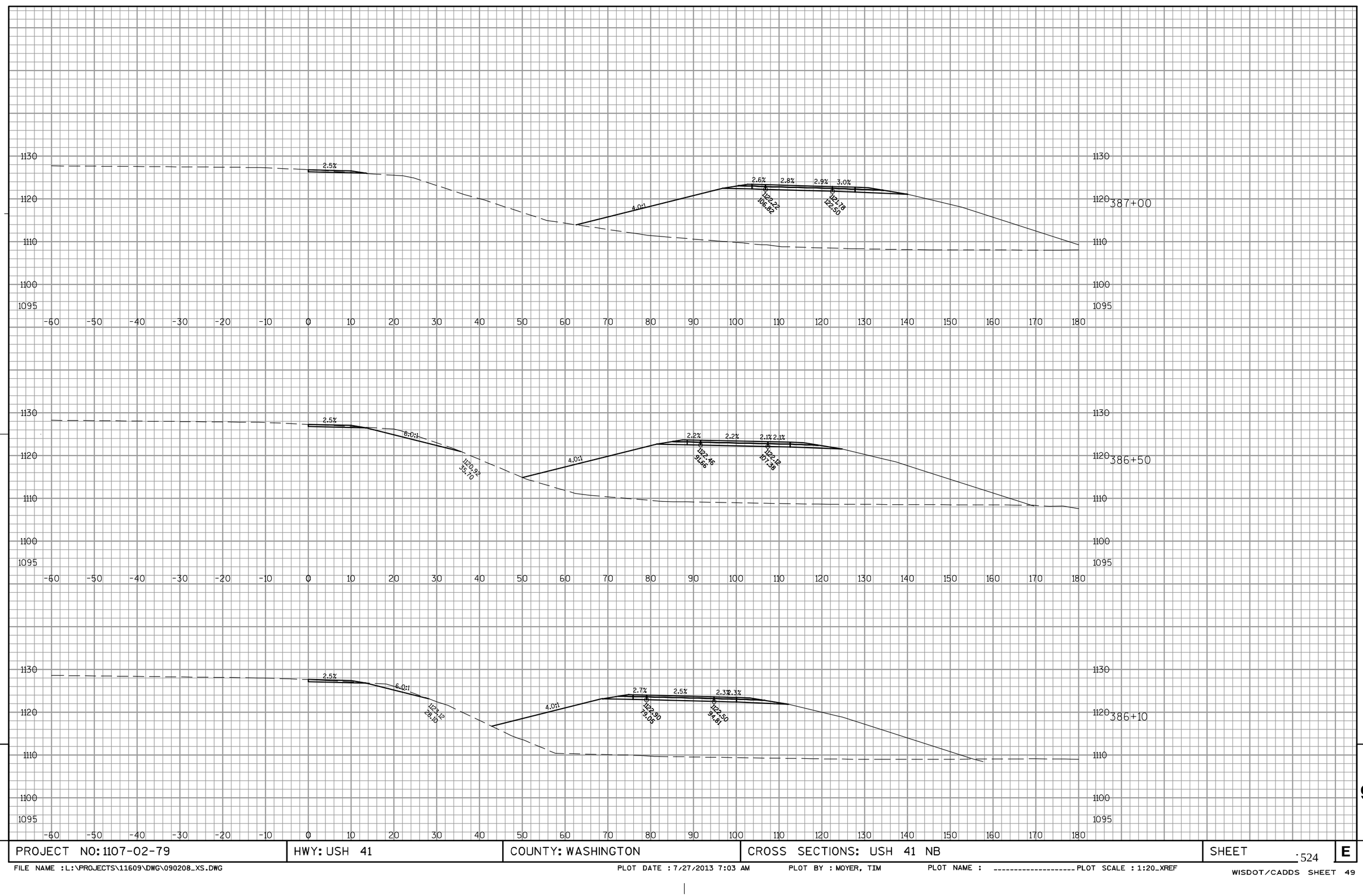
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: USH 41 NB	SHEET 523	E

FILE NAME : L:\PROJECTS\11609\DWG\090208_XS.DWG PLOT DATE : 7/27/2013 7:03 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



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PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: USH 41 NB	SHEET 524	E

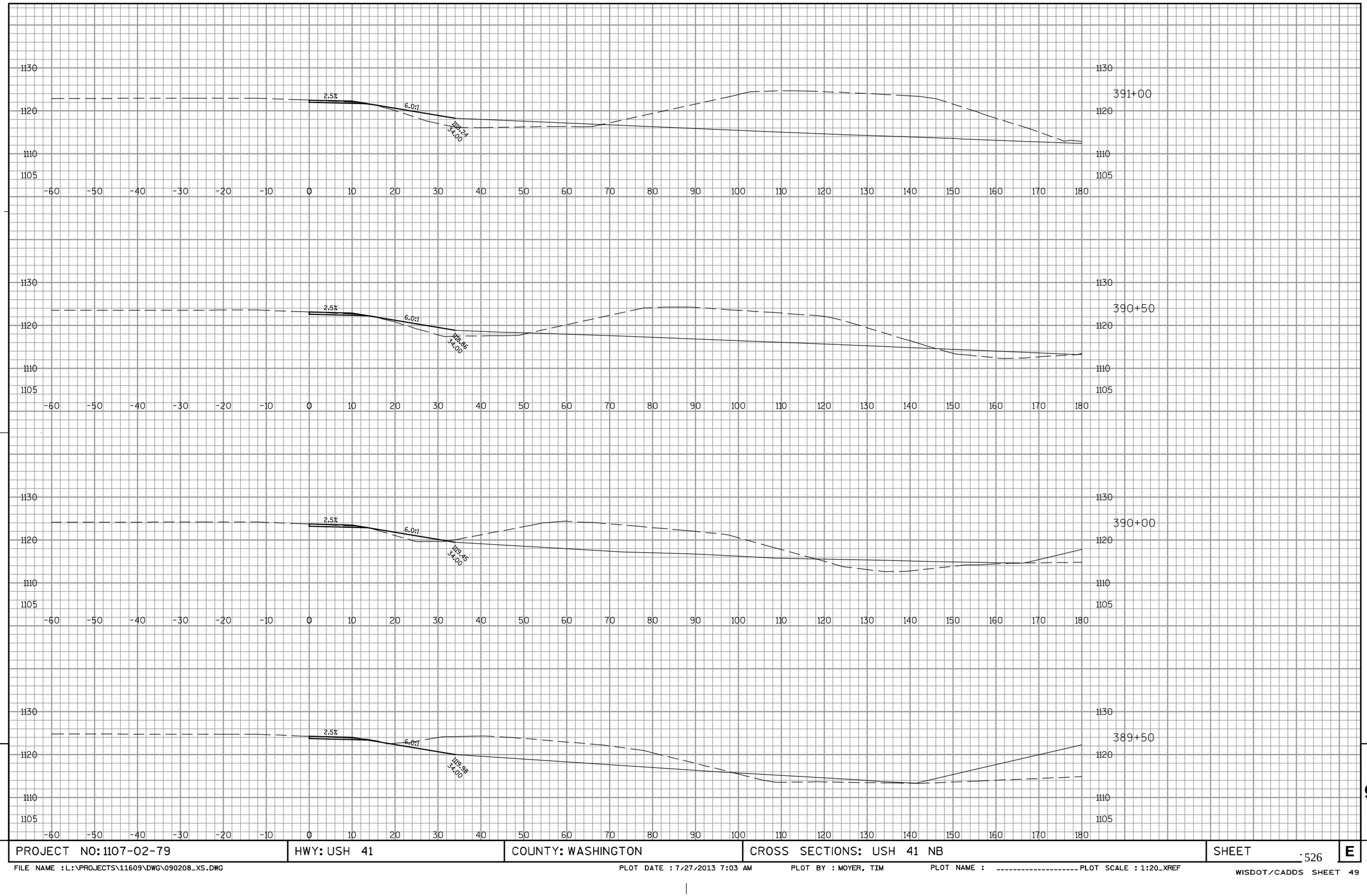
FILE NAME : L:\PROJECTS\11609\DWG\090208_XS.DWG PLOT DATE : 7/27/2013 7:03 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: USH 41 NB	SHEET 525 E

FILE NAME : L:\PROJECTS\11609\DWG\090208_XS.DWG PLOT DATE : 7/27/2013 7:03 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



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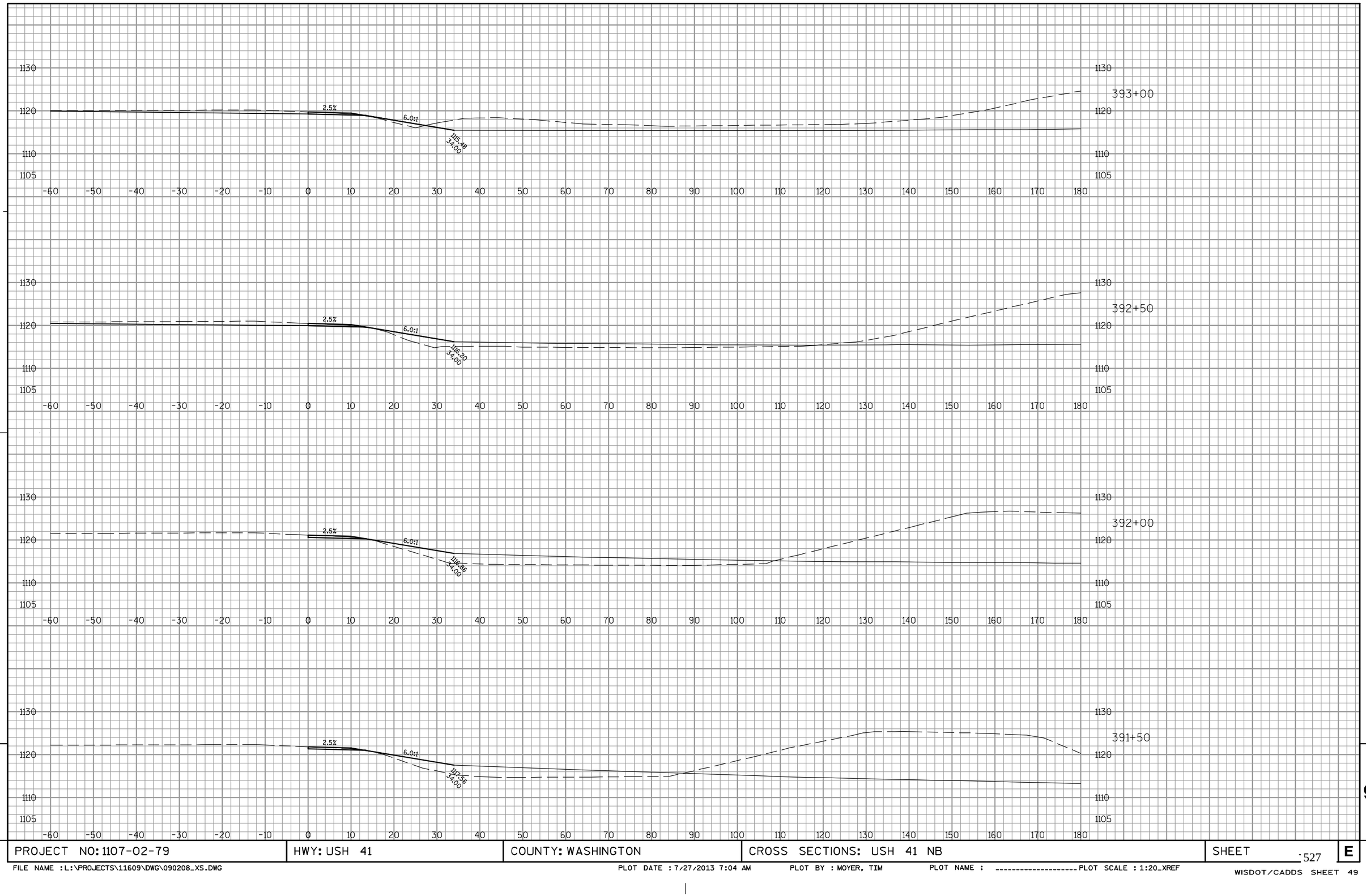
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: USH 41 NB	SHEET	E

FILE NAME : L:\PROJECTS\11609\DWG\090208_XS.DWG PLOT DATE : 7/27/2013 7:03 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



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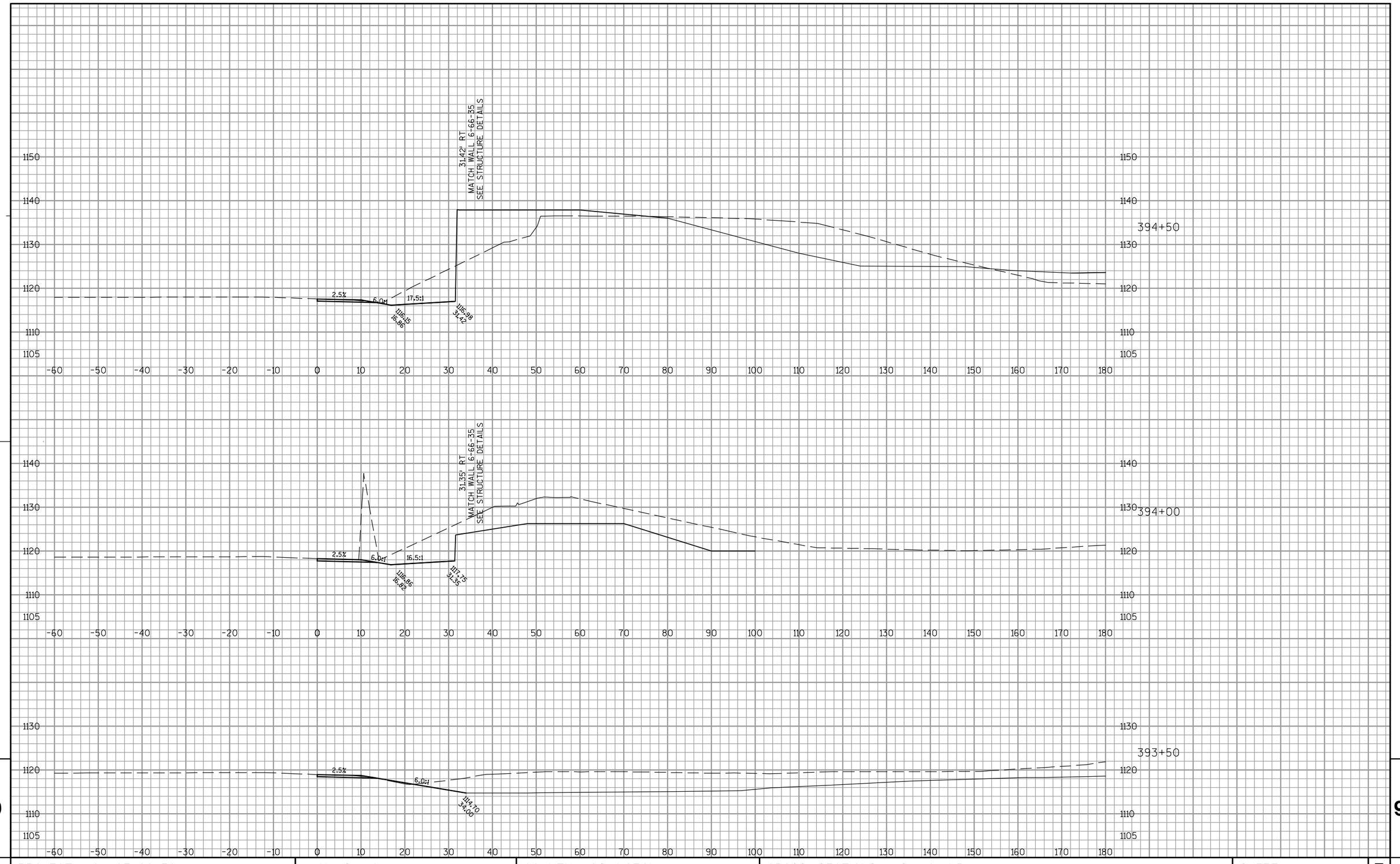
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: USH 41 NB	SHEET	E

FILE NAME : L:\PROJECTS\11609\DWG\090208_XS.DWG PLOT DATE : 7/27/2013 7:04 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



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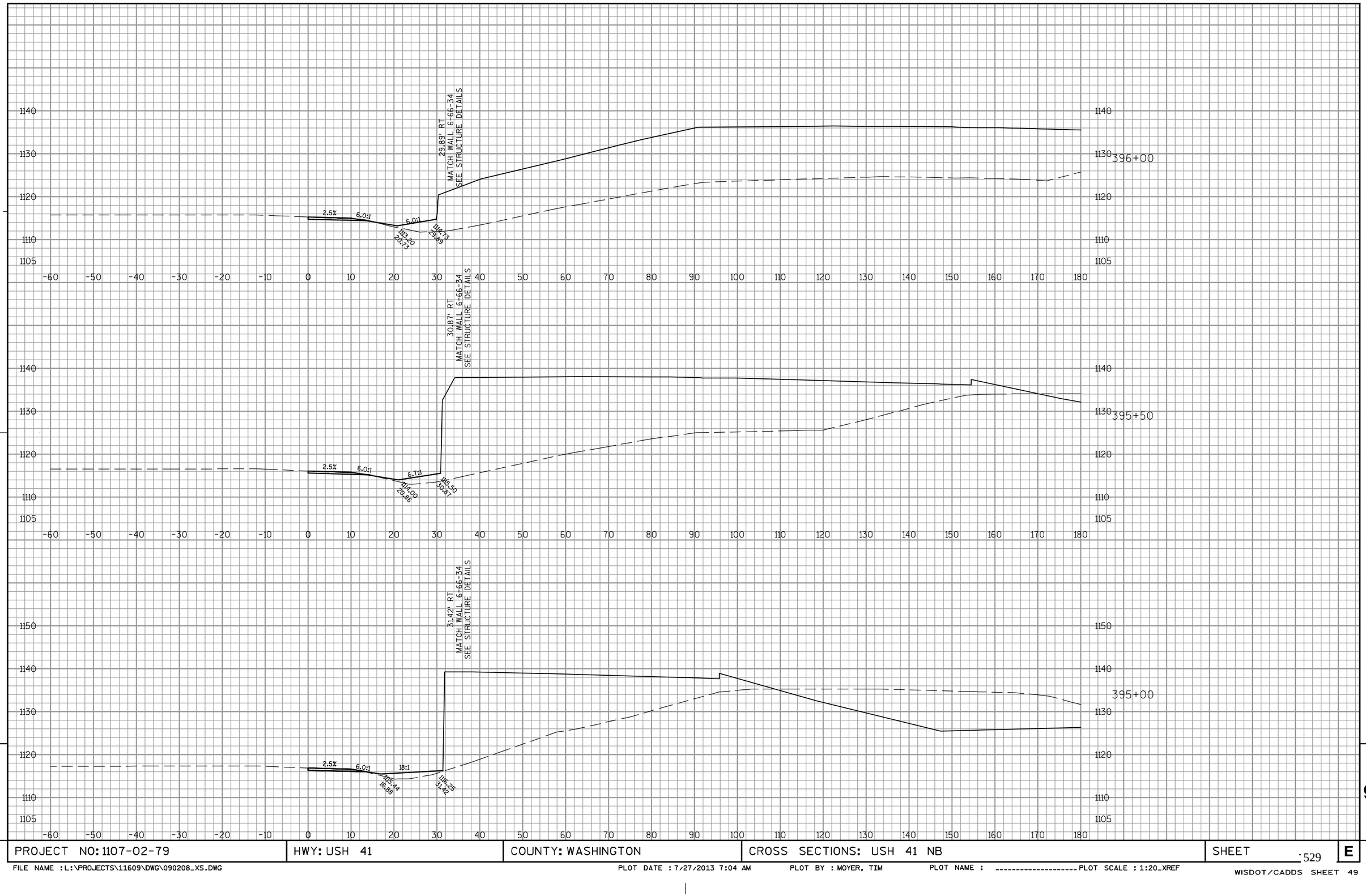
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: USH 41 NB	SHEET 528	E

FILE NAME : L:\PROJECTS\11609\DWG\090208_XS.DWG PLOT DATE : 7/27/2013 7:04 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



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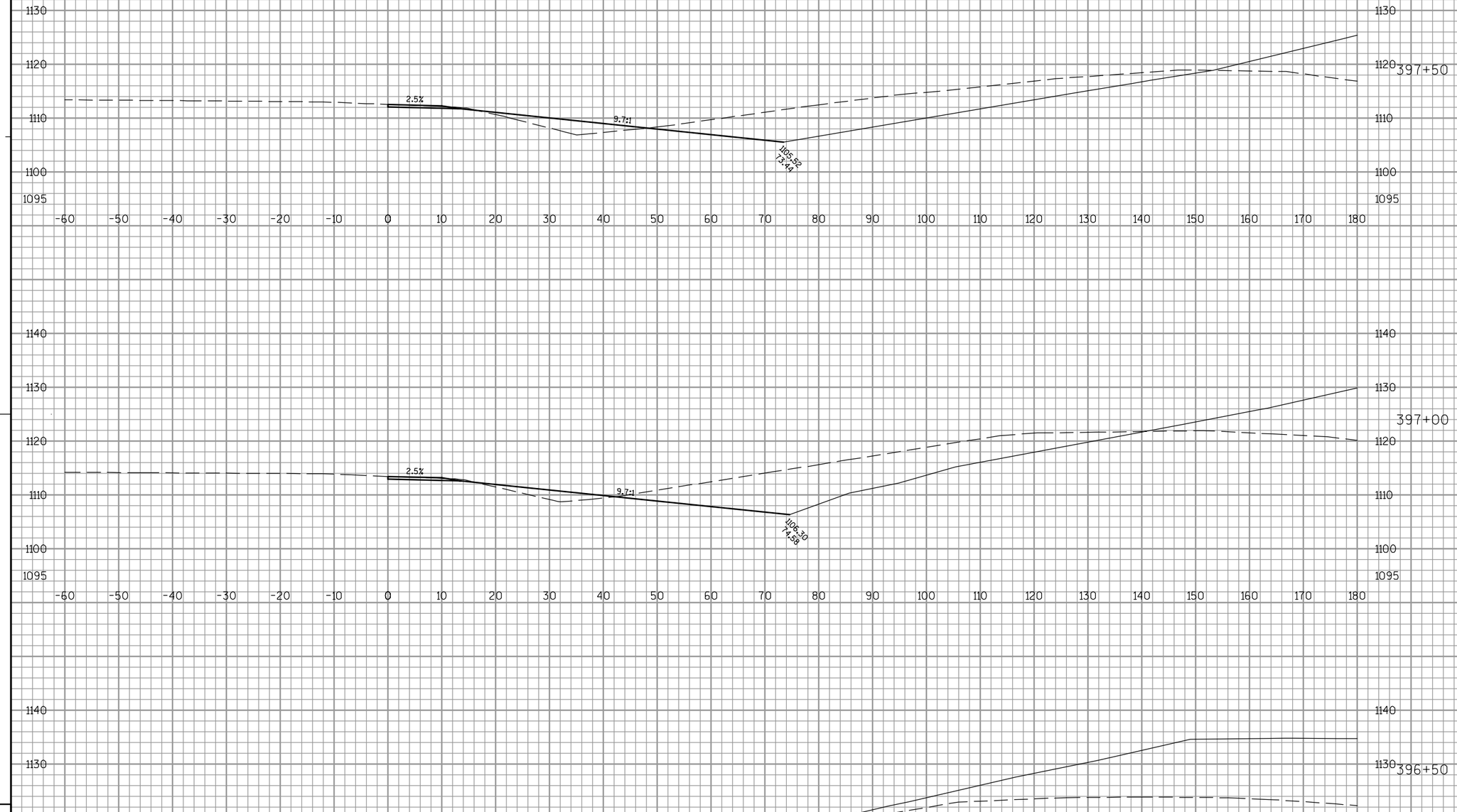
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: USH 41 NB	SHEET	E

FILE NAME :L:\PROJECTS\11609\DWG\090208_XS.DWG PLOT DATE : 7/27/2013 7:04 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

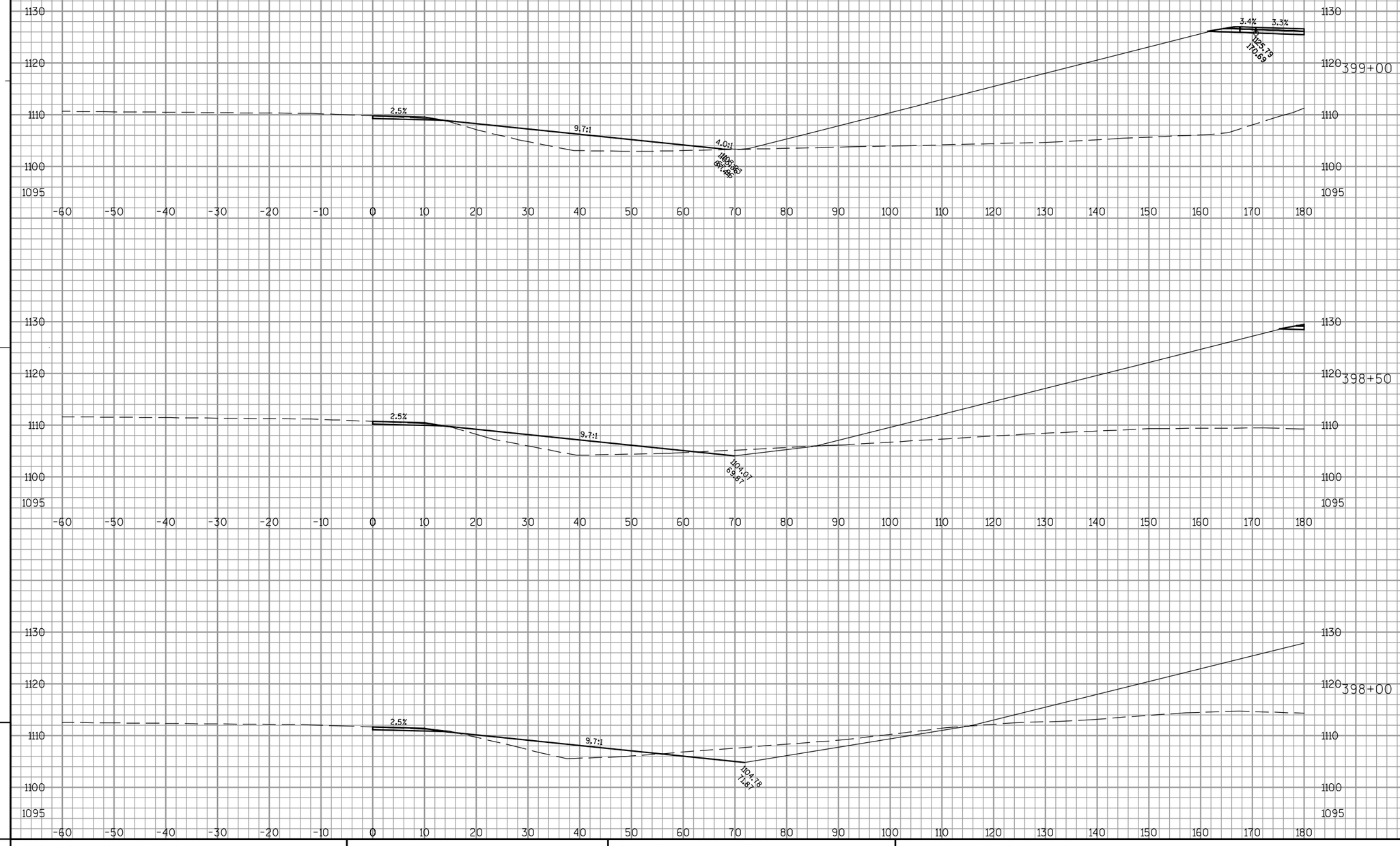
WISDOT/CADDS SHEET 49



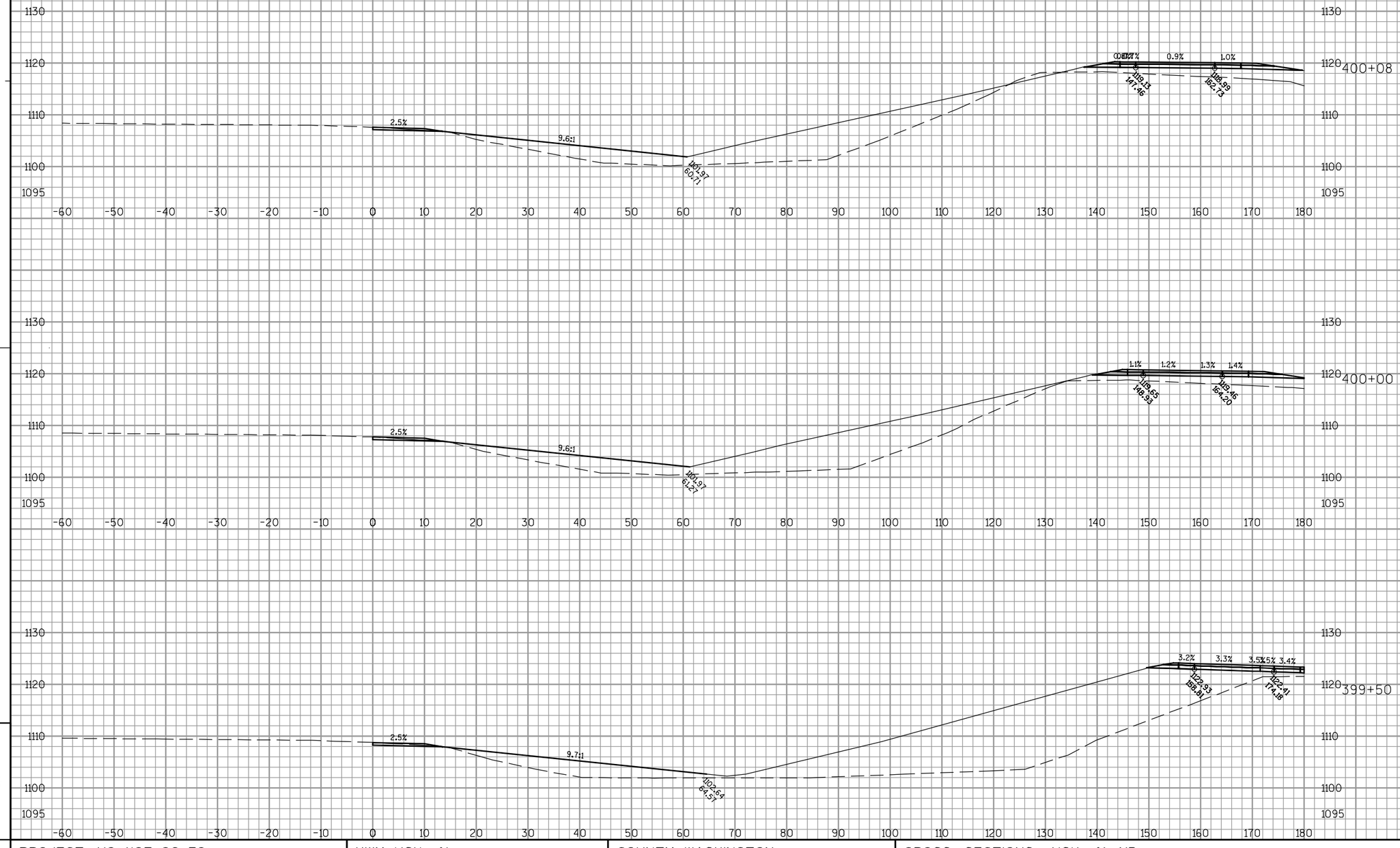
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: USH 41 NB	SHEET 530 E

FILE NAME : L:\PROJECTS\11609\DWG\090208_XS.DWG PLOT DATE : 7/27/2013 7:04 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



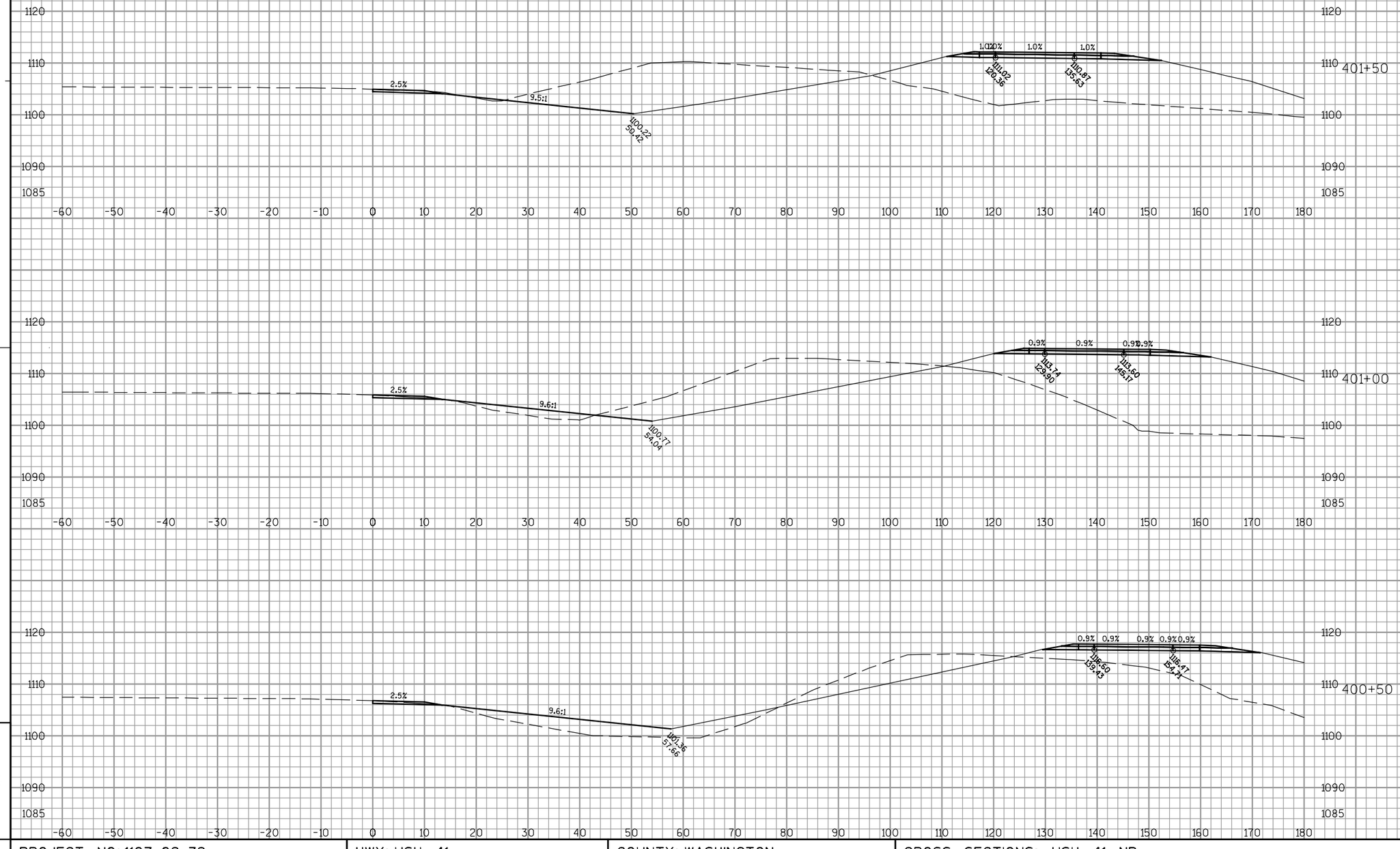
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: USH 41 NB	SHEET 531	E



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: USH 41 NB	SHEET 532	E

FILE NAME : L:\PROJECTS\11609\DWG\090208_XS.DWG PLOT DATE : 7/27/2013 7:04 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



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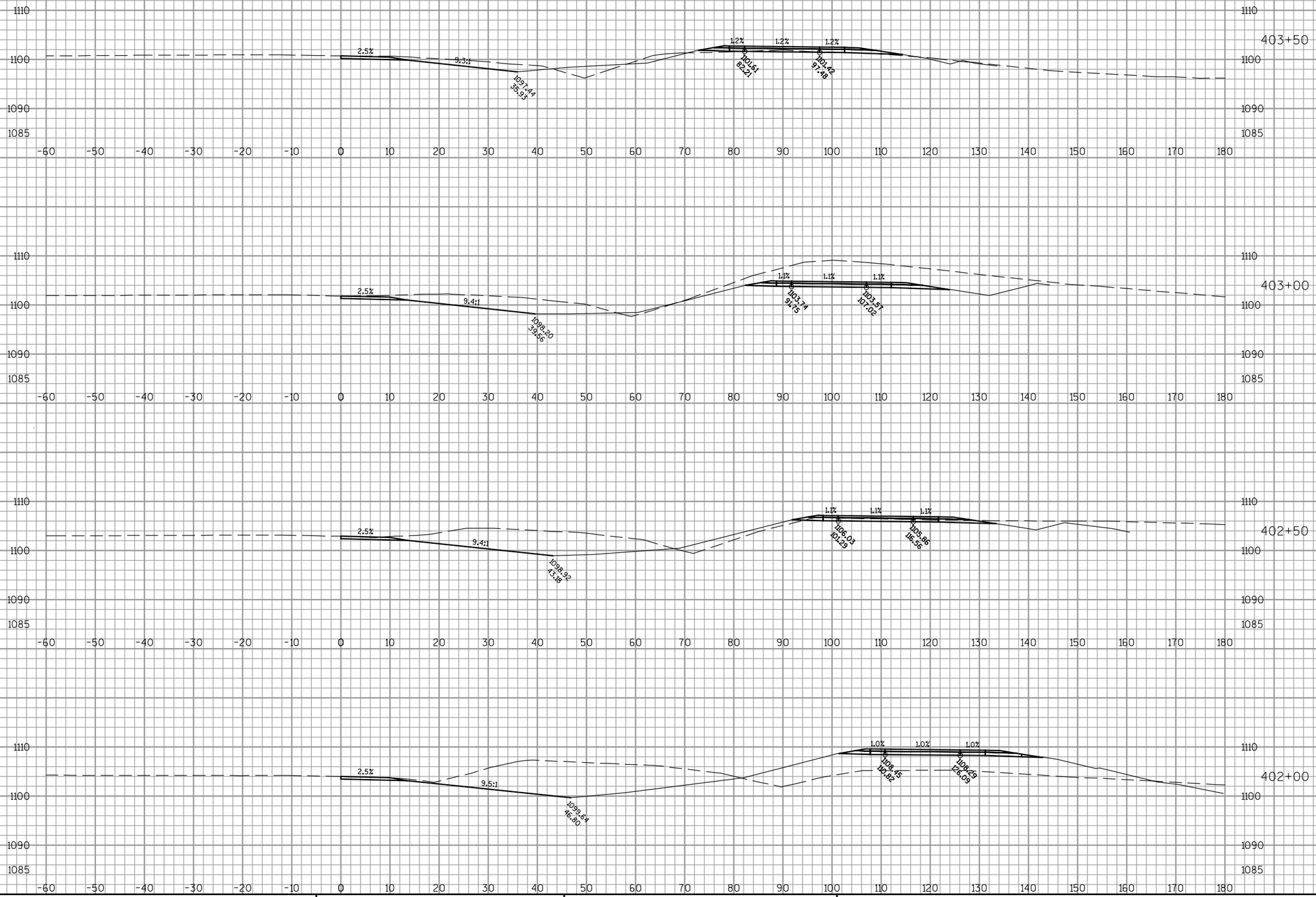
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: USH 41 NB	SHEET 533	E

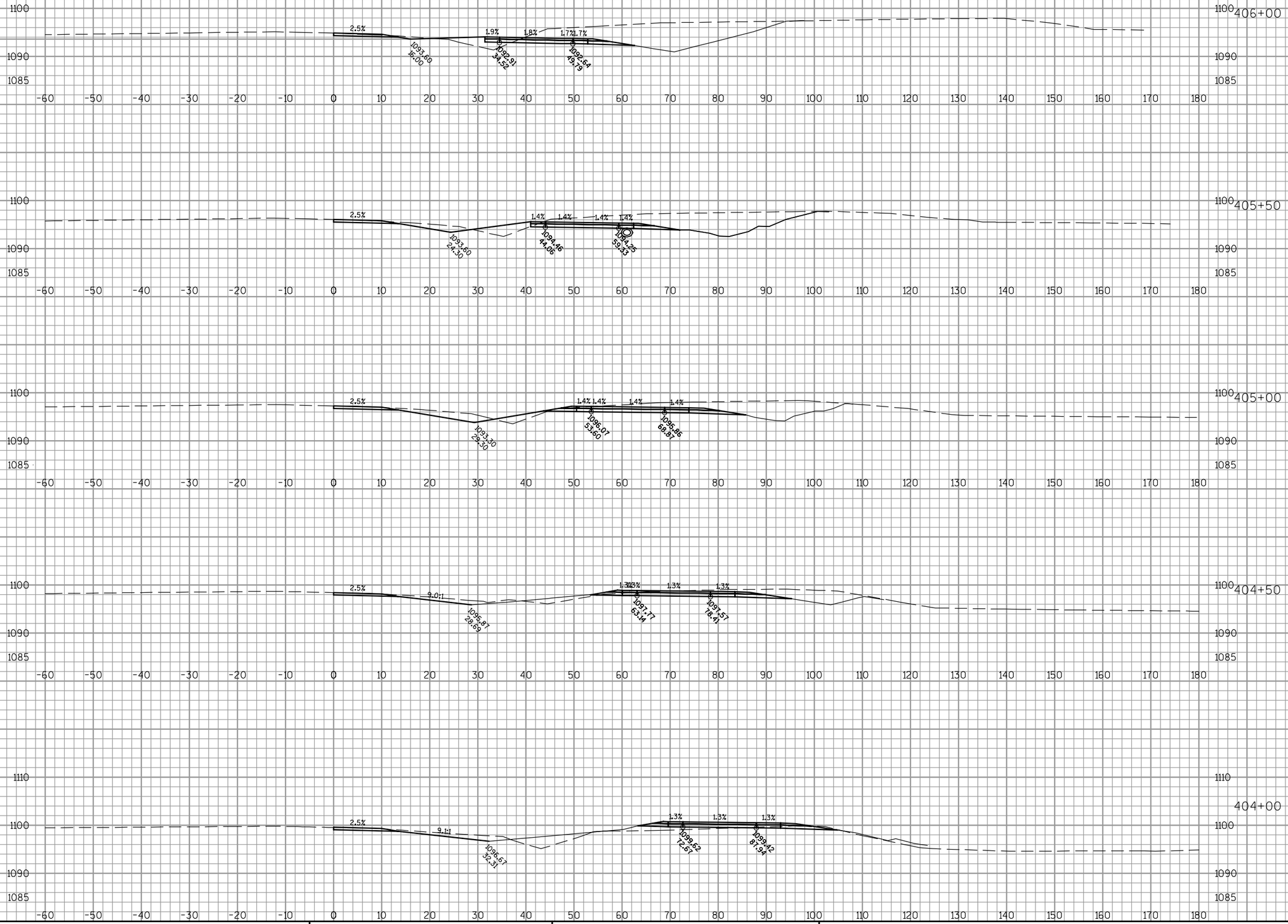
FILE NAME : L:\PROJECTS\11609\DWG\090208_XS.DWG PLOT DATE : 7/27/2013 7:04 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: USH 41 NB	SHEET	E

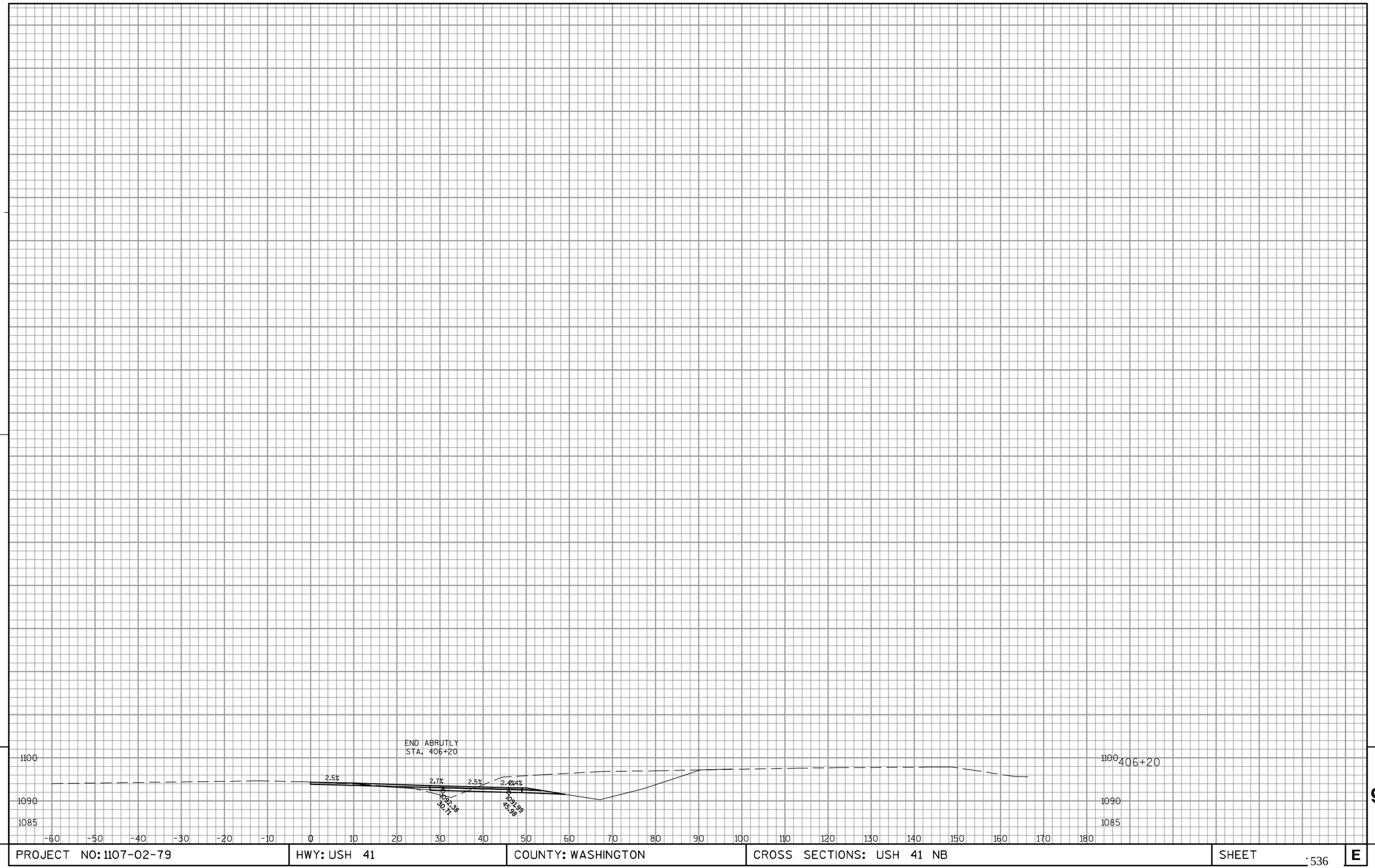
FILE NAME : L:\PROJECTS\11609\DWG\090208_XS.DWG PLOT DATE : 7/27/2013 7:04 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF



9	PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: USH 41 NB	SHEET 535 E

FILE NAME : L:\PROJECTS\11609\DWG\090208_XS.DWG PLOT DATE : 7/27/2013 7:04 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



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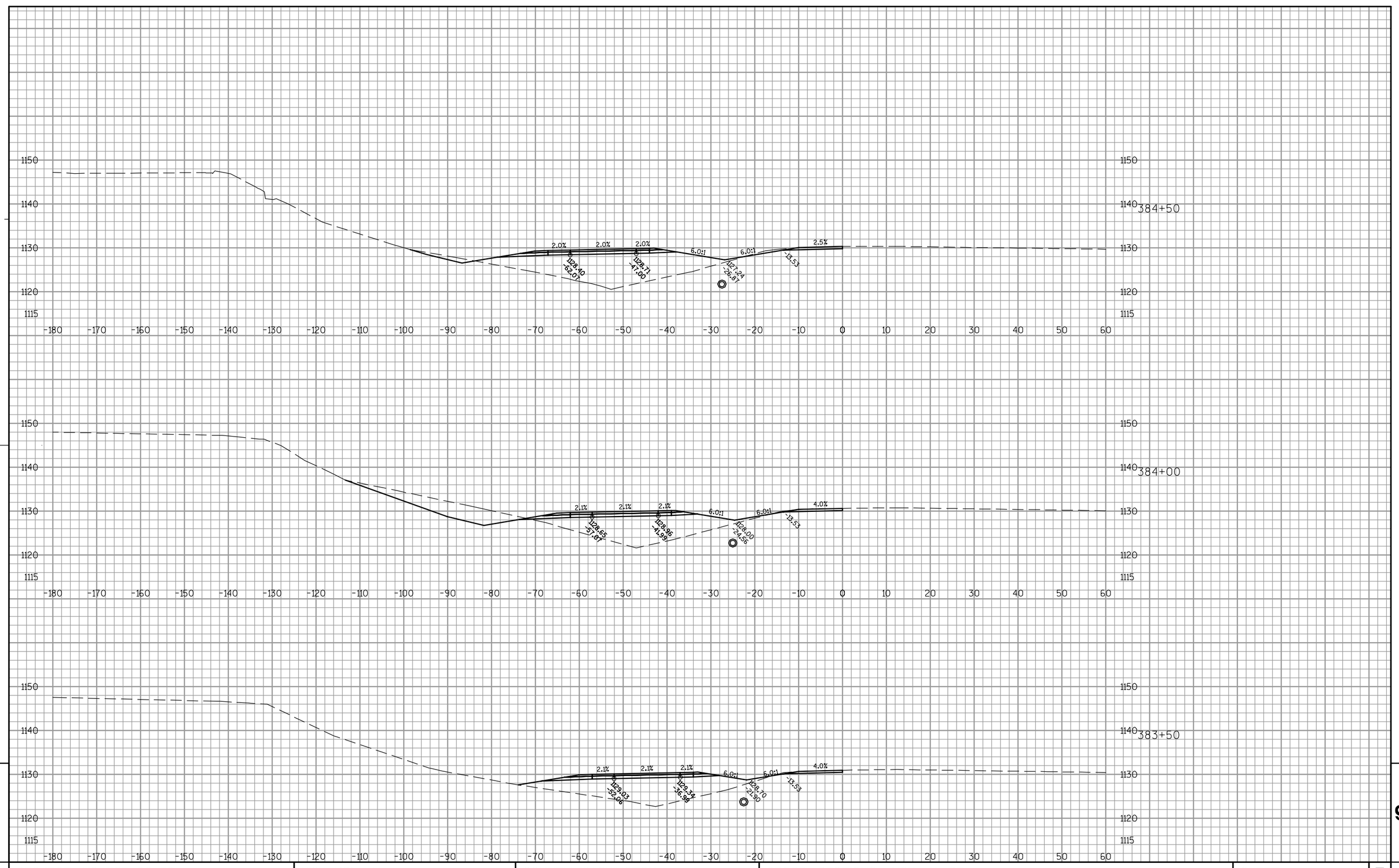
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: USH 41 NB	SHEET	E

FILE NAME :L:\PROJECTS\11609\DWG\090208_XS.DWG PLOT DATE : 7/27/2013 7:04 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: USH 41 SB	SHEET 537	E

FILE NAME : L:\PROJECTS\11609\DWG\090209_XS.DWG PLOT DATE : 7/27/2013 7:07 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

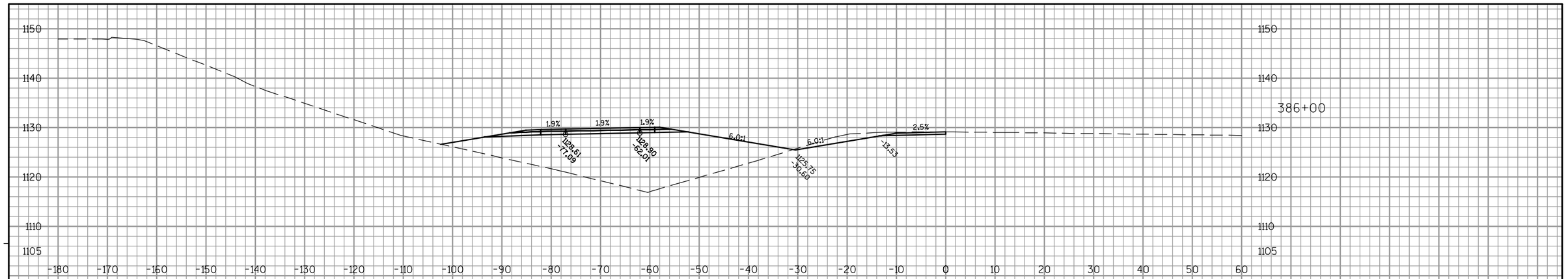
WISDOT/CADDS SHEET 49

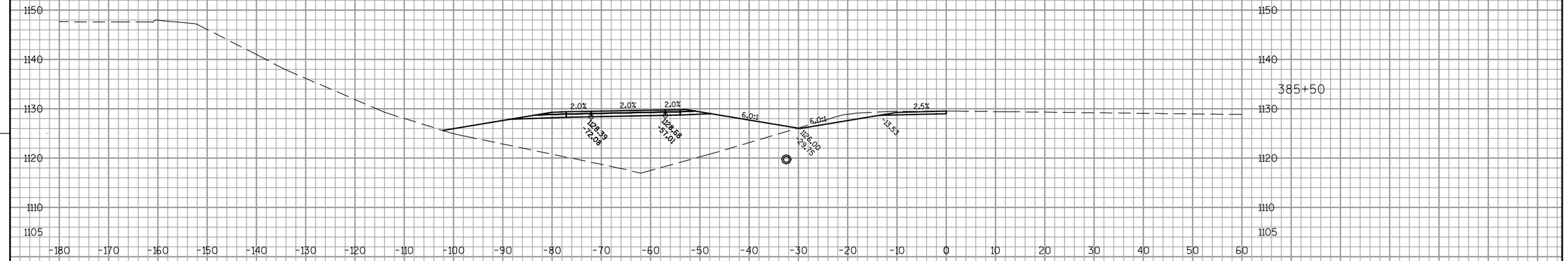


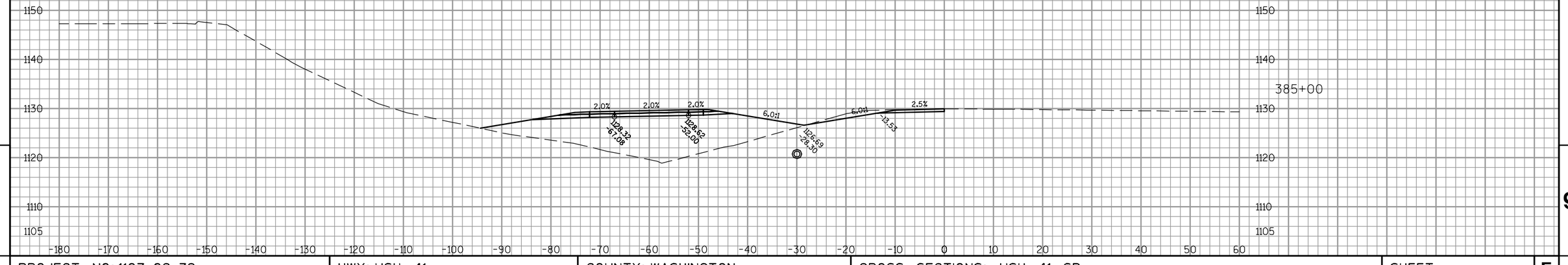
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: USH 41 SB	SHEET 538	E

FILE NAME : L:\PROJECTS\11609\DWG\090209_XS.DWG PLOT DATE : 7/27/2013 7:07 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49







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PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: USH 41 SB	SHEET 539	E

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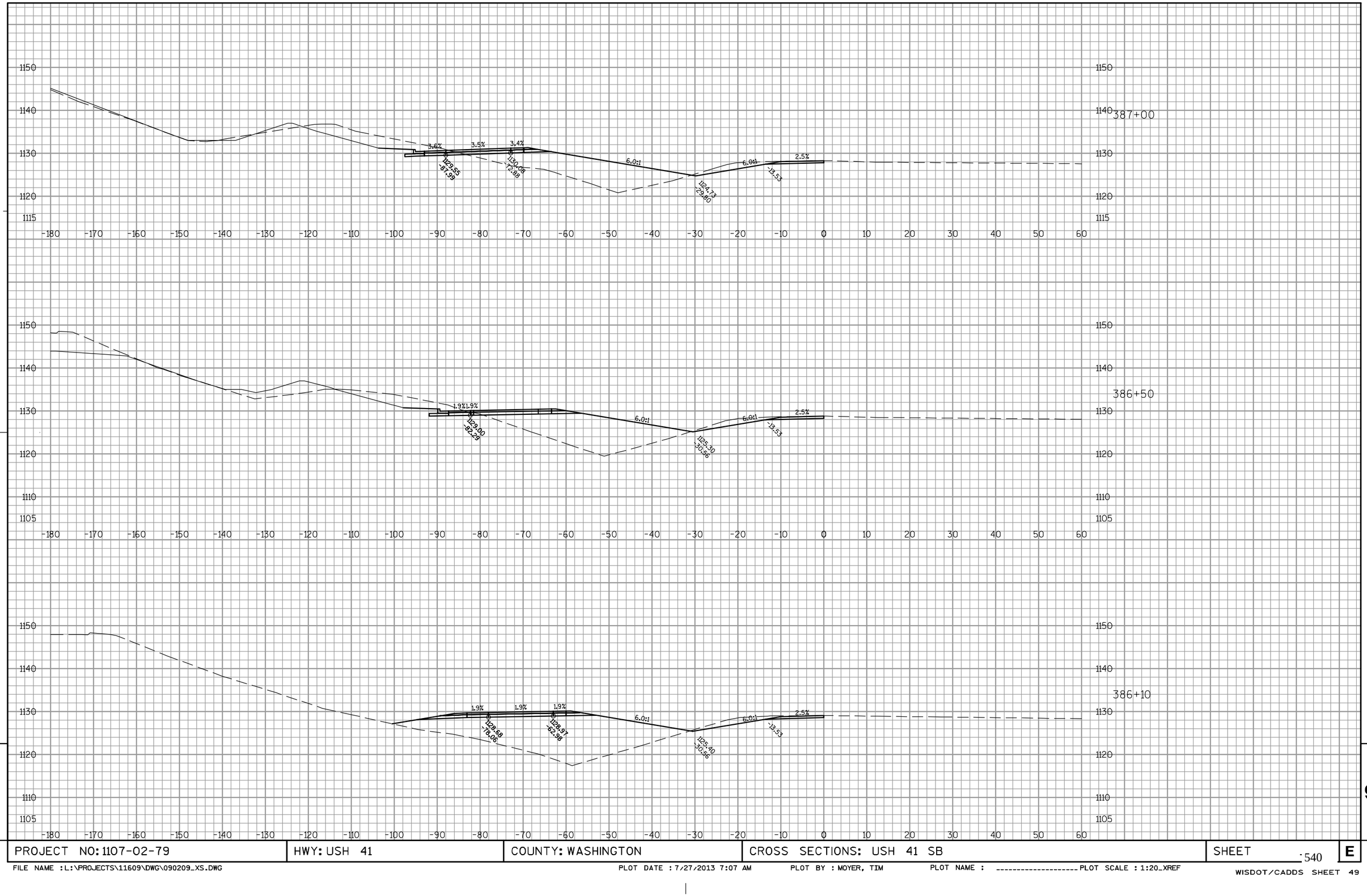
WISDOT/CADDS SHEET 49



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PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: USH 41 SB	SHEET	E

FILE NAME : L:\PROJECTS\11609\DWG\090209_XS.DWG PLOT DATE : 7/27/2013 7:07 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

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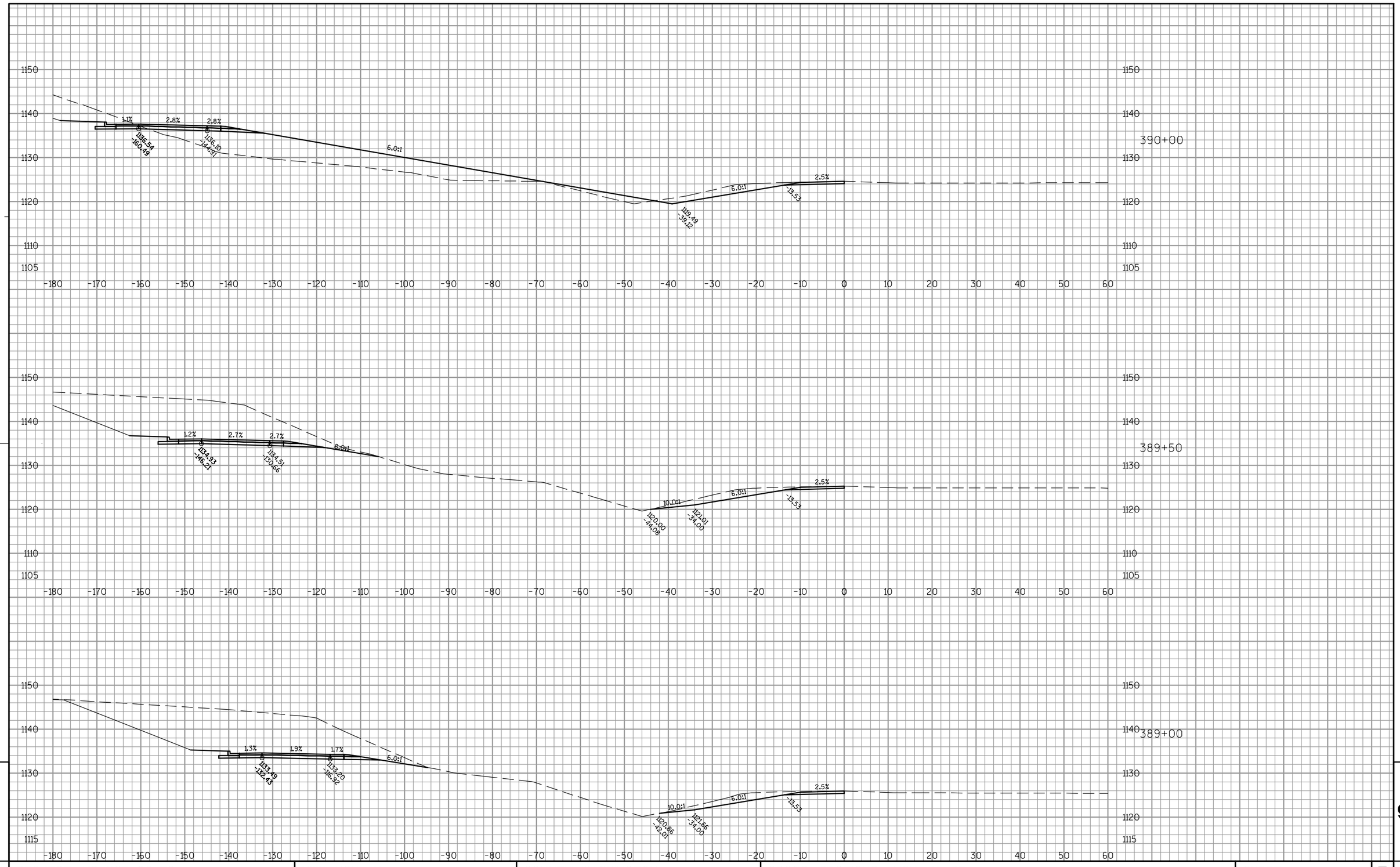
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: USH 41 SB	SHEET 541	E

FILE NAME : L:\PROJECTS\11609\DWG\090209_XS.DWG PLOT DATE : 7/27/2013 7:07 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: USH 41 SB	SHEET 542 E

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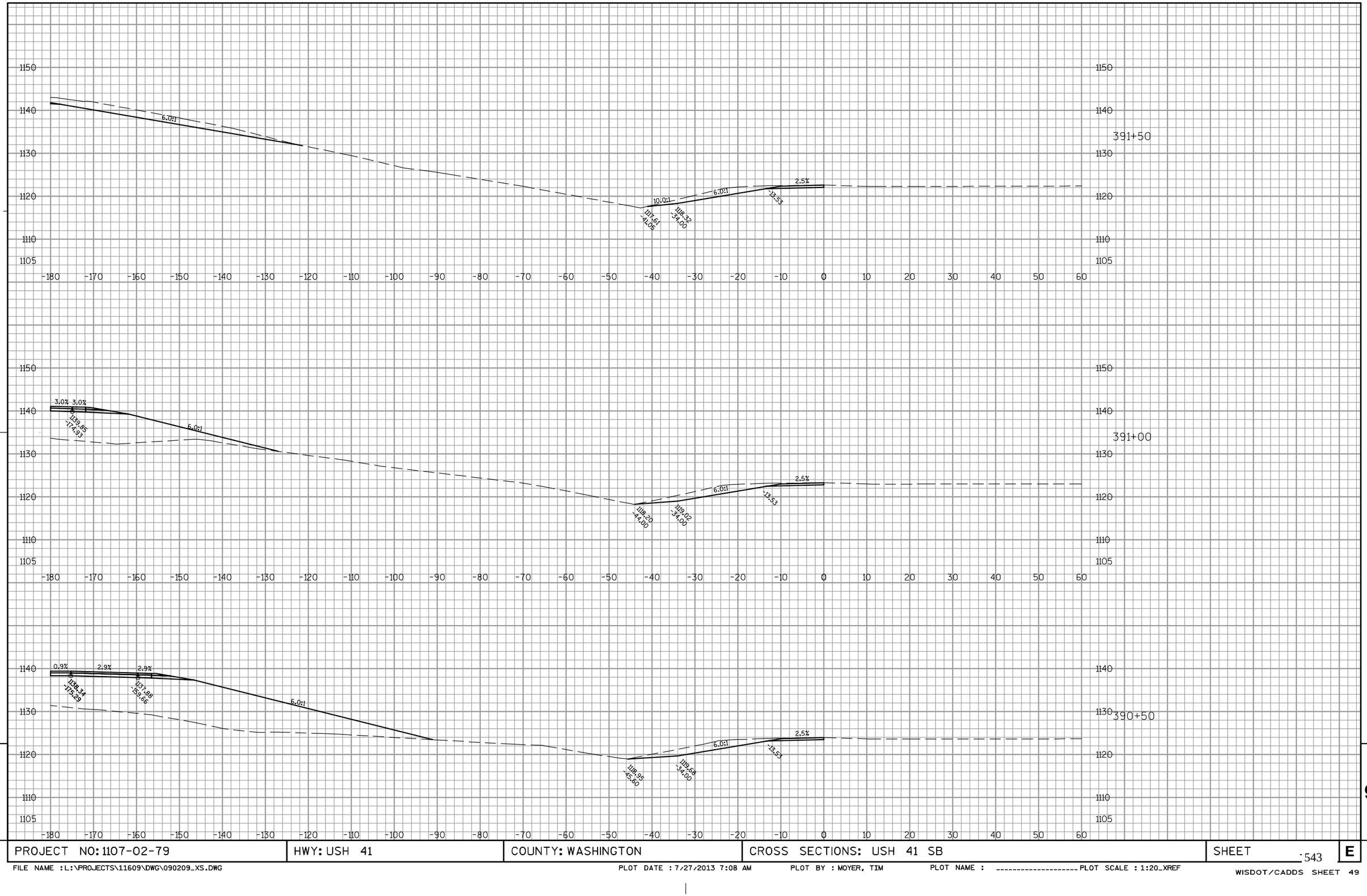
WISDOT/CADDS SHEET 49



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PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: USH 41 SB	SHEET	E

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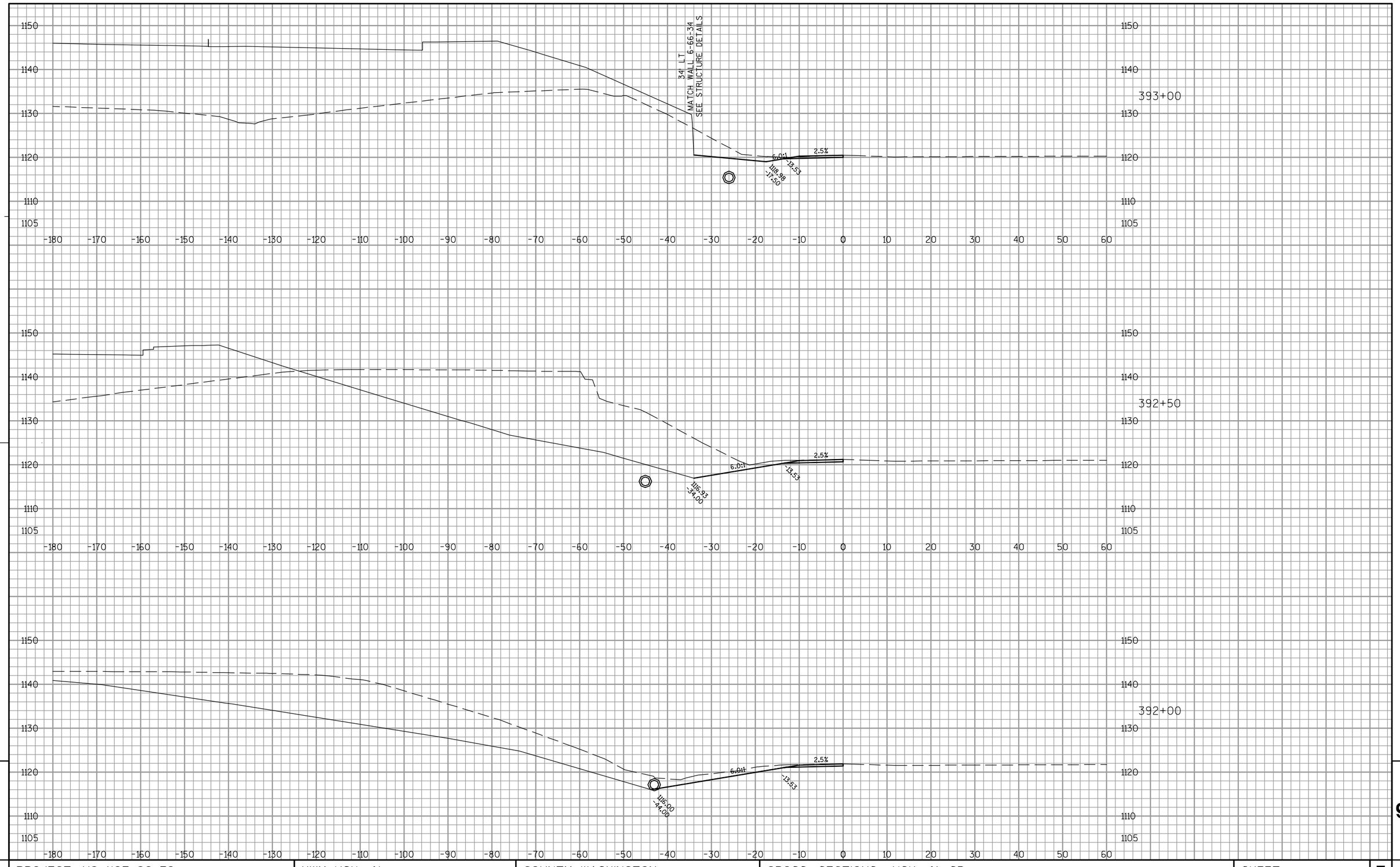
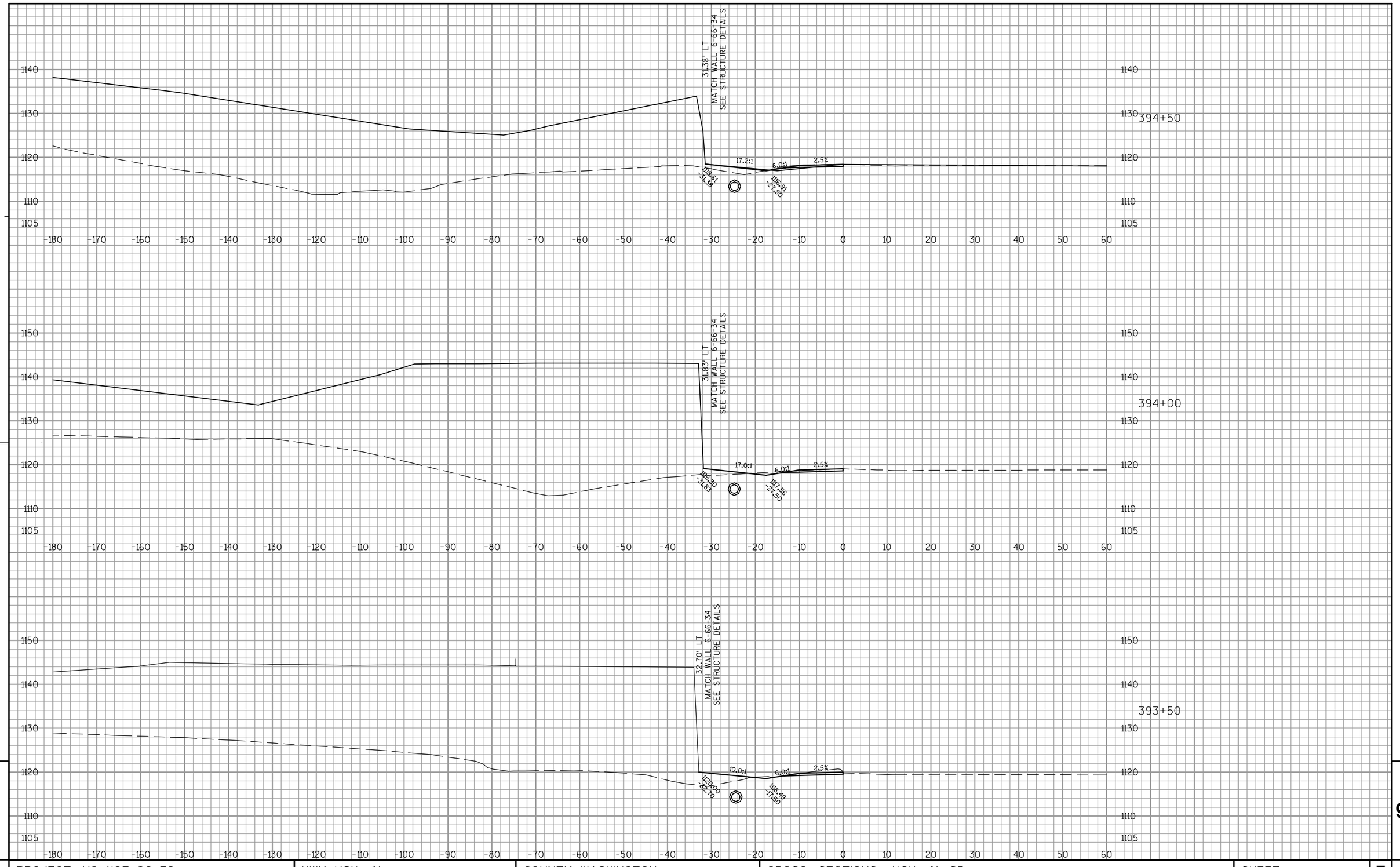


PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: USH 41 SB	SHEET 544	E

FILE NAME : L:\PROJECTS\11609\DWG\090209_XS.DWG PLOT DATE : 7/27/2013 7:08 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: USH 41 SB	SHEET 545 E

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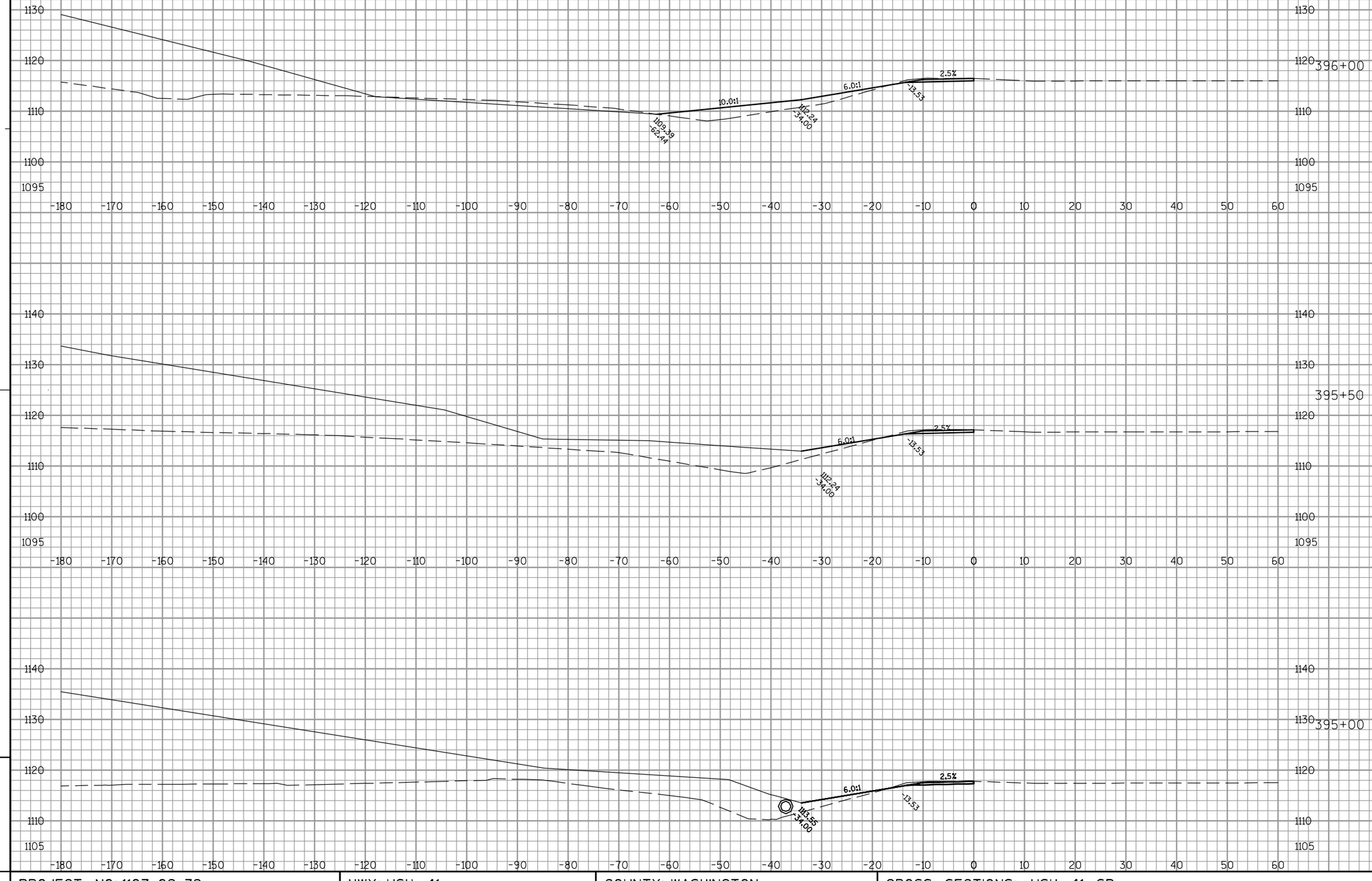
WISDOT/CADDS SHEET 49



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PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: USH 41 SB	SHEET 546	E

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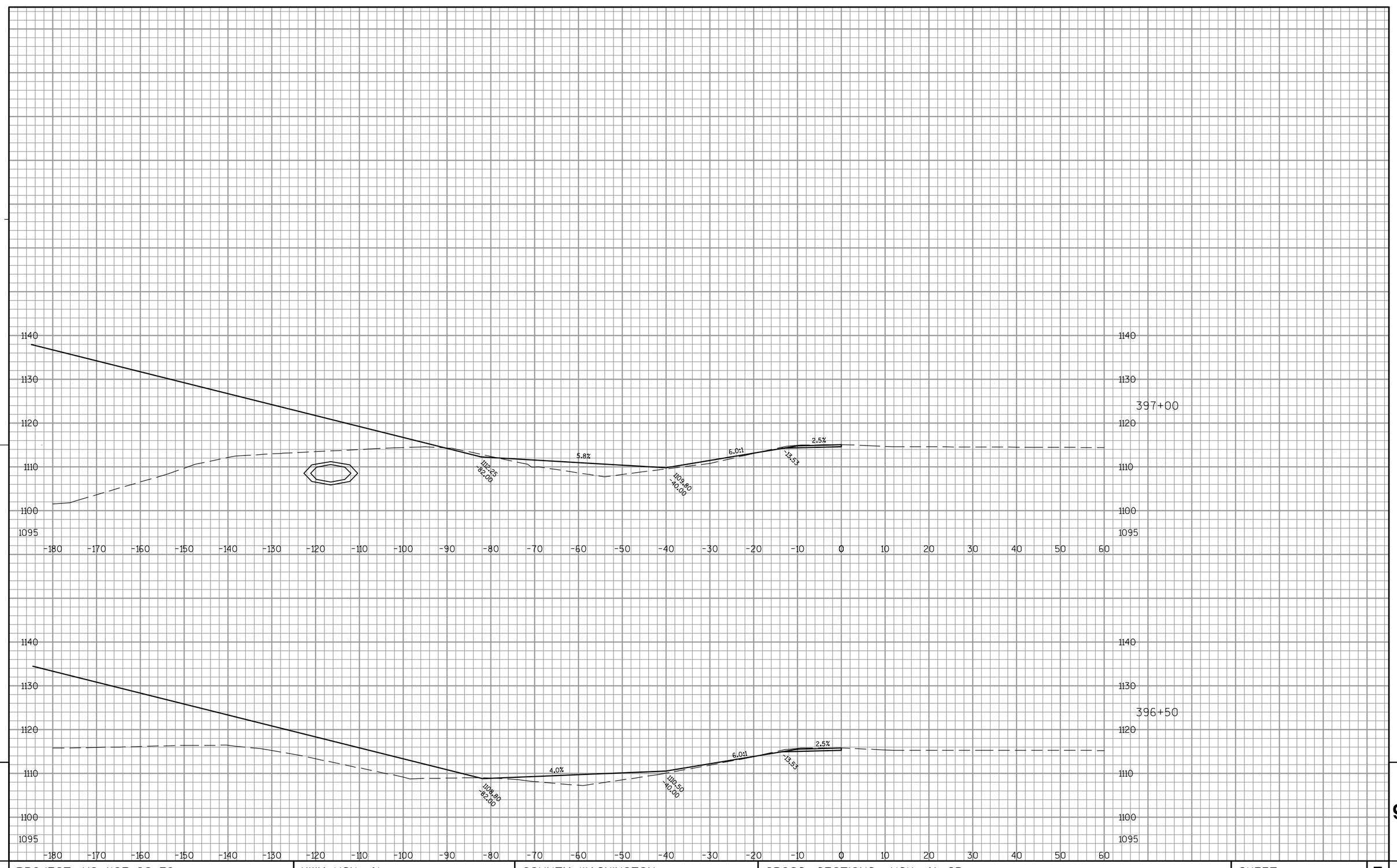
WISDOT/CADDS SHEET 49



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PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: USH 41 SB	SHEET 547	E

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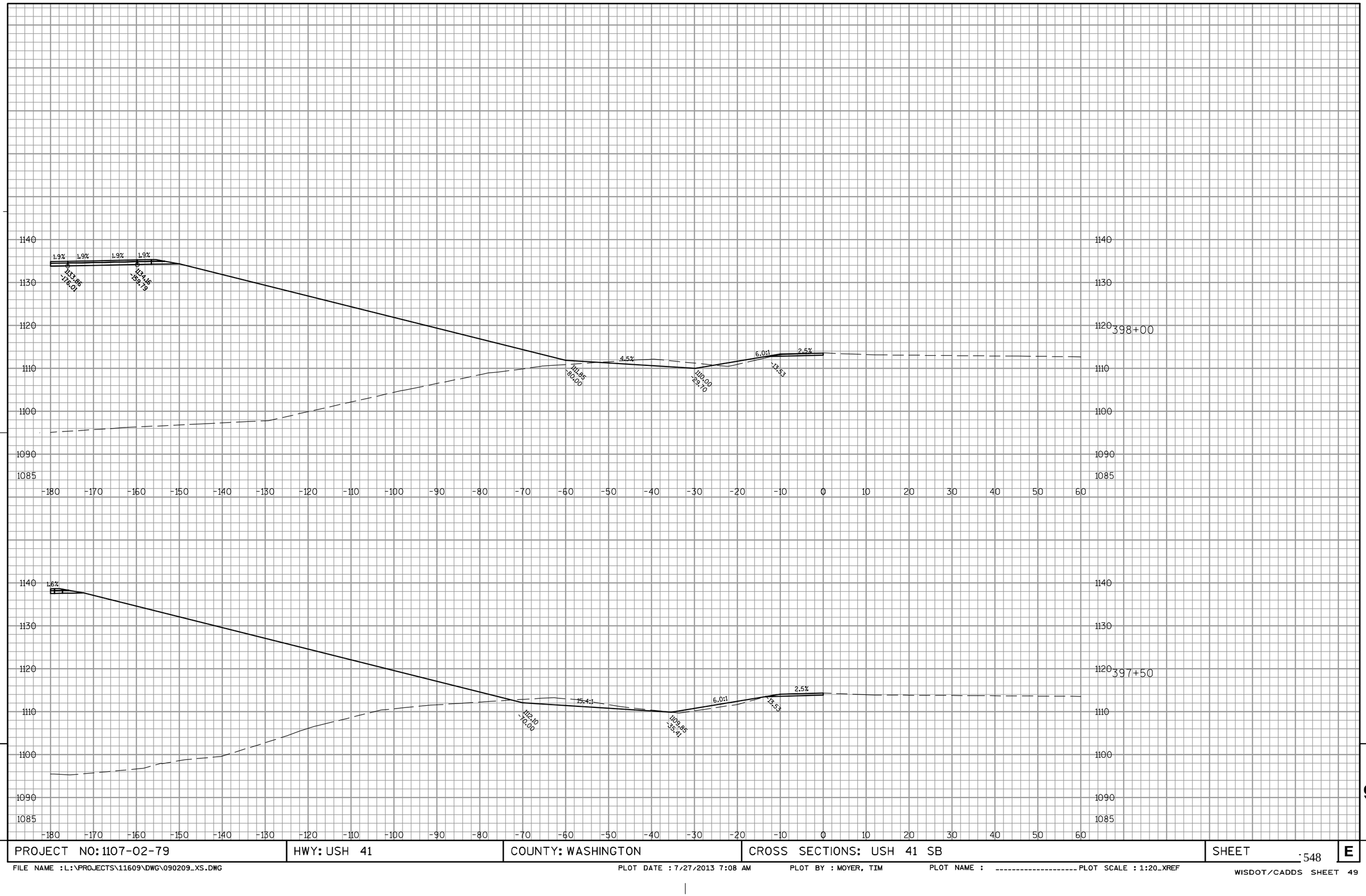
WISDOT/CADDS SHEET 49



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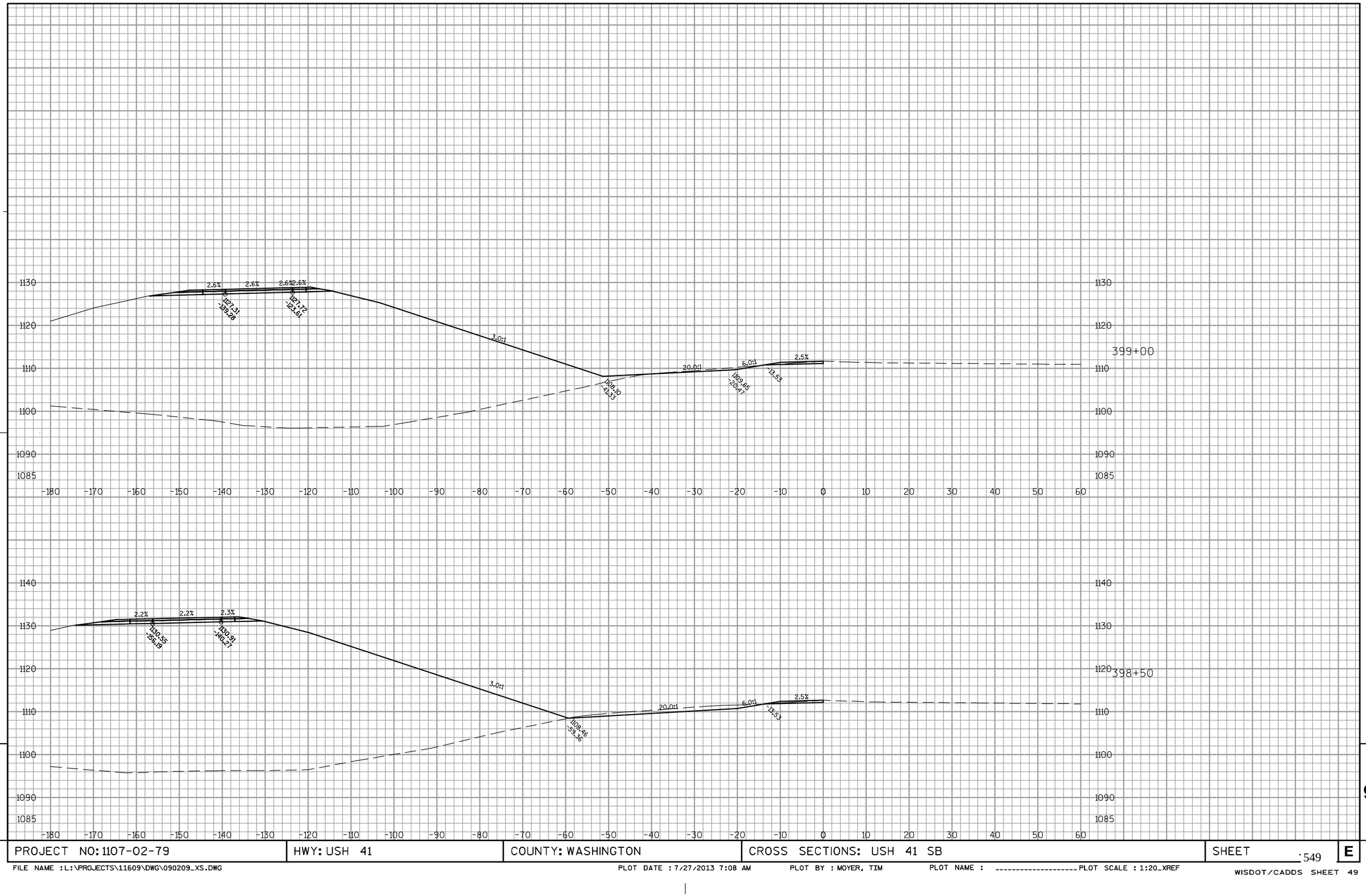
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: USH 41 SB	SHEET	E

FILE NAME : L:\PROJECTS\11609\DWG\090209_XS.DWG PLOT DATE : 7/27/2013 7:08 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



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PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: USH 41 SB	SHEET 549	E

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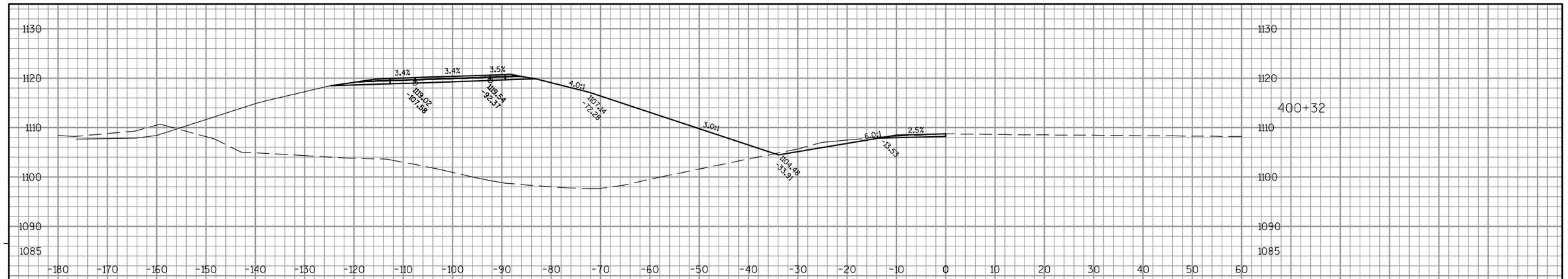
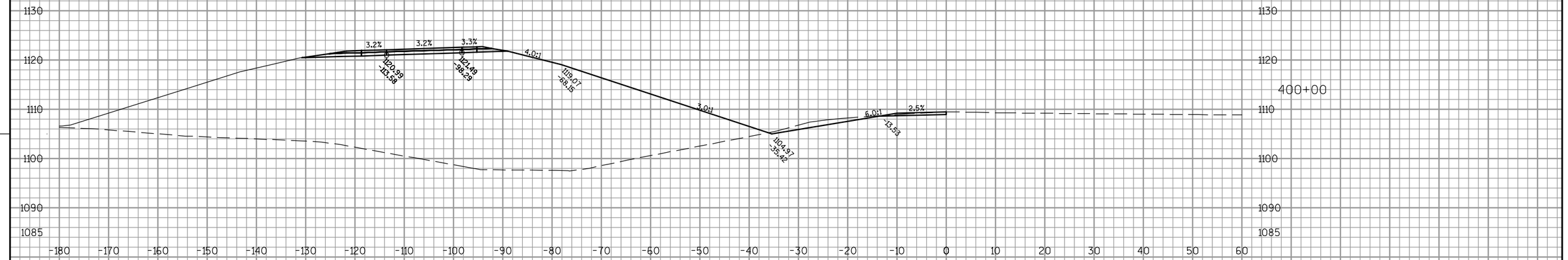
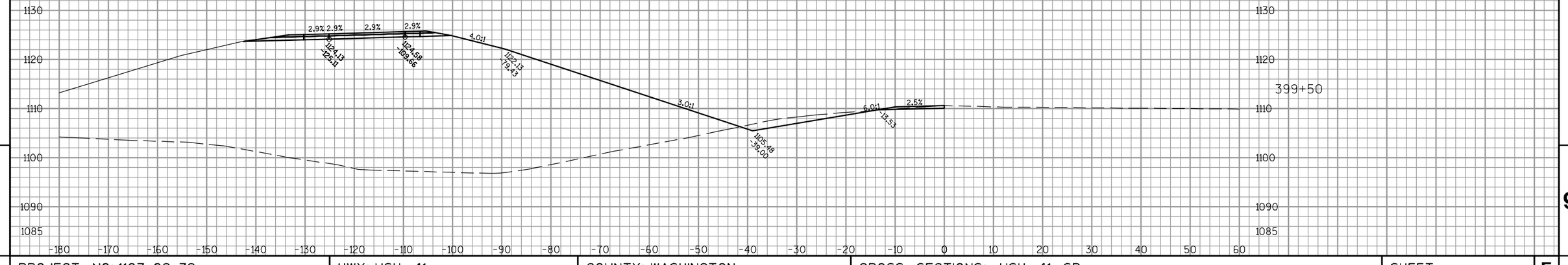
WISDOT/CADDS SHEET 49







PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: USH 41 SB	SHEET 550	E

FILE NAME : L:\PROJECTS\11609\DWG\090209_XS.DWG PLOT DATE : 7/27/2013 7:08 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49

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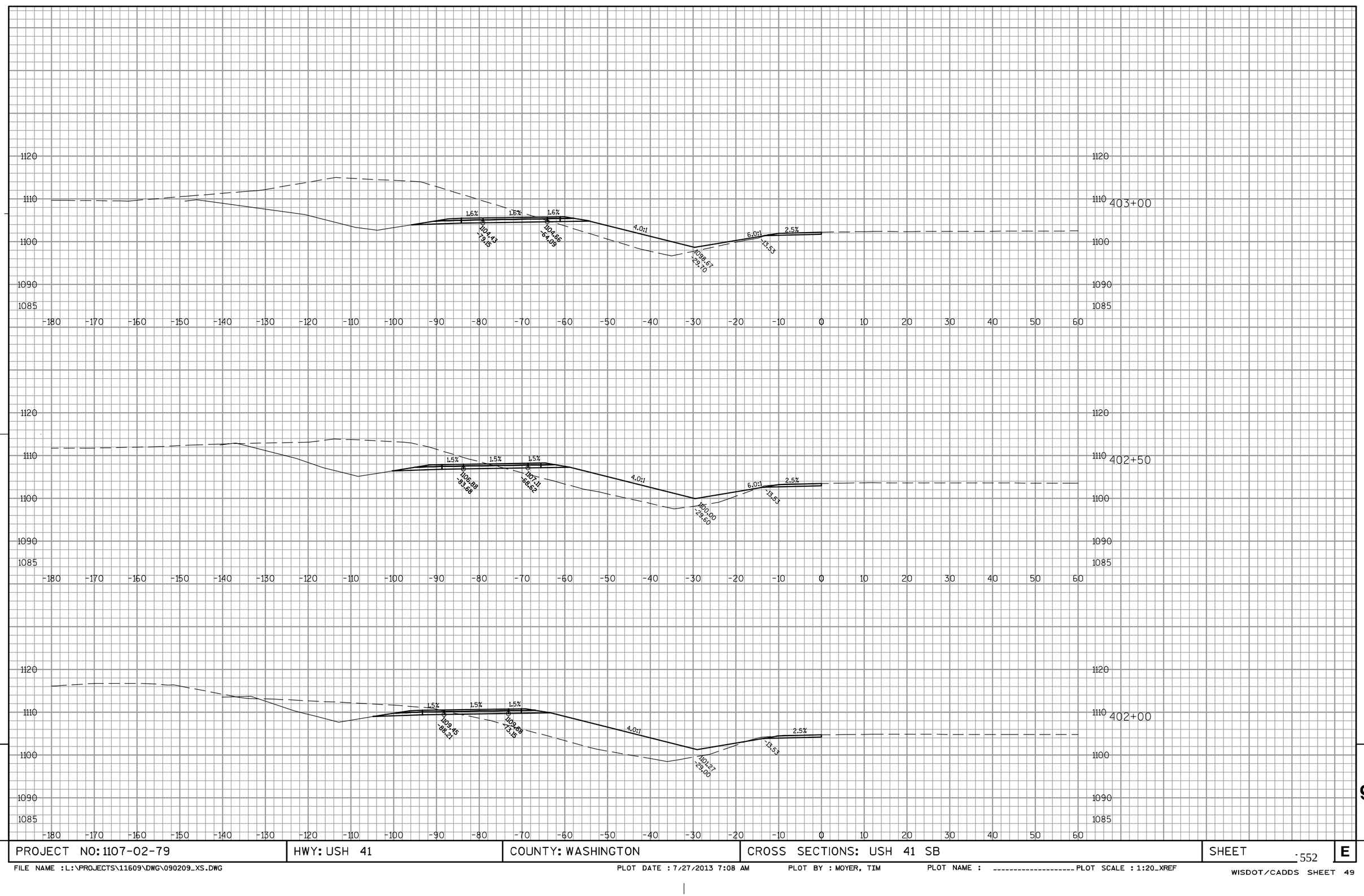
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: USH 41 SB	SHEET	E

FILE NAME : L:\PROJECTS\11609\DWG\090209_XS.DWG PLOT DATE : 7/27/2013 7:08 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



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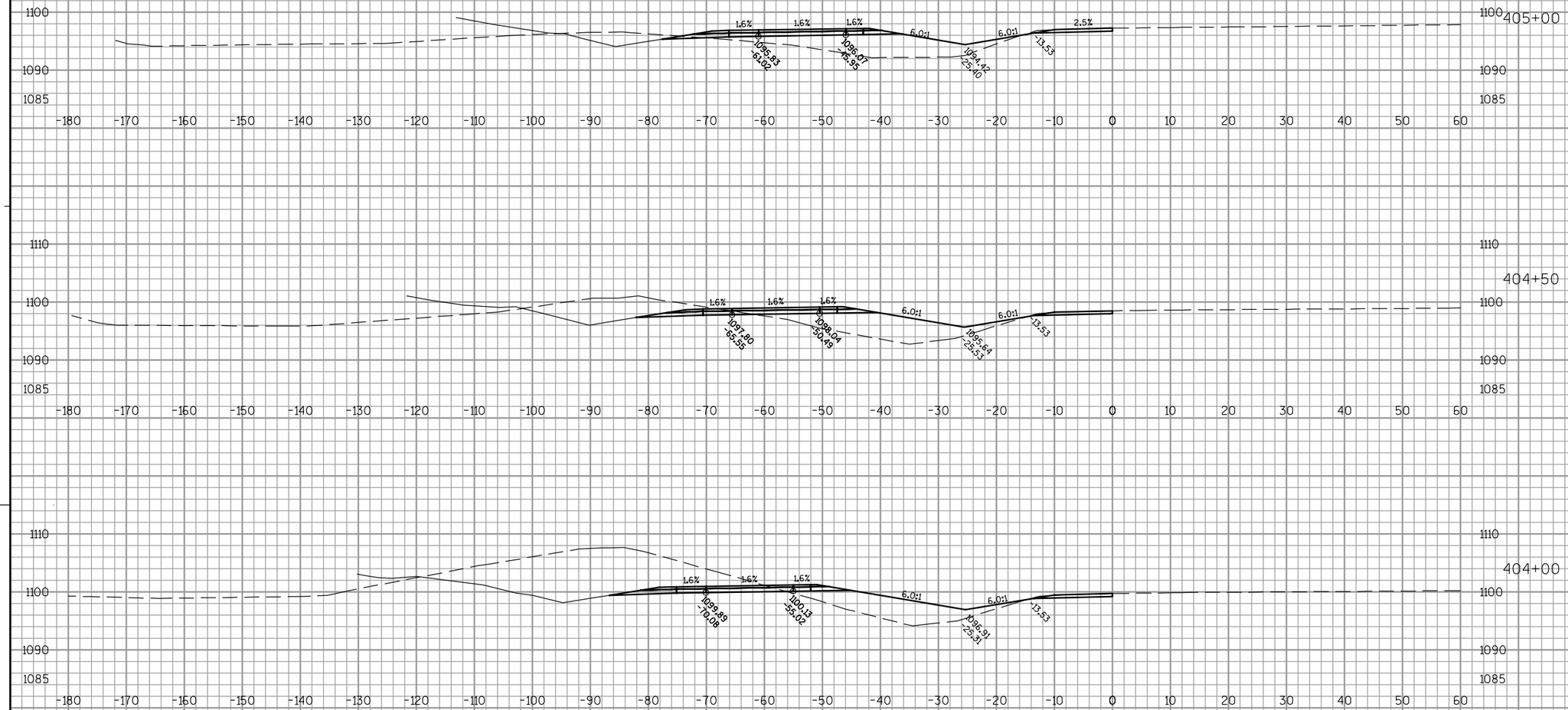
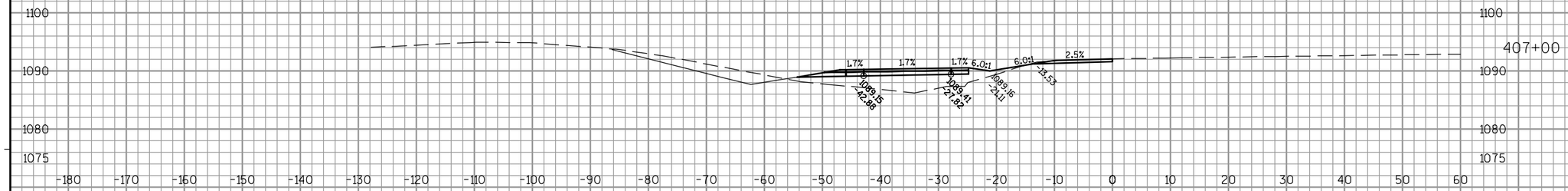
WISDOT/CADDS SHEET 49

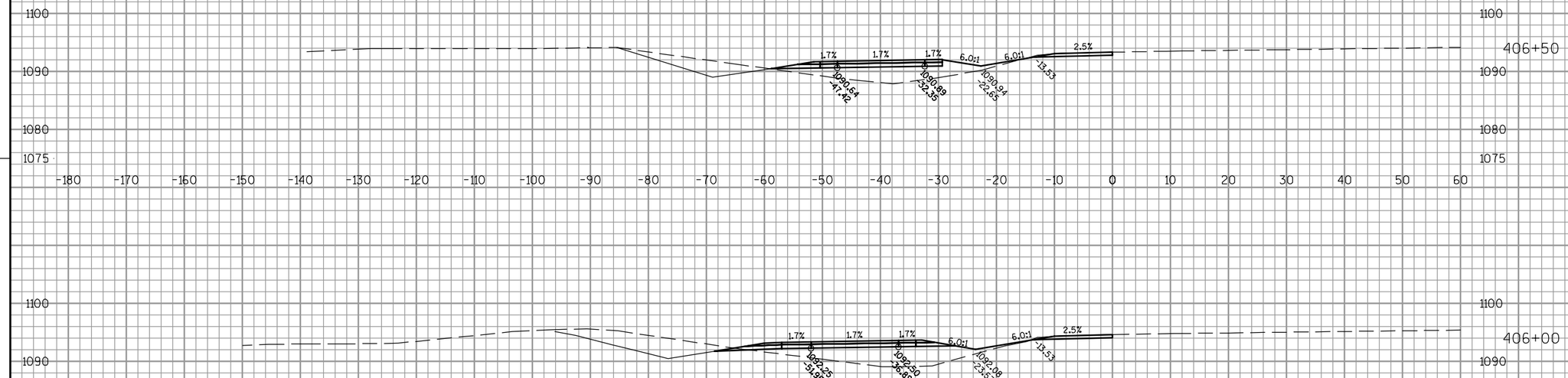


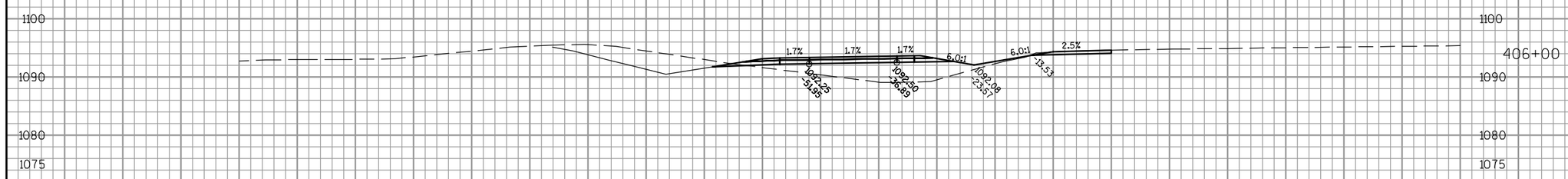
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: USH 41 SB	SHEET 553 E

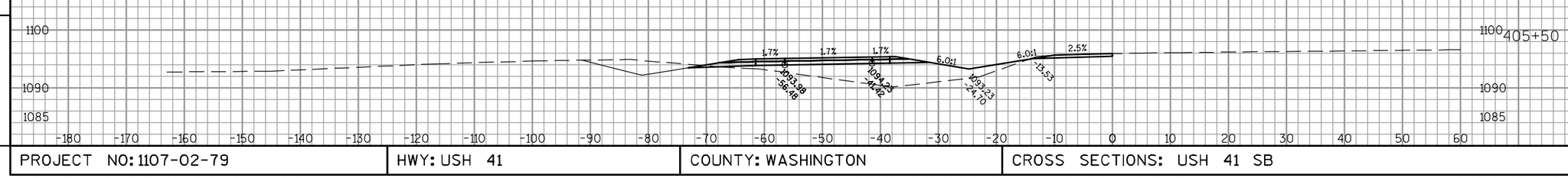
FILE NAME : L:\PROJECTS\11609\DWG\090209_XS.DWG PLOT DATE : 7/27/2013 7:09 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49









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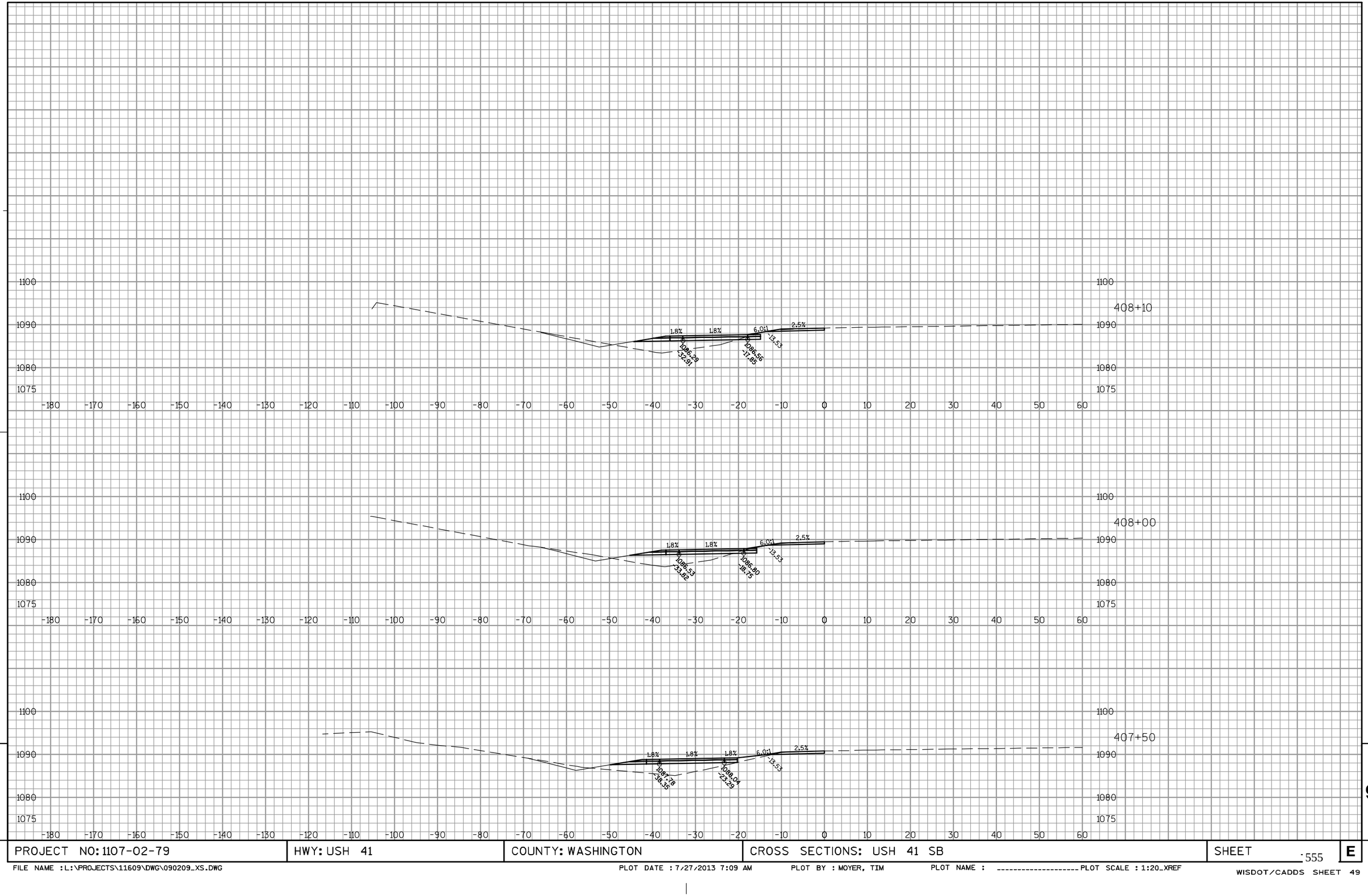
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: USH 41 SB	SHEET	E

FILE NAME : L:\PROJECTS\11609\DWG\090209_XS.DWG PLOT DATE : 7/27/2013 7:09 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

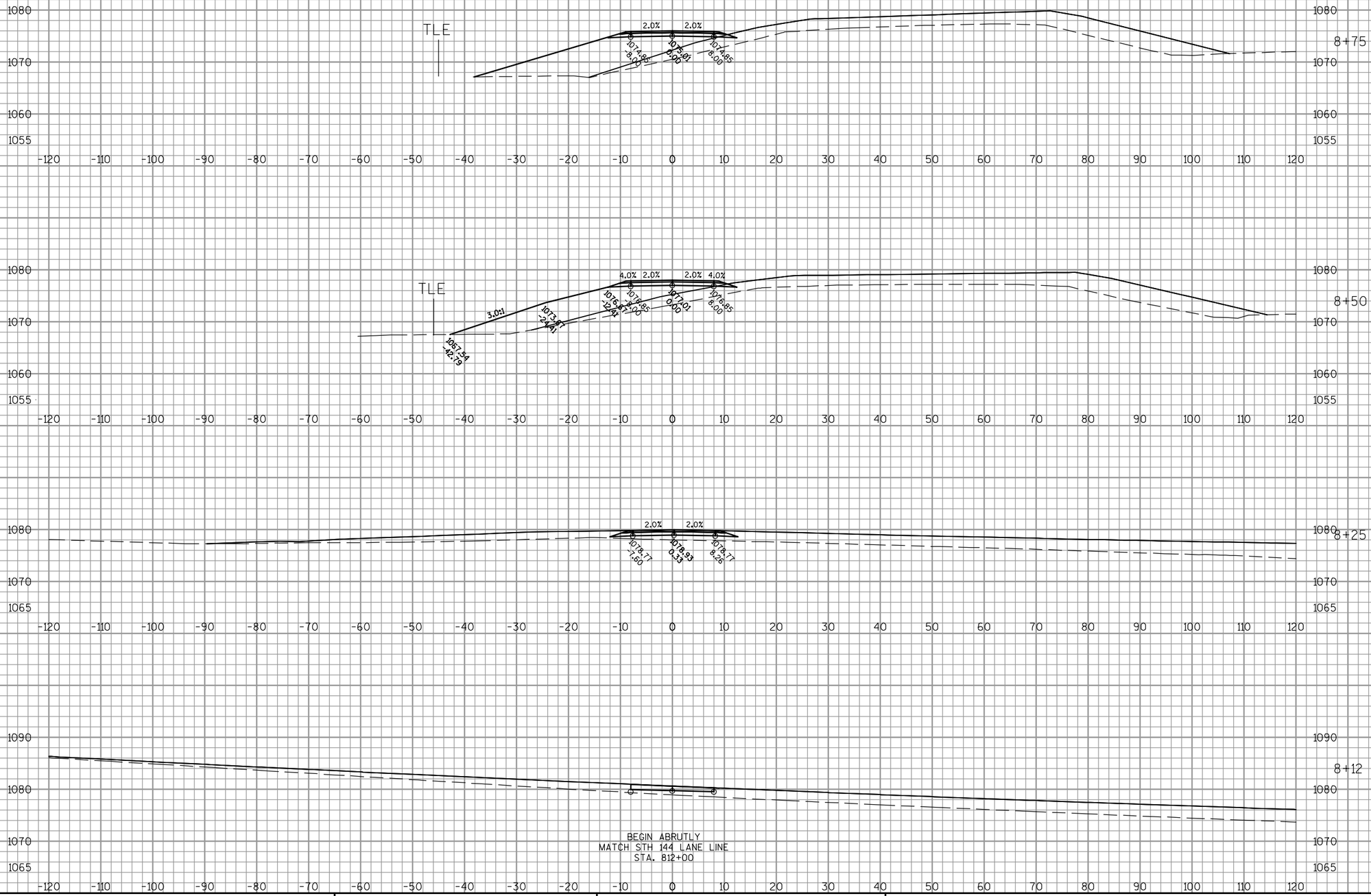
WISDOT/CADDS SHEET 49



PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: USH 41 SB	SHEET 555	E

FILE NAME : L:\PROJECTS\11609\DWG\090209_XS.DWG PLOT DATE : 7/27/2013 7:09 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

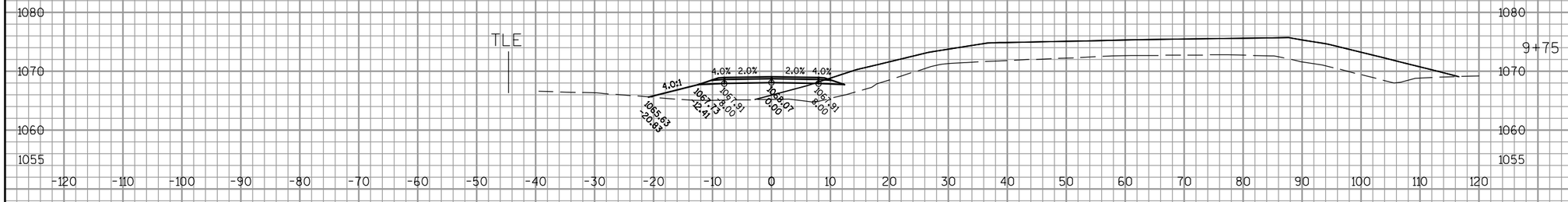
WISDOT/CADDS SHEET 49

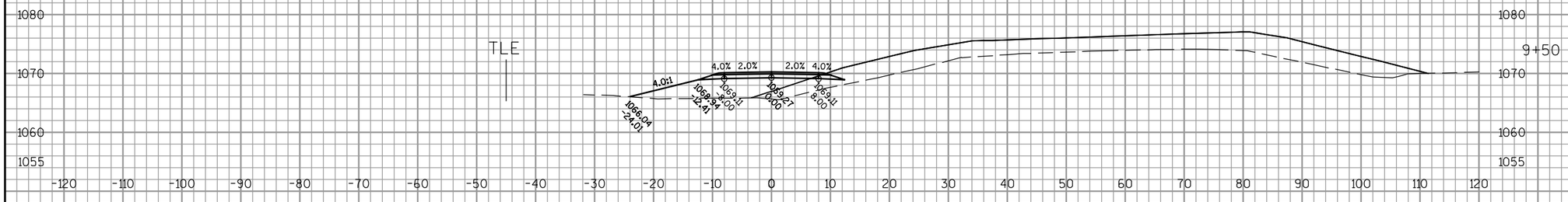


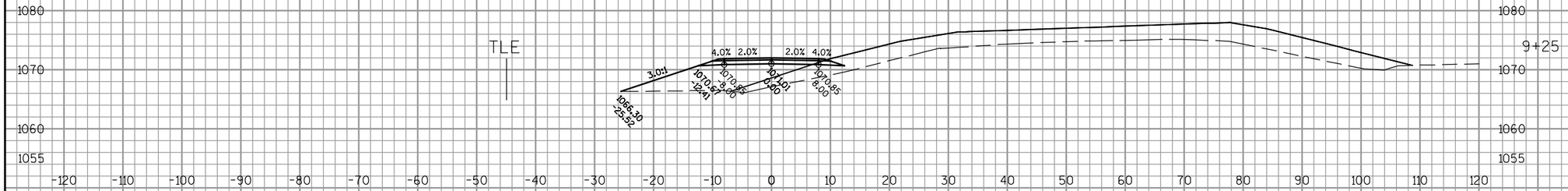
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: DRIVEWAY	SHEET 556 E

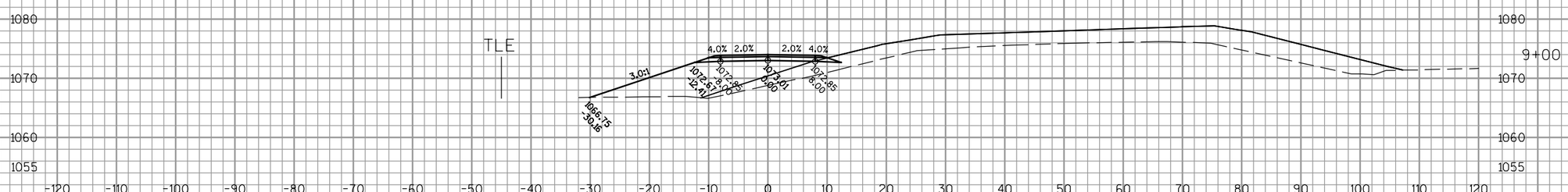
FILE NAME : L:\PROJECTS\11609\DWG\090210_XS.DWG PLOT DATE : 7/27/2013 7:15 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49









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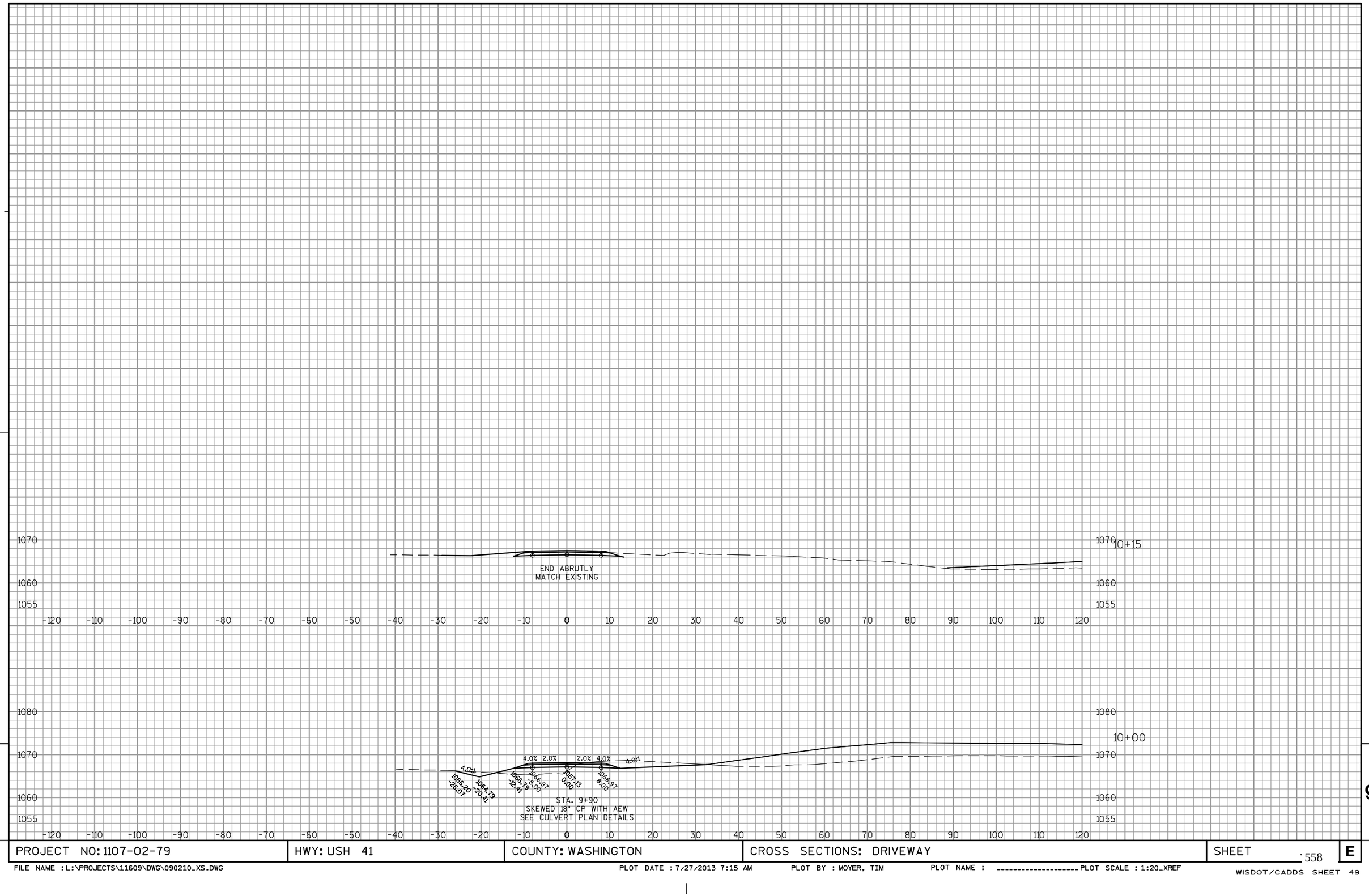
PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: DRIVEWAY	SHEET 557	E

FILE NAME : L:\PROJECTS\11609\DWG\090210_XS.DWG PLOT DATE : 7/27/2013 7:15 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



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PROJECT NO: 1107-02-79	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: DRIVEWAY	SHEET	E

FILE NAME :L:\PROJECTS\11609\DWG\090210_XS.DWG PLOT DATE : 7/27/2013 7:15 AM PLOT BY : MOYER, TIM PLOT NAME : ---------- PLOT SCALE : 1:20_XREF

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Notes

Wisconsin Department of Transportation

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