WKE

PROJECT ID: 1100-15-71
WITH: 1100-38-70 / 1100-47-70

COUNTY: WASHINGTON

JUNE 2015

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 = 98

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1100-15-71		

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

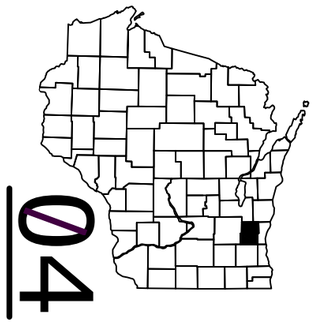
MILWAUKEE - FOND DU LAC

B-66-0195

U.S.H. 41

WASHINGTON COUNTY

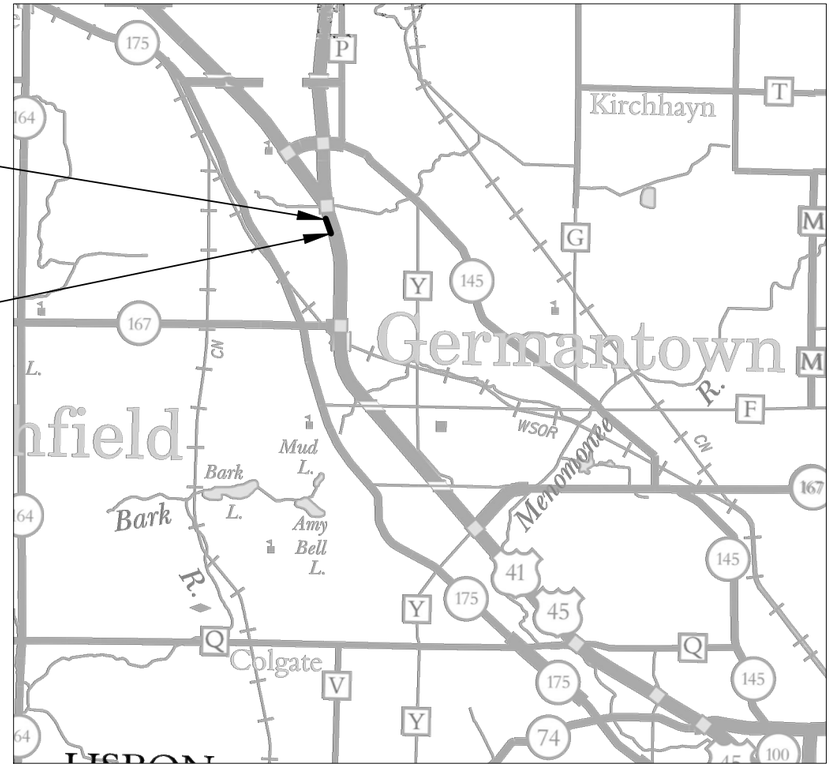
STATE PROJECT NUMBER
1100-15-71



N

END PROJECT 1100-15-71
STA 681+88

BEGIN PROJECT 1100-15-71
STA 679+50



43°15'

T-9-N

R-20-E

LAYOUT
SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.045

DESIGN DESIGNATION

A.A.D.T.	2020	= 84,900
A.A.D.T.	2030	= 92,600
D.H.V.		= 9.1%
D.D.		= 62/38
T.		= 11.4%
DESIGN SPEED		= 65 MPH
ESALS		=

CONVENTIONAL SYMBOLS

PLAN		PROFILE	
CORPORATE LIMITS		GRADE LINE	
PROPERTY LINE		ORIGINAL GROUND	
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)	ROCK
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH	LABEL
EXISTING RIGHT OF WAY		GRADE ELEVATION	95.36
PROPOSED OR NEW R/W LINE		CULVERT (Profile View)	
SLOPE INTERCEPT		UTILITIES	
REFERENCE LINE		ELECTRIC	E
EXISTING CULVERT		FIBER OPTIC	FO
PROPOSED CULVERT (Box or Pipe)		GAS	G
COMBUSTIBLE FLUIDS	CAUTION	SANITARY SEWER	SAN
		STORM SEWER	SS
MARSH AREA		TELEPHONE	T
		WATER	W
WOODED OR SHRUB AREA		UTILITY PEDESTAL	
		POWER POLE	
		TELEPHONE POLE	

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, WASHINGTON COUNTY, NAD83 (2007), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES. ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF NAVD88 (2007).

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	DOT
Designer	N. YANG
Project Manager	CHRISTINE HANNA
Regional Examiner	
Regional Supervisor	REEM SHAHIN
C.O. Examiner	

APPROVED FOR THE DEPARTMENT

DATE: MARCH 1, 2015 Christine Hanna
(Signature)

E

UTILITIES

Rick Podolak
AT&T Wisconsin - Communication Line
4th Floor
304 S Dewey St
Eau Claire, WI 54701
(715) 839-5565
rick.t.podolak@att.com

Steven Cramer
TW Cable Engineering
Time Warner Cable
1320 N Dr. Martin Luther King Dr.
Milwaukee, WI 53212-4002
Phone: (414) 277-4045
wis.engineering@twcable.com

LaTroy Brumfield, Project Manager
We Energies (Electric)
333 W. Everett St - A299
Milwaukee, WI 53203
Phone: (414) 221-5617
Fax: (414) 221-2336
latroy.brumfield@we-energies.com

Ron Frase
Charter Communications - Communication Line
N3760 CTH DJ
Juneau, WI 53039
(920) 349-3202
ronald.frase@charter.com

Brahim Gaddour
Time Warner Telecom of Wisconsin LP - Communication Line
Suite 600
3235 Intertech Dr
Brookfield, WI 53045
(414) 908-1027
Brahim.Gaddour@twtelecom.com

LaTroy Brumfield, Project Manager
Wisc. Gas Co. d/b/a We Energies
333 W. Everett St - A299
Milwaukee, WI 53203
Phone: (414) 221-5617
Fax: (414) 221-2336
latroy.brumfield@we-energies.com

CONTACTS

Kristina Betzold
Environmental Analysis and Review Specialist
Wisconsin DNR
2300 N Dr. Martin Luther King Jr. Dr.
Milwaukee, WI 53212
Phone: (414) 263-8517
Cell: (414) 507-4946
kristina.betzold@wisconsin.gov

Christine Hanna
WISDOT Project Manager SE-Region
141 NW Barstow St
P.O. Box 798
Waukesha, WI 53187-0798
Phone: (262) 548-8809
FAX: (262) 548-8645
christine.hanna@dot.wi.gov

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

2

GENERAL NOTES

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

ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPERATELY.

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

ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES SHALL BE BACKFILLED WITH SUITABLE MATERIAL, AND AS DIRECTED BY THE ENGINEER.

DIMENSIONS GIVEN FOR EXISTING FEATURES SHALL BE CONSIDERED AS APPROXIMATE AND SHALL BE MEASURED IN THE FIELD FOR MATCHING PURPOSES.

CROSS SECTIONS SHOWN INCLUDE THE THICKNESS OF SALVAGED TOPSOIL WHERE REQUIRED.

EXCAVATION BELOW SUBGRADE (EBS) SHALL BE MEASURED AND PAID FOR AS EXCAVATION COMMON. THE EXACT LOCATION OF EBS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

TEMPORARY STORAGE OF ANY EXCAVATED MATERIAL SHALL NOT BE PERMITED IN WETLANDS.

ALL DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCLUDING ROAD BED, ARE TO BE TOPSOILED OR SALVAGED TOPSOILED, FERTILIZED, AND SEEDED, SODDED, MULCHED OR INSTALLED EROSION-MAT AS DIRECTED BY THE ENGINEER.

EROSION CONTROL BMP'S ARE SHOWN AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S 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.

EROSION CONTROL FEATURES ARE TO BE PLACED IN SEQUENCE WITH CONSTRUCTION STAGING AND MAINTAINED THROUGH EACH STAGE OR AS DETERMINED BY THE ENGINEER.

WHEN TEMPORARY PAVEMENT MARKING REMOVABLE TAPE IS REQUIRED, IT SHALL BE CUT THROUGH ITS FULL WIDTH AND THICKNESS AT 25-FOOT INTERVALS TO CONTROL RAVELING.

A SAWED JOINT IS REQUIRED WHERE NEW HMA SURFACE MEETS EXISTING ASPHALTIC CONCRETE SURFACE.

SHOULDERS SHALL BE PAVED FULL WIDTH IN LOCATIONS WHICH REQUIRE STEEL PLATE BEAM GUARD AND SHALL BE PAVED PRIOR TO BEAM GUARD INSTALLATION.

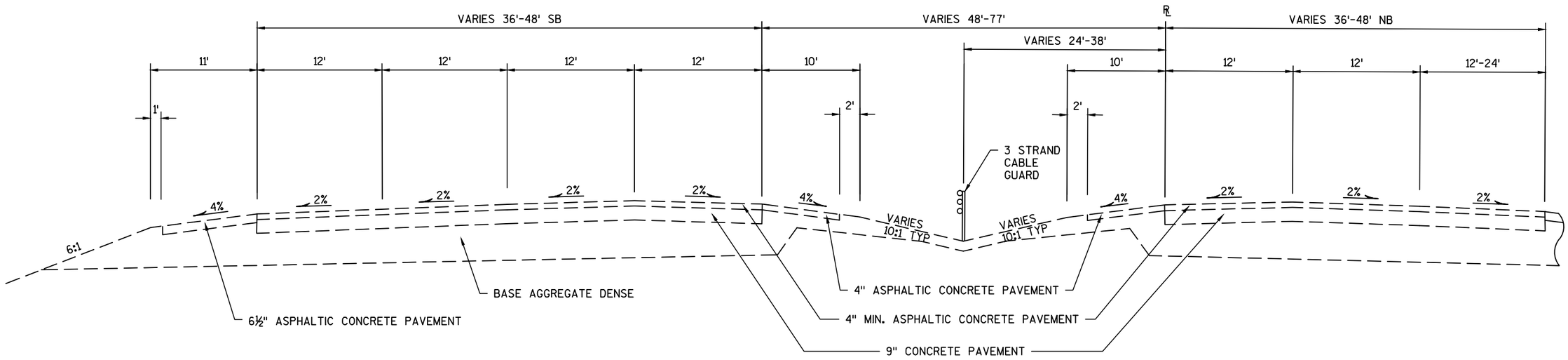
HMA PAVEMENTS WILL BE CONSTRUCTED WITH THE FOLLOWING LAYERS AND GRADATIONS:

6 3/4 INCH PAVEMENT TYPE E-30 (MAINLINE SHOULDER RECONSTRUCTION)

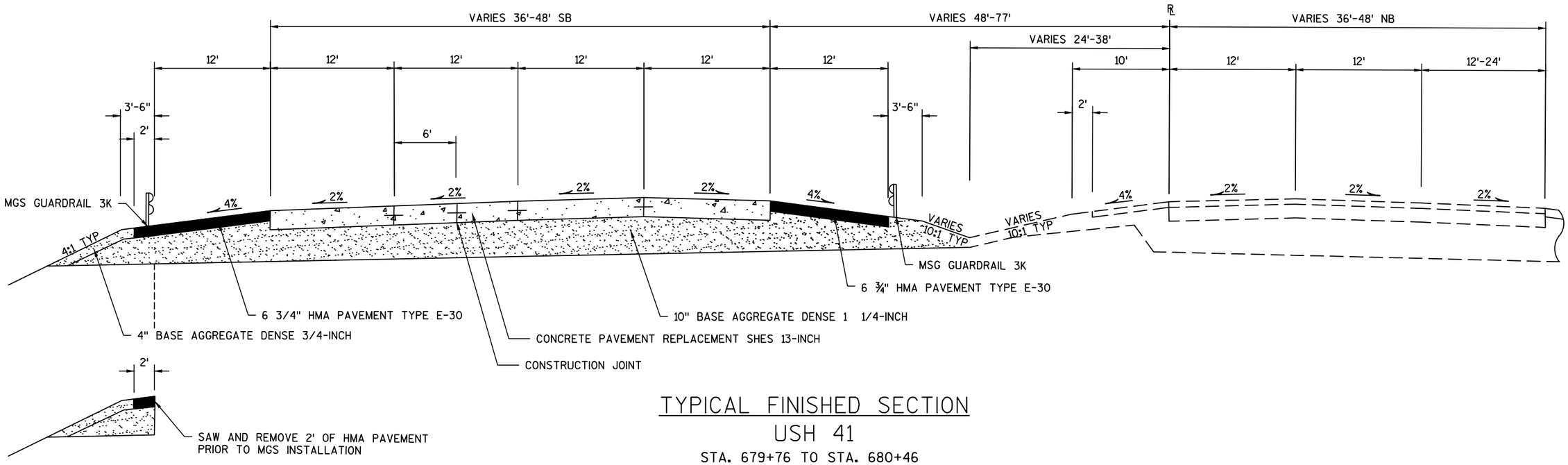
1 3/4	INCH UPPER LAYER	12.5 MM	PG70-28P
2 1/4	INCH LOWER LAYER	19.0 MM	PG64-28
2 3/4	INCH LOWER LAYER	19.0 MM	PG64-28

5 INCH PAVEMENT TYPE E-30 (TEMPORARY SHOULDER WIDENING)

2	INCH UPPER LAYER	12.5 MM	PG70-28P
3	INCH LOWER LAYER	19.0 MM	PG64-28

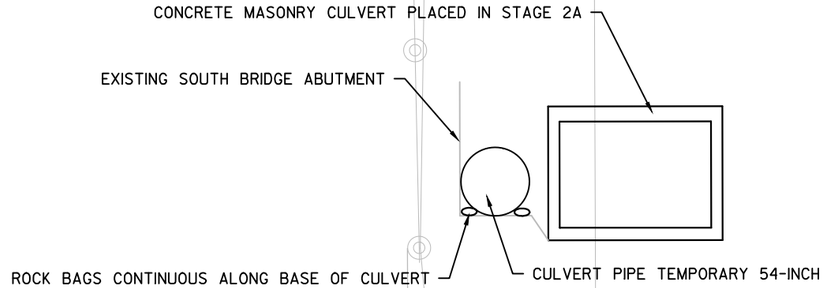


TYPICAL EXISTING SECTION
USH 41
STA. 679+76 TO STA. 680+46

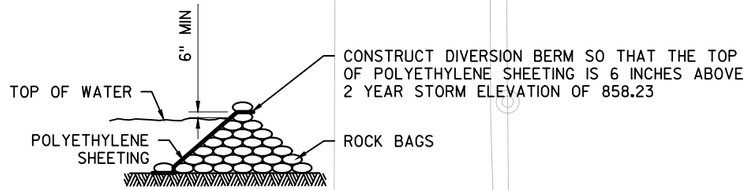


TYPICAL FINISHED SECTION
USH 41
STA. 679+76 TO STA. 680+46

PROJECT NO: 1100-15-71	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: TYPICAL SECTION	SHEET 4	E



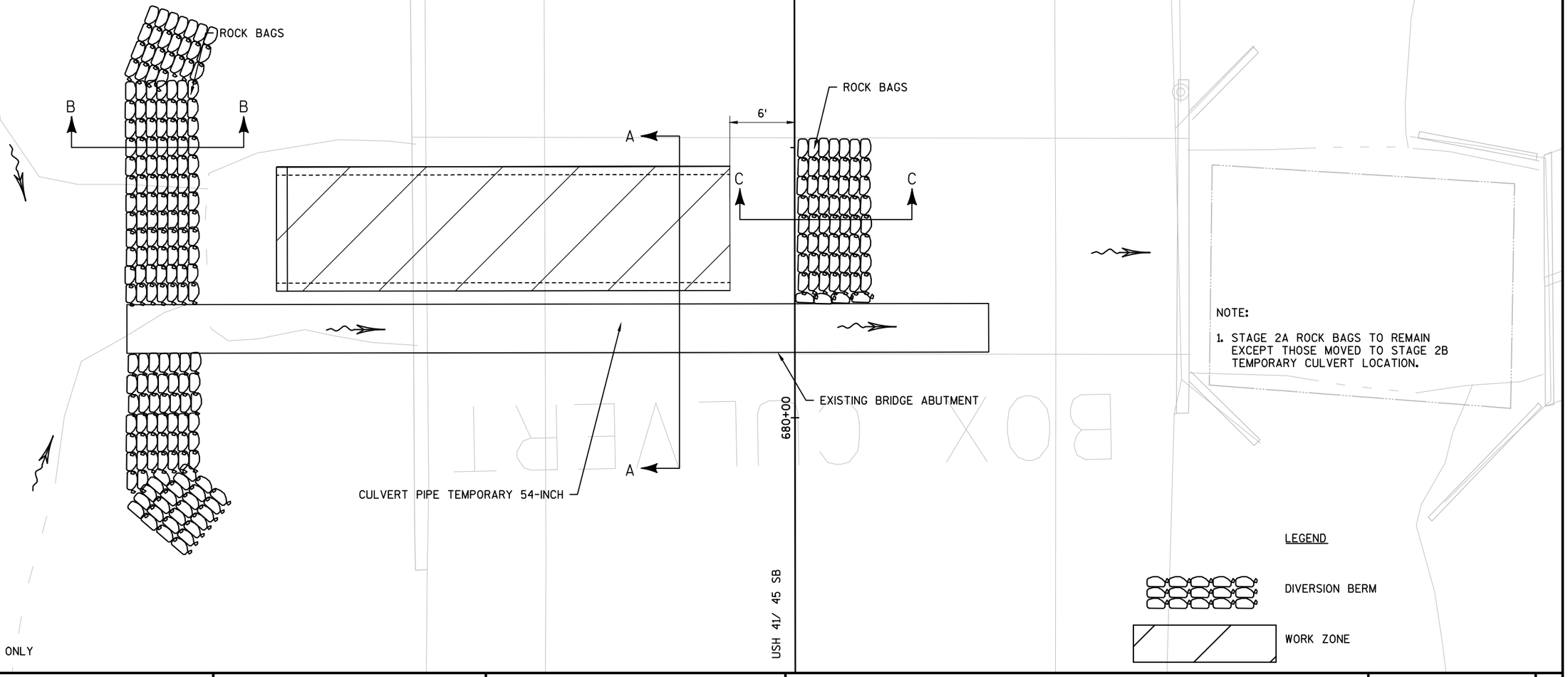
SECTION A-A



SECTION B-B

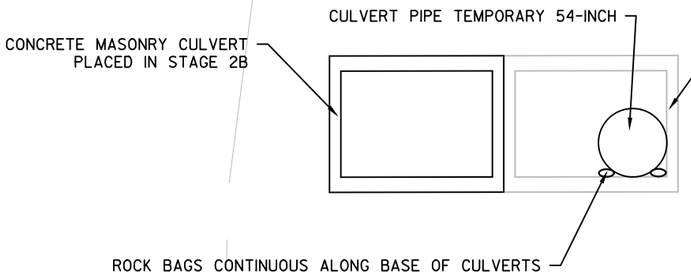
SECTION C-C
MIRROR IMAGE



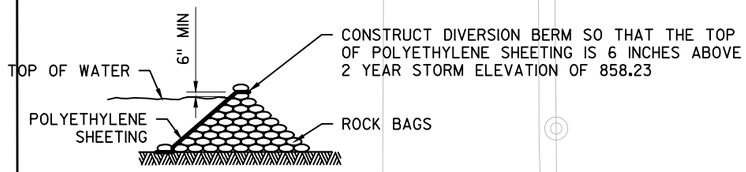


FOR INFORMATION ONLY

PROJECT NO: 1100-15-71	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY DRAINAGE - STAGE 2A	SHEET 5	E

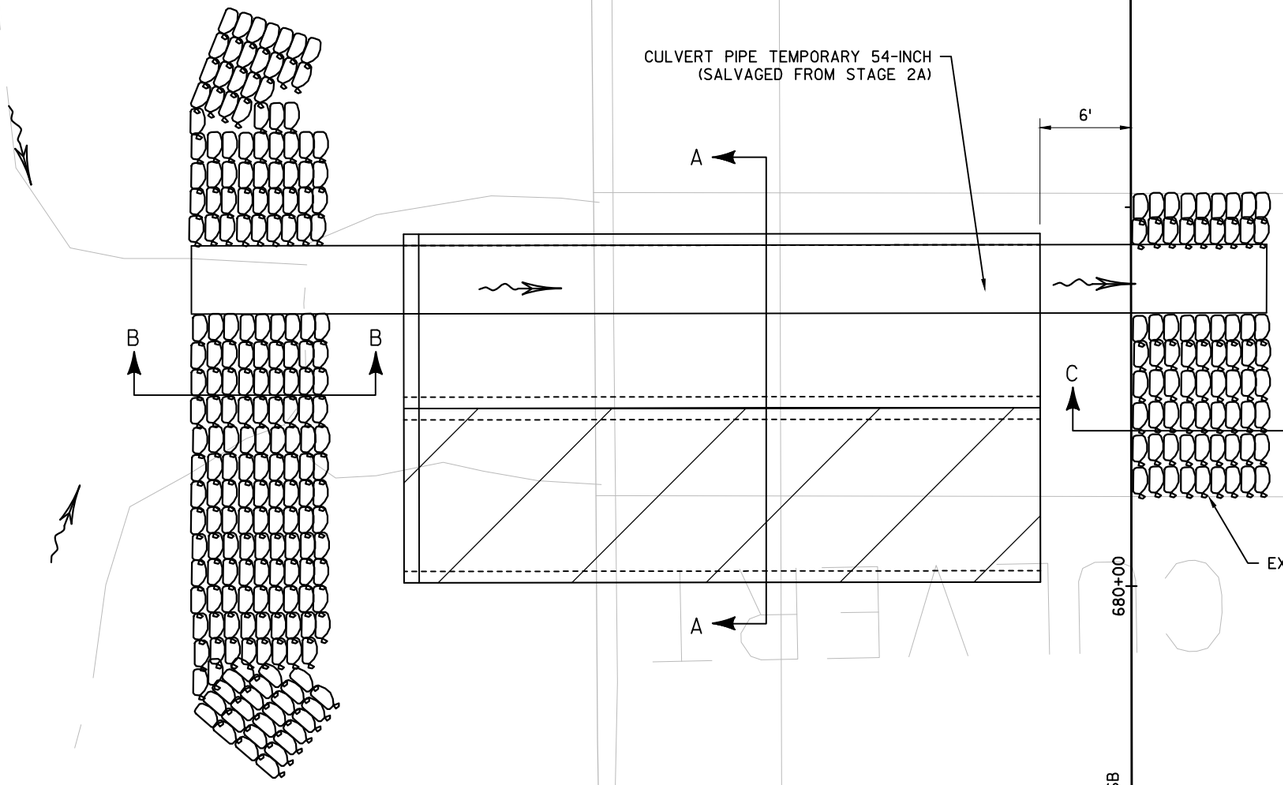


SECTION A-A

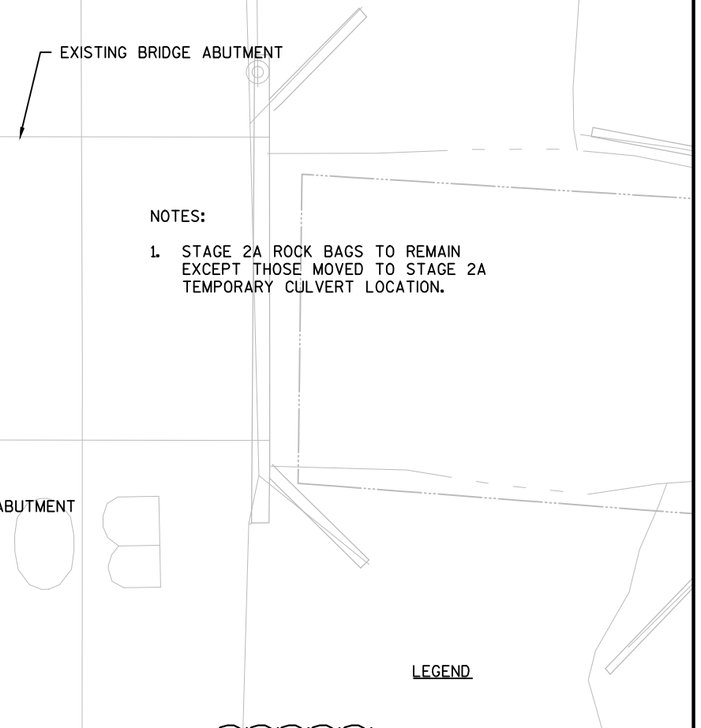


SECTION B-B

SECTION C-C
MIRROR IMAGE







NOTES:

1. STAGE 2A ROCK BAGS TO REMAIN EXCEPT THOSE MOVED TO STAGE 2A TEMPORARY CULVERT LOCATION.

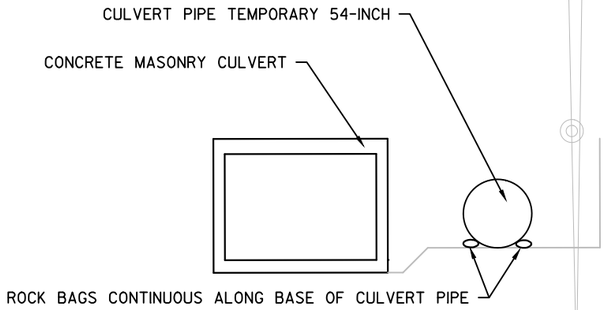
LEGEND

DIVERSION BERM

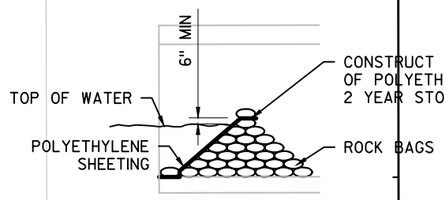
WORK ZONE

FOR INFORMATION ONLY

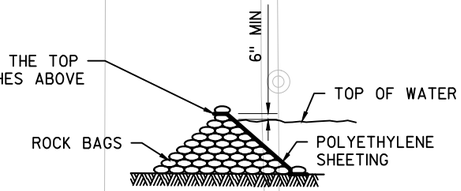
PROJECT NO: 1100-15-71	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY DRAINAGE - STAGE 2B	SHEET 6	E



SECTION A-A

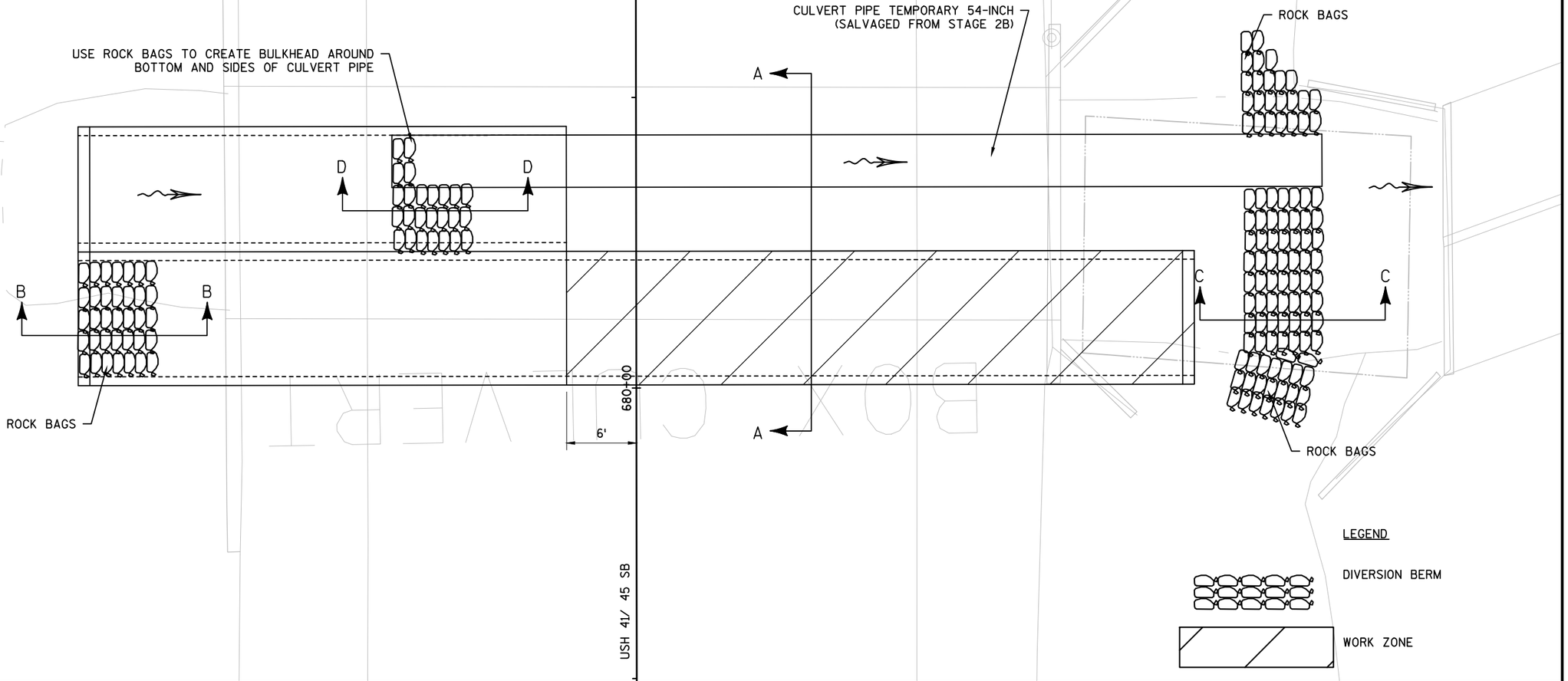


SECTION B-B
SECTION D-D



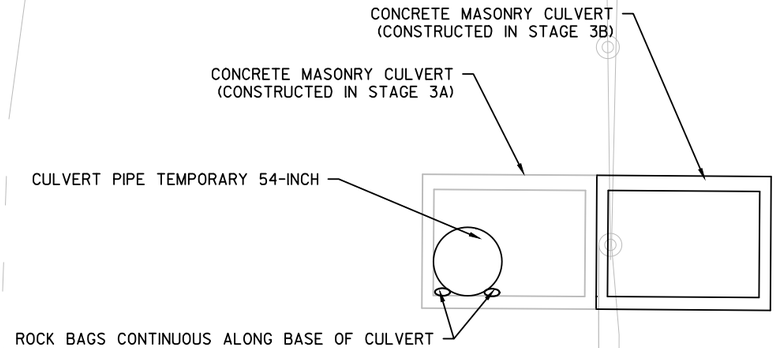
SECTION C-C



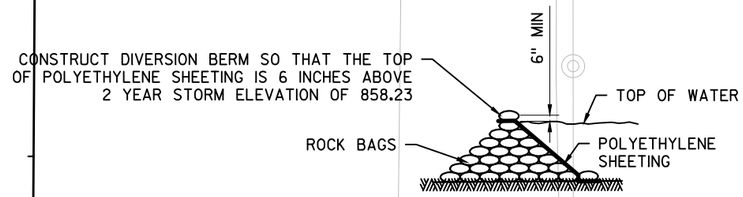


FOR INFORMATION ONLY

PROJECT NO: 1100-15-71	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY DRAINAGE - STAGE 3A	SHEET 7	E



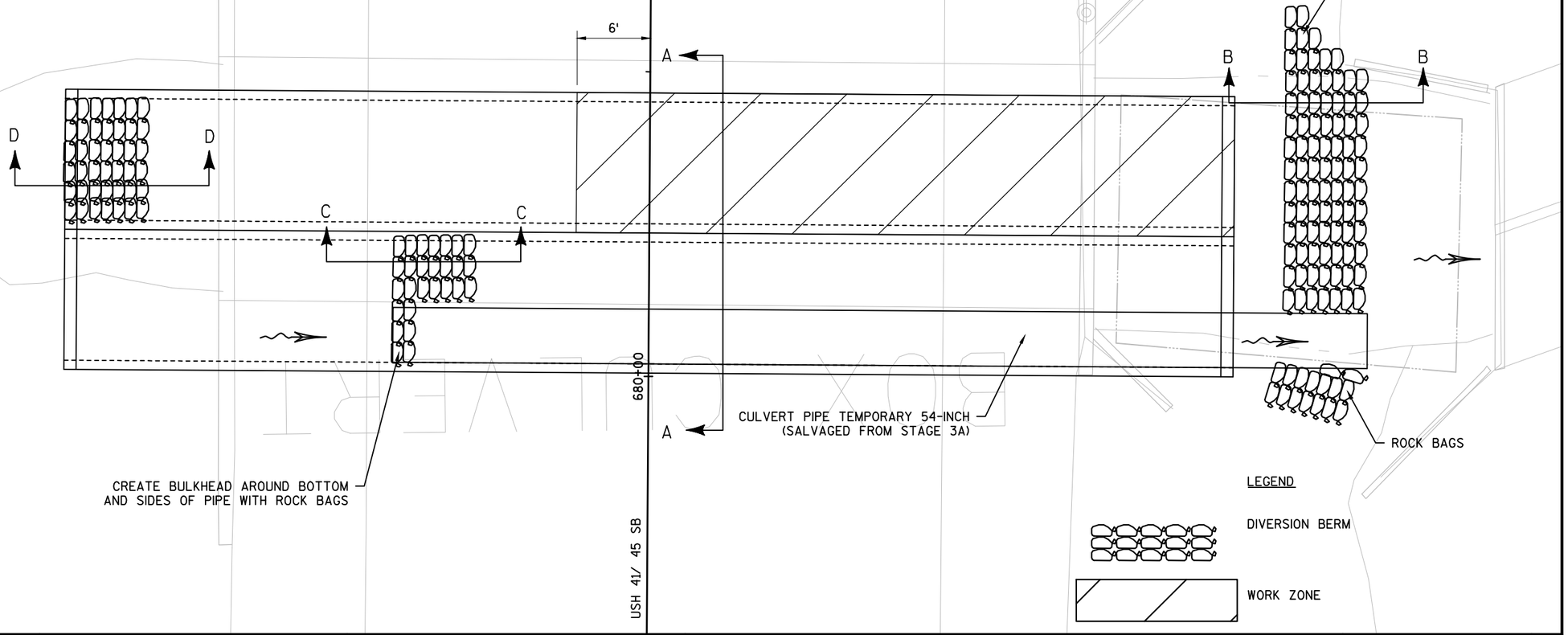
SECTION A-A



SECTION B-B

SECTION C-C
MIRROR IMAGE

SECTION D-D
MIRROR IMAGE



FOR INFORMATION ONLY

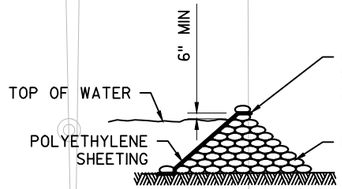
PROJECT NO: 1100-15-71	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY DRAINAGE - STAGE 3B	SHEET 8	E

2

LEGEND

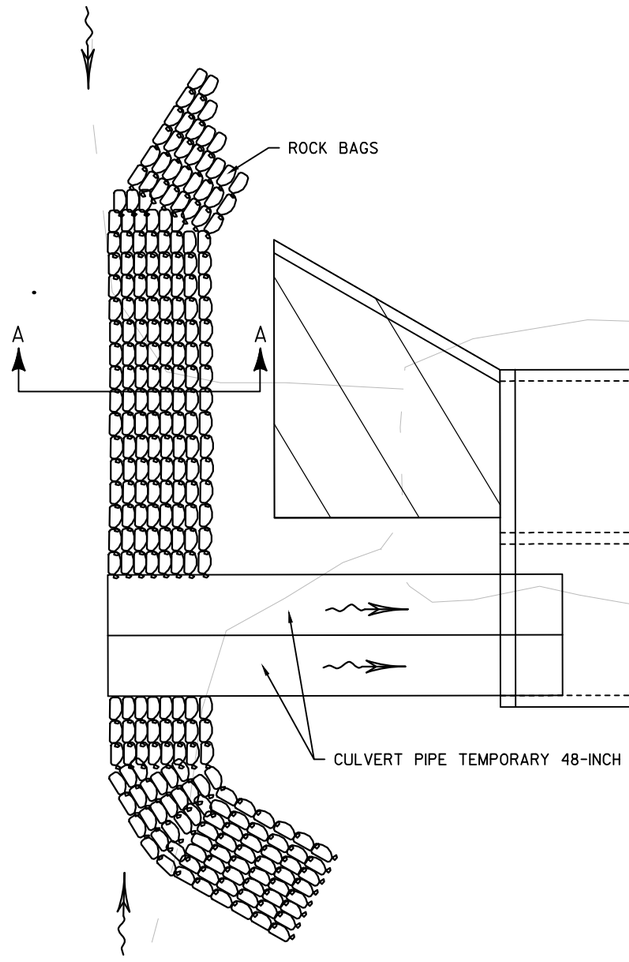
DIVERSION BERM

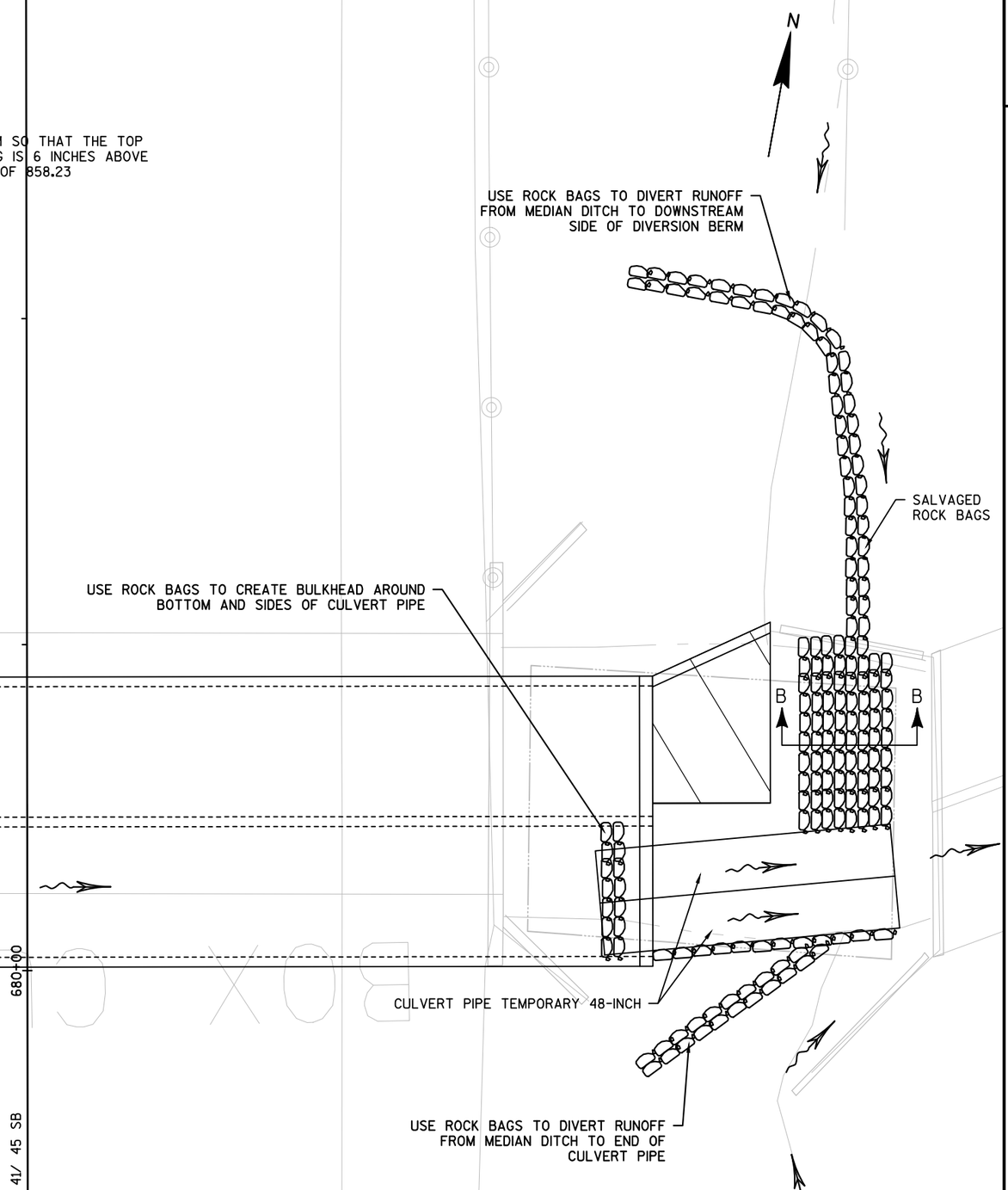
WORK ZONE



SECTION A-A

SECTION B-B
MIRROR IMAGE





680-00

USH 41/ 45 SB

BOX CULVERT

PROJECT NO: 1100-15-71	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY DRAINAGE - STAGE 4A	SHEET	E

FILE NAME : N:\PDS\C3D\11003800\11001501\DIVERSION_S4A.DWG PLOT DATE : 2/24/2015 1:39 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1:10_XREF

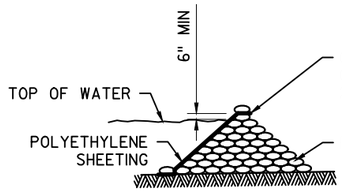
LEGEND

DIVERSION BERM

WORK ZONE

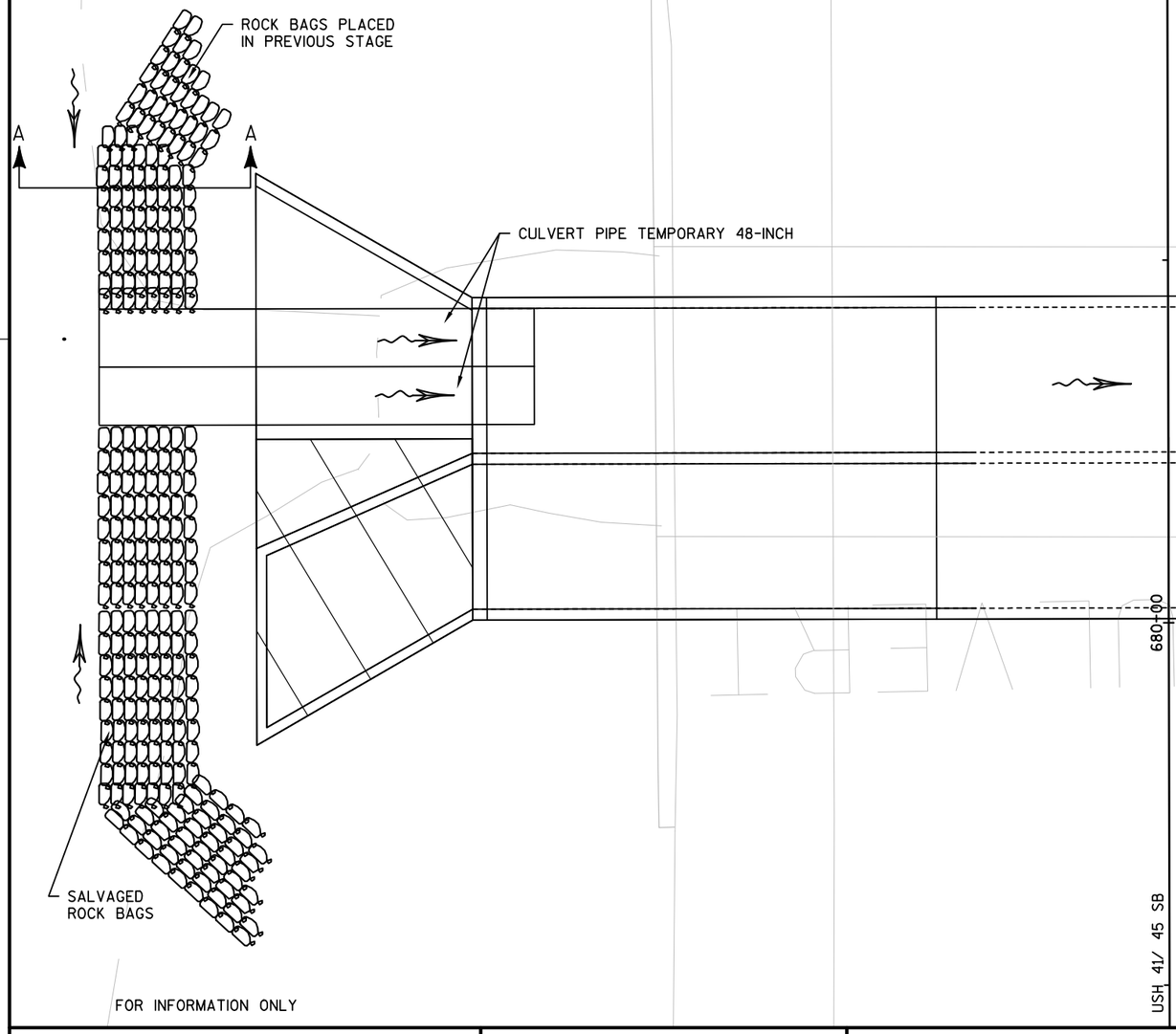
NOTE:

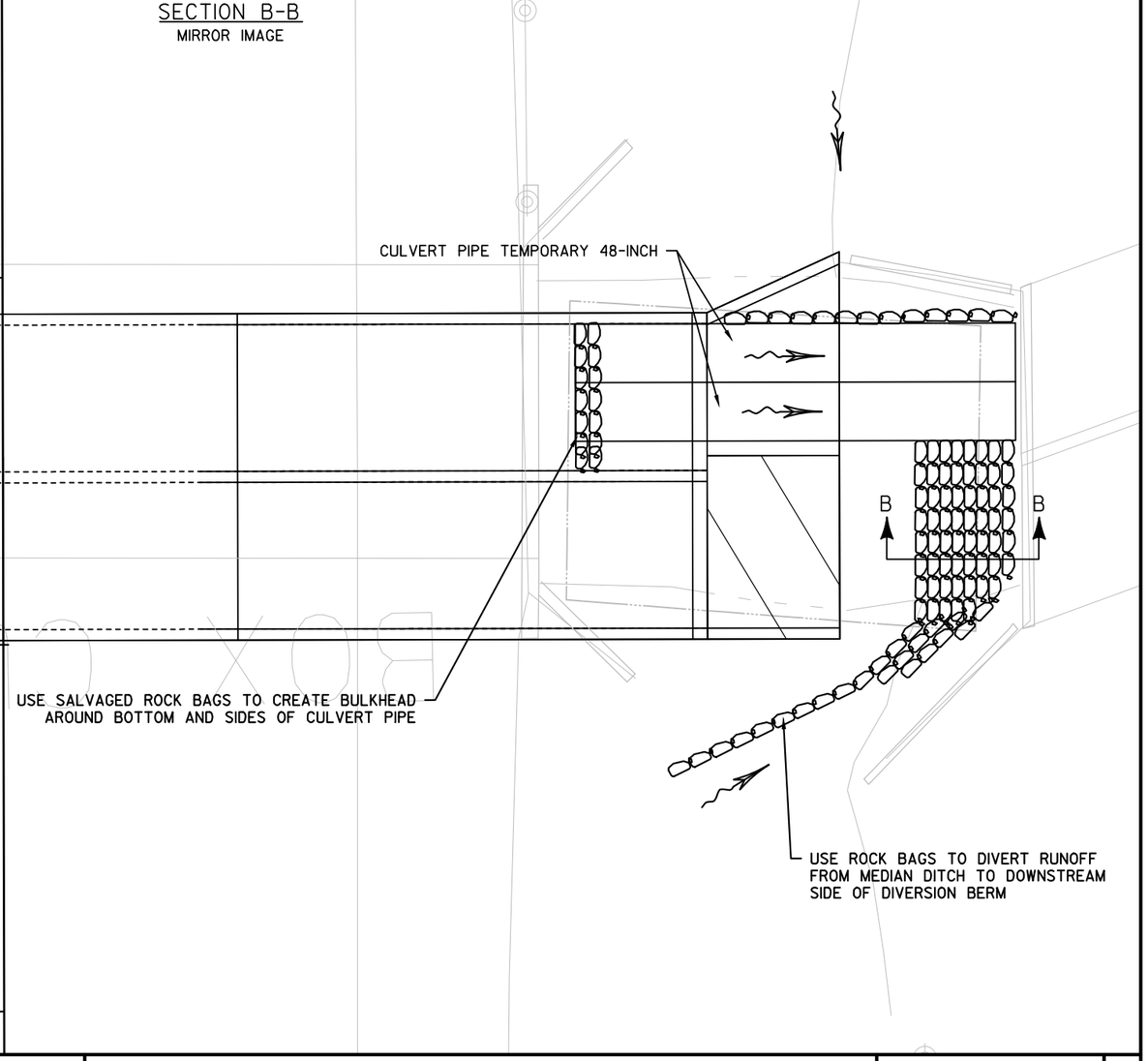
STAGE 4A ROCK BAGS TO REMAIN EXCEPT THOSE MOVED FOR STAGE 4B CULVERT CONFIGURATION



SECTION A-A

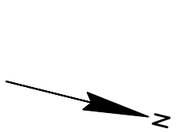
SECTION B-B
MIRROR IMAGE

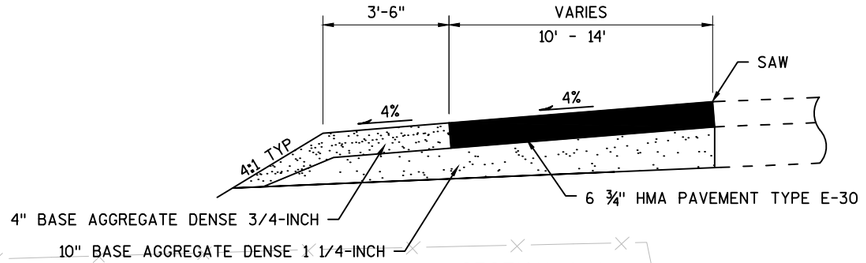




FOR INFORMATION ONLY

PROJECT NO: 1100-15-71	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY DRAINAGE - STAGE 4B	SHEET 10	E

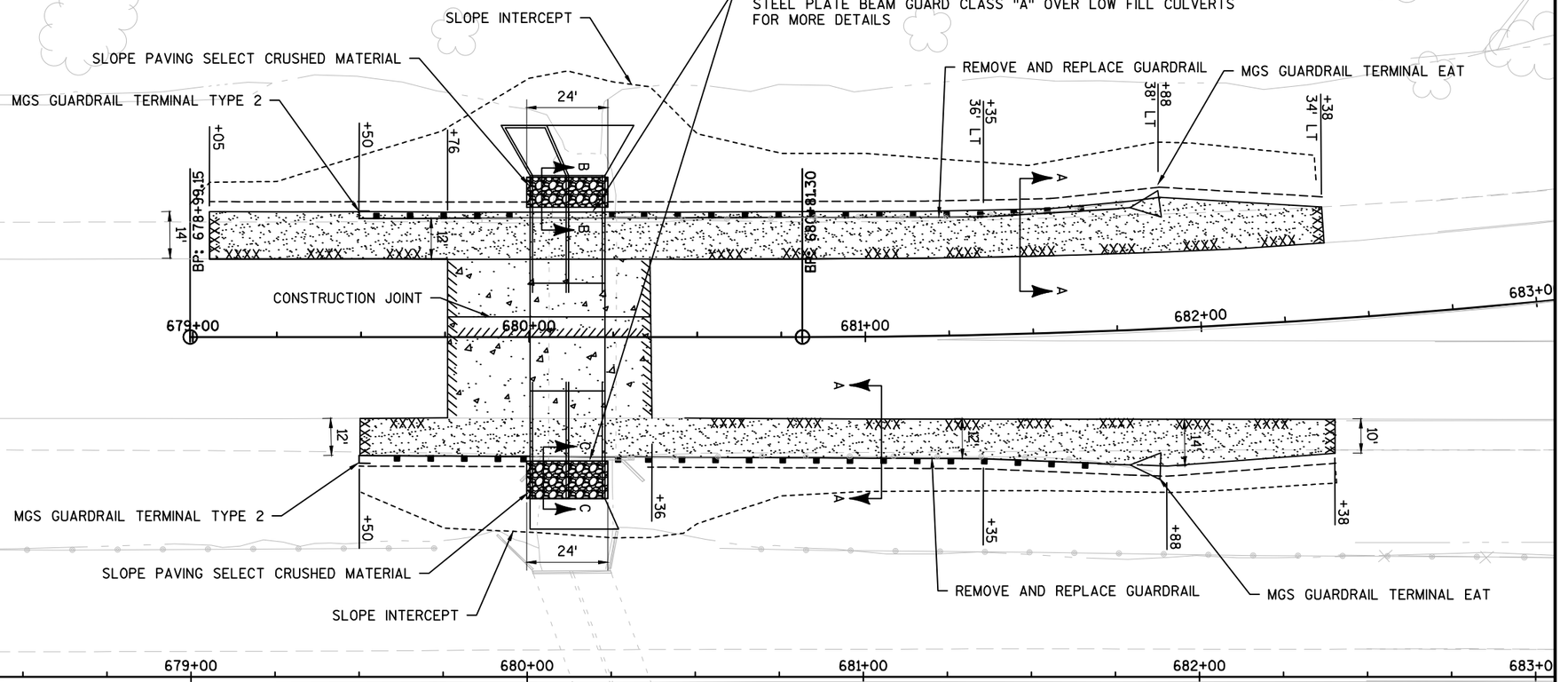




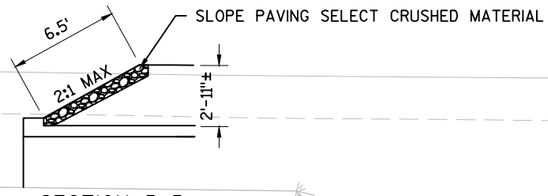
SECTION A-A

LEGEND
- HMA PAVEMENT TYPE E-30
- CONCRETE PAVEMENT REPLACEMENT SHES
- XXXX SAWING ASPHALT
- SAWING CONCRETE
- MGS GUARDRAIL 3 K

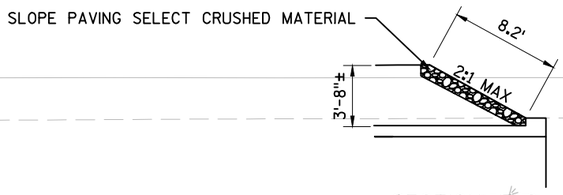
USH 41/ 45 SB



USH 41/ 45 NB



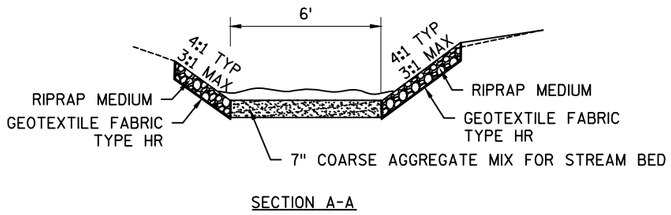
SECTION B-B



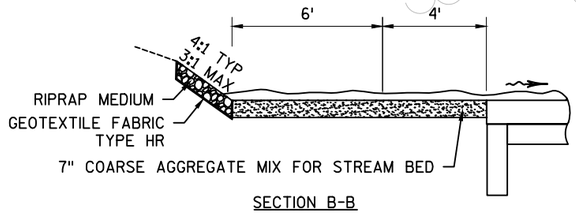
SECTION C-C

PROJECT NO: 1100-15-71	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN DETAIL	SHEET	E

FILE NAME : N:\PDS\C3D\11003800\11001501\40_PD.DWG PLOT DATE : 3/24/2015 4:45 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 40'_XREF



SECTION A-A

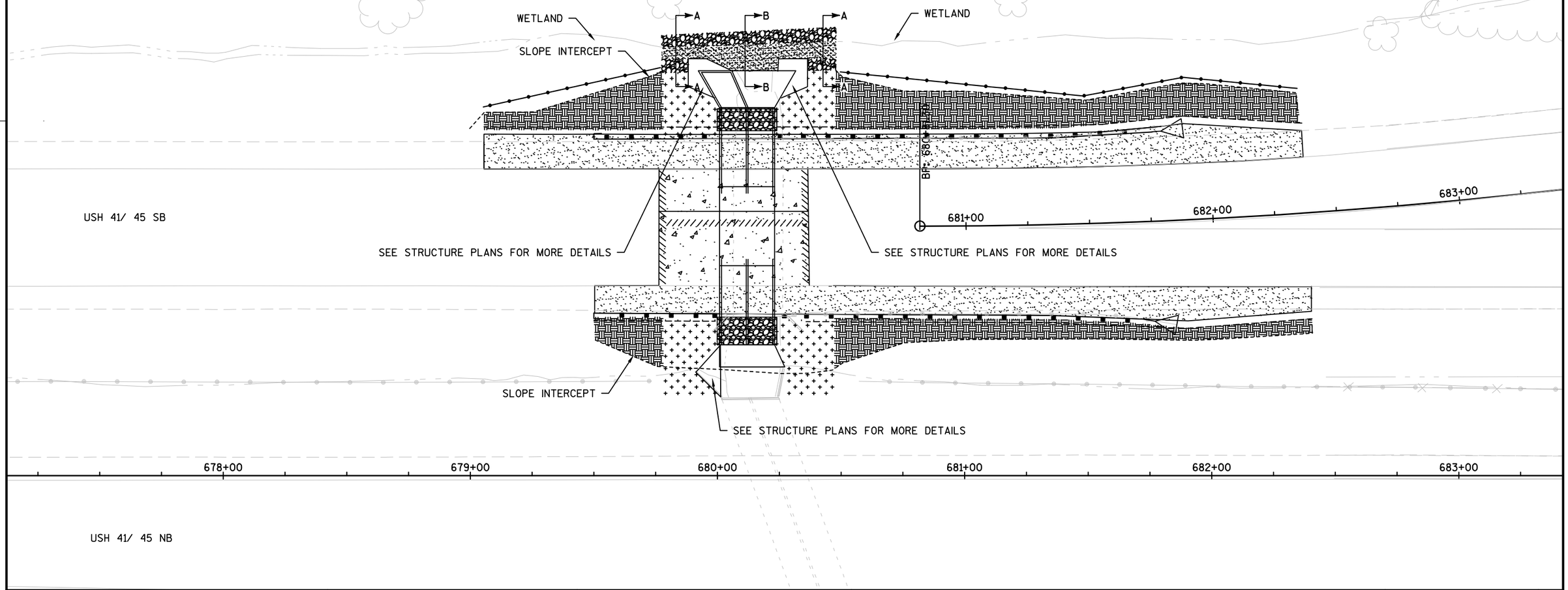


SECTION B-B

LEGEND

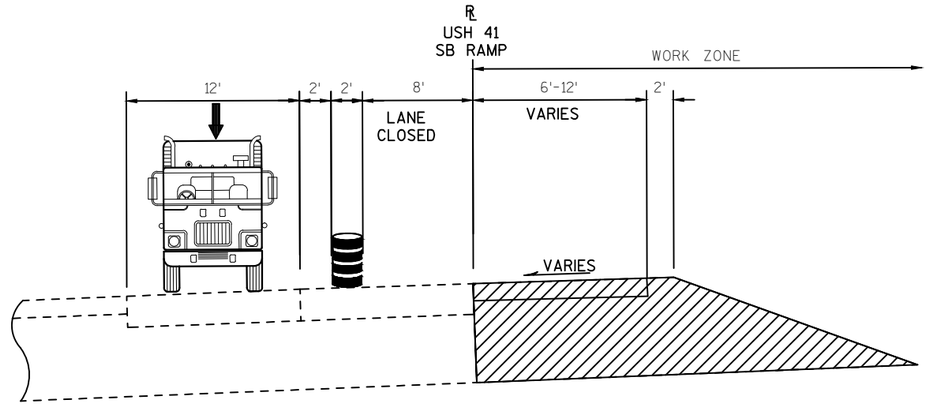
- HEAVY DUTY SILT FENCE
- EROSION MAT CLASS III TYPE C
- EROSION MAT CLASS I TYPE B
- COARSE AGGREGATE MIX FOR STREAM BED
- RIPRAP MEDIUM

N



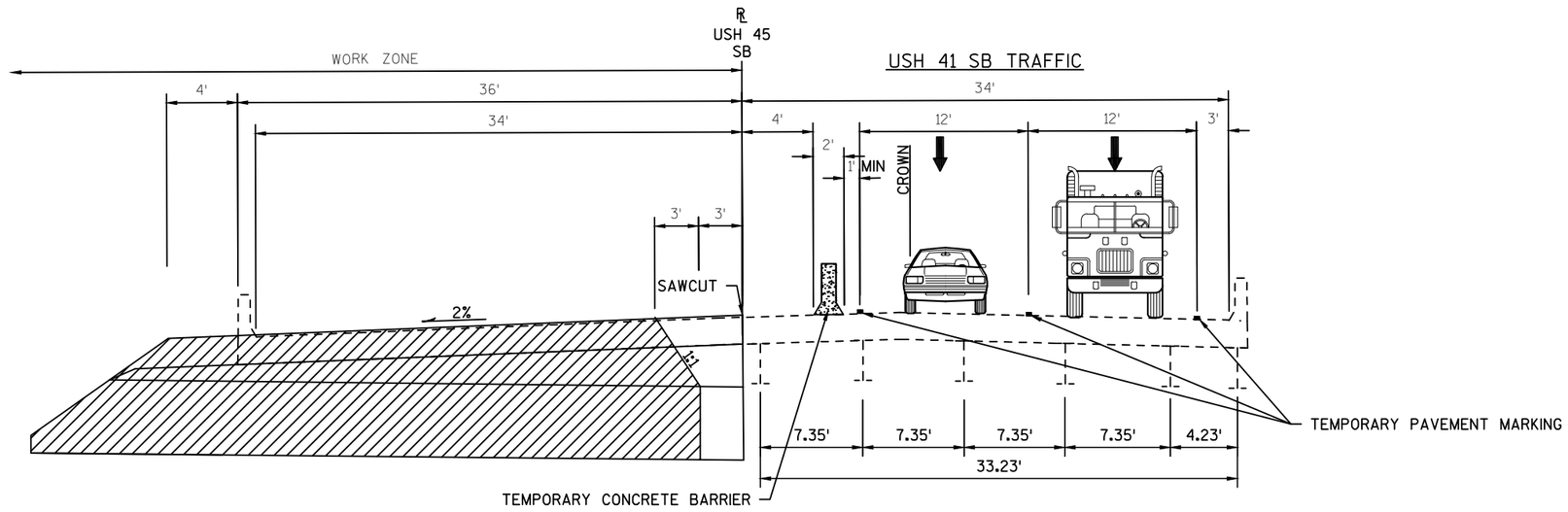
PROJECT NO: 1100-15-71	HWY: USH 41/45	COUNTY: WASHINGTON	EROSION CONTROL	SHEET	E

FILE NAME : N:\PDS\C3D\11003800\11001501\40_EC.DWG PLOT DATE : 3/5/2015 9:40 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 0.30000000 = 1'-0" WISDOT/CADDS SHEET 42



TYPICAL SECTION USH 45 SB RAMP
STAGE 1

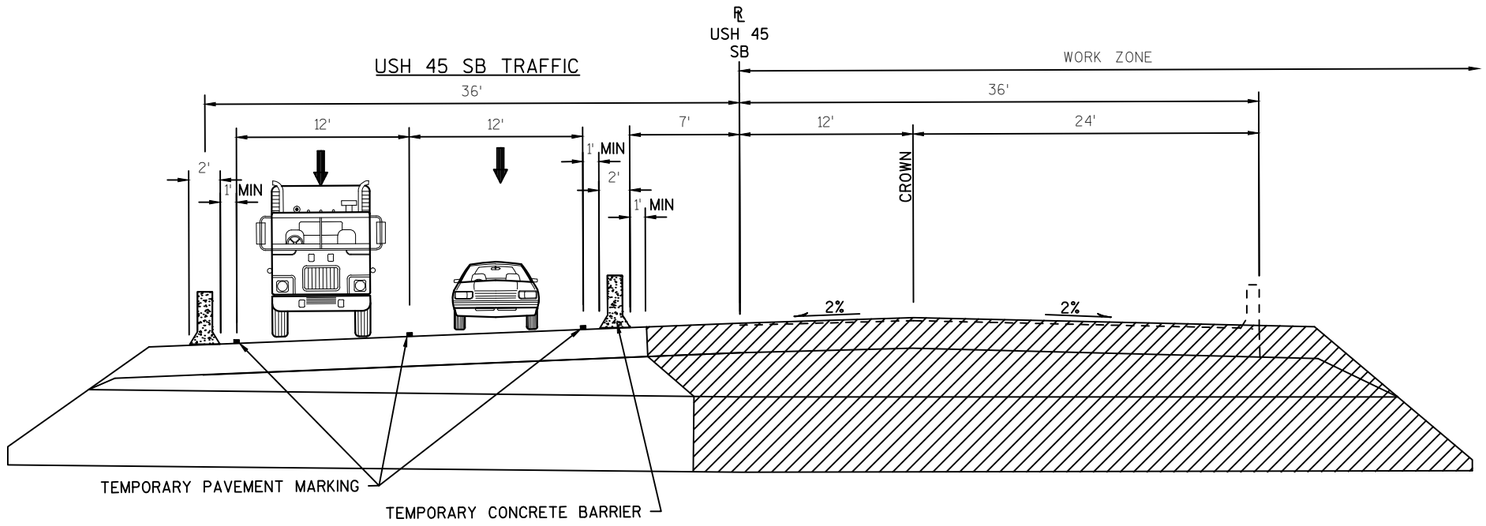
STA. 684+00 TO STA. 688+00



TYPICAL SECTION USH 41/45 SB
STAGE 2

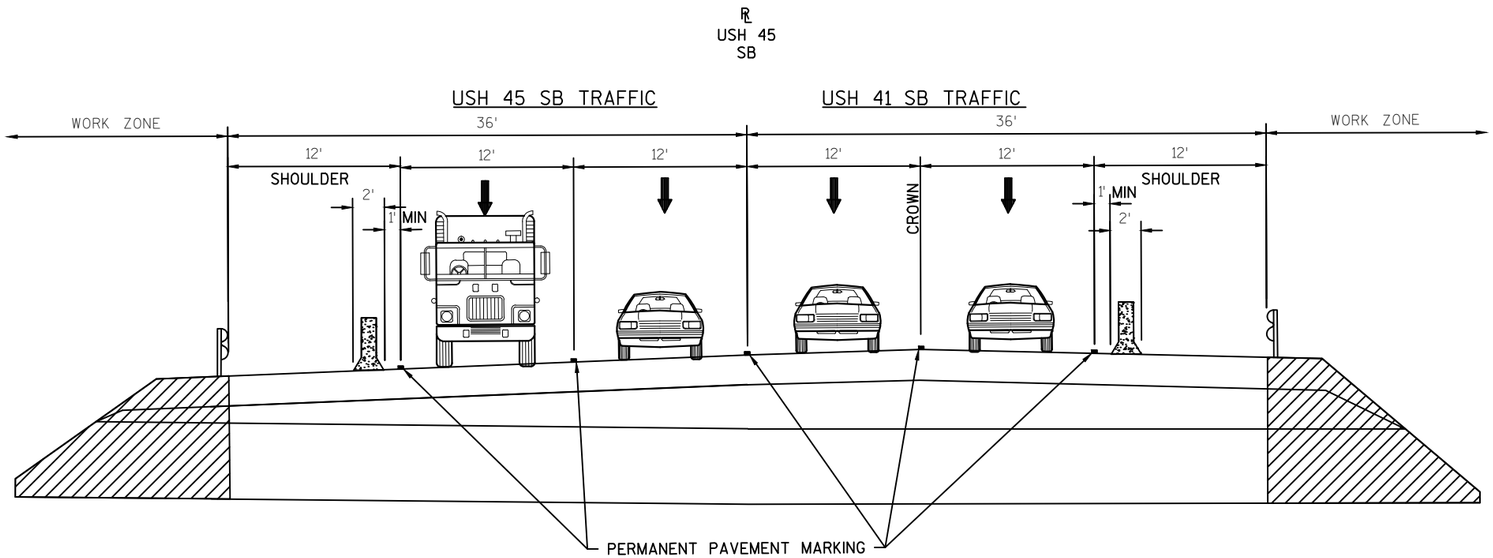
STA. 679+75 TO STA. 680+50

PROJECT NO: 1100-15-71	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: TRAFFIC CONTROL - STAGE 1 & 2	SHEET 13	E



TYPICAL SECTION USH 41/45 SB
STAGE 3

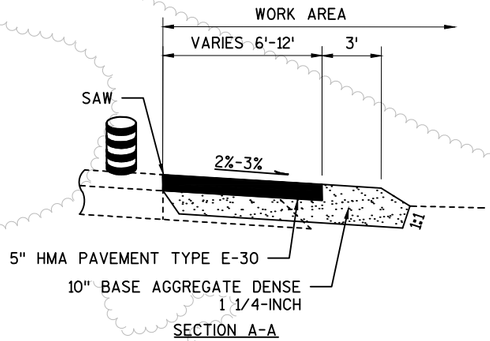
STA. 679+75 TO STA. 680+50



TYPICAL SECTION USH 41/45 SB
STAGE 4

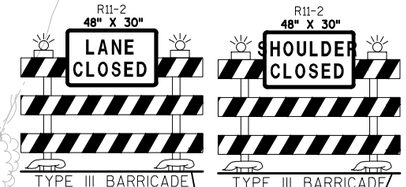
STA. 679+75 TO STA. 680+50

PROJECT NO: 1100-15-71	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: TRAFFIC CONTROL - STAGE 3 & 4	SHEET 14	E



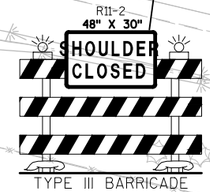
LEGEND

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- WORK ZONE
- PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC



SEE STANDARD DETAIL DRAWING TRAFFIC CONTROL LANE CLOSURE SPEED REDUCTION AND TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY SPEED GREATER THAN 40 MPH FOR ADDITIONAL TRAFFIC CONTROL ITEMS.

BP: 678+99.15
BP: 680+81.30
PT: 686+42.15
PC: 693+91.12
680
682
684
686
688
690
692
694
100'
USH 45
CULVERT
INL
SEE STANDARD DETAIL DRAWING TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY SPEED GREATER THAN 40 MPH FOR ADDITIONAL TRAFFIC CONTROL ITEMS.
PC: 690+93.62
50'
SIGN
SIGN



PROJECT NO: 1100-15-71	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 1	SHEET	E

FILE NAME : N:\PDS\C3D\11003800\11001501\100_S1.DWG PLOT DATE : 3/26/2015 10:20 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1:100_XREF

WISDOT/CADDS SHEET 42

LEGEND

1. TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH
2. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
3. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH
4. CONCRETE BARRIER TEMPORARY PRECAST
5. REMOVING PAVEMENT MARKING

LEGEND

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- WORK ZONE
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
SHOULDER CLOSED
TYPE III BARRICADE

PT: 673+09.68
BP: 680+81.30
PT: 686+42.15
USH 41/45
BOX CULVERT
18" RCP
100'
50'
+45
+50

PROJECT NO: 1100-15-71	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2	SHEET	E

FILE NAME : N:\PDS\C3D\11003800\11001501\100_S2.DWG PLOT DATE : 3/9/2015 10:36 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF
WISDOT/CADDS SHEET 42

2

* AS DIRECTED BY THE FIELD ENGINEER

N

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

SEE STANDARD DETAIL DRAWING
TRAFFIC CONTROL LANE CLOSURE SPEED REDUCTION
FOR ADDITIONAL TRAFFIC CONTROL ITEMS.

PT: 686+42.15

689+00.00, -12.00' LT

100'

PC: 693+91.12

693+91.12, -17.66' LT

PRIOR TO STH 145 EXIT RAMP*

PRIOR TO STH 60 EXIT RAMP*

PRIOR TO STH 144 EXIT RAMP*

699+40.02, -23.76' LT

688 690 692 694 696 698 700

SEE STANDARD DETAIL DRAWING
TRAFFIC CONTROL LANE CLOSURE SPEED REDUCTION
FOR ADDITIONAL TRAFFIC CONTROL ITEMS.

689+00.04, -88.65' LT

100'

690+93.62, -90.68' LT

PC: 690+93.62

50'

699+39.71, -87.59' LT

688 690 692 694 696 698 700 702

U.S.H. 41 USH 41 U.S.H. 45 USH 45

LEGEND

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- WORK ZONE
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

LEGEND

1. TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH
2. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
3. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH
4. CONCRETE BARRIER TEMPORARY PRECAST
5. REMOVING PAVEMENT MARKING

PROJECT NO: 1100-15-71	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2	SHEET 17	E

LEGEND

1. TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH
2. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
3. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH
4. CONCRETE BARRIER TEMPORARY PRECAST
5. REMOVING PAVEMENT MARKING

BP: 0+00.00
X= 362441.650
Y= 126497.577

PT: 673+09.68

644.36'
S15° 18' 30"E

228.50'
S13° 58' 33"E

X= 362271.520
Y= 127119.117
PI: 6+44.36

CRASH CUSHION REQUIRED

BP: 680+81.30
X= 362212.468
Y= 127356.383
PC: 8+88.91

Ø81+15.48, -21.75' LT

PI STA = 11+58.20
Y = 127617.703
X = 362147.431
DELTA = 14°01'59"
D = 2°37'07"
T = 269.29'
L = 535.89'
R = 2188.00'
PC STA = 8+88.91
PT STA = 14+24.80

R11-2
48" X 30"
SHOULDER CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

EDGE OF PAVEMENT ℄

PT: 686+42.15

PT: 14+24.80
X= 362020.969
Y= 127855.453

686+42.15, -12.09' LT

USH 41/45

674 676 678 680 682 684 686 688

100' 50' 100'

+50 +50

BOX CULVERT

INL INL

18" CP

LEGEND

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- WORK ZONE
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

PROJECT NO: 1100-15-71	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 3	SHEET	E

FILE NAME : N:\PDS\C3D\11003800\11001501\100_S3.DWG PLOT DATE : 3/9/2015 10:59 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1:100_XREF
WISDOT/CADDS SHEET 42

LEGEND

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- WORK ZONE
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

*AS DIRECTED BY THE FIELD ENGINEER

N

SEE STANDARD DETAIL DRAWING
TRAFFIC CONTROL LANE CLOSURE SPEED REDUCTION
FOR ADDITIONAL TRAFFIC CONTROL ITEMS.

EDGE OF PAVEMENT ℄

EP: 20+53.15
X= 361725.891
Y= 128410.207

PC: 693+91.12

693+91.12, -19.31' LT

PRIOR TO STH 145 EXIT RAMP*

PRIOR TO STH 60 EXIT RAMP*

PRIOR TO STH 144 EXIT RAMP*

699+39.97, -23.76' LT

50'

628.35'

S28° 00' 32"E

20

688 690 692 694 696 698 700 702

689+00.28, -12.00' LT

R11-2
48" X 30"
SHOULDER CLOSED

TYPE III BARRICADE

692+18.49, -99.39' LT

SEE STANDARD DETAIL DRAWING
TRAFFIC CONTROL LANE CLOSURE SPEED REDUCTION
FOR ADDITIONAL TRAFFIC CONTROL ITEMS.

100'

50'

PC: 690+99.52

692+18.37, -87.65' LT

702+59.99, -58.14' LT

R11-2
48" X 30"
LANE CLOSED

TYPE III BARRICADE

U.S.H. 45 USH 45

U.S.H. 41 USH 41

LEGEND

1. TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH
2. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
3. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH
4. CONCRETE BARRIER TEMPORARY PRECAST
5. REMOVING PAVEMENT MARKING

PROJECT NO: 1100-15-71	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 3	SHEET	E

FILE NAME : N:\PDS\C3D\11003800\11001501\100_S3.DWG PLOT DATE : 3/26/2015 10:45 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1:100_XREF

LEGEND

1. TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH
2. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
3. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH
4. CONCRETE BARRIER TEMPORARY PRECAST
5. REMOVING PAVEMENT MARKING
6. PAVEMENT MARKING EPOXY 4-INCH (12.5' LINE W/ 37.5' GAP)

N

BP: 678+99.15

BP: 680+81.30

CRASH CUSHION REQUIRED

100'

PT: 686+42.15

SEE STANDARD DETAIL DRAWING
TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY
SPEED GREATER THAN 40 MPH
FOR ADDITIONAL TRAFFIC CONTROL ITEMS.

50'

PC: 693+91.12

680 682 684 686 688 690 692 694

+50

+90

CULVERT

SEE STANDARD DETAIL DRAWING
TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY
SPEED GREATER THAN 40 MPH
FOR ADDITIONAL TRAFFIC CONTROL ITEMS.

PC: 690+93.62

INL

INL

R11-2
48" X 30"
SHOULDER CLOSED
TYPE III BARRICADE

LEGEND

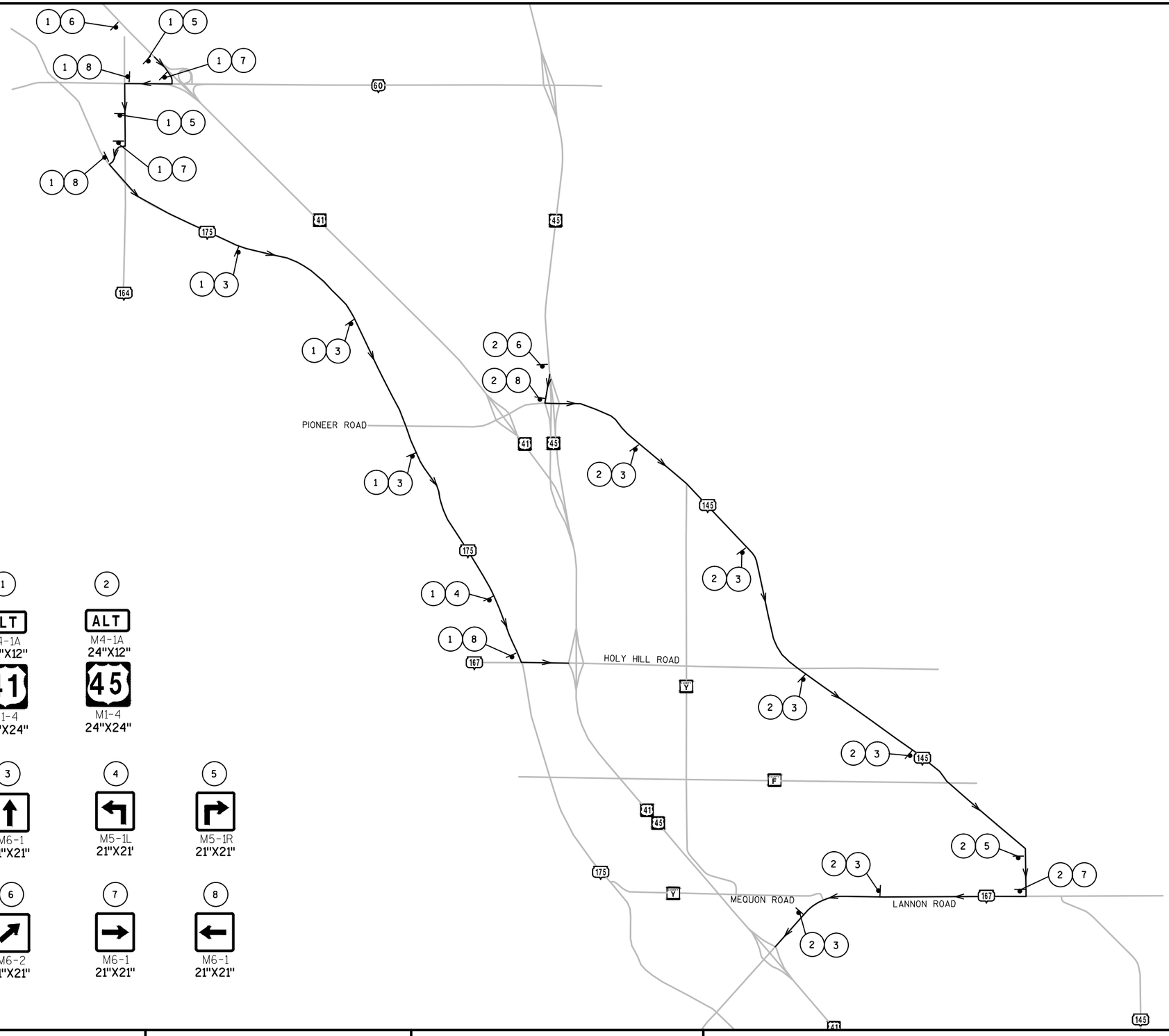
- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- WORK ZONE
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

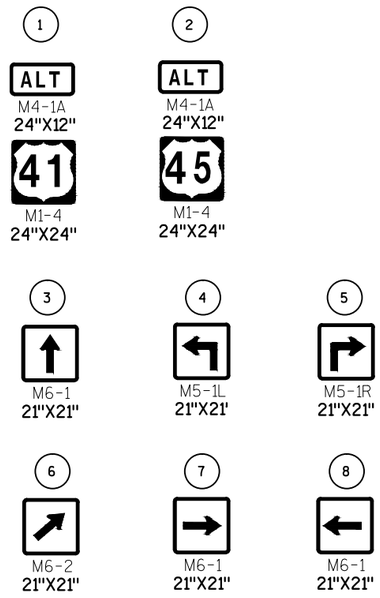
SIGN SIGN

PROJECT NO: 1100-15-71	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 4	SHEET	E

FILE NAME : N:\PDS\C3D\11003800\11001501\100_S4.DWG PLOT DATE : 3/26/2015 11:02 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1:100_XREF

WISDOT/CADDS SHEET 42



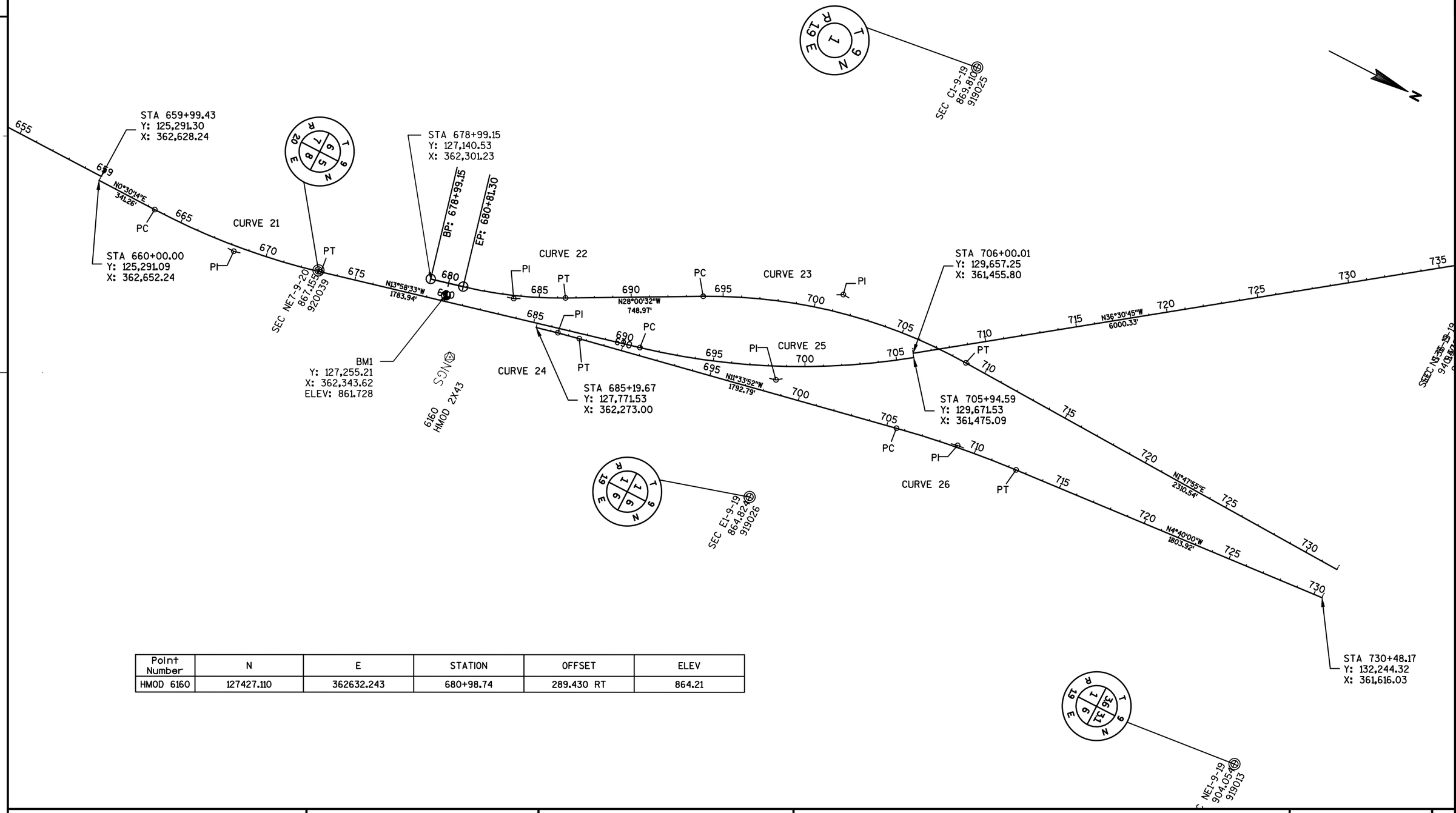


PROJECT NO: 1100-15-71	HWY: USH 41/45	COUNTY: WASHINGTON	ALTERNATE ROUTE	SHEET 21	E

FILE NAME : N:\PDS\C3D\11003800\11001501\STICKMAP.DWG PLOT DATE : 2/26/2015 5:29 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 0.000204

WISDOT/CADDS SHEET 42

2



Point Number	N	E	STATION	OFFSET	ELEV
HMOD 6160	127427.110	362632.243	680+98.74	289.430 RT	864.21

PROJECT NO: 1100-15-71	HWY: USH 41/45	COUNTY: WASHINGTON	ALIGNMENT PLAN	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11001501\027205_AD.DWG PLOT DATE : 1/22/2015 3:07 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1 IN:500 FT

DATE 29APR15 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	1100-15-71 QUANTITY
0010	203.0200	Removing Old Structure (station) 01. 680+16	LS	1.000	1.000
0030	204.0115	Removing Asphaltic Surface Butt Joints	SY	133.300	133.300
0040	204.0125	Removing Asphaltic Surface Milling	TON	342.900	342.900
0070	204.0165	Removing Guardrail	LF	288.000	288.000
0170	205.0100	Excavation Common	CY	1,023.450	1,023.450
0180	205.0400	Excavation Marsh	CY	51.900	51.900
0190	206.2000	Excavation for Structures Culverts (structure) 01. B-66-0195	LS	1.000	1.000
0210	210.0100	Backfill Structure	CY	600.000	600.000
0220	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	9.800	9.800
0230	213.0100	Finishing Roadway (project) 01. 1100-15-71	EACH	1.000	1.000
0260	305.0110	Base Aggregate Dense 3/4-Inch	TON	98.400	98.400
0270	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,079.300	1,079.300
0290	311.0115	Breaker Run	CY	130.000	130.000
0320	416.0620	Drilled Dowel Bars	EACH	64.000	64.000
0340	416.1725	Concrete Pavement Replacement SHES	SY	320.000	320.000
0360	455.0120	Asphaltic Material PG64-28	TON	13.900	13.900
0370	455.0150	Asphaltic Material PG70-28P	TON	9.400	9.400
0380	455.0605	Tack Coat	GAL	34.000	34.000
0390	460.1130	HMA Pavement Type E-30	TON	387.600	387.600
0480	502.6105	Masonry Anchors Type S 5/8-Inch	EACH	25.000	25.000
0490	504.0100	Concrete Masonry Culverts	CY	250.000	250.000
0500	505.0410	Bar Steel Reinforcement HS Culverts	LB	27,505.000	27,505.000
0510	505.0610	Bar Steel Reinforcement HS Coated Culverts	LB	935.000	935.000
0520	511.1200	Temporary Shoring (structure) 01. B-66-0195	SF	1,030.000	1,030.000
0530	516.0500	Rubberized Membrane Waterproofing	SY	35.000	35.000
0660	603.8000	Concrete Barrier Temporary Precast Delivered	LF	768.000	768.000
0670	603.8125	Concrete Barrier Temporary Precast Installed	LF	2,016.000	2,016.000
0690	604.0600	Slope Paving Select Crushed Material	SY	39.200	39.200
0700	606.0200	Riprap Medium	CY	63.300	63.300
0840	614.0010	Barrier System Grading Shaping Finishing	EACH	2.000	2.000
0870	614.0905	Crash Cushions Temporary	EACH	3.000	3.000
0890	614.2330	MGS Guardrail 3 K	LF	370.000	370.000
0910	614.2610	MGS Guardrail Terminal EAT	EACH	2.000	2.000
0920	614.2620	MGS Guardrail Terminal Type 2	EACH	2.000	2.000
0930	619.1000	Mobilization	EACH	0.100	0.100
0960	625.0100	Topsoil	SY	908.000	908.000
1000	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
1010	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
1020	628.2004	Erosion Mat Class I Type B	SY	550.000	550.000
1030	628.2037	Erosion Mat Class III Type C	SY	358.000	358.000
1090	628.7560	Tracking Pads	EACH	1.000	1.000
1100	629.0210	Fertilizer Type B	CWT	3.500	3.500
1110	630.0120	Seeding Mixture No. 20	LB	21.000	21.000
1120	630.0130	Seeding Mixture No. 30	LB	21.000	21.000
1430	643.0200	Traffic Control Surveillance and Maintenance (project) 01. 1100-15-71	DAY	30.000	30.000
1460	643.0300	Traffic Control Drums	DAY	1,648.000	1,648.000

3

DATE 29APR15 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	1100-15-71 QUANTITY
1480	643.0420	Traffic Control Barricades Type III	DAY	47.000	47.000
1490	643.0705	Traffic Control Warning Lights Type A	DAY	94.000	94.000
1500	643.0715	Traffic Control Warning Lights Type C	DAY	842.000	842.000
1510	643.0800	Traffic Control Arrow Boards	DAY	114.000	114.000
1520	643.0900	Traffic Control Signs	DAY	571.000	571.000
1540	643.0920	Traffic Control Covering Signs Type II	EACH	4.000	4.000
1560	643.1050	Traffic Control Signs PCMS	DAY	244.000	244.000
1570	643.1055.S	Truck or Trailer Mounted Attenuator 01. 1100-15-71	DAY	16.000	16.000
1630	645.0105	Geotextile Fabric Type C	SY	422.000	422.000
1640	645.0120	Geotextile Fabric Type HR	SY	159.000	159.000
1660	646.0106	Pavement Marking Epoxy 4-Inch	LF	1,000.000	1,000.000
1670	646.0126	Pavement Marking Epoxy 8-Inch	LF	920.000	920.000
1680	646.0600	Removing Pavement Markings	LF	3,962.500	3,962.500
1760	649.0100	Temporary Pavement Marking 4-Inch	LF	4,725.000	4,725.000
1770	649.0200	Temporary Pavement Marking Reflective Paint 4-Inch	LF	2,425.000	2,425.000
1780	649.0400	Temporary Pavement Marking Removable Tape 4-Inch	LF	8,425.000	8,425.000
1800	649.0801	Temporary Pavement Marking Removable Tape 8-Inch	LF	1,600.000	1,600.000
1870	650.5000	Construction Staking Base	LF	733.000	733.000
1900	650.6500	Construction Staking Structure Layout (structure) 01. B-66-0195	LS	1.000	1.000
1910	650.7000	Construction Staking Concrete Pavement	LF	60.000	60.000
2930	690.0150	Sawing Asphalt	LF	1,215.000	1,215.000
2940	690.0250	Sawing Concrete	LF	166.000	166.000
2950	715.0502	Incentive Strength Concrete Structures	DOL	250.000	250.000
2980	SPV.0035	Special 01. Backfill Slurry	CY	80.000	80.000
3230	SPV.0090	Special 05. Heavy Duty Silt Fence	LF	273.000	273.000
3330	SPV.0105	Special 08. Maintaining Drainage During Construction	LS	1.000	1.000
3660	SPV.0195	Special 02. Coarse Aggregate Mix for Stream Bed	TON	20.700	20.700

3

3

				REMOVING ASPHALTIC SURFACE	
				BUTT JOINTS	MILLING
				204.0115	204.0125
STATION	TO	STATION	LOCATION	SY	TON
STAGE 1:					
684+00	-	684+40	USH 45 SB INSIDE SHOULDER	--	14.7
684+40	-	688+00	USH 45 SB INSIDE SHOULDER	--	66.0
STAGE 2:					
679+05	-	680+46	USH 41/45 SB OUTSIDE SHOULDER	--	58.2
680+46	-	681+88	USH 41/45 SB OUTSIDE SHOULDER	--	58.6
681+88	-	682+38	USH 41/45 SB OUTSIDE SHOULDER	66.7	--
STAGE 3:					
679+50	-	680+46	USH 41/45 SB INSIDE SHOULDER	--	31.7
680+46	-	681+88	USH 41/45 SB INSIDE SHOULDER	--	46.9
681+88	-	682+38	USH 41/45 SB INSIDE SHOULDER	66.7	--
STAG 4:					
684+35	-	688+00	USH 45 SB INSIDE SHOULDER	--	66.9
			TOTAL 0010	133.3	342.9

REMOVING GUARDRAIL

				204.0165
STATION	TO	STATION	LOCATION	LF
680+29	-	681+73	USH 41/45 LT	144
680+45	-	681+89	USH 41/45 LT	144
			TOTAL 0010	288

PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS

				211.0400
STATION	TO	STATION	LOCATION	STA
STAGE 1:				
684+40	-	688+00	USH 45 SB INSIDE SHOULDER	3.6
STAGE 2:				
679+05	-	682+38	USH 41/45 SB OUTSIDE SHOULDER	3.3
STAGE 3:				
679+50		682+38	USH 41/45 SB INSIDE SHOULDER	2.9
			TOTAL 0010	9.8

213-FIN N MOB

				FINISHING ROADWAY PROJECT 01. 1100-15-71	
				213.0100	619.1000
STATION	TO	STATION	LOCATION	EACH	EACH
679+50	-	681+88	USH 41/45 SB	1	0.1
			TOTAL 0010	1	0.1

305-BAD

				BASE AGGREGATE DENSE 3/4-INCH	BASE AGGREGATE DENSE 1 1/4-INCH	CONSTRUCTION STAKING BASE	COARSE AGGREGATE MIX FOR STREAM BED
				305.0110	305.0120	650.5000	SPV.0195.02
STATION	TO	STATION	LOCATION	TON	TON	LF	TON
679+05	-	679+76	USH 41/45 SB SHOULDERS	14.0	122.7	71.0	--
679+76	-	680+46	USH 41/45 SB	6.9	328.4	70.0	--
680+46	-	682+38	USH 41/45 SB SHOULDERS	37.9	331.9	192.0	--
679+76	-	680+46	USH 41/45 SB LT	--	--	--	20.7
684+00	-	688+00	USH 45 SB RT	39.5	296.3	400.0	--
			TOTAL 0010	98.4	1079.3	733.0	20.7

3

Division	From / To Station	Location	Common Excavation (1)	Salvaged / Unusable Pavement Material (4)	Available Material (5)	Unexpanded Fill	Expanded Fill (13)	Mass Ordinate + / - (14)	Waste	Comment:
			(205.0100) Cut (2)				Factor 1.25			
Division 1 Inside shoulder widening	684+00/688+00	USH 45 SB	222.22	18.52	203.70	0.00	0.00	203.70	203.70	
Division 2 QuantityReportTempXML.xml	679+05/682+37	USH 41/45 SB	801.23	117.08	684.15	226.69	283.36	400.79	400.79	
Division 1 Subtotal			801.23	117.08	684.15	226.69	283.36	400.79	400.79	
Grand Total			1023.45	117.08	684.15	226.69	283.36	604.49	604.49	
Total Common Exc										

1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
2) Salvaged/Unsuable Pavement Material is included in Cut.
4) Salvaged/Unusable Pavement Material
5) Available Material = Cut - Salvaged/Unusuable Pavement Material
13) Expanded Fill. Factor = 1.25

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

Or Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced EBS) * Fill Factor

Or Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced Marsh) * Fill Factor

Or Expanded Fill = (Unexpanded Fill - Rock* Rock Factor) * Fill Factor

416-CONCRETE

STATION	TO	STATION	LOCATION	DRILLED DOWEL BARS 416.0620 EACH	CONCRETE PAVEMENT REPLACEMENT SHES 416.1725 SY	CONSTRUCTION STAKING CONCRETE PAVEMENT 650.7000 LF
679+76	-	680+36	USH 41/45 SB LANES	64	320.0	60.0
			TOTAL 0010	64	320.0	60.0

460-ASPHALT

STATION	TO	STATION	LOCATION	ASPHLATIC MATERIAL PG64-28 455.0120 TON	ASPHLATIC MATERIAL PG70-28P 455.0150 TON	TACK COAT 455.0605 GAL	HMA PAVEMENT TYPE E-30 460.1130 TON
STAGE 1:							
684+00	-	688+00	USH 45 SB INSIDE SHOULDER	5.5	3.7	13.3	153.3
STAGE 2:							
679+05	-	681+88	USH 41/45 SB OUTSIDE SHOULDER	3.9	2.6	9.4	108.5
681+88	-	682+38	USH 41/45 SB OUTSIDE SHOULDER	0.7	0.5	1.7	19.2
STAGE 3:							
679+50	-	681+88	USH 41/45 SB INSIDE SHOULDER	3.3	2.2	7.9	91.2
681+88	-	682+38	USH 41/45 SB INSIDE SHOULDER	0.5	0.5	1.7	15.3
			TOTAL 0010	13.9	9.4	34.0	387.6

603-TEMP BARRIER

STATION	TO	STATION	LOCATION	CONCRETE BARRIER TEMPORARY PRECAST DELIVERED 603.8000 LF	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED 603.8125 LF	CRASH CUSHIONS TEMPORARY 614.0905 EACH	REMARKS
STAGE 2:							
678+80	-	681+80	USH 41/45 SB RT	252	252	--	PARALLEL TO USH 41/45 SB
681+80		683+78	USH 41/45 SB RT	228	228	--	TAPERED AT 8:1 TO OUTSIDE SHOULDER
STAGE 3:							
678+80	-	683+80	USH 41/45 SB LT	--	312	1	DELIVERED IN STAGE 2
678+80	-	681+80	USH 41/45 SB RT	84	252	--	168-LF WAS DELIVERED IN STAGE 2
681+80		683+78	USH 41/45 SB RT	204	204		TAPERED AT 8:1 TO INSIDE SHOULDER
STAGE 4:							
678+80	-	683+80	USH 41/45 SB	--	384	1	DELIVERED IN STAGES 2 & 3
678+80	-	683+80	USH 41/45 SB	--	384	1	DELIVERED IN STAGES 2 & 3
			TOTAL 0010	768	2016	3	

SLOPE PAVING SELECT CRUSHED MATERIAL

STATION	TO	STATION	LOCATION	604.0600 SY
680+00	-	680+24	USH 41/45 SB LT	17.3
680+00	-	680+24	USH 41/45 SB RT	21.9
			TOTAL 0010	39.2

606-RIPRAP

STATION	TO	STATION	LOCATION	EXCAVATION MARSH 205.0400 CY	RIPRAP MEDIUM 606.0200 CY	GEOTEXTILE FABRIC TYPE HR 645.0120 SY
679+76	-	680+46	USH 41/45 SB LT	51.9	23.3	70.0
679+76	-	680+00	USH 41/45 SB LT	--	8.0	24.0
680+22	-	680+46	USH 41/45 SB LT	--	8.0	24.0
			TOTAL 0010	51.9	39.3	118.0

614-GUARDRAIL

STATION	TO	STATION	LOCATION	BARRIER SYSTEM GRADING SHAPING FINISHING 614.0010 EACH	MGS GUARDRAIL 3 K 614.2330 LF	MGS GUARDRAIL TERMINAL EAT 614.2610 EACH	MGS GUARDRAIL TERMINAL TYPE 2 614.2620 EACH
679+50	-	680+00	USH 41/45 SB LT	--	50	--	1
680+00	-	680+23	USH 41/45 SB LT	--	23	--	--
680+23	-	681+35	USH 41/45 SB LT	--	112	--	--
681+35	-	681+88	USH 41/45 SB LT	1	--	1	--
679+50	-	680+00	USH 41/45 SB RT	--	50	--	1
680+00	-	680+23	USH 41/45 SB RT	--	23	--	--
680+23	-	681+35	USH 41/45 SB RT	--	112	--	--
681+35	-	681+88	USH 41/45 SB RT	1	--	1	--
			TOTAL 0010	2	370	2	2

628-EC

STATION	TO	STATION	LOCATION	TOPSOIL 625.0100 SY	MOBILIZATIONS EROSION CONTROL 628.1905 EACH	MOBILIZATIONS EMERGENCY EROSION CONTROL 628.1910 EACH	EROSION MAT CLASS I TYPE B 628.2004 SY	EROSION MAT CLASS III TYPE C 628.2037 SY	TRACKING PADS 628.7560 EACH	FERTILIZER TYPE B 629.0210 CWT	SEEDING MIXTURE NO. 20 630.0120 LB	SEEDING MIXTURE NO. 30 630.0130 LB
679+05	-	679+76	USH 41/45 SB LT	30	1	1	30		1	0.5	1.0	1.0
679+76	-	681+46	USH 41/45 SB BACK SLOPE	70	--	--	--	70	--	0.5	2.0	2.0
679+76	-	680+00	USH 41/45 SW QUAD	64	--	--	--	64	--	0.5	2.0	2.0
680+22	-	681+46	USH 41/45 NW QUAD	64	--	--	--	64	--	0.5	2.0	2.0
679+76	-	680+00	USH 41/45 SE QUAD	80	1	1	--	80	--	0.5	2.0	2.0
680+22	-	681+46	USH 41/45 NE QUAD	80	--	--	--	80	--	0.5	2.0	2.0
681+46	-	682+38	USH 41/45 SB LT & RT	520	--	--	520	--	--	0.5	10.0	10.0
			TOTAL 0010	908	2	2	550	358	1	3.5	21.0	21

3

643-TC

STATION	TO	STATION	LOCATION	SURVEILLANCE AND MAINTENANCE PROJECT 1100-15-71 643.0200 DAY	TRAFFIC CONTROL DRUMS 643.0300 DAY	TRAFFIC CONTROL BARRICADES TYPE III 643.0420 DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE A 643.0705 DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE C 643.0715 DAY	TRAFFIC CONTROL ARROW BOARDS 643.0800 DAY	TRAFFIC CONTROL SIGNS 643.0900 DAY	TRAFFIC CONTROL COVERING SIGNS TYPE II 643.0920 EACH	TRAFFIC CONTROL SIGNS PCMS 643.1050 DAY	TRUCK OR TRAILER-MOUNTED ATTENUATOR 643.1055.S DAY
STAGE 1				2	--	--	--	--	--	--	--	--	--
682+00	-	694+00	USH 45 SB	--	74	4	8	32	4	32	--	32	2
682+00	-	694+00	USH 41 SB	--	32	2	4	10	2	18	--	32	2
STAGE 2				12	--	--	--	--	--	--	--	--	--
682+00	-	693+00	USH 45 SB	--	154	7	14	105	0	7	--	--	1
693+00	-	710+00	USH 45 SB	--	175	0	0	112	14	105	--	45	--
682+00	-	692+00	USH 41 SB	--	140	--	--	--	0	14	--	--	1
692+00	-	710+00	USH 41 SB	--	175	--	--	--	30	105	2	45	--
STAGE 3				12	--	--	--	--	--	--	--	--	--
682+00	-	693+00	USH 45 SB	--	154	14	28	98	0	14	--	--	1
693+00	-	710+00	USH 45 SB	--	140	0	0	91	14	105	--	45	--
682+00	-	692+00	USH 41 SB	--	154	--	--	140	0	14	--	--	1
692+00	-	710+00	USH 41 SB	--	210	--	--	154	30	105	2	45	--
STAGE 4				4	--	--	--	--	--	--	--	--	--
684+00	-	693+00	USH 45 SB	--	120	10	20	50	10	10	--	0	4
693+00	-	710+00	USH 45 SB	--	0	0	0	0	0	16	--	0	--
684+00	-	692+00	USH 41 SB	--	120	10	20	50	10	10	--	0	4
692+00	-	710+00	USH 41 SB	--	0	0	0	0	0	16	--	0	--
			TOTAL 0010	30	1648	47	94	842	114	571	4	244	16

649-TEMP PM

STATION	TO	STATION	LOCATION	PAVEMENT MARKING EPOXY 4-INCH 646.0106 LF	PAVEMENT MARKING EPOXY 8-INCH 646.0126 LF	REMOVING PAVEMEMT MARKING 646.0600 LF	TEMPORARY PAVEMENT MARKING 4-INCH 649.0100 LF	REFLECTIVE PAINT 4-INCH 649.0200 LF	REMOVABLE TAPE 4-INCH 649.0400 LF	REMOVABLE TAPE 8-INCH 649.0801 LF
STAGE 2:										
675+50	-	679+00	USH 41/45 SB	--	--	525.0	--	--	875.0	--
679+00	-	682+00	USH 41/45 SB	--	--	375.0	--	300.0	300.0	300.0
682+00	-	684+50	USH 41/45 SB	--	--	250.0	--	250.0	250.0	500.0
684+50	-	693+00	USH 45 SB	--	--	212.5	--	350.0	850.0	--
684+50	-	693+00	USH 41 SB	--	--	212.5	--	175.0	850.0	--
STAGE 3:										
670+00	-	679+00	USH 41/45 SB	--	--	1350.0	--	--	2250.0	--
679+00	-	682+00	USH 41/45 SB	--	--	375.0	--	300.0	300.0	300.0
682+00	-	684+50	USH 41/45 SB	--	--	250.0	--	250.0	250.0	500.0
684+50	-	693+00	USH 45 SB	--	--	212.5	--	--	1700.0	--
684+50	-	692+50	USH 41 SB	--	--	200.0	--	800.0	800.0	--
STAGE 4:										
675+50	-	679+00	USH 41/45 SB	--	--	--	875.0	--	--	--
679+00	-	680+80	USH 41/45 SB	--	180.0	--	450.0	--	--	--
680+80	-	684+50	USH 41/45 SB	--	740.0	--	925.0	--	--	--
684+50	-	686+00	USH 45 SB	--	--	--	337.5	--	--	--
686+00	-	694+00	USH 45 SB	1000.0	--	--	--	--	--	--
684+50	-	694+00	USH 41 SB	--	--	--	2137.5	--	--	--
			TOTAL 0010	1000.0	920.0	3962.5	4725.0	2425.0	8425.0	1600.0

690-SAWING

STATION	TO	STATION	LOCATION	SAWING ASPHALT 690.0150 LF	SAWING CONCRETE 690.0250 LF	REMARKS
STAGE 1						
684+36		688+00	USH 45 SB INSIDE SHOULDER	379	--	REMOVE EXISTING SHOULDER
STAGES 2 & 3						
679+50	-	679+50	USH 41/45 SB SHOULDERS	18	--	
679+50	-	679+76	USH 41/45 SB SHOULDERS	52	--	
680+46	-	682+38	USH 41/45 SB SHOULDERS	384	--	
679+76	-	679+76	USH 41/45 SB LANES	--	48	
680+46	-	680+46	USH 41/45 SB LANES	--	48	
682+00	-	682+00	USH 41/45 SB SHOULDERS	18	--	
679+76	-	680+46	2' RT OF USH 45 SB R/L	--	70	
STAGE 4:						
684+36	-	688+00	USH 45 SB INSIDE SHOULDER	364	--	6' OF PAVED SHOULDER TO REMAIN
			TOTAL 0010	1215	166	

MAINTAINING DRAINAGE DURING CONSTRUCTION

STATION	TO	STATION	LOCATION	SPV.0105.08 LS
679+76	-	680+46	B-66-0195	1
			TOTAL 0010	1

628-MAINTAINING DRAINAGE

STATION	LOCATION (USH 45 SB R/L)	CULVERT PIPE TEMPORARY 48-INCH LF	CULVERT PIPE TEMPORARY 54-INCH LF	POLYETHYLENE SHEETING SY	ROCK BAGS EACH
STAGE 2A:					
680+15	60' LT - 10' RT	--	80	50	1750
STAGE 2B:					
680+05	60' LT - 10' RT	--	--	10	400
STAGE 3A:					
680+05	USH 45 SB R/L - 60' RT	--	--	30	800
STAGE 3B:					
680+15	60' LT - 50' LT	--	--	25	500
STAGE 4A:					
680+05	60' LT - 50 ' LT	60	--	45	1130
680+05	50' RT - 60' RT	50	--	12	575
STAGE 4B:					
680+10	60' LT - 50 ' LT	--	--	7	240
680+10	50' RT - 60' RT	--	--	15	460
	TOTAL 0010	110	80	194	5855

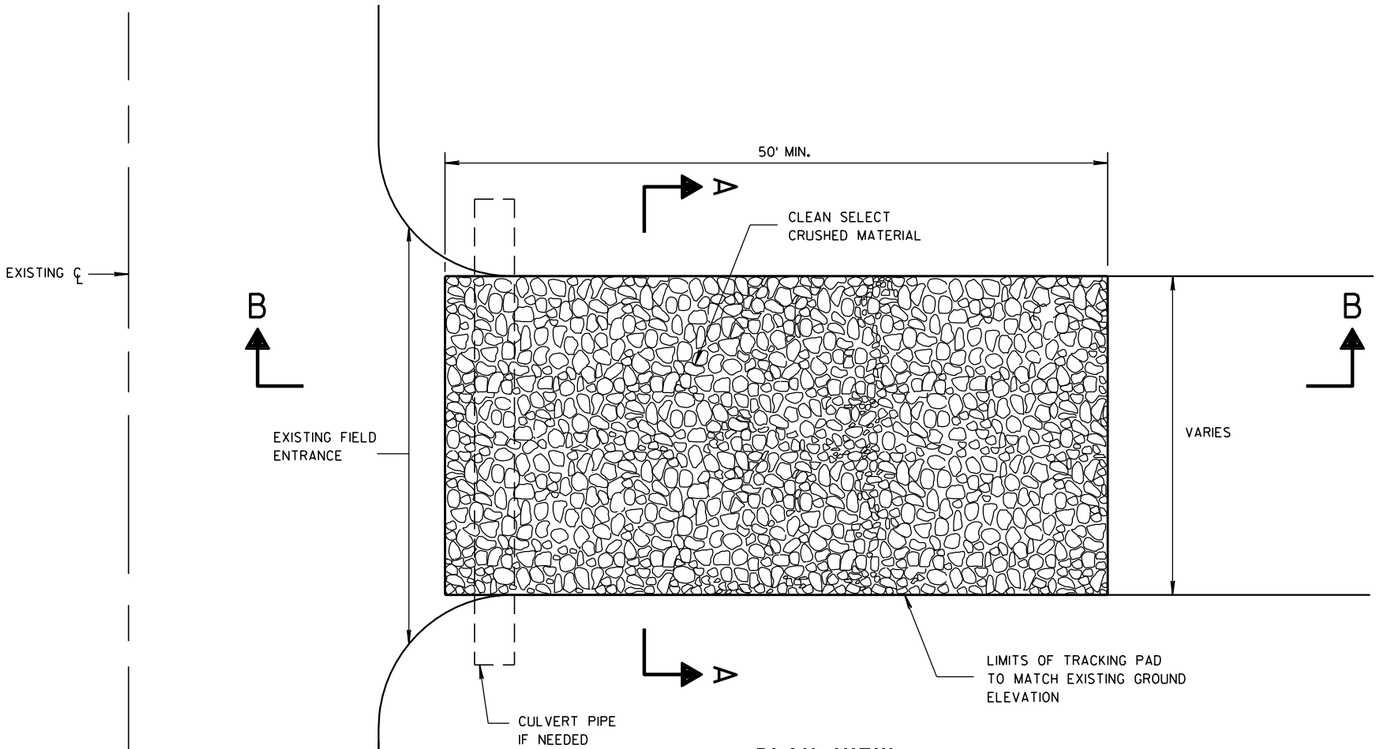
* NOTES: RE-USE ROCK BAGS FROM PREVIOUS STAGES. RE-USE CULVERT PIPE TEMPORARY 48-INCH & 54-INCH FROM PREVIOUS STAGES. QUANTITIES ON THIS SCHEDULE OF ITEMS ARE FOR INFORMATION ONLY. ALL ITEMS ARE INCIDENDENTAL TO MAINTAINING DRAINAGE DURING CONSTRUCTION, ITEM SPV.0105.08.

SPECIAL .05 HEAVY DUTY SILT FENCE

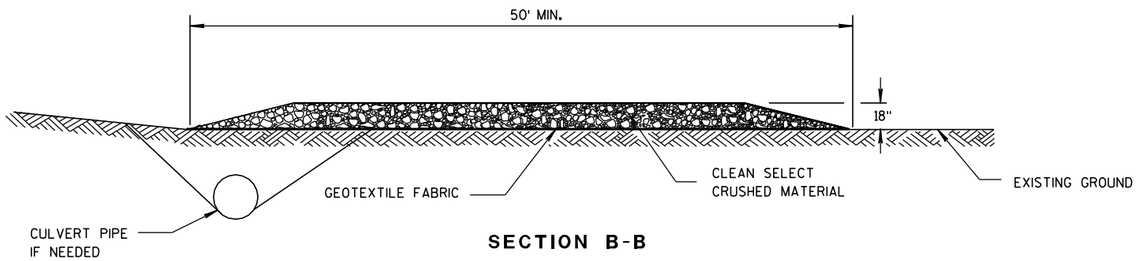
STATION	TO	STATION	LOCATION	SPV.0090.05 LF
679+00	-	679+80	USH 41/45 SB LT	80
680+47	-	682+40	USH 41/45 SB LT	193
			TOTAL 0010	273

Standard Detail Drawing List

08E14-01	TRACKING PAD
13C01-17	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C09-11A	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-11B	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-11C	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C11-11A	RURAL DOWELED CONCRETE PAVEMENT
13C11-11B	RURAL DOWELED CONCRETE PAVEMENT
13C18-02A	CONCRETE PAVEMENT JOINTING
13C18-02B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-02C	CONCRETE PAVEMENT JOINT TIES
13C18-02D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
14B07-14A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14H	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
14B15-08A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-08B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-08C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B42-03A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-02A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-03A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B47-02A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16E	PAVEMENT MARKING (LEFT TURN LANE)
15D03-02	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. WITH BARRIER
15D12-04	TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
15D27-02	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
16A01-06	LANDMARK REFERENCE MONUMENTS AND COVERS



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.

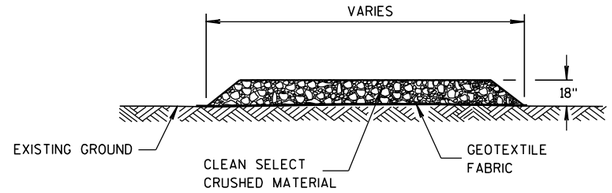
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

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

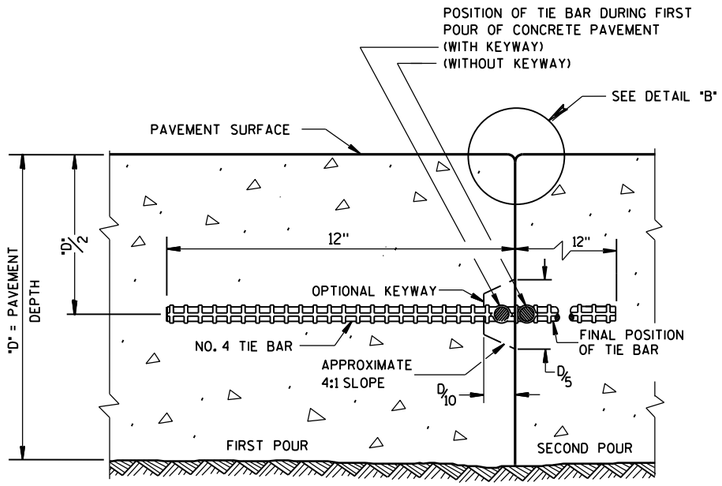
APPROVED

3/24/2011	/S/ Jerry H. Zona	
DATE	ROADWAY STANDARDS ENGINEER	ENT

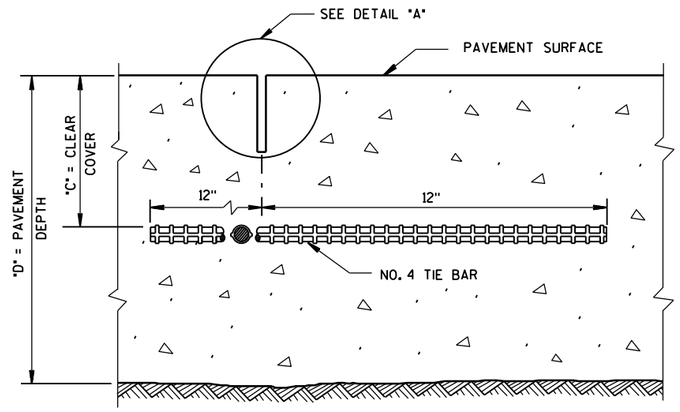
FHWA

6

S.D.D. 8 E 14-1



CONSTRUCTION JOINT



SAWED JOINT

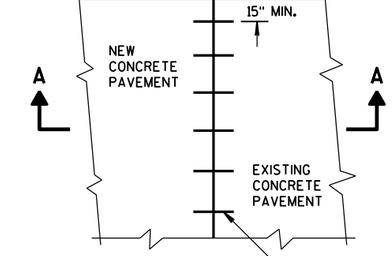
GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

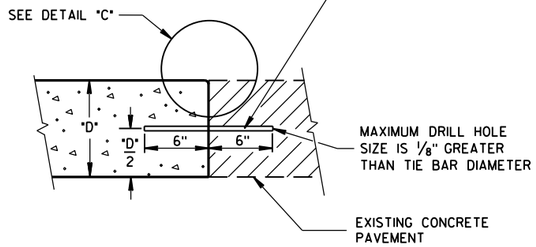
CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

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

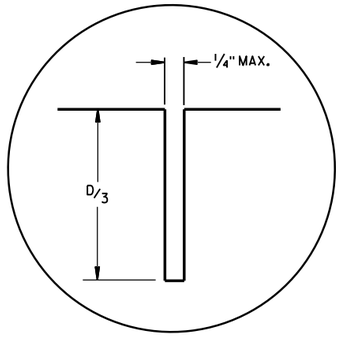


PLAN VIEW

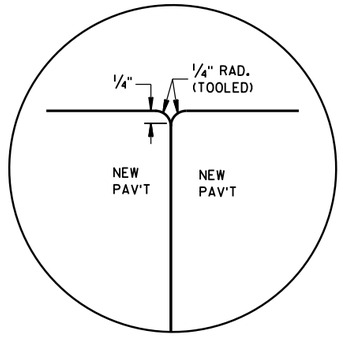


SECTION A-A

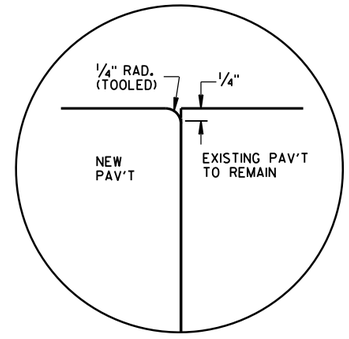
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT



DETAIL "A"



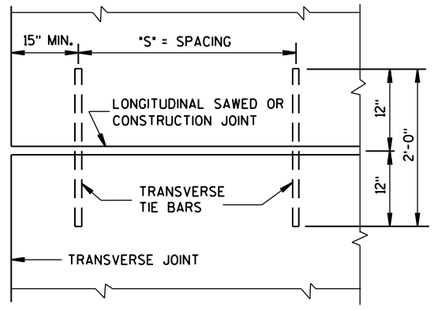
DETAIL "B"



DETAIL "C"

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

9/2014 DATE

/S/ Deb Bischoff
PAVEMENT POLICY & DE ...NEER

FHWA

6

S.D.D. 13 C 1-17

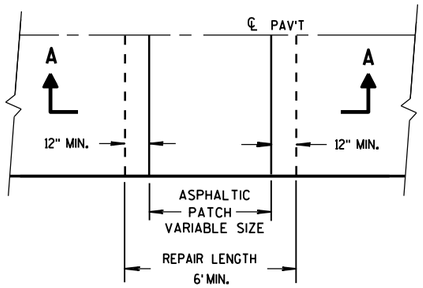
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES. ADDITIONAL SAW CUTS ARE NOT PAID FOR BY THE DEPARTMENT.

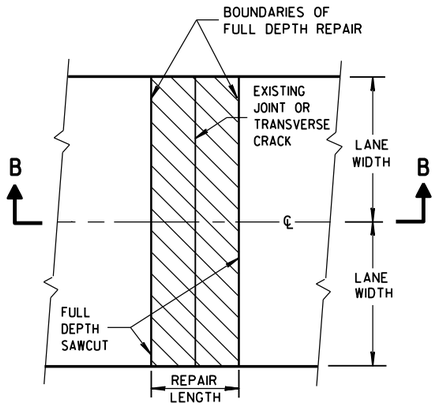
PROVIDE A 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK IN THE SAME LANE.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NONDOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

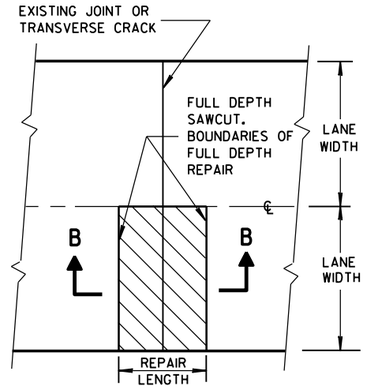
(1) DOWEL BARS MIGHT NOT EXIST.



PLAN VIEW



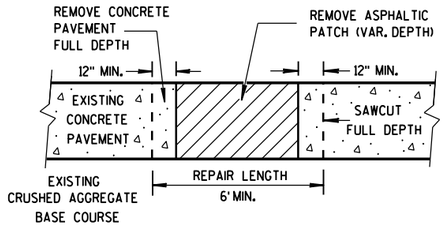
PLAN VIEW
(DOUBLE LANE REPAIR)



PLAN VIEW
(SINGLE LANE REPAIR)

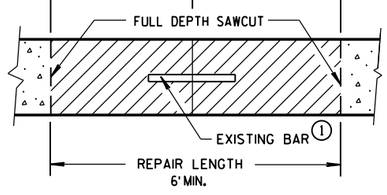
FULL DEPTH CONCRETE PAVEMENT REMOVAL

(SEE NOTE)



SECTION A-A

HMA PATCH REMOVAL



SECTION B-B

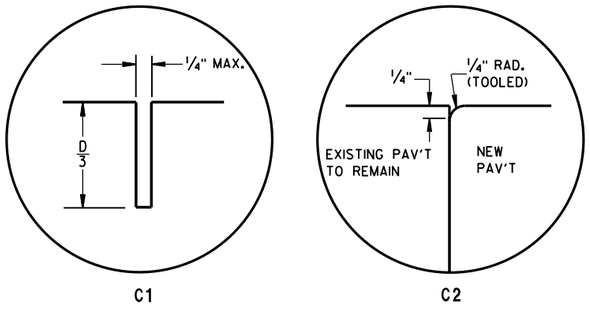
CONCRETE REMOVAL

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

S.D.D. 13 C 9-11a

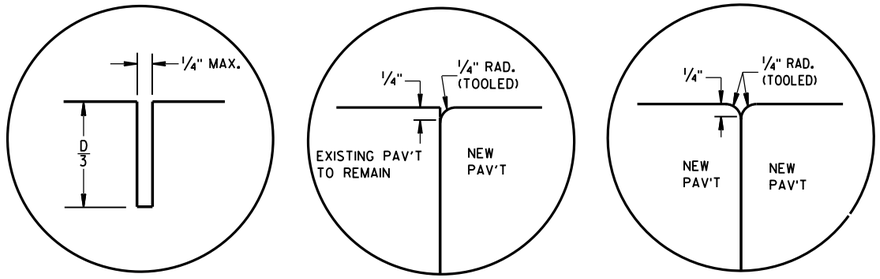


C1 C2

TRANSVERSE JOINTS

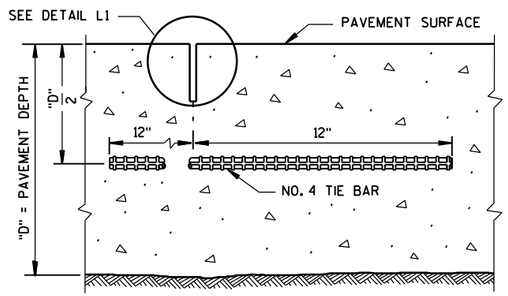
TIE BAR TABLE

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"



L1 L2 L3

LONGITUDINAL JOINTS



SECTION C-C

SAWED LONGITUDINAL JOINT

GENERAL NOTES

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

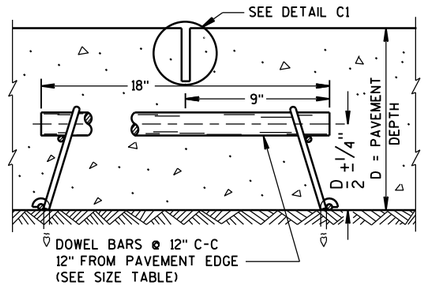
CONCRETE PAVEMENT REPAIRS OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

DO NOT SEAL OR FILL JOINTS.

ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

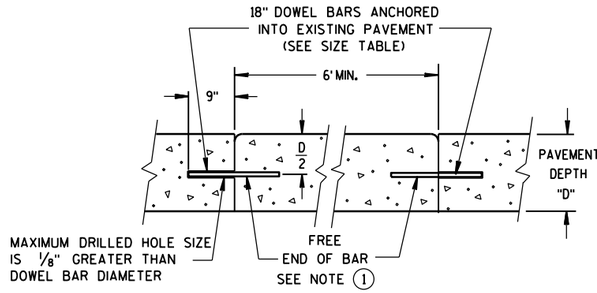
FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

(1) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

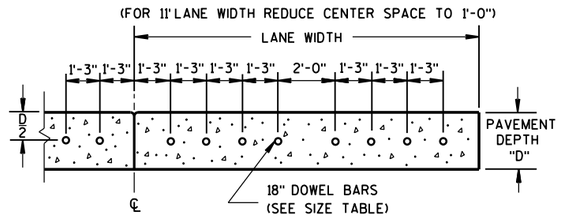


SECTION F-F

CONTRACTION JOINT



SECTION D-D

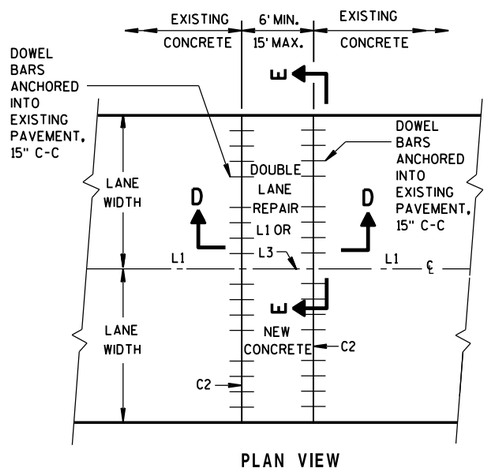


SECTION E-E

DRILLED DOWEL BAR CONSTRUCTION JOINT

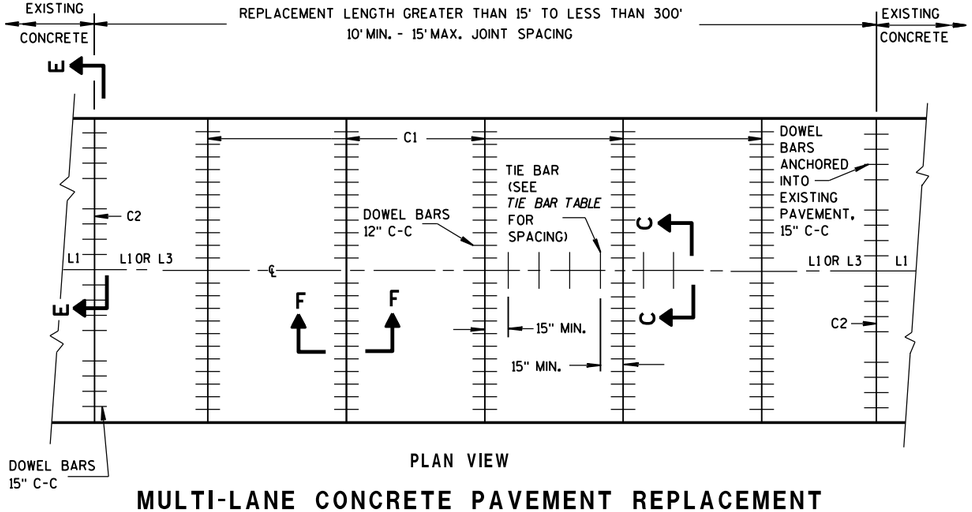
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6",6 1/2"	NONE	12'
7",7 1/2"	1"	14'
8",8 1/2"	1 1/4"	15'
9",9 1/2"	1 1/4"	15'
10" & ABOVE	1 1/2"	15'



PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPAIR



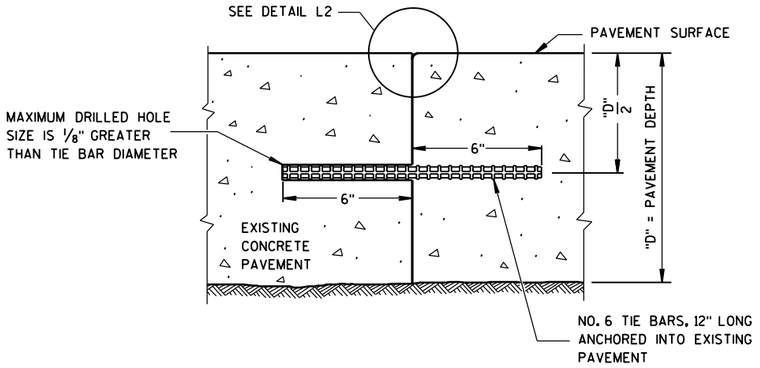
PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 13 C 9-11b



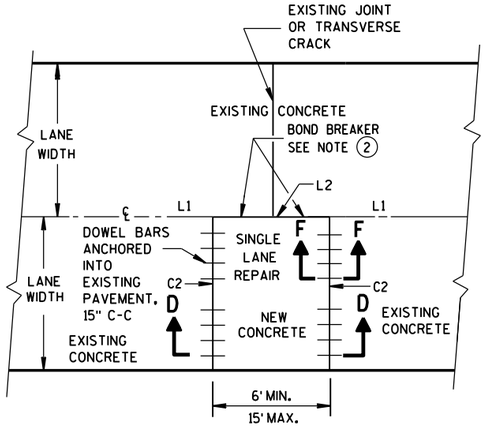
SECTION G-G

TIE BARS ANCHORED INTO EXISTING PAVEMENT

GENERAL NOTES

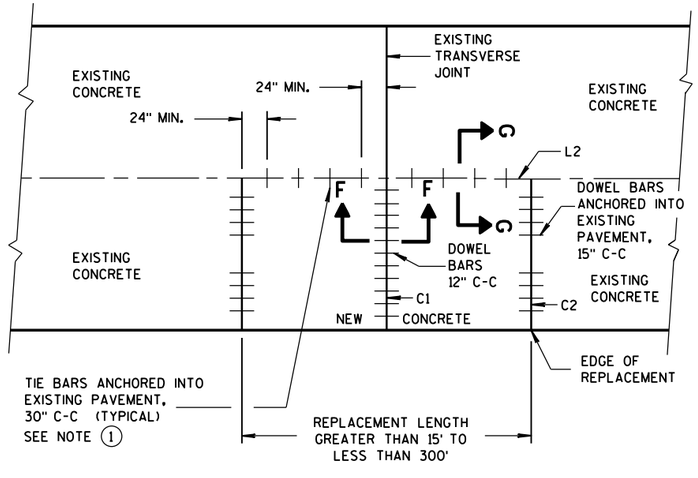
(1) WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES AND TO SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.

(2) USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPLACEMENT

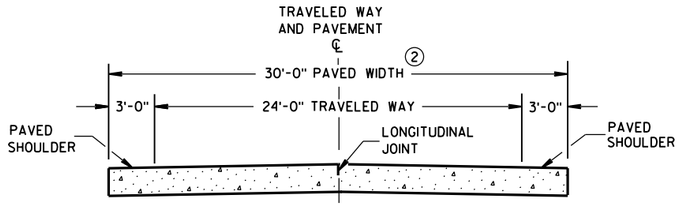
CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12-2013 DATE
/S/ Deb Bischoff
PAVEMENT POLICY & DE
FHWA

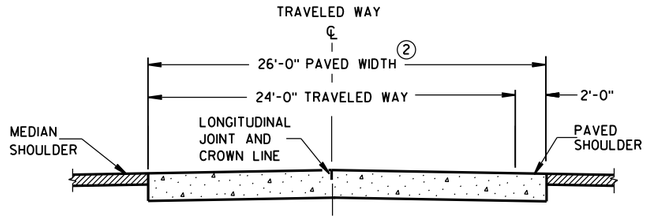
6

S.D.D. 13 C 9-11c

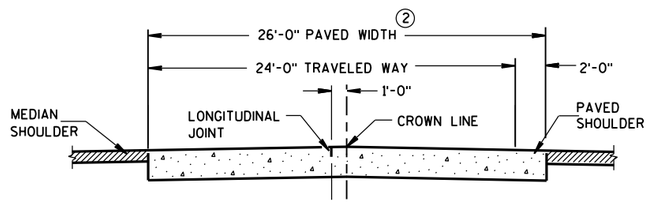


SECTION A-A ①

TWO-LANE TWO-WAY HIGHWAY



SECTION B-B



ALTERNATIVE SECTION B-B ①

DIVIDED HIGHWAY

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT SEAL OR FILL CONTRACTION JOINTS.

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES AND A MAXIMUM OF 18 INCHES FROM THE FREE EDGE OF PAVEMENT.

CONSTRUCTION JOINTS

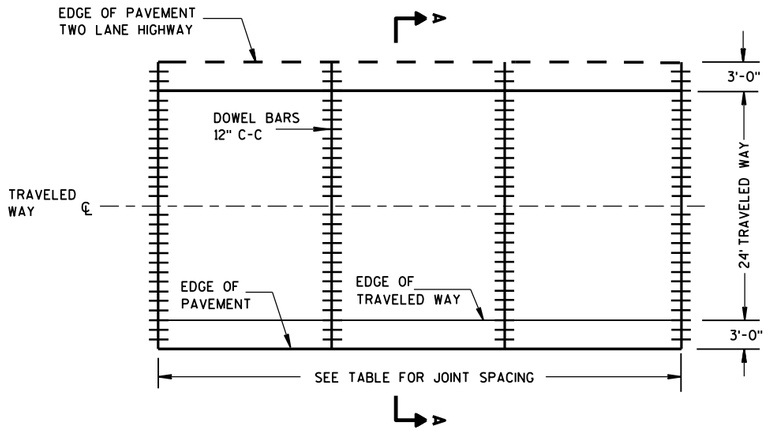
LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

① REFER TO TYPICAL CROSS SECTIONS FOR ADDITIONAL DETAILS.

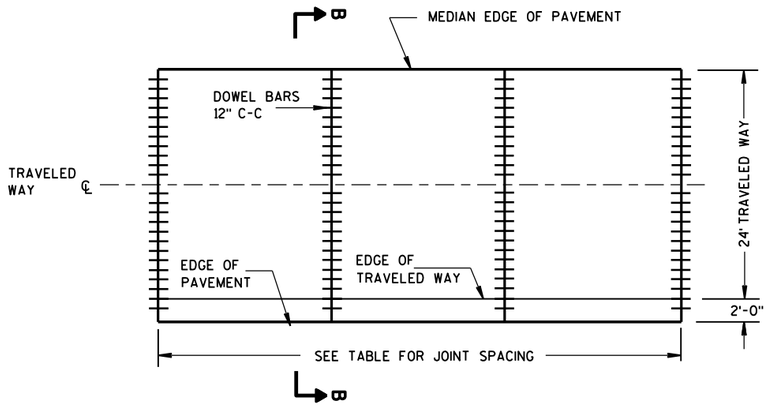
② MEASURE THE ENTIRE PAVED WIDTH INCLUDING THE PORTION(S) LABELED PAVED SHOULDER AS CONCRETE PAVEMENT.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'



CONTRACTION JOINT LAYOUT
FOR TWO-LANE TWO-WAY HIGHWAY



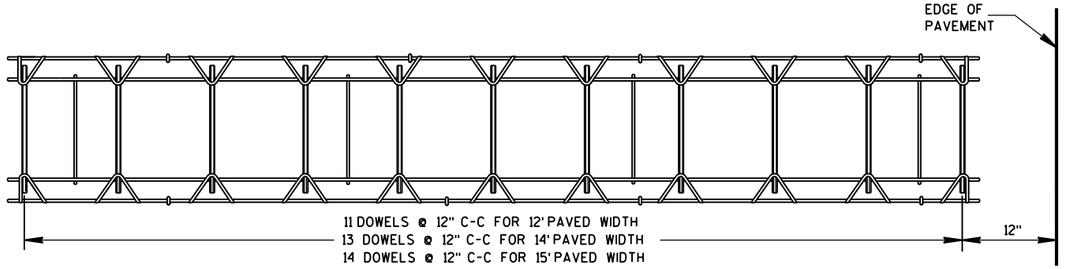
CONTRACTION JOINT LAYOUT
FOR DIVIDED HIGHWAY

RURAL DOWELED
CONCRETE PAVEMENT

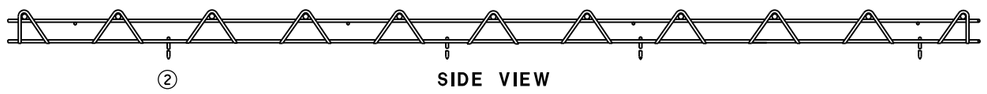
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 13 C 11-11a



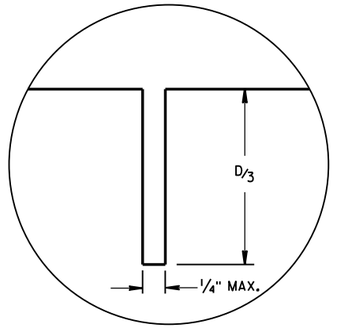
PLAN VIEW



SIDE VIEW

(NORMAL TO CENTERLINE)

CONTRACTION JOINT DOWEL ASSEMBLY ①



JOINT DETAIL

GENERAL NOTES

① OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.

② SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.

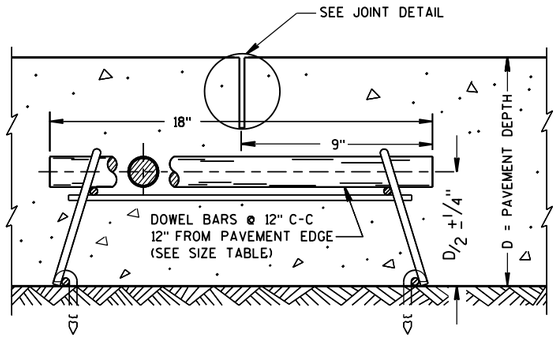
③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A 1/4-INCH RADIUS AT FORMED JOINTS.

④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.

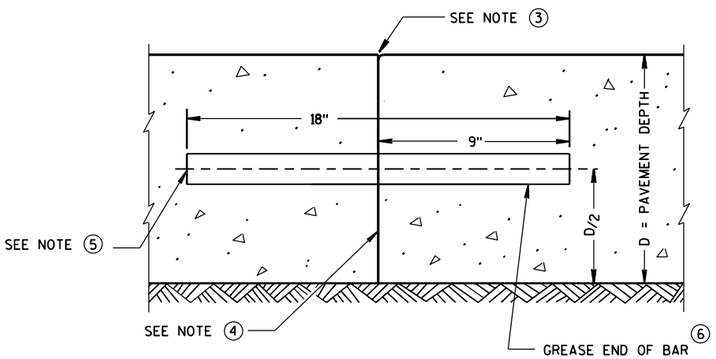
⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL BAR CONSTRUCTION JOINT* DETAIL.

⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

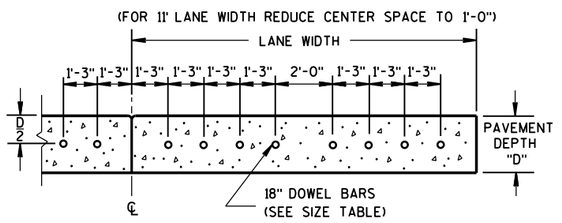
⑦ ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS 1/8-INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



DOWELED CONTRACTION JOINT



TRANSVERSE CONSTRUCTION JOINT



DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦

RURAL DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

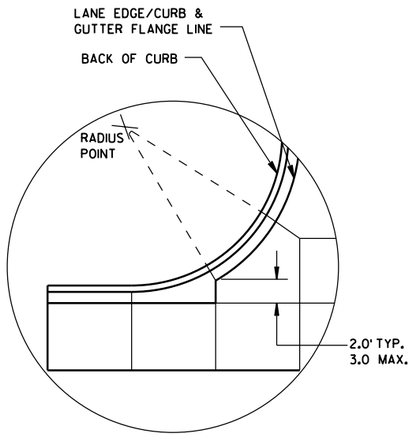
APPROVED
5/3/2013 DATE
/S/ Deb Bischoff PAVEMENT POLICY & DE
FHWA

6

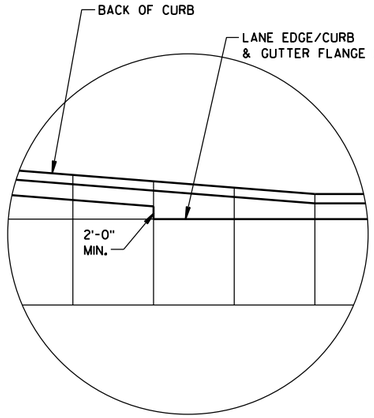
S.D.D. 13 C 11-11b

6

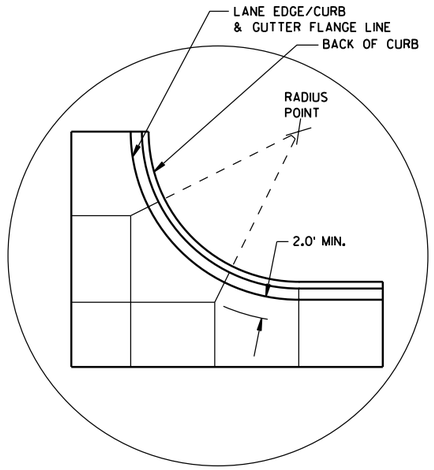
S.D.D. 13 C 11-11b



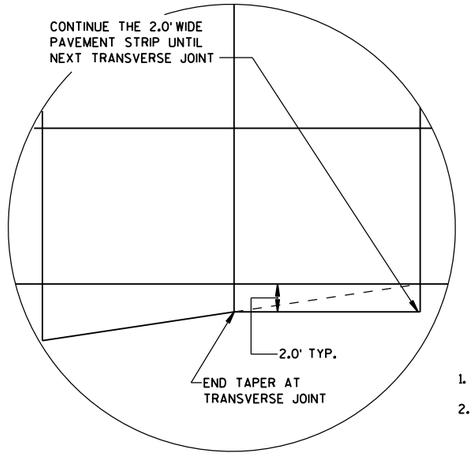
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

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

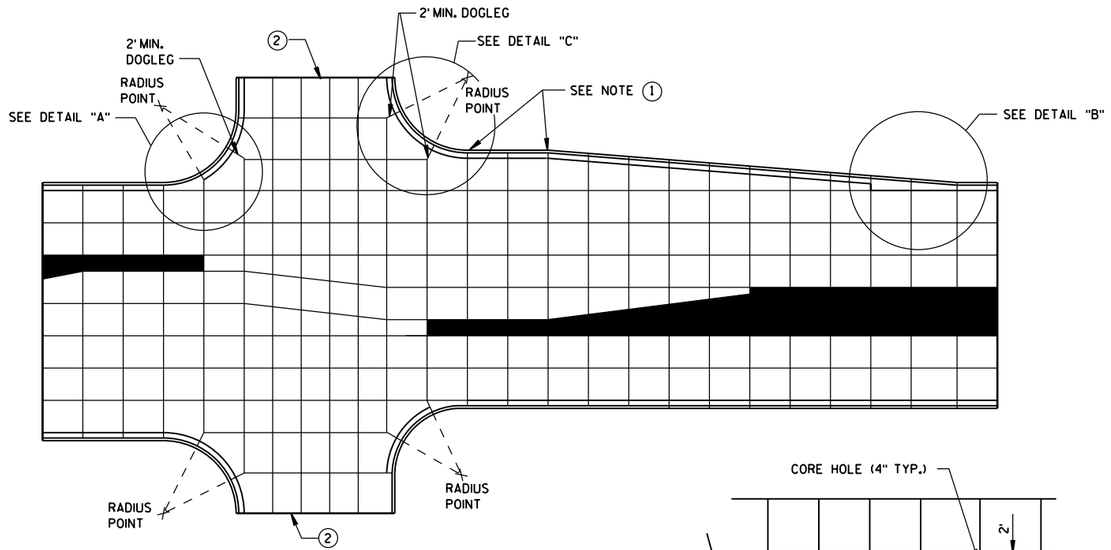
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

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

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

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

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

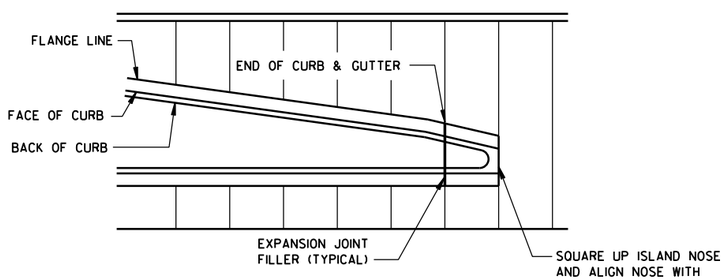


STANDARD INTERSECTION

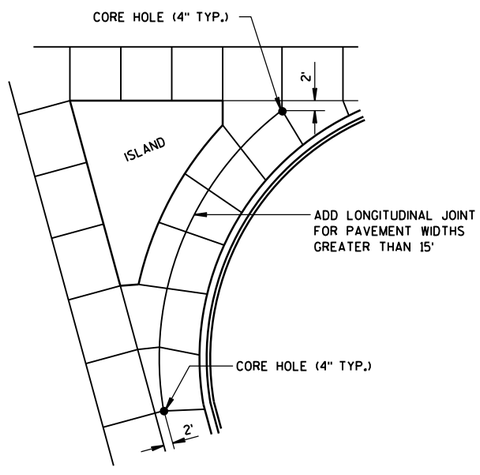
PAVEMENT DEPTH AND JOINT SPACING TABLE

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

SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

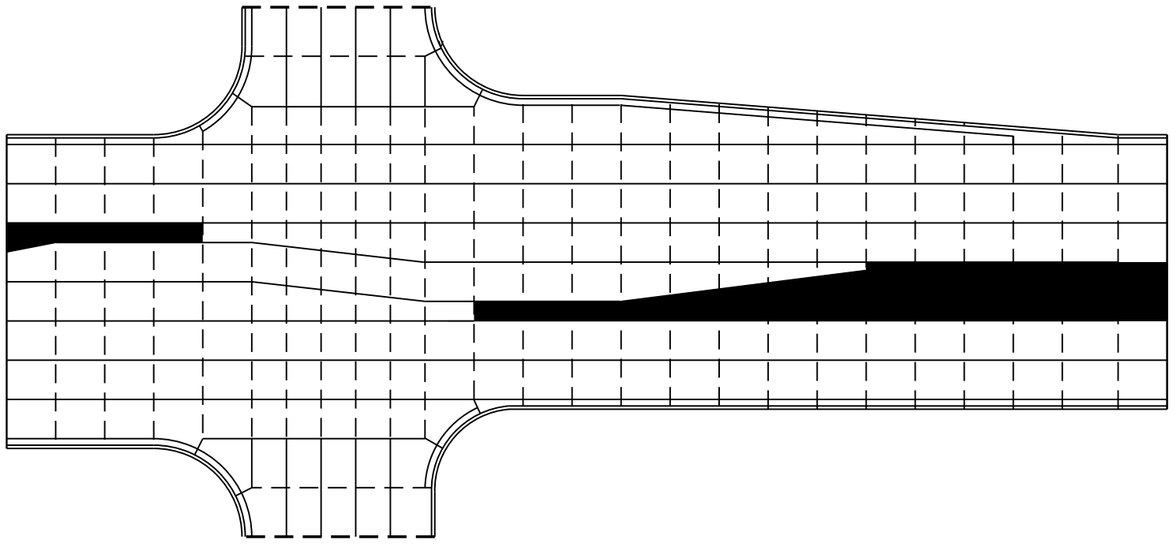
6
S.D.D. 13 C 18-2a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

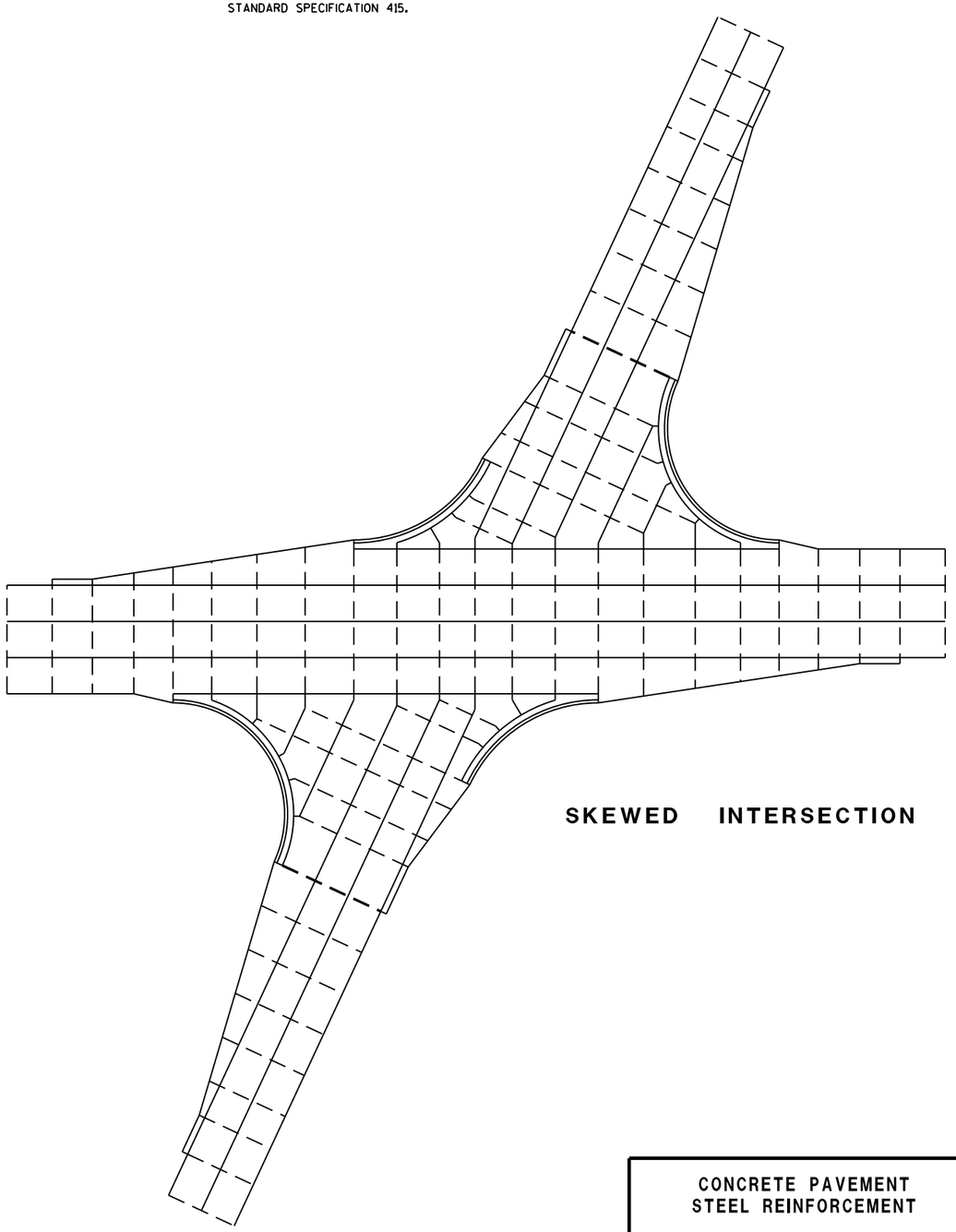
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

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



SKEWED INTERSECTION

CONCRETE PAVEMENT
STEEL REINFORCEMENT

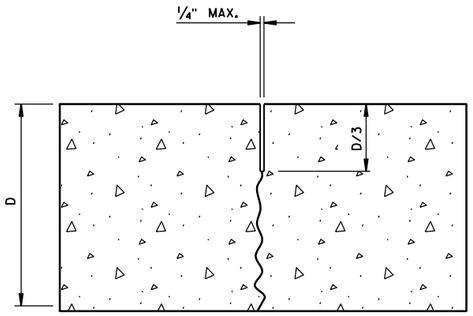
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

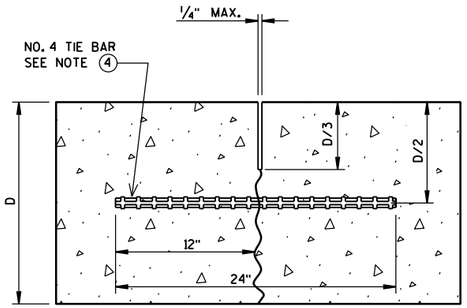
S.D.D. 13 C 18-2b

6

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



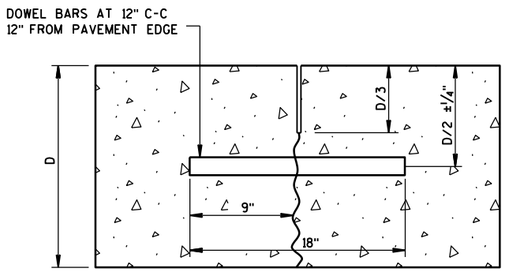
UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

GENERAL NOTES

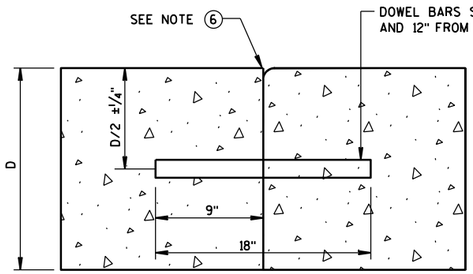
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF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



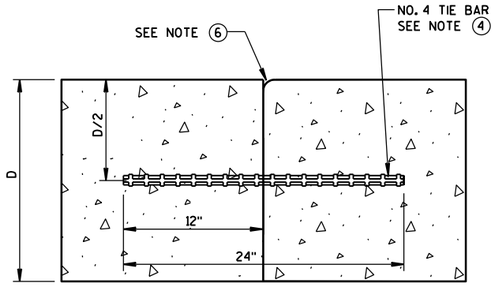
DOWELED-TRANSVERSE

CONTRACTION JOINTS

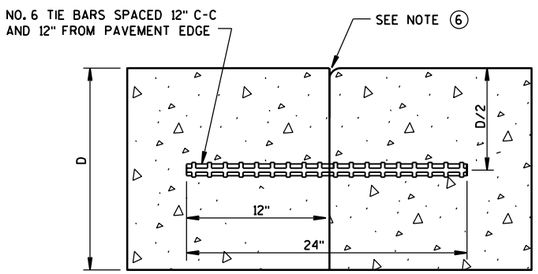
SEE NOTE (2)



DOWELED TRANSVERSE

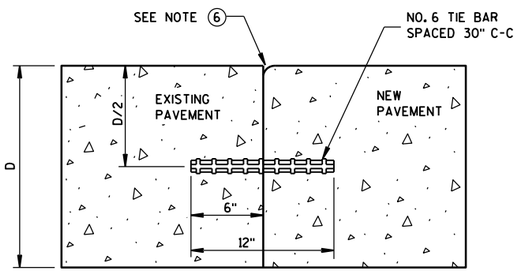


TIED LONGITUDINAL



TIED TRANSVERSE

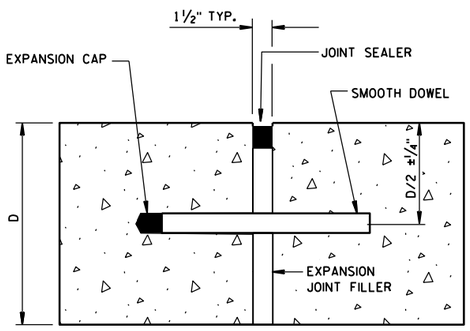
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



TIED LONGITUDINAL TO EXISTING

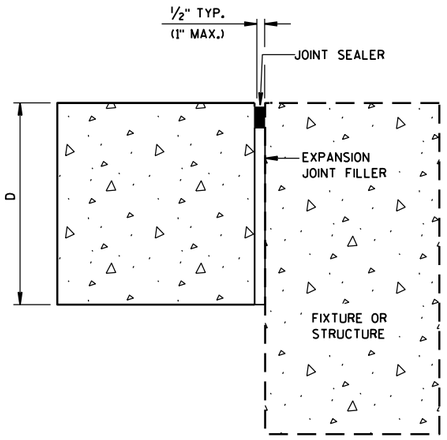
CONSTRUCTION JOINTS

SEE NOTE (5)



DOWELED-TRANSVERSE

SEE NOTE (1)



UNTIED-LONGITUDINAL

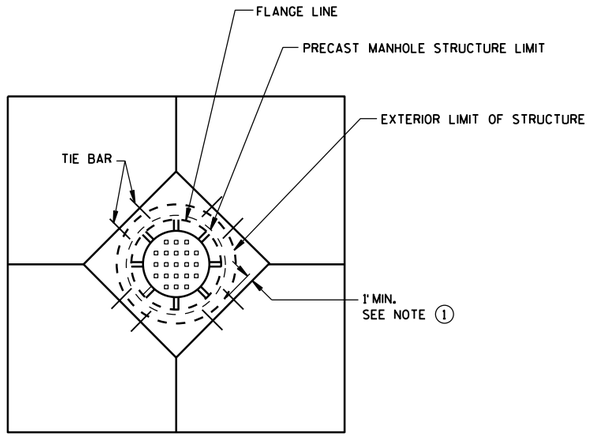
EXPANSION JOINTS

CONCRETE PAVEMENT
JOINT TYPES

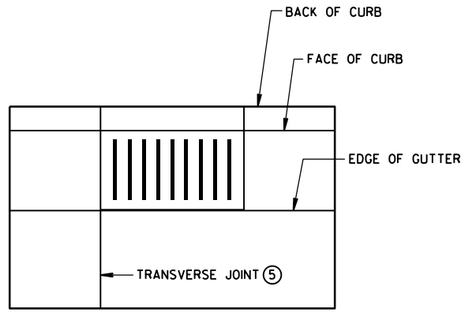
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

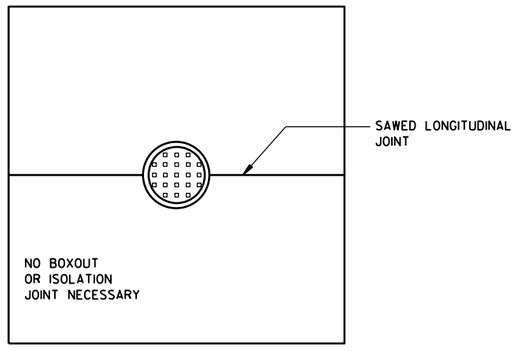
S.D.D. 13 C 18-2c



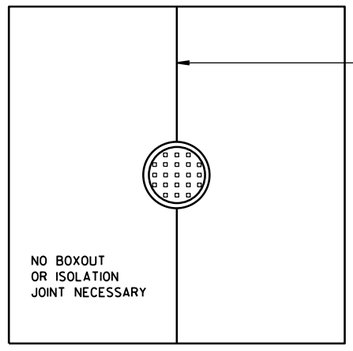
DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS



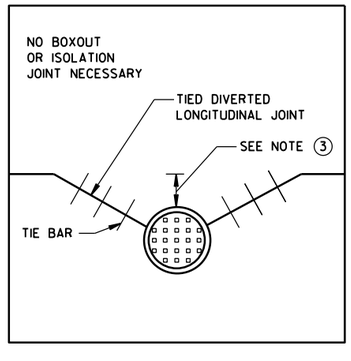
INLET WITH TRANSVERSE JOINT



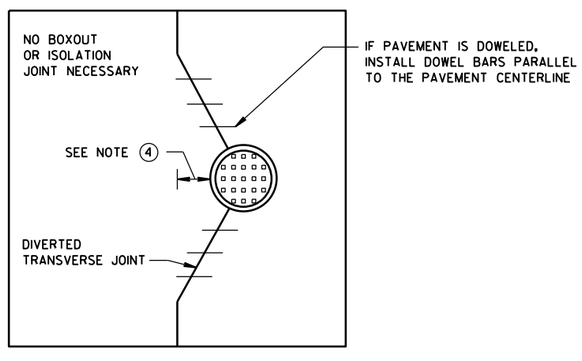
MANHOLE WITH LONGITUDINAL JOINT



MANHOLE WITH TRANSVERSE JOINT



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT

GENERAL NOTES

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

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

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

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

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

CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

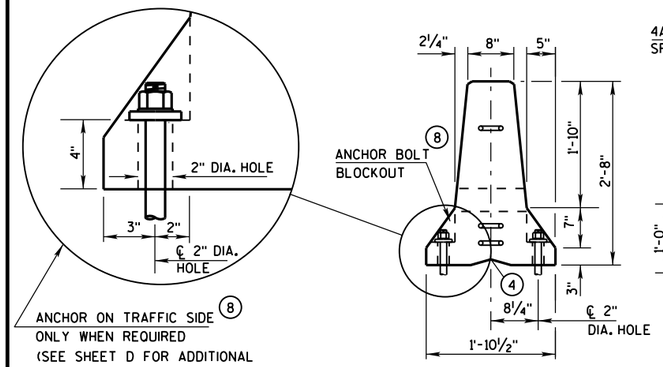
APPROVED

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

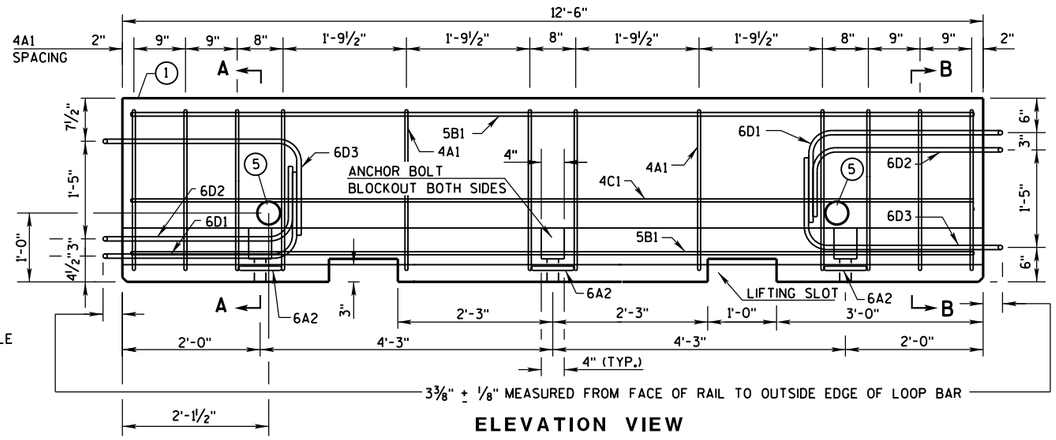
FHWA

6

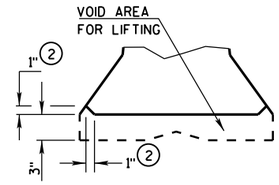
S.D.D. 13 C 18-2d



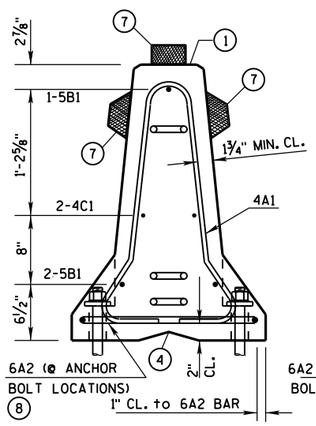
END VIEW



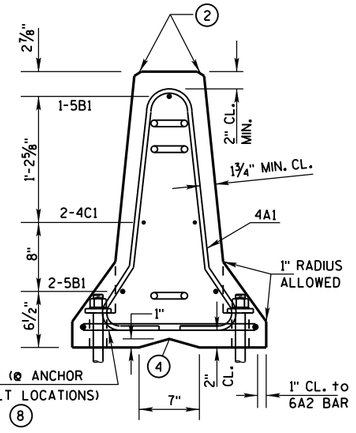
ELEVATION VIEW



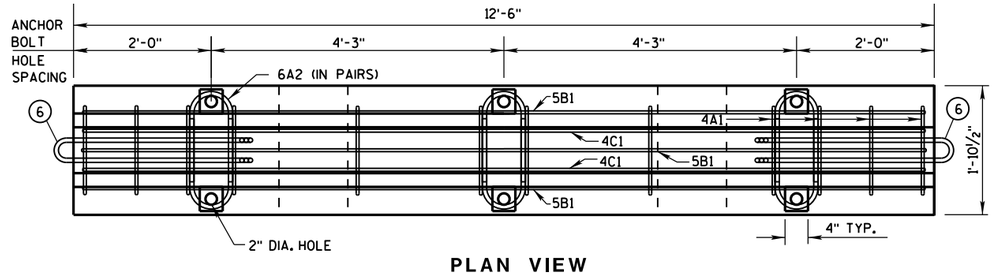
DETAIL "B"
LIFTING SLOT DETAIL



SECTION A-A
(STIRRUP PLACEMENT)

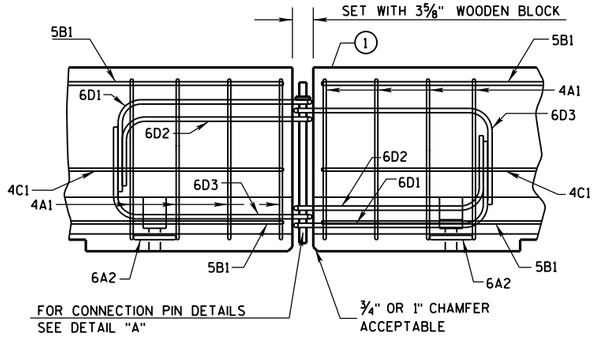


SECTION B-B
(STIRRUP PLACEMENT)

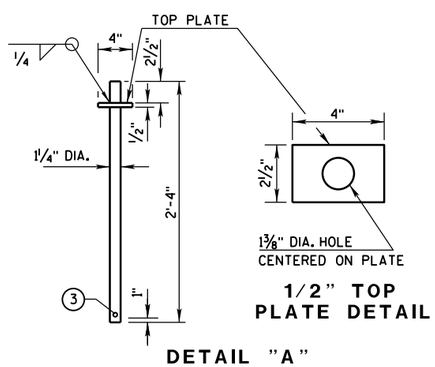


PLAN VIEW

DETAILS OF BARRIER SECTION

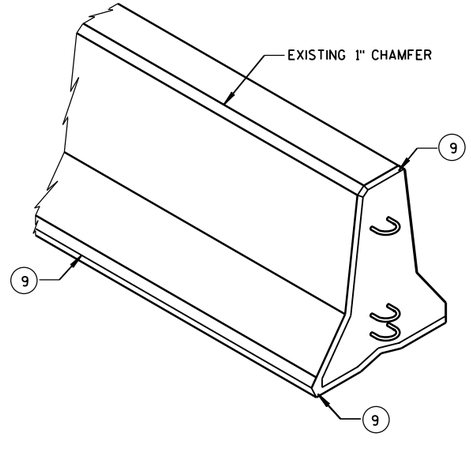


DETAILS OF BARRIER CONNECTION



1/2" TOP
PLATE DETAIL

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



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-14(a) THRU 14B7-14(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: WI CBTP
- 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.

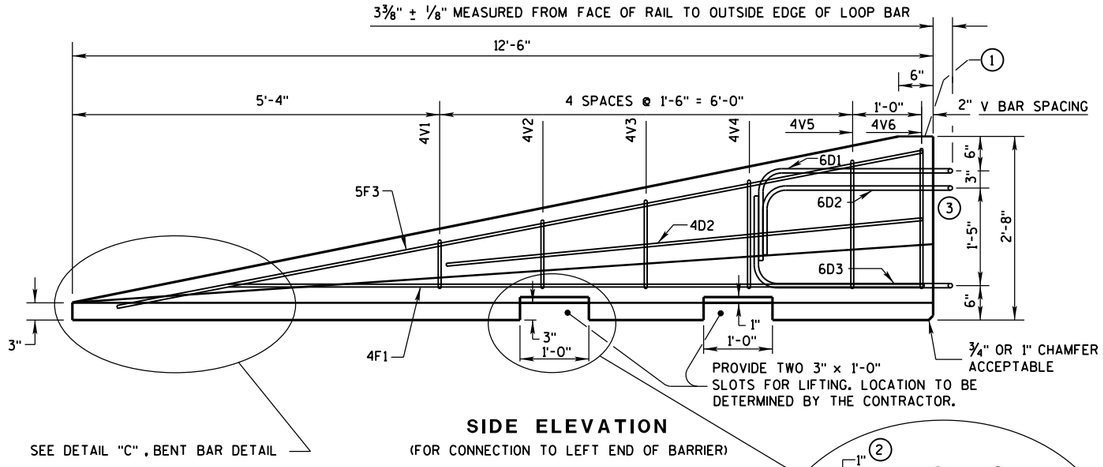
(9) 1" CHAMFER OPTIONAL.

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

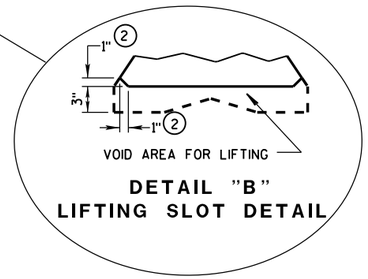
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

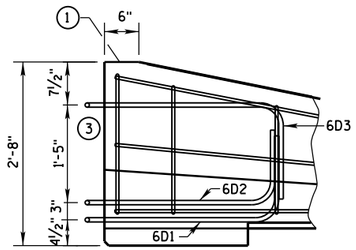
S.D.D. 14 B 7-14a



SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



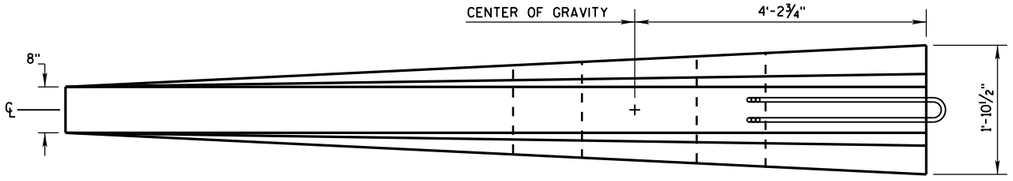
DETAIL "B"
LIFTING SLOT DETAIL



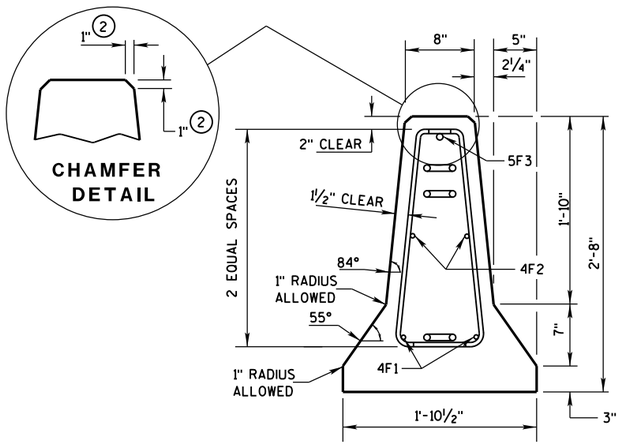
SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

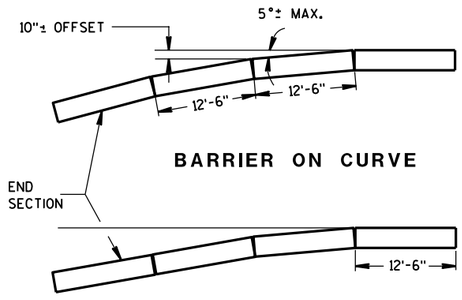
1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



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 TRANSPOI

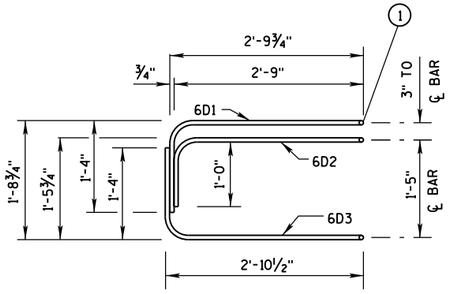
6

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

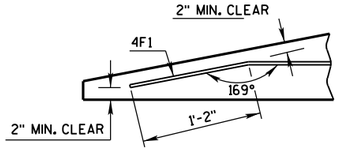
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

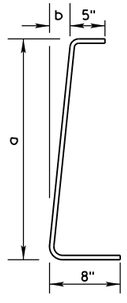
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



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

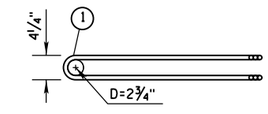
GENERAL NOTES

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

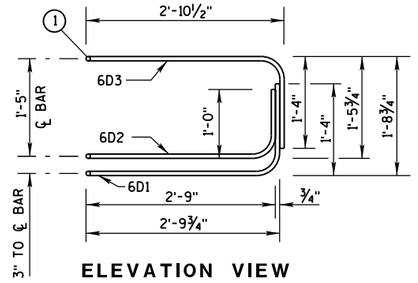
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

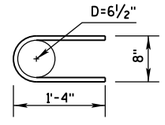
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



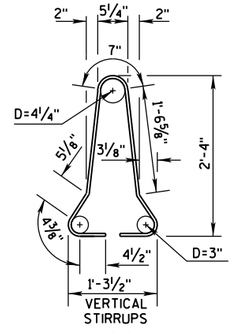
PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



ELEVATION VIEW



6A2



4A1

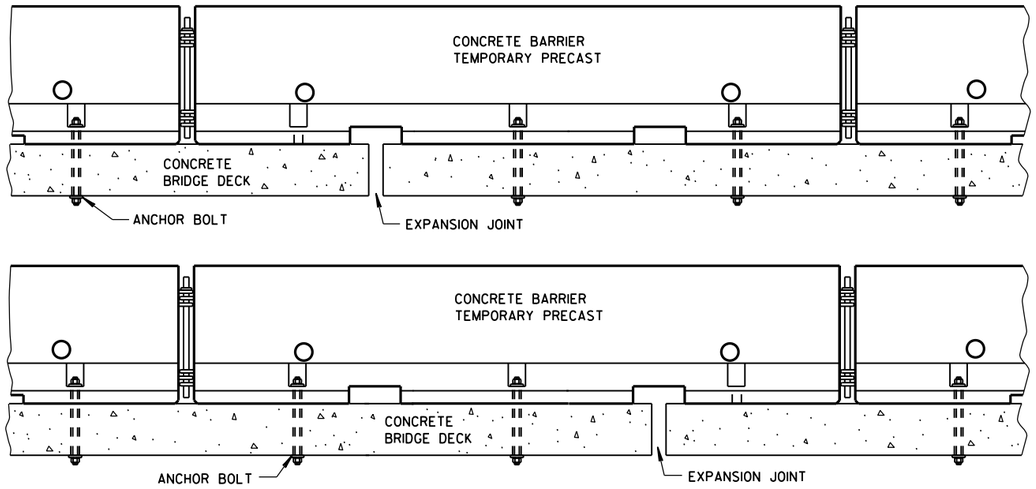
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

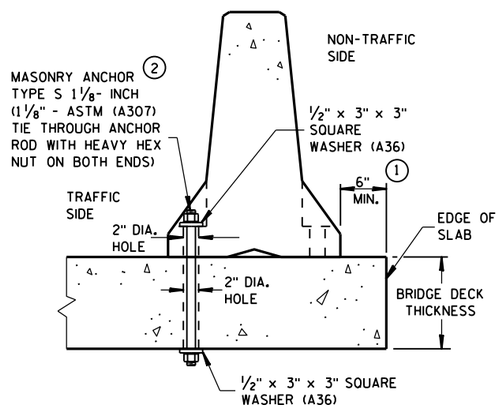
6

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



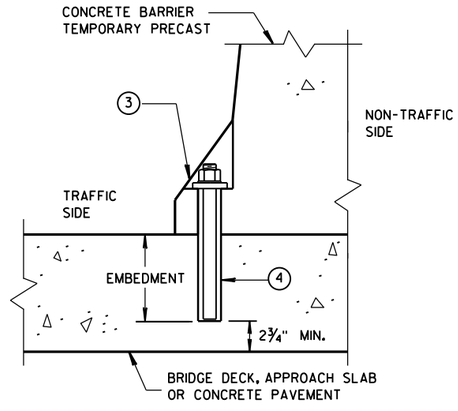
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(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 ② 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.

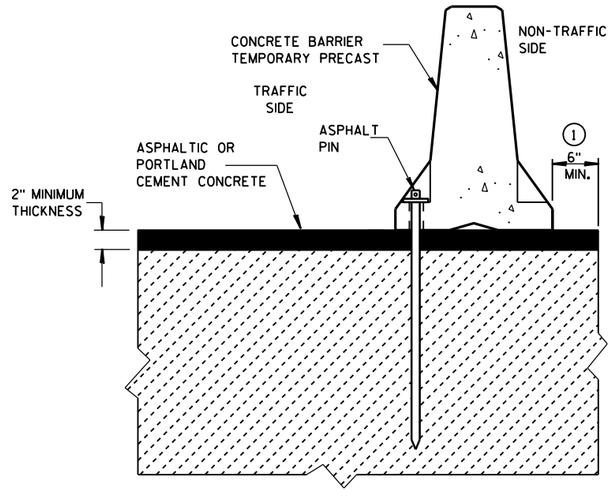
② ANCHORING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST.

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.

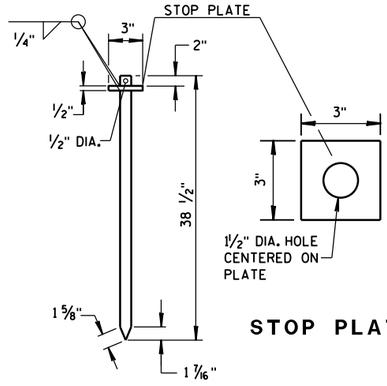
③ 1⅛" DIAMENTER A307 THREADED ROD, ½" X 3" X 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL, ASTM A563A HEAVY HEX NUT.

④ ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5¼" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.



STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

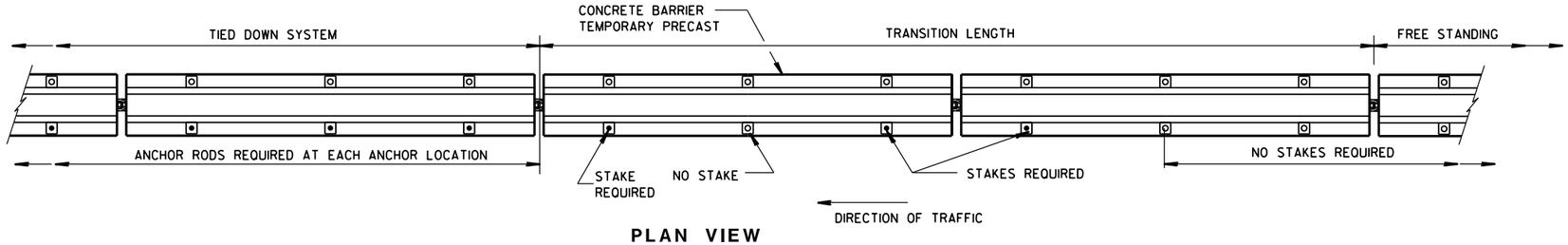
(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



STOP PLATE

ASPHALT PIN

(ASTM A36 STEEL)



PLAN VIEW

FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

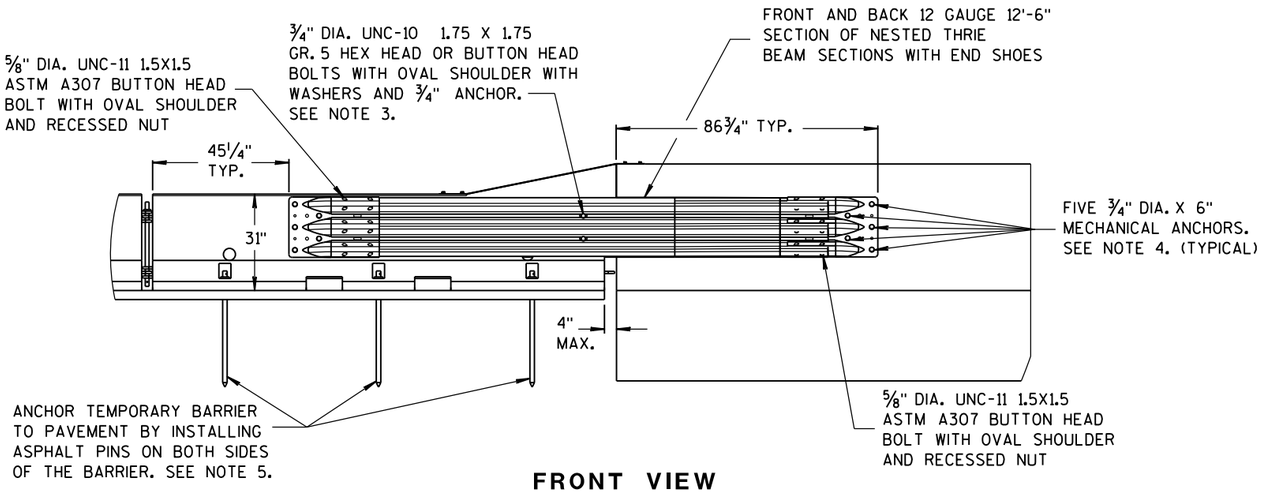
(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

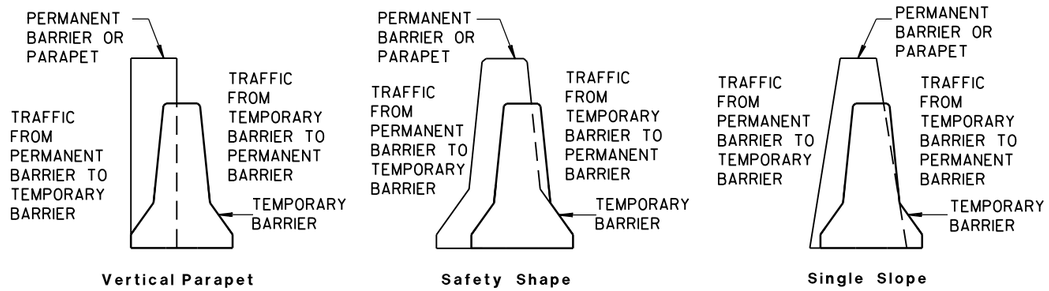
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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



FRONT VIEW



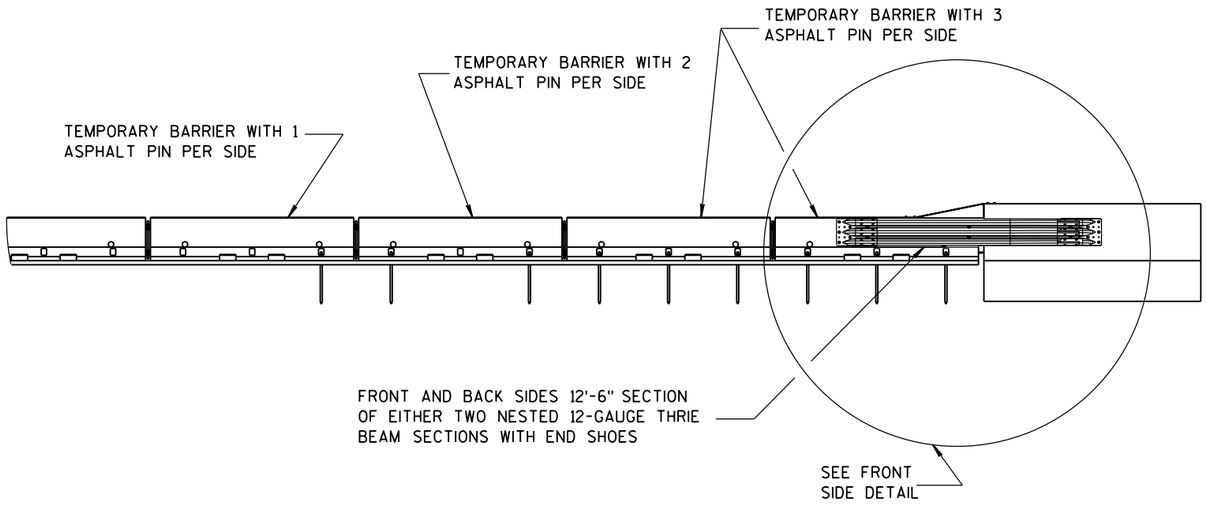
TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

NOTES

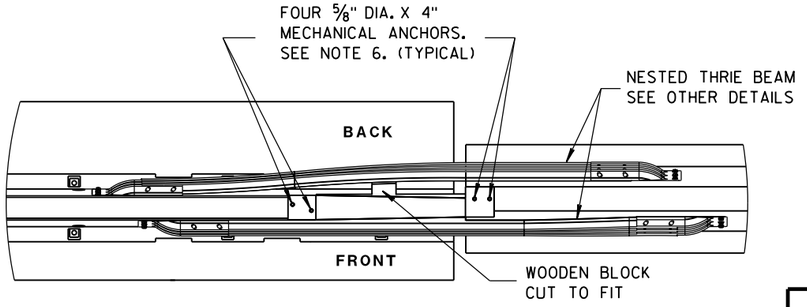
NESTED THRIE BEAM IS REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS.

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

BACK VIEW



FRONT VIEW



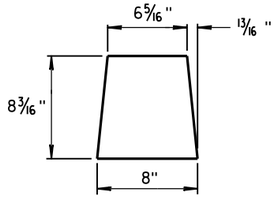
PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

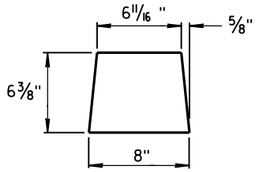
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

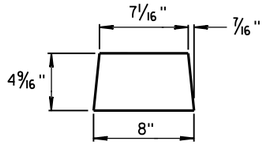
6
S.D.D. 14 B 7-14e



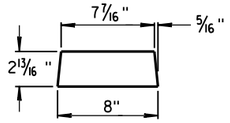
GUSSET 1



GUSSET 2

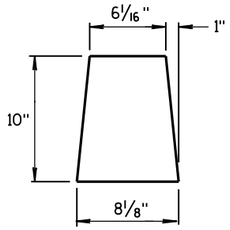


GUSSET 3

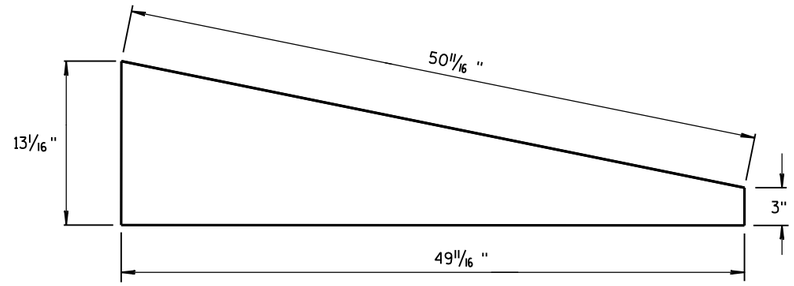


GUSSET 4

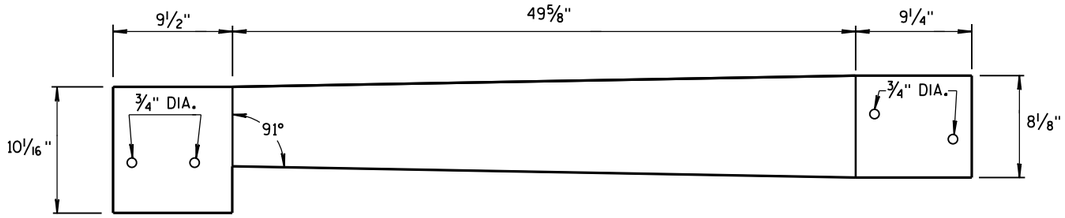
GUSSETS

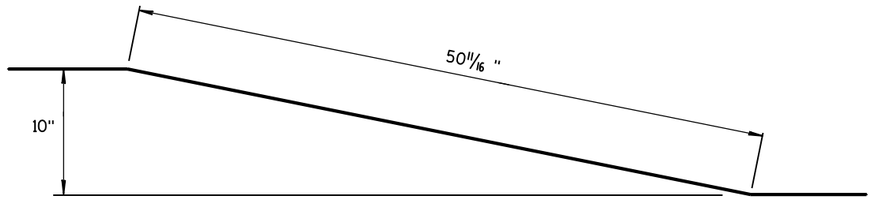


END PLATE



SIDE PLATE

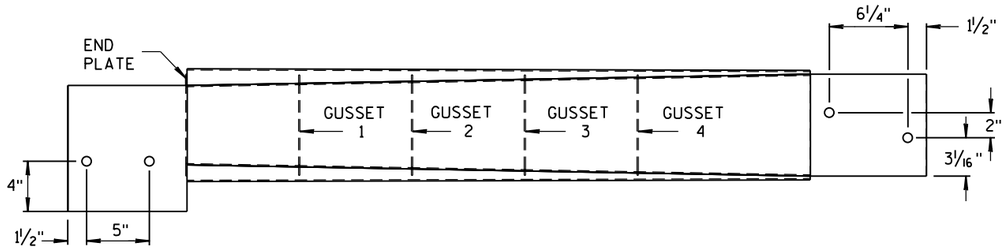


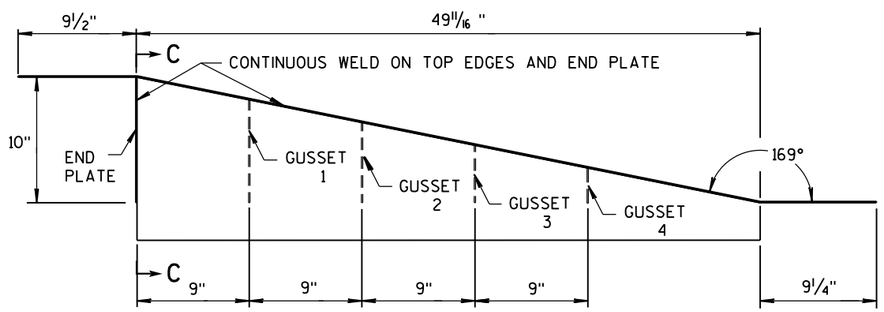


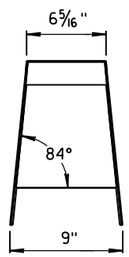
TOP PLATE

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.







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.

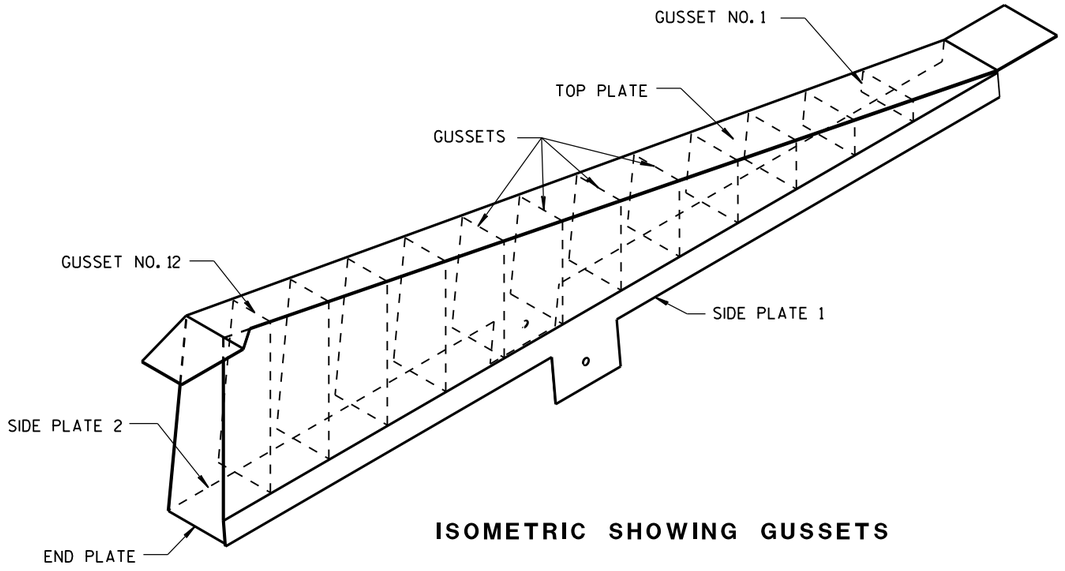
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

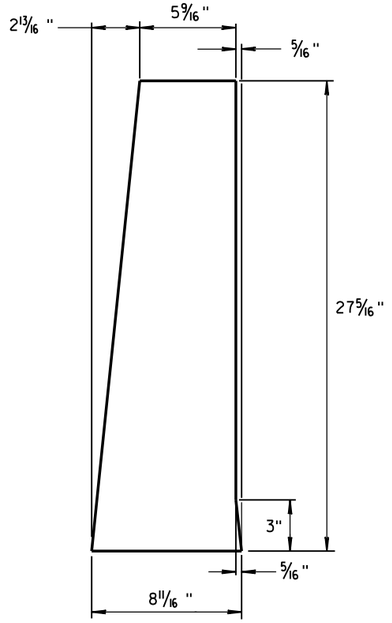
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 7-14f

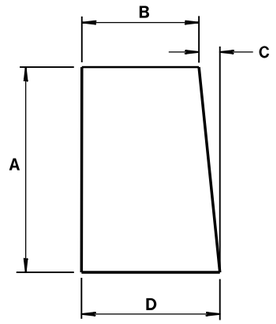


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



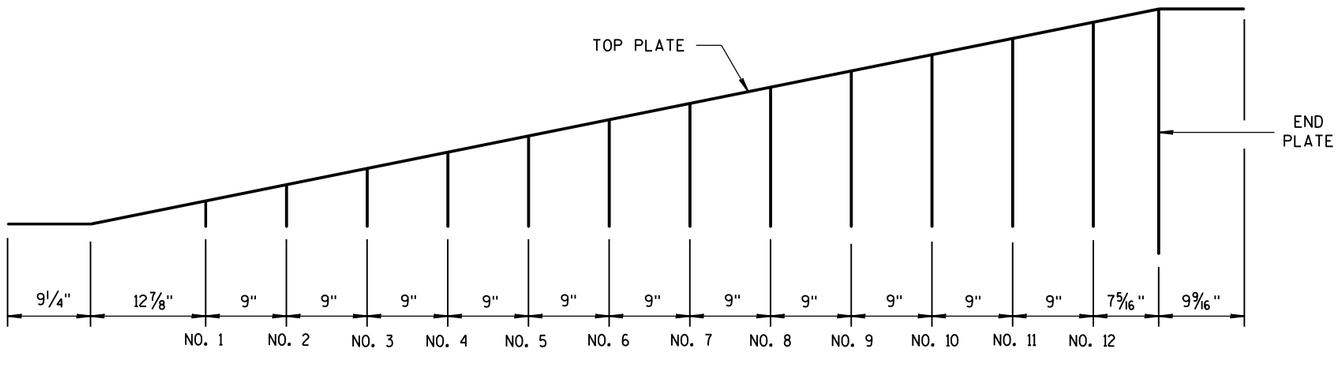
GUSSETS 1 - 12

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

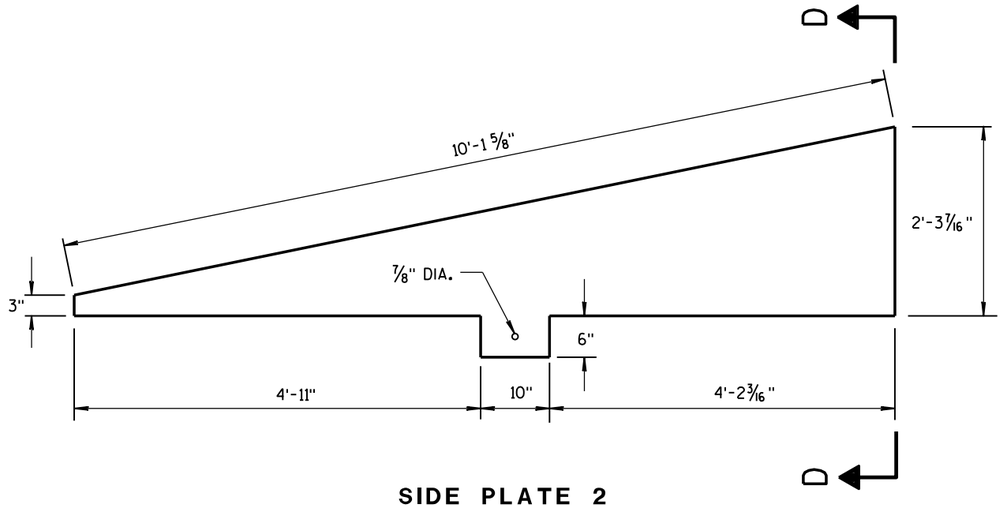
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

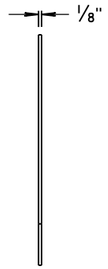
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

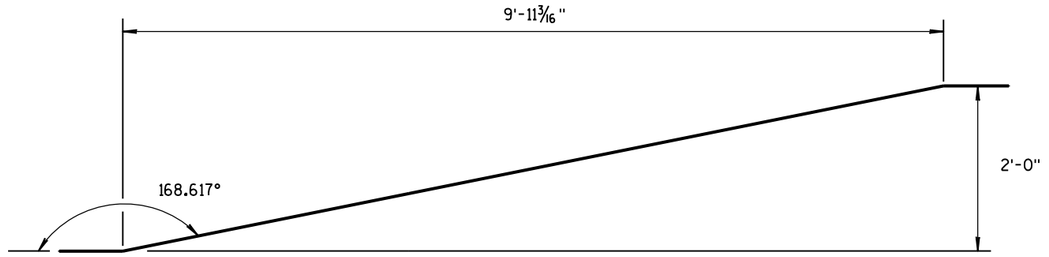
S.D.D. 14 B 7-14g



SIDE PLATE 2

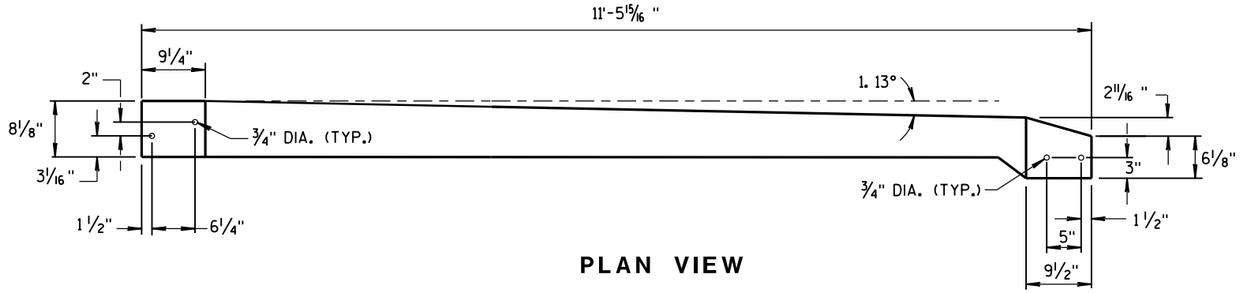


END VIEW



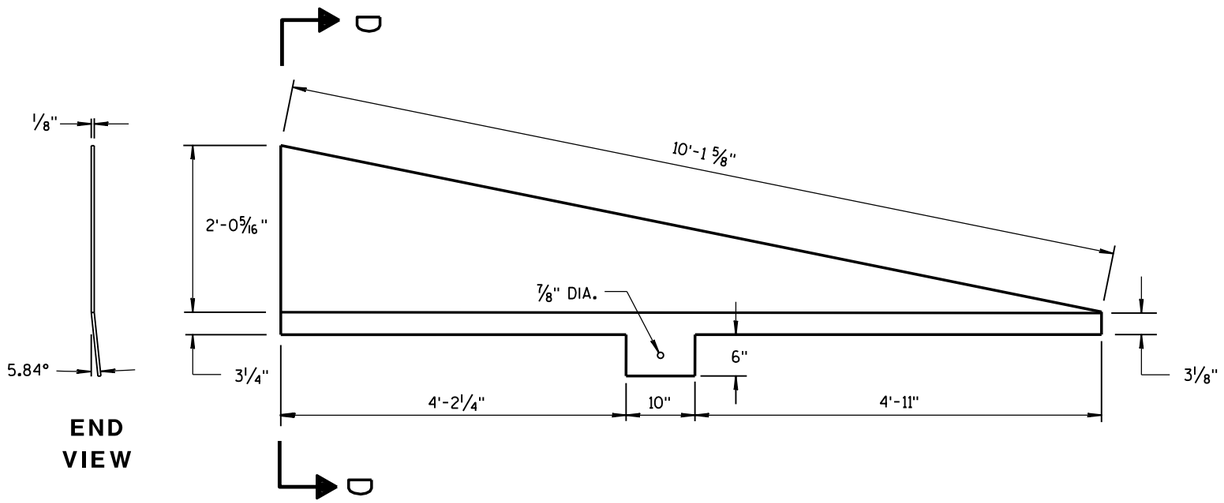
SIDE VIEW

TOP PLATE



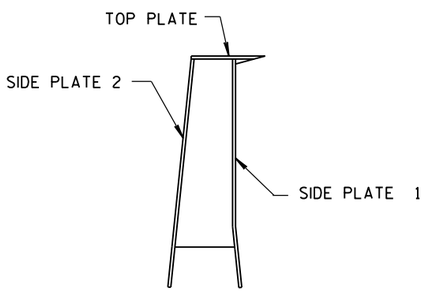
PLAN VIEW

TOP PLATE



END VIEW

SIDE PLATE 1



SECTION D-D

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

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

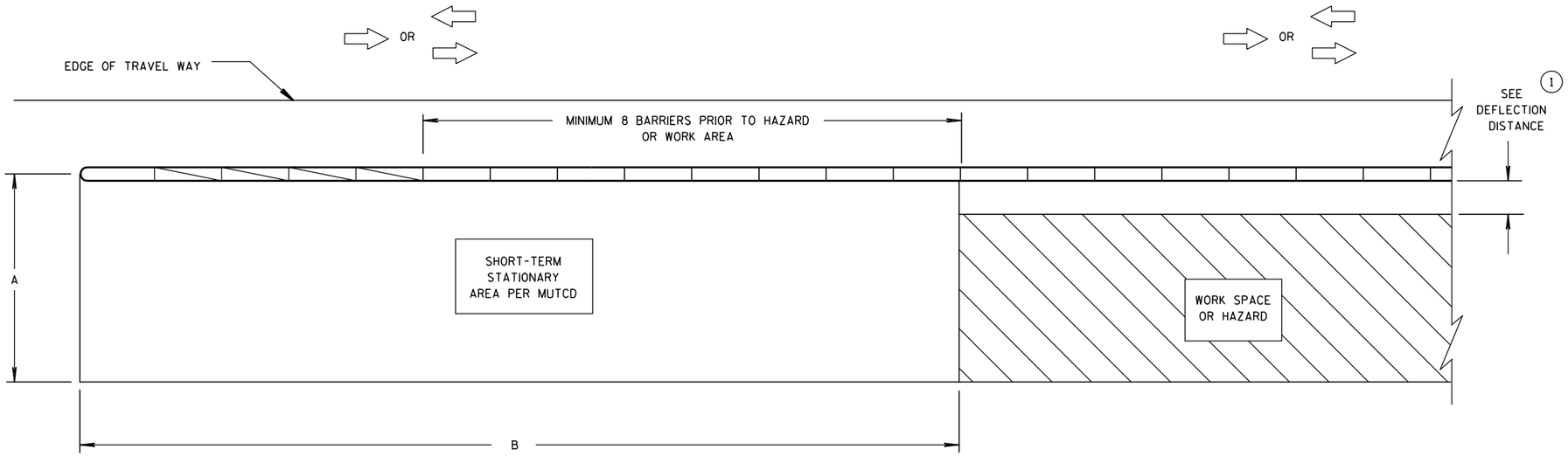
APPROVED
June 2014 — DATE
/S/ Jerry H. Zoda — ROADWAY STANDARD DEVELOPMENT ENGINEER
FHWA

6

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

6

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



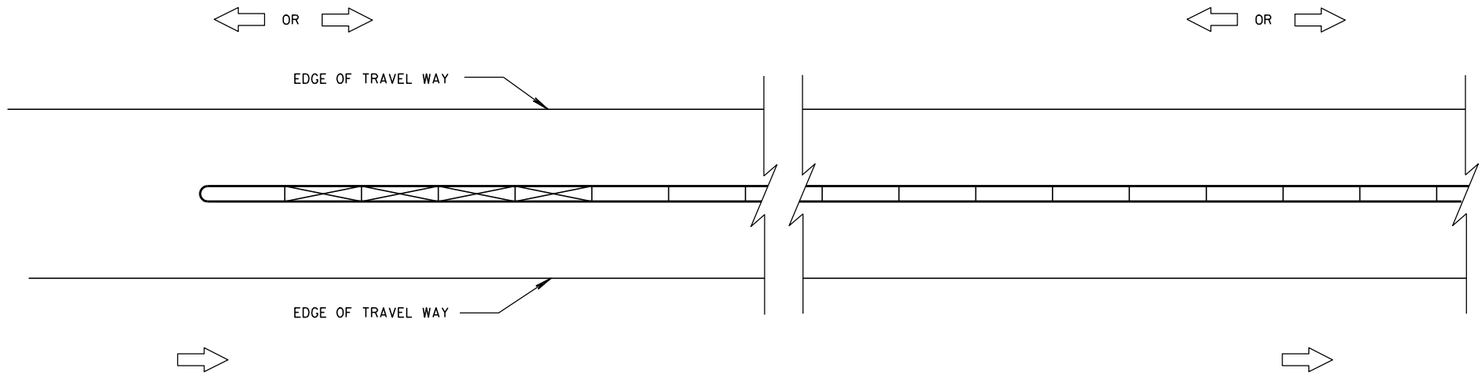
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

DIMENSION A TABLE (2)

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

DIMENSION B TABLE (2)

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



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

LEGEND

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

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

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

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

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

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

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

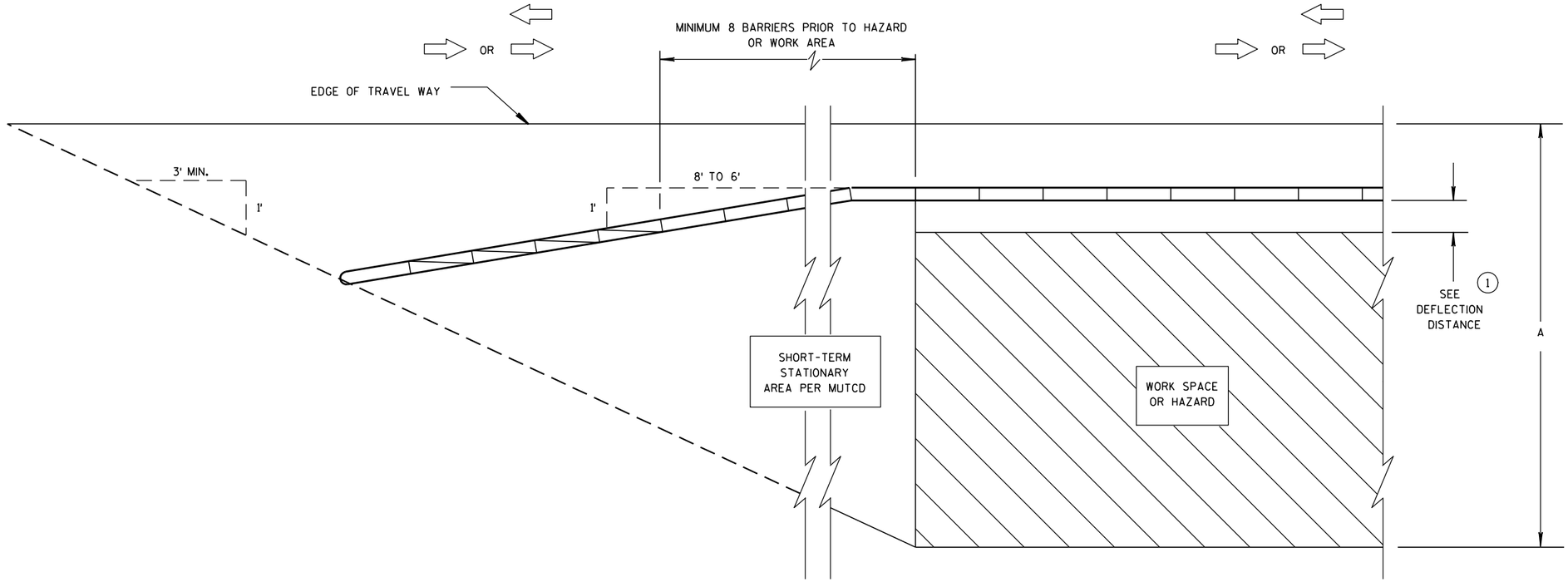
(1) FOR DEFLECTION INFORMATION SEE STANDARD DETAIL DRAWING 14B7.

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

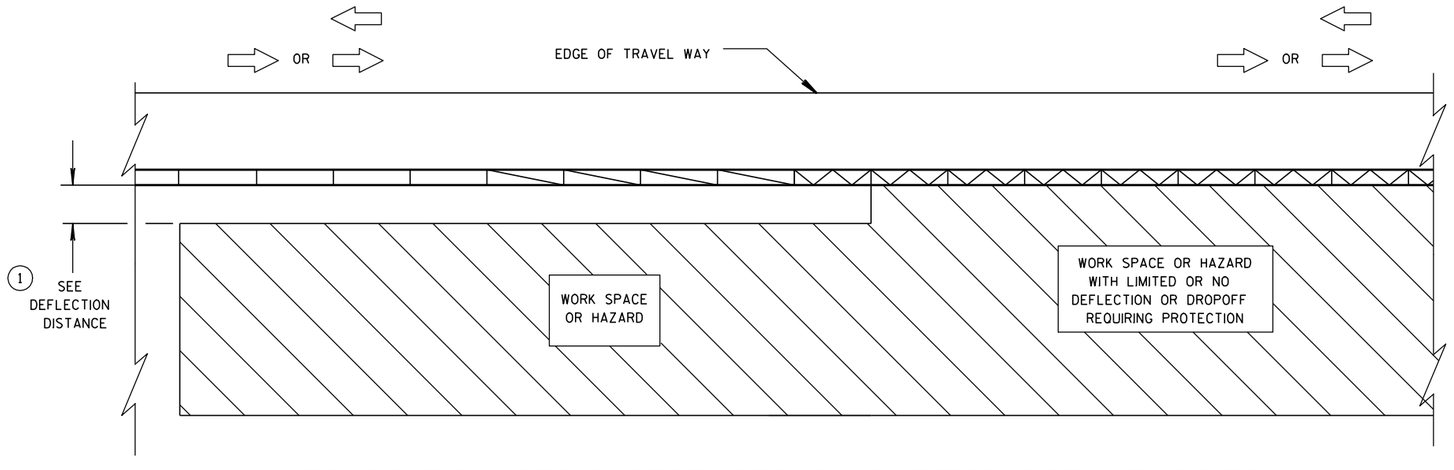
CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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



TRANSITION FROM FREE STANDING TEMPORARY BARRIER TO ANCHORED BARRIER

LEGEND

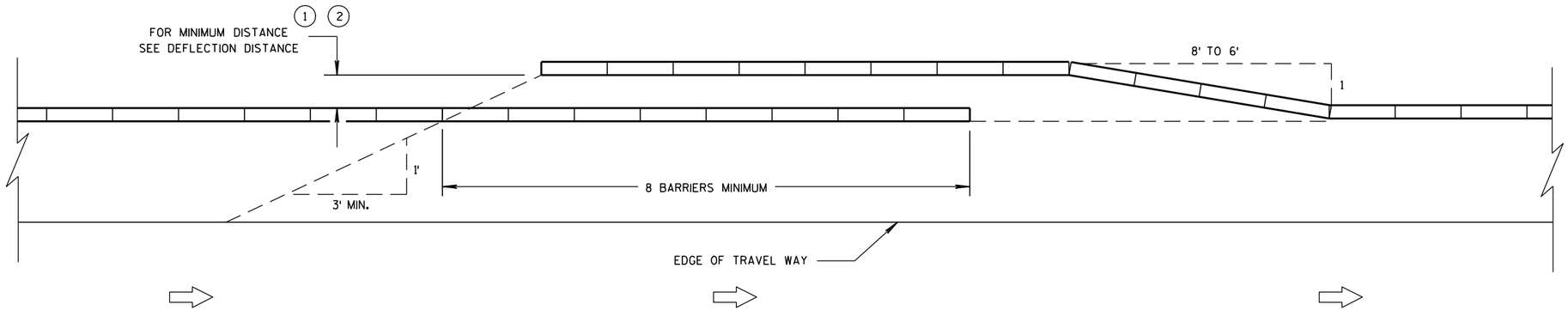
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

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

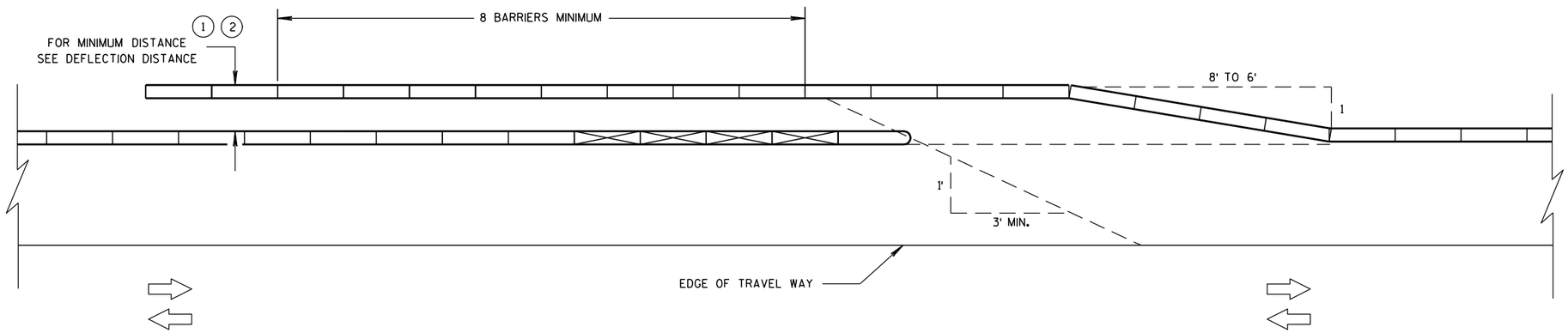
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

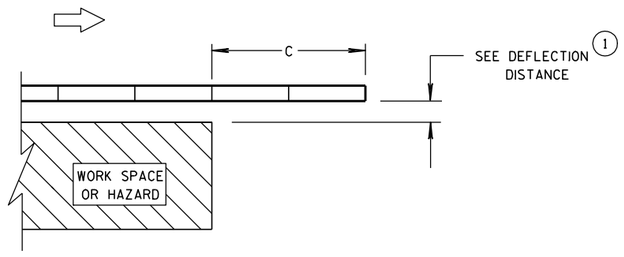
S.D.D. 14 B 8-1b



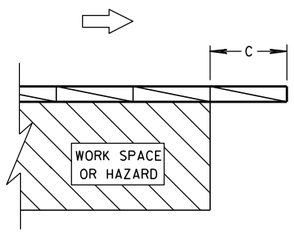
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

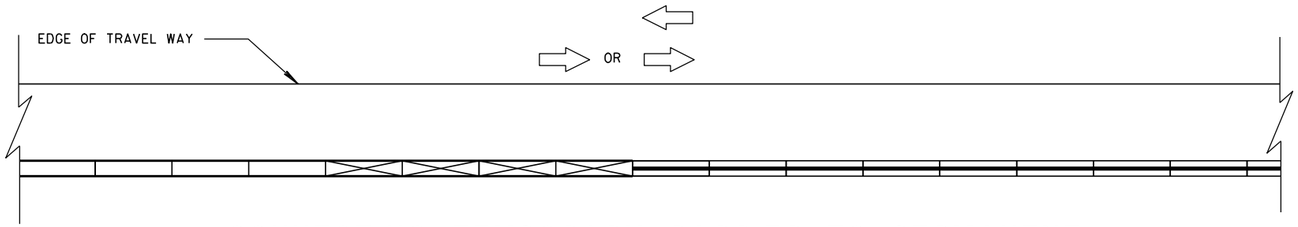
LEGEND

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

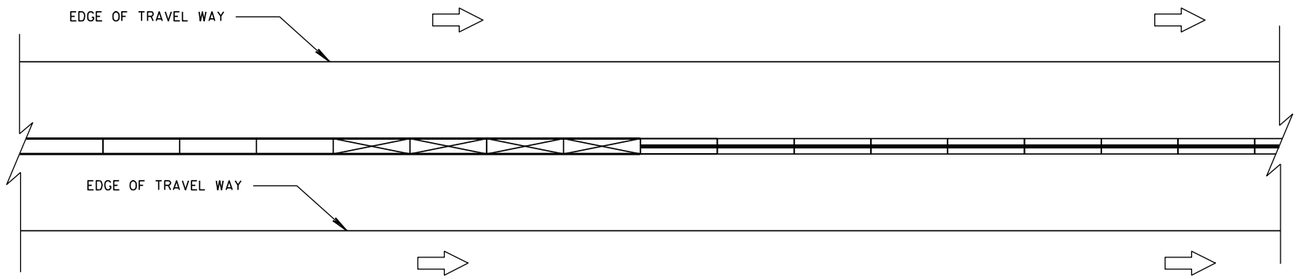
CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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



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

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

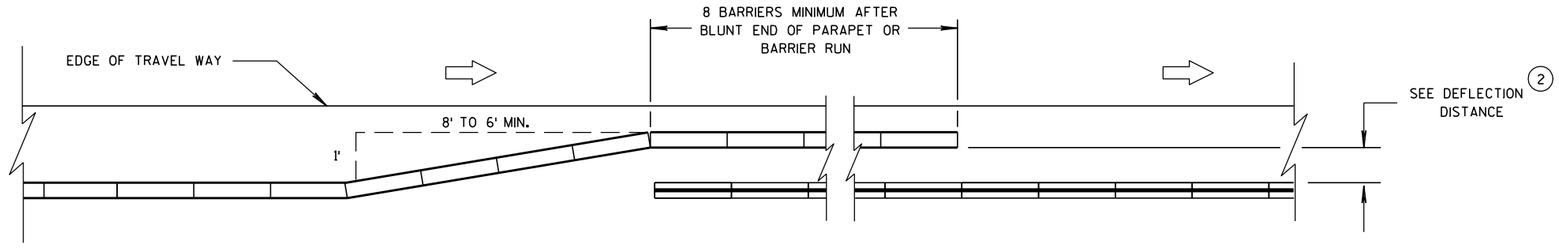
SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

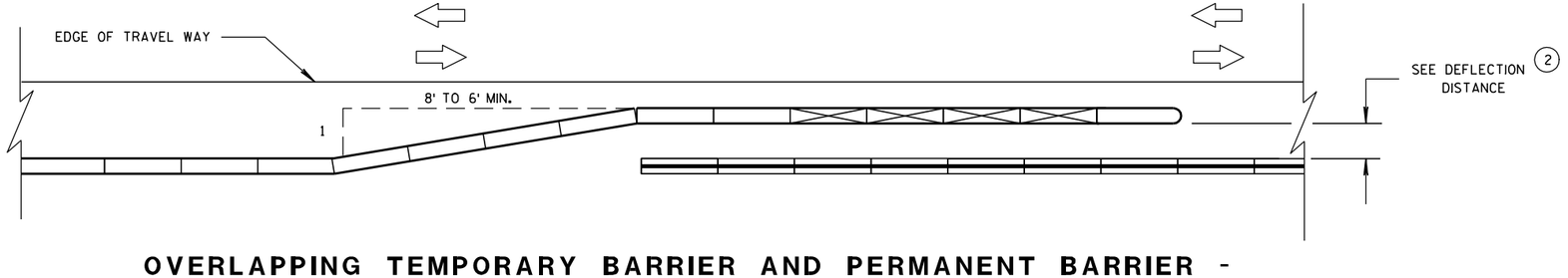
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER - ONE WAY TRAFFIC



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER - TWO WAY TRAFFIC

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

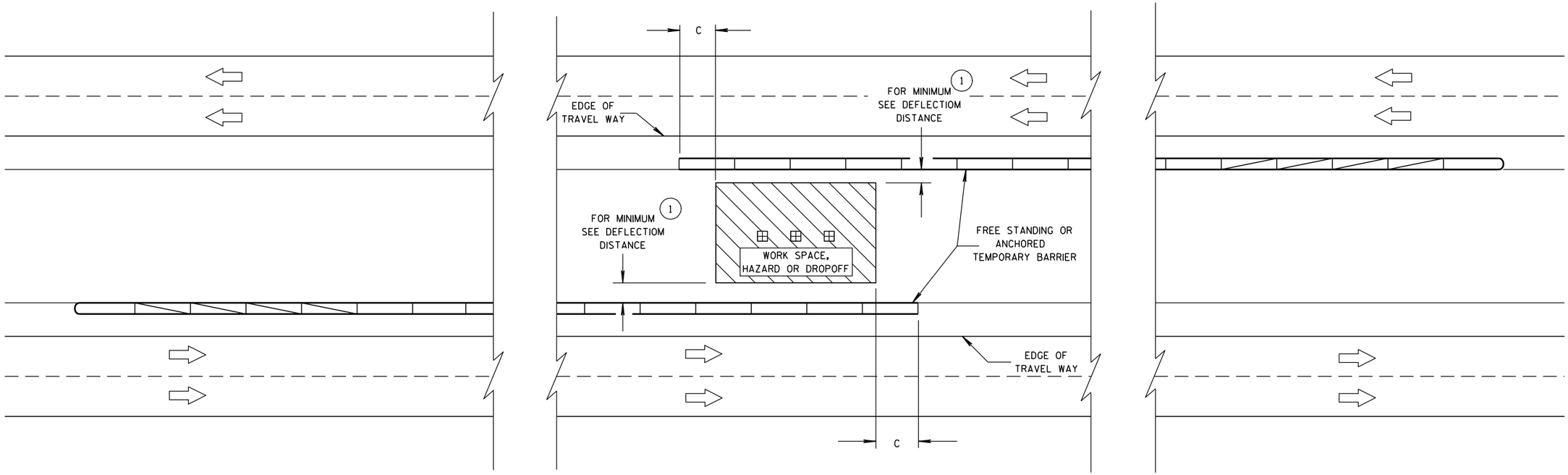
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE (2)

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



CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
8/31/2012 DATE	/S/ Jerry H. Zogg ROADWAY STANDARDS ENGINNER
FHWA	

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

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.

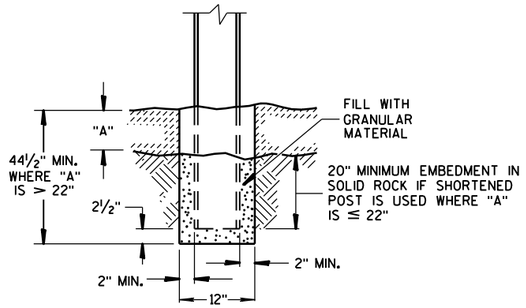
(5) IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).

(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.

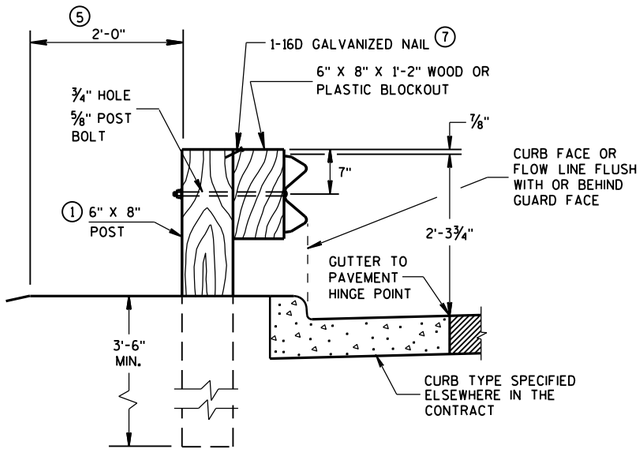
(7) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

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

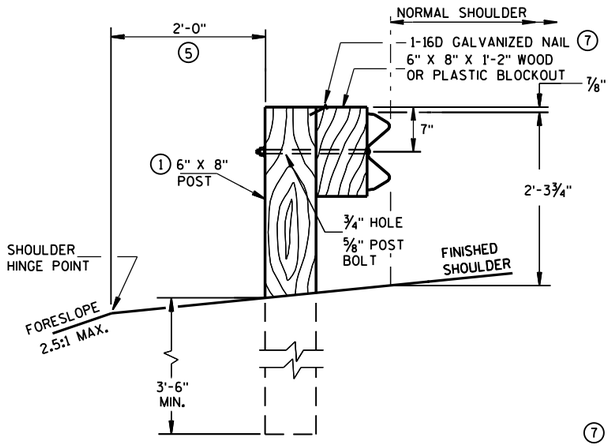
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



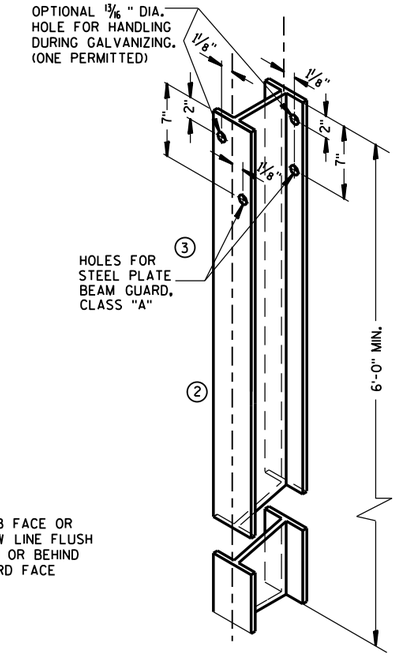
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (6)



END VIEW
LOCATED ALONG A CURBED ROADWAY

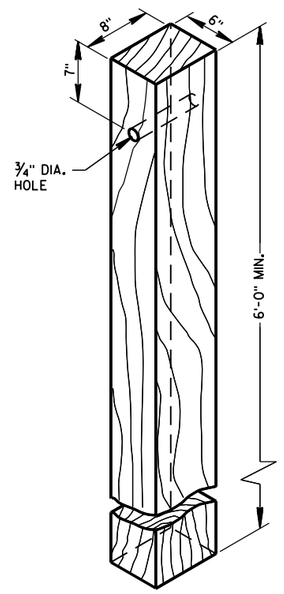


END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION

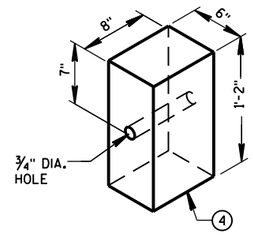


STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) (1)

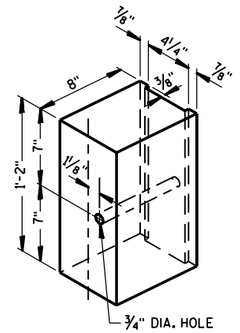
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



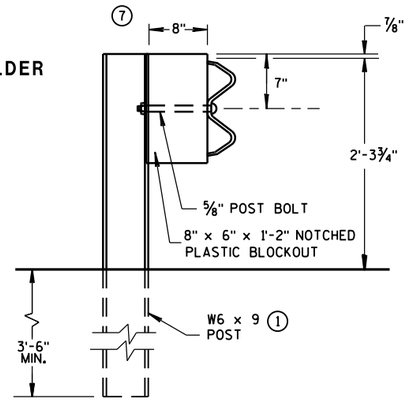
WOOD POST
(6"X8") NOMINAL



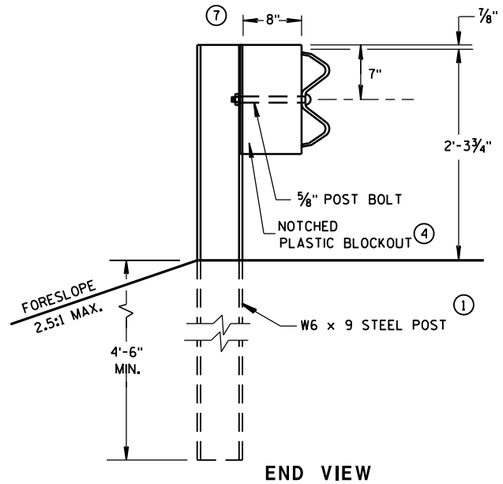
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



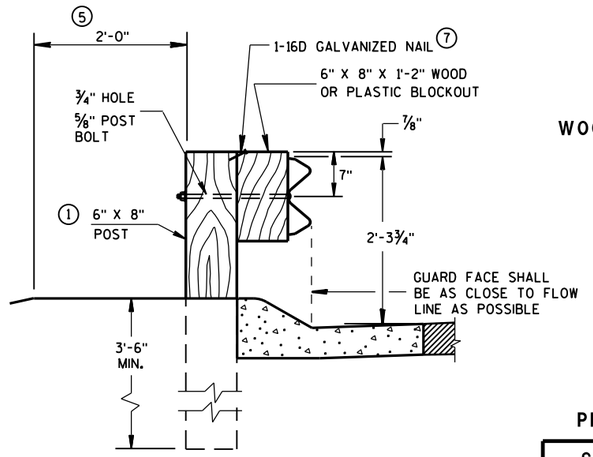
TYPICAL NOTCHED (1)
PLASTIC BLOCKOUT
FOR STEEL POSTS



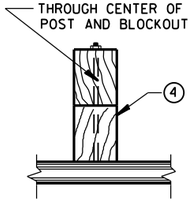
END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION



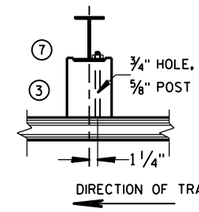
END VIEW
LONGER POST AT HALF
POST SPACING W BEAM
(LHW)



END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

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

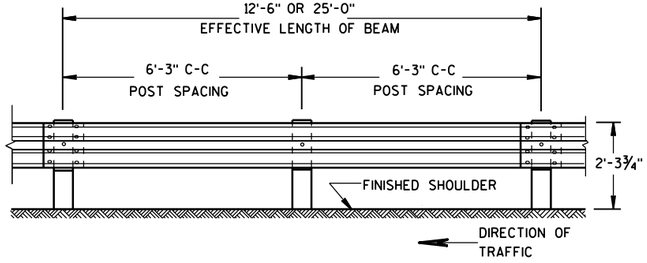
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 57

6

S.D.D. 14 B 15-8a

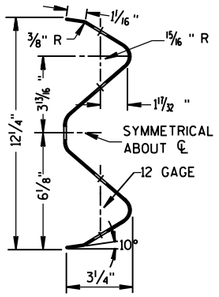
6

S.D.D. 14 B 15-8a

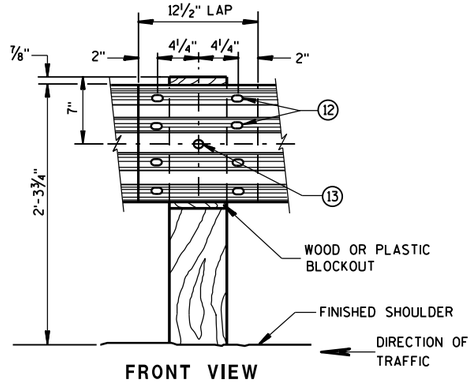


FRONT VIEW

POST SPACING STANDARD INSTALLATION



SECTION THRU W BEAM



FRONT VIEW

BEAM SPLICE AT WOOD POST AND POST MOUNTING DETAIL

GENERAL NOTES

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

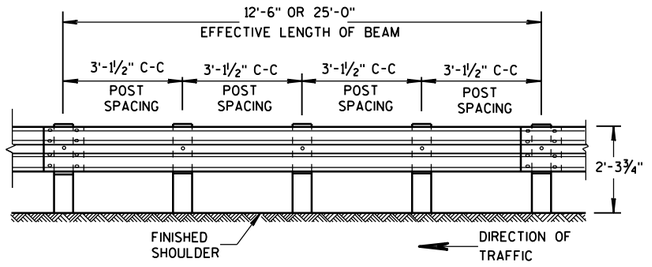
(9) DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

(11) PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.

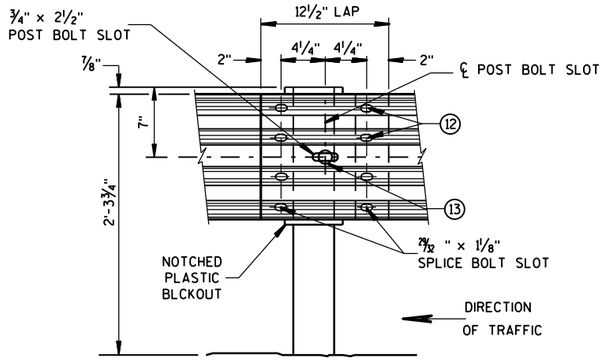
(12) 8 -⅝" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.

(13) ⅝" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH ⅝" DIA. F844 FLAT WASHER UNDER NUT.



FRONT VIEW

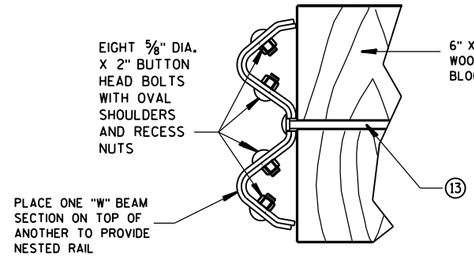
POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)



FRONT VIEW

BEAM SPLICE AT STEEL POST

TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD

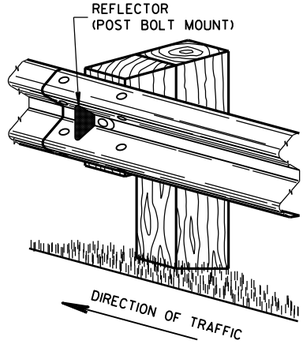


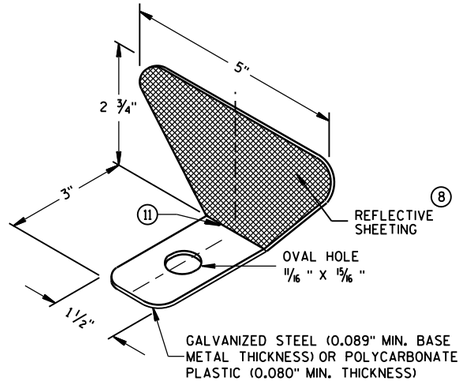
NESTED W BEAM (NW)

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

REFLECTOR SPACING (9)

	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 (10)	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2 (11)	3
	> 200'	100' C-C	2	



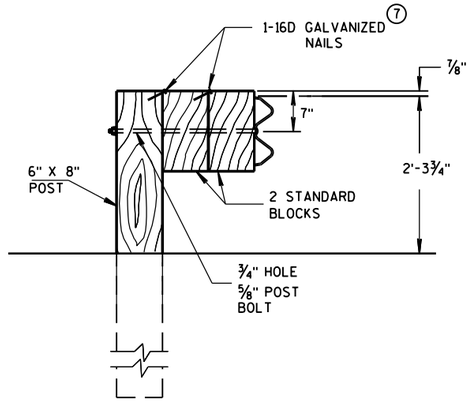


ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION (8)

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

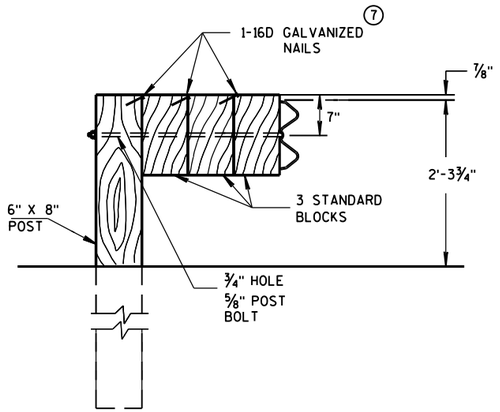
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 14 B 15-8b



DETAIL FOR DOUBLE BLOCKS

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

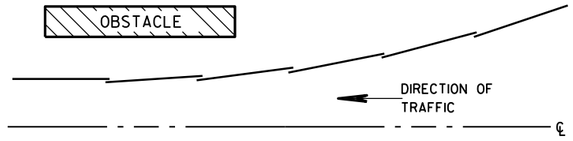


DETAIL FOR TRIPLE BLOCKS

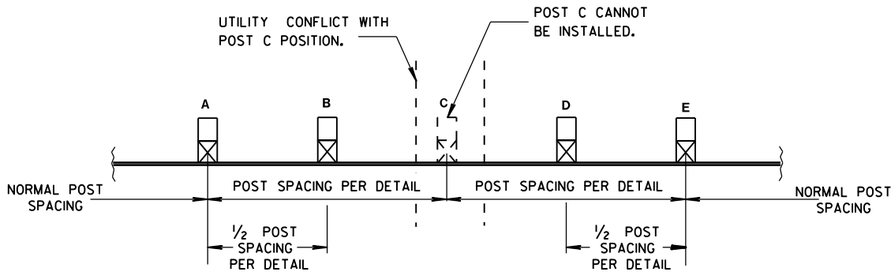
TRIPLE BLOCK DETAIL IS LIMITED TO ONE LOCATION WITHIN A BEAM GUARD RUN.

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.



PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 14 B 15-8c

GENERAL NOTES

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

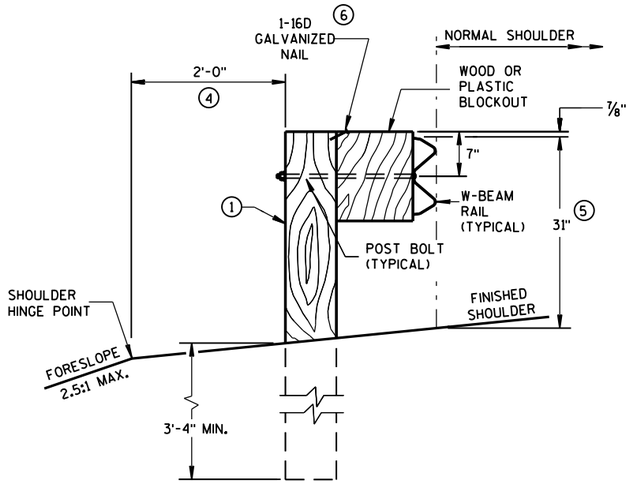
(2) USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

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

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

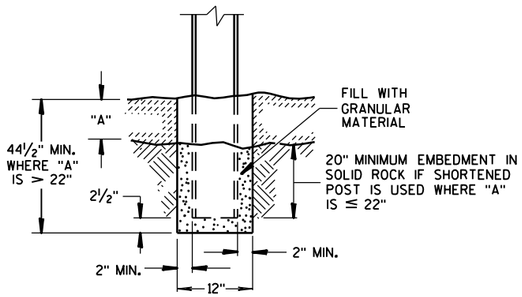
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

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



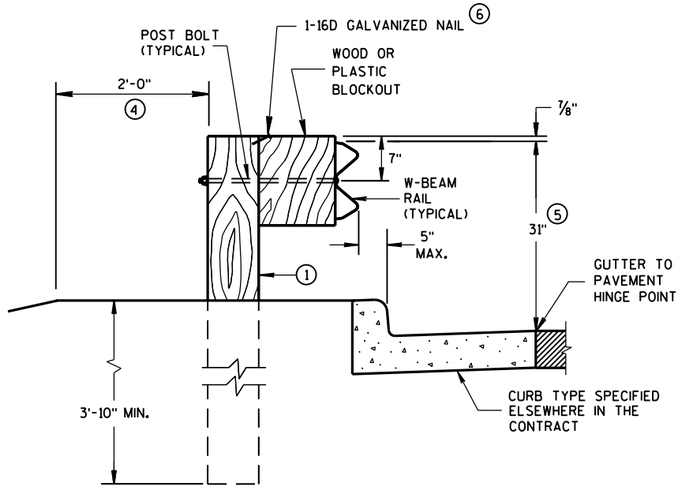
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



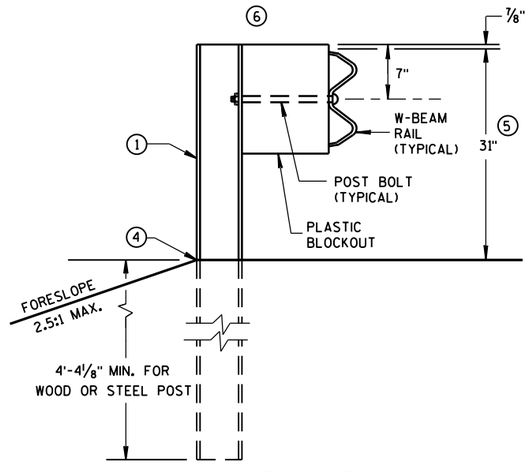
END VIEW

SETTING STEEL OR WOOD POST IN ROCK (3)



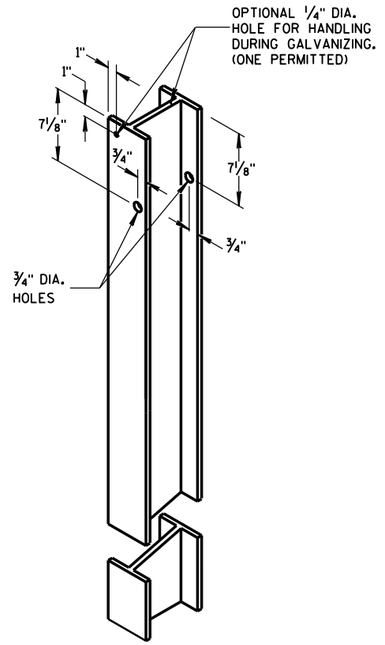
END VIEW

LOCATED ALONG A CURBED ROADWAY

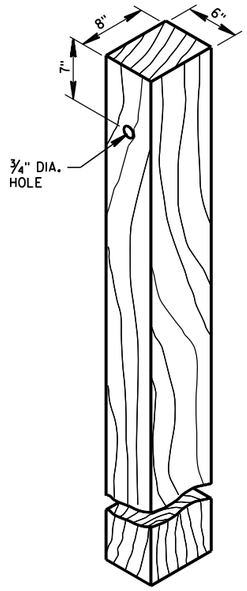


END VIEW

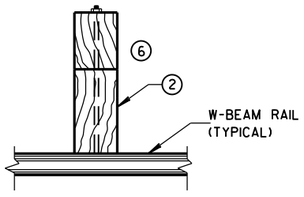
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



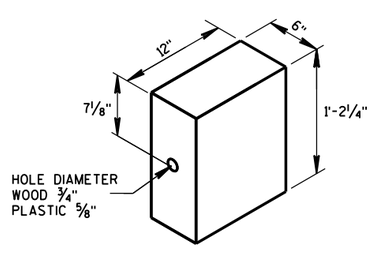
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) (1)



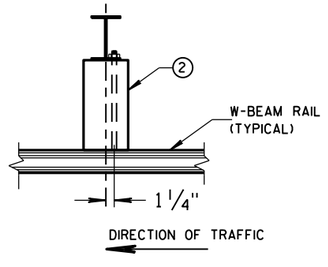
WOOD POST
(6" X 8") NOMINAL (1)



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT (2)



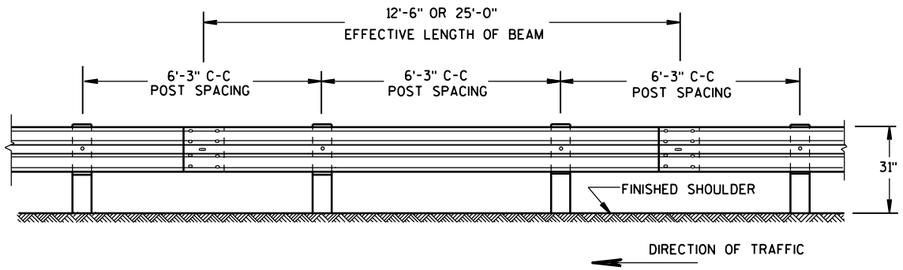
PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

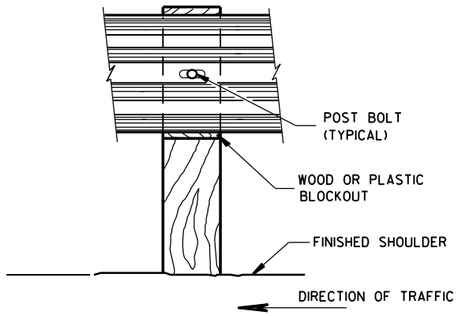
6

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



FRONT VIEW

POST SPACING STANDARD INSTALLATION



FRONT VIEW AT WOOD POST

GENERAL NOTES

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

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

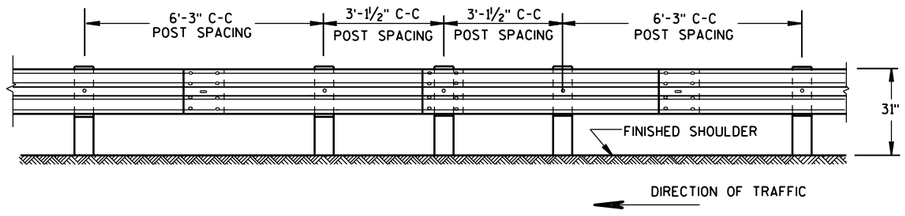
(9) REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.

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

(11) 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

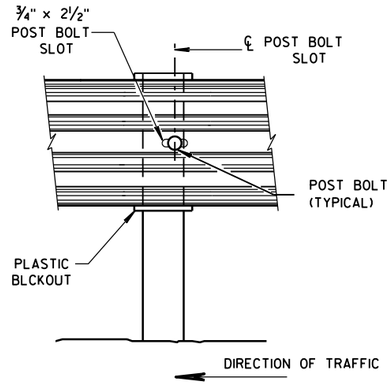
POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

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.

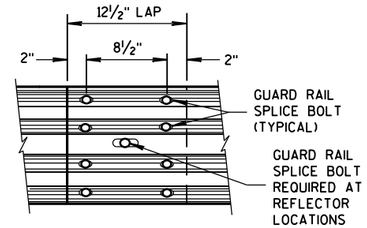


FRONT VIEW

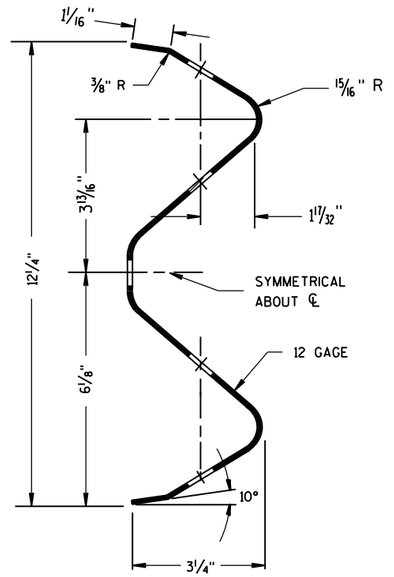
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



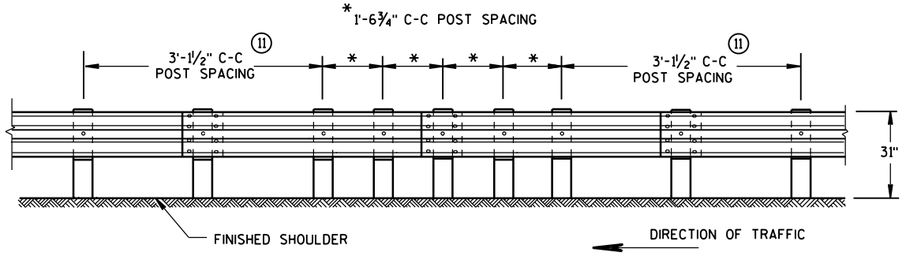
FRONT VIEW AT STEEL POST



FRONT VIEW
MID-SPAN BEAM SPLICE

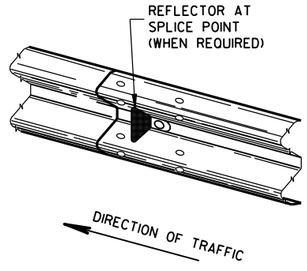


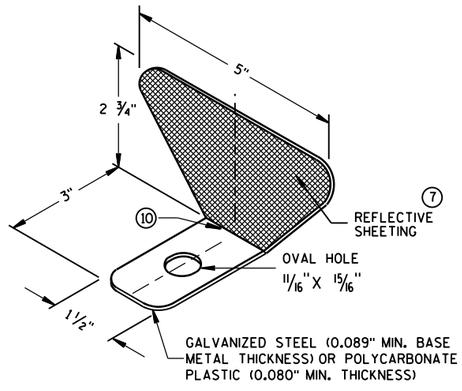
SECTION THRU W-BEAM RAIL



FRONT VIEW

QUARTER POST SPACING (QS)





ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION (7)

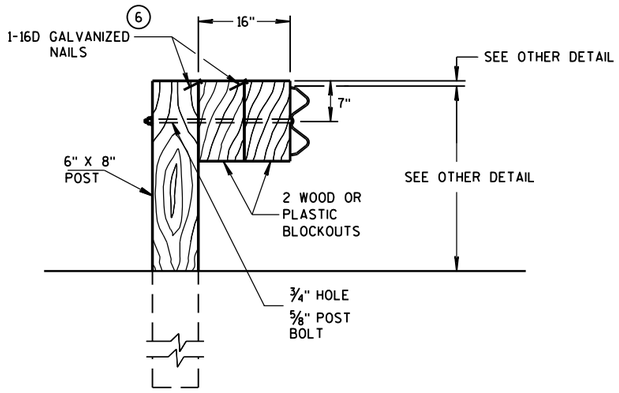
REFLECTOR SPACING (8)

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

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

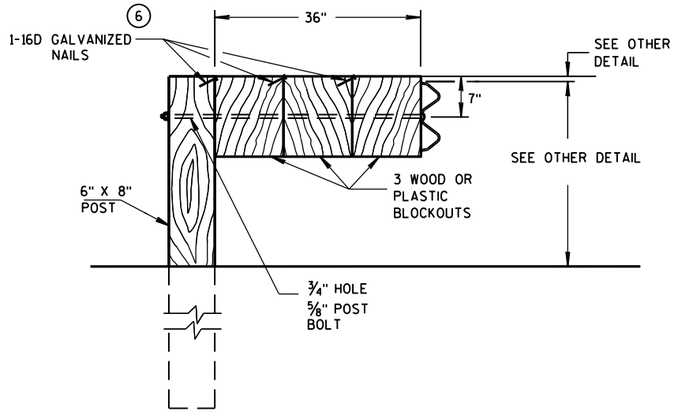
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

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



DETAIL FOR 16" BLOCKOUT DEPTH

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

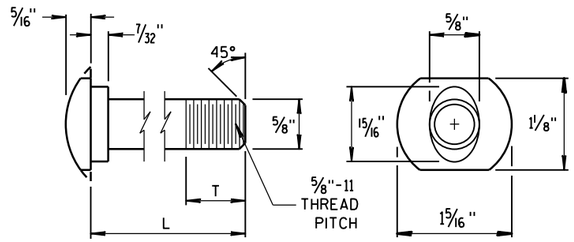


DETAIL FOR 36" BLOCKOUT DEPTH

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

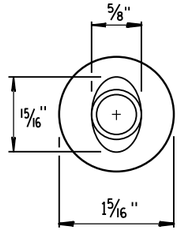
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

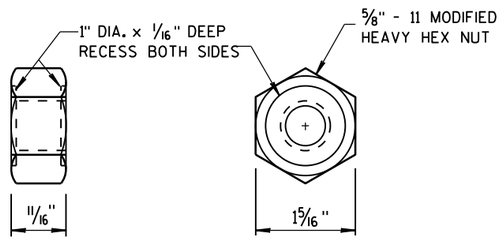


POST BOLT TABLE

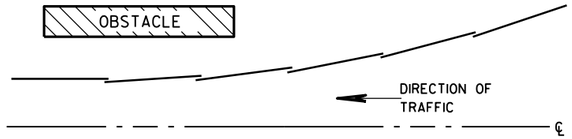
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

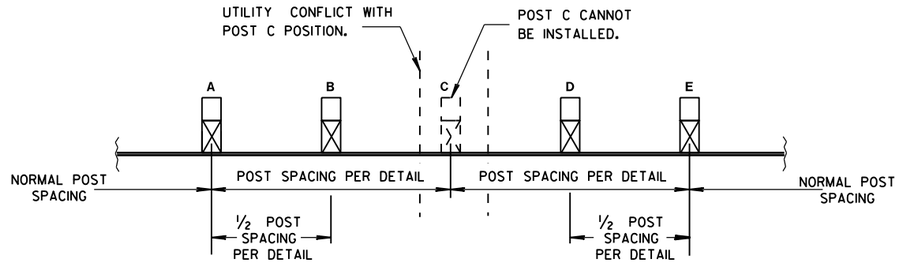


POST BOLT AND RECESS NUT

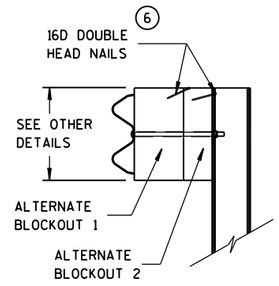


PLAN VIEW

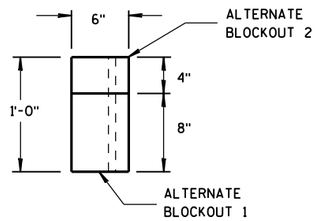
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

GENERAL NOTES

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

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

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

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

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

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

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

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

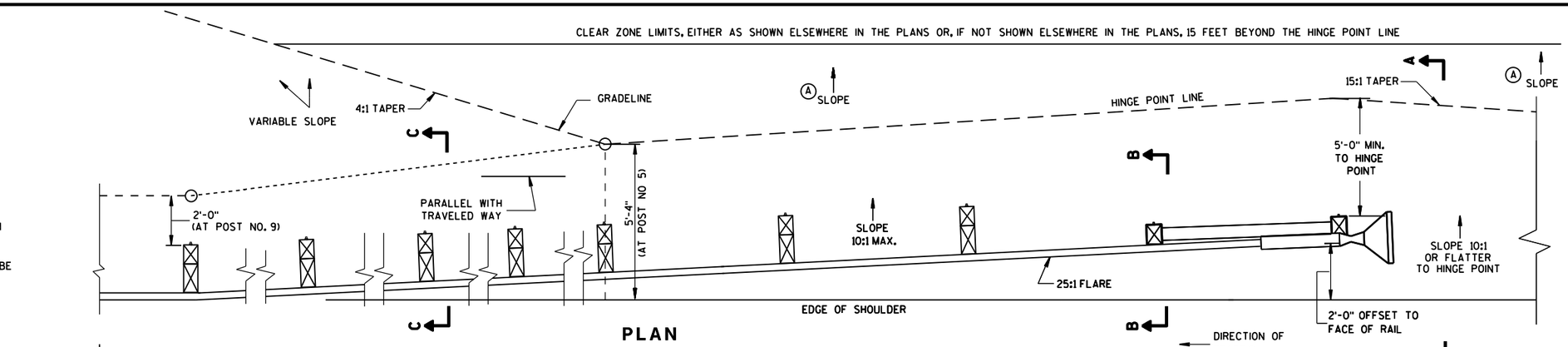
SEE SDD 14B42 FOR MORE INFORMATION.

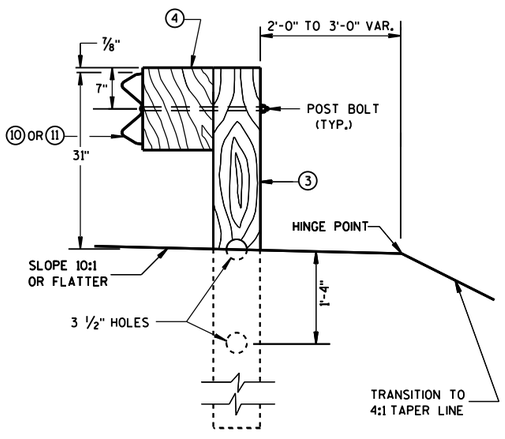
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

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

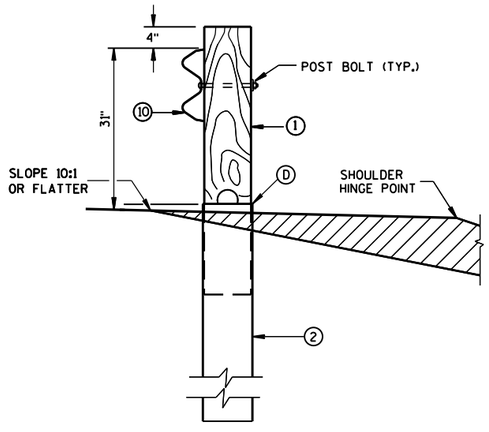
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

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

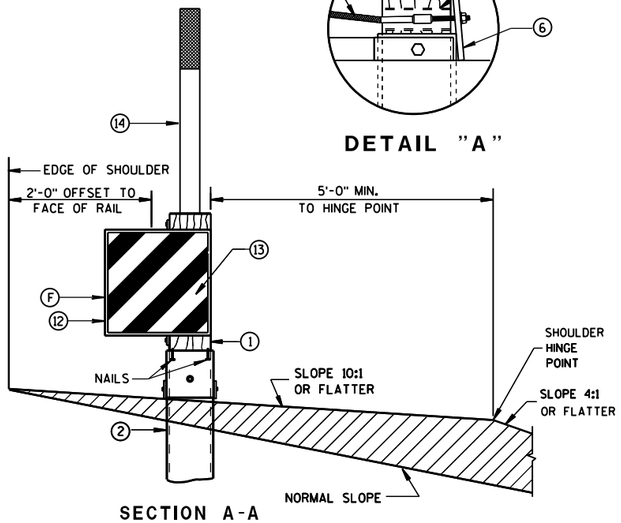




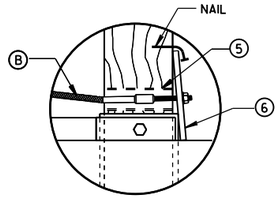
SECTION C-C
TYPICAL AT POST NOS. 3-9



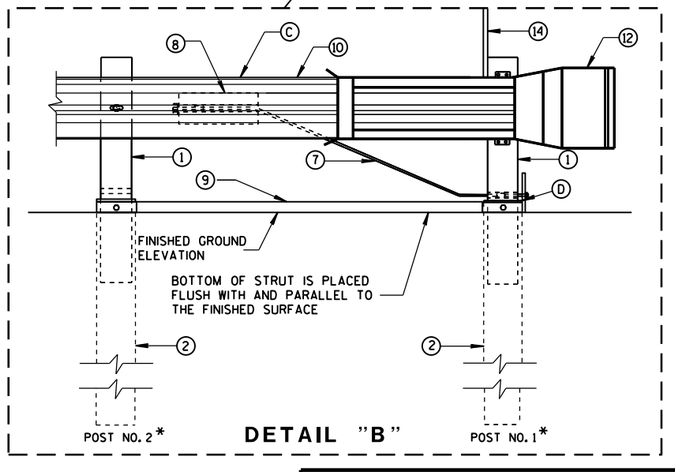
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



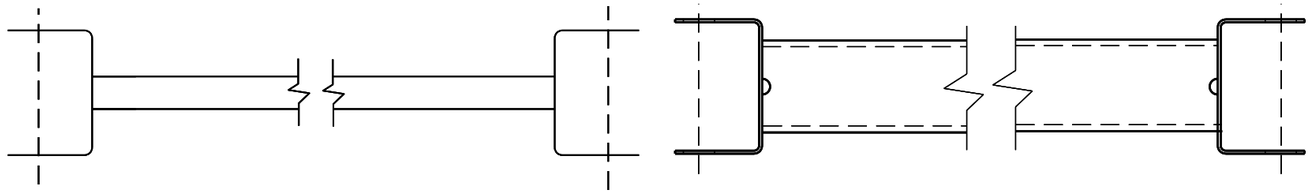
DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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

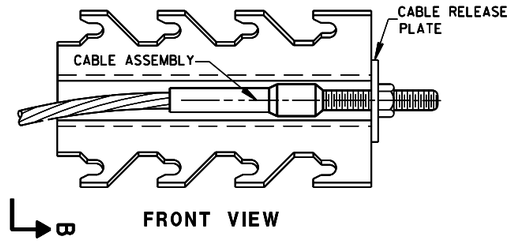
S.D.D. 14 B 44-2a



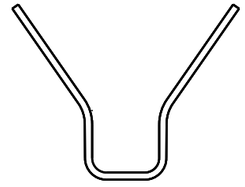
GENERIC GROUND STRUT (9) (H)

BILL OF MATERIALS

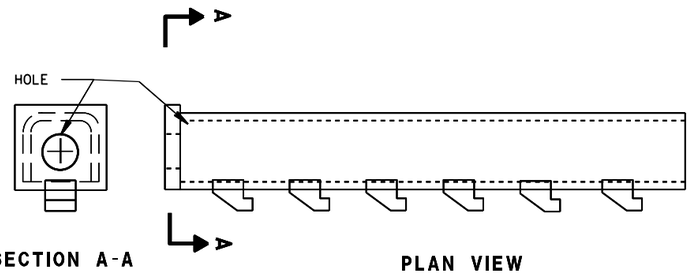
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	WOOD BREAKAWAY POST
(2)	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR CABLE BOX
(9)	GROUND STRUT
(10)	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
(11)	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
(12)	END SECTION EAT
(13)	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
(14)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



FRONT VIEW



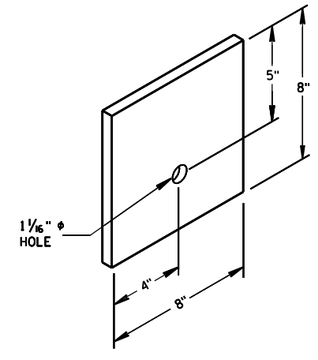
SECTION B-B



SECTION A-A

PLAN VIEW

GENERIC ANCHOR CABLE BOX (8) (H)



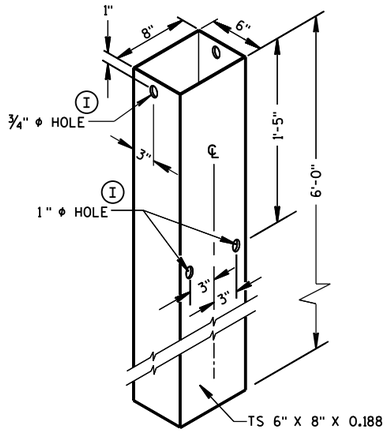
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

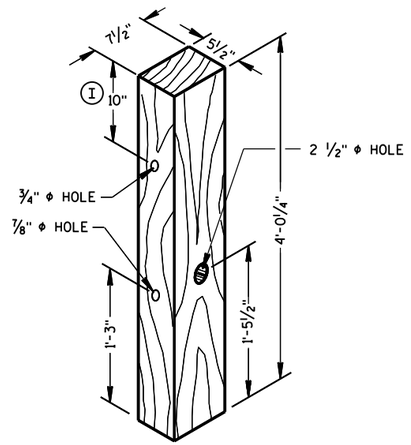
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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

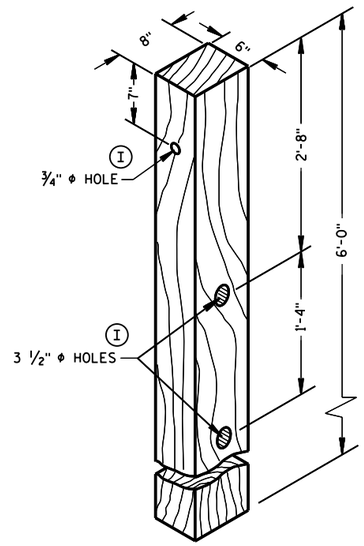


FOUNDATION TUBE (2)



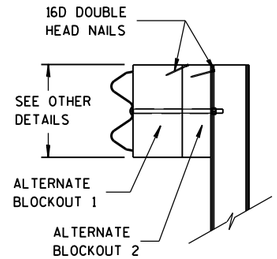
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

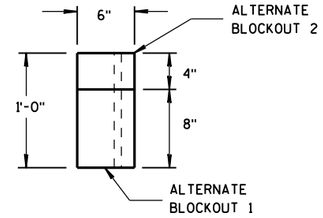


POSTS NUMBER 3-9

WOOD CRT POST (3)

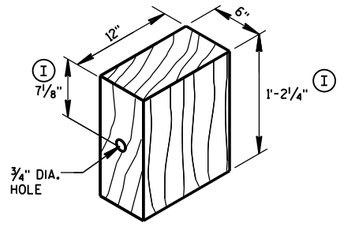


SIDE VIEW



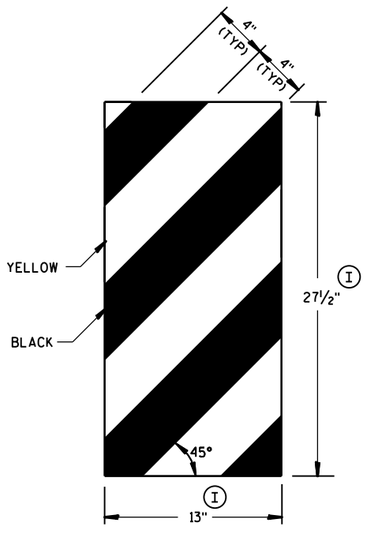
TOP VIEW

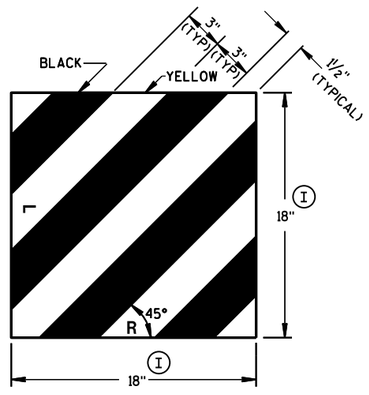
ALTERNATE WOOD BLOCKOUT DETAIL



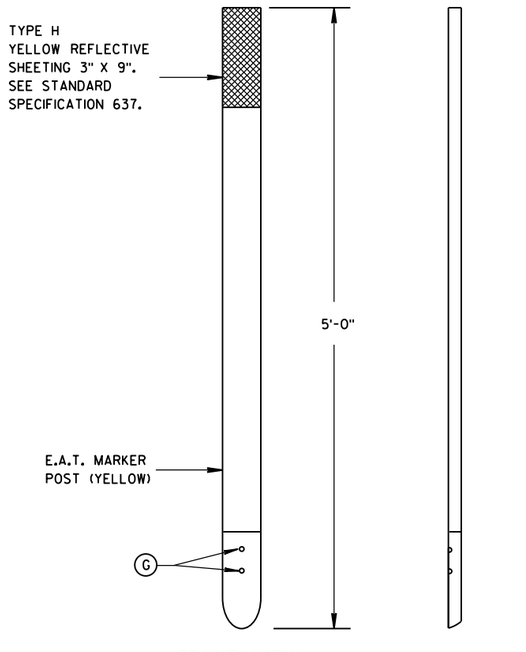
WOOD BLOCKOUT (4)

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





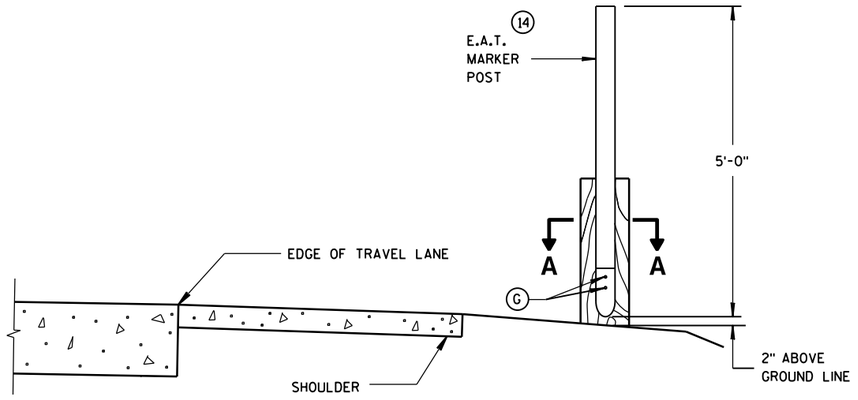
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

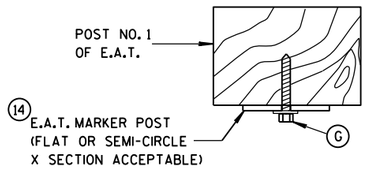
SIDE VIEW

E.A.T. MARKER POST (14)



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

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



SECTION A-A

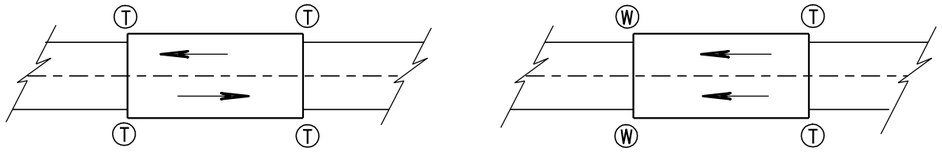
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

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



TWO WAY TRAFFIC

ONE WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

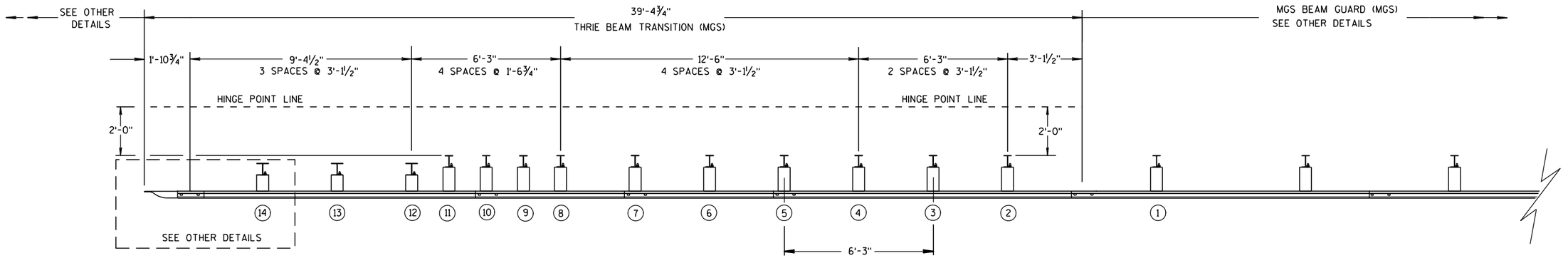
BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3.

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

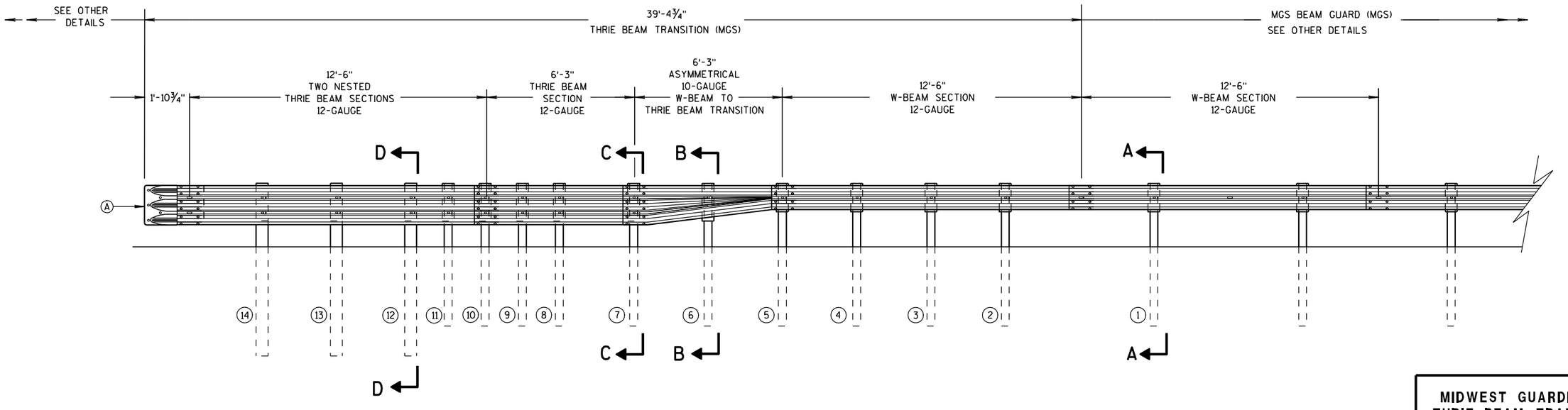
TRANSITION USES STEEL POSTS ONLY.

SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

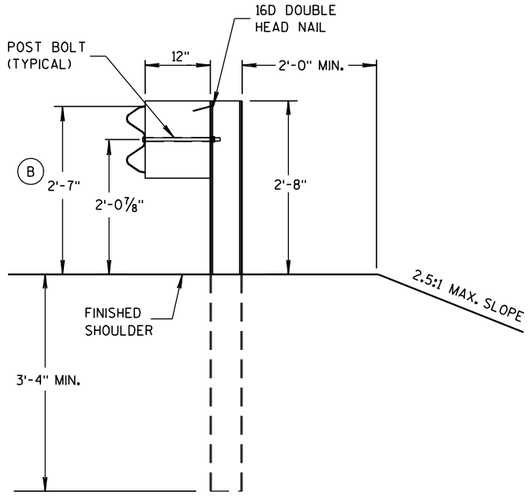
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

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

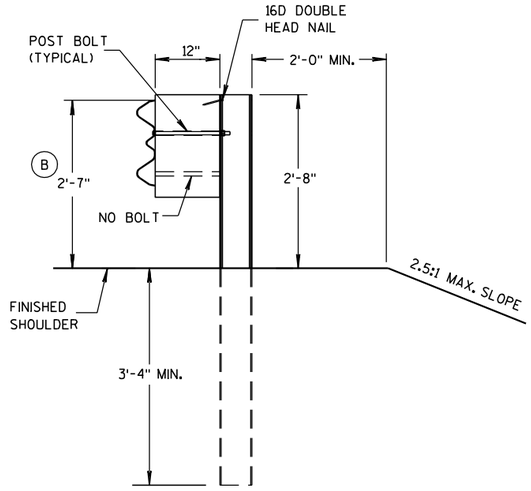
GENERAL NOTES

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



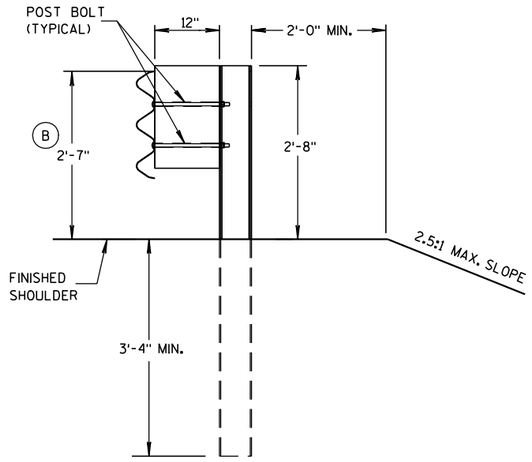
SECTION A-A

POSTS 1-5



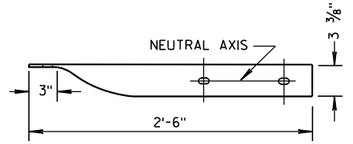
SECTION B-B

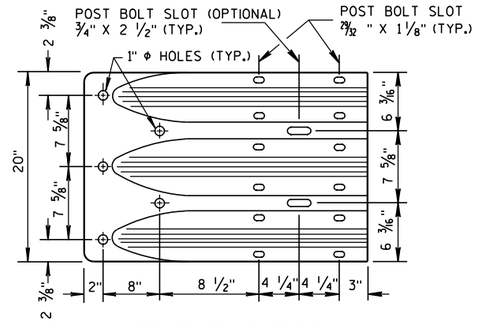
POST 6



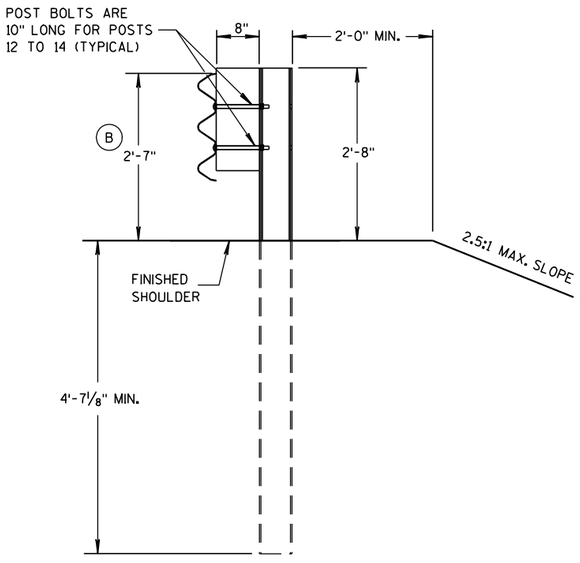
SECTION C-C

POSTS 7-11



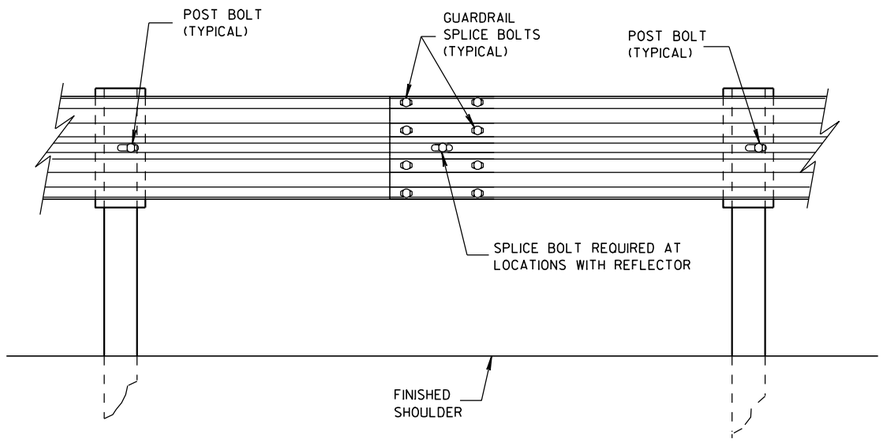


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-14



SPLICE DETAIL

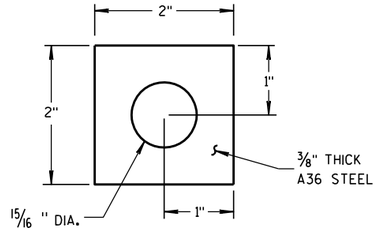
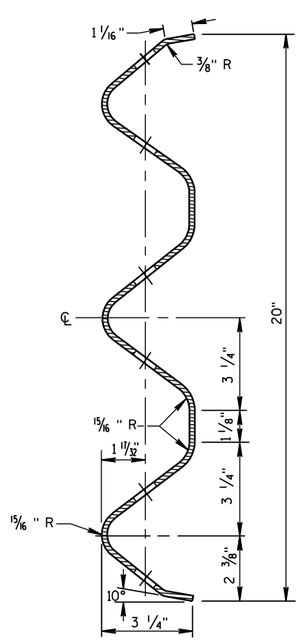


PLATE WASHER DETAIL

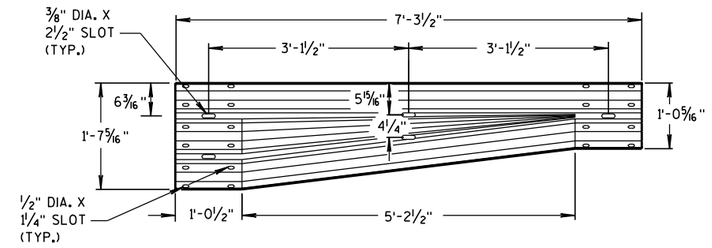


SECTION THRU THRIE BEAM RAIL ELEMENT

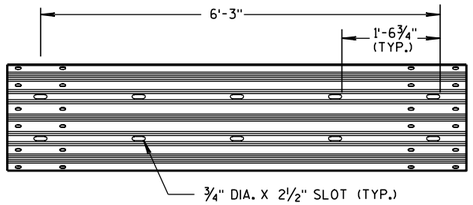
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

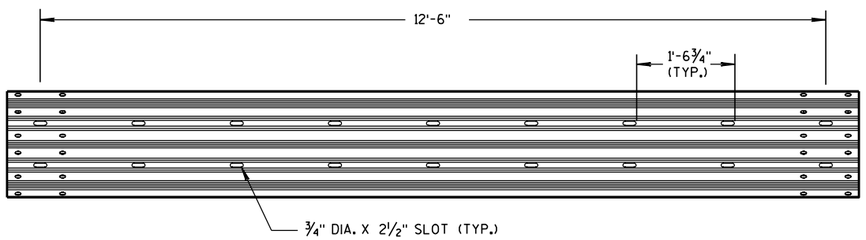
6
S.D.D. 14 B 45-3b



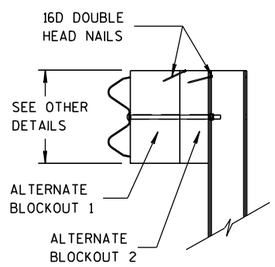
W-BEAM TO THRIE BEAM TRANSITION SECTION



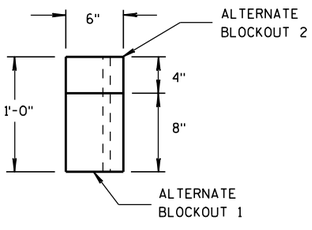
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

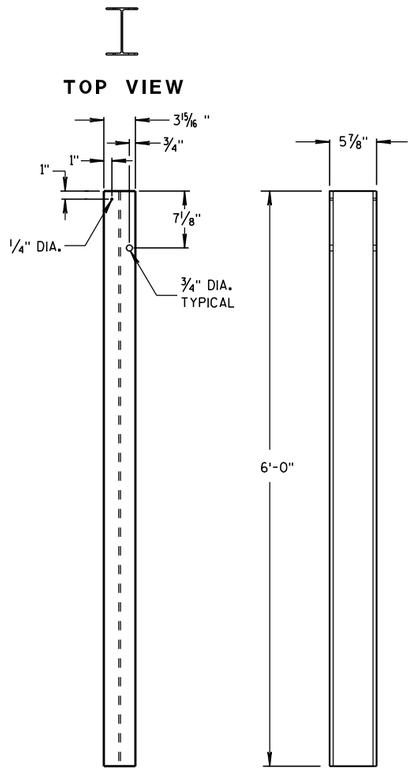


SIDE VIEW

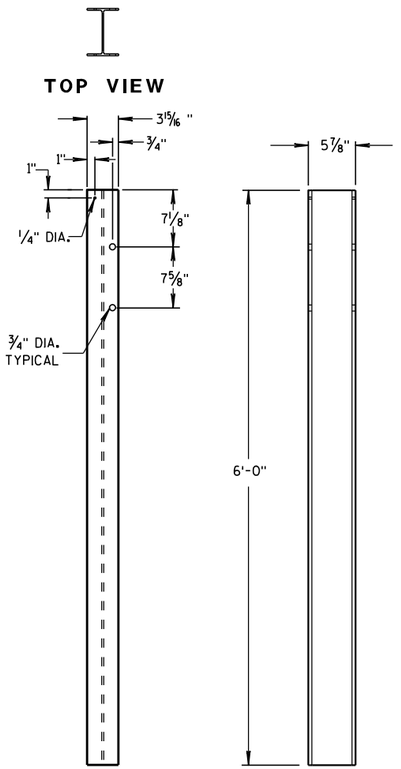


TOP VIEW

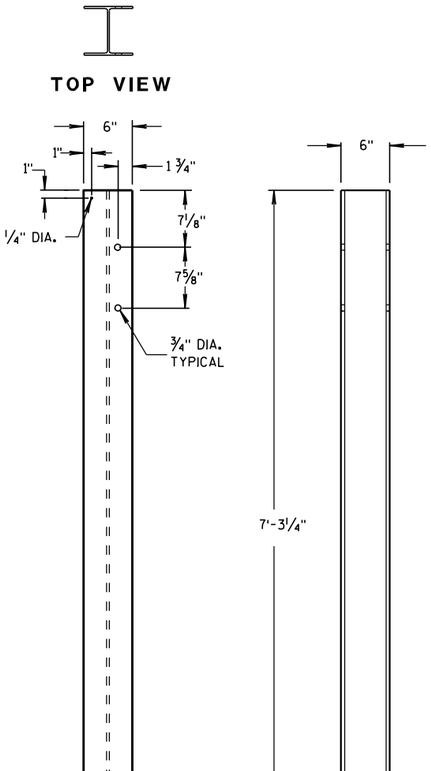
ALTERNATE WOOD BLOCKOUT DETAIL



STEEL POSTS 1-5

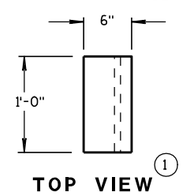


STEEL POSTS 6-11

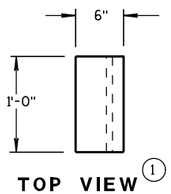


STEEL POSTS 12-14

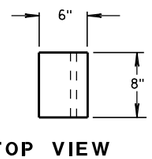
1 WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.



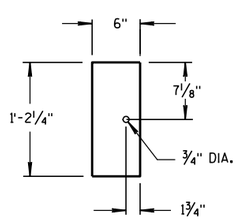
TOP VIEW (1)



TOP VIEW (1)

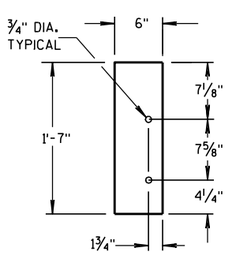


TOP VIEW



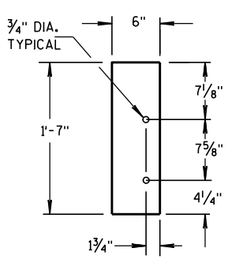
FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-11



FRONT VIEW

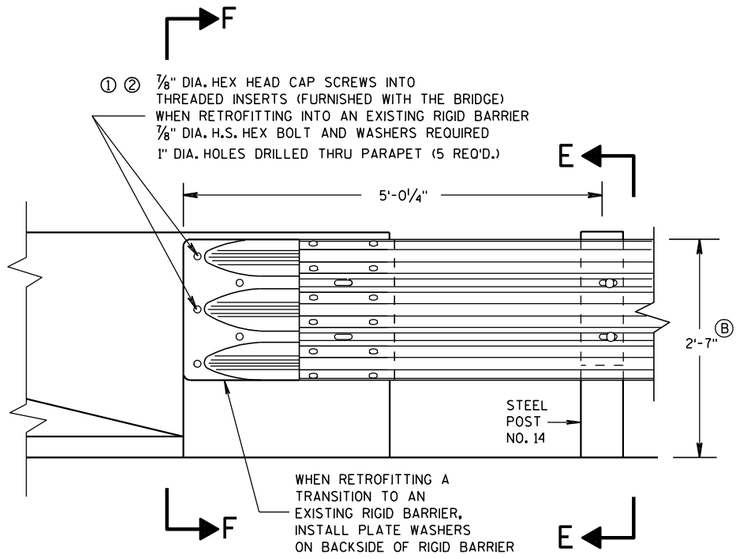
BLOCKOUT POSTS 12-14

STEEL POST SIZES

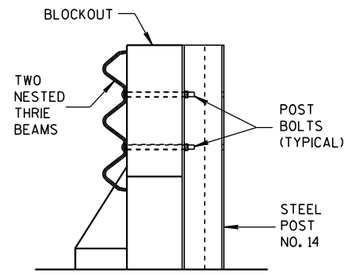
POST NUMBER	SECTION TYPE	LENGTH
1	W6x9	72"
2	W6x9	72"
3	W6x9	72"
4	W6x9	72"
5	W6x9	72"
6	W6x9	72"
7	W6x9	72"
8	W6x9	72"
9	W6x9	72"
10	W6x9	72"
11	W6x9	72"
12	W6x15	87 1/8"
13	W6x15	87 1/8"
14	W6x15	87 1/8"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



FRONT VIEW



SECTION E-E

GENERAL NOTES

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

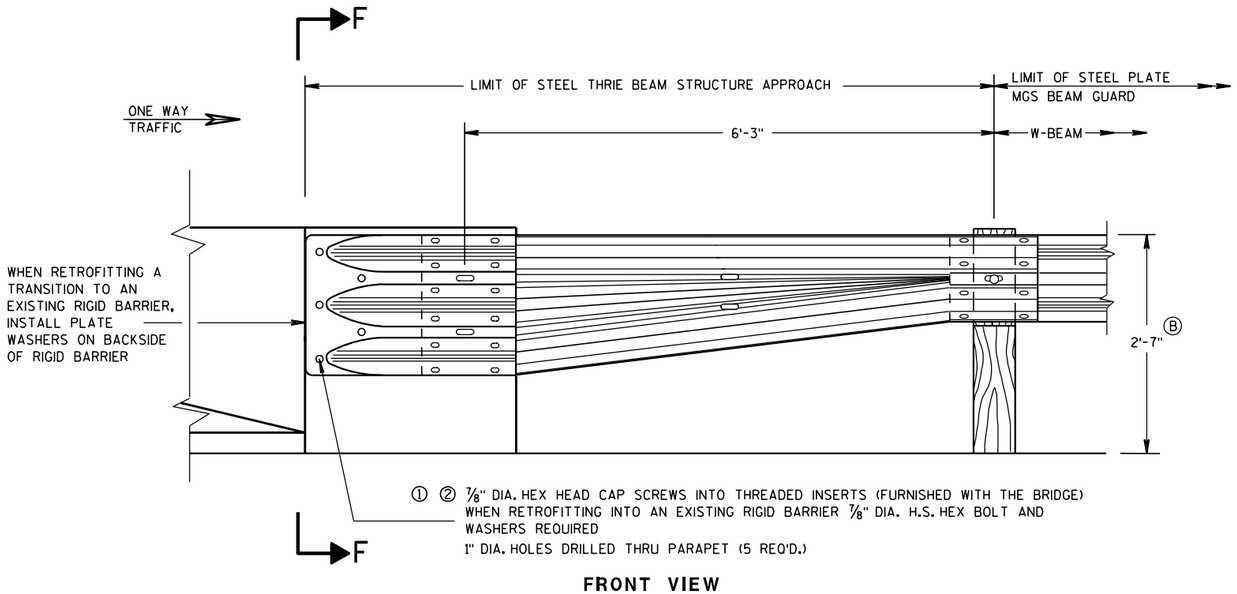
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

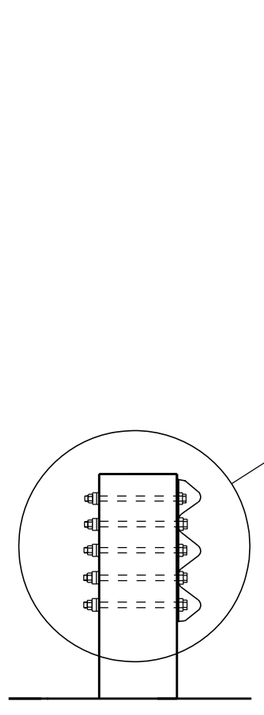
③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".

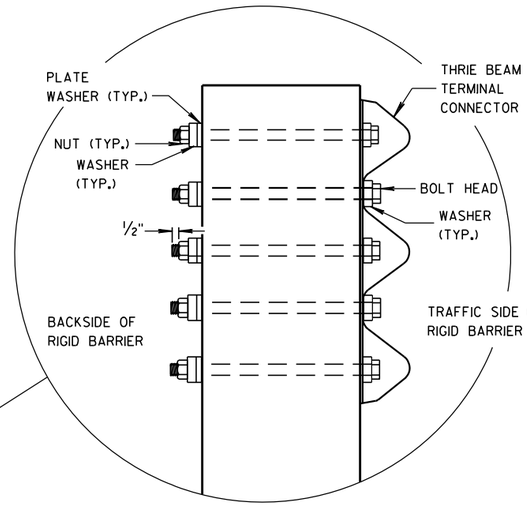
THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS



FRONT VIEW



SECTION F-F



W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012 — DATE

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

FHWA

6

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

6

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

GENERAL NOTES

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

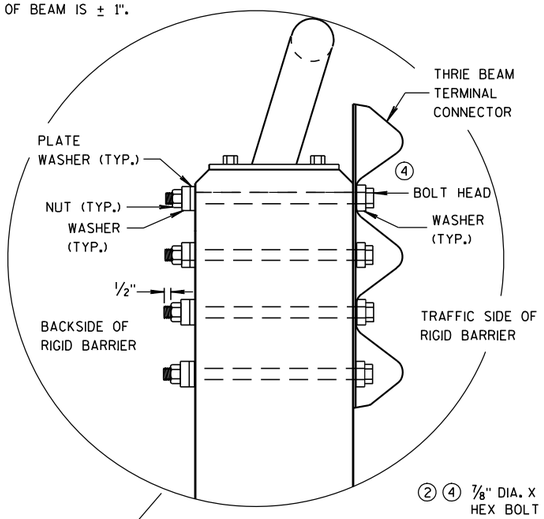
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

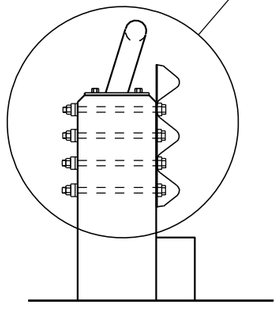
② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE.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

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

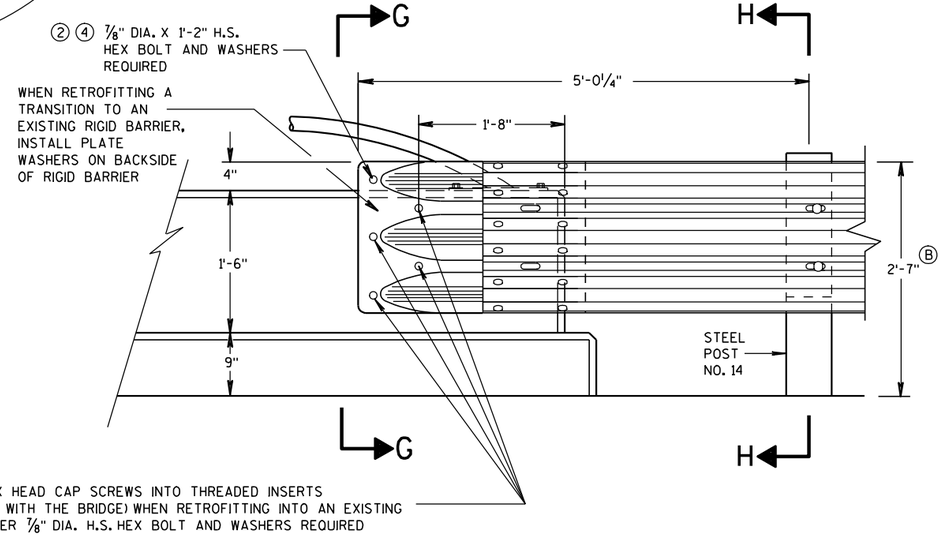
④ BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.

Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".

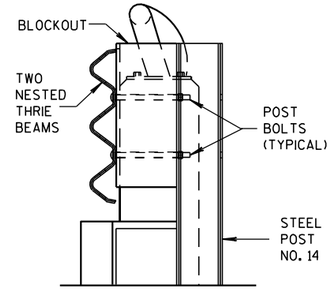




SECTION G-G

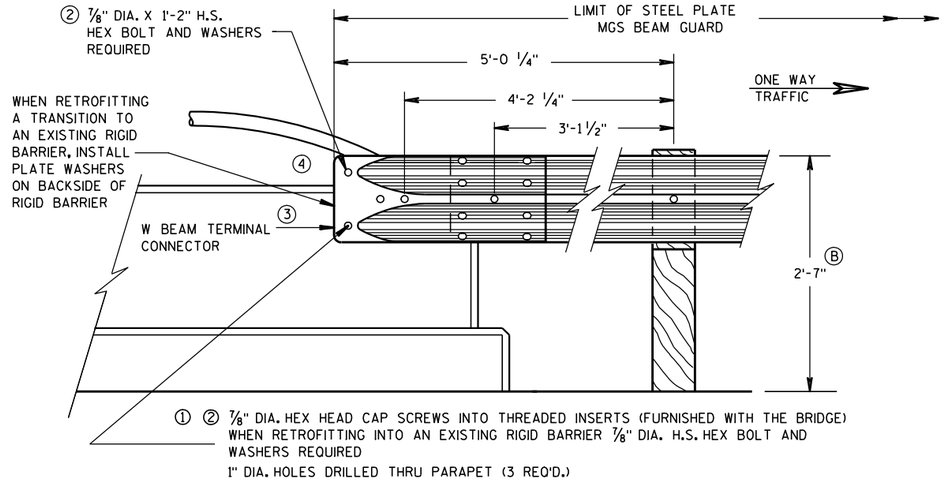


FRONT VIEW



SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8-31-2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

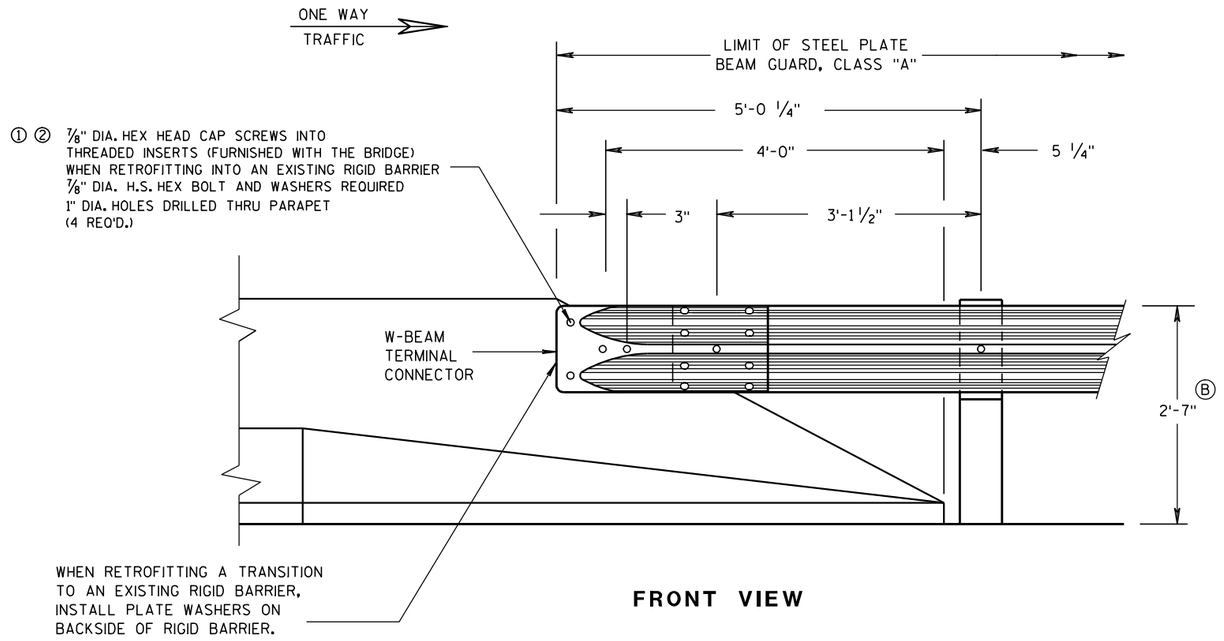
FHWA

6

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

6

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



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

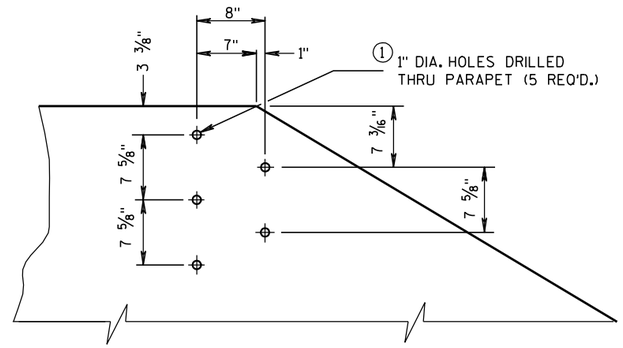
(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

GENERAL NOTES

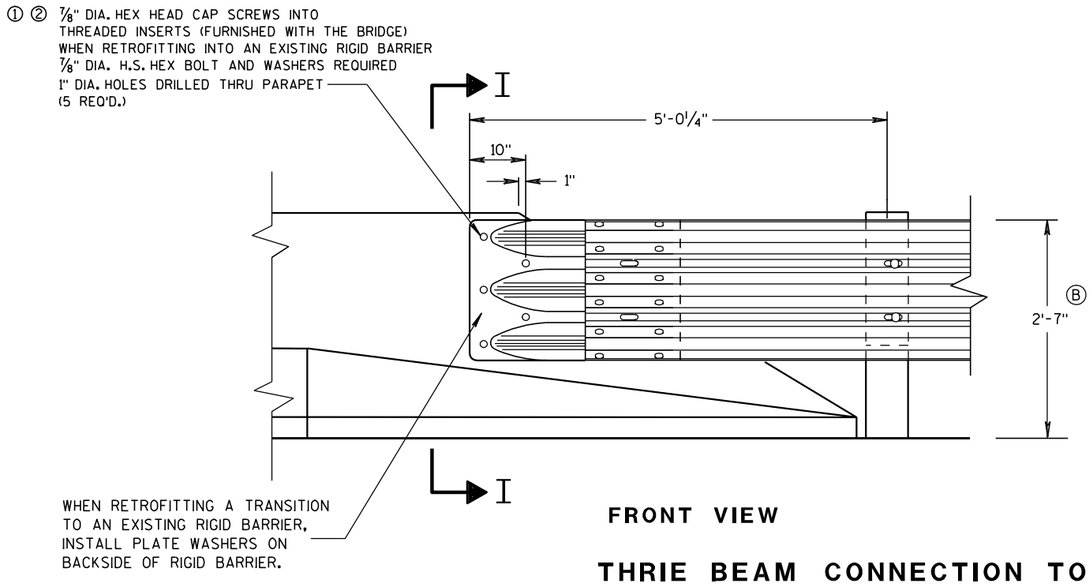
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

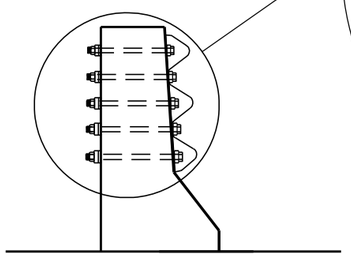
Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".



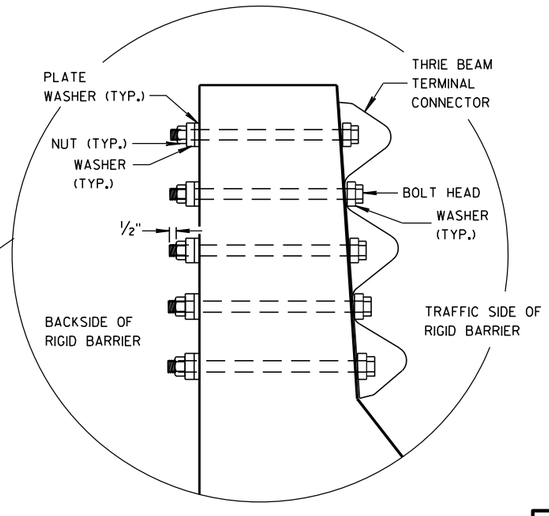
DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012 DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

71

ENT

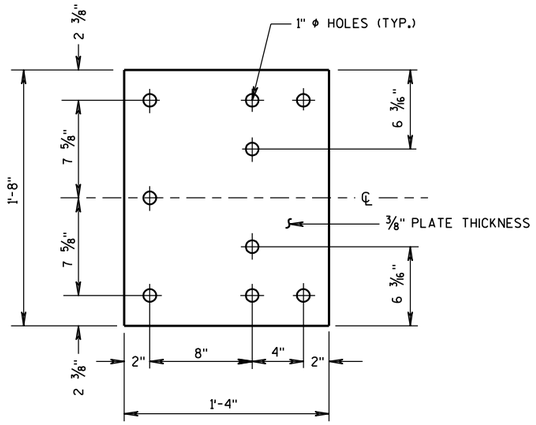
FHWA

6

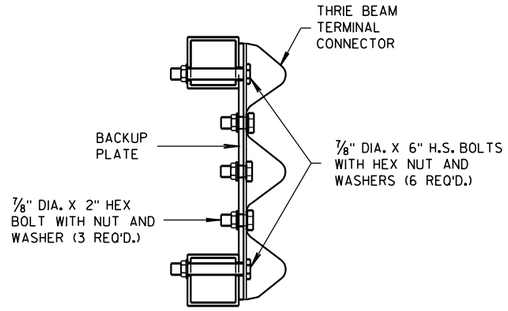
S.D.D. 14 B 45-3f

6

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



BACK-UP PLATE DETAIL

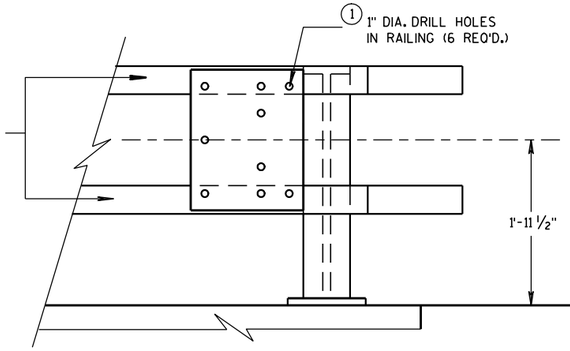


SECTION J-J

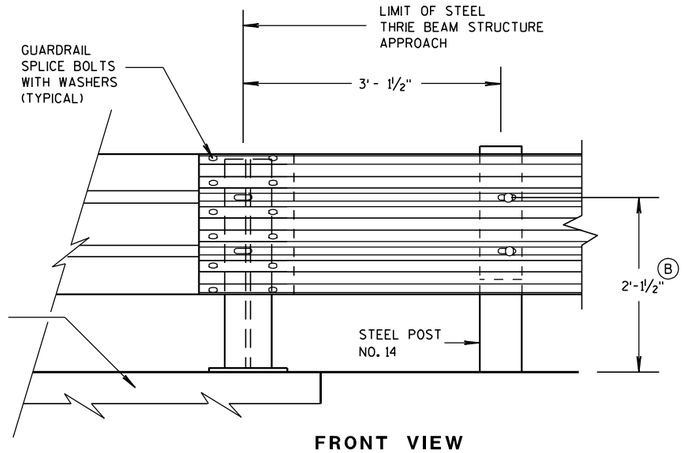
GENERAL NOTES

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

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

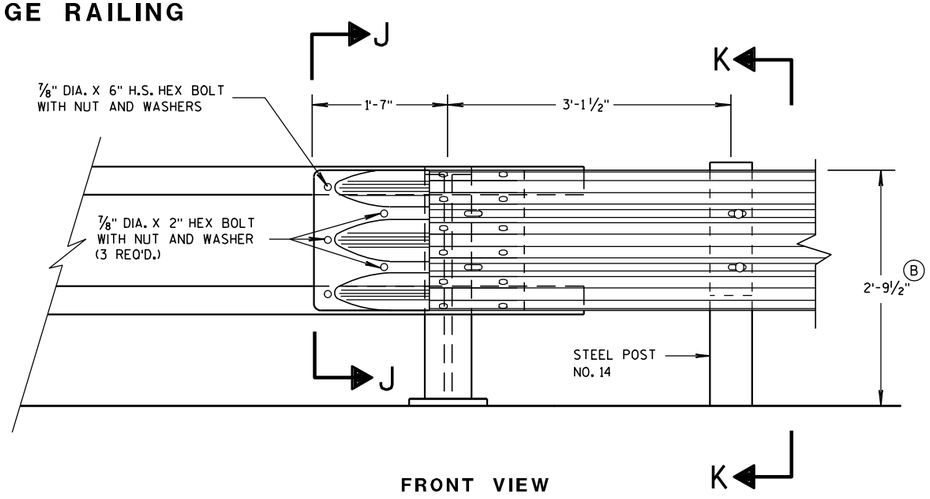


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

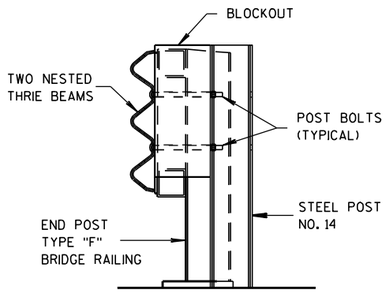


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/31/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

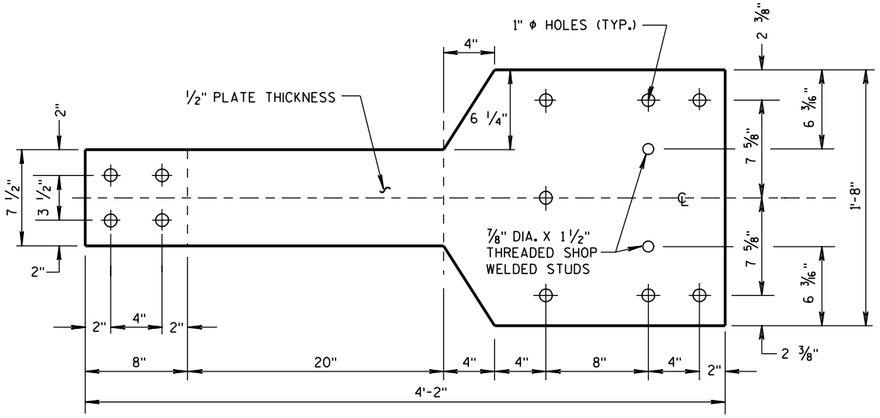
S.D.D. 14 B 45-3g

6

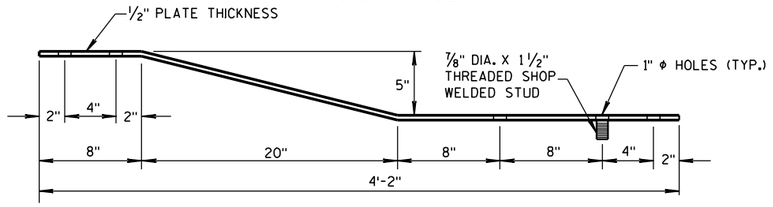
S.D.D. 14 B 45-3g

GENERAL NOTES

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

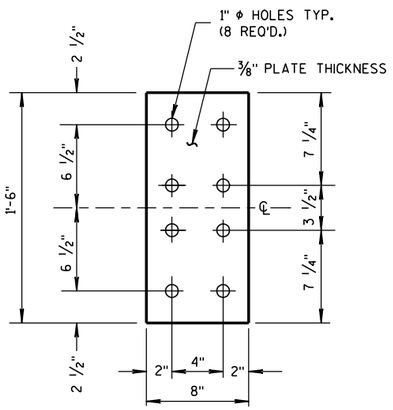


FRONT VIEW



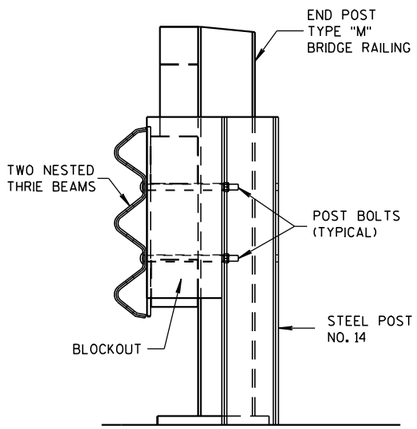
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

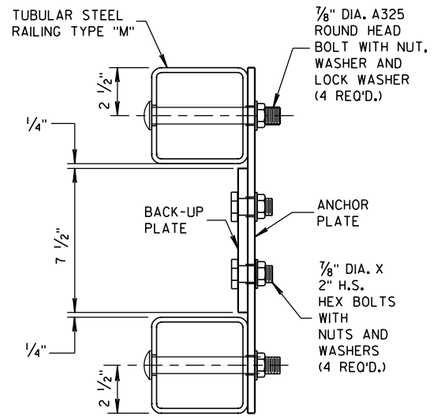


FRONT VIEW

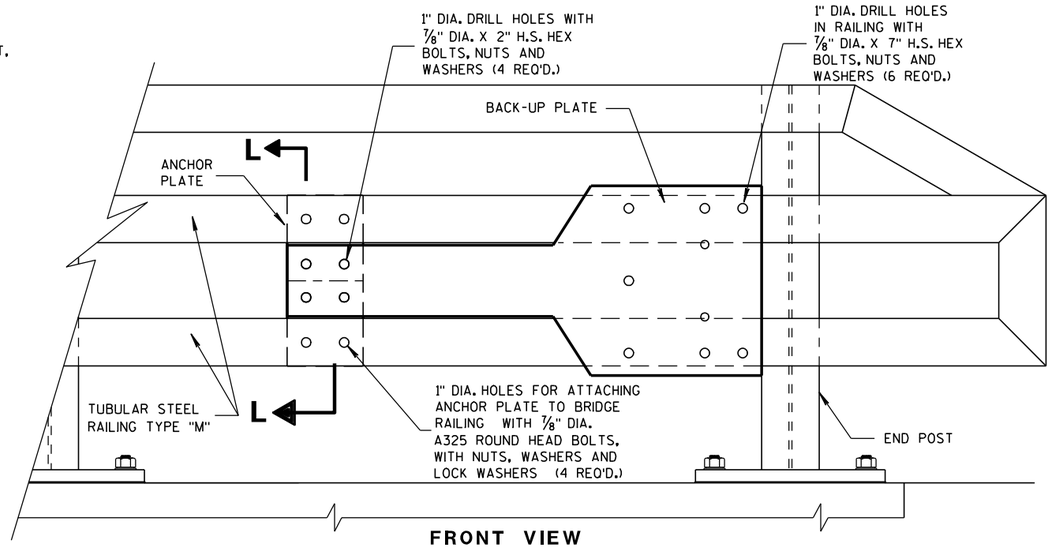
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

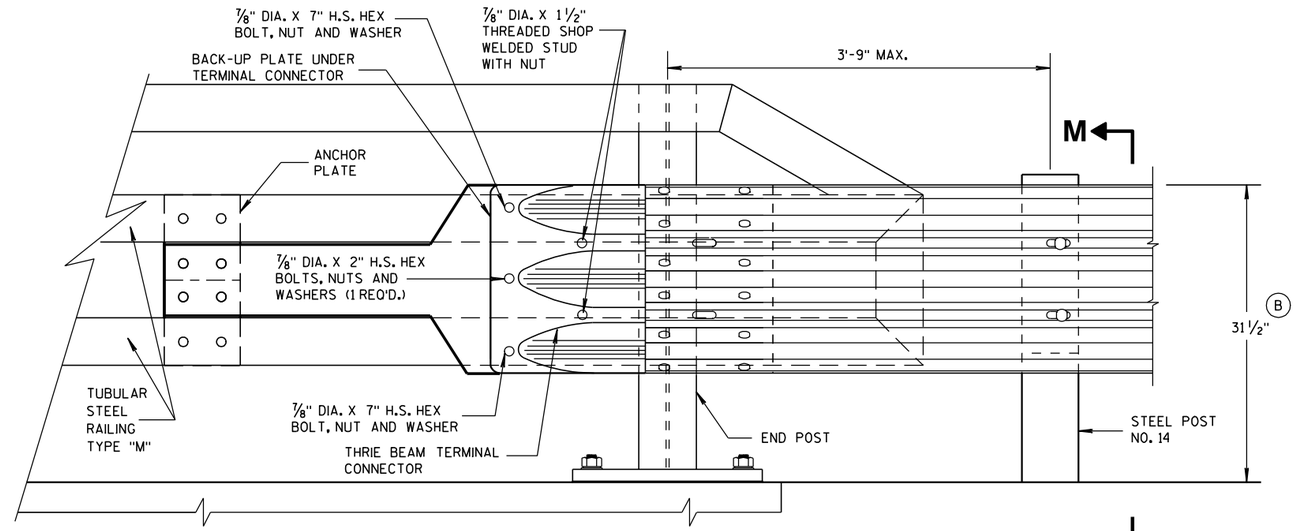


SECTION L-L

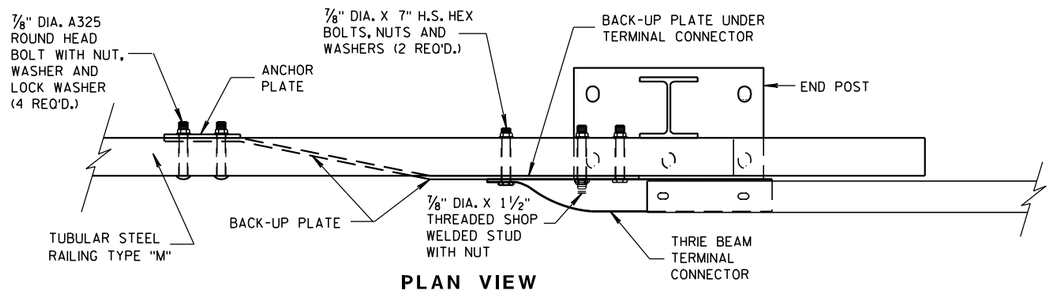


FRONT VIEW

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



FRONT VIEW



PLAN VIEW

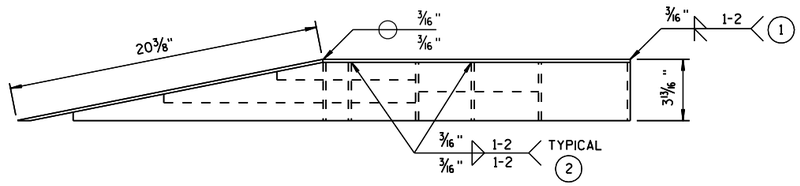
THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

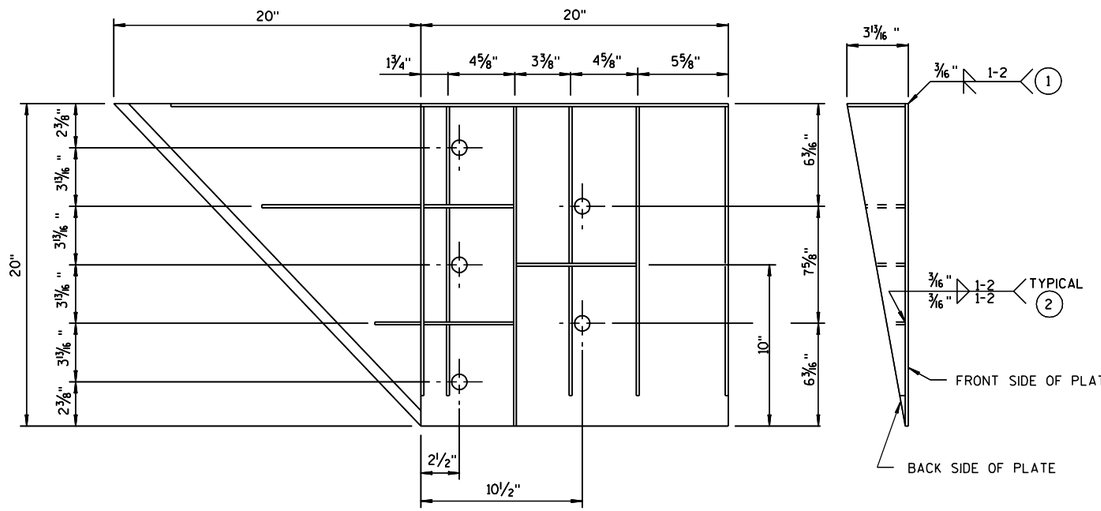
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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





WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

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

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

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

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

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

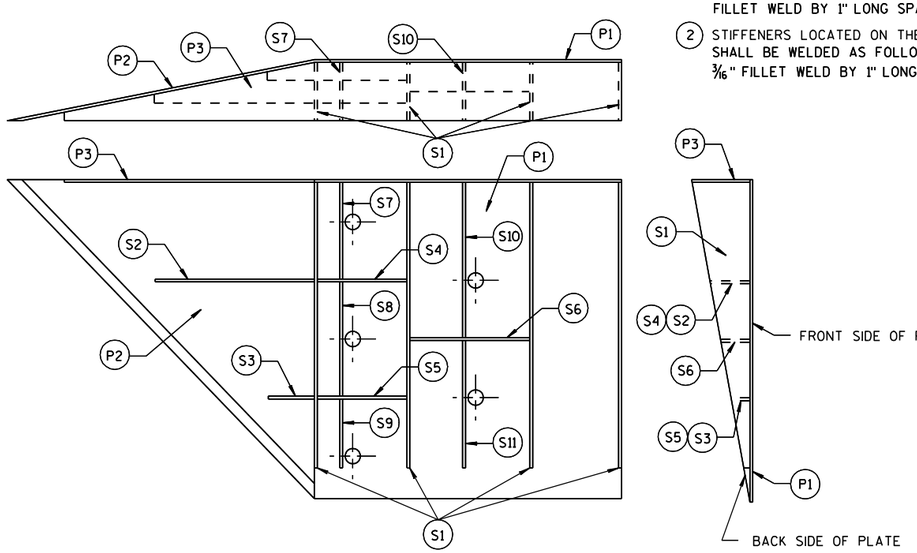


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

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

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

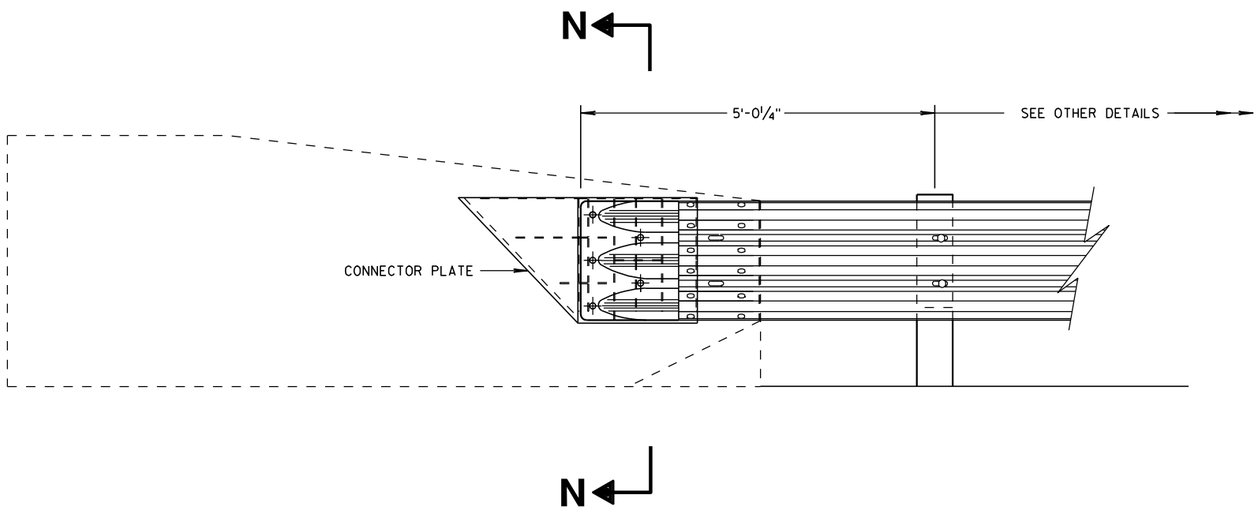
APPROVED
8/31/2012
DATE
/S/ Jerry H ----
ROADWAY STANDARDS ENGINEER
74
FHWA

6

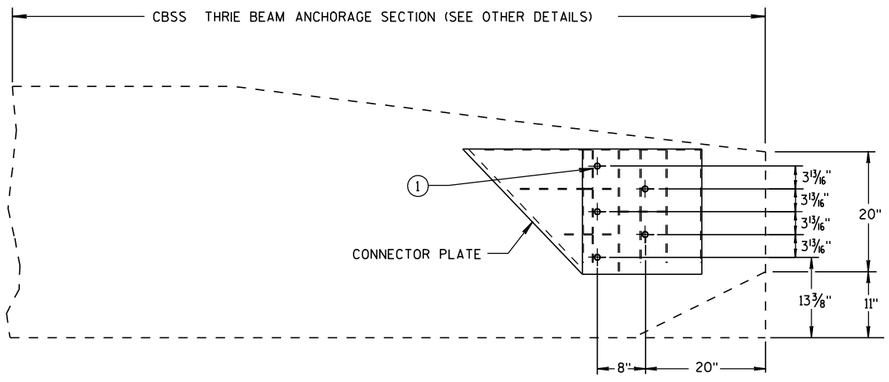
S.D.D. 14 B 45-3i

6

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



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER

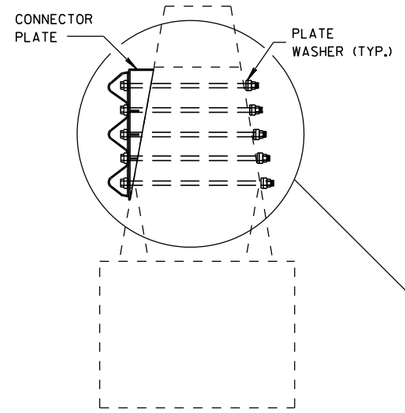


SINGLE SLOPE CONNECTION PLATE PLACEMENT

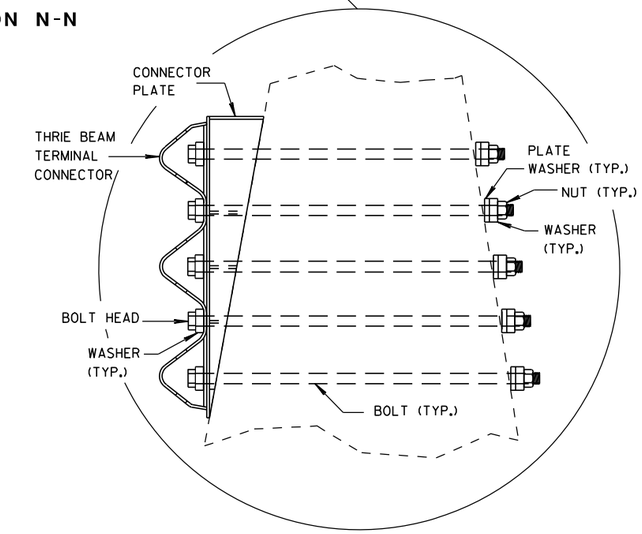
GENERAL NOTES

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

(1) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X ⅝" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012
DATE

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

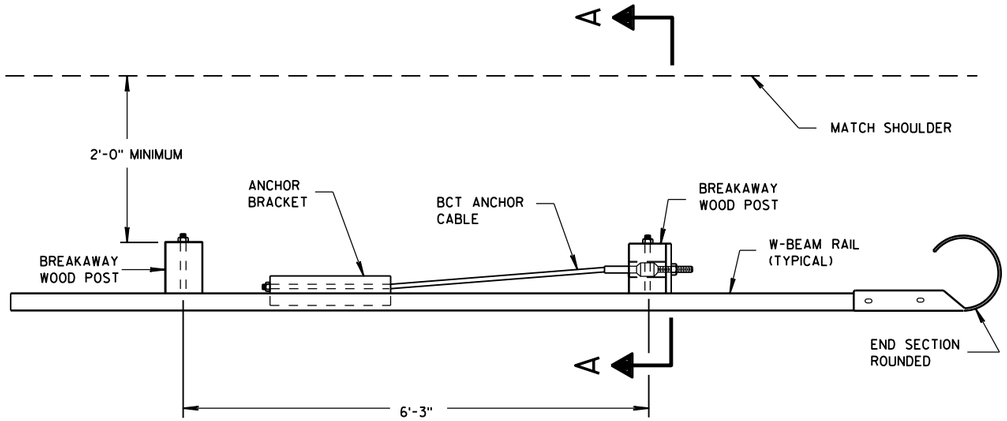
FHWA

6

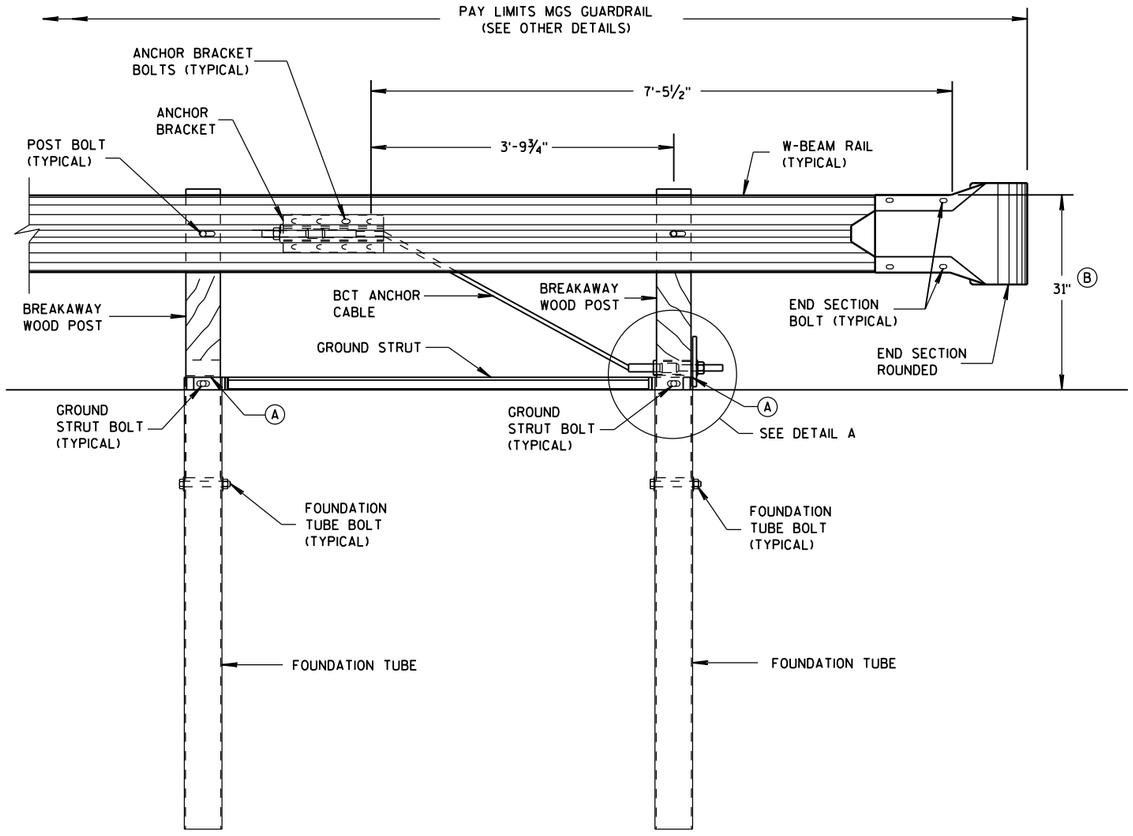
S.D.D. 14 B 45-3j

6

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

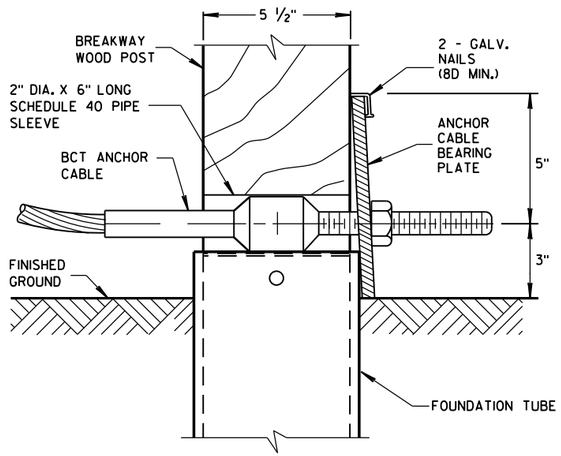


PLAN VIEW



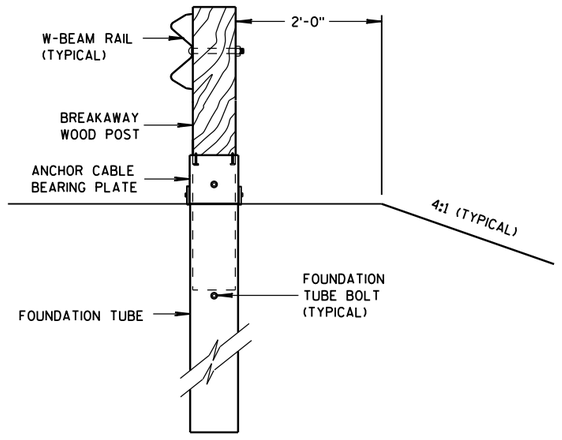
FRONT VIEW

END RAIL DETAIL



DETAIL A

POST NO. 1
GROUNG STRUT NOT SHOWN FOR CLARITY.



SECTION A-A

GENERAL NOTES

SEE SDD 14 B 42 FOR MORE INFORMATION.

END SECTION BOLTS AND NUTS HAVE THE SAME MATERIAL REQUIREMENTS AS SPLICE BOLTS.

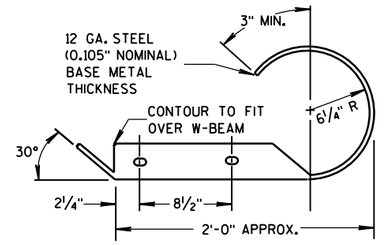
FOUNDATION TUBE BOLTS ARE ⅞" DIAMETER ASTM A307 HEX HEAD BOLT. FOUNDATION TUBE BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅞" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

ANCHOR BRACKET AND GROUND STRUT BOLTS ARE A ⅝" DIAMETER ASTM A307 HEX HEAD BOLT. ANCHOR BRACKET BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅝" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

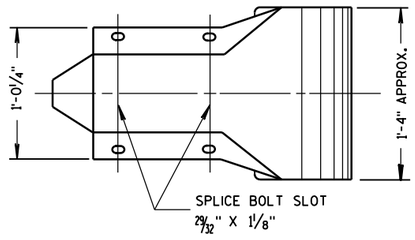
W-BEAM END SECTION ROUNDED HAS THE SAME MATERIAL PROPERTIES AS STANDARD STEEL RAIL.

(A) TOP OF FOUNDATION TUBE SHALL BE NO MORE THAN 3" ABOVE FINISHED GROUND.

(B) FOR NEW CONSTRUCTION TOP OF RAIL IS 31" ± 1".
FOR EXISTING INSTALLATIONS TOP OF RAIL IS BETWEEN 27¾" TO 32" ± 1".



PLAN VIEW



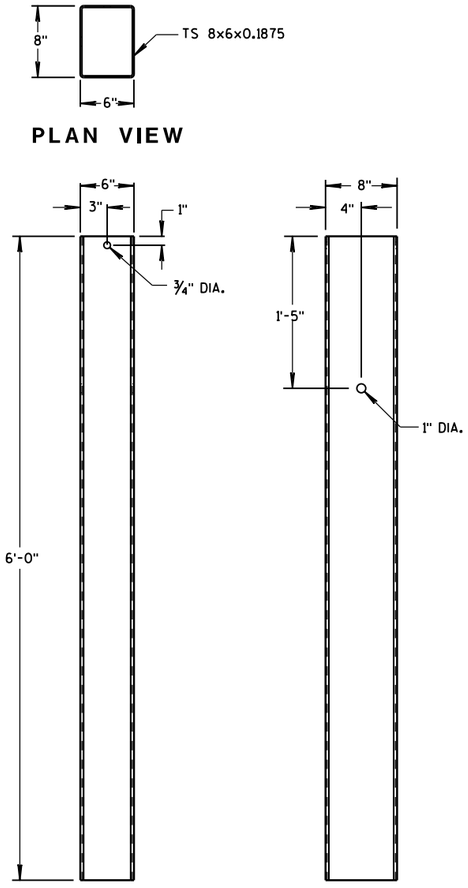
FRONT VIEW

W BEAM END SECTION ROUNDED

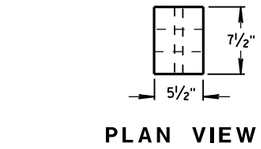
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

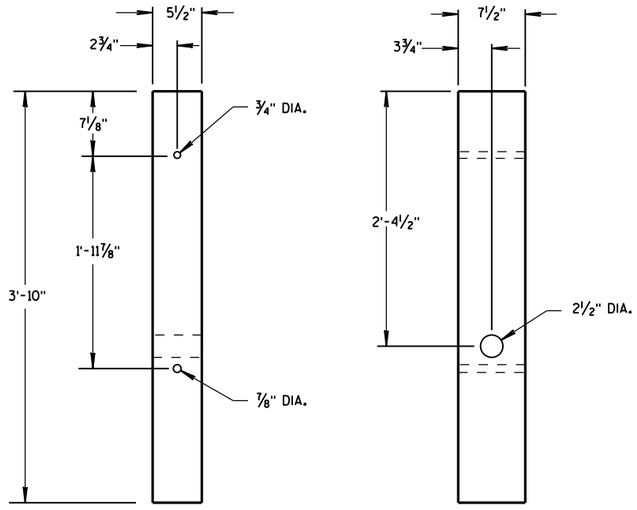
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6
S.D.D. 14 B 47-2a



FOUNDATION TUBE

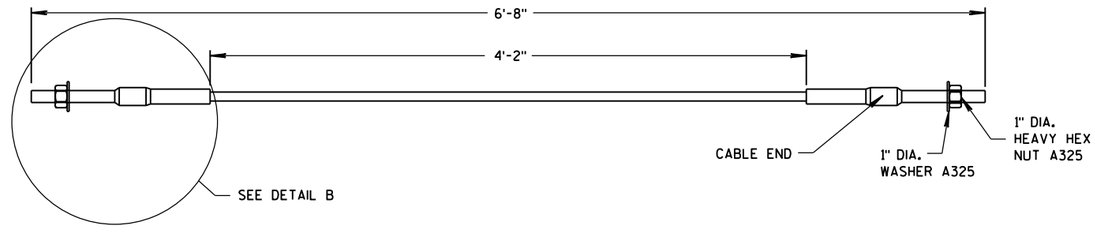




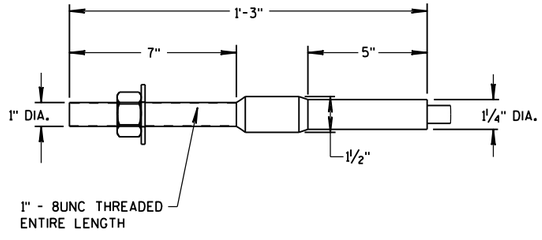
BREAKAWAY WOOD POST

GENERAL NOTES

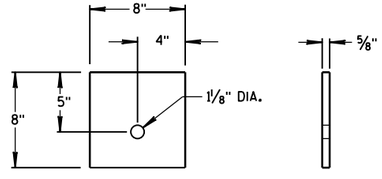
BCT ANCHOR CABLE IS A ¾" DIAMETER 6X19 IWRC IPS GALVANIZED WIRE ROPE. THE SWAGED FITTINGS AND STUD ARE REQUIRED. END FITTING SHALL BE MACHINED FROM HOT-ROLLED CARBON STEEL CONFORMING TO ASTM A576 GRADE 1035 AND GALVANIZED ACCORDING TO ASTM A123. TREADED STUD SHALL CONFORM TO ASTM A325 OR SAE GRADE 5. MINIMUM BREAKING STRENGTH OF WIRE ROPE IS 43,000 LB. WIRE ROPE IS TO BE TAUT.



BCT ANCHOR CABLE



DETAIL B



ANCHOR CABLE
BEARING PLATE

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

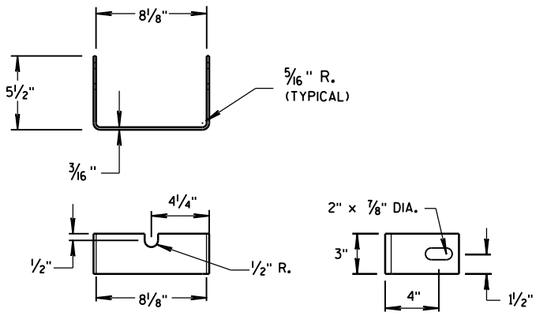
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI 77

6

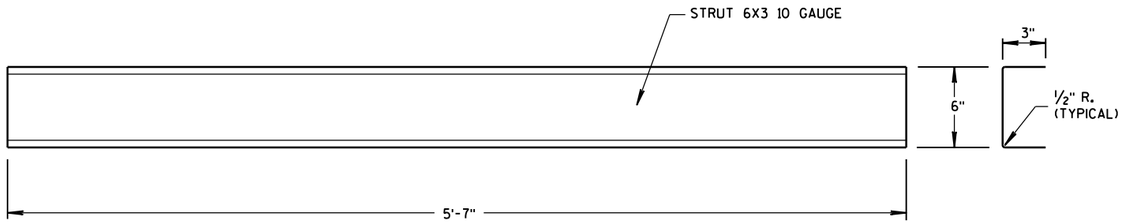
S.D.D. 14 B 47-2b

6

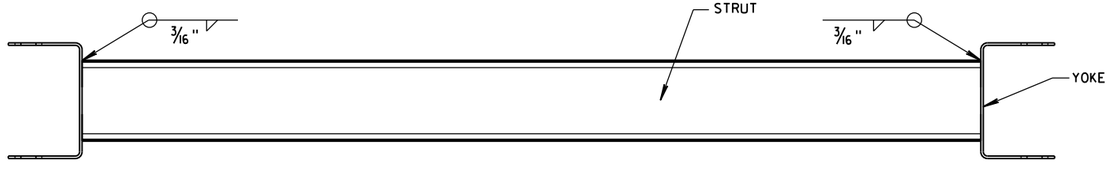
S.D.D. 14 B 47-2b



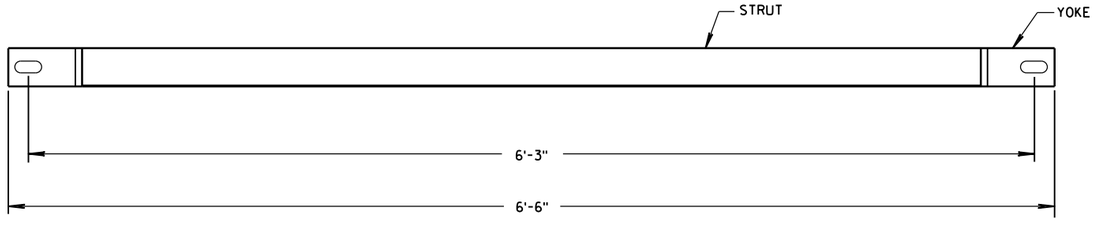
YOKE DETAIL



STRUT DETAIL

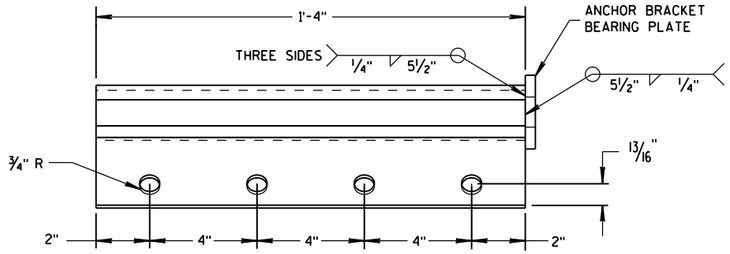


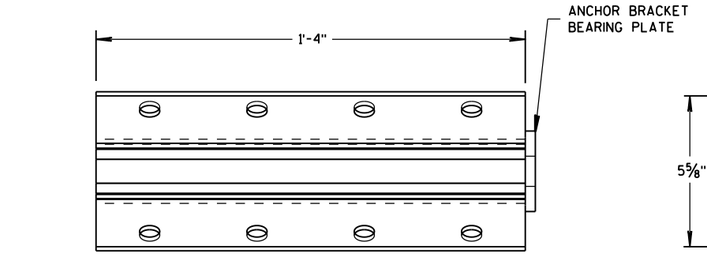
PLAN VIEW

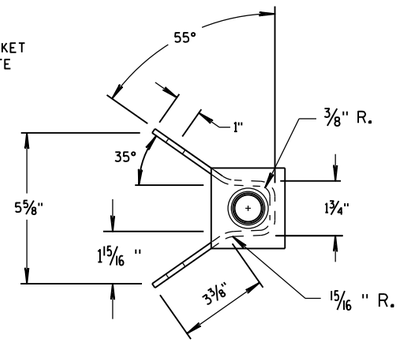


FRONT VIEW

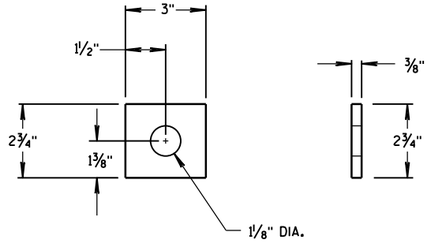
GROUND STRUT DETAIL







ANCHOR BRACKET



ANCHOR BRACKET BEARING PLATE

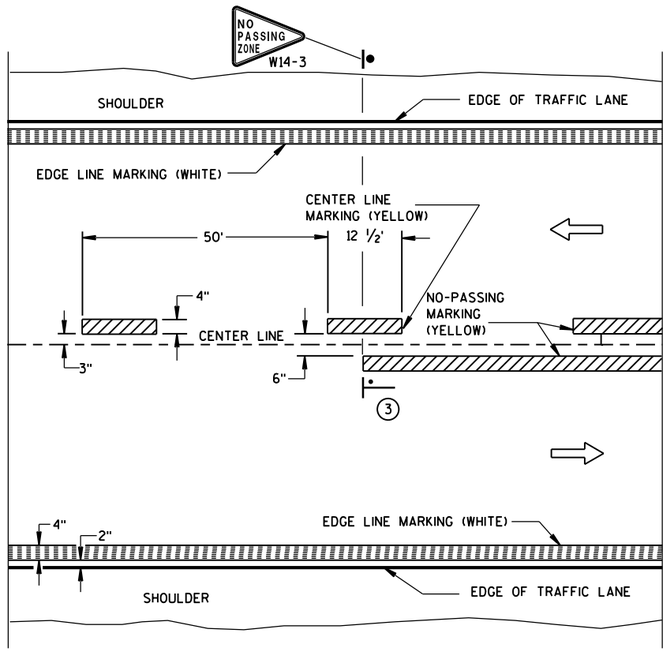
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

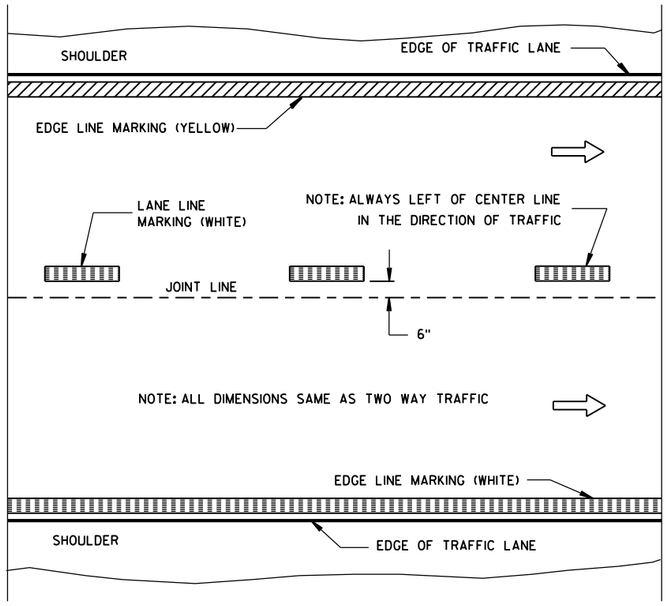
APPROVED
June 2014
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 14 B 47-2c

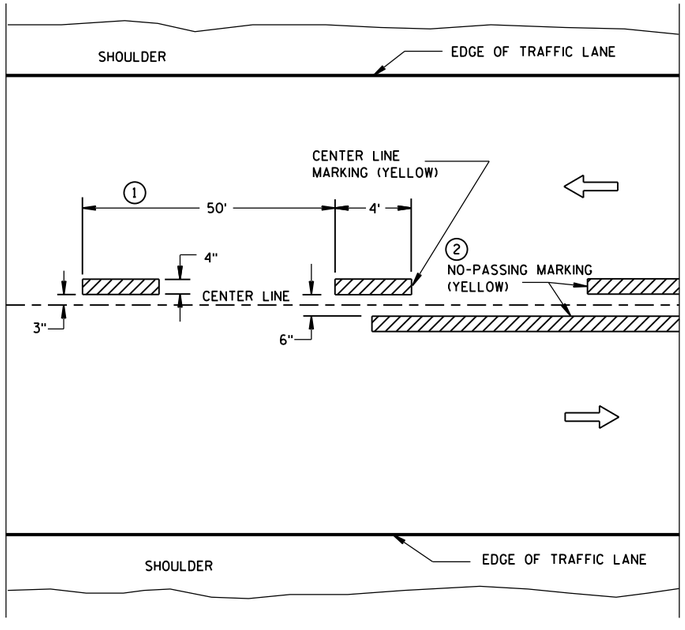


TWO WAY TRAFFIC

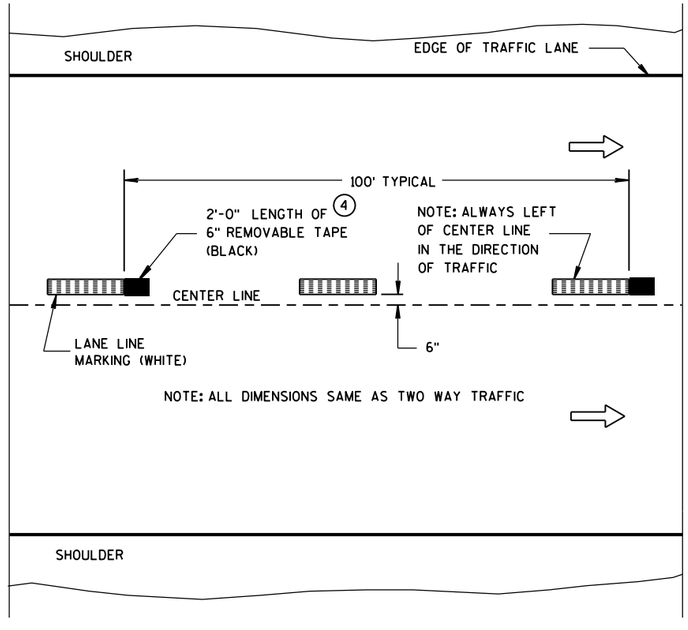


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

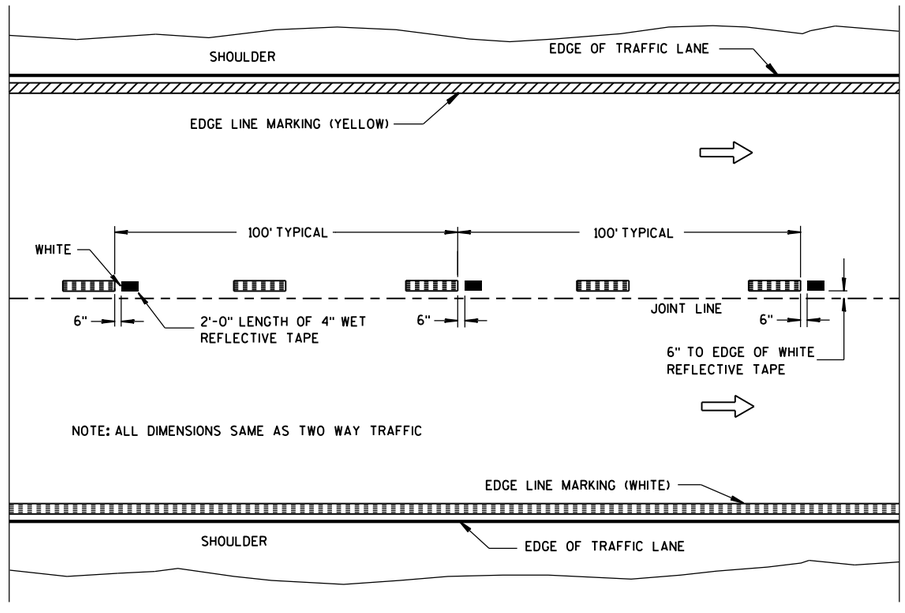
GENERAL NOTES

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

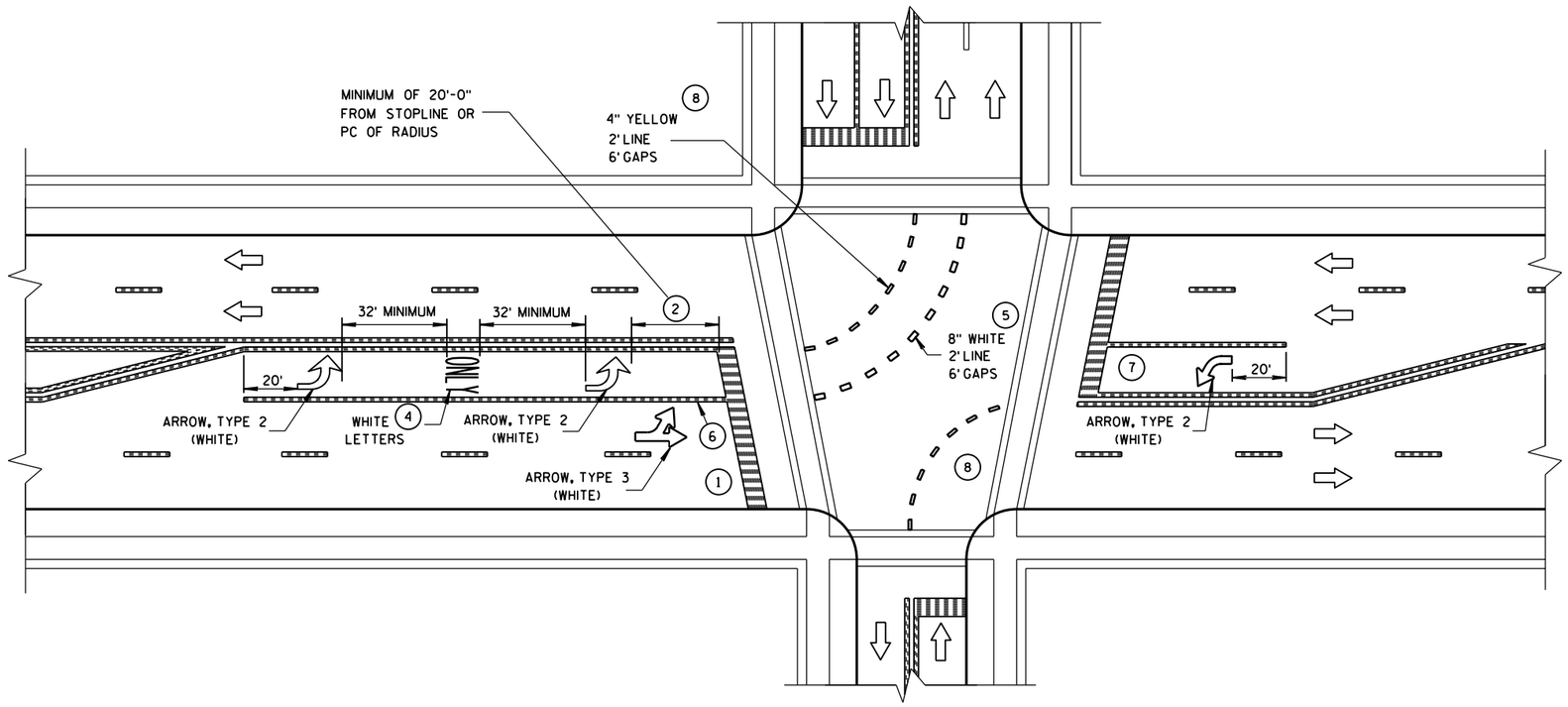
APPROVED
5-13-2013 DATE
/S/ Travis Feltes STATE TRAFFIC E
FHWA

6

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

6

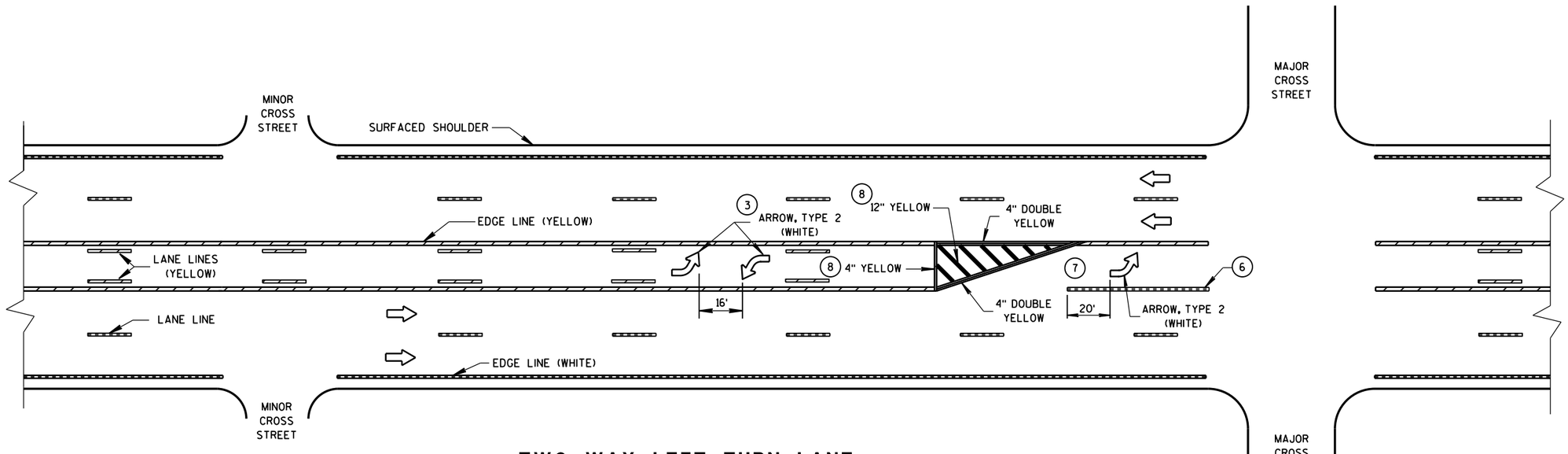
S.D.D. 15 C 8-16a



GENERAL NOTES

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

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TWO WAY LEFT TURN LANE

PAVEMENT MARKING (LEFT TURN LANE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

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

6

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

LEGEND

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



W057-52
36"x24"

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



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



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

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

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

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

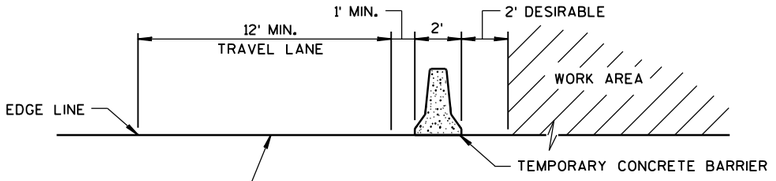
(1) CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUM TAPER.

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

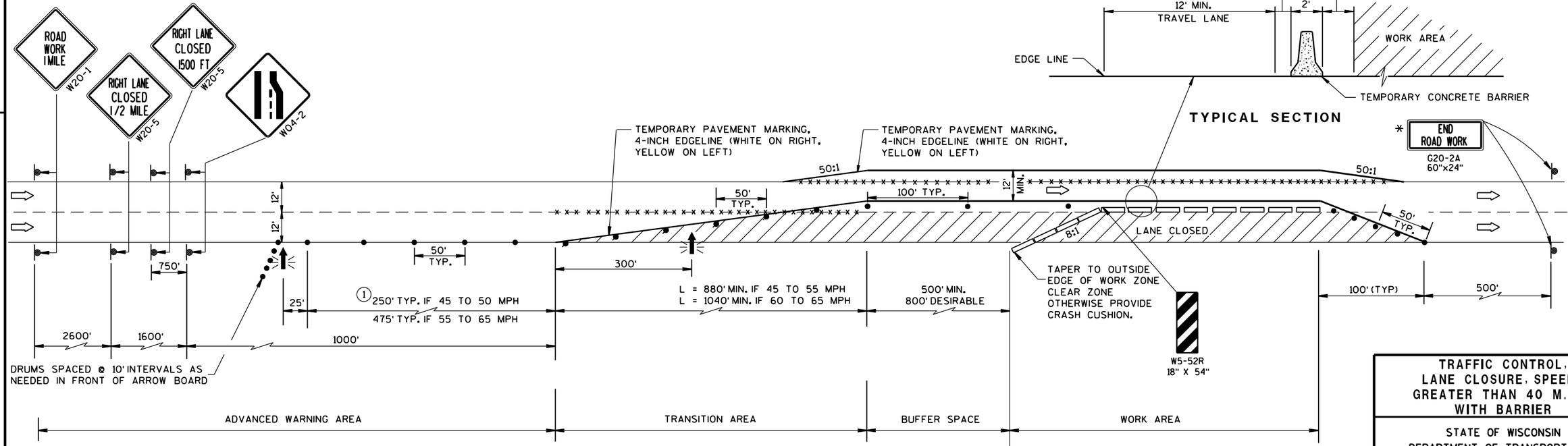
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

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



TYPICAL SECTION



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 15 D 3-2

6

S.D.D. 15 D 3-2

LEGEND

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

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"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. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

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

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

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

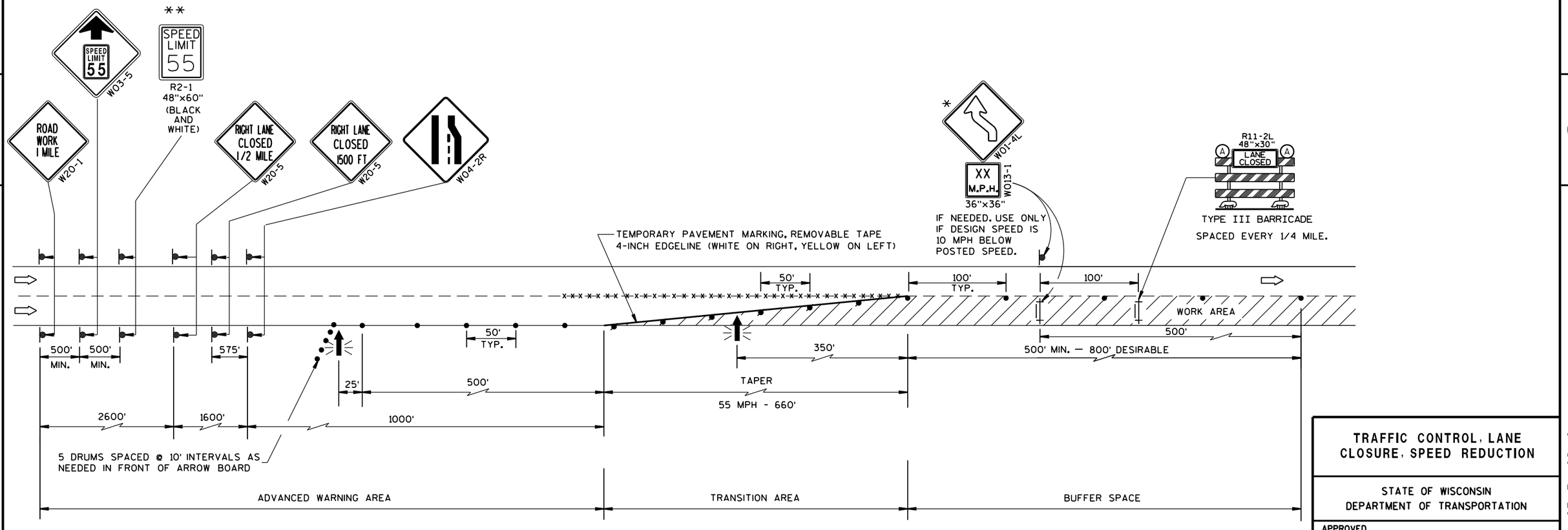
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

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

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

** A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. THERE SHOULD BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 2 OR 3 MILES. INCLUDE A 65 MPH RESUME SPEED LIMIT SIGN 200 FEET MINIMUM (500 FEET DESIREABLE) BEYOND THE "END OF ROADWORK" SIGN.



TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3-2014 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 D 12-4

LEGEND

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

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

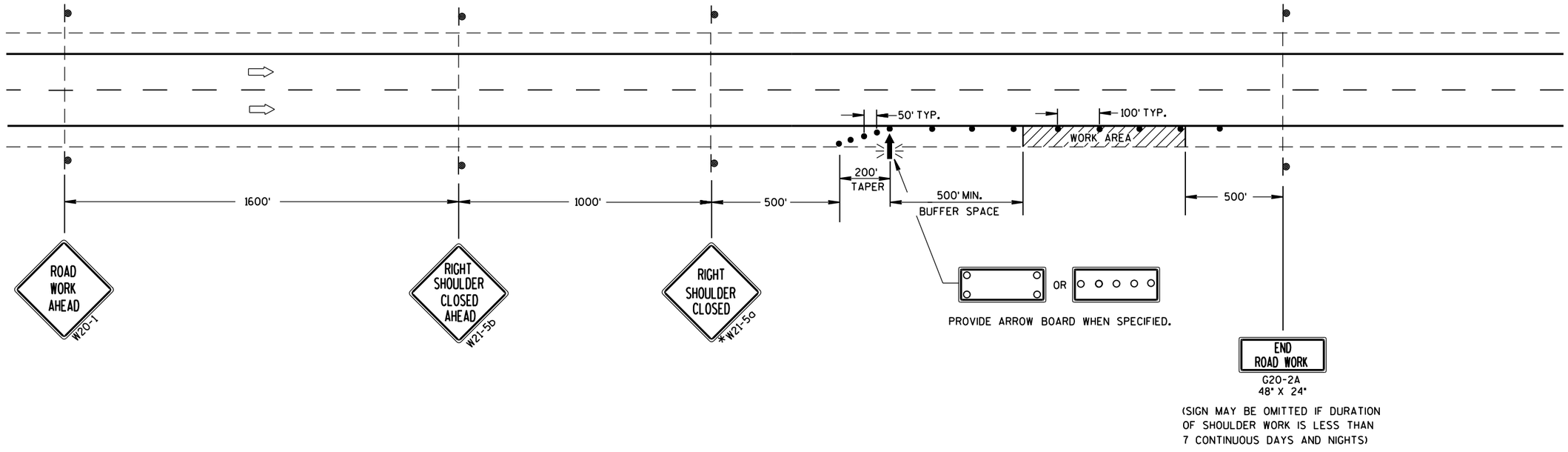
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

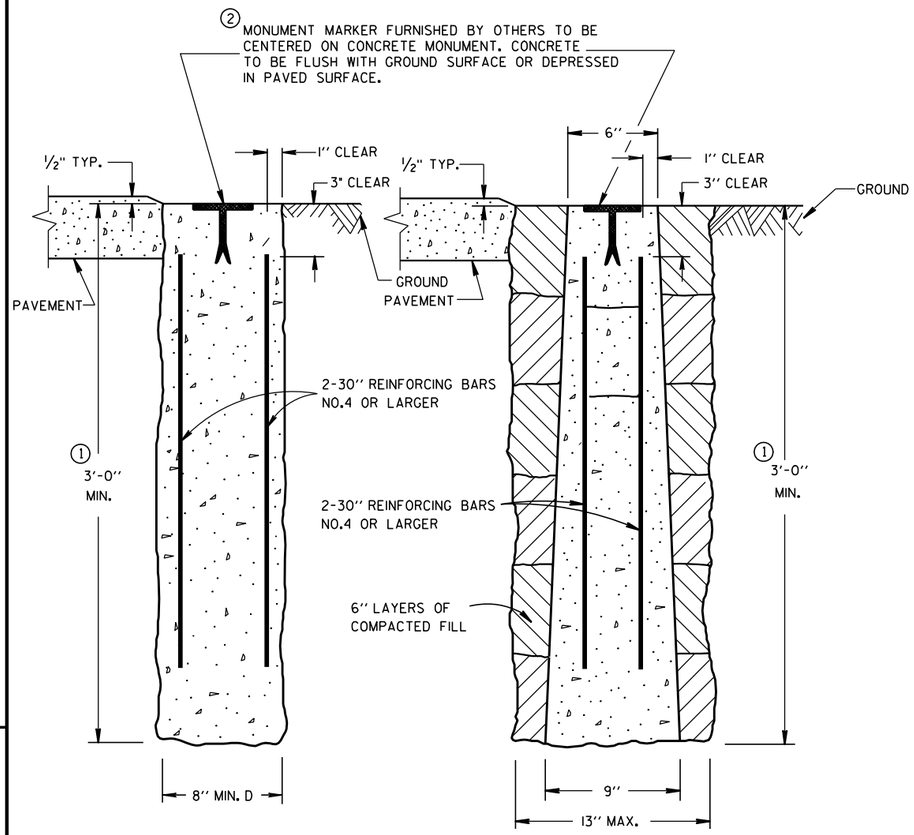
8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

6

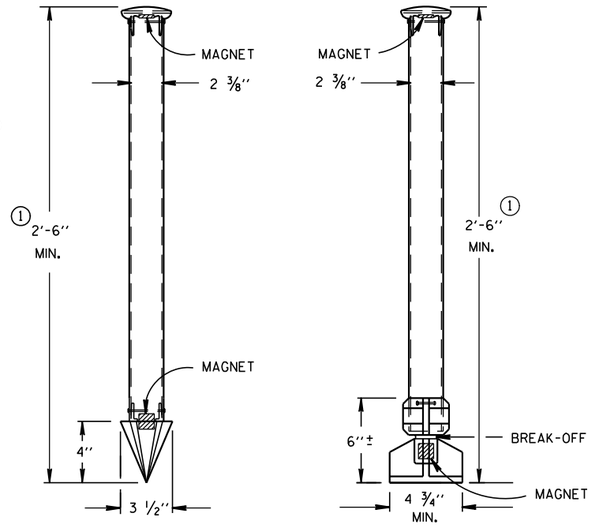
S.D.D. 15 D 27-2



CAST-IN-PLACE PRECAST

CONCRETE MONUMENTS

TYPE A



TYPE C DRIVE-IN MONUMENT

TYPE D BREAK-OFF MONUMENT

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.

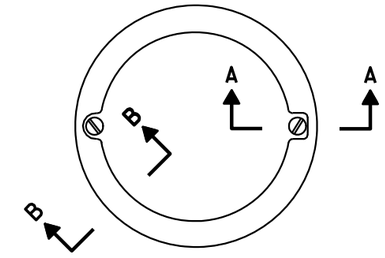
ALUMINUM MONUMENTS AND MONUMENT COVERS SHALL BE MADE FROM AN ALUMINUM AND MAGNESIUM ALLOY AS DETERMINED BY THE MANUFACTURER.

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.

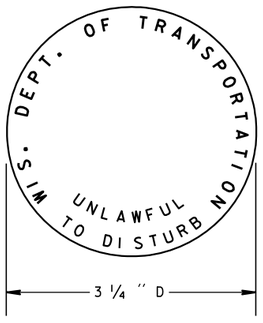
MONUMENT SHALL BE CAST-IN-PLACE CONCRETE UNLESS PRECAST CONCRETE OR ALUMINUM MONUMENTS ARE SPECIFIED IN THE CONTRACT OR PERMITTED BY THE ENGINEER.

① MINIMUM LENGTH SHALL BE 4'-0" FOR MONUMENTS INSTALLED IN PAVED AREAS.

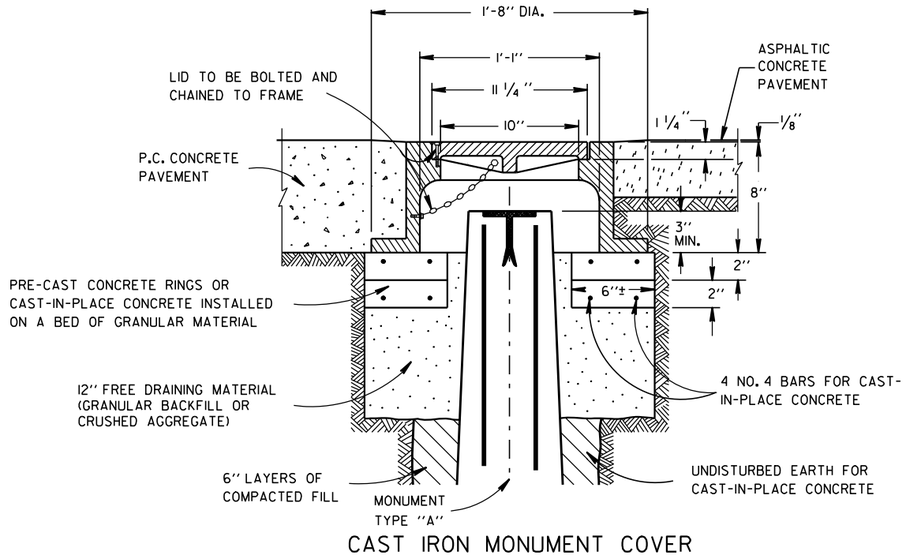
② AN OFFICIAL COUNTY MONUMENT MARKER SUPPLIED BY A COUNTY MAY BE REQUIRED FOR SOME SECTION CORNERS AND WITNESS MONUMENTS INSTEAD OF THIS WIS DOT MARKER.



TOP VIEW

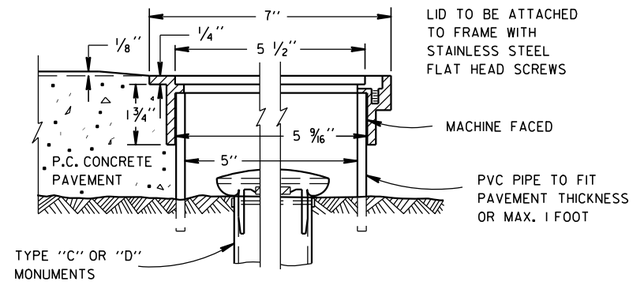


② WIS DOT MONUMENT MARKER LOGO FOR TYPES "A", "C" & "D"



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

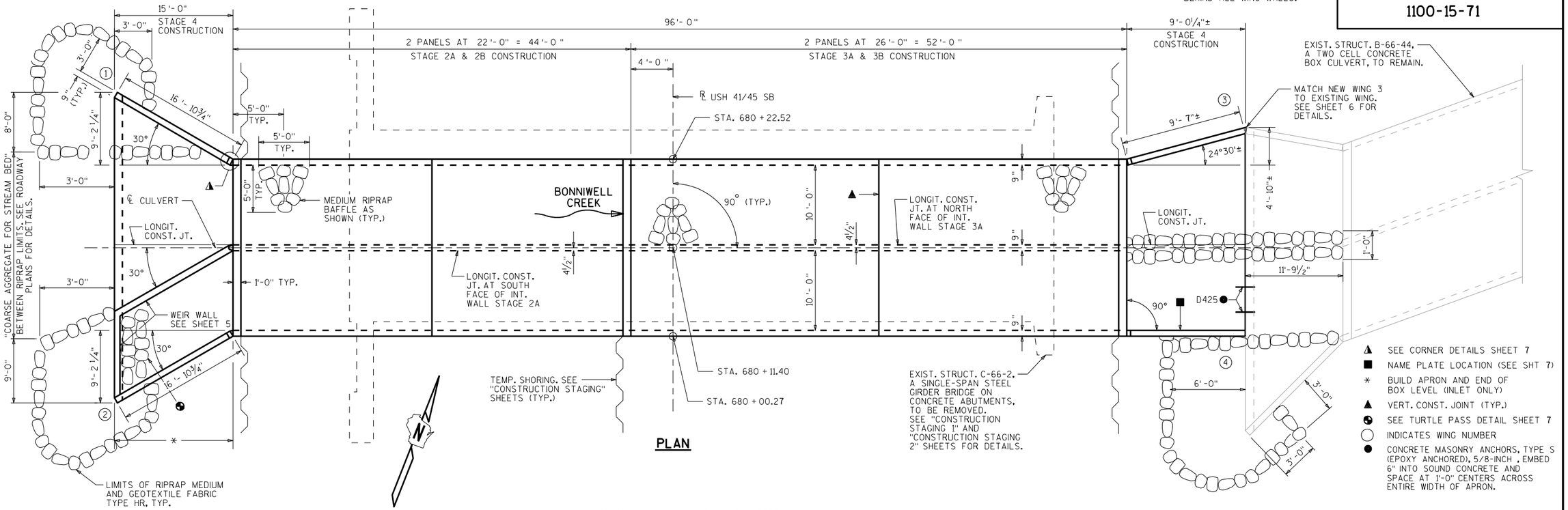
APPROVED
9/22/1999 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6 S.D.D. 16 A 1-6

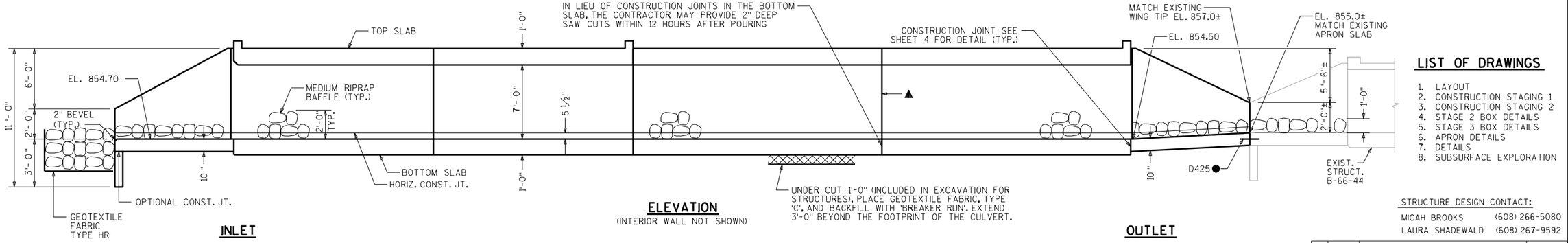
STATE PROJECT NUMBER

1100-15-71

NOTE: STRUCTURE BACKFILL REQUIRED BEHIND ALL WING WALLS.



PLAN



INLET

ELEVATION

(INTERIOR WALL NOT SHOWN)

OUTLET

LIST OF DRAWINGS

1. LAYOUT
2. CONSTRUCTION STAGING 1
3. CONSTRUCTION STAGING 2
4. STAGE 2 BOX DETAILS
5. STAGE 3 BOX DETAILS
6. APRON DETAILS
7. DETAILS
8. SUBSURFACE EXPLORATION

STRUCTURE DESIGN CONTACT:

MICAH BROOKS (608) 266-5080

LAURA SHADEWALD (608) 267-9592

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF=1.05
OPERATING RATING FACTOR: RF=1.35
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 210 (KIPS)

EARTHLOAD: DESIGNED FOR 2.5 TO 5.0 FT. OF FILL.

MATERIAL PROPERTIES:

CONCRETE MASONRY, GRADE A-FA — f'_c = 3500 P.S.I.
HIGH STRENGTH BAR STEEL REINFORCEMENT — f_y = 60000 P.S.I.

TRAFFIC VOLUME

USH 41/45 SB
A.D.T. = 95600 (2030)
R.D.S. = 65 M.P.H.

HYDRAULIC DATA

100 YEAR FREQUENCY
Q_{100} = 550 C.F.S.
VEL. = 4.1 F.P.S.
HW. = EL. 861.74

2 YEAR FREQUENCY
Q_2 = 130 C.F.S.
$HW_{.2}$ = EL. 858.23

DRAINAGE AREA = 2.8 SQ. MI.
OVERTOPPING RDWY. = N.A.
SCOUR CODE = 8

TOTAL ESTIMATED QUANTITIES

BID ITEMS

203.0200	REMOVING OLD STRUCTURE STA. 680+16	1	LS
206.2000	EXCAVATION FOR STRUCTURES CULVERTS B-66-195	1	LS
210.0100	BACKFILL STRUCTURE	600	CY
311.0115	BREAKER RUN	130	CY
502.6105	MASONRY ANCHORS TYPE S 5/8-INCH	25	EACH
504.0100	CONCRETE MASONRY CULVERTS	250	CY
505.0410	BAR STEEL REINFORCEMENT HS CULVERTS	27505	LB
505.0610	BAR STEEL REINFORCEMENT HS COATED CULVERTS	935	LB
511.1200	TEMPORARY SHORING B-66-195	1030	SF
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	35	SY
606.0200	RIPRAP MEDIUM	24	CY
645.0105	GEOTEXTILE FABRIC TYPE C	422	SY
645.0120	GEOTEXTILE FABRIC TYPE HR	41	SY
SPV.0035	BACKFILL SLURRY	80	CY

NON-BID ITEMS

FILLER	3/4"	SIZE

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES CULVERTS B-66-195" SHALL BE THE EXISTING GROUNDLINE.

ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL TO THE TOP OF THE BOX WITHIN THE LENGTH OF THE CULVERT.

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

PLACE A 18" (MIN.) WIDE SHEET OF 'RUBBERIZED MEMBRANE WATERPROOFING' ON TOP SLAB OVER ALL CONSTRUCTION JOINTS AND EXTEND DOWN TO BOTTOM OF OUTSIDE WALLS.

THE CONTRACTOR MAY FURNISH A PRECAST CONCRETE BOX CULVERT IN LIEU OF THE CAST-IN-PLACE BOX CULVERT WITH THE ACCEPTANCE OF THE SHOP DRAWINGS BY THE STRUCTURES DESIGN SECTION. THE PRECAST CONCRETE BOX CULVERT SHALL CONFORM TO PRECAST DETAILS IN CHAPTER 36 STANDARDS OF THE CURRENT WISC. DOT BRIDGE MANUAL. PAYMENT FOR THE PRECAST CULVERT SHALL BE BASED ON THE QUANTITIES AND PRICES BID FOR THE ITEMS LISTED IN THE "TOTAL ESTIMATED QUANTITIES".

CONTRACTOR MAY ELECT TO SUBSTITUTE #1 OR #2 CONCRETE COARSE AGGREGATE, SELECT CRUSHED MATERIAL OR OTHER GRANULAR MATERIAL AS APPROVED BY THE FIELD ENGINEER, IN LIEU OF THE BREAKER RUN, TO BE UTILIZED AS A CONSTRUCTION PLATFORM FOR THE BOX. THE CONTRACTOR IS RESPONSIBLE FOR BASE STABILITY WITH ANY SUBSTITUTED MATERIAL.

NO.	DATE	REVISION	BY

Plans Prepared By WISDOT
BUREAU OF STRUCTURES

ACCEPTED William C. Ducker LLS — 3/2/15
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-66-195

USH 41/45 SB OVER BONNIWELL CREEK

COUNTY WASHINGTON — TOWN ~~CITY/VILLAGE~~ RICHFIELD

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MWB	DFD	MWB	DFD

LAYOUT

SHEET 1 OF 8

85

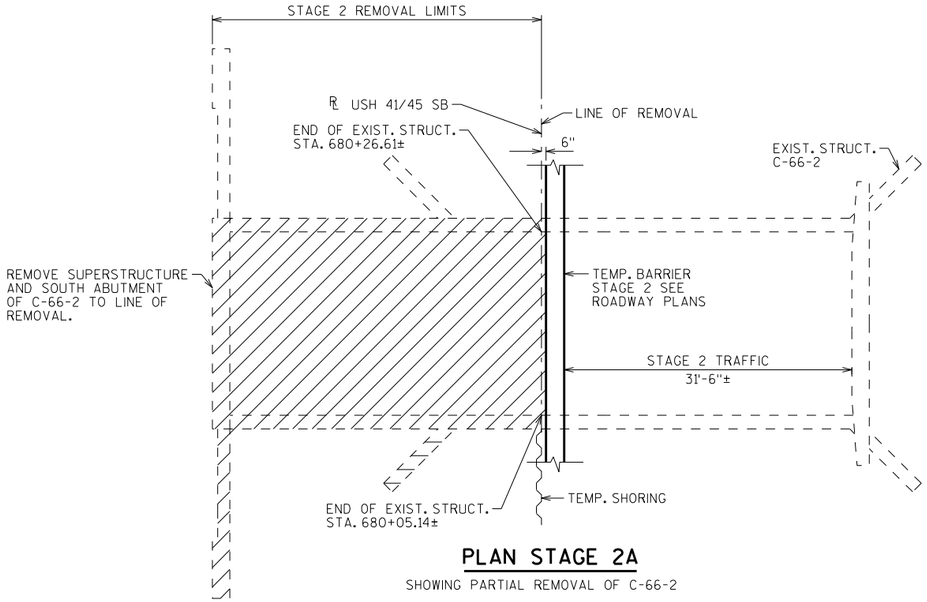
SCALE = 4

I.D. 1100-15-01A

DATE: FEB. 2015

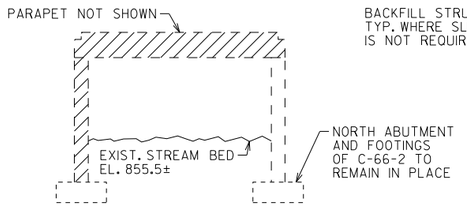
STATE PROJECT NUMBER

1100-15-71



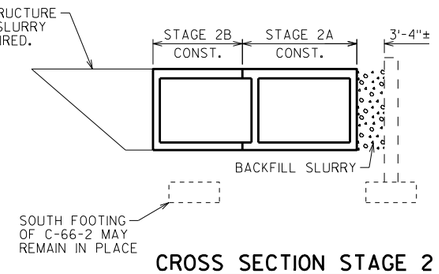
PLAN STAGE 2A

SHOWING PARTIAL REMOVAL OF C-66-2



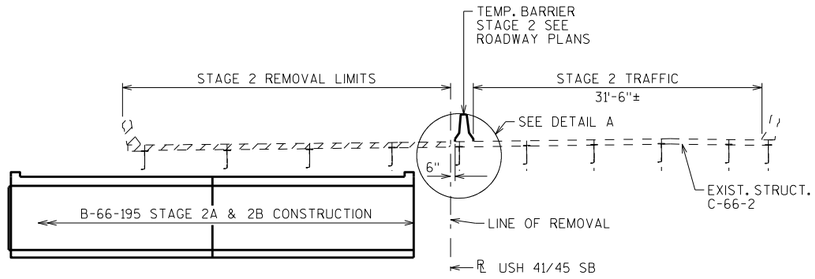
CROSS SECTION STAGE 2

SHOWING PARTIAL REMOVAL OF C-66-2
STAGE 3 SIMILAR



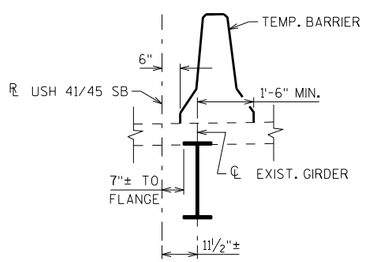
CROSS SECTION STAGE 2

SHOWING STAGE 2A & 2B CONSTRUCTION OF B-66-195
STAGE 3 SIMILAR

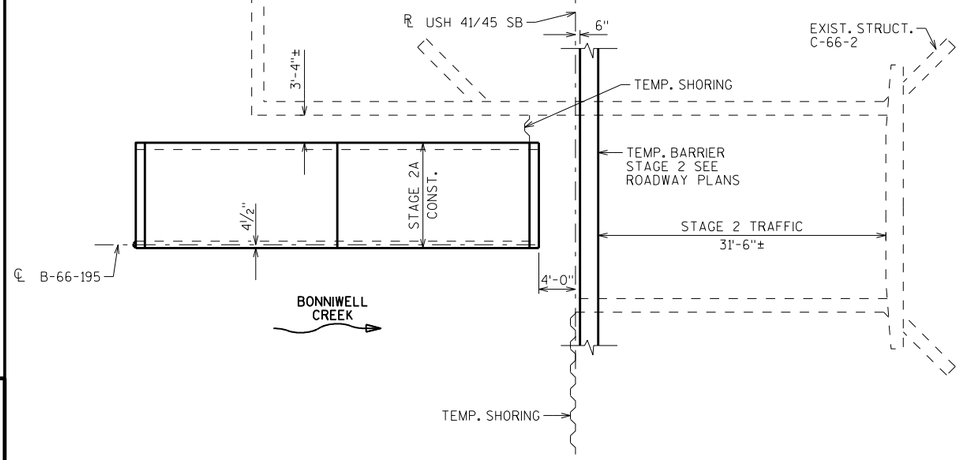


ELEVATION STAGE 2

SHOWING STAGE 2A AND 2B CONSTRUCTION OF B-66-195
AND PARTIAL REMOVAL OF C-66-2
(LOOKING NORTH)

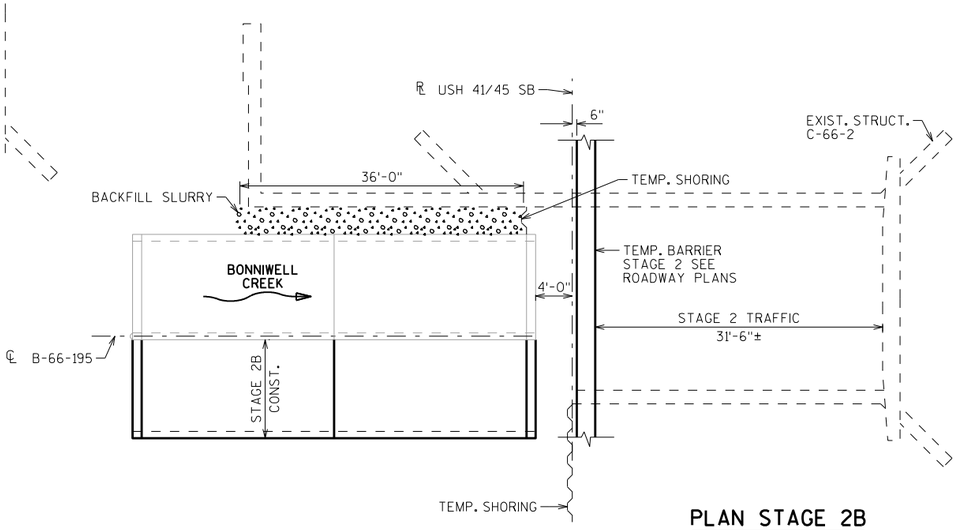


DETAIL A



PLAN STAGE 2A

SHOWING STAGE 2A CONSTRUCTION OF B-66-195



PLAN STAGE 2B

SHOWING STAGE 2B CONSTRUCTION OF B-66-195

NOTE:
ASPHALT OVERLAY TO BE REMOVED IN AREA WHERE BARRIER IS TO BE PLACED BEFORE PLACING BARRIER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-66-195

DRAWN BY MWB | PLANS CK'D. DFD

CONSTRUCTION STAGING 1

SHEET 2

86

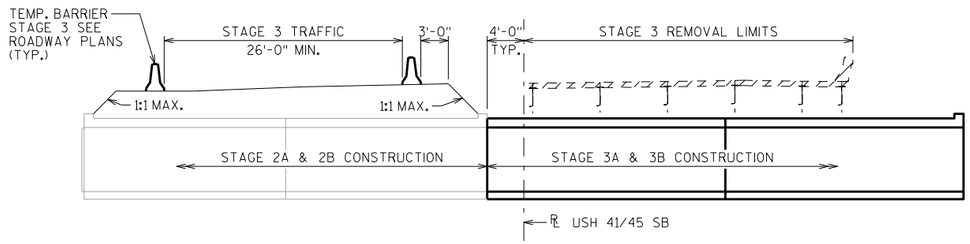
SCALE = 8

8

8

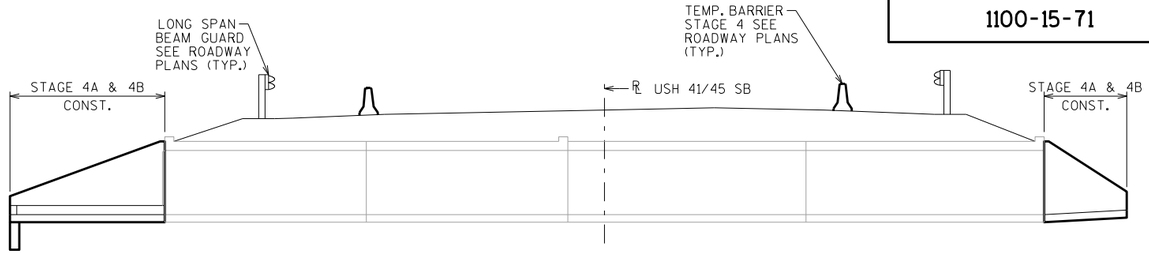
STATE PROJECT NUMBER

1100-15-71



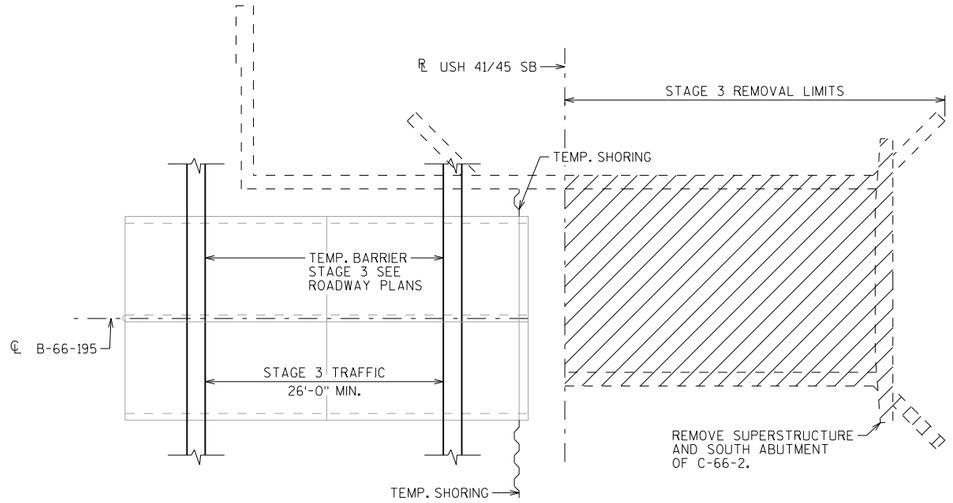
ELEVATION STAGE 3

SHOWING STAGE 3A AND 3B CONSTRUCTION OF B-66-195
AND FINAL REMOVAL OF C-66-2
(LOOKING NORTH)



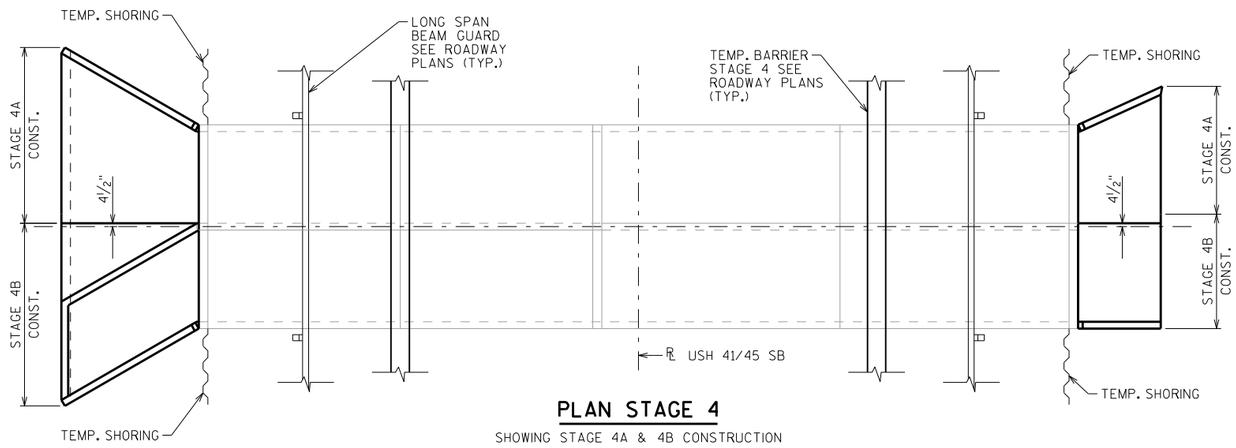
ELEVATION STAGE 4

SHOWING STAGE 4A & 4B CONSTRUCTION AND FINAL ROADWAY
(LOOKING NORTH)



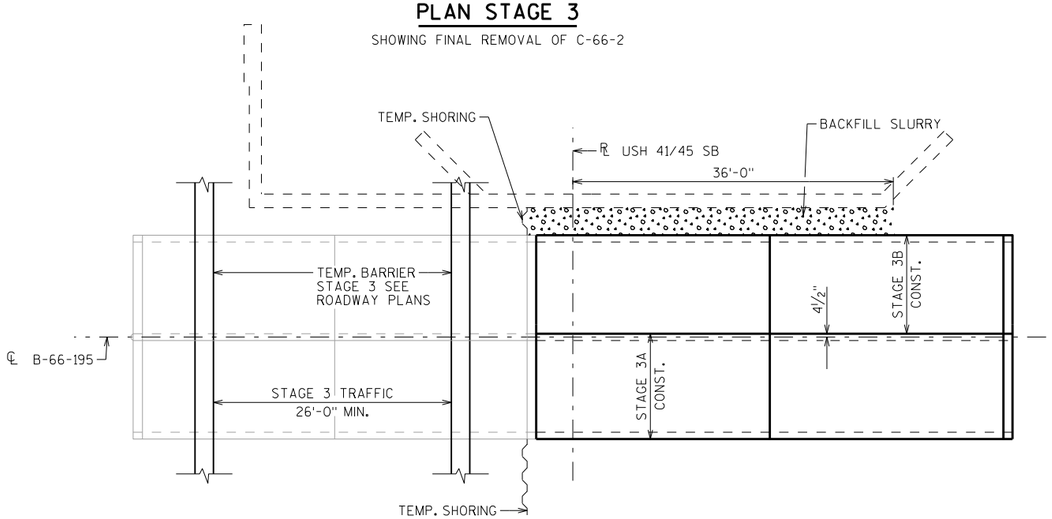
PLAN STAGE 3

SHOWING FINAL REMOVAL OF C-66-2



PLAN STAGE 4

SHOWING STAGE 4A & 4B CONSTRUCTION



PLAN STAGE 3

SHOWING STAGE 3A & 3B CONSTRUCTION OF B-66-195

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-66-195

DRAWN BY MWB | PLANS CK'D. DFD

CONSTRUCTION STAGING 2

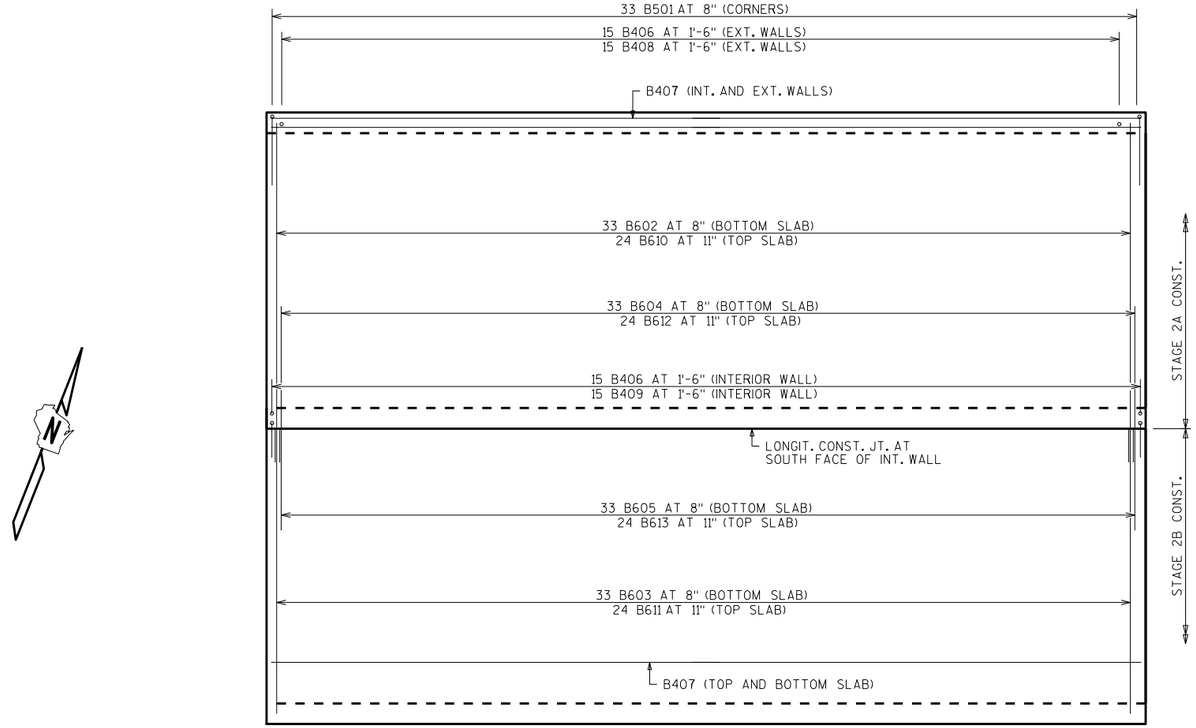
SHEET 3

87

SCALE = 8

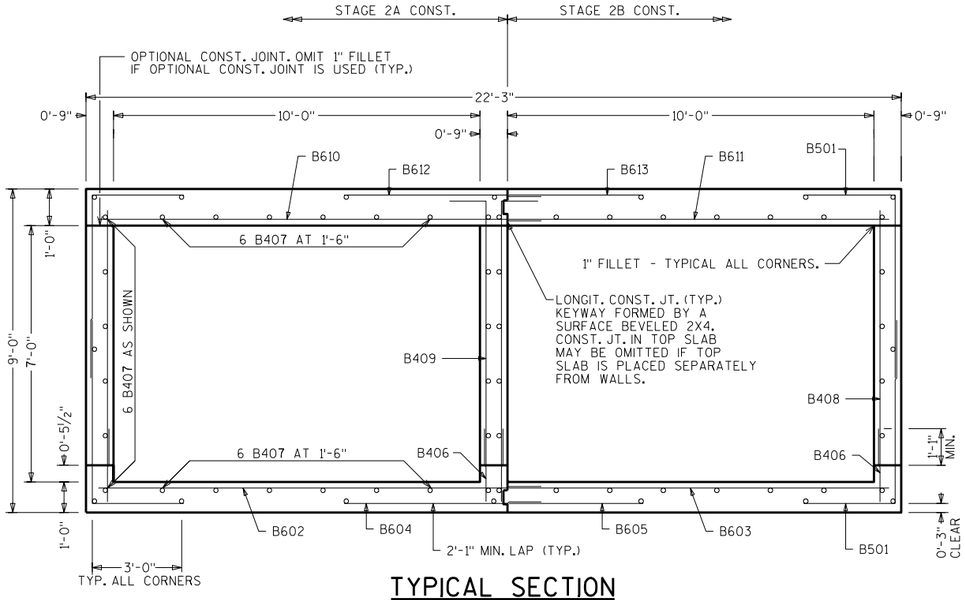
STATE PROJECT NUMBER

1100-15-71



PLAN VIEW OF INLET PANEL

USE IDENTICAL STEEL IN INNER PANEL.
(HEADER NOT SHOWN FOR CLARITY)



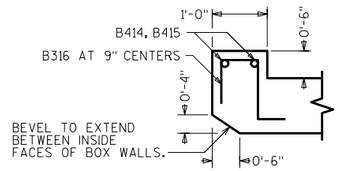
TYPICAL SECTION THRU INLET PANEL

ALL LONGITUDINAL BARS NOT IDENTIFIED ARE B407 AS SHOWN.
(LOOKING EAST)

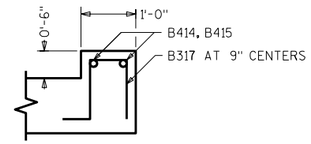
BILL OF BARS

THE FIRST OR FIRST AND SECOND DIGIT OF THE MARK SIGNIFIES THE BAR SIZE. THE DIMENSION IN THE BENT COLUMN IS THE OUT TO OUT HORIZONTAL LEG OF A "L" SHAPED BAR. LONGER BARS OF THE SAME SIZE MAY BE SUBSTITUTED FOR SHORTER BARS. PAYMENT BASED ON BAR LENGTHS AS DETAILED.

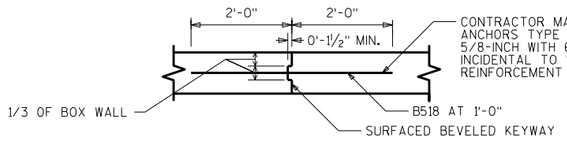
MARK	NUMBER REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501	264	8-0	3-0	NO	CORNERS
B602	66	13-5	NO	NO	BOTTOM SLAB TRANS. STAGE 2A
B603	66	10-7	NO	NO	BOTTOM SLAB TRANS. STAGE 2B
B604	66	8-3	NO	NO	BOTTOM SLAB TRANS. STAGE 2A
B605	66	5-4	NO	NO	BOTTOM SLAB TRANS. STAGE 2B
B406	120	2-2	NO	NO	WALLS-DOWELS VERT.
B407	128	21-6	NO	NO	TOP & BOTTOM SLAB & WALL
B408	60	7-4	NO	NO	EXTERIOR WALLS VERT.
B409	60	8-3	1-0	NO	INTERIOR WALLS VERT.
B610	48	13-5	NO	NO	TOP SLAB TRANS. STAGE 2A
B611	48	10-7	NO	NO	TOP SLAB TRANS. STAGE 2B
B612	48	8-3	NO	NO	TOP SLAB TRANS. STAGE 2A
B613	48	5-4	NO	NO	TOP SLAB TRANS. STAGE 2B
B414	4	14-5	NO	NO	HEADERS HORIZ. STAGE 2A
B415	4	9-7	NO	NO	HEADERS HORIZ. STAGE 2B
B316	30	3-0	YES	NO	INLET HEADER STIRRUPS VERT.
B317	30	3-3	YES	NO	CONST. JT. HEADER STIRRUPS VERT.
B518	134	4-0	NO	NO	VERT. CONST. JOINT
B419	22	3-4	NO	NO	APRON CONST. JT.



SECTION THRU TOP HEADER AT INLET

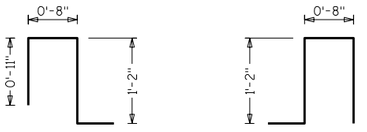


SECTION THRU TOP HEADER AT CONST. JT.

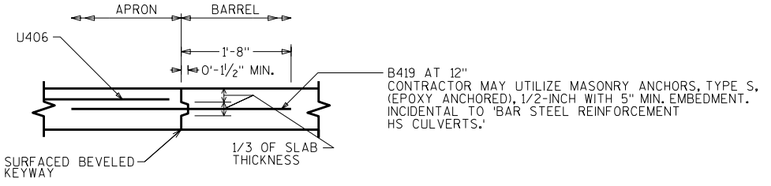


VERTICAL CONSTRUCTION JOINT

IN LIEU OF CONSTRUCTION JOINTS IN THE BOTTOM SLAB WITHIN CONSTRUCTION STAGES, THE CONTRACTOR MAY PROVIDE 2" DEEP SAW CUTS WITHIN 12 HOURS AFTER POURING



B316 B317



APRON CONSTRUCTION JOINT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-66-195

DRAWN BY MWB | PLANS CK'D. DFD

STAGE 2
BOX DETAILS

SHEET 4

88

SCALE = 4

8

8

STATE PROJECT NUMBER

1100-15-71



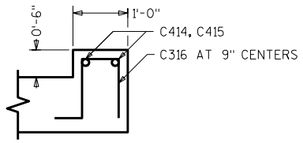
PLAN VIEW OF OUTLET PANEL

USE IDENTICAL STEEL IN INNER PANEL.
(HEADER NOT SHOWN FOR CLARITY)

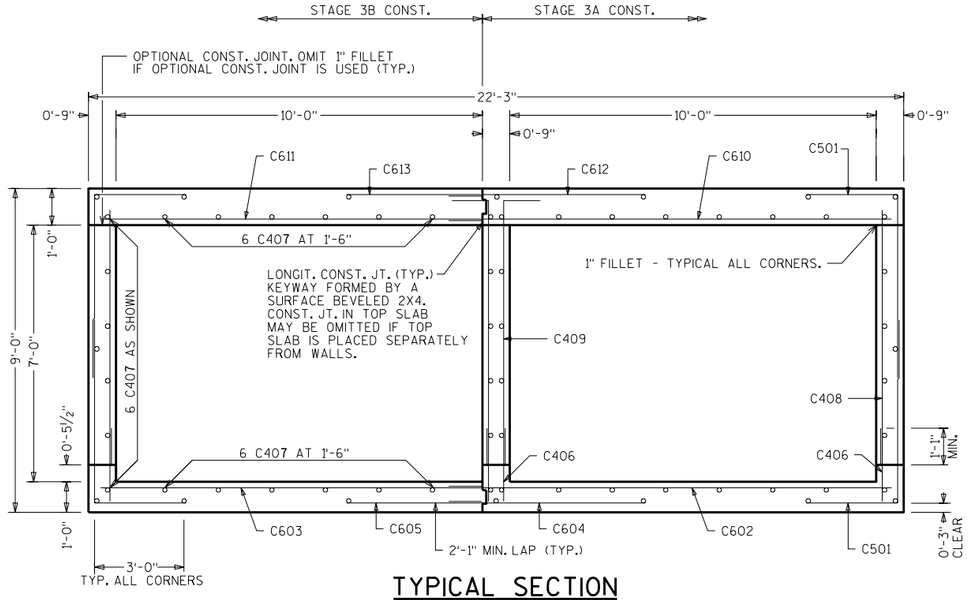
BILL OF BARS

THE FIRST OR FIRST AND SECOND DIGIT OF THE MARK SIGNIFIES THE BAR SIZE. THE DIMENSION IN THE BENT COLUMN IS THE OUT TO OUT HORIZONTAL LEG OF A "L" SHAPED BAR. LONGER BARS OF THE SAME SIZE MAY BE SUBSTITUTED FOR SHORTER BARS. PAYMENT BASED ON BAR LENGTHS AS DETAILED.

MARK	NUMBER REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
C501	312	8-0	3-0	NO	CORNERS
C602	78	13-5	NO	NO	BOTTOM SLAB TRANS. STAGE 3A
C603	78	10-7	NO	NO	BOTTOM SLAB TRANS. STAGE 3B
C604	78	8-3	NO	NO	BOTTOM SLAB TRANS. STAGE 3A
C605	78	5-4	NO	NO	BOTTOM SLAB TRANS. STAGE 3B
C406	144	2-2	NO	NO	WALLS-DOWELS VERT.
C407	128	25-6	NO	NO	TOP & BOTTOM SLAB & WALL
C408	72	7-4	NO	NO	EXTERIOR WALLS VERT.
C409	72	8-3	1-0	NO	INTERIOR WALLS VERT.
C610	58	13-5	NO	NO	TOP SLAB TRANS. STAGE 3A
C611	58	10-7	NO	NO	TOP SLAB TRANS. STAGE 3B
C612	58	8-3	NO	NO	TOP SLAB TRANS. STAGE 3A
C613	58	5-4	NO	NO	TOP SLAB TRANS. STAGE 3B
C414	2	14-5	NO	NO	HEADERS HORIZ. STAGE 3A
C415	2	9-7	NO	NO	HEADERS HORIZ. STAGE 3B
C316	30	3-3	YES	NO	OUTLET HEADER STIRRUPS VERT.
C517	67	4-0	NO	NO	VERT. CONST. JOINT
C418	22	3-4	NO	NO	APRON CONST. JT.

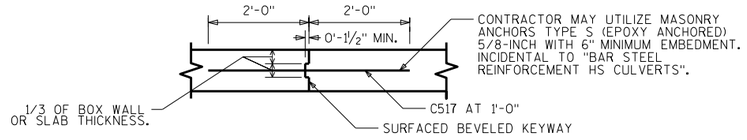


SECTION THRU TOP HEADER AT OUTLET



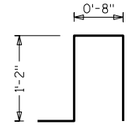
TYPICAL SECTION THRU BOX

ALL LONGITUDINAL BARS NOT IDENTIFIED ARE C407 AS SHOWN.
(LOOKING EAST)

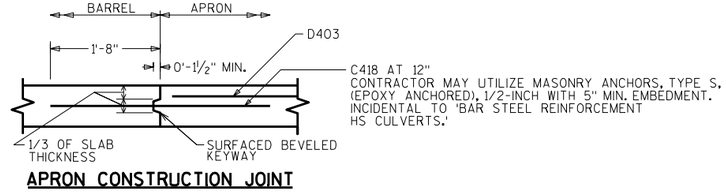


VERTICAL CONSTRUCTION JOINT

IN LIEU OF CONSTRUCTION JOINTS IN THE BOTTOM SLAB WITHIN CONSTRUCTION STAGES, THE CONTRACTOR MAY PROVIDE 2" DEEP SAW CUTS WITHIN 12 HOURS AFTER POURING



C316



APRON CONSTRUCTION JOINT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-66-195

DRAWN BY MWB | PLANS CK'D. DFD

STAGE 3
BOX DETAILS

SHEET 5

89

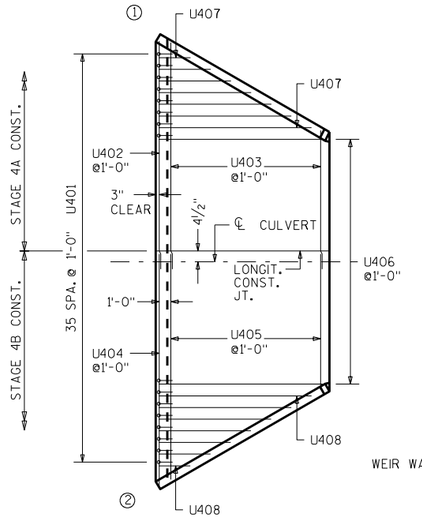
8

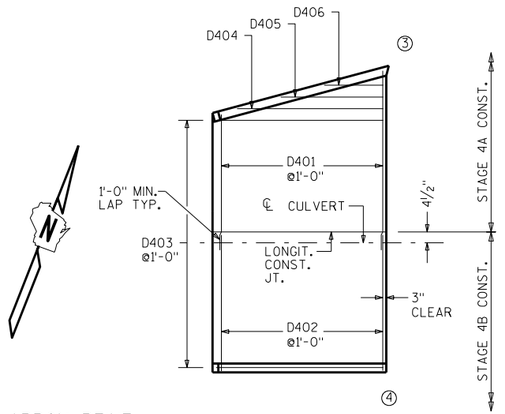
8

SCALE = 4

STATE PROJECT NUMBER

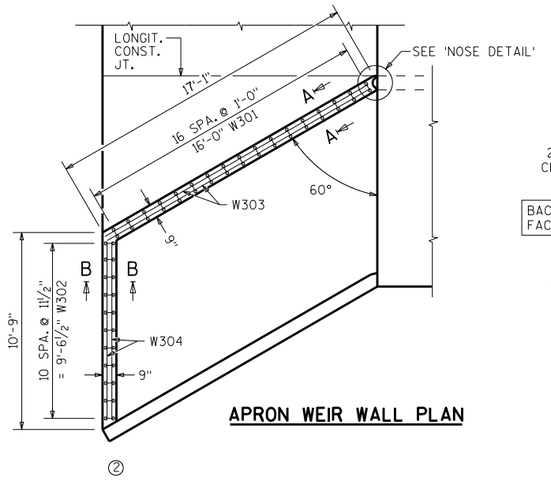
1100-15-71





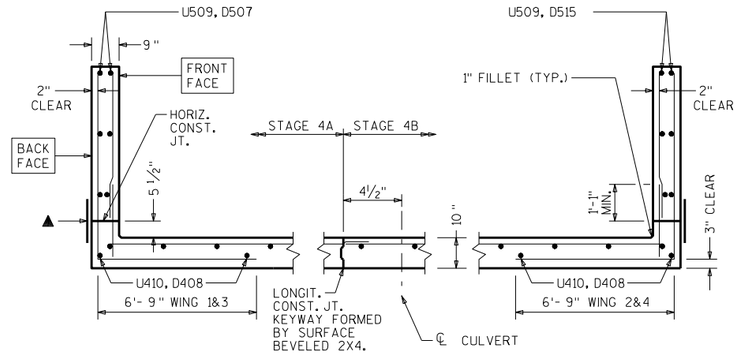
APRON REINF.

WEIR WALL NOT SHOWN FOR CLARITY



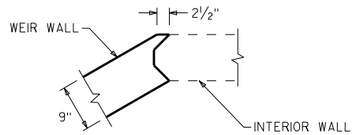
APRON WEIR WALL PLAN

▲ 18" RUBBERIZED MEMBRANE WATER-PROOFING. PLACE ALONG HORIZ. CONST. JT. FOR ENTIRE WING LENGTH (TYP.).

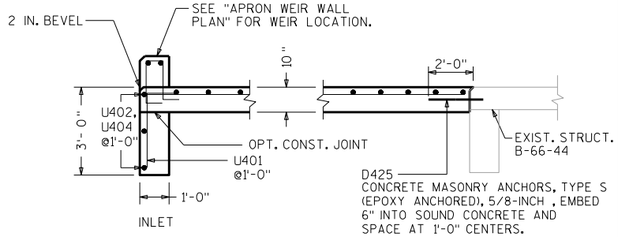


SECTION THRU WINGS

AT RIGHT ANGLES TO WING WALLS

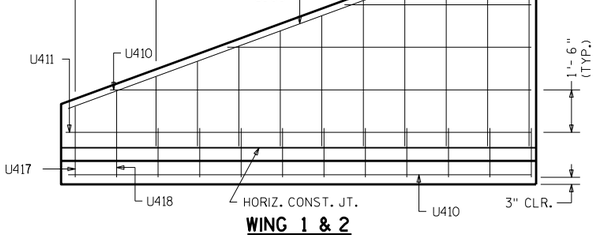


NOSE DETAIL



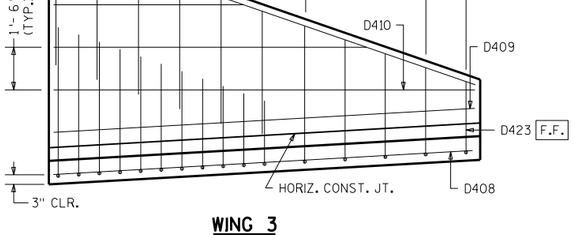
CUT-OFF WALLS

SECTION THRU THE WALLS

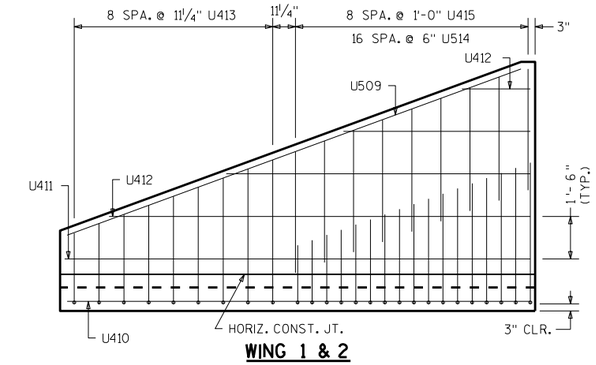


WING 1 & 2

SHOWING FRONT FACE

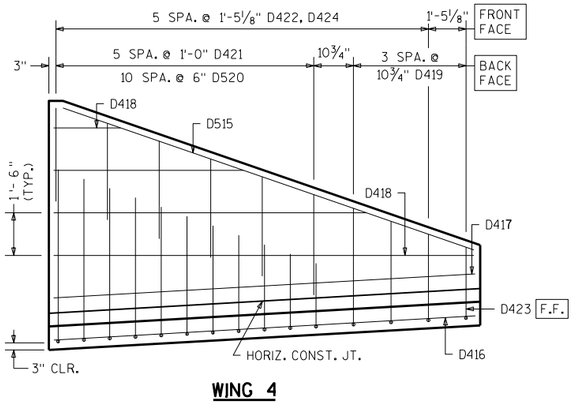


WING 3

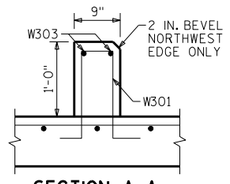


WING 1 & 2

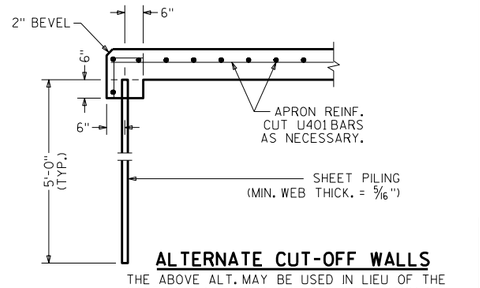
SHOWING BACK FACE



WING 4

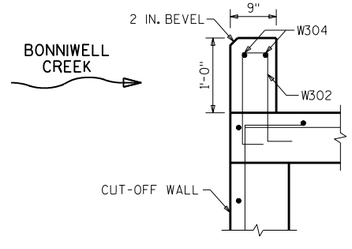


SECTION A-A



ALTERNATE CUT-OFF WALLS

THE ABOVE ALT. MAY BE USED IN LIEU OF THE CAST-IN-PLACE CONC. CUT-OFF WALL. PAYMENT WILL BE BASED ON THE CONC. CUT-OFF WALL.



SECTION B-B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-66-195

DRAWN BY MWB | PLANS CK'D. DFD

APRON DETAILS

SHEET 6

90

8

8

SCALE =

STATE PROJECT NUMBER

1100-15-71

BILL OF BARS

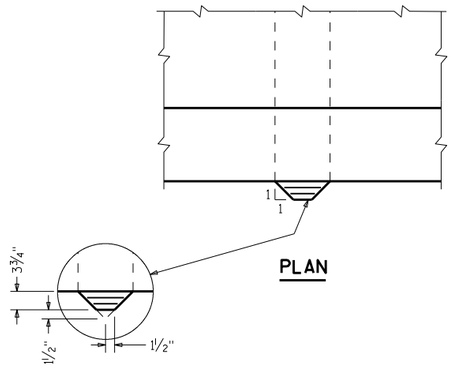
THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE.
THE DIMENSION IN THE BENT COLUMN IS THE OUT TO OUT HORIZONTAL LEG OF AN L - SHAPED BAR.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
U401		36	3 - 6	1 - 0		INLET APRON AND CUTOFF WALL
U402		3	19 - 8			INLET APRON AND CUTOFF WALL - STAGE 4A
U403		14	15 - 10		*	" APRON - STAGE 4A
U404		3	19 - 4			" APRON AND CUTOFF WALL - STAGE 4B
U405		14	15 - 5		*	" APRON - STAGE 4B
U406		22	14 - 6			" APRON
U407		7	8 - 7		*	" APRON - STAGE 4A
U408		7	8 - 7		*	" APRON - STAGE 4B
U509		4	17 - 3			WINGS 1 AND 2 -HORIZONTAL -BOTH FACES
U410		4	16 - 5			WINGS " -HORIZONTAL -APRON BOTT. SLAB
U411		4	16 - 5			WINGS " -HORIZONTAL - BOTH FACES
U412		16	8 - 11		*	WINGS " -HORIZONTAL - BOTH FACES
U413	X	18	10 - 7	6 - 9	*	WINGS " -VERTICAL - BACK FACE
U514	X	34	10 - 9	6 - 9	*	WINGS " -VERTICAL - BACK FACE
U415		18	4 - 5			WINGS " -VERTICAL - BACK FACE
U416		20	4 - 11		*	WINGS " -VERTICAL - FRONT FACE
U417	X	2	2 - 6			WINGS " -DOWELS - F.F. WING TIP
U418	X	2	3 - 0			WINGS " -DOWELS - F.F. WING TIP
U419	X	20	2 - 2			WINGS " -DOWELS - FRONT FACE
D401		9	13 - 10		*	OUTLET APRON - STAGE 4A
D402		9	11 - 4			" APRON - STAGE 4B
D403		22	8 - 6			" APRON
D404		1	7 - 6			" APRON - STAGE 4A
D405		1	5 - 4			" APRON - STAGE 4A
D406		1	3 - 2			" APRON - STAGE 4A
D507		2	10 - 4			WING 3 -HORIZONTAL -BOTH FACES
D408		2	9 - 2			WING " -HORIZONTAL -APRON BOTT. SLAB
D409		2	9 - 2			WING " -HORIZONTAL - BOTH FACES
D410		8	5 - 6		*	WING " -HORIZONTAL - BOTH FACES
D411	X	5	10 - 3	6 - 9	*	WING " -VERTICAL - BACK FACE
D512	X	11	10 - 7	6 - 9	*	WING " -VERTICAL - BACK FACE
D413		6	4 - 2			WING " -VERTICAL - BACK FACE
D414		7	4 - 10		*	WING " -VERTICAL - FRONT FACE
D515		2	10 - 0			WING 4 -HORIZONTAL -BOTH FACES
D416		2	8 - 7			WING " -HORIZONTAL -APRON BOTT. SLAB
D417		2	8 - 7			WING " -HORIZONTAL - BOTH FACES
D418		8	5 - 1		*	WING " -HORIZONTAL - BOTH FACES
D419	X	4	10 - 2	6 - 9	*	WING " -VERTICAL - BACK FACE
D520	X	11	10 - 9	6 - 9	*	WING " -VERTICAL - BACK FACE
D421		6	3 - 11			WING " -VERTICAL - BACK FACE
D422		6	4 - 11		*	WING " -VERTICAL - FRONT FACE
D423	X	2	2 - 7			WINGS 3 AND 4 - VERTICAL - FRONT FACE
D424	X	13	2 - 2			WINGS 3 AND 4 - DOWELS - FRONT FACE
D425		25	2 - 6			OUTLET APRON ANCHORS TO B-66-44
W301	X	17	4 - 1	X		WEIR WALL STIRRUPS
W302	X	11	3 - 9	X		WEIR WALL STIRRUPS
W303	X	2	16 - 7			WEIR WALL HORIZONTAL
W304	X	2	9 - 8			WEIR WALL HORIZONTAL

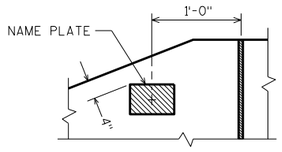
* LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE --- BUNDLE AND TAG EACH SERIES SEPARATELY

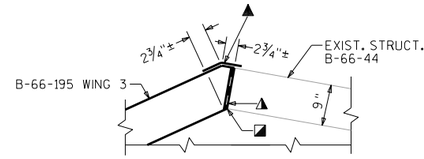
BAR MARK	NO. REQ'D.	LENGTHS FOR EACH SERIES
U403	1 SERIES OF 14	12 - 1 TO 19 - 7
U405	1 SERIES OF 14	11 - 8 TO 19 - 2
U407	1 SERIES OF 7	3 - 4 TO 13 - 9
U408	1 SERIES OF 7	3 - 4 TO 13 - 9
U412	4 SERIES OF 4	2 - 9 TO 15 - 0
U413	2 SERIES OF 9	9 - 2 TO 11 - 11
U514	2 SERIES OF 17	9 - 3 TO 12 - 1
U416	2 SERIES OF 10	2 - 5 TO 7 - 4
D401	1 SERIES OF 9	12 - 0 TO 15 - 8
D410	2 SERIES OF 4	1 - 9 TO 9 - 2
D411	1 SERIES OF 5	9 - 2 TO 11 - 4
D512	1 SERIES OF 11	8 - 11 TO 12 - 2
D414	1 SERIES OF 7	2 - 4 TO 7 - 3
D418	2 SERIES OF 4	1 - 7 TO 8 - 7
D419	1 SERIES OF 4	9 - 3 TO 11 - 1
D520	1 SERIES OF 11	9 - 0 TO 12 - 6
D422	1 SERIES OF 6	2 - 5 TO 7 - 4



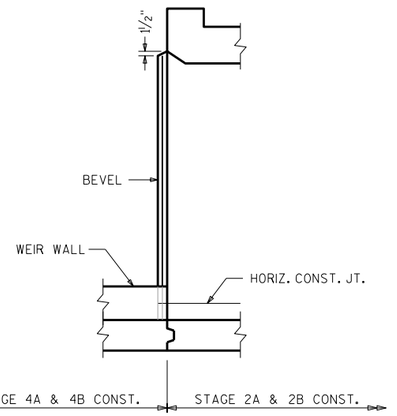
PLAN



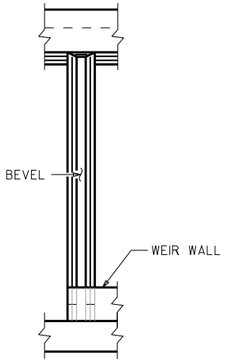
NAME PLATE LOCATION
WING 4



WING 3 TIP

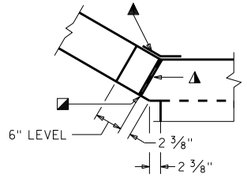


SECTION



ELEVATION

INLET NOSE DETAILS

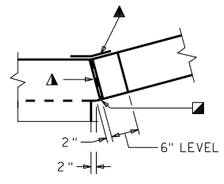


CORNER 1

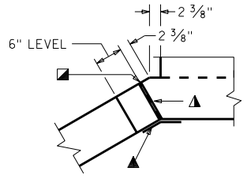
▲ ¾" FILLER TYPICAL. EXTEND FILLER FROM HORIZ. CONST. JT. TO TOP OF WING.

◪ 1" BEVEL TYPICAL

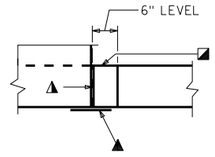
▲ 18" RUBBERIZED MEMBRANE WATER-PROOFING. EXTEND FROM HORIZ. CONST. JT. TO TOP OF WALL.



CORNER 3

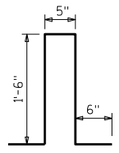


CORNER 2

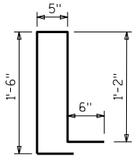


CORNER 4

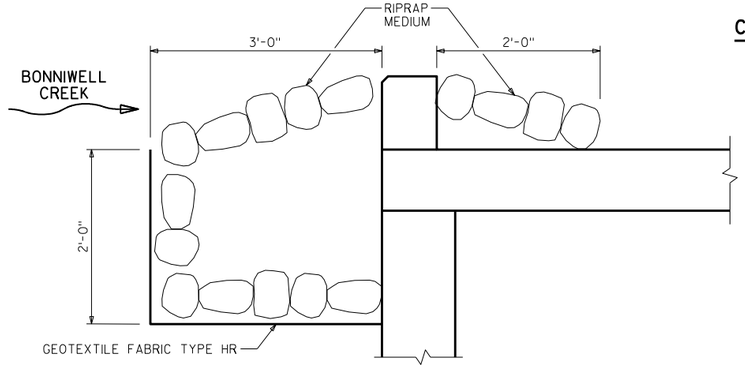
CORNER DETAILS



W301



W302



TURTLE PASS DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-66-195

DRAWN BY MWB | PLANS CK'D. DFD

DETAILS

SHEET 7

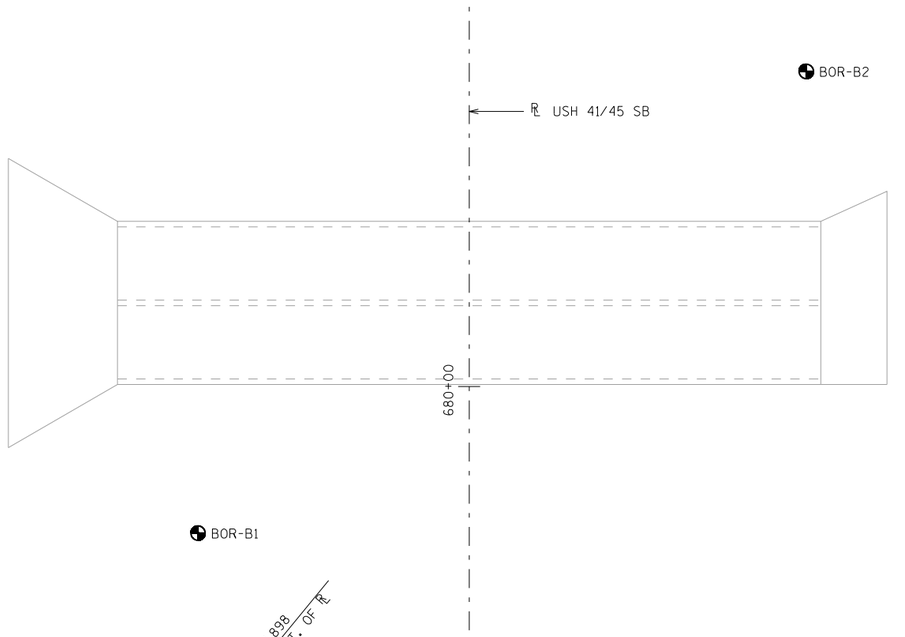
91

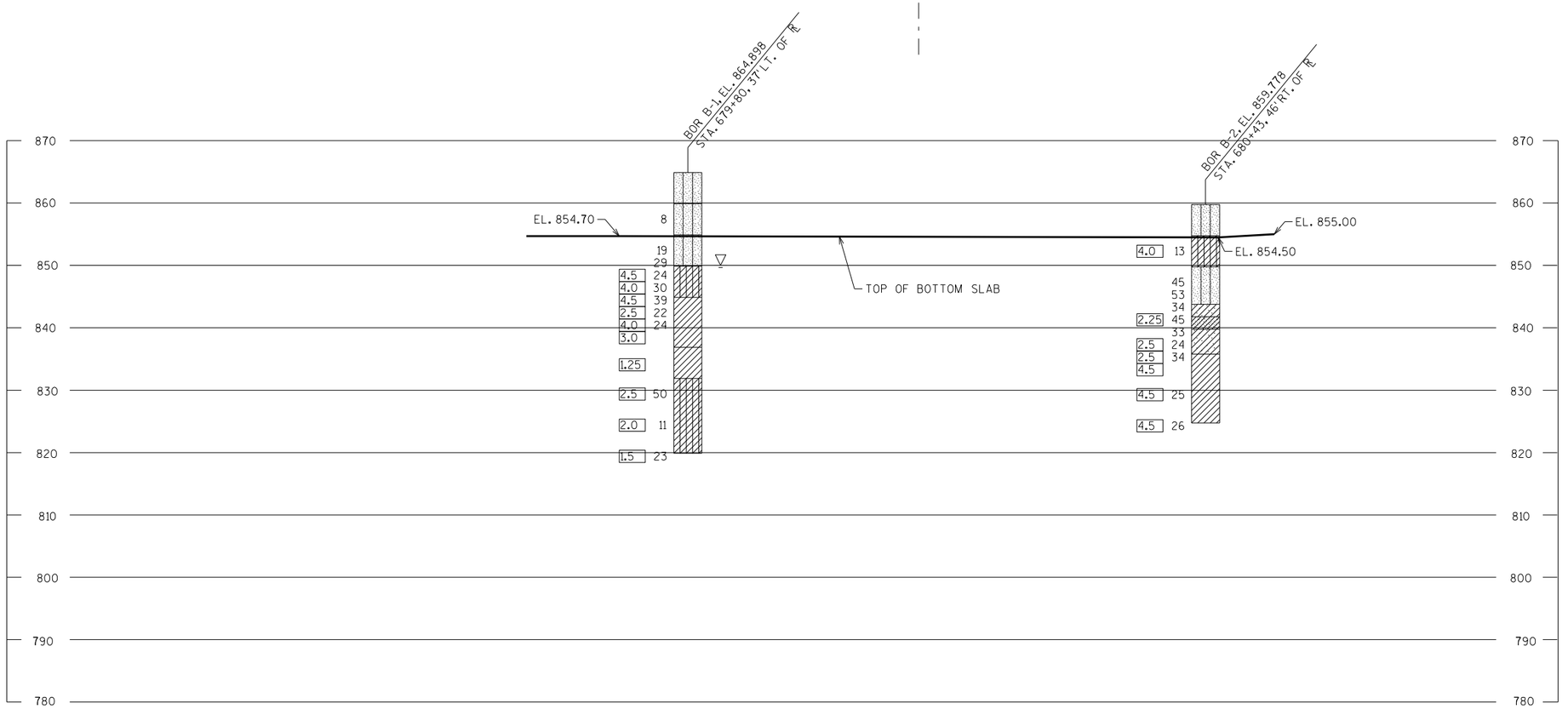
SCALE =

8

8

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	2/2/2015	127217.7	362241.2
2	2/2/2015	127296.6	362321.2
BORINGS COMPLETED BY: PSI			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) WASHINGTON COUNTY			





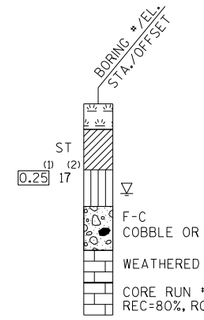
STATE PROJECT NUMBER

1100-15-71

MATERIAL SYMBOLS

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

LEGEND OF BORING



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

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

GROUND WATER ELEVATION

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

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-66-195

DRAWN BY PR/MWB | PLANS CK'D. DFD

SUBSURFACE EXPLORATION

SHEET 8

92

8

8

SCALE =

STATION	Real Station	Distance	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		
			Cut	Salvaged / Unusable Pavement Material	Fill	Cut Note 1	Salvaged / Unusable Pavement Material Note 2	Fill Note 3	Cut 1.00 Note 1	Expanded Fill 1.25	Mass Ordinate Note 8
679+05	67905.00	0.00	25.94	5.625	0.00	0.00	0.00	0	0.00	0	0.00
679+49	67949.00	44.00	27.80	5.625	0.00	43.79	9.17	0.00	43.79	0.00	34.62
679+50	67950.00	1.00	53.74	10.125	0.08	1.51	0.29	0.00	45.30	0.00	35.84
679+74	67974.00	24.00	48.09	10.125	5.69	45.26	9.00	2.56	90.56	3.21	68.89
679+75	67975.00	1.00	153.45	10.125	4.94	3.73	0.38	0.20	94.29	3.45	72.00
680+00	68000.00	25.00	142.32	10.125	118.90	136.93	9.38	57.33	231.22	75.12	127.90
680+36	68036.00	36.00	162.97	10.125	60.41	203.53	13.50	119.54	434.74	224.54	168.50
680+45.9	68045.90	9.90	130.77	10.125	34.98	53.85	3.71	17.49	488.60	246.40	196.78
680+46	68046.00	0.10	36.76	10.125	35.42	0.31	0.04	0.13	488.91	246.56	196.89
680+50	68050.00	4.00	39.41	10.125	24.13	5.64	1.50	4.41	494.55	252.08	195.51
681+00	68100.00	50.00	41.76	10.125	0.82	75.16	18.75	23.11	569.71	280.96	223.04
681+50	68150.00	50.00	41.87	10.125	0.62	77.44	18.75	1.34	647.15	282.63	280.06
682+00	68200.00	50.00	49.56	10.125	0.00	84.66	18.75	0.58	731.81	283.36	345.25
682+37	68237.00	37.00	51.76	10.125	0.00	69.42	13.88	0.00	801.23	283.36	400.79
					Total =	801.23	117.08	226.69			

USH 45

2.0% 2.0% 2.0% 2.0%

2.5:1

856.67
-76.90

855.59
-73.64

855.59
-63.64

863.19
-44.64

864.01
-24.00

864.25
-12.00

864.49
0.00

864.73
12.00

864.49
24.00

863.67
42.64

858.67
57.68

857.01
57.96

B-66-195
STATION 680+11.40

680+00

USH 45

2.0%

3.0:1 4.0:1

863.47
-48.00

861.54
-54.10

864.43
-24.00

2.0%

864.99
24.18

864.12
46.02

679+50

USH 45

863.60
-46.01

679+05

10 FT

20 FT

870 860 850

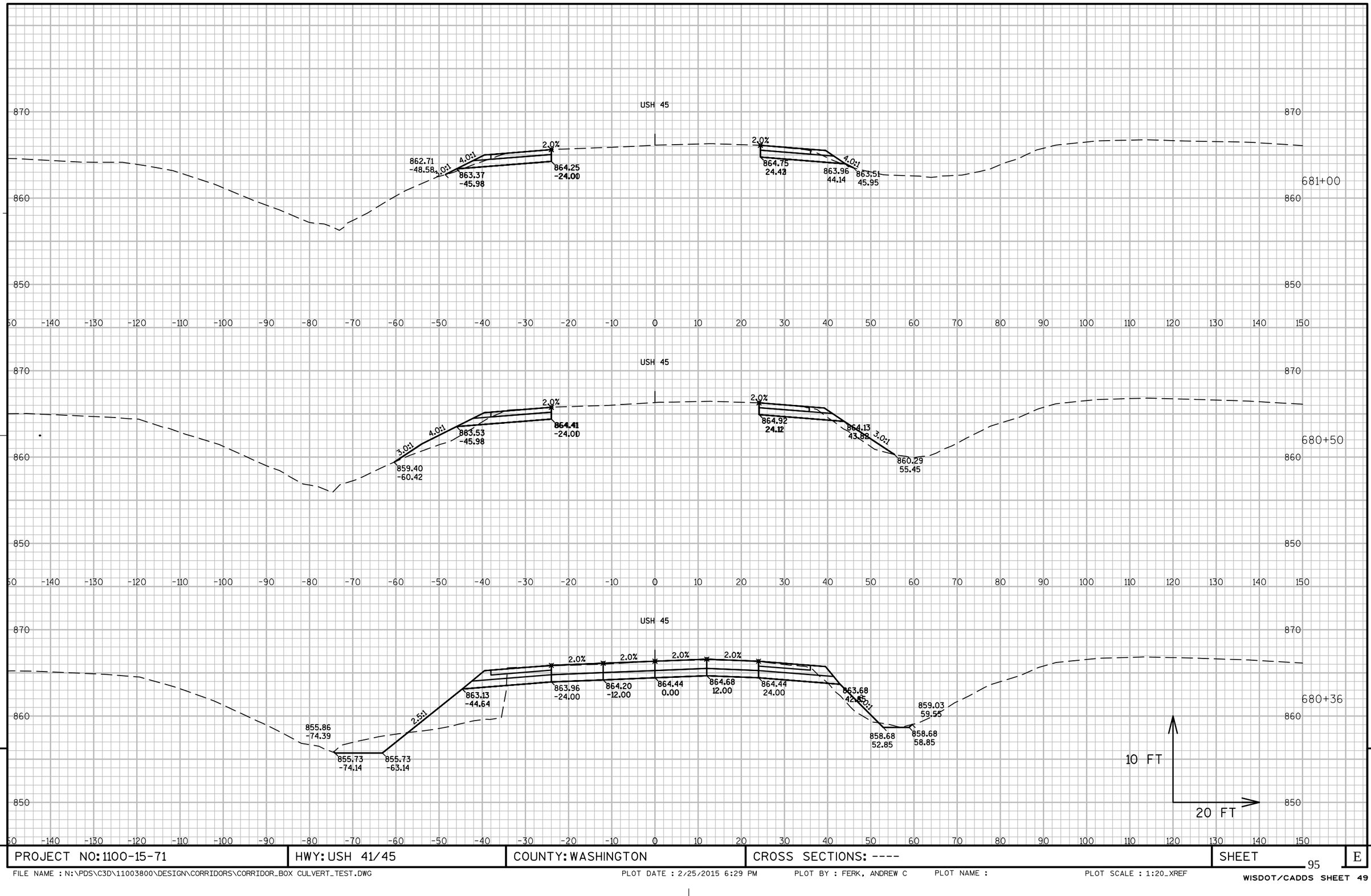
-150 -140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

9

PROJECT NO: 1100-15-71	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_BOX CULVERT_TEST.DWG PLOT DATE : 2/25/2015 6:29 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1:20_XREF

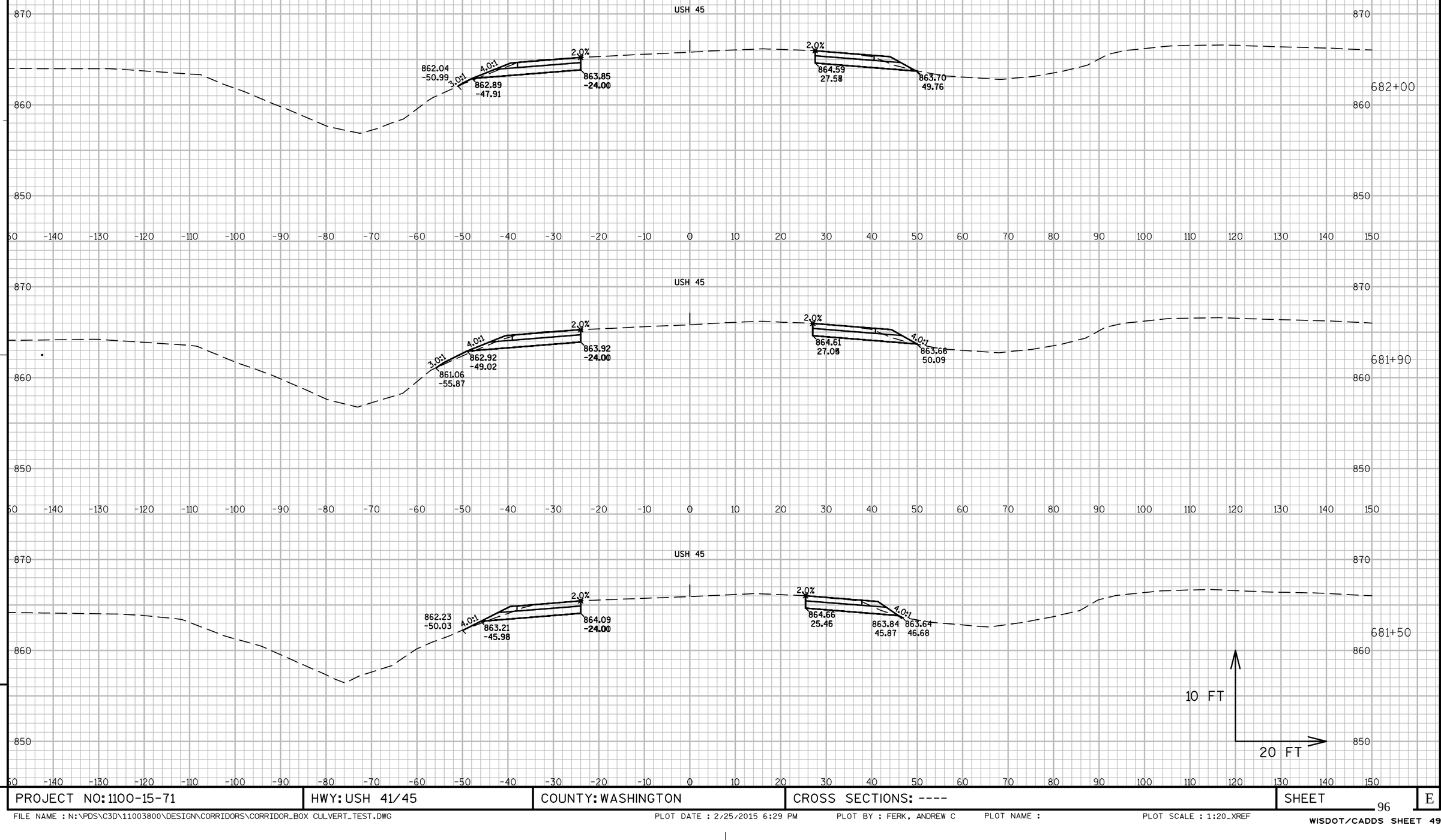
WISDOT/CADDS SHEET 49



PROJECT NO: 1100-15-71	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_BOX CULVERT_TEST.DWG PLOT DATE : 2/25/2015 6:29 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49

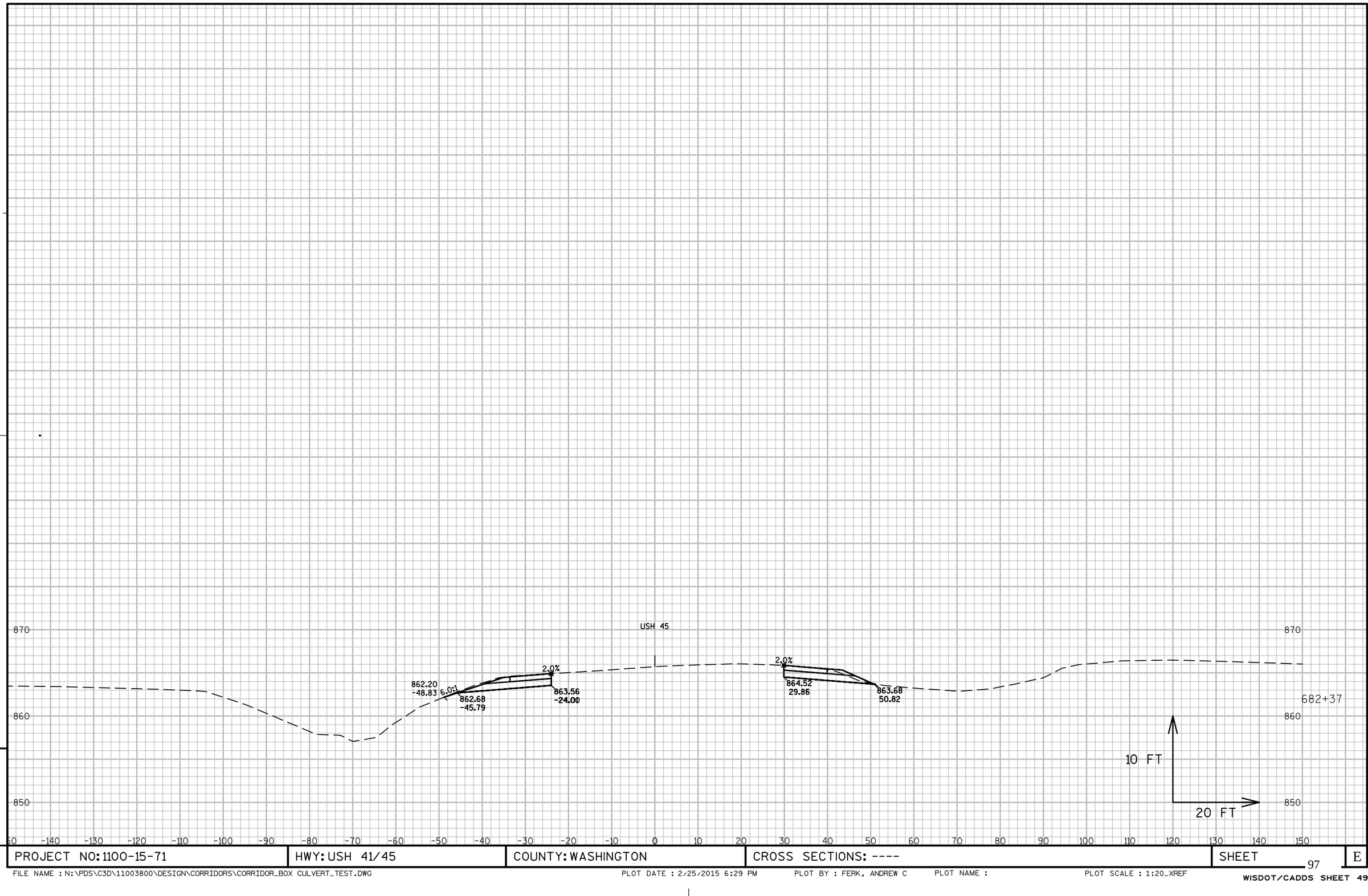


9

9

PROJECT NO: 1100-15-71	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_BOX CULVERT_TEST.DWG PLOT DATE : 2/25/2015 6:29 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1:20_XREF



PROJECT NO: 1100-15-71	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET 97	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_BOX CULVERT_TEST.DWG PLOT DATE : 2/25/2015 6:29 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov

WKE

JUNE 2015

PROJECT ID: 1100-38-70/ 1100-47-70
WITH: 1100-15-71

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 = 850

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1100-38-70	WISC 2015317	1
1100-47-70	WISC 2015318	1

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

MILWAUKEE - FOND DU-LAC

WASHINGTON COUNTY LINE TO USH 41/45 SPLIT RDWY

U.S.H. 41

WASHINGTON COUNTY

STATE PROJECT NUMBER
1100-38-70

USH 41/45

CTH F (FREIDSTADT RD) TO STH 167

U.S.H. 41

WASHINGTON COUNTY

STATE PROJECT NUMBER
1100-47-70



04

N

DESIGN DESIGNATION		CTH Q TO LANNON ROAD	LANNON ROAD TO HOLY HILL ROAD	HOLY HILL ROAD TO USH 41/45 SPLIT
A.A.D.T.	2020	= 77,200	= 92,400	= 84,900
A.A.D.T.	2030	= 83,300	= 104,200	= 92,600
D.H.V.		= 9.1%	= 9.1%	= 9.1%
D.D.		= 62/38	= 62/ 38	= 62/ 38
T.		= 11.4%	= 11.4%	= 11.4%
DESIGN SPEED		= 65 MPH	= 65 MPH	= 65 MPH
ESALS		=	=	=

CONVENTIONAL SYMBOLS

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

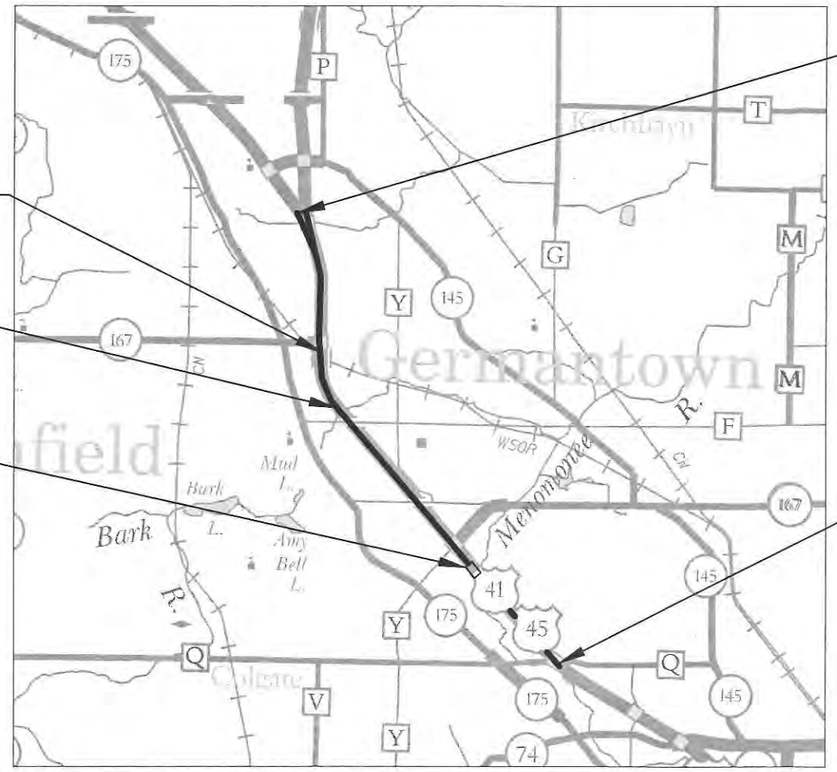
PROFILE
- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (95.36)
- CULVERT (Profile View)

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

END PROJECT 1100-47-70
STA 612+50 NB
STA 613+00 SB

BEGIN PROJECT 1100-47-70
STA 574+45

NET EXCEPTION
STA 424+50 - 430+75
B-66-187
B-66-190



LAYOUT
SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 6.610

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, WASHINGTON COUNTY, NAD83 (2007), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES. ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF NAVD88 (2007).

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	DOT
Designer	N. YANG
Project Manager	CHRISTINE HANNA
Regional Examiner	
Regional Supervisor	REEM SHAHIN
C.O. Examiner	

APPROVED FOR THE DEPARTMENT
DATE: FEBRUARY 1, 2015 christine Hanna (Signature)

E

FILE NAME : N:\PDS\C3D\CAD\11003800\010101_TI.DWG PLOT DATE : 9/7/2012 10:35 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : ----------

WISDOT/CADDS SHEET 10

UTILITIES

LaTroy Brumfield, Project Manager
We Energies (Electric)
333 W. Everett St - A299
Milwaukee, WI 53203
Phone: (414) 221-5617
Fax: (414) 221-2336
latroy.brumfield@we-energies.com

LaTroy Brumfield, Project Manager
Wisc. Gas Co. d/b/a We Energies
333 W. Everett St - A299
Milwaukee, WI 53203
Phone: (414) 221-5617
Fax: (414) 221-2336
latroy.brumfield@we-energies.com

Karin Ewoldt, Area Manager
AT&T Wisconsin
316 W Washington Ave, Rm. 206
Madison, WI 53703
Phone: (608) 252-5423
ke3543@att.com

Larry Huber, Property Rights Sp.
ANR Pipeline Co
W3925 Pipeline Lane
Eden, WI 53019
Phone: (920) 477-2235 Ext. 13
Fax: (920) 477-2240
lawrence_huber@transcanada.com

Jim Kostuch, Supervisor - OSP Network
PAETEC Business Services
13935 Bishops Dr.
Brookfield, WI 53005
Phone: (262) 792-7938
james.kostuch@windstream.com

Mike Olsen
ATC Management, Inc.
801 O'Keefe Road
PO Box 6113
DePere, WI 54115-6113
Phone: (920) 338-6582
molsen@atcllc.com

Jeffrey Nettesheim, Director of Utilities
Menomonee Falls, Village of
W156 N8480 Pilgrim Road
Menomonee Falls, WI 53051-3140
Phone: (262) 532-4848
Fax: (262) 532-4709
jnettesheim@menomonee-falls.org

Daniel Ludwig, Director of Public Works
Germantown, Village of
N112 W17001 Mequon Road
PO Box 337
Germantown, WI 53022
Phone: (262) 250-4721
dludwig@village.germantown.wi.us

Steven Cramer
TW Cable Engineering
Time Warner Cable
1320 N Dr. Martin Luther King Dr.
Milwaukee, WI 53212-4002
Phone: (414) 277-4045
wis.engineering@twcable.com

Cliff Serowski
WISDOT ATR Pull Boxes - Electricity
935 S 60th St
West Allis, WI 53214
(414) 256-4596
clifford.serowski@dot.wi.gov

Jay Olszewski
Germantown, Village of - Road Facility
N112 W17001 Mequon Rd
P.O. Box 337
Germantown, WI 53022
(262) 253-8253
voghighwaysup@aol.com

Jim Driver
Germantown, Village of - Water
N112 W17001 Mequon Rd
P.O. Box 337
Germantown, WI 53022
(262) 253-8254
gtwater@biwi.rr.com

Arlyn Johnson
Menomonee Falls, Village of
Public Works - Street Lighting
W156 N8480 Pilgrim Rd
Menomonee Falls, WI 53051-3140
(262) 532-4700

Tim Zemmerman
Germantown, Village of - Sewer
N112 W17001 Mequon Rd
Germantown, WI 53002
(262) 253-7765
gtsewer@biwi.rr.com

John Edgren
Washington County - Road Facility
900 Lang St
West Bend, WI 53095
(262) 335-4437
jon.edgren@co.washington.wi.us

CONTACTS

Kristina Betzold
Environmental Analysis and Review Specialist
Wisconsin DNR
2300 N Dr. Martin Luther King Jr. Dr.
Milwaukee, WI 53212
Phone: (414) 263-8517
Cell: (414) 507-4946
kristina.betzold@wisconsin.gov

Washington County Engineer/Surveyor
Scott M. Schmidt, PE, RLS
Washington County Public Agency Center
333 East Washington St, Suite 2300
P.O. BOX 2003
West Bend, WI 53095-2003
Phone: 262-335-6881 FAX: 262-335-4171
scott.schmidt@co.washington.wi.us

Christine Hanna
WISDOT Project Manager SE-Region
141 NW Barstow St
P.O. Box 798
Waukesha, WI 53187-0798
Phone: (262) 548-8809
FAX: (262) 548-8645
christine.hanna@dot.wi.gov

Elizabeth Lloyd-Weis
WisDOT SE Region Traffic Signals
141 NW Barstow St
P.O. Box 798
Waukesha, WI 53187-0798
Phone: 262-521-4404
elzabeth.lloydweis@dot.wi.gov

Jeff Madson
WisDOT SE Region STOC
141 NW Barstow St
P.O. Box 798
Waukesha, WI 53187-0798
Office: 414-225-3723
jeffrey.madson@dot.wi.gov

Eric Perea
SE Region Highway Lighting Engineer
Wisconsin Department of Transportation
141 NW Barstow St
Waukesha, WI 53187-0798
Office: 262-574-5422
Mobile: 414-750-0935
eric.perea@dot.wi.gov



GENERAL NOTES

1 THE LOCATIONS OF EXISTING OR PROPOSED UTILITIES, AS NOTED ON THE PLANS, ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

2 ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPERATELY.

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

4 ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES SHALL BE BACKFILLED WITH SUITABLE MATERIAL, OR AS DIRECTED BY THE ENGINEER.

5 DIMENSIONS GIVEN FOR EXISTING FEATURES SHALL BE CONSIDERED AS APPROXIMATE AND SHALL BE MEASURED IN THE FIELD FOR MATCHING PURPOSES.

6 CURB AND GUTTER RADII, GRADES AND OFFSETS ARE TO THE FLANGE UNLESS NOTED OTHERWISE.

7 CROSS SECTIONS SHOWN INCLUDE THE THICKNESS OF SALVAGED TOPSOIL WHERE REQUIRED.

8 EXCAVATION BELOW SUBGRADE (EBS) SHALL BE MEASURED AND PAID FOR AS EXCAVATION COMMON. THE EXACT LOCATION OF EBS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

9 TEMPORARY STORAGE OF ANY EXCAVATED MATERIAL SHALL NOT BE PERMITED IN WETLANDS.

10 ALL DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCLUDING ROAD BED, ARE TO BE TOPSOILED OR SALVAGED TOPSOILED, FERTILIZED, AND SEEDED, SODDED, MULCHED OR INSTALLED EROSION-MAT AS DIRECTED BY THE ENGINEER.

11 EROSION CONTROL BMP'S ARE SHOWN AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S 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.

12 EROSION CONTROL FEATURES ARE TO BE PLACED IN SEQUENCE WITH CONSTRUCTION STAGING AND MAINTAINED THROUGH EACH STAGE OR AS DETERMINED BY THE ENGINEER.

13 REINFORCED CONCRETE APRON ENDWALLS AND ADJOINING TWO SECTIONS OF CONCRETE PIPE SHALL BE TIED TOGETHER AS SHOWN ON THE STANDARD DETAIL DRAWINGS AND AS LOCATED IN THE MISCELLANEOUS QUANTITIES. JOINT TIES SHALL BE INCIDENTAL ITEMS INCLUDED IN THE COST OF THE CONCRETE PIPE.

14 INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES SHOWN ON THE PLAN MAY BE ADJUSTED BY THE ENGINEER TO FIT FIELD CONDITIONS. PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, THE CONTRACTOR SHALL VERIFY RELATED DRAINAGE INFORMATION IN THE PLAN WITH THE ENGINEER.

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

16 WHEN TEMPORARY PAVEMENT MARKING REMOVABLE TAPE IS REQUIRED, IT SHALL BE CUT THROUGH ITS FULL WIDTH AND THICKNESS AT 25-FOOT INTERVALS TO CONTROL RAVELING.

17 TEMPORARY PAVEMENT MARKING, TEMPORARY PAVEMENT MARKING TAPE, PAVEMENT MARKING SAME DAY EPOXY, AND/OR PERMANENT PAVEMENT MAKRING SHALL BE INSTALLED PRIOR TO OPENING TO TRAFFIC.

18 MISCELLANEOUS REMOVAL ITEMS REQUIRING RESTORAITON OF CONCRETE OR ASPHALT DRIVEWAYS, SIDEWALKS, OR SIDE STREETS SHALL BE REMOVED TO AN EXISTING JOINT OR SAWED AS DETERMINED BY THE ENGINEER.

19 A SAWED JOINT IS REQUIRED WHERE NEW HMA SURFACE MEETS EXISTING ASPHALTIC CONCRETE SURFACE.

20 SHOULDERS SHALL BE PAVED FULL WIDTH IN LOCATIONS WHICH REQUIRE STEEL PLATE BEAM GUARD AND SHALL BE PAVED PRIOR TO BEAM GUARD INSTALLATION.

21 REMOVAL OF TEMPORARY LONGITUDINAL CONSTRUCTION JOINTS WITH THE REMOVING ASPHALTIC SURFACE MILLING OPERATIONS ARE INCIDENTAL TO REMOVING ASPHALTIC SURFACE MILLING (SY).

22 HMA PAVEMENT UPPER LAYER BETWEEN LANE 1 AND INSIDE SHOULDER AND BETWEEN LANE 3 AND OUTSIDE SHOULDER OR RAMP SHALLL BE COMPLETED IN THE SAME DAY OF PAVING OPERATIONS. NO TEMPORARY LONGITUDINAL CONSTRUCION JOINTS IS REQUIRED BETWEEN THESE PAVING OPERATIONS.

23 CONTRACTOR MUST CONTACT THE PROJECT ENGINEER AND THE WASHINGTON COUNTY HIGHWAY ENGINEER , SCOTT SCHMIDT, TO REMOVE PERMANENT BARRICADES AT THE NORTHEAST QUADRANT OF LANNON ROAD AND USH 41/45 PRIOR TO THE INSTALLATION OF RAMP CLOSURE BARRICADE RACKS.

24 CONTRACTOR MUST CONTACT THE PROJECT ENGINEER AND THE WASHINGTON COUNTY SURVEYOR, SCOTT SCHMIDT, AT LEAST TWO WEEKS PRIOR TO WORK NEAR ANY PUBLIC SURVEY MONUMENTS.

HMA PAVEMENTS WILL BE CONSTRUCTED WITH THE FOLLOWING LAYERS AND GRADATIONS:

6 3/4 INCH PAVEMENT TYPE E-30 (MAINLINE SHOULDER RECONSTRUCTION)

1 3/4	INCH UPPER LAYER	12.5 MM	PG70-28P
2 1/4	INCH LOWER LAYER	19.0 MM	PG64-28
2 3/4	INCH LOWER LAYER	19.0 MM	PG64-28

5 1/2 INCH PAVEMENT TYPE E-30 (RAMP WIDENING)

2	INCH UPPER LAYER	12.5 MM	PG70-28P
3 1/2	INCH LOWER LAYER	19.0 MM	PG64-28

4 INCH PAVEMENT TYPE E-30 (MAINLINE OVERLAY)

1 3/4	INCH UPPER LAYER	12.5 MM	PG70-28P
2 1/4	INCH LOWER LAYER	19.0 MM	PG64-28

2 INCH PAVEMENT TYPE E-30 (RAMP OVERLAY)

2	INCH UPPER LAYER	12.5 MM	PG70-28P

4 - 5 INCH PAVEMENT TYPE E-30 (MAINLINE CROSS SLOPE CORRECTION)

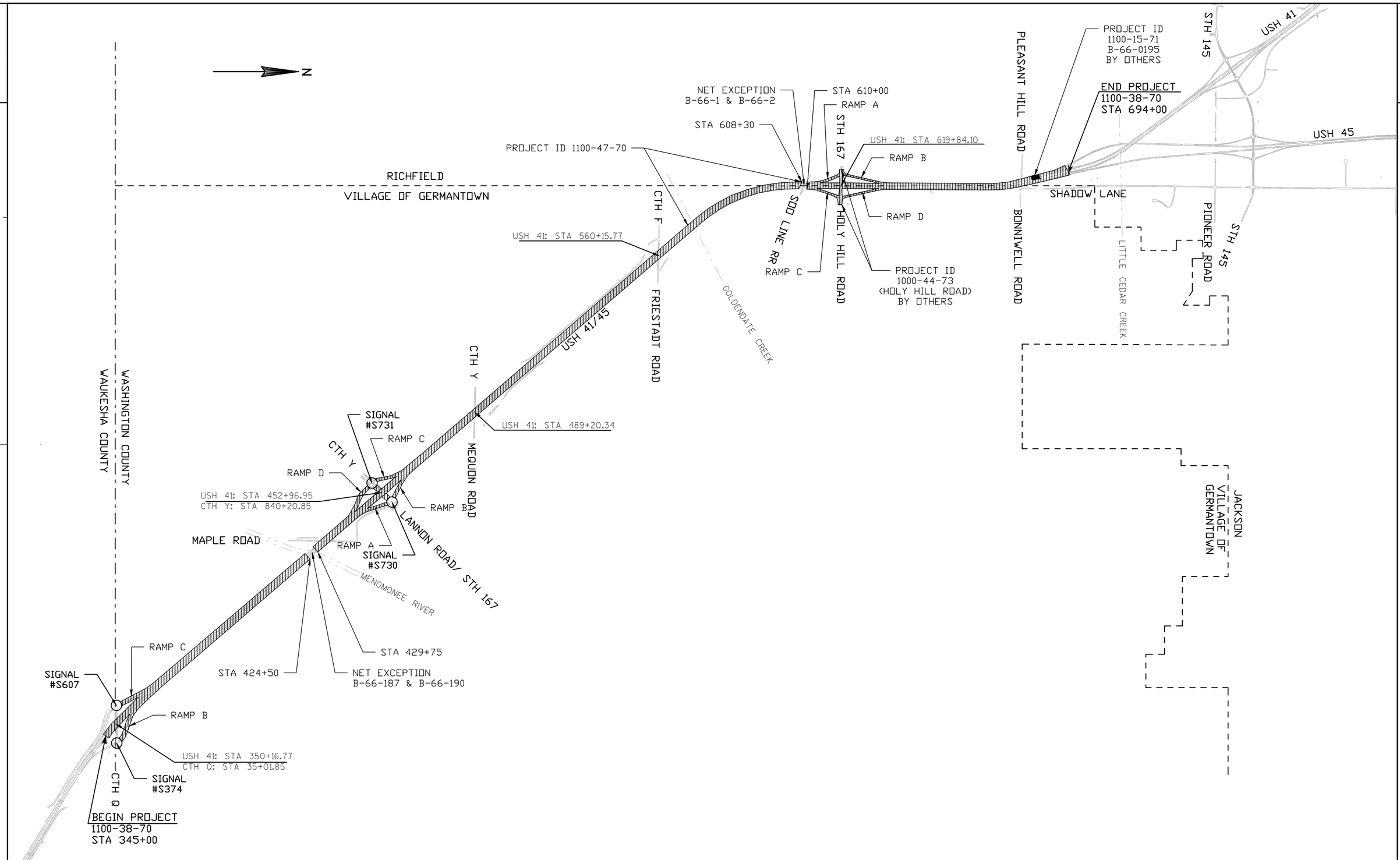
1 3/4	INCH UPPER LAYER	12.5 MM	PG70-28P
2 1/4 TO 3 1/4	INCH LOWER LAYER	19.0 MM	PG64-28

PAVEMENT TYPE E-30 (MAINLINE WEDGING - VAR. THICKNESS)
STA. 575+45 TO STA. 606+07 NB & SB LANES

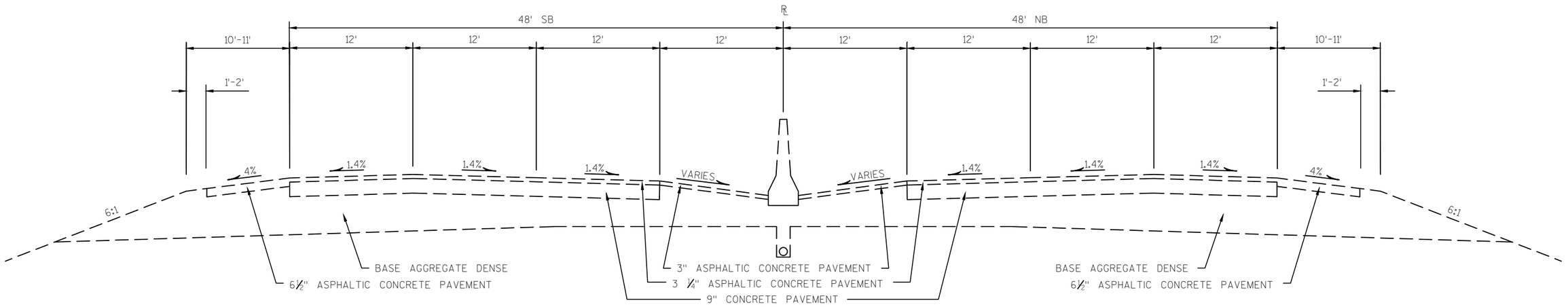
1 3/4 TO 2 3/4 INCH	WEDGING LAYER #2	19.0 MM PG64-28
1 3/4 TO 4 INCH	WEDGING LAYER #1	19.0 MM PG64-28

PAVEMENT TYPE E-30 (MAINLINE WEDGING - VAR. THICKNESS)
STA. 663+41 TO STA. 673+09 SB LANES:

1 3/4 TO 2 3/4 INCH	WEDGING LAYER #3	19.0 MM PG64-28
1 3/4 TO 2 3/4 INCH	WEDGING LAYER #2	19.0 MM PG64-28
1 3/4 TO 4 INCH	WEDGING LAYER #1	19.0 MM PG64-28



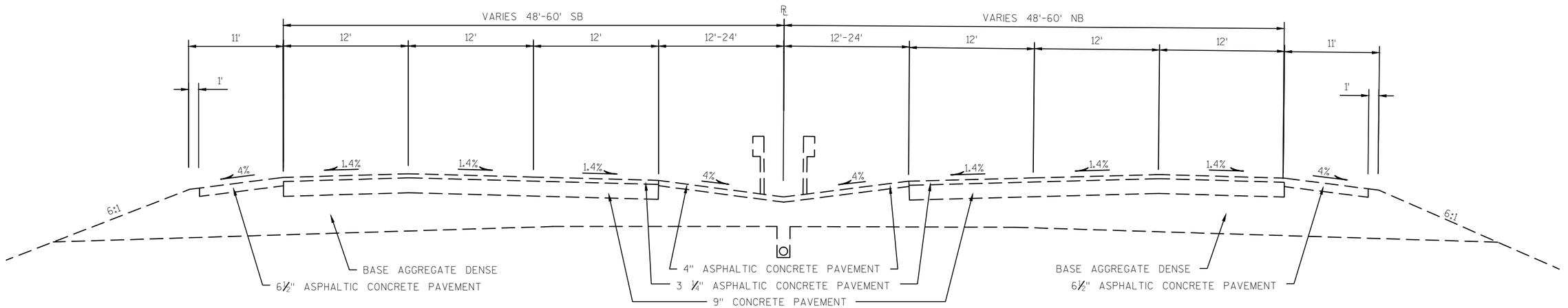
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: PROJECT OVERVIEW	SHEET 4	E



TYPICAL EXISTING SECTION

USH 41

STA. 345+00 TO STA. 349+58



TYPICAL EXISTING SECTION

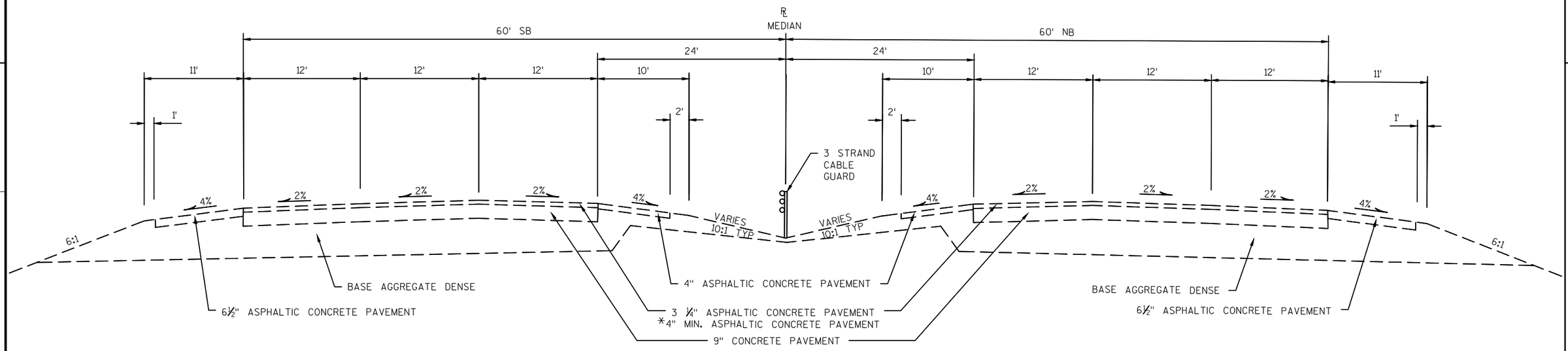
USH 41

STA. 349+58 TO STA. 362+05

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: TYPICAL SECTION	SHEET 5	E

FILE NAME : N:\PDS\C3D\CAD\11003800\020301_TS.DWG PLOT DATE : 12/2/2014 10:57 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

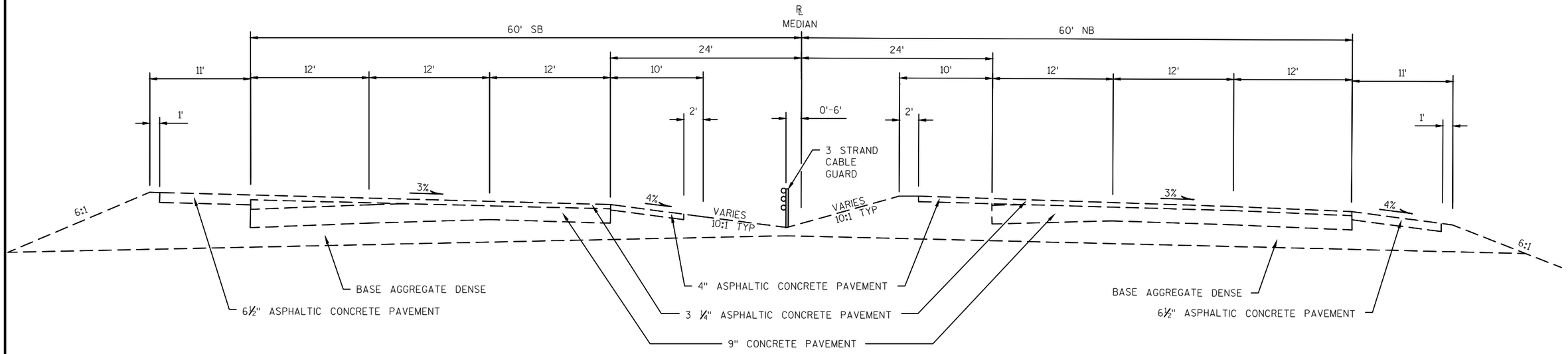
WISDOT/CADDS SHEET 42



TYPICAL EXISTING SECTION

USH 41

STA. 362+05 TO STA. 575+45
***STA. 606+07 TO STA. 660+00**

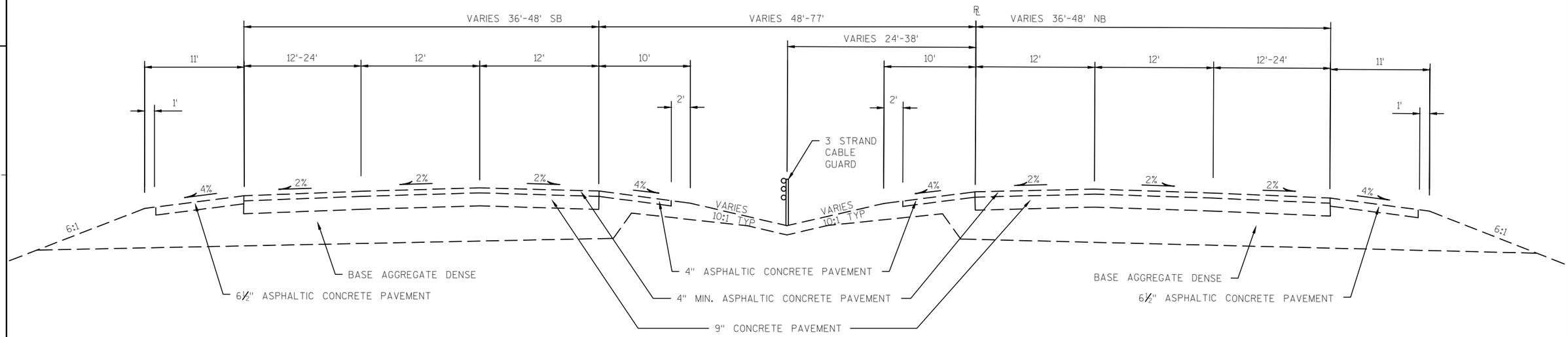


TYPICAL EXISTING SUPERELEVATED SECTION

USH 41

STA. 575+45 TO STA. 606+07

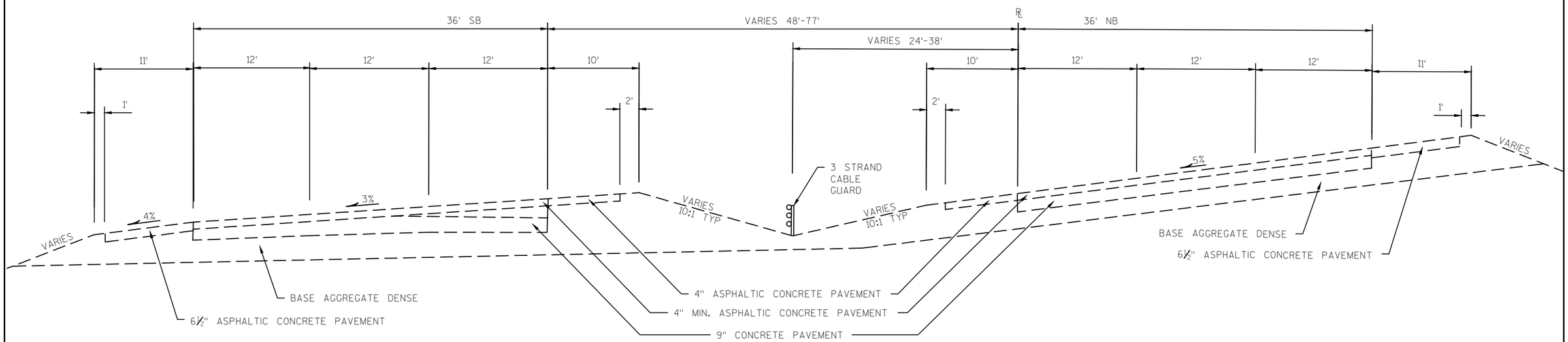
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: TYPICAL SECTION	SHEET 6	E



TYPICAL EXISTING SECTION

USH 41

STA. 660+00 TO STA. 663+41
STA. 673+09 TO STA. 690+94 SB
STA. 673+09 TO STA. 690+94 NB

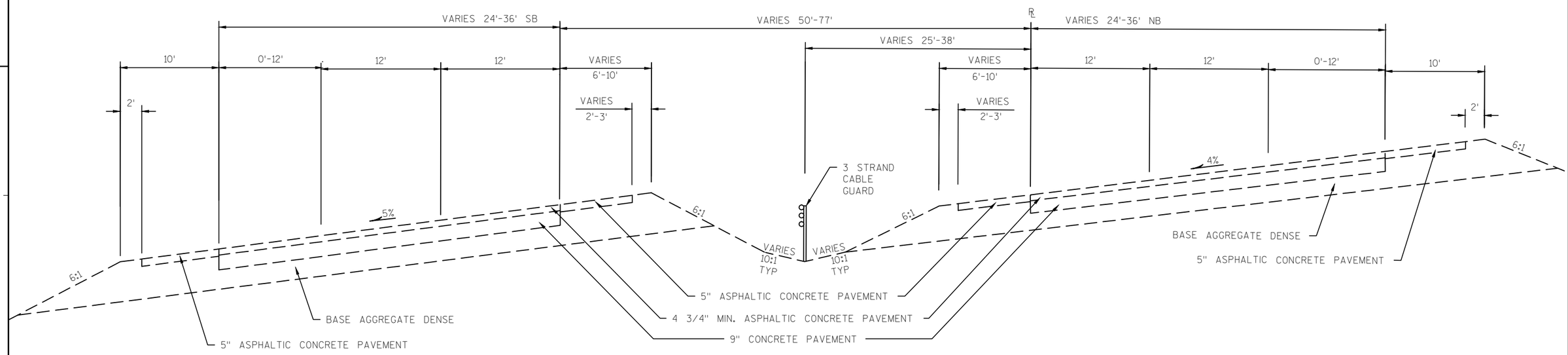


TYPICAL EXISTING SUPERELEVATED SECTION

USH 41

STA. 663+41 TO STA. 673+09

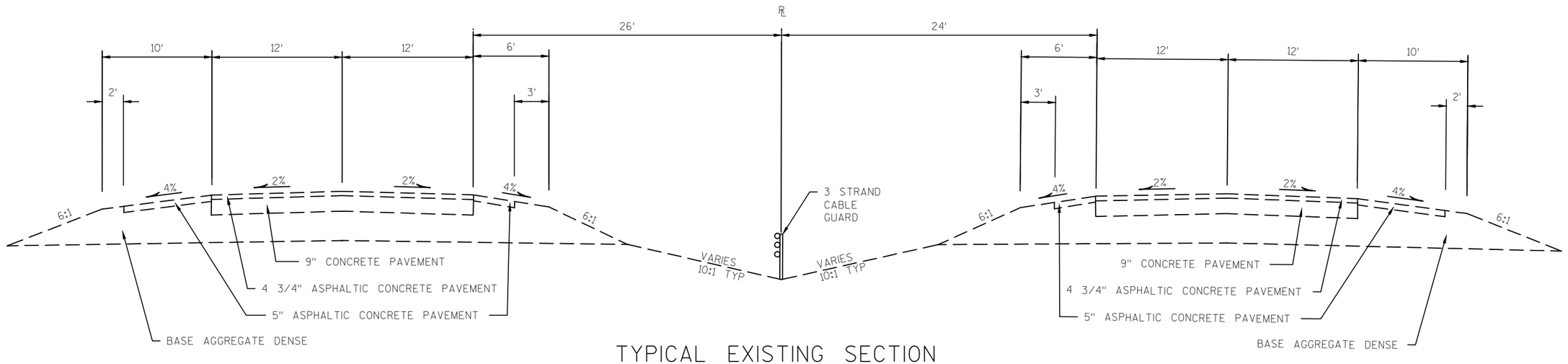
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: TYPICAL SECTION	SHEET 7	E



TYPICAL EXISTING SUPERELEVATED SECTION

USH 41

STA. 690+94 TO STA. 705+95

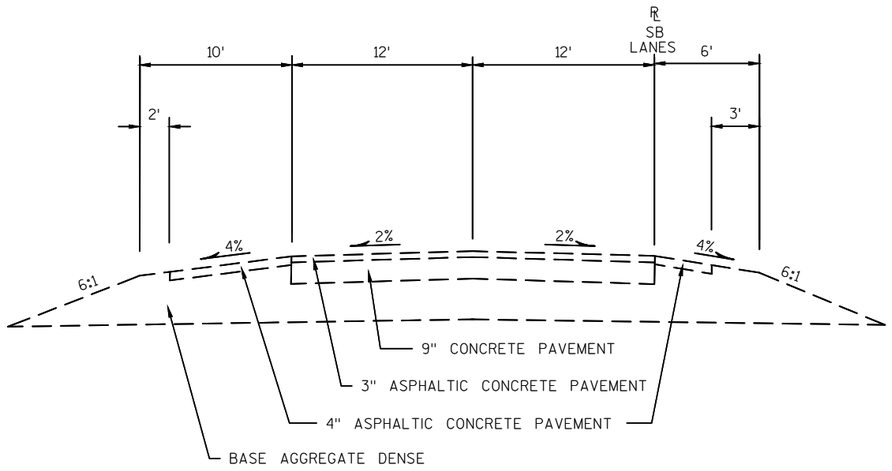


TYPICAL EXISTING SECTION

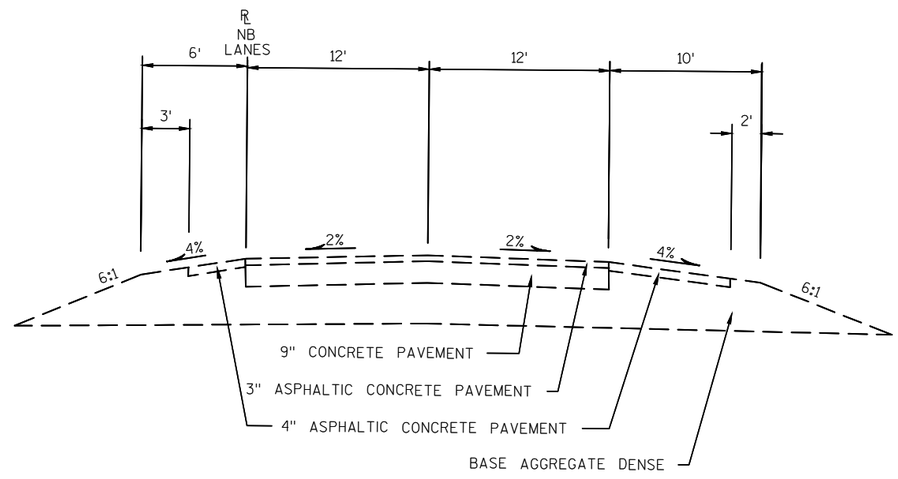
USH 41

STA. 706+00 TO STA. 770+00

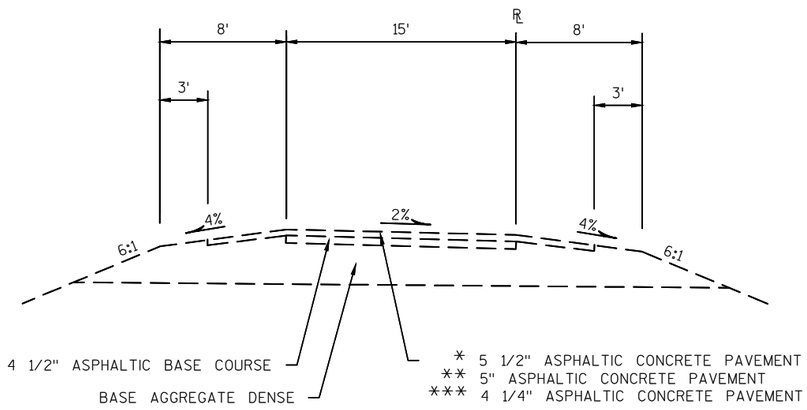
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: TYPICAL SECTION	SHEET 8	E



TYPICAL EXISTING SECTION
USH 45 SB LANES
STA. 667+40.41 TO STA. 680+81

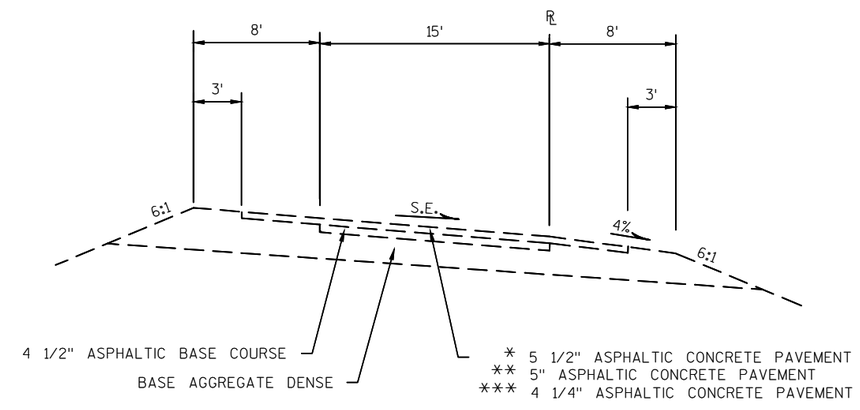


TYPICAL EXISTING SECTION
USH 45 NB LANES
STA. 673+19.72 TO STA. 685+20



TYPICAL EXISTING RAMP SECTION
USH 41

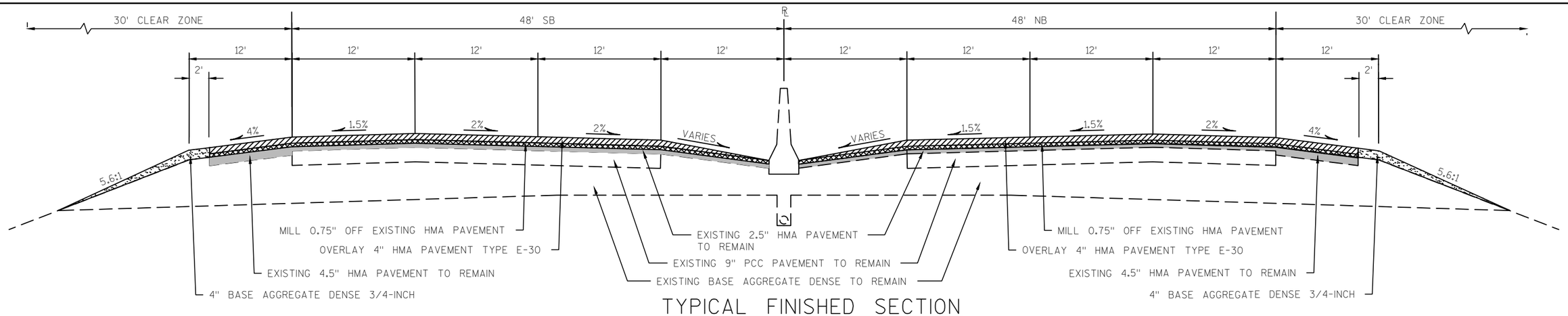
* CTH Q (COUNTY LINE ROAD)
** STH 167E (LANNON ROAD)
*** STH 167W (HOLY HILL ROAD)



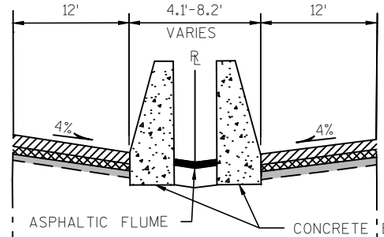
TYPICAL EXISTING SUPERELEVATED RAMP SECTION
USH 41

* CTH Q (COUNTY LINE ROAD)
** STH 167E (LANNON ROAD)
*** STH 167W (HOLY HILL ROAD)

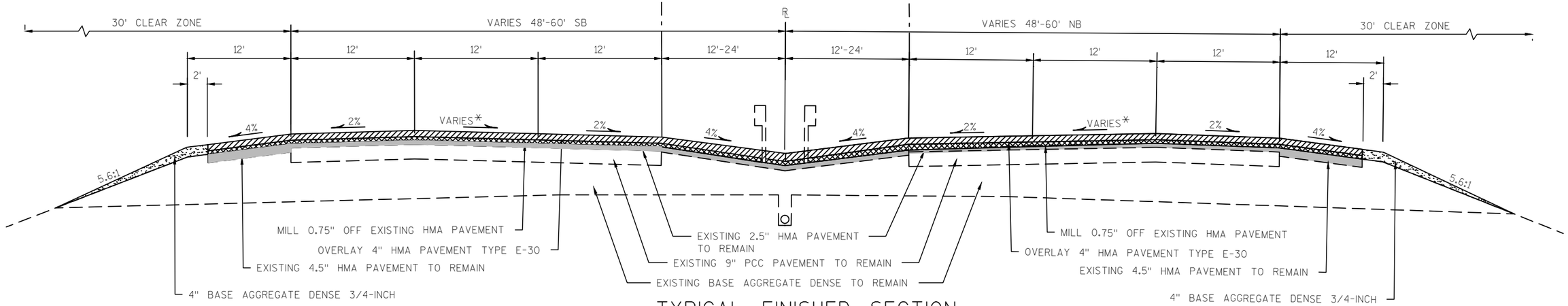
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: TYPICAL SECTION	SHEET 9	E



TYPICAL FINISHED SECTION
USH 41
STA. 345+00 TO STA. 349+58



STA. 352+50 TO STA. 353+50

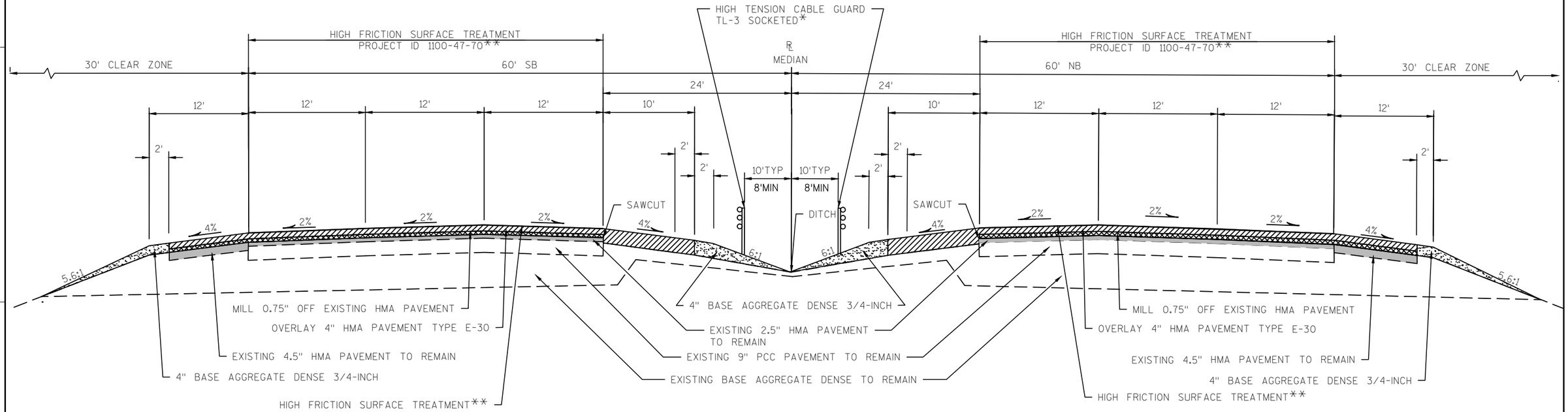


TYPICAL FINISHED SECTION
USH 41
STA. 349+58 TO STA. 362+05

* NB LANE #2 SLOPE VARIES FROM 1.5% TO -2.0%

* SB LANE #2 SLOPE VARIES FROM -2.0% TO 2.0%

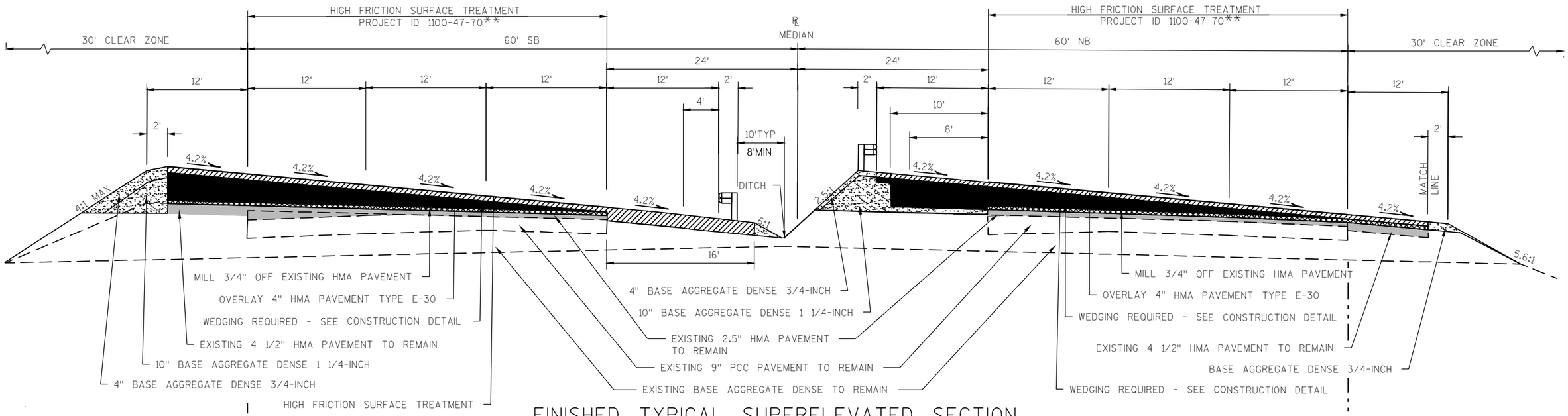
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: TYPICAL SECTION	SHEET 10	E



TYPICAL FINISHED SECTION

USH 41

STA. 362+05 TO STA. 575+45
STA. 606+07 TO STA. 660+00
STA. 560+00 TO STA. 620+00
*SEE PLAN DETAIL SHEETS FOR EXACT LOCATIONS
**STA. 574+45 TO STA. 613+00 (SB LANES)
**STA. 574+45 TO STA. 612+50 (NB LANES)

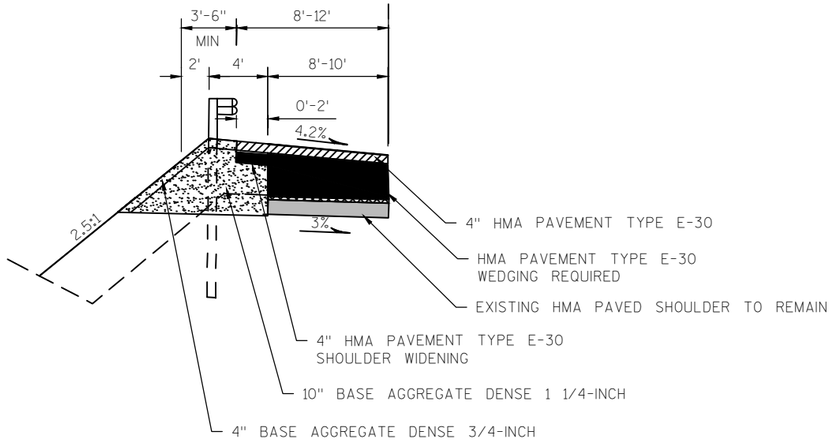


FINISHED TYPICAL SUPERELEVATED SECTION

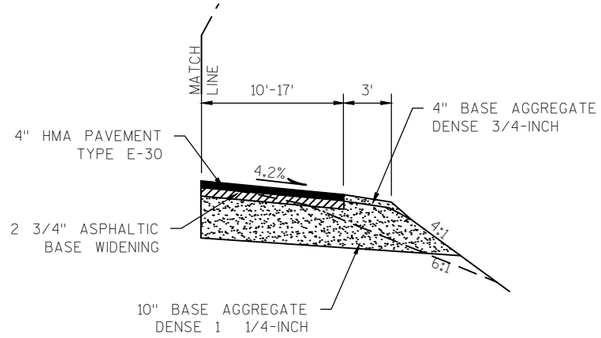
USH 41

STA. 575+45 TO STA. 606+07

*** STA. 560+00 TO STA. 620+00**



STA. 590+00 TO STA. 606+09

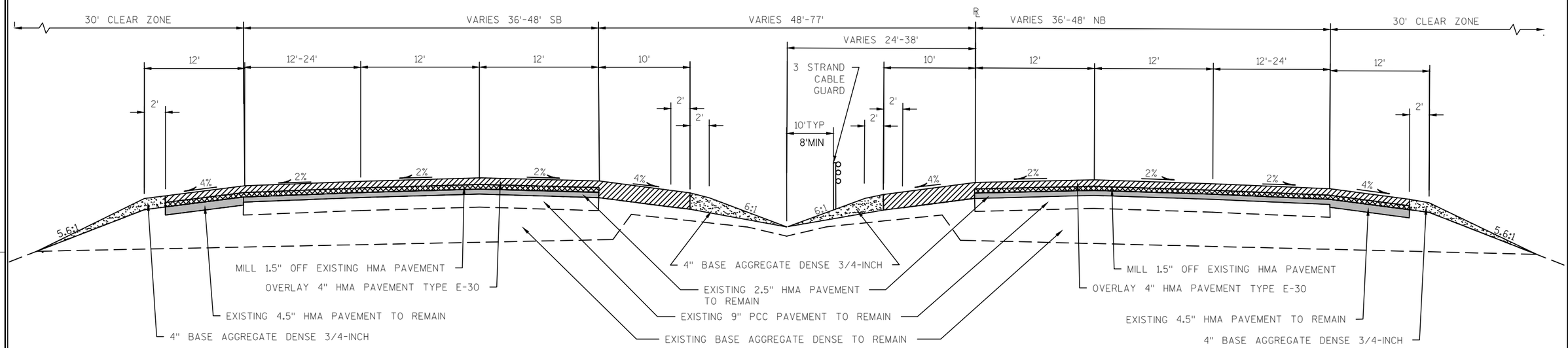


USH 41

STA 600+45 - STA 605+00, 70' RT

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: TYPICAL SECTION	SHEET 12	E

2

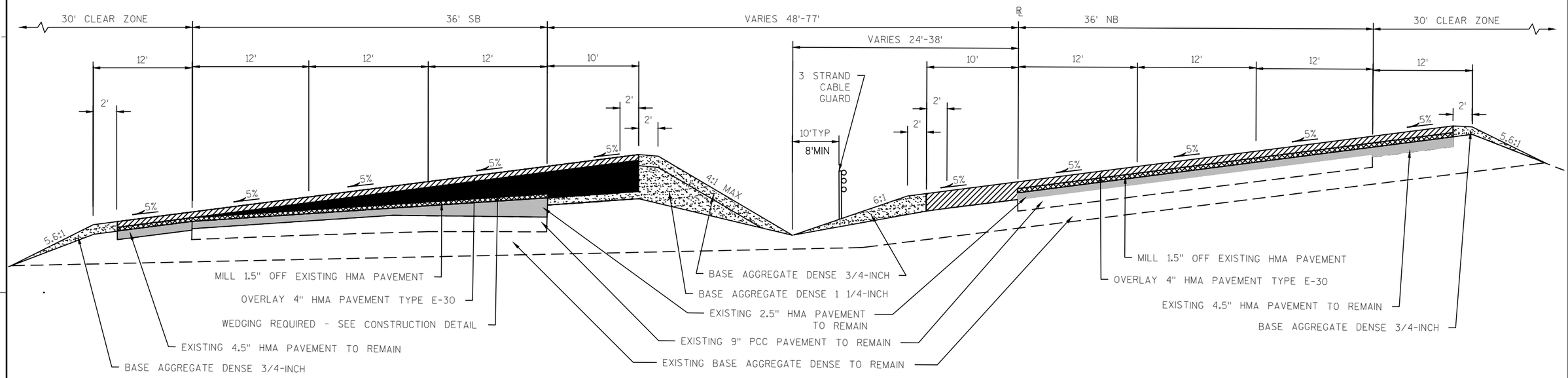


TYPICAL FINISHED SECTION

USH 41

STA. 660+00 TO STA. 663+41
STA. 673+09 TO STA. 690+94 SB
STA. 673+09 TO STA. 690+94 NB

2

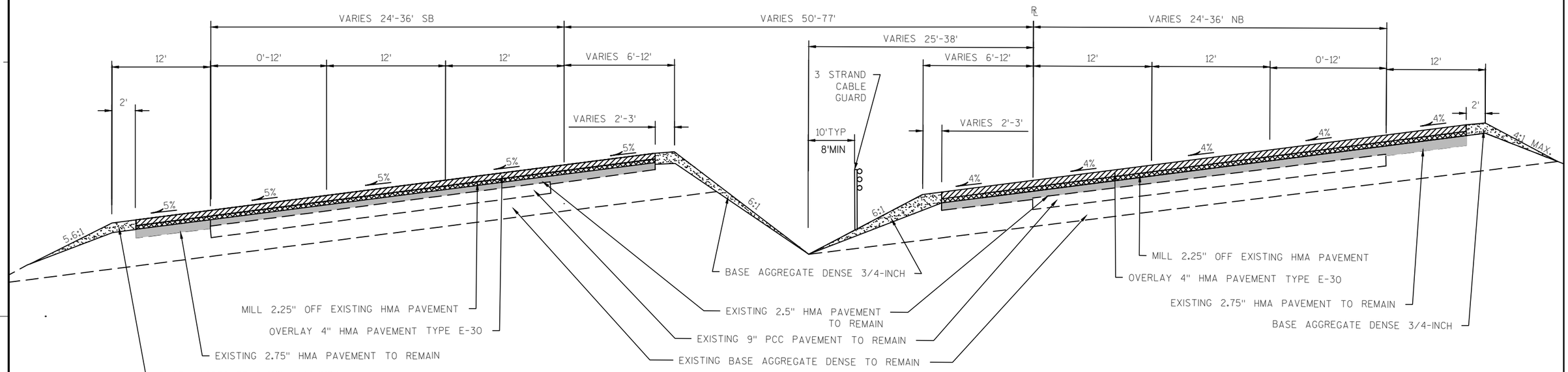


TYPICAL FINISHED SUPERELEVATED SECTION

USH 41

STA. 663+41 TO STA. 673+09

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: TYPICAL SECTION	SHEET 14	E

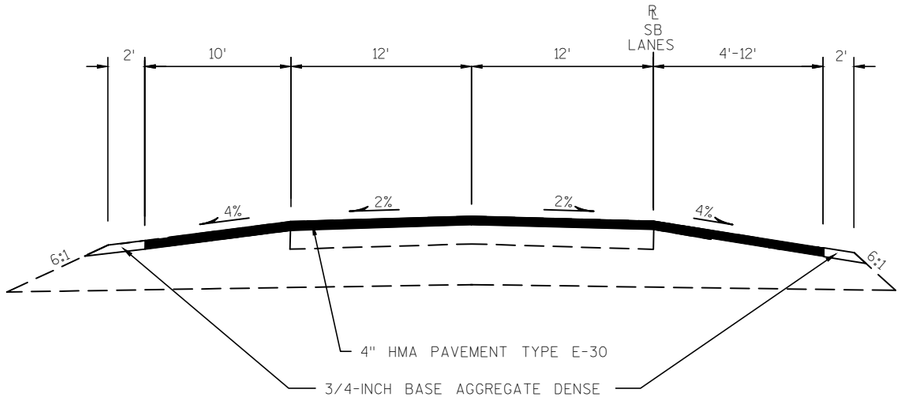


TYPICAL FINISHED SUPERELEVATED SECTION

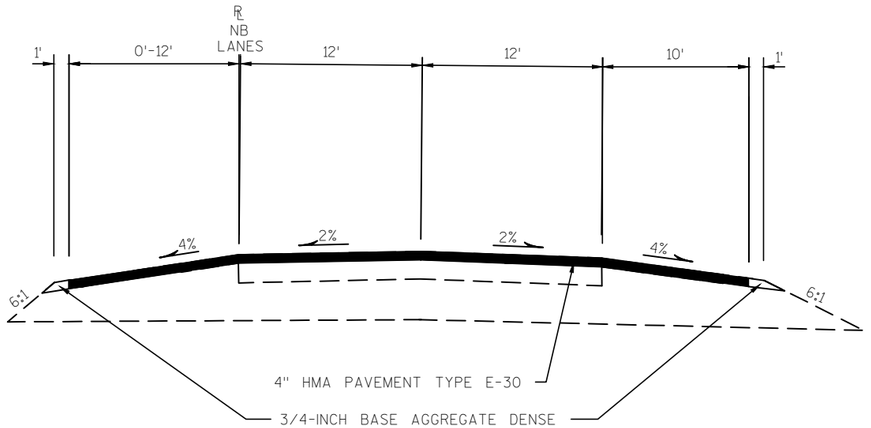
USH 41

STA. 690+94 TO STA. 694+00

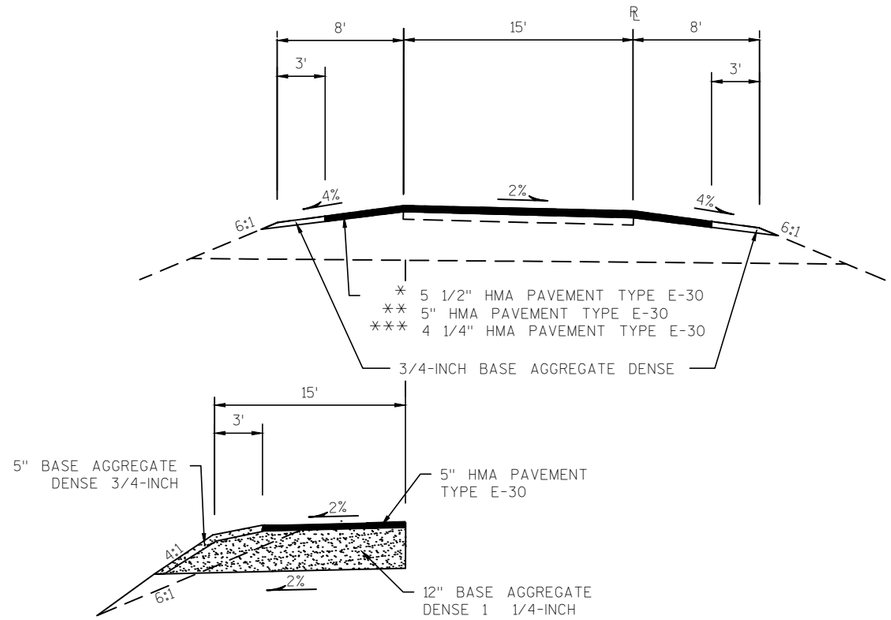
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: TYPICAL SECTION	SHEET 15	E



TYPICAL FINISHED SECTION
USH 45 SB LANES
STA. 667+40.41 TO STA. 685+00

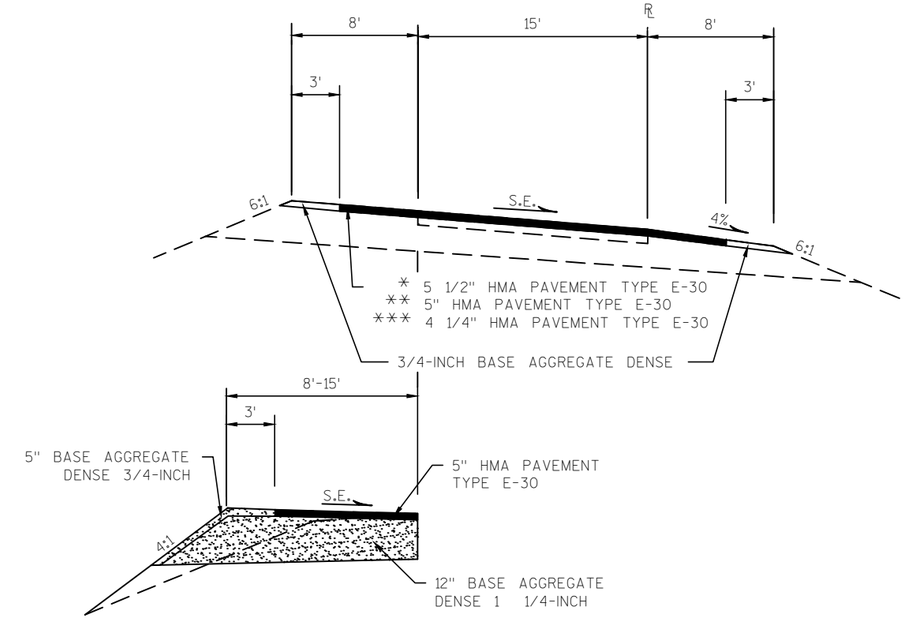


TYPICAL FINISHED SECTION
USH 45 NB LANES
STA. 673+19.72 TO STA. 694+00



STH 167 (HOLY HILL RD.) NB OFF-RAMP

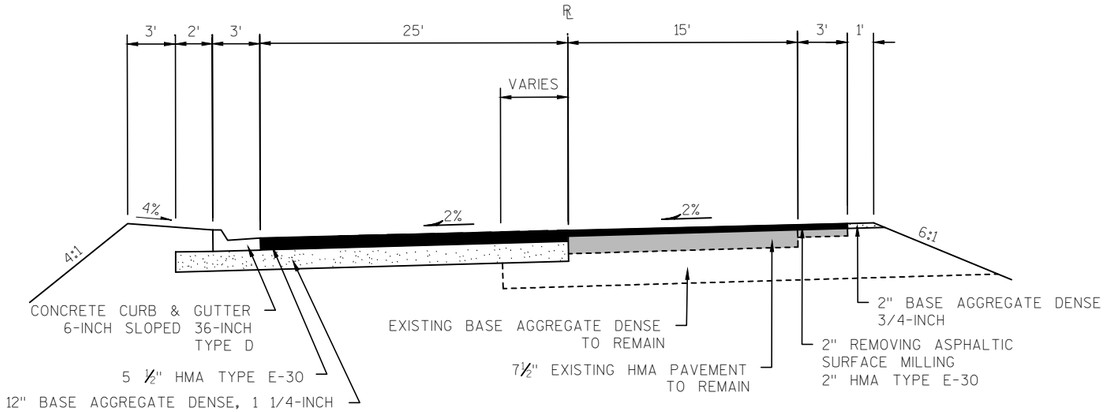
FINISHED TYPICAL RAMP SECTION
USH 41
* CTH Q (COUNTY LINE ROAD) NB ON-RAMP
** STH 167E (LANNON ROAD) SB ON-RAMP & NB OFF-RAMP
*** STH 167W (HOLY HILL ROAD) ALL RAMPS



STH 167 (HOLY HILL RD.) NB OFF-RAMP

FINISHED TYPICAL SUPERELEVATED RAMP SECTION
USH 41
* CTH Q (COUNTY LINE ROAD) NB ON-RAMP
** STH 167E (LANNON ROAD) SB ON-RAMP & NB OFF-RAMP
*** STH 167W (HOLY HILL ROAD) ALL RAMPS

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: TYPICAL SECTION	SHEET 16	E

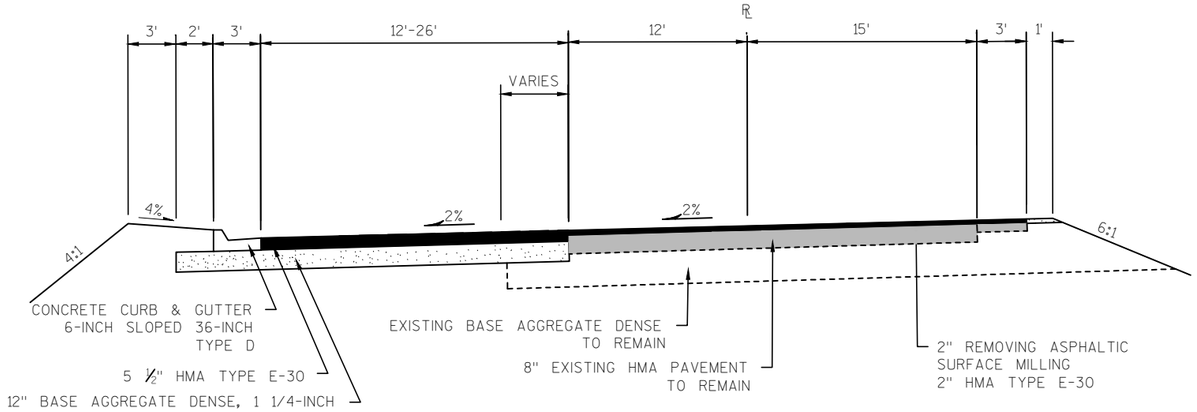


TYPICAL FINISHED SECTION

USH 41 - LANNON ROAD

STA 1453+00 - STA 1454+25

SB OFF-RAMP

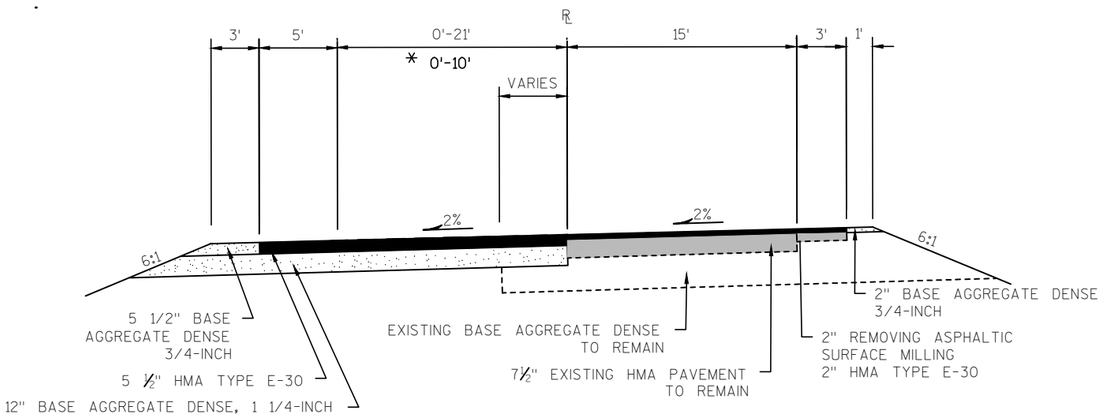


TYPICAL FINISHED SECTION

USH 41 - CTH Q

STA 353+50 - STA 355+85

SB OFF-RAMP



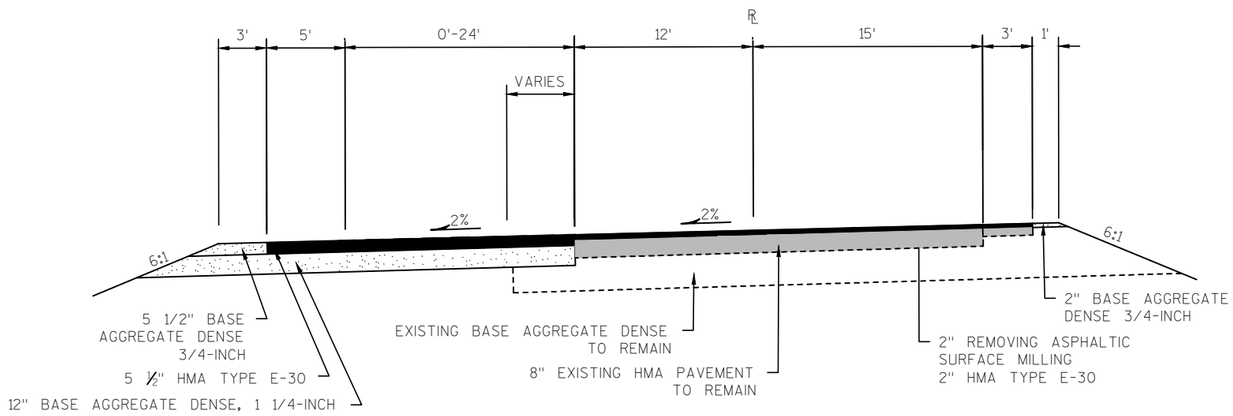
TYPICAL FINISHED SECTION

USH 41 - LANNON ROAD

STA 1454+25 - STA 1459+15

SB OFF-RAMP

* NB ON-RAMP



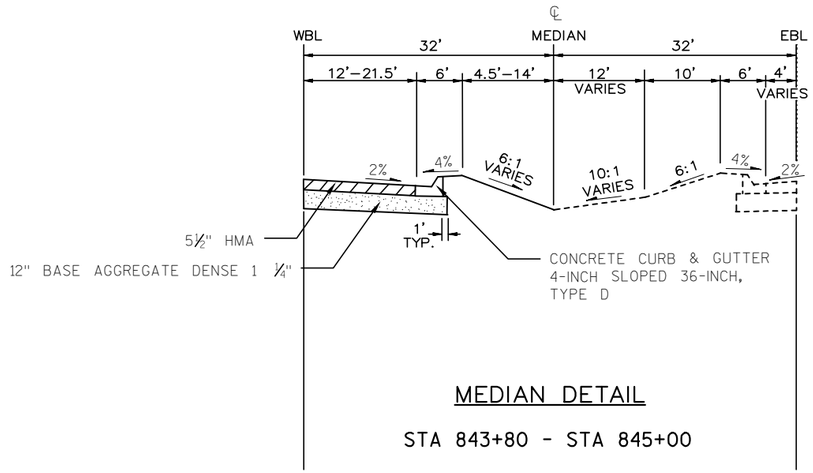
TYPICAL FINISHED SECTION

USH 41 - CTH Q

STA 355+85 - STA 359+10

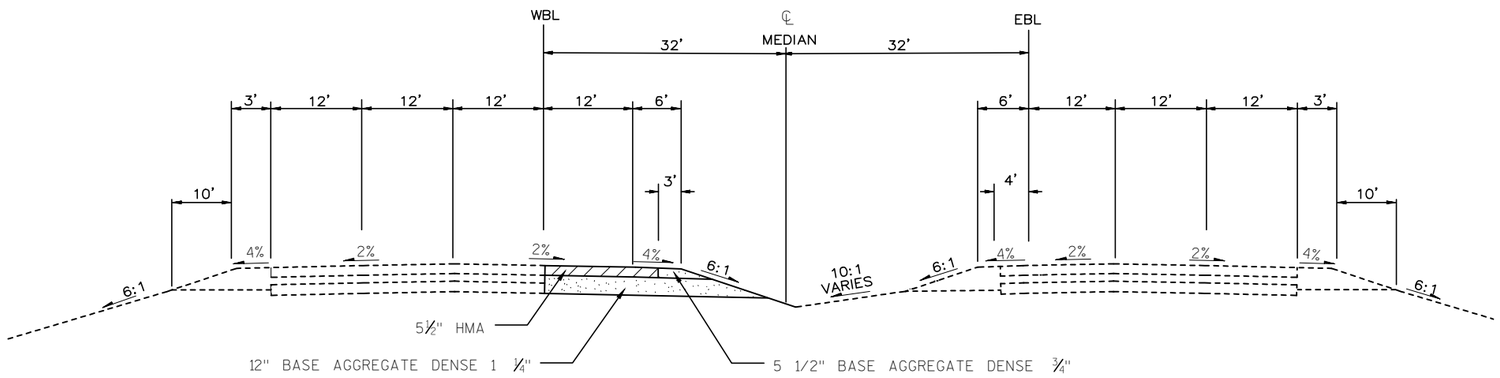
SB OFF-RAMP

2



MEDIAN DETAIL

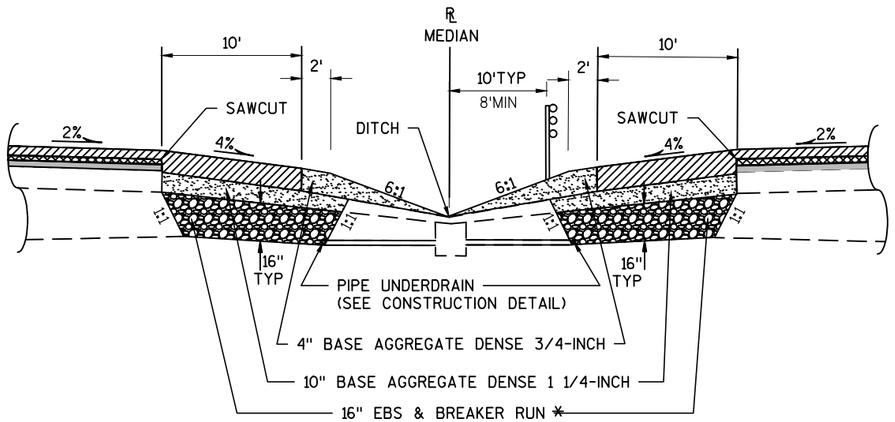
STA 843+80 - STA 845+00



TYPICAL EXISTING/FINISHED SECTION

STH 167 (LANNON ROAD)
STA 845+00 - STA 848+32

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: TYPICAL SECTION	SHEET 18	E

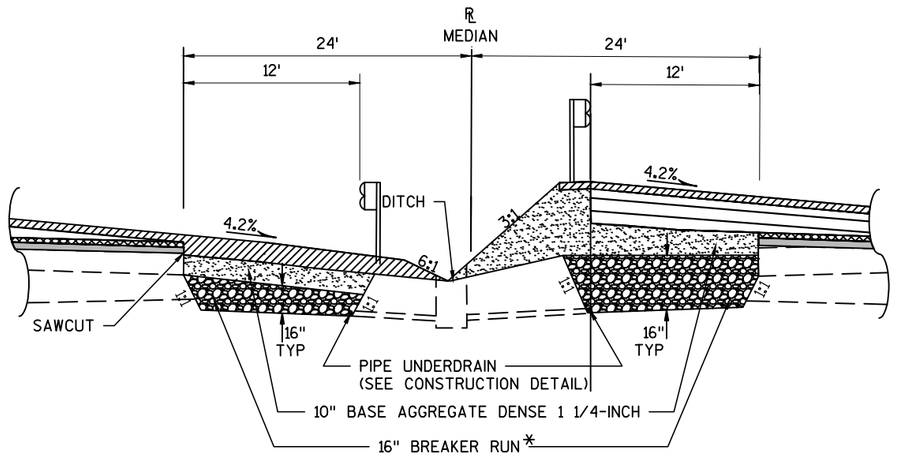


EBS AND BREAKER RUN CONSTRUCTION DETAIL

USH 41

STA. 362+05 TO STA. 575+45*
STA. 606+07 TO STA. 660+00*
STA. 660+00 TO STA. 663+41*
STA. 673+09 TO STA. 694+00*

* EXACT EBS LOCATIONS TO BE DETERMINED BY THE ENGINEER

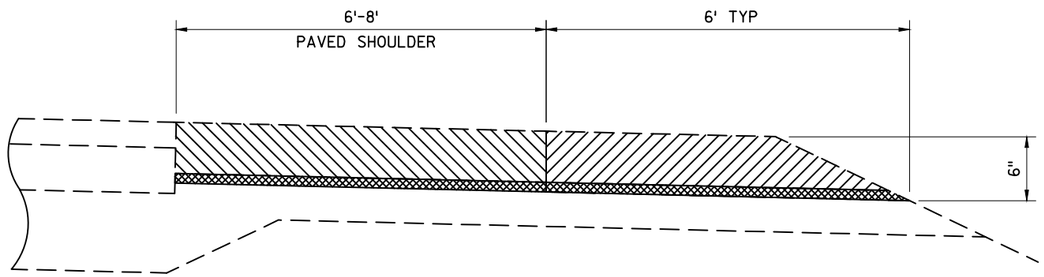


EBS AND BREAKER RUN CONSTRUCTION DETAIL

USH 41

STA. 575+45 TO STA. 606+07*

* EXACT EBS LOCATIONS TO BE DETERMINED BY THE ENGINEER



PROOF ROLLING HALF SECTION

USH 41/45

STA. 362+05 TO STA. 424+50
STA. 429+75 TO STA. 608+00
STA. 610+00 TO STA. 694+00

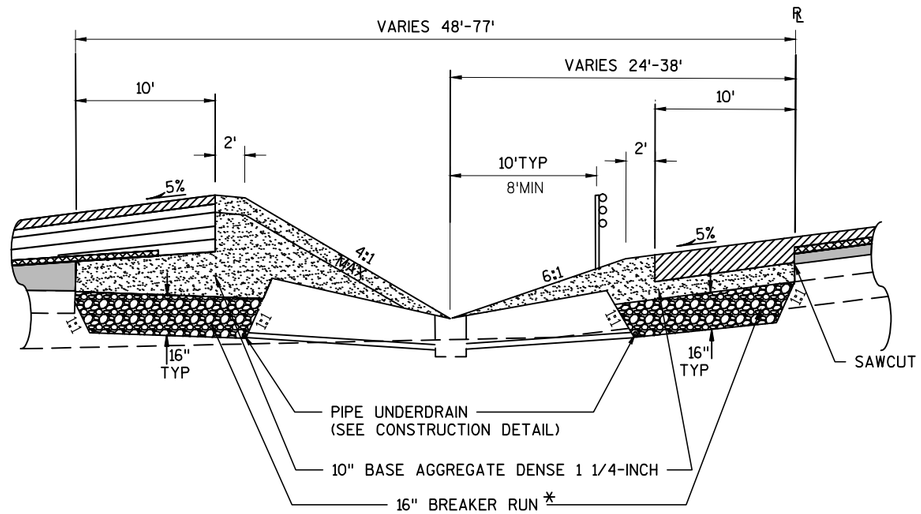
LEGEND

EXCAVATION COMMON

REMOVING ASPHALTIC SURFACE MILLING

PROOF ROLLING SURFACE

NOTE: 6" X 6' WIDE, PROOF ROLLING, EBS LOCATIONS TO BE DETERMINED BY THE ENGINEER.



EBS AND BREAKER RUN CONSTRUCTION DETAIL

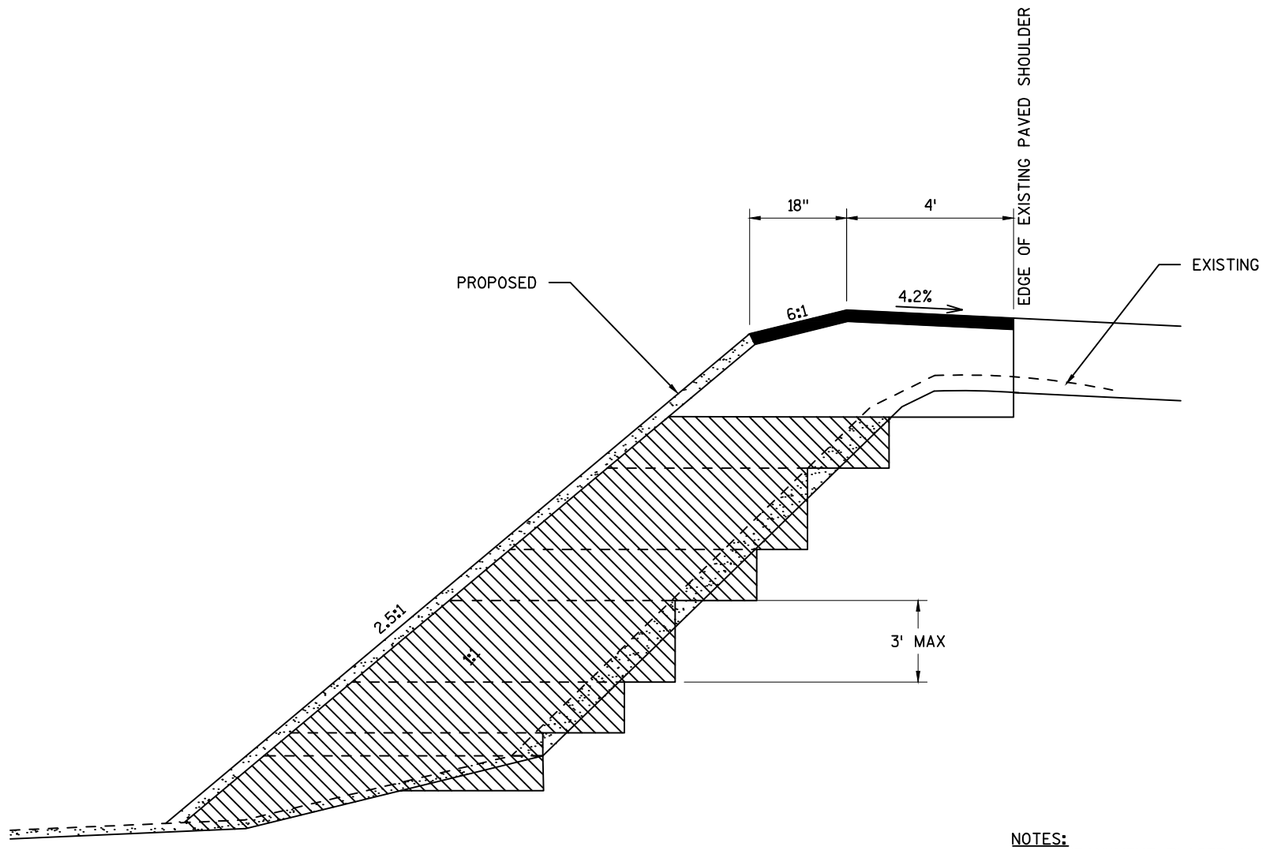
USH 41

STA. 663+41 TO STA. 673+09*

* EXACT EBS LOCATIONS TO BE DETERMINED BY THE ENGINEER

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CONSTRUCTION DETAILS	SHEET 19	E

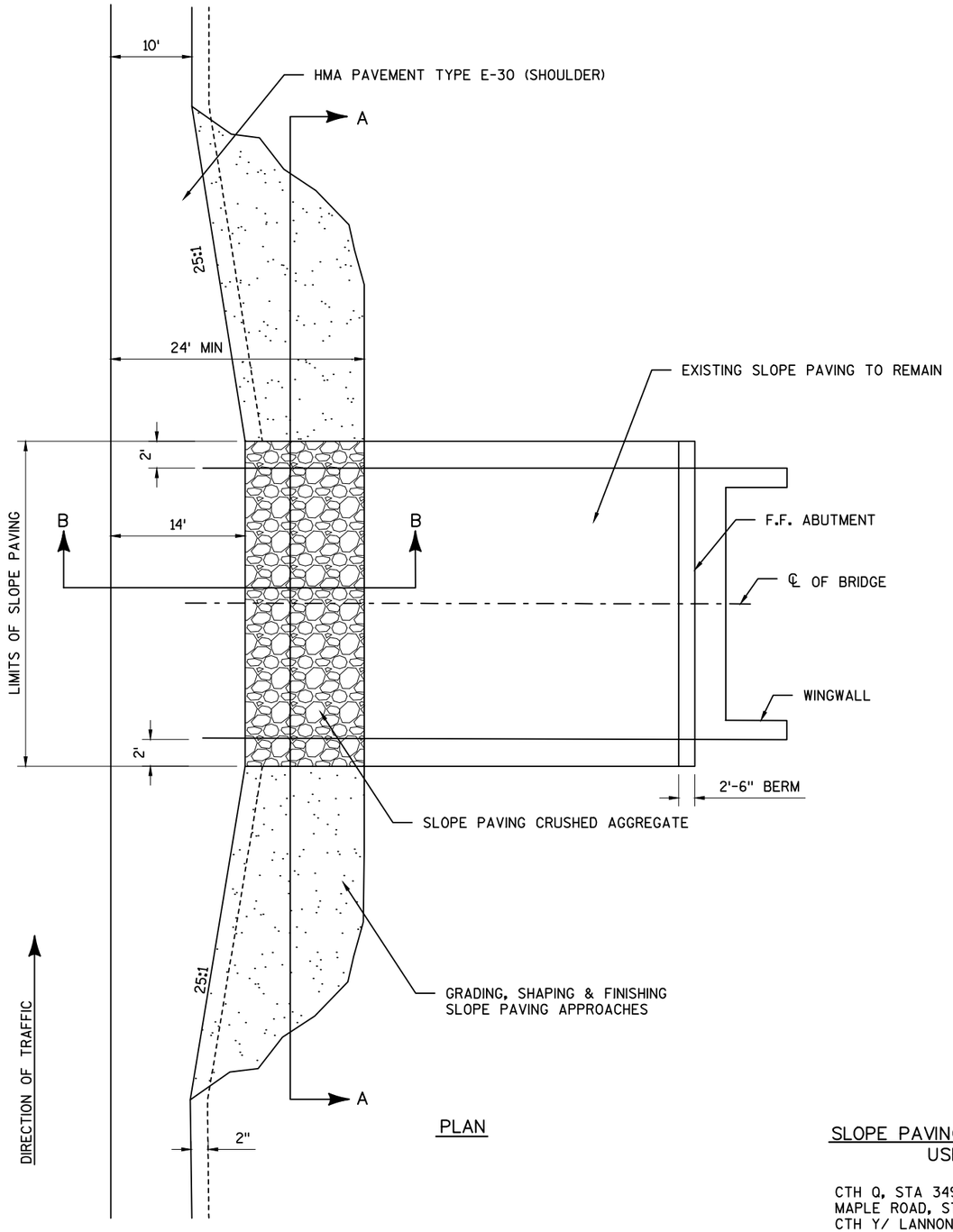
2



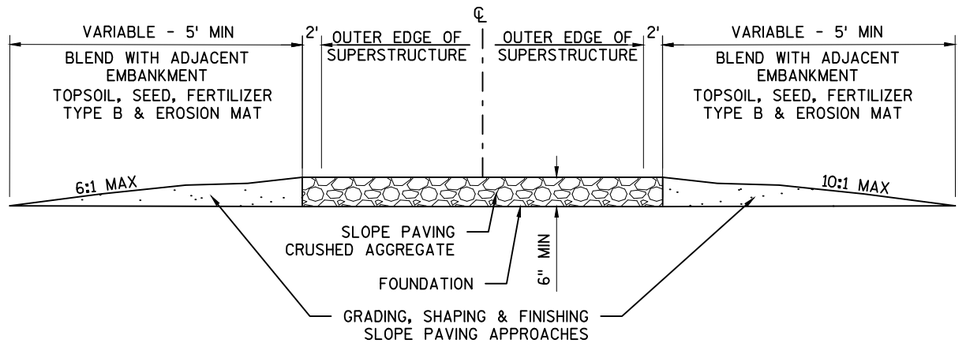
STEPPED EMBANKMENT DETAIL

USH 41/45
STA. 592+00 - STA. 608+00, LT

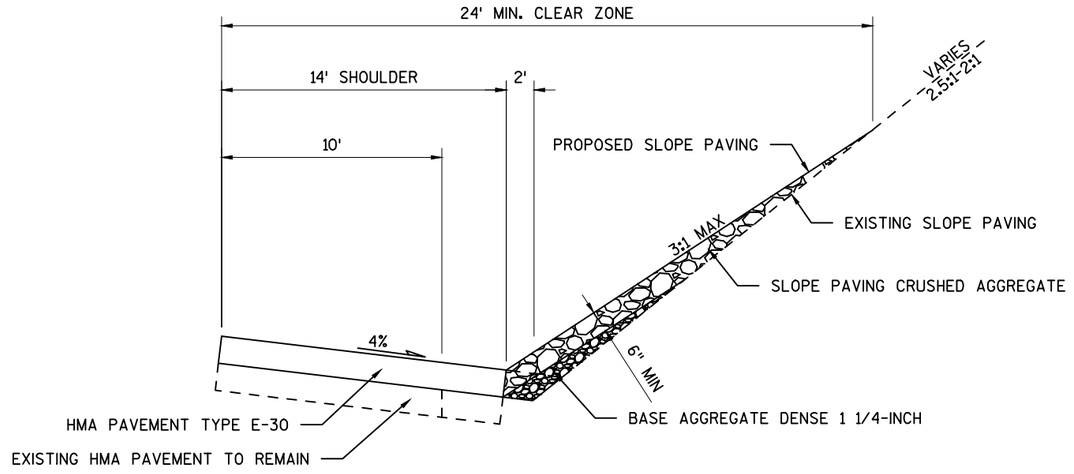
NOTES:
1. EMBANKMENT PLACED IN LAYERSAND COMPACTED PER SPECIFICATIONS.
2. BENCH AS REQUIRED TO FACILITATE CONSTRUCTION FILLING OPERATIONS (3' MAXIMUM BENCH DEPTH, INCIDENTAL)
3. EBS AS REQUIRED IN THE PLANS OR DIRECTED BY THE ENGINEER SHALL BE PAID UNDER THE ITEM "EXCAVATION COMMON".



PLAN



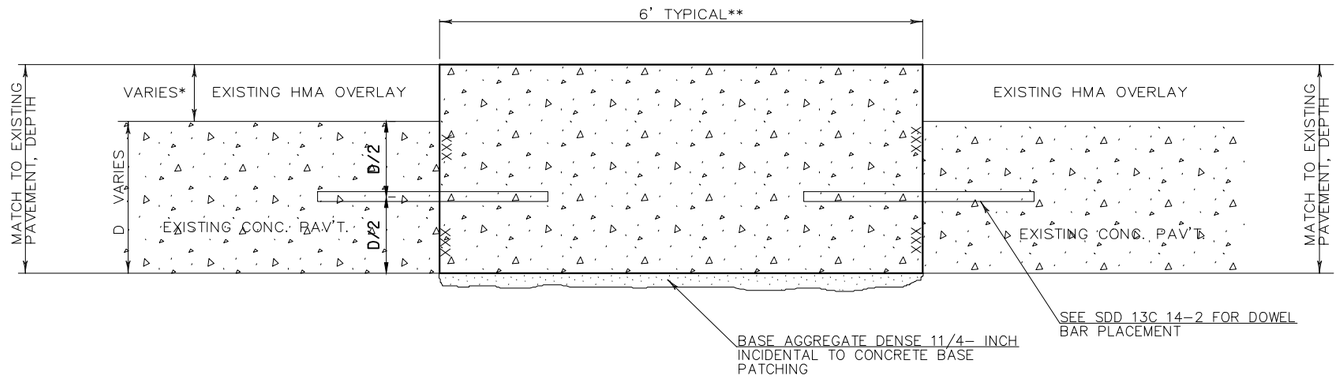
SECTION A–A



SECTION B–B

SLOPE PAVING CONSTRUCTION DETAIL
USH 41/45 NB

CTH Q, STA 349+25, LT & RT
MAPLE ROAD, STA 432+00, RT
CTH Y/ LANNON ROAD, STA 453+25, LT & RT
CTH F/ FRIESTADT ROAD, STA 559+50, LT & RT
STH 167/ HOLY HILL ROAD, STA 619+75, LT & RT



CONCRETE PAVEMENT REPAIR SHES **

CONCRETE PAVEMENT REPLACEMENT SHES ***

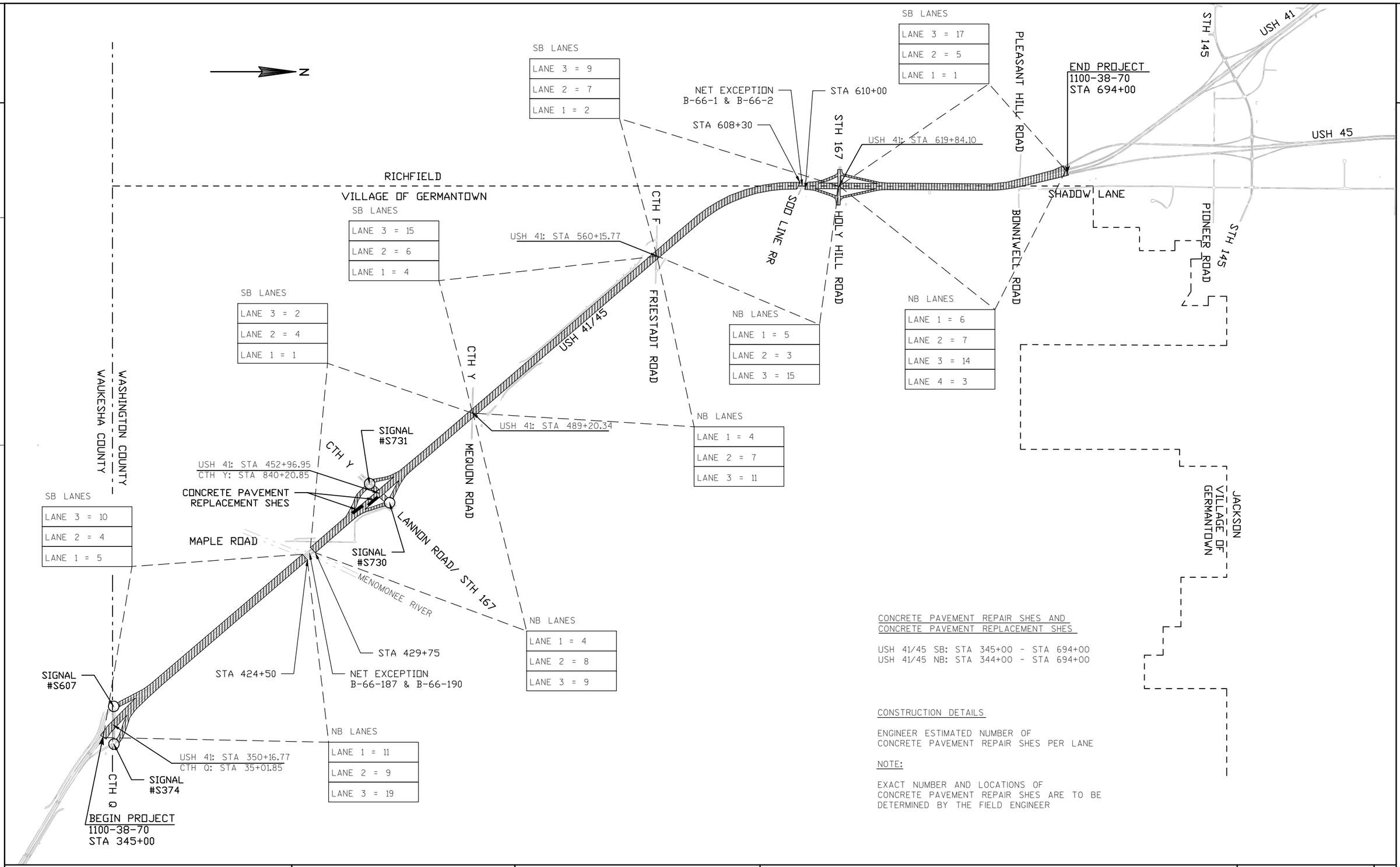
NOTE:

* EXISTING HMA OVERLAY 4" – 8" TYPICAL

** EXACT LOCATIONS AND DIMENSIONS TO BE MARKED BY THE FIELD ENGINEER. (6'–15')

*** EXACT LOCATIONS AND DIMENSIONS TO BE MARKED BY THE FIELD ENGINEER. (>15'–<300')

DEPTH OF CONC. PAVT. REPAIR SHES IS EQUAL TO THICKNESS OF EXISTING CONC. PAVEMENT PLUS ASPHALTIC OVERLAY.



CONCRETE PAVEMENT REPAIR SHES AND
CONCRETE PAVEMENT REPLACEMENT SHES

USH 41/45 SB: STA 345+00 - STA 694+00
USH 41/45 NB: STA 344+00 - STA 694+00

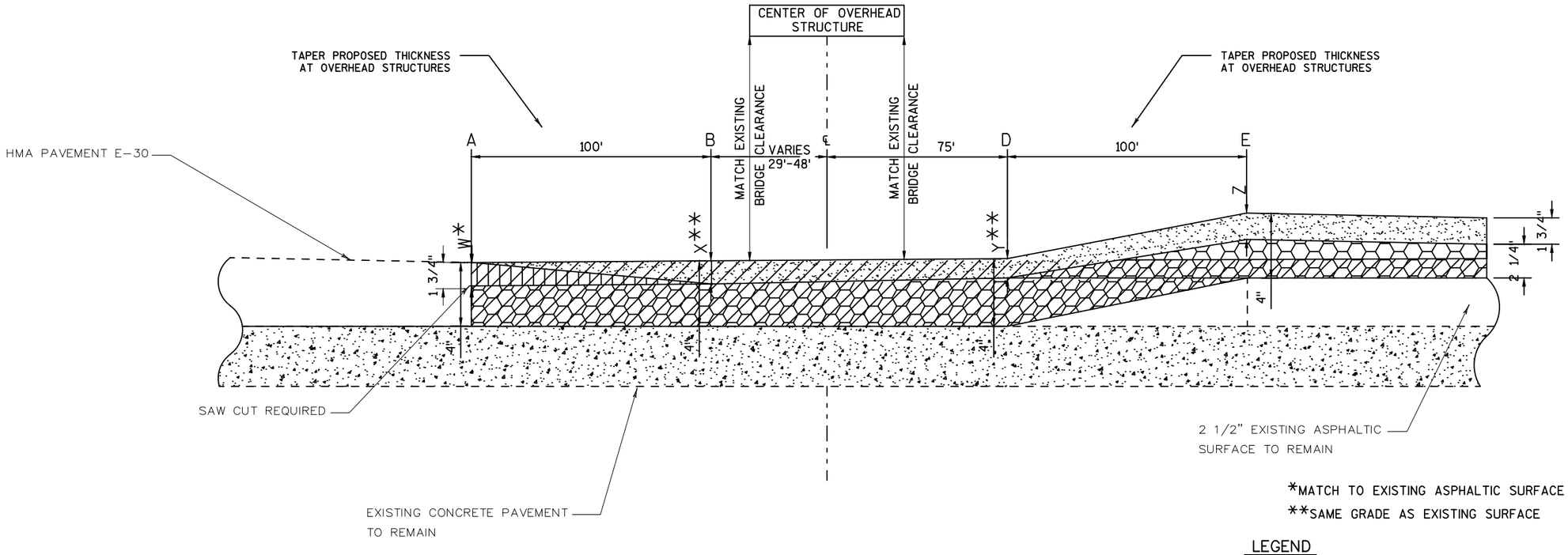
CONSTRUCTION DETAILS

ENGINEER ESTIMATED NUMBER OF
CONCRETE PAVEMENT REPAIR SHES PER LANE

NOTE:

EXACT NUMBER AND LOCATIONS OF
CONCRETE PAVEMENT REPAIR SHES ARE TO BE
DETERMINED BY THE FIELD ENGINEER

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CONSTRUCTION DETAILS - BASE PATCHING	SHEET 23	E



*MATCH TO EXISTING ASPHALTIC SURFACE

**SAME GRADE AS EXISTING SURFACE

LEGEND

- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALTIC SURFACE BUTT JOINTS
- HMA PAVEMENT TYPE E-30 (LOWER LAYER)
- HMA PAVEMENT TYPE E-30 (UPPER LAYER)
- EXISTING CONCRETE PAVEMENT

NOTE: TRANSITION NB CROSS SLOPE OF OUTSIDE LANES FROM 0.014'/' TO 0.02'/' BETWEEN POINT D AND POINT E. (REFER TO TYPICAL FINISHED SECTION UNDER CTH Q STRUCTURE)

TRANSITION SB CROSS SLOPE OF OUTSIDE LANE FROM 0.014'/' TO 0.02'/' BETWEEN POINT D AND POINT E. (REFER TO TYPICAL FINISHED SECTION UNDER CTH Q STRUCTURE)

USH 41 PAVING DETAIL AT OVERHEAD STRUCTURE

B-66-30 (CTH Q)

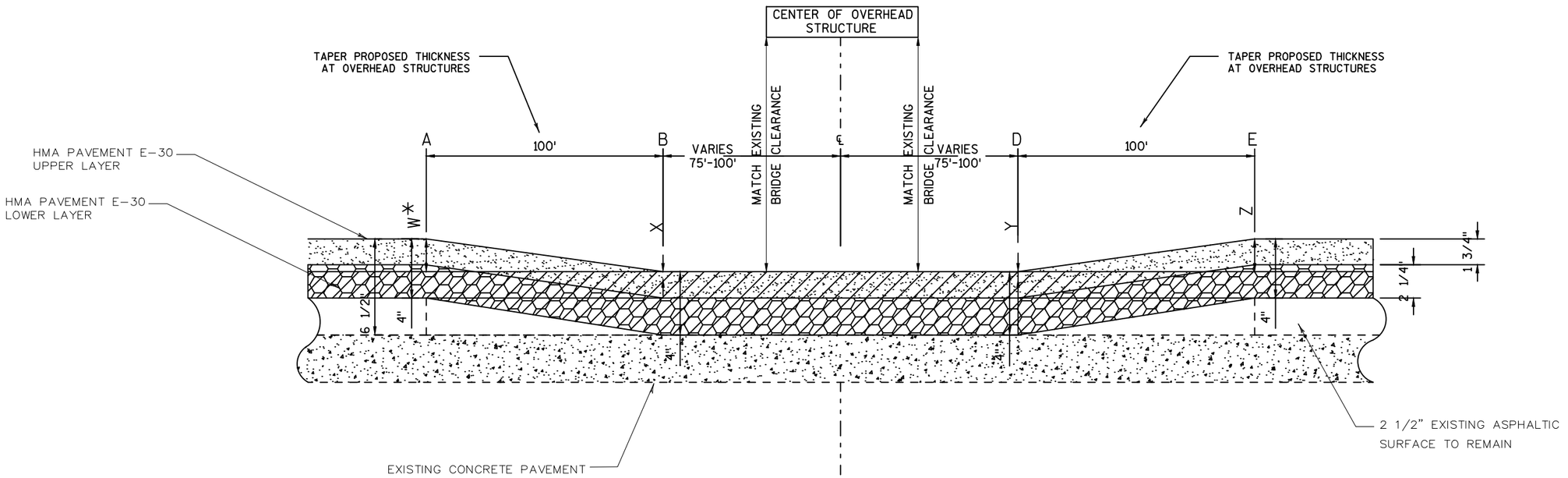
B-66-31 (MAPLE ROAD)

USH 41 SB

STR. NO.	A	B	℄	D	E	W*	X**	Y**	Z
B-66-30	345+00	346+00	350+48	351+23	352+23	4"	4"	4"	6 1/2"
B-66-31	429+75	430+75	431+04	431+79	432+79	4"	4"	4"	6 1/2"

USH 41 NB

STR. NO.	A	B	℄	D	E	W*	X	Y	Z
B-66-30	345+00	346+00	349+76	350+51	351+51	4"	4"	4"	6 1/2"
B-66-31	429+75	430+75	432+00	432+75	433+75	4"	4"	4"	6 1/2"



USH 41 PAVING DETAIL AT OVERHEAD STRUCTURE

USH 41 SB*

STR. NO.	A	B	℄	D	E	W*	X	Y	Z
B-66-32 B-66-33	451+24	452+24	453+24	454+24	255+24	6 1/2"	4"	4"	6 1/2"
B-66-34	487+88	488+88	489+58	490+33	491+33	6 1/2"	4"	4"	6 1/2"
B-66-35	558+79	559+79	560+54	561+29	562+29	6 1/2"	4"	4"	6 1/2"
B-66-36	618+07	619+07	619+82	620+57	621+57	6 1/2"	4"	4"	6 1/2"

USH 41 NB*

STR. NO.	A	B	℄	D	E	W*	X	Y	Z
B-66-32 B-66-33	451+34	452+34	453+34	454+34	455+34	6 1/2"	4"	4"	6 1/2"
B-66-34	487+07	488+07	488+82	489+57	490+57	6 1/2"	4"	4"	6 1/2"
B-66-35	588+02	559+02	559+77	560+52	561+52	6 1/2"	4"	4"	6 1/2"
B-66-36	618+02	619+02	619+77	620+52	621+52	6 1/2"	4"	4"	6 1/2"

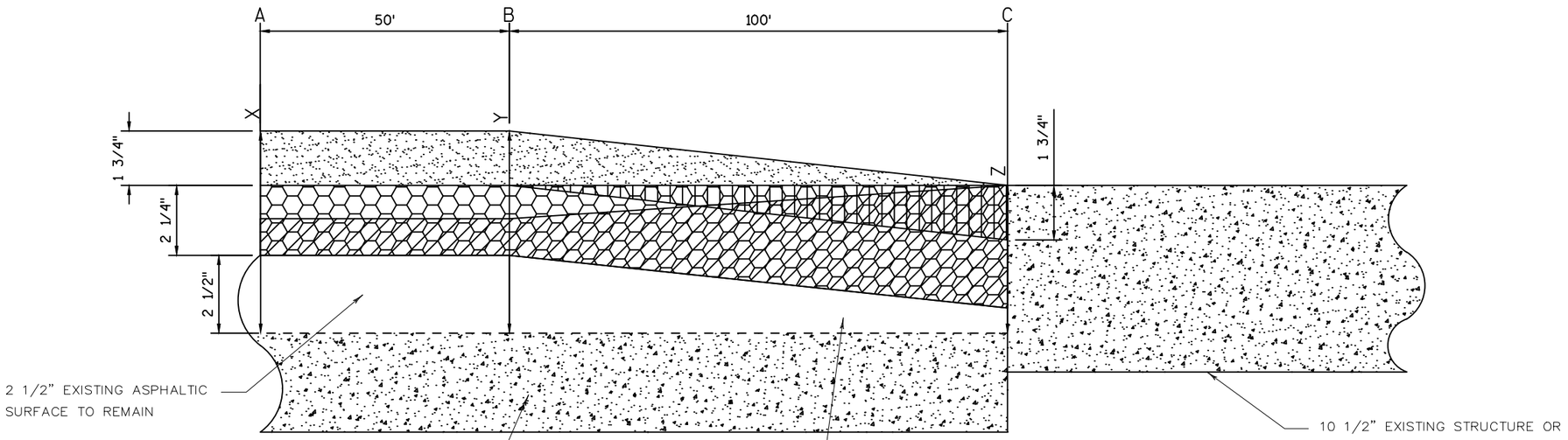
* DEPTH VARIES ACROSS LANES, SEE TYPICAL FINISHED SECTION UNDER STRUCTURES

B-66-32 (LANNON ROAD)
B-66-33 (LANNON ROAD)
B-66-34 (MEQUON ROAD)
B-66-35 (FREISTADT ROAD)
B-66-36 (HOLY HILL ROAD)

LEGEND

- REMOVING ASPHALTIC SURFACE MILLING
- HMA PAVEMENT TYPE E-30 (LOWER LAYER)
- HMA PAVEMENT TYPE E-30 (UPPER LAYER)
- EXISTING CONCRETE PAVEMENT

*TRANSITION SLOPE ONLY USED FOR STRUCTURES, B-66-1 AND B-66-2.



USH 41 SB*

STR. NO.	A	B	C	X	Y	Z
B-66-2	606+96	607+46	608+46	6 1/2"-8"	6 1/2"	4"
B-66-2	611+84	611+34	610+21	6 1/2"-8"	6 1/2"	4"

*SLOPE TRANSITION FROM 2% CROSS SLOPE TO 1.5% CROSS SLOPE IN LANE 2 AND LANE 3 FROM STA. 606+96 TO STA. 607+46.

*SLOPE TRANSITION FROM 1.5% CROSS SLOPE TO 2% CROSS SLOPE IN LANE 2 AND LANE 3 FROM STA. 611+34 TO STA. 611+84

USH 41 NB*

STR. NO.	A	B	C	X	Y	Z
B-66-1	606+45	606+96	608+06	6 1/2"-8"	6 1/2"	4"
B-66-1	611+31	610+81	609+81	6 1/2"-8"	6 1/2"	4"

*SLOPE TRANSITION FROM 2% CROSS SLOPE TO 1.5% CROSS SLOPE IN LANE 2 AND LANE 4 FROM STA. 606+46 TO STA. 606+96.

*SLOPE TRANSITION FROM 1.5% CROSS SLOPE TO 2% CROSS SLOPE IN LANE 2 AND LANE 3 FROM STA. 610+81 TO STA. 611+31.

NET EXCEPTION MATCHING DETAIL

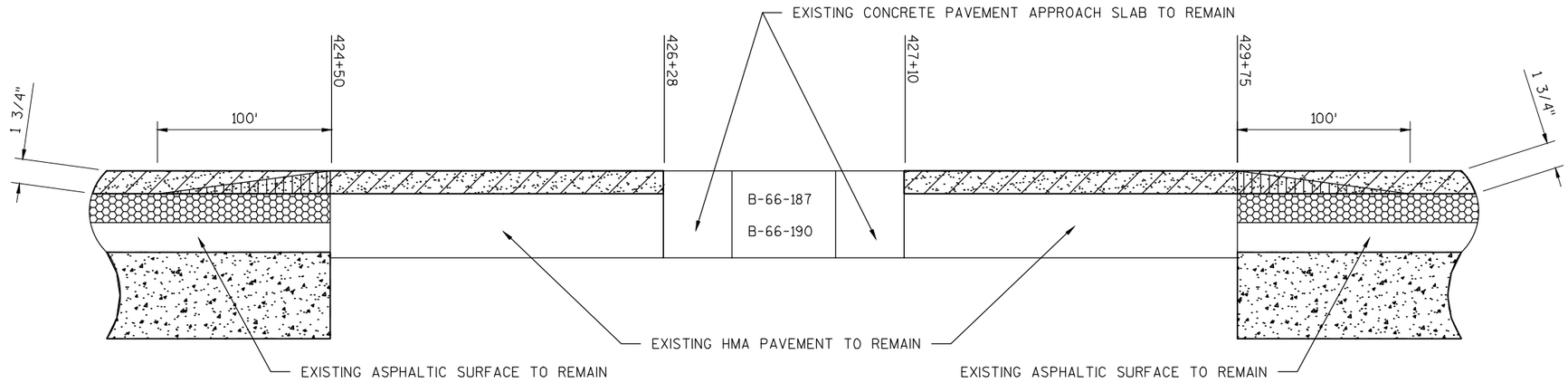
LEGEND

- REMOVING ASPHALTIC SURFACE MILLING
- HMA PAVEMENT TYPE E-30 (LOWER LAYER)
- HMA PAVEMENT TYPE E-30 (UPPER LAYER)
- EXISTING CONCRETE PAVEMENT
- REMOVING ASPHALTIC SURFACE BUTT JOINTS (LOWER LAYER)

ORDER OF OPERATIONS

1. REMOVING ASPHALTIC SURFACE MILLING (EXISTING PAVEMENT)
2. PLACE HMA PAVEMENT TYPE E-30 (LOWER LAYER)
3. REMOVING ASPHALTIC SURFACE BUTT JOINTS (LOWER LAYER)
4. PLACE HMA PAVEMENT TYPE E-30 (UPPER LAYER)

2



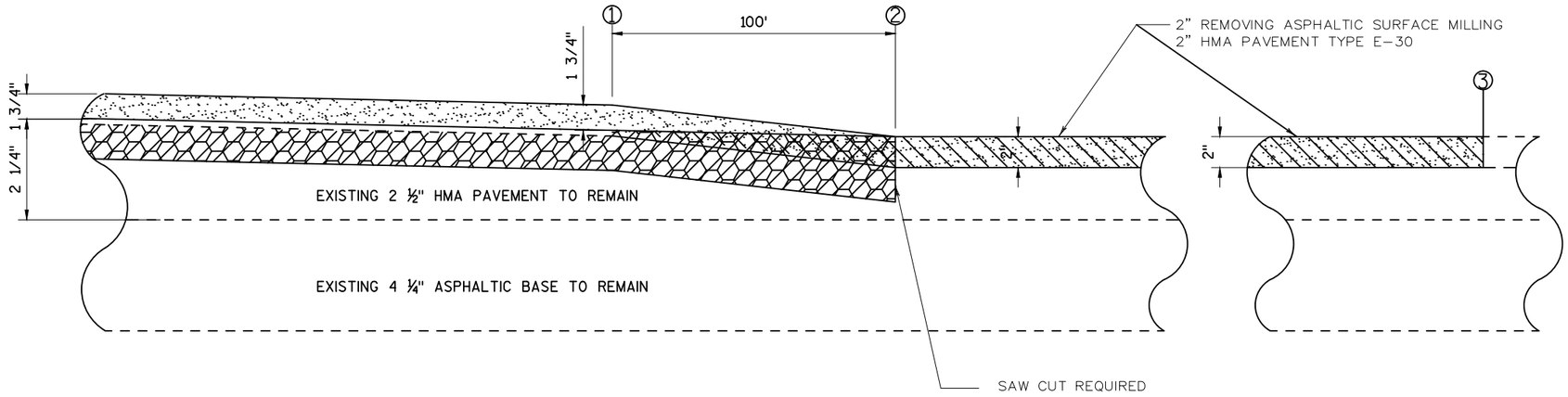
NET EXCEPTION MATCHING DETAIL
STA. 424+50 – STA. 429+75

LEGEND

- REMOVING ASPHALTIC SURFACE MILLING
- HMA PAVEMENT TYPE E–30 (LOWER LAYER)
- HMA PAVEMENT TYPE E–30 (UPPER LAYER)
- EXISTING CONCRETE PAVEMENT
- REMOVING ASPHALTIC SURFACE BUTT JOINTS (LOWER LAYER)

ORDER OF OPERATIONS

1. REMOVING ASPHALTIC SURFACE MILLING (EXISTING PAVEMENT)
2. PLACE HMA PAVEMENT TYPE E-30 (LOWER LAYER)
3. REMOVING ASPHALTIC SURFACE BUTT JOINTS (LOWER LAYER)
4. PLACE HMA PAVEMENT TYPE E-30 (UPPER LAYER)



CTH Q AND USH 41/45 INTERCHANGE

RAMP	①	②	③
B	353+00	352+00	346+60
C	363+00	362+00	354+15

LANNOR ROAD AND USH 41/45 INTERCHANGE

RAMP	①	②	③
A	1445+75	1446+75	-
B	462+00	461+00	454+30
C	1461+00	1460+00	1453+10
D	442+25	443+25	1453+30

HOLY HILL ROAD AND USH 41/45 INTERCHANGE

RAMP	①	②	③
A	613+00	614+00	619+50
B	631+00	630+00	620+45
C	612+50	613+50	619+25
D	626+00	625+00	620+20

RAMP PAVING DETAIL

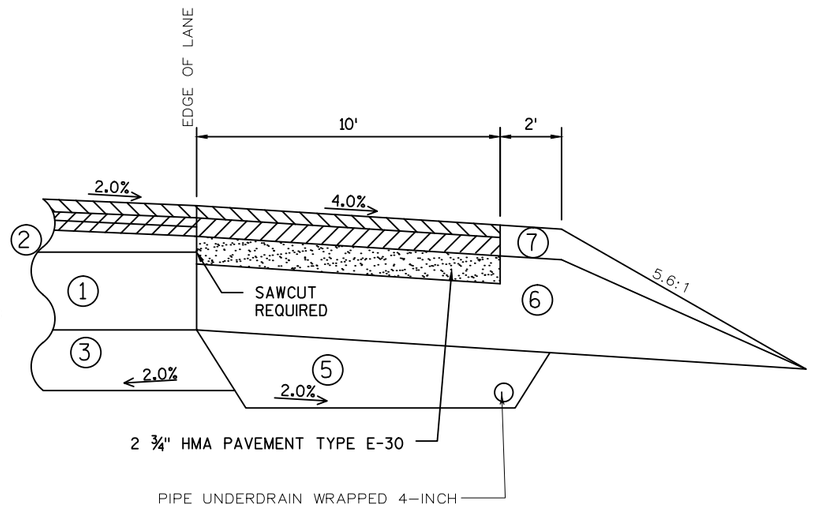
LEGEND

- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALTIC SURFACE BUTT JOINTS
- HMA PAVEMENT TYPE E-30 (LOWER LAYER)
- HMA PAVEMENT TYPE E-30 (UPPER LAYER)
- EXISTING ASPHALTIC BASE

LEGEND

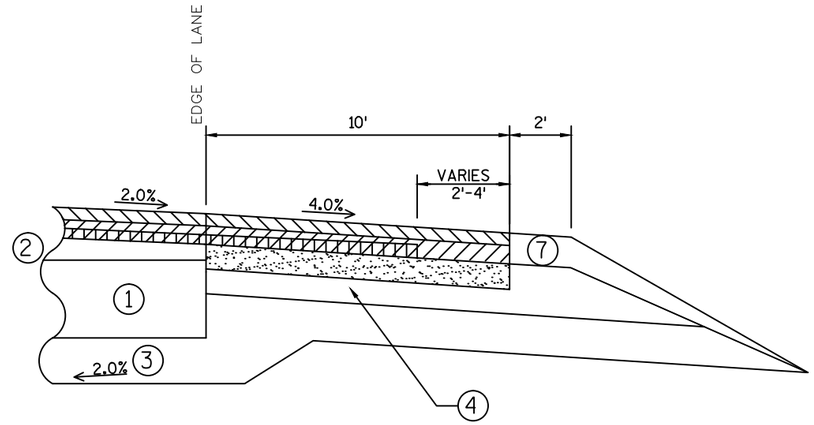
- 2 1/4" HMA PAVEMENT TYPE E-30 LOWER LAYER 2
- 1 3/4" HMA PAVEMENT TYPE E-30 UPPER LAYER
- REMOVING ASPHALTIC SURFACE BUTT JOINTS
- 2 3/4" ASPHALTIC BASE OR 5" ASPHALTIC BASE WIDENING

1. EXISTING PCC PAVEMENT TO REMAIN
2. 2 1/2" MIN. EXISTING HMA PAVEMENT TO REMAIN
3. EXISTING BASE AGGREGATE DENSE TO REMAIN
4. 2 3/4" BASE AGGREGATE DENSE 1 1/4-INCH
5. 16" EBS AND BREAKER RUN
6. 10" BASE AGGREGATE DENSE 1 1/4-INCH
7. 4"-6" BASE AGGREGATE DENSE 3/4-INCH



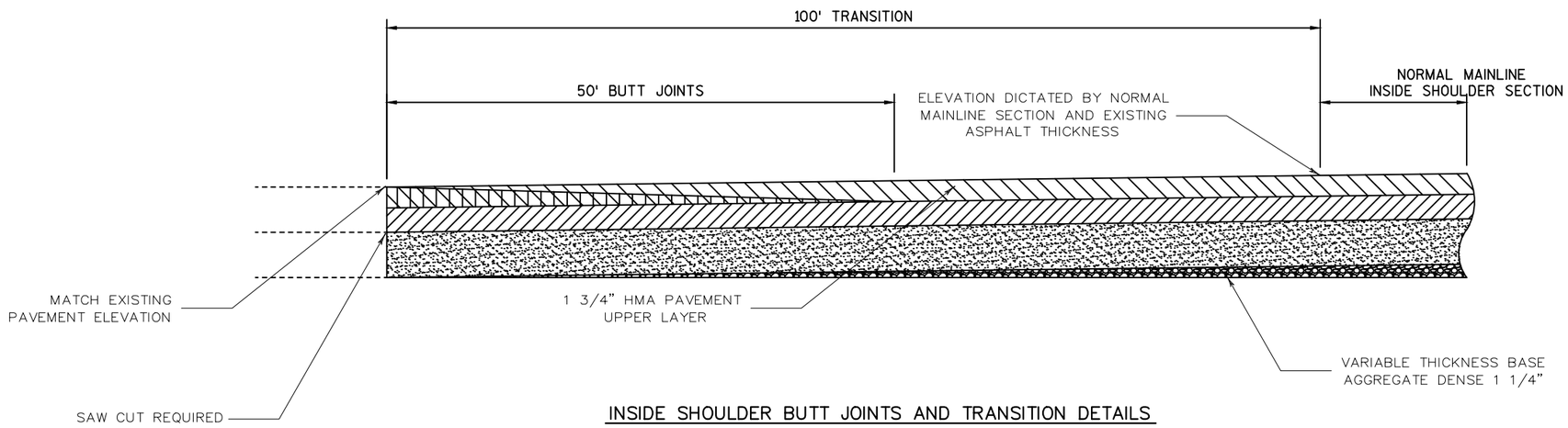
INSIDE SHOULDER RECONSTRUCTION DETAILS

WITH EBS REQUIRED



INSIDE SHOULDER WIDENING DETAILS

WITHOUT EBS REQUIRED



INSIDE SHOULDER BUTT JOINTS AND TRANSITION DETAILS

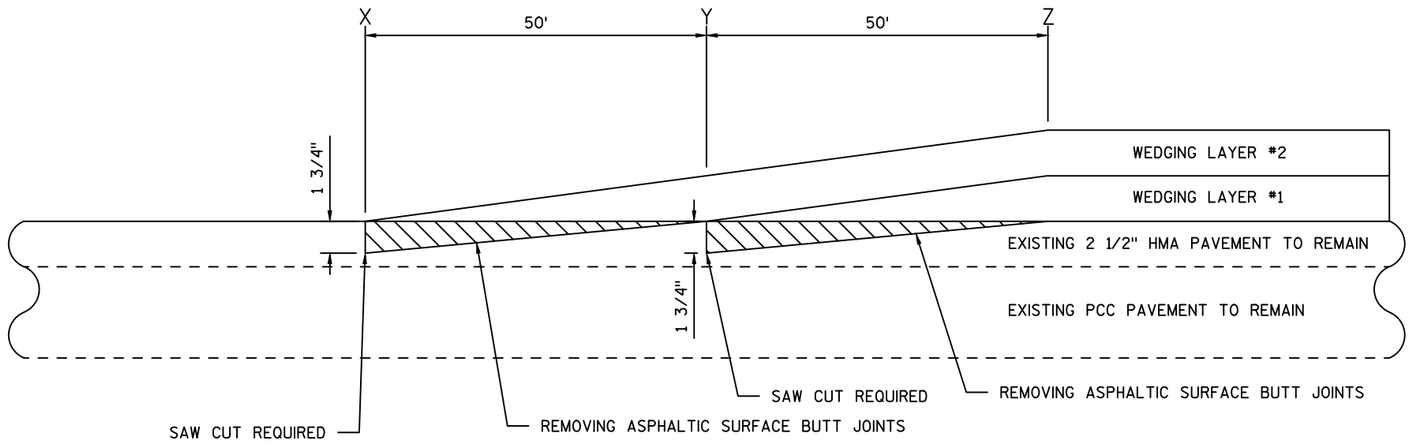
LEGEND

- 2 1/4" HMA PAVEMENT TYPE E-30 LOWER LAYER 2
- 1 3/4" HMA PAVEMENT TYPE E-30 UPPER LAYER
- REMOVING ASPHALTIC SURFACE BUTT JOINTS
- 2 3/4" HMA PAVEMENT TYPE E-30 LOWER LAYER 1

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CONSTRUCTION DETAILS - WEDGING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021001_CD.DWG PLOT DATE : 2/27/2015 4:55 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 0.005006

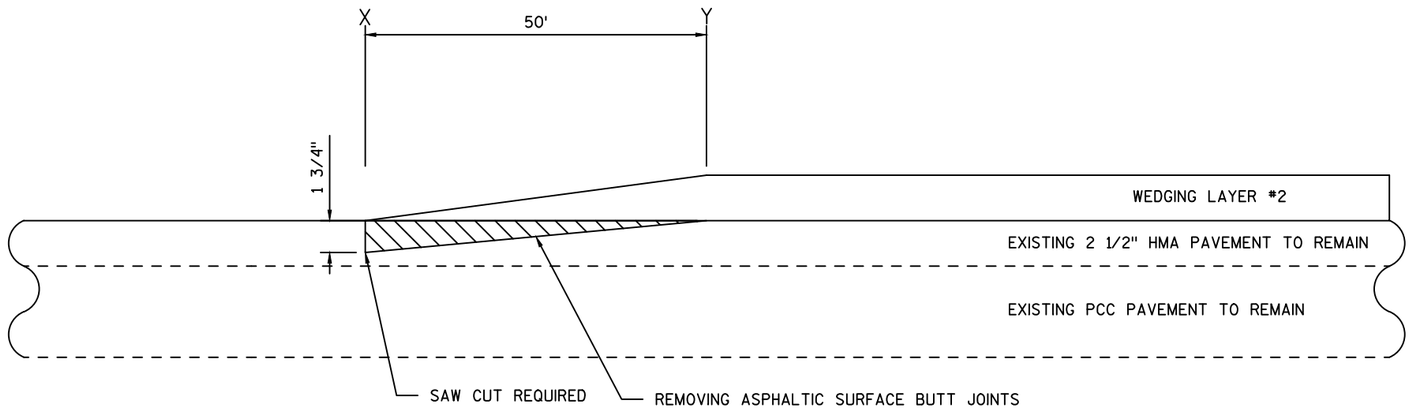
WISDOT/CADDS SHEET 42



SECTION A–A

IN PLAN DETAIL SHEETS

STA 574+96 - STA 575+96
STA 606+57 - STA 605+57



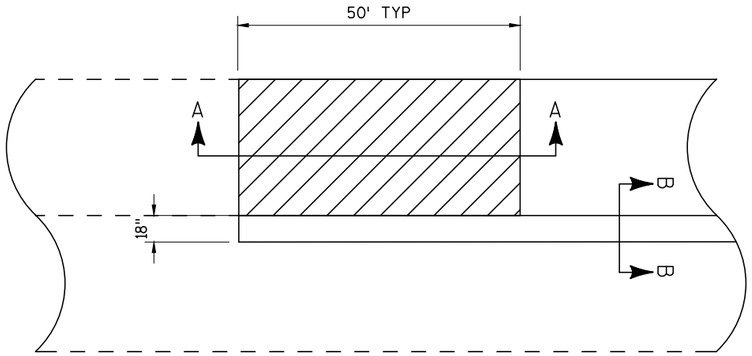
SECTION B–B

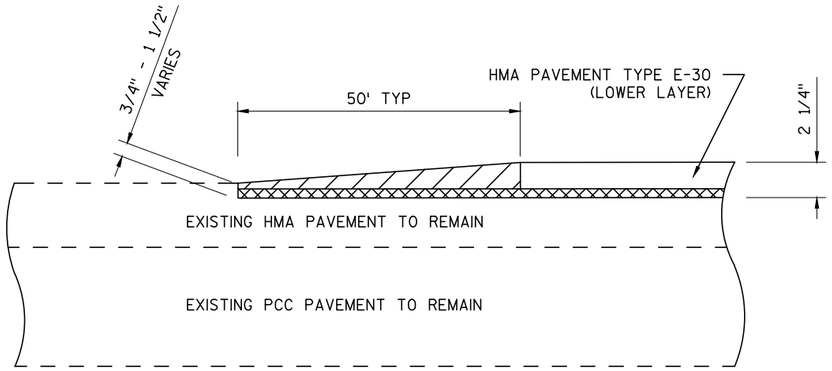
IN PLAN DETAIL SHEETS

STA 574+46 - STA 575+96
STA 606+07 - STA 605+57

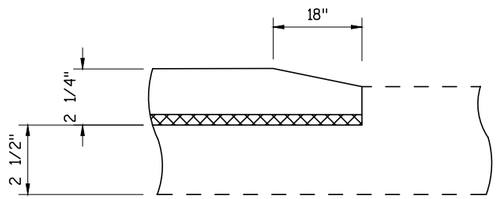
X	Y	Z
574+96	575+46	575+96
606+57	606+07	605+57

BUTT JOINTS AND HMA WEDGING DETAILS

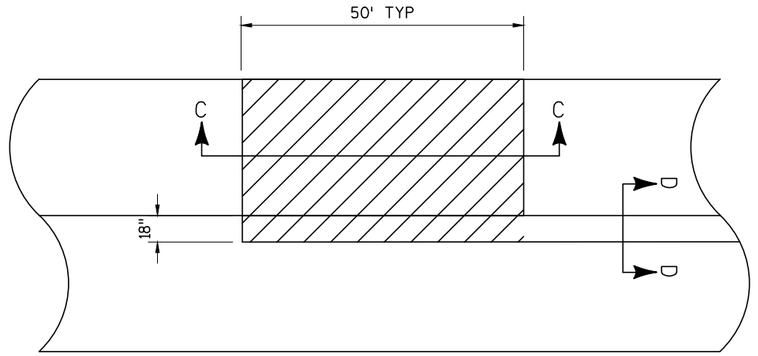


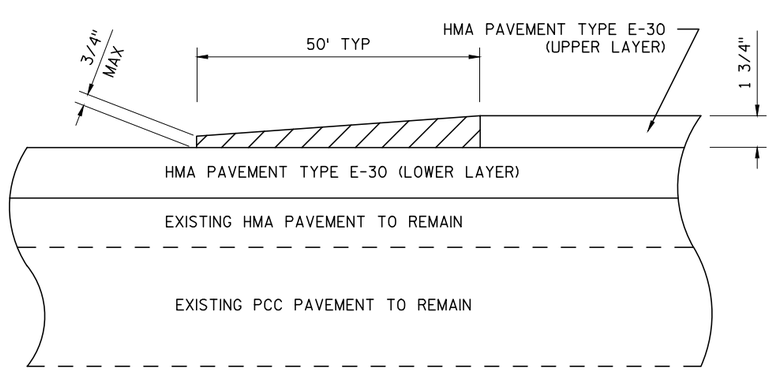


SECTION A–A

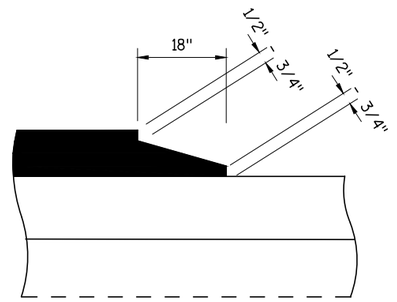


SECTION B–B





SECTION C–C



SECTION D–D

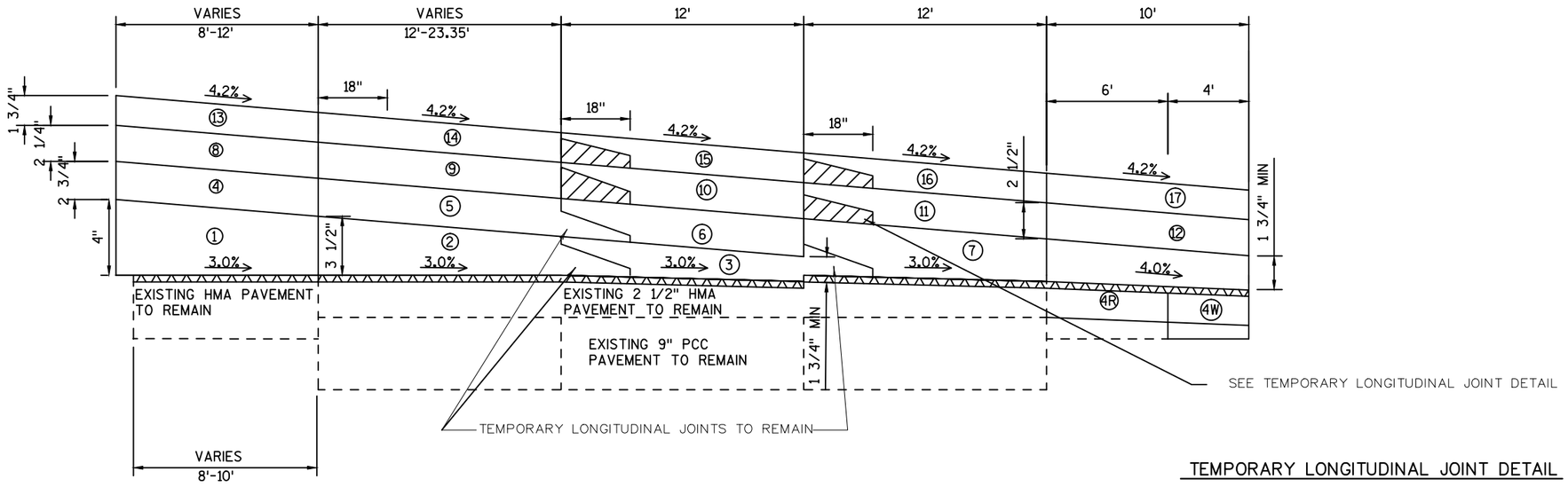
LEGEND:

ROUGH MILLED SURFACE

REMOVING ASPHALTIC SURFACE BUTT JOINTS

DAY END CONSTRUCTION TRANSVERSE JOINT DETAILS

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CONSTRUCTION DETAILS - BUTT JOINTS	SHEET 31	E



LEGEND

ROUGH MILLED SURFACE

MILLING AND REMOVING TEMPORARY LONGITUDINAL JOINTS

① ② HMA PAVEMENT WEDGING LAYER #1 TO BE COMPLETED IN THE SAME DAY OF PAVING OPERATIONS. NO TEMPORARY LONGITUDINAL JOINT IS REQUIRED BETWEEN OPERATION 1 AND OPERATION 2.

④ ⑤ HMA PAVEMENT WEDGING LAYER #2 TO BE COMPLETED IN THE SAME DAY OF PAVING OPERATIONS. NO TEMPORARY LONGITUDINAL JOINT IS REQUIRED BETWEEN OPERATION 4 AND OPERATION 5.

④R USH 41 SB INSIDE SHOULDER RECONSTRUCTION REQUIRED

④W USH 41 SB INSIDE SHOULDER WIDENING REQUIRED

⑧ ⑨ HMA PAVEMENT LOWER LAYER TO BE COMPLETED IN THE SAME DAY OF PAVING OPERATIONS. NO TEMPORARY LONGITUDINAL JOINT IS REQUIRED BETWEEN OPERATION 8 AND OPERATION 9.

⑪ ⑫ HMA PAVEMENT LOWER LAYER TO BE COMPLETED IN THE SAME DAY OF PAVING OPERATIONS. NO TEMPORARY LONGITUDINAL JOINT IS REQUIRED BETWEEN OPERATION 11 AND OPERATION 12.

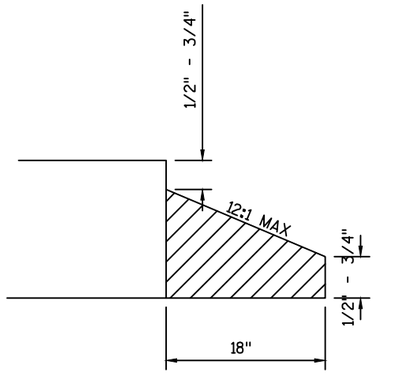
SECTION C–C
IN PLAN DETAIL SHEETS
STA 575+46 - STA 606+07

USH 41 SB PAVING OPERATION DETAILS

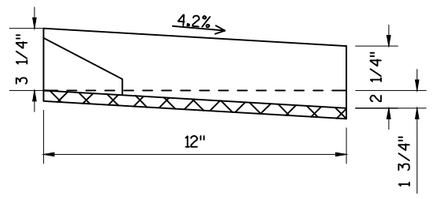
ORDER OF OPERATIONS

SHOULDER WIDENING OR RECONSTRUCTION	WEDGING LAYER #1	WEDGING LAYER #2	LOWER LAYER	UPPER LAYER
4R OR 4W	1, 2, 3	4, 5, 6, 7	8, 9, 10, 11, 12	13, 14, 15, 16, 17

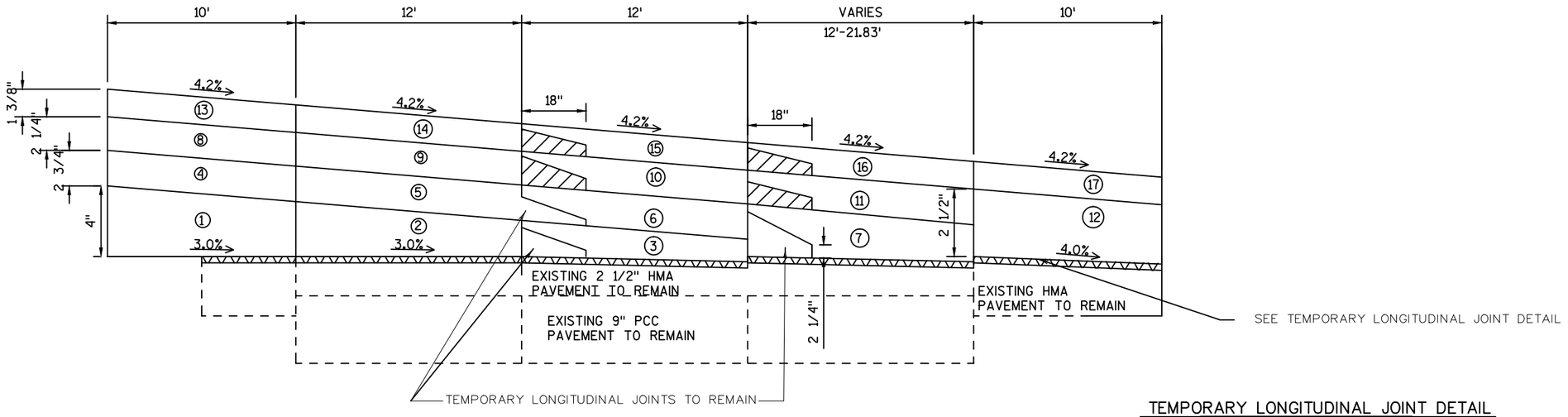
TEMPORARY LONGITUDINAL JOINT DETAIL



WEDGING & MILLING DETAIL



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CONSTRUCTION DETAILS	SHEET 32	E



SECTION D–D
IN PLAN DETAIL SHEETS
STA 575+46 - STA 606+07

USH 41 NB PAVING OPERATION DETAILS

LEGEND

ROUGH MILLED SURFACE

MILLING AND REMOVING TEMPORARY LONGITUDINAL JOINTS

① ② HMA PAVEMENT WEDGING LAYER #1 TO BE COMPLETED IN THE SAME DAY OF PAVING OPERATIONS. NO TEMPORARY LONGITUDINAL JOINT IS REQUIRED BETWEEN OPERATION 1 AND OPERATION 2.

④ ⑤ HMA PAVEMENT WEDGING LAYER #2 TO BE COMPLETED IN THE SAME DAY OF PAVING OPERATIONS. NO TEMPORARY LONGITUDINAL JOINT IS REQUIRED BETWEEN OPERATION 4 AND OPERATION 5.

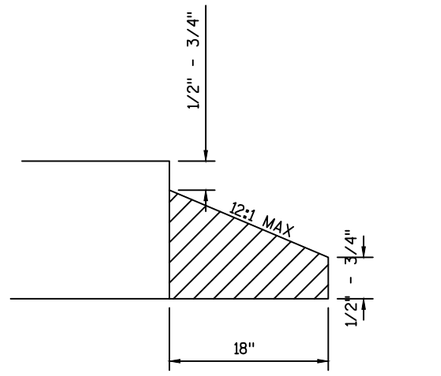
⑧ ⑨ HMA PAVEMENT LOWER LAYER TO BE COMPLETED IN THE SAME DAY OF PAVING OPERATIONS. NO TEMPORARY LONGITUDINAL JOINT IS REQUIRED BETWEEN OPERATION 8 AND OPERATION 9.

⑪ ⑫ HMA PAVEMENT LOWER LAYER TO BE COMPLETED IN THE SAME DAY OF PAVING OPERATIONS. NO TEMPORARY LONGITUDINAL JOINT IS REQUIRED BETWEEN OPERATION 11 AND OPERATION 12.

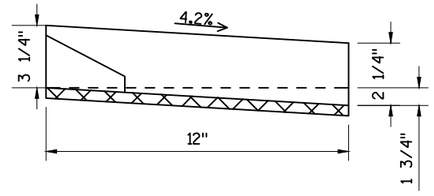
ORDER OF OPERATIONS

WEDGING LAYER #1	WEDGING LAYER #2	LOWER LAYER	UPPER LAYER
1, 2, 3	4, 5, 6, 7	8, 9, 10, 11, 12	13, 14, 15, 16, 17

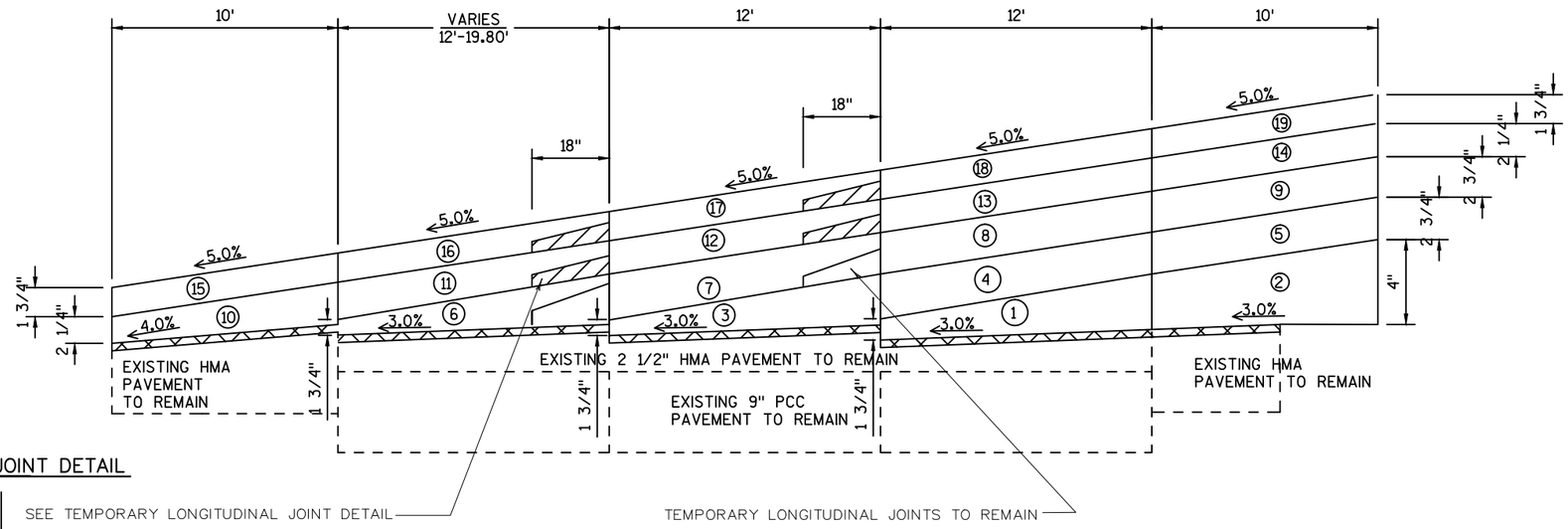
TEMPORARY LONGITUDINAL JOINT DETAIL



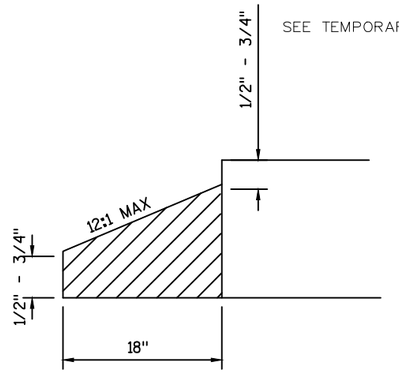
WEDGING & MILLING DETAIL



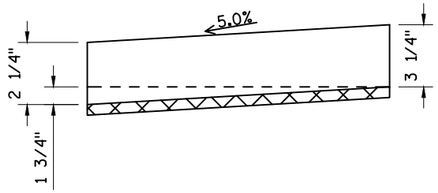
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CONSTRUCTION DETAILS	SHEET 33	E



TEMPORARY LONGITUDINAL JOINT DETAIL



WEDGING & MILLING DETAIL



SECTION E–E
IN PLAN DETAIL SHEETS
STA 663+41 - STA 673+09

USH 41 SB PAVING OPERATION DETAILS

ORDER OF OPERATIONS

WEDGING LAYER #1	WEDGING LAYER #2	WEDGING LAYER #3	LOWER LAYER	UPPER LAYER
1, 2	3, 4, 5	6, 7, 8, 9	10, 11, 12, 13, 14	15, 16, 17, 18, 19

LEGEND

ROUGH MILLED SURFACE

MILLING AND REMOVING TEMPORARY LONGITUDINAL JOINTS

(1) (2) HMA PAVEMENT WEDGING LAYER #1 SHALL BE COMPLETED IN THE SAME DAY OF PAVING OPERATIONS. NO TEMPORARY LONGITUDINAL JOINT IS REQUIRED BETWEEN OPERATION 1 AND OPERATION 2.

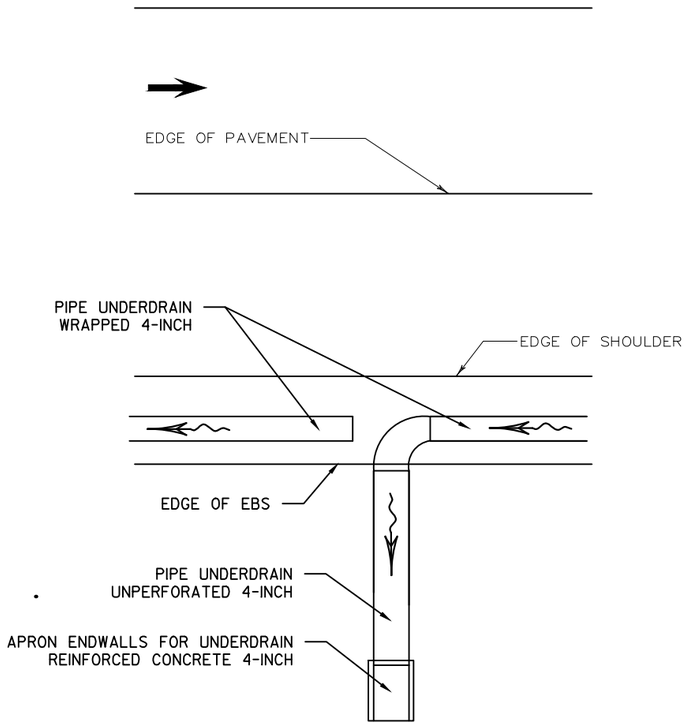
(4) (5) HMA PAVEMENT WEDGING LAYER #2 SHALL BE COMPLETED IN THE SAME DAY OF PAVING OPERATIONS. NO TEMPORARY LONGITUDINAL JOINT IS REQUIRED BETWEEN OPERATION 4 AND OPERATION 5.

(8) (9) HMA PAVEMENT WEDGING LAYER #3 SHALL BE COMPLETED IN THE SAME DAY OF PAVING OPERATIONS. NO TEMPORARY LONGITUDINAL JOINT IS REQUIRED BETWEEN OPERATIONS 6,7,8 AND 9.

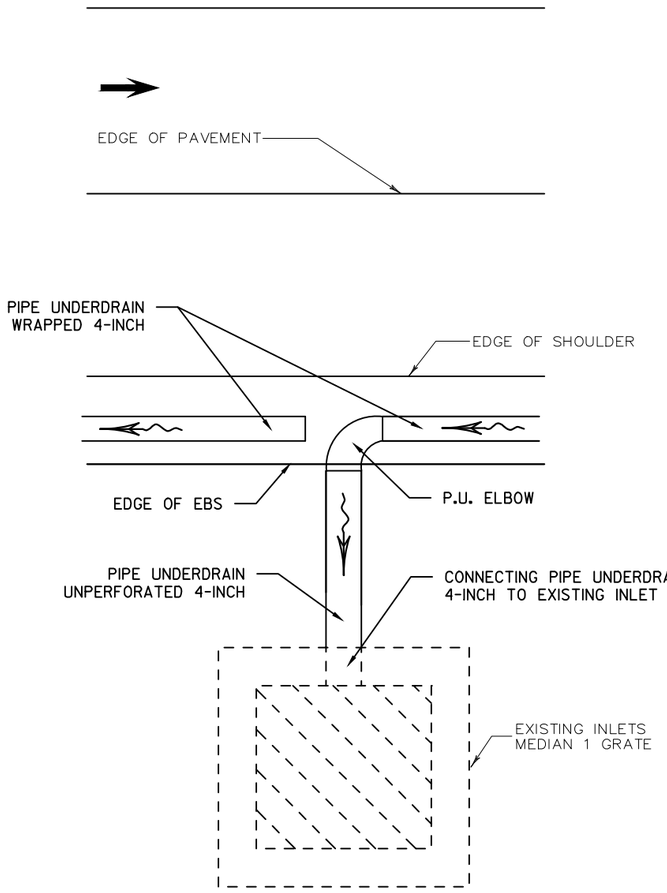
(10) (11) HMA PAVEMENT OUTSIDE SHOULDER AND LANE 3 SHALL BE COMPLETED IN THE SAME DAY OF PAVING OPERATIONS.

(13) (14) HMA PAVEMENT INSIDE SHOULDER AND LANE 1 SHALL BE COMPLETED IN THE SAME DAY OF PAVING OPERATIONS.

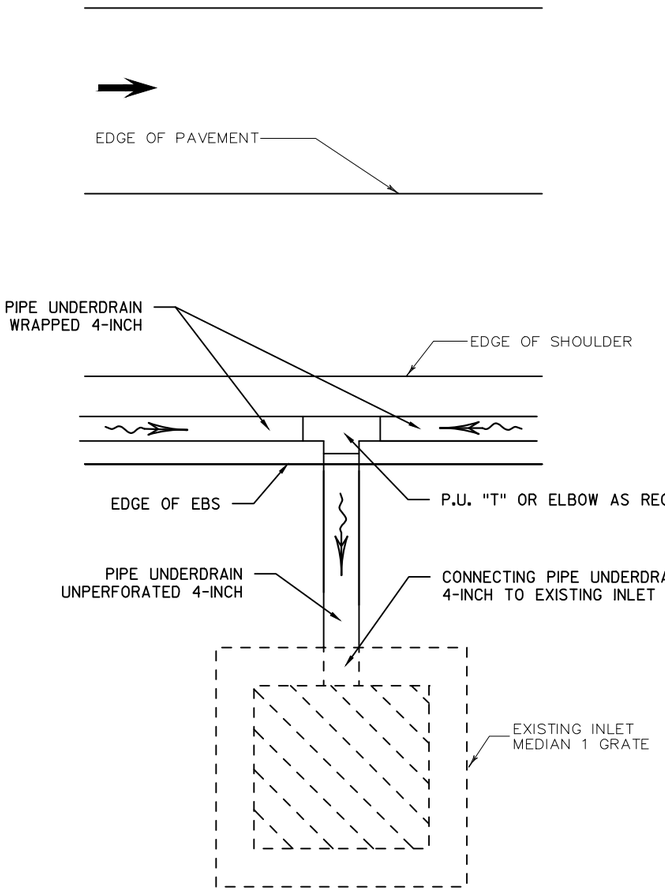
NOTE: COORDINATION WITH CONTRACT PROJECT ID 1100-15-71 IS REQUIRED.



INTERMEDIATE LOCATIONS AT DITCH



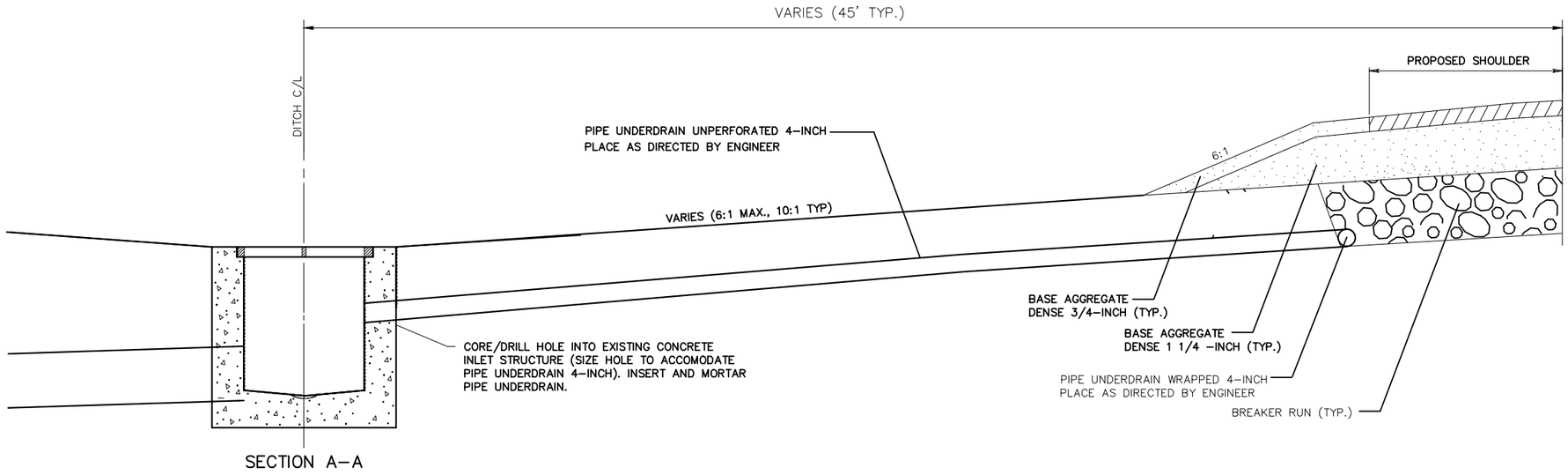
INTERMEDIATE LOCATIONS AT INLETS



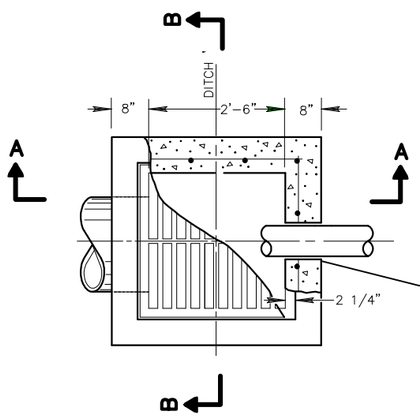
LOW POINT LOCATIONS

DETAIL FOR PIPE UNDERDRAIN OUTFALLS

(SEE MISCELLANEOUS QUANTITIES FOR LOCATIONS)

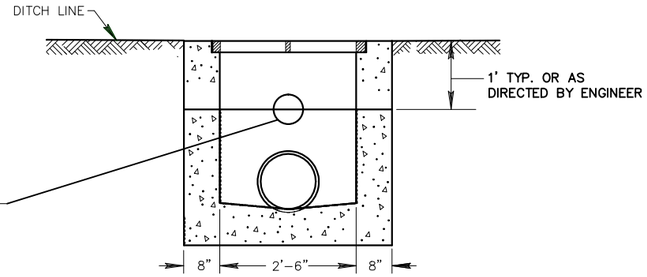


SECTION A–A



PLAN VIEW
EXISTING INLET (TYP.)

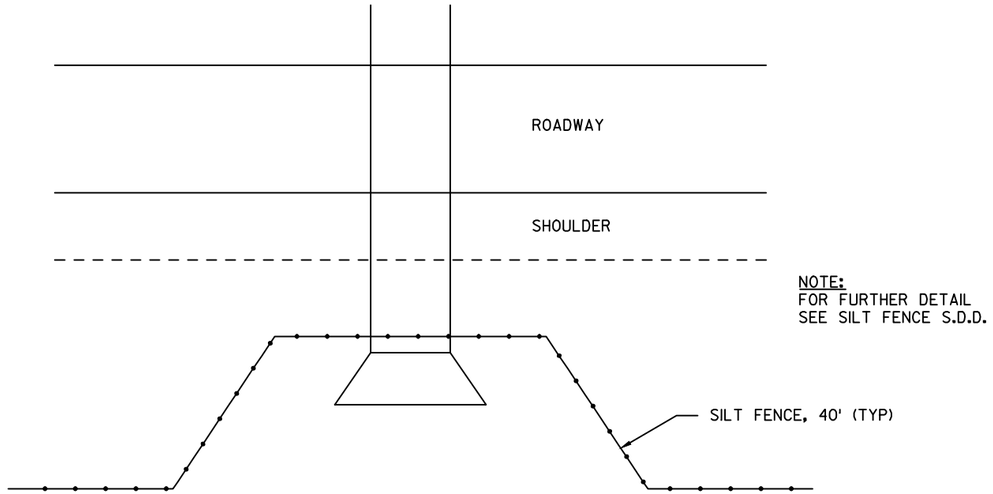
CORE/DRILL HOLE INTO EXISTING CONCRETE
INLET STRUCTURE (SIZE HOLE TO ACCOMODATE
PIPE UNDERDRAIN 4–INCH). INSERT AND
MORTAR PIPE UNDERDRAIN.



SECTION B–B

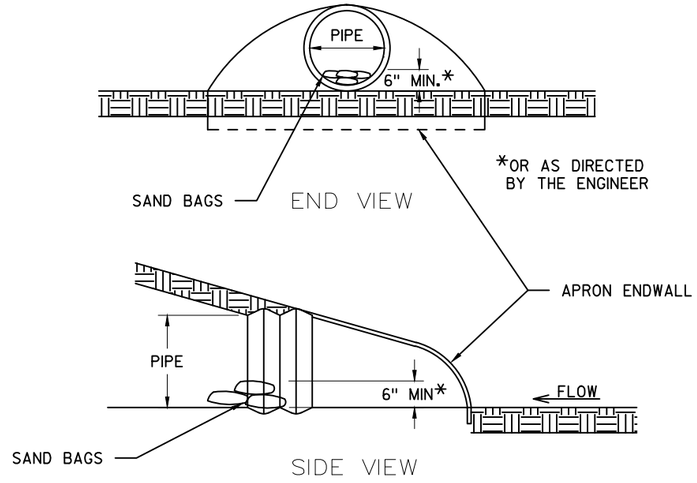
CONNECTING PIPE UNDERDRAIN 4–INCH TO EXISTING INLET

(SEE MISCELLANEOUS QUANTITIES FOR LOCATIONS)
NOT TO SCALE



TYPICAL SILT FENCE AT PIPE INLET DETAIL

SEE EROSION CONTROL PLAN FOR LOCATIONS

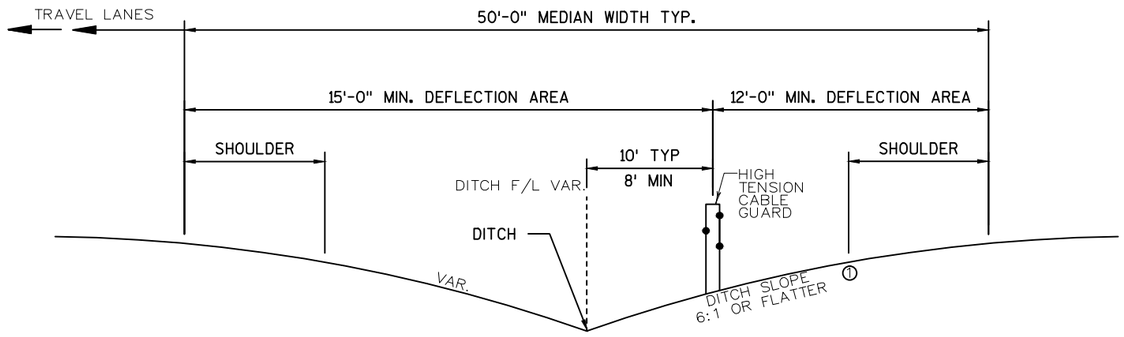


CULVERT PIPE CHECK DETAIL

SEE EROSION CONTROL PLAN FOR LOCATIONS

EXTIMATED BAG SIZE = 24" X 12" X 6"	
PIPE SIZE	EXTIMATED NO. OF BAGS
12"	1
15"	2
18"	2
24"	3
30"	5
36"	7
42"	7
48"	10
54"	10
60"	13
72"	16
30"X19"	5
38"X24"	7
53"X34"	10
60"X38"	13
76"X48"	18

NOTE:
TO BE PLACED AT INLET
END OF CULVERT PIPE



CABLE BARRIER OFFSET LOCATIONS

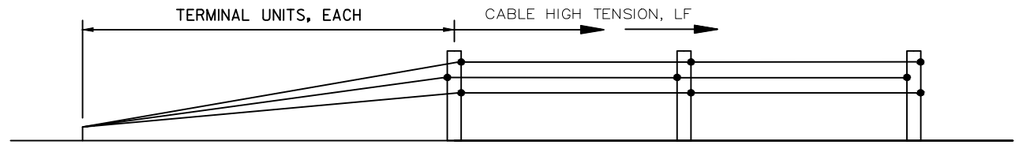
BARRIER 3-STRAND HT CABLE

STA.

GENERAL NOTES

① DO NOT INSTALL CABLE GUARD BARRIER ON SLOPES STEEPER THAN 6:1.

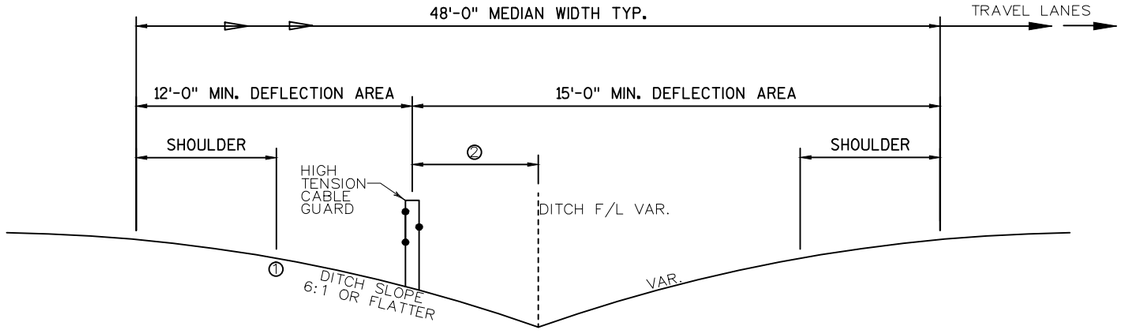
② OFFSET CABLE GUARD RAIL TO EITHER SIDE OF THE MEDIAN CENTERLINE: USE 1'-0" MIN. OFFSET FOR MEDIAN 50 FEET



Ⓐ CABLE HIGH TENSION THAT FALLS WITHIN THE TERMINAL UNIT IS INCLUDED IN COST OF TERMINAL UNIT.

TERMINAL UNITS, EACH

BRIFFEN WRGT END TERMINAL = 25'-6"
CASS CCT TERMINAL = 51'-3"

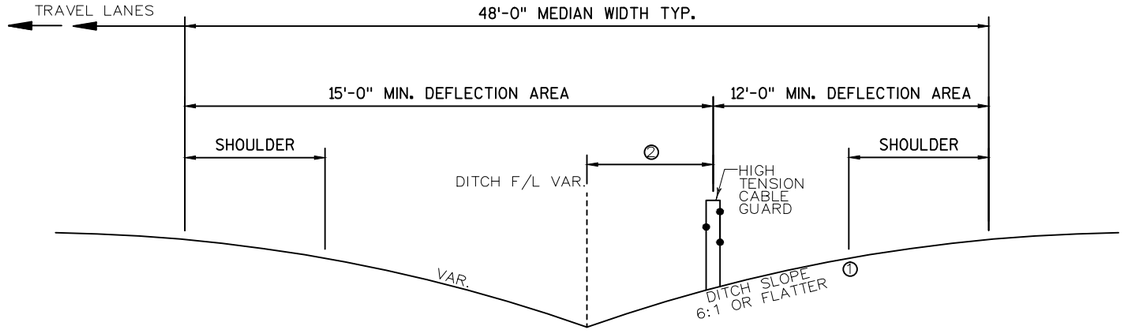


CABLE BARRIER OFFSET LOCATIONS

(LEFT OF DITCH F/L)

BARRIER 3-STRAND HT CABLE

STA.



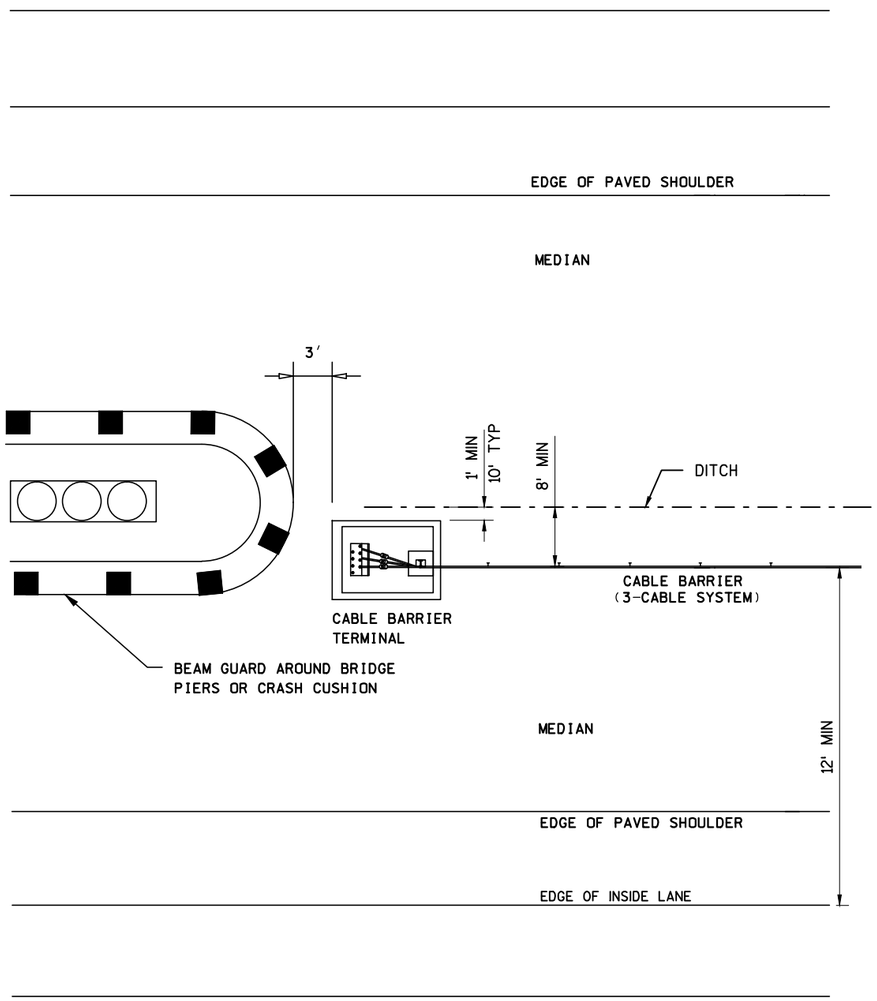
CABLE BARRIER OFFSET LOCATIONS

(RIGHT OF DITCH F/L)

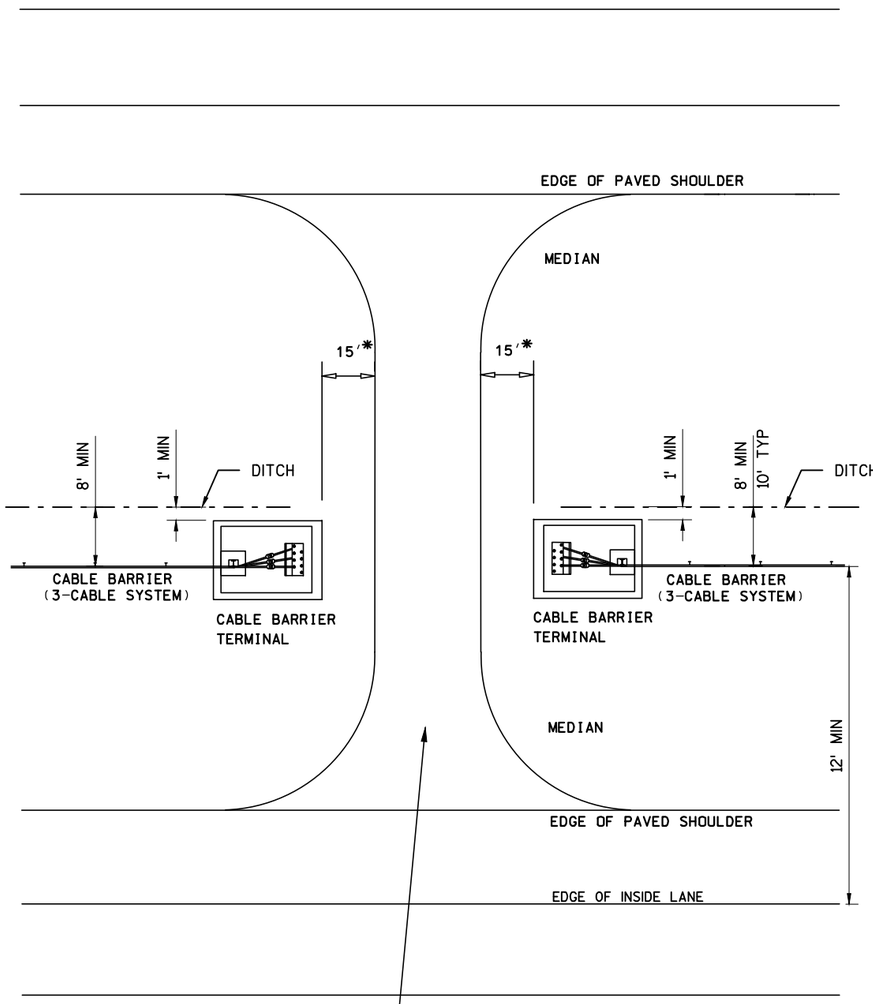
BARRIER 3-STRAND HT CABLE

STA.

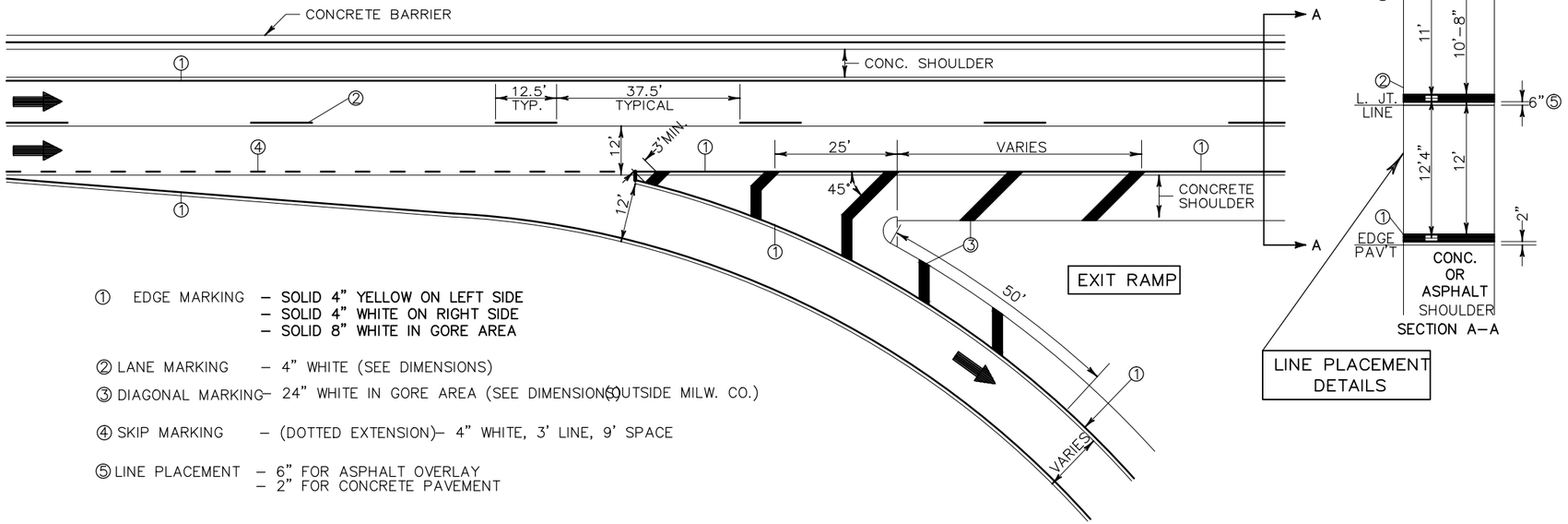
CABLE BARRIER TERMINAL END
DETAIL A



CABLE BARRIER TERMINAL END
DETAIL B



* – DISTANCE MEASURED FROM
EDGE OF ASPHALT PAVEMENT



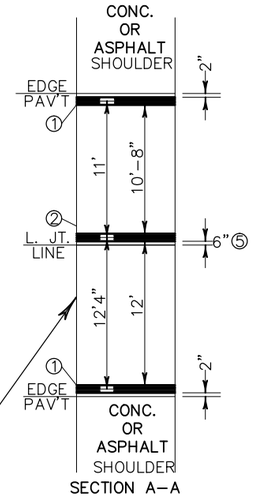
① EDGE MARKING – SOLID 4" YELLOW ON LEFT SIDE
– SOLID 4" WHITE ON RIGHT SIDE
– SOLID 8" WHITE IN GORE AREA

② LANE MARKING – 4" WHITE (SEE DIMENSIONS)

③ DIAGONAL MARKING – 24" WHITE IN GORE AREA (SEE DIMENSIONS OUTSIDE MILW. CO.)

④ SKIP MARKING – (DOTTED EXTENSION)– 4" WHITE, 3' LINE, 9' SPACE

⑤ LINE PLACEMENT – 6" FOR ASPHALT OVERLAY
– 2" FOR CONCRETE PAVEMENT



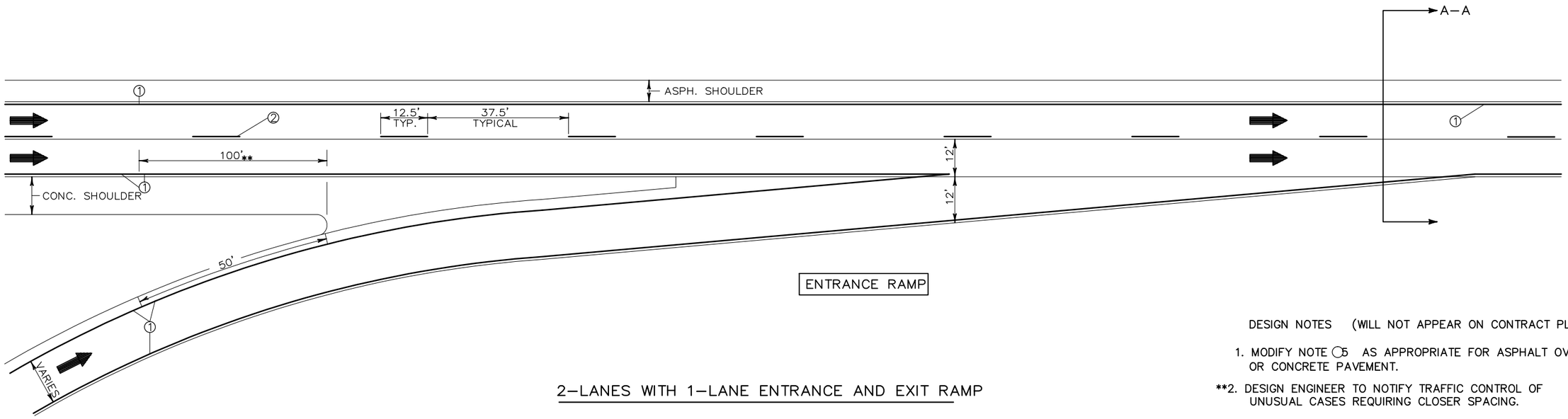
SECTION A–A

LINE PLACEMENT DETAILS

RACINE, KENOSHA, WALWORTH, WAUKESHA, FOND DU LAC, OZAUKEE & WASHINGTON COUNTIES

NOTES:

1. WHERE THE DOTTED EXTENSION OF THE RIGHT EDGE LINE IS SHOWN ON THE PLAN, IT SHALL BE 4" WIDE, WITH A LINE SKIP PATTERN CONSISTING OF A 3' LONG LINE AND A 9' SKIP.
2. PAVEMENT LANE MARKINGS SHALL BE LOCATED 6" OFF THE LONGITUDINAL JOINT OF THE UNDERLYING CONC. PAVEMENT.
3. ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.
4. SPOTTING FOR PAVEMENT LANE MARKINGS AND EDGE LINES SHALL BE 4"x4" PIECES OF REFLECTORIZED PAV'T MARKING TAPE SPACED AT 50' INTERVALS, INCIDENTAL TO PAV'T MARKING.
5. SEE STANDARD DETAIL DRAWING FOR RAISED PAVEMENT MARKERS IN GORE AND LINE WIDTH TOLERANCES.



ENTRANCE RAMP

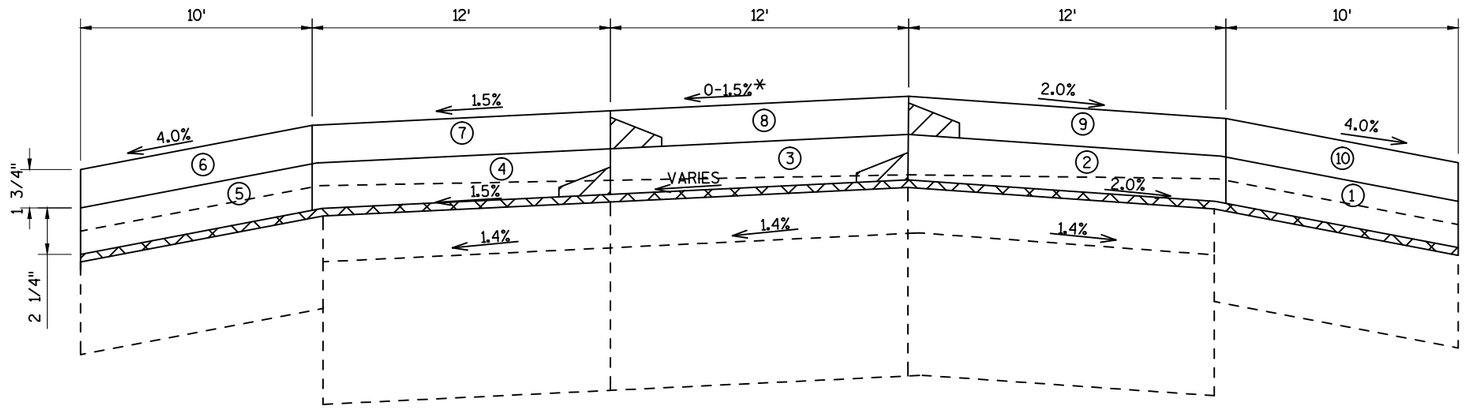
2–LANES WITH 1–LANE ENTRANCE AND EXIT RAMP

DESIGN NOTES (WILL NOT APPEAR ON CONTRACT PLANS)

1. MODIFY NOTE ⑤ AS APPROPRIATE FOR ASPHALT OVERLAY OR CONCRETE PAVEMENT.

**2. DESIGN ENGINEER TO NOTIFY TRAFFIC CONTROL OF UNUSUAL CASES REQUIRING CLOSER SPACING.

2



LEGEND

ROUGH MILLED SURFACE

12:1 MAX

MILLING AND REMOVING TEMPORARY LONGITUDINAL JOINTS

(#) ORDER OF OPERATIONS

USH 41 SB PAVING OPERATION DETAILS

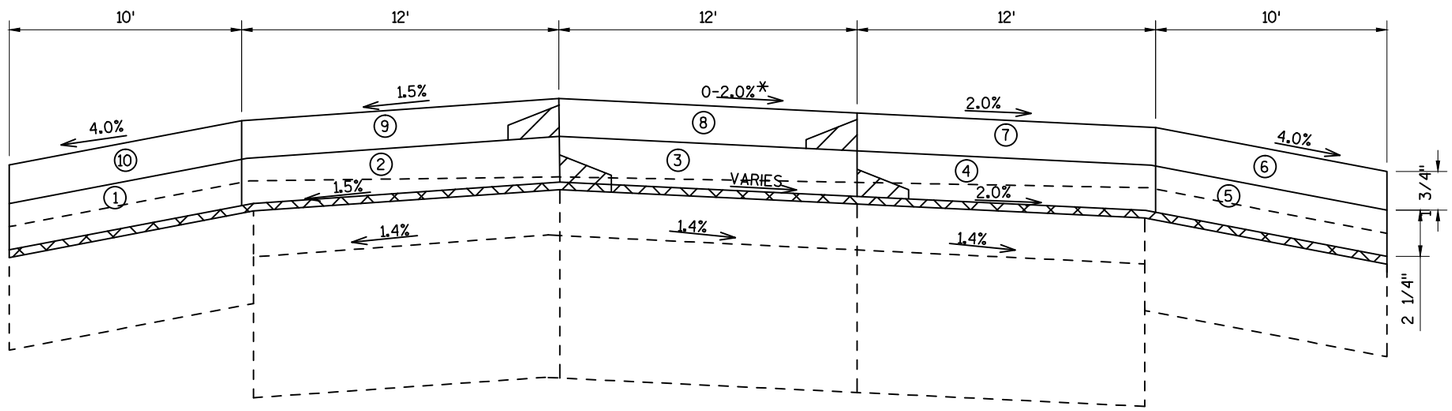
STA. 354+00 - STA. 363+00

*CROSS SLOPE VARIES:

STA. 354+00	0.00%
STA. 355+00	0.50%
STA. 356+00	1.00%
STA. 357+00	1.50%

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CONSTRUCTION DETAILS	SHEET 41	E

2



LEGEND

ROUGH MILLED SURFACE

12:1 MAX

MILLING AND REMOVING TEMPORARY LONGITUDINAL JOINTS

(#) ORDER OF OPERATIONS

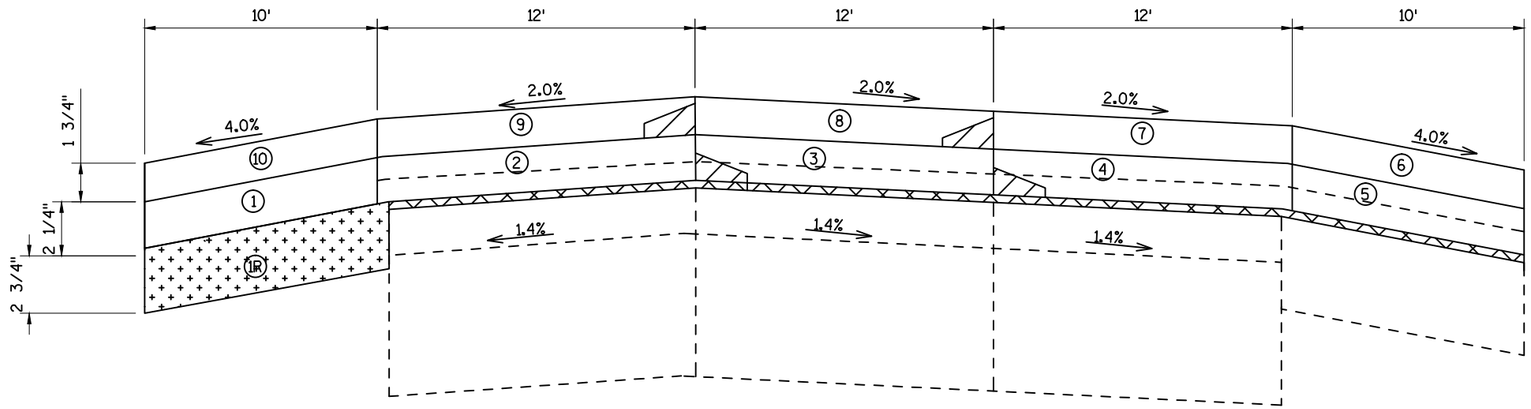
USH 41 NB PAVING OPERATION DETAILS

STA. 357+00 - STA. 363+00

*CROSS SLOPE VARIES:

STA. 357+00	0.00%
STA. 358+00	0.50%
STA. 359+00	1.00%
STA. 360+00	1.50%
STA. 361+00	2.00%

2



USH 41 NB PAVING OPERATION DETAILS

STA. 364+00 - STA. 423+50
STA. 433+75 - STA. 451+34
STA. 455+34 - STA. 487+07
STA. 490+57 - STA. 558+02
STA. 561+52 - STA. 575+45
STA. 610+85 - STA. 618+02
STA. 621+52 - STA. 660+00
STA. 673+59 - STA. 694+00

LEGEND

ROUGH MILLED SURFACE

12:1 MAX

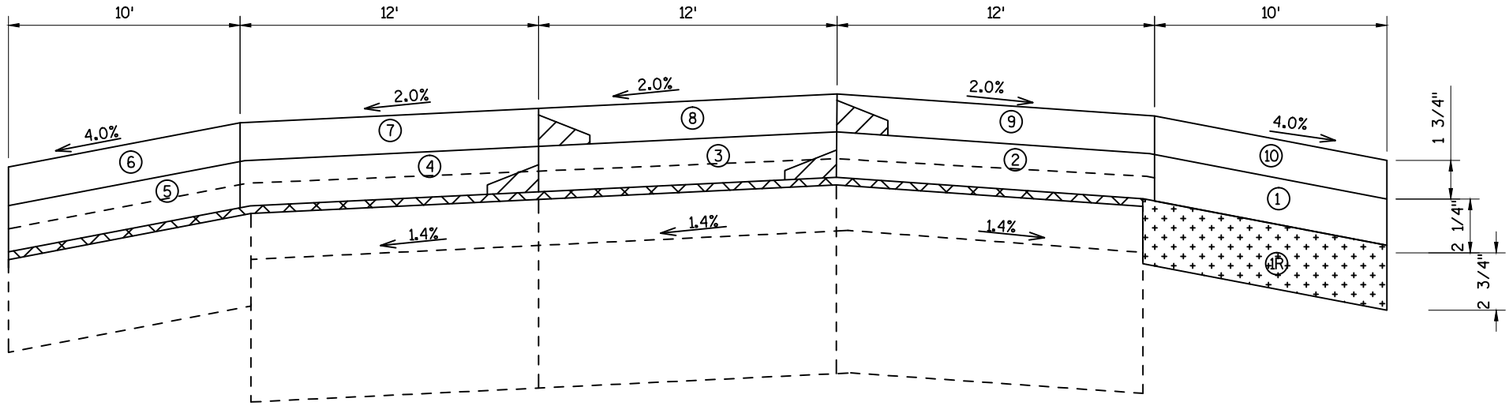
MILLING AND REMOVING TEMPORARY LONGITUDINAL JOINTS

HMA PAVEMENT TYPE E-30

(#) ORDER OF OPERATIONS

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CONSTRUCTION DETAILS	SHEET 43	E

2



LEGEND

ROUGH MILLED SURFACE

12:1 MAX

MILLING AND REMOVING TEMPORARY LONGITUDINAL JOINTS

HMA PAVEMENT TYPE E-30

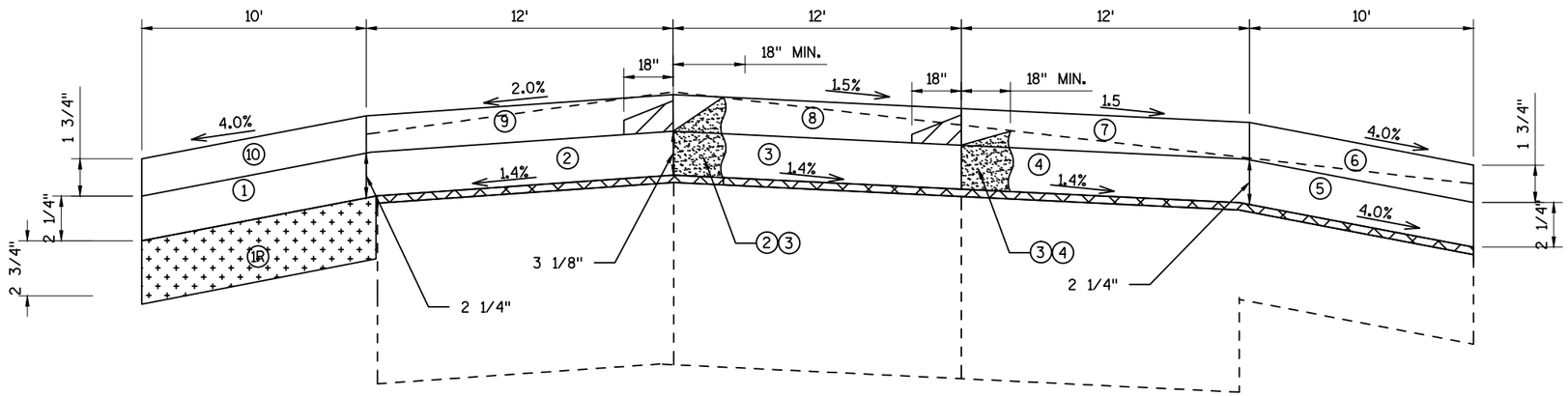
(#) ORDER OF OPERATIONS

USH 41 SB PAVING OPERATION DETAILS

STA. 364+00 - STA. 423+50
STA. 432+79 - STA. 451+24
STA. 455+24 - STA. 487+88
STA. 491+33 - STA. 558+79
STA. 562+29 - STA. 575+45
STA. 611+34 - STA. 618+07
STA. 621+57 - STA. 662+94
STA. 673+59 - STA. 694+00

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CONSTRUCTION DETAILS	SHEET 44	E

2



USH 41 NB PAVING OPERATION DETAILS

STA. 430+75 - STA. 432+75
STA. 452+34 - STA. 454+34
STA. 488+07 - STA. 489+57
STA. 559+02 - STA. 560+52
STA. 619+02 - STA. 620+52

LEGEND

ROUGH MILLED SURFACE

12:1 MAX

MILLING AND REMOVING TEMPORARY LONGITUDINAL JOINTS

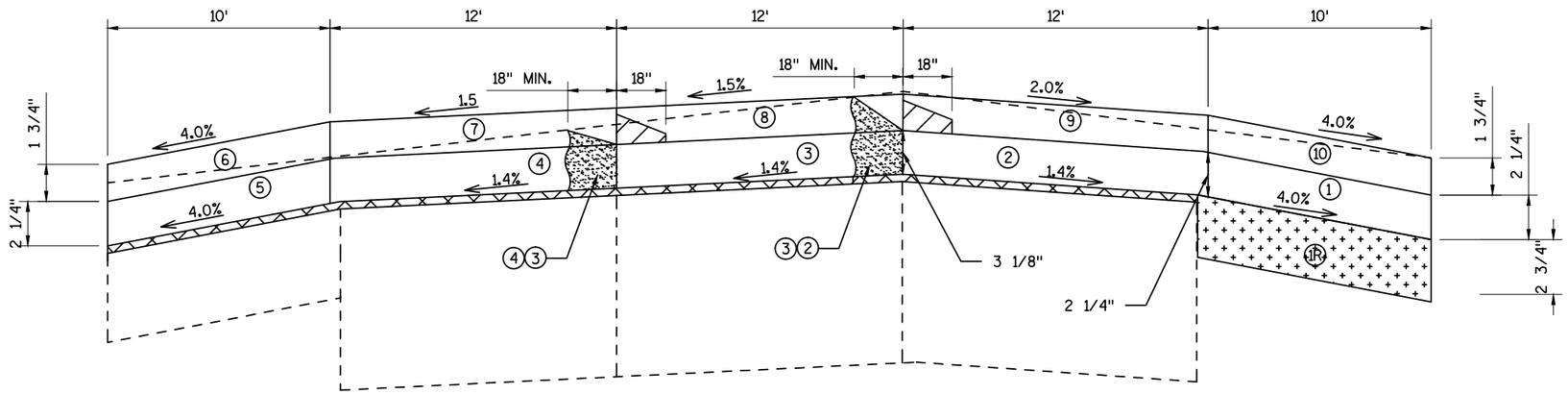
12:1 MAX

RAMP CONSTRUCTION JOINT DETAIL FROM HMA PAVEMENT LOWER LAYER TO EXISTING HMA PAVEMENT SURFACE. RAMP CONSTRUCTION JOINT IS INCIDENTAL TO HMA PAVEMENT TYPE E-30 AND REMOVING ASPHALTIC SURFACE MILLING (TON)

HMA PAVEMENT TYPE E-30

(#) ORDER OF OPERATIONS

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CONSTRUCTION DETAILS	SHEET 45	E



LEGEND

ROUGH MILLED SURFACE

MILLING AND REMOVING TEMPORARY LONGITUDINAL JOINTS

RAMP CONSTRUCTION JOINT DETAIL FROM HMA PAVEMENT LOWER LAYER TO EXISTING HMA PAVEMENT SURFACE. RAMP CONSTRUCTION JOINT IS INCIDENTAL TO HMA PAVEMENT TYPE E-30 AND REMOVING ASPHALTIC SURFACE MILLING (TON)

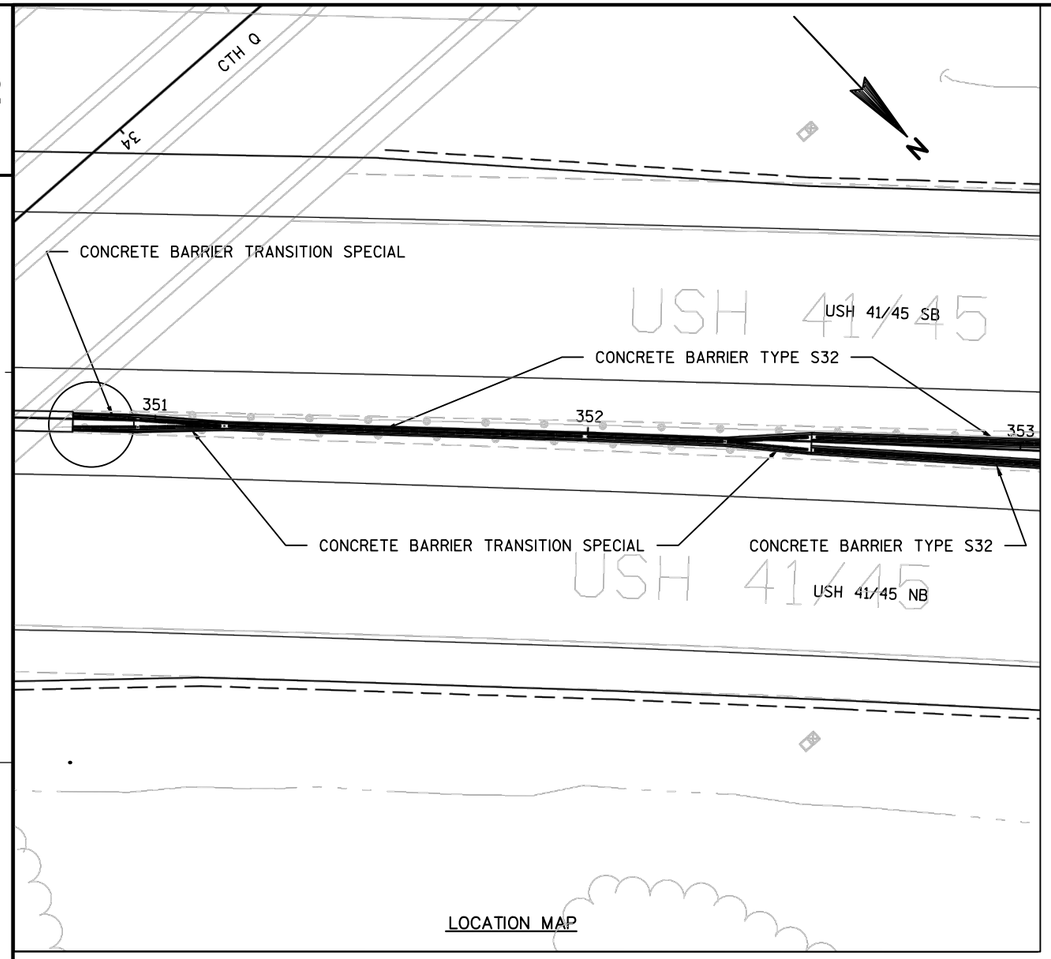
HMA PAVEMENT TYPE E-30

(#) ORDER OF OPERATIONS

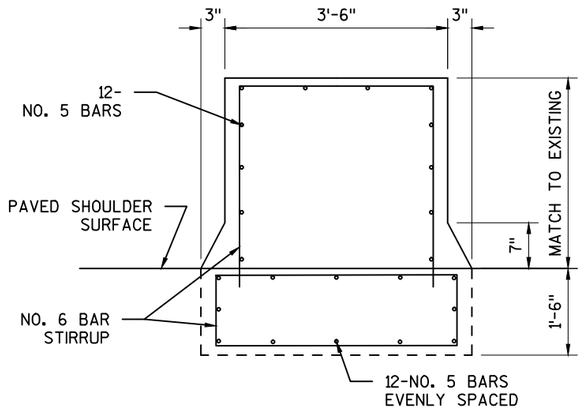
USH 41 SB PAVING OPERATION DETAILS

STA. 430+75 - STA. 432+75
STA. 452+24 - STA. 454+24
STA. 488+88 - STA. 490+33
STA. 559+79 - STA. 561+29
STA. 619+07 - STA. 620+57

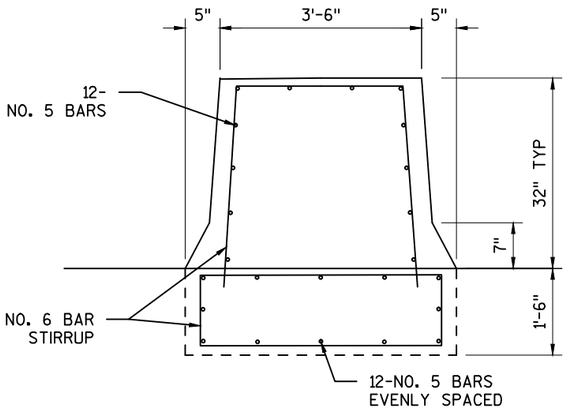
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CONSTRUCTION DETAILS	SHEET 46	E



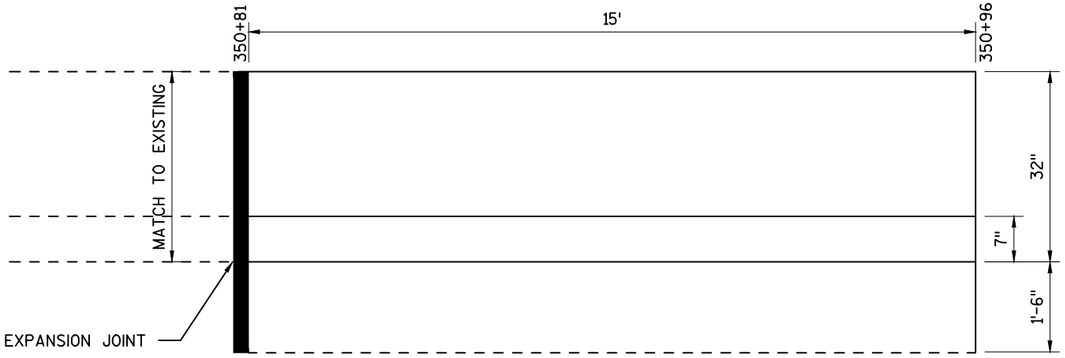
LOCATION MAP



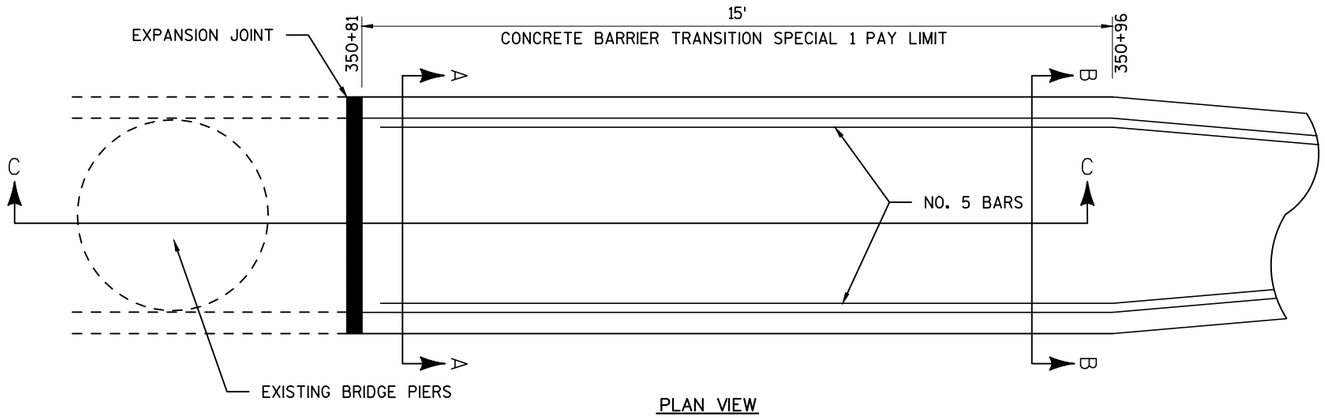
SECTION A–A



SECTION B–B



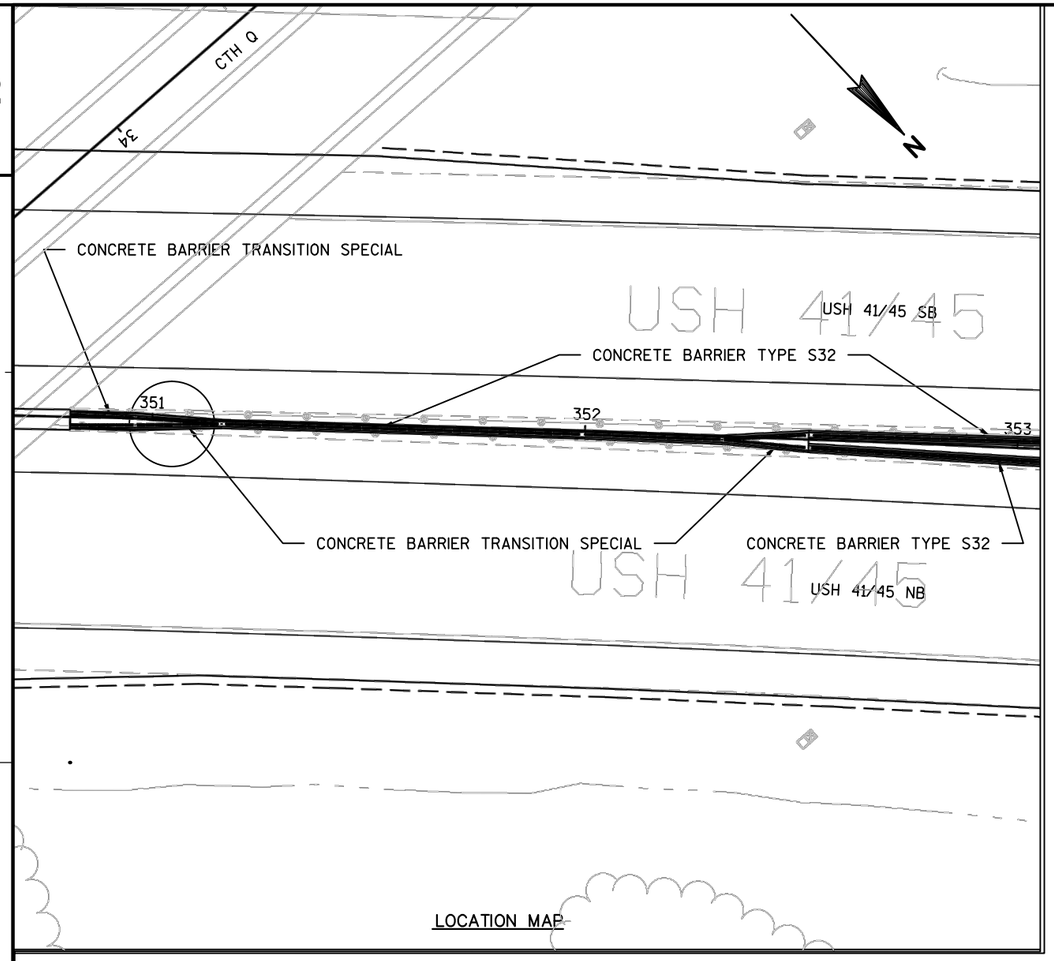
SECTION C–C



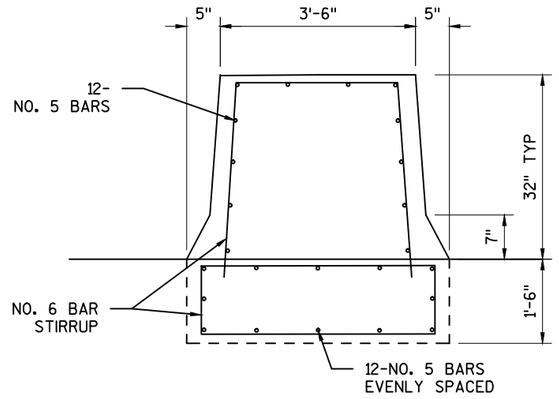
PLAN VIEW

CONCRETE BARRIER TRANSITION SPECIAL 1

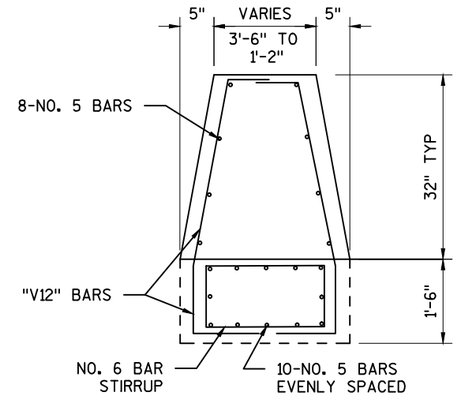
STA. 350+81 - STA. 350+96



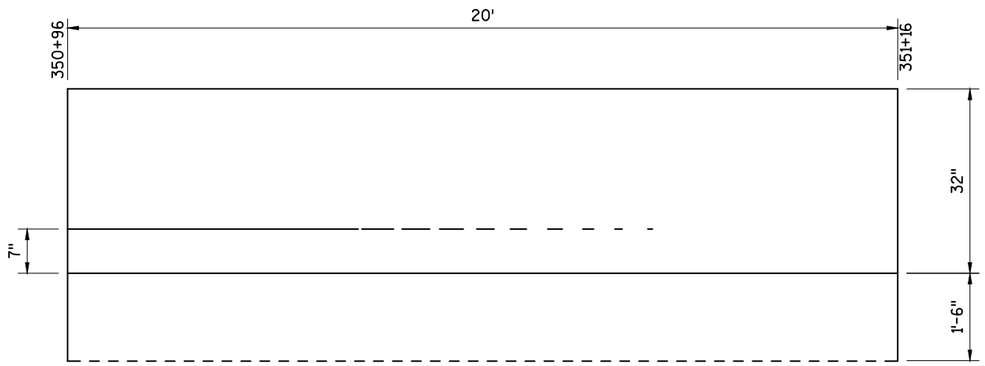
LOCATION MAP



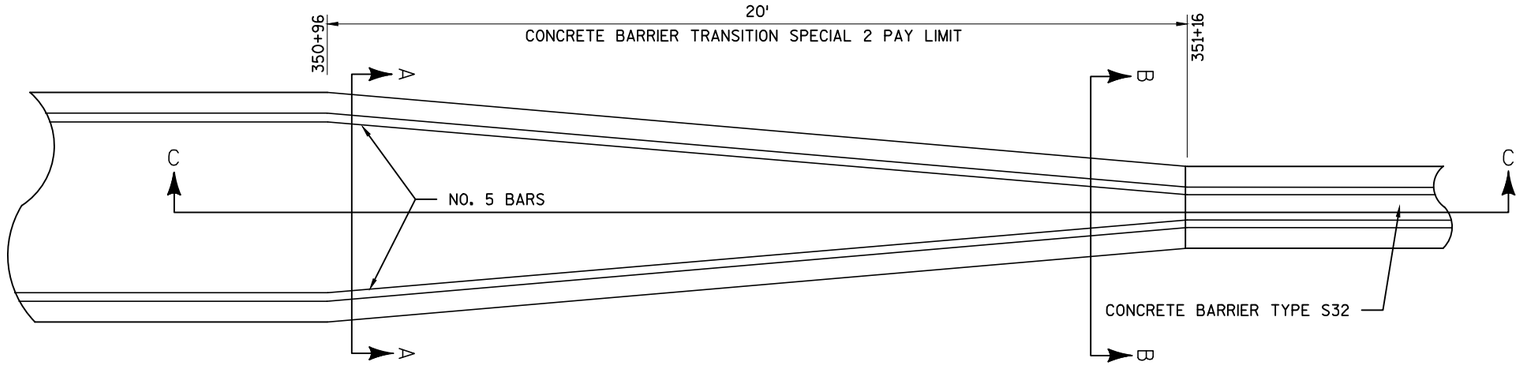
SECTION A–A



SECTION B–B



SECTION C–C

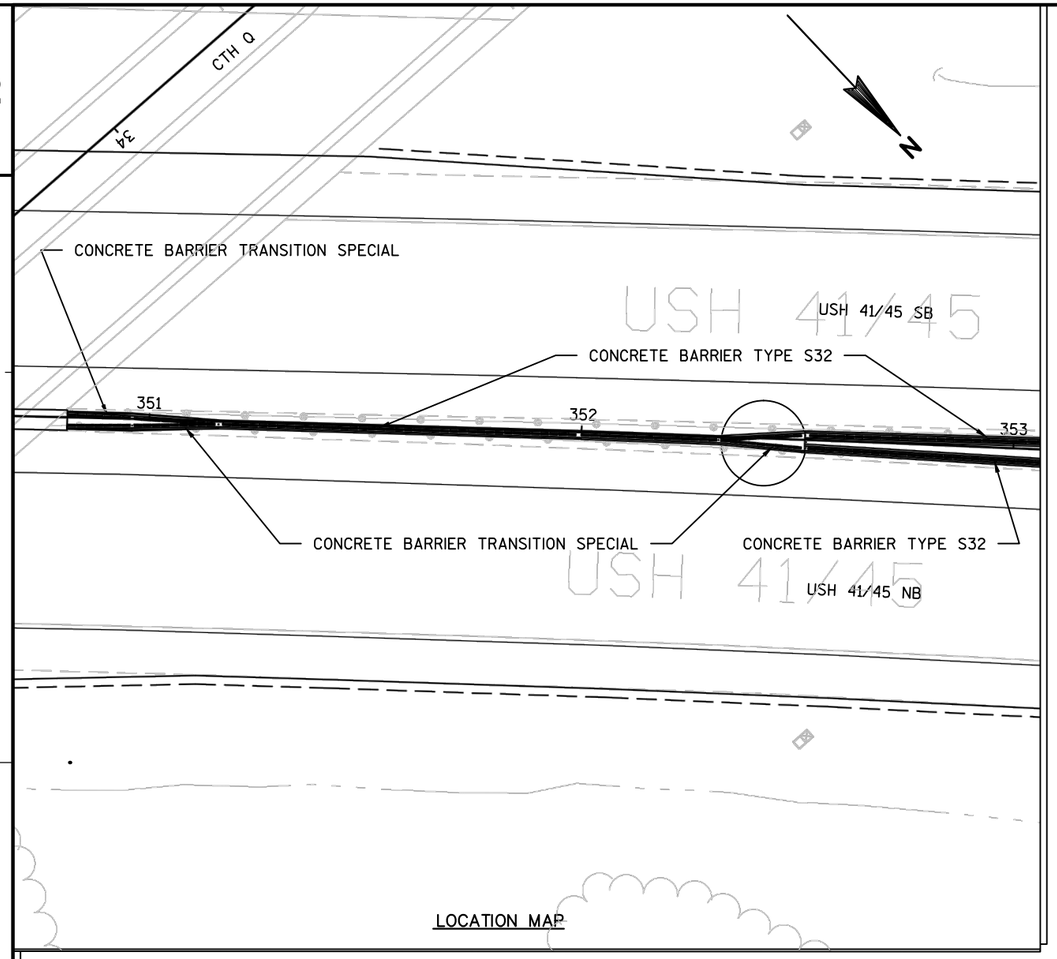


PLAN VIEW

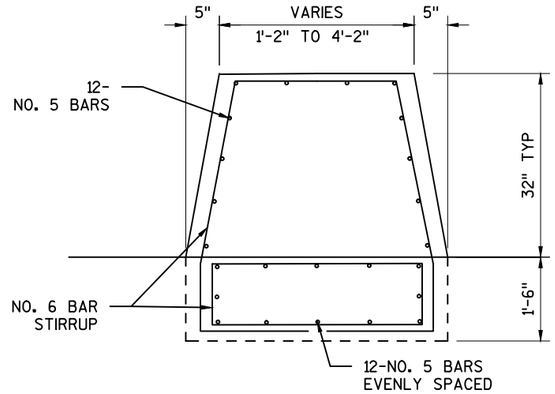
CONCRETE BARRIER TRANSITION SPECIAL 2

STA. 350+96 - STA. 351+16

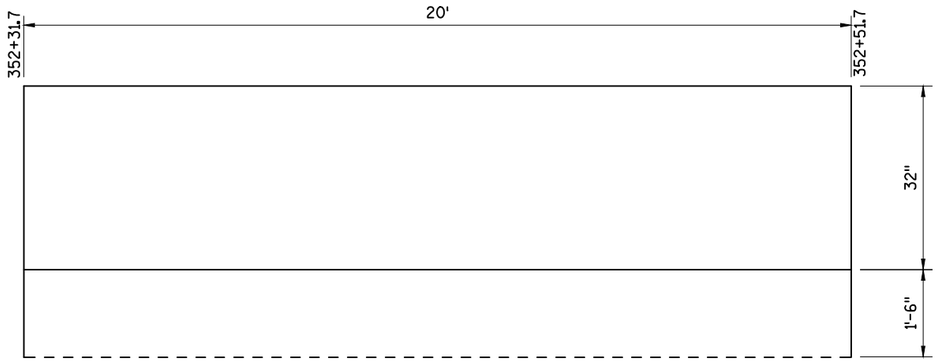
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CONSTRUCTION DETAILS	SHEET 48	E



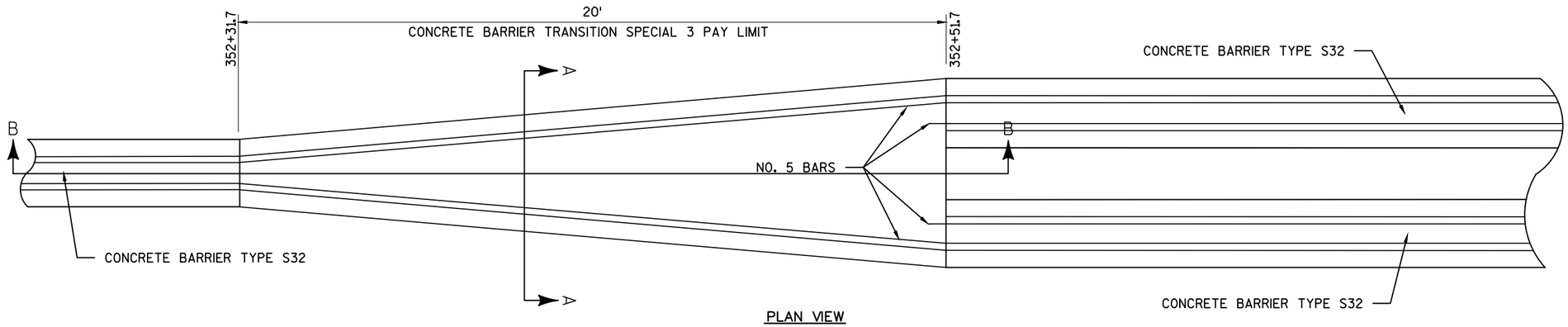
LOCATION MAP



SECTION A–A



SECTION B–B

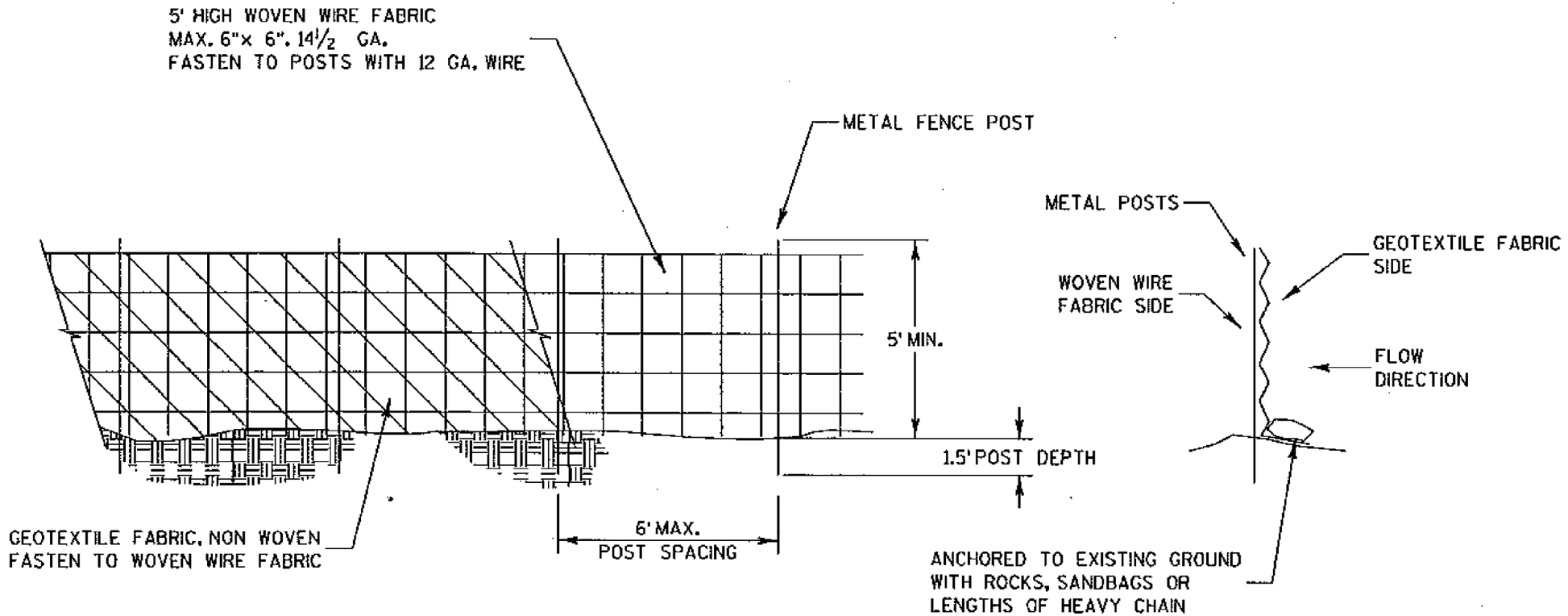


PLAN VIEW

CONCRETE BARRIER TRANSITION SPECIAL 3

STA. 352+31.7 - STA. 352+51.7

2



HEAVY DUTY SILT FENCE DETAIL

INSTALL AS NECESSARY AS
DIRECTED BY THE ENGINEER

GENERAL NOTES

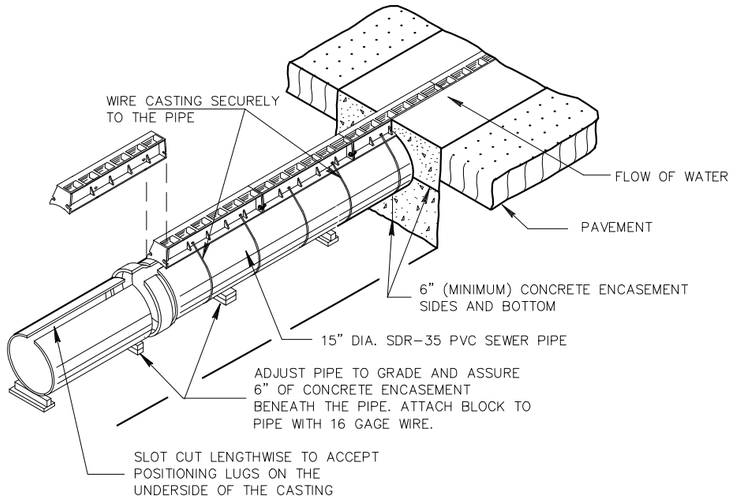
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

ENCASEMENT: THE ENCASING MATERIAL AROUND THE PIPE SHALL BE IN ACCORDANCE WITH SPECIFICATIONS OF 501.4.3.3 FOR CONCRETE PAVEMENT.

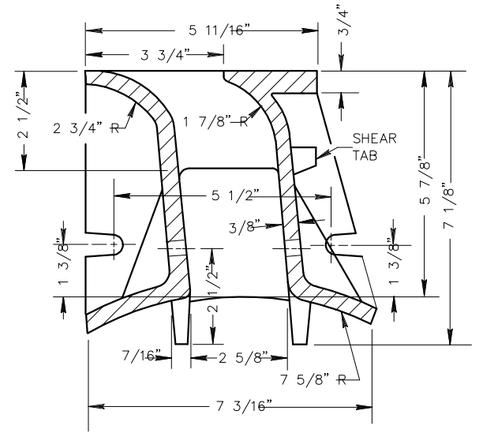
THE PIPE USED SHALL BE A 15" DIAMETER SDR-35 POLYVINYL CHLORIDE SEWER PIPE. THE PIPE SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN STANDARD SPECIFICATION 612.2.6

SURFACE DRAIN: BEFORE PAVING OVER THE DRAIN, COVER THE TOP OF THE DRAIN TO KEEP MATERIAL OUT OF THE PIPE. THE FINISHED GRADE SHOULD BE FLUSH WITH THE TOP OF THE DRAIN.

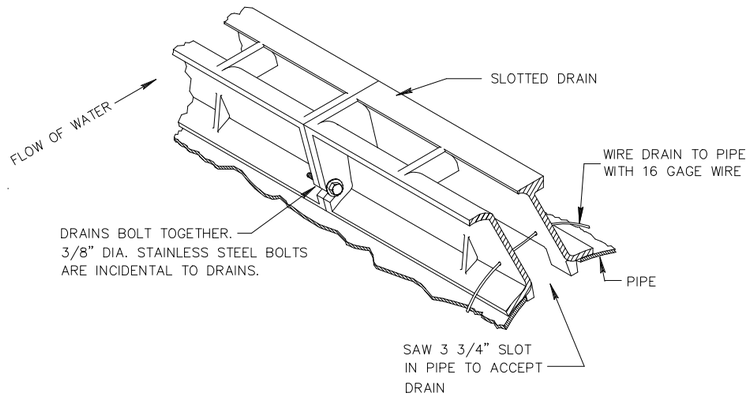
THE ANGLE OF THE DRAIN TO THE FLOW OF WATER SHOULD BE AS CLOSE TO 90° AS POSSIBLE.



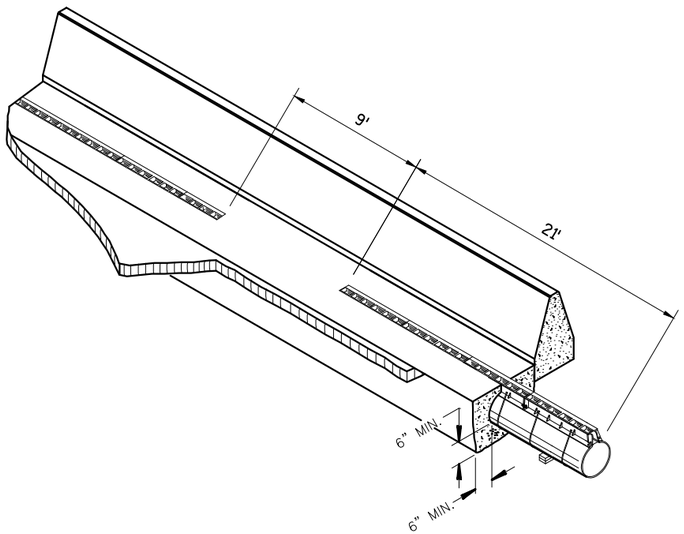
INSTALLATION OF SLOTTED VANE DRAIN

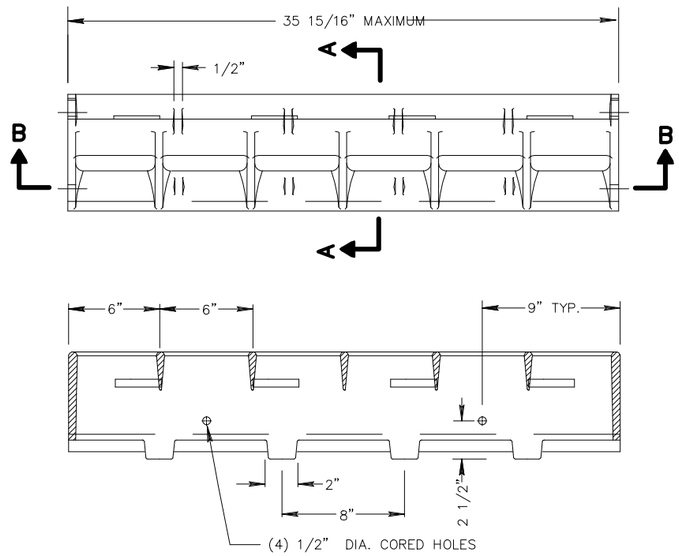


SECTION A-A



ISOMETRIC VIEW





SECTION B-B

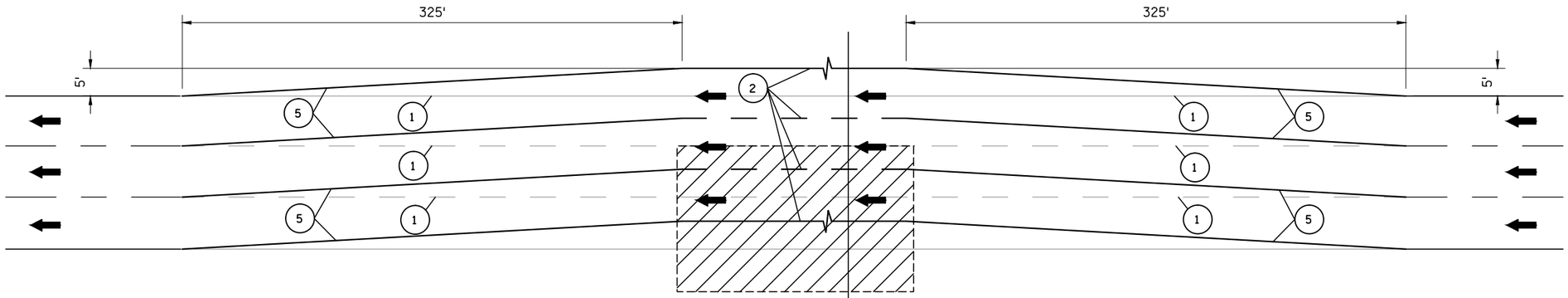
SLOTTED VANE DRAIN DETAIL

(APPROXIMATE WEIGHT 87 LBS.)

DRAIN SLOTTED VANE LONGITUDINAL

STA 351+16 - STA 352+32

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CONSTRUCTION DETAIL	SHEET 51	E



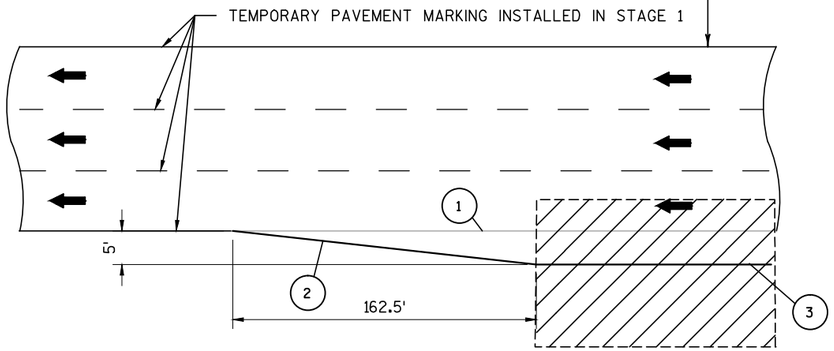
LANE SHIFT DETAIL

TEMPORARY PAVEMENT MARKING INSTALLED IN STAGE 1 AND USED IN STAGE 2A

LEGEND

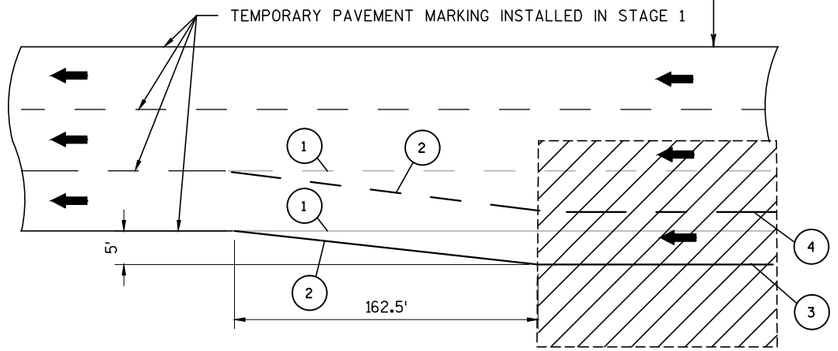
1. REMOVING PAVEMENT MARKINGS
2. TEMPORARY PAVEMENT MARKING 4-INCH
3. PAVEMENT MARKING EPOXY 4-INCH
4. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5' LINE W/ 37.5' GAP)
5. TEMPORARY PAVEMENT MARKING REFLECTIVE TAPE 4-INCH

WORK AREA



DAILY PAVEMENT MARKING DETAIL

SINGLE-LANE CLOSURE FOR UPPER LAYER PAVING & MARKING OPERATIONS



DAILY PAVEMENT MARKING DETAIL

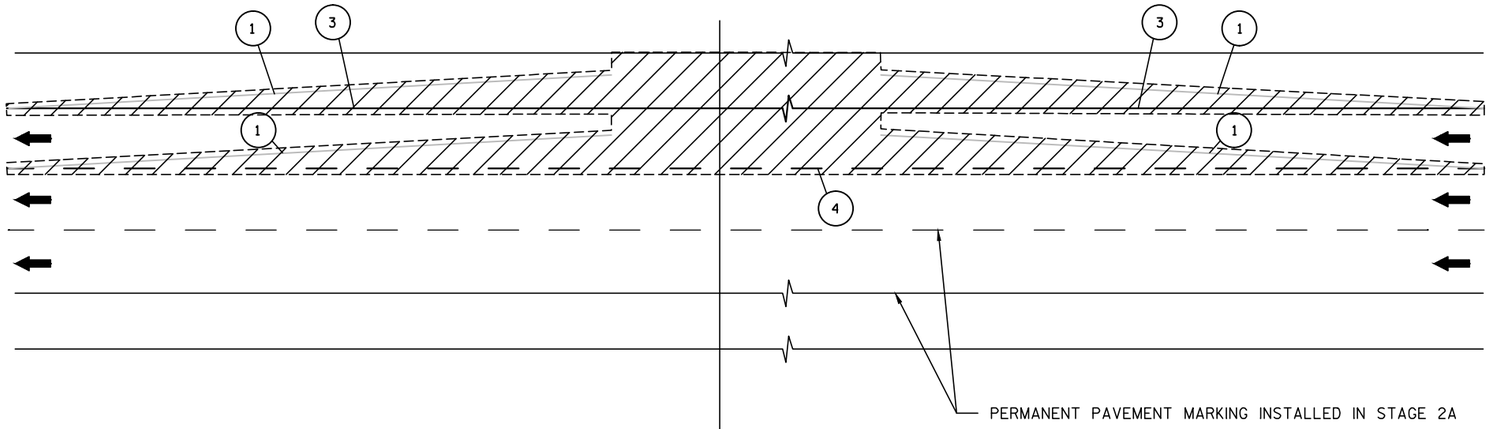
DUEL-LANE CLOSURE FOR UPPER LAYER PAVING & MARKING OPERATIONS

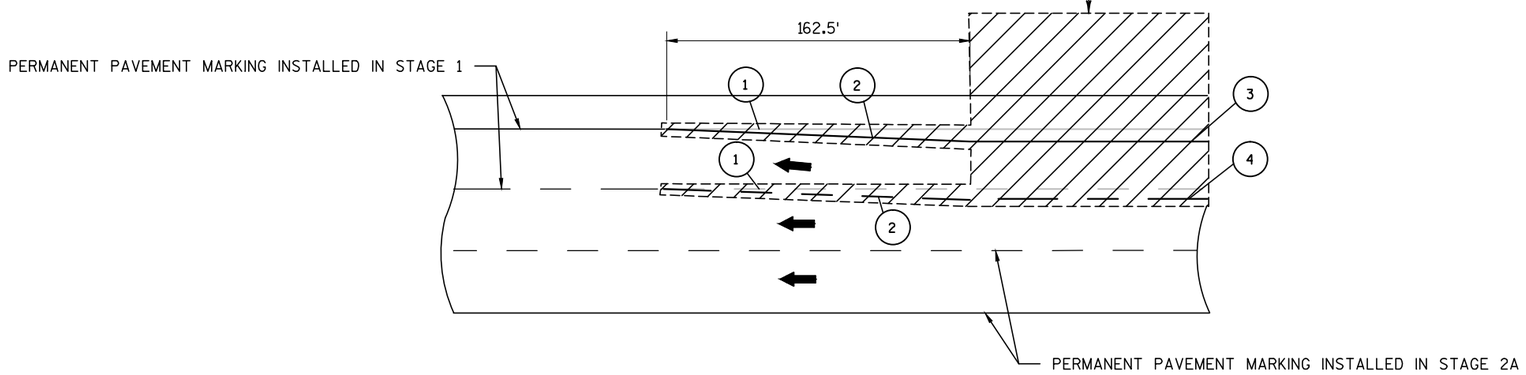
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CONSTRUCTION DETAILS - STAGE 2A	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021001_CD.DWG PLOT DATE : 2/27/2015 4:56 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : ********

WISDOT/CADDS SHEET 42

2





DAILY PAVEMENT MARKING DETAIL

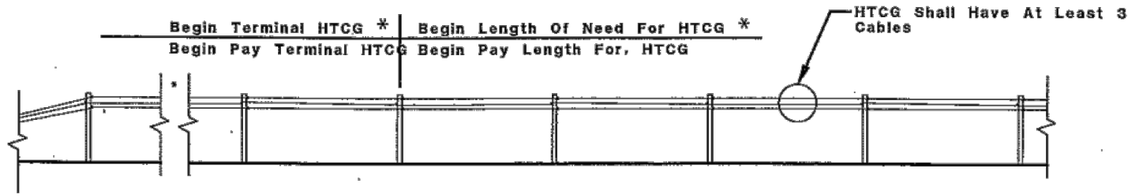
DUEL-LANE CLOSURE FOR UPPER LAYER PAVING & MARKING OPERATIONS

LEGEND

1. REMOVING PAVEMENT MARKINGS
2. TEMPORARY PAVEMENT MARKING 4-INCH
3. PAVEMENT MARKING EPOXY 4-INCH
4. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5' LINE W/ 37.5' GAP)
5. TEMPORARY PAVEMENT MARKING REFLECTIVE TAPE 4-INCH

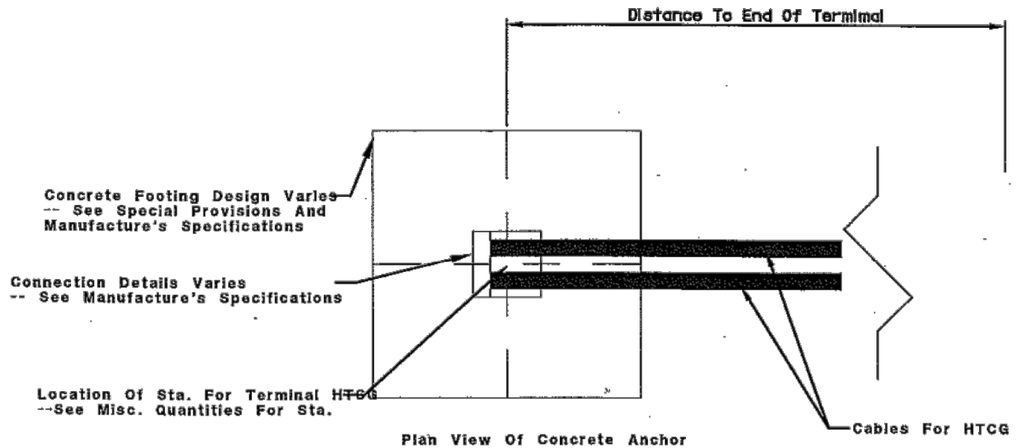
WORK AREA

2



High Tension Cable Guard (HTCG), Pay Limit Detail
And
Terminal, High Tension Cable Guard, Pay Limit Detail

* As Determined By Manufacturer



Plan View Of Concrete Anchor

Concrete anchors for terminal for HTCG shall be flush with finished Surface \3/4" tolerance

HTCG DETAILS

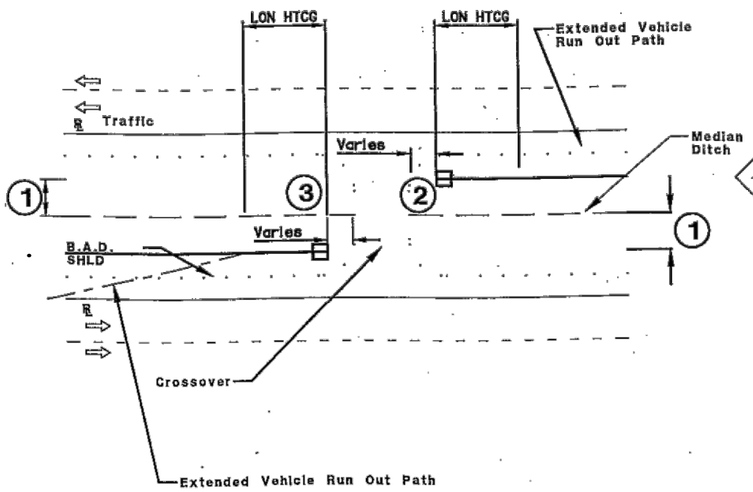
2

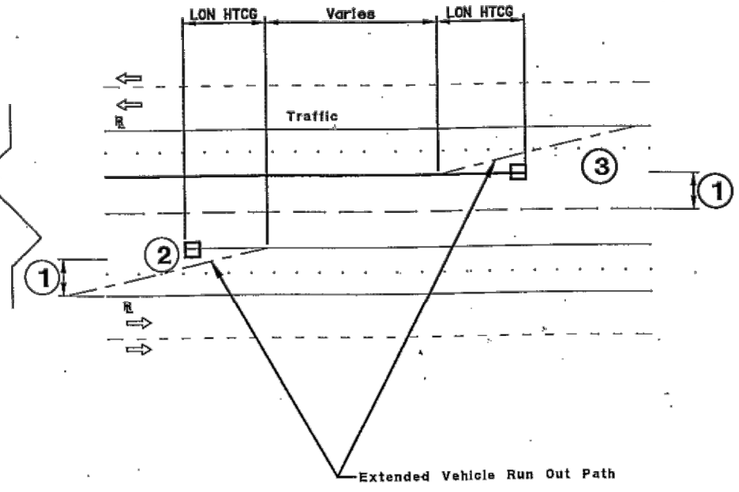
(1) Offset of HTCG:
Desirable: 10'
Minimum: 8'

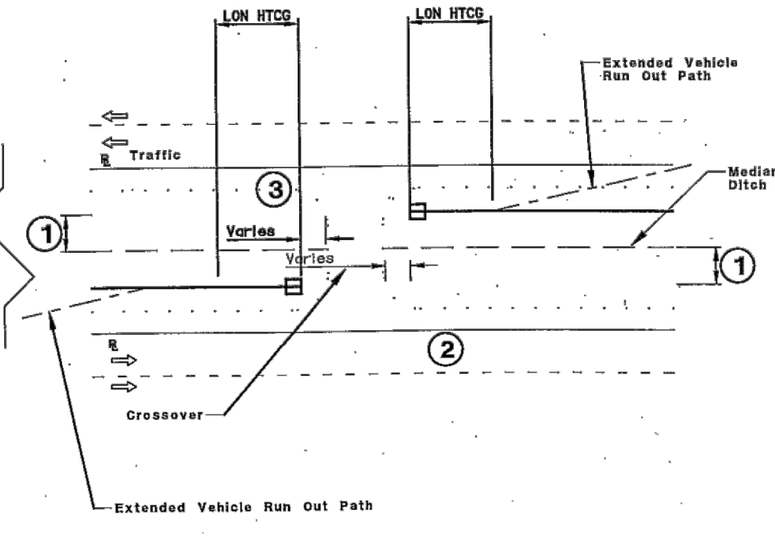
(2) Begin station for HTCG may be adjusted in field --See project engineer

(3) End station for HTCG may be adjusted in field --See project engineer

* The preferred alternative is to install HTCG terminals in areas where HTCG terminals are protected by other roadside barriers. If not possible install two terminals as shown.





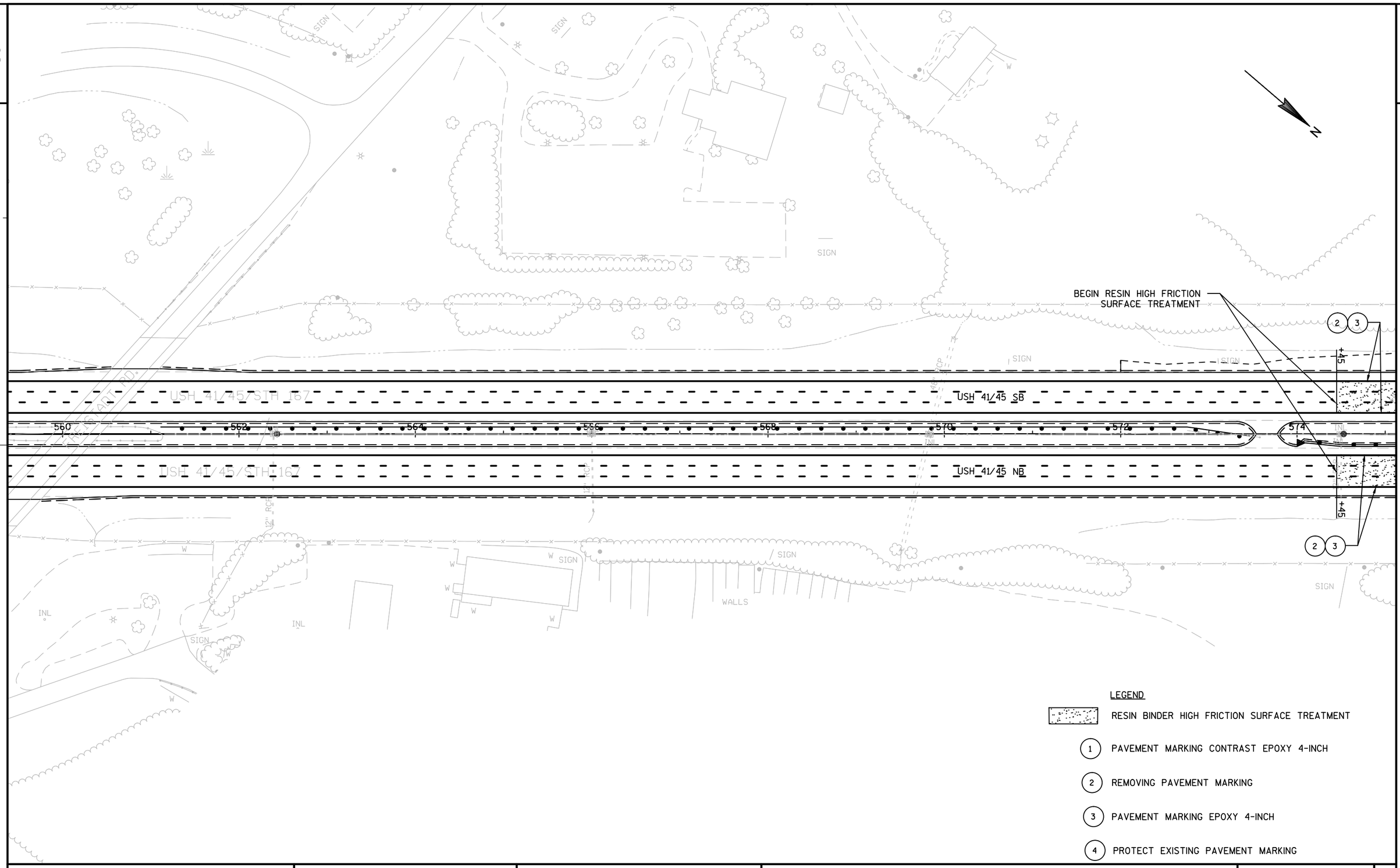


HTCG DETAILS

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CONSTRUCTION DETAILS	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021001_CD.DWG PLOT DATE : 10/16/2014 10:56 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



LEGEND

RESIN BINDER HIGH FRICTION SURFACE TREATMENT

1 PAVEMENT MARKING CONTRAST EPOXY 4-INCH

2 REMOVING PAVEMENT MARKING

3 PAVEMENT MARKING EPOXY 4-INCH

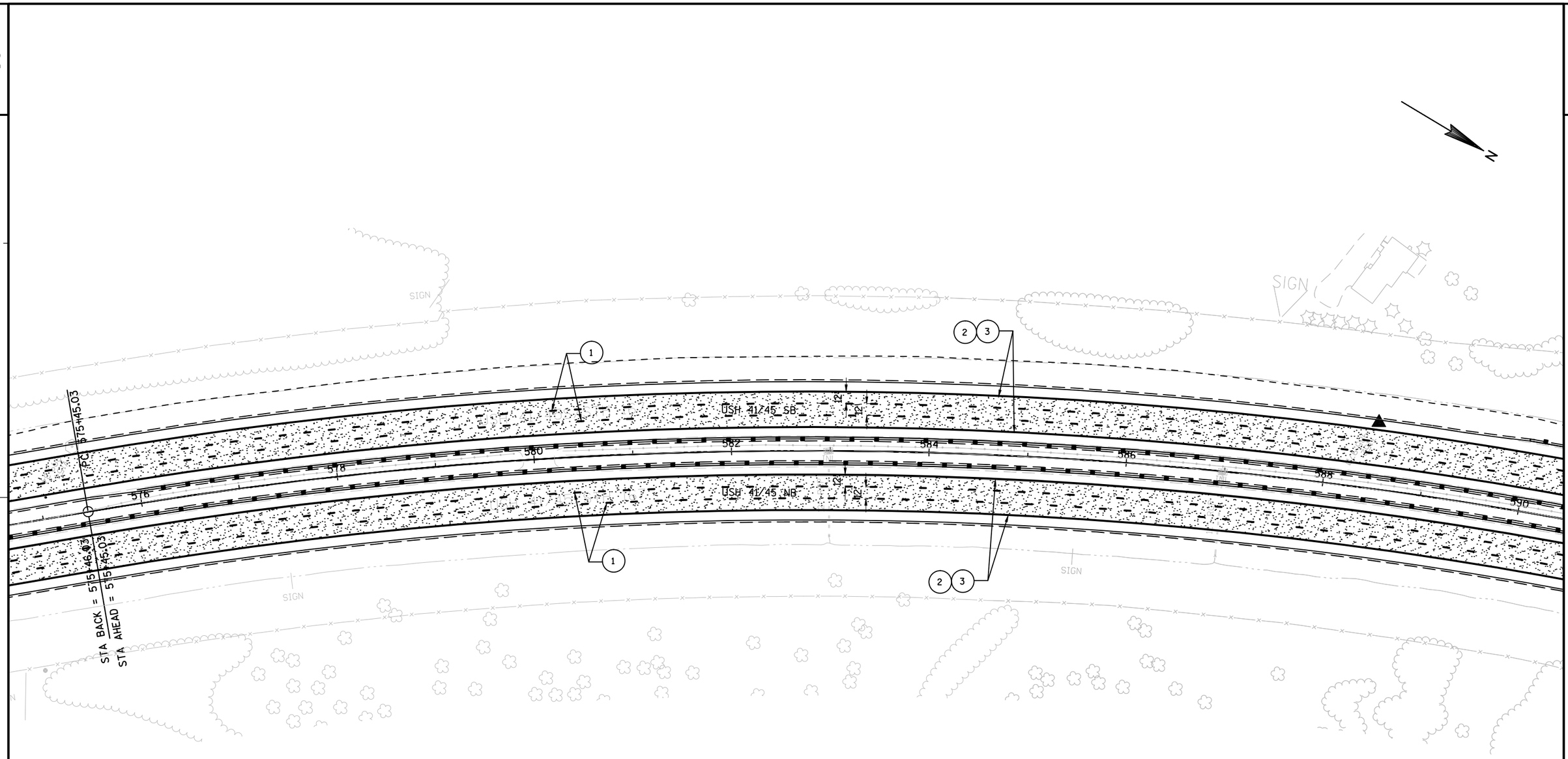
4 PROTECT EXISTING PAVEMENT MARKING

PROJECT NO: 1100-47-70	HWY: USH 41/45	COUNTY: WASHINGTON	HIGH FRICTION SURFACE TREATMENT	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\999201_HFST.DWG PLOT DATE : 3/26/2015 2:24 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2



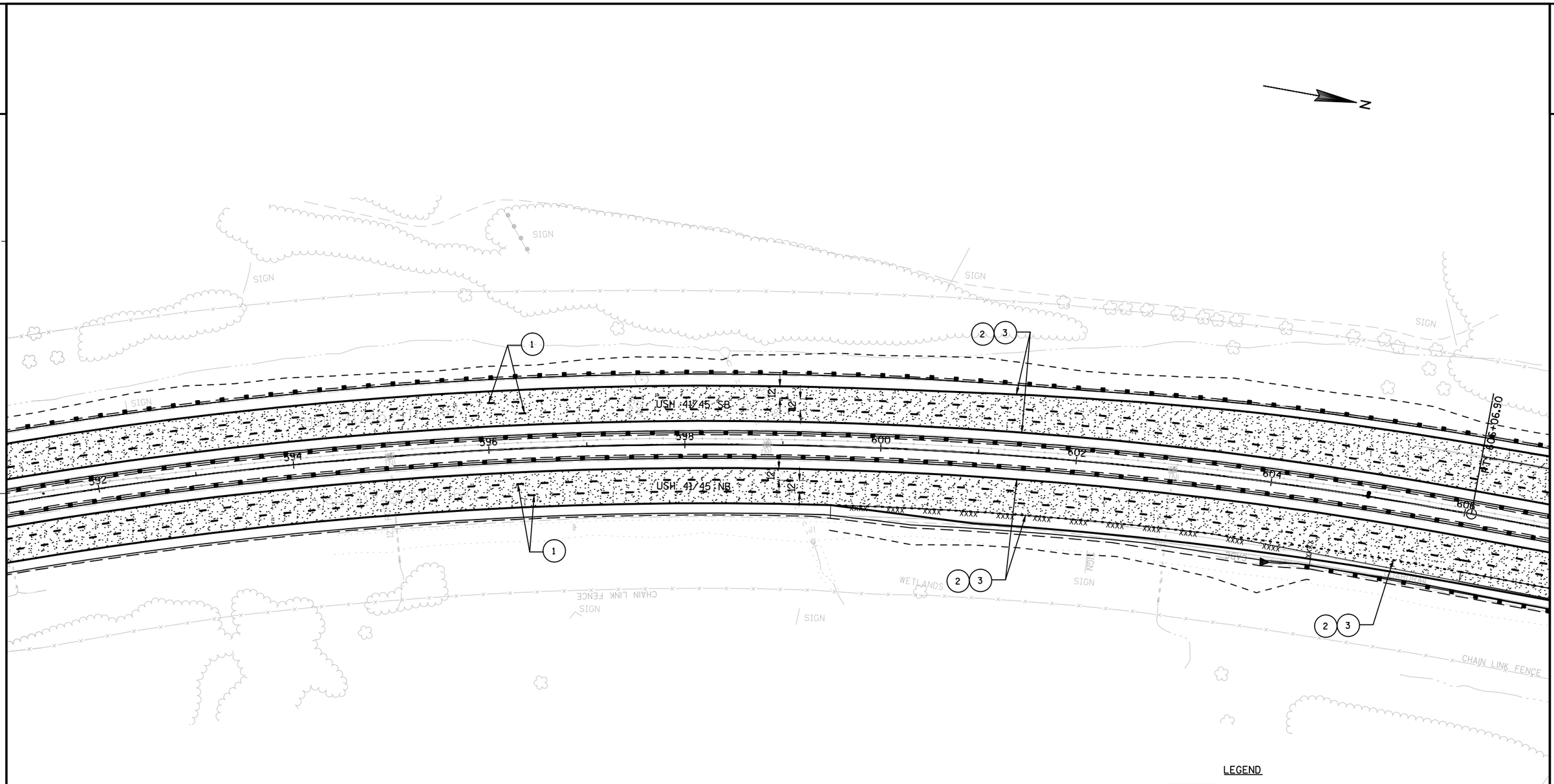
LEGEND

- RESIN BINDER HIGH FRICTION SURFACE TREATMENT
- (1) PAVEMENT MARKING CONTRAST EPOXY 4-INCH
- (2) REMOVING PAVEMENT MARKING
- (3) PAVEMENT MARKING EPOXY 4-INCH
- (4) PROTECT EXISTING PAVEMENT MARKING

NOTE:
* COVERING THE EXISTING PAVEMENT MARKING IS INCIDENTAL TO RESIN HIGH FRICTION SURFACE TREATMENT.

PROJECT NO: 1100-47-70	HWY: USH 41/45	COUNTY: WASHINGTON	HIGH FRICTION SURFACE TREATMENT	SHEET 57	E

2



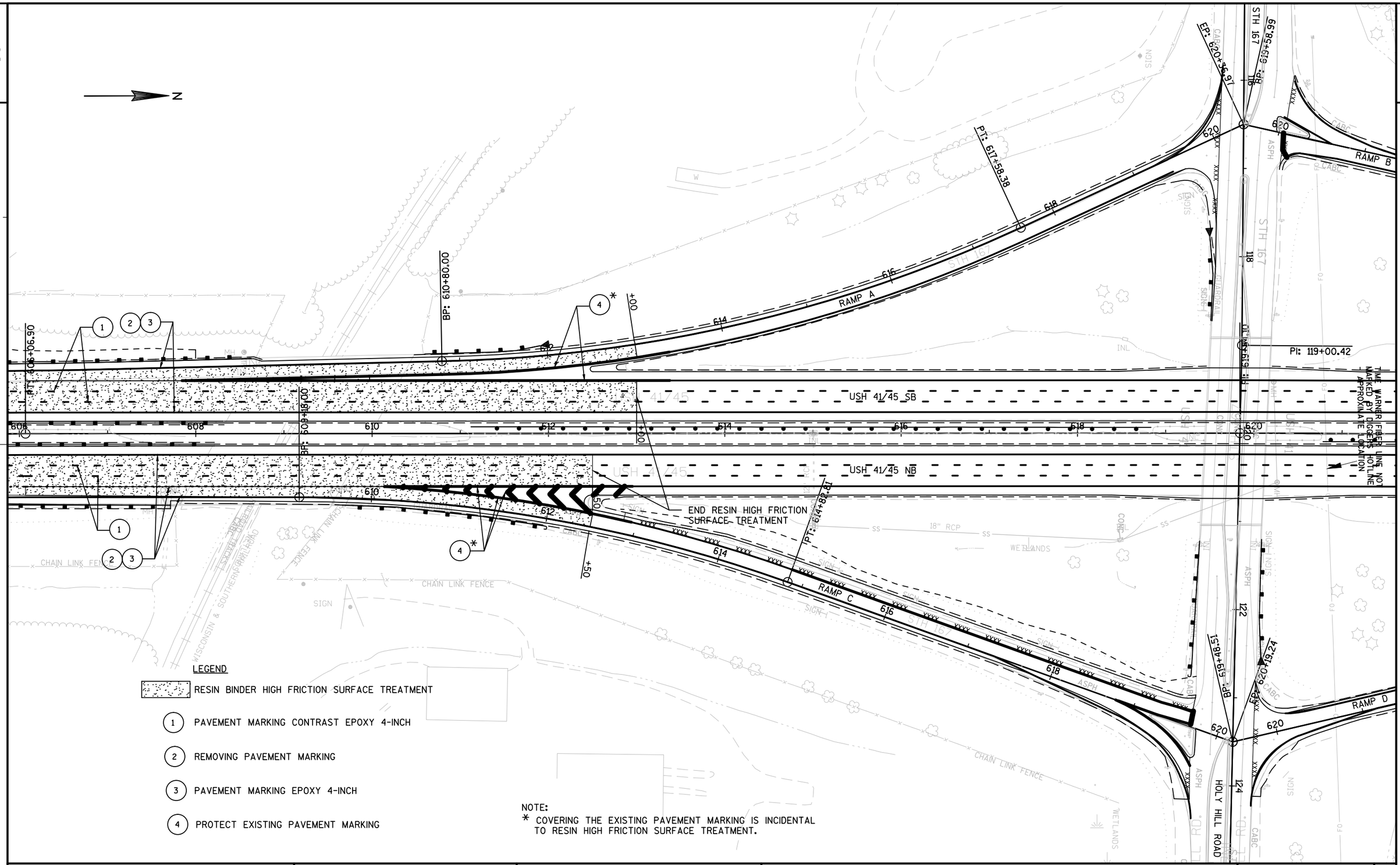
LEGEND

- RESIN BINDER HIGH FRICTION SURFACE TREATMENT
- (1) PAVEMENT MARKING CONTRAST EPOXY 4-INCH
- (2) REMOVING PAVEMENT MARKING
- (3) PAVEMENT MARKING EPOXY 4-INCH
- (4) PROTECT EXISTING PAVEMENT MARKING

NOTE:
* COVERING THE EXISTING PAVEMENT MARKING IS INCIDENTAL TO RESIN HIGH FRICTION SURFACE TREATMENT.

PROJECT NO: 1100-47-70	HWY: USH 41/45	COUNTY: WASHINGTON	HIGH FRICTION SURFACE TREATMENT	SHEET 58	E

2



PROJECT NO: 1100-47-70	HWY: USH 41/45	COUNTY: WASHINGTON	HIGH FRICTION SURFACE TREATMENT	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\999204_HFST.DWG PLOT DATE : 3/26/2015 2:25 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

LEGEND:

1. CONCRETE CURB & GUTTER 30-INCH TYPE D
2. CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
3. CONCRETE SIDEWALK 5-INCH
4. CURB RAMP TYPE 2 W/DETECTABLE WARNING FIELD
5. CONCRETE MEDIAN SLOPED NOSE TYPE 1
6. ASPHALTIC FLUME

XXX SAWING ASPHALT

MGS GUARDRAIL 3

SAWING CONCRETE

CTH Q

28+00

29+00

30+00

31+00

+90

+00

REMOVING CURB AND GUTTER

28+45.16, -46.00' LT

28+40.42, -100.00' LT

354+94.34, -89.29' LT

54' R

354+76.28, -38.40' LT

355+05.67, -29.95' LT

355+23.46, -28.00' LT

82' R

WETLAND

355+59.90, -28.00' LT

SL

MGS GUARDRAIL TERMINAL TYPE 2

355+74.90, -30.00' LT

357+06.12, -30.00' LT

357+06.00, -24.00' LT

SEE TABLE

29+37.46, -41.09' LT
4.5' R

PT: 353+65.96

BP: 353+20.50

354+00

355+00

356+00

357+00

358+00

354+90.07, 0.00'

4.5' R
354+45.16, -4.50' LT

353+77.49, -4.50' LT
4.5' R

353+65.69, 15.00' RT

30+02.73, -42.31' LT

353+63.38, 22.60' RT
10' R

30+04.52, -34.00' LT

SEE CONSTRUCTION DETAIL
CTH Q ISLAND - RAMP "C"

3' 3' 12' 12' 15' 6'

+55 21' RT

+30 21' RT

+83 23' RT

STR. NO. S-66-236
OVERHEAD SIGN SUPPORT
STA 356+80

CONSTRUCTION STAKING
CURB & GUTTER

STATION	OFFSET	ELEVATION
27+"Q"10.00	46.00' LT	
27+"Q"50.00	46.00' LT	860.51
28+"Q"00.00	46.00' LT	861.37
28+"Q"46.16	46.00' LT	862.25
354+"C"43.69	70.58' LT	862.38
354+"C"76.28	38.40' LT	862.51
355+"C"05.76	29.95' LT	862.07
355+"C"23.46	28.00' LT	861.96
355+"C"50.00	28.00' LT	861.54
355+"C"59.90	28.00' LT	861.40

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: RAMP DETAIL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021101_ID.DWG PLOT DATE : 2/13/2015 11:12 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : _____ PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42

2

2

LEGEND:

1. CONCRETE CURB & GUTTER 30-INCH TYPE D
2. CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
3. CONCRETE SIDEWALK 5-INCH
4. CURB RAMP TYPE 2 W/DETECTABLE WARNING FIELD
5. CONCRETE MEDIAN SLOPED NOSE TYPE 1
6. ASPHALTIC FLUME

XXX SAWING ASPHALT

MGS GUARDRAIL 3

SAWING CONCRETE

MGS GUARDRAIL TERMINAL EAT

357+06.24, -30.00' LT

357+06.00, -24.00' LT

358+74.81, -16.51' LT

359+24.81, -14.52' LT

360+03.05, -4.85' LT

360+02.99, 0.00'

STR. NO. S-66-236
OVERHEAD SIGN SUPPORT
STA 356+80

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: RAMP DETAIL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021101A_ID.DWG PLOT DATE : 12/11/2014 4:49 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : ---------- PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42

END REVERSE SLOPE
354+45.16
0.00' LT
354+46.45
8.81' LT
ELEV. 863.62
ADJUSTING INLET COVERS
ELEV. 863.66
CONCRETE CURB AND GUTTER 30-INCH TYPE D (REVERSE SLOPE)
354+20.45
20.27' LT
ELEV. 863.74
115' R
MATCH TO EXISTING PAVEMENT GRADES
353+70.49
37.75' LT
ELEV. 863.85
END REVERSE SLOPE
MATCH TO EXISTING PAVEMENT GRADES
CTH Q ISLAND – RAMP "C"

N

STR. NO. S-66-607
OVERHEAD
SIGN SUPPORT
STA 25+00

CTH Q

WETLAND

LEGEND:
1. CONCRETE CURB & GUTTER 30-INCH TYPE D
2. CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
3. CONCRETE SIDEWALK 5-INCH
4. CURB RAMP TYPE 2 W/DETECTABLE WARNING FIELD
5. CONCRETE MEDIAN SLOPED NOSE TYPE 1
6. ASPHALTIC FLUME

XXX SAWING ASPHALT
MGS GUARDRAIL 3
SAWING CONCRETE

28+78.23, -65.77' LT
28+14.69, -71.82' LT
28+73.41, -64.10' LT
28+15.22, -66.15' LT
28+45.16, -46.00' LT
27+08.45, -46.00' LT
29+37.45, -49.84' LT
29+36.36, -44.84' LT
SEE CTH Q ISLAND - RAMP "C"
29+92.12, -49.74' LT
29+95.26, -44.03' LT
30+76.08, -46.93' LT
30+75.89, -41.34' LT
29+69.46, -49.78' LT
29+72.35, -44.77' LT

COUNTY LINE ROAD
CTH Q
ELMER ROAD
CONC
ASPH
SIGN
GUY
CABC
MH
SS
E
W
N
S

25+00 26+00 27+00 28+00 29+00 30+00

BP: 353+20.50
PT: 353+65.96
354+00
353+00

SECTION A–A

5' 5.5' 2.5'
2% 1.5% 2%
4" ASPHALTIC SURFACE SAFETY ISLANDS
CONCRETE SIDEWALK 5-INCH
CONCRETE CURB AND GUTTER 30-INCH TYPE D
4" ASPHALTIC SURFACE SAFETY ISLANDS

SECTION B–B

2.5' VARIES 2.5'
4" ASPHALTIC SURFACE SAFETY ISLAND
2% 2% 4% 4% 2%
CONCRETE CURB AND GUTTER 30-INCH TYPE D (REVERSE SLOPE)
CONCRETE CURB AND GUTTER 30-INCH TYPE D

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: RAMP DETAIL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021102_ID.DWG PLOT DATE : 2/13/2015 11:16 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : ---------- PLOT SCALE : 0.30000000 = 1'-0"_XREF
WISDOT/CADDS SHEET 42

LEGEND:

1. CONCRETE CURB & GUTTER 30-INCH TYPE D
2. CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
3. CONCRETE SIDEWALK 5-INCH
4. CURB RAMP TYPE 2 W/DETECTABLE WARNING FIELD
5. CONCRETE MEDIAN SLOPED NOSE TYPE 1
6. ASPHALTIC FLUME

XXX SAWING ASPHALT

MGS GUARDRAIL 3

SAWING CONCRETE

N

346+42.59, 9.16' RT

346+59.77, -14.23' LT

346+14.72, 23.21' RT

346+44.16, -31.75' LT

40+92.18, -53.22' LT

39+47.37, -51.31' LT

PC: 346+30.61

PI: 40+51.00

39+79.02, -47.10' LT

40+50.72, -50.88' LT

346+00

347+00

36+00

37+00

38+00

39+00

40+00

41+00

CTH Q

37+57.91, 0.00'

38+29.93, 0.00'

36+56.81, 10.37' RT

BP: 346+87.45

345+00

348+00

USH 41/45

2

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: RAMP DETAIL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021103_ID.DWG PLOT DATE : 12/11/2014 4:51 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : ---------- PLOT SCALE : 0.30000000 = 1'-0" XREF

LEGEND:

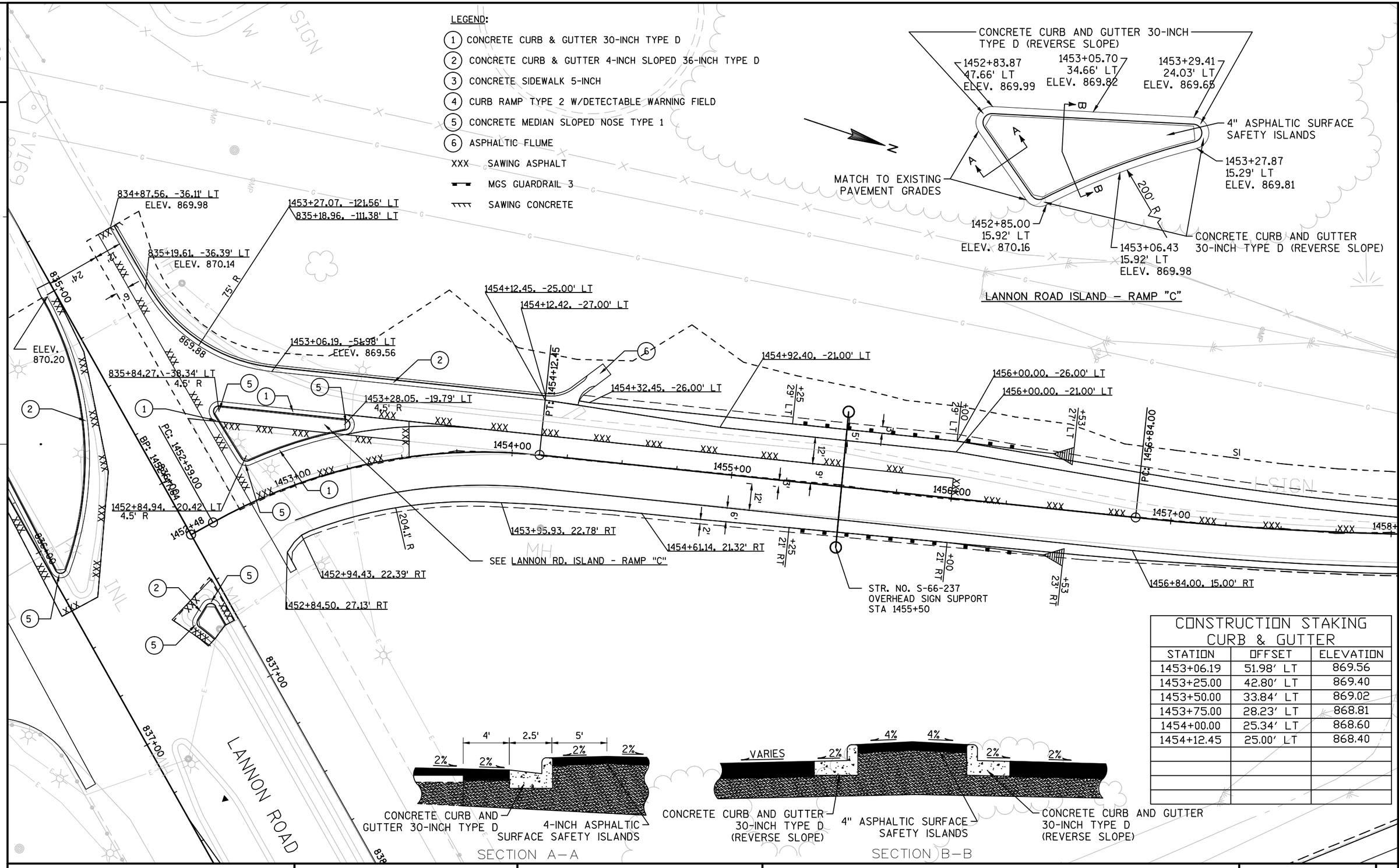
1. CONCRETE CURB & GUTTER 30-INCH TYPE D
2. CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
3. CONCRETE SIDEWALK 5-INCH
4. CURB RAMP TYPE 2 W/DETECTABLE WARNING FIELD
5. CONCRETE MEDIAN SLOPED NOSE TYPE 1
6. ASPHALTIC FLUME

XXX SAWING ASPHALT

MGS GUARDRAIL 3

SAWING CONCRETE

LANNON ROAD ISLAND – RAMP "C"



CONSTRUCTION STAKING CURB & GUTTER		
STATION	OFFSET	ELEVATION
1453+06.19	51.98' LT	869.56
1453+25.00	42.80' LT	869.40
1453+50.00	33.84' LT	869.02
1453+75.00	28.23' LT	868.81
1454+00.00	25.34' LT	868.60
1454+12.45	25.00' LT	868.40

SECTION A–A

SECTION B–B

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: RAMP DETAIL	SHEET 64	E

2

LEGEND:

1. CONCRETE CURB & GUTTER 30-INCH TYPE D
2. CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
3. CONCRETE SIDEWALK 5-INCH
4. CURB RAMP TYPE 2 W/DETECTABLE WARNING FIELD
5. CONCRETE MEDIAN SLOPED NOSE TYPE 1
6. ASPHALTIC FLUME

XXX SAWING ASPHALT

MGS GUARDRAIL 3

SAWING CONCRETE

N

SI

PC 1456+84.00

5'

3'

15'

3'

1'

XXX

1457+00

1458+00

1459+00

1460+00

1461+00

1462+00

1459+14.98, -5.08' LT

1459+15.01, -0.07' LT

1459+15.09, 15.00' RT

1459+15.11, 18.00' RT

SIGN

MH

461+00

462+00

460+00

459+00

458+00

USH 41/45

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: RAMP DETAIL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021105_ID.DWG PLOT DATE : 12/11/2014 4:53 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : _____ PLOT SCALE : 0.30000000 = 1'-0" XREF

2

LANNON ROAD

843+00

454+14.16
22.55' LT
ELEV. 868.59

454+00.54
25.89' LT
ELEV. 868.66

454+27.79
19.21' LT
ELEV. 868.52

MATCH TO EXISTING
PAVEMENT GRADES

4" ASPHALTIC SURFACE
SAFETY ISLANDS

454+27.49
10.41' LT

57.75' R

MATCH TO EXISTING
PAVEMENT GRADES
(REVERSE SLOPE)

453+96.93
2.63' RT

LANNON ROAD ISLAND – RAMP "B"

USH 41/45

459+00

N

843+28.03, -27.81' LT

843+27.14, -33.74' LT

843+30.47, -54.84' LT

454+31.37, -71.46' LT

20' R

454+26.58, -52.04' LT

454+87.03, -37.12' LT

450' R

843+87.51, -38.75' LT

455+94.89, -24.00' LT

456+66.56, -24.00' LT

SI

PC: 458+16.88

458+47.49, -18.00' LT

459+42.66, -15.00' LT

454+26.72, -14.84' LT

455+00

456+00

457+00

458+00

459+00

453+94.80, -1.33' LT

454+63.22, 7.70' RT

455+44.22, 0.00'

455+93.42, 6.40' RT

459+51.89, 6.50' RT

SEE LANNON RD. ISLAND - RAMP "B"

102.9' R

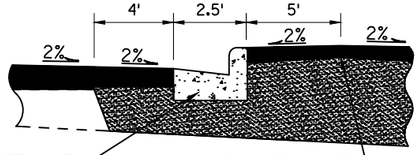
844+90.28, -36.00' LT

845+12.58, -35.82' LT

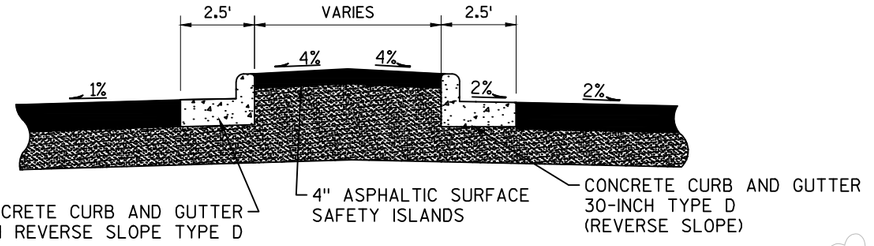
845+12.62, -24.30' LT

454+63.87, 111.02' RT

844+95.73, -138.76' LT



SECTION A–A



SECTION B–B

LEGEND:

1. CONCRETE CURB & GUTTER 30-INCH TYPE D
2. CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
3. CONCRETE SIDEWALK 5-INCH
4. CURB RAMP TYPE 2 W/DETECTABLE WARNING FIELD
5. CONCRETE MEDIAN SLOPED NOSE TYPE 1
6. ASPHALTIC FLUME

XXX SAWING ASPHALT

MGS GUARDRAIL 3

SAWING CONCRETE

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: RAMP DETAIL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021106_ID.DWG PLOT DATE : 12/11/2014 4:54 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : ---------- PLOT SCALE : 0.30000000 = 1'-0" XREF

WISDOT/CADDS SHEET 42

2

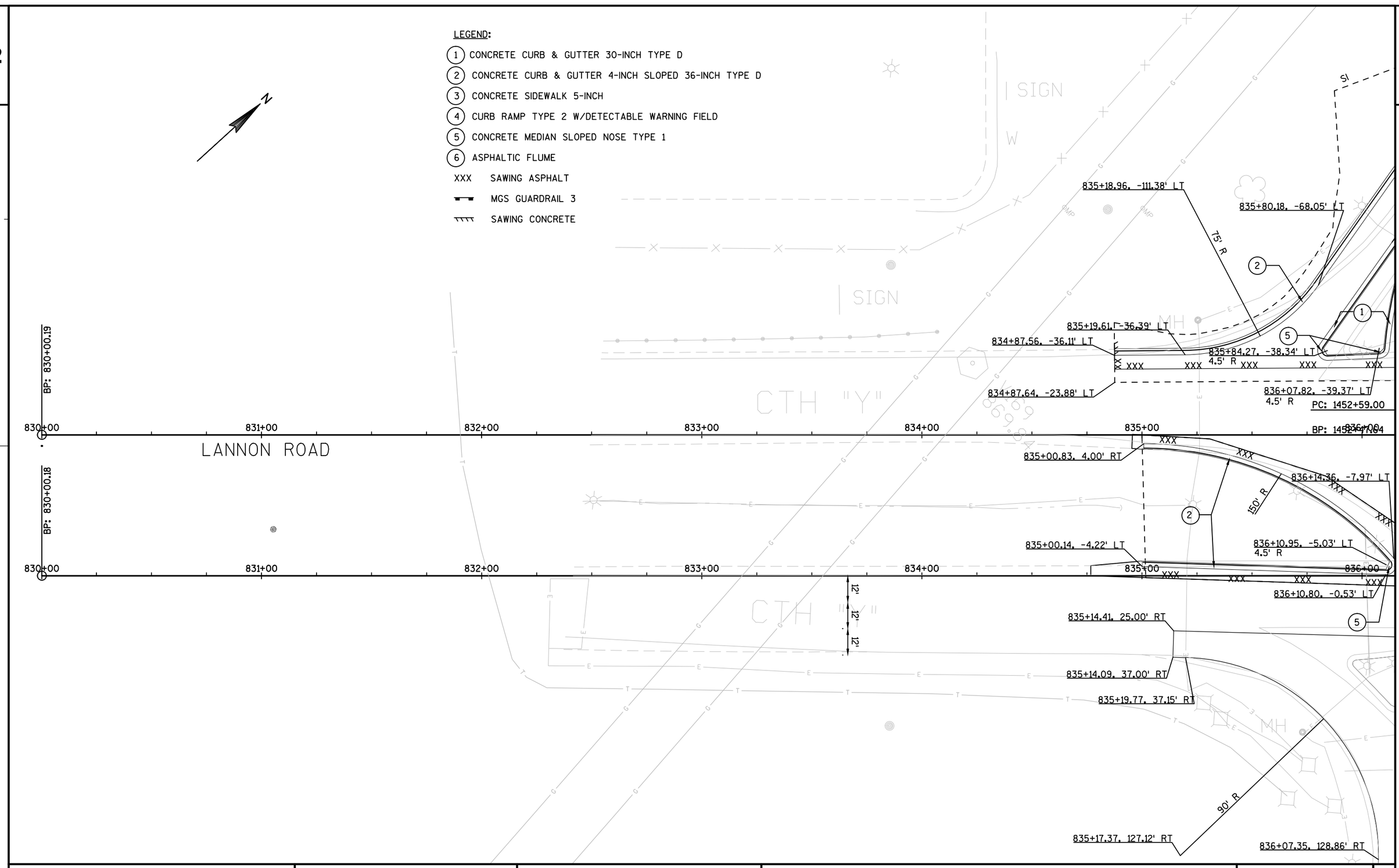
LEGEND:

1. CONCRETE CURB & GUTTER 30-INCH TYPE D
2. CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
3. CONCRETE SIDEWALK 5-INCH
4. CURB RAMP TYPE 2 W/DETECTABLE WARNING FIELD
5. CONCRETE MEDIAN SLOPED NOSE TYPE 1
6. ASPHALTIC FLUME

XXX SAWING ASPHALT

MGS GUARDRAIL 3

SAWING CONCRETE



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: RAMP DETAIL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021107_ID.DWG PLOT DATE : 12/11/2014 4:55 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : ---------- PLOT SCALE : 0.30000000 = 1'-0" XREF
WISDOT/CADDS SHEET 42

LEGEND:

1. CONCRETE CURB & GUTTER 30-INCH TYPE D
2. CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
3. CONCRETE SIDEWALK 5-INCH
4. CURB RAMP TYPE 2 W/DETECTABLE WARNING FIELD
5. CONCRETE MEDIAN SLOPED NOSE TYPE 1
6. ASPHALTIC FLUME

XXX SAWING ASPHALT

MGS GUARDRAIL 3

SAWING CONCRETE

PI: 1454+12.45

1453+28.05, -19.79' LT

836+91.56, -143.49' LT

204.1' R

836+51.45, -43.49' LT

836+55.06, -34.05' LT

836+63.76, -33.92' LT

836+63.78, -30.92' LT

1452+84.94, -20.42' LT

1452+59.00

836+70.12, 4.33' RT

836+60.49, 8.75' RT

836+64.03, 15.02' RT

836+73.91, 15.93' RT

836+14.36, -7.97' LT

836+10.95, -5.03' LT

837+07.41, -8.90' LT

836+10.80, -0.53' LT

837+38.15, 0.00'

838+95.06, -16.76' LT

841+64.93, -16.90' LT

LANNON ROAD

USH 41/45

STH 167

CONCRETE WALL

STR. NO. S-66-XXX
OVERHEAD SIGN SUPPORT
STA 838+55

4" ASPHALTIC SURFACE
SAFETY ISLAND

40' R

EXISTING CONCRETE CURB& GUTTER
TO REMAIN

REMOVING ASPHALTIC
SURFACE BUTT JOINTS

CONCRETE PAVEMENT
APPROACH SLAB

ADJUSTING
INLET COVERS

SECTION A-A

VARIES

REMOVE ASPHALTIC SURFACE

2" BASE AGGREGATE DENSE
1 1/4-INCH

BASE AGGREGATE DENSE TO REMAIN

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: RAMP DETAIL	SHEET 68	E

2

454+26.58, -52.04' LT

454+31.37, -71.46' LT

20' R

842+10.66, -24.23' LT

843+34.05, -35.16' LT

454+12.14, -80.76' LT

843+87.51, -38.75' LT
4.5' R

453+94.80, -1.33' LT
4.5' R

844+90.17, -36.00' LT

845+12.63, -36.00' LT

845+12.54, -30.30' LT

STR. NO. S-66-239
OVERHEAD SIGN SUPPORT
STA 846+00

842+00 843+00 844+00 845+00 846+00 847+00 848+00

BP: 453+52.47

843+06.26, 20.60' RT

843+11.08, 20.60' RT

843+11.08, 25.10' RT
4.5' R

843+14.10, -35.57' LT

842+67.00, -19.00' LT

843+92.60, 12.00' RT

844+59.14, 12.00' RT

4.5' R

843+91.59, 16.50' RT

843+87.30, 17.84' RT

60' R

845+00.00, 12.00' RT

846+83.00, 12.00' RT
SI

LANNON ROAD

844+44.41, -3.98' LT

845+00.05, -3.82' LT

842+00 843+00 844+00 845+00 846+00 847+00 848+00

6'

5'

12'

12'

12'

12'

ASPH

1454+00

843+50.25, 44.00' RT
10' R

1453+00

17'

22'

13'

3'

+75
32.5' LT

1452+00

EXISTING GUARDRAIL TO REMAIN

STR. NO. S-66-238
OVERHEAD SIGN SUPPORT
STA 1451+50

REMOVE AND REPLACE GUARDRAIL

V167
863.92

N

LEGEND:

1. CONCRETE CURB & GUTTER 30-INCH TYPE D
2. CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
3. CONCRETE SIDEWALK 5-INCH
4. CURB RAMP TYPE 2 W/DETECTABLE WARNING FIELD
5. CONCRETE MEDIAN SLOPED NOSE TYPE 1
6. ASPHALTIC FLUME

XXX SAWING ASPHALT

MGS GUARDRAIL 3

SAWING CONCRETE

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: RAMP DETAIL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021109_ID.DWG PLOT DATE : 12/11/2014 4:57 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : _____ PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42

2

2

LEGEND:

1. CONCRETE CURB & GUTTER 30-INCH TYPE D
2. CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
3. CONCRETE SIDEWALK 5-INCH
4. CURB RAMP TYPE 2 W/DETECTABLE WARNING FIELD
5. CONCRETE MEDIAN SLOPED NOSE TYPE 1
6. ASPHALTIC FLUME

XXX SAWING ASPHALT

MGS GUARDRAIL 3

SAWING CONCRETE

848+33.00, 0.00'

846+00 847+00 848+00 849+00 850+00 851+00 852+00

846+83.00, 12.00' RT

LANNON ROAD

846+00 847+00 848+00 849+00 850+00 851+00 852+00

12'

12'

N

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: RAMP DETAIL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021110_ID.DWG PLOT DATE : 12/11/2014 4:58 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : ---------- PLOT SCALE : 0.30000000 = 1'-0" XREF

2

2

N

WETLAND

WETLAND

USH 41/45 SB

USH 41/45 NB

598+00

599+00

600+00

601+00

602+00

597+00

596+00

595+00

17'

3'

+37.5

10'

2'

+58

LEGEND:

1. CONCRETE CURB & GUTTER 30-INCH TYPE D
2. CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
3. CONCRETE SIDEWALK 5-INCH
4. CURB RAMP TYPE 2 W/DETECTABLE WARNING FIELD
5. CONCRETE MEDIAN SLOPED NOSE TYPE 1
6. ASPHALTIC FLUME

XXX SAWING ASPHALT

MGS GUARDRAIL 3

SAWING CONCRETE

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: PLAN DETAIL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021111_ID.DWG PLOT DATE : 2/10/2015 2:41 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : ---------- PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42

2

2

N

USH 41/45 SB

USH 41/45 NB

602+00

603+00

604+00

605+00

606+00

607+00

608+00

PT: 609+09.69

SI

+00

+53

17'

3'

WETLAND

GUARDRAIL

CHAIN LINK FENCE

SIGN

MH

LEGEND:

1. CONCRETE CURB & GUTTER 30-INCH TYPE D
2. CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
3. CONCRETE SIDEWALK 5-INCH
4. CURB RAMP TYPE 2 W/DETECTABLE WARNING FIELD
5. CONCRETE MEDIAN SLOPED NOSE TYPE 1
6. ASPHALTIC FLUME

XXX SAWING ASPHALT

MGS GUARDRAIL 3

SAWING CONCRETE

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: PLAN DETAIL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021111A_ID.DWG PLOT DATE : 2/10/2015 10:27 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : ---------- PLOT SCALE : 0.30000000 = 1'-0"_XREF

WISDOT/CADDS SHEET 42

2

WETLAND

N

BP: 610+80.00

610+80

611+00

612+00

USH 41/45 SB

609+00

610+00

611+00

612+00

613+00

614+00

USH 41/45

USH 41/45

USH 41/45 NB

MH

INL

INL

SI

SIGN

xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

RAMP C

ASPH

CABC

611+00

612+00

613+00

614+00

8' RT +00

MGS GUARDRAIL TERMINAL TYPE 2

GUARDRAIL

CONC

610+00

BP: 609+18.00

609+18

CHAIN LINK FENCE

CHAIN LINK FENCE

RAILROAD TRACKS

CABC

WETLANDS

WETLAND

SIGN

LEGEND:

1. CONCRETE CURB & GUTTER 30-INCH TYPE D
2. CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
3. CONCRETE SIDEWALK 5-INCH
4. CURB RAMP TYPE 2 W/DETECTABLE WARNING FIELD
5. CONCRETE MEDIAN SLOPED NOSE TYPE 1
6. ASPHALTIC FLUME

XXX SAWING ASPHALT

MGS GUARDRAIL 3

SAWING CONCRETE

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: PLAN DETAIL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021112_ID.DWG PLOT DATE : 2/10/2015 10:57 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : ---------- PLOT SCALE : 0.30000000 = 1'-0" XREF

WISDOT/CADDS SHEET 42

2

USH 41/45 SB

USH 41/45 NB

615+00

616+00

617+00

618+00

619+00

620+00

STH 167

RAMP C

PT: 614+82.81

BP: 619+48.51

EP: 620+19.24

HOLY HILL ROAD

122+00

123+00

18" RCP

WETLAND

WETLANDS

EXISTING GUARDRAILS
TO BE REMOVED AND REPLACED
BY OTHERS

SIGN

ASPH

CABC

CONC

INL

SS

3'

12'

CHAIN LINK FENCE

LEGEND:

1. CONCRETE CURB & GUTTER 30-INCH TYPE D
2. CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
3. CONCRETE SIDEWALK 5-INCH
4. CURB RAMP TYPE 2 W/DETECTABLE WARNING FIELD
5. CONCRETE MEDIAN SLOPED NOSE TYPE 1
6. ASPHALTIC FLUME

XXX SAWING ASPHALT

MGS GUARDRAIL 3

SAWING CONCRETE

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: PLAN DETAIL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021113_ID.DWG PLOT DATE : 2/10/2015 11:08 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : ---------- PLOT SCALE : 0.30000000 = 1'-0" XREF
WISDOT/CADDS SHEET 42

2

N

BP: 326+85.58

USH 41/45 SB

USH 41/45 NB

328 330 332 334 336 338 340 342

BP: 334+91.34

336 338 340 RAMP A 342

RAMP D

BP: 341+79.46

RICHFIELD WAY

USH 41/45

USH 41/45

MGS GUARDRAIL TERMINAL EAT

PT: 341+28.03

+97 32' LT

+50 30' LT

+25 30' LT

+97 22' RT

+50 20' RT

+25 20' RT

STR. NO. S-67-952
OVERHEAD SIGN SUPPORT
STA 342+00

MGS GUARDRAIL TERMINAL TYPE 2

LEGEND

- HIGH TENSION CABLE GUARD (3 STRAND)
- MGS GUARDRAIL 3
- REMOVING ASPHALTIC SURFACE MILLING SEE CONSTRUCTION DETAILS
- REMOVING ASPHALTIC SURFACE BUTT JOINTS (LOWER LAYER)
- XXXXX SAWING ASPHALT

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN DETAIL	SHEET 75	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021201_PD.DWG PLOT DATE : 1/15/2015 4:35 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

NOTES:

1. SLOPE PAVING CRUSHED AGGREGATE
2. GRADING, SHAPING AND FINISHING SLOPE PAVING APPROACHES

N

WETLAND

PC: 350+95.13

3-2" HDPE CONDUIT

PT: 341+12.21

RAMP D

RAMP GATE

PT: 353+65.96

BP: 353+20.50

RAMP GATE

SLOPE INTERCEPT

3-2" HDPE CONDUIT

GUARDRAIL TERMINAL TYPE 2

WETLAND

RAMP C

RAMP WIDENING
SEE PAVEMENT DETAILS

CTH Q

CONCRETE BARRIER TYPE S32

STR. NO. S-66-236
OVERHEAD SIGN SUPPORT
STA 356+80

REMOVE & REPLACE GUARDRAIL
SEE S.D.D. 14B28
MOW STRIP REQUIRED

ADJUSTING INLET COVERS
RIM ELEV. 847.90

SEE BUTT JOINT DETAIL

USH 41/45 SB

USH 41/45 NB

USH 41/45

BEGIN CONSTRUCTION
STA 344+00 NB

BEGIN PROJECT
1100-38-70
STA 345+00

CONCRETE BARRIER TRANSITION
TYPE F32SF TO S32

ADJUSTING INLET COVERS
RIM ELEV. 844.10

PC: 352+92.20

RAMP A

BP: 345+55.45

PC: 346+30.61

RAMP GATE

PT: 348+84.46

RAMP B

LEGEND

- HIGH TENSION CABLE GUARD (3 STRAND)
- MGS GUARDRAIL 3
- REMOVING ASPHALTIC SURFACE MILLING SEE CONSTRUCTION DETAILS
- REMOVING ASPHALTIC SURFACE BUTT JOINTS (LOWER LAYER)
- XXXXX SAWING ASPHALT

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN DETAIL	SHEET 76	E

2

SLOPE INTERCEPT

WETLAND

3-2" HDPE CONDUIT

RAMP C

RAMP B

REMOVE & REPLACE GUARDRAIL
SEE S.D.D. 14B28
MOW STRIP ARE REQUIRED

PC: 363+46.12

PT: 363+52.88

STEEL THRIE BEAM
BULLNOSE TERMINAL
TO REMAIN

WETLAND

PT: 1366+00.13

WETLAND

EP: 370+80.13

PT: 359+00.01

USH 41/45 SB

USH 41/45 NB

ADJUSTING INLET COVERS
RIM ELEV. 853.74

BEGIN PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS
BEGIN PROOF-ROLLING EXISTING BASE

TERMINAL HTCG TL-3 SOCKETED
STA 363+90, RT

HIGH TENSION CABLE GUARD
TL-3 SOCKETED
STA 364+41, 8' RT

REMOVE CABLE GUARD
3-STRANDS

LEGEND

- HIGH TENSION CABLE GUARD (3 STRAND)
- MGS GUARDRAIL 3
- REMOVING ASPHALTIC SURFACE MILLING SEE CONSTRUCTION DETAILS
- REMOVING ASPHALTIC SURFACE BUTT JOINTS (LOWER LAYER)
- XXXXX SAWING ASPHALT

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN DETAIL	SHEET 77	E

2

2

WETLAND

3-2" HDPE CONDUIT

APRON ENDWALLS FOR CPRC 42-INCH AND CONCRETE COLLAR REQ'D

3-2" HDPE, SPECIAL

CAUTION

USH 41/45 SB

USH 41/45 NB

374 376 378 380 382 384 386 388

12" RCP

42" RCP

6" CMP

CMP

SIGN

GOLF GREEN

GOLF COURSE

U/C

20" STEEL GAS MAIN IN 24" CASING PER 1108-00-70

LEGEND

HIGH TENSION CABLE GUARD (3 STRAND)

MGS GUARDRAIL 3

REMOVING ASPHALTIC SURFACE MILLING SEE CONSTRUCTION DETAILS

REMOVING ASPHALTIC SURFACE BUTT JOINTS (LOWER LAYER)

XXXXX SAWING ASPHALT

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN DETAIL	SHEET 78	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021204_PD.DWG PLOT DATE : 1/15/2015 4:38 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

2

TERMINAL HTCG TL-3 SOCKETED
STA 390+58.75, RT

HIGH TENSION CABLE GUARD
TL-3 SOCKETED
STA 391+10, 8' RT

REMOVE CABLE GUARD 3-STRANDS

3-2" HDPE CONDUIT

REMOVE CABLE GUARD 3-STRANDS

SIGN

USH 41/45

USH 41/45 SB

390 392 394 396 398 400 402 404

18" RCP

SIGN

USH 41/45

USH 41/45 NB

SIGN

SIGN

MAINTENANCE CROSSOVER
FOR FREEWAYS

TERMINAL HTCG TL-3 SOCKETED
STA 390+10, RT

HIGH TENSION CABLE GUARD
TL-3 SOCKETED
STA 389+59, 8' RT

EXISTING GUARDRAIL TO REMAIN

TERMINAL HTCG TL-3 SOCKETED
STA 393+60, RT

HIGH TENSION CABLE GUARD
TL-3 SOCKETED
STA 395+85, 8' RT

TERMINAL HTCG TL-3 SOCKETED
STA 395+30, RT

LEGEND

HIGH TENSION CABLE GUARD (3 STRAND)

MGS GUARDRAIL 3

REMOVING ASPHALTIC SURFACE MILLING
SEE CONSTRUCTION DETAILS

REMOVING ASPHALTIC SURFACE BUTT JOINTS
(LOWER LAYER)

XXXXX SAWING ASPHALT

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN DETAIL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021205_PD.DWG PLOT DATE : 1/15/2015 4:40 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

2

N

3-2" HDPE CONDUIT

WETLAND

SIGN

USH 41/45

USH 41/45 SB

406 408 410 412 414 416 418 420

18" RCP

18" RCP

USH 41/45

USH 41/45 NB

SIGN

SIGN

TERMINAL HTCG TL-3 SOCKETED
STA 414+07, RT

EXISTING HTCG
TL-3 SOCKETED
TO REMAIN

HIGH TENSION CABLE GUARD
TL-3 SOCKETED
STA 413+56, 8' RT

LEGEND

HIGH TENSION CABLE GUARD (3 STRAND)

MGS GUARDRAIL 3

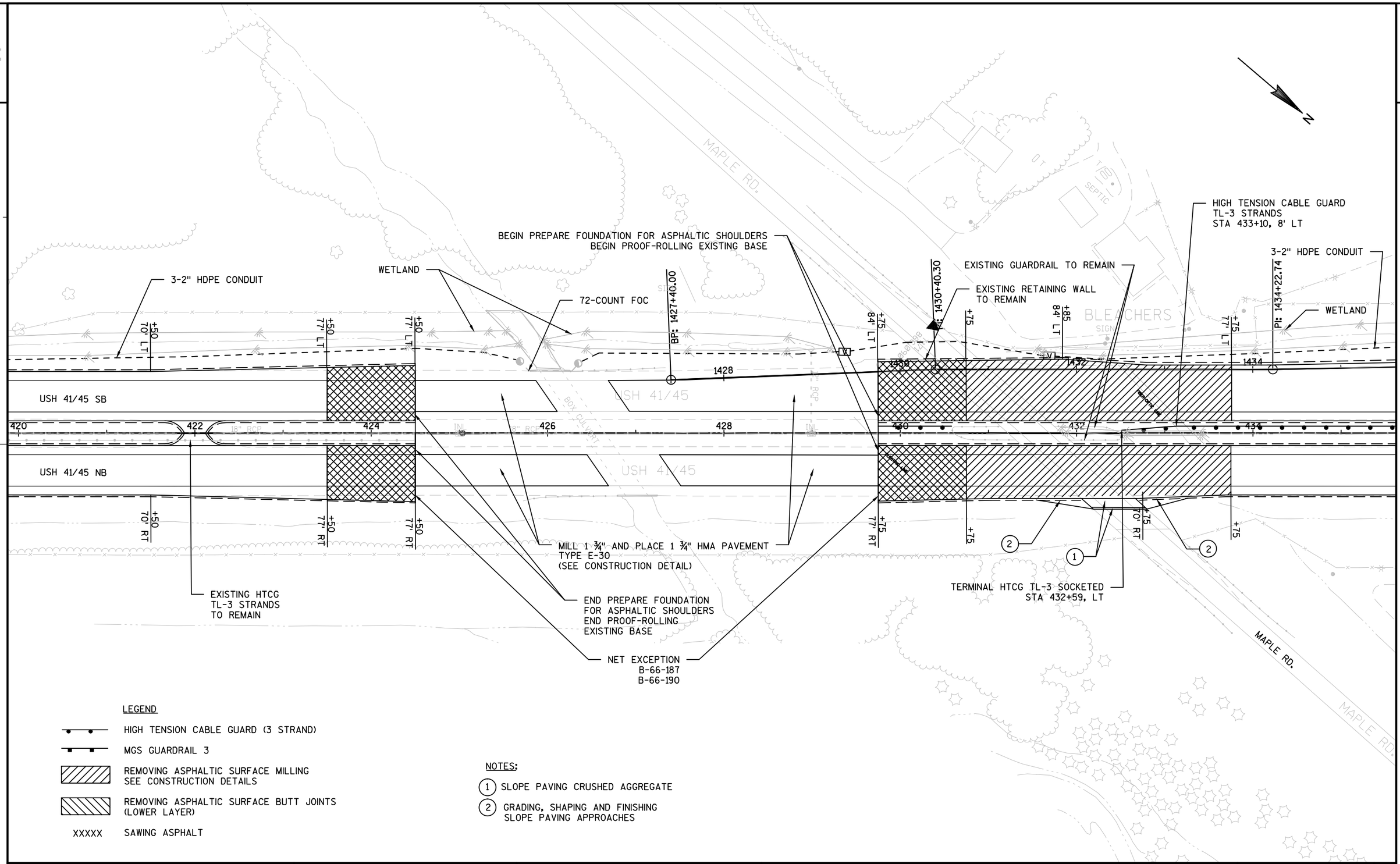
REMOVING ASPHALTIC SURFACE MILLING
SEE CONSTRUCTION DETAILS

REMOVING ASPHALTIC SURFACE BUTT JOINTS
(LOWER LAYER)

XXXXX SAWING ASPHALT

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN DETAIL	SHEET 80	E

2



LEGEND

- HIGH TENSION CABLE GUARD (3 STRAND)
- MGS GUARDRAIL 3
- REMOVING ASPHALTIC SURFACE MILLING SEE CONSTRUCTION DETAILS
- REMOVING ASPHALTIC SURFACE BUTT JOINTS (LOWER LAYER)
- XXXXX SAWING ASPHALT

NOTES:

(1) SLOPE PAVING CRUSHED AGGREGATE

(2) GRADING, SHAPING AND FINISHING SLOPE PAVING APPROACHES

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN DETAIL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021207_PD.DWG PLOT DATE : 2/27/2015 5:38 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

CONCRETE COLLAR

EXISTING PIPE
TO REMAIN

EL. 837.83

APRON ENDWALLS FOR
CPRC 30-INCH

3-2" HDPE CONDUIT

PT: 1450+6

CONCRETE CURB & GUTTER
TO REMAIN

PC: 1447+11.82

PT: 1445+95.74

WETLAND

WETLAND

SIGN

3-2" HDPE CONDUIT

PC: 1440+49.95

+25

+25

RAMP D

WETLAND

WETLAND

CONCRETE PAVEMENT REPLACEMENT SHES

USH 41/45 SB

30" RCP

12" RCP

12" RCP

+28

+60

BP: 1442+80.58

+85

+50

USH 41/45 NB

FLOW LINE

CONCRETE PAVEMENT REPLACEMENT SHES

REMOVE PARTIAL SMALL PIPE CULVERTS (8')
INSTALL APRON ENDWALLS FOR CULVERT
PIPE REINFORCED CONCRETE 30-INCH
INSTALL CONCRETE COLLAR SPECIAL

+75

+75

ASPHALTIC FLUME

PT: 1448+33.45

MGS GUARDRAIL
TERMINAL EAT

RAMP A

+22 22 LT

+25 27 LT

+22 16' RT

+75 16' RT

LEGEND

HIGH TENSION CABLE GUARD (3 STRAND)

MGS GUARDRAIL 3

REMOVING ASPHALTIC SURFACE MILLING
SEE CONSTRUCTION DETAILS

REMOVING ASPHALTIC SURFACE BUTT JOINTS
(LOWER LAYER)

XXXXX SAWING ASPHALT

FLOW LINE

0'-19'

3'

2'

EDGE OF SHOULDER

4%

VARIES 4%-6:1

4"

6:1

4:1 TYP
3:1 MAX

ASPHALTIC SHOULDER

ASPHALTIC SHOULDER TO REMAIN

6" BASE AGGREGATE DENSE 1 1/4-INCH

SECTION A-A

GRADING, SHAPING & FINISHING
BACK SLOPE AT STA 446+00, RT

ASPHALTIC FLUME

150'

FLOW LINE

0.3% MIN
0.5% TYP

SECTION B-B

ASPHALTIC FLUME

6" BASE AGGREGATE DENSE 1 1/4-INCH

STR. NO. S-66-238
OVERHEAD SIGN SUPPORT
STA 1451+50

EXISTING GUARDRAIL TO REMAIN

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN DETAIL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021208_PD.DWG PLOT DATE : 1/15/2015 4:43 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

RAMP GATE

RAMP D

RAMP GATE

CTH Y

EP: 1453+38

BP: 1452+36

PC: 1452+36

PT: 1454+12.45

RAMP WIDENING
SEE PAVEMENT DETAILS

3-2" HDPE CONDUIT

SLOPE INTERCEPT

+25 29' LT

+00 29' LT

+53 27' LT

WETLAND

PC: 1456+34.00

MGS GUARDRAIL TERMINAL EAT

CAUTION

GUARDRAIL TERMINAL
TYPE 2

+25 21' RT

+00 21' RT

+53 23' RT

CONCRETE CURB & GUTTER
TO REMAIN

STR. NO. S-66-XXX
OVERHEAD SIGN SUPPORT
STA 838+55

STR. NO. S-66-237
OVERHEAD SIGN SUPPORT
STA 1455+50

RAMP C

WETLAND

EXISTING GUARDRAIL TO REMAIN

CAUTION

WETLAND

3-2" HDPE CONDUIT

EP: 1463+64.45

USH 41/45 SB

14" GASMAIN PER 1108-00-70

20" GASMAIN PER 1108-00-70

EP: 1463+83.84

USH 41/45 NB

WETLAND

RAMP CLOSURE
BARRICADE RACK

WETLAND

SLOPE INTERCEPT

RAMP WIDENING
SEE PAVEMENT DETAILS

PC: 459+16.88

RAMP B

STR. NO. S-66-238
OVERHEAD SIGN SUPPORT
STA 1451+50

+75 33' LT

GUARDRAIL TERMINAL
TYPE 2

RAMP A

EXISTING GUARDRAIL
TO REMAIN

CONCRETE CURB & GUTTER
TO REMAIN

LANNON ROAD
STH 167

RAMP CLOSURE
BARRICADE RACK

WETLAND

NOTES:

1. SLOPE PAVING CRUSHED AGGREGATE
2. GRADING, SHAPING AND FINISHING SLOPE PAVING APPROACHES

LEGEND

- HIGH TENSION CABLE GUARD (3 STRAND)
- MGS GUARDRAIL 3
- REMOVING ASPHALTIC SURFACE MILLING SEE CONSTRUCTION DETAILS
- REMOVING ASPHALTIC SURFACE BUTT JOINTS (LOWER LAYER)
- XXXXX SAWING ASPHALT

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN DETAIL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021209_PD.DWG PLOT DATE : 1/15/2015 4:44 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

2

LEGEND

HIGH TENSION CABLE GUARD (3 STRAND)

MGS GUARDRAIL 3

REMOVING ASPHALTIC SURFACE MILLING
SEE CONSTRUCTION DETAILS

REMOVING ASPHALTIC SURFACE BUTT JOINTS
(LOWER LAYER)

XXXXX SAWING ASPHALT

N

WETLAND

WETLAND

3-2" HDPE CONDUIT

12" RCP

USH 41/45/STH 167

30" RCP

12" RCP

USH 41/45 SB

458 470 472 474 476 478 480 482

USH 41/45/STH 167

24" RCP

USH 41/45 NB

WETLAND

U/C

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN DETAIL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021210_PD.DWG PLOT DATE : 1/15/2015 4:45 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

N

3-2" HDPE CONDUIT

MGS TERMINAL TYPE 2

+57

+88

+87
72' LT

+40
74' LT

+33

MGS GUARDRAIL TERMINAL EAT

3-2" HDPE CONDUIT

WETLAND

USH 41/45 SB

12" RCP

482 484 486 488 490 492 494 496

USH 41/45 NB

41/45/STH 167

+07
74' RT

+00
74' RT

+53
72' RT

+88

+57

MAINTENANCE CROSSOVER
FOR FREEWAY

MGS GUARDRAIL TERMINAL EAT

EXISTING GUARDRAIL TO REMAIN

RIPRAP

MEQUON RD.

MH

W

XXXXX

LEGEND

HIGH TENSION CABLE GUARD (3 STRAND)

MGS GUARDRAIL 3

REMOVING ASPHALTIC SURFACE MILLING
SEE CONSTRUCTION DETAILS

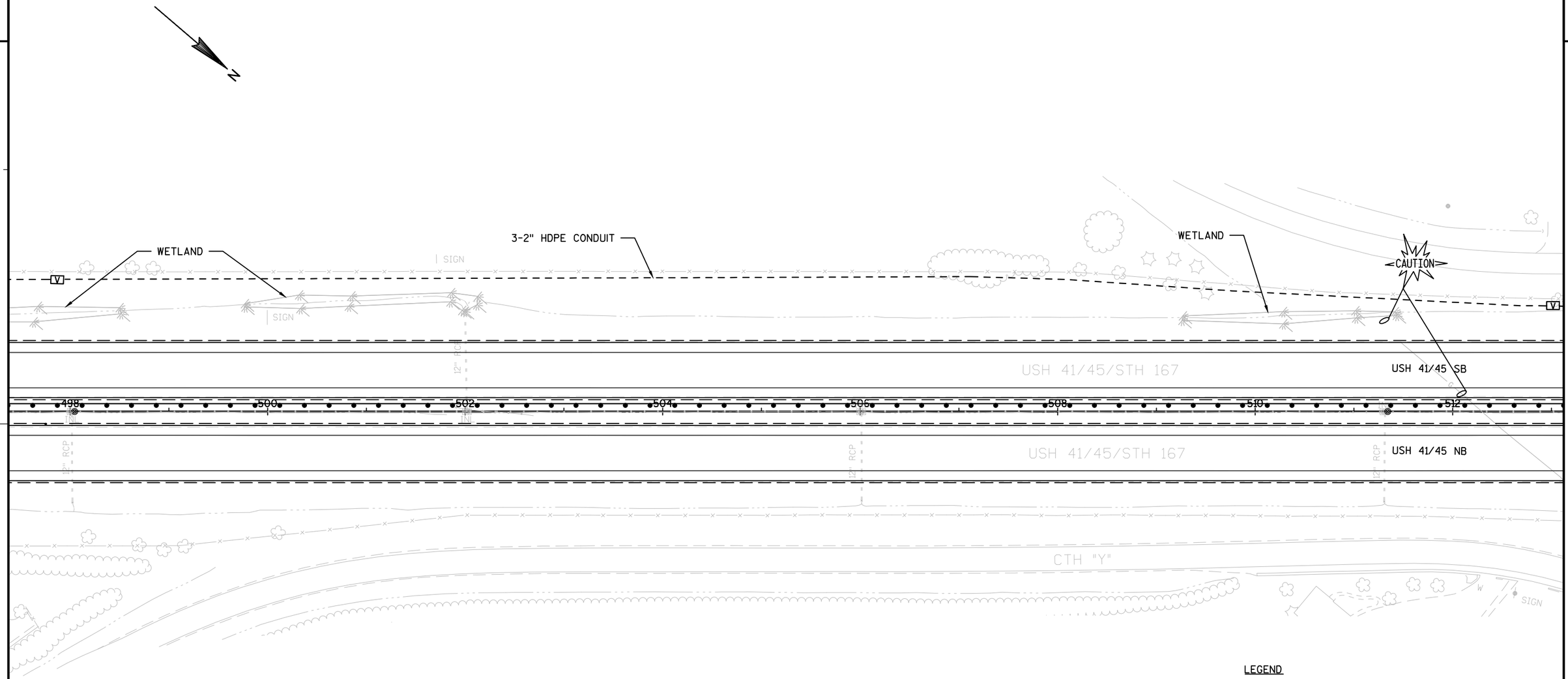
REMOVING ASPHALTIC SURFACE BUTT JOINTS
(LOWER LAYER)

XXXXX SAWING ASPHALT

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN DETAIL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021211_PD.DWG PLOT DATE : 1/15/2015 4:46 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2



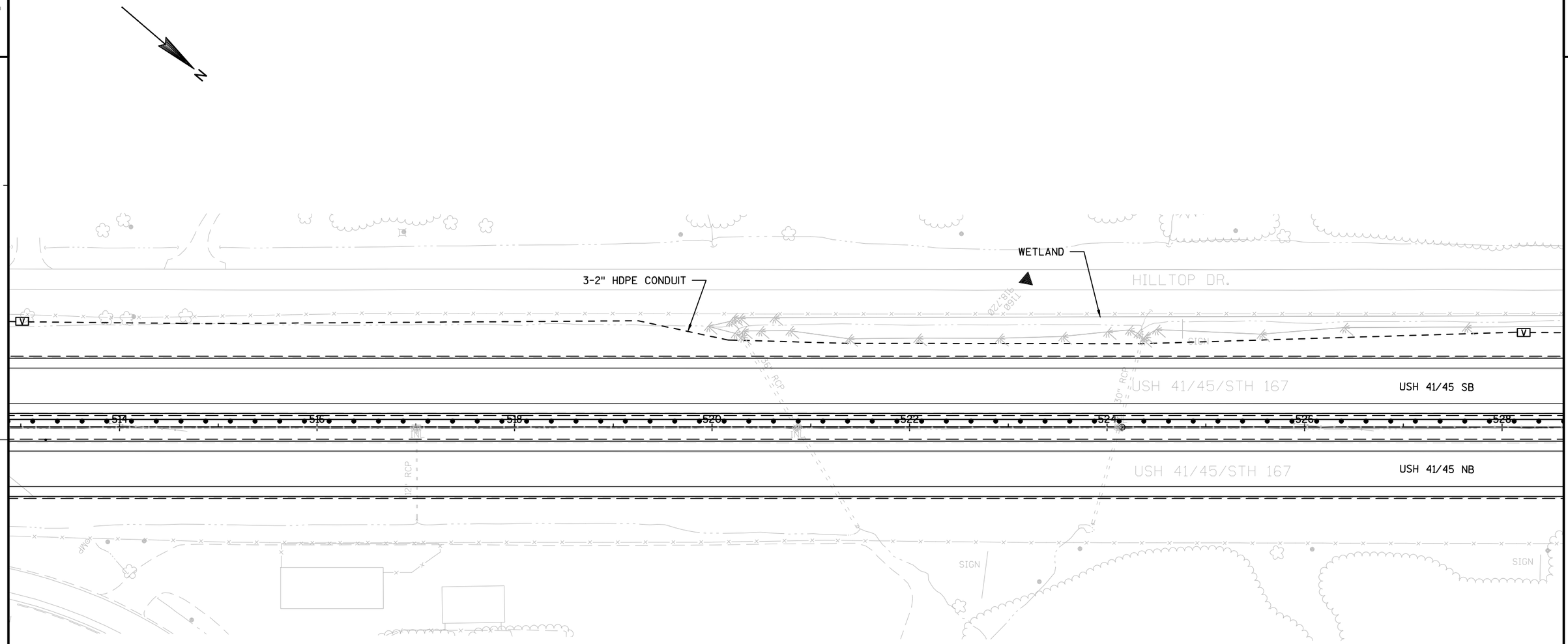
LEGEND

- HIGH TENSION CABLE GUARD (3 STRAND)
- MGS GUARDRAIL 3
- REMOVING ASPHALTIC SURFACE MILLING SEE CONSTRUCTION DETAILS
- REMOVING ASPHALTIC SURFACE BUTT JOINTS (LOWER LAYER)
- XXXXX SAWING ASPHALT

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN DETAIL	SHEET 86	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021212_PD.DWG PLOT DATE : 1/15/2015 4:47 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2



LEGEND

- HIGH TENSION CABLE GUARD (3 STRAND)
- MGS GUARDRAIL 3
- REMOVING ASPHALTIC SURFACE MILLING SEE CONSTRUCTION DETAILS
- REMOVING ASPHALTIC SURFACE BUTT JOINTS (LOWER LAYER)
- XXXXX SAWING ASPHALT

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN DETAIL	SHEET 87	E

2

2

N

WETLAND

3-2" HDPE CONDUIT

SIGN

SIREN

HILLTOP DR.

SIGN

12" RCP

USH 41/45 SB

USH 41/45/STH 1

530 532 534 536 538 540 542 544

INL

USH 41/45 NB

USH 41/45/STH

SIGN

SIGN

SIGN

SEPTIC

LEGEND

HIGH TENSION CABLE GUARD (3 STRAND)

MGS GUARDRAIL 3

REMOVING ASPHALTIC SURFACE MILLING
SEE CONSTRUCTION DETAILS

REMOVING ASPHALTIC SURFACE BUTT JOINTS
(LOWER LAYER)

XXXXX SAWING ASPHALT

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN DETAIL	SHEET 88	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021214_PD.DWG PLOT DATE : 1/15/2015 4:49 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

2

N

3-2" HDPE CONDUIT

V

2

+79

TH 167

USH 41/45 SB

30" RCP

544 546 548 550 552 554 556 558

TH 167

USH 41/45 NB

12" RCP

12" RCP

12" RCP

SIGN

SIGN

SIGN

SIGN

SIGN

SIGN

+20

2

1

FRIESTADT RD.

LEGEND

HIGH TENSION CABLE GUARD (3 STRAND)

MGS GUARDRAIL 3

REMOVING ASPHALTIC SURFACE MILLING
SEE CONSTRUCTION DETAILS

REMOVING ASPHALTIC SURFACE BUTT JOINTS
(LOWER LAYER)

XXXXX SAWING ASPHALT

NOTES:

1. SLOPE PAVING CRUSHED AGGREGATE
2. GRADING, SHAPING AND FINISHING SLOPE PAVING APPROACHES

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN DETAIL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021215_PD.DWG PLOT DATE : 1/15/2015 4:50 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

3-2" HDPE, SPECIAL

FRIEDSTADT RD.

CAUTION

3-2" HDPE CONDUIT

SLOPE INTERCEPT

MAINTENANCE CROSSOVER FOR FREEWAY

+96 BEGIN WEDGING LAYER #1

USH 41/45 SB

USH 41/45 NB

MGS GUARDRAIL TERMINAL EAT

10' RT +00

12' RT +53

EXISTING GUARDRAIL TO REMAIN

+29

+52

560 562 564 566 568 570 572 574

SIGN

WALLS

INL

W

12" RCP

42" RCP

LEGEND

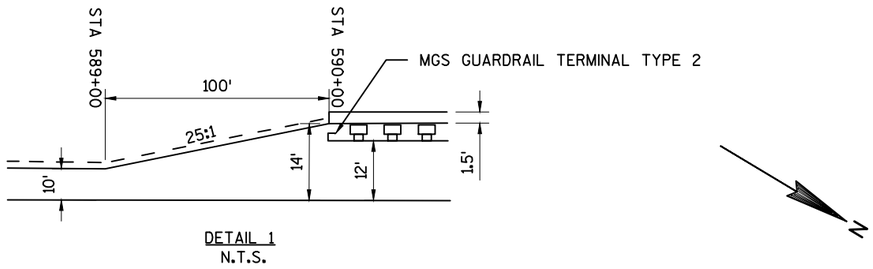
- HIGH TENSION CABLE GUARD (3 STRAND)
- MGS GUARDRAIL 3
- REMOVING ASPHALTIC SURFACE MILLING SEE CONSTRUCTION DETAILS
- REMOVING ASPHALTIC SURFACE BUTT JOINTS (LOWER LAYER)
- XXXXX SAWING ASPHALT

NOTES:

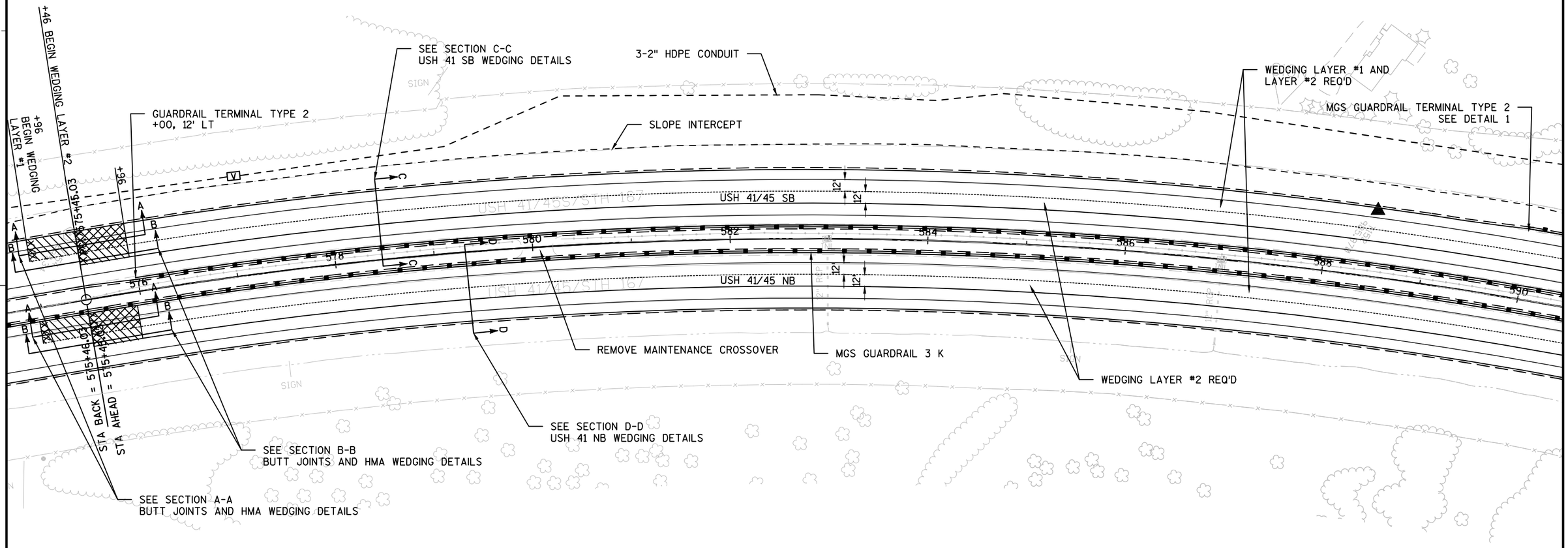
1. SLOPE PAVING CRUSHED AGGREGATE
2. GRADING, SHAPING AND FINISHING SLOPE PAVING APPROACHES

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN DETAIL	SHEET 90	E

2



DETAIL 1
N.T.S.



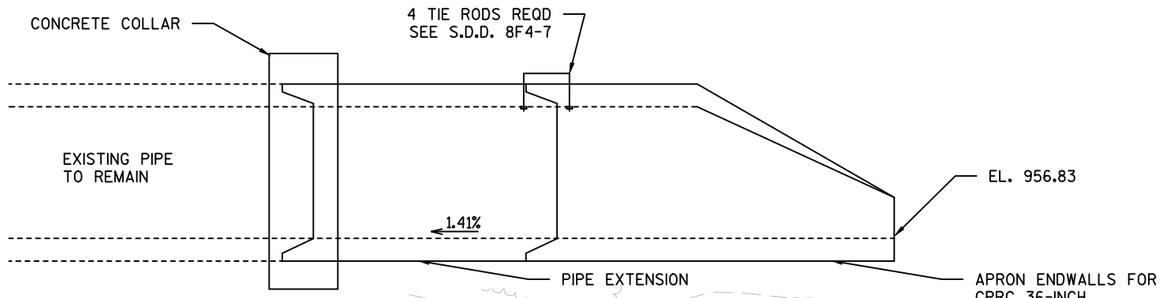
LEGEND

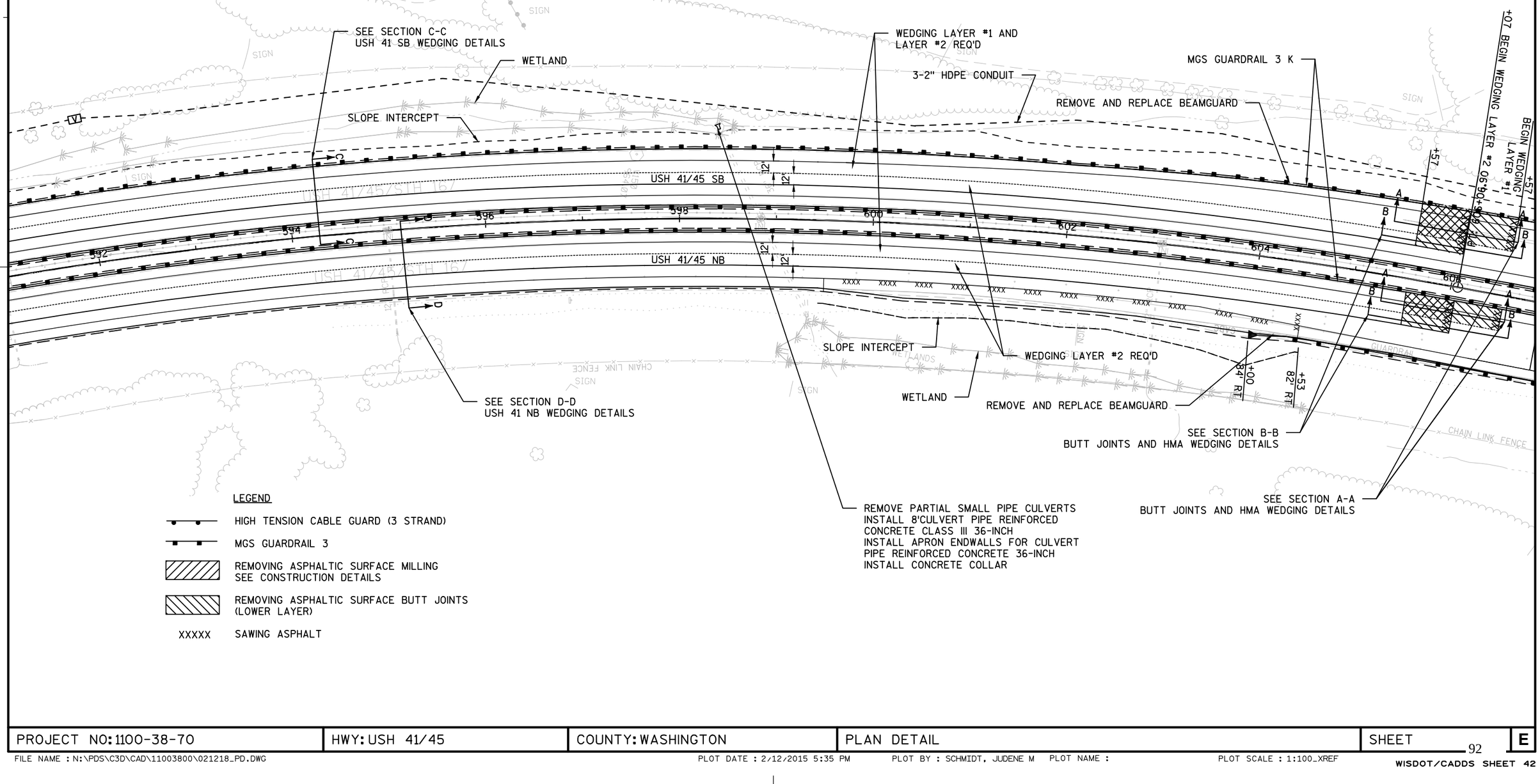
- HIGH TENSION CABLE GUARD (3 STRAND)
- MGS GUARDRAIL 3
- REMOVING ASPHALTIC SURFACE MILLING SEE CONSTRUCTION DETAILS
- REMOVING ASPHALTIC SURFACE BUTT JOINTS (LOWER LAYER)
- XXXXX SAWING ASPHALT

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN DETAIL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021217_PD.DWG PLOT DATE : 2/12/2015 5:29 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2



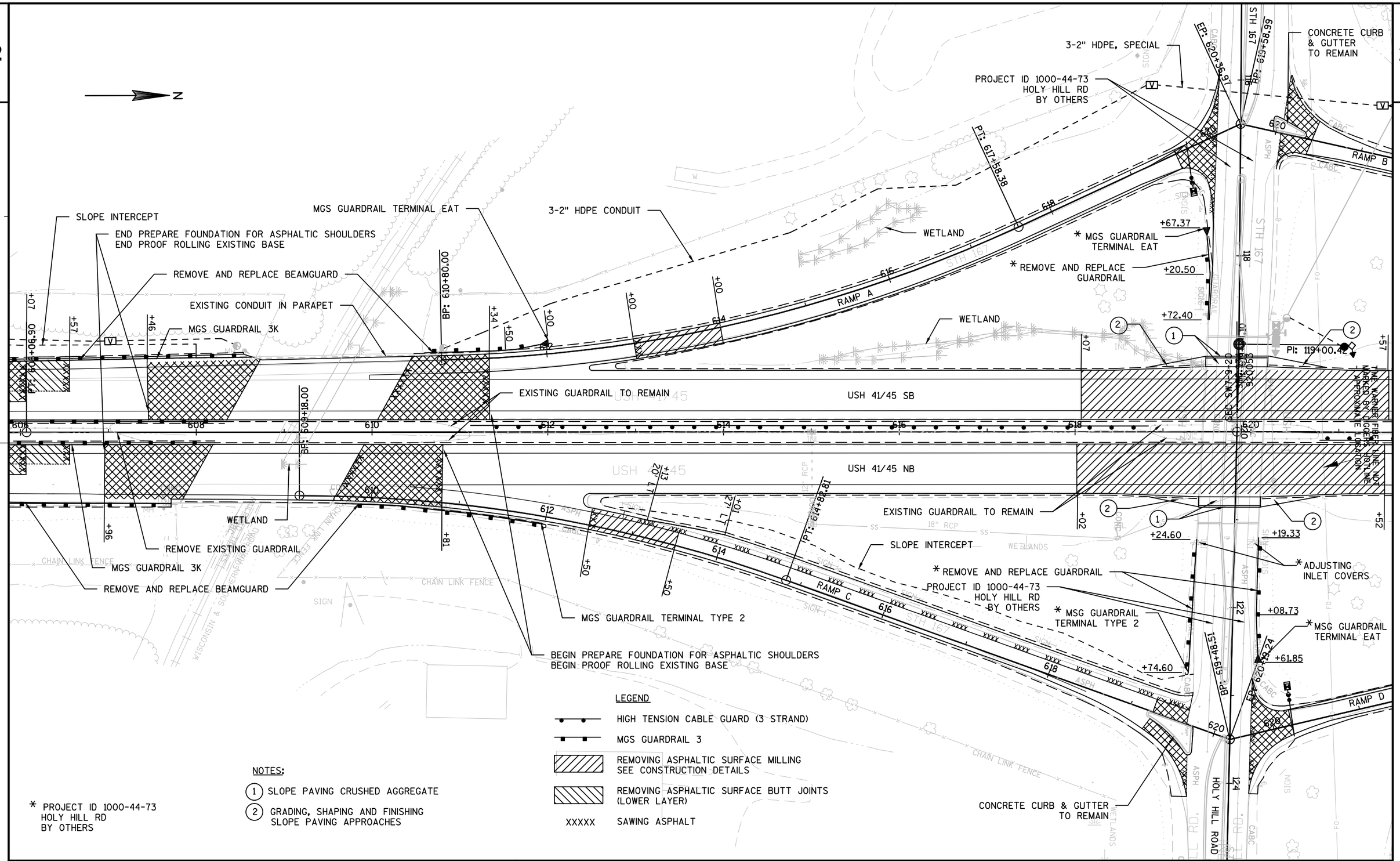


LEGEND

- HIGH TENSION CABLE GUARD (3 STRAND)
- MGS GUARDRAIL 3
- REMOVING ASPHALTIC SURFACE MILLING SEE CONSTRUCTION DETAILS
- REMOVING ASPHALTIC SURFACE BUTT JOINTS (LOWER LAYER)
- XXXXX SAWING ASPHALT

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN DETAIL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021218_PD.DWG PLOT DATE : 2/12/2015 5:35 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1:100_XREF



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN DETAIL	SHEET 93	E

2

2

N

3-2" HDPE CONDUIT

RAMP B

RAMP D

WETLAND

WETLAND

WETLAND

PC: 630+54.35

EP: 634+29.99

PC: 628+94.07

EP: 632+99.99

USH 41/45

USH 41/45 SB

USH 41/45

USH 41/45 NB

622 624 626 628 630 632 634 636

+57

+52

+00

+00

+00

+00

SIGN

12" RCP

24" RCP

12" RCP

12" RCP

LEGEND

HIGH TENSION CABLE GUARD (3 STRAND)

MGS GUARDRAIL 3

REMOVING ASPHALTIC SURFACE MILLING
SEE CONSTRUCTION DETAILS

REMOVING ASPHALTIC SURFACE BUTT JOINTS
(LOWER LAYER)

XXXXX SAWING ASPHALT

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN DETAIL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021220_PD.DWG PLOT DATE : 1/15/2015 4:52 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

2

N

WETLAND

SIGN

SIGN

SIGN

SIGN

USH 41/45

USH 41/45 SB

SEC W7-9-20
918.648
920.042

638 640 642 644 646 648 650 652

USH 41/45

USH 41/45 NB

12" RCP

12" RCP

12" RCP

SIGN

SIGN

SIGN

WETLAND

3-2" HDPE CONDUIT

WETLAND

V145
905.82

LEGEND

HIGH TENSION CABLE GUARD (3 STRAND)

MGS GUARDRAIL 3

REMOVING ASPHALTIC SURFACE MILLING
SEE CONSTRUCTION DETAILS

REMOVING ASPHALTIC SURFACE BUTT JOINTS
(LOWER LAYER)

XXXXX SAWING ASPHALT

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN DETAIL	SHEET 95	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021221_PD.DWG PLOT DATE : 1/15/2015 4:53 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

N

T144
907.410

SIGN

SIGN

MAINTENANCE CROSSOVER
FOR FREEWAY

USH 41/45 SB

USH 41/45

652 654 656 658 659 662 664 666

USH 41/45 NB

USH 41/45

SIGN

3-2" HDPE CONDUIT

WETLAND

+94 BEGIN WEDGING LAYER #1

+44 BEGIN WEDGING LAYER #2

+94 BEGIN WEDGING LAYER #3

+44

SEE SECTION E-E
USH 41 SB WEDGING DETAILS

SIGN

E

E

12'

12'

10'

WEDGING LAYER #3 REQ'D

SIGN

WEDGING LAYERS #2 & 3 REQ'D

WEDGING LAYERS #1, 2, & 3 REQ'D

LEGEND

HIGH TENSION CABLE GUARD (3 STRAND)

MGS GUARDRAIL 3

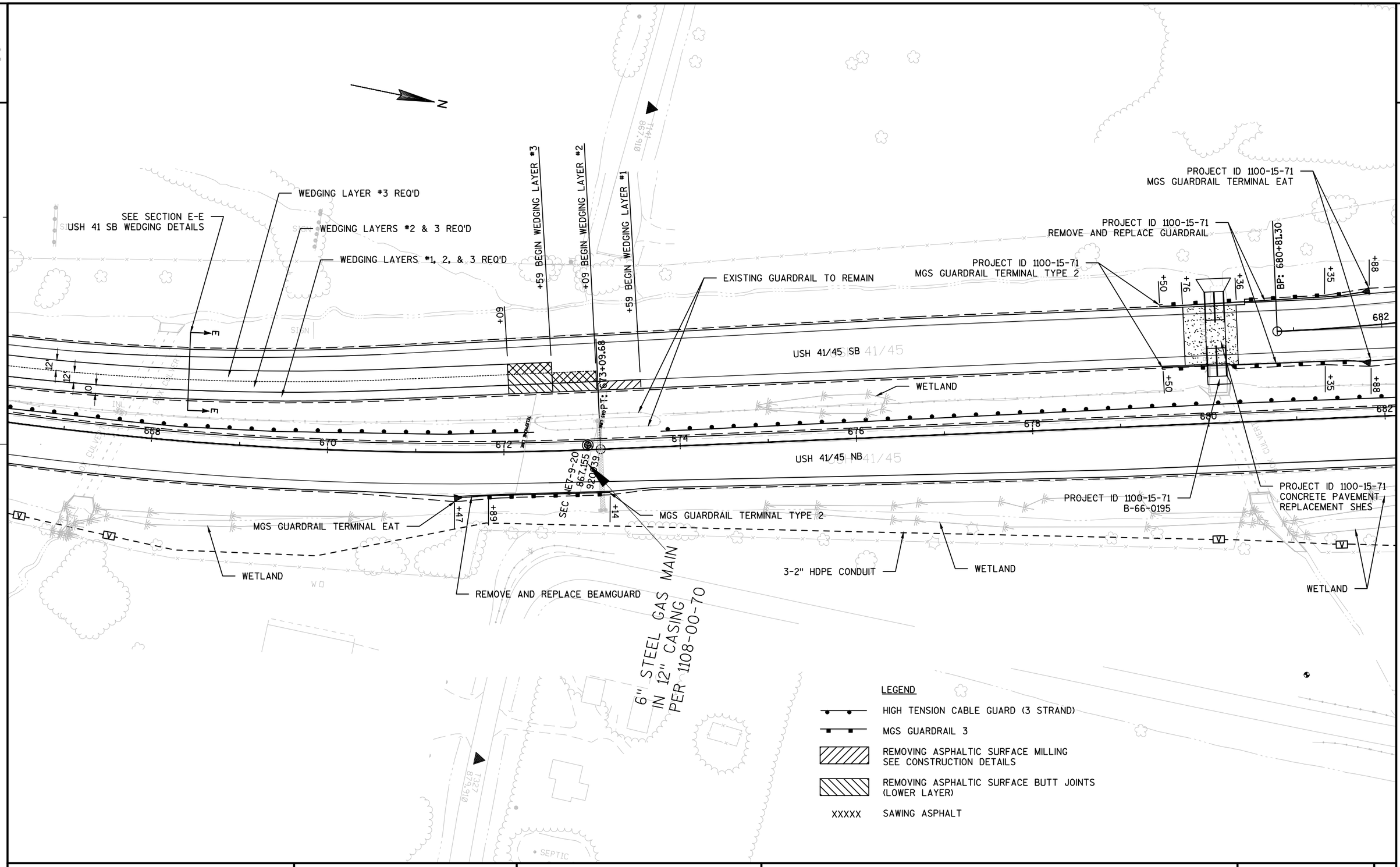
REMOVING ASPHALTIC SURFACE MILLING
SEE CONSTRUCTION DETAILS

REMOVING ASPHALTIC SURFACE BUTT JOINTS
(LOWER LAYER)

XXXXX SAWING ASPHALT

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN DETAIL	SHEET 96	E

2



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN DETAIL	SHEET 97	E

2

PROJECT ID 1100-15-71
MGS GUARDRAIL TERMINAL EAT

PT: 686+42.15

EXISTING GUARDRAIL TO REMAIN

BP: 685+19.67

PT: 687+61.67

PC: 690+33.62

PC: 693+91.12

END PROJECT
STA 694+00

USH 45 SB

USH 41 SB

USH 41 NB

USH 45 NB

WETLAND

MGS GUARDRAIL TERMINAL TYPE 2

MGS GUARDRAIL TERMINAL EAT

REMOVE AND REPLACE BEAMGUARD

3-2" HDPE CONDUIT

END PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS
END PROOF-ROLLING EXISTING BASE

LEGEND

- HIGH TENSION CABLE GUARD (3 STRAND)
- MGS GUARDRAIL 3
- REMOVING ASPHALTIC SURFACE MILLING SEE CONSTRUCTION DETAILS
- REMOVING ASPHALTIC SURFACE BUTT JOINTS (LOWER LAYER)
- XXXXX SAWING ASPHALT

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN DETAIL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021224_PD.DWG PLOT DATE : 2/27/2015 10:18 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

2

696 698 700 USH 45 SB 702 704 706 708 710

U.S.H. 45 USH 45

SIGN

U.S.H. 41 USH 41

696 698 700 702 704 USH 41 NB

USH 41 SB

WETLAND

EP: 705+00.01

PT: 708+82.51

696 698 700 702 704 706 708 710

U.S.H. 45 USH 45

SIGN

3-2" HDPE CONDUIT

WETLAND

WETLAND

WETLAND

696 698 700 702 704 706 708

USH 45 NB

PC: 705+54.46

LEGEND

HIGH TENSION CABLE GUARD (3 STRAND)

MGS GUARDRAIL 3

REMOVING ASPHALTIC SURFACE MILLING SEE CONSTRUCTION DETAILS

REMOVING ASPHALTIC SURFACE BUTT JOINTS (LOWER LAYER)

XXXXX SAWING ASPHALT

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN DETAIL	SHEET 99	E

2

2

LEGEND

HIGH TENSION CABLE GUARD (3 STRAND)

MGS GUARDRAIL 3

REMOVING ASPHALTIC SURFACE MILLING
SEE CONSTRUCTION DETAILS

REMOVING ASPHALTIC SURFACE BUTT JOINTS
(LOWER LAYER)

XXXXX SAWING ASPHALT

N

USH 41

USH 41 SB

USH 41

710 712 714 716 718 720 722 724

USH 41

USH 41 NB

USH 41

18" RCP

30" RCP

SIGN

RIPRAP

RIPRAP

RIPRAP

SIGN

712

714

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN DETAIL	SHEET 100	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021226_PD.DWG PLOT DATE : 1/15/2015 4:55 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

2

USH 41 SB

USH 41

USH 41

12" RCP

12" RCP

12" RCP

726 728 730 732 734 736 738 740

USH 41 NB

USH 41

LEGEND

HIGH TENSION CABLE GUARD (3 STRAND)

MGS GUARDRAIL 3

REMOVING ASPHALTIC SURFACE MILLING
SEE CONSTRUCTION DETAILS

REMOVING ASPHALTIC SURFACE BUTT JOINTS
(LOWER LAYER)

XXXXX SAWING ASPHALT

SEC N1-9-19
940.572
919012

SEC S36-9-19
940.791
1019168

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN DETAIL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021227_PD.DWG PLOT DATE : 1/15/2015 4:56 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

2

STH 145

PHONE

SIGN

RAMP

SCALE

SIGN RAMP

WALLS

SIGN

RIPRAP

USH 41

USH 41 SB

742 744 746 748 750 752 754 756

USH 41

USH 41 NB

USH 41

STH 145

SIGN

STH 145

12" RCP

LEGEND

HIGH TENSION CABLE GUARD (3 STRAND)

MGS GUARDRAIL 3

REMOVING ASPHALTIC SURFACE MILLING
SEE CONSTRUCTION DETAILS

REMOVING ASPHALTIC SURFACE BUTT JOINTS
(LOWER LAYER)

XXXXX SAWING ASPHALT

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN DETAIL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021228_PD.DWG PLOT DATE : 1/15/2015 4:58 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

2

N

USH 41

USH 41 SB

USH 41 NB

USH 41

USH 41

USH 41

2

N

3-2" HDPE CONDUIT

SLOPE INTERCEPT

STR. NO. S-66-236
OVERHEAD SIGN SUPPORT
STA 356+80

RAMP WIDENING
SEE PAVEMENT DETAILS

STR. NO. S-66-607
OVERHEAD SIGN SUPPORT
STA 25+00

WETLAND

BP: 23+96.00

CTH Q

COUNTY LINE ROAD

TEMMER ROAD

RICHFIELD WAY

BP: 353+50.50

3-2" HDPE, SPECIAL

RAMP GATE

PT: 353+85.96

RAMP GATE

WETLAND

3-2" HDPE CONDUIT

PC: 350+95.13

PT: 347+12.21

RAMP C

RAMP B

RAMP D

USH 41/45 NB

USH 41/45 SB

PC: 352+92.20

LEGEND

- HIGH TENSION CABLE GUARD (3 STRAND)
- MGS GUARDRAIL 3
- REMOVING ASPHALTIC SURFACE MILLING SEE CONSTRUCTION DETAILS
- REMOVING ASPHALTIC SURFACE BUTT JOINTS (LOWER LAYER)
- XXXXX SAWING ASPHALT

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN DETAIL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021230_PD.DWG PLOT DATE : 1/15/2015 5:00 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

N

RAMP B

350

348

PT: 348+84.46

RAMP GATE

+60

PC: 346+30.61

346

BP: 345+87.85

344

PC: 40+51.00

PC: 41+72.50

36

38

40

42

44

46

48

50

CTH Q

PT: 46+97.33

PC: 50+70.70

348

346

344

RAMP A

RAMP D

BEGIN PROJECT
STA 345+00

USH 41/45 NB

USH 41/45 SB

PT: 347+12.21

3-2" HDPE CONDUIT

STR. NO. S-67-952
OVERHEAD SIGN SUPPORT
STA 342+00

PT: 341+28.03

LEGEND

- HIGH TENSION CABLE GUARD (3 STRAND)
- MGS GUARDRAIL 3
- REMOVING ASPHALTIC SURFACE MILLING SEE CONSTRUCTION DETAILS
- REMOVING ASPHALTIC SURFACE BUTT JOINTS (LOWER LAYER)
- XXXXX SAWING ASPHALT

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN DETAIL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021231_PD.DWG PLOT DATE : 1/15/2015 5:01 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

3-2" HDPE CONDUIT

RAMP WIDENING
SEE PAVEMENT DETAILS

PT: 1454+12.45

SLOPE INTERCEPT

STR. NO. S-66-237
OVERHEAD SIGN SUPPORT
STA 1455+50

RAMP WIDENING
SEE PAVEMENT DETAILS

SLOPE INTERCEPT

BP: 830+00
BB: 830+00.19

PC: 1452+59.00
BP: 1452+47.64

EP: 1453+06.29

3-2" HDPE, SPECIAL

RAMP GATE

RAMP GATE

CONCRETE CURB & GUTTER
TO REMAIN

PT: 1450+67.50

3-2" HDPE CONDUIT

STR. NO. S-66-238
OVERHEAD SIGN SUPPORT
STA 1451+50

PT: 1448+33.45

CTH Y

CTH "Y"

USH 41/45 SB

USH 41/45 NB

RAMP A

RAMP B

RAMP C

RAMP D

LEGEND

- HIGH TENSION CABLE GUARD (3 STRAND)
- MGS GUARDRAIL 3
- REMOVING ASPHALTIC SURFACE MILLING SEE CONSTRUCTION DETAILS
- REMOVING ASPHALTIC SURFACE BUTT JOINTS (LOWER LAYER)
- XXXXX SAWING ASPHALT

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN DETAIL	SHEET E

FILE NAME : N:\PDS\C3D\CAD\11003800\021232_PD.DWG PLOT DATE : 1/15/2015 5:02 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

USH 41/45 SB

USH 41/45 NB

RAMP B

454

SLOPE INTERCEPT

RAMP WIDENING
SEE PAVEMENT DETAILS

STR. NO. S-66-239
OVERHEAD SIGN SUPPORT
STA 846+00

840 842 844 846 848 850 852 854

LANNON ROAD/ STH 167

SLOPE INTERCEPT

CONCRETE CURB & GUTTER
TO REMAIN

1452

1450 RAMP A

STR. NO. S-66-238
OVERHEAD SIGN SUPPORT
STA 1451+50

PT: 1448+33.45

LEGEND

- HIGH TENSION CABLE GUARD (3 STRAND)
- MGS GUARDRAIL 3
- REMOVING ASPHALTIC SURFACE MILLING SEE CONSTRUCTION DETAILS
- REMOVING ASPHALTIC SURFACE BUTT JOINTS (LOWER LAYER)
- XXXXX SAWING ASPHALT

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN DETAIL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021233_PD.DWG PLOT DATE : 1/15/2015 5:03 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WI Dept. of Transportation
3502 Kinsman Blvd.
Madison, WI 53704

WISDOT PROJECT ID: 1100-38-00
WISDOT STRUCTURE ID:

BORING ID: 14
PAGE NO: 1 of 1

WISDOT PROJECT NAME: Washington Countyline - USH 41/45 Split	CONSULTANT:	CONSULTANT PROJECT NO:	LATITUDE: / LONGITUDE:
ROADWAY NAME:	DRILLING CONTRACTOR: PSI	DRILLING CONTRACTOR PROJECT NO:	NORTHING: 100830.3602 / EASTING: 377616.9352
DATE STARTED: 12/10/13	CREW CHIEF:	DRILL RIG:	COORDINATE SYSTEM: WCCS
DATE COMPLETED: 12/10/13	LOGGED BY:	HOLE SIZE: 4 in	HORIZONTAL DATUM: / VERTICAL DATUM:
COUNTY: Washington	LOG QC BY: A. Zimmer	HAMMER TYPE: Automatic	STREAMBED ELEVATION: NA
STATION: 361+00 / OFFSET: Inside Shoulder	TOWNSHIP: / RANGE: / SECTION: / 1/4 SECTION: / 1/4 1/4 SECTION:		SURFACE ELEVATION:

SAMPLE TYPE NUMBER	RECOVERY (in) (RQD)	Moisture	BLOW COUNTS (N VALUE)	Depth (ft)	Graphic	Soil Description/ Comments	USCS / AASHTO	Strength Qp (tsf)	Liquid Limit (%)	Plasticity Index (%)	Boulders	Drilling Method	Notes
						12" Asphalt							
				1.0		FINE TO COARSE SAND & GRAVEL, brown, trace to little silt, fill							
SS 1	12	M 6	6-6-5-10 (11)	2.0		SILTY CLAY, brown/gray mottled, trace fine to coarse sand & gravel							
SS 2	18	21	4-6-10-11 (16)					3.5					
				5.0		End of Boring at 5.0 ft.							

WATER LEVEL & CAVE-IN OBSERVATION DATA

▽	WATER ENCOUNTERED DURING DRILLING: NMR	CAVE - IN DEPTH AT COMPLETION: NMR		WET ☐ DRY ☐
▼	WATER LEVEL AT COMPLETION: NMR	CAVE - IN DEPTH AFTER 0 HOURS: NMR		WET ☐ DRY ☐

NOTES: 1) Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.
2) NE = Not Encountered; NMR = No Measurement Recorded

WI Dept. of Transportation
3502 Kinsman Blvd.
Madison, WI 53704

WISDOT PROJECT ID: 1100-38-00
WISDOT STRUCTURE ID:

BORING ID: 15
PAGE NO: 1 of 1

WISDOT PROJECT NAME: Washington Countyline - USH 41/45 Split	CONSULTANT:	CONSULTANT PROJECT NO:	LATITUDE: / LONGITUDE:
ROADWAY NAME:	DRILLING CONTRACTOR: PSI	DRILLING CONTRACTOR PROJECT NO:	NORTHING: 102345.6063 / EASTING: 376312.2554
DATE STARTED: 12/10/13	CREW CHIEF:	DRILL RIG:	COORDINATE SYSTEM: WCCS
DATE COMPLETED: 12/10/13	LOGGED BY:	HOLE SIZE: 4 in	HORIZONTAL DATUM: / VERTICAL DATUM:
COUNTY: Washington	LOG QC BY: A. Zimmer	HAMMER TYPE: Automatic	STREAMBED ELEVATION: NA
STATION: 381+00 / OFFSET: Inside Shoulder	TOWNSHIP: / RANGE: / SECTION: / 1/4 SECTION: / 1/4 1/4 SECTION:		SURFACE ELEVATION:

SAMPLE TYPE NUMBER	RECOVERY (in) (RQD)	Moisture	BLOW COUNTS (N VALUE)	Depth (ft)	Graphic	Soil Description/ Comments	USCS / AASHTO	Strength Qp (tsf)	Liquid Limit (%)	Plasticity Index (%)	Boulders	Drilling Method	Notes
						5 1/2" Asphalt							
				0.5		SILTY CLAY, brown, trace fine to coarse sand & gravel, fill							
SS 1	12	M 17	11-6-4-6 (10)					1.75	29	15			
				3.0		SILTY CLAY, brown/dark brown mottled, trace fine to coarse sand & gravel, fill							
SS 2	18	15	4-7-11-12 (18)					4.5					
				5.0		End of Boring at 5.0 ft.							

WATER LEVEL & CAVE-IN OBSERVATION DATA

▽	WATER ENCOUNTERED DURING DRILLING: NMR	CAVE - IN DEPTH AT COMPLETION: NMR		WET ☐ DRY ☐
▼	WATER LEVEL AT COMPLETION: NMR	CAVE - IN DEPTH AFTER 0 HOURS: NMR		WET ☐ DRY ☐

NOTES: 1) Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.
2) NE = Not Encountered; NMR = No Measurement Recorded

C:\USERS\DOTAEZ\DOCUMENTS\A PROJECTS\WASHINGTON\USH 41\1100-38-00 - USH 41 - COUNTY LINE TO 41-45 SPLIT\1100-38-00 US 41- 45 (MILWAUKEE COUNTYLINE TO STH 145) MILWAUKEE CO.GPJ Washington Countyline - USH 41/45 Split 6/2013

WI Dept. of Transportation
3502 Kinsman Blvd.
Madison, WI 53704

WISDOT PROJECT ID: 1100-38-00
WISDOT STRUCTURE ID:

BORING ID: 16
PAGE NO: 1 of 1

WISDOT PROJECT NAME: Washington Countyline - USH 41/45 Split
ROADWAY NAME:
DATE STARTED: 12/10/13
DATE COMPLETED: 12/10/13
COUNTY: Washington
STATION: 401+00 OFFSET: Inside Shoulder

CONSULTANT:
CONSULTANT PROJECT NO:
DRILLING CONTRACTOR: PSI
DRILLING CONTRACTOR PROJECT NO:
CREW CHIEF:
DRILL RIG:
LOGGED BY:
HOLE SIZE: 4 in
LOG QC BY: A. Zimmer
HAMMER TYPE: Automatic
TOWNSHIP: RANGE: SECTION: 1/4 SECTION: 1/4 1/4 SECTION:

LATITUDE:
LONGITUDE:
NORTHING: 103863.0179
EASTING: 375009.3886
COORDINATE SYSTEM: WCCS
HORIZONTAL DATUM:
VERTICAL DATUM:
STREAMBED ELEVATION: NA
SURFACE ELEVATION:

SAMPLE TYPE NUMBER	RECOVERY (in) (RQD)	Moisture	BLOW COUNTS (N VALUE)	Depth (ft)	Graphic	Soil Description/ Comments	USCS / AASHTO	Strength Qp (tsf)	Liquid Limit (%)	Plasticity Index (%)	Boulders	Drilling Method	Notes
						5" Asphalt							
				0.5		FINE SAND, brown, trace to little silt, trace medium to coarse sand, fill							
SS 1	18	M 14	8-4-4-4 (8)	2.5		SILTY CLAY, brown, trace fine to coarse sand & gravel							
SS 2	18	17	8-5-4-4 (9)					4.5					
				5.0		End of Boring at 5.0 ft.							

WATER LEVEL & CAVE-IN OBSERVATION DATA

▽	WATER ENCOUNTERED DURING DRILLING: NMR	▨	CAVE - IN DEPTH AT COMPLETION: NMR	WET ☐ DRY ☐
▼	WATER LEVEL AT COMPLETION: NMR	■	CAVE - IN DEPTH AFTER 0 HOURS: NMR	WET ☐ DRY ☐

NOTES: 1) Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.
2) NE = Not Encountered; NMR = No Measurement Recorded

WI Dept. of Transportation
3502 Kinsman Blvd.
Madison, WI 53704

WISDOT PROJECT ID: 1100-38-00
WISDOT STRUCTURE ID:

BORING ID: 17
PAGE NO: 1 of 1

WISDOT PROJECT NAME: Washington Countyline - USH 41/45 Split
ROADWAY NAME:
DATE STARTED: 12/10/13
DATE COMPLETED: 12/10/13
COUNTY: Washington
STATION: 421+00 OFFSET: Inside Shoulder

CONSULTANT:
CONSULTANT PROJECT NO:
DRILLING CONTRACTOR: PSI
DRILLING CONTRACTOR PROJECT NO:
CREW CHIEF:
DRILL RIG:
LOGGED BY:
HOLE SIZE: 4 in
LOG QC BY: A. Zimmer
HAMMER TYPE: Automatic
TOWNSHIP: RANGE: SECTION: 1/4 SECTION: 1/4 1/4 SECTION:

LATITUDE:
LONGITUDE:
NORTHING: 105380.4295
EASTING: 373706.5217
COORDINATE SYSTEM: WCCS
HORIZONTAL DATUM:
VERTICAL DATUM:
STREAMBED ELEVATION: NA
SURFACE ELEVATION:

SAMPLE TYPE NUMBER	RECOVERY (in) (RQD)	Moisture	BLOW COUNTS (N VALUE)	Depth (ft)	Graphic	Soil Description/ Comments	USCS / AASHTO	Strength Qp (tsf)	Liquid Limit (%)	Plasticity Index (%)	Boulders	Drilling Method	Notes
						6" Asphalt							
				0.5		FINE TO COARSE SAND & GRAVEL, brown, trace to little silt							
SS 1	12	M 6	10-8-5-6 (13)	2.8		SILTY CLAY, brown, trace fine to coarse sand & gravel							
SS 2	24	16	5-6-12-14 (18)										
				5.0		End of Boring at 5.0 ft.							

WATER LEVEL & CAVE-IN OBSERVATION DATA

▽	WATER ENCOUNTERED DURING DRILLING: NMR	▨	CAVE - IN DEPTH AT COMPLETION: NMR	WET ☐ DRY ☐
▼	WATER LEVEL AT COMPLETION: NMR	■	CAVE - IN DEPTH AFTER 0 HOURS: NMR	WET ☐ DRY ☐

NOTES: 1) Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.
2) NE = Not Encountered; NMR = No Measurement Recorded

C:\USERS\DOTAEZ\DOCUMENTS\A PROJECTS\WASHINGTON\USH 41\1100-38-00 - USH 41 - COUNTY LINE TO 41-45 SPLIT\1100-38-00 US 41- 45 (MILWAUKEE COUNTYLINE TO STH 145) MILWAUKEE CO.GPJ Washington Countyline - USH 41/45 Split 6/2013

WI Dept. of Transportation
3502 Kinsman Blvd.
Madison, WI 53704

WISDOT PROJECT ID: 1100-38-00
WISDOT STRUCTURE ID:

BORING ID: 18
PAGE NO: 1 of 1

WISDOT PROJECT NAME: Washington Countyline - USH 41/45 Split	CONSULTANT:	CONSULTANT PROJECT NO:	LATITUDE: / LONGITUDE:
ROADWAY NAME:	DRILLING CONTRACTOR: PSI	DRILLING CONTRACTOR PROJECT NO:	NORTHING: 106897.8411 / EASTING: 372403.6548
DATE STARTED: 12/10/13	CREW CHIEF:	DRILL RIG:	COORDINATE SYSTEM: WCCS
DATE COMPLETED: 12/10/13	LOGGED BY:	HOLE SIZE: 4 in	HORIZONTAL DATUM: / VERTICAL DATUM:
COUNTY: Washington	LOG QC BY: A. Zimmer	HAMMER TYPE: Automatic	STREAMBED ELEVATION: NA
STATION: 441+00 / OFFSET: Inside Shoulder	TOWNSHIP: / RANGE: / SECTION: / 1/4 SECTION: / 1/4 1/4 SECTION:		SURFACE ELEVATION:

SAMPLE TYPE NUMBER	RECOVERY (in) (RQD)	Moisture	BLOW COUNTS (N VALUE)	Depth (ft)	Graphic	Soil Description/ Comments	USCS / AASHTO	Strength Qp (tsf)	Liquid Limit (%)	Plasticity Index (%)	Boulders	Drilling Method	Notes
						6" Asphalt							
				0.5		FINE TO COARSE SAND & GRAVEL, brown, little silt, with clay lensed, fill							
SS 1	12	11	11-9-12-6 (21)										
SS 2	16	6	12-15-50/4"										
				5.0		End of Boring at 5.0 ft.							

WATER LEVEL & CAVE-IN OBSERVATION DATA

▽	WATER ENCOUNTERED DURING DRILLING: NMR	CAVE - IN DEPTH AT COMPLETION: NMR		WET ☐ DRY ☐
▼	WATER LEVEL AT COMPLETION: NMR	CAVE - IN DEPTH AFTER 0 HOURS: NMR		WET ☐ DRY ☐

NOTES: 1) Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.
2) NE = Not Encountered; NMR = No Measurement Recorded

C:\USERS\DOTAEZ\DOCUMENTS\A PROJECTS\WASHINGTON\USH 41\1100-38-00 - USH 41 - COUNTY LINE TO 41-45 SPLIT\1100-38-00 US 41 - 45 (MILWAUKEE COUNTYLINE TO STH 145) MILWAUKEE CO.GPJ Washington Countyline - USH 41/45 Split 6/4/13

WI Dept. of Transportation
3502 Kinsman Blvd.
Madison, WI 53704

WISDOT PROJECT ID: 1100-38-00
WISDOT STRUCTURE ID:

BORING ID: 19
PAGE NO: 1 of 1

WISDOT PROJECT NAME: Washington Countyline - USH 41/45 Split	CONSULTANT:	CONSULTANT PROJECT NO:	LATITUDE: / LONGITUDE:
ROADWAY NAME:	DRILLING CONTRACTOR: PSI	DRILLING CONTRACTOR PROJECT NO:	NORTHING: 108415.2527 / EASTING: 371100.788
DATE STARTED: 12/10/13	CREW CHIEF:	DRILL RIG:	COORDINATE SYSTEM: WCCS
DATE COMPLETED: 12/10/13	LOGGED BY:	HOLE SIZE: 4 in	HORIZONTAL DATUM: / VERTICAL DATUM:
COUNTY: Washington	LOG QC BY: A. Zimmer	HAMMER TYPE: Automatic	STREAMBED ELEVATION: NA
STATION: 461+00 / OFFSET: Inside Shoulder	TOWNSHIP: / RANGE: / SECTION: / 1/4 SECTION: / 1/4 1/4 SECTION:		SURFACE ELEVATION:

SAMPLE TYPE NUMBER	RECOVERY (in) (RQD)	Moisture	BLOW COUNTS (N VALUE)	Depth (ft)	Graphic	Soil Description/ Comments	USCS / AASHTO	Strength Qp (tsf)	Liquid Limit (%)	Plasticity Index (%)	Boulders	Drilling Method	Notes
						7.5" Asphalt							
				0.6		FINE TO COARSE SAND & GRAVEL, brown, trace to little silt							
SS 1	12	M	8-10-11-6 (21)										Fines = 16%
				2.5		SILTY CLAY, Dark Brown & Dark Gray, trace fine to coarse sand & gravel							
SS 2	5	17	5-6-50/5"					3.75					
				5.0		End of Boring at 5.0 ft.							

WATER LEVEL & CAVE-IN OBSERVATION DATA

▽	WATER ENCOUNTERED DURING DRILLING: NMR	CAVE - IN DEPTH AT COMPLETION: NMR		WET ☐ DRY ☐
▼	WATER LEVEL AT COMPLETION: NMR	CAVE - IN DEPTH AFTER 0 HOURS: NMR		WET ☐ DRY ☐

NOTES: 1) Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.
2) NE = Not Encountered; NMR = No Measurement Recorded

C:\USERS\DOTAEZ\DOCUMENTS\A PROJECTS\WASHINGTON\USH 41\1100-38-00 - USH 41 - COUNTY LINE TO 41-45 SPLIT\1100-38-00 US 41 - 45 (MILWAUKEE COUNTYLINE TO STH 145) MILWAUKEE CO.GPJ Washington Countyline - USH 41/45 Split 6/4/13

WI Dept. of Transportation
3502 Kinsman Blvd.
Madison, WI 53704

WISDOT PROJECT ID: 1100-38-00
WISDOT STRUCTURE ID:

BORING ID: 20
PAGE NO: 1 of 1

WISDOT PROJECT NAME: Washington Countyline - USH 41/45 Split	CONSULTANT:	CONSULTANT PROJECT NO:	LATITUDE: / LONGITUDE:
ROADWAY NAME:	DRILLING CONTRACTOR: PSI	DRILLING CONTRACTOR PROJECT NO:	NORTHING: 109932.6643 / EASTING: 369797.9211
DATE STARTED: 12/10/13	CREW CHIEF:	DRILL RIG:	COORDINATE SYSTEM: WCCS
DATE COMPLETED: 12/10/13	LOGGED BY:	HOLE SIZE: 4 in	HORIZONTAL DATUM: / VERTICAL DATUM:
COUNTY: Washington	LOG QC BY: A. Zimmer	HAMMER TYPE: Automatic	STREAMBED ELEVATION: NA
STATION: 481+00 / OFFSET: Inside Shoulder	TOWNSHIP: / RANGE: / SECTION: / 1/4 SECTION: / 1/4 1/4 SECTION:		SURFACE ELEVATION:

SAMPLE TYPE NUMBER	RECOVERY (in) (RQD)	Moisture	BLOW COUNTS (N VALUE)	Depth (ft)	Graphic	Soil Description/ Comments	USCS / AASHTO	Strength Qp (tsf)	Liquid Limit (%)	Plasticity Index (%)	Boulders	Drilling Method	Notes
						7.5" Asphalt							
						0.6							
						SILTY CLAY, brown, trace fine to coarse sand & gravel, fill							
SS 1	15	M 13	6-8-22-34 (30)					1.5					
SS 2	6	9	15-15-50/2"					1.0					
						5.0							
						End of Boring at 5.0 ft.							

WATER LEVEL & CAVE-IN OBSERVATION DATA

WATER ENCOUNTERED DURING DRILLING: NMR	CAVE - IN DEPTH AT COMPLETION: NMR	WET ☐ DRY ☐
WATER LEVEL AT COMPLETION: NMR	CAVE - IN DEPTH AFTER 0 HOURS: NMR	WET ☐ DRY ☐

NOTES: 1) Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.
2) NE = Not Encountered; NMR = No Measurement Recorded

WI Dept. of Transportation
3502 Kinsman Blvd.
Madison, WI 53704

WISDOT PROJECT ID: 1100-38-00
WISDOT STRUCTURE ID:

BORING ID: 21
PAGE NO: 1 of 1

WISDOT PROJECT NAME: Washington Countyline - USH 41/45 Split	CONSULTANT:	CONSULTANT PROJECT NO:	LATITUDE: / LONGITUDE:
ROADWAY NAME:	DRILLING CONTRACTOR: PSI	DRILLING CONTRACTOR PROJECT NO:	NORTHING: 111450.0759 / EASTING: 368495.0543
DATE STARTED: 12/11/13	CREW CHIEF:	DRILL RIG:	COORDINATE SYSTEM: WCCS
DATE COMPLETED: 12/11/13	LOGGED BY:	HOLE SIZE: 4 in	HORIZONTAL DATUM: / VERTICAL DATUM:
COUNTY: Washington	LOG QC BY: A. Zimmer	HAMMER TYPE: Automatic	STREAMBED ELEVATION: NA
STATION: 501+00 / OFFSET: Inside Shoulder	TOWNSHIP: / RANGE: / SECTION: / 1/4 SECTION: / 1/4 1/4 SECTION:		SURFACE ELEVATION:

SAMPLE TYPE NUMBER	RECOVERY (in) (RQD)	Moisture	BLOW COUNTS (N VALUE)	Depth (ft)	Graphic	Soil Description/ Comments	USCS / AASHTO	Strength Qp (tsf)	Liquid Limit (%)	Plasticity Index (%)	Boulders	Drilling Method	Notes
						9.5" Asphalt							
						0.8							
SS 1	20	M 22	6-7-9-9 (16)			SILTY CLAY TO CLAYEY SILT, Dark Brown & Dark Gray, wet, trace fine to coarse sand & gravel & organic material, fill		3.5	30	8			
						3.0							
SS 2	6	21	5-7-12-16 (19)			SILTY CLAY, brown/dark brown & gray, trace fine to coarse sand & gravel, with fine to medium sand lenses		1.25					
						5.0							
						End of Boring at 5.0 ft.							

WATER LEVEL & CAVE-IN OBSERVATION DATA

WATER ENCOUNTERED DURING DRILLING: NMR	CAVE - IN DEPTH AT COMPLETION: NMR	WET ☐ DRY ☐
WATER LEVEL AT COMPLETION: NMR	CAVE - IN DEPTH AFTER 0 HOURS: NMR	WET ☐ DRY ☐

NOTES: 1) Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.
2) NE = Not Encountered; NMR = No Measurement Recorded

C:\USERS\DOTAEZ\DOCUMENTS\A PROJECTS\WASHINGTON\USH 41\1100-38-00 - USH 41 - COUNTY LINE TO 41-45 SPLIT\1100-38-00 US 41- 45 (MILWAUKEE COUNTYLINE TO STH 145) MILWAUKEE CO.GPJ Washington Countyline - USH 41/45 Split 6/4/13

WI Dept. of Transportation
3502 Kinsman Blvd.
Madison, WI 53704

WISDOT PROJECT ID: 1100-38-00
WISDOT STRUCTURE ID:

BORING ID: 22
PAGE NO: 1 of 1

WISDOT PROJECT NAME: Washington Countyline - USH 41/45 Split
ROADWAY NAME:
DATE STARTED: 12/11/13
DATE COMPLETED: 12/11/13
COUNTY: Washington
STATION: 521+00 OFFSET: Inside Shoulder

CONSULTANT:
DRILLING CONTRACTOR: PSI
CREW CHIEF:
LOGGED BY:
LOG QC BY: A. Zimmer
TOWNSHIP: RANGE: SECTION: 1/4 SECTION: 1/4 1/4 SECTION:

CONSULTANT PROJECT NO:
DRILLING CONTRACTOR PROJECT NO:
DRILL RIG:
HOLE SIZE: 4 in
HAMMER TYPE: Automatic

LATITUDE: LONGITUDE:
NORTHING: 112966.0414 EASTING: 367194.4097
COORDINATE SYSTEM: WCCS
HORIZONTAL DATUM: VERTICAL DATUM:
STREAMBED ELEVATION: NA
SURFACE ELEVATION:

SAMPLE TYPE NUMBER	RECOVERY (in) (RQD)	Moisture	BLOW COUNTS (N VALUE)	Depth (ft)	Graphic	Soil Description/ Comments	USCS / AASHTO	Strength Qp (tsf)	Liquid Limit (%)	Plasticity Index (%)	Boulders	Drilling Method	Notes
						10" Asphalt							
				0.8		FINE TO COARSE SAND & GRAVEL, brown, trace to little silt, fill							
SS 1	20	M	6-6-10-14 (16)	1.5		SILTY CLAY, brown gray, trace fine to coarse sand							Fines = 17%
SS 2	10	7	4-12-8-4 (20)	3.0		FINE TO COARSE SAND & GRAVEL, brown, trace to little silt							
		5		5.0		End of Boring at 5.0 ft.							

WATER LEVEL & CAVE-IN OBSERVATION DATA

▽	WATER ENCOUNTERED DURING DRILLING: NMR	CAVE - IN DEPTH AT COMPLETION: NMR		WET ☐ DRY ☐
▼	WATER LEVEL AT COMPLETION: NMR	CAVE - IN DEPTH AFTER 0 HOURS: NMR		WET ☐ DRY ☐

NOTES: 1) Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.
2) NE = Not Encountered; NMR = No Measurement Recorded

WI Dept. of Transportation
3502 Kinsman Blvd.
Madison, WI 53704

WISDOT PROJECT ID: 1100-38-00
WISDOT STRUCTURE ID:

BORING ID: 23
PAGE NO: 1 of 1

WISDOT PROJECT NAME: Washington Countyline - USH 41/45 Split
ROADWAY NAME:
DATE STARTED: 12/11/13
DATE COMPLETED: 12/11/13
COUNTY: Washington
STATION: 541+00 OFFSET: Inside Shoulder

CONSULTANT:
DRILLING CONTRACTOR: PSI
CREW CHIEF:
LOGGED BY:
LOG QC BY: A. Zimmer
TOWNSHIP: RANGE: SECTION: 1/4 SECTION: 1/4 1/4 SECTION:

CONSULTANT PROJECT NO:
DRILLING CONTRACTOR PROJECT NO:
DRILL RIG:
HOLE SIZE: 4 in
HAMMER TYPE: Automatic

LATITUDE: LONGITUDE:
NORTHING: 114485.184 EASTING: 365889.5104
COORDINATE SYSTEM: WCCS
HORIZONTAL DATUM: VERTICAL DATUM:
STREAMBED ELEVATION: NA
SURFACE ELEVATION:

SAMPLE TYPE NUMBER	RECOVERY (in) (RQD)	Moisture	BLOW COUNTS (N VALUE)	Depth (ft)	Graphic	Soil Description/ Comments	USCS / AASHTO	Strength Qp (tsf)	Liquid Limit (%)	Plasticity Index (%)	Boulders	Drilling Method	Notes
						6.5 Asphalt							
				0.5		SILTY FINE SAND, brown, little to some clay, trace medium to coarse sand & gravel							
SS 1	6	M	12-50/5"										
SS 2	18	9	9-8-5-8 (13)	3.0		SILTY FINE SAND - FINE SANDY SILT, brown, trace medium to coarse sand & gravel							
		7		5.0		End of Boring at 5.0 ft.							

WATER LEVEL & CAVE-IN OBSERVATION DATA

▽	WATER ENCOUNTERED DURING DRILLING: NMR	CAVE - IN DEPTH AT COMPLETION: NMR		WET ☐ DRY ☐
▼	WATER LEVEL AT COMPLETION: NMR	CAVE - IN DEPTH AFTER 0 HOURS: NMR		WET ☐ DRY ☐

NOTES: 1) Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.
2) NE = Not Encountered; NMR = No Measurement Recorded

C:\USERS\DOTAEZ\DOCUMENTS\A PROJECTS\WASHINGTON\USH 41\1100-38-00 - USH 41 - COUNTY LINE TO 41-45 SPLIT\1100-38-00 US 41- 45 (MILWAUKEE COUNTYLINE TO STH 145) MILWAUKEE CO.GPJ Washington Countyline - USH 41/45 Split 6/4/13

WI Dept. of Transportation
3502 Kinsman Blvd.
Madison, WI 53704

WISDOT PROJECT ID: **1100-38-00**
WISDOT STRUCTURE ID:

BORING ID: 24
PAGE NO: **1 of 1**

WISDOT PROJECT NAME: **Washington Countyline - USH 41/45 Split**	CONSULTANT:	CONSULTANT PROJECT NO:	LATITUDE: / LONGITUDE:
ROADWAY NAME: **US 41/45**	DRILLING CONTRACTOR: **PSI**	DRILLING CONTRACTOR PROJECT NO:	NORTHING: **116002.3107** / EASTING: **364586.4537**
DATE STARTED: **12/11/13**	CREW CHIEF:	DRILL RIG:	COORDINATE SYSTEM: **WCCS**
DATE COMPLETED: **12/11/13**	LOGGED BY:	HOLE SIZE: **4 in**	HORIZONTAL DATUM: / VERTICAL DATUM:
COUNTY: **Washington**	LOG QC BY: **A. Zimmer**	HAMMER TYPE: **Automatic**	STREAMBED ELEVATION: **NA**
STATION: **561+00** OFFSET: **Inside Shoulder**	TOWNSHIP: / RANGE: / SECTION: / 1/4 SECTION: / 1/4 1/4 SECTION:		SURFACE ELEVATION:

SAMPLE TYPE NUMBER	RECOVERY (in) (RQD)	Moisture	BLOW COUNTS (N VALUE)	Depth (ft)	Graphic	Soil Description/ Comments	USCS / AASHTO	Strength Qp (tsf)	Liquid Limit (%)	Plasticity Index (%)	Boulders	Drilling Method	Notes
						7.5" Asphalt							
				0.6		FINE TO COARSE SAND & GRAVEL, brown, little silt, fill							
SS 1	12	M	12-20-11-8 (31)	2.0		FINE TO COARSE SAND & GRAVEL, brown, little to some silt, with clay lensed							
SS 2	9	17	12-18-19-19 (37)										
		7		5.0		End of Boring at 5.0 ft.							

WATER LEVEL & CAVE-IN OBSERVATION DATA

▽	WATER ENCOUNTERED DURING DRILLING: NMR	CAVE - IN DEPTH AT COMPLETION: NMR		WET ☐ DRY ☐
▼	WATER LEVEL AT COMPLETION: NMR	CAVE - IN DEPTH AFTER 0 HOURS: NMR		WET ☐ DRY ☐

NOTES: 1) Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.
2) NE = Not Encountered; NMR = No Measurement Recorded

WI Dept. of Transportation
3502 Kinsman Blvd.
Madison, WI 53704

WISDOT PROJECT ID: **1100-38-00**
WISDOT STRUCTURE ID:

BORING ID: 25
PAGE NO: **1 of 1**

WISDOT PROJECT NAME: **Washington Countyline - USH 41/45 Split**	CONSULTANT:	CONSULTANT PROJECT NO:	LATITUDE: / LONGITUDE:
ROADWAY NAME: **US 41/45**	DRILLING CONTRACTOR: **PSI**	DRILLING CONTRACTOR PROJECT NO:	NORTHING: **117540.5672** / EASTING: **363312.6436**
DATE STARTED: **12/11/13**	CREW CHIEF:	DRILL RIG:	COORDINATE SYSTEM: **WCCS**
DATE COMPLETED: **12/11/13**	LOGGED BY:	HOLE SIZE: **4 in**	HORIZONTAL DATUM: / VERTICAL DATUM:
COUNTY: **Washington**	LOG QC BY: **A. Zimmer**	HAMMER TYPE: **Automatic**	STREAMBED ELEVATION: **NA**
STATION: **581+00** OFFSET: **Inside Shoulder**	TOWNSHIP: / RANGE: / SECTION: / 1/4 SECTION: / 1/4 1/4 SECTION:		SURFACE ELEVATION:

SAMPLE TYPE NUMBER	RECOVERY (in) (RQD)	Moisture	BLOW COUNTS (N VALUE)	Depth (ft)	Graphic	Soil Description/ Comments	USCS / AASHTO	Strength Qp (tsf)	Liquid Limit (%)	Plasticity Index (%)	Boulders	Drilling Method	Notes
						11.5" Asphalt							
				1.0		SILTY FINE TO COARSE SAND, brown, trace fine to coarse gravel, fill							
SS 1	18	M	12-23-18-16 (41)	3.0		FINE TO COARSE SAND & GRAVEL, brown, trace to little silt							
SS 2	15	6	13-13-22-26 (35)										
		6		5.0		End of Boring at 5.0 ft.							

WATER LEVEL & CAVE-IN OBSERVATION DATA

▽	WATER ENCOUNTERED DURING DRILLING: NMR	CAVE - IN DEPTH AT COMPLETION: NMR		WET ☐ DRY ☐
▼	WATER LEVEL AT COMPLETION: NMR	CAVE - IN DEPTH AFTER 0 HOURS: NMR		WET ☐ DRY ☐

NOTES: 1) Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.
2) NE = Not Encountered; NMR = No Measurement Recorded

C:\USERS\DOTAEZ\DOCUMENTS\A PROJECTS\WASHINGTON\USH 41\1100-38-00 - USH 41 - COUNTY LINE TO 41-45 SPLIT\1100-38-00 US 41-45 (MILWAUKEE COUNTYLINE TO STH 145) MILWAUKEE CO.GPJ Washington Countyline - USH 41/45 Split 6/2013

WI Dept. of Transportation
3502 Kinsman Blvd.
Madison, WI 53704

WISDOT PROJECT ID: 1100-38-00
WISDOT STRUCTURE ID:

BORING ID: 26
PAGE NO: 1 of 1

WISDOT PROJECT NAME: Washington Countyline - USH 41/45 Split
CONSULTANT:
CONSULTANT PROJECT NO:
LATITUDE:
LONGITUDE:

ROADWAY NAME: US 41/45
DRILLING CONTRACTOR: PSI
DRILLING CONTRACTOR PROJECT NO:
NORTHING: 119395.3704
EASTING: 362640.6951

DATE STARTED: 12/11/13
CREW CHIEF:
DRILL RIG:
COORDINATE SYSTEM: WCCS

DATE COMPLETED: 12/11/13
LOGGED BY:
HOLE SIZE: 4 in
HORIZONTAL DATUM:
VERTICAL DATUM:

COUNTY: Washington
LOG QC BY: A. Zimmer
HAMMER TYPE: Automatic
STREAMBED ELEVATION: NA

STATION: 601+00
OFFSET: Inside Shoulder
TOWNSHIP:
RANGE:
SECTION:
1/4 SECTION:
1/4 1/4 SECTION:
SURFACE ELEVATION:

SAMPLE TYPE NUMBER	RECOVERY (in) (RQD)	Moisture	BLOW COUNTS (N VALUE)	Depth (ft)	Graphic	Soil Description/ Comments	USCS / AASHTO	Strength Qp (tsf)	Liquid Limit (%)	Plasticity Index (%)	Boulders	Drilling Method	Notes
						7.5' ASPHALT							
				0.6		FINE TO COARSE SAND & GRAVEL, brown, little silt, with clay lensed, fill							
SS 1	12	M	13-14-50/3"										
SS 2	15	4	13-17-23-27 (40)	3.0		SILTY FINE SAND, brown, trace medium to coarse sand, fill							Fines = 26%
		9		5.0									
						End of Boring at 5.0 ft.							

WATER LEVEL & CAVE-IN OBSERVATION DATA

▽	WATER ENCOUNTERED DURING DRILLING: NMR	CAVE - IN DEPTH AT COMPLETION: NMR		WET ☐ DRY ☐
▼	WATER LEVEL AT COMPLETION: NMR	CAVE - IN DEPTH AFTER 0 HOURS: NMR		WET ☐ DRY ☐

NOTES: 1) Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.
2) NE = Not Encountered; NMR = No Measurement Recorded

WI Dept. of Transportation
3502 Kinsman Blvd.
Madison, WI 53704

WISDOT PROJECT ID: 1100-38-00
WISDOT STRUCTURE ID:

BORING ID: 27
PAGE NO: 1 of 1

WISDOT PROJECT NAME: Washington Countyline - USH 41/45 Split
CONSULTANT:
CONSULTANT PROJECT NO:
LATITUDE:
LONGITUDE:

ROADWAY NAME: US 41/45
DRILLING CONTRACTOR: PSI
DRILLING CONTRACTOR PROJECT NO:
NORTHING: 121391.8395
EASTING: 362617.7345

DATE STARTED: 12/11/13
CREW CHIEF:
DRILL RIG:
COORDINATE SYSTEM: WCCS

DATE COMPLETED: 12/11/13
LOGGED BY:
HOLE SIZE: 4 in
HORIZONTAL DATUM:
VERTICAL DATUM:

COUNTY: Washington
LOG QC BY: A. Zimmer
HAMMER TYPE: Automatic
STREAMBED ELEVATION: NA

STATION: 621+00
OFFSET: Inside Shoulder
TOWNSHIP:
RANGE:
SECTION:
1/4 SECTION:
1/4 1/4 SECTION:
SURFACE ELEVATION:

SAMPLE TYPE NUMBER	RECOVERY (in) (RQD)	Moisture	BLOW COUNTS (N VALUE)	Depth (ft)	Graphic	Soil Description/ Comments	USCS / AASHTO	Strength Qp (tsf)	Liquid Limit (%)	Plasticity Index (%)	Boulders	Drilling Method	Notes
						5" Asphalt							
				0.7		SILTY CLAY, brown/dark brown, trace fine to coarse sand & gravel, fill							
SS 1		M 11	6-8-7-9 (15)					2.25	28	13			
SS 2	12		5-8-16-25 (24)	4.0		FINE TO COARSE SAND & GRAVEL, brown, trace to little silt		4.5					
				5.0									
						End of Boring at 5.0 ft.							

WATER LEVEL & CAVE-IN OBSERVATION DATA

▽	WATER ENCOUNTERED DURING DRILLING: NMR	CAVE - IN DEPTH AT COMPLETION: NMR		WET ☐ DRY ☐
▼	WATER LEVEL AT COMPLETION: NMR	CAVE - IN DEPTH AFTER 0 HOURS: NMR		WET ☐ DRY ☐

NOTES: 1) Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.
2) NE = Not Encountered; NMR = No Measurement Recorded

C:\USERS\DOTAEZ\DOCUMENTS\A PROJECTS\WASHINGTON\USH 41\1100-38-00 - USH 41 - COUNTY LINE TO 41-45 SPLIT\1100-38-00 US 41- 45 (MILWAUKEE COUNTYLINE TO STH 145) MILWAUKEE CO.GPJ Washington Countyline - USH 41/45 Split 6/2/13

WI Dept. of Transportation
3502 Kinsman Blvd.
Madison, WI 53704

WISDOT PROJECT ID: 1100-38-00
WISDOT STRUCTURE ID:

BORING ID: 28
PAGE NO: 1 of 1

WISDOT PROJECT NAME: Washington Countyline - USH 41/45 Split
ROADWAY NAME: US 41/45
DATE STARTED: 12/11/13
DATE COMPLETED: 12/11/13
COUNTY: Washington
STATION: 641+00
OFFSET: Inside Shoulder

CONSULTANT:
CONSULTANT PROJECT NO:
DRILLING CONTRACTOR: PSI
DRILLING CONTRACTOR PROJECT NO:
CREW CHIEF:
DRILL RIG:
LOGGED BY:
HOLE SIZE: 4 in
LOG QC BY: A. Zimmer
HAMMER TYPE: Automatic
TOWNSHIP: RANGE: SECTION: 1/4 SECTION: 1/4 1/4 SECTION:

LATITUDE: LONGITUDE:
NORTHING: 123391.7862 EASTING: 362632.3347
COORDINATE SYSTEM: WCCS
HORIZONTAL DATUM: VERTICAL DATUM:
STREAMBED ELEVATION: NA
SURFACE ELEVATION:

SAMPLE TYPE NUMBER	RECOVERY (in) (RQD)	Moisture	BLOW COUNTS (N VALUE)	Depth (ft)	Graphic	Soil Description/ Comments	USCS / AASHTO	Strength Qp (tsf)	Liquid Limit (%)	Plasticity Index (%)	Boulders	Drilling Method	Notes
						7.5" Asphalt							
				0.6		FINE TO COARSE SAND, brown, little to some silt, trace fine to coarse gravel, fill							
SS 1	15	M 8	10-8-5-6 (13)										
				3.0		SILTY CLAY, Dark Brown, trace, fill/buried topsoil							
SS 2	18	22	3-5-5-6 (10)					2.5					
				5.0		End of Boring at 5.0 ft.							

WATER LEVEL & CAVE-IN OBSERVATION DATA

▽	WATER ENCOUNTERED DURING DRILLING: NMR	▩	CAVE - IN DEPTH AT COMPLETION: NMR	WET ☐ DRY ☐
▼	WATER LEVEL AT COMPLETION: NMR	■	CAVE - IN DEPTH AFTER 0 HOURS: NMR	WET ☐ DRY ☐

NOTES: 1) Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.
2) NE = Not Encountered; NMR = No Measurement Recorded

C:\USERS\DOTAEZ\DOCUMENTS\A PROJECTS\WASHINGTON\USH 41\1100-38-00 - USH 41 - COUNTY LINE TO 41-45 SPLIT\1100-38-00 US 41-45 (MILWAUKEE COUNTYLINE TO STH 145) MILWAUKEE CO.GPJ Washington Countyline - USH 41/45 Split 6/4/13

WI Dept. of Transportation
3502 Kinsman Blvd.
Madison, WI 53704

WISDOT PROJECT ID: 1100-38-00
WISDOT STRUCTURE ID:

BORING ID: 29
PAGE NO: 1 of 1

WISDOT PROJECT NAME: Washington Countyline - USH 41/45 Split
ROADWAY NAME: US 41/45
DATE STARTED: 12/11/13
DATE COMPLETED: 12/11/13
COUNTY: Washington
STATION: 661+00
OFFSET: Inside Shoulder

CONSULTANT:
CONSULTANT PROJECT NO:
DRILLING CONTRACTOR: PSI
DRILLING CONTRACTOR PROJECT NO:
CREW CHIEF:
DRILL RIG:
LOGGED BY:
HOLE SIZE: 4 in
LOG QC BY: A. Zimmer
HAMMER TYPE: Automatic
TOWNSHIP: RANGE: SECTION: 1/4 SECTION: 1/4 1/4 SECTION:

LATITUDE: LONGITUDE:
NORTHING: 125391.1165 EASTING: 362649.1184
COORDINATE SYSTEM: WCCS
HORIZONTAL DATUM: VERTICAL DATUM:
STREAMBED ELEVATION: NA
SURFACE ELEVATION:

SAMPLE TYPE NUMBER	RECOVERY (in) (RQD)	Moisture	BLOW COUNTS (N VALUE)	Depth (ft)	Graphic	Soil Description/ Comments	USCS / AASHTO	Strength Qp (tsf)	Liquid Limit (%)	Plasticity Index (%)	Boulders	Drilling Method	Notes
						7" Asphalt							
				0.6		SILTY CLAY, Dark Brown, trace, fill							
				1.5		SILTY CLAY, brown, trace fine to coarse sand & gravel & organic material, fill/buried topsoil							
SS 1	15	M	6-4-6-8 (10)					2.75					
				3.0		MOTTLED SILTY CLAY, brown/gray, trace fine to coarse sand Wet - Very wet							
SS 2	15	30	3-3-4-8 (7)					1.0					
		23							32	13			
				5.0		End of Boring at 5.0 ft.							

WATER LEVEL & CAVE-IN OBSERVATION DATA

▽	WATER ENCOUNTERED DURING DRILLING: 3ft.	▩	CAVE - IN DEPTH AT COMPLETION: NMR	WET ☐ DRY ☐
▼	WATER LEVEL AT COMPLETION: NMR	■	CAVE - IN DEPTH AFTER 0 HOURS: NMR	WET ☐ DRY ☐

NOTES: 1) Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.
2) NE = Not Encountered; NMR = No Measurement Recorded

C:\USERS\DOTAEZ\DOCUMENTS\A PROJECTS\WASHINGTON\USH 41\1100-38-00 - USH 41 - COUNTY LINE TO 41-45 SPLIT\1100-38-00 US 41-45 (MILWAUKEE COUNTYLINE TO STH 145) MILWAUKEE CO.GPJ Washington Countyline - USH 41/45 Split 6/4/13

2

WI Dept. of Transportation
3502 Kinsman Blvd.
Madison, WI 53704

WISDOT PROJECT ID: **1100-38-00** | **BORING ID: 30**
WISDOT STRUCTURE ID: | PAGE NO: **1 of 1**

WISDOT PROJECT NAME: **Washington Countyline - USH 41/45 Split**	CONSULTANT:	CONSULTANT PROJECT NO:	LATITUDE: / LONGITUDE:
ROADWAY NAME:	DRILLING CONTRACTOR:	DRILLING CONTRACTOR PROJECT NO:	NORTHING: / EASTING:
DATE STARTED: **12/11/13**	CREW CHIEF:	DRILL RIG:	COORDINATE SYSTEM:
DATE COMPLETED: **12/11/13**	LOGGED BY:	HOLE SIZE: **in**	HORIZONTAL DATUM: / VERTICAL DATUM:
COUNTY: **Washington**	LOG QC BY:	HAMMER TYPE:	STREAMBED ELEVATION: **NA**
STATION: / OFFSET:	TOWNSHIP: / RANGE: / SECTION: / 1/4 SECTION: / 1/4 1/4 SECTION:		SURFACE ELEVATION:

SAMPLE TYPE NUMBER	RECOVERY (in) (RQD)	Moisture	BLOW COUNTS (N VALUE)	Depth (ft)	Graphic	Soil Description/ Comments	USCS / AASHTO	Strength Qp (tsf)	Liquid Limit (%)	Plasticity Index (%)	Boulders	Drilling Method	Notes
				0.6		7.5" Asphalt							
						SILTY CLAY, brown, some fine to coarse sand, trace fine to coarse gravel							
SS 1	12	M 5	12-16-50/5"	3.0									
						FINE TO COARSE SAND & GRAVEL, brown, little silt							
SS 2	5	4	50/4"	5.0									

End of Boring at 5.0 ft.

WATER LEVEL & CAVE-IN OBSERVATION DATA

▽	WATER ENCOUNTERED DURING DRILLING: NMR	▨	CAVE - IN DEPTH AT COMPLETION: NMR	WET ☐ DRY ☐
▼	WATER LEVEL AT COMPLETION: NMR	■	CAVE - IN DEPTH AFTER 0 HOURS: NMR	WET ☐ DRY ☐

NOTES: 1) Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.
2) NE = Not Encountered; NMR = No Measurement Recorded

WI Dept. of Transportation
3502 Kinsman Blvd.
Madison, WI 53704

WISDOT PROJECT ID: **1100-38-00** | **BORING ID: 31**
WISDOT STRUCTURE ID: | PAGE NO: **1 of 1**

WISDOT PROJECT NAME: **Washington Countyline - USH 41/45 Split**	CONSULTANT:	CONSULTANT PROJECT NO:	LATITUDE: / LONGITUDE:
ROADWAY NAME: **US 41/45**	DRILLING CONTRACTOR: **PSI**	DRILLING CONTRACTOR PROJECT NO:	NORTHING: **127357.468** / EASTING: **362347.1946**
DATE STARTED: **12/11/12**	CREW CHIEF:	DRILL RIG:	COORDINATE SYSTEM: **WCCS**
DATE COMPLETED: **12/11/12**	LOGGED BY:	HOLE SIZE: **4 in**	HORIZONTAL DATUM: / VERTICAL DATUM:
COUNTY: **Washington**	LOG QC BY: **A. Zimmer**	HAMMER TYPE: **Automatic**	STREAMBED ELEVATION: **NA**
STATION: **681+00** / OFFSET: **Inside Shoulder**	TOWNSHIP: / RANGE: / SECTION: / 1/4 SECTION: / 1/4 1/4 SECTION:		SURFACE ELEVATION:

SAMPLE TYPE NUMBER	RECOVERY (in) (RQD)	Moisture	BLOW COUNTS (N VALUE)	Depth (ft)	Graphic	Soil Description/ Comments	USCS / AASHTO	Strength Qp (tsf)	Liquid Limit (%)	Plasticity Index (%)	Boulders	Drilling Method	Notes
						4" Shoulder Gravel							
				0.3		SILTY CLAY, brown, trace fine to coarse sand & gravel							
SS 1	12	M 14	6-4-6-8 (10)					2.75	21	10			
				3.0		SILTY FINE TO COARSE SAND & GRAVEL, brown							
SS 2	24	7	5-12-15-19 (27)										Fines = 26%
				5.0									

End of Boring at 5.0 ft.

WATER LEVEL & CAVE-IN OBSERVATION DATA

▽	WATER ENCOUNTERED DURING DRILLING: NMR	▨	CAVE - IN DEPTH AT COMPLETION: NMR	WET ☐ DRY ☐
▼	WATER LEVEL AT COMPLETION: NMR	■	CAVE - IN DEPTH AFTER 0 HOURS: NMR	WET ☐ DRY ☐

NOTES: 1) Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.
2) NE = Not Encountered; NMR = No Measurement Recorded

C:\USERS\DOTAEZIDOCUMENTS\A PROJECTS\WASHINGTON\USH 41\1100-38-00 - USH 41 - COUNTY LINE TO 41-45 SPLIT\1100-38-00 US 41- 45 (MILWAUKEE COUNTYLINE TO STH 145) MILWAUKEE CO.GPJ Washington Countyline - USH 41/45 Split 6/2/13

WI Dept. of Transportation
3502 Kinsman Blvd.
Madison, WI 53704

WISDOT PROJECT ID: **1100-38-00**
WISDOT STRUCTURE ID:

BORING ID: 32
PAGE NO: **1 of 1**

WISDOT PROJECT NAME: **Washington Countyline - USH 41/45 Split**
CONSULTANT:
CONSULTANT PROJECT NO:
LATITUDE:
LONGITUDE:

ROADWAY NAME: **US 41/45**
DRILLING CONTRACTOR: **PSI**
DRILLING CONTRACTOR PROJECT NO:
NORTHING: **130876.5157**
EASTING: **360581.7921**

DATE STARTED: **12/11/13**
CREW CHIEF:
DRILL RIG:
COORDINATE SYSTEM: **WCCS**

DATE COMPLETED: **12/11/13**
LOGGED BY:
HOLE SIZE: **4 in**
HORIZONTAL DATUM:
VERTICAL DATUM:

COUNTY: **Washington**
LOG QC BY: **A. Zimmer**
HAMMER TYPE: **Automatic**
STREAMBED ELEVATION: **NA**

STATION: **721+00**
OFFSET: **Inside Shoulder**
TOWNSHIP:
RANGE:
SECTION:
1/4 SECTION:
1/4 1/4 SECTION:
SURFACE ELEVATION:

SAMPLE TYPE NUMBER	RECOVERY (in) (RQD)	Moisture	BLOW COUNTS (N VALUE)	Depth (ft)	Graphic	Soil Description/ Comments	USCS / AASHTO	Strength Qp (tsf)	Liquid Limit (%)	Plasticity Index (%)	Boulders	Drilling Method	Notes
						6" Shoulder Gravel							
				0.5		FINE TO COARSE SAND, brown, little silt, fill							
SS 1	15	M 8	13-16-11-7 (27)										Fines = 14%
				3.0		SILTY CLAY, brown/dark brown, trace fine to coarse sand & gravel, with fine to coarse sand lenses, fill							
SS 2	18	6	14-14-15-11 (29)										
				5.0		End of Boring at 5.0 ft.							

WATER LEVEL & CAVE-IN OBSERVATION DATA

WATER ENCOUNTERED DURING DRILLING: NMR		CAVE - IN DEPTH AT COMPLETION: NMR		WET ☐ DRY ☐
WATER LEVEL AT COMPLETION: NMR		CAVE - IN DEPTH AFTER 0 HOURS: NMR		WET ☐ DRY ☐

NOTES: 1) Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.
2) NE = Not Encountered; NMR = No Measurement Recorded

WI Dept. of Transportation
3502 Kinsman Blvd.
Madison, WI 53704

WISDOT PROJECT ID: **1100-38-00**
WISDOT STRUCTURE ID:

BORING ID: 33
PAGE NO: **1 of 1**

WISDOT PROJECT NAME: **Washington Countyline - USH 41/45 Split**
CONSULTANT:
CONSULTANT PROJECT NO:
LATITUDE:
LONGITUDE:

ROADWAY NAME: **US 41/45**
DRILLING CONTRACTOR: **PSI**
DRILLING CONTRACTOR PROJECT NO:
NORTHING: **132483.9671**
EASTING: **359391.7922**

DATE STARTED: **12/11/13**
CREW CHIEF:
DRILL RIG:
COORDINATE SYSTEM: **WCCS**

DATE COMPLETED: **12/11/13**
LOGGED BY:
HOLE SIZE: **4 in**
HORIZONTAL DATUM:
VERTICAL DATUM:

COUNTY: **Washington**
LOG QC BY: **A. Zimmer**
HAMMER TYPE: **Automatic**
STREAMBED ELEVATION: **NA**

STATION: **741+00**
OFFSET: **Inside Shoulder**
TOWNSHIP:
RANGE:
SECTION:
1/4 SECTION:
1/4 1/4 SECTION:
SURFACE ELEVATION:

SAMPLE TYPE NUMBER	RECOVERY (in) (RQD)	Moisture	BLOW COUNTS (N VALUE)	Depth (ft)	Graphic	Soil Description/ Comments	USCS / AASHTO	Strength Qp (tsf)	Liquid Limit (%)	Plasticity Index (%)	Boulders	Drilling Method	Notes
						4" Shoulder Gravel							
				0.3		FINE SAND, brown, little silt, trace medium to coarse sand, fill							
				1.0		SILTY/CLAY CLAYEY/SILT, brown, trace fine to coarse sand & gravel							
SS 1	12	M-W 12	7-5-7-12 (12)										
				3.0		SILTY CLAY, brown, trace fine to coarse sand & gravel							
SS 2	18	17	7-7-7-10 (14)					4.5	33	14			
				5.0		End of Boring at 5.0 ft.							

WATER LEVEL & CAVE-IN OBSERVATION DATA

WATER ENCOUNTERED DURING DRILLING: NMR		CAVE - IN DEPTH AT COMPLETION: NMR		WET ☐ DRY ☐
WATER LEVEL AT COMPLETION: NMR		CAVE - IN DEPTH AFTER 0 HOURS: NMR		WET ☐ DRY ☐

NOTES: 1) Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.
2) NE = Not Encountered; NMR = No Measurement Recorded

C:\USERS\DOTAEZ\DOCUMENTS\A PROJECTS\WASHINGTON\USH 41\1100-38-00 - USH 41 - COUNTY LINE TO 41-45 SPLIT\1100-38-00 US 41- 45 (MILWAUKEE COUNTYLINE TO STH 145) MILWAUKEE CO.GPJ Washington Countyline - USH 41/45 Split 6/2/13

2

BEGIN HEAVY DUTY SILT FENCE
STA 354+93

354+93.40, -124.32' LT
355+13.15, -88.06' LT
355+36.69, -87.85' LT
355+61.62, -80.90' LT

SLOPE
INTERCEPT

USH 41/45

CTH "O"

40+51.00

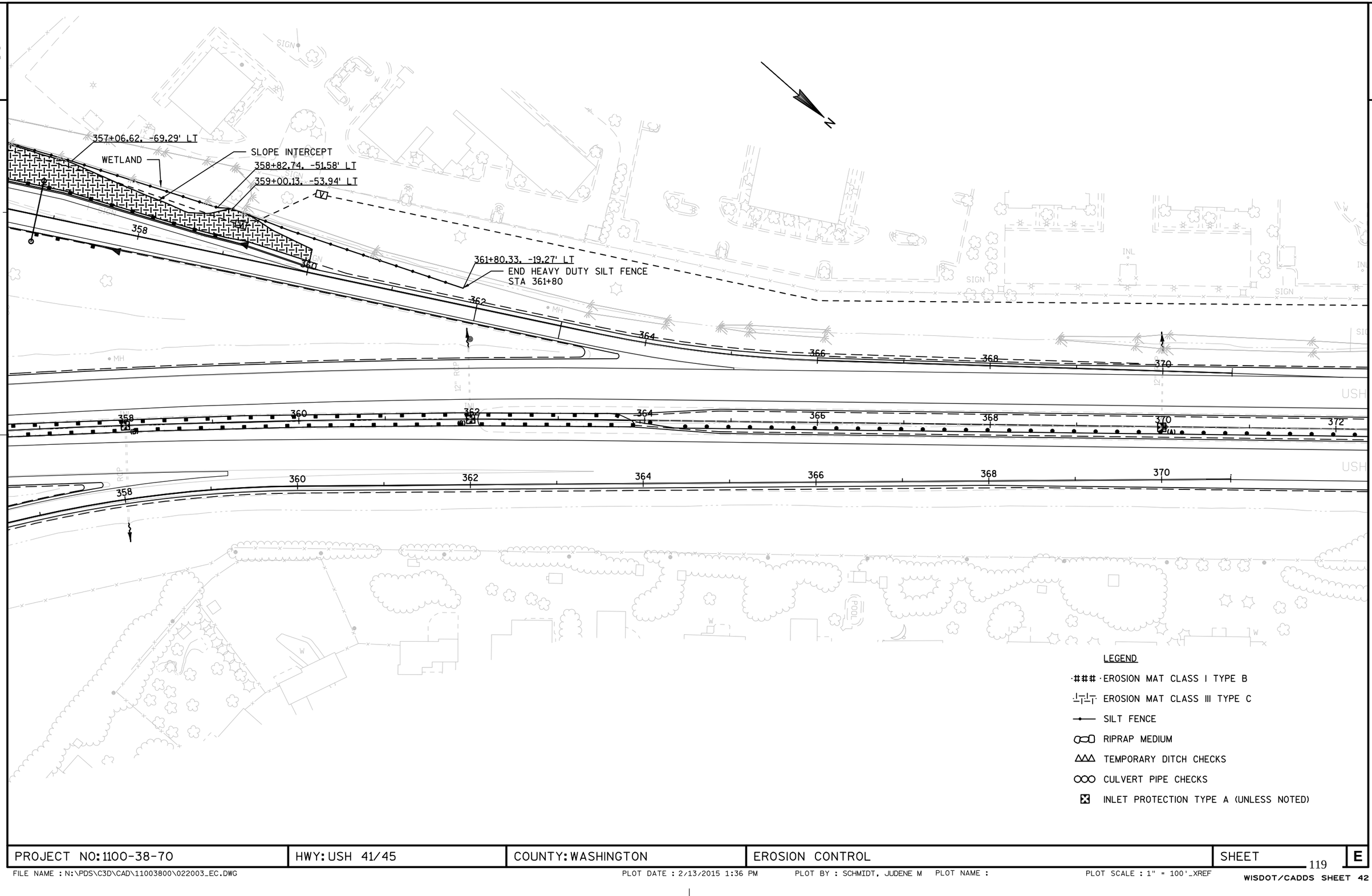
LEGEND

- ### EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS III TYPE C
- SILT FENCE
- RIPRAP MEDIUM
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A (UNLESS NOTED)

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	EROSION CONTROL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\022002_EC.DWG PLOT DATE : 2/13/2015 1:21 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

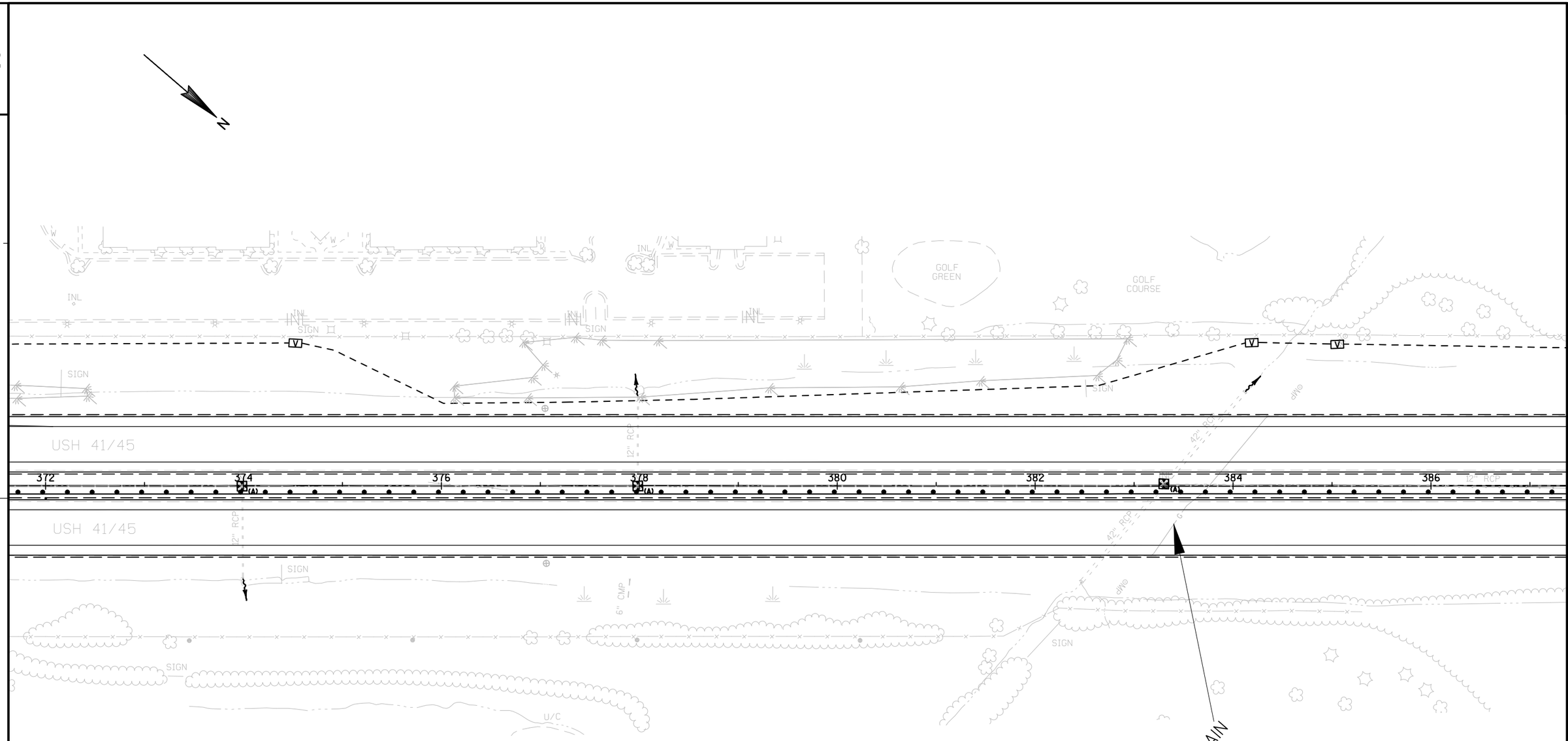


PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	EROSION CONTROL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\022003_EC.DWG PLOT DATE : 2/13/2015 1:36 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

2



LEGEND

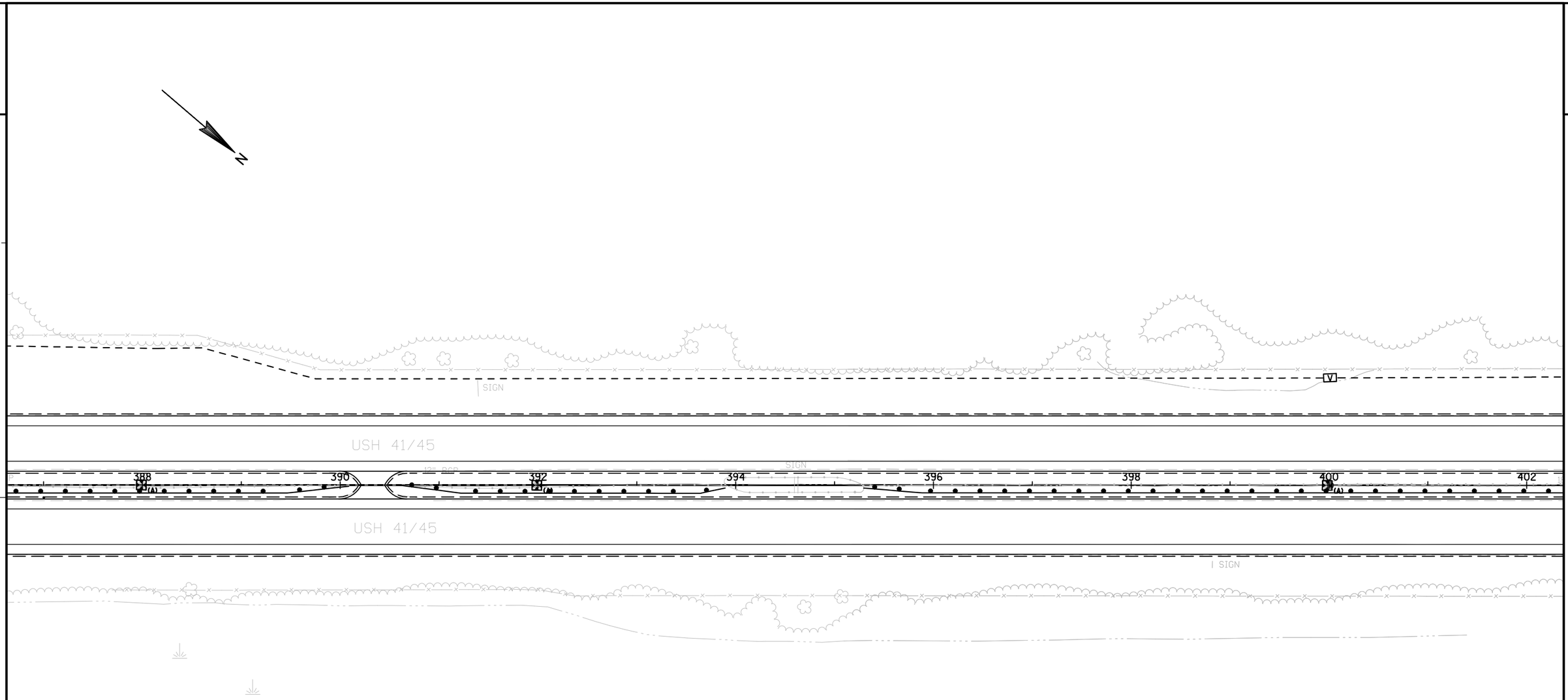
- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS III TYPE C
- SILT FENCE
- RIPRAP MEDIUM
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A (UNLESS NOTED)

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	EROSION CONTROL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\022004_EC.DWG PLOT DATE : 12/11/2014 1:44 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

2



LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS III TYPE C
- SILT FENCE
- RIPRAP MEDIUM
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A (UNLESS NOTED)

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	EROSION CONTROL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\022005_EC.DWG PLOT DATE : 12/11/2014 1:45 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

2

N

SIGN

USH 41/45

402 18" RCP 404 406 408 18" RCP 410 412 414 416 18" RCP

(A) (A)

USH 41/45

SIGN

SIGN

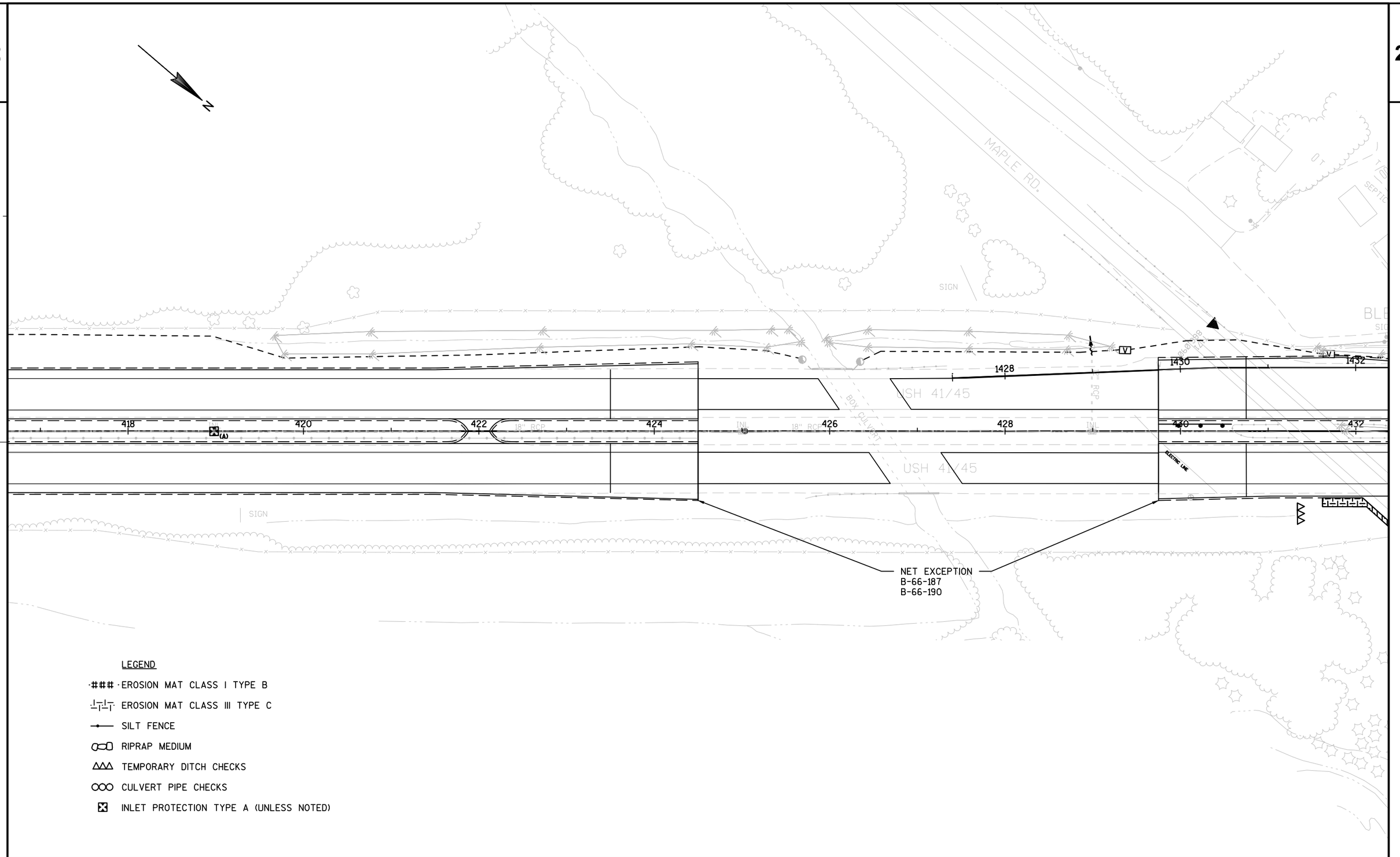
LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS III TYPE C
- SILT FENCE
- RIPRAP MEDIUM
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A (UNLESS NOTED)

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	EROSION CONTROL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\022006_EC.DWG PLOT DATE : 12/11/2014 1:46 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2



LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS III TYPE C
- SILT FENCE
- RIPRAP MEDIUM
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A (UNLESS NOTED)

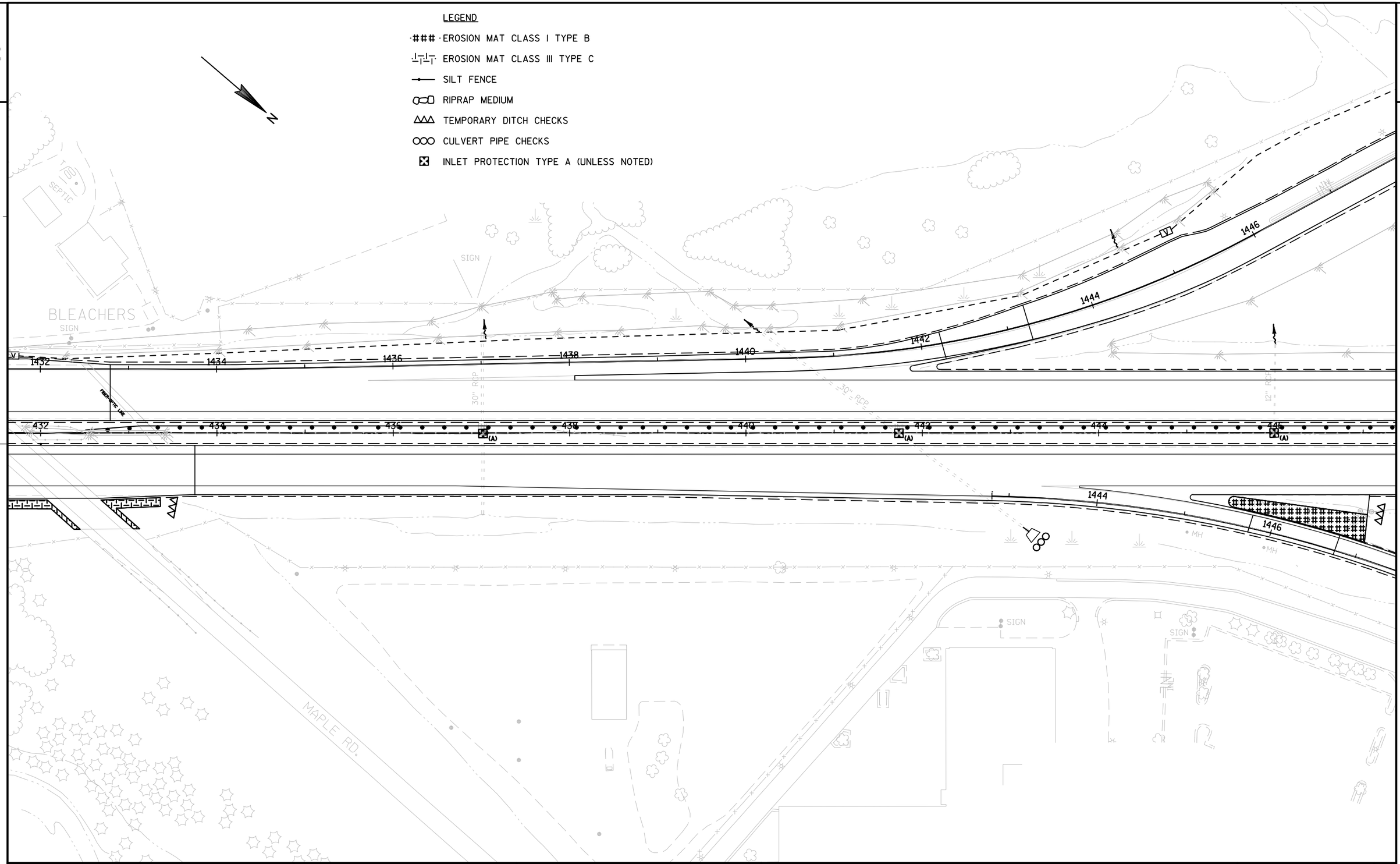
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	EROSION CONTROL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\022007_EC.DWG PLOT DATE : 3/9/2015 12:31 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS III TYPE C
- SILT FENCE
- RIPRAP MEDIUM
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A (UNLESS NOTED)

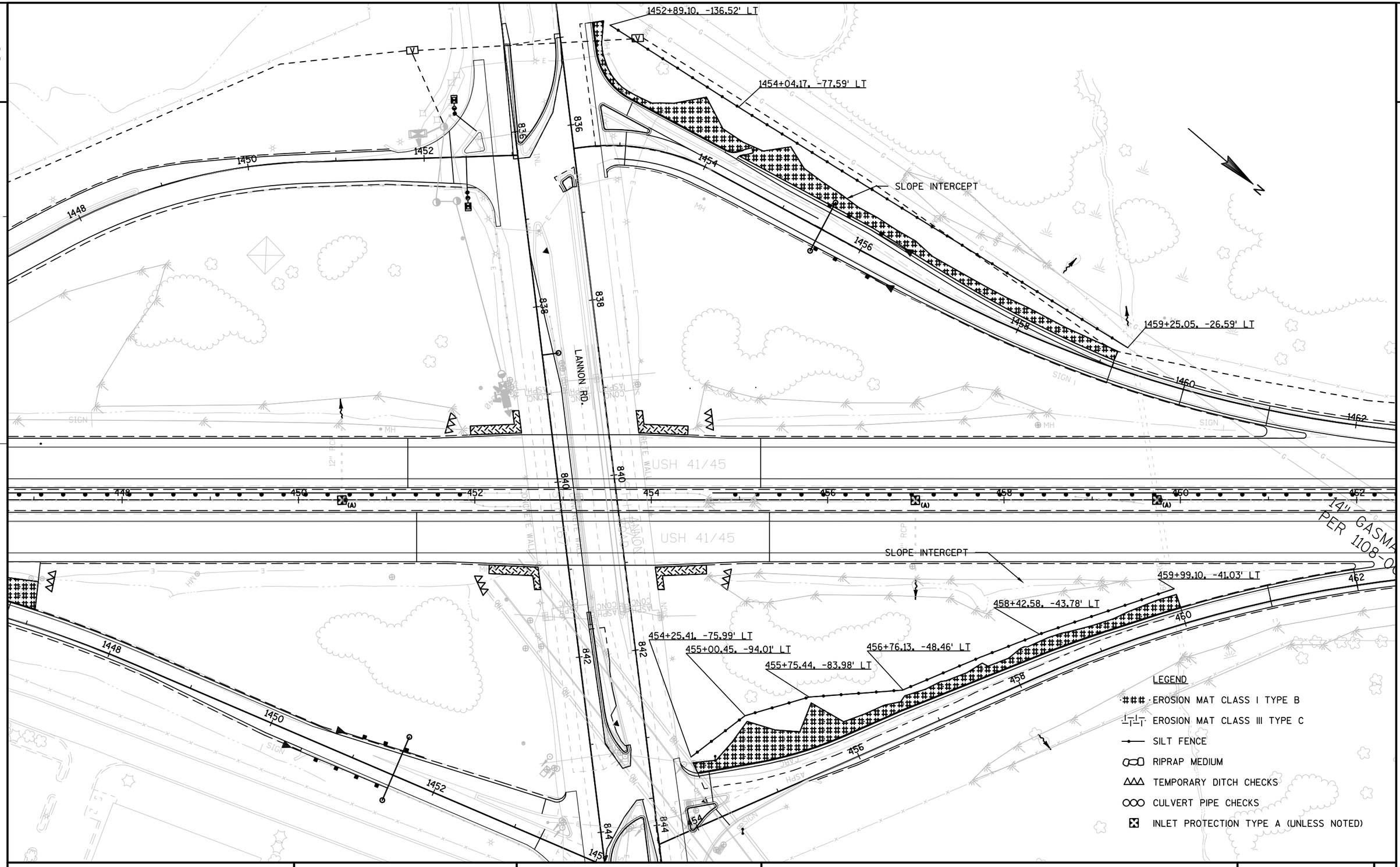


PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	EROSION CONTROL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\022008_EC.DWG PLOT DATE : 12/11/2014 1:49 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	EROSION CONTROL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\022009_EC.DWG PLOT DATE : 12/11/2014 1:50 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

2

LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS III TYPE C
- SILT FENCE
- RIPRAP MEDIUM
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A (UNLESS NOTED)

N

USH 41/45/STH 167

1462

462 464 466 468 470 472 474 476

(A)

14" GASMAIN PER 1108-00-70

20" GASMAIN PER 1108-00-70

12" RCP

36" RCP

30" RCP

12" RCP

RCP

U/C

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	EROSION CONTROL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\022010_EC.DWG PLOT DATE : 12/11/2014 1:51 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS III TYPE C
- SILT FENCE
- RIPRAP MEDIUM
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A (UNLESS NOTED)

N

489+39.99, -85.00' LT

SIGN

12" RCP

USH 41/45/STH 167

478 480 482 484 486 488 490 492

INLET PROTECTION TYPE A (UNLESS NOTED)

24" RCP

30" RCP

MARION RD

USH 41/45/STH 167

486+00.22, 85.00' RT

489+00.00, 85.00' RT

RIPRAP

MH

MH

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	EROSION CONTROL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\022011_EC.DWG PLOT DATE : 12/11/2014 1:52 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

2

N

492+39.99, -85.00' LT

SIGN

SIGN

12" RCP

12" RCP

12" RCP

12" RCP

492 494 496 498 500 502 504 506

(A)

MH

MH

MH

W

W

LEGEND

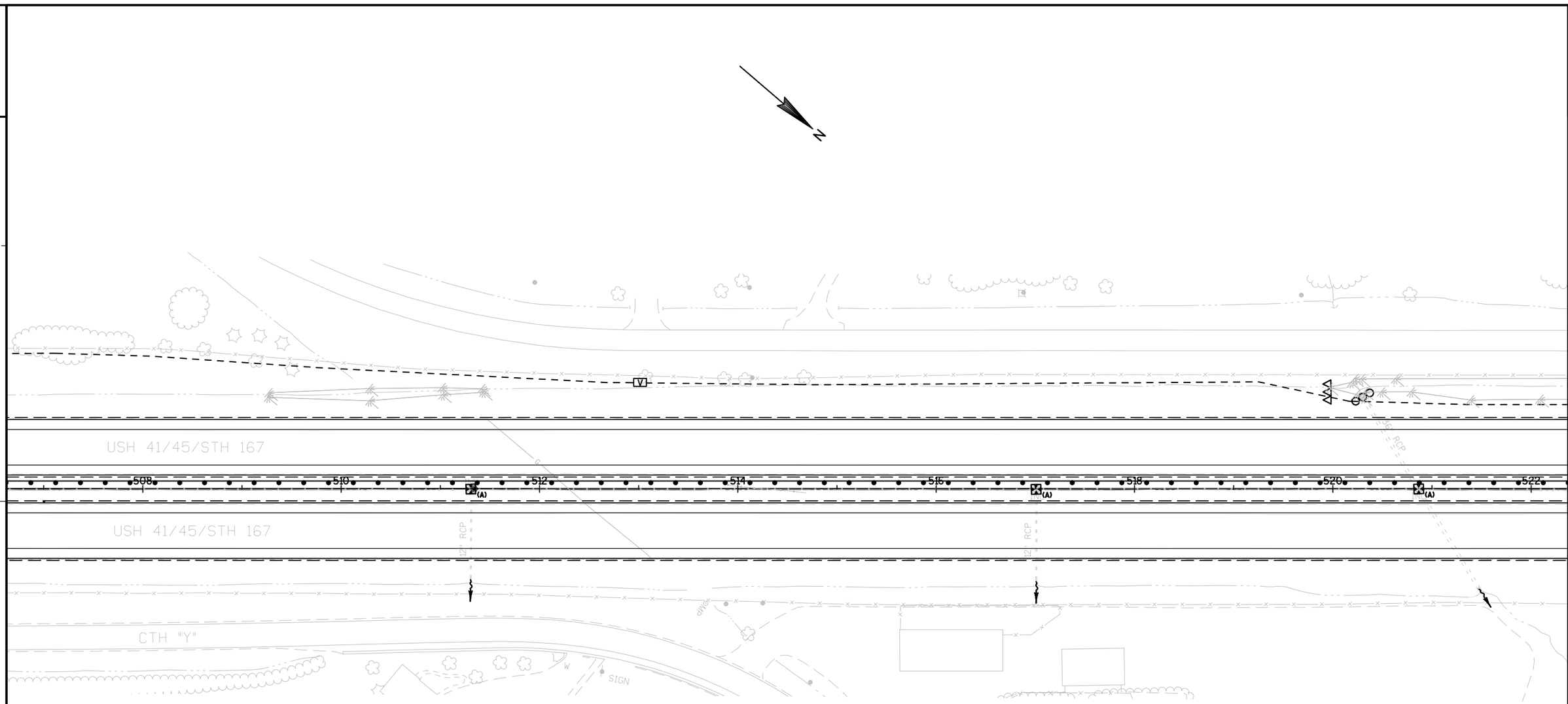
- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS III TYPE C
- SILT FENCE
- RIPRAP MEDIUM
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A (UNLESS NOTED)

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	EROSION CONTROL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\022012_EC.DWG PLOT DATE : 12/11/2014 1:54 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

2



LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS III TYPE C
- SILT FENCE
- RIPRAP MEDIUM
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A (UNLESS NOTED)

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	EROSION CONTROL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\022013_EC.DWG PLOT DATE : 12/11/2014 1:55 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

2

HILLTOP DR.

USH 41/45/STH 167

522 524 526 528 530 532 534 536

(A)

12" RCP

SIGN

SEPTIC

LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS III TYPE C
- SILT FENCE
- RIPRAP MEDIUM
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A (UNLESS NOTED)

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	EROSION CONTROL	SHEET 130	E

FILE NAME : N:\PDS\C3D\CAD\11003800\022014_EC.DWG PLOT DATE : 12/11/2014 1:56 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

N

SIREN

SIGN

SIGN

SIGN

SIGN

HILLTOP DR.

SIGN

12" RCP

30" RCP

USH 41/45/STH 167

538 540 542 544 546 548 550 552

(A) (A) (A) (A)

12" RCP

12" RCP

USH 41/45/STH 167

SIGN

SIGN

SIGN

SEPTIC

LEGEND

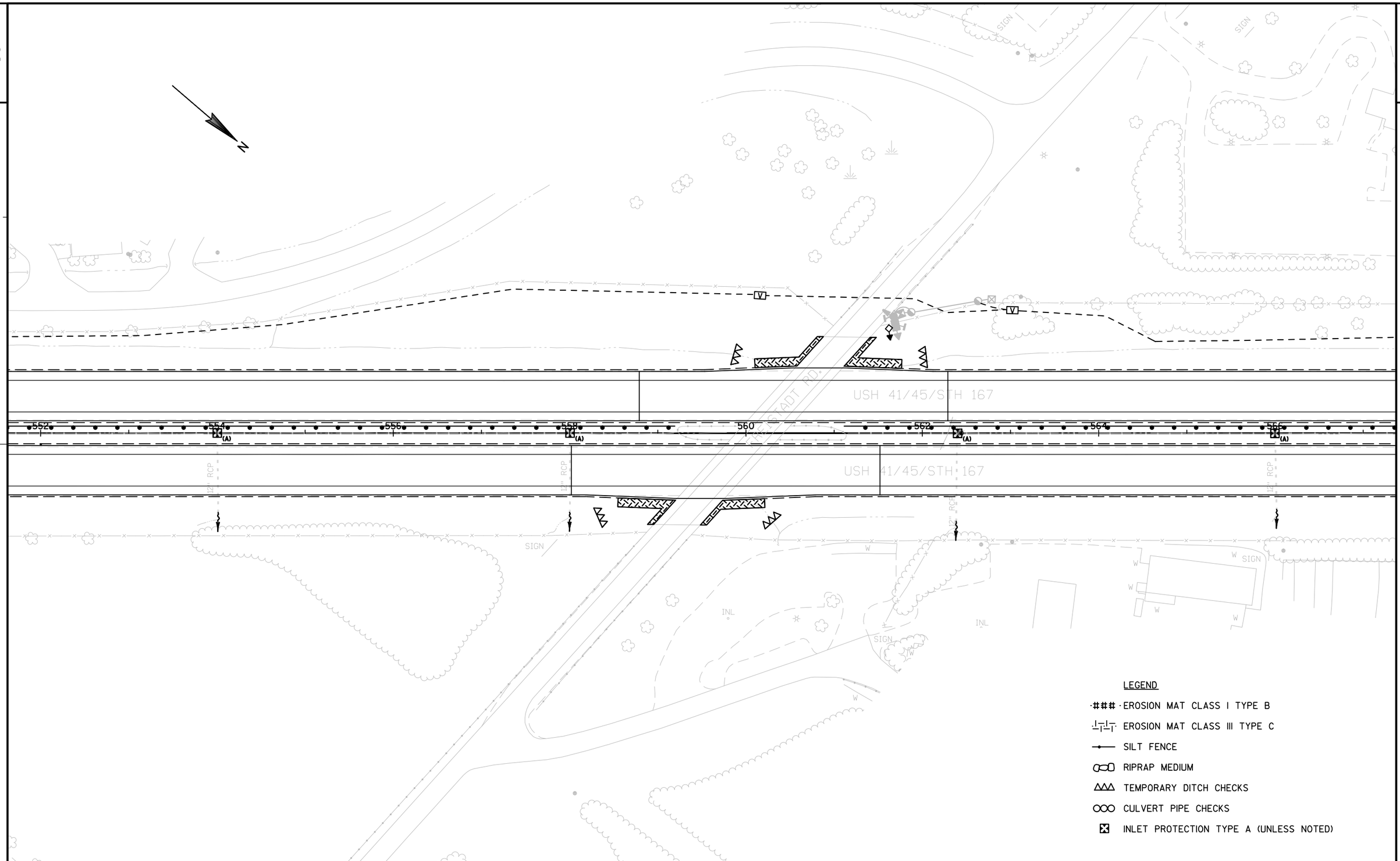
- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS III TYPE C
- SILT FENCE
- RIPRAP MEDIUM
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A (UNLESS NOTED)

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	EROSION CONTROL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\022015_EC.DWG PLOT DATE : 12/11/2014 1:57 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

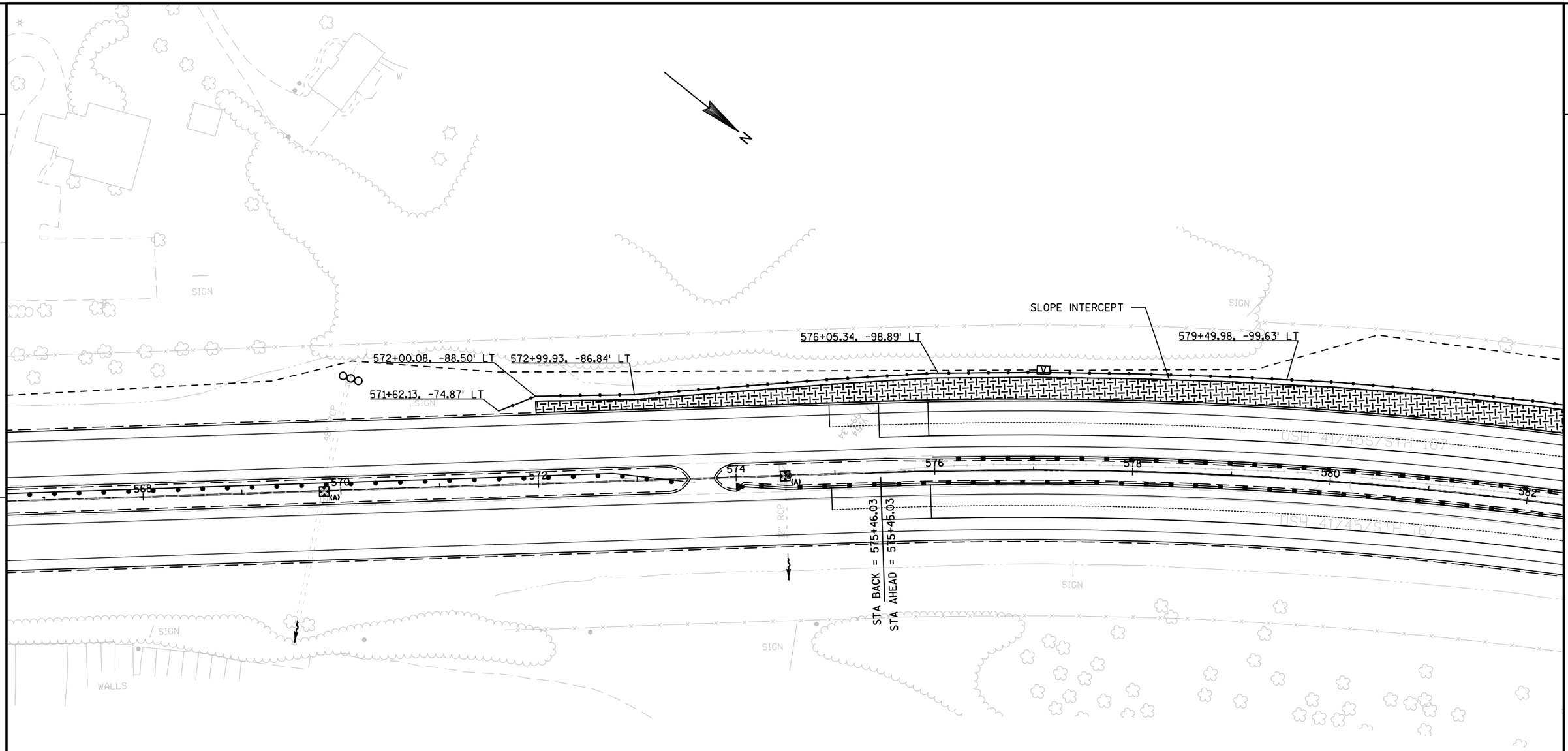
2



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	EROSION CONTROL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\022016_EC.DWG PLOT DATE : 12/11/2014 1:59 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2



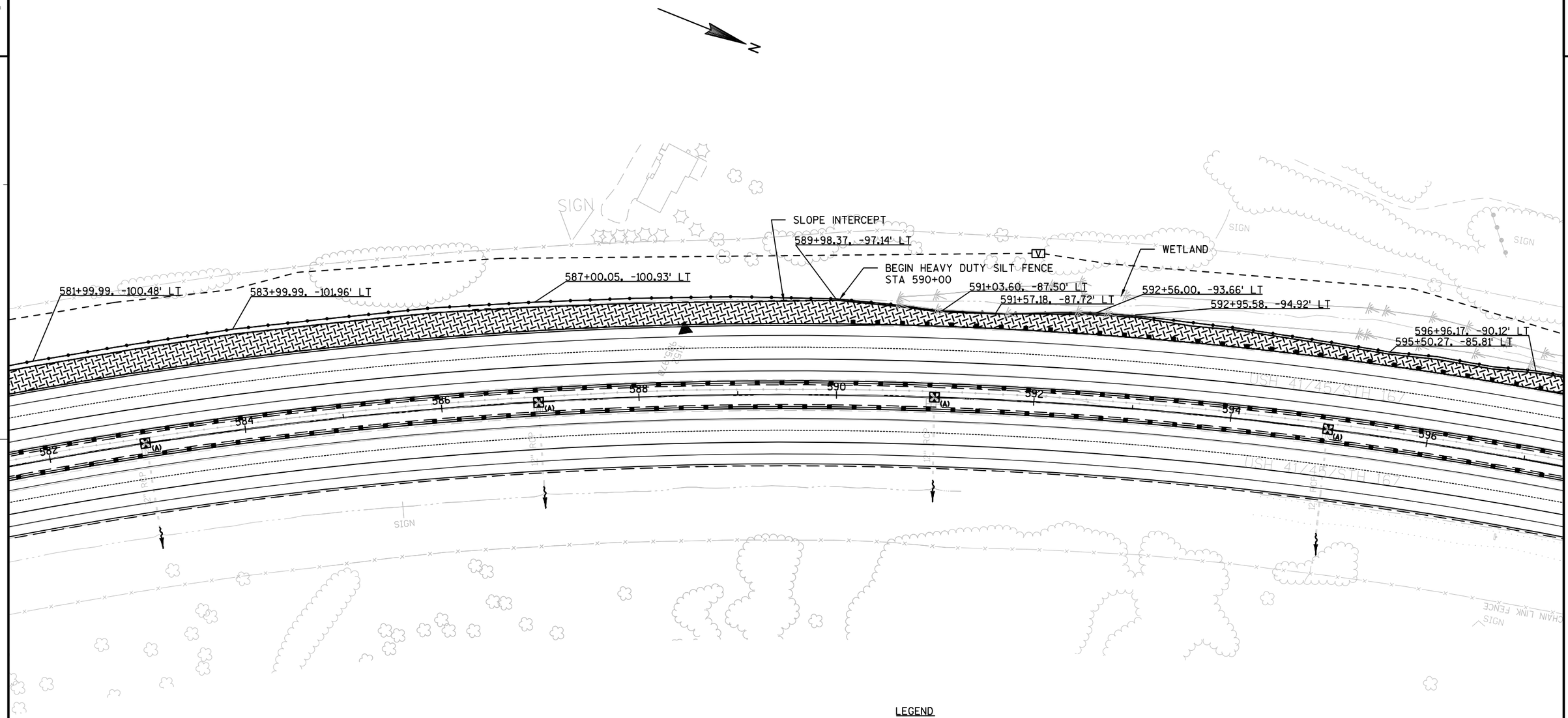
LEGEND

- ### EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS III TYPE C
- SILT FENCE
- RIPRAP MEDIUM
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A (UNLESS NOTED)

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	EROSION CONTROL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\022017_EC.DWG PLOT DATE : 12/11/2014 2:00 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2



LEGEND

- ### EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS III TYPE C
- SILT FENCE
- RIPRAP MEDIUM
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A (UNLESS NOTED)

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	EROSION CONTROL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\022018_EC.DWG PLOT DATE : 2/12/2015 10:21 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

2

N

597+80.78, -91.86' LT

598+38.35, -87.09' LT

598+62.99, -93.46' LT

END HEAVY DUTY SILT FENCE
STA 599+00

600+98.62, -100.78' LT

601+50.76, -93.58' LT

SLOPE INTERCEPT

603+51.39, -103.22' LT

605+52.14, -103.98' LT

606+01.20, -97.51' LT

608+00.04, -98.19' LT

608+52.13, -93.60' LT

599+49.85, -97.26' LT

WETLAND

596+94.24, 30.10' LT

598

600

602

604

606

608

610

612

(A)

(B)

602+48.02, 96.89' RT

600+50.28, 101.12' RT

599+50.00, 94.00' RT

603+99.27, 117.98' RT

604+77.08, 103.60' RT

WETLAND

SLOPE INTERCEPT

+00 78' RT

+50 80' RT

+71 80' RT

WETLAND

NET
EXCEPTION
B-66-1
B-66-2

SIGN

CHAIN LINK FENCE

WETLANDS

CONC

ASPH

GUARDRAIL

WISCONSIN & SOUTHERN RAILROAD

LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS III TYPE C
- SILT FENCE
- RIPRAP MEDIUM
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A (UNLESS NOTED)

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	EROSION CONTROL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\022019_EC.DWG PLOT DATE : 2/12/2015 10:16 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

N

PROJECT ID 1000-44-73
HOLY HILL RD
BY OTHERS

PI: 119+00.22

TIME WARNER FIBER LINE NOT MARKED BY DIGGERS HOTLINE
APPROXIMATE LOCATION

USH 41/45

STH 167

HOLY HILL RD.

612 614 616 618 620 622 624 626

613+53.40, -40.90' LT
614+04.32, -49.60' LT
615+12.13, -51.45' LT
615+46.39, -44.42' LT
616+01.14, -44.16' LT
616+59.68, -49.55' LT
618+41.38, -52.59' LT
619+19.62, -41.77' LT
619+31.43, -46.34' LT

PROJECT ID 1000-44-73
HOLY HILL RD
BY OTHERS

LEGEND

- ### EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS III TYPE C
- SILT FENCE
- RIPRAP MEDIUM
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A (UNLESS NOTED)

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	EROSION CONTROL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\022020_EC.DWG PLOT DATE : 1/15/2015 5:35 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

2

N

628 630 632 634

SIGN

12" RCP

USH 41/45

628 630 632 634 636 638 640 642

12" RCP

12" RCP

USH 41/45

SIGN

628 630 632

SIGN

SIGN

LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS III TYPE C
- SILT FENCE
- RIPRAP MEDIUM
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A (UNLESS NOTED)

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	EROSION CONTROL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\022021_EC.DWG PLOT DATE : 1/15/2015 5:36 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

2

N

SIGN

SIGN

SIGN

SIGN

SIGN

T144
907.410

12" RCP

12" RCP

12" RCP

V145
905.82

642 644 646 648 650 652 654 656

LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS III TYPE C
- SILT FENCE
- RIPRAP MEDIUM
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A (UNLESS NOTED)

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	EROSION CONTROL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\022022_EC.DWG PLOT DATE : 1/15/2015 5:37 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

2

N

T144
907.410

SIGN

SIGN

SIGN

SIGN

12" RCP

12" RCP

12" RCP

USH 41/45

USH 41/45

654

656

658

659

662

664

666

CULVERT

SIGN

SIGN

LEGEND

- ### EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS III TYPE C
- SILT FENCE
- RIPRAP MEDIUM
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A (UNLESS NOTED)

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	EROSION CONTROL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\022023_EC.DWG PLOT DATE : 1/15/2015 5:38 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

2

N

T44
86.91Ø

SIGN

SIGN

SIGN

USH 41/45

USH 41/45

680+36.36, -147.00' LT

PROJECT ID 1100-15-71
B-66-0195
BY OTHERS

682+32.96, -157.97' LT

668

670

672

674

676

678

680

682

682

669+99.42, 64.00' RT

672+49.67, 64.00' RT

+45
46' RT

+45
50' RT

+95
48' RT

+18
48' RT

+68
46' RT

6" STEEL GAS MAIN
IN 12" CASING
PER 1108-00-70

T23
87.91Ø

SEPTIC

W

LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS III TYPE C
- SILT FENCE
- RIPRAP MEDIUM
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A (UNLESS NOTED)

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	EROSION CONTROL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\022024_EC.DWG PLOT DATE : 1/15/2015 5:39 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

2

682+36.00, -51.86' LT

682+40.00, 78.00' RT

684+40.00, 77.98' RT

+47 56' RT

+57 60' RT

+97 58' RT

+14 58' RT

+64 56' RT

682 684 686 688 690 692 694 696

U.S.H. 45 USH

U.S.H. 41 USH

SIGN

FOUND

SEPTIC

LEGEND

- ### EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS III TYPE C
- SILT FENCE
- RIPRAP MEDIUM
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A (UNLESS NOTED)

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	EROSION CONTROL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\022025_EC.DWG PLOT DATE : 1/15/2015 5:40 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

2

BP: 706+00.01

LEGEND

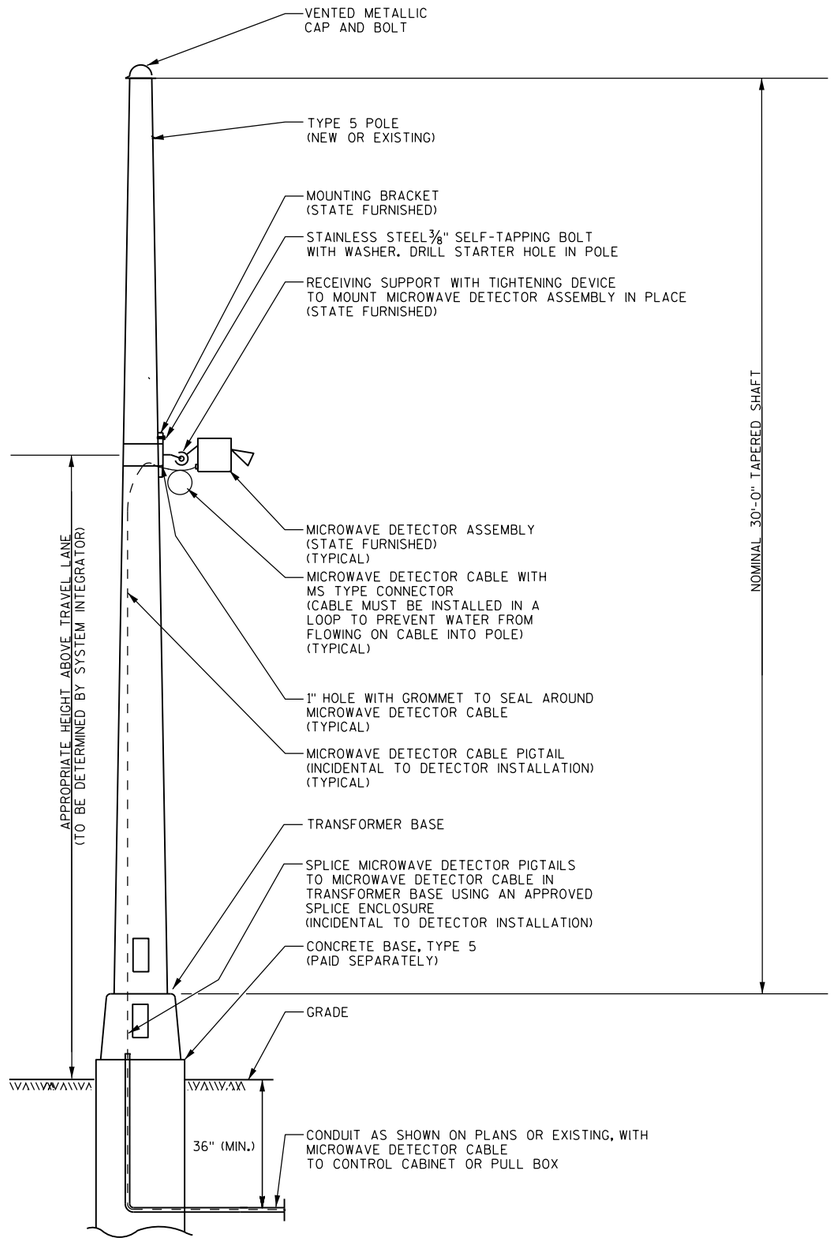
- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS III TYPE C
- SILT FENCE
- RIPRAP MEDIUM
- TEMPORARY DITCH CHECKS
- CULVERT PIPE CHECKS
- INLET PROTECTION TYPE A (UNLESS NOTED)

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	EROSION CONTROL	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\022026_EC.DWG PLOT DATE : 1/15/2015 5:41 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

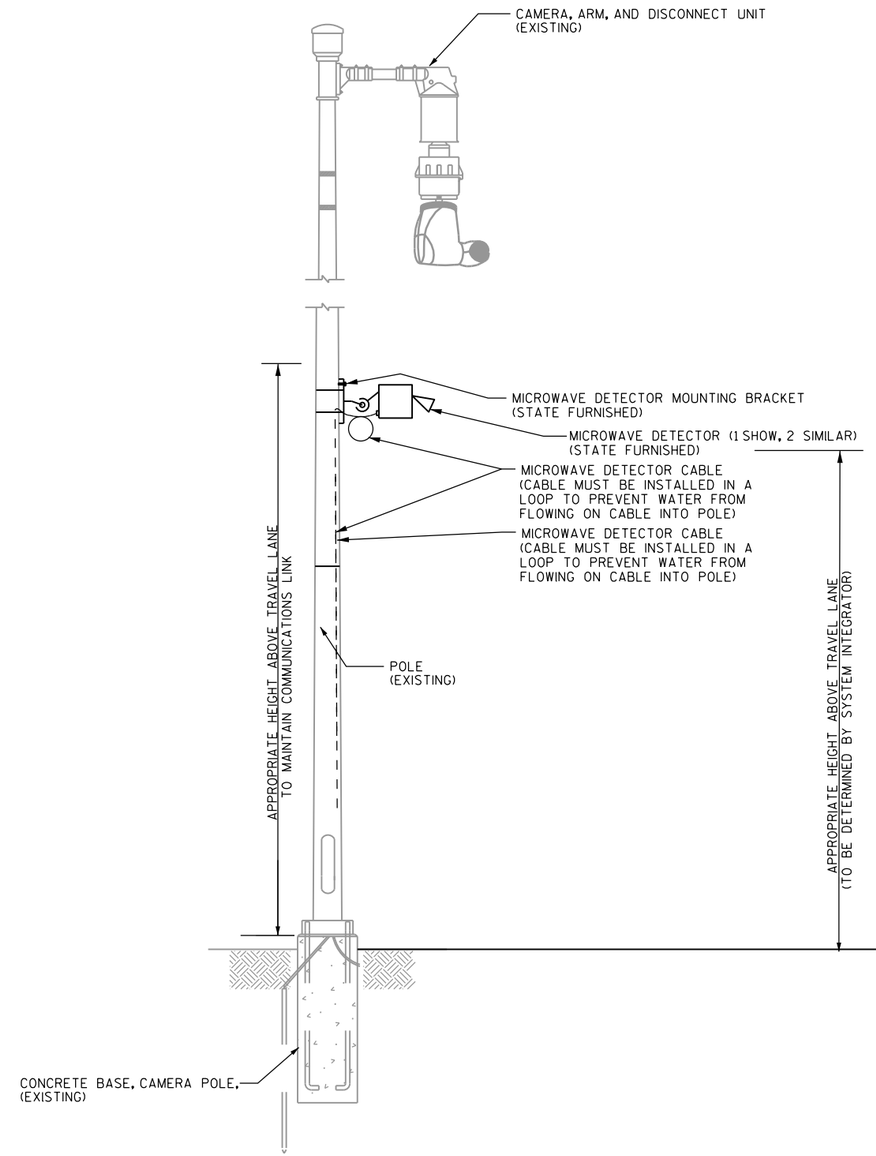
WISDOT/CADDS SHEET 42

2



MICROWAVE DETECTOR INSTALLATION
ON TYPE 5 POLE

2



EXISTING CAMERA POLE WITH MICROWAVE DETECTOR

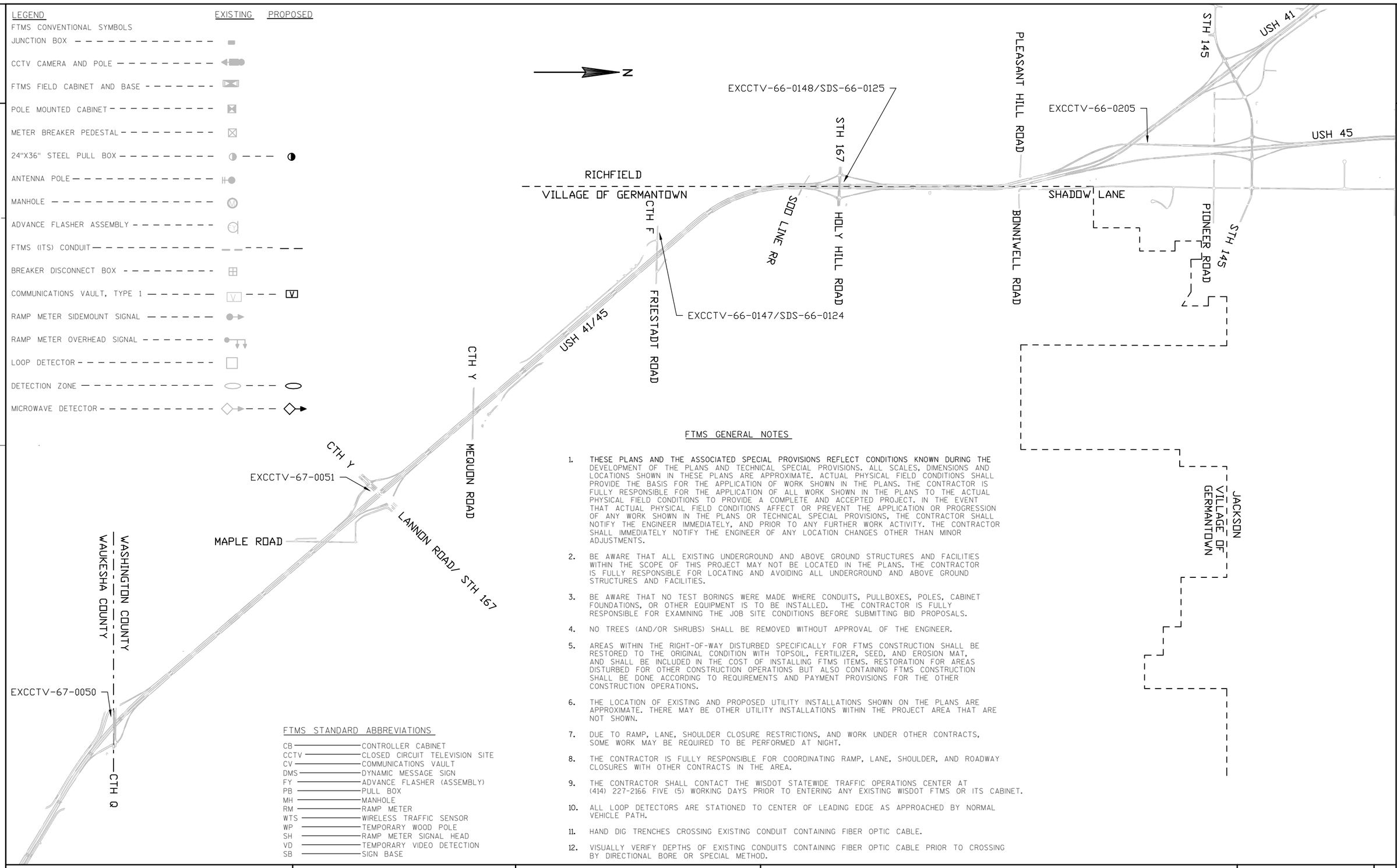
NOTES

1) ALL HARDWARE AND FASTENERS SHALL BE STAINLESS STEEL
2) POLE DRAWINGS SHOWN FOR BIDDING INFORMATION PURPOSES ONLY. POLES WILL BE STATE FURNISHED. BASE TO BE CONTRACTOR DESIGNED.
3) CONTRACTOR SHALL CONFIRM BOLT PATTERN OF CAMERA POLE PRIOR TO CONSTRUCTION OF CONCRETE BASE.

2

LEGEND

FTMS CONVENTIONAL SYMBOLS	EXISTING	PROPOSED
JUNCTION BOX		
CCTV CAMERA AND POLE		
FTMS FIELD CABINET AND BASE		
POLE MOUNTED CABINET		
METER BREAKER PEDESTAL		
24"X36" STEEL PULL BOX		
ANTENNA POLE		
MANHOLE		
ADVANCE FLASHER ASSEMBLY		
FTMS (ITS) CONDUIT		
BREAKER DISCONNECT BOX		
COMMUNICATIONS VAULT, TYPE 1		
RAMP METER SIDEMOUNT SIGNAL		
RAMP METER OVERHEAD SIGNAL		
LOOP DETECTOR		
DETECTION ZONE		
MICROWAVE DETECTOR		



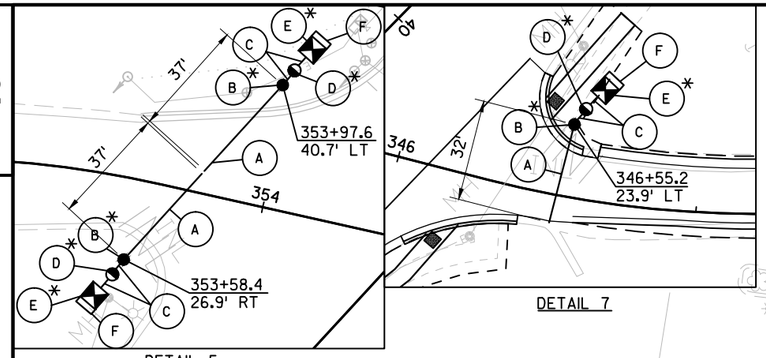
FTMS STANDARD ABBREVIATIONS

CB	CONTROLLER CABINET
CCTV	CLOSED CIRCUIT TELEVISION SITE
CV	COMMUNICATIONS VAULT
DMS	DYNAMIC MESSAGE SIGN
FY	ADVANCE FLASHER (ASSEMBLY)
PB	PULL BOX
MH	MANHOLE
RM	RAMP METER
WTS	WIRELESS TRAFFIC SENSOR
WP	TEMPORARY WOOD POLE
SH	RAMP METER SIGNAL HEAD
VD	TEMPORARY VIDEO DETECTION
SB	SIGN BASE

FTMS GENERAL NOTES

1. THESE PLANS AND THE ASSOCIATED SPECIAL PROVISIONS REFLECT CONDITIONS KNOWN DURING THE DEVELOPMENT OF THE PLANS AND TECHNICAL SPECIAL PROVISIONS. ALL SCALES, DIMENSIONS AND LOCATIONS SHOWN IN THESE PLANS ARE APPROXIMATE. ACTUAL PHYSICAL FIELD CONDITIONS SHALL PROVIDE THE BASIS FOR THE APPLICATION OF WORK SHOWN IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE APPLICATION OF ALL WORK SHOWN IN THE PLANS TO THE ACTUAL PHYSICAL FIELD CONDITIONS TO PROVIDE A COMPLETE AND ACCEPTED PROJECT. IN THE EVENT THAT ACTUAL PHYSICAL FIELD CONDITIONS AFFECT OR PREVENT THE APPLICATION OR PROGRESSION OF ANY WORK SHOWN IN THE PLANS OR TECHNICAL SPECIAL PROVISIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY, AND PRIOR TO ANY FURTHER WORK ACTIVITY. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY LOCATION CHANGES OTHER THAN MINOR ADJUSTMENTS.
2. BE AWARE THAT ALL EXISTING UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES WITHIN THE SCOPE OF THIS PROJECT MAY NOT BE LOCATED IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR LOCATING AND AVOIDING ALL UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES.
3. BE AWARE THAT NO TEST BORINGS WERE MADE WHERE CONDUITS, PULLBOXES, POLES, CABINET FOUNDATIONS, OR OTHER EQUIPMENT IS TO BE INSTALLED. THE CONTRACTOR IS FULLY RESPONSIBLE FOR EXAMINING THE JOB SITE CONDITIONS BEFORE SUBMITTING BID PROPOSALS.
4. NO TREES (AND/OR SHRUBS) SHALL BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.
5. AREAS WITHIN THE RIGHT-OF-WAY DISTURBED SPECIFICALLY FOR FTMS CONSTRUCTION SHALL BE RESTORED TO THE ORIGINAL CONDITION WITH TOPSOIL, FERTILIZER, SEED, AND EROSION MAT, AND SHALL BE INCLUDED IN THE COST OF INSTALLING FTMS ITEMS. RESTORATION FOR AREAS DISTURBED FOR OTHER CONSTRUCTION OPERATIONS BUT ALSO CONTAINING FTMS CONSTRUCTION SHALL BE DONE ACCORDING TO REQUIREMENTS AND PAYMENT PROVISIONS FOR THE OTHER CONSTRUCTION OPERATIONS.
6. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
7. DUE TO RAMP, LANE, SHOULDER CLOSURE RESTRICTIONS, AND WORK UNDER OTHER CONTRACTS, SOME WORK MAY BE REQUIRED TO BE PERFORMED AT NIGHT.
8. THE CONTRACTOR IS FULLY RESPONSIBLE FOR COORDINATING RAMP, LANE, SHOULDER, AND ROADWAY CLOSURES WITH OTHER CONTRACTS IN THE AREA.
9. THE CONTRACTOR SHALL CONTACT THE WISDOT STATEWIDE TRAFFIC OPERATIONS CENTER AT (414) 227-2166 FIVE (5) WORKING DAYS PRIOR TO ENTERING ANY EXISTING WISDOT FTMS OR ITS CABINET.
10. ALL LOOP DETECTORS ARE STATIONED TO CENTER OF LEADING EDGE AS APPROACHED BY NORMAL VEHICLE PATH.
11. HAND DIG TRENCHES CROSSING EXISTING CONDUIT CONTAINING FIBER OPTIC CABLE.
12. VISUALLY VERIFY DEPTHS OF EXISTING CONDUITS CONTAINING FIBER OPTIC CABLE PRIOR TO CROSSING BY DIRECTIONAL BORE OR SPECIAL METHOD.

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: FTMS PLAN OVERVIEW	SHEET 145	E



DETAIL 5

DETAIL 7

INSTALL 3-2" HDPE CONDUIT, SPECIAL
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

CV354

G-66-05
SEE DETAIL 5

G-66-06
SEE DETAIL 5

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

EXMH344
(75) F.O. Ssplices IN
NEW SPLICE ENCLOSURE (S-F)
INSTALL CONDUIT INTO EXISTING ITEM

EXCCTV-67-0050
REMOVE PARABOLIC ANTENNA AND ASSOCIATED WIRING
REMOVE 5.8 GHz ETHERNET BRIDGE
REMOVE 1 UNUSED YAGI ANTENNA

G-66-07
SEE DETAIL 7

USH 41/45 SB

USH 41/45 NB

USH 41/45

CTH O

ICHFIELD WAY

LEGEND

- (A) RAMP CLOSURE GATES SOLAR-POWERED
- (B) CONCRETE BASE, TYPE 5
- (C) 3-2-INCH SCHEDULE 40 PVC CONDUIT
- (D) PULL BOX STEEL 24 X 36 INCH
- (E) SOLAR POWERED BATTERY AND CONTROLLER CABINET
- (F) CONCRETE MAINTENANCE PLATFORM

NOTE:
* EXACT LOCATIONS TO BE DETERMINED BY THE FIELD ENGINEER

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	FTMS	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021402_FM.DWG PLOT DATE : 12/5/2014 10:36 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF
WISDOT/CADDS SHEET 42

2

2

INSTALL 3-2" HDPE CONDUIT, SPECIAL
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

INSTALL 3-2" HDPE CONDUIT, SPECIAL
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

CV356

SLOPE INTERCEPT

CV359

CV360

N

356 358 360 362 364 366 368 370

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	FTMS	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021403_FM.DWG PLOT DATE : 2/13/2015 1:51 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

CV374

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

INSTALL 3-2" HDPE CONDUIT, SPECIAL
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

CV384

CV385

GOLF COURSE

GOLF GREEN

SIGN

INL

W

370 372 374 376 378 380 382 384

USH 41/45

12" RCP

42" RCP

6" CMP

DWD

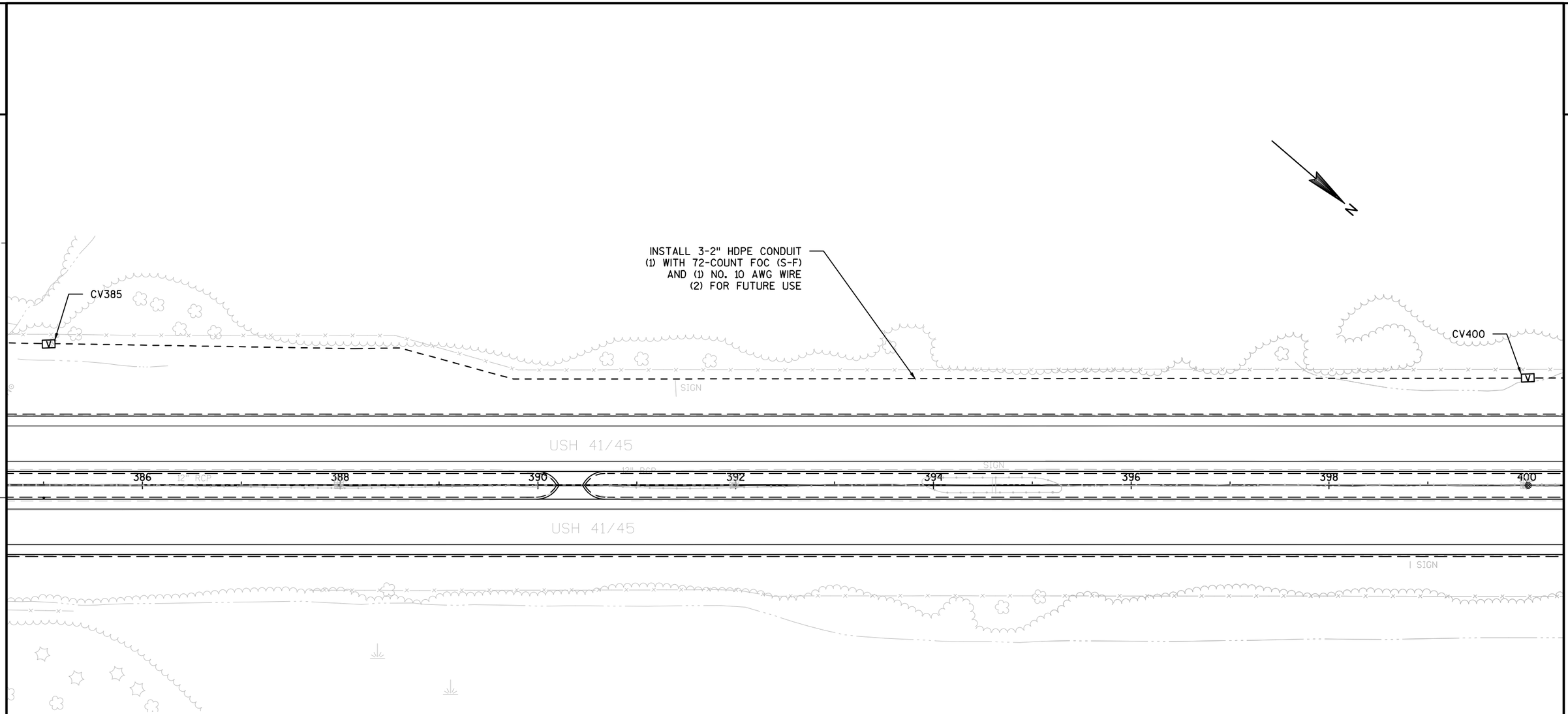
U/C

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	FTMS	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021404_FM.DWG PLOT DATE : 12/5/2014 10:38 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

2

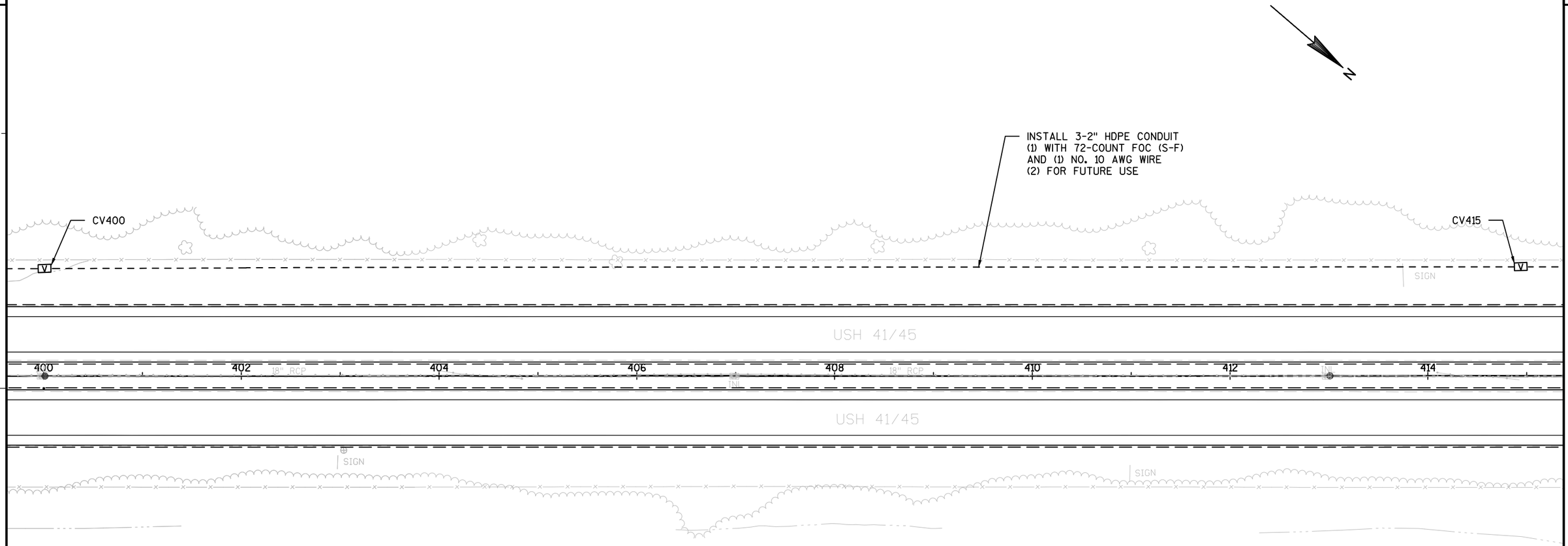


PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	FTMS	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021405_FM.DWG PLOT DATE : 12/5/2014 10:38 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

2



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	FTMS	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021406_FM.DWG PLOT DATE : 12/5/2014 10:39 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

N

MAPLE RD.

MAPLE RD.

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

INSTALL 3-2" HDPE CONDUIT, SPECIAL
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

CV415

EXPB425

INSTALL (1) 72-COUNT FOC
IN EXISTING PARAPET CONDUIT

CV429

EXPB426

SIGN

1427

1428

1430

USH 41/45

416

18" RCP

418

INL

420

422

18" RCP

424

INL

18" RCP

426

428

INL

430

BOX CULVERT

5' RCP

ELECTRIC LINE

USH 41/45

SIGN

INSTALL CONDUIT INTO EXISTING ITEM

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	FTMS	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021407_FM.DWG PLOT DATE : 12/5/2014 10:40 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

2

INSTALL 3-2" HDPE CONDUIT, SPECIAL
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

CV432

CV445

BLEACHERS

SIGN

SEPTIC

FIBER OPTIC LINE

ELECTRIC LINE

30" RCP

MAPLE RD.

MH

1430 1432 1434 1436 1438 1440 1442 1444

430 432 434 436 438 440 442 444

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	FTMS	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021408_FM.DWG PLOT DATE : 12/5/2014 10:41 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

CV452
(75) F.O. SLICES IN NEW
SPLICE ENCLOSURE(S-F)
SPLICE 6-COUNT DROP

INSTALL 3-2" HDPE CONDUIT, SPECIAL
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

G-66-03
SEE DETAIL 3

(2) 2-INCH NONMETALLIC CONDUITS
(1) WITH 6-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(1) FOR FUTURE USE

EXPB451
INSTALL CONDUIT INTO EXISTING ITEM

EXRM CABINET
REMOVE YAGI ANTENNA AND POLE

INSTALL (1) F.O. TERM PANEL
(12) F.O. TERMINATIONS
(1) ETHERNET SWITCH

INSTALL IN EXISTING CONDUIT
2-6-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE

G-66-04
SEE DETAIL 4

EXPB453

EXPB452

INSTALL IN EXISTING CONDUIT
1-6-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE

EXPB454

EXCCTV-66-0051
(2) REMOVE 5.8 GHz ETHERNET BRIDGES
REMOVE PARABOLIC ANTENNA AND ASSOCIATED WIRES
REMOVE EXISTING ETHERNET SWITCH
REMOVE YAGI ANTENNA

INSTALL (1) F.O. TERM PANEL (S-F)
(6) F.O. TERMINATIONS
(1) ETHERNET SWITCH (S-F)

CV454

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

LEGEND

- (A) RAMP CLOSURE GATES SOLAR-POWERED
- (B) CONCRETE BASE, TYPE 5
- (C) 3-2-INCH SCHEDULE 40 PVC CONDUIT
- (D) PULL BOX STEEL 24 X 36 INCH
- (E) SOLAR POWERED BATTERY AND CONTROLLER CABINET
- (F) CONCRETE MAINTENANCE PLATFORM

NOTE:
* EXACT LOCATIONS TO BE DETERMINED BY THE FIELD ENGINEER

SLOPE INTERCEPT

CAUTION

LANNON RD.

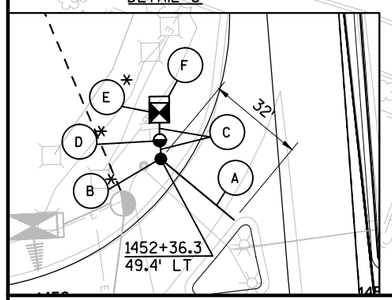
USH 41/45 SB

USH 41/45 NB

USH 41/45

EXMH 446
REMOVE EXISTING MANHOLE

DETAIL 3

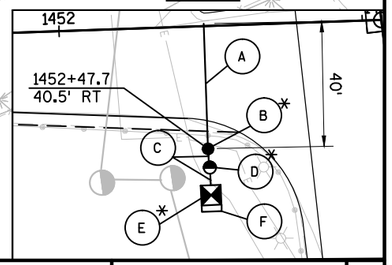


SLOPE INTERCEPT

RAMP CLOSURE
BARRICADE RACK

RAMP CLOSURE
BARRICADE RACK

DETAIL 4



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	FTMS	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021409_FM.DWG PLOT DATE : 12/5/2014 10:43 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF
WISDOT/CADDS SHEET 42

2

2

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

CV469

USH 41/45/STH 167

460 462 464 466 468 470 472 474

1460 1462 1463

463 462 460

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	FTMS	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021410_FM.DWG PLOT DATE : 12/5/2014 10:44 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

2

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

CV483

STA

476 478 480 482 484 486 488 490

30" RCP

12" RCP

12" RCP

30" RCP

12" RCP

30" RCP

MEQUON RD.

RIPRAP

MH

MH

U/C

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	FTMS	SHEET 155	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021411_FM.DWG PLOT DATE : 12/5/2014 10:45 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

2

MEQUON RD.

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

CV498

N

SIGN

SIGN

SIGN

USH 41/45/STH 167

USH 41/45/STH 167

12" RCP

12" RCP

12" RCP

30" RCP

60" RCP

490 492 494 496 498 500 502 504

MH

MH

MH

W

W

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	FTMS	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021412_FM.DWG PLOT DATE : 12/5/2014 10:46 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

2

N

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

CV513

USH 41/45/STH 167

506 508 510 512 514 516 518 520

12" RCP 12" RCP 12" RCP

USH 41/45/STH 167

CTH "Y"

W SIGN

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	FTMS	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021413_FM.DWG PLOT DATE : 12/5/2014 10:47 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

N

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

HILLTOP DR.

CV528

USH 41/45/STH 167

USH 41/45/STH 167

520 522 524 526 528 530 532 534

SIGN SIGN SIGN SIGN

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	FTMS	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021414_FM.DWG PLOT DATE : 12/5/2014 10:48 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

N

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

SIGN
SIREN
SIGN
SIGN
SIGN
SIGN

HILLTOP DR.

CV544

SIGN

USH 41/45/STH 167

12" RCP

536 538 540 542 544 546 548 550

12" RCP

12" RCP

USH 41/45/STH 167

SIGN

SIGN

SIGN

SEPTIC

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	FTMS	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021415_FM.DWG PLOT DATE : 12/5/2014 10:49 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

N

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

IN EXISTING CONDUIT (1) 6-COUNT FOC (S-F)

INSTALL 3-2" HDPE CONDUIT, SPECIAL
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

CV560

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

EXPB562
INSTALL CONDUIT INTO ITEM

CV562
(75) F.O. SPLICES IN NEW
F.O. SPLICE ENCLOSURE (S-F)

MD561

INSTALL ON EXISTING CAMERA POLE
1) MICROWAVE DETECTOR ASSEMBLY (S-F)

EXPB561

(2) 2-INCH NONMETALLIC CONDUITS
(1) WITH 6-COUNT FOC (S-F)
AND (1) NO 10 AWG WIRE

CTH F

FRIESTADT RD.

USH 41/45/STH 167

550 552 554 556 558 560 562 564

30" RCP

12" RCP

12" RCP

12" RCP

SIGN

INL

W

EXCCTV-66-0147 /SDS-66-0124
(2) REMOVE 5.8 GHz ETHERNET BRIDGES
REMOVE ETHERNET SWITCH

INSTALL (1) F.O. TERM. PANEL (S-F)
(6) F.O. TERMINATIONS
(1) ETHERNET SWITCH (S-F)

2

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	FTMS	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021416_FM.DWG PLOT DATE : 12/5/2014 10:49 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

SLOPE INTERCEPT

CV577

SIGN

USH 41/45

566 568 570 572 574 576 578 580

STA BACK = 575+46.03

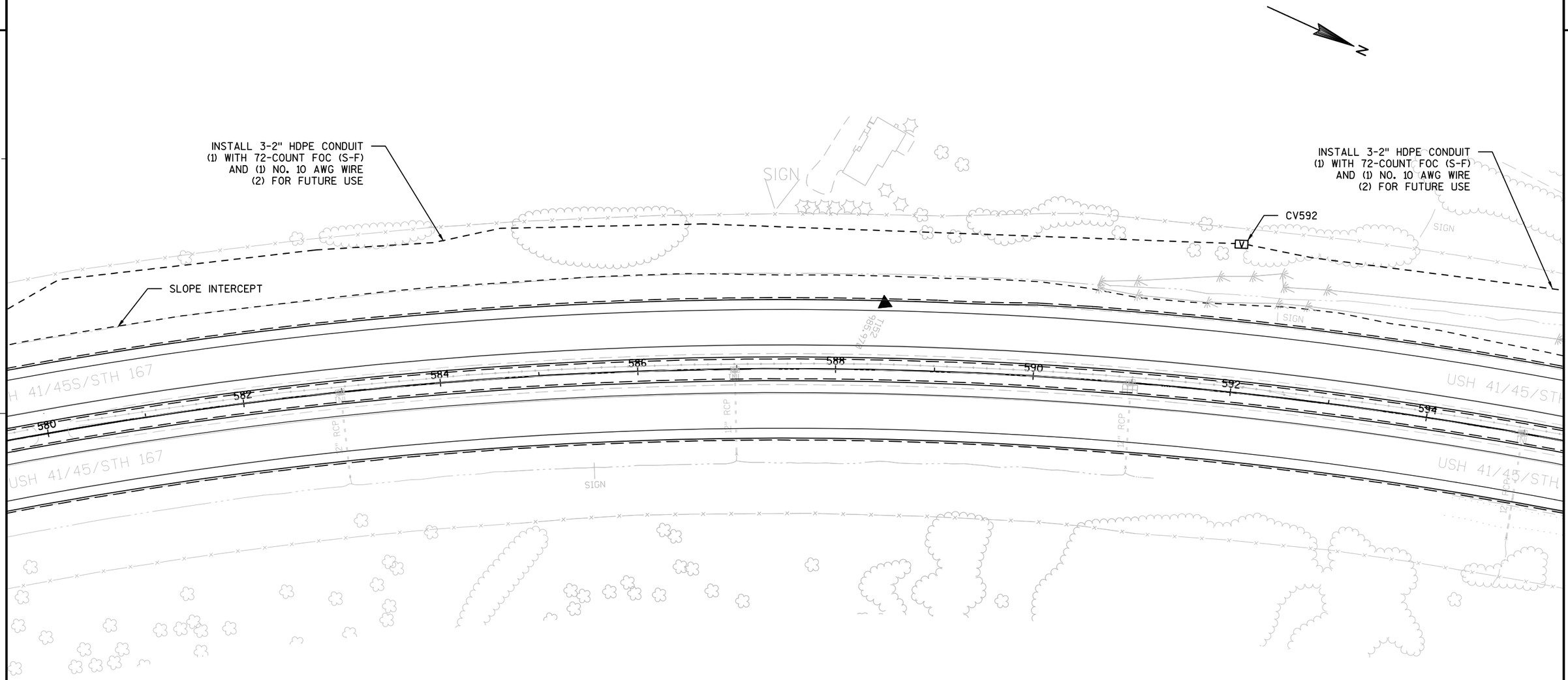
STA AHEAD = 575+45.03

WALLS

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	FTMS	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021417_FM.DWG PLOT DATE : 12/5/2014 10:50 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	FTMS	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021418_FM.DWG PLOT DATE : 2/13/2015 9:28 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

N

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

SLOPE INTERCEPT

SLOPE INTERCEPT

INSTALL 72-COUNT FOC (S-F)
IN EXISTING CONDUIT IN PARAPET

INSTALL CONDUIT INTO EXISTING ITEM

CV607

EXPB608

SLOPE INTERCEPT

41/45/STH 167

SIGN

V150
964.0'

36" RCP

596

598

600

602

604

606

608

610

609

CONC

CP

INL

MH

INL

xxxx

xxxx

GUARDRAIL

WETLANDS

CHAIN LINK FENCE

WISCONSIN & SOUTHERN RAILROAD

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	FTMS	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021419_FM.DWG PLOT DATE : 2/13/2015 9:33 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

N

DETAIL 1

619+60.35
32.0' RT

INSTALL 3-2" HDPE CONDUIT, SPECIAL
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

CV619

PROJECT ID 1000-44-73
HOLY HILL RD
BY OTHERS

CV621
(75) F.O. SPLICES IN NEW
F.O. SPLICE ENCLOSURE (S-F)

INSTALL (2) 2-INCH NONMETALIC CONDUITS
(1) WITH (1) 6-COUNT FOC (S-F)
AND 1 NO. 10 AWG WIRE
(1) FOR FUTURE USE

EXPB621

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

INSTALL CONDUIT INTO
EXISTING ITEM

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

INSTALL IN EXISTING CONDUIT
(1) 6-COUNT FOC (S-F)

G-66-01
SEE DETAIL 1

INSTALL CONDUIT INTO EXISTING ITEM

IN EXISTING CONDUIT
(1) 6-COUNT FOC (S-F)

INSTALL 72-COUNT FOC (S-F)
IN EXISTING CONDUIT IN PARAPET

INSTALL CONDUIT INTO
EXISTING ITEM

EXPB611

EXPB620

INSTALL (2) 2-INCH NONMETALIC CONDUITS
(1) WITH MICROWAVE DETECTOR CABLES
AND (1) NO. 10 AWG WIRE
(1) FOR FUTURE USE

MD562
INSTALL ON TYPE 5 CONCRETE BASE
1) TYPE 5 ALUMINUM POLE
1) TRANSFORMER BASE
1) MICROWAVE DETECTOR ASSEMBLY (S-F)

USH 41/45 SB

USH 41/45 NB

STH 167

HOLY HILL RD

EXCCTV-66-0148 /SDS-66-0125
(2) REMOVE 5.8 Ghz ETHERNET BRIDGES
(1) REMOVE ETHERNET SWITCH

INSTALL (1) F.O. TERM. PANEL (S-F)
(6) F.O. TERMINATIONS
(1) ETHERNET SWITCH (S-F)

SLOPE INTERCEPT

PROJECT ID 1000-44-73
HOLY HILL RD
BY OTHERS

G-66-02
SEE DETAIL 2

CHAIN LINK FENCE

WETLANDS

DETAIL 2

620+24.5
28.3' LT

LEGEND

- (A) RAMP CLOSURE GATES SOLAR-POWERED
- (B) CONCRETE BASE, TYPE 5
- (C) 3-2-INCH SCHEDULE 40 PVC CONDUIT
- (D) PULL BOX STEEL 24 X 36 INCH
- (E) SOLAR POWERED BATTERY AND CONTROLLER CABINET
- (F) CONCRETE MAINTENANCE PLATFORM

NOTE:
* EXACT LOCATIONS TO BE DETERMINED BY THE FIELD ENGINEER

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	FTMS	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021420_FM.DWG PLOT DATE : 1/15/2015 12:15 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

2

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

N

CV636

CV637

INSTALL 3-2" HDPE CONDUIT, SPECIAL
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

SIGN

RCP

626 628 630 632 634 636 638 640

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	FTMS	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021421_FM.DWG PLOT DATE : 1/15/2015 11:48 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

2

N

T144
907.410

SIGN

SIGN

SIGN

SIGN

USH 41/45

640 642 644 646 648 650 652 654

INL

12" RCP

USH 41/45

12" RCP

12" RCP

12" RCP

SIGN

SIGN

CV652

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

V145
905.82

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	FTMS	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021422_FM.DWG PLOT DATE : 1/15/2015 11:48 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

2

N

T144
907.410

SIGN

SIGN

SIGN

SIGN

12" RCP

12" RCP

12" RCP

INL

INL

CULVERT

USH 41/45

654

656

658

659

660

662

664

666

USH 41/45

SIGN

V

V

CV666

CV667

SIGN

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

INSTALL 3-2" HDPE CONDUIT, SPECIAL
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	FTMS	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021423_FM.DWG PLOT DATE : 1/15/2015 11:48 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

2

N

PLEASANT HILL RD.

SIGN

SIGN

SIGN

USH 41/45

USH 41/45

668

670

672

674

676

678

680

682

680

682

INL

CULVERT

CULVERT

CULVERT

PROJECT ID 1100-15-71
B-66-0195
BY OTHERS

CV666

CV667

CV680

CV681

INSTALL 3-2" HDPE CONDUIT, SPECIAL
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

INSTALL 3-2" HDPE CONDUIT, SPECIAL
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

INSTALL 3-2" HDPE CONDUIT, SPECIAL
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

W.D.

BONNIWELL RD.

1227
879.910

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	FTMS	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021424_FM.DWG PLOT DATE : 1/15/2015 11:48 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

2

N

682 684 686 688 690 692 694 696

U.S.H. 45

U.S.H. 41

682 684 685 686 688 690 692 694 696

U.S.H. 45 USH

CV681

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

CV690

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

FOUND FOUND FOUND

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	FTMS	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\021425_FM.DWG PLOT DATE : 1/15/2015 11:49 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

N

INSTALL CONDUIT INTO EXISTING ITEM

INSTALL IN EXISTING CONDUIT
(1) 6-COUNT FOC (S-F)

EXCCTV-66-0205
(1) REMOVE 5.8 GHz ETHERNET BRIDGE
ONLY THE SOUTH FACING RADIO
(1) REMOVE ETHERNET SWITCH

INSTALL (1) F.O. TERM PANEL (S-F)
(6) F.O. TERMINATIONS
(1) ETHERNET SWITCH (S-F)

EXPB709

EXPB710

CV709
(6) F.O. SPLICES IN NEW
F.O. SPLICE ENCLOSURE (S-F)

INSTALL 2-2" NONMETALIC CONDUIT
(1) WITH 6-COUNT FOC (S-F)
AND (1) NO 10 AWG WIRE
(1) FOR FUTURE USE

INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

CV701

INSTALL 3-2" HDPE CONDUIT, SPECIAL
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

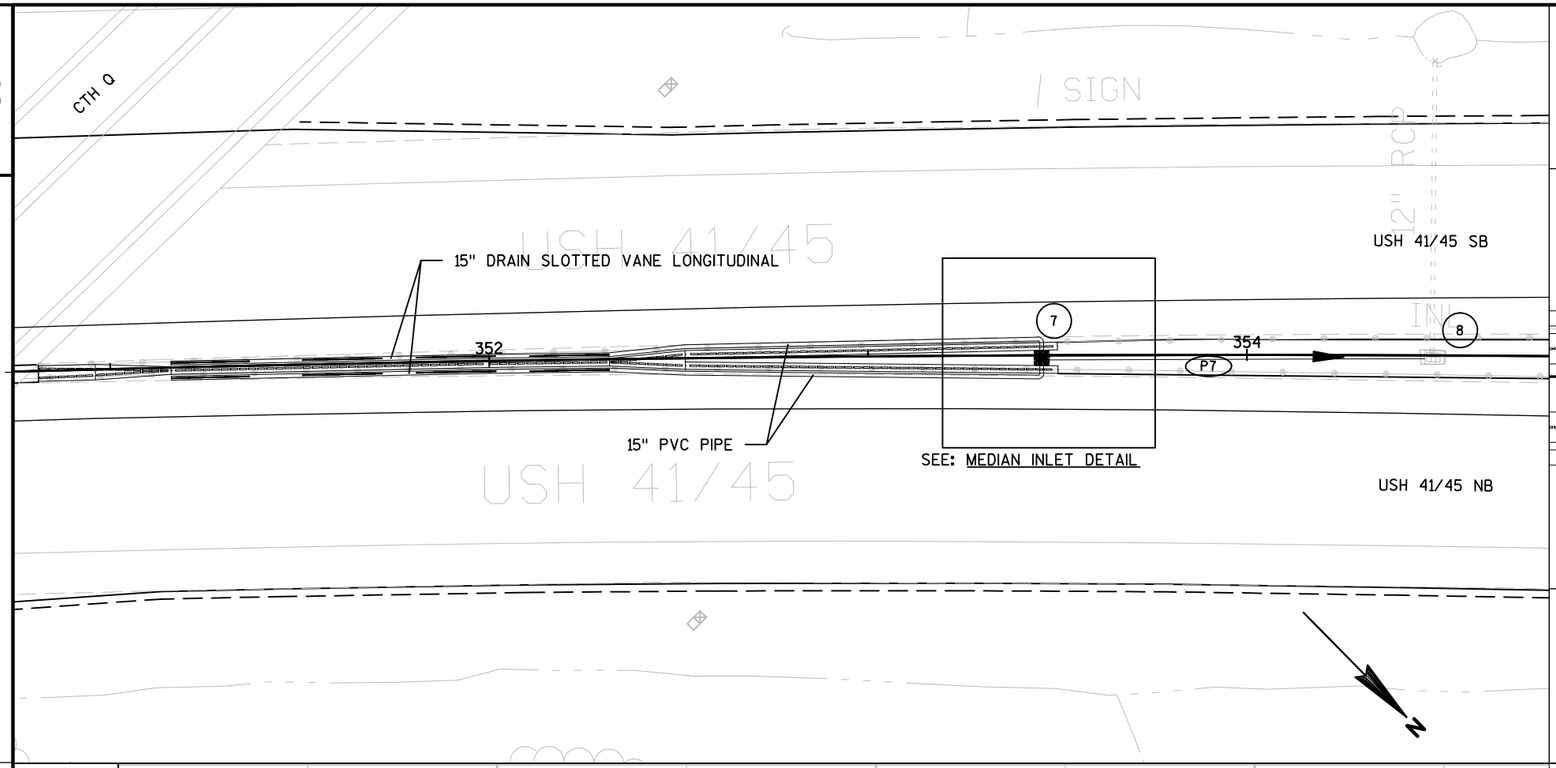
INSTALL 3-2" HDPE CONDUIT
(1) WITH 72-COUNT FOC (S-F)
AND (1) NO. 10 AWG WIRE
(2) FOR FUTURE USE

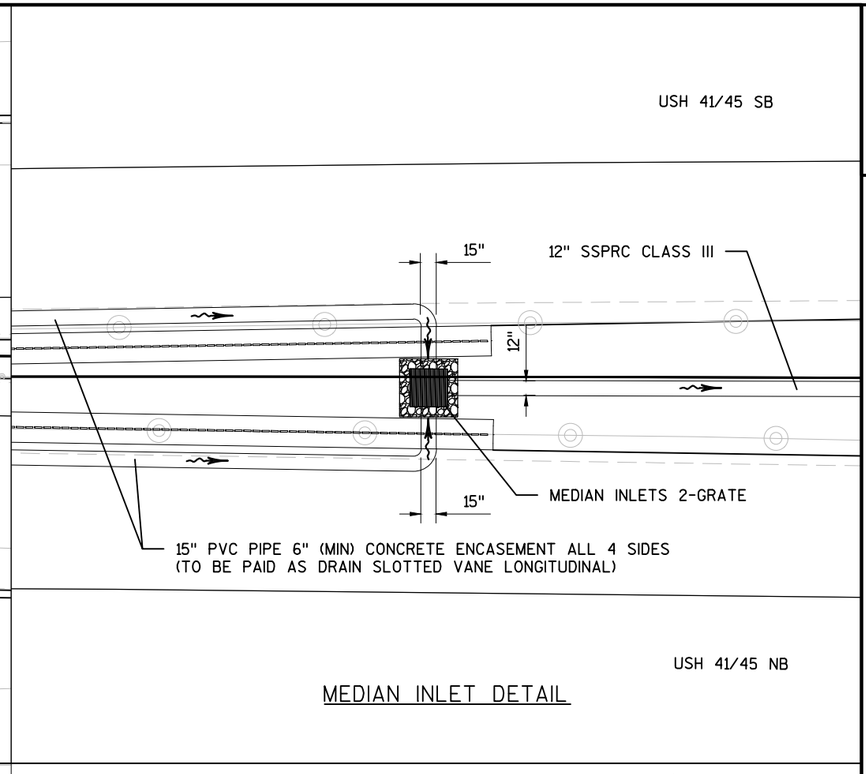
CV699

USH 41 / USH 45 / SIGN / BOX CULVERT

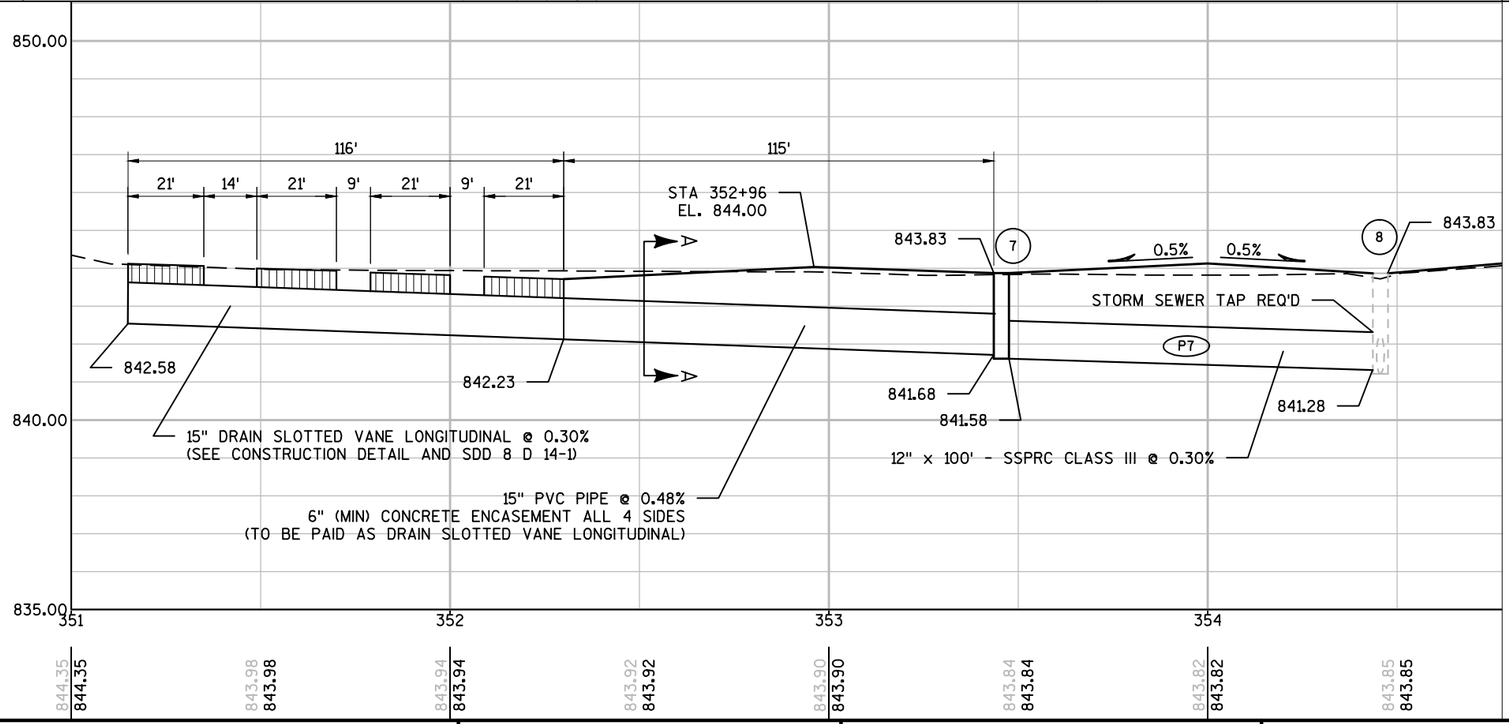
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	FTMS	SHEET	E

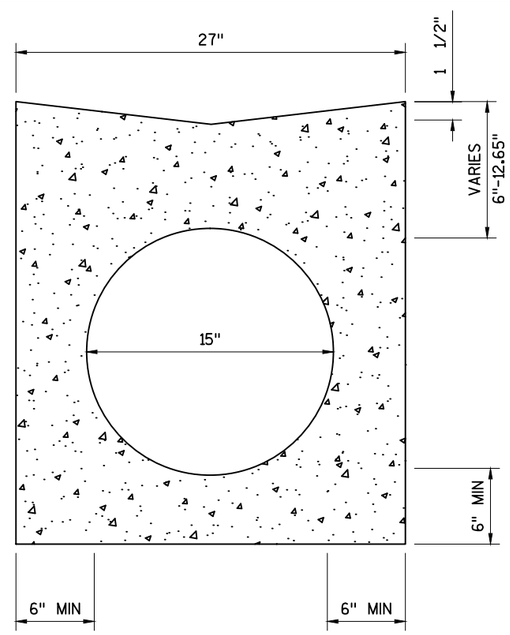
FILE NAME : N:\PDS\C3D\CAD\11003800\021425A_FM.DWG PLOT DATE : 1/15/2015 11:49 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1:100_XREF





MEDIAN INLET DETAIL





SECTION A-A

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	STORM SEWER	SHEET 171	E

2

BEGIN GRADING, SHAPING AND FINISHING MEDIAN DITCH
FROM STA 395+00 TO STA 419+00

USH 41/45 SB

USH 41/45

USH 41/45 NB

USH 41/45

SIGN

SIGN

SIGN

18" RCP

18" RCP

395 396 398 400 402 404 405 406 408

P10 P11 P12 P13

10 11 12 13

395+00.00 396+00.00 397+00.00 398+00.00 399+00.00 400+00.00 401+00.00 402+00.00 403+00.00 404+00.00 405+00.00 406+00.00 407+00.00 408+00.00 409+00.00

BEGIN GRADING, SHAPING AND FINISHING MEDIAN DITCH
FROM STA 395+00 TO STA 419+00

STA 395+00
EL 846.42

0.3%

10

845.97

STA 397+62.07
EL 845.52

0.5%

0.5%

REMOVE AND REPLACE INLETS MEDIAN 2 GRATE

844.90

11

CONCRETE COLLAR

0.5%

STA 401+84.48
EL 845.82

844.98

CONCRETE COLLAR

12

0.5%

EXISTING INLETS MEDIAN 2 GRATE TO REMAIN

CONCRETE COLLAR

STA 404+96.37
EL 845.71

0.5%

13

844.69

0.5%

STA 408+19.96
EL 845.29

0.5%

P10

P11

P12

P13

843.65

350'-12" SSPRC CLASS III @ 0.30%

842.60

16'-18"

EXISTING 18" SSPRC TO REMAIN

24'-18"

841.84

EXISTING 18" SSPRC TO REMAIN

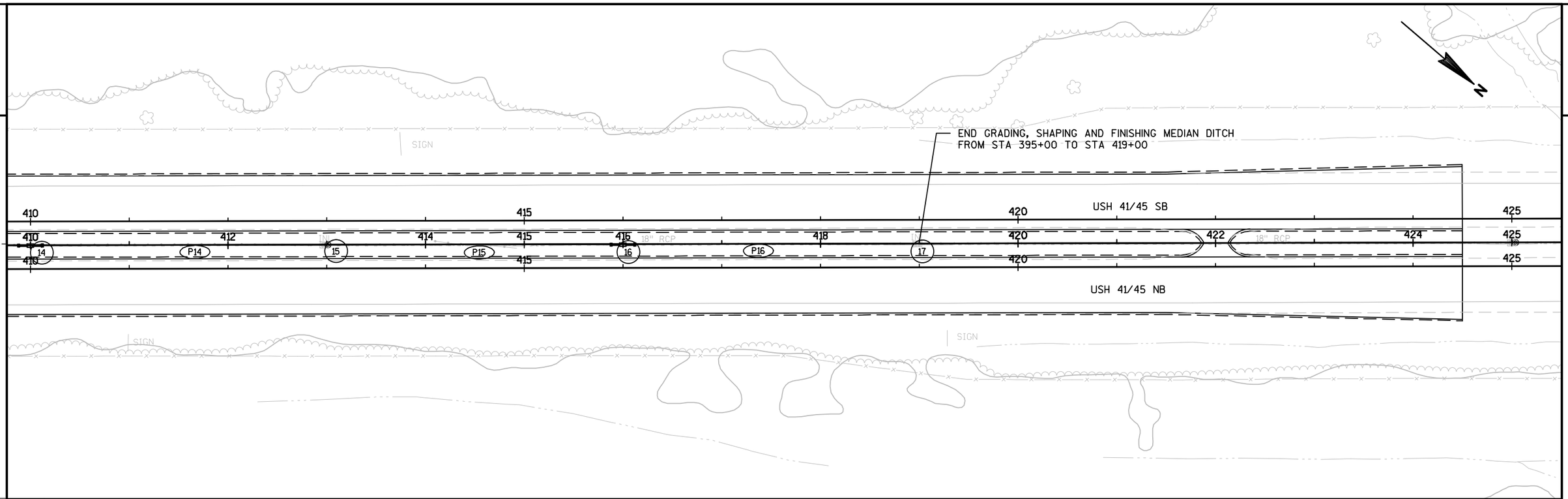
394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409

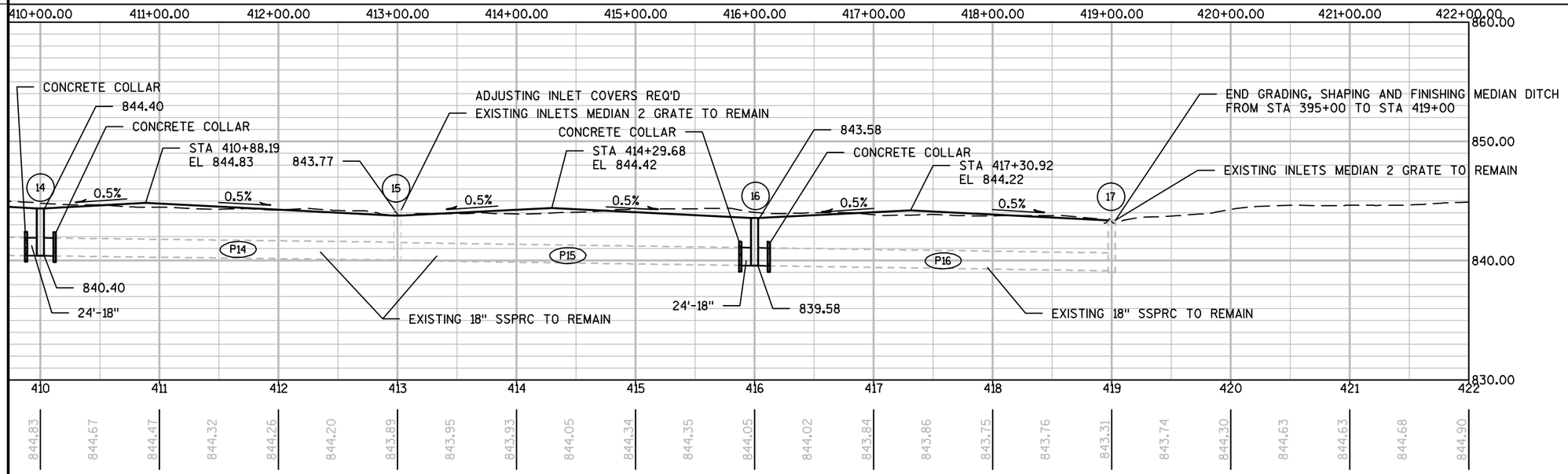
846.35 846.41 846.29 846.38 846.41 846.44 846.45 846.33 846.33 846.00 845.74 844.70 845.56 845.67 845.47 845.69 845.49 845.57 845.73 845.44 845.32 845.10 844.87 844.89 844.82 844.38 844.89 844.85 844.85 844.85 845.04

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	STORM SEWER	SHEET 172	E

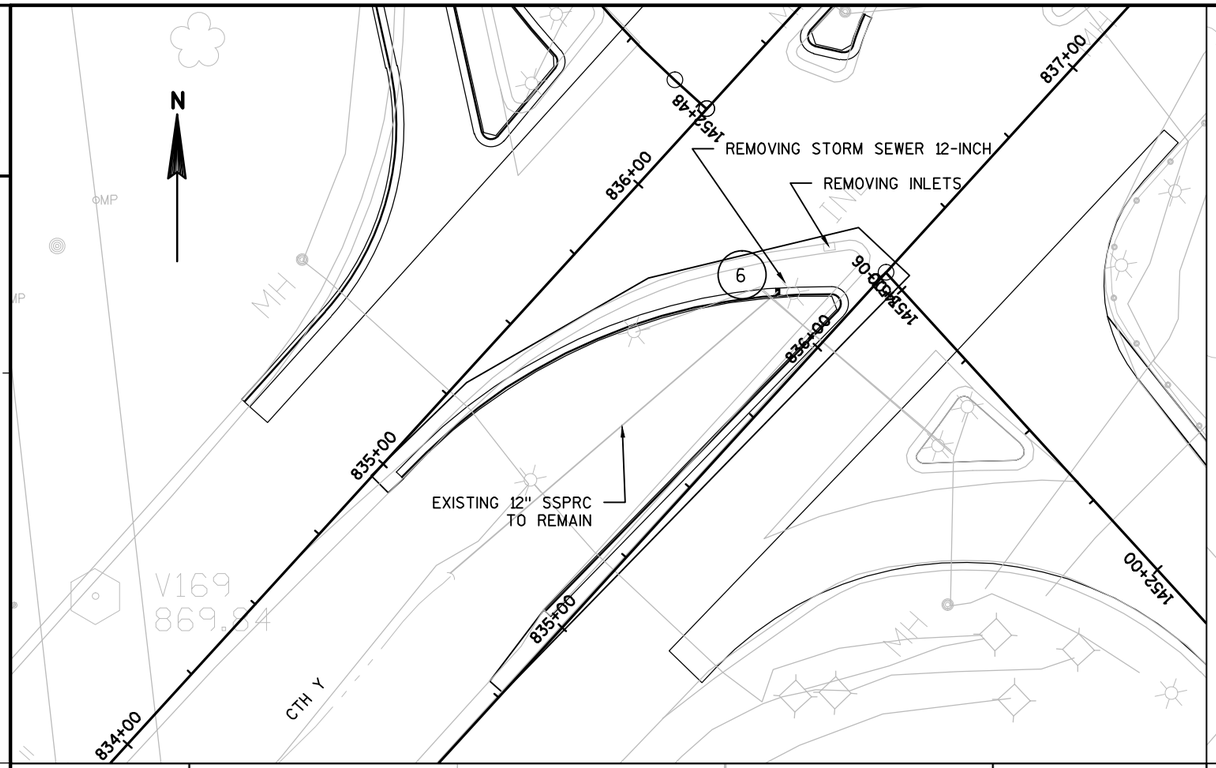
FILE NAME : N:\PDS\C3D\CAD\11003800\022501_SS.DWG PLOT DATE : 10/7/2014 5:32 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : ********

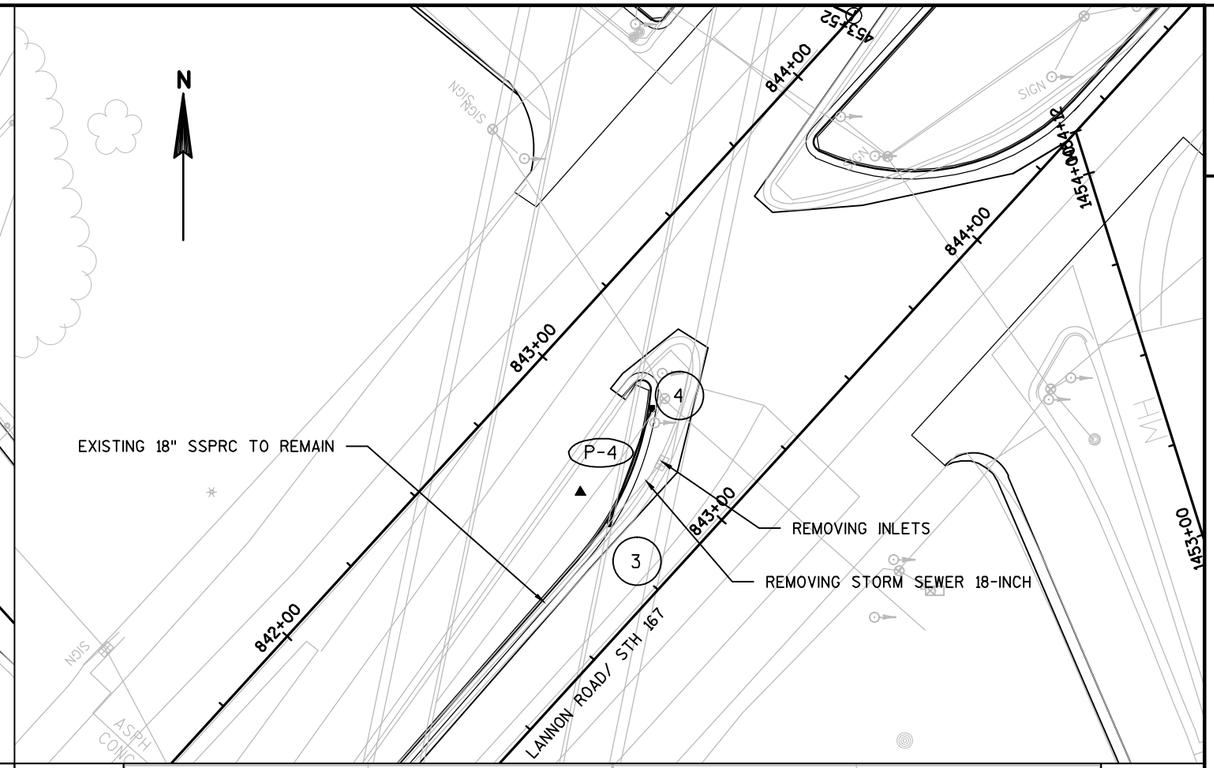
2

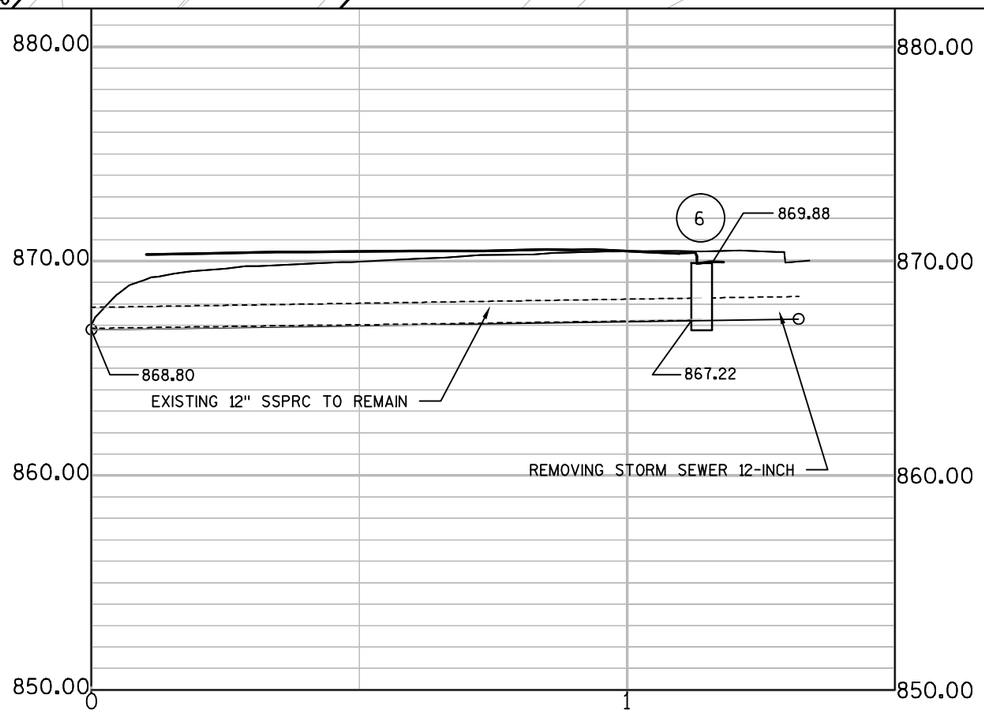


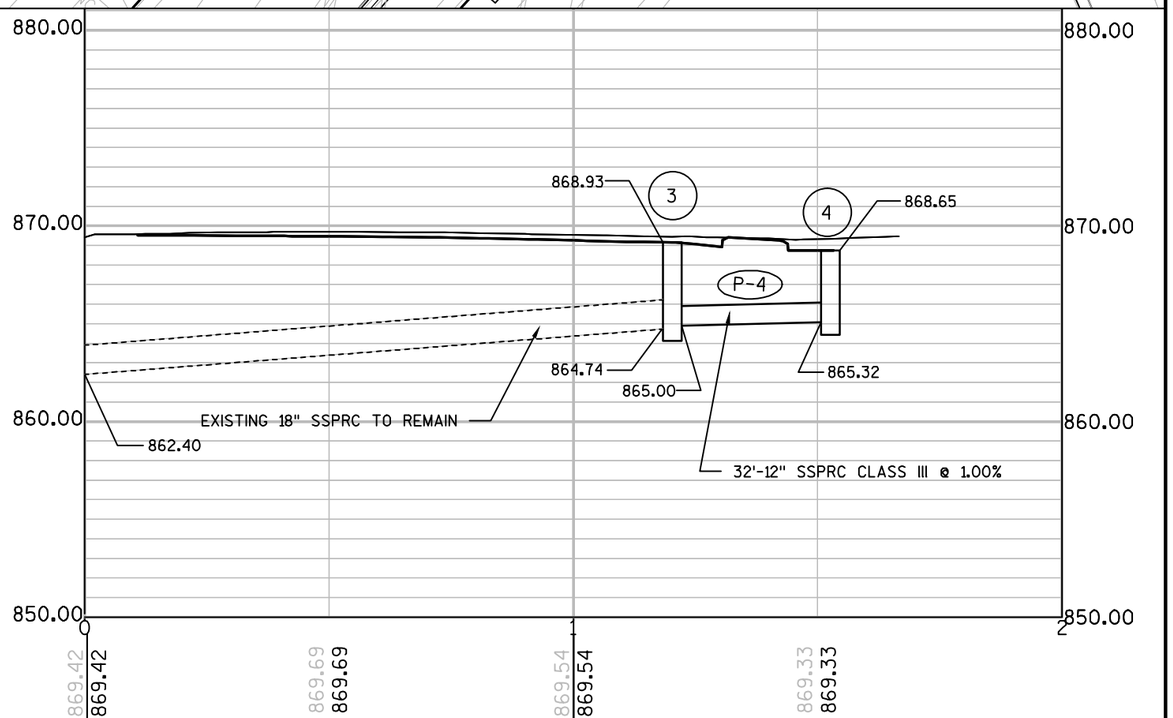


PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	STORM SEWER	SHEET 173	E









PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	STORM SEWER	SHEET 174	E

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
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING WHITE/RIGHT YELLOW/LEFT
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

USH 41/45 SB ON RAMP

USH 41/45 SB OFF RAMP

USH 41/45

CTH Q (COUNTY LINE ROAD)

USH 41/45 NB OFF RAMP

USH 41/45 NB ON RAMP

28+00 29+00 30+00 31+00 32+00 33+00 34+00 35+00 36+00 37+00 38+00 39+00 40+00 41+00 42+00

342 344 346 348 350 352 354 356

41 CONVERSION PROJECT WILL REPLACE THESE SIGNS

NORTH 41 45 MILE 52 .6 — D10-5A ESTR

SOUTH 41 45 MILE 52 .6 — D10-5A ESTR

41 CONVERSION PROJECT WILL REPLACE THESE SIGNS

NORTH 41 45 MILE 52 .7 — D10-5A ESTR

SOUTH 41 45 MILE 52 .7 — D10-5A ESTR

41 CONVERSION PROJECT WILL REPLACE THESE SIGNS

NORTH 41 45 MILE 52 .5 — D10-5A ESTR

SOUTH 41 45 MILE 52 .5 — D10-5A ESTR

OVERHEAD SIGN SUPPORT S-67-952

Waukesha Co — REMOVE

Waukesha Co — I2-2 (5) — 4

COUNTY Q — M1-5A

M6-4 — 5

J13-1 REMOVE

Washington Co — I2-2 (5) — 8

VILLAGE OF Germantown — I2-3A (5) — 9

Washington Co / VILLAGE OF Germantown — REMOVE

W4-1R (5) — 7 — REMOVE

County Line Rd — M1-94(5) — 1 2 — MOUNT ON BRIDGE

County Line Rd — REMOVE

W4-1R (5) — 3 — REMOVE

PEDESTRIANS BICYCLES NON MOTORIZED TRAFFIC MOTOR BICYCLES PROHIBITED — REMOVE

PEDESTRIANS BICYCLES NON MOTORIZED TRAFFIC MOTOR BICYCLES PROHIBITED — R5-57 (5) — 6

ONLY — R3-5L (2S) — 10

R3-6L (2S) — 11

ONLY — R3-5R (2S) — 12

NOTES:

TYPE II ALUMINUM SIGNS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL TRAFFIC SIGN SHOP ON 60TH STREET IN WEST ALLIS. SIGNS SHALL BE CAREFULLY REMOVED FROM SIGN SUPPORTS. THE SIGNS SHALL BE PALLETIZED FOR HANDLING WITH A FORKLIFT (SEE SPECIAL PROVISION 638.3.4). THE REGIONAL SIGN SHOP (414-266-1165) SHALL BE NOTIFIED THREE WORKING DAYS PRIOR TO DELIVERY OF THE SIGNS.

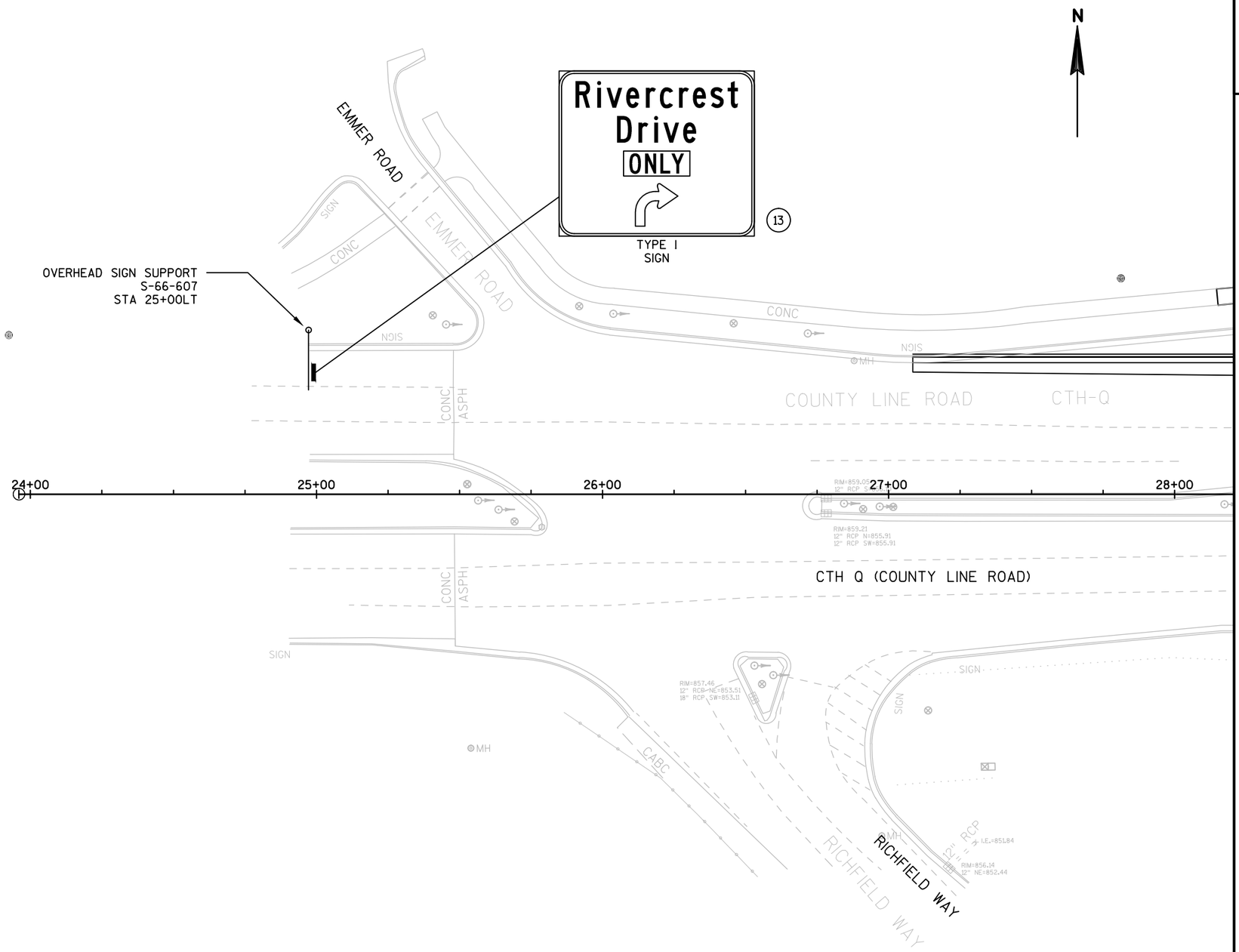
WHEN AN EXISTING STOP SIGN SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED, THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD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

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

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
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING
  WHITE/RIGHT YELLOW/LEFT
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

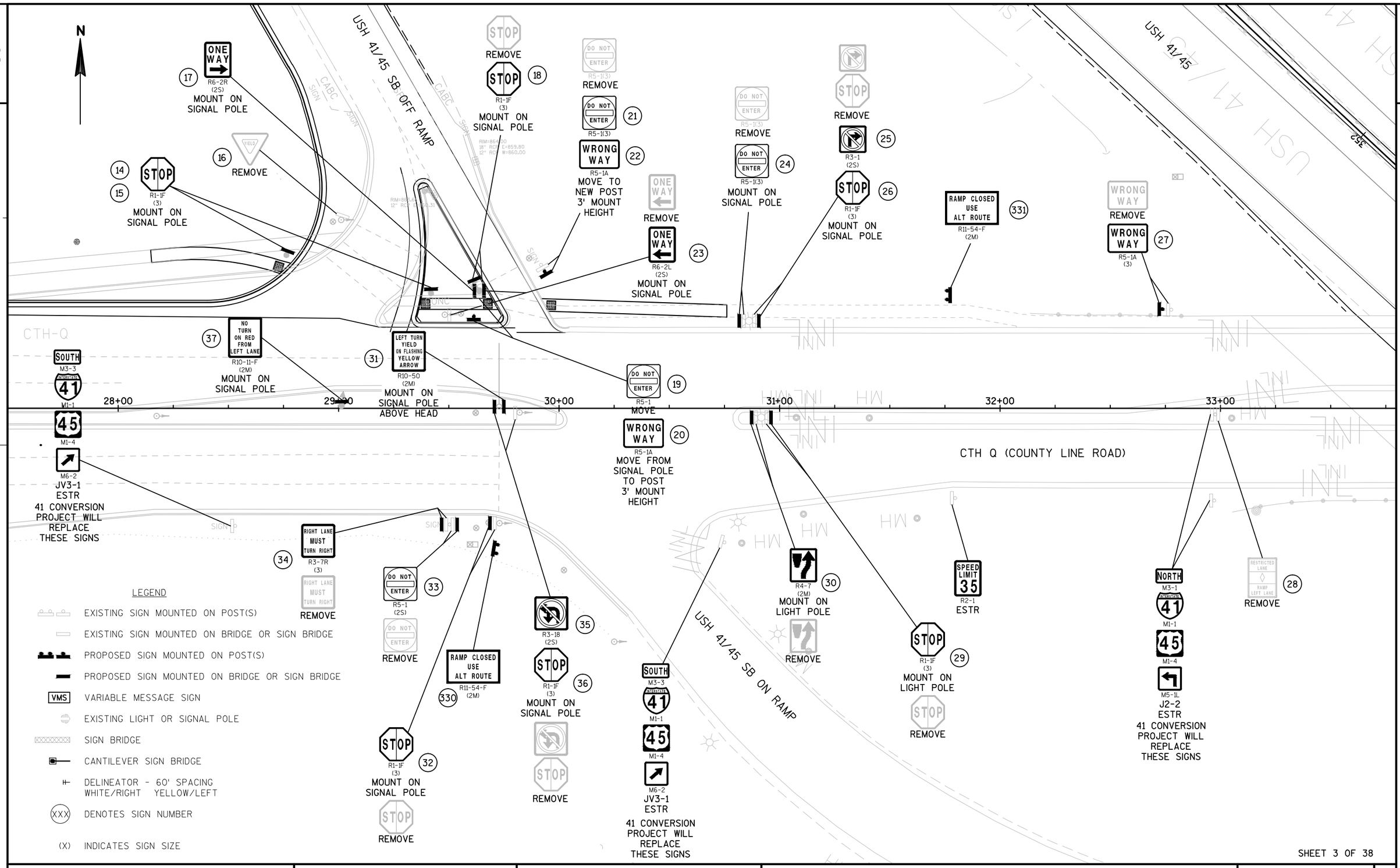


SHEET 2 OF 38

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\023201_PS.DWG PLOT DATE : 7/31/2014 2:29 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\023201_PS.DWG PLOT DATE : 7/31/2014 2:29 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42

2

N

USH 41/45 NB ON RAMP

USH 41/45

RAMP CLOSED
USE
ALT ROUTE
R11-54-F
(2M)
332

W3-3
(3)
ESTR

SOUTH
M3-3
INTERSTATE
41
M1-1
45
M1-4
M5-1L
JV2-1
ESTR
41 CONVERSION
PROJECT WILL
REPLACE
THESE SIGNS

WRONG
WAY
REMOVE
WRONG
WAY
R5-1A
(2S)
41

REMOVE
R4-7
(2M)
38

34+00 35+00 36+00 37+00 38+00 39+00 40+

CTH Q (COUNTY LINE ROAD)

350

348

W3-3
(3)
42
REMOVE

R3-1
(2S)
39

STOP
R1-1F
(3)
40
MOUNT ON
SIGNAL POLE

STOP
REMOVE

DO NOT
ENTER
R5-1
ESTR

NORTH
M3-1
INTERSTATE
41
M1-1
45
M1-4
M6-1
JV3-1
ESTR
41 CONVERSION
PROJECT WILL
REPLACE
THESE SIGNS

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
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING
  WHITE/RIGHT YELLOW/LEFT
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

SHEET 4 OF 38

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\023201_PS.DWG PLOT DATE : 7/31/2014 2:30 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : PLOT SCALE : 1" = 40'_XREF

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
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING WHITE/RIGHT YELLOW/LEFT
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

N

41+00 42+00 43+00 44+00 45+00 46+00

CTH Q (COUNTY LINE ROAD)

USH 41/45 NB OFF RAMP

43 — REMOVE — DO NOT ENTER R5-1(3) — MOUNT ON SIGNAL POLE

333 — RAMP CLOSED USE ALT ROUTE R11-54-F (2M)

44 — REMOVE — STOP R1-1F (3) — MOUNT ON SIGNAL POLE

54 — REMOVE — R4-7 (2M) — MOUNT ON SIGNAL POLE

45 — REMOVE — STOP — R3-18 (2S)

46 — STOP R1-1F (3) — MOUNT ON SIGNAL POLE

NORTH M3-1 — 41 M1-1 — 45 M1-4 — M6-2 — JV3-1 ESTR — 41 CONVERSION PROJECT WILL REPLACE THESE SIGNS

JCT M2-1 — 41 M1-1 — 45 M1-4 — JV1-1 ESTR — 41 CONVERSION PROJECT WILL REPLACE THESE SIGNS

W3-3 ESTR

49 — ONE WAY R6-2R (2S)

47 — YIELD R1-2 (2S) — REMOVE

48 — STOP R1-1F (3) — MOUNT ON SIGNAL POLE — REMOVE

53 — ONE WAY R6-2L (2S) — REMOVE

50 — ONLY R3-8B (2S)

51 — STOP R1-1F (3)

52 — DO NOT ENTER R5-1(3) — REMOVE

REMOVE — STOP

SHEET 5 OF 38

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\023201_PS.DWG PLOT DATE : 7/31/2014 2:30 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : PLOT SCALE : 1" = 40'_XREF

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
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING WHITE/RIGHT YELLOW/LEFT
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

60 — WEST M3-4 / COUNTY Q M1-5A / M6-1 — J3-1(2S) MOUNT ON UPRIGHT

56 — WRONG WAY R5-1A (3) — MOUNT ON UPRIGHT

WRONG WAY — REMOVE

County Line Rd EAST WEST — REMOVE

62 — County Line Rd EAST WEST — D1-60

57 — R3-6L (2S)

58 — R3-5R (2S) ONLY

59 — R3-5R (2S) ONLY

EXIT 52 — REMOVE

REMOVE

SIS — CONTACT ROGER ROSE OF INTERSTATE LOGOS-WISCONSIN TO MOVE (614) 332-4709

63 — W3-3 (3)

64 — EXIT 52 — E5-1A (5)

65 — W5-54(2S)

66 — W5-54(2S)

USH 41/45 SB OFF RAMP

OVERHEAD SIGN SUPPORT
S-66-236
STA 356+80

USH 41/45

358 360 362 364 366 368 370 372

USH 41/45 NB ON RAMP

55 — WRONG WAY R5-1A (3) — MOUNT ON UPRIGHT

WRONG WAY — REMOVE

EAST M3-2 / COUNTY Q 61 / M1-5A / M6-1 — J3-1(2S) MOUNT ON UPRIGHT

NORTH 41 45 MILE 52 .8 — D10-5A — ESTR

SOUTH 41 45 MILE 52 .8 — D10-5A — ESTR

41 CONVERSION PROJECT WILL REPLACE THESE SIGNS

NORTH 41 45 MILE 52 .9 — D10-5A — ESTR

SOUTH 41 45 MILE 52 .9 — D10-5A — ESTR

41 CONVERSION PROJECT WILL REPLACE THESE SIGNS

NORTH INTERSTATE 41 / NORTH 41 / NORTH 45 — JV4-1 — ESTR

41 CONVERSION PROJECT WILL REPLACE THESE SIGNS

MILE 5 3 — D10-2 — ESTR

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET 180	E

FILE NAME : N:\PDS\C3D\CAD\11003800\023201_PS.DWG PLOT DATE : 7/31/2014 2:30 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

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
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING WHITE/RIGHT YELLOW/LEFT
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

N

EXIT 52
Q
County Line Rd
REMOVE

E1-5P
EXIT 52
Q
County Line Rd
67A
67
E1-1A
TYPE I SIGN
REUSE STEEL POSTS

SIS
ESTR

GOLF GREEN
GOLF COURSE
INL
W
SIGN
I.E.=841.25
I.E.=838.12
12" RCP
42" RCP
USH 41/45

372 374 376 378 380 382 384 386

USH 41/45

I.E.=844.35
I.E.=842.07
6" CMP
I.E.=838.99
U/C

E1-5P
EXIT 54
167 EAST
Y
Lannon Rd
Mequon Rd
1 MILE
68A
68
E1-1A
TYPE I SIGN
REUSE STEEL POSTS

EXIT 54
167 EAST
Y
Lannon Rd
Mequon Rd
1 MILE
REMOVE

SPEED LIMIT 65
R2-1
(5)
69
SPEED LIMIT 65
REMOVE

EMERGENCY STOPPING ONLY
R8-7
(5)
70
EMERGENCY STOPPING ONLY
REMOVE

SLOWER TRAFFIC KEEP RIGHT
R4-3
(5)
71
SLOWER TRAFFIC KEEP RIGHT
REMOVE

SHEET 7 OF 38

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\023201_PS.DWG PLOT DATE : 7/31/2014 2:31 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : PLOT SCALE : 1" = 100'_XREF

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
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING
  WHITE/RIGHT YELLOW/LEFT
- XXX — DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

2

2

SIS
ESTR

167 EAST 3/4
167 WEST 4 1/4
45 6
REMOVE

167 EAST 3/4
167 WEST 4 1/4
45 6
75
E8-1
TYPE I SIGN

Q 1/2
Pilgrim Rd 2 3/4
74 100 3
REMOVE

Q 1/2
Pilgrim Rd 2 3/4
74 100 3
76
E8-1
TYPE I SIGN

USH 41/45

388 390 392 394 396 398 400 402

S-66-200

USH 41/45

72
73
R3-4B
(5)
R3-4
R3-4A
REMOVE

74
REMOVE

RIDESHARE
INFO CALL
1-800-455-POOL
77
D12-2A
(5)
RIDESHARE
INFO CALL
1-800-455-POOL
REMOVE

SHEET 8 OF 38

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET E

FILE NAME : N:\PDS\C3D\CAD\11003800\023201_PS.DWG PLOT DATE : 7/31/2014 2:31 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : PLOT SCALE : 1" = 100'_XREF

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
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING
  WHITE/RIGHT YELLOW/LEFT
- XXX — DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

EMERGENCY STOPPING ONLY
REMOVE

EMERGENCY STOPPING ONLY
R8-7
(5)
78

EXIT 52
Q
County Line Rd
3/4 MILE
REMOVE
E1-5P

EXIT 52
79A
Q
County Line Rd
3/4 MILE
79
E1-1A
TYPE I SIGN
REUSE STEEL POSTS

USH 41/45

402 404 406 408 410 412 414 416

18" RCP

RIM=844.27
W SC=840.05
18" NW=840.01

USH 41/45

SIGN

Germantown
Park & Ride
EXIT 54
ESTR

RIDESHARE
INFORMATION
www.rideshare.wi.gov
D12-2B
(5)
342

SIS
ESTR

SHEET 9 OF 38

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\023201_PS.DWG PLOT DATE : 7/31/2014 2:32 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

REMOVE
SLOWER TRAFFIC KEEP RIGHT
R4-3
(5)
80

REMOVE
SPEED LIMIT 65
R2-1
(5)
81

SOUTH INTERSTATE 41 SOUTH 41 SOUTH 45
JV4-1
ESTR
41 CONVERSION PROJECT WILL REPLACE THESE SIGNS

REMOVE
W5-52R
(5)
85
4' MOUNT HEIGHT

MILE 54
D10-2
ESTR

REMOVE
W5-52R
(5)
86
4' MOUNT HEIGHT

MAPLE ROAD

USH 41/45

418 420 422 424 426 428 430 432

1428+00 1429+00 1430+00 1431+00 1432+00

SIGN

SIS
ESTR

R3-4B
(5)
82
83

R3-4
R3-4A
REMOVE

W5-52R
(5)
84
4' MOUNT HEIGHT
REMOVE

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
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING
  WHITE/RIGHT YELLOW/LEFT
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

SHEET 10 OF 38

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\023201_PS.DWG PLOT DATE : 7/31/2014 2:32 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : PLOT SCALE : 1" = 100'_XREF
WISDOT/CADDS SHEET 42

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
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING WHITE/RIGHT YELLOW/LEFT
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE

TRAFFIC INFO
TUNE RADIO TO
1610 AM
IMPORTANT
WHEN FLASHING
REMOVE

TRAFFIC INFO
TUNE RADIO TO
1610 AM
IMPORTANT
WHEN FLASHING
87
D12-3(MOD)
TYPE I SIGN
REUSE STEEL POSTS

REMOVE
88
W4-2R
(3)

90
W4-2L
(3)

343 344
FORM SINGLE LINE
R3-58
(2S)

LEFT LANE ENDS
REMOVE
89

REMOVE
91
W4-1R
(5)

BLEACHERS
SIGN

USH 41/45

1432+00 1433+00 1434+00 1435+00 1436+00 1437+00 1438+00 1439+00 1440+00 1441+00 1442+00 1443+00 1444+00 1445+00 1446+00 1447+00

USH 41/45 SB ON RAMP

I.E.=837.04
I.E.=835.82
30" RCP
30" NE=837.12
30" SW=837.11
30" NE=837.00
30" S=837.06
12" RCP
I.E.=837.53
I.E.=837.83
MH

432 434 436 438 440 442 444 446

USH 41/45

1443+00 1444+00 1445+00 1446+00 1447+00

USH 41/45 NB
OFF RAMP

E1-5P
EXIT 54
167 EAST Y
Lannon Rd
Mequon Rd
98A
98
E4-1A
TYPE I SIGN
REUSE STEEL POSTS

EXIT 54
167 EAST Y
Lannon Rd
Mequon Rd
REMOVE

167 WEST
To Holy Hill Rd
AHEAD
97
E1-1A
TYPE I SIGN
REUSE STEEL POSTS

167 WEST
To Holy Hill Rd
AHEAD
REMOVE

EXIT 54
94
E5-1A
(5)
95
W5-54(2S)
96
W5-54(2S)

EXIT 54
REMOVE

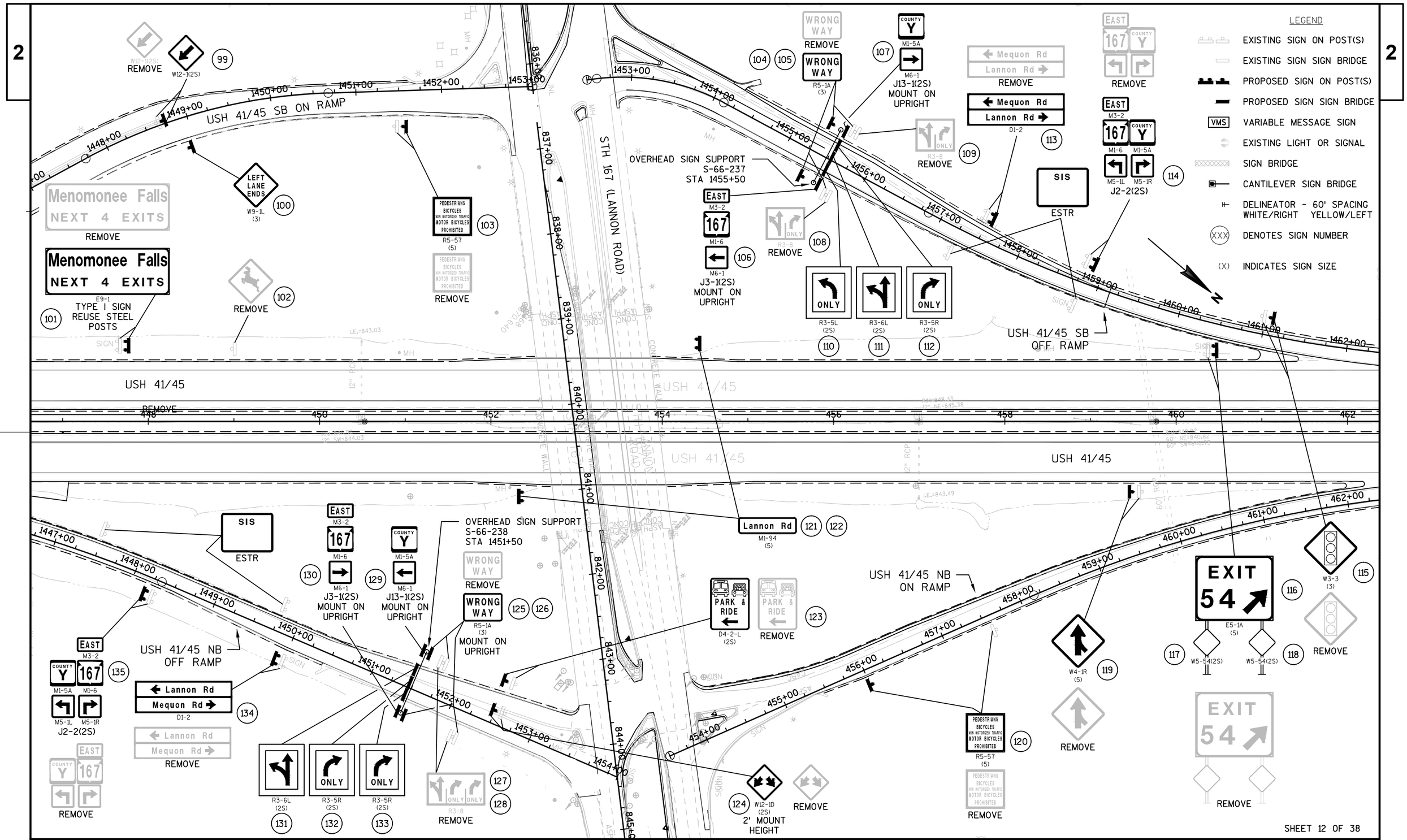
93
W3-3
(3)
REMOVE

REMOVE
92

SHEET 11 OF 38

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\023201_PS.DWG PLOT DATE : 7/31/2014 2:32 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : PLOT SCALE : 1" = 100'_XREF



SHEET 12 OF 38

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET E

FILE NAME : N:\PDS\C3D\CAD\11003800\023201_PS.DWG PLOT DATE : 7/31/2014 2:33 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

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
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING WHITE/RIGHT YELLOW/LEFT
- XXX — DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

Germantown PARK & RIDE
REMOVE

Germantown PARK & RIDE
TYPE I SIGN
REUSE STEEL POSTS
136 137

RIGHT LANE ENDS
W9-1R
ESTR

W4-2R
ESTR

R4-7
ESTR

DO NOT ENTER
R5-1
ESTR

R3-4
ESTR

WRONG WAY
R5-1A
ESTR

STOP
REMOVE

R3-2
(2S)
142

STOP
R1-1F
(3)
143
MOUNT ON SIGNAL POLE

YIELD
REMOVE

YIELD
R1-2
(2S)
139

COUNTY Y
M1-5A

M6-1
J13-1
REMOVE
138

ONE WAY
REMOVE

ONE WAY
R6-2L
(2M)
140
MOUNT ON SIGNAL POLE

Milwaukee
REMOVE

Milwaukee
D1-1
141

LANNON ROAD

CTH "Y"

831+00 832+00 833+00 834+00 835+00 836+00

CTH "Y"

ONE WAY
R6-2L
ESTR

Fond du Lac
Milwaukee
D1-2
146

Fond du Lac
Milwaukee
REMOVE

41 CONVERSION PROJECT WILL REPLACE THESE SIGNS

SOUTH
M3-3
41
M1-1
45
M1-4
M6-1
JV3-1
ESTR

DO NOT ENTER
R5-1
ESTR

144
STOP
R1-1F
(3)
MOUNT ON SIGNAL POLE

STOP
REMOVE

145
YIELD
R1-2
(2S)

YIELD
REMOVE

RAMP CLOSED USE ALT ROUTE
R11-54-F
(2M)
334

1452+00

SHEET 13 OF 38

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\023201_PS.DWG PLOT DATE : 7/31/2014 2:33 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : PLOT SCALE : 1" = 40'_XREF

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
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING WHITE/RIGHT YELLOW/LEFT
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE

USH 41/45 SB OFF RAMP

1454+00

1453+00

1452+00

USH 41/45 SB ON RAMP

USH 41/45

LANNON ROAD

STH 167

836+00

837+00

838+00

839+00

840+00

841+00

842+00

454

452

147 REMOVE W12-1D (2S) 2' MOUNT HEIGHT

148 REMOVE STOP R1-1F (3) MOUNT ON SIGNAL POLE

149 REMOVE DO NOT ENTER R5-1(3)

150 REMOVE WRONG WAY R5-1A MOVE TO NEW SIGNAL POLE 3' MOUNT HEIGHT

151 EAST M3-2 167 M1-6 M6-1 J3-1 REMOVE

152 STOP R1-1F (3) MOUNT ON SIGNAL POLE

153 REMOVE R3-1 (2S)

154 DO NOT ENTER R5-1(3) MOUNT ON SIGNAL POLE

155 WRONG WAY R5-1A MOVE TO NEW SIGNAL POLE 3' MOUNT HEIGHT

156 REMOVE WRONG WAY R5-1A (3)

157 SOUTH 41 45 M1-6 M6-1 REMOVE

158 SOUTH 41 45 ONLY TYPE I

159 REMOVE W5-52R (3) 4' MOUNT HEIGHT

160 BEGIN LEFT TURN LANE R3-20-LL (3) LEFT TURN LANE R3-56L REMOVE

161 W5-52L (3) 4' MOUNT HEIGHT REMOVE

162 REMOVE W5-52R (3) 4' MOUNT HEIGHT

163 REMOVE W5-52L (3) 4' MOUNT HEIGHT

164 Fond du Lac D1-1 Fond du Lac REMOVE

165 REMOVE STOP R1-1F (3)

166 R4-7 (2S) REMOVE

167 ONE WAY R6-2L (2M) MOUNT ON SIGNAL POLE ONE WAY REMOVE

168 STOP R1-1F (3) MOUNT ON SIGNAL POLE STOP REMOVE

336 RAMP CLOSED USE ALT ROUTE R11-54-F (2M)

345 Mequon Rd / Lannon Rd M1-94S(MOD) MOUNT ON MAST ARM

NORTH M3-1 INTERSTATE 41 M1-1 / 45 M1-4 M5-1L JV2-1 ESTR

SOUTH M3-3 INTERSTATE 41 M1-1 / 45 M1-4 M6-1 JV3-1 ESTR

41 CONVERSION PROJECT WILL REPLACE THESE SIGNS

351 COVER PLAQUE NORTH 41 45 ONLY TYPE I

352

OVERHEAD SIGN SUPPORT S-66-240 STA 838+55

EXISTING SIGN BRIDGE S-66-203

CONCRETE WALL

SHEET 14 OF 38

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET E

FILE NAME : N:\PDS\C3D\CAD\11003800\023201_PS.DWG PLOT DATE : 7/31/2014 2:34 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42

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
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING WHITE/RIGHT YELLOW/LEFT
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE

N

LANNON ROAD

USH 41/45 NB ON RAMP

USH 41/45 NB OFF RAMP

455+00

454+00

1454+00

1453+00

842+00 843+00 844+00 845+00 846+00 847+00 848+00

ASPH

REMOVE (169) ONE WAY R6-2L (2M) MOUNT ON SIGNAL POLE

Y Lannon Rd / 57 Mequon Rd M1-94S(MOD) MOUNT ON MAST ARM (346)

REMOVE (195) STOP R1-1F (3) MOUNT ON SIGNAL POLE

(170) NORTH M3-1 INTERSTATE 41 M1-1 45 M1-4 M6-1 JV3-1 MOVE 41 CONVERSION PROJECT WILL REPLACE THESE SIGNS

REMOVE (171) R3-18 (2S) (172) STOP R1-1F (3) MOUNT ON SIGNAL POLE

REMOVE (174) STOP R1-1F (3) MOUNT ON SIGNAL POLE

REMOVE (173) YIELD R1-2 (2S)

REMOVE (175) DO NOT ENTER R5-1 (3)

RAMP CLOSED USE ALT ROUTE R11-54-F (2M) (337)

REMOVE (177) WEST M3-4 167 M1-6 M6-1 J3-1(2S)

NORTH M3-1 INTERSTATE 41 M1-1 45 M1-4 M6-1 ESTR 41 CONVERSION PROJECT WILL REPLACE THESE SIGNS

SOUTH M3-3 INTERSTATE 41 M1-1 45 M1-4 M5-2L JV2-1 REMOVE (176)

COVER PLAQUE — SOUTH INTERSTATE 41 US 45 ONLY TYPE I (178)

SOUTH M3-3 INTERSTATE 41 M1-1 45 M1-4 USE LEFT LANE M4-20L JV2-1(2S) (349)

REMOVE Milwaukee / Fond du Lac D1-1 (179) (180)

REMOVE WRONG WAY R5-1A (3) (181)

OVERHEAD SIGN BRIDGE S-66-239 STA 846+00

REMOVE (182) M1-85

RAMP CLOSED USE ALT ROUTE R11-54-F (2M) (335)

REMOVE (194) LEFT TURN LANE R3-55L

REMOVE (187) R4-7 (3)

REMOVE (188) EAST M3-2 167 M1-6 M6-1

REMOVE (196) DO NOT ENTER R5-1 (3)

(197) R3-1 (2S) (198) STOP R1-1F (3) MOUNT ON SIGNAL POLE

REMOVE STOP

(192) DO NOT ENTER R5-1(3) REMOVE

(193) WRONG WAY R5-1A MOVE TO NEW POST 3' MOUNT HEIGHT BELOW R5-1

(191) COUNTY Y M1-5A M6-1 REMOVE

(189) STOP R1-1F (3) (190) MOUNT ON SIGNAL POLE

REMOVE STOP

(186) NO TURN ON RED FROM LEFT LANE R10-11-F (2M) MOUNT ON SIGNAL POLE

REMOVE NO TURN ON RED FROM LEFT LANE

(185) REMOVE

EAST M3-2 167 M1-6 J4-1(3) (183) (184)

REMOVE EAST 167

SHEET 15 OF 38

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET 189 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
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING
  WHITE/RIGHT YELLOW/LEFT
- XXX — DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

N

SOUTH M3-3 | WEST M3-4 | NORTH M3-1
41 M1-1 | 167 M1-6 | 41 M1-1
45 M1-4 | M5-1R | 45 M1-4
M6-1 | M5-1R

ESTR
41 CONVERSION
PROJECT WILL
REPLACE
THESE SIGNS

ESTR

PARK & RIDE AHEAD
D4-2-A
ESTR

LANNON ROAD

848+00 | 849+00 | 850+00 | 851+00 | 852+00 | 853+00 | 854+00

Homestead Hallow Co Park
ESTR

Maple Rd
D1-61
199 200

Maple Rd
REMOVE

SPEED LIMIT 45
R2-1
ESTR

Germantown Industrial Park
D1-2
201

Germantown Industrial Park
REMOVE

LANNON ROAD

SHEET 16 OF 38

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\023201_PS.DWG PLOT DATE : 7/31/2014 2:34 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : PLOT SCALE : 1" = 40'_XREF

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

VMS VARIABLE MESSAGE SIGN

EXISTING LIGHT OR SIGNAL POLE

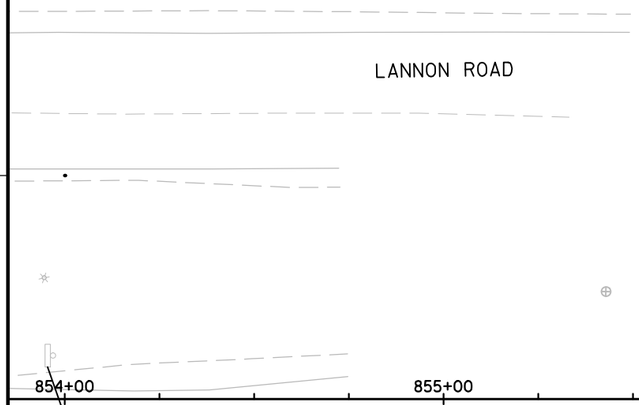
SIGN BRIDGE

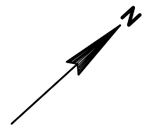
CANTILEVER SIGN BRIDGE

DELINEATOR - 60' SPACING
WHITE/RIGHT YELLOW/LEFT

XXX DENOTES SIGN NUMBER

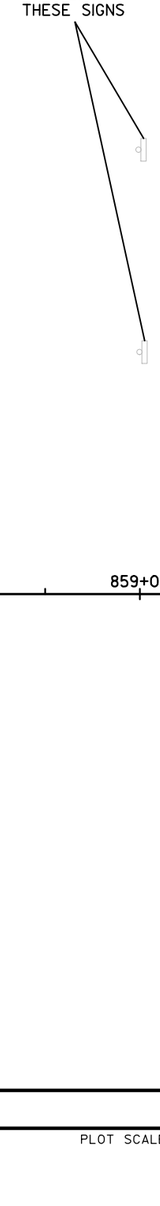
(X) INDICATES SIGN SIZE

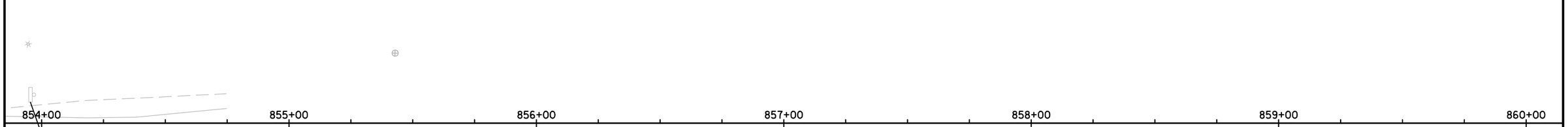




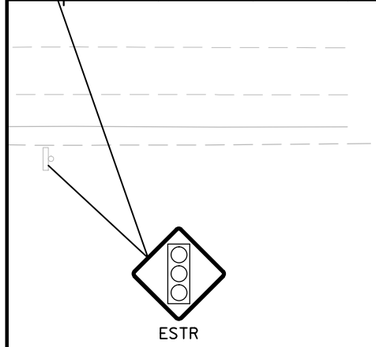


ESTR
41 CONVERSION
PROJECT WILL
REPLACE
THESE SIGNS





LANNON ROAD



ESTR

SHEET 17 OF 38

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\023201_PS.DWG PLOT DATE : 7/31/2014 2:35 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42

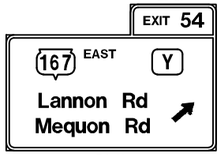
LEGEND

- 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
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING WHITE/RIGHT YELLOW/LEFT
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE



REMOVE

E1-5P



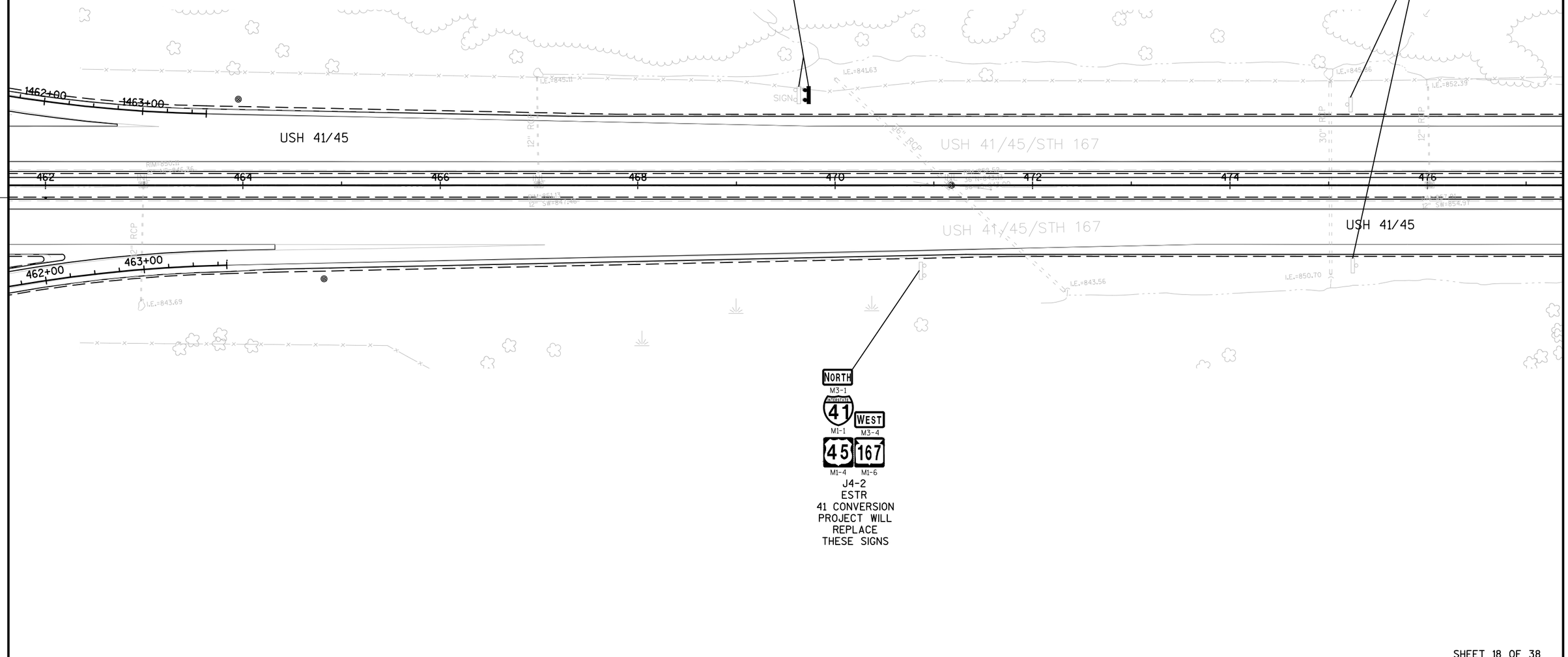
202A

202

E4-1A
TYPE I
REUSE STEEL POSTS



D10-2
ESTR



J4-2
ESTR
41 CONVERSION
PROJECT WILL
REPLACE
THESE SIGNS

SHEET 18 OF 38

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\023201_PS.DWG PLOT DATE : 7/31/2014 2:35 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

SIS
ESTR

R3-4
EXCEPT MAINTENANCE AND POLICE AUTHORIZED VEHICLES
R3-4A
REMOVE

203
204

R3-4B
(5)

SIS
ESTR

MEQUON ROAD

USH 41/45/STH 167

478 480 482 484 486 488 490 492

USH 41/45/STH 167

USH 41/45/STH 167

SIGN

I.E.=877.85

RIM=869.07

I.E.=866.41

I.E.=895.49

RIPRAP

SPEED LIMIT 65
R2-1

205

SPEED LIMIT 65
REMOVE

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
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING WHITE/RIGHT YELLOW/LEFT
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE

SHEET 19 OF 38

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\023201_PS.DWG PLOT DATE : 7/31/2014 2:36 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

2

PARK & RIDE
NEXT RIGHT
REMOVE

Germantown
PARK & RIDE
EXIT 54
206
TYPE I
NEW STEEL POSTS
REUSE STUBS

SIGN

I.E.=905.46

12" RCP

I.E.=916.02

12" RCP

167 USH 41/45 STH 167

492 494 496 498 500 502 504 506

INT 12" RCP SW=906.85

INT 12" RCP SW=920.56

67 USH 41/45 STH 167

12" RCP

I.E.=912.43

I.E.=923.57

MH MH MH

W W

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
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING WHITE/RIGHT YELLOW/LEFT
- XXX — DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

SHEET 20 OF 38

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET E

FILE NAME : N:\PDS\C3D\CAD\11003800\023201_PS.DWG PLOT DATE : 7/31/2014 2:36 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : PLOT SCALE : 1" = 100'_XREF

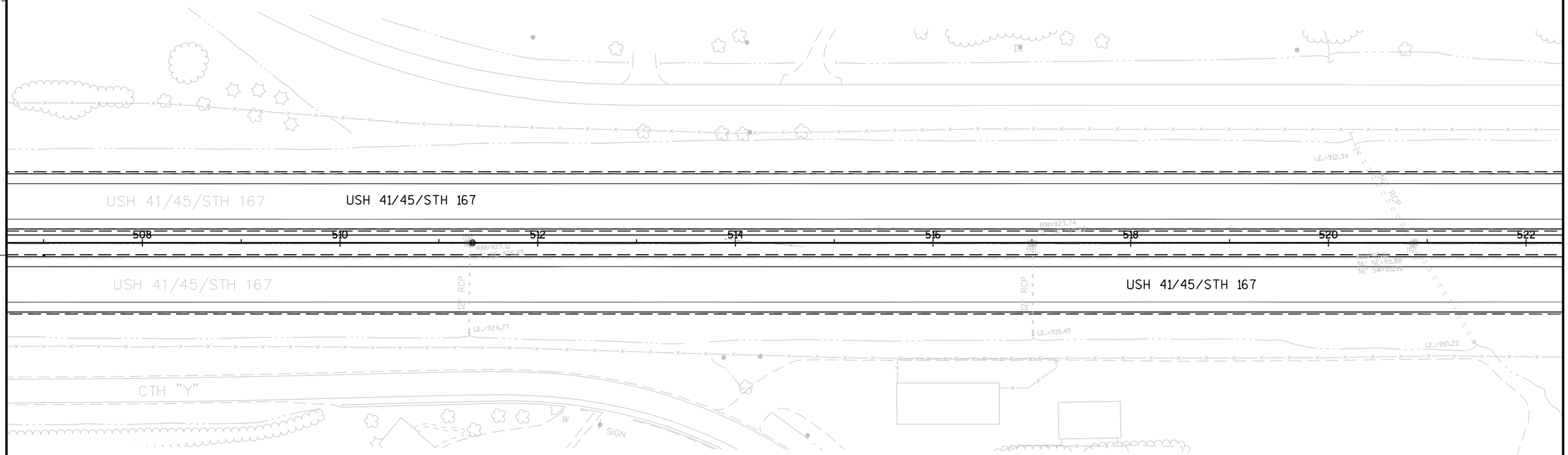
WISDOT/CADDS SHEET 42

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
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING WHITE/RIGHT YELLOW/LEFT
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE

NO SIGNS
THIS SHEET



SHEET 21 OF 38

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET E

FILE NAME : N:\PDS\C3D\CAD\11003800\023201_PS.DWG PLOT DATE : 7/31/2014 2:36 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

E1-5P

EXIT 54

167 EAST Y

Lannon Rd
Mequon Rd
1 MILE

207A

207

EXIT 54

167 EAST Y

Lannon Rd
Mequon Rd
1 MILE

REMOVE

E1-1A
TYPE I
REUSE STEEL POSTS

HILLTOP DR.

SIGN

USH 41/45/STH 167

USH 41/45/STH 167

522 524 526 528 530 532 534 536

USH 41/45/STH 167

USH 41/45/STH 167

SIGN SIGN SIGN SIGN SEPTIC

MILE 56
D10-2
ESTR

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
- VMS VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING WHITE/RIGHT YELLOW/LEFT
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

SHEET 22 OF 38

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET E

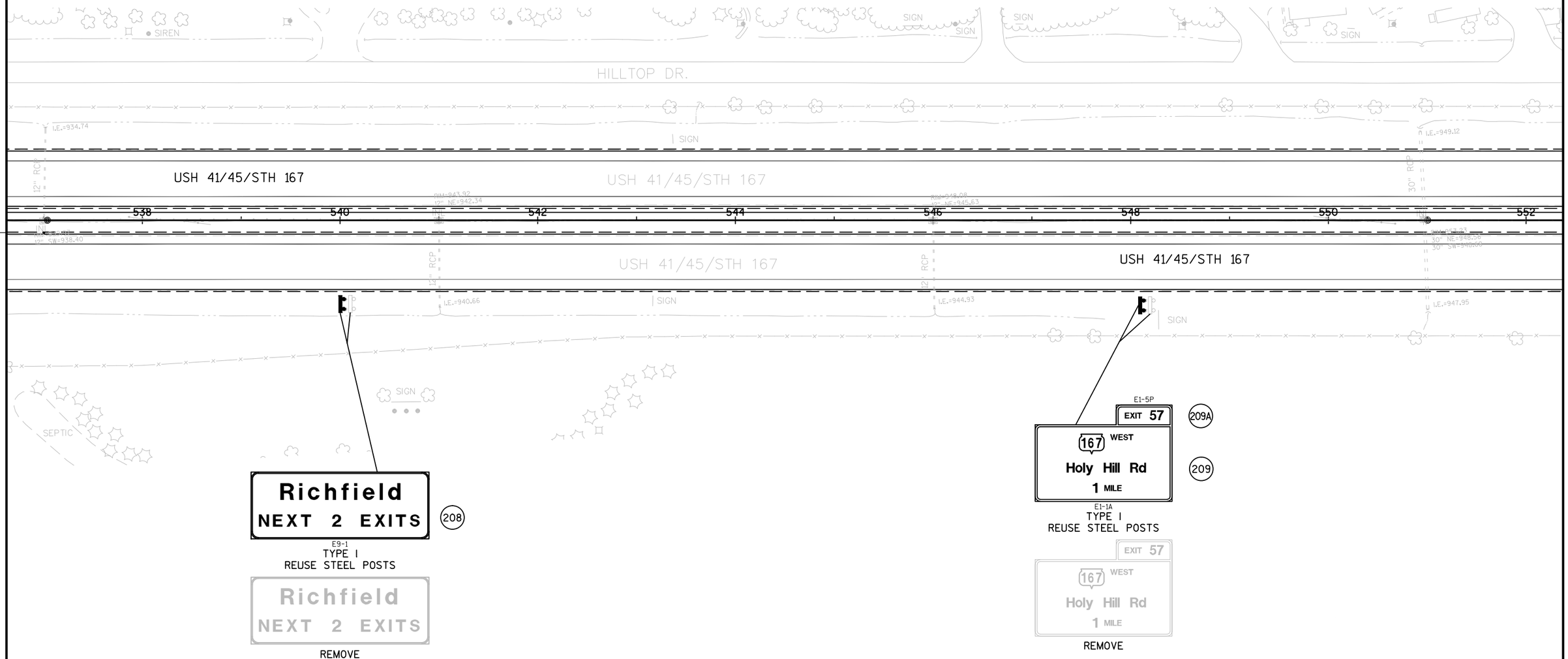
FILE NAME : N:\PDS\C3D\CAD\11003800\023201_PS.DWG PLOT DATE : 7/31/2014 2:37 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

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
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING
  WHITE/RIGHT YELLOW/LEFT
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE



SHEET 23 OF 38

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\023201_PS.DWG PLOT DATE : 7/31/2014 2:37 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

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
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING WHITE/RIGHT YELLOW/LEFT
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

NO SIGNS THIS SHEET

USH 41/45/STH 167

552 554 556 558 560 562 564 566

USH 41/45/STH 167

USH 41/45/STH 167

FRIESTADT ROAD

12" RCP I.E.=953.98

12" RCP I.E.=959.34

12" RCP I.E.=964.66

12" RCP I.E.=977.05

SIGN

INL

W

SHEET 24 OF 38

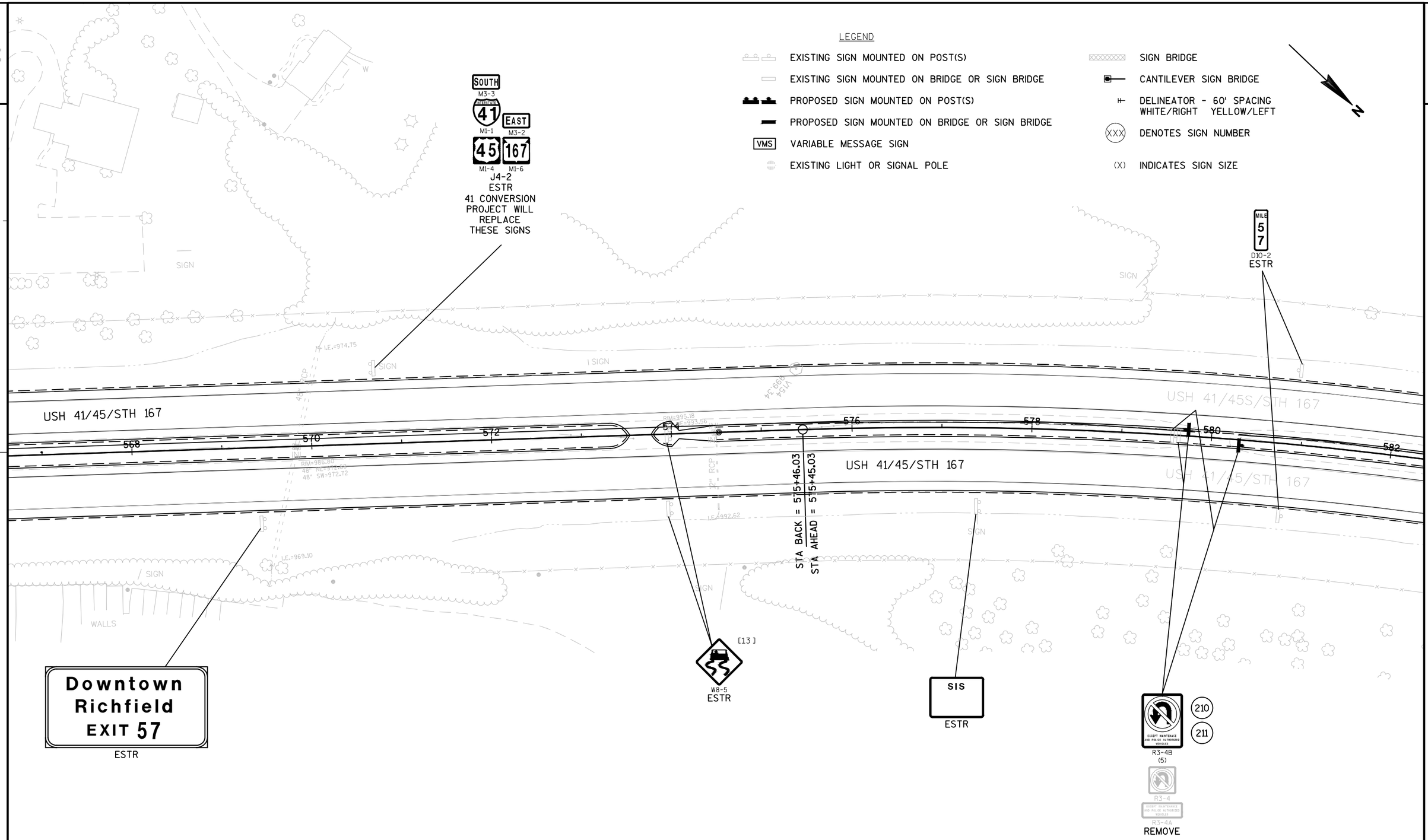
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\023201_PS.DWG PLOT DATE : 7/31/2014 2:38 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

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
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING WHITE/RIGHT YELLOW/LEFT
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE



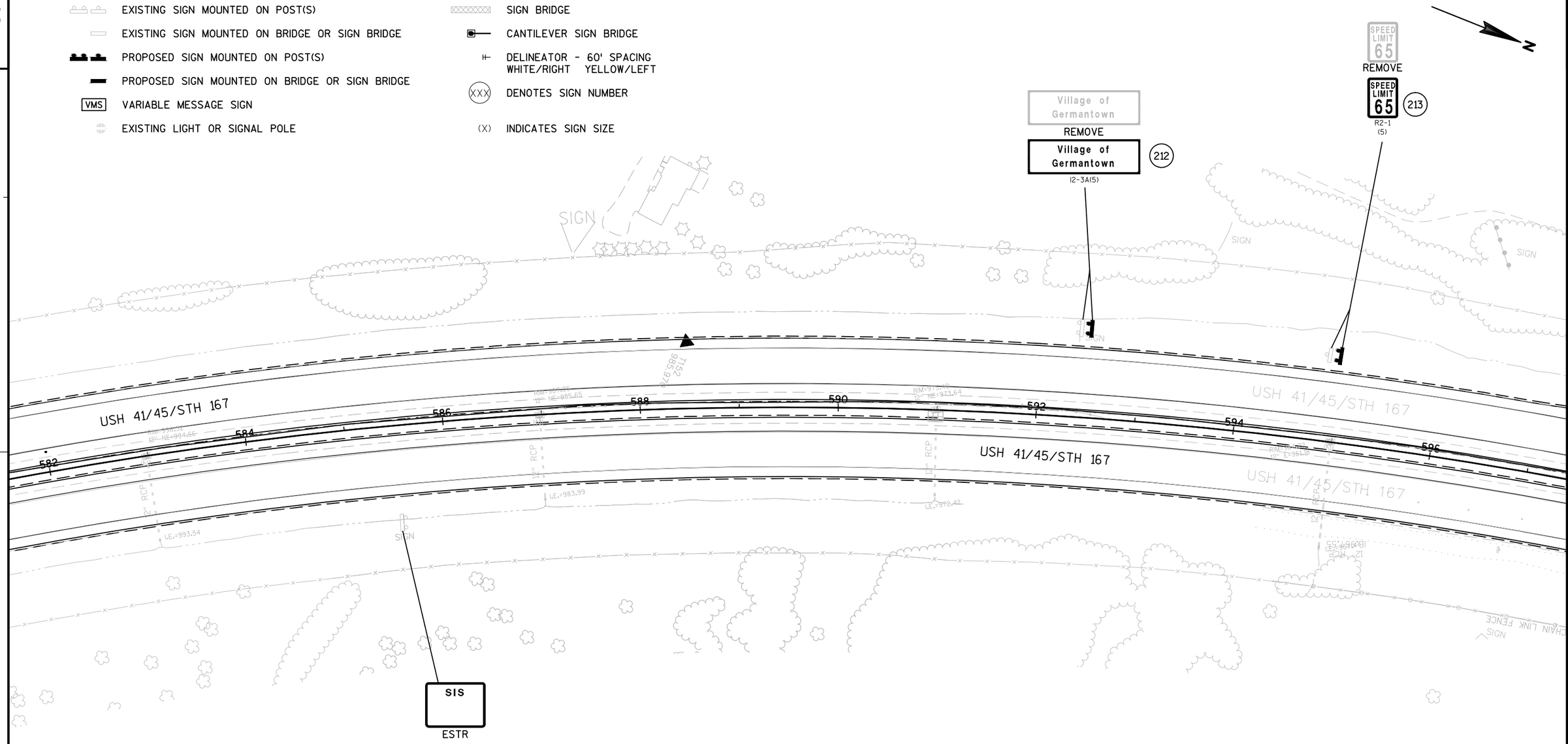
SHEET 25 OF 38

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\023201_PS.DWG PLOT DATE : 7/31/2014 2:38 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : PLOT SCALE : 1" = 100'_XREF

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
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING WHITE/RIGHT YELLOW/LEFT
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE



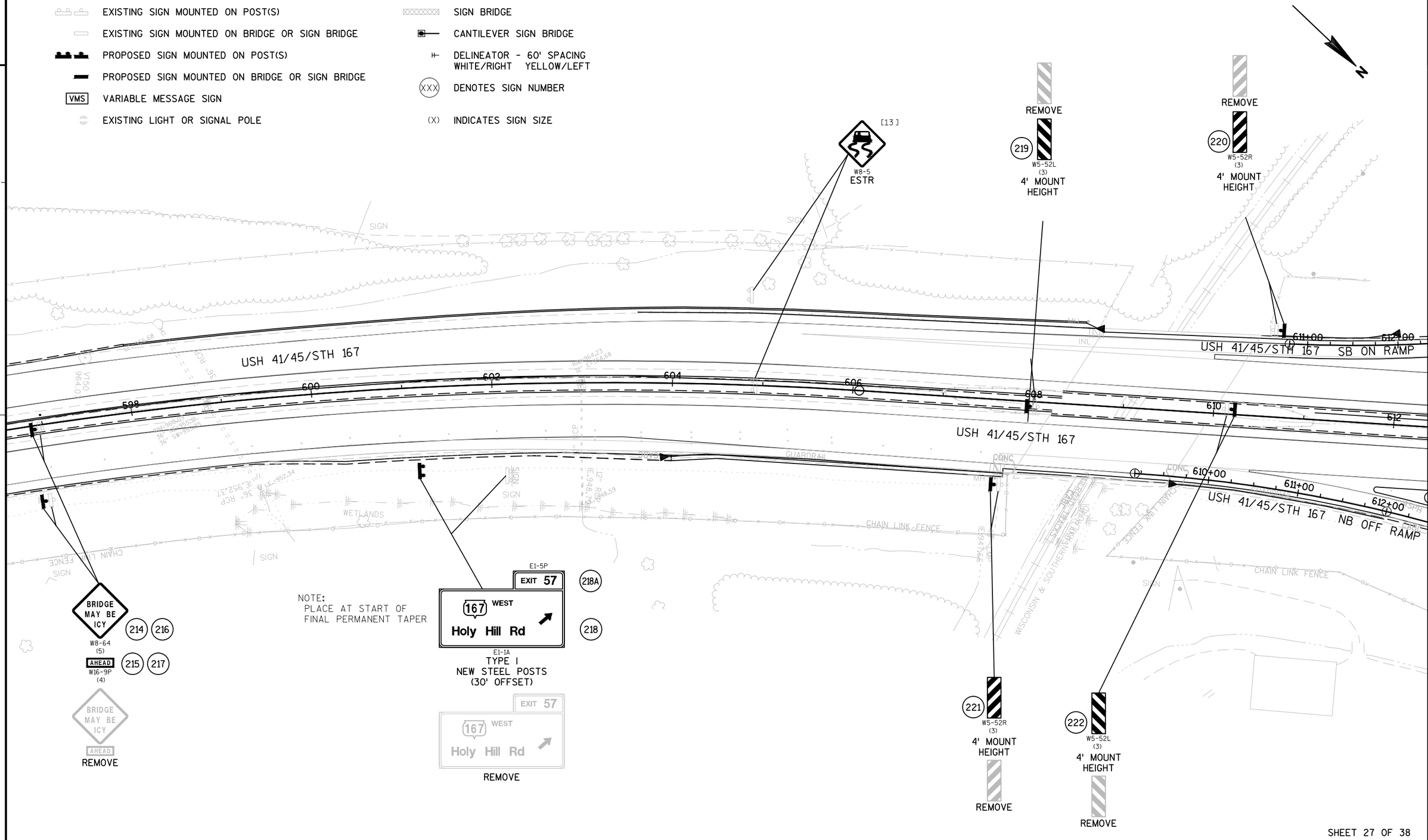
SHEET 26 OF 38

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET 200	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
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING WHITE/RIGHT YELLOW/LEFT
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE



SHEET 27 OF 38

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\023201_PS.DWG PLOT DATE : 7/31/2014 2:39 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

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
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

N

EXIT 57 — REMOVE

EXIT 57 — E5-1A (5) — 242 — 243 W5-54(2M) — 244 W5-54(2M)

REMOVE — W4-1R (5) — 223

BRIDGE MAY BE ICY AHEAD — REMOVE

BRIDGE MAY BE ICY — W8-64 (5) — 225 227 — AHEAD W16-9P (3) — 226 228

PEDESTRIANS BICYCLES NON MOTORIZED TRAFFIC MOTOR BICYCLES PROHIBITED — REMOVE

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

WRONG WAY — REMOVE

WRONG WAY — R5-1A (3) — 230 232

Germantown / Holy Hill — REMOVE

Germantown / Holy Hill — D1-2 — 231

SIS — ESTR

229 — Downtown Richfield — Downtown Richfield — REMOVE

SIS — ESTR

USH 41/45/STH 167 SB ON RAMP

USH 41/45

STH 167 (HOLY HILL ROAD)

USH 41/45 SB OFF RAMP

USH 41/45

USH 41/45/STH 167 NB OFF RAMP

SIS — CONTACT INTERSTATE LOGOS TO MOVE SIGNS PHONE: (844) 496-9163

SIS — CONTACT INTERSTATE LOGOS TO MOVE SIGNS PHONE: (844) 496-9163

167 EAST 2¾ / Q 4¾ / Pilgrim Rd 6½ — E8-1 — 235 MOUNT ON BRIDGE

167 EAST 2¾ / Y 4¾ / Pilgrim Rd 6½ — REMOVE

USH 41/45 NB ON RAMP

241 — W3-1 (3) — REMOVE

239 — Holy Hill / Germantown — D1-2 — Holy Hill / Germantown — REMOVE

237 240 — WRONG WAY — R5-1A (3) — WRONG WAY — REMOVE

Downtown Richfield — 236 — INSTALL IN 2016, AND MOVE IN 2017

Downtown Richfield — REMOVE

WEST — M3-4 — 167 — M1-6 — 238 — M6-1 — J3-1(2S)

WEST 167 — REMOVE

PEDESTRIANS BICYCLES NON MOTORIZED TRAFFIC MOTOR BICYCLES PROHIBITED — R5-57 (5) — 234

PEDESTRIANS BICYCLES NON MOTORIZED TRAFFIC MOTOR BICYCLES PROHIBITED — REMOVE

W4-1R (5) — 233 — REMOVE

SHEET 28 OF 38

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET 202	E

FILE NAME : N:\PDS\C3D\CAD\11003800\023201_PS.DWG PLOT DATE : 3/25/2015 9:02 AM PLOT BY : LAROSA, PHILIP P PLOT NAME : PLOT SCALE : 1" = 100'_XREF

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
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING WHITE/RIGHT YELLOW/LEFT
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

N

12" CPP
IE.963.05

RICHFIELD
POPULATION 11,385
REMOVE

Richfield
POPULATION 11,300
12-3

245

WOLF RD

CABC

SIGN

WETLANDS

IE.961.63

18" CMP

IE.960.41

IE.959.63

CABC

STH 167

105+00 106+00 107+00 108+00 109+00 110+00

STH 167 (HOLY HILL ROAD)

24" RCP

ASPH

IE.957.89

IE.960.84

POST

24" CMP

IE.958.31

WETLANDS

RAILROAD TRACKS

NO ENGINE BRAKING EXCEPT IN EMERGENCY
R10-64
ESTR

155-56
ESTR

CABC

ASPH

CABC

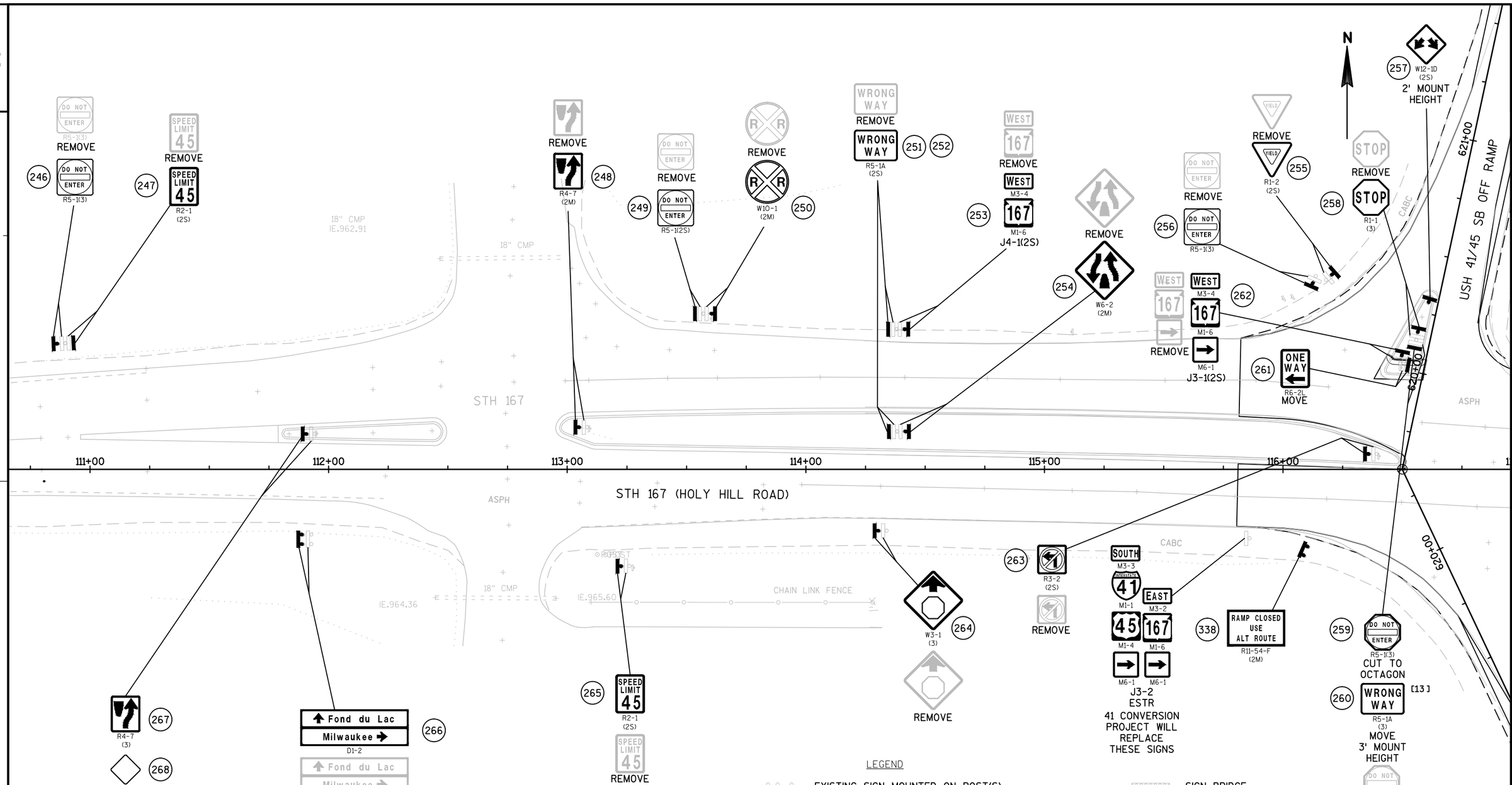
JCT M2-1
41 M1-1
45 M1-4
JV1-1
ESTR
41 CONVERSION PROJECT WILL REPLACE THESE SIGNS

NORTH M3-1 | SOUTH M3-3 | EAST M3-2
41 M1-1 | 41 M1-1 | 167 M1-6
45 M1-4 | 45 M1-4 | M5-1R
M6-1 | M5-1R
ESTR
41 CONVERSION PROJECT WILL REPLACE THESE SIGNS

SHEET 29 OF 38

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET 203	E

FILE NAME : N:\PDS\C3D\CAD\11003800\023201_PS.DWG PLOT DATE : 3/25/2015 9:03 AM PLOT BY : LAROSA, PHILIP P PLOT NAME : PLOT SCALE : 1" = 40'_XREF



SHEET 30 OF 38

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET E

FILE NAME : N:\PDS\C3D\CAD\11003800\023201_PS.DWG PLOT DATE : 7/31/2014 2:40 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : PLOT SCALE : 1" = 40'_XREF

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
- VMS VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING WHITE/RIGHT YELLOW/LEFT
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

N

USH 41/45 SB OFF RAMP

621+00

269 STOP R1-1 (3) REMOVE

270 DO NOT ENTER R5-1(3) REMOVE

271 WRONG WAY R5-1A MOVE TO NEW POST 3' MOUNT HEIGHT

272 DO NOT ENTER R5-1(2S) REMOVE

273 R3-1 (2S) REMOVE

274 WRONG WAY R5-1A (2S) REMOVE

339 RAMP CLOSED USE ALT ROUTE R11-54-F (2M)

353 RAMP CLOSED USE ALT ROUTE R11-54-F (2M)

USH 41/45

RIM=950.82

RIM=950.88

MH

ASPH

STH 167

CONC

60

117+00 118+00 119+00 120+00 121+00 122+00

STH 167 (HOLY HILL ROAD)

GUARDRAIL

SIGNS

R4-7 ESTR

USH 41/45/STH 167 SB ON RAMP

619+00

347 RAMP CLOSED USE ALT ROUTE R11-54-F (2M)

SOUTH M3-3 INTERSTATE 41 M1-1 45 M1-4 M5-1L JV3-1 ESTR 41 CONVERSION PROJECT WILL REPLACE THESE SIGNS

284 285 W3-1 (3) REMOVE

283 Fond du Lac D1-1 Fond du Lac REMOVE

282 W5-52R (2S) 4' MOUNT HEIGHT REMOVE

NORTH M3-1 INTERSTATE 41 M1-1 45 M1-4 M5-1L JV2-1 ESTR 41 CONVERSION PROJECT WILL REPLACE THESE SIGNS

USH 41

618

SOUTH M3-3 INTERSTATE 41 M1-1 45 M1-4 M5-1L JV2-1 ESTR 41 CONVERSION PROJECT WILL REPLACE THESE SIGNS

Milwaukee REMOVE

276 Milwaukee D1-1

275 W5-52R (2S) 4' MOUNT HEIGHT REMOVE

281 WRONG WAY R5-1A (2S) WRONG WAY REMOVE

277 STOP R1-1 (3) ALL WAY R1-3-P (2S) REMOVE

278

279 R4-7 (2M) REMOVE

RAMP CLOSED USE ALT ROUTE R11-54-F (2M) 341

280 STOP R1-1 (3) MOUNT ON MAST ARM

STOP REMOVE

SHEET 31 OF 38

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET E

FILE NAME : N:\PDS\C3D\CAD\11003800\023201_PS.DWG PLOT DATE : 7/31/2014 2:40 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42

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
- VMS VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING WHITE/RIGHT YELLOW/LEFT
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

N

USH 41/45 NB ON RAMP

621+00

620+00

619+00

USH 41/45/STH 167 NB OFF RAMP

HOLY HILL ROAD

123+00 124+00 125+00 126+00 127+00 128+00

348 RAMP CLOSED USE ALT ROUTE R11-54-F (2M)

286 STOP R1-1 (3) ALL WAY R1-3-P (2S) REMOVE

287

NORTH M3-1 INTERSTATE 41 M1-1 45 M1-4 M6-1 JV3-1 ESTR 41 CONVERSION PROJECT WILL REPLACE THESE SIGNS

DO NOT ENTER R5-1(2S) ESTR

340 RAMP CLOSED USE ALT ROUTE R11-54-F (2M)

NORTH M3-1 INTERSTATE 41 M1-1 45 M1-4 M6-1 JV3-1 ESTR 41 CONVERSION PROJECT WILL REPLACE THESE SIGNS

STOP ALL WAY REMOVE

288 STOP R1-1 (3)

289 ALL WAY R1-3-P (2S)

R3-2 ESTR

R3-2 ESTR

R4-7 ESTR

Milwaukee Fond du Lac REMOVE

350 Milwaukee Fond du Lac D1-2

296 DO NOT ENTER R5-1(2S)

DO NOT ENTER REMOVE

295 R3-1 (2S) REMOVE

293 294 STOP R1-1 (3)

STOP REMOVE

YIELD 292 R1-2 (2S)

YIELD REMOVE

DO NOT ENTER 290 R5-1(3)

DO NOT ENTER REMOVE

WRONG WAY 291 R5-1A MOVE TO NEW POST 3' MOUNT HEIGHT

DO NOT ENTER R5-1

WRONG WAY R5-1A ESTR

W6-2 ESTR

SPEED LIMIT 45 R2-1 ESTR

WRONG WAY R5-1A ESTR

ASPH CABC

SHEET 32 OF 38

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET E

FILE NAME : N:\PDS\C3D\CAD\11003800\023201_PS.DWG PLOT DATE : 7/31/2014 2:41 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : PLOT SCALE : 1" = 40'_XREF

2



ESTR



JV2-2
ESTR
41 CONVERSION
PROJECT WILL
REPLACE
THESE SIGNS



JV1-1
ESTR
41 CONVERSION
PROJECT WILL
REPLACE
THESE SIGNS

N

129+00 130+00 131+00 132+00 133+00 134+00

STH 167 (HOLY HILL ROAD)

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
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING
  WHITE/RIGHT YELLOW/LEFT
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE

SHEET 33 OF 38

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\023201_PS.DWG PLOT DATE : 7/31/2014 2:41 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42

2

N

EXIT 57

REMOVE

EXIT 57

297

E5-1A
(5)

298

W5-54(2S)

W5-54(2S)

299

REMOVE

W3-1
(3)

300

MILE 5 8

D10-2
ESTR

EXIT 57

167 WEST

Holy Hill Rd

REMOVE

E1-5P

EXIT 57

303A

167 WEST

Holy Hill Rd

303

E1-1A

TYPE I SIGN
REUSE STEEL POSTS

627+00 628+00 629+00 630+00 631+00 632+00 633+00 634+00

USH 41/45 SB OFF RAMP

USH 41/45

628 630 632 634 636 638 640 642

USH 41/45

USH 41/45

627+00 628+00 629+00 630+00 631+00 632+00

USH 41/45
NB ON RAMP

E1-5P

EXIT 59

45 NORTH

West Bend

1 MILE

RIGHT EXIT LANE ONLY

301A

301

E1-1A

TYPE I SIGN
REUSE STEEL POSTS

EXIT 59

45 NORTH

West Bend

1 MILE

RIGHT EXIT LANE ONLY

REMOVE

302

167 EAST

To Lannon Rd
Mequon Rd

AHEAD

E1-1A

TYPE I SIGN
REUSE STEEL POSTS

167 EAST

To Lannon Rd
Mequon Rd

AHEAD

REMOVE

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
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING
  WHITE/RIGHT YELLOW/LEFT
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE

SHEET 34 OF 38

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\023201_PS.DWG PLOT DATE : 7/31/2014 2:41 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : PLOT SCALE : 1" = 100'_XREF

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
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING
  WHITE/RIGHT YELLOW/LEFT
- XXX — DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

N

RIDESHARE INFO CALL 1-800-455-POOL
REMOVE

RIDESHARE INFO CALL 1-800-455-POOL
D12-2A
(5)
304

RIDESHARE INFORMATION www.rideshare.wi.gov
D12-2B
(5)
329

EMERGENCY STOPPING ONLY
REMOVE

305
EMERGENCY STOPPING ONLY
R8-7
(5)

SLOWER TRAFFIC KEEP RIGHT
REMOVE

306
SLOWER TRAFFIC KEEP RIGHT
R4-3
(5)

T144
907.410

SIGN

USH 41/45

642 644 646 648 650 652 654 656

I.E.=890.64

12" RCP

I.E.=908.31

I.E.=900.01

USH 41/45

NORTH
M3-1

INTERSTATE
41
M1-1

45
M1-4

JV4-1
ESTR
41 CONVERSION
PROJECT WILL
REPLACE
THESE SIGNS

V145
905.82

LOGO LOGO
TRAVEL INFO CALL 511
D12-5
(2S)
309

LOGO LOGO
TRAVEL INFO CALL 511
REMOVE

EXCEPT MAINTENANCE AND POLICE AUTHORIZED VEHICLES
R3-4B
(5)
307
308

R3-4
EXCEPT MAINTENANCE AND POLICE AUTHORIZED VEHICLES
R3-4A
REMOVE

SHEET 35 OF 38

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET E

FILE NAME : N:\PDS\C3D\CAD\11003800\023201_PS.DWG PLOT DATE : 7/31/2014 2:42 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : PLOT SCALE : 1" = 100'_XREF

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
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING WHITE/RIGHT YELLOW/LEFT
- XXX — DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

N

SOUTH
M3-3
INTERSTATE 41
M1-1
45
M1-4

JV4-1
ESTR
41 CONVERSION
PROJECT WILL
REPLACE
THESE SIGNS

SPEED LIMIT 65
REMOVE

SPEED LIMIT 65
R2-1
(5)
310

SIS
ESTR

SIGN

I.E.=869.19

12" RCP

USH 41/45

656 658 659 662 664 666 668 670

USH 41/45

USH 41/45

12" RCP

I.E.=878.47

SPEED LIMIT 65
R2-1
(5)
311

SPEED LIMIT 65
REMOVE

RIGHT LANE FOR EXIT ONLY
312
REMOVE

SIGN

SIGN

SHEET 36 OF 38

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET 210 E

FILE NAME : N:\PDS\C3D\CAD\11003800\023201_PS.DWG PLOT DATE : 7/31/2014 2:42 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : PLOT SCALE : 1" = 100'_XREF

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
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING WHITE/RIGHT YELLOW/LEFT
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

N

EXIT 57
167 WEST
Holy Hill Rd
½ MILE
REMOVE

E1-5P
EXIT 57
167 WEST
Holy Hill Rd
½ MILE
313A
313
E1-1A
TYPE I
REUSE STEEL POSTS

REMOVE

314
W5-52R
(3)
4' MOUNT HEIGHT

REMOVE
315
W4-2R
(5)

USH 41/45

BOX CULVERT

EXISTING SIGN BRIDGE
S-66-1

668 670 672 674 676 678 680 682

320
EMERGENCY STOPPING ONLY
R8-7
(5)
EMERGENCY STOPPING ONLY
REMOVE

319
41 NORTH
Fond du Lac
E6-51
TYPE I

41 NORTH
Fond du Lac
REMOVE

E1-5P
EXIT 59
318A
45 NORTH
West Bend
EXIT ONLY
318
E6-1
TYPE I

EXIT 59
45 NORTH
West Bend
EXIT ONLY
REMOVE

2 RIGHT LANES MUST EXIT
317
TYPE I SIGN

2 RIGHT LANES MUST EXIT
REMOVE
TYPE II SIGN

316
W5-52L
(3)
4' MOUNT HEIGHT

REMOVE

SHEET 37 OF 38

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING	SHEET	E

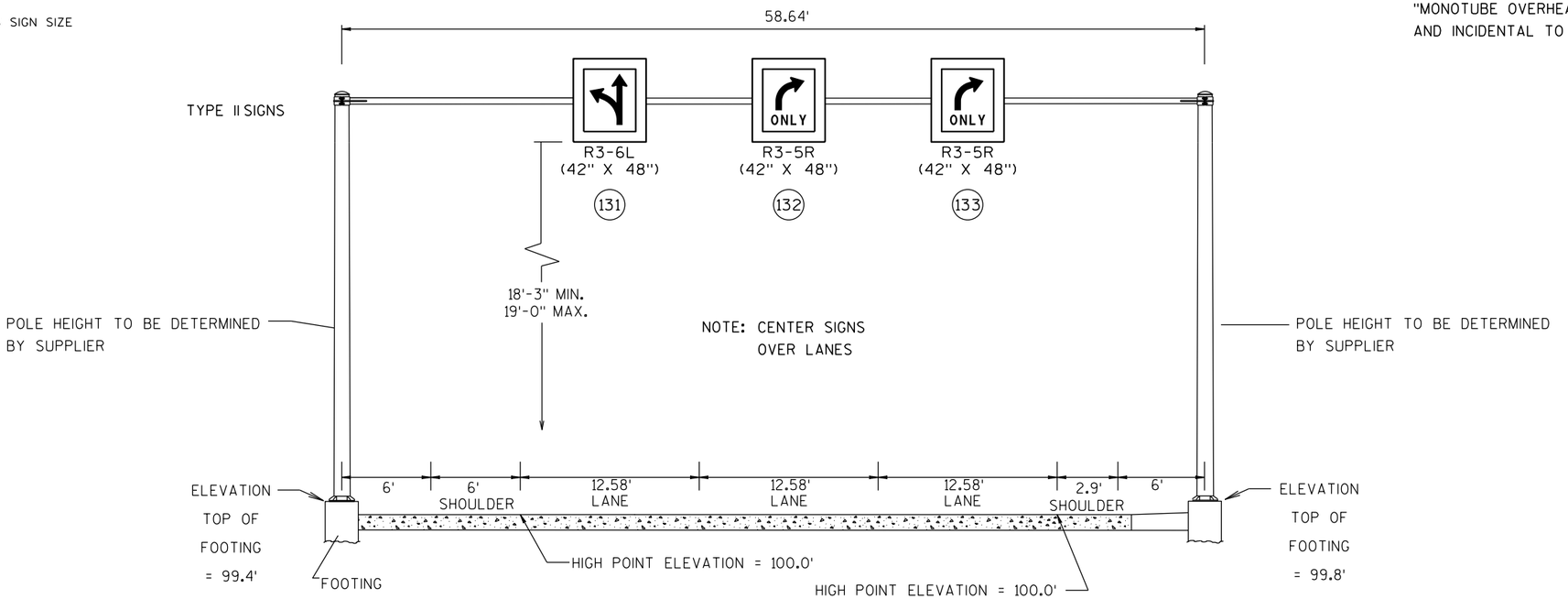
FILE NAME : N:\PDS\C3D\CAD\11003800\023201_PS.DWG PLOT DATE : 7/31/2014 2:42 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : PLOT SCALE : 1" = 100'_XREF
WISDOT/CADDS SHEET 42

LEGEND

(XXX) DENOTES SIGN NUMBER

(X) INDICATES SIGN SIZE

NOTE: FOOTING SHALL BE PER STANDARD DETAIL DRAWING, "MONOTUBE OVERHEAD SIGN SUPPORT BASE" AND INCIDENTAL TO STRUCTURE



OVERHEAD SIGN SUPPORTS DETAIL
S-66-238
USH 41 NB
EXIT RAMP TO LANNON ROAD
STA 1451+50
(SEE SIGNING PLAN FOR LOCATION)

NOTE, CONTRACTOR SHALL:
1.) SUBMIT SHOP DRAWINGS OF OVERHEAD SIGN SUPPORT. FOOTING IS INCIDENTAL TO OVERHEAD SIGN SUPPORT.
2.) PROVIDE DESIGN CALCULATIONS.
3.) SHOW SIGNS ON SHOP DRAWINGS.
4.) I.D. PLAQUE INCIDENTAL TO OVERHEAD SIGN SUPPORT
5.) 6 ANCHOR RODS PER STANDARD DETAIL DRAWING ARE REQUIRED

MOUNTING BRACKETS FOR SIGNS
- TO BE PER APPROVED FROM PRODUCT LIST- TYPE II SIGNS
- I BEAMS W5X3.7 FOR TYPE I SIGNS INCIDENTAL TO SIGNS

GENERAL NOTES

DRAWINGS NOT TO SCALE

DESIGN ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS".

THE SIGN STRUCTURES SHALL BE DESIGNED TO SUPPORT THE SIGN SHOWN.

WIND VELOCITY PER WISDOT STD SPECIFICATIONS

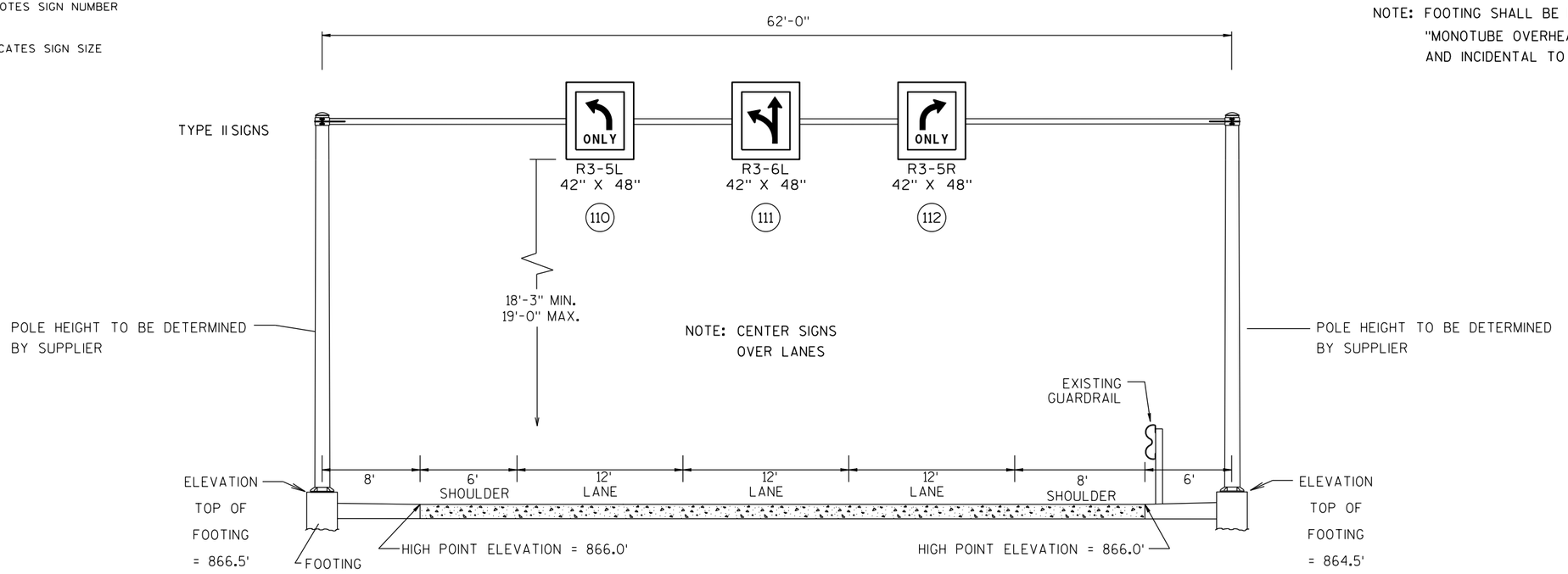
BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR UNLESS DETAILED OTHERWISE.

LEGEND

(XXX) DENOTES SIGN NUMBER

(X) INDICATES SIGN SIZE

NOTE: FOOTING SHALL BE PER STANDARD DETAIL DRAWING, "MONOTUBE OVERHEAD SIGN SUPPORT BASE" AND INCIDENTAL TO STRUCTURE



OVERHEAD SIGN SUPPORTS DETAIL
S-66-237
USH 41 SB
EXIT RAMP TO STH 167 (LANNON RD)
STA 1455+50
(SEE SIGNING PLAN FOR LOCATION)

NOTE, CONTRACTOR SHALL:
1.) SUBMIT SHOP DRAWINGS OF OVERHEAD SIGN SUPPORT. FOOTING IS INCIDENTAL TO OVERHEAD SIGN SUPPORT.
2.) PROVIDE DESIGN CALCULATIONS.
3.) SHOW SIGNS ON SHOP DRAWINGS.
4.) I.D. PLAQUE INCIDENTAL TO OVERHEAD SIGN SUPPORT
5.) 6 ANCHOR RODS PER STANDARD DETAIL DRAWING ARE REQUIRED

MOUNTING BRACKETS FOR SIGNS
- TO BE PER APPROVED FROM PRODUCT LIST- TYPE II SIGNS
- I BEAMS W5X3.7 FOR TYPE I SIGNS INCIDENTAL TO SIGNS

GENERAL NOTES

DRAWINGS NOT TO SCALE

DESIGN ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS".

THE SIGN STRUCTURES SHALL BE DESIGNED TO SUPPORT THE SIGN SHOWN.

WIND VELOCITY PER WISDOT STD SPECIFICATIONS

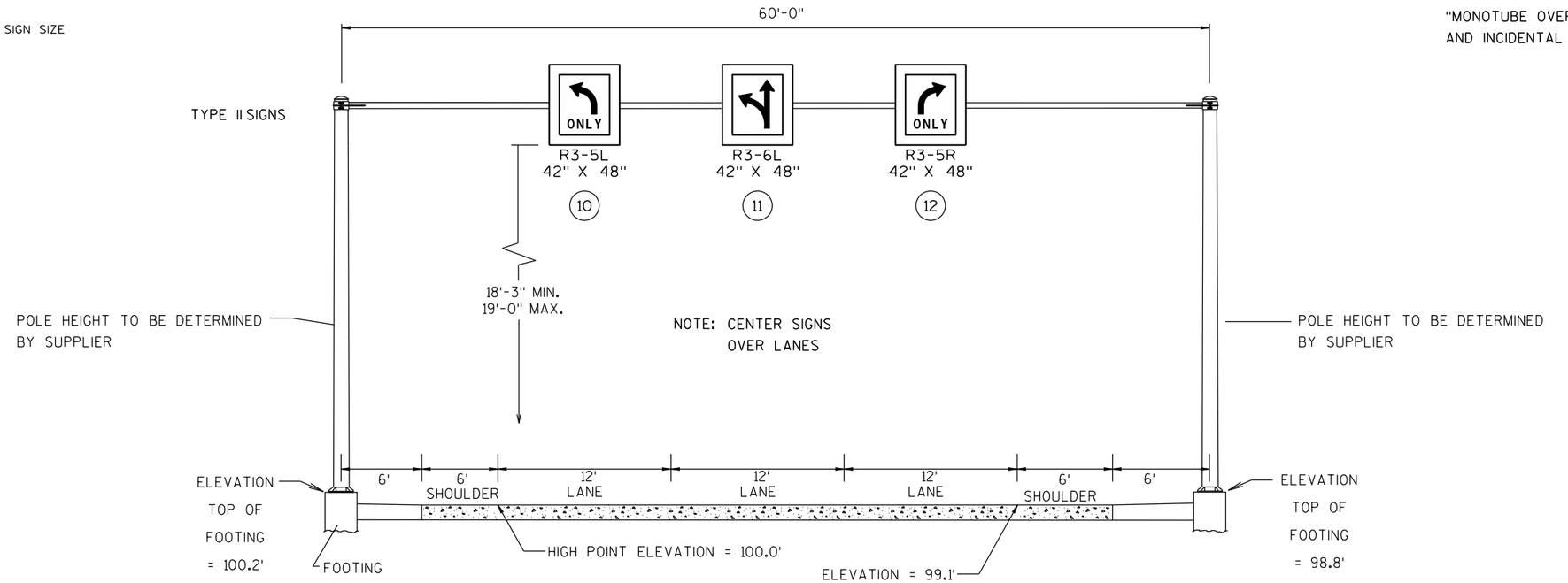
BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR UNLESS DETAILED OTHERWISE.

LEGEND

(XXX) DENOTES SIGN NUMBER

(X) INDICATES SIGN SIZE

NOTE: FOOTING SHALL BE PER STANDARD DETAIL DRAWING, "MONOTUBE OVERHEAD SIGN SUPPORT BASE" AND INCIDENTAL TO STRUCTURE



OVERHEAD SIGN SUPPORTS DETAIL
S-67-952
USH 41 NB
EXIT RAMP TO CTY Q
STA 342+00
WAUKESHA COUNTY
(SEE SIGNING PLAN
FOR LOCATION)

NOTE, CONTRACTOR SHALL:
1.) SUBMIT SHOP DRAWINGS OF OVERHEAD SIGN SUPPORT. FOOTING IS INCIDENTAL TO OVERHEAD SIGN SUPPORT.
2.) PROVIDE DESIGN CALCULATIONS.
3.) SHOW SIGNS ON SHOP DRAWINGS.
4.) I.D. PLAQUE INCIDENTAL TO OVERHEAD SIGN SUPPORT
5.) 6 ANCHOR RODS PER STANDARD DETAIL DRAWING ARE REQUIRED

MOUNTING BRACKETS FOR SIGNS
- TO BE PER APPROVED FROM PRODUCT LIST- TYPE II SIGNS
- I BEAMS W5X3.7 FOR TYPE I SIGNS INCIDENTAL TO SIGNS

GENERAL NOTES

DRAWINGS NOT TO SCALE

DESIGN ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS".

THE SIGN STRUCTURES SHALL BE DESIGNED TO SUPPORT THE SIGN SHOWN.

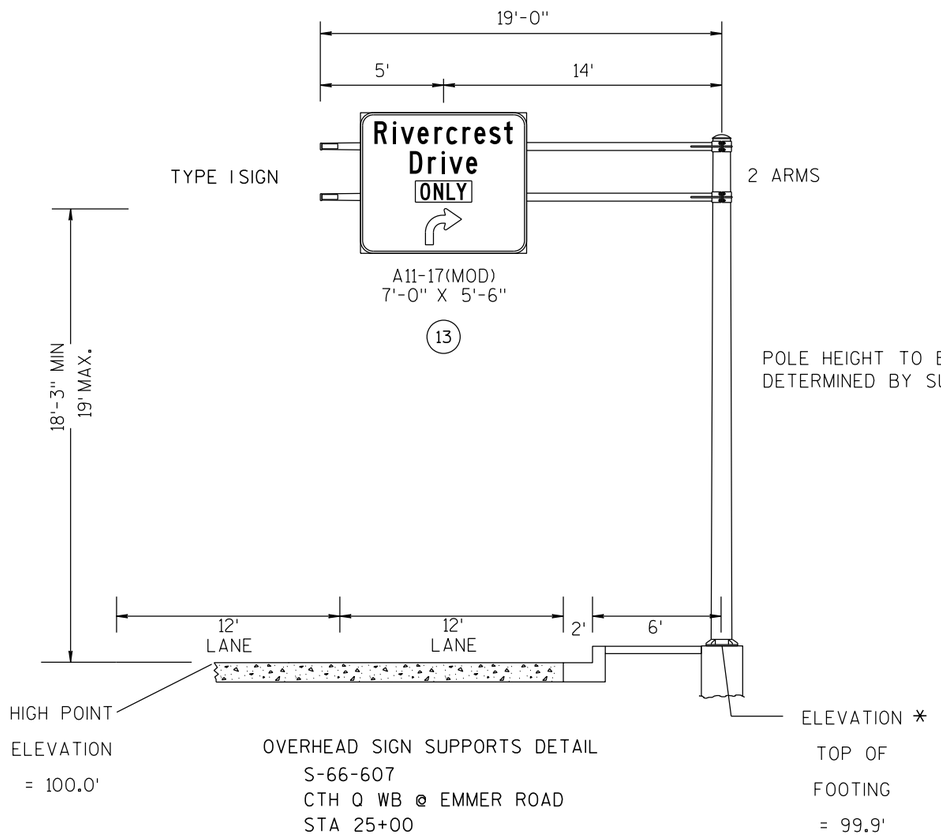
WIND VELOCITY PER WISDOT STD SPECIFICATIONS

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR UNLESS DETAILED OTHERWISE.

LEGEND

(XXX) DENOTES SIGN NUMBER

(X) INDICATES SIGN SIZE



OVERHEAD SIGN SUPPORTS DETAIL
S-66-607
CTH Q WB @ EMMER ROAD
STA 25+00

CONTRACTOR TO USE SDD 15C 24-1, 36" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE

MOUNTING BRACKETS FOR SIGNS TO BE APPROVED FROM PRODUCT LIST FOR TYPE II SIGNS

IBEAMS- W5X3.7 IBEAMS FOR MOUNTING SIGNS ARE INCIDENTAL TO TYPE I SIGNS

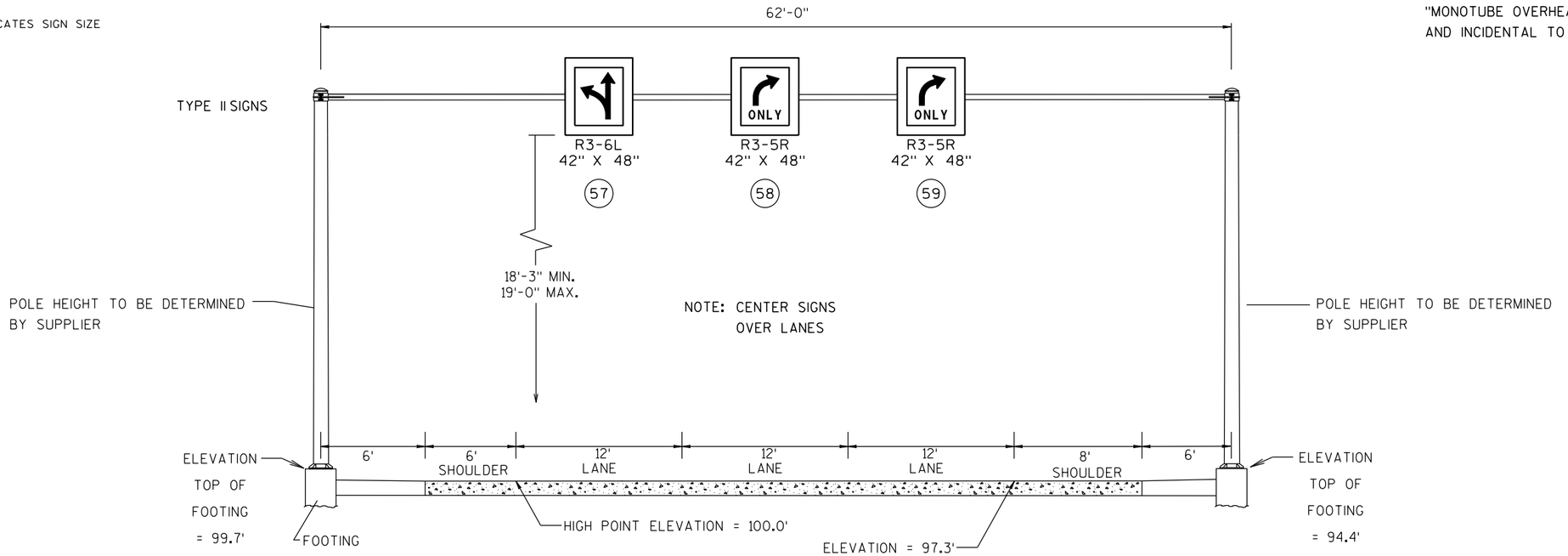
NOTE, CONTRACTOR SHALL:
1.) SUBMIT SHOP DRAWINGS OF OVERHEAD SIGN SUPPORT. FOOTING IS INCIDENTAL TO OVERHEAD SIGN SUPPORT.
2.) PROVIDE DESIGN CALCULATIONS.
3.) SHOW SIGNS ON SHOP DRAWINGS.
4.) I.D. PLAQUE INCIDENTAL TO SIGN SUPPORT
5.) 6ANCHER RODS SHALL BE USED PER SDD 15C 24-1

LEGEND

(XXX) DENOTES SIGN NUMBER

(X) INDICATES SIGN SIZE

NOTE: FOOTING SHALL BE PER STANDARD DETAIL DRAWING, "MONOTUBE OVERHEAD SIGN SUPPORT BASE" AND INCIDENTAL TO STRUCTURE



OVERHEAD SIGN SUPPORTS DETAIL
S-66-236
USH 41 SB
EXIT RAMP TO CTH Q
STA 356+80
(SEE SIGNING PLAN FOR LOCATION)

NOTE, CONTRACTOR SHALL:
1.) SUBMIT SHOP DRAWINGS OF OVERHEAD SIGN SUPPORT. FOOTING IS INCIDENTAL TO OVERHEAD SIGN SUPPORT.
2.) PROVIDE DESIGN CALCULATIONS.
3.) SHOW SIGNS ON SHOP DRAWINGS.
4.) I.D. PLAQUE INCIDENTAL TO OVERHEAD SIGN SUPPORT
5.) 6 ANCHOR RODS PER STANDARD DETAIL DRAWING ARE REQUIRED

MOUNTING BRACKETS FOR SIGNS
- TO BE PER APPROVED FROM PRODUCT LIST- TYPE II SIGNS
- I BEAMS W5X3.7 FOR TYPE I SIGNS INCIDENTAL TO SIGNS

GENERAL NOTES

DRAWINGS NOT TO SCALE

DESIGN ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS".

THE SIGN STRUCTURES SHALL BE DESIGNED TO SUPPORT THE SIGN SHOWN.

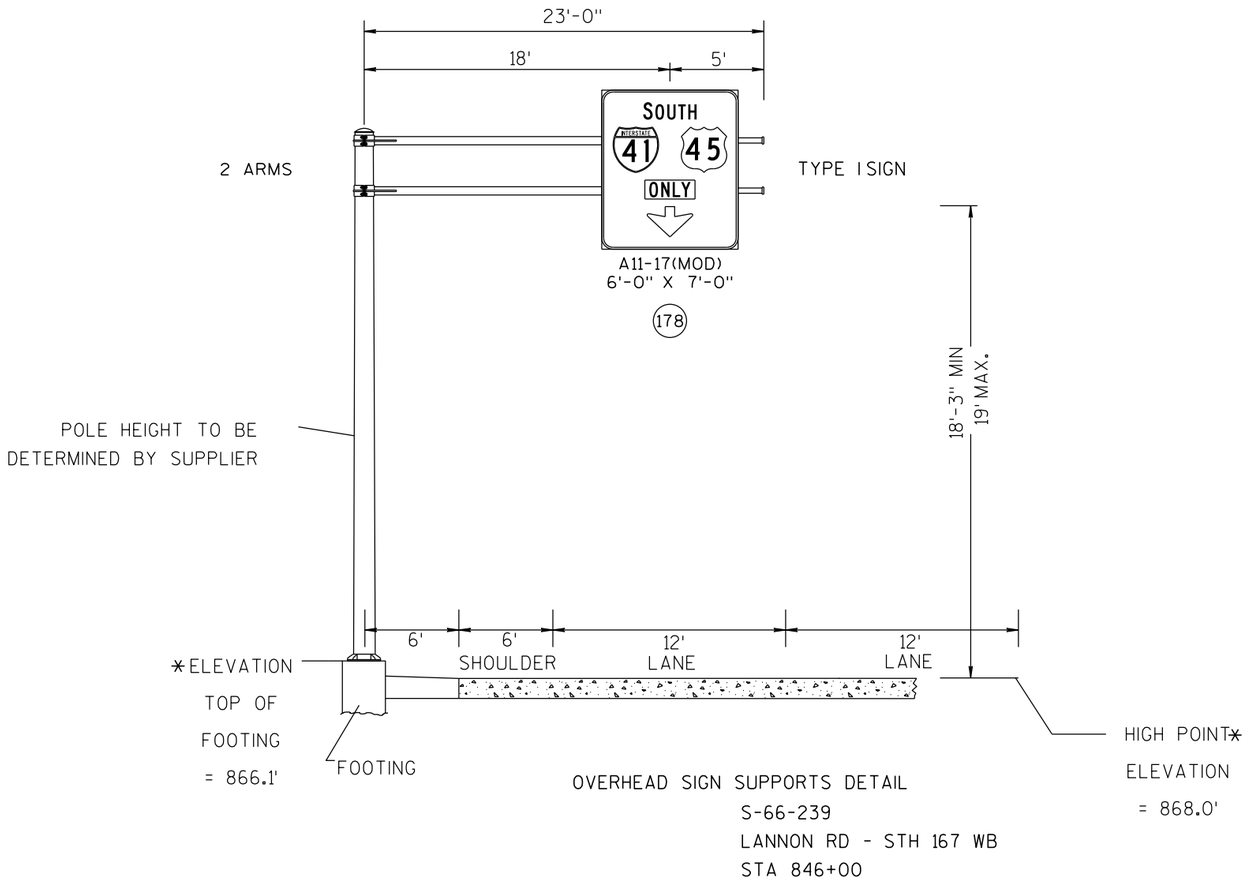
WIND VELOCITY PER WISDOT STD SPECIFICATIONS

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR UNLESS DETAILED OTHERWISE.

LEGEND

(XXX) DENOTES SIGN NUMBER

(X) INDICATES SIGN SIZE



OVERHEAD SIGN SUPPORTS DETAIL
S-66-239
LANNON RD - STH 167 WB
STA 846+00

CONTRACTOR TO USE SDD 15C 24-1, 36" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE

MOUNTING BRACKETS FOR SIGNS TO BE APPROVED FROM PRODUCT LIST FOR TYPE II SIGNS

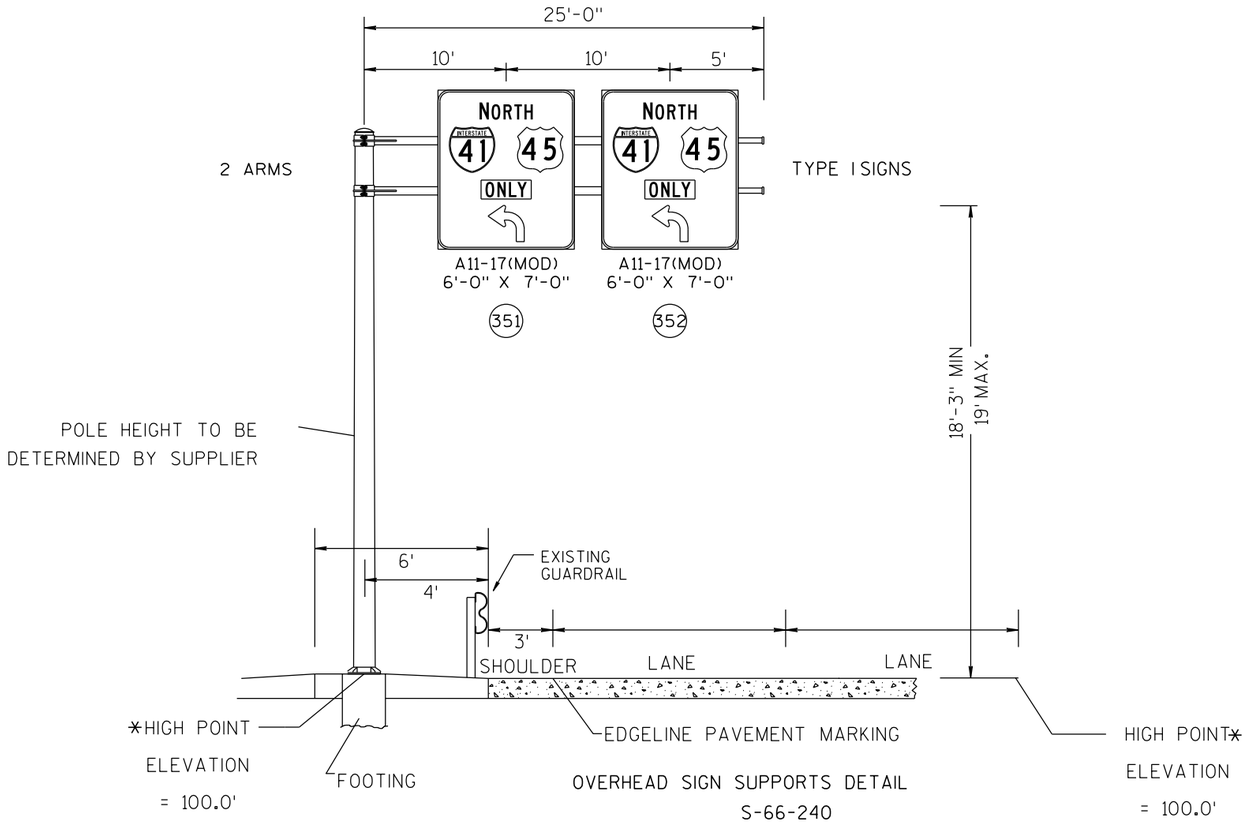
IBEAMS- W5X3.7 IBEAMS FOR MOUNTING SIGNS ARE INCIDENTAL TO TYPE I SIGNS

NOTE, CONTRACTOR SHALL:
1.) SUBMIT SHOP DRAWINGS OF OVERHEAD SIGN SUPPORT. FOOTING IS INCIDENTAL TO OVERHEAD SIGN SUPPORT.
2.) PROVIDE DESIGN CALCULATIONS.
3.) SHOW SIGNS ON SHOP DRAWINGS.
4.) I.D. PLAQUE INCIDENTAL TO SIGN SUPPORT
5.) 6ANCHER RODS SHALL BE USED PER SDD 15C 24-1

LEGEND

(XXX) DENOTES SIGN NUMBER

(X) INDICATES SIGN SIZE



OVERHEAD SIGN SUPPORTS DETAIL
S-66-240
LANNON RD EB AT USH 41
STA 838+55 LT
35' WEST OF BRIDGE PARAPET

CONTRACTOR TO USE SDD 15C 24-1, 36" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE

MOUNTING BRACKETS FOR SIGNS TO BE APPROVED FROM PRODUCT LIST FOR TYPE II SIGNS

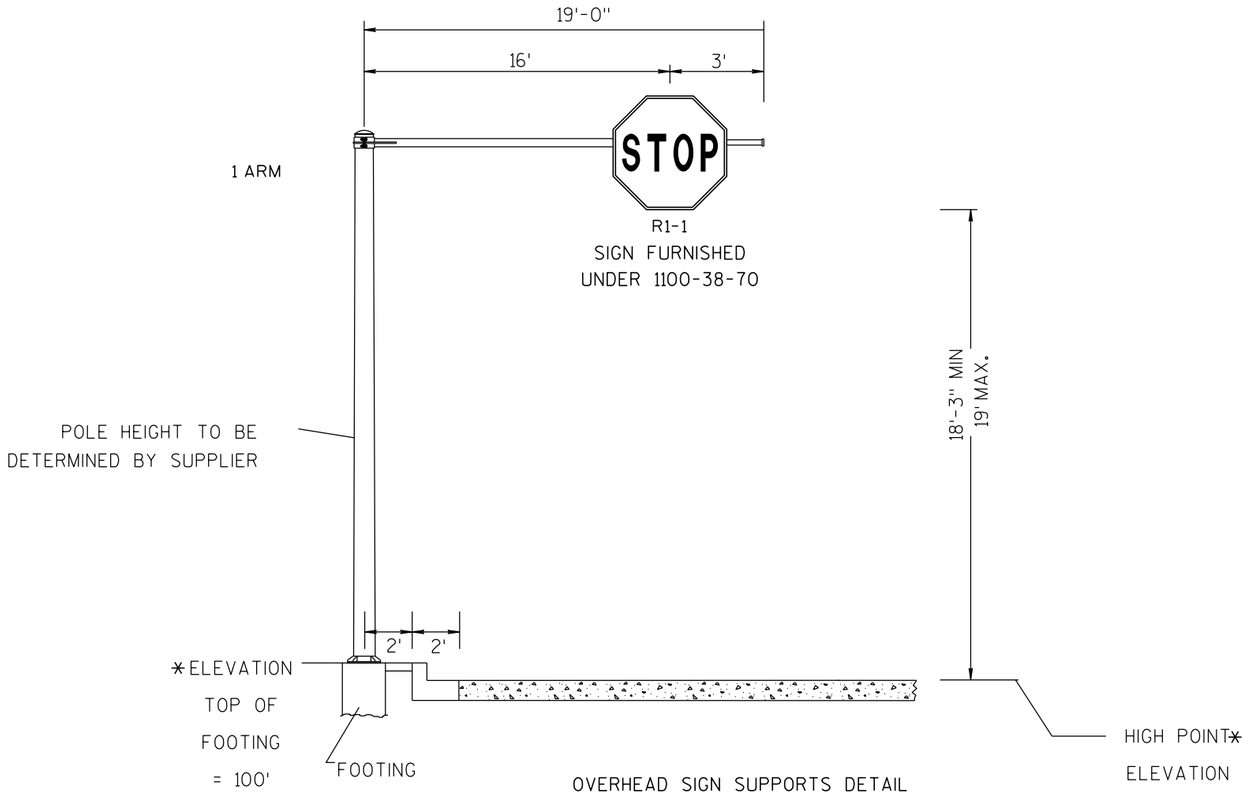
IBEAMS- W5X3.7 IBEAMS FOR MOUNTING SIGNS ARE INCIDENTAL TO TYPE I SIGNS

NOTE, CONTRACTOR SHALL:
1.) SUBMIT SHOP DRAWINGS OF OVERHEAD SIGN SUPPORT. FOOTING IS INCIDENTAL TO OVERHEAD SIGN SUPPORT.
2.) PROVIDE DESIGN CALCULATIONS.
3.) SHOW SIGNS ON SHOP DRAWINGS.
4.) I.D. PLAQUE INCIDENTAL TO SIGN SUPPORT
5.) 6ANCHER RODS SHALL BE USED PER SDD 15C 24-1

LEGEND

(XXX) DENOTES SIGN NUMBER

(X) INDICATES SIGN SIZE



OVERHEAD SIGN SUPPORTS DETAIL
S-66-241
STH 67 EB @ USH 41 NB ON RAMP
STA 122+50

CONTRACTOR TO USE SDD 15C 23-1, 30" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE

MOUNTING BRACKETS FOR SIGNS TO BE APPROVED FROM PRODUCT LIST FOR TYPE II SIGNS

IBEAMS- W5X3.7 IBEAMS FOR MOUNTING SIGNS ARE INCIDENTAL TO TYPE I SIGNS

NOTE, CONTRACTOR SHALL:
1.) SUBMIT SHOP DRAWINGS OF OVERHEAD SIGN SUPPORT. FOOTING IS INCIDENTAL TO OVERHEAD SIGN SUPPORT.
2.) PROVIDE DESIGN CALCULATIONS.
3.) SHOW SIGNS ON SHOP DRAWINGS.
4.) I.D. PLAQUE INCIDENTAL TO SIGN SUPPORT
5.) 6ANCHER RODS SHALL BE USED PER SDD 15C 23-1

SHEET 1 OF 1

PROJECT NO: 1000-44-73	HWY: HOLY HILL RD	COUNTY: WASHINGTON	OVERHEAD SIGN SUPPORT S-66-241	SHEET 219	E

LIGHTING PLAN LEGEND

PROPOSED

- REMOTE METER PEDESTAL
- PAD MOUNT TRANSF. (WEPCO)
- DISTRIBUTION CENTER
- PHOTO CELL POLE
- PULL BOX- 24" UNLESS OTHERWISE NOTED)
- LIGHTING SYSTEM MANHOLE
- JUNCTION BOX
- CONDUIT- 2" UNLESS OTHERWISE NOTED)
- CID (CABLE IN DUCT)
- LIGHT POLE, ARM MOUNTED LUMINAIRE
- LOCAL MUNI. POLE
- LOCAL MUNI UDL
- CONDUIT STUBOUT

HL-66-GM	
A,C	RED
B,D	BLACK
N	WHITE
GND	GREEN (OR BARE)
A,B,C,D	20 A
120/240VAC 3 WIRE ISOLATED NEUTRAL	

HL-66-VG	
A,C,E	
B,D,F	
6 @ 30 AMPS	
240/480VAC 3 WIRE ISOLATED NEUTRAL	

DISTRIBUTION CENTER HL-66-GM

DISTRIBUTION CENTER HL-66-VG

USH 41/45 SB OFF RAMP

STH 167 (LANNON RD)

ON RAMP

1456CC

1454CC

1453+40CC, 42.1'LT
AVG4
REMOVE LIGHTING UNIT

838+75W, 46.3'LT
AVG6

837+17W, 49.2'LT
BVG5

837+35W, 38.6'RT
DVG15

839+91W, 35.6'RT
CVG16

1451+74W, 19.4'LT
EVG11

835+23W, 30.9'RT
BVG3

1450+30CC, 17.9'LT
FVG12

832+51W, 29.6'RT
BVG2

830+55W, 33.0'RT
BVG1

1447+82CC, 32.5'LT
EVG13

1445+80CC, 34.0'LT
FVG14

1450CC

1448CC

1446CC

1448AA

1450AA

BGM3 AGM3 BGM2 AGM2 BGM5 AGM5 BGM4 AGM4

BVG20

*8 A,B,N

*10 A,B,N

*4 A,B,N,G

*6 A,B,N,G

*8 C,D,N,G

*6 C,D,N,G

*8 A,N

*8 E,F,N,G

*10 B,N,G

*10 F,N,G

PB101 PB102 PB104 PB105 PB110 PB901 PB902

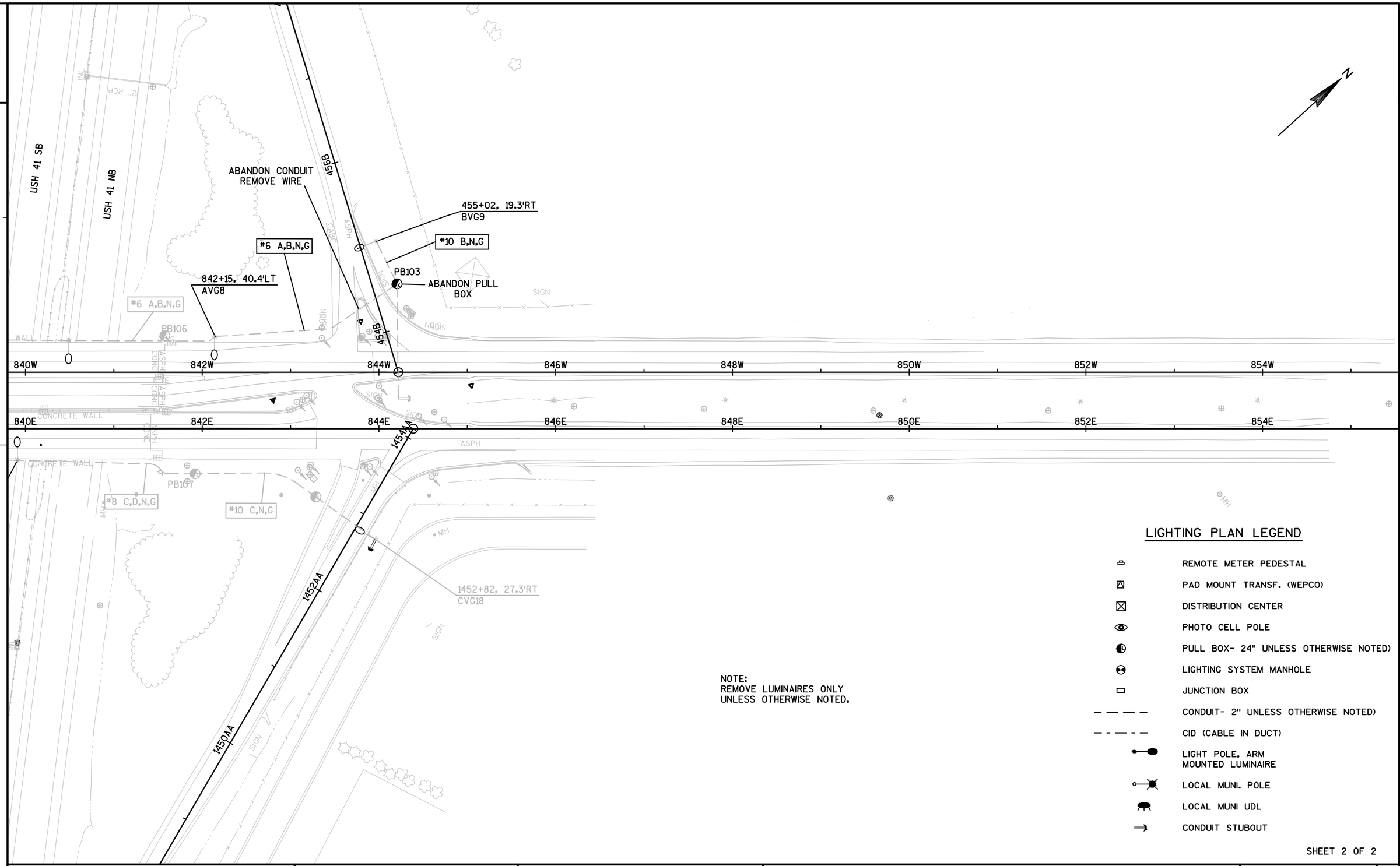
836W 836E 838W 838E 840W 840E 834W 834E 832W 832E

NOTE:
REMOVE LUMINAIRES ONLY
UNLESS OTHERWISE NOTED.

SHEET 1 OF 2

PROJECT NO: 1100-38-70	HWY: USH 41	COUNTY: WASHINGTON	LIGHTING REMOVAL PLAN	SHEET 220	E

2



NOTE:
REMOVE LUMINAIRES ONLY
UNLESS OTHERWISE NOTED.

LIGHTING PLAN LEGEND

- REMOTE METER PEDESTAL
- PAD MOUNT TRANSF. (WEPCO)
- DISTRIBUTION CENTER
- PHOTO CELL POLE
- PULL BOX- 24" UNLESS OTHERWISE NOTED)
- LIGHTING SYSTEM MANHOLE
- JUNCTION BOX
- CONDUIT- 2" UNLESS OTHERWISE NOTED)
- CID (CABLE IN DUCT)
- LIGHT POLE, ARM MOUNTED LUMINAIRE
- LOCAL MUNI. POLE
- LOCAL MUNI UDL
- CONDUIT STUBOUT

SHEET 2 OF 2

PROJECT NO: 1100-38-70	HWY: USH 41	COUNTY: WASHINGTON	LIGHTING REMOVAL PLAN	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\023501_LP.DWG PLOT DATE : 10/20/2014 4:16 PM PLOT BY : JOHNSON, JUDITH A PLOT NAME : PLOT SCALE : 1" = 100'_XREF

LIGHTING PLAN LEGEND

PROPOSED

- REMOTE METER PEDESTAL
- PAD MOUNT TRANSF. (WEPCO)
- DISTRIBUTION CENTER
- PHOTO CELL POLE
- PULL BOX- 24" UNLESS OTHERWISE NOTED)
- LIGHTING SYSTEM MANHOLE
- JUNCTION BOX
- CONDUIT- 2" UNLESS OTHERWISE NOTED)
- CID (CABLE IN DUCT)
- LIGHT POLE, ARM MOUNTED LUMINAIRE
- LOCAL MUNI. POLE
- LOCAL MUNI UDL
- CONDUIT STUBOUT

HL-66-GM	
A,C	RED
B,D	BLACK
N	WHITE
GND	GREEN (OR BARE)
A,B,C,D	20 A
120/240VAC 3 WIRE ISOLATED NEUTRAL	
LED - CATEGORY C	

HL-66-VG
A,C,E
B,D,F
6 @ 30 AMPS
240/480VAC 3 WIRE ISOLATED NEUTRAL

DISTRIBUTION CENTER HL-66-GM

DISTRIBUTION CENTER HL-66-VG

USH 41/45 SB OFF RAMP

USH 41/45 SB

STH 167 (LANNON RD)

1456CC

1454CC

1453+40CC, 42.1'LT
AVG4
INSTALL LIGHTING UNIT
LED CAT.-C

837+17W, 49.2'LT
BVG5
LED CAT.-D

838+75W, 46.3'LT
AVG6
LED CAT.-C

837+35W, 38.6'RT
DVG15
LED CAT.-D

839+91W, 35.6'RT
CVG16
LED CAT.-D

1451+74DD, 19.4'LT
EVG11
LED CAT.-C

835+23W, 30.9'RT
BVG3
LED CAT.-D

832+51W, 29.6'RT
BVG2
LED CAT.-D

830+55W, 33.0'RT
BVG1
LED CAT.-C

1450+30DD, 17.9'LT
FVG12
LED CAT.-C

1447+82DD, 32.5'LT
EVG13
LED CAT.-C

1445+80DD, 34.0'LT
FVG14
LED CAT.-C

1450AA

1448AA

1450DD

1449DD

1446DD

BGM3 AGM3 AGM2 BGM2 AGM5 BGM5 AGM4 BGM4

BVG20
LED CAT.-C

AVG3

*8 A,B,N

*10 A,B,N

*4 A,B,N,G

*6 A,B,N,G

*6 C,D,N,G

*8 C,D,N,G

*8 A,N

*8 E,F,N,G

*10 B,N,G

*10 F,N,G

PB102 PB104 PB105 PB110 PB901 PB902

836W 836E 838W 838E 840W 840E 834W 834E 832W 832E 836S

NOTE:
INSTALL LED LUMINAIRES
UNLESS OTHERWISE NOTED.

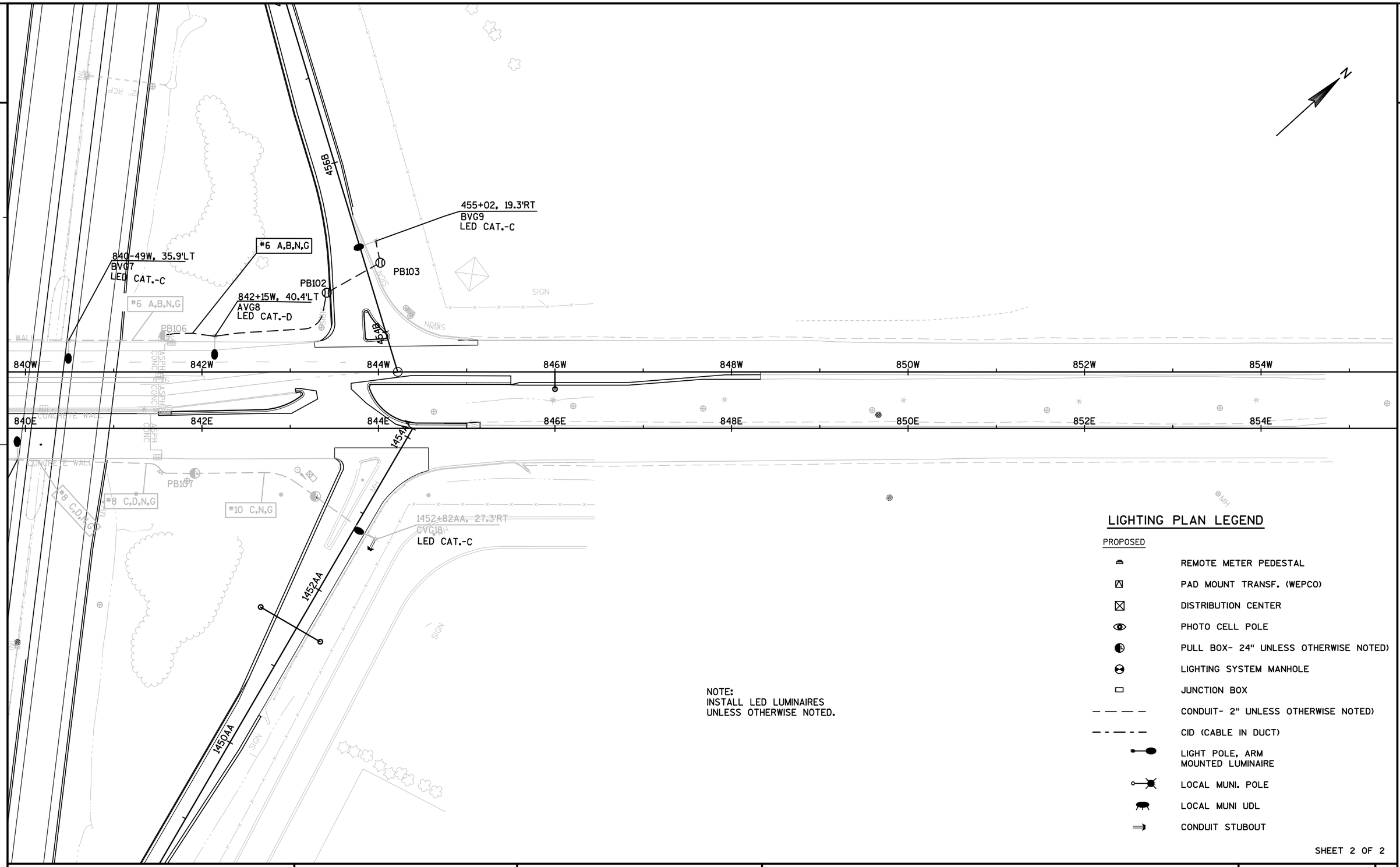
SHEET 1 OF 2

PROJECT NO: 1100-38-70	HWY: USH 41	COUNTY: WASHINGTON	LIGHTING PLAN	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\023601_LP.DWG PLOT DATE : 10/20/2014 4:05 PM PLOT BY : JOHNSON, JUDITH A PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2



NOTE:
INSTALL LED LUMINAIRES
UNLESS OTHERWISE NOTED.

LIGHTING PLAN LEGEND

PROPOSED

- REMOTE METER PEDESTAL
- PAD MOUNT TRANSF. (WEPCO)
- DISTRIBUTION CENTER
- PHOTO CELL POLE
- PULL BOX- 24" UNLESS OTHERWISE NOTED)
- LIGHTING SYSTEM MANHOLE
- JUNCTION BOX
- CONDUIT- 2" UNLESS OTHERWISE NOTED)
- CID (CABLE IN DUCT)
- LIGHT POLE, ARM MOUNTED LUMINAIRE
- LOCAL MUNI. POLE
- LOCAL MUNI UDL
- CONDUIT STUBOUT

SHEET 2 OF 2

PROJECT NO: 1100-38-70	HWY: USH 41	COUNTY: WASHINGTON	LIGHTING PLAN	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\023601_LP.DWG PLOT DATE : 10/20/2014 4:05 PM PLOT BY : JOHNSON, JUDITH A PLOT NAME : PLOT SCALE : 1" = 100'_XREF

CONSTRUCTION NOTES

1. EXISTING CONDUIT RUNS TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS REMAINING IN THE CONDUIT.
2. ABANDONED LOOP DETECTOR CONDUIT TO REMAIN IN PLACE. LOOP DETECTOR WIRE AND LEAD-IN CABLE TO BE REMOVED BY THE CONTRACTOR.
3. CABINET AND CONTROLLER SHALL BE REMOVED BY WISDOT ELECTRICAL PERSONNEL.

NOTE: GRAYSHADE REPRESENTS EXISTING. BOLD REPRESENTS ITEMS TO BE REMOVED.

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, PEDESTAL MOUNT
- (XX) SIGNAL HEAD, MAST-ARM MOUNT
- LUMINAIRE
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- PULL BOX, 24" X 36"
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- Y YIELD SIGN (BY OTHERS)
- OPTICALLY PROGRAMMABLE HEADS

N

USH 41/45 SB OFF RAMP

CTH Q

SPEED LIMIT 35 MPH

INTERCONNECT CONDUIT

SB10 PB6 PB5 SB4 SB3 PB4 SB5 PB7 SB2 PB2 PB3 SB6 PB8 PB12 PB13 SB7 PB9 PB10 PB1 PB11 SB1 CB1 SB9

ABANDON

20' 25' 25' 3"

27 28 29 30 31 32 33

354 355 353

FO

TRAFFIC SIGNAL REMOVAL
USH 41/45 SB RAMPS & CTH Q
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0607

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

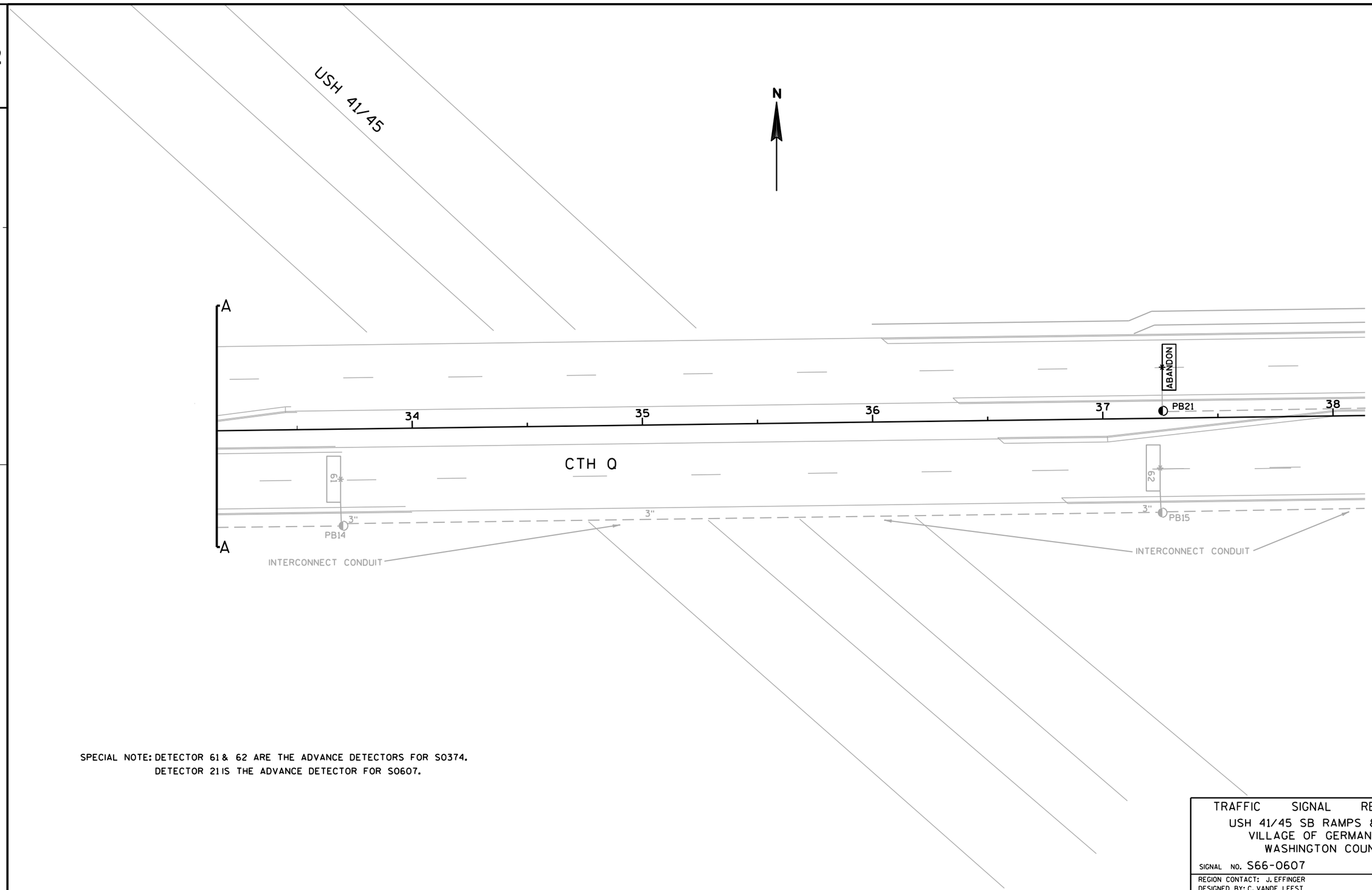
PAGE 1 OF 2

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 224 E

FILE NAME : N:\PDS\C3D\CAD\11003800\024001_sp_rem.dgn PLOT DATE : 30-SEP-2014 11:20 PLOT BY : dotcmv PLOT NAME : PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2



SPECIAL NOTE: DETECTOR 61 & 62 ARE THE ADVANCE DETECTORS FOR S0374.
DETECTOR 21 IS THE ADVANCE DETECTOR FOR S0607.

TRAFFIC SIGNAL REMOVAL
USH 41/45 SB RAMPS & CTH Q
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0607

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 2 OF 2

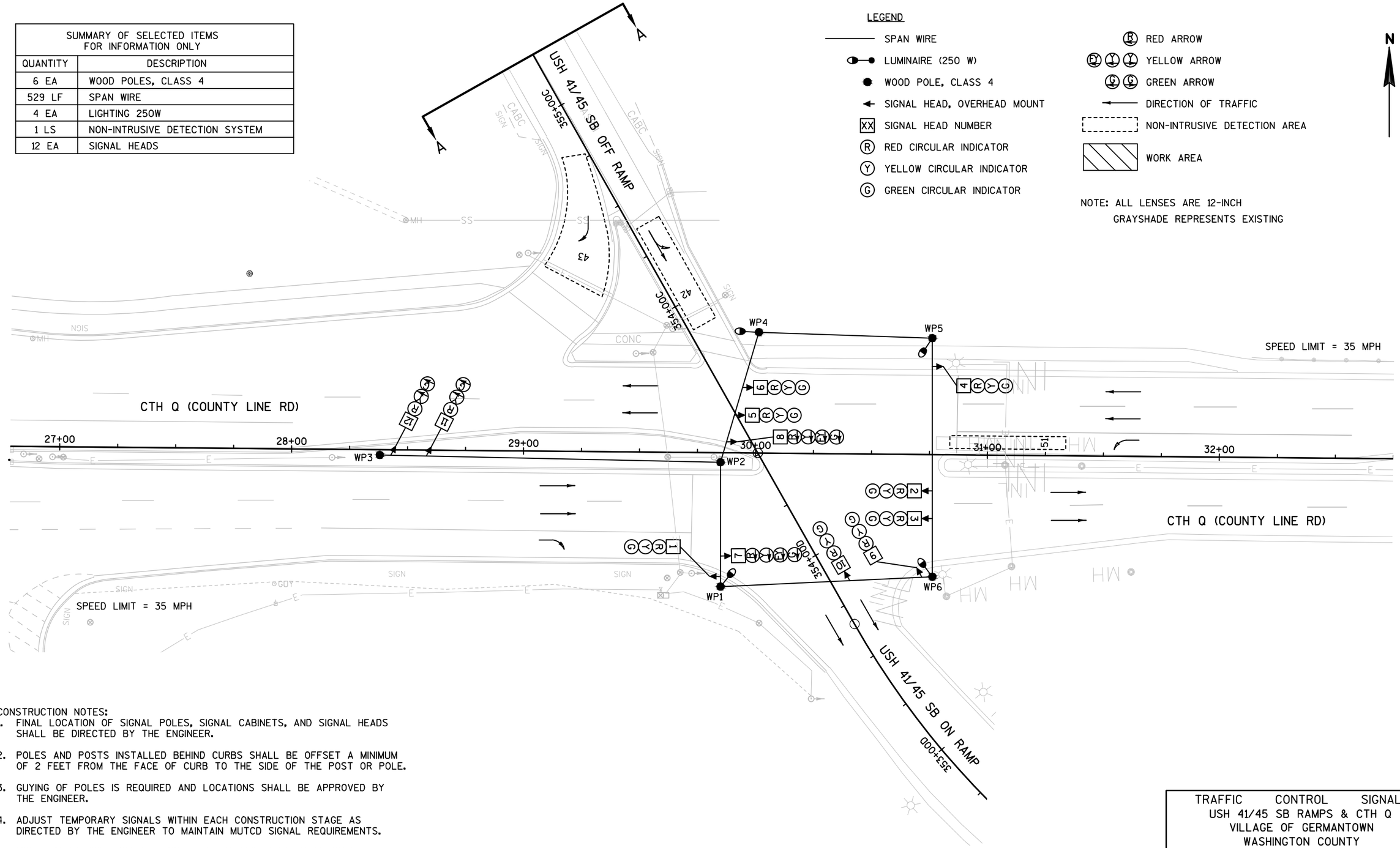
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 225	E

SUMMARY OF SELECTED ITEMS FOR INFORMATION ONLY	
QUANTITY	DESCRIPTION
6 EA	WOOD POLES, CLASS 4
529 LF	SPAN WIRE
4 EA	LIGHTING 250W
1 LS	NON-INTRUSIVE DETECTION SYSTEM
12 EA	SIGNAL HEADS

LEGEND

- SPAN WIRE
- LUMINAIRE (250 W)
- WOOD POLE, CLASS 4
- SIGNAL HEAD, OVERHEAD MOUNT
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- Y YELLOW ARROW
- G GREEN ARROW
- DIRECTION OF TRAFFIC
- NON-INTRUSIVE DETECTION AREA
- WORK AREA

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



CONSTRUCTION NOTES:

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINETS, AND SIGNAL HEADS SHALL BE DIRECTED BY THE ENGINEER.
2. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF THE POST OR POLE.
3. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
4. ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
5. MOUNT NEAR RIGHT SIGNAL ABOVE TETHER WIRE WHEN OVER ROAD.
6. ALL LUMINAIRES ARE 250W HPS UNLESS OTHERWISE NOTED.

TRAFFIC CONTROL SIGNAL
USH 41/45 SB RAMPS & CTH Q
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0607

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

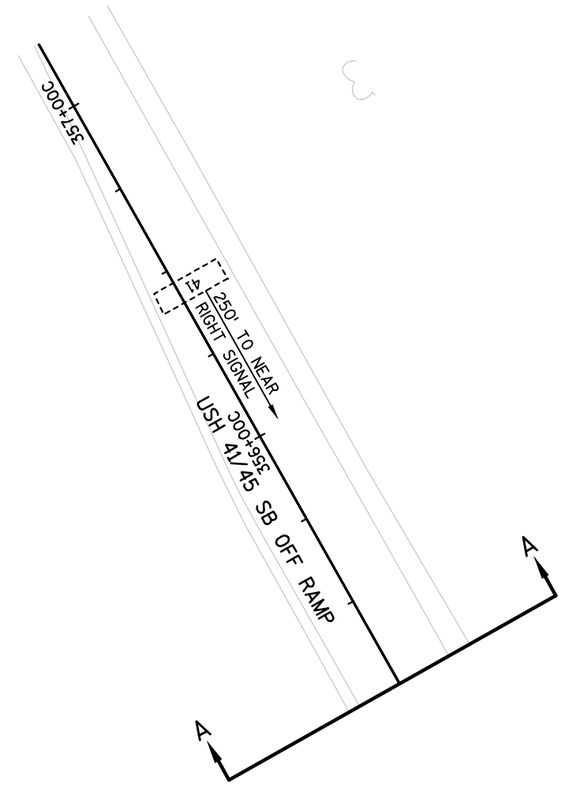
PAGE 1 OF 9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY TRAFFIC SIGNAL PLAN - PRECONSTRUCTION STAGE	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024001_SP_1SPRECON.DWG PLOT DATE : 10/20/2014 8:11 AM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : 0.30000000 = 1'-0"_XREF
WISDOT/CADDS SHEET 42

2

N



TRAFFIC CONTROL SIGNAL
USH 41/45 SB RAMPS & CTH Q
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0607

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 2 OF 9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY TRAFFIC SIGNAL PLAN - PRECONSTRUCTION STAGE	SHEET 227	E

LEGEND

- SPAN WIRE
- LUMINAIRE (250 W)
- WOOD POLE, CLASS 4
- SIGNAL HEAD, OVERHEAD MOUNT
- XX SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- DIRECTION OF TRAFFIC
- NON-INTRUSIVE DETECTION AREA
- WORK AREA

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

N

USH 41/45 SB OFF RAMP
355+00
43
42
354+00
CTH Q (COUNTY LINE RD)
27+00
28+00
29+00
30+00
31+00
32+00
WP1
WP2
WP3
WP4
WP5
WP6
SPEED LIMIT = 35 MPH
SPEED LIMIT = 35 MPH
CTH Q (COUNTY LINE RD)
354+00
USH 41/45 SB ON RAMP
353+00
SIGN
CABC
MH
SS
GUY
E

TRAFFIC CONTROL SIGNAL
USH 41/45 SB RAMPS & CTH Q
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0607

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

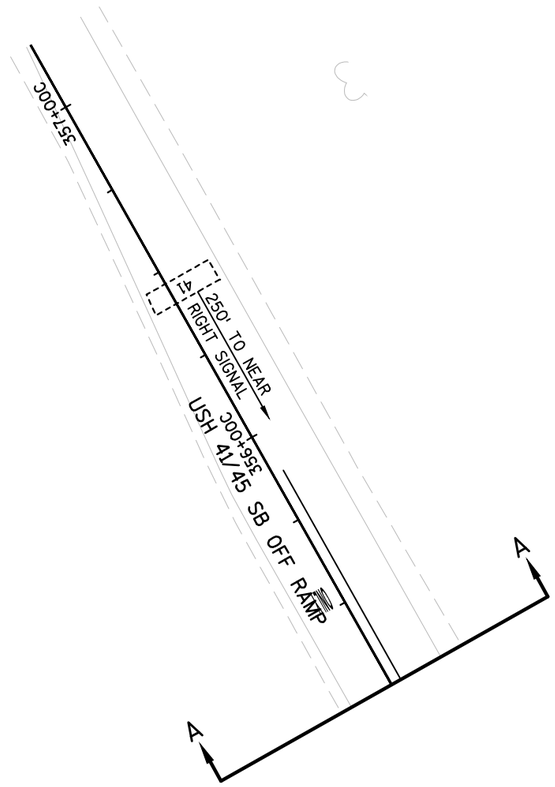
PAGE 3 OF 9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1A	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024001_SP_2S1A.DWG PLOT DATE : 10/20/2014 8:12 AM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : 1" = 40'_XREF

2

N



TRAFFIC CONTROL SIGNAL
USH 41/45 SB RAMPS & CTH Q
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

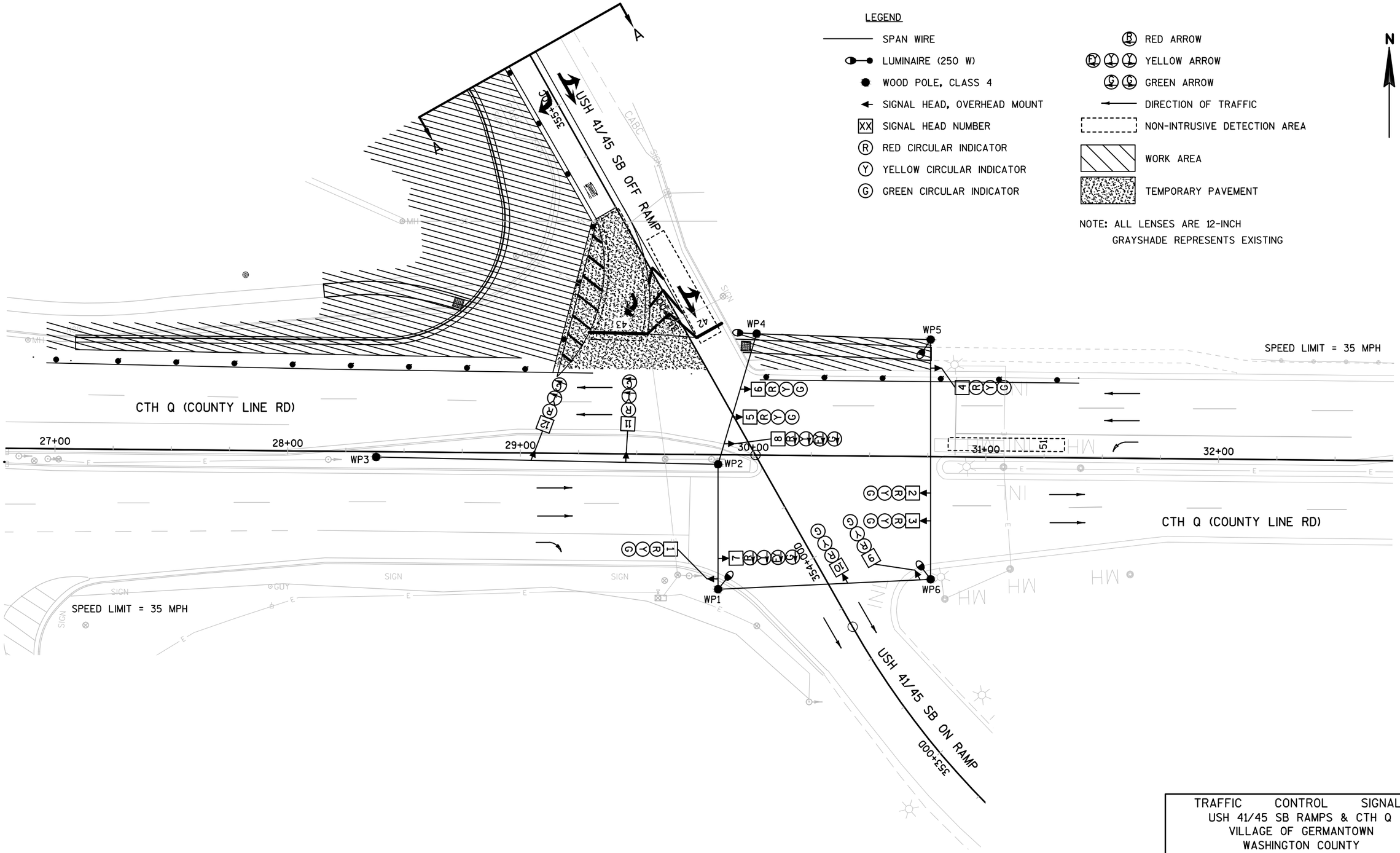
SIGNAL NO. S66-0607

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 4 OF 9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1A	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024001_SP_2S1A.DWG PLOT DATE : 10/20/2014 8:12 AM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : **********



TRAFFIC CONTROL SIGNAL
USH 41/45 SB RAMPS & CTH Q
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0607

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 5 OF 9

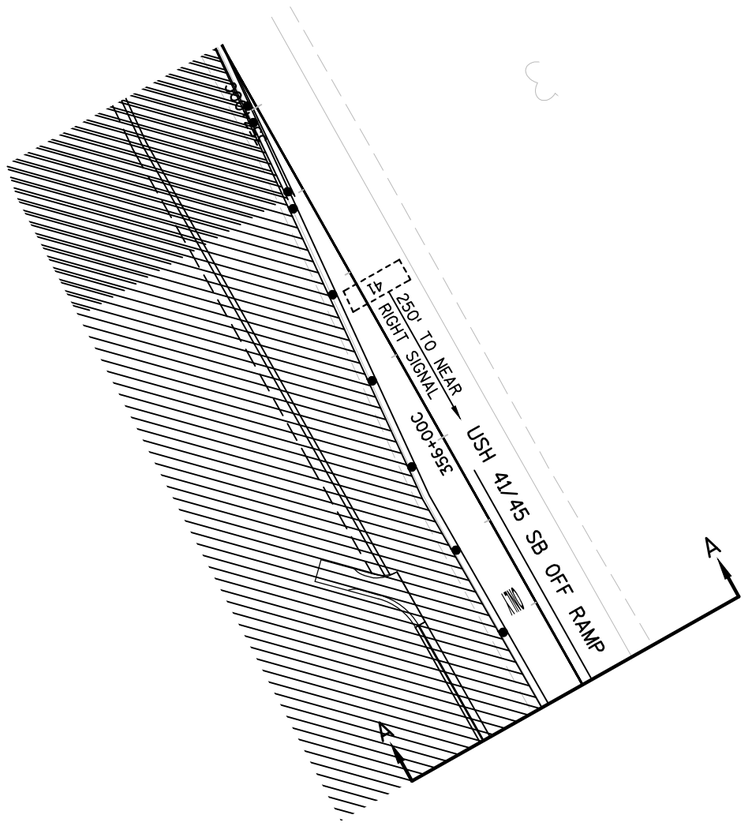
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1B	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024001_SP_3S1B.DWG PLOT DATE : 10/20/2014 8:13 AM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42

2

N



TRAFFIC CONTROL SIGNAL
USH 41/45 SB RAMPS & CTH Q
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0607

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 6 OF 9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1B	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024001_SP_3S1B.DWG PLOT DATE : 10/20/2014 8:13 AM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : ********** WISDOT/CADDS SHEET 42

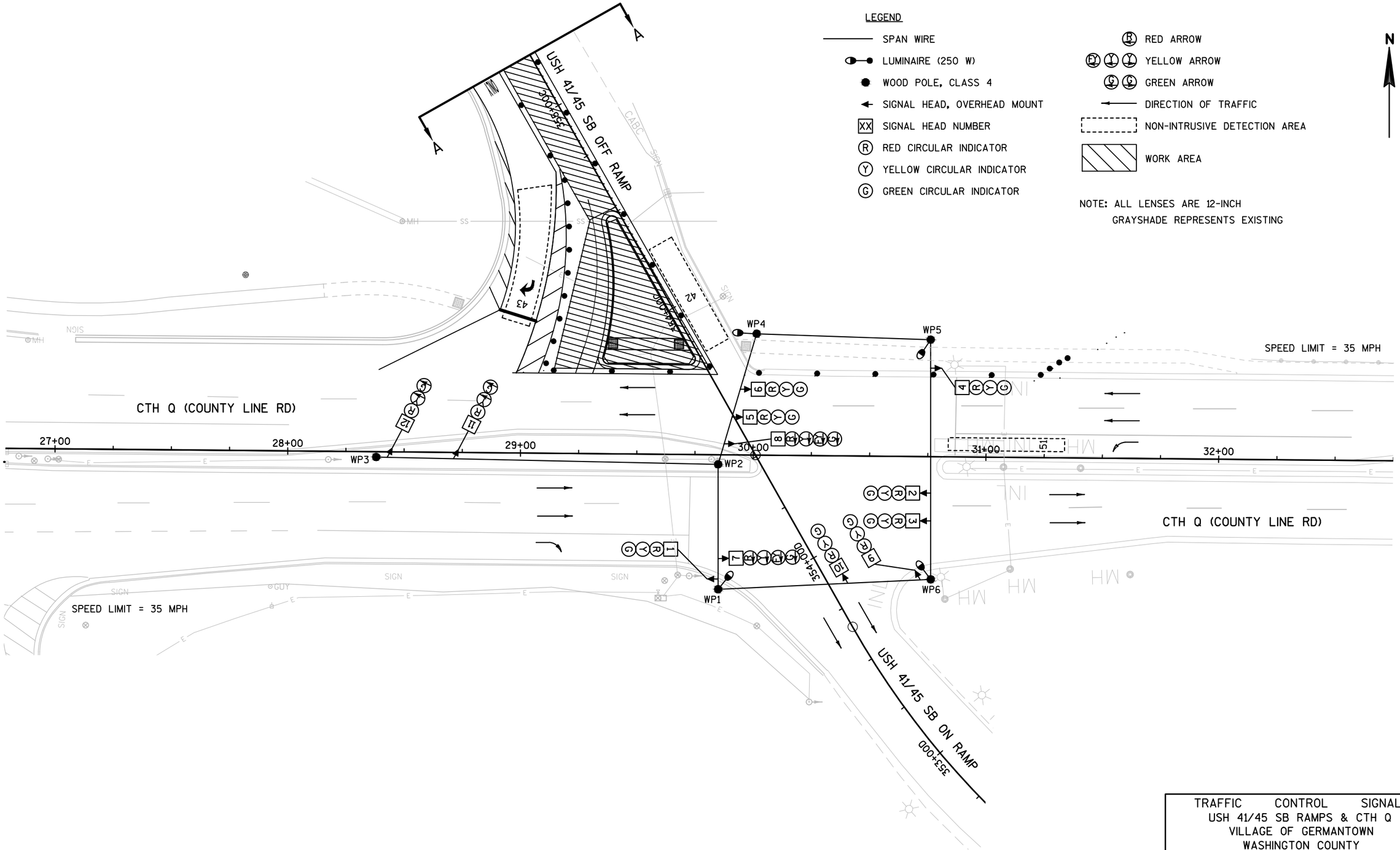
2

LEGEND

- SPAN WIRE
- LUMINAIRE (250 W)
- WOOD POLE, CLASS 4
- SIGNAL HEAD, OVERHEAD MOUNT
- XX SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- DIRECTION OF TRAFFIC
- NON-INTRUSIVE DETECTION AREA
- WORK AREA

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

N



TRAFFIC CONTROL SIGNAL
USH 41/45 SB RAMPS & CTH Q
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0607

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

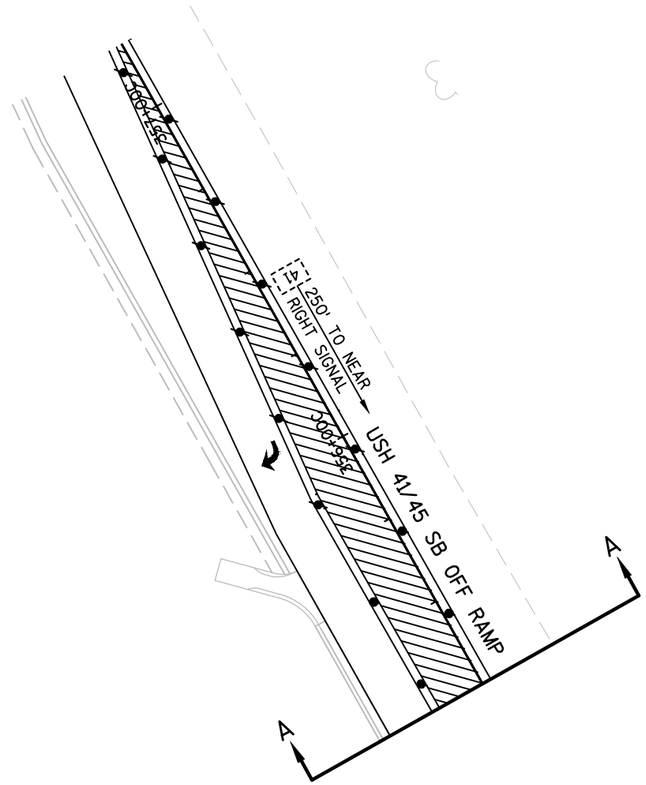
PAGE 7 OF 9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024001_SP_4S2.DWG PLOT DATE : 10/20/2014 8:14 AM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : 1" = 40'_XREF

2

N



TRAFFIC CONTROL SIGNAL
USH 41/45 SB RAMPS & CTH Q
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0607

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

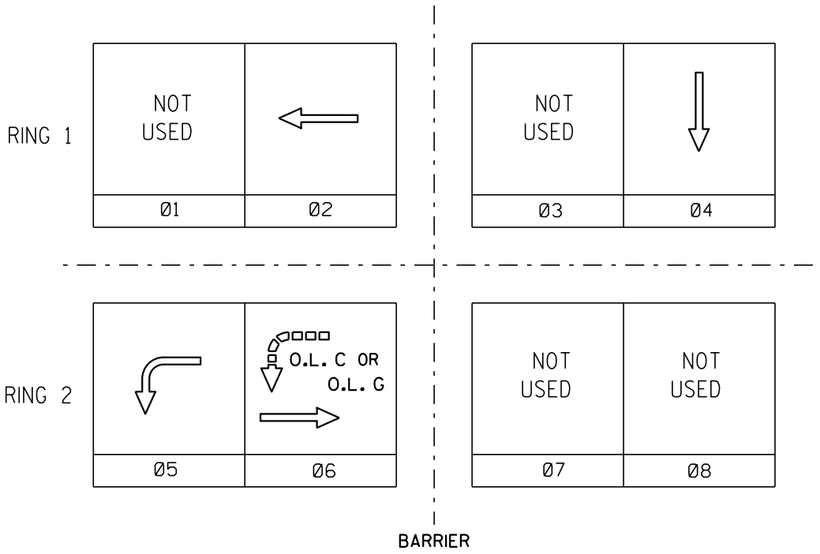
PAGE 8 OF 9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024001_SP_4S2.DWG PLOT DATE : 10/20/2014 8:14 AM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : **********

WISDOT/CADDS SHEET 42

	HEAD NUMBERS	FLASH
Ø1		
Ø2	4, 5, 6	R
Ø3		
Ø4	9, 10, 11, 12	R
Ø5	7, 8	-
Ø6	1, 2, 3	R
Ø7		
Ø8		
Ø2P		
Ø4P		
Ø6P		
Ø8P		
OLC/OLG	7, 8	R ←



CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				
2		6	MAX	x
3				
4				x
5		2		x
6		2	MAX	x
7				
8				

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	x
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	

TYPE OF COORDINATION	
NONE	
TBC	x
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM *:	SS- -

TYPE OF LIGHTING	
BY OTHER AGENCY	x
IN TRAFFIC SIGNAL CABINET	x
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	x
RAILROAD	
EMERGENCY VEHICLE	
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

DETECTOR LOGIC

DETECTOR NUMBER	AMPLIFIER CHANNEL NUMBER	DETECTOR OPERATION: CALLS AND EXTENDS	DETECTOR OPERATION: CALLS ONLY	DETECTOR OPERATION: EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
41				X		4			X		
42		X			4	4					
43		X			4	4		X			
51		X			5	5					

USH 41/45 SB RAMPS & CTH Q
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0607 CABINET TYPE:

CONTROLLER TYPE: TEMP

DATE 11/3/2014 PAGE NO. 9 OF 9

FILE NAME : N:\PDS\C3D\CAD\11003800\024001_sp_5TSeq.dgn PLOT DATE : 20-OCT-2014 09:44 PLOT BY : dotcmv PLOT NAME : S-400,seq,rev2 PLOT SCALE : 40.000373:1
WISDOT/CADDS SHEET 42

MONOTUBE STRUCTURE NUMBERS
SB1 = S-66-1112
SB10 = S-66-1113
SB11 = S-66-1114

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- NONMETALLIC INTERCONNECT CONDUIT
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM
- (XX) MONOTUBE BASE, POLE, 35'-55' ARM
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- VIDEO DETECTION AREA
- VX VIDEO DETECTION CAMERA
- RADIO INTERCONNECT ANTENNA, 5.8 GHz
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- Y YELLOW ARROW
- G GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- V COMMUNICATIONS VAULT

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

N

USH 41/45 SB OFF RAMP
USH 41/45 SB ON RAMP
CTH Q (COUNTY LINE RD)
SPEED LIMIT = 35 MPH
250' TO NEAR RIGHT SIGNAL
FTMS RAMP GATE
SB1 SB2 SB3 SB4 SB5 SB6 SB7 SB8 SB9 SB10 SB11 SB12
PB1 PB2 PB3 PB4 PB5 PB6 PB7 PB8 PB9 PB10 PB11 PB12
CB1
V1 V2 V3 V4 V5 V6 V7 V8
27+00 28+00 29+00 30+00 31+00 32+00
35+400
44 43 42

CONSTRUCTION NOTES:

1. * LOCATION IS TO FRONT CENTER OF DETECTOR LOOP.
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL FIELD UNIT TO MAKE ARRANGEMENTS. (414) 266-1170.
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
4. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
5. INSTALL CABINET BASE 6" ABOVE ROADWAY ELEVATION.
6. THE CONDUIT EMBEDDED IN A TYPE 10 OR TYPE 13 CONCRETE BASE SHALL BE 3" CONDUIT.
7. ALL LUMINAIRES ARE LED-C UNLESS OTHERWISE NOTED.

TRAFFIC CONTROL SIGNAL
USH 41/45 SB RAMPS & CTH Q
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY
CABINET TYPE: TS2
SIGNAL NO. S66-0607 CONTROLLER TYPE: ECONOLITE

WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVAL RECOMMENDED DATE 12/18/14 — Mitzi M. Dobersek, REGION TRAFFIC ENGINEER
APPROVED DATE 1/21/15 — Joanna L. Bush, STATE TRAFFIC ENGINEER
REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:
PAGE 1 OF 3

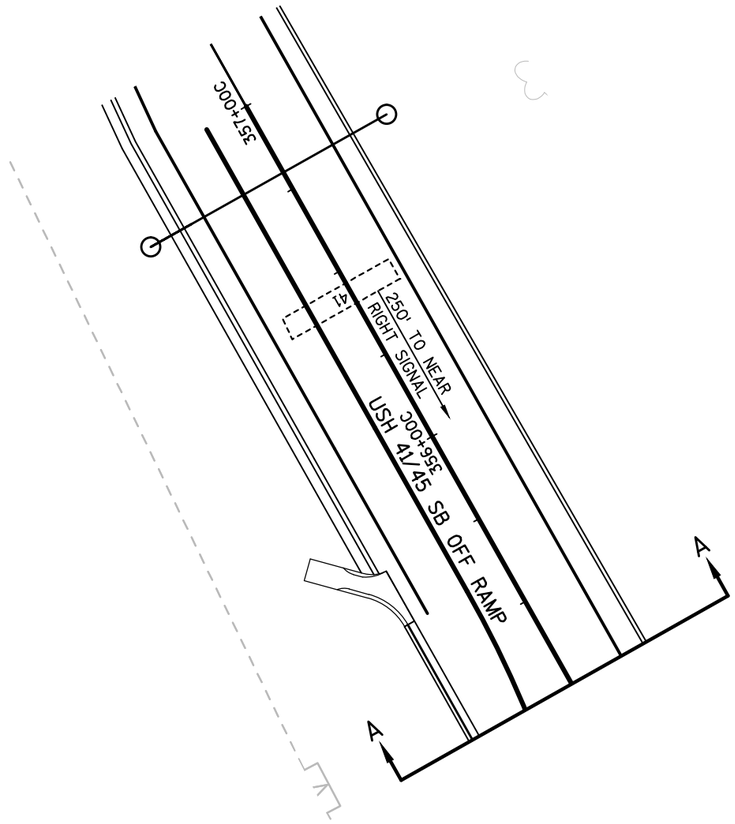
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC SIGNAL PLAN	SHEET 235	E

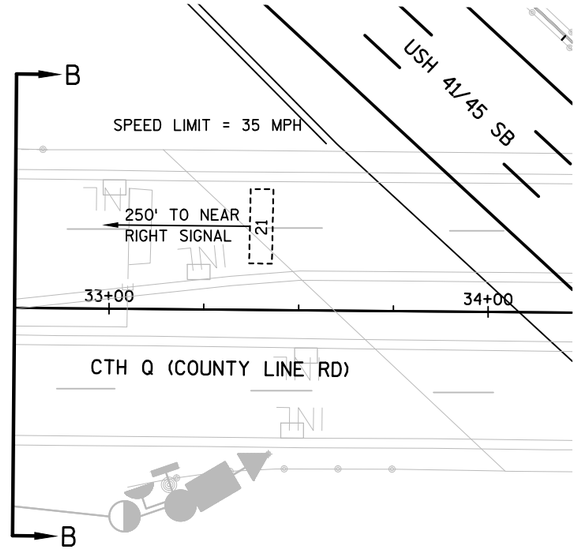
FILE NAME : N:\PDS\C3D\CAD\11003800\024001_SP.DWG PLOT DATE : 1/21/2015 11:47 AM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42

2

N





TRAFFIC CONTROL SIGNAL
USH 41/45 SB RAMPS & CTH Q
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

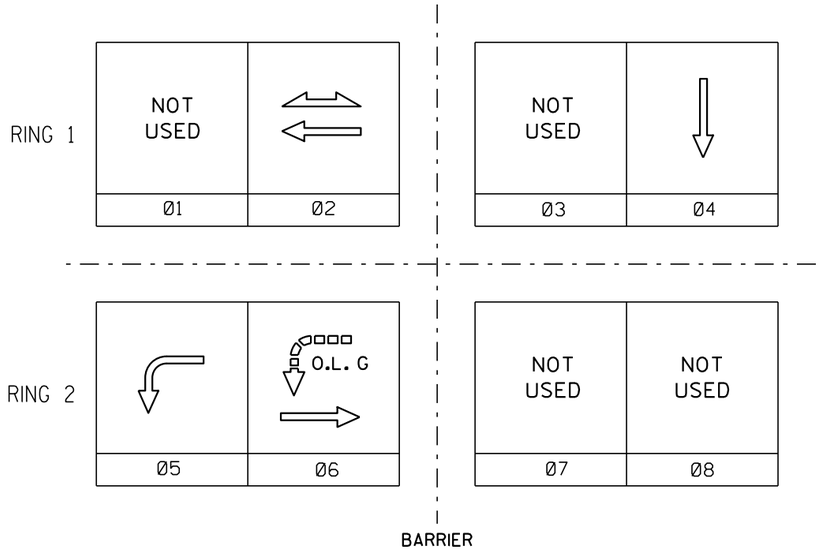
SIGNAL NO. S66-0607

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 2 OF 3

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC SIGNAL PLAN	SHEET 236	E

	HEAD NUMBERS	FLASH
Ø1		
Ø2	4, 5, 6	R
Ø3		
Ø4	9, 10, 11, 12, 13	R
Ø5	7, 8	R
Ø6	1, 2, 3	R
Ø7		
Ø8		
Ø2P	14, 15, 16, 17	
Ø4P		
Ø6P		
Ø8P		
OLE		
OLF		
OLG	7, 8	-
OLH		





CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				
2	X	6	MIN	x
3				
4				x
5		2		x
6	X	2	MIN	x
7				
8				

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	x
RADIO	x

TYPE OF COORDINATION	
NONE	
TBC	
TRAFFIC RESPONSIVE	x
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S66-0607
SIGNAL SYSTEM #:	SS-00-41

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	x
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	x
RAILROAD	
EMERGENCY VEHICLE	
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR #(S)	21	42	44			S1	S3	S5
CALLED PHASE	2	4	4					
CALL OPTION	X	X	X					
DELAY TIME			X					
EXTEND OPTION	X	X	X					
EXTEND TIME								
USE ADDED INITIAL	X							
CROSS SWITCH PHASE								

19	17	23	21	27	25	31	29	DETECTOR INPUT
								PLAN LOOP DETECTOR #(S)
								CALLED PHASE
								CALL OPTION
								DELAY TIME
								EXTEND OPTION
								EXTEND TIME
								USE ADDED INITIAL
								CROSS SWITCH PHASE

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR #(S)	41	43	51	61		S2	S4	
CALLED PHASE	4	4	5	6				
CALL OPTION		X	X	X				
DELAY TIME								
EXTEND OPTION	X	X	X	X				
EXTEND TIME	X							
USE ADDED INITIAL				X				
CROSS SWITCH PHASE			6					

20	18	24	22	28	26	32	30	DETECTOR INPUT
								PLAN LOOP DETECTOR #(S)
								CALLED PHASE
								CALL OPTION
								DELAY TIME
								EXTEND OPTION
								EXTEND TIME
								USE ADDED INITIAL
								CROSS SWITCH PHASE

USH 41/45 SB RAMPS & CTH Q
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0607 CABINET TYPE: TS2

CONTROLLER TYPE: ECONOLITE

DATE 11/3/2014 PAGE NO. 3 OF 3

2

PROJECT ID:	1100-38-70
INTERSECTION:	USH 41/45 SB Ramps & CTH Q

Signal Wire Color Coding	BLK - black	RED - red	GRN - green
	WHT - white	BLU - blue	ORG - orange

CB1 TO	AWG14 # OF CONDUCTORS	HEAD NO.	SIGNAL INDICATION WIRE COLOR									PED BUTTON
			RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	<FLASHING YELLOW>	D/WALK	WALK	
SB1	12	5	RED	ORG	GRN							
		6	RED	ORG	GRN							
		8				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
SB2	7	12	RED				ORG	GRN				
SB3	7	13	RED				ORG	GRN				
SB4	7	15								BLK	BLU	
		Button										WHT/BLK
SB5	7	14								BLK	BLU	
		Button										WHT/BLK
SB6	12	9	RED	ORG	GRN							
		16								BLK	BLU	
		Button										WHT/BLK
SB7	7	17								BLK	BLU	
		Button										WHT/BLK
SB8	7	4	RED	ORG	GRN							
SB10	12	2	RED/BLK	ORG/BLK	GRN/BLK							
		3	RED/BLK	ORG/BLK	GRN/BLK							
		10	RED	ORG	GRN							
SB11	7	11	RED	ORG	GRN							
SB12	12	1	RED	ORG	GRN							
		7				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			

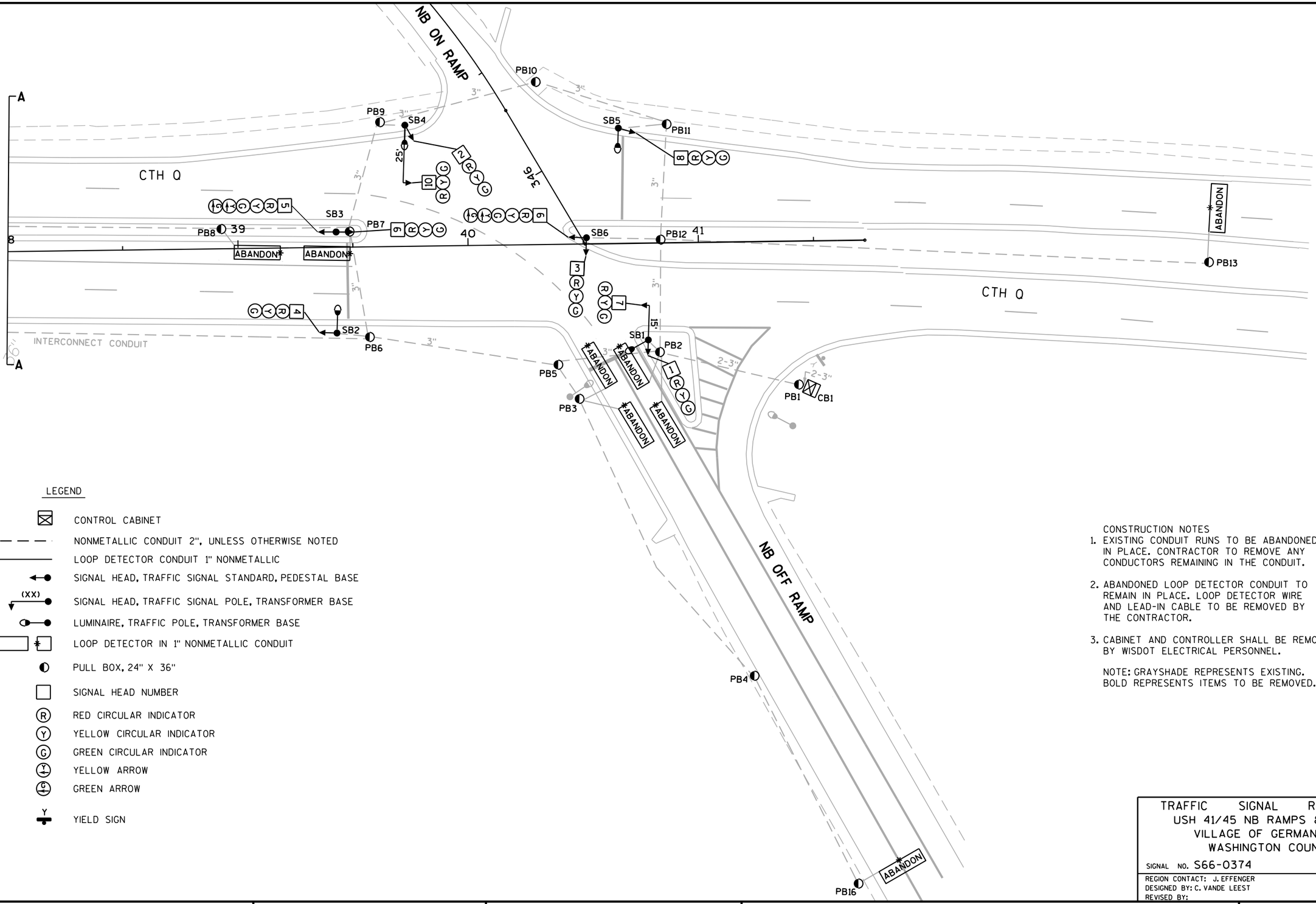
*Use the white conductor in the cable assembly as the grounded conductor for all traffic signal indications
*Ensure the grounded conductor in the feeder cable and the pole cables are both 18" longer than the ungrounded conductors.
*At the signal bases, connect one terminal from the pedestrian push buttons to the color indicated in the chart. Connect the other terminal to the grounded conductor.
*Reconnect the grounding conductors wherever the circuit has been interrupted to ensure the grounding circuit is complete.

Equipment grounding conductor 10 AWG Green XLP	
From	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	SB10
SB10	SB11
SB11	SB12
SB12	CB1
SB12	CB1

Pull Box Bonding Jumper 10 AWG Green XLP	
From	To
PB1	CB1
PB2	SB1
PB3	SB2
PB4	SB4
PB5	SB5
PB6	SB7
PB7	SB8
PB8	SB9
PB9	SB10
PB10	SB10
PB11	SB11
PB12	CB1

Video Detection Cable	
From	To
CB1	SB1 (V1)
CB1	SB1 (V2)
CB1	SB11 (V3)
CB1	SB2 (V4)
CB1	SB1 (V5)
CB1	SB1 (V6)
CB1	SB9 (V7)
CB1	SB10 (V8)

Lighting UF #12 w/ground	
From	To
CB1	SB1
SB1	SB5
CB1	SB9



LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- PULL BOX, 24" X 36"
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- YELLOW ARROW
- GREEN ARROW
- Y YIELD SIGN

CONSTRUCTION NOTES

1. EXISTING CONDUIT RUNS TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS REMAINING IN THE CONDUIT.
2. ABANDONED LOOP DETECTOR CONDUIT TO REMAIN IN PLACE. LOOP DETECTOR WIRE AND LEAD-IN CABLE TO BE REMOVED BY THE CONTRACTOR.
3. CABINET AND CONTROLLER SHALL BE REMOVED BY WISDOT ELECTRICAL PERSONNEL.

NOTE: GRAYSHADE REPRESENTS EXISTING. BOLD REPRESENTS ITEMS TO BE REMOVED.

TRAFFIC SIGNAL REMOVAL
USH 41/45 NB RAMPS & CTH Q
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0374

REGION CONTACT: J. EFFENGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 1 OF 2

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 239	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024002_sp_rem.dgn PLOT DATE : 30-SEP-2014 11:15 PLOT BY : dotcmv PLOT NAME : PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

2

N

A

CTH Q

S0607

S0607

PB21

33

34

35

36

37

3

ABANDON

ABANDON

CTH Q

PB14

INTERCONNECT CONDUIT

3"

INTERCONNECT CONDUIT

PB15

3"

INTERCONNECT CONDUIT

A

TRAFFIC SIGNAL REMOVAL
USH 41/45 NB RAMPS & CTH Q
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0374

REGION CONTACT: J. EFFENGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 2 OF 2

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 240	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024002_sp_rem.dgn PLOT DATE : 30-SEP-2014 11:15 PLOT BY : dotcmv PLOT NAME : PLOT SCALE : 40:1

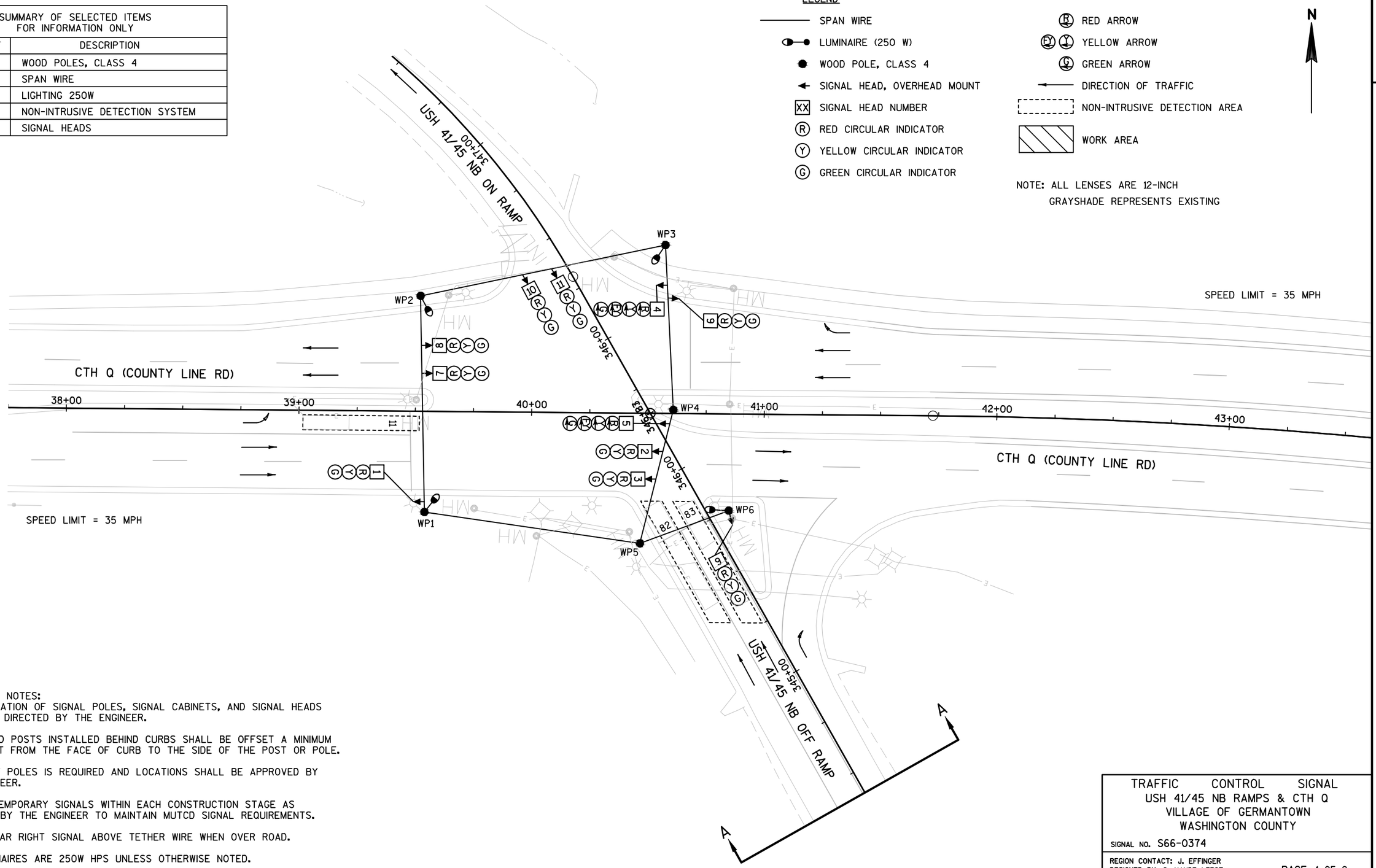
WISDOT/CADDS SHEET 42

SUMMARY OF SELECTED ITEMS FOR INFORMATION ONLY	
QUANTITY	DESCRIPTION
6 EA	WOOD POLES, CLASS 4
465 LF	SPAN WIRE
4 EA	LIGHTING 250W
1 LS	NON-INTRUSIVE DETECTION SYSTEM
11 EA	SIGNAL HEADS

LEGEND

- SPAN WIRE
- LUMINAIRE (250 W)
- WOOD POLE, CLASS 4
- SIGNAL HEAD, OVERHEAD MOUNT
- XX SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- DIRECTION OF TRAFFIC
- NON-INTRUSIVE DETECTION AREA
- WORK AREA

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



CONSTRUCTION NOTES:

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINETS, AND SIGNAL HEADS SHALL BE DIRECTED BY THE ENGINEER.
2. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF THE POST OR POLE.
3. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
4. ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
5. MOUNT NEAR RIGHT SIGNAL ABOVE TETHER WIRE WHEN OVER ROAD.
6. ALL LUMINAIRES ARE 250W HPS UNLESS OTHERWISE NOTED.

TRAFFIC CONTROL SIGNAL
USH 41/45 NB RAMPS & CTH Q
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0374

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

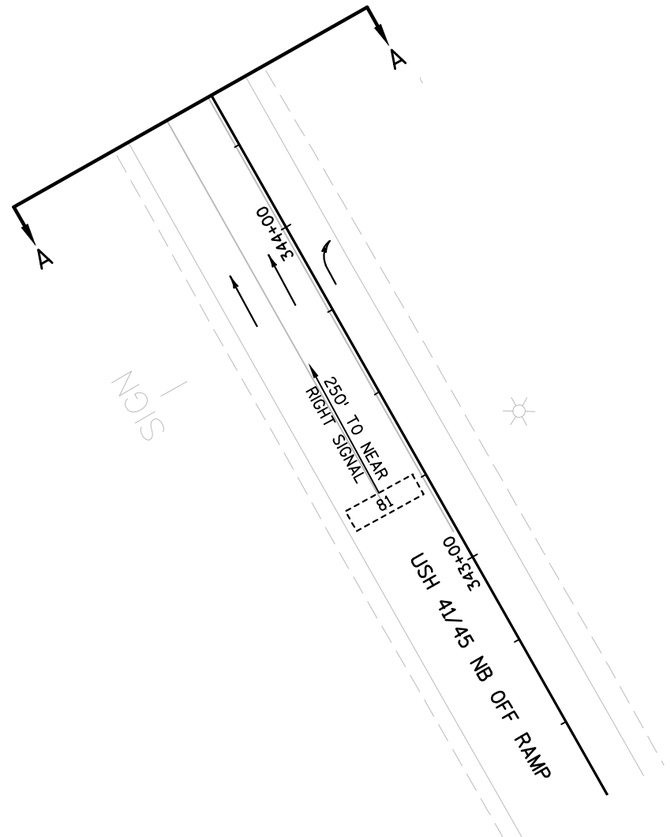
PAGE 1 OF 9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY TRAFFIC SIGNAL PLAN - PRECONSTRUCTION STAGE	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024002_SP_1SPRECON.DWG PLOT DATE : 9/24/2014 4:06 PM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : 1" = 40'_XREF
WISDOT/CADDS SHEET 42

2

N



TRAFFIC CONTROL SIGNAL
USH 41/45 NB RAMPS & CTH Q
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0374

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 2 OF 9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY TRAFFIC SIGNAL PLAN - PRECONSTRUCTION STAGE	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024002_SP_1SPRECON.DWG PLOT DATE : 9/24/2014 4:07 PM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : **********

LEGEND

- SPAN WIRE
- LUMINAIRE (250 W)
- WOOD POLE, CLASS 4
- SIGNAL HEAD, OVERHEAD MOUNT
- XX SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- DIRECTION OF TRAFFIC
- NON-INTRUSIVE DETECTION AREA
- WORK AREA

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

N

SPEED LIMIT = 35 MPH

USH 41/45 NB ON RAMP 347+00

346+00

345+83

346+00

WP1 WP2 WP3 WP4 WP5 WP6

CTH Q (COUNTY LINE RD)

38+00 39+00 40+00 41+00 42+00 43+00

CTH Q (COUNTY LINE RD)

SPEED LIMIT = 35 MPH

82 83

USH 41/45 NB OFF RAMP 345+00

A A

TRAFFIC CONTROL SIGNAL
USH 41/45 NB RAMPS & CTH Q
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0374

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

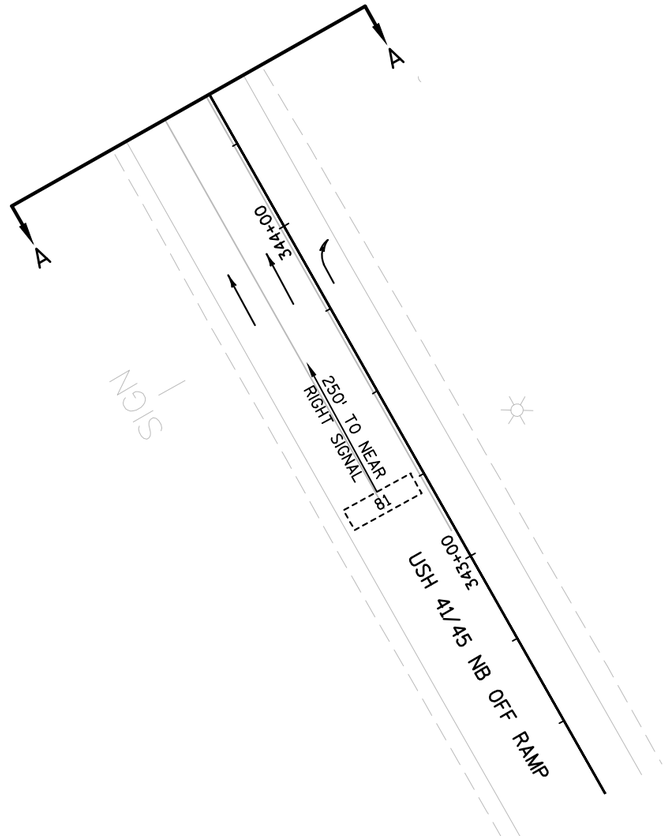
PAGE 3 OF 9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1A	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024002_SP_2S1A.DWG PLOT DATE : 9/24/2014 4:07 PM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : 1" = 40'_XREF

2

N



TRAFFIC CONTROL SIGNAL
USH 41/45 NB RAMPS & CTH Q
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0374

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 4 OF 9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1A	SHEET 244	E

2

LEGEND

- SPAN WIRE
- LUMINAIRE (250 W)
- WOOD POLE, CLASS 4
- SIGNAL HEAD, OVERHEAD MOUNT
- XX SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (R) RED ARROW
- (FY)(Y) YELLOW ARROW
- (G) GREEN ARROW
- DIRECTION OF TRAFFIC
- NON-INTRUSIVE DETECTION AREA
- WORK AREA

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

N

SPEED LIMIT = 35 MPH

USH 41/45 NB ON RAMP 347+00

CTH Q (COUNTY LINE RD)

38+00 39+00 40+00 41+00 42+00 43+00

346+00

346+83

WP1 WP2 WP3 WP4 WP5 WP6

SPEED LIMIT = 35 MPH

CTH Q (COUNTY LINE RD)

USH 41/45 NB OFF RAMP 345+00

A A

TRAFFIC CONTROL SIGNAL
USH 41/45 NB RAMPS & CTH Q
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0374

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 5 OF 9

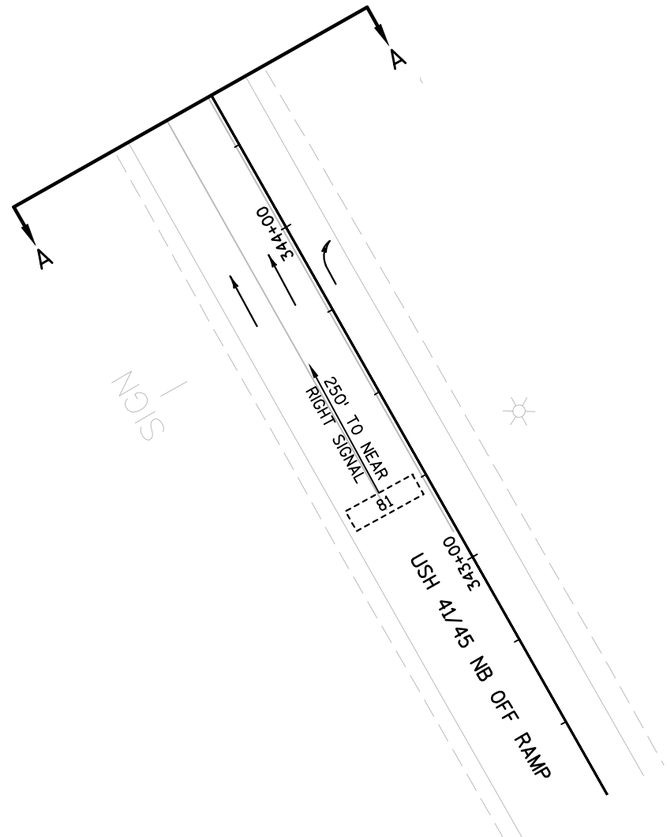
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1B	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024002_SP_3S1B.DWG PLOT DATE : 9/24/2014 4:08 PM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42

2

N



TRAFFIC CONTROL SIGNAL
USH 41/45 NB RAMPS & CTH Q
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0374

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 6 OF 9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1B	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024002_SP_3S1B.DWG PLOT DATE : 9/24/2014 4:09 PM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : **********

WISDOT/CADDS SHEET 42

2

LEGEND

- SPAN WIRE
- LUMINAIRE (250 W)
- WOOD POLE, CLASS 4
- SIGNAL HEAD, OVERHEAD MOUNT
- XX SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- DIRECTION OF TRAFFIC
- NON-INTRUSIVE DETECTION AREA
- WORK AREA

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

N

SPEED LIMIT = 35 MPH

USH 41/45 NB ON RAMP

347+00

346+00

345+83

345+00

CTH Q (COUNTY LINE RD)

38+00 39+00 40+00 41+00 42+00 43+00

WP1 WP2 WP3 WP4 WP5 WP6

SPEED LIMIT = 35 MPH

CTH Q (COUNTY LINE RD)

USH 41/45 NB OFF RAMP

A A

TRAFFIC CONTROL SIGNAL
USH 41/45 NB RAMPS & CTH Q
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0374

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

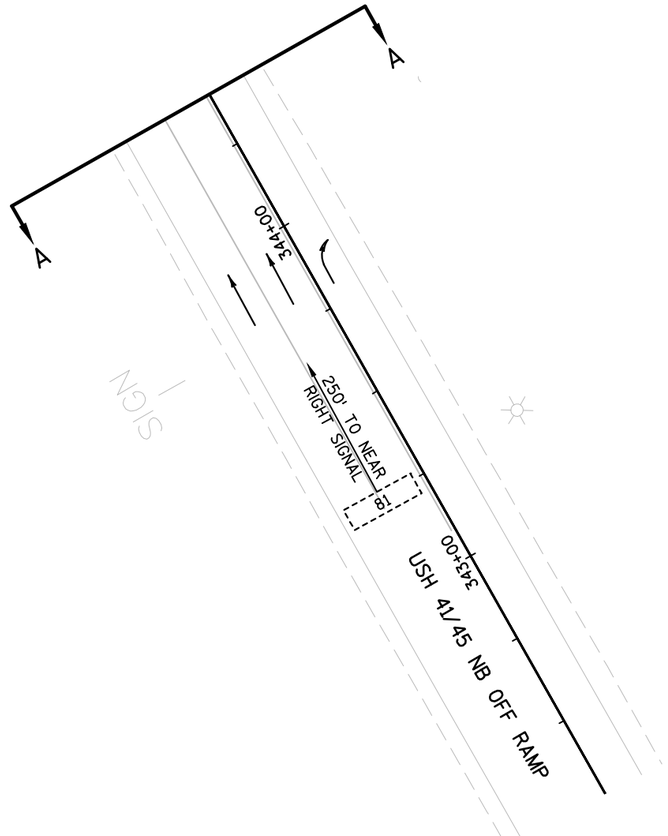
PAGE 7 OF 9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024002_SP_4S2.DWG PLOT DATE : 9/24/2014 4:09 PM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : 1" = 40'_XREF

2

N



TRAFFIC CONTROL SIGNAL
USH 41/45 NB RAMPS & CTH Q
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0374

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

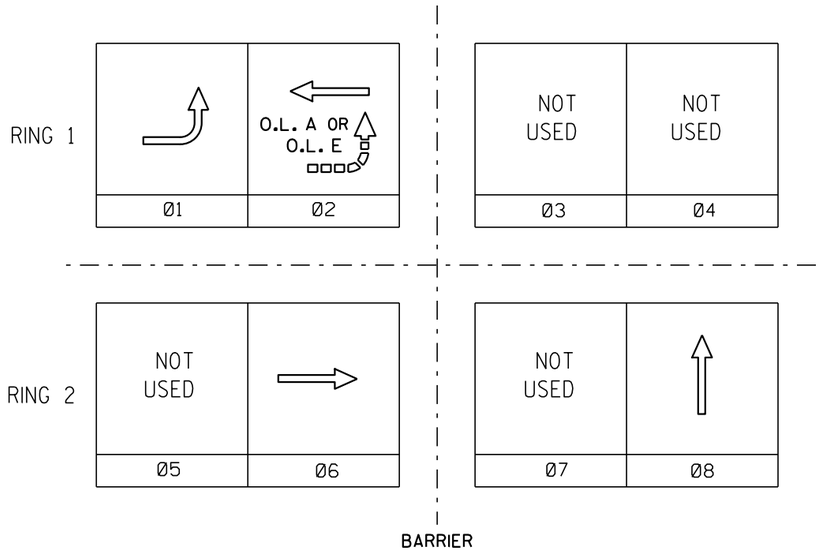
PAGE 8 OF 9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024002_SP_4S2.DWG PLOT DATE : 9/24/2014 4:10 PM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : **********

WISDOT/CADDS SHEET 42

	HEAD NUMBERS	FLASH
Ø1	4, 5	R
Ø2	6, 7, 8	R
Ø3		
Ø4		
Ø5		
Ø6	1, 2, 3	R
Ø7		
Ø8	9, 10, 11	R
Ø2P		
Ø4P		
Ø6P		
Ø8P		
OLA/OLE	4, 5	-





CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		x
2		6	MAX	x
3				
4				x
5				
6		2	MAX	x
7				
8				x

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	x
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	

TYPE OF COORDINATION	
NONE	
TBC	x
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM *:	SS- -

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	x
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	x
RAILROAD	
EMERGENCY VEHICLE	
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

DETECTOR LOGIC

DETECTOR NUMBER	AMPLIFIER CHANNEL NUMBER	DETECTOR OPERATION: CALLS AND EXTENDS	DETECTOR OPERATION: CALLS ONLY	DETECTOR OPERATION: EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
11		X			1	1					
81				X		8			X		
82		X			8	8					
83		X			8	8					

USH 41/45 NB RAMPS & CTH Q
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0374 CABINET TYPE:

CONTROLLER TYPE: TEMP

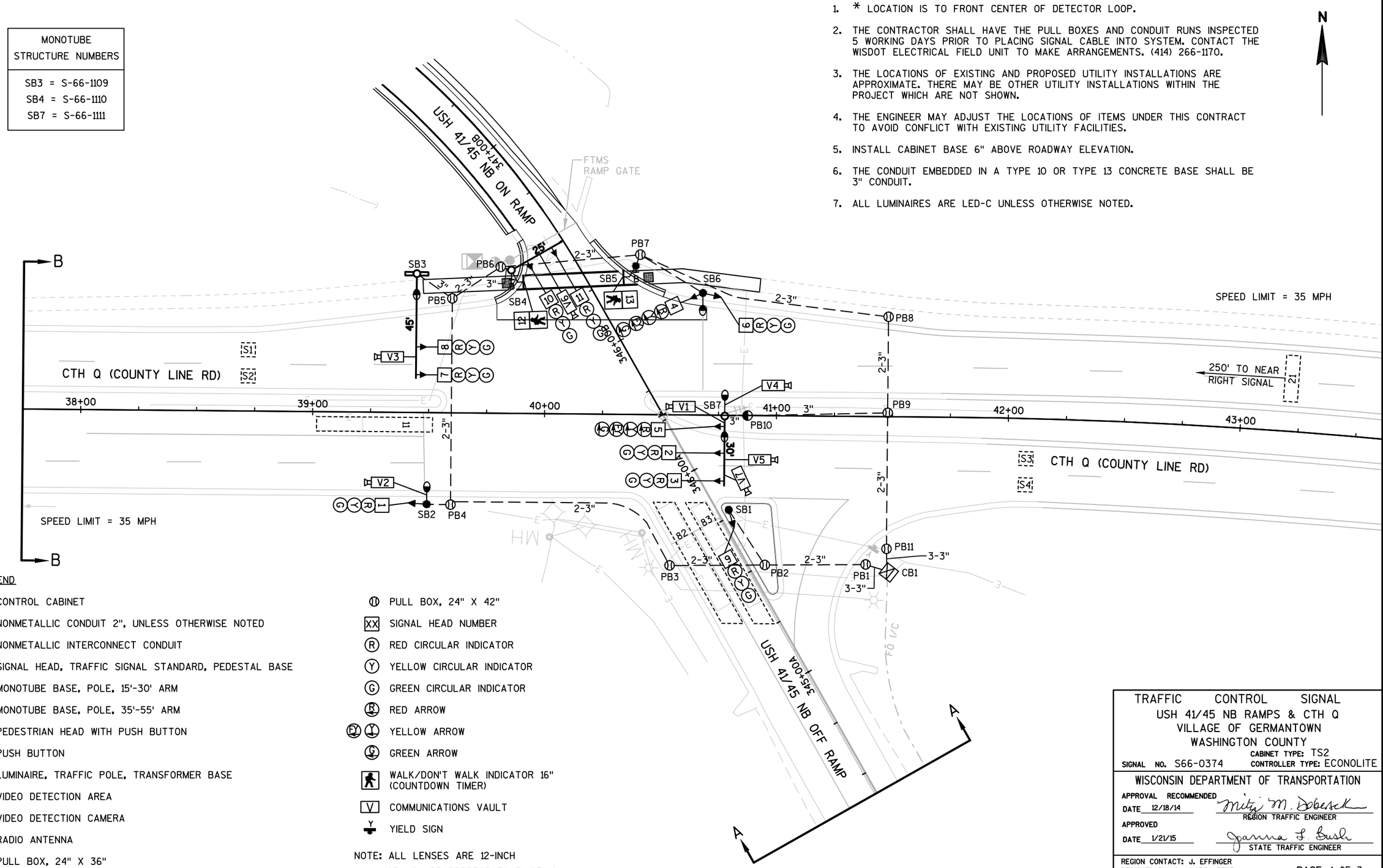
DATE 11/3/2014 PAGE NO. 9 OF 9

FILE NAME : N:\PDS\C3D\CAD\11003800\024002_sp_5TSeq.dgn PLOT DATE : 20-OCT-2014 09:57 PLOT BY : dotcmv PLOT NAME : S-400,seq,rev2 PLOT SCALE : 40.000373:1
WISDOT/CADDS SHEET 42

MONOTUBE STRUCTURE NUMBERS
SB3 = S-66-1109
SB4 = S-66-1110
SB7 = S-66-1111

CONSTRUCTION NOTES:

1. * LOCATION IS TO FRONT CENTER OF DETECTOR LOOP.
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL FIELD UNIT TO MAKE ARRANGEMENTS. (414) 266-1170.
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
4. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
5. INSTALL CABINET BASE 6" ABOVE ROADWAY ELEVATION.
6. THE CONDUIT EMBEDDED IN A TYPE 10 OR TYPE 13 CONCRETE BASE SHALL BE 3" CONDUIT.
7. ALL LUMINAIRES ARE LED-C UNLESS OTHERWISE NOTED.



LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- NONMETALLIC INTERCONNECT CONDUIT
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM
- (XX) MONOTUBE BASE, POLE, 35'-55' ARM
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- VIDEO DETECTION AREA
- VX VIDEO DETECTION CAMERA
- RADIO ANTENNA
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- FY Y YELLOW ARROW
- G GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- V COMMUNICATIONS VAULT
- YIELD SIGN

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

TRAFFIC CONTROL SIGNAL
USH 41/45 NB RAMPS & CTH Q
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY
CABINET TYPE: TS2
SIGNAL NO. S66-0374 CONTROLLER TYPE: ECONOLITE

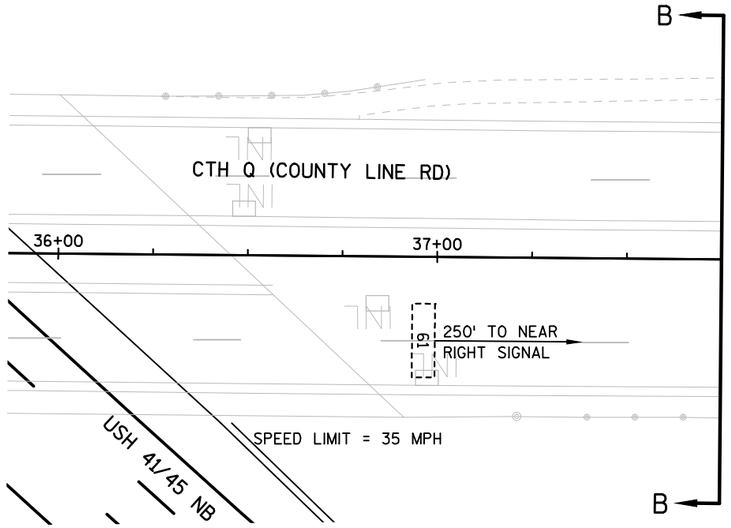
WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVAL RECOMMENDED
DATE 12/18/14 Mitzi M. Dobersek
REGION TRAFFIC ENGINEER
APPROVED
DATE 1/21/15 Joanna L. Bush
STATE TRAFFIC ENGINEER

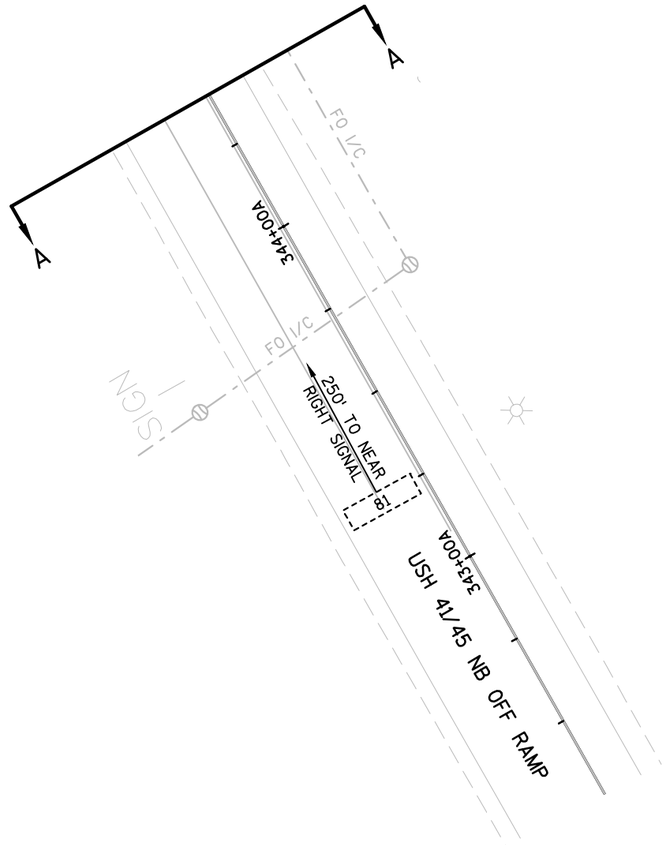
REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:
PAGE 1 OF 3

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC SIGNAL PLAN	SHEET 250	E

2

N





TRAFFIC CONTROL SIGNAL
USH 41/45 NB RAMPS & CTH Q
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

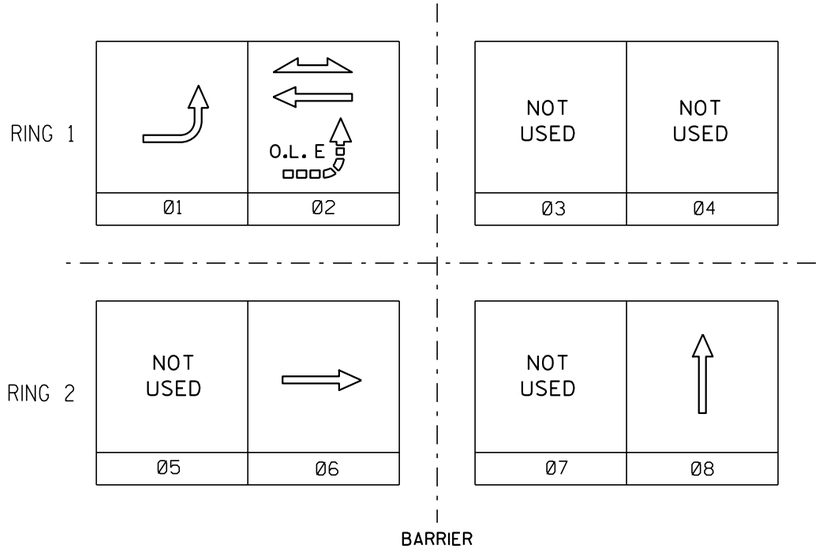
SIGNAL NO. S66-0374

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 2 OF 3

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC SIGNAL PLAN	SHEET 251	E

	HEAD NUMBERS	FLASH
Ø1	4, 5	R ←
Ø2	6, 7, 8	R
Ø3		
Ø4		
Ø5		
Ø6	1, 2, 3	R
Ø7		
Ø8	9, 10, 11	R
Ø2P	12, 13	
Ø4P		
Ø6P		
Ø8P		
OLE	4, 5	-
OLF		
OLG		
OLH		





CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		X
2	X	6	MIN	X
3				
4				X
5				
6	X	2	MIN	X
7				
8		4		X

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	X
RADIO	X

TYPE OF COORDINATION	
NONE	
TBC	
TRAFFIC RESPONSIVE	X
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S66-0607
SIGNAL SYSTEM #:	SS-00-41

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	X
RAILROAD	
EMERGENCY VEHICLE	
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR #(S)	11	21	81	83		S1	S3	
CALLED PHASE	1	2	8	8				
CALL OPTION	X	X		X				
DELAY TIME								
EXTEND OPTION	X	X	X	X				
EXTEND TIME			X					
USE ADDED INITIAL		X						
CROSS SWITCH PHASE	2							

19	17	23	21	27	25	31	29	DETECTOR INPUT
								PLAN LOOP DETECTOR #(S)
								CALLED PHASE
								CALL OPTION
								DELAY TIME
								EXTEND OPTION
								EXTEND TIME
								USE ADDED INITIAL
								CROSS SWITCH PHASE

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR #(S)		61	82			S2	S4	
CALLED PHASE		6	8					
CALL OPTION		X	X					
DELAY TIME								
EXTEND OPTION		X	X					
EXTEND TIME								
USE ADDED INITIAL		X						
CROSS SWITCH PHASE								

20	18	24	22	28	26	32	30	DETECTOR INPUT
								PLAN LOOP DETECTOR #(S)
								CALLED PHASE
								CALL OPTION
								DELAY TIME
								EXTEND OPTION
								EXTEND TIME
								USE ADDED INITIAL
								CROSS SWITCH PHASE

USH 41/45 NB RAMPS & CTH Q
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0374 CABINET TYPE: TS2

CONTROLLER TYPE: ECONOLITE

DATE 11/3/2014 PAGE NO. 3 OF 3

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	SEQUENCE OF OPERATIONS	SHEET 252	E

PROJECT ID:	1100-38-70
INTERSECTION:	USH 41/45 NB Ramps & CTH Q

Signal Wire Color Coding	BLK - black	RED - red	GRN - green
	WHT - white	BLU - blue	ORG - orange

CB1 TO	AWG14 # OF CONDUCTORS	HEAD NO.	SIGNAL INDICATION WIRE COLOR									PED BUTTON
			RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	<FLASHING YELLOW>	D/WALK	WALK	
SB1	7	9	RED	ORG	GRN							
SB2	7	1	RED	ORG	GRN							
SB3	7	7	RED	ORG	GRN							
		8	RED	ORG	GRN							
SB4	12	10	RED	ORG	GRN							
		11	RED	ORG	GRN							
		12								BLK	BLU	
		Button										WHT/BLK
SB5	7	13								BLK	BLU	
		Button										WHT/BLK
SB6	12	4				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		6	RED	ORG	GRN							
SB7	12	2	RED	ORG	GRN							
		3	RED	ORG	GRN							
		5				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			

*Use the white conductor in the cable assembly as the grounded conductor for all traffic signal indications
*Ensure the grounded conductor in the feeder cable and the pole cables are both 18" longer than the ungrounded conductors.
*At the signal bases, connect one terminal from the pedestrian push buttons to the color indicated in the chart. Connect the other terminal to the grounded conductor.
*Reconnect the grounding conductors wherever the circuit has been interrupted to ensure the grounding circuit is complete.

Equipment grounding conductor 10 AWG Green XLP	
From	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	CB1

Pull Box Bonding Jumper 10 AWG Green XLP	
From	To
PB1	CB1
PB2	SB1
PB3	SB1
PB4	SB2
PB5	SB3
PB6	SB4
PB7	SB5
PB8	SB6
PB9	SB7
PB10	SB7
PB11	CB1

Lighting UF #12 w/ground	
From	To
CB1	SB2
SB2	SB3
CB1	SB7
SB7	SB6

Video Detection Cable	
From	To
CB1	SB7 (V1)
CB1	SB2 (V2)
CB1	SB3 (V3)
CB1	SB7 (V4)
CB1	SB7 (V5)
CB1	SB4 (V6)
CB1	SB7 (V7)

CAUTION

POLES MAY CARRY INDUCTIVE VOLTAGE DURING INSTALLATION OR REMOVAL

LEGEND

- SERVICE POLE
- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- OH — CABLE-OVERHEAD
- DB — CABLE-DIRECT BURIED
- INTERCONNECT CABLE
- SIGNAL HEAD, PEDESTAL MOUNT
- (XX) SIGNAL HEAD, MAST-ARM MOUNT
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- PULL BOX, 24" X 36"
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- 8 SIGNAL HEAD NUMBER
- Y YIELD SIGN
- S STOP SIGN

N

SB OFF RAMP

STH 167 (LANNON RD)

ABANDON

SB5 PB6 SB6 SB7 PB7 PB10 PB12 SB4 PB5 SB3 SB8 PB13 SB1 SB2 PB4 SB9 SB10 PB14 PB17 PB3 PB1 CB1 PB16 PB15

25' 2-3" 2" 1453 1452 454 453

835 836 837 838 839 840

LOOP, PULL BOX AND CONDUIT FOR INFORMATION ONLY

SB ON RAMP

CONSTRUCTION NOTES

1. EXISTING CONDUIT RUNS TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS REMAINING IN THE CONDUIT.
2. ABANDONED LOOP DETECTOR CONDUIT TO REMAIN IN PLACE. LOOP DETECTOR WIRE AND LEAD-IN CABLE TO BE REMOVED BY THE CONTRACTOR.
3. CABINET AND CONTROLLER SHALL BE REMOVED BY WISDOT ELECTRICAL PERSONNEL.

NOTE: GRAYSHADE REPRESENTS EXISTING. BOLD REPRESENTS ITEMS TO BE REMOVED.

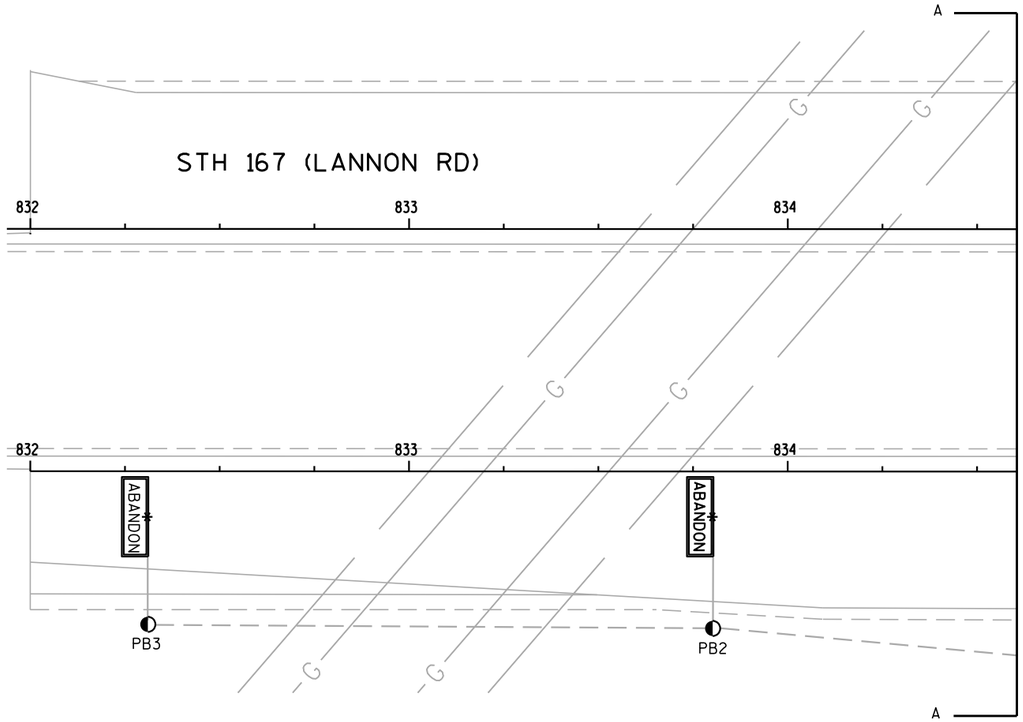
TRAFFIC SIGNAL REMOVAL
USH 41/45 SB RAMPS & STH 167
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

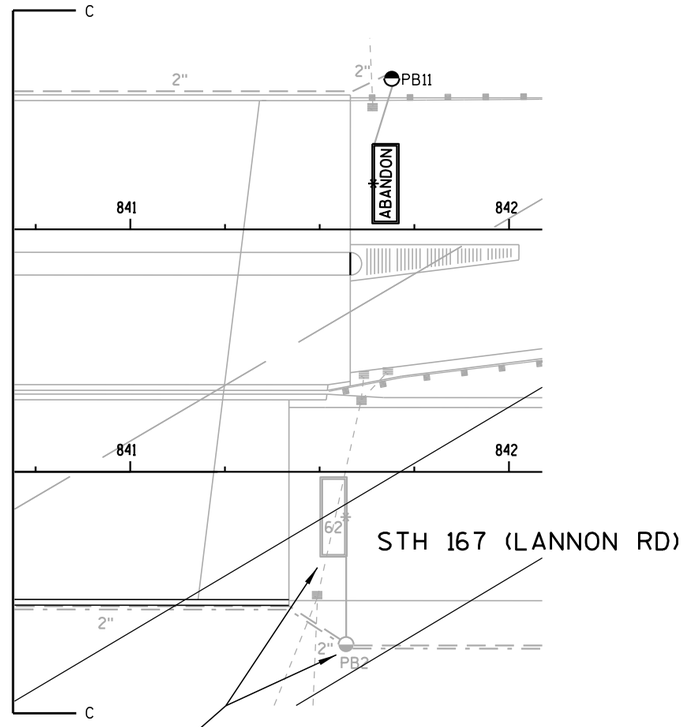
SIGNAL NO. S66-0731

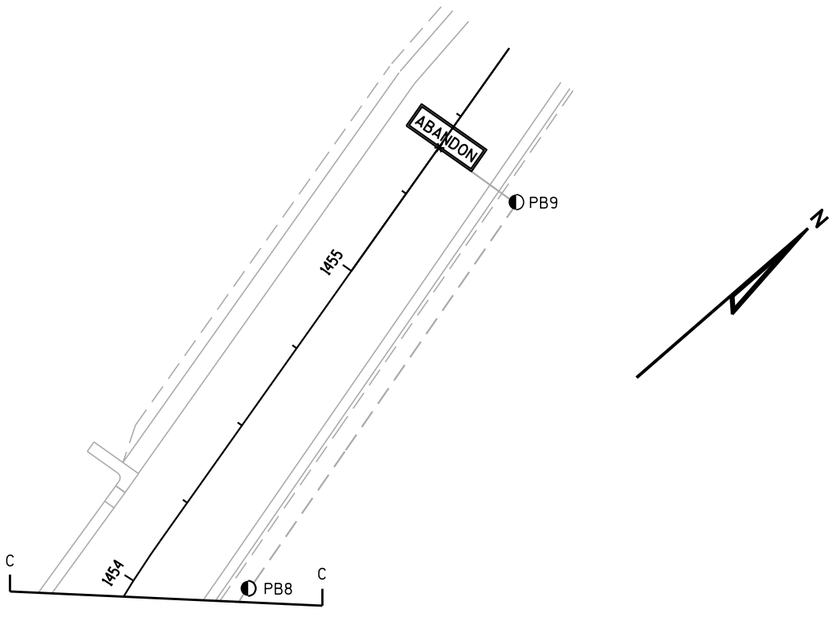
REGION CONTACT: J. EFFENGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 254	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024003_sp_rem.dgn PLOT DATE : 26-SEP-2014 10:44 PLOT BY : dotcmv PLOT NAME : PLOT SCALE : 40:1







⚠CAUTION

POLES MAY CARRY INDUCTIVE VOLTAGE DURING INSTALLATION OR REMOVAL

LOOP, PULL BOX AND CONDUIT FOR INFORMATION ONLY

TRAFFIC SIGNAL REMOVAL
USH 41 45 SB RAMPS & STH 167
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0731

REGION CONTACT: J. EFFENGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 2 OF 2

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 255	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024003_sp_rem.dgn PLOT DATE : 26-SEP-2014 10:44 PLOT BY : dotcmv PLOT NAME : PLOT SCALE : 40:1

SUMMARY OF SELECTED ITEMS FOR INFORMATION ONLY	
QUANTITY	DESCRIPTION
7 EA	WOOD POLES, CLASS 4
562 LF	SPAN WIRE
1 EA	LIGHTING 250W
1 LS	NON-INTRUSIVE DETECTION SYSTEM
11 EA	SIGNAL HEADS

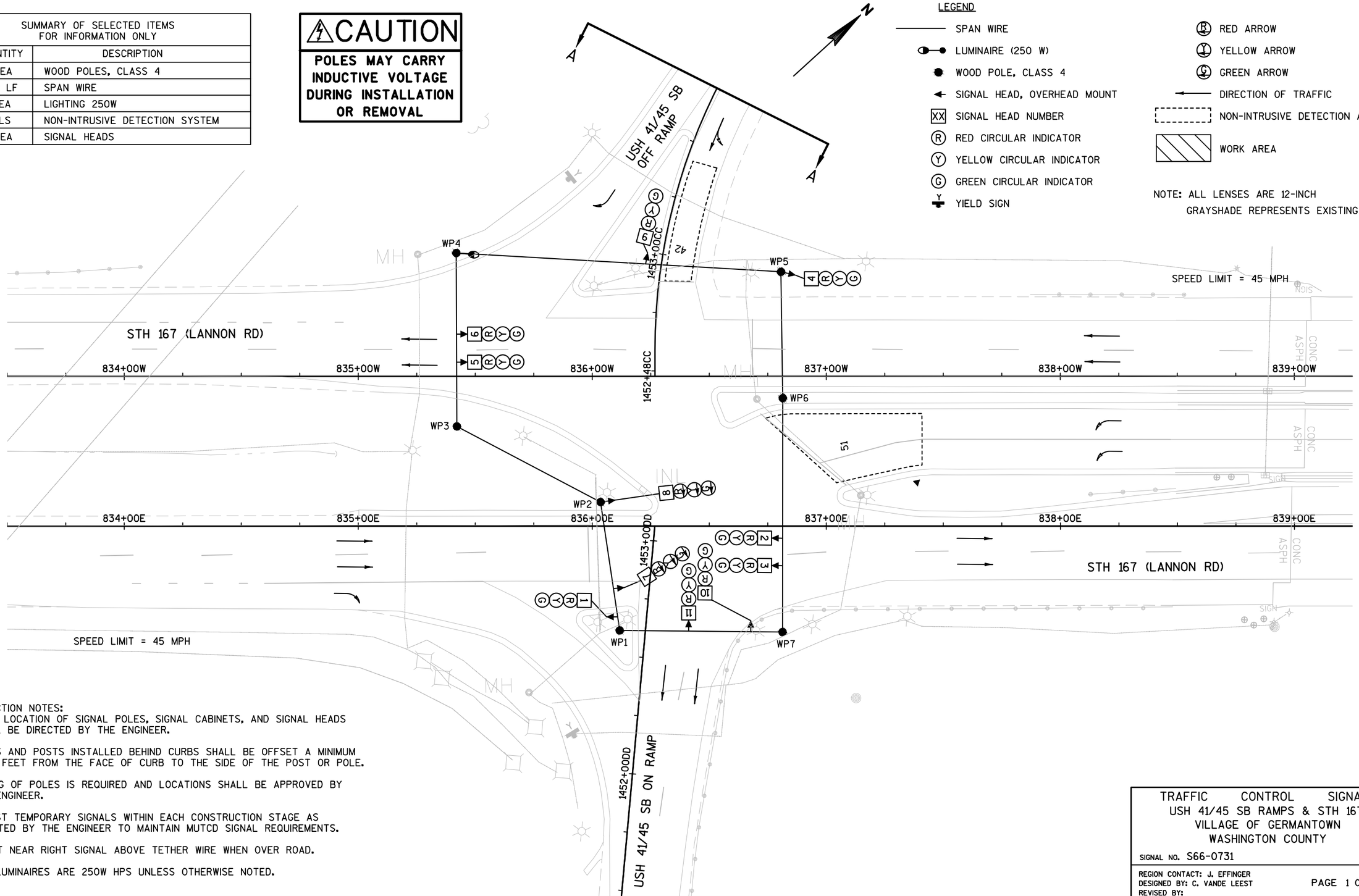
⚠CAUTION

POLES MAY CARRY INDUCTIVE VOLTAGE DURING INSTALLATION OR REMOVAL

LEGEND

- SPAN WIRE
- LUMINAIRE (250 W)
- WOOD POLE, CLASS 4
- SIGNAL HEAD, OVERHEAD MOUNT
- XX SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- Y YIELD SIGN
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- DIRECTION OF TRAFFIC
- NON-INTRUSIVE DETECTION AREA
- WORK AREA

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



CONSTRUCTION NOTES:

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINETS, AND SIGNAL HEADS SHALL BE DIRECTED BY THE ENGINEER.
2. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF THE POST OR POLE.
3. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
4. ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
5. MOUNT NEAR RIGHT SIGNAL ABOVE TETHER WIRE WHEN OVER ROAD.
6. ALL LUMINAIRES ARE 250W HPS UNLESS OTHERWISE NOTED.

TRAFFIC CONTROL SIGNAL
USH 41/45 SB RAMPS & STH 167
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0731

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 1 OF 9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY TRAFFIC SIGNAL PLAN - PRECONSTRUCTION STAGE	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024003_SP_1SPRECON.DWG PLOT DATE : 10/20/2014 11:34 AM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : 1" = 40'_XREF

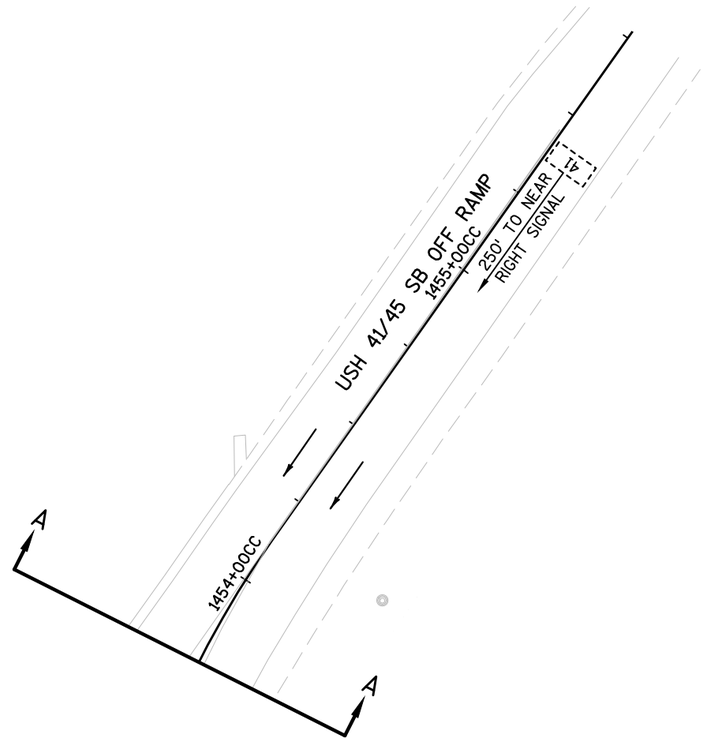
WISDOT/CADDS SHEET 42

2

2

⚠CAUTION

POLES MAY CARRY INDUCTIVE VOLTAGE DURING INSTALLATION OR REMOVAL



TRAFFIC CONTROL SIGNAL
USH 41/45 SB RAMPS & STH 167
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0731

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 2 OF 9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY TRAFFIC SIGNAL PLAN - PRECONSTRUCTION STAGE	SHEET 257	E

2

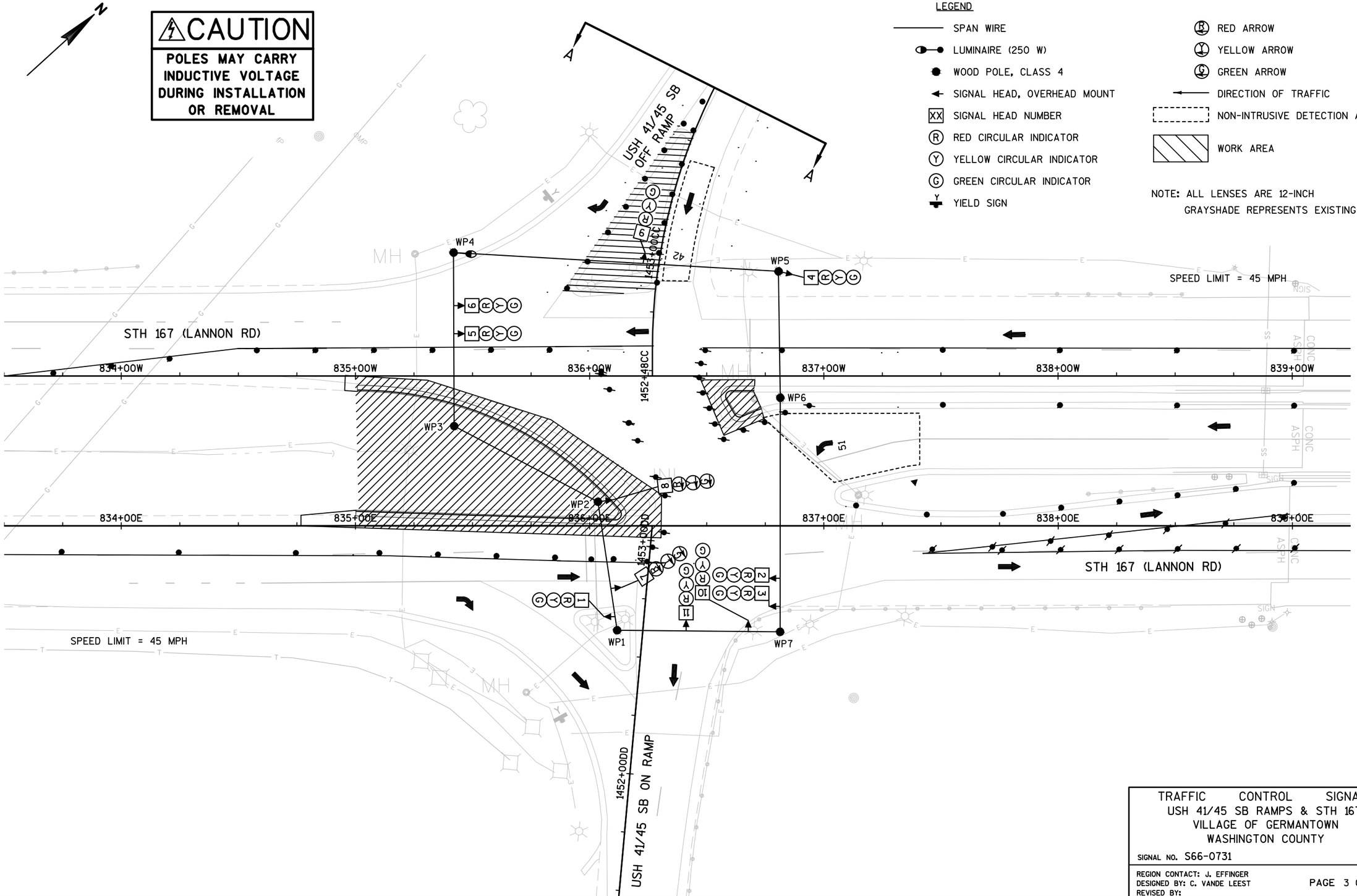
⚠CAUTION

POLES MAY CARRY INDUCTIVE VOLTAGE DURING INSTALLATION OR REMOVAL

LEGEND

- SPAN WIRE
- LUMINAIRE (250 W)
- WOOD POLE, CLASS 4
- SIGNAL HEAD, OVERHEAD MOUNT
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- Y YIELD SIGN
- R RED ARROW
- Y YELLOW ARROW
- G GREEN ARROW
- DIRECTION OF TRAFFIC
- NON-INTRUSIVE DETECTION AREA
- WORK AREA

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



TRAFFIC CONTROL SIGNAL
USH 41/45 SB RAMPS & STH 167
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0731

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 3 OF 9

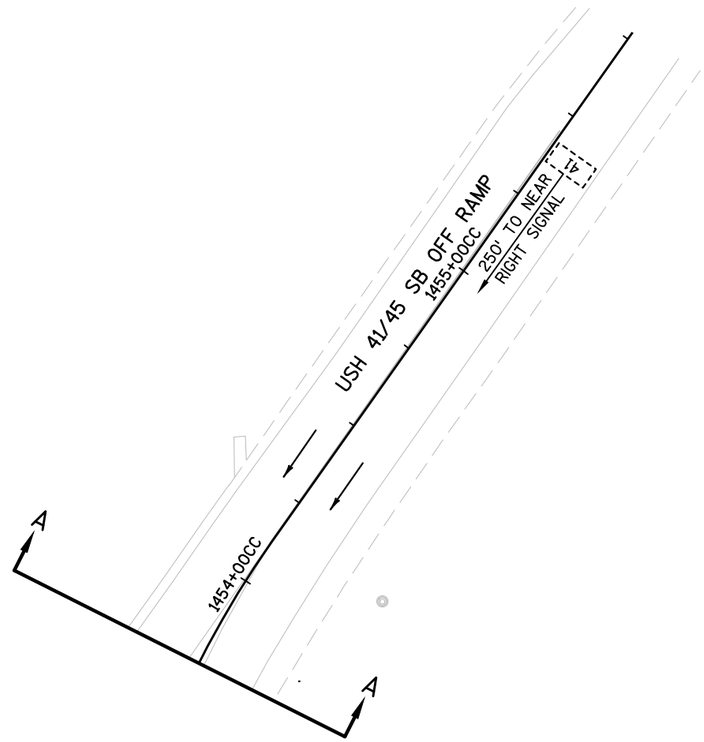
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1A	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024003_SP_2S1A.DWG PLOT DATE : 10/20/2014 11:36 AM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : 0.30000000 = 1'-0"_XREF
WISDOT/CADDS SHEET 42

2

⚠CAUTION

POLES MAY CARRY INDUCTIVE VOLTAGE DURING INSTALLATION OR REMOVAL



TRAFFIC CONTROL SIGNAL
USH 41/45 SB RAMPS & STH 167
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0731

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 4 OF 9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1A	SHEET 259	E

2

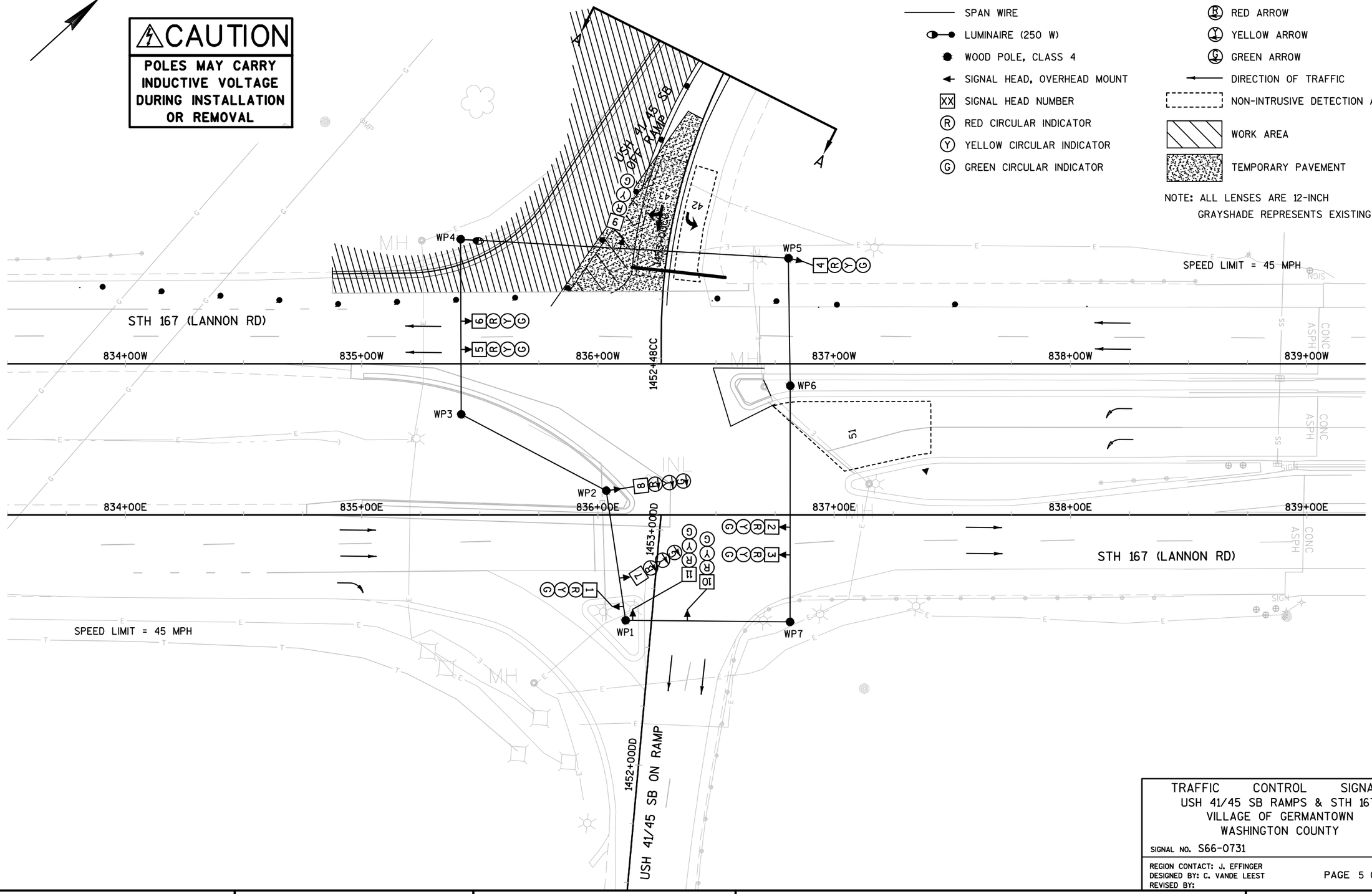
⚠CAUTION

POLES MAY CARRY INDUCTIVE VOLTAGE DURING INSTALLATION OR REMOVAL

LEGEND

- SPAN WIRE
- LUMINAIRE (250 W)
- WOOD POLE, CLASS 4
- SIGNAL HEAD, OVERHEAD MOUNT
- XX SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- DIRECTION OF TRAFFIC
- NON-INTRUSIVE DETECTION AREA
- WORK AREA
- TEMPORARY PAVEMENT

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



TRAFFIC CONTROL SIGNAL
USH 41/45 SB RAMPS & STH 167
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0731

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 5 OF 9

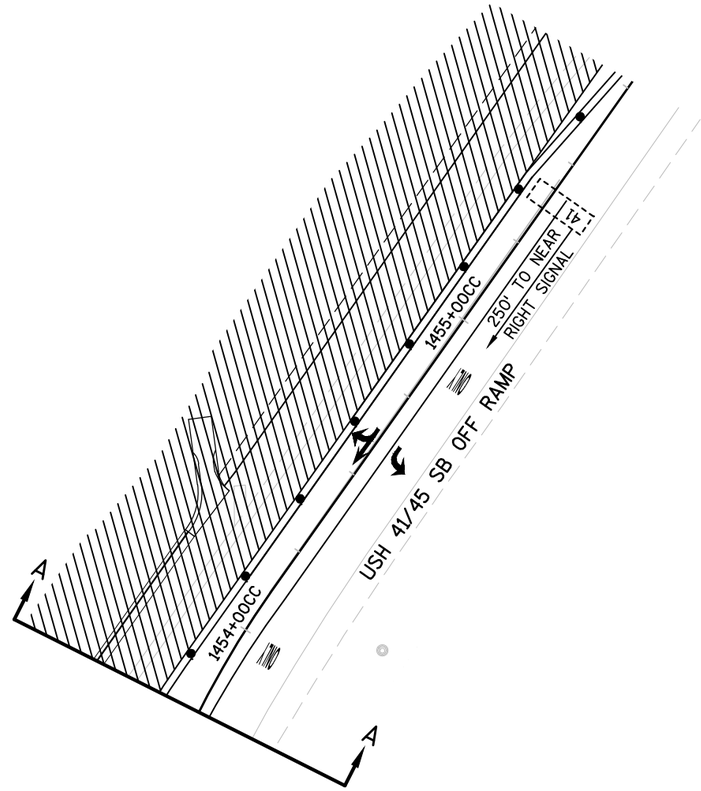
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1B	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024003_SP_3S1B.DWG PLOT DATE : 10/20/2014 11:37 AM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : 1" = 40'_XREF

2

⚠CAUTION

POLES MAY CARRY INDUCTIVE VOLTAGE DURING INSTALLATION OR REMOVAL



TRAFFIC CONTROL SIGNAL
USH 41/45 SB RAMPS & STH 167
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0731

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 6 OF 9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1B	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024003_SP_3S1B.DWG PLOT DATE : 10/20/2014 11:57 AM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : **********

WISDOT/CADDS SHEET 42

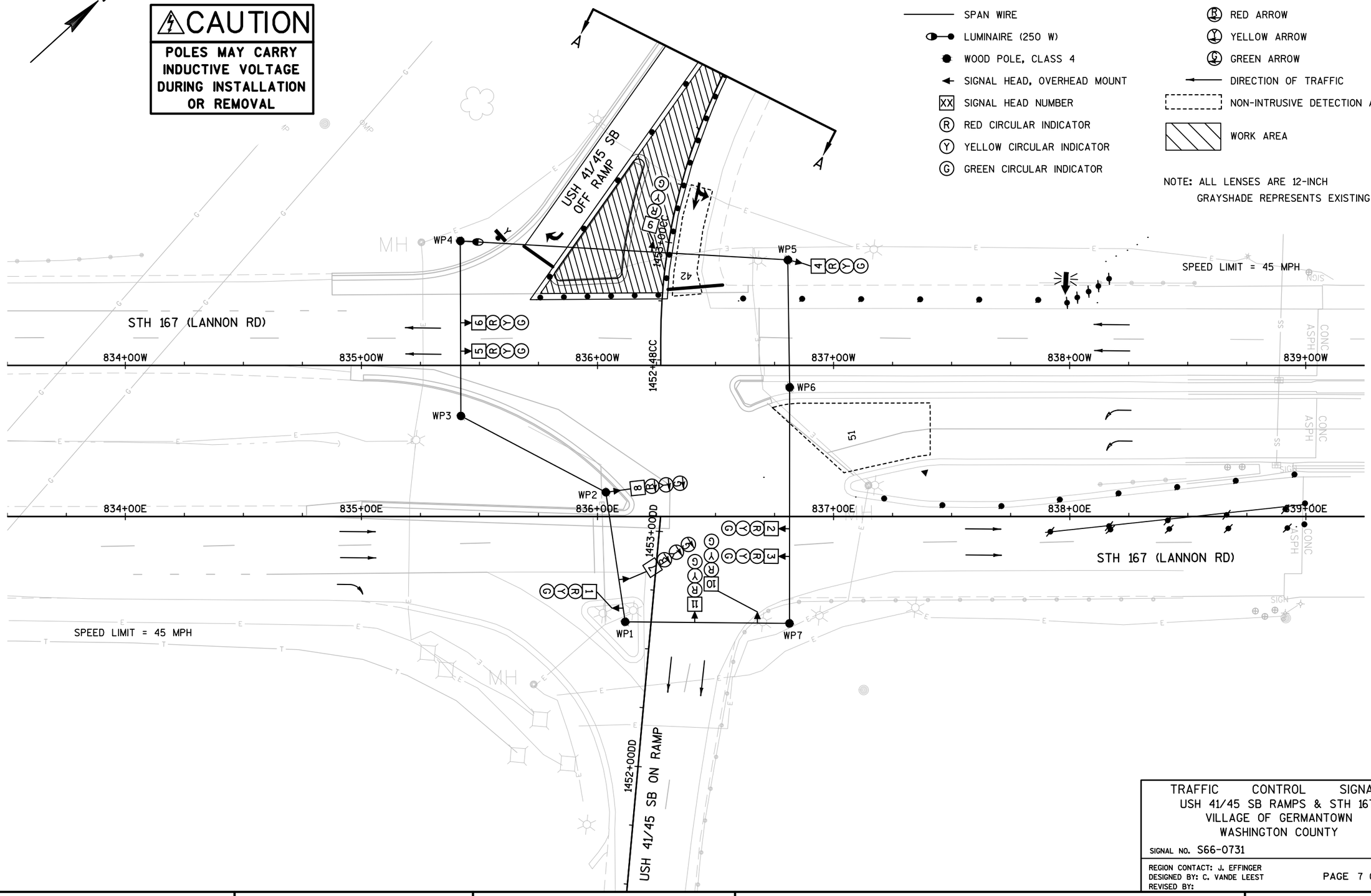
2

CAUTION
POLES MAY CARRY INDUCTIVE VOLTAGE DURING INSTALLATION OR REMOVAL

LEGEND

- SPAN WIRE
- LUMINAIRE (250 W)
- WOOD POLE, CLASS 4
- SIGNAL HEAD, OVERHEAD MOUNT
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- Y YELLOW ARROW
- G GREEN ARROW
- DIRECTION OF TRAFFIC
- NON-INTRUSIVE DETECTION AREA
- WORK AREA

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



TRAFFIC CONTROL SIGNAL
USH 41/45 SB RAMPS & STH 167
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0731

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 7 OF 9

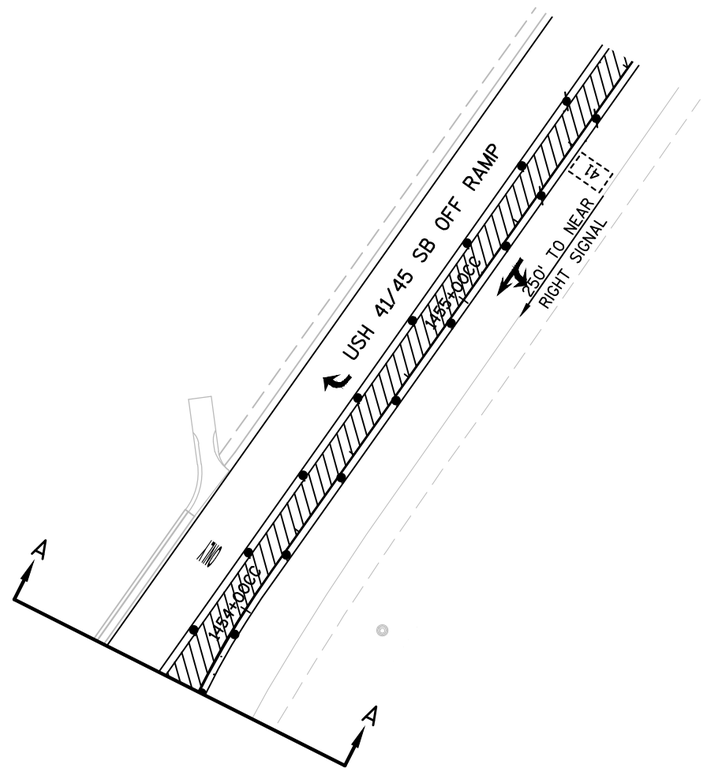
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024003_SP_4S2.DWG PLOT DATE : 10/20/2014 11:38 AM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : 0.30000000 = 1'-0"_XREF
WISDOT/CADDS SHEET 42

2

⚠CAUTION

POLES MAY CARRY INDUCTIVE VOLTAGE DURING INSTALLATION OR REMOVAL



TRAFFIC CONTROL SIGNAL
USH 41/45 SB RAMPS & STH 167
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0731

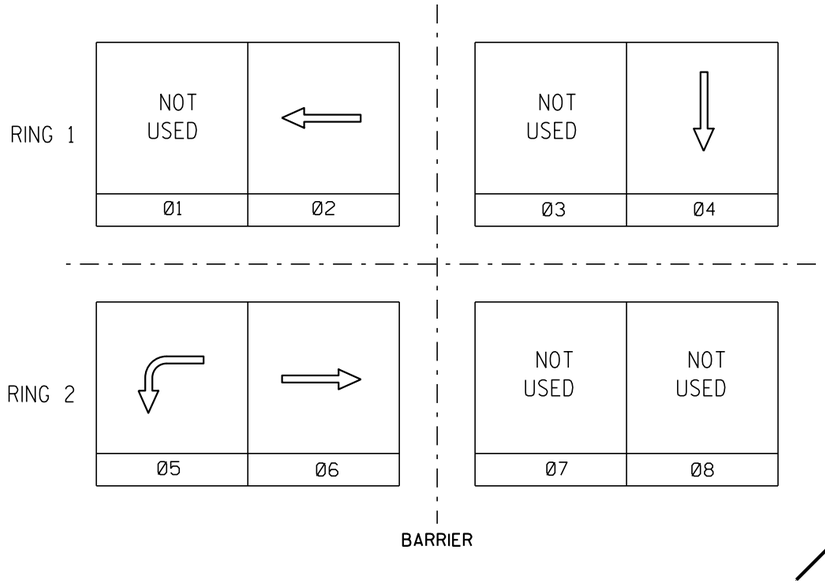
REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 8 OF 9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024003_SP_4S2.DWG PLOT DATE : 10/20/2014 11:38 AM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : **********

	HEAD NUMBERS	FLASH
Ø1		
Ø2	4, 5, 6	R
Ø3		
Ø4	9, 10, 11	R
Ø5	7, 8	R
Ø6	1, 2, 3	R
Ø7		
Ø8		
Ø2P		
Ø4P		
Ø6P		
Ø8P		



CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				
2		6	MAX	x
3				
4				x
5		2		x
6		2	MAX	x
7				
8				

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	x
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	

TYPE OF COORDINATION	
NONE	
TBC	x
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM *:	SS- -

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	x
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	x
RAILROAD	
EMERGENCY VEHICLE	
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

DETECTOR LOGIC

DETECTOR NUMBER	AMPLIFIER CHANNEL NUMBER	DETECTOR OPERATION: CALLS AND EXTENDS	DETECTOR OPERATION: CALLS ONLY	DETECTOR OPERATION: EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
41				X		4			X		
42		X			4	4					
43		X			4	4					
51		X			5	5					

USH 41/45 SB RAMPS & STH 167
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0731 CABINET TYPE:

CONTROLLER TYPE: TEMP

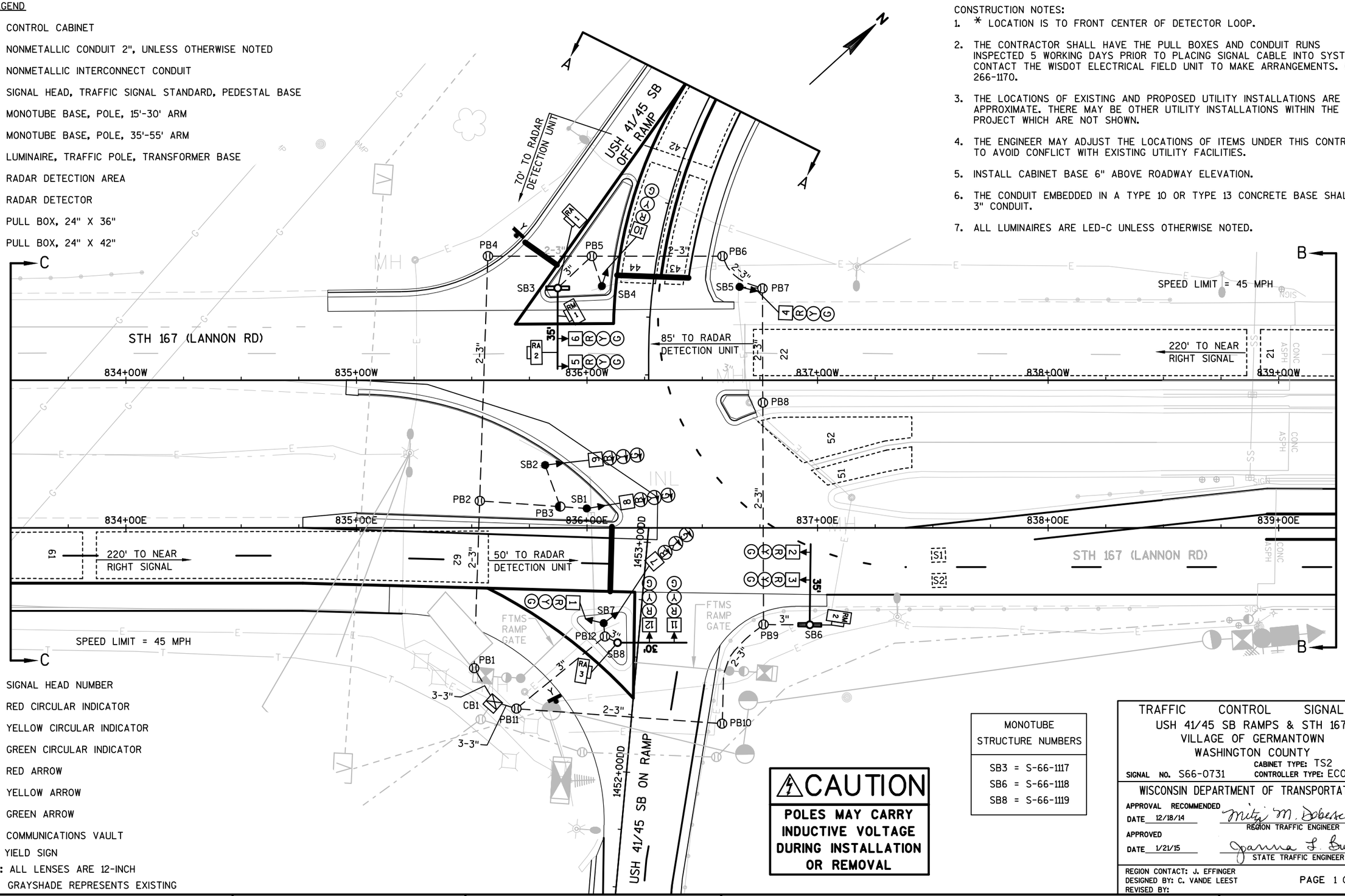
DATE 11/3/2014 PAGE NO. 9 OF 9

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- NONMETALLIC INTERCONNECT CONDUIT
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM
- (XX) MONOTUBE BASE, POLE, 35'-55' ARM
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- RADAR DETECTION AREA
- RX XX RADAR DETECTOR
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"

CONSTRUCTION NOTES:

1. * LOCATION IS TO FRONT CENTER OF DETECTOR LOOP.
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL FIELD UNIT TO MAKE ARRANGEMENTS. (414) 266-1170.
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
4. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
5. INSTALL CABINET BASE 6" ABOVE ROADWAY ELEVATION.
6. THE CONDUIT EMBEDDED IN A TYPE 10 OR TYPE 13 CONCRETE BASE SHALL BE 3" CONDUIT.
7. ALL LUMINAIRES ARE LED-C UNLESS OTHERWISE NOTED.



XX SIGNAL HEAD NUMBER
(R) RED CIRCULAR INDICATOR
(Y) YELLOW CIRCULAR INDICATOR
(G) GREEN CIRCULAR INDICATOR
(R) RED ARROW
(Y) YELLOW ARROW
(G) GREEN ARROW
V COMMUNICATIONS VAULT
Y YIELD SIGN

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

⚠CAUTION
POLES MAY CARRY INDUCTIVE VOLTAGE DURING INSTALLATION OR REMOVAL

MONOTUBE STRUCTURE NUMBERS
SB3 = S-66-1117
SB6 = S-66-1118
SB8 = S-66-1119

TRAFFIC CONTROL SIGNAL
USH 41/45 SB RAMPS & STH 167
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY
SIGNAL NO. S66-0731
CABINET TYPE: TS2
CONTROLLER TYPE: ECONOLITE

WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVAL RECOMMENDED
DATE 12/18/14 — Mitzi M. Dobersek, REGION TRAFFIC ENGINEER
APPROVED
DATE 1/21/15 — Joanna L. Bush, STATE TRAFFIC ENGINEER
REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

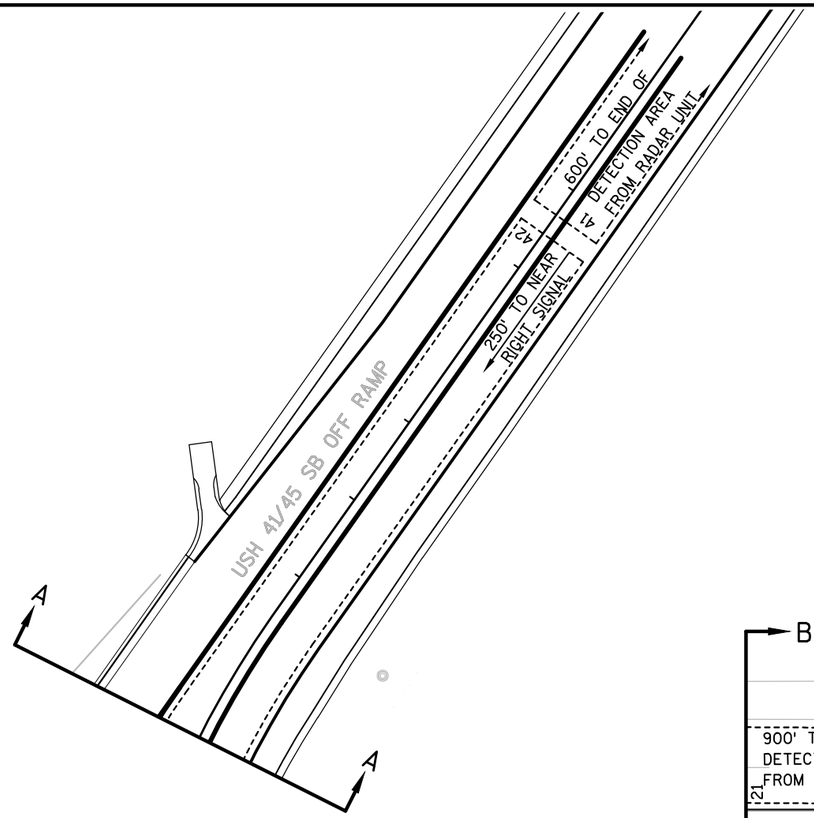
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC SIGNAL PLAN	SHEET 265	E

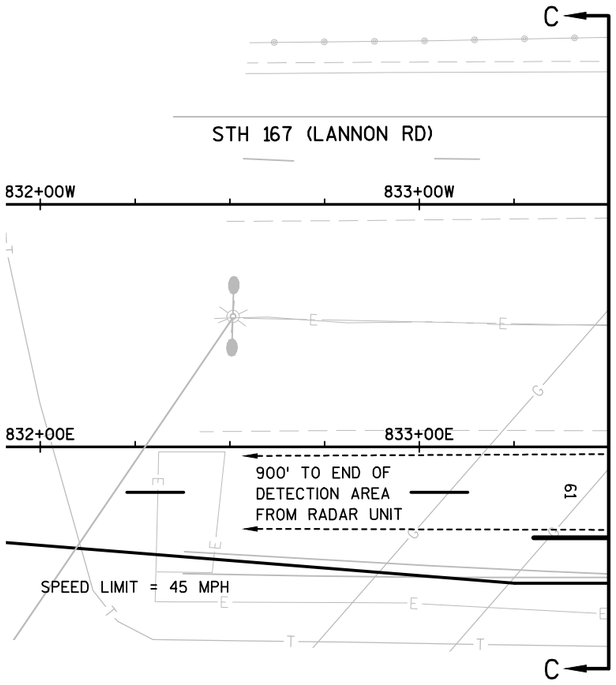
FILE NAME : N:\PDS\C3D\CAD\11003800\024003_SP.DWG
PLOT DATE : 1/21/2015 12:08 PM
PLOT BY : VANDE LEEST, CYNTHIA
PLOT NAME :
PLOT SCALE : 0.30000000 = 1'-0"
XREF
WISDOT/CADDS SHEET 42

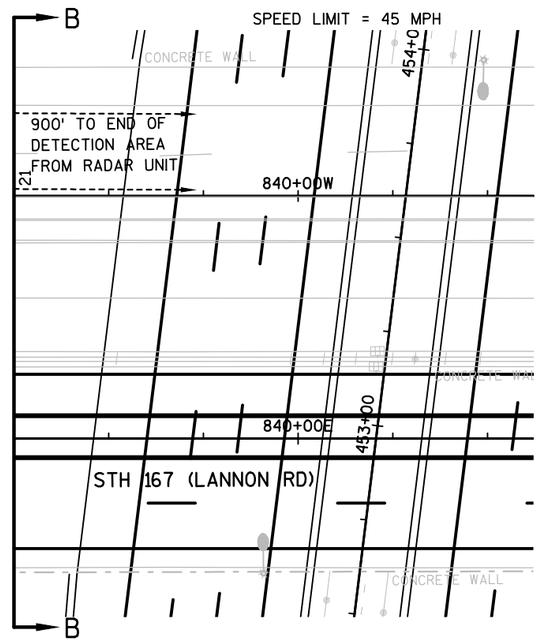
2

⚠CAUTION

POLES MAY CARRY INDUCTIVE VOLTAGE DURING INSTALLATION OR REMOVAL







TRAFFIC CONTROL SIGNAL
USH 41/45 SB RAMPS & STH 167
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0731

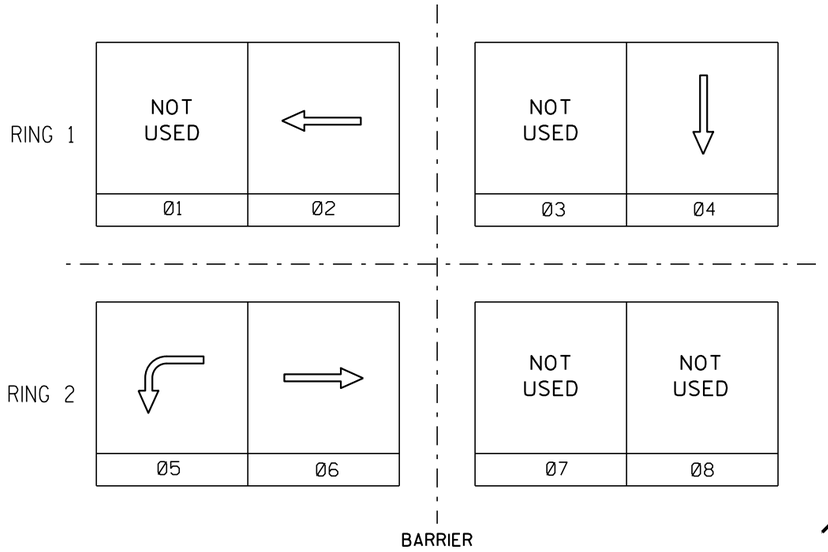
REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 2 OF 3

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC SIGNAL PLAN	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024003_SP.DWG PLOT DATE : 1/21/2015 12:09 PM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : 0.30000000 = 1'-0"_XREF

	HEAD NUMBERS	FLASH
Ø1		
Ø2	4, 5, 6	R
Ø3		
Ø4	10, 11, 12	R
Ø5	7, 8, 9	R
Ø6	1, 2, 3	R
Ø7		
Ø8		
Ø2P		
Ø4P		
Ø6P		
Ø8P		
OLE		
OLF		
OLG		
OLH		



CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				
2	X	6	MIN	x
3				
4				x
5		2		x
6	X	2	MIN	x
7				
8				

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	x
RADIO	

TYPE OF COORDINATION	
NONE	
TBC	
TRAFFIC RESPONSIVE	x
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S66-0731
SIGNAL SYSTEM #:	SS-00-40

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	x
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	x
RAILROAD	
EMERGENCY VEHICLE	
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR #(S)	21	41	43	51	61		S1	
CALLED PHASE	2	4	4	5	6			
CALL OPTION	X		X	X	X			
DELAY TIME								
EXTEND OPTION	X	X	X	X	X			
EXTEND TIME		X						
USE ADDED INITIAL	X				X			
CROSS SWITCH PHASE								

19	17	23	21	27	25	31	29	DETECTOR INPUT
								PLAN LOOP DETECTOR #(S)
								CALLED PHASE
								CALL OPTION
								DELAY TIME
								EXTEND OPTION
								EXTEND TIME
								USE ADDED INITIAL
								CROSS SWITCH PHASE

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR #(S)	22	42	44	52	62		S2	
CALLED PHASE	2	4	4	5	6			
CALL OPTION	X	X	X	X	X			
DELAY TIME								
EXTEND OPTION	X	X	X	X	X			
EXTEND TIME								
USE ADDED INITIAL	X				X			
CROSS SWITCH PHASE								

20	18	24	22	28	26	32	30	DETECTOR INPUT
								PLAN LOOP DETECTOR #(S)
								CALLED PHASE
								CALL OPTION
								DELAY TIME
								EXTEND OPTION
								EXTEND TIME
								USE ADDED INITIAL
								CROSS SWITCH PHASE

USH 41/45 SB RAMPS & STH 167
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0731 CABINET TYPE: TS2

CONTROLLER TYPE: ECONOLITE

DATE 11/3/2014 PAGE NO. 3 OF 3

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	SEQUENCE OF OPERATIONS	SHEET 267	E

PROJECT ID:	1100-38-70
INTERSECTION:	USH 41/45 SB Ramps & STH 167

Signal Wire Color Coding	BLK - black	RED - red	GRN - green
	WHT - white	BLU - blue	ORG - orange

CB1 TO	AWG14 # OF CONDUCTORS	HEAD NO.	SIGNAL INDICATION WIRE COLOR									PED BUTTON
			RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	<FLASHING YELLOW>	D/WALK	WALK	
SB1	7	8				RED	ORG	GRN				
SB2	7	9				RED	ORG	GRN				
SB3	7	5	RED	ORG	GRN							
		6	RED	ORG	GRN							
SB4	7	10	RED	ORG	GRN							
SB5	7	4	RED	ORG	GRN							
SB6	7	2	RED	ORG	GRN							
		3	RED	ORG	GRN							
SB7	12	1	RED	ORG	GRN							
		7				RED/BLK	ORG/BLK	GRN/BLK				
SB8	7	11	RED	ORG	GRN							
		12	RED	ORG	GRN							

*Use the white conductor in the cable assembly as the grounded conductor for all traffic signal indications
*Ensure the grounded conductor in the feeder cable and the pole cables are both 18" longer than the ungrounded conductors.
*At the signal bases, connect one terminal from the pedestrian push buttons to the color indicated in the chart. Connect the other terminal to the grounded conductor.
*Reconnect the grounding conductors wherever the circuit has been interrupted to ensure the grounding circuit is complete.

Equipment Grounding Conductor 10 AWG Green XLP	
From	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	CB1

Pull Box Bonding Jumper 10 AWG Green XLP	
From	To
PB1	CB1
PB2	SB1
PB3	SB1
PB4	SB3
PB5	SB4
PB6	SB5
PB7	SB5
PB8	SB5
PB9	SB6
PB10	SB6
PB11	CB1
PB12	SB8

Radar Detection Cable	
From	To
CB1	SB3 (RM1)
CB1	SB6 (RM2)
CB1	SB3 (RA1)
CB1	SB3 (RA2)
CB1	SB8 (RA3)

LEGEND

- SERVICE POLE
- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT

CAUTION
POLES MAY CARRY INDUCTIVE VOLTAGE DURING INSTALLATION OR REMOVAL

WARNING HIGH VOLTAGE

WARNING HIGH VOLTAGE

U.S.H. 41 & 45 NB ON RAMP

U.S.H. 41 & 45 NB OFF RAMP

STH 167 (LANNON RD)

EASEMENT

ATC

SIGNAL 731

PB1 PB4 PB5 PB6 PB7 PB8 PB9 PB11 PB12 PB13 PB14

SB1 SB2 SB3 SB4 SB5 SB6 SB7 SB8 SB9 SB10 SB11 SB12 SB13

CB1

ABANDON

I/C

IP

CONSTRUCTION NOTES

1. EXISTING CONDUIT RUNS TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS REMAINING IN THE CONDUIT.
2. ABANDONED LOOP DETECTOR CONDUIT TO REMAIN IN PLACE. LOOP DETECTOR WIRE AND LEAD-IN CABLE TO BE REMOVED BY THE CONTRACTOR.
3. CABINET AND CONTROLLER SHALL BE REMOVED BY WISDOT ELECTRICAL PERSONNEL.

NOTE: GRAYSHADE REPRESENTS EXISTING. BOLD REPRESENTS ITEMS TO BE REMOVED.

- PULL BOX, 24" X 36"
- 8 SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (R) RED ARROW
- (FY)(Y)(Y) YELLOW ARROW
- (G)(G) GREEN ARROW
- Y YIELD SIGN
- S STOP SIGN

TRAFFIC SIGNAL REMOVAL
USH 41/45 NB RAMPS & STH 167
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0730

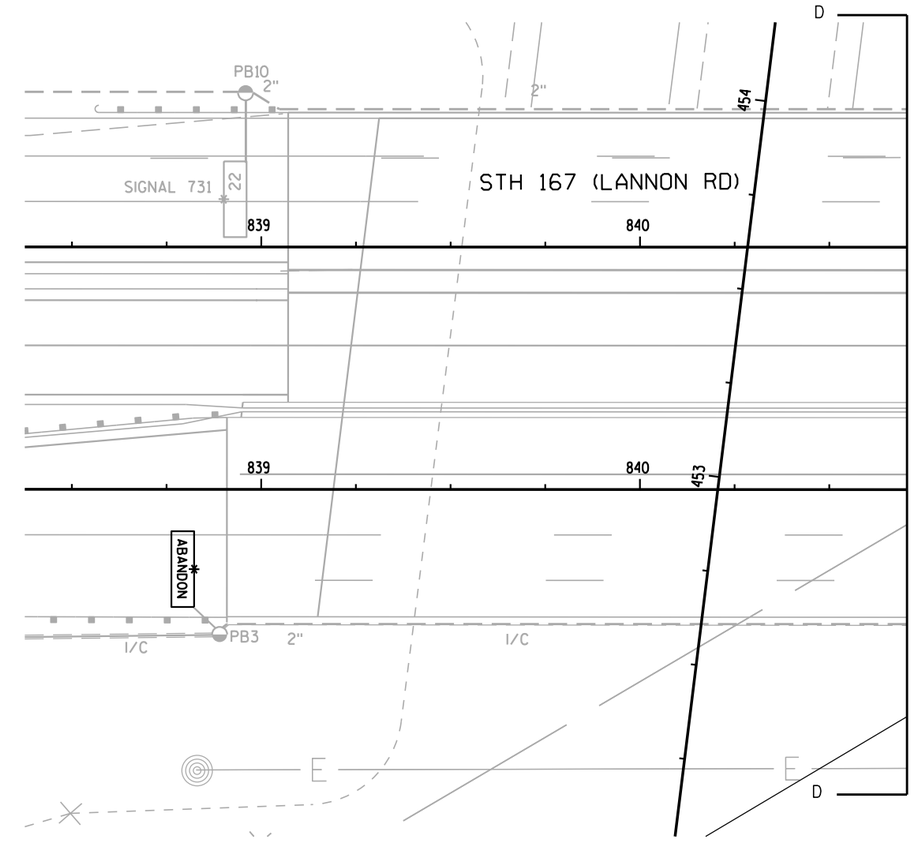
REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

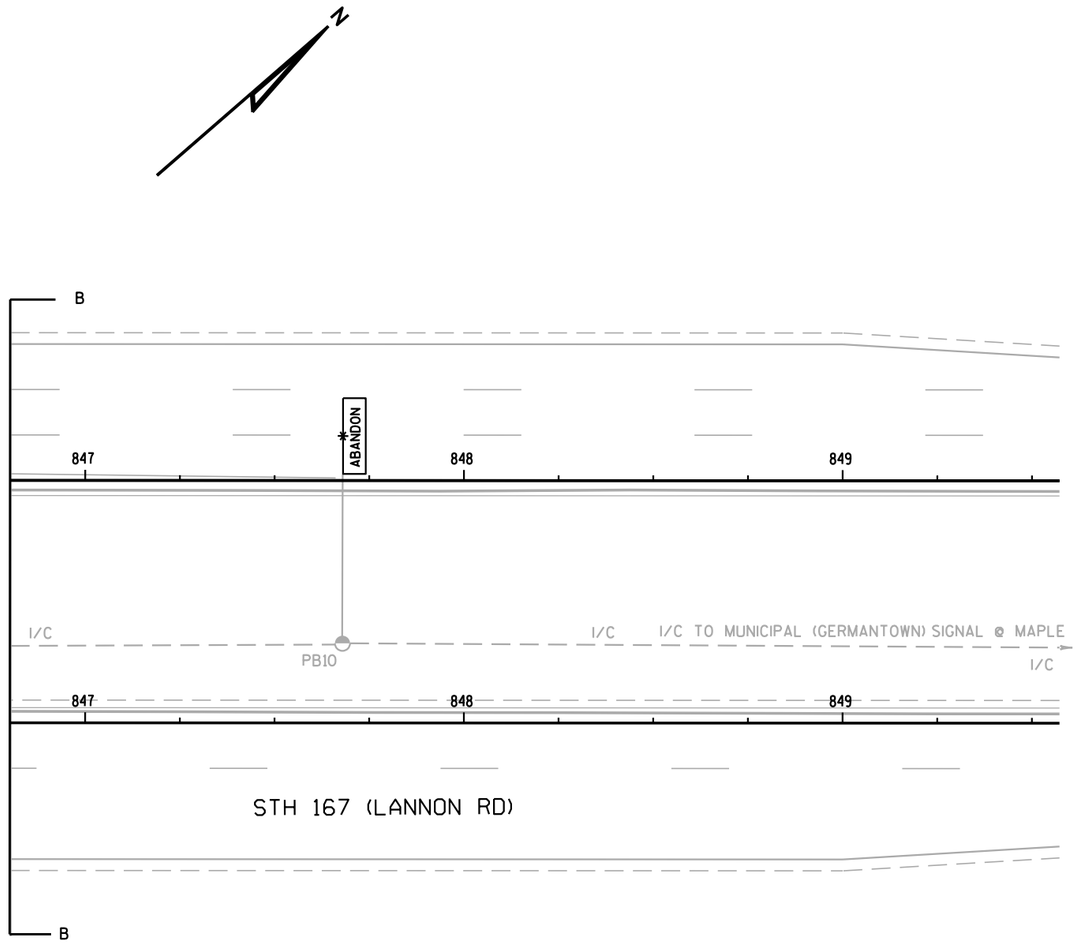
PAGE 1 OF 3

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 269	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024004_sp_rem.dgn PLOT DATE : 20-OCT-2014 12:28 PLOT BY : dotcmv PLOT NAME : PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42





⚠CAUTION

POLES MAY CARRY INDUCTIVE VOLTAGE DURING INSTALLATION OR REMOVAL

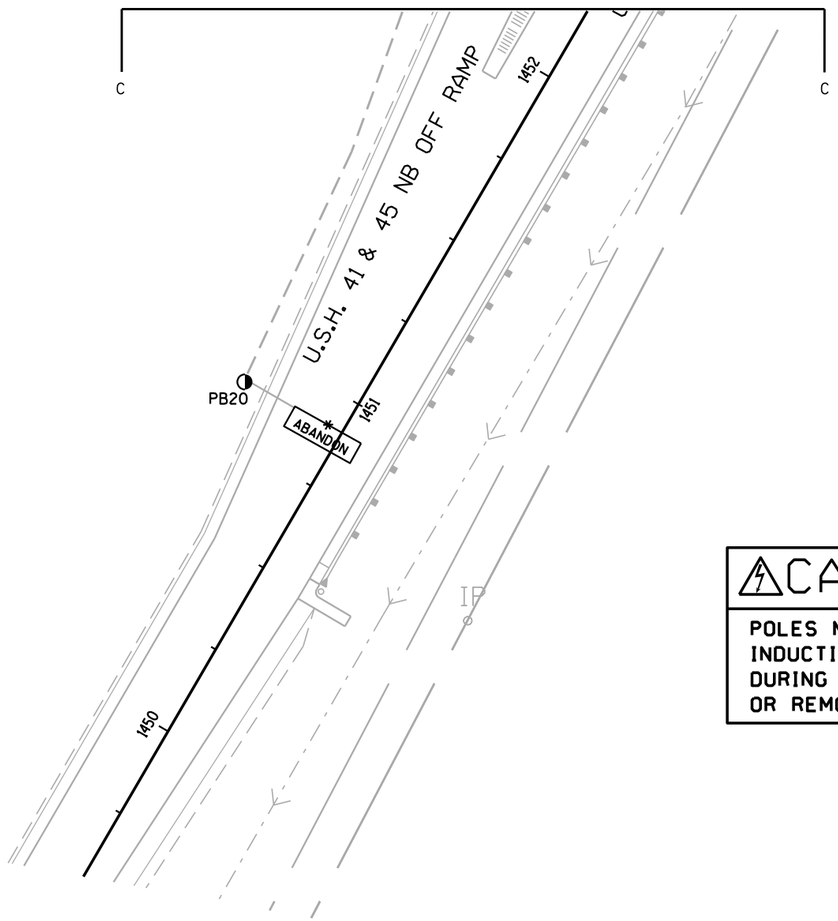
TRAFFIC SIGNAL REMOVAL
USH 41/45 NB RAMPS & STH 167
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

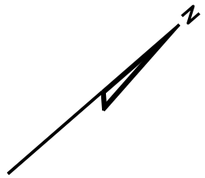
SIGNAL NO. S66-0730

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 2 OF 3

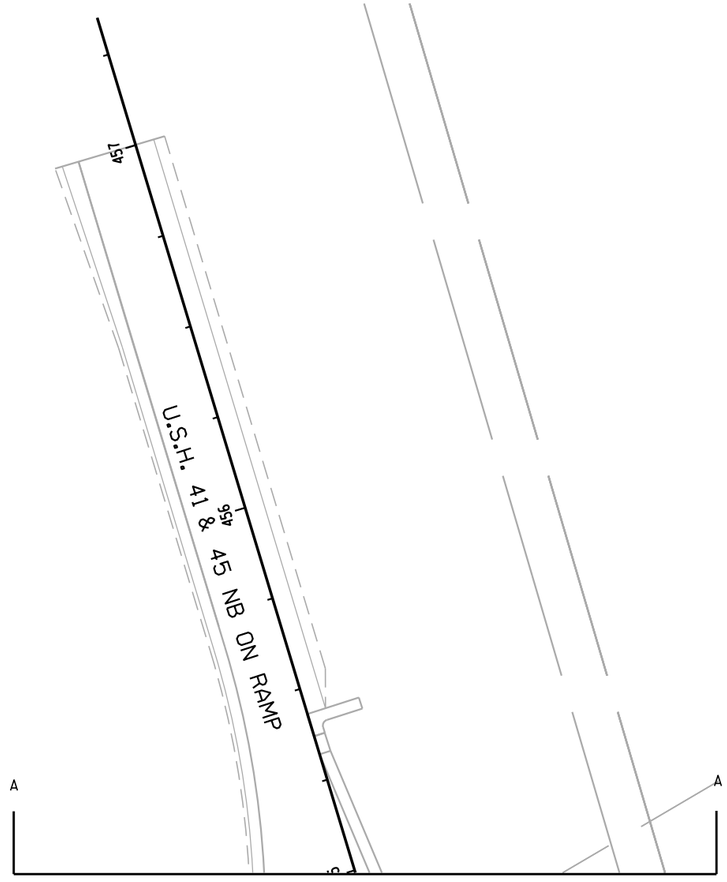
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 270	E





⚠CAUTION

POLES MAY CARRY
INDUCTIVE VOLTAGE
DURING INSTALLATION
OR REMOVAL



TRAFFIC SIGNAL REMOVAL
USH 41/45 NB RAMPS & STH 167
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0730

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

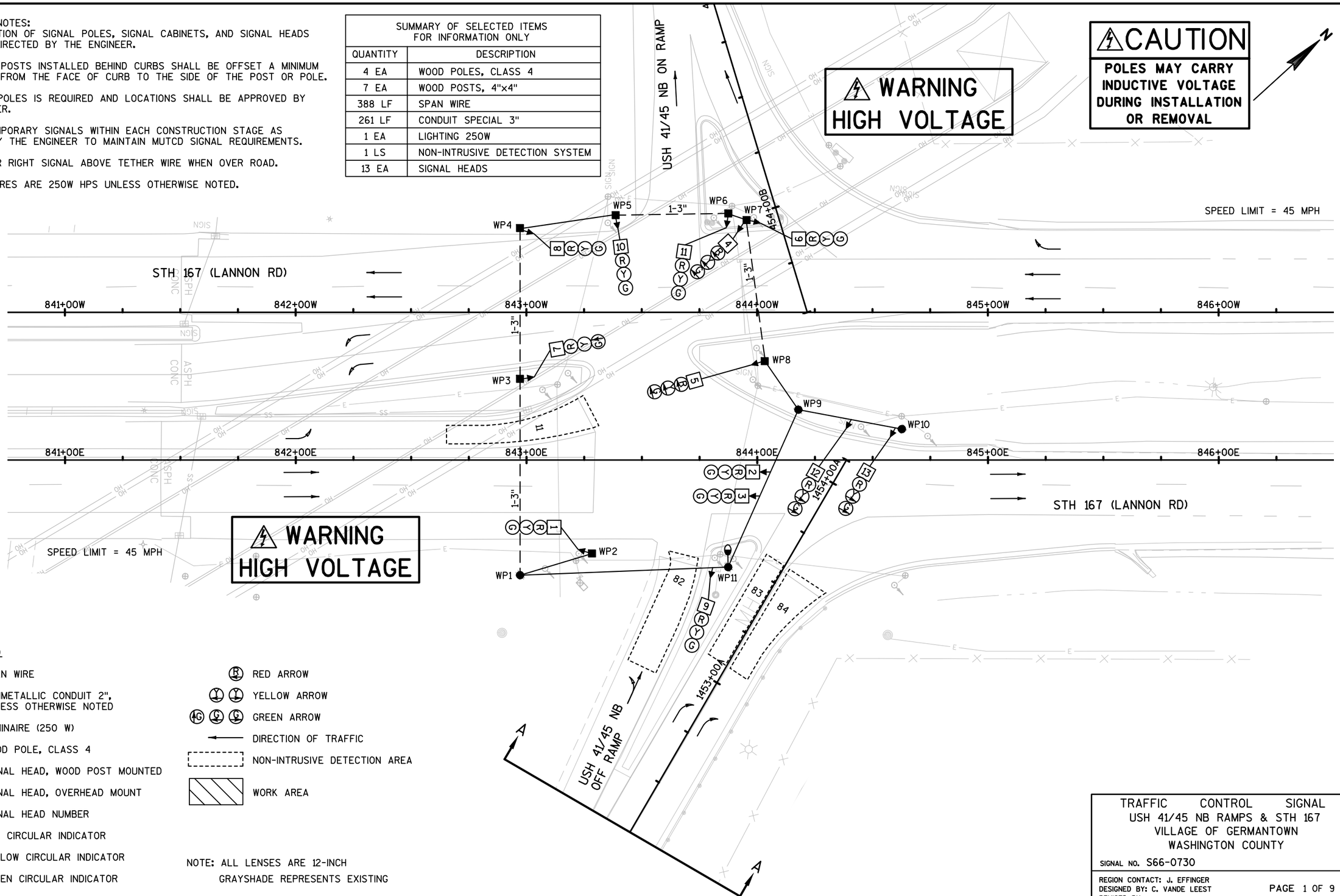
PAGE 3 OF 3

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 271	E

CONSTRUCTION NOTES:

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINETS, AND SIGNAL HEADS SHALL BE DIRECTED BY THE ENGINEER.
2. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF THE POST OR POLE.
3. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
4. ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
5. MOUNT NEAR RIGHT SIGNAL ABOVE TETHER WIRE WHEN OVER ROAD.
6. ALL LUMINAIRES ARE 250W HPS UNLESS OTHERWISE NOTED.

SUMMARY OF SELECTED ITEMS FOR INFORMATION ONLY	
QUANTITY	DESCRIPTION
4 EA	WOOD POLES, CLASS 4
7 EA	WOOD POSTS, 4"x4"
388 LF	SPAN WIRE
261 LF	CONDUIT SPECIAL 3"
1 EA	LIGHTING 250W
1 LS	NON-INTRUSIVE DETECTION SYSTEM
13 EA	SIGNAL HEADS



LEGEND

- SPAN WIRE
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LUMINAIRE (250 W)
- WOOD POLE, CLASS 4
- SIGNAL HEAD, WOOD POST MOUNTED
- SIGNAL HEAD, OVERHEAD MOUNT
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- Y YELLOW ARROW
- AG G G GREEN ARROW
- DIRECTION OF TRAFFIC
- NON-INTRUSIVE DETECTION AREA
- WORK AREA

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

TRAFFIC CONTROL SIGNAL
USH 41/45 NB RAMPS & STH 167
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0730

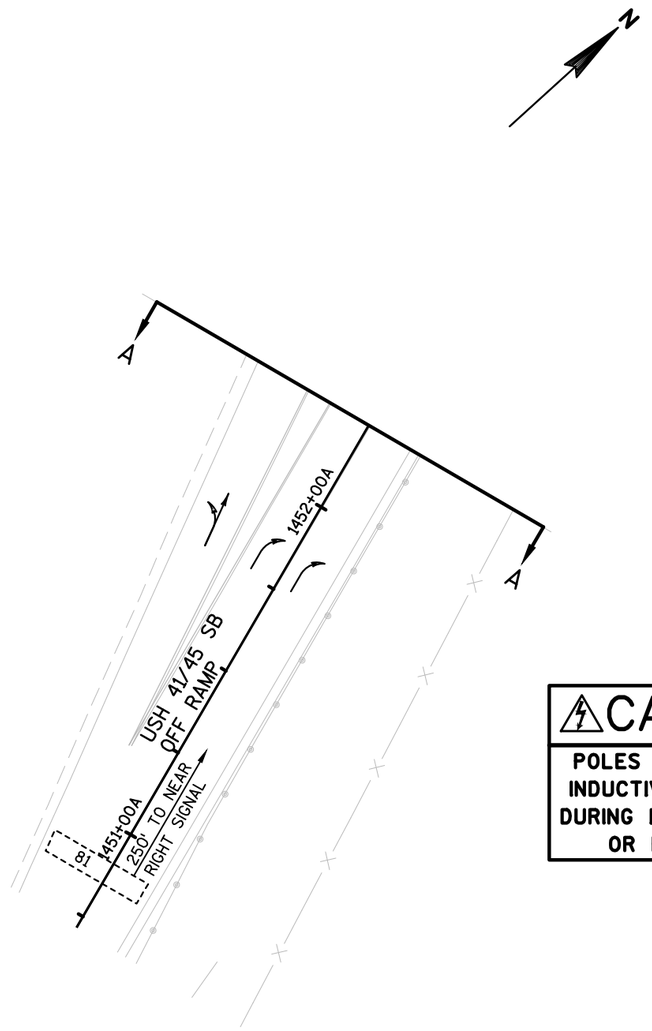
REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 1 OF 9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY TRAFFIC SIGNAL PLAN - PRECONSTRUCTION STAGE	SHEET E

FILE NAME : N:\PDS\C3D\CAD\11003800\024004_SP_1SPRECON.DWG PLOT DATE : 10/20/2014 2:21 PM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : 0.30000000 = 1'-0"_XREF
WISDOT/CADDS SHEET 42

2



⚠CAUTION

POLES MAY CARRY INDUCTIVE VOLTAGE DURING INSTALLATION OR REMOVAL

TRAFFIC CONTROL SIGNAL
USH 41/45 NB RAMPS & STH 167
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0730

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 2 OF 9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY TRAFFIC SIGNAL PLAN - PRECONSTRUCTION STAGE	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024004_SP_1SPRECON.DWG PLOT DATE : 10/20/2014 2:21 PM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : ********** WISDOT/CADDS SHEET 42

2

N

USH 41/45 NB ON RAMP

⚠ WARNING
HIGH VOLTAGE

⚠ CAUTION
POLES MAY CARRY INDUCTIVE VOLTAGE DURING INSTALLATION OR REMOVAL

SPEED LIMIT = 45 MPH

STH 167 (LANNON RD)

841+00W 842+00W 843+00W 844+00W 845+00W 846+00W

841+00E 842+00E 843+00E 844+00E 845+00E 846+00E

1453+00A

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8 WP9 WP10 WP11

1-3" 2-3" 3-3" 4-3" 5-3" 6-3" 7-3" 8-3" 9-3" 10-3" 11-3" 12-3" 13-3" 14-3" 15-3"

82 83 84

A A

USH 41/45 NB OFF RAMP

⚠ WARNING
HIGH VOLTAGE

LEGEND

- SPAN WIRE
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LUMINAIRE (250 W)
- WOOD POLE, CLASS 4
- SIGNAL HEAD, WOOD POST MOUNTED
- SIGNAL HEAD, OVERHEAD MOUNT
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- Y YELLOW ARROW
- G GREEN ARROW
- DIRECTION OF TRAFFIC
- NON-INTRUSIVE DETECTION AREA
- WORK AREA

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

TRAFFIC CONTROL SIGNAL
USH 41/45 NB RAMPS & STH 167
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0730

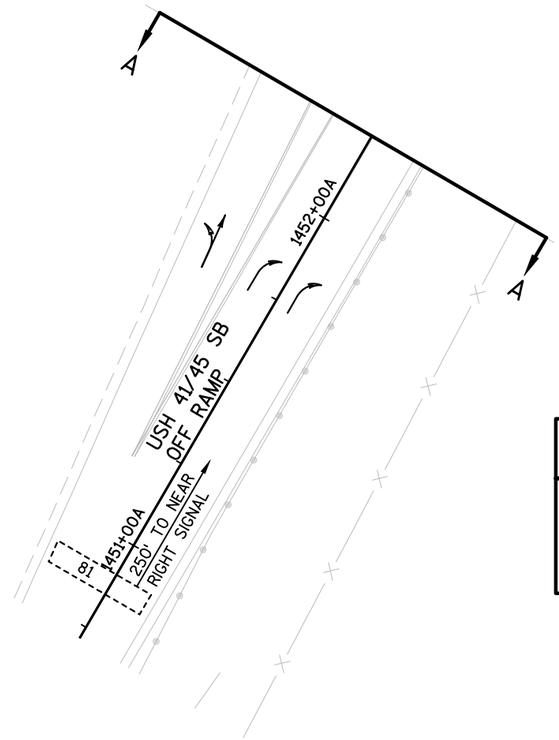
REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 3 OF 9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1A	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024004_SP_2S1A.DWG PLOT DATE : 10/20/2014 2:22 PM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : 1" = 40'_XREF

2



⚠CAUTION

POLES MAY CARRY INDUCTIVE VOLTAGE DURING INSTALLATION OR REMOVAL

TRAFFIC CONTROL SIGNAL
USH 41/45 NB RAMPS & STH 167
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0730

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 4 OF 9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1A	SHEET 275	E

2

⚠ CAUTION
POLES MAY CARRY INDUCTIVE VOLTAGE DURING INSTALLATION OR REMOVAL

⚠ WARNING
HIGH VOLTAGE

SPEED LIMIT = 45 MPH

STH 167 (LANNON RD)

USH 41/45 NB ON RAMP

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8 WP9 WP10 WP11

1-3"

454+00B

1454+00A

1453+00A

841+00W 842+00W 843+00W 844+00W 845+00W 846+00W

841+00E 842+00E 843+00E 844+00E 845+00E 846+00E

82 83 84

ASPH CONC

USH 41/45 NB OFF RAMP

⚠ WARNING
HIGH VOLTAGE

LEGEND

- SPAN WIRE
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LUMINAIRE (250 W)
- WOOD POLE, CLASS 4
- SIGNAL HEAD, WOOD POST MOUNTED
- SIGNAL HEAD, OVERHEAD MOUNT
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- Y YELLOW ARROW
- AG G G GREEN ARROW
- DIRECTION OF TRAFFIC
- NON-INTRUSIVE DETECTION AREA
- WORK AREA

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

TRAFFIC CONTROL SIGNAL
USH 41/45 NB RAMPS & STH 167
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0730

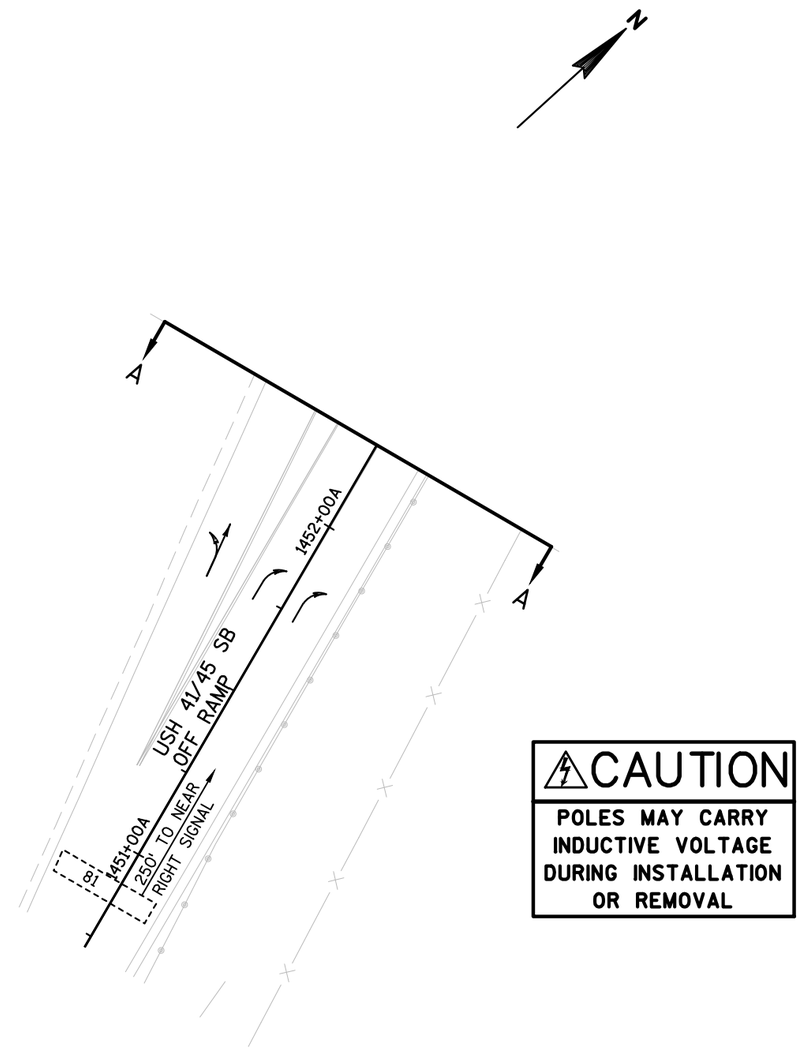
REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 5 OF 9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1B	SHEET E

FILE NAME : N:\PDS\C3D\CAD\11003800\024004_SP_3S1B.DWG PLOT DATE : 10/20/2014 2:24 PM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : 0.30000000 = 1'-0"_XREF

2



⚠CAUTION

POLES MAY CARRY INDUCTIVE VOLTAGE DURING INSTALLATION OR REMOVAL

TRAFFIC CONTROL SIGNAL
USH 41/45 NB RAMPS & STH 167
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

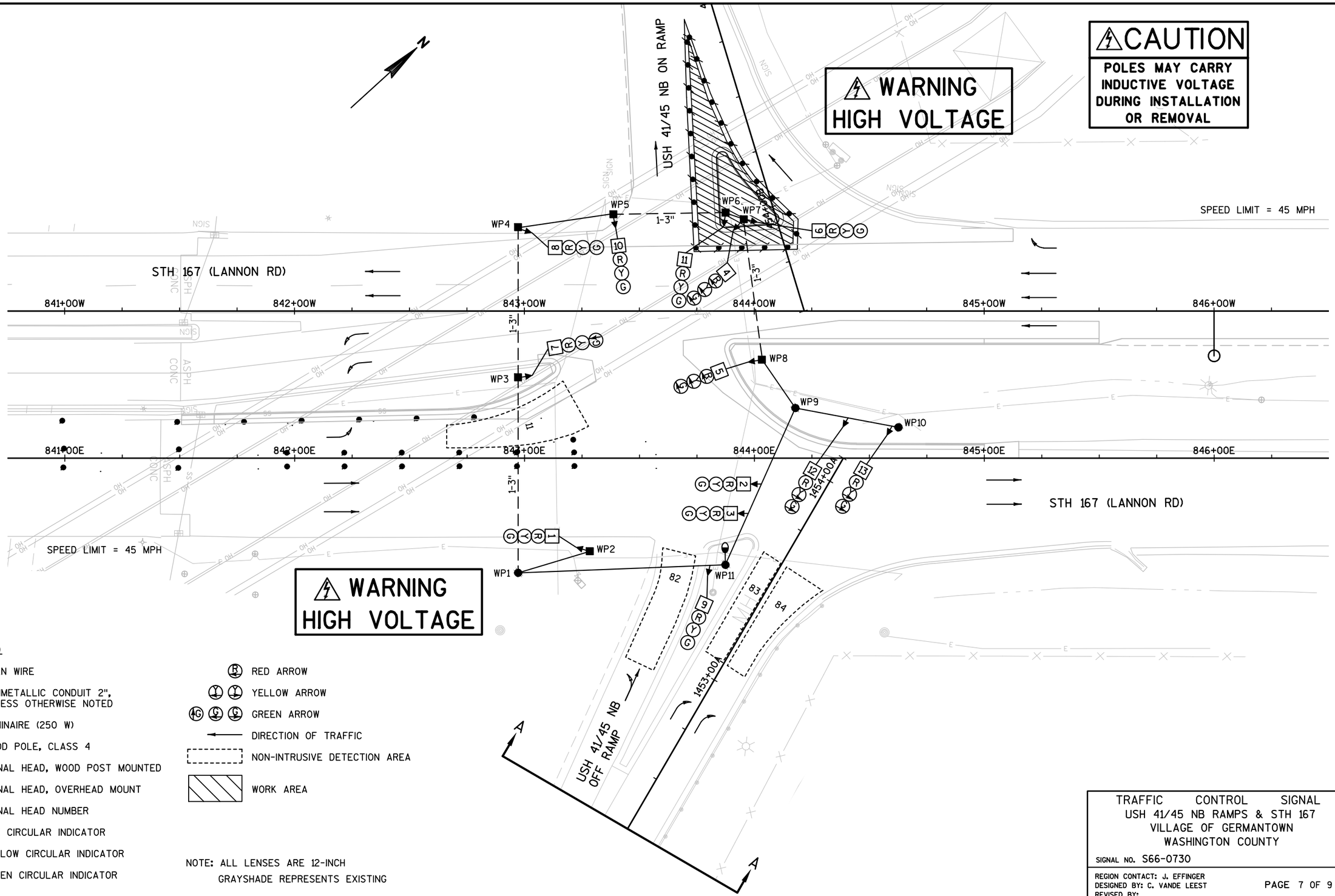
SIGNAL NO. S66-0730

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 6 OF 9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1B	SHEET 277	E

2



LEGEND

- SPAN WIRE
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LUMINAIRE (250 W)
- WOOD POLE, CLASS 4
- SIGNAL HEAD, WOOD POST MOUNTED
- SIGNAL HEAD, OVERHEAD MOUNT
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- Y YELLOW ARROW
- G GREEN ARROW
- DIRECTION OF TRAFFIC
- NON-INTRUSIVE DETECTION AREA
- WORK AREA

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

TRAFFIC CONTROL SIGNAL
USH 41/45 NB RAMPS & STH 167
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0730

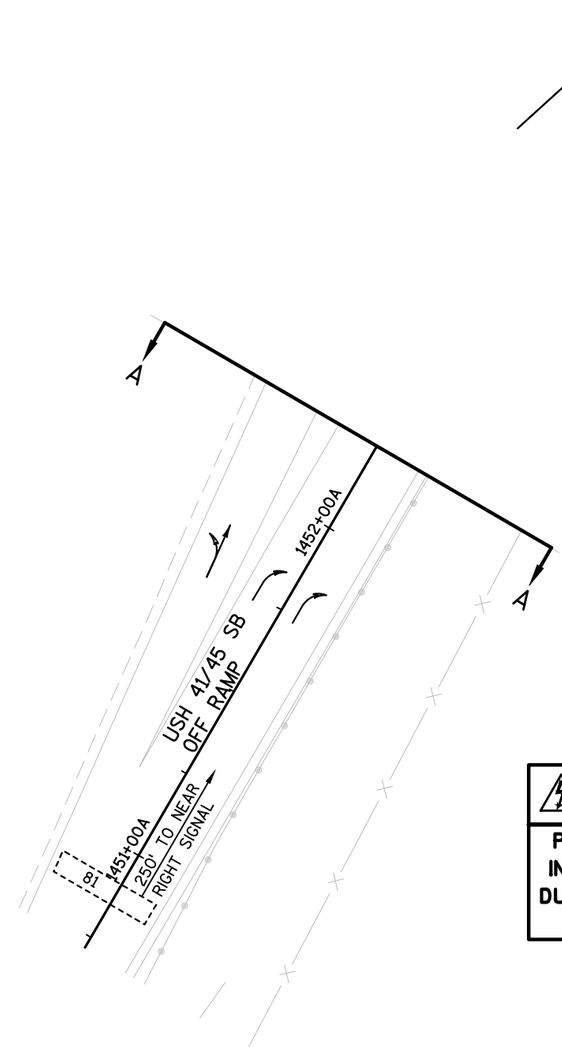
REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 7 OF 9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2	SHEET E

FILE NAME : N:\PDS\C3D\CAD\11003800\024004_SP_4S2.DWG PLOT DATE : 10/20/2014 2:35 PM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : 1" = 40'_XREF

2



⚠CAUTION

POLES MAY CARRY INDUCTIVE VOLTAGE DURING INSTALLATION OR REMOVAL

TRAFFIC CONTROL SIGNAL
USH 41/45 NB RAMPS & STH 167
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0730

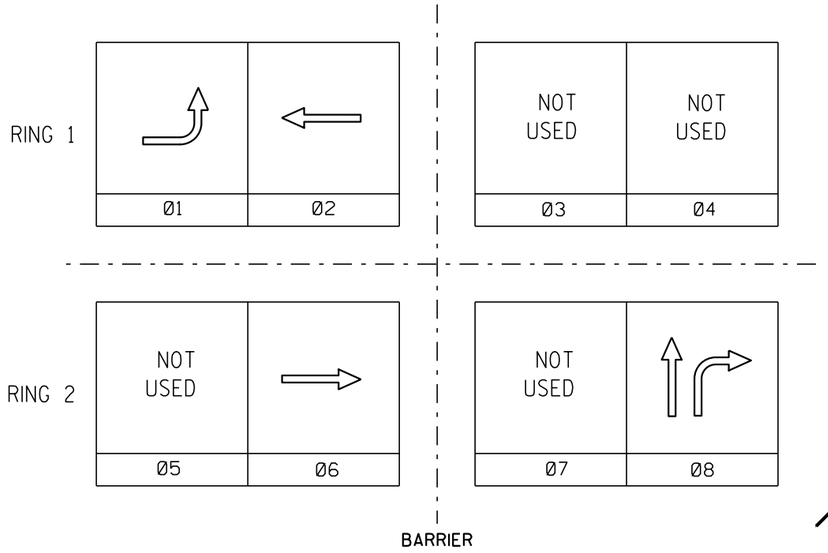
REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 8 OF 9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024004_SP_4S2.DWG PLOT DATE : 10/20/2014 2:35 PM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : **********

	HEAD NUMBERS	FLASH
Ø1	4, 5	R
Ø2	6, 7, 8	R
Ø3		
Ø4		
Ø5		
Ø6	1, 2, 3	R
Ø7		
Ø8	9, 10, 11, 12, 13	R
Ø2P		
Ø4P		
Ø6P		
Ø8P		



CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				x
2		6	MAX	x
3				
4				x
5		2		
6		2	MAX	x
7				
8				x

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	x
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	

TYPE OF COORDINATION	
NONE	
TBC	x
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM *:	SS- -

TYPE OF LIGHTING	
BY OTHER AGENCY	x
IN TRAFFIC SIGNAL CABINET	x
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	x
RAILROAD	
EMERGENCY VEHICLE	
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

DETECTOR LOGIC

DETECTOR NUMBER	AMPLIFIER CHANNEL NUMBER	DETECTOR OPERATION: CALLS AND EXTENDS	DETECTOR OPERATION: CALLS ONLY	DETECTOR OPERATION: EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
11		X			1	1					
81				X		8			X		
82		X			8	8					
83		X			8	8					
84		X			8	8		X			

USH 41/45 NB RAMPS & STH 167
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0730 CABINET TYPE:

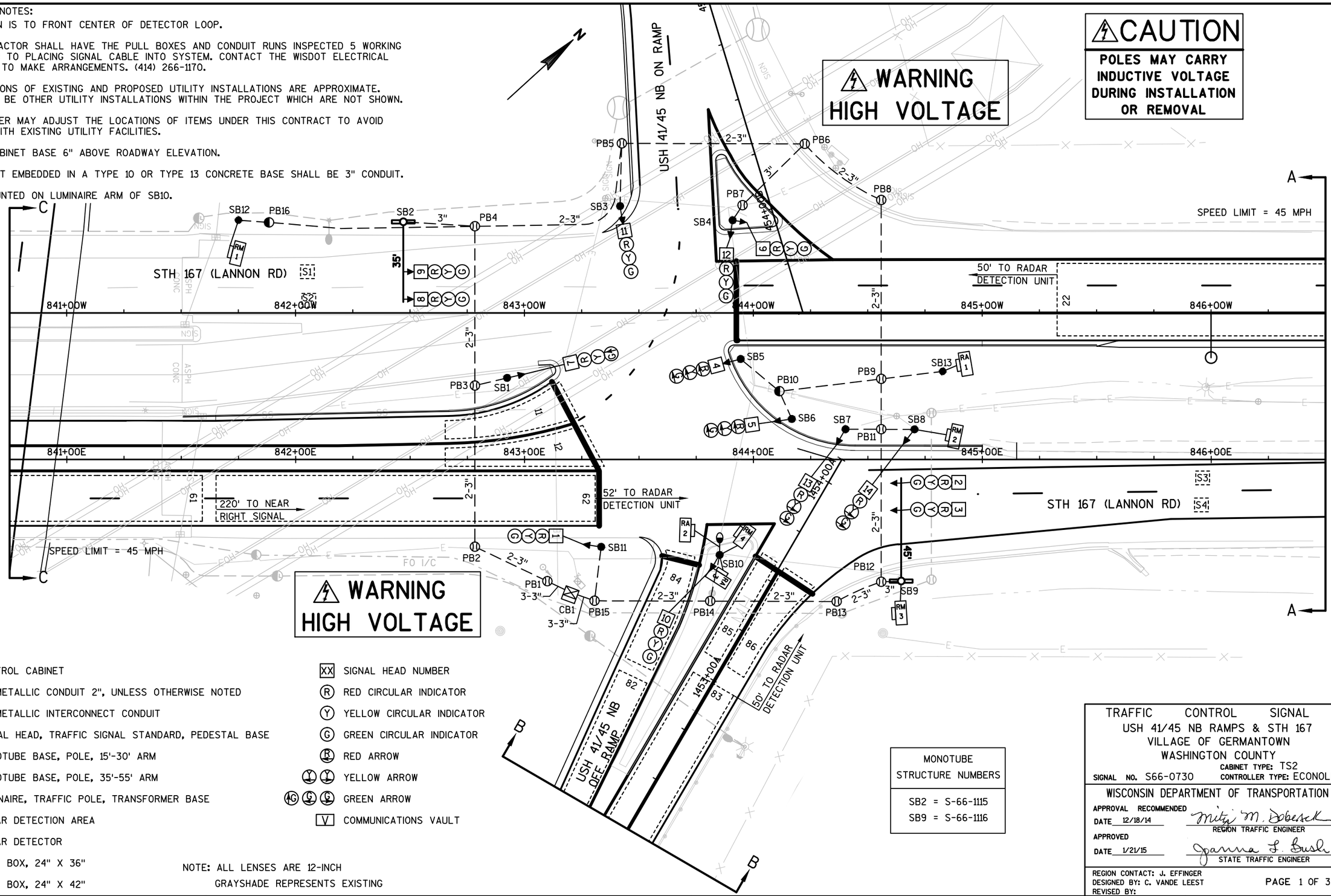
CONTROLLER TYPE: TEMP

DATE 11/3/2014 PAGE NO. 9 OF 9

FILE NAME : N:\PDS\C3D\CAD\11003800\024004_sp_5TSeq.dgn PLOT DATE : 20-OCT-2014 13:49 PLOT BY : dotcmv PLOT NAME : S-400,seq,rev2 PLOT SCALE : 40.000373:1
WISDOT/CADDS SHEET 42

CONSTRUCTION NOTES:

1. * LOCATION IS TO FRONT CENTER OF DETECTOR LOOP.
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL FIELD UNIT TO MAKE ARRANGEMENTS. (414) 266-1170.
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
4. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
5. INSTALL CABINET BASE 6" ABOVE ROADWAY ELEVATION.
6. THE CONDUIT EMBEDDED IN A TYPE 10 OR TYPE 13 CONCRETE BASE SHALL BE 3" CONDUIT.
7. RA2 IS MOUNTED ON LUMINAIRE ARM OF SB10.



LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- NONMETALLIC INTERCONNECT CONDUIT
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM
- (XX) MONOTUBE BASE, POLE, 35'-55' ARM
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- RADAR DETECTION AREA
- RADAR DETECTOR
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- Y YELLOW ARROW
- AG G G GREEN ARROW
- V COMMUNICATIONS VAULT

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

MONOTUBE STRUCTURE NUMBERS
SB2 = S-66-1115
SB9 = S-66-1116

TRAFFIC CONTROL SIGNAL
USH 41/45 NB RAMPS & STH 167
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY
SIGNAL NO. S66-0730
CABINET TYPE: TS2
CONTROLLER TYPE: ECONOLITE

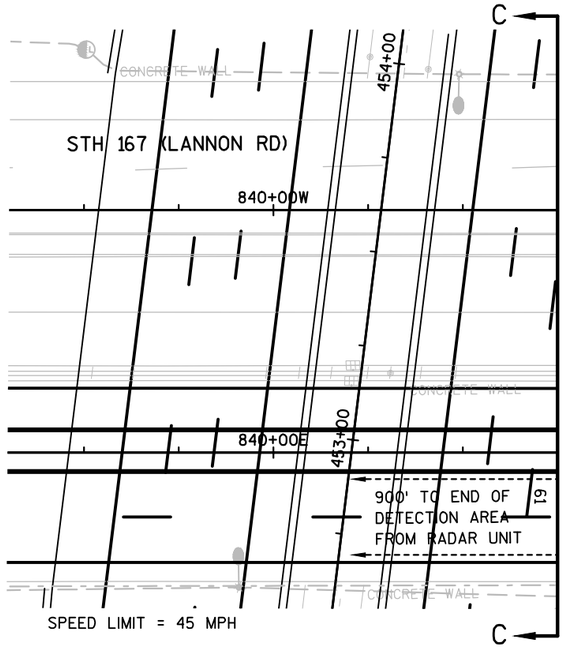
WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVAL RECOMMENDED
DATE 12/18/14 — Mitzi M. Dobersek, REGION TRAFFIC ENGINEER
APPROVED
DATE 1/21/15 — Joanna L. Bush, STATE TRAFFIC ENGINEER

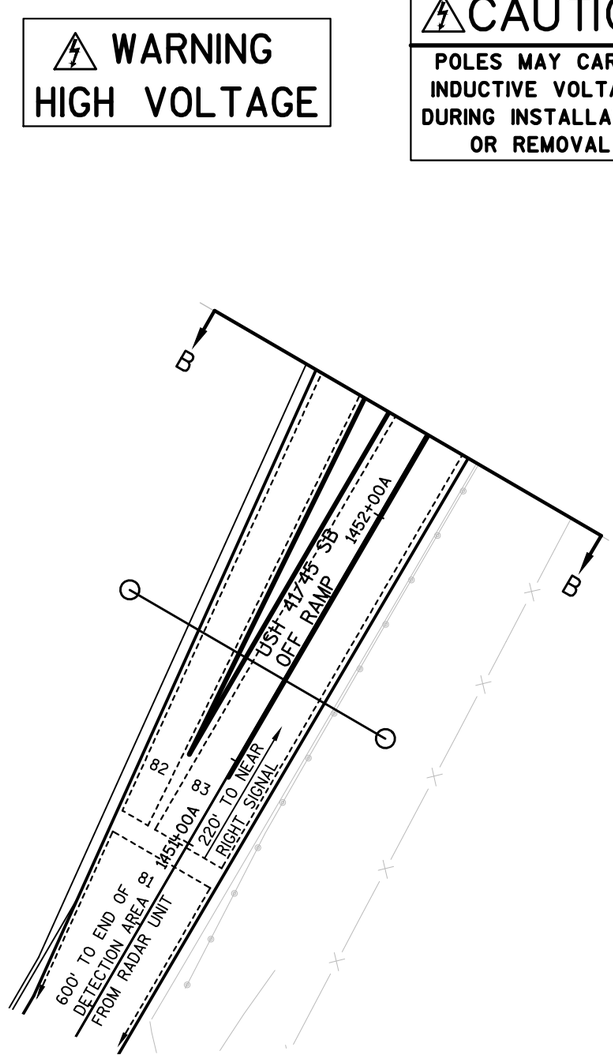
REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

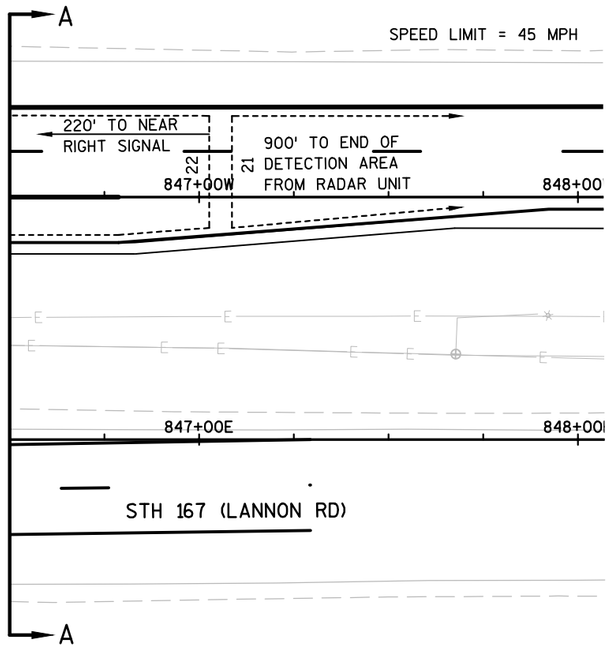
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC SIGNAL PLAN	SHEET 281	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024004_SP.DWG
PLOT DATE : 1/21/2015 12:11 PM
PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME :
PLOT SCALE : 1" = 40'_XREF
WISDOT/CADDS SHEET 42

2







⚠ WARNING
HIGH VOLTAGE

⚠CAUTION
POLES MAY CARRY INDUCTIVE VOLTAGE DURING INSTALLATION OR REMOVAL

TRAFFIC CONTROL SIGNAL
USH 41/45 NB RAMPS & STH 167
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

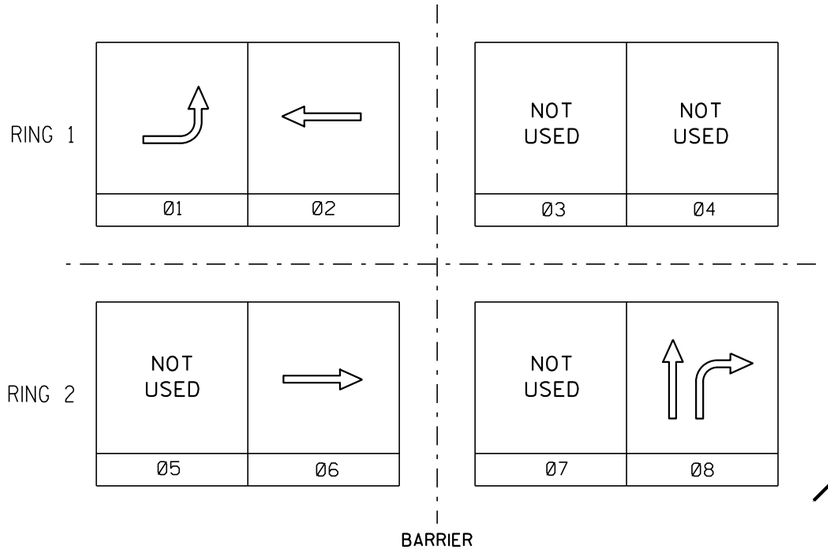
SIGNAL NO. S66-0730

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 2 OF 3

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC SIGNAL PLAN	SHEET 282	E

	HEAD NUMBERS	FLASH
Ø1	4, 5	R ←
Ø2	6, 7, 8, 9	R
Ø3		
Ø4		
Ø5		
Ø6	1, 2, 3	R
Ø7		
Ø8	10, 11, 12, 13, 14	R
Ø2P		
Ø4P		
Ø6P		
Ø8P		
OLE		-
OLF		-
OLG		-
OLH		-



CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				x
2	X	6	MIN	x
3				
4				x
5				
6	X	2	MIN	x
7				
8				x

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	x
RADIO	

TYPE OF COORDINATION	
NONE	
TBC	
TRAFFIC RESPONSIVE	x
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S66-0731
SIGNAL SYSTEM #:	SS-00-40

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	x
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	x
RAILROAD	
EMERGENCY VEHICLE	
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR #(S)	11	21	61	81	83	85	S1	S3
CALLED PHASE	1	2	6	8	8	8		
CALL OPTION	X	X	X		X	X		
DELAY TIME								
EXTEND OPTION	X	X	X	X	X	X		
EXTEND TIME				X				
USE ADDED INITIAL		X	X					
CROSS SWITCH PHASE								

19	17	23	21	27	25	31	29	DETECTOR INPUT
								PLAN LOOP DETECTOR #(S)
								CALLED PHASE
								CALL OPTION
								DELAY TIME
								EXTEND OPTION
								EXTEND TIME
								USE ADDED INITIAL
								CROSS SWITCH PHASE

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR #(S)	12	22	62	82	84	86	S2	S4
CALLED PHASE	1	2	6	8	8	8		
CALL OPTION	X	X	X	X	X	X		
DELAY TIME						X		
EXTEND OPTION	X	X	X	X	X	X		
EXTEND TIME								
USE ADDED INITIAL		X	X					
CROSS SWITCH PHASE								

20	18	24	22	28	26	32	30	DETECTOR INPUT
								PLAN LOOP DETECTOR #(S)
								CALLED PHASE
								CALL OPTION
								DELAY TIME
								EXTEND OPTION
								EXTEND TIME
								USE ADDED INITIAL
								CROSS SWITCH PHASE

USH 41/45 NB RAMPS & STH 167
VILLAGE OF GERMANTOWN
WASHINGTON COUNTY

SIGNAL NO. S66-0730 CABINET TYPE: TS2

CONTROLLER TYPE: ECONOLITE

DATE 11/3/2014 PAGE NO. 3 OF 3

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	SEQUENCE OF OPERATIONS	SHEET 283	E

PROJECT ID:	1100-38-70
INTERSECTION:	USH 41/45 NB Ramps & STH 167

Signal Wire Color Coding	BLK - black	RED - red	GRN - green
	WHT - white	BLU - blue	ORG - orange

CB1 TO	AWG14 # OF CONDUCTORS	HEAD NO.	SIGNAL INDICATION WIRE COLOR									PED BUTTON
			RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	<FLASHING YELLOW>	D/WALK	WALK	
SB1	7	7	RED	ORG				GRN				
SB2	7	8	RED	ORG	GRN							
		9	RED	ORG	GRN							
SB3	7	11	RED	ORG	GRN							
SB4	12	6	RED/BLK	ORG/BLK	GRN/BLK							
		12	RED	ORG	GRN							
SB5	7	4				RED	ORG	GRN				
SB6	7	5				RED	ORG	GRN				
SB7	7	13	RED				ORG	GRN				
SB8	7	14	RED				ORG	GRN				
SB9	7	2	RED	ORG	GRN							
		3	RED	ORG	GRN							
SB10	7	10	RED	ORG	GRN							
SB11	7	1	RED	ORG	GRN							

Equipment Grounding Conductor 10 AWG Green XLP

From	TO
CB1	SB1
SB1	SB2
SB2	SB12
SB12	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB13
SB13	SB8
SB8	SB7
SB7	SB9
SB9	SB10
SB10	SB11
SB11	CB1

Pull Box Bonding Jumper 10 AWG Green XLP

From	To
PB1	CB1
PB2	CB1
PB3	SB1
PB4	SB2
PB5	SB3
PB6	SB4
PB7	SB4
PB8	SB4
PB9	SB13
PB10	SB6
PB11	SB8
PB12	SB9
PB13	SB9
PB14	SB10
PB15	CB1
PB16	SB12

Lighting UF #12 w/ground

From	To
CB1	SB10

Radar Detection Cable

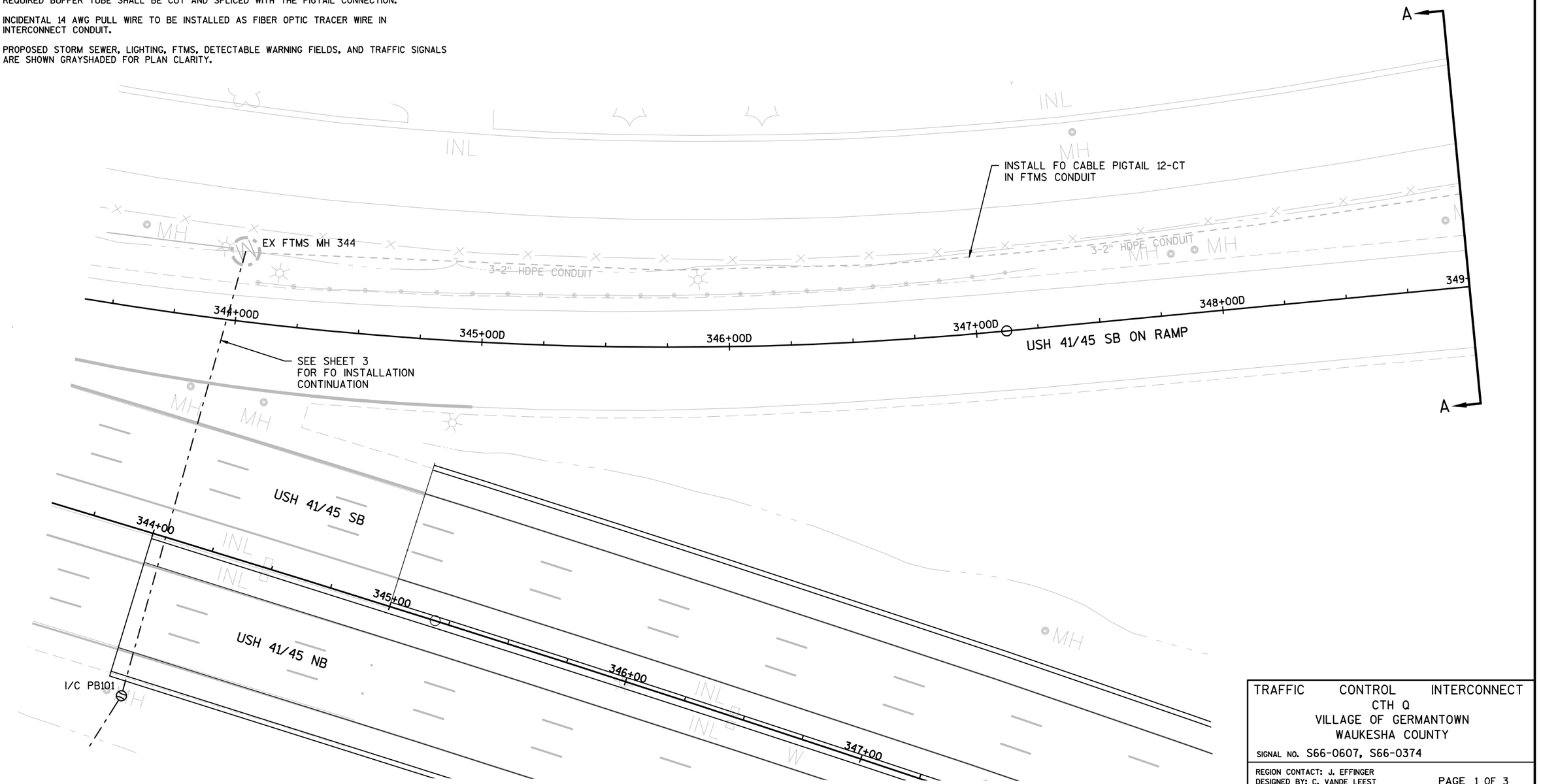
From	To
CB1	SB12 (RM1)
CB1	SB8 (RM2)
CB1	SB9 (RM3)
CB1	SB10 (RM4)
CB1	SB13 (RA1)
CB1	SB10 (RA2)
CB1	SB10 (RA3)

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING INTERCONNECT CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL UNIT AT (414 266-1170 TO MAKE ARRANGEMENTS.
2. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
4. LEAVE 100-FEET OF FIBER OPTIC INTERCONNECT PIGTAIL COILED IN EACH COMMUNICATIONS VAULT AND 30-FEET IN EACH PULL BOX.
5. THE ENTIRE MAINLINE FIBER OPTIC CABLE SHALL NOT BE CUT AND/OR SPLICED IN THE VAULTS NEAREST THE TRAFFIC SIGNAL CABINET WHILE MAKING THE PIGTAIL CONNECTION. ONLY THE REQUIRED BUFFER TUBE SHALL BE CUT AND SPLICED WITH THE PIGTAIL CONNECTION.
6. INCIDENTAL 14 AWG PULL WIRE TO BE INSTALLED AS FIBER OPTIC TRACER WIRE IN INTERCONNECT CONDUIT.
7. PROPOSED STORM SEWER, LIGHTING, FTMS, DETECTABLE WARNING FIELDS, AND TRAFFIC SIGNALS ARE SHOWN GRAYSHADED FOR PLAN CLARITY.

LEGEND

- NONMETALLIC INTERCONNECT CONDUIT 2", UNLESS OTHERWISE NOTED
- COMMUNICATIONS VAULT
- CONTROL CABINET
- PULL BOX, 24" X 42"
- PULL BOX, 24" X 36"



TRAFFIC CONTROL INTERCONNECT
CTH Q
VILLAGE OF GERMANTOWN
WAUKESHA COUNTY

SIGNAL NO. S66-0607, S66-0374

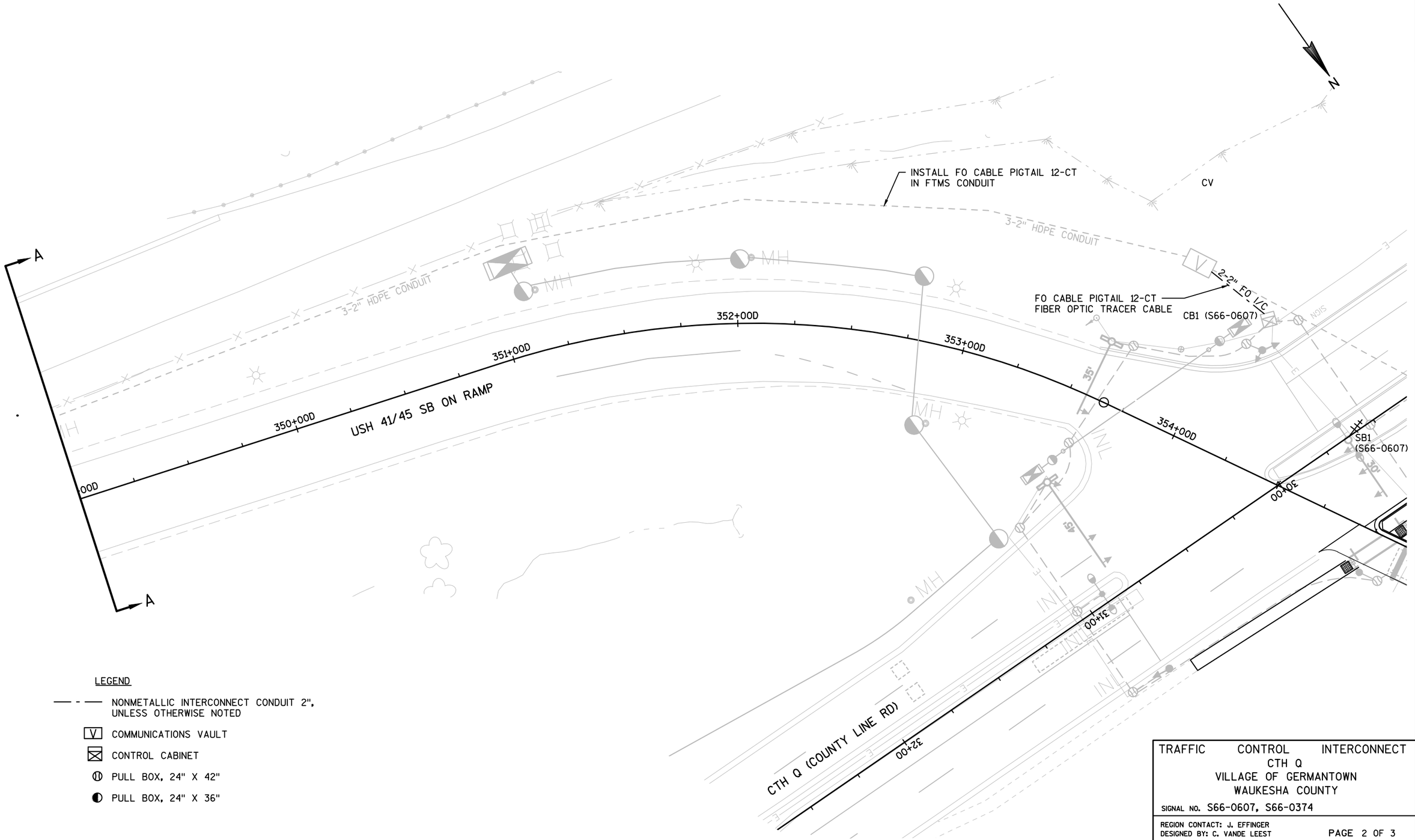
REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 1 OF 3

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024050_IC.DWG PLOT DATE : 10/20/2014 2:54 PM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : 1" = 40'_XREF
WISDOT/CADDS SHEET 42

2



LEGEND

- NONMETALLIC INTERCONNECT CONDUIT 2", UNLESS OTHERWISE NOTED
- COMMUNICATIONS VAULT
- CONTROL CABINET
- PULL BOX, 24" X 42"
- PULL BOX, 24" X 36"

TRAFFIC CONTROL INTERCONNECT
CTH Q
VILLAGE OF GERMANTOWN
WAUKESHA COUNTY

SIGNAL NO. S66-0607, S66-0374

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 2 OF 3

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024050_IC.DWG PLOT DATE : 10/20/2014 2:55 PM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42

LEGEND

NONMETALLIC INTERCONNECT CONDUIT 2", UNLESS OTHERWISE NOTED

COMMUNICATIONS VAULT

CONTROL CABINET

PULL BOX, 24" X 42"

PULL BOX, 24" X 36"

N

346+00D

345+00D

USH 41/45 SB ON RAMP

346+00

345+00

USH 41/45 SB

USH 41/45 NB

FO CABLE PIGTAIL 8-CT
FIBER OPTIC TRACER CABLE

I/C PB101

EX FTMS MH 344

344+00D

2-2" FO I/C

344+00

343+00D

343+00

3-2" HDPE CONDUIT

MH

INL

SIGN

I/C PB102

2-2" FO I/C

I/C PB103

346+00A

345+00A

344+00A

343+00A

SB7
(S66-0374)

41+00

30°

CTH Q (COUNTY LINE RD)

CB1 (S66-0374)

2-2" FO I/C

FO CABLE PIGTAIL 8-CT
FIBER OPTIC TRACER CABLE

TRAFFIC CONTROL INTERCONNECT
CTH Q
VILLAGE OF GERMANTOWN
WAUKESHA COUNTY

SIGNAL NO. S66-0607, S66-0374

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 3 OF 3

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024050_IC.DWG PLOT DATE : 10/20/2014 2:55 PM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42

LEGEND

NONMETALLIC INTERCONNECT CONDUIT 2", UNLESS OTHERWISE NOTED

COMMUNICATIONS VAULT

CONTROL CABINET

PULL BOX, 24" X 42"

PULL BOX, 24" X 36"

CV454

CV452

CB1 (S66-0731)

I/C PB201

I/C PB202

I/C PB203

EX I/C PB204

2-2" FO I/C

FIBER OPTIC SPLICE USE FIBER OPTIC SPLICE ENCLOSURE PER FTMS PLANS

FO CABLE PIGTAIL 12-CT FIBER OPTIC TRACER CABLE

FO CABLE PIGTAIL 12-CT IN EXISTING CONDUIT IN BRIDGE PARAPET

STH 167 (LANNON RD)

835+00W 836+00W 837+00W 838+00W 839+00W

835+00E 836+00E 837+00E 838+00E 839+00E

1453+00D 1452+00D 1451+00D

USH 41/45 SB ON RAMP

USH 41/45 SB

CONCRETE WALL

CONC ASPH

35'

30'

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING INTERCONNECT CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL UNIT AT (414 266-1170 TO MAKE ARRANGEMENTS.
2. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
4. LEAVE 100-FEET OF FIBER OPTIC INTERCONNECT PIGTAIL COILED IN EACH COMMUNICATIONS VAULT AND 30-FEET IN EACH PULL BOX.
5. THE ENTIRE MAINLINE FIBER OPTIC CABLE SHALL NOT BE CUT AND/OR SPLICED IN THE VAULTS NEAREST THE TRAFFIC SIGNAL CABINET WHILE MAKING THE PIGTAIL CONNECTION. ONLY THE REQUIRED BUFFER TUBE SHALL BE CUT AND SPLICED WITH THE PIGTAIL CONNECTION.
6. INCIDENTAL 14 AWG PULL WIRE TO BE INSTALLED AS FIBER OPTIC TRACER WIRE IN INTERCONNECT CONDUIT.
7. PROPOSED STORM SEWER, LIGHTING, FTMS, DETECTABLE WARNING FIELDS, AND TRAFFIC SIGNALS ARE SHOWN GRAYSHADED FOR PLAN CLARITY.

TRAFFIC CONTROL INTERCONNECT
STH 167 (LANNON RD)
VILLAGE OF GERMANTOWN
WAUKESHA COUNTY

SIGNAL NO. S66-0731, S66-0730

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

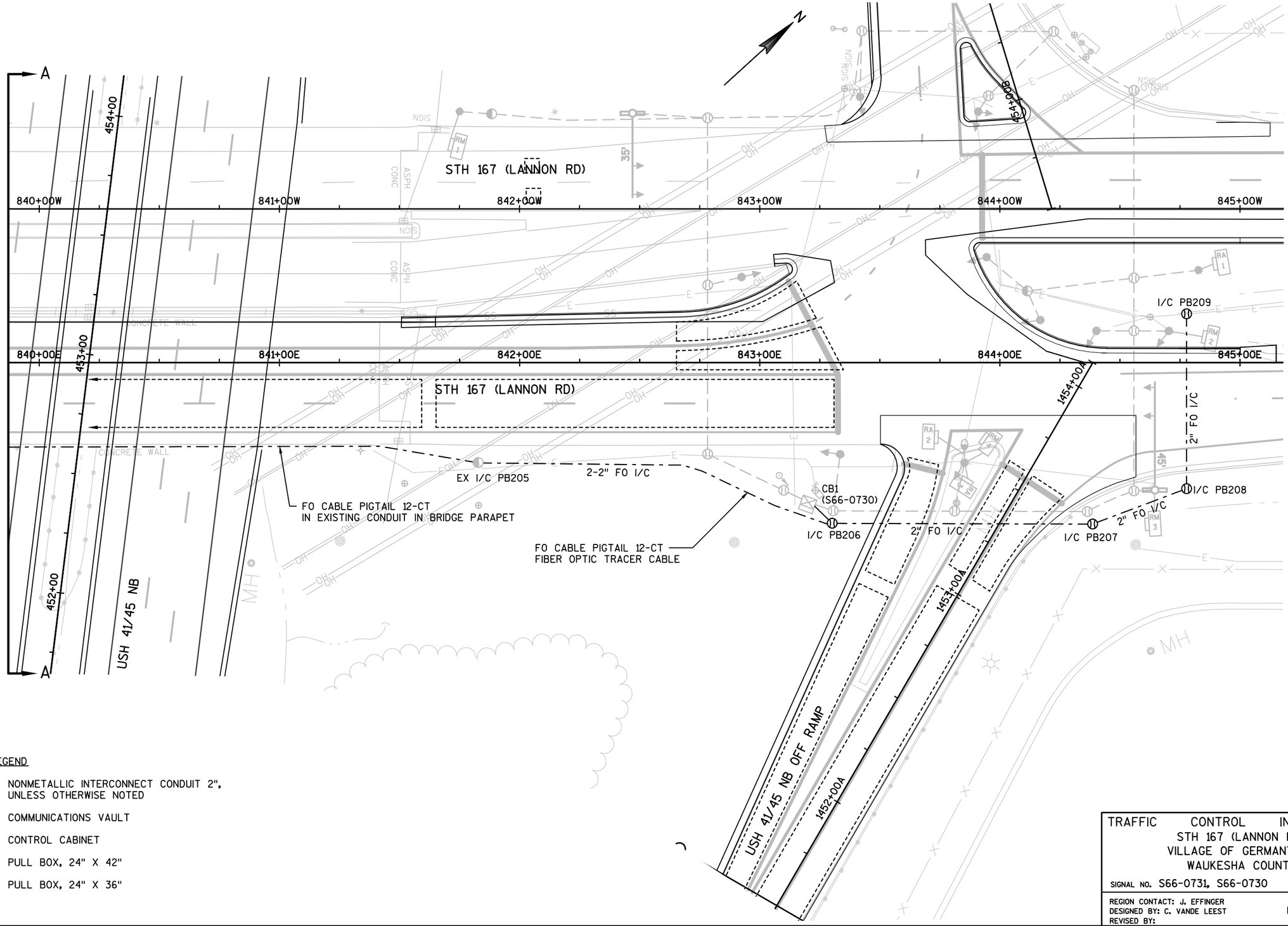
PAGE 1 OF 2

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024050_IC.DWG PLOT DATE : 10/20/2014 2:55 PM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42

2



LEGEND

- NONMETALLIC INTERCONNECT CONDUIT 2", UNLESS OTHERWISE NOTED
- COMMUNICATIONS VAULT
- CONTROL CABINET
- PULL BOX, 24" X 42"
- PULL BOX, 24" X 36"

TRAFFIC CONTROL INTERCONNECT
STH 167 (LANNON RD)
VILLAGE OF GERMANTOWN
WAUKESHA COUNTY

SIGNAL NO. S66-0731, S66-0730

REGION CONTACT: J. EFFINGER
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 2 OF 2

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET 289	E

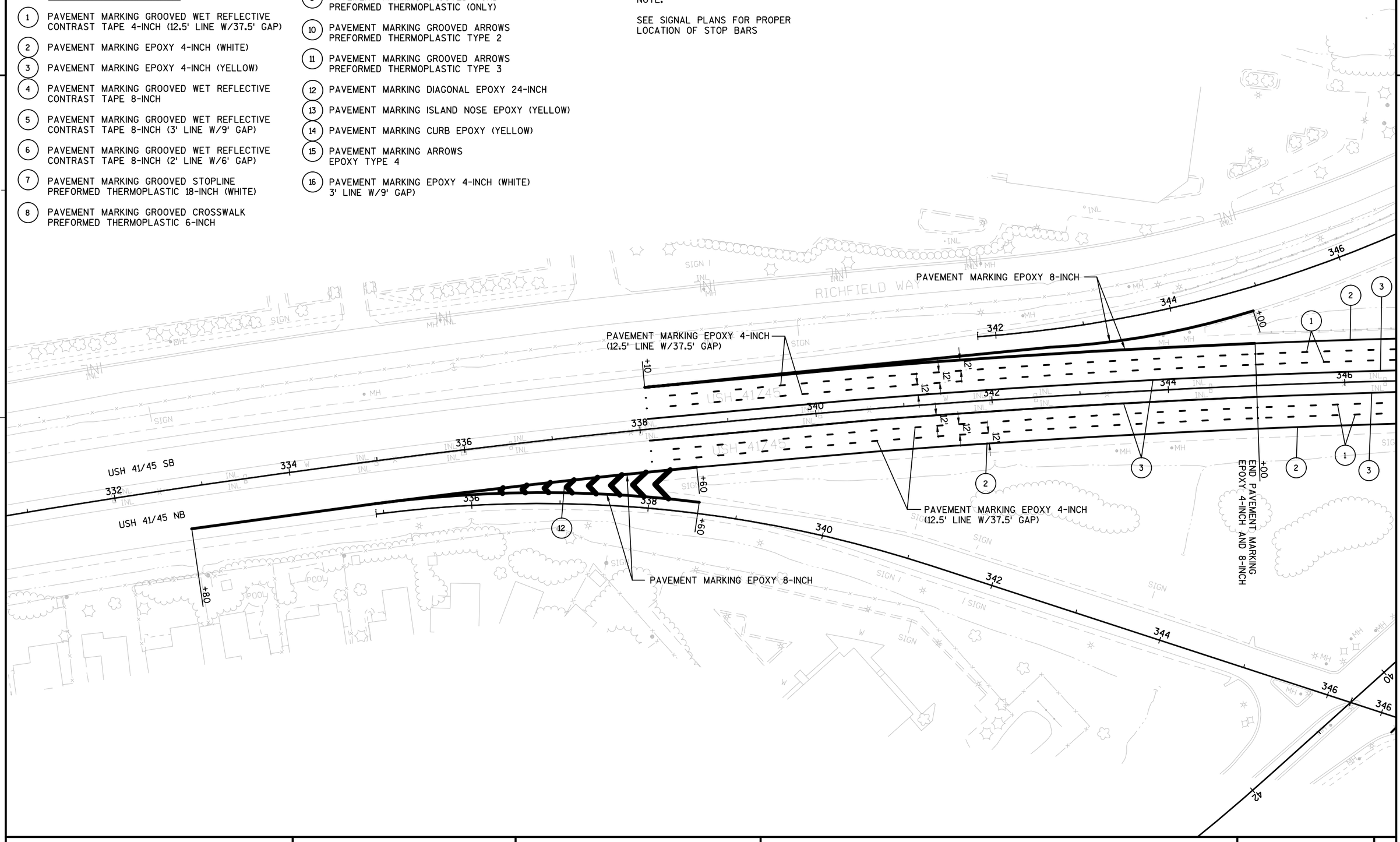
2

PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5' LINE W/37.5' GAP)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
4. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH
5. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3' LINE W/9' GAP)
6. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2' LINE W/6' GAP)
7. PAVEMENT MARKING GROOVED STOPLINE PREFORMED THERMOPLASTIC 18-INCH (WHITE)
8. PAVEMENT MARKING GROOVED CROSSWALK PREFORMED THERMOPLASTIC 6-INCH
9. PAVEMENT MARKING GROOVED WORD PREFORMED THERMOPLASTIC (ONLY)
10. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 2
11. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 3
12. PAVEMENT MARKING DIAGONAL EPOXY 24-INCH
13. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
14. PAVEMENT MARKING CURB EPOXY (YELLOW)
15. PAVEMENT MARKING ARROWS EPOXY TYPE 4
16. PAVEMENT MARKING EPOXY 4-INCH (WHITE) 3' LINE W/9' GAP)

NOTE:

SEE SIGNAL PLANS FOR PROPER LOCATION OF STOP BARS



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024500_PM.DWG PLOT DATE : 3/26/2015 2:15 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5' LINE W/37.5' GAP)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
4. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH
5. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3' LINE W/9' GAP)
6. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2' LINE W/6' GAP)
7. PAVEMENT MARKING GROOVED STOPLINE PREFORMED THERMOPLASTIC 18-INCH (WHITE)
8. PAVEMENT MARKING GROOVED CROSSWALK PREFORMED THERMOPLASTIC 6-INCH
9. PAVEMENT MARKING GROOVED WORD PREFORMED THERMOPLASTIC (ONLY)
10. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 2
11. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 3
12. PAVEMENT MARKING DIAGONAL EPOXY 24-INCH
13. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
14. PAVEMENT MARKING CURB EPOXY (YELLOW)
15. PAVEMENT MARKING ARROWS EPOXY TYPE 4
16. PAVEMENT MARKING EPOXY 4-INCH (WHITE) 3' LINE W/9' GAP)

NOTE:

SEE SIGNAL PLANS FOR PROPER LOCATION OF STOP BARS

27+44.40, -36.11' LT

28+45.16, -46.00' LT

PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (10' SPACING)

PAVEMENT MARKING EPOXY 4-INCH (12.5' LINE W/37.5' GAP)

USH 41/45 SB

USH 41/45 NB

CTH Q

USH 41/45

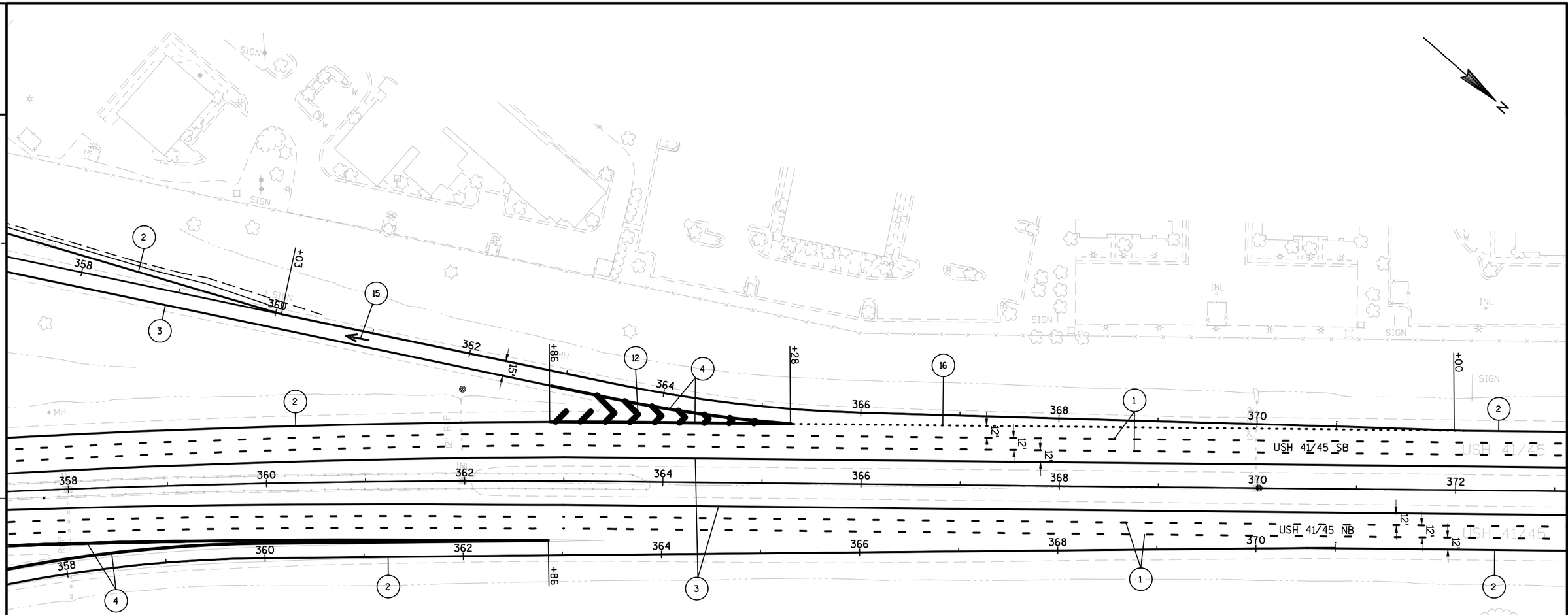
2

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024501_PM.DWG PLOT DATE : 12/15/2014 5:07 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2



PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5' LINE W/37.5' GAP)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
4. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH
5. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3' LINE W/9' GAP)
6. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2' LINE W/6' GAP)
7. PAVEMENT MARKING GROOVED STOPLINE PREFORMED THERMOPLASTIC 18-INCH (WHITE)
8. PAVEMENT MARKING GROOVED CROSSWALK PREFORMED THERMOPLASTIC 6-INCH
9. PAVEMENT MARKING GROOVED WORD PREFORMED THERMOPLASTIC (ONLY)
10. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 2
11. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 3
12. PAVEMENT MARKING DIAGONAL EPOXY 24-INCH
13. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
14. PAVEMENT MARKING CURB EPOXY (YELLOW)
15. PAVEMENT MARKING ARROWS EPOXY TYPE 4
16. PAVEMENT MARKING EPOXY 4-INCH (WHITE) 3' LINE W/9' GAP)

NOTE:

SEE SIGNAL PLANS FOR PROPER LOCATION OF STOP BARS

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET 292	E

2

2

N

GOLF GREEN

GOLF COURSE

SIGN

INL

W

USH 41/45 SB

USH 41/45 NB

12"

12" RCP

6" CMP

374 376 378 380 382 384 386 388

U/C

NOTE:

SEE SIGNAL PLANS FOR PROPER LOCATION OF STOP BARS

PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5' LINE W/37.5' GAP)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
4. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH
5. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3' LINE W/9' GAP)
6. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2' LINE W/6' GAP)
7. PAVEMENT MARKING GROOVED STOPLINE PREFORMED THERMOPLASTIC 18-INCH (WHITE)
8. PAVEMENT MARKING GROOVED CROSSWALK PREFORMED THERMOPLASTIC 6-INCH
9. PAVEMENT MARKING GROOVED WORD PREFORMED THERMOPLASTIC (ONLY)
10. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 2
11. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 3
12. PAVEMENT MARKING DIAGONAL EPOXY 24-INCH
13. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
14. PAVEMENT MARKING CURB EPOXY (YELLOW)
15. PAVEMENT MARKING ARROWS EPOXY TYPE 4
16. PAVEMENT MARKING EPOXY 4-INCH (WHITE) 3' LINE W/9' GAP)

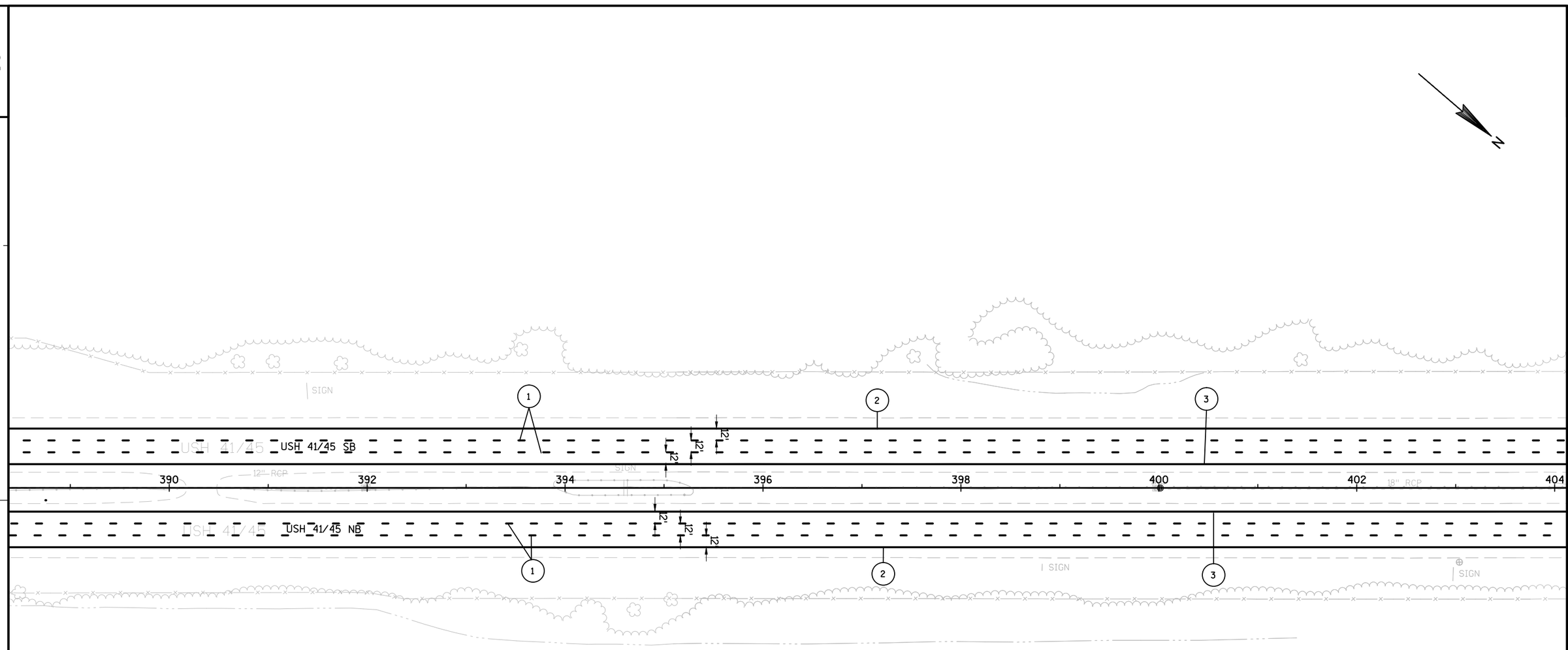
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024503_PM.DWG PLOT DATE : 12/15/2014 5:09 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

2



PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5' LINE W/37.5' GAP)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
4. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH
5. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3' LINE W/9' GAP)
6. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2' LINE W/6' GAP)
7. PAVEMENT MARKING GROOVED STOPLINE PREFORMED THERMOPLASTIC 18-INCH (WHITE)
8. PAVEMENT MARKING GROOVED CROSSWALK PREFORMED THERMOPLASTIC 6-INCH
9. PAVEMENT MARKING GROOVED WORD PREFORMED THERMOPLASTIC (ONLY)
10. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 2
11. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 3
12. PAVEMENT MARKING DIAGONAL EPOXY 24-INCH
13. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
14. PAVEMENT MARKING CURB EPOXY (YELLOW)
15. PAVEMENT MARKING ARROWS EPOXY TYPE 4
16. PAVEMENT MARKING EPOXY 4-INCH (WHITE) 3' LINE W/9' GAP)

NOTE:

SEE SIGNAL PLANS FOR PROPER LOCATION OF STOP BARS

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024504_PM.DWG PLOT DATE : 12/15/2014 5:09 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

2

N

SIGN

1

2

3

12'

12'

12'

USH 41/45 SB

USH 41/45

404 406 408 410 412 414 416 418

INL

18" RCP

INL

18" RCP

INL

12'

12'

12'

USH 41/45 NB

USH 41/45

1

2

3

SIGN

SIGN

PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5' LINE W/37.5' GAP)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
4. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH
5. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3' LINE W/9' GAP)
6. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2' LINE W/6' GAP)
7. PAVEMENT MARKING GROOVED STOPLINE PREFORMED THERMOPLASTIC 18-INCH (WHITE)
8. PAVEMENT MARKING GROOVED CROSSWALK PREFORMED THERMOPLASTIC 6-INCH
9. PAVEMENT MARKING GROOVED WORD PREFORMED THERMOPLASTIC (ONLY)
10. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 2
11. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 3
12. PAVEMENT MARKING DIAGONAL EPOXY 24-INCH
13. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
14. PAVEMENT MARKING CURB EPOXY (YELLOW)
15. PAVEMENT MARKING ARROWS EPOXY TYPE 4
16. PAVEMENT MARKING EPOXY 4-INCH (WHITE) 3' LINE W/9' GAP)

NOTE:

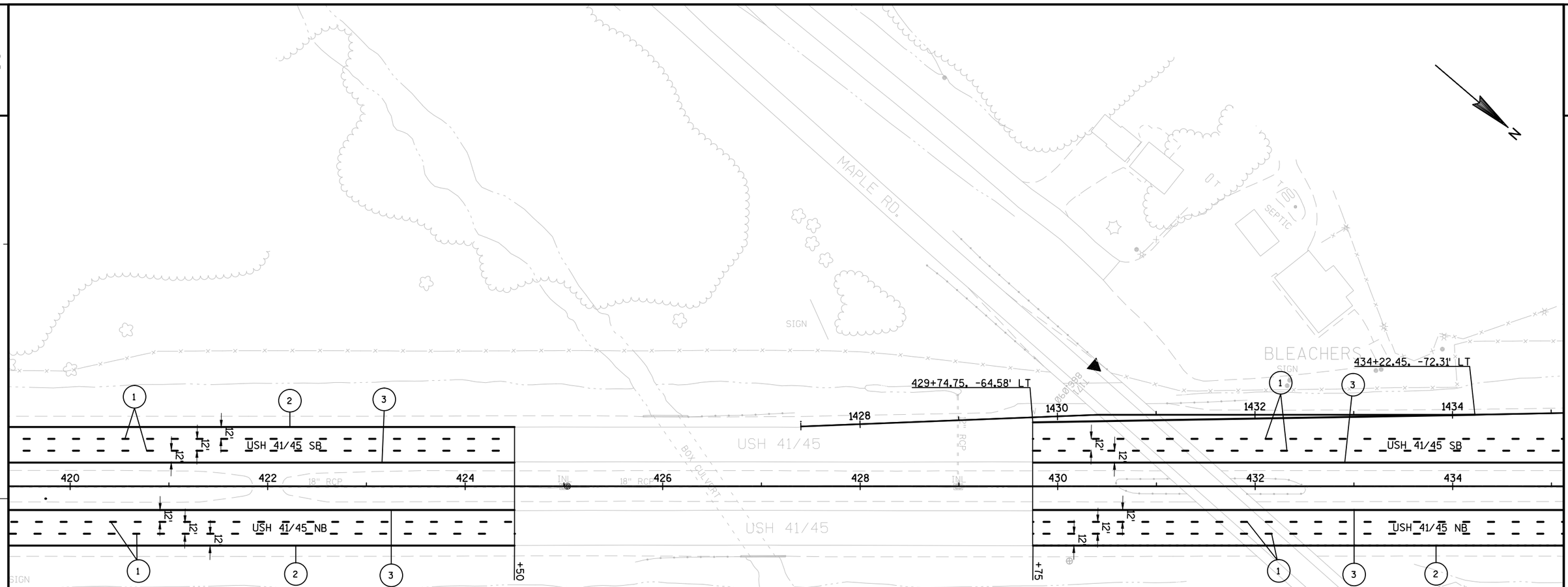
SEE SIGNAL PLANS FOR PROPER LOCATION OF STOP BARS

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024505_PM.DWG PLOT DATE : 12/15/2014 5:10 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2



PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5' LINE W/37.5' GAP)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
4. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH
5. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3' LINE W/9' GAP)
6. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2' LINE W/6' GAP)
7. PAVEMENT MARKING GROOVED STOPLINE PREFORMED THERMOPLASTIC 18-INCH (WHITE)
8. PAVEMENT MARKING GROOVED CROSSWALK PREFORMED THERMOPLASTIC 6-INCH
9. PAVEMENT MARKING GROOVED WORD PREFORMED THERMOPLASTIC (ONLY)
10. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 2
11. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 3
12. PAVEMENT MARKING DIAGONAL EPOXY 24-INCH
13. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
14. PAVEMENT MARKING CURB EPOXY (YELLOW)
15. PAVEMENT MARKING ARROWS EPOXY TYPE 4
16. PAVEMENT MARKING EPOXY 4-INCH (WHITE) 3' LINE W/9' GAP)

NOTE:

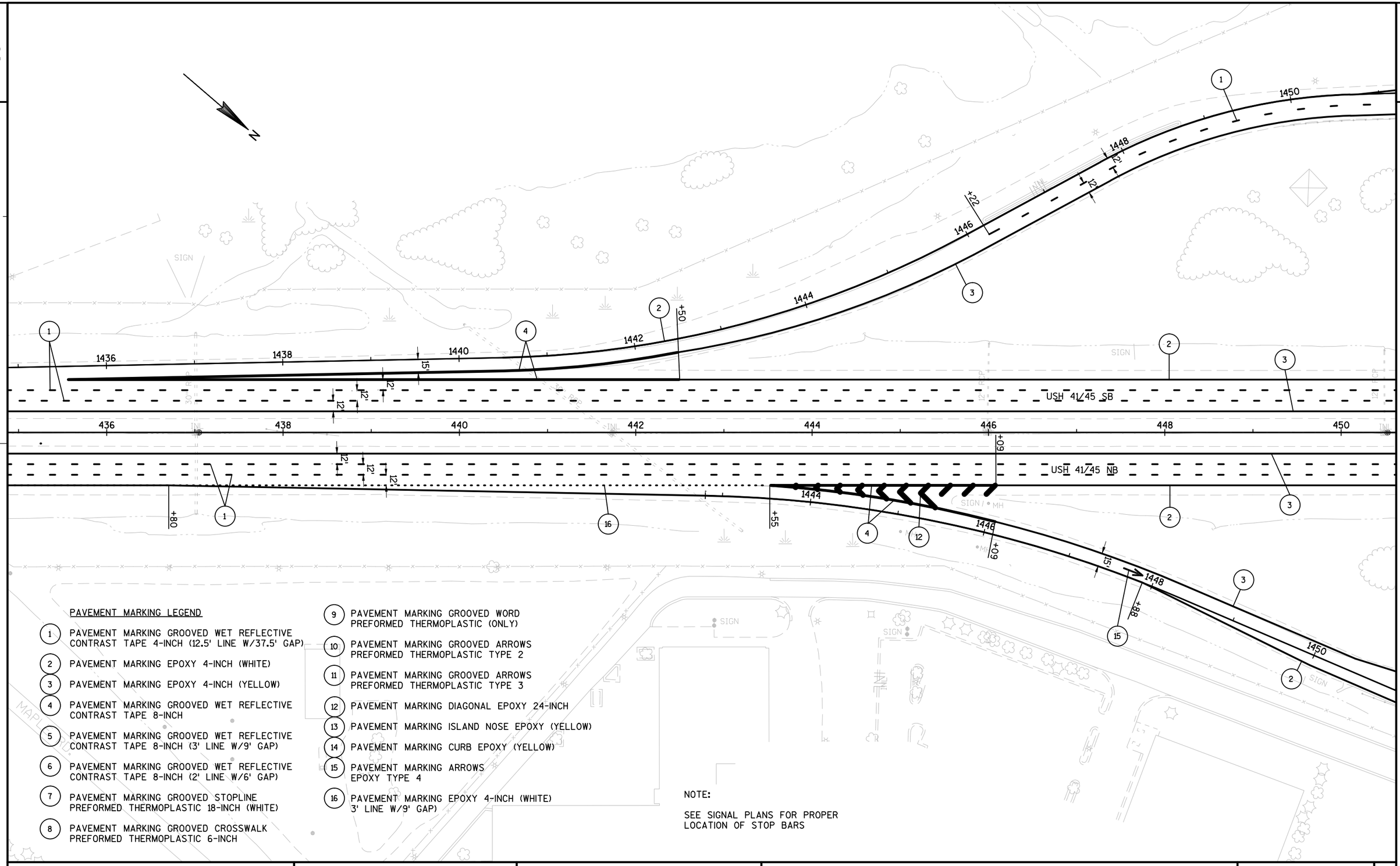
SEE SIGNAL PLANS FOR PROPER LOCATION OF STOP BARS

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024506_PM.DWG PLOT DATE : 12/15/2014 5:11 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF
WISDOT/CADDS SHEET 42

2

2



PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5' LINE W/37.5' GAP)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
4. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH
5. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3' LINE W/9' GAP)
6. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2' LINE W/6' GAP)
7. PAVEMENT MARKING GROOVED STOPLINE PREFORMED THERMOPLASTIC 18-INCH (WHITE)
8. PAVEMENT MARKING GROOVED CROSSWALK PREFORMED THERMOPLASTIC 6-INCH
9. PAVEMENT MARKING GROOVED WORD PREFORMED THERMOPLASTIC (ONLY)
10. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 2
11. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 3
12. PAVEMENT MARKING DIAGONAL EPOXY 24-INCH
13. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
14. PAVEMENT MARKING CURB EPOXY (YELLOW)
15. PAVEMENT MARKING ARROWS EPOXY TYPE 4
16. PAVEMENT MARKING EPOXY 4-INCH (WHITE) 3' LINE W/9' GAP)

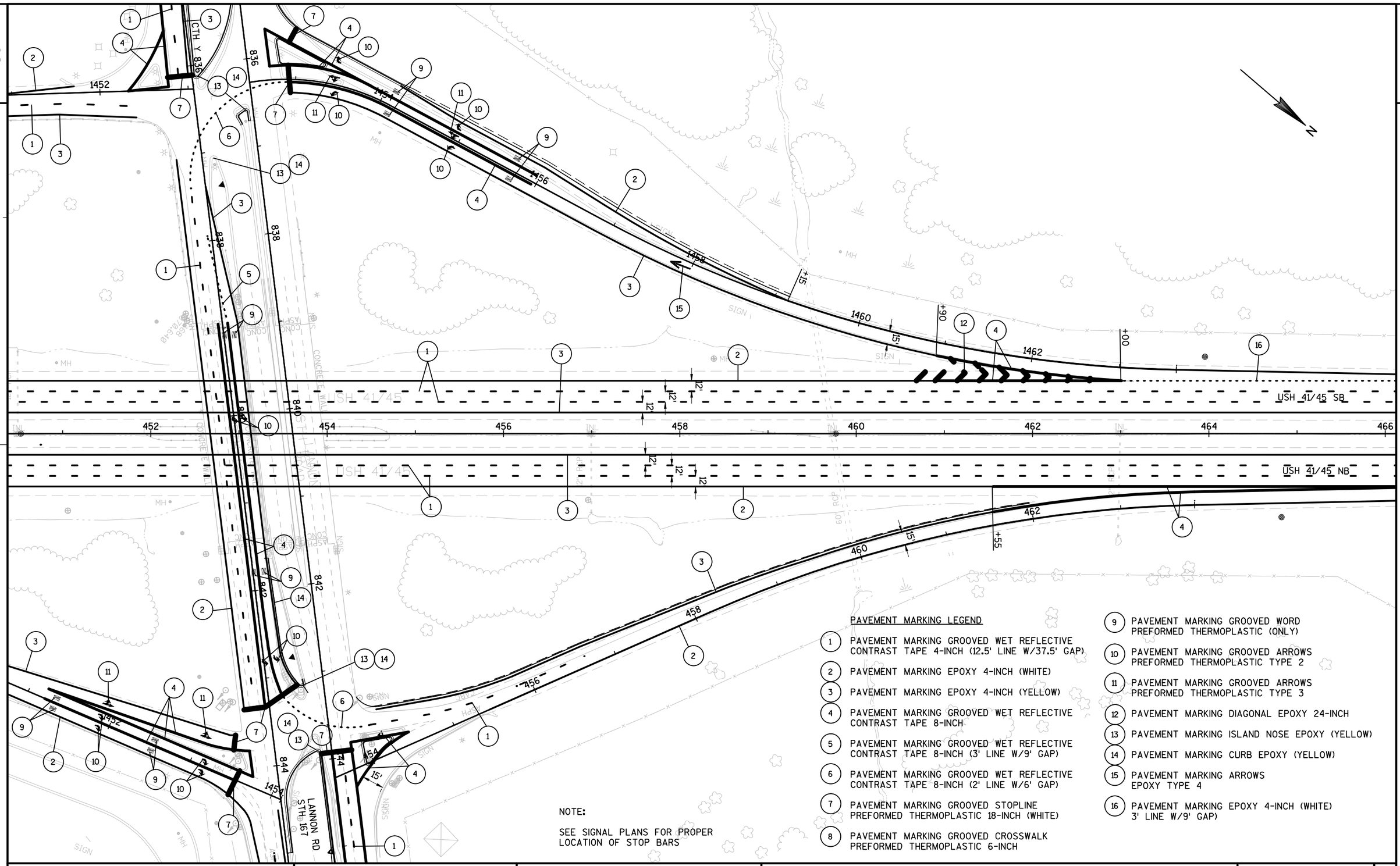
NOTE:

SEE SIGNAL PLANS FOR PROPER LOCATION OF STOP BARS

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024507_PM.DWG PLOT DATE : 12/15/2014 5:11 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF
WISDOT/CADDS SHEET 42

2



NOTE:

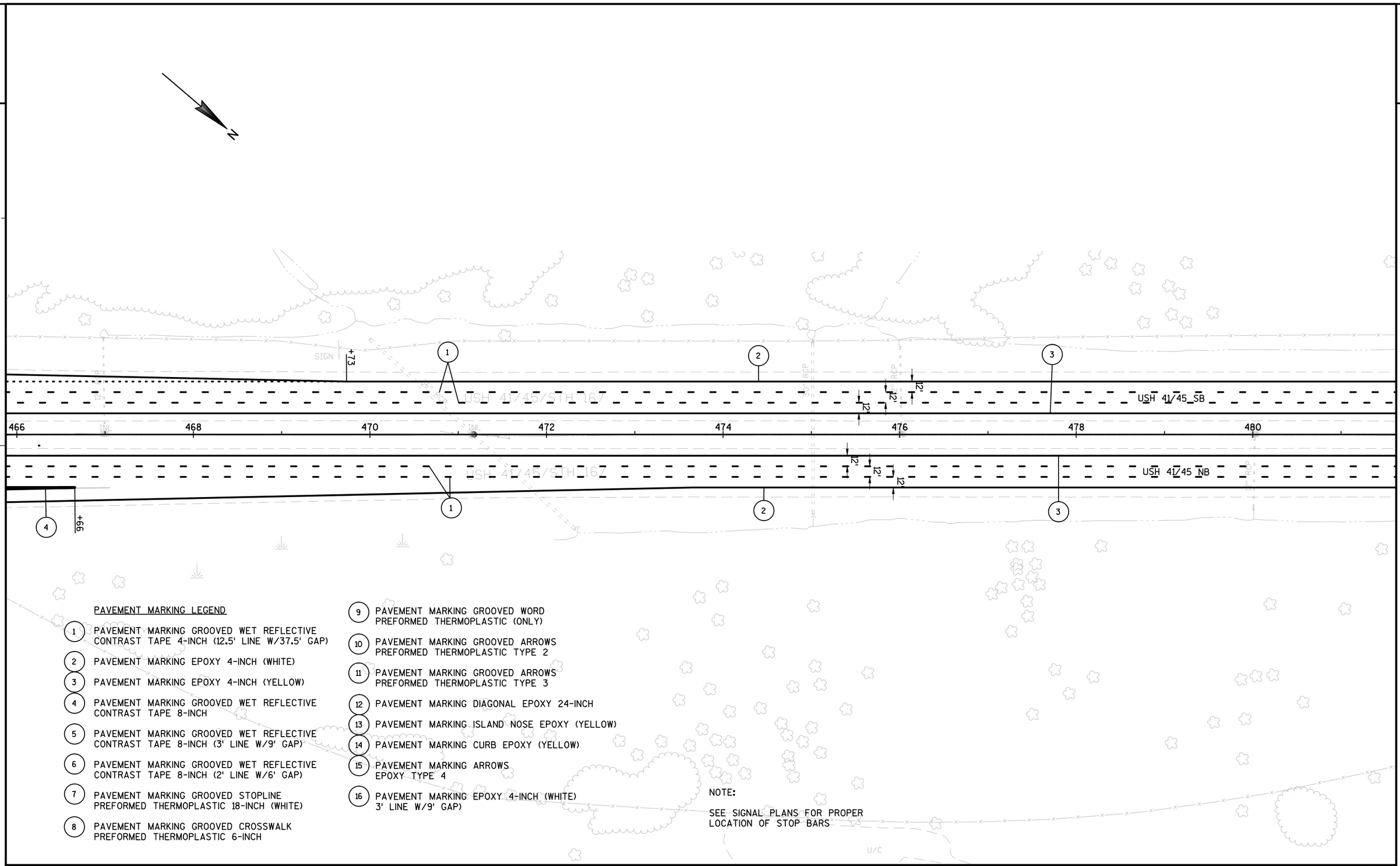
SEE SIGNAL PLANS FOR PROPER LOCATION OF STOP BARS

PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5' LINE W/37.5' GAP)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
4. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH
5. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3' LINE W/9' GAP)
6. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2' LINE W/6' GAP)
7. PAVEMENT MARKING GROOVED STOPLINE PREFORMED THERMOPLASTIC 18-INCH (WHITE)
8. PAVEMENT MARKING GROOVED CROSSWALK PREFORMED THERMOPLASTIC 6-INCH
9. PAVEMENT MARKING GROOVED WORD PREFORMED THERMOPLASTIC (ONLY)
10. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 2
11. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 3
12. PAVEMENT MARKING DIAGONAL EPOXY 24-INCH
13. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
14. PAVEMENT MARKING CURB EPOXY (YELLOW)
15. PAVEMENT MARKING ARROWS EPOXY TYPE 4
16. PAVEMENT MARKING EPOXY 4-INCH (WHITE) 3' LINE W/9' GAP)

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET 298	E

2



PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5' LINE W/37.5' GAP)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
4. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH
5. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3' LINE W/9' GAP)
6. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2' LINE W/6' GAP)
7. PAVEMENT MARKING GROOVED STOPLINE PREFORMED THERMOPLASTIC 18-INCH (WHITE)
8. PAVEMENT MARKING GROOVED CROSSWALK PREFORMED THERMOPLASTIC 6-INCH
9. PAVEMENT MARKING GROOVED WORD PREFORMED THERMOPLASTIC (ONLY)
10. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 2
11. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 3
12. PAVEMENT MARKING DIAGONAL EPOXY 24-INCH
13. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
14. PAVEMENT MARKING CURB EPOXY (YELLOW)
15. PAVEMENT MARKING ARROWS EPOXY TYPE 4
16. PAVEMENT MARKING EPOXY 4-INCH (WHITE) 3' LINE W/9' GAP)

NOTE:

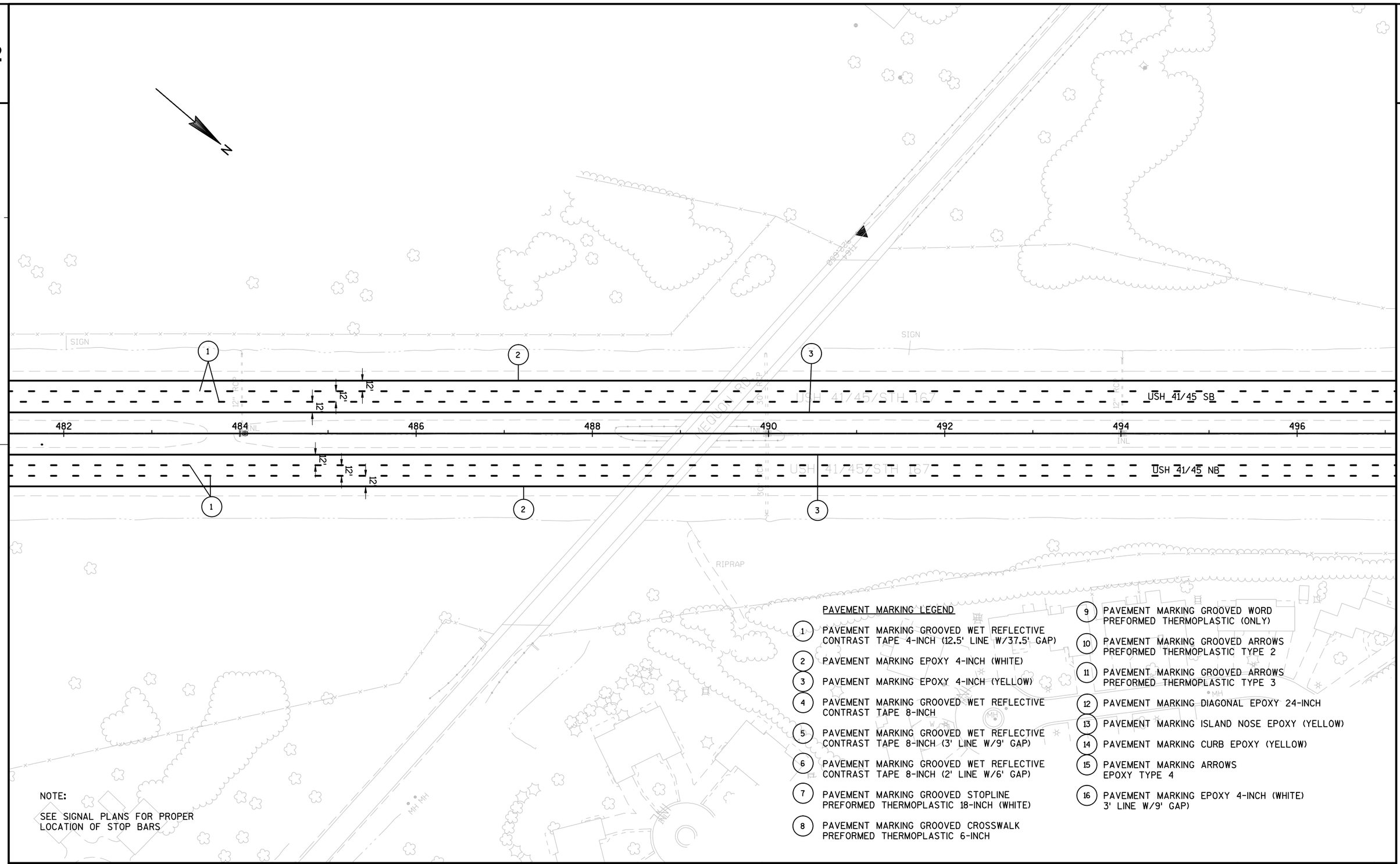
SEE SIGNAL PLANS FOR PROPER LOCATION OF STOP BARS

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024509_PM.DWG PLOT DATE : 12/15/2014 5:13 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2



NOTE:

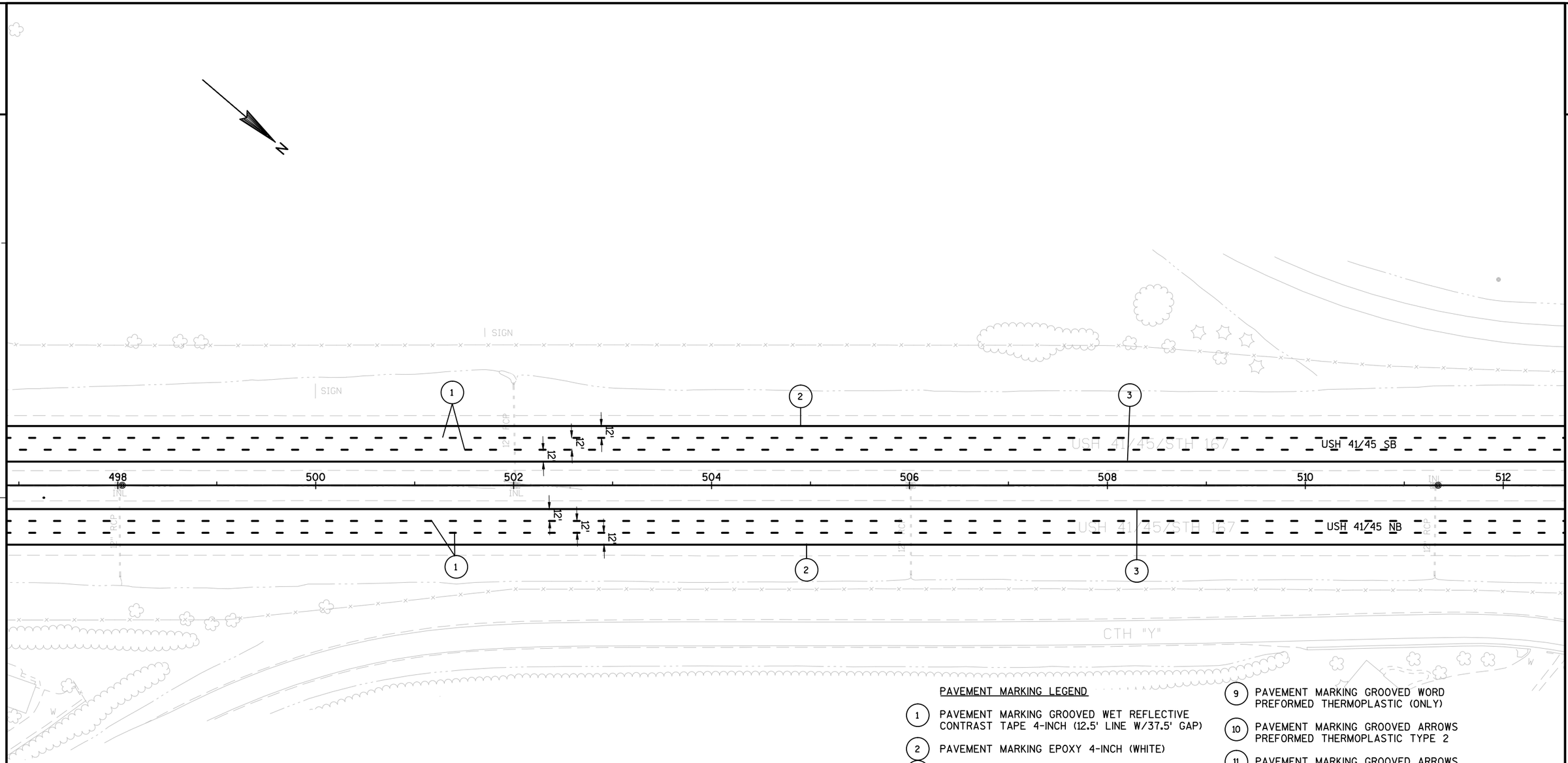
SEE SIGNAL PLANS FOR PROPER LOCATION OF STOP BARS

PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5' LINE W/37.5' GAP)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
4. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH
5. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3' LINE W/9' GAP)
6. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2' LINE W/6' GAP)
7. PAVEMENT MARKING GROOVED STOPLINE PREFORMED THERMOPLASTIC 18-INCH (WHITE)
8. PAVEMENT MARKING GROOVED CROSSWALK PREFORMED THERMOPLASTIC 6-INCH
9. PAVEMENT MARKING GROOVED WORD PREFORMED THERMOPLASTIC (ONLY)
10. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 2
11. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 3
12. PAVEMENT MARKING DIAGONAL EPOXY 24-INCH
13. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
14. PAVEMENT MARKING CURB EPOXY (YELLOW)
15. PAVEMENT MARKING ARROWS EPOXY TYPE 4
16. PAVEMENT MARKING EPOXY 4-INCH (WHITE) 3' LINE W/9' GAP)

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET 300	E

2



PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5' LINE W/37.5' GAP)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
4. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH
5. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3' LINE W/9' GAP)
6. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2' LINE W/6' GAP)
7. PAVEMENT MARKING GROOVED STOPLINE PREFORMED THERMOPLASTIC 18-INCH (WHITE)
8. PAVEMENT MARKING GROOVED CROSSWALK PREFORMED THERMOPLASTIC 6-INCH
9. PAVEMENT MARKING GROOVED WORD PREFORMED THERMOPLASTIC (ONLY)
10. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 2
11. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 3
12. PAVEMENT MARKING DIAGONAL EPOXY 24-INCH
13. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
14. PAVEMENT MARKING CURB EPOXY (YELLOW)
15. PAVEMENT MARKING ARROWS EPOXY TYPE 4
16. PAVEMENT MARKING EPOXY 4-INCH (WHITE) 3' LINE W/9' GAP)

NOTE:

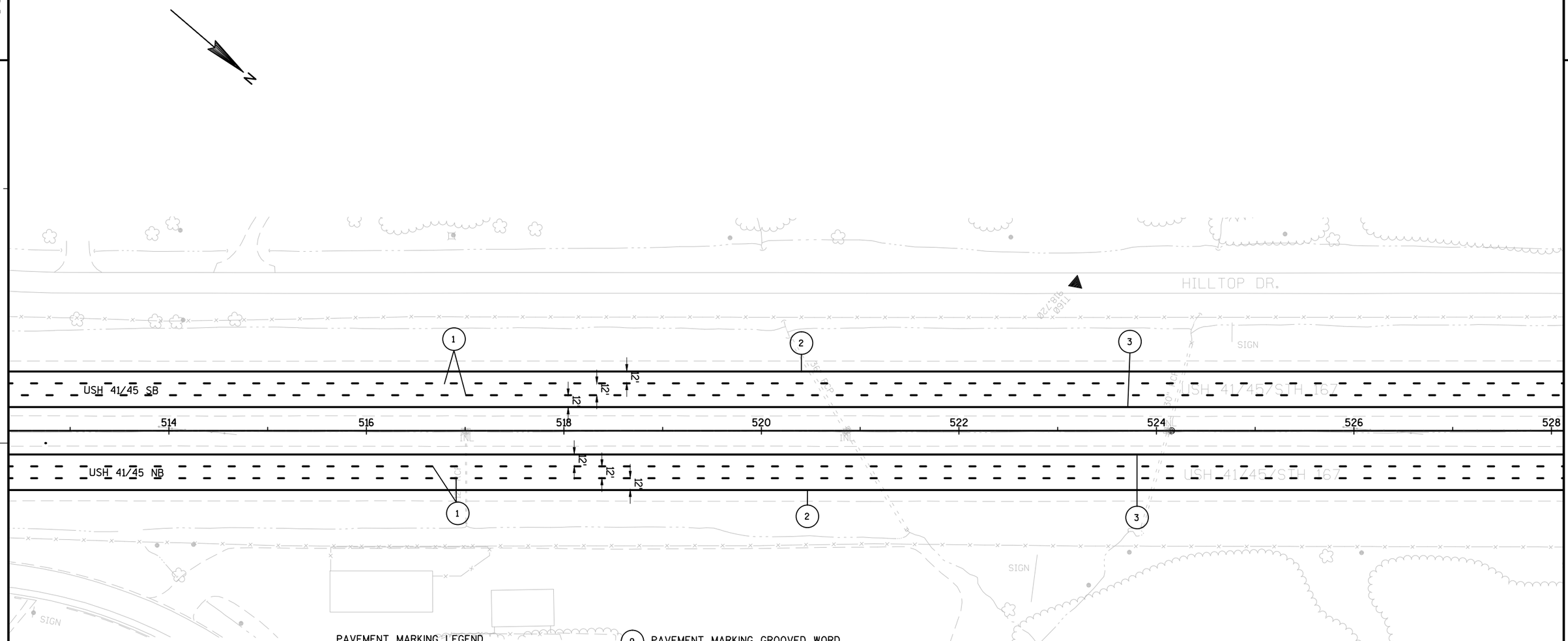
SEE SIGNAL PLANS FOR PROPER LOCATION OF STOP BARS

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024511_PM.DWG PLOT DATE : 12/15/2014 5:14 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2



PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5' LINE W/37.5' GAP)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
4. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH
5. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3' LINE W/9' GAP)
6. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2' LINE W/6' GAP)
7. PAVEMENT MARKING GROOVED STOPLINE PREFORMED THERMOPLASTIC 18-INCH (WHITE)
8. PAVEMENT MARKING GROOVED CROSSWALK PREFORMED THERMOPLASTIC 6-INCH
9. PAVEMENT MARKING GROOVED WORD PREFORMED THERMOPLASTIC (ONLY)
10. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 2
11. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 3
12. PAVEMENT MARKING DIAGONAL EPOXY 24-INCH
13. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
14. PAVEMENT MARKING CURB EPOXY (YELLOW)
15. PAVEMENT MARKING ARROWS EPOXY TYPE 4
16. PAVEMENT MARKING EPOXY 4-INCH (WHITE) 3' LINE W/9' GAP)

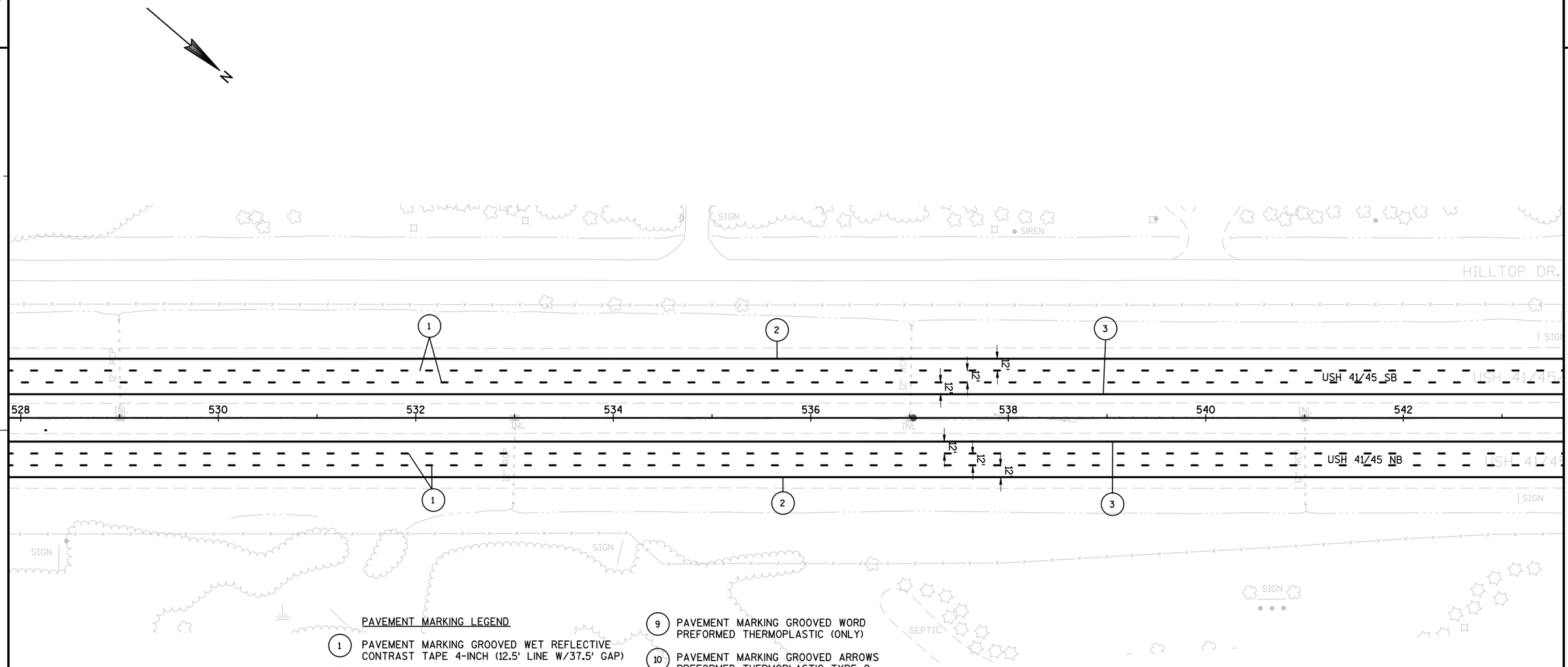
NOTE:

SEE SIGNAL PLANS FOR PROPER LOCATION OF STOP BARS

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024512_PM.DWG PLOT DATE : 12/15/2014 5:15 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2



PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5' LINE W/37.5' GAP)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
4. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH
5. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3' LINE W/9' GAP)
6. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2' LINE W/6' GAP)
7. PAVEMENT MARKING GROOVED STOPLINE PREFORMED THERMOPLASTIC 18-INCH (WHITE)
8. PAVEMENT MARKING GROOVED CROSSWALK PREFORMED THERMOPLASTIC 6-INCH
9. PAVEMENT MARKING GROOVED WORD PREFORMED THERMOPLASTIC (ONLY)
10. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 2
11. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 3
12. PAVEMENT MARKING DIAGONAL EPOXY 24-INCH
13. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
14. PAVEMENT MARKING CURB EPOXY (YELLOW)
15. PAVEMENT MARKING ARROWS EPOXY TYPE 4
16. PAVEMENT MARKING EPOXY 4-INCH (WHITE) 3' LINE W/9' GAP)

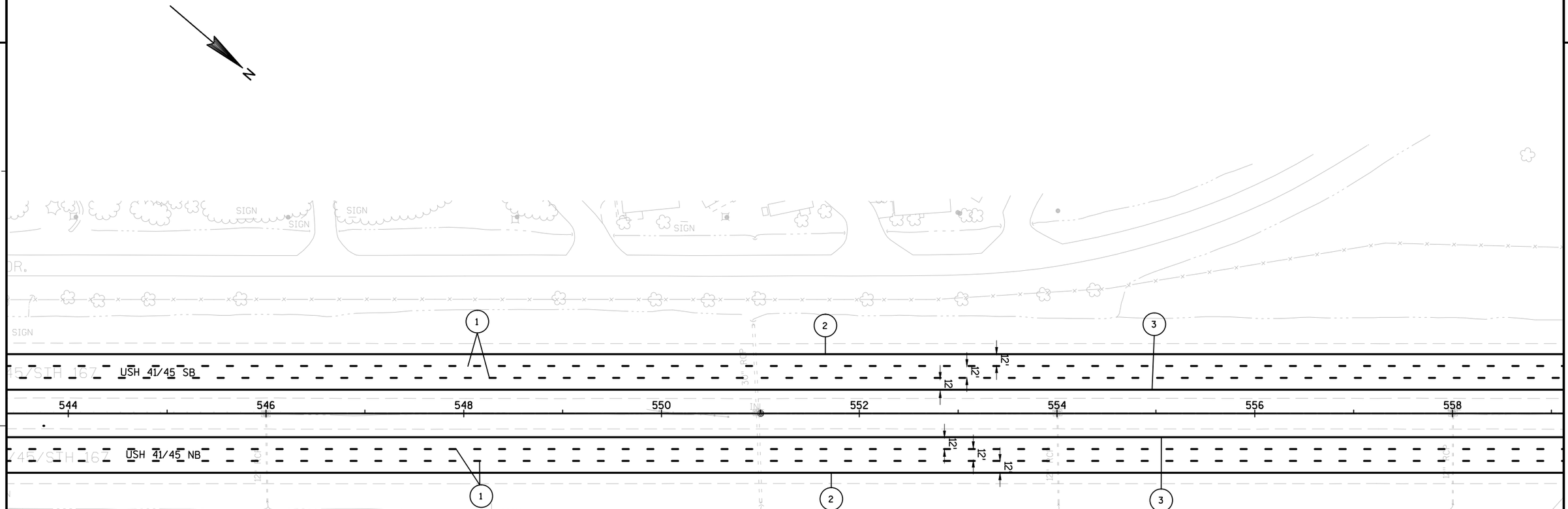
NOTE:

SEE SIGNAL PLANS FOR PROPER LOCATION OF STOP BARS

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024513_PM.DWG PLOT DATE : 12/15/2014 5:15 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF
WISDOT/CADDS SHEET 42

2



PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5' LINE W/37.5' GAP)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
4. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH
5. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3' LINE W/9' GAP)
6. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2' LINE W/6' GAP)
7. PAVEMENT MARKING GROOVED STOPLINE PREFORMED THERMOPLASTIC 18-INCH (WHITE)
8. PAVEMENT MARKING GROOVED CROSSWALK PREFORMED THERMOPLASTIC 6-INCH
9. PAVEMENT MARKING GROOVED WORD PREFORMED THERMOPLASTIC (ONLY)
10. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 2
11. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 3
12. PAVEMENT MARKING DIAGONAL EPOXY 24-INCH
13. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
14. PAVEMENT MARKING CURB EPOXY (YELLOW)
15. PAVEMENT MARKING ARROWS EPOXY TYPE 4
16. PAVEMENT MARKING EPOXY 4-INCH (WHITE) 3' LINE W/9' GAP)

NOTE:

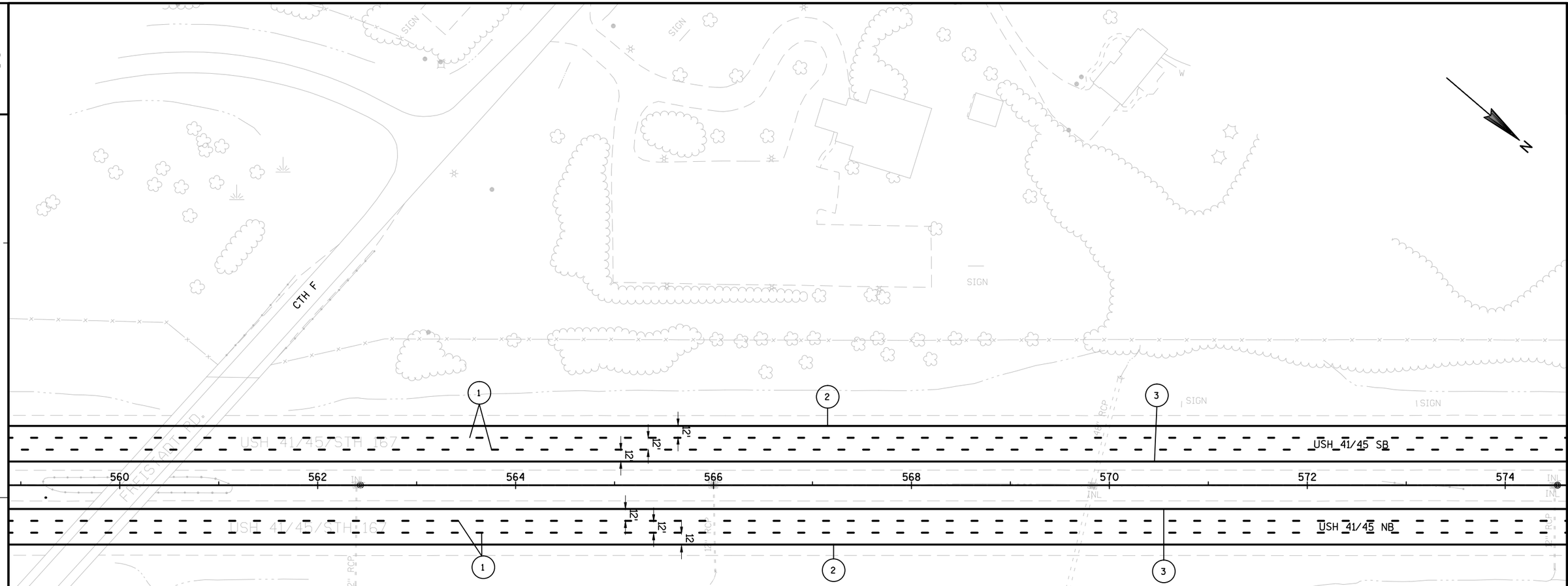
SEE SIGNAL PLANS FOR PROPER LOCATION OF STOP BARS

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024514_PM.DWG PLOT DATE : 12/15/2014 5:16 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF
WISDOT/CADDS SHEET 42

2

2



PAVEMENT MARKING LEGEND

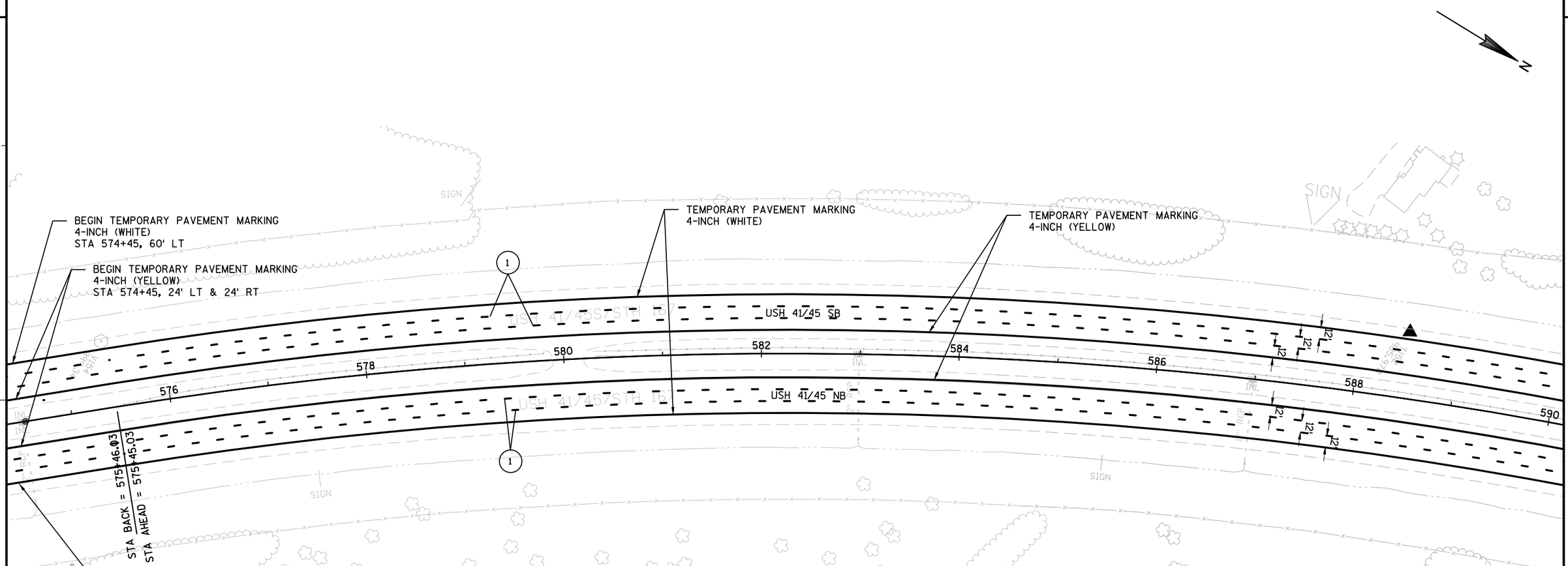
1. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5' LINE W/37.5' GAP)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
4. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH
5. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3' LINE W/9' GAP)
6. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2' LINE W/6' GAP)
7. PAVEMENT MARKING GROOVED STOPLINE PREFORMED THERMOPLASTIC 18-INCH (WHITE)
8. PAVEMENT MARKING GROOVED CROSSWALK PREFORMED THERMOPLASTIC 6-INCH
9. PAVEMENT MARKING GROOVED WORD PREFORMED THERMOPLASTIC (ONLY)
10. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 2
11. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 3
12. PAVEMENT MARKING DIAGONAL EPOXY 24-INCH
13. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
14. PAVEMENT MARKING CURB EPOXY (YELLOW)
15. PAVEMENT MARKING ARROWS EPOXY TYPE 4
16. PAVEMENT MARKING EPOXY 4-INCH (WHITE) 3' LINE W/9' GAP)

NOTE:

SEE SIGNAL PLANS FOR PROPER LOCATION OF STOP BARS

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET	E

2



PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5' LINE W/37.5' GAP)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
4. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH
5. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3' LINE W/9' GAP)
6. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2' LINE W/6' GAP)
7. PAVEMENT MARKING GROOVED STOPLINE PREFORMED THERMOPLASTIC 18-INCH (WHITE)
8. PAVEMENT MARKING GROOVED CROSSWALK PREFORMED THERMOPLASTIC 6-INCH
9. PAVEMENT MARKING GROOVED WORD PREFORMED THERMOPLASTIC (ONLY)
10. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 2
11. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 3
12. PAVEMENT MARKING DIAGONAL EPOXY 24-INCH
13. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
14. PAVEMENT MARKING CURB EPOXY (YELLOW)
15. PAVEMENT MARKING ARROWS EPOXY TYPE 4
16. PAVEMENT MARKING EPOXY 4-INCH (WHITE) 3' LINE W/9' GAP)

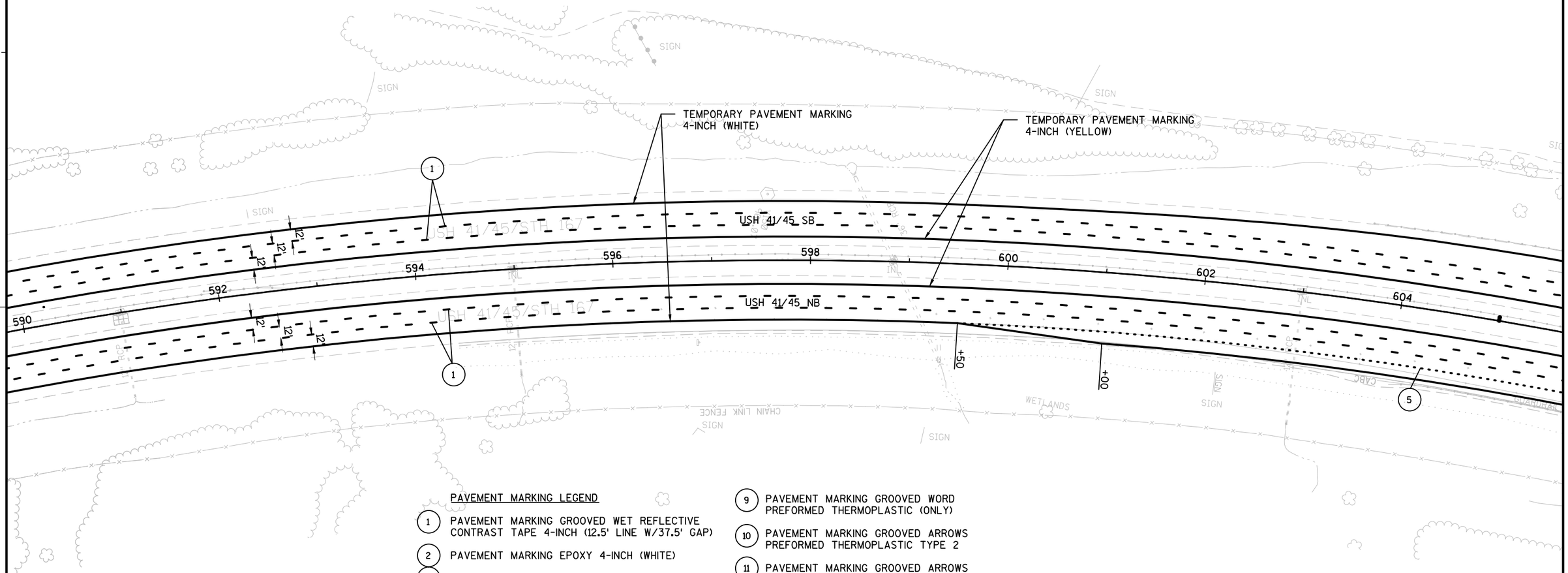
NOTE:

SEE SIGNAL PLANS FOR PROPER LOCATION OF STOP BARS

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024516_PM.DWG PLOT DATE : 12/15/2014 5:17 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF
WISDOT/CADDS SHEET 42

2



PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5' LINE W/37.5' GAP)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
4. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH
5. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3' LINE W/9' GAP)
6. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2' LINE W/6' GAP)
7. PAVEMENT MARKING GROOVED STOPLINE PREFORMED THERMOPLASTIC 18-INCH (WHITE)
8. PAVEMENT MARKING GROOVED CROSSWALK PREFORMED THERMOPLASTIC 6-INCH
9. PAVEMENT MARKING GROOVED WORD PREFORMED THERMOPLASTIC (ONLY)
10. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 2
11. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 3
12. PAVEMENT MARKING DIAGONAL EPOXY 24-INCH
13. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
14. PAVEMENT MARKING CURB EPOXY (YELLOW)
15. PAVEMENT MARKING ARROWS EPOXY TYPE 4
16. PAVEMENT MARKING EPOXY 4-INCH (WHITE) 3' LINE W/9' GAP)

NOTE:

SEE SIGNAL PLANS FOR PROPER LOCATION OF STOP BARS

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024517_PM.DWG PLOT DATE : 12/15/2014 5:18 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

N

END TEMPORARY PAVEMENT MARKING
4-INCH (WHITE)
STA 612+50

END TEMPORARY PAVEMENT MARKING
4-INCH (YELLOW)
STA 612+50, 24' LT
STA 613+00, 24' RT

END TEMPORARY PAVEMENT MARKING
4-INCH (WHITE)
STA 613+00 (NB LANES)

620+05.19, -60.06' LT

620+02.40, 18.16' LT

620+15.40, 25.94' RT

620+61.56, 0.00'

619+41.94, 15.00' RT

619+65.32, -17.62' LT

618+78.02, 0.00'

620+13.74, -18.00'

619+82.57, 41.92' RT

620+03.54, 97.81' RT

619+51.96, 75.39' RT

USH 41/45 SB

USH 41/45 NB

STH 167

HOLY HILL ROAD

606 608 610 612 614 616 618 620

+85 +37 +14 +95 +32

15' 12'

116 118 122 124

CHAIN LINK FENCE

GUARDRAIL

SIGN

CONC

ASPH

18" RCP

WETLANDS

MH

INL

CABC

PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5' LINE W/37.5' GAP)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
4. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH
5. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3' LINE W/9' GAP)
6. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2' LINE W/6' GAP)
7. PAVEMENT MARKING GROOVED STOPLINE PREFORMED THERMOPLASTIC 18-INCH (WHITE)
8. PAVEMENT MARKING GROOVED CROSSWALK PREFORMED THERMOPLASTIC 6-INCH
9. PAVEMENT MARKING GROOVED WORD PREFORMED THERMOPLASTIC (ONLY)
10. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 2
11. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 3
12. PAVEMENT MARKING DIAGONAL EPOXY 24-INCH
13. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
14. PAVEMENT MARKING CURB EPOXY (YELLOW)
15. PAVEMENT MARKING ARROWS EPOXY TYPE 4
16. PAVEMENT MARKING EPOXY 4-INCH (WHITE) 3' LINE W/9' GAP)

NOTE:

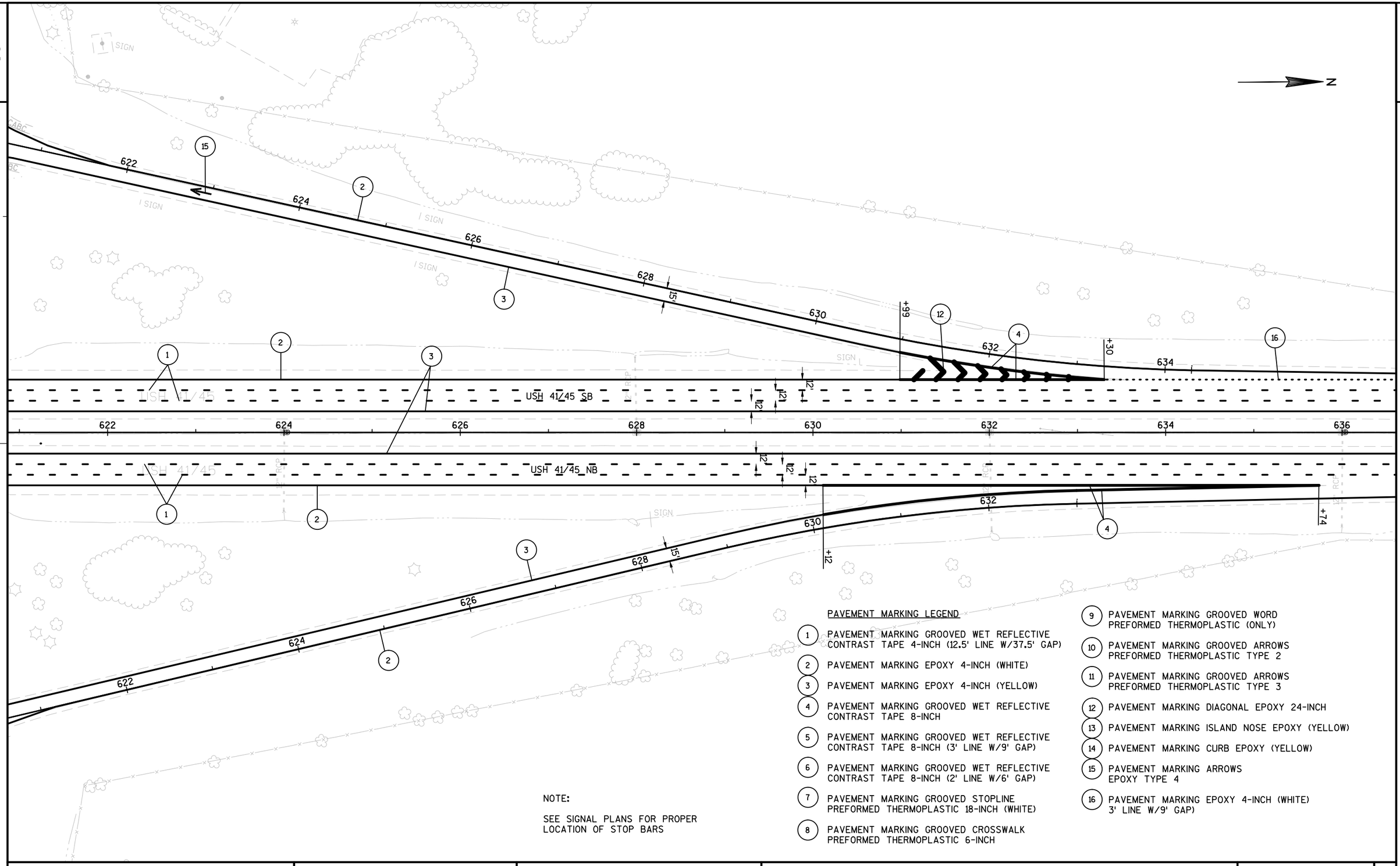
SEE SIGNAL PLANS FOR PROPER LOCATION OF STOP BARS

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET E

FILE NAME : N:\PDS\C3D\CAD\11003800\024518_PM.DWG PLOT DATE : 12/15/2014 5:18 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2



NOTE:

SEE SIGNAL PLANS FOR PROPER LOCATION OF STOP BARS

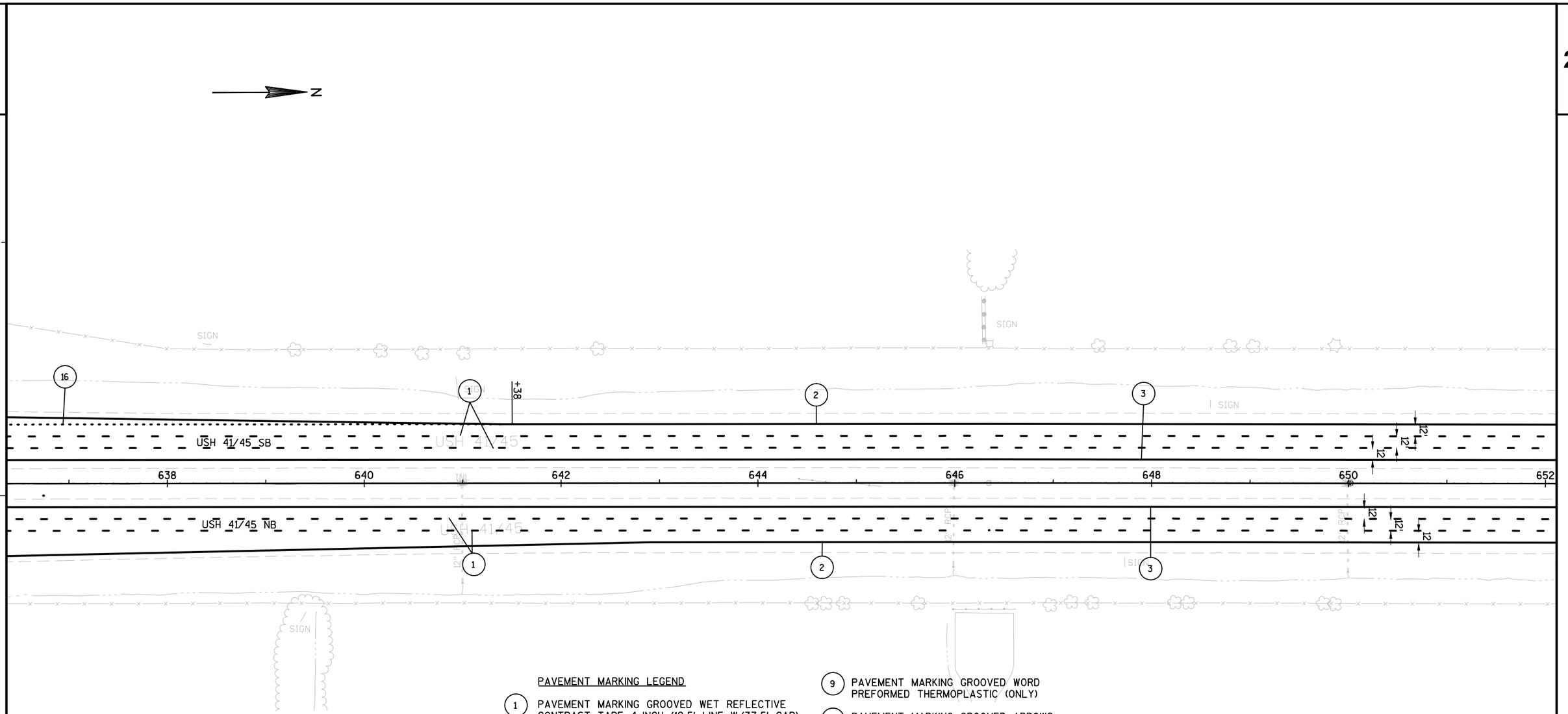
PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5' LINE W/37.5' GAP)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
4. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH
5. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3' LINE W/9' GAP)
6. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2' LINE W/6' GAP)
7. PAVEMENT MARKING GROOVED STOPLINE PREFORMED THERMOPLASTIC 18-INCH (WHITE)
8. PAVEMENT MARKING GROOVED CROSSWALK PREFORMED THERMOPLASTIC 6-INCH
9. PAVEMENT MARKING GROOVED WORD PREFORMED THERMOPLASTIC (ONLY)
10. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 2
11. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 3
12. PAVEMENT MARKING DIAGONAL EPOXY 24-INCH
13. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
14. PAVEMENT MARKING CURB EPOXY (YELLOW)
15. PAVEMENT MARKING ARROWS EPOXY TYPE 4
16. PAVEMENT MARKING EPOXY 4-INCH (WHITE) 3' LINE W/9' GAP)

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024519_PM.DWG PLOT DATE : 12/15/2014 5:19 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF
WISDOT/CADDS SHEET 42

2



PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5' LINE W/37.5' GAP)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
4. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH
5. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3' LINE W/9' GAP)
6. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2' LINE W/6' GAP)
7. PAVEMENT MARKING GROOVED STOPLINE PREFORMED THERMOPLASTIC 18-INCH (WHITE)
8. PAVEMENT MARKING GROOVED CROSSWALK PREFORMED THERMOPLASTIC 6-INCH
9. PAVEMENT MARKING GROOVED WORD PREFORMED THERMOPLASTIC (ONLY)
10. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 2
11. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 3
12. PAVEMENT MARKING DIAGONAL EPOXY 24-INCH
13. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
14. PAVEMENT MARKING CURB EPOXY (YELLOW)
15. PAVEMENT MARKING ARROWS EPOXY TYPE 4
16. PAVEMENT MARKING EPOXY 4-INCH (WHITE) 3' LINE W/9' GAP)

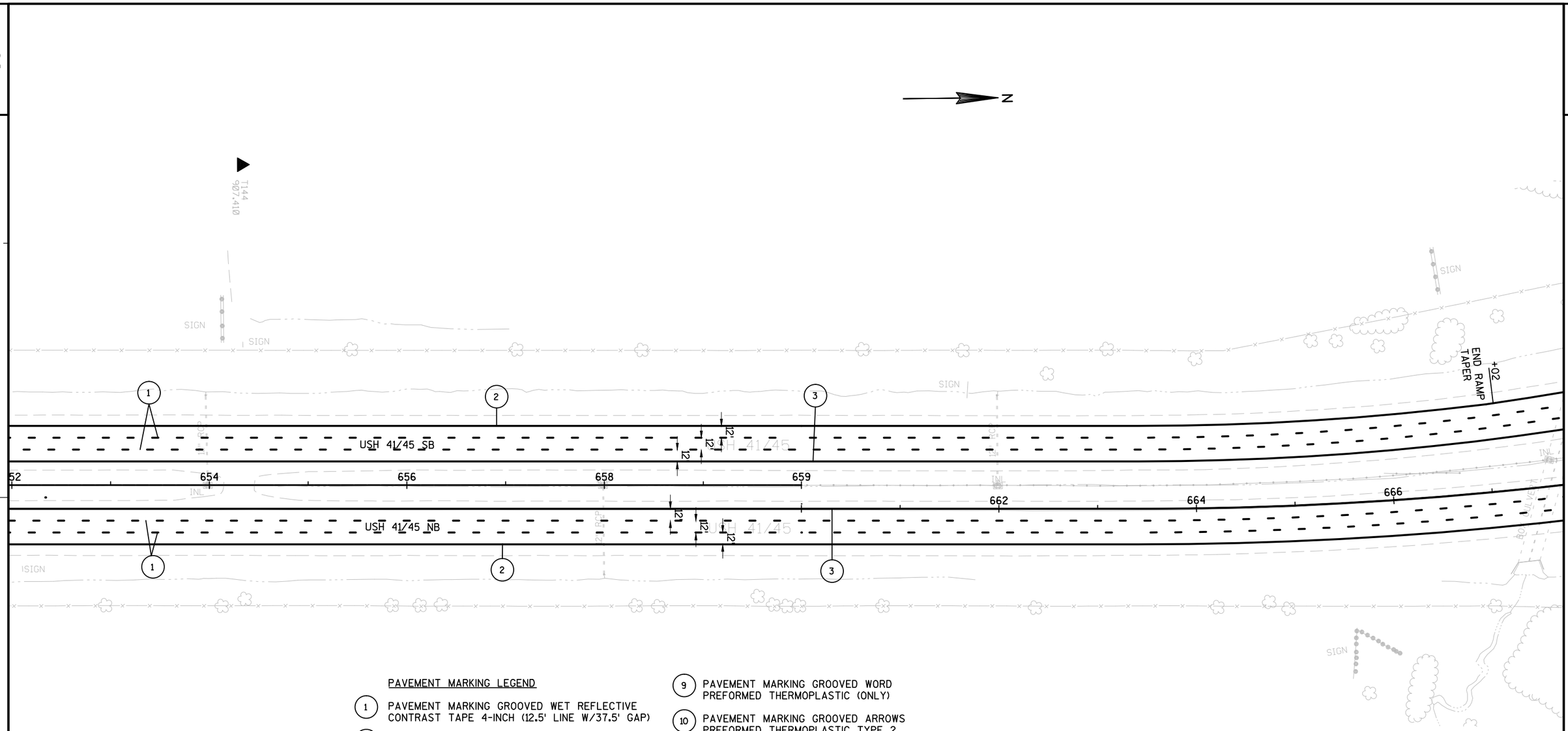
NOTE:

SEE SIGNAL PLANS FOR PROPER LOCATION OF STOP BARS

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024520_PM.DWG PLOT DATE : 12/15/2014 5:20 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF
WISDOT/CADDS SHEET 42

2



PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5' LINE W/37.5' GAP)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
4. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH
5. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3' LINE W/9' GAP)
6. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2' LINE W/6' GAP)
7. PAVEMENT MARKING GROOVED STOPLINE PREFORMED THERMOPLASTIC 18-INCH (WHITE)
8. PAVEMENT MARKING GROOVED CROSSWALK PREFORMED THERMOPLASTIC 6-INCH
9. PAVEMENT MARKING GROOVED WORD PREFORMED THERMOPLASTIC (ONLY)
10. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 2
11. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 3
12. PAVEMENT MARKING DIAGONAL EPOXY 24-INCH
13. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
14. PAVEMENT MARKING CURB EPOXY (YELLOW)
15. PAVEMENT MARKING ARROWS EPOXY TYPE 4
16. PAVEMENT MARKING EPOXY 4-INCH (WHITE) 3' LINE W/9' GAP)

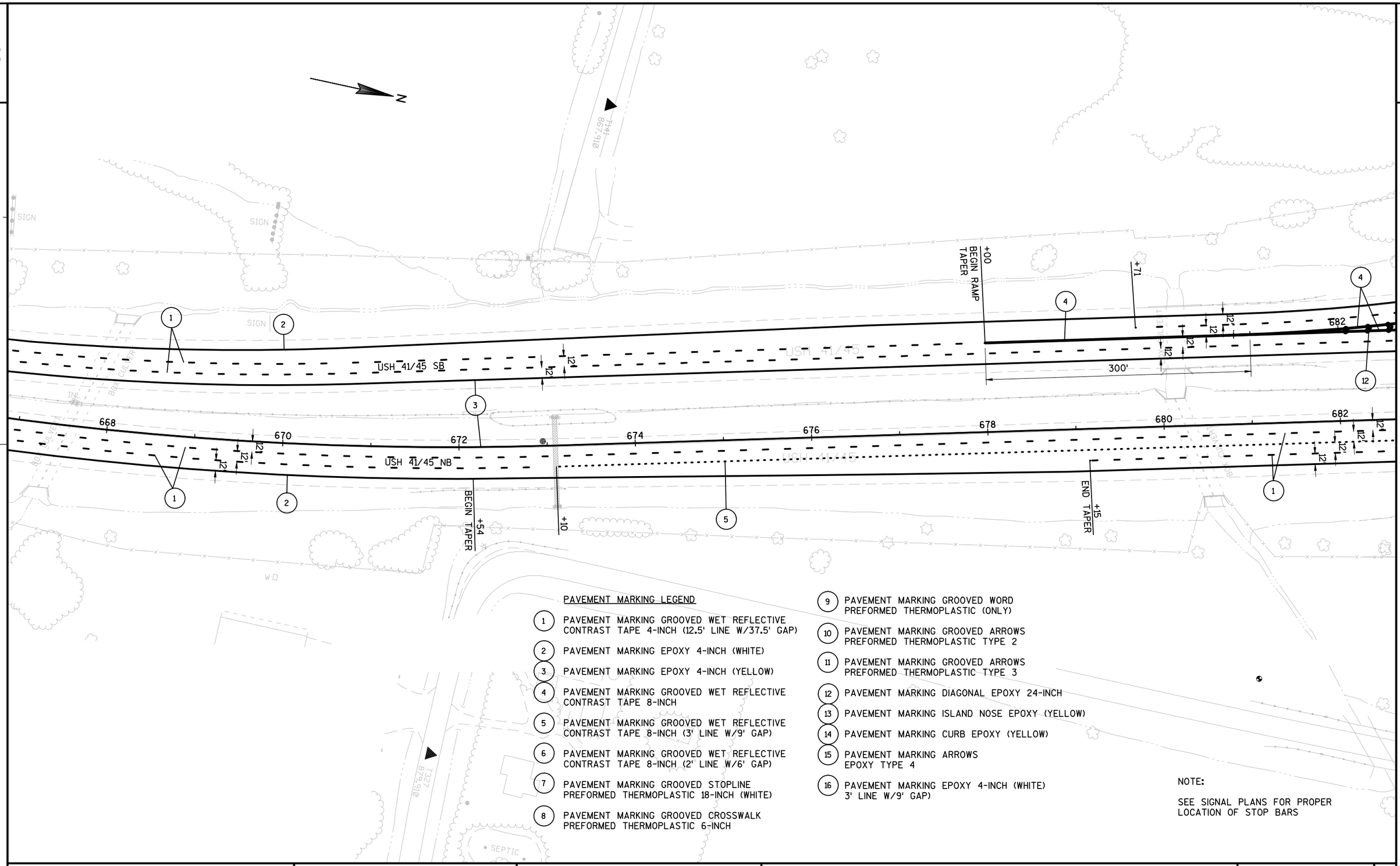
NOTE:

SEE SIGNAL PLANS FOR PROPER LOCATION OF STOP BARS

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024521_PM.DWG PLOT DATE : 12/15/2014 5:20 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF
WISDOT/CADDS SHEET 42

2



PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5' LINE W/37.5' GAP)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
4. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH
5. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3' LINE W/9' GAP)
6. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2' LINE W/6' GAP)
7. PAVEMENT MARKING GROOVED STOPLINE PREFORMED THERMOPLASTIC 18-INCH (WHITE)
8. PAVEMENT MARKING GROOVED CROSSWALK PREFORMED THERMOPLASTIC 6-INCH
9. PAVEMENT MARKING GROOVED WORD PREFORMED THERMOPLASTIC (ONLY)
10. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 2
11. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 3
12. PAVEMENT MARKING DIAGONAL EPOXY 24-INCH
13. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
14. PAVEMENT MARKING CURB EPOXY (YELLOW)
15. PAVEMENT MARKING ARROWS EPOXY TYPE 4
16. PAVEMENT MARKING EPOXY 4-INCH (WHITE) 3' LINE W/9' GAP)

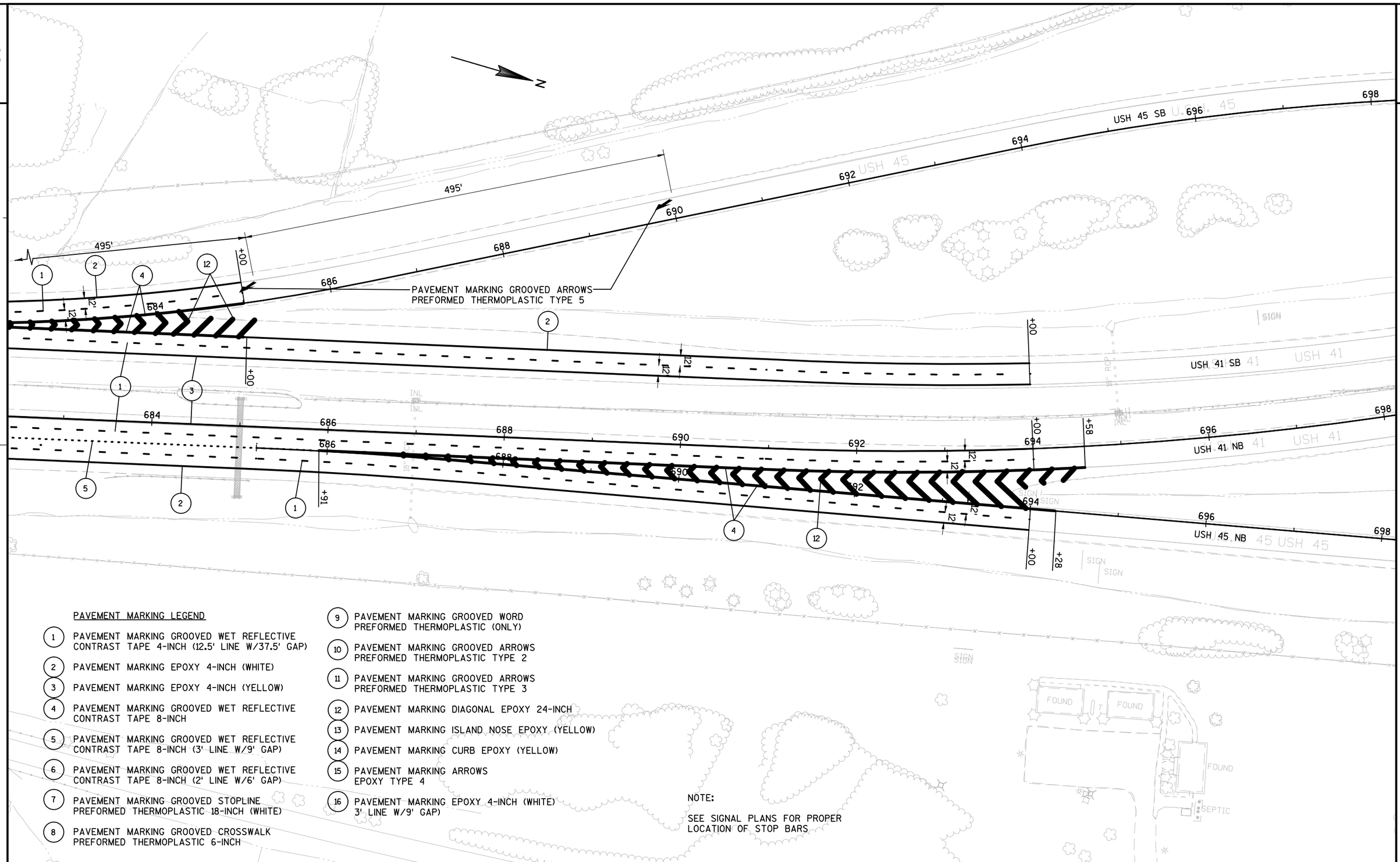
NOTE:

SEE SIGNAL PLANS FOR PROPER LOCATION OF STOP BARS

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024522_PM.DWG PLOT DATE : 12/15/2014 5:21 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2



PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5' LINE W/37.5' GAP)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
4. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH
5. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3' LINE W/9' GAP)
6. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2' LINE W/6' GAP)
7. PAVEMENT MARKING GROOVED STOPLINE PREFORMED THERMOPLASTIC 18-INCH (WHITE)
8. PAVEMENT MARKING GROOVED CROSSWALK PREFORMED THERMOPLASTIC 6-INCH
9. PAVEMENT MARKING GROOVED WORD PREFORMED THERMOPLASTIC (ONLY)
10. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 2
11. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 3
12. PAVEMENT MARKING DIAGONAL EPOXY 24-INCH
13. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
14. PAVEMENT MARKING CURB EPOXY (YELLOW)
15. PAVEMENT MARKING ARROWS EPOXY TYPE 4
16. PAVEMENT MARKING EPOXY 4-INCH (WHITE) 3' LINE W/9' GAP)

NOTE:

SEE SIGNAL PLANS FOR PROPER LOCATION OF STOP BARS

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024523_PM.DWG PLOT DATE : 12/15/2014 5:22 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

1456+00.00, -21.00' LT

1455+95.00, 3.00' RT

1454+12.45, -25.00' LT

1453+84.22, -10.67' LT

835+68.85, -24.36' LT

836+44.12, -44.42' LT

836+11.52, -24.61' LT

838+94.95, -6.00' LT

838+95.11, -17.00' LT

837+38.15, 0.00'

834+76.73, 0.00'

835+56.82, 26.14' RT

830+00.18, 12.00' RT

831+75.55, 24.00' RT

833+30.18, 24.00' RT

835+19.77, 37.15' RT

1452+77.99, -4.02' LT

1452+40.63, 30.17' RT

837+38.15, 17.00' RT

837+94.14, 5.00' RT

1452+32.14, 0.00'

1451+70.76, -7.30' LT

1451+49.54, 24.66' RT

1450+77.25, 0.00'

CTH "Y"

CTH Y

USH 41/45 SB

USH 41/45 NB

456

454

452

450

1450

832

834

836

838

840

842

12'

SIGN

MH

CONCRETE WALL

NOISE BARRIER WALL

PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5' LINE W/37.5' GAP)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
4. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH
5. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3' LINE W/9' GAP)
6. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2' LINE W/6' GAP)
7. PAVEMENT MARKING GROOVED STOPLINE PREFORMED THERMOPLASTIC 18-INCH (WHITE)
8. PAVEMENT MARKING GROOVED CROSSWALK PREFORMED THERMOPLASTIC 6-INCH
9. PAVEMENT MARKING GROOVED WORD PREFORMED THERMOPLASTIC (ONLY)
10. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 2
11. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 3
12. PAVEMENT MARKING DIAGONAL EPOXY 24-INCH
13. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
14. PAVEMENT MARKING CURB EPOXY (YELLOW)
15. PAVEMENT MARKING ARROWS EPOXY TYPE 4
16. PAVEMENT MARKING EPOXY 4-INCH (WHITE) 3' LINE W/9' GAP)

NOTE:

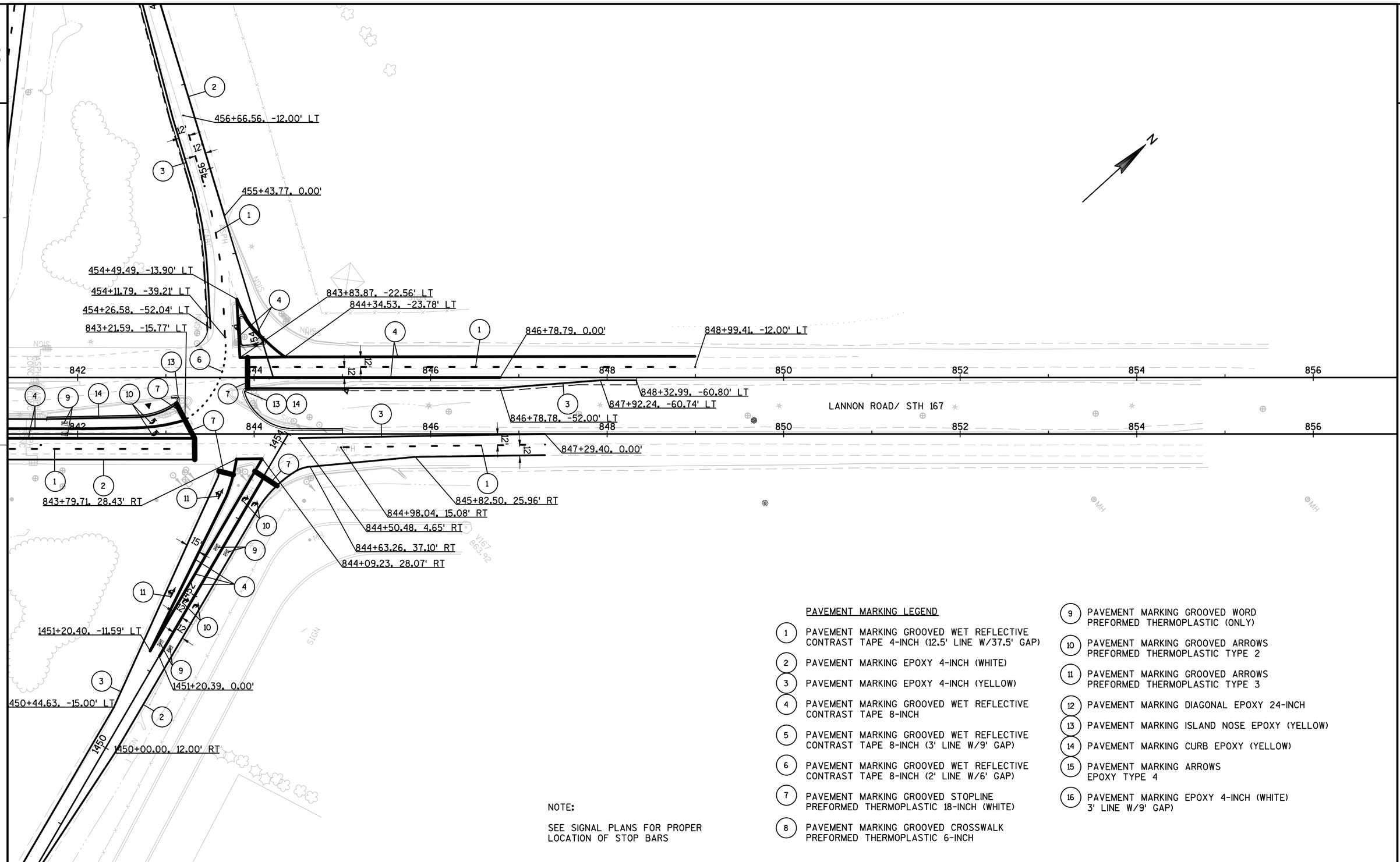
SEE SIGNAL PLANS FOR PROPER LOCATION OF STOP BARS

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024524_PM.DWG PLOT DATE : 12/15/2014 5:22 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2



NOTE:

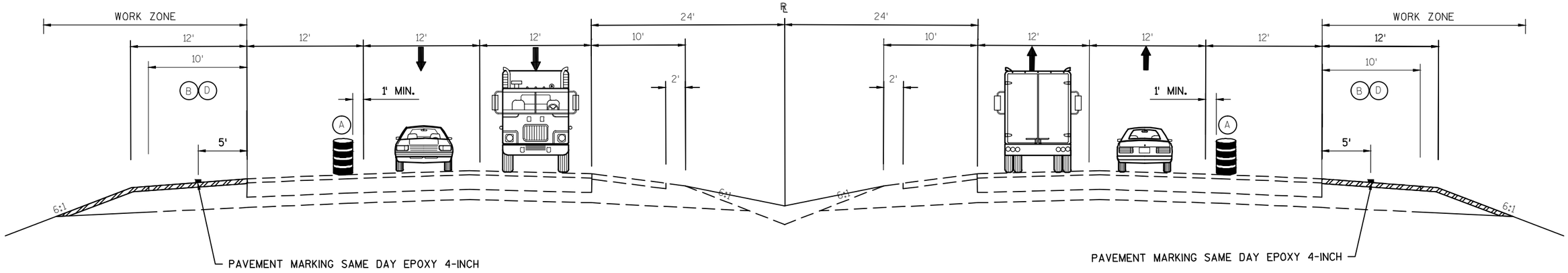
SEE SIGNAL PLANS FOR PROPER LOCATION OF STOP BARS

PAVEMENT MARKING LEGEND

1. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (12.5' LINE W/37.5' GAP)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
4. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH
5. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (3' LINE W/9' GAP)
6. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (2' LINE W/6' GAP)
7. PAVEMENT MARKING GROOVED STOPLINE PREFORMED THERMOPLASTIC 18-INCH (WHITE)
8. PAVEMENT MARKING GROOVED CROSSWALK PREFORMED THERMOPLASTIC 6-INCH
9. PAVEMENT MARKING GROOVED WORD PREFORMED THERMOPLASTIC (ONLY)
10. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 2
11. PAVEMENT MARKING GROOVED ARROWS PREFORMED THERMOPLASTIC TYPE 3
12. PAVEMENT MARKING DIAGONAL EPOXY 24-INCH
13. PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
14. PAVEMENT MARKING CURB EPOXY (YELLOW)
15. PAVEMENT MARKING ARROWS EPOXY TYPE 4
16. PAVEMENT MARKING EPOXY 4-INCH (WHITE) 3' LINE W/9' GAP)

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET	E

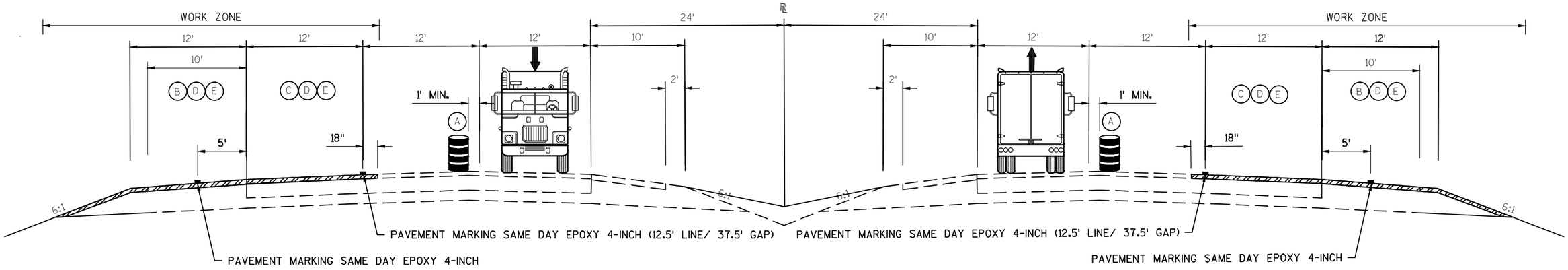
FILE NAME : N:\PDS\C3D\CAD\11003800\024525_PM.DWG PLOT DATE : 12/15/2014 5:23 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF
WISDOT/CADDS SHEET 42



TYPICAL SECTION USH 41/45

TRAFFIC CONTROL - STAGE 1A (ONE LANE CLOSURE)

STA. 345+00 TO STA. 694+00



TYPICAL SECTION USH 41/45

TRAFFIC CONTROL - STAGE 1A (TWO LANE CLOSURE)

STA. 345+00 TO STA. 694+00

MAINLINE USH 41 STAGING NOTES:

STAGE 1A: NORTHBOUND AND SOUTHBOUND

(A.) SET UP TRAFFIC CONTROL PER SDD's, CLOSE CENTER LANE AS NEEDED, SEE ALLOWED LANE CLOSURE HOURS.

(B.) RECONSTRUCT SHOULDER WIDENING FROM STA 572+00 TO STA 608+00 LT AND FROM STA 599+50 TO STA 604+50 RT.

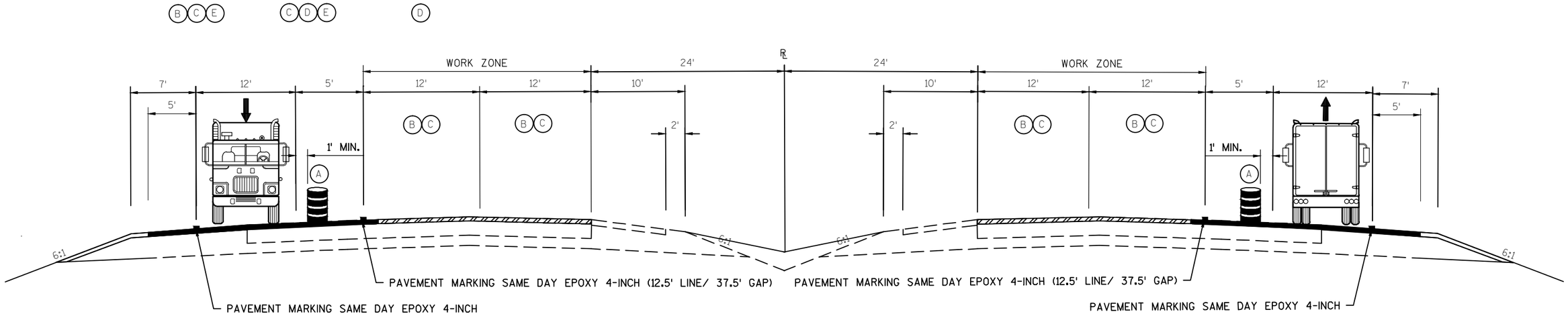
(C.) PERFORM CONCRETE PAVEMENT REPAIR ON LANE #3

(D.) PERFORM ASPHALTIC MILLING AND PLACE LOWER LAYERS OF HMA PAVEMENT.

(E.) INSTALL TEMPORARY PAVEMENT MARKING.

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: TRAFFIC CONTROL - STAGE 1A	SHEET 316	E

2



TYPICAL SECTION USH 41/45

TRAFFIC CONTROL - STAGE 1B (TWO LANE CLOSURE)

STA. 345+00 TO STA. 694+00

MAINLINE USH 41 STAGING NOTES:

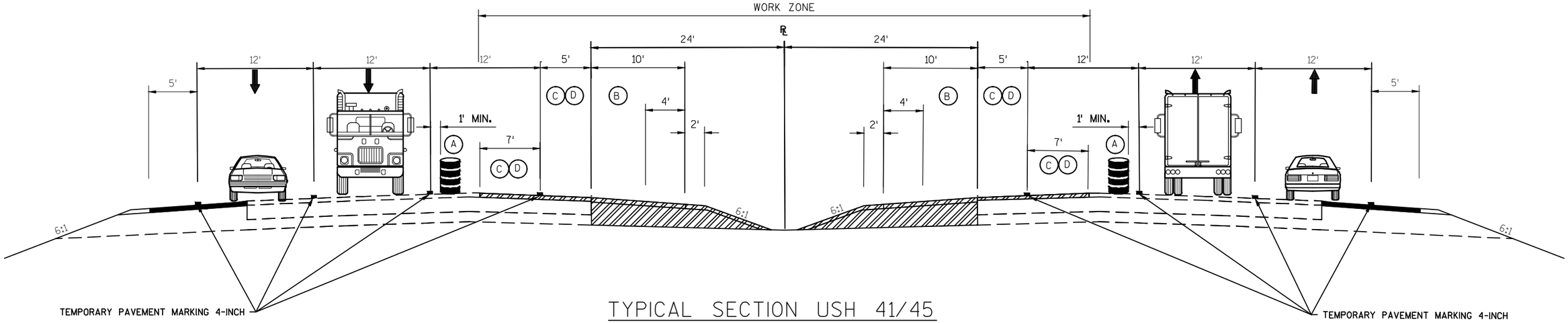
STAGE 1B: NORTHBOUND AND SOUTHBOUND

(A.) SET UP TRAFFIC CONTROL PER SDD's, CLOSE CENTER LANE AS NEEDED, SEE ALLOWED LANE CLOSURE HOURS.

(B.) PERFORM CONCRETE REPAIRS ON LANE #1 AND LANE #2.

(C.) INSTALL TEMPORARY PAVEMENT MARKING AS DIRECTED BY THE ENGINEER.

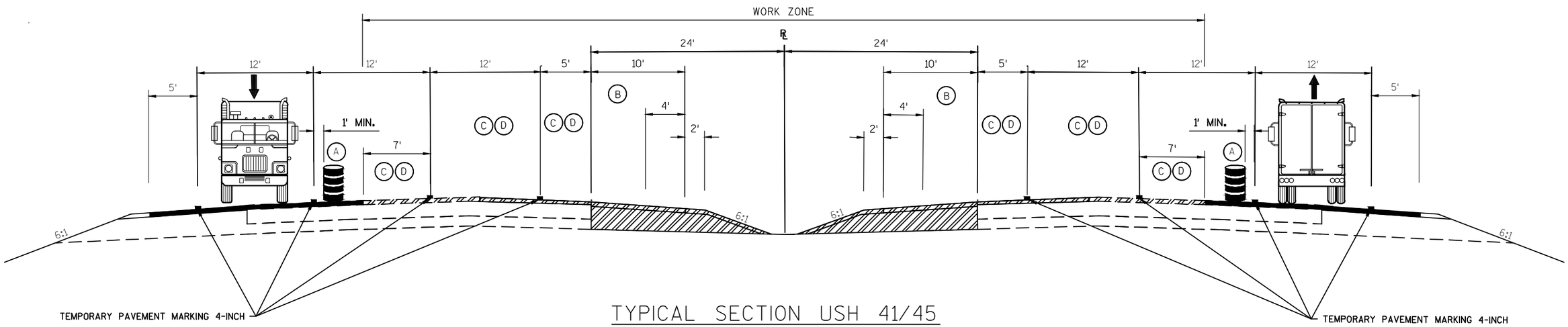
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: TRAFFIC CONTROL - STAGE 1B	SHEET 317	E



TYPICAL SECTION USH 41/45

TRAFFIC CONTROL - STAGE 2A (ONE LANE CLOSURE)

STA. 345+00 TO STA. 694+00



TYPICAL SECTION USH 41/45

TRAFFIC CONTROL - STAGE 2A (TWO LANE CLOSURE)

STA. 345+00 TO STA. 694+00

MAINLINE USH 41 STAGING NOTES:

STAGE 2A: NORTHBOUND AND SOUTHBOUND

(A.) SET UP TRAFFIC CONTROL PER SDD's, CLOSE CENTER LANE AS NEEDED, SEE ALLOWED LANE CLOSURE HOURS.

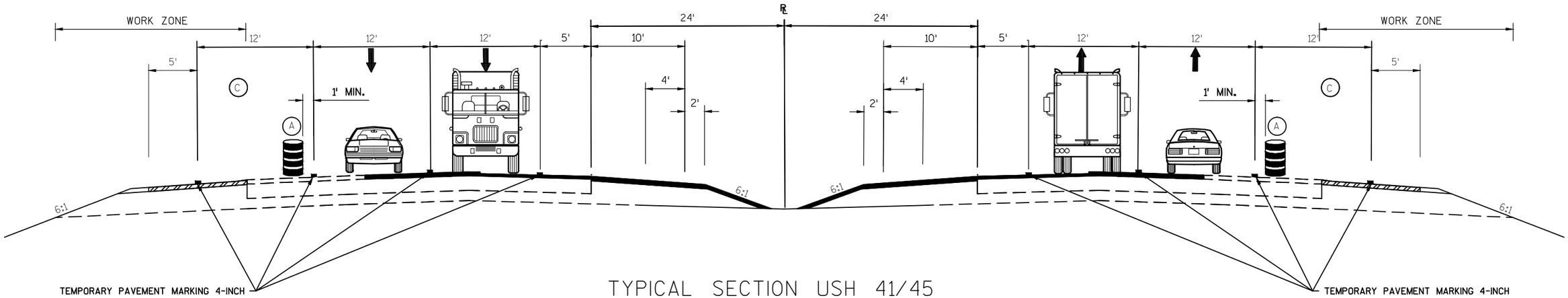
(B.) RECONSTRUCT INSIDE SHOULDER WIDENING UP TO HMA PAVEMENT LOWER LAYERS.

(C.) PERFORM ASPHALTIC SURFACE MILLING AND PLACE LOWER AND UPPER LAYERS OF HMA PAVEMENT.

(D.) PLACE TEMPORARY PAVEMENT MARKING.

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: TRAFFIC CONTROL - STAGE 2A	SHEET 318	E

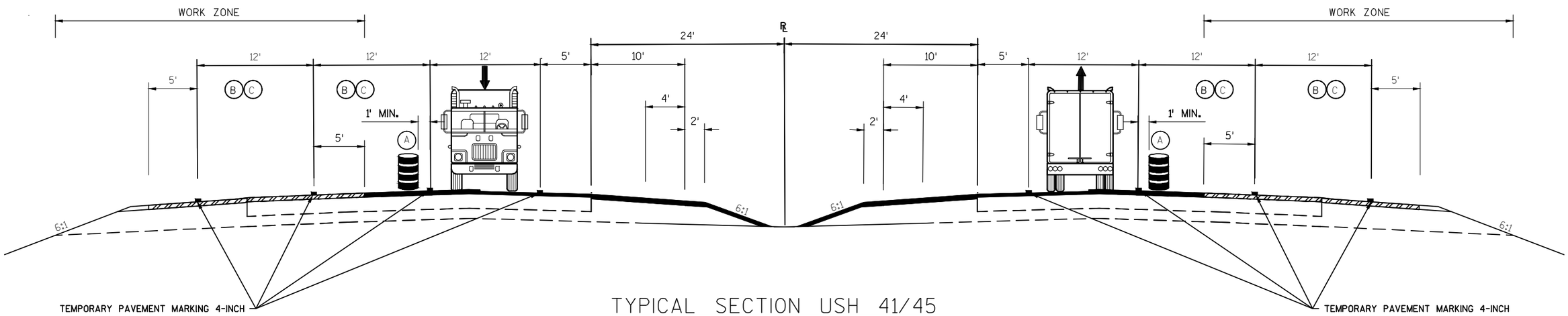
FILE NAME : N:\PDS\C3D\CAD\11003800\025001_TC.DWG PLOT DATE : 3/10/2015 1:36 PM PLOT BY : YANG, VANG NENG PLOT NAME : PLOT SCALE : 1 IN:10 FT



TYPICAL SECTION USH 41/45

TRAFFIC CONTROL - STAGE 2B (ONE LANE CLOSURE)

STA. 345+00 TO STA. 694+00



TYPICAL SECTION USH 41/45

TRAFFIC CONTROL - STAGE 2B (TWO LANE CLOSURE)

STA. 345+00 TO STA. 694+00

MAINLINE USH 41 STAGING NOTES:

STAGE 2B: NORTHBOUND AND SOUTHBOUND

(A.) SET UP TRAFFIC CONTROL PER SDD's, CLOSE CENTER LANE AS NEEDED, SEE ALLOWED LANE CLOSURE HOURS.

(B.) PLACE UPPER LAYERS OF HMA PAVEMENT.

(C.) PLACE PERMANENT PAVEMENT MARKING.

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: TRAFFIC CONTROL - STAGE 2B	SHEET 319	E

FILE NAME : N:\PDS\C3D\CAD\11003800\025001_TC.DWG PLOT DATE : 3/10/2015 1:37 PM PLOT BY : YANG, VANG NENG PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 42

OFF PEAK LANE CLOSURE HOURS

NORTHBOUND

ALL(3) LANES OPEN

2:00 PM MONDAY TO 7:30 PM MONDAY
2:00 PM TUESDAY TO 7:30 PM TUESDAY
2:00 PM WEDNESDAY TO 7:30 PM WEDNESDAY
2:00 PM THURSDAY TO 7:30 PM THURSDAY
1:00 PM FRIDAY TO 7:30 PM FRIDAY

ONE LANE CLOSURE

12:00 AM SUNDAY TO 2:00 PM MONDAY
7:30 PM MONDAY TO 2:00 PM TUESDAY
7:30 PM TUESDAY TO 2:00 PM WEDNESDAY
7:30 PM WEDNESDAY TO 2:00 PM THURSDAY
7:30 PM THURSDAY TO 1:00 PM FRIDAY
7:30 PM FRIDAY TO 12:00 AM SUNDAY

TWO LANE CLOSURE

7:00 PM SUNDAY TO 6:00 AM MONDAY
8:30 PM MONDAY TO 6:00 AM TUESDAY
8:30 PM TUESDAY TO 6:00 AM WEDNESDAY
8:30 PM WEDNESDAY TO 6:00 AM THURSDAY
8:30 PM THURSDAY TO 6:00 AM FRIDAY
8:30 PM FRIDAY TO 8:00 AM SATURDAY
8:00 PM SATURDAY TO 9:00 AM SUNDAY

SOUTHBOUND

ALL(3) LANES OPEN

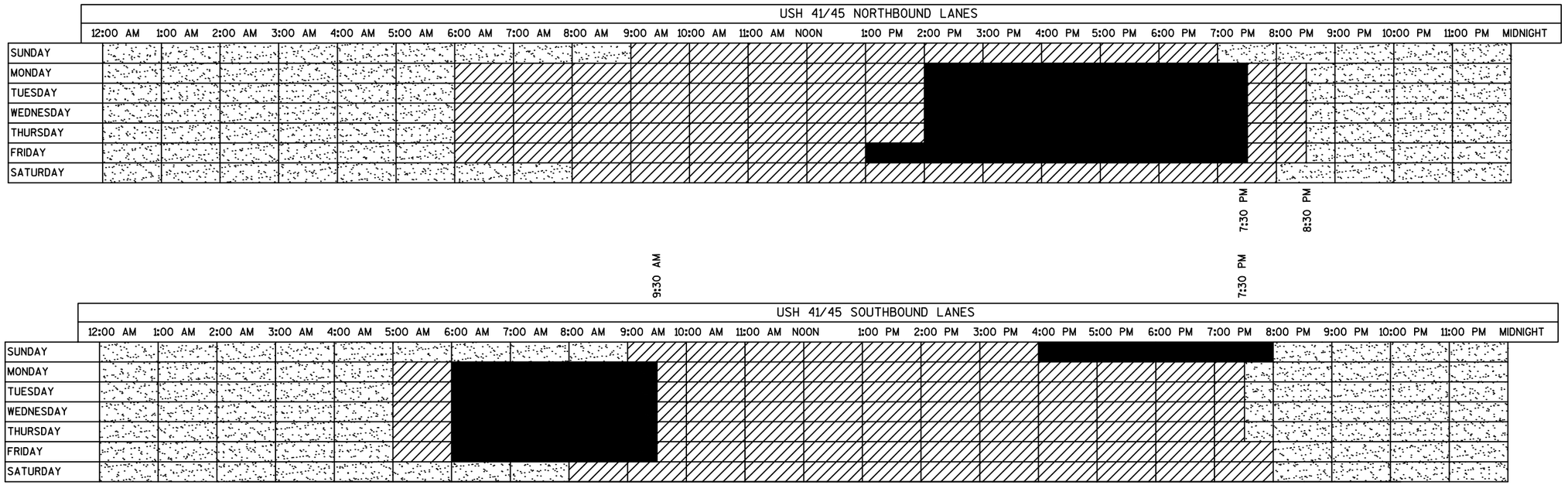
4:00 PM SUNDAY TO 8:00 PM SUNDAY
6:00 AM MONDAY TO 9:30 AM MONDAY
6:00 AM TUESDAY TO 9:30 AM TUESDAY
6:00 AM WEDNESDAY TO 9:30 AM WEDNESDAY
6:00 AM THURSDAY TO 9:30 AM THURSDAY
6:00 AM FRIDAY TO 9:30 AM FRIDAY

ONE LANE CLOSURE

8:00 PM SUNDAY TO 6:00 AM MONDAY
9:30 AM MONDAY TO 6:00 AM TUESDAY
9:30 AM TUESDAY TO 6:00 AM WEDNESDAY
9:30 AM WEDNESDAY TO 6:00 AM THURSDAY
9:30 AM THURSDAY TO 6:00 AM FRIDAY
9:30 AM FRIDAY TO 4:00 PM SUNDAY

TWO LANE CLOSURE

8:00 PM SUNDAY TO 5:00 AM MONDAY
7:30 PM MONDAY TO 5:00 AM TUESDAY
7:30 PM TUESDAY TO 5:00 AM WEDNESDAY
7:30 PM WEDNESDAY TO 5:00 AM THURSDAY
7:30 PM THURSDAY TO 5:00 AM FRIDAY
8:00 PM FRIDAY TO 8:00 AM SATURDAY
8:00 PM SATURDAY TO 9:00 AM SUNDAY



LEGEND:

- ALL THREE (3) LANES OF USH 41/45 FREEWAY SHALL BE OPEN TO TRAFFIC
- AT LEAST TWO (2) LANES OF USH 41/45 FREEWAY SHALL BE OPEN TO TRAFFIC
- AT LEAST ONE (1) LANE OF USH 41/45 FREEWAY SHALL BE OPEN TO TRAFFIC

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: TRAFFIC CONTROL	SHEET 320	E

LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

NOTES:

* TRAFFIC CONTROL LANE CLOSURE SPEED REDUCTION

** TRAFFIC CONTROL TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY SHORT TERM (LESS THAN 24 HOURS)

*** TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY SPEED GREATER THAN 40 MPH

SEE THE FOLLOWING STANDARD DETAIL DRAWING FOR ADDITIONAL TRAFFIC CONTROL ITEMS:
S.D.D. 15 D 12-4 *
S.D.D. 15 D 14-2 **
S.D.D. 15 D 27-2 ***

N

END ROAD WORK
G20-2A
48" X 24"

RICHFIELD WAY

USH 41/ 45 SB

USH 41/ 45 NB

USH 41/45

USH 41/45

328 330 332 334 336 338 340 342

336 338 340 342

RAMP A

50'

100'

1 1/2 MILE

3/4 MILE

1600' 1000' 500'

ROAD WORK AHEAD W20-1

RIGHT SHOULDER CLOSED AHEAD W21-5B

RIGHT SHOULDER CLOSED W21-5A

PROJECT NO: 1100-38-70	HWY: 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 1A & 1B	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026021_S1.DWG PLOT DATE : 3/26/2015 1:58 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1:100_XREF
WISDOT/CADDS SHEET 42

2

N

5

RAMP D

RAMP C

RAMP A

RAMP B

CTH Q

USH 41/45

USH 41/45 SB

USH 41/45 NB

100'

SIGN

R11-2
48" X 30"
SHOULDER CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

ROAD WORK AHEAD
W20-1

RIGHT SHOULDER CLOSED
W21-5A

LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

PROJECT NO: 1100-38-70	HWY: 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 1A & 1B	SHEET E

FILE NAME : N:\PDS\C3D\CAD\11003800\026022_S1.DWG PLOT DATE : 3/5/2015 3:50 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1:100_XREF

2

COVERING SIGNS TYPE I FOR MILLING AND PAVING WORK OPERATIONS
USH 41/ 45 SB OFF-RAMP CLOSED
(SEE DETOUR PLANS)

R11-2
48" X 30"
SHOULDER CLOSED
TYPE III BARRICADE

50'

RAMP C

+35

100'

COVERING SIGNS TYPE I FOR MILLING AND PAVING WORK OPERATIONS
USH 41/ 45 SB OFF-RAMP CLOSED
(SEE DETOUR PLANS)

USH 41/ 45 SB

USH 41/ 45 NB

RAMP B

100'

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
SHOULDER CLOSED
TYPE III BARRICADE

LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

PROJECT NO: 1100-38-70	HWY: 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 1A & 1B	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026023_S1.DWG PLOT DATE : 3/5/2015 3:52 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1:100_XREF
WISDOT/CADDS SHEET 42

2

2

R11-2
48" X 30"
SHOULDER CLOSED

R11-2
48" X 30"
LANE CLOSED

TYPE III BARRICADE

TYPE III BARRICADE

GOLF GREEN

GOLF COURSE

SIGN

100'

USH 41/ 45 SB

374 376 378 380 382 384 386 388

USH 41/ 45 NB

100'

R11-2
48" X 30"
LANE CLOSED

R11-2
48" X 30"
SHOULDER CLOSED

TYPE III BARRICADE

TYPE III BARRICADE

20" STEEL GAS MAIN
IN 24" CASING
PER 1108-00-70

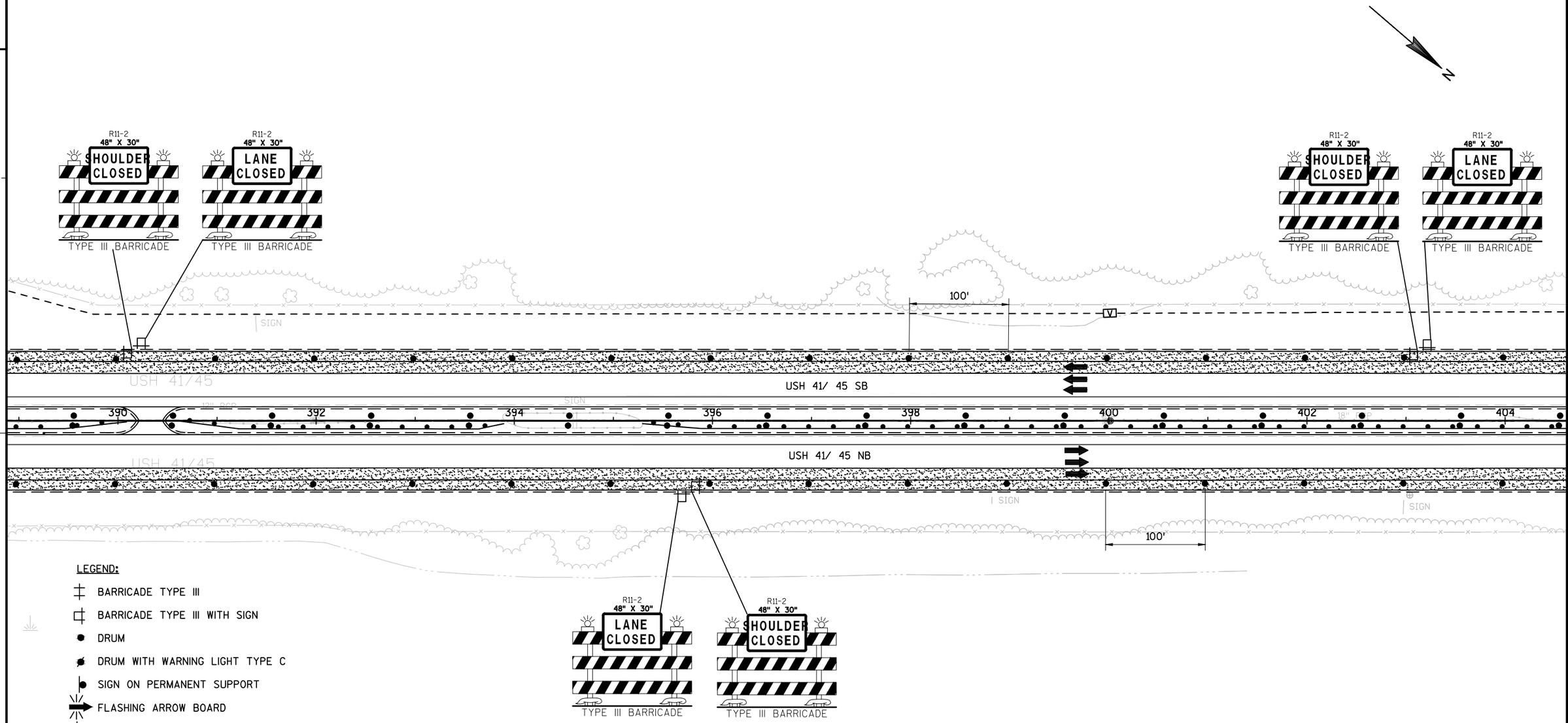
LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

PROJECT NO: 1100-38-70	HWY: 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 1A & 1B	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026024_S1.DWG PLOT DATE : 3/5/2015 3:53 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2



LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

PROJECT NO: 1100-38-70	HWY: 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 1A & 1B	SHEET E

FILE NAME : N:\PDS\C3D\CAD\11003800\026025_S1.DWG PLOT DATE : 3/5/2015 3:54 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

2

COVERING SIGNS TYPE I FOR MILLING AND PAVING WORK OPERATIONS
USH 41/ 45 SB OFF-RAMP CLOSED
(SEE DETOUR PLANS)

R11-2
48" X 30"
SHOULDER CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

100'

SIGN

USH 41/45

USH 41/ 45 SB

406 408 410 412 414 416 418 420

USH 41/45

USH 41/ 45 NB

SIGN

SIGN

100'

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
SHOULDER CLOSED
TYPE III BARRICADE

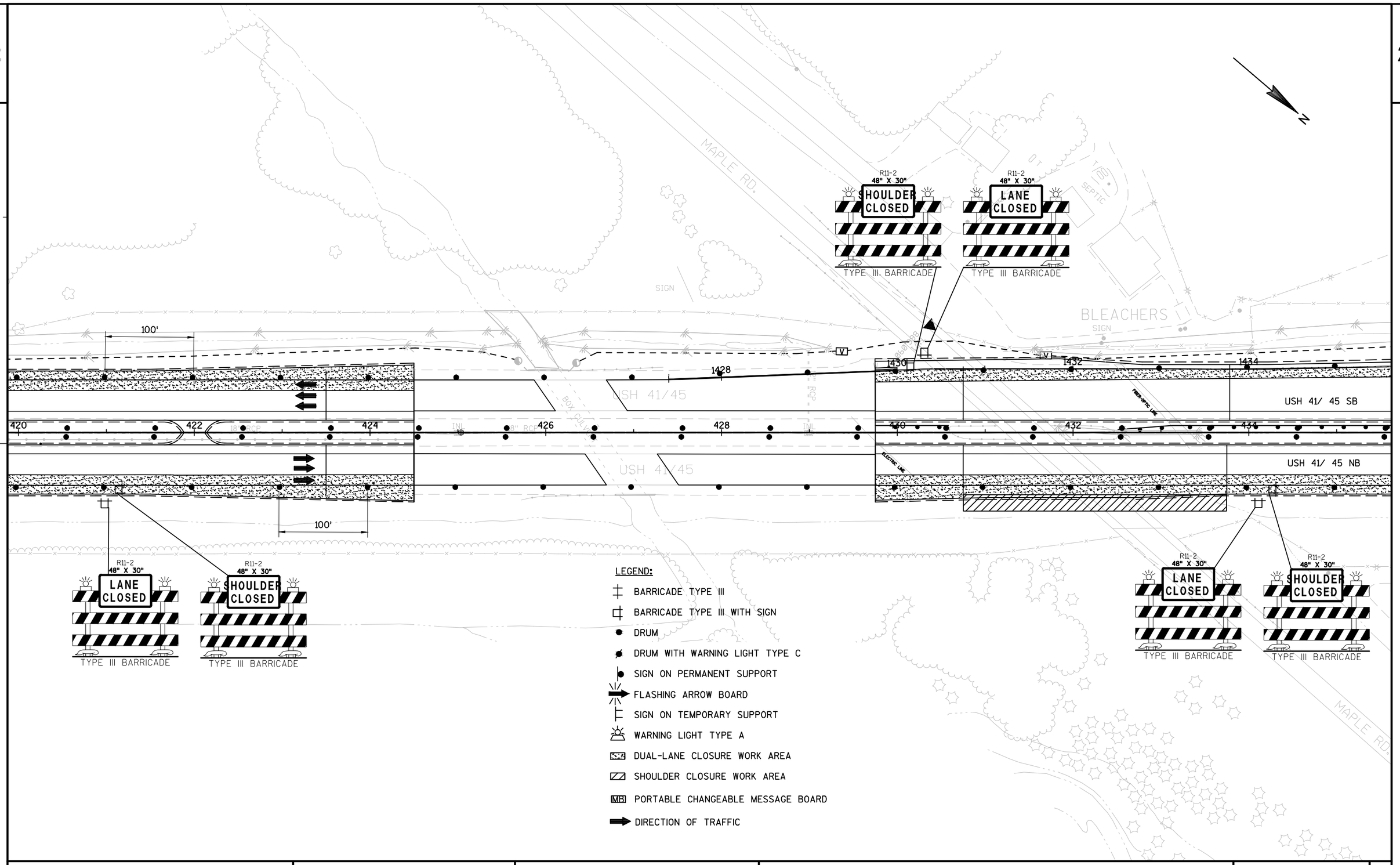
LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

PROJECT NO: 1100-38-70	HWY: 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 1A & 1B	SHEET	E

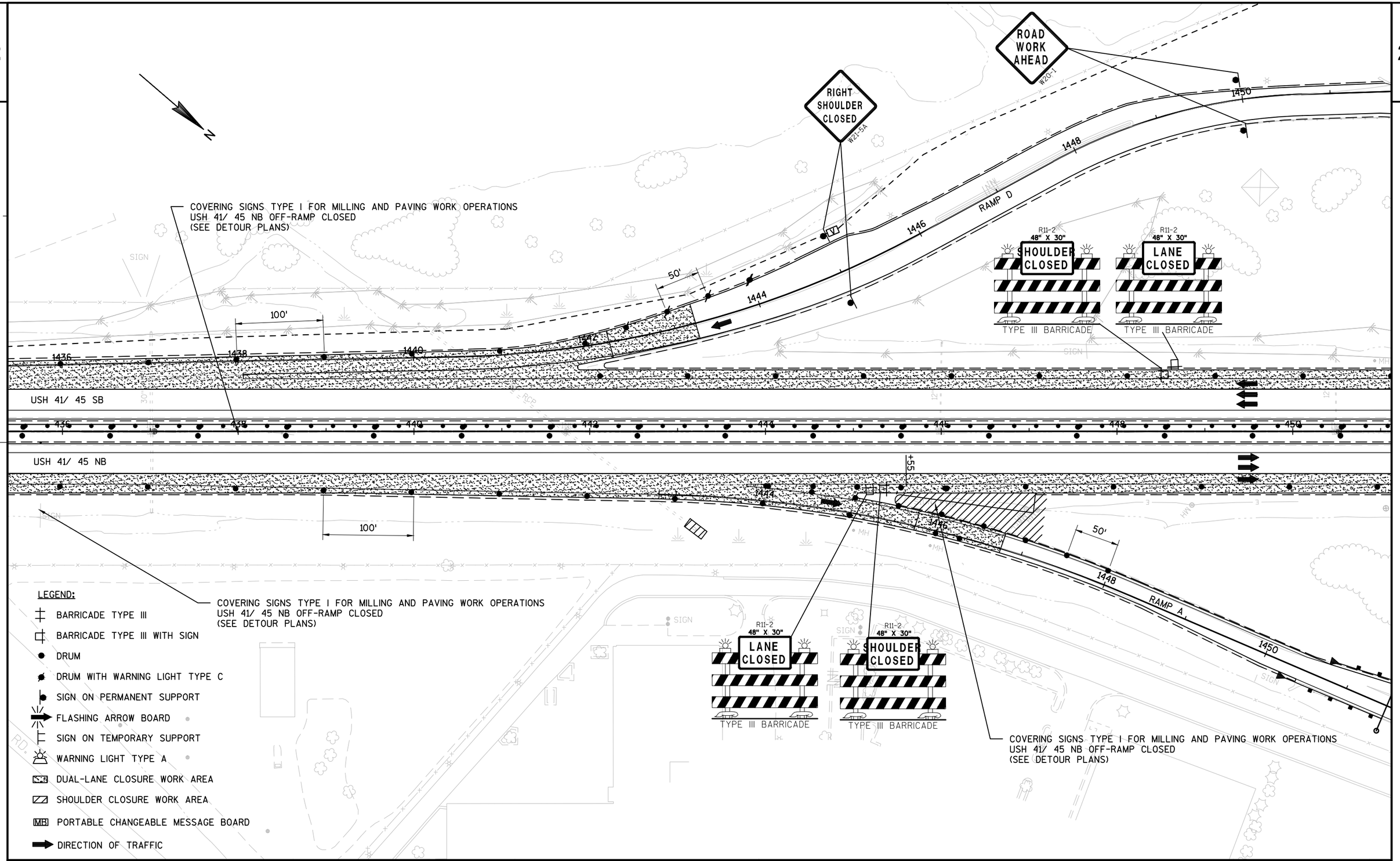
FILE NAME : N:\PDS\C3D\CAD\11003800\026026_S1.DWG PLOT DATE : 3/5/2015 3:55 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF
WISDOT/CADDS SHEET 42

2



PROJECT NO: 1100-38-70	HWY: 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 1A & 1B	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026027_S1.DWG PLOT DATE : 3/5/2015 3:56 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF



PROJECT NO: 1100-38-70	HWY: 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 1A & 1B	SHEET E

FILE NAME : N:\PDS\C3D\CAD\11003800\026028_S1.DWG PLOT DATE : 3/5/2015 3:57 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1:100_XREF
WISDOT/CADDS SHEET 42

COVERING SIGNS TYPE I FOR MILLING AND PAVING WORK OPERATIONS
USH 41/ 45 SB OFF-RAMP CLOSED
(SEE DETOUR PLANS)

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
SHOULDER CLOSED
TYPE III BARRICADE

RAMP D
RAMP C
RAMP B
RAMP A
LANNON RD./ STH 167
USH 41/45
USH 41/ 45 SB
USH 41/ 45 NB
100'
14" GASMAIN PER 1108-00-70
20" GASMAIN PER 1108-00-70

ROAD WORK AHEAD
W20-1

RIGHT SHOULDER CLOSED
W21-5A

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
SHOULDER CLOSED
TYPE III BARRICADE

LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

PROJECT NO: 1100-38-70	HWY: 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 1A & 1B	SHEET E

FILE NAME : N:\PDS\C3D\CAD\11003800\026029_S1.DWG PLOT DATE : 3/5/2015 3:58 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1:100_XREF
WISDOT/CADDS SHEET 42

2

2

N

R11-2
48" X 30"
SHOULDER CLOSED

R11-2
48" X 30"
LANE CLOSED

TYPE III BARRICADE

TYPE III BARRICADE

COVERING SIGNS TYPE I FOR MILLING AND PAVING WORK OPERATIONS
USH 41/ 45 SB OFF-RAMP CLOSED
(SEE DETOUR PLANS)

100'

USH 41/45/STH 167

USH 41/ 45 SB

458 470 472 474 476 478 480 482

USH 41/ 45 NB

100'

R11-2
48" X 30"
LANE CLOSED

R11-2
48" X 30"
SHOULDER CLOSED

TYPE III BARRICADE

TYPE III BARRICADE

U/C

LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

PROJECT NO: 1100-38-70	HWY: 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 1A & 1B	SHEET 330	E

2

2

N

R11-2
48" X 30"
SHOULDER CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

100'

USH 41/ 45 SB

USH 41/45/STH 167

482 484 486 488 490 492 494 496

USH 41/ 45 NB

100'

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
SHOULDER CLOSED
TYPE III BARRICADE

RIPRAP

SIGN

MH

W

LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

PROJECT NO: 1100-38-70	HWY: 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 1A & 1B	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026031_S1.DWG PLOT DATE : 3/5/2015 4:00 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

2

2

COVERING SIGNS TYPE I FOR MILLING AND PAVING WORK OPERATIONS
USH 41/ 45 SB OFF-RAMP CLOSED
(SEE DETOUR PLANS)

N

R11-2
48" X 30"
SHOULDER CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

I SIGN

SIGN

100'

USH 41/ 45 SB

USH 41/45/STH 167

498 500 502 504 506 508 510 512

USH 41/ 45 NB

USH 41/45/STH 167

100'

CTH "Y"

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
SHOULDER CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

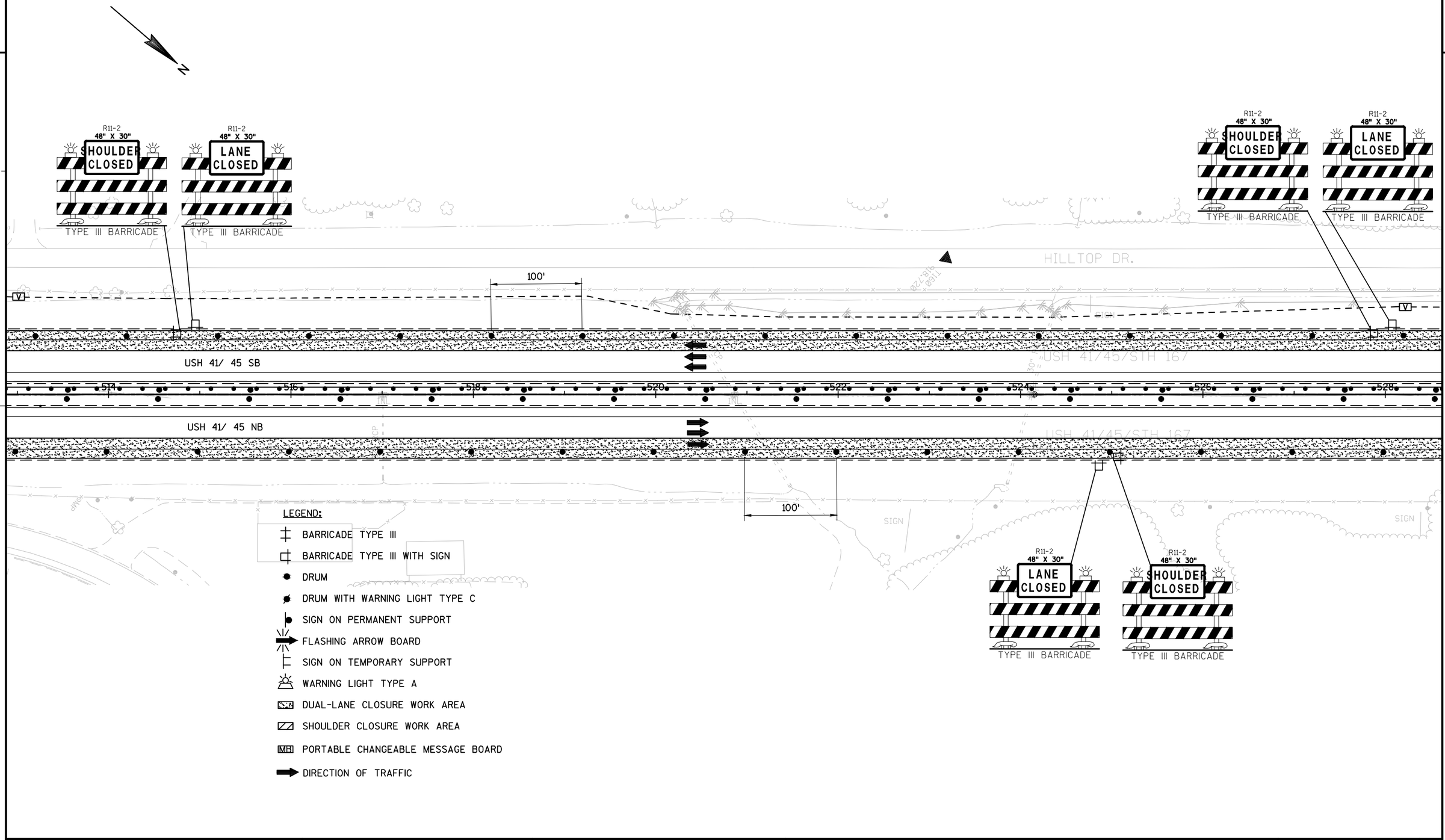
R11-2
48" X 30"
SHOULDER CLOSED
TYPE III BARRICADE

SIGN

PROJECT NO: 1100-38-70	HWY: 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 1A & 1B	SHEET	E

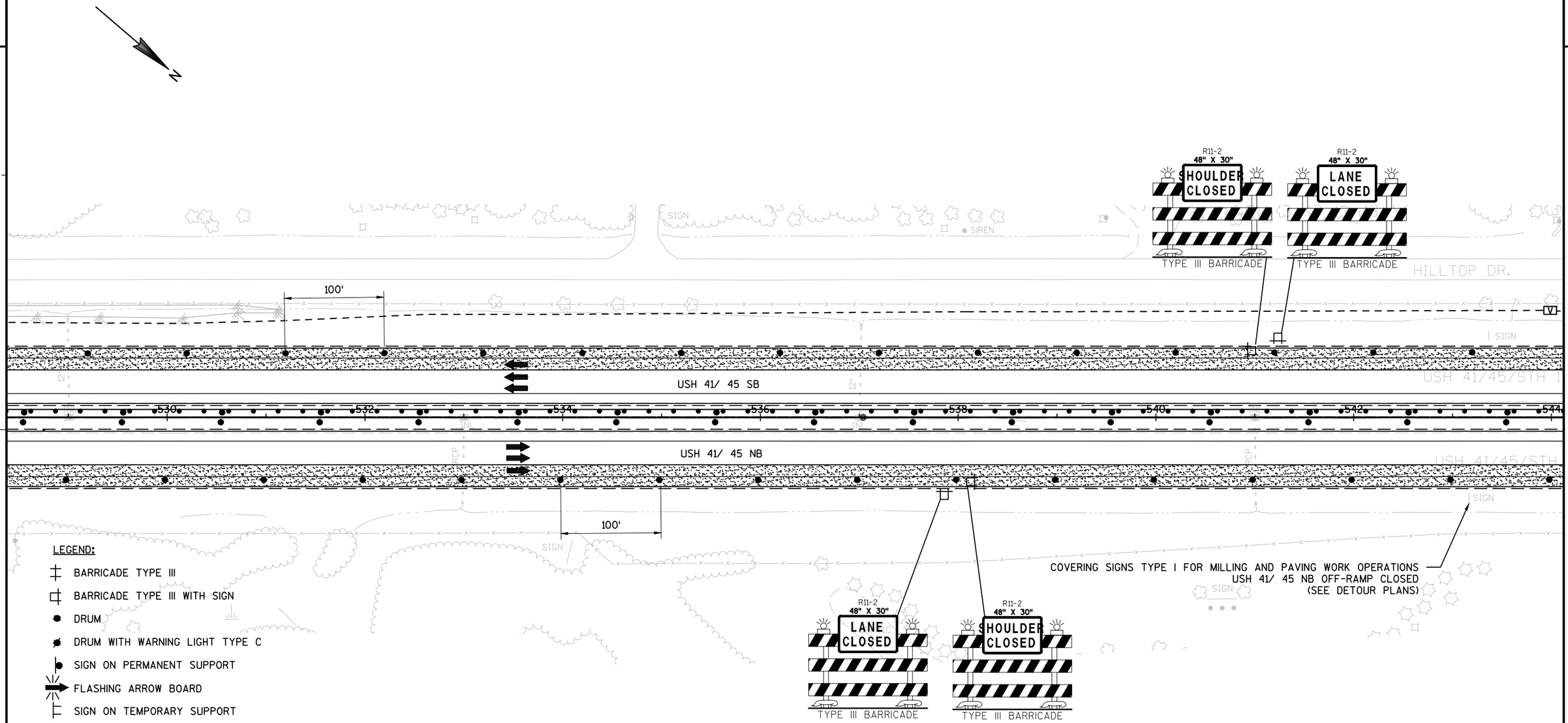
FILE NAME : N:\PDS\C3D\CAD\11003800\026032_S1.DWG PLOT DATE : 3/5/2015 4:01 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF
WISDOT/CADDS SHEET 42

2



PROJECT NO: 1100-38-70	HWY: 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 1A & 1B	SHEET 333	E

2



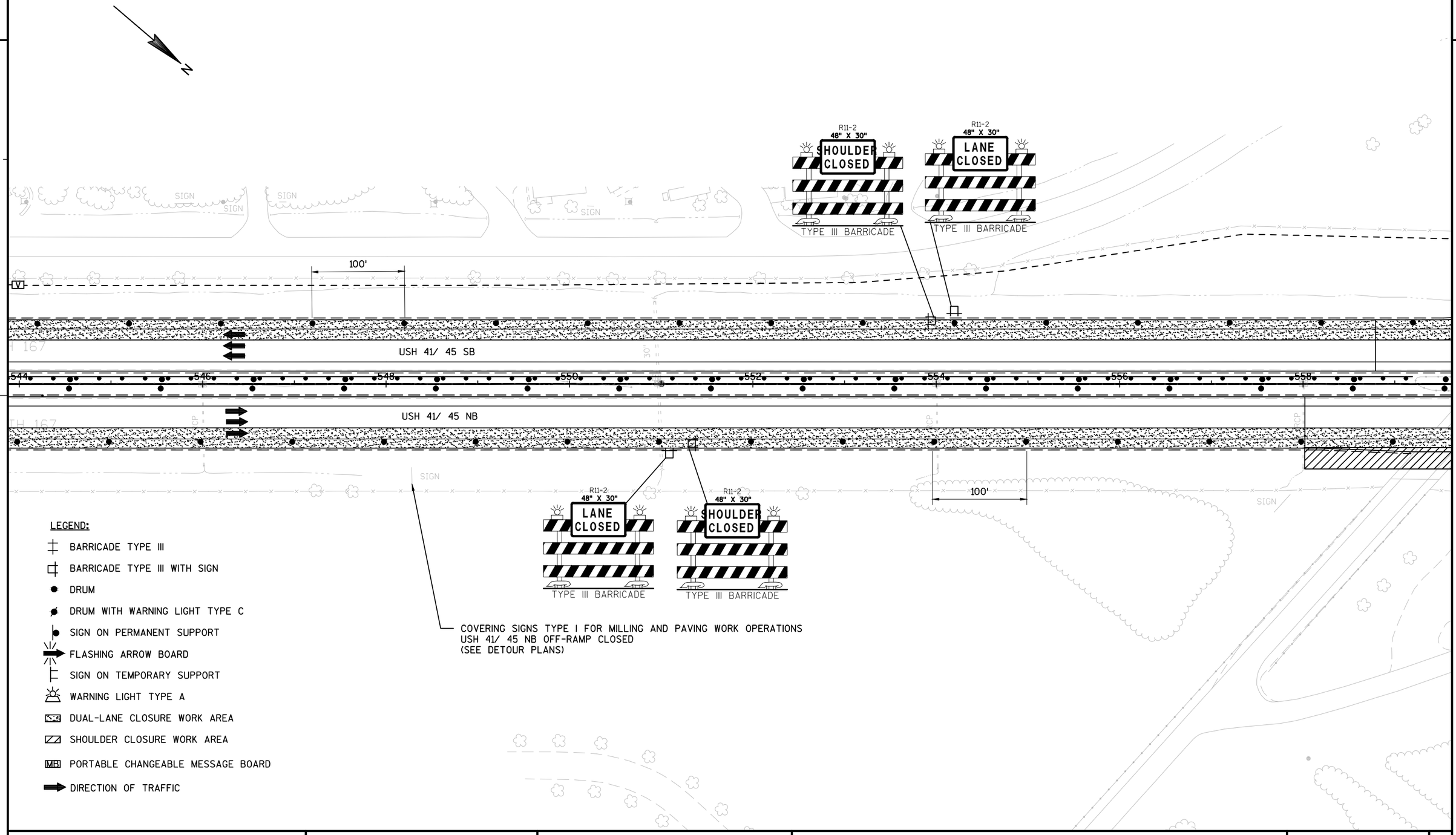
LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

PROJECT NO: 1100-38-70	HWY: 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 1A & 1B	SHEET 334	E

2

2



PROJECT NO: 1100-38-70	HWY: 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 1A & 1B	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026035_S1.DWG PLOT DATE : 3/5/2015 4:05 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF
WISDOT/CADDS SHEET 42

2

2

LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

R11-2 48" X 30" SHOULDER CLOSED — TYPE III BARRICADE

R11-2 48" X 30" LANE CLOSED — TYPE III BARRICADE

SLOPE INTERCEPT

572+00

100'

USH 41/45/STH 167

USH 41/ 45 SB

560 562 564 566 568 570 572 574

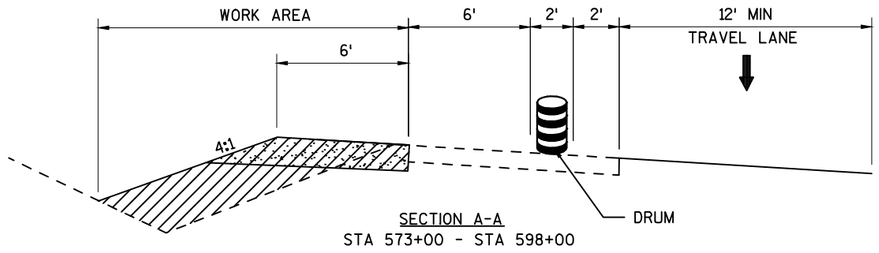
USH 41/ 45 NB

100'

COVERING SIGNS TYPE I FOR MILLING AND PAVING WORK OPERATIONS
USH 41/ 45 NB OFF-RAMP CLOSED
(SEE DETOUR PLANS)

R11-2 48" X 30" LANE CLOSED — TYPE III BARRICADE

R11-2 48" X 30" SHOULDER CLOSED — TYPE III BARRICADE



SECTION A-A
STA 573+00 - STA 598+00

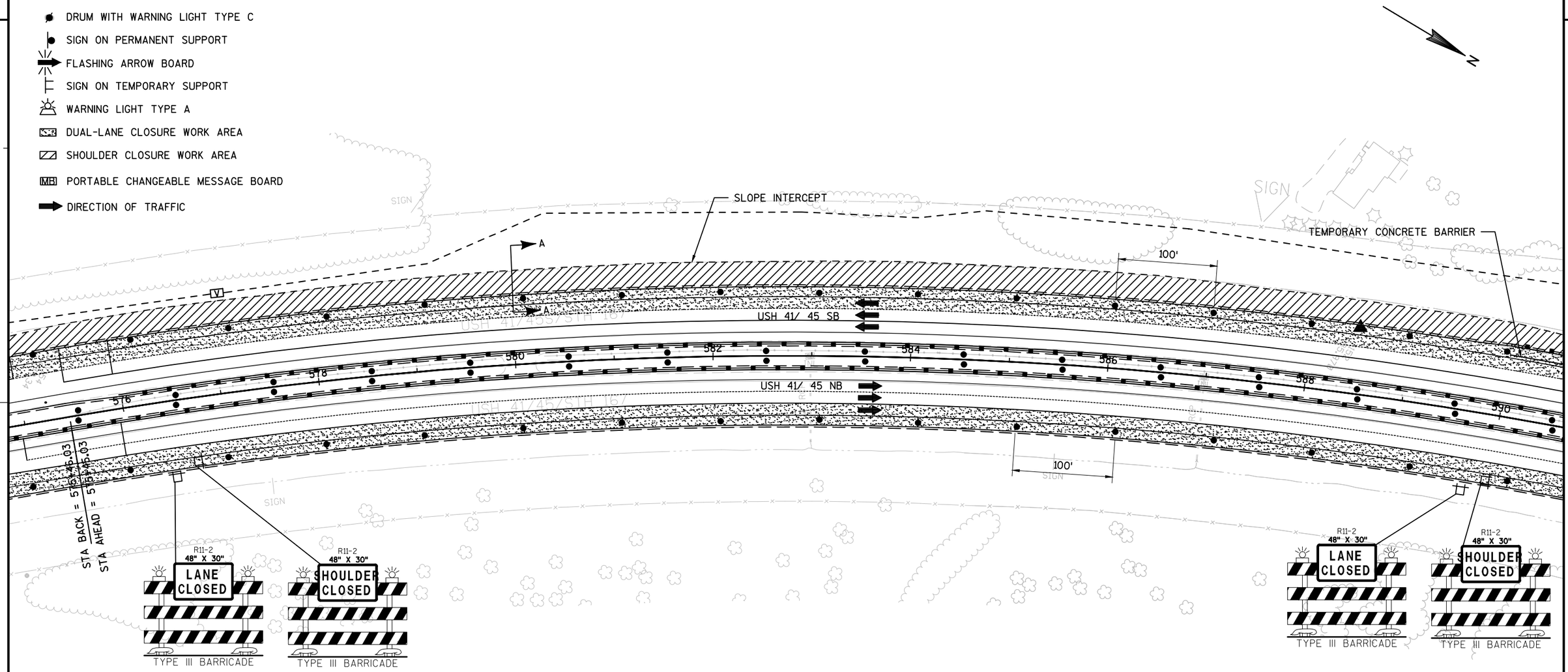
PROJECT NO: 1100-38-70	HWY: 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 1A & 1B	SHEET	E

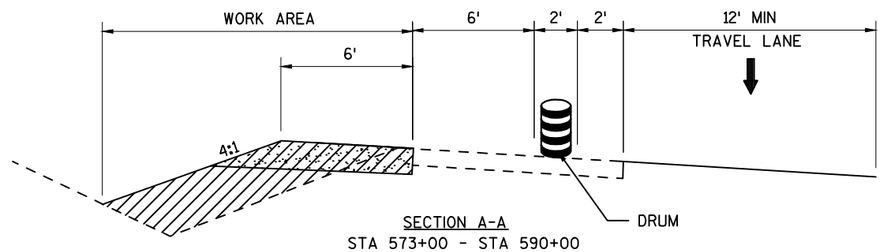
FILE NAME : N:\PDS\C3D\CAD\11003800\026036_S1.DWG PLOT DATE : 3/5/2015 4:06 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF
WISDOT/CADDS SHEET 42

2

LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC



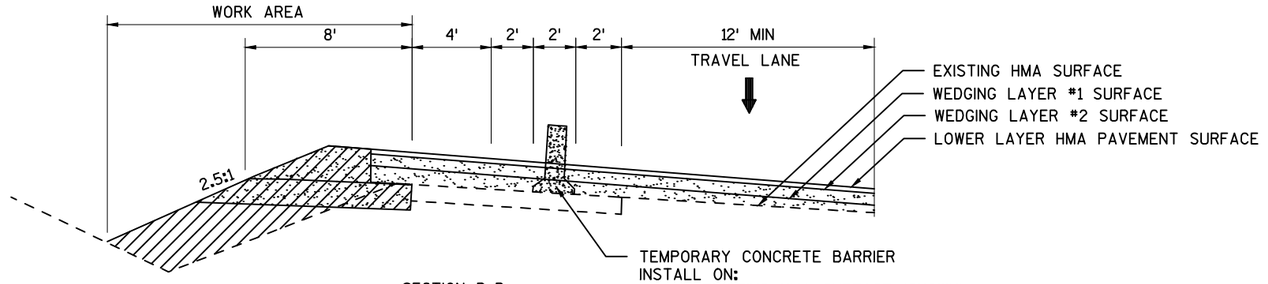


SECTION A-A
STA 573+00 - STA 590+00

PROJECT NO: 1100-38-70	HWY: 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 1A & 1B	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026037_S1.DWG PLOT DATE : 3/5/2015 4:07 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1:100_XREF
WISDOT/CADDS SHEET 42

2



SECTION B-B
STA 590+00 - STA 608+50

N

SIGN

SLOPE INTERCEPT

100'

B

B

USH 41/ 45 SB

USH 41/ 45 NB

592 594 596 598 600 602 604 606

TEMPORARY CONCRETE BARRIER

B

B

C

C

100'

WETLANDS

SIGN

CHAIN LINK FENCE

SLOPE INTERCEPT

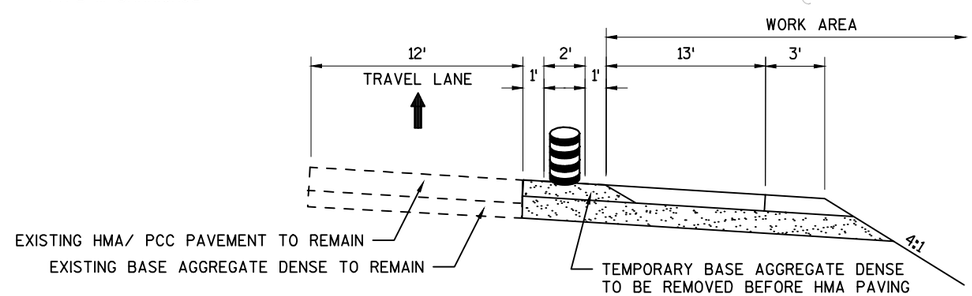
R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
SHOULDER CLOSED
TYPE III BARRICADE

COVERING SIGNS TYPE I FOR MILLING AND PAVING WORK OPERATIONS
USH 41/ 45 NB OFF-RAMP CLOSED
(SEE DETOUR PLANS)

LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

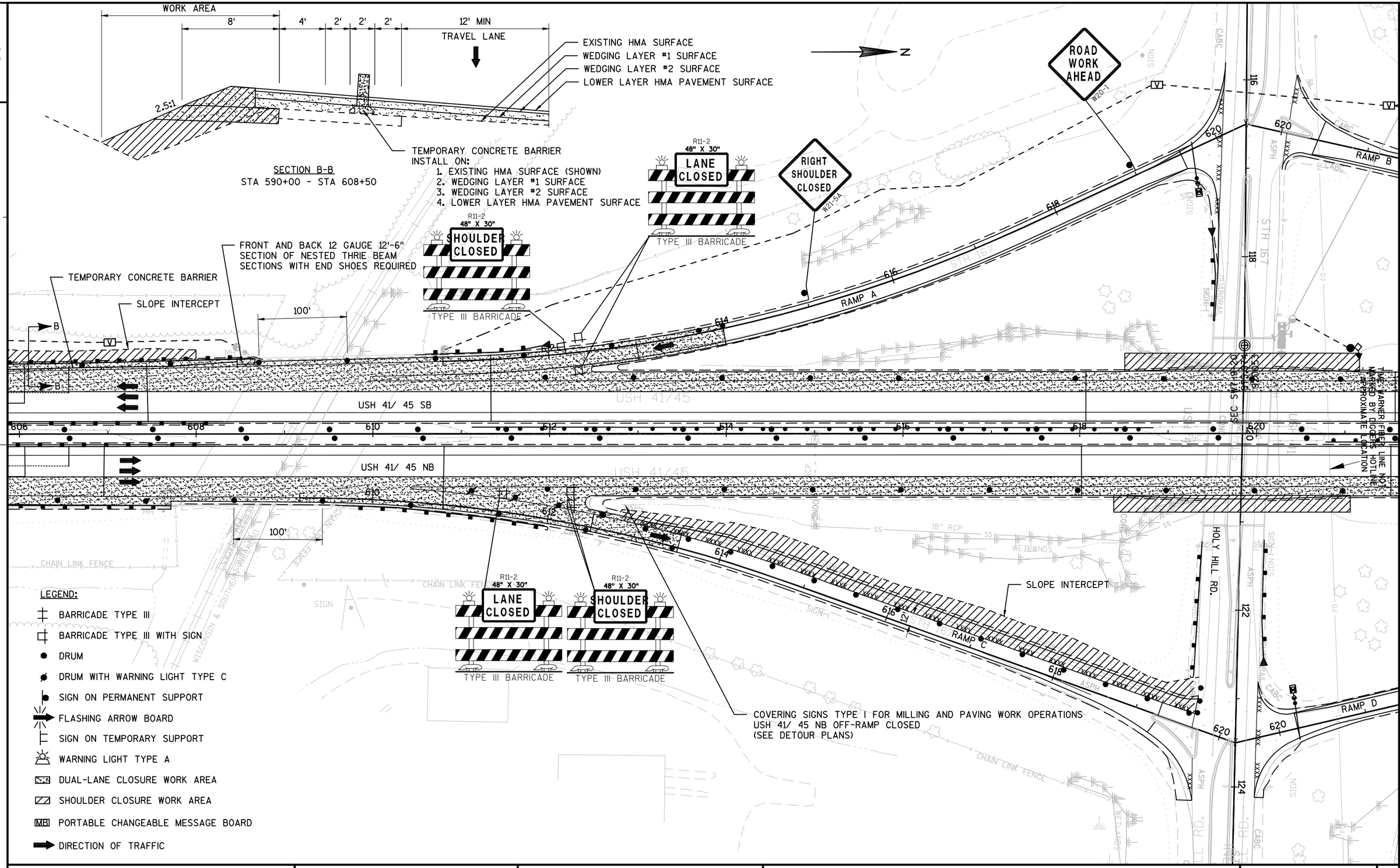


SECTION C-C
STA 599+50 - STA 604+50

PROJECT NO: 1100-38-70	HWY: 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 1A & 1B	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026038_S1.DWG PLOT DATE : 3/5/2015 4:08 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1:100_XREF
WISDOT/CADDS SHEET 42

SECTION B-B
STA 590+00 - STA 608+50



LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

PROJECT NO: 1100-38-70	HWY: 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 1A & 1B	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026039_S1.DWG PLOT DATE : 3/5/2015 4:09 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1:100_XREF
WISDOT/CADDS SHEET 42

2

N

COVERING SIGNS TYPE I FOR MILLING AND PAVING WORK OPERATIONS
USH 41/ 45 SB OFF-RAMP CLOSED
(SEE DETOUR PLANS)

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
SHOULDER CLOSED
TYPE III BARRICADE

RAMP B

622 624 626 628 630 632 634

100'

USH 41/45

USH 41/ 45 SB

TWLTL WARNER FLYER LINE NO.

USH 41/45

USH 41/ 45 NB

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
SHOULDER CLOSED
TYPE III BARRICADE

RAMP D

622 624 626 628 630 632

100'

RIGHT SHOULDER CLOSED
W21-5A

ROAD WORK AHEAD
W20-1

LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

PROJECT NO: 1100-38-70	HWY: 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 1A & 1B	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026040_S1.DWG PLOT DATE : 3/5/2015 4:10 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

N

COVERING SIGNS TYPE I FOR MILLING AND PAVING WORK OPERATIONS
USH 41/ 45 SB OFF-RAMP CLOSED
(SEE DETOUR PLANS)

R11-2
48" X 30"
SHOULDER CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

SIGN

100'

USH 41/45

USH 41/ 45 SB

SEC W27-20 SC06524 BA0042

638 640 642 644 646 648 650 652

USH 41/ 45 NB

USH 41/45

SIGN

100'

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
SHOULDER CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
SHOULDER CLOSED
TYPE III BARRICADE

LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

V145
905.82

PROJECT NO: 1100-38-70	HWY: 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 1A & 1B	SHEET 341	E

2

N

T144
907.410

SIGN

SIGN

R11-2
48" X 30"
SHOULDER CLOSED

TYPE III BARRICADE

R11-2
48" X 30"
LANE CLOSED

TYPE III BARRICADE

100'

USH 41/ 45 SB

USH 41/45

654

656

658

659

662

664

666

USH 41/ 45 NB

USH 41/45

100'

SIGN

SIGN

SIGN

SIGN

R11-2
48" X 30"
LANE CLOSED

TYPE III BARRICADE

R11-2
48" X 30"
SHOULDER CLOSED

TYPE III BARRICADE

LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

PROJECT NO: 1100-38-70	HWY: 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 1A & 1B	SHEET 342	E

2

N

COVERING SIGNS TYPE I FOR MILLING AND PAVING WORK OPERATIONS
USH 41/ 45 SB OFF-RAMP CLOSED
(SEE DETOUR PLANS)

R11-2
48" X 30"
SHOULDER CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

PROJECT ID 1100-15-71
B-66-0195
BY OTHERS

100'

USH 41/ 45 SB

USH 41/ 45 NB

668 670 672 674 676 678 680 682

SEE 17-20-155-39

6" STEEL GAS MAIN
IN 12" CASING
PER 1108-00-70

100'

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
SHOULDER CLOSED
TYPE III BARRICADE

LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

PROJECT NO: 1100-38-70	HWY: 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 1A & 1B	SHEET E

FILE NAME : N:\PDS\C3D\CAD\11003800\026043_S1.DWG PLOT DATE : 3/5/2015 4:13 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

2

N

R11-2
48" X 30"
LANE CLOSED

R11-2
48" X 30"
SHOULDER CLOSED

TYPE III BARRICADE

TYPE III BARRICADE

100'

50'

SEE THE FOLLOWING STANDARD DETAIL DRAWING FOR ADDITIONAL TRAFFIC CONTROL ITEMS:
S.D.D. 15 D 12-4*
S.D.D. 15 D 27-4***

R11-2
48" X 30"
LANE CLOSED

R11-2
48" X 30"
SHOULDER CLOSED

TYPE III BARRICADE

TYPE III BARRICADE

1'

100'

USH 45 SB

USH 41 SB

USH 41 NB

USH 45 NB

U.S.H. 41

U.S.H. 45

682 684 686 688 690 692 694 696

SIGN

FOUND

SEPTIC

SHADOW

NOTES:

* TRAFFIC CONTROL LANE CLOSURE SPEED REDUCTION

*** TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY SPEED GREATER THAN 40 MPH

LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

PROJECT NO: 1100-38-70	HWY: 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 1A & 1B	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026044_S1.DWG PLOT DATE : 3/26/2015 1:58 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42

NOTES:

* TRAFFIC CONTROL LANE CLOSURE SPEED REDUCTION

*** TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY SPEED GREATER THAN 40 MPH

RIGHT SHOULDER CLOSED W21-5A

3/4 MILE

1000'

RIGHT SHOULDER CLOSED AHEAD W21-5B

1 1/2 MILE

1600'

ROAD WORK AHEAD W20-1

SEE THE FOLLOWING STANDARD DETAIL DRAWING FOR ADDITIONAL TRAFFIC CONTROL ITEMS:
S.D.D. 15 D 14-2 *
S.D.D. 15 D 27-4 ***

END ROAD WORK G20-2A 48" X 24"

500'

LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

PROJECT NO: 1100-38-70	HWY: 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 1A & 1B	SHEET E

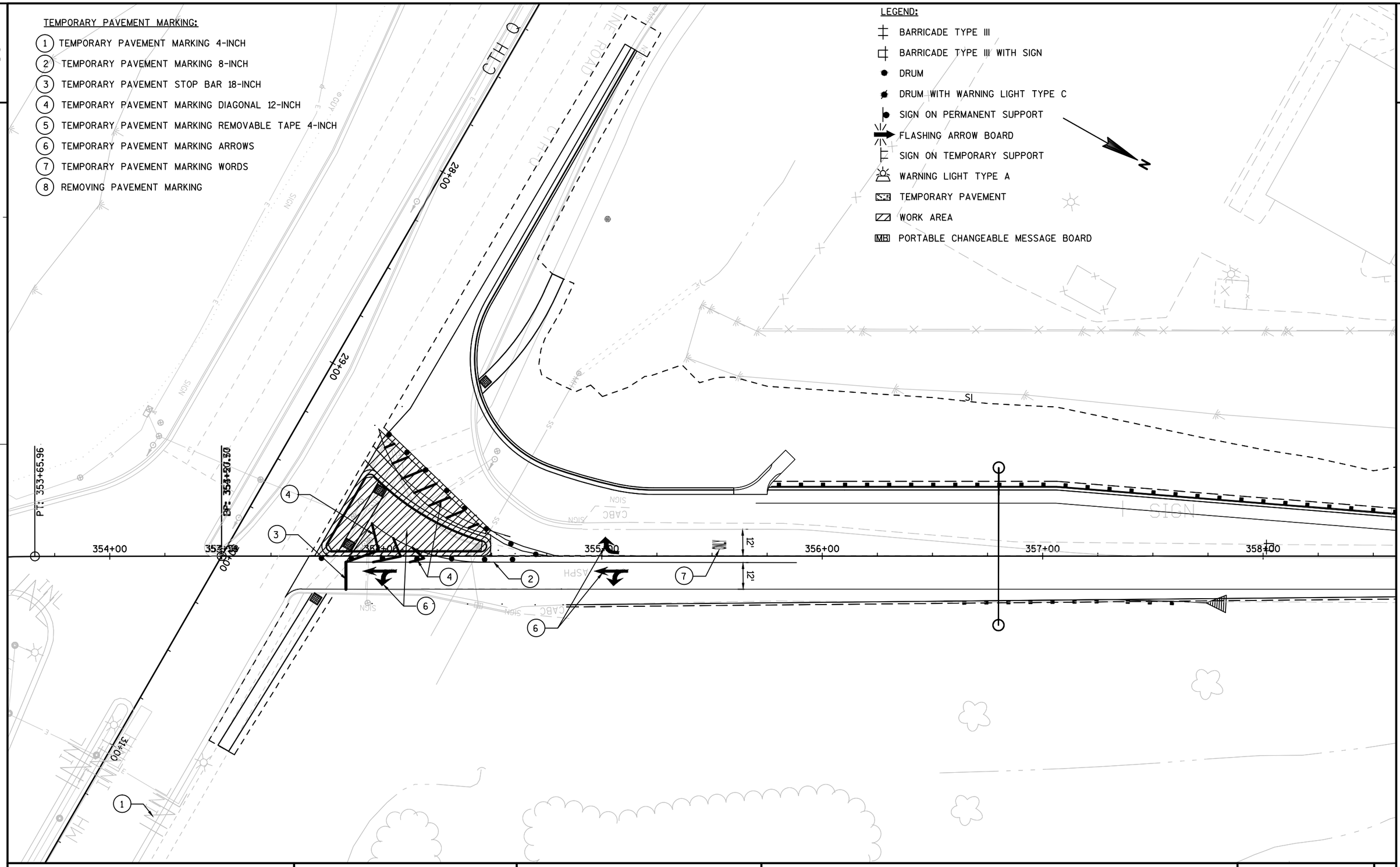
FILE NAME : N:\PDS\C3D\CAD\11003800\026045_S1.DWG PLOT DATE : 3/26/2015 1:58 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF
WISDOT/CADDS SHEET 42

TEMPORARY PAVEMENT MARKING:

1. TEMPORARY PAVEMENT MARKING 4-INCH
2. TEMPORARY PAVEMENT MARKING 8-INCH
3. TEMPORARY PAVEMENT STOP BAR 18-INCH
4. TEMPORARY PAVEMENT MARKING DIAGONAL 12-INCH
5. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
6. TEMPORARY PAVEMENT MARKING ARROWS
7. TEMPORARY PAVEMENT MARKING WORDS
8. REMOVING PAVEMENT MARKING

LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- TEMPORARY PAVEMENT
- WORK AREA
- MB PORTABLE CHANGEABLE MESSAGE BOARD

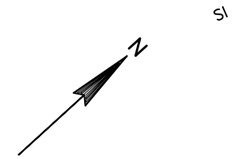


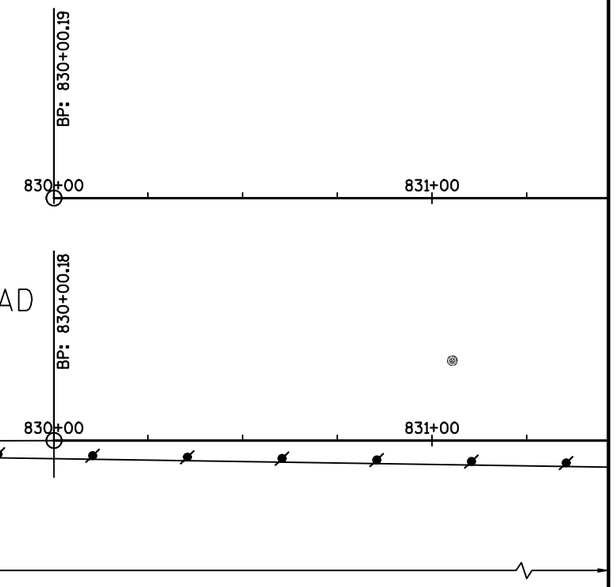
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: TRAFFIC CONTROL- STAGE 1A	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026091_S1A.DWG PLOT DATE : 3/9/2015 1:24 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : _____ PLOT SCALE : 0.30000000 = 1'-0" XREF
WISDOT/CADDS SHEET 42

TEMPORARY PAVEMENT MARKING:

1. TEMPORARY PAVEMENT MARKING 4-INCH
2. TEMPORARY PAVEMENT MARKING 8-INCH
3. TEMPORARY PAVEMENT STOP BAR 18-INCH
4. TEMPORARY PAVEMENT MARKING DIAGONAL 12-INCH
5. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
6. TEMPORARY PAVEMENT MARKING ARROWS
7. TEMPORARY PAVEMENT MARKING WORDS
8. REMOVING PAVEMENT MARKING



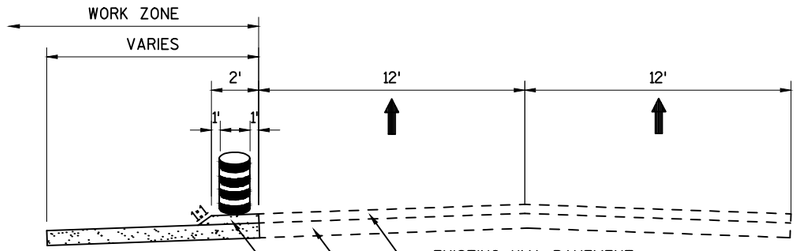


LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- TEMPORARY PAVEMENT
- WORK AREA
- PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: TRAFFIC CONTROL- STAGE 1A	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026100_S1A.DWG PLOT DATE : 3/9/2015 1:25 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : ---------- PLOT SCALE : 1" = 40'_XREF
WISDOT/CADDS SHEET 42



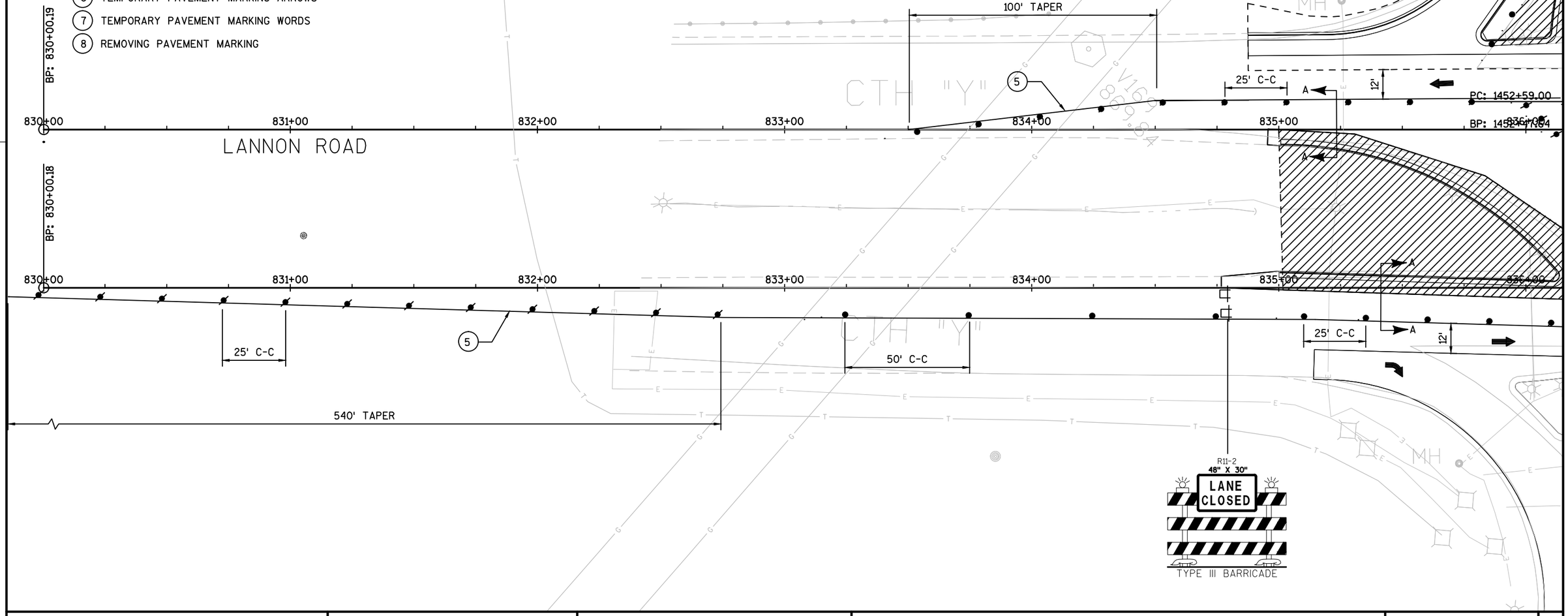
SECTION A-A

TEMPORARY PAVEMENT MARKING:

1. TEMPORARY PAVEMENT MARKING 4-INCH
2. TEMPORARY PAVEMENT MARKING 8-INCH
3. TEMPORARY PAVEMENT STOP BAR 18-INCH
4. TEMPORARY PAVEMENT MARKING DIAGONAL 12-INCH
5. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
6. TEMPORARY PAVEMENT MARKING ARROWS
7. TEMPORARY PAVEMENT MARKING WORDS
8. REMOVING PAVEMENT MARKING

LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- TEMPORARY PAVEMENT
- WORK AREA
- MB PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: TRAFFIC CONTROL- STAGE 1A	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026101_S1A.DWG PLOT DATE : 3/9/2015 1:26 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : ---------- PLOT SCALE : 1" = 40'_XREF

2

PI: 1454+12.45

1454+00

1453+00

1452+59.00'

1452+48

836+00

837+00

838+00

839+00

840+00

841+00

842+00

LANNON ROAD

USH 41/45

455+00

454+00

453+00

452+00

STH 167

CONCRETE WALL

50' C-C

10' C-C

25' C-C

SIGN

CONC

ASPH

MH

LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- TEMPORARY PAVEMENT
- WORK AREA
- MB PORTABLE CHANGEABLE MESSAGE BOARD

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

TEMPORARY PAVEMENT MARKING:

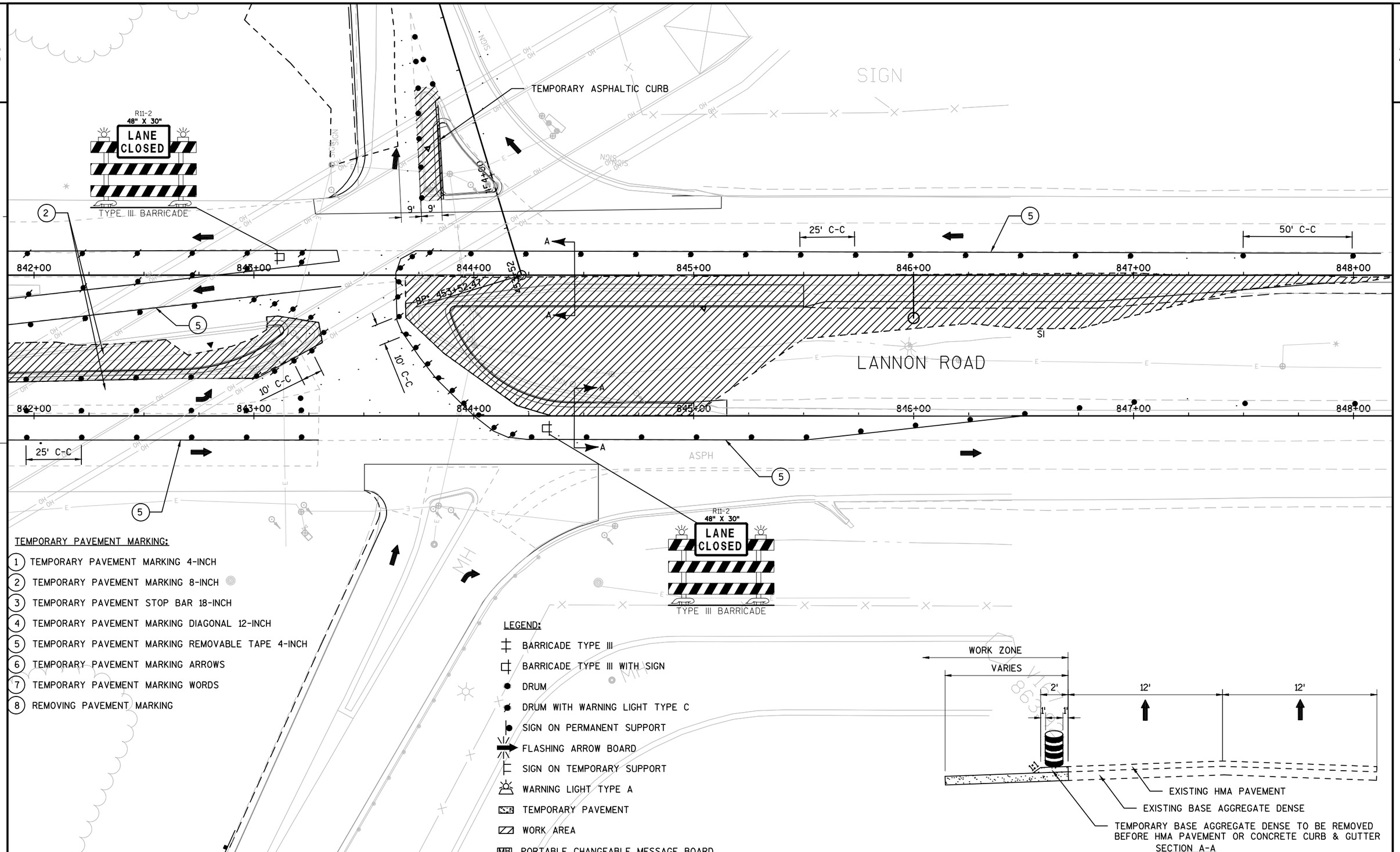
1. TEMPORARY PAVEMENT MARKING 4-INCH
2. TEMPORARY PAVEMENT MARKING 8-INCH
3. TEMPORARY PAVEMENT STOP BAR 18-INCH
4. TEMPORARY PAVEMENT MARKING DIAGONAL 12-INCH
5. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
6. TEMPORARY PAVEMENT MARKING ARROWS
7. TEMPORARY PAVEMENT MARKING WORDS
8. REMOVING PAVEMENT MARKING

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: TRAFFIC CONTROL- STAGE 1A	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026102_S1A.DWG PLOT DATE : 3/9/2015 1:27 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : ---------- PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42

2



TEMPORARY PAVEMENT MARKING:

1. TEMPORARY PAVEMENT MARKING 4-INCH
2. TEMPORARY PAVEMENT MARKING 8-INCH
3. TEMPORARY PAVEMENT STOP BAR 18-INCH
4. TEMPORARY PAVEMENT MARKING DIAGONAL 12-INCH
5. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
6. TEMPORARY PAVEMENT MARKING ARROWS
7. TEMPORARY PAVEMENT MARKING WORDS
8. REMOVING PAVEMENT MARKING

LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- TEMPORARY PAVEMENT
- WORK AREA
- PORTABLE CHANGEABLE MESSAGE BOARD

SECTION A-A

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: TRAFFIC CONTROL- STAGE 1A	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026103_S1A.DWG PLOT DATE : 3/9/2015 1:28 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : _____ PLOT SCALE : 0.30000000 = 1'-0" XREF

WISDOT/CADDS SHEET 42

2

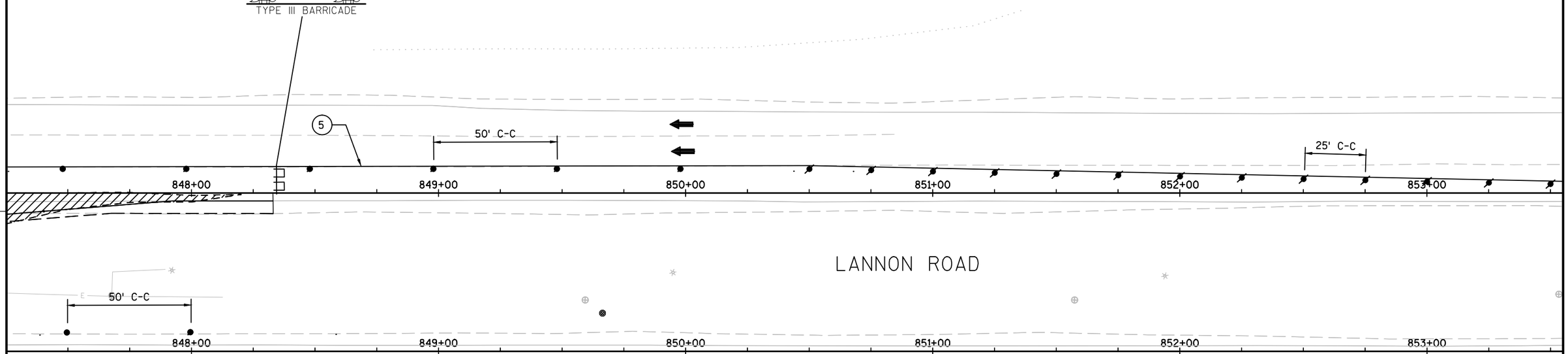
2

LEGEND:

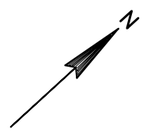
- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- TEMPORARY PAVEMENT
- WORK AREA
- PORTABLE CHANGEABLE MESSAGE BOARD



TYPE III BARRICADE



LANNON ROAD



TEMPORARY PAVEMENT MARKING:

1. TEMPORARY PAVEMENT MARKING 4-INCH
2. TEMPORARY PAVEMENT MARKING 8-INCH
3. TEMPORARY PAVEMENT STOP BAR 18-INCH
4. TEMPORARY PAVEMENT MARKING DIAGONAL 12-INCH
5. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
6. TEMPORARY PAVEMENT MARKING ARROWS
7. TEMPORARY PAVEMENT MARKING WORDS
8. REMOVING PAVEMENT MARKING

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: TRAFFIC CONTROL- STAGE 1A	SHEET 351	E

2

2

LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- TEMPORARY PAVEMENT
- WORK AREA
- MB PORTABLE CHANGEABLE MESSAGE BOARD

N

5

25' C-C

853+00 854+00 855+00 856+00 857+00 858+00 859+00

LANNON ROAD

853+00 854+00 855+00 856+00 857+00 858+00 859+00

MH MH

TEMPORARY PAVEMENT MARKING:

1. TEMPORARY PAVEMENT MARKING 4-INCH
2. TEMPORARY PAVEMENT MARKING 8-INCH
3. TEMPORARY PAVEMENT STOP BAR 18-INCH
4. TEMPORARY PAVEMENT MARKING DIAGONAL 12-INCH
5. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
6. TEMPORARY PAVEMENT MARKING ARROWS
7. TEMPORARY PAVEMENT MARKING WORDS
8. REMOVING PAVEMENT MARKING

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: TRAFFIC CONTROL- STAGE 1A	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026105_S1A.DWG PLOT DATE : 3/9/2015 1:30 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : _____ PLOT SCALE : 0.30000000 = 1'-0" XREF

WISDOT/CADDS SHEET 42

TEMPORARY PAVEMENT MARKING:

1. TEMPORARY PAVEMENT MARKING 4-INCH
2. TEMPORARY PAVEMENT MARKING 8-INCH
3. TEMPORARY PAVEMENT STOP BAR 18-INCH
4. TEMPORARY PAVEMENT MARKING DIAGONAL 12-INCH
5. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
6. TEMPORARY PAVEMENT MARKING ARROWS
7. TEMPORARY PAVEMENT MARKING WORDS
8. REMOVING PAVEMENT MARKING

LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- TEMPORARY PAVEMENT
- WORK AREA
- PORTABLE CHANGEABLE MESSAGE BOARD

R11-2
48" X 30"
SHOULDER CLOSED
TYPE III BARRICADE

CTH Q
28+00
29+00
25' C-C
PT: 353+65.96
BP: 353+20.50
354+00
355+00
356+00
357+00
358+00
12'
12'
25' C-C
31+00
25' C-C
BEGIN RIGHT TURN LANE
R3-2OR
24"X36"

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: TRAFFIC CONTROL- STAGE 1B	SHEET 353	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026151_S1B.DWG PLOT DATE : 3/9/2015 1:53 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : _____ PLOT SCALE : 0.30000000 = 1'-0" XREF

TEMPORARY PAVEMENT MARKING:

1. TEMPORARY PAVEMENT MARKING 4-INCH
2. TEMPORARY PAVEMENT MARKING 8-INCH
3. TEMPORARY PAVEMENT STOP BAR 18-INCH
4. TEMPORARY PAVEMENT MARKING DIAGONAL 12-INCH
5. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
6. TEMPORARY PAVEMENT MARKING ARROWS
7. TEMPORARY PAVEMENT MARKING WORDS
8. REMOVING PAVEMENT MARKING

LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- TEMPORARY PAVEMENT
- WORK AREA
- PORTABLE CHANGEABLE MESSAGE BOARD

R11-2
48" X 30"
SHOULDER CLOSED
TYPE III BARRICADE

BEGIN RIGHT TURN LANE
R3-2OR
24"X36"

357+00 358+00 359+00 360+00 361+00 362+00 363+0

25' C-C

50' C-C

12

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: TRAFFIC CONTROL- STAGE 1B	SHEET 354	E

2

2

LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- TEMPORARY PAVEMENT
- WORK AREA
- MB PORTABLE CHANGEABLE MESSAGE BOARD

N

EMMER ROAD

CTH Q

COUNTY LINE ROAD

CTH Q

25' C-C

25' C-C

25' C-C

R11-2
48" X 30"
SHOULDER CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
SHOULDER CLOSED
TYPE III BARRICADE

BP: 353+20.50

PT: 353+65.96

355+00

354+00

353+00

25+00 26+00 27+00 28+00 29+00 30+00

TEMPORARY PAVEMENT MARKING:

1. TEMPORARY PAVEMENT MARKING 4-INCH
2. TEMPORARY PAVEMENT MARKING 8-INCH
3. TEMPORARY PAVEMENT STOP BAR 18-INCH
4. TEMPORARY PAVEMENT MARKING DIAGONAL 12-INCH
5. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
6. TEMPORARY PAVEMENT MARKING ARROWS
7. TEMPORARY PAVEMENT MARKING WORDS
8. REMOVING PAVEMENT MARKING

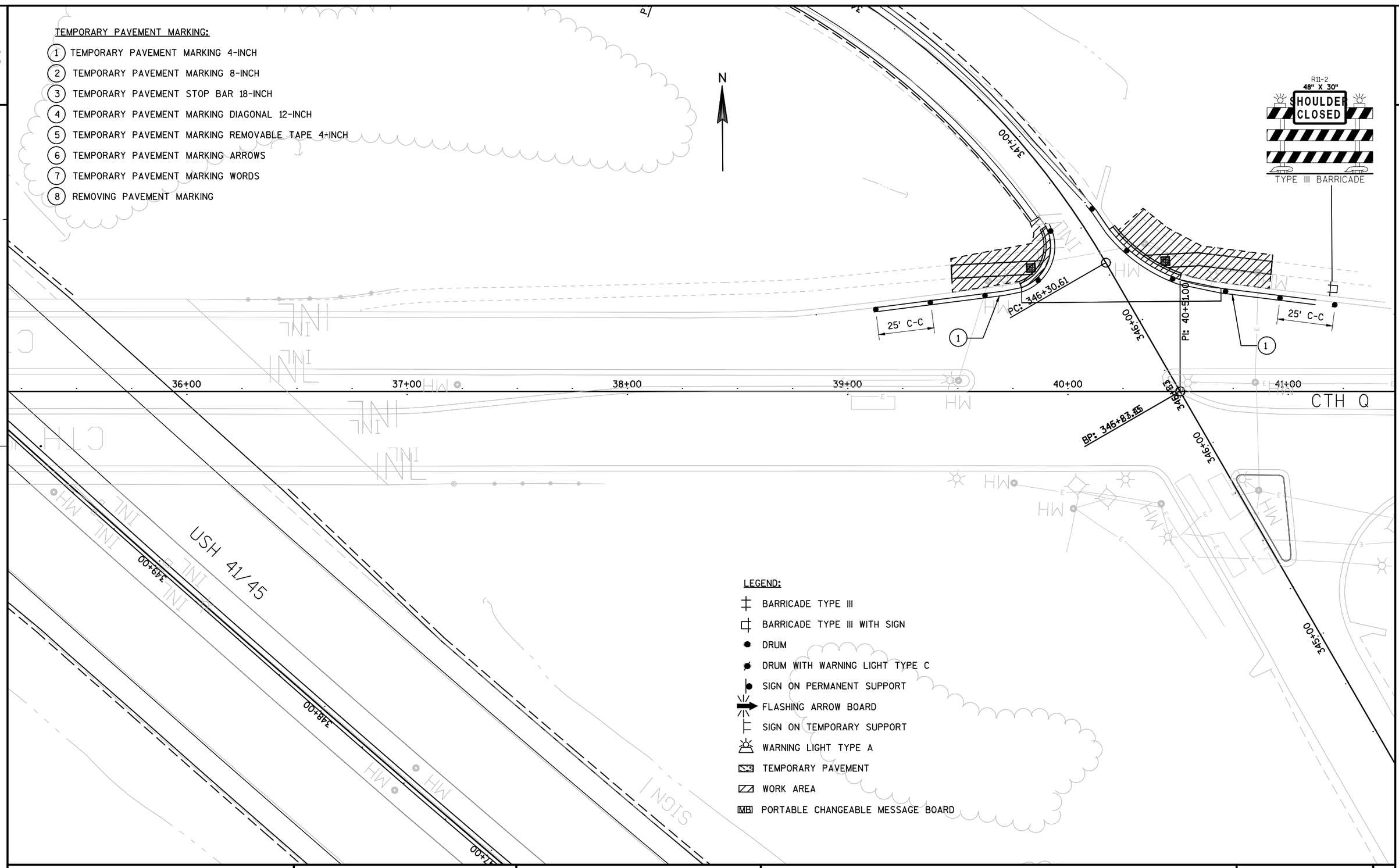
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: TRAFFIC CONTROL- STAGE 1B	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026152_S1B.DWG PLOT DATE : 3/9/2015 1:55 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : ---------- PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42

TEMPORARY PAVEMENT MARKING:

1. TEMPORARY PAVEMENT MARKING 4-INCH
2. TEMPORARY PAVEMENT MARKING 8-INCH
3. TEMPORARY PAVEMENT STOP BAR 18-INCH
4. TEMPORARY PAVEMENT MARKING DIAGONAL 12-INCH
5. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
6. TEMPORARY PAVEMENT MARKING ARROWS
7. TEMPORARY PAVEMENT MARKING WORDS
8. REMOVING PAVEMENT MARKING



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: TRAFFIC CONTROL- STAGE 1B	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026153_S1B.DWG PLOT DATE : 3/9/2015 1:56 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : ---------- PLOT SCALE : 0.30000000 = 1'-0" XREF
WISDOT/CADDS SHEET 42

2

LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- TEMPORARY PAVEMENT
- WORK AREA
- PORTABLE CHANGEABLE MESSAGE BOARD

N

SIGN

SIGN

W

MH

MH

INL

INL

835+00

25' C-C

4

PC: 1452+59.00

BP: 1453+04

1453+00

1457+48

836+00

837+00

837+00

50' C-C

LANNON ROAD

PI: 1454+12.15

1454+00

1455+00

1456+00

1457+00

PC: 1456+84.00

SI

11'

11'

4"

2

8

6

7

MH

6

1

25' C-C

R11-2
48" X 30"
SHOULDER CLOSED
TYPE III BARRICADE

BEGIN RIGHT TURN LANE
R3-20R
24"X36"

TEMPORARY PAVEMENT MARKING:

1. TEMPORARY PAVEMENT MARKING 4-INCH
2. TEMPORARY PAVEMENT MARKING 8-INCH
3. TEMPORARY PAVEMENT STOP BAR 18-INCH
4. TEMPORARY PAVEMENT MARKING DIAGONAL 12-INCH
5. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
6. TEMPORARY PAVEMENT MARKING ARROWS
7. TEMPORARY PAVEMENT MARKING WORDS
8. REMOVING PAVEMENT MARKING

PLOT SCALE

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: TRAFFIC CONTROL- STAGE 1B	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026201_S1B.DWG PLOT DATE : 3/9/2015 1:57 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : _____ 1" = 40'_XREF

2

2

TEMPORARY PAVEMENT MARKING:

1. TEMPORARY PAVEMENT MARKING 4-INCH
2. TEMPORARY PAVEMENT MARKING 8-INCH
3. TEMPORARY PAVEMENT STOP BAR 18-INCH
4. TEMPORARY PAVEMENT MARKING DIAGONAL 12-INCH
5. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
6. TEMPORARY PAVEMENT MARKING ARROWS
7. TEMPORARY PAVEMENT MARKING WORDS
8. REMOVING PAVEMENT MARKING

R11-2
48" X 30"
SHOULDER CLOSED
TYPE III BARRICADE

1456+84.00
1457+00
1458+00
1459+00
1460+00
1461+00
1462+00
12'
25' C-C
1
SIGN
SIGN
MH
458+00
459+00
460+00
461+00
462+00
USH 41/45

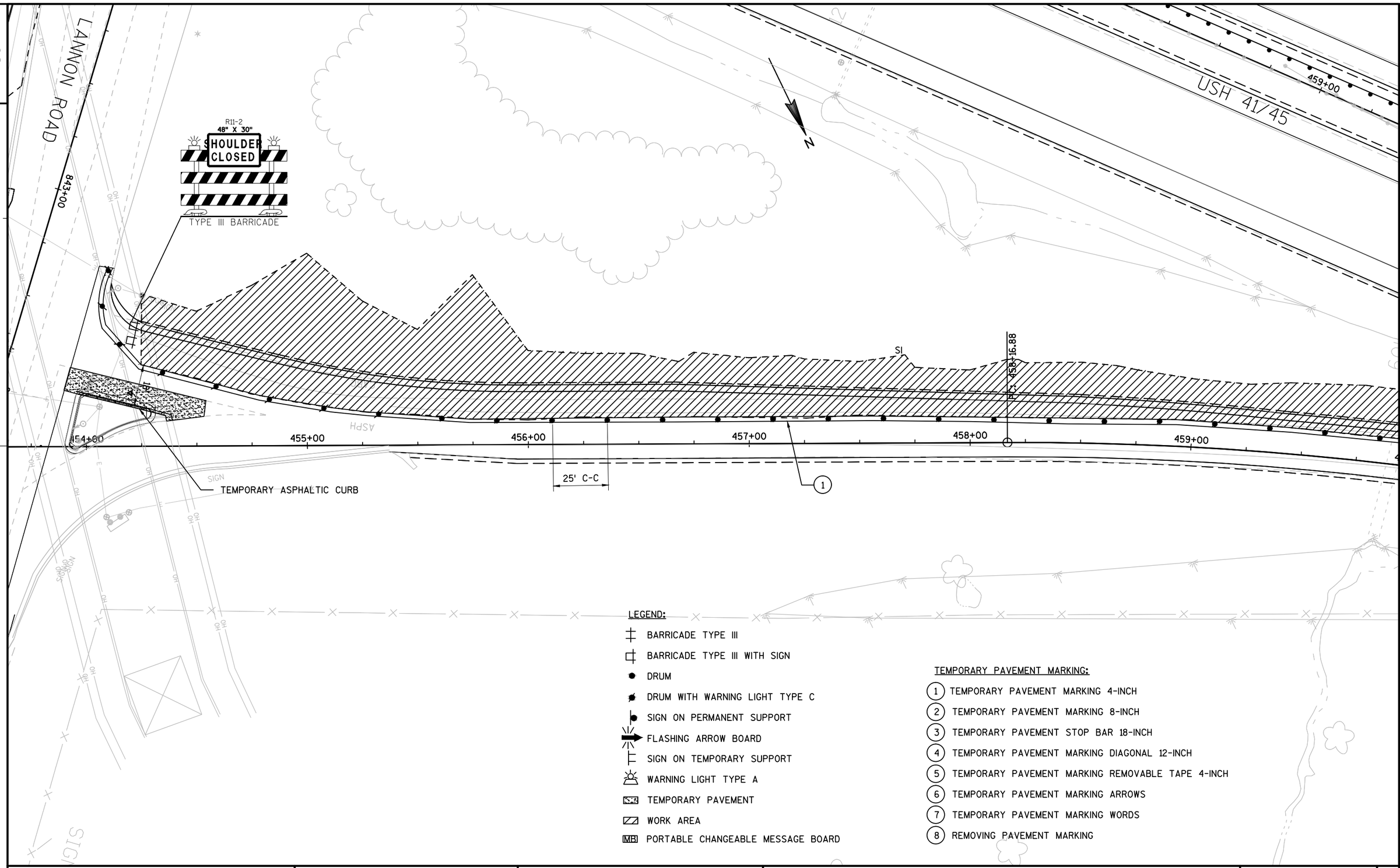
LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- TEMPORARY PAVEMENT
- WORK AREA
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: TRAFFIC CONTROL- STAGE 1B	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026202_S1B.DWG PLOT DATE : 3/9/2015 1:59 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : ---------- PLOT SCALE : 0.30000000 = 1'-0"_XREF
WISDOT/CADDS SHEET 42

2



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: TRAFFIC CONTROL- STAGE 1B	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026203_S1B.DWG PLOT DATE : 3/9/2015 2:00 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : _____ PLOT SCALE : 1" = 40'_XREF

2

2

TANNON ROAD

60' ROW

25' C-C

460+00

461+00

462+00

463+00

464+00

465+00

1462+00

1463+00

1464+64

EP: 1463+64.45

14" RER CASMAIN 1108-00-00

20" RER CASMAIN 1108-00-00

USH 41/45

EP: 463+83.84

463+84

SI

N

LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- TEMPORARY PAVEMENT
- WORK AREA
- MB PORTABLE CHANGEABLE MESSAGE BOARD

TEMPORARY PAVEMENT MARKING:

1. TEMPORARY PAVEMENT MARKING 4-INCH
2. TEMPORARY PAVEMENT MARKING 8-INCH
3. TEMPORARY PAVEMENT STOP BAR 18-INCH
4. TEMPORARY PAVEMENT MARKING DIAGONAL 12-INCH
5. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
6. TEMPORARY PAVEMENT MARKING ARROWS
7. TEMPORARY PAVEMENT MARKING WORDS
8. REMOVING PAVEMENT MARKING

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: TRAFFIC CONTROL- STAGE 1B	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026204_S1B.DWG PLOT DATE : 3/9/2015 2:00 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : _____ PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42

2

LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

TEMPORARY PAVEMENT MARKING LEGEND:

1. TEMPORARY PAVEMENT MARKING 4-INCH (WHITE)
2. TEMPORARY PAVEMENT MARKING 4-INCH (YELLOW)
3. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
4. TEMPORARY PAVEMENT MARKING 8-INCH

SEE THE FOLLOWING STANDARD DETAIL DRAWING FOR ADDITIONAL TRAFFIC CONTROL ITEMS:
S.D.D. 15 D 12-4 *
S.D.D. 15 D 14-2 **
S.D.D. 15 D 27-2 ***

N

USH 41/ 45 SB

USH 41/ 45 NB

RICHFIELD WAY

USH 41/45

RAMP A

328 330 332 334 336 338 340 342

MEH MEH

1 1/2 MILE

3/4 MILE

100' TYP.

NOTES:

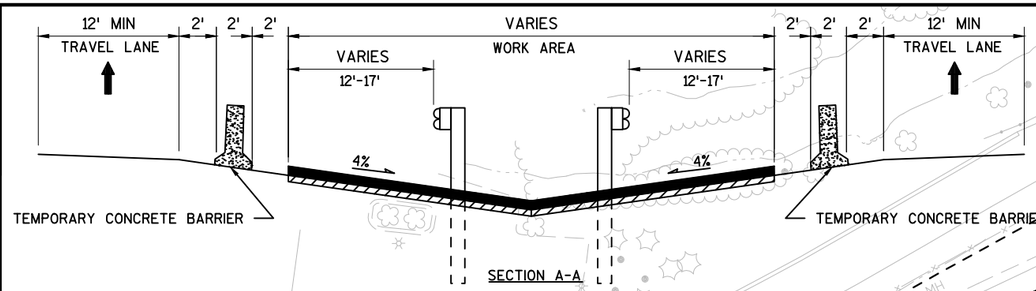
* TRAFFIC CONTROL LANE CLOSURE SPEED REDUCTION

** TRAFFIC CONTROL TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY SHORT TERM (LESS THAN 24 HOURS)

*** TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY SPEED GREATER THAN 40 MPH

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2A & 2B	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026321_S2.DWG PLOT DATE : 3/26/2015 2:06 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1:100_XREF



SECTION A-A

2

R11-2
48" X 30"
SHOULDER CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
SHOULDER CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
LANE CLOSED
TYPE III BARRICADE

RAMP C
RAMP D
RAMP A
RAMP B
CTH Q
USH 41/ 45 SB
USH 41/ 45 NB
100' TYP.
TEMPORARY CONCRETE BARRIER

LEGEND:

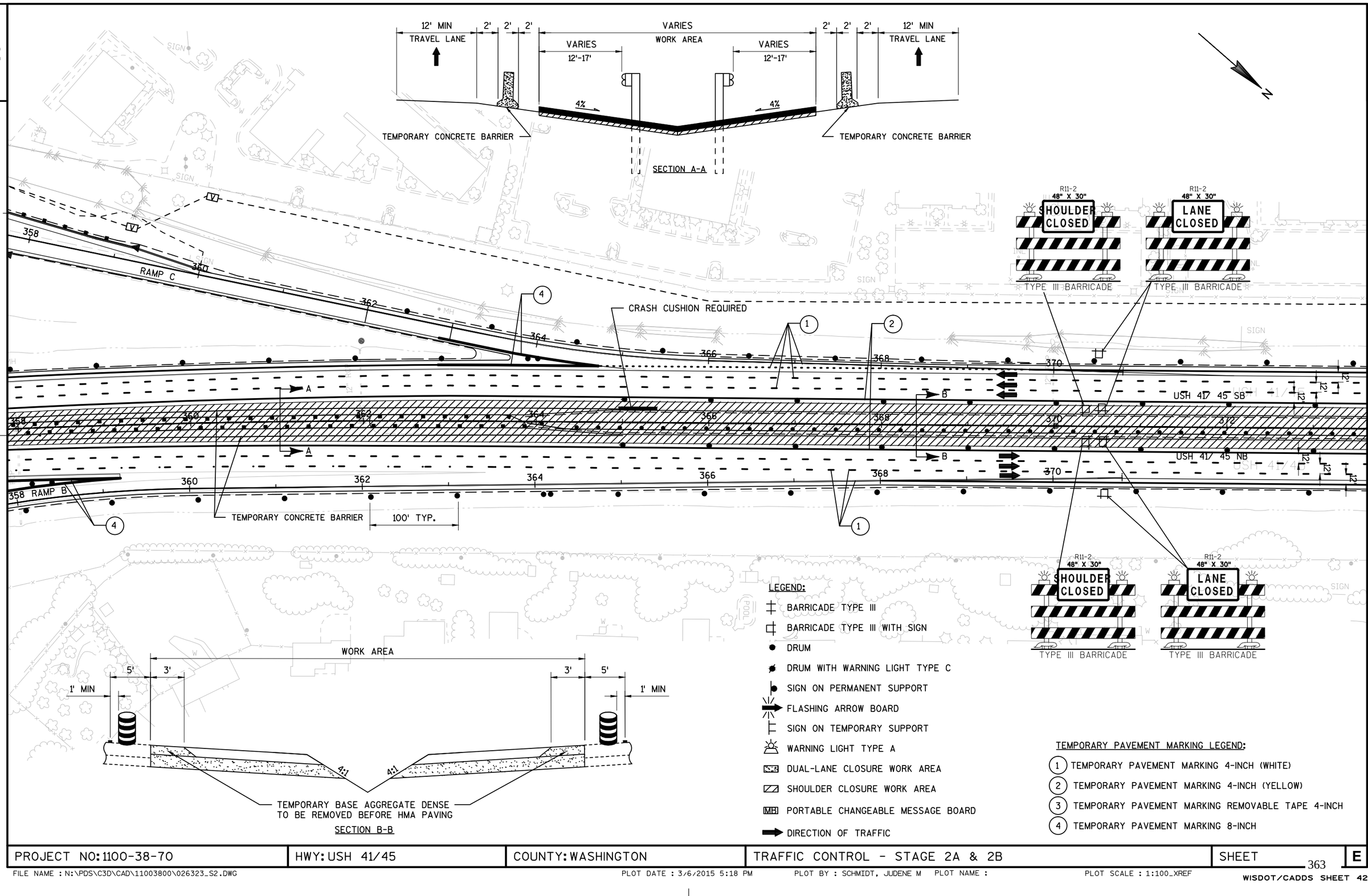
- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

TEMPORARY PAVEMENT MARKING LEGEND:

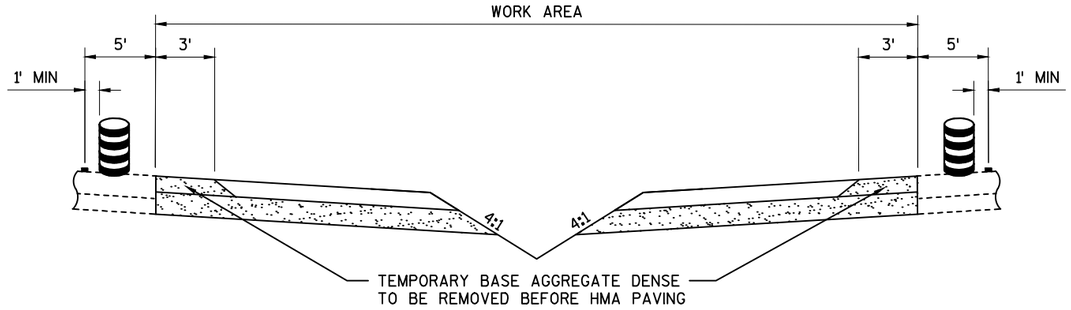
1. TEMPORARY PAVEMENT MARKING 4-INCH (WHITE)
2. TEMPORARY PAVEMENT MARKING 4-INCH (YELLOW)
3. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
4. TEMPORARY PAVEMENT MARKING 8-INCH

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2A & 2B	SHEET	E

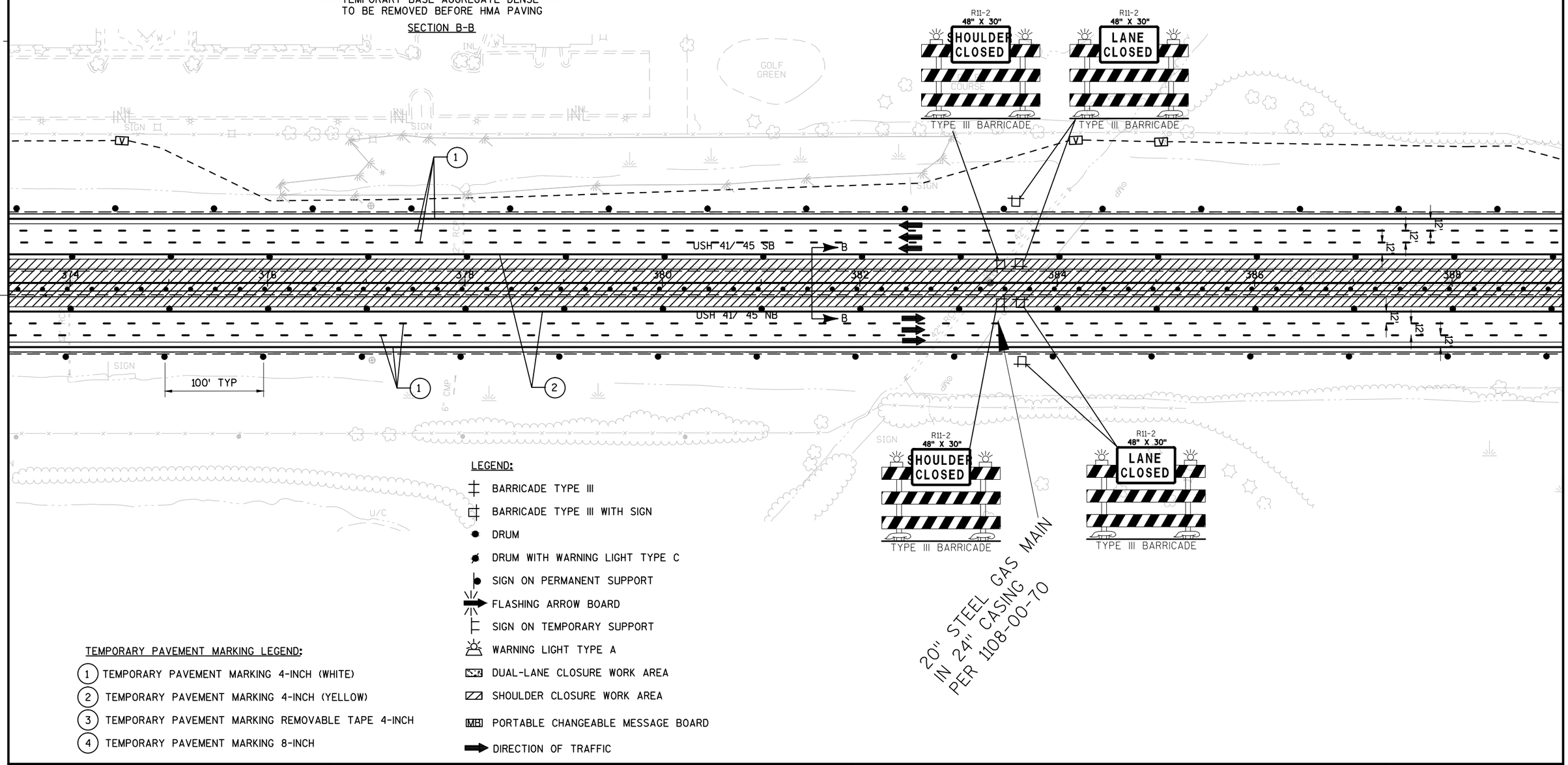
FILE NAME : N:\PDS\C3D\CAD\11003800\026322_S2.DWG PLOT DATE : 3/6/2015 5:17 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF
WISDOT/CADDS SHEET 42



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2A & 2B	SHEET 363	E



SECTION B-B



LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

TEMPORARY PAVEMENT MARKING LEGEND:

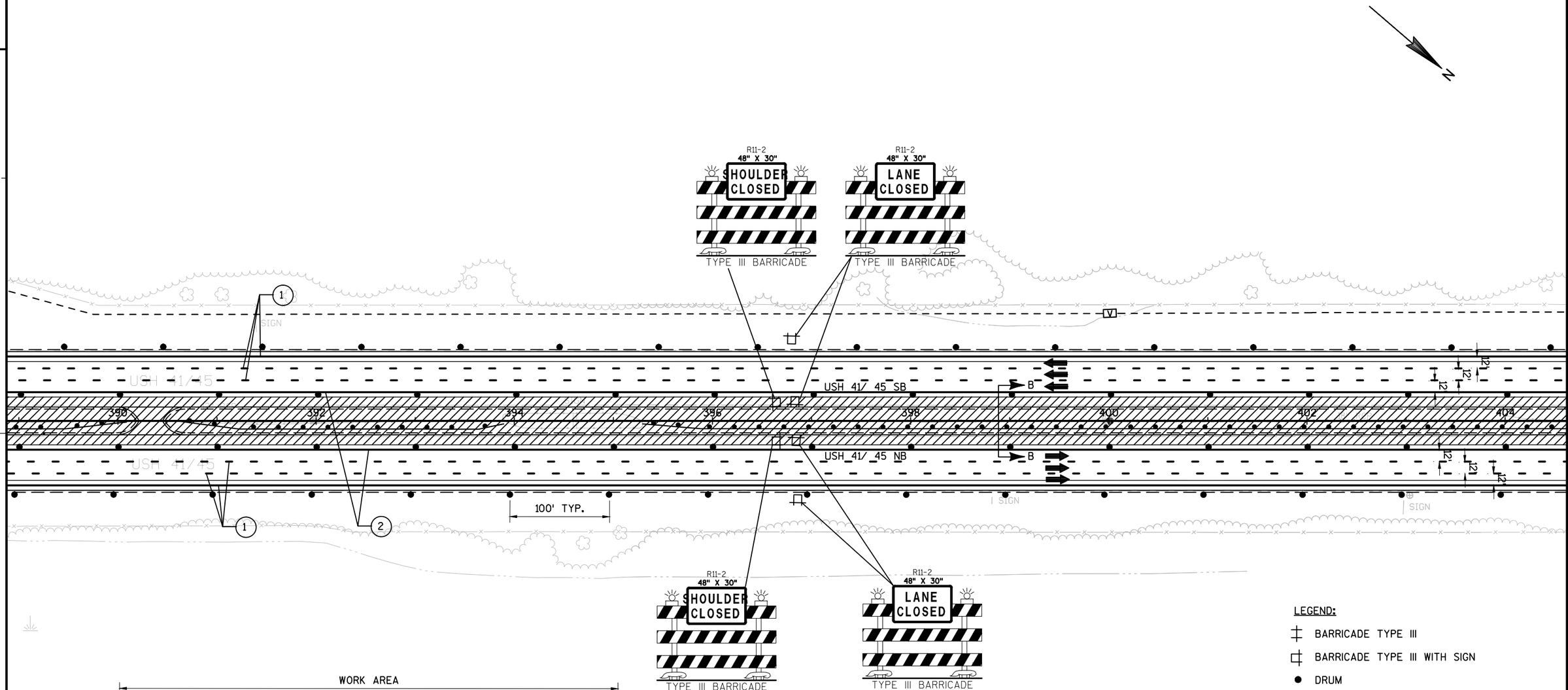
1. TEMPORARY PAVEMENT MARKING 4-INCH (WHITE)
2. TEMPORARY PAVEMENT MARKING 4-INCH (YELLOW)
3. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
4. TEMPORARY PAVEMENT MARKING 8-INCH

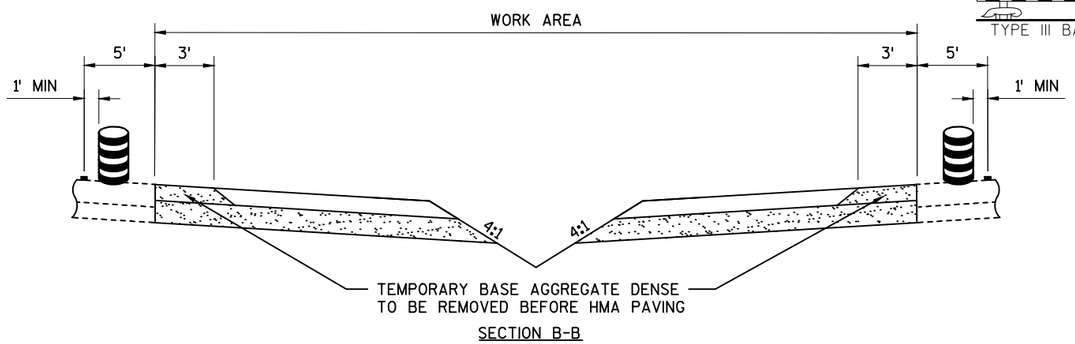
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2A & 2B	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026324_S2.DWG
PLOT DATE : 3/6/2015 5:19 PM
PLOT BY : SCHMIDT, JUDENE M
PLOT NAME :
PLOT SCALE : 1:100_XREF
WISDOT/CADDS SHEET 42

2

2





SECTION B-B

LEGEND:

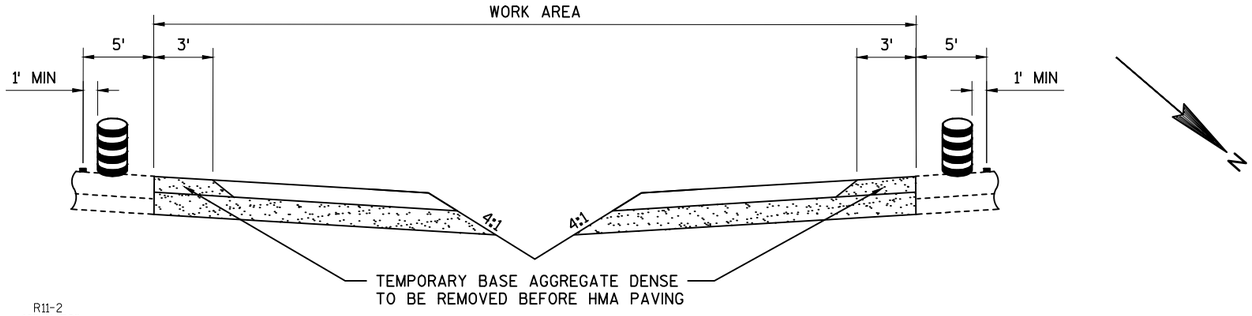
- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

TEMPORARY PAVEMENT MARKING LEGEND:

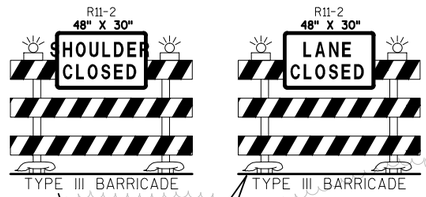
1. TEMPORARY PAVEMENT MARKING 4-INCH (WHITE)
2. TEMPORARY PAVEMENT MARKING 4-INCH (YELLOW)
3. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
4. TEMPORARY PAVEMENT MARKING 8-INCH

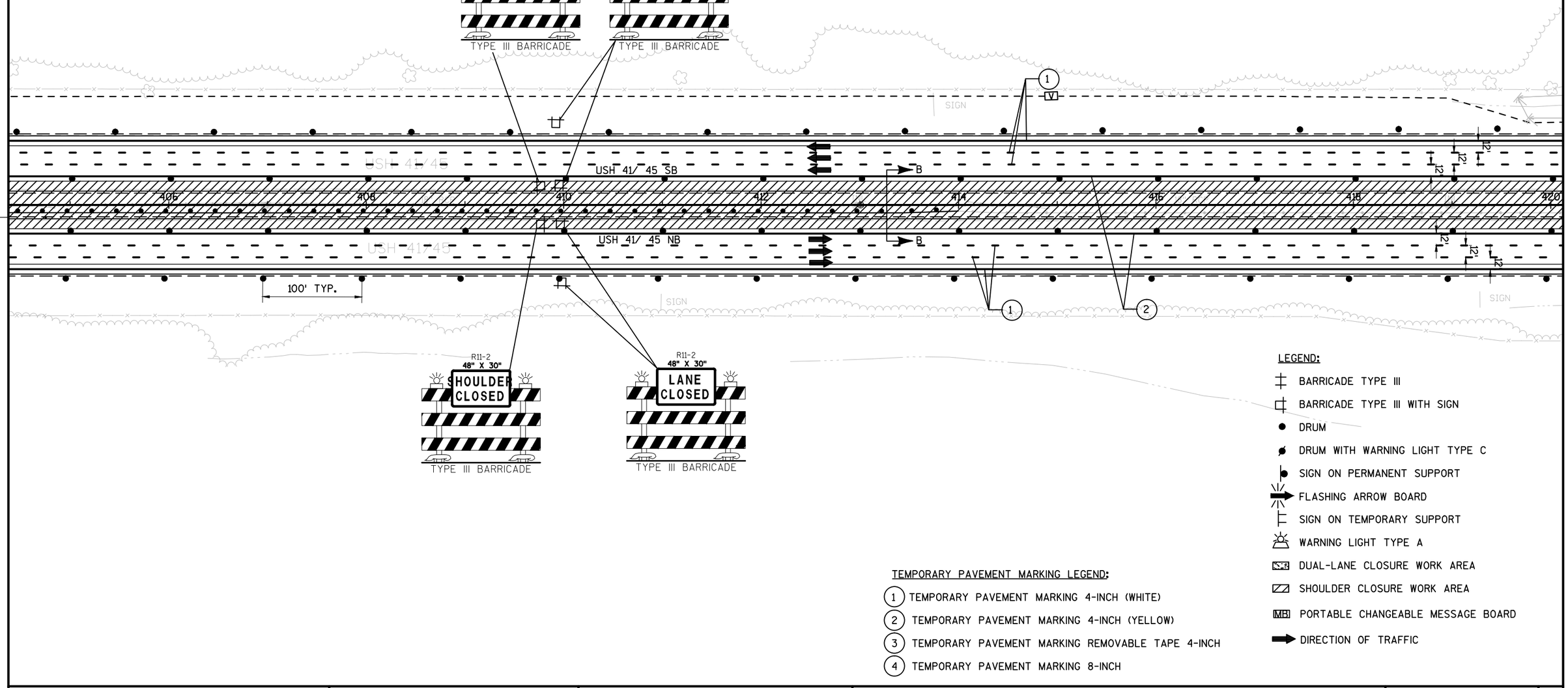
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2A & 2B	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026325_S2.DWG PLOT DATE : 3/6/2015 5:20 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1:100_XREF
WISDOT/CADDS SHEET 42



SECTION B-B





LEGEND:

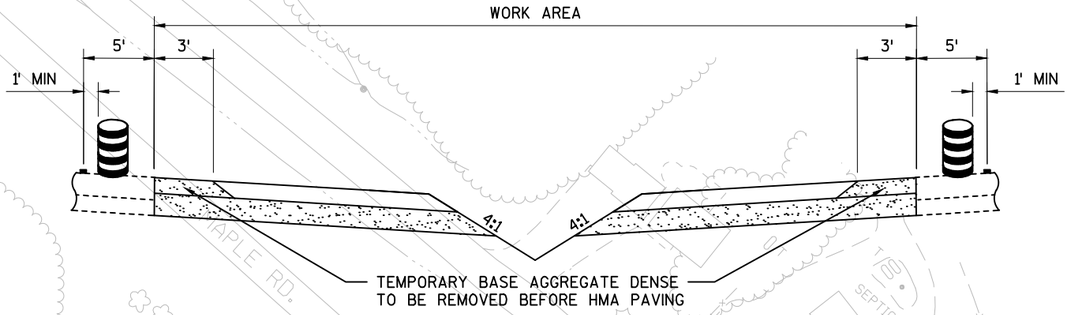
- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

TEMPORARY PAVEMENT MARKING LEGEND:

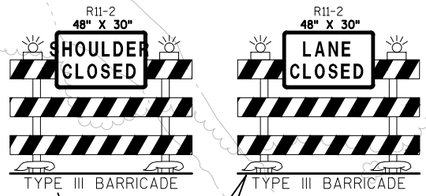
1. TEMPORARY PAVEMENT MARKING 4-INCH (WHITE)
2. TEMPORARY PAVEMENT MARKING 4-INCH (YELLOW)
3. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
4. TEMPORARY PAVEMENT MARKING 8-INCH

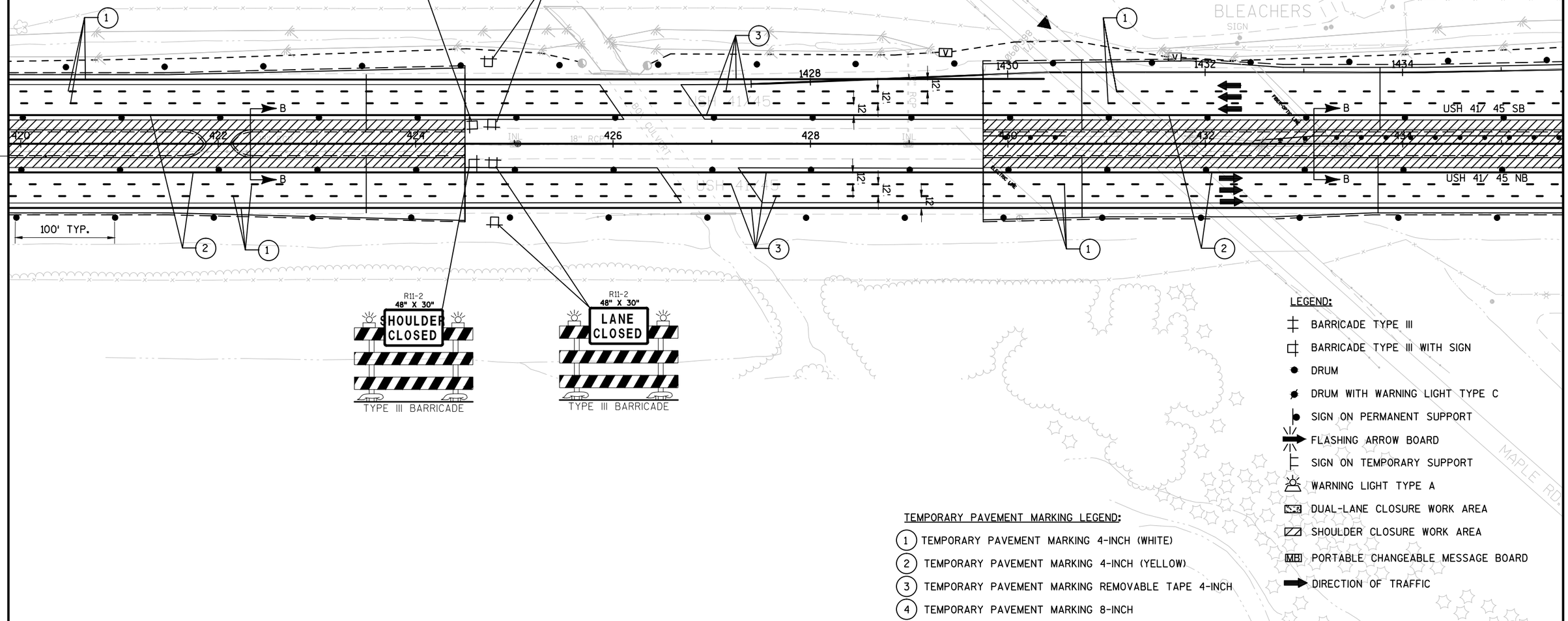
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2A & 2B	SHEET E

FILE NAME : N:\PDS\C3D\CAD\11003800\026326_S2.DWG PLOT DATE : 3/6/2015 5:21 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1:100_XREF
WISDOT/CADDS SHEET 42



SECTION B-B





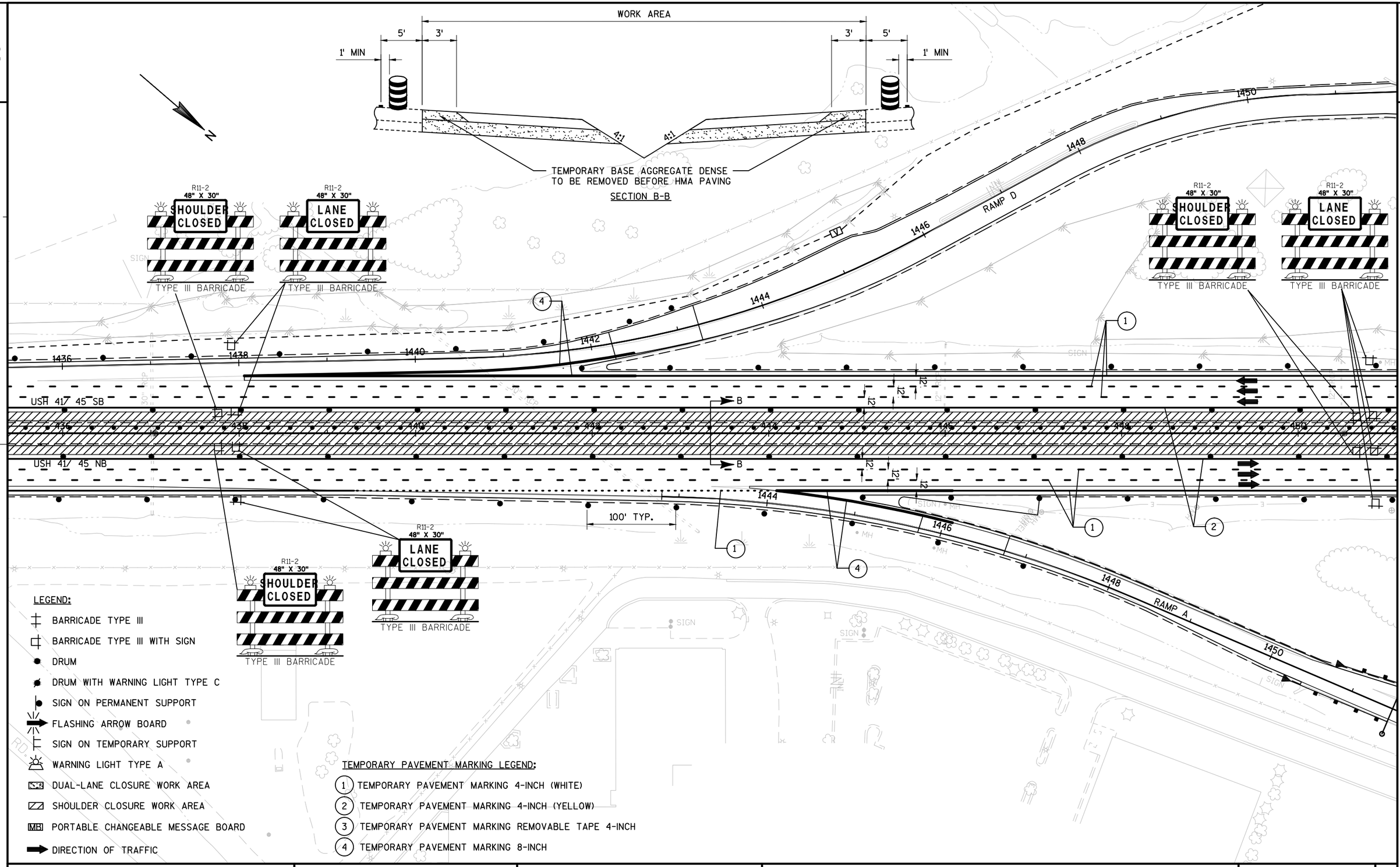
LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

TEMPORARY PAVEMENT MARKING LEGEND:

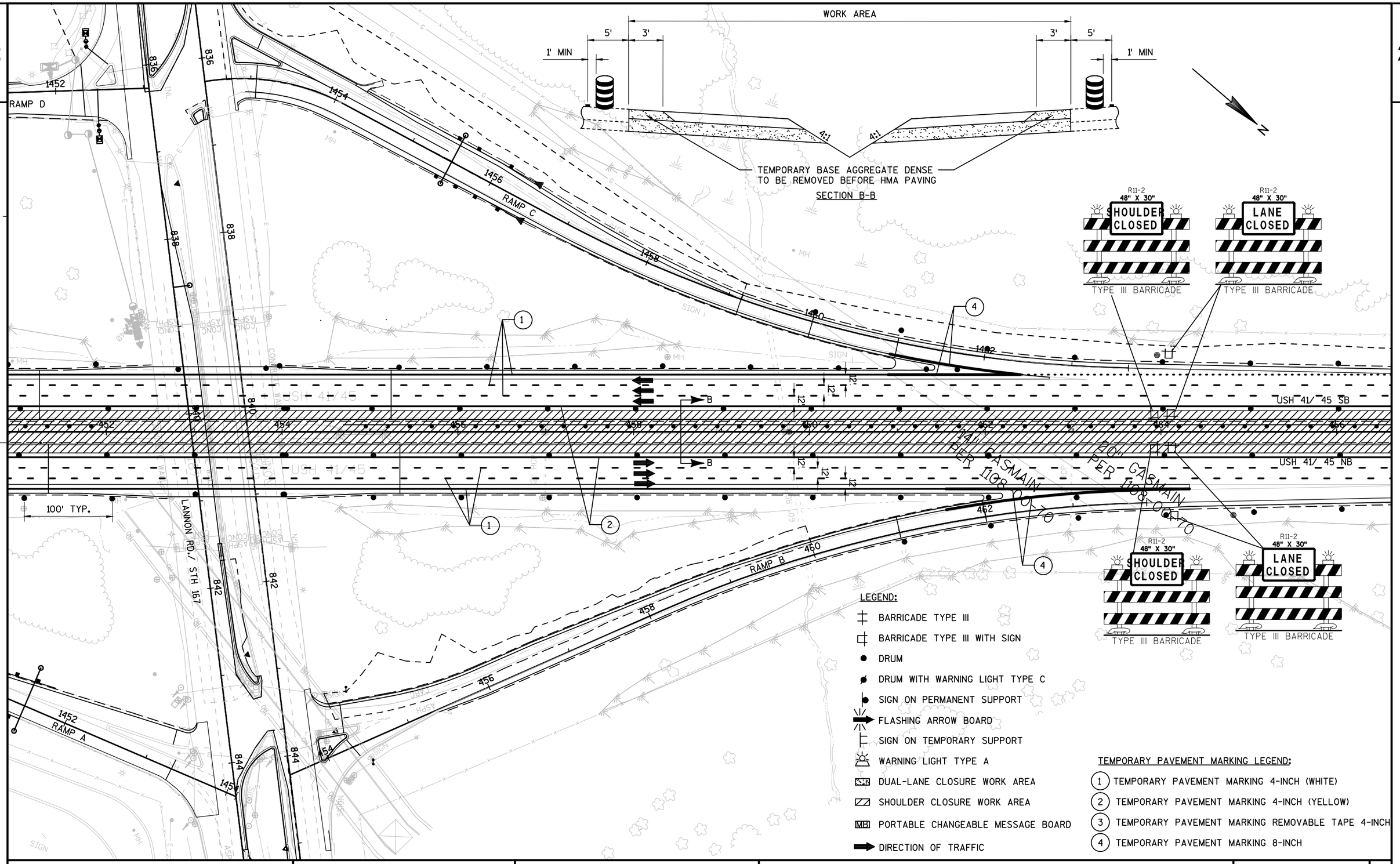
1. TEMPORARY PAVEMENT MARKING 4-INCH (WHITE)
2. TEMPORARY PAVEMENT MARKING 4-INCH (YELLOW)
3. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
4. TEMPORARY PAVEMENT MARKING 8-INCH

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2A & 2B	SHEET 367	E



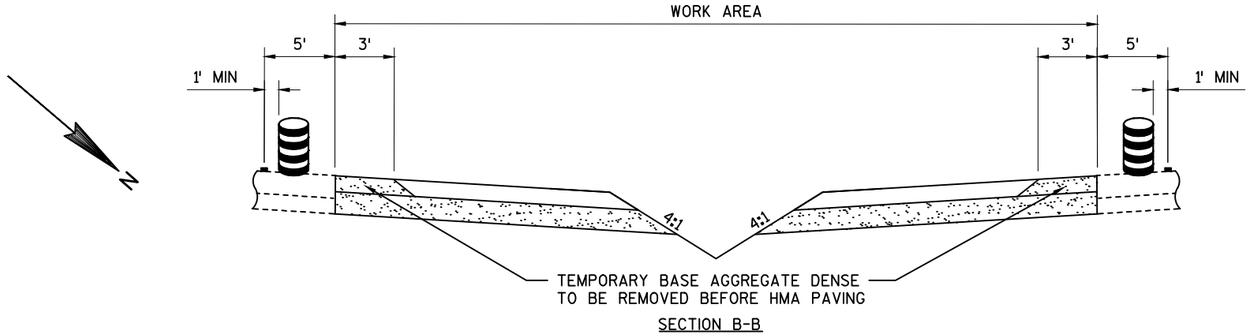
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2A & 2B	SHEET E

FILE NAME : N:\PDS\C3D\CAD\11003800\026328_S2.DWG PLOT DATE : 3/6/2015 5:24 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1:100_XREF

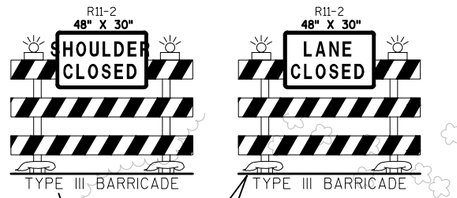


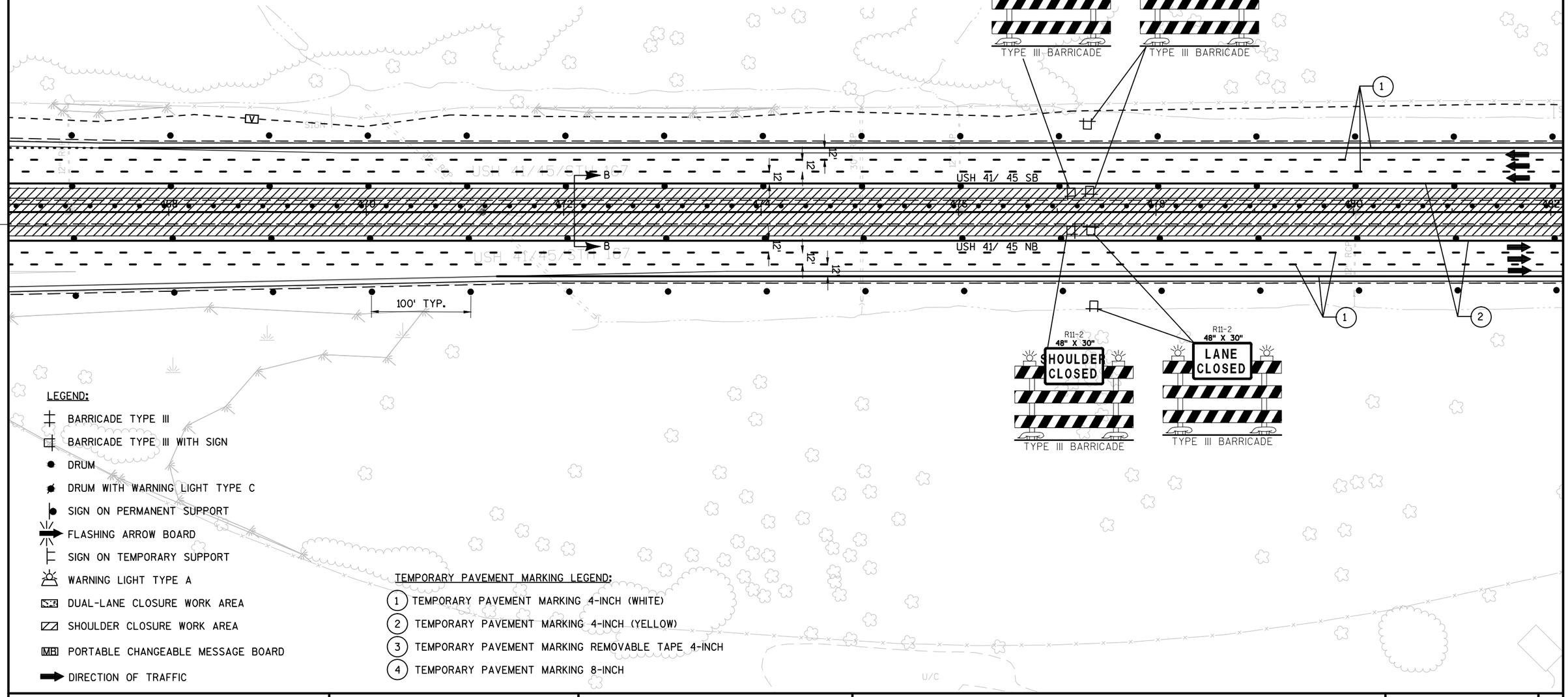
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2A & 2B	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026329_S2.DWG PLOT DATE : 3/6/2015 5:25 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1:100_XREF



SECTION B-B





LEGEND:

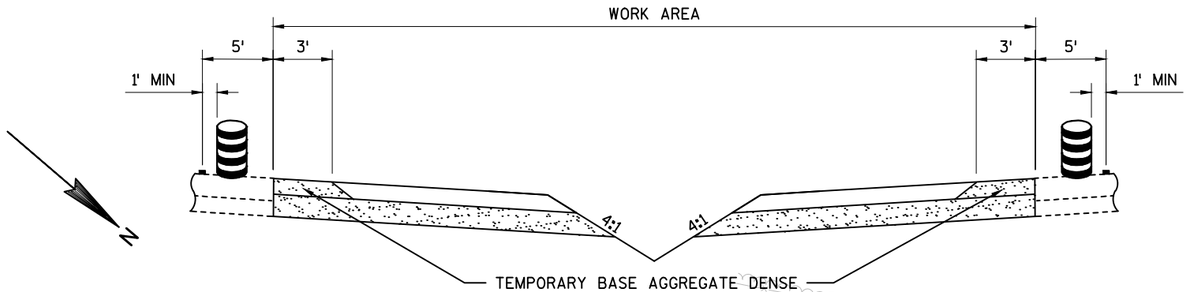
- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

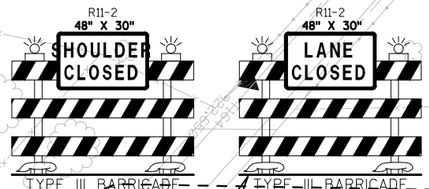
TEMPORARY PAVEMENT MARKING LEGEND:

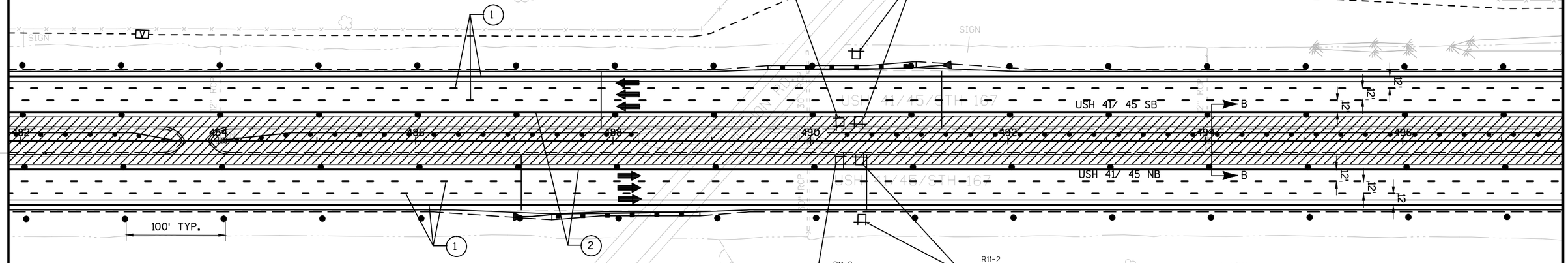
1. TEMPORARY PAVEMENT MARKING 4-INCH (WHITE)
2. TEMPORARY PAVEMENT MARKING 4-INCH (YELLOW)
3. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
4. TEMPORARY PAVEMENT MARKING 8-INCH

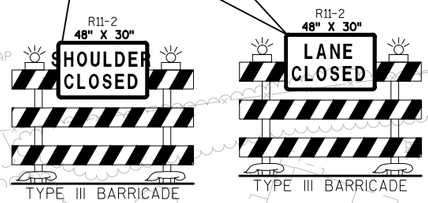
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2A & 2B	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026330_S2.DWG PLOT DATE : 3/6/2015 5:26 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF









LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

TEMPORARY PAVEMENT MARKING LEGEND:

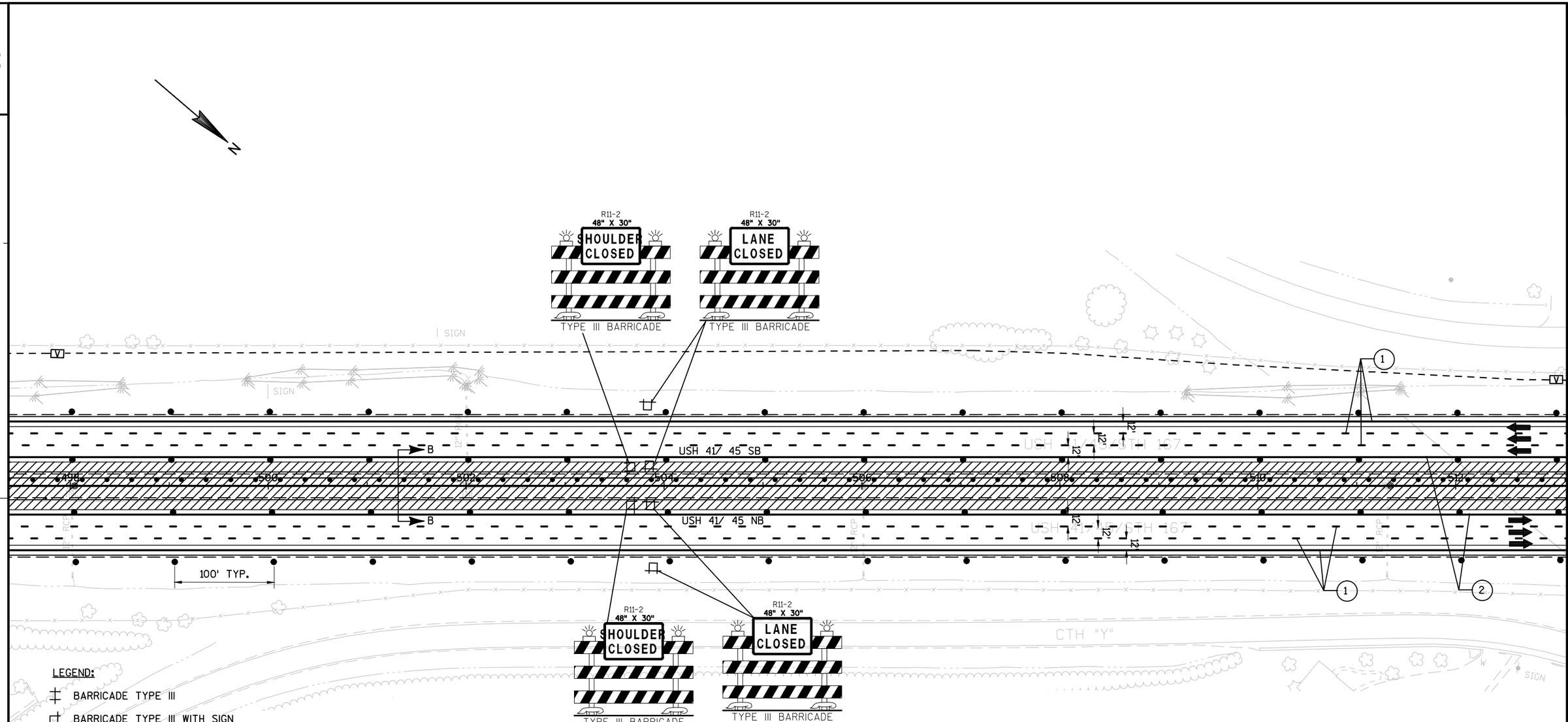
1. TEMPORARY PAVEMENT MARKING 4-INCH (WHITE)
2. TEMPORARY PAVEMENT MARKING 4-INCH (YELLOW)
3. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
4. TEMPORARY PAVEMENT MARKING 8-INCH

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2A & 2B	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026331_S2.DWG PLOT DATE : 3/6/2015 5:27 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF
WISDOT/CADDS SHEET 42

2

2

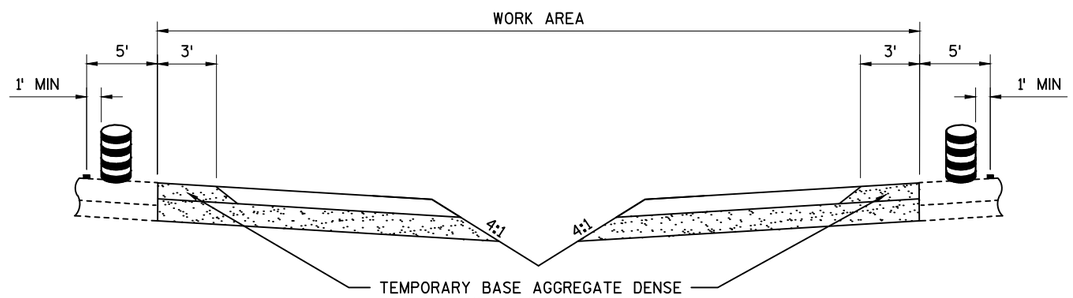


LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

TEMPORARY PAVEMENT MARKING LEGEND:

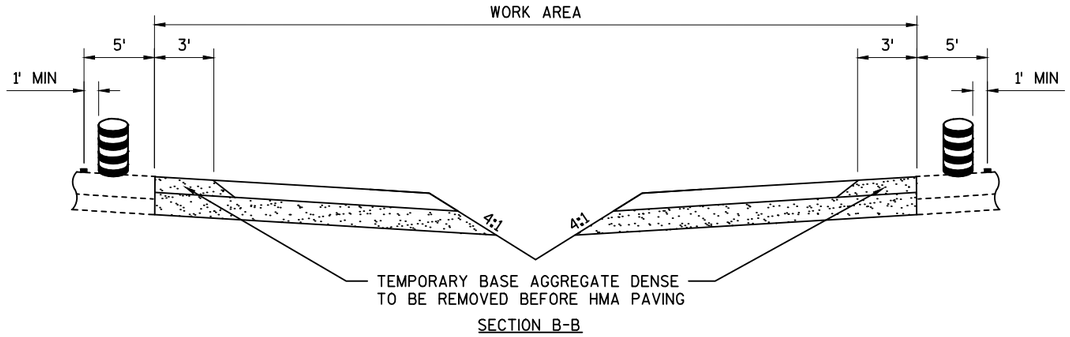
1. TEMPORARY PAVEMENT MARKING 4-INCH (WHITE)
2. TEMPORARY PAVEMENT MARKING 4-INCH (YELLOW)
3. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
4. TEMPORARY PAVEMENT MARKING 8-INCH



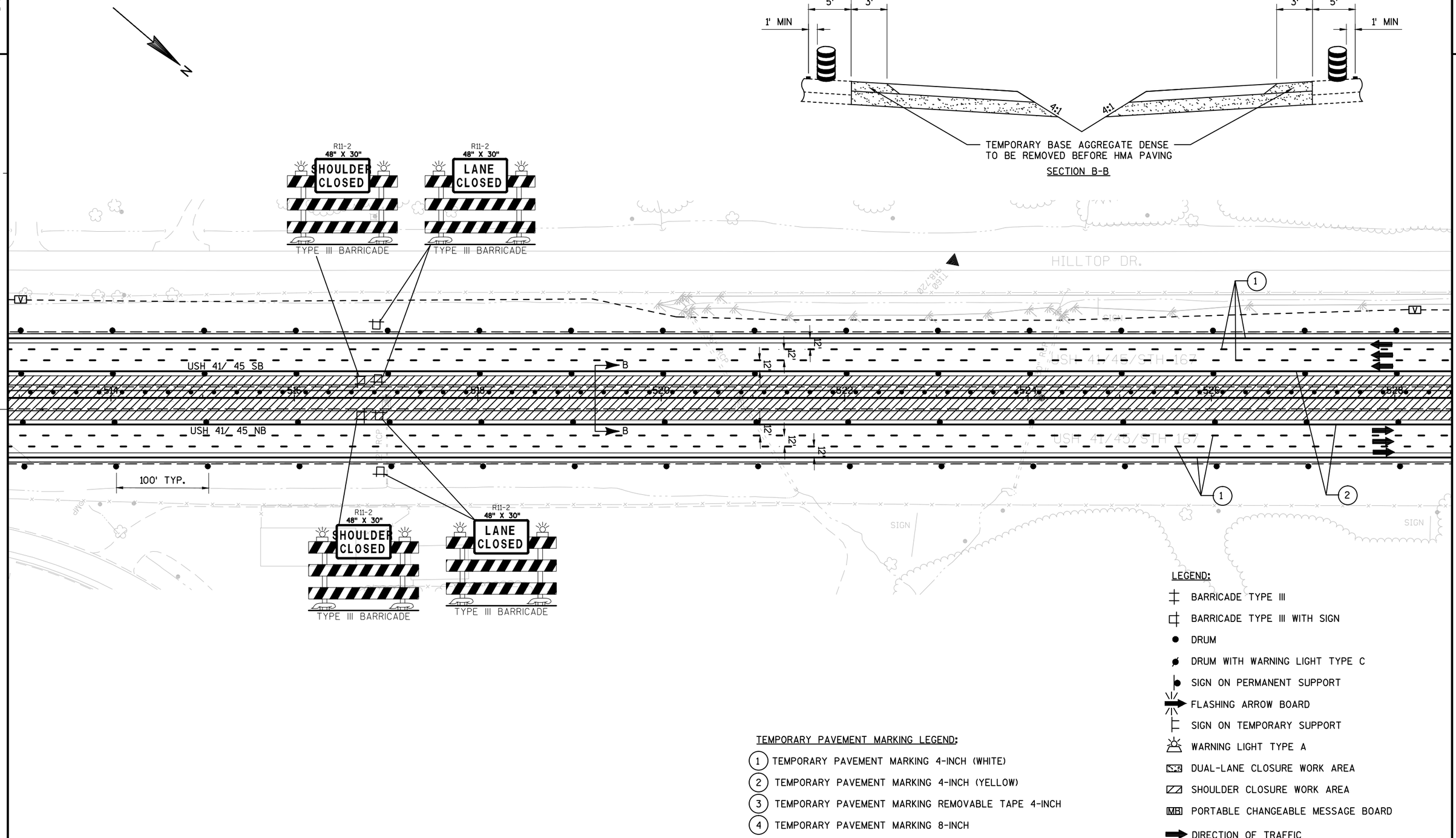
SECTION B-B

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2A & 2B	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026332_S2.DWG PLOT DATE : 3/6/2015 5:28 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF
WISDOT/CADDS SHEET 42



SECTION B-B



LEGEND:

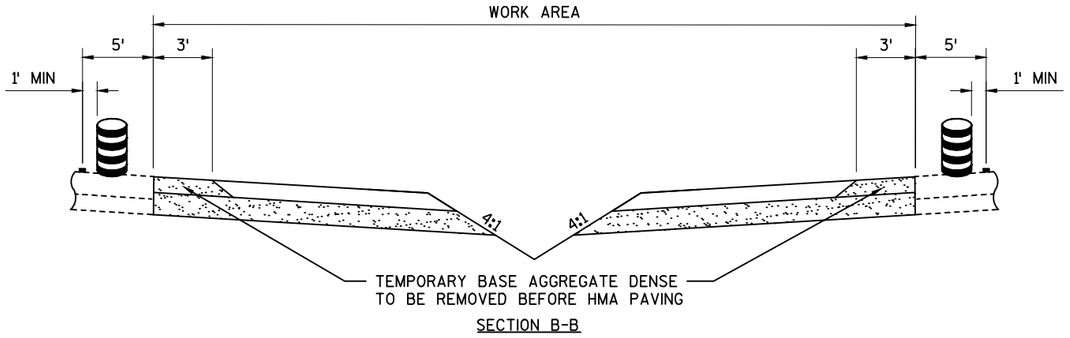
- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

TEMPORARY PAVEMENT MARKING LEGEND:

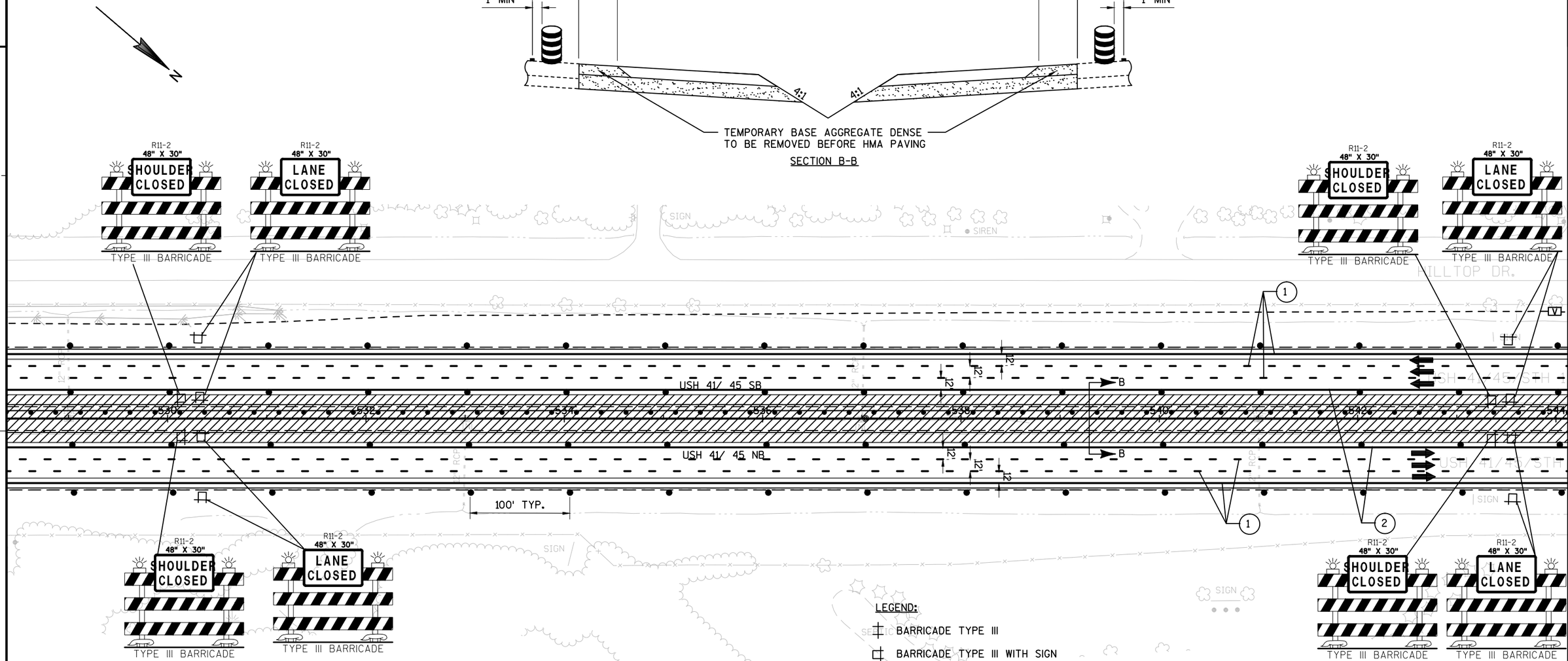
1. TEMPORARY PAVEMENT MARKING 4-INCH (WHITE)
2. TEMPORARY PAVEMENT MARKING 4-INCH (YELLOW)
3. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
4. TEMPORARY PAVEMENT MARKING 8-INCH

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2A & 2B	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026333_S2.DWG PLOT DATE : 3/6/2015 5:29 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF
WISDOT/CADDS SHEET 42



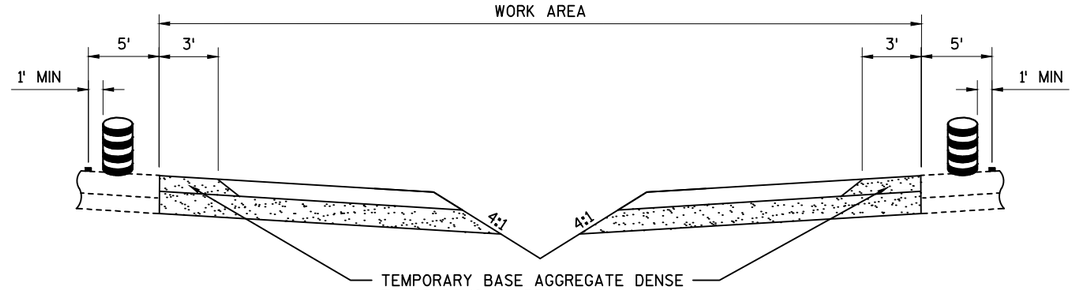
SECTION B-B



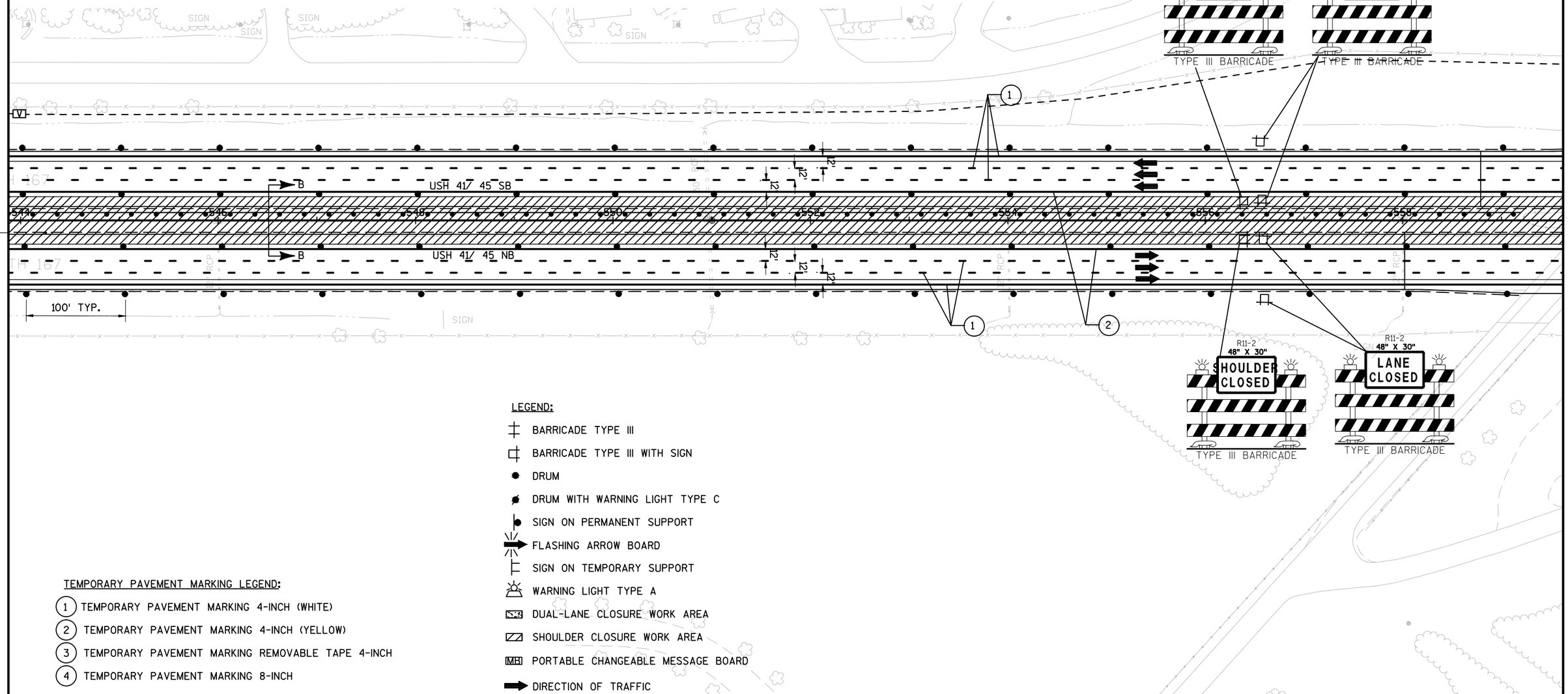
TEMPORARY PAVEMENT MARKING LEGEND:

1. TEMPORARY PAVEMENT MARKING 4-INCH (WHITE)
2. TEMPORARY PAVEMENT MARKING 4-INCH (YELLOW)
3. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
4. TEMPORARY PAVEMENT MARKING 8-INCH

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2A & 2B	SHEET 374	E



SECTION B-B



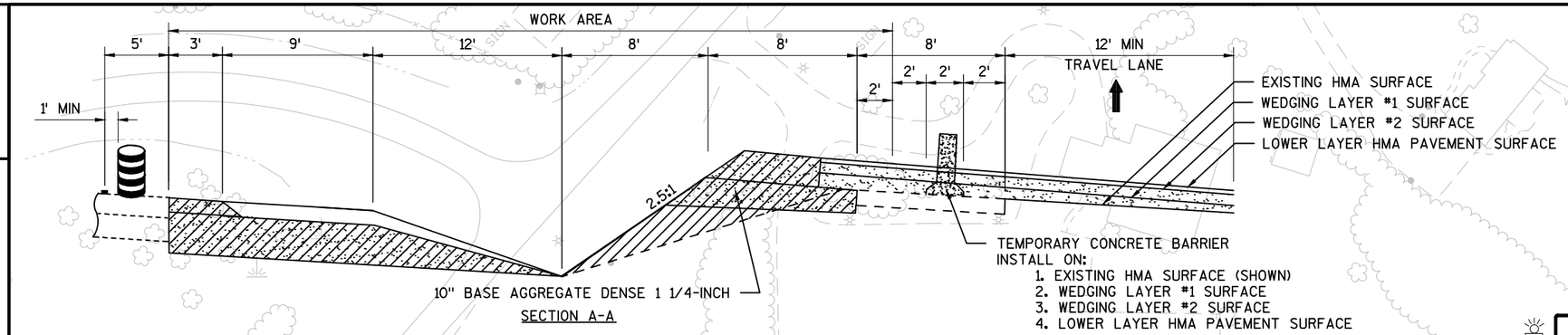
LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

TEMPORARY PAVEMENT MARKING LEGEND:

1. TEMPORARY PAVEMENT MARKING 4-INCH (WHITE)
2. TEMPORARY PAVEMENT MARKING 4-INCH (YELLOW)
3. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
4. TEMPORARY PAVEMENT MARKING 8-INCH

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2A & 2B	SHEET 375	E



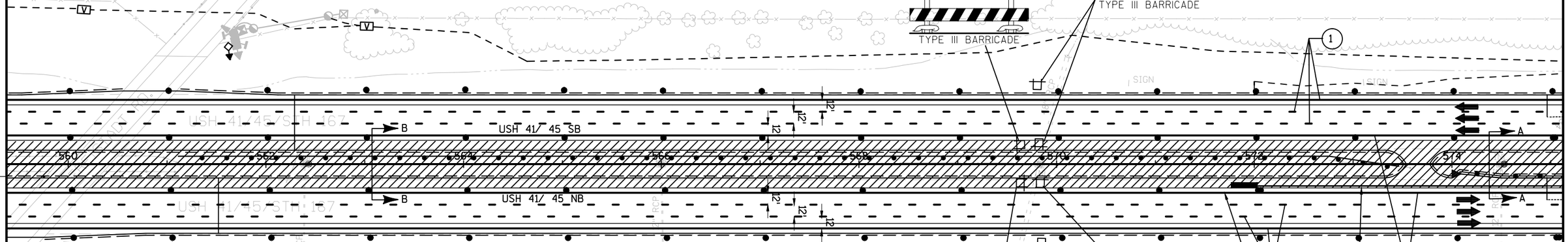
SECTION A-A

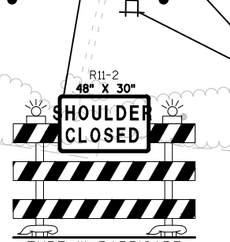


TYPE III BARRICADE

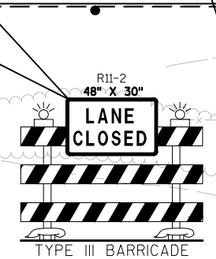


TYPE III BARRICADE





TYPE III BARRICADE



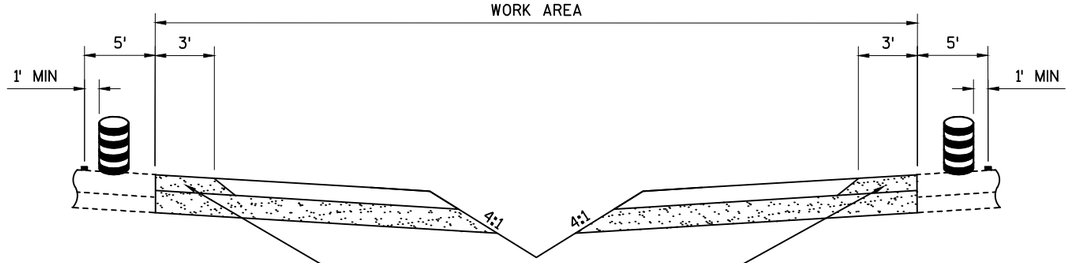
TYPE III BARRICADE

LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

TEMPORARY PAVEMENT MARKING LEGEND:

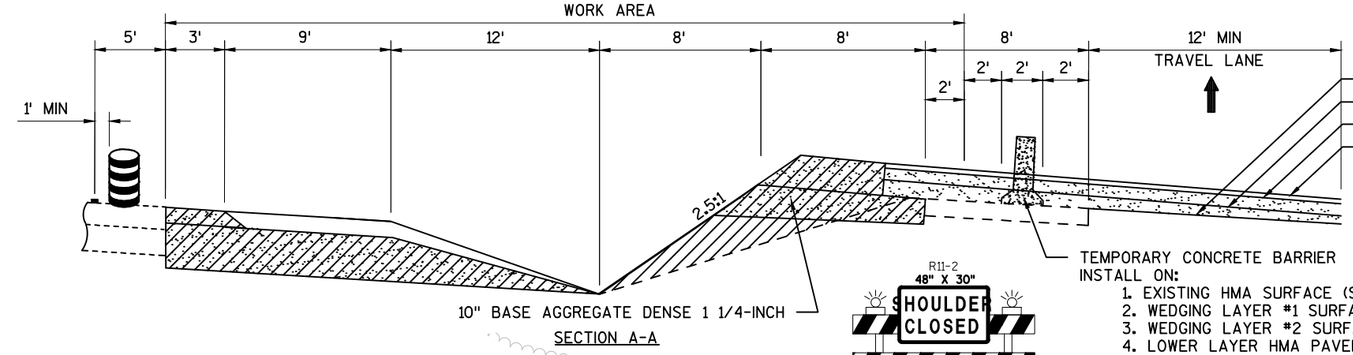
1. TEMPORARY PAVEMENT MARKING 4-INCH (WHITE)
2. TEMPORARY PAVEMENT MARKING 4-INCH (YELLOW)
3. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
4. TEMPORARY PAVEMENT MARKING 8-INCH

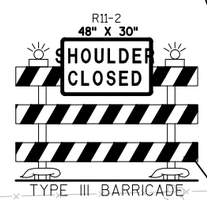


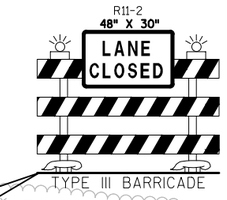
SECTION B-B

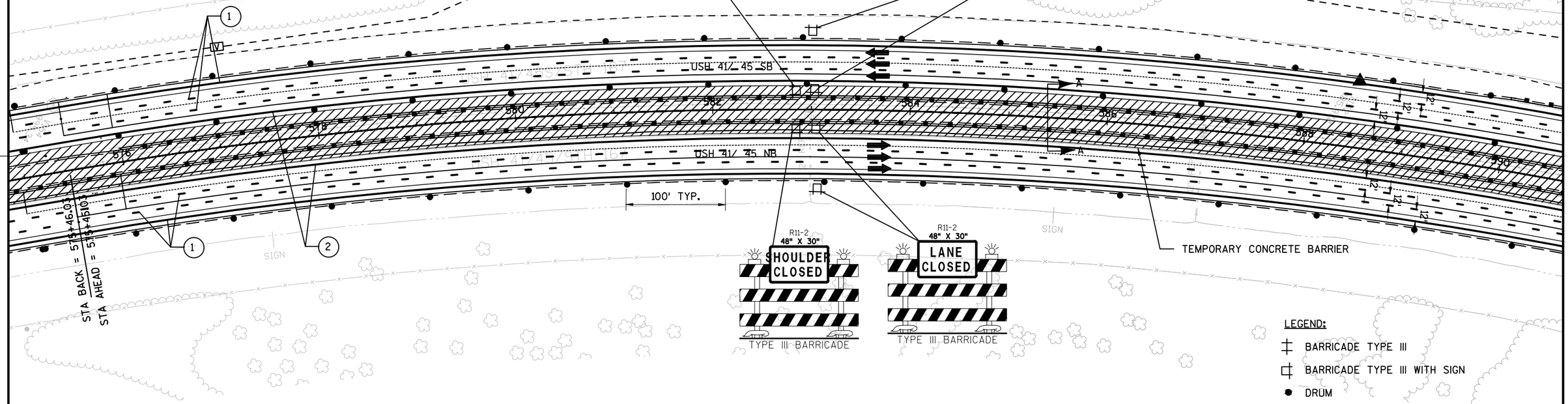
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2A & 2B	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026336_S2.DWG PLOT DATE : 3/6/2015 5:33 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1:100_XREF









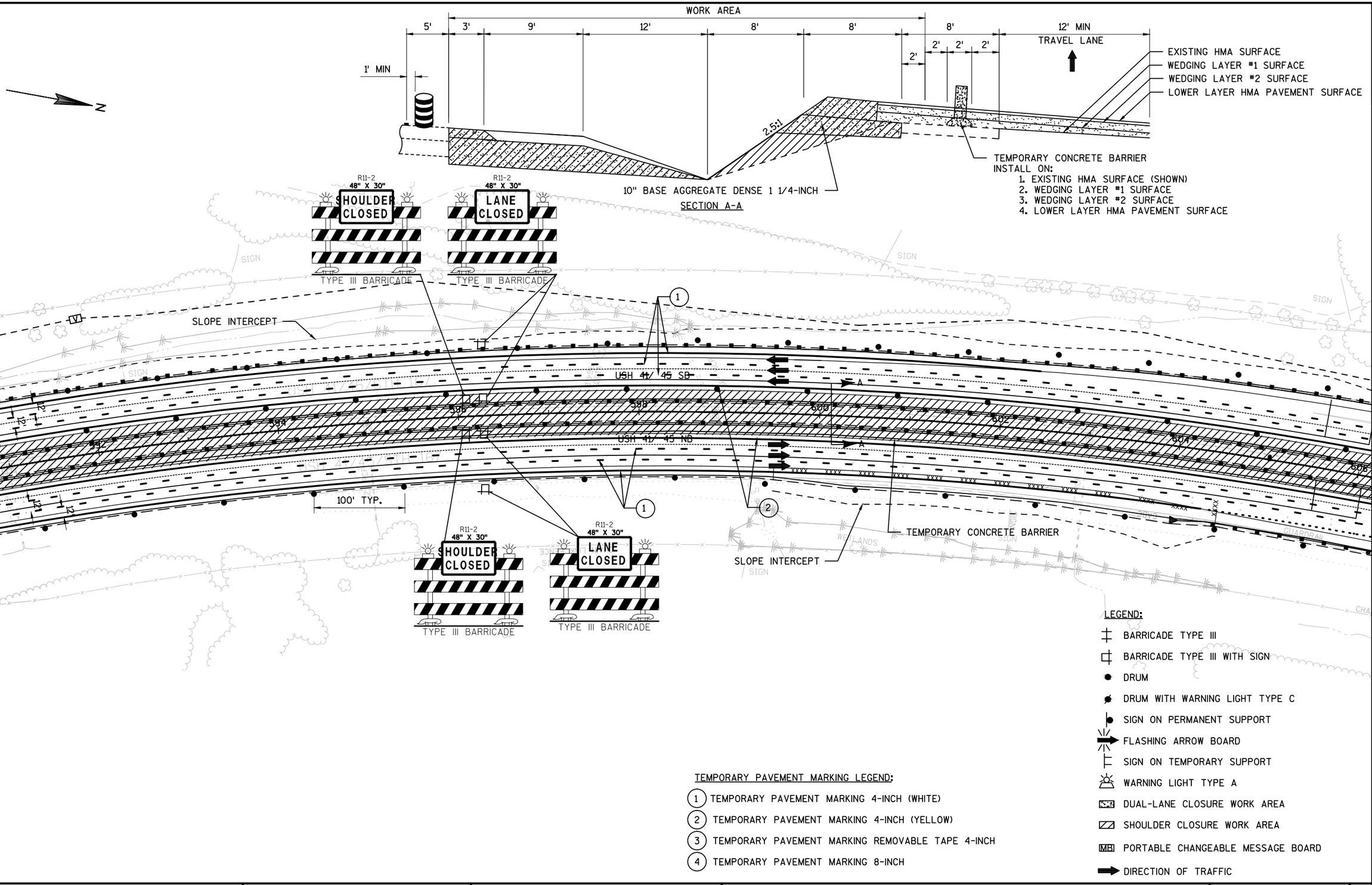
TEMPORARY PAVEMENT MARKING LEGEND:

1. TEMPORARY PAVEMENT MARKING 4-INCH (WHITE)
2. TEMPORARY PAVEMENT MARKING 4-INCH (YELLOW)
3. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
4. TEMPORARY PAVEMENT MARKING 8-INCH

LEGEND:

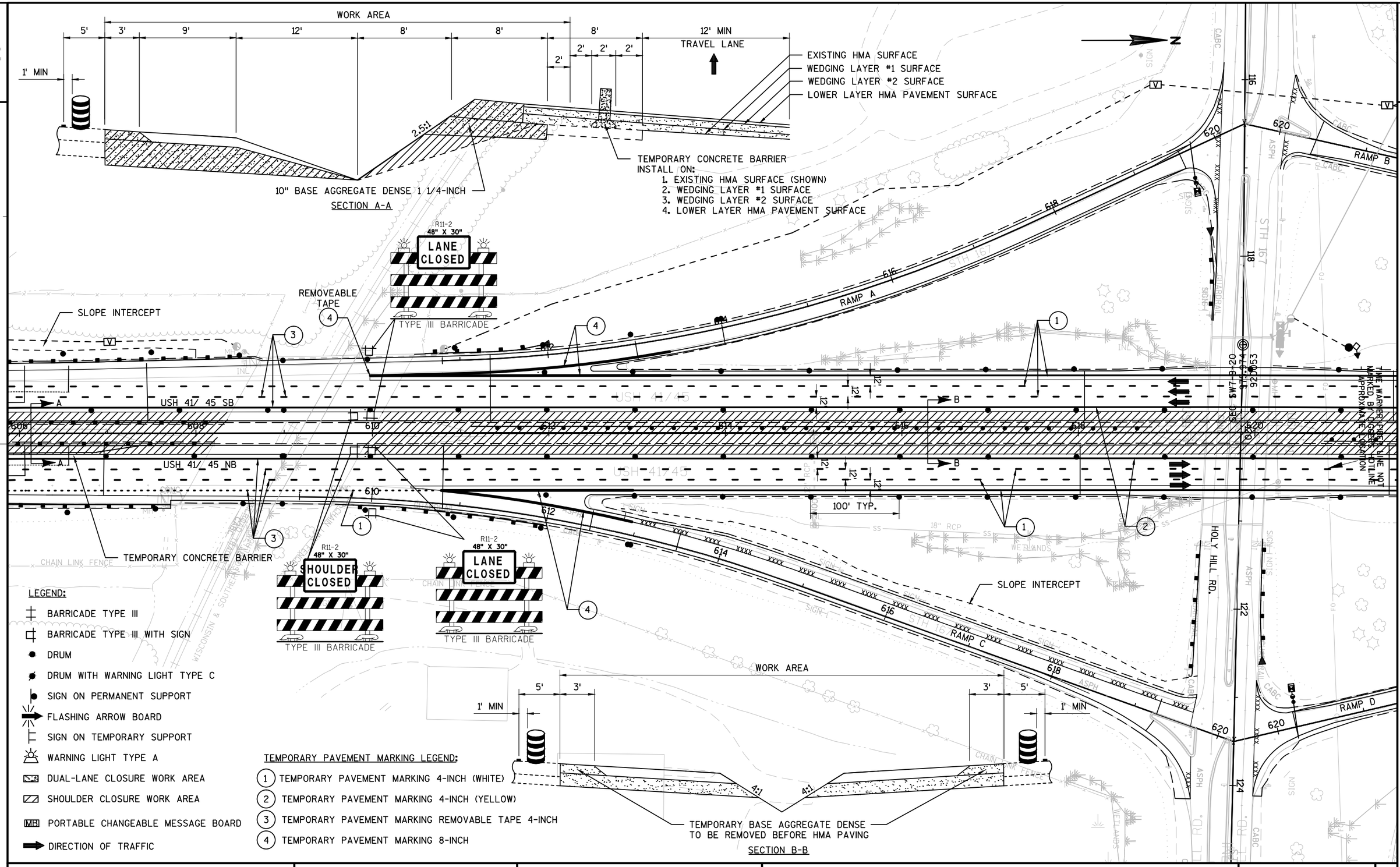
- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2A & 2B	SHEET 377	E



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2A & 2B	SHEET E

FILE NAME : N:\PDS\C3D\CAD\11003800\026338_S2.DWG PLOT DATE : 3/6/2015 5:35 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1:100_XREF
WISDOT/CADDS SHEET 42



LEGEND:

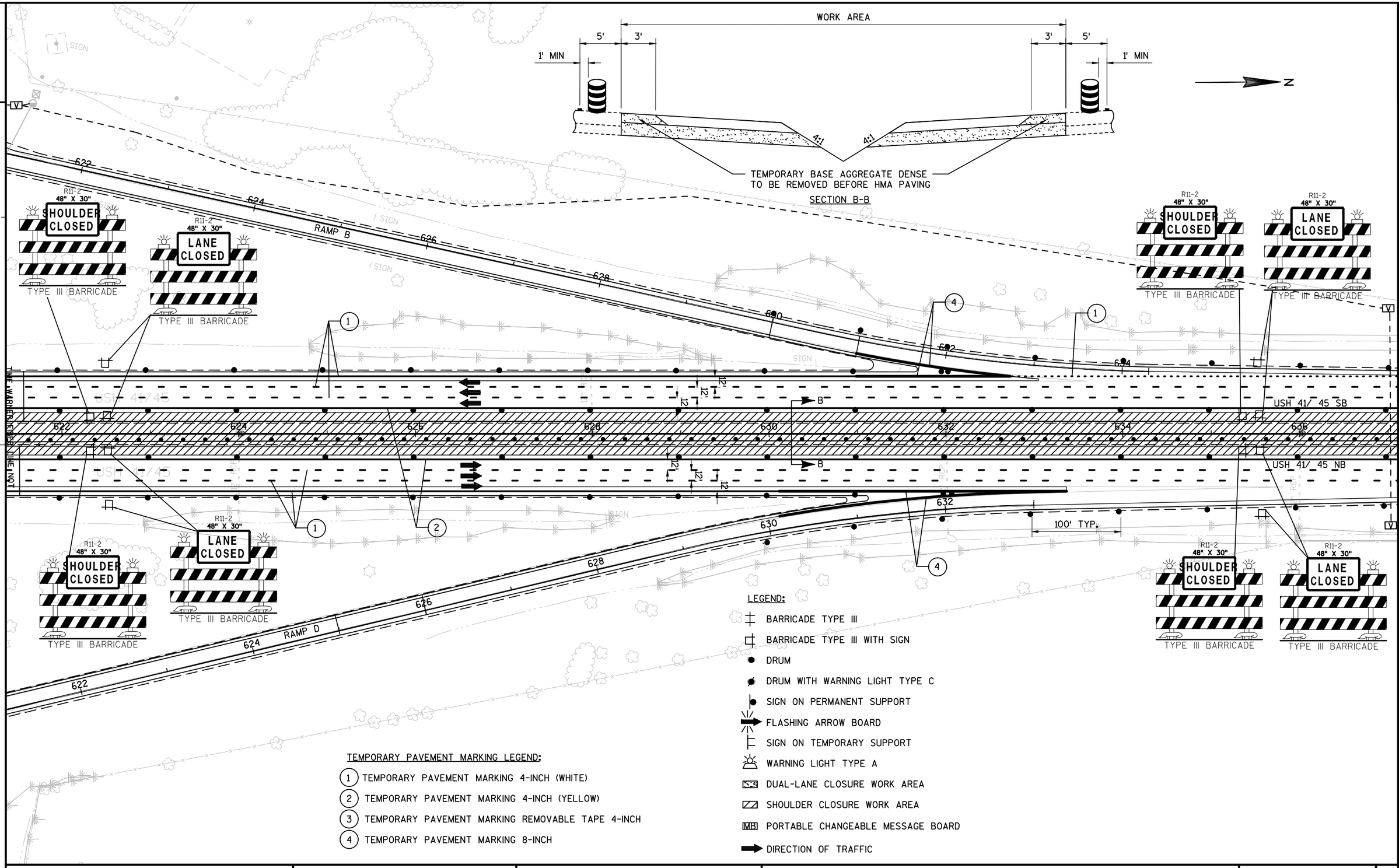
- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

TEMPORARY PAVEMENT MARKING LEGEND:

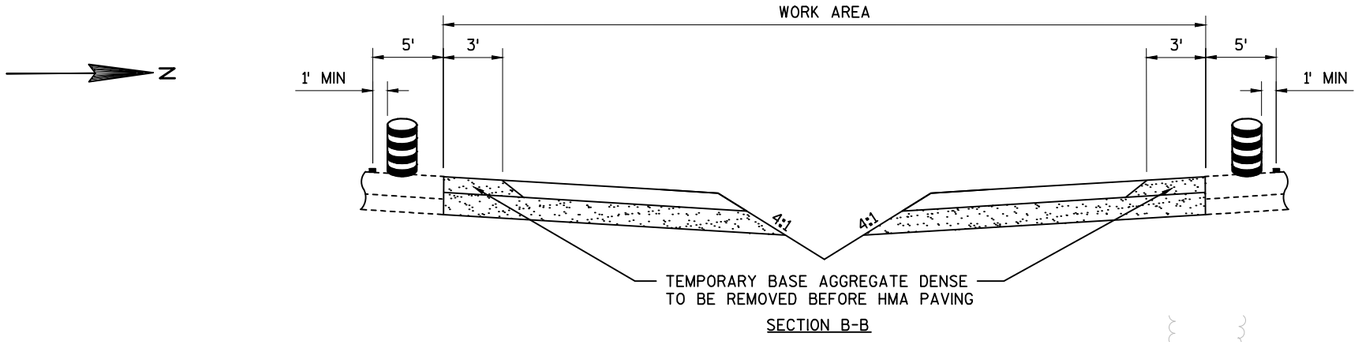
1. TEMPORARY PAVEMENT MARKING 4-INCH (WHITE)
2. TEMPORARY PAVEMENT MARKING 4-INCH (YELLOW)
3. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
4. TEMPORARY PAVEMENT MARKING 8-INCH

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2A & 2B	SHEET E

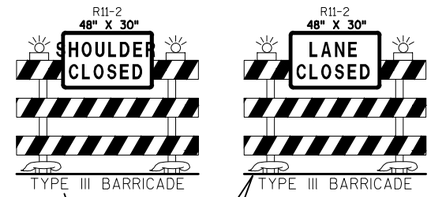
FILE NAME : N:\PDS\C3D\CAD\11003800\026339_S2.DWG PLOT DATE : 3/6/2015 5:36 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1:100_XREF

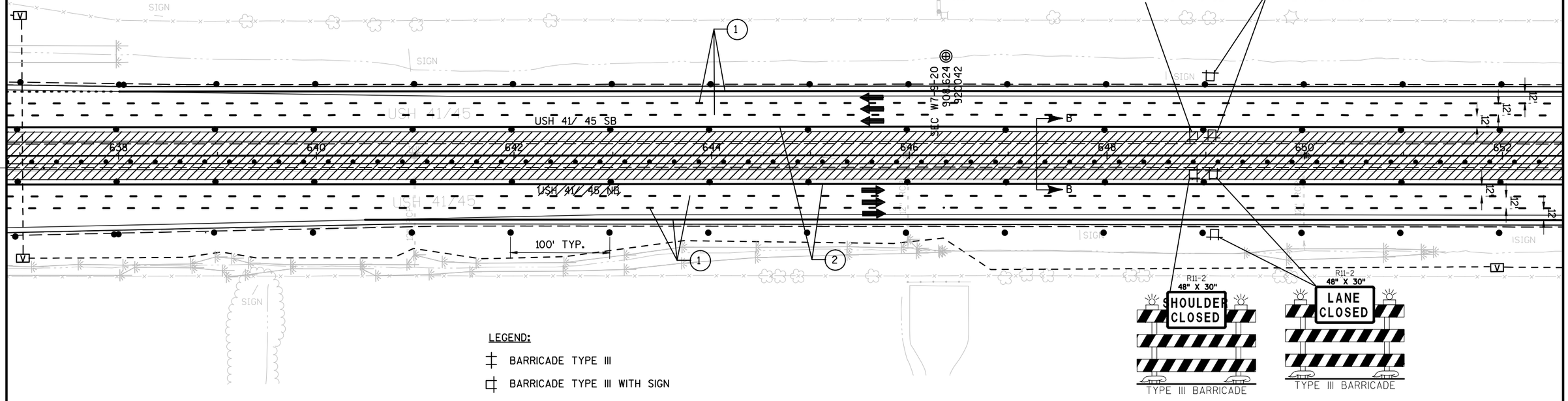


PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2A & 2B	SHEET 380	E



SECTION B-B





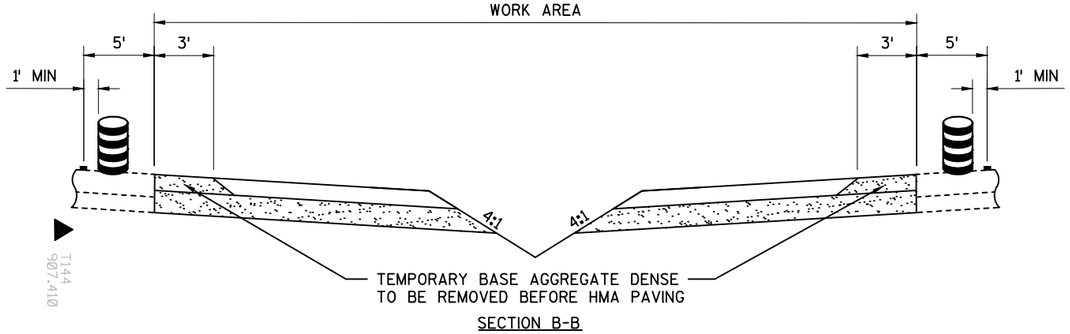
LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

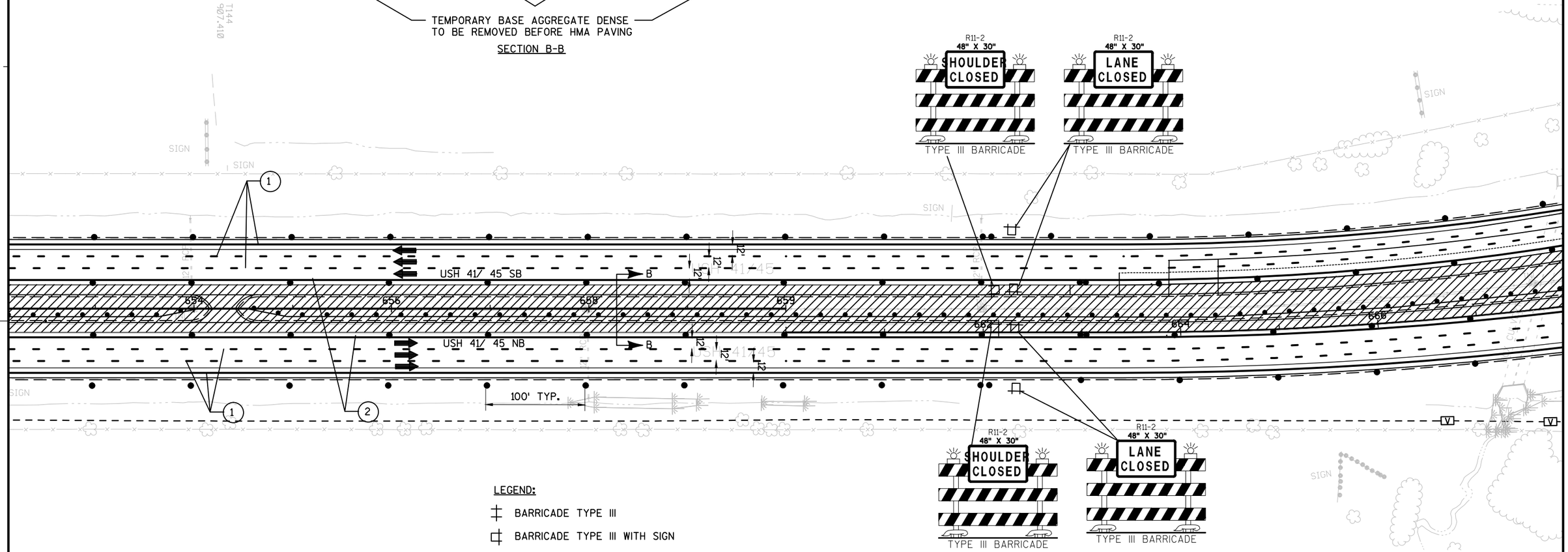
TEMPORARY PAVEMENT MARKING LEGEND:

1. TEMPORARY PAVEMENT MARKING 4-INCH (WHITE)
2. TEMPORARY PAVEMENT MARKING 4-INCH (YELLOW)
3. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
4. TEMPORARY PAVEMENT MARKING 8-INCH

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2A & 2B	SHEET 381	E



SECTION B-B



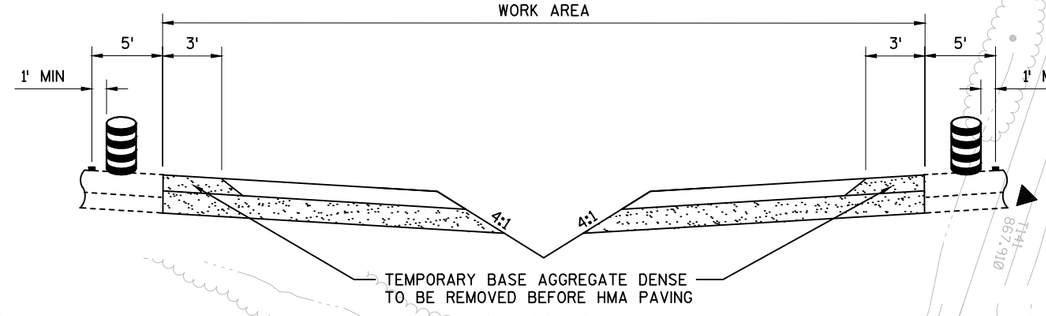
LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

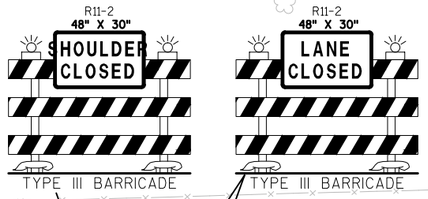
TEMPORARY PAVEMENT MARKING LEGEND:

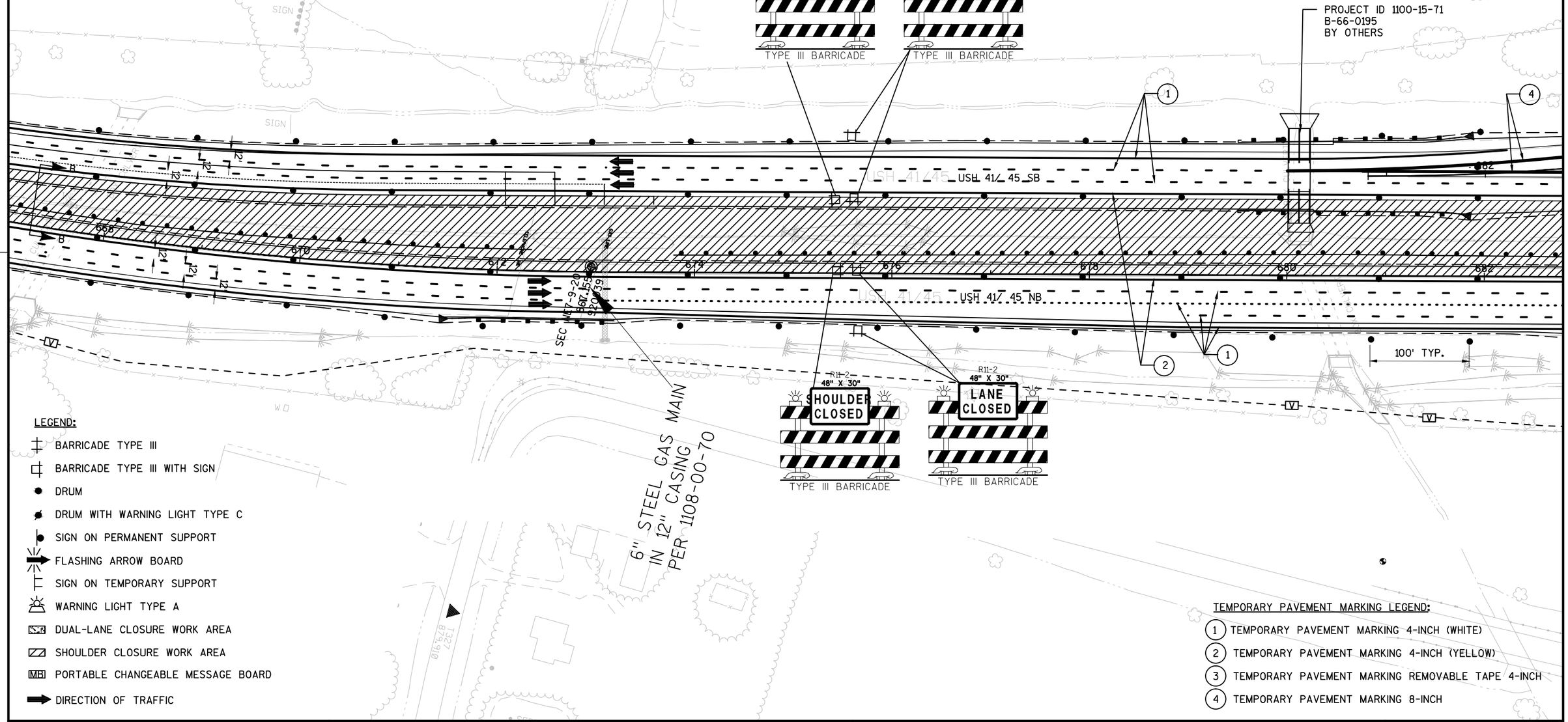
1. TEMPORARY PAVEMENT MARKING 4-INCH (WHITE)
2. TEMPORARY PAVEMENT MARKING 4-INCH (YELLOW)
3. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
4. TEMPORARY PAVEMENT MARKING 8-INCH

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2A & 2B	SHEET 382	E



SECTION B-B





LEGEND:

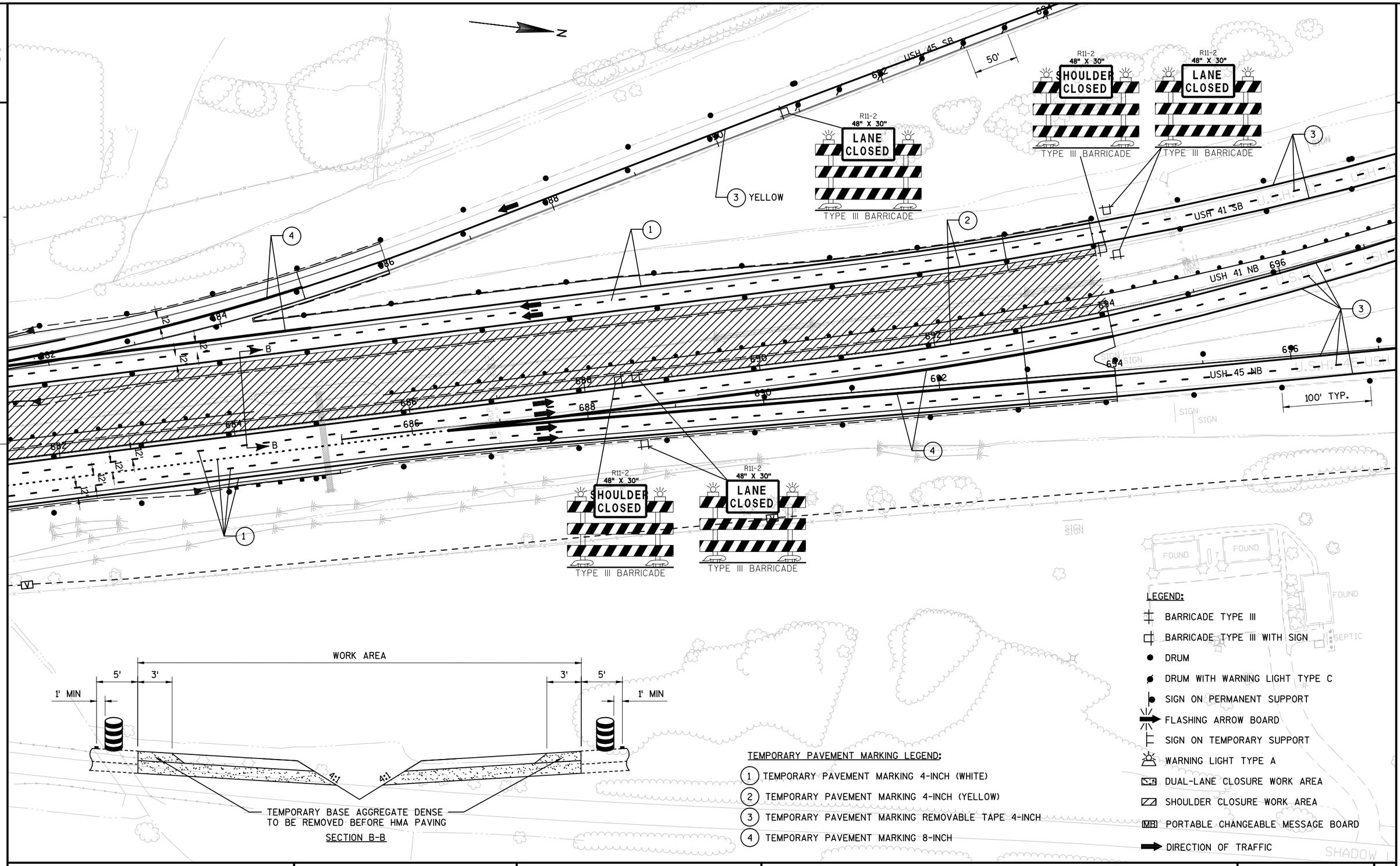
- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

TEMPORARY PAVEMENT MARKING LEGEND:

1. TEMPORARY PAVEMENT MARKING 4-INCH (WHITE)
2. TEMPORARY PAVEMENT MARKING 4-INCH (YELLOW)
3. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
4. TEMPORARY PAVEMENT MARKING 8-INCH

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2A & 2B	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026343_S2.DWG
PLOT DATE : 3/6/2015 5:41 PM
PLOT BY : SCHMIDT, JUDENE M
PLOT NAME :
PLOT SCALE : 1:100_XREF
WISDOT/CADDS SHEET 42



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2A & 2B	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\026344_S2.DWG
PLOT DATE : 3/6/2015 5:42 PM
PLOT BY : SCHMIDT, JUDENE M
PLOT NAME :
PLOT SCALE : 1" = 100'_XREF
WISDOT/CADDS SHEET 42

NOTES:

* TRAFFIC CONTROL LANE CLOSURE SPEED REDUCTION

*** TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY SPEED GREATER THAN 40 MPH

3 YELLOW

3/4 MILE

SEE THE FOLLOWING STANDARD DETAIL DRAWING FOR ADDITIONAL TRAFFIC CONTROL ITEMS:
S.D.D. 15 D 12-4*

1 1/2 MILE

SEE THE FOLLOWING STANDARD DETAIL DRAWING FOR ADDITIONAL TRAFFIC CONTROL ITEMS:
S.D.D. 15 D 12-4*
S.D.D. 15 D 27-2***

3/4 MILE

1 1/2 MILE

USH 45 SB

USH 41 SB

USH 41 NB

USH 45 NB

50'

100' TYP.

12

686 688 696 698 700 702 704 706 708 710 712

TEMPORARY PAVEMENT MARKING LEGEND:

1. TEMPORARY PAVEMENT MARKING 4-INCH (WHITE)
2. TEMPORARY PAVEMENT MARKING 4-INCH (YELLOW)
3. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
4. TEMPORARY PAVEMENT MARKING 8-INCH

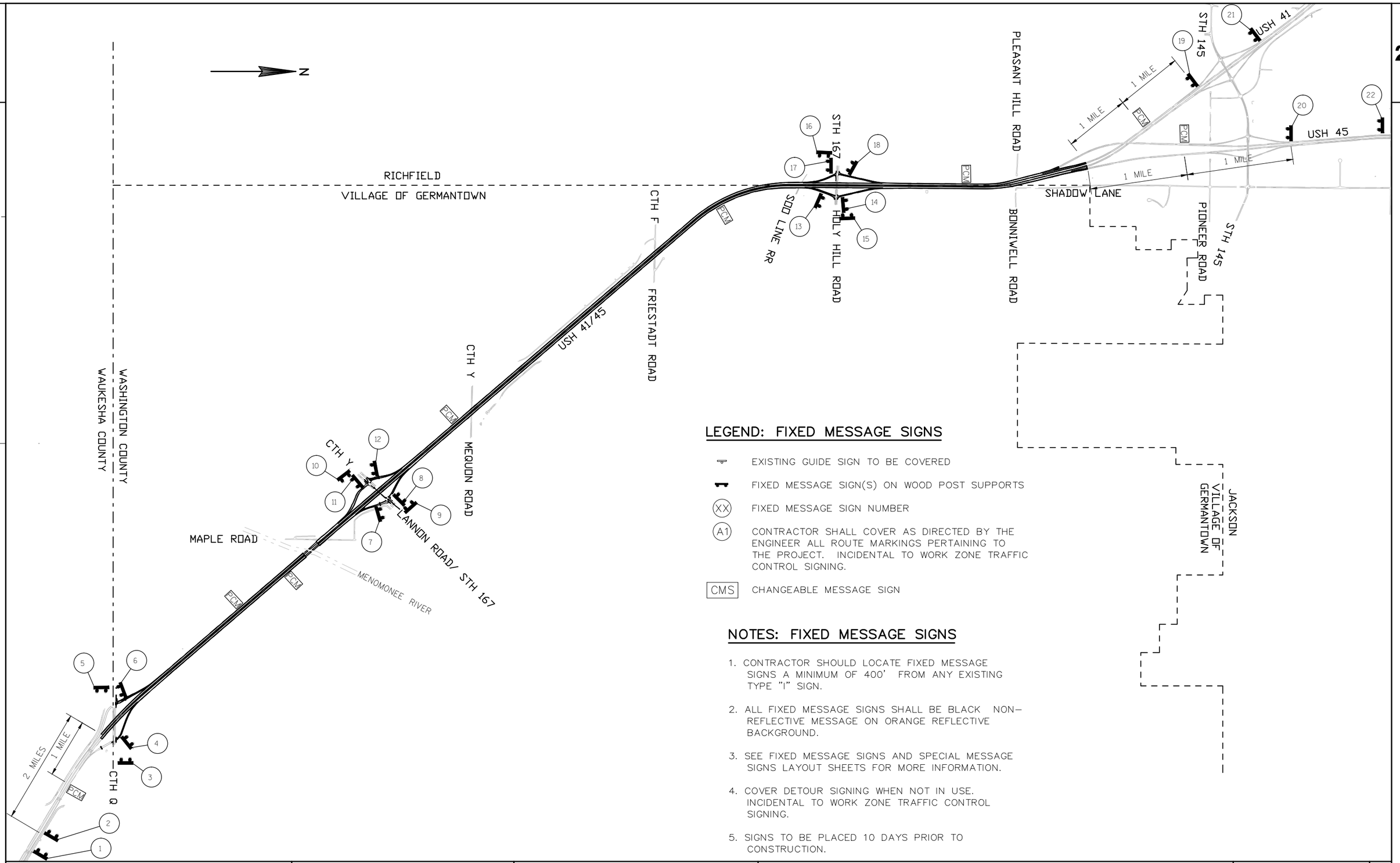
LEGEND:

- BARRICADE TYPE III
- BARRICADE TYPE III WITH SIGN
- DRUM
- DRUM WITH WARNING LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT TYPE A
- DUAL-LANE CLOSURE WORK AREA
- SHOULDER CLOSURE WORK AREA
- PORTABLE CHANGEABLE MESSAGE BOARD
- DIRECTION OF TRAFFIC

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	TRAFFIC CONTROL - STAGE 2A & 2B	SHEET E

FILE NAME : N:\PDS\C3D\CAD\11003800\026345_S2.DWG PLOT DATE : 3/26/2015 2:07 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 100'_XREF

WISDOT/CADDS SHEET 42



LEGEND: FIXED MESSAGE SIGNS

- EXISTING GUIDE SIGN TO BE COVERED
- FIXED MESSAGE SIGN(S) ON WOOD POST SUPPORTS
- (XX) FIXED MESSAGE SIGN NUMBER
- (A1) CONTRACTOR SHALL COVER AS DIRECTED BY THE ENGINEER ALL ROUTE MARKINGS PERTAINING TO THE PROJECT. INCIDENTAL TO WORK ZONE TRAFFIC CONTROL SIGNING.
- [CMS] CHANGEABLE MESSAGE SIGN

NOTES: FIXED MESSAGE SIGNS

1. CONTRACTOR SHOULD LOCATE FIXED MESSAGE SIGNS A MINIMUM OF 400' FROM ANY EXISTING TYPE "I" SIGN.
2. ALL FIXED MESSAGE SIGNS SHALL BE BLACK NON-REFLECTIVE MESSAGE ON ORANGE REFLECTIVE BACKGROUND.
3. SEE FIXED MESSAGE SIGNS AND SPECIAL MESSAGE SIGNS LAYOUT SHEETS FOR MORE INFORMATION.
4. COVER DETOUR SIGNING WHEN NOT IN USE. INCIDENTAL TO WORK ZONE TRAFFIC CONTROL SIGNING.
5. SIGNS TO BE PLACED 10 DAYS PRIOR TO CONSTRUCTION.

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: FIXED MESSAGE SIGN OVERVIEW	SHEET 386	E

2

NOTES: FIXED MESSAGE SIGNS

1. CONTRACTOR TO LOCATE FIXED MESSAGE SIGNS A MINIMUM OF 400' FROM ANY EXISTING TYPE I SIGNS.
2. ALL FIXED MESSAGE SIGNS SHALL BE BLACK NON-REFLECTIVE MESSAGE ON ORANGE REFLECTIVE BACKGROUND.
3. SEE FIXED MESSAGE SIGNS LAYOUT FOR MORE INFORMATION.

NOTES:

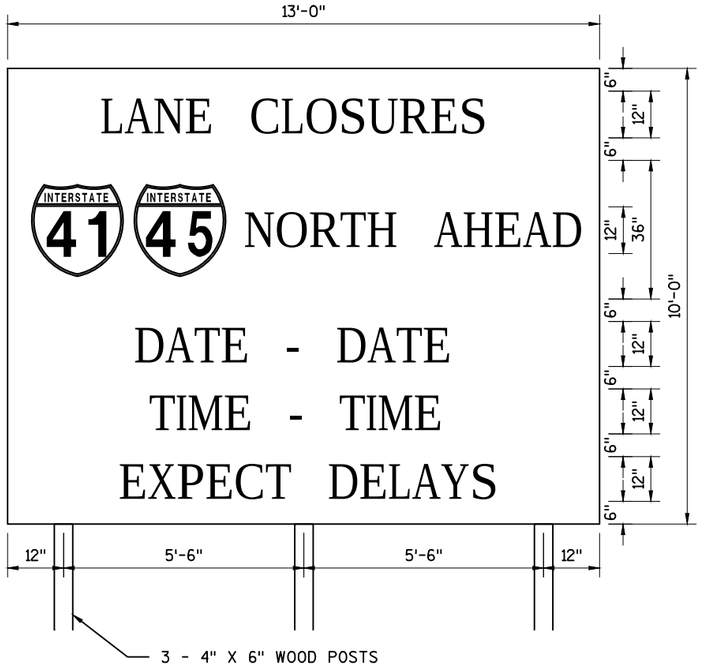
1. ALL SIGNS TO HAVE TYPE F REFLECTIVE SHEETING - REFERENCE: "WISDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION," LATEST EDITION.
2. SIGNS SHALL BE BLACK NON-REFLECTIVE MESSAGE ON ORANGE TYPE H REFLECTIVE SHEETING PER SPEC 643.2.9.3.
3. ALL SIGNS SHALL HAVE CAPITAL LETTERS AND NUMERALS:
   12" CAPS SHALL BE SERIES "D"
   6" CAPS SHALL BE SERIES "C"
4. SIGN BASE MATERIAL SHALL BE ACCORDING TO SECTION 637.2.2.1.
5. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.
6. ALL SIGNS TO BE MOUNTED ON NEW WOODEN POST SUPPORTS (4"X6"). THE NUMBER OF POSTS REQUIRED FOR EACH LAYOUT IS SHOWN.
7. SIGNS ON THIS SHEET TO BE PAID UNDER THE ITEM "TRAFFIC CONTROL SIGNS FIXED MESSAGE."
8. "BEGINS XXX XX" SIGNS PLACED PRIOR TO STAGE 2 SHALL BE SEPARATE PANELS, BUT SHALL BE CONSIDERED AS PART OF THE SIGN. "BEGINS XXX XX" SIGNS PLACED PRIOR TO STAGE 2 AND 4 SHALL BE REMOVED OR COVERED WITH "EXPECT DELAYS" PANELS AFTER THEIR EFFECTIVE DATE. THE MONTH AND DATE SHALL BE AS DIRECTED BY THE ENGINEER IN THE FIELD.
9. AFTER SIGNS HAVE BEEN LOCATED IN THE FIELD, BUT BEFORE INSTALLATION, THE WISDOT SIGNING AND MARKING SUPERVISOR SHALL VERIFY EACH SIGN LOCATION.
10. SIGNS TO BE PLACED 10 DAYS PRIOR TO CONSTRUCTION.

(XXX) = SIGN NUMBER

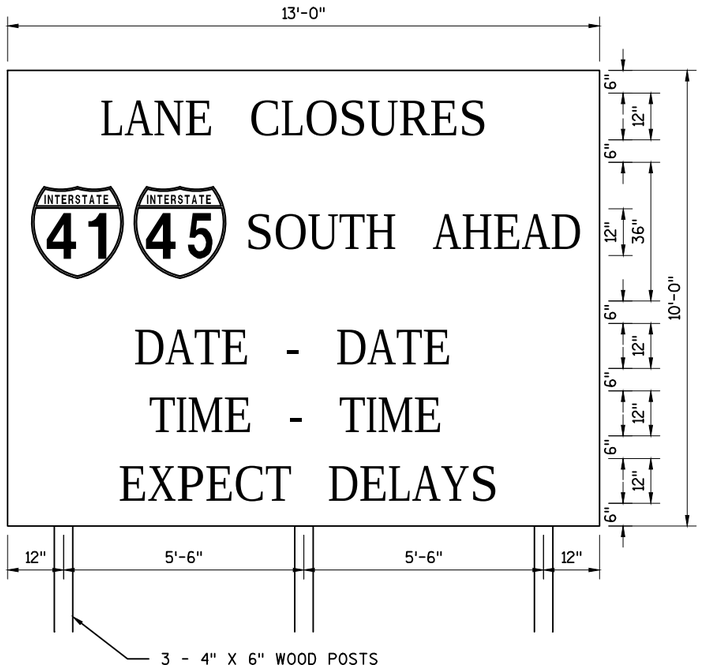
(4) (6) (7) (8) (11)
(12) (13) (14) (17) (18)

SEE S.D.D. 15D16-1

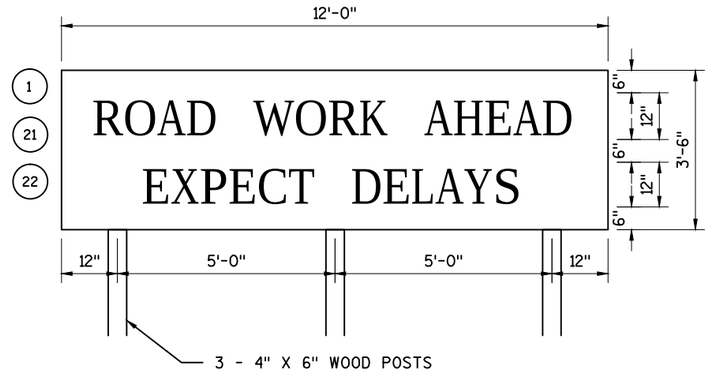
(2)



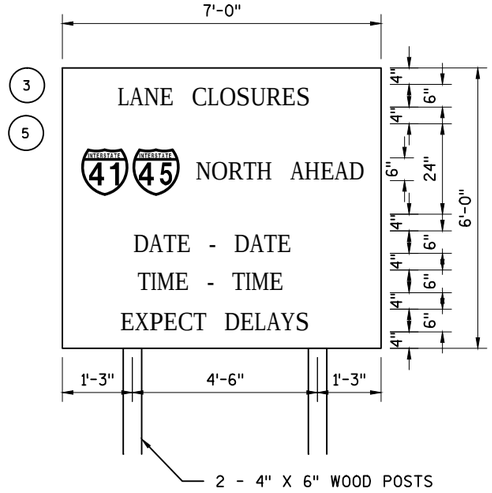
(19) (20)



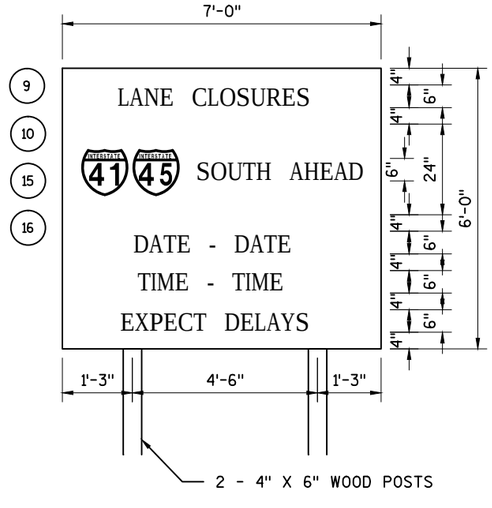
(1) (21) (22)



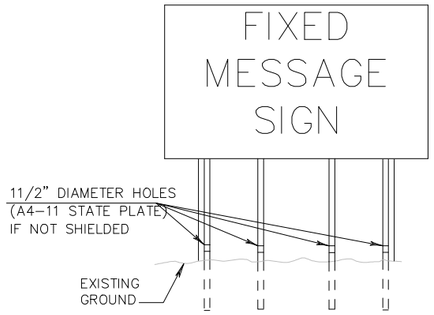
(3) (5)



(9) (10) (15) (16)



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	FIXED MESSAGE SIGN DETAILS	SHEET 387	E



FRONT VIEW

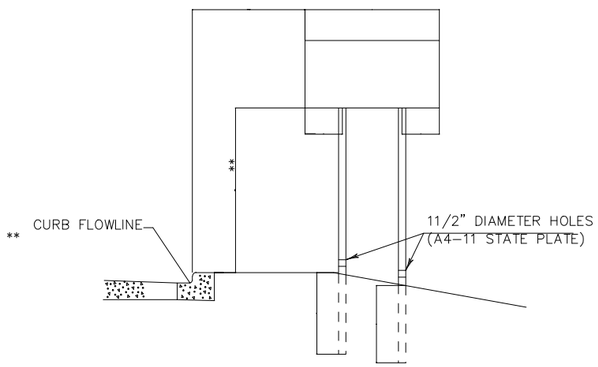
NOTES

1. SEE TRAFFIC CONTROL SHEETS FOR SIGN LOCATIONS.
2. SEE TABLES BELOW FOR REQUIRED NUMBER OF POSTS.

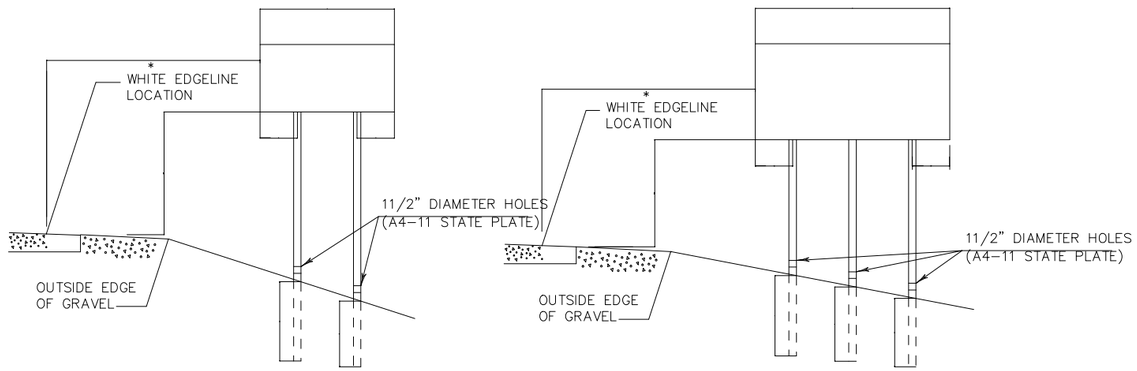
* 6' FROM EDGE OF A PAVED SHOULDER OR 12' FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) OR 2' FROM OUTSIDE EDGE OF GRAVEL, WHICHEVER IS GREATER UNLESS DIRECTED BY PROJECT ENGINEER.

** 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.

3. 4X6 WOOD POSTS SHALL HAVE TWO HOLES PER STATE PLATE A4–11



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

NOTES: FIXED MESSAGE SIGNS

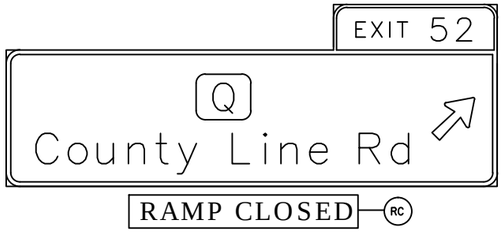
1. CONTRACTOR TO LOCATE FIXED MESSAGE SIGNS A MINIMUM OF 400' FROM ANY EXISTING TYPE I SIGNS.
2. ALL FIXED MESSAGE SIGNS SHALL BE BLACK NON-REFLECTIVE MESSAGE ON ORANGE REFLECTIVE BACKGROUND.
3. SEE FIXED MESSAGE SIGNS LAYOUT FOR MORE INFORMATION.

NOTES:

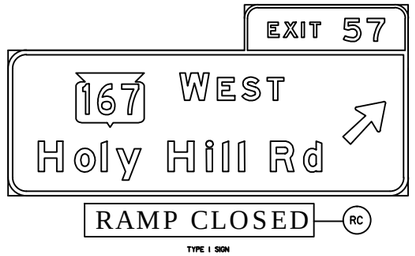
1. ALL SIGNS TO HAVE TYPE F REFLECTIVE SHEETING - REFERENCE: "WISDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION," LATEST EDITION.
2. SIGNS SHALL BE BLACK NON-REFLECTIVE MESSAGE ON ORANGE TYPE H REFLECTIVE SHEETING PER SPEC 643.2.9.3.
3. ALL SIGNS SHALL HAVE CAPITAL LETTERS AND NUMERALS:
   12" CAPS SHALL BE SERIES "D"
   6" CAPS SHALL BE SERIES "C"
4. SIGN BASE MATERIAL SHALL BE ACCORDING TO SECTION 637.2.2.1.
5. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.
6. ALL SIGNS TO BE MOUNTED ON NEW WOODEN POST SUPPORTS (4"X6"). THE NUMBER OF POSTS REQUIRED FOR EACH LAYOUT IS SHOWN.
7. SIGN (RC) ON THIS SHEET TO BE PAID UNDER THE ITEM "TRAFFIC CONTROL SIGNS FIXED MESSAGE."
8. "BEGINS XXX XX" SIGNS PLACED PRIOR TO STAGE 2 SHALL BE SEPARATE PANELS, BUT SHALL BE CONSIDERED AS PART OF THE SIGN. "BEGINS XXX XX" SIGNS PLACED PRIOR TO STAGE 2 AND 4 SHALL BE REMOVED OR COVERED WITH "EXPECT DELAYS" PANELS AFTER THEIR EFFECTIVE DATE. THE MONTH AND DATE SHALL BE AS DIRECTED BY THE ENGINEER IN THE FIELD.
9. AFTER SIGNS HAVE BEEN LOCATED IN THE FIELD, BUT BEFORE INSTALLATION, THE WISDOT SIGNING AND MARKING SUPERVISOR SHALL VERIFY EACH SIGN LOCATION.
10. SIGNS TO BE PLACED 10 DAYS PRIOR TO CONSTRUCTION.

(XXX) = SIGN NUMBER

(A)

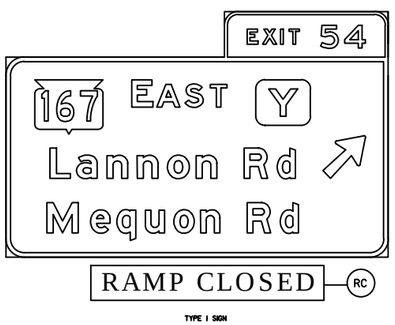


(B)



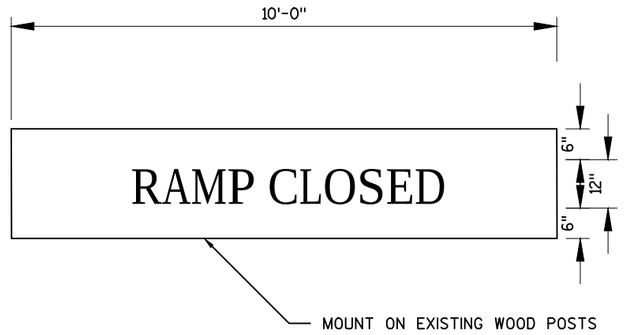
TYPE I SIGN

(C)



TYPE I SIGN

(RC)



(D) DETOUR — M4-8, 24"X12"

(E) EAST — M3-2, SIZE

(F) WEST — M3-4, SIZE

(G) M6-1, 21"X21"

(H) M5-1L, 21"X21"

(I) M5-1R, 21"X21"

(J) M6-2, 21"X21"

(K) M6-1, 21"X21"

(L) M6-1, 21"X21"

(M) COUNTY Q — M1-5A, 24"X24"

(N) 167 — M1-6, SIZE

(O) Lannon Road — M1-94, SIZE

(T) HOLY HILL RD — M1-94, SIZE

(P) 41 — M1-4, SIZE

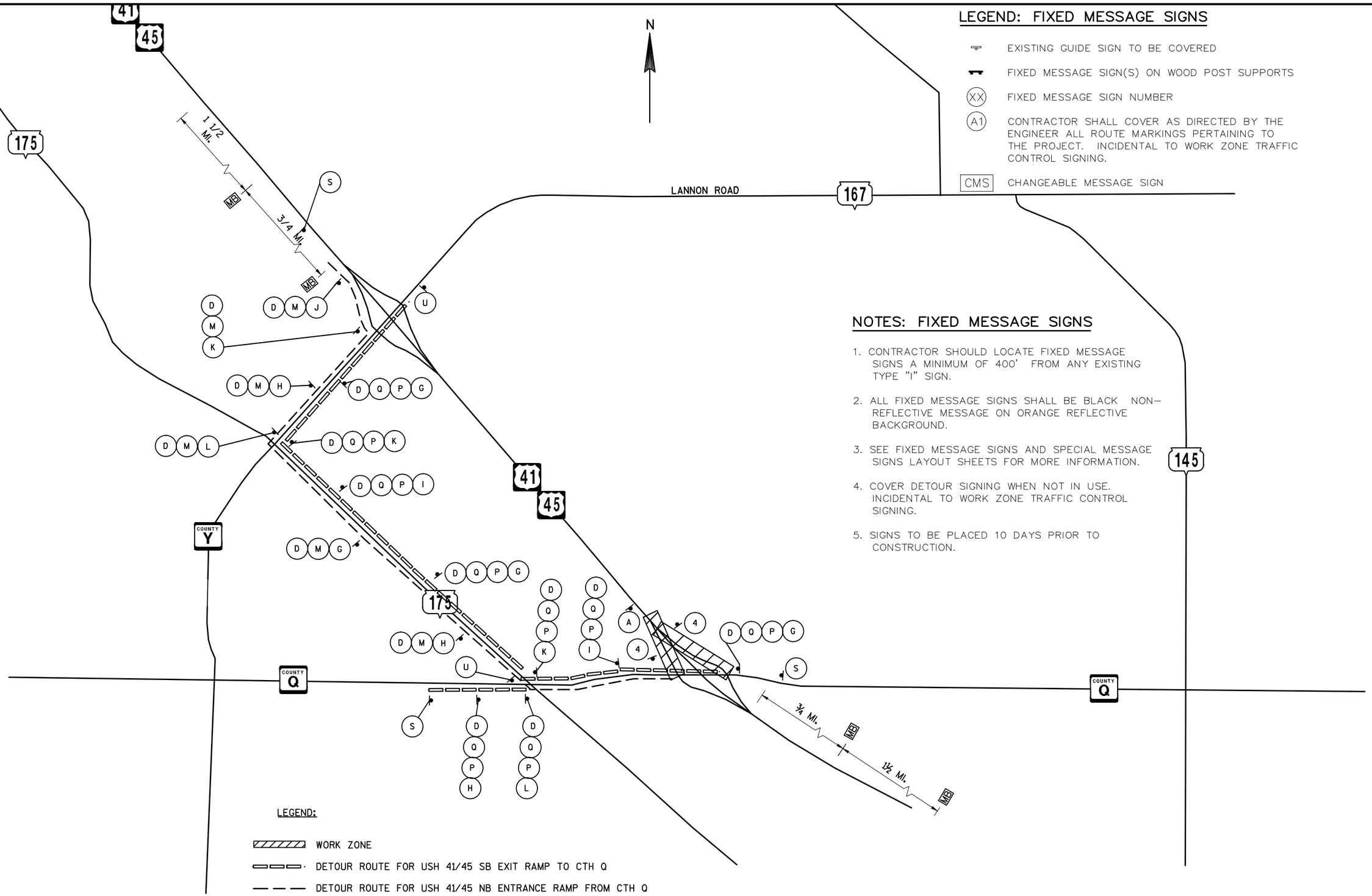
(Q) NORTH — M3-1, SIZE

(R) SOUTH — M3-3, SIZE

(S) DETOUR AHEAD — W20-2

(U) END DETOUR — M4-8A, SIZE

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: DETOUR FOR RAMP CLOSURES	SHEET 389	E



LEGEND: FIXED MESSAGE SIGNS

- EXISTING GUIDE SIGN TO BE COVERED
- FIXED MESSAGE SIGN(S) ON WOOD POST SUPPORTS
- (XX) FIXED MESSAGE SIGN NUMBER
- (A1) CONTRACTOR SHALL COVER AS DIRECTED BY THE ENGINEER ALL ROUTE MARKINGS PERTAINING TO THE PROJECT. INCIDENTAL TO WORK ZONE TRAFFIC CONTROL SIGNING.
- [CMS] CHANGEABLE MESSAGE SIGN

NOTES: FIXED MESSAGE SIGNS

1. CONTRACTOR SHOULD LOCATE FIXED MESSAGE SIGNS A MINIMUM OF 400' FROM ANY EXISTING TYPE "I" SIGN.
2. ALL FIXED MESSAGE SIGNS SHALL BE BLACK NON-REFLECTIVE MESSAGE ON ORANGE REFLECTIVE BACKGROUND.
3. SEE FIXED MESSAGE SIGNS AND SPECIAL MESSAGE SIGNS LAYOUT SHEETS FOR MORE INFORMATION.
4. COVER DETOUR SIGNING WHEN NOT IN USE. INCIDENTAL TO WORK ZONE TRAFFIC CONTROL SIGNING.
5. SIGNS TO BE PLACED 10 DAYS PRIOR TO CONSTRUCTION.

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	DETOUR PLAN - STAGE 1 & STAGE 2B - CTH Q NORTH RAMPS	SHEET 390	E

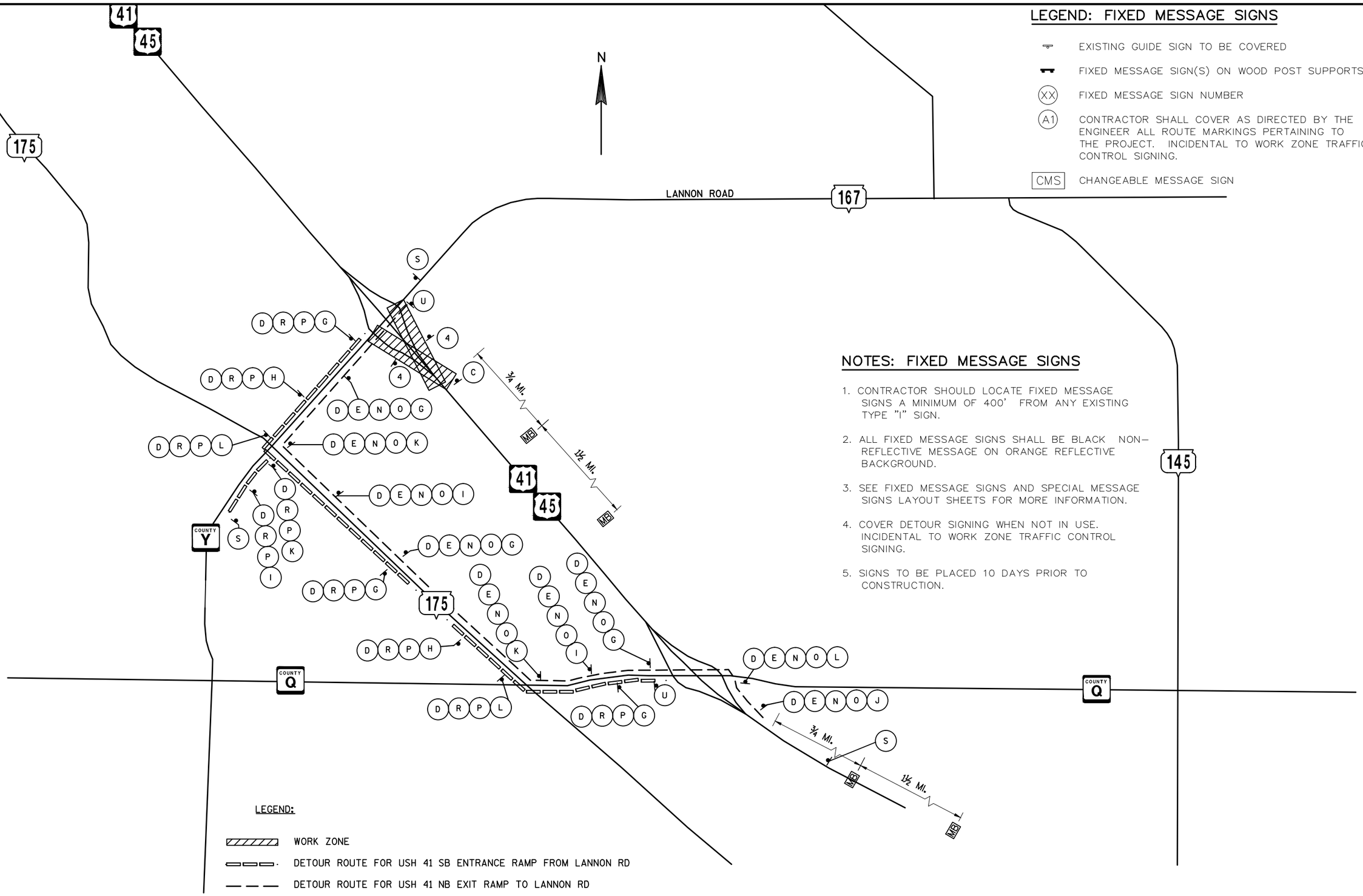
2

LEGEND: FIXED MESSAGE SIGNS

- EXISTING GUIDE SIGN TO BE COVERED
- FIXED MESSAGE SIGN(S) ON WOOD POST SUPPORTS
- (XX) FIXED MESSAGE SIGN NUMBER
- (A1) CONTRACTOR SHALL COVER AS DIRECTED BY THE ENGINEER ALL ROUTE MARKINGS PERTAINING TO THE PROJECT. INCIDENTAL TO WORK ZONE TRAFFIC CONTROL SIGNING.
- CMS CHANGEABLE MESSAGE SIGN

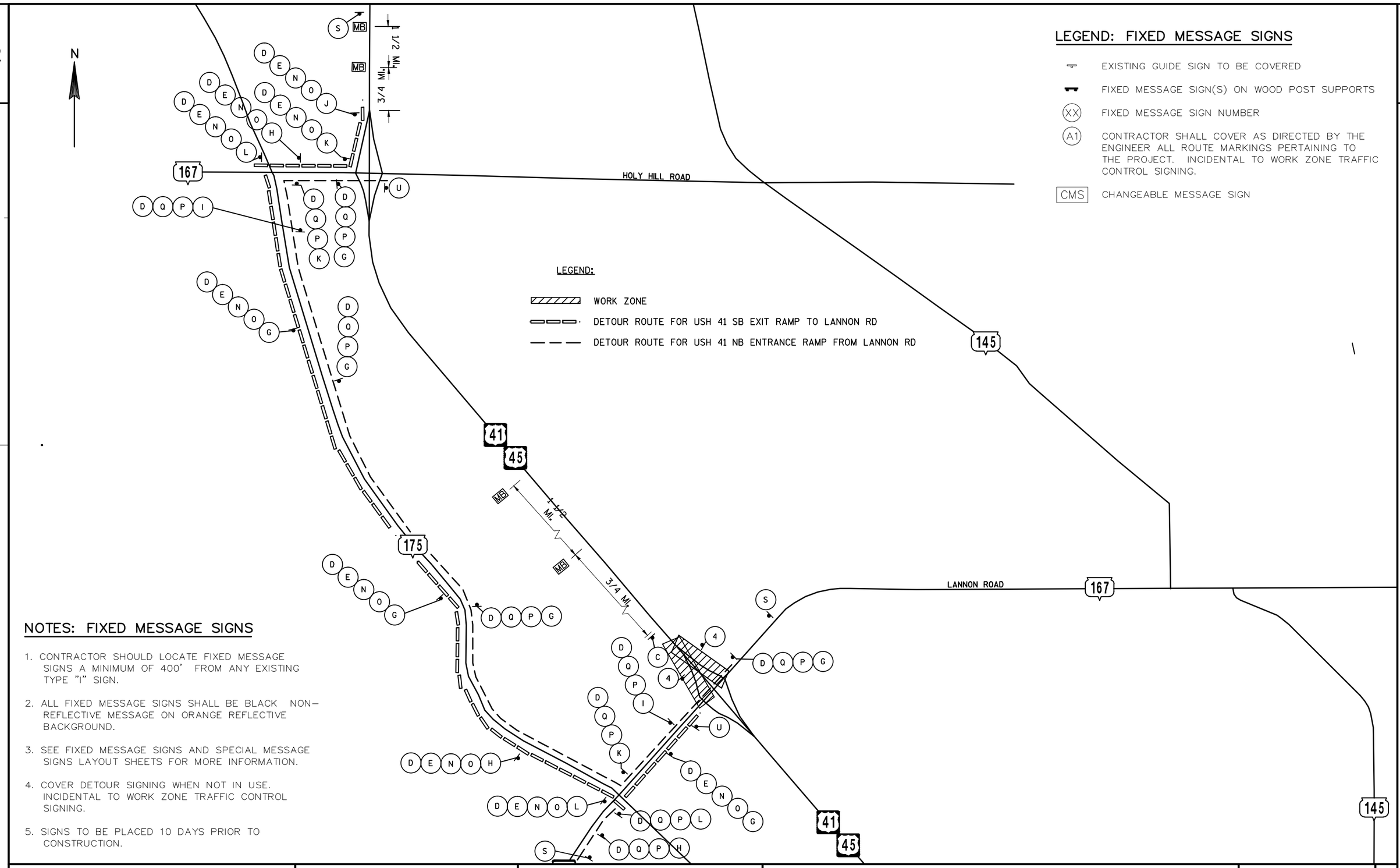
NOTES: FIXED MESSAGE SIGNS

1. CONTRACTOR SHOULD LOCATE FIXED MESSAGE SIGNS A MINIMUM OF 400' FROM ANY EXISTING TYPE "I" SIGN.
2. ALL FIXED MESSAGE SIGNS SHALL BE BLACK NON-REFLECTIVE MESSAGE ON ORANGE REFLECTIVE BACKGROUND.
3. SEE FIXED MESSAGE SIGNS AND SPECIAL MESSAGE SIGNS LAYOUT SHEETS FOR MORE INFORMATION.
4. COVER DETOUR SIGNING WHEN NOT IN USE. INCIDENTAL TO WORK ZONE TRAFFIC CONTROL SIGNING.
5. SIGNS TO BE PLACED 10 DAYS PRIOR TO CONSTRUCTION.



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	DETOUR PLAN - STAGE 1 & STAGE 2B - LANNON RD SOUTH RAMPS	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\027001_DT.DWG PLOT DATE : 3/19/2015 11:59 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1" = 2000'_XREF

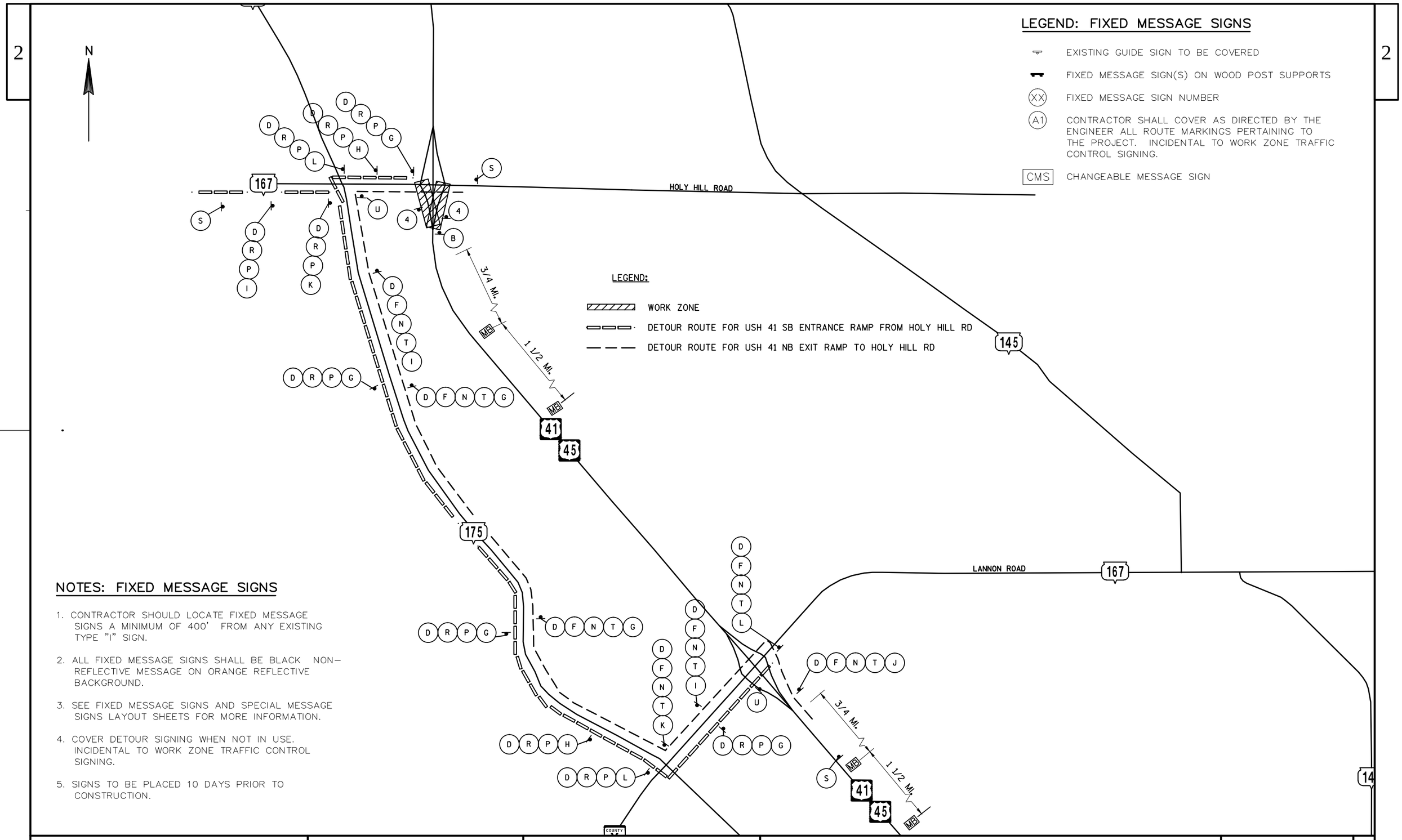


NOTES: FIXED MESSAGE SIGNS

1. CONTRACTOR SHOULD LOCATE FIXED MESSAGE SIGNS A MINIMUM OF 400' FROM ANY EXISTING TYPE "I" SIGN.
2. ALL FIXED MESSAGE SIGNS SHALL BE BLACK NON-REFLECTIVE MESSAGE ON ORANGE REFLECTIVE BACKGROUND.
3. SEE FIXED MESSAGE SIGNS AND SPECIAL MESSAGE SIGNS LAYOUT SHEETS FOR MORE INFORMATION.
4. COVER DETOUR SIGNING WHEN NOT IN USE. INCIDENTAL TO WORK ZONE TRAFFIC CONTROL SIGNING.
5. SIGNS TO BE PLACED 10 DAYS PRIOR TO CONSTRUCTION.

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	DETOUR PLAN - STAGE 1 & STAGE 2B - LANNON RD NORTH RAMPS	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\027001_DT.DWG PLOT DATE : 3/19/2015 11:59 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 0.000434
WISDOT/CADDS SHEET 42

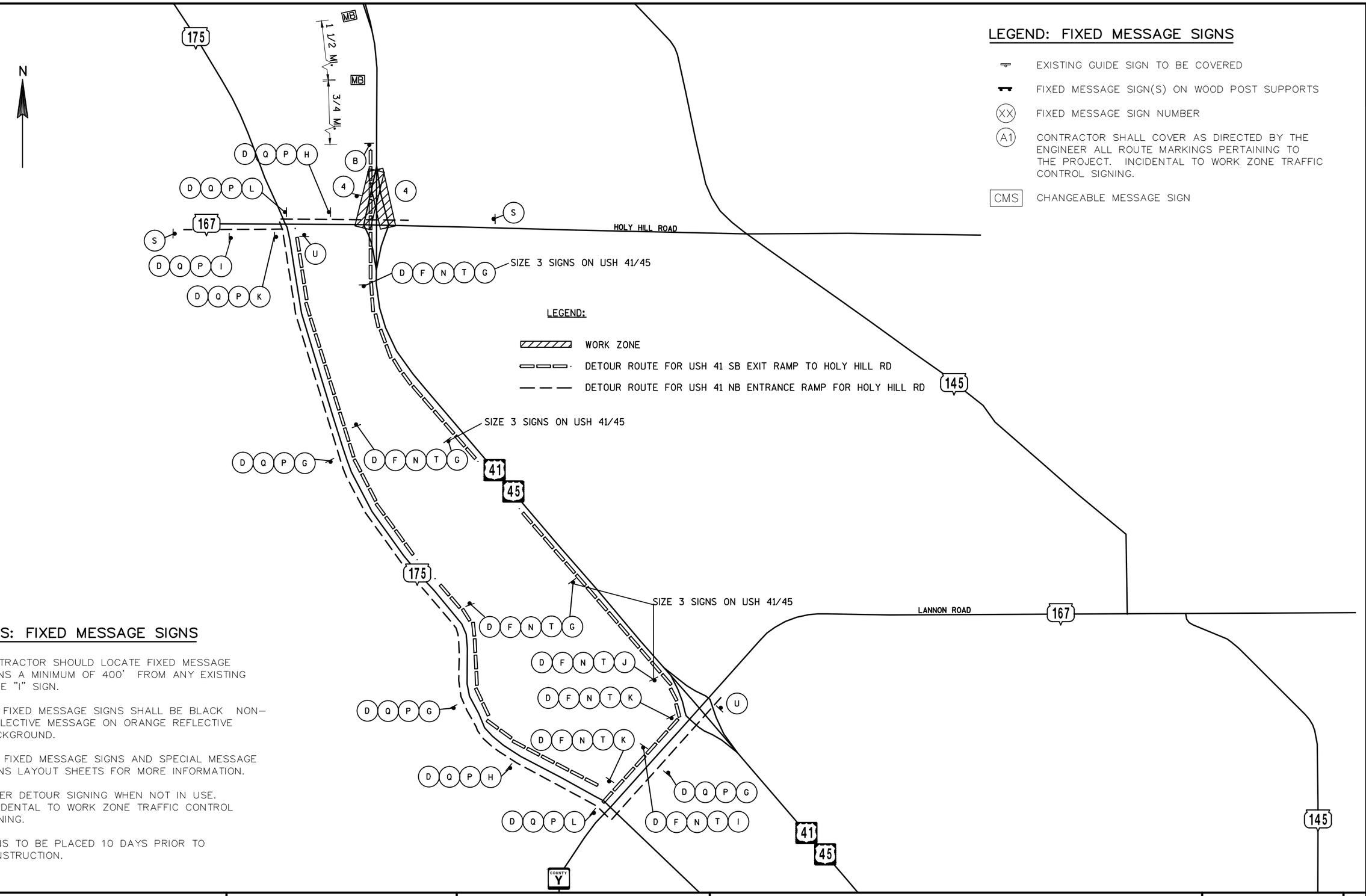


NOTES: FIXED MESSAGE SIGNS

1. CONTRACTOR SHOULD LOCATE FIXED MESSAGE SIGNS A MINIMUM OF 400' FROM ANY EXISTING TYPE "I" SIGN.
2. ALL FIXED MESSAGE SIGNS SHALL BE BLACK NON-REFLECTIVE MESSAGE ON ORANGE REFLECTIVE BACKGROUND.
3. SEE FIXED MESSAGE SIGNS AND SPECIAL MESSAGE SIGNS LAYOUT SHEETS FOR MORE INFORMATION.
4. COVER DETOUR SIGNING WHEN NOT IN USE. INCIDENTAL TO WORK ZONE TRAFFIC CONTROL SIGNING.
5. SIGNS TO BE PLACED 10 DAYS PRIOR TO CONSTRUCTION.

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	DETOUR PLAN - STAGE 1 & 2B - HOLY HILL RD SOUTH RAMPS	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\11003800\027001_DT.DWG PLOT DATE : 3/19/2015 11:59 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 0.000419



LEGEND: FIXED MESSAGE SIGNS

- EXISTING GUIDE SIGN TO BE COVERED
- FIXED MESSAGE SIGN(S) ON WOOD POST SUPPORTS
- (XX) FIXED MESSAGE SIGN NUMBER
- (A1) CONTRACTOR SHALL COVER AS DIRECTED BY THE ENGINEER ALL ROUTE MARKINGS PERTAINING TO THE PROJECT. INCIDENTAL TO WORK ZONE TRAFFIC CONTROL SIGNING.
- CMS CHANGEABLE MESSAGE SIGN

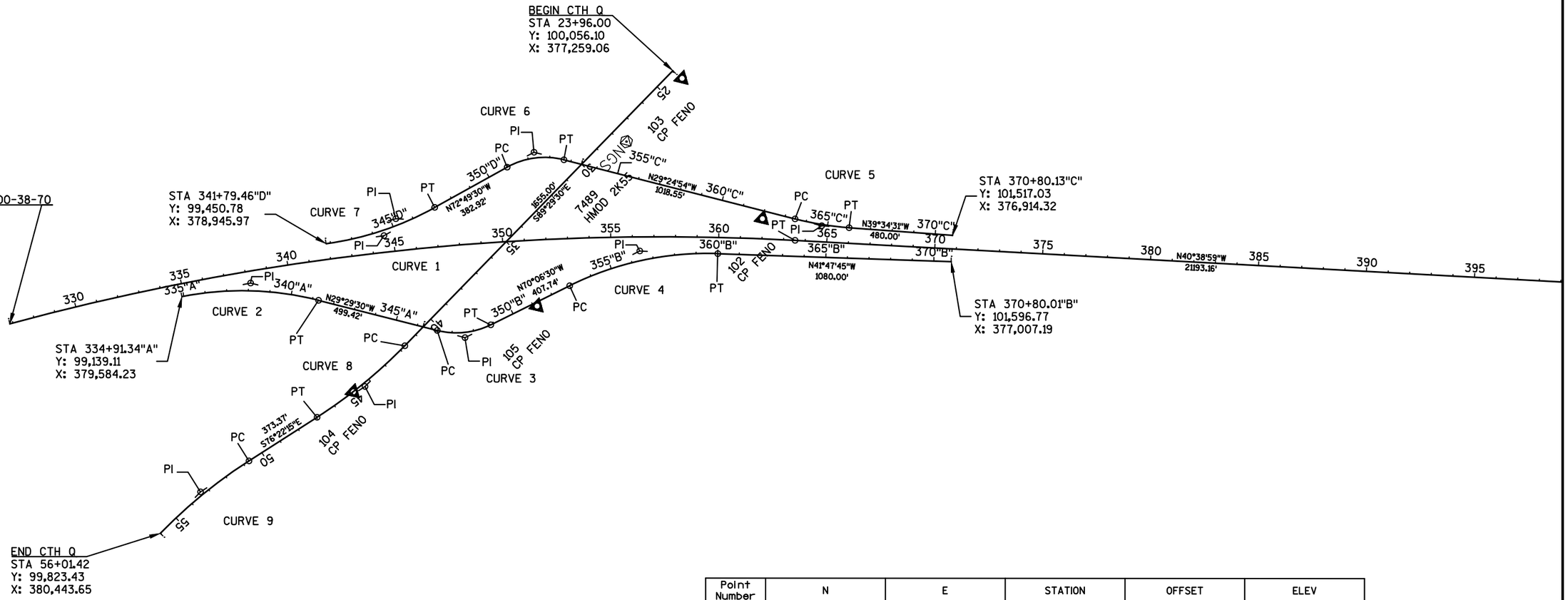
NOTES: FIXED MESSAGE SIGNS

1. CONTRACTOR SHOULD LOCATE FIXED MESSAGE SIGNS A MINIMUM OF 400' FROM ANY EXISTING TYPE "I" SIGN.
2. ALL FIXED MESSAGE SIGNS SHALL BE BLACK NON-REFLECTIVE MESSAGE ON ORANGE REFLECTIVE BACKGROUND.
3. SEE FIXED MESSAGE SIGNS AND SPECIAL MESSAGE SIGNS LAYOUT SHEETS FOR MORE INFORMATION.
4. COVER DETOUR SIGNING WHEN NOT IN USE. INCIDENTAL TO WORK ZONE TRAFFIC CONTROL SIGNING.
5. SIGNS TO BE PLACED 10 DAYS PRIOR TO CONSTRUCTION.

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	DETOUR PLAN - STAGE 1 & 2A - HOLY HILL RD NORTH RAMPS	SHEET	E

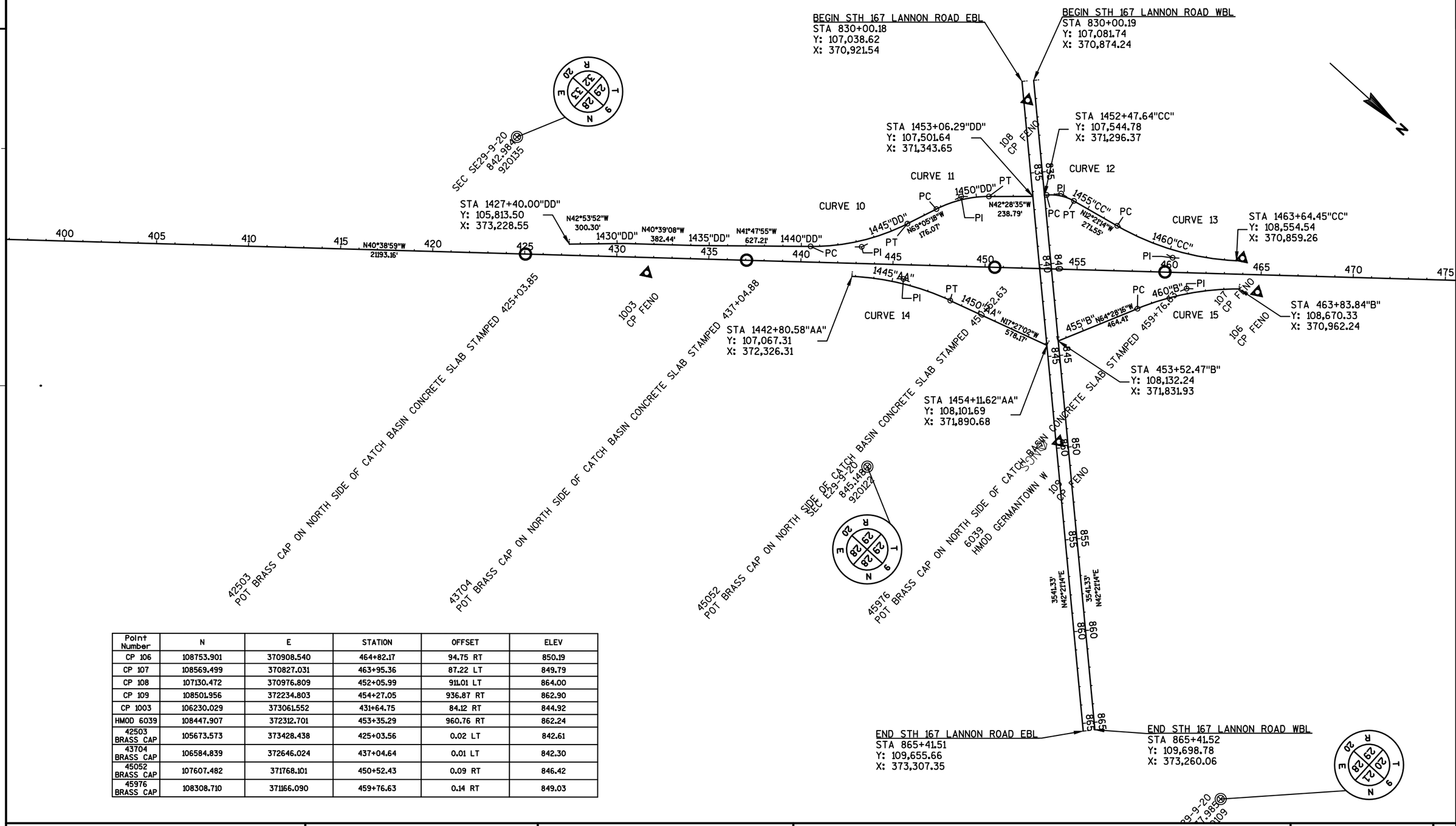
FILE NAME : N:\PDS\C3D\CAD\11003800\027001_DT.DWG PLOT DATE : 3/19/2015 11:59 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 0.000393
WISDOT/CADDS SHEET 42

2



Point Number	N	E	STATION	OFFSET	ELEV
CP 102	100828.839	377467.508	361+97.90	92.63 LT	852.77
CP 103	100111.686	377256.028	358+23.92	732.20 LT	852.87
CP 104	100015.937	379354.477	342+23.10	623.87 RT	872.80
CP 105	100355.749	378479.925	351+43.68	306.31 RT	853.90
HMOD 7489	100128.094	377644.979	355+78.55	440.58 LT	860.63

2



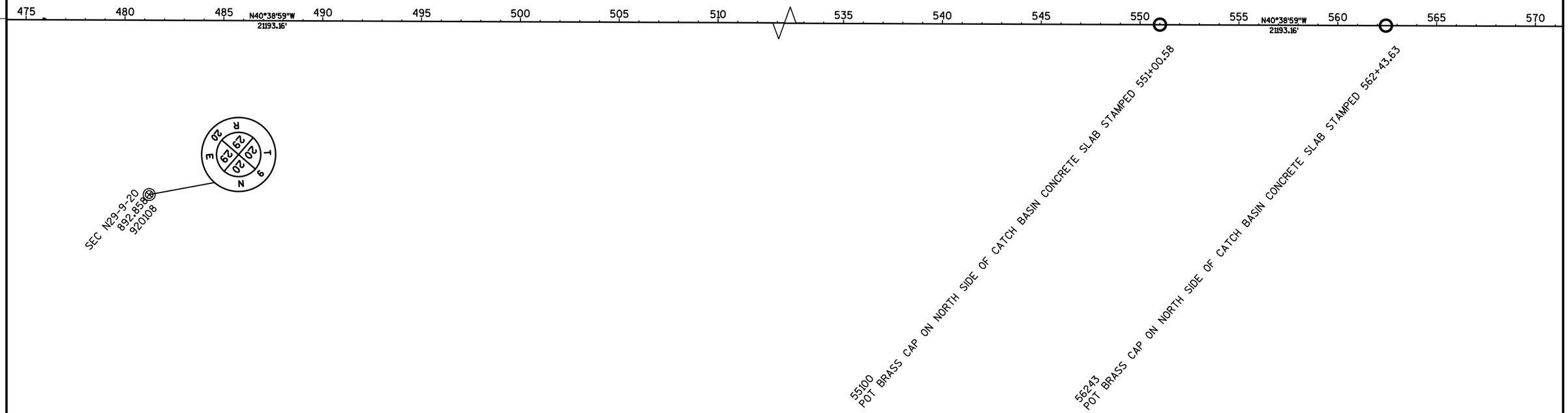
Point Number	N	E	STATION	OFFSET	ELEV
CP 106	108753.901	370908.540	464+82.17	94.75 RT	850.19
CP 107	108569.499	370827.031	463+95.36	87.22 LT	849.79
CP 108	107130.472	370976.809	452+05.99	911.01 LT	864.00
CP 109	108501.956	372234.803	454+27.05	936.87 RT	862.90
CP 1003	106230.029	373061.552	431+64.75	84.12 RT	844.92
HMOD 6039	108447.907	372312.701	453+35.29	960.76 RT	862.24
42503 BRASS CAP	105673.573	373428.438	425+03.56	0.02 LT	842.61
43704 BRASS CAP	106584.839	372646.024	437+04.64	0.01 LT	842.30
45052 BRASS CAP	107607.482	371768.101	450+52.43	0.09 RT	846.42
45976 BRASS CAP	108308.710	371166.090	459+76.63	0.14 RT	849.03

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	ALIGNMENT PLAN	SHEET	E

FILE NAME : N:\PDS\C3D\11003800\SHEETSPLAN\027202_AD.DWG PLOT DATE : 5/27/2014 10:42 AM PLOT BY : MAAS, JOSEPH A PLOT NAME : PLOT SCALE : 1 IN:500 FT

2

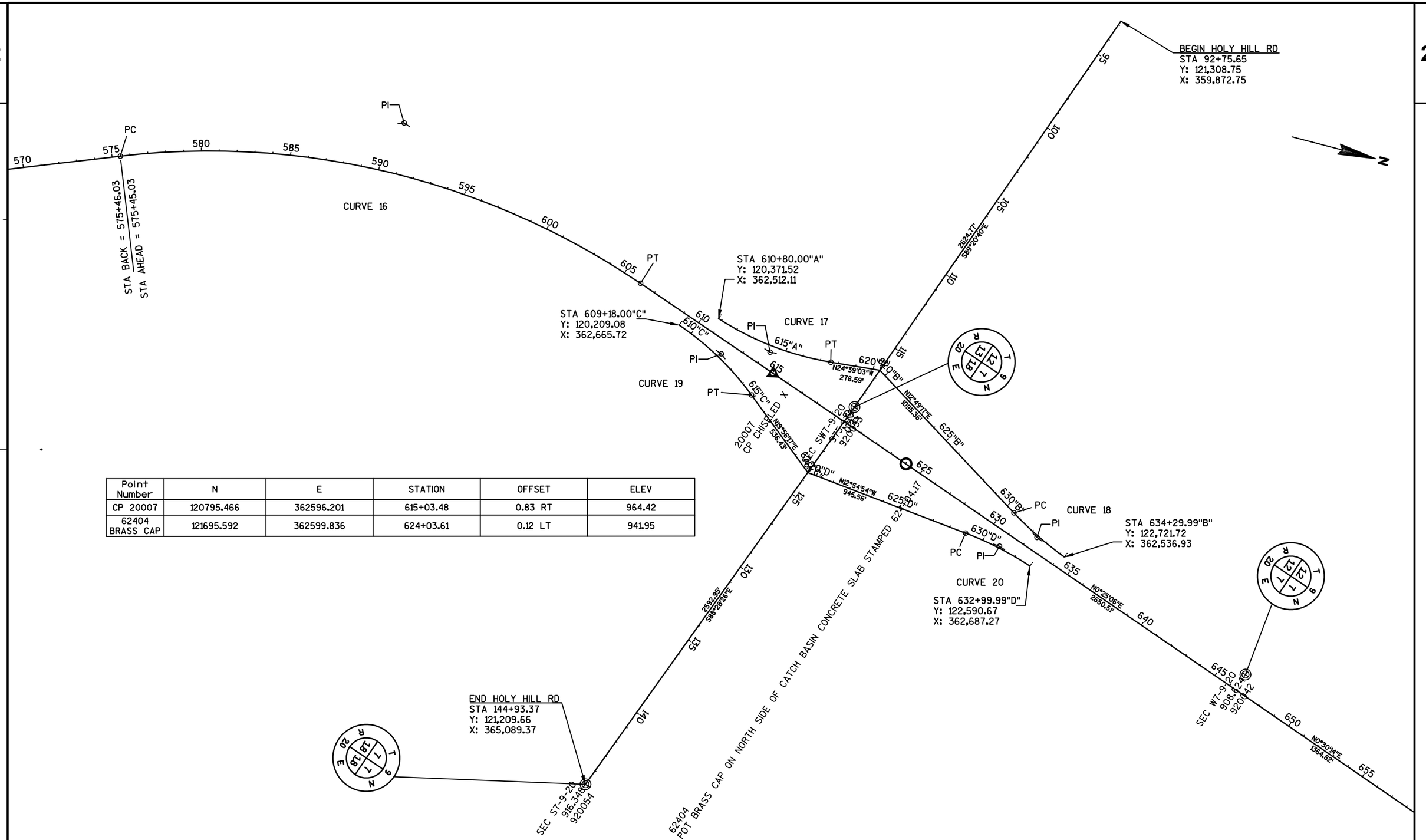
Point Number	N	E	STATION	OFFSET	ELEV
55100 BRASS CAP	115230.794	365222.526	551+00.29	0 RT	953.22
56243 BRASS CAP	116097.956	364477.921	562+43.27	0.04 LT	973.26



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	ALIGNMENT PLAN	SHEET	E

FILE NAME : N:\PDS\C3D\11003800\SHEETSPLAN\027203_AD.DWG PLOT DATE : 5/27/2014 10:42 AM PLOT BY : MAAS, JOSEPH A PLOT NAME : PLOT SCALE : 1 IN:500 FT

2



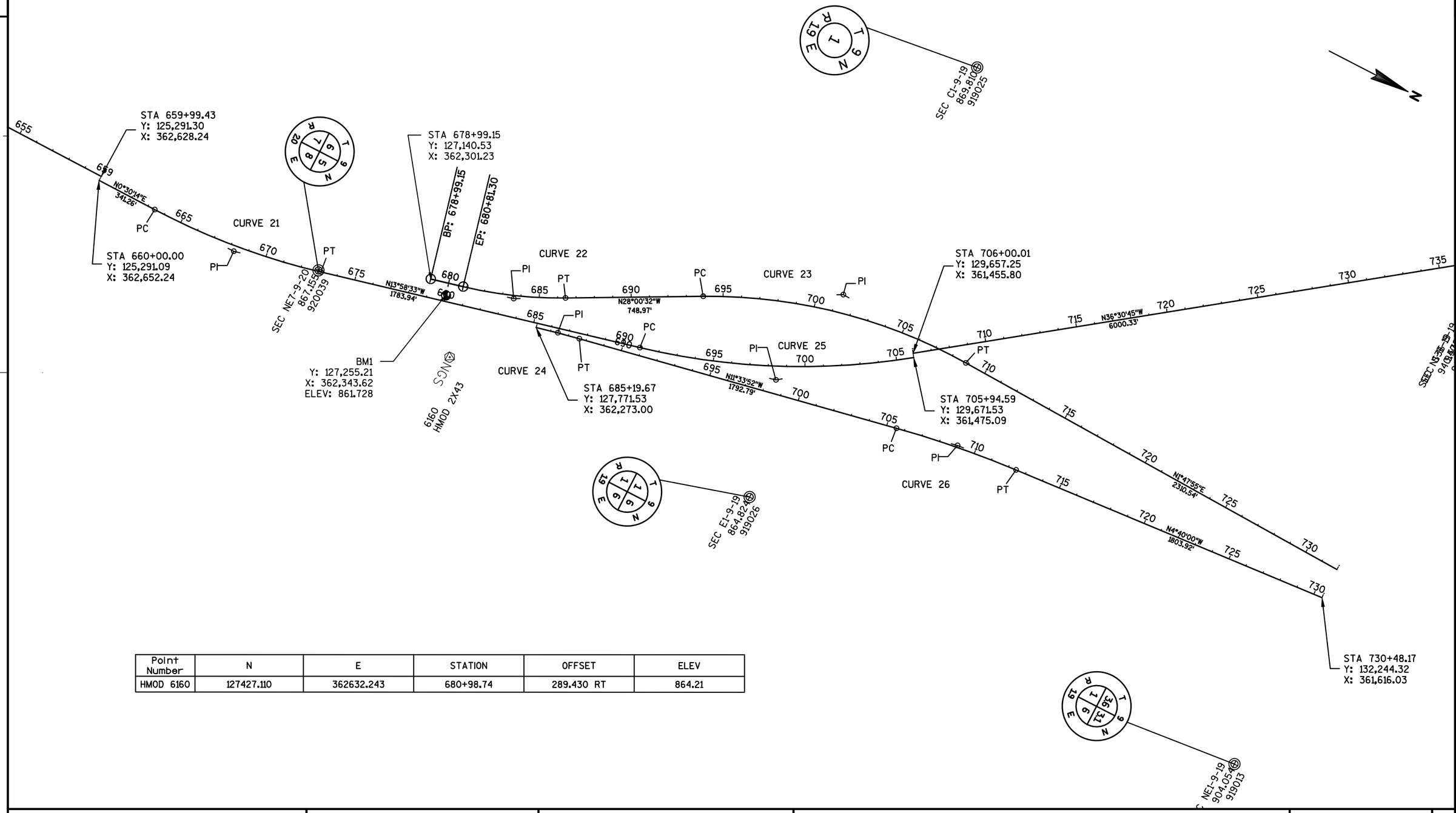
Point Number	N	E	STATION	OFFSET	ELEV
CP 20007	120795.466	362596.201	615+03.48	0.83 RT	964.42
62404 BRASS CAP	121695.592	362599.836	624+03.61	0.12 LT	941.95

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	ALIGNMENT PLAN	SHEET	E

FILE NAME : N:\PDS\C3D\11003800\SHEETSPLAN\027204_AD.DWG PLOT DATE : 5/27/2014 10:42 AM PLOT BY : MAAS, JOSEPH A PLOT NAME : PLOT SCALE : 1 IN:500 FT

WISDOT/CADDS SHEET 42

2



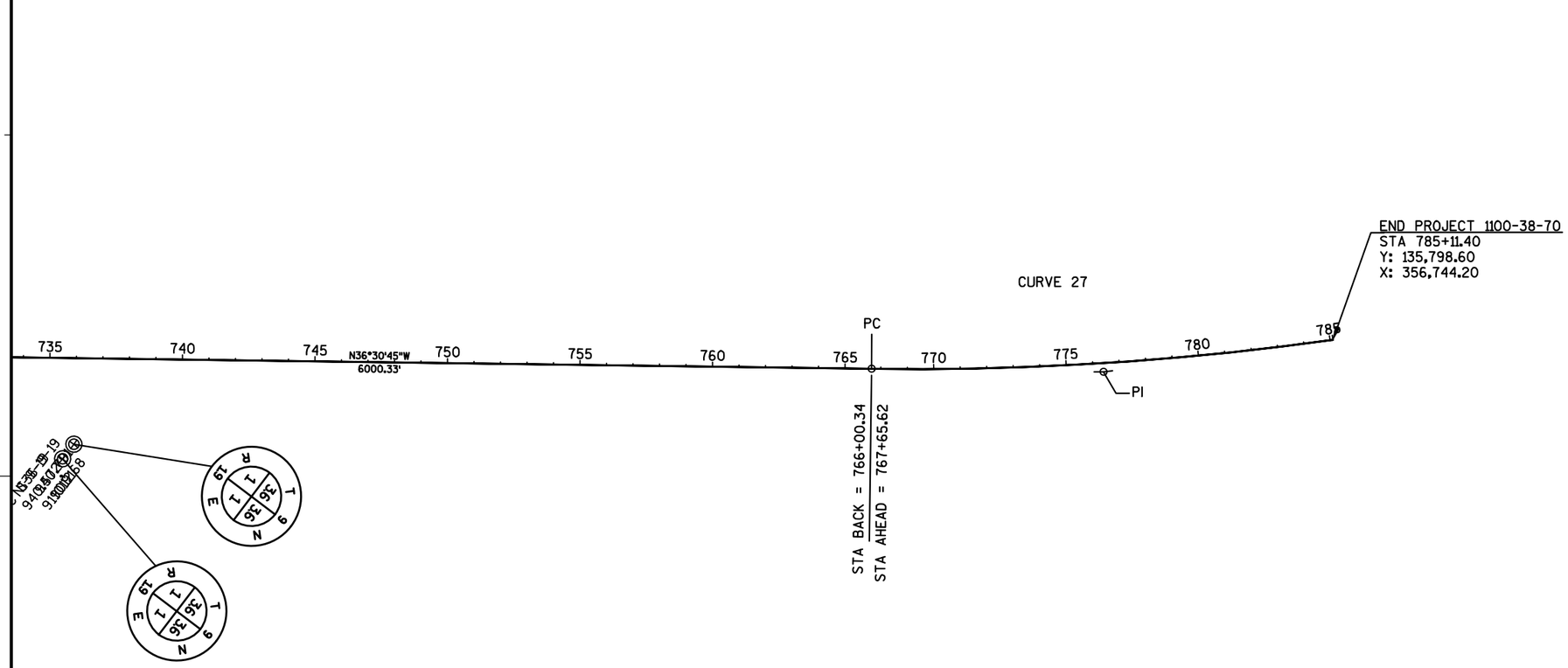
Point Number	N	E	STATION	OFFSET	ELEV
HMOD 6160	127427.110	362632.243	680+98.74	289.430 RT	864.21

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	ALIGNMENT PLAN	SHEET	E

FILE NAME : N:\PDS\C3D\11003800\SHEETSPLAN\027205_AD.DWG PLOT DATE : 12/12/2014 3:16 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1 IN:500 FT

2

2



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	ALIGNMENT PLAN	SHEET 400	E

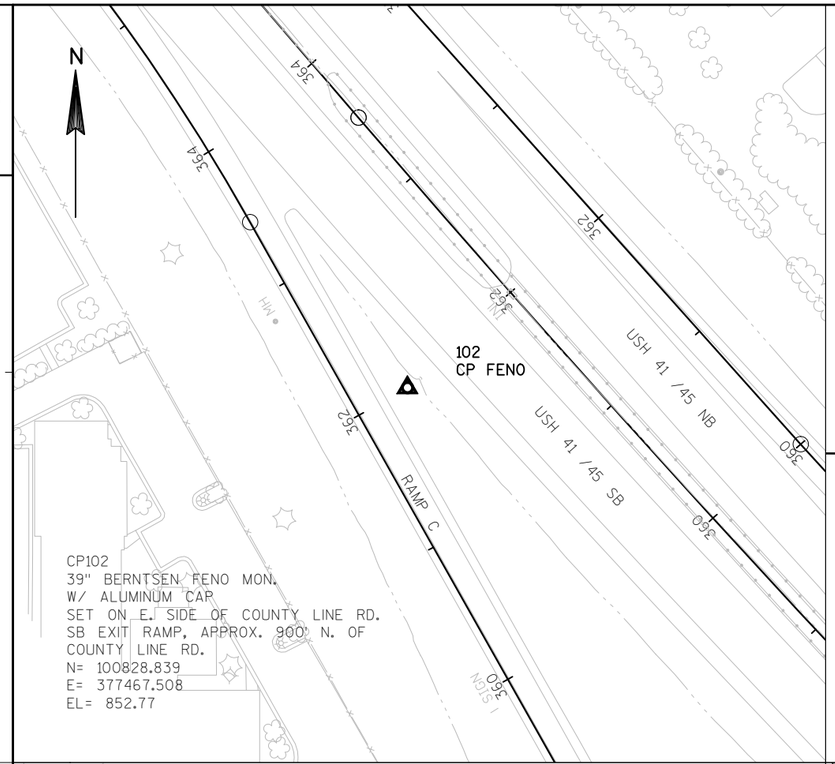
FILE NAME : N:\PDS\C3D\11003800\SHEETSPLAN\027206_AD.DWG PLOT DATE : 5/27/2014 10:43 AM PLOT BY : MAAS, JOSEPH A PLOT NAME : PLOT SCALE : 1 IN:500 FT

2

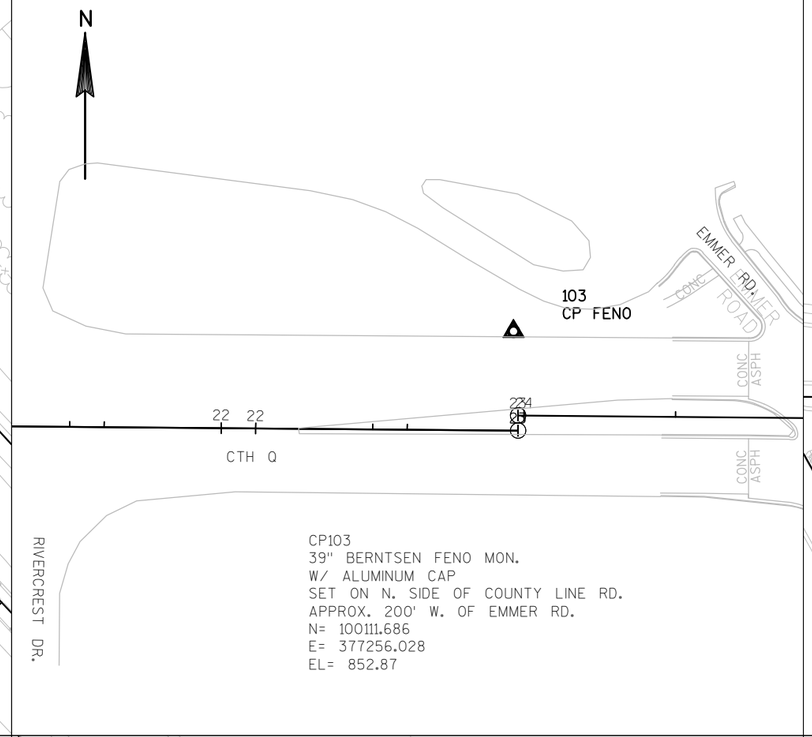
CURVE TABLE

CURVE	PI STA	PI NORTHING	PI EASTING	DELTA	D	T	L	R	PC STA	PC NORTHING	PC EASTING	PT STA	PT NORTHING	PT EASTING	BK	AH
C = 1	345+35.10	99,603.86	378,639.99	18°20'29"	0°30'01"	1849.42	3667.20	11455.83	326+85.68	98,651.09	380,225.10	363+52.88	101,007.03	377,435.21	N58° 59' 28"W	N40° 38' 59"W
C = 2	338+15.03	99,324.96	379,319.21	25°28'04"	4°00'00"	323.69	636.69	1432.38	334+91.34	99,139.11	379,584.23	341+28.03	99,606.71	379,159.86	N54° 57' 34"W	N29° 29' 30"W
C = 3	347+63.13	100,215.51	378,815.53	40°37'00"	16°00'00"	132.52	253.85	358.10	346+30.61	100,100.15	378,880.77	348+84.46	100,260.60	378,690.92	N29° 29' 30"W	N70° 06' 30"W
C = 4	356+53.49	100,522.25	377,967.78	28°18'45"	4°00'00"	361.29	707.81	1432.39	352+92.20	100,399.33	378,307.51	360+00.01	100,791.60	377,726.99	N70° 06' 30"W	N41° 47' 45"W
C = 5	364+73.46	101,048.90	377,301.25	10°09'37"	4°00'00"	127.34	254.01	1432.42	363+46.12	100,937.98	377,363.79	366+00.13	101,147.06	377,220.13	N29° 24' 54"W	N39° 34' 31"W
C = 6	352+37.39	99,853.14	377,975.79	43°20'00"	16°00'01"	142.26	270.83	358.09	350+95.13	99,811.14	378,111.71	353+65.96	99,976.97	377,905.75	N72° 49' 30"W	N29° 29' 30"W
C = 7	344+48.95	99,618.48	378,735.02	21°18'36"	4°00'00"	269.49	532.75	1432.39	341+79.46	99,450.78	378,945.97	347+12.21	99,698.06	378,477.55	N51° 30' 54"W	N72° 49' 30"W
C = 8	44+36.07	100,038.00	379,299.05	13°07'15"	2°30'00"	263.57	524.83	2291.82	41+72.50	100,040.34	379,035.49	46+97.33	99,975.89	379,555.20	S89° 29' 30"E	S76° 22' 15"E
C = 9	53+37.26	99,825.10	380,177.10	13°16'07"	2°30'00"	266.55	530.72	2291.71	50+70.70	99,887.91	379,918.05	56+01.42	99,823.43	380,443.65	S76° 22' 15"E	S89° 38' 22"E
C = 10	1443+28.13	106,998.60	372,171.54	27°17'23"	5°00'00"	278.18	545.80	1145.92	1440+49.95	106,791.22	372,356.95	1445+95.74	107,097.89	371,911.69	N41° 47' 55"W	N69° 05' 18"W
C = 11	1449+22.38	107,214.48	371,606.57	26°36'43"	9°00'00"	150.56	295.69	636.62	1447+71.82	107,160.74	371,747.21	1450+67.50	107,325.52	371,504.90	N69° 05' 18"W	N42° 28' 35"W
C = 12	1453+38.25	107,605.83	371,229.42	35°17'32"	23°00'00"	79.24	153.45	249.11	1452+59.00	107,552.44	371,287.98	1454+12.45	107,683.24	371,212.46	N47° 38' 47"W	N12° 21' 14"W
C = 13	1460+30.77	108,287.24	371,080.17	27°13'05"	4°00'00"	346.77	680.45	1432.39	1456+84.00	107,948.50	371,154.36	1463+64.45	108,554.54	370,859.26	N12° 21' 14"W	N39° 34' 19"W
C = 14	1445+60.50	107,283.10	372,148.01	22°06'54"	4°00'00"	279.92	552.87	1432.39	1442+80.58	107,067.31	372,326.31	1448+33.45	107,550.13	372,064.07	N39° 33' 56"W	N17° 27' 02"W
C = 15	461+04.12	108,456.18	371,153.66	22°40'42"	4°00'00"	287.24	566.96	1432.40	458+16.88	108,332.39	371,412.86	463+83.84	108,670.33	370,962.24	N64° 28' 16"W	N41° 47' 34"W
C = 16	591+44.22	118,299.71	362,587.52	40°49'49"	1°20'01"	1599.19	3061.87	4296.63	575+45.03	117,086.40	363,629.28	606+06.90	119,898.90	362,592.55	N40° 38' 59"W	N0° 10' 49"E
C = 17	614+24.13	120,715.61	362,506.66	23°44'37"	3°30'00"	344.13	678.38	1637.01	610+80.00	120,371.52	362,512.11	617+58.38	121,028.38	362,363.13	N0° 54' 26"W	N24° 39' 03"W
C = 18	632+42.78	122,533.36	362,531.82	11°16'10"	3°00'00"	188.43	375.64	1909.84	630+54.35	122,349.63	362,490.01	634+29.99	122,721.72	362,536.93	N12° 49' 17"E	N1° 33' 07"E
C = 19	612+03.24	120,494.32	362,666.57	19°46'00"	3°29'59"	285.24	564.81	1637.16	609+18.00	120,209.08	362,665.72	614+82.81	120,762.46	362,763.84	N0° 10' 17"E	N19° 56' 17"E
C = 20	630+97.80	122,386.96	362,689.89	12°10'41"	3°00'00"	203.73	405.92	1909.81	628+94.07	122,188.38	362,735.43	632+99.99	122,590.67	362,687.27	N12° 54' 54"W	N0° 44' 13"W
C = 21	668+28.06	126,119.11	362,659.52	14°28'47"	1°29'43"	486.80	968.42	3831.99	663+41.26	125,632.33	362,655.24	673+09.68	126,591.51	362,541.95	N0° 30' 14"E	N13° 58' 33"W
C = 22	683+63.14	127,589.96	362,189.37	14°01'59"	2°30'08"	281.84	560.85	2289.92	680+81.30	127,316.46	362,257.44	686+42.15	127,838.78	362,057.02	N13° 58' 33"W	N28° 00' 32"W
C = 23	701+54.10	129,173.64	361,347.00	29°48'27"	1°59'55"	762.98	1491.39	2866.74	693+91.12	128,500.02	361,705.30	708+82.51	129,936.24	361,370.95	N28° 00' 32"W	N1° 47' 55"E
C = 24	686+40.69	127,888.96	362,243.77	2°24'41"	0°59'47"	121.02	242.00	5749.83	685+19.67	127,771.53	362,273.00	687+61.67	128,007.53	362,219.51	N13° 58' 33"W	N11° 33' 52"W
C = 25	698+53.93	129,060.45	361,927.48	22°32'12"	1°30'05"	760.31	1500.97	3815.96	690+93.62	128,322.64	362,111.10	705+94.59	129,671.53	361,475.09	N13° 58' 33"W	N36° 30' 45"W
C = 26	708+99.77	130,102.22	361,790.89	6°53'52"	1°00'00"	345.31	689.79	5729.64	705+54.46	129,763.92	361,860.11	712+44.25	130,446.39	361,762.79	N11° 33' 52"W	N4° 40' 00"W
C = 27	776+40.20	135,182.79	357,365.23	8°43'44"	0°30'00"	874.58	1745.78	11459.16	767+65.62	134,479.87	357,885.61	785+11.40	135,798.60	356,744.20	N36° 30' 45"W	N45° 14' 29"W

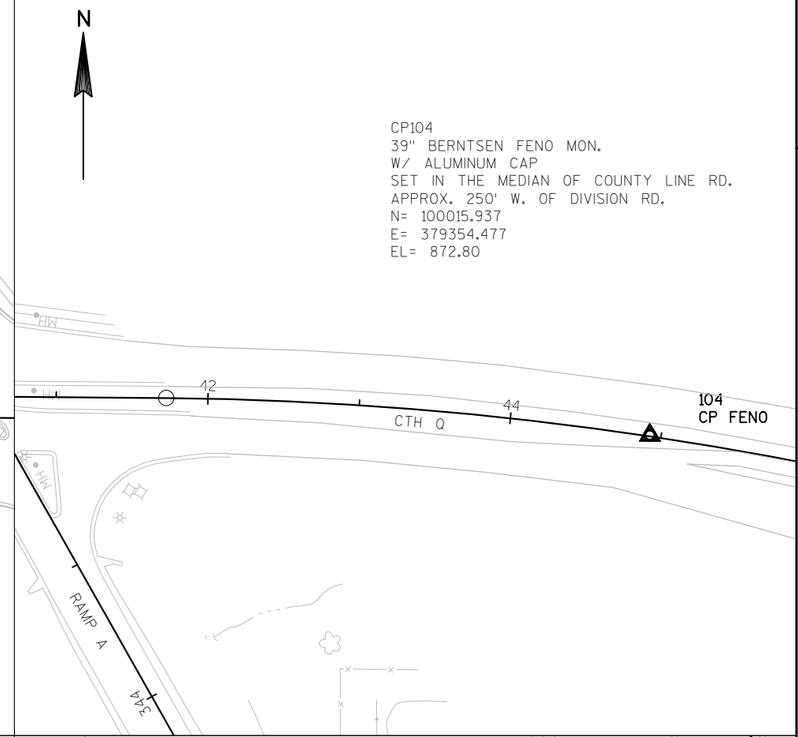
2



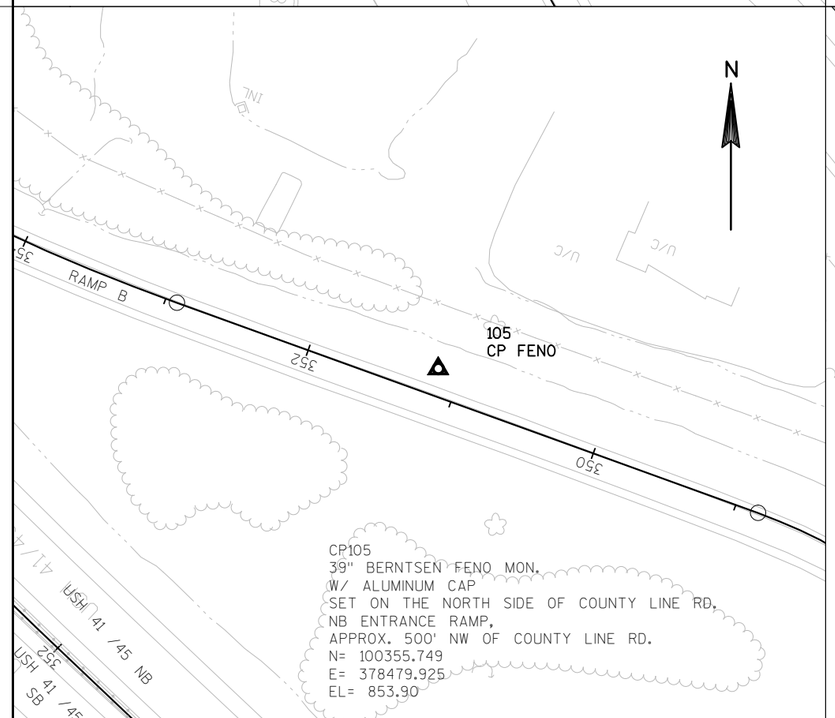
CP102
39" BERNTSEN FENO MON.
W/ ALUMINUM CAP
SET ON E. SIDE OF COUNTY LINE RD.
SB EXIT RAMP, APPROX. 900' N. OF
COUNTY LINE RD.
N= 100828.839
E= 377467.508
EL= 852.77



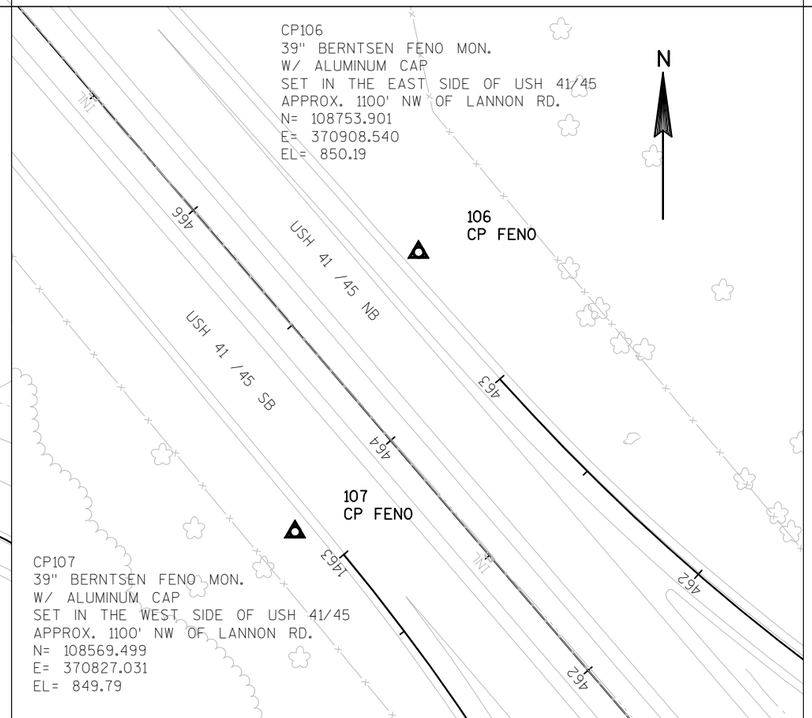
CP103
39" BERNTSEN FENO MON.
W/ ALUMINUM CAP
SET ON N. SIDE OF COUNTY LINE RD.
APPROX. 200' W. OF EMMER RD.
N= 100111.686
E= 377256.028
EL= 852.87



CP104
39" BERNTSEN FENO MON.
W/ ALUMINUM CAP
SET IN THE MEDIAN OF COUNTY LINE RD.
APPROX. 250' W. OF DIVISION RD.
N= 100015.937
E= 379354.477
EL= 872.80

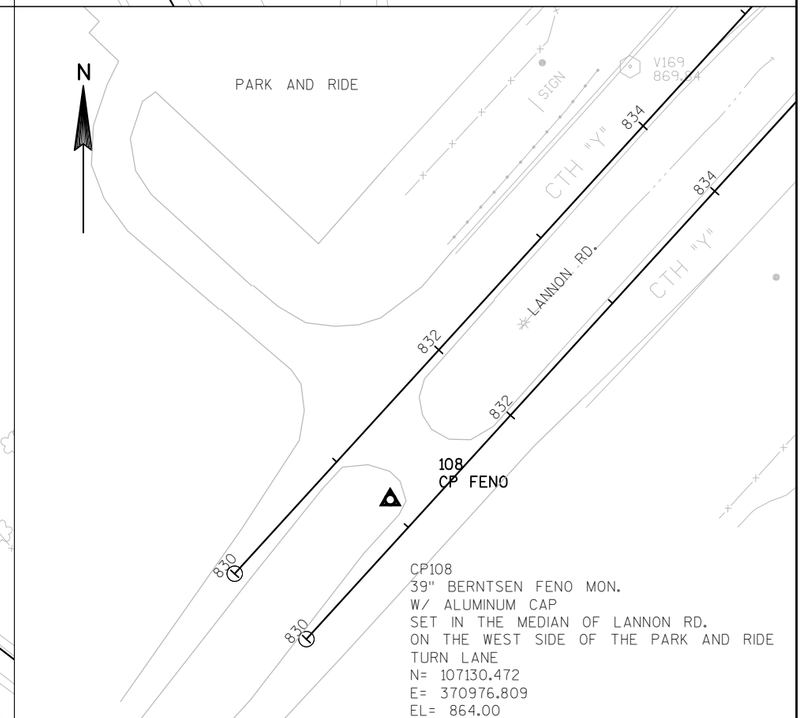


CP105
39" BERNTSEN FENO MON.
W/ ALUMINUM CAP
SET ON THE NORTH SIDE OF COUNTY LINE RD.
NB ENTRANCE RAMP,
APPROX. 500' NW OF COUNTY LINE RD.
N= 100355.749
E= 378479.925
EL= 853.90



CP106
39" BERNTSEN FENO MON.
W/ ALUMINUM CAP
SET IN THE EAST SIDE OF USH 41/45
APPROX. 1100' NW OF LANNON RD.
N= 108753.901
E= 370908.540
EL= 850.19

CP107
39" BERNTSEN FENO MON.
W/ ALUMINUM CAP
SET IN THE WEST SIDE OF USH 41/45
APPROX. 1100' NW OF LANNON RD.
N= 108569.499
E= 370827.031
EL= 849.79



CP108
39" BERNTSEN FENO MON.
W/ ALUMINUM CAP
SET IN THE MEDIAN OF LANNON RD.
ON THE WEST SIDE OF THE PARK AND RIDE
TURN LANE
N= 107130.472
E= 370976.809
EL= 864.00

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: SURVEY CONTROL	SHEET 402	E

2

N

109
CP FENO

LANNON RD.

852
852
850
850
848
848

6039
HMOD GERMANTOWN W

NGS

CP109
39" BERNTSEN FENO MON.
W/ ALUMINUM CAP
SET IN THE MEDIAN OF LANNON RD.
APPROX. 600' NE OF THE LANNON RD.
NB EXIT RAMP
N= 108501.956
E= 372234.803
EL= 862.90

CP1003
39" BERNTSEN FENO MON.
W/ ALUMINUM CAP
SET ON THE NORTH SIDE OF USH 41
APPROX. 60' E OF THE MAPLE RD. ℄
N= 106230.029
E= 373061.552
EL= 844.92

434
1434
USH 41 /45 NB
USH 41 /45 SB
MAPLE RD.
432
1432
430
1430

1003
CP FENO

N

BLEACHERS
SIGN
SEPTIC

T171 090398

CP20007
SET CHISLED "X" ON THE NORTH SIDE OF
CATCH BASIN CONCRETE SLAB
SET IN THE USH 41 MEDIAN
APPROX. 475' S OF HOLY HILL RD.
N= 120795.466
E= 362596.201
EL= 964.42

618
1618
RAMP A
619
1619
USH 41 /45 SB
USH 41 /45 NB
STH 167
RAMP C
616
614

20007
CP CHISELED X

N

2

428
1428
USH 41/45
427
1427
426
1426
USH 41 /45 NB
USH 41 /45 SB
424
1424
422
1422

42503
POT BRASS CAP ON NORTH SIDE OF CATCH

POT 42503
FOUND BRASS CAP ON NORTH SIDE OF CB
CONCRETE SLAB STAMPED 425+03.85
IN THE USH 41 MEDIAN
APPROX. 650' SE OF MAPLE RD.
N= 105673.573
E= 373428.438
EL= 842.61

N

POT 43704
FOUND BRASS CAP ON NORTH SIDE OF CB
CONCRETE SLAB STAMPED 437+04.88
IN THE USH 41 MEDIAN
APPROX. 550' NW OF MAPLE RD.
N= 106584.839
E= 372646.024
EL= 842.30

440
1440
USH 41 /45 NB
USH 41 /45 SB
438
1438
436
1436

43704
POT BRASS CAP ON NORTH SID

N

SIGN

842
1452
LANNON RD
ASPH
CONC
840
USH 41 /45 NB
USH 41 /45 SB
452
1450
RAMP A

45052
POT BRASS CAP ON NORTH SIDE OF CATCH BASIN

POT 45052
FOUND BRASS CAP ON NORTH SIDE OF CB
CONCRETE SLAB STAMPED 450+52.63
IN THE USH 41 MEDIAN
APPROX. 250' SE OF LANNON RD.
N= 107607.482
E= 371768.101
EL= 846.43

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: SURVEY CONTROL	SHEET 403	E

FILE NAME : N:\PDS\C3D\CAD\11003800\027204_AD.DWG PLOT DATE : 6/10/2014 2:27 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : _____ PLOT SCALE : **********

WISDOT/CADDS SHEET 42

POT 45976
FOUND BRASS CAP ON NORTH SIDE OF CB
CONCRETE SLAB STAMPED 459+76.63
IN THE USH 41 MEDIAN
APPROX. 650' NW OF LANNON RD.
N= 108308.710
E= 371166.090
EL= 849.04

45976
POT BRASS CAP ON NORTH SIDE OF CATCH BA

POT 55100
FOUND BRASS CAP ON NORTH SIDE OF CB
CONCRETE SLAB STAMPED 551+00.58
IN THE USH 41 MEDIAN
APPROX. 900' SE OF FREISTADT RD.
N= 115230.794
E= 365222.526
EL= 953.23

55100
POT BRASS CAP ON NORTH SIDE OF CATCH BASIN CONCRETE

POT 56243
FOUND BRASS CAP ON NORTH SIDE OF CB
CONCRETE SLAB STAMPED 562+43.63
IN THE USH 41 MEDIAN
APPROX. 225' NW OF FREISTADT RD.
N= 116097.956
E= 364477.921
EL= 973.27

56243
POT BRASS CAP ON NORTH SIDE OF CATCH BASIN CONC

FREISTADT RD.

62404
POT BRASS CAP ON NORTH SIDE OF CATCH

POT 62404
FOUND BRASS CAP ON NORTH SIDE OF CB
CONCRETE SLAB STAMPED 624+04.17
IN THE USH 41 MEDIAN
APPROX. 425' N OF HOLY HILL RD.
N= 121695.592
E= 362599.836
EL= 941.95

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PLAN: SURVEY CONTROL	SHEET 404	E

DATE 29APR15 — 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	1100-38-70 QUANTITY	1100-47-70 QUANTITY
0020	204.0100	Removing Pavement	SY	66.000	66.000	
0030	204.0115	Removing Asphaltic Surface Butt Joints	SY	28,219.000	28,219.000	
0040	204.0125	Removing Asphaltic Surface Milling	TON	41,285.000	41,285.000	
0050	204.0150	Removing Curb & Gutter	LF	1,851.000	1,851.000	
0060	204.0155	Removing Concrete Sidewalk	SY	206.000	206.000	
0070	204.0165	Removing Guardrail	LF	4,277.000	4,277.000	
0080	204.0180	Removing Delineators and Markers	EACH	190.000	190.000	
0090	204.0195	Removing Concrete Bases	EACH	43.000	43.000	
0100	204.0210	Removing Manholes	EACH	1.000	1.000	
0110	204.0220	Removing Inlets	EACH	3.000	3.000	
0120	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	18.000	18.000	
0130	204.0245	Removing Storm Sewer (size) 02. 18-Inch	LF	110.000	110.000	
0140	204.9060.S	Removing (item description) 01. Partial Small Pipe Culverts	EACH	4.000	4.000	
0150	204.9060.S	Removing (item description) 02. Cable Guard Terminals	EACH	78.000	78.000	
0160	204.9090.S	Removing (item description) 01. Cable Guard 3-Strands	LF	37,297.000	37,297.000	
0170	205.0100	Excavation Common	CY	45,450.160	45,450.160	
0200	208.0100	Borrow	CY	2,076.580	2,076.580	
0220	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	646.000	646.000	
0240	213.0100	Finishing Roadway (project) 02. 1100-38-70	EACH	1.000	1.000	
0250	213.0100	Finishing Roadway (project) 03. 1100-47-70	EACH	1.000		1.000
0260	305.0110	Base Aggregate Dense 3/4-Inch	TON	21,392.000	21,392.000	
0270	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	36,556.000	36,556.000	
0280	311.0110	Breaker Run	TON	35,275.000	35,275.000	
0300	415.0410	Concrete Pavement Approach Slab	SY	66.000	66.000	
0310	416.0610	Drilled Tie Bars	EACH	1,332.000	1,332.000	
0320	416.0620	Drilled Dowel Bars	EACH	5,744.000	5,744.000	
0330	416.1715	Concrete Pavement Repair SHES	SY	4,284.000	4,284.000	
0340	416.1725	Concrete Pavement Replacement SHES	SY	372.000	372.000	
0350	440.4410.S	Incentive IRI Ride	DOL	10,000.000	10,000.000	
0360	455.0120	Asphaltic Material PG64-28	TON	6,405.000	6,405.000	
0370	455.0150	Asphaltic Material PG70-28P	TON	3,505.000	3,505.000	
0380	455.0605	Tack Coat	GAL	29,421.000	29,421.000	
0390	460.1130	HMA Pavement Type E-30	TON	168,544.000	168,544.000	
0400	460.2000	Incentive Density HMA Pavement	DOL	150,741.000	150,741.000	
0410	460.4000	HMA Cold Weather Paving	TON	39,220.000	39,220.000	
0420	460.4110.S	Reheating HMA Pavement Longitudinal Joints	LF	615,290.000	615,290.000	
0430	465.0110	Asphaltic Surface Patching	TON	200.000	200.000	
0440	465.0125	Asphaltic Surface Temporary	TON	170.000	170.000	
0450	465.0305	Asphaltic Surface Safety Islands	TON	88.000	88.000	
0460	465.0315	Asphaltic Flumes	SY	259.000	259.000	
0470	465.0400	Asphaltic Shoulder Rumble Strips	LF	67,822.000	67,822.000	
0540	520.7000	Cleaning Culvert Pipes	EACH	4.000	4.000	
0550	520.8000	Concrete Collars for Pipe	EACH	11.000	11.000	
0560	522.0136	Culvert Pipe Reinforced Concrete Class III 36-Inch	LF	8.000	8.000	
0570	522.1012	Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	EACH	1.000	1.000	

3

DATE 29APR15 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	1100-38-70 QUANTITY	1100-47-70 QUANTITY
0580	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	1.000	1.000	
0590	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	1.000	1.000	
0600	522.1036	Apron Endwalls for Culvert Pipe Reinforced Concrete 36-Inch	EACH	1.000	1.000	
0610	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	1,171.000	1,171.000	
0620	601.0553	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type D	LF	604.000	604.000	
0630	602.0410	Concrete Sidewalk 5-Inch	SF	1,532.000	1,532.000	
0640	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	48.000	48.000	
0650	603.1132	Concrete Barrier Type S32	LF	215.000	215.000	
0660	603.8000	Concrete Barrier Temporary Precast Delivered	LF	8,275.000	8,275.000	
0670	603.8125	Concrete Barrier Temporary Precast Installed	LF	24,400.000	24,400.000	
0680	604.0500	Slope Paving Crushed Aggregate	SY	1,127.000	1,127.000	
0700	606.0200	Riprap Medium	CY	9.000	9.000	
0710	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	482.000	482.000	
0720	608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	LF	88.000	88.000	
0730	611.0624	Inlet Covers Type H	EACH	4.000	4.000	
0740	611.0642	Inlet Covers Type MS	EACH	10.000	10.000	
0750	611.3004	Inlets 4-FT Diameter	EACH	1.000	1.000	
0760	611.3230	Inlets 2x3-FT	EACH	2.000	2.000	
0770	611.3901	Inlets Median 1 Grate	EACH	2.000	2.000	
0780	611.3902	Inlets Median 2 Grate	EACH	4.000	4.000	
0790	611.8115	Adjusting Inlet Covers	EACH	8.000	8.000	
0800	611.8120.S	Cover Plates Temporary	EACH	5.000	5.000	
0810	612.0204	Pipe Underdrain Unperforated 4-Inch	LF	1,404.000	1,404.000	
0820	612.0404	Pipe Underdrain Wrapped 4-Inch	LF	36,600.000	36,600.000	
0830	612.0804	Apron Endwalls for Underdrain Reinforced Concrete 4-Inch	EACH	15.000	15.000	
0840	614.0010	Barrier System Grading Shaping Finishing	EACH	20.000	20.000	
0850	614.0220	Steel Thrie Beam Bullnose Terminal	EACH	1.000	1.000	
0860	614.0230	Steel Thrie Beam	LF	1,951.000	1,951.000	
0870	614.0905	Crash Cushions Temporary	EACH	2.000	2.000	
0880	614.2300	MGS Guardrail 3	LF	5,139.000	5,139.000	
0890	614.2330	MGS Guardrail 3 K	LF	5,138.000	5,138.000	
0900	614.2500	MGS Thrie Beam Transition	LF	320.000	320.000	
0910	614.2610	MGS Guardrail Terminal EAT	EACH	17.000	17.000	
0920	614.2620	MGS Guardrail Terminal Type 2	EACH	14.000	14.000	
0930	619.1000	Mobilization	EACH	0.900	0.800	0.100
0940	620.0300	Concrete Median Sloped Nose	SF	77.000	77.000	
0950	624.0100	Water	MGAL	463.000	463.000	
0960	625.0100	Topsoil	SY	2,282.000	2,282.000	
0970	625.0500	Salvaged Topsoil	SY	13,910.000	13,910.000	
0980	628.1504	Silt Fence	LF	7,370.000	7,370.000	
0990	628.1520	Silt Fence Maintenance	LF	7,370.000	7,370.000	
1000	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000	
1010	628.1910	Mobilizations Emergency Erosion Control	EACH	9.000	9.000	
1020	628.2004	Erosion Mat Class I Type B	SY	3,315.000	3,315.000	
1030	628.2037	Erosion Mat Class III Type C	SY	14,690.000	14,690.000	

3

DATE 29APR15 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	1100-38-70 QUANTITY	1100-47-70 QUANTITY
1040	628.7005	Inlet Protection Type A	EACH	85.000	85.000	
1050	628.7010	Inlet Protection Type B	EACH	13.000	13.000	
1060	628.7015	Inlet Protection Type C	EACH	2.000	2.000	
1070	628.7504	Temporary Ditch Checks	LF	525.000	525.000	
1080	628.7555	Culvert Pipe Checks	EACH	12.000	12.000	
1090	628.7560	Tracking Pads	EACH	4.000	4.000	
1100	629.0210	Fertilizer Type B	CWT	21.000	21.000	
1110	630.0120	Seeding Mixture No. 20	LB	58.000	58.000	
1120	630.0130	Seeding Mixture No. 30	LB	446.000	446.000	
1130	630.0140	Seeding Mixture No. 40	LB	44.000	44.000	
1140	630.0200	Seeding Temporary	LB	603.000	603.000	
1150	630.0300	Seeding Borrow Pit	LB	110.000	110.000	
1160	633.0100	Delineator Posts Steel	EACH	141.000	141.000	
1170	633.0200	Delineators Flexible	EACH	148.000	148.000	
1180	633.0500	Delineator Reflectors	EACH	141.000	141.000	
1190	633.5200	Markers Culvert End	EACH	4.000	4.000	
1200	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	229.000	229.000	
1210	634.0622	Posts Wood 4x6-Inch X 22-FT	EACH	13.000	13.000	
1220	635.0200	Sign Supports Structural Steel HS	LB	2,600.000	2,600.000	
1230	635.0300	Sign Supports Replacing Base Connection Bolts	EACH	17.000	17.000	
1240	636.0100	Sign Supports Concrete Masonry	CY	2.800	2.800	
1250	636.0500	Sign Supports Steel Reinforcement	LB	166.000	166.000	
1260	637.1220	Signs Type I Reflective SH	SF	5,090.400	5,090.400	
1270	637.2210	Signs Type II Reflective H	SF	2,127.335	2,127.335	
1280	637.2215	Signs Type II Reflective H Folding	SF	319.040	319.040	
1290	637.2230	Signs Type II Reflective F	SF	497.070	497.070	
1300	638.2102	Moving Signs Type II	EACH	11.000	11.000	
1310	638.2601	Removing Signs Type I	EACH	28.000	28.000	
1320	638.2602	Removing Signs Type II	EACH	204.000	204.000	
1330	638.3000	Removing Small Sign Supports	EACH	193.000	193.000	
1340	638.3100	Removing Structural Steel Sign Supports	EACH	4.000	4.000	
1350	641.8100	Overhead Sign Support (structure) 01. S-66-238	LS	1.000	1.000	
1360	641.8100	Overhead Sign Support (structure) 02. S-66-237	LS	1.000	1.000	
1370	641.8100	Overhead Sign Support (structure) 03. S-66-952	LS	1.000	1.000	
1380	641.8100	Overhead Sign Support (structure) 04. S-66-607	LS	1.000	1.000	
1390	641.8100	Overhead Sign Support (structure) 05. S-66-236	LS	1.000	1.000	
1400	641.8100	Overhead Sign Support (structure) 06. S-66-239	LS	1.000	1.000	
1410	641.8100	Overhead Sign Support (structure) 07. S-66-240	LS	1.000	1.000	
1420	642.5401	Field Office Type D	EACH	1.000	1.000	
1440	643.0200	Traffic Control Surveillance and Maintenance (project) 02. 1100-38-70	DAY	225.000	225.000	
1450	643.0200	Traffic Control Surveillance and Maintenance (project) 03. 1100-47-70	DAY	14.000		14.000
1460	643.0300	Traffic Control Drums	DAY	413,625.000	412,462.000	1,163.000
1470	643.0410	Traffic Control Barricades Type II	DAY	352.000	352.000	
1480	643.0420	Traffic Control Barricades Type III	DAY	37,815.000	37,752.000	63.000
1490	643.0705	Traffic Control Warning Lights Type A	DAY	75,666.000	75,526.000	140.000

3

DATE 29APR15 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	1100-38-70 QUANTITY	1100-47-70 QUANTITY
1500	643.0715	Traffic Control Warning Lights Type C	DAY	20,781.000	20,481.000	300.000
1510	643.0800	Traffic Control Arrow Boards	DAY	1,695.000	1,660.000	35.000
1520	643.0900	Traffic Control Signs	DAY	45,244.000	44,988.000	256.000
1530	643.0910	Traffic Control Covering Signs Type I	EACH	36.000	34.000	2.000
1540	643.0920	Traffic Control Covering Signs Type II	EACH	247.000	242.000	5.000
1550	643.1000	Traffic Control Signs Fixed Message	SF	1,100.000	1,036.000	64.000
1560	643.1050	Traffic Control Signs PCMS	DAY	1,888.000	1,848.000	40.000
1580	643.1055.S	Truck or Trailer Mounted Attenuator 02. 1100-38-70	DAY	990.000	990.000	
1590	643.1055.S	Truck or Trailer Mounted Attenuator 03. 1100-47-70	DAY	14.000		14.000
1600	643.2000	Traffic Control Detour (project) 02. 1100-38-70	EACH	1.000	1.000	
1610	643.2000	Traffic Control Detour (project) 03. 1100-47-70	EACH	1.000		1.000
1620	643.3000	Traffic Control Detour Signs	DAY	2,594.000	2,436.000	158.000
1650	645.0130	Geotextile Fabric Type R	SY	17.000	17.000	
1660	646.0106	Pavement Marking Epoxy 4-Inch	LF	162,800.000	147,315.000	15,485.000
1670	646.0126	Pavement Marking Epoxy 8-Inch	LF	1,446.000	1,446.000	
1680	646.0600	Removing Pavement Markings	LF	194,328.000	174,993.000	19,335.000
1690	646.0790.S	Removing Raised Pavement Markers	EACH	24.000	24.000	
1700	646.0841.S	Pavement Marking Grooved Wet Reflective Contrast Tape 4-Inch	LF	34,480.000	34,480.000	
1710	646.0843.S	Pavement Marking Grooved Wet Reflective Contrast Tape 8-Inch	LF	16,557.000	16,557.000	
1720	647.0186	Pavement Marking Arrows Epoxy Type 4	EACH	6.000	6.000	
1730	647.0456	Pavement Marking Curb Epoxy	LF	750.000	750.000	
1740	647.0606	Pavement Marking Island Nose Epoxy	EACH	5.000	5.000	
1750	647.0746	Pavement Marking Diagonal Epoxy 24-Inch	LF	1,818.000	1,818.000	
1760	649.0100	Temporary Pavement Marking 4-Inch	LF	366,233.000	366,233.000	
1780	649.0400	Temporary Pavement Marking Removable Tape 4-Inch	LF	12,769.000	12,769.000	
1790	649.0701	Temporary Pavement Marking 8-Inch	LF	10,923.000	10,923.000	
1800	649.0801	Temporary Pavement Marking Removable Tape 8-Inch	LF	72.000	72.000	
1810	649.1100	Temporary Pavement Marking Stop Line 18-Inch	LF	132.000	132.000	
1820	649.1500	Temporary Pavement Marking Diagonal 12-Inch	LF	255.000	255.000	
1830	649.1700	Temporary Pavement Marking Arrows	EACH	14.000	14.000	
1840	649.1900	Temporary Pavement Marking Words	EACH	8.000	8.000	
1850	650.4000	Construction Staking Storm Sewer	EACH	30.000	30.000	
1860	650.4500	Construction Staking Subgrade	LF	5,240.000	5,240.000	
1870	650.5000	Construction Staking Base	LF	5,240.000	5,240.000	
1880	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	1,775.000	1,775.000	
1890	650.6000	Construction Staking Pipe Culverts	EACH	4.000	4.000	
1920	650.7500	Construction Staking Concrete Barrier	LF	540.000	540.000	
1930	650.8000	Construction Staking Resurfacing Reference	LF	58,970.000	58,970.000	
1940	650.9910	Construction Staking Supplemental Control (project) 02. 1100-38-70	LS	1.000	1.000	
1950	650.9920	Construction Staking Slope Stakes	LF	5,240.000	5,240.000	
1960	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	3,686.000	3,686.000	

DATE 29APR15 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	1100-38-70 QUANTITY	1100-47-70 QUANTITY
1970	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	2,167.000	2,167.000	
1980	652.0605	Conduit Special 2-Inch	LF	946.000	946.000	
1990	652.0615	Conduit Special 3-Inch	LF	3,234.000	3,234.000	
2000	652.0700.S	Install Conduit into Existing Item	EACH	11.000	11.000	
2010	653.0135	Pull Boxes Steel 24x36-Inch	EACH	12.000	12.000	
2020	653.0140	Pull Boxes Steel 24x42-Inch	EACH	56.000	56.000	
2030	653.0905	Removing Pull Boxes	EACH	58.000	58.000	
2040	654.0101	Concrete Bases Type 1	EACH	19.000	19.000	
2050	654.0102	Concrete Bases Type 2	EACH	10.000	10.000	
2060	654.0105	Concrete Bases Type 5	EACH	8.000	8.000	
2070	654.0107	Concrete Bases Type 7	EACH	1.000	1.000	
2080	654.0110	Concrete Bases Type 10	EACH	4.000	4.000	
2090	654.0113	Concrete Bases Type 13	EACH	7.000	7.000	
2100	654.0217	Concrete Control Cabinet Bases Type 9 Special	EACH	4.000	4.000	
2110	654.0220	Concrete Control Cabinet Bases Type 10	EACH	7.000	7.000	
2120	655.0225	Cable Traffic Signal 5-12 AWG	LF	1,860.000	1,860.000	
2130	655.0230	Cable Traffic Signal 5-14 AWG	LF	1,663.000	1,663.000	
2140	655.0240	Cable Traffic Signal 7-14 AWG	LF	7,393.000	7,393.000	
2150	655.0260	Cable Traffic Signal 12-14 AWG	LF	2,173.000	2,173.000	
2160	655.0305	Cable Type UF 2-12 AWG Grounded	LF	2,247.000	2,247.000	
2170	655.0505	Electrical Wire Traffic Signals 14 AWG	LF	38,105.000	38,105.000	
2180	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	8,866.000	8,866.000	
2190	655.0610	Electrical Wire Lighting 12 AWG	LF	1,551.000	1,551.000	
2200	655.0630	Electrical Wire Lighting 4 AWG	LF	1,580.000	1,580.000	
2210	656.0200	Electrical Service Meter Breaker Pedestal (location) 01. 41/45 Nb Ramp At Cth Q	LS	1.000	1.000	
2220	656.0200	Electrical Service Meter Breaker Pedestal (location) 02. 41/45 Nb Ramp At Sth 167	LS	1.000	1.000	
2230	656.0200	Electrical Service Meter Breaker Pedestal (location) 03. 41/45 Sb Ramp At Cth Q	LS	1.000	1.000	
2240	656.0200	Electrical Service Meter Breaker Pedestal (location) 04. 41/45 Sb Ramp At Sth 167	LS	1.000	1.000	
2250	657.0100	Pedestal Bases	EACH	26.000	26.000	
2260	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	18.000	18.000	
2270	657.0305	Poles Type 2	EACH	4.000	4.000	
2280	657.0310	Poles Type 3	EACH	6.000	6.000	
2290	657.0322	Poles Type 5-Aluminum	EACH	1.000	1.000	
2300	657.0420	Traffic Signal Standards Aluminum 13-FT	EACH	15.000	15.000	
2310	657.0425	Traffic Signal Standards Aluminum 15-FT	EACH	8.000	8.000	
2320	657.0430	Traffic Signal Standards Aluminum 10-FT	EACH	3.000	3.000	
2330	657.0609	Luminaire Arms Single Member 4-Inch Clamp 6-FT	EACH	7.000	7.000	
2340	657.1345	Install Poles Type 9	EACH	2.000	2.000	
2350	657.1350	Install Poles Type 10	EACH	2.000	2.000	
2360	657.1355	Install Poles Type 12	EACH	6.000	6.000	
2370	657.1360	Install Poles Type 13	EACH	1.000	1.000	
2380	657.1525	Install Monotube Arms 25-FT	EACH	1.000	1.000	
2390	657.1530	Install Monotube Arms 30-FT	EACH	3.000	3.000	
2400	657.1535	Install Monotube Arms 35-FT	EACH	4.000	4.000	

3

DATE 29APR15 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	1100-38-70 QUANTITY	1100-47-70 QUANTITY
2410	657.1545	Install Monotube Arms 45-FT	EACH	3.000	3.000	
2420	657.1815	Install Luminaire Arms Steel 15-FT	EACH	5.000	5.000	
2430	658.0110	Traffic Signal Face 3-12 Inch Vertical	EACH	46.000	46.000	
2440	658.0115	Traffic Signal Face 4-12 Inch Vertical	EACH	4.000	4.000	
2450	658.0215	Backplates Signal Face 3 Section 12-Inch	EACH	46.000	46.000	
2460	658.0220	Backplates Signal Face 4 Section 12-Inch	EACH	4.000	4.000	
2470	658.0416	Pedestrian Signal Face 16-Inch	EACH	6.000	6.000	
2480	658.0500	Pedestrian Push Buttons	EACH	6.000	6.000	
2490	658.0600	Led Modules 12-Inch Red Ball	EACH	41.000	41.000	
2500	658.0605	Led Modules 12-Inch Yellow Ball	EACH	37.000	37.000	
2510	658.0610	Led Modules 12-Inch Green Ball	EACH	36.000	36.000	
2520	658.0615	Led Modules 12-Inch Red Arrow	EACH	9.000	9.000	
2530	658.0620	Led Modules 12-Inch Yellow Arrow	EACH	17.000	17.000	
2540	658.0625	Led Modules 12-Inch Green Arrow	EACH	14.000	14.000	
2550	658.0635	Led Modules Pedestrian Countdown Timer 16-Inch	EACH	6.000	6.000	
2560	658.5069	Signal Mounting Hardware (location) 01. 41/45 Sb Ramp At Cth Q	LS	1.000	1.000	
2570	658.5069	Signal Mounting Hardware (location) 02. 41/45 Nb Ramp At Cth Q	LS	1.000	1.000	
2580	658.5069	Signal Mounting Hardware (location) 03. 41/45 Sb Ramp At Sth 167	LS	1.000	1.000	
2590	658.5069	Signal Mounting Hardware (location) 04. 41/45 Nb Ramp At Sth 167	LS	1.000	1.000	
2600	659.0802	Plaques Sequence Identification	EACH	2.000	2.000	
2610	659.1125	Luminaires Utility LED C	EACH	30.000	30.000	
2620	659.1130	Luminaires Utility LED D	EACH	8.000	8.000	
2630	661.0200	Temporary Traffic Signals for Intersections (location) 01. 41/45 Sb Ramp At Cth Q	LS	1.000	1.000	
2640	661.0200	Temporary Traffic Signals for Intersections (location) 02. 41/45 Nb Ramp At Cth Q	LS	1.000	1.000	
2650	661.0200	Temporary Traffic Signals for Intersections (location) 03. 41/45 Sb Ramp At Sth 167	LS	1.000	1.000	
2660	661.0200	Temporary Traffic Signals for Intersections (location) 04. 41/45 Nb Ramp At Sth 167	LS	1.000	1.000	
2670	662.2032.S	Ramp Closure Gates Solar 32-FT	EACH	2.000	2.000	
2680	662.2037.S	Ramp Closure Gates Solar 37-FT	EACH	2.000	2.000	
2690	662.2040.S	Ramp Closure Gates Solar 40-FT	EACH	3.000	3.000	
2700	662.6020.S	Ramp Closure Barricade Rack 2-Unit	EACH	1.000	1.000	
2710	662.6030.S	Ramp Closure Barricade Rack 3-Unit	EACH	1.000	1.000	
2720	670.0100	Field System Integrator 01. FTMS	LS	1.000	1.000	
2730	670.0100	Field System Integrator 02. 41/45 Nb & Sb Ramps At Cth Q	LS	1.000	1.000	
2740	670.0100	Field System Integrator 03. 41/45 Nb & Sb Ramps At Sth 167	LS	1.000	1.000	
2750	670.0200	ITS Documentation 01. FTMS	LS	1.000	1.000	
2760	670.0200	ITS Documentation 02. 41/45 Nb & Sb Ramps At Cth Q	LS	1.000	1.000	
2770	670.0200	ITS Documentation 03. 41/45 Nb & Sb Ramps At Sth 167	LS	1.000	1.000	
2780	671.0132	Conduit HDPE 3-Duct 2-Inch	LF	34,800.000	34,800.000	

DATE 29APR15 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	1100-38-70 QUANTITY	1100-47-70 QUANTITY
2790	671.0232	Conduit HDPE Directional Bore 3-Duct 2-Inch	LF	2,280.000	2,280.000	
2800	671.0300	Fiber Optic Cable Marker	EACH	66.000	66.000	
2810	673.0105	Communication Vault Type 1	EACH	38.000	38.000	
2820	674.0200	Cable Microwave Detector	LF	165.000	165.000	
2830	675.0300	Install Mounted Controller Microwave Detector Assembly	EACH	2.000	2.000	
2840	675.0400.S	Install Ethernet Switch	EACH	5.000	5.000	
2850	678.0006	Install Fiber Optic Cable Outdoor Plant 6-CT	LF	1,455.000	1,455.000	
2860	678.0072	Install Fiber Optic Cable Outdoor Plant 72-CT	LF	41,300.000	41,300.000	
2870	678.0200	Fiber Optic Splice Enclosure	EACH	4.000	4.000	
2880	678.0300	Fiber Optic Splice	EACH	330.000	330.000	
2890	678.0400	Fiber Optic Termination	EACH	36.000	36.000	
2900	678.0500	Communication System Testing 01. FTMS	LS	1.000	1.000	
2910	678.0500	Communication System Testing 02. 41/45 Nb & Sb Ramps At Cth Q	LS	1.000	1.000	
2920	678.0500	Communication System Testing 03. 41/45 Nb & Sb Ramps At Sth 167	LS	1.000	1.000	
2930	690.0150	Sawing Asphalt	LF	6,723.000	6,723.000	
2940	690.0250	Sawing Concrete	LF	15,403.000	15,403.000	
2960	ASP.1T0A	On-the-Job Training Apprentice at $5. 00/HR	HRS	5,000.000	5,000.000	
2970	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	6,000.000	6,000.000	
2990	SPV.0060	Special 01. Connecting Pipe Underdrain 4-Inch To Existing Inlets	EACH	91.000	91.000	
3000	SPV.0060	Special 02. Clearing Of Overgrowth And Cleaning Exsting Storm Sewer System	EACH	58.000	58.000	
3010	SPV.0060	Special 03. Storm Sewer Tap	EACH	1.000	1.000	
3020	SPV.0060	Special 04. Concrete Barrier Transiition Special	EACH	3.000	3.000	
3030	SPV.0060	Special 05. Terminal High-Tension Cable Guard Tl-3	EACH	28.000	28.000	
3040	SPV.0060	Special 06. Section Corner Monuments Special	EACH	1.000	1.000	
3050	SPV.0060	Special 07. Permanent Barricades Type III	EACH	5.000	5.000	
3060	SPV.0060	Special 08. Removing And Salvage Lighting Units	EACH	1.000	1.000	
3070	SPV.0060	Special 09. Removing Luminaires	EACH	27.000	27.000	
3080	SPV.0060	Special 10. Lamp Disposal High Instensity Discharge	EACH	27.000	27.000	
3090	SPV.0060	Special 11. Install Salvage Lighting Units	EACH	1.000	1.000	
3100	SPV.0060	Special 12. Pavement Marking Grooved Preformed Thermoplastic Arrows Type 2	EACH	19.000	19.000	
3110	SPV.0060	Special 13. Pavement Marking Grooved Preformed Thermoplastic Arrows Type 3	EACH	8.000	8.000	
3120	SPV.0060	Special 14. Pavement Marking Grooved Preformed Thermoplastic Arrows Type 5	EACH	2.000	2.000	
3130	SPV.0060	Special 15. Pavement Marking Grooved Preformed Thermoplastic Words	EACH	19.000	19.000	
3140	SPV.0060	Special 16. Install 5.8 Ghz Ethernet Bridge Ush 41/45 Sb & Nb Ramps At Cth Q	EACH	2.000	2.000	
3150	SPV.0060	Special 17. Removing Wireless Ethernet Bridge	EACH	7.000	7.000	

DATE 29APR15 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	1100-38-70 QUANTITY	1100-47-70 QUANTITY
3160	SPV.0060	Special 18. Removing Parabolic Antenna	EACH	2.000	2.000	
3170	SPV.0060	Special 19. Removing Yagi Antenna	EACH	3.000	3.000	
3180	SPV.0060	Special 20. Ground Rod	EACH	1.000	1.000	
3190	SPV.0090	Special 01. High-Tension Cable Guard Tl-3 Socketed	LF	32,023.000	32,023.000	
3200	SPV.0090	Special 02. Pavement Marking Grooved Preformed Thermoplastic Crosswalk 6-Inch	LF	241.000	241.000	
3210	SPV.0090	Special 03. Pavement Marking Grooved Preformed Thermoplastic Stop Bars 18-Inch	LF	394.000	394.000	
3220	SPV.0090	Special 04. Drain Slotted Vane Longitudinal	LF	472.000	472.000	
3230	SPV.0090	Special 05. Heavy Duty Silt Fence	LF	1,830.000	1,830.000	
3240	SPV.0090	Special 06. Pavement Marking Contrast Epoxy 4-Inch	LF	3,850.000		3,850.000
3250	SPV.0090	Special 07. Milling And Removing Temporary Longitudinal Joint	LF	152,399.000	152,399.000	
3260	SPV.0105	Special 01. Grading, Shaping, & Finishing Slope Paving Approaches At Ush 41 & Cth Q	LS	1.000	1.000	
3270	SPV.0105	Special 02. Grading Shaping & Finishing Slope Paving Appr At Ush 41 Nb & Maple Rd	LS	1.000	1.000	
3280	SPV.0105	Special 03. Grading Shaping & Finishing Slope Paving Appr At Ush 41 & Lannon Rd	LS	1.000	1.000	
3290	SPV.0105	Special 04. Grading Shaping & Finishing Slope Paving Appr At Ush 41 & Friestadt Rd	LS	1.000	1.000	
3300	SPV.0105	Special 05. Grading Shaping & Finishing Slope Paving Appr At Ush 41 & Holy Hill Rd	LS	1.000	1.000	
3310	SPV.0105	Special 06. Grading, Shaping, & Finishing Back Slope At Sta 446+00 Rt	LS	1.000	1.000	
3320	SPV.0105	Special 07. Grading, Shaping & Finishing Median Ditch From Sta 395+00 To Sta 419+00	LS	1.000	1.000	
3340	SPV.0105	Special 09. Install State Furnished Traffic Signal Cabinet (41/45 Sb Ramp At Cth Q)	LS	1.000	1.000	
3350	SPV.0105	Special 10. Install State Furnished Traffic Signal Cabinet (41/45 Nb Ramp At Cth Q)	LS	1.000	1.000	
3360	SPV.0105	Special 11. Install State Furnished Traffic Signal Cabinet (41/45 Sb Ramp At Sth 167	LS	1.000	1.000	
3370	SPV.0105	Special 12. Install State Furnished Traffic Signal Cabinet (41/45 Nb Ramp At Sth 167	LS	1.000	1.000	
3380	SPV.0105	Special 13. Trans. Traf. Sig. & Int. Lighting Materials 41/45 Sb Ramp At Cth Q	LS	1.000	1.000	
3390	SPV.0105	Special 14. Trans. Traf. Sig. & Int. Lighting Materials 41/45 Nb Ramp At Cth Q	LS	1.000	1.000	
3400	SPV.0105	Special 15. Trans. Traf. Sig. & Int. Lighting Materials 41/45 Sb Ramp At Sth 167	LS	1.000	1.000	

3

DATE 29APR15 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	1100-38-70 QUANTITY	1100-47-70 QUANTITY
3410	SPV.0105	Special 16. Trans. Traf. Sig. & Int. Lighting Materials 41/45 Nb Ramp At Sth 167	LS	1.000	1.000	
3420	SPV.0105	Special 17. Trans. & Inst St Furn Autoscope Vid Det Sys 41/45 Sb Ramp At Cth Q	LS	1.000	1.000	
3430	SPV.0105	Special 18. Trans. & Inst St Furn Autoscope Vid Det Sys 41/45 Nb Ramp At Cth Q	LS	1.000	1.000	
3440	SPV.0105	Special 19. Trans. & Inst St Furn Radar Det Sys 41/45 Sb Ramp At Sth 167	LS	1.000	1.000	
3450	SPV.0105	Special 20. Trans. & Inst St Furn Radar Det Sys 41/45 Nb Ramp At Sth 167	LS	1.000	1.000	
3460	SPV.0105	Special 21. Install Fiber Optic Comm. In Cabinet 41/45 Sb Ramp At Cth Q	LS	1.000	1.000	
3470	SPV.0105	Special 22. Install Fiber Optic Comm. In Cabinet 41/45 Nb Ramp At Cth Q	LS	1.000	1.000	
3480	SPV.0105	Special 23. Install Fiber Optic Comm. In Cabinet 41/45 Sb Ramp At Sth 167	LS	1.000	1.000	
3490	SPV.0105	Special 24. Install Fiber Optic Comm. In Cabinet 41/45 Nb Ramp At Sth 167	LS	1.000	1.000	
3500	SPV.0105	Special 25. Remove Loop Detector Wire & Lead-In Cable 41/45 Sb Ramp At Cth Q	LS	1.000	1.000	
3510	SPV.0105	Special 26. Remove Loop Detector Wire & Lead-In Cable 41/45 Nb Ramp At Cth Q	LS	1.000	1.000	
3520	SPV.0105	Special 27. Remove Loop Detector Wire & Lead-In Cable 41/45 Sb Ramp At Sth 167	LS	1.000	1.000	
3530	SPV.0105	Special 28. Remove Loop Detector Wire & Lead-In Cable 41/45 Nb Ramp At Sth 167	LS	1.000	1.000	
3540	SPV.0105	Special 29. Remove Traffic Signals 41/45 Sb Ramp At Cth Q	LS	1.000	1.000	
3550	SPV.0105	Special 30. Remove Traffic Signals 41/45 Nb Ramp At Cth Q	LS	1.000	1.000	
3560	SPV.0105	Special 31. Remove Traffic Signals 41/45 Sb Ramp At Sth 167	LS	1.000	1.000	
3570	SPV.0105	Special 32. Remove Traffic Signals 41/45 Nb Ramp At Sth 167	LS	1.000	1.000	
3580	SPV.0105	Special 33. Temp. Non Intrusive Veh. Video Det Sys For Int 41/45 Sb Ramp At Cth Q	LS	1.000	1.000	
3590	SPV.0105	Special 34. Temp. Non Intrusive Veh. Video Det Sys For Int 41/45 Nb Ramp At Cth Q	LS	1.000	1.000	
3600	SPV.0105	Special 35. Temp. Non Intrusive Veh. Video Det Sys For Int 41/45 Sb Ramp At Sth 167	LS	1.000	1.000	
3610	SPV.0105	Special 36. Temp. Non Intrusive Veh. Video Det Sys For Int 41/45 Nb Ramp At Sth 167	LS	1.000	1.000	
3620	SPV.0105	Special 37. Removing Concrete Barrier Transition Special	LS	1.000	1.000	
3630	SPV.0170	Special 01. Proof-Rolling Existing Base	STA	646.000	646.000	
3640	SPV.0180	Special 01. Resin Binder High Friction Surface Treatment	SY	33,362.000		33,362.000
3650	SPV.0195	Special 01. Qmp Base Aggregate Dense 1 1/4-Inch Compaction	TON	36,556.000	36,556.000	

3

REMOVING ASPHALTIC SURFACE BUTT JOINTS

STATION TO STATION	LOCATION	204.0115 SY	REMARKS
344+00 - 345+00	USH 41/45 NB	622	BEGIN OF PROJECT
423+50 - 424+50	USH 41/45 NB	722	MATCH TO NET EXCEPTION
429+75 - 430+75	USH 41/45 NB	722	MATCH TO NET EXCEPTION
575+00 - 575+50	USH 41/45 NB	122	WEDGING LAYER 1
575+50 - 576+00	USH 41/45 NB	189	WEDGING LAYER 2
605+57 - 606+07	USH 41/45 NB	189	WEDGING LAYER 2
606+07 - 606+57	USH 41/45 NB	122	WEDGING LAYER 1
606+96 - 608+00	USH 41/45 NB	716	MATCH TO EXISTING BRIDGE
609+75 - 610+81	USH 41/45 NB	801	MATCH TO EXISTING BRIDGE
693+00 - 694+00	USH 41/45 NB	1,167	END OF PROJECT
344+00 - 694+00	USH 41/45 NB	3,500	TEMPORARY TRANSVERSE JOINTS
USH 41/45 SB			
345+00 - 346+00	USH 41/45 SB	622	BEGIN OF PROJECT
423+50 - 424+50	USH 41/45 SB	722	MATCH TO NET EXCEPTION
429+75 - 430+75	USH 41/45 SB	722	MATCH TO NET EXCEPTION
575+00 - 575+50	USH 41/45 SB	122	WEDGING LAYER 1
575+50 - 576+00	USH 41/45 SB	189	WEDGING LAYER 2
605+57 - 606+07	USH 41/45 SB	189	WEDGING LAYER 2
606+07 - 606+57	USH 41/45 SB	122	WEDGING LAYER 1
607+46 - 608+50	USH 41/45 SB	647	MATCH TO EXISTING BRIDGE
610+30 - 610+34	USH 41/45 SB	25	MATCH TO EXISTING BRIDGE
662+94 - 663+44	USH 41/45 SB	311	WEDGING LAYER 1
663+44 - 663+94	USH 41/45 SB	311	WEDGING LAYER 2
663+94 - 664+44	USH 41/45 SB	311	WEDGING LAYER 3
672+09 - 672+59	USH 41/45 SB	311	WEDGING LAYER 3
672+59 - 673+09	USH 41/45 SB	311	WEDGING LAYER 2
673+09 - 673+59	USH 41/45 SB	311	WEDGING LAYER 1
685+00 - 686+00	USH 45 SB	622	END OF PROJECT
693+00 - 694+00	USH 41 SB	622	END OF PROJECT
345+00 - 694+00	USH 41/45 SB	3,490	TEMPORARY TRANSVERSE JOINTS
RAMPS & SIDE ROADS			
346+10 - 346+60	RAMP B AT CTH Q	575	FOR UPPER LAYER
356+50 - 357+50	RAMP B AT CTH Q	256	FOR LOWER LAYER
353+75 - 354+15	RAMP C AT CTH Q	179	FOR UPPER LAYER
362+00 - 363+00	RAMP C AT CTH Q	256	FOR LOWER LAYER
1442+25 - 1443+25	RAMP D AT LANNON RD	356	FOR LOWER LAYER
1452+30 - 1452+80	RAMP D AT LANNON RD	1,038	FOR UPPER LAYER
1445+75 - 1446+75	RAMP A AT LANNON RD	289	FOR LOWER LAYER
619+50 - 620+25	RAMP A AT LANNON RD	776	FOR UPPER LAYER
1452+60 1453+10	RAMP C AT LANNON RD	356	FOR UPPER LAYER
1460+00 1461+00	RAMP C AT LANNON RD	256	FOR LOWER LAYER
453+75 454+25	RAMP B AT LANNON RD	256	FOR UPPER LAYER
461+00 462+00	RAMP B AT LANNON RD	256	FOR LOWER LAYER
612+50 - 613+50	RAMP C AT HOLY HILL RD	256	FOR LOWER LAYER
619+25 619+75	RAMP C AT HOLY HILL RD	707	FOR UPPER LAYER
613+00 614+00	RAMP A AT HOLY HILL RD	256	FOR LOWER LAYER
618+55 620+05	RAMP A AT HOLY HILL RD	915	FOR UPPER LAYER
619+85 620+35	RAMP B AT HOLY HILL RD	915	FOR UPPER LAYER
630+00 631+00	RAMP B AT HOLY HILL RD	256	FOR LOWER LAYER
619+72 620+22	RAMP D AT HOLY HILL RD	978	FOR UPPER LAYER
625+00 626+00	RAMP D AT HOLY HILL RD	256	FOR LOWER LAYER
	TOTAL 0010	28,219	

REMOVING ASPHALTIC SURFACE MILLING

STATION TO STATION	LOCATION	204.0125 TON	REMARKS
USH 41/45 NORTHBOUND STAGE 1A:			
344+00 - 351+51	OUTSIDE SHOULDER	149	MILL TO EXISTING PCC SURFACE
351+51 - 357+50	OUTSIDE SHOULDER	27	MILL 3/4-INCH
368+00 - 421+50	OUTSIDE SHOULDER	245	MILL 3/4-INCH
421+50 - 424+50	OUTSIDE SHOULDER	19	MILL 3/4-INCH
429+75 - 433+75	OUTSIDE SHOULDER	79	MILL TO EXISTING PCC SURFACE
433+75 - 439+00	OUTSIDE SHOULDER	24	MILL 3/4-INCH
445+75 - 451+34	OUTSIDE SHOULDER	26	MILL 3/4-INCH
451+34 - 455+34	OUTSIDE SHOULDER	98	MILL TO EXISTING PCC SURFACE
455+34 - 462+00	OUTSIDE SHOULDER	31	MILL 3/4-INCH
472+00 - 487+07	OUTSIDE SHOULDER	69	MILL 3/4-INCH
487+07 - 490+57	OUTSIDE SHOULDER	86	MILL TO EXISTING PCC SURFACE
490+57 - 558+02	OUTSIDE SHOULDER	309	MILL 3/4-INCH
558+02 - 561+52	OUTSIDE SHOULDER	86	MILL TO EXISTING PCC SURFACE
561+52 - 602+00	OUTSIDE SHOULDER	186	MILL 3/4-INCH
612+50 - 618+02	OUTSIDE SHOULDER	25	MILL 3/4-INCH
618+02 - 621+52	OUTSIDE SHOULDER	86	MILL TO EXISTING PCC SURFACE
621+52 - 630+75	OUTSIDE SHOULDER	42	MILL 3/4-INCH
641+00 - 659+00	OUTSIDE SHOULDER	83	MILL 3/4-INCH
660+00 - 693+00	OUTSIDE SHOULDER	303	MILL 1 1/2-INCH
357+50 - 368+00	RAMP TAPER & GORE	60	MILL 3/4-INCH (CAD MEASURED)
439+00 - 445+75	RAMP TAPER & GORE	39	MILL 3/4-INCH (CAD MEASURED)
462+00 - 472+00	RAMP TAPER & GORE	118	MILL 3/4-INCH (CAD MEASURED)
602+00 - 606+96	RAMP TAPER	14	MILL 3/4-INCH (CAD MEASURED)
610+81 - 612+50	RAMP TAPER & GORE	33	MILL 3/4-INCH (CAD MEASURED)
630+75 - 641+00	RAMP TAPER & GORE	113	MILL 3/4-INCH (CAD MEASURED)
685+20 693+00	GORE AT SPLIT	123	MILL 1 1/2-INCH (CAD MEASURED)
USH 41/45 SOUTHBOUND STAGE 1A:			
345+00 - 352+23	OUTSIDE SHOULDERS	144	MILL TO EXISTING PCC SURFACE
352+23 - 363+00	OUTSIDE SHOULDER	49	MILL 3/4-INCH
368+00 - 421+50	OUTSIDE SHOULDER	245	MILL 3/4-INCH
421+50 - 424+50	OUTSIDE SHOULDER	19	MILL 3/4-INCH
429+75 - 432+79	OUTSIDE SHOULDER	74	MILL TO EXISTING PCC SURFACE
442+25 - 451+24	OUTSIDE SHOULDER	41	MILL 3/4-INCH
451+24 - 455+24	OUTSIDE SHOULDER	98	MILL TO EXISTING PCC SURFACE
455+24 - 461+00	OUTSIDE SHOULDER	26	MILL 3/4-INCH
467+25 - 487+88	OUTSIDE SHOULDER	95	MILL 3/4-INCH
487+88 - 491+33	OUTSIDE SHOULDER	84	MILL TO EXISTING PCC SURFACE
491+33 - 558+79	OUTSIDE SHOULDER	309	MILL 3/4-INCH
558+79 - 562+29	OUTSIDE SHOULDER	86	MILL TO EXISTING PCC SURFACE
562+29 - 600+00	OUTSIDE SHOULDER	173	MILL 3/4-INCH
613+00 - 618+07	OUTSIDE SHOULDER	23	MILL 3/4-INCH
618+07 - 621+57	OUTSIDE SHOULDER	86	MILL TO EXISTING PCC SURFACE
621+57 - 631+00	OUTSIDE SHOULDER	43	MILL 3/4-INCH
638+00 - 659+00	OUTSIDE SHOULDER	96	MILL 3/4-INCH
660+00 - 686+00	OUTSIDE SHOULDER	238	MILL 1 1/2-INCH
363+00 - 368+00	RAMP TAPER & GORE	37	MILL 3/4-INCH (CAD MEASURED)
432+79 - 442+25	RAMP TAPER & GORE	101	MILL 3/4-INCH (CAD MEASURED)
462+00 - 467+25	RAMP TAPER & GORE	46	MILL 3/4-INCH (CAD MEASURED)
600+00 - 607+46	RAMP TAPER	44	MILL 3/4-INCH (CAD MEASURED)
611+34 - 613+00	RAMP TAPER & GORE	22	MILL 3/4-INCH (CAD MEASURED)
631+00 - 638+00	RAMP TAPER & GORE	73	MILL 3/4-INCH (CAD MEASURED)
680+81 - 693+00	GORE AT SPLIT	43	MILL 1 1/2-INCH (CAD MEASURED)

3

3

REMOVING ASPHALTIC SURFACE MILLING (CONTINUED)

STATION TO STATION	LOCATION	204.0125 TON	REMARKS
USH 41/45 NORTHBOUND STAGE 2A:			
344+00 - 351+51	INSIDE SHOULDER	184	MILL TO EXISTING PCC SURFACE
351+00 - 362+05	MEADIAN	78	MILL 3/4-INCH (CAD MEASURED)
351+51 - 362+05	INSIDE SHOULDER	48	MILL 3/4-INCH
362+05 424+50	INSIDE SHOULDER	1,221	MILL ALL EXISTING HMA SURFACE
429+75 - 483+63	INSIDE SHOULDER	1,054	MILL ALL EXISTING HMA SURFACE
483+93 - 573+50	INSIDE SHOULDER	1,752	MILL ALL EXISTING HMA SURFACE
573+50 - 608+20	INSIDE SHOULDER	679	MILL ALL EXISTING HMA SURFACE
610+00 - 654+15	INSIDE SHOULDER	863	MILL ALL EXISTING HMA SURFACE
654+45 - 694+00	INSIDE SHOULDER	773	MILL ALL EXISTING HMA SURFACE
344+00 - 351+51	TRAFFIC LANES	661	MILL ALL EXISTING HMA PAVT
351+51 - 424+50	TRAFFIC LANES	1,204	MILL 3/4-INCH
424+50 426+28	TRAFFIC LANES	69	MILL 1 3/4-INCH
427+10 429+75	TRAFFIC LANES	102	MILL 1 3/4-INCH
429+75 - 433+75	TRAFFIC LANES	352	MILL ALL EXISTING HMA PAVT
433+75 - 451+34	TRAFFIC LANES	290	MILL 3/4-INCH
451+34 - 455+34	TRAFFIC LANES	352	MILL ALL EXISTING HMA PAVT
455+34 - 487+07	TRAFFIC LANES	524	MILL 3/4-INCH
487+07 - 490+57	TRAFFIC LANES	308	MILL ALL EXISTING HMA PAVT
490+57 - 558+02	TRAFFIC LANES	1,113	MILL 3/4-INCH
558+02 - 561+52	TRAFFIC LANES	308	MILL ALL EXISTING HMA PAVT
561+52 - 606+96	TRAFFIC LANES	750	MILL 3/4-INCH
610+81 - 618+02	TRAFFIC LANES	119	MILL 3/4-INCH
618+02 - 621+52	TRAFFIC LANES	308	MILL ALL EXISTING HMA PAVT
621+52 - 659+00	TRAFFIC LANES	618	MILL 3/4-INCH
660+00 - 673+10	TRAFFIC LANES	432	MILL 1 1/2-INCH
673+10 - 693+00	TRAFFIC LANES	766	MILL 1 1/2-INCH
USH 41/45 SOUTHBOUND STAGE 2A:			
345+00 - 352+23	INSIDE SHOULDER	177	MATCH TO EXISTING PCC SURFACE
352+23 - 362+05	INSIDE SHOULDER	45	MILL 3/4-INCH
362+05 424+50	INSIDE SHOULDER	286	MILL 3/4-INCH
429+75 - 483+50	INSIDE SHOULDER	1,051	MILL ALL EXISTING HMA SURFACE
484+00 - 573+50	INSIDE SHOULDER	1,750	MILL ALL EXISTING HMA SURFACE
574+00 - 608+30	INSIDE SHOULDER	671	MILL ALL EXISTING HMA SURFACE
610+10 - 654+15	INSIDE SHOULDER	861	MILL ALL EXISTING HMA SURFACE
654+45 - 694+00	INSIDE SHOULDER	773	MILL ALL EXISTING HMA SURFACE
345+00 - 352+23	TRAFFIC LANES	636	MILL ALL EXISTING HMA SURFACE
352+23 - 424+50	TRAFFIC LANES	1,192	MILL 3/4-INCH
424+50 426+28	TRAFFIC LANES	69	MILL 1 3/4-INCH
427+10 429+75	TRAFFIC LANES	102	MILL 1 3/4-INCH
429+75 - 432+79	TRAFFIC LANES	268	MILL ALL EXISTING HMA PAVT
432+79 - 451+24	TRAFFIC LANES	304	MILL 3/4-INCH
451+24 - 455+24	TRAFFIC LANES	352	MILL ALL EXISTING HMA PAVT
455+24 - 487+88	TRAFFIC LANES	539	MILL 3/4-INCH
487+88 - 491+33	TRAFFIC LANES	304	MILL ALL EXISTING HMA PAVT
491+33 - 558+79	TRAFFIC LANES	1,113	MILL 3/4-INCH
558+79 - 562+29	TRAFFIC LANES	308	MILL ALL EXISTING HMA PAVT

REMOVING ASPHALTIC SURFACE MILLING (CONTINUED)

STATION TO STATION	LOCATION	204.0125 TON	REMARKS
611+34 - 618+07	TRAFFIC LANES	111.0	MILL 3/4-INCH
618+07 - 621+57	TRAFFIC LANES	308.0	MILL ALL EXISTING HMA PAVT
621+57 - 659+00	TRAFFIC LANES	617.6	MILL 3/4-INCH
660+00 - 667+00	TRAFFIC LANES	231.0	MILL 1 1/2-INCH
667+00 - 680+81	TRAFFIC LANES	531.7	MILL 1 1/2-INCH
680+81 - 685+00	USH 45 SB LANES	92.2	MILL 1 1/2-INCH
680+81 - 694+00	USH 41 SB LANES	290.2	MILL 1 1/2-INCH
RAMPS & SIDE ROADS:			
27+00 - 29+00	CTH Q EB SHOULDER	13	MILL 2-INCH
346+00 - 356+50	RAMP B AT CTH Q	309	MILL 2-INCH
353+50 - 362+00	RAMP C AT CTH Q	213	MILL 2-INCH
834+88 - 836+64	LANNON RD WB SHOULDER	11	MILL 2-INCH
842+25 - 845+13	LANNON RD WB SHOULDER	14	MILL 2-INCH
1443+25 - 1452+75	RAMP D AT LANNON	564	MILL 2-INCH
1446+75 - 1453+75	RAMP A AT LANNON	313	MILL 2-INCH
1452+75 - 1460+00	RAMP C AT LANNON	204	MILL 2-INCH
453+75 - 461+00	RAMP B AT LANNON	195	MILL 2-INCH
610+81 - 619+75	RAMP C AT HOLY HILL	238	MILL 2-INCH
610+34 - 620+25	RAMP A AT HOLY HILL	156	MILL 2-INCH
620+00 - 630+00	RAMP B AT HOLY HILL	299	MILL 2-INCH
619+50 - 629+75	RAMP D AT HOLY HILL	332	MILL 2-INCH
	UNDISTRIBUTED	5,000	
	TOTAL 0010	41,285	

REMOVING CURB & GUTTER

STATION TO STATION	LOCATION	204.0150 LF
27+08 - 29+15	CTH Q, LT (Turning radius)	260
29+18 - 29+76	CTH Q, LT (Island)	200
39+78 - 39+90	CTH Q, LT (LT Turning radius)	30
40+21 - 40+52	CTH Q, LT (RT Turning radius)	38
834+87 - 836+62	WB STH 167, LT (Turning radius)	229
835+94 - 836+42	WB STH 167, LT (Island)	180
835+00 - 836+26	WB STH 167, RT (Median)	265
836+53 - 836+74	WB STH 167, RT (Turn Lane End)	47
841+65 - 843+28	EB STH 167, LT (Turn Lane End)	192
843+77 - 844+12	EB STH 167, LT (Island)	140
843+71 - 845+00	EB STH 167, LT (Median)	270
	TOTAL 0010	1,851

3

REMOVING CONCRETE SIDEWALK

STATION	TO	STATION	LOCATION	204.0155 SY
28+15	-	29+02	CTH Q, LT	56
29+25	-	29+72	CTH Q, LT	24
29+93	-	30+76	CTH Q, LT	49
39+47	-	39+90	CTH Q, LT	28
40+24	-	40+92	CTH Q, LT	49
			TOTAL 0010	206

REMOVING GUARDRAIL

STATION	TO	STATION	LOCATION	204.0165 LF
350+77	-	363+88	USH 41/45 LT & RT	2,623
1450+75	-	1451+50	LANNON RD RAMP 'A' RT	75
603+60	-	608+64	USH 41/45 LT	504
603+98	-	607+72	USH 41/45 RT	374
609+65	-	611+96	USH 41/45 RT	231
610+58	-	611+90	USH 41/45 LT	132
671+45	-	673+20	USH 41/45 RT	175
683+15	-	685+15	USH 41/45 RT	163
			TOTAL 0010	4,277

3

REMOVING DELINEARTORS AND MARKERS

STATION	TO	STATION	LOCATION	204.0180 EACH
344+00	-	694+00	NB USH 41/45 RT	65
344+00	-	694+00	SB USH 41/45 LT	65
346+00	-	370+00	CTH Q RAMP 'B'	4
354+00	-	370+00	CTH Q RAMP 'C'	6
1429+75	-	1453+00	LANNON RD RAMP 'D'	7
1443+00	-	1454+00	LANNON RD RAMP 'A'	10
1454+00	-	1463+50	LANNON RD RAMP 'C'	7
1454+00	-	1463+50	LANNON RD RAMP 'B'	13
610+00	-	620+00	HOLY HILL RD RAMP 'C'	4
611+00	-	620+00	HOLY HILL RD RAMP 'A'	3
620+00	-	633+00	HOLY HILL RD RAMP 'D'	3
620+00	-	634+50	HOLY HILL RD RAMP 'B'	3
			TOTAL 0010	190

REMOVING INLETS

STATION	OFFSET	LOCATION	204.0220 EACH
836+22	16' LT	EB STH 167/LANNON RD.	1
843+00	21' LT	EB STH 167/LANNON RD.	1
400+00	R/L	USH 41/45	1
		TOTAL 0010	3

REMOVING STORM SEWER

BEGIN STATION	OFFSET	END STATION	OFFSET	LOCATION	204.0245.01 12-INCH LF	204.0245.02 18-INCH LF
400+00	R/L	400+16	R/L	USH 41/45 MEDIAN	--	16
403+38	R/L	403+62	R/L	USH 41/45 MEDIAN	--	24
409+88	R/L	410+12	R/L	USH 41/45 MEDIAN	--	24
415+88	R/L	416+12	R/L	USH 41/45 MEDIAN	--	24
836+04	18' LT	836+22	16' LT	EB STH 167/LANNON RD	18	--
842+79	21' LT	843+00	21' LT	EB STH 167/LANNON RD	--	22
				TOTAL 0010	18	110

REMOVING PARTIAL SMALL PIPE CULVERTS

STATION	TO	STATION	LOCATION	204.9060.S EACH	REMARKS
443+15	-	443+21	USH 41/45 RT	1	EXISTING CPRC 30-INCH
562+40	-	562+40	USH 41/45 RT	1	EXISTING ENDWALLS FOR CPRC 12-INCH
598+43	-	598+46	USH 41/45 LT	1	EXISTING ENDWALLS FOR CPRC 36-INCH
617+00	-	617+00	USH 41/45 SB ON RAMP	1	EXISTING ENDWALLS FOR CPRC 24-INCH
			TOTAL 0010	4	

3

REMOVING CABLE GUARD TERMINALS

STATION	LOCATION	204.9060.S.02 EACH
363+90	USH 41/45 R/L	1
375+87	USH 41/45 R/L	1
376+67	USH 41/45 R/L	1
390+09	USH 41/45 R/L	1
390+66	USH 41/45 R/L	1
393+87	USH 41/45 R/L	1
395+35	USH 41/45 R/L	1
404+00	USH 41/45 R/L	1
404+85	USH 41/45 R/L	1
414+08	USH 41/45 R/L	1
414+92	USH 41/45 R/L	1
421+70	USH 41/45 R/L	1
422+28	USH 41/45 R/L	1
430+56	USH 41/45 R/L	1
432+52	USH 41/45 R/L	1
437+80	USH 41/45 R/L	1
438+64	USH 41/45 R/L	1
451+87	USH 41/45 R/L	1
454+76	USH 41/45 R/L	1
458+80	USH 41/45 R/L	1
459+59	USH 41/45 R/L	1
470+79	USH 41/45 R/L	1
471+59	USH 41/45 R/L	1
483+57	USH 41/45 R/L	1
483+98	USH 41/45 R/L	1
488+23	USH 41/45 R/L	1
490+20	USH 41/45 R/L	1
501+90	USH 41/45 R/L	1
502+69	USH 41/45 R/L	1
513+89	USH 41/45 R/L	1
514+69	USH 41/45 R/L	1
525+88	USH 41/45 R/L	1
526+70	USH 41/45 R/L	1
536+85	USH 41/45 R/L	1
537+69	USH 41/45 R/L	1
549+85	USH 41/45 R/L	1
550+68	USH 41/45 R/L	1
559+18	USH 41/45 R/L	1
561+15	USH 41/45 R/L	1
572+75	USH 41/45 R/L	1

REMOVING CABLE GUARD TERMINALS CONTINUED:

STATION	LOCATION	204.9060.S.02 EACH
573+59	USH 41/45 R/L	1
579+80	USH 41/45, 10' LT	1
580+30	USH 41/45, 10' LT	1
591+85	USH 41/45, 10' LT	1
592+68	USH 41/45, 10' LT	1
607+00	USH 41/45, 10' LT	1
611+13	USH 41/45 R/L	1
618+82	USH 41/45 R/L	1
620+78	USH 41/45 R/L	1
632+57	USH 41/45 R/L	1
633+41	USH 41/45 R/L	1
644+41	USH 41/45 R/L	1
645+25	USH 41/45 R/L	1
654+08	USH 41/45 R/L	1
654+63	USH 41/45 R/L	1
665+90	USH 41/45 MED. DITCH	1
666+70	USH 41/45 MED. DITCH	1
672+33	USH 41/45 MED. DITCH	1
673+81	USH 41/45 MED. DITCH	1
679+73	USH 41/45 MED. DITCH	1
680+56	USH 41/45 MED. DITCH	1
684+25	USH 41/45 MED. DITCH	1
685+72	USH 41/45 MED. DITCH	1
686+42	USH 41/45 MED. DITCH	1
687+27	USH 41/45 MED. DITCH	1
706+71	USH 41/45 MED. DITCH	1
708+98	USH 41/45 R/L	1
716+89	USH 41/45 R/L	1
717+38	USH 41/45 R/L	1
725+45	USH 41/45 R/L	1
726+29	USH 41/45 R/L	1
733+87	USH 41/45 R/L	1
734+70	USH 41/45 R/L	1
742+92	USH 41/45 R/L	1
745+15	USH 41/45 R/L	1
757+19	USH 41/45 R/L	1
758+00	USH 41/45 R/L	1
769+54	USH 41/45 R/L	1
	TOTAL 0010	78

REMOVING CABLE GUARD 3-STRANDS

STATION TO STATION	LOCATION	204.9090.S LF	REMARKS
363+90 - 376+67	USH 41/45 R/L	1,277	80' OVERLAP
375+87 - 390+09	USH 41/45 R/L	1,422	ENDS AT CROSSOVER
390+60 - 393+87	USH 41/45 R/L	327	ENDS AT THRIE BEAM BULLNOSE
395+35 - 404+85	USH 41/45 R/L	950	83' OVERLAP
404+02 - 414+92	USH 41/45 R/L	1,090	84' OVERLAP
414+08 - 421+80	USH 41/45 R/L	0	REMOVED BY OTHERS
422+21 - 430+56	USH 41/45 R/L	0	REMOVED BY OTHERS
434+52 - 451+87	USH 41/45 R/L	1,735	ENDS AT THRIE BEAM BULLNOSE
454+76 - 459+59	USH 41/45 R/L	483	79' OVERLAP
458+80 - 471+59	USH 41/45 R/L	1,279	80' OVERLAP
470+79 - 483+57	USH 41/45 R/L	1,278	ENDS AT CROSSOVER
483+98 - 488+23	USH 41/45 R/L	425	ENDS AT THRIE BEAM BULLNOSE
490+20 - 502+69	USH 41/45 R/L	1,249	79' OVERLAP
501+90 - 514+69	USH 41/45 R/L	1,279	80' OVERLAP
513+89 - 526+70	USH 41/45 R/L	1,281	82' OVERLAP
525+88 - 538+69	USH 41/45 R/L	1,281	83' OVERLAP
537+85 - 550+68	USH 41/45 R/L	1,283	ENDS AT THRIE BEAM BULLNOSE
549+85 - 559+18	USH 41/45 R/L	933	ENDS AT CROSSOVER
561+15 - 573+59	USH 41/45 R/L	1,244	84' OVERLAP
572+75 - 575+46	USH 41/45 R/L	271	STATION EQN
574+45 - 579+81	USH 41/45 LT	536	ENDS AT CROSSOVER
580+29 - 592+68	USH 41/45 LT	1,239	83' OVERLAP
591+85 - 606+99	USH 41/45 LT	1,514	ENDS AT THRIE BEAM BULLNOSE
611+13 - 618+82	USH 41/45 R/L	769	ENDS AT THRIE BEAM BULLNOSE
620+79 - 633+41	USH 41/45 R/L	1,262	84' OVERLAP
632+57 - 645+25	USH 41/45 R/L	1,268	84' OVERLAP
644+41 - 654+08	USH 41/45 R/L	967	ENDS AT CROSSOVER
654+53 - 659+00	USH 41/45 R/L	447	78' OVERLAP
660+00 666+70	USH 41/45 C/L	670	STATION EQN
665+92 - 672+33	USH 41/45 C/L	641	ENDS AT THRIE BEAM BULLNOSE
673+81 - 679+73	USH 41/45 C/L	592	ENDS AT BOX CULVERT
680+57 - 684+25	USH 41/45 C/L	368	ENDS AT THRIE BEAM BULLNOSE
685+72 - 698+27	USH 41/45 C/L	1,255	83' OVERLAP
697+44 - 705+00	USH 41/45 C/L	756	STATION EQN
706+00 - 706+60	USH 41/45 R/L	60	ENDS AT THRIE BEAM BULLNOSE
708+98 - 716+89	USH 41/45 R/L	791	ENDS AT CROSSOVER
717+39 - 726+29	USH 41/45 R/L	890	84' OVERLAP
725+45 - 734+71	USH 41/45 R/L	926	84' OVERLAP
733+87 - 742+92	USH 41/45 R/L	905	ENDS AT THRIE BEAM BULLNOSE
745+15 - 758+00	USH 41/45 R/L	1,285	81' OVERLAP
757+19 - 766+00	USH 41/45 R/L	881	STATION EQN
767+66 - 769+54	USH 41/45 R/L	188	ENDS OF EXISTING CABLE GUARD
	TOTAL 0010	37,297	

Division	From Station	To Station	Common Excavation (1) (Item # 205.0100)	EBS Excavation (3) (Item # 205.0100)	Salvaged/ Unusable Pavement Material (4)	Available Material (5)	Unexpanded Fill	Expanded Fill (13) Factor 1.25	Mass Ordinate + / - (14)	Waste (15)	Borrow (16) (item #208.0100)
STAGE 1											
Division 1											
USH 41/45 SB Shoulder	572+00.00	608+00.00	223.96	0.00	0.00	223.96	1,840.43	2,300.54	-2,076.58	0.00	2,076.58
Division 2											
CTH Q SB Off Ramp	353+69.80	360+00.00	644.76	0.00	100.00	544.76	1,554.73	1,943.41	-1,398.65	0.00	0.00
CTH Q Left (WB)	27+08.51	29+79.62	191.53	0.00	103.00	88.53	8.90	11.13	77.41	77.41	0.00
Division 3											
Lannon SB Off Ramp	1452+78.33	1459+15.00	937.54	0.00	148.00	789.54	58.55	73.19	716.35	716.35	0.00
Lannon NB On Ramp	454+25.00	459+42.66	485.67	0.00	23.00	462.67	175.67	219.59	243.08	243.08	0.00
Lannon West Median Nose	835+00.83	836+07.85	133.40	0.00	20.00	113.40	24.75	30.94	82.46	82.46	0.00
Lannon EB Left Turn Lane	841+50.99	843+09.99	80.69	0.00	0.00	80.69	1.41	1.76	78.93	78.93	0.00
Lannon WB Left Turn Lane	843+91.00	848+15.00	389.10	0.00	0.00	389.10	68.94	86.18	302.93	302.93	0.00
Lannon WB at SB Off Ramp	834+87.60	835+97.48	68.45	0.00	0.00	68.45	6.14	7.68	60.78	60.78	0.00
Division 4											
Holy Hill Rd NB Off Ramp	599+50.00	604+53.00	520.97	0.00	104.00	416.97	50.18	62.73	354.25	354.25	0.00
Holy Hill Rd NB Off Ramp	612+79.00	619+50.00	350.29	0.00	44.00	306.29	350.25	437.81	-131.52	0.00	0.00
Stage 1 Subtotal			4026.36	0.00	542.00	3484.36	4139.95	5174.94	-1690.58	1916.18	2076.58
STAGE 2											
Division 4											
USH 41/45 Median Shld	362+05.00	424+50.00	1387.78	--	0.00	1,387.78	0.00	0.00	1,387.78	1,387.78	0.00
USH 41/45 Median Shld	429+75.00	573+53.00	3195.11	--	0.00	3,195.11	0.00	0.00	3,195.11	3,195.11	0.00
USH 41/45 Median Shld	573+53.00	608+00.00	700.23	35.01	0.00	700.23	561.71	667.13	33.10	33.10	0.00
USH 41/45 Median Shld	610+00.00	694+00.00	186.67	--	0.00	186.67	0.00	0.00	186.67	186.67	0.00
Undistributed			0.00	35919.00	35919.00	-35,919.00	0.00	0.00	-35919.00	0.00	0.00
Stage 2 Subtotal			5469.79	35954.01	35919.00	-30449.21	561.71	667.13	-31,116.34		0.00
Grand Total			**45450.16**		36461.00	-26964.85	4701.66	5842.06	-32806.91	6718.84	**2076.58**

General Notes:

1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
2) Salvaged/Unsuable Pavement Material is included in Cut.
3) EBS Excavation to be backfilled with Breaker Run material. EBS considered to be waste.
4) Salvaged/Unusable Pavement Material (Asphalt pavement not to be used in fill).
5) Available Material = Cut - Salvaged/Unusuable Pavement Material
13) Expanded Fill. Factor = 1.25
14) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material
15) Use 1484.53 CY of Available Material from Division 3 to fill in Division 2.
16) Borrow is required in Division 1 because grading is to be completed prior to other Divisions.

EXCAVATION BELOW SUBGRADE (EBS)

STATION TO STATION	LOCATION	205.0100 EXCAVATION COMMON** CY	305.0110 BASE AGGREGATE DENSE 3/4-INCH* TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH* TON	311.0110 BREAKER RUN TON	612.0204 PIPE UNDERDRAIN UNPERFORATED 4-INCH LF	612.0404 PIPE UNDERDRAIN WRAPPED 4-INCH LF	612.0804 APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 4-INCH EACH	SPV.0060.01 CONNECTING PIPE UNDERDRAIN 4-INCH TO EXISTING INLETS EACH
362+00 - 365+00	SB median	316	103	221	310	12	300	--	1
370+00 - 372+00	SB median	211	68	148	207	12	200	--	1
376+50 - 380+50	SB median	421	137	295	414	12	400	--	1
385+00 - 389+50	SB median	474	154	332	466	12	450	--	1
392+00 - 395+50	SB median	369	120	258	362	12	350	--	1
400+50 - 406+00	SB median	579	188	406	569	24	700	--	2
410+00 - 415+00	SB median	527	171	369	517	12	500	--	1
449+50 - 455+00	SB median	579	188	406	569	24	750	--	2
461+00 - 470+00	SB median	948	308	664	931	24	1,010	--	2
472+00 - 475+00	SB median	316	103	221	310	12	390	--	1
480+50 - 485+50	SB median	527	171	369	517	24	550	--	2
489+50 - 492+00	SB median	263	86	184	259	12	250	--	1
496+00 - 505+50	SB median	1,001	325	701	983	36	1,000	--	3
510+00 - 525+50	SB median	1,633	530	1,144	1,603	48	1,550	--	4
530+50 - 532+00	SB median	158	51	111	155	12	250	--	1
540+50 - 545+50	SB median	527	171	369	517	24	550	--	2
550+00 - 552+00	SB median	211	68	148	207	12	200	--	1
560+50 - 569+50	SB median	948	308	664	931	36	935	--	3
572+00 - 575+00	SB median	316	103	221	310	12	300	--	1
612+00 - 635+00	SB median	2,423	787	1,697	2,379	60	2,400	--	5
641+00 - 651+50	SB median	1,106	359	775	1,086	36	1,050	--	3
660+00 - 685+00	SB median	2,633	856	1,844	2,586	156	2,700	6	3
692+00 - 694+00	SB median	211	68	148	207	20	300	--	1
362+00 - 372+00	NB median	1,053	342	738	1,034	42	1,000	--	4
380+50 - 383+00	NB median	263	86	184	259	12	275	--	1
392+00 - 396+50	NB median	474	154	332	466	12	450	--	1
400+50 - 402+50	NB median	211	68	148	207	12	250	--	1
407+50 - 412+00	NB median	474	154	332	466	24	600	--	2
417+50 - 420+50	NB median	316	103	221	310	12	300	--	1
433+00 - 440+50	NB median	790	257	553	776	24	875	--	2
448+00 - 455+50	NB median	790	257	553	776	24	900	--	2
463+00 - 467+00	NB median	421	137	295	414	24	400	--	2
473+00 - 486+00	NB median	1,369	445	959	1,345	48	1,490	--	4
493+00 - 502+50	NB median	1,001	325	701	983	36	950	--	3
512+50 - 540+50	NB median	2,949	958	2,066	2,896	96	2,975	--	8
543+00 - 552+50	NB median	1,001	325	701	983	24	950	--	2
558+00 - 560+50	NB median	263	86	184	259	12	250	--	1
568+00 - 571+00	NB median	316	103	221	310	12	300	--	1
593+00 - 600+50	NB median	790	257	553	776	36	750	3	--
612+50 - 631+50	NB median	2,001	650	1,402	1,965	48	1,950	--	4
637+50 - 646+50	NB median	948	308	664	931	36	1,050	--	3
652+50 - 682+50	NB median	3,160	1,027	2,213	3,103	176	3,000	6	4
688+00 - 694+00	NB median	632	205	443	621	50	800	--	2
	TOTAL 0010	35,919	11,670	25,158	35,275	1,404	36,600	15	91

*QUANTITIES LISTED ELSEWHERE IN PLAN
**FOR INFORMATION ONLY. SEE EARTHWORK SUMMARY TABLE FOR EARTHWORK BALANCE.

GENERAL NOTES

1) EBS & PIPE UNDERDRAIN QUANTITIES ARE ESTIMATED ON SOIL REPORT LOCATIONS. ACTUAL LOCATIONS & QUANTITIES OF EBS & PIPE UNDERDRAIN ARE TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
2) PIPE UNDERDRAIN UNPERFORATED 4-INCH SPACING IS 250' TYPICAL. CONNECT TO CLOSEST INLET WHERE POSSIBLE.

BASE AGGREGATE DENSE

STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH* TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH* TON	624.0100 WATER MGAL	SPV.0195.01 QMP BASE AGGREGATE DENSE 1 1/4-INCH COMPACTION TON	REMARKS
362+00	-	694+00	USH 41/45 SB INSIDE SHOULDER	--	--	117	11,693	SEE EBS AREAS
362+00	-	694+00	USH 41/45 NB INSIDE SHOULDER	--	--	135	13,465	SEE EBS AREAS
348+75	-	350+00	USH 41/45 NB, RT	10	65	1	65	PLACE UNDER SLOPE PAVING
350+25	-	351+50	USH 41/45 SB, LT	10	65	1	65	PLACE UNDER SLOPE PAVING
432+10	-	432+80	USH 41/45 NB, RT	10	36	0	36	PLACE UNDER SLOPE PAVING
445+50	-	447+00	USH 41/45 NB, RT	10	69	1	69	PLACE UNDER ASPHALTIC FLUME
452+75	-	454+00	USH 41/45 NB, RT	10	65	1	65	PLACE UNDER SLOPE PAVING
452+50	-	453+75	USH 41/45 SB, LT	10	65	1	65	PLACE UNDER SLOPE PAVING
559+17	-	559+72	USH 41/45 NB, RT	10	29	0	29	PLACE UNDER SLOPE PAVING
560+54	-	561+09	USH 41/45 SB, LT	10	29	0	29	PLACE UNDER SLOPE PAVING
573+50	-	573+80	USH 41/45 MEDIAN	10	89	1	89	MAINTENANCE CROSSOVER
619+40	-	620+10	USH 41/45 NB, RT	10	36	0	36	PLACE UNDER SLOPE PAVING
619+48	-	620+18	USH 41/45 SB, LT	10	36	0	36	PLACE UNDER SLOPE PAVING
344+00	-	424+50	USH 41/45 NB, OUTSIDE SHOULDER	795	0	8	0	
429+75	-	608+00	USH 41/45 NB, OUTSIDE SHOULDER	1,760	0	18	0	
609+75	-	694+00	USH 41/45 NB, OUTSIDE SHOULDER	832	0	8	0	
345+00	-	424+50	USH 41/45 SB, OUTSIDE SHOULDER	785	0	8	0	
429+75	-	572+00	USH 41/45 SB, OUTSIDE SHOULDER	1,405	0	14	0	
572+00	-	598+00	USH 41/45 SB, OUTSIDE SHOULDER	257	642	9	642	SHOULDER WIDENING
598+00		608+00	USH 41/45 SB, OUTSIDE SHOULDER	99	494	6	494	SHOULDER WIDENING W/ GUARDRAIL
610+50	-	694+00	USH 41/45 SB, OUTSIDE SHOULDER	825	0	8	0	
346+60	-	357+50	RAMP 'B' AT CTH Q LT & RT	215	0	2	0	
355+75	-	360+00	RAMP 'C' AT CTH Q RT SHOULDER	42	0	0	0	
354+00	-	360+00	RAMP 'C' AT CTH Q LT	59	1,726	18	1,726	LANE WIDENING
360+00	-	363+00	RAMP 'C' AT CHT Q LT & RT	59	0	1	0	
1442+25	-	1451+50	RAMP 'D' AT LANNON RD LT & RT	183	0	2	0	
1445+75	-	1450+50	RAMP 'A' AT LANNON RD LT & RT	94	0	1	0	
1450+50	-	1453+25	RAMP 'A' AT LANNON RD LT & RT	54	0	1	0	
454+00	-	460+00	RAMP 'B' AT LANNON RD LT	59	767	8	767	LANE WIDENING
455+50	-	460+00	RAMP 'B' AT LANNON RD RT	44	0	0	0	
460+00	-	462+00	RAMP 'B' AT LANNON RD LT & RT	40	0	0	0	
1452+27	-	1459+00	RAMP 'C' AT LANNON RD LT	66	1,539	16	1,539	LANE WIDENING
1452+27	-	1459+00	RAMP 'C' AT LANNON RD RT	66	0	1	0	
1459+00	-	1461+00	RAMP 'C' AT LANNON RD LT & RT	40	0	0	0	
599+50	-	604+50	RAMP 'C' AT HOLY HILL RD	99	586	7	586	PARALLEL RAMP WIDENING
612+50	-	619+50	RAMP 'C' AT HOLY HILL RD	138	726	9	726	SHOULDER WIDENING
613+00	-	620+00	RAMP 'A' AT HOLY HILL RD	138	0	1	0	
620+00	-	630+75	RAMP 'D' AT HOLY HILL RD	212	0	2	0	
620+00	-	631+00	RAMP 'B' AT HOLY HILL RD	217	0	2	0	
28+15	-	40+92	CTH Q, 110' LT	0	57	1	57	PLACE UNDER SIDEWALK
835+00	-	836+70	LANNON RD MEDIAN ISLANDS	0	288	3	288	
841+95	-	848+33	LANNON RD MEDIAN ISLANDS	0	253	3	253	
845+50	-	848+33	LANNON RD WB LT TURN LANE	28	293	3	293	
834+88	-	836+25	LANNON RD WB LEFT TURN LANE	0	142	1	142	
345+00		694+00	UNDISTRIBUTED	1,000	3,300	43	3,300	
			TOTAL 0010	9,722	11,398	463	36,556	

*QUANTITIES LISTED ELSEWHERE IN PLANS

CONCRETE PATCHING

STATION	TO	STATION	LOCATION	204.0100 REMOVING PAVEMENT SY	415.0410 CONCRETE PAVEMENT APPROACH SLAB SY	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH	416.1715 CONCRETE PAVEMENT REPAIR SHES SY	416.1725 CONCRETE PAVEMENT REPLACEMENT SHES SY	690.0250 SAWING CONCRETE LF	REMARKS
345+00	-	424+50	USH 41/45 NB LANE 1	--	--	33	176	132	--	462	
429+75	-	489+20	USH 41/45 NB LANE 1	--	--	12	64	48	--	168	
489+20	-	560+16	USH 41/45 NB LANE 1	--	--	12	64	48	--	168	
560+16	-	608+30	USH 41/45 NB LANE 1	--	--	15	80	60	--	210	
610+00	-	694+00	USH 41/45 NB LANE 1	--	--	18	96	72	--	252	
345+00	-	424+50	USH 41/45 NB LANE 2	--	--	54	144	108	--	378	
429+75	-	489+20	USH 41/45 NB LANE 2	--	--	48	128	96	--	336	
489+20	-	560+16	USH 41/45 NB LANE 2	--	--	42	112	84	--	294	
560+16	-	608+30	USH 41/45 NB LANE 2	--	--	18	48	36	--	126	
610+00	-	694+00	USH 41/45 NB LANE 2	--	--	42	112	84	--	294	
345+00	-	424+50	USH 41/45 NB LANE 3	--	--	57	304	228	--	798	
429+75	-	489+20	USH 41/45 NB LANE 3	--	--	27	144	108	--	378	
489+20	-	560+16	USH 41/45 NB LANE 3	--	--	33	176	132	--	462	
560+16	-	608+30	USH 41/45 NB LANE 3	--	--	45	240	180	--	630	
610+00	-	694+00	USH 41/45 NB LANE 3	--	--	42	224	168	--	588	
610+00	-	694+00	USH 41/45 NB LANE 4	--	--	9	48	36	--	126	
445+60	-	446+25	USH 41/45 NB LANES	--	--	44	16	0	260	202	EXISTING LOOP DETECTOR AREA
345+00	-	424+50	USH 41/45 SB LANE 1	--	--	15	80	60	--	210	
429+75	-	489+20	USH 41/45 SB LANE 1	--	--	3	16	12	--	42	
489+20	-	560+16	USH 41/45 SB LANE 1	--	--	12	64	48	--	168	
560+16	-	608+30	USH 41/45 SB LANE 1	--	--	6	32	24	--	84	
610+00	-	694+00	USH 41/45 SB LANE 1	--	--	3	16	12	--	42	
345+00	-	424+50	USH 41/45 SB LANE 2	--	--	24	64	48	--	168	
429+75	-	489+20	USH 41/45 SB LANE 2	--	--	24	64	48	--	168	
489+20	-	560+16	USH 41/45 SB LANE 2	--	--	36	96	72	--	252	
560+16	-	608+30	USH 41/45 SB LANE 2	--	--	42	112	84	--	294	
610+00	-	694+00	USH 41/45 SB LANE 2	--	--	30	80	60	--	210	
345+00	-	424+50	USH 41/45 SB LANE 3	--	--	30	160	120	--	420	
429+75	-	489+20	USH 41/45 SB LANE 3	--	--	6	32	24	--	84	
489+20	-	560+16	USH 41/45 SB LANE 3	--	--	45	240	180	--	630	
560+16	-	608+30	USH 41/45 SB LANE 3	--	--	27	144	108	--	378	
610+00	-	694+00	USH 41/45 SB LANE 3	--	--	51	272	204	--	714	
442+22	-	442+50	USH 41/45 SB LANES	--	--	18	16	0	112	128	EXISTING LOOP DETECTOR AREA
			RAMPS - VARIOUS LOCATIONS	--	--	30	160	120	--	420	
838+88	-	839+12	LANNON RD EB SHOULDER	27	27	8	--	--	--	34	
841+20	-	841+55	LANNON RD EB SHOULDER	39	39	11	--	--	--	45	
345+00	-	694+00	USH 41/45 NB UNDISTRIBUTED	--	--	180	960	720	--	2,520	
345+00	-	694+00	USH 41/45 SB UNDISTRIBUTED	--	--	180	960	720	--	2,520	
			TOTAL 0010	66	66	1,332	5,744	4,284	372	15,403	

ASPHALTIC PAVEMENT

STATION TO STATION	LOCATION	440.4410.S INCENTIVE IRI RIDE DOL	(LOWER) 455.0120 ASPHALTIC MATERIAL PG64-28 TON	(UPPER) 455.0150 ASPHALTIC MATERIAL PG70-28P TON	455.0605 TACK COAT GAL	460.1130 HMA PAVEMENT TYPE E-30 TON	460.2000 INCENTIVE DENSITY HMA PAVEMENT DOL	460.4000 HMA COLD WEATHER PAVING TON	460.4110.S REHEATING HMA LONGITUDINAL JOINTS LF	465.0400 ASPHALTIC SHOULDER RUMBLE STRIP LF	REMARKS
USH 41 NB											
344+00 - 364+00	USH 41/45 NB	--	119	75	622	3,230	3,230	808	16,000	1,420	
364+00 - 424+50	USH 41/45 NB	--	379	227	1,882	10,105	10,105	2,526	48,400	6,050	
362+05 - 694+00	USH 41/45 NB	--	350	0	1,844	5,832	5,832	--	--	--	SHOUDER BASE LAYER
429+75 - 575+45	USH 41/45 NB	--	913	547	4,533	24,336	24,336	6,084	116,560	14,300	
575+45 - 606+10	USH 41/45 NB	--	356	123	1,533	7,981	7,981	1,995	24,520	3,065	WEDGING REQD
606+10 - 608+00	USH 41/45 NB	--	13	8	63	339	339	85	1,520	208	
609+75 - 663+41	USH 41/45 NB	--	336	202	1,669	8,963	8,963	2,241	42,928	4,661	
663+41 - 673+10	USH 41/45 NB	--	47	36	301	1,387	1,387	347	7,752	969	
673+10 - 694+00	USH 41/45 NB	--	131	79	650	3,491	3,491	873	16,720	2,090	
673+10 - 694+00	USH 45 NB LANE 4	--	22	17	139	641	641	160	2,090	--	
344+00 - 694+00	USH 41/45 NB		67	35	292	3,408	3,408	852	--	--	TEMP. CONS. JOINTS
USH 41 SB											
345+00 - 364+00	USH 41/45 SB	--	124	71	591	3,261	3,261	815	15,200	1,830	
364+00 - 424+50	USH 41/45 SB	--	379	227	1,882	10,105	10,105	2,526	48,400	5,850	
362+05 - 694+00	USH 41/45 SB	--	350	0	1,844	5,832	5,832	--	--	--	SHOUDER BASE LAYER
429+75 - 575+45	USH 41/45 SB	--	913	547	4,533	24,336	24,336	6,084	116,560	13,705	
575+45 - 606+10	USH 41/45 SB	--	361	127	1,567	8,138	8,138	2,034	24,520	3,065	WEDGING REQD
606+10 - 608+50	USH 41/45 SB	--	17	10	83	450	450	112	1,920	199	
610+25 - 663+41	USH 41/45 SB	--	333	200	1,654	8,879	8,879	2,220	42,528	1,900	
663+41 - 673+10	USH 41/45 SB	--	141	36	495	2,959	2,959	740	7,752	3,880	WEDGING REQD
673+10 - 694+00	USH 41/45 SB	--	131	79	650	3,491	3,491	873	16,720	2,255	
667+00 - 694+00	USH 45 SB LANE 4	--	28	22	180	828	828	207	2,700	--	
345+00 - 694+00	USH 41/45 SB	--	67	35	291	3,398	3,398	850	--	--	TEMP. CONS. JOINTS
RAMPS AT CTH Q											
350+79 - 362+08	USH 41 MEDIAN	--	16	11	94	461	461	115	--	--	MEDIAN
346+00 - 356+50	RAMP B	--	0	19	70	323	323	81	4,200	--	UPPER LAYER ONLY
356+50 - 360+00	RAMP B	--	11	9	73	334	334	83	1,400	--	
353+75 - 360+00	RAMP C, LEFT	--	21	14	103	591	591	148	2,500	--	LANE WIDENING
353+75 - 362+00	RAMP C, RIGHT	--	0	13	48	223	223	56	3,300	825	UPPER LAYER ONLY
362+00 - 366+00	RAMP C	--	7	5	45	208	208	52	1,600	--	
RAMPS AT LANNON RD											
1439+32 - 1445+75	RAMP A	--	7	6	47	215	215	54	2,572	--	
1445+75 - 1453+75	RAMP A	--	0	20	71	327	327	82	3,200	--	UPPER LAYER ONLY
453+75 - 460+00	RAMP B, LEFT	--	7	5	17	193	193	48	2,500	--	LANE WIDENING
453+75 - 461+00	RAMP B, RIGHT	--	0	12	44	204	204	51	--	725	UPPER LAYER ONLY
461+00 - 463+71	RAMP B	--	22	17	143	657	657	164	1,084	--	
1452+75 - 1459+15	RAMP C, LEFT	--	18	12	43	492	492	123	2,560	--	LANE WIDENING
1452+75 - 1461+00	RAMP C, RIGHT	--	0	13	46	213	213	53	3,300	825	UPPER LAYER ONLY
1461+00 - 1463+64	RAMP C	--	9	7	56	256	256	64	1,056	--	
1429+75 - 1443+25	RAMP D	--	19	15	122	561	561	140	5,400	--	
1443+25 - 1453+00	RAMP D	--	0	35	128	590	590	147	3,900	--	UPPER LAYER ONLY
RAMPS AT HOLY HILL RD											
600+00 - 608+50	RAMP A	--	8	6	53	244	244	61	3,680	--	
610+40 - 614+00	RAMP A	--	4	3	27	125	125	31	--	--	
614+00 - 620+00	RAMP A	--	0	13	49	224	224	56	--	--	UPPER LAYER ONLY
620+00 - 630+00	RAMP B	--	0	21	75	347	347	87	5,720	--	UPPER LAYER ONLY
630+00 - 641+50	RAMP B	--	14	11	89	410	410	102	--	--	
599+50 - 604+50	RAMP C (PARALLEL EXIT)	--	16	5	45	349	349	87	990		
603+25 - 607+91	RAMP C	--	3	2	17	79	79	20	4,228	--	
609+63 - 613+50	RAMP C	--	6	5	40	184	184	46	--	--	
612+50 - 619+65	RAMP C (WIDENING)	--	7	5	43	209	209	52	1,430		
613+50 - 619+80	RAMP C	--	0	15	54	249	249	62	--	--	UPPER LAYER ONLY
619+70 - 625+00	RAMP D	--	0	10	38	173	173	43	5,220	--	UPPER LAYER ONLY
625+00 - 642+75	RAMP D	--	31	24	198	909	909	227	--	--	
345+00 - 694+00	$1/TON TO MAX. $10,000	10,000	--	--	--	--	--	--	--	--	
345+00 - 694+00	UNDISTRIBUTED	--	561	431	105	16,525	--	4,131	2,660	--	
345+00 - 694+00	GORES/TAPERS/ETC.	--	43	35	139	1,278	--	319	--	--	
	TOTAL 0010	10,000	6,405	3,505	29,421	168,544	150,741	39,220	615,290	67,822	

ASPHALTIC SURFACE PATCHING

STATION	TO	STATION	LOCATION	465.0110 TON	REMARKS
344+00	-	694+00	USH 41/45 NB - UNDISTRIBUTED	100	EXACT LOCATIONS TO BE DETERMINED BY THE ENGINEER
344+00	-	694+00	USH 41/45 SB - UNDISTRIBUTED	100	EXACT LOCATIONS TO BE DETERMINED BY THE ENGINEER
			TOTAL 0010	200	

ASPHALTIC SURFACE TEMPORARY & ASPHALTIC SURFACE SAFETY ISLANDS

STATION	LOCATION	465.0125 ASPHALTIC SURFACE TEMPORARY TON	465.0305 ASPHALTIC SURFACE SAFETY ISLANDS TON	REMARKS
STA 354+00	RAMP C AT CTH Q	60	27	REPLACE SAFETY ISLAND
STA 345+50	RAMP A AT CTH Q	--	14	REPLACE SAFETY ISLAND
STA 1452+50	RAMP D AT LANNON RD	--	8	REPLACE SAFETY ISLAND
STA 1453+00	RAMP C AT LANNON RD	60	20	REPLACE SAFETY ISLAND
STA 454+00	RAMP B AT LANNON RD	50	19	REPLACE SAFETY ISLAND
	TOTAL 0010	170	88	

ASPHALTIC FLUMES

STATION	TO	STATION	LOCATION	465.0315 SY
352+50	-	353+50	USH 41 MEDIAN	29
355+75	-	355+75	CTH Q SB OFF RAMP, LT	9
445+50	-	447+00	USH 41, 70' RT	212
1454+25	-	1454+25	LANNON SB OFF RAMP, LT	9
			TOTAL 0010	259

CLEANING CULVERT PIPES

STATION	LOCATION	520.7000 EACH	REMARKS - FOR INFO ONLY
354+00	USH 41 NB ON-RAMP	1	22 X 36-IN X 62-FT
355+00	USH 41 NB ON-RAMP	2	17 X 29-IN X 87-FT
458+00	USH 41 NB ON-RAMP	1	30-IN X 150-FT
	TOTAL 0010	4	

REINFORCED CONCRETE CULVERT PIPE

INLET END STATION	INLET END OFFSET	INLET END INVERT ELEV	OUTLET END STATION	OUTLET END OFFSET	OUTLET END INVERT ELEV	LOCATION	520.8000 CONCRETE COLLARS FOR PIPE* EACH	522.0136 CULVERT PIPE REINFORCED CONCRETE CLASS III 36-INCH LF	522.1012 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH LF	522.1030 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH EACH	522.1036 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 36-INCH EACH	633.5200 MARKERS CULVERT END EACH	650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH
443+21	112' RT	837.83	440+05	123' LT	835.82	USH 41/45	1	--	--	--	1	--	1	1
562+40	94' RT	965.10	562+40	102' RT	964.66	USH 41/45	1	--	1	--	--	--	1	1
598+44	85' LT	956.79	599+34	100' RT	952.34	USH 41/45	1	8	--	--	--	1	1	1
617+00	85' LT	956.79	599+34	100' RT	952.34	USH 41/45	1	--	--	1	--	--	1	1
						TOTAL 0010	4	8	1	1	1	1	4	4

*QUANTITIES LISTED ELSEWHERE IN PLAN

CONCRETE ITEMS

STATION TO STATION	LOCATION	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D LF	601.0553 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D LF	602.0410 CONCRETE SIDEWALK 5-INCH SF	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF	620.0300 CONCRETE MEDIAN SLOPED NOSE SF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF
27+00 - 31+00	CTH Q	178	308	984	32	18	486
36+00 - 41+00	CTH Q	--	70	548	16	--	70
834+00 - 837+00	STH 167/Lannon Rd	423	226	--	--	30	649
841+00 - 846+00	STH 167/Lannon Rd	570	--	--	--	29	570
	TOTAL 0010	1,171	604	1,532	48	77	1,775

TEMPORARY BARRIER

	STATION	STATION	LOCATION	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF	614.0905 CRASH CUSHIONS TEMPORARY EACH	REMARKS
STAGE 1	590+00 -	608+50	USH 41/45 SB	1,850	7,400	--	SEE STAGING PLANS FOR MORE INFORMATION
STAGE 2	350+00 -	365+00	USH 41/45 SB	1,500	1,500	1	SEE STAGING PLANS FOR MORE INFORMATION
STAGE 2	351+00 -	365+00	USH 41/45 NB	1,400	1,400	--	SEE STAGING PLANS FOR MORE INFORMATION
STAGE 2	572+00 -	607+25	USH 41/45 NB	3,525	14,100	1	SEE STAGING PLANS FOR MORE INFORMATION
			TOTAL 0010	8,275	24,400	2	

SLOPE PAVING & GRADING

STATION	LOCATION	604.0500 SLOPE PAVING CRUSHED AGGREGATE SY	SPV.0105.01 GRADING, SHAPING, & FINISHING SLOPE PAVING APPROACHES USH 41 & CTH Q LS	SPV.0105.02 USH 41 NB & MAPLE RD LS	SPV.0105.03 USH 41 & LANNON RD LS	SPV.0105.04 USH 41 & FRIESTADT RD LS	SPV.0105.05 USH 41 & HOLY HILL RD LS	SPV.0105.06 GRADING, SHAPING, & FINISHING BACK SLOPE AT STA 446+00 RT LS
349+25 LT	CTH Q	168	1	--	--	--	--	--
349+25 RT	CTH Q	156	--	--	--	--	--	--
432+00 RT	MAPLE ROAD	88	--	1	--	--	--	--
453+25 LT	STH 167/LANNON ROAD	183	--	--	1	--	--	--
453+25 RT	STH 167/LANNON ROAD	183	--	--	--	--	--	--
559+50 LT	FRIESTADT ROAD	76	--	--	--	1	--	--
559+50 RT	FRIESTADT ROAD	77	--	--	--	--	--	--
619+75 LT	HOLY HILL ROAD	99	--	--	--	--	1	--
619+75 RT	HOLY HILL ROAD	97	--	--	--	--	--	--
446+00 RT	LANNON RD RAMP 'A' GORE AREA	--	--	--	--	--	--	1
	TOTAL 0010	1,127	1	1	1	1	1	1

3

CONCRETE BARRIER

STATION START	TO	STATION END	END STA OFFSET LT	END STA OFFSET RT	END STA ELEV LT & RT	SHOULDER CROSS SLOPE	CONCRETE BARRIER PROFILE SLOPE	603.1132 CONCRETE BARRIER TYPE S32 LF	650.7500 CONSTRUCTION STAKING CONCRETE BARRIER LF	SPV.0060.04 CONCRETE BARRIER TRANSITION SPECIAL EACH	SPV.0105.37 REMOVING CONCRETE BARRIER TRANSITION SPECIAL LS
		350+80	1.37'	2.75'	844.43	1.00%	-0.30%	--	--	--	1
350+80	-	350+95	1.30'	2.80'	844.38	1.50%	-0.30%	--	30	1	--
350+95	-	351+15	0.19'	1.81'	844.32	2.00%	-0.30%	--	40	1	--
351+15	-	351+95	0.25'	1.75'	844.08	3.65%	-0.30%	80	160	--	--
351+95	-	352+30	1.00'	1.00'	843.98	4.60%	-0.30%	35	70	--	--
352+30	-	352+50	2.00'	3.00'	844.13	3.84%	0.30%	--	40	1	--
352+50	-	353+00	2.58'	4.01'	844.28	2.35%	0.30%	50	100	--	--
353+00	-	353+50	3.37'	4.83'	844.05	4.00%	-0.48%	50	100	--	--
					TOTAL 0010			215	540	3	1

NOTE: CONSTRUCTION STAKING CONCRETE BARRIER, ELEVATIONS AND OFFSETS ARE TO THE FACE OF THE CONCRETE BARRIER TYPE S32 OR TO THE FACE OF THE CONCRETE BARRIER TRANSITION SPECIAL

3

DRAIN SLOTTED VANE LONGITUDINAL

STATION START	TO	STATION END	END STA OFFSET	PAVEMENT ELEV	DRAIN SLOTTED VANE INVERT ELEV	DRAIN SLOTTED VANE DEPTH	DRAIN SLOTTED VANE SLOPE	650.4000 CONSTRUCTION STAKING STORM SEWER* EACH	SPV.0090.04 DRAIN SLOTTED VANE LONGITUDINAL LF
351+15	-	351+15	1.02' LT	844.32	842.83	1.49	--	--	--
351+15	-	351+95	1.08' LT	844.08	842.59	1.49	-0.30%	1	80
351+95	-	352+30	1.83' LT	843.98	842.49	1.49	-0.30%	1	35
352+30	-	352+50	2.83' LT	844.13	842.37	1.76	-0.60%	1	20
352+50	-	353+00	3.41' LT	844.28	842.07	2.21	-0.60%	1	50
353+00	-	353+46	4.20' LT	844.05	841.79	2.26	-0.60%	1	46
353+46	-	STRUC. No. 7	0.73' RT	843.83	841.68	2.15	-2.23%	1	5
351+15	-	351+15	2.64' RT	844.32	842.83	1.49	--	--	--
351+15	-	351+95	2.58' RT	844.08	842.59	1.49	-0.30%	1	80
351+95	-	352+30	1.83' RT	843.98	842.49	1.49	-0.30%	1	35
352+30	-	352+50	3.83' RT	844.13	842.37	1.76	-0.60%	1	20
352+50	-	353+00	4.84' RT	844.28	842.07	2.21	-0.60%	1	50
353+00	-	353+46	5.66' RT	844.05	841.79	2.26	-0.60%	1	46
353+46	-	STRUC. No. 7	0.73' RT	843.83	841.68	2.15	-2.23%	1	5
					TOTAL 0010			12	472

*QUANTITIES LISTED ELSEWHERE IN PLAN

NOTE: CONSTRUCTION STAKING STORM SEWER, ELEVATIONS AND OFFSETS ARE TO THE FLOWLINE OF DRAIN SLOTTED VANE LONGITUDINAL

3

STORM SEWER

STRUC. NO.	STATION	LOCATION	OFFSET	RIM ELEV	PIPE NO.	FROM	TO	INLET ELEV	DISCH ELEV	PIPE SLOPE	520.8000 CONCRETE COLLARS FOR PIPE* EACH	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH LF	611.0624 INLET COVERS TYPE H EACH	611.0642 INLET COVERS TYPE MS EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3230 INLETS 2X3-FT EACH	611.3901 INLETS MEDIAN 1 GRATE EACH	611.3902 INLETS MEDIAN 2 GRATE EACH	611.8115 ADJUSTING INLET COVERS EACH	611.8120.S COVER PLATES TEMPORARY EACH	650.4000 CONSTRUCTION STAKING STORM SEWER* EACH	SPV.0060.03 STORM SEWER TAP EACH
1	354+40	CTH Q RAMP 'C'	1.0' LT	863.91	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	1	1	--
3	842+79	EB LANNON RD	21.3' LT	868.93	--	--	--	--	--	--	--	--	--	1	--	1	--	--	--	--	1	1	--
4	843+09	EB LANNON RD	33.4' LT	868.65	P-4	4	3	865.32	865.00	1.00%	--	32	--	1	--	--	1	--	--	--	1	1	--
6	836+04	EB LANNON RD	17.6' LT	869.88	--	--	--	--	--	--	--	--	--	1	--	--	1	--	--	--	1	1	--
EXIST.	841+59	EB LANNON RD	19.0' LT	869.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	1	--
EXIST.	841+49	EB LANNON RD	33.0' RT	869.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	1	--
EXIST.	121+26	HOLY HILL RD	24.0' LT	973.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	1	--
EXIST.	121+27	HOLY HILL RD	40.0' RT	973.17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	1	--
7	353+45	USH 41/45 RL	C/L	843.91	P-7	7	8		841.67	841.18	--	100	--	--	1	--	--	1	--	--	1	1	--
8	354+45	USH 41/45 RL	C/L	844.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	1	1
EXIST.	358+00	USH 41/45 RL	C/L	847.90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	1	--
EXIST.	362+00	USH 41/45 RL	C/L	853.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	1	--
10	396+50	USH 41/45 RL	C/L	845.97	P-10	10	11	843.65	842.60	0.30%	--	350	--	--	1	--	--	1	--	--	--	1	--
11	400+00	USH 41/45 RL	C/L	844.90	--	--	--	842.60	841.70	0.23%	1	--	16	--	2	--	--	--	1	--	--	1	--
12	403+50	USH 41/45 RL	C/L	844.98	--	--	--	841.66	841.01	0.23%	2	--	24	--	2	--	--	--	1	--	--	1	--
13	407+00	USH 41/45 RL	C/L	844.69	--	--	--	840.76	840.54	0.12%	--	--	--	--	--	--	--	--	--	--	--	--	--
14	410+00	USH 41/45 RL	C/L	844.40	--	--	--	840.52	840.05	0.12%	2	--	24	--	2	--	--	--	1	--	--	1	--
15	413+00	USH 41/45 RL	C/L	843.77	--	--	--	840.01	839.59	0.14%	--	--	--	--	--	--	--	--	--	1	--	1	--
16	416+00	USH 41/45 RL	C/L	843.58	--	--	--	839.57	839.15	0.14%	2	--	24	--	2	--	--	--	1	--	--	1	--
17	419+00	USH 41/45 RL	C/L	843.37	--	--	--	839.02	838.05	0.16%	--	--	--	--	--	--	--	--	--	--	--	--	--
										TOTAL 0010	7	482	88	4	10	1	2	2	4	8	5	18	1

*QUANTITIES LISTED ELSEWHERE IN PLAN

3

GUARDRAIL

STATION TO STATION	LOCATION	614.0010 BARRIER SYSTEM GRADING SHAPING FINISHING EACH	614.0220 STEEL THRIE BEAM BULLNOSE TERMINAL EACH	614.0230 STEEL THRIE BEAM LF	614.2300 MGS GUARDRAIL 3 LF	614.2330 MGS GUARDRAIL 3 K LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	614.2620 MGS GUARDRAIL TERMINAL TYPE 2 EACH	REMARKS
340+97 - 342+25	CTH Q RAMP 'A' LT	1	--	--	75	--	--	1	1	
340+97 - 342+25	CTH Q RAMP 'A' RT	1	--	--	75	--	--	1	1	
353+50 - 363+25	USH 41/45 LT	--	--	975	--	--	--	--	--	
353+50 - 363+25	USH 41/45 RT	--	--	975	--	--	--	--	--	
355+77 - 359+27	CTH Q RAMP 'C' LT	1	--	--	300	--	--	1	1	
356+55 - 357+83	CTH Q RAMP 'C' RT	1	--	--	75	--	--	1	1	
363+30 - 363+90	USH 41/45	--	1	1	--	--	--	--	--	
1450+22 - 1451+50	STH 167 RAMP 'A' RT	1	--	--	75	--	--	1	--	CONNECT TO EXISTING GUARDRAIL
1450+47 - 1451+75	STH 167 RAMP 'A' LT	1	--	--	75	--	--	1	1	
1455+25 - 1456+53	STH 167 RAMP 'C' RT	1	--	--	75	--	--	1	1	
1455+25 - 1456+53	STH 167 RAMP 'C' LT	1	--	--	75	--	--	1	1	
487+38 - 488+88	USH 41/45 RT	1	--	--	100	--	--	1	1	
489+57 - 491+07	USH 41/45 LT	1	--	--	100	--	--	1	1	
574+02 - 608+08	USH 41/45 RT	1	--	--	--	3313	40	1	--	
575+96 - 608+24	USH 41/45 LT	1	--	--	3188	--	40	--	1	
589+99 - 608+64	USH 41/45 LT	1	--	--	--	1825	40	--	1	
604+07 - 607+72	USH 41/45 RT	1	--	--	275	--	40	1	--	
609+65 - 612+05	USH 41/45 RT	1	--	--	200	--	40	--	1	
610+58 - 611+98	USH 41/45 LT	1	--	--	50	--	40	1	--	
671+39 - 673+14	USH 41/45 RT	1	--	--	125	--	--	1	1	
680+29 - 681+85	USH 41/45 LT	1	--	--	63	--	40	1	--	
680+40 - 681+96	USH 41/45 LT	1	--	--	63	--	40	1	--	
683+48 - 685+15	USH 41/45 RT	1	--	--	150	--	--	1	1	
	TOTAL 0010	20	1	1,951	5,139	5,138	320	17	14	

EROSION CONTROL

STATION	TO	STATION	LOCATION	606.0200 RIPRAP MEDIUM CY	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2004 EROSION MAT CLASS I TYPE B SY	628.2037 EROSION MAT CLASS III TYPE C SY	628.7005 INLET PROTECTION TYPE A EACH	628.7010 INLET PROTECTION TYPE B EACH	628.7015 INLET PROTECTION TYPE C EACH	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	628.7560 TRACKING PADS EACH	645.0130 GEOTEXTILE FABRIC TYPE R SY
345+00	-	362+00	USH 41/45	2	--	--	--	2,340	--	9	1	12	1	1	6
362+00	-	375+00	USH 41/45	--	--	--	--	--	2	--	--	--	--	--	--
375+00	-	390+00	USH 41/45	--	--	--	--	--	3	--	--	--	--	--	--
390+00	-	405+00	USH 41/45	--	--	--	--	--	2	--	--	--	--	--	--
405+00	-	423+00	USH 41/45	--	--	--	--	--	3	--	--	--	--	--	--
430+00	-	450+00	USH 41/45	--	--	--	350	170	3	--	--	36	1	--	--
450+00	-	465+00	USH 41/45	2	1,280	1,280	2,300	300	4	--	--	48	--	2	6
465+00	-	480+00	USH 41/45	--	--	--	--	--	4	--	--	--	--	--	--
480+00	-	495+00	USH 41/45	--	600	600	--	--	3	--	--	--	--	--	--
495+00	-	510+00	USH 41/45	--	--	--	--	--	3	--	--	--	--	--	--
510+00	-	525+00	USH 41/45	--	--	--	--	--	4	--	--	24	2	--	--
525+00	-	540+00	USH 41/45	--	--	--	--	--	3	--	--	--	--	--	--
540+00	-	555+00	USH 41/45	--	--	--	--	--	4	--	--	--	1	--	--
555+00	-	570+00	USH 41/45	--	--	--	--	320	4	--	--	48	--	--	--
570+00	-	585+00	USH 41/45	--	1,365	1,365	--	3,010	2	--	--	--	1	1	--
585+00	-	600+00	USH 41/45	--	500	500	--	3,990	4	--	--	--	1	--	--
600+00	-	615+00	USH 41/45	--	1,500	1,500	--	1,300	2	2	--	--	--	--	--
615+00	-	630+00	USH 41/45	--	--	--	--	320	2	--	--	48	--	--	--
630+00	-	645+00	USH 41/45	--	--	--	--	--	3	--	--	12	--	--	--
645+00	-	660+00	USH 41/45	--	--	--	--	--	4	--	--	--	--	--	--
660+00	-	675+00	USH 41/45	--	250	250	--	--	2	--	--	48	--	--	--
675+00	-	690+00	USH 41/45	--	400	400	--	--	1	--	--	96	--	--	--
690+00	-	711+00	USH 41/45	--	--	--	--	--	3	--	--	48	--	--	--
UNDISTRIBUTED (25%)			USH 41/45	5	1,475	1,475	665	2,940	20	2	1	105	5	--	5
			TOTAL 0010	9	7,370	7,370	3,315	14,690	85	13	2	525	12	4	17

SPECIAL 05. HEAVY DUTY SILT FENCE

STATION	TO	STATION	LOCATION	SPV.0090.05 LF
354+93	-	361+80	USH 41/45 SB OF RAMP TO CTH Q	700
590+00	-	599+00	USH 41/45 SB OUTSIDE SHOULDER	930
			UNDISTRIBUTED	200
			TOTAL 0010	1,830

LANDSCAPING

STATION TO STATION	LOCATION	625.0100 TOPSOIL SY	625.0500 SALVAGED TOPSOIL SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0130 SEEDING MIXTURE NO. 30 LB	630.0140 SEEDING MIXTURE NO. 40 LB	630.0200 SEEDING TEMPORARY LB	630.0300 SEEDING BORROW PIT LB
348+00 - 352+50	USH 41/45 SLOPE PAVING APPROACHES	--	--	1	--	6	--	9	--
354+00 - 360+00	CTH Q RAMP 'C' LT	--	2,010	2	--	37	--	55	--
395+00 - 419+00	USH 41/45 MEDIAN DITCH	--	--	5	58	58	--	173	--
431+50 - 433+50	USH 41/45 SLOPE PAVING APPROACHES	--	--	1	--	4	--	5	--
1445+50 - 1447+00	STH 167 RAMP 'A' LT	--	--	1	--	7	--	10	--
452+00 - 455+00	USH 41/45 SLOPE PAVING APPROACHES	--	--	1	--	6	--	9	--
1452+50 - 1459+50	STH 167 (LANNON RD) RAMP 'C' LT	--	1,160	1	--	21	--	32	--
454+25 - 460+00	STH 167 (LANNON RD) RAMP 'B' LT	--	1,140	1	--	21	--	31	--
558+50 - 562+00	USH 41/45 SLOPE PAVING APPROACHES	--	--	1	--	6	--	9	--
572+00 - 608+00	USH 41/45 LT	--	8,300	6	--	250	--	225	--
599+50 - 604+50	USH 41/45 RT	--	550	1	--	10	--	15	--
618+50 - 621+00	USH 41/45 SLOPE PAVING APPROACHES	--	--	1	--	6	--	9	--
612+79 - 619+50	STH 167 (HOLY HILL RD) RAMP 'C'	--	750	1	--	14		21	--
27+10 28+75	CTH Q BETWEEN CURB AND SIDEWALK	186	--	1	--	--	4	--	--
30+00 30+75	CTH Q BOTH SIDES OF SIDEWALK	77	--	1	--	--	2	--	--
39+50 40+00	CTH Q BOTH SIDES OF SIDEWALK	46	--	1	--	--	1	--	--
40+25 41+00	CTH Q BOTH SIDES OF SIDEWALK	85	--	1	--	--	2	--	--
835+00 848+33	LANNON ROAD MEDIAN ISLANDS	1,432	--	1	--	--	26	--	--
	UNDISTRIBUTED	456	--	1	--	--	9	--	110
	TOTAL 0010	2,282	13,910	21	58	446	44	603	110

DELINEATORS

STATION TO STATION	LOCATION	633.0100 DELINEATOR POSTS STEEL EACH	633.0200 DELINEATORS FLEXIBLE EACH	633.0500 DELINEATOR REFLECTORS EACH
346+00 - 680+00	NB USH 41/45 RT	69	--	69
346+00 - 676+00	SB USH 41/45 LT	72	--	72
353+00 - 371+00	CTH Q NB ON-RAMP RT	--	19	--
357+00 - 371+00	CTH Q SB OFF-RAMP LT	--	15	--
1433+00 - 1446+00	LANNON RD SB ON-RAMP LT	--	14	--
1436+00 - 1450+00	LANNON RD NB OFF-RAMP RT	--	15	--
1456+00 - 1469+00	LANNON RD SB OFF-RAMP LT	--	14	--
457+00 - 474+00	LANNON RD NB ON-RAMP RT	--	18	--
601+00 - 603+00	SB USH 41/45 LT	--	3	--
613+00 - 616+00	HOLY HILL RD NB OFF-RAMP RT	--	4	--
613+00 - 617+00	HOLY HILL RD SB ON-RAMP LT	--	5	--
628+00 - 641+00	HOLY HILL RD SB OFF-RAMP LT	--	14	--
628+00 - 642+00	HOLY HILL RD NB ON-RAMP RT	--	15	--
683+00 - 685+00	SB USH 45 LT	--	3	--
686+00 - 694+00	NB USH 45 RT	--	9	--
	TOTAL 0010	141	148	141

TRAFFIC CONTROL SIGNS FIXED MESSAGE

SIGN NO.	LOCATION	643.1000 SF
1 & 2	USH 41/45 NB SOUTH OF PROJECT	182
3,4,5 & 6	CTH Q & RAMPS	116
7,8,9,10,11 & 12	LANNON RD & RAMPS	148
13,14,15,16,17 & 18	HOLY HILL RD & RAMPS	148
19 & 21	USH 41 SB NORTH OF PROJECT	182
20 & 22	USH 45 SB NORTH OF PROJECT	140
A (DETOUR PLANS)	EXIT 52 AT CTH Q	40
B (DETOUR PLANS)	EXIT 54 AT LANNON RD	40
C (DETOUR PLANS)	EXIT 57 AT HOLY HILL RD	40
	TOTAL 0010	1036

TRAFFIC CONTROL

STATION	TO	STATION	LOCATION	643.0200 SURVEILLANCE AND MAINTENANCE ID 1100-38-70 DAY	643.0300 DRUMS DAY	643.0410 BARRICADES TYPE II DAY	643.0420 BARRICADES TYPE III DAY	643.0705 WARNING LIGHTS TYPE A DAY	643.0715 WARNING LIGHTS TYPE C DAY	643.0800 ARROW BOARDS DAY	643.0900 SIGNS DAY	643.0910 COVERING SIGNS TYPE I EACH	643.0920 COVERING SIGNS TYPE II EACH	643.1050 SIGNS PCMS DAY	643.1055.S TRUCK OR TRAILER-MOUNTED ATTENUATOR DAY
STAGE 1A & 1B:				52											
209+00	-	344+00	USH 41/45 NB	--	1,976	--	104	208	1,560	156	728	--	--	104	104
344+00	-	453+00	USH 41/45 NB	--	12,480	--	728	1,456	--	--	832	2	--	--	--
453+00	-	560+00	USH 41/45 NB	--	11,700	--	832	1,664	--	--	936	2	--	--	--
560+00	-	620+00	USH 41/45 NB	--	6,812	--	572	1,144	260	--	572	3	--	--	--
620+00	-	694+00	USH 41/45 NB	--	8,476	--	520	1,040	--	--	624	--	--	--	--
694+00	-	770+00	USH 41/45 NB	--	416	--	--	--	--	--	208	--	--	--	--
712+00	-	686+00	USH 45 SB	--	2,080	--	104	208	520	104	312	--	--	104	--
834+00	-	694+00	USH 41 SB	--	2,132	--	104	208	1,560	104	832	--	--	104	104
694+00	-	620+00	USH 41/45 SB	--	8,528	--	728	1,456	--	--	728	3	--	--	--
620+00	-	560+00	USH 41/45 SB	--	6,500	--	364	728	--	--	468	--	--	--	--
560+00	-	453+00	USH 41/45 SB	--	11,596	--	832	1,664	--	--	832	3	--	--	--
453+00	-	342+00	USH 41/45 SB	--	12,480	--	676	1,352	260	--	988	4	--	--	--
STAGE 1A:															
28+00	-	42+00	CTH Q	--	90	40	--	20	50	10	80	--	--	--	--
353+50	-	354+50	RAMP C @ CTH Q	--	180	--	10	20	--	--	--	--	--	--	--
828+50	-	855+75	LANNON RD	--	2,400	--	90	180	1,210	20	220	--	--	--	--
			RAMP B @ LANNON RD	--	100	--	10	20	--	--	--	--	--	--	--
			RAMP C @ LANNON RD	--	170	--	10	20	--	--	--	--	--	--	--
			RAMP C @ HOLY HILL RD	--	440	--	20	40	230	--	100	--	--	--	--
STAGE 1B:															
28+00	-	42+00	CTH Q	--	380	80	60	120	--	20	360	--	48	--	--
346+25	-	346+75	RAMP B @ CTH Q	--	220	80	--	--	--	--	--	--	--	--	--
353+50	-	362+25	RAMP C @ CTH Q	--	640	80	40	80	80	20	40	--	--	--	--
828+00	-	855+75	LANNON RD	--	240	--	20	40	--	20	340	--	106	--	--
1453+00	-	1461+25	RAMP B @ LANNON RD	--	760	--	40	80	80	20	40	--	--	--	--
454+00	-	460+00	RAMP C @ LANNON RD	--	580	--	40	80	160	--	20	--	--	--	--
HOLY HILL RD AND			RAMP C @ HOLY HILL RD	--	700	--	40	80	260	20	160	--	66	--	--
STAGE 2A:				78											
209+00	-	344+00	USH 41/45 NB	--	2,964	--	156	312	2,340	234	468	--	--	156	156
344+00	-	453+00	USH 41/45 NB	--	17,316	--	2,106	4,212	--	--	2,106	2	--	--	--
453+00	-	560+00	USH 41/45 NB	--	17,238	--	1,872	3,744	--	--	1,872	2	--	--	--
560+00	-	620+00	USH 41/45 NB	--	9,750	--	936	1,872	--	--	936	3	--	--	--
620+00	-	694+00	USH 41/45 NB	--	13,416	--	1,404	2,808	--	--	1,404	--	--	--	--
694+00	-	770+00	USH 41/45 NB	--	1,482	--	--	--	--	--	156	--	--	--	--
712+00	-	686+00	USH 45 SB	--	4,056	--	78	156	2,574	156	78	--	--	156	--
834+00	-	694+00	USH 41 SB	--	1,092	--	234	468	--	--	702	--	--	156	156
694+00	-	620+00	USH 41/45 SB	--	13,182	--	1,170	2,340	--	--	1,170	3	--	--	--
620+00	-	560+00	USH 41/45 SB	--	9,828	--	936	1,872	--	--	936	--	--	--	--
560+00	-	453+00	USH 41/45 SB	--	17,238	--	1,872	3,744	--	--	1,872	3	--	--	--
453+00	-	342+00	USH 41/45 SB	--	17,472	--	1,872	3,744	--	--	2,028	4	--	--	--
28+00	-	42+00	CTH Q	--	450	--	30	60	450	30	240	--	--	60	--
336+00	-	344+00	RAMP A @ CTH Q	--	200	--	40	80	--	--	40	--	--	--	--
346+00	-	360+00	RAMP B @ CTH Q	--	200	40	30	60	50	10	30	--	--	--	--
354+00	-	358+00	RAMP C @ CTH Q	--	180	--	10	20	--	--	--	--	--	--	--
344+00	-	354+00	RAMP D @ CTH Q	--	100	--	10	20	50	--	10	--	--	--	--
834+50	-	845+50	LANNON RD	--	2,070	--	90	180	420	30	270	--	--	60	--
1445+75	-	1453+00	RAMP A @ LANNON RD	--	350	--	20	40	--	10	20	--	--	--	--
453+50	-	462+00	RAMP B @ LANNON RD	--	100	--	10	20	--	--	--	--	--	--	--
1452+75	-	1461+00	RAMP C @ LANNON RD	--	170	--	10	20	--	--	--	--	--	--	--
1442+25	-	1452+75	RAMP D @ LANNON RD	--	350	--	20	40	--	10	20	--	--	--	--
108+00	-	132+00	HOLY HILL RD	--	--	--	--	--	--	20	80	--	--	20	--
613+00	-	620+25	RAMP A @ HOLY HILL	--	350	--	20	40	130	10	80	--	--	--	--
620+30	-	631+00	RAMP B @ HOLY HILL	--	350	--	20	40	130	10	80	--	--	--	--
612+50	-	619+75	RAMP C @ HOLY HILL	--	350	--	20	40	130	10	80	--	--	--	--
619+50	-	631+00	RAMP D @ HOLY HILL	--	350	--	20	40	130	10	80	--	--	--	--
STAGE 2B:				95											
209+00	-	344+00	USH 41/45 NB	--	3,610	--	190	380	2,850	285	570	--	--	190	190
344+00	-	453+00	USH 41/45 NB	--	21,090	--	2,565	5,130	--	--	2,565	--	--	190	--
453+00	-	560+00	USH 41/45 NB	--	20,995	--	2,280	4,560	--	--	2,280	--	--	--	--
560+00	-	620+00	USH 41/45 NB	--	11,875	--	1,140	2,280	--	--	1,140	--	--	--	--
620+00	-	694+00	USH 41/45 NB	--	16,340	--	1,710	3,420	--	--	1,710	--	--	--	--
694+00	-	770+00	USH 41/45 NB	--	1,805	--	--	--	--	--	190	--	--	--	--
712+00	-	686+00	USH 45 SB	--	4,940	--	95	190	3,135	190	95	--	--	190	190
834+00	-	694+00	USH 41 SB	--	1,330	--	285	570	--	--	855	--	--	--	--
694+00	-	620+00	USH 41/45 SB	--	16,055	--	1,425	2,850	--	--	1,425	--	--	--	--
620+00	-	560+00	USH 41/45 SB	--	11,970	--	1,140	2,280	--	--	1,140	--	--	--	--
560+00	-	453+00	USH 41/45 SB	--	20,995	--	2,280	4,560	--	--	2,280	--	--	--	--
453+00	-	342+00	USH 41/45 SB	--	21,280	--	2,280	4,560	--	--	2,470	--	--	190	--
UNDISTRIBUTED				--	37,497	32	3,432	6,866	1,862	151	4,090	--	22	168	90
			TOTAL 0010	225	412,462	352	37,752	75,526	20,481	1,660	44,988	34	242	1,848	990

TRAFFIC CONTROL DETOUR

STATION	TO	STATION	LOCATION	PROJECT 1100-38-70 SIGNS 643.2000 EACH	643.3000 DAY	REMARKS
STAGE 1A:						
354+00	-	372+00	USH 41/45 SB EXIT RAMP AT CTH Q	0.1	12	CLOSE USH 41/45 SB EXIT & USH 41/45 NB ENTRANCE RAMPS AT CTH Q
454+00	-	477+00	USH 41/45 RAMPS AT LANNON RD	--	28	
STH 175	-	USH 41/45	CTH Q	--	88	
CTH Q	-	CTH Y (LANNON RD)	STH 175	--	76	
STH 175	-	USH 41/45	LANNON RD	--	44	
323+00	-	346+00	USH 41/45 NB EXIT RAMP TT CTH Q	0.1	44	CLOSE USH 41/45 NB EXIT & USH 41/45 SB ENTRANCE RAMPS AT LANNON RD
437+00	-	454+00	USH 41/45 RAMPS AT LANNON RD	--	16	
STH 175	-	USH 41/45	CTH Q	--	80	
CTH Q	-	CTH Y (LANNON RD)	STH 175	--	108	
STH 175	-	USH 41/45	LANNON RD	--	76	
454+00	-	477+00	USH 41/45 SB EXIT RAMP AT LANNON DR	0.1	12	CLOSE USH 41/45 SB EXIT & USH 41/45 NB ENTRANCE RAMPS AT LANNON RD
620+00	-	647+00	USH 41/45 RAMPS AT HOLY HILL RD	--	44	
STH 175	-	USH 41/45	LANNON RD	--	112	
CTH Y (LANNON RD)	-	STH 167 (HOLY HILL RD)	STH 175	--	144	
STH 175	-	USH 41/45	STH 167 (HOLY HILL RD)	--	60	
429+00	-	454+00	USH 41/45 NB EXIT RAMP AT LANNON RD	0.1	44	CLOSE USH 41/45 NB EXIT & USH 41/45 SB ENTRANCE RAMPS AT HOLY HILL RD
603+00	-	620+00	USH 41/45 RAMPS AT HOLY HILL RD	--	12	
STH 175	-	USH 41/45	LANNON RD	--	60	
CTH Y (LANNON RD)	-	STH 167 (HOLY HILL RD)	STH 175	--	128	
STH 175	-	USH 41/45	STH 167 (HOLY HILL RD)	--	88	
454+00	-	620+00	USH 41/45 SB EXIT RAMP AT LANNON DR	0.1	40	CLOSE USH 41/45 SB EXIT & USH 41/45 NB ENTRANCE RAMPS AT HOLY HILL RD
620+00	-	638+00	USH 41/45 RAMPS AT HOLY HILL RD	--	12	
STH 175	-	USH 41/45	LANNON RD	--	56	
CTH Y (LANNON RD)	-	STH 167 (HOLY HILL RD)	STH 175	--	108	
STH 175	-	USH 41/45	STH 167 (HOLY HILL RD)	--	72	
CTH Y (LANNON RD)	-	STH 167 (HOLY HILL RD)	USH 41/45 SB Mainline	--	60	
STAGE 2B:						
354+00	-	372+00	USH 41/45 SB EXIT RAMP AT CTH Q	0.1	6	CLOSE USH 41/45 SB EXIT & USH 41/45 NB ENTRANCE RAMPS AT CTH Q
454+00	-	477+00	USH 41/45 RAMPS AT LANNON RD	--	14	
STH 175	-	USH 41/45	CTH Q	--	44	
CTH Q	-	CTH Y (LANNON RD)	STH 175	--	38	
STH 175	-	USH 41/45	LANNON RD	--	22	
323+00	-	346+00	USH 41/45 NB EXIT RAMP TT CTH Q	0.1	22	CLOSE USH 41/45 NB EXIT & USH 41/45 SB ENTRANCE RAMPS AT LANNON RD
437+00	-	454+00	USH 41/45 RAMPS AT LANNON RD	--	8	
STH 175	-	USH 41/45	CTH Q	--	40	
CTH Q	-	CTH Y (LANNON RD)	STH 175	--	54	
STH 175	-	USH 41/45	LANNON RD	--	38	
454+00	-	477+00	USH 41/45 SB EXIT RAMP AT LANNON DR	0.1	6	CLOSE USH 41/45 SB EXIT & USH 41/45 NB ENTRANCE RAMPS AT LANNON RD
620+00	-	647+00	USH 41/45 RAMPS AT HOLY HILL RD	--	22	
STH 175	-	USH 41/45	LANNON RD	--	56	
CTH Y (LANNON RD)	-	STH 167 (HOLY HILL RD)	STH 175	--	72	
STH 175	-	USH 41/45	STH 167 (HOLY HILL RD)	--	30	
429+00	-	454+00	USH 41/45 NB EXIT RAMP AT LANNON RD	0.1	22	CLOSE USH 41/45 NB EXIT & USH 41/45 SB ENTRANCE RAMPS AT HOLY HILL RD
603+00	-	620+00	USH 41/45 RAMPS AT HOLY HILL RD	--	6	
STH 175	-	USH 41/45	LANNON RD	--	30	
CTH Y (LANNON RD)	-	STH 167 (HOLY HILL RD)	STH 175	--	64	
STH 175	-	USH 41/45	STH 167 (HOLY HILL RD)	--	44	
454+00	-	62+00	USH 41/45 SB EXIT RAMP AT LANNON DR	0.1	20	CLOSE USH 41/45 SB EXIT & USH 41/45 NB ENTRANCE RAMPS AT HOLY HILL RD
620+00	-	638+00	USH 41/45 RAMPS AT HOLY HILL RD	--	6	
STH 175	-	USH 41/45	LANNON RD	--	28	
CTH Y (LANNON RD)	-	STH 167 (HOLY HILL RD)	STH 175	--	54	
STH 175	-	USH 41/45	STH 167 (HOLY HILL RD)	--	36	
CTH Y (LANNON RD)	-	STH 167 (HOLY HILL RD)	USH 41/45 SB Mainline	--	30	
			TOTAL 0010	1.0	2436	

PAVEMENT MARKING

STATION TO STATION	LOCATION	646.0106 PAVEMENT MARKING EPOXY 4-INCH WHITE LF	646.0106 PAVEMENT MARKING EPOXY 4-INCH WHITE 12.5' LINE W/ 37.5' GAP LF	646.0106 PAVEMENT MARKING EPOXY 4-INCH WHITE 3' LINE W/ 9' GAP LF	646.0106 PAVEMENT MARKING EPOXY 4-INCH YELLOW LF	646.0126 PAVEMENT MARKING EPOXY 8-INCH WHITE LF	646.0841.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH 12.5' LINE W/ 37.5' GAP LF	646.0843.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH 3' LINE W/ 9' GAP LF	646.0843.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH 2' LINE W/ 6' GAP LF	647.0186 PAVEMENT MARKING ARROWS EPOXY TYPE 4 EACH	647.0456 PAVEMENT MARKING CURB EPOXY LF	647.0606 PAVEMENT MARKING ISLAND NOSE EPOXY EACH	647.0746 PAVEMENT MARKING DIAGONAL EPOXY 24-INCH LF
338+10 - 345+00	USH 41/45	640	690	--	1,390	1,446	--	--	--	--	1	--	--	--
345+00 - 372+00	USH 41/45	7,315	--	170	7,385	--	2,700	2,712	--	--	1	--	--	125
372+00 - 424+50	USH 41/45	10,500	--	--	10,500	--	5,250	--	--	--	--	--	--	--
429+75 - 474+00	USH 41/45	13,582	--	339	13,602	--	5,130	7,018	26	74	2	750	5	280
474+00 - 600+00	USH 41/45	20,090	--	--	20,090	--	12,600	--	--	--	--	--	--	--
600+00 - 644+00	USH 41/45	11,136	--	202	9,736	--	4,228	3,632	--	--	2	--	--	355
644+00 - 695+00	USH 41/45	9,968	--	--	9,980	--	4,572	2,774	321	--	--	--	--	1,058
	TOTAL 0010		147,315			1,446	34,480		16,557		6	750	5	1,818

PAVEMENT MARKING (CONTINUED)

STATION TO STATION	LOCATION	646.0790.S REMOVING RAISED PAVEMENT MARKERS EACH	SPV.0060.12 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2 EACH	SPV.0060.13 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3 EACH	SPV.0060.14 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 5 EACH	SPV.0060.15 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS EACH	SPV.0090.02 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 6-INCH LF	SPV.0090.03 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP BARS 18-INCH LF
338+10 - 345+00	USH 41/45	8	--	--	--	--	--	--
345+00 - 372+00	USH 41/45	--	4	2	--	4	241	67
327+00 - 424+50	USH 41/45	--	--	--	--	--	--	--
429+75 - 474+00	USH 41/45	--	13	4	--	13	--	227
474+00 - 600+00	USH 41/45	--	--	--	--	--	--	--
600+00 - 644+00	USH 41/45	16	2	2	--	2	--	100
644+00 - 695+00	USH 41/45	--	--	--	2	--	--	--
	TOTAL 0010	24	19	8	2	19	241	394

TEMPORARY PAVEMENT MARKING

	STATION TO STATION	LOCATION	646.0600 REMOVING PAVEMENT MARKINGS LF	649.0100 TEMPORARY PAVEMENT MARKING 4-INCH LF	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH LF	649.0701 TEMPORARY PAVEMENT MARKING 8-INCH LF	649.0801 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH LF	649.1100 TEMPORARY PAVEMENT MARKING STOP LINE 18-INCH LF	649.1500 TEMPORARY PAVEMENT MARKING DIAGONAL 12-INCH LF	649.1700 TEMPORARY PAVEMENT MARKING ARROWS EACH	649.1900 TEMPORARY PAVEMENT MARKING WORDS EACH
STAGE 2	341+00 - 345+00	USH 41 SB YELLOW EL	400	--	400	--	--	--	--	--	--
STAGE 2	341+00 - 345+00	USH 41 SB CENTER SKIPS	200	--	200	--	--	--	--	--	--
STAGE 2	341+00 - 345+00	USH 41 SB WHITE EL	400	--	400	--	--	--	--	--	--
STAGE 2	345+00 - 424+50	USH 41 SB YELLOW EL	7,950	15,900	--	--	--	--	--	--	--
STAGE 2	345+00 - 424+50	USH 41 SB CENTER SKIPS	3,975	7,950	--	--	--	--	--	--	--
STAGE 2	345+00 - 424+50	USH 41 SB WHITE EL	7,950	15,780	--	370	--	--	--	--	--
STAGE 2	424+50 - 429+75	USH 41 SB YELLOW EL	525	--	525	--	--	--	--	--	--
STAGE 2	424+50 - 429+75	USH 41 SB CENTER SKIPS	263	--	263	--	--	--	--	--	--
STAGE 2	424+50 - 429+75	USH 41 SB WHITE EL	525	--	525	--	--	--	--	--	--
STAGE 2	429+75 - 608+28	USH 41 SB YELLOW EL	17,853	41,828	--	--	--	--	--	--	--
STAGE 2	429+75 - 608+28	USH 41 SB CENTER SKIPS	8,927	20,914	--	--	--	--	--	--	--
STAGE 2	429+75 - 608+28	USH 41 SB WHITE EL	16,263	38,101	--	1,188	--	--	--	--	--
STAGE 2	608+28 - 610+00	USH 41 SB YELLOW EL	172	--	172	--	--	--	--	--	--
STAGE 2	608+28 - 610+00	USH 41 SB CENTER SKIPS	86	--	86	--	--	--	--	--	--
STAGE 2	608+28 - 610+00	USH 41 SB WHITE EL	172	--	--	--	72	--	--	--	--
STAGE 2	610+00 - 698+00	USH 41 SB YELLOW EL	8,800	16,800	1,800	--	--	--	--	--	--
STAGE 2	610+00 - 698+00	USH 41 SB CENTER SKIPS	4,400	8,800	--	--	--	--	--	--	--
STAGE 2	610+00 - 698+00	USH 41 SB WHITE EL	8,800	13,984	--	2,024	--	--	--	--	--
STAGE 2	340+00 - 344+00	USH 41 NB YELLOW EL	400	--	400	--	--	--	--	--	--
STAGE 2	340+00 - 344+00	USH 41 NB CENTER SKIPS	200	--	200	--	--	--	--	--	--
STAGE 2	340+00 - 344+00	USH 41 NB WHITE EL	400	--	400	--	--	--	--	--	--
STAGE 2	344+00 - 424+50	USH 41 NB YELLOW EL	8,050	16,100	--	--	--	--	--	--	--
STAGE 2	344+00 - 424+50	USH 41 NB CENTER SKIPS	4,025	8,050	--	--	--	--	--	--	--
STAGE 2	344+00 - 424+50	USH 41 NB WHITE EL	7,166	14,332	--	396	--	--	--	--	--
STAGE 2	424+50 - 429+75	USH 41 NB YELLOW EL	525	--	525	--	--	--	--	--	--
STAGE 2	424+50 - 429+75	USH 41 NB CENTER SKIPS	263	--	263	--	--	--	--	--	--
STAGE 2	424+50 - 429+75	USH 41 NB WHITE EL	525	--	525	--	--	--	--	--	--
STAGE 2	429+75 - 608+28	USH 41 NB YELLOW EL	17,853	41,828	--	--	--	--	--	--	--
STAGE 2	429+75 - 608+28	USH 41 NB CENTER SKIPS	8,927	20,914	--	--	--	--	--	--	--
STAGE 2	429+75 - 608+28	USH 41 NB WHITE EL	17,152	39,589	--	954	--	--	--	--	--
STAGE 2	608+28 - 610+00	USH 41 NB YELLOW EL	172	--	172	--	--	--	--	--	--
STAGE 2	608+28 - 610+00	USH 41 NB CENTER SKIPS	86	--	86	--	--	--	--	--	--
STAGE 2	608+28 - 610+00	USH 41 NB WHITE EL	43	--	43	--	--	--	--	--	--
STAGE 2	610+00 - 698+00	USH 41 NB YELLOW EL	8,800	16,800	800	--	--	--	--	--	--
STAGE 2	610+00 - 698+00	USH 41 NB CENTER SKIPS	4,585	8,970	200	1,520	--	--	--	--	--
STAGE 2	610+00 - 698+00	USH 41 NB WHITE EL	8,087	14,901	800	1,084	--	--	--	--	--
STAGE 1	353+00 - 362+00	CTH Q SB OFF-RAMP	--	1,242	--	262	--	38	64	4	2
STAGE 1	346+00 - 347+00	CTH Q NB ON-RAMP	--	225	--	--	--	--	--	--	--
STAGE 1	827+00 - 856+00	LANNON RD	--	--	3,985	700	--	--	--	--	--
STAGE 1	1452+50 - 1461+00	LANNON RD SB OFF-RAMP	75	875	--	300	--	38	66	4	2
STAGE 1	454+00 - 462+00	LANNON RD NB ON-RAMP	--	900	--	--	--	--	--	--	--
STAGE 2	353+00 - 360+00	CTH Q SB OFF-RAMP	--	700	--	850	--	16	125	2	2
STAGE 2	1452+50 - 1459+00	LANNON RD SB OFF-RAMP	--	750	--	1,000	--	40	--	4	2
STAGE 2	453+75 - 455+00	LANNON RD NB ON-RAMP	--	--	--	275	--	--	--	--	--
		TOTAL 0010	174,993	366,233	12,769	10,923	72	132	255	14	8

CONSTRUCTION STAKING

STATION TO STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL PROJECT ID 1100-38-70 LS	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
572+00 - 608+00	USH 41/45 LT	3,600	3,600	--	3,600
355+00 - 360+00	CTH Q RAMP 'C'	500	500	--	500
1453+25 - 1459+15	LANNON RD RAMP 'C'	590	590	--	590
454+50 - 460+00	LANNON RD RAMP 'B'	550	550	--	550
344+00 - 694+00	PROJECT LIMITS	--	--	1	--
	TOTAL 0010	5,240	5,240	1	5,240

CONSTRUCTION STAKING RESURFACING REFERENCE

STATION TO STATION	LOCATION	650.8000 LF	REMARKS
344+00.00 - 424+50.00	USH 41/45 - R/L	8,050	PLACE STAKES ALONG REFERENCE LINE
429+75.00 - 659+00.00	USH 41/45 - R/L	22,925	PLACE STAKES ALONG REFERENCE LINE
660+00.00 - 694+00.00	USH 41/45 - 15' LT	3,400	PLACE STAKES AT 15' LEFT OF REFERENCE LINE
345+63.13 - 370+80.01	CTH Q RAMP 'B' - 15' RT	2,517	PLACE STAKES AT 15' RIGHT OF REFERENCE LINE
360+00.00 - 370+80.13	CTH Q RAMP 'C' - 15' LT	1,080	PLACE STAKES AT 15' LEFT OF REFERENCE LINE
1442+80.58 - 1450+00.00	LANNON RD RAMP 'A' - 15' RT	719	PLACE STAKES AT 15' RIGHT OF REFERENCE LINE
1450+00.00 - 1454+11.62	LANNON RD RAMP 'A' - 25' RT	412	PLACE STAKES AT 25' RIGHT OF REFERENCE LINE
1434+22.74 - 1441+00.00	LANNON RD RAMP 'D' - 15' LT	677	PLACE STAKES AT 15' LEFT OF REFERENCE LINE
1441+00.00 - 1453+06.29	LANNON RD RAMP 'D' - 50' LT	1,206	PLACE STAKES AT 50' LEFT OF REFERENCE LINE
460+00.00 - 463+83.84	LANNON RD RAMP 'B' - 15' RT	384	PLACE STAKES AT 15' RIGHT OF REFERENCE LINE
1459+00.00 - 1463+64.45	LANNON RD RAMP 'C' - 15' LT	464	PLACE STAKES AT 15' LEFT OF REFERENCE LINE
609+18.00 - 620+19.24	HOLY HILL RD RAMP 'C' 15' RT	1,101	PLACE STAKES AT 15' RIGHT OF REFERENCE LINE
610+80.00 - 620+36.97	HOLY HILL RD RAMP 'A' 15' LT	957	PLACE STAKES AT 15' LEFT OF REFERENCE LINE
619+58.99 - 634+29.99	HOLY HILL RD RAMP 'B'	1,471	PLACE STAKES AT 15' LEFT OF REFERENCE LINE
619+48.51 - 632+99.99	HOLY HILL RD RAMP 'D'	1,351	PLACE STAKES AT 15' RIGHT OF REFERENCE LINE
680+81.30 - 686+00.00	USH 45 SB - 50' LT	519	PLACE STAKES AT 50' LEFT OF REFERENCE LINE
685+19.67 - 694+00.00	USH 45 NB - 50' RT	880	PLACE STAKES AT 50' RIGHT OF REFERENCE LINE
024+96.00 - 040+51.00	CTH Q - R/L	1,555	PLACE STAKES ALONG REFERENCE LINE
830+00.18 - 865+41.51	LANNON RD (STH 167) - EB R/L	3,541	PLACE MARKS ALONG REFERENCE LINE
830+00.19 - 865+41.52	LANNON RD (STH 167) - WB R/L	3,541	PLACE MARKS ALONG REFERENCE LINE
092+75.65 - 114+93.37	HOLY HILL RD (STH 167) - R/L	2,218	PLACE STAKES OR MARKS ALONG REFERENCE LINE
	TOTAL 0010	58,970	

NOTES:

*PLACE STAKES OR MARKS AS INDICATED UNDER REMARKS OR AS DIRECTED BY THE FIELD ENGINEER.

3

RAMP CLOSURE GATES

STATION	LOCATION	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	653.0135 PULL BOXES STEEL 24X36-INCH EACH	654.0105 CONCRETE BASES TYPE 5 EACH	654.0220 CONCRETE CONTROL CABINET BASES TYPE 10 EACH	655.0305 CABLE TYPE UF 2-12 AWG GROUNDED LF	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	662.2032.S RAMP CLOSURE GATES SOLAR 32-FT EACH	662.2037.S RAMP CLOSURE GATES SOLAR 37-FT EACH	662.2040.S RAMP CLOSURE GATES SOLAR 40-FT EACH
353+58.40	26.90' RT, SB AT CTH Q	30	1	1	1	70	1	1	1	--	1	--
353+97.60	40.70' LT, SB AT CTH Q	30	1	1	1	70	1	1	1	--	1	--
346+55.20	23.90' LT, NB AT CTH Q	30	1	1	1	70	1	1	1	1	--	--
1452+36.30	49.40' LT, SB AT LANNON	30	1	1	1	70	1	1	1	1	--	--
1452+47.70	40.50' RT, SB AT LANNON	30	1	1	1	70	1	1	1	--	--	1
619+60.35	32.00' RT, SB ON HOLY HILL	30	1	1	1	70	1	1	1	--	--	1
620+24.50	28.30' LT, NB ON HOLY HILL	30	1	1	1	70	1	1	1	--	--	1
	TOTAL 0010	210	7	7	7	490	7	7	7	2	2	3

RAMP CLOSURE BARRICADE RACK

STATION	LOCATION	662.6020.S RAMP CLOSURE BARRICADE RACK 2-UNIT EACH	662.6030.S RAMP CLOSURE BARRICADE RACK 3-UNIT EACH	SPV.0060.07 PERMANENT BARICADES TYPE III EACH
STA 454+40 LT	LANNON RD & RAMP 'B'	--	1	3
STA 454+40 RT	LANNON RD & RAMP 'B'	1	--	2
	TOTAL 0010	1	1	5

SAWING ASPHALT

690.0150

STATION	TO	STATION	LOCATION	LF
344+00	-	344+00	USH 41/45 NB	56
351+51	-	351+51	USH 41/45 NB	56
423+50	-	423+50	USH 41/45 NB	63
424+50	-	424+50	USH 41/45 NB	63
429+75	-	429+75	USH 41/45 NB	63
433+75	-	433+75	USH 41/45 NB	56
451+34	-	451+34	USH 41/45 NB	56
455+34	-	455+34	USH 41/45 NB	56
487+07	-	487+07	USH 41/45 NB	56
490+57	-	490+57	USH 41/45 NB	56
558+02	-	558+02	USH 41/45 NB	56
561+52	-	561+52	USH 41/45 NB	56
574+96	-	574+96	USH 41/45 NB	22
575+46	-	575+46	USH 41/45 NB	34
606+07	-	606+07	USH 41/45 NB	34
606+57	-	606+57	USH 41/45 NB	22
606+96	-	606+96	USH 41/45 NB	62
610+81	-	610+81	USH 41/45 NB	72
618+02	-	618+02	USH 41/45 NB	56
621+52	-	621+52	USH 41/45 NB	56
693+00	-	693+00	USH 41/45 NB	93
694+00	-	694+00	USH 41 NB	52
694+00	-	694+00	USH 45 NB	32
345+00	-	345+00	USH 41/45 SB	56
352+23	-	352+23	USH 41/45 SB	56
423+50	-	423+50	USH 41/45 SB	63
424+50	-	424+50	USH 41/45 SB	63
429+75	-	429+75	USH 41/45 SB	70
432+79	-	432+79	USH 41/45 SB	63
451+24	-	451+24	USH 41/45 SB	56
455+24	-	455+24	USH 41/45 SB	56
487+88	-	487+88	USH 41/45 SB	56
491+33	-	491+33	USH 41/45 SB	56
558+79	-	558+79	USH 41/45 SB	56
562+29	-	562+29	USH 41/45 SB	56
574+96	-	574+96	USH 41/45 SB	22
575+46	-	575+46	USH 41/45 SB	34
606+07	-	606+07	USH 41/45 SB	42
606+57	-	606+57	USH 41/45 SB	30
607+46	-	607+46	USH 41/45 SB	66
611+34	-	611+34	USH 41/45 SB	75
618+07	-	618+07	USH 41/45 SB	56
621+57	-	621+57	USH 41/45 SB	56
662+94	-	662+94	USH 41/45 SB	10
663+44	-	663+44	USH 41/45 SB	22
663+94	-	663+94	USH 41/45 SB	34
672+59	-	672+59	USH 41/45 SB	34
673+09	-	673+09	USH 41/45 SB	22
673+59	-	673+59	USH 41/45 SB	12
693+00	-	693+00	USH 41 SB	40
694+00	-	694+00	USH 41 SB	38
685+00	-	685+00	USH 45 SB	32
686+00	-	686+00	USH 45 SB	36
357+50	-	357+50	CTH Q RAMP B BUTT JT	20
363+00	-	363+00	CTH Q RAMP C BUTT JT	21
1445+75	-	1445+75	LANNON RAMP A BUTT JT	26
462+00	-	462+00	LANNON RAMP B BUTT JT	23
1461+00	-	1461+00	LANNON RAMP C BUTT JT	32
1442+25	-	1442+25	LANNON RAMP D BUTT JT	23
613+00	-	613+00	HOLY HILL RAMP A BUTT JT	23
630+00	-	630+00	HOLY HILL RAMP B BUTT JT	23
612+50	-	612+50	HOLY HILL RAMP C BUTT JT	23
629+75	-	629+75	HOLY HILL RAMP D BUTT JT	23
346+25	-	346+50	RAMP B TO CTH Q	75
353+70	-	360+50	RAMP C TO CTH Q	765
26+90	-	30+00	CTH Q E/W AT RAMP C	310
453+83	-	459+43	RAMP B TO LANNON	855
835+00	-	836+75	LANNON E/W @ RAMP B	560
1452+78	-	1459+15	RAMP C TO LANNON	940
834+87	-	836+22	LANNON E/W @ RAMP C	385
			TOTAL 0010	6,723

CLEARING OF OVERGROWTH AND CLEANING STORM SEWER SYSTEM

STATION	TO	STATION	LOCATION FROM	-	LOCATION TO	SPV.0060.02 EACH	REMARKS FOR INFORMATION ONLY
354+50	-	354+50	USH 41/45 R/L	-	LEFT DITCH	1	12-IN X 77-FT
358+00	-	358+00	USH 41/45 R/L	-	RIGHT DITCH	1	18-IN X 109-FT
362+00	-	362+00	USH 41/45 R/L	-	LEFT DITCH	1	12-IN X 80-FT
370+00	-	370+00	USH 41/45 R/L	-	LEFT DITCH	1	12-IN X 87-FT
374+00	-	374+00	USH 41/45 R/L	-	RIGHT DITCH	1	12-IN X 92-FT
378+00	-	378+00	USH 41/45 R/L	-	LEFT DITCH	1	12-IN X 89-FT
383+30	-	383+30	RIGHT DITCH	-	LEFT DITCH	--	42-IN X 254-FT
392+00	-	388+00	USH 41/45 R/L	-	USH 41/45 R/L	1	12-IN X 400-FT
388+00	-	383+00	USH 41/45 R/L	-	USH 41/45 R/L	1	12-IN X 470-FT
400+00	-	407+00	USH 41/45 R/L	-	USH 41/45 R/L	1	18-IN X 700-FT
407+00	-	413+00	USH 41/45 R/L	-	USH 41/45 R/L	1	18-IN X 600-FT
413+00	-	419+00	USH 41/45 R/L	-	USH 41/45 R/L	1	18-IN X 600-FT
419+00	-	425+00	USH 41/45 R/L	-	USH 41/45 R/L	1	18-IN X 600-FT
425+00	-	426+50	USH 41/45 R/L	-	USH 41/45 R/L	--	DONE BY OTHER
429+00	-	429+00	USH 41/45 R/L	-	LEFT DITCH	--	DONE BY OTHER
437+00	-	437+00	RIGHT DITCH	-	LEFT DITCH	1	30-IN X 205-FT
442+50	-	440+00	RIGHT DITCH	-	LEFT DITCH	--	30-IN X 393-FT
446+00	-	446+00	USH 41/45 R/L	-	LEFT DITCH	1	12-IN X 99-FT
450+50	-	450+50	USH 41/45 R/L	-	LEFT DITCH	1	12-IN X 92-FT
457+00	-	457+00	USH 41/45 R/L	-	RIGHT DITCH	1	12-IN X 86-FT
460+00	-	459+50	RIGHT DITCH	-	LEFT DITCH	--	60-IN X 376-FT
463+00	-	463+00	USH 41/45 R/L	-	RIGHT DITCH	1	12-IN X 115-FT
467+00	-	467+00	USH 41/45 R/L	-	LEFT DITCH	1	12-IN X 107-FT
472+25	-	470+00	RIGHT DITCH	-	LEFT DITCH	1	36-IN X 316-FT
476+00	-	476+00	USH 41/45 R/L	-	LEFT DITCH	1	12-IN X 97-FT
480+00	-	480+00	USH 41/45 R/L	-	RIGHT DITCH	1	12-IN X 84-FT
484+00	-	484+00	USH 41/45 R/L	-	LEFT DITCH	1	12-IN X 89-FT
490+00	-	490+00	RIGHT DITCH	-	LEFT DITCH	1	30-IN X 182-FT
494+00	-	494+00	USH 41/45 R/L	-	LEFT DITCH	1	12-IN X 84-FT
498+00	-	498+00	USH 41/45 R/L	-	RIGHT DITCH	1	12-IN X 91-FT
502+00	-	502+00	USH 41/45 R/L	-	LEFT DITCH	1	12-IN X 102-FT
506+00	-	506+00	USH 41/45 R/L	-	RIGHT DITCH	1	12-IN X 89-FT
511+35	-	511+35	USH 41/45 R/L	-	RIGHT DITCH	1	12-IN X 90-FT
517+00	-	517+00	USH 41/45 R/L	-	RIGHT DITCH	1	12-IN X 92-FT
520+25	-	521+50	LEFT DITCH	-	RIGHT DITCH	1	36-IN X 226-FT
	-		LEFT DITCH	-	RIGHT DITCH	--	30-IN X 193-FT
529+00	-	529+00	USH 41/45 R/L	-	LEFT DITCH	1	12-IN X 97-FT
533+00	-	533+00	USH 41/45 R/L	-	RIGHT DITCH	1	12-IN X 84-FT
537+00	-	537+00	USH 41/45 R/L	-	LEFT DITCH	1	12-IN X 93-FT
541+00	-	541+00	USH 41/45 R/L	-	RIGHT DITCH	1	12-IN X 86-FT
546+00	-	546+00	USH 41/45 R/L	-	RIGHT DITCH	1	12-IN X 87-FT
551+00	-	551+00	LEFT DITCH	-	RIGHT DITCH	--	30-IN X 180-FT
554+00	-	554+00	USH 41/45 R/L	-	RIGHT DITCH	1	12-IN X 90-FT
558+00	-	558+00	USH 41/45 R/L	-	RIGHT DITCH	1	12-IN X 90-FT
562+40	-	562+40	USH 41/45 R/L	-	RIGHT DITCH	1	12-IN X 101-FT
566+00	-	566+00	USH 41/45 R/L	-	RIGHT DITCH	1	12-IN X 85-FT
569+50	-	570+00	RIGHT DITCH	-	LEFT DITCH	1	48-IN X 248-FT
574+50	-	574+50	USH 41/45 R/L	-	RIGHT DITCH	1	12-IN X 83-FT
583+00	-	583+00	USH 41/45 R/L	-	RIGHT DITCH	1	12-IN X 85-FT
587+00	-	587+00	USH 41/45 R/L	-	RIGHT DITCH	1	12-IN X 83-FT
591+00	-	591+00	USH 41/45 R/L	-	RIGHT DITCH	1	12-IN X 84-FT
595+00	-	595+00	USH 41/45 R/L	-	RIGHT DITCH	1	12-IN X 106-FT
598+30	-	599+50	LEFT DITCH	-	RIGHT DITCH	--	36-IN X 206-FT
603+00	-	603+00	USH 41/45 R/L	-	RIGHT DITCH	1	12-IN X 134-FT
615+00	-	615+00	USH 41/45 R/L	-	RIGHT DITCH	1	12-IN X 103-FT
624+00	-	624+00	USH 41/45 R/L	-	RIGHT DITCH	1	12-IN X 87-FT
628+00	-	628+00	USH 41/45 R/L	-	LEFT DITCH	1	12-IN X 84-FT
632+00	-	632+00	USH 41/45 R/L	-	RIGHT DITCH	1	12-IN X 111-FT
636+00	-	636+00	USH 41/45 R/L	-	RIGHT DITCH	1	12-IN X 105-FT
641+00	-	641+00	USH 41/45 R/L	-	RIGHT DITCH	1	12-IN X 100-FT
646+00	-	646+00	USH 41/45 R/L	-	RIGHT DITCH	1	12-IN X 84-FT
650+00	-	650+00	USH 41/45 R/L	-	RIGHT DITCH	1	12-IN X 88-FT
654+00	-	654+00	USH 41/45 R/L	-	LEFT DITCH	1	12-IN X 90-FT
658+00	-	658+00	USH 41/45 R/L	-	RIGHT DITCH	1	12-IN X 88-FT
662+00	-	662+00	USH 41/45 R/L	-	LEFT DITCH	1	12-IN X 90-FT
687+00	-	687+00	USH 41/45 R/L	-	RIGHT DITCH	1	18-IN X 132-FT
					TOTAL 0010	58	

3

FILE NAME : N:\PDS\Projects\11003800\qty\Final\11003870_Final MQ Plan Sheets.pptx PLOT DATE : 10/30/2014 PLOT BY : PLOT NAME : PLOT SCALE :

3

HIGH TENSION CABLE GUARD

STATION TO STATION	LOCATION	SPV.0060.05 TERMINAL HIGH-TENSION CABLE GUARD TL-3 EACH	SPV.0090.01 HIGH-TENSION CABLE GUARD TL-3 SOCKETED LF	REMARKS
363+90 - 390+10	USH 41/45 8' RT	2	2,518	
390+60 - 393+87	USH 41/45 8' RT	2	225	
395+35 - 414+92	USH 41/45 8' RT	2	1,855	
414+08 430+56	USH 41/45 8' RT	--	--	EXISTING HTCG TO REMAIN
432+59 - 451+87	USH 41/45 8' LT	2	1,826	
454+76 - 483+57	USH 41/45 8' LT	2	2,779	
483+98 - 488+23	USH 41/45 8' LT	2	323	
490+20 - 559+18	USH 41/45 8' LT	2	6,796	
561+15 - 573+59	USH 41/45 8' LT	2	1,142	
611+13 - 618+82	USH 41/45 8' LT	2	667	
620+79 - 654+08	USH 41/45 8' RT	2	3,227	
654+53 - 672+33	USH 41/45 8' RT	2	1,678	
673+81 - 716+89	USH 41/45 8' RT	2	4,206	
717+39 - 742+92	USH 41/45 8' RT	2	2,451	
745+15 - 769+54	USH 41/45 8' RT	2	2,337	
	TOTAL 0010	28	32,023	

PREPARING FOUNDATION

STATION TO STATION	LOCATION	211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS STA	SPV.0170.01 PROOF-ROLLING EXISTING BASE STA
362+00 - 424+50	USH 41/45 NB Median Shoulder	62.5	62.5
429+75 - 606+96	USH 41/45 NB Median Shoulder	177.2	177.2
610+81 - 694+00	USH 41/45 NB Median Shoulder	83.2	83.2
362+00 - 424+50	USH 41/45 SB Median Shoulder	62.5	62.5
429+75 - 607+46	USH 41/45 SB Median Shoulder	177.7	177.7
611+34 - 694+00	USH 41/45 SB Median Shoulder	82.7	82.7
	TOTAL 0010	646.0	646.0

3

MISCELLANEOUS ITEMS

	213.0100 FINISHING ROADWAY (PROJECT) 02. 1100-38-70 EACH	619.1000 MOBILIZATION EACH	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	642.5401 FIELD OFFICE TYPE D EACH	SPV.0105.07 GRADING, SHAPING, & FINISHING MEDIAN DITCH FROM STA 395+00 TO STA 419+00 LS
ID 1100-38-70	1	0.8	5	9	1	1
TOTAL 0010	1	0.8	5	9	1	1

SECTION CORNER MONUMENTS SPECIAL

STATION	LOCATION	SPV.0060.06 EACH	REMARKS
673+00	NB USH 41/45 LT	1	SEC NW 7-9-20
	TOTAL 0010	1	

3

REMOVING TEMPORARY LONGITUDINAL CONSTRUCTION JOINTS

STATION TO STATION	LOCATION	SPV.0090.07 LF
LOWER LAYER		
575+45 - 606+07	USH 41/45 NB Between Lanes 1 & 2	3,062
575+45 - 606+07	USH 41/45 SB Between Lanes 2 & 3	3,062
663+41 - 673+09	USH 41/45 SB Between Lanes 1 & 2	968
UPPER LAYER		
344+00 - 424+50	USH 41/45 NB Between Lanes 1 & 2	8,050
429+75 - 608+00	USH 41/45 NB Between Lanes 1 & 2	17,825
609+75 - 694+00	USH 41/45 NB Between Lanes 1 & 2	8,425
344+00 - 424+50	USH 41/45 NB Between Lanes 2 & 3	8,050
429+75 - 608+00	USH 41/45 NB Between Lanes 2 & 3	17,825
559+50 - 610+50	USH 41/45 NB Between Lanes 3 & Parallel exit ramp *	5,100
609+75 - 686+00	USH 41/45 NB Between Lanes 2 & 3	7,625
673+25 - 694+00	USH 41/45 NB Between Lanes 3 & 4	2,075
345+00 - 424+50	USH 41/45 SB Between Lanes 1 & 2	7,950
429+75 - 608+50	USH 41/45 SB Between Lanes 1 & 2	17,875
610+25 - 694+00	USH 41/45 SB Between Lanes 1 & 2	8,375
345+00 - 424+50	USH 41/45 SB Between Lanes 2 & 3	7,950
429+75 - 608+50	USH 41/45 SB Between Lanes 2 & 3	17,875
610+25 - 682+00	USH 41/45 SB Between Lanes 2 & 3	7,175
670+00 - 686+00	USH 41/45 SB Between Lanes 3 & 4	1,600
354+50 - 360+00	RAMP "C" at CTH Q Between traffic lanes *	550
1453+30 - 1458+00	RAMP "C" atLannon Rd Between traffic lanes *	470
454+30 - 459+42	RAMP "B" atLannon Rd Between traffic lanes *	512
	TOTAL 0010	152,399

NOTE:
REMOVAL OF TEMPORARY LONGITUDINAL CONSTRUCTION JOINTS WITH THE REMOVING ASPHALTIC SURFACE MILLING OPERATIONS ARE INCIDENTAL TO REMOVING ASPHALTIC SURFACE MILLING (SY).

HMA PAVEMENT UPPER LAYER BETWEEN LANE 1 AND INSIDE SHOULDER AND BETWEEN LANE 3 AND OUTSIDE SHOULDER OR RAMP SHALL BE COMPLETED IN THE SAME DAY OF PAVING OPERATIONS.
NO TEMPORARY LONGITUDINAL CONSTRUCITON JOINT IS REQUIRED BETWEEN THESE PAVING OPERATIONS.

* NO TEMPORARY LONGITUDINAL CONSTRUCTION JOINT IS REQUIRED IF SAME DAY PAVING OPERATIONS.

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]	638.2602 REM SIGNS TYPE II [EA]	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]	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]	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUPPORT [EA]	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]
1	M1-94(5)	II	COUNTY LINE RD	114	x	21	16.625	--	--	1	--	--	--	--	--	MOUNT ON BRIDGE	--	x	--	--	--	--	--	--	--	--	--
2	M1-94(5)	II	COUNTY LINE RD	114	x	21	16.625	--	--	1	--	--	--	--	--	MOUNT ON BRIDGE	--	x	--	--	--	--	--	--	--	--	--
3	W4-1R(5)	II	--	48	x	48	--	--	16.000	1	1	1	--	--	--	--	--	x	--	--	--	--	--	--	--	--	--
4	I2-2(5)	II	WAUKESHA CO	102	x	21	14.875	--	--	1	2	2	--	--	--	--	--	x	--	--	--	--	--	--	--	--	--
5	J13-1	--	--	--	x	--	--	--	--	1	1	--	--	--	--	--	--	x	--	--	--	--	--	--	--	--	--
6	R5-57(5)	II	--	36	x	36	9.000	--	--	1	1	1	--	--	--	--	--	x	--	--	--	--	--	--	--	--	--
7	W4-1R(5)	II	--	48	x	48	--	--	16.000	1	1	1	--	--	--	--	--	x	--	--	--	--	--	--	--	--	--
8	I2-2(5)	II	WASHINGTON CO	108	x	21	15.750	--	--	1	2	2	--	--	--	--	--	x	--	--	--	--	--	--	--	--	--
9	I2-3A(5)	II	VILLAGE OF GERMANTOWN	96	x	30	20.000	--	--	--	--	--	--	--	8	--	--	x	--	--	--	--	--	--	--	--	--
10	R3-5L(2S)	II	--	42	x	48	14.000	--	--	--	--	--	--	--	--	INSTALL ON S-67-952 BRACKETS INCIDENTAL	--	x	--	--	--	--	--	--	--	--	--	--
11	R3-6L(2S)	II	--	42	x	48	14.000	--	--	--	--	--	--	--	--	INSTALL ON S-67-952 BRACKETS INCIDENTAL	--	x	--	--	--	--	--	--	--	--	--	--
12	R3-5R(2S)	II	--	42	x	48	14.000	--	--	--	--	--	--	--	--	INSTALL ON S-67-952 BRACKETS INCIDENTAL	--	x	--	--	--	--	--	--	--	--	--	--
13	--	I	RIVERCREST DRIVE ONLY [A]	--	x	--	--	--	--	--	--	--	--	--	--	INSTALL ON S-66-607 I-BEAMS INCIDENTAL	7	x	5.5	38.500	--	--	--	--	--	--	--
14	R1-1F(3)	II	--	36	x	36	--	7.460	--	--	--	--	--	--	--	MOUNT ON LIGHT POLE	--	x	--	--	--	--	--	--	--	--	--
15	R1-1F(3)	II	--	36	x	36	--	7.460	--	--	--	1	--	--	--	--	--	x	--	--	--	--	--	--	--	--	--
16	R1-2	--	--	--	x	--	--	--	--	1	--	--	--	--	--	REMOVE FROM LIGHT POLE	--	x	--	--	--	--	--	--	--	--	--
17	R6-2R(2S)	II	--	24	x	30	5.000	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE	--	x	--	--	--	--	--	--	--	--	--
18	R1-1F(3)	II	--	36	x	36	--	7.460	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE	--	x	--	--	--	--	--	--	--	--	--
19	R5-1	--	--	--	x	--	--	--	--	--	--	1	--	1	--	--	--	x	--	--	--	--	--	--	--	--	--
20	R5-1A	--	--	--	x	--	--	--	--	--	--	--	--	1	19	3' MOUNTING HEIGHT	--	x	--	--	--	--	--	--	--	--	--
21	R5-1(3)	II	--	36	x	36	9.000	--	--	1	1	1	--	--	--	--	--	x	--	--	--	--	--	--	--	--	--
22	R5-1A	--	--	--	x	--	--	--	--	--	--	--	--	1	21	3' MOUNTING HEIGHT	--	x	--	--	--	--	--	--	--	--	--
23	R6-2L(2S)	II	--	24	x	30	5.000	--	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE	--	x	--	--	--	--	--	--	--	--	--
24	R5-1(3)	II	--	36	x	36	9.000	--	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE	--	x	--	--	--	--	--	--	--	--	--
25	R3-1(2S)	II	--	24	x	24	4.000	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE	--	x	--	--	--	--	--	--	--	--	--
26	R1-1F(3)	II	--	36	x	36	--	7.460	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE	--	x	--	--	--	--	--	--	--	--	--
27	R5-1A(3)	II	--	42	x	30	8.750	--	--	1	1	1	--	--	--	--	--	x	--	--	--	--	--	--	--	--	--
28	--	II	RESTRICTED LANE/RAMP LT LANE	--	x	--	--	--	--	1	--	--	--	--	--	--	--	x	--	--	--	--	--	--	--	--	--
29	R1-1F(3)	II	--	36	x	36	--	7.460	--	1	--	--	--	--	--	MOUNT ON LIGHT POLE	--	x	--	--	--	--	--	--	--	--	--
30	R4-7(2M)	II	--	24	x	30	5.000	--	--	--	--	--	--	--	--	MOUNT ON LIGHT POLE	--	x	--	--	--	--	--	--	--	--	--
31	R10-50(2M)	II	--	30	x	36	7.500	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE	--	x	--	--	--	--	--	--	--	--	--
32	R1-1F(3)	II	--	36	x	36	--	7.460	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE	--	x	--	--	--	--	--	--	--	--	--
33	R5-1(2S)	II	--	30	x	30	6.250	--	--	1	1	1	--	--	--	--	--	x	--	--	--	--	--	--	--	--	--
34	R3-7R(3)	II	--	36	x	36	9.000	--	--	--	--	--	--	--	33	BACK OF SIGN #33	--	x	--	--	--	--	--	--	--	--	--
35	R3-18(2S)	II	--	24	x	24	4.000	--	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE	--	x	--	--	--	--	--	--	--	--	--
36	R1-1F(3)	II	--	36	x	36	--	7.460	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE	--	x	--	--	--	--	--	--	--	--	--
37	R10-11F(2M)	II	--	30	x	36	7.500	--	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE	--	x	--	--	--	--	--	--	--	--	--
38	R4-7(2M)	II	--	24	x	30	5.000	--	--	1	--	1	--	--	--	--	--	x	--	--	--	--	--	--	--	--	--
39	R3-1(2S)	II	--	24	x	24	4.000	--	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE	--	x	--	--	--	--	--	--	--	--	--
40	R1-1F(3)	II	--	36	x	36	--	7.460	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE	--	x	--	--	--	--	--	--	--	--	--
41	R5-1A(2S)	II	--	36	x	24	6.000	--	--	1	1	1	--	--	--	--	--	x	--	--	--	--	--	--	--	--	--
42	W3-3(3)	II	--	36	x	36	--	--	9.000	--	--	--	--	--	41	BACK OF SIGN #41	--	x	--	--	--	--	--	--	--	--	--
43	R5-1(3)	II	--	36	x	36	9.000	--	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE	--	x	--	--	--	--	--	--	--	--	--
44	R1-1F(3)	II	--	36	x	36	--	7.460	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE	--	x	--	--	--	--	--	--	--	--	--
45	R3-18(2S)	II	--	24	x	24	4.000	--	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE	--	x	--	--	--	--	--	--	--	--	--
46	R1-1F(3)	II	--	36	x	36	--	7.460	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE	--	x	--	--	--	--	--	--	--	--	--
47	R1-2(2S)	II	--	36	x	31	3.880	--	--	1	1	1	--	--	--	--	--	x	--	--	--	--	--	--	--	--	--
48	R1-1F(3)	II	--	36	x	36	--	7.460	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE	--	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]	638.2602 REM SIGNS TYPE II [EA]	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]	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]	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUPPORT [EA]	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]
49	R6-2R(2S)	II	--	24 x 30	5.000	--	--	--	--	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
50	R3-8B(2S)	II	--	30 x 36	7.500	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
51	R1-1F(3)	II	--	36 x 36	--	7.460	--	--	--	--	--	--	50	--	-- x --	--	--	--	--	--	--	--	--
52	R5-1(3)	II	--	36 x 36	9.000	--	--	--	--	--	--	--	50	BACK OF SIGN #50	-- x --	--	--	--	--	--	--	--	--
53	R6-2L(2S)	II	--	24 x 30	5.000	--	--	1	1	--	--	--	49	BACK OF SIGN #49	-- x --	--	--	--	--	--	--	--	--
54	R4-7(2M)	II	--	24 x 30	5.000	--	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE	-- x --	--	--	--	--	--	--	--	--
55	R5-1A(3)	II	--	42 x 30	8.750	--	--	1	1	--	--	--	--	MOUNT ON UPRIGHT	-- x --	--	--	--	--	--	--	--	--
56	R5-1A(3)	II	--	42 x 30	8.750	--	--	--	--	--	--	--	--	MOUNT ON UPRIGHT	-- x --	--	--	--	--	--	--	--	--
57	R3-6L(2S)	II	--	42 x 48	14.000	--	--	--	--	--	--	--	--	INSTALL ON S-66-236 BRACKETS INCIDENTAL	-- x --	--	--	--	--	--	--	--	--
58	R3-5R(2S)	II	--	42 x 48	14.000	--	--	--	--	--	--	--	--	INSTALL ON S-66-236 BRACKETS INCIDENTAL	-- x --	--	--	--	--	--	--	--	--
59	R3-5R(2S)	II	--	42 x 48	14.000	--	--	--	--	--	--	--	--	INSTALL ON S-66-236 BRACKETS INCIDENTAL	-- x --	--	--	--	--	--	--	--	--
60	J3-1(2S) M3-4 M1-5A M6-1	II	-- -- CTH Q --	24 x 57 24 x 12 24 x 24 21 x 21	9.500	--	--	--	--	--	--	--	--	MOUNT ON UPRIGHT	-- x --	--	--	--	--	--	--	--	--
61	J3-1(2S) M3-4 M1-5A M6-1	II	-- 	24 x 57 24 x 12 24 x 24 21 x 21	9.500	--	--	--	--	--	--	--	--	MOUNT ON UPRIGHT	-- x --	--	--	--	--	--	--	--	--
62	D1-60	II	COUNTY LINE RD [A] EAST WEST [A]	84 x 24	14.000	--	--	1	2	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
63	W3-3(3)	II	--	36 x 36	--	--	9.000	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
64	E5-1A(5)	II	EXIT 52	72 x 60	30.000	--	--	1	2	--	2	--	--	--	-- x --	--	--	--	--	--	--	--	--
65	W5-54(2S)	II	--	18 x 18	--	--	2.250	--	--	--	--	--	64	--	-- x --	--	--	--	--	--	--	--	--
66	W5-54(2S)	II	--	18 x 18	--	--	2.250	--	--	--	--	--	64	--	-- x --	--	--	--	--	--	--	--	--
67	E4-1A	I	[Q] COUNTY LINE RD [A]	-- x --	--	--	--	--	--	--	--	--	--	REUSE STEEL POSTS	27 x 7.5	202.500	1	--	--	--	--	--	1
67A	E1-5P	I	EXIT 52	-- x --	--	--	--	--	--	--	--	--	--	--	9 x 2.5	22.500	--	--	--	--	--	--	--
68	E1-1A	I	[167] EAST [Y] LANNON RD MEQUON RD 1 MILE	-- x --	--	--	--	--	--	--	--	--	--	REUSE STEEL POSTS	19 x 13.5	256.500	1	--	--	--	--	--	1
68A	E1-5P	I	EXIT 54	-- x --	--	--	--	--	--	--	--	--	--	--	9 x 2.5	22.500	--	--	--	--	--	--	--
69	R2-1(5)	II	65 MPH	48 x 60	20.000	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
70	R8-7(5)	II	--	48 x 36	12.000	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
71	R4-3(5)	II	--	48 x 60	20.000	--	--	1	1	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
72	R3-4B(5)	II	--	36 x 48	12.000	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
73	R3-4B(5)	II	--	36 x 48	12.000	--	--	--	--	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
74	W11-3	--	--	-- x --	--	--	--	1	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
75	E8-1	I	[167] EAST 3/4 [167] WEST 4 1/4 [45] 6	-- x --	--	--	--	--	--	--	--	--	--	INSTALL ON S-66-200 I-BEAMS INCIDENTAL	17 x 8	136.000	1	--	--	--	--	--	--
76	E8-1	I	[Q] 1/2 PILGRIM RD 2 3/4 [74] [100] 3	-- x --	--	--	--	--	--	--	--	--	--	INSTALL ON S-66-200 I-BEAMS INCIDENTAL	17 x 7.5	127.500	1	--	--	--	--	--	--
77	D12-2A(5)	II	--	78 x 54	29.250	--	--	1	2	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
78	R8-7(5)	II	--	48 x 36	12.000	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
79	E1-1A	I	[Q] COUNTY LINE RD 3/4 MILE	-- x --	--	--	--	--	--	--	--	--	--	REUSE STEEL POSTS	24 x 10	240.000	1	--	--	--	--	--	1
79A	E1-5P	I	EXIT 52	-- x --	--	--	--	--	--	--	--	--	--	--	9 x 2.5	22.500	--	--	--	--	--	--	--

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]	638.2602 REM SIGNS TYPE II [EA]	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]	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]	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUPPORT [EA]	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]
80	R4-3(5)	II	--	48 x 60	20.000	--	--	1	1	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
81	R2-1(5)	II	65 MPH	48 x 60	20.000	--	--	1	1	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
82	R3-4B(5)	II	--	36 x 48	12.000	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
83	R3-4B(5)	II	--	36 x 48	12.000	--	--	--	--	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
84	W5-52R(5)	II	--	18 x 54	--	--	6.750	1	1	1	--	--	--	4' MOUNTING HEIGHT	-- x --	--	--	--	--	--	--	--	--
85	W5-52R(5)	II	--	18 x 54	--	--	6.750	1	1	1	--	--	--	4' MOUNTING HEIGHT	-- x --	--	--	--	--	--	--	--	--
86	W5-52R(5)	II	--	18 x 54	--	--	6.750	1	1	1	--	--	--	4' MOUNTING HEIGHT	-- x --	--	--	--	--	--	--	--	--
87	--	I	TRAFFIC INFO TUNE RADIO TO 1610 AM IMPORTANT WHEN FLASHING	-- x --	--	--	--	--	--	--	--	--	--	REUSE STEEL POSTS	11 x 6.5	71.500	1	--	--	--	--	--	1
88	W4-2R(3)	II	--	36 x 36	--	--	9.000	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
89	W9-1L	--	--	-- x --	--	--	--	1	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
90	W4-2L(3)	II	--	36 x 36	--	--	9.000	--	--	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
91	W4-1R(5)	II	--	48 x 48	--	--	16.000	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
92	W11-3	--	--	-- x --	--	--	--	1	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
93	W3-3(3)	II	--	36 x 36	--	--	9.000	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
94	E5-1A(5)	II	EXIT 54	72 x 60	30.000	--	--	1	2	--	2	--	--	--	-- x --	--	--	--	--	--	--	--	--
95	W5-54(2S)	II	--	18 x 18	--	--	2.250	--	--	--	--	--	94	--	-- x --	--	--	--	--	--	--	--	--
96	W5-54(2S)	II	--	18 x 18	--	--	2.250	--	--	--	--	--	94	--	-- x --	--	--	--	--	--	--	--	--
97	E1-1A	I	[167] WEST TO HOLY HILL RD AHEAD	-- x --	--	--	--	--	--	--	--	--	--	REUSE STEEL POSTS	15 x 9.5	142.500	1	--	--	--	--	--	1
98	E4-1A	I	[167] EAST [Y] LANNON RD [A] MEQUON RD	-- x --	--	--	--	--	--	--	--	--	--	REUSE STEEL POSTS	21 x 11	231.000	1	--	--	--	--	--	1
98A	E1-5P	I	EXIT 54	-- x --	--	--	--	--	--	--	--	--	--	--	9 x 2.5	22.500	--	--	--	--	--	--	--
99	W12-1(2S)	II	--	24 x 24	--	--	4.000	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
100	W9-1L(3)	II	--	36 x 36	--	--	9.000	--	--	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
101	E9-1	I	MENOMONEE FALLS NEXT 4 EXITS	-- x --	--	--	--	--	--	--	--	--	--	REUSE STEEL POSTS	17 x 4.5	76.500	1	--	--	--	--	--	1
102	W11-3	--	--	-- x --	--	--	--	1	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
103	R5-57(5)	II	--	36 x 36	9.000	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
104	R5-1A(3)	II	--	42 x 30	8.750	--	--	--	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
105	R5-1A(3)	II	--	42 x 30	8.750	--	--	--	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
106	J3-1(2S) M3-2 M1-6 M6-1	II	-- -- STH 167 --	24 x 57 24 x 12 24 x 24 21 x 21	9.500	--	--	--	--	--	--	--	--	MOUNT ON UPRIGHT S-66-237	-- x --	--	--	--	--	--	--	--	--
107	J13-1(2S) M1-5A M6-1	II	-- CTH Y --	24 x 45 24 x 24 21 x 21	7.500	--	--	--	--	--	--	--	--	MOUNT ON UPRIGHT S-66-237	-- x --	--	--	--	--	--	--	--	--
108	R3-8	--	--	-- x --	--	--	--	1	--	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
109	R3-8	--	--	-- x --	--	--	--	1	--	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
110	R3-5L(2S)	II	--	42 x 48	14.000	--	--	--	--	--	--	--	--	INSTALL ON S-66-237 BRACKETS INCIDENTAL	-- x --	--	--	--	--	--	--	--	--
111	R3-6L(2S)	II	--	42 x 48	14.000	--	--	--	--	--	--	--	--	INSTALL ON S-66-237 BRACKETS INCIDENTAL	-- x --	--	--	--	--	--	--	--	--
112	R3-5R(2S)	II	--	42 x 48	14.000	--	--	--	--	--	--	--	--	INSTALL ON S-66-237 BRACKETS INCIDENTAL	-- x --	--	--	--	--	--	--	--	--
113	D1-2	II	[A] MEQUON RD LANNON RD [A]	78 x 30	16.250	--	--	1	2	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--

FILE NAME : N:\SPO\Operations\Traffic_Ops\Signing\Miscellaneous Quantities\1100-38-70\030501_mq.pptx PLOT DATE : 05-AUG-2014 PLOT BY : DOTKLM PLOT NAME : 030501_mq.pdf PLOT SCALE : 1:1

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]	638.2602 REM SIGNS TYPE II [EA]	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]	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]	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUPPORT [EA]	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]
114	J2-2(2S)	II	--	48 x 57	19.000	--	--	1	2	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
	M3-2		--	24 x 12																			
	M1-6		STH 167	24 x 24																			
	M5-1L		--	21 x 21																			
	M1-5A		CTH Y	24 x 24																			
	M5-1R		--	21 x 21																			
115	W3-3(3)	II	--	36 x 36	--	--	9.000	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
116	E5-1A(5)	II	--	72 x 60	30.000	--	--	1	2	--	2	--	--	--	-- x --	--	--	--	--	--	--	--	--
117	W5-54(2S)	II	--	18 x 18	--	--	2.250	--	--	--	--	--	116	--	-- x --	--	--	--	--	--	--	--	--
118	W5-54(2S)	II	--	18 x 18	--	--	2.250	--	--	--	--	--	116	--	-- x --	--	--	--	--	--	--	--	--
119	W4-1R(5)	II	--	48 x 48	--	--	16.000	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
120	R5-57(5)	II	--	36 x 36	9.000	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
121	M1-94(5)	II	LANNON RD	84 x 21	12.250	--	--	--	--	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
122	M1-94(5)	II	LANNON RD	84 x 21	12.250	--	--	--	--	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
123	D4-2L(2S)	II	--	30 x 36	7.500	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
124	W12-1D(2S)	II	--	24 x 24	--	--	4.000	1	1	1	--	--	--	2' MOUNTING HEIGHT	-- x --	--	--	--	--	--	--	--	--
125	R5-1A(3)	II	--	42 x 30	8.750	--	--	1	1	--	--	--	--	MOUNT ON UPRIGHT	-- x --	--	--	--	--	--	--	--	--
126	R5-1A(3)	II	--	42 x 30	8.750	--	--	1	1	--	--	--	--	MOUNT ON UPRIGHT	-- x --	--	--	--	--	--	--	--	--
127	R3-8	--	--	-- x --	--	--	--	--	--	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
128	R3-8	--	--	-- x --	--	--	--	--	--	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
129	J13-1(2S)	II	--	24 x 45	7.500	--	--	--	--	--	--	--	--	MOUNT ON UPRIGHT	-- x --	--	--	--	--	--	--	--	--
	M1-5A		CTH Y	24 x 24										S-66-238									
	M6-1		--	21 x 21																			
130	J3-1(2S)	II	--	24 x 57	9.500	--	--	--	--	--	--	--	--	MOUNT ON UPRIGHT	-- x --	--	--	--	--	--	--	--	--
	M3-2		--	24 x 12										S-66-238									
	M1-6		STH 167	24 x 24																			
	M6-1		--	21 x 21																			
131	R3-6L(2S)	II	--	42 x 48	14.000	--	--	--	--	--	--	--	--	INSTALL ON S-66-238	-- x --	--	--	--	--	--	--	--	--
														BRACKETS INCIDENTAL									
132	R3-5R(2S)	II	--	42 x 48	14.000	--	--	--	--	--	--	--	--	INSTALL ON S-66-238	-- x --	--	--	--	--	--	--	--	--
														BRACKETS INCIDENTAL									
133	R3-5R(2S)	II	--	42 x 48	14.000	--	--	--	--	--	--	--	--	INSTALL ON S-66-238	-- x --	--	--	--	--	--	--	--	--
														BRACKETS INCIDENTAL									
134	D1-2	II	[A] LANNON RD	90 x 30	18.750	--	--	1	2	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
			MEQUON RD [A]																				
135	J2-2(2S)	II	--	48 x 57	19.000	--	--	1	2	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
	M1-5A		CTH Y	24 x 24																			
	M5-1L		--	21 x 21																			
	M3-2		--	24 x 12																			
	M1-6		STH 167	24 x 24																			
	M5-1R		--	21 x 21																			
136	--	I	GERMANTOWN	-- x --	--	--	--	--	--	--	--	--	--	REUSE STEEL POSTS	13 x 7.5	97.500	1	--	--	--	--	--	1
			[LOGO] [LOGO]																				
			PARK & RIDE																				
137	--	I	GERMANTOWN	-- x --	--	--	--	--	--	--	--	--	--	REUSE STEEL POSTS	13 x 7.5	97.500	1	--	--	--	--	--	1
			[LOGO] [LOGO]																				
			PARK & RIDE																				
138	J13-1	--	--	-- x --	--	--	--	1	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
139	R1-2(2S)	II	--	36 x 31	3.880	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
140	R6-2L(2M)	II	--	30 x 36	7.500	--	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE	-- x --	--	--	--	--	--	--	--	--
141	D1-1	II	[A] MILWAUKEE	78 x 15	8.125	--	--	1	2	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
142	R3-2(2S)	II	--	24 x 24	4.000	--	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE	-- x --	--	--	--	--	--	--	--	--
143	R1-1F(3)	II	--	36 x 36	--	7.460	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE	-- x --	--	--	--	--	--	--	--	--
144	R1-1F(3)	II	--	36 x 36	--	7.460	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE	-- x --	--	--	--	--	--	--	--	--
145	R1-2(2S)	II	--	36 x 31	3.880	--	--	1	1	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]	638.2602 REM SIGNS TYPE II [EA]	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]	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]	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUPPORT [EA]	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]
146	D1-2	II	[A] FOND DU LAC MILWAUKEE [A]	84 x 30	17.500	--	--	1	2	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
147	W12-1D(2S)	II	--	24 x 24	--	--	4.000	1	1	1	--	--	--	2' MOUNTING HEIGHT	-- x --	--	--	--	--	--	--	--	--
148	R1-1F(3)	II	--	36 x 36	--	7.460	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE	-- x --	--	--	--	--	--	--	--	--
149	R5-1(3)	II	--	36 x 36	9.000	--	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE	-- x --	--	--	--	--	--	--	--	--
150	R5-1A	--	--	-- x --	--	--	--	--	--	--	--	1	--	3' MOUNT HEIGHT ON SIGNAL POLE	-- x --	--	--	--	--	--	--	--	--
151	J3-1	--	--	-- x --	--	--	--	1	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
152	R1-1F(3)	II	--	36 x 36	--	7.460	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE	-- x --	--	--	--	--	--	--	--	--
153	R3-1(2S)	II	--	24 x 24	4.000	--	--	1	--	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
154	R5-1(3)	II	--	36 x 36	9.000	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE	-- x --	--	--	--	--	--	--	--	--
155	R5-1A	--	--	-- x --	--	--	--	--	--	--	--	1	--	3' MOUNT HEIGHT ON SIGNAL POLE	-- x --	--	--	--	--	--	--	--	--
156	R5-1A(3)	II	--	42 x 30	8.750	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
157	--	I	SOUTH [41] [45] ONLY [A]	-- x --	--	--	--	--	--	--	--	--	--	INSTALL ON EXISTING OVERHEAD S-66-203 I-BEAMS INCIDENTAL	6 x 7	42.000	1	--	--	--	--	--	--
158	--	I	SOUTH [41] [45] ONLY [A]	-- x --	--	--	--	--	--	--	--	--	--	INSTALL ON EXISTING OVERHEAD S-66-203 I-BEAMS INCIDENTAL	6 x 7	42.000	1	--	--	--	--	--	--
159	W5-52R(3)	II	--	18 x 54	--	--	6.750	1	1	1	--	--	--	4' MOUNTING HEIGHT	-- x --	--	--	--	--	--	--	--	--
160	R3-20LL(3)	II	--	36 x 54	13.500	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
161	W5-52L(3)	II	--	18 x 54	--	--	6.750	1	1	1	--	--	--	4' MOUNTING HEIGHT	-- x --	--	--	--	--	--	--	--	--
162	W5-52R(3)	II	--	18 x 54	--	--	6.750	1	1	1	--	--	--	4' MOUNTING HEIGHT	-- x --	--	--	--	--	--	--	--	--
163	W5-52L(3)	II	--	18 x 54	--	--	6.750	1	1	1	--	--	--	4' MOUNTING HEIGHT	-- x --	--	--	--	--	--	--	--	--
164	D1-1	II	[A] FOND DU LAC	84 x 15	8.750	--	--	1	2	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
165	R1-1F(3)	II	--	36 x 36	--	7.460	--	1	--	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
166	R4-7(2S)	II	--	24 x 30	5.000	--	--	1	--	--	--	--	165	BACK OF SIGN #165	-- x --	--	--	--	--	--	--	--	--
167	R6-2L(2M)	II	--	30 x 36	7.500	--	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE	-- x --	--	--	--	--	--	--	--	--
168	R1-1F(3)	II	--	36 x 36	--	7.460	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE	-- x --	--	--	--	--	--	--	--	--
169	R6-2L(2M)	II	--	30 x 36	7.500	--	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE	-- x --	--	--	--	--	--	--	--	--
170	JV3-1	--	--	-- x --	--	--	--	--	1	1	--	1	--	--	-- x --	--	--	--	--	--	--	--	--
171	R3-18(2S)	II	--	24 x 24	4.000	--	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE	-- x --	--	--	--	--	--	--	--	--
172	R1-1F(3)	II	--	36 x 36	--	7.460	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE	-- x --	--	--	--	--	--	--	--	--
173	R1-2(2S)	II	--	36 x 31	3.880	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
174	R1-1F(3)	II	--	36 x 36	--	7.460	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE	-- x --	--	--	--	--	--	--	--	--
175	R5-1(3)	II	--	36 x 36	9.000	--	--	--	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
176	JV2-1	--	--	-- x --	--	--	--	1	--	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
177	J3-1(2S) M3-4 M1-6 M6-1	II	-- -- STH 167 --	24 x 57 24 x 12 24 x 24 21 x 21	9.500	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
178	--	I	SOUTH [41] [45] ONLY [A]	-- x --	--	--	--	--	--	--	--	--	--	INSTALL ON S-66-239 I-BEAMS INCIDENTAL	6 x 7	42.000	--	--	--	--	--	--	--
179	D1-2	II	[A] MILWAUKEE FOND DU LAC [A]	84 x 30	17.500	--	--	1	2	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
180	D1-2	II	[A] MILWAUKEE FOND DU LAC [A]	84 x 30	17.500	--	--	1	2	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
181	R5-1A(3)	II	--	42 x 30	8.750	--	--	--	--	--	--	--	180	BACK OF SIGN #180	-- x --	--	--	--	--	--	--	--	--
182	M1-85	--	--	-- x --	--	--	--	1	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--

FILE NAME : N:\SPO\Operations\Traffic_Ops\Signing\Miscellaneous Quantities\1100-38-70\030501_mq.pptx PLOT DATE : 05-AUG-2014 PLOT BY : DOTKLM PLOT NAME : 030501_mq.pdf PLOT SCALE : 1:1

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]	638.2602 REM SIGNS TYPE II [EA]	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]	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]	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUPPORT [EA]	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]
183	J4-1(3) M3-2 M1-6	II	-- -- STH 167	24 x 36 24 x 12 24 x 24	6.000	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
184	J4-1(3) M3-2 M1-6	II	-- -- STH 167	24 x 36 24 x 12 24 x 24	6.000	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
185	W4-2R	--	--	-- x --	--	--	--	1	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
186	R10-11F(2M)	II	--	30 x 36	7.500	--	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE	-- x --	--	--	--	--	--	--	--	--
187	R4-7(3)	II	--	36 x 48	12.000	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
188	J3-1	--	--	-- x --	--	--	--	1	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
189	R1-1F(3)	II	--	36 x 36	--	7.460	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE	-- x --	--	--	--	--	--	--	--	--
190	R1-1F(3)	II	--	36 x 36	--	7.460	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE	-- x --	--	--	--	--	--	--	--	--
191	J13-1	--	--	-- x --	--	--	--	1	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
192	R5-1(3)	II	--	36 x 36	9.000	--	--	--	--	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
193	R5-1A	--	--	-- x --	--	--	--	--	--	--	--	1	192	3' MOUNTING HEIGHT	-- x --	--	--	--	--	--	--	--	--
194	R3-55L	--	--	-- x --	--	--	--	1	--	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
195	R1-1F(3)	II	--	36 x 36	--	7.460	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE	-- x --	--	--	--	--	--	--	--	--
196	R5-1(3)	II	--	36 x 36	9.000	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
197	R3-1(2S)	II	--	24 x 24	4.000	--	--	1	--	--	--	--	--	MOUNT ON SIGNAL POLE	-- x --	--	--	--	--	--	--	--	--
198	R1-1F(3)	II	--	36 x 36	--	7.460	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE	-- x --	--	--	--	--	--	--	--	--
199	D1-61	II	MAPLE RD [A] [A]	72 x 30	15.000	--	--	1	2	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
200	D1-61	II	MAPLE RD [A] [A]	72 x 30	15.000	--	--	1	2	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
201	D1-2	II	[A] GERMANTOWN INDUSTRIAL PARK	102 x 24	17.000	--	--	1	2	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
202	E4-1A	I	[167] EAST [Y] LANNON RD [A] MEQUON RD	-- x --	--	--	--	--	--	--	--	--	--	REUSE STEEL POSTS	21 x 11	231.000	1	--	--	--	--	--	--	1
202A	E1-5P	I	EXIT 54	-- x --	--	--	--	--	--	--	--	--	--	--	9 x 2.5	22.500	--	--	--	--	--	--	--
203	R3-4B(5)	II	--	36 x 48	12.000	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
204	R3-4B(5)	II	--	36 x 48	12.000	--	--	--	--	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
205	R2-1(5)	II	65 MPH	48 x 60	20.000	--	--	1	1	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
206	--	I	GERMANTOWN [LOGO] [LOGO] PARK & RIDE EXIT 54	-- x --	--	--	--	--	--	--	--	--	--	NEW STEEL POSTS	13 x 9.5	123.500	1	2	B	--	--	1000	--
207	E1-1A	I	[167] EAST [Y] LANNON RD MEQUON RD 1 MILE	-- x --	--	--	--	--	--	--	--	--	--	REUSE STEEL POSTS	19 x 13.5	256.500	1	--	--	--	--	--	1
207A	E1-5P	I	EXIT 54	-- x --	--	--	--	--	--	--	--	--	--	--	9 x 2.5	22.500	--	--	--	--	--	--	--
208	E9-1	I	RICHFIELD NEXT 2 EXITS	-- x --	--	--	--	--	--	--	--	--	--	REUSE STEEL POSTS	12 x 4.5	54.000	1	--	--	--	--	--	1
209	E1-1A	I	[167] WEST HOLY HILL RD 1 MILE	-- x --	--	--	--	--	--	--	--	--	--	REUSE STEEL POSTS	19 x 10.6	201.400	1	--	--	--	--	--	1
209A	E1-5P	I	EXIT 57	-- x --	--	--	--	--	--	--	--	--	--	--	9 x 2.5	22.500	--	--	--	--	--	--	--
210	R3-4B(5)	II	--	36 x 48	12.000	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
211	R3-4B(5)	II	--	36 x 48	12.000	--	--	--	--	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
212	I2-3A(5)	II	VILLAGE OF GERMANTOWN	96 x 30	20.000	--	--	1	2	2	--	--	--		-- x --	--	--	--	--	--	--	--	--

FILE NAME : N:\SPO\Operations\Traffic_Ops\Signing\Miscellaneous Quantities\1100-38-70\030501_mq.pptx PLOT DATE : 05-AUG-2014 PLOT BY : DOTKLM PLOT NAME : 030501_mq.pdf PLOT SCALE : 1:1

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]	638.2602 REM SIGNS TYPE II [EA]	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]	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]	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUPPORT [EA]	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]
213	R2-1(5)	II	65 MPH	48 x 60	20.000	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
214	W8-64(5)	II	--	48 x 48	--	--	16.000	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
215	W16-9P(4)	II	--	48 x 24	--	--	8.000	1	--	--	--	--	214	--	-- x --	--	--	--	--	--	--	--	--
216	W8-64(5)	II	--	48 x 48	--	--	16.000	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
217	W16-9P(4)	II	--	48 x 24	--	--	8.000	1	--	--	--	--	216	--	-- x --	--	--	--	--	--	--	--	--
218	E4-1A	I	[167] WEST HOLY HILL RD [A]	-- x --	--	--	--	--	--	--	--	--	--	NEW STEEL POSTS STA 601+50	22 x 8	176.000	1	2	B	1.6	98	1000	--
218A	E1-5P	I	EXIT 57	-- x --	--	--	--	--	--	--	--	--	--	--	9 x 2.5	22.500	--	--	--	--	--	--	--
219	W5-52L(3)	II	--	18 x 54	--	--	6.750	1	1	1	--	--	--	4' MOUNTING HEIGHT	-- x --	--	--	--	--	--	--	--	--
220	W5-52R(3)	II	--	18 x 54	--	--	6.750	1	1	1	--	--	--	4' MOUNTING HEIGHT	-- x --	--	--	--	--	--	--	--	--
221	W5-52R(3)	II	--	18 x 54	--	--	6.750	1	1	1	--	--	--	4' MOUNTING HEIGHT	-- x --	--	--	--	--	--	--	--	--
222	W5-52L(3)	II	--	18 x 54	--	--	6.750	1	1	1	--	--	--	4' MOUNTING HEIGHT	-- x --	--	--	--	--	--	--	--	--
223	W4-1R(5)	II	--	48 x 48	--	--	16.000	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
224	R5-57(5)	II	--	36 x 36	9.000	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
225	W8-64(5)	II	--	48 x 48	--	--	16.000	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
226	W16-9P(4)	II	--	48 x 24	--	--	8.000	1	--	--	--	--	225	--	-- x --	--	--	--	--	--	--	--	--
227	W8-64(5)	II	--	48 x 48	--	--	16.000	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
228	W16-9P(4)	II	--	48 x 24	--	--	8.000	1	--	--	--	--	227	--	-- x --	--	--	--	--	--	--	--	--
229	D1-2	II	DOWNTOWN [A] RICHFIELD	72 x 24	12.000	--	--	1	2	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
230	R5-1A(3)	II	--	42 x 30	8.750	--	--	--	--	--	--	--	231	BACK OF SIGN #231	-- x --	--	--	--	--	--	--	--	--
231	D1-2	II	[A] GERMANTOWN HOLY HILL [A]	84 x 30	17.500	--	--	1	2	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
232	R5-1A(3)	II	--	42 x 30	8.750	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
233	W4-1R(5)	II	--	48 x 48	--	--	16.000	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
234	R5-57(5)	II	--	36 x 36	9.000	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
235	E8-1	I	[167] EAST 2 3/4 [Q] 4 3/4 PILGRIM RD 6 1/2	-- x --	--	--	--	--	--	--	--	--	--	MOUNT ON BRIDGE	17 x 7.5	127.500	1	--	--	--	--	--	--
236	D1-2	II	[A] DOWNTOWN RICHFIELD	72 x 24	12.000	--	--	1	2	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
237	R5-1A(3)	II	--	42 x 30	8.750	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
238	J3-1(2S)	II	--	24 x 57	9.500	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
	M3-4		--	24 x 12																			
	M1-6		STH 167	24 x 24																			
	M6-1		--	21 x 21																			
239	D1-2	II	[A] HOLY HILL GERMANTOWN [A]	84 x 30	17.500	--	--	1	2	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
240	R5-1A(3)	II	--	42 x 30	8.750	--	--	--	--	--	--	--	239	BACK OF SIGN #239	-- x --	--	--	--	--	--	--	--	--
241	W3-1(3)	II	--	36 x 36	--	--	9.000	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
242	E5-1A(5)	II	EXIT 57	72 x 60	30.000	--	--	1	2	--	2	--	--	--	-- x --	--	--	--	--	--	--	--	--
243	W5-54(2M)	II	--	18 x 18	--	--	2.250	--	--	--	--	--	242	--	-- x --	--	--	--	--	--	--	--	--
244	W5-54(2M)	II	--	18 x 18	--	--	2.250	--	--	--	--	--	242	--	-- x --	--	--	--	--	--	--	--	--
245	I2-3	II	RICHFIELD POPULATION 11,300	66 x 30	13.750	--	--	1	2	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
246	R5-1(3)	II	--	36 x 36	9.000	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
247	R2-1(2S)	II	45 MPH	24 x 30	5.000	--	--	--	--	--	--	--	246	BACK OF SIGN #246	-- x --	--	--	--	--	--	--	--	--
248	R4-7(2M)	II	--	24 x 30	5.000	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
249	R5-1(2S)	II	--	30 x 30	6.250	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
250	W10-1(2M)	II	--	36 x 36	--	--	7.070	--	--	--	--	--	249	BACK OF SIGN #249	-- 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]	638.2602 REM SIGNS TYPE II [EA]	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]	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]	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUPPORT [EA]	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]
251	R5-1A(2S)	II	--	36 x 24	6.000	--	--	--	--	--	--	--	253	BACK OF SIGN #253	-- x --	--	--	--	--	--	--	--	--
252	R5-1A(2S)	II	--	36 x 24	6.000	--	--	--	--	--	--	--	254	BACK OF SIGN #254	-- x --	--	--	--	--	--	--	--	--
253	J4-1(2S)	II	--	24 x 36	6.000	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
	M3-4		--	24 x 12																			
	M1-6		STH 167	24 x 24																			
254	W6-2(2M)	II	--	36 x 36	--	--	9.000	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
255	R1-2(2S)	II	--	36 x 31	3.880	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
256	R5-1(3)	II	--	36 x 36	9.000	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
257	W12-1D(2S)	II	--	24 x 24	--	--	4.000	--	--	1	--	--	--	2' MOUNTING HEIGHT	-- x --	--	--	--	--	--	--	--	--
258	R1-1(3)	II	--	36 x 36	7.460	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
259	R5-1(3)	II	--	36 x 36	9.000	--	--	1	--	--	--	--	258	TRIM TO OCTAGON SHAPE	-- x --	--	--	--	--	--	--	--	--
260	R5-1A	--	--	-- x --	--	--	--	--	--	--	--	1	258	3' MOUNTING HEIGHT	-- x --	--	--	--	--	--	--	--	--
261	R6-2L	--	--	-- x --	--	--	--	--	--	--	--	1	262	--	-- x --	--	--	--	--	--	--	--	--
262	J3-1(2S)	II	--	24 x 57	9.500	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
	M3-4		--	24 x 12																			
	M1-6		STH 167	24 x 24																			
	M6-1		--	21 x 21																			
263	R3-2(2S)	II	--	24 x 24	4.000	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
264	W3-1(3)	II	--	36 x 36	--	--	9.000	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
265	R2-1(2S)	II	45 MPH	24 x 30	5.000	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
266	D1-2	II	[A] FOND DU LAC MILWAUKEE [A]	84 x 30	17.500	--	--	1	2	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
267	R4-7(3)	II	--	36 x 48	12.000	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
268	W5-54(2M)	II	--	18 x 18	--	--	2.250	--	--	--	--	--	267	--	-- x --	--	--	--	--	--	--	--	--
269	R1-1(3)	II	--	36 x 36	7.460	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
270	R5-1(3)	II	--	36 x 36	9.000	--	--	--	--	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
271	R5-1A	--	--	-- x --	--	--	--	--	--	--	--	1	270	3' MOUNTING HEIGHT	-- x --	--	--	--	--	--	--	--	--
272	R5-1(2S)	II	--	30 x 30	6.250	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
273	R3-1(2S)	II	--	24 x 24	4.000	--	--	--	--	--	--	--	272	BACK OF SIGN #273	-- x --	--	--	--	--	--	--	--	--
274	R5-1A(2S)	II	--	36 x 24	6.000	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
275	W5-52R(2S)	II	--	12 x 36	--	--	3.000	1	1	1	--	--	--	4' MOUNTING HEIGHT	-- x --	--	--	--	--	--	--	--	--
276	D1-1	II	[A] MILWAUKEE	78 x 15	8.125	--	--	1	2	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
277	R1-1(3)	II	--	36 x 36	7.460	--	--	1	--	--	--	--	--	MOUNT ON UPRIGHT - S-67-241	-- x --	--	--	--	--	--	--	--	--
278	R1-3P(2S)	II	--	18 x 6	0.750	--	--	--	--	--	--	--	277	--	-- x --	--	--	--	--	--	--	--	--
279	R4-7(2M)	II	--	24 x 30	5.000	--	--	--	--	--	--	--	--	MOUNT ON UPRIGHT - S-67-241	-- x --	--	--	--	--	--	--	--	--
280	R1-1(3)	II	--	36 x 36	7.460	--	--	1	--	--	--	--	--	MOUNT ON MAST ARM - S-67-241	-- x --	--	--	--	--	--	--	--	--
281	R5-1A(2S)	II	--	36 x 24	6.000	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
282	W5-52R(2S)	II	--	12 x 36	--	--	3.000	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
283	D1-1	II	[A] FOND DU LAC	84 x 15	8.750	--	--	1	2	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
284	W3-1(3)	II	--	36 x 36	--	--	9.000	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
285	W3-1(3)	II	--	36 x 36	--	--	9.000	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
286	R1-1(3)	II	--	36 x 36	7.460	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
287	R1-3P(2S)	II	--	18 x 6	0.750	--	--	--	--	--	--	--	286	--	-- x --	--	--	--	--	--	--	--	--
288	R1-1(3)	II	--	36 x 36	7.460	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
289	R1-3P(2S)	II	--	18 x 6	0.750	--	--	--	--	--	--	--	288	--	-- x --	--	--	--	--	--	--	--	--
290	R5-1(3)	II	--	36 x 36	9.000	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
291	R5-1A	--	--	-- x --	--	--	--	--	--	--	--	1	--	3' MOUNTING HEIGHT	-- x --	--	--	--	--	--	--	--	--
292	R1-2(2S)	II	--	36 x 31	3.880	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
293	R1-1(3)	II	--	36 x 36	7.460	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
294	R1-1(3)	II	--	36 x 36	7.460	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
295	R3-1(2S)	II	--	24 x 24	4.000	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
296	R5-1(2S)	II	--	30 x 30	6.250	--	--	--	--	--	--	--	295	BACK OF SIGN #295	-- 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]	638.2602 REM SIGNS TYPE II [EA]	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]	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]	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUPPORT [EA]	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]
297	E5-1A(5)	II	EXIT 57	72 x 60	30.000	--	--	1	2	--	2	--	--	--	-- x --	--	--	--	--	--	--	--	--
298	W5-54(2S)	II	--	18 x 18	--	--	2.250	--	--	--	--	--	297	--	-- x --	--	--	--	--	--	--	--	--
299	W5-54(2S)	II	--	18 x 18	--	--	2.250	--	--	--	--	--	297	--	-- x --	--	--	--	--	--	--	--	--
300	W3-1(3)	II	--	36 x 36	--	--	9.000	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
301	E1-1A	I	[45] NORTH WEST BEND 1 MILE RIGHT LANE EXIT ONLY	-- x --	--	--	--	--	--	--	--	--	--	REUSE STEEL POSTS	17 x 14.5	246.500	1	--	--	--	--	--	1
301A	E1-5P	I	EXIT 59	-- x --	--	--	--	--	--	--	--	--	--	--	9 x 2.5	22.500	--	--	--	--	--	--	--
302	E1-1A	I	[167] EAST TO MEQUON RD LANNON RD AHEAD	-- x --	--	--	--	--	--	--	--	--	--	REUSE STEEL POSTS	21 x 13.5	283.500	1	--	--	--	--	--	1
303	E4-1A	I	[167] WEST HOLY HILL RD [A]	-- x --	--	--	--	--	--	--	--	--	--	REUSE STEEL POSTS	22 x 8	176.000	1	--	--	--	--	--	1
303A	E1-5P	I	EXIT 57	-- x --	--	--	--	--	--	--	--	--	--	--	9 x 2.5	22.500	--	--	--	--	--	--	--
304	D12-2A(5)	II	--	78 x 54	29.250	--	--	1	2	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
305	R8-7(5)	II	--	48 x 36	12.000	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
306	R4-3(5)	II	--	48 x 60	20.000	--	--	1	1	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
307	R3-4B(5)	II	--	36 x 48	12.000	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
308	R3-4B(5)	II	--	36 x 48	12.000	--	--	--	--	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
309	D12-5(2S)	II	--	60 x 66	27.500	--	--	1	2	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
310	R2-1(5)	II	65 MPH	48 x 60	20.000	--	--	1	1	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
311	R2-1(5)	II	65 MPH	48 x 60	20.000	--	--	1	1	2	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
312	--	--	RIGHT LANE FOR EXIT ONLY	-- x --	--	--	--	1	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
313	E1-1A	I	[167] WEST HOLY HILL RD 1/2 MILE	-- x --	--	--	--	--	--	--	--	--	--	REUSE STEEL POSTS	19 x 10.5	199.500	1	--	--	--	--	--	1
313A	E1-5P	I	EXIT 57	-- x --	--	--	--	--	--	--	--	--	--	--	9 x 2.5	22.500	--	--	--	--	--	--	--
314	W5-52R(3)	II	--	18 x 54	--	--	6.750	--	--	1	--	--	--	4' MOUNTING HEIGHT	-- x --	--	--	--	--	--	--	--	--
315	W4-2R(5)	II	--	48 x 48	--	--	16.000	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
316	W5-52L(3)	II	--	18 x 54	--	--	6.750	1	1	1	--	--	--	4' MOUNTING HEIGHT	-- x --	--	--	--	--	--	--	--	--
317	--	I	2 RIGHT LANES MUST EXIT	-- x --	--	--	--	1	2	2	--	--	--	--	16 x 5	80.000	--	--	A	1.2	68	600	--
318	E6-1	I	[45] NORTH WEST BEND EXIT [A] ONLY	-- x --	--	--	--	--	--	--	--	--	--	INSTALL ON S-66-1 I-BEAMS INCIDENTAL	16 x 10.5	168.000	1	--	--	--	--	--	--
318A	E1-5P	I	EXIT 59	-- x --	--	--	--	--	--	--	--	--	--	--	9 x 2.5	22.500	--	--	--	--	--	--	--
319	E6-51	I	[41] NORTH FOND DU LAC [A] [A]	-- x --	--	--	--	--	--	--	--	--	--	INSTALL ON S-66-1 I-BEAMS INCIDENTAL	17 x 10.5	178.500	1	--	--	--	--	--	--
320	R8-7(5)	II	--	48 x 36	12.000	--	--	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
321	W11-3	--	--	-- x --	--	--	--	1	1	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
322	W57-51	--	--	-- x --	--	--	--	1	--	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
323	W4-3R(5)	II	--	48 x 48	--	--	16.000	1	1	1	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
324	E6-51	I	[41] NORTH FOND DU LAC [A] [A]	-- x --	--	--	--	--	--	--	--	--	--	INSTALL ON S-66-2 I-BEAMS INCIDENTAL	17 x 10.5	178.500	1	--	--	--	--	--	--
325	E6-1	I	[45] NORTH WEST BEND [A] EXIT ONLY [A]	-- x --	--	--	--	--	--	--	--	--	--	INSTALL ON S-66-2 I-BEAMS INCIDENTAL	19 x 10	190.000	1	--	--	--	--	--	--
325A	E1-5P	I	EXIT 59	-- x --	--	--	--	--	--	--	--	--	--	--	9 x 2.5	22.500	--	--	--	--	--	--	--

TYPE I & II PERMANENT SIGNING — **CATEGORY 0010** — **USH 41/45 1100-38-70**

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]	638.2602 REM SIGNS TYPE II [EA]	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]	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]	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUPPORT [EA]	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]
326	E5-1A(5)	II	EXIT 59	72 x 60	30.000	--	--	1	2	--	2	--	--	--	-- x --	--	--	--	--	--	--	--	--
327	W5-54(2S)	II	--	18 x 18	--	--	2.250	--	--	--	--	--	326	--	-- x --	--	--	--	--	--	--	--	--
328	W5-54(2S)	II	--	18 x 18	--	--	2.250	--	--	--	--	--	326	--	-- x --	--	--	--	--	--	--	--	--
329	D12-2B(5)	II	--	114 x 48	38.000	--	--	--	--	2	--	--	--	SHEET 35 OF 38	-- x --	--	--	--	--	--	--	--	--
330	R11-54F(2M)	II	--	48 x 30	--	10.000	--	--	--	2	--	--	--	SHEET 3 OF 38	-- x --	--	--	--	--	--	--	--	--
331	R11-54F(2M)	II	--	48 x 30	--	10.000	--	--	--	2	--	--	--	SHEET 3 OF 38	-- x --	--	--	--	--	--	--	--	--
332	R11-54F(2M)	II	--	48 x 30	--	10.000	--	--	--	2	--	--	--	SHEET 4 OF 38	-- x --	--	--	--	--	--	--	--	--
333	R11-54F(2M)	II	--	48 x 30	--	10.000	--	--	--	2	--	--	--	SHEET 5 OF 38	-- x --	--	--	--	--	--	--	--	--
334	R11-54F(2M)	II	--	48 x 30	--	10.000	--	--	--	2	--	--	--	SHEET 13 OF 38	-- x --	--	--	--	--	--	--	--	--
335	R11-54F(2M)	II	--	48 x 30	--	10.000	--	--	--	2	--	--	--	SHEET 15 OF 38	-- x --	--	--	--	--	--	--	--	--
336	R11-54F(2M)	II	--	48 x 30	--	10.000	--	--	--	2	--	--	--	SHEET 14 OF 38	-- x --	--	--	--	--	--	--	--	--
337	R11-54F(2M)	II	--	48 x 30	--	10.000	--	--	--	2	--	--	--	SHEET 15 OF 38	-- x --	--	--	--	--	--	--	--	--
338	R11-54F(2M)	II	--	48 x 30	--	10.000	--	--	--	2	--	--	--	SHEET 30 OF 38	-- x --	--	--	--	--	--	--	--	--
339	R11-54F(2M)	II	--	48 x 30	--	10.000	--	--	--	2	--	--	--	SHEET 31 OF 38	-- x --	--	--	--	--	--	--	--	--
340	R11-54F(2M)	II	--	48 x 30	--	10.000	--	--	--	2	--	--	--	SHEET 32 OF 38	-- x --	--	--	--	--	--	--	--	--
341	R11-54F(2M)	II	--	48 x 30	--	10.000	--	--	--	2	--	--	--	SHEET 31 OF 38	-- x --	--	--	--	--	--	--	--	--
342	D12-2B(5)	II	--	114 x 48	38.000	--	--	--	--	2	--	--	--	SHEET 9 OF 38	-- x --	--	--	--	--	--	--	--	--
343	R3-58(2S)	II	--	24 x 30	5.000	--	--	--	--	1	--	--	--	SHEET 11 OF 38	-- x --	--	--	--	--	--	--	--	--
344	R3-58(2S)	II	--	24 x 30	5.000	--	--	--	--	1	--	--	--	SHEET 11 OF 38	-- x --	--	--	--	--	--	--	--	--
345	M1-94S(MOD)	II	[A] [167] MEQUON RD [Y] LANNON RD [A]	108 x 36	27.000	--	--	--	--	--	--	--	--	ON MAST ARM SHEET 14 OF 38	-- x --	--	--	--	--	--	--	--	--
346	M1-94S(MOD)	II	[A] [Y] LANNON RD [167] MEQUON RD [A]	108 x 36	27.000	--	--	--	--	--	--	--	--	ON MAST ARM SHEET 15 OF 38	-- x --	--	--	--	--	--	--	--	--
347	R11-54F(2M)	II	--	48 x 30	--	10.000	--	--	--	2	--	--	--	SHEET 31 OF 38	-- x --	--	--	--	--	--	--	--	--
348	R11-54F(2M)	II	--	48 x 30	--	10.000	--	--	--	2	--	--	--	SHEET 32 OF 38	-- x --	--	--	--	--	--	--	--	--
349	JV2-1(2S) M3-3 M1-1 M1-4 M4-20L	II	-- -- IH 41 USH 45 --	24 x 84 24 x 12 24 x 24 24 x 24 24 x 24	14.000	--	--	--	--	--	1	--	--	SHEET 15 OF 38 COVER IH 41 SHIELD	-- x --	--	--	--	--	--	--	--	--
350	D1-2	II	[A] MILWAUKEE FOND DU LAC [A]	84 x 30	17.500	--	--	--	--	2	--	--	--	SHEET 32 OF 38	-- x --	--	--	--	--	--	--	--	--
351	--	I	NORTH [41] [45] ONLY [A]	-- x --	--	--	--	--	--	--	--	--	--	INSTALL ON S-66-240 I-BEAMS INCIDENTAL SHEET 14 OF 38	6 x 7	42.000	--	--	--	--	--	--	--
352	--	I	NORTH [41] [45] ONLY [A]	-- x --	--	--	--	--	--	--	--	--	--	INSTALL ON S-66-240 I-BEAMS INCIDENTAL SHEET 14 OF 38	6 x 7	42.000	--	--	--	--	--	--	--
353	R11-54F(2M)	II	--	48 x 30	--	--	10.000	--	--	2	--	--	--	SHEET 31 OF 38	-- x --	--	--	--	--	--	--	--	--
	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--	-- x --	--	--	--	--	--	--	--	--
	TOTALS				2127.335	319.040	497.070	204	193	229	13	11				5090.40	28	4		2.8	166	2600	17

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	PERMANENT SIGNING QUANTITIES	SHEET:	E

OVERHEAD SIGN SUPPORTS - MISC QUANTITIES

1100-38-70 USH 41/45

LOCATION	OVERHEAD SIGN SUPPORT STRUCTURE S-66-238 L.S. 641.8100.01	OVERHEAD SIGN SUPPORT STRUCTURE S-66-237 L.S. 641.8100.02	OVERHEAD SIGN SUPPORT STRUCTURE S-67-952 L.S. 641.8100.03	OVERHEAD SIGN SUPPORT STRUCTURE S-66-607 L.S. 641.8100.04	OVERHEAD SIGN SUPPORT STRUCTURE S-66-236 L.S. 641.8100.05	OVERHEAD SIGN SUPPORT STRUCTURE S-66-239 L.S. 641.8100.06	OVERHEAD SIGN SUPPORT STRUCTURE S-66-240 L.S. 641.8100.07
USH 41 NB EXIT RAMP TO LANNON ROAD	1						
USH 41 SB EXIT RAMP TO STH 167		1					
USH 41 NB EXIT RAMP TO CTH Q			1				
CTH Q WB AT EMMER ROAD				1			
USH 41 SB RAMP TO CTH Q					1		
LANNON ROAD WB - STH 167 AT LOOKAHEAD LANE						1	
LANNON ROAD EB - DUAL LEFT AT USH 41/45							1
TOTAL 0010	1	1	1	1	1	1	1

SHEET: 1 OF 1

PROJECT NO:1100-38-70	HWY: USH 41/45	COUNTY:WASHINGTON	MISCELLANEOUS QUANTITIES – OVERHEAD SIGN SUPPORTS	SHEET:	E

3

3

CATEGORY 0030
LIGHTING REMOVAL ITEMS

204.0195 REMOVING CONCRETE BASES
SPV.0060.08 REMOVING AND SALVAGE LIGHTING UNITS
SPV.0060.09 REMOVING LUMINAIRES
SPV.0090.10 LAMP DISPOSAL H.I.D.

SYSTEM	LOCATION	ITEM	204.0195 REMOVING CONCRETE BASES EACH	SPV.0060.08 REMOVING AND SALVAGE LIGHTING UNIT EACH	SPV.0060.09 REMOVING LUMINAIRES EACH	SPV.0060.10 LAMP DISPOSAL H.I.D. EACH	COMMENTS
HL-66-GM	PARK & RIDE	AGM2/BGM2	--	--	2	2	REMOVE LUMINAIRE ONLY
HL-66-GM	PARK & RIDE	AGM3/BGM3	--	--	2	2	"
HL-66-GM	PARK & RIDE	AGM4/BGM4	--	--	2	2	"
HL-66-GM	PARK & RIDE	AGM5/BGM5	--	--	2	2	"
HL-66-VG	830+55W, 33.0' RT	BVG1	--	--	1	1	"
HL-66-VG	832+51W, 29.6' RT	AVG2/BVG2	--	--	2	2	"
HL-66-VG	835+23W, 30.9' RT	AVG3/BVG3	--	--	2	2	"
HL-66-VG	1453+40CC, 42.1' LT	AVG4	1	1	1	1	REMOVE LIGHTING UNIT
HL-66-VG	837+17W, 49.2' LT	BVG5	--	--	1	1	REMOVE LUMINAIRE ONLY
HL-66-VG	838+75W, 46.3' LT	AVG6	--	--	1	1	"
HL-66-VG	840+49W, 35.9' LT	BVG7	--	--	1	1	"
HL-66-VG	842+15W, 40.4' LT	AVG8	--	--	1	1	"
HL-66-VG	455+02B, 19.3' RT	BVG9	--	--	1	1	"
HL-66-VG	837+35W, 38.6' RT	DVG15	--	--	1	1	"
HL-66-VG	839+91W, 35.6' RT	CVG16	--	--	1	1	"
HL-66-VG	1452+82AA, 27.3' RT	CVG18	--	--	1	1	"
HL-66-VG	1451+74DD, 19.4' LT	EVG11	--	--	1	1	"
HL-66-VG	1450+30DD, 17.9' LT	FVG12	--	--	1	1	"
HL-66-VG	1447+82DD, 32.5' LT	EVG13	--	--	1	1	"
HL-66-VG	1445+80DD, 34.0' LT	FVG14	--	--	1	1	"
HL-66-VG	831+20W, 70' LT	BVG20	--	--	1	1	REMOVE LUMINAIRE ONLY
	TOTAL (0030)		**1**	**1**	**27**	**27**	

CATEGORY 0030
LIGHTING BRANCH CIRCUIT CONDUIT

652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH

SYSTEM	LOCATION TO LOCATION	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF
HL-66-VG	EXISTING LIGHT POLE BVG5 TO INSTALLED SALVAGE LIGHT POLE AVG4	150
HL-66-VG	INSTALLED SALVAGE LIGHT POLE AVG4 TO EXISTING PB102	120
HL-66-VG	EXISTING PB106 TO EXISTING LIGHT POLE AVG8	60
HL-66-VG	EXISTING LIGHT POLE AVG8 TO PB108	170
HL-66-VG	PB108 TO PB103	80
HL-66-VG	PB103 TO EXISTING LIGHT POLE BVG9	40
	TOTAL (0030)	**620**

CATEGORY 0030
LIGHTING WIRE QUANTITIES
240/480 VAC 3-WIRE ISOLATED NEUTRAL SYSTEM

655.0625 ELECTRICAL WIRE LIGHTING 6 AWG
655.0630 ELECTRICAL WIRE LIGHTING 4 AWG

SYSTEM	NETWORK	LOCATION TO LOCATION	DISTANCE	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG LF	655.0630 ELECTRICAL WIRE LIGHTING 4 AWG LF
HL-66-VG	A/B/N/G	EXISTING LIGHT POLE AVG3 / BVG3 TO EXISTING PB102 TO LIGHT POLE AVG4	235	--	940
HL-66-VG	A/B/N/G	LIGHT POLE AVG4 TO EXISTING LIGHT POLE BVG5	160	--	640
HL-66-VG	A/B/N/G	EXISTING LIGHT POLE BVG7 TO EXISTING PB106 TO EXISTING LIGHT POLE AVG8	170	680	--
HL-66-VG	A/B/N/G	EXISTING LIGHT POLE AVG8 TO PB108 TO PB103 TO EXISTING LIGHT POLE BVG9	295	1180	--
		TOTAL (0030)		**1,860**	**1,580**

CATEGORY 0030
LIGHT POLE QUANTITIES

654.0107	CONCRETE BASES TYPE 7
655.0610	ELECTRICAL WIRE LIGHTING 12 AWG
659.1125	LUMINAIRES UTILITY LED C
659.1130	LUMINAIRES UTILITY LED D
SPV.0060.11	INSTALL SALVAGE LIGHTING UNITS

SYSTEM	STATION	OFFSET	ITEM	BOLT PROJECTION	654.0107 CONCRETE BASES TYPE 7	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG	659.1125 LUMINAIRES UTILITY LED C	659.1130 LUMINAIRES UTILITY LED D	SPV.0060.11 INSTALL SALVAGE LIGHTING UNITS
					EACH	L.F.	EACH	EACH	EACH
HL-66-GM	PARK & RIDE	--	AGM2/BGM2	--	--	--	2	--	--
HL-66-GM	PARK & RIDE	--	AGM3/BGM3	--	--	--	2	--	--
HL-66-GM	PARK & RIDE	--	AGM4/BGM4	--	--	--	2	--	--
HL-66-GM	PARK & RIDE	--	AGM5/BGM5	--	--	--	2	--	--
HL-66-VG	830+55W	33.0' RIGHT	BVG1	--	--	--	1	--	--
HL-66-VG	832+51W	29.6' RIGHT	AVG2/BVG2	--	--	--	--	2	--
HL-66-VG	835+23W	30.9' RIGHT	AVG3/BVG3	--	--	--	--	2	--
HL-66-VG	1453+40CC	42.1' LEFT	AVG4	--	1	144	1	--	1
HL-66-VG	837+17W	49.2' LEFT	BVG5	--	--	--	--	1	--
HL-66-VG	838+75W	46.3' LEFT	AVG6	--	--	--	1	--	--
HL-66-VG	840+49W	35.9' LEFT	BVG7	--	--	--	1	--	--
HL-66-VG	842+15W	40.4' LEFT	AVG8	--	--	--	--	1	--
HL-66-VG	455+02B	19.3' RIGHT	BVG9	--	--	--	1	--	--
HL-66-VG	837+35W	38.6' RIGHT	DVG15	--	--	--	--	1	--
HL-66-VG	839+91W	35.6' RIGHT	CVG16	--	--	--	--	1	--
HL-66-VG	1452+82AA	27.3' RIGHT	CVG18	--	--	--	1	--	--
HL-66-VG	1451+74DD	19.4' LEFT	EVG11	--	--	--	1	--	--
HL-66-VG	1450+30DD	17.9' LEFT	FVG12	--	--	--	1	--	--
HL-66-VG	1447+82DD	34.0' LEFT	EVG13	--	--	--	1	--	--
HL-66-VG	1445+80DD	34.0' LEFT	FVG14	--	--	--	1	--	--
HL-66-VG	831+20W	70.0' LEFT	BVG20	--	--	--	1	--	--
TOTAL (0030)					**1**	**144**	**19**	**8**	**1**

3

3

STATE FURNISHED MATERIALS SUMMARY

EACH	DESCRIPTION
1	TRAFFIC SIGNAL CONTROLLER, FULLY ACTUATED, 8 PHASE
1	TRAFFIC SIGNAL CABINET
1	POLES, TYPE 10
2	POLES, TYPE 12
2	LUMINAIRE ARMS, STEEL, 15-FT
1	30-FT MONOTUBE ARM
1	35-FT MONOTUBE ARM
1	45-FT MONOTUBE ARM
8	VIDEO CAMERA

REMOVING CONCRETE BASES

SIGNAL BASE NO.	204.0195 REMOVING CONCRETE BASES EACH
CB1	1
SB1	1
SB2	1
SB3	1
SB4	1
SB5	1
SB6	1
SB7	1
SB9	1
SB10	1
** TOTAL	10

** QUANTITY SHOWN ELSEWHERE ON PLAN

STATE FURNISHED FOR INFORMATION ONLY

SIGNAL BASE NO.	POLE TYPE 10 EACH	POLE TYPE 12 EACH	MONOTUBE 30-FT ARM EACH	MONOTUBE 35-FT ARM EACH	MONOTUBE 45-FT ARM EACH	VIDEO CAMERA EACH	LUMINAIRE ARMS, STEEL, 15-FT EACH
SB1	1		1			4	2
SB10		1			1	1	
SB11		1		1		1	
SB2						1	
SB9						1	
***TOTAL	1	2	1	1	1	8	2

** QUANTITY SHOWN ELSEWHERE ON PLAN

USH 41/45 SB RAMPS & CTH Q (COUNTY LINE RD.)
WASHINGTON COUNTY
CATEGORY 0020
S66-0607

3

CONDUIT

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	652.0235 CONDUIT NONMETALLIC SCHEDULE 40 3-INCH L.F.	652.0605 CONDUIT SPECIAL 2-INCH L.F.	652.0615 CONDUIT SPECIAL 3-INCH L.F.
CB1	PB1		39		
PB1	PB2				112
PB2	SB1		12		
PB2	PB3			41	
PB3	SB2	10			
PB3	SB3			49	
PB2	PB4				116
PB4	SB4	13			
PB4	PB5		87		
PB5	SB5	14			
PB4	SB6	14			
PB4	PB6		72		
PB6	SB7	9			
PB6	PB7		242		
PB7	SB8	19			
PB7	PB8				86
PB8	SB9	13			
PB8	PB9				90
PB9	SB10		23		
PB9	PB10		90		
PB10	PB11				102
PB11	SB11		10		
PB11	PB12		102		
PB12	SB12	8			
PB12	CB1		42		
	** TOTAL	100	719	90	506

** QUANTITY SHOWN ELSEWHERE ON PLAN

PULL BOXES

PULL BOX NO.	LOCATION*	653.0135 PULL BOXES STEEL 24x36-INCH EACH	653.0140 PULL BOXES STEEL 24x42-INCH EACH
PB1	29+52.5, 54.8'RT		1
PB2	29+52.5, 1.0'LT		1
PB3	29+11.5, 1.0'LT	1	
PB4	29+52.5, 59.3'LT		1
PB5	28+65.8, 59.3'LT		1
PB6	29+88.8, 59.3'LT		1
PB7	31+05.0, 38.7'LT		1
PB8	31+05.0, 4.4'RT		1
PB9	31+05.0, 49.0'RT		1
PB10	30+66.0, 67.5'RT		1
PB11	30+18.5, 86.5'RT		1
PB12	29+77.2, 59.2'RT		1
	** TOTAL	1	11

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.
** QUANTITY SHOWN ELSEWHERE ON PLAN

REMOVE PULL BOXES

PULL BOX NO.	653.0905 REMOVING PULL BOXES EACH
PB1	1
PB2	1
PB3	1
PB4	1
PB5	1
PB6	1
PB7	1
PB8	1
PB9	1
PB10	1
PB11	1
PB12	1
PB13	1
PB21	1
** TOTAL	14

** QUANTITY SHOWN ELSEWHERE ON PLAN

3

CONCRETE BASES

SIGNAL BASE NO.	LOCATION*	654.0101 CONCRETE BASES TYPE 1 EACH	654.0102 CONCRETE BASES TYPE 2 EACH	654.0110 CONCRETE BASES TYPE 10 EACH	654.0113 CONCRETE BASES TYPE 13 EACH	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
CB1	29+63.3, 61.4'RT					1
SB1	29+64.2, 1.0'LT			1		
SB2	29+02.1, 0.0'RT		1			
SB3	28+62.8, 0.0'RT	1				
SB4	29+41.4, 51.8'LT	1				
SB5	28+76.5, 68.3'LT		1			
SB6	29+64.3, 51.8'LT	1				
SB7	29+93.2, 51.7'LT	1				
SB8	30+85.9, 39.2'LT	1				
SB9	30+91.7, 4.4'RT		1			
SB10	30+83.7, 58.6'RT				1	
SB11	30+25.4, 93.4'RT				1	
SB12	29+73.0, 52.9'RT	1				
	** TOTAL	6	3	1	2	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.
** QUANTITY SHOWN ELSEWHERE ON PLAN

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	MISCELLANEOUS QUANTITIES	SHEET:	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024001_SP_S0607\030201_MQ.PPTX PLOT DATE : 10/10/2014 12:30PM PLOT BY : MSCCXV PLOT NAME : 030201_MQ.PDF PLOT SCALE : 1:1

USH 41/45 SB RAMPS & CTH Q (COUNTY LINE RD.)
WASHINGTON COUNTY
CATEGORY 0020
S66-0607

3

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG L.F.	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG L.F.	655.0305 CABLE TYPE UF 2-12 AWG GROUNDED L.F.
CB1	SB1		124	
CB1	SB2	179		
CB1	SB3	218		
CB1	SB4	199		
CB1	SB5	303		
CB1	SB6		200	
CB1	SB7	247		
CB1	SB8	375		
CB1	SB10		259	
CB1	SB11	118		
CB1	SB12		49	
CB1	SB1			124
SB1	SB5			227
CB1	SB9			310
	** TOTAL	1639	632	661

** QUANTITY SHOWN ELSEWHERE ON PLAN

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.
CB1	SB1	124
SB1	SB2	103
SB2	SB3	83
SB3	SB4	217
SB4	SB5	154
SB5	SB6	155
SB6	SB7	99
SB7	SB8	189
SB8	SB10	186
SB10	SB11	185
SB11	SB12	109
SB12	CB1	49
PB1	CB1	36
PB2	SB1	32
PB3	SB2	30
PB4	SB4	33
PB5	SB5	34
PB6	SB7	29
PB7	SB8	39
PB8	SB9	33
PB9	SB10	43
PB10	SB10	104
PB11	SB11	30
PB12	CB1	34
	** TOTAL	2130

** QUANTITY SHOWN ELSEWHERE ON PLAN

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0230 *CABLE TRAFFIC SIGNAL 5-14 AWG L.F.	655.0240 *CABLE TRAFFIC SIGNAL 7-14 AWG L.F.
SB1	HEAD 5	40	
SB1	HEAD 6	52	
SB1	HEAD 8		30
SB2	HEAD 12	19	
SB3	HEAD 13	19	
SB4	HEAD 15	15	
SB5	HEAD 14	15	
SB6	HEAD 9	19	
SB6	HEAD 16	15	
SB7	HEAD 17	15	
SB8	HEAD 4	19	
SB10	HEAD 2	68	
SB10	HEAD 3	56	
SB10	HEAD 10	19	
SB11	HEAD 11	58	
SB12	HEAD 1	19	
SB12	HEAD 7		22
	** TOTAL	448	52

** QUANTITY SHOWN ELSEWHERE ON PLAN

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG L.F.
SB1	LUMIN. (2)	258
SB5	LUMIN.	129
SB9	LUMIN. (2)	258
	** TOTAL	645

** QUANTITY SHOWN ELSEWHERE ON PLAN

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	MISCELLANEOUS QUANTITIES	SHEET:	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024001_SP_S0607\030201_MQ.PPTX PLOT DATE : 10/10/2014 12:30PM PLOT BY : MSCCXV PLOT NAME : 030201_MQ.PDF PLOT SCALE : 1:1

3

USH 41/45 SB RAMPS & CTH Q (COUNTY LINE RD.)
WASHINGTON COUNTY
CATEGORY 0020
S66-0607

METER BREAKER PEDESTAL

LOCATION*	656.0200.01 ELECTRICAL SERVICE METER BREAKER PEDESTAL L.S.
USH 41/45 SB RAMP & CTH Q	1
** TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
** QUANTITY SHOWN ELSEWHERE ON PLAN

POLES

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0310 POLES TYPE 3 EACH	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	657.0609 LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH	657.1350 INSTALL POLES TYPE 10 EACH	657.1355 INSTALL POLES TYPE 12 EACH	657.1530 INSTALL MONOTUBE ARMS 30-FT EACH	657.1535 INSTALL MONOTUBE ARMS 35-FT EACH	657.1545 INSTALL MONOTUBE ARMS 45-FT EACH	657.1815 INSTALL LUMINAIRE ARMS STEEL 15-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH	659.1125 LUMINAIRES UTILITY LED C EACH
SB1								1		1			2		2
SB2		1	1				1								
SB3	1			1											
SB4	1					1								1	
SB5		1	1				1							1	1
SB6	1			1										1	
SB7	1					1								1	
SB8	1			1											
SB9		1	1				2								2
SB10									1			1			
SB11									1		1				
SB12	1				1										
** TOTAL	6	3	3	3	1	2	4	1	2	1	1	1	2	4	5

** QUANTITY SHOWN ELSEWHERE ON PLAN

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	MISCELLANEOUS QUANTITIES	SHEET:	E

3

USH 41/45 SB RAMPS & CTH Q (COUNTY LINE RD.)
WASHINGTON COUNTY
CATEGORY 0020
S66-0607

		FACES											
		658.0110	658.0115	658.0215	658.0220	658.0416	658.0600	658.0605	658.0610	658.0615	658.0620	658.0625	658.0635
SIGNAL HEAD NO.	SIGNAL BASE NO.	3-12 INCH VERTICAL EACH	4-12 INCH VERTICAL EACH	BACKPLATE 3 SECTION EACH	BACKPLATE 4 SECTION EACH	PEDESTRIAN SIGNAL FACE 16-INCH EACH	RED BALL EACH	YELLOW BALL EACH	GREEN BALL EACH	RED ARROW EACH	YELLOW ARROW EACH	GREEN ARROW EACH	LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH EACH
1	SB12	1		1			1	1	1				
2	SB10	1		1			1	1	1				
3	SB10	1		1			1	1	1				
4	SB8	1		1			1	1	1				
5	SB1	1		1			1	1	1				
6	SB1	1		1			1	1	1				
7	SB12		1		1					1	2	1	
8	SB1		1		1					1	2	1	
9	SB6	1		1			1	1	1				
10	SB10	1		1			1	1	1				
11	SB11	1		1			1	1	1				
12	SB2	1		1			1				1	1	
13	SB3	1		1			1				1	1	
14	SB5					1							1
15	SB4					1							1
16	SB6					1							1
17	SB7					1							1
	** TOTAL	11	2	11	2	4	11	9	9	2	6	4	4

** QUANTITY SHOWN ELSEWHERE ON PLAN

TRAFFIC SIGNAL MOUNTING HARDWARE

LOCATION	658.5069.01 SIGNAL MOUNTING HARDWARE L.S.
USH 41/45 SB RAMPS & CTH Q	1
** TOTAL	1

** QUANTITY SHOWN ELSEWHERE ON PLAN

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS

LOCATION	661.0200.01 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS L.S.
USH 41/45 SB RAMPS & CTH Q	1
** TOTAL	1

** QUANTITY SHOWN ELSEWHERE ON PLAN

3

INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET

LOCATION	SPV.0105.09 INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET L.S.
USH 41/45 SB RAMPS & CTH Q	1
** TOTAL	1

** QUANTITY SHOWN ELSEWHERE ON PLAN

TRANSPORTING TRAFFIC SIGNAL AND INTERSECTION LIGHTING MATERIALS

LOCATION	SPV.0105.13 TRANSPORTING TRAFFIC SIGNAL AND INTERSECTION LIGHTING MATERIALS L.S.
USH 41/45 SB RAMPS & CTH Q	1
** TOTAL	1

** QUANTITY SHOWN ELSEWHERE ON PLAN

TRANSPORTING AND INSTALLING STATE FURNISHED VIDEO DETECTION SYSTEM

LOCATION	SPV.0105.17 TRANSPORTING AND INSTALLING STATE FURNISHED VIDEO DETECTION SYSTEM L.S.
USH 41/45 SB RAMPS & CTH Q	1
** TOTAL	1

** QUANTITY SHOWN ELSEWHERE ON PLAN

REMOVE LOOP DETECTOR WIRE AND LEAD-IN CABLE

LOCATION	SPV.0105.25 REMOVE LOOP DETECTOR WIRE & LEAD-IN CABLE L.S.
USH 41/45 SB RAMPS & CTH Q	1
** TOTAL	1

** QUANTITY SHOWN ELSEWHERE ON PLAN

REMOVE TRAFFIC SIGNALS

LOCATION	SPV.0105.29 REMOVE TRAFFIC SIGNALS L.S.
USH 41/45 SB RAMPS & CTH Q	1
** TOTAL	1

** QUANTITY SHOWN ELSEWHERE ON PLAN

TEMPORARY NON-INTRUSIVE VEHICLE DETECTION SYSTEM FOR INTERSECTIONS

LOCATION	SPV.0105.33 TEMPORARY NON-INTRUSIVE VEHICLE DETECTION SYSTEM FOR INTERSECTIONS L.S.
USH 41/45 SB RAMPS & CTH Q	1
** TOTAL	1

** QUANTITY SHOWN ELSEWHERE ON PLAN

3

USH 41/45 NB RAMPS & CTH Q (COUNTY LINE RD.)
WASHINGTON COUNTY
CATEGORY 0020
S66-0374

STATE FURNISHED MATERIALS SUMMARY

EACH	DESCRIPTION
1	TRAFFIC SIGNAL CONTROLLER, FULLY ACTUATED, 8 PHASE
1	TRAFFIC SIGNAL CABINET
1	POLES, TYPE 9
1	POLES, TYPE 10
1	POLES, TYPE 13
3	LUMINAIRE ARMS, STEEL, 10-FT
1	25-FT MONOTUBE ARM
1	30-FT MONOTUBE ARM
1	45-FT MONOTUBE ARM
7	VIDEO CAMERA

STATE FURNISHED FOR INFORMATION ONLY

SIGNAL BASE NO.	POLE TYPE 9 EACH	POLE TYPE 10 EACH	POLE TYPE 13 EACH	MONOTUBE 25-FT ARM EACH	MONOTUBE 30-FT ARM EACH	MONOTUBE 45-FT ARM EACH	VIDEO CAMERA EACH	LUMINAIRE ARMS, STEEL, 15-FT EACH
SB3			1			1	1	1
SB4	1			1			1	
SB7		1			1		4	2
SB2							1	
**TOTAL	1	1	1	1	1	1	7	3

** QUANTITY SHOWN ELSEWHERE ON PLAN

REMOVING CONCRETE BASES

SIGNAL BASE NO.	204.0195 REMOVING CONCRETE BASES EACH
CB1	1
SB1	1
SB2	1
SB3	1
SB4	1
SB5	1
SB6	1
** TOTAL	7

** QUANTITY SHOWN ELSEWHERE ON PLAN

CONDUIT

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	652.0235 CONDUIT NONMETALLIC SCHEDULE 40 3-INCH L.F.	652.0605 CONDUIT SPECIAL 2-INCH L.F.	652.0615 CONDUIT SPECIAL 3-INCH L.F.
CB1	PB1		30		
PB1	PB2				86
PB2	SB1			28	
PB2	PB3				82
PB3	PB4		216		
PB4	SB2	10			
PB4	PB5				178
PB5	SB3		19		
PB5	PB6		50		
PB6	SB4		5		
PB6	PB7				120
PB7	SB5	5			
PB7	SB6	32			
PB7	PB8		224		
PB8	PB9				82
PB9	PB10		60		
PB10	SB7		10		
PB9	PB11				118
PB11	CB1		30		
** TOTAL		47	644	28	666

** QUANTITY SHOWN ELSEWHERE ON PLAN

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	MISCELLANEOUS QUANTITIES	SHEET:	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024002_SP_S0374\030202_MQ.PPTX PLOT DATE : 10/10/2014 12:30PM PLOT BY : MSCCXV PLOT NAME : 030202_MQ.PDF PLOT SCALE : 1:1

3

3

PULL BOXES

PULL BOX NO.	LOCATION*	653.0135 PULL BOXES STEEL 24x36-INCH EACH	653.0140 PULL BOXES STEEL 24x42-INCH EACH
PB1	41+38.9, 63.8'RT		1
PB2	40+95.5, 64.4'RT		1
PB3	40+54.5, 65.0'RT		1
PB4	39+59.8, 39.6'RT		1
PB5	39+59.8, 49.3'LT		1
PB6	39+80.5, 63.1'LT		1
PB7	40+40.6, 68.9'LT		1
PB8	41+47.9, 43.0'LT		1
PB9	41+47.9, 1.6'LT		1
PB10	40+87.5, 0.1'RT	1	
PB11	41+47.9, 57.0'RT		1
	** TOTAL	1	10

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.
** QUANTITY SHOWN ELSEWHERE ON PLAN

REMOVE PULL BOXES

PULL BOX NO.	653.0905 REMOVING PULL BOXES EACH
PB1	1
PB2	1
PB3	1
PB4	1
PB5	1
PB6	1
PB7	1
PB8	1
PB9	1
PB10	1
PB11	1
PB12	1
PB13	1
PB14	1
PB15	1
PB16	1
** TOTAL	16

** QUANTITY SHOWN ELSEWHERE ON PLAN

CONCRETE BASES

SIGNAL BASE NO.	LOCATION*	654.0101 CONCRETE BASES TYPE 1 EACH	654.0102 CONCRETE BASES TYPE 2 EACH	654.0110 CONCRETE BASES TYPE 10 EACH	654.0113 CONCRETE BASES TYPE 13 EACH	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
CB1	41+48.2, 66.6'RT					1
SB1	40+79.7, 40.8'RT	1				
SB2	39+49.5, 39.5'RT		1			
SB3	39+44.4, 59.8'LT				1	
SB4	39+85.1, 61.7'LT			1		
SB5	40+38.8, 64.0'LT	1				
SB6	40+67.8, 52.6'LT		1			
SB7	40+77.7, 0.4'RT			1		
	** TOTAL	2	2	2	1	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.
** QUANTITY SHOWN ELSEWHERE ON PLAN

USH 41/45 NB RAMPS & CTH Q (COUNTY LINE RD.)
WASHINGTON COUNTY
CATEGORY 0020
S66-0374

3

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO		655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG L.F.	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG L.F.	655.0305 CABLE TYPE UF 2-12 AWG GROUNDED L.F.
CB1	SB1		124		
CB1	SB2		287		
CB1	SB3		401		
CB1	SB4			378	
CB1	SB5		302		
CB1	SB6			329	
CB1	SB7			198	
CB1	SB2				287
SB2	SB3				158
CB1	SB7				198
SB7	SB6				327
		** TOTAL	1114	905	970

** QUANTITY SHOWN ELSEWHERE ON PLAN

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.
CB1	SB1	124
SB1	SB2	243
SB2	SB3	158
SB3	SB4	89
SB4	SB5	110
SB5	SB6	61
SB6	SB7	327
SB7	CB1	198
PB1	CB1	33
PB2	SB1	48
PB3	SB1	105
PB4	SB2	30
PB5	SB3	39
PB6	SB4	25
PB7	SB5	25
PB8	SB6	180
PB9	SB7	106
PB10	SB7	30
PB11	CB1	33
	** TOTAL	1964

** QUANTITY SHOWN ELSEWHERE ON PLAN

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO		655.0230 *CABLE TRAFFIC SIGNAL 5-14 AWG L.F.	655.0240 *CABLE TRAFFIC SIGNAL 7-14 AWG L.F.
SB1	HEAD 9		19	
SB2	HEAD 1		19	
SB3	HEAD 7		69	
SB3	HEAD 8		57	
SB4	HEAD 10		33	
SB4	HEAD 11		45	
SB4	HEAD 12		15	
SB5	HEAD 13		15	
SB6	HEAD 4			22
SB6	HEAD 6		19	
SB7	HEAD 2		41	
SB7	HEAD 3		53	
SB7	HEAD 5			31
		** TOTAL	385	53

** QUANTITY SHOWN ELSEWHERE ON PLAN

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG L.F.
SB2	LUMIN.	129
SB3	LUMIN.	129
SB6	LUMIN.	129
SB7	LUMIN. (2)	258
	** TOTAL	645

** QUANTITY SHOWN ELSEWHERE ON PLAN

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	MISCELLANEOUS QUANTITIES	SHEET:	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024002_SP_S0374\030202_MQ.PPTX PLOT DATE : 10/10/2014 12:30PM PLOT BY : MSCCXV PLOT NAME : 030202_MQ.PDF PLOT SCALE : 1:1

USH 41/45 NB RAMPS & CTH Q (COUNTY LINE RD.)
WASHINGTON COUNTY
CATEGORY 0020
S66-0374

3

3

METER BREAKER PEDESTAL

LOCATION*	656.0200.02 ELECTRICAL SERVICE METER BREAKER PEDESTAL L.S.
USH 41/45 NB RAMP & CTH Q	1
** TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
** QUANTITY SHOWN ELSEWHERE ON PLAN

POLES

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0310 POLES TYPE 3 EACH	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	657.0609 LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH	657.1345 INSTALL POLES TYPE 9 EACH	657.1350 INSTALL POLES TYPE 10 EACH	657.1360 INSTALL POLES TYPE 13 EACH	657.1525 INSTALL MONOTUBE ARMS 25-FT EACH	657.1530 INSTALL MONOTUBE ARMS 30-FT EACH	657.1545 INSTALL MONOTUBE ARMS 45-FT EACH	657.1815 INSTALL LUMINAIRE ARMS STEEL 15-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH	659.1125 LUMINAIRES UTILITY LED C EACH
SB1	1			1											
SB2		1	1			1									1
SB3									1			1	1		1
SB4							1			1				1	
SB5	1				1									1	
SB6		1	1			1									1
SB7								1			1		2		2
** TOTAL	2	2	2	1	1	2	1	1	1	1	1	1	3	2	5

** QUANTITY SHOWN ELSEWHERE ON PLAN

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	MISCELLANEOUS QUANTITIES	SHEET:	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024002_SP_S0374\030202_MQ.PPTX PLOT DATE : 10/10/2014 12:30PM PLOT BY : MSCCXV PLOT NAME : 030202_MQ.PDF PLOT SCALE : 1:1

3

USH 41/45 NB RAMPS & CTH Q (COUNTY LINE RD.)
WASHINGTON COUNTY
CATEGORY 0020
S66-0374

		FACES											
		658.0110	658.0115	658.0215	658.0220	658.0416	658.0600	658.0605	658.0610	658.0615	658.0620	658.0625	658.0635
SIGNAL HEAD NO.	SIGNAL BASE NO.	3-12 INCH VERTICAL EACH	4-12 INCH VERTICAL EACH	BACKPLATE 3 SECTION EACH	BACKPLATE 4 SECTION EACH	PEDESTRIAN SIGNAL FACE 16-INCH EACH	RED BALL EACH	YELLOW BALL EACH	GREEN BALL EACH	RED ARROW EACH	YELLOW ARROW EACH	GREEN ARROW EACH	LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH EACH
1	SB2	1		1			1	1	1				
2	SB7	1		1			1	1	1				
3	SB7	1		1			1	1	1				
4	SB6		1		1					1	2	1	
5	SB7		1		1					1	2	1	
6	SB6	1		1			1	1	1				
7	SB3	1		1			1	1	1				
8	SB3	1		1			1	1	1				
9	SB1	1		1			1	1	1				
10	SB4	1		1			1	1	1				
11	SB4	1		1			1	1	1				
12	SB4					1							1
13	SB5					1							1
	** TOTAL	9	2	9	2	2	9	9	9	2	4	2	2

** QUANTITY SHOWN ELSEWHERE ON PLAN

TRAFFIC SIGNAL MOUNTING HARDWARE

LOCATION	658.5069.02 SIGNAL MOUNTING HARDWARE L.S.
USH 41/45 NB RAMPS & CTH Q	1
** TOTAL	1

** QUANTITY SHOWN ELSEWHERE ON PLAN

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS

LOCATION	661.0200.02 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS L.S.
USH 41/45 NB RAMPS & CTH Q	1
** TOTAL	1

** QUANTITY SHOWN ELSEWHERE ON PLAN

3

INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET

LOCATION	SPV.0105.10 INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET L.S.
USH 41/45 NB RAMPS & CTH Q	1
** TOTAL	1

** QUANTITY SHOWN ELSEWHERE ON PLAN

TRANSPORTING TRAFFIC SIGNAL AND INTERSECTION LIGHTING MATERIALS

LOCATION	SPV.0105.14 TRANSPORTING TRAFFIC SIGNAL AND INTERSECTION LIGHTING MATERIALS L.S.
USH 41/45 NB RAMPS & CTH Q	1
** TOTAL	1

** QUANTITY SHOWN ELSEWHERE ON PLAN

TRANSPORTING AND INSTALLING STATE FURNISHED VIDEO DETECTION SYSTEM

LOCATION	SPV.0105.18 TRANSPORTING AND INSTALLING STATE FURNISHED VIDEO DETECTION SYSTEM L.S.
USH 41/45 NB RAMPS & CTH Q	1
** TOTAL	1

** QUANTITY SHOWN ELSEWHERE ON PLAN

REMOVE LOOP DETECTOR WIRE AND LEAD-IN CABLE

LOCATION	SPV.0105.26 REMOVE LOOP DETECTOR WIRE & LEAD-IN CABLE L.S.
USH 41/45 NB RAMPS & CTH Q	1
** TOTAL	1

** QUANTITY SHOWN ELSEWHERE ON PLAN

REMOVE TRAFFIC SIGNALS

LOCATION	SPV.0105.30 REMOVE TRAFFIC SIGNALS L.S.
USH 41/45 NB RAMPS & CTH Q	1
** TOTAL	1

** QUANTITY SHOWN ELSEWHERE ON PLAN

TEMPORARY NON-INTRUSIVE VEHICLE DETECTION SYSTEM FOR INTERSECTIONS

LOCATION	SPV.0105.34 TEMPORARY NON-INTRUSIVE VEHICLE DETECTION SYSTEM FOR INTERSECTIONS L.S.
USH 41/45 NB RAMPS & CTH Q	1
** TOTAL	1

** QUANTITY SHOWN ELSEWHERE ON PLAN

3

USH 41/45 SB RAMPS & STH 167 (LANNON RD.)
WASHINGTON COUNTY
CATEGORY 0020
S66-0731

STATE FURNISHED MATERIALS SUMMARY

EACH	DESCRIPTION
1	TRAFFIC SIGNAL CONTROLLER, FULLY ACTUATED, 8 PHASE
1	TRAFFIC SIGNAL CABINET
1	POLES, TYPE 9
2	POLES, TYPE 12
1	30-FT MONOTUBE ARM
2	35-FT MONOTUBE ARM
5	RADAR DETECTOR

STATE FURNISHED FOR INFORMATION ONLY

SIGNAL BASE NO.	POLE TYPE 9 EACH	POLE TYPE 12 EACH	MONOTUBE 30-FT ARM EACH	MONOTUBE 35-FT ARM EACH	RADAR DETECTOR EACH
SB3		1		1	3
SB6		1		1	1
SB8	1		1		1
TOTAL	1	2	1	2	5

REMOVING CONCRETE BASES

SIGNAL BASE NO.	204.0195 REMOVING CONCRETE BASES EACH
CB1	1
SB1	1
SB2	1
SB3	1
SB4	1
SB5	1
SB6	1
SB7	1
SB8	1
SB9	1
SB10	1
** TOTAL	11

** QUANTITY SHOWN ELSEWHERE ON PLAN

CONDUIT

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	652.0235 CONDUIT NONMETALLIC SCHEDULE 40 3-INCH L.F.	652.0615 CONDUIT SPECIAL 3-INCH L.F.
CB1	PB1		51	
PB1	PB2			146
PB2	PB3	35		
PB3	SB1	12		
PB3	SB2	19		
PB2	PB4			212
PB4	PB5			90
PB5	SB3		20	
PB5	SB4	14		
PB5	PB6			114
PB6	PB7		46	
PB7	SB5	10		
PB7	PB8			100
PB8	PB9			192
PB9	SB6		20	
PB9	PB10		100	
PB10	PB11			178
PB11	PB12			50
PB12	SB7	6		
PB12	SB8		6	
PB11	CB1		30	
** TOTAL		96	273	1082

** QUANTITY SHOWN ELSEWHERE ON PLAN

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	MISCELLANEOUS QUANTITIES	SHEET:	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024003_SP_S0731\030203_MQ.PPTX PLOT DATE : 10/10/2014 12:30PM PLOT BY : MSCCXV PLOT NAME : 030203_MQ.PDF PLOT SCALE : 1:1

3

3

PULL BOXES

PULL BOX NO.	LOCATION*	653.0135 PULL BOXES STEEL 24x36-INCH EACH	653.0140 PULL BOXES STEEL 24x42-INCH EACH
PB1	835+51.0 E, 60.8'RT		1
PB2	835+53.5 E, 11.7'LT		1
PB3	835+88.4 E, 9.2'LT	1	
PB4	835+57.0 E, 117.8'LT		1
PB5	836+02.1 E, 117.8'LT		1
PB6	836+58.8 E, 117.8'LT		1
PB7	836+76.1 E, 103.8'LT		1
PB8	836+76.3 E, 54.3'LT		1
PB9	836+76.6 E, 41.9'RT		1
PB10	836+58.6 E, 84.9'RT		1
PB11	835+69.3 E, 78.4'RT		1
PB12	836+07.7 E, 47.1'RT		1
	** TOTAL	1	11

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.
** QUANTITY SHOWN ELSEWHERE ON PLAN

REMOVE PULL BOXES

PULL BOX NO.	653.0905 REMOVING PULL BOXES EACH
PB1	1
PB2	1
PB3	1
PB4	1
PB5	1
PB6	1
PB7	1
PB8	1
PB9	1
PB10	1
PB11	1
PB12	1
PB13	1
PB14	1
PB15	1
PB16	1
PB17	1
** TOTAL	17

** QUANTITY SHOWN ELSEWHERE ON PLAN

CONCRETE BASES

SIGNAL BASE NO.	LOCATION*	654.0101 CONCRETE BASES TYPE 1 EACH	654.0110 CONCRETE BASES TYPE 10 EACH	654.0113 CONCRETE BASES TYPE 13 EACH	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
CB1	835+59.8 E, 75.4'RT				1
SB1	835+99.8 E, 8.4'LT	1			
SB2	835+81.8 E, 27.2'LT	1			
SB3	835+87.2 E, 104.0'LT			1	
SB4	836+06.4 E, 104.8'LT	1			
SB5	836+66.1 E, 104.5'LT	1			
SB6	836+96.6 E, 42.0'RT			1	
SB7	836+04.5 E, 41.6'RT	1			
SB8	836+13.2 E, 49.8'RT		1		
	** TOTAL	5	1	2	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.
** QUANTITY SHOWN ELSEWHERE ON PLAN

3

USH 41/45 SB RAMPS & STH 167 (LANNON RD.)
WASHINGTON COUNTY
CATEGORY 0020
S66-0731

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG L.F.	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG L.F.
CB1	SB1	196	
CB1	SB2	203	
CB1	SB3	336	
CB1	SB4	330	
CB1	SB5	396	
CB1	SB6	228	
CB1	SB7		109
CB1	SB8	109	
	** TOTAL	1798	109

** QUANTITY SHOWN ELSEWHERE ON PLAN

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.
CB1	SB1	196
SB1	SB2	55
SB2	SB3	297
SB3	SB4	58
SB4	SB5	160
SB5	SB6	232
SB6	SB7	287
SB7	SB8	36
SB8	CB1	109
PB1	CB1	40
PB2	SB1	83
PB3	SB1	32
PB4	SB3	101
PB5	SB4	34
PB6	SB5	69
PB7	SB5	30
PB8	SB5	96
PB9	SB6	40
PB10	SB6	106
PB11	CB1	33
PB12	SB8	26
	** TOTAL	2120

** QUANTITY SHOWN ELSEWHERE ON PLAN

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG L.F.
SB1	HEAD 8	19
SB2	HEAD 9	19
SB3	HEAD 5	60
SB3	HEAD 6	47
SB4	HEAD 10	19
SB5	HEAD 4	19
SB6	HEAD 2	56
SB6	HEAD 3	44
SB7	HEAD 1	19
SB7	HEAD 7	19
SB8	HEAD 11	50
SB8	HEAD 12	39
	** TOTAL	410

** QUANTITY SHOWN ELSEWHERE ON PLAN

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	MISCELLANEOUS QUANTITIES	SHEET:	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024003_SP_S0731\030203_MQ.PPTX PLOT DATE : 10/10/2014 12:30PM PLOT BY : MSCCXV PLOT NAME : 030203_MQ.PDF PLOT SCALE : 1:1

USH 41/45 SB RAMPS & STH 167 (LANNON RD.)
WASHINGTON COUNTY
CATEGORY 0020
S66-0731

3

METER BREAKER PEDESTAL

LOCATION*	656.0200.03 ELECTRICAL SERVICE METER BREAKER PEDESTAL L.S.
USH 41/45 SB RAMPS & STH 167 (LANNON RD)	1
** TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
** QUANTITY SHOWN ELSEWHERE ON PLAN

FACES

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0110 3-12 INCH VERTICAL EACH	658.0215 BACKPLATE 3 SECTION EACH	658.0600 RED BALL EACH	658.0605 YELLOW BALL EACH	658.0610 GREEN BALL EACH	658.0615 RED ARROW EACH	658.0620 YELLOW ARROW EACH	658.0625 GREEN ARROW EACH
1	SB7	1	1	1	1	1			
2	SB6	1	1	1	1	1			
3	SB6	1	1	1	1	1			
4	SB5	1	1	1	1	1			
5	SB3	1	1	1	1	1			
6	SB3	1	1	1	1	1			
7	SB7	1	1				1	1	1
8	SB1	1	1				1	1	1
9	SB2	1	1				1	1	1
10	SB4	1	1	1	1	1			
11	SB8	1	1	1	1	1			
12	SB8	1	1	1	1	1			
	**TOTAL	12	12	9	9	9	3	3	3

** QUANTITY SHOWN ELSEWHERE ON PLAN

POLES

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	657.1345 INSTALL POLES TYPE 9 EACH	657.1355 INSTALL POLES TYPE 12 EACH	657.1530 INSTALL MONOTUBE ARMS 30-FT EACH	657.1535 INSTALL MONOTUBE ARMS 35-FT EACH
SB1	1	1				
SB2	1	1				
SB3				1		1
SB4	1	1				
SB5	1	1				
SB6				1		1
SB7	1	1				
SB8			1		1	
** TOTAL	5	5	1	2	1	2

** QUANTITY SHOWN ELSEWHERE ON PLAN

USH 41/45 SB RAMPS & STH 167 (LANNON RD.)
WASHINGTON COUNTY
CATEGORY 0020
S66-0731

3

TRAFFIC SIGNAL MOUNTING HARDWARE

LOCATION	658.5069.03 SIGNAL MOUNTING HARDWARE L.S.
USH 41/45 SB RAMPS & STH 167 (LANNON RD)	1
** TOTAL	1

** QUANTITY SHOWN ELSEWHERE ON PLAN

INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET

LOCATION	SPV.0105.11 INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET L.S.
USH 41/45 SB RAMPS & STH 167 (LANNON RD)	1
** TOTAL	1

** QUANTITY SHOWN ELSEWHERE ON PLAN

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS

LOCATION	661.0200.03 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS L.S.
USH 41/45 SB RAMPS & STH 167 (LANNON RD)	1
** TOTAL	1

** QUANTITY SHOWN ELSEWHERE ON PLAN

TRANSPORTING TRAFFIC SIGNAL AND INTERSECTION LIGHTING MATERIALS

LOCATION	SPV.0105.15 TRANSPORTING TRAFFIC SIGNAL AND INTERSECTION LIGHTING MATERIALS L.S.
USH 41/45 SB RAMPS & STH 167 (LANNON RD)	1
** TOTAL	1

** QUANTITY SHOWN ELSEWHERE ON PLAN

3

TRANSPORTING AND INSTALLING STATE FURNISHED RADAR DETECTION SYSTEM

LOCATION	SPV.0105.19 TRANSPORTING AND INSTALLING STATE FURNISHED RADAR DETECTION SYSTEM L.S.
USH 41/45 SB RAMPS & STH 167 (LANNON RD)	1
** TOTAL	1

** QUANTITY SHOWN ELSEWHERE ON PLAN

REMOVE TRAFFIC SIGNALS

LOCATION	SPV.0105.31 REMOVE TRAFFIC SIGNALS L.S.
USH 41/45 SB RAMPS & STH 167 (LANNON RD)	1
** TOTAL	1

** QUANTITY SHOWN ELSEWHERE ON PLAN

REMOVE LOOP DETECTOR WIRE AND LEAD-IN CABLE

LOCATION	SPV.0105.27 REMOVE LOOP DETECTOR WIRE & LEAD-IN CABLE L.S.
USH 41/45 SB RAMPS & STH 167 (LANNON RD)	1
** TOTAL	1

** QUANTITY SHOWN ELSEWHERE ON PLAN

TEMPORARY NON-INTRUSIVE VEHICLE DETECTION SYSTEM FOR INTERSECTIONS

LOCATION	SPV.0105.35 TEMPORARY NON-INTRUSIVE VEHICLE DETECTION SYSTEM FOR INTERSECTIONS L.S.
USH 41/45 SB RAMPS & STH 167 (LANNON RD)	1
** TOTAL	1

** QUANTITY SHOWN ELSEWHERE ON PLAN

3

USH 41/45 NB RAMPS & STH 167 (LANNON RD.)
WASHINGTON COUNTY
CATEGORY 0020
S66-0730

STATE FURNISHED MATERIALS SUMMARY

EACH	DESCRIPTION
1	TRAFFIC SIGNAL CONTROLLER, FULLY ACTUATED, 8 PHASE
1	TRAFFIC SIGNAL CABINET
2	POLES, TYPE 12
1	35-FT MONOTUBE ARM
1	45-FT MONOTUBE ARM
7	RADAR DETECTOR

STATE FURNISHED FOR INFORMATION ONLY

SIGNAL BASE NO.	POLE TYPE 12 EACH	MONO 35' ARM EACH	MONO 45' ARM EACH	RADAR DETECTOR EACH
SB2	1	1		
SB8				1
SB9	1		1	1
SB10				3
SB12				1
SB13				1
**TOTAL	2	1	1	7

** QUANTITY SHOWN ELSEWHERE ON PLAN

REMOVING CONCRETE BASES

SIGNAL BASE NO.	204.0195 REMOVING CONCRETE BASES EACH
CB1	1
SB1	1
SB2	1
SB3	1
SB4	1
SB5	1
SB6	1
SB7	1
SB8	1
SB9	1
SB10	1
SB11	1
SB12	1
SB13	1
** TOTAL	14

** QUANTITY SHOWN ELSEWHERE ON PLAN

CONDUIT

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	652.0235 CONDUIT NONMETALLIC SCHEDULE 40 3-INCH L.F.	652.0605 CONDUIT SPECIAL 2-INCH L.F.	652.0615 CONDUIT SPECIAL 3-INCH L.F.
CB1	PB1		36		
PB1	PB2		70		
PB2	PB3				140
PB3	SB1	14			
PB3	PB4				140
PB4	SB2		31		
PB4	PB16	90			
PB16	SB12	13			
PB4	PB5		182		
PB5	SB3	27			
PB5	PB6				160
PB6	PB7				38
PB7	SB4	8			
PB6	PB8		84		
PB8	PB9				156
PB9	PB10	45			
PB10	SB5	22			
PB10	SB6	13			
PB9	SB13	27			
PB9	PB11		44		
PB11	SB7	16			
PB11	SB8	15			
PB11	PB12				134
PB12	SB9		9		
PB12	PB13		42		
PB13	PB14				110
PB14	SB10			21	
PB14	PB15				102
PB15	SB11	24			
PB15	CB1		33		
	** TOTAL	314	531	21	980

** QUANTITY SHOWN ELSEWHERE ON PLAN

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	MISCELLANEOUS QUANTITIES	SHEET:	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024004_SP_S0730\030204_MQ.PPTX PLOT DATE : 10/10/2014 12:30PM PLOT BY : MSCCXV PLOT NAME : 030204_MQ.PDF PLOT SCALE : 1:1

3

USH 41/45 NB RAMPS & STH 167 (LANNON RD.)
WASHINGTON COUNTY
CATEGORY 0020
S66-0730

PULL BOXES

PULL BOX NO.	LOCATION*	653.0135 PULL BOXES STEEL 24x36-INCH EACH	653.0140 PULL BOXES STEEL 24x42-INCH EACH
PB1	843+09.9 E, 53.2'RT		1
PB2	842+78.3 E, 38.1'RT		1
PB3	842+78.3 E, 32.3'LT		1
PB4	842+78.3 E, 101.9'LT		1
PB5	843+42.5 E, 138.1'LT		1
PB6	844+22.4 E, 137.9'LT		1
PB7	843+95.2 E, 111.1'LT		1
PB8	844+55.8 E, 113.4'LT		1
PB9	844+55.8 E, 35.2'LT		1
PB10	844+11.4 E, 29.8'LT	1	
PB11	844+55.8 E, 13.2'LT		1
PB12	844+55.8 E, 53.5'RT		1
PB13	844+36.4 E, 62.0'RT		1
PB14	843+81.1 E, 61.9'RT		1
PB15	843+30.6 E, 61.7'RT		1
PB16	841+88.4 E, 103.5'LT	1	
	** TOTAL	2	14

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.
** QUANTITY SHOWN ELSEWHERE ON PLAN

CONCRETE BASES

SIGNAL BASE NO.	LOCATION*	654.0101 CONCRETE BASES TYPE 1 EACH	654.0102 CONCRETE BASES TYPE 2 EACH	654.0113 CONCRETE BASES TYPE 13 EACH	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
CB1	843+20.3 E, 58.1'RT				1
SB1	842+92.4 E, 35.6'LT	1			
SB2	842+47.0 E, 103.8'LT			1	
SB3	843+41.7 E, 110.7'LT	1			
SB4	843+88.9 E, 104.4'LT	1			
SB5	843+94.5 E, 43.9'LT	1			
SB6	844+16.8 E, 17.7'LT	1			
SB7	844+40.2 E, 13.2'LT		1		
SB8	844+70.4 E, 13.2'LT		1		
SB9	844+64.5 E, 53.1'RT			1	
SB10	843+85.3 E, 41.7'RT		1		
SB11	843+33.5 E, 38.2'RT	1			
SB12	841+75.0 E, 104.6' LT		1		
SB13	844+82.7 E, 38.5' LT		1		
	** TOTAL	6	5	2	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.
** QUANTITY SHOWN ELSEWHERE ON PLAN

REMOVE PULL BOXES

PULL BOX NO.	653.0905 REMOVING PULL BOXES EACH
PB1	1
PB4	1
PB5	1
PB6	1
PB7	1
PB8	1
PB11	1
PB12	1
PB13	1
PB14	1
PB20	1
** TOTAL	11

** QUANTITY SHOWN ELSEWHERE ON PLAN

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG L.F.	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG L.F.	655.0305 CABLE TYPE UF 2-12 AWG GROUNDED L.F.
CB1	SB1	190		
CB1	SB2	293		
CB1	SB3	396		
CB1	SB4		527	
CB1	SB5	417		
CB1	SB6	408		
CB1	SB7	312		
CB1	SB8	311		
CB1	SB9	222		
CB1	SB10	126		126
CB1	SB11	62		
	** TOTAL	2737	527	126

** QUANTITY SHOWN ELSEWHERE ON PLAN

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG L.F.
SB1	HEAD 7	19
SB2	HEAD 8	59
SB2	HEAD 9	47
SB3	HEAD 11	19
SB4	HEAD 6	19
SB4	HEAD 12	19
SB5	HEAD 4	19
SB6	HEAD 5	19
SB7	HEAD 13	19
SB8	HEAD 14	19
SB9	HEAD 2	68
SB9	HEAD 3	56
SB10	HEAD 10	19
SB11	HEAD 1	19
	** TOTAL	420

** QUANTITY SHOWN ELSEWHERE ON PLAN

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	MISCELLANEOUS QUANTITIES	SHEET:	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024004_SP_S0730\030204_MQ.PPTX PLOT DATE : 10/10/2014 12:30PM PLOT BY : MSCCXV PLOT NAME : 030204_MQ.PDF PLOT SCALE : 1:1

USH 41/45 NB RAMPS & STH 167 (LANNON RD.)
WASHINGTON COUNTY
CATEGORY 0020
S66-0730

3

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.
CB1	SB1	190
SB1	SB2	155
SB2	SB3	199
SB3	SB4	209
SB4	SB5	321
SB5	SB6	59
SB6	SB7	152
SB7	SB8	55
SB8	SB9	131
SB9	SB10	162
SB10	SB11	136
SB11	CB1	62
PB1	CB1	35
PB2	CB1	86
PB3	SB1	34
PB4	SB2	51
PB5	SB3	47
PB6	SB4	82
PB7	SB4	28
PB8	SB4	140
PB9	SB13	47
PB10	SB6	33
PB11	SB8	35
PB12	SB9	29
PB13	SB9	66
PB14	SB10	41
PB15	CB1	34
PB16	SB12	33
** TOTAL		2652

** QUANTITY SHOWN ELSEWHERE ON PLAN

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG L.F.
SB10	LUMIN.	117
** TOTAL		117

** QUANTITY SHOWN ELSEWHERE ON PLAN

METER BREAKER PEDESTAL

LOCATION*	656.0200.04 ELECTRICAL SERVICE METER BREAKER PEDESTAL L.S.
USH 41/45 NB RAMPS & STH 167 (LANNON RD)	1
** TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
** QUANTITY SHOWN ELSEWHERE ON PLAN

POLES

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0305 POLES TYPE 2 EACH	657.0310 POLES TYPE 3 EACH	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	657.0609 LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH	657.1355 INSTALL POLES TYPE 12 EACH	657.1535 INSTALL MONOTUBE ARMS 35-FT EACH	657.1545 INSTALL MONOTUBE ARMS 45-FT EACH	659.1125 LUMINAIRES UTILITY LED C EACH
SB1	1				1					
SB2							1	1		
SB3	1				1					
SB4	1				1					
SB5	1				1					
SB6	1				1					
SB7		1	1							
SB8		1	1							
SB9							1		1	
SB10		1		1		1				1
SB11	1				1					
SB12		1	1							
SB13		1	1							
** TOTAL	6	5	4	1	6	1	2	1	1	1

** QUANTITY SHOWN ELSEWHERE ON PLAN

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	MISCELLANEOUS QUANTITIES	SHEET:	E

FILE NAME : N:\PDS\C3D\CAD\11003800\024004_SP_S0730\030204_MQ.PPTX PLOT DATE : 10/10/2014 12:30PM PLOT BY : MSCCXV PLOT NAME : 030204_MQ.PDF PLOT SCALE : 1:1

3

USH 41/45 NB RAMPS & STH 167 (LANNON RD.)
WASHINGTON COUNTY
CATEGORY 0020
S66-0730

		FACES							
		658.0110	658.0215	658.0600	658.0605	658.0610	658.0615	658.0620	658.0625
SIGNAL HEAD NO.	SIGNAL BASE NO.	3-12 INCH VERTICAL EACH	BACKPLATE 3 SECTION EACH	RED BALL EACH	YELLOW BALL EACH	GREEN BALL EACH	RED ARROW EACH	YELLOW ARROW EACH	GREEN ARROW EACH
1	SB11	1	1	1	1	1			
2	SB9	1	1	1	1	1			
3	SB9	1	1	1	1	1			
4	SB5	1	1				1	1	1
5	SB6	1	1				1	1	1
6	SB4	1	1	1	1	1			
7	SB1	1	1	1	1				1
8	SB2	1	1	1	1	1			
9	SB2	1	1	1	1	1			
10	SB10	1	1	1	1	1			
11	SB3	1	1	1	1	1			
12	SB4	1	1	1	1	1			
13	SB7	1	1	1				1	1
14	SB8	1	1	1				1	1
	** TOTAL	14	14	12	10	9	2	4	5

** QUANTITY SHOWN ELSEWHERE ON PLAN

TRAFFIC SIGNAL MOUNTING HARDWARE

LOCATION	658.5069.04 SIGNAL MOUNTING HARDWARE L.S.
USH 41/45 NB RAMPS & STH 167 (LANNON RD)	1
** TOTAL	1

** QUANTITY SHOWN ELSEWHERE ON PLAN

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS

LOCATION	661.0200.04 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS L.S.
USH 41/45 NB RAMPS & STH 167 (LANNON RD)	1
** TOTAL	1

** QUANTITY SHOWN ELSEWHERE ON PLAN

3

INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET

LOCATION	SPV.0105.12 INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET L.S.
USH 41/45 NB RAMPS & STH 167 (LANNON RD)	1
** TOTAL	1

** QUANTITY SHOWN ELSEWHERE ON PLAN

REMOVE LOOP DETECTOR WIRE AND LEAD-IN CABLE

LOCATION	SPV.0105.28 REMOVE LOOP DETECTOR WIRE & LEAD-IN CABLE L.S.
USH 41/45 NB RAMPS & STH 167 (LANNON RD)	1
** TOTAL	1

** QUANTITY SHOWN ELSEWHERE ON PLAN

TRANSPORTING TRAFFIC SIGNAL AND INTERSECTION LIGHTING MATERIALS

LOCATION	SPV.0105.16 TRANSPORTING TRAFFIC SIGNAL AND INTERSECTION LIGHTING MATERIALS L.S.
USH 41/45 NB RAMPS & STH 167 (LANNON RD)	1
** TOTAL	1

** QUANTITY SHOWN ELSEWHERE ON PLAN

REMOVE TRAFFIC SIGNALS

LOCATION	SPV.0105.32 REMOVE TRAFFIC SIGNALS L.S.
USH 41/45 NB RAMPS & STH 167 (LANNON RD)	1
** TOTAL	1

** QUANTITY SHOWN ELSEWHERE ON PLAN

TRANSPORTING AND INSTALLING STATE FURNISHED RADAR DETECTION SYSTEM

LOCATION	SPV.0105.20 TRANSPORTING AND INSTALLING STATE FURNISHED RADAR DETECTION SYSTEM L.S.
USH 41/45 NB RAMPS & STH 167 (LANNON RD)	1
** TOTAL	1

** QUANTITY SHOWN ELSEWHERE ON PLAN

TEMPORARY NON-INTRUSIVE VEHICLE DETECTION SYSTEM FOR INTERSECTIONS

LOCATION	SPV.0105.36 TEMPORARY NON-INTRUSIVE VEHICLE DETECTION SYSTEM FOR INTERSECTIONS L.S.
USH 41/45 NB RAMPS & STH 167 (LANNON RD)	1
** TOTAL	1

** QUANTITY SHOWN ELSEWHERE ON PLAN

USH 41/45 NB & SB RAMPS & CTH Q
WASHINGTON & WAUKESHA COUNTY
CATEGORY 0020
COMMUNICATIONS

3

STATE FURNISHED MATERIALS SUMMARY

EACH	DESCRIPTION
2	RADIO INTERCONNECT ANTENNA 5.8 GHZ

STATE FURNISHED FOR INFORMATION ONLY

SIGNAL BASE NO.	RADIO INTERCONNECT ANTENNA 5.8 GHZ EACH
SB1 (S66-0607)	1
SB7 (S66-0374)	1
TOTAL	2

INSTALL CONDUIT INTO EXISTING ITEM

STRUCTURE NO.	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EACH
EX MH 344 (FTMS)	1
***TOTAL	1

CONDUIT

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	652.0605 CONDUIT SPECIAL 2-INCH L.F.
FTMS CVXXX	CB1 (S66-0607)	126	
EX MH344	I/C PB101		374
I/C PB101	I/C PB102	280	
I/C PB102	I/C PB103		136
I/C PB103	CB1 (S66-0374)	302	
	***TOTAL	708	510

PULL BOXES

PULL BOX NO.	LOCATION*	653.0140 PULL BOXES STEEL 24x42-INCH EACH
I/C PB101	344+06.9, 66.5'RT	1
I/C PB102	343+68.1A, 43.4'LT	1
I/C PB103	343+74.7A, 24.0'RT	1
	***TOTAL	3

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

FIELD SYSTEM INTEGRATOR

LOCATION	670.0100.02 FIELD SYSTEM INTEGRATOR L.S.	670.0200.02 ITS DOCUMENTATION L.S.	678.0500.02 COMMUNICATION SYSTEM TESTING L.S.
1100-38-70 (CTH Q)	1	1	1
***TOTAL	1	1	1

FIBER OPTIC SPLICE

LOCATION	678.0200 FIBER OPTIC SPLICE ENCLOSURE EACH	678.0300 FIBER OPTIC SPLICE EACH
EX MH 344	2	16
***TOTAL	2	16

INSTALL 5.8 GHZ ETHERNET BRIDGE

LOCATION	SPV.0060.16 INSTALL 5.8 GHZ ETHERNET BRIDGE EACH
SB1 (S66-0607)	1
SB7 (S66-0374)	1
***TOTAL	2

***QUANTITIES SHOWN ELSEWHERE ON PLAN

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	MISCELLANEOUS QUANTITIES	SHEET:	E

FILE NAME : N:\PDS\C3D\CAD\11003800\Interconnect\030250_MQ.PPTX PLOT DATE : 10/10/2014 12:30PM PLOT BY : MSCCXV PLOT NAME : 030250_MQ.PDF PLOT SCALE : 1:1

3

USH 41/45 NB & SB RAMPS & CTH Q
WASHINGTON & WAUKESHA COUNTY
CATEGORY 0020
COMMUNICATIONS

FIBER OPTIC COMMUNICATIONS EQUIPMENT

LOCATION	**SPV.0105.21 INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET 41/45 SB RAMP AT CTH Q L.S.	ST-ST SINGLE MODE FIBER JUMPER 2-CT CONTRACTOR FURNISHED L.F.	CAT-5E CABLE 1-METER CONTRACTOR FURNISHED EACH	PATCH PANEL WITH FIBER OPTIC CABLE PIGTAIL 12-CT STATE FURNISHED L.F.	ETHERNET SWITCH 2-PORT STATE FURNISHED EACH	JUMPER FROM ETHERNET SWITCH TO ETHERNET SWITCH STATE FURNISHED EACH
CB1 (S66-0607)	1	2	2	1185	2	1
***TOTAL	1	2	2	1185	2	1

**PAY ITEM INCLUDES INSTALLATION OF BOTH CONTRACTOR FURNISHED AND STATE FURNISHED MATERIALS

STATE FURNISHED MATERIALS SUMMARY

QUANTITY	UNIT	DESCRIPTION
2	EACH	ETHERNET SWITCH 2-PORT
1185	L.F.	PATCH PANEL WITH FIBER OPTIC CABLE PIGTAIL 12-CT
1	EACH	JUMPER FROM ETHERNET SWITCH TO ETHERNET SWITCH

CONTRACTOR FURNISHED MATERIALS SUMMARY

QUANTITY	UNIT	DESCRIPTION
2	EACH	CAT-5E CABLE 1-METER
2	L.F.	ST-ST SINGLE MODE FIBER OPTIC JUMBER 2-CT

***QUANTITIES SHOWN ELSEWHERE ON PLAN

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	MISCELLANEOUS QUANTITIES	SHEET:	E

FILE NAME : N:\PDS\C3D\CAD\11003800\Interconnect\030250_MQ.PPTX PLOT DATE : 10/10/2014 12:30PM PLOT BY : MSCCXV PLOT NAME : 030250_MQ.PDF PLOT SCALE : 1:1

3

USH 41/45 NB & SB RAMPS & CTH Q
WASHINGTON & WAUKESHA COUNTY
CATEGORY 0020
COMMUNICATIONS

FIBER OPTIC COMMUNICATIONS EQUIPMENT

LOCATION	**SPV.0105.22 INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET 41/45 NB RAMP AT CTH Q L.S.	ST-ST SINGLE MODE FIBER JUMPER 2-CT CONTRACTOR FURNISHED L.F.	CAT-5E CABLE 1-METER CONTRACTOR FURNISHED EACH	PATCH PANEL WITH FIBER OPTIC CABLE PIGTAIL 8-CT STATE FURNISHED L.F.	ETHERNET SWITCH 2-PORT STATE FURNISHED EACH
CB1 (S66-0374)	1	2	2	766	1
***TOTAL	1	2	2	766	1

**PAY ITEM INCLUDES INSTALLATION OF BOTH CONTRACTOR FURNISHED AND STATE FURNISHED MATERIALS

STATE FURNISHED MATERIALS SUMMARY

QUANTITY	UNIT	DESCRIPTION
1	EACH	ETHERNET SWITCH 2-PORT
766	L.F.	PATCH PANEL WITH FIBER OPTIC CABLE PIGTAIL 8-CT

CONTRACTOR FURNISHED MATERIALS SUMMARY

QUANTITY	UNIT	DESCRIPTION
2	EACH	CAT-5E CABLE 1-METER
2	L.F.	ST-ST SINGLE MODE FIBER OPTIC JUMBER 2-CT

***QUANTITIES SHOWN ELSEWHERE ON PLAN

3

USH 41/45 NB & SB RAMPS & STH 167
WASHINGTON & WAUKESHA COUNTY
CATEGORY 0020
COMMUNICATIONS

CONDUIT

FROM	TO		652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	652.0605 CONDUIT SPECIAL 2-INCH L.F.
FTMS CV452	I/C PB201		152	
I/C PB201	CB1 (S66-0731)		10	
I/C PB201	I/C PB202		92	
I/C PB202	I/C PB203			116
I/C PB203	EX I/C PB204		496	
EX I/C PB205	I/C PB206		306	
I/C PB206	CB1 (S66-0730)		13	
I/C PB206	I/C PB207			108
I/C PB207	I/C PB208		42	
I/C PB208	I/C PB209			73
		***TOTAL	1111	297

INSTALL CONDUIT INTO EXISTING ITEM

STRUCTURE NO.		652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EACH
EX I/C PB204		1
EX I/C PB205		1
	TOTAL	2

PULL BOXES

PULL BOX NO.	LOCATION*		653.0140 PULL BOXES STEEL 24x42-INCH EACH
I/C PB201	835+53.9E, 83.0'RT		1
I/C PB202	835+97.9E, 97.3'RT		1
I/C PB203	836+56.0E, 99.4'RT		1
I/C PB206	843+30.2E, 66.9'RT		1
I/C PB207	844+38.6E, 67.2'RT		1
I/C PB208	844+77.7E, 52.5'RT		1
I/C PB209	844+77.7E, 20.3'LT		1
		***TOTAL	7

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE F

FIELD SYSTEM INTEGRATOR

LOCATION		670.0100.03 FIELD SYSTEM INTEGRATOR L.S.	670.0200.03 ITS DOCUMENTATION L.S.	678.0500.03 COMMUNICATION SYSTEM TESTING L.S.
1100-38-70 (STH 167)		1	1	1
	***TOTAL	1	1	1

FIBER OPTIC SPLICE

LOCATION		678.0200 FIBER OPTIC SPLICE ENCLOSURE EACH	678.0300 FIBER OPTIC SPLICE EACH
FTMS CV452		2	8
	***TOTAL	2	8

***QUANTITIES SHOWN ELSEWHERE ON PLAN

3

3

FIBER OPTIC COMMUNICATIONS EQUIPMENT

LOCATION	**SPV.0105.23 INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET 41/45 SB RAMP AT STH 167 L.S.	ST-ST SINGLE MODE FIBER JUMPER 2-CT CONTRACTOR FURNISHED L.F.	CAT-5E CABLE 1-METER CONTRACTOR FURNISHED EACH	PATCH PANEL WITH FIBER OPTIC CABLE PIGTAIL 12-CT STATE FURNISHED L.F.	ETHERNET SWITCH 2-PORT STATE FURNISHED EACH
CB1 (S66-0731)	1	2	2	216	1
***TOTAL	1	2	2	216	1

**PAY ITEM INCLUDES INSTALLATION OF BOTH CONTRACTOR FURNISHED AND STATE FURNISHED MATERIALS

STATE FURNISHED MATERIALS SUMMARY

QUANTITY	UNIT	DESCRIPTION
1	EACH	ETHERNET SWITCH 2-PORT
216	L.F.	PATCH PANEL WITH FIBER OPTIC CABLE PIGTAIL 12-CT

CONTRACTOR FURNISHED MATERIALS SUMMARY

QUANTITY	UNIT	DESCRIPTION
2	EACH	CAT-5E CABLE 1-METER
2	L.F.	ST-ST SINGLE MODE FIBER OPTIC JUMBER 2-CT

***QUANTITIES SHOWN ELSEWHERE ON PLAN

3

USH 41/45 NB & SB RAMPS & STH 167
WASHINGTON & WAUKESHA COUNTY
CATEGORY 0020
COMMUNICATIONS

FIBER OPTIC COMMUNICATIONS EQUIPMENT

LOCATION	**SPV.0105.24 INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET 41/45 NB RAMP AT STH 167 L.S.	ST-ST SINGLE MODE FIBER JUMPER 2-CT CONTRACTOR FURNISHED L.F.	CAT-5E CABLE 1-METER CONTRACTOR FURNISHED EACH	PATCH PANEL WITH FIBER OPTIC CABLE PIGTAIL 12-CT STATE FURNISHED L.F.	ETHERNET SWITCH 2-PORT STATE FURNISHED EACH
CB1 (S66-0730)	1	2	2	1008	1
***TOTAL	1	2	2	1008	1

**PAY ITEM INCLUDES INSTALLATION OF BOTH CONTRACTOR FURNISHED AND STATE FURNISHED MATERIALS

STATE FURNISHED MATERIALS SUMMARY

QUANTITY	UNIT	DESCRIPTION
1	EACH	ETHERNET SWITCH 2-PORT
1008	L.F.	PATCH PANEL WITH FIBER OPTIC CABLE PIGTAIL 12-CT

CONTRACTOR FURNISHED MATERIALS SUMMARY

QUANTITY	UNIT	DESCRIPTION
2	EACH	CAT-5E CABLE 1-METER
2	L.F.	ST-ST SINGLE MODE FIBER OPTIC JUMBER 2-CT

***QUANTITIES SHOWN ELSEWHERE ON PLAN

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	MISCELLANEOUS QUANTITIES	SHEET:	E

FILE NAME : N:\PDS\C3D\CAD\11003800\Interconnect\030251_MQ.PPTX PLOT DATE : 10/10/2014 12:30PM PLOT BY : MSCCXV PLOT NAME : 030251_MQ.PDF PLOT SCALE : 1:1

3

CATEGORY 0040

FTMS REMOVAL ITEMS

ITEM ID	204.0210 REMOVING MANHOLES EACH	SPV.0060.17 REMOVE AND SALVAGE WIRELESS ETHERNET BRIDGE EACH	SPV.0060.18 REMOVING PARABOLIC ANTENNA EACH	SPV.0060.19 REMOVING YAGI ANTENNA EACH
EXMH 446	1	--	--	--
EXCCTV-67-0050	--	1	1	1
EXRM CABINET	--	--	--	1
EXCCTV-66-0051	--	2	1	1
EXCCTV-66-0147	--	2	--	--
EXCCTV-66-0148	--	1	--	--
EXCCTV-66-0205	--	1	--	--
TOTAL (0040)	1	7	2	3

CATEGORY 0040

ITS CABINET AND MICROWAVE DETECTOR ITEMS

ITEM ID	654.0105 CONCRETE BASE TYPE 5 EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0322 POLES TYPE 5 ALUMINUM EACH	659.0802 PLAQUES SEQUENCE IDENTIFICATION EACH	675.0300 INSTALL MOUNTED CONTROLLER MICROWAVE DETECTOR ASSEMBLY EACH	675.0400.S INSTALL ETHERNET SWITCH EACH	678.0400 FIBER OPTIC TERMINATION EACH	SPV.0060.20 GROUND ROD EACH
EXRM CABINET	--	--	--	--	--	1	12	--
EXCCTV-66-0051	--	--	--	--	--	1	6	--
EXCCTV-66-0147/SDS-66-0124	--	--	--	1	1	1	6	--
EXCCTV-66-0148/SDS-66-0125	--	--	--	1	--	1	6	--
MD562	1	1	1	--	1	--	--	1
EXCCTV-66-0205	--	--	--	--	--	1	6	--
TOTAL (0040)	1	1	1	2	2	5	36	1

CATEGORY 0040

MISCELLANEOUS FTMS ITEMS

ITEM ID	670.0100 FIELD SYSTEM INTEGRATOR LS	670.0200 ITS DOCUMENTATION LS	678.0500 COMMUNICATION SYSTEM TESTING LS
MISCELLANEOUS	1	1	1
TOTAL (0040)	1	1	1

CATEGORY 0040

COMMUNICATION VAULT ITEMS

ITEM ID	673.0105 COMMUNICATION VAULT TYPE 1 EACH
CV354	1
CV356	1
CV359	1
CV360	1
CV374	1
CV384	1
CV385	1
CV400	1
CV415	1
CV429	1
CV432	1
CV445	1
CV452	1
CV454	1
CV469	1
CV483	1
CV498	1
CV513	1
CV528	1
CV544	1
CV560	1
CV562	1
CV577	1
CV592	1
CV607	1
CV619	1
CV621	1
CV636	1
CV637	1
CV652	1
CV666	1
CV667	1
CV680	1
CV681	1
CV690	1
CV699	1
CV701	1
CV709	1
TOTAL	38

3

CATEGORY 0040

CONDUIT, FIBER AND CABLE ITEMS

FROM	TO	LINEAR DISTANCE	FIBER SLACK	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2 INCH LF	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EACH	655.0505 ELECTRICAL WIRE TRAFFIC SIGNALS 14 AWG LF	671.0132 CONDUIT HDPE 3-DUCT 2-INCH LF	671.0232 CONDUIT HDPE DIRECTIONAL BORE 3-DUCT 2-INCH LF	671.0300 FIBER OPTIC CABLE MARKER EACH	674.0200 CABLE MICROWAVE DETECTOR LF	678.0006 INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 6-COUNT LF	678.0072 INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 72-COUNT LF	678.0300 FIBER OPTIC SPLICE EACH
EXMH344	CV354	1000	100	--	1	1000	1000	--	2	--	--	1100	75
CV354	CV356	280	100	--	--	280	--	280	1	--	--	380	--
CV356	CV359	380	100	--	--	380	380	--	1	--	--	480	--
CV359	CV360	100	100	--	--	100	--	100	1	--	--	200	--
CV360	CV374	1390	100	--	--	1390	1390	--	2	--	--	1490	--
CV374	CV384	980	100	--	--	980	980	--	1	--	--	1080	--
CV384	CV385	90	100	--	--	90	--	90	1	--	--	190	--
CV385	CV400	1500	100	--	--	1500	1500	--	2	--	--	1600	--
CV400	CV415	1490	100	--	--	1590	1490	--	2	--	--	1590	--
CV415	EXPB425	1080	25	--	1	1080	1080	--	2	--	--	1105	--
EXPB425	EXPB426	80	25	--	1	80	--	--	--	--	--	105	--
EXPB426	CV429	300	100	--	--	300	300	--	1	--	--	400	--
CV429	CV432	230	100	--	--	230	--	230	1	--	--	330	--
CV432	CV445	1330	100	--	--	1330	1330	--	2	--	--	1430	--
CV445	CV452	710	100	--	--	710	710	--	1	--	--	810	75
CV452	EXPB451	90	25	180	--	90	--	--	--	--	115	--	--
EXPB451	EXRM CAB	30	25	--	--	30	--	--	--	--	55	--	--
EXPB451	EXPB452	90	25	--	--	90	--	--	--	--	115	--	--
EXPB452	EXPB453	30	25	--	--	30	--	--	--	--	55	--	--
EXPB453	EXPB454	200	25	--	--	200	--	--	--	--	225	--	--
EXPB454	EXCCTV-66-0051	25	25	--	--	25	--	--	--	--	50	--	--
CV452	CV454	260	100	--	--	260	--	260	1	--	--	360	--
CV454	CV469	1610	100	--	--	1610	1610	--	2	--	--	1710	--
CV469	CV483	1440	100	--	--	1440	1440	--	2	--	--	1540	--
CV483	CV498	1480	100	--	--	1480	1480	--	2	--	--	1580	--
CV498	CV513	1510	100	--	--	1510	1510	--	2	--	--	1610	--
CV513	CV528	1520	100	--	--	1520	1520	--	2	--	--	1620	--
CV528	CV544	1580	100	--	--	1580	1580	--	2	--	--	1680	--
CV544	CV560	1620	100	--	--	1620	1620	--	2	--	--	1720	--
CV560	CV562	290	100	--	--	290	--	290	1	--	--	390	75
CV562	EXPB562	40	25	40	--	40	--	--	--	--	65	--	--
EXPB562	EXPB561	80	25	--	--	--	--	--	--	--	105	--	--
EXPB561	EXCCTV-66-0147	25	25	--	--	--	--	--	--	--	50	--	--
MD561	SDS-66-0124	40	--	--	--	--	--	--	--	40	--	--	--
CV562	CV577	1410	100	--	--	1410	1410	--	2	--	--	1510	--
CV577	CV592	1530	100	--	--	1530	1530	--	2	--	--	1630	--
CV592	CV607	1540	100	--	--	1540	1540	--	2	--	--	1640	--
CV607	EXPB608	140	25	--	1	140	140	--	--	--	--	165	--
EXPB608	EXPB611	240	25	-	1	240	--	--	--	--	--	265	--
EXPB611	CV619	860	100	--	--	860	860	--	1	--	--	960	--
CV619	CV621	260	100	--	--	260	--	260	1	--	--	360	75
CV621	EXPB621	30	25	60	1	--	--	--	--	--	55	--	--
EXPB621	EXPB620	280	25	--	--	--	--	--	--	--	305	--	--
EXPB620	EXCCTV-66-0148	25	25	--	1	--	--	--	--	25	50	--	--
EXPB620	MD562	80	--	160	--	80	--	--	--	100	--	--	--
CV621	CV636	1570	100	--	--	1570	1570	--	2	--	--	1670	--
CV636	CV637	250	100	--	--	250	--	250	2	--	--	350	--
CV637	CV652	1500	100	--	--	1500	1500	--	2	--	--	1600	--
CV652	CV666	1480	100	--	--	1480	1480	--	2	--	--	1580	--
CV666	CV667	100	100	--	--	100	--	100	2	--	--	200	--
CV667	CV680	1280	100	--	--	1280	1280	--	2	--	--	1380	--
CV680	CV681	140	100	--	--	140	--	140	2	--	--	240	--
CV681	CV690	850	100	--	--	850	850	--	2	--	--	950	--
CV690	CV699	890	100	--	--	890	890	--	2	--	--	990	--
CV699	CV701	280	100	--	--	280	--	280	2	--	--	380	--
CV701	CV709	830	100	--	--	830	830	--	2	--	--	930	6
CV709	EXPB709	20	25	40	1	20	--	--	--	--	45	--	--
EXPB709	EXPB710	90	25	--	--	--	--	--	--	--	115	--	--
EXPB710	EXCCTV-66-0205	25	25	--	--	--	--	--	--	--	50	--	--
	TOTALS			480	8	38105	34800	2280	66	165	1455	41300	306

3

FINISHING ROADWAY (PROJECT) 03. 1100-47-70

STATION	TO	STATION	LOCATION	213.0100 EACH
574+45	-	613+00	USH 41/45	1
			TOTAL 0010	1

MOBILIZATION

STATION	TO	STATION	LOCATION	619.1000 EACH
575+45	-	613+00	USH 41/45	0.1
			TOTAL 0010	0.1

PAVEMENT MARKING EPOXY 4-INCH
REMOVING PAVEMENT MARKING
SPECIAL .06 PAVEMENT MARKING CONSTRAST EPOXY 4-INCH

STATION	TO	STATION	LOCATION	PAVEMENT MARKING EPOXY 4-INCH 646.0106 LF	REMOVING PAVEMENT MARKINGS 646.0600 LF	PAVEMENT MARKING CONSTRAST EPOXY 4-INCH SPV.0090.06 LF	REMARKS
574+45	-	613+00	24' RT, USH 41/45 NB	3,855	3,855	--	YELLOW EDGE LINE
574+45	-	613+00	60' RT, USH 41/45 NB	3,855	3,855	--	WHITE EDGE LINE
575+45	-	613+00	36' & 48' RT, USH 41/45 NB	--	1,925	1,925	CENTER SKIPS 12.5' LINE W/ 37.5' GAP
603+50	-	610+15	60' RT, USH 41/45 NB	165	165		WHITE 3' LINE W/ 9' GAP
574+45	-	612+50	24' LT, USH 41/45 SB	3,805	3,805	--	YELLOW EDGE LINE
574+45	-	612+50	36' & 48' LT, USH 41/45 SB	--	1,925	1,925	CENTER SKIPS 12.5' LINE W/ 37.5' GAP
574+45	-	612+50	60' LT, USH 41/45 SB	3,805	3,805	--	WHITE EDGE LINE
			TOTAL 0010	15,485	19,335	3,850	

3

			TRAFFIC CONTROL						
			MAINTENACE (PROJECT 1100-47-70)	DRUMS	BARRICADES TYPE III	WARNING LIGHTS TYPE A	WARNING LIGHTS TYPE C	ARROW BOARDS	
			643.0200.02	643.0300	643.0420	643.0705	643.0715	643.0800	
STATION	TO STATION	LOCATION	DAY	DAY	DAY	DAY	DAY	DAY	REMARKS
		USH 41/45 NB							
574+45	- 612+50	LANE 1	2	134	6	12	32	4	SINGLE LANE CLOSURE
574+45	- 612+50	LANE 2	2	226	12	24	64	6	DUAL LANES CLOSURE (LANES 1 & 2)
574+45	- 612+50	LANE 3	2	134	6	12	32	4	SINGLE LANE W/ EXIT RAMP CLOSURES
603+50	- 612+50	NB EXIT RAMP	1	45	2	4	0	2	SINGLE LANE W/ EXIT RAMP CLOSURES
		USH 41/45 SB							
574+45	- 613+00	LANE 1	2	134	6	12	32	4	SINGLE LANE CLOSURE
574+45	- 613+00	LANE 2	2	226	12	24	64	6	DUAL LANES CLOSURE (LANES 1 & 2)
574+45	- 613+00	LANE 3	2	134	6	12	32	4	SINGLE LANE & ENTRANCE RAMP CLOSURES
601+00	- 613+00	SB ENTRANCE RAMP	1	25	2	4	16	2	SINGLE LANE & ENTRANCE RAMP CLOSURES
110+00	- 130+00	HOLY HILL RD	--	--	4	8	--	--	
		UNDISTRIBUTED	--	105	7	28	28	3	
		TOTAL 0010	14	1163	63	140	300	35	

			TRAFFIC CONTROL						
			SIGNS	COVERING SIGNS TYPE I	COVERING SIGNS TYPE II	SIGNS FIXED MESSAGE	SIGNS PCMS	TRUCK MOUNTED ATTENUATOR	
			643.0900	643.0910	643.0920	643.1000	643.1050	643.1055.S	
STATION	TO STATION	LOCATION	DAY	EACH	EACH	SF	DAY	DAY	REMARKS
		USH 41/45 NB							
574+45	- 612+50	LANE 1	34	--	--	--	4	2	SINGLE LANE CLOSURE
574+45	- 612+50	LANE 2	34	--	--	--	4	2	DUAL LANES CLOSURE (LANES 1 & 2)
574+45	- 612+50	LANE 3	34	--	--	--	4	2	SINGLE LANE W/ EXIT RAMP CLOSURES
603+50	- 612+50	NB EXIT RAMP	10	2	1	16	2	1	SINGLE LANE W/ EXIT RAMP CLOSURES
		USH 41/45 SB							
574+45	- 613+00	LANE 1	34	--	--	--	4	2	SINGLE LANE CLOSURE
574+45	- 613+00	LANE 2	34	--	--	--	4	2	DUAL LANES CLOSURE (LANES 1 & 2)
574+45	- 613+00	LANE 3	34	--	--	--	4	2	SINGLE LANE & ENTRANCE RAMP CLOSURES
601+00	- 613+00	SB ENTRANCE RAMP	10	--	--	16	6	1	SINGLE LANE & ENTRANCE RAMP CLOSURES
110+00	- 130+00	HOLY HILL RD	4	--	4	32	4	--	
		UNDISTRIBUTED	28	--	--	--	4	--	
		TOTAL 0010	256	2	5	64	40	14	

TRAFFIC CONTROL DETOUR (PROJECT 1100-47-70)
TRAFFIC CONTROL DETOUR SIGNS

STATION	TO	STATION	LOCATION	TRAFFIC CONTROL DETOUR (PROJECT 1100-47-70) 643.2000 EACH	SIGNS 643.3000 DAY	REMARKS
STAGE 2B:						
429+00	-	454+00	USH 41/45 NB EXIT RAMP	1	32	CLOSE USH 41/45 NB EXIT & USH 41/45 SB ENTRANCE RAMPS AT HOLY HILL RD
603+00	-	620+00	USH 41/45 RAMPS	--	6	
STH 175	-	USH 41/45	LANNON RD	--	30	
CTH Y (LANNON RD)	-	STH 167 (HOLY HILL RD)	STH 175	--	64	
STH 175	-	USH 41/45	STH 167 (HOLY HILL RD)	--	26	
			TOTAL 0010	1	158	

NOTES: USH 41/45 SB ENTRANCE RAMP CLOSURE IS REQUIRED FOR THE INSTALLATION OF RESIN BINDER HIGH FRICTION SURFACE TREATMENT ON LANE #3 AND RAMP FROM STA. 559+50 TO STA.613+00.
USH 41/45 NB EXIT RAMP CLOSURE IS REQUIRED FOR THE INSTALLATION OF RESIN BINDER HIGH FRICTION SURFACE TREATMENT ON LANE #3 AND RAMP FROM STA. 559+50 TO STA.612+50.

SPECIAL .01 RESIN BINDER HIGH FRICTION SURFACE TREATMENT

STATION	TO	STATION	LOCATION	SPV.0180.01 SY	REMARKS
			USH 41/45 NB LANES		
57445	-	61250	LANE 1 (INSIDE LN)	5,034	Curve Radius = 3031.87'
57445	-	61250	LANE 2 (CENTER LN)	5,018	Curve Radius = 3019.87
57445	-	61250	LANE 3 (OUTSIDE LN)	5,002	Curve Radius = 3007.87
60350	-	61250	NB OFF RAMP	1,837	CAD Measured
			USH 41/45 SB LANES		
57445	-	61300	LANE 1 (INSIDE LN)	5,181	Curve Radius = 3091.87
57445	-	61300	LANE 2 (CENTER LN)	5,197	Curve Radius = 3103.87
57445	-	61300	LANE 3 (OUTSIDE LN)	5,213	Curve Radius = 3115.87
60350	-	61300	SB ON RAMP	879	CAD Measured
			TOTAL 0010	33,362	

Standard Detail Drawing List

08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08C06-01	INLETS 3-FT AND 4-FT DIAMETER
08C07-01	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
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
08D13-01	SLOTTED CORRUGATED METAL PIPE SURFACE DRAINS
08D14-01	SLOTTED VANE DRAIN
08D15-04A	EDGEDRAIN OUTLET AND OUTFALL MARKERS
08D15-04B	EDGEDRAIN AND BASE AGGREGATE OPEN GRADED
08D15-04C	EDGEDRAIN AND BASE AGGREGATE OPEN GRADED
08D16-10	CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES
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
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F05-01	CLASS "B" BEDDING FOR CULVERT PIPE OR STORM SEWER
08F06-04	REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN
09B02-08	CONDUIT UNDER PAVED HIGHWAYS
09B04-11	PULL BOX
09C02-07	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C05-09	CONCRETE CONTROL CABINET BASES
09C06-07	CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL
09C08-05	CONCRETE BASE, TYPE 7
09C10-03	TRANSFORMER BASE FOR 15" BOLT CIRCLE
09C11-05	CONCRETE BASE TYPE 10
09C12-05A	CONCRETE BASE TYPE 13
09C12-05B	CONCRETE BASE TYPE 13
09C13-02	CONCRETE BASE TYPE 10 & TYPE 13 EXTENSION
09D01-05	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09E01-13A	POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2
09E01-13B	POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 3 (HEAVY DUTY)
09E01-13C	POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 4
09E01-13D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E02-04	FREEWAY LIGHTING UNIT POLE WIRING
09E03-05	NON-FREEWAY LIGHTING UNIT POLE WIRING
09E06-05	TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.
09E07-05	TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS
09E08-06A	TYPE 9 POLE 15'-30' MONOTUBE ARM
09E08-06B	TYPE 10 POLE 15'-30' MONOTUBE ARM
09E08-06C	TYPE 12 POLE 35'-55' MONOTUBE ARM
09E08-06D	TYPE 13 POLE 35'-55' MONOTBE ARM
09E08-06E	GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS
09G01-03A	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03B	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03C	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03D	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03E	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03F	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-03G	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09H08-01	COMMUNICATIONS MANHOLE DETAILS
09H09-01	COMMUNICATION VAULT
09H11-01	IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENTS
10A01-03	ELECTRICAL HANDHOLE WIRING
10A05-02	ELECTRICAL DETAILS GROUND MOUNT LIGHT POLES ISOLATED NEUTRAL SYSTEMS
11A01-05	MAINTENANCE CROSSOVER FOR FREEWAYS
11B02-02	CONCRETE MEDIAN NOSE
12A04-03	STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES & OVERHEAD SIGN SUPPORTS & TRAFFIC SIGNALS
13A05-05A	SHOULDER RUMBLE STRIP, MILLING

6

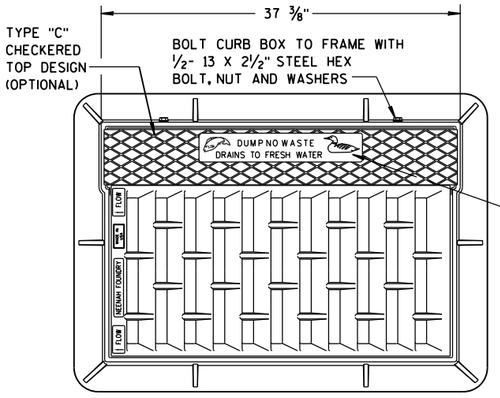
Standard Detail Drawing List

13A05-05B	SHOULDER RUMBLE STRIP, MILLING
13B02-07A	CONCRETE BRIDGE APPROACH
13B02-07B	STRUCTURAL APPROACH SLAB AND CONCRETE BRIDGE APPROACH
13C01-17	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C09-11A	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-11B	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-11C	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C11-11A	RURAL DOWELED CONCRETE PAVEMENT
13C11-11B	RURAL DOWELED CONCRETE PAVEMENT
13C18-02A	CONCRETE PAVEMENT JOINTING
13C18-02B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-02D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
14B07-14A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14H	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
14B15-08A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-08B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-08C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B18-06A	STEEL PLATE BEAM GUARD, CLASS "A" (AT BRIDGES, OBSTACLES AND SIDEROADS/DRIVEWAYS)
14B20-11G	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTOR PLATE DETAIL
14B20-11H	STEEL THRIE BEAM STRUCTURE APPROACH, SINGLE SLOPE ATTACHMENT
14B26-03A	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-03B	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-03C	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-03D	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-03E	STEEL THRIE BEAM BULLNOSE TERMINAL
14B29-01	SAFETY EDGE
14B32-03A	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-03B	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-03C	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-03D	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-03E	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B33-01A	CONCRETE BARRIER SINGLE SLOPE 32" THRIE BEAM ANCHOR
14B33-01B	CONCRETE BARRIER SINGLE SLOPE 32" THRIE BEAM ANCHOR
14B33-01C	CONCRETE BARRIER SINGLE SLOPE 32" THRIE BEAM ANCHOR
14B40-01A	32-INCH VERTICAL SHAPE CONCRETE BARRIER TO 32-INCH SSCB TRANSITION
14B40-01B	32-INCH VERTICAL SHAPE CONCRETE BARRIER TO 32-INCH SSCB TRANSITION
14B42-03A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-02A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-03A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B47-02A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
15A02-08	DELINEATOR POST, DELINEATOR, AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END

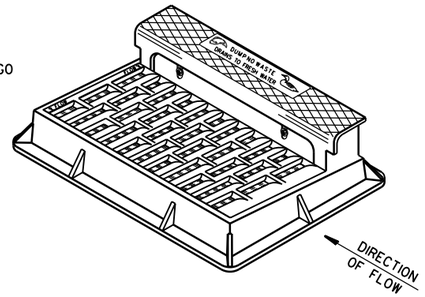
6

Standard Detail Drawing List

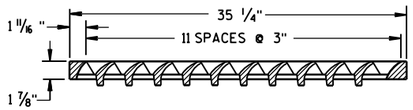
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15A04-02	FLEXIBLE DELINEATOR POST
15A06-02	DELINEATOR LAYOUT
15C04-02	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-02	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-12B	PAVEMENT MARKING WORDS
15C07-12C	PAVEMENT MARKING ARROWS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16E	PAVEMENT MARKING (LEFT TURN LANE)
15C08-16F	PAVEMENT MARKING (ISLANDS)
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C15-03	36" DIAMETER FULL SPAN OVERHEAD SIGN SUPPORT BASE
15C18-03	MEDIAN ISLAND MARKING
15C19-02C	MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY
15C24-02	36" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE
15C31-01A	PAVEMENT MARKING (RAMPS AND GORES)
15C31-01B	LANE DROP PAVEMENT MARKING
15C31-01C	PAVEMENT MARKING MAJOR SPLIT FREEWAY TO FREEWAY
15C31-01D	PAVEMENT MARKING FOR PARALLEL ON-RAMP AND PARALLEL OFF-RAMP
15C33-01	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D03-02	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. WITH BARRIER
15D04-01	TRAFFIC CONTROL, RAMP CONSTRUCTION STAGING
15D12-04	TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
15D14-02	TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT-TERM (LESS THAN 24 HOURS)
15D15-01	TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE
15D16-02	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D20-02	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D21-02	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D27-02	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D30-01	TRAFFIC CONTROL, SIDEWALK 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
15D36-01	BARRICADE RACK
16A01-06	LANDMARK REFERENCE MONUMENTS AND COVERS

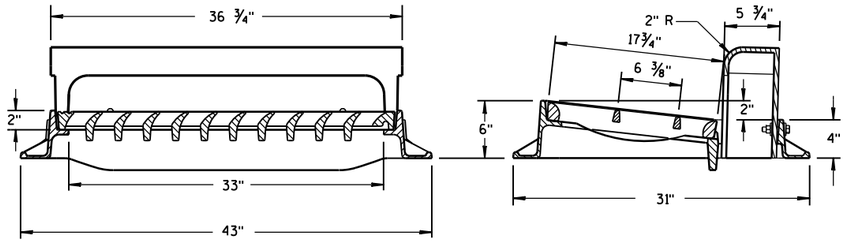


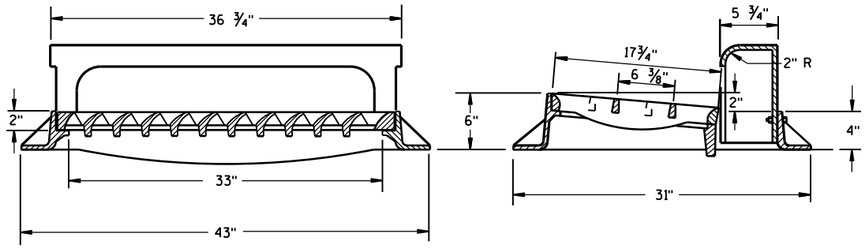
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

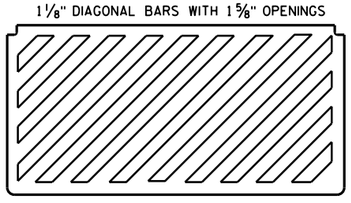






TYPE "H"

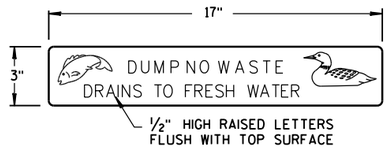
NOTE: EITHER CASTING IS ACCEPTABLE



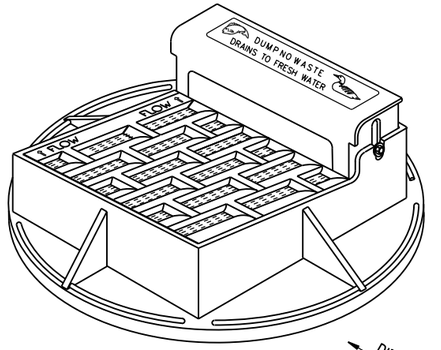
SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35 1/4" X 17 3/4" X 2")

(NOTED AS TYPE H-S ON DRAINAGE TABLE)



LOGO DETAIL



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

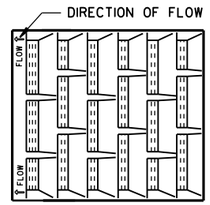
NOTE:
GRATE IS REVERSIBLE.

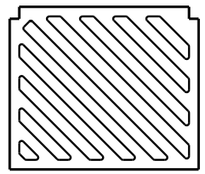
GENERAL NOTES

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.

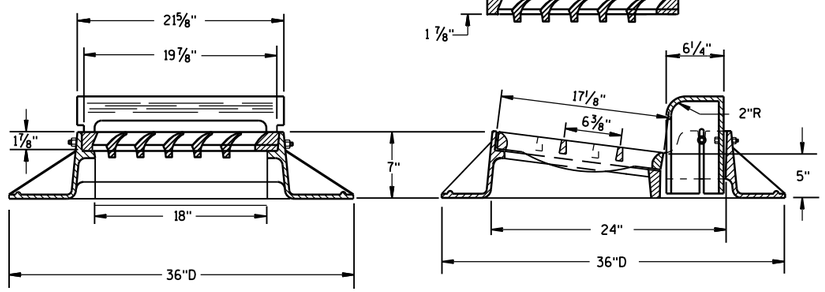




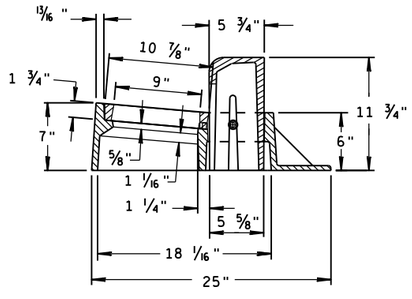
SPECIAL GRATE FOR TYPE "A" COVER

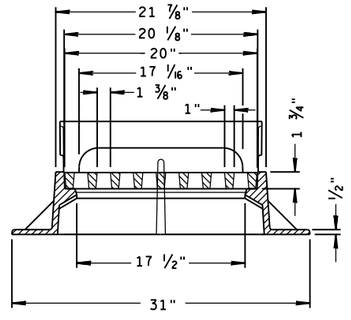
(MEASURES 19 3/4" X 17" X 1 7/8")

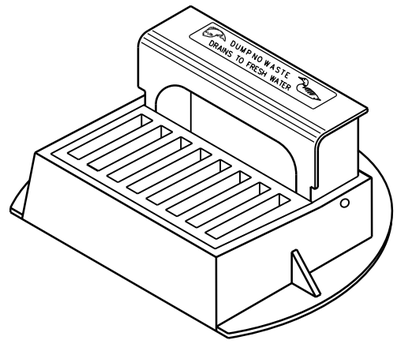
(NOTED AS TYPE A-S ON DRAINAGE TABLE)



TYPE "A"







TYPE "Z"

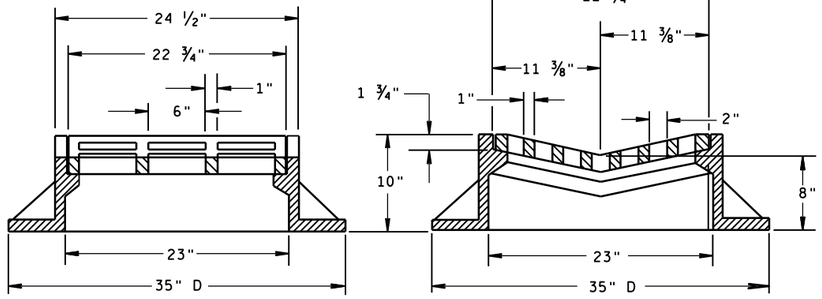
INLET COVERS
TYPE A, H, A-S, H-S & Z

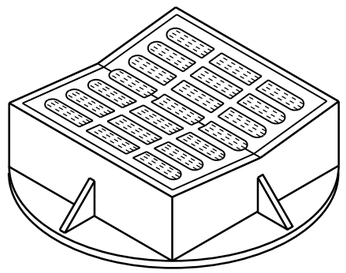
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11-27-13 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

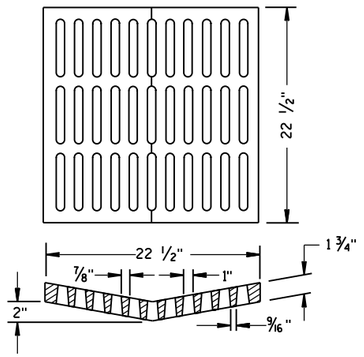
6

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



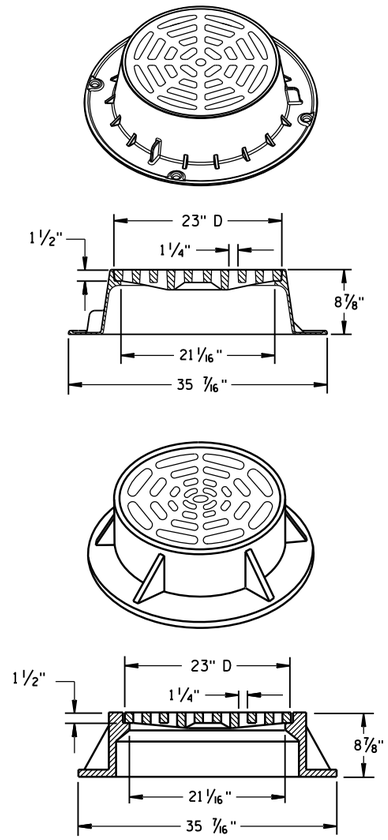


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.
NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

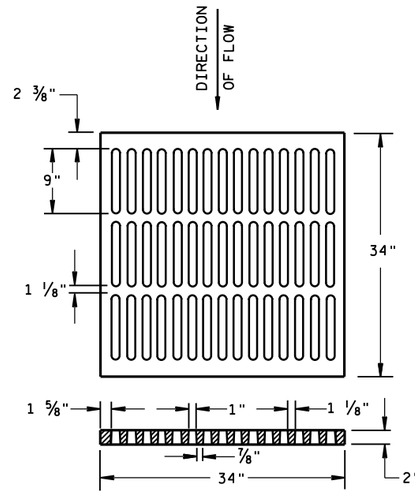
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

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

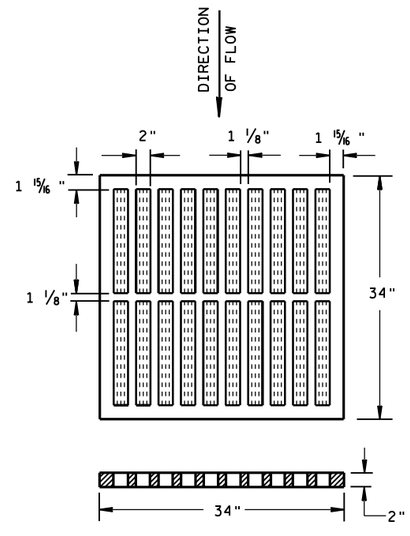
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



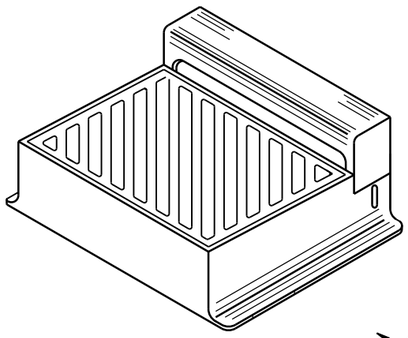
ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE

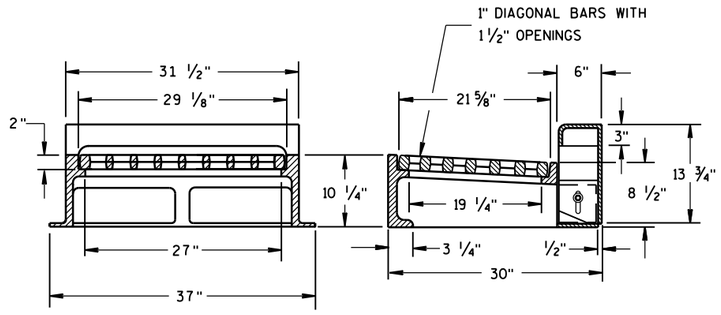


TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS
NOTED AS TYPE MS ON DRAINAGE TABLE



DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

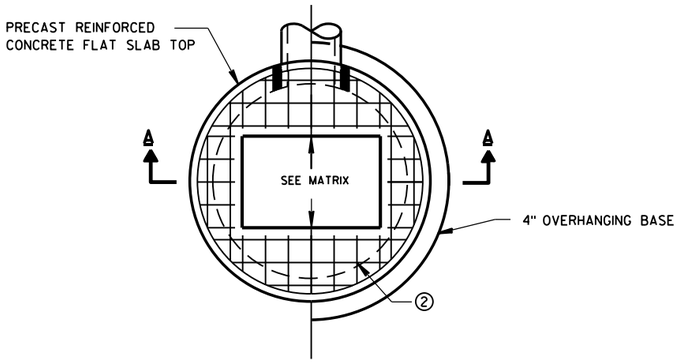
INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

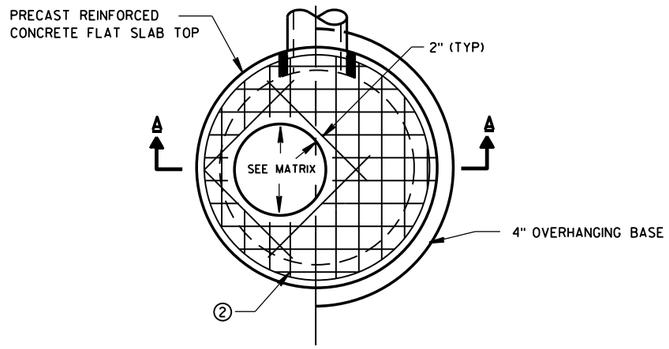
APPROVED
11/27/2013
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

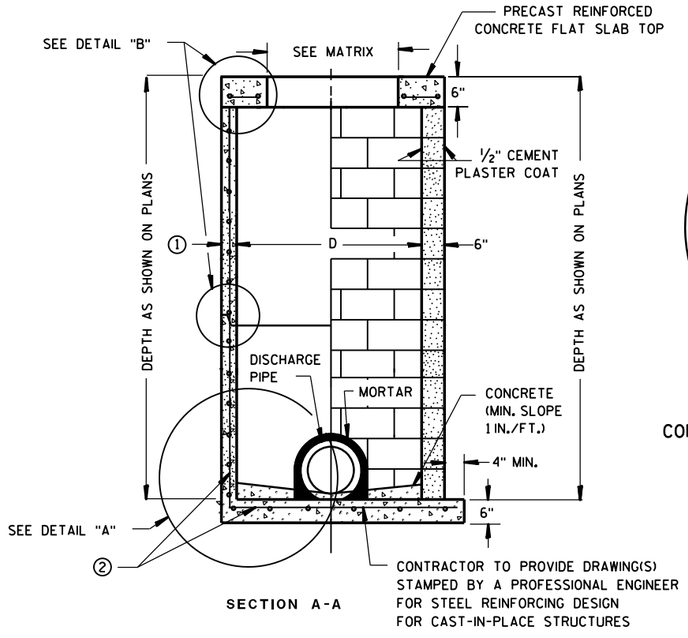
S.D.D. 8 A 5-19b



PLAN VIEW RECTANGULAR OPENING



PLAN VIEW CIRCULAR OPENING

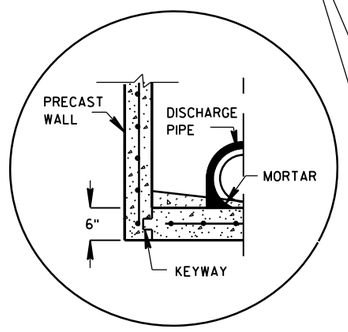


SECTION A-A

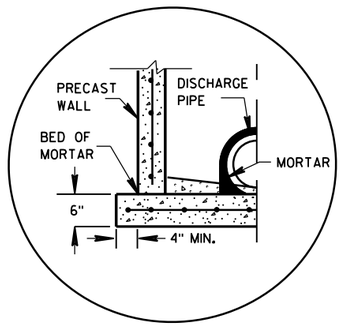
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

CIRCULAR INLETS W/ FLAT TOP

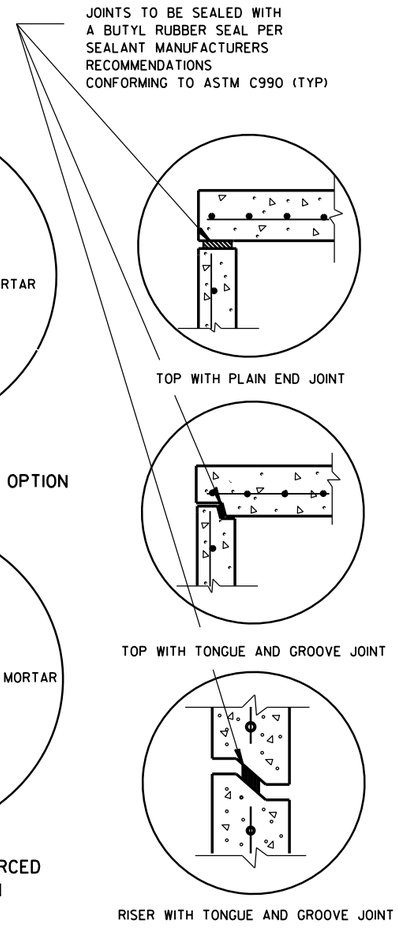


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "B"

GENERAL NOTES

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

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

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

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

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

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

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

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

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

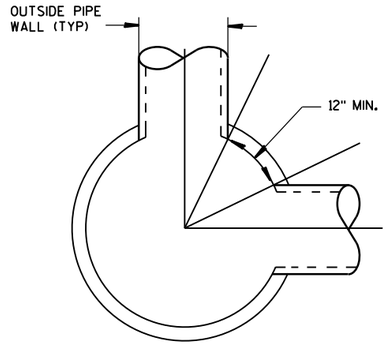
FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4-IN FOR 3-FT DIAMETER AND 5-IN FOR 4-FT DIAMETER PRECAST INLETS.

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

INLET COVER OPENING MATRIX

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



DETAIL "C"

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18

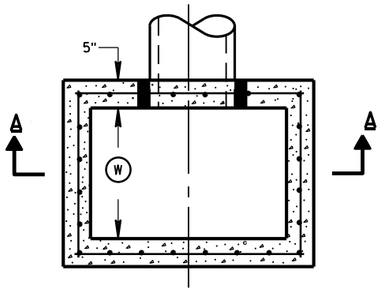
INLETS 3-FT AND 4-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

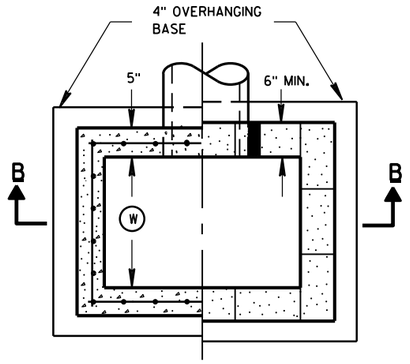
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

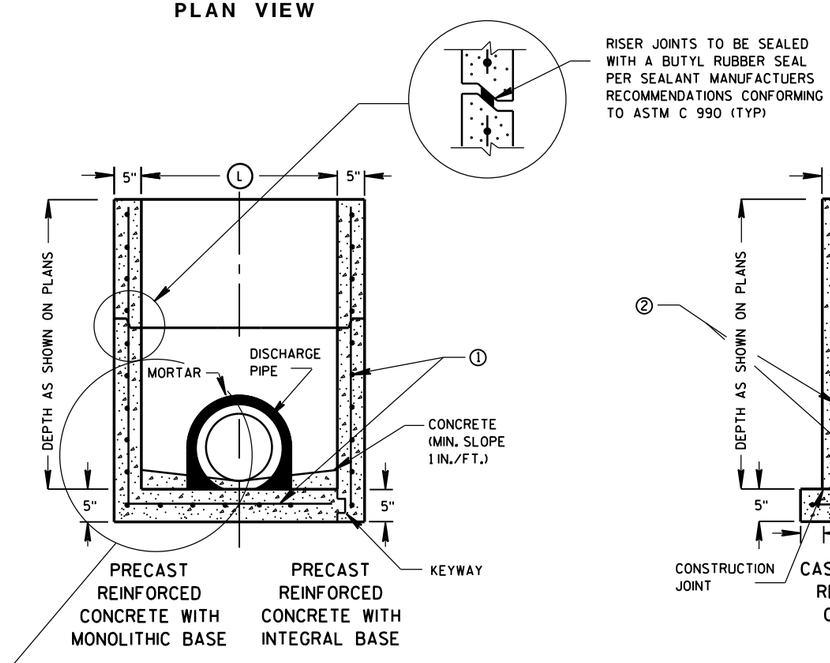
S.D.D. 8 C 6-1



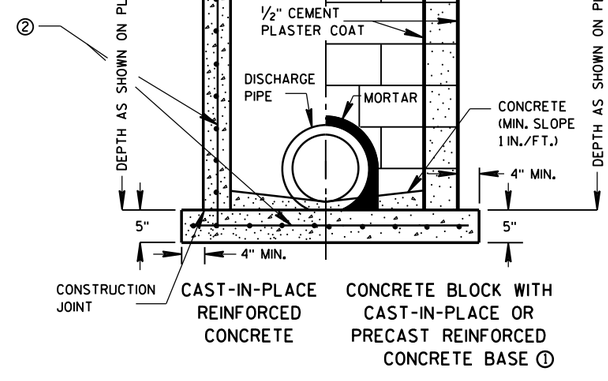
PLAN VIEW



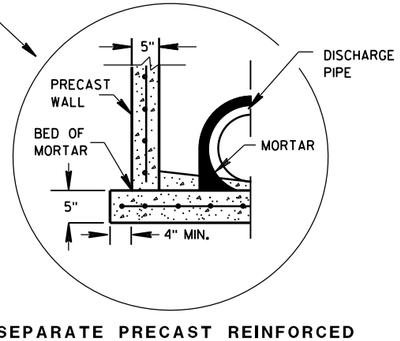
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

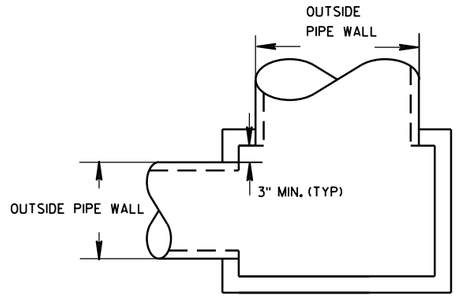
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

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

PIPE MATRIX

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



DETAIL "A"

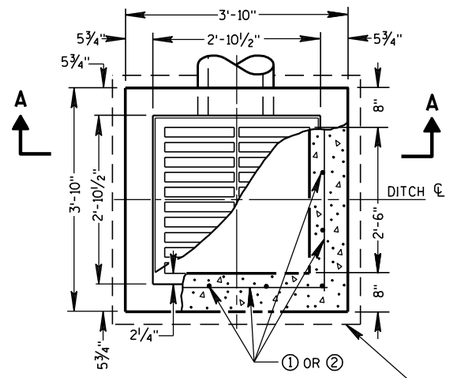
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

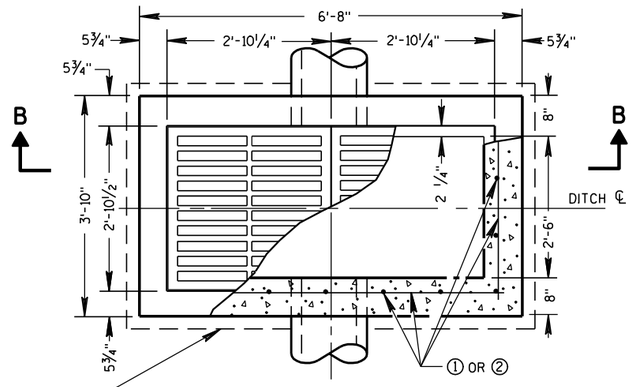
APPROVED
6/5/2012
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DE ENGINEER

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

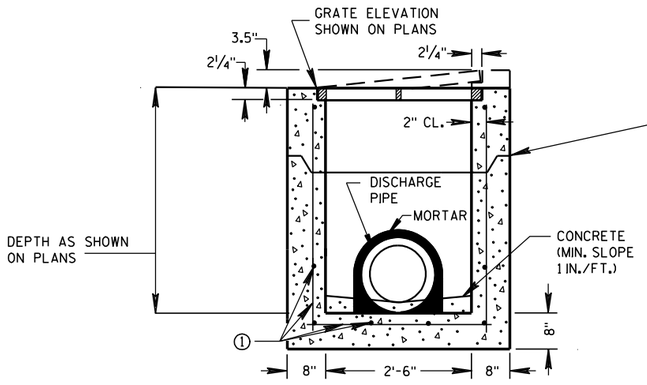


PLAN VIEW

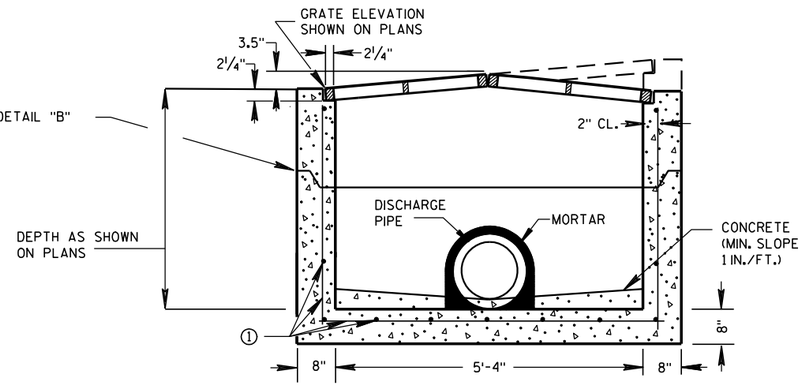


PLAN VIEW

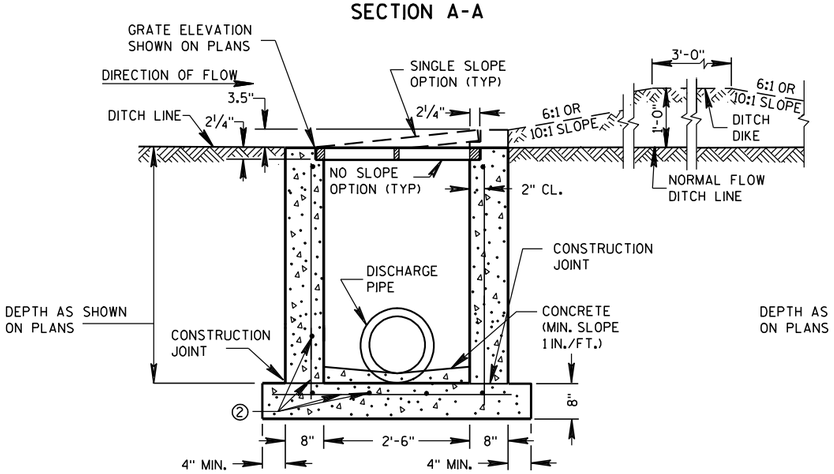
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



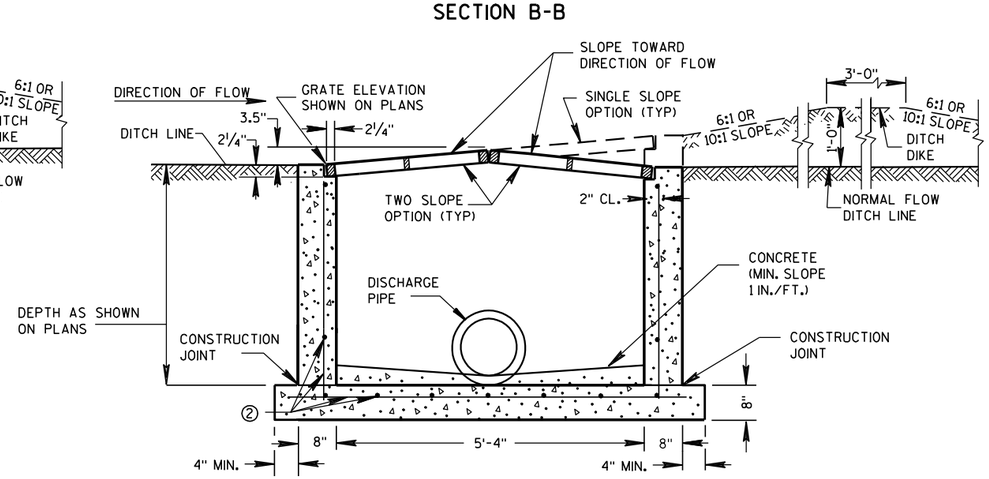
PRECAST REINFORCED CONCRETE SECTION A-A



PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

INLETS MEDIAN 1 GRATE

INLETS MEDIAN 2 GRATE

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.

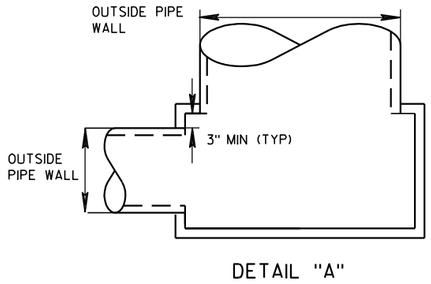
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

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.

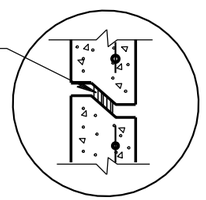
PIPE MATRIX

	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 AND 2 GRATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/5/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

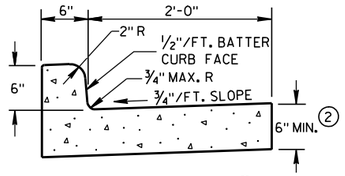
FHWA

6

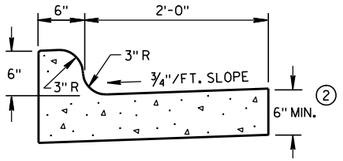
S.D.D. 8 C 8-1

6

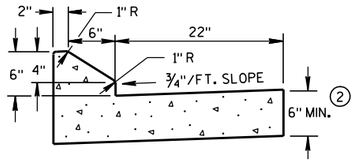
S.D.D. 8 C 8-1



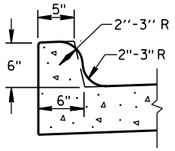
TYPES A & D (1)



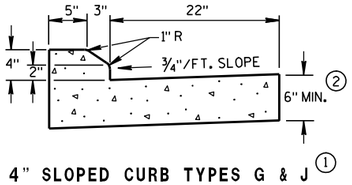
TYPES K & L (1)



6" SLOPED CURB TYPES G & J (1)

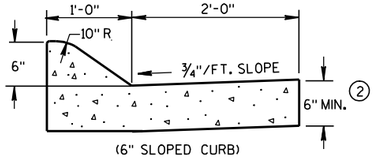


OPTIONAL CURB SHAPE FOR TYPES K & L (1)

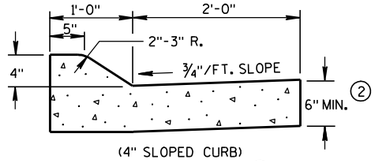


4" SLOPED CURB TYPES G & J (1)

CONCRETE CURB & GUTTER 30"

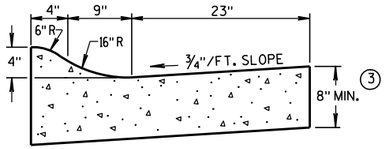


(6" SLOPED CURB)



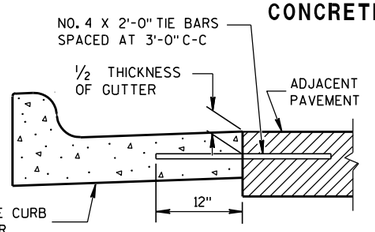
(4" SLOPED CURB)

TYPES A & D (1)

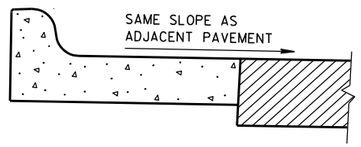


4" SLOPED CURB TYPES R & T (1) (4)

CONCRETE CURB & GUTTER 36"



TYPICAL TIE BAR LOCATION (1)



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

GENERAL NOTES

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

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

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

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

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

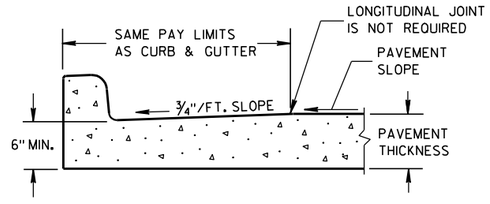
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.

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

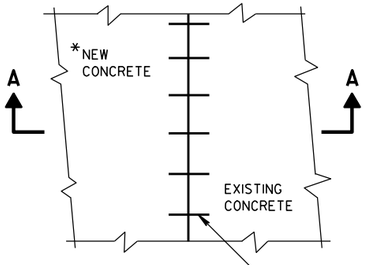
(3) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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

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

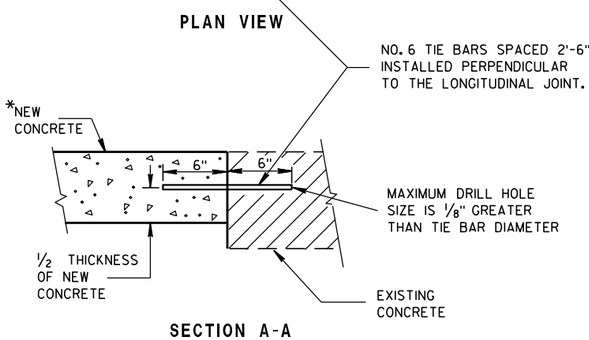


PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



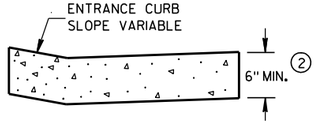
PLAN VIEW

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

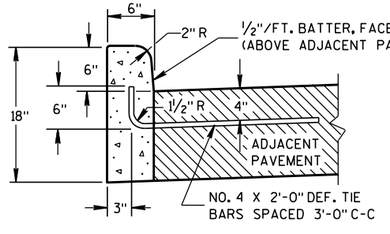


SECTION A-A

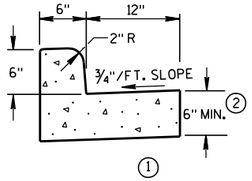
TIE BARS DRILLED INTO EXISTING PAVEMENT



DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

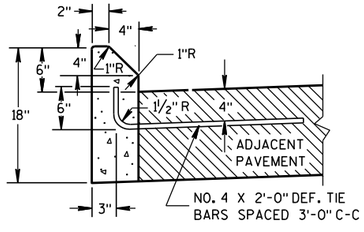


(1) TYPES A & D

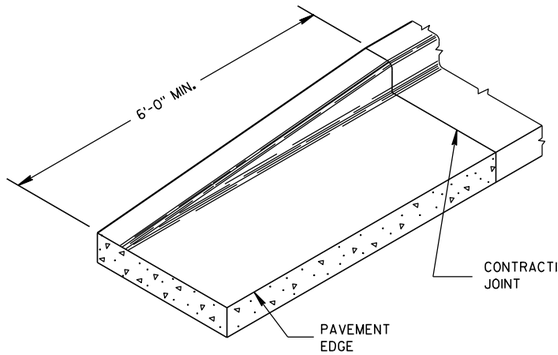


(1) TYPES A & D

CONCRETE CURB & GUTTER 18"



(1) TYPES G & J



END SECTION CURB & GUTTER

CONCRETE CURB

CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/4/08 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
495
FHWA
ENT

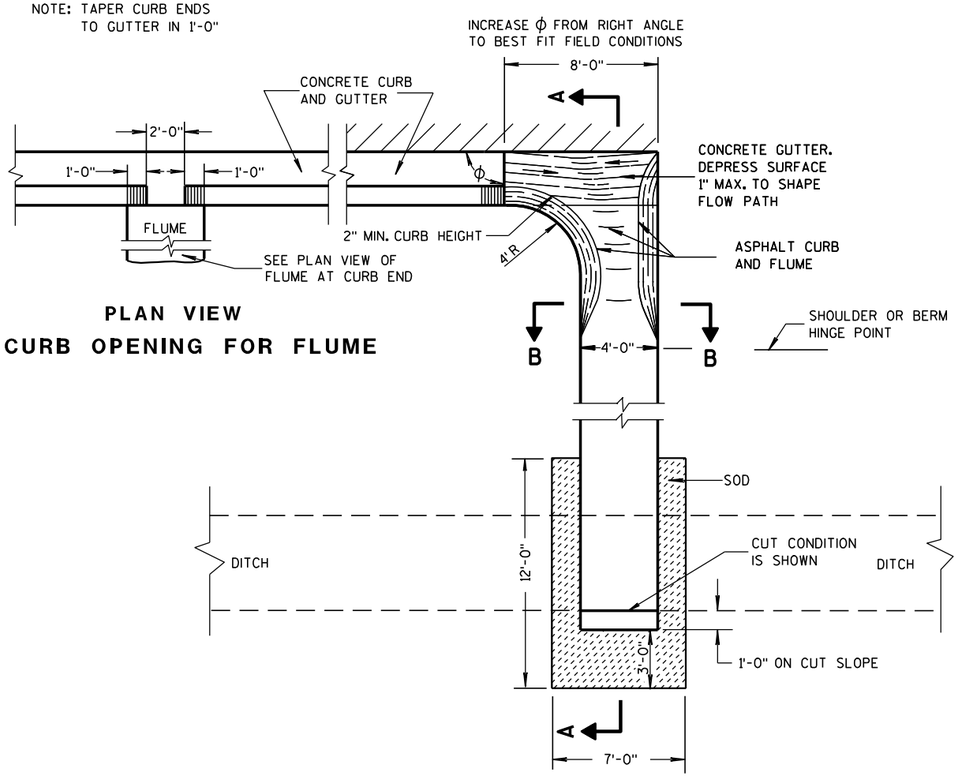
6

S.D.D. 8 D 1-17

6

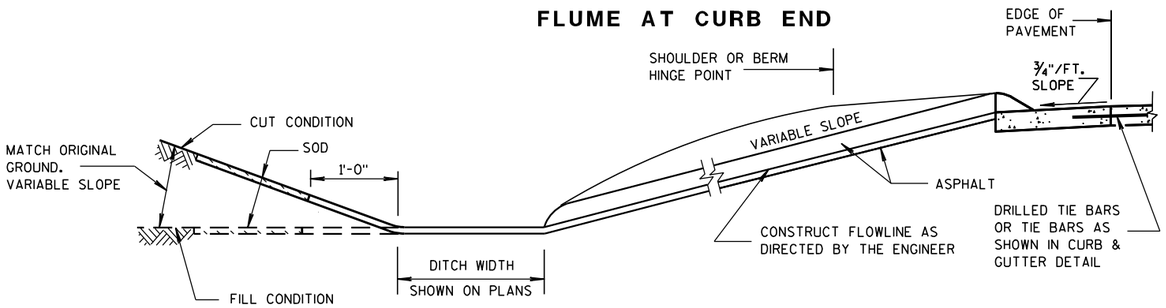
S.D.D. 8 D 1-17

ASPHALTIC FLUME

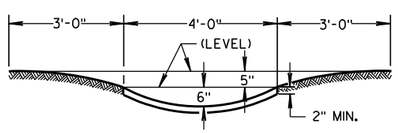


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

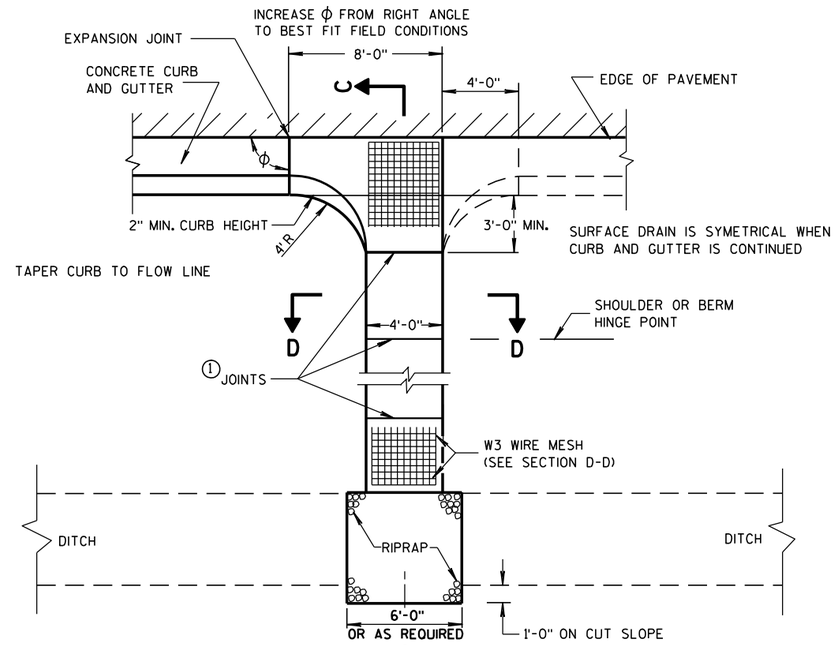
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE ⅛ TO ¼ INCH WIDE BY 1½ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

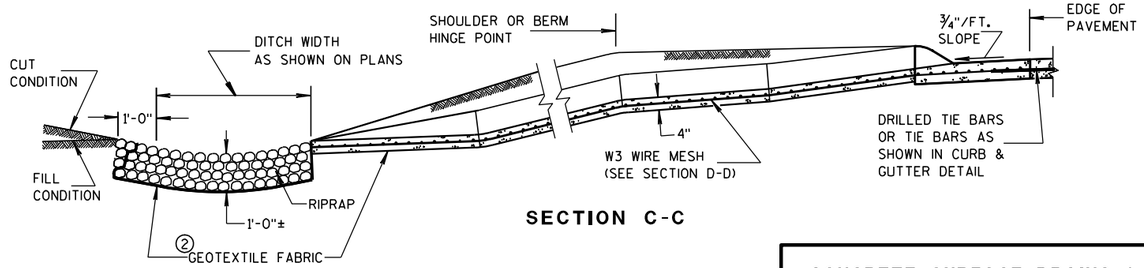
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

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

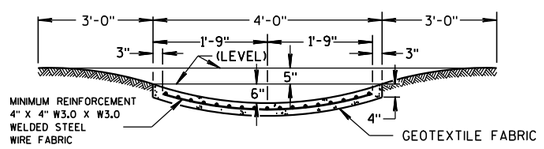
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

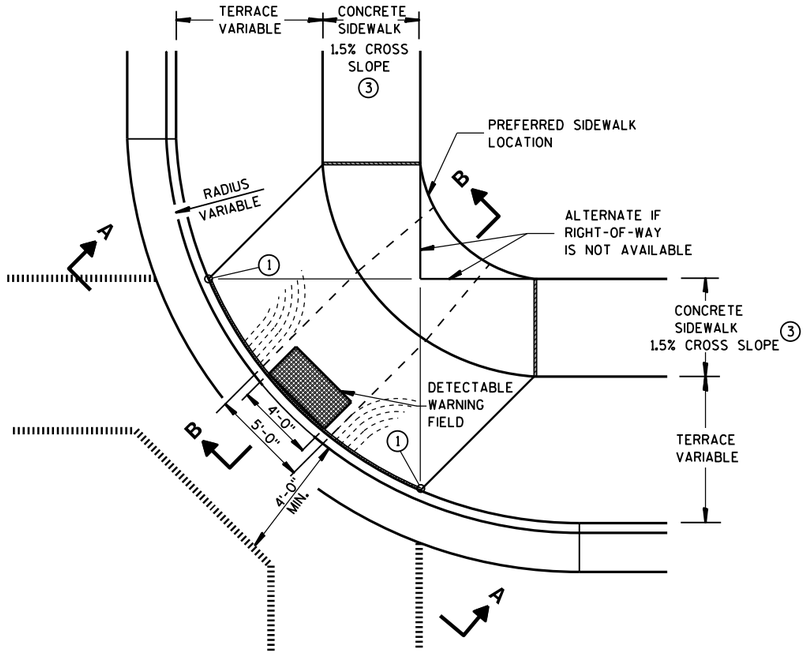
APPROVED
9-4-08 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
496
MENT
FHWA

6

S.D.D. 8 D 4-5

6

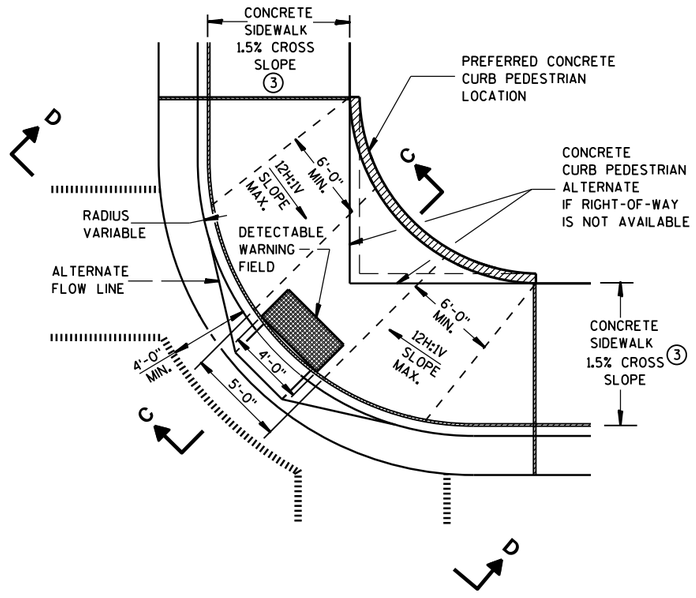
S.D.D. 8 D 4-5



PLAN VIEW

TYPE 1 RAMP

(CENTER OF CORNER RADIUS)



PLAN VIEW

TYPE 1-A RAMP

(NO TERRACE)

GENERAL NOTES

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

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

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

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

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

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

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

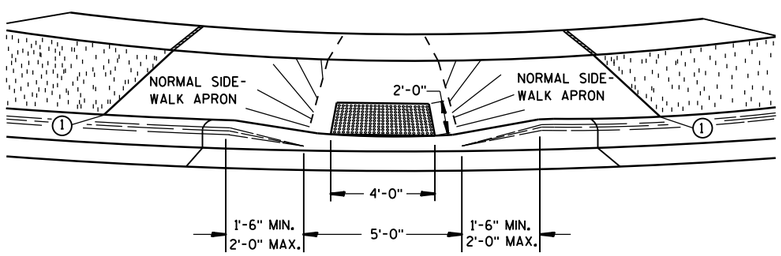
① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.

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

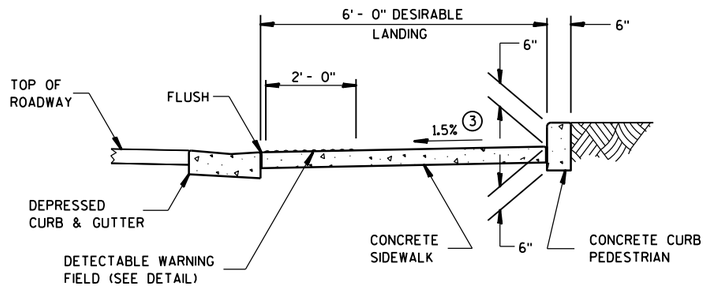
③ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

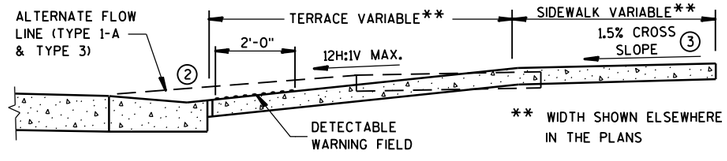
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



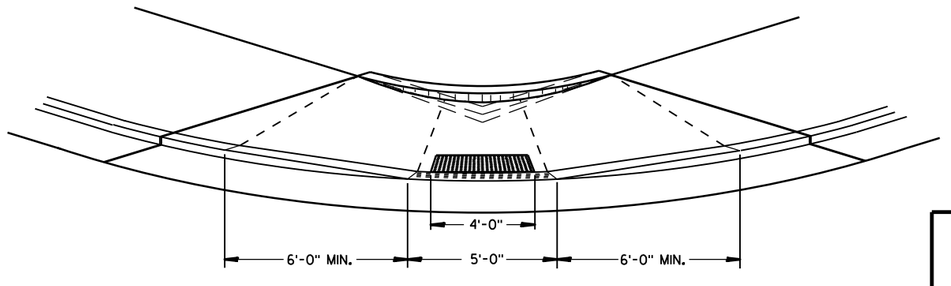
VIEW A-A



SECTION C-C



SECTION B-B



VIEW D-D

CURB RAMPS TYPES 1 AND 1-A

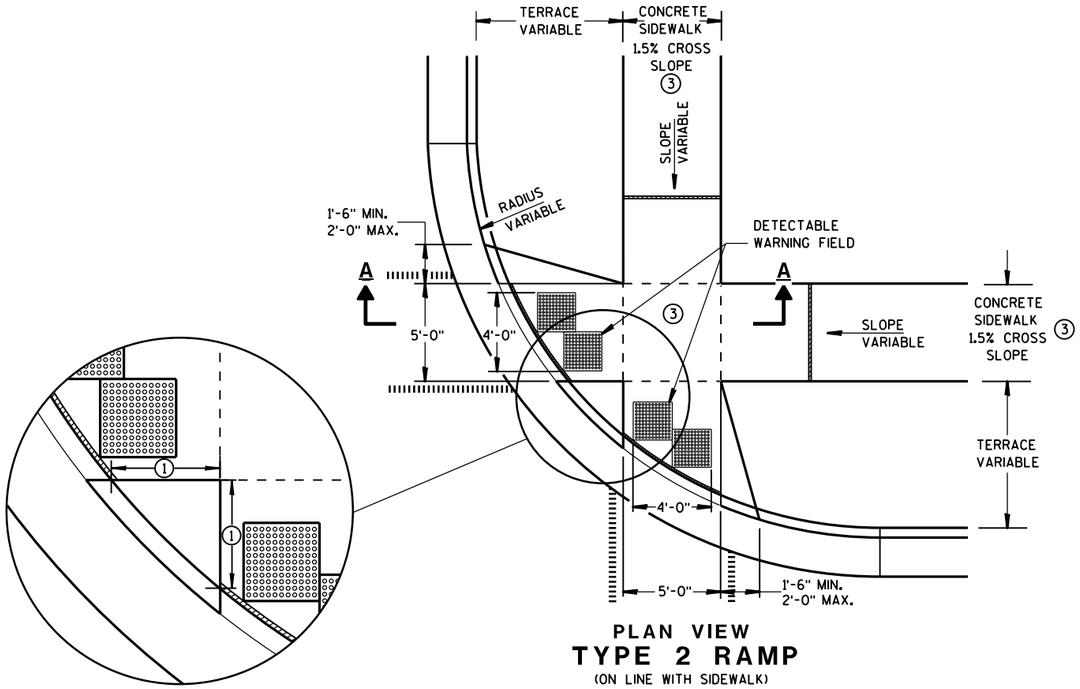
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 497

6

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

6

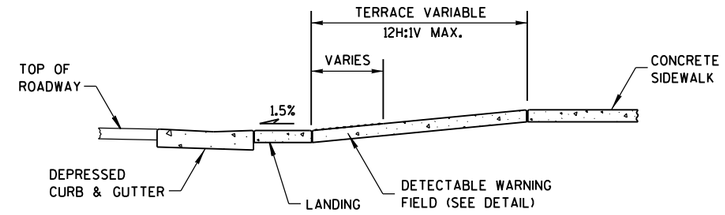
S.D.D. 8 D 5-15a



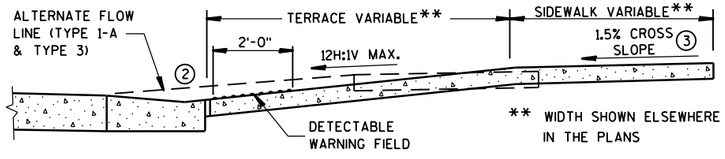
PLAN VIEW

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.

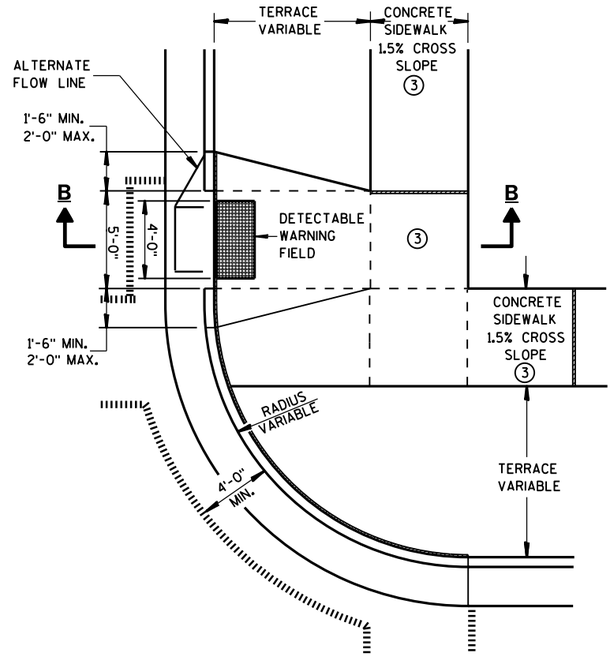
① WHEN THIS DISTANCE IS LESS THAN 6'-0" IT MAY BE DIFFICULT TO ACHIEVE A 12H:1V SLOPE, OR FLATTER, ON THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 12H:1V SLOPE, OR FLATTER, ON RAMP. 2" MINIMUM CURB HEIGHT.

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

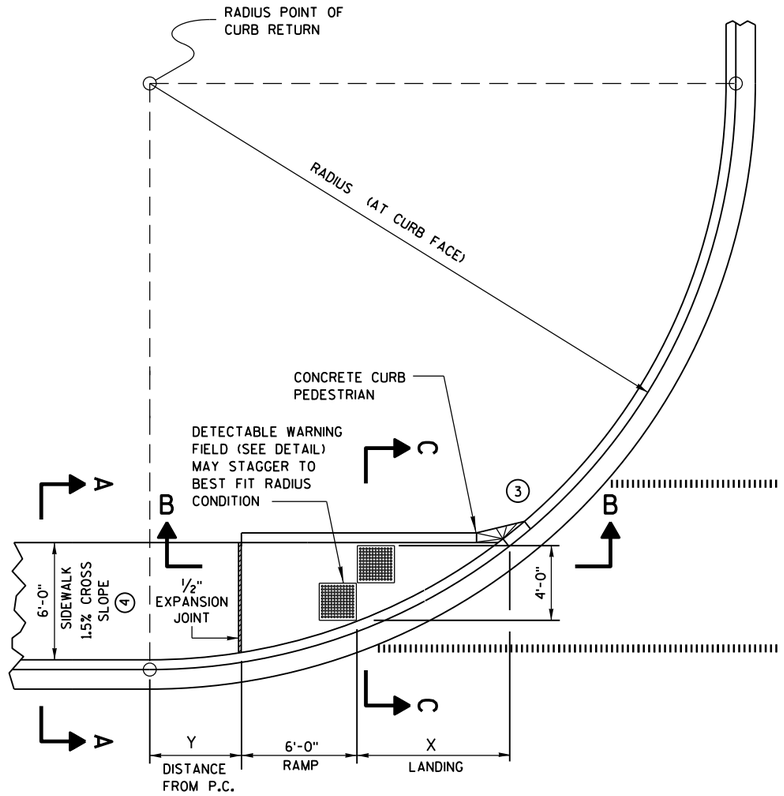
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS TYPES 2 AND 3

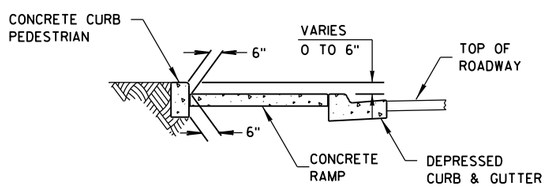
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

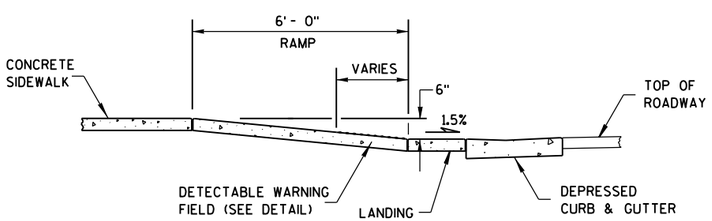
S.D.D. 8 D 5-15b



CURB RAMP TYPE 4A
PLAN VIEW



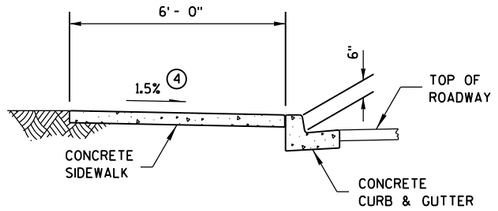
SECTION C-C FOR TYPE 4A



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

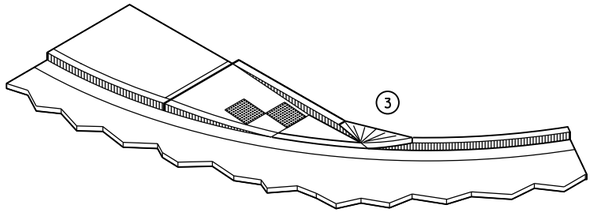
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

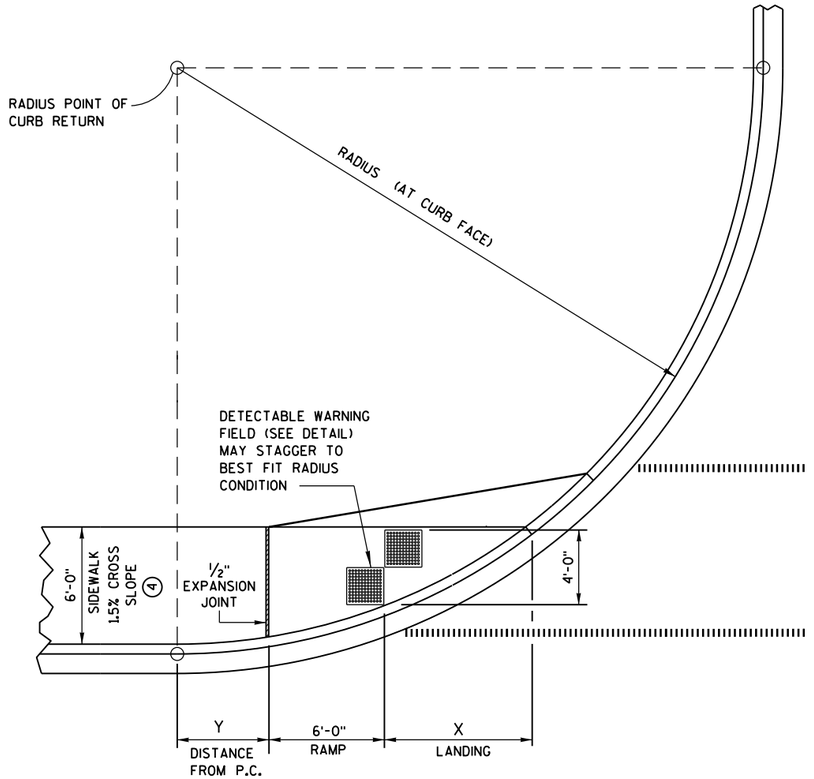
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

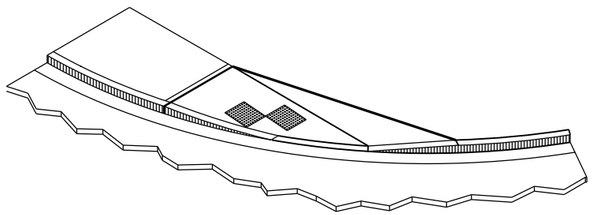
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



ISOMETRIC VIEW FOR TYPE 4A



CURB RAMP TYPE 4A1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

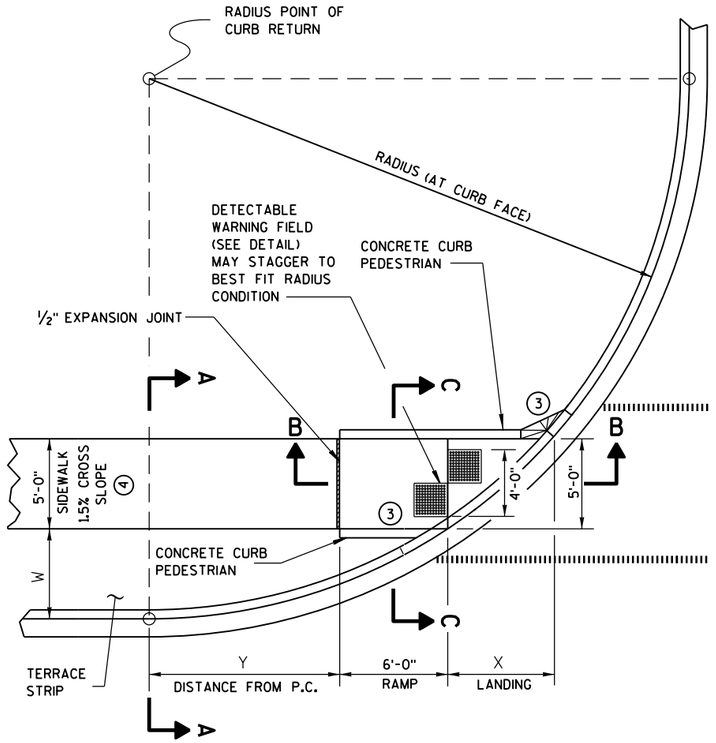
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPES 4A AND 4A1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

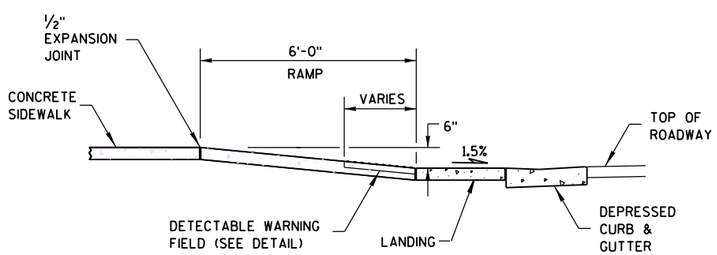
6

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

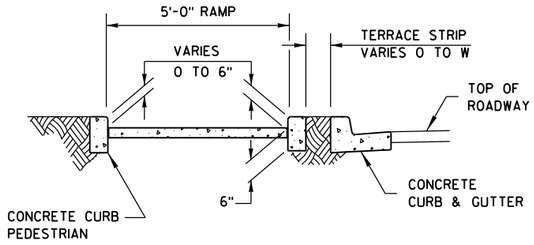


CURB RAMP TYPE 4B
PLAN VIEW

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

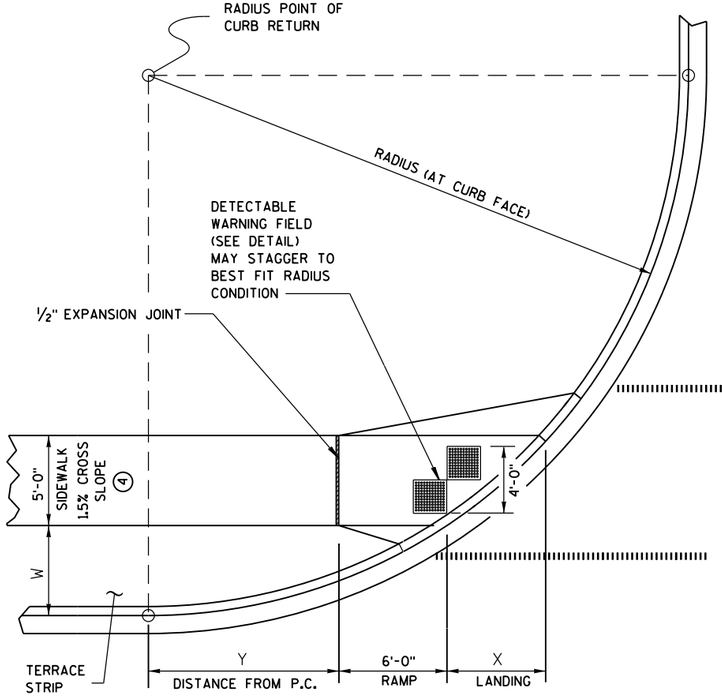
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

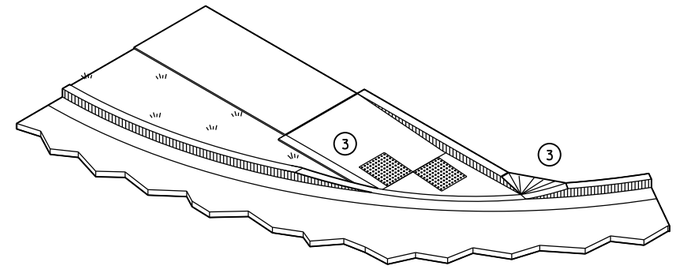
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

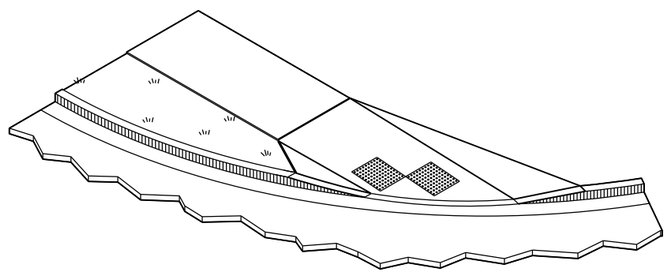
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



CURB RAMP TYPE 4B1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4B



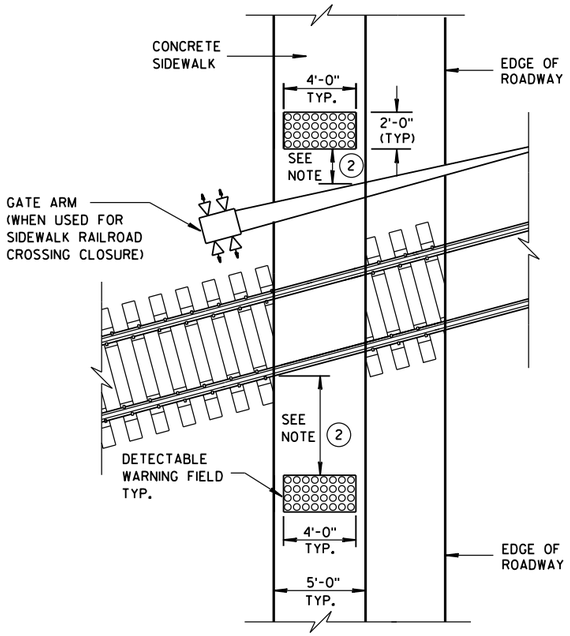
ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS
TYPE 4B AND 4B1

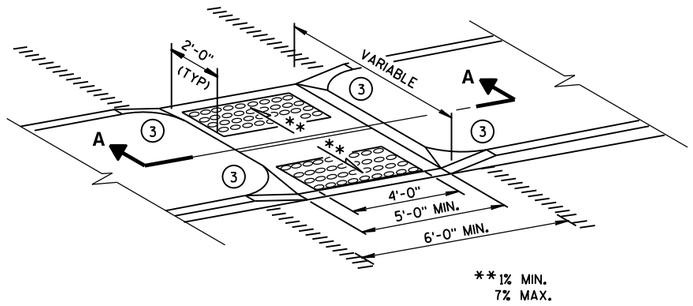
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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%.

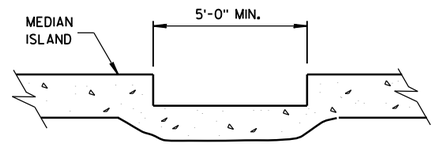
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

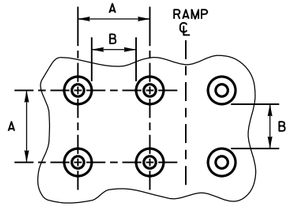
(2) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET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



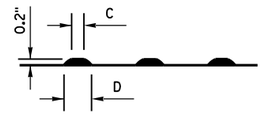
SECTION A-A



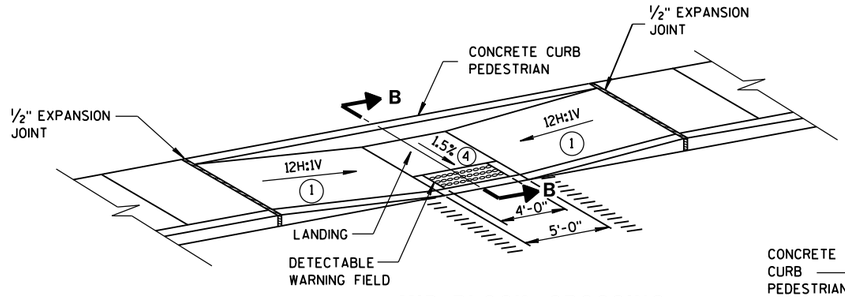
PLAN VIEW

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

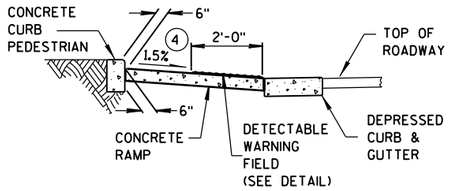
* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



ELEVATION VIEW

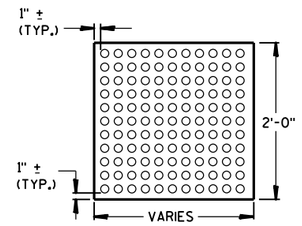


MID-BLOCK CROSSING
TYPE 7A



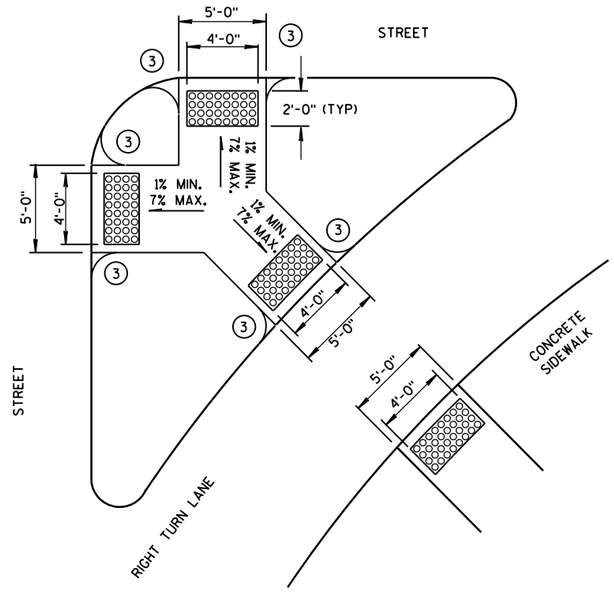
SECTION B-B

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL

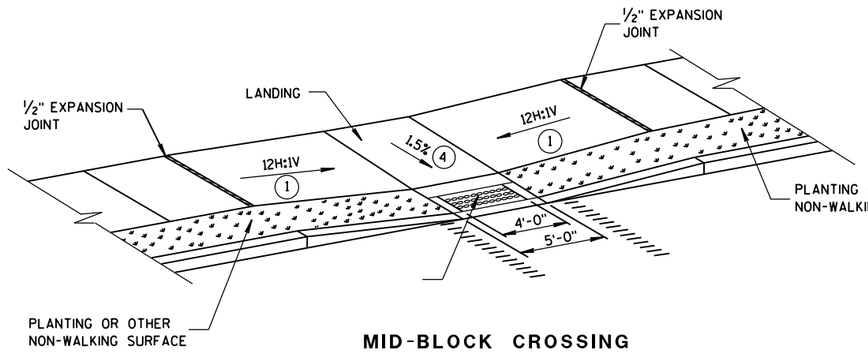


PLAN VIEW

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)

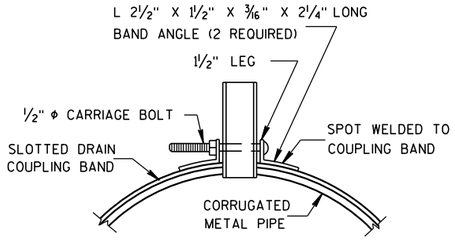
CURB RAMPS
TYPES 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

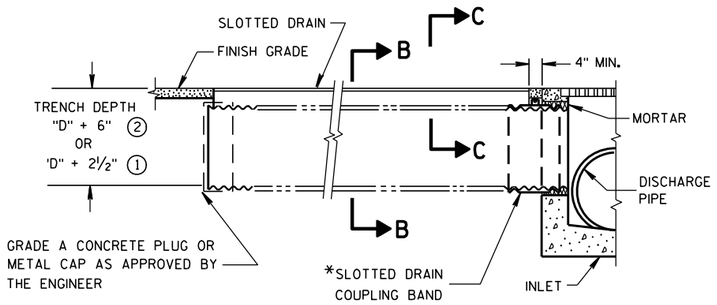
APPROVED
2-6-2013 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS [illegible] ENGINEER
FHWA

6

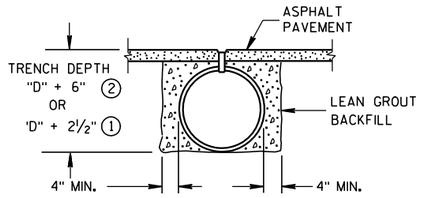
S.D.D. 8 D 5-15e



SECTION A-A



SLOTTED DRAIN INSTALLATION TYPE "A"



SECTION B-B

GENERAL NOTES

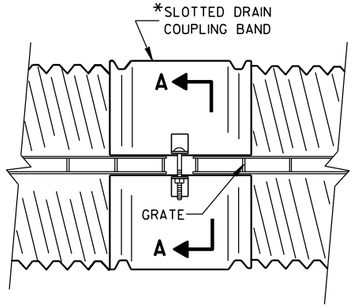
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

BACKFILL MATERIAL

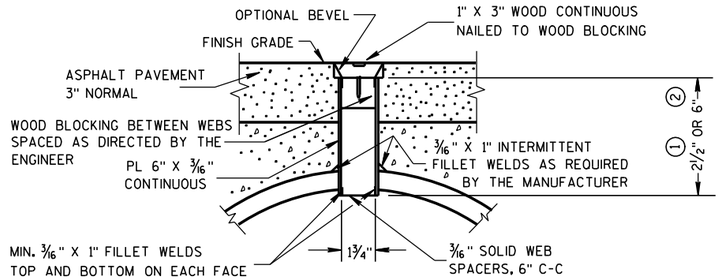
THE LEAN GROUT BACKFILL MATERIAL SHALL BE A FINE AGGREGATE, IN ACCORDANCE WITH SUBSECTION 501.3.6.3.6 OF THE STANDARD SPECIFICATIONS, MIXED WITH 150 POUNDS OF CEMENT AND APPROXIMATELY 30 GALLONS OF WATER FOR EACH 3000 POUNDS OF FINE AGGREGATE.

THE PIPE FOR THE SLOTTED DRAIN SHALL MEET AASHTO DESIGNATION M-36, AND THE GRATE ASSEMBLIES SHALL BE MADE FROM STRUCTURAL STEEL SUITABLY WELDED TO FORM THE OPEN SLOT AND HOT-DIP GALVANIZED TO MEET THE PROVISIONS OF AASHTO DESIGNATION M-111.

NORMAL PIPE SIZES ARE 12-INCH THROUGH 24-INCH DIAMETER IN 0.064 INCH THICKNESS, AND 30-INCH DIAMETER PIPE IN 0.079 INCH THICKNESS.

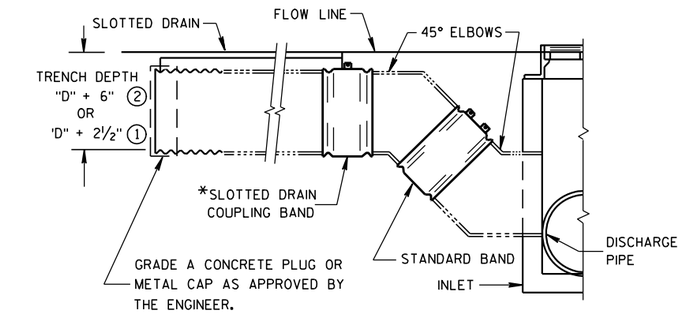


PLAN VIEW



SECTION C-C

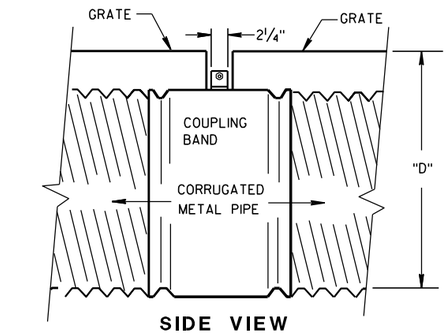
GRATE SLOT DETAIL



SLOTTED DRAIN INSTALLATION TYPE "B"

NOTE:

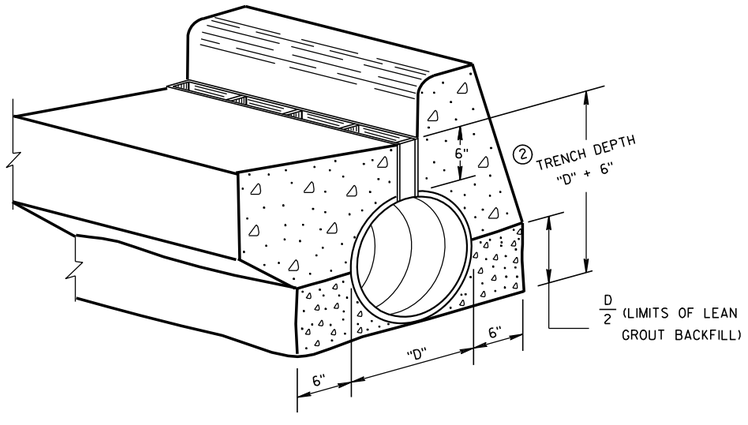
TO PREVENT "FLOATING" OF THE SLOTTED DRAIN DURING BACKFILL OPERATIONS PROVIDE ADEQUATE WEDGES, OR POUR THE LEAN GROUT ON TOP OF THE PLUGGED SLOT ALLOWING IT TO SLOUGH TO THE SIDES OF THE PIPE. THIS WILL PROVIDE ENOUGH WEIGHT ON TOP TO KEEP THE PIPE FROM FLOATING.



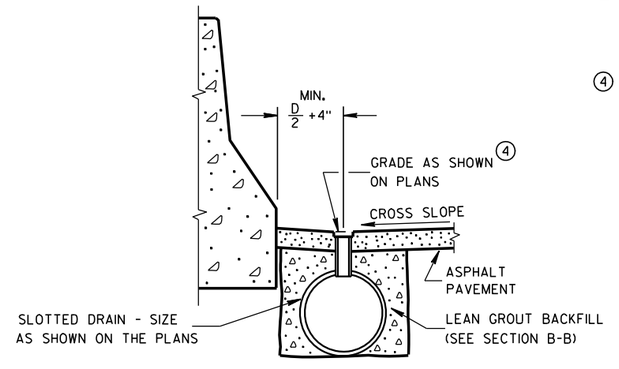
SIDE VIEW

*TYPICAL COUPLING BAND FOR SLOTTED DRAIN

(ALTERNATES PERMITTED AS APPROVED BY THE ENGINEER)



SLOTTED DRAIN INSTALLATION IN FLOW LINE OF CURB & GUTTER TYPE "C"



SLOTTED DRAIN INSTALLATION AT MEDIAN BARRIER TYPE "D"

① 2½" NORMAL GRATE DEPTH.

② 6" SPECIAL GRATE DEPTH, WHEN SPECIFIED ON THE PLANS.

③ FOR SCREEDING DIRECTLY OVER THE SLOTTED DRAIN WITH ASPHALT PAVER. FOR CONCRETE SURFACE USE 3" WIDE TAPE OVER THE SLOT TO KEEP MATERIAL OUT OF THE PIPE.

④ WHEN THE SURFACE IS CONCRETE PAVEMENT THE GRADE AS SHOWN ON THE PLANS WILL BE FLUSH WITH THE TOP OF THE SLOTTED DRAIN.

SLOTTED CORRUGATED METAL PIPE SURFACE DRAINS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/30/79
DATE

/S/ D. L. Strand
CHIEF ROADWAY DEVELOPMENT ENGINEER

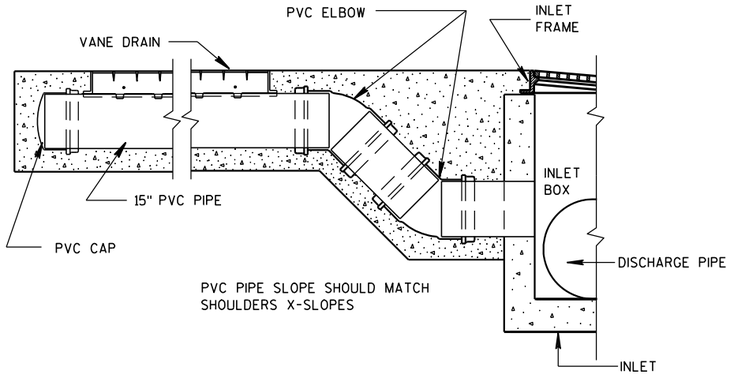
FHWA

6

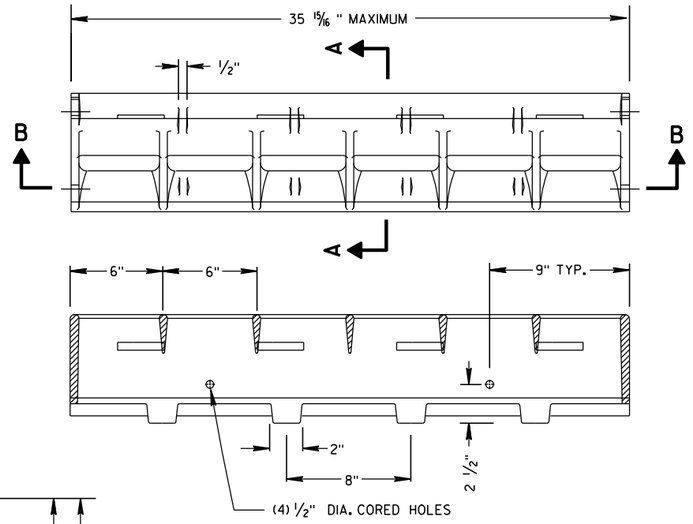
S.D.D. 8 D 13-1

6

S.D.D. 13 D 13-1



TYPICAL SLOTTED VANE DRAIN CONFIGURATION



SECTION B-B

SLOTTED VANE DRAIN DETAIL

(APPROXIMATE WEIGHT 87 LBS.)

GENERAL NOTES

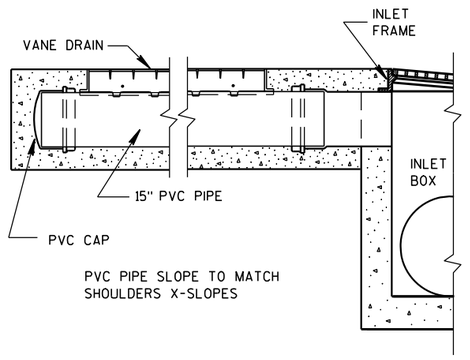
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

ENCASEMENT: THE ENCASING MATERIAL AROUND THE PIPE SHALL BE IN ACCORDANCE WITH SPECIFICATIONS OF 501.4.3.3 FOR CONCRETE PAVEMENT.

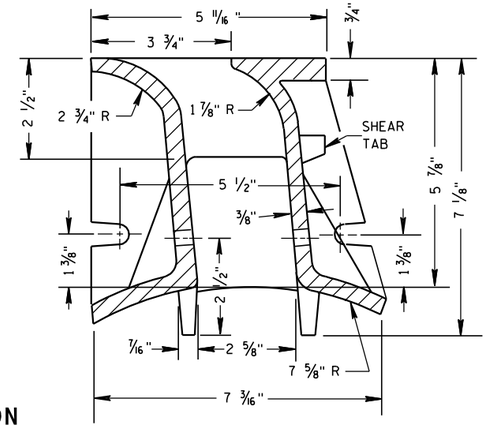
THE PIPE USED SHALL BE A 15" DIAMETER SDR-35 POLYVINYL CHLORIDE SEWER PIPE. THE PIPE SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN STANDARD SPECIFICATION 612.2.6

SURFACE DRAIN: BEFORE PAVING OVER THE DRAIN, COVER THE TOP OF THE DRAIN TO KEEP MATERIAL OUT OF THE PIPE. THE FINISHED GRADE SHOULD BE FLUSH WITH THE TOP OF THE DRAIN.

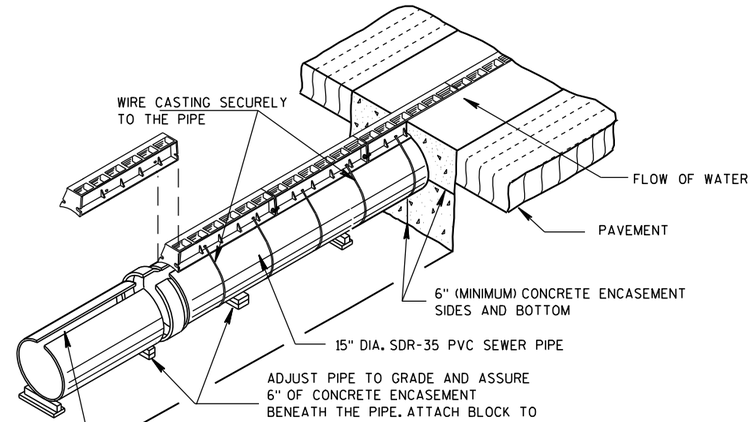
THE ANGLE OF THE DRAIN TO THE FLOW OF WATER SHOULD BE AS CLOSE TO 90° AS POSSIBLE.



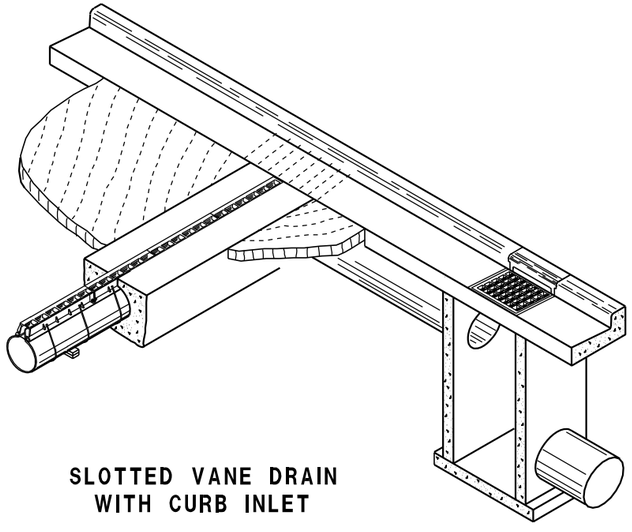
TYPICAL SLOTTED VANE DRAIN CONFIGURATION



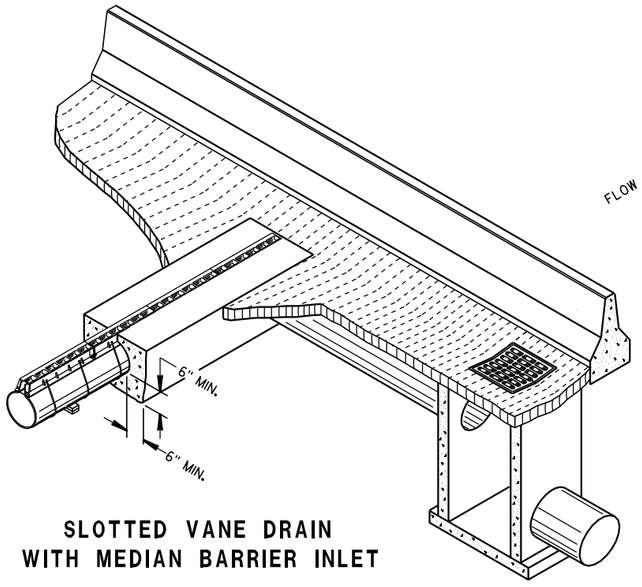
SECTION A-A



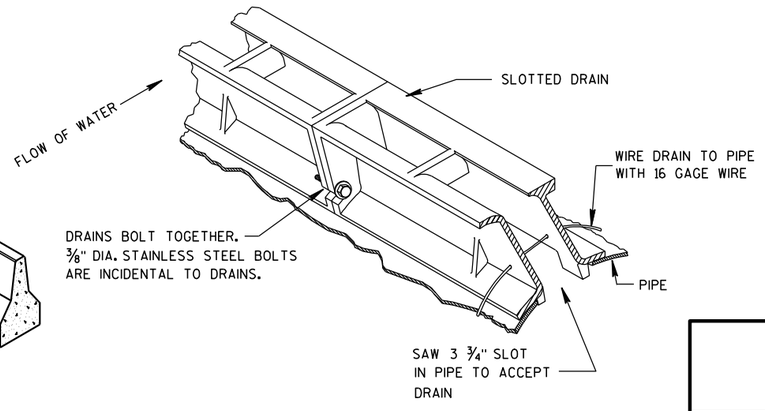
INSTALLATION OF SLOTTED VANE DRAIN



SLOTTED VANE DRAIN WITH CURB INLET



SLOTTED VANE DRAIN WITH MEDIAN BARRIER INLET



ISOMETRIC VIEW

SLOTTED VANE DRAIN

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/13/00 DATE

/S/ Rory L. Rhinehart
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

6

S.D.D. 8 D 14-1

6

S.D.D. 8 D 14-1

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) UNPERFORATED PIPE UNDERDRAIN AND FITTINGS FURNISHED FOR OUTFALL PIPE SHALL MEET THE REQUIREMENTS OF ONE OF THE FOLLOWING SPECIFICATIONS:

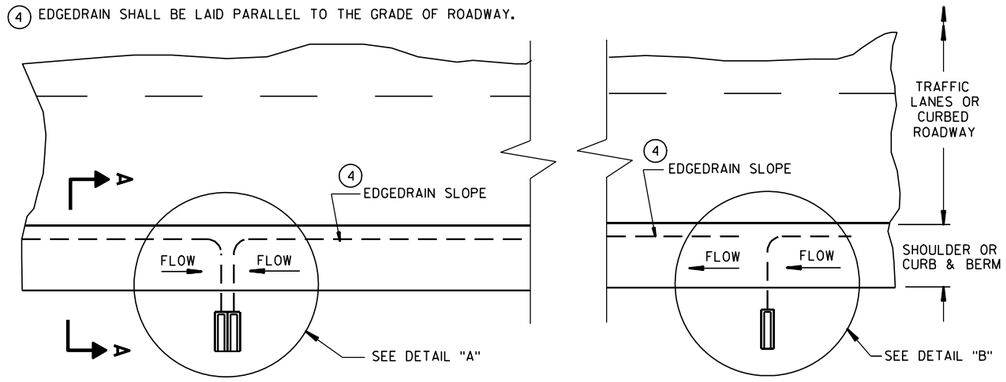
POLYVINYL CHLORIDE (PVC) PLASTIC DRAIN, WASTE, AND VENT PIPE AND FITTINGS, ASTM D 2665, SCHEDULE 40 PVC.

TYPE PSM POLYVINYL CHLORIDE (PVC) SEWER PIPE AND FITTINGS, ASTM D 3034, SDR 23.5 PVC SEWER PIPE.

(2) MAXIMUM SPACING OF EDGEDRAIN OUTLETS SHALL BE 250 FEET UNLESS OTHERWISE SPECIFIED IN THE CONTRACT OR DIRECTED BY THE ENGINEER.

(3) EDGEDRAIN SHALL BE CONNECTED TO INLETS REGARDLESS OF FLOW DIRECTION FOR DRAINAGE AND MAINTENANCE ACCESS.

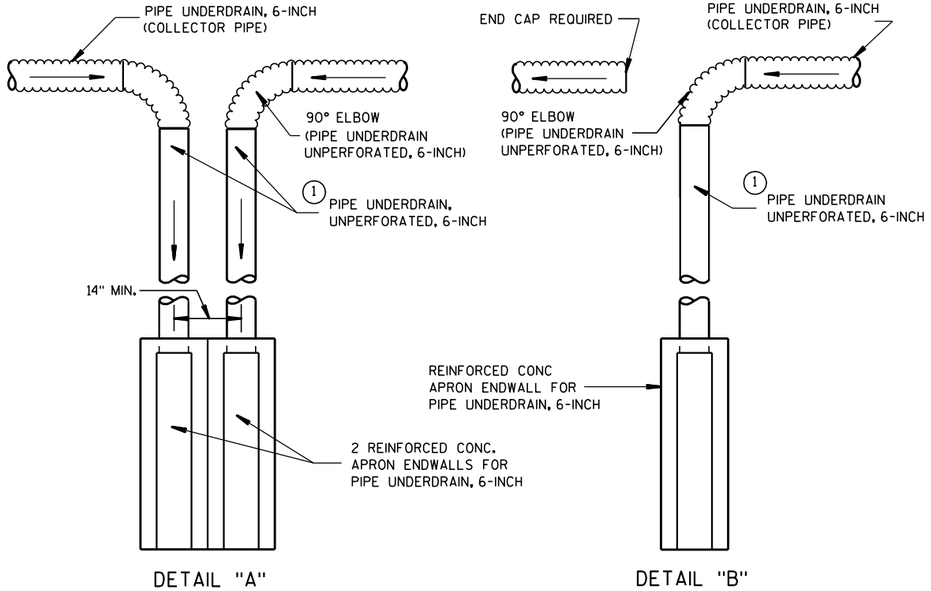
(4) EDGEDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF ROADWAY.



PLAN VIEW

ROADWAY WITH SHOULDERS OR CURBS

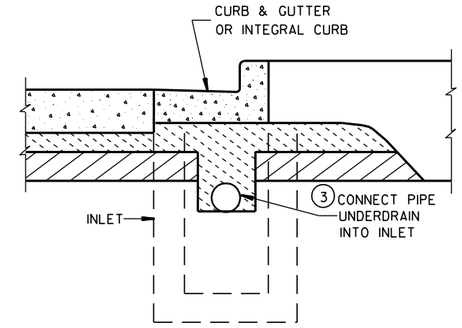
(EDGEDRAIN OUTLETS TO ROADSIDE) (2)



DETAIL "A"
TO BE USED AT LOW POINT LOCATIONS

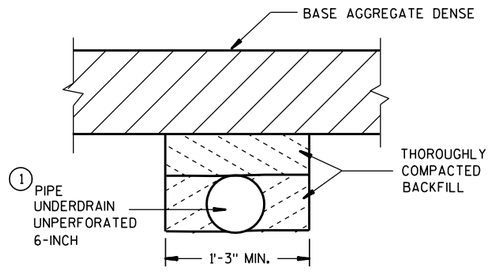
DETAIL "B"
TO BE USED AT INTERMEDIATE LOCATIONS

TYPICAL DRAIN OUT DETAILS



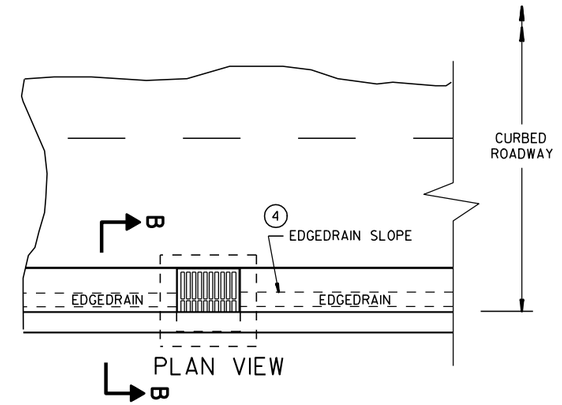
SECTION B-B

URBAN CROSS SECTION



SECTION C-C

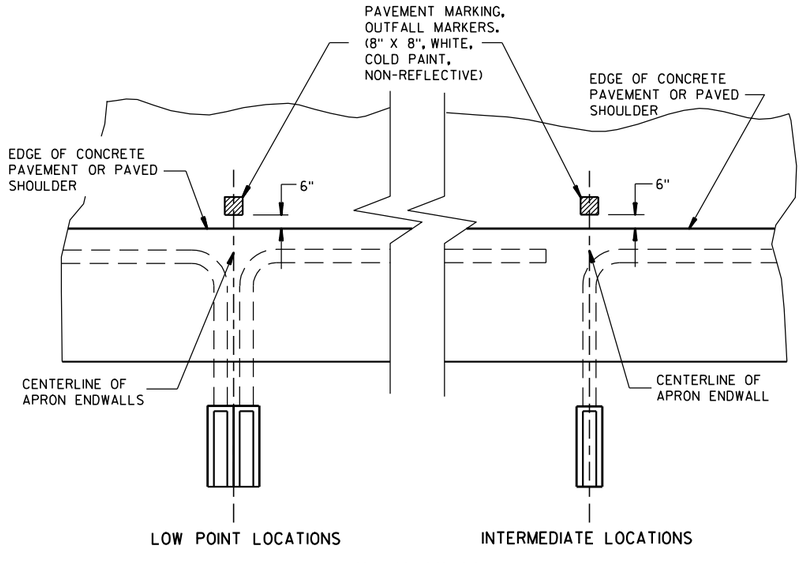
(TRENCH FOR OUTFALL PIPE)



PLAN VIEW

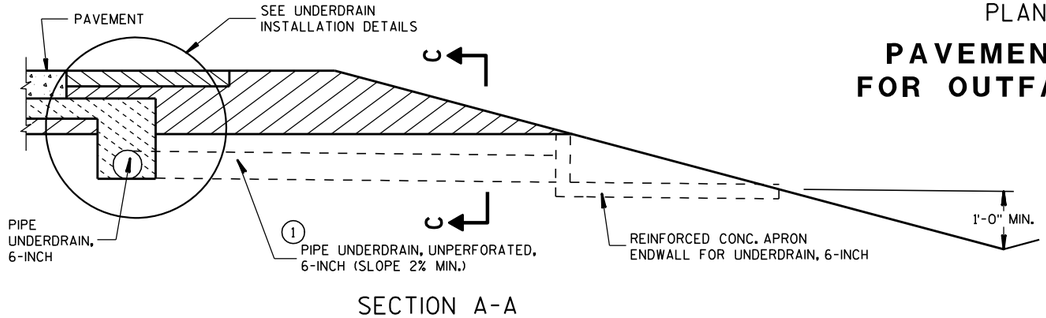
ROADWAY WITH CURBS

(EDGEDRAIN CONNECTS INTO INLET STRUCTURE)



PLAN VIEW

PAVEMENT MARKING FOR OUTFALL MARKERS

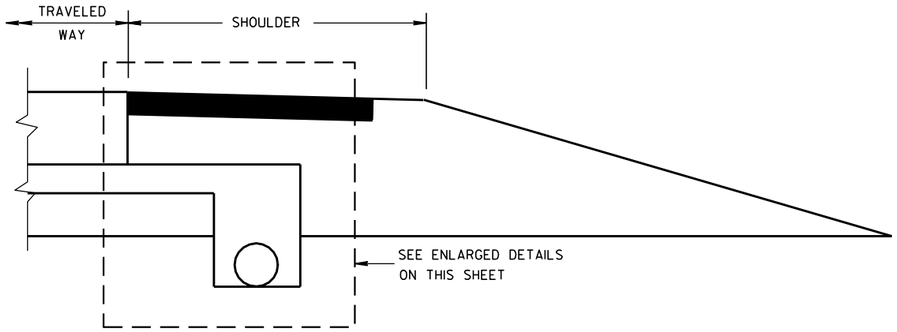


SECTION A-A

RURAL CROSS SECTION

EDGEDRAIN OUTLET AND OUTFALL MARKERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



RURAL CROSS SECTION

GENERAL NOTES

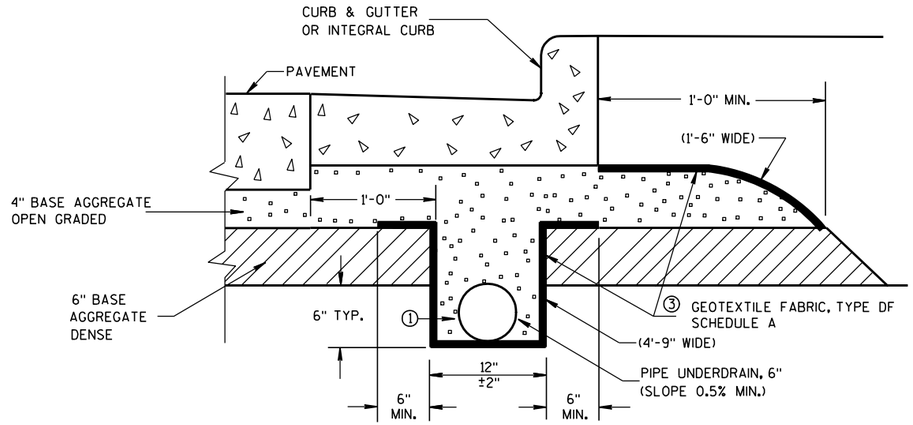
THE DIMENSIONS SHOWN ON THE TYPICAL CROSS SECTIONS WILL GOVERN IN THE EVENT THERE IS A CONFLICT WITH THE DETAILS SHOWN ON THIS DRAWING.

PIPE UNDERDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF THE ROADWAY.

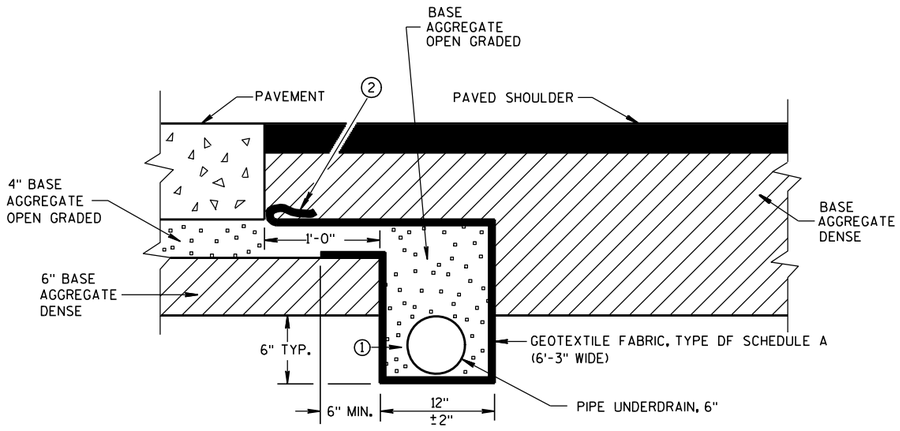
① TRENCH BACKFILL WILL BE PAID FOR AS BASE AGGREGATE OPEN GRADED.

② FOLD OVER EXCESS GEOTEXTILE FABRIC AT THIS LOCATION.

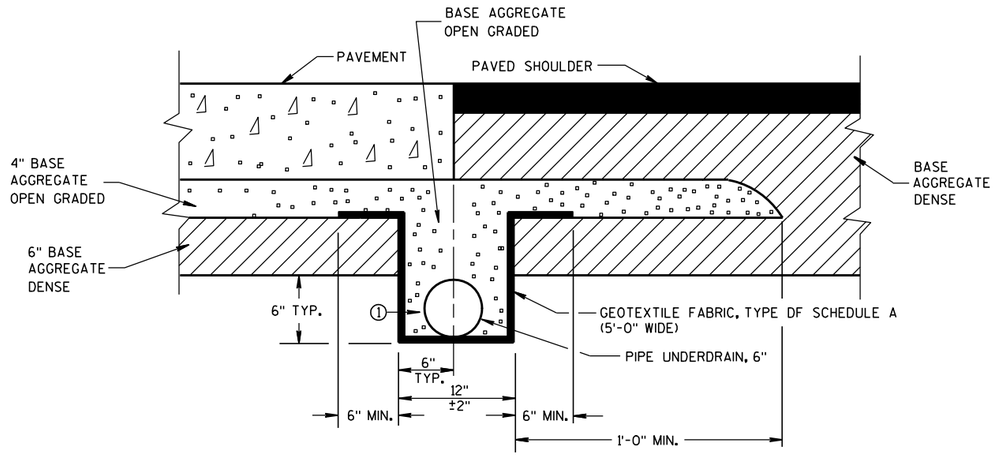
③ TOTAL FABRIC WIDTH IS 6'-3" FOR PAYMENT.



EDGEDRAIN IN URBAN ROADWAY



POST PAVING INSTALLATION
(QUANTITIES ARE BASED ON THIS DETAIL)



PRE-PAVING INSTALLATION ALTERNATE

EDGEDRAIN IN RURAL ROADWAY

EDGEDRAIN AND BASE AGGREGATE OPEN GRADED

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

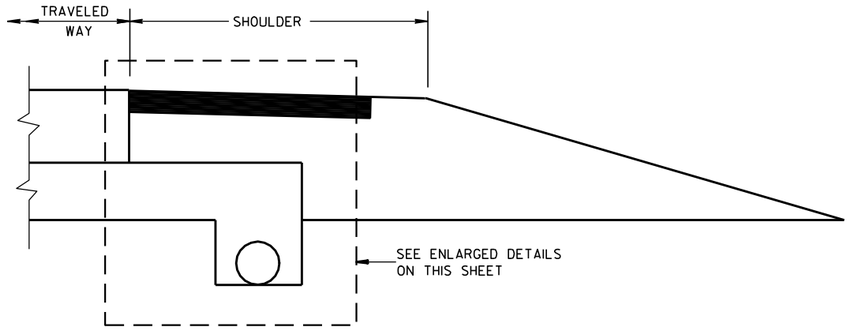
APPROVED
3/21/07 DATE — /S/ Steven W. [illegible] CHIEF MATERIALS MANAGER
FHWA

6

S.D.D. 8 D 15-4b

6

S.D.D. 8 D 15-4b



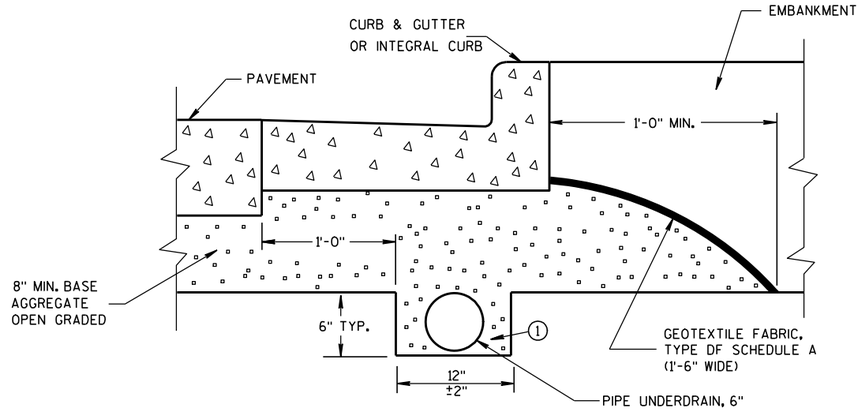
RURAL CROSS SECTION

GENERAL NOTES

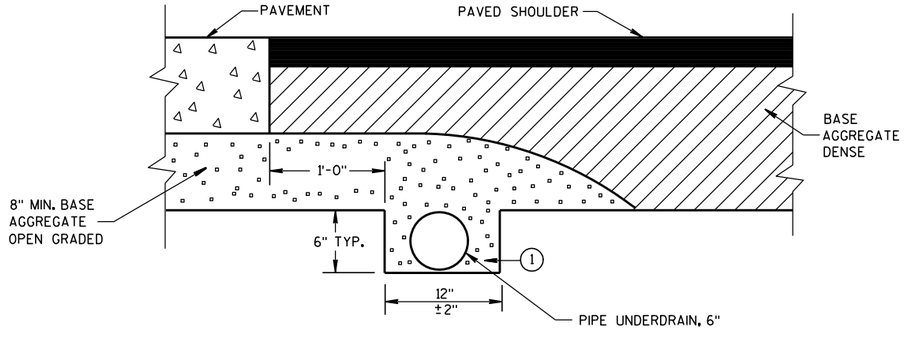
THE DIMENSIONS SHOWN ON THE TYPICAL CROSS SECTIONS WILL GOVERN IN THE EVENT THERE IS A CONFLICT WITH THE DETAILS SHOWN ON THIS DRAWING.

PIPE UNDERDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF THE ROADWAY.

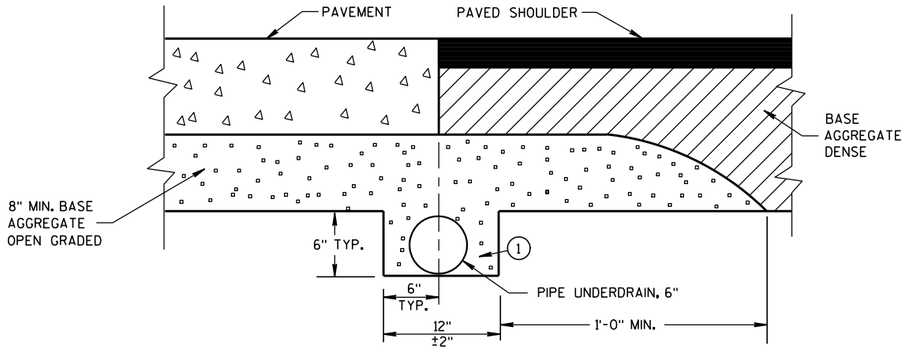
(1) TRENCH BACKFILL WILL BE PAID FOR AS BASE AGGREGATE OPEN GRADED.



EDGEDRAIN IN URBAN ROADWAY



POST PAVING INSTALLATION
(QUANTITIES ARE BASED ON THIS DETAIL)



PRE-PAVING INSTALLATION ALTERNATIVE

EDGEDRAIN IN RURAL ROADWAY

EDGEDRAIN AND BASE AGGREGATE OPEN GRADED

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

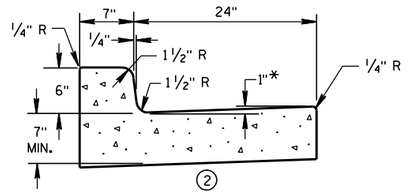
APPROVED
3/21/07 DATE
/S/ Steven W. Krebs
CHIEF MATERIALS MANAGER 506 ENGINEER
FHWA

6

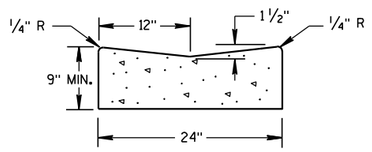
S.D.D. 8 D 15-4c

6

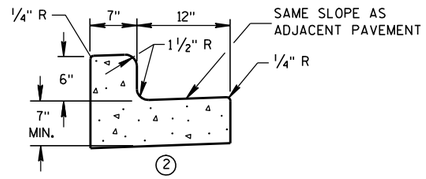
S.D.D. 8 D 15-4c



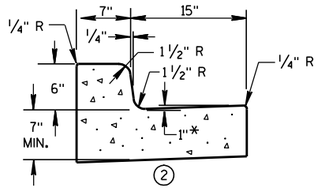
① CONCRETE CURB & GUTTER 31"



① CONCRETE GUTTER 24"

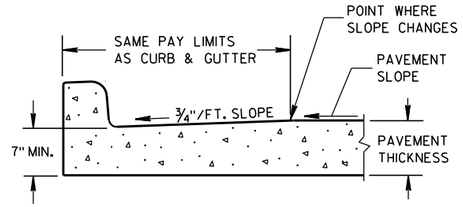


① CONCRETE CURB & GUTTER 19"



① CONCRETE CURB & GUTTER 22"

* TO BE MEASURED TO A MAXIMUM OF 3" WHERE DRAINAGE PROBLEMS EXIST.



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER

GENERAL NOTES

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

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

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

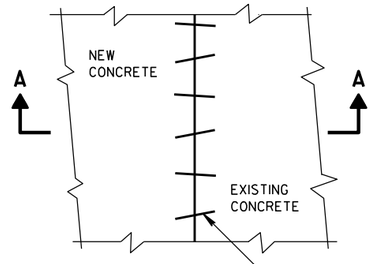
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE COURSE AND UNCLASSIFIED EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURB.

① WHEN PLACED ADJACENT TO NEW CONCRETE, TIE BARS ARE REQUIRED FOR CURB AND GUTTER 31", 22", 19" AND CONCRETE GUTTER 24".

② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE COURSE PROVIDED A 7" MIMIMUM GUTTER THICKNESS IS MAINTAINED.

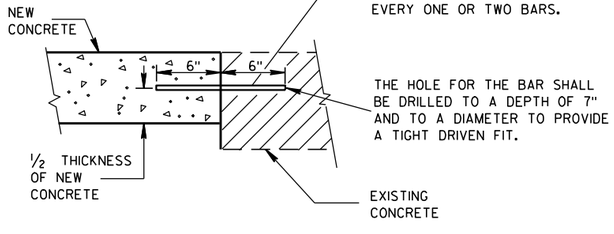
③ WHEN HIGH SIDE CURB SECTION IS REQUIRED, THE LOCATION(S) WILL BE NOTED ON THE PLAN.



PLAN VIEW

EXISTING AND NEW CONCRETE MAY BE CURB & GUTTER, SURFACE DRAIN, PAVEMENT OR OTHER CONCRETE STRUCTURE.

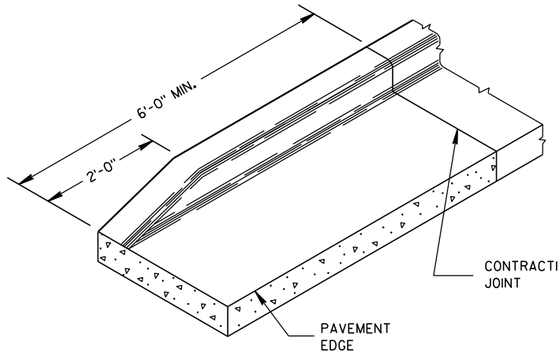
NO. 6 X 12" DEF. BARS SPACED 3'-0" C-C, INSTALLED ON 6:1 SKEW HORIZONTALLY. DIRECTION OF SKEW ALTERNATING AFTER EVERY ONE OR TWO BARS.



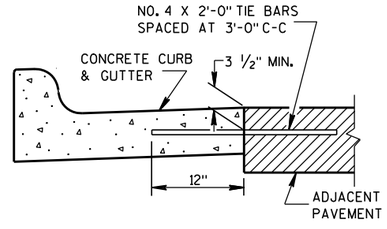
THE HOLE FOR THE BAR SHALL BE DRILLED TO A DEPTH OF 7" AND TO A DIAMETER TO PROVIDE A TIGHT DRIVEN FIT.

SECTION A-A

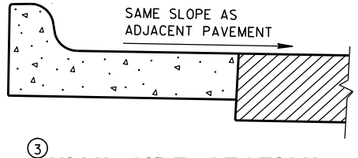
PAVEMENT TIES



END SECTION CURB & GUTTER



① TYPICAL TIE BAR LOCATION



③ HIGH SIDE SECTION

(TYPICAL FOR ALL CURB & GUTTER)

CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES

(For Optional Use in Milwaukee Co. Only)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/2/2010 — DATE

/S/ Jerry Zogg — ROADWAY STANDARDS ENGINEER

507 — ENT

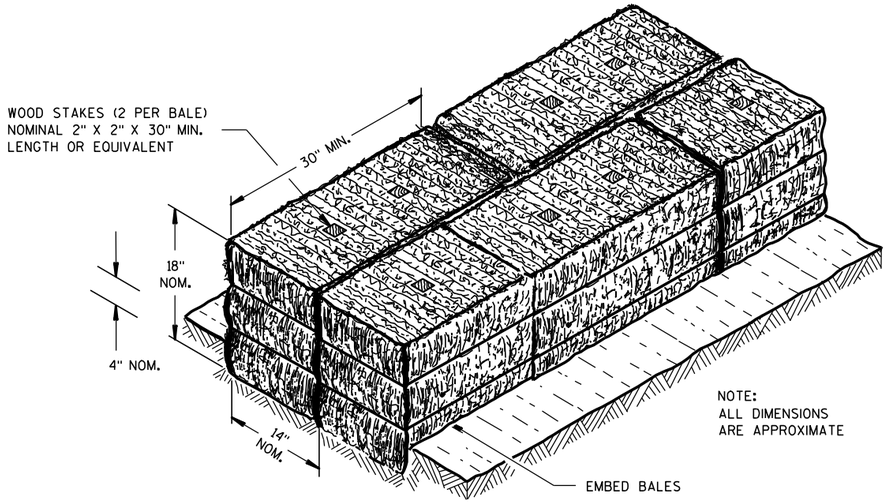
FHWA

6

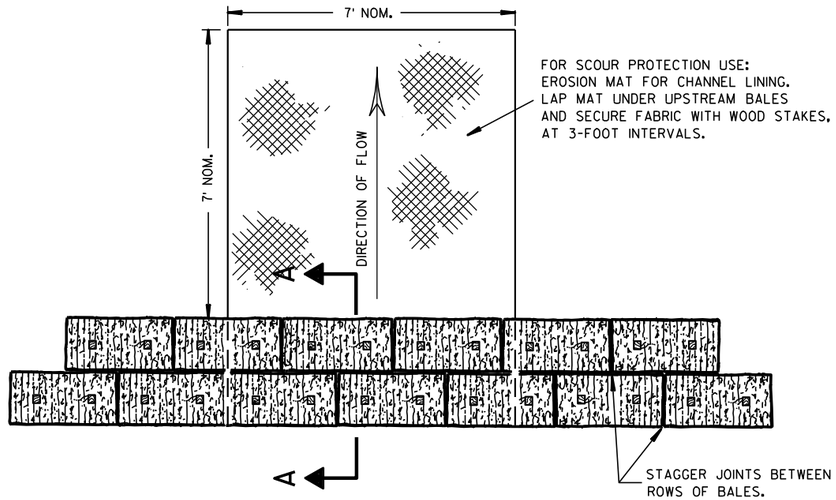
S.D.D. 8 D 16-10

6

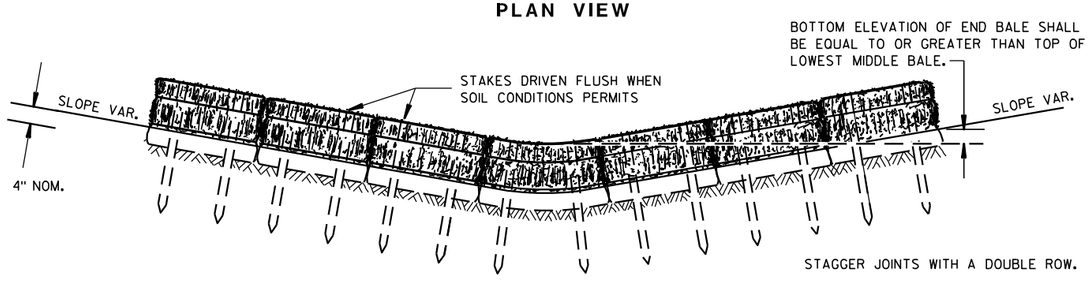
S.D.D. 8 D 16-10



SECTION A-A



PLAN VIEW



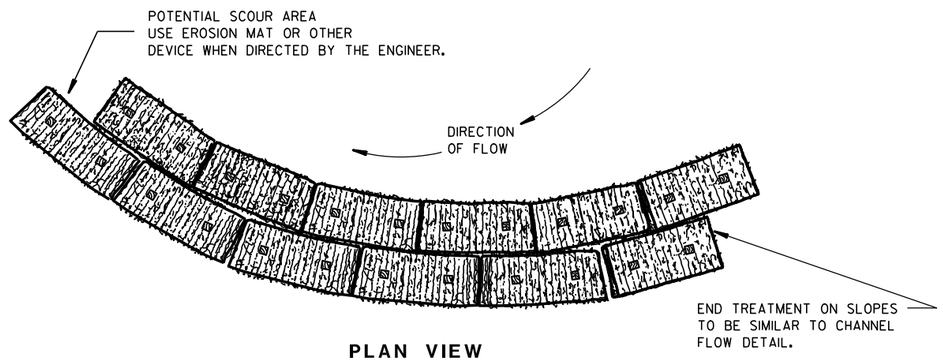
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

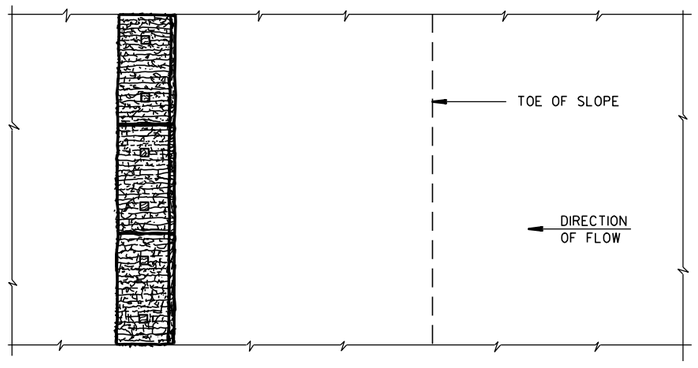
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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.

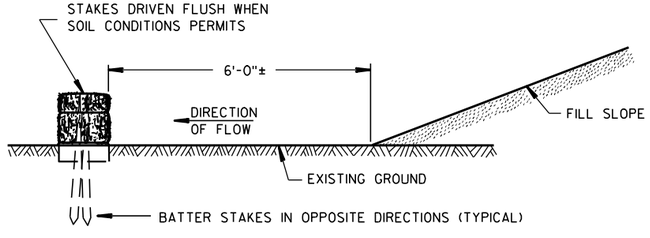


PLAN VIEW

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

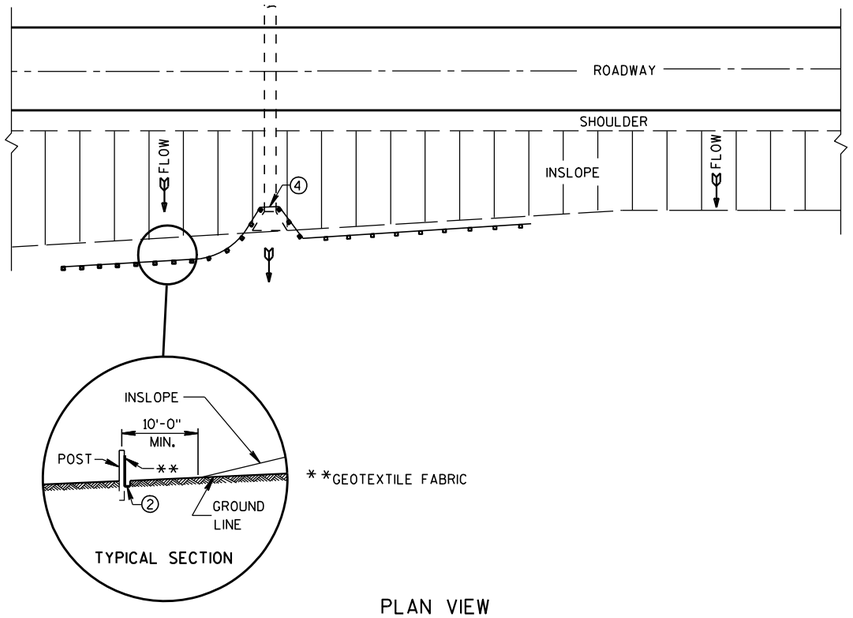
6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

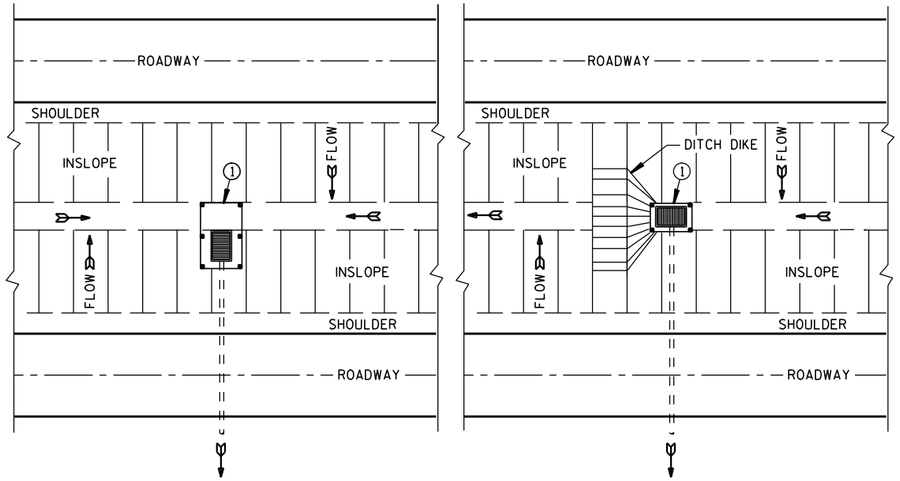
6

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.

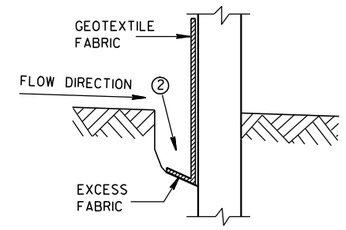
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

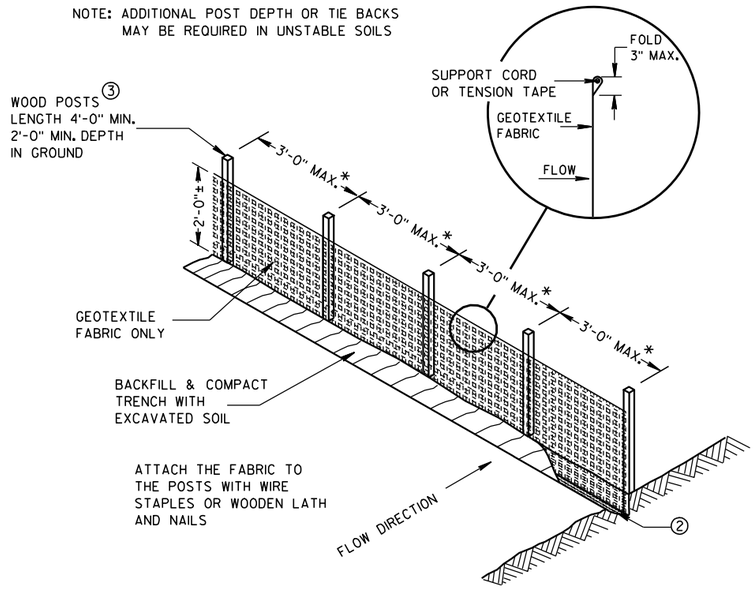
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

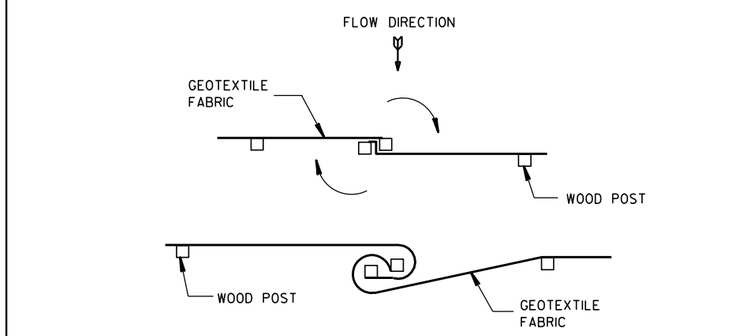
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



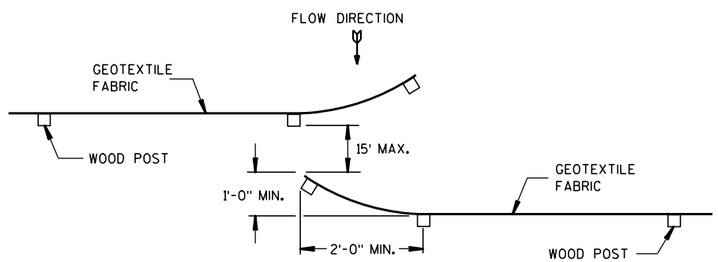
TRENCH DETAIL



SILT FENCE

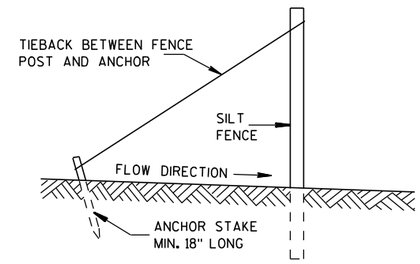


TWIST METHOD



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

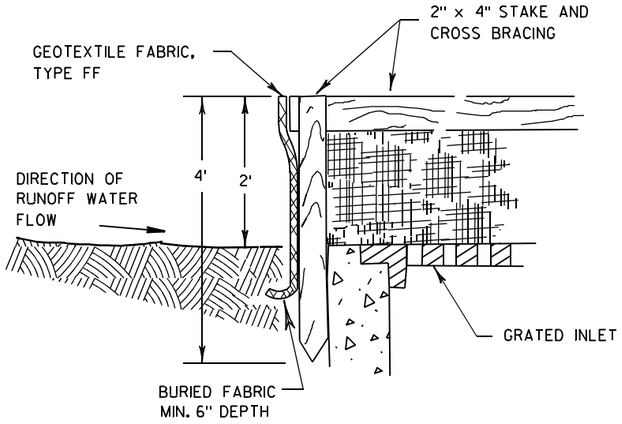
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

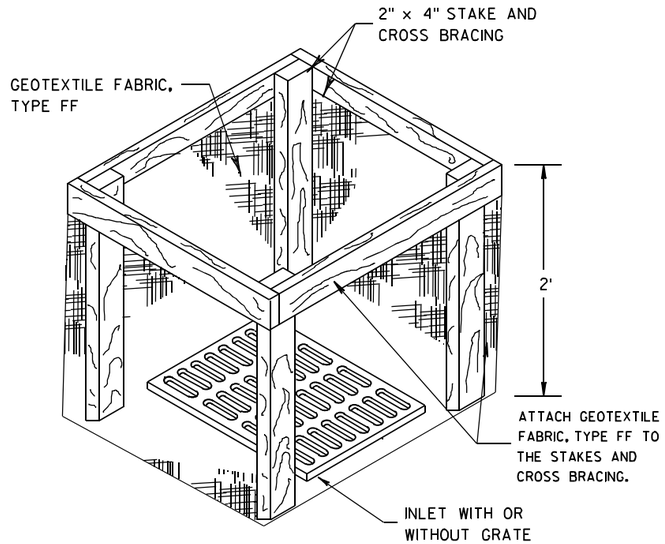
6

S.D.D. 8 E 9-6

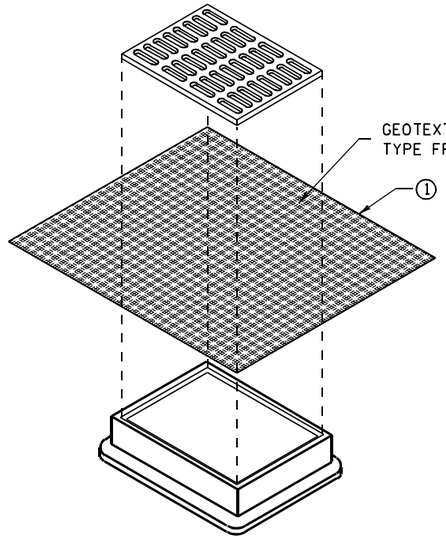
6

S.D.D. 8 E 9-6



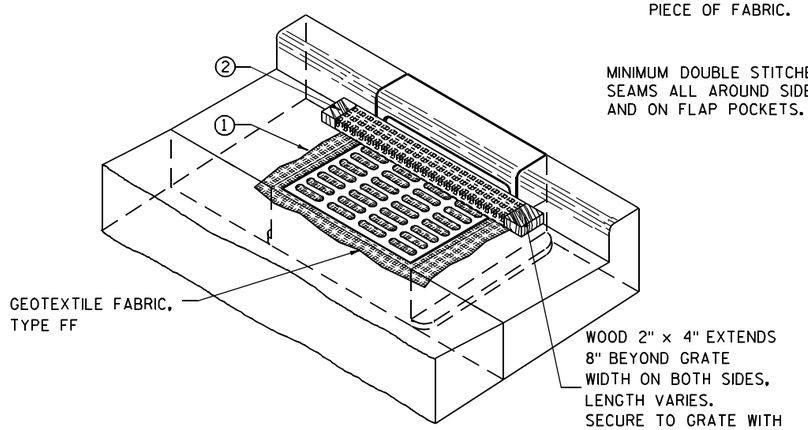


INLET PROTECTION, TYPE A

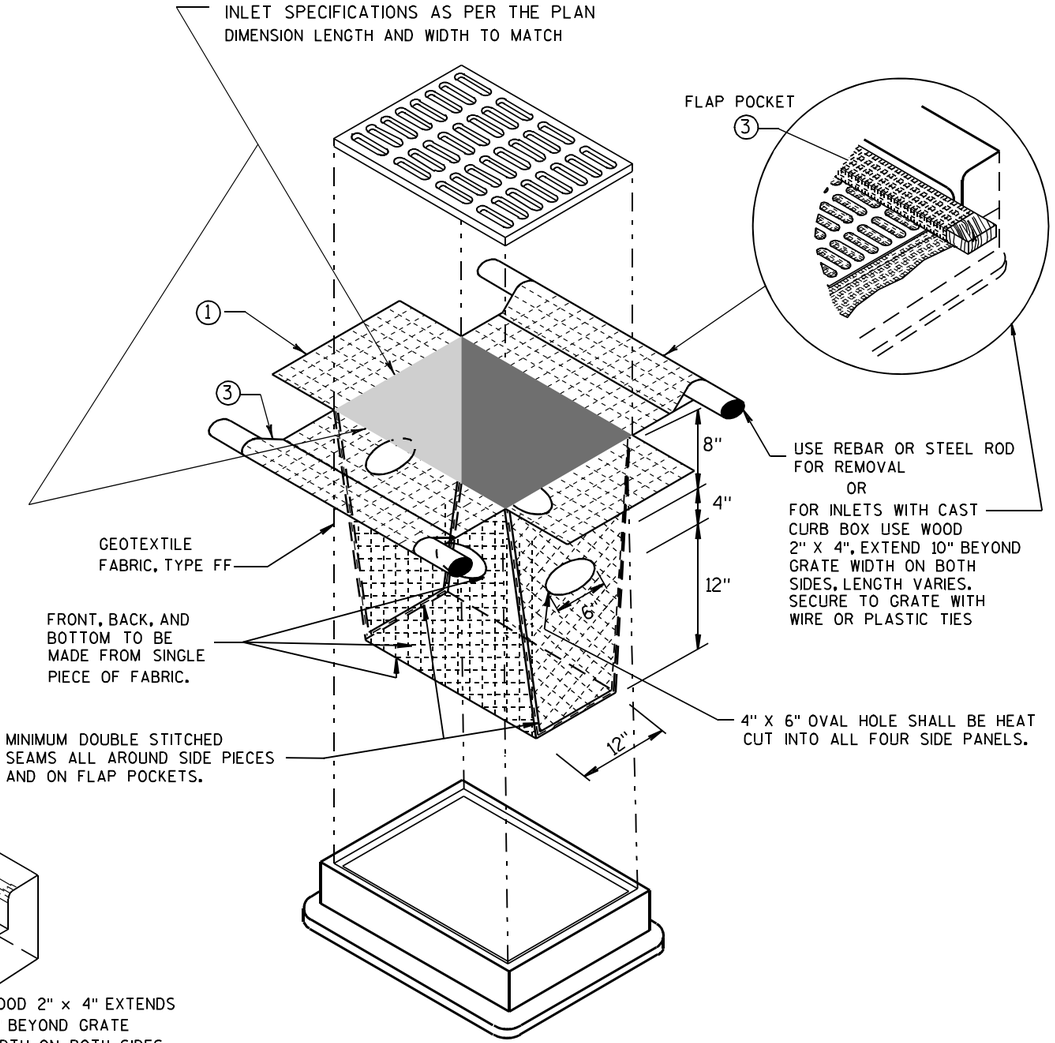


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(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

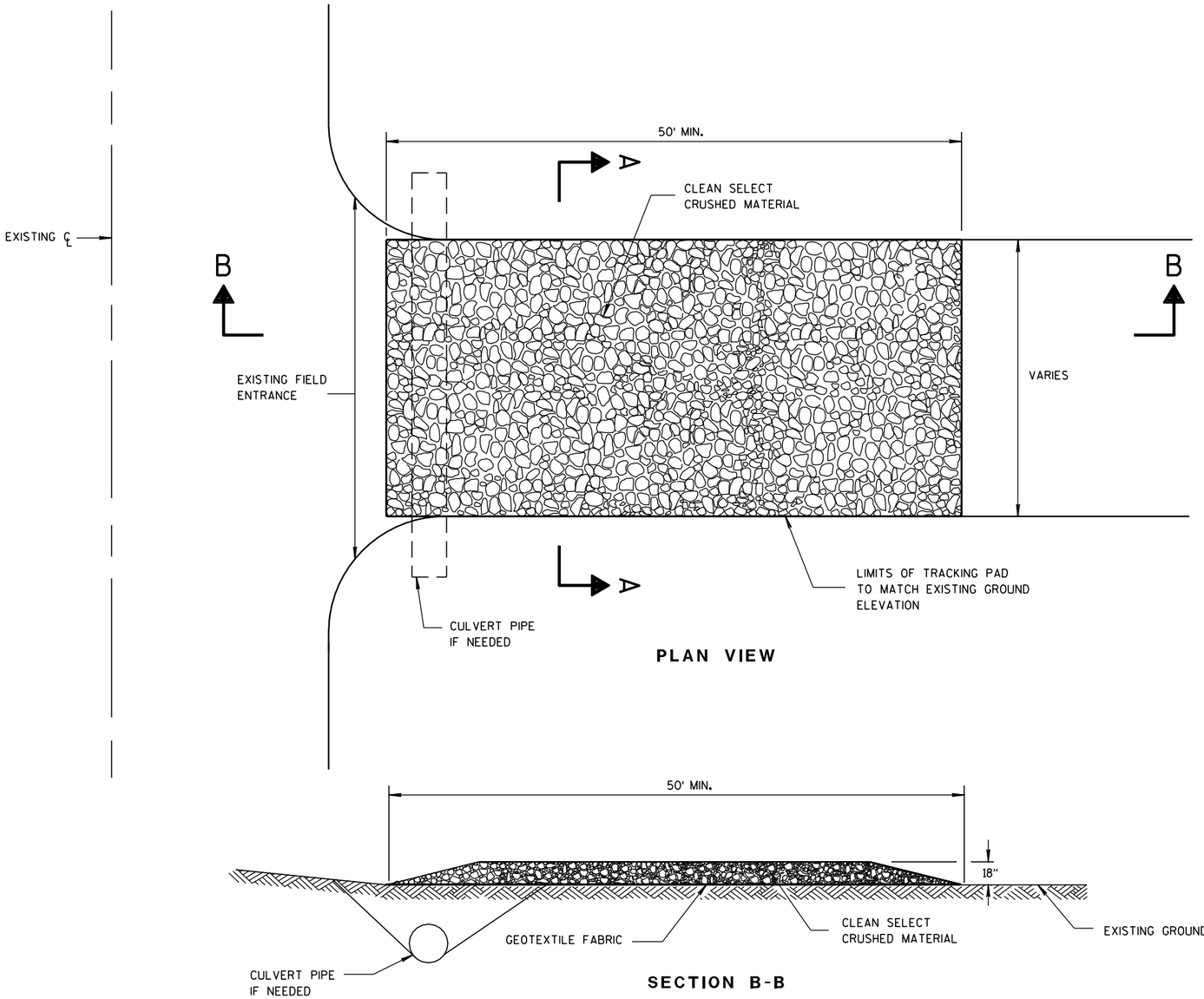
APPROVED
10/16/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 10-2

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.

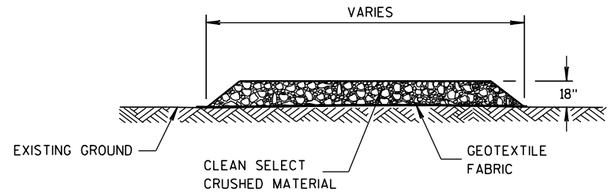
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

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
/S/ Jerry H. Zoda — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 8 E 14-1

6

S.D.D. 8 E 14-1

METAL APRON ENDWALLS

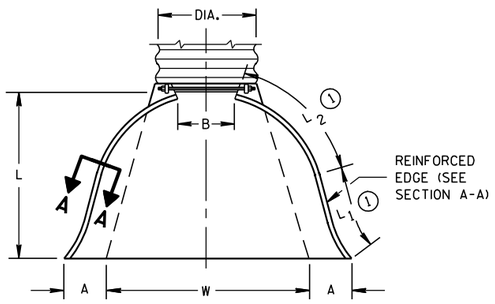
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

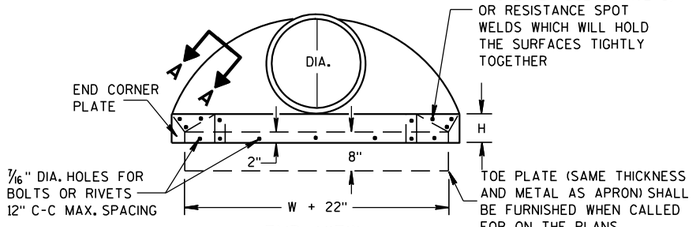
REINFORCED CONCRETE APRON ENDWALLS

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

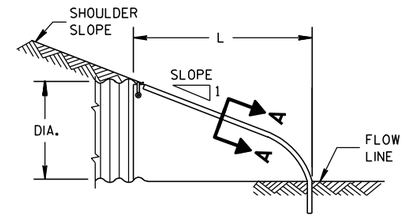
*MINIMUM
**MAXIMUM



PLAN VIEW

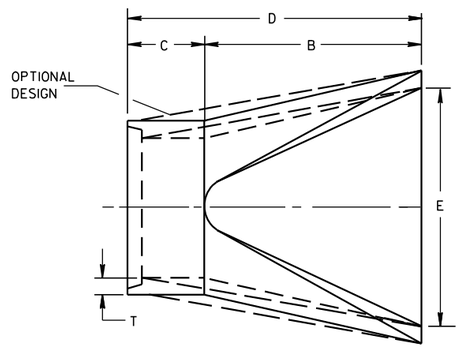


END VIEW

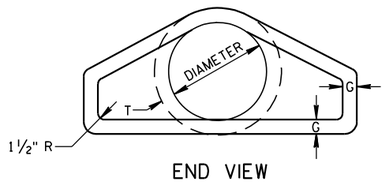


SIDE ELEVATION

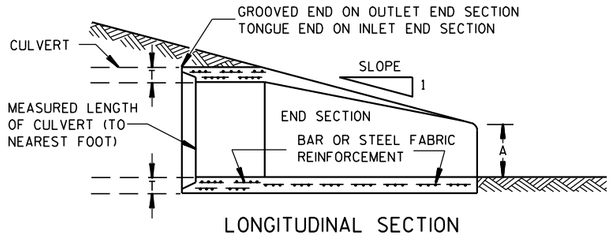
METAL ENDWALLS



PLAN

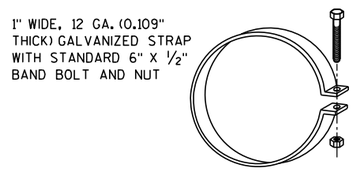


END VIEW



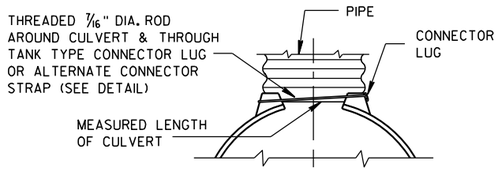
LONGITUDINAL SECTION

CONCRETE ENDWALLS

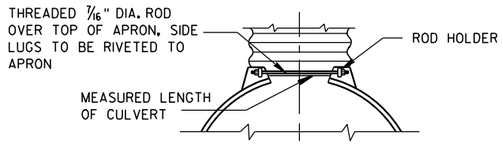


ALTERNATE FOR TYPE 1 CONNECTION

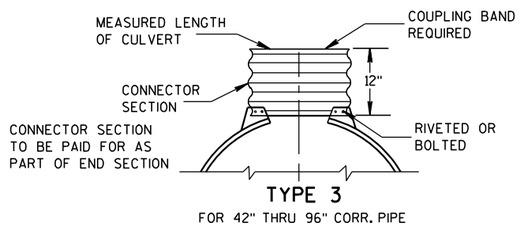
END SECTION CONNECTOR STRAP



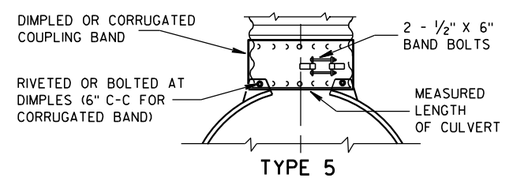
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

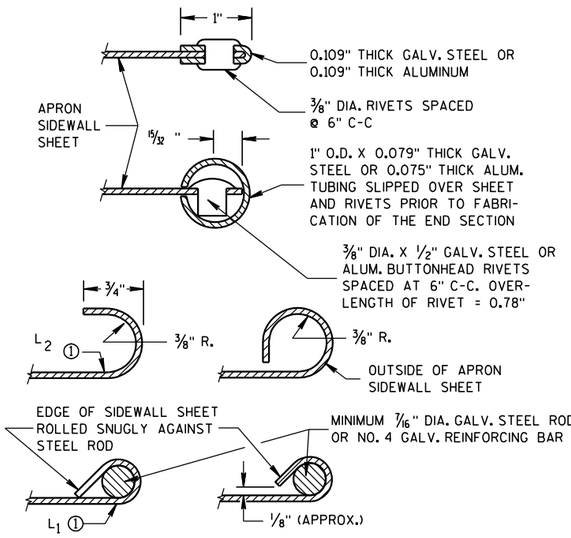
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

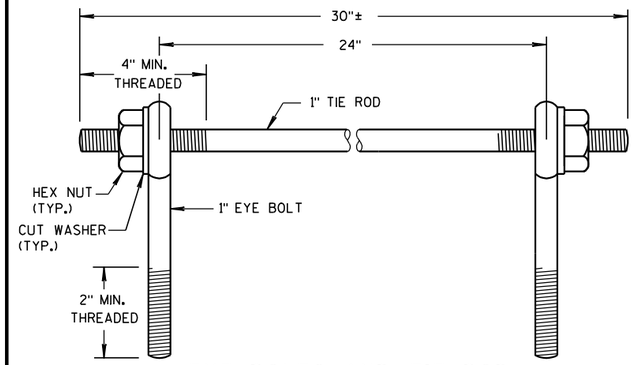
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

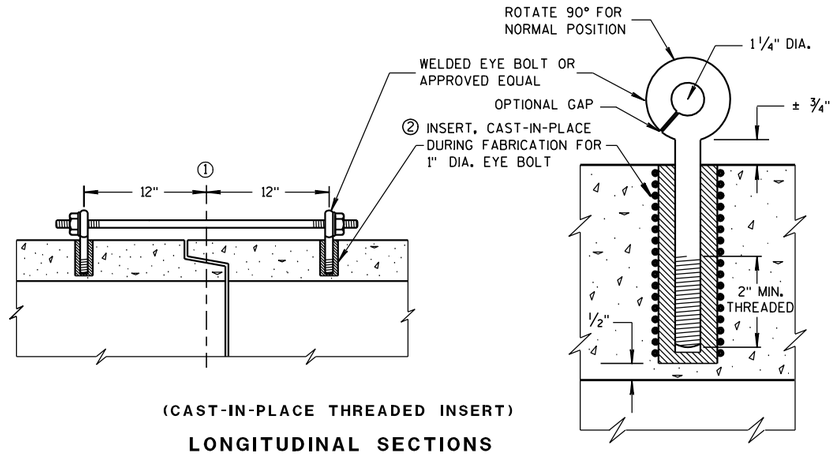
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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



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.

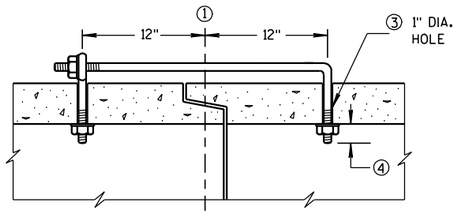
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

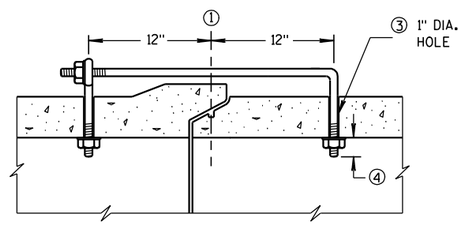
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

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)

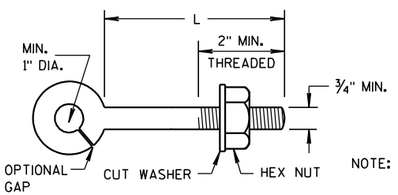


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

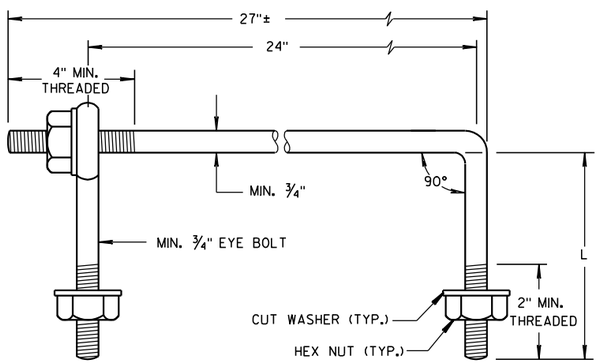
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



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

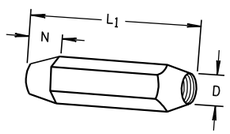
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

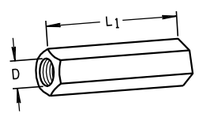
ADJUSTABLE TIE ROD TABLE

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



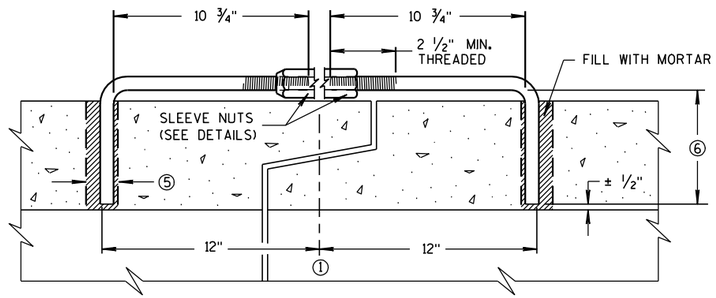
TAPERED



PLAIN

RIGHT AND LEFT THREADS

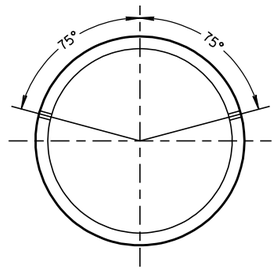
SLEEVE NUTS



LONGITUDINAL SECTION

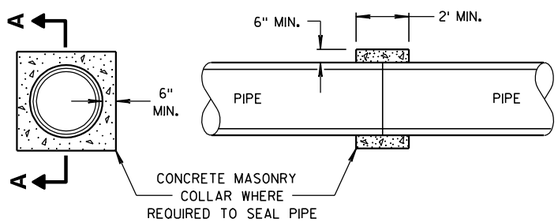
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

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
513
FHWA

6

S.D.D. 8 F 4-7

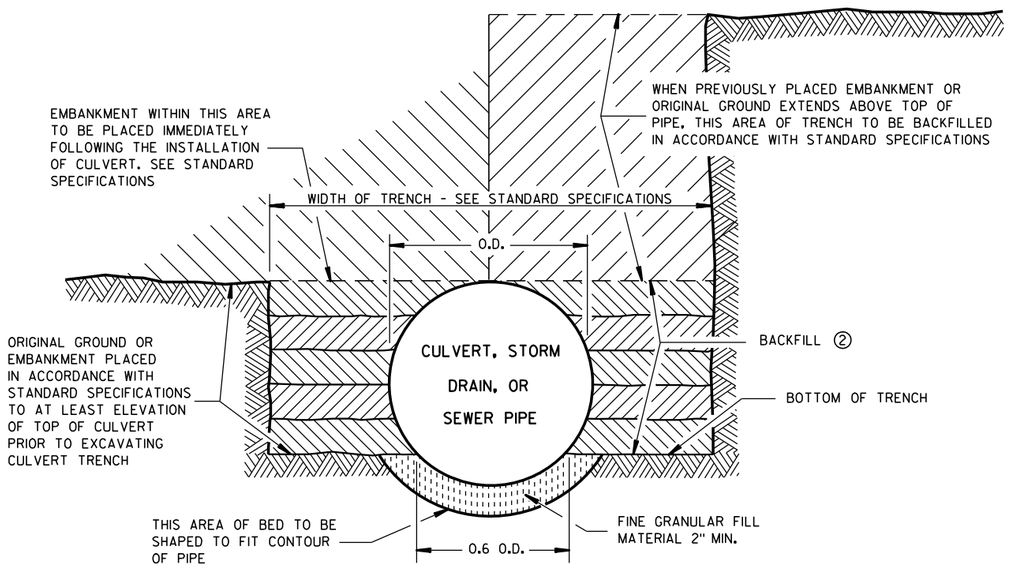
GENERAL NOTES

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

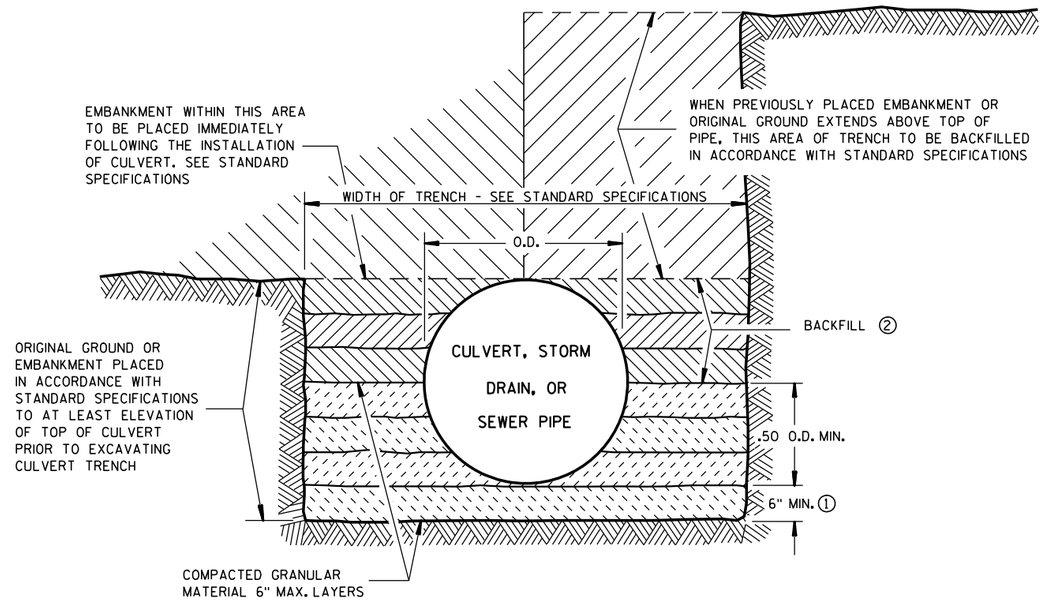
THE SHAPED SUBGRADE WITH GRANULAR FOUNDATION IS AN EQUAL ALTERNATE TO THE GRANULAR FOUNDATION EXCEPT WHERE ROCK IS ENCOUNTERED.

① WHERE ROCK, HARD PAN OR FRAGMENTED MATERIAL IS ENCOUNTERED, THE TRENCH SHALL BE EXCAVATED BELOW THE BOTTOM OF THE PIPE AN AMOUNT EQUAL TO ½ INCH PER FOOT OF PROPOSED EMBANKMENT ABOVE THE TOP OF THE PIPE, BUT NOT LESS THAN 6 INCHES.

② TRENCH SHALL BE BACKFILLED AS REQUIRED BY STANDARD SPECIFICATIONS; SECTION 520 FOR PIPE CULVERTS AND SECTION 607 FOR STORM SEWERS.



SHAPED SUBGRADE WITH GRANULAR FOUNDATION



GRANULAR FOUNDATION

CLASS "B" BEDDING

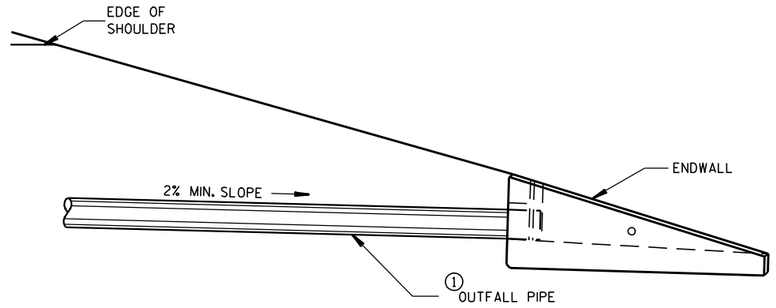
CLASS "B" BEDDING FOR CULVERT PIPE OR STORM SEWER	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
4/7/83 DATE	/S/ D. L. Strand STATE DESIGN ENGINEER
FHWA	HWYS

6

S.D.D. 8 F 5-1

DIMENSIONS IN INCHES											
PIPE DIA.	A	B	C	D	E	F	G	H	J	L	Z
**4	6	12	5 1/4	9	8	32	36	11	2 3/8	6 1/2	4
6	8	14	7 1/4	11	10	42	44	13	3 5/8	8 1/2	6

**APRON ENDWALL FOR 6 INCH DIAMETER PIPE MAY BE SUBSTITUTED FOR THIS SIZE PROVIDED THE HOLE IN THE HEADWALL IS SIZED AND LOCATED TO CONFORM TO THE 4 INCH DIAMETER PIPE DIMENSIONS (C & J)



INSTALLATION 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.

ALTERNATIVE DESIGNS WHICH PROVIDE EQUIVALENT CAPACITY AND STRENGTH MAY BE USED WHEN APPROVED BY THE ENGINEER. ENDWALL MAY BE EITHER PRECAST OR CAST-IN-PLACE CONCRETE.

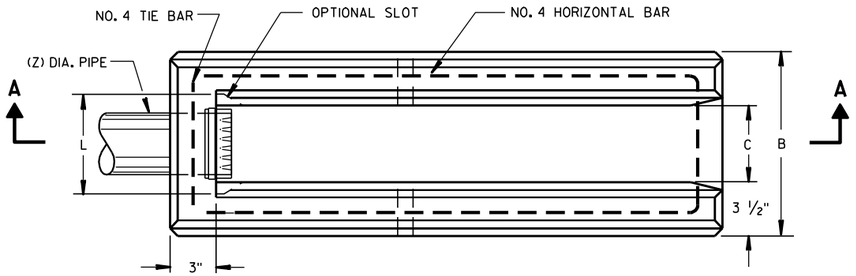
THE UNDERDRAIN PIPE SHALL BE FULLY INSERTED AND SEALED INTO THE ENDWALL WITH CEMENT MORTAR PRIOR TO BACKFILLING AROUND THE STRUCTURE.

THE UPPERMOST POINT OF THE ENDWALL SHALL BE PLACED FLUSH WITH THE ROADWAY SLOPE. ADJACENT EMBANKMENT SLOPES SHALL BE SHAPED TO FIT THE SIDES AND TOE OF THE ENDWALL. EXACT PLACEMENT OF THE OUTFALL PIPE AND ENDWALL SHALL BE DETERMINED BY THE ENGINEER TO MATCH THE ELEVATIONS AND FLOW DIRECTION OF THE ROADSIDE DITCH.

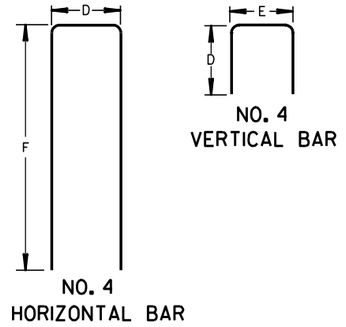
① THE OUTFALL PIPE UNDERDRAIN AND FITTINGS SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATION FOR POLY (VINYL CHORIDE) (PVC) PLASTIC DRAIN, WASTE AND VENT PIPE AND FITTINGS, ASTM DESIGNATION: D 2665, SCHEDULE 40 PVC OR THE STANDARD SPECIFICATION FOR TYPE PSM POLY (VINYL CHORIDE) (PVC) SEWER PIPE AND FITTINGS, ASTM DESIGNATION: D 3034, TYPE PSM SDR 23.5 PVC SEWER PIPE, ALL JOINTS SHALL BE SOLVENT WELDED.

THE OUTFALL PIPE INCLUDING ALL FITTINGS AND THE RODENT SHIELD SHALL BE MEASURED AND PAID FOR AS PIPE UNDERDRAIN UNPERFORATED.

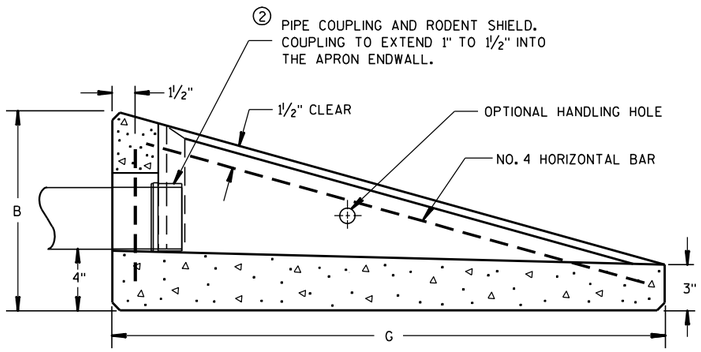
② THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE OUTFALL PIPE. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



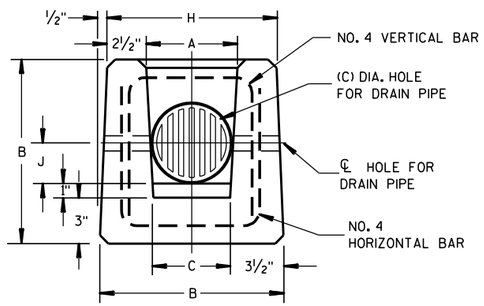
PLAN VIEW



BAR STEEL REINFORCEMENT DETAILS

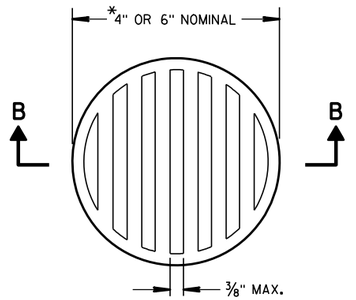


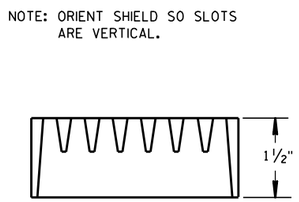
SECTION A-A



END VIEW

CONCRETE APRON ENDWALL FOR UNDERDRAIN





SECTION B-B

② RODENT SHIELD

*NOTE: DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

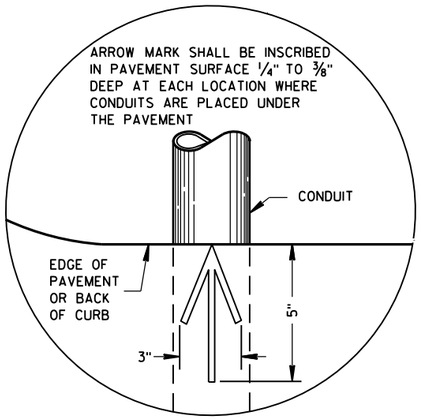
APPROVED
3/10/98 DATE
/S/ Rory L. Rhinehart
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 F 6-4

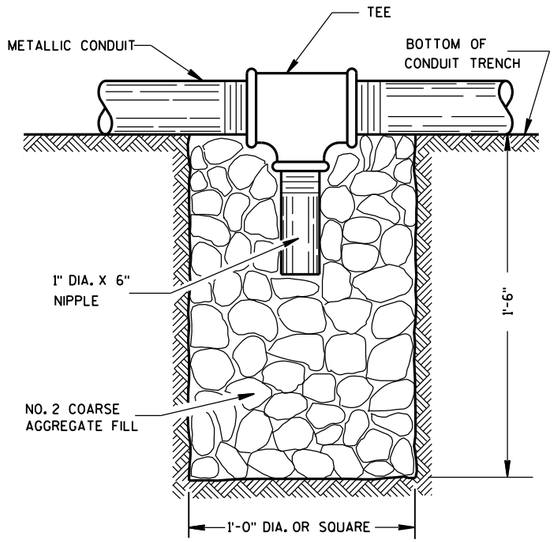
6

S.D.D. 8 F 6-4



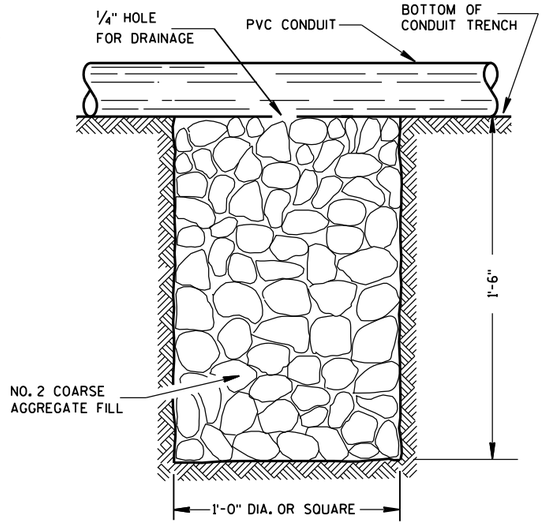
PLAN VIEW

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.

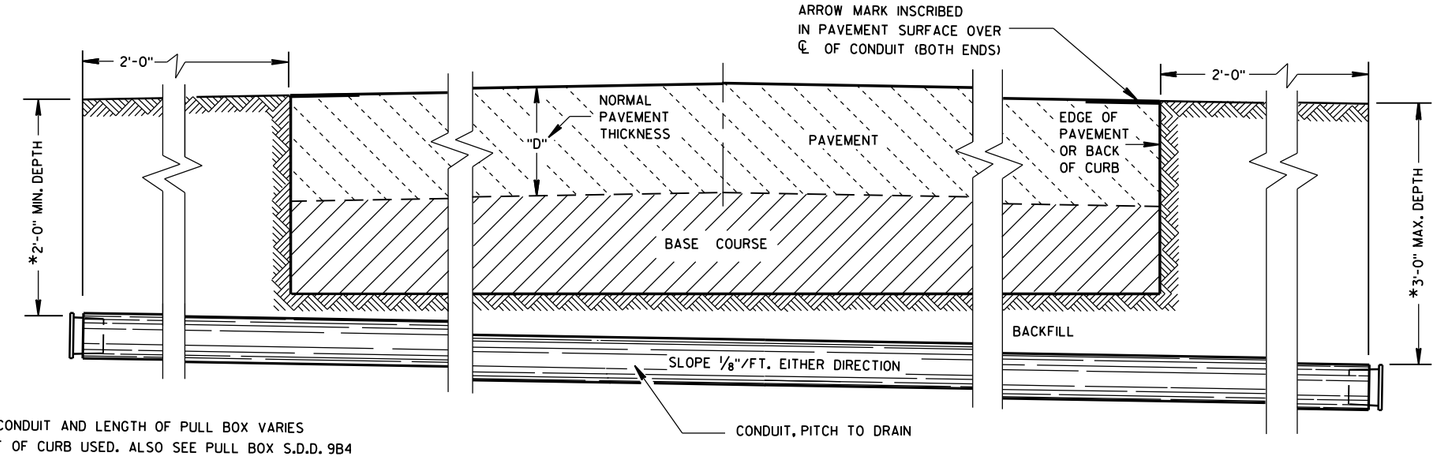
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

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 UNDER PAVED HIGHWAYS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2014 — DATE

/S/ Ahmet Demirbilek — STATE ELECTRICAL

FHWA

6

S.D.D. 9 B 2-8

6

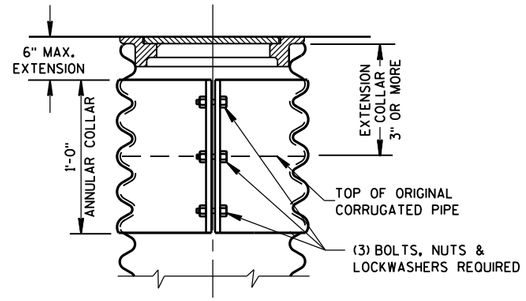
S.D.D. 9 B 2-8

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

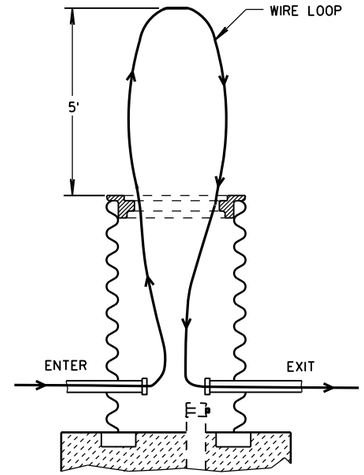
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2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

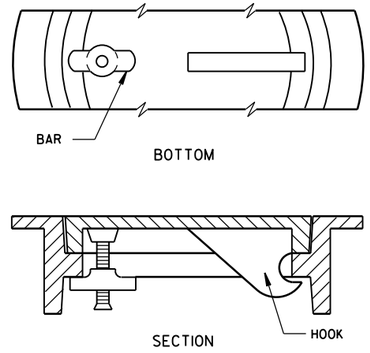
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

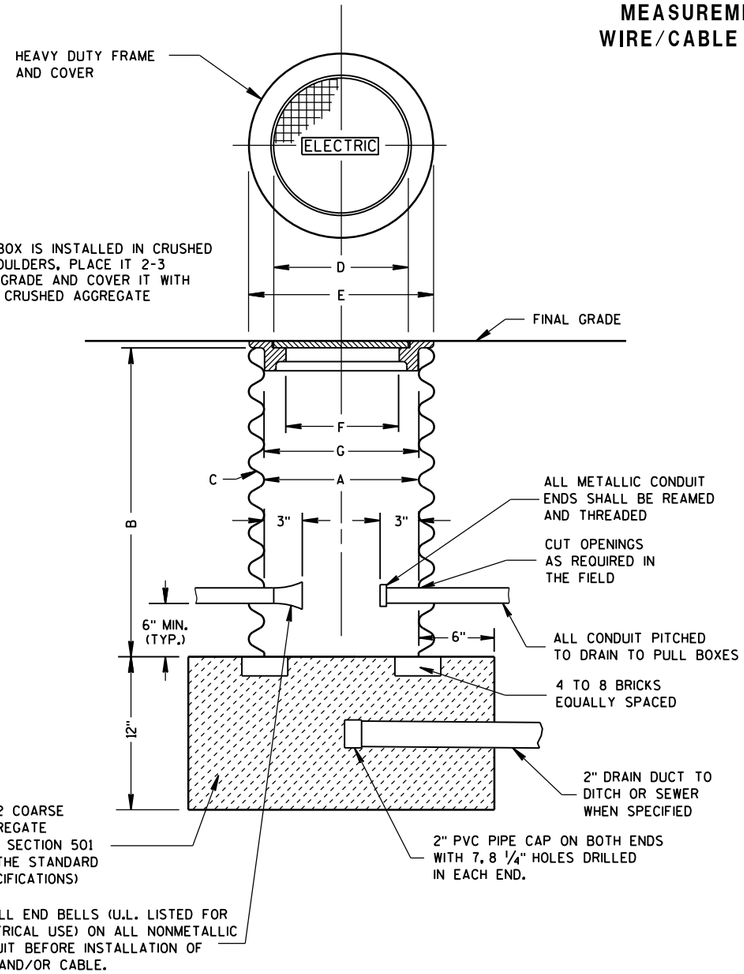


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



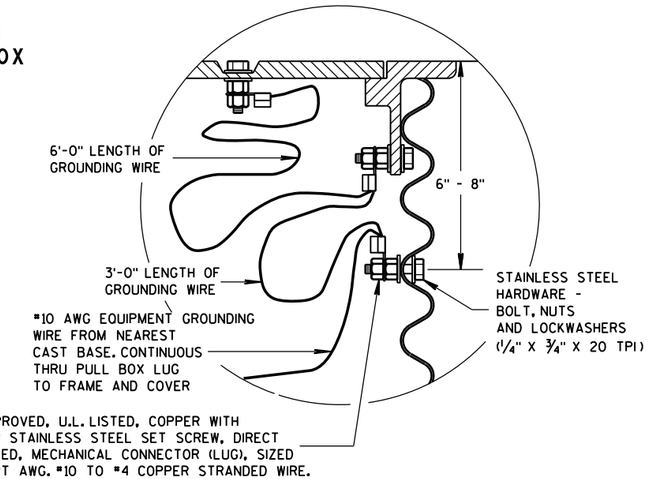
ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE

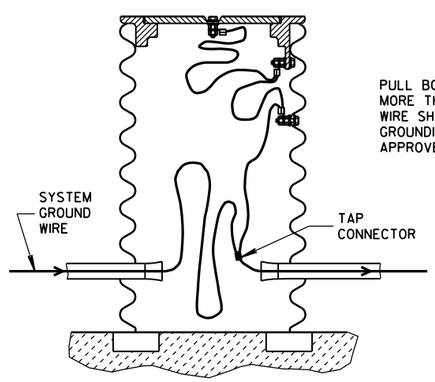


WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

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.

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

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.

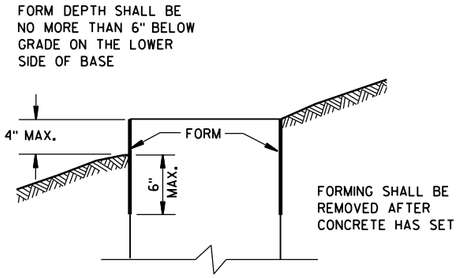
PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 9 B 4-11



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
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 1, TYPE 2, TYPE 5, AND TYPE 6 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 OF THE STANDARD SPECIFICATIONS.

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.

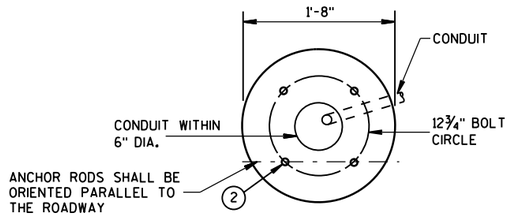
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

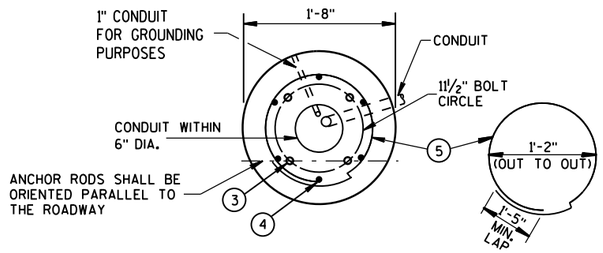
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

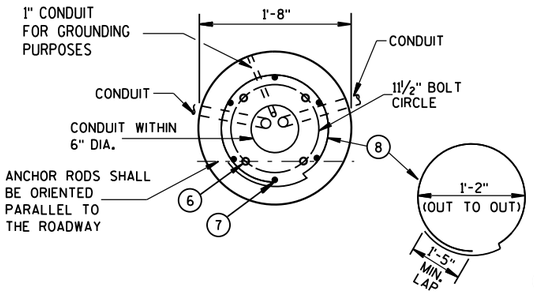
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

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

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

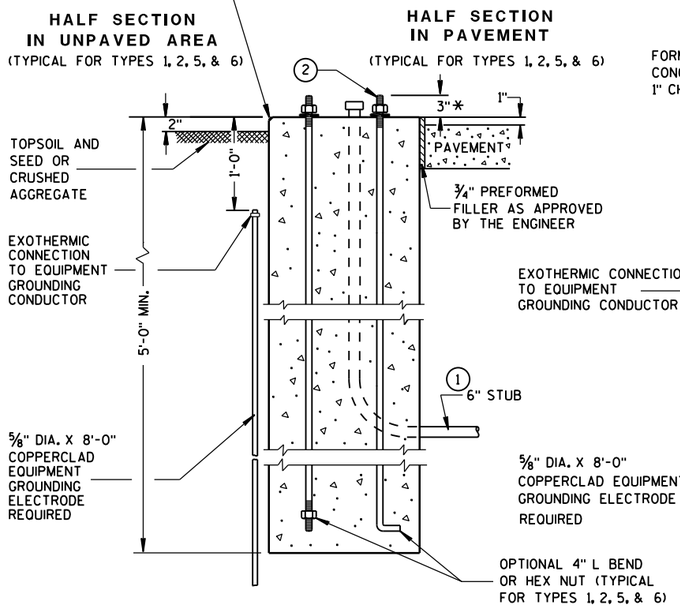






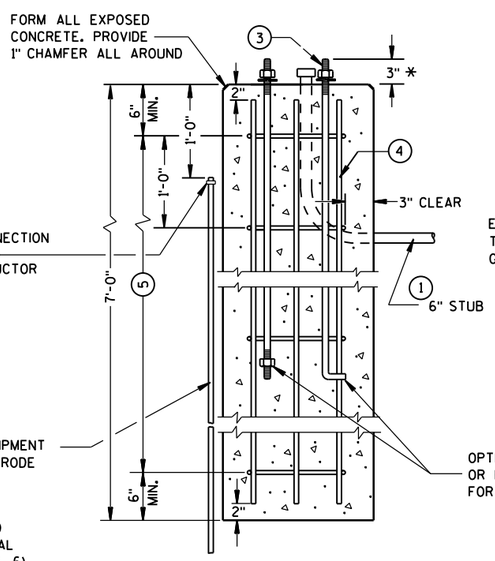
HALF SECTION IN UNPAVED AREA

(TYPICAL FOR TYPES 1, 2, 5, & 6)

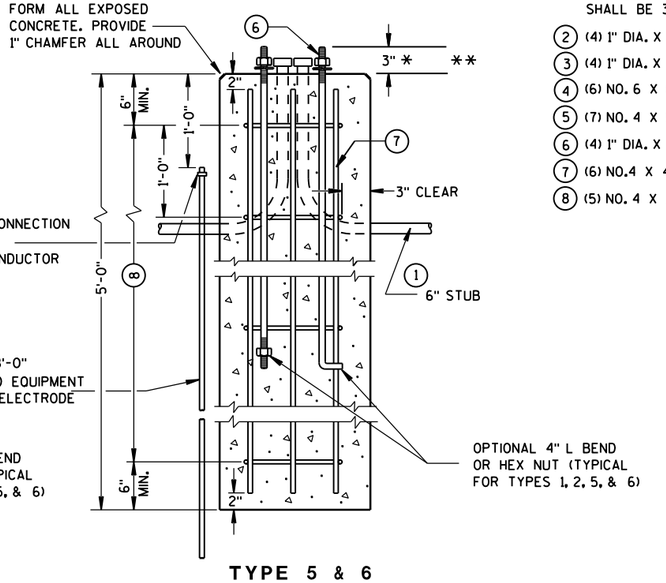


HALF SECTION IN PAVEMENT

(TYPICAL FOR TYPES 1, 2, 5, & 6)



TYPE 2



TYPE 5 & 6

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, & 6

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 9 C 2-7

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.

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, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

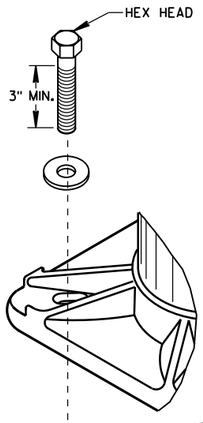
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

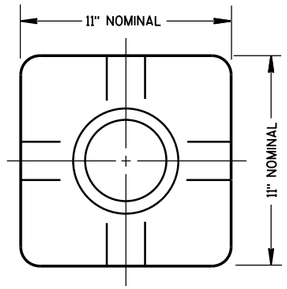
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

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

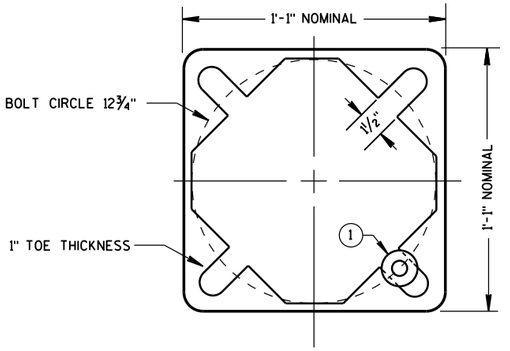
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

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

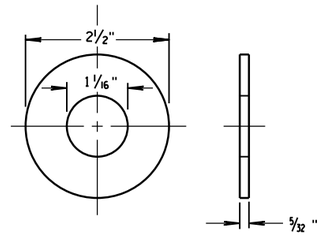




TOP VIEW
(PEDESTAL BASE)

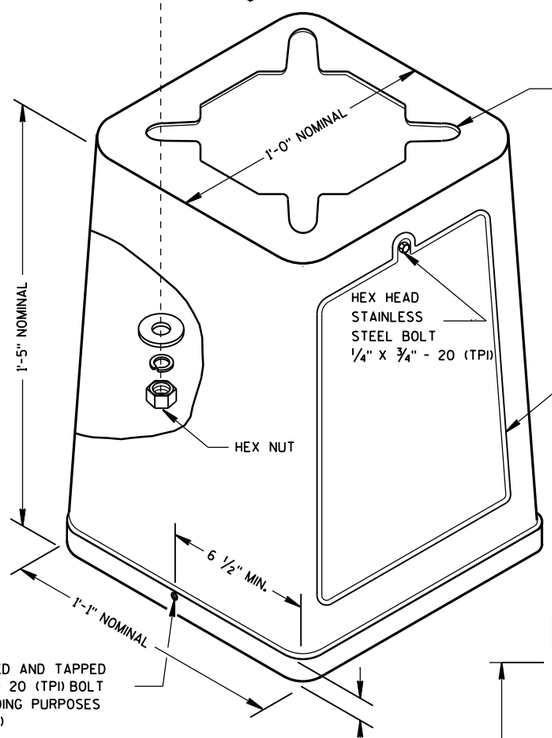


BOTTOM VIEW
(PEDESTAL BASE)

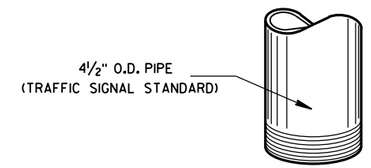


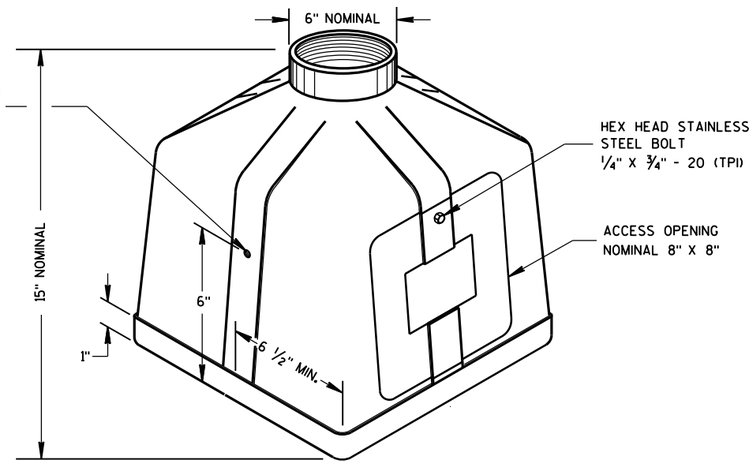
ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)



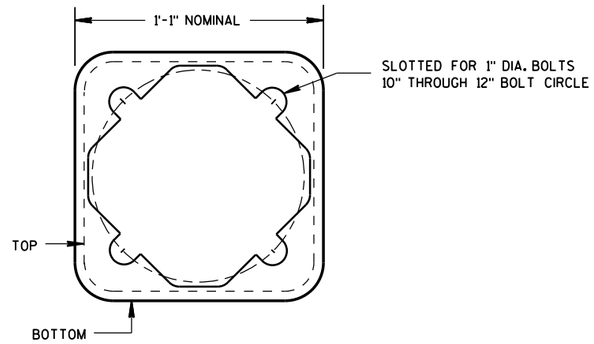
ISOMETRIC VIEW



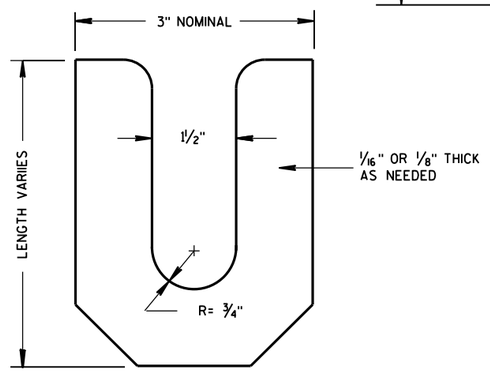


ISOMETRIC VIEW

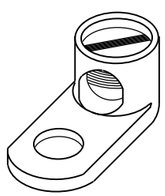
PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)



LEVELING SHIM



TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

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

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

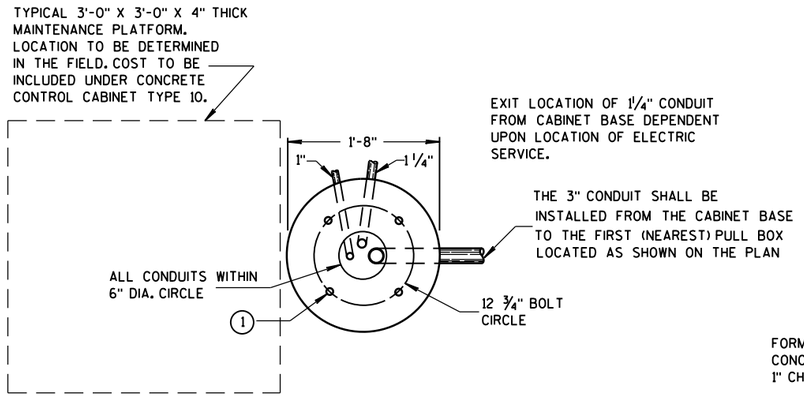
S.D.D. 9 C 3-4

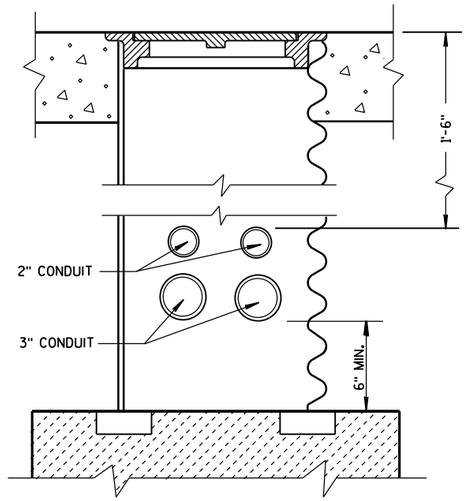
6

S.D.D. 9 C 3-4

CONTROL CABINET BASE TYPE	DIMENSIONS				C.Y. CONCRETE (APPROX.)
	H	I	J	K	
TYPE 6 - 30" CABINET	34"	60"	10"	17"	.64
TYPE 7 - 38" CABINET	42"	60"	10"	21"	.93
TYPE 8 - 38" CABINET	42"	72"	12"	21"	1.29
TYPE 9 - VARIABLE	54"	72"	14"	27"	1.56
TYPE 10 - POST MOUNT	AS SHOWN				.65 *

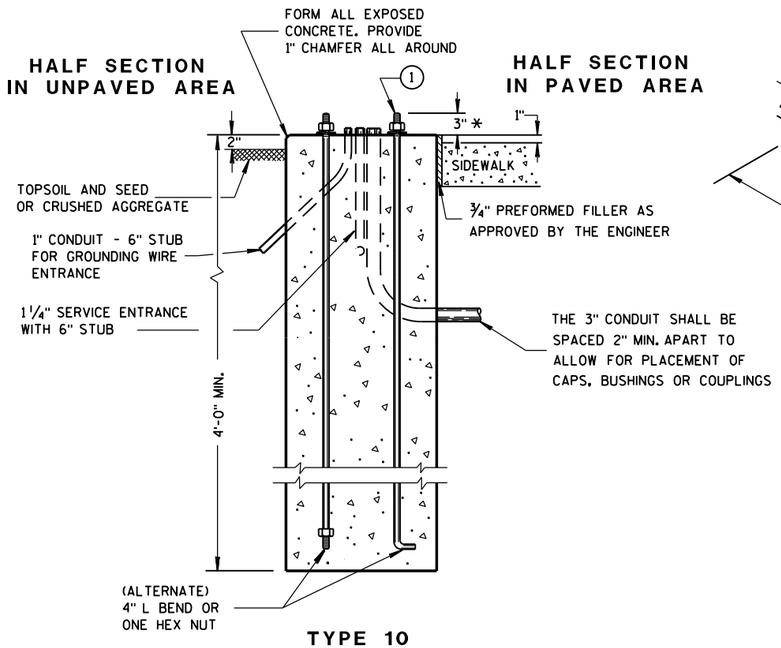
* INCLUDES MAINTENANCE PLATFORM.



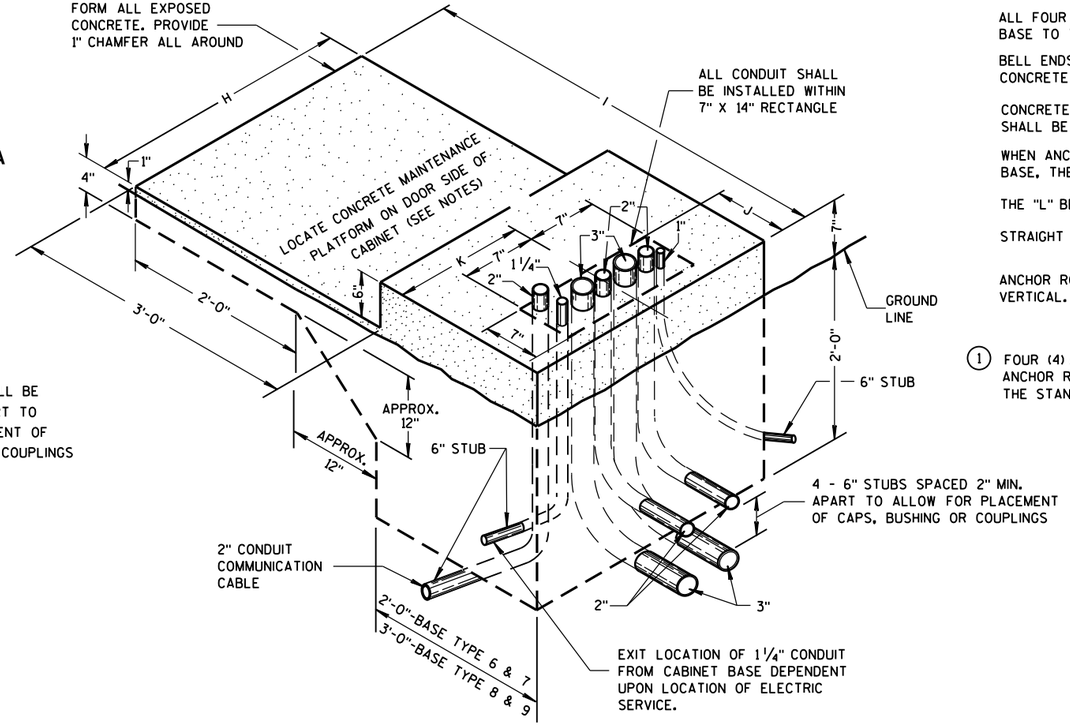


CONDUIT LOCATIONS IN 24" X 36" PULL BOX

(LEADING TO CONTROLLER CABINET BASE TYPE 6, 7, 8 AND 9)



TYPE 10



TYPE 6,7,8 AND 9
(ISOMETRIC VIEW)

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

GENERAL NOTES

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

INSTALL FOUR ½ INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH APPROVED CONCRETE MASONRY ANCHORS WITH A PULLOUT STRENGTH OF 9,000 LBS. TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

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

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

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

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

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

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

WHEN A TYPE 10 CONTROL CABINET BASE IS USED TO POST MOUNT A CONTROL CABINET, A 36" SQUARE 4" THICK CONCRETE MAINTENANCE PLATFORM SHALL BE REQUIRED ON THE DOOR SIDE OF THE CABINET. THE TOP 1 INCH SHALL BE ABOVE FINISHED GRADE AND BE BROOM FINISHED AND LEVEL.

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

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

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

ALL FOUR (TWO INCH AND THREE INCH) CONDUIT SHALL BE INSTALLED FROM THE CABINET BASE TO THE FIRST (NEAREST PULL BOX LOCATED AS SHOWN ON THE PLANS.

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

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

WHEN ANCHOR RODS USING THE ALTERNATE L BEND ARE FURNISHED FOR THE TYPE 10 BASE, THE 4" L BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH.

THE "L" BEND SHALL NOT BE THREADED.

STRAIGHT ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD.

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

(1) FOUR (4) ANCHOR RODS, 1" DIA. X 3'-6". ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

CONCRETE CONTROL CABINET BASES

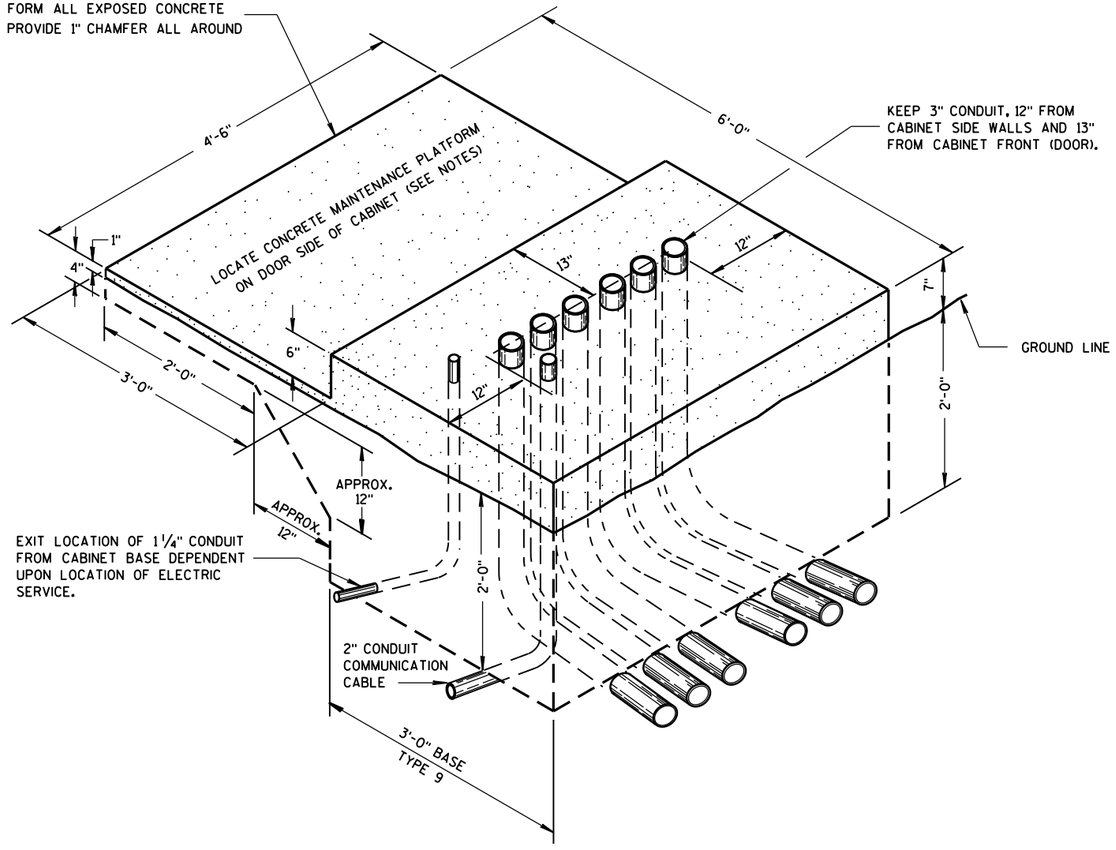
CONCRETE CONTROL CABINET BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

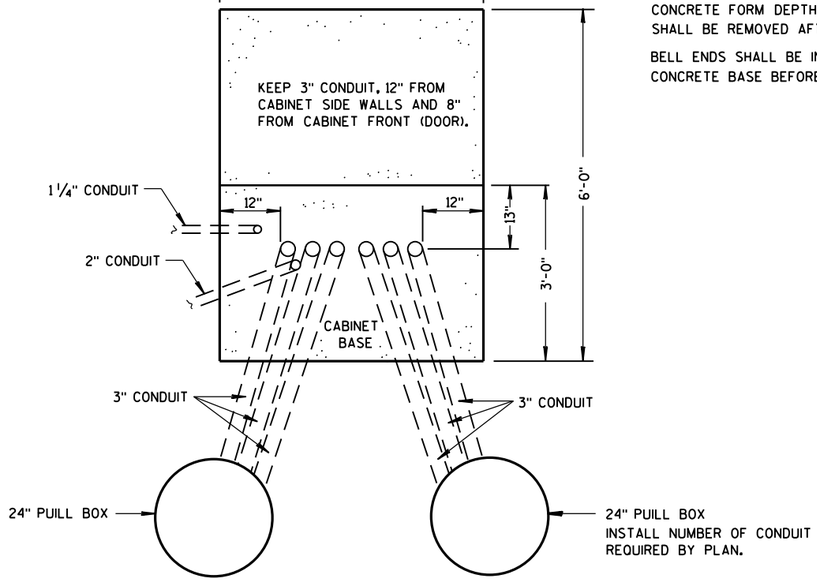
S.D.D. 9 C 5-9



ISOMETRIC VIEW

TYPE 9, SPECIAL

(C.Y. CONCRETE = APPROX. 1.56)



PLAN VIEW

CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL

GENERAL NOTES

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

INSTALL FOUR ½ INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS WITH A PULLOUT STRENGTH OF 9,000 LBS. TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

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

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

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

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

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

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

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

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

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

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

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

CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL 521
FHWA

6
S.D.D. 9 C 6-7

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.

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.

ANCHOR RODS SHALL BE 1" X 60".

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 OF THE STANDARD SPECIFICATIONS.

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.

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

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

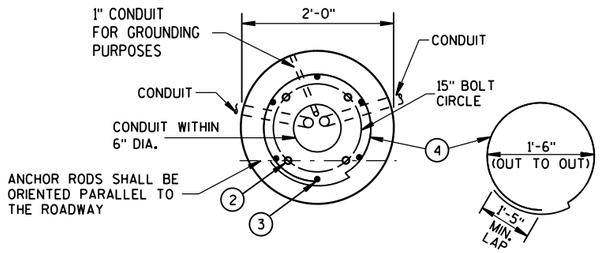
BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

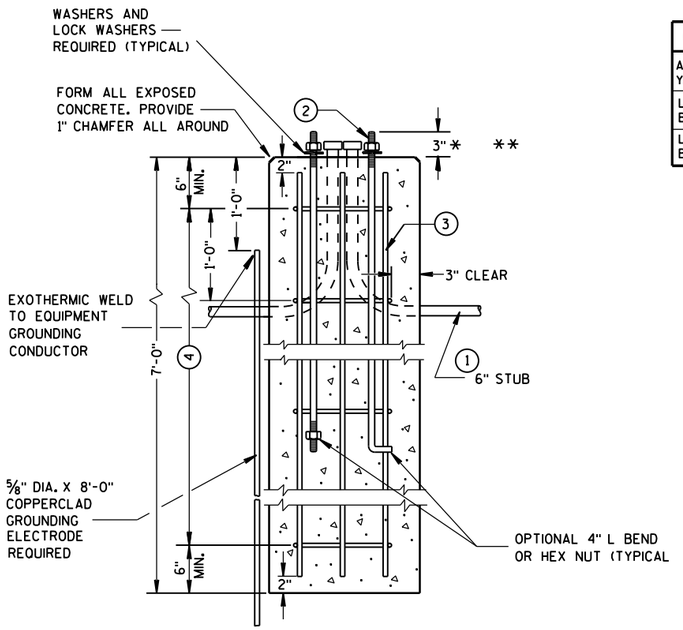
(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN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

(2) (4) 1" DIA. X 5'-0" ANCHOR RODS.

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

(4) (7) NO. 4 X 6'-2" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

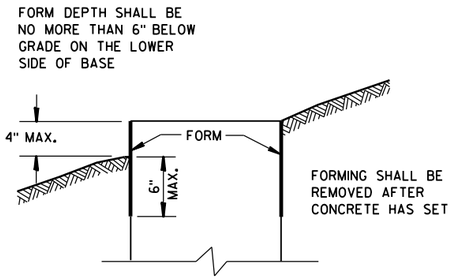




CONCRETE BASE, TYPE 7 (FOR 40' LIGHT POLES)

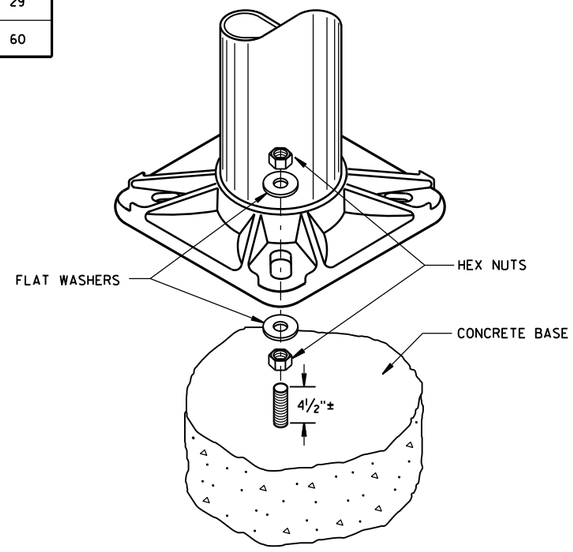
* ANY ANCHOR ROD PROJECTION SHORTER THAN 2¾" OR LONGER THAN 3¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

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



FORMING DETAIL

QUANTITY REQUIREMENTS	
APPROX. CUBIC YARDS OF CONCRETE	0.8
LBS. OF HOOP BAR STEEL	29
LBS. OF VERTICAL BAR STEEL	60



NON-BREAKAWAY INSTALLATION (LEVELING NUT)

CONCRETE BASE, TYPE 7

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

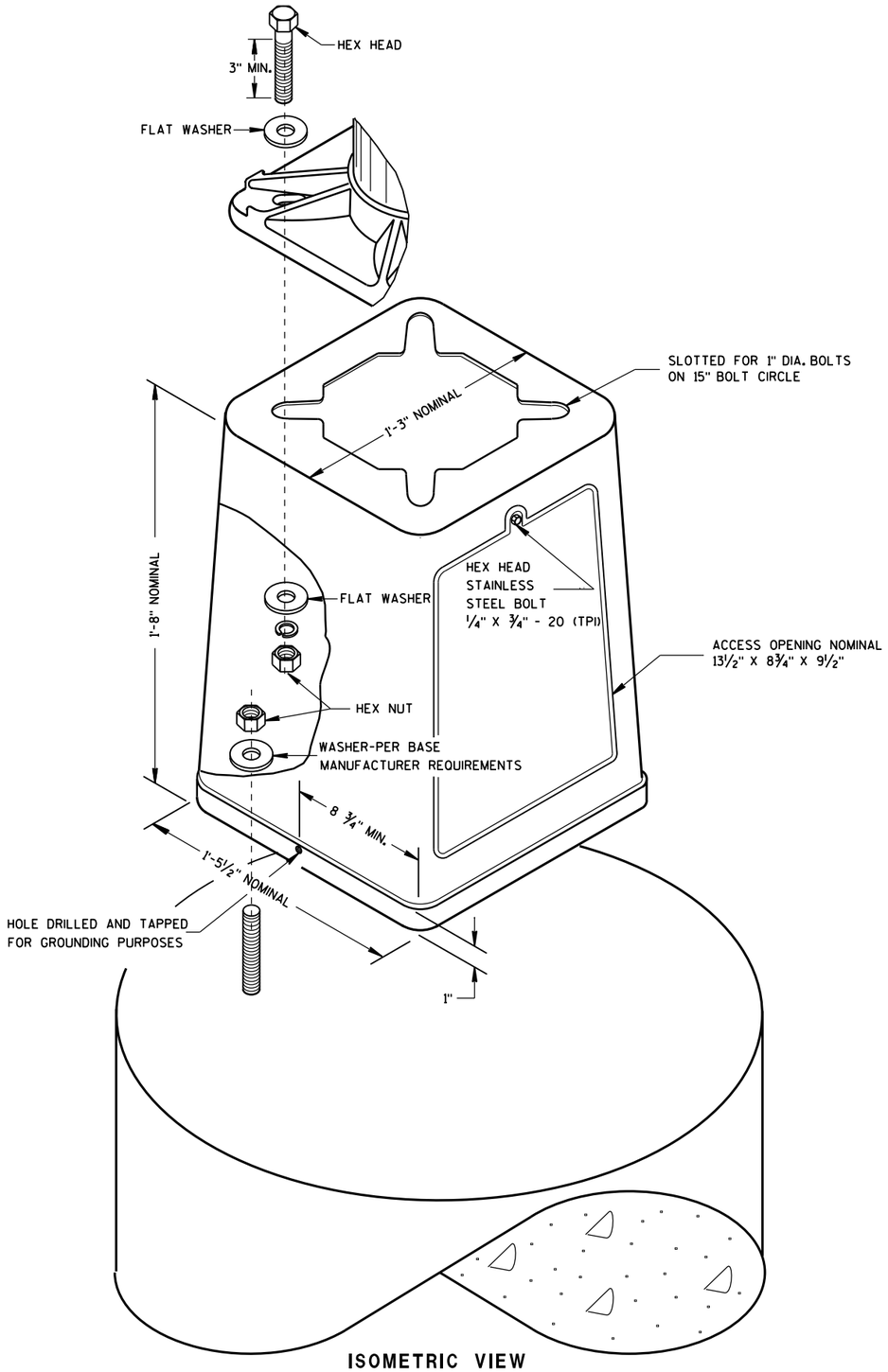
APPROVED
Sept. 2014
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL 522
FHWA

6

S.D.D. 9 C 8-5

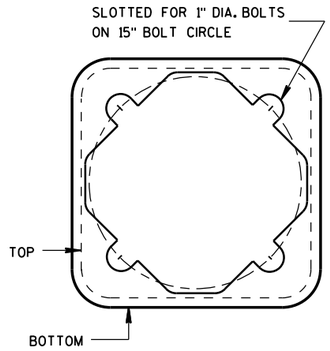
6

S.D.D. 9 C 8-5



ISOMETRIC VIEW

TRANSFORMER BASE



BOTTOM VIEW

GENERAL NOTES

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

BREAKAWAY BASES (WHERE REQUIRED) WILL BE MEASURED AND PAID AS SEPARATE ITEMS OF WORK IN ADDITION TO THE LIGHT POLE.

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.

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

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

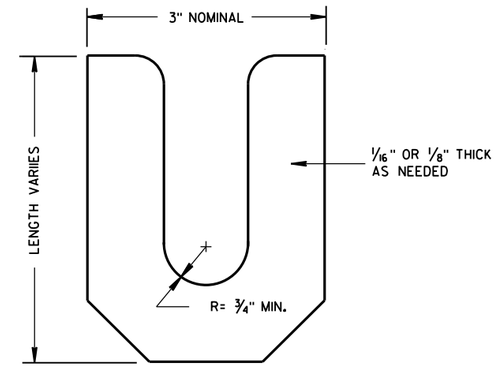
A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE TRANSFORMER BASE.

THE MECHANICAL CONNECTOR (GROUNDING LUG) SHALL BE INSTALLED USING THE TAPPED HOLE PROVIDED BY THE MANUFACTURER. THE MOUNTING BOLT HEXHEAD), NUT, WASHER AND LOCK WASHER SHALL BE STAINLESS STEEL, SIZED TO FIT THE THREADING AND HOLE SIZE, AND BE OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

SHOULD A GROUNDING LUG MOUNTING HOLE NOT BE PROVIDED, THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" X 3/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE. IT SHALL BE MOUNTED IN THE SAME LOCATION AS IS SHOWN ON THE DRAWING.

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

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



LEVELING SHIM



TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE FOR 15" BOLT CIRCLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 9 C 10-3

6

S.D.D. 9 C 10-3

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).

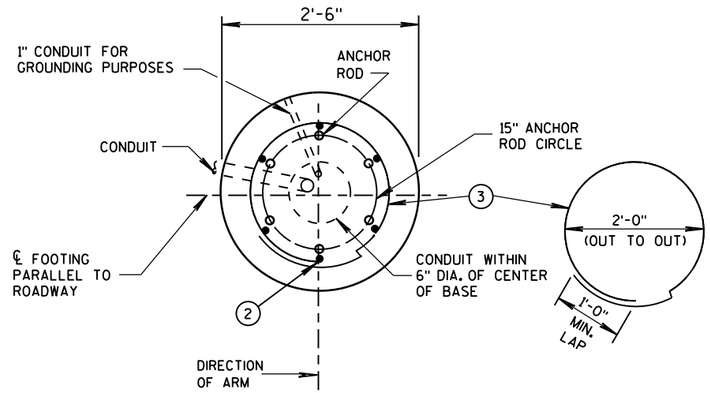
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

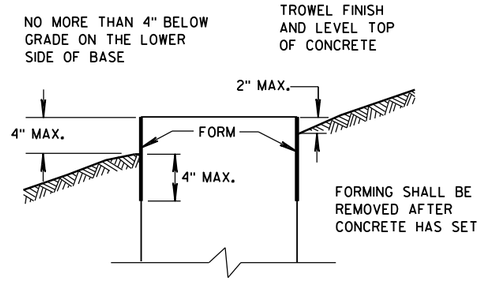
(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES, (GREATER THAN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

(2) (6) NO. 6 X 13'-7" BAR STEEL REINFORCEMENT.

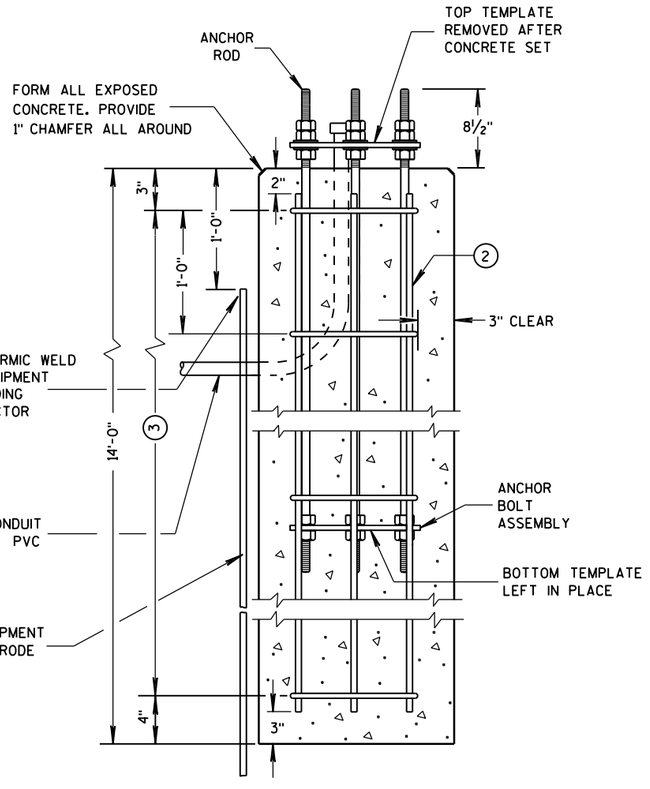
(3) (15) NO. 4 X 7'-4" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

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.



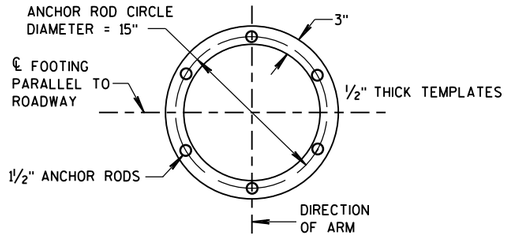


FORMING DETAIL

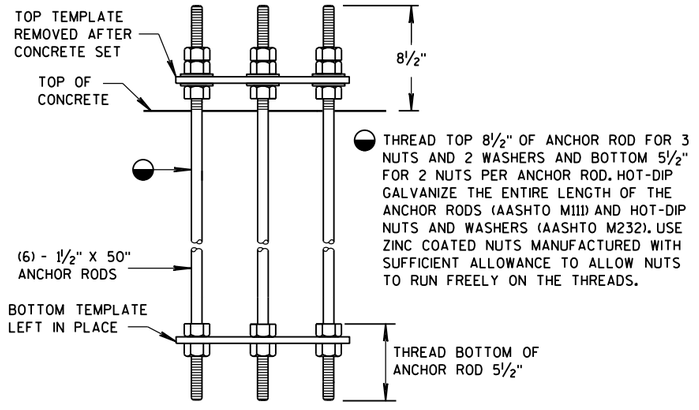


CONCRETE BASE TYPE 10
(FOR TYPE 9 & 10 POLES)

TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION. SEE S.D.D. 9C13-2 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.



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

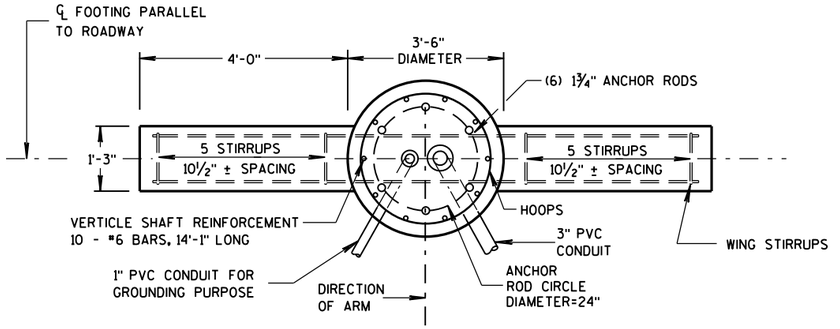
CONCRETE BASE TYPE 10

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

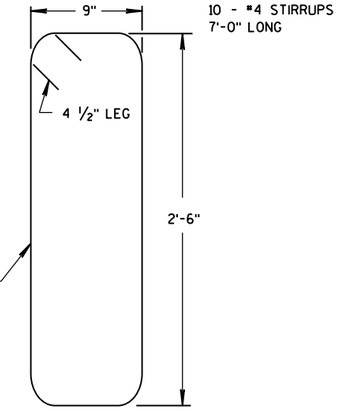
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

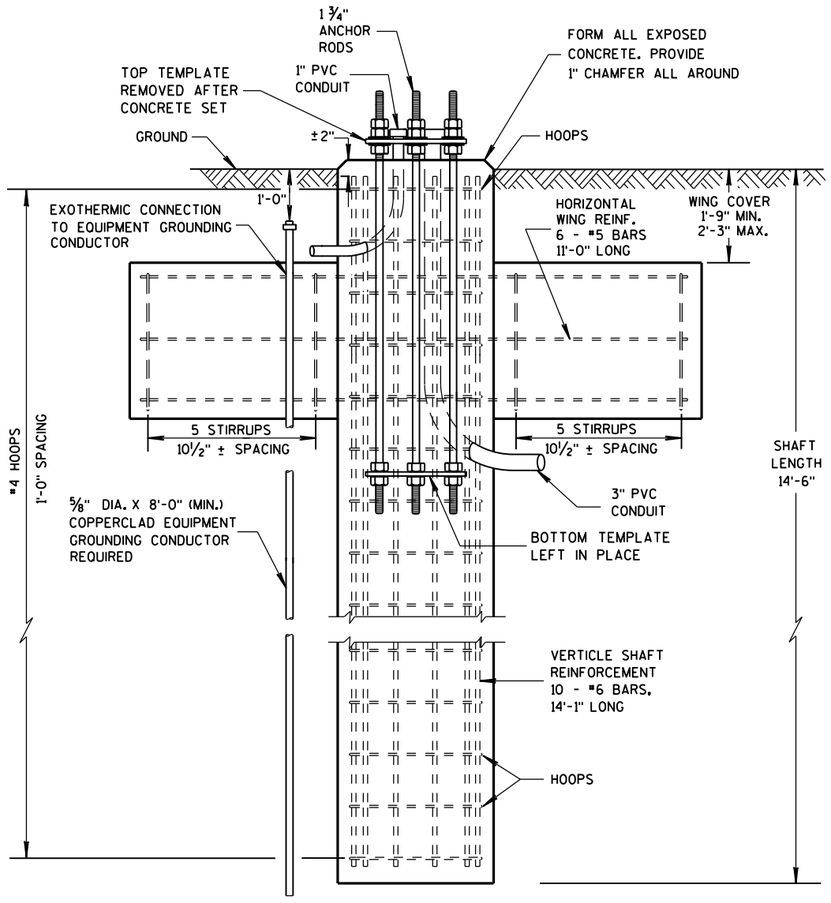
S.D.D. 9 C 11-5



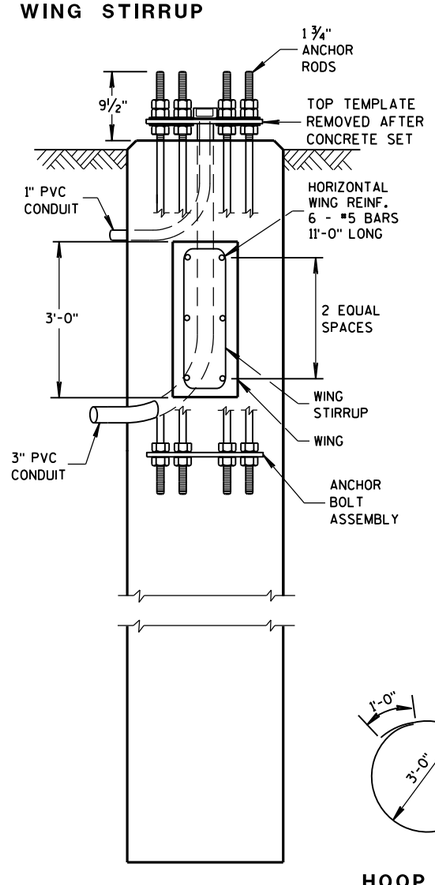
PLAN VIEW



WING STIRRUP

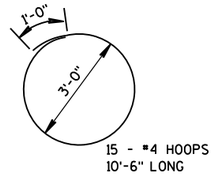


ELEVATION VIEW



SIDE VIEW

DOES NOT SHOW HOOPS OR VERTICAL SHAFT REINFORCEMENT



15 - #4 HOOPS 10'-6" LONG

HOOP DETAIL

GENERAL NOTES

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

ORIENT ANCHOR RODS IN FOOTING AND PROVIDE ANCHOR ROD PROJECTION ABOVE TOP OF CONCRETE FOOTING BASE PER THIS SHEET.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF THE UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

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

BASES (SHAFT), BELOW THE WING, SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUNG THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

TOP SURFACE OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

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

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

CONDUIT HEIGHT ABOVE CONCRETE BASE SHALL BE 4½" INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL ENDS INSTALLED. ALL CONDUIT SHALL SLOPE TO PULL BOX.

ALL CONDUIT ENDS AT THE TOP OF THE 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.

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

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTOR FITTINGS, UL LISTED FOR ELECTRICAL USE, SHALL BE USED.

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 BE FURNISHED AND INSTALLED TO 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.

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

THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVEL 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 THE WRITTEN APPROVAL OF THE ENGINEER.

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

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.

(FOR TYPE 12 & 13 POLES)

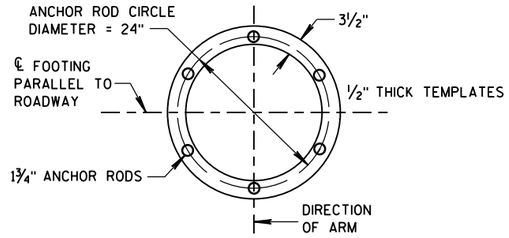
CONCRETE = 6.3 C.Y.
H.S. REINFORCEMENT = 433 LBS.

TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION.
SEE S.D.D. 9C13-2 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.

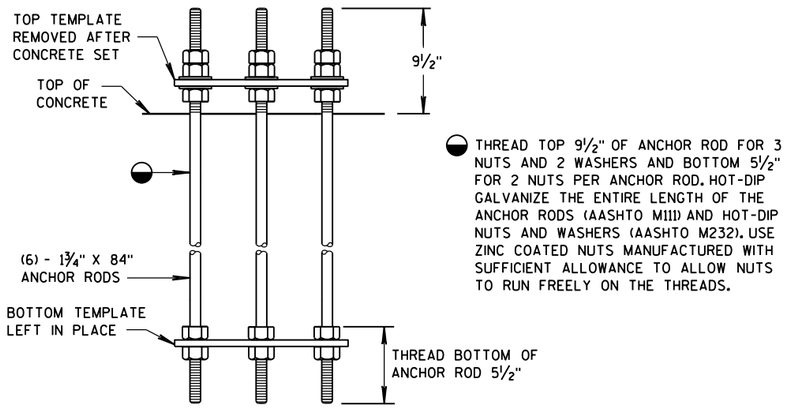
CONCRETE BASE TYPE 13

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 9 C 12-5a

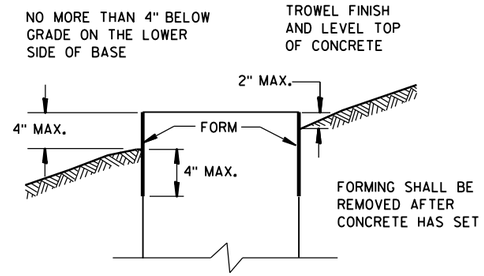


TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 13 ANCHOR ASSEMBLY



FORMING DETAIL

6

CONCRETE BASE TYPE 13

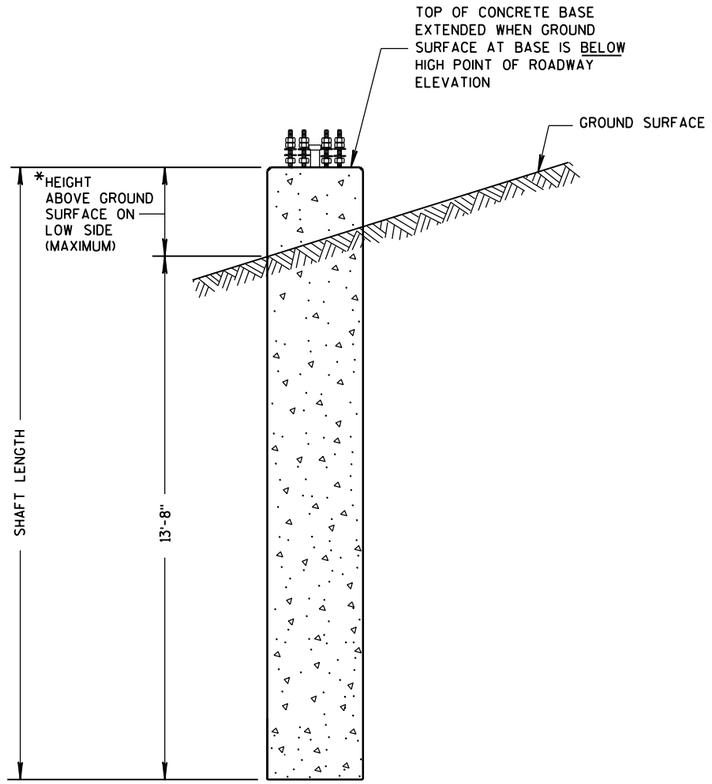
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL
FHWA

S.D.D. 9 C 12-5b

REINFORCEMENT AND CONCRETE QUANTITIES
ADJUSTED FOR EXTENDED TYPE 10 CONCRETE BASE

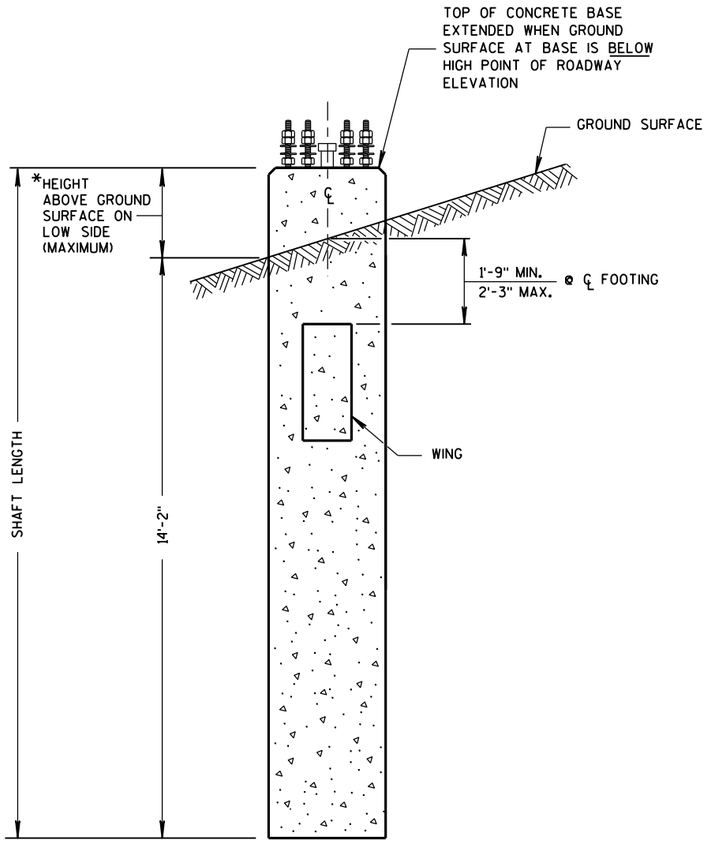
HEIGHT INCREASE REQUIRED	* HEIGHT ABOVE GROUND SURFACE ON LOW SIDE (MAXIMUM)	SHAFT LENGTH	LENGTH OF #6 VERTICAL REINF.	NO. OF #4 HOOPS	C.Y. OF CONCRETE	LBS. OF HOOP BAR STEEL	LBS. OF VERTICAL BAR STEEL
>0" TO 6"	10"	14'-6"	14'-1"	16	2.6	78	127
>6" TO 1'-0"	1'-4"	15'-0"	14'-7"	16	2.7	78	131
>1'-0" TO 1'-6"	1'-10"	15'-6"	15'-1"	17	2.8	83	136
>1'-6" TO 2'-0"	2'-4"	16'-0"	15'-7"	17	2.9	83	141



CONCRETE BASE TYPE 10 (EXTENDED)

REINFORCEMENT AND CONCRETE QUANTITIES
ADJUSTED FOR EXTENDED TYPE 13 CONCRETE BASE

HEIGHT INCREASE REQUIRED	* HEIGHT ABOVE GROUND SURFACE ON LOW SIDE (MAXIMUM)	SHAFT LENGTH	LENGTH OF #6 VERTICAL REINF.	NO. OF #4 HOOPS	C.Y. OF CONCRETE	LBS. OF H.S. BAR STEEL
>0" TO 6"	10"	15'-0"	14'-7"	16	6.5	447
>6" TO 1'-0"	1'-4"	15'-6"	15'-1"	16	6.6	454
>1'-0" TO 1'-6"	1'-10"	16'-0"	15'-7"	17	6.8	469
>1'-6" TO 2'-0"	2'-4"	16'-6"	16'-1"	17	7.0	476



CONCRETE BASE TYPE 13 (EXTENDED)

CONCRETE BASE
TYPE 10 & TYPE 13 EXTENSION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

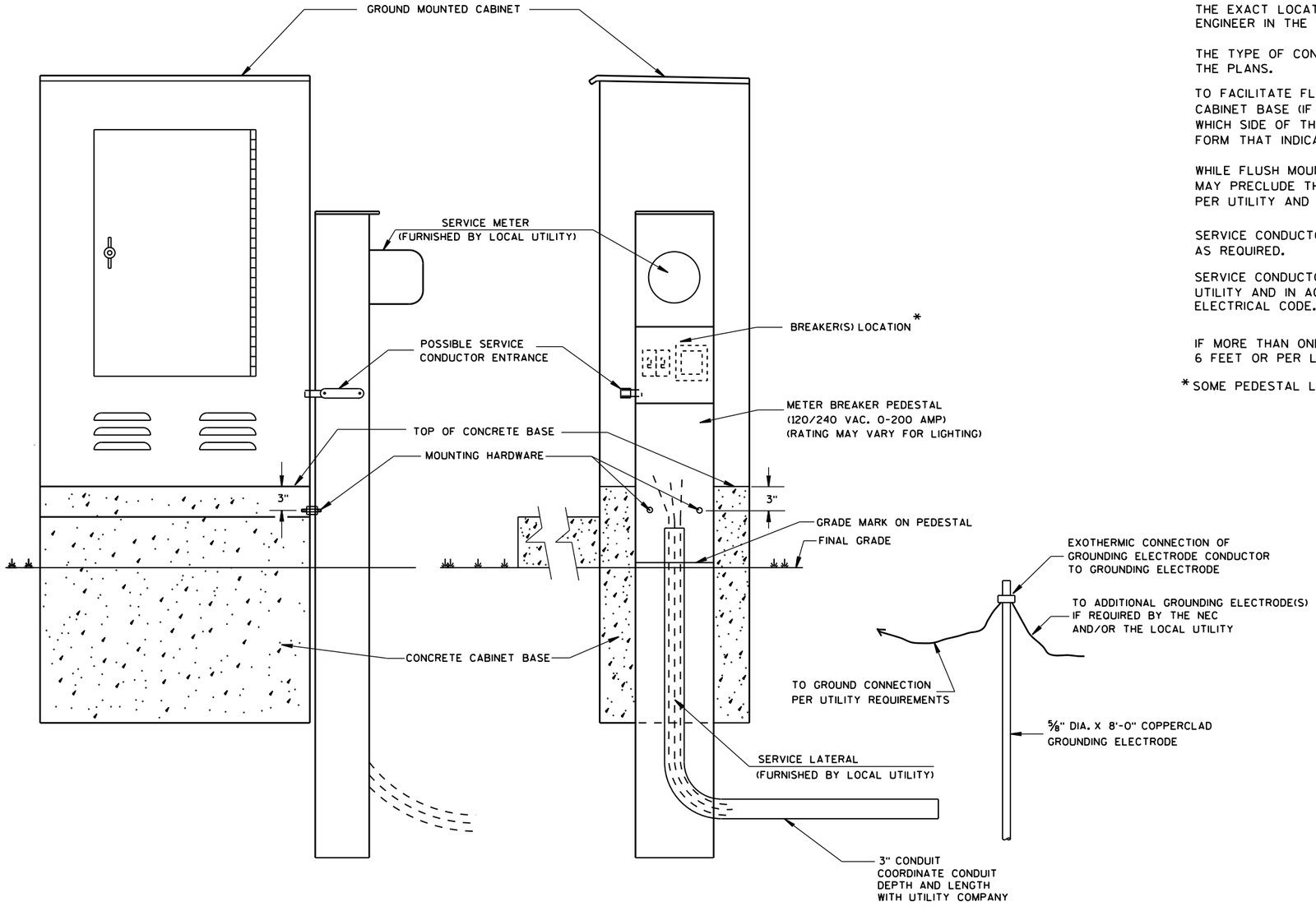
APPROVED
11-26-2013 DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL
FHWA

6

S.D.D. 9 C 13-2

6

S.D.D. 9 C 13-2



TYPICAL CABINET SERVICE INSTALLATION

GENERAL NOTES

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

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

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

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

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

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

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

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

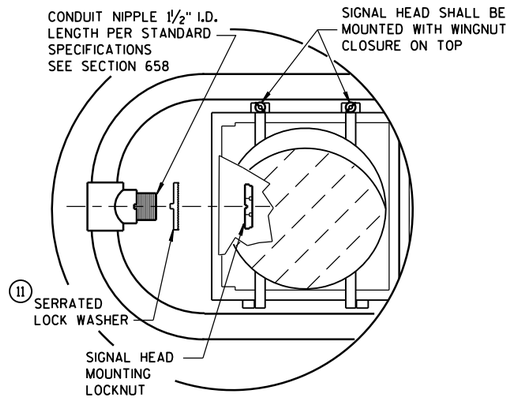
*SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

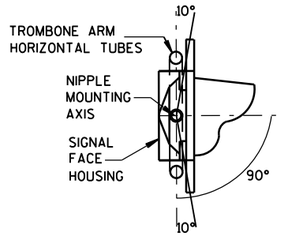
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6
S.D.D. 9 D 1-5



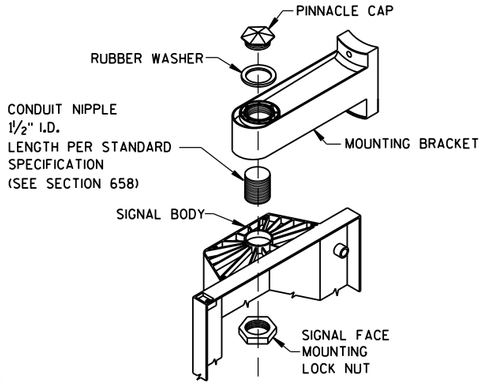
HORIZONTAL SIGNAL HEAD MOUNTING DETAIL *

* SIGNAL HEAD ATTACHMENT ALSO APPLYS TO MOUNTING AT CROSS BAR



SECTION A-A

(10 DEGREES TILT REQUIREMENT OF FACE(S) IN THE TROMBONE MOUNTING)



SIGNAL FACE MOUNTING DETAIL

(BANDED)

GENERAL NOTES

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

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

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

A PULL WIRE/ROPE IN ACCORDANCE WITH STANDARD SPECIFICATION 652 SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.

TYPE 2 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

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

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

(2) SIGNAL FACE MOUNTING BRACKETS. MOUNT WITH CAP SCREWS AND BANDING. (SEE STANDARD SPECIFICATIONS - SEC. 658)

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

(4) SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.

(5) POLE MOUNTED SIGNAL FACES SHALL REQUIRE 1 OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACES.

(6) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

(7) MOUNTING BRACKET NIPPLES FOR THE SIGNAL FACE(S) SHALL BE 2 INCHES IN LENGTH AND 1½ INCHES IN DIAMETER. (SEE STANDARD SPECIFICATION - SECTION 658).

(8) VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW (¼" X ¾" LONG - 20 TPI, STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUT IS THE SLIDING TYPE.

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

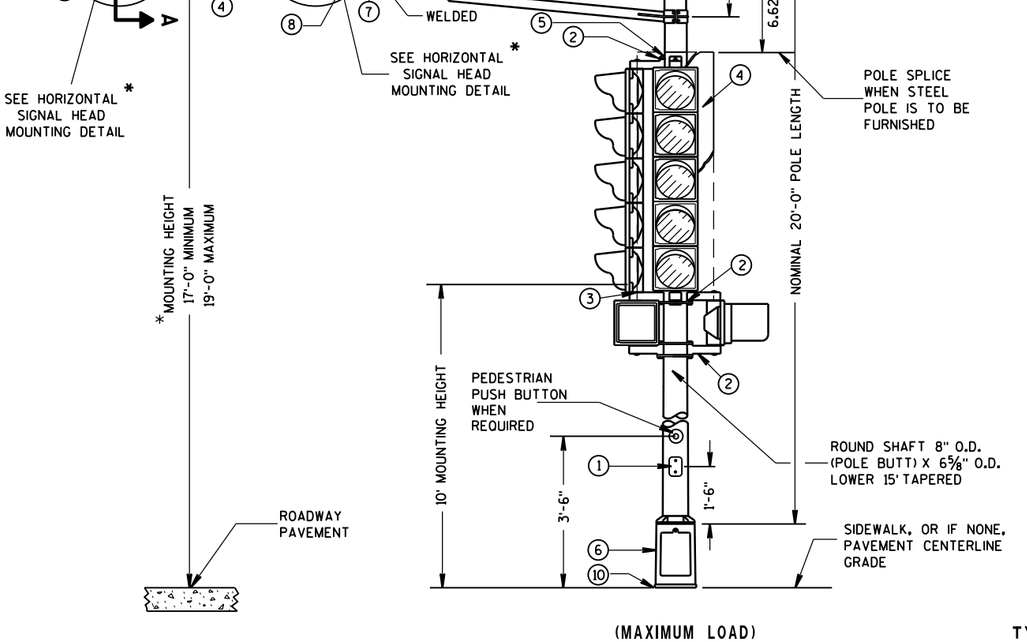
(10) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.

(11) USE SERRATED LOCK WASHERS WITH NOTCHES BETWEEN END TEE AND SIGNAL HEAD.

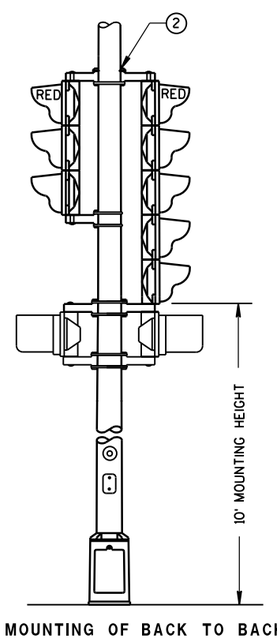
*MOUNTING HEIGHT LIMITATION DIMENSIONS OF THE TROMBONE MAST ARM WILL BE DEPENDENT UPON THE USE/NON-USE OF A TRANSFORMER BASE.

FOR MANUFACTURERS USE ONLY

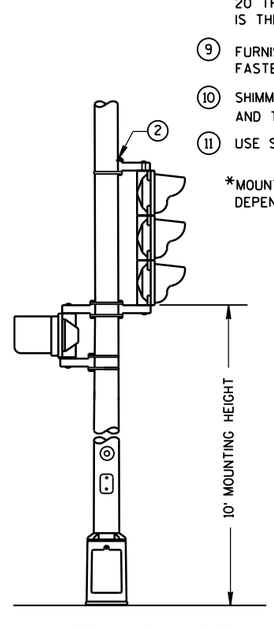
WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN/BRIDGE FOR VERIFICATION AND APPROVAL.



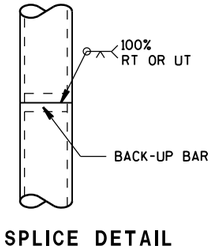
(MAXIMUM LOAD)



TYPICAL MOUNTING OF BACK TO BACK 3 AND 5 SECTION SIGNAL FACES



TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE



POLE SPLICE DETAIL

TYPE 2 POLE MOUNTING CONFIGURATION

POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

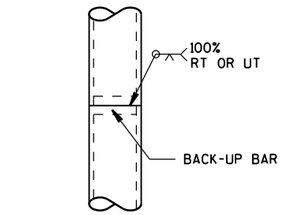
6

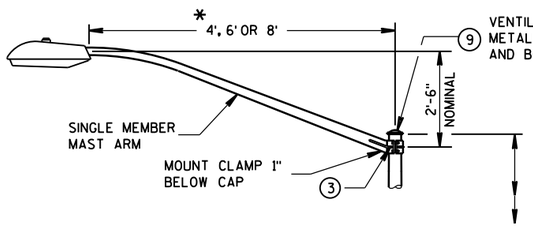
S.D.D. 9 E 1-13a

FOR MANUFACTURERS USE ONLY

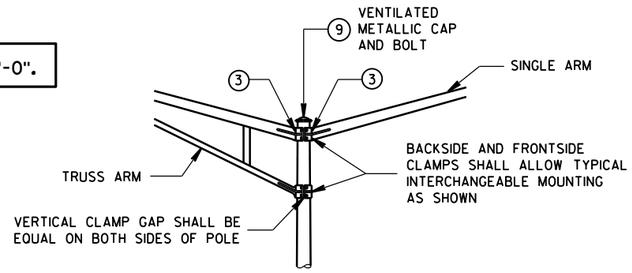
WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN/BRIDGE FOR VERIFICATION AND APPROVAL.

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





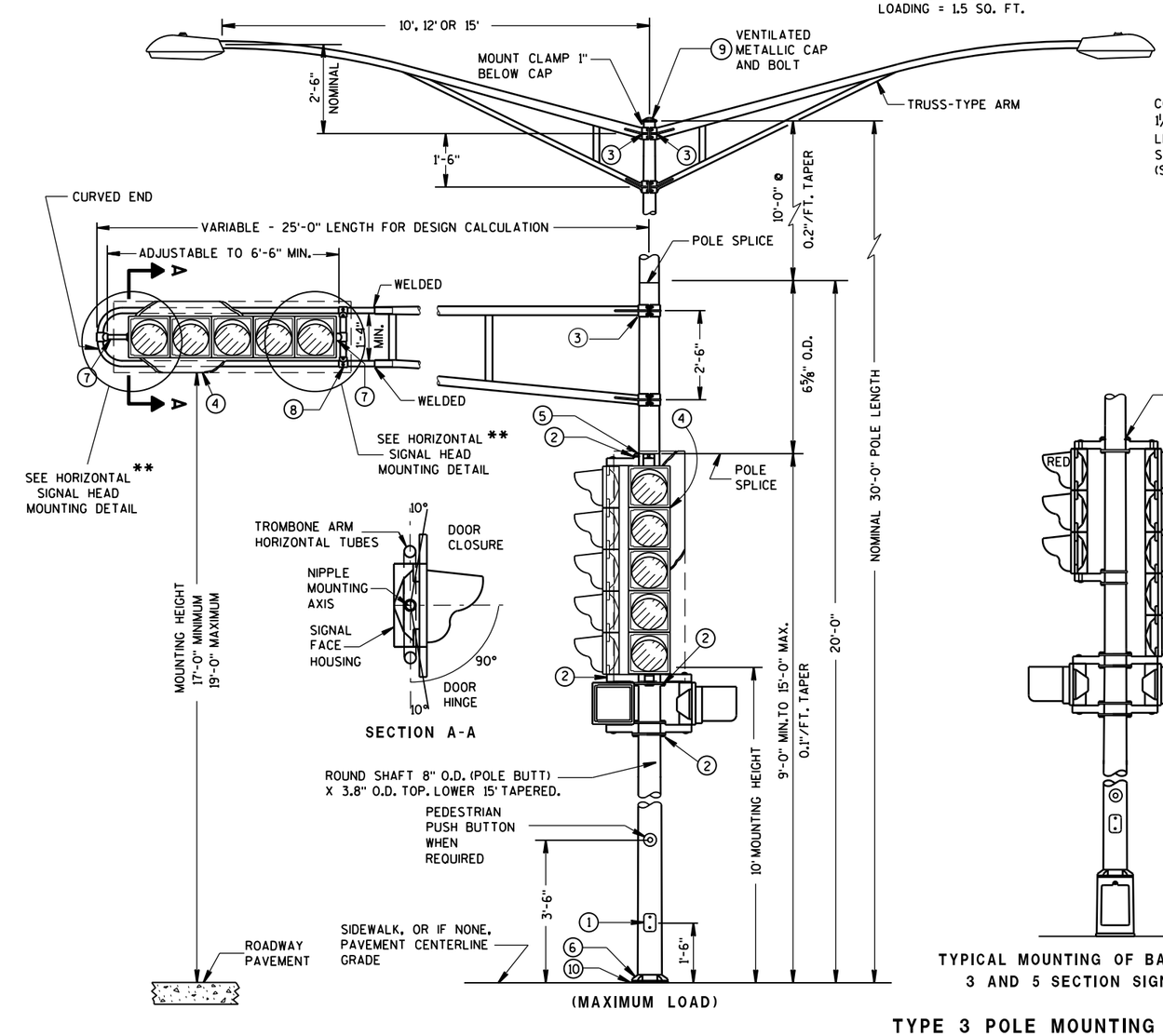
POLE SPLICE DETAIL

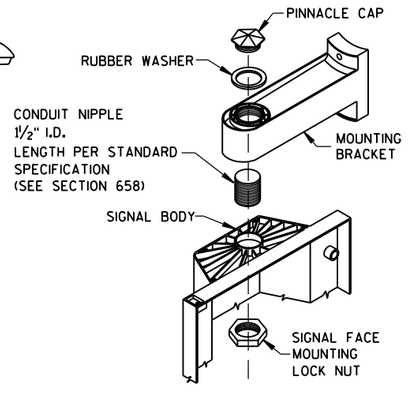


INTERCHANGEABLE MOUNTING DETAIL

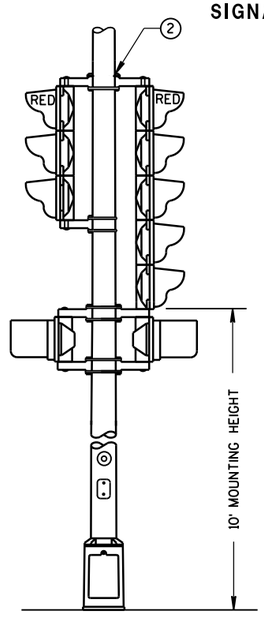
LUMINAIRE

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

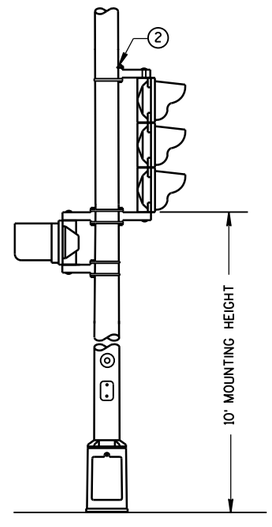




SIGNAL FACE MOUNTING DETAIL
(BANDED)



TYPICAL MOUNTING OF BACK TO BACK
3 AND 5 SECTION SIGNAL FACES



TYPICAL MOUNTING OF 3 SECTION
SIGNAL FACE

GENERAL NOTES

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

ALL TYPE 3 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL.

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

A PULL WIRE/ROPE IN ACCORDANCE WITH STANDARD SPECIFICATION 652, SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.

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

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

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

(2) SIGNAL FACE MOUNTING BRACKETS, MOUNT WITH CAP SCREWS AND BANDING. (SEE STANDARD SPECIFICATIONS - SEC. 658)

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

(4) SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.

(5) POLE MOUNTED SIGNAL FACES SHALL REQUIRE 1 OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACE.

(6) TYPE 3 POLE CONFIGURATIONS SHALL BE MOUNTED DIRECTLY TO THEIR CONCRETE BASES.

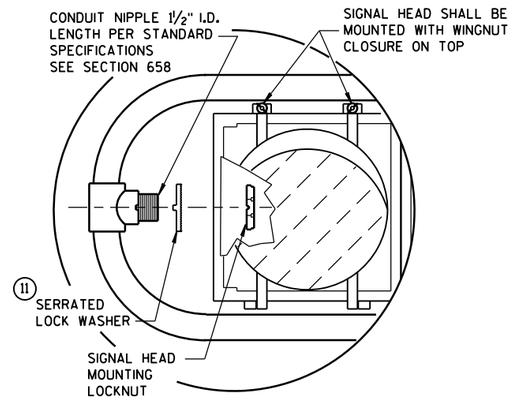
(7) MOUNTING BRACKET NIPPLES FOR THE SIGNAL FACE(S) SHALL BE 2 INCHES IN LENGTH AND 1½ INCHES IN DIAMETER. (SEE STANDARD SPECIFICATION - SECTION 658)

(8) VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW (1/4 " X ¾" -20 TPI, STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUT IS THE SLIDING TYPE.

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

(10) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.

(11) USE SERRATED LOCK WASHERS WITH NOTCHES BETWEEN END TEE AND SIGNAL HEAD.



HORIZONTAL SIGNAL HEAD MOUNTING DETAIL **

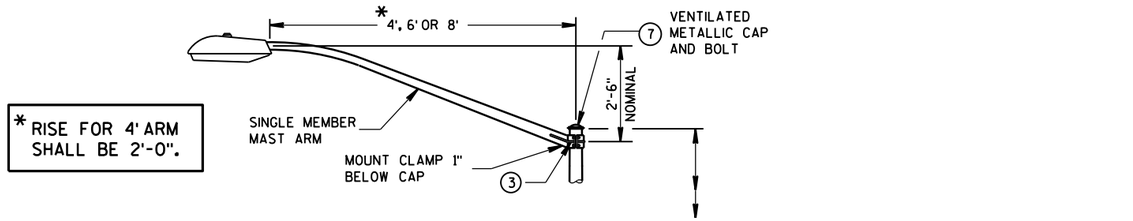
** SIGNAL HEAD ATTACHMENT ALSO APPLYS TO MOUNTING AT CROSS BAR

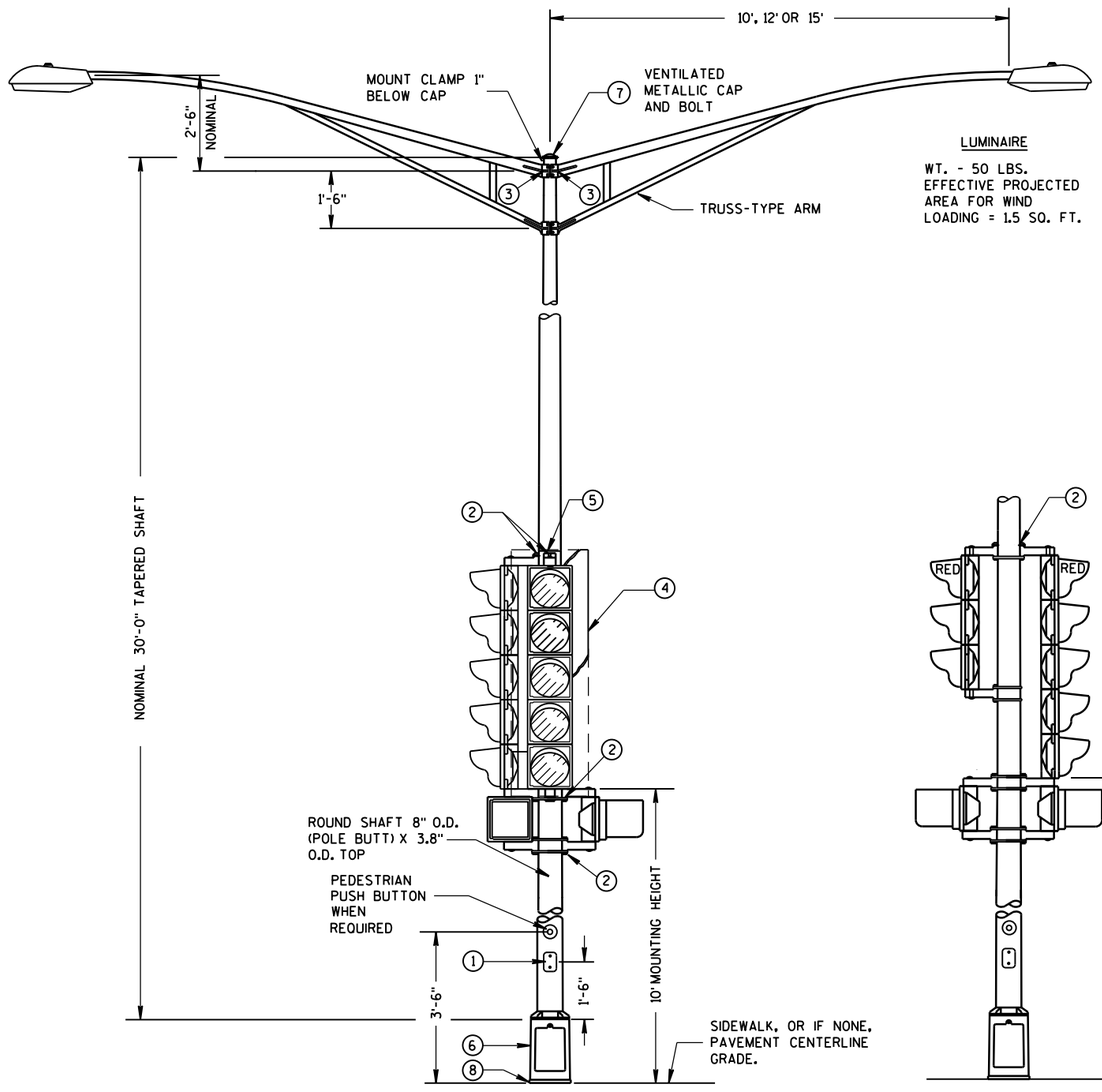
TYPE 3 POLE MOUNTING CONFIGURATION

POLE MOUNTINGS FOR
TRAFFIC SIGNALS AND
LIGHTING UNITS, TYPE 3
(HEAVY DUTY)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI 530

6
S.D.D. 9 E 1-13b

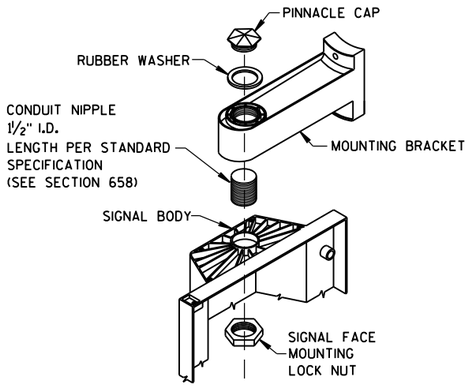




LUMINAIRE

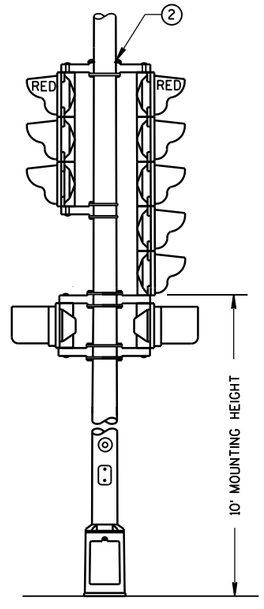
WT. - 50 LBS.
EFFECTIVE PROJECTED AREA FOR WIND LOADING = 1.5 SQ. FT.

(MAXIMUM LOAD)

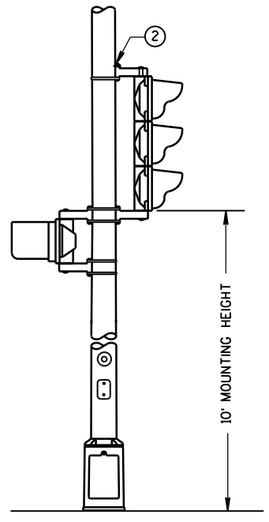


SIGNAL FACE MOUNTING DETAIL

(BANDED)



TYPICAL MOUNTING OF BACK TO BACK 3 AND 5 SECTION SIGNAL FACES



TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE

TYPE 4 POLE MOUNTING CONFIGURATION

GENERAL NOTES

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

ALL TYPE 4 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL WITH A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (.1196").

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

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

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

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

(2) SIGNAL FACE MOUNTING BRACKETS, MOUNT WITH CAP SCREWS AND BANDING. (SEE STANDARD SPECIFICATIONS - SEC. 658).

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

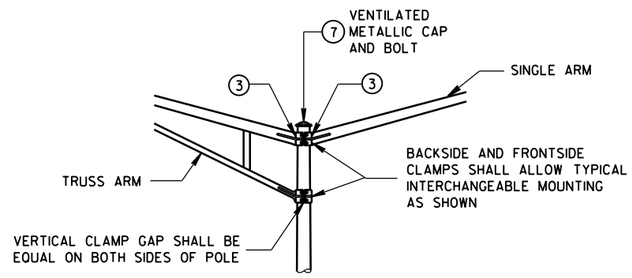
(4) SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.

(5) POLE MOUNTED SIGNAL FACES SHALL REQUIRE 1 OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACE.

(6) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

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

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



INTERCHANGEABLE MOUNTING DETAIL

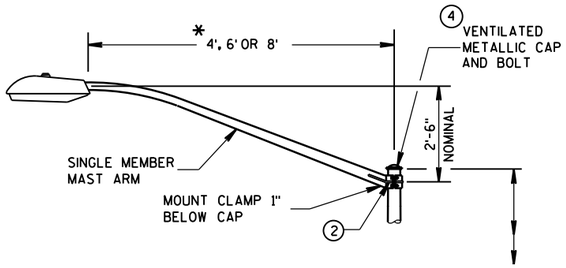
POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 4

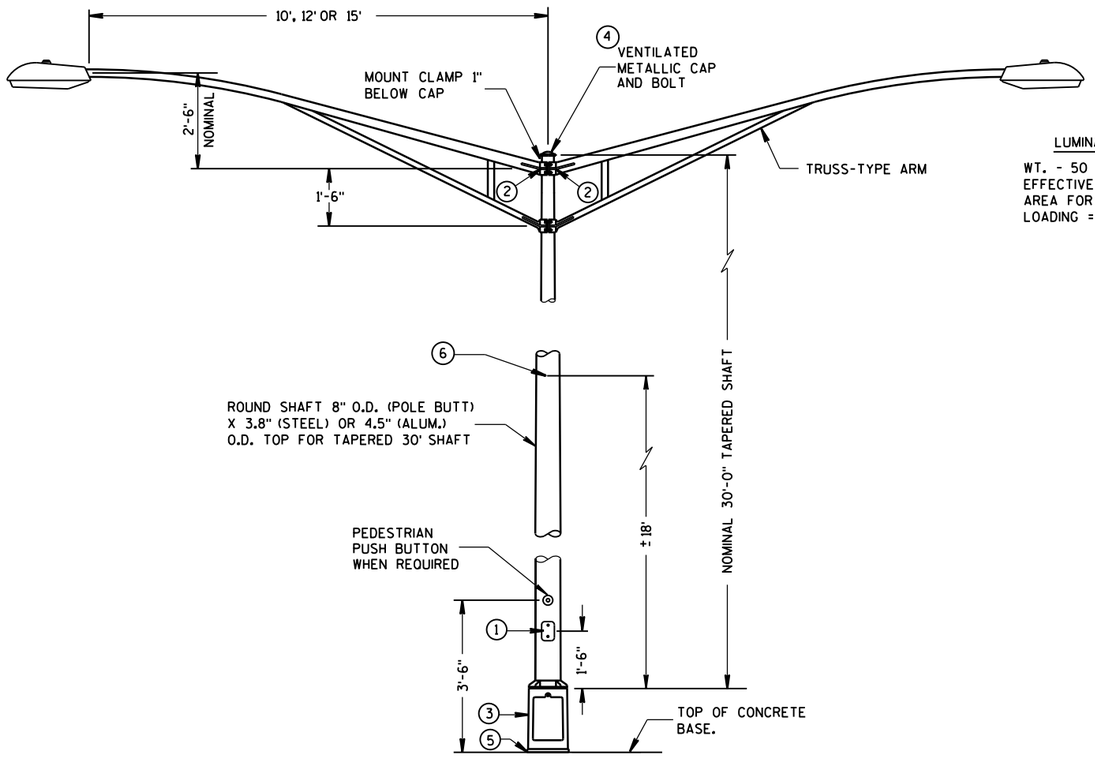
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

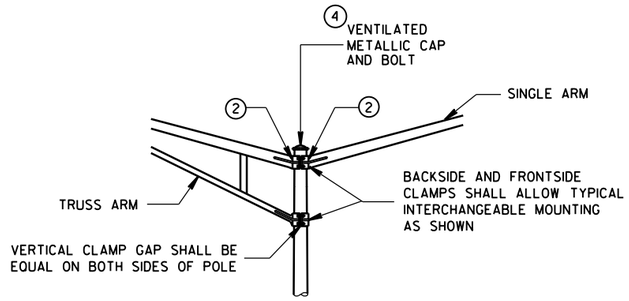
S.D.D. 9 E 1-13c

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





TYPE 5 POLE MOUNTING CONFIGURATION
(MAXIMUM LOAD)
LIGHTING ONLY



INTERCHANGEABLE MOUNTING DETAIL

LUMINAIRE

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

(3) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

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

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

(6) INTERNAL DUMBBELL-TYPE VIBRATION DAMPER.

6

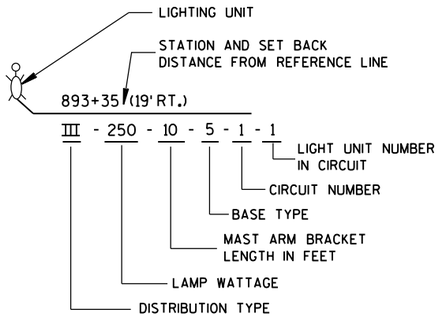
S.D.D. 9 E 1-13d

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

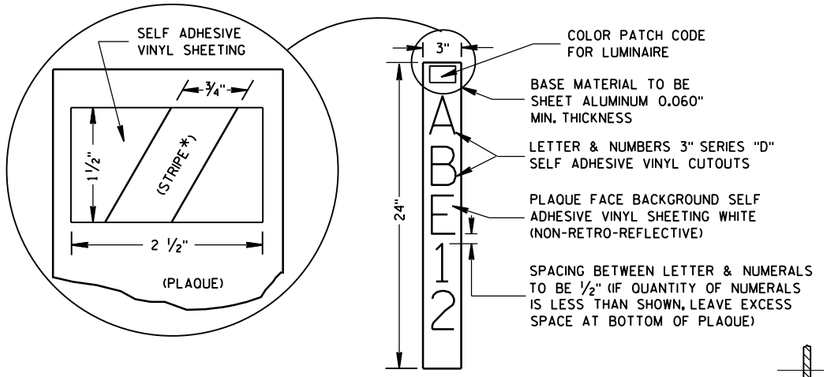
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 9 E 1-13d



LIGHTING UNIT CODE
(TYPICAL)



COLOR PATCH CODE FOR LUMINAIRES

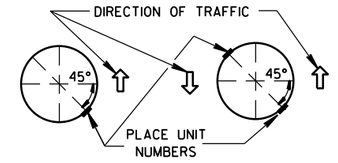
(HIGH PRESSURE SODIUM)

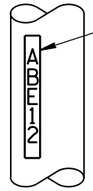
1000 WATT - NO PATCH
400 WATT - ORANGE
310 WATT - BLUE
250 WATT - ORANGE W/WHITE STRIPE*
200 WATT - RED
150 WATT - GREEN
100 WATT - BROWN

(MERCURY VAPOR)

400 WATT - (NO PATCH)
250 WATT - YELLOW

IDENTIFICATION PLAQUE





FASTEN TOP, CENTER AND BOTTOM OF PLAQUE WITH 3 ALUMINUM POP RIVETS (ALUM. POLES) OR STAINLESS STEEL POP RIVETS (STEEL POLES)

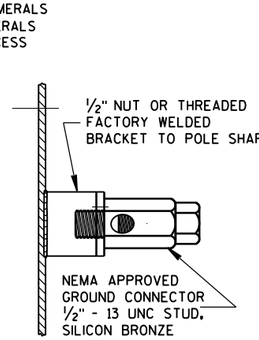
NOTES:

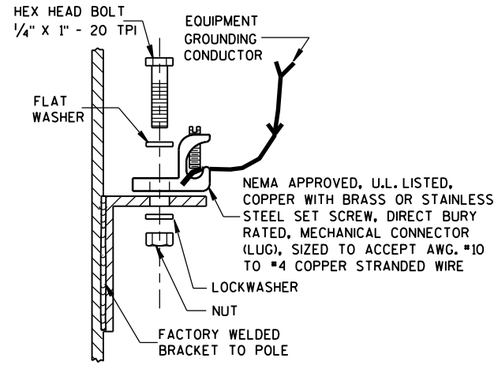
1) PLACE BOTTOM OF UNIT NUMBER PLAQUE 5'-0" ABOVE ELEVATION OF ADJACENT CURB OR SHOULDER.

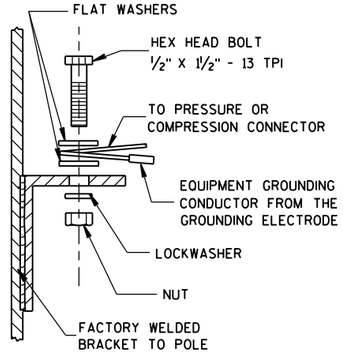
2) UNIT NUMBERS: ONE REQUIRED FOR SINGLE ARM POLES TWO REQUIRED FOR MEDIAN MOUNT POLES.

LIGHTING UNIT IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENT
(TYPICAL ALL LIGHTING UNITS)

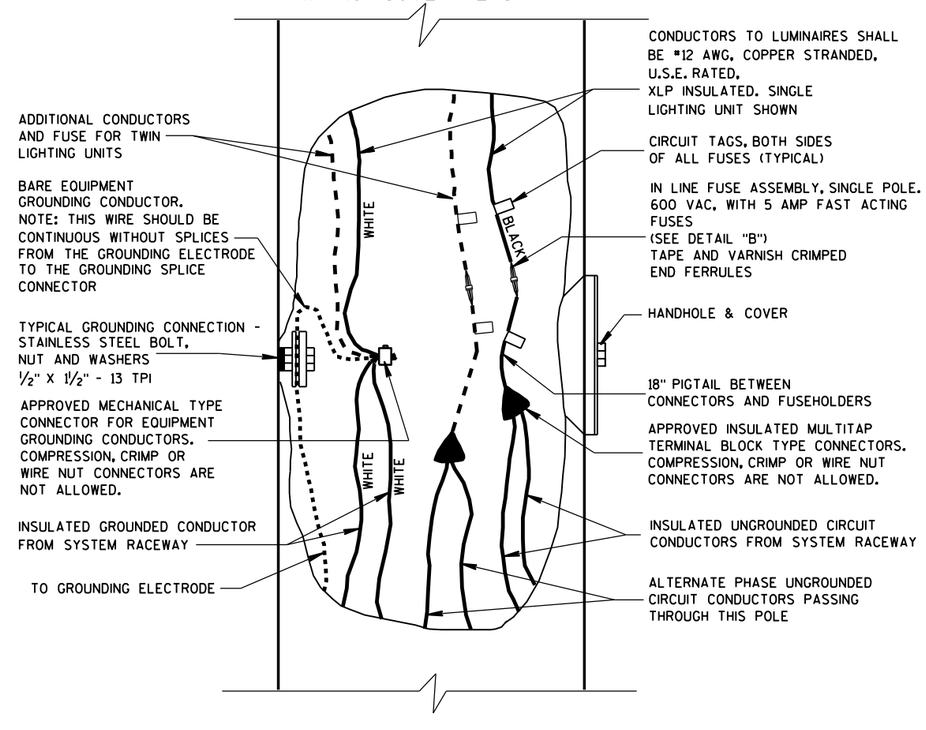
FURNISH PLAQUE WHEN CALLED FOR BY SPECIAL PROVISIONS



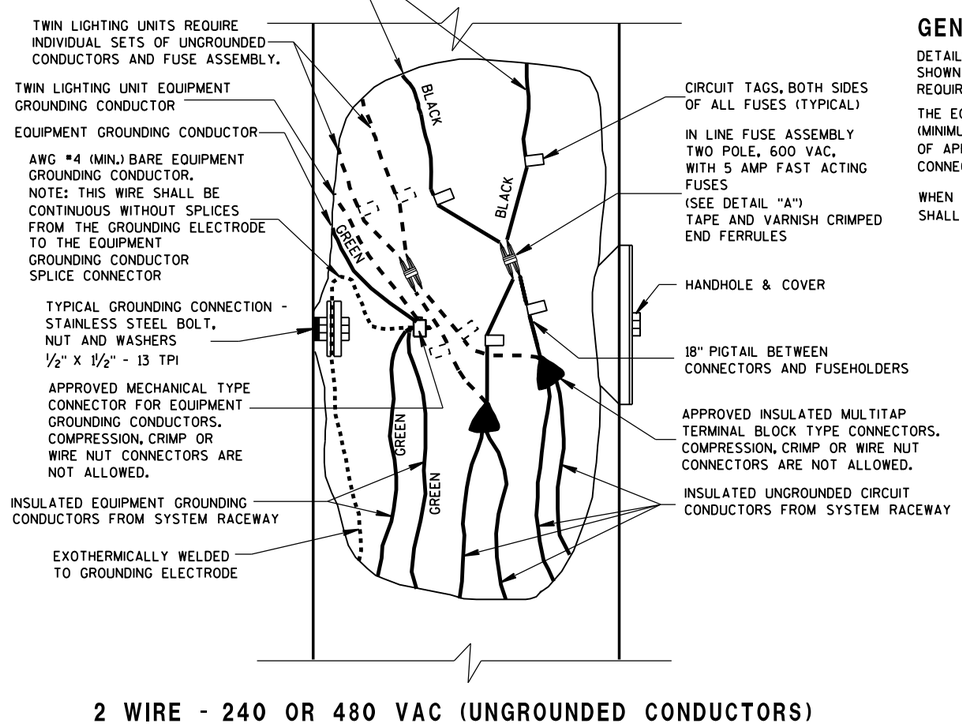




TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



2 WIRE - 120, 240 OR 480 VAC TO GROUND



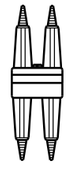
2 WIRE - 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR

GENERAL NOTES

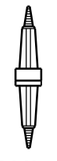
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EQUIPMENT GROUND 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.



DETAIL "A"
BREAKAWAY DOUBLE POLE WITH WATERPROOF INSULATING BOOT



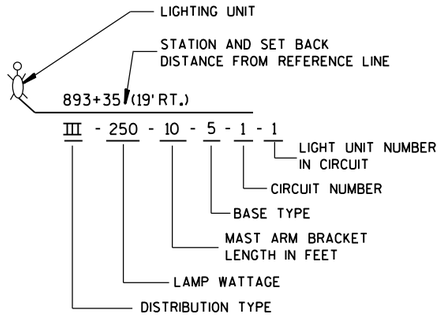
DETAIL "B"
BREAKAWAY SINGLE POLE WITH WATERPROOF INSULATING BOOT

FREEWAY LIGHTING UNIT POLE WIRING

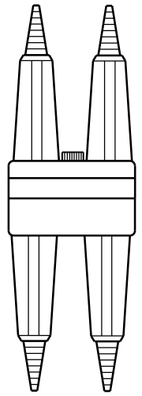
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

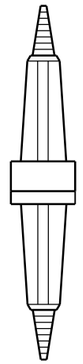
6
S.D.D. 9 E 2-4



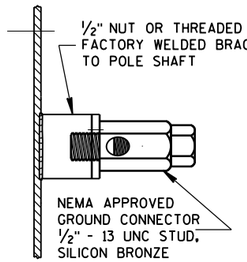
LIGHTING UNIT CODE
(TYPICAL)

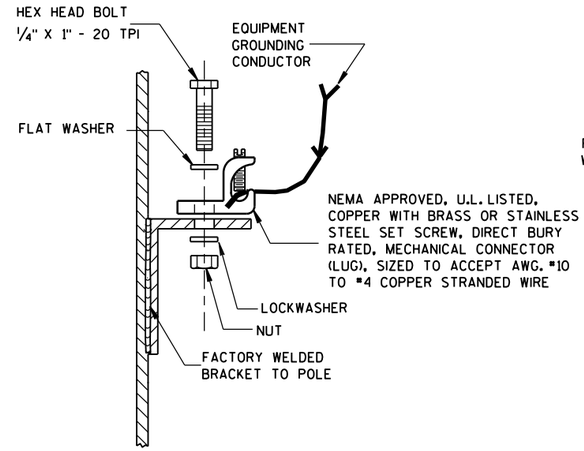


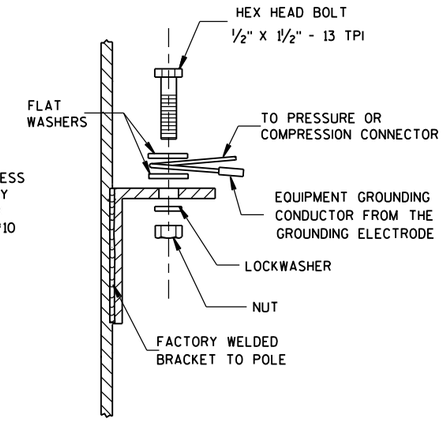
DETAIL "A"
BREAKAWY DOUBLE POLE WITH WATERPROOF INSULATING BOOT



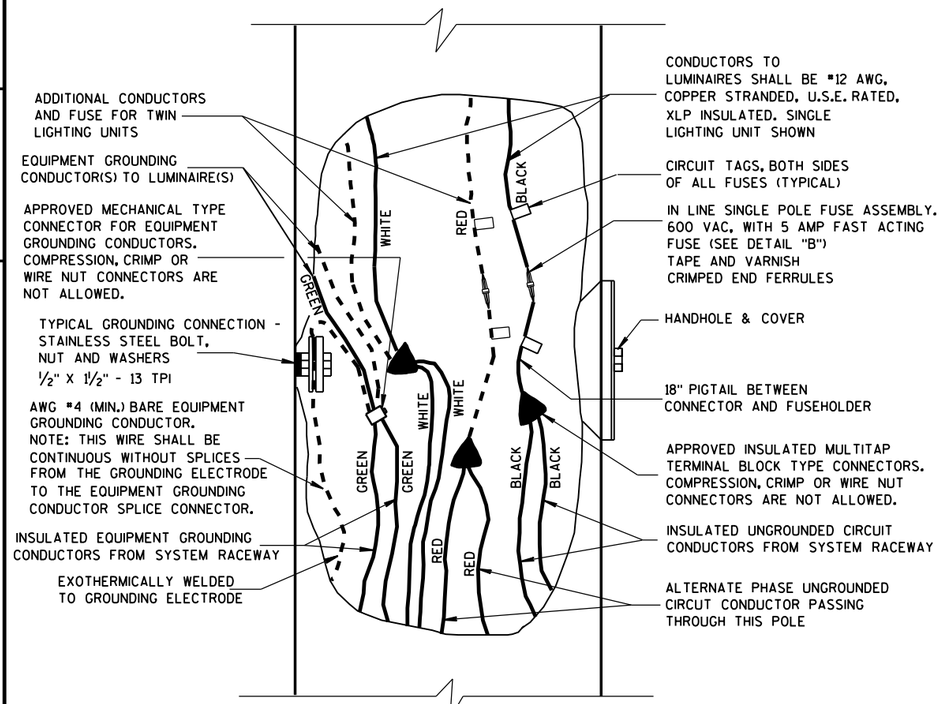
DETAIL "B"
BREAKAWY SINGLE POLE WITH WATERPROOF INSULATING BOOT



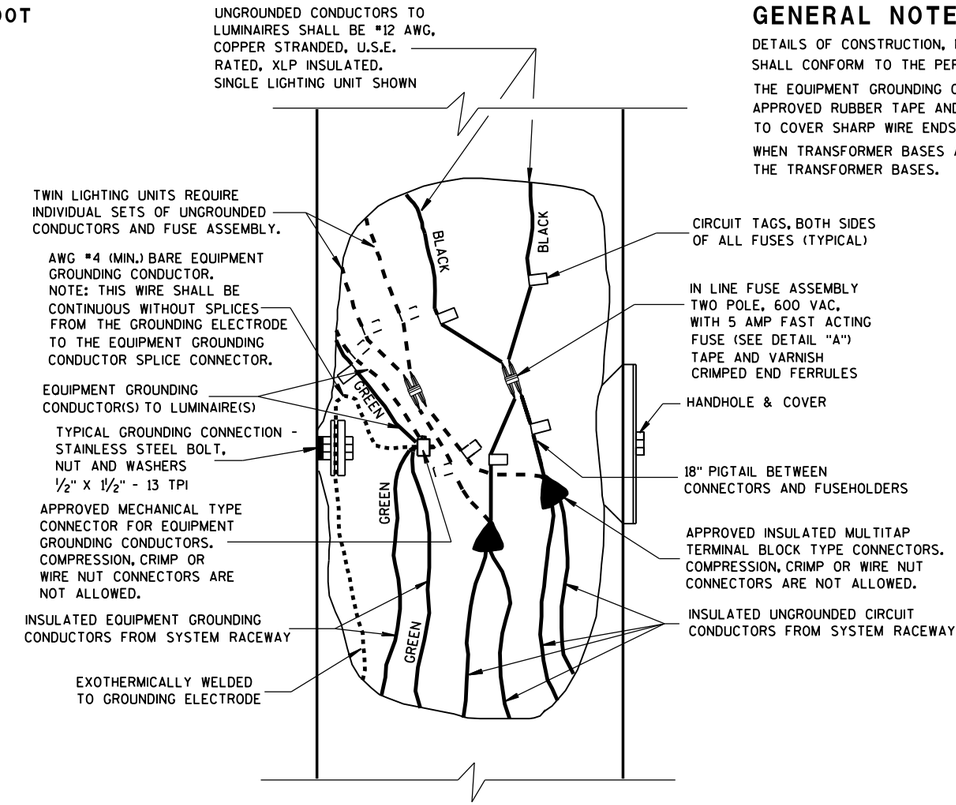




TYPICAL GROUNDING CONNECTIONS
NUT, BOLT, WASHERS AND LOCKWASHERS SHALL BE STAINLESS STEEL



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



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

GENERAL NOTES

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

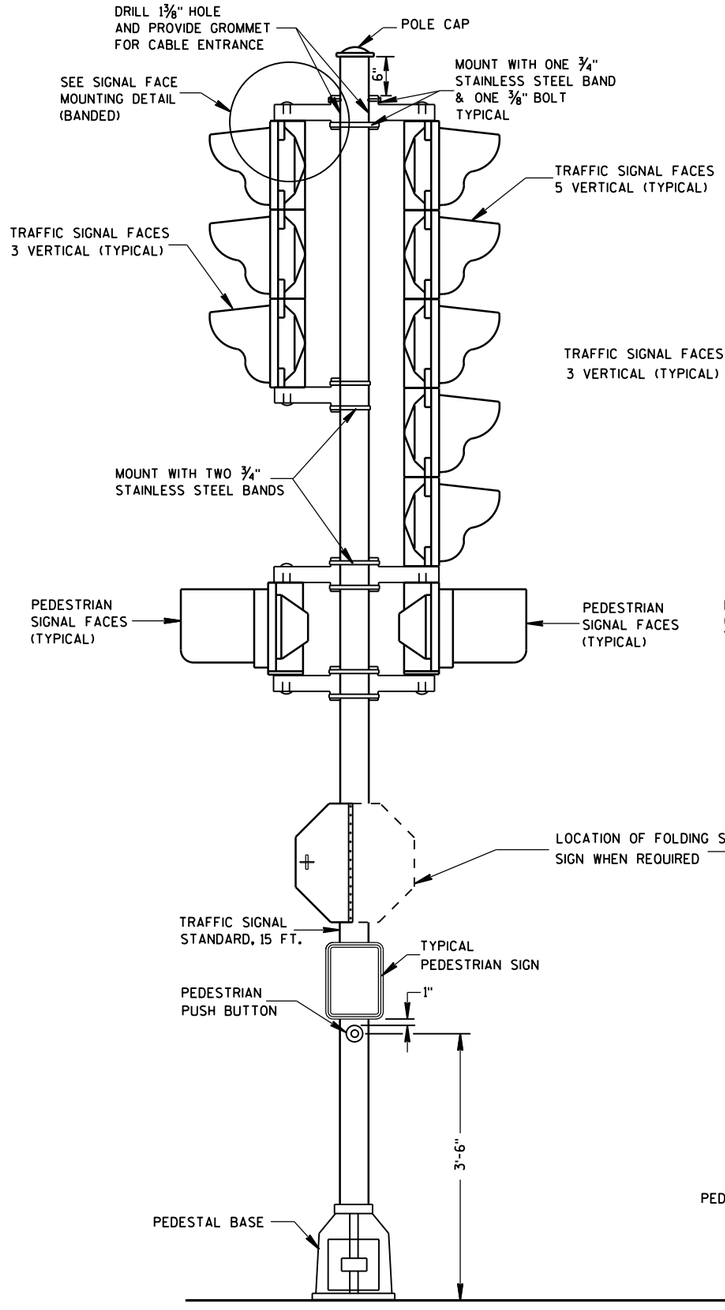
THE EQUIPMENT GROUNDING CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND THEN 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

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

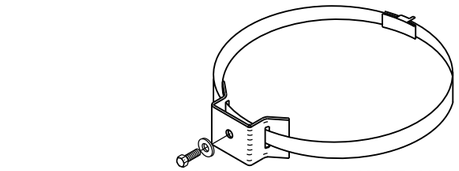
NON-FREEWAY LIGHTING UNIT POLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

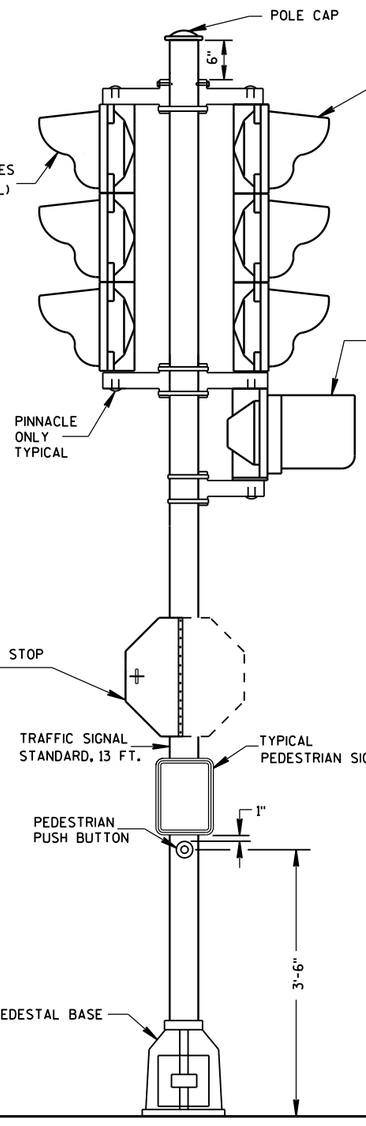
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA



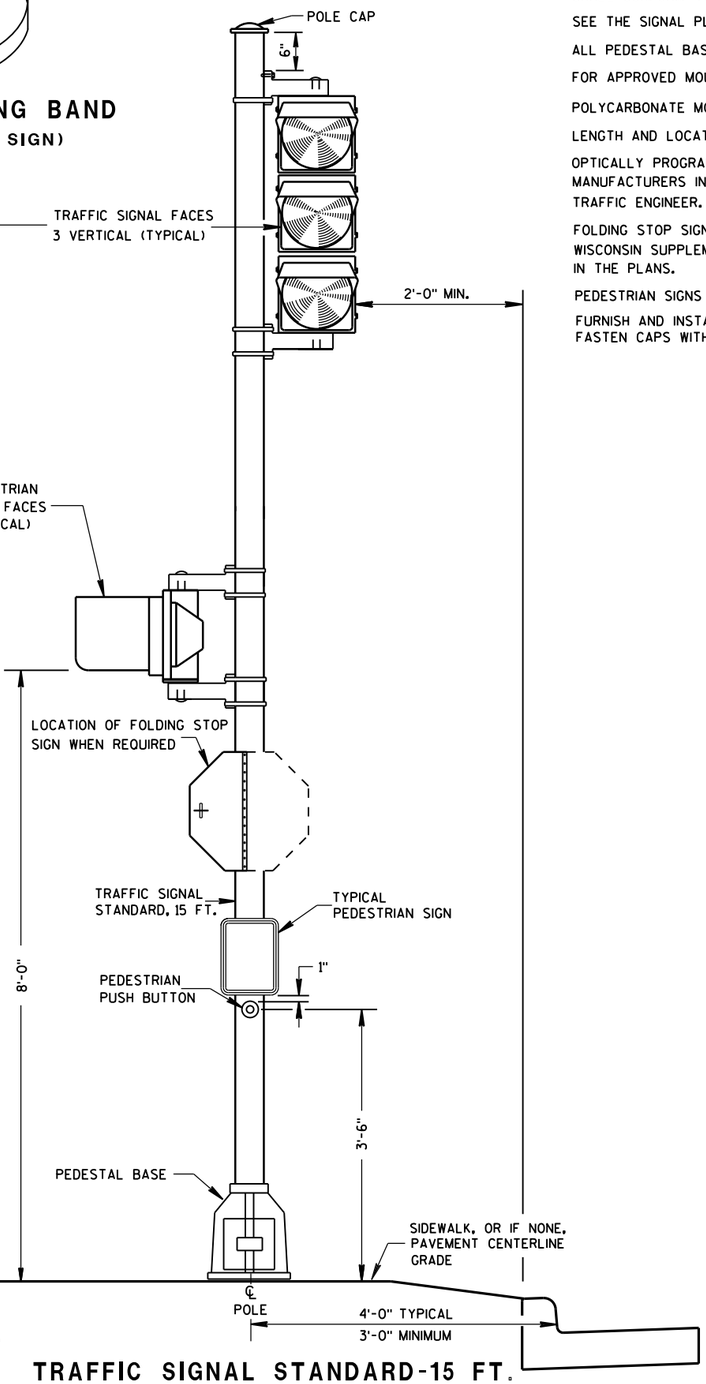
TRAFFIC SIGNAL STANDARD-15 FT.



TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



TRAFFIC SIGNAL STANDARD-13 FT.



TRAFFIC SIGNAL STANDARD-15 FT.
3M MOUNTING (TYPICAL)

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLYCARBONATE MOUNTING BRACKETS SHALL BE USED.

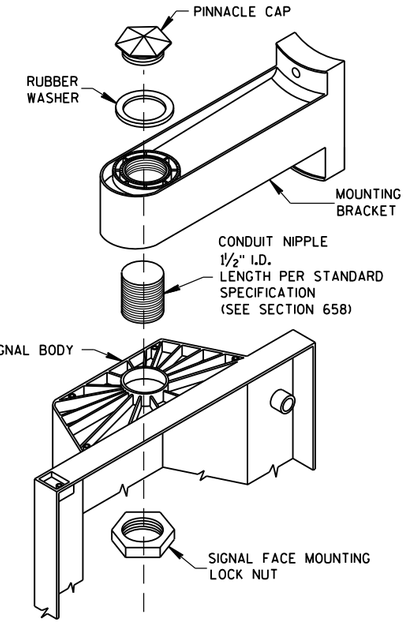
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

OPTICALLY PROGRAMMED SIGNAL FACES SHALL BE MASKED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS, AND UNDER THE DIRECTIONS OF THE REGION TRAFFIC ENGINEER.

FOLDING STOP SIGNS SHALL BE IN ACCORDANCE WITH THE MUTCD AND/OR THE LATEST WISCONSIN SUPPLEMENT. THE SIGNS SHALL BE SIZED AND LOCATED AS CALLED FOR IN IN THE PLANS.

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

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



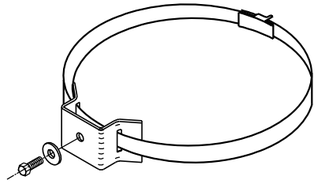
SIGNAL FACE MOUNTING DETAIL
(BANDED)

TRAFFIC SIGNAL STANDARD
POLY BRACKET MOUNTINGS
(TYPICAL) 13 FT. OR 15 FT.

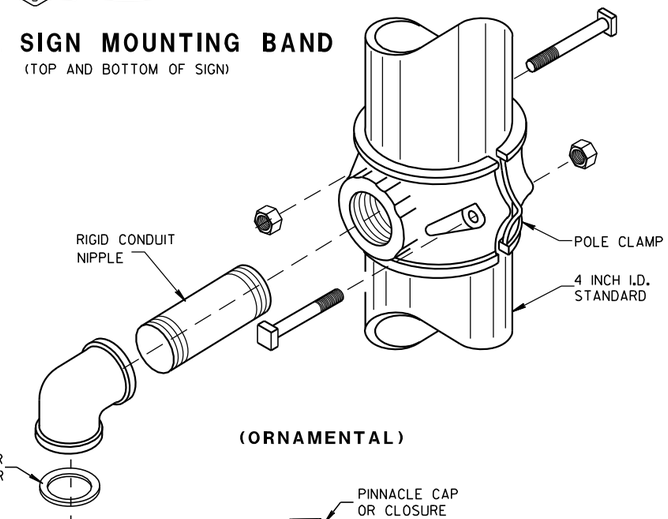
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/28/2013
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL 535
FHWA

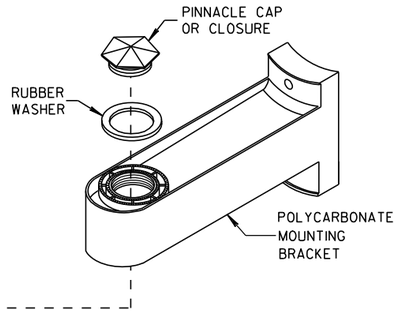
6
S.D.D. 9 E 6-5



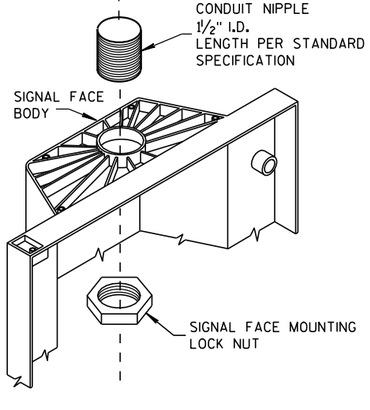
TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



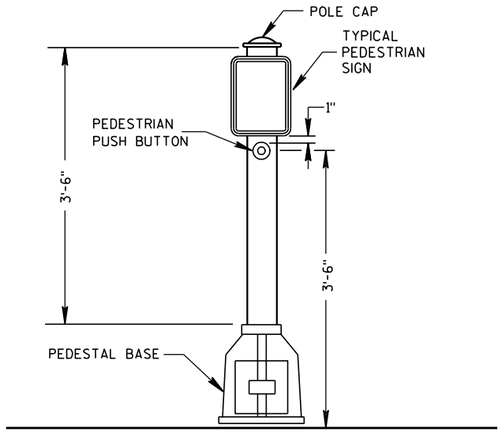
(ORNAMENTAL)



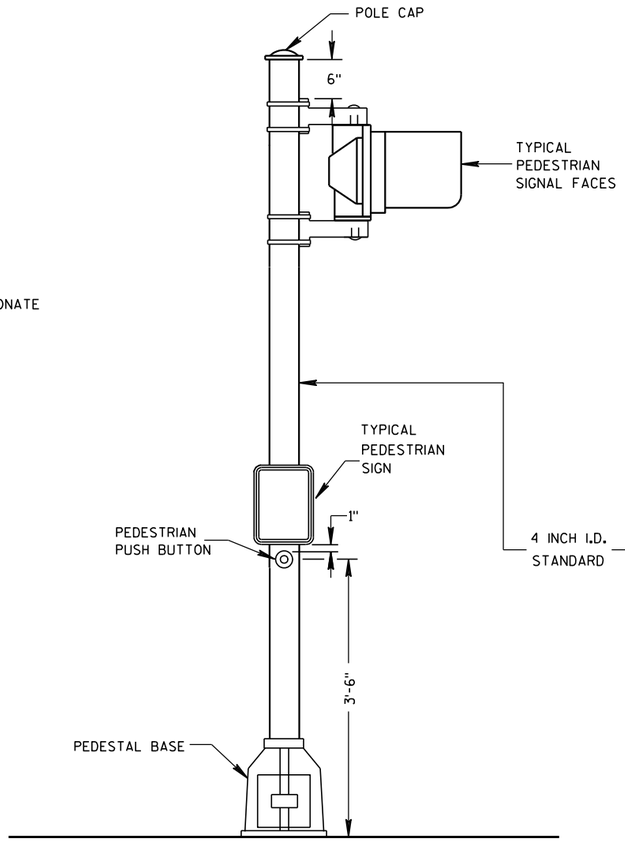
(BANDED)



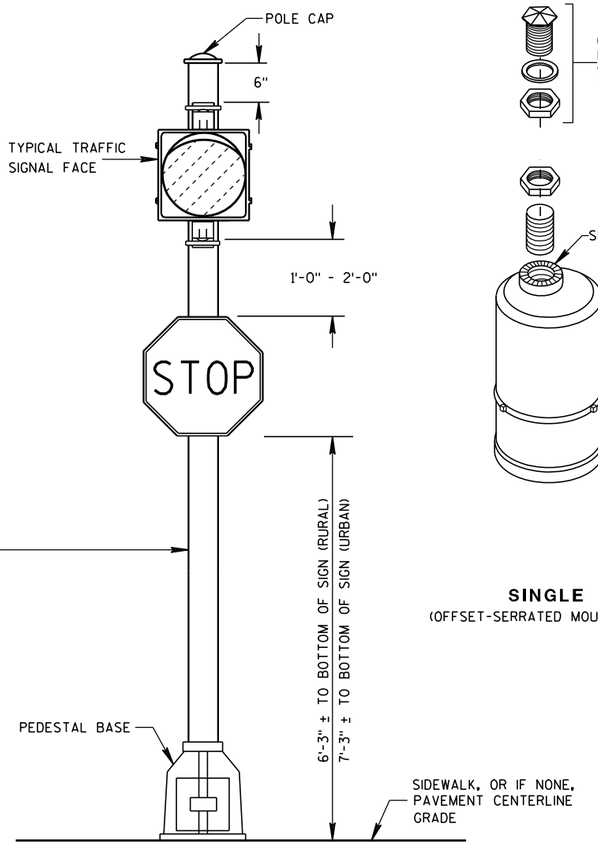
SIGNAL FACE MOUNTING DETAILS



PEDESTRIAN PUSH BUTTON TYPICAL MOUNTING



PEDESTRIAN FACE STANDARD-10 FT.
(WALK-DON'T WALK)



STANDARD FLASHER.
10 FOOT, 13 FOOT OR 15 FOOT AS REQUIRED

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIFICATIONS.

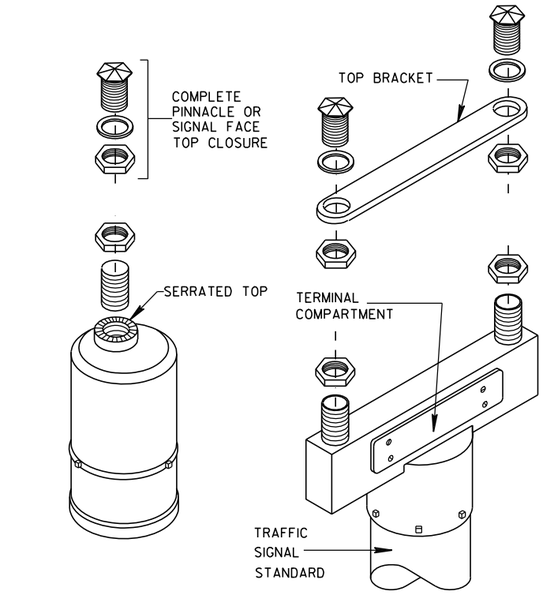
POLYCARBONATE SIGNAL FACE MOUNTING BRACKETS SHALL BE USED UNLESS ORNAMENTAL POLE CLAMPS ARE SPECIFIED.

LENGTH OF TRAFFIC STANDARDS SHALL BE AS SHOWN ON THE PLANS.

MOUNTINGS AND BRACKETS SHALL BE AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIAL PROVISIONS (BY THE DISTRICT TRAFFIC ENGINEER).

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

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



SINGLE
(OFFSET-SERRATED MOUNTING)

DOUBLE
(SERRATED MOUNTING)

SLIPFITTERS

TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/11/10
DATE

/S/ John Corbin
STATE ELECTRICAL ENGI

536
HWYS

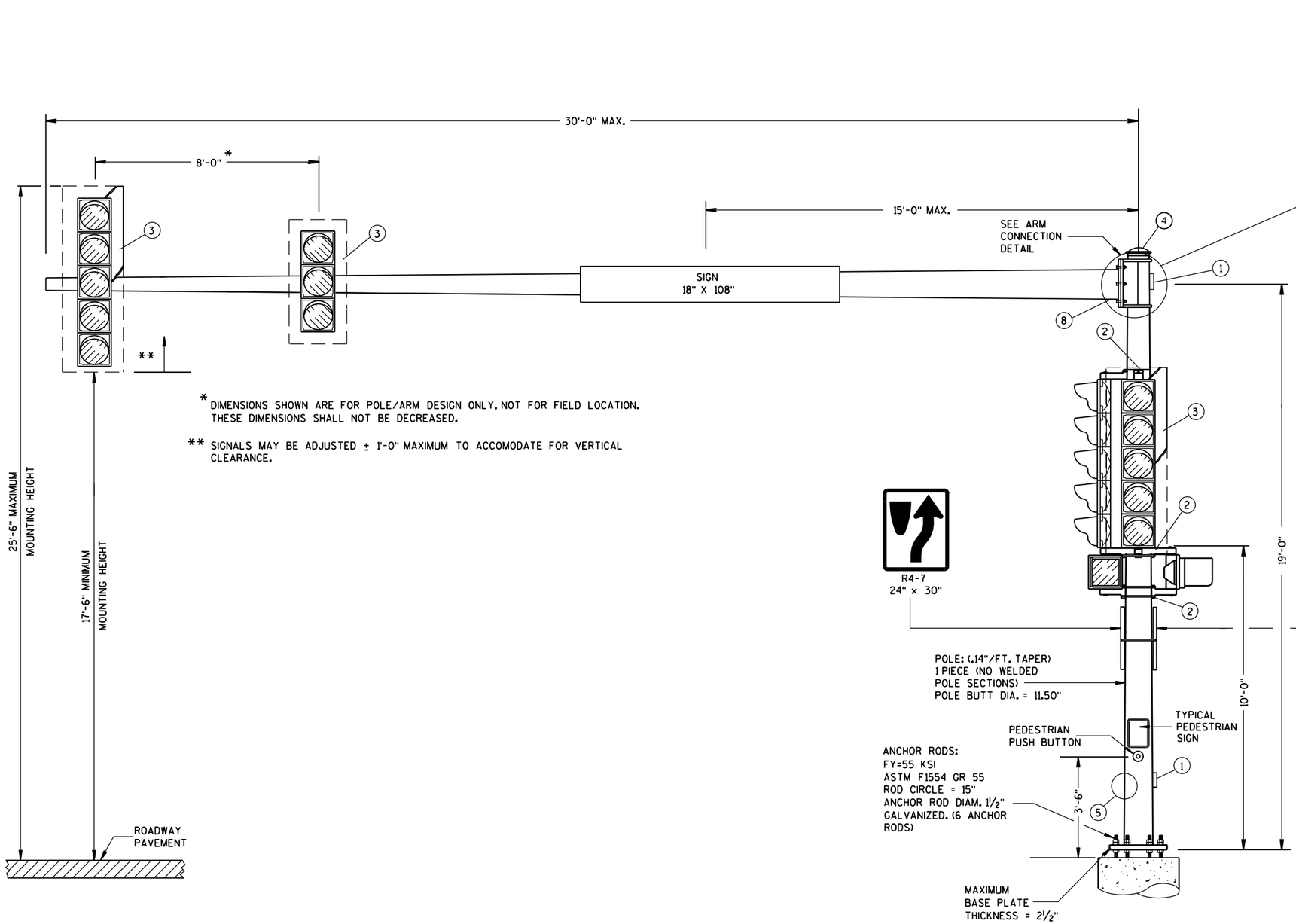
FHWA

6

S.D.D. 9 E 7-5

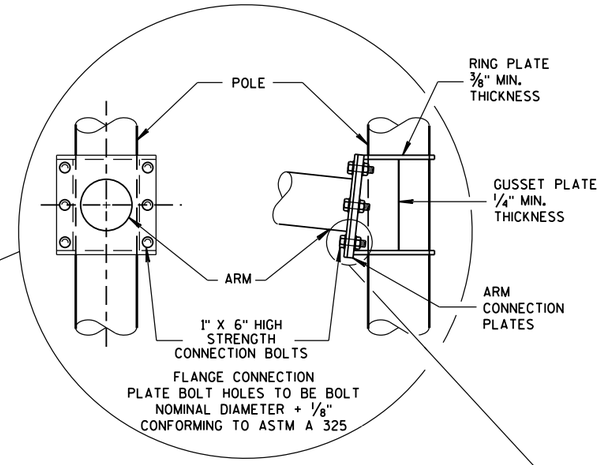
6

S.D.D. 9 E 7-5

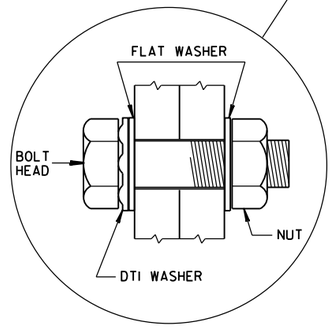


* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

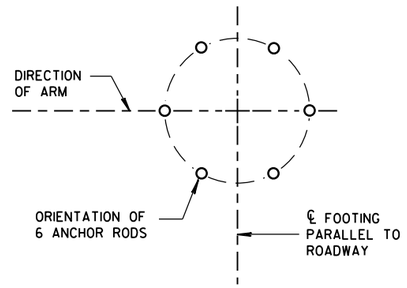
** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.



6 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL



ANCHOR ROD LOCATION

(MAXIMUM LOAD)

TYPE 9 POLE 15'- 30' MONOTUBE ARM

TYPE 9 POLE 15' - 30' MONOTUBE ARM

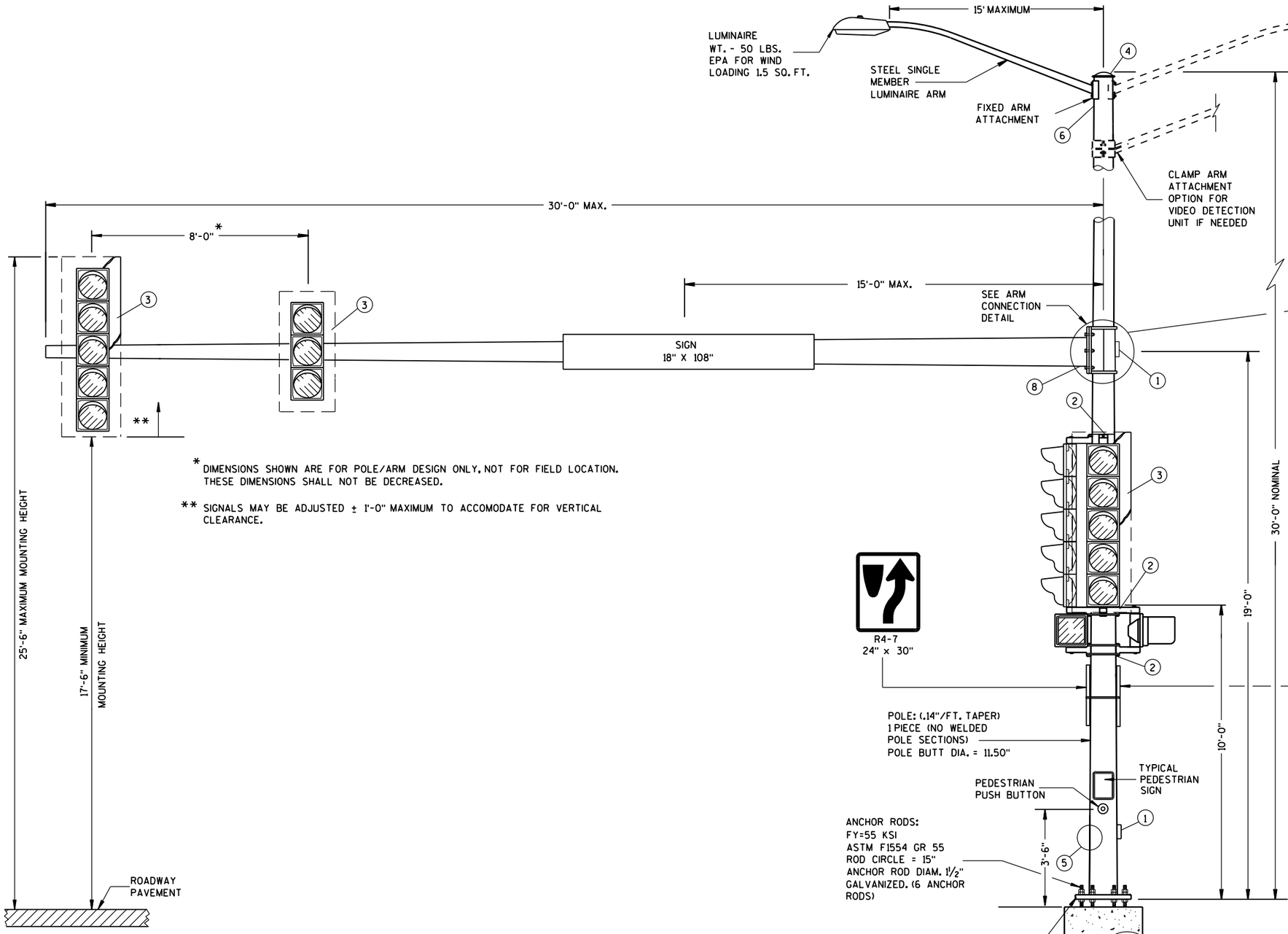
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

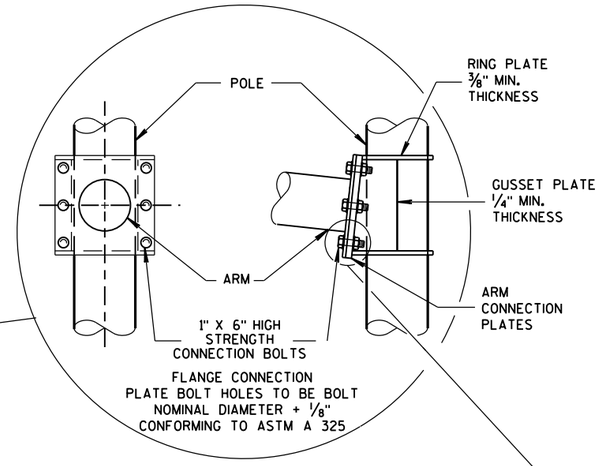
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

S.D.D. 9 E 8-6a

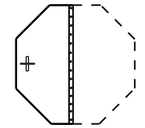
* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

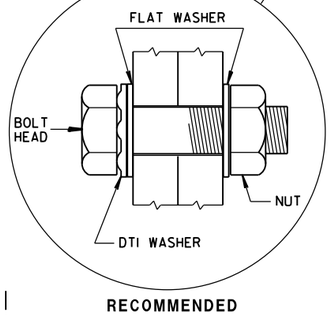
** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.



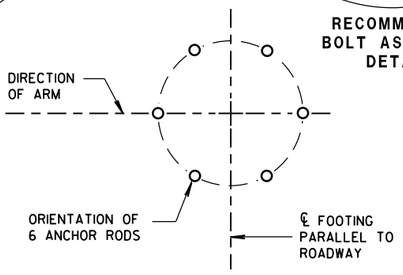


6 BOLT ARM CONNECTION DETAIL





RECOMMENDED
BOLT ASSEMBLY
DETAIL



ANCHOR ROD LOCATION

(MAXIMUM LOAD)

TYPE 10 POLE
15'- 30' MONOTUBE ARM

TYPE 10 POLE
15' - 30' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

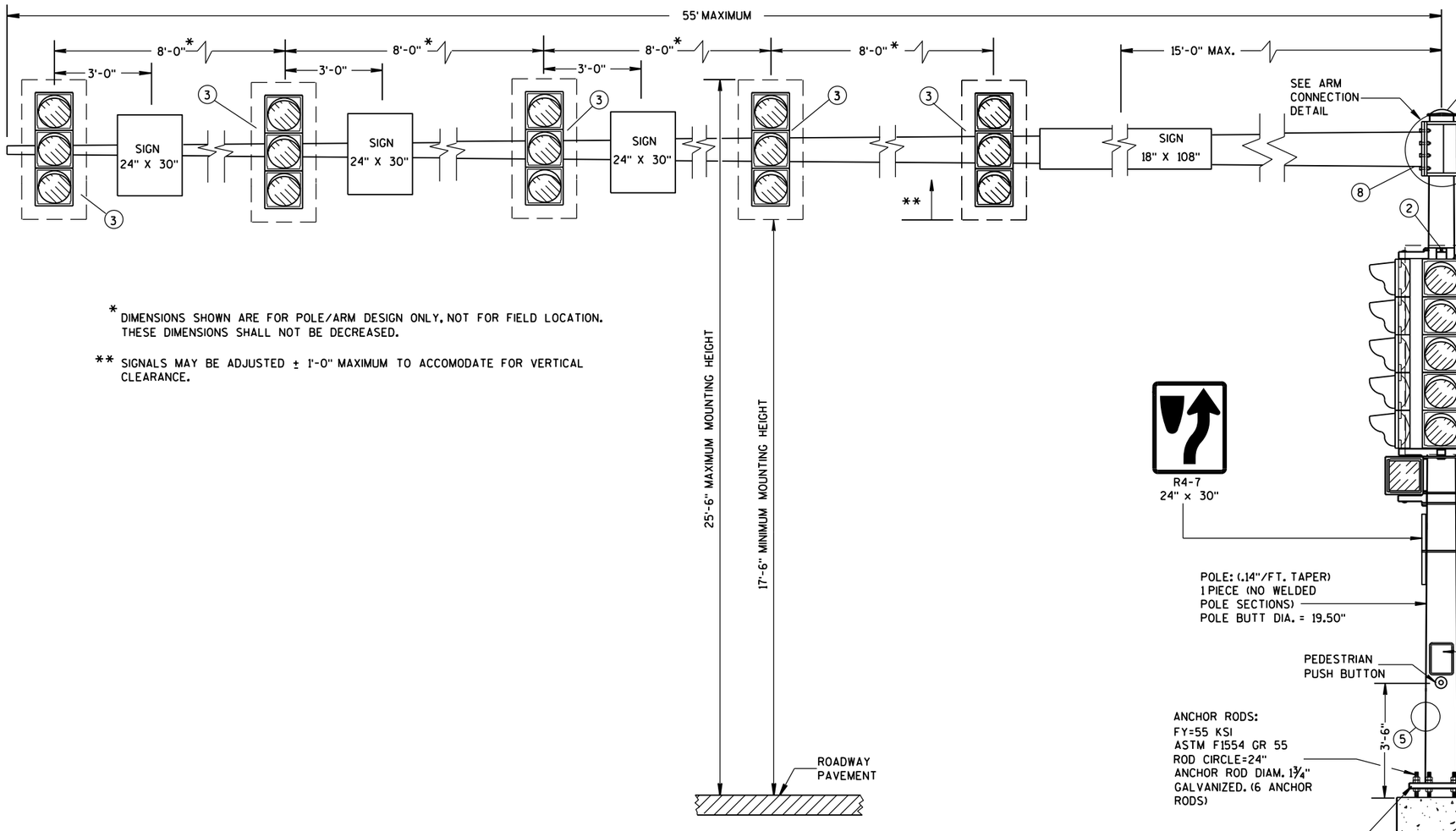
APPROVED
Sept. 2014
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL 538
FHWA

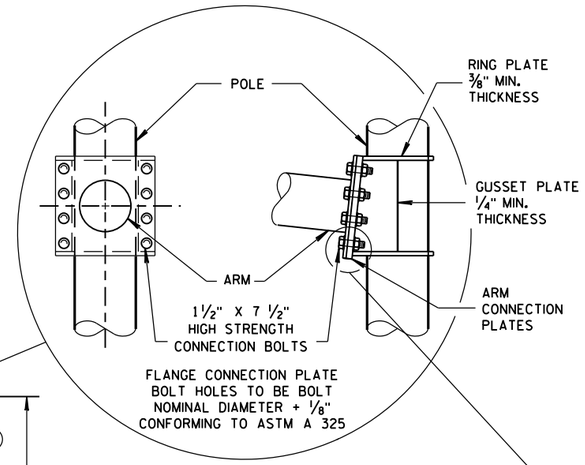
6

S.D.D. 9 E 8-6b

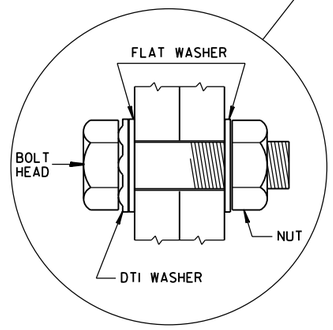
6

S.D.D. 9 E 8-6b

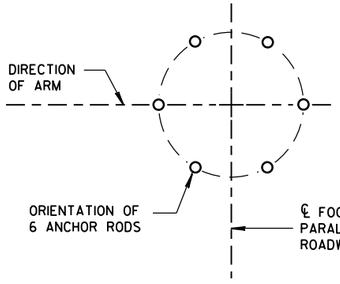




8 BOLT ARM CONNECTION DETAIL



RECOMMENDED
BOLT ASSEMBLY
DETAIL



ANCHOR ROD LOCATION

* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.

(MAXIMUM LOAD)

TYPE 12 POLE 35'- 55' MONOTUBE ARM

TYPE 12 POLE
35' - 55' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

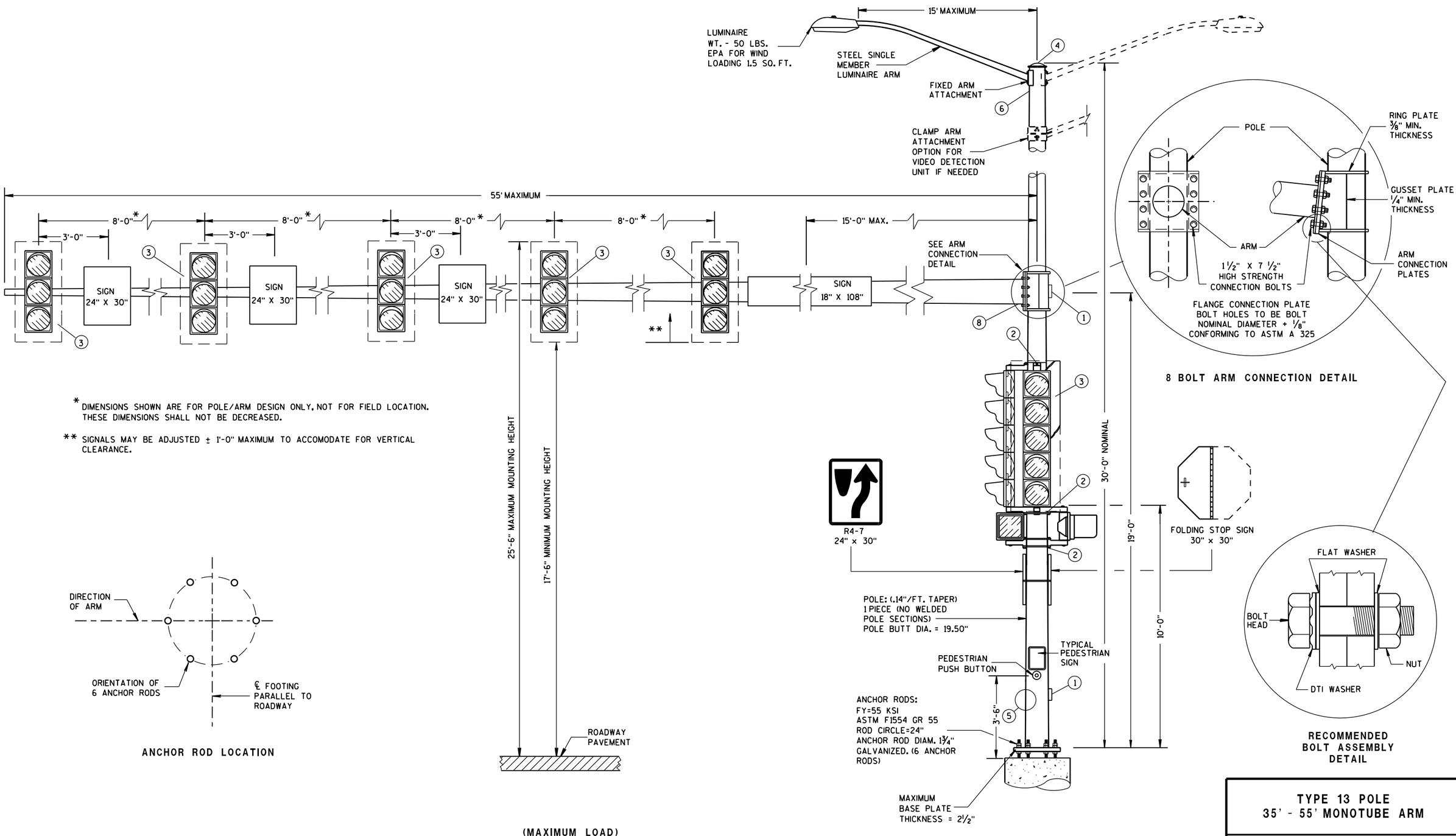
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 9 E 8-6c

6

S.D.D. 9 E 8-6c



* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.

8 BOLT ARM CONNECTION DETAIL

RECOMMENDED
BOLT ASSEMBLY
DETAIL

ANCHOR ROD LOCATION

(MAXIMUM LOAD)

TYPE 13 POLE 35'- 55' MONOTUBE ARM

TYPE 13 POLE
35' - 55' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2014
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL

FHWA

6

S.D.D. 9 E 8-6d

GENERAL NOTES

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

POLE TYPES 9 AND 10 ARE FOR ARM LENGTHS 15-FOOT TO 30-FOOT.

POLE TYPES 12 AND 13 ARE FOR ARM LENGTHS 35-FOOT TO 55-FOOT.

MONOTUBE POLE AND ARM SHALL BE GALVANIZED STEEL.

RING-STIFFENED BUILT-UP BOX TYPE OF ATTACHMENT FOR TRAFFIC SIGNAL ARM.

ONE (1) PIECE POLE CONSTRUCTION (NO WELDED POLE SECTIONS).

STANDARD STRAIGHT ARM DESIGN (3 % ± RISE).

SECTION 657, POLES OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

PROVIDE WIREWAY THRU POLE WALL AND ARM CONNECTION PLATES. PROVIDE ROUND, SMOOTH INSIDE SURFACE.

MANUFACTURER'S SUBMITTED POLE DESIGNS AND DRAWINGS SHALL BE SIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER AND CERTIFIED AS BEING IN COMPLIANCE WITH THE AASHTO 2013 6TH EDITION AND ALL PERTINENT WISDOT SPECIFICATIONS AND DRAWINGS FOR TRAFFIC AND LIGHTING STRUCTURES AND AS FOLLOWS:

- CATEGORY III FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 AND TYPE 10 STRUCTURES.
- CATEGORY II FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 12 AND TYPE 13 STRUCTURES.
- 90 MPH (3-SECOND GUST) WIND SPEED AND A 50 YEAR DESIGN LIFE.

SECURE THE OPENING BELOW THE BASE PLATE WITH STAINLESS STEEL OR GALVANIZED STEEL MESH AND SECURE THE MESH WITH ¾" S.S. BANDING AROUND THE LEVELING NUTS.

INDENT PRINT (NOMINAL ½" HIGH) THE POLE LENGTH AND FIRST TWO LETTERS OF THE MANUFACTURERS NAME ON TWO SIDES OF THE BASE PLATE 180 DEGREES APART, BEFORE GALVANIZING. THE ARM SHALL BE IDENTIFIED WITH THE SAME INFORMATION BY INDENT PRINT.

SIGNAL FACE SHALL BE MOUNTED 6 INCHES (NOMINAL) FROM THE END OF THE MONOTUBE ARM OR AS SHOWN ON THE PLAN CONSTRUCTION DETAIL OR AS DIRECTED BY THE PROJECT ENGINEER/ELECTRICAL OPERATIONS PERSONNEL. MOUNT ALL LIKE HEADS AT SAME ELEVATION.

SIGN MOUNTING BRACKETS SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 637 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

(1) DESIGN FOR MAXIMUM ALLOWABLE HANDHOLE WITH COVER ASSEMBLY WITH TWO ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.

(2) SIGNAL MOUNTING BRACKETS FOR POLE MOUNTING, MOUNT WITH CAP SCREW AND BANDING, (SEE SPECIFICATIONS SEC. 658).

(3) SECURELY MOUNT BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURERS RECOMMENDATIONS.

(4) THE TOP OF THE POLE SHAFT AND THE END OF THE MONOTUBE ARM SHALL BE EQUIPPED WITH A REMOVABLE, VENTILATED CAP HELD SECURELY IN PLACE WITH SET SCREWS.

(5) FACTORY-WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HANDHOLE, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.

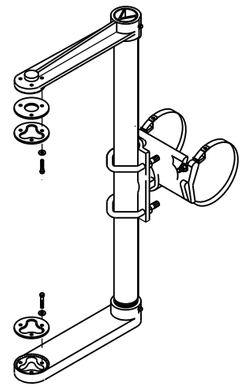
(6) FACTORY-WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.

(7) INSTALL DEPARTMENT PROVIDED STRUCTURAL IDENTIFICATION PLAQUES.

STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

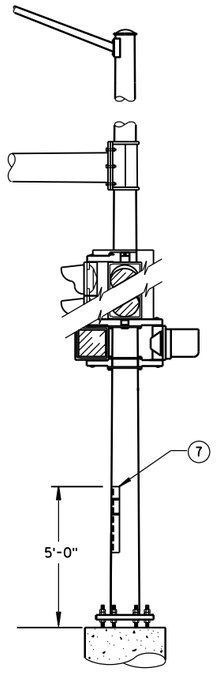
MOUNTING HEIGHT SHALL BE 5'-0" ABOVE THE CURB OR SHOULDER . ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.

(8) FACTORY DRILLED ½" DRAIN HOLE 2" FROM FLANGE CONNECTION PLATE.

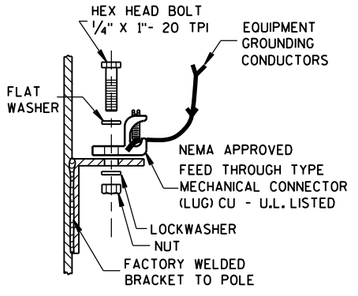


SIGNAL FACE MOUNTING BRACKET DETAIL FOR MONOTUBE ARM

(MOUNT PER MANUFACTURER'S RECOMMENDATION)

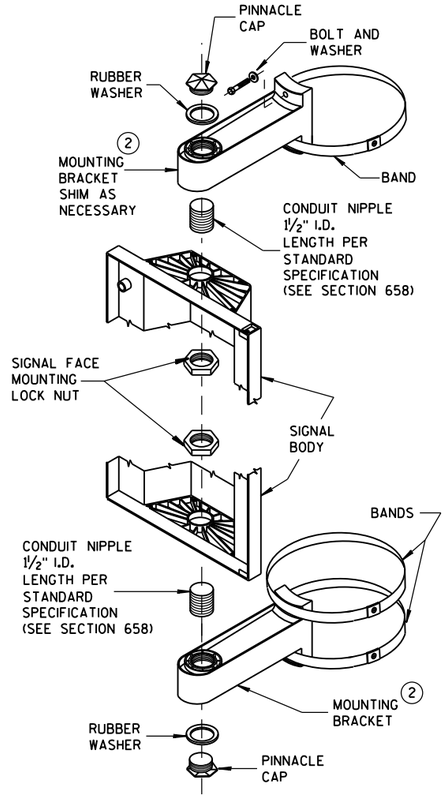


STRUCTURAL IDENTIFICATION PLAQUE PLACEMENT

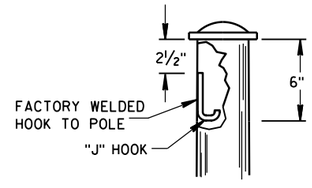


TYPICAL GROUNDING CONNECTIONS (5)

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



SIGNAL FACE VERTICAL MOUNTING DETAIL



"J" HOOK WIRE SUPPORT (6)

GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2014 — DATE

/S/ Ahmet Demirbilek — STATE ELECTRICAL

FHWA

6

S.D.D. 9 E 8-6e

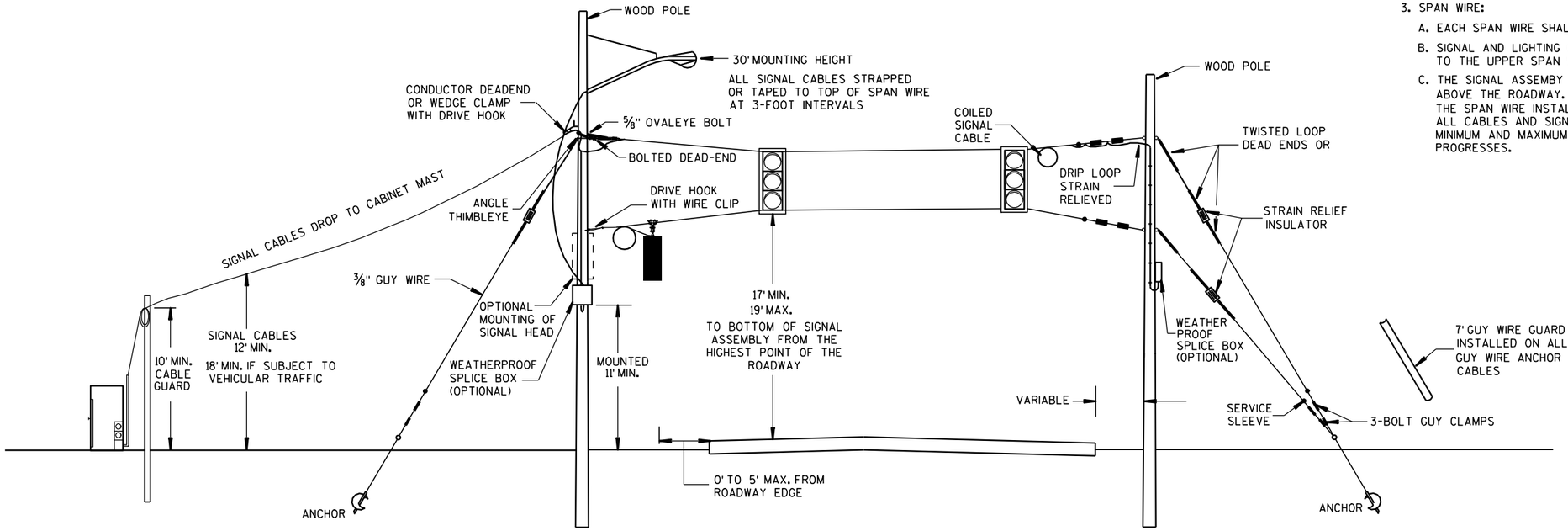
GENERAL NOTES

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

1. WOOD POLES SHALL BE CLASS 4. LENGTH DETERMINED BY SIGNAL PLAN.

2. SIGNAL FACES:
   A. ALL SECTIONS SHALL BE 12" AND POLYCARBONATE.
   B. EACH SHALL CONTAIN A 5" WIDE DULL BLACK POLYCARBONATE BACKPLATE.
   C. EACH SHALL BE WIRED FROM THE TOP SIGNAL MOUNTING BRACKET.
   D. NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.

3. SPAN WIRE:
   A. EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED.
   B. SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
   C. THE SIGNAL ASSEMBY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.



SPAN WIRE
TEMPORARY SIGNALS

MINIMUM POLE LENGTHS	POLE BURIEL DEPTHS
25'	5'
30'	6'
35'	7'
40'	8'
45'	9'

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

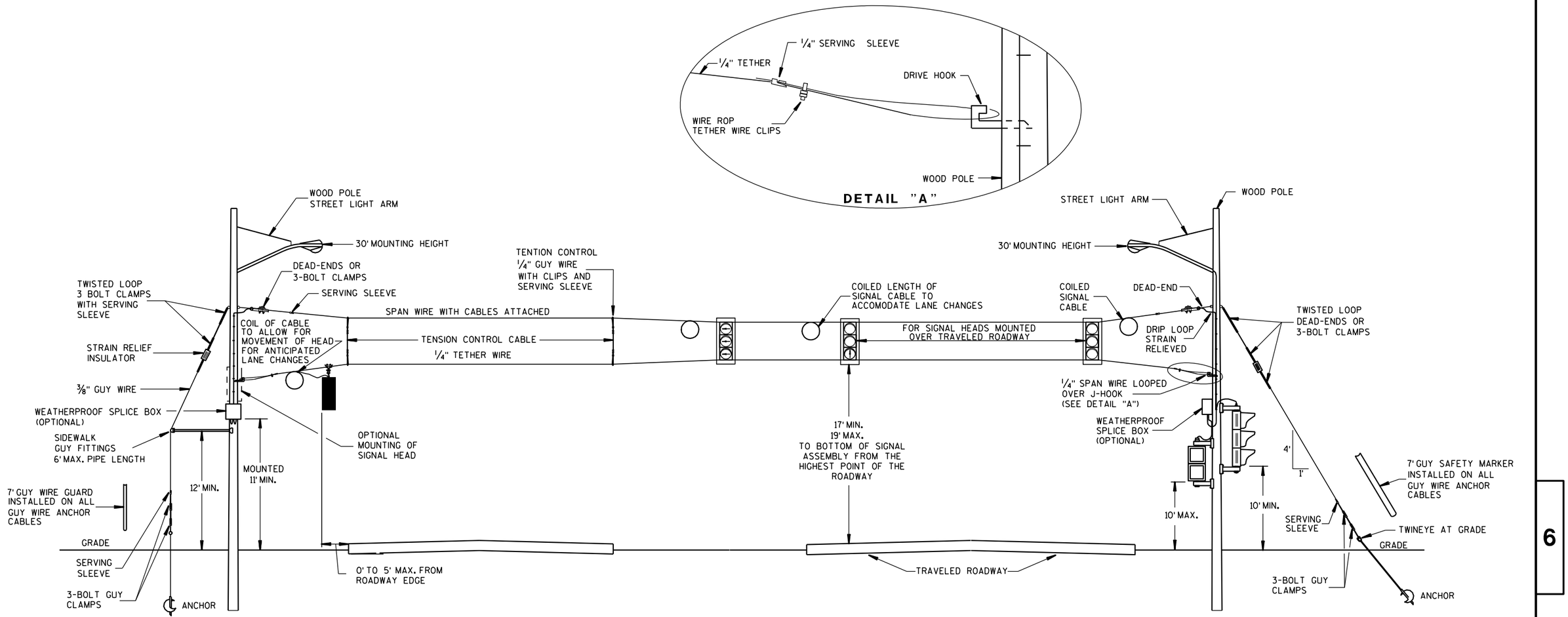
APPROVED

7-14-08 DATE

/S/ Balu Ananthar [illegible] n
STATE ELECTRICAL ENGI 542 HWYS

FHWA

6
S.D.D. 9 G 1-3a



GENERAL NOTES

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

1. WOOD POLES SHALL BE CLASS 4. LENGTH DETERMINED BY SIGNAL PLAN.
2. SIGNAL FACES:
   A. ALL SECTIONS SHALL BE 12" AND POLYCARBONATE.
   B. EACH SHALL CONTAIN A 5" WIDE DULL BLACK POLYCARBONATE BACKPLATE.
   C. EACH SHALL BE WIRED FROM THE TOP SIGNAL MOUNTING BRACKET.
   D. NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.
   E. FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.
3. SPAN WIRE:
   A. EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED.
   B. SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
   C. THE SIGNAL ASSEMBY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.

SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

MINIMUM POLE LENGTHS	CLASS	MIN. BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-14-08 DATE

/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI 543 HWYS

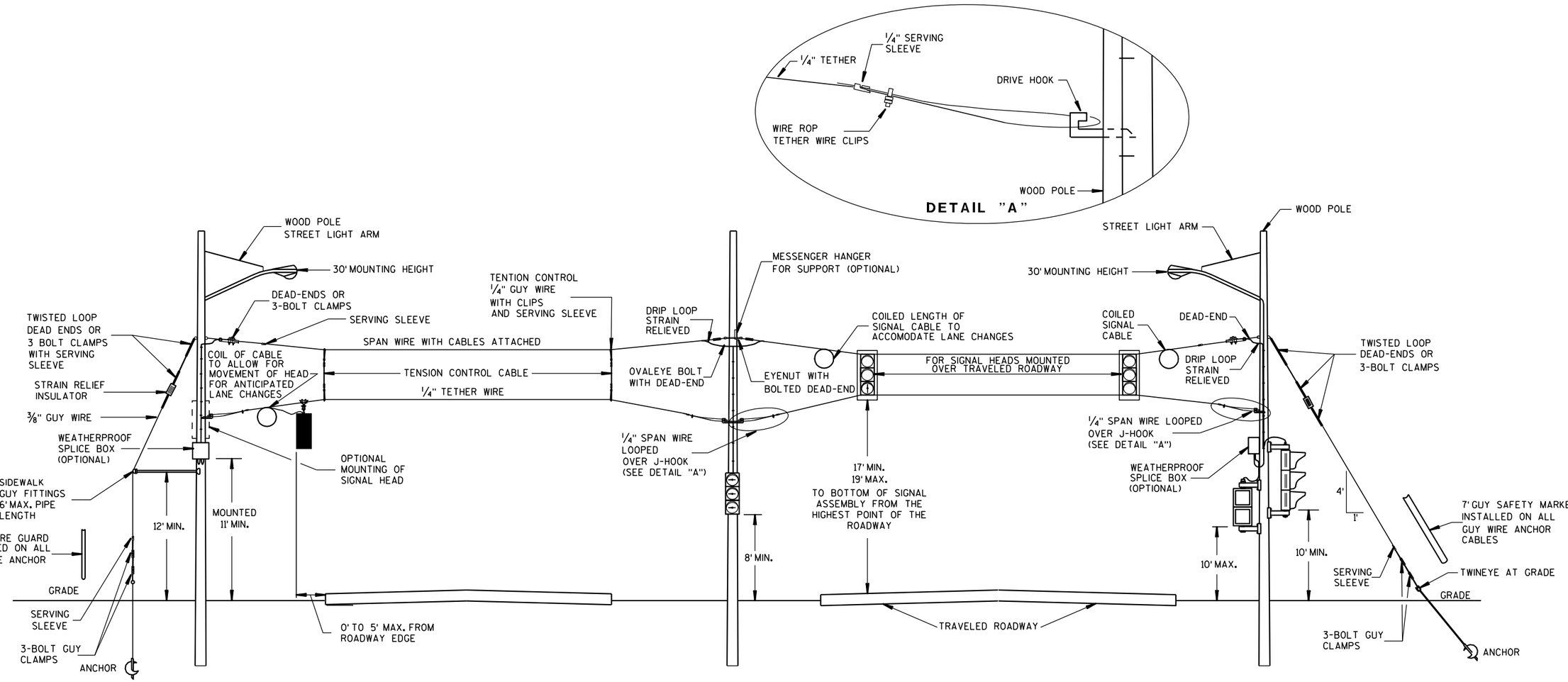
FHWA

6

S.D.D. 9 G 1-3b

6

S.D.D. 9 G 1-3b



SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

GENERAL NOTES

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

1. WOOD POLES SHALL BE CLASS 4. LENGTH DETERMINED BY SIGNAL PLAN.

2. SIGNAL FACES:
   A. ALL SECTIONS SHALL BE 12" AND POLYCARBONATE.
   B. EACH SHALL CONTAIN A 5" WIDE DULL BLACK POLYCARBONATE BACKPLATE.
   C. EACH SHALL BE WIRED FROM THE TOP SIGNAL MOUNTING BRACKET.
   D. NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.
   E. FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.

3. SPAN WIRE:
   A. EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED.
   B. SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
   C. THE SIGNAL ASSEMBY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.

MINIMUM POLE LENGTHS	CLASS	MIN. BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-14-08 DATE

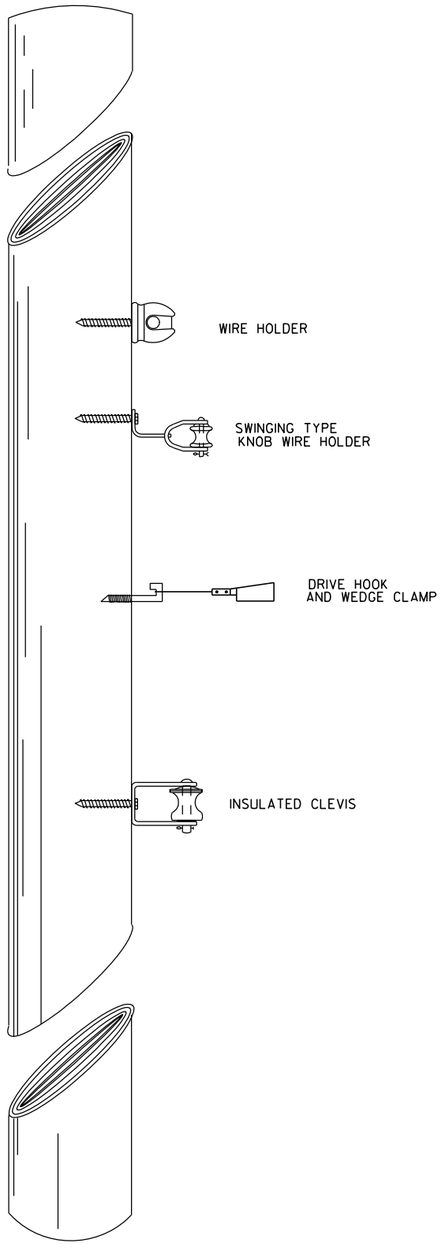
/S/ Balu Aganthangarayanan
STATE ELECTRICAL ENGI

544 HWYS

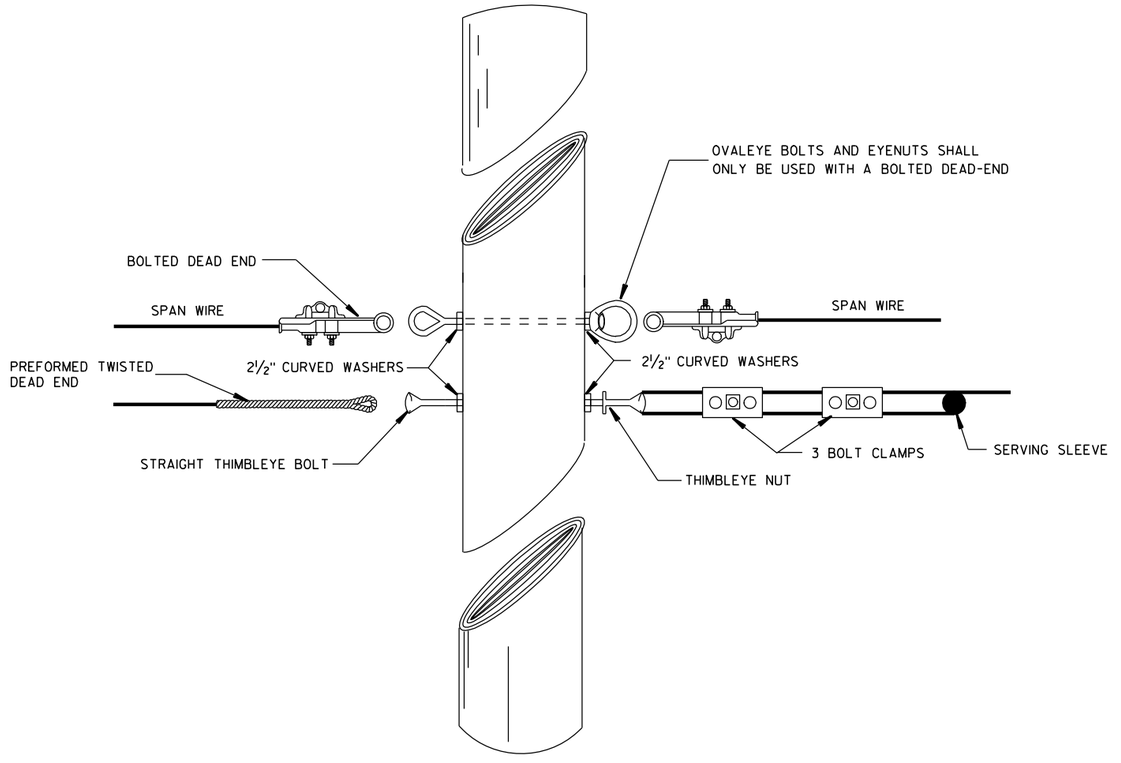
FHWA

6

S.D.D. 9 G 1-3c



TYPICAL CABLE HANGERS



TYPICAL DEAD-ENDING

6

6

S.D.D. 9 G 1-3d

S.D.D. 9 G 1-3d

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

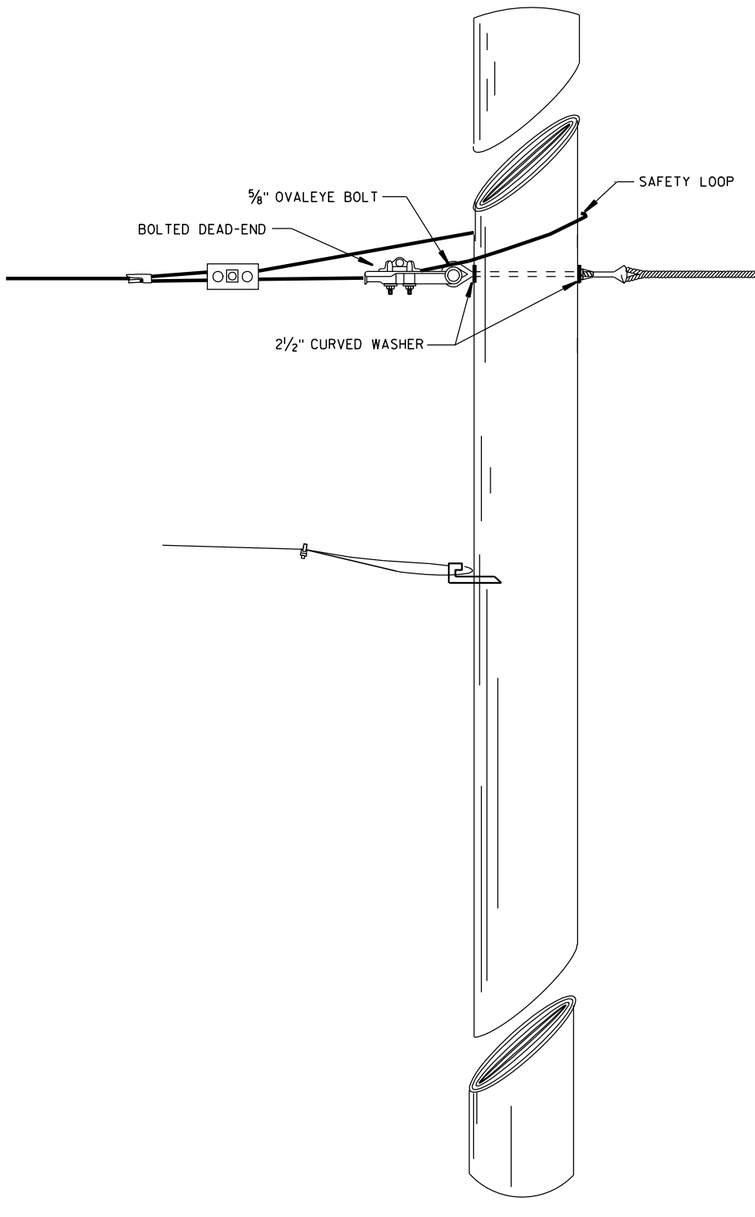
7-14-08
DATE

/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI 545 HWYS

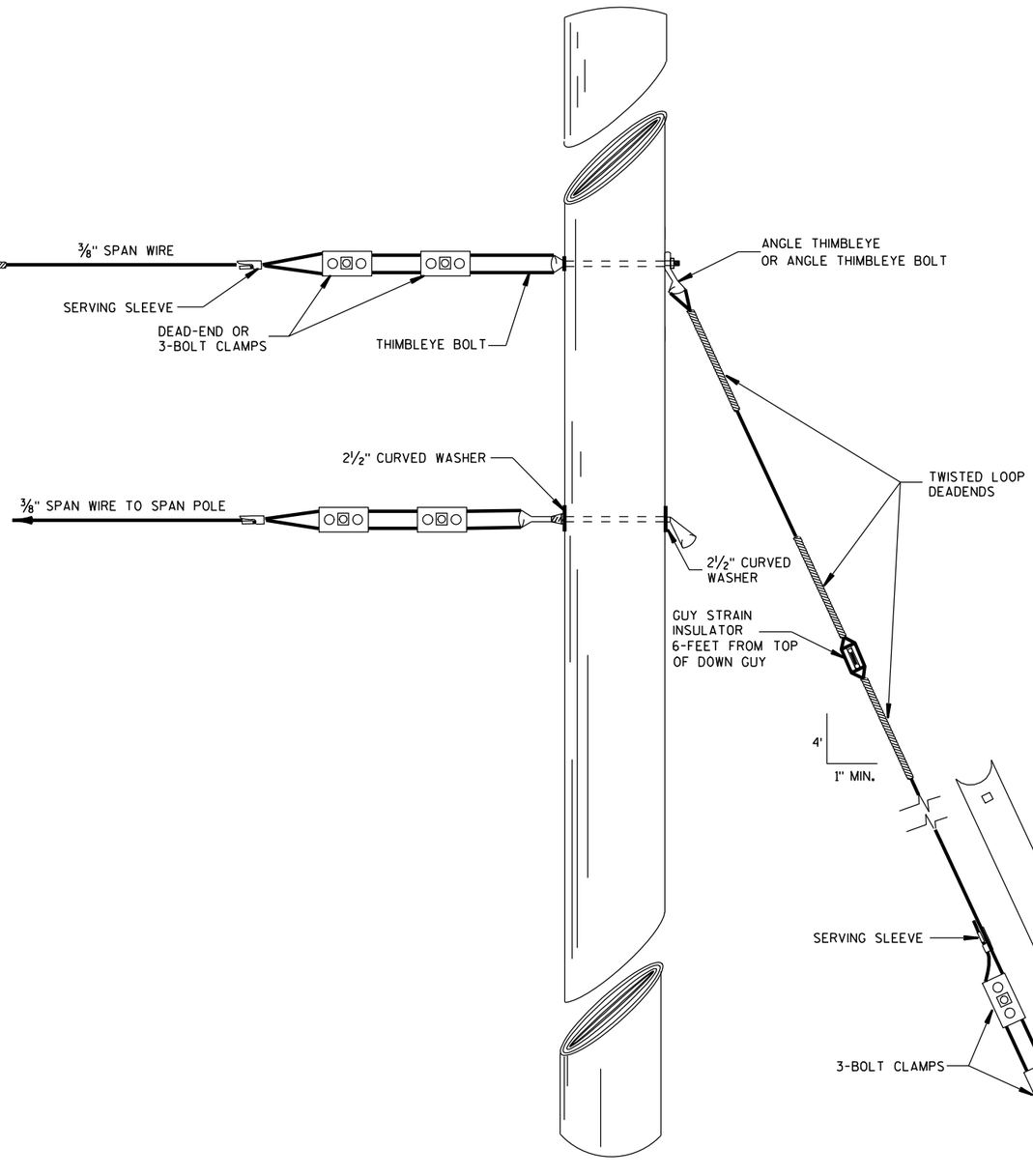
FHWA

GENERAL NOTES

1. USE ¾" DRILL IN WOOD POLE TO PROVIDE HOLE FOR ⅝" BOLTS.
2. SAFTY LOOP REQUIRED ON EACH END OF ALL SPAN WIRES.



SPAN WIRE POLE



GUY POLE

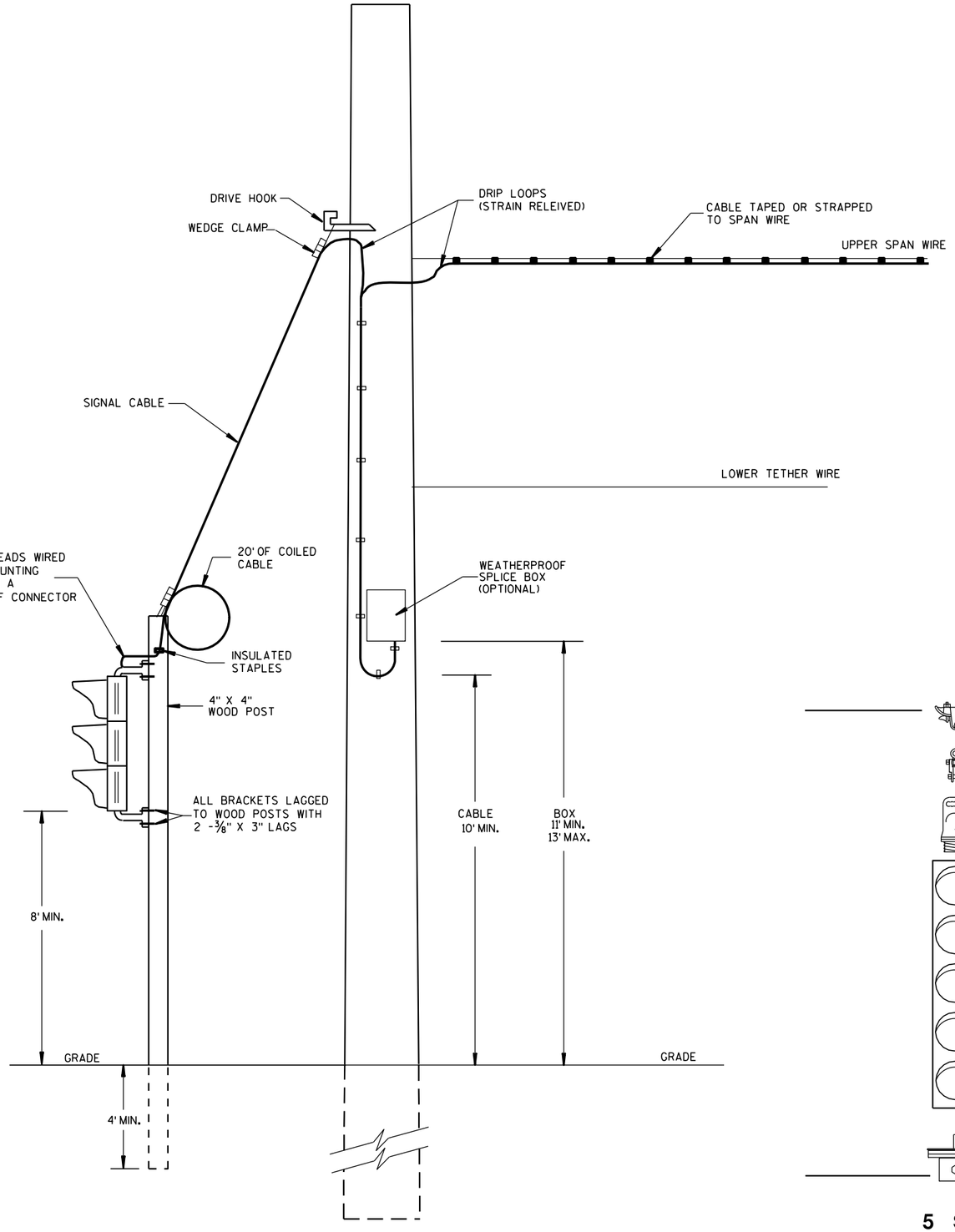
TYPICAL DEAD-ENDINGS OR GUYING

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

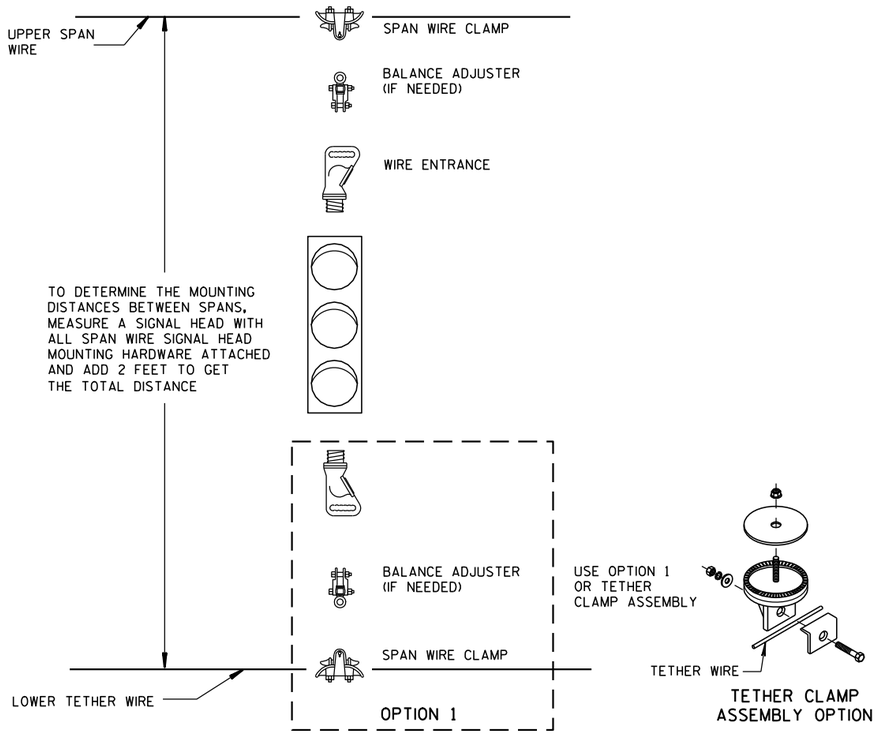
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7-14-08 DATE
/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI 546 HWYS
FHWA

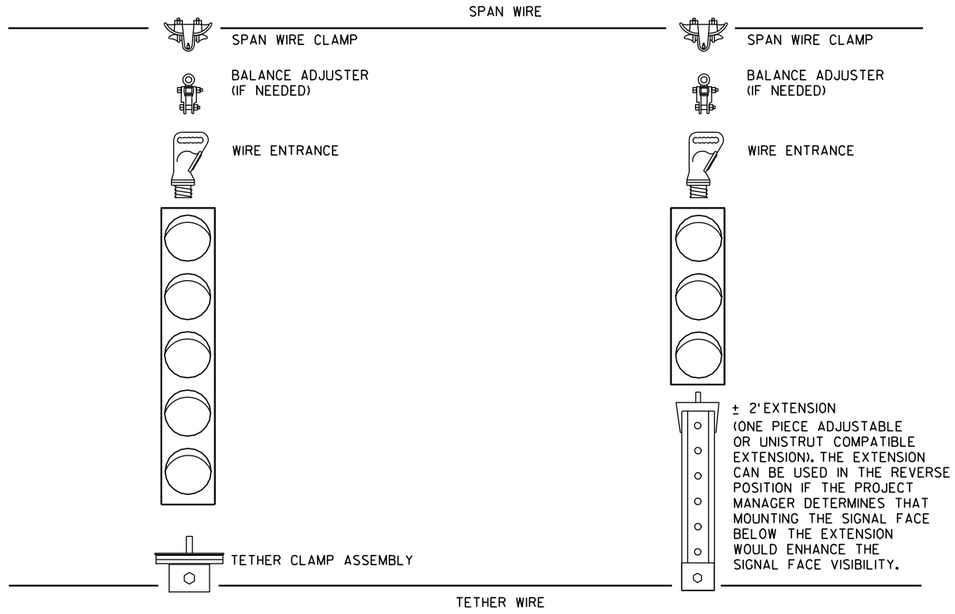
6
S.D.D. 9 G 1-3e



TYPICAL DROP TO TEMPORARY MOVEABLE SIGNAL



TYPICAL SPAN WIRE MOUNTING HARDWARE

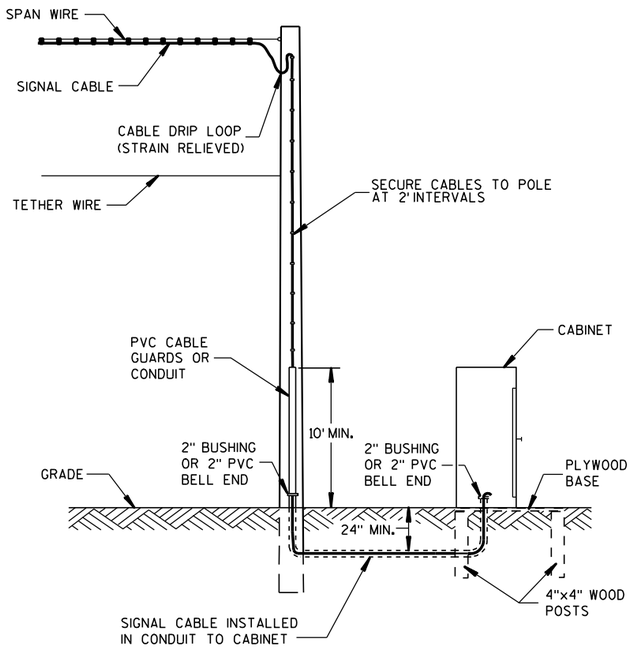


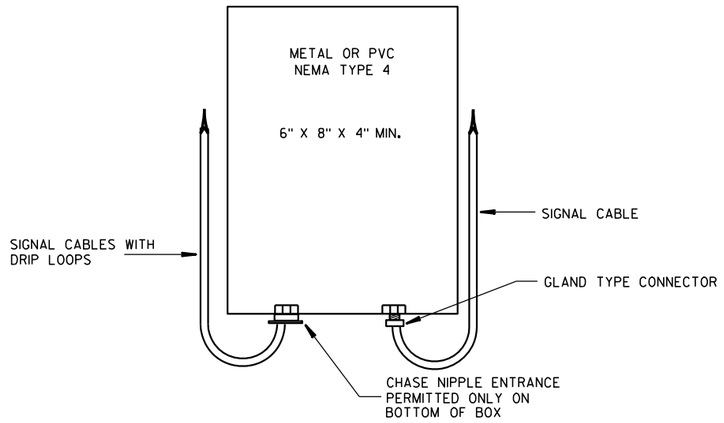
5 SECTION VERTICAL WITH 3 SECTION VERTICAL ON ONE SPAN WIRE

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

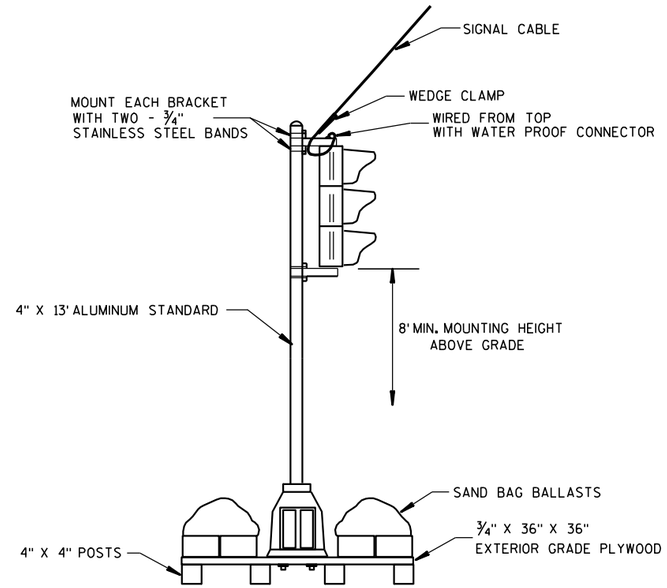
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7-14-08
DATE
/S/ Balu Aganthangarayanan
STATE ELECTRICAL ENGI
FHWA

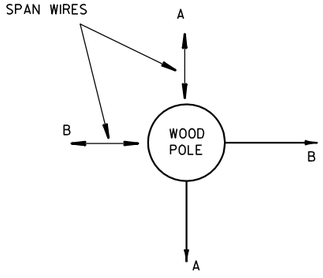




SPLICE BOX

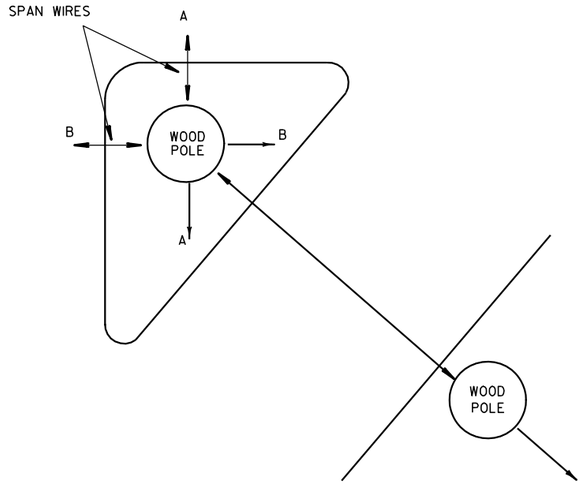


TYPICAL SKID TYPE TEMPORARY

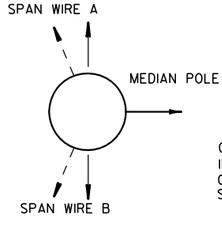


ALL DOWN OR SIDEWALK GUYS SHALL BE INSTALLED IN THE OPPOSITE DIRECTION OF THE STRAIN OF THE SPAN WIRE

CORNER POLES



ISLAND POLES



GUY AWAY FROM INTERSECTION OR IN OPPOSITE DIRECTION OF THE SPAN LOADING

MEDIAN POLES

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-14-08 DATE

/S/ Balu Aganthangayanan
STATE ELECTRICAL ENGI

548

HWYS

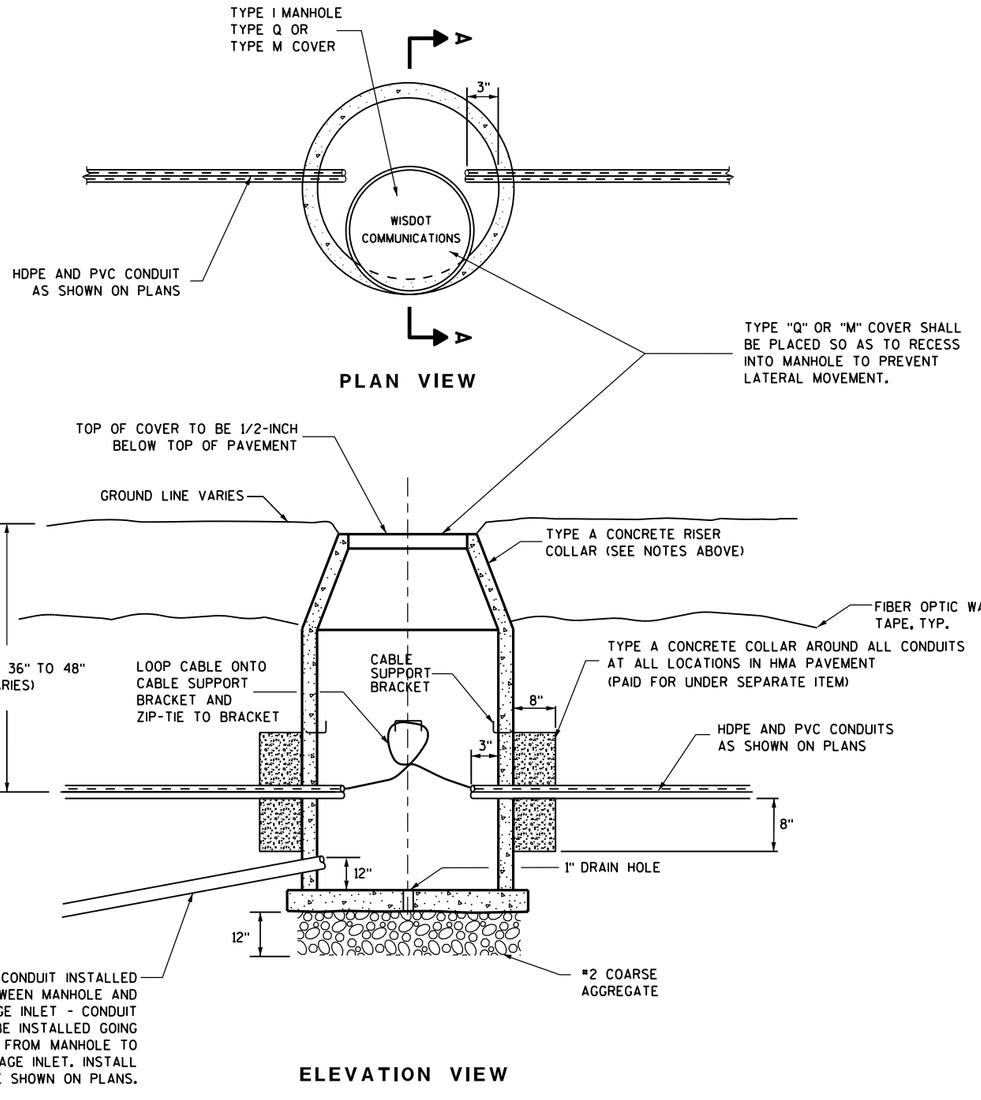
FHWA

6

S.D.D. 9 G 1-3g

6

S.D.D. 9 G 1-3g



PLAN VIEW

ELEVATION VIEW

GENERAL NOTES

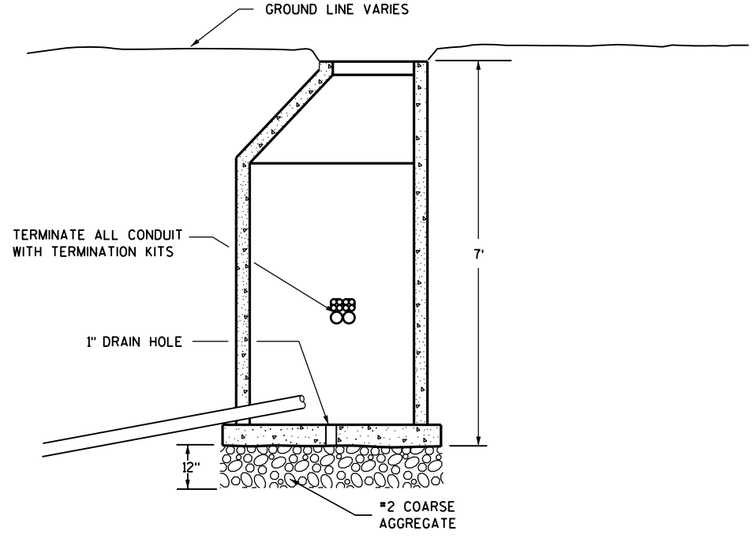
ALL OPENINGS IN STRUCTURE MUST BE CORED OR BLOCKED OUT AT TIME OF FABRICATION, OR CORED AT TIME OF PLACEMENT.

FOR MANHOLES PLACED OUTSIDE PAVED AREA, TYPE "M" COVERS SHALL BE INSTALLED SO THAT THE FRAME AND LID ARE RECESSED INTO THE TOP OF THE CONCRETE MANHOLE AS TO PREVENT LATERAL MOVEMENT OF THE COVER. THE FRAME SHALL BE INVERTED AND PLACED INTO THE OPENING OF THE MANHOLE PROTRUDING LESS THAN 1-INCH ABOVE THE TOP OF THE CONCRETE.

FOR MANHOLES WITHIN PAVED AREAS, TYPE "Q" COVERS SHALL BE USED.

MANHOLE COVERS TO BE IMPRINTED WITH "WISDOT COMMUNICATIONS" IN 2-INCH LETTERING.

ALL MANHOLES, INLETS, AND PULL BOXES LOCATED WITHIN WARRANTED HMA PAVEMENT SHALL BE COVER PLATED AT OR BELOW THE TOP OF THE BASE COURSE AND COVERS BROUGHT TO FINAL GRADE PRIOR TO PLACING THE TOP SMA LAYER. ALL WORK IS INCIDENTAL TO OTHER ITEMS OF WORK.



SECTION A-A

COMMUNICATIONS MANHOLE

COMMUNICATIONS
MANHOLE DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

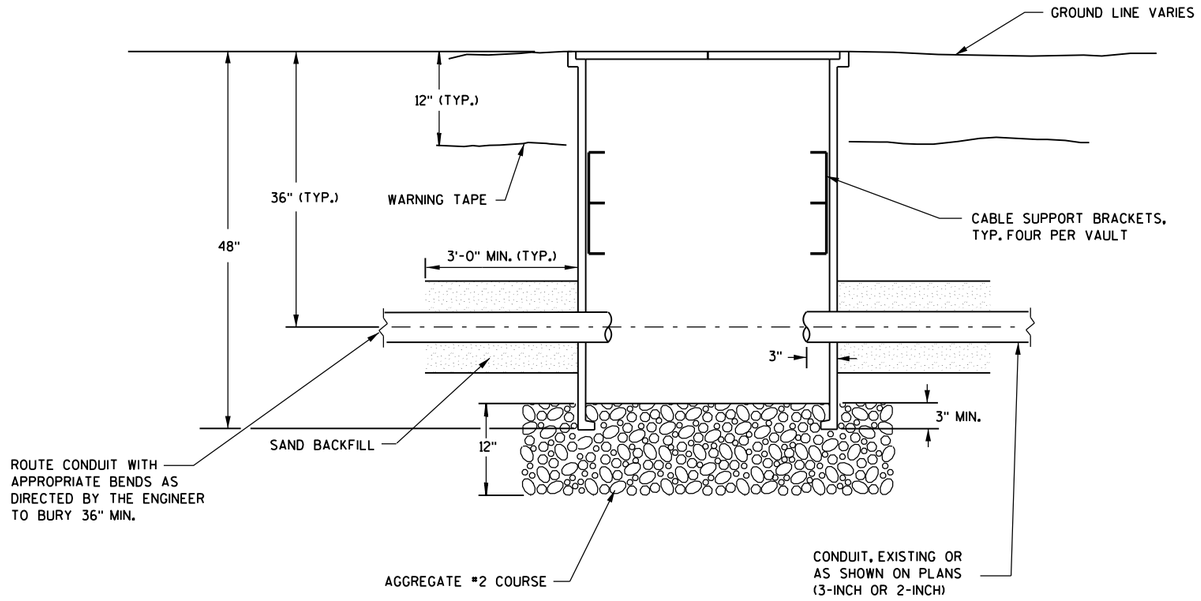
APPROVED
Sept. 2014
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL
FHWA

6

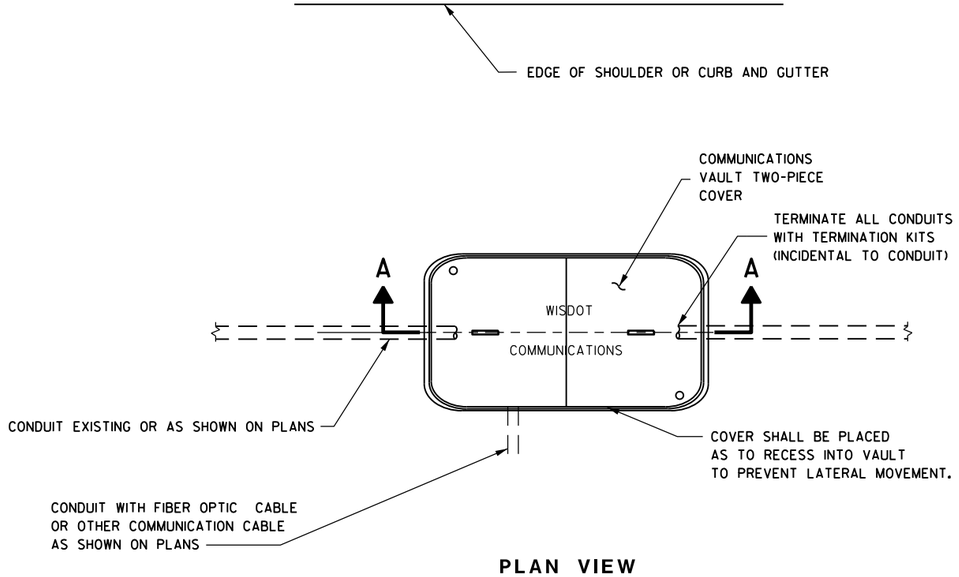
S.D.D. 9 H 8-1

6

S.D.D. 9 H 8-1



SECTION A-A



PLAN VIEW

COMMUNICATIONS VAULT

GENERAL NOTES

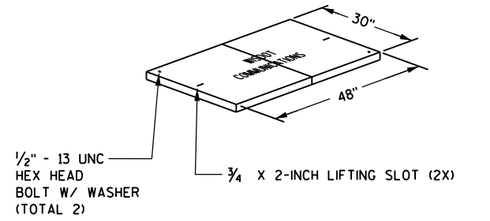
BOX SHALL HAVE AN OPEN BASE.

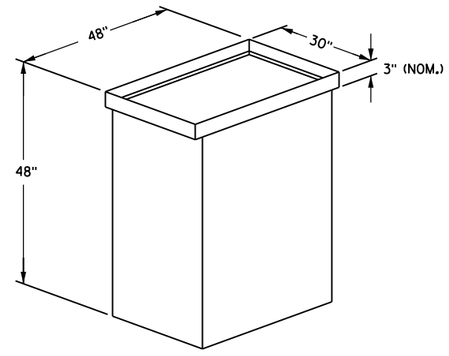
COVER SHALL BE DETECTABLE, AND HAVE A MINIMUM DESIGN LOAD OF 15,000 LBS AND SHALL LOCK.

ALL OPENINGS IN STRUCTURE MUST BE MACHINED AT TIME OF FABRICATION, OR PUNCH DRIVEN AT TIME OF PLACEMENT.

VAULTS SHALL BE OF ONE-PIECE CONSTRUCTION. TWO-PIECE/STACKABLE VAULTS WILL NOT BE PERMITTED.

FIELD PLACEMENT OF COMMUNICATIONS VAULTS SHALL BE AS DIRECTED BY THE ENGINEER.

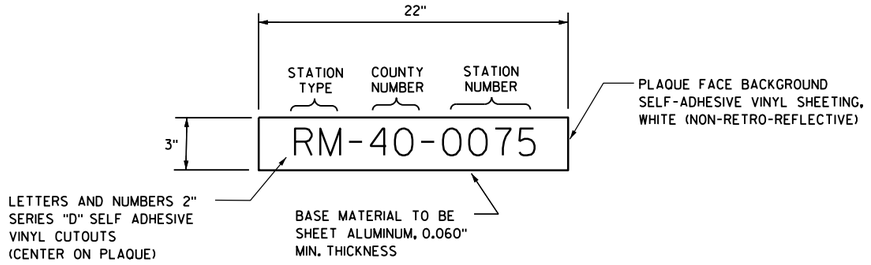




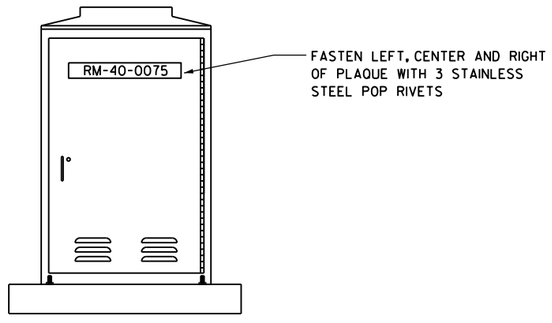
ISOMETRIC VIEW

COMMUNICATION VAULT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
Sept. 2014	/S/ Ahmet Demirbilek
DATE	STATE ELECTRICAL
FHWA	

6
S.D.D. 9 H 9-1

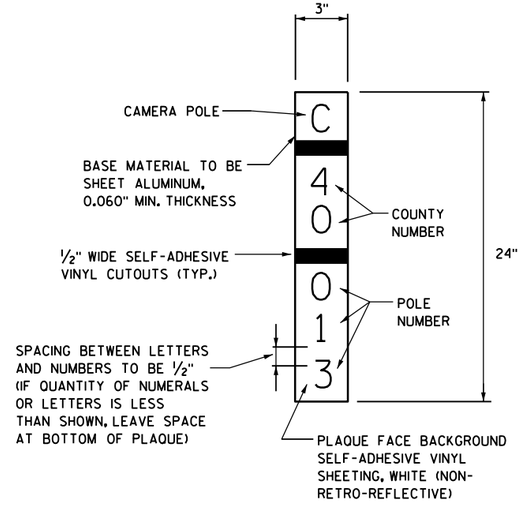


CONTROL CABINET IDENTIFICATION PLAQUE DETAIL

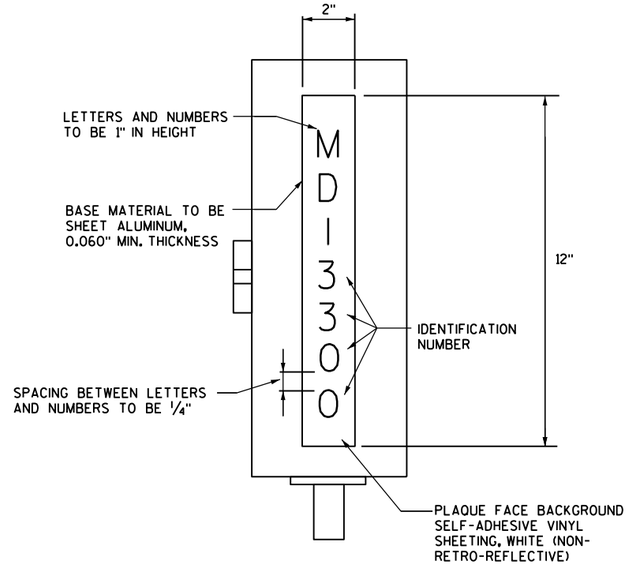


CONTROL CABINET IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENTS

(TYPICAL ALL CONTROL CABINETS)



POLE IDENTIFICATION PLAQUE DETAIL



MICROWAVE DETECTOR FIELD CABINET IDENTIFICATION PLAQUE DETAIL

GENERAL NOTES

1. TWO PLAQUES PER CABINET REQUIRED ON CONTROL CABINET.
2. FASTEN ONE PLAQUE ON FRONT DOOR, UPPER HALF.
3. FASTEN ONE PLAQUE ON SIDE FACING LOCAL STREET. IF NO LOCAL STREET NEARBY, OR IF SUCH LOCATION COINCIDES WITH LOCATION OF PLAQUE IN NOTE (2), FASTEN PLAQUE ON REAR OF CABINET, UPPER HALF.
4. COUNTY NUMBER NOT REQUIRED ON RAMP METER CABINETS.

LEGEND STATION TYPE

RM - RAMP METER
CCTV - CLOSED CIRCUIT TELEVISION
ATR - AUTOMATIC TRAFFIC RECORDER
SDS - SYSTEM DETECTOR STATION
MD - MICROWAVE DETECTOR

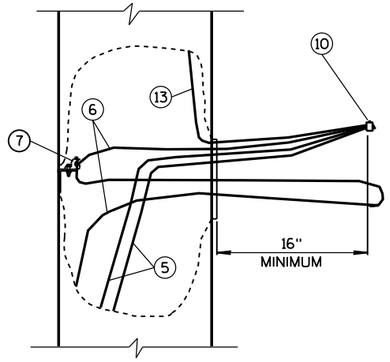
IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

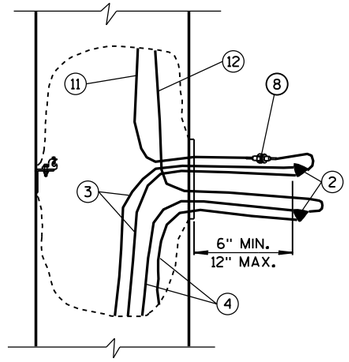
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demribilek — STATE ELECTRICAL
FHWA

6

S.D.D. 9 H 11-1

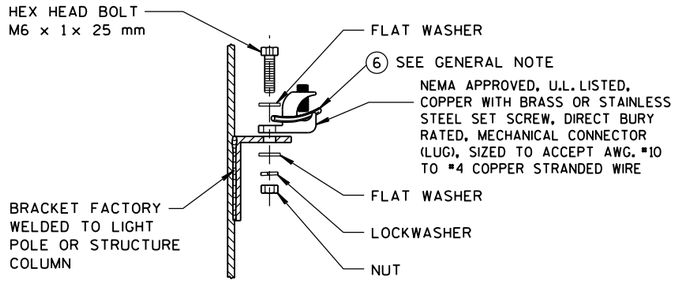


EQUIPMENT GROUNDING CONDUCTOR SLACK



UNGROUNDED CONDUCTOR SLACK (AND GROUNDED NEUTRAL SLACK IN GROUNDED NEUTRAL SYSTEM)

TYPICAL CONDUCTOR SLACK AT HANDHOLES



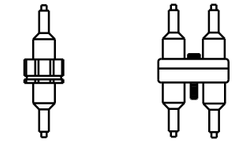
HANDHOLE GROUNDING LUG

(NUT, BOLT, WASHERS, AND LOCK WASHERS SHALL BE STAINLESS STEEL)

CONDUCTOR COLOR CODES

KEY	CONDUCTOR	COLOR
3	UNGROUNDED LINE WIRE	*
4	GROUNDED LINE WIRE	WHITE
5	SYSTEM GROUNDING LINE WIRE	GREEN
6	GROUNDING ELECTRODE CONDUCTOR	BARE
11	UNGROUNDED POLE WIRE	*
12	GROUNDED POLE WIRE	WHITE
13	EQUIPMENT GROUNDING POLE WIRE	GREEN

* FOLLOW COLOR CODING SHOWN IN THE PLANS. WHERE THE PLANS DO NOT SHOW COLOR CODING, USE BLACK FOR SINGLE LUMINAIRE POLES; BLACK AND RED FOR TWIN LUMINAIRE POLES.



FUSE ASSEMBLIES

GENERAL NOTES

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

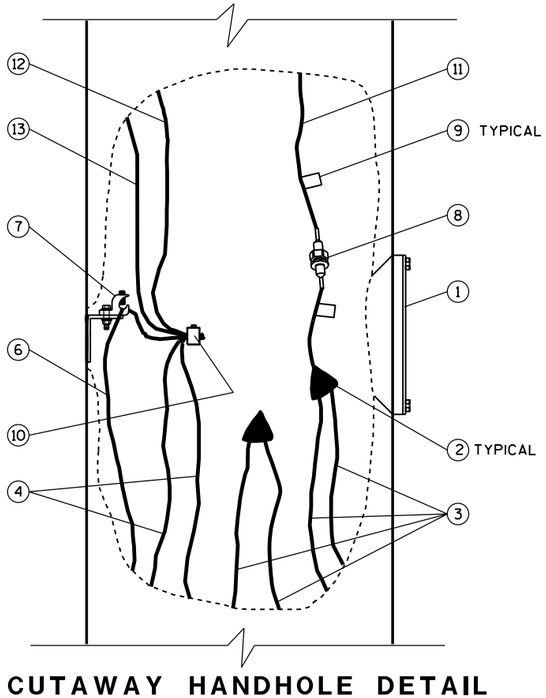
USE THIS DETAIL IN CONJUNCTION WITH THE ELECTRICAL DETAILS FOR THE APPLICATION, WHICH MAY BE A LIGHT POLE, SIGN BRIDGE, ETC.

THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLE GROUNDING LUG TO THE CONNECTOR.

THREE POLE WIRES ARE SHOWN FOR A SINGLE LUMINAIRE LIGHT POLE. THREE ADDITIONAL POLE WIRES REQUIRED FOR TWIN LUMINAIRE LIGHT POLES ARE OMITTED FROM THE DRAWING FOR CLARITY. IN THE TWIN POLE CASE, BUNDLE EACH SET OF THREE WIRES WITH A NYLON CABLE TIE.

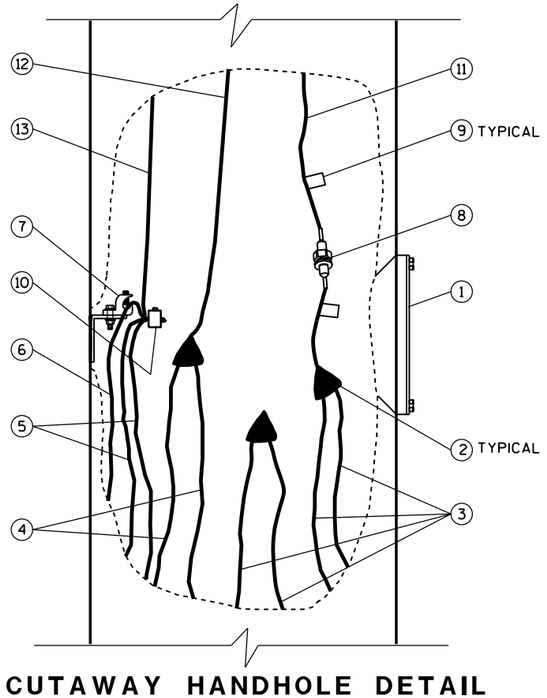
IN 3-PHASE SYSTEMS, THERE WILL BE ONE MORE UNGROUNDED LINE WIRE, WHICH IS OMITTED FROM THE DRAWING FOR CLARITY.

CIRCUIT TAGS SHALL BE INSTALLED ONLY WHERE REQUIRED IN THE SPECIAL PROVISIONS.



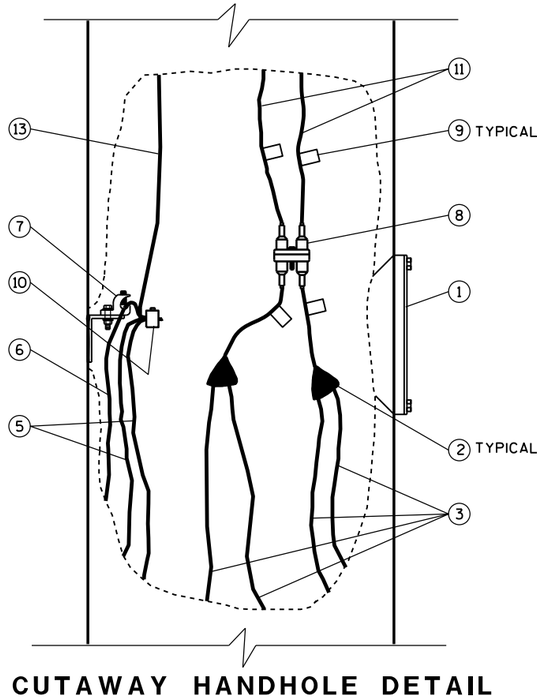
CUTAWAY HANDHOLE DETAIL

GROUNDED NEUTRAL SYSTEMS
1-Φ



CUTAWAY HANDHOLE DETAIL

ISOLATED NEUTRAL SYSTEMS
1-Φ SHOWN; 3-Φ WYE SIMILAR
(SEE GENERAL NOTE)



CUTAWAY HANDHOLE DETAIL

PHASE-TO-PHASE SYSTEMS
1-Φ SHOWN; 3-Φ DELTA SIMILAR
(SEE GENERAL NOTE)

NOTE: REQUIRED CONDUCTOR SLACK NOT SHOWN ON "CUTAWAY HAND HOLE" DETAILS FOR DRAWING CLARITY, SEE "TYPICAL CONDUCTOR SLACK AT HANDHOLES" ON THIS SHEET.

1. HANDHOLE AND COVER
2. INSULATED SPLICE
3. UNGROUNDED LINE WIRE
4. GROUNDED LINE WIRE
5. SYSTEM GROUNDING LINE WIRE
6. GROUNDING ELECTRODE CONDUCTOR
7. HANDHOLE GROUNDING LUG
8. FUSE ASSEMBLY, 1P OR 2P AS REQUIRED
9. CIRCUIT TAG (SEE GENERAL NOTE)
10. REVERSIBLE PRESSURE OR COMPRESSION GROUNDING CONNECTOR (NOT INSULATED)
11. UNGROUNDED POLE WIRE
12. GROUNDED POLE WIRE
13. EQUIPMENT GROUNDING POLE WIRE

ELECTRICAL HANDHOLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6
S.D.D. 10 A 1-3

GENERAL NOTES

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

USE THIS DETAIL IN CONJUNCTION WITH THE DETAIL FOR ELECTRICAL HANDHOLE WIRING.

THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLE GROUNDING LUG TO THE CONNECTOR.

WIRING FOR SINGLE LUMINAIRE POLES IS SHOWN WITH SOLID LINES. WIRING FOR THE SECOND LUMINAIRE OF TWIN LUMINAIRE POLES IS SHOWN WITH DOTTED LINES.

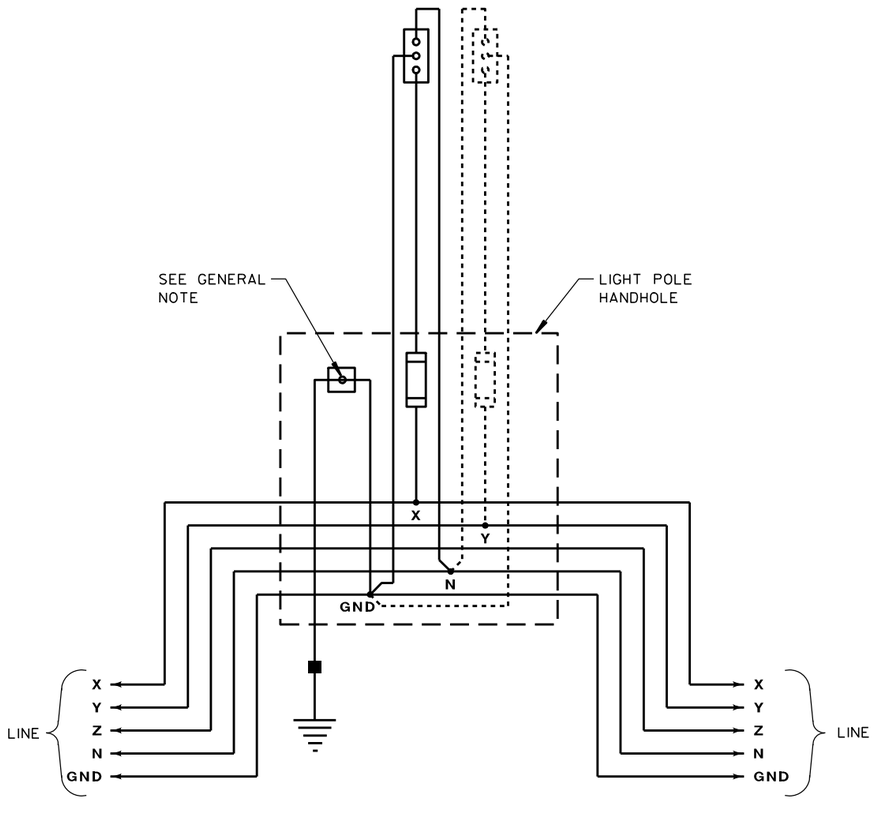
THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.

HANDHOLE FUSE SCHEDULES

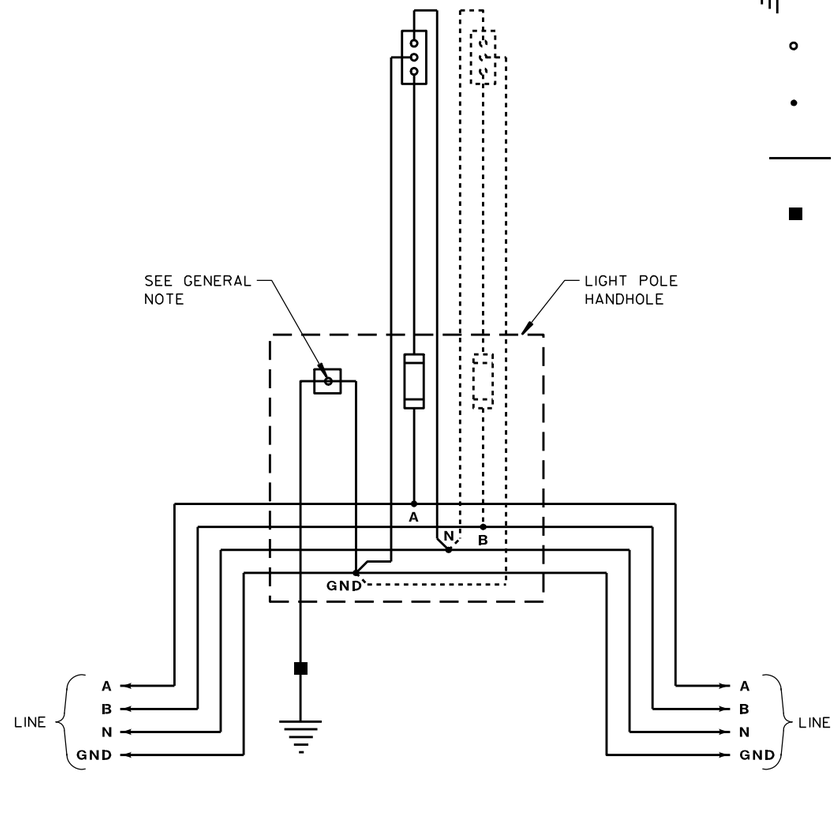
LINE VOLTAGE	BALLAST WATTAGE	
φ-GROUND	70-200 W	250-400 W
120 VAC	5 A	10 A
240 VAC	5 A	5 A
277 VAC	5 A	5 A
480 VAC	3 A	5 A

LEGEND

A,B,X,Y,Z	UNGROUNDED CIRCUIT CONDUCTORS
N	GROUNDED CIRCUIT CONDUCTORS
GND	EQUIPMENT GROUNDING CONDUCTOR
P	POLE (ELECTRICAL CIRCUIT)
φ	PHASE (ELECTRICAL CURRENT)
	HANDHOLE GROUND LUG
	SINGLE-POLE (1P) FUSE ASSEMBLY
	TWO-POLE (2P) FUSE ASSEMBLY
	UNFUSED LUMINAIRE
	EQUIPMENT GROUNDING ELECTRODE
	TERMINAL
	SPLICE
	CONDUCTOR
	EXOTHERMIC WELD



TYPICAL WIRING DIAGRAM
ISOLATED NEUTRAL SYSTEM
3-φ 208Y/120VAC OR 480Y/277VAC 4 WIRE



TYPICAL WIRING DIAGRAM
ISOLATED NEUTRAL SYSTEM
1-φ 120/240VAC OR 240/480VAC 3 WIRE

ELECTRICAL DETAILS
GROUND MOUNT LIGHT POLES
ISOLATED NEUTRAL SYSTEM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

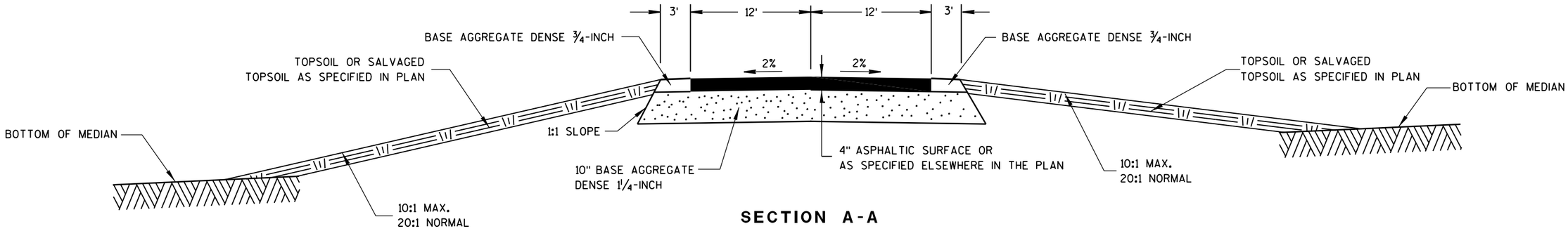
APPROVED
10/25/2010 DATE
/S/ John Corbin STATE ELECTRICAL ENGI
553
HWYS
FHWA

6

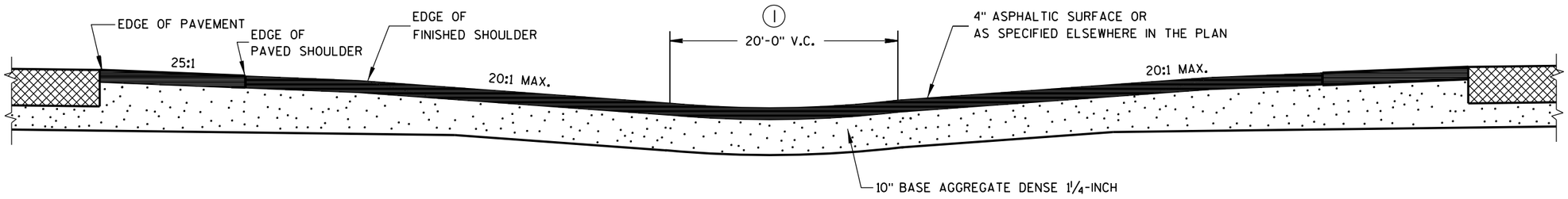
S.D.D. 10 A 5-2

6

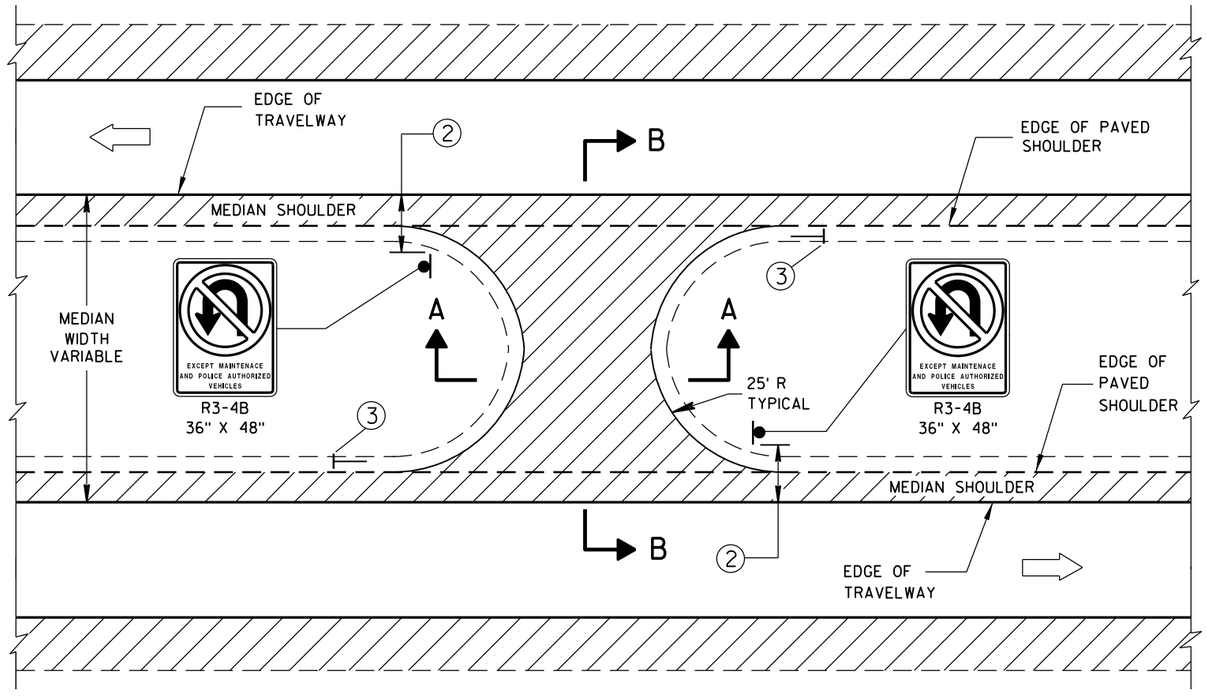
S.D.D. 10 A 5-2



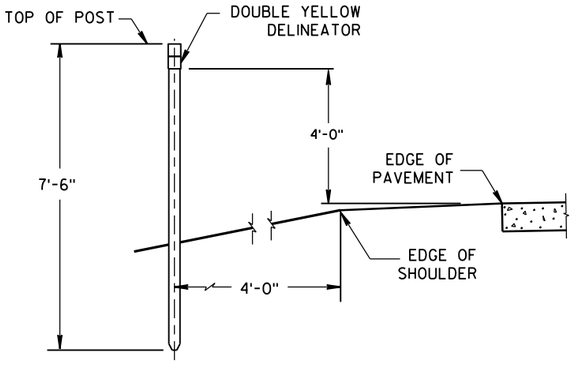
SECTION A-A



SECTION B-B



PLAN VIEW



DOUBLE YELLOW DELINEATOR INSTALLATION

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) ADJUST VERTICAL CURVE LOCATION LATERALLY TO MAINTAIN 20:1 MAX.

(2) SIGNING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

(3) INSTALL DOUBLE YELLOW DELINEATOR. SEE STANDARD DETAIL DRAWING 15A2.

MAINTENANCE CROSSOVER FOR FREEWAYS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

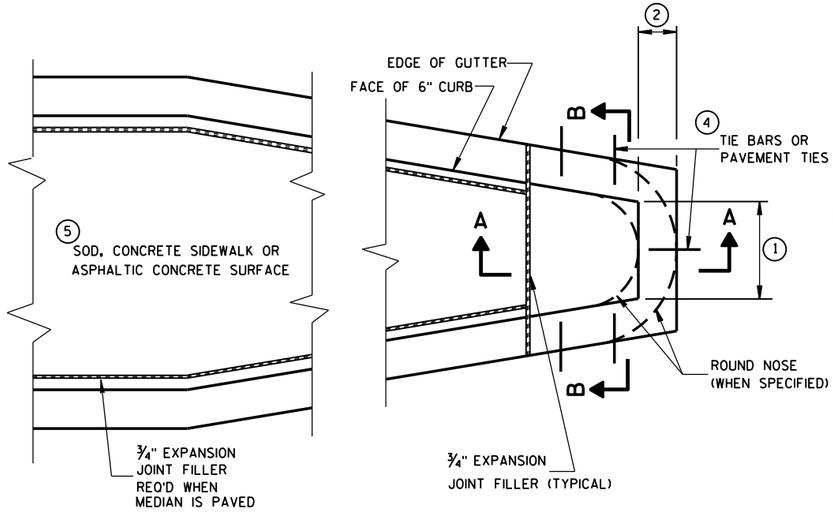
FHWA

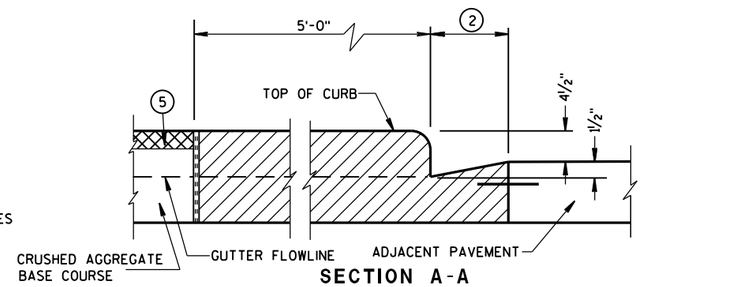
6

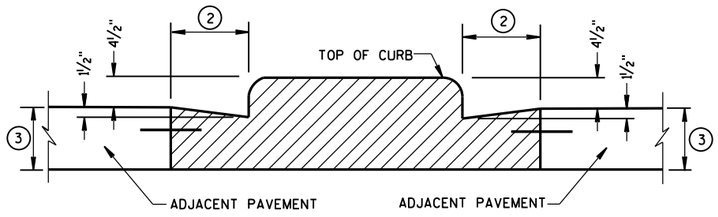
S.D.D. 11 A 1-5

6

S.D.D. 11 A 1-5







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.

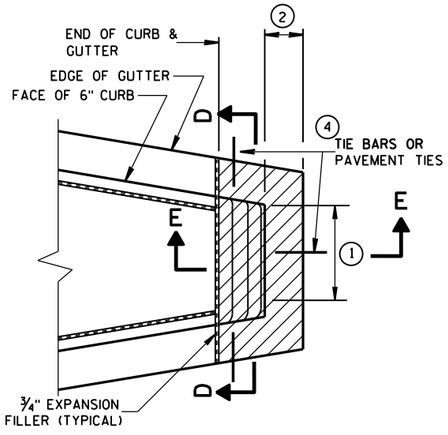
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

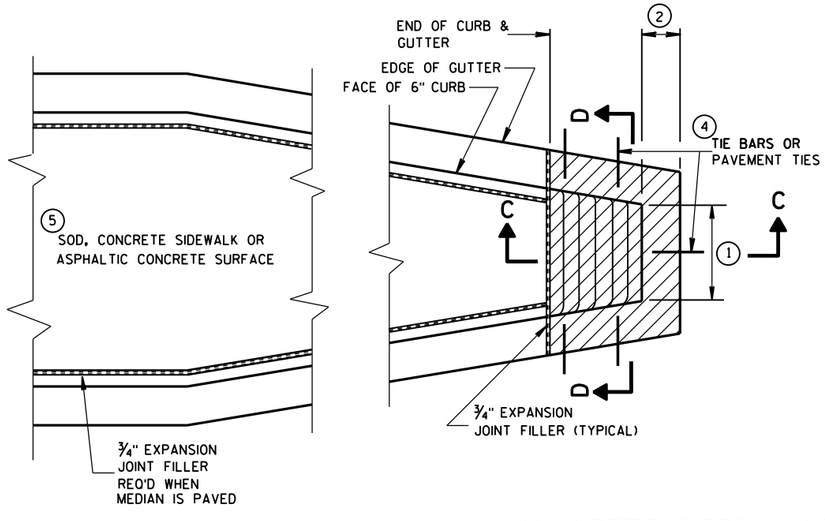
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

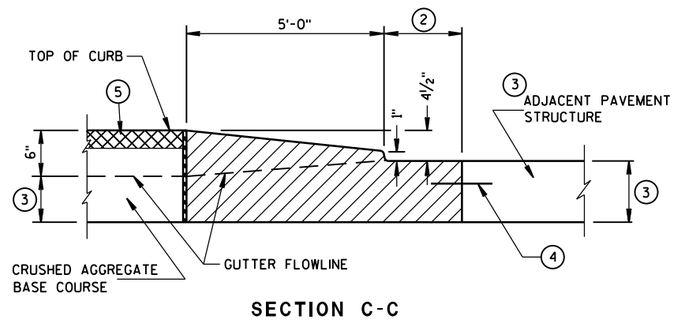
(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

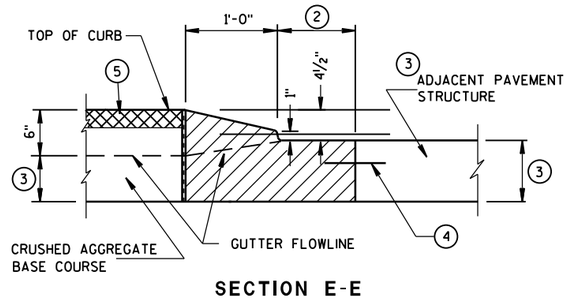
PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

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



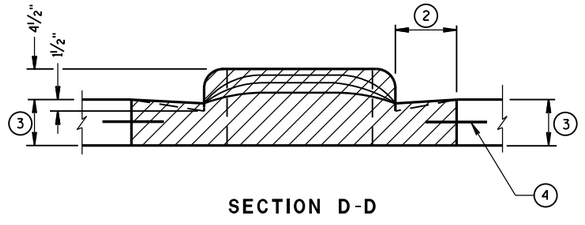






CONCRETE MEDIAN SLOPED NOSE TYPE 2

CONCRETE MEDIAN SLOPED NOSE TYPE 1



CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

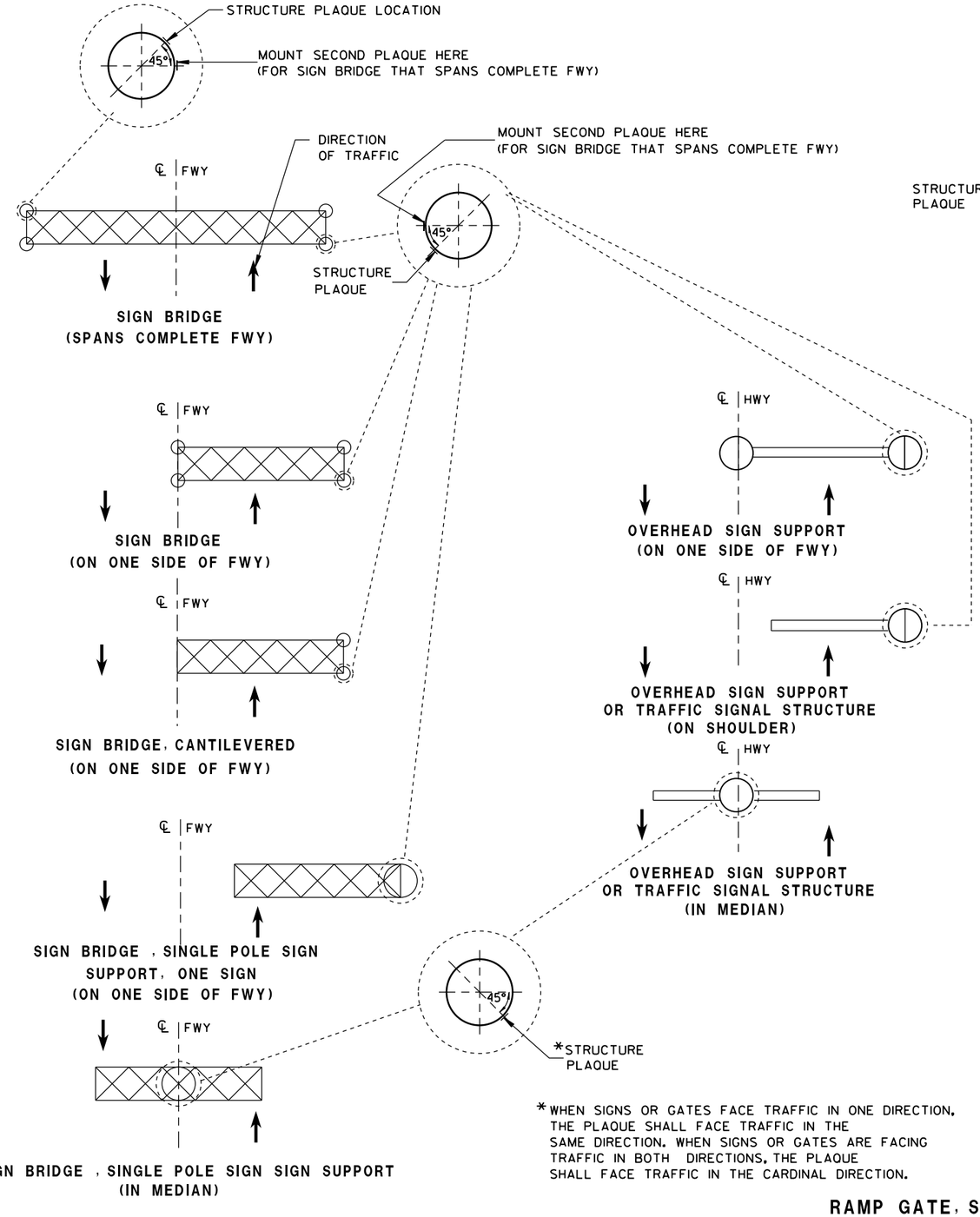
APPROVED
6/8/2006
DATE
/S/ Jerry H. Zoga
ROADWAY STANDARDS DEVELOPMENT ENGINEER
555
FHWA

6

S.D.D. 11 B 2-2

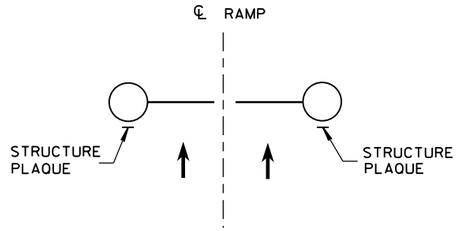
6

S.D.D. 11 B 2-2

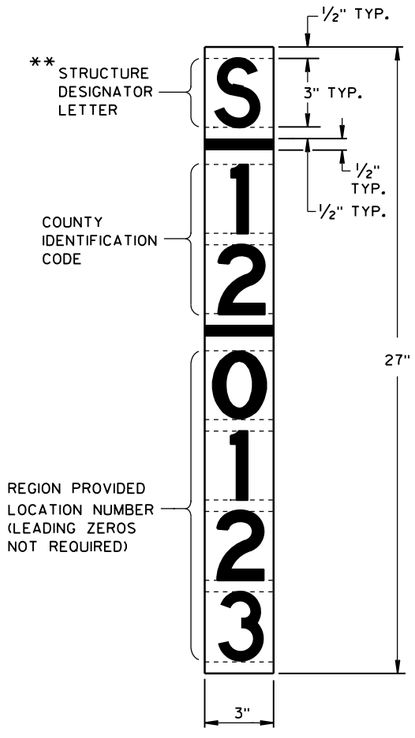


* WHEN SIGNS OR GATES FACE TRAFFIC IN ONE DIRECTION, THE PLAQUE SHALL FACE TRAFFIC IN THE SAME DIRECTION. WHEN SIGNS OR GATES ARE FACING TRAFFIC IN BOTH DIRECTIONS, THE PLAQUE SHALL FACE TRAFFIC IN THE CARDINAL DIRECTION.

LOCATION OF RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT & TRAFFIC SIGNAL STRUCTURE PLAQUES



**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.

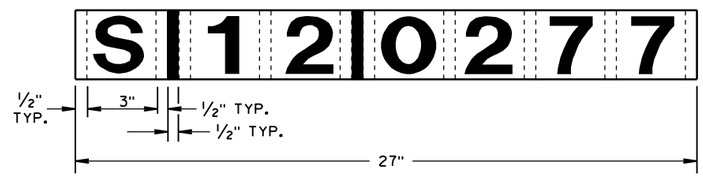
FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETROREFLECTIVE

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

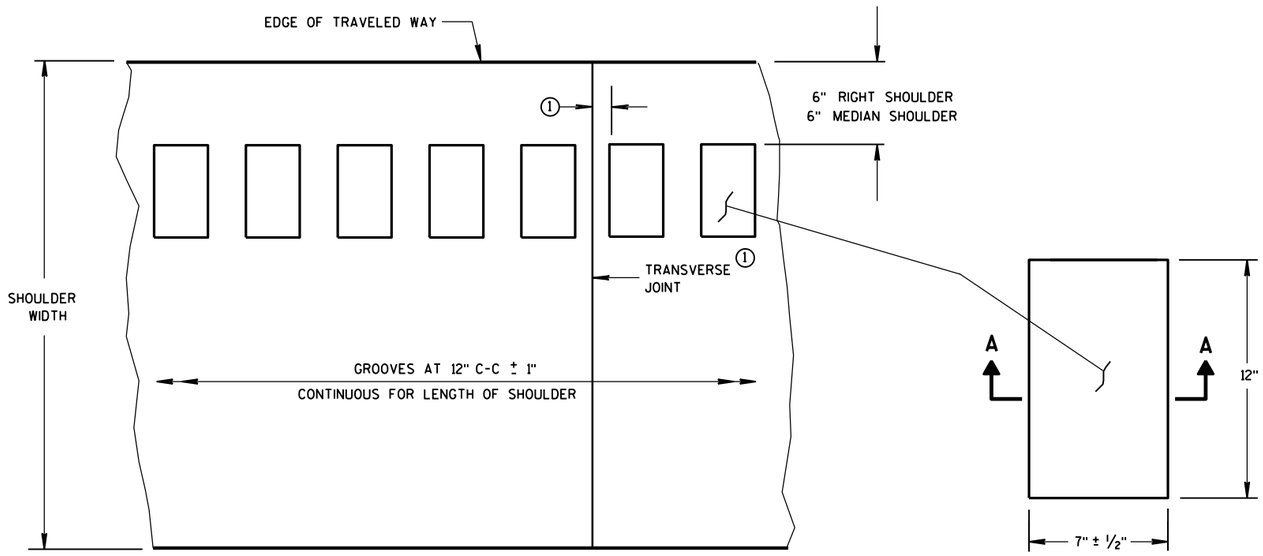
APPROVED
12/4/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 12 A 4-3

6

S.D.D. 12 A 4-3



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

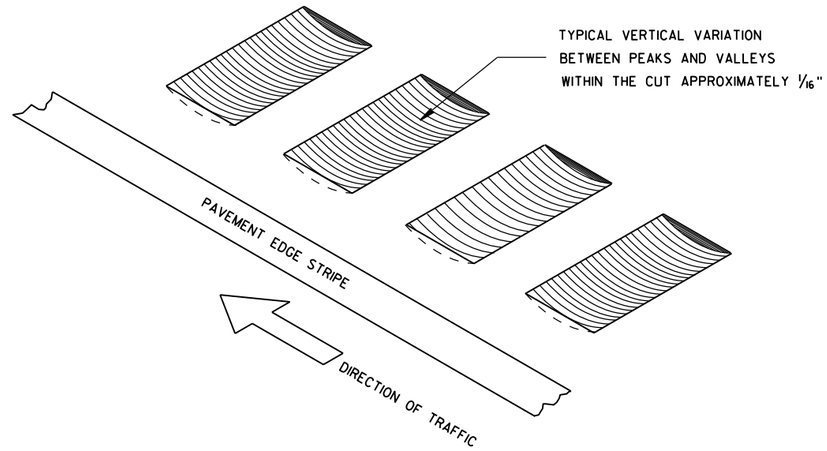
GENERAL NOTES

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

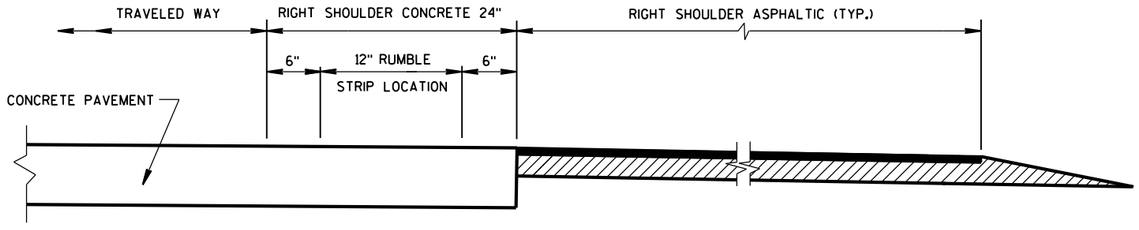
RUMBLE STRIPS ON EXPRESSWAYS

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.

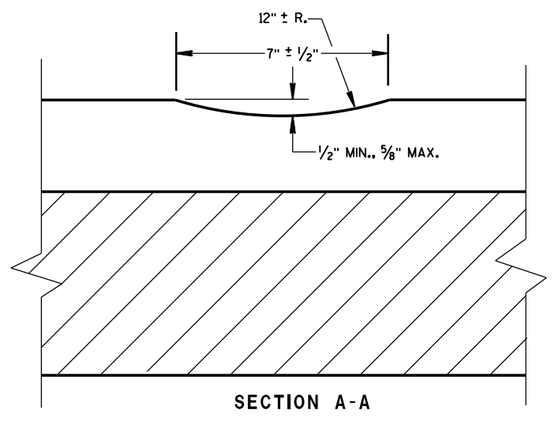
(1) CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6" AWAY FROM TRANSVERSE JOINTS.



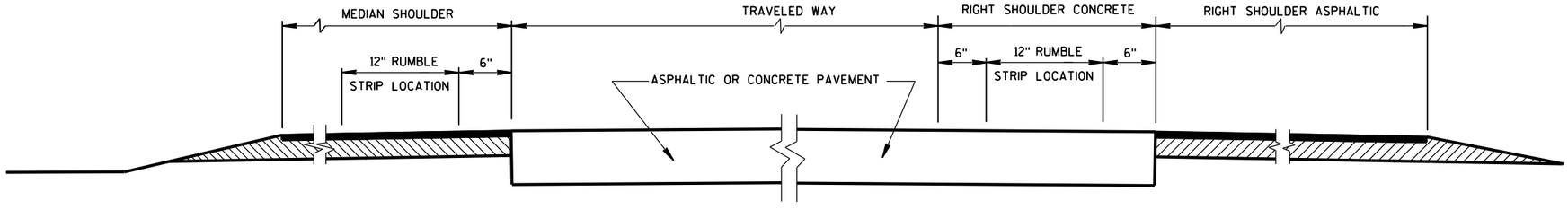
ISOMETRIC



SECTION VIEW
CONCRETE PAVEMENT EXTENDS INTO RIGHT SHOULDER)



SECTION A-A



SECTION VIEW

TYPICAL LOCATIONS OF SHOULDER RUMBLE STRIPS IN RURAL DIVIDED HIGHWAYS

(ONE ROADWAY IS SHOWN)

SHOULDER RUMBLE STRIP, MILLING

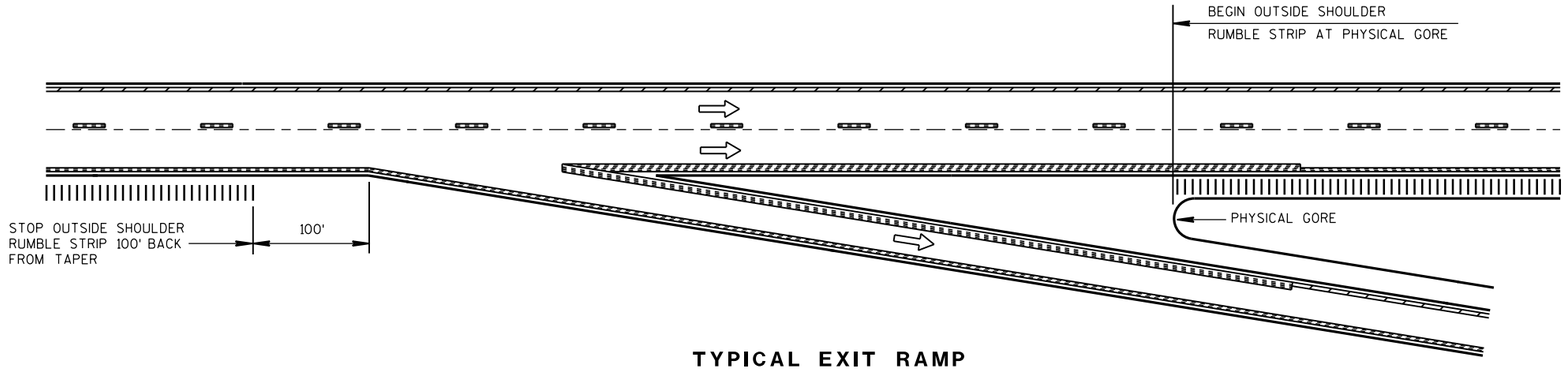
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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

6

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



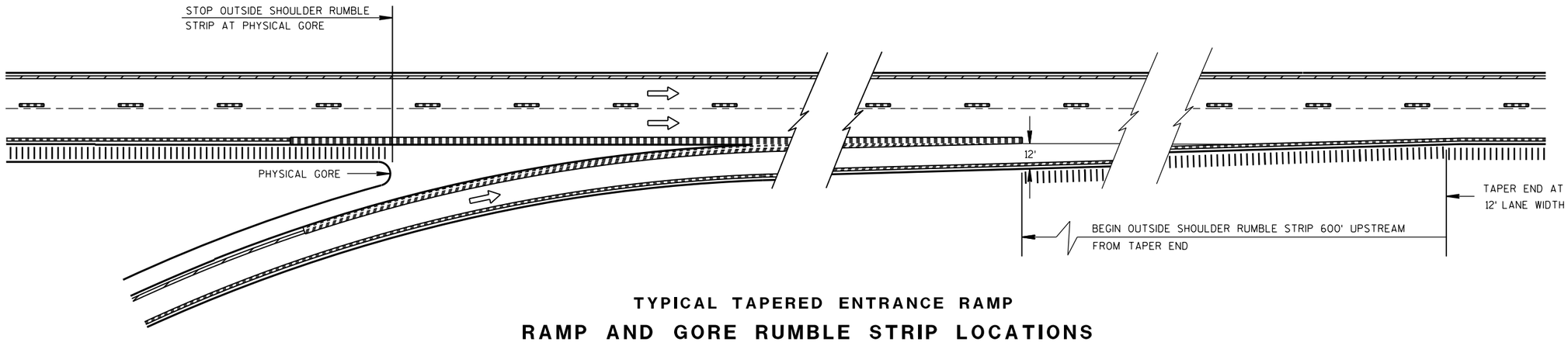
TYPICAL EXIT RAMP

NOTES:

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

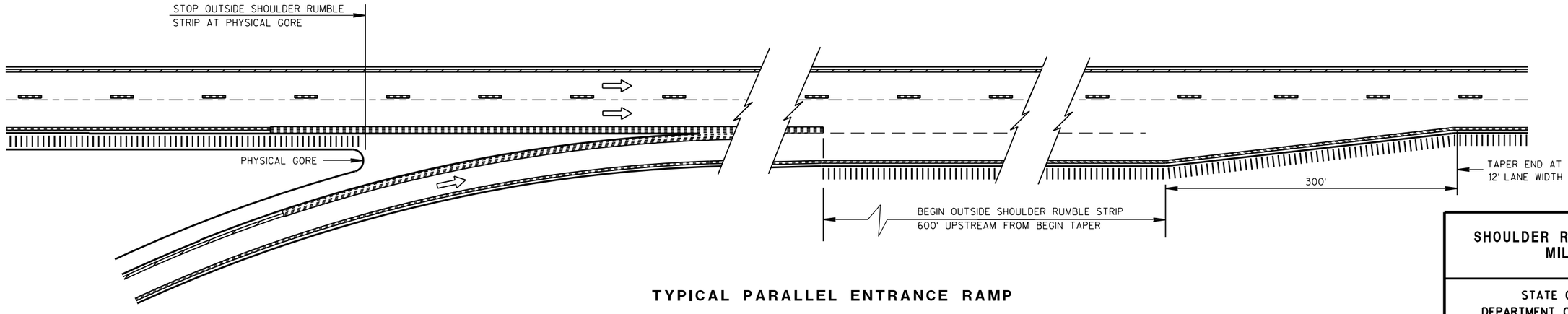
PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TYPICAL TAPERED ENTRANCE RAMP

RAMP AND GORE RUMBLE STRIP LOCATIONS



TYPICAL PARALLEL ENTRANCE RAMP

RAMP AND GORE RUMBLE STRIP LOCATIONS

SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

12/17/2012
DATE

/S/ Jerry H. Zoga
ROADWAY STANDARDS ENGINEER

FHWA

558

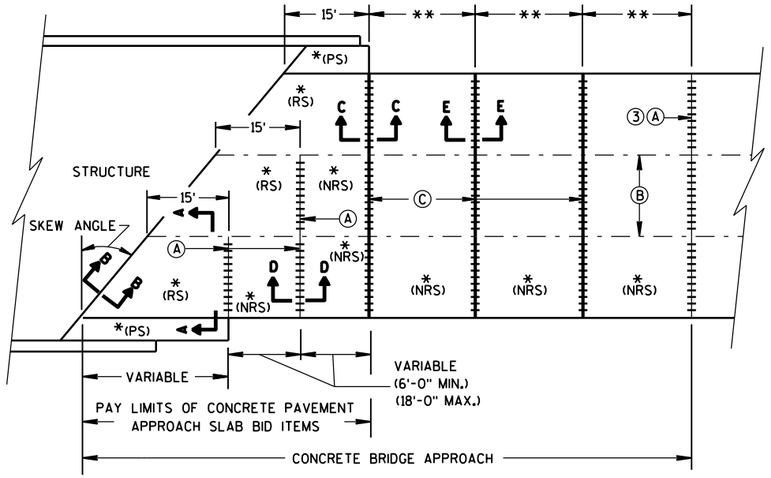
ENT

6

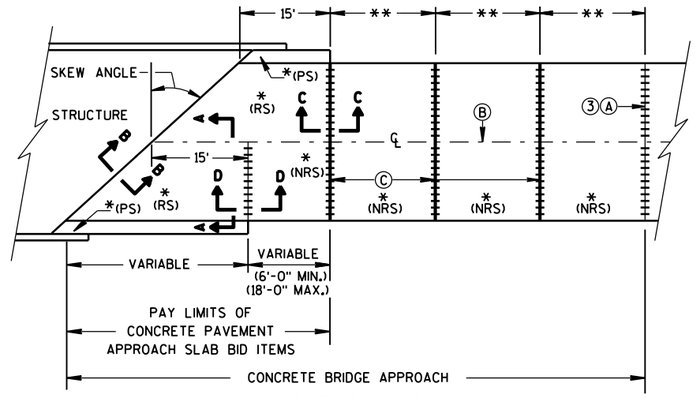
S.D.D. 13 A 5-5b

6

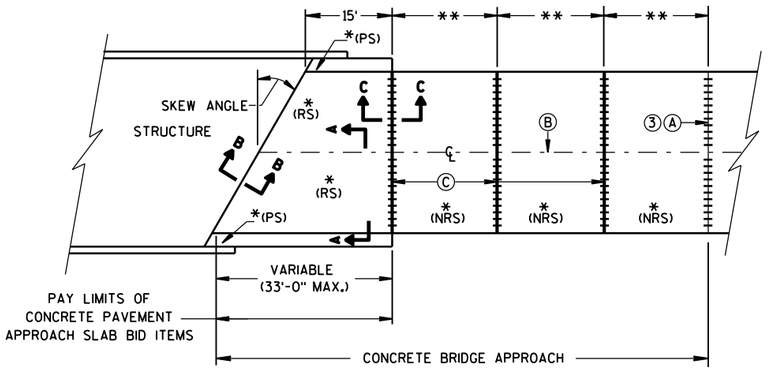
S.D.D. 13 A 5-5b



SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >30°
(PAVEMENT WIDTH ≤30')



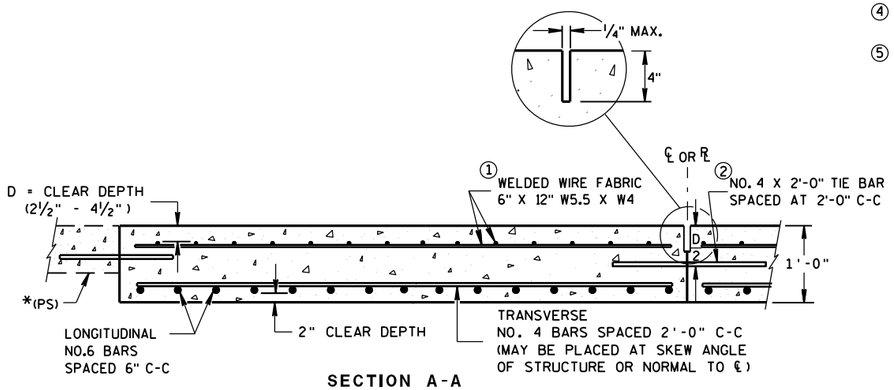
SKEWS ≤30°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

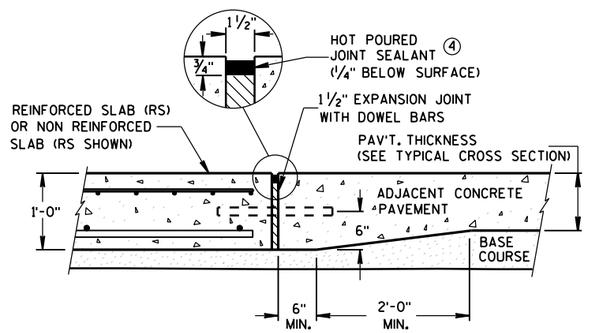
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER: CONCRETE PAVEMENT, OR CONCRETE SURFACE DRAIN (SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

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

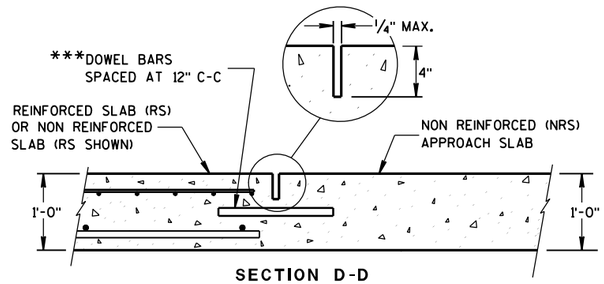
Ⓐ STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄
Ⓑ STANDARD LONGITUDINAL JOINT AND TIE BARS.
Ⓒ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



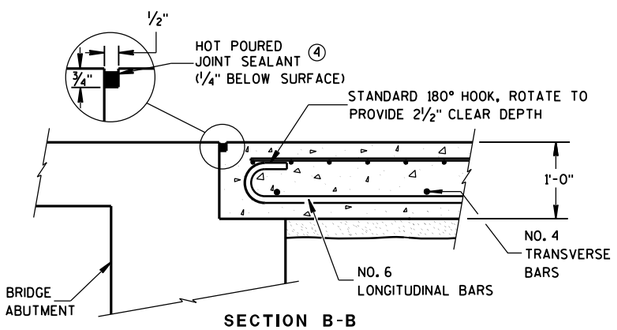
SECTION D-D
CONTRACTION JOINT

GENERAL NOTES

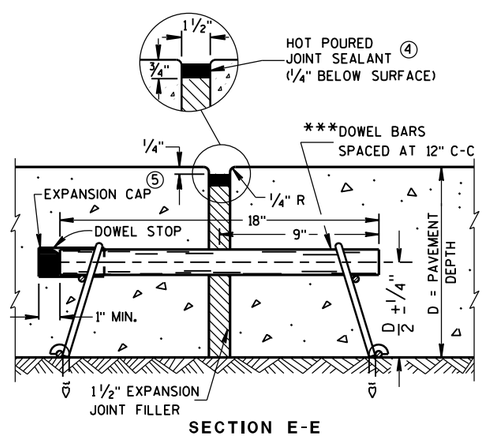
THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

1. THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.
2. THE CONTRACTOR MAY OMIT TIE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.
3. DO NOT DOWEL A CONTRACTION JOINT THAT ABUTS AN HMA PAVEMENT.
4. USE A JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM D6690.
5. PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.



SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT



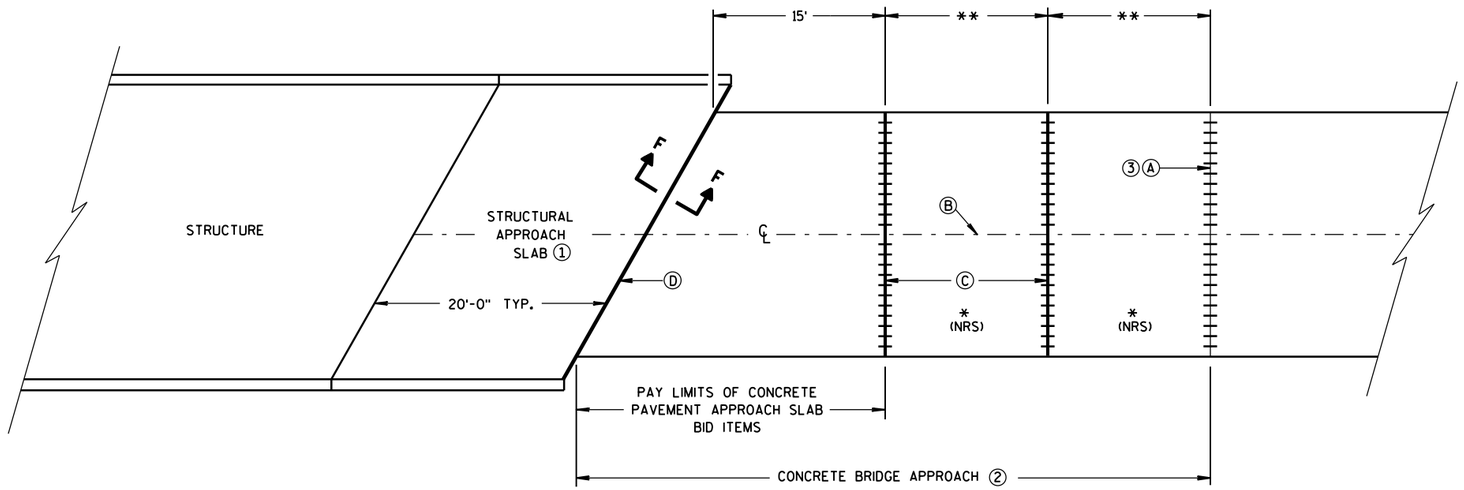
SECTION E-E
EXPANSION JOINT

CONCRETE BRIDGE APPROACH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2014 — DATE
/S/ Deb Bischoff — PAVEMENT POLICY & DE
EER
FHWA

6
S.D.D. 13 B 2-7a



BRIDGE APPROACHES

GENERAL NOTES

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

① CONFORM TO APPLICABLE BRIDGE MANUAL STANDARD DRAWINGS FOR *STRUCTURAL APPROACH SLABS* (SEE CHAPTER 12 - ABUTMENTS).

② CONFORM TO SHEET (a) OF THIS SET FOR *CONCRETE BRIDGE APPROACH* DETAILS, WITH ONE EXCEPTION — WHEN CONSTRUCTING A *CONCRETE BRIDGE APPROACH* NEXT TO A *STRUCTURAL APPROACH SLAB*, AS SHOWN IN THE DETAIL DRAWING, THE *CONCRETE BRIDGE APPROACH* WILL ONLY HAVE TWO EXPANSION JOINTS; THE THIRD EXPANSION JOINT IS AT THE END OF THE *STRUCTURAL APPROACH SLAB*.

③ DO NOT DOWEL A CONTRACTION JOINT THAT ABUTS AN HMA PAVEMENT.

*(NRS) = NON-REINFORCED CONCRETE SLAB

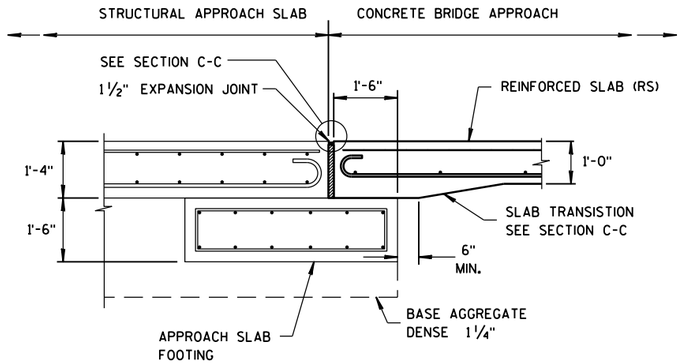
**STANDARD TRANSVERSE JOINT SPACING (SEE SDD 13C4, SDD 13C11, & SDD 13C13)

Ⓐ STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄

Ⓑ STANDARD LONGITUDINAL JOINT AND TIE BARS.

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

Ⓓ 1½" EXPANSION JOINT (NO DOWELS)



SECTION F-F

FOOTING DETAIL

STRUCTURAL APPROACH SLAB TO CONCRETE BRIDGE APPROACH

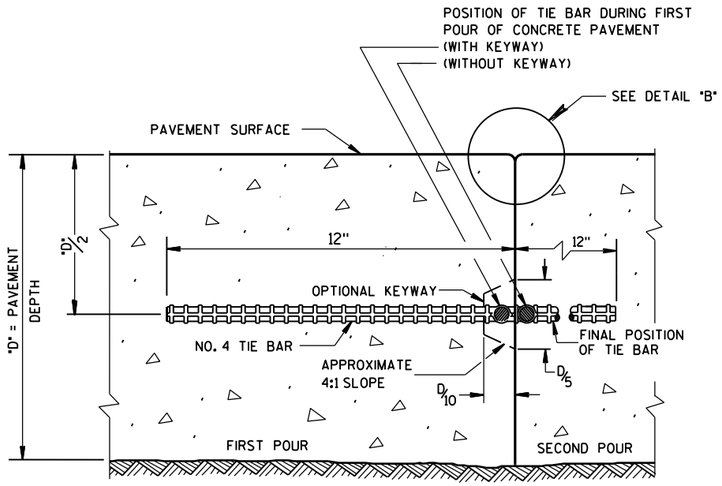
STRUCTURAL APPROACH SLAB AND CONCRETE BRIDGE APPROACH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

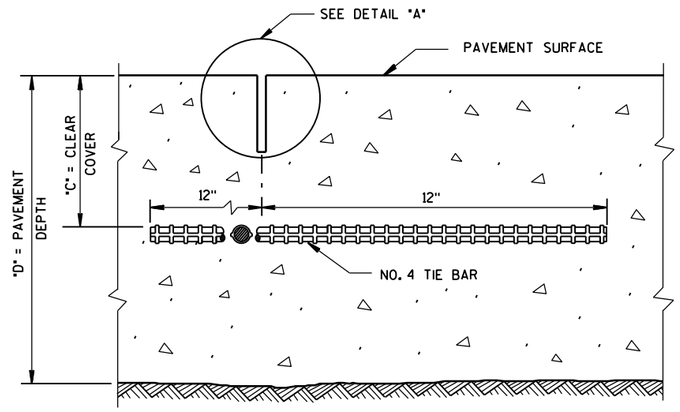
APPROVED
June, 2014 — DATE
/S/ Deb Bischoff — PAVEMENT POLICY & DE
FHWA
EER

6

S.D.D. 13 B 2-7b



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

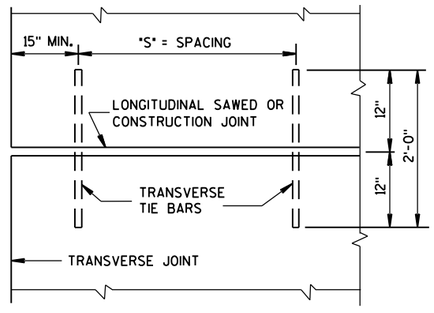
DETAIL "A"

DETAIL "B"

DETAIL "C"

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
9/2014 — DATE
/S/ Deb Bischoff — PAVEMENT POLICY & DE ... NEER
FHWA

6

S.D.D. 13 C 1-17

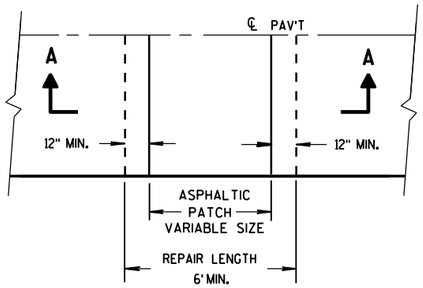
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES. ADDITIONAL SAW CUTS ARE NOT PAID FOR BY THE DEPARTMENT.

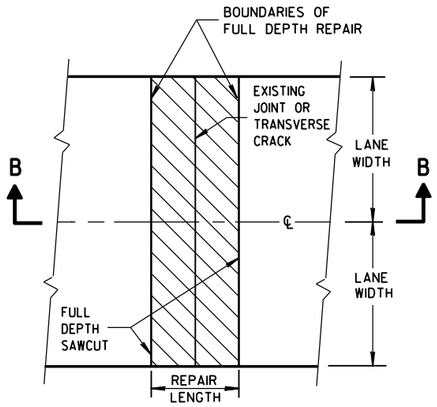
PROVIDE A 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK IN THE SAME LANE.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NONDOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

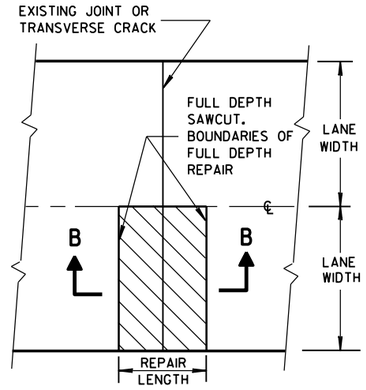
(1) DOWEL BARS MIGHT NOT EXIST.



PLAN VIEW



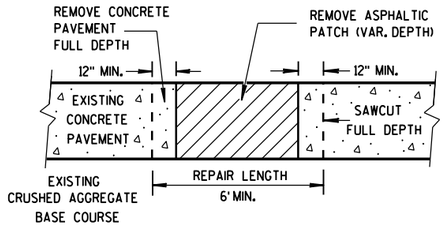
PLAN VIEW
(DOUBLE LANE REPAIR)



PLAN VIEW
(SINGLE LANE REPAIR)

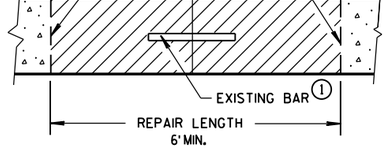
FULL DEPTH CONCRETE PAVEMENT REMOVAL

(SEE NOTE)



SECTION A-A

HMA PATCH REMOVAL



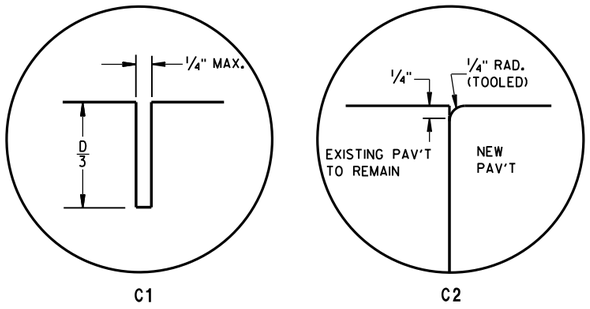
SECTION B-B

CONCRETE REMOVAL

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

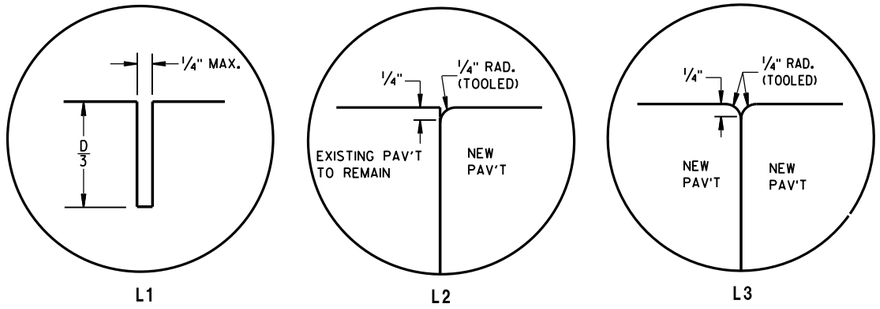
6
S.D.D. 13 C 9-11a



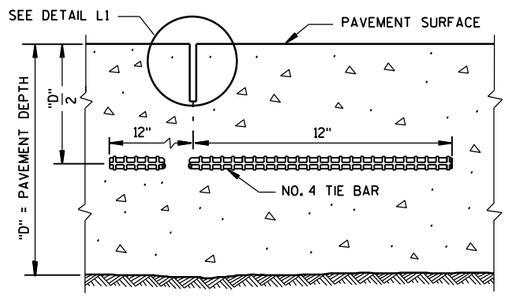
TRANSVERSE JOINTS

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"



LONGITUDINAL JOINTS



SECTION C-C

SAWED LONGITUDINAL JOINT

GENERAL NOTES

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

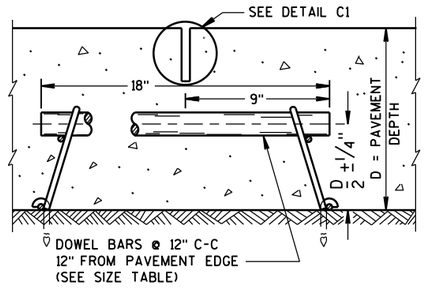
CONCRETE PAVEMENT REPAIRS OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

DO NOT SEAL OR FILL JOINTS.

ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

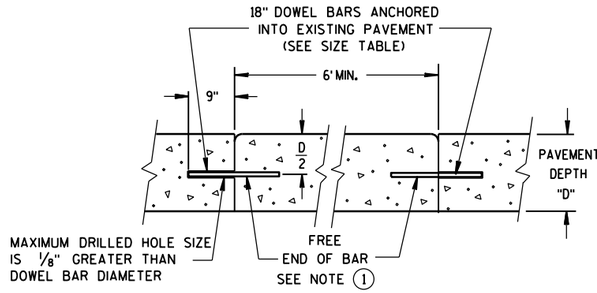
FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

(1) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

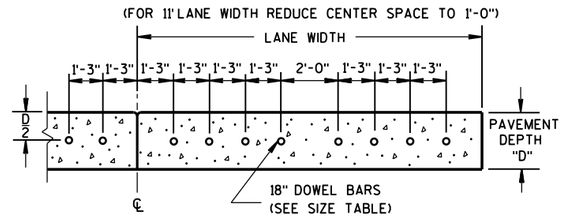


SECTION F-F

CONTRACTION JOINT



SECTION D-D

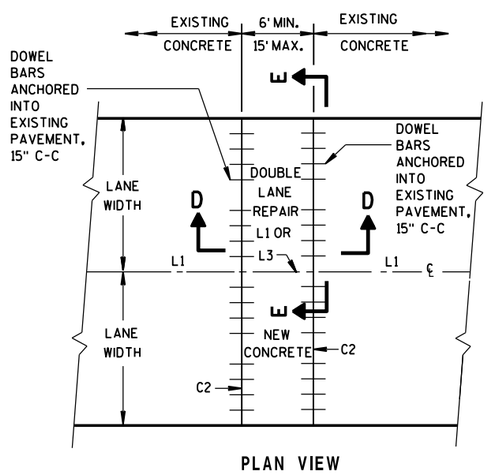


SECTION E-E

DRILLED DOWEL BAR CONSTRUCTION JOINT

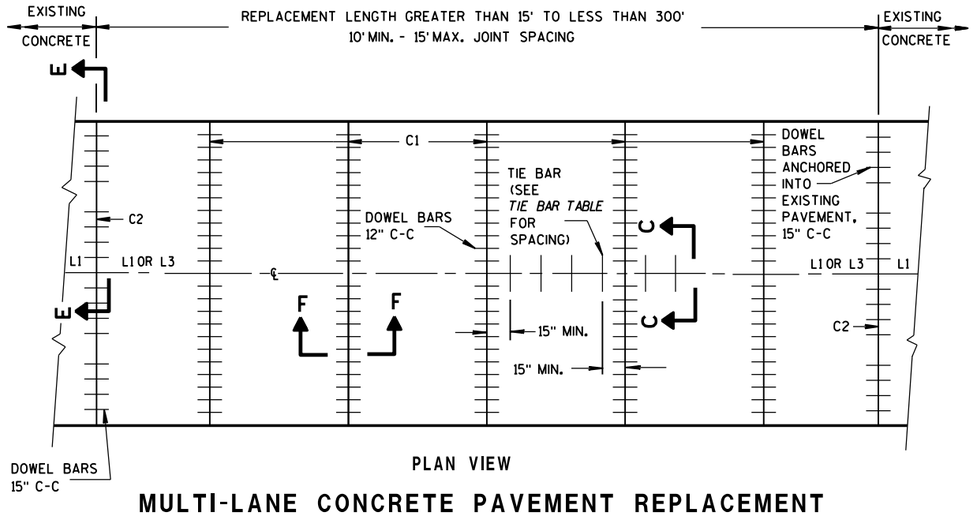
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6",6 1/2"	NONE	12'
7",7 1/2"	1"	14'
8",8 1/2"	1 1/4"	15'
9",9 1/2"	1 1/4"	15'
10" & ABOVE	1 1/2"	15'



PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

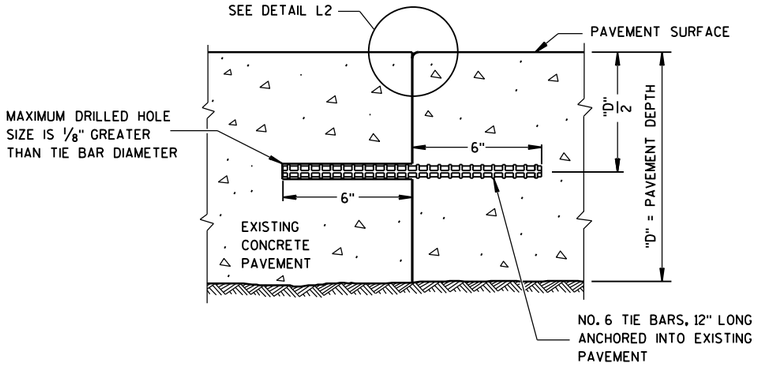
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI 563

6

S.D.D. 13 C 9-11b

6

S.D.D. 13 C 9-11b



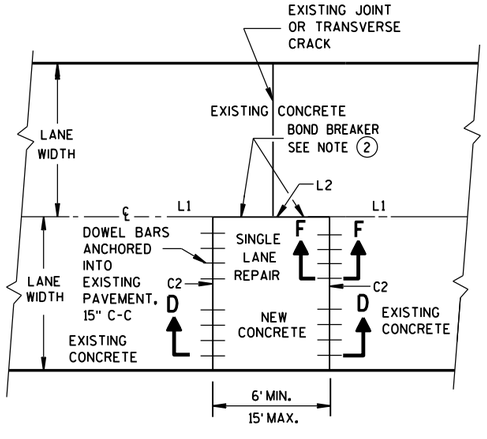
SECTION G-G

TIE BARS ANCHORED INTO EXISTING PAVEMENT

GENERAL NOTES

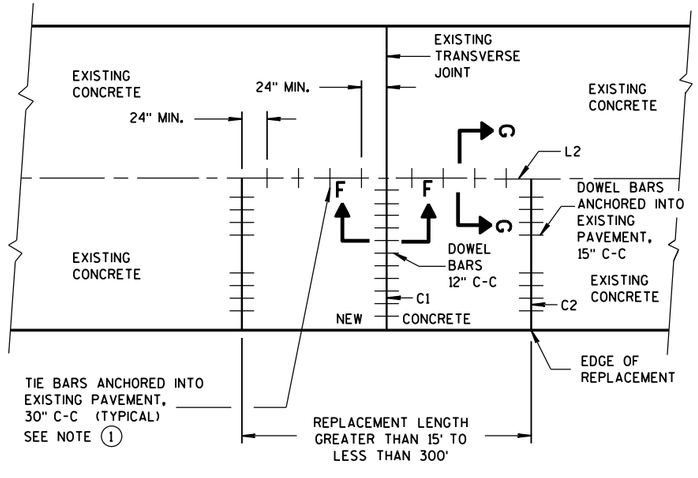
(1) WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES AND TO SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.

(2) USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPLACEMENT

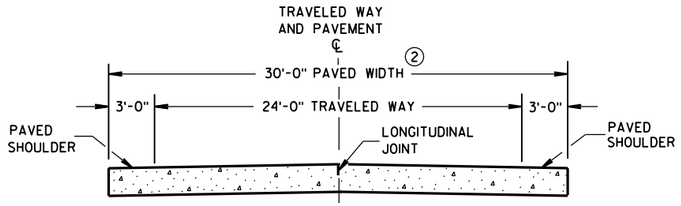
CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12-2013 DATE
/S/ Deb Bischoff
PAVEMENT POLICY & DE
FHWA

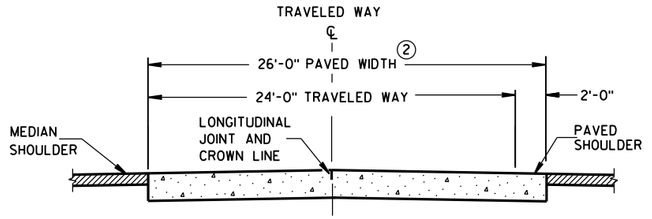
6

S.D.D. 13 C 9-11c

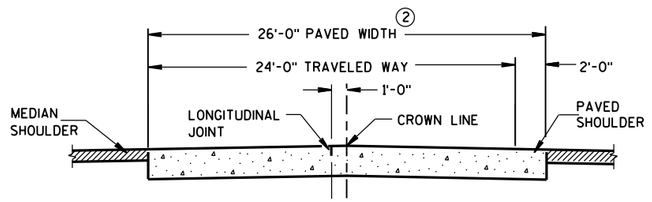


SECTION A-A ①

TWO-LANE TWO-WAY HIGHWAY



SECTION B-B



ALTERNATIVE SECTION B-B ①

DIVIDED HIGHWAY

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT SEAL OR FILL CONTRACTION JOINTS.

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES AND A MAXIMUM OF 18 INCHES FROM THE FREE EDGE OF PAVEMENT.

CONSTRUCTION JOINTS

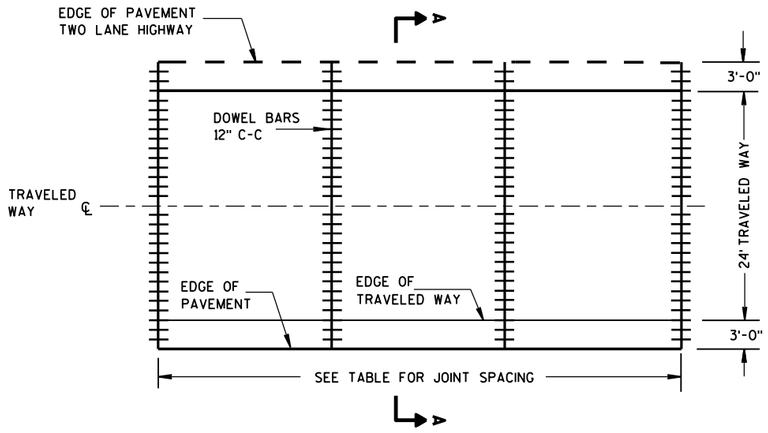
LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

① REFER TO TYPICAL CROSS SECTIONS FOR ADDITIONAL DETAILS.

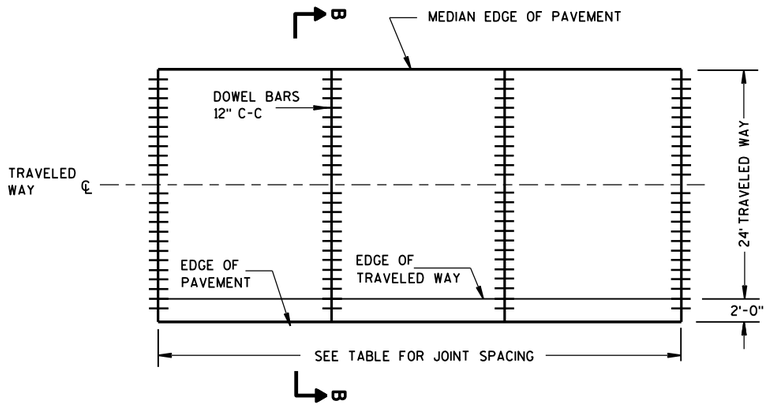
② MEASURE THE ENTIRE PAVED WIDTH INCLUDING THE PORTION(S) LABELED PAVED SHOULDER AS CONCRETE PAVEMENT.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'



CONTRACTION JOINT LAYOUT
FOR TWO-LANE TWO-WAY HIGHWAY



CONTRACTION JOINT LAYOUT
FOR DIVIDED HIGHWAY

RURAL DOWELED
CONCRETE PAVEMENT

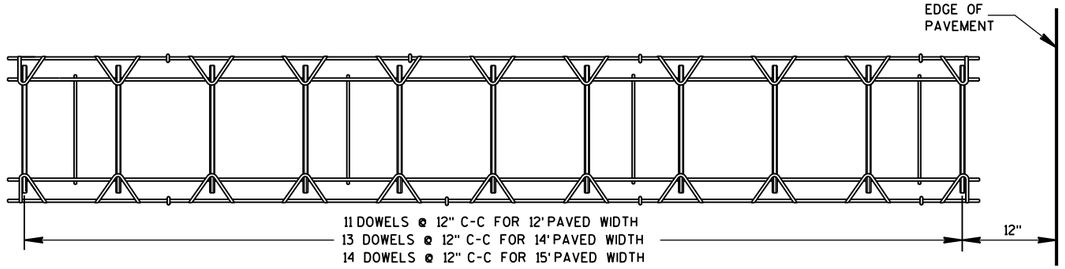
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI 565

6

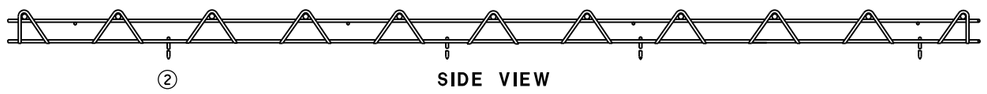
S.D.D. 13 C 11-11a

6

S.D.D. 13 C 11-11a



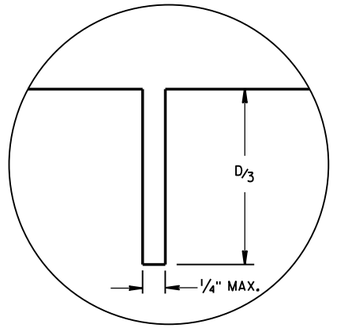
PLAN VIEW



SIDE VIEW

(NORMAL TO CENTERLINE)

CONTRACTION JOINT DOWEL ASSEMBLY ①



JOINT DETAIL

GENERAL NOTES

① OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.

② SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.

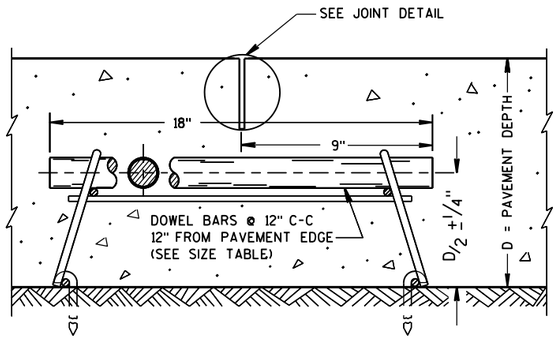
③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A 1/4-INCH RADIUS AT FORMED JOINTS.

④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.

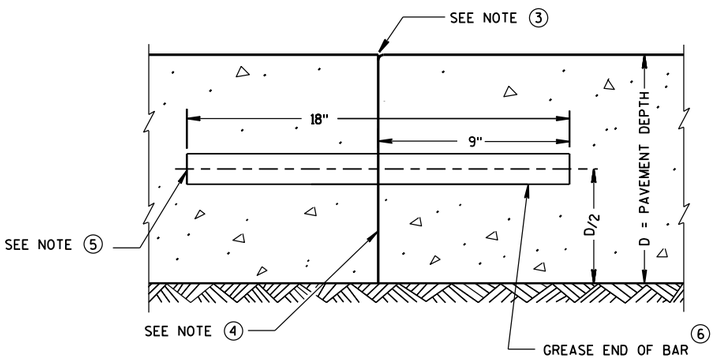
⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL BAR CONSTRUCTION JOINT* DETAIL.

⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

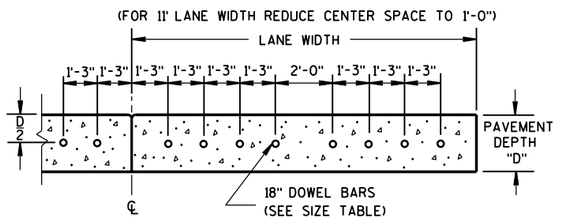
⑦ ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS 1/8-INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



DOWELED CONTRACTION JOINT



TRANSVERSE CONSTRUCTION JOINT



DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦

RURAL DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

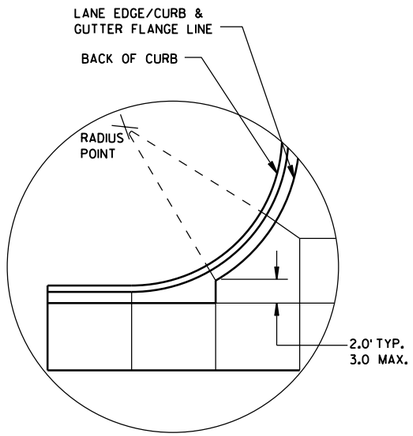
APPROVED
5/3/2013 DATE
/S/ Deb Bischoff PAVEMENT POLICY & DE ENGINEER
FHWA

6

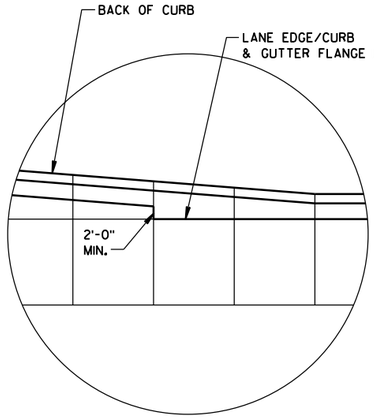
S.D.D. 13 C 11-11b

6

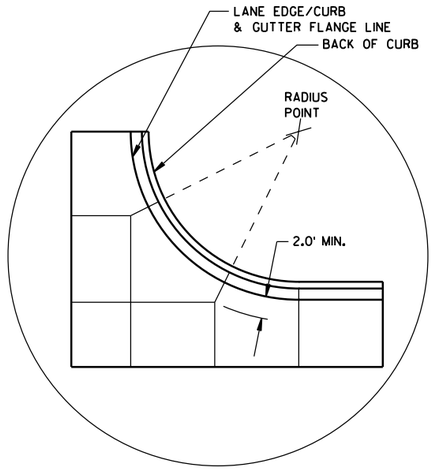
S.D.D. 13 C 11-11b



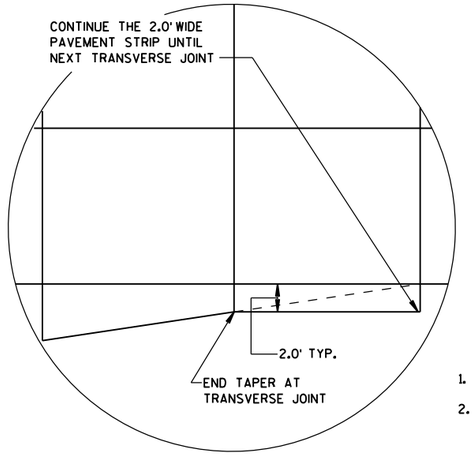
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

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

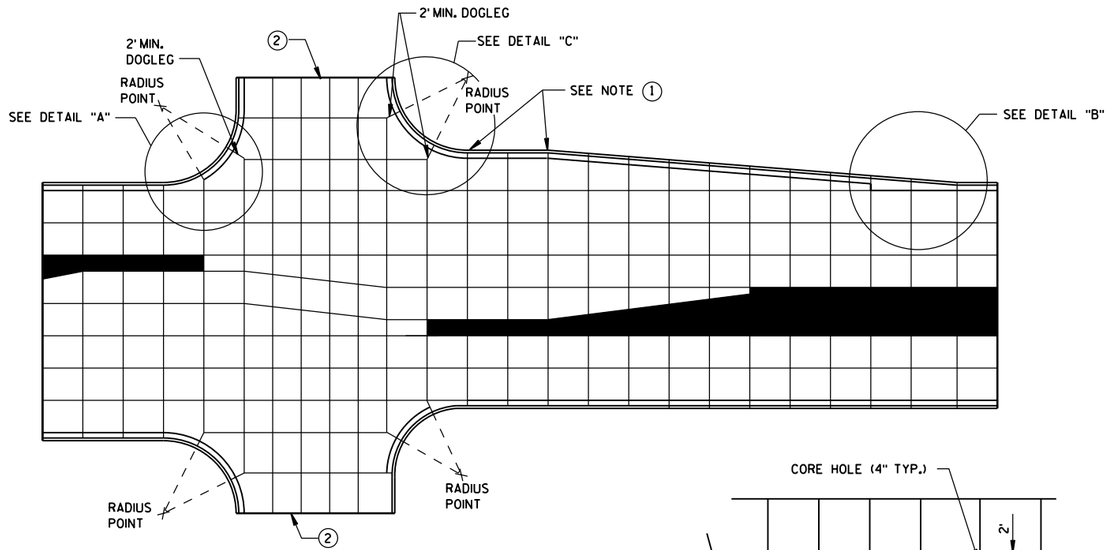
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

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

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

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

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

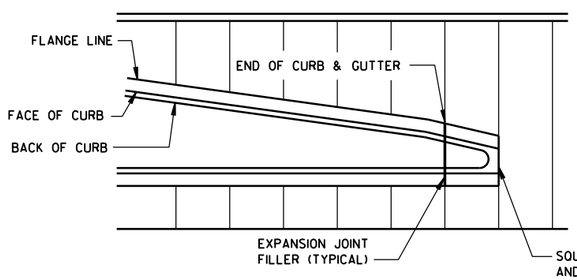


STANDARD INTERSECTION

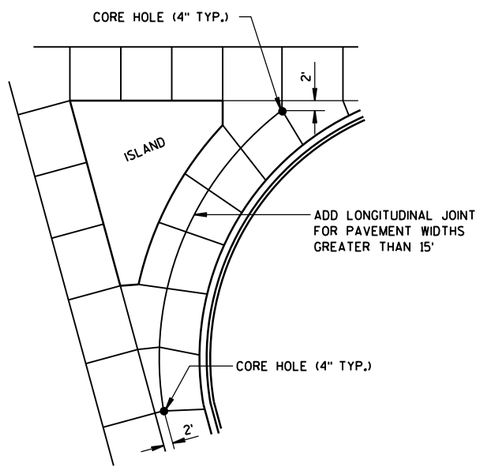
PAVEMENT DEPTH AND JOINT SPACING TABLE

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

SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 567

6

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

6

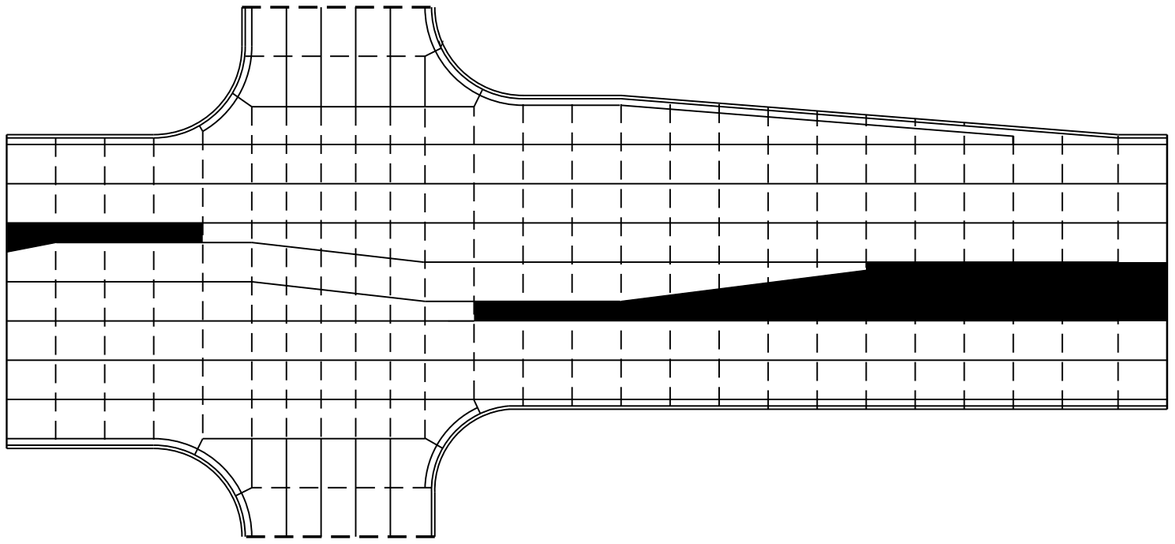
S.D.D. 13 C 18-2a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

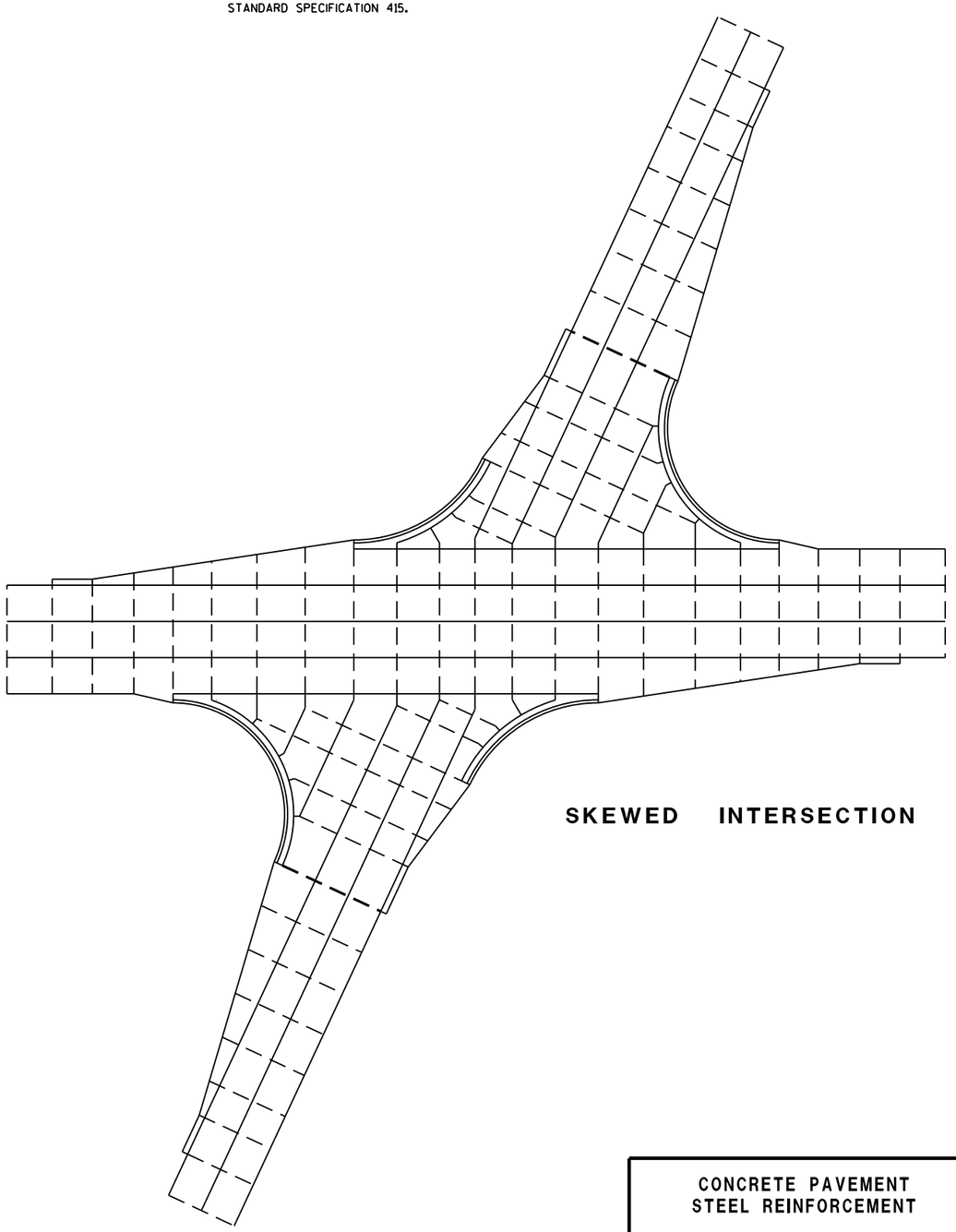
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

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



SKEWED INTERSECTION

CONCRETE PAVEMENT
STEEL REINFORCEMENT

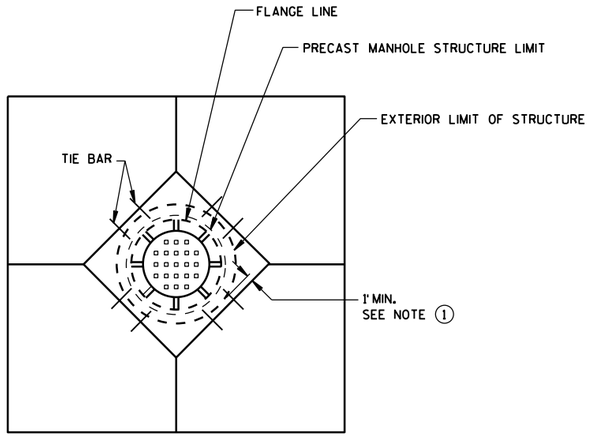
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

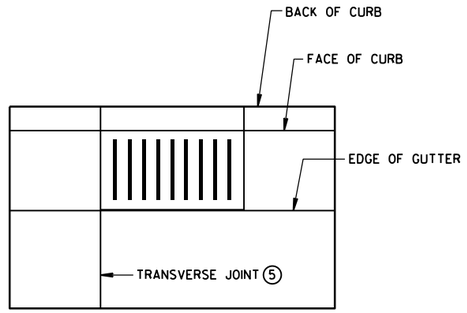
S.D.D. 13 C 18-2b

6

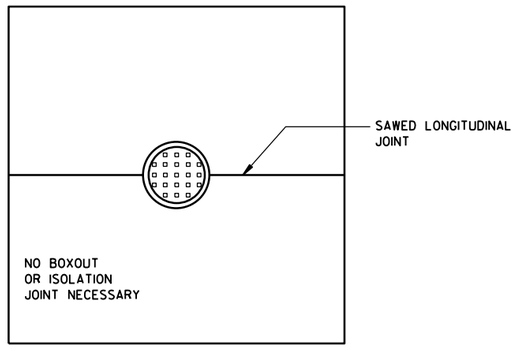
S.D.D. 13 C 18-2b



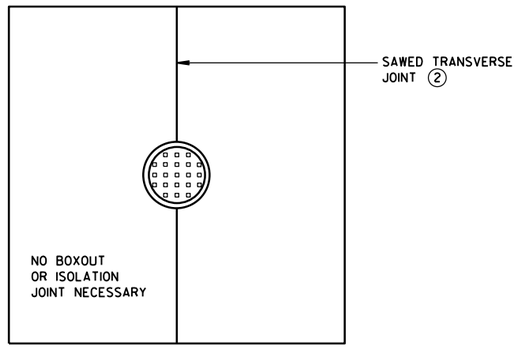
DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS



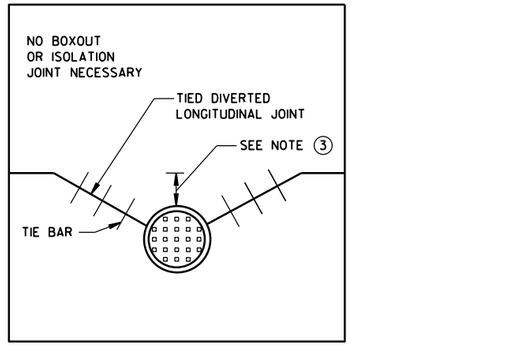
INLET WITH TRANSVERSE JOINT



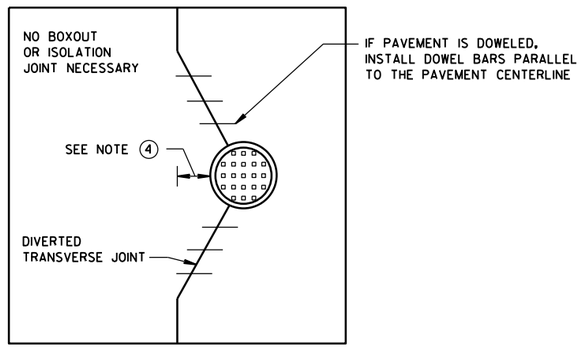
MANHOLE WITH LONGITUDINAL JOINT



MANHOLE WITH TRANSVERSE JOINT



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT

GENERAL NOTES

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

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

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

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

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

CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-3-2013
DATE

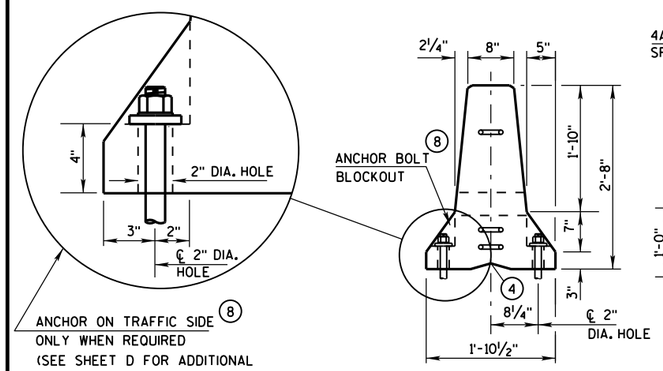
/S/ Deb Bischoff
PAVEMENT POLICY & DE

NEER

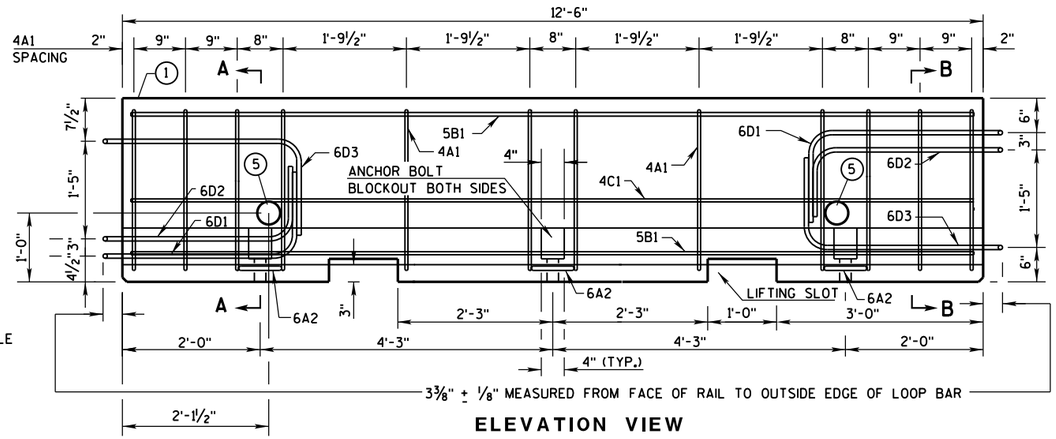
FHWA

6

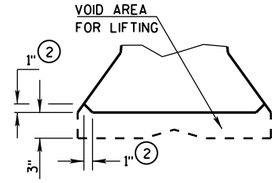
S.D.D. 13 C 18-2d



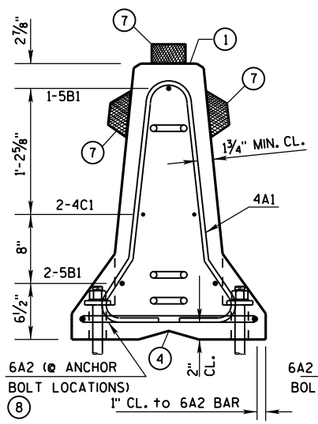
END VIEW



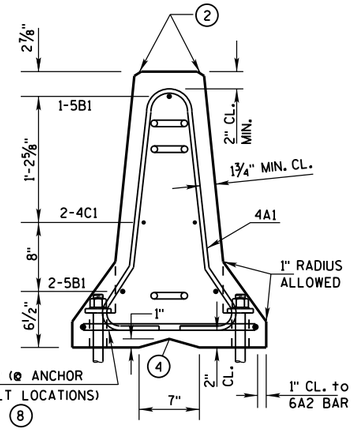
ELEVATION VIEW



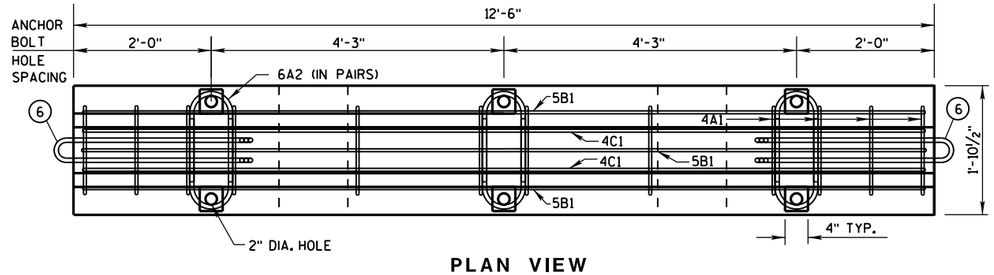
DETAIL "B"
LIFTING SLOT DETAIL



SECTION A-A
(STIRRUP PLACEMENT)

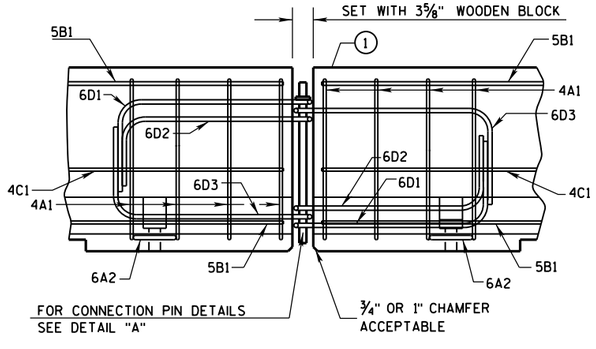


SECTION B-B
(STIRRUP PLACEMENT)

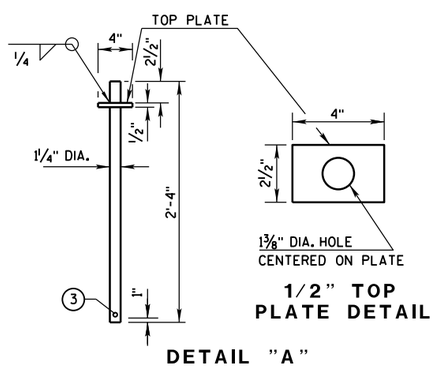


PLAN VIEW

DETAILS OF BARRIER SECTION

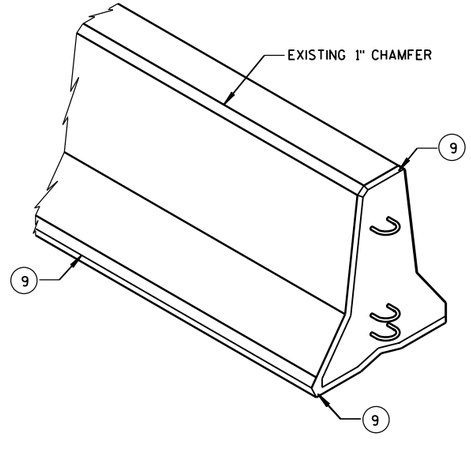


DETAILS OF BARRIER CONNECTION



1/2" TOP
PLATE DETAIL

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



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-14(a) THRU 14B7-14(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: WI CBTP
- 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.

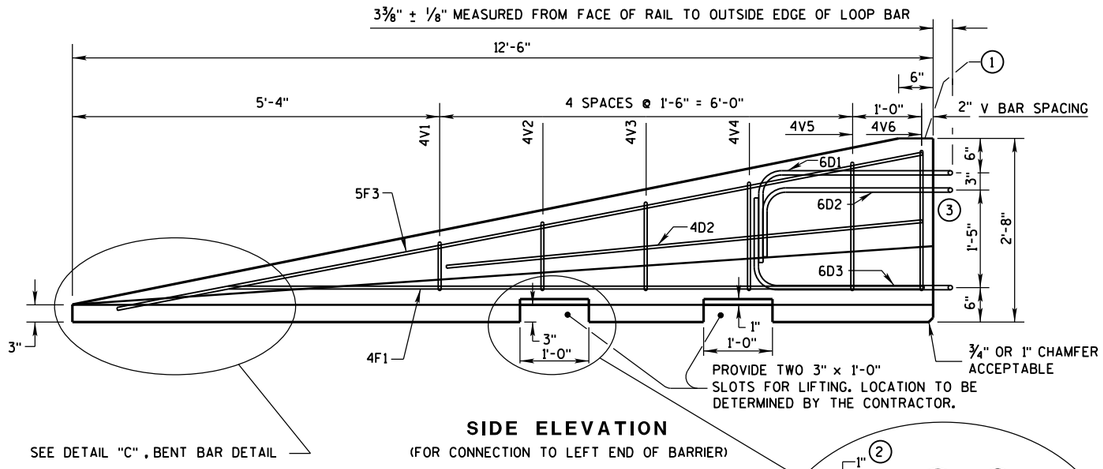
(7) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MAY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURES INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED TO THE LEFT OF TRAFFIC AND WHITE REFLECTORS WHEN BARRIER IS LOCATED 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.

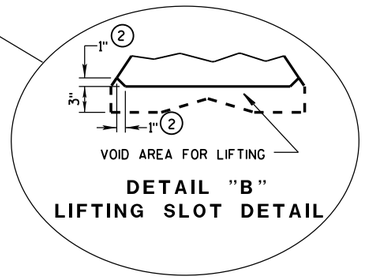
(9) 1" CHAMFER OPTIONAL.

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

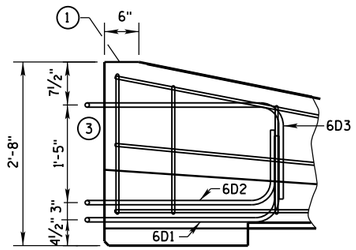
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 570



SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



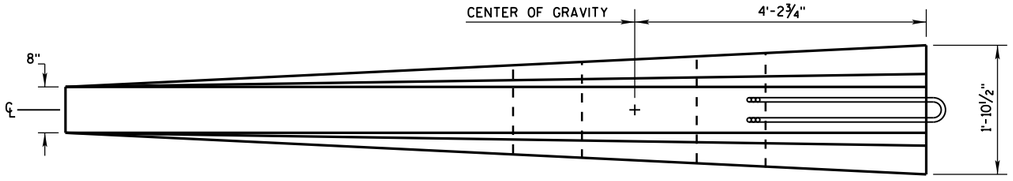
DETAIL "B"
LIFTING SLOT DETAIL



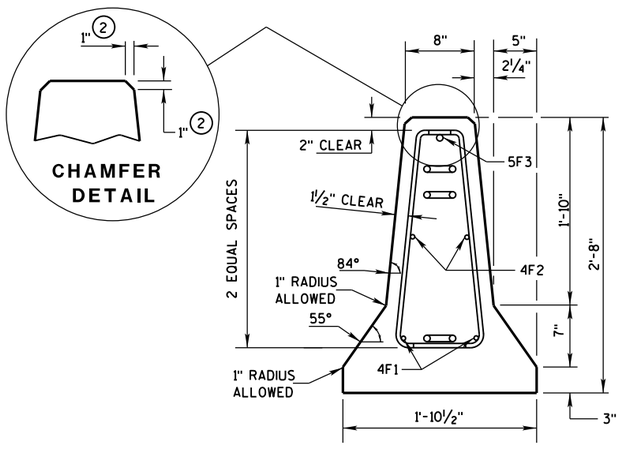
SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

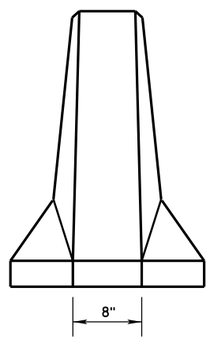
1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



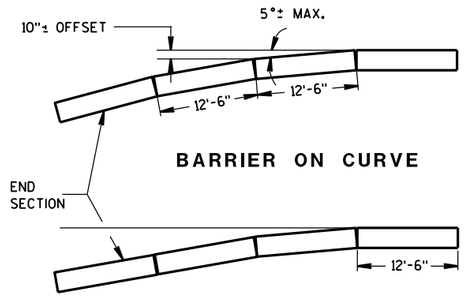
PLAN VIEW



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"

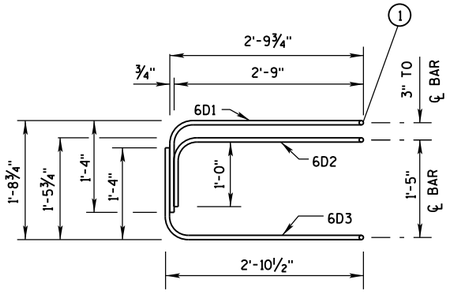
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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

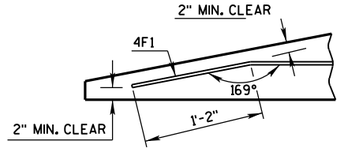
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

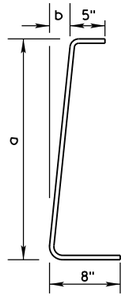
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



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

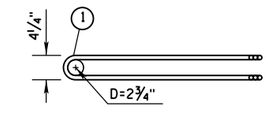
GENERAL NOTES

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

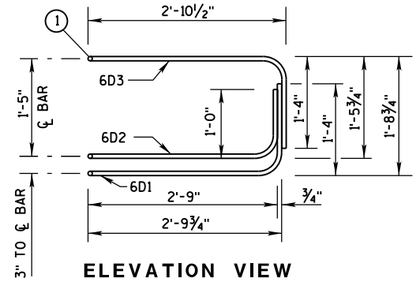
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

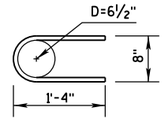
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



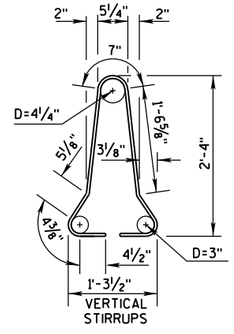
PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



ELEVATION VIEW



6A2



4A1

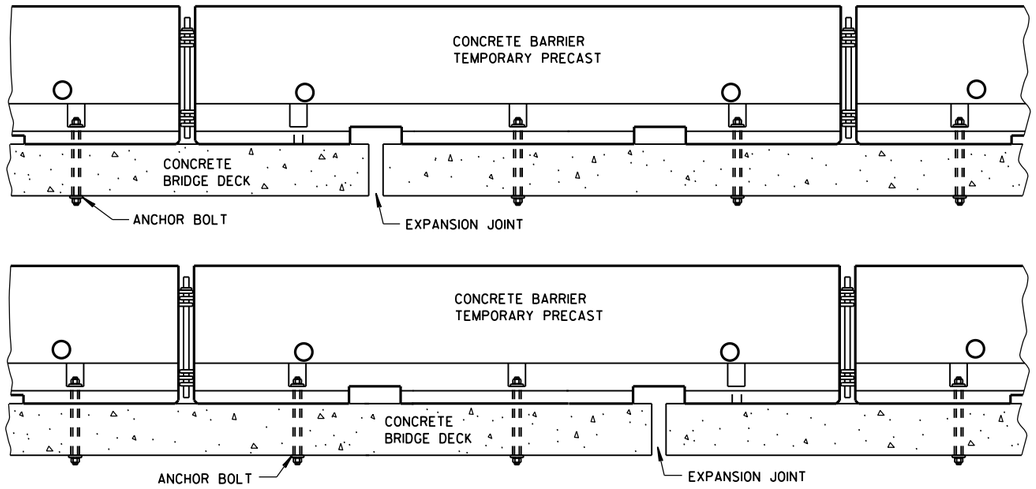
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

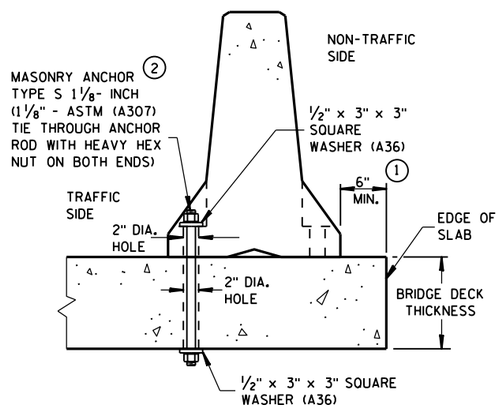
6

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



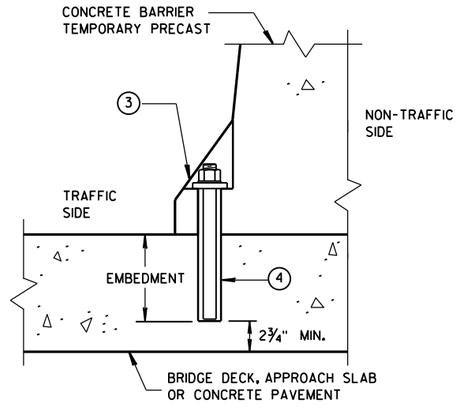
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(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 ② 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.

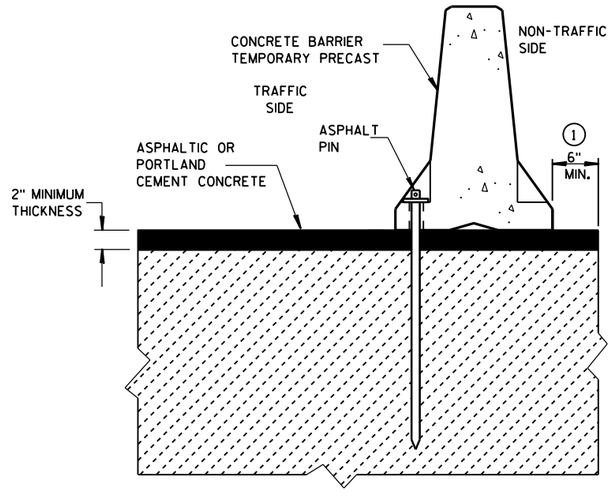
② ANCHORING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST.

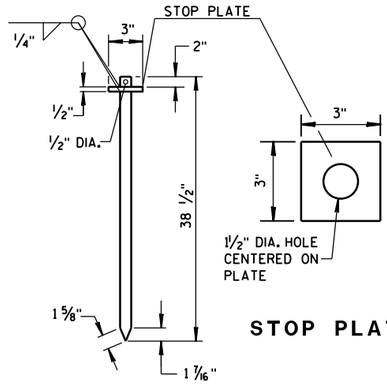
WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED (EPOXY) ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1⅛-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE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

③ 1⅛" DIAMENTER A307 THREADED ROD, ½" X 3" X 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL, ASTM A563A HEAVY HEX NUT.

④ ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5¼" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.



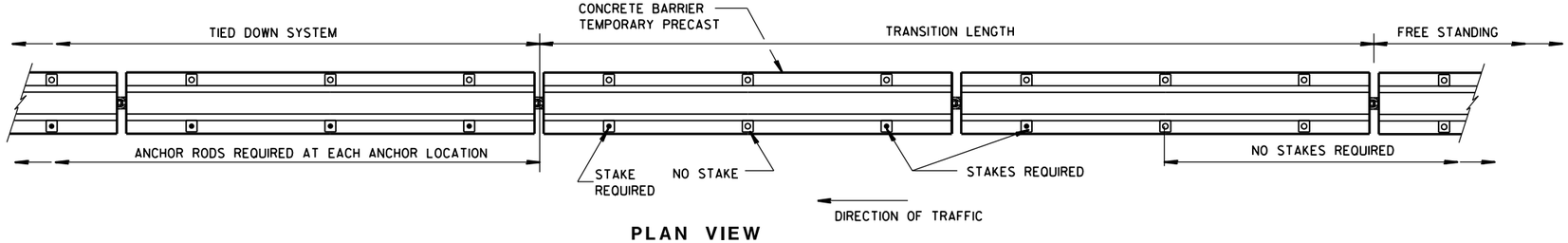


STOP PLATE

ASPHALT PIN
(ASTM A36 STEEL)

STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



PLAN VIEW

FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

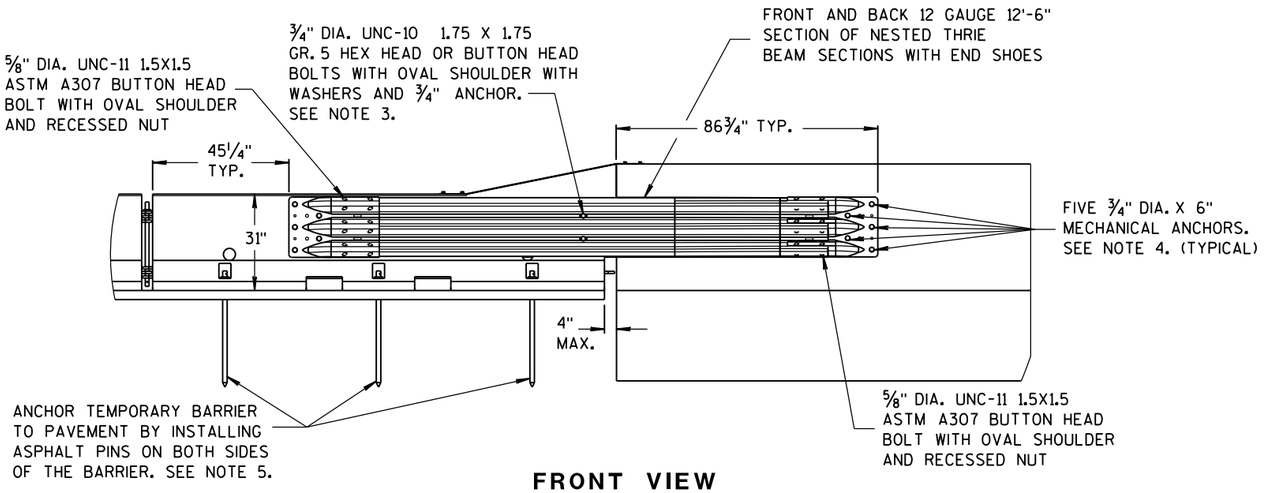
(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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

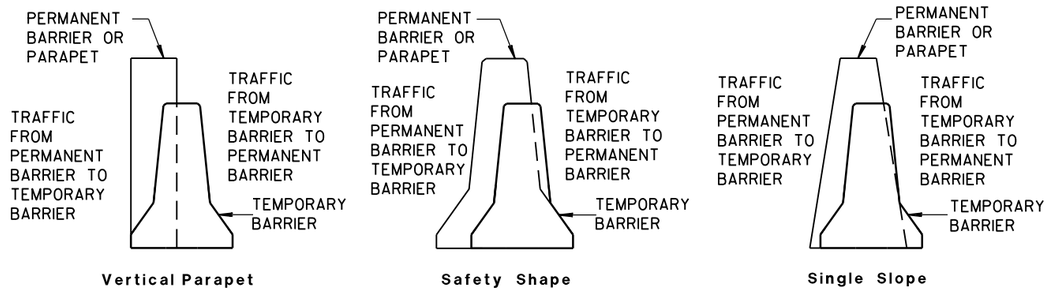


FRONT VIEW

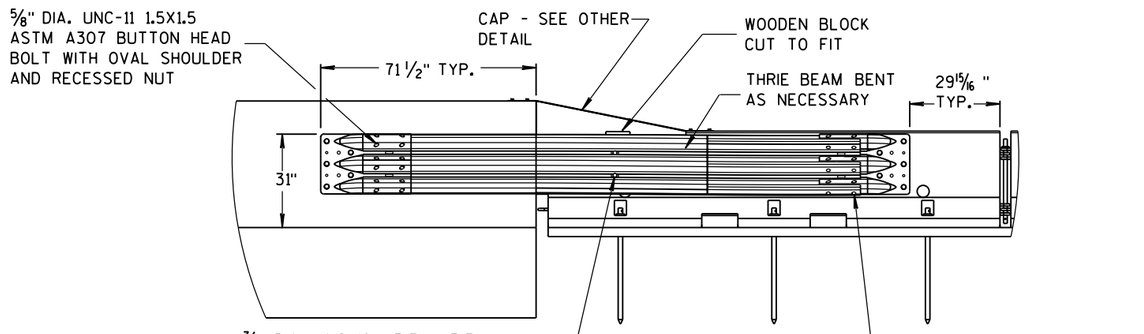
NOTES

NESTED THRIE BEAM IS REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS.

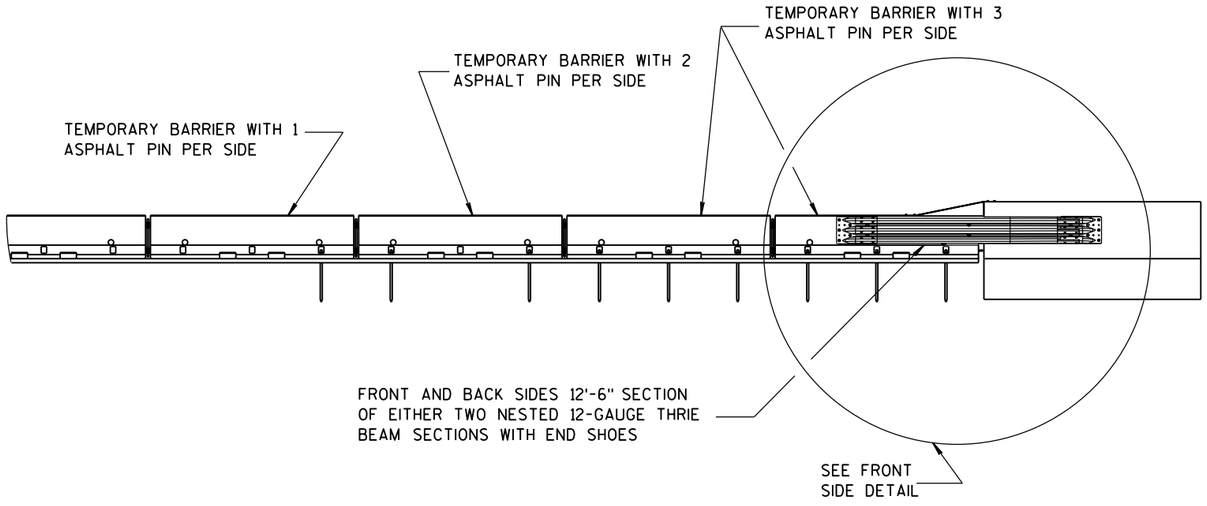
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48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



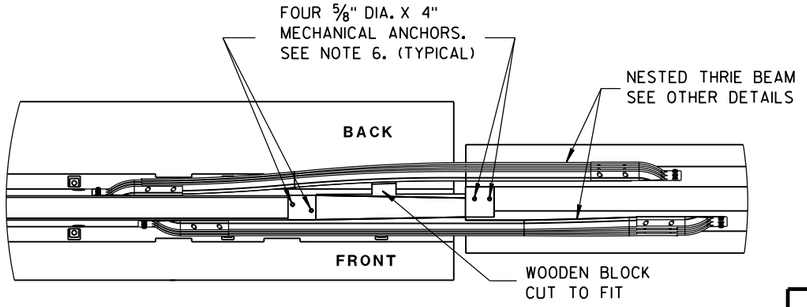
TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM



BACK VIEW



FRONT VIEW



PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

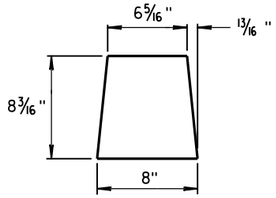
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 574

6

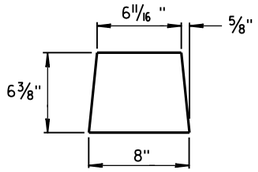
S.D.D. 14 B 7-14e

6

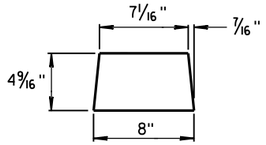
S.D.D. 14 B 7-14e



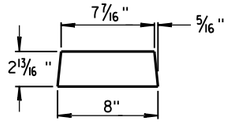
GUSSET 1



GUSSET 2

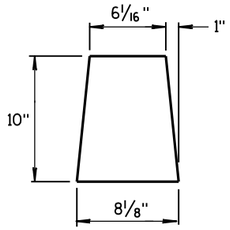


GUSSET 3

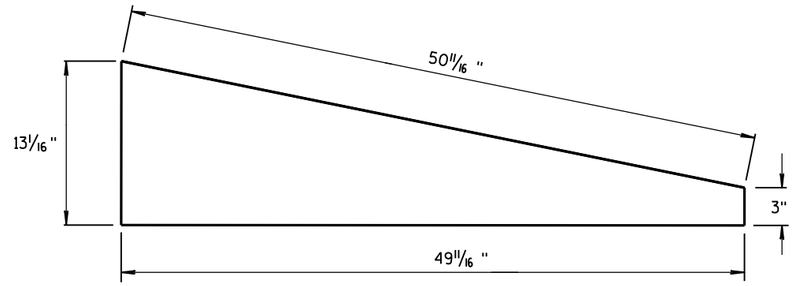


GUSSET 4

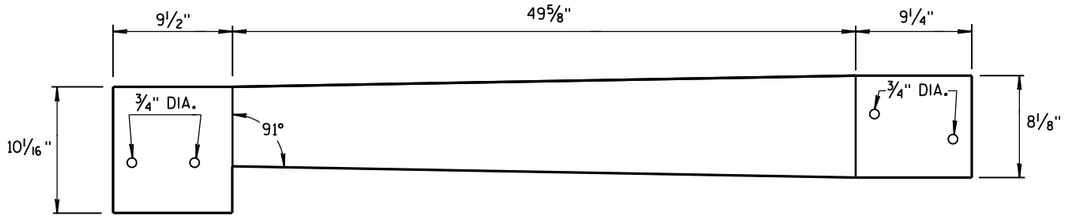
GUSSETS

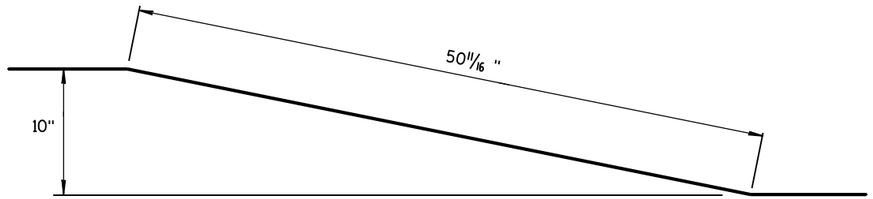


END PLATE



SIDE PLATE

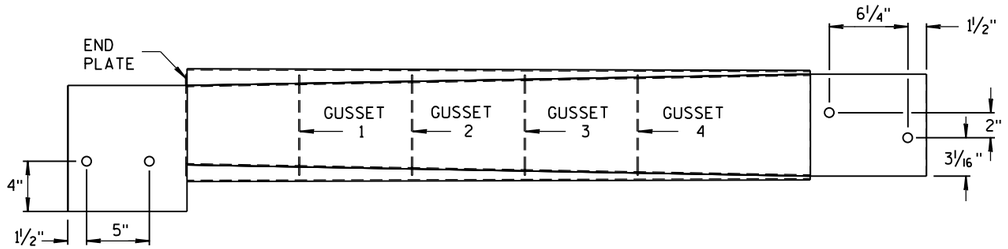


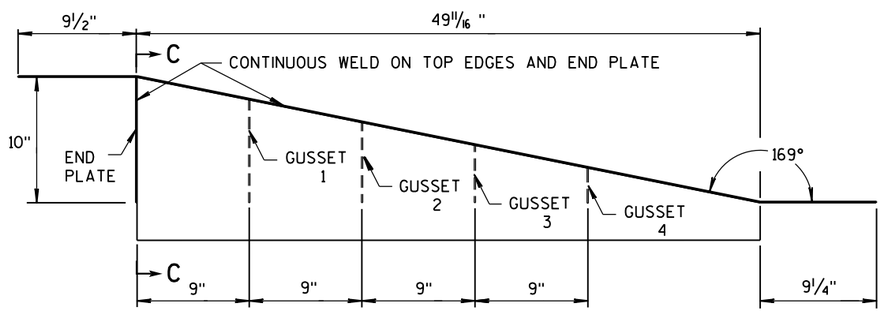


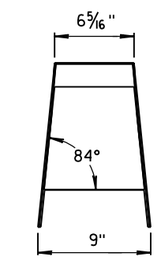
TOP PLATE

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.







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.

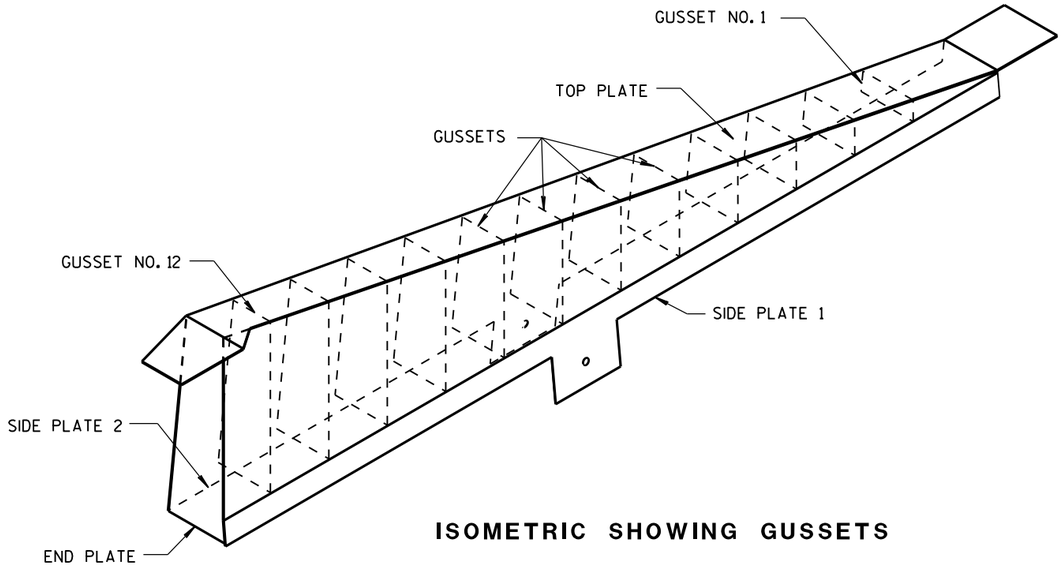
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

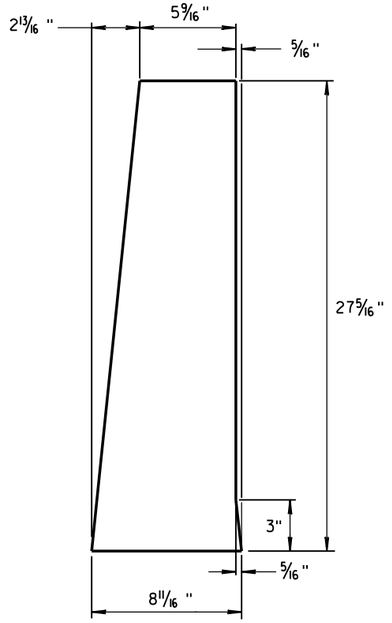
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 7-14f

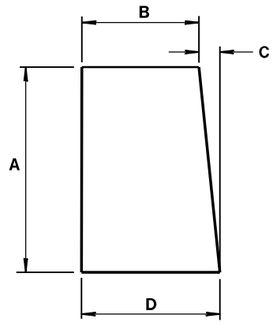


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



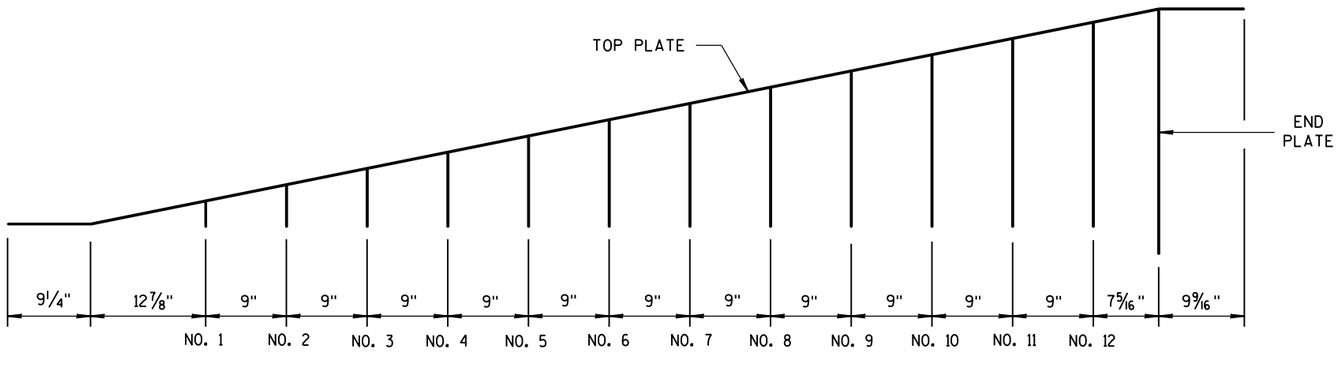
GUSSETS 1 - 12

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

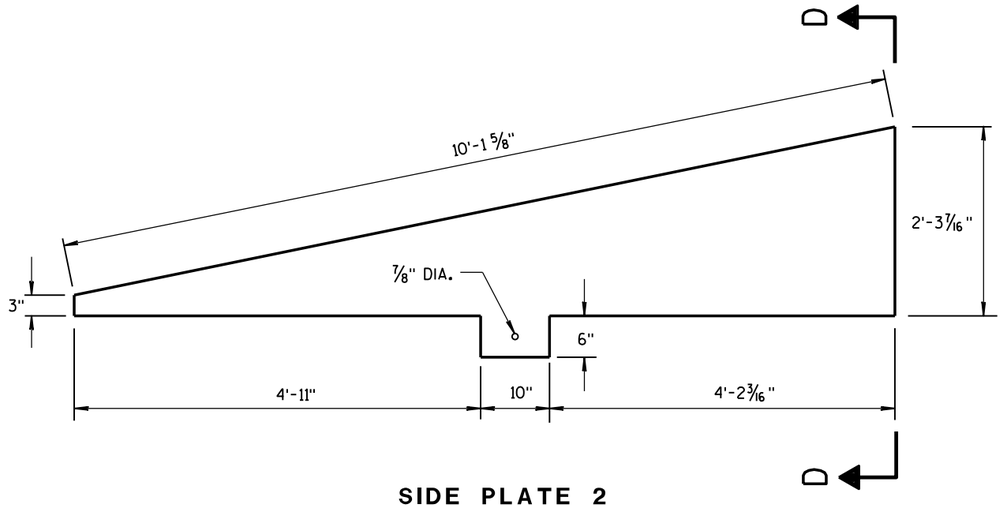
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

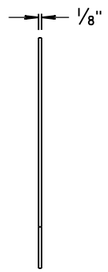
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

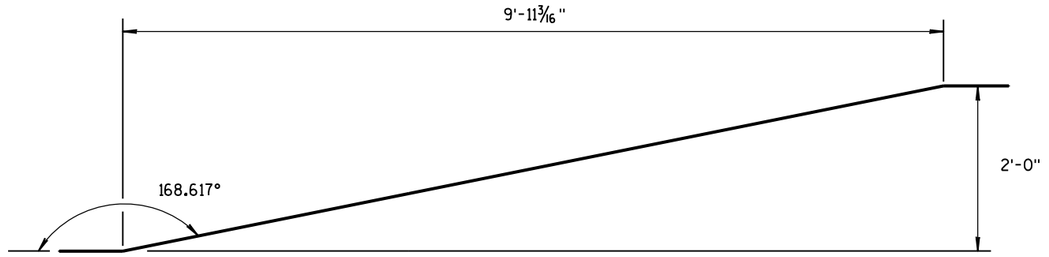
S.D.D. 14 B 7-14g



SIDE PLATE 2

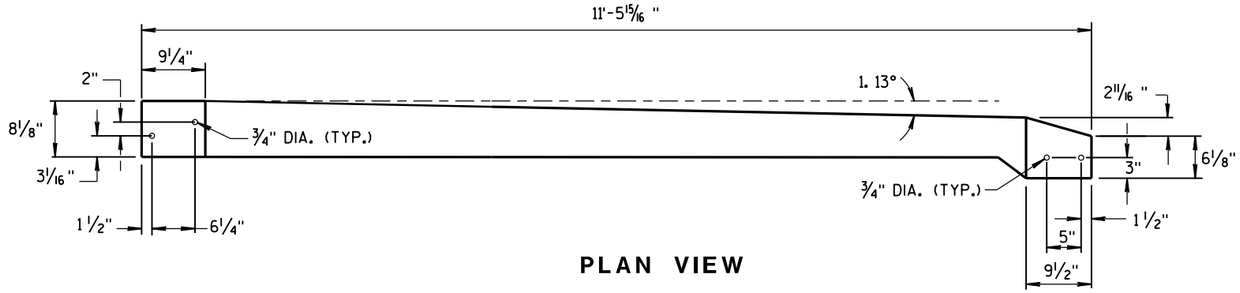


END VIEW



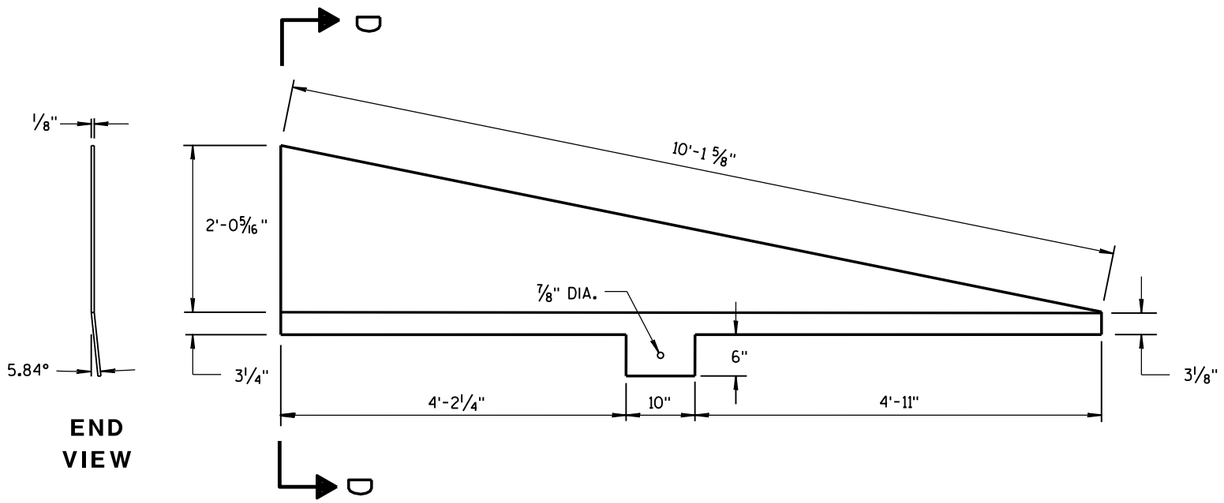
SIDE VIEW

TOP PLATE



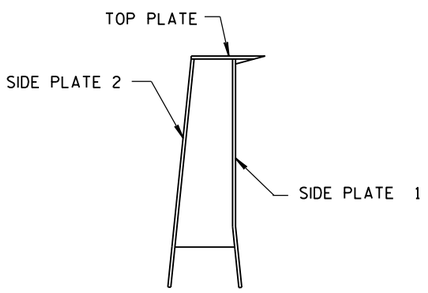
PLAN VIEW

TOP PLATE



END VIEW

SIDE PLATE 1



SECTION D-D

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

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Jerry H. Zoda — ROADWAY STANDARD DEVELOPMENT ENGINEER
FHWA

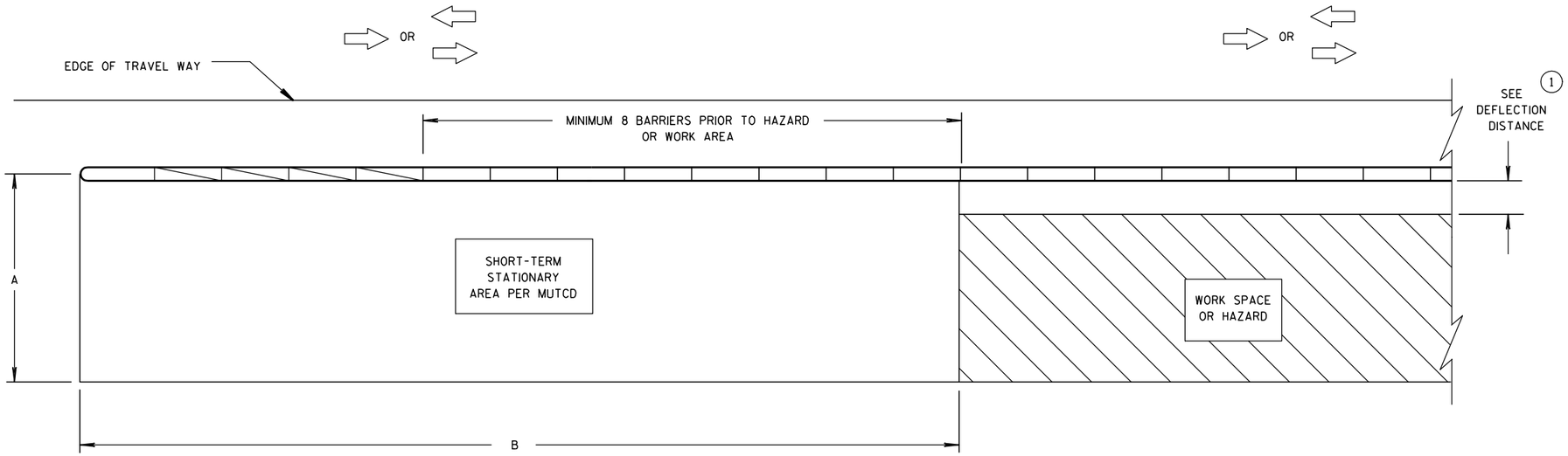
577

6

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

6

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



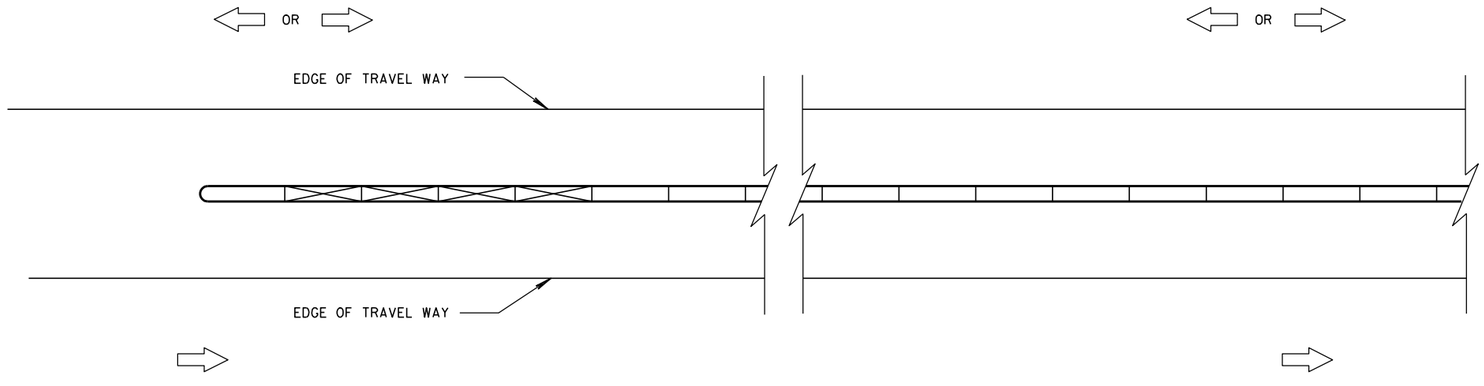
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

DIMENSION A TABLE (2)

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

DIMENSION B TABLE (2)

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



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

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

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

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

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

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

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

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

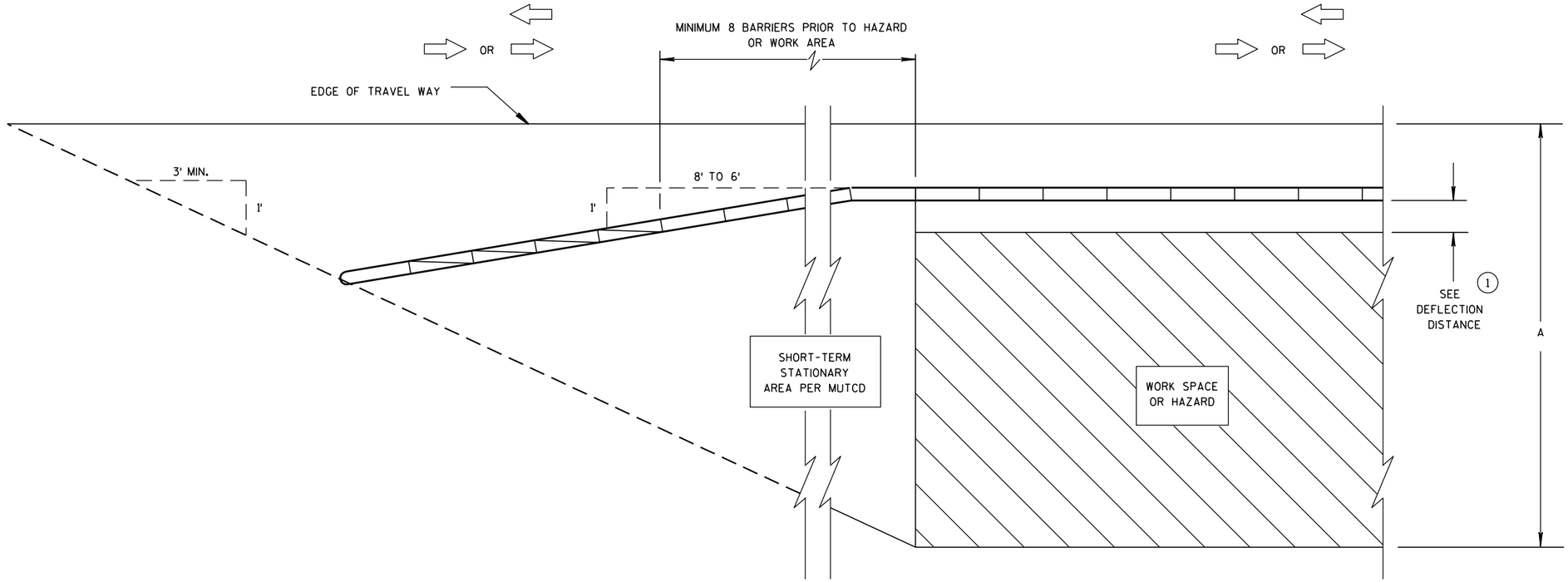
(2) VALUES PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

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

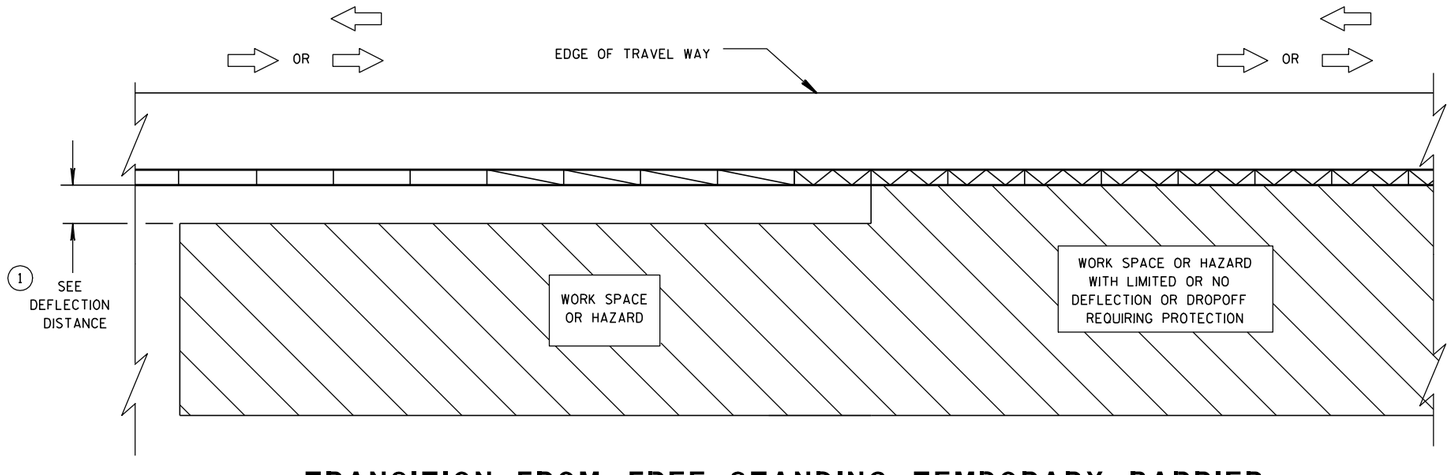
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

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



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



TRANSITION FROM FREE STANDING TEMPORARY BARRIER TO ANCHORED BARRIER

LEGEND

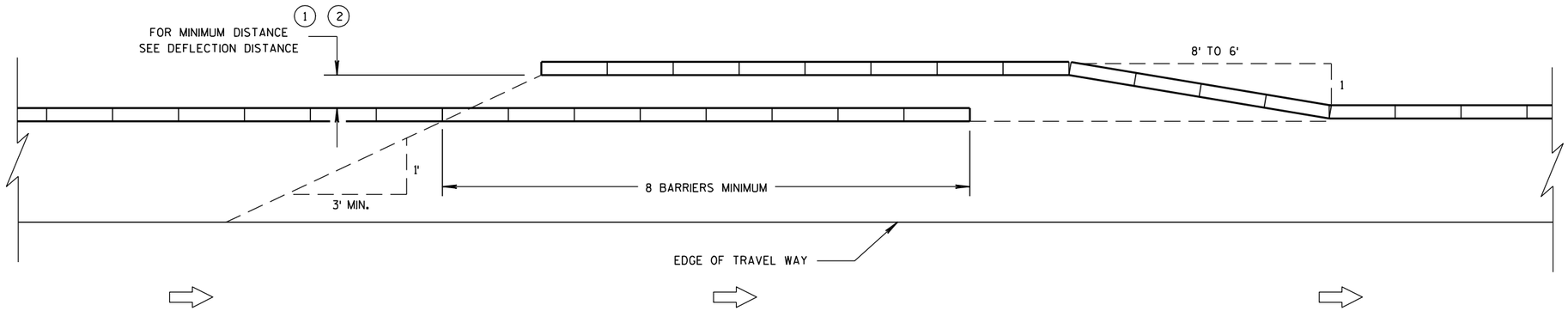
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

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

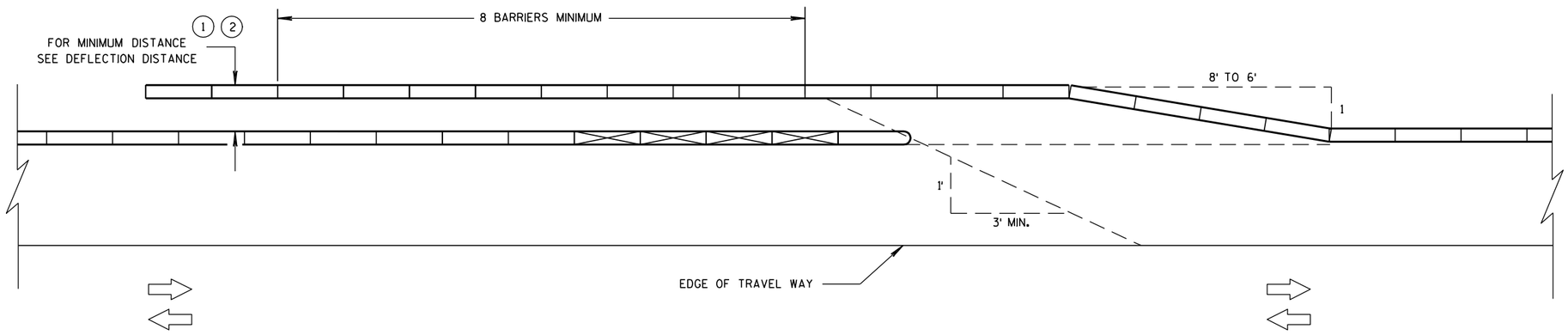
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

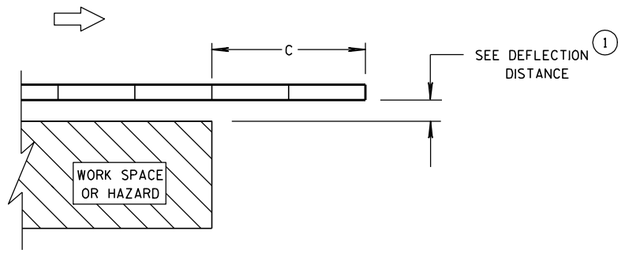
S.D.D. 14 B 8-1b



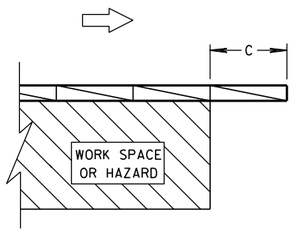
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

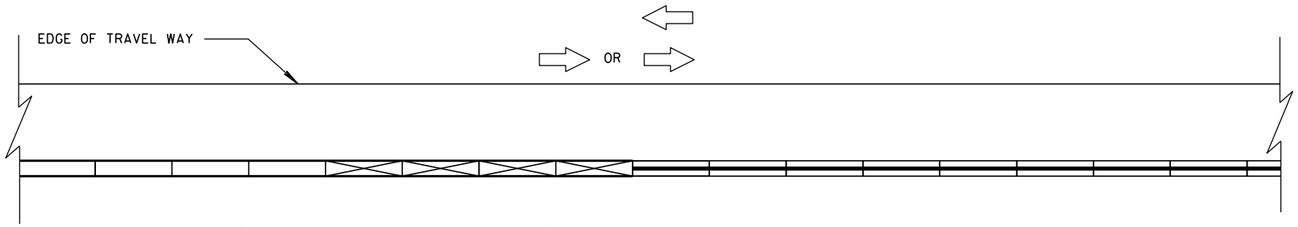
LEGEND

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

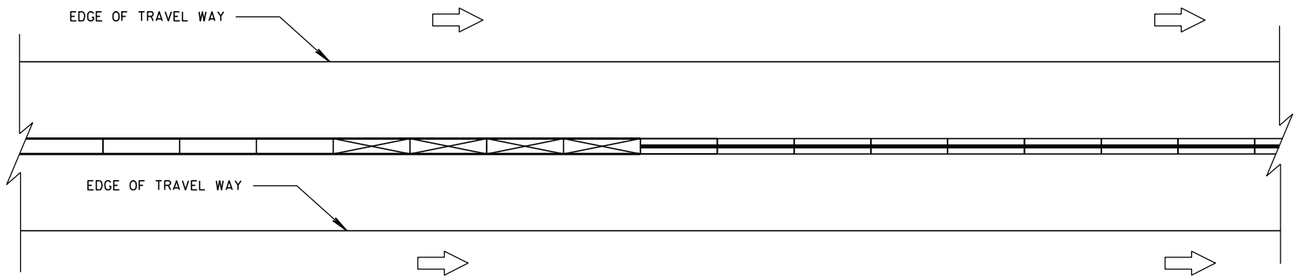
CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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



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

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

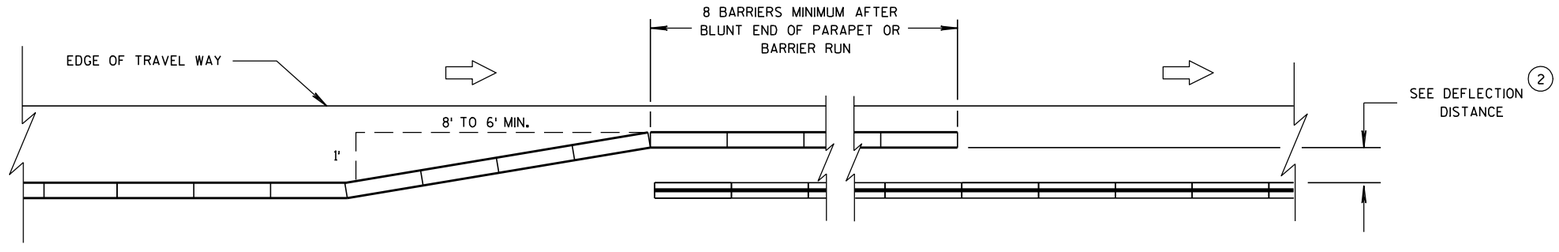
SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

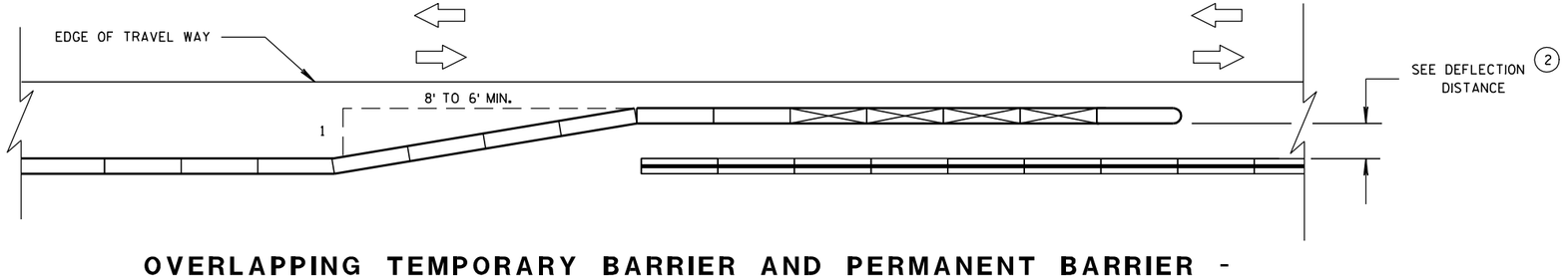
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER - ONE WAY TRAFFIC



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER - TWO WAY TRAFFIC

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

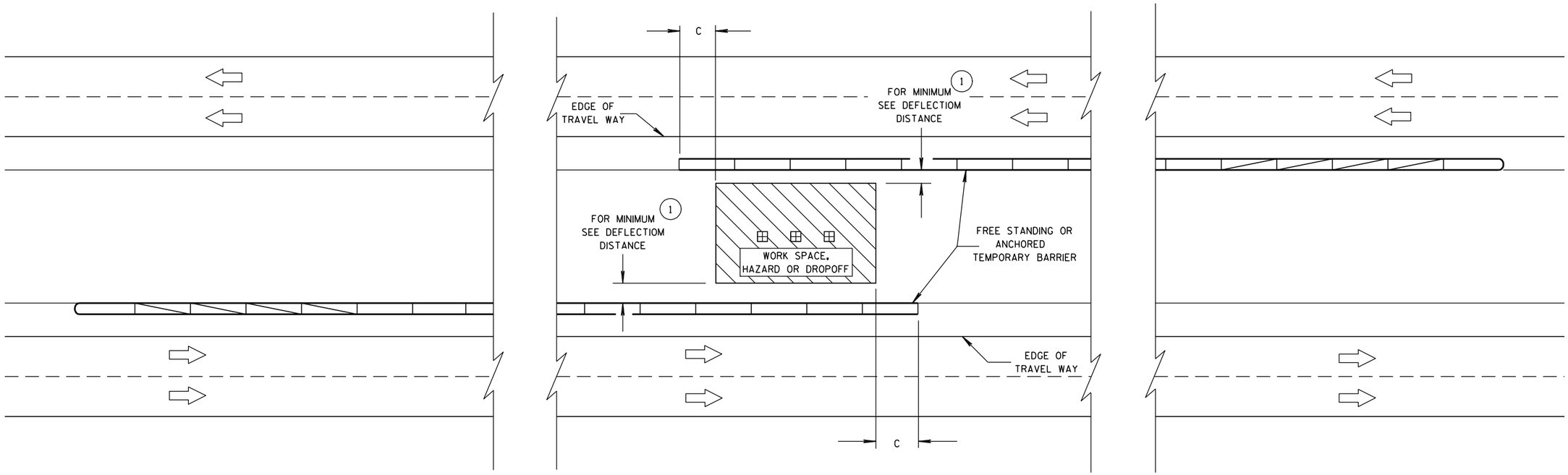
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE (2)

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



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINNER

582

FHWA

6

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

6

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

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.

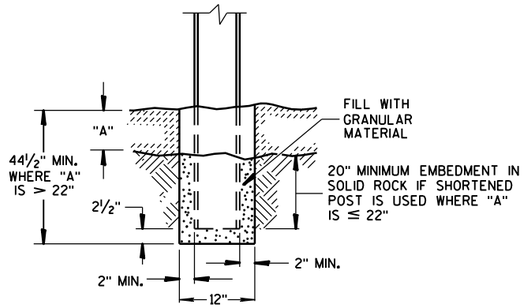
(5) IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).

(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.

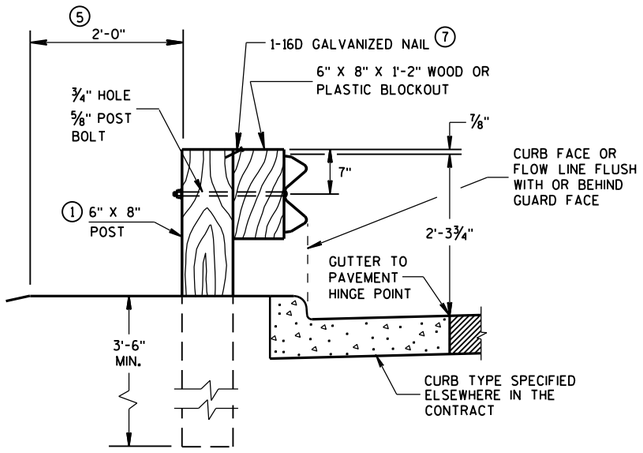
(7) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

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

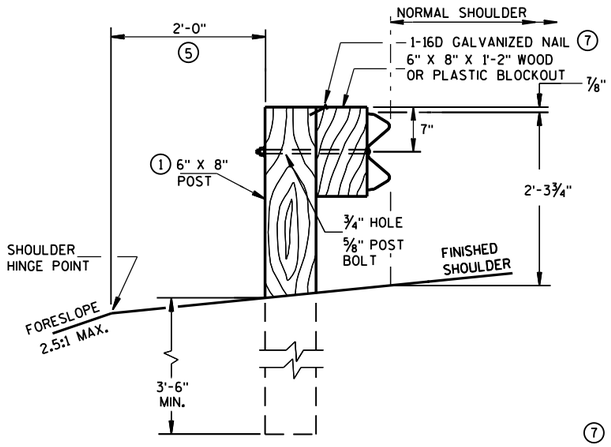
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



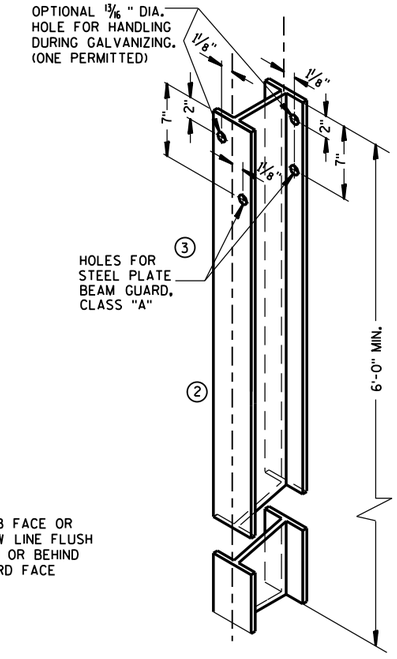
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (6)



END VIEW
LOCATED ALONG A CURBED ROADWAY

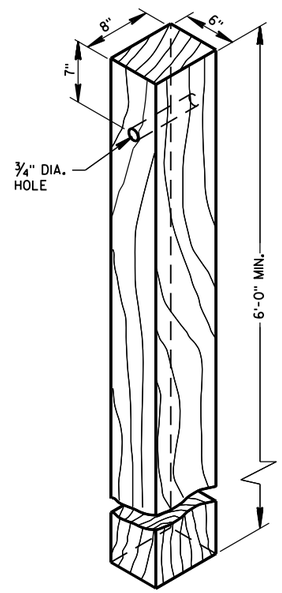


END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION

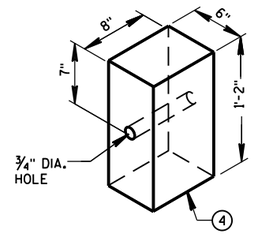


STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) (1)

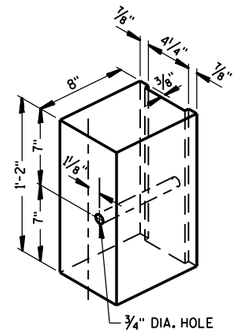
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



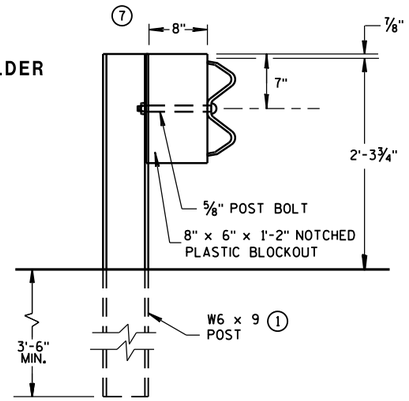
WOOD POST
(6"X8") NOMINAL



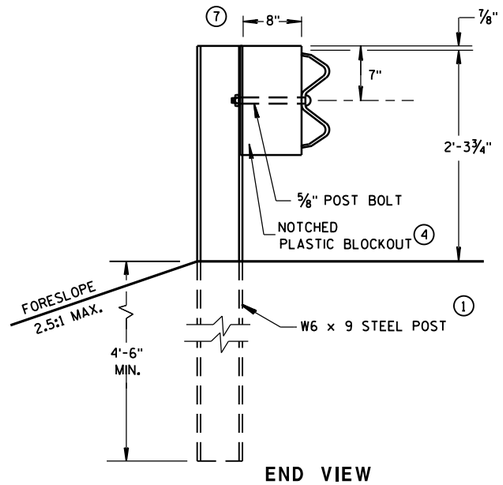
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



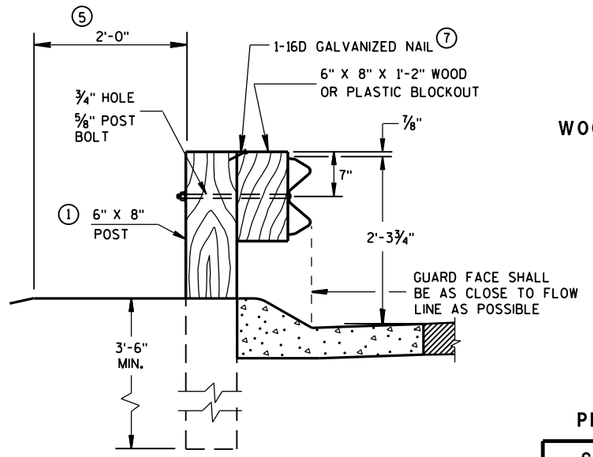
TYPICAL NOTCHED (1)
PLASTIC BLOCKOUT
FOR STEEL POSTS



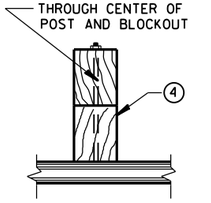
END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION



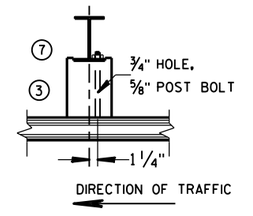
END VIEW
LONGER POST AT HALF
POST SPACING W BEAM
(LHW)



END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

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

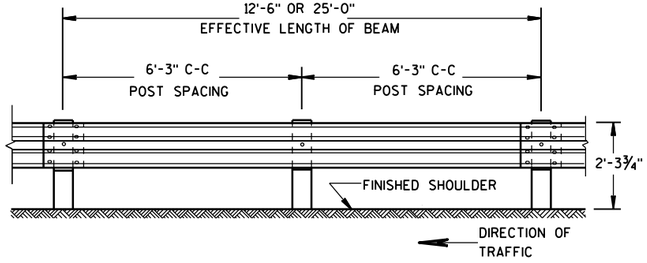
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 583

6

S.D.D. 14 B 15-8a

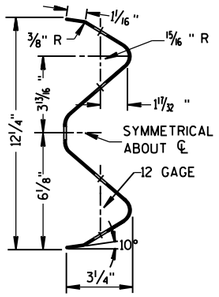
6

S.D.D. 14 B 15-8a

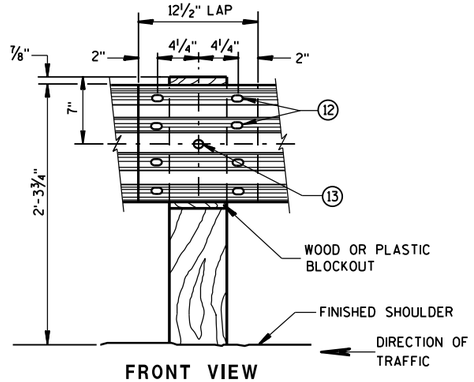


FRONT VIEW

POST SPACING STANDARD INSTALLATION



SECTION THRU W BEAM



FRONT VIEW

BEAM SPLICE AT WOOD POST AND POST MOUNTING DETAIL

GENERAL NOTES

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

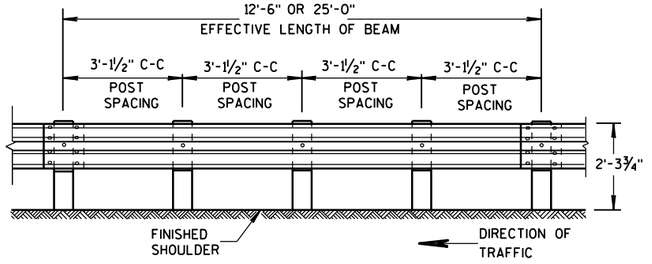
(9) DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

(11) PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.

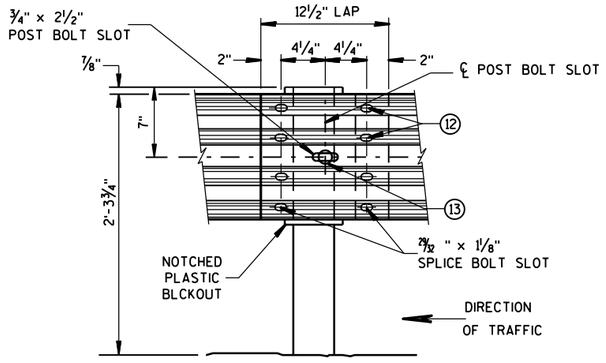
(12) 8 -⅝" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.

(13) ⅝" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH ⅝" DIA. F844 FLAT WASHER UNDER NUT.



FRONT VIEW

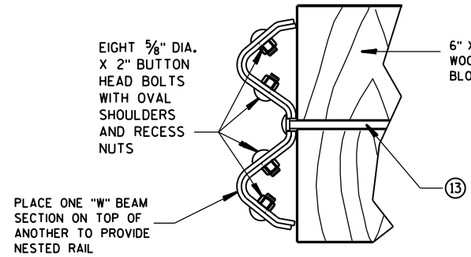
POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)



FRONT VIEW

BEAM SPLICE AT STEEL POST

TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD

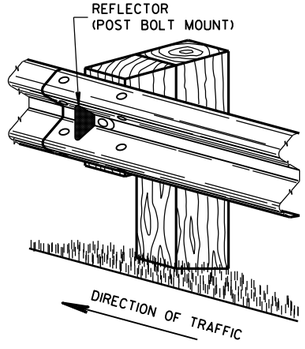


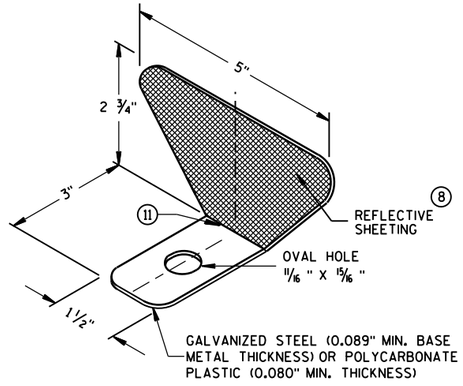
NESTED W BEAM (NW)

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

REFLECTOR SPACING (9)

	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 (10) 1	6
TWO WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	2 2 (11)	3



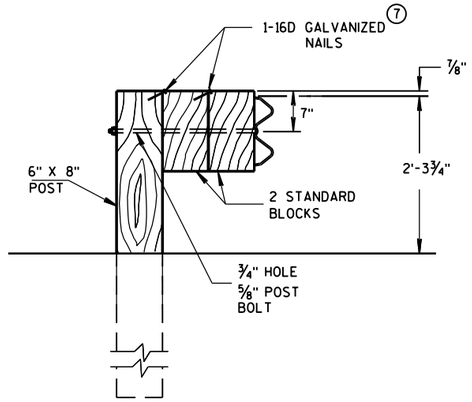


ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION (8)

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

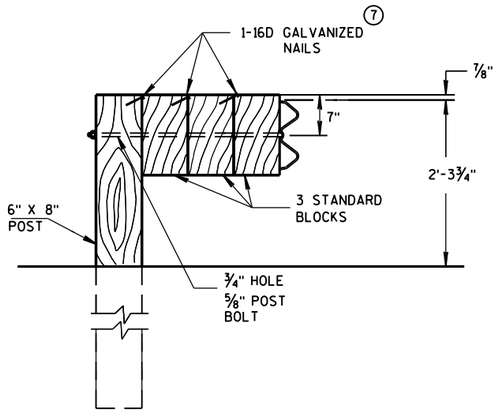
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 14 B 15-8b



DETAIL FOR DOUBLE BLOCKS

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

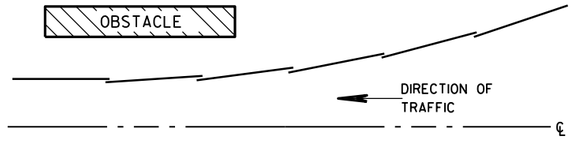


DETAIL FOR TRIPLE BLOCKS

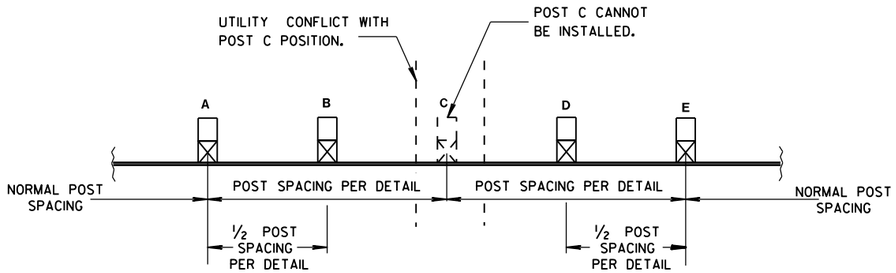
TRIPLE BLOCK DETAIL IS LIMITED TO ONE LOCATION WITHIN A BEAM GUARD RUN.

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.



PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

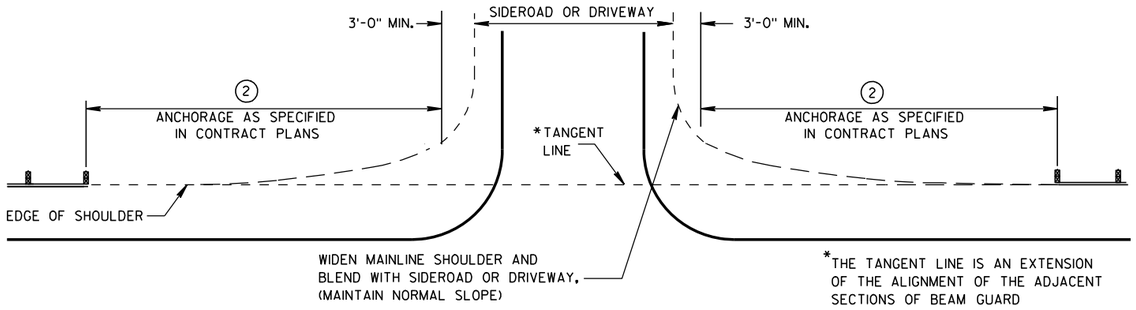
STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

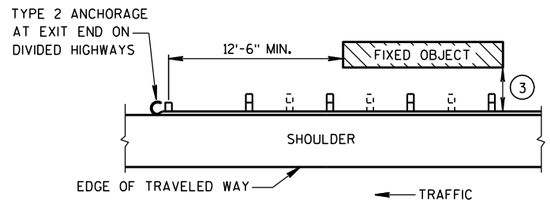
APPROVED
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

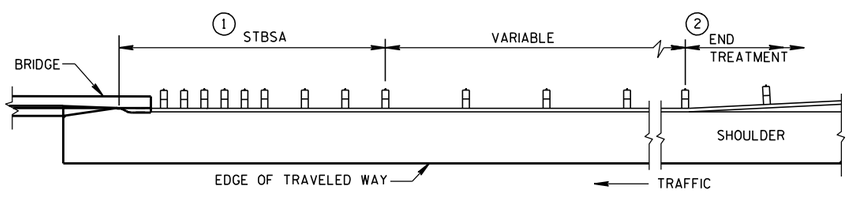
S.D.D. 14 B 15-8c



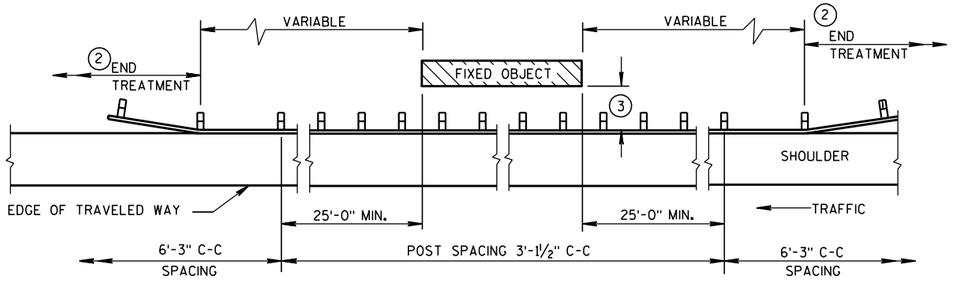
BEAM GUARD AT SIDEROADS OR DRIVEWAYS



BEAM GUARD AT OBSTACLES EXIT END - ONE WAY TRAFFIC

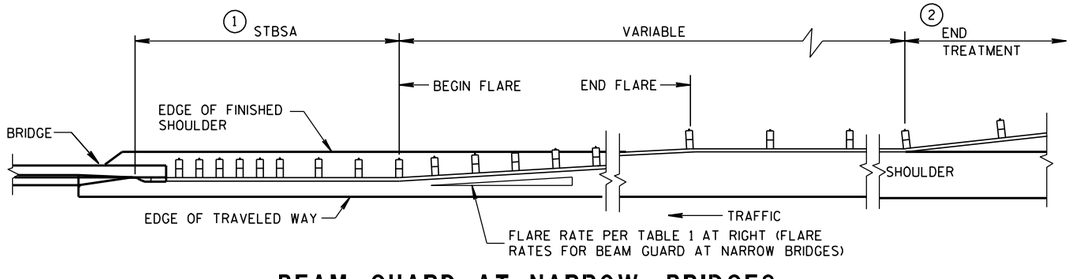


BEAM GUARD AT FULL WIDTH BRIDGES



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

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"

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

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.

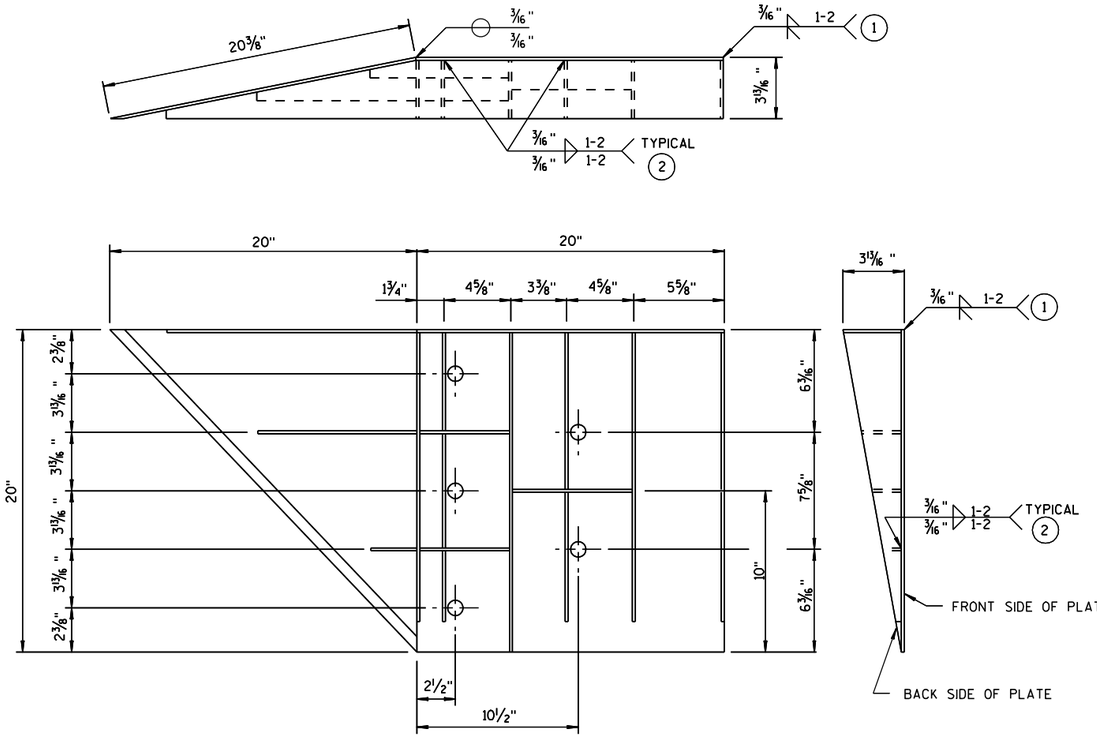
FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

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)

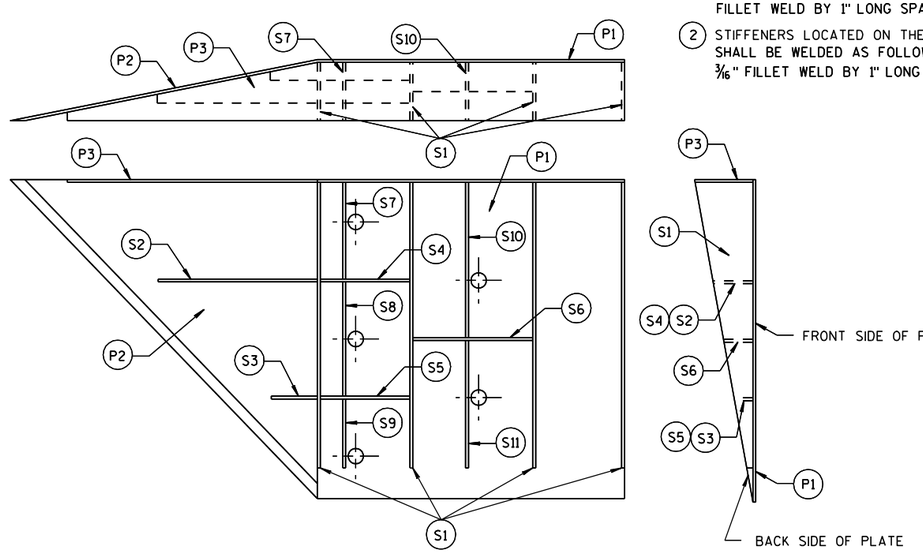


PLATE AND STIFFENER IDENTIFICATION

(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"

STEEL THRIE BEAM STRUCTURE APPROACH

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTOR PLATE DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

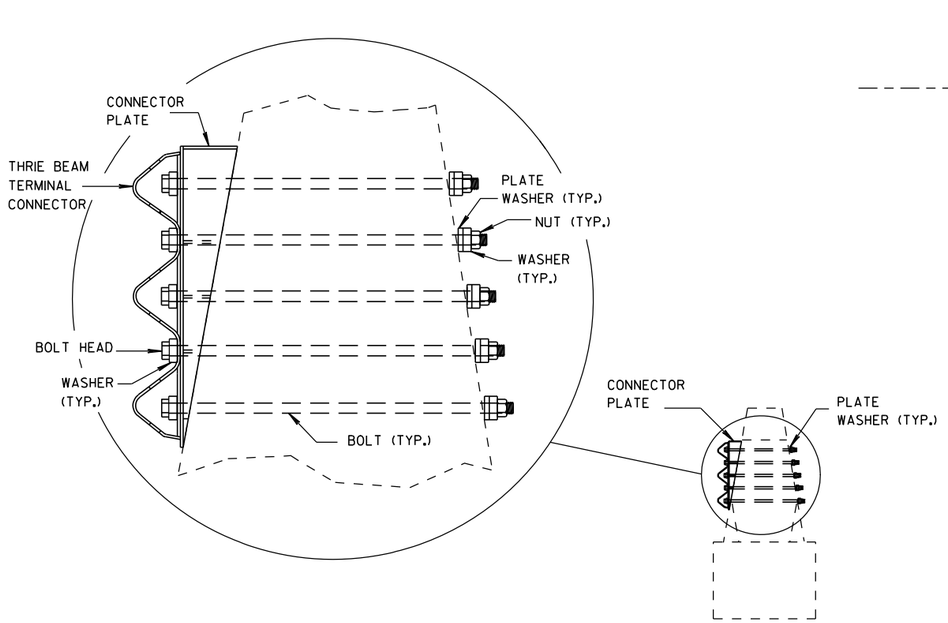
APPROVED
8/31/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
587
FHWA

6

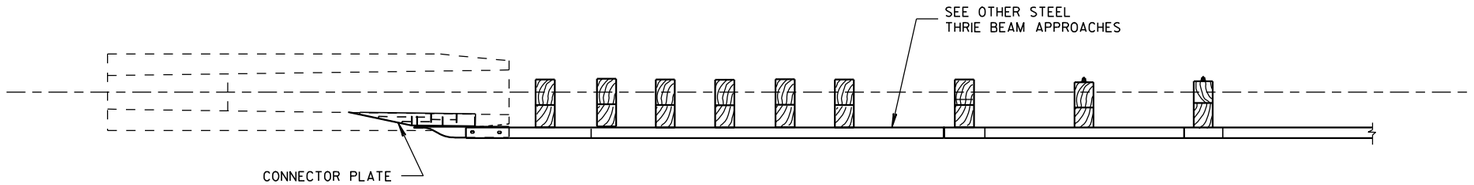
S.D.D. 14 B 20-11g

6

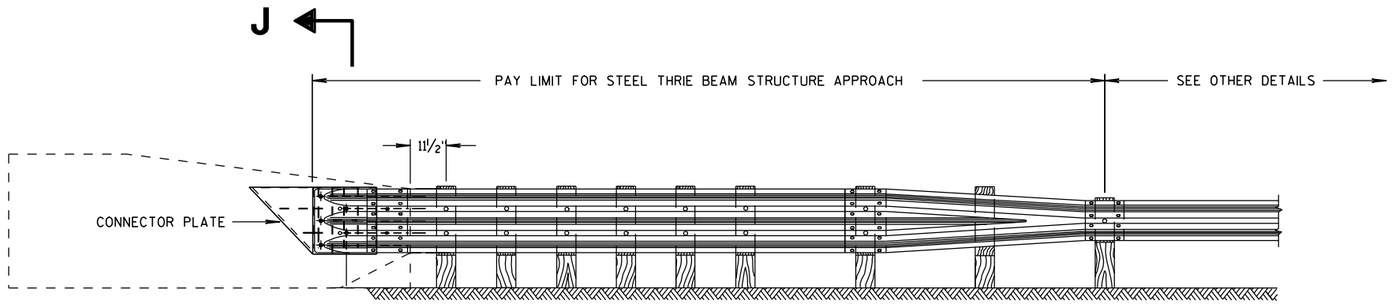
S.D.D. 14 B 20-11g



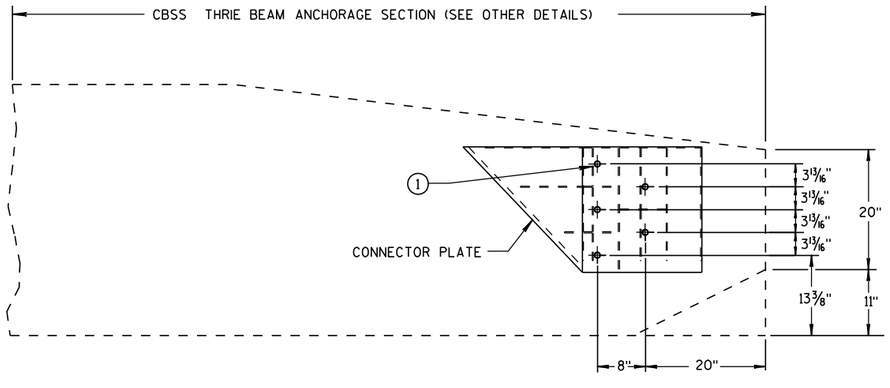
SECTION J-J



PLAN VIEW



FRONT VIEW



CONNECTOR PLATE LOCATION

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 614.

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

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

STEEL THRIE BEAM STRUCTURE APPROACH

STEEL THRIE BEAM STRUCTURE APPROACH, SINGLE SLOPE ATTACHMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

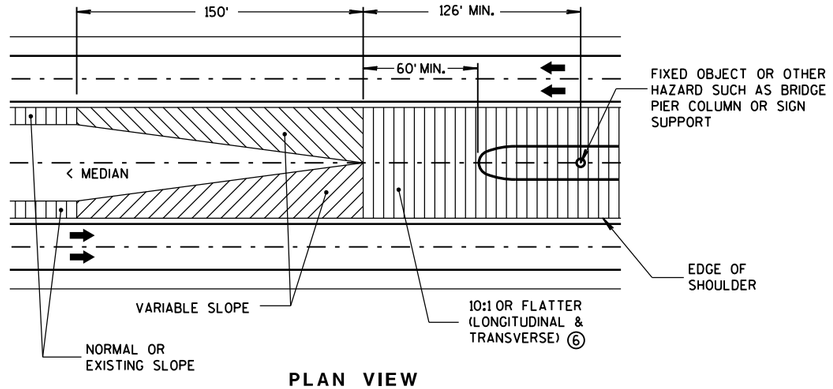
8/31/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

588

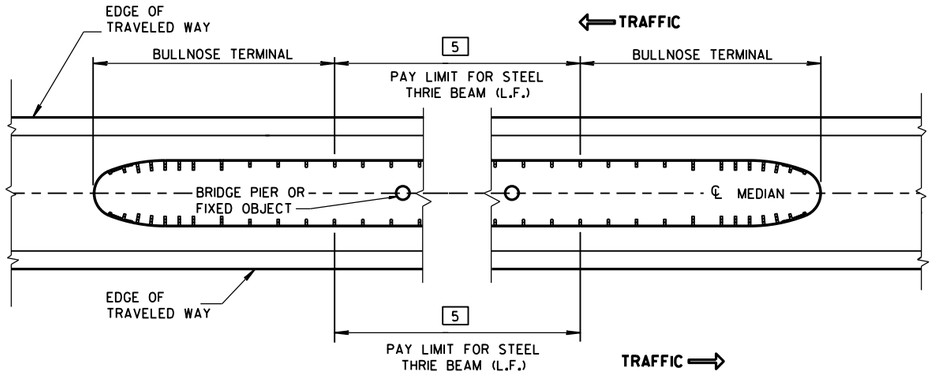
FHWA

6
S.D.D. 14 B 20-11h

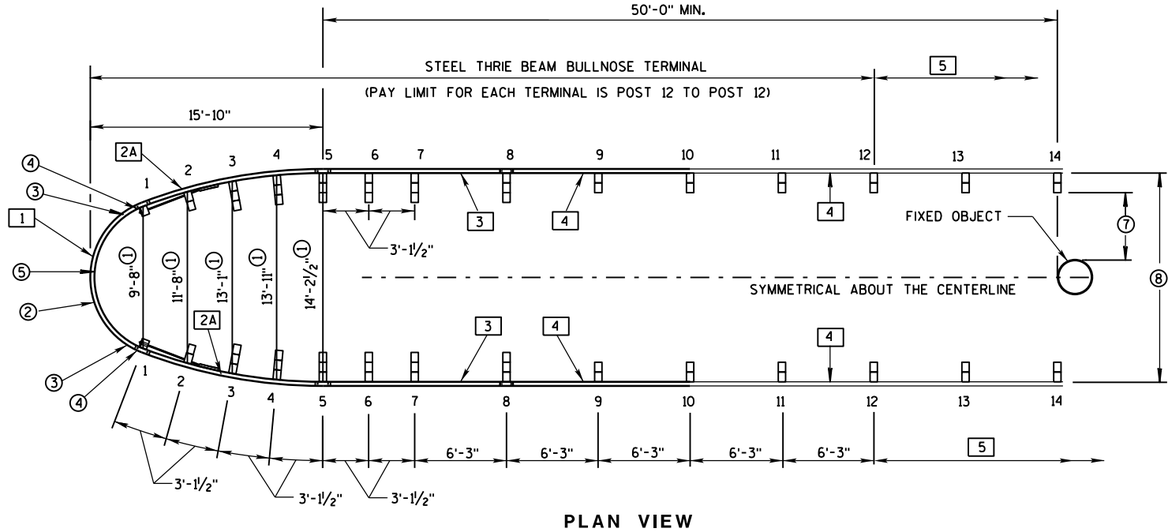


PLAN VIEW

GRADING AT BULLNOSE
(ALL INSTALLATIONS)

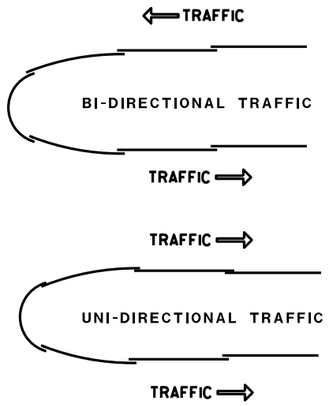


MEDIAN HAZARD PROTECTION PAY LIMITS



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.

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½" AND 12" DIAMETER AROUND POST. SEE SDD 14B15 OR SDD 14B42 FOR MORE INFORMATION.

[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.

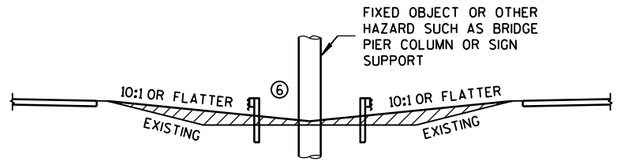
④ NOSE CABLE ANCHOR PLATE (BACKSIDE OF SPLICE).

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.

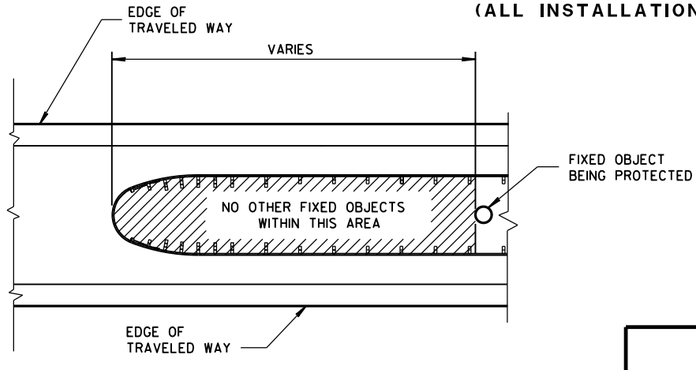
⑥ PROVIDE SUITABLE DRAINAGE WHEN MEDIAN GRADING IMPEDES NORMAL FLOW.

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)

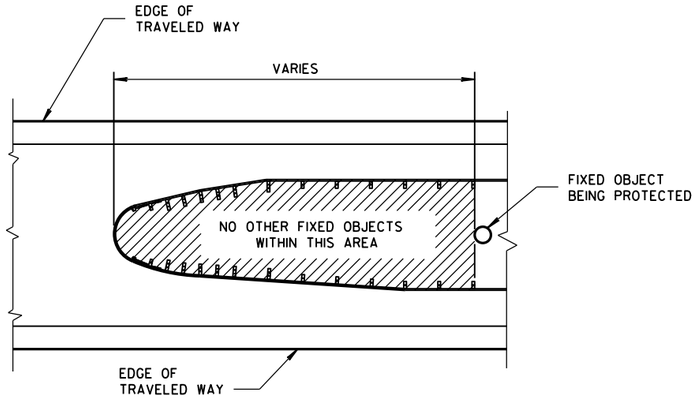


HAZARD FREE AREA INSIDE BULLNOSE

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6
S.D.D. 14 B 26-3a



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)

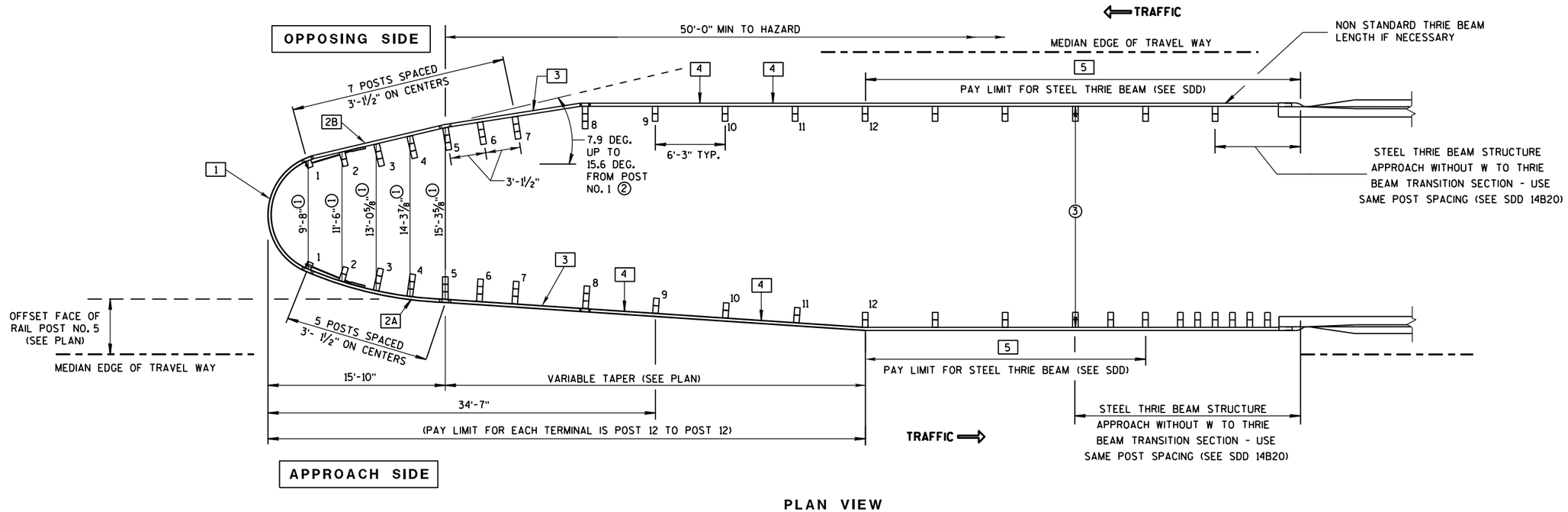
[4] UNBENT STANDARD THRIE-BEAM RAIL NO. 4, (POST 8 TO POST 10 & POST 10 TO POST 12)

[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

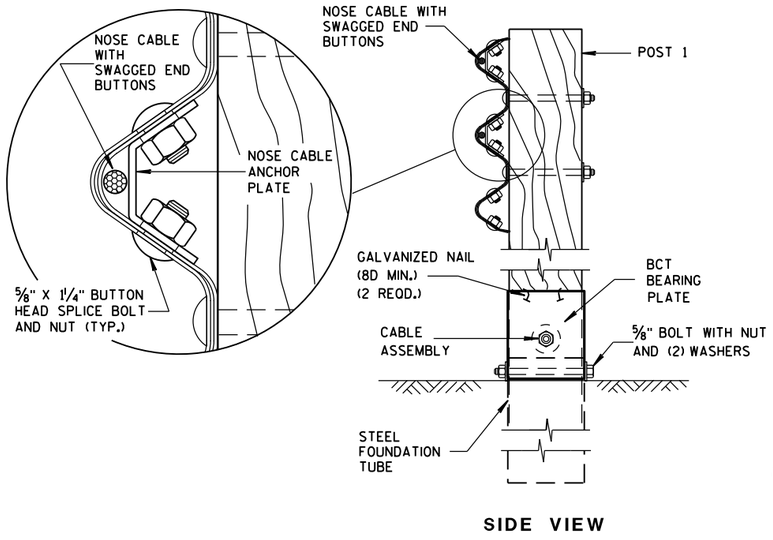
(INSTALLATION AT TWIN BRIDGES WITH BI-DIRECTIONAL TRAFFIC SHOWN)

STEEL THRIE BEAM
BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

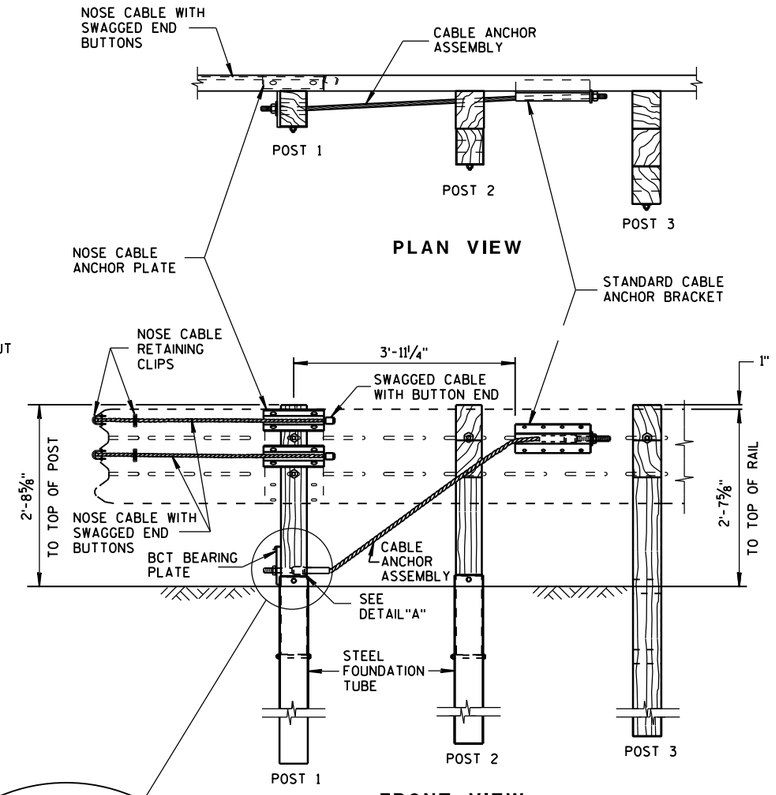
6

S.D.D. 14 B 26-3b



SIDE VIEW

NOSE CABLE ASSEMBLY AT POST NO. 1



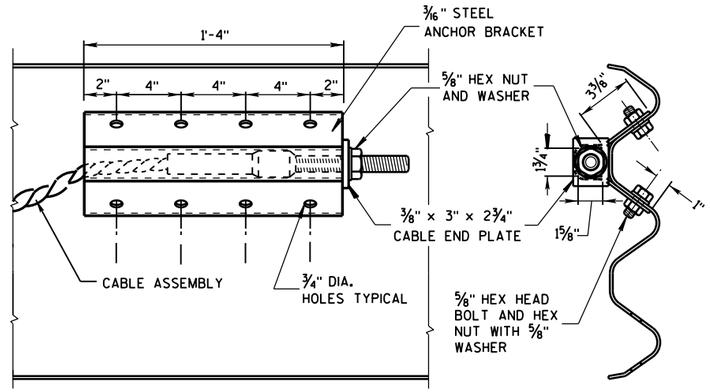
PLAN VIEW

FRONT VIEW

NOSE CABLE ANCHOR AND STANDARD BRACKET ASSEMBLY

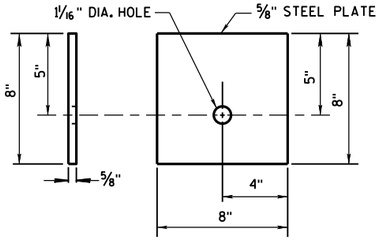
GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.

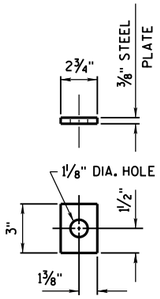


FRONT VIEW END VIEW

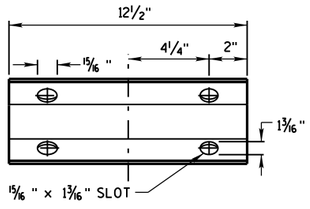
DETAILS OF CABLE ANCHOR BRACKET



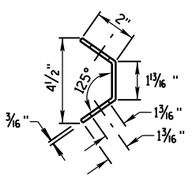
BCT BEARING PLATE



CABLE END PLATE



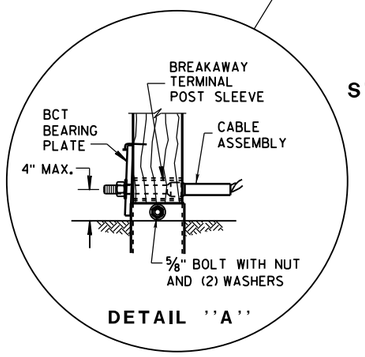
ELEVATION VIEW



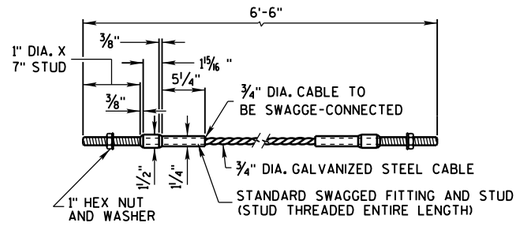
END VIEW

NOSE CABLE ANCHOR PLATE

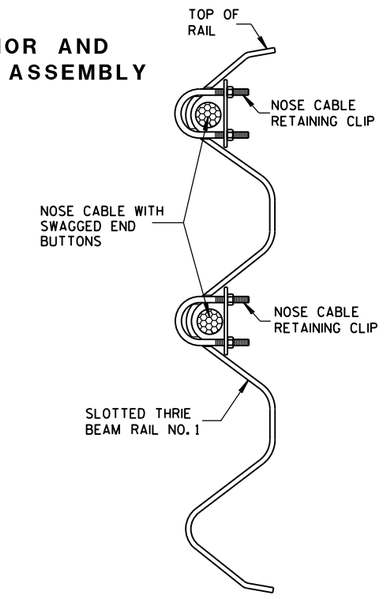
NOTE: 12 1/2" x 5 13/16" x 3/16" STEEL PLATE (A306)



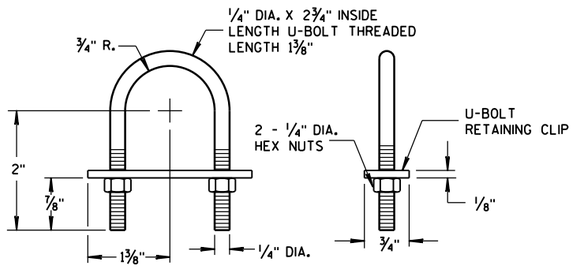
DETAIL ''A''



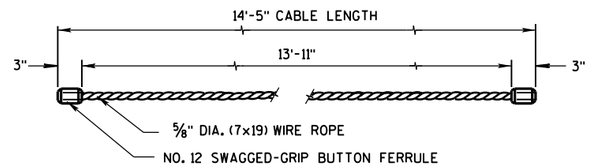
DETAILS OF CABLE ANCHOR ASSEMBLY



PLACEMENT OF NOSE CABLE RETAINING CLIP



NOSE CABLE RETAINING CLIP



NOSE CABLE WITH SWAGGED END BUTTONS

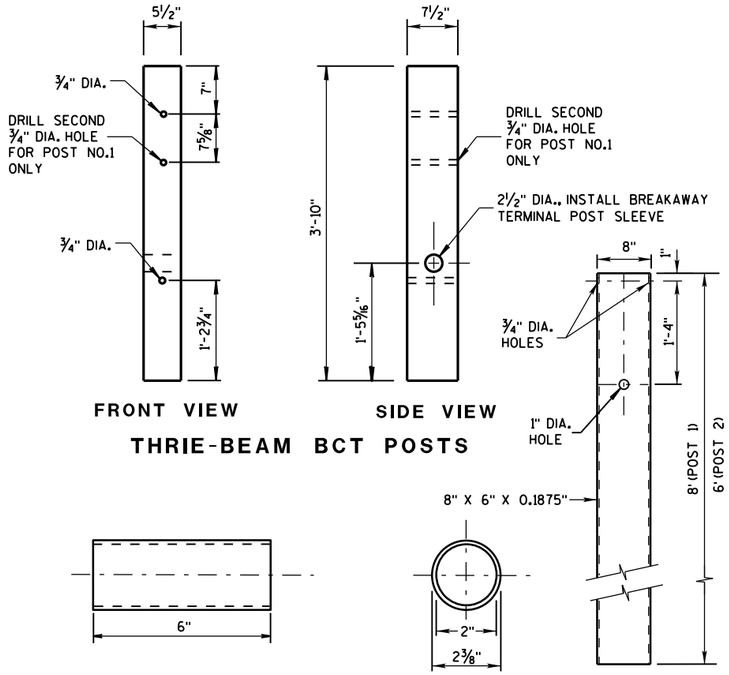
TO PULL OFF SWAGGED GRIP BUTTON FERRULE FROM WIRE ROPE REQUIRES A FORCE EQUAL TO 98% OF THE WIRE ROPE'S BREAKING STRENGHT.

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 26-3c

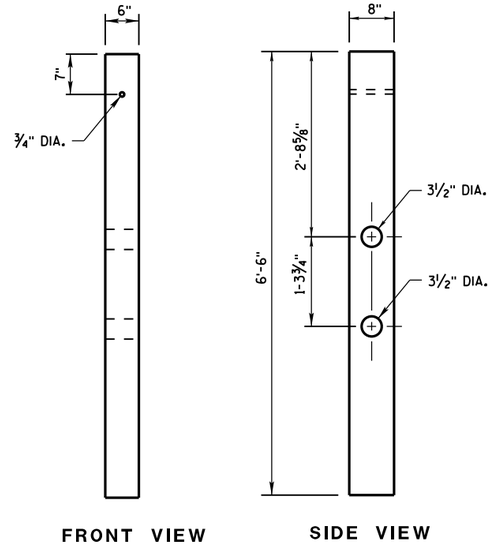


FRONT VIEW SIDE VIEW

THRIE-BEAM BCT POSTS

BREAKAWAY TERMINAL POST SLEEVE

STEEL FOUNDATION TUBE

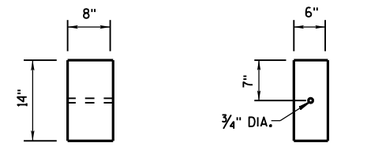


FRONT VIEW SIDE VIEW

THRIE-BEAM CRT WOOD POSTS

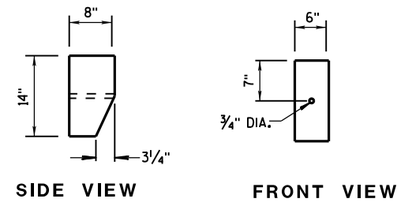
GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.



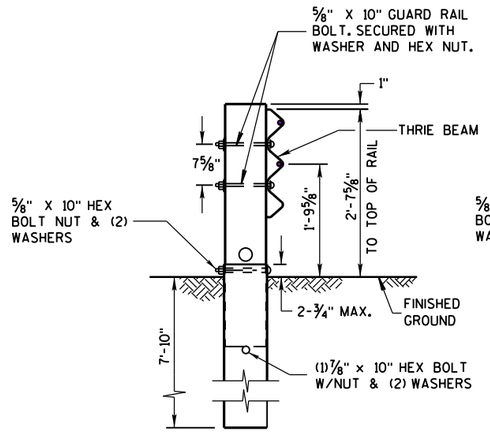
SIDE VIEW FRONT VIEW

STANDARD WOOD BLOCK



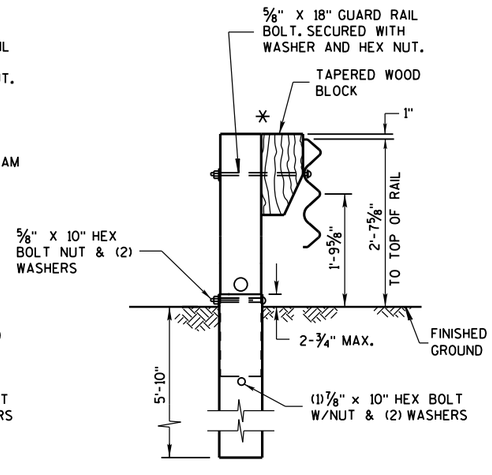
SIDE VIEW FRONT VIEW

TAPERED WOOD BLOCK



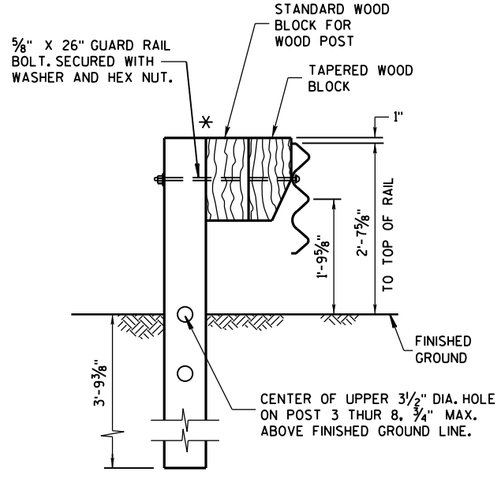
THRIE-BEAM BCT POST
(WITH 8'-0" FOUNDATION TUBE)

POST NO. 1



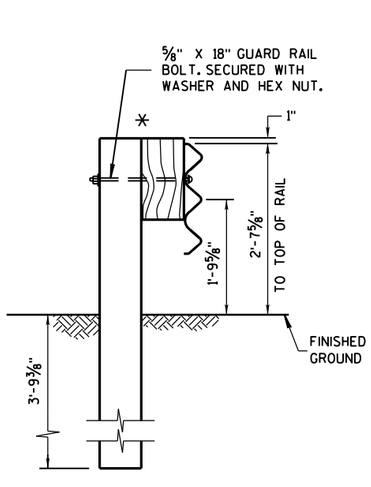
THRIE-BEAM BCT POST
(WITH 6'-0" FOUNDATION TUBE AND 1'-2" TAPERED BLOCK)

POST NO. 2



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

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



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

POST NO. 9,10,11,& 12

(ALSO USE FOR STEEL THRIE BEAM BEYOND POST 12)

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

STEEL THRIE BEAM BULLNOSE TERMINAL

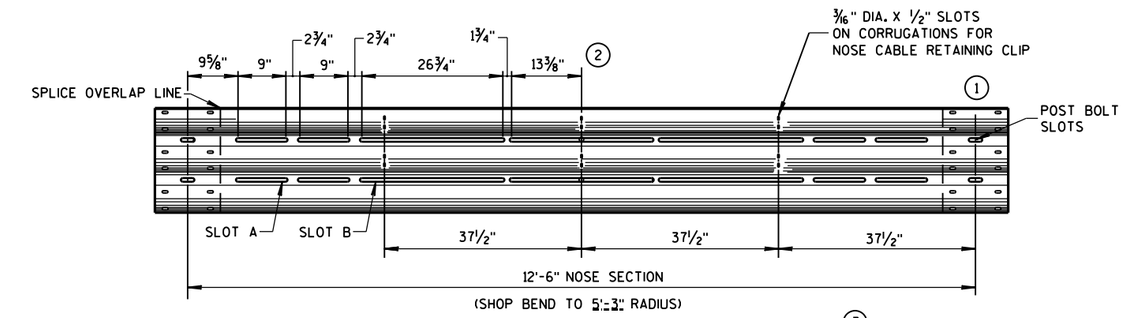
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 592

6

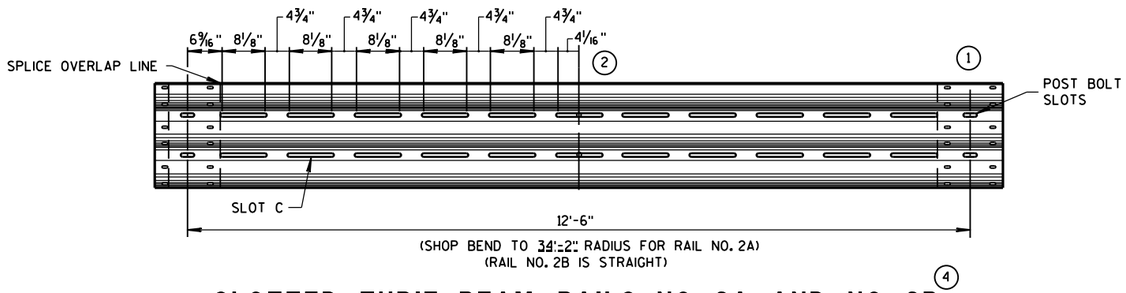
S.D.D. 14 B 26-3d

6

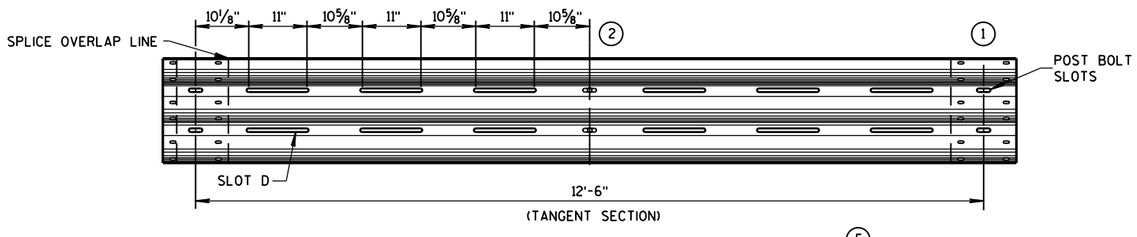
S.D.D. 14 B 26-3d



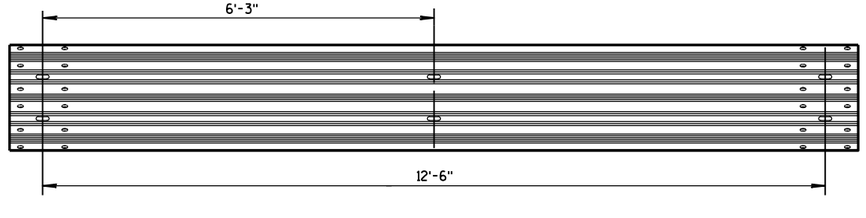
SLOTTED THRIE BEAM RAIL NO. 1 (3)



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.

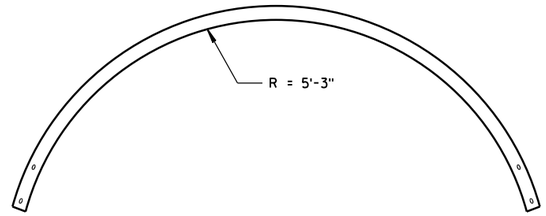
(1) SLOTTED THRIE BEAM RAIL DIMENSIONS SHOWN ARE BEFORE BENDING TO THE RADIUS SHOWN.

(2) SLOT SIZE AND SPACING SYMMETRIC.

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

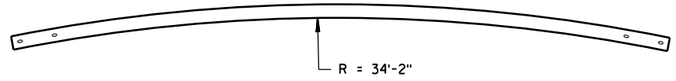
(4) SLOTTED THRIE BEAM RAIL NO. 2A, 12'-6", SHOP BEND TO R=34'-2".
SLOTTED THRIE BEAM RAIL NO. 2B, 12'-6", RAIL IS STRAIGHT.

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



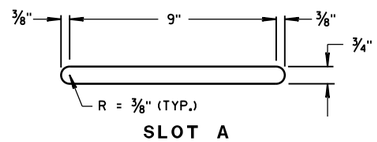
PLAN VIEW

SLOTTED THRIE BEAM RAIL NO. 1

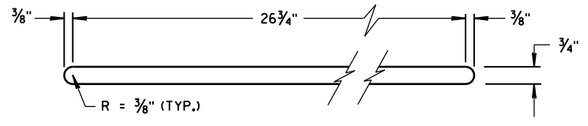


PLAN VIEW

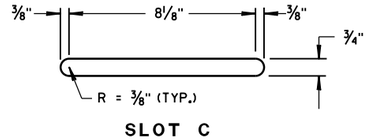
SLOTTED THRIE BEAM RAIL NO. 2A



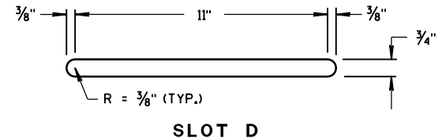
SLOT A



SLOT B



SLOT C



SLOT D

SLOT DETAILS

STEEL THRIE BEAM
BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2014 — DATE

/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER

593

NT

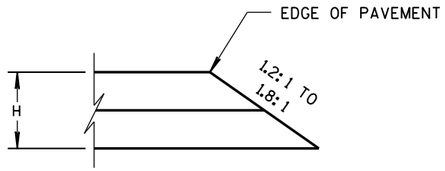
FHWA

6

S.D.D. 14 B 26-3e

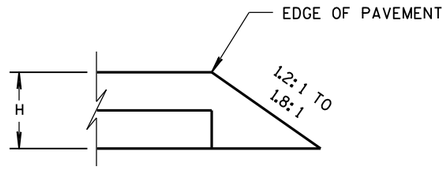
6

S.D.D. 14 B 26-3e



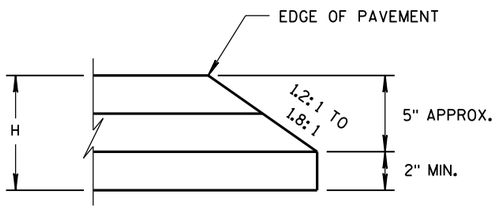
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



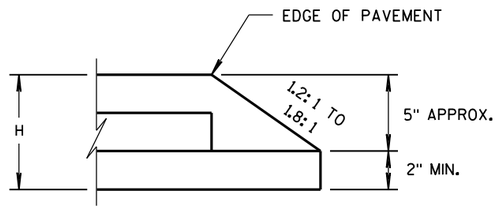
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

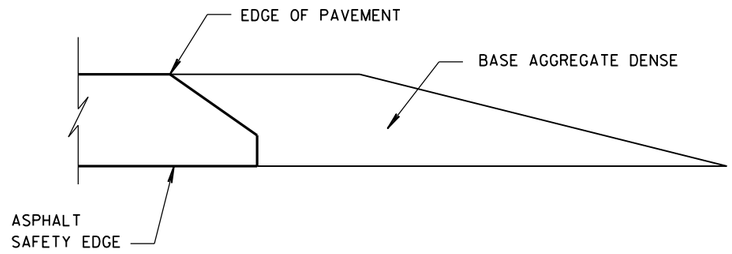
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

6

S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

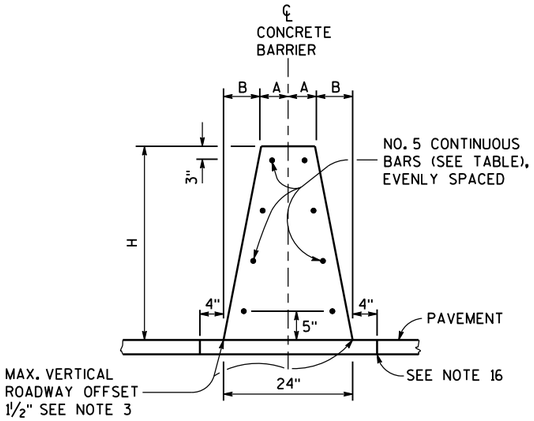
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

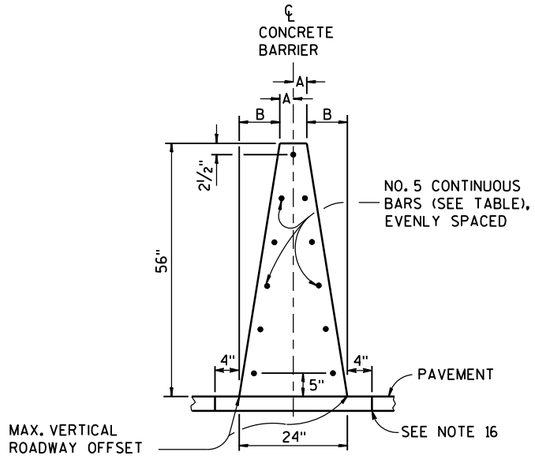
11/30/2012
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

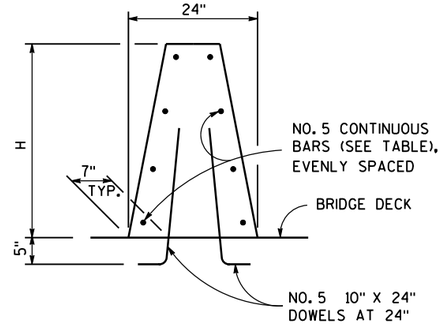
FHWA



32-INCH, 36-INCH OR 42-INCH SINGLE SLOPE CONCRETE BARRIER (TYPE S32, TYPE S36, AND TYPE S42)



56-INCH SINGLE SLOPE CONCRETE BARRIER (TYPE S56)



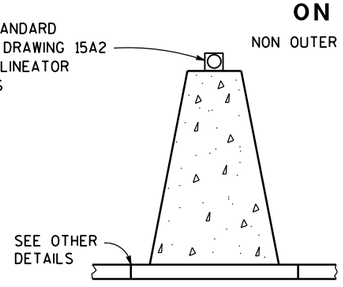
SINGLE SLOPE CONCRETE BARRIER ON BRIDGE

NON OUTER PARAPET APPLICATION

GENERAL NOTES

1. WHERE THE CONCRETE BARRIER IS ADDED TO THE FACE OF EXISTING CONCRETE STRUCTURE, MATCH EXISTING WEEP HOLES.
2. EXPANSION JOINTS IN CONCRETE BARRIER SHALL BE LOCATED AT ALL DECK, AND PRINCIPAL WALL JOINTS. EXPANSION JOINT FILLER MATERIAL SHALL BE THE SAME SIZE AS JOINT OR ½" MINIMUM.
3. WHERE VERTICAL ROADWAY OFFSET IS GREATER THAN 1½", USE TYPE A
4. PLACE BARRIER PERPENDICULAR TO SHOULDER GRADE, UNLESS INDICATED IN PLAN.
5. EXCEPT IN ANCHORS, VERTICAL REINFORCING STIRRUP NOT REQUIRED FOR ROADWAY OFFSETS LESS THAN 1'-0".
6. FOR TYPE S32, TYPE S36, TYPE S42, AND S56 MONOLITHIC FOOTING OR DOWELED FOOTING WITH 2-#8 x 8" @ 2'-0".
7. STAGGER LAPPING OF LONGITUDINAL STEEL. MINIMUM OVERLAP OF STEEL 2 FEET. BARS AT LAPS TO BE FIRMLY TIED OR CONNECTED.
8. 4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATION 501.
9. WHEN SWITCHING BETWEEN SLIP FORM AND CAST-IN-PLACE OPERATIONS, EXTEND LONGITUDINAL STEEL 3 FEET BEYOND SLIP-FORMING CUT OFF POINT. EXPOSED STEEL INTO NEXT POURS REINFORCEMENT. LAPS TO BE FIRMLY TIED.
10. USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS OTHERWISE NOTED.
11. 2" CLEAR COVER TYPICAL.
12. COLD-JOINTS MAY BE USED BETWEEN ANCHOR INSTALLATIONS. WHEN A COLD JOINT IS NEEDED, 3 FEET OF LAP OF LONGITUDINAL STEEL IS REQUIRED. LAPS TO BE FIRMLY TIED.
13. IN TYPE S32, TYPE S36, TYPE S42 AND TYPE S56 NO ADDITIONAL VERTICAL STEEL NEEDED. IN TYPE S32A, TYPE S36A, TYPE S42A AND TYPE S56A REQUIRES VERTICAL STEEL. SEE OTHER DETAIL.
14. IN TYPE S32, TYPE S36, TYPE S42 AND TYPE S56 DEPTH OF FOOTING 10". IN TYPE S32A, TYPE S36A, TYPE S42A AND TYPE S56A MATCH TOTAL HEIGHT OF SINGLE SLOPE BARRIER RETAINING WALL.
15. FOR ALL BARRIER TYPES SHOWN, ANCHOR IS REQUIRED AT CONCRETE BARRIER ENDS AND AT INTERRUPTIONS IN CONCRETE BARRIER. ANCHOR MAY BE AS SHOWN ON DRAWING OR DETAILS SHOWN ON S.D.D. 14B33. ANCHORS INCIDENTAL TO CBSS.
16. CONCRETE PAD UNDER CBSS MAY BE PLACED INTEGRAL WITH BARRIER, PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED FULL DEPTH. CONCRETE PAD MINIMUM DEPTH IS 6 INCHES, OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER.

BARRIER HEIGHT H INCHES	A INCHES	B INCHES	NUMBER OF NO. 5 BARS EACH
32	7	5	8
36	6¼	5¾	8
42	5¼	6¾	10
56	3	9	11



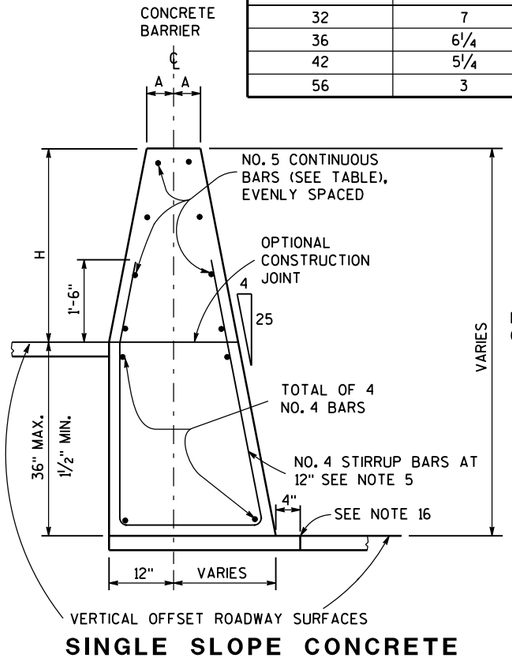
DELINEATION

DELINEATOR SPACING ON HORIZONTAL CURVES

RADIUS OF CURVE	APPROXIMATE SPACING ON CURVE
50 FEET	20 FEET
115 FEET	25 FEET
180 FEET	35 FEET
250 FEET	40 FEET
300 FEET	50 FEET
400 FEET	55 FEET
500 FEET	65 FEET
600 FEET	70 FEET
700 FEET	75 FEET
800 FEET	80 FEET
900 FEET	85 FEET
1000 FEET	90 FEET

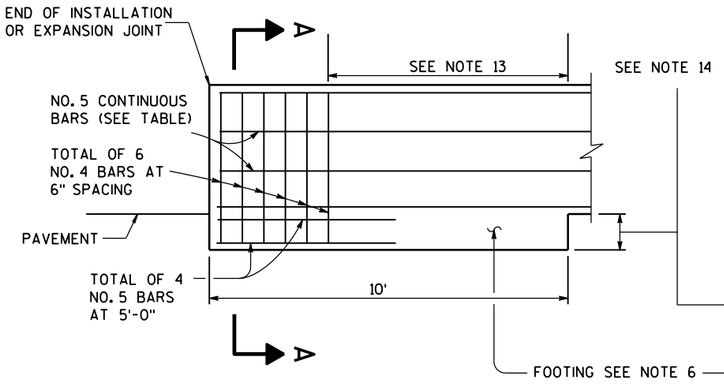
DELINEATOR SPACING ON RADIUS GREATER THAN 1000 FEET OR TANGENT SECTIONS

	LENGTH OF BARRIER	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	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2	3
	> 200'	100' C-C	2	



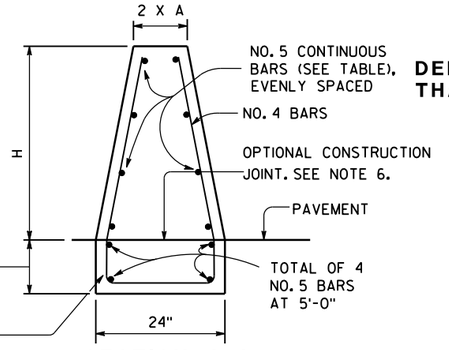
SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL (TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)

(BETWEEN ADJACENT ROADWAYS)



END ANCHOR SINGLE SLOPE CONCRETE BARRIER

AT CONSTRUCTION JOINT



SECTION A-A

CONCRETE BARRIER SINGLE SLOPE (CBSS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

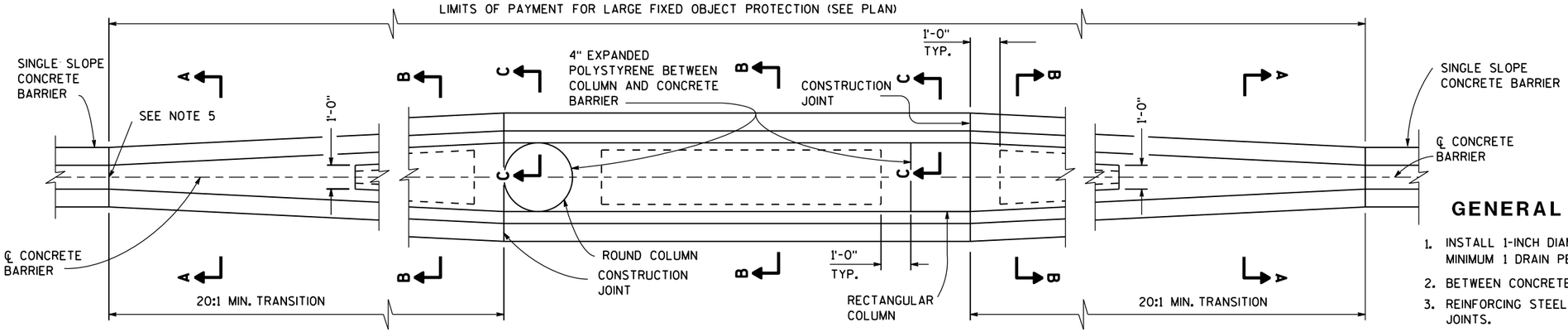
595

6

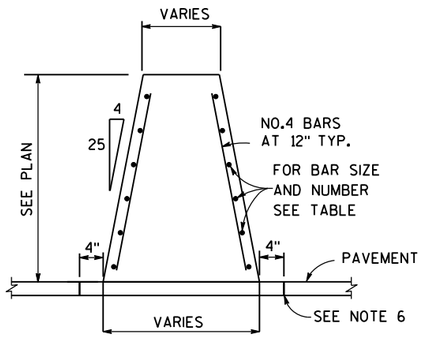
S.D.D. 14 B 32-3a

6

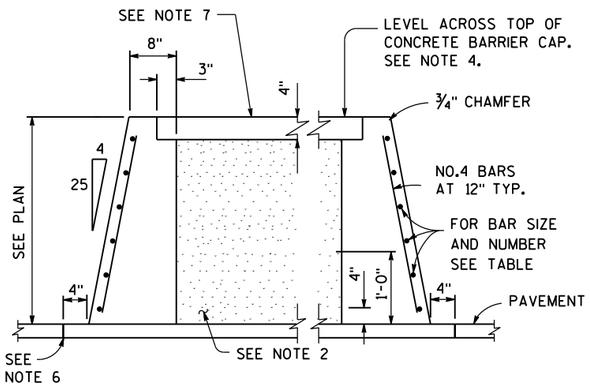
S.D.D. 14 B 32-3a



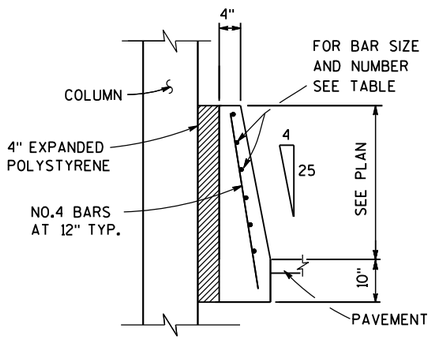
LARGE FIXED OBJECTS PROTECTION
TYPE S32, TYPE S36, TYPE S42, TYPE S56



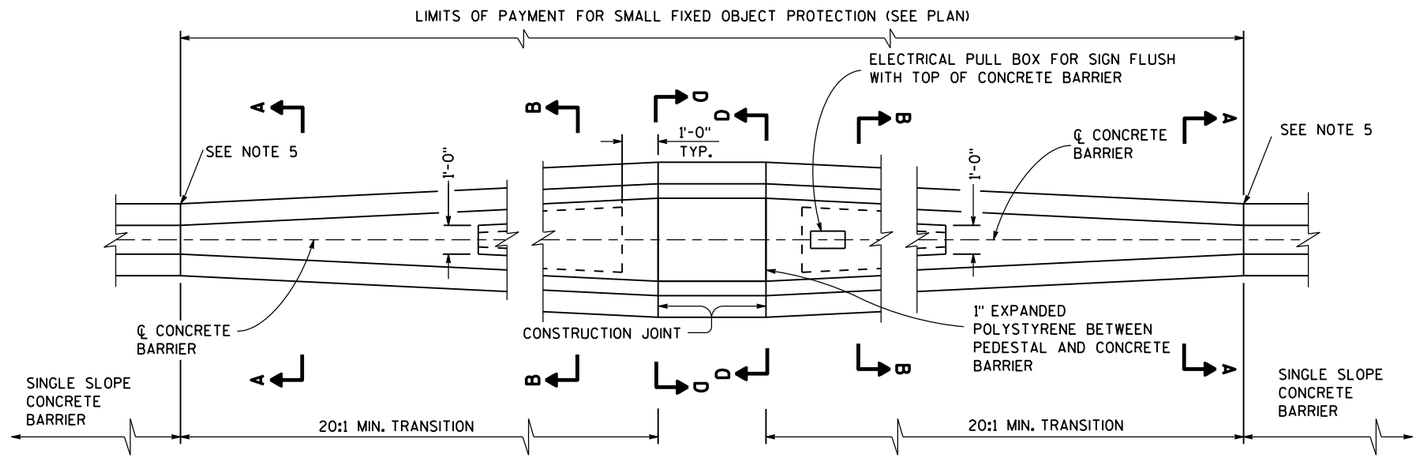
SECTION A-A



SECTION B-B



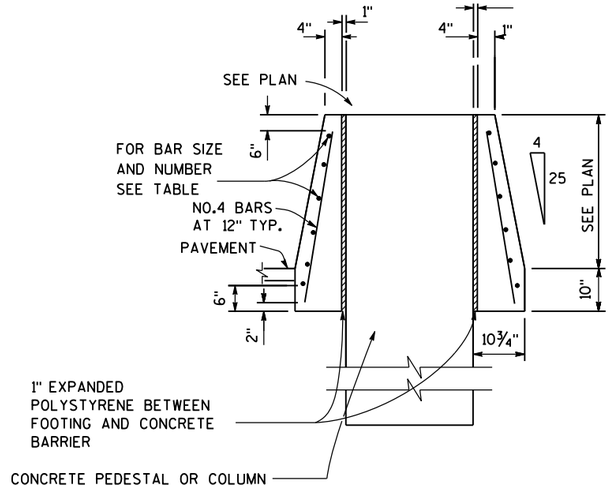
SECTION C-C



SMALL FIXED OBJECTS PROTECTION
TYPE S32, TYPE S36, TYPE S42, TYPE S56

GENERAL NOTES

1. INSTALL 1-INCH DIAMETER DRAIN PIPE EVERY 20 FEET OF CROSS SECTION B-B. MINIMUM 1 DRAIN PER CAVITY.
2. BETWEEN CONCRETE BARRIER WALLS FILL WITH GRANULAR BACKFILL GRADE 2
3. REINFORCING STEEL SHALL EXTEND CONTINUOUS THROUGH CONSTRUCTION JOINTS.
4. ADJUST HEIGHT OF CONCRETE BARRIER WALL ON LOW SIDE OF OFFSET OR SUPERELEVATED ROADWAYS TO PROVIDE LEVEL GRADE ACROSS TOP OF CONCRETE CAP.
5. IF FIXED OBJECT PROTECTION IS INSTALLED FIRST, USE COLD JOINTS. IF CBSS PLACED FIRST, USE EXPANSION JOINT.
6. CONCRETE PAD UNDER CBSS MAY BE PLACED INTEGRAL WITH BARRIER, PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED FULL DEPTH. SAWING OF CONCRETE SHOULDER IS INCIDENTAL TO CONCRETE BARRIER BID ITEM. CONCRETE PAD MINIMUM DEPTH IS 6 INCHES, OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER.
7. USE NO. 3 BAR SPACED 12 INCHES CENTER TO CENTER (PLACED IN EACH DIRECTION) OR EQUIVALENT WIRE MESH.



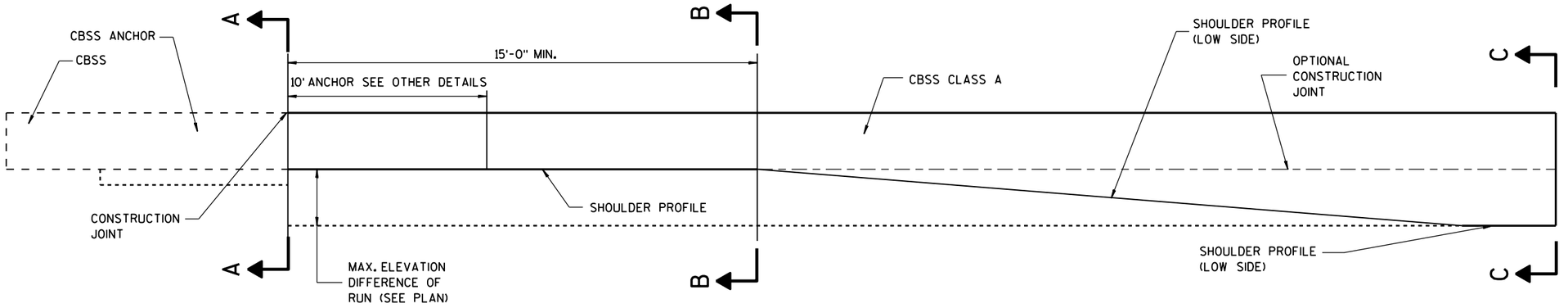
SECTION D-D

BARRIER HEIGHT H INCHES	BAR SIZE	NUMBER OF BARS EACH
32	4	6
36	4	6
42	5	6
56	5	9

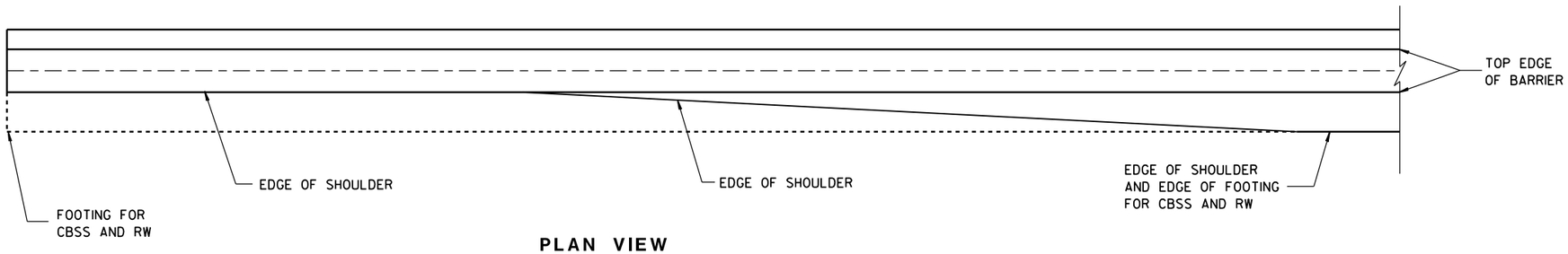
CONCRETE BARRIER SINGLE SLOPE (CBSS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

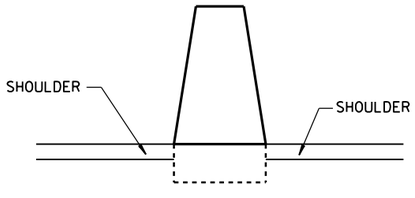
6
S.D.D. 14 B 32-3b



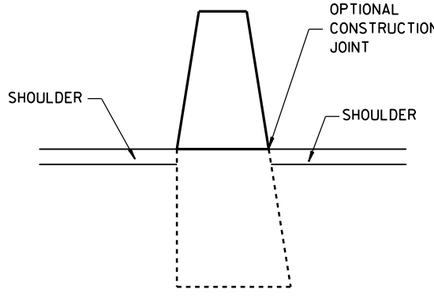
ELEVATION VIEW
TRANSITION TO CBSS CLASS A
(TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)



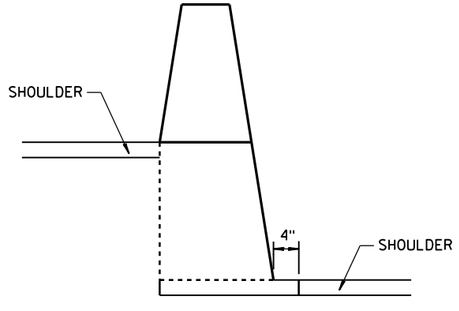
PLAN VIEW
TRANSITION TO CBSS CLASS A
(TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)



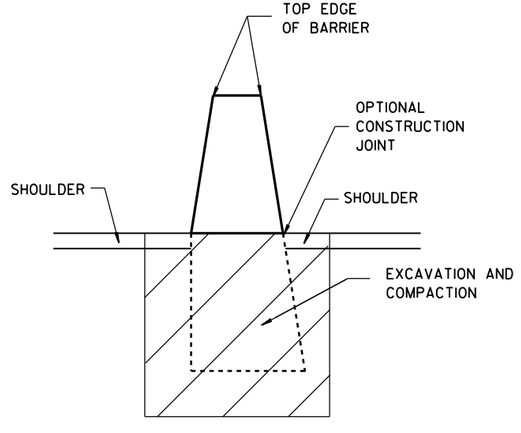
SECTION A-A



SECTION B-B



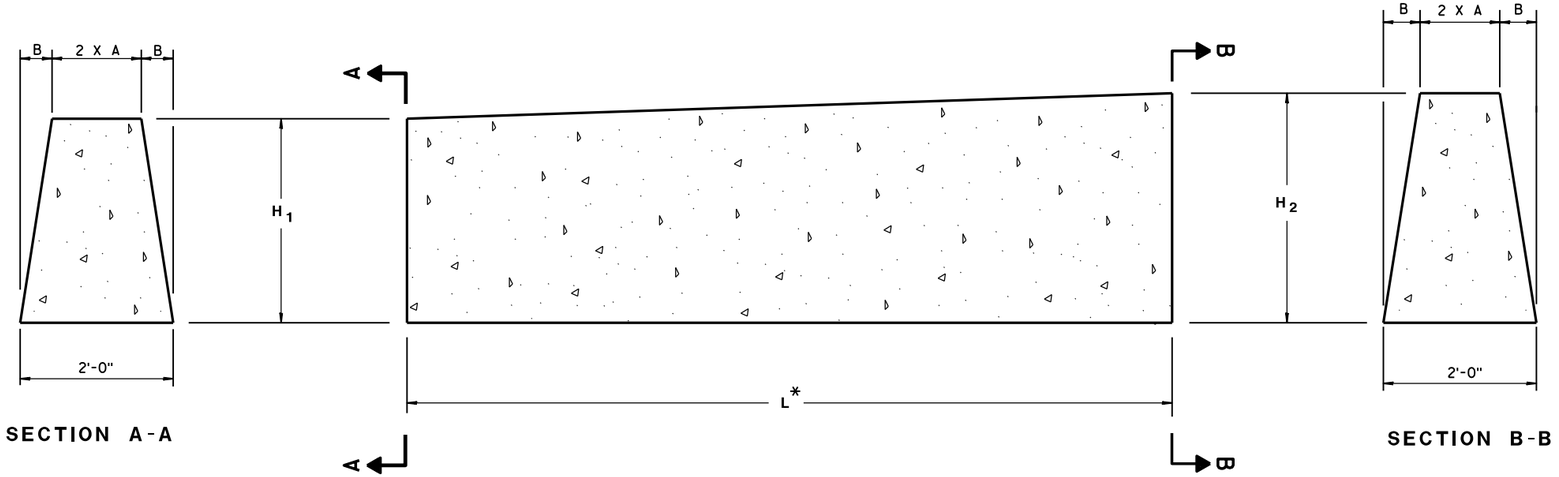
SECTION C-C



CONCRETE BARRIER SINGLE SLOPE (CBSS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 14 B 32-3c



SECTION A-A

SECTION B-B

DOUBLE COLD JOINT HEIGHT TRANSITION

BARRIER DIMENSIONS

BARRIER HEIGHT INCHES	A INCHES	B INCHES
32	7	5
36	6 1/4	5 3/4
42	5 1/4	6 3/4
56	3	9

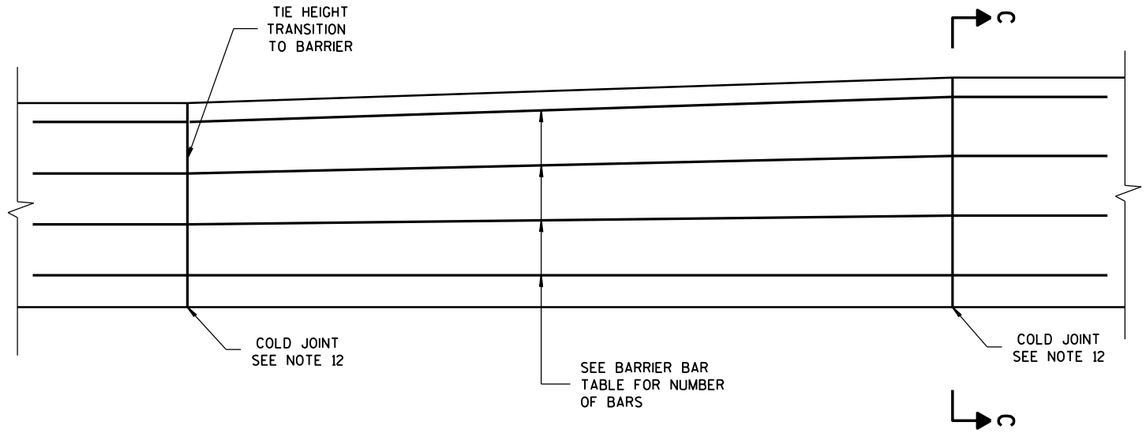
MULTIPLE HEIGHT TRANSITIONS MAY BE USED IN SEQUENCE TO GET TO APPROPRIATE HEIGHT.

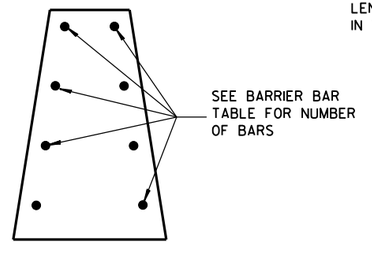
USE COLD JOINT TO CONNECT MULTIPLE HEIGHT TRANSITIONS.

BARRIER BARS

H_1	H_2	L*	NUMBER OF NO. 5 BARS
32"	36"	10'-0"	8
36"	42"	10'-6"	10
42"	56"	24'-6"	11

* LENGTH OF DOUBLE COLD JOINT INCLUDED IN THE TOTAL LENGTH OF CBSS.





SECTION C-C

STEEL REINFORCEMENT DETAIL

CONCRETE BARRIER SINGLE SLOPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2014 — DATE

/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER

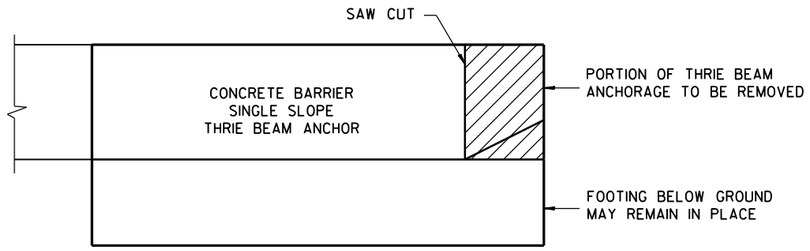
FHWA

6

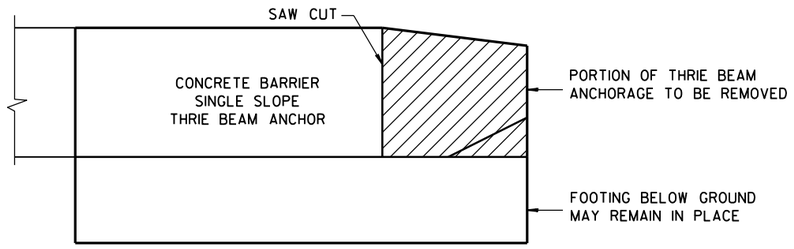
S.D.D. 14 B 32-3d

6

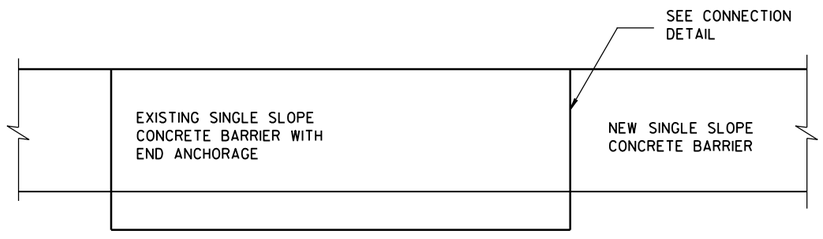
S.D.D. 14 B 32-3d



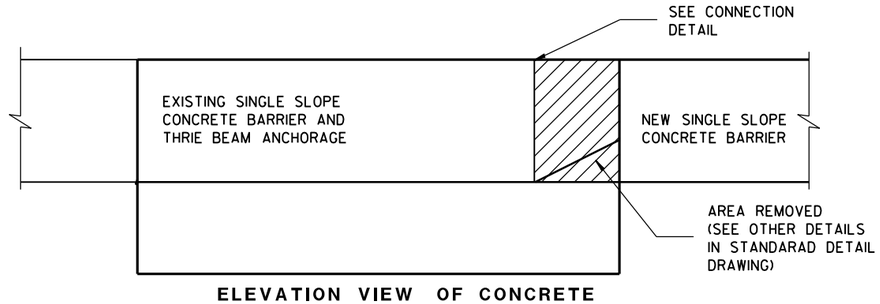
REMOVAL AREA OF
32" CONCRETE THRIE BEAM ANCHORAGE



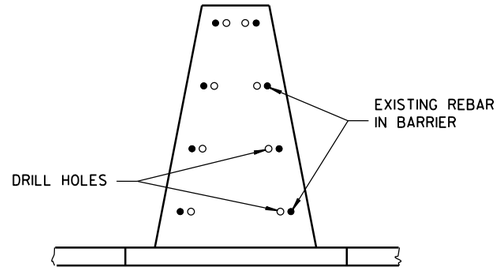
REMOVAL AREA OF CONCRETE THRIE BEAM
ANCHORAGE WITH HEIGHT GREATER THAN 32"



ELEVATION VIEW OF CONCRETE
BARRIER EXTENSION NEAR END ANCHORAGE



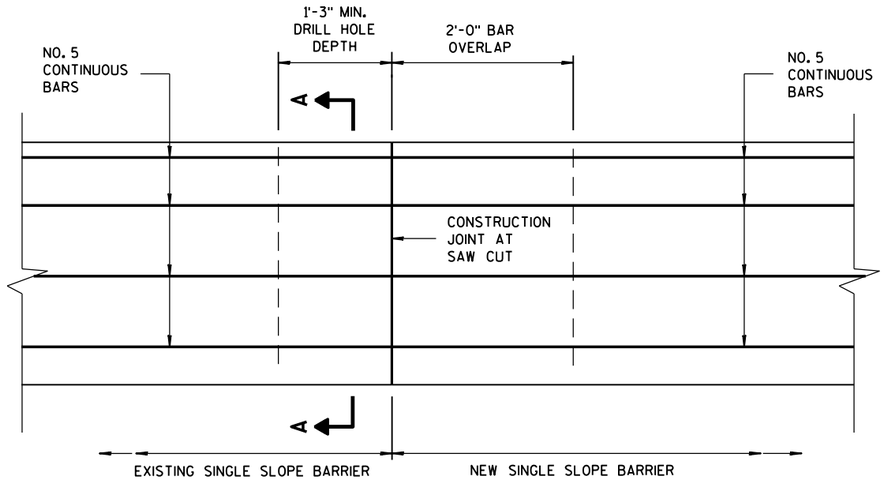
ELEVATION VIEW OF CONCRETE
BARRIER EXTENSION NEAR THRIE BEAM TERMINAL



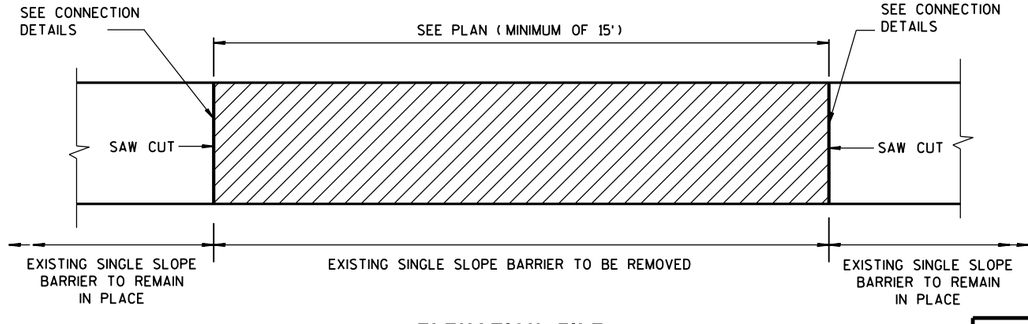
SECTION A-A

GENERAL NOTES

1. THE NUMBER OF DRILL HOLES IS EQUAL TO THE NUMBER OF REBAR IN BARRIER (SEE OTHER DETAILS).
2. MINIMUM DEPTH OF DRILL HOLES IS 1'-3".
3. DRILL HOLES TO BE A MINIMUM OF 4 INCHES FROM THE EDGE OF CONCRETE.
4. INSTALL EPOXY COATED NO. 5 BARS IN DRILL HOLES.
5. END ANCHORAGE MAY OR MAY NOT BE PRESENT ON EXISTING BARRIER.
6. REMOVE THRIE BEAM ANCHORAGE AS SHOWN.



CONNECTION OF EXISTING SINGLE SLOPE CONCRETE BARRIER TO
NEW SINGLE SLOPE CONCRETE BARRIER



ELEVATION FILE
BARRIER REMOVAL AND REPLACEMENT

CONCRETE BARRIER
SINGLE SLOPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

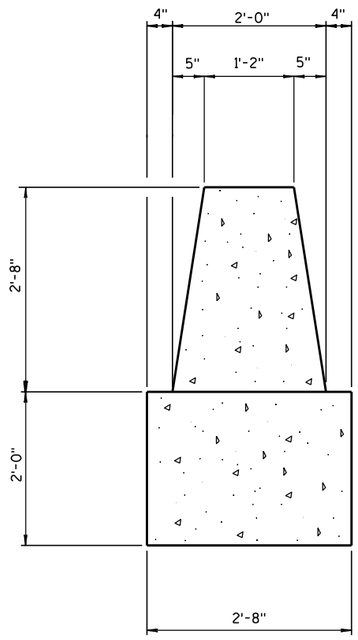
RETROFIT OR REPAIR SINGLE SLOPE CONCRETE BARRIER

6

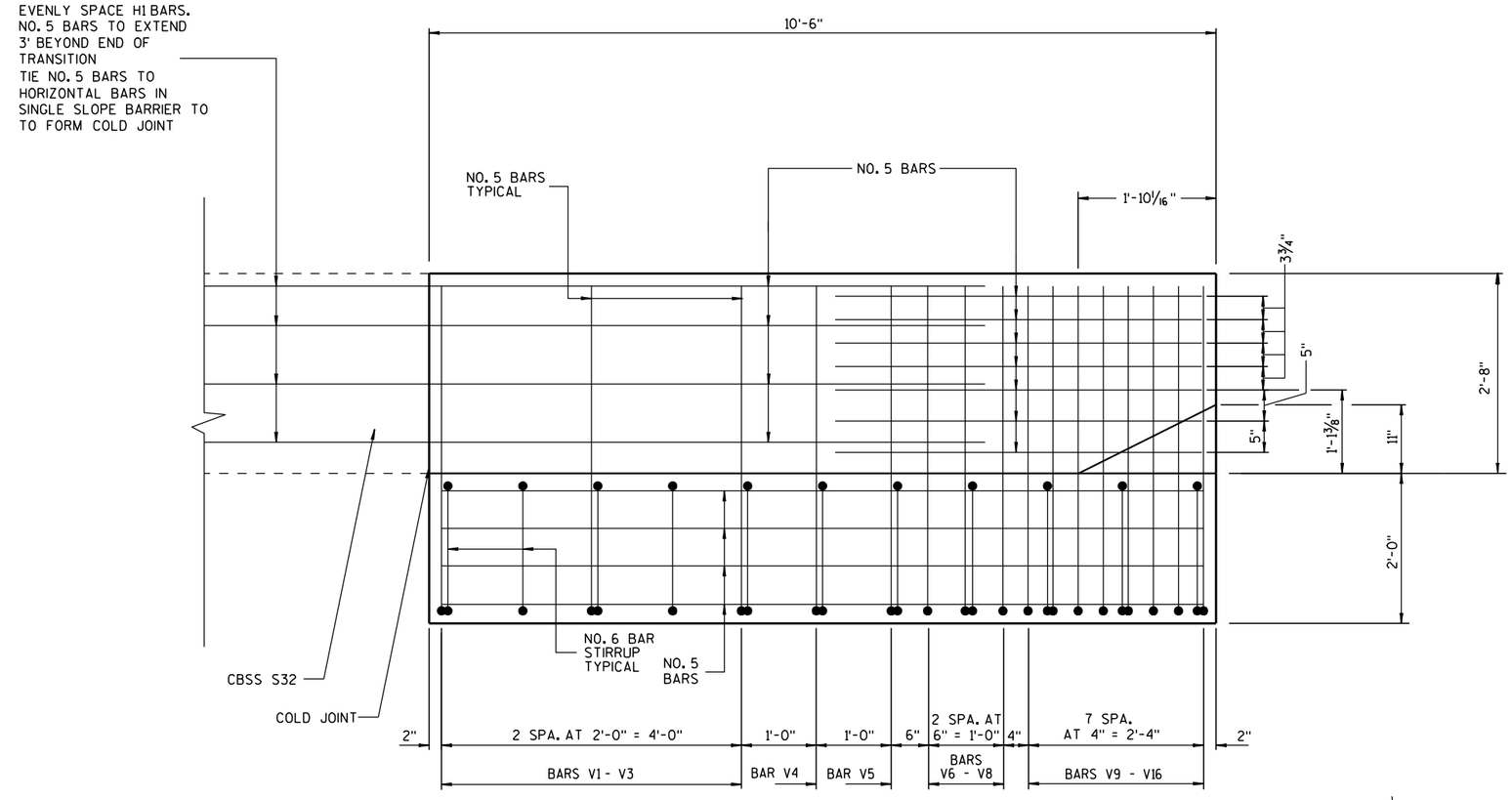
S.D.D. 14 B 32-3e

6

S.D.D. 14 B 32-3e

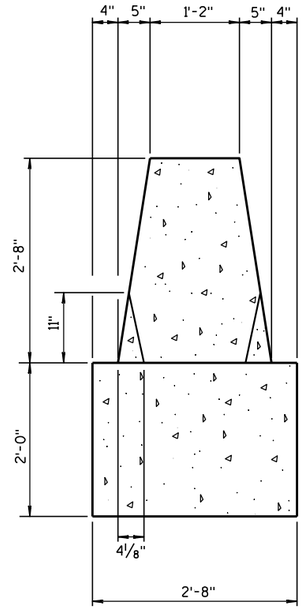


SECTION A-A

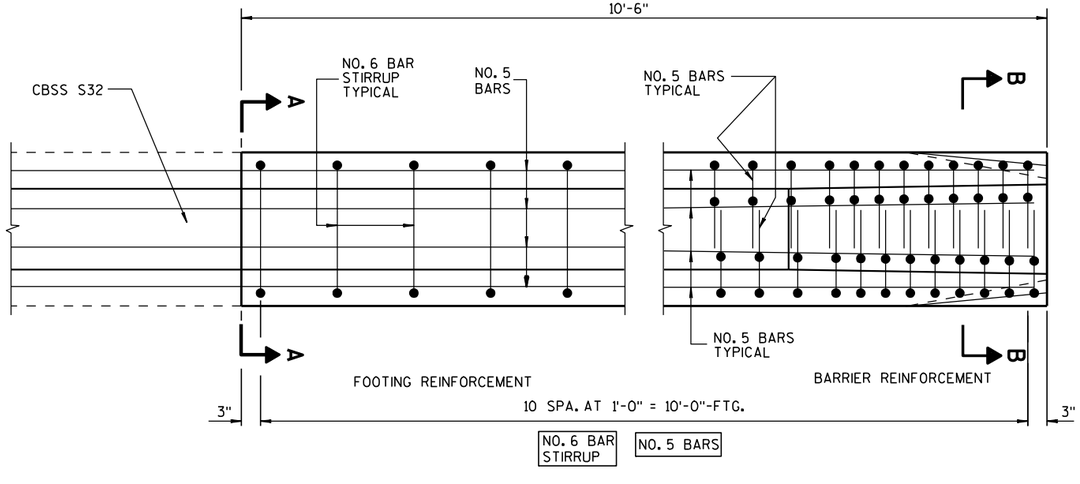


SEE SECTIONS (1) THRU (16)

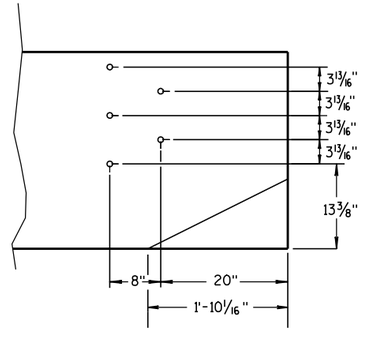
ELEVATION VIEW



SECTION B-B



PLAN VIEW



PVC PIPE LOCATIONS

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2' LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS SECTION 501.

USE 3/4" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

THRIE BEAM ANCHOR INCIDENTAL TO CONCRETE BARRIER ITEM.

INSTALL SCHEDULE 40 PVC PIPE 1" DIAMETER AT LOCATIONS INDICATED.

EXTEND PVC PIPE COMPLETELY THROUGH BARRIER.

CUT ENDS OF PVC PIPE FLUSH WITH FINISHED FACE of BARRIER.

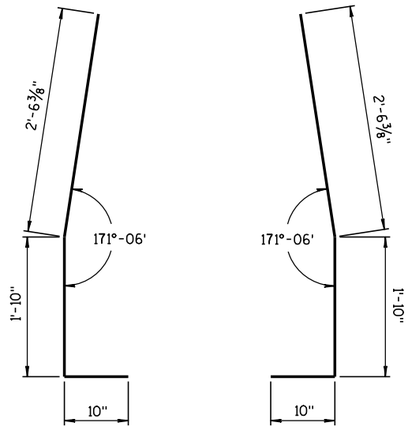
THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

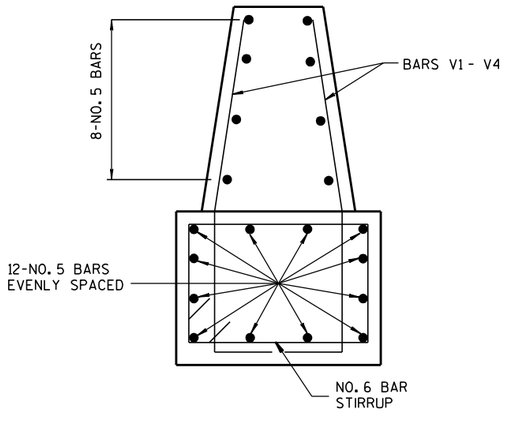
CONCRETE BARRIER
SINGLE SLOPE 32"
THRIE BEAM ANCHOR

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

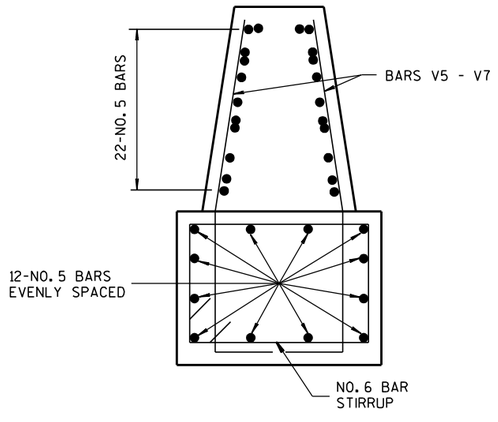
6
S.D.D. 14 B 33-1a



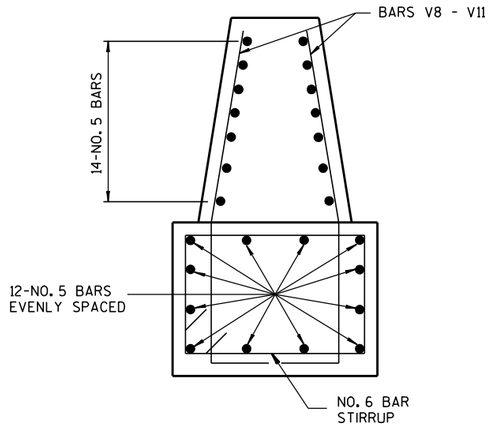
BAR BENDING DETAIL
FOR BARS V1 - V11



BAR DETAIL
SECTIONS 1 - 4



BAR DETAIL
SECTIONS 5 - 7



BAR DETAIL
SECTIONS 8 - 11

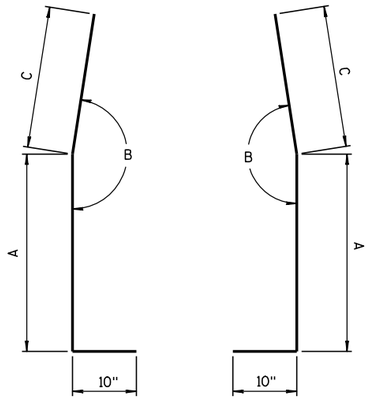
CONCRETE BARRIER
SINGLE SLOPE 32"
THRIE BEAM ANCHOR

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

6
S.D.D. 14 B 33-1b

BAR CHART
SECTIONS V12 - V13

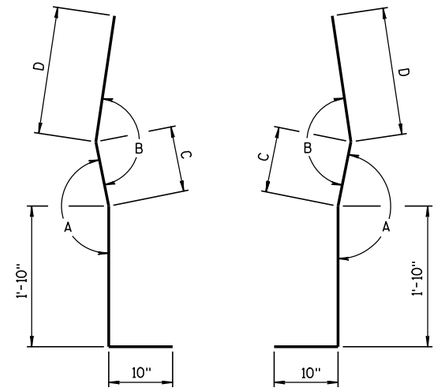
BAR	A	B	C
V12	2'-2"	171°-15'	2'-1 3/4"
V13	2'-7"	171°-05'	1'-9 3/8"



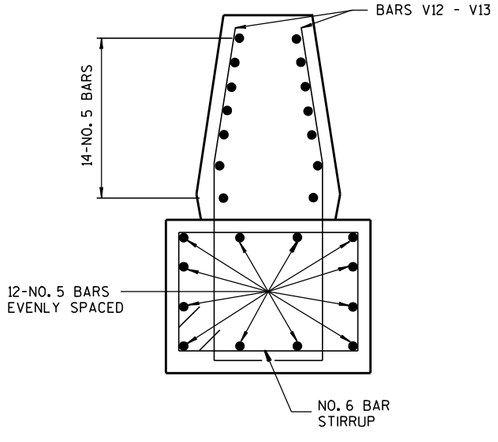
BAR BENDING DETAIL
FOR BARS V12 - V13

BAR CHART
SECTIONS V14 - V16

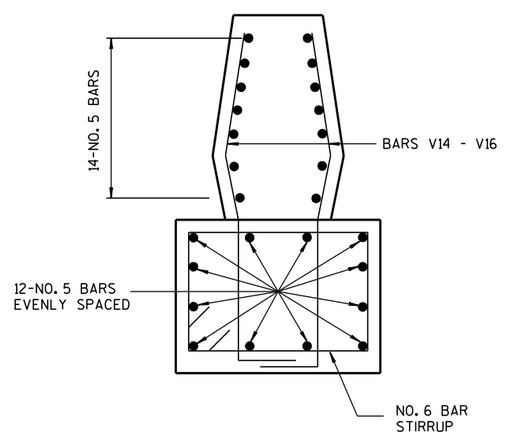
BAR	A	B	C	D
V14	168°-15'	159°-15'	6"	2'-0"
V15	169°-20'	161°-00'	8"	1'-10"
V16	168°-40'	160°-10'	10"	1'-8"



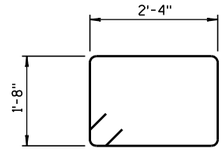
BAR BENDING DETAIL
FOR BARS V14 - V16



BAR DETAIL
SECTIONS 12 - 13



BAR DETAIL
SECTIONS 14 - 16



STIRRUP BAR
BENDING DETAIL

CONCRETE BARRIER
SINGLE SLOPE 32"
THRIE BEAM ANCHOR

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6-3-2010
DATE

/S/ Jerry H. Zoss
ROADWAY STANDARDS ENGINEER

602

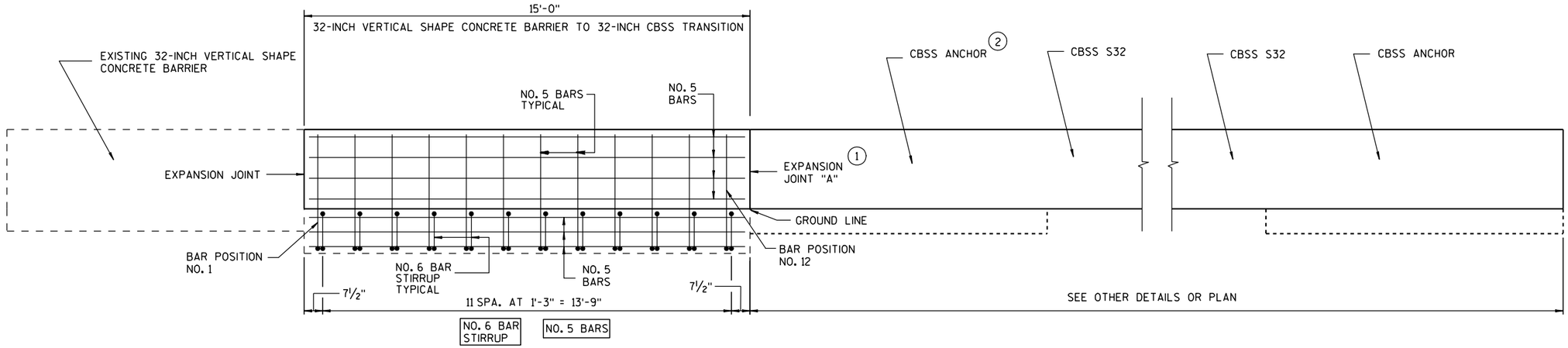
FHWA

6

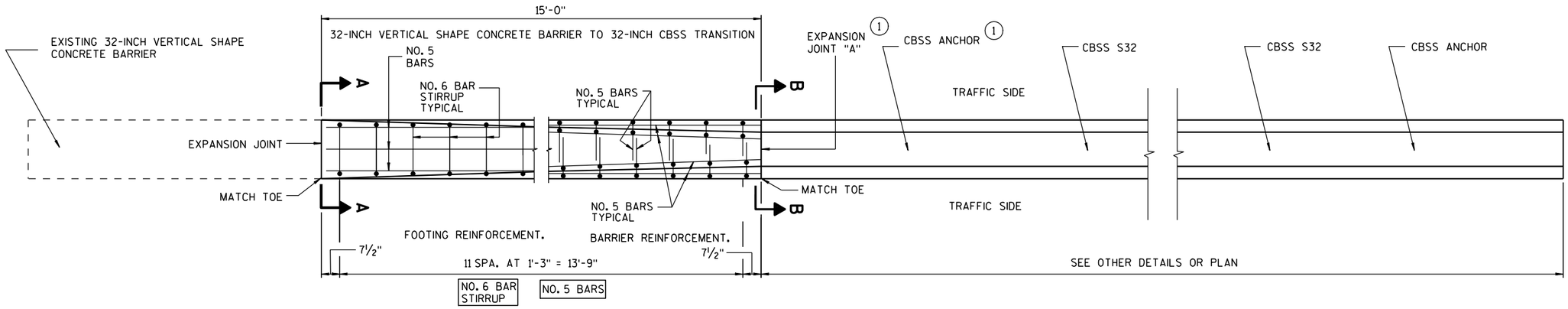
S.D.D. 14 B 33-1c

6

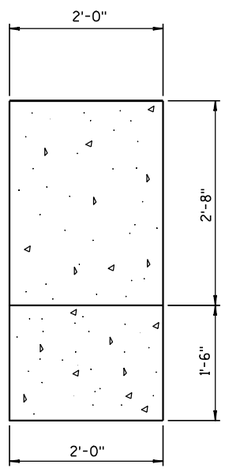
S.D.D. 14 B 33-1c



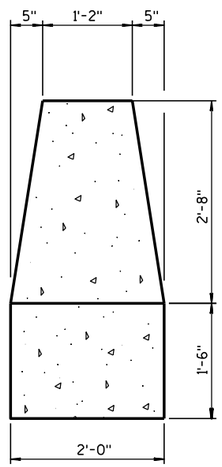
ELEVATION VIEW



PLAN VIEW



SECTION A-A



SECTION B-B

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2' LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

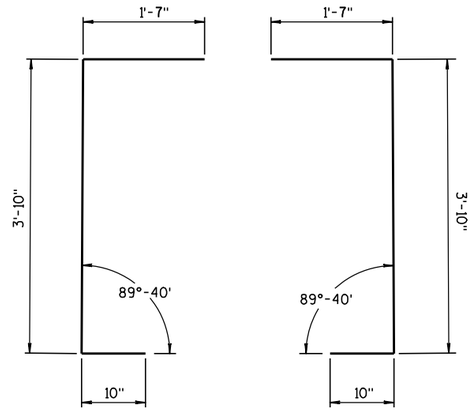
2" CLEAR COVER TYPICAL.

(1) EXPANSION JOINT "A" MAY BE REPLACED WITH A COLD-JOINT PROVIDED THAT 3 FEET OF LAP OF LONGITUDINAL STEEL IS PROVIDED. IF COLD-JOINT IS USED ANCHOR NOT REQUIRED.

32-INCH VERTICAL SHAPE CONCRETE BARRIER TO 32-INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

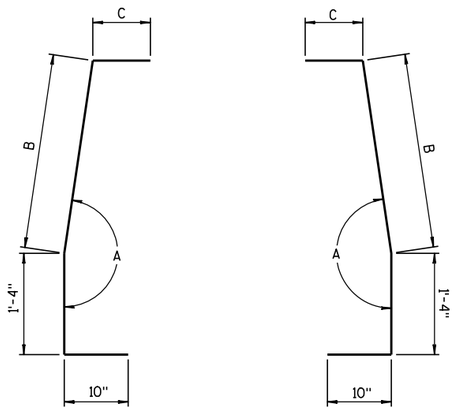
6
S.D.D. 14 B 40-1a



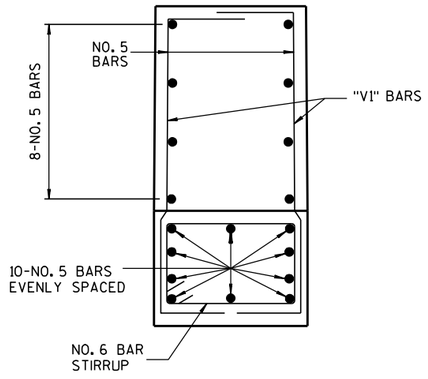
BAR NO. V1
BENDING DETAIL

BAR CHART
BAR POSITIONS V2 - V12

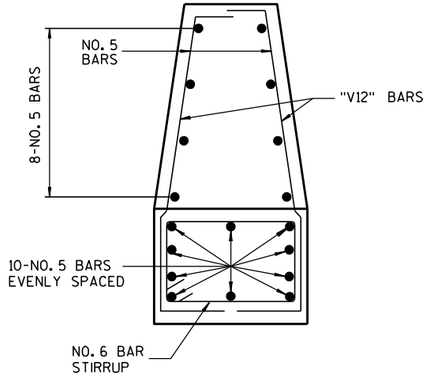
BAR	A	B	C
V2	178°-50'	2'-6"	1'-7"
V3	178°-15'	2'-6"	1'-7"
V4	177°-20'	2'-6"	1'-4"
V5	176°-40'	2'-6"	1'-4"
V6	176°	2'-6"	1'-2"
V7	175°-05'	2'-6"	1'-0"
V8	174°-25'	2'-6"	1'-0"
V9	173°-30'	2'-6"	11"
V10	172°-50'	2'-6"	11"
V11	172°-15'	2'-6½"	10"
V12	171°-35'	2'-6½"	9"



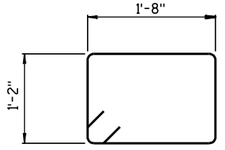
BAR NO. V2 - NO. V12
BENDING DETAIL



BAR DETAIL
BAR POSITION NO. 1



BAR DETAIL
BAR POSITION NO. 12



STIRRUP BAR
BENDING DETAIL

32-INCH VERTICAL SHAPE CONCRETE BARRIER TO 32-INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6-3-2010
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

604

FHWA

6

S.D.D. 14 B 40-1b

6

S.D.D. 14 B 40-1b

GENERAL NOTES

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

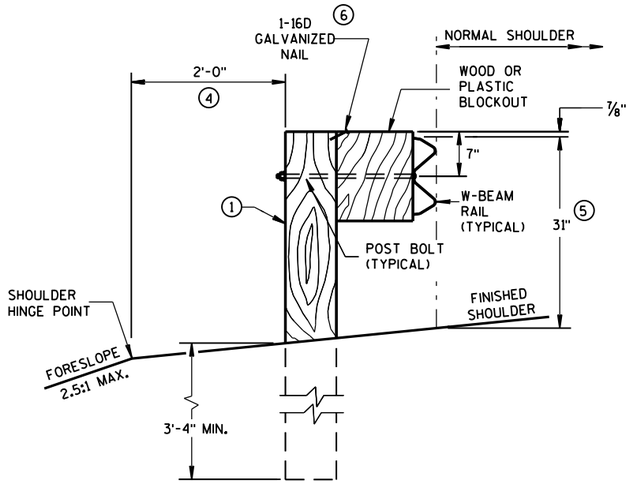
(2) USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

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

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

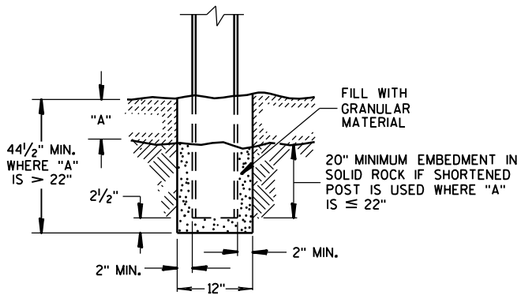
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

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



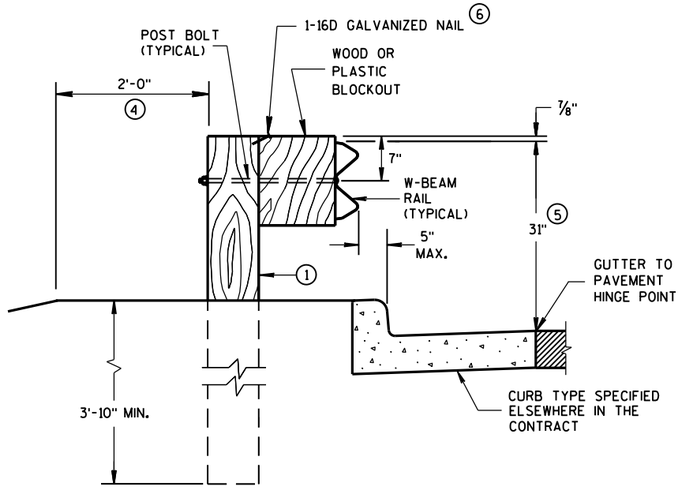
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



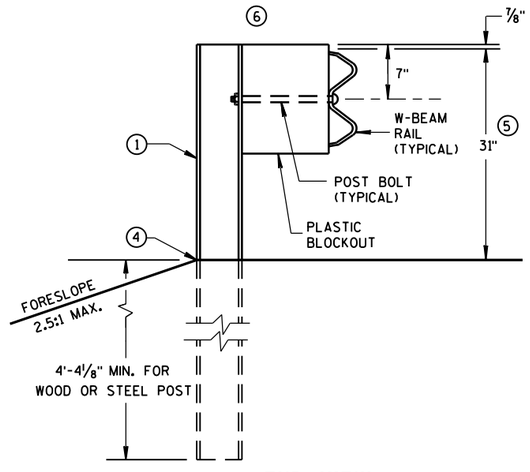
END VIEW

SETTING STEEL OR WOOD POST IN ROCK (3)



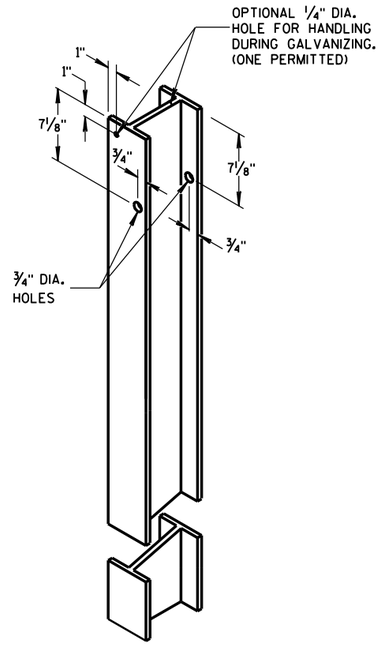
END VIEW

LOCATED ALONG A CURBED ROADWAY

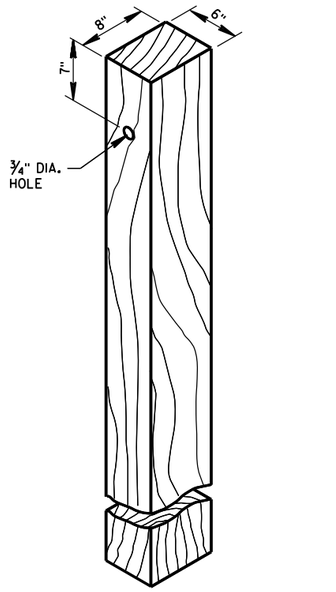


END VIEW

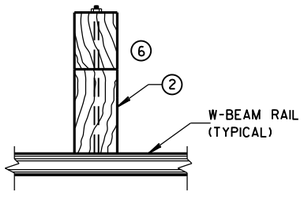
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



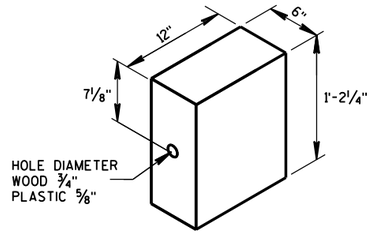
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) (1)



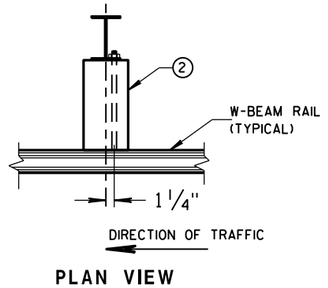
WOOD POST
(6" X 8") NOMINAL (1)



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT (2)

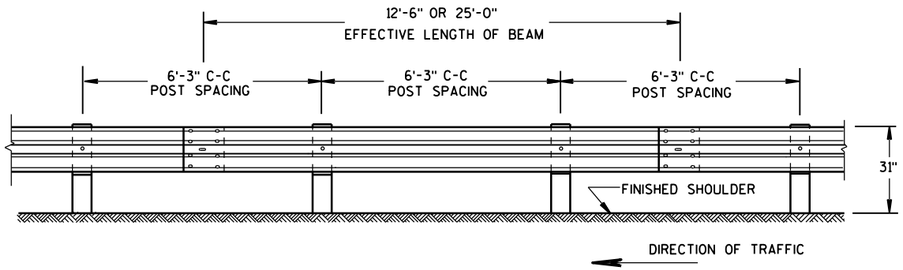


PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

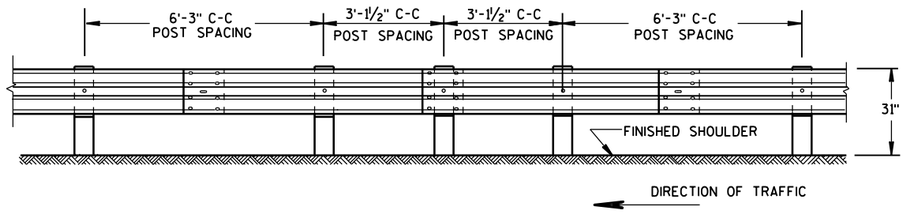
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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



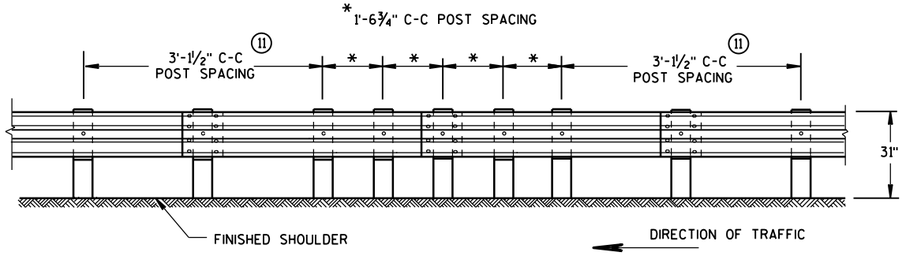
FRONT VIEW

POST SPACING STANDARD INSTALLATION



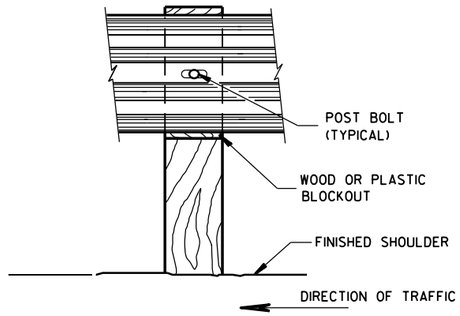
FRONT VIEW

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

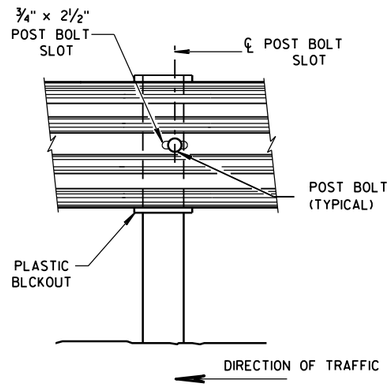


FRONT VIEW

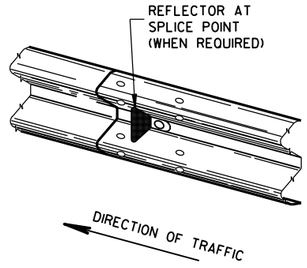
QUARTER POST SPACING (QS)

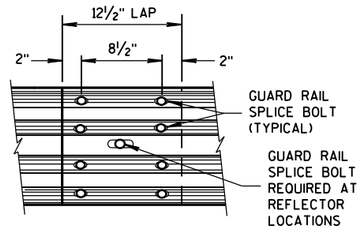


FRONT VIEW AT WOOD POST



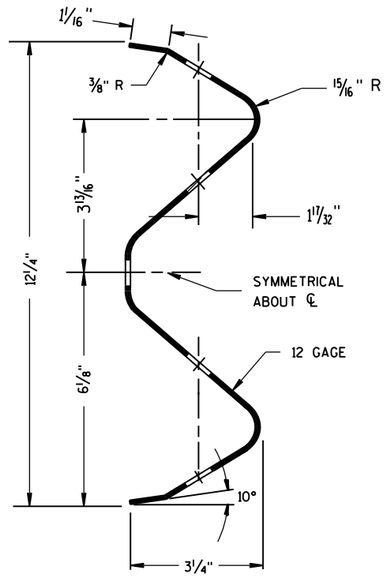
FRONT VIEW AT STEEL POST



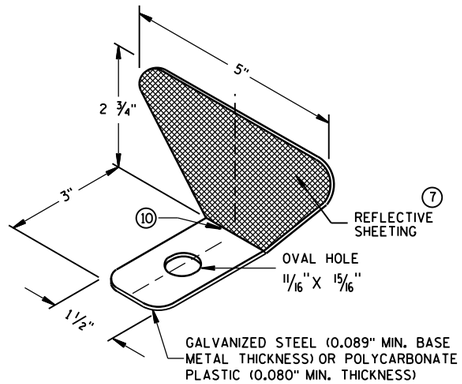


FRONT VIEW

MID-SPAN BEAM SPLICE



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION ⑦

GENERAL NOTES

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

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

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

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

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

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

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

REFLECTOR SPACING ⑧

	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	1 1	3
TWO WAY TRAFFIC	< 200' > 200'	25' C-C 50' C-C	1 ⑨ 1	6
TWO WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	2 2 ⑩	3

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

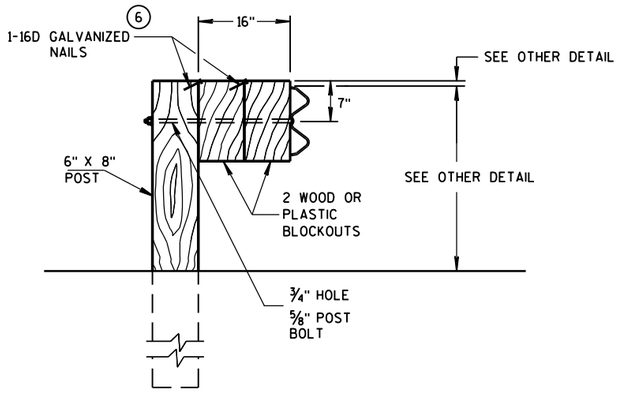
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO 606

6

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

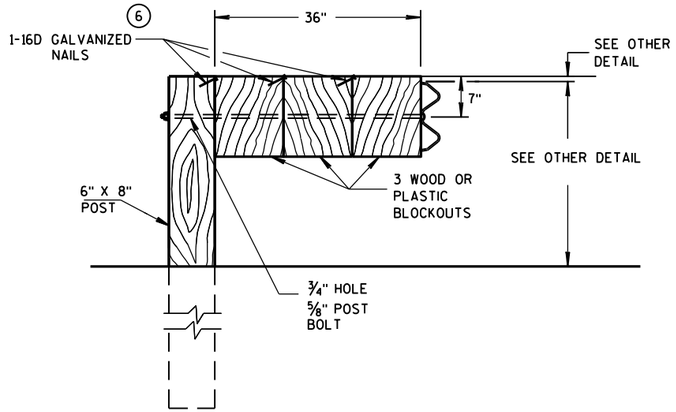
6

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



DETAIL FOR 16" BLOCKOUT DEPTH

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

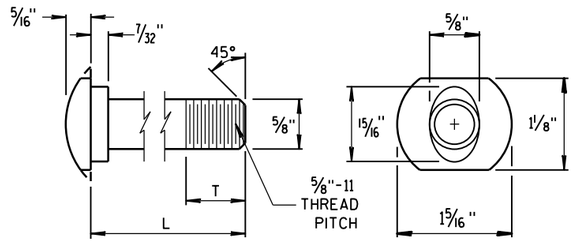


DETAIL FOR 36" BLOCKOUT DEPTH

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

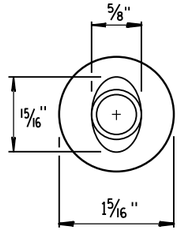
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

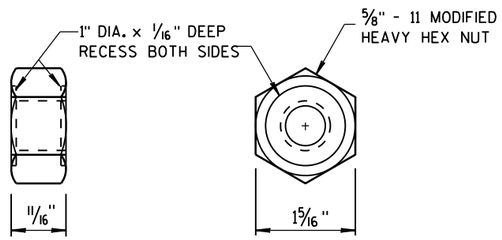


POST BOLT TABLE

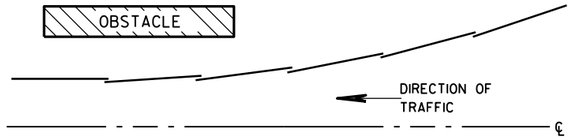
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

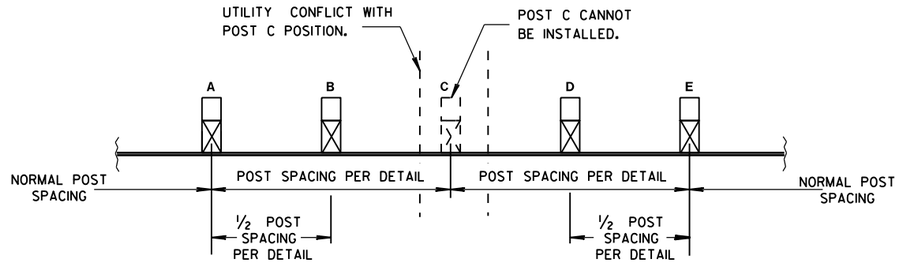


POST BOLT AND RECESS NUT

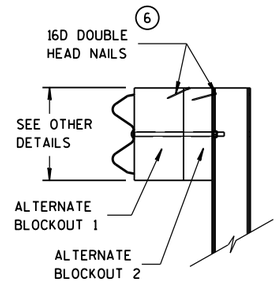


PLAN VIEW

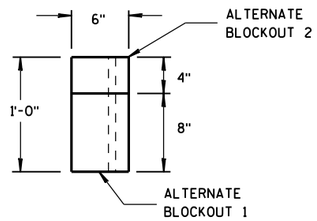
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

607

6

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

6

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

GENERAL NOTES

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

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

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

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

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

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

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

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

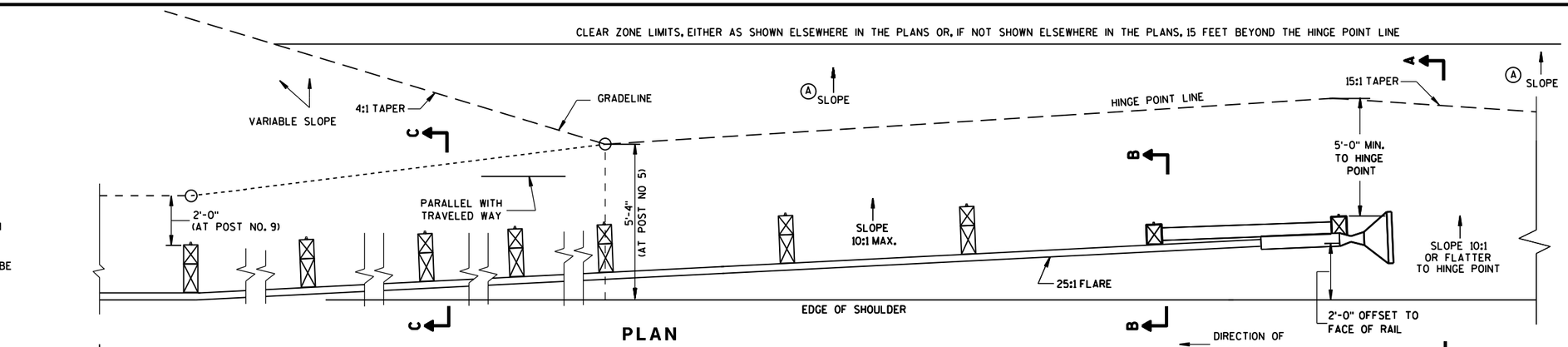
SEE SDD 14B42 FOR MORE INFORMATION.

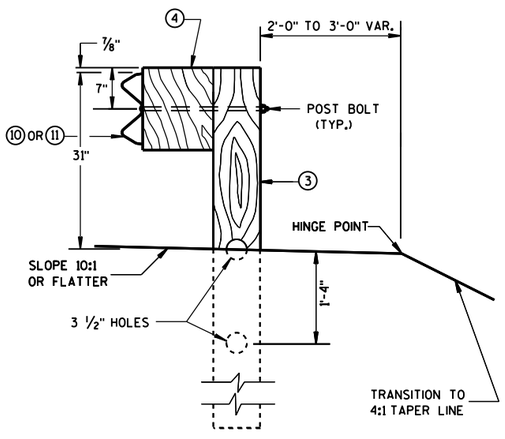
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

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

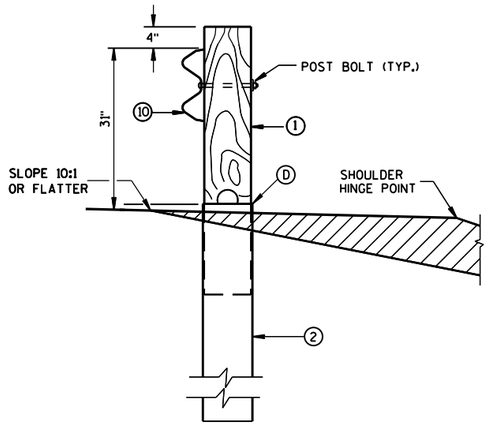
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

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

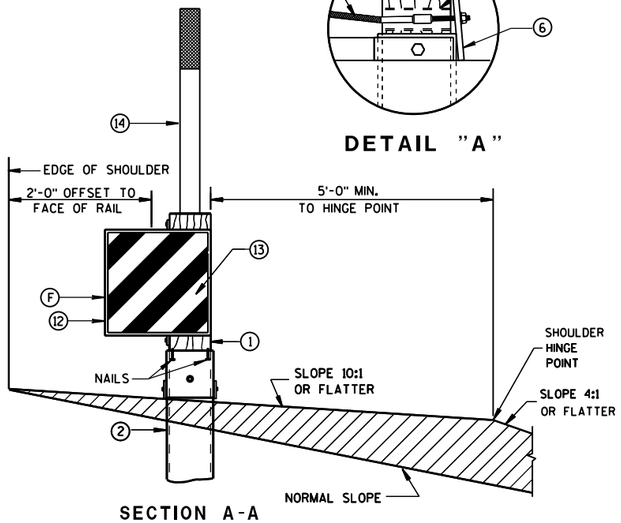




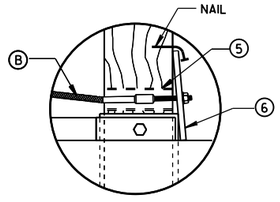
SECTION C-C
TYPICAL AT POST NOS. 3-9



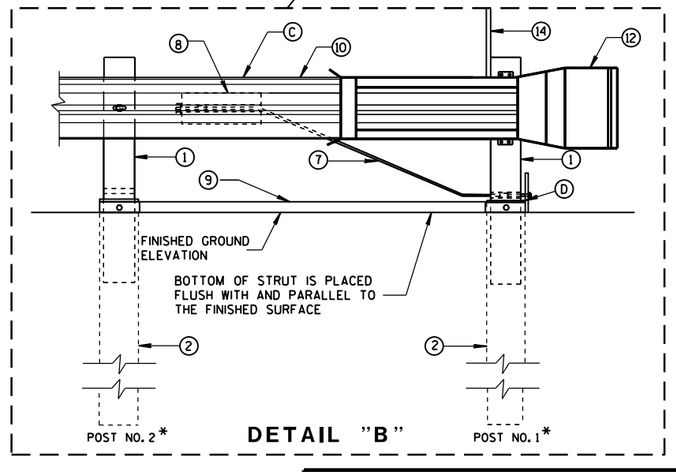
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



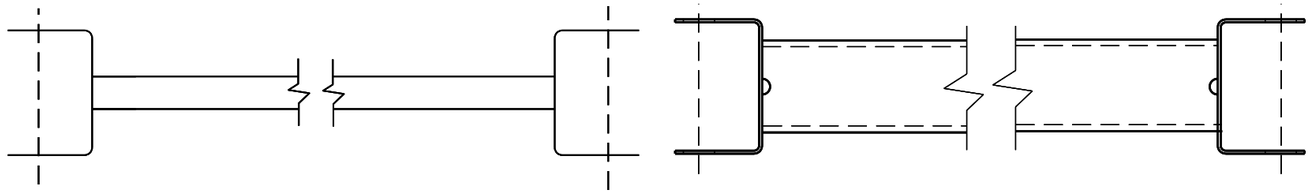
DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO 608

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

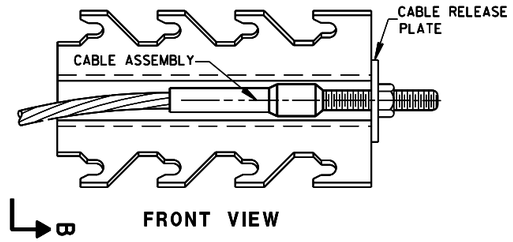
S.D.D. 14 B 44-2a



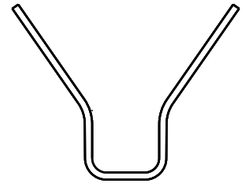
GENERIC GROUND STRUT (9) (H)

BILL OF MATERIALS

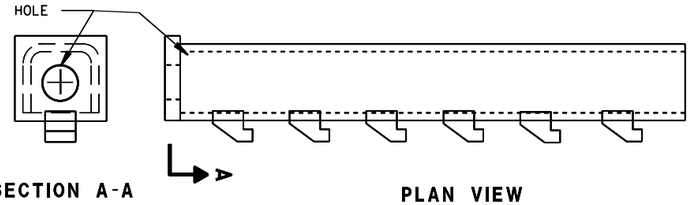
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	WOOD BREAKAWAY POST
(2)	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR CABLE BOX
(9)	GROUND STRUT
(10)	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
(11)	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
(12)	END SECTION EAT
(13)	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
(14)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



FRONT VIEW



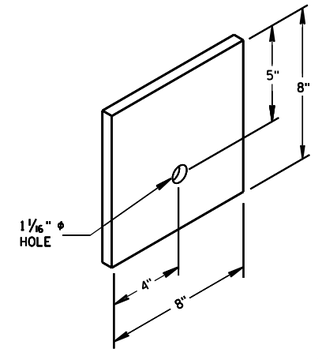
SECTION B-B



SECTION A-A

PLAN VIEW

GENERIC ANCHOR CABLE BOX (8) (H)



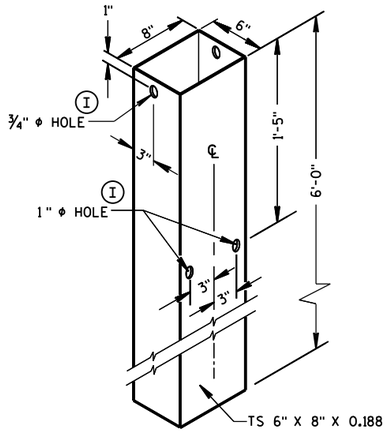
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

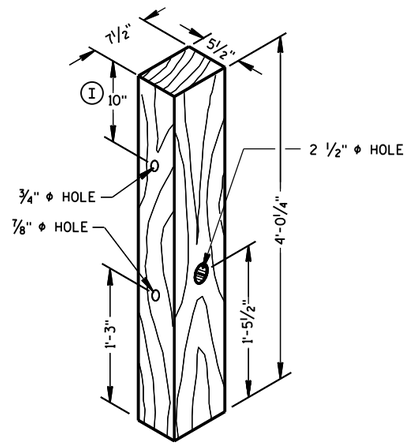
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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

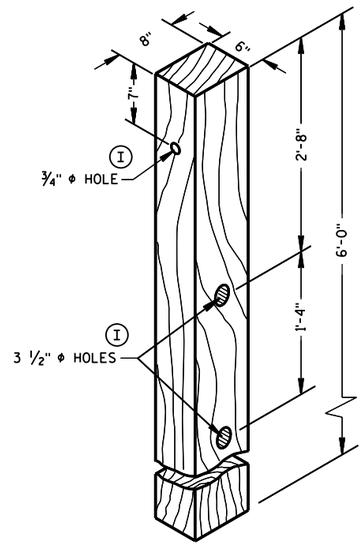


FOUNDATION TUBE (2)



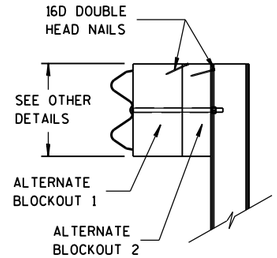
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

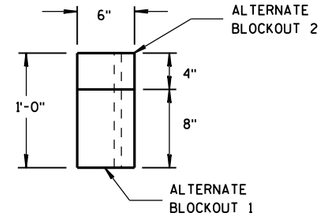


POSTS NUMBER 3-9

WOOD CRT POST (3)

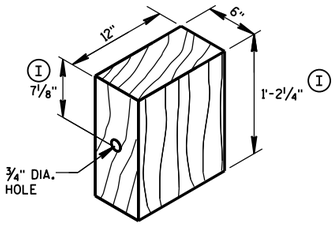


SIDE VIEW



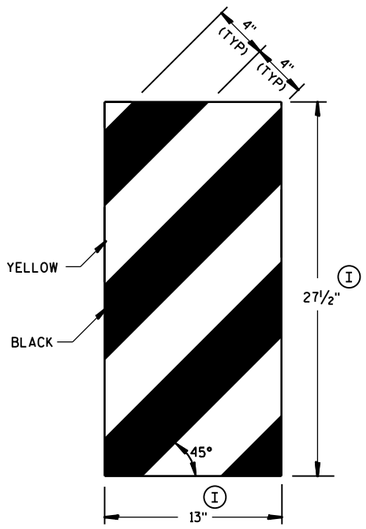
TOP VIEW

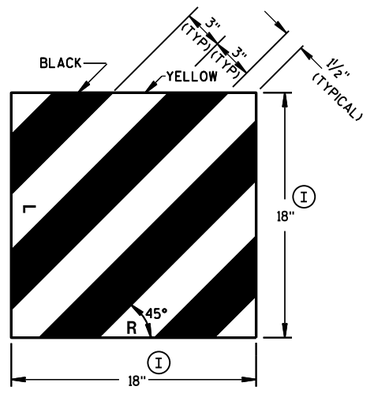
ALTERNATE WOOD BLOCKOUT DETAIL



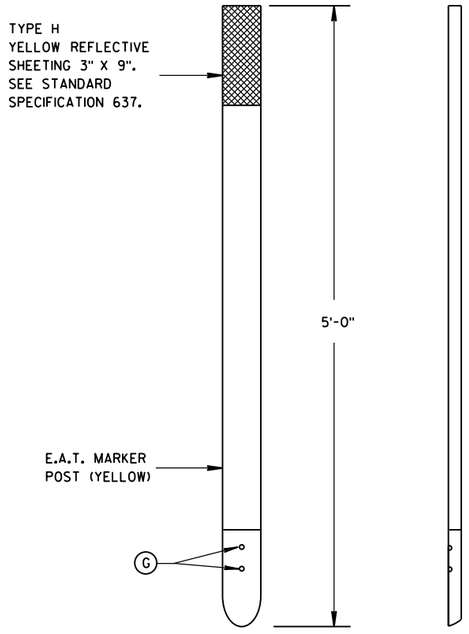
WOOD BLOCKOUT (4)

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





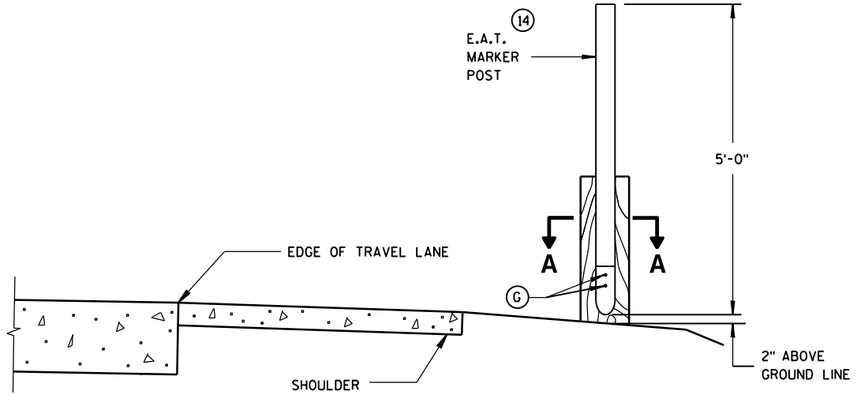
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

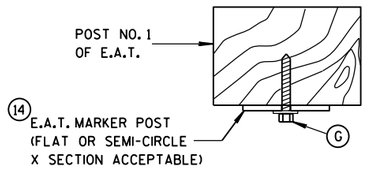
SIDE VIEW

E.A.T. MARKER POST (14)



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

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



SECTION A-A

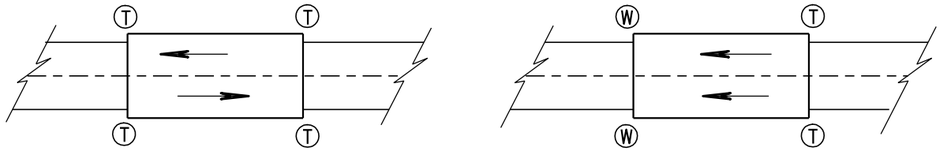
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

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



TWO WAY TRAFFIC

ONE WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

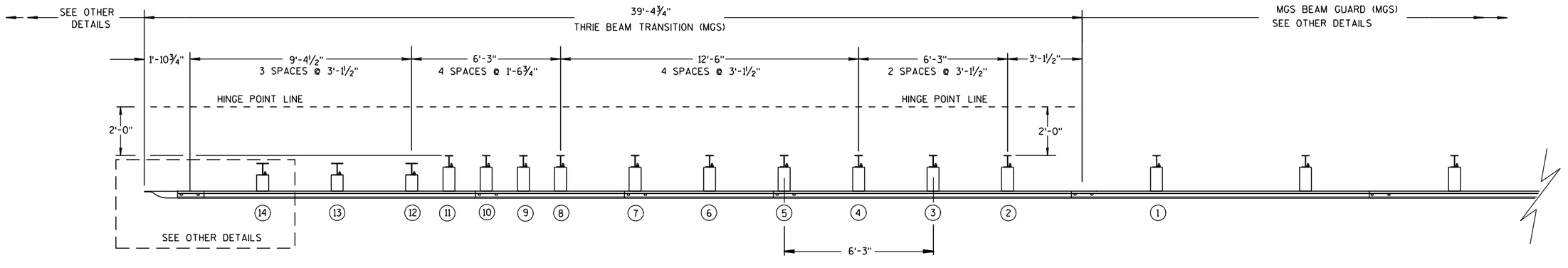
BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3.

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

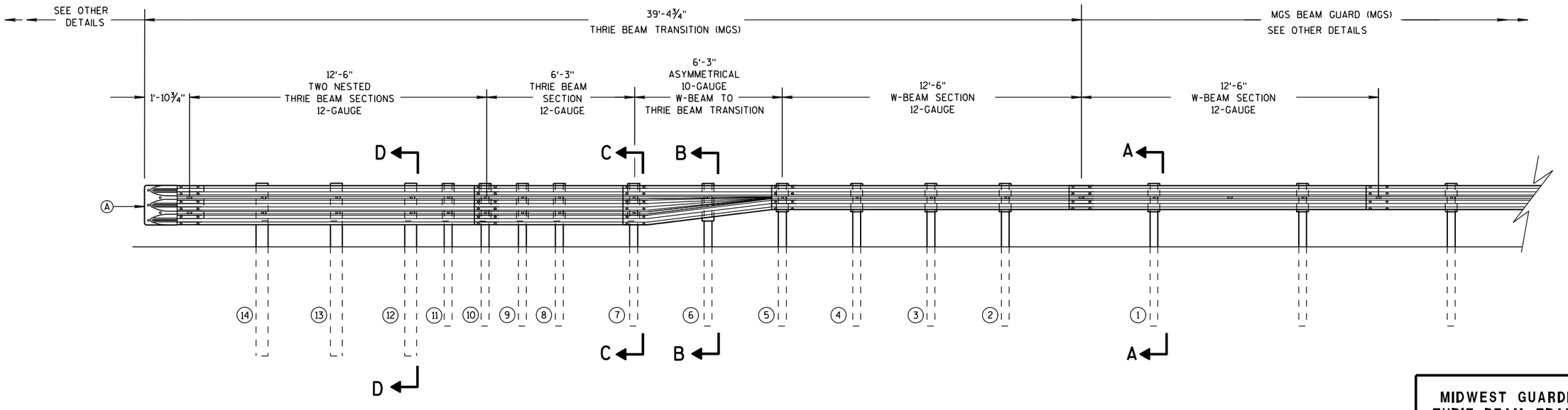
TRANSITION USES STEEL POSTS ONLY.

SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

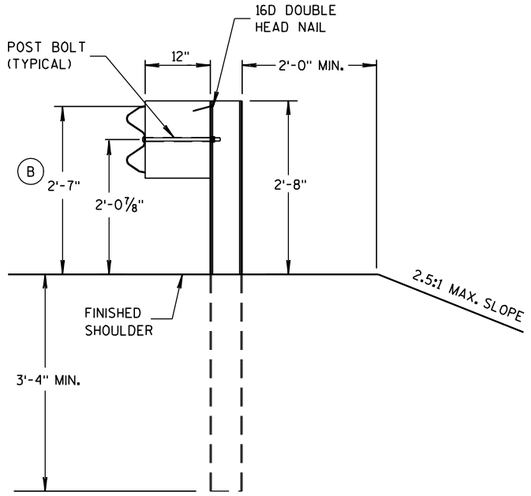
S.D.D. 14 B 45-3a

6

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

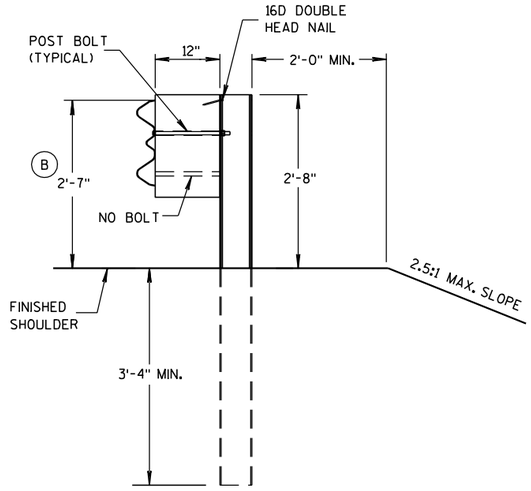
GENERAL NOTES

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



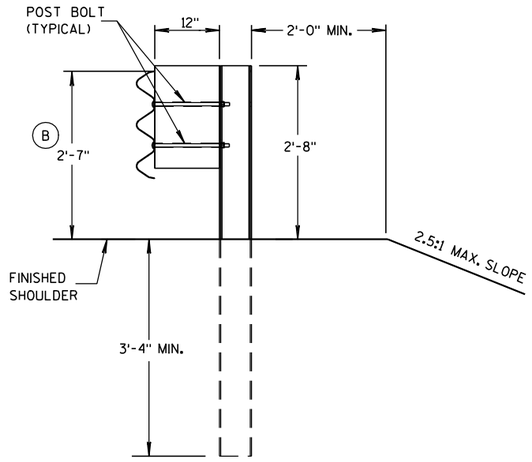
SECTION A-A

POSTS 1-5



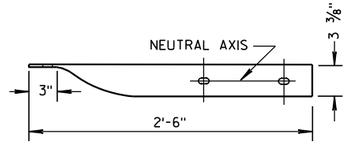
SECTION B-B

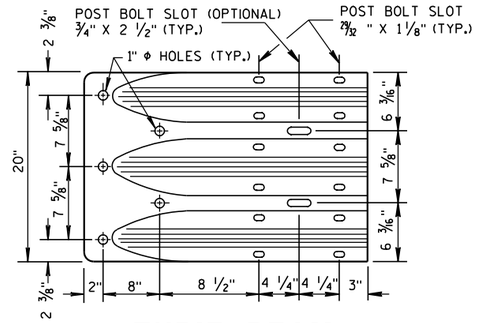
POST 6



SECTION C-C

POSTS 7-11





THRIE BEAM TERMINAL CONNECTOR

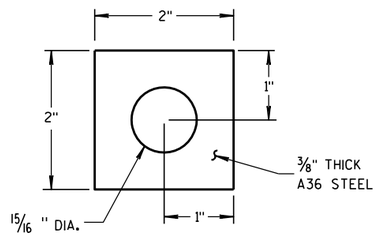
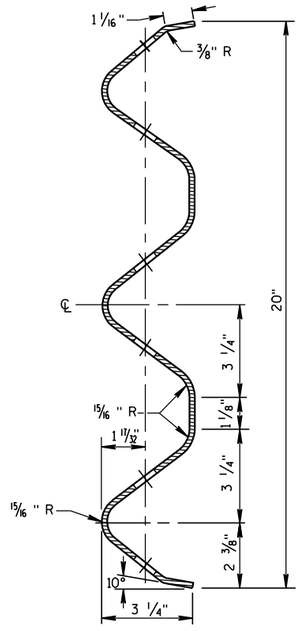
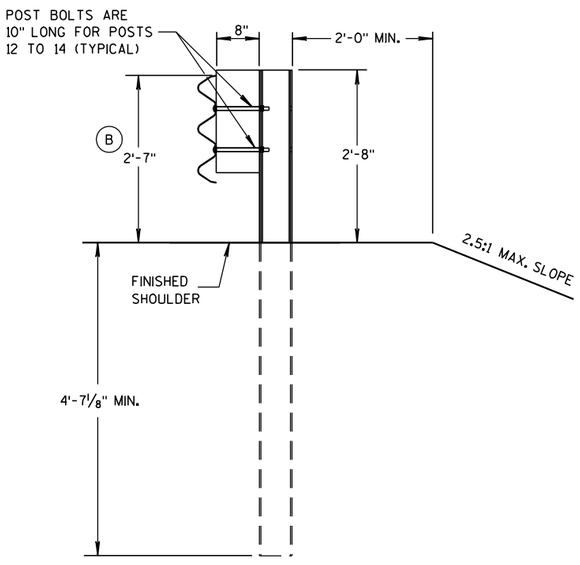


PLATE WASHER DETAIL

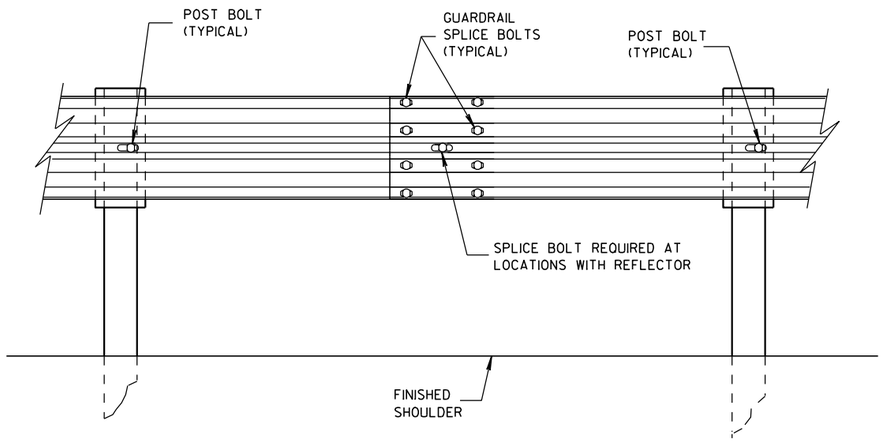


SECTION THRU THRIE BEAM RAIL ELEMENT



SECTION D-D

POSTS 12-14

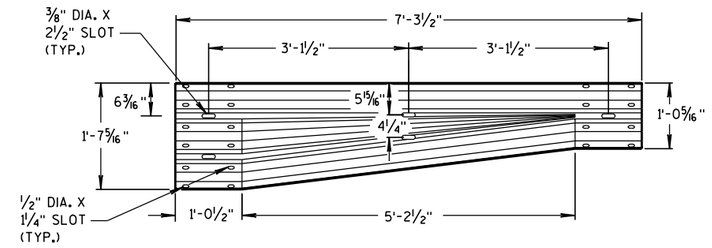


SPLICE DETAIL

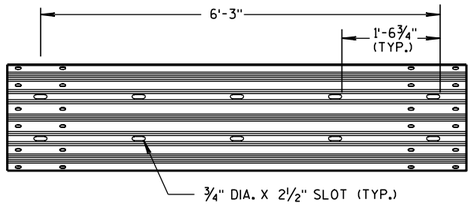
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

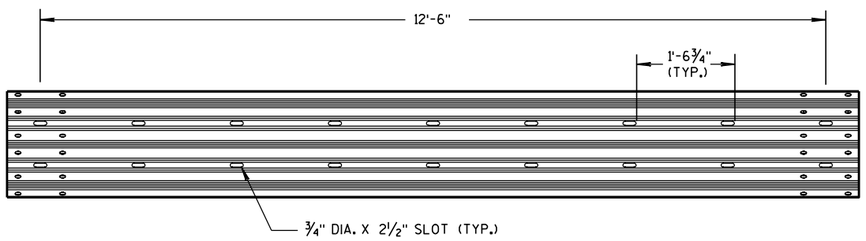
6
S.D.D. 14 B 45-3b



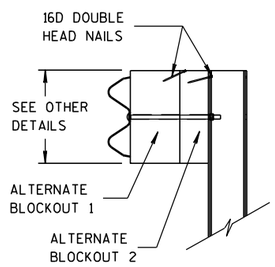
W-BEAM TO THRIE BEAM TRANSITION SECTION



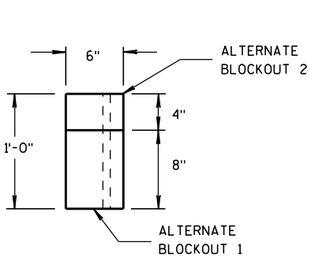
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

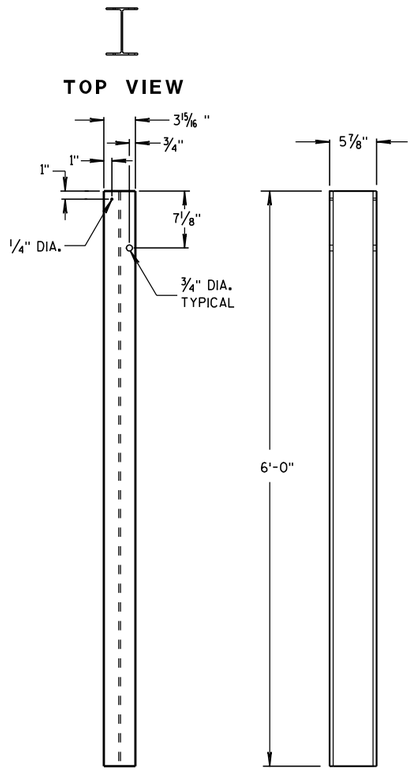


SIDE VIEW



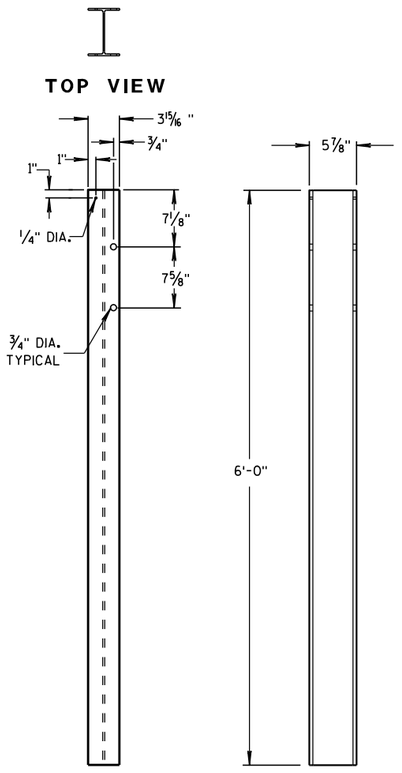
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



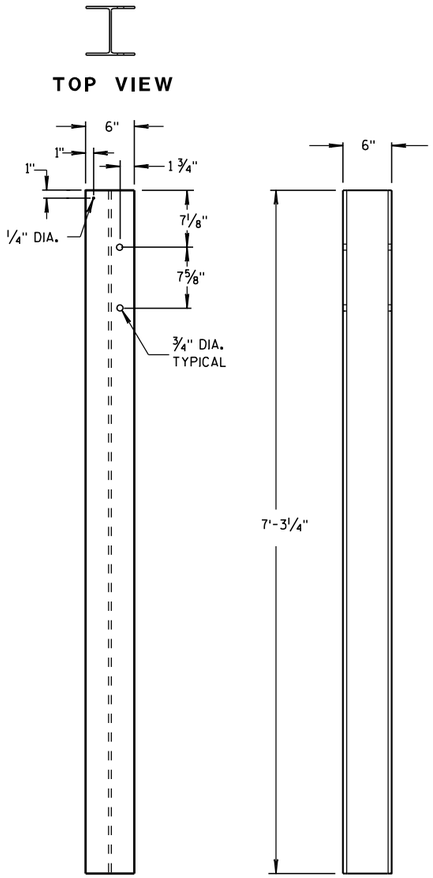
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5



FRONT VIEW SIDE VIEW

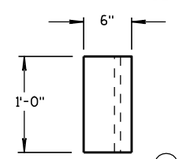
STEEL POSTS 6-11



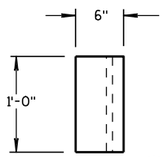
FRONT VIEW SIDE VIEW

STEEL POSTS 12-14

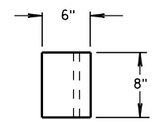
(1) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.



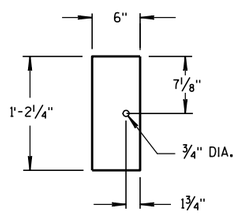
TOP VIEW (1)



TOP VIEW (1)

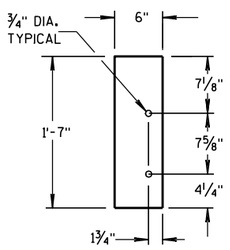


TOP VIEW



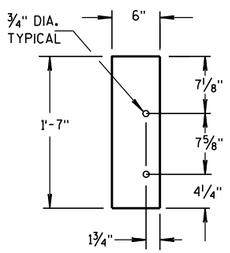
FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-11



FRONT VIEW

BLOCKOUT POSTS 12-14

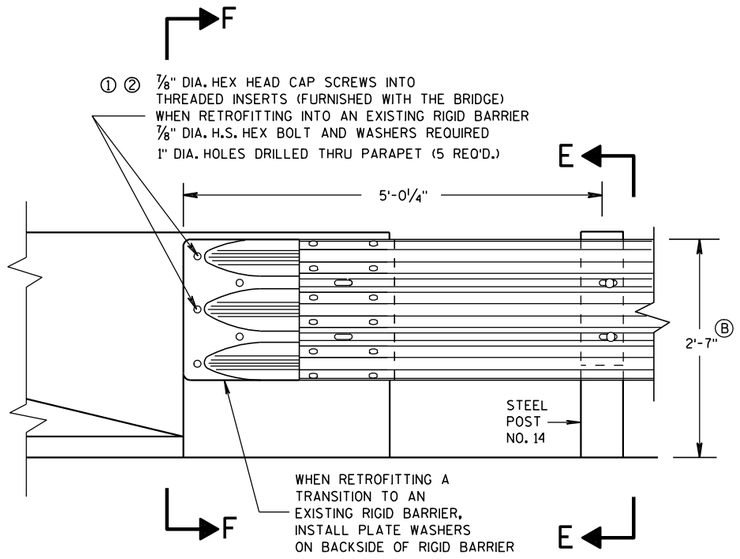
STEEL POST SIZES

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

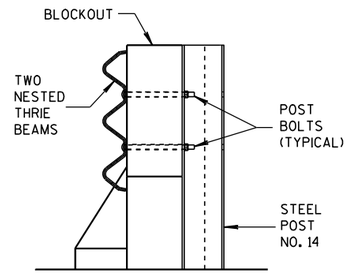
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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.

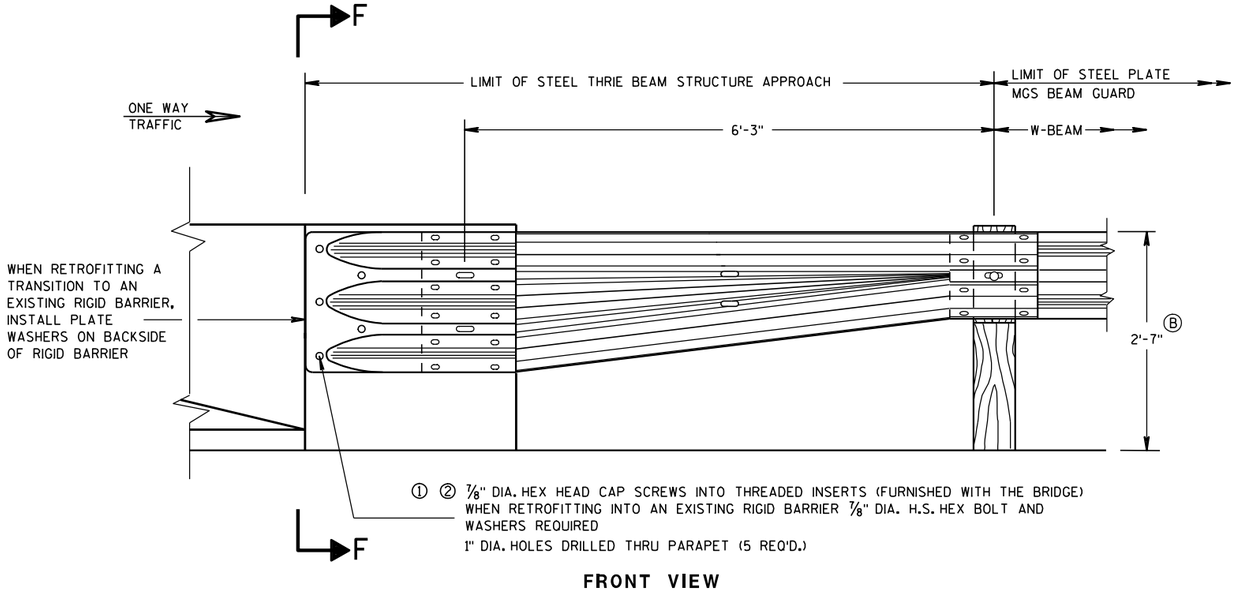
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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.

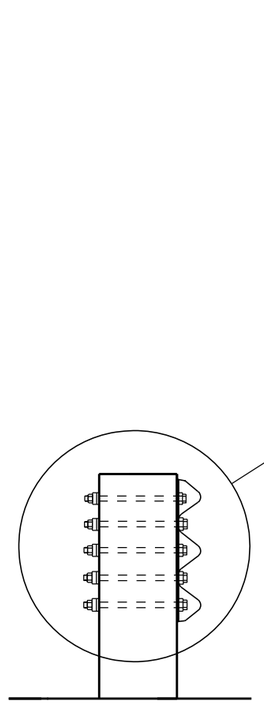
③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".

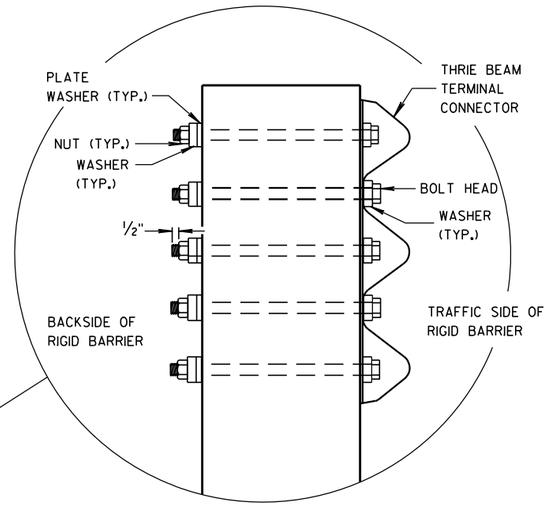
THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS



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 (614) — ENGINEER

FHWA

6

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

6

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

GENERAL NOTES

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

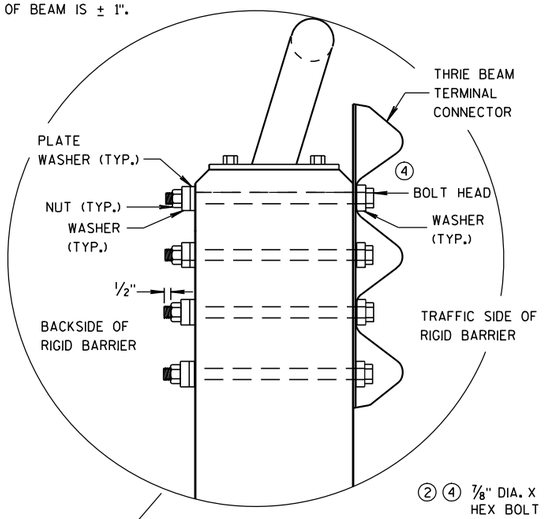
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

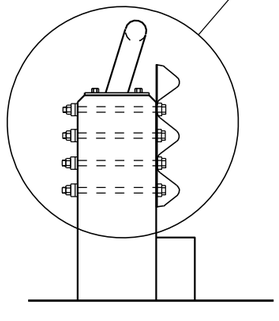
② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE.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

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

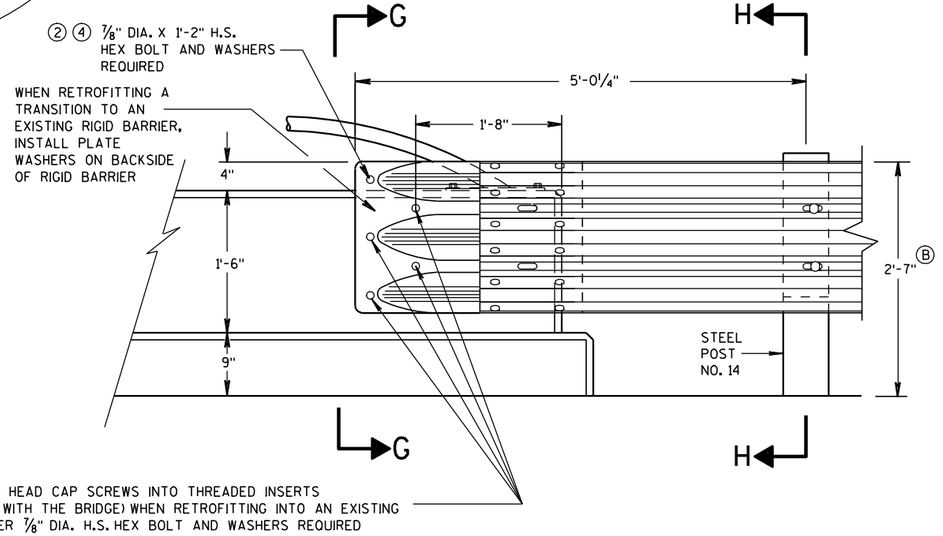
④ BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.

Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".

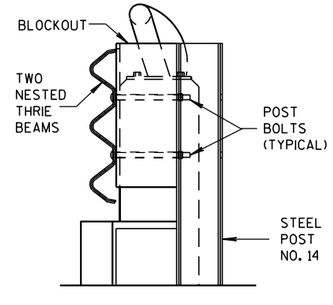




SECTION G-G

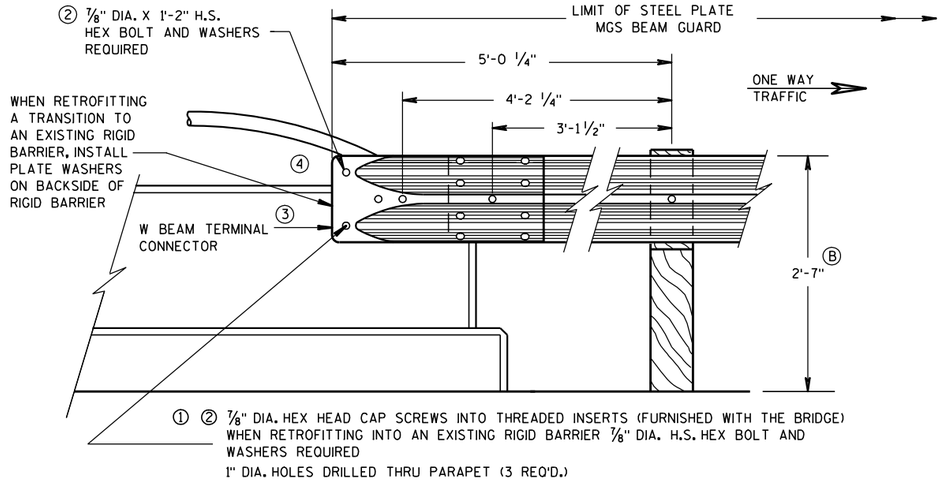


FRONT VIEW



SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

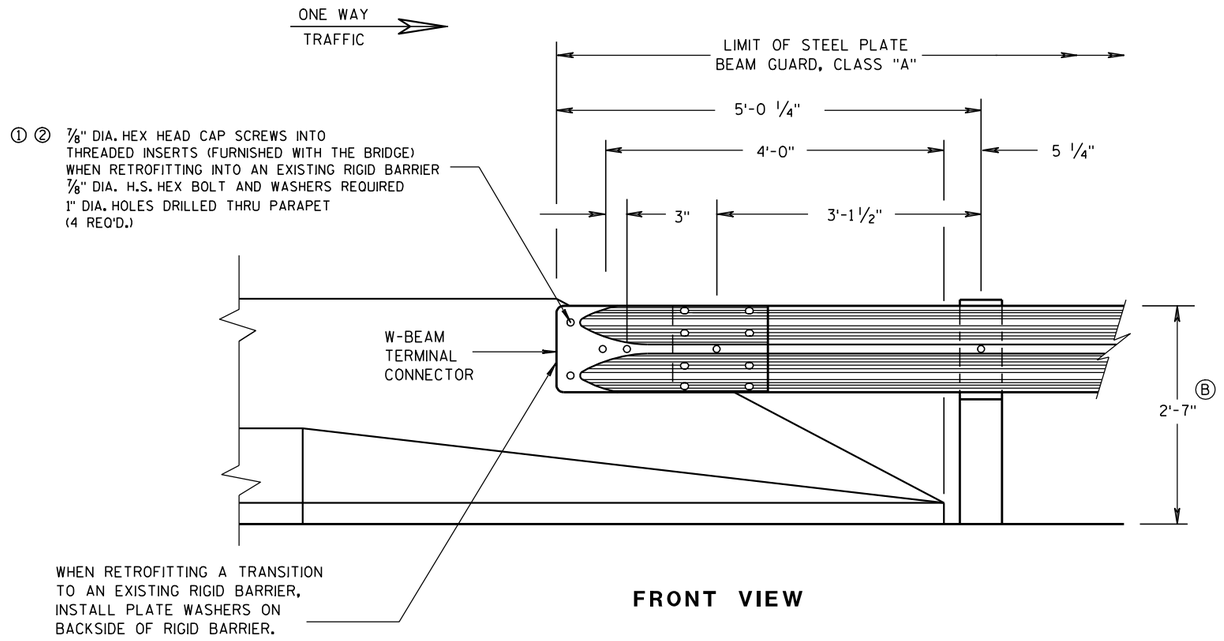


FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

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

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
8-31-2012 DATE	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	1615



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

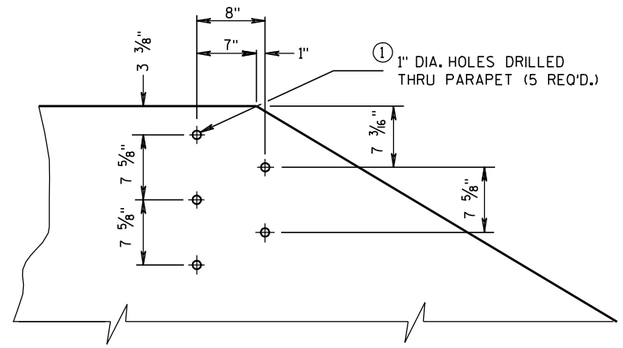
(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

GENERAL NOTES

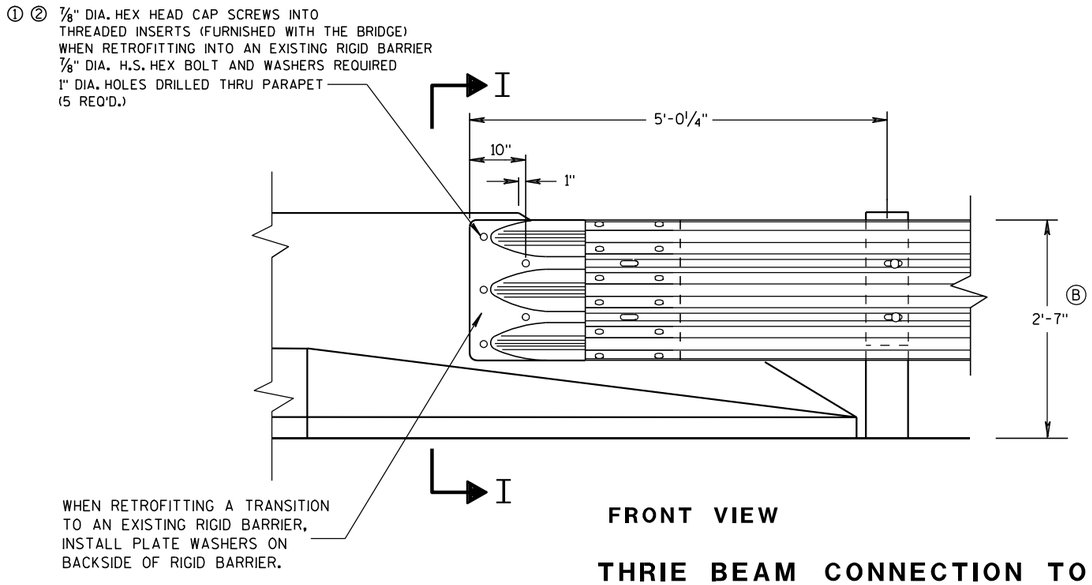
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

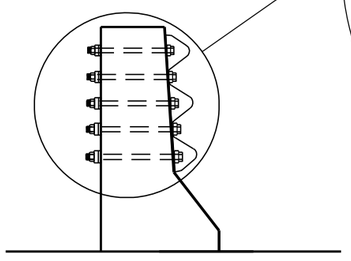
Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".



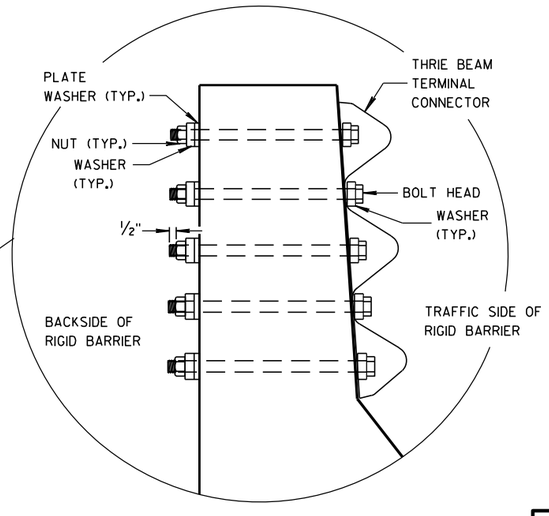
DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

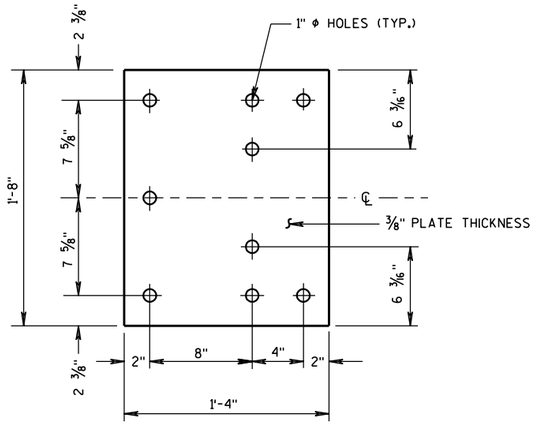
APPROVED
8/31/2012 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

6

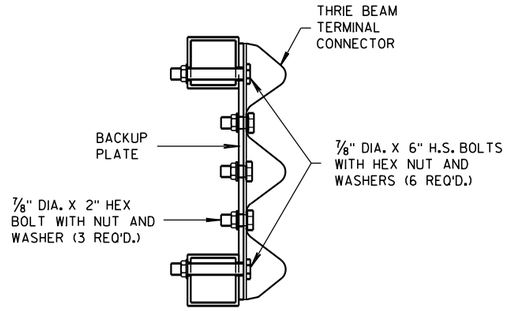
S.D.D. 14 B 45-3f

6

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



BACK-UP PLATE DETAIL

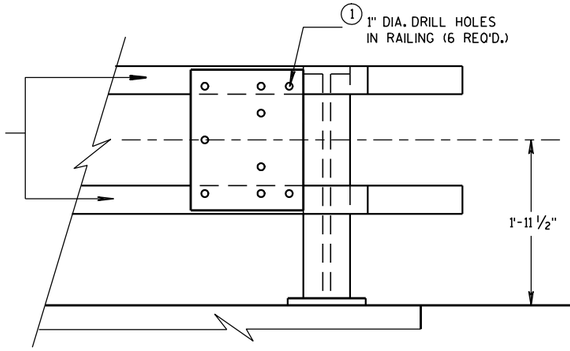


SECTION J-J

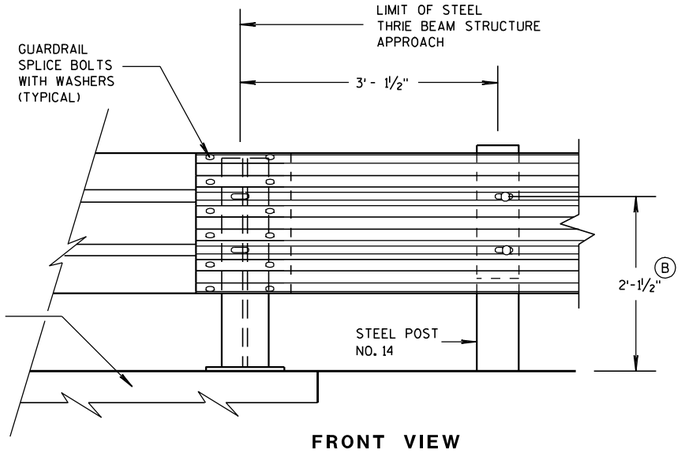
GENERAL NOTES

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

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

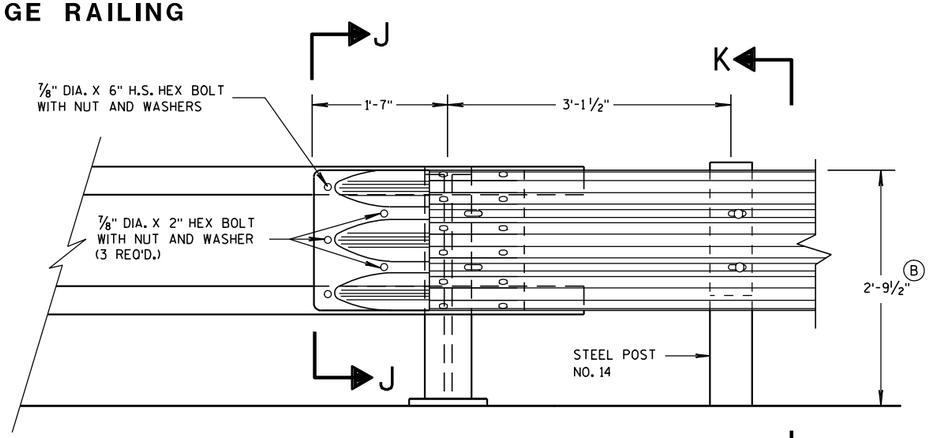


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

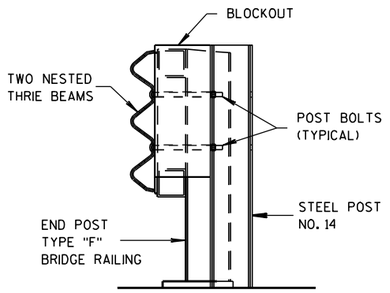


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

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

617

6

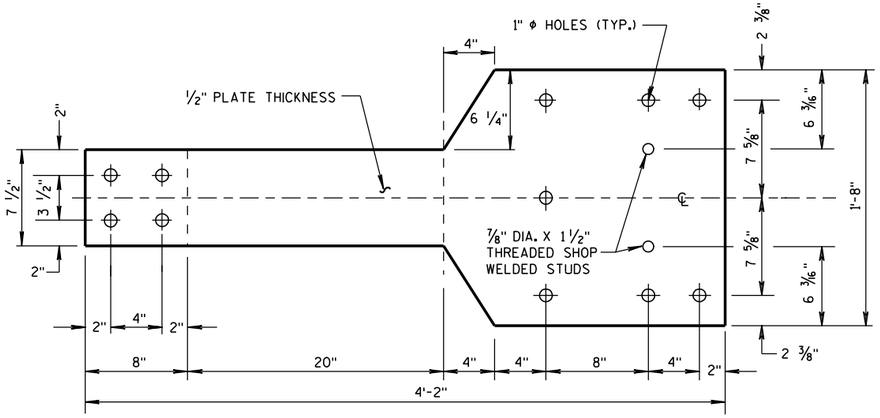
S.D.D. 14 B 45-3g

6

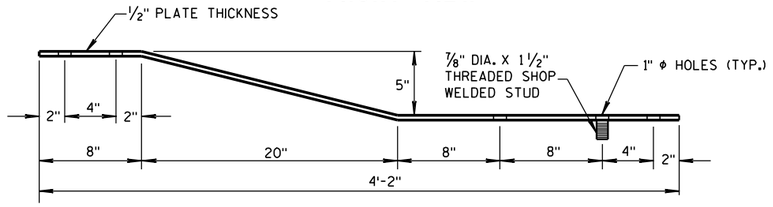
S.D.D. 14 B 45-3g

GENERAL NOTES

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

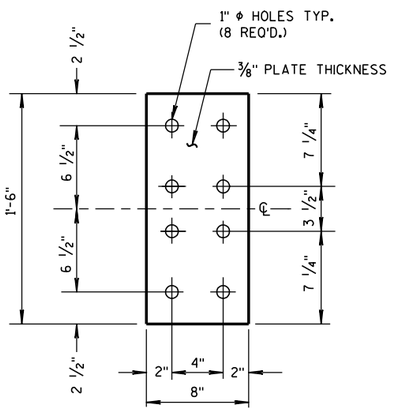


FRONT VIEW



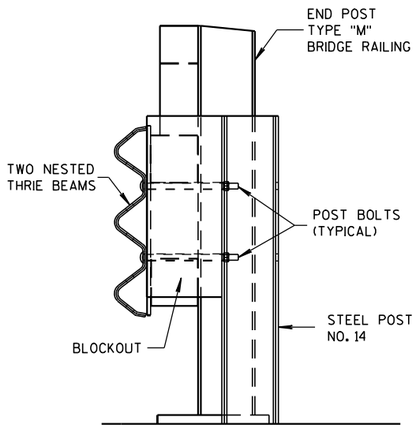
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

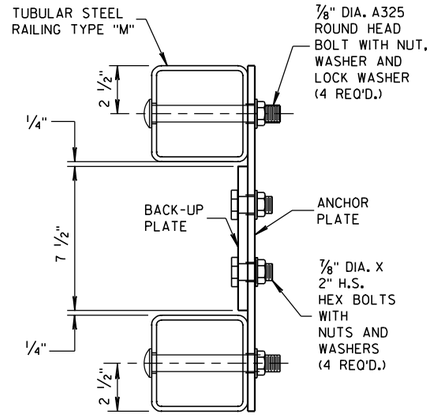


FRONT VIEW

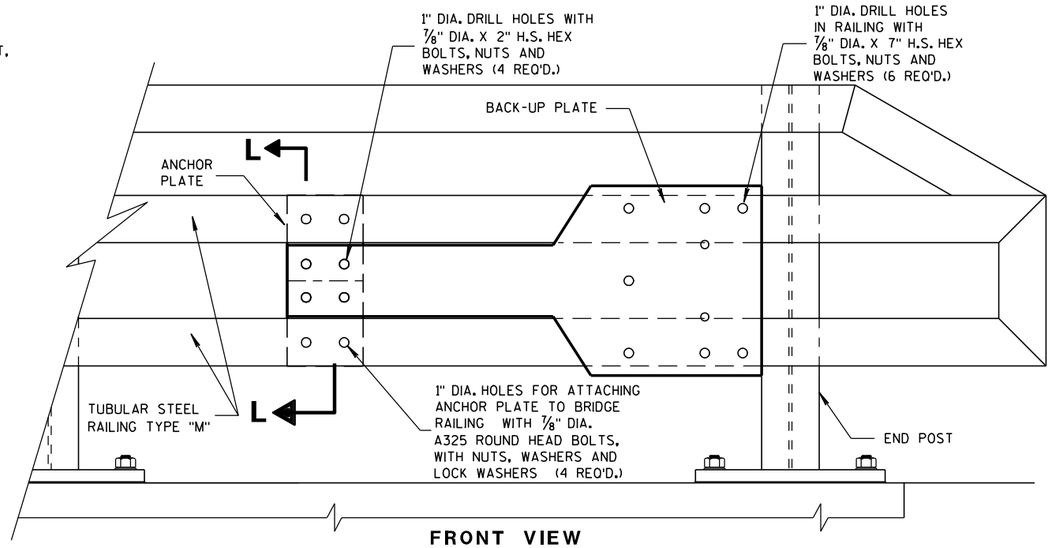
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

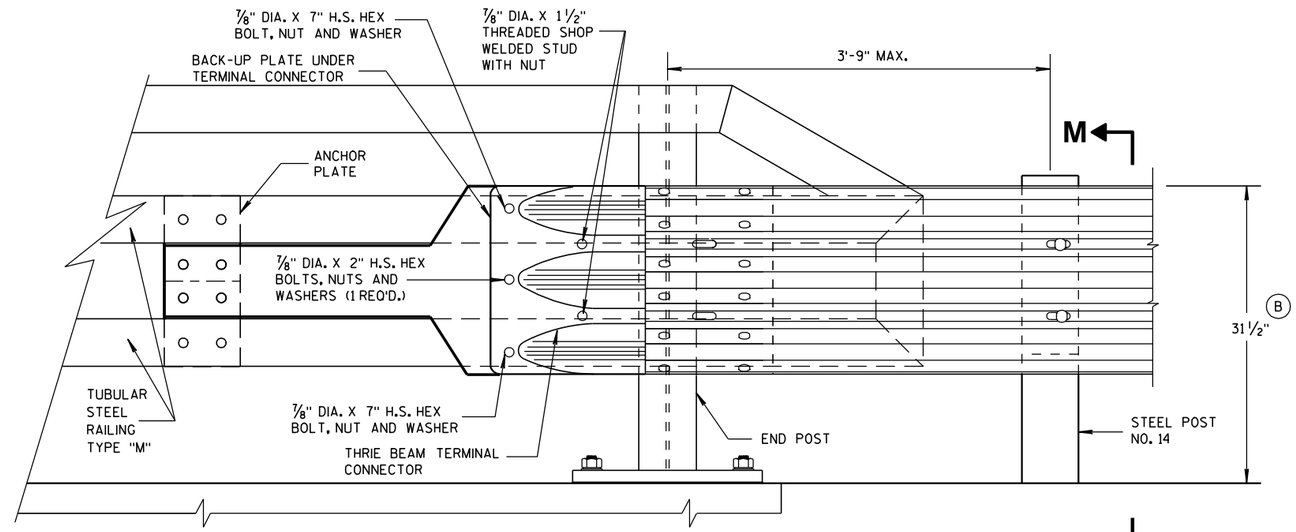


SECTION L-L

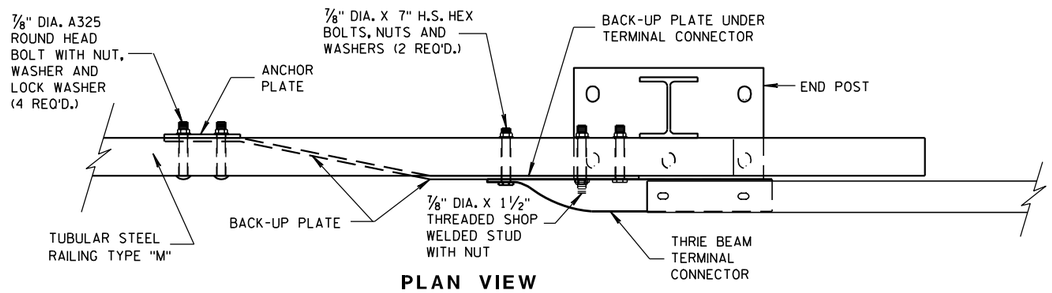


FRONT VIEW

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

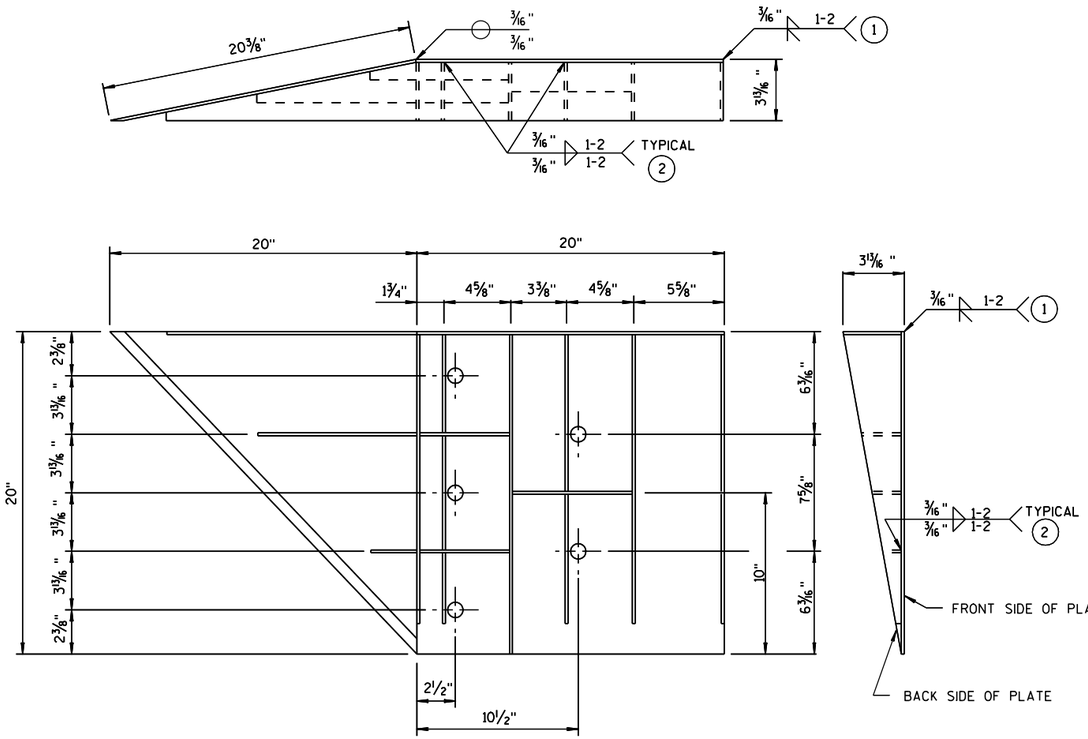
APPROVED
8-31-2012 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
618 ENT
FHWA

6

S.D. 14 B 45-3h

6

S.D. 14 B 45-3h



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

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

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

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

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

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

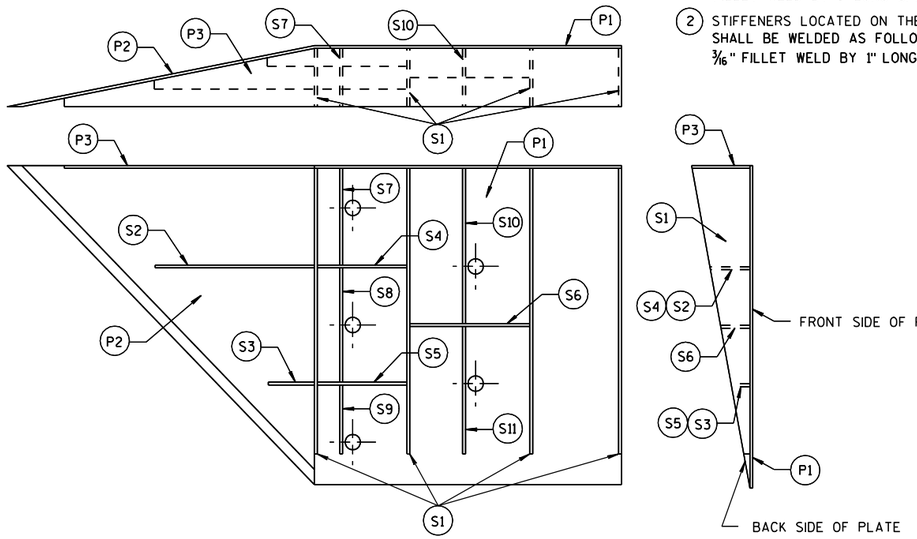


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

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

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

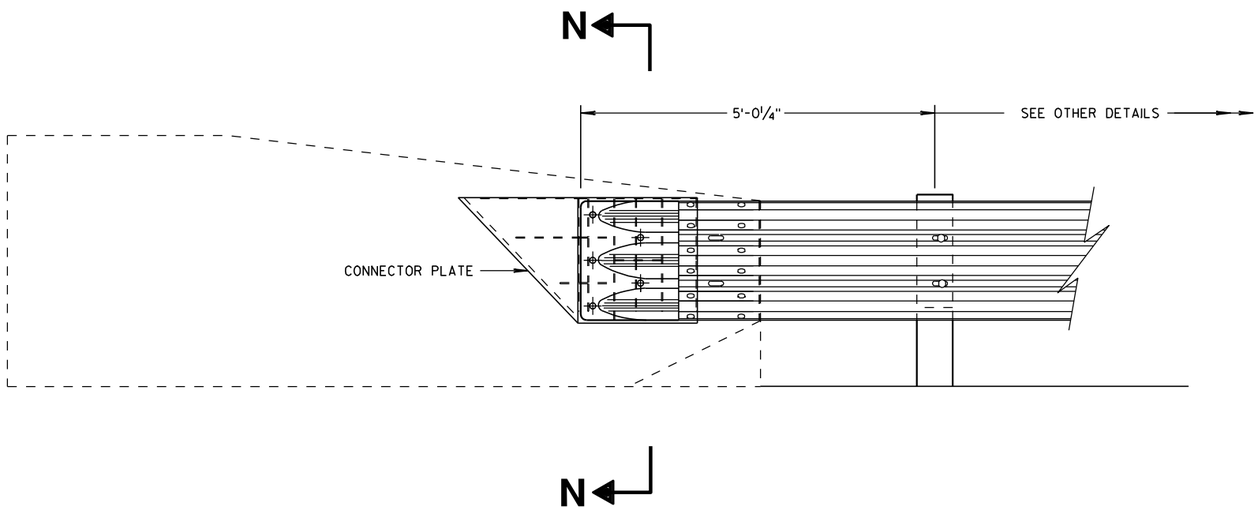
APPROVED
8/31/2012
DATE
/S/ Jerry H ...
ROADWAY STANDARDS 619 ...MENT
ENGINEER
FHWA

6

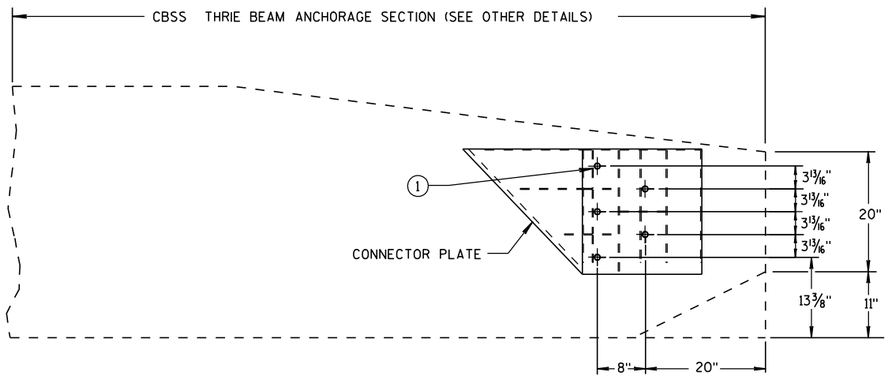
S.D.D. 14 B 45-3i

6

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



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER

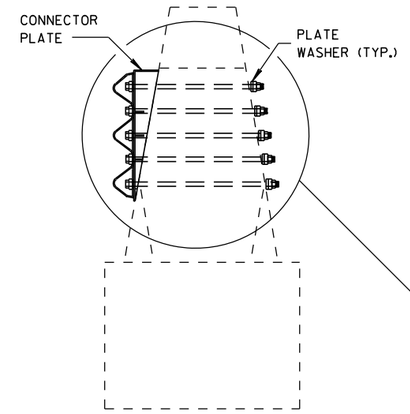


SINGLE SLOPE CONNECTION PLATE PLACEMENT

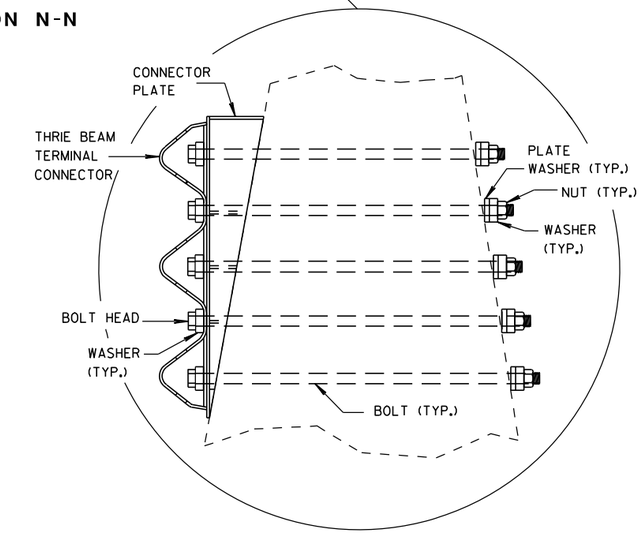
GENERAL NOTES

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

(1) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X ⅝" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012
DATE

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

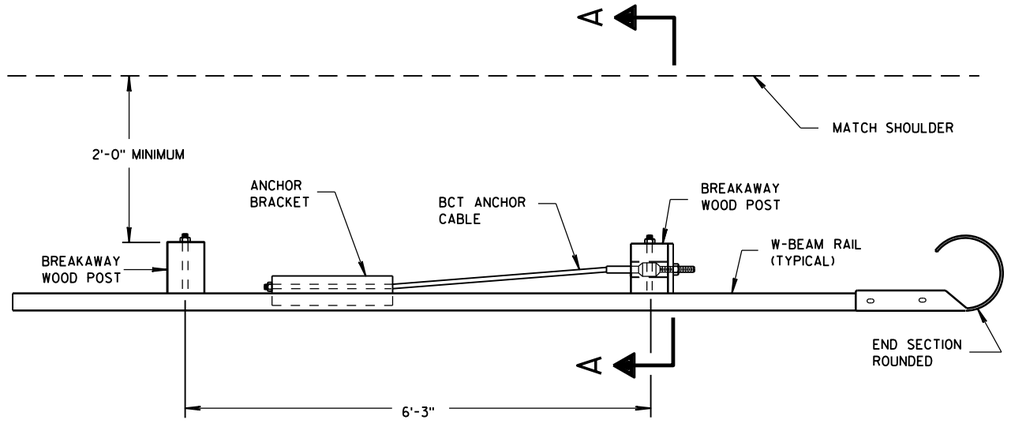
FHWA

6

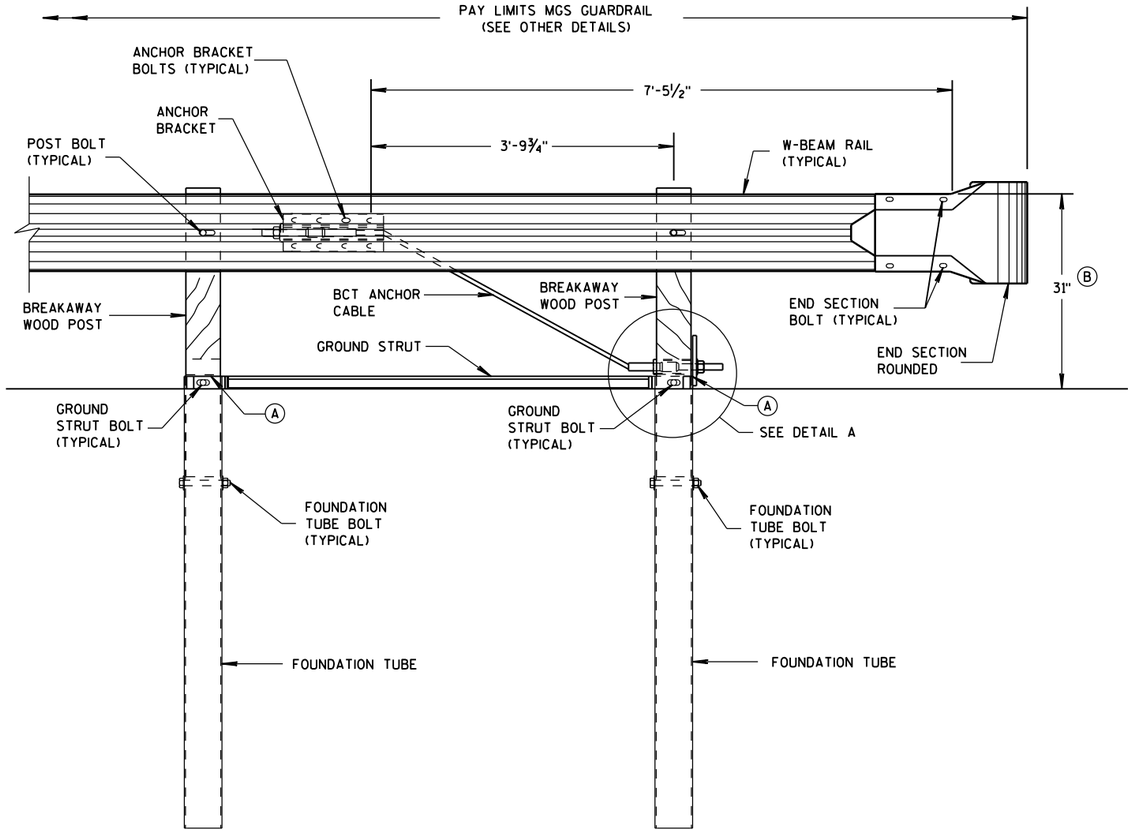
S.D.D. 14 B 45-3j

6

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

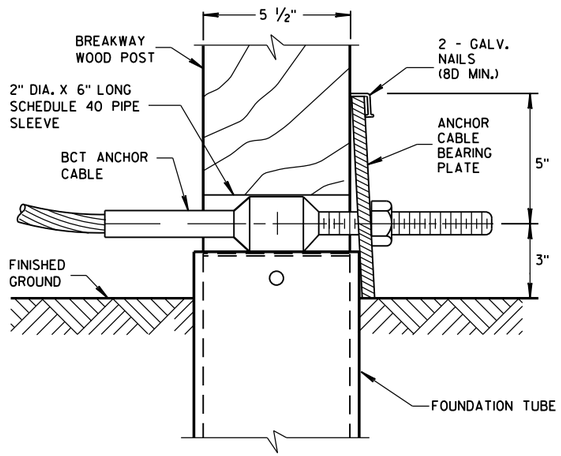


PLAN VIEW



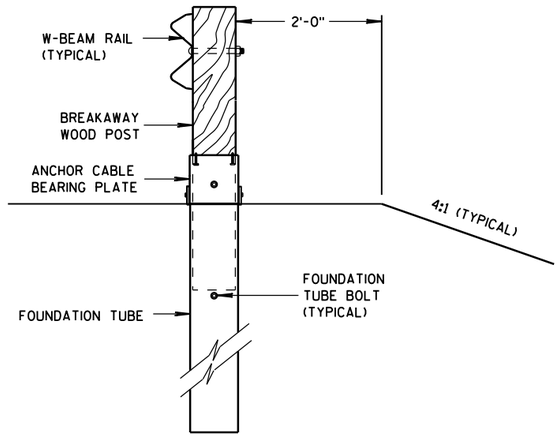
FRONT VIEW

END RAIL DETAIL



DETAIL A

POST NO. 1
GROUNG STRUT NOT SHOWN FOR CLARITY.



SECTION A-A

GENERAL NOTES

SEE SDD 14 B 42 FOR MORE INFORMATION.

END SECTION BOLTS AND NUTS HAVE THE SAME MATERIAL REQUIREMENTS AS SPLICE BOLTS.

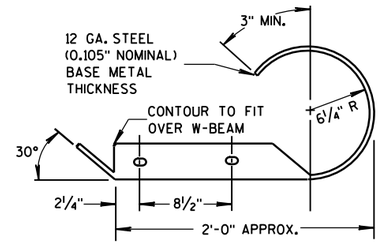
FOUNDATION TUBE BOLTS ARE ⅞" DIAMETER ASTM A307 HEX HEAD BOLT. FOUNDATION TUBE BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅞" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

ANCHOR BRACKET AND GROUND STRUT BOLTS ARE A ⅝" DIAMETER ASTM A307 HEX HEAD BOLT. ANCHOR BRACKET BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅝" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

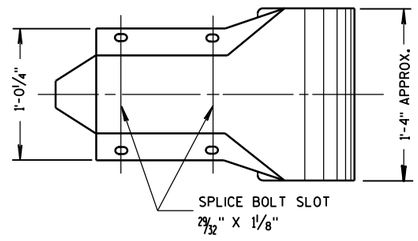
W-BEAM END SECTION ROUNDED HAS THE SAME MATERIAL PROPERTIES AS STANDARD STEEL RAIL.

(A) TOP OF FOUNDATION TUBE SHALL BE NO MORE THAN 3" ABOVE FINISHED GROUND.

(B) FOR NEW CONSTRUCTION TOP OF RAIL IS 31" ± 1".
FOR EXISTING INSTALLATIONS TOP OF RAIL IS BETWEEN 27¾" TO 32" ± 1".



PLAN VIEW



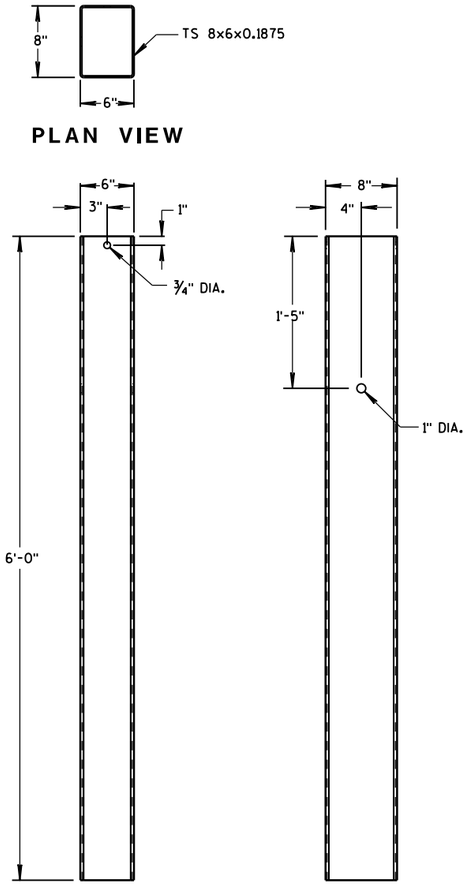
FRONT VIEW

W BEAM END
SECTION ROUNDED

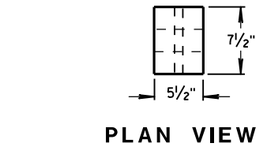
MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

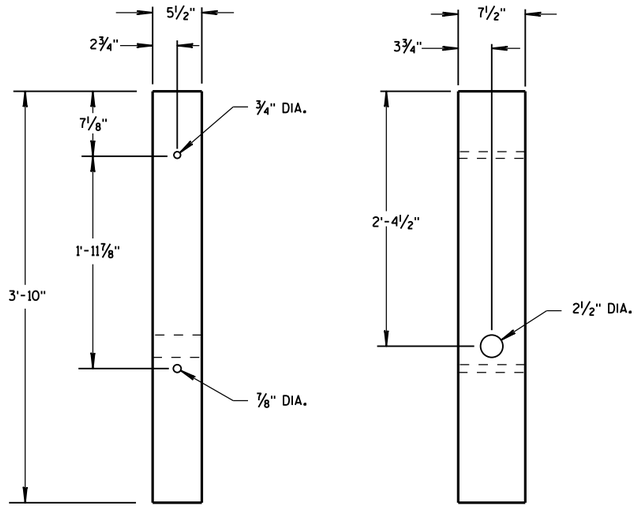
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6
S.D.D. 14 B 47-2a



FOUNDATION TUBE

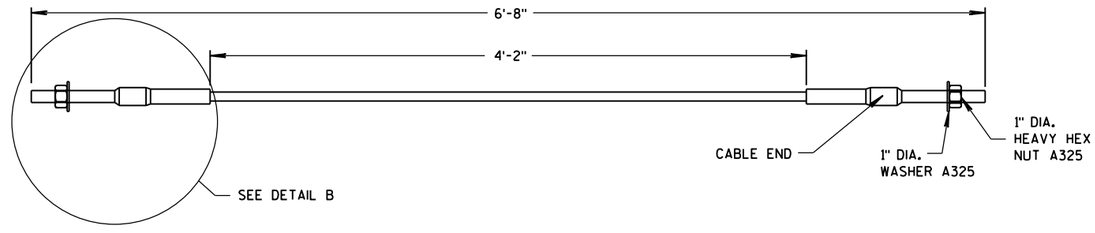




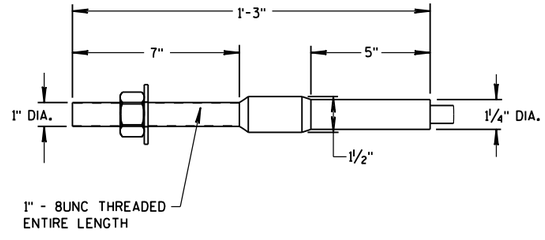
BREAKAWAY WOOD POST

GENERAL NOTES

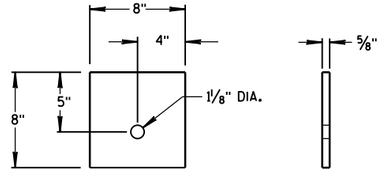
BCT ANCHOR CABLE IS A ¾" DIAMETER 6X19 IWRC IPS GALVANIZED WIRE ROPE. THE SWAGED FITTINGS AND STUD ARE REQUIRED. END FITTING SHALL BE MACHINED FROM HOT-ROLLED CARBON STEEL CONFORMING TO ASTM A576 GRADE 1035 AND GALVANIZED ACCORDING TO ASTM A123. TREADED STUD SHALL CONFORM TO ASTM A325 OR SAE GRADE 5. MINIMUM BREAKING STRENGTH OF WIRE ROPE IS 43,000 LB. WIRE ROPE IS TO BE TAUT.



BCT ANCHOR CABLE



DETAIL B



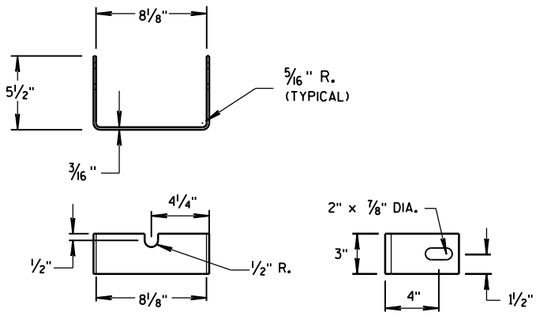
ANCHOR CABLE
BEARING PLATE

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

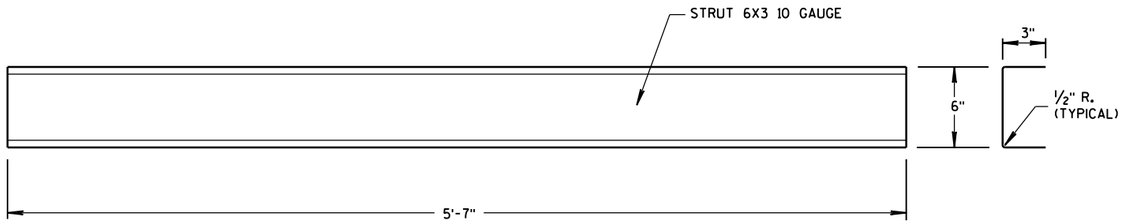
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

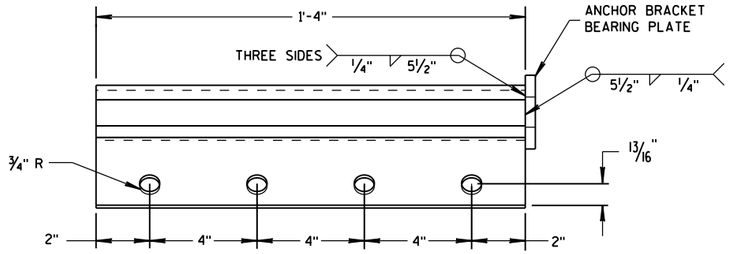
S.D.D. 14 B 47-2b

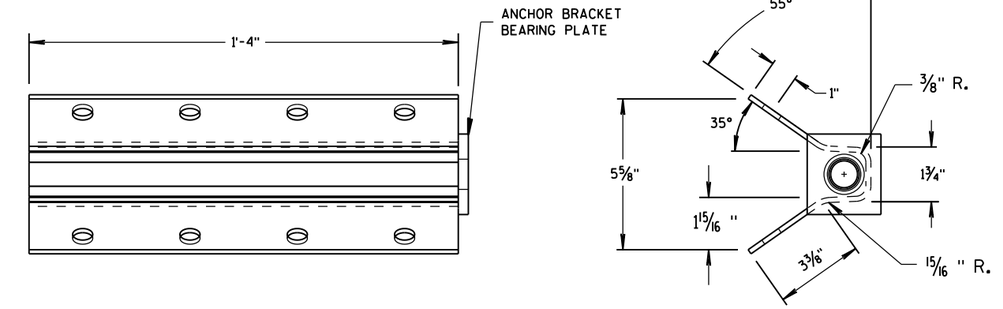


YOKE DETAIL

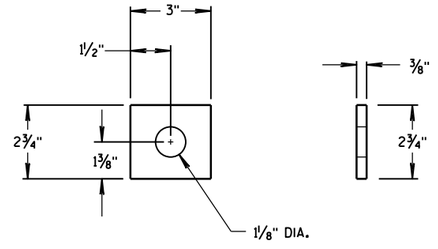


STRUT DETAIL

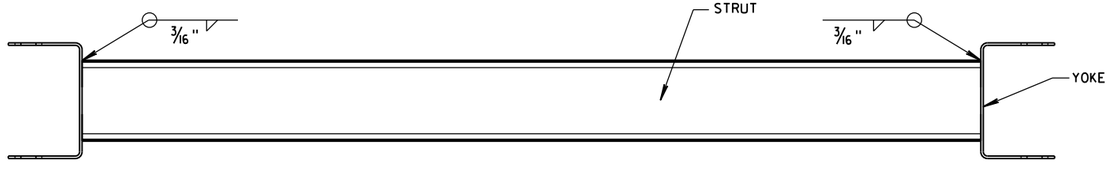




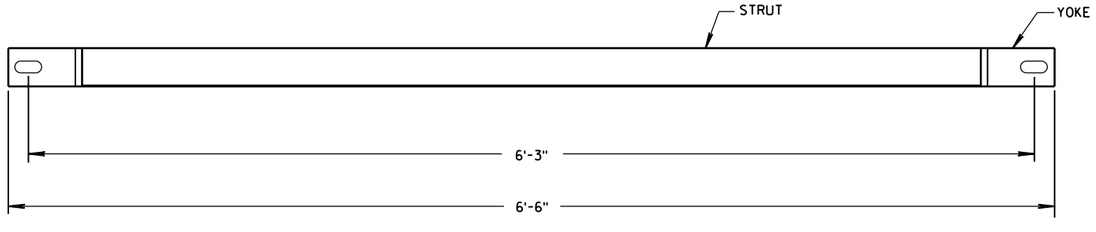
ANCHOR BRACKET



ANCHOR BRACKET BEARING PLATE



PLAN VIEW



FRONT VIEW

GROUND STRUT DETAIL

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

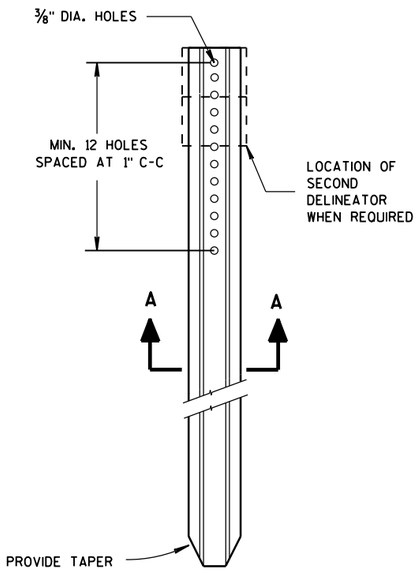
APPROVED
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

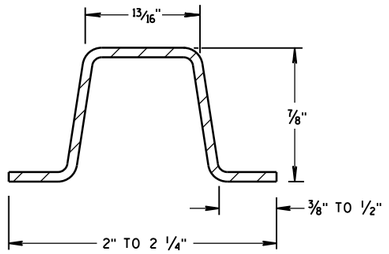
S.D.D. 14 B 47-2c

6

S.D.D. 14 B 47-2c

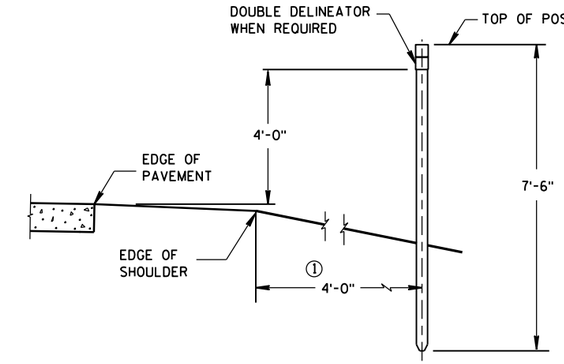


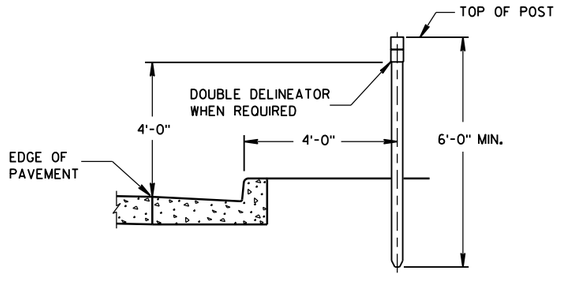
DELINEATOR POST



SECTION A-A

WEIGHT 1.12 LBS PER FT. ± 0.1 LB.



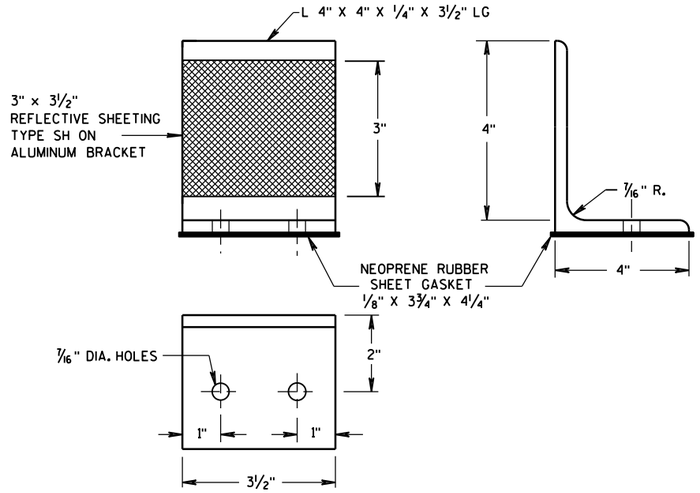


TYPICAL INSTALLATIONS OF DELINEATOR POSTS

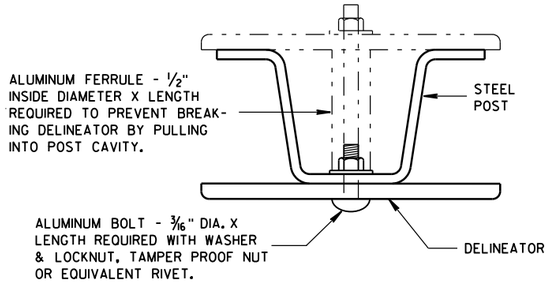
GENERAL NOTES

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

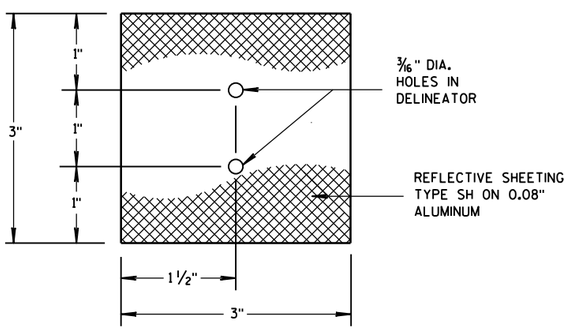
① DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.



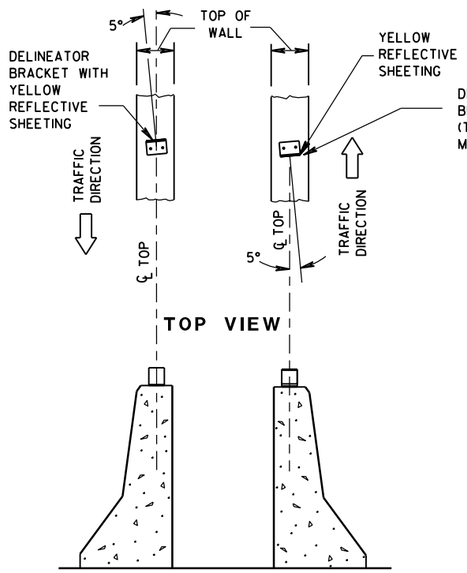
DELINEATOR BRACKET



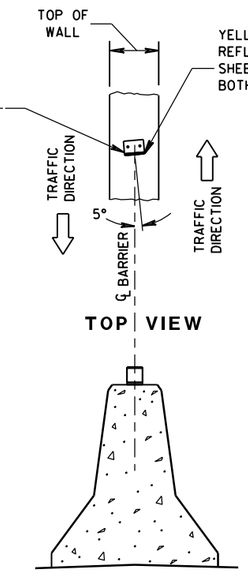
MOUNTING DETAIL FOR DELINEATOR



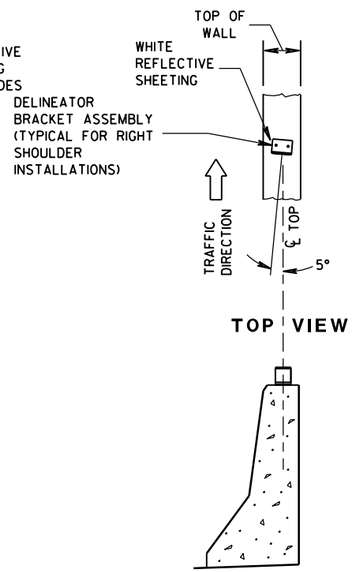
3"x 3" DELINEATOR



DOUBLE BARRIERS IN MEDIAN

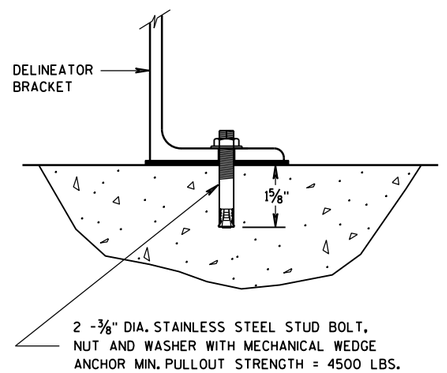


MEDIAN BARRIER



BARRIER LOCATED TO RT. OF TRAFFIC FLOW

LOCATION AND AIMING DETAILS FOR DELINEATOR BRACKETS MOUNTED ON CONCRETE BARRIERS



DELINEATOR BRACKET MOUNTING DETAIL

DELINEATOR POST, DELINEATOR, AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

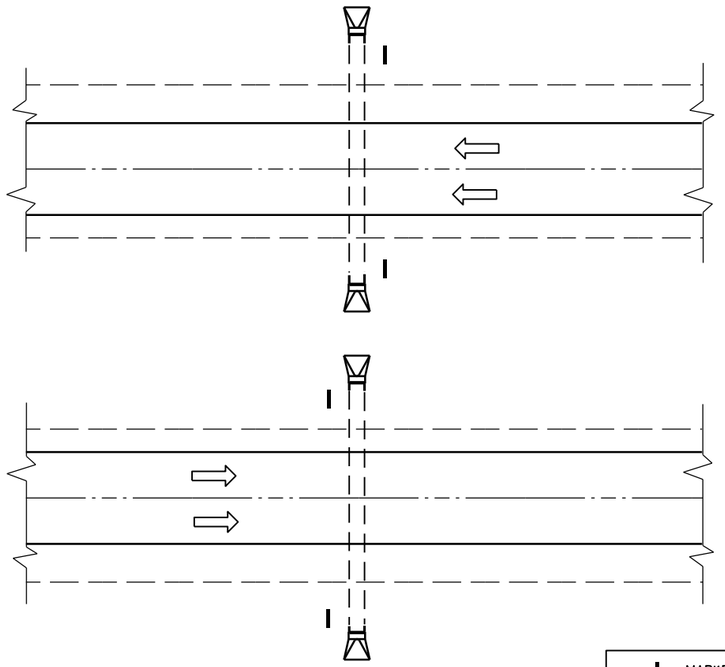
624

6

S.D.D. 15 A 2-8

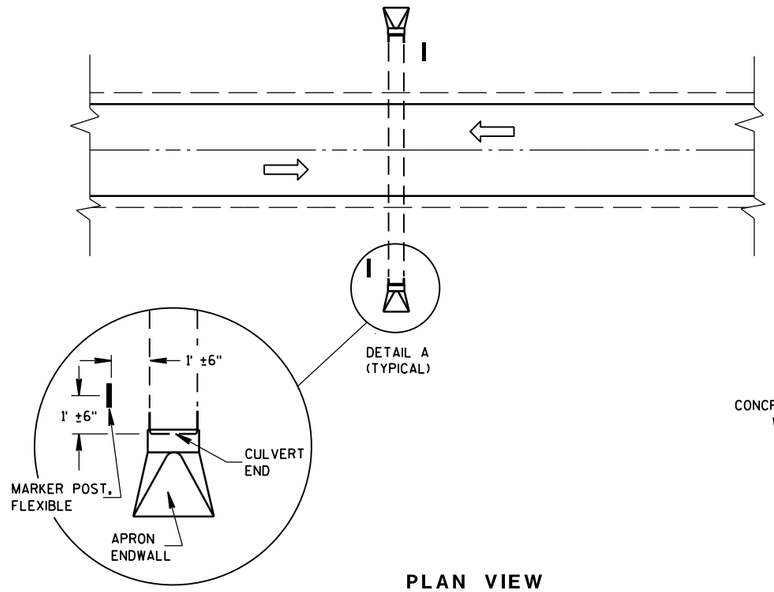
6

S.D.D. 15 A 2-8



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

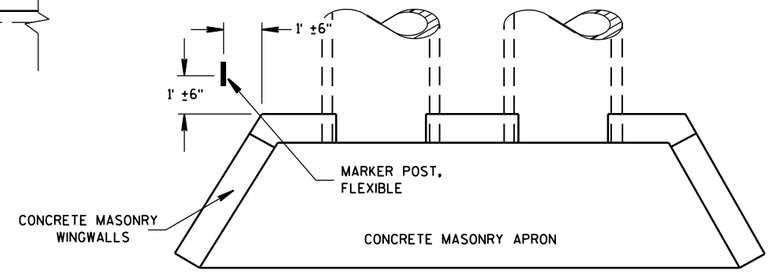
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

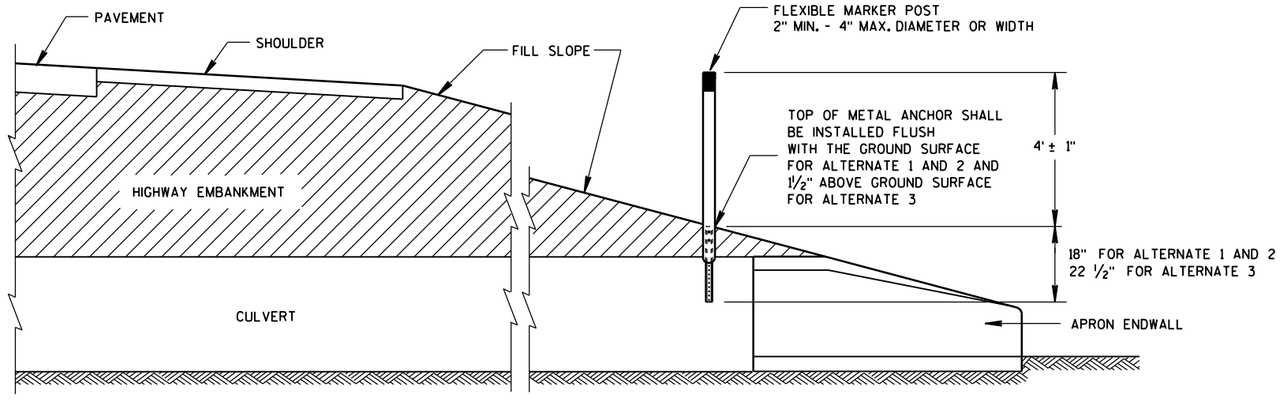
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

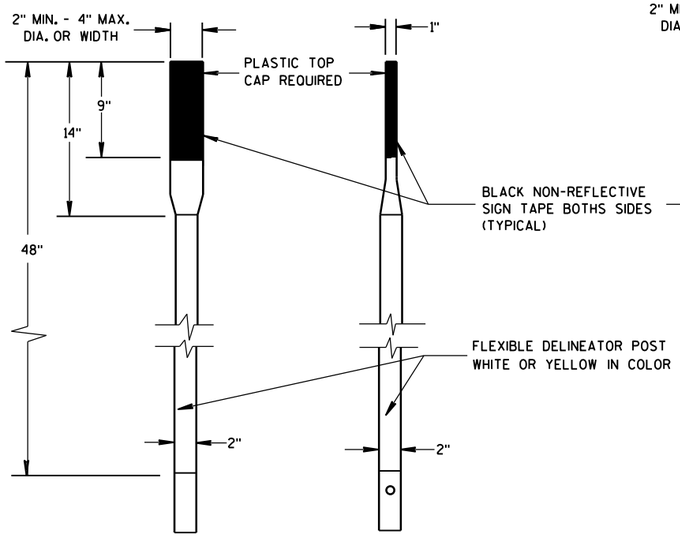
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

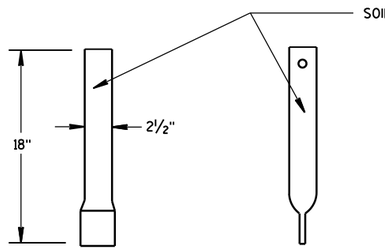
6

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

6

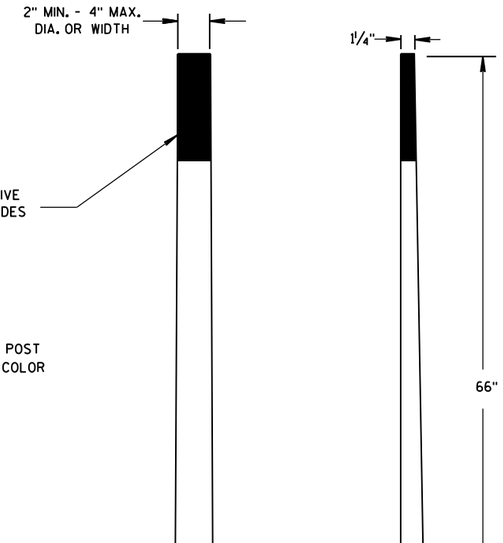
S.D.D. 15 A 3-2a





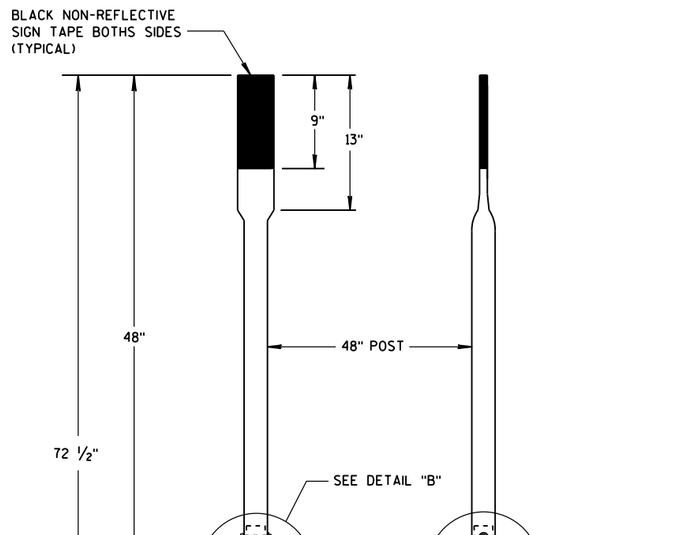
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

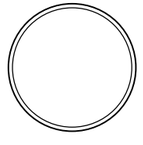
ALTERNATE 2



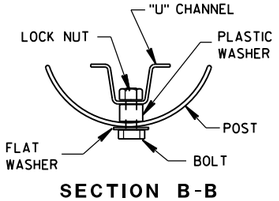
FRONT VIEW SIDE VIEW

ALTERNATE 3

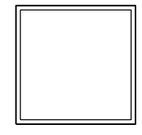
FLEXIBLE MARKER POSTS



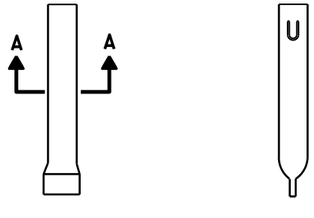
SECTION A-A



SECTION B-B

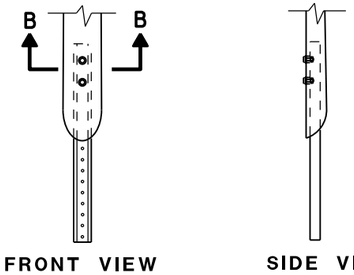


SECTION C-C



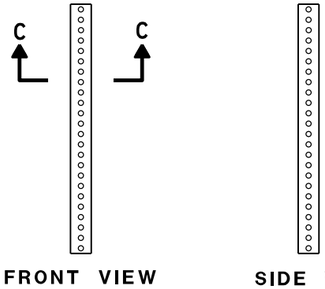
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

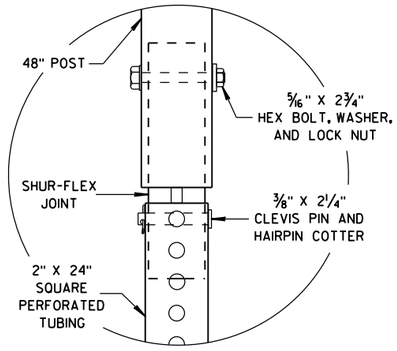
ALTERNATE 2



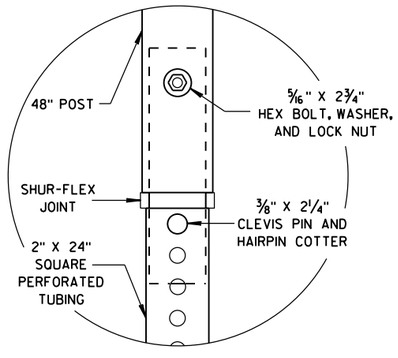
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

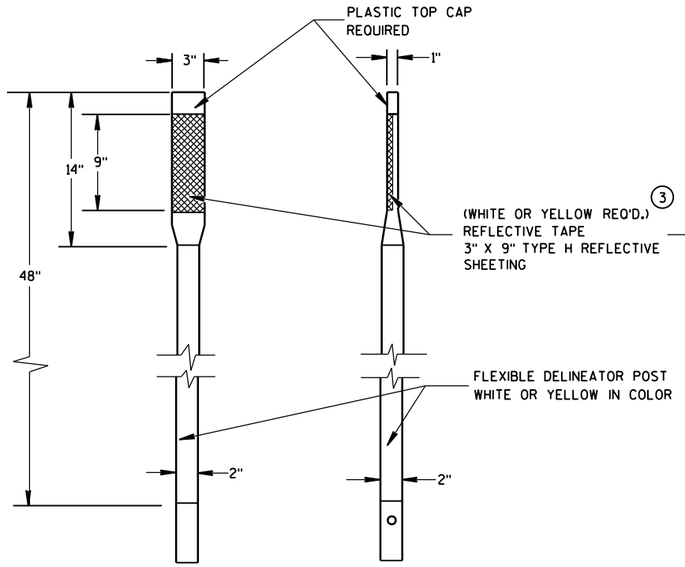
APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

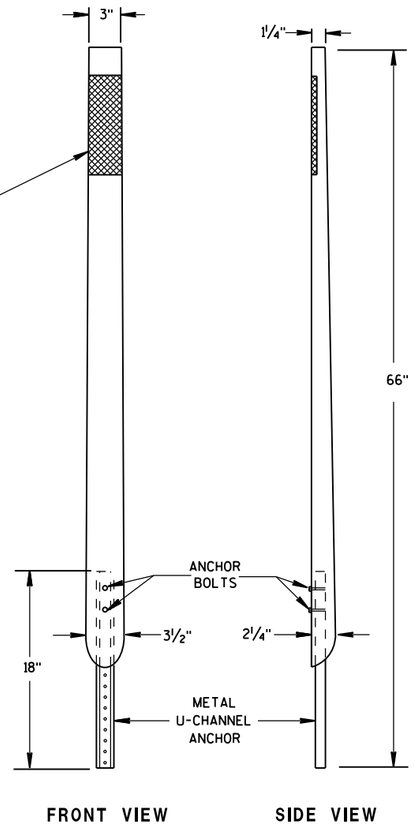
S.D.D. 15 A 3-2b

6

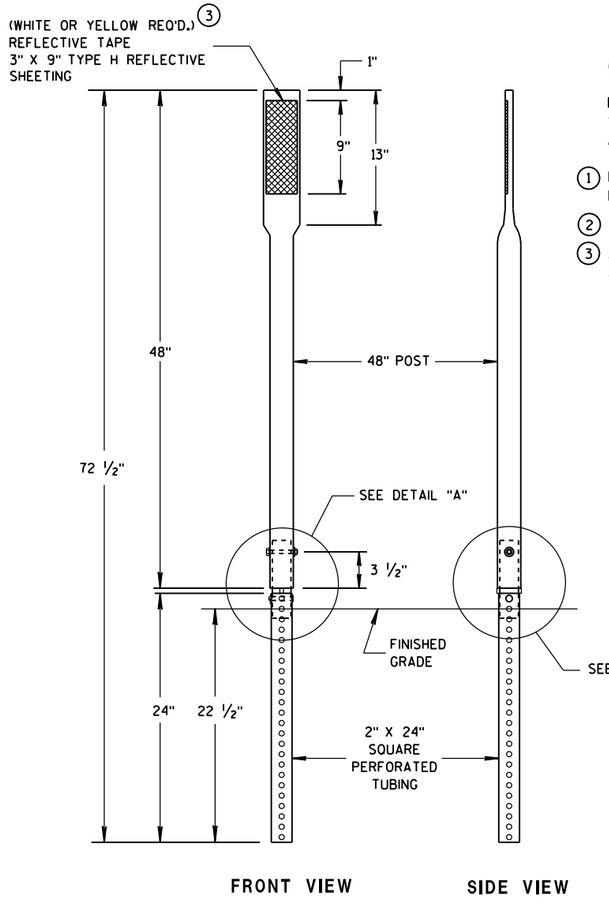
S.D.D. 15 A 3-2b



ALTERNATE 1



ALTERNATE 2



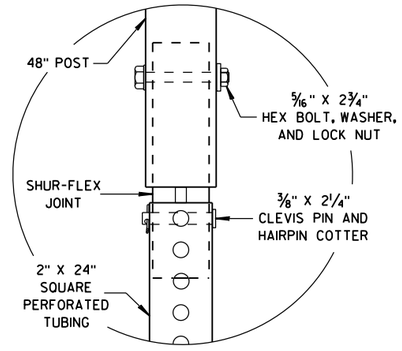
ALTERNATE 3

FLEXIBLE DELINEATOR POSTS

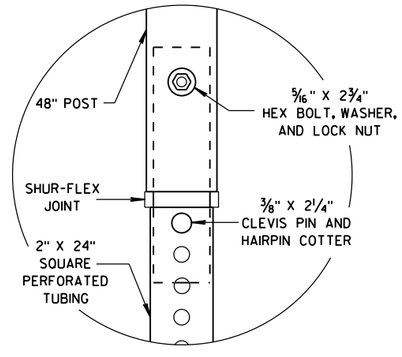
GENERAL NOTES

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

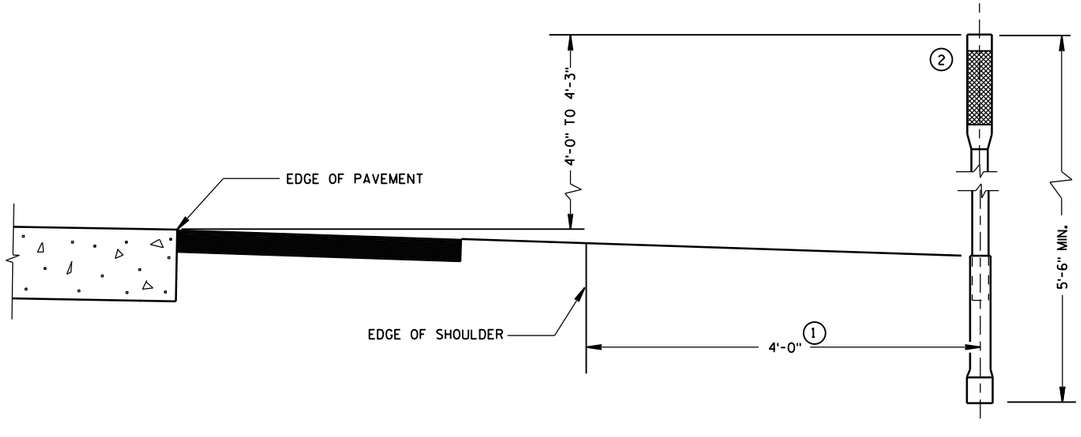
1. DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.
2. EITHER ALTERNATE NO. 1, NO. 2 OR NO. 3 MAY BE FURNISHED.
3. AS PER SECTION 637.2.2.2. OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

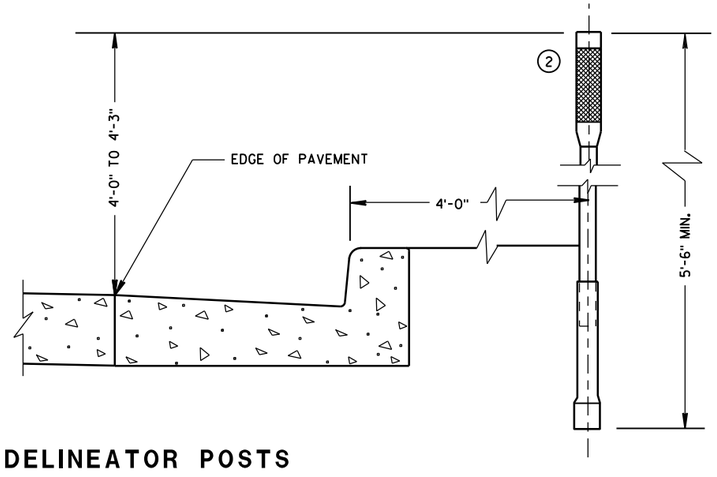


DETAIL A



DETAIL B





TYPICAL INSTALLATIONS OF FLEXIBLE DELINEATOR POSTS

FLEXIBLE DELINEATOR POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9-26-2012
DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

6

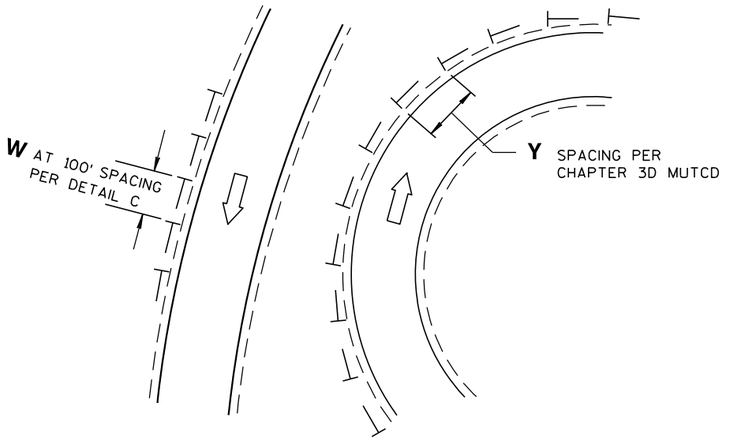
S.D.D. 15 A 4-2

6

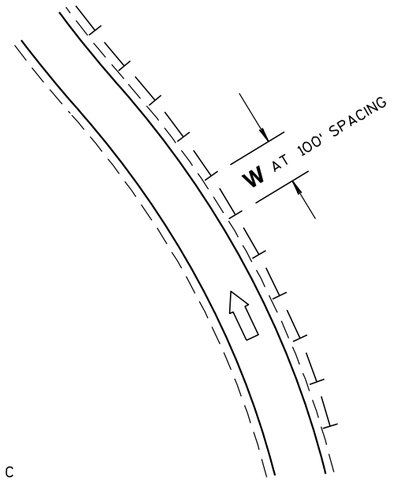
S.D.D. 15 A 4-2

GENERAL NOTES

* USE DOUBLE DELINEATOR ALONG ACCELERATION-DECELERATION LANES AND TAPERS. USE SINGLE DELINEATOR WHEN RAMP PAVEMENT IS FULL WIDTH.



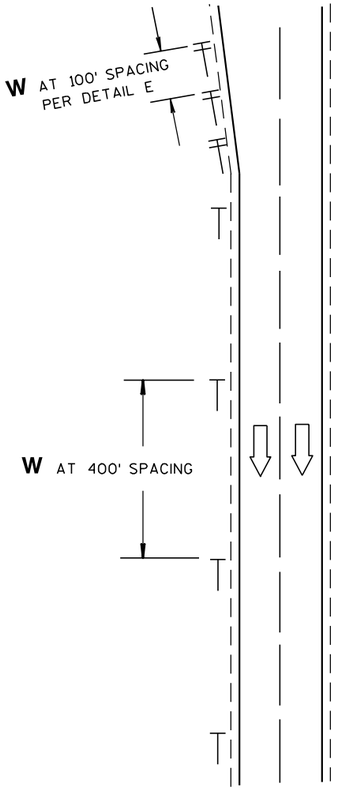
DETAIL A
DELINEATOR LAYOUT AT CURVED RAMP



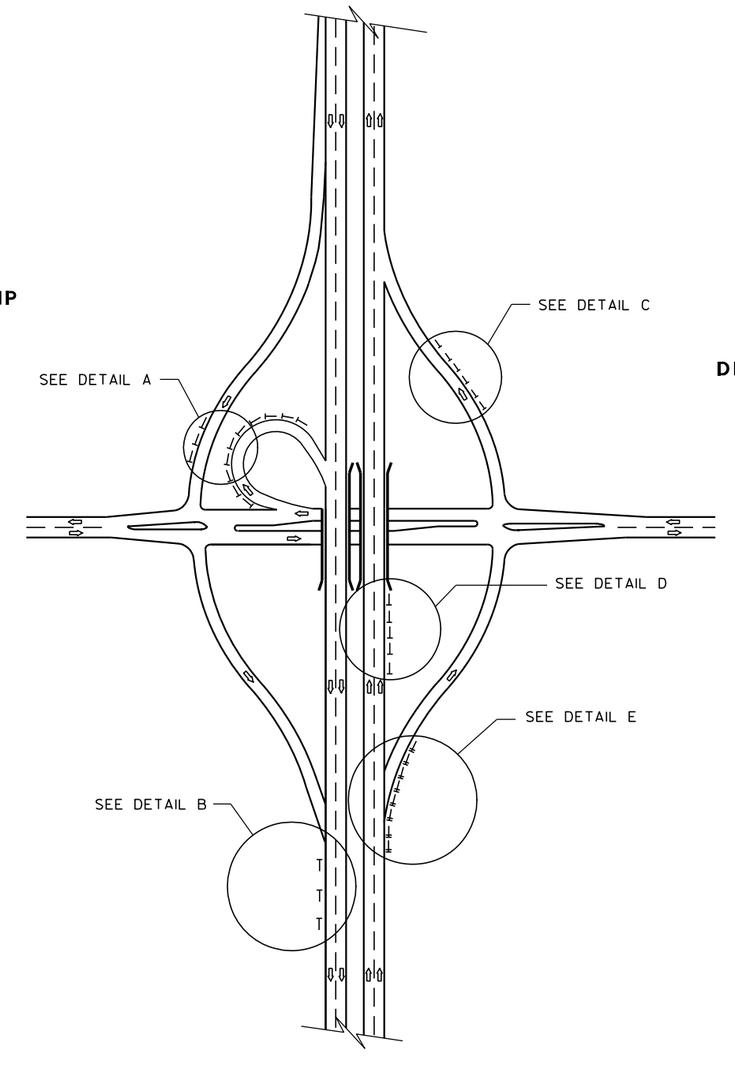
DETAIL C
DELINEATOR LAYOUT ALONG RAMP

LEGEND

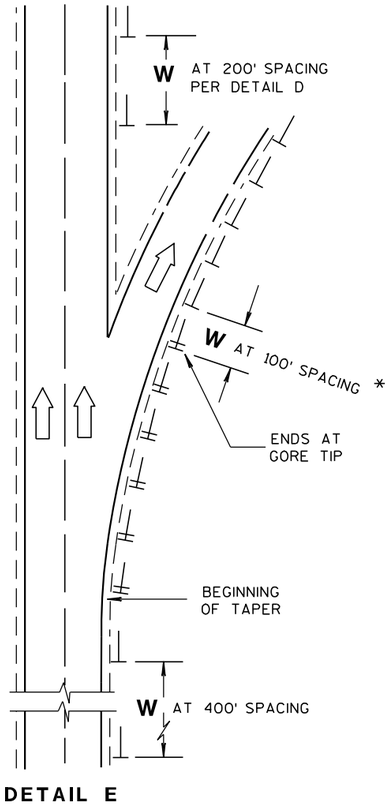
- DIRECTION OF TRAFFIC FLOW
- SINGLE DELINEATOR
- DOUBLE DELINEATOR
- W — WHITE
- Y — YELLOW



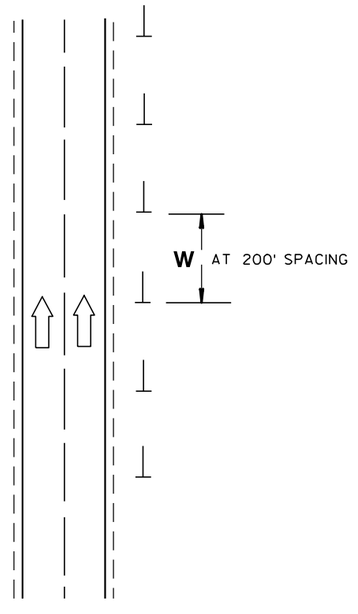
DETAIL B
DELINEATOR LAYOUT ALONG MAINLINE



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

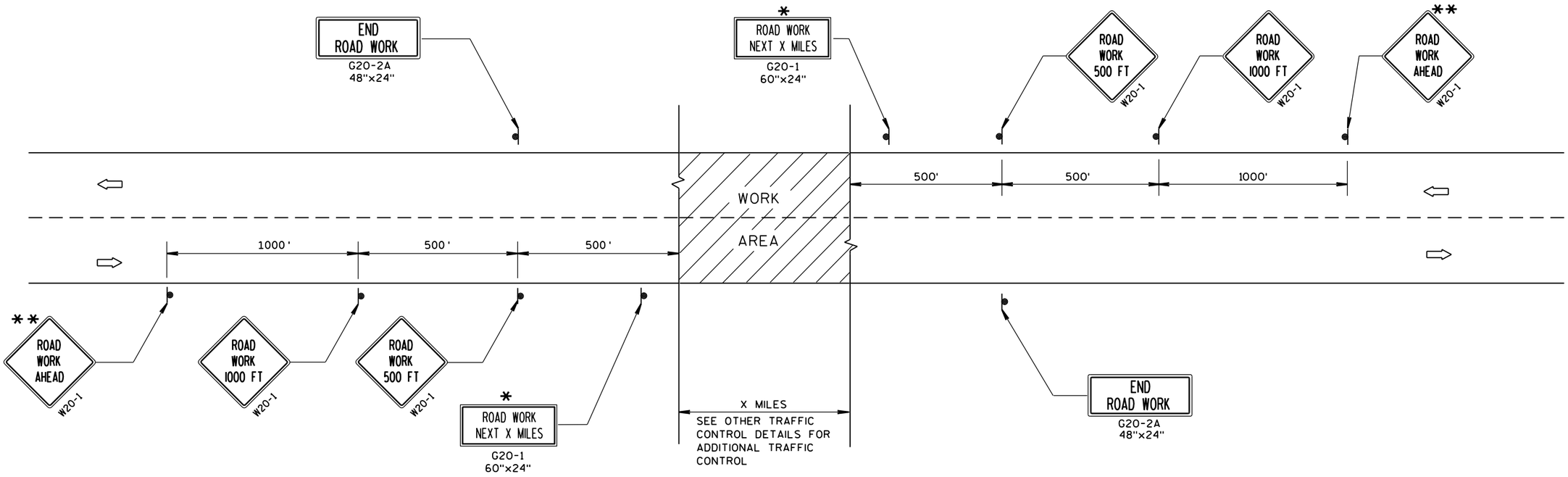
APPROVED
2/5/09 DATE
/S/ Thomas N. Nothdurft STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 A 6-2

6

S.D.D. 15 A 6-2



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

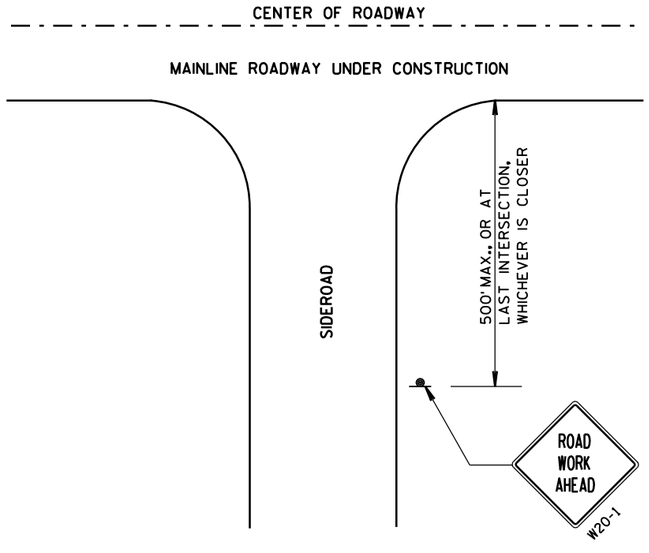
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

** PLACE ADDITIONAL W20-1 "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



LEGEND

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

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

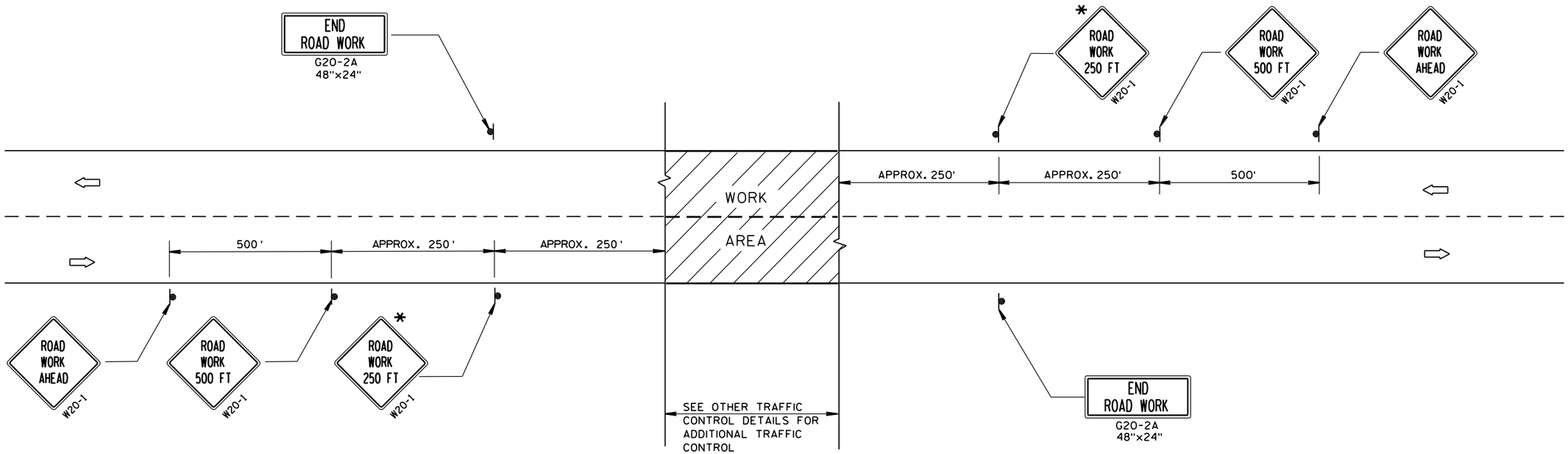
APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
SIGN
FHWA

6

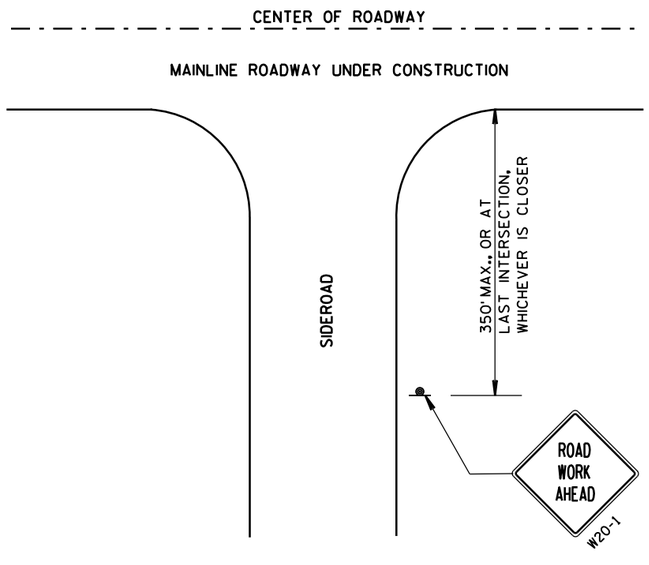
S.D.D. 15 C 4-2

6

S.D.D. 15 C 4-2



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



GENERAL NOTES

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

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

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

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

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

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

LEGEND

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

630 — SIGN

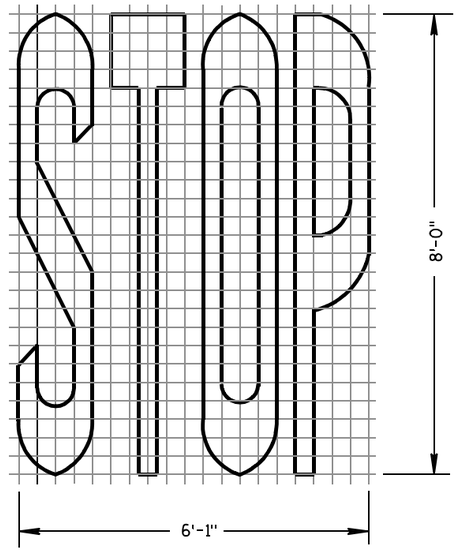
FHWA

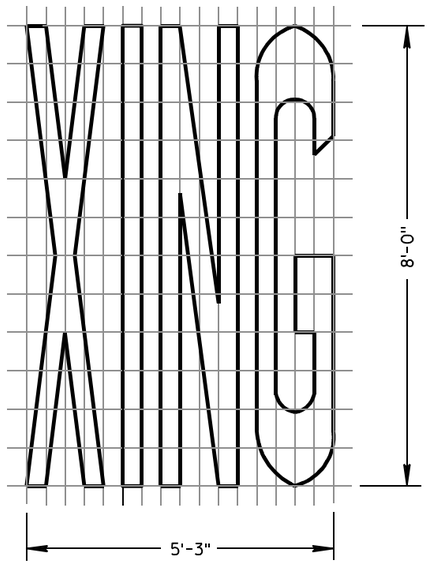
6
S.D.D. 15 C 5-2

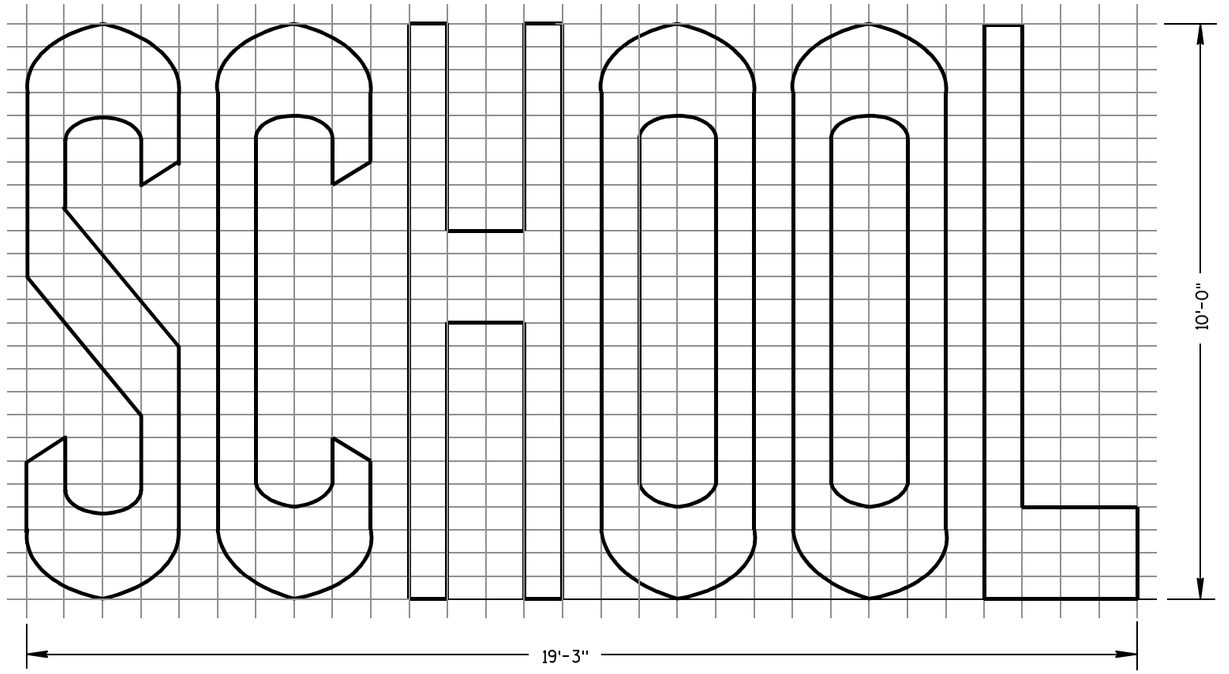
GENERAL NOTES

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

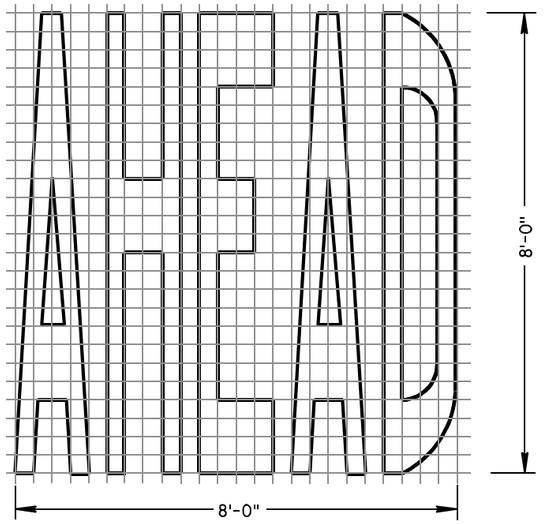
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES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

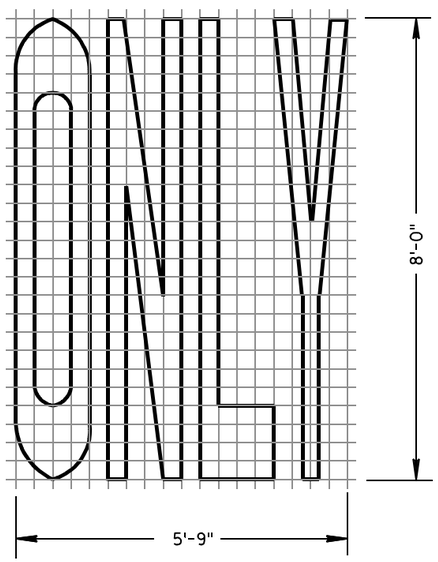


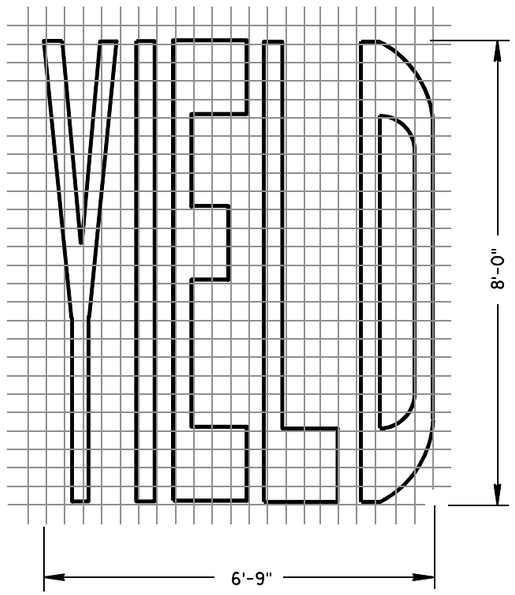


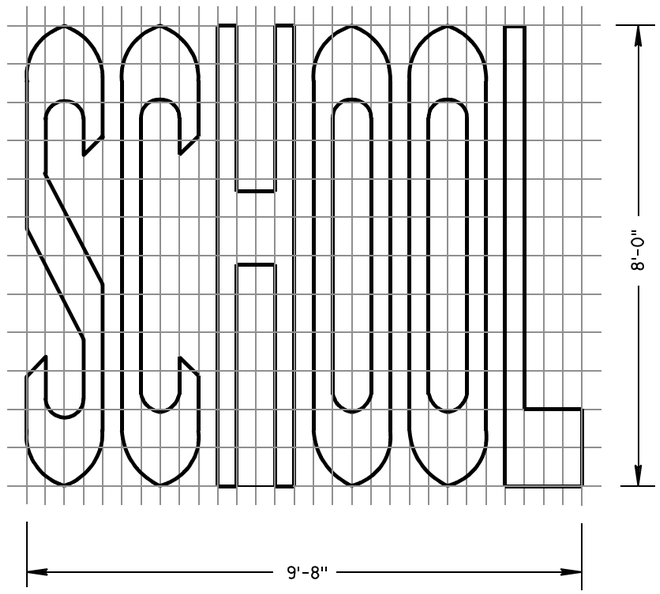


TWO-LANE









SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-1-11 DATE — /S/ Thomas N. Nothohm STATE TRAFFIC ENGINEER

FHWA

IGN

6

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

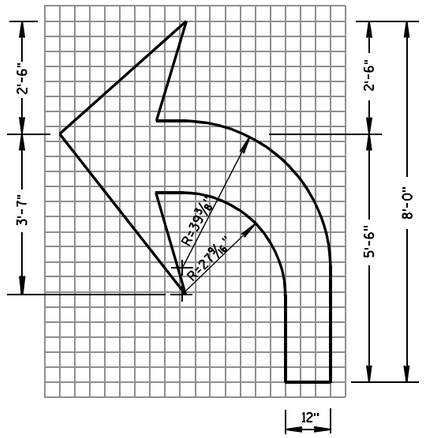
6

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

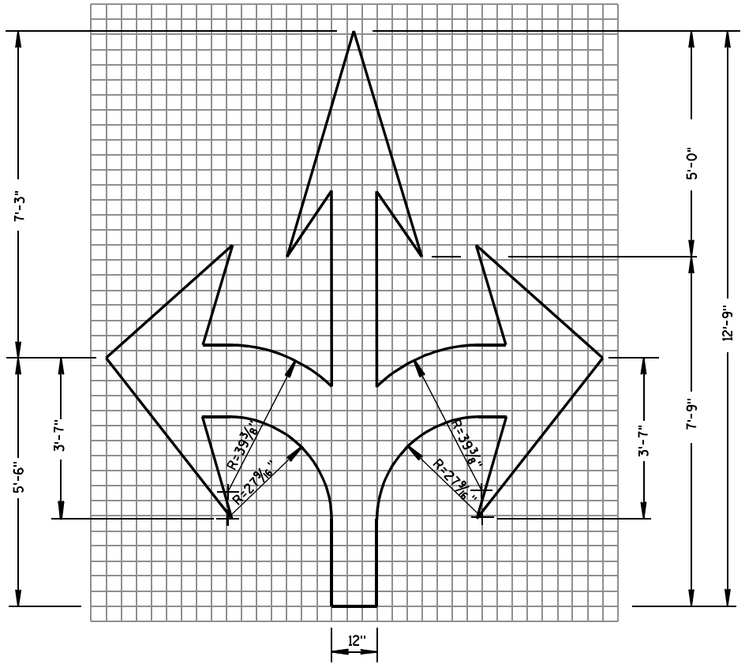
GENERAL NOTES

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.

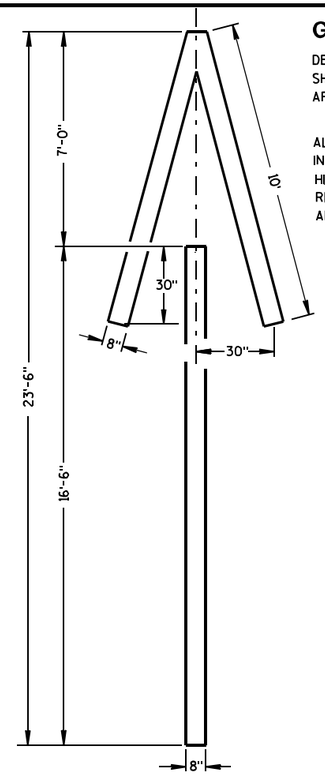
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES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



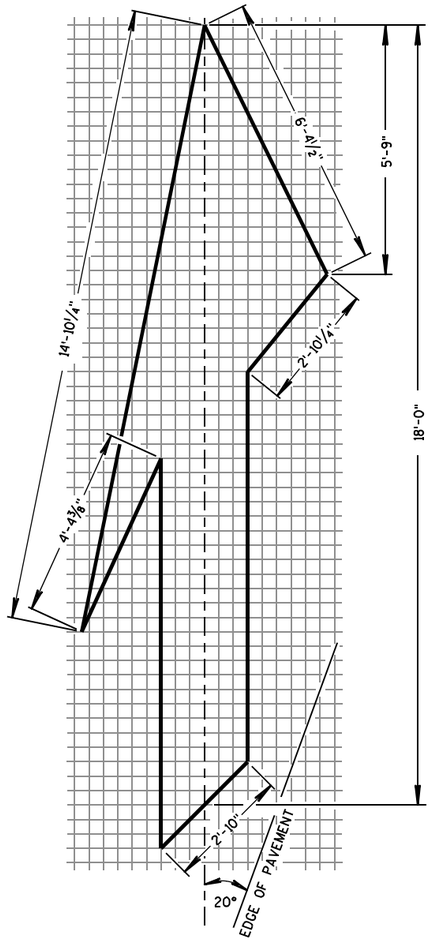
TYPE 2



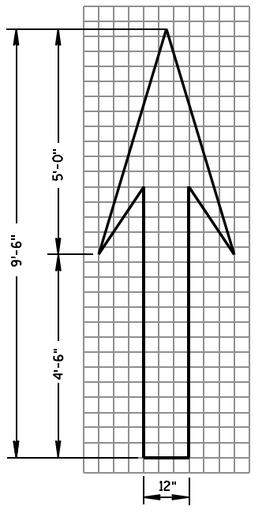
TYPE 6



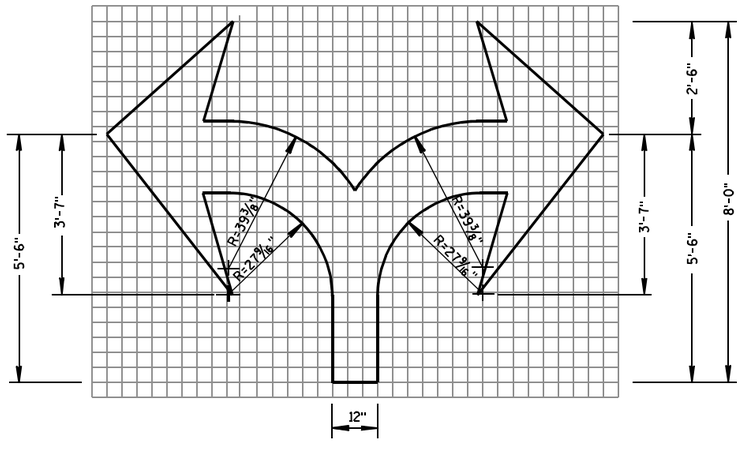
TYPE 4



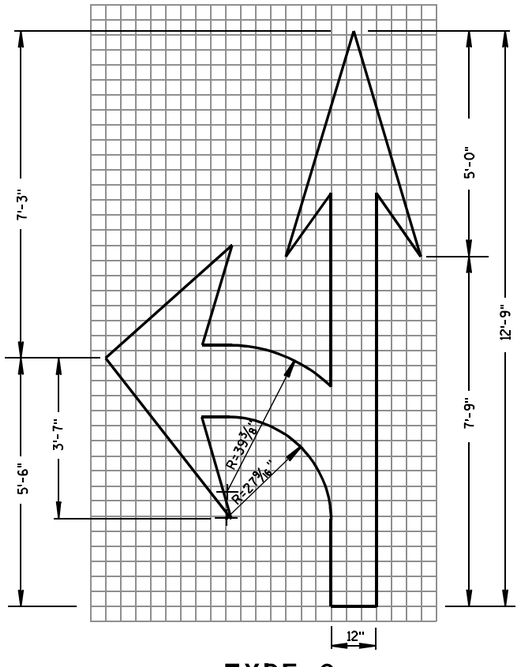
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/1/11 — DATE

/S/ Thomas N. Nothdurft — STATE TRAFFIC ENGINEER

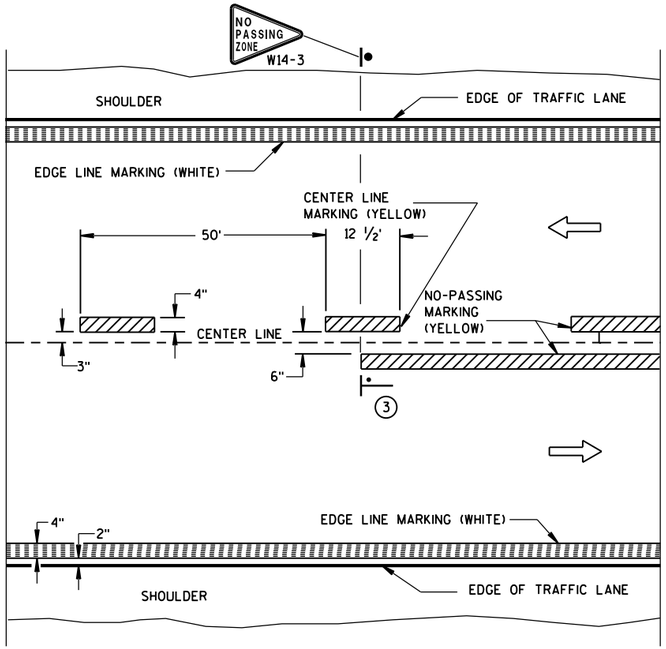
FHWA

6

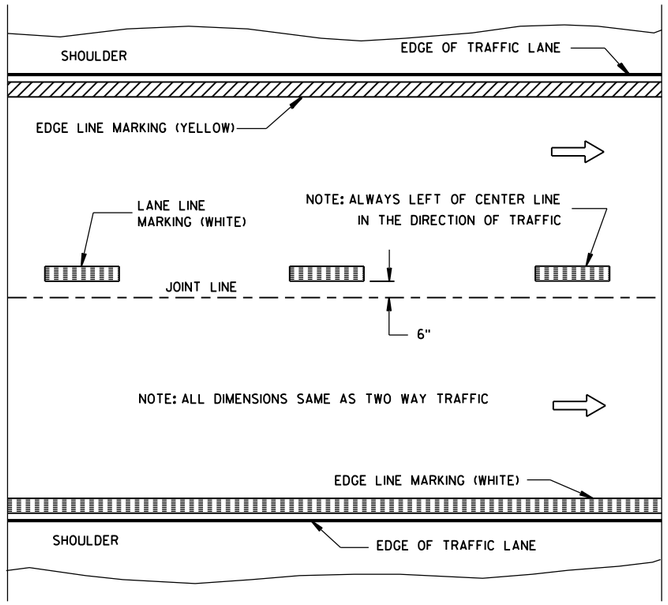
S.D.D. 15 C 7-12c

6

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

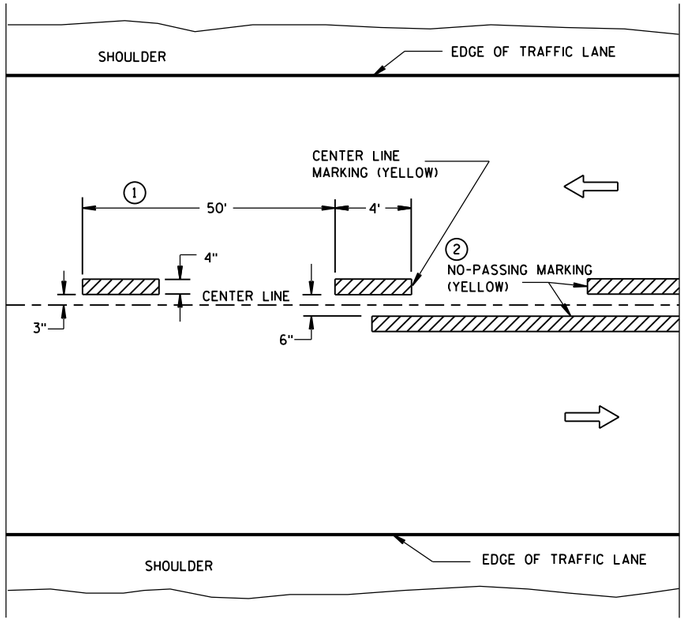


TWO WAY TRAFFIC

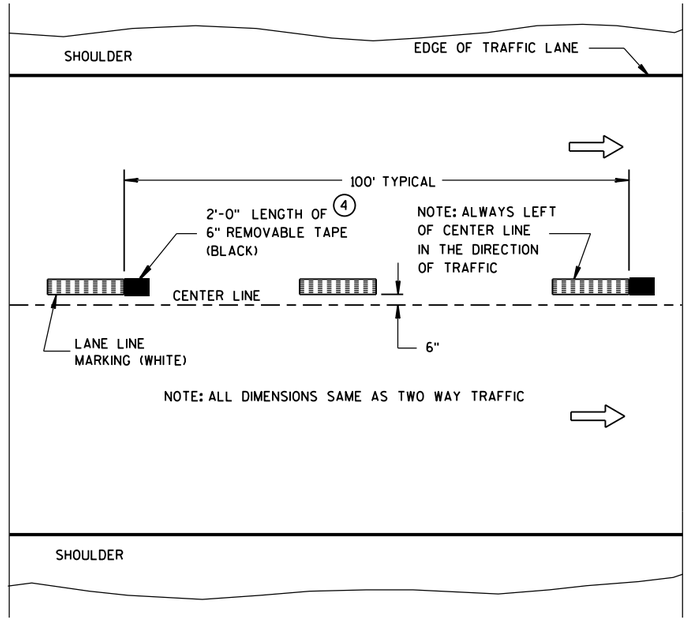


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

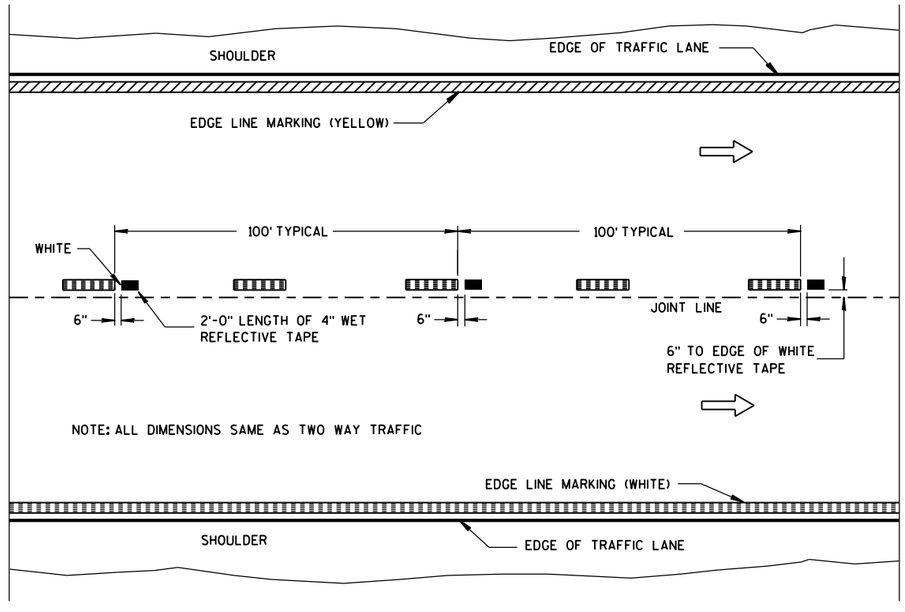
GENERAL NOTES

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

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

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



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

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

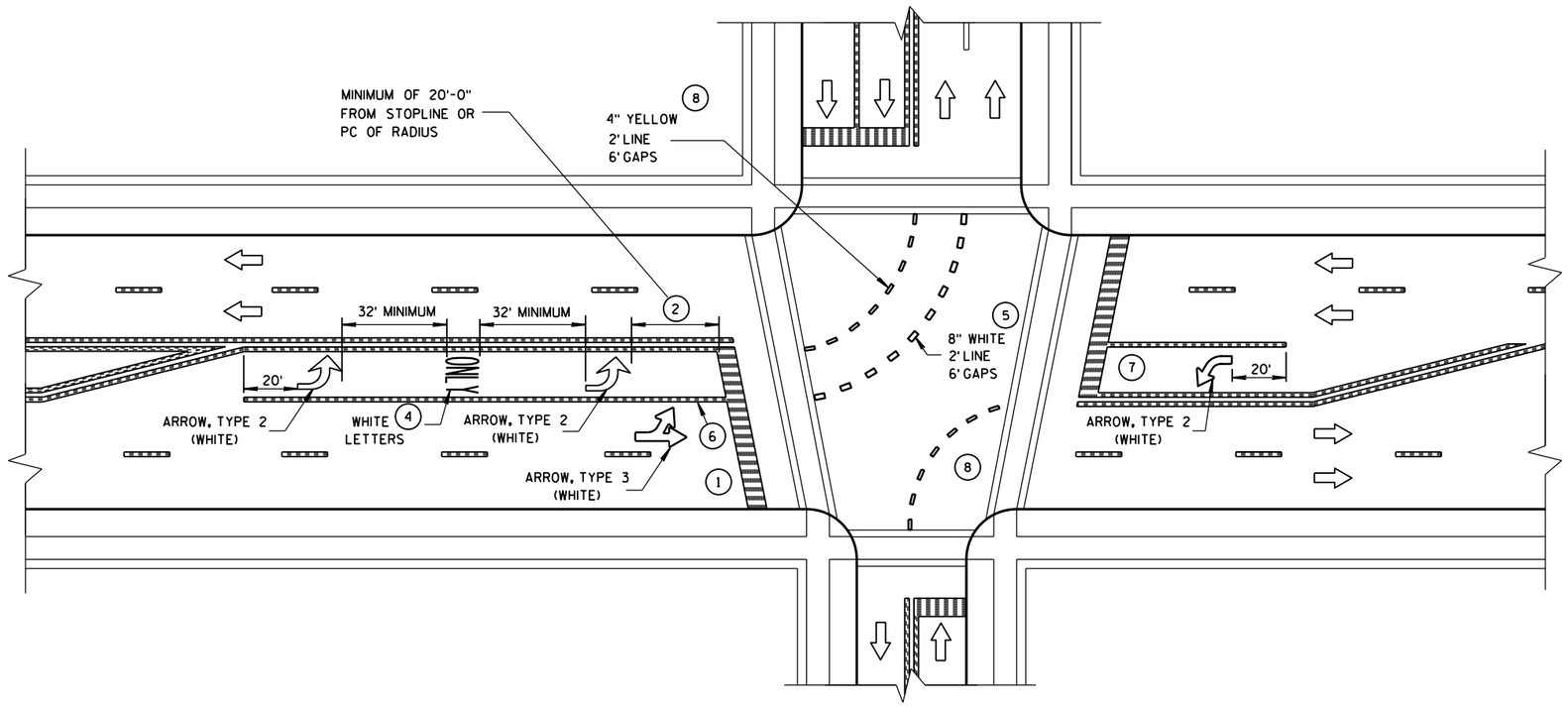
633

6

6

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

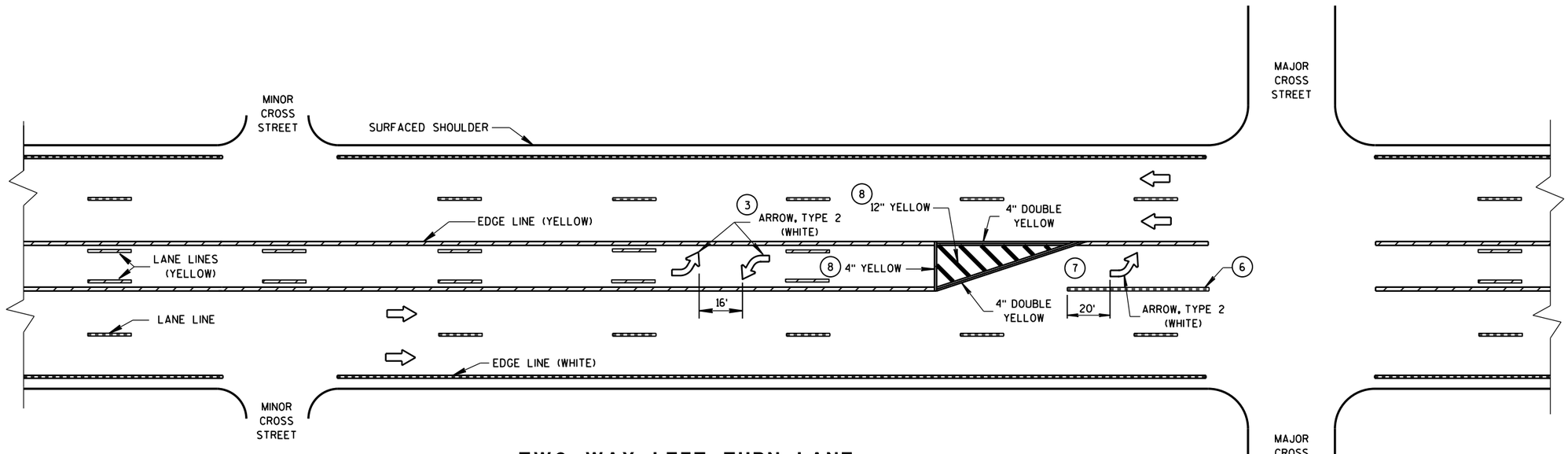
S.D.D. 15 C 8-16a



GENERAL NOTES

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

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TWO WAY LEFT TURN LANE

PAVEMENT MARKING (LEFT TURN LANE)

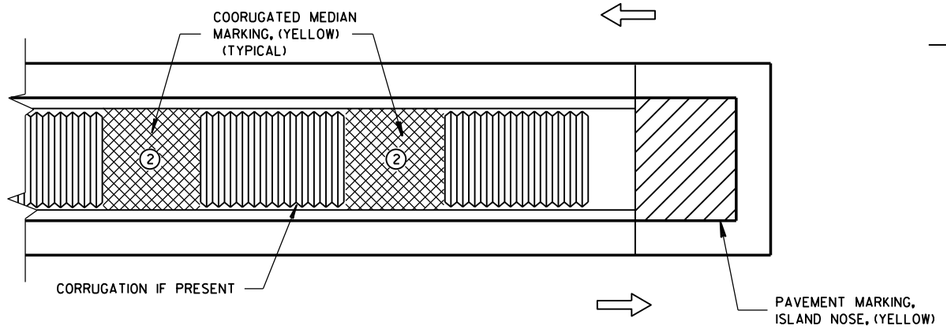
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

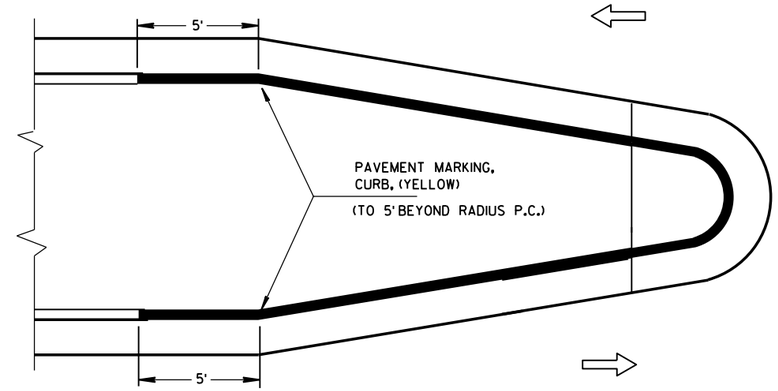
S.D.D. 15 C 8-16e

6

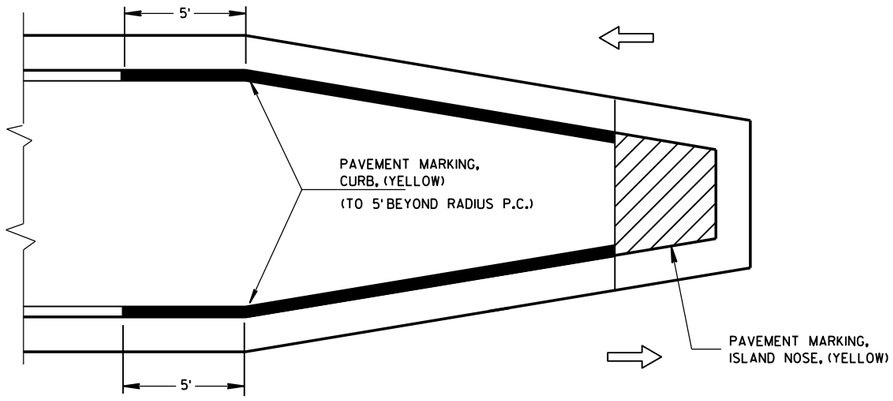
S.D.D. 15 C 8-16e



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

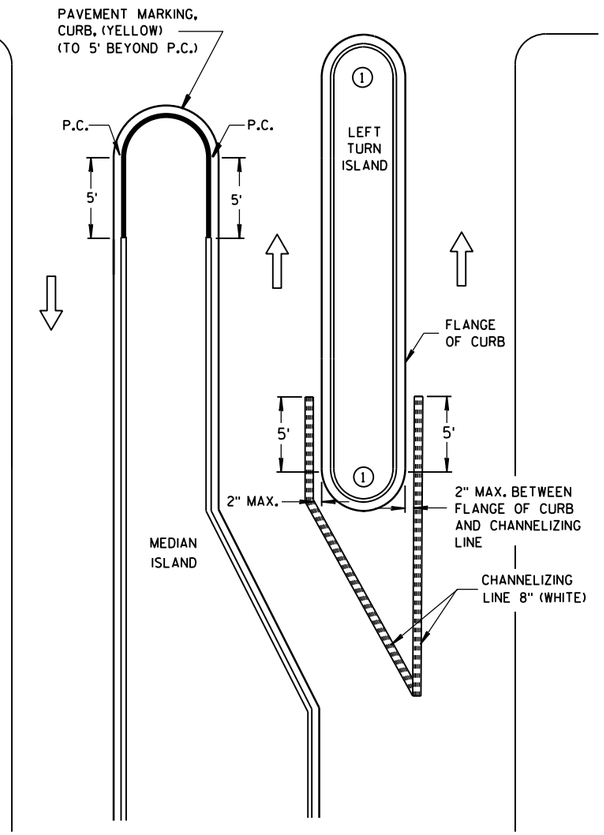


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

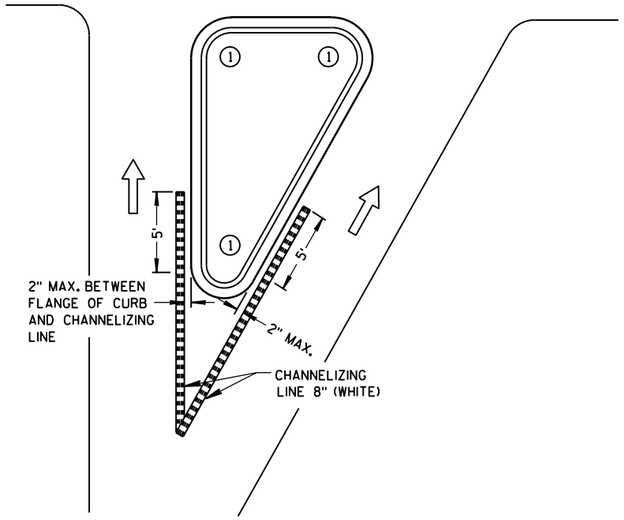


LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

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

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



RIGHT TURN ISLAND

LEGEND

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

PAVEMENT MARKING
(ISLANDS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

635

6

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

6

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

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA

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

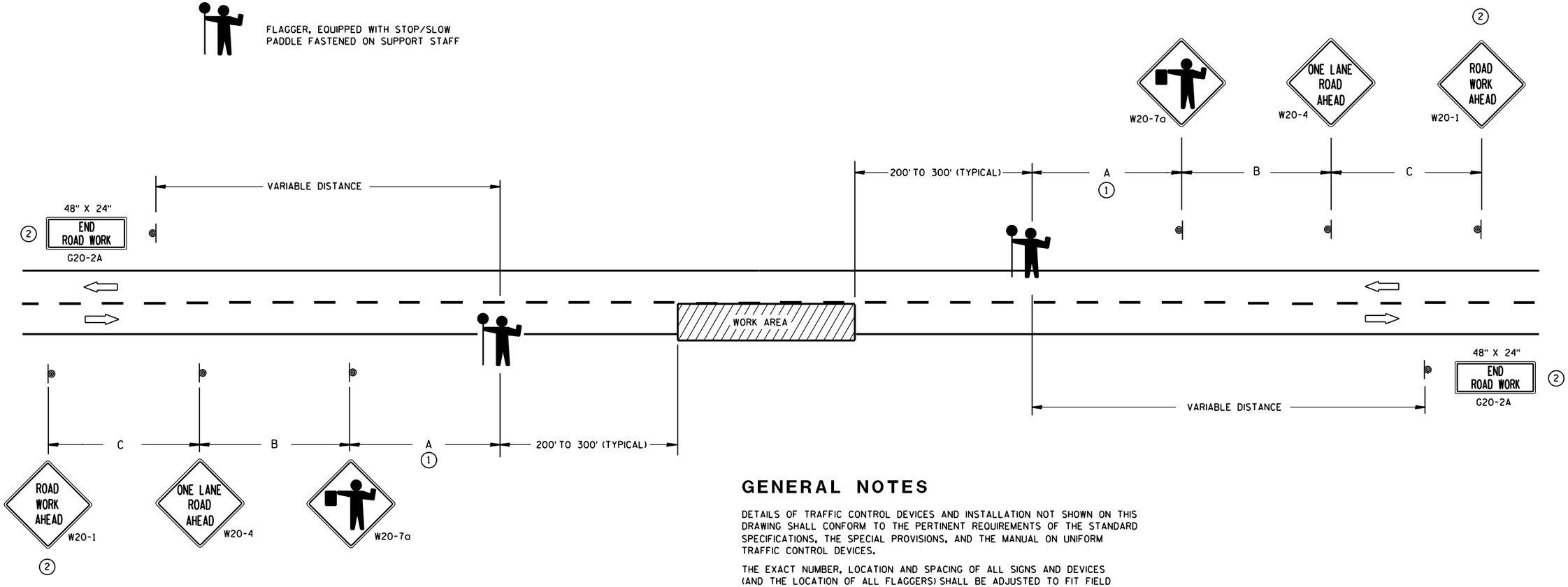
SIGN SPACING TABLE

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



W3-4

USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



(1) FOR A MOVING WORK OPERATION,
SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.

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

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 15 C 12-4

6

S.D.D. 15 C 12-4

GENERAL NOTES

ORIENT ANCHOR BOLTS IN FOOTING AND PROVIDE ANCHOR BOLT STICK OUT ABOVE TOP OF CONCRETE FOOTING BASE PER FABRICATION DRAWING.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

SIGN SUPPORTS SHALL BE LOCATED NORMAL TO ROADWAY.

THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

WELDING OF ANCHOR BOLTS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

BAR CAGE TO BE ASSEMBLED USING TIE WIRES ONLY, NO WELDING.

BASES (SHAFT) SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACK FILLING AROUND THE BASE. ANY REQUIRED BACKFILL SHALL BE WELL COMPACTED IN LAYERS OF 1 FOOT OR LESS. COMPACTION SHALL BE BY MECHANICAL MEANS. CARE SHALL BE TAKEN SO NO DAMAGE OCCURS TO THE CONCRETE BASE DURING COMPACTION.

EXCAVATION OF MATERIALS NOT OCCUPIED BY CONCRETE SHALL BE MINIMIZED TO REDUCE DISTURBANCE OF THE SURROUNDING SOILS.

THE BOTTOM OF THE DRILLED HOLE SHALL BE FIRM AND THOROUGHLY CLEANED SO NO LOOSE OR COMPRESSIBLE MATERIALS ARE PRESENT AT THE TIME OF THE CONCRETE PLACEMENT.

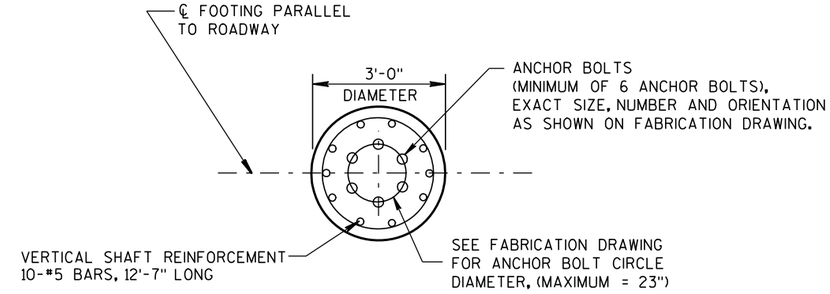
IF THE DRILLED HOLE CONTAINS STANDING WATER, THE CONCRETE SHALL BE PLACED USING A TREMIE TO DISPLACE THE WATER.

THE REINFORCEMENT AND ANCHOR BOLTS SHALL BE ADEQUATELY SUPPORTED IN THE PROPER POSITIONS SO NO MOVEMENT OCCURS DURING CONCRETE PLACEMENT.

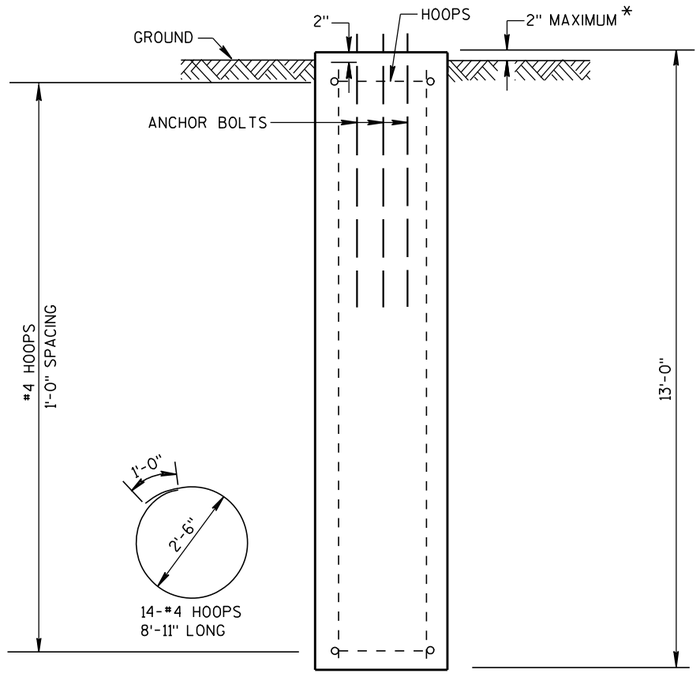
ANY DAMAGE TO THE CONCRETE BASE DURING CONSTRUCTION OPERATIONS SHALL BE REPAIRED AT THE ENGINEER'S DIRECTION, AT THE EXPENSE OF THE CONTRACTOR.

CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR BOLTS	AASHTO M314 GRADE 55

THIS FOOTING HAS BEEN DESIGNED FOR SITES WHERE SOILS EXHIBIT A PHI-ANGLE GREATER THAN OR EQUAL TO 20 DEGREES (GRANULAR SOILS), OR A COHESION VALUE GREATER THAN OR EQUAL TO 350 PSF (COHESIVE SOILS).



PLAN VIEW



ELEVATION VIEW

* FOR OVERHEAD SIGN SUPPORTS THAT ARE INSTALLED ADJACENT TO SIDEWALKS, THE TOP OF THE BASE SHALL BE POURED FLUSH WITH THE GROUND.

CONCRETE - 3.4 C.Y. PER FOOTING
H.S. REINFORCEMENT - 215 LBS. PER FOOTING

36" DIAMETER FULL SPAN OVERHEAD SIGN SUPPORT BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4/17/09 — DATE

/S/ Thomas N. Nothdurm — STATE TRAFFIC ENGINEER

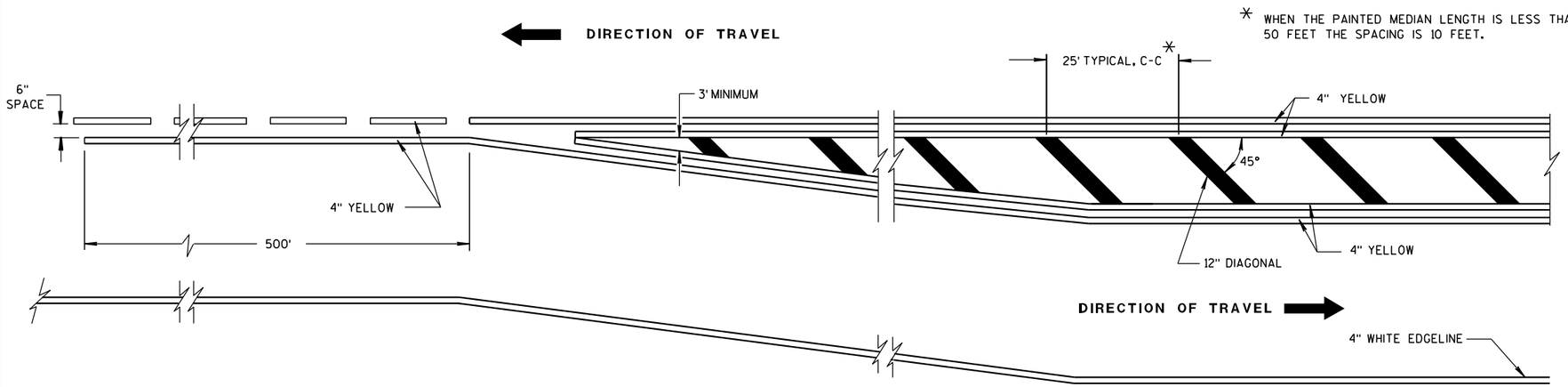
FHWA

S.D.D. 15 C 15-3

S.D.D. 15 C 15-3

6

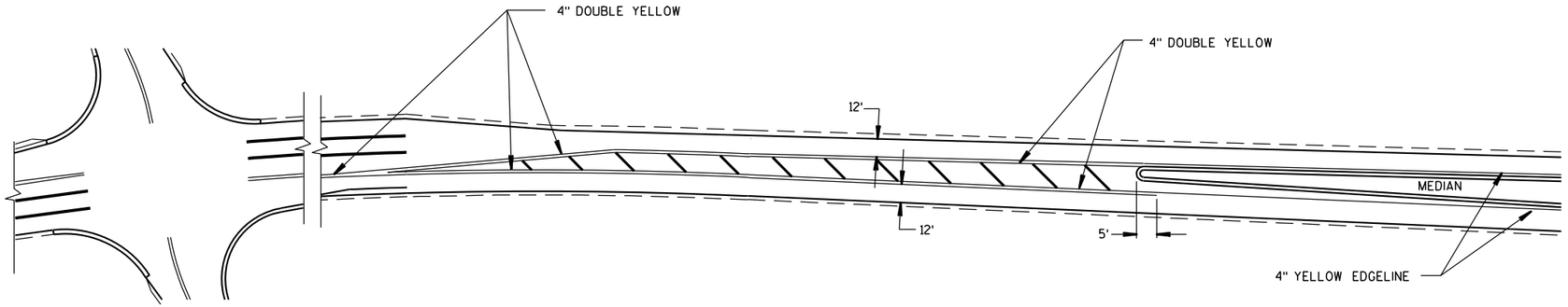
6



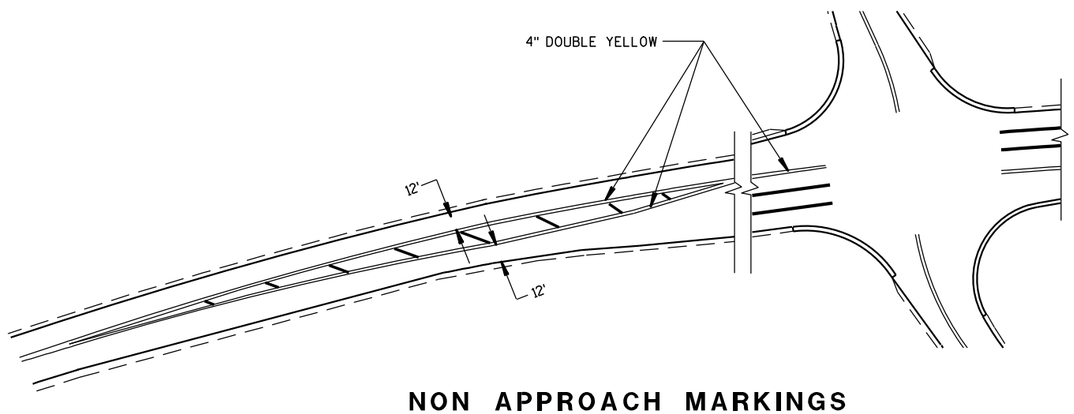
MEDIAN ISLAND DETAIL

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

6

6

S.D.D. 15 C 18-3

S.D.D. 15 C 18-3

MEDIAN ISLAND MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

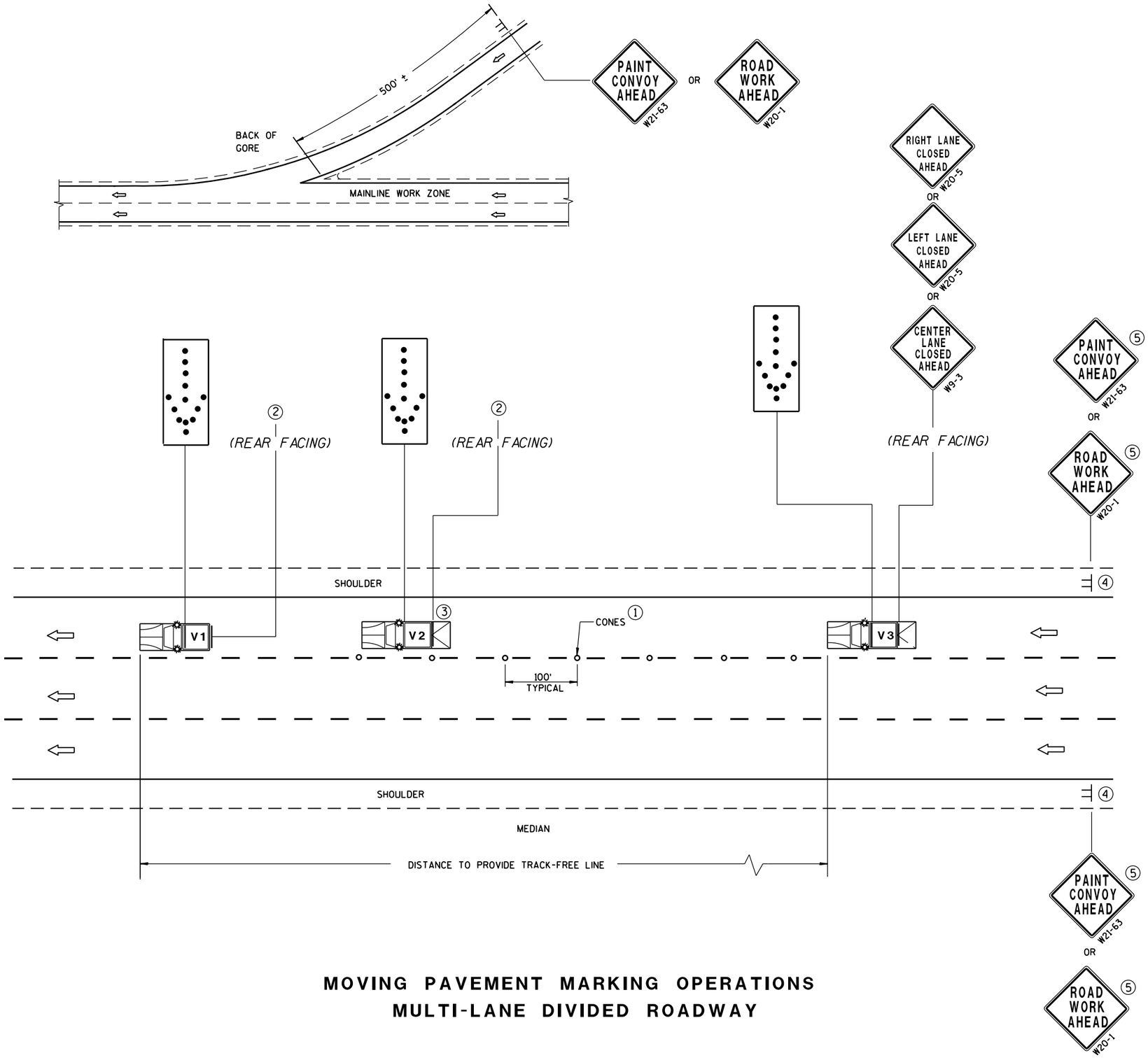
APPROVED

2-5-09 DATE

/S/ Thomas N. Nothohm
STATE TRAFFIC ENGINEER

638 IGN

FHWA



MOVING PAVEMENT MARKING OPERATIONS
MULTI-LANE DIVIDED ROADWAY

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE SPECIFIED.

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

FOR EDGELINE MARKING OR IF CONES ARE NOT USED, POSITION THE REARMOST SHADOW VEHICLE ON THE SHOULDER AS SHOWN IN THE MUTCD IF THE SHOULDER HAS ADEQUATE WIDTH. USE DOUBLE ARROWS WHEN CONVOY IS IN CENTER LANE ONLY.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

THIS DRAWING SHALL BE USED FOR EDGELINE OR LANELINE MARKING FOR MULTILANE DIVIDED ROADWAYS.

① CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

② USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.

WET PAINT W21-64 OR WET PAINT W21-64

③ OPTIONAL TRUCK-MOUNTED ATTENUATOR.

④ SIGNS SHALL BE REPEATED AFTER EVERY ON RAMP OR EVERY THREE MILES.

⑤ IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

LEGEND

V1	LEAD VEHICLE
V2	SHADOW VEHICLE
V3	TRAIL VEHICLE WITH TMA
TMA	TRUCK-MOUNTED ATTENUATOR
	SIGN ON TEMPORARY SUPPORT
	DIRECTION OF TRAFFIC
	CONES
	FLASHING ARROW PANEL (MERGE)

MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/3/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC EN

FHWA

6

S.D.D. 15 C 19-2c

6

S.D.D. 15 C 19-2c

GENERAL NOTES

ORIENT ANCHOR BOLTS IN FOOTING AND PROVIDE ANCHOR BOLT STICK OUT ABOVE TOP OF CONCRETE FOOTING BASE PER FABRICATION DRAWING.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

SIGN SUPPORTS SHALL BE LOCATED NORMAL TO ROADWAY.

THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

WELDING OF ANCHOR BOLTS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

BAR CAGE TO BE ASSEMBLED USING TIE WIRES ONLY, NO WELDING.

BASES (SHAFT) SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACK FILLING AROUND THE BASE. ANY REQUIRED BACKFILL SHALL BE WELL COMPACTED IN LAYERS OF 1 FOOT OR LESS. COMPACTION SHALL BE BY MECHANICAL MEANS. CARE SHALL BE TAKEN SO NO DAMAGE OCCURS TO THE CONCRETE BASE DURING COMPACTION.

EXCAVATION OF MATERIALS NOT OCCUPIED BY CONCRETE SHALL BE MINIMIZED TO REDUCE DISTURBANCE OF THE SURROUNDING SOILS.

THE BOTTOM OF THE DRILLED HOLE SHALL BE FIRM AND THOROUGHLY CLEANED SO NO LOOSE OR COMPRESSIBLE MATERIALS ARE PRESENT AT THE TIME OF THE CONCRETE PLACEMENT.

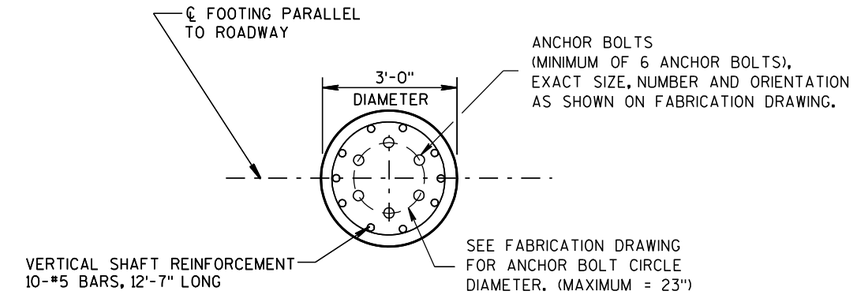
IF THE DRILLED HOLE CONTAINS STANDING WATER, THE CONCRETE SHALL BE PLACED USING A TREMIE TO DISPLACE THE WATER.

THE REINFORCEMENT AND ANCHOR BOLTS SHALL BE ADEQUATELY SUPPORTED IN THE PROPER POSITIONS SO NO MOVEMENT OCCURS DURING CONCRETE PLACEMENT.

ANY DAMAGE TO THE CONCRETE BASE DURING CONSTRUCTION OPERATIONS SHALL BE REPAIRED AT THE ENGINEER'S DIRECTION, AT THE EXPENSE OF THE CONTRACTOR.

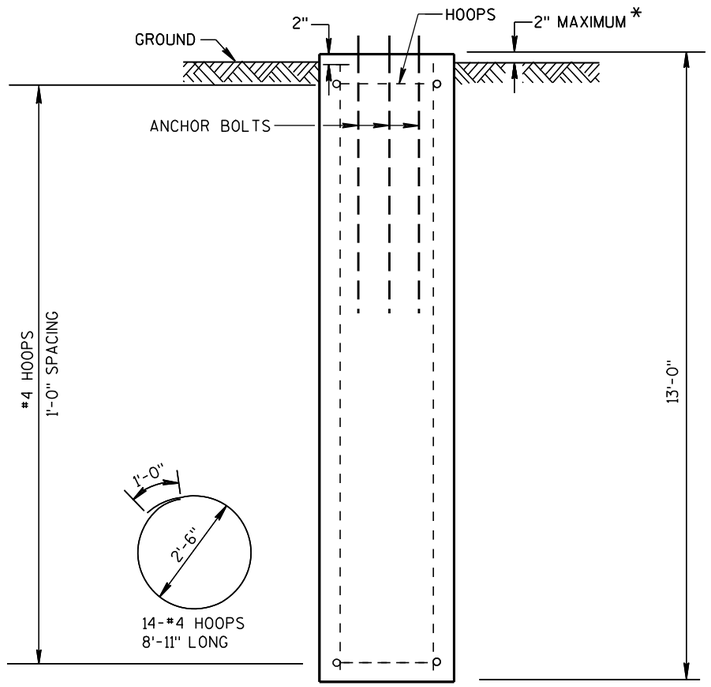
CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR BOLTS	AASHTO M314 GRADE 55

THIS FOOTING HAS BEEN DESIGNED FOR SITES WHERE SOILS EXHIBIT A PHI-ANGLE GREATER THAN OR EQUAL TO 20 DEGREES (GRANULAR SOILS), OR A COHESION VALUE GREATER THAN OR EQUAL TO 350 PSF (COHESIVE SOILS).



PLAN VIEW

* FOR OVERHEAD SIGN SUPPORTS THAT ARE INSTALLED ADJACENT TO SIDEWALKS, THE TOP OF THE BASE SHALL BE POURED FLUSH WITH THE GROUND.



ELEVATION VIEW

CONCRETE - 3.4 C.Y. PER FOOTING
H.S. REINFORCEMENT - 215 LBS. PER FOOTING

36" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

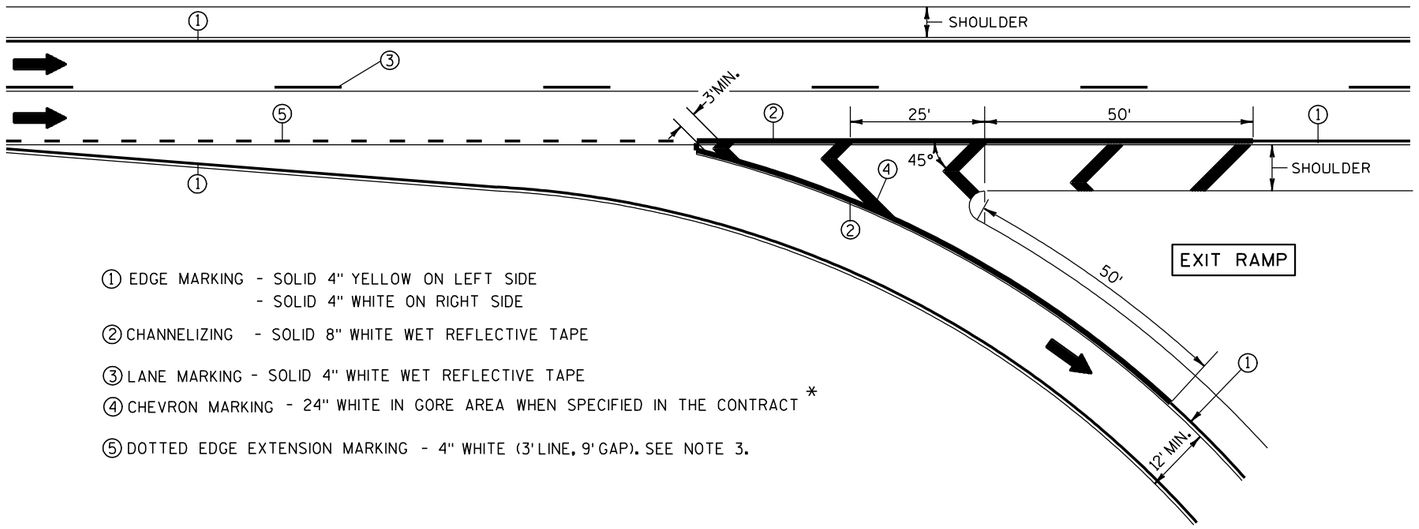
APPROVED
4/17/2009 DATE
/S/ Thomas N. N[illegible] STATE TRAFFIC ENGINEE 640 IGN
FHWA

6

S.D.D. 15 C 24-2

6

S.D.D. 15 C 24-2



① EDGE MARKING - SOLID 4" YELLOW ON LEFT SIDE
- SOLID 4" WHITE ON RIGHT SIDE

② CHANNELIZING - SOLID 8" WHITE WET REFLECTIVE TAPE

③ LANE MARKING - SOLID 4" WHITE WET REFLECTIVE TAPE

④ CHEVRON MARKING - 24" WHITE IN GORE AREA WHEN SPECIFIED IN THE CONTRACT *

⑤ DOTTED EDGE EXTENSION MARKING - 4" WHITE (3' LINE, 9' GAP). SEE NOTE 3.

NOTES:

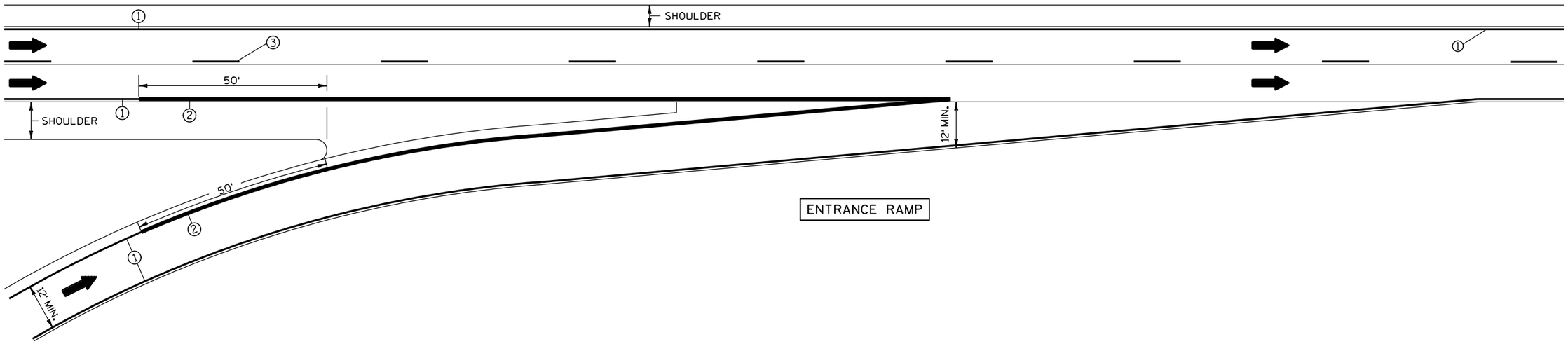
1. ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.

2. PLACE WHITE EDGE OF TAPE 6" LEFT FROM JOINT.

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

4. RETRACE EXISTING DIAGONAL MARKINGS.

* REFER TO DESIGN NOTES.



6

6

S.D.D. 15 C 31-1a

S.D.D. 15 C 31-1a

PAVEMENT MARKING
(RAMPS AND GORES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

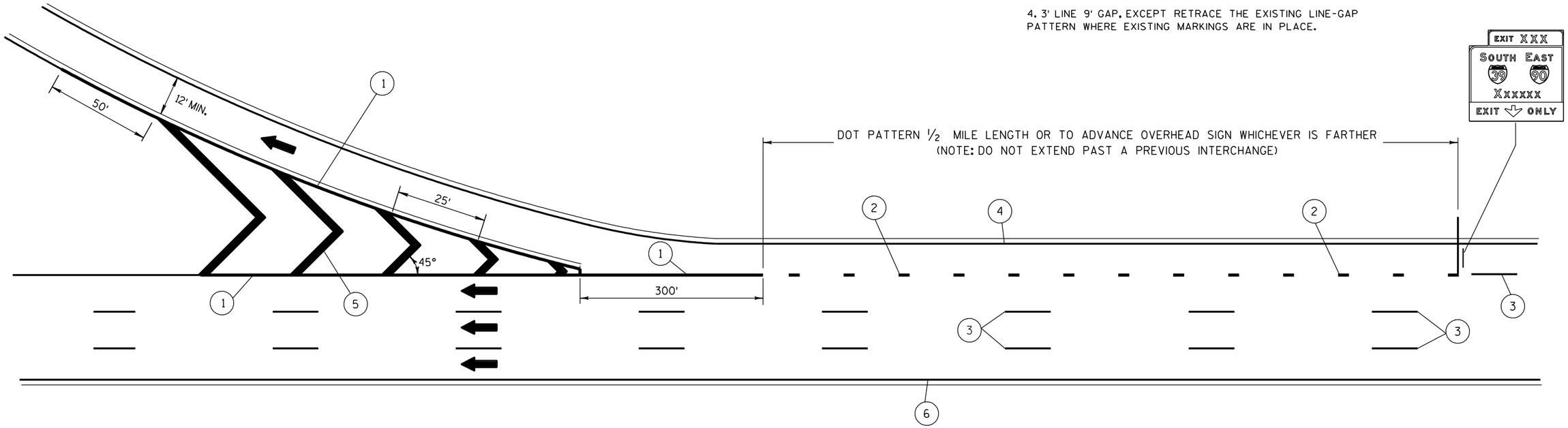
NOTES:

1. SEE STANDARD DETAIL DRAWING 15 C 10 FOR SPRAYED OR NON WET REFLECTIVE LINE SEGMENTS.

2. ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.

3. PLACE WHITE EDGE OF TAPE 6" LEFT FROM JOINT.

4. 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE-GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.



1. CHANNELIZING - SOLID 8" WHITE WET RELECTIVE TAPE
2. 3' LINE, 9' GAP SOLID 8" WHITE WET REFLECTIVE TAPE. SEE NOTE 4.
3. SOLID 4" WHITE WET REFLECTIVE TAPE
4. 4" WHITE EDGELINE
5. CHEVRON MARKING - 24" WHITE WHEN SPECIFIED IN THE CONTRACT
6. 4" YELLOW EDGELINE

LANE DROP
PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 15 C 31-1b
S.D.D. 15 C 31-1b

NOTES:

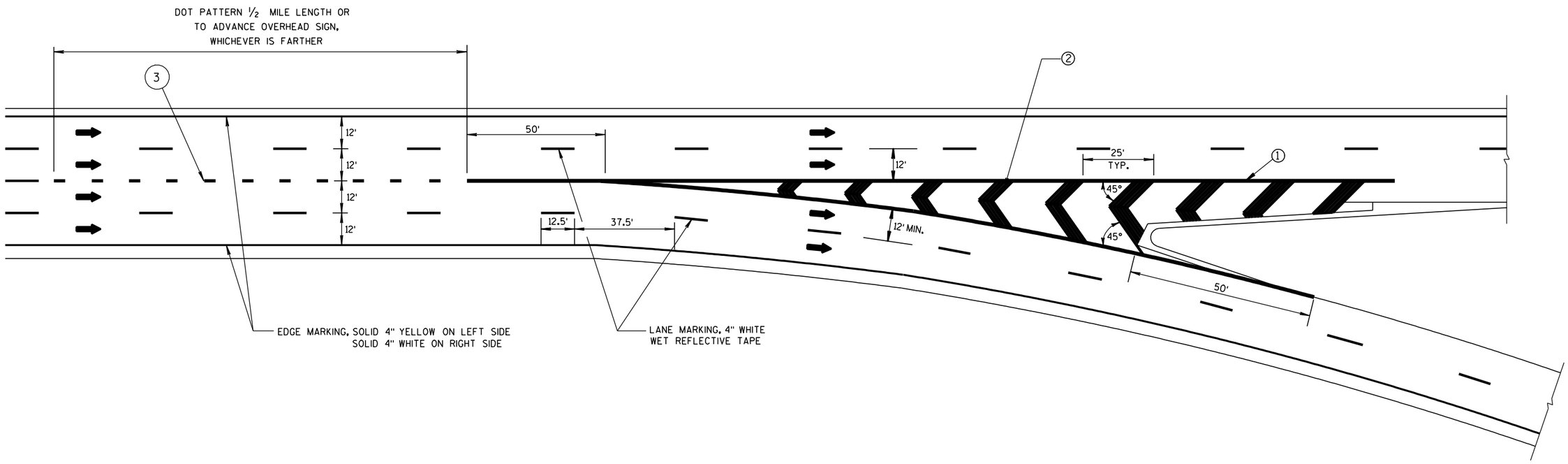
1. ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.

2. PLACE WHITE EDGE OF TAPE 6" LEFT FROM JOINT.

① CHANNELIZING - SOLID 8" WHITE WET REFLECTIVE TAPE.

② CHEVRON MARKING - 24" WHITE WHEN SPECIFIED IN THE CONTRACT.

③ 3' LINE, 9' GAP SOLID 8" WHITE WET REFLECTIVE TAPE.



6

6

S.D.D. 15 C 31-1c

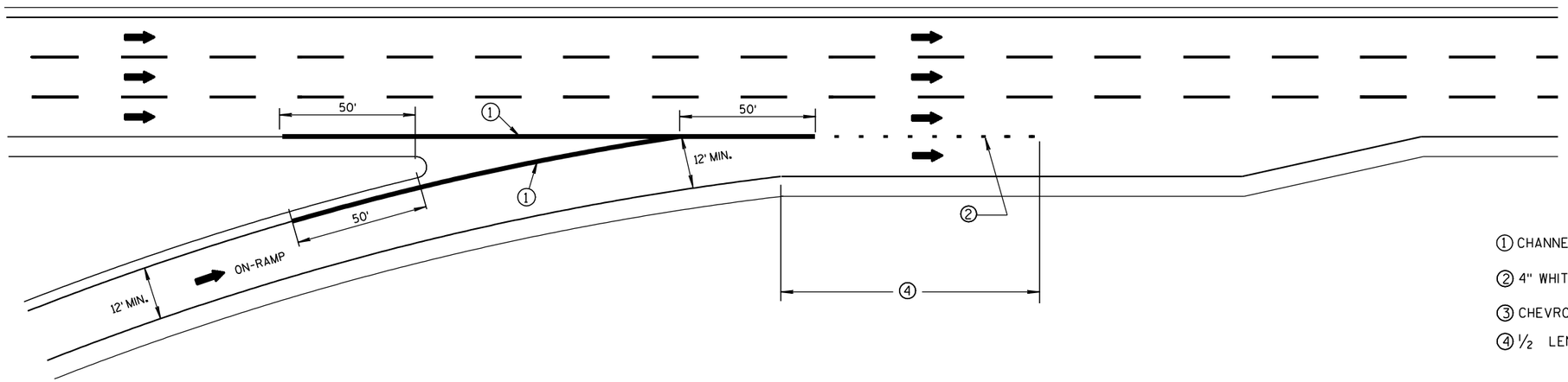
S.D.D. 15 C 31-1c

PAVEMENT MARKING
MAJOR SPLIT
FREEWAY TO FREEWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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.



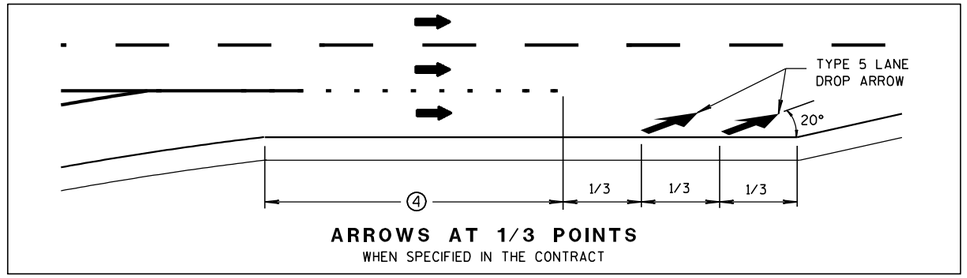
① CHANNELIZING - SOLID 8" WHITE WET REFLECTIVE TAPE IN GORE AREA.

② 4" WHITE (3' LINE, 9' GAP).

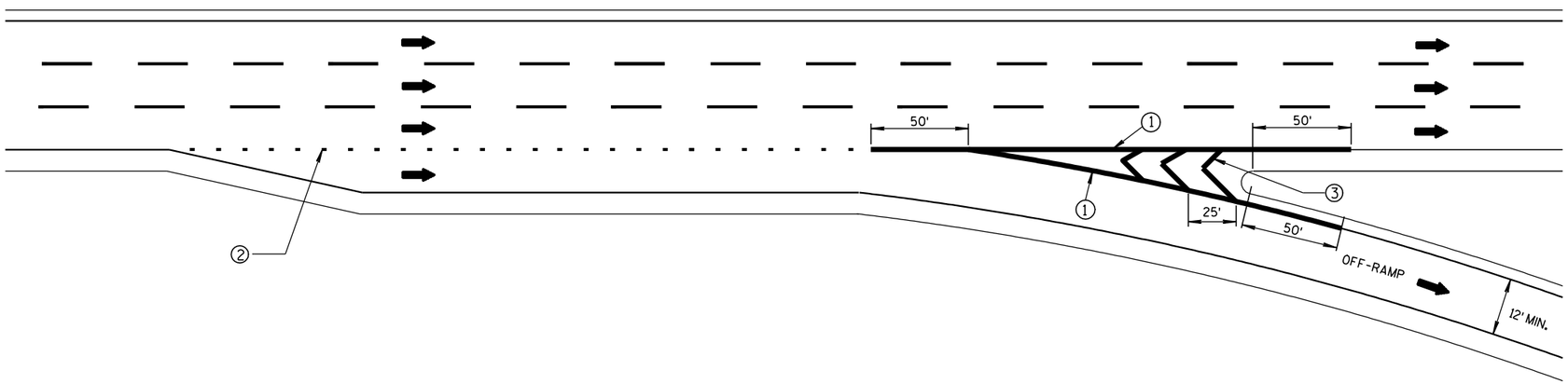
③ CHEVRON MARKING - 24" WHITE WHEN SPECIFIED IN THE CONTRACT.

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



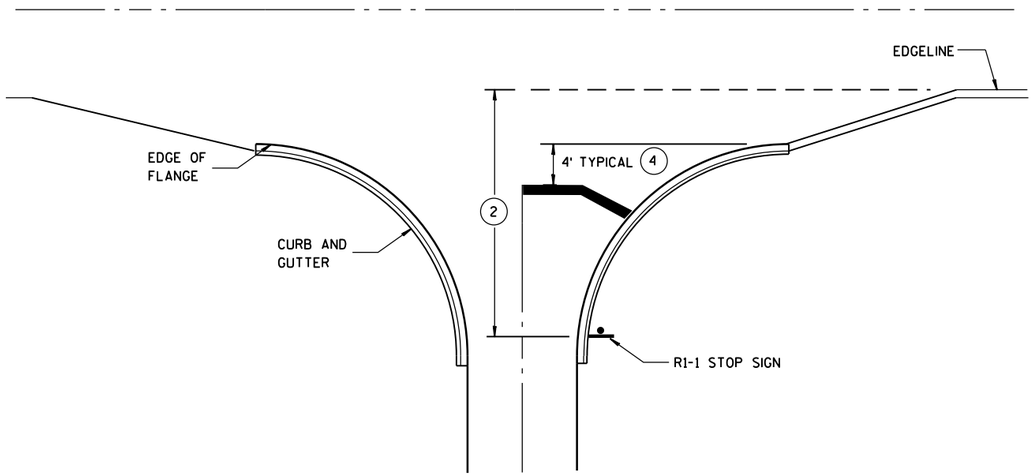
SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL EXIT-RAMP

PAVEMENT MARKING FOR PARALLEL ON-RAMP AND PARALLEL OFF-RAMP

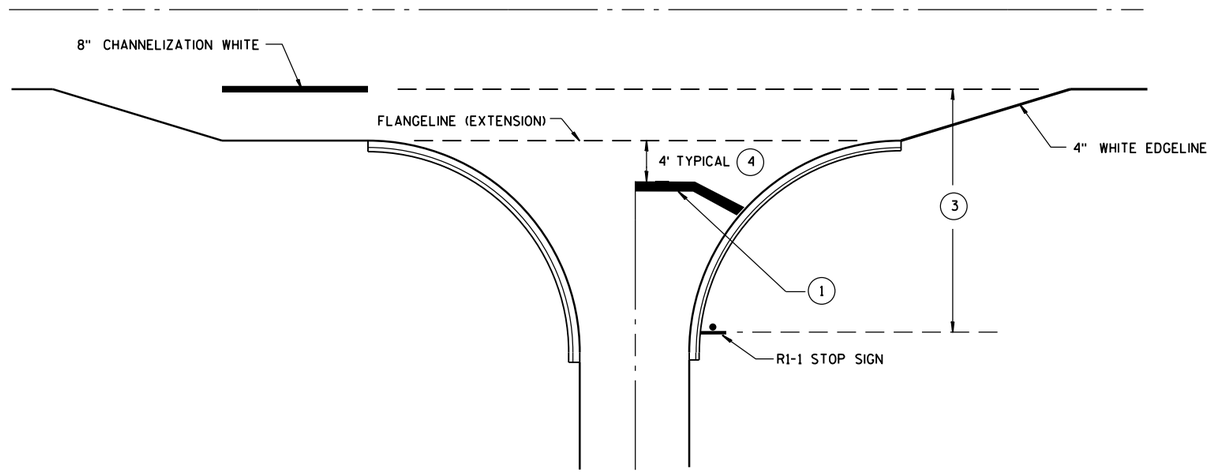
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/23/2011 DATE
/S/ Thomas N. Nothnagel STATE TRAFFIC ENGINEER 644 SIGN
FHWA

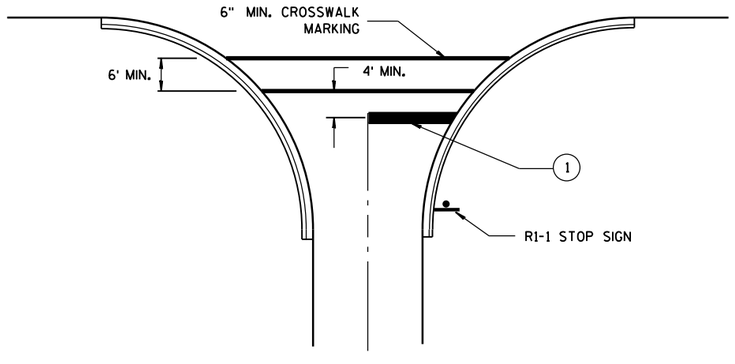
6
S.D.D. 15 C 31-1d



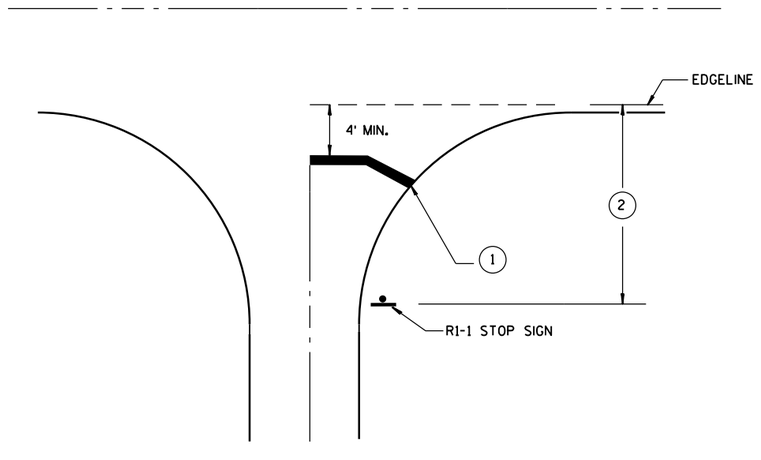
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



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

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



W057-52
36"x24"

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



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



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

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

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

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

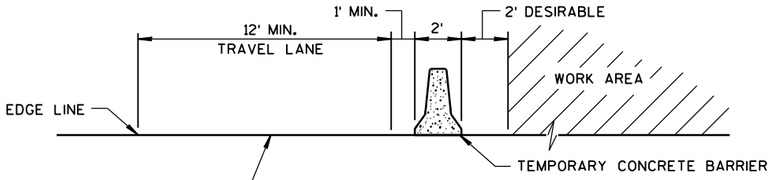
(1) CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUM TAPER.

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

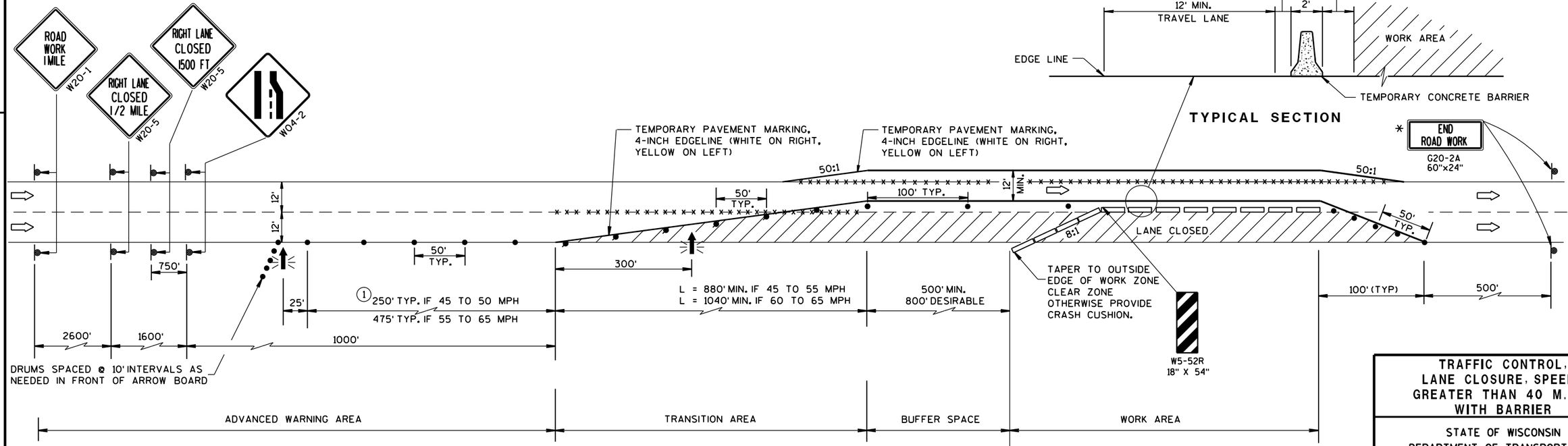
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

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



TYPICAL SECTION



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

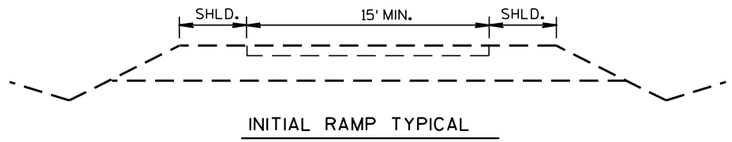
APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER — SIGN
FHWA

6

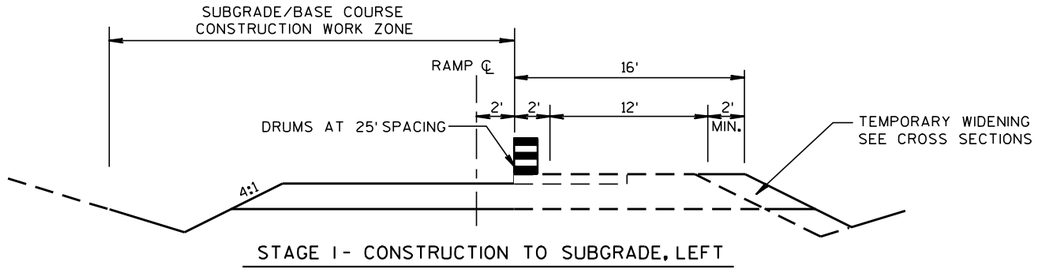
S.D.D. 15 D 3-2

6

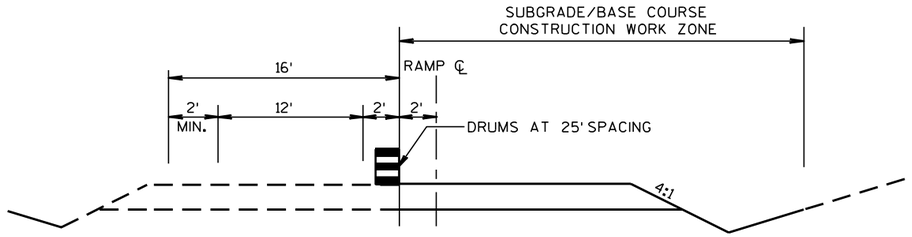
S.D.D. 15 D 3-2



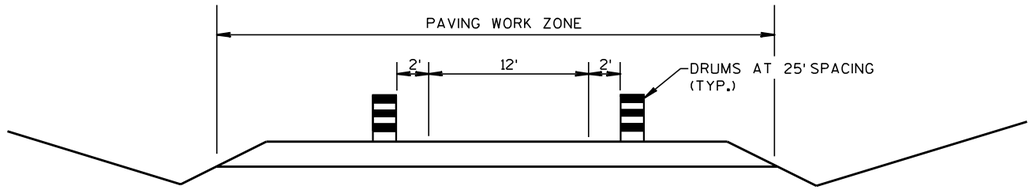
INITIAL RAMP TYPICAL



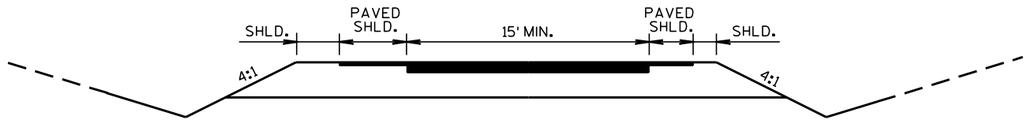
STAGE I - CONSTRUCTION TO SUBGRADE, LEFT



STAGE II - CONSTRUCTION TO SUBGRADE, RIGHT



STAGE III - TRAFFIC ON BASE COURSE



STAGE IV - PAVING

GENERAL NOTES :

WORK SHALL BE SCHEDULED FOR ALL STAGES TO MINIMIZE INCONVENIENCE TO THE TRAFFIC USING THE RAMP WHILE IT IS ONLY BASE COURSE.

IN STAGE III, A MINIMUM 12' LANE WIDTH SHALL BE DELINEATED WITH DRUMS ALONG BOTH EDGES AT ALL TIMES UNTIL PAVED AND PAVEMENT MARKINGS ARE PLACED.

TRAFFIC CONTROL, RAMP CONSTRUCTION STAGING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-14-94
DATE

/S/ Chester J. [illegible]
DIRECTOR, OFFICE [illegible]

FHWA

6

S.D.D. 15 D 4-1

LEGEND

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

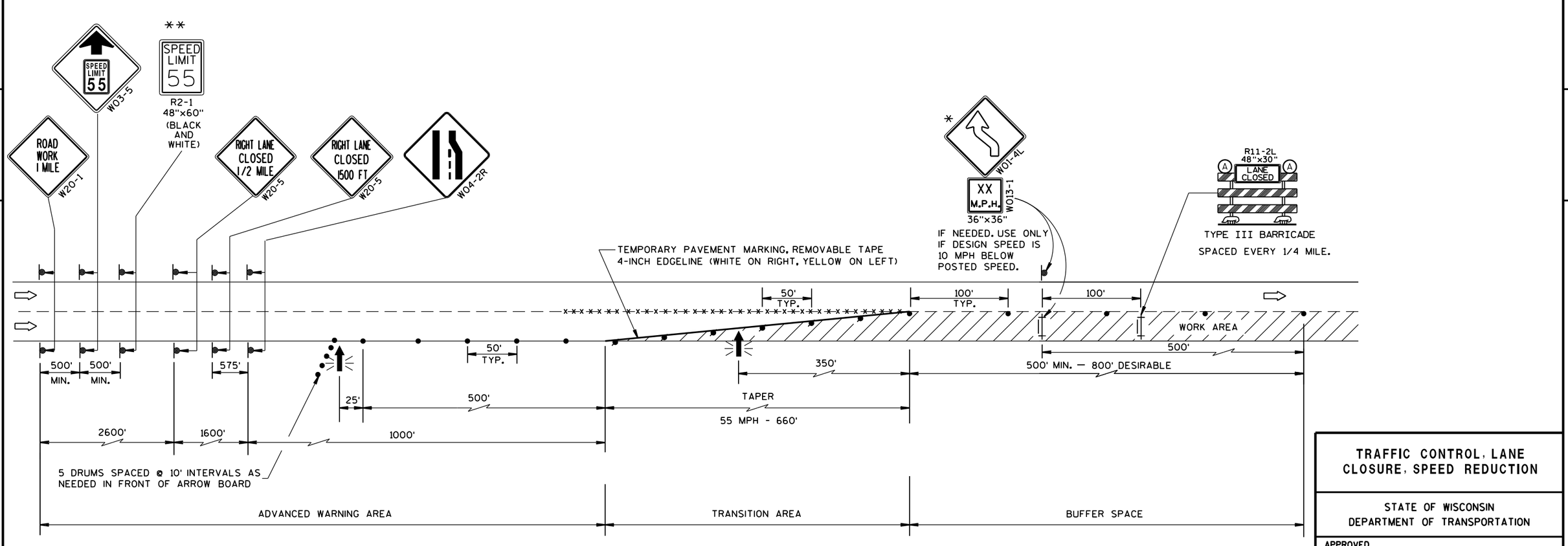
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

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

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

** A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. THERE SHOULD BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 2 OR 3 MILES. INCLUDE A 65 MPH RESUME SPEED LIMIT SIGN 200 FEET MINIMUM (500 FEET DESIREABLE) BEYOND THE "END OF ROADWORK" SIGN.

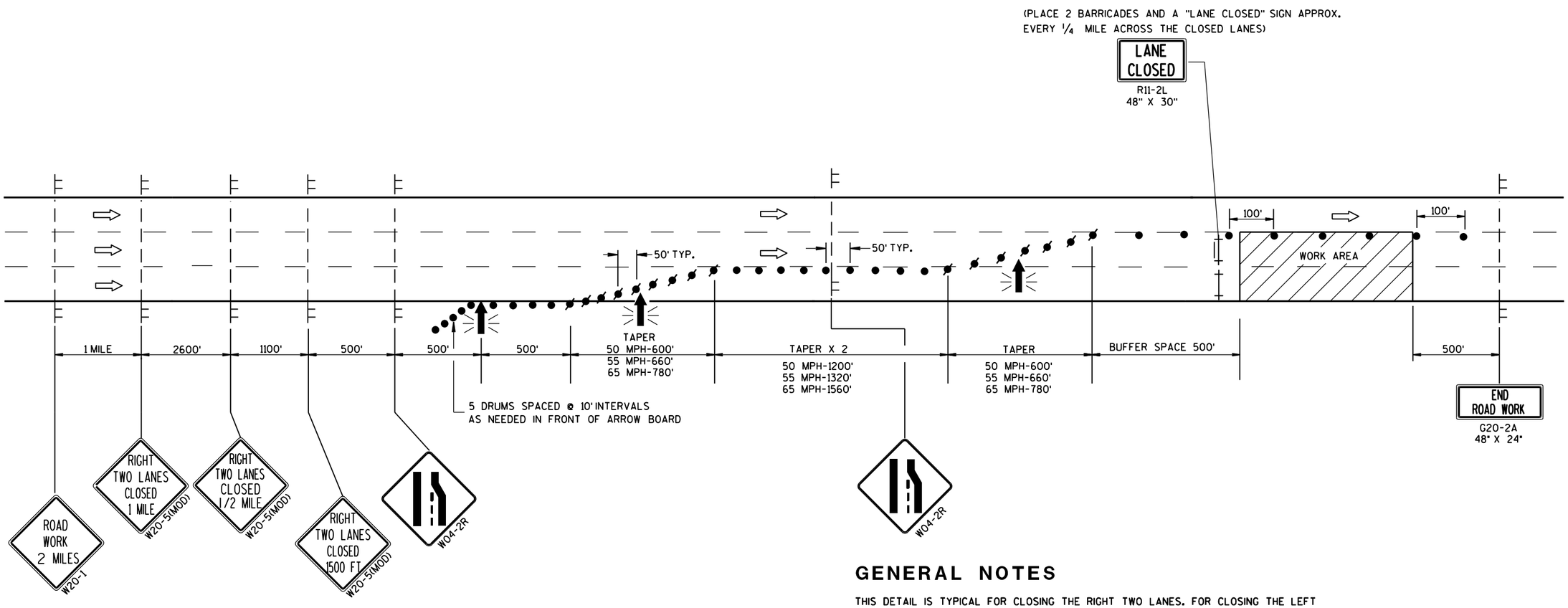


TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3-2014 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6
S.D.D. 15 D 12-4



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT TWO LANES. FOR CLOSING THE LEFT TWO LANES, 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.

"WO" SIGNS ARE THE SAME AS "W" SIGNS 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.

W20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

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

WHEN A RAMP OR SIDE ROAD INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

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

TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

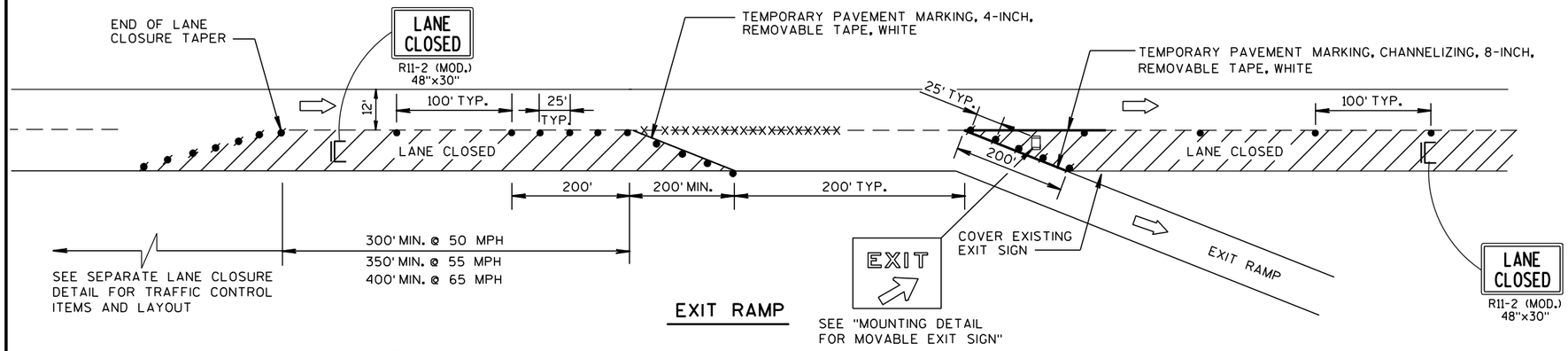
8/2013
DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

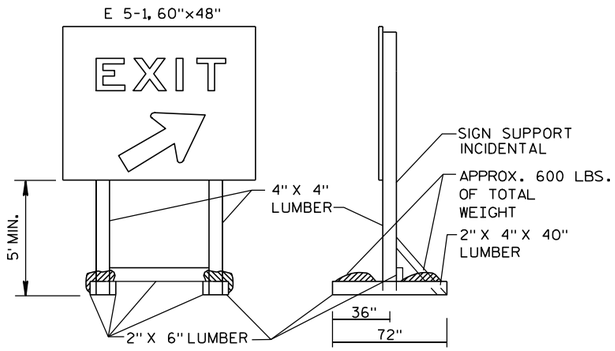
FHWA

6

S.D.D. 15 D 14-2

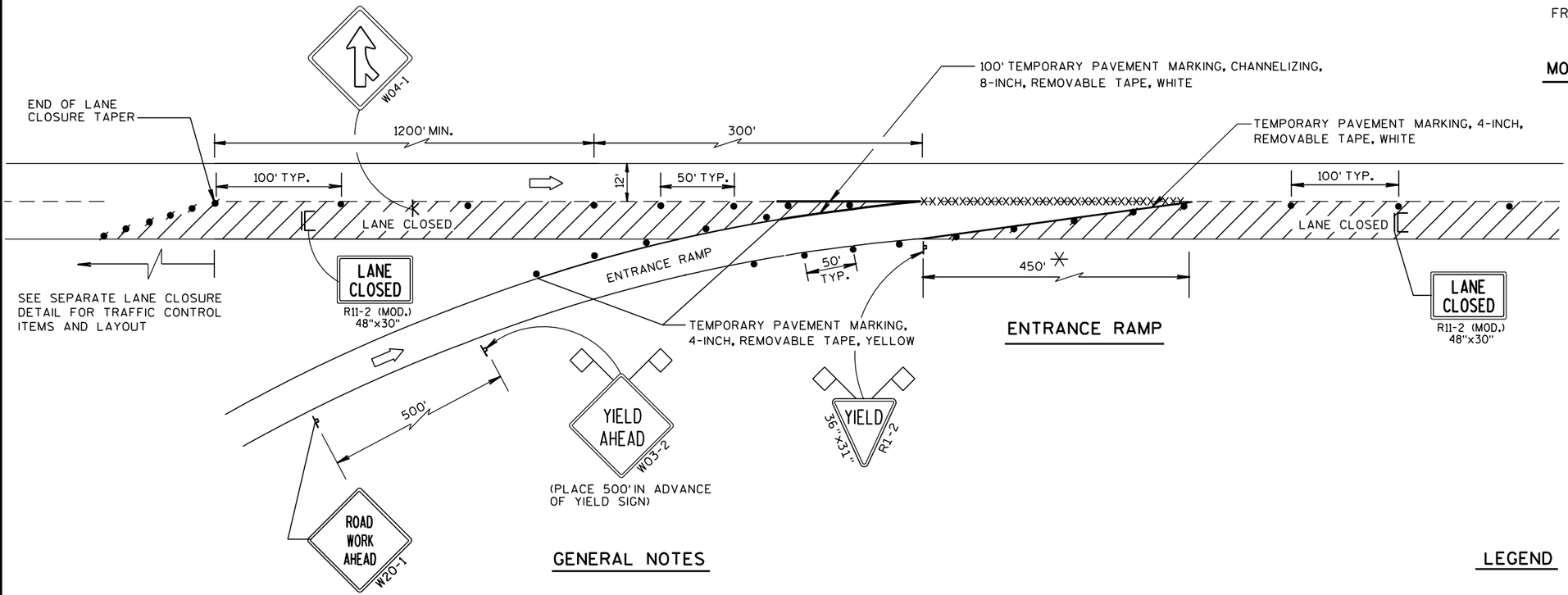


EXIT RAMP



NOTE: ALL LUMBER DIMENSIONS ARE NOMINAL

MOUNTING DETAIL FOR MOVABLE EXIT SIGN



ENTRANCE RAMP

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2 (MOD.) "LANE CLOSED" SIGNS.

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 7 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

✳ LENGTH OF OPENING MAY BE REDUCED TO 150 FEET DURING STAGING OF WORK IN IMMEDIATE AREA OF RAMP TAPER.

LEGEND

- POST MOUNTED SIGN
- SIGN ON PORTABLE SUPPORT
- TRAFFIC CONTROL, DRUM
- TRAFFIC CONTROL, DRUM WITH WARNING LIGHT, TYPE C (STEADY-BURN)
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- TYPE III BARRICADE (8' EQUIVALENT) WITH SIGN
- FLAGS, 16"x16" MIN., ORANGE
- DIRECTION OF TRAFFIC FLOW

TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/24/2000 DATE
/S/ Chester J. [illegible]
CHIEF SIGNS AND MAR 650 INEER
FHWA

6

S.D.D. 15 D 15-1

6

S.D.D. 15 D 15-1

LEGEND

TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

TRAFFIC CONTROL DRUM

SIGN ON PERMANENT SUPPORT

TYPE "A" WARNING LIGHT (FLASHING)

DIRECTION OF TRAFFIC

GENERAL NOTES

THIS RAMP CLOSURE DETAIL IS TYPICAL FOR CLOSING A RIGHT SIDE EXIT RAMP. FOR A LEFT SIDE EXIT RAMP, REVERSE THE TRAFFIC CONTROL.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

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

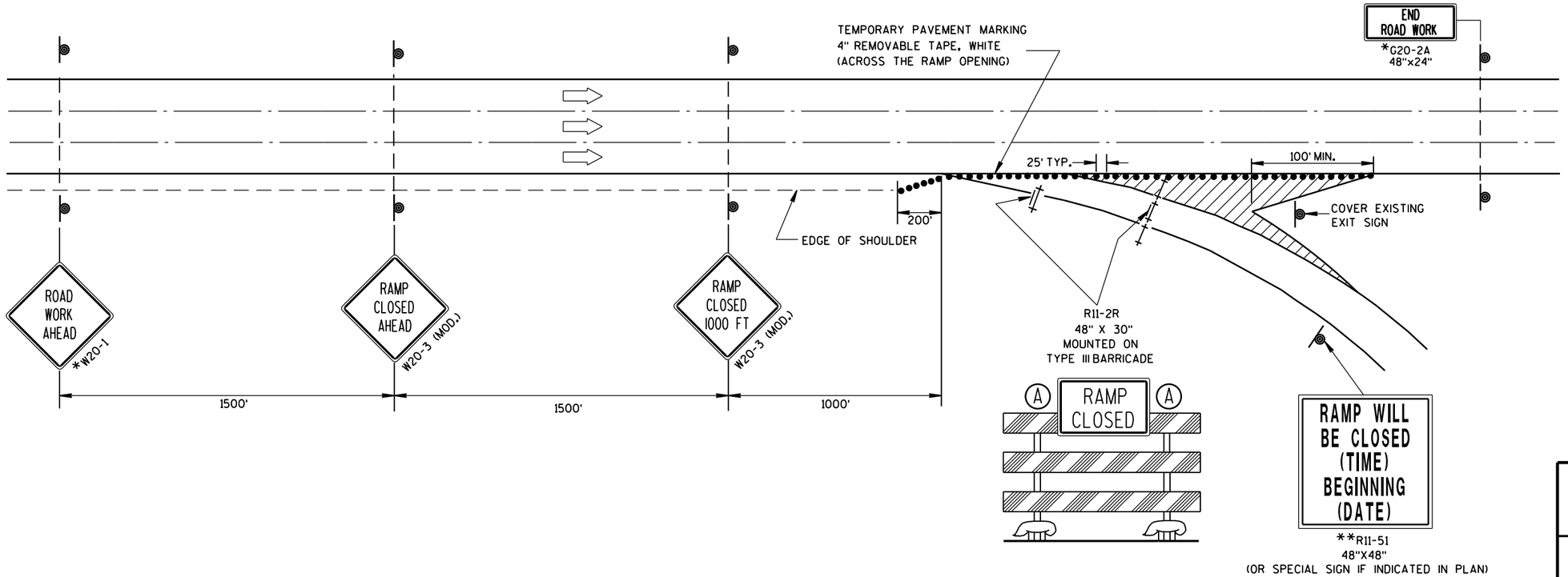
PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF RAMP CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WORK AREAS WITH A DROPOFF ALONG THE EDGE OF AN OPEN TRAVEL LANE SHALL BE LEVELED WITH TEMPORARY FILL WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE TRAVEL LANE. DRUMS SHALL BE PLACED ENTIRELY OUTSIDE THE TRAVEL LANE, ALLOWING THE FULL UNOBSTRUCTED LANE WIDTH, WHEN THE WORK IS NOT IN PROGRESS.

WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12-HOUR DURATION.

*W20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE RAMP CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

** PLACE "RAMP WILL BE CLOSED" SIGN 10 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.



TRAFFIC CONTROL,
EXIT RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013
DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

651

DESIGN

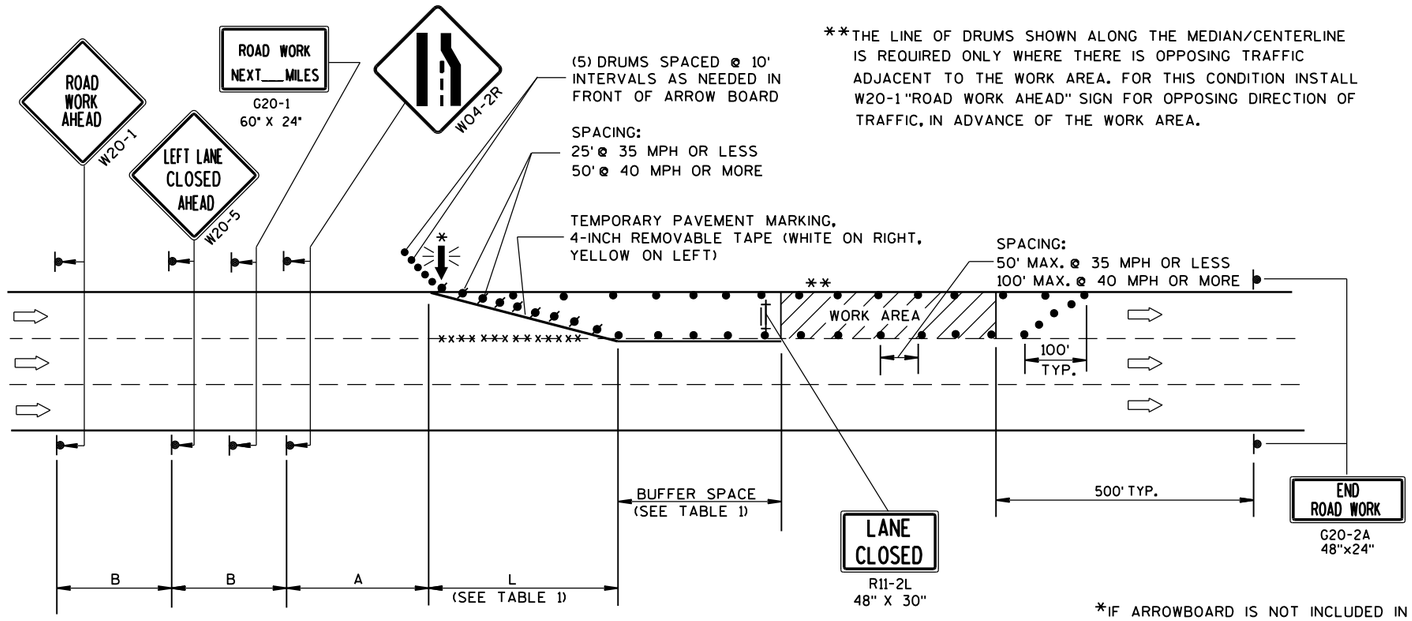
FHWA

6

S.D.D. 15 D 16-2

6

S.D.D. 15 D 16-2



**THE LINE OF DRUMS SHOWN ALONG THE MEDIAN/CENTERLINE IS REQUIRED ONLY WHERE THERE IS OPPOSING TRAFFIC ADJACENT TO THE WORK AREA. FOR THIS CONDITION INSTALL W20-1 "ROAD WORK AHEAD" SIGN FOR OPPOSING DIRECTION OF TRAFFIC, IN ADVANCE OF THE WORK AREA.

B=400' AT 25-30 MPH
700' AT 35-40 MPH
1000' AT 45-55 MPH

A=200' AT 25-30 MPH
350' AT 35-40 MPH
500' AT 45-55 MPH

(PLACE BARRICADE AND SIGN APPROX. EVERY 1000' ACROSS THE CLOSED LANE)

*IF ARROWBOARD IS NOT INCLUDED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE A TYPE III BARRICADE WITH W01-6 SIGN IN THE LANE CLOSURE TAPER.

W01-6
48"x24"

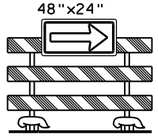


TABLE 1
TAPER AND BUFFER SPACE FOR 12' LANE WIDTH

S	L	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	540'	220'
50	600'	280'
55	660'	335'

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

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

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

GENERAL NOTES

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

ON UNDIVIDED ROADWAYS, OMIT THE SIGNS SHOWN ON LEFT SIDE OF ROAD.

W20-1, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

PLACE THE ARROWBOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

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

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

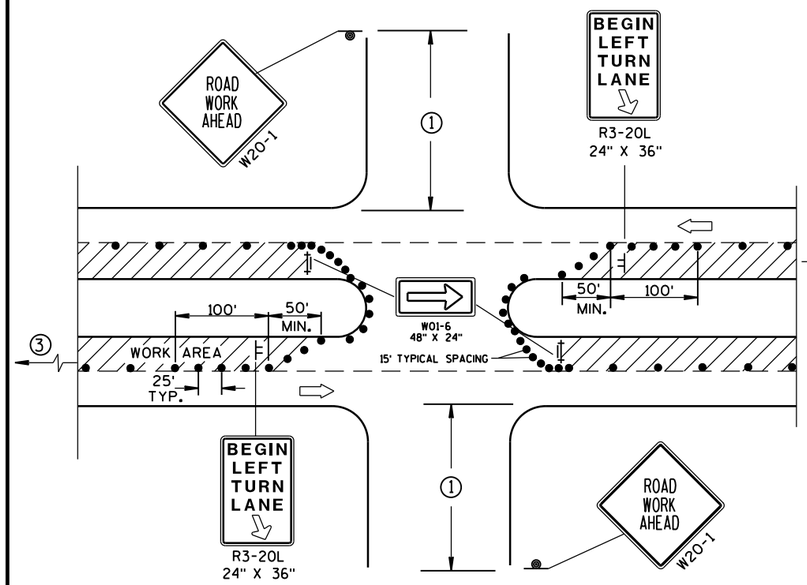
TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

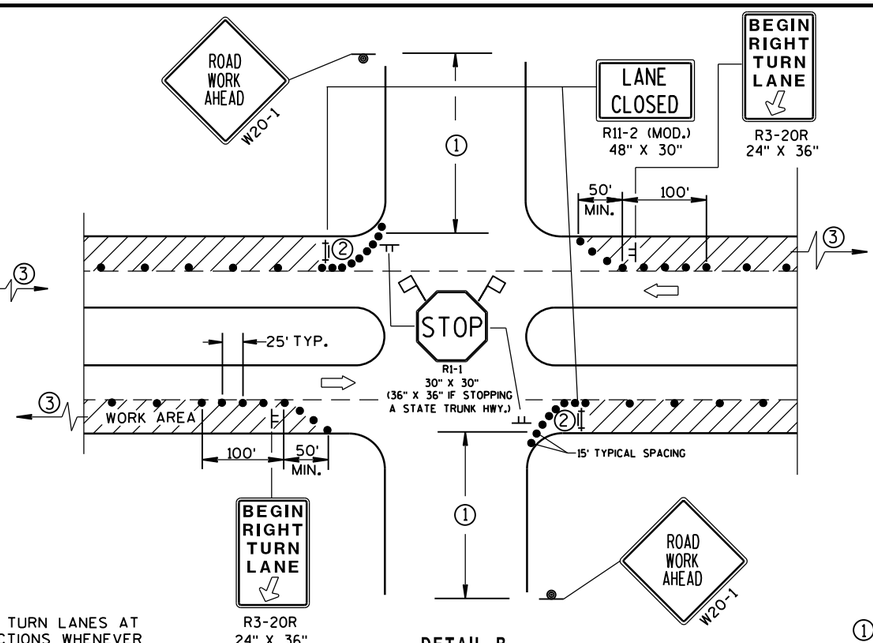
S.D.D. 15 D 20-2



DETAIL A

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.



DETAIL B

FOR RIGHT LANE CLOSURE AT INTERSECTION

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

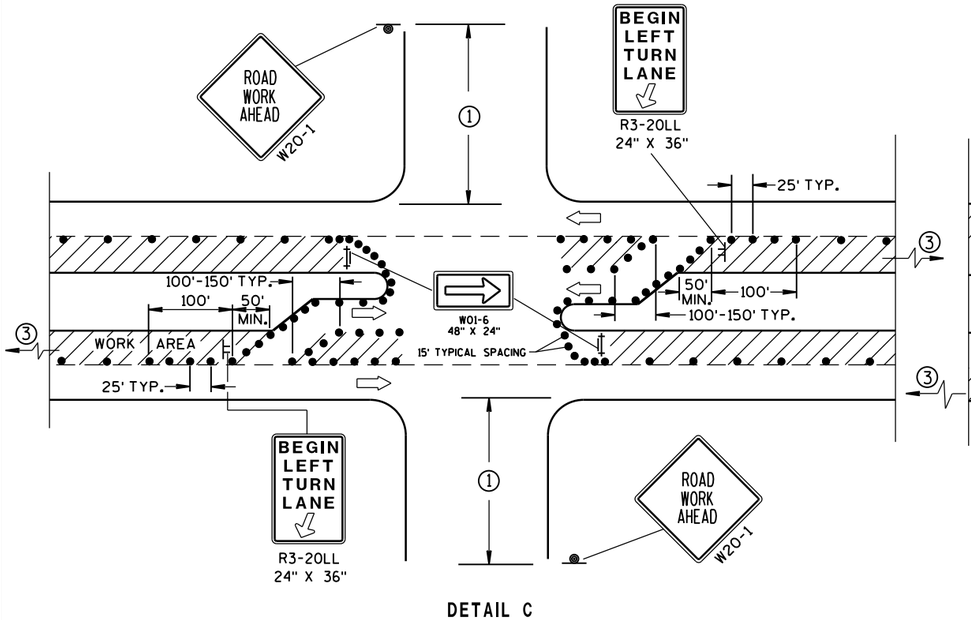
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35-40 MPH.
200' IF 25-30 MPH.

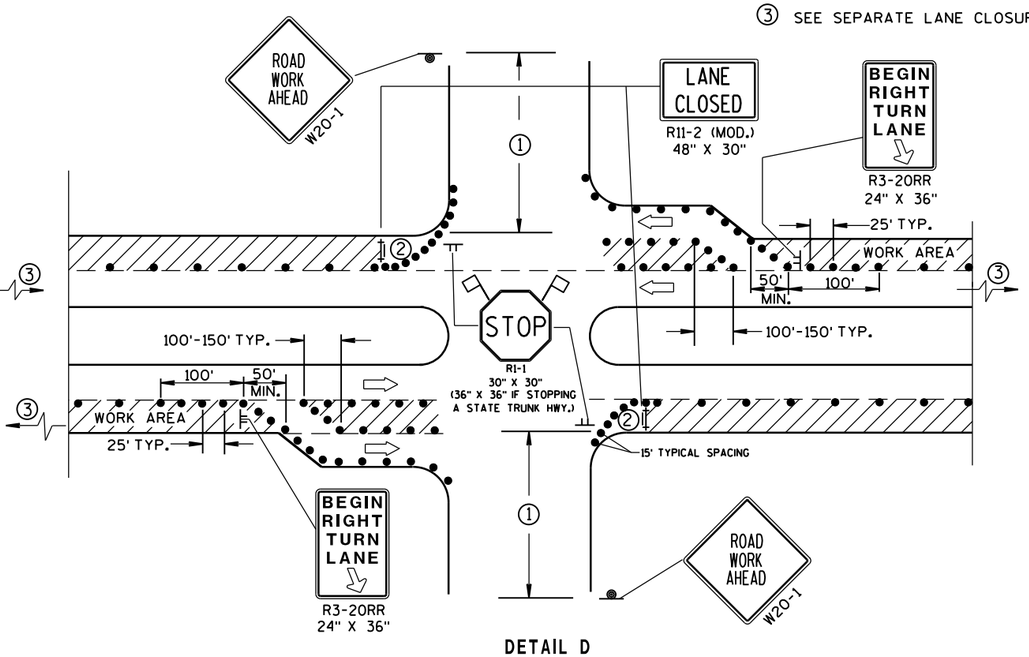
② ALSO USE BARRICADE AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.

③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.



DETAIL C

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING (WITH LEFT TURN BAY OPEN)



DETAIL D

FOR RIGHT LANE CLOSURE AT INTERSECTION (WITH RIGHT TURN BAY OPEN)

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT (5' MIN. MOUNTING HEIGHT)
- TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., (ORANGE)
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

DESIGN

FHWA

6

S.D.D. 15 D 21-2

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW BOARD
- WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

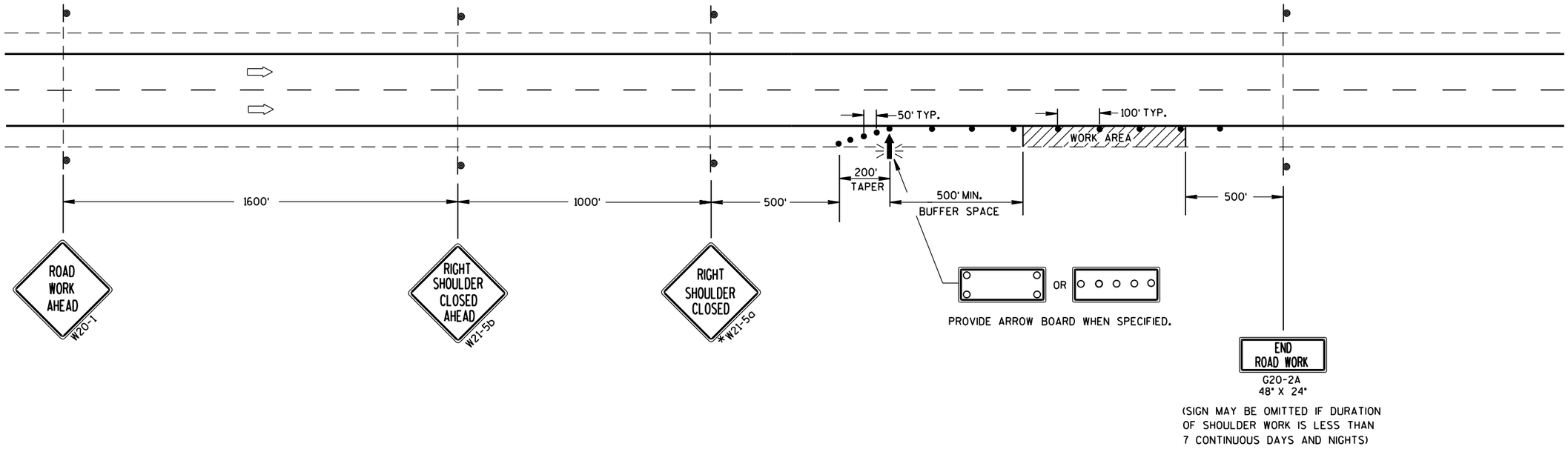
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 — DATE

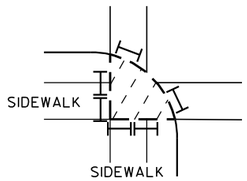
/S/ Travis Feltes — STATE TRAFFIC ENGINEER

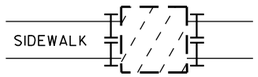
FHWA

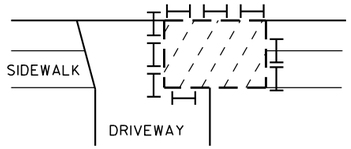
6

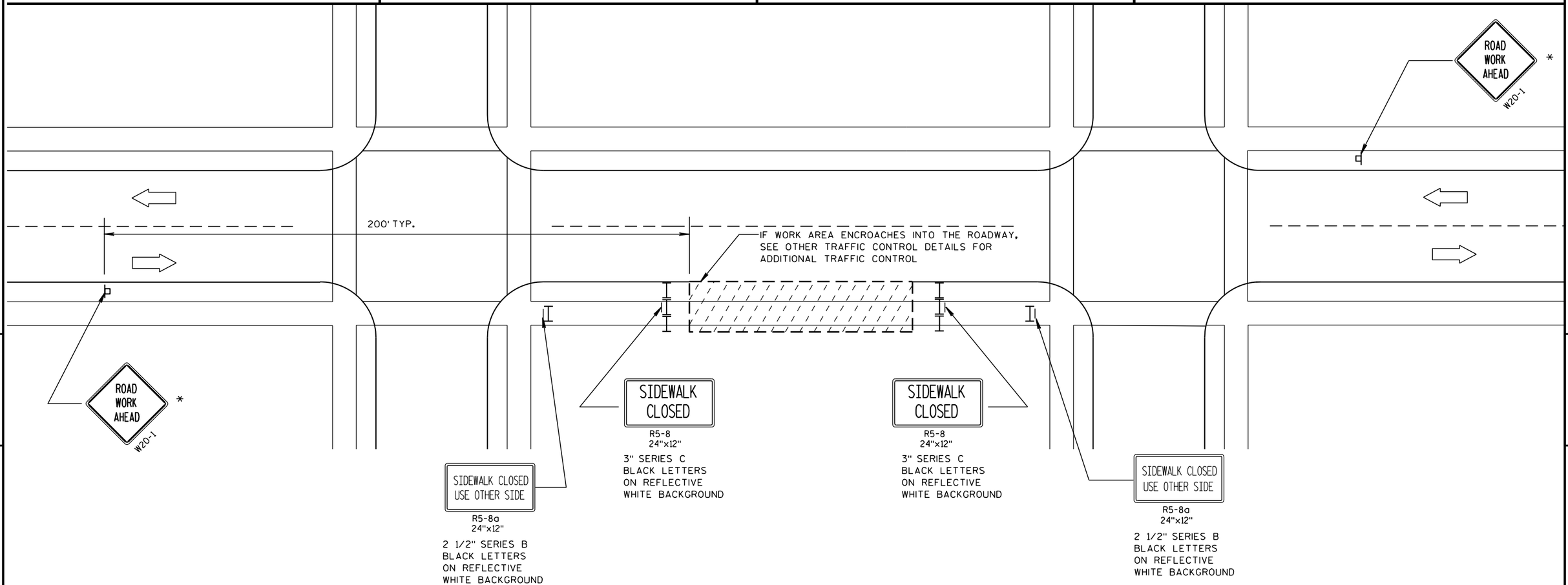
S.D.D. 15 D 27-2

WARNING OF LOCALIZED SIDEWALK WORK AREAS









LEGEND

- POST MOUNTED SIGN
- TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC FLOW

GENERAL NOTES :

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS, IF APPROVED BY DISTRICT TRAFFIC UNIT.

THE EXACT LOCATION AND PLACEMENT OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

* "ROAD WORK AHEAD" SIGNS ARE NOT REQUIRED IF THE SIDEWALK CLOSURE OCCURS WITHIN A LARGER WORK ZONE WHERE ADVANCE WARNING SIGNS ARE ALREADY PRESENT, OR IF THE WORK AREA AND EQUIPMENT ARE MORE THAN 2 FEET BEHIND THE CURB.

WARNING SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

TRAFFIC CONTROL, SIDEWALK CLOSURE

TRAFFIC CONTROL, SIDEWALK CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

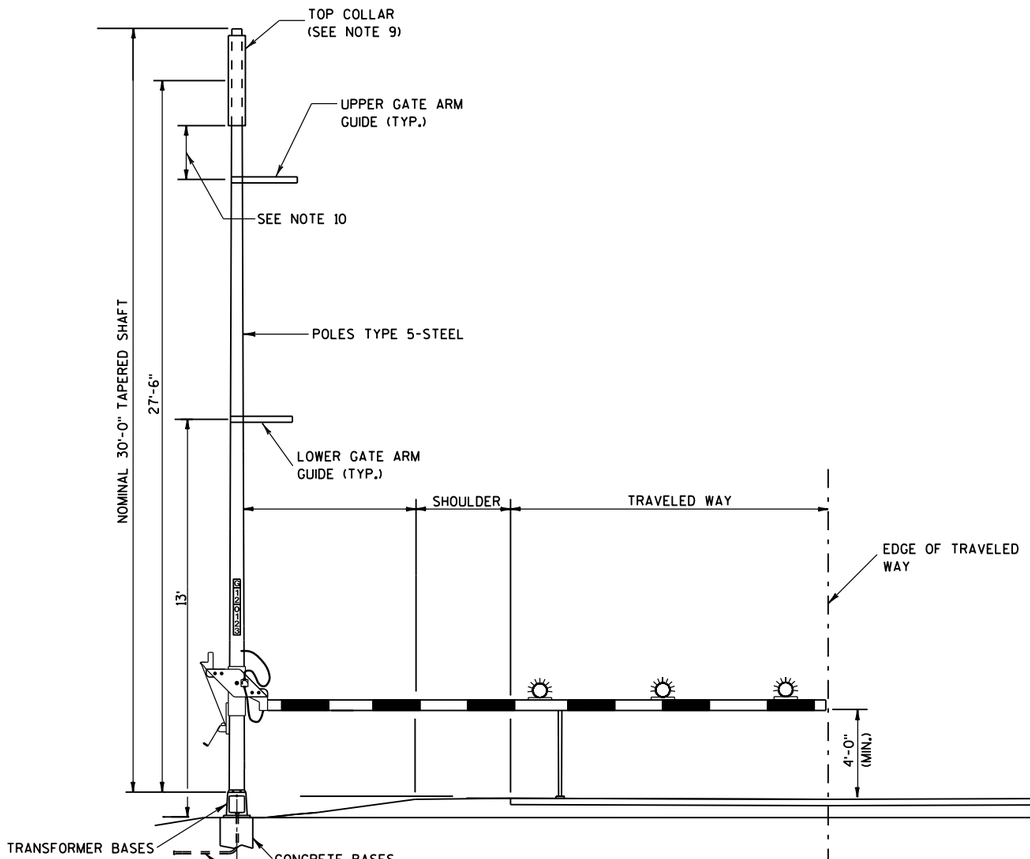
APPROVED
5/23/2000 DATE
/S/ Chester J. [illegible]
CHIEF SIGNS AND MARK 655 [illegible]
FHWA

6

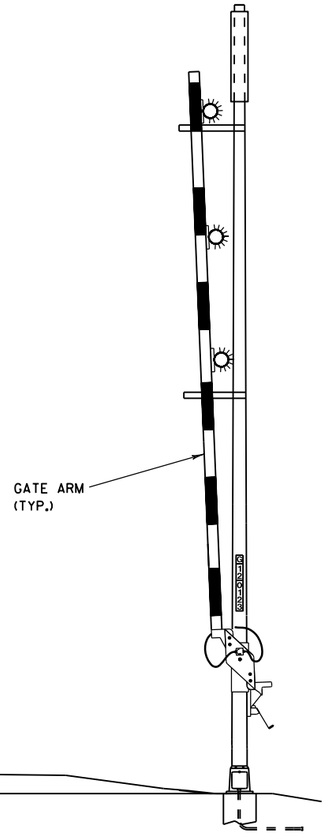
S.D.D. 15 D 30-1

6

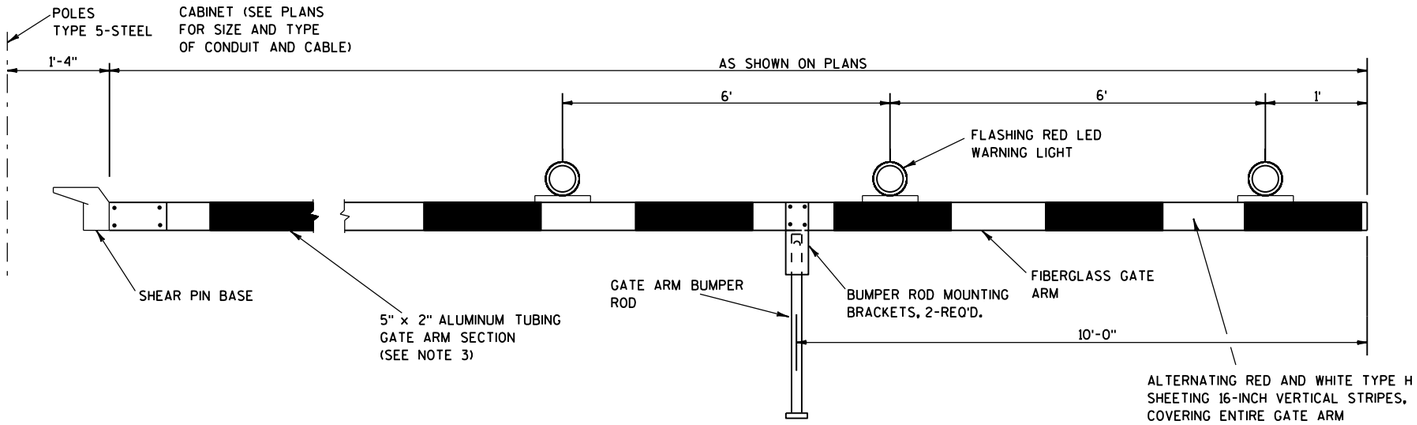
S.D.D. 15 D 30-1



TYPICAL LOWERED POSITION

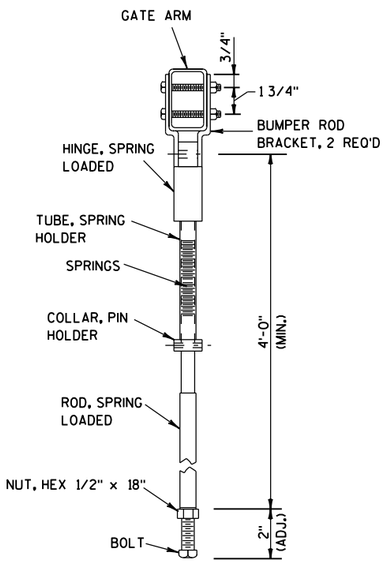


TYPICAL RAISED POSITION

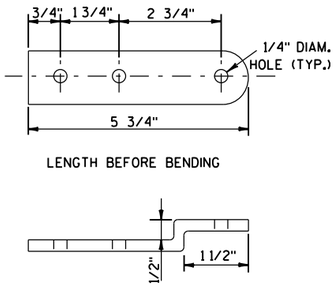


GATE DETAIL

(SOLAR POWER OPTION)



GATE ARM BUMPER ROD DETAIL



BUMPER ROD MOUNTING
BRACKET DETAIL

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.

RAMP GATE
SOLAR POWER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 656

6

S.D.D. 15 D 34-1a

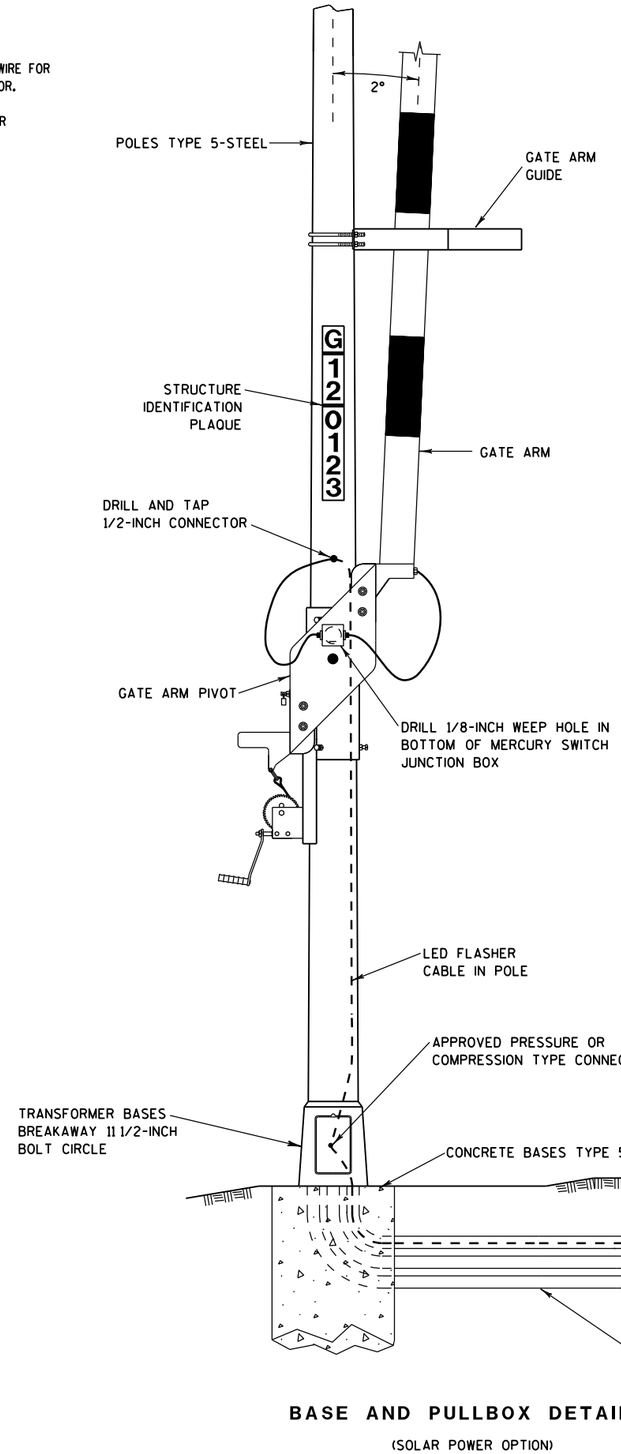
6

S.D.D. 15 D 34-1a

WIRING NOTES

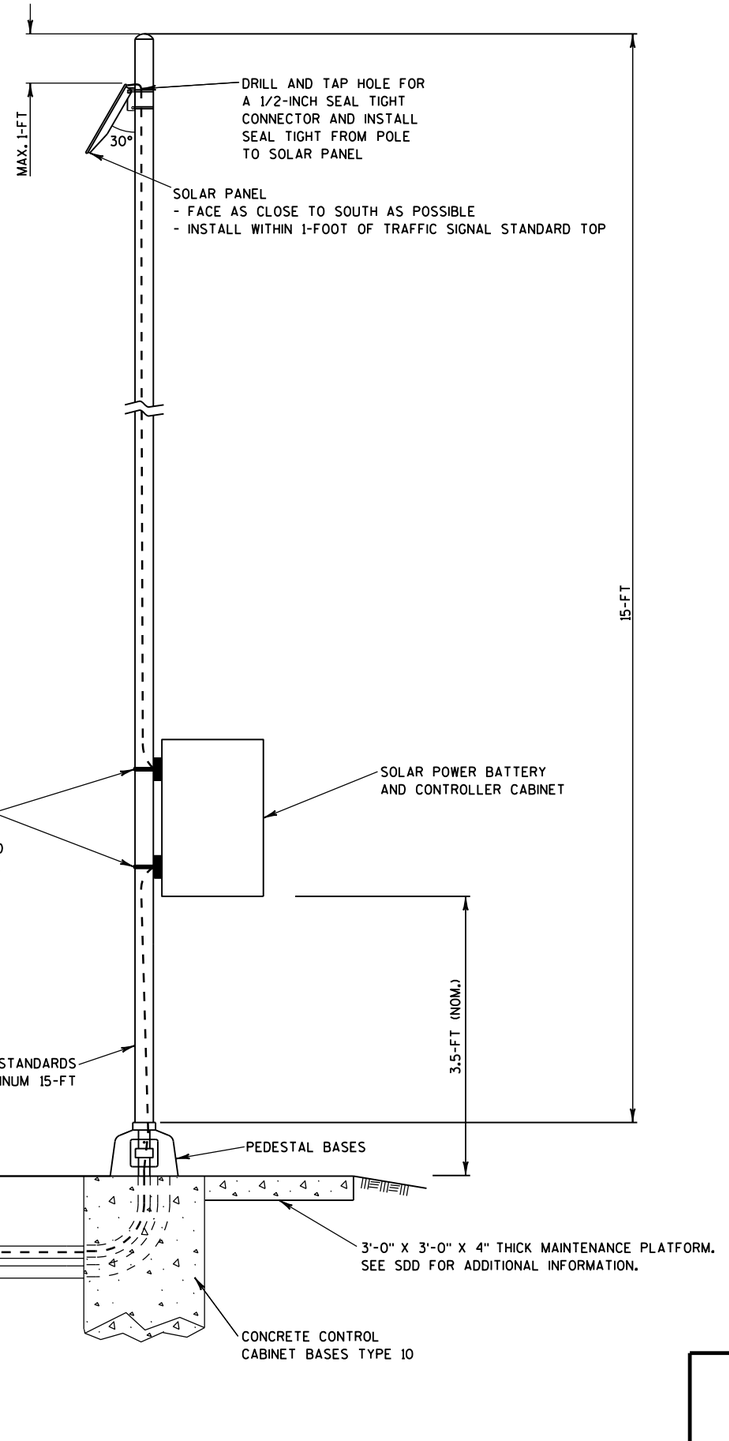
1. WIRING FROM SOLAR PANEL TO CABINET SHALL BE BLUE #10 XLP WIRE FOR POSITIVE CONDUCTOR AND WHITE #10 XLP FOR NEGATIVE CONDUCTOR.

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

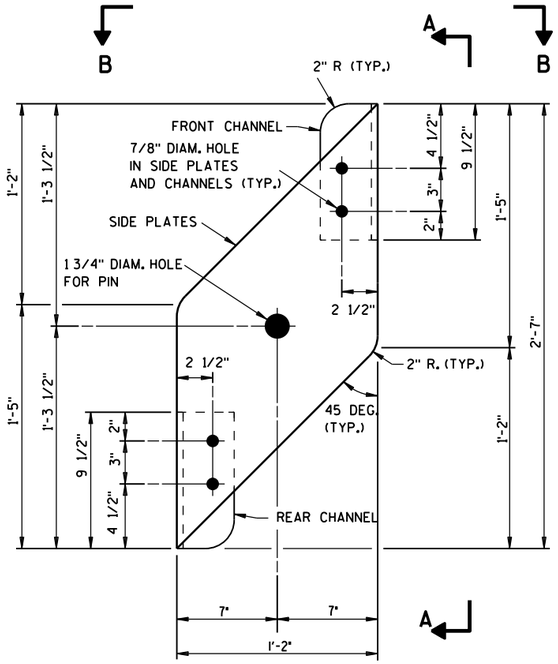
(SOLAR POWER OPTION)



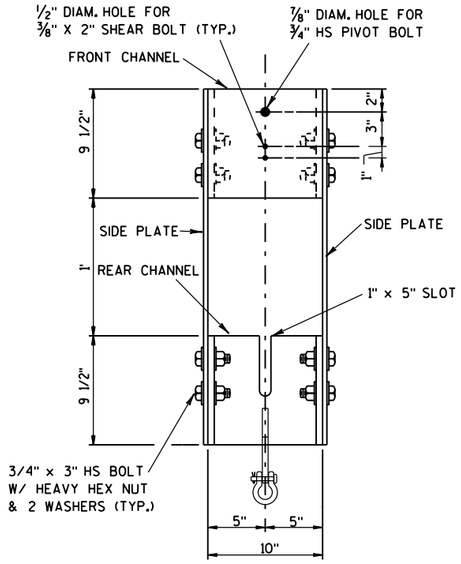
RAMP GATE
SOLAR POWER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

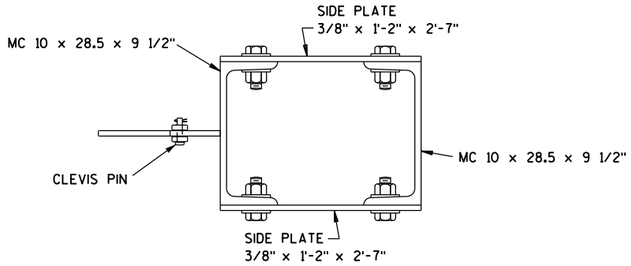
6
S.D.D. 15 D 34-1b



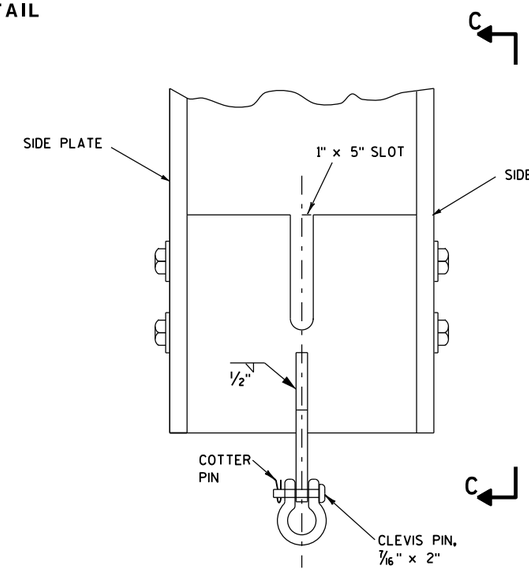
SIDE PLATE DETAIL



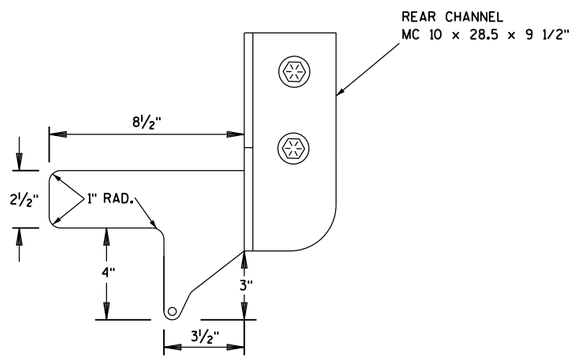
SECTION A-A



SECTION B-B



YOKE ASSEMBLY DETAIL



SECTION C-C

RAMP GATE
SOLAR POWER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 658

6

S.D.D. 15 D 34-1c

6

S.D.D. 15 D 34-1c

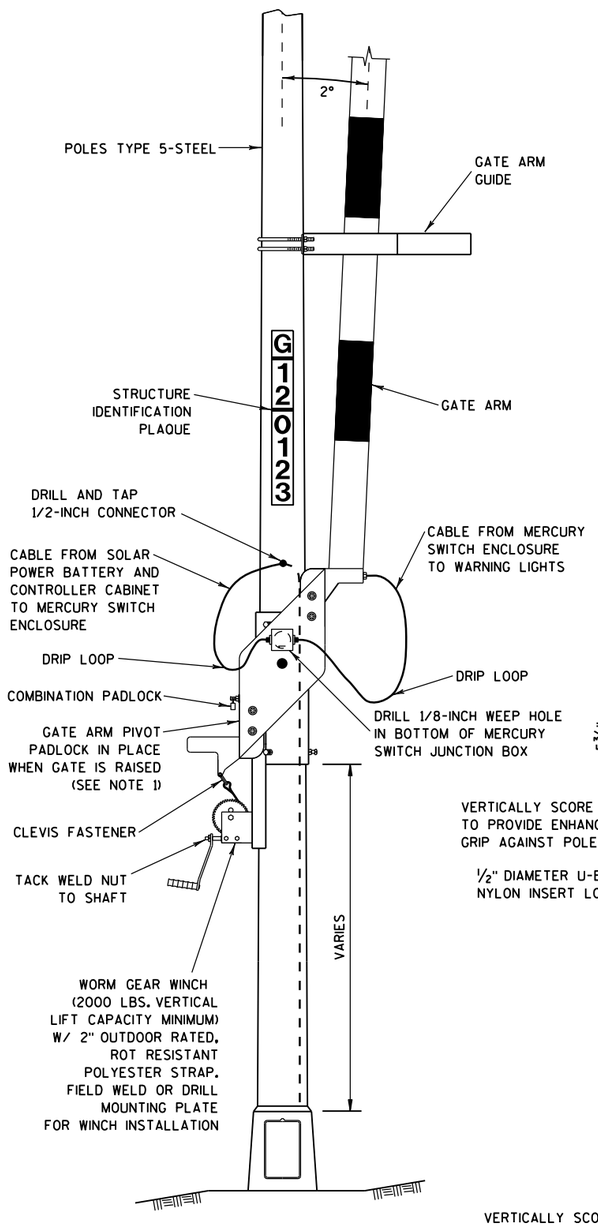
GENERAL NOTES

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.

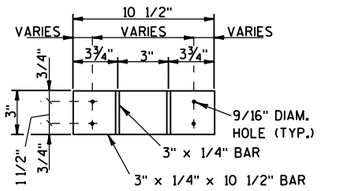
2. WHEN THE GATE IS FULLY LOWERED, THE NUT AND WASHER SHALL BE PLACED SNUGLY AGAINST THE INSIDE OF THE REAR CHANNEL AND PADLOCKED INTO PLACE.

3. ANTI-SEIZE LUBRICATING MATERIAL SHALL BE USED ON ALL BOLT THREADS BEFORE INSTALLATION.

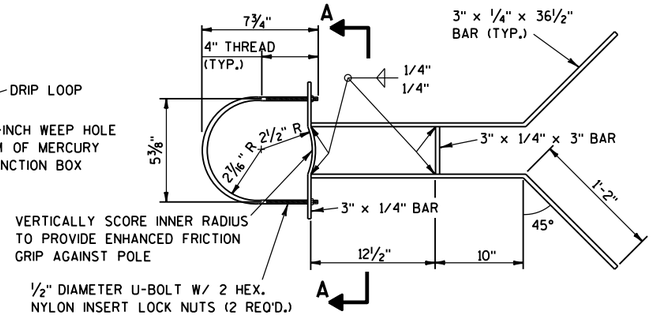
4. ALL BOLTS SHALL BE GALVANIZED AND CONFORM TO ASTM A307, GRADE A, UNLESS DESIGNATED AS HS (HIGH STRENGTH), WHICH SHALL CONFORM TO ASTM A325. BOLTS OF 1/2" NOMINAL DIAMTER OR LESS MAY BE STAINLESS STEEL.



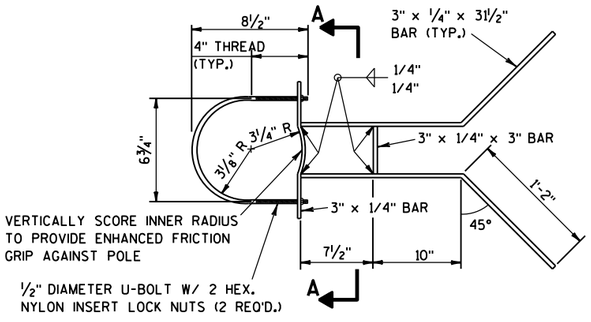
GATE PIVOT ASSEMBLY



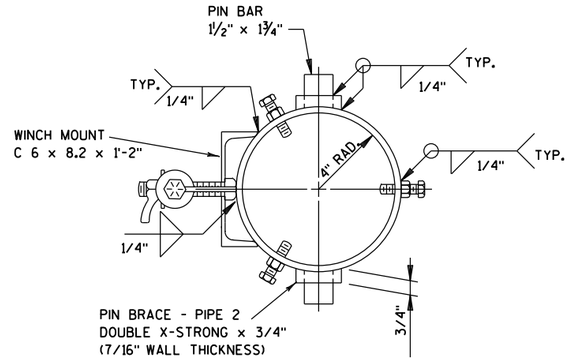
SECTION A-A
U-BOLTS NOT SHOWN



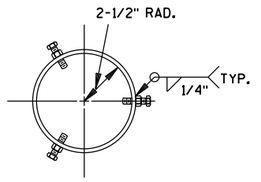
UPPER GATE ARM GUIDE DETAIL



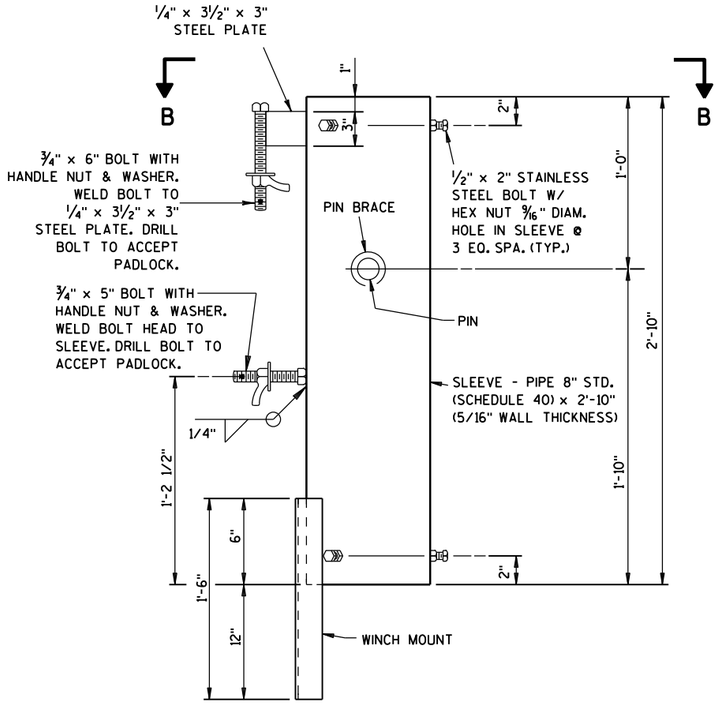
LOWER GATE ARM GUIDE DETAIL



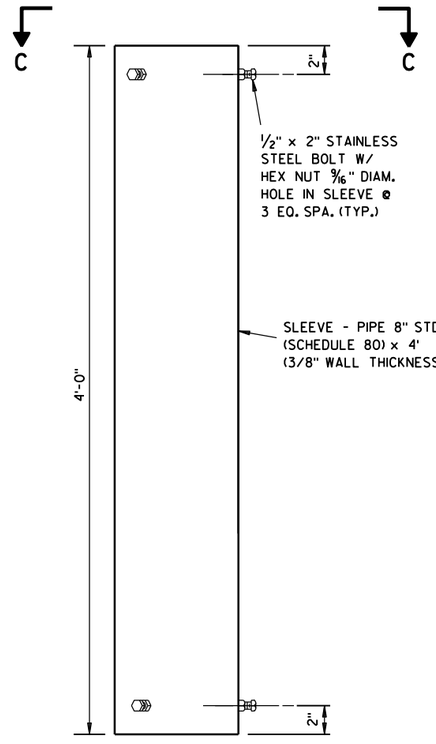
SECTION B-B



SECTION C-C



PIVOT SLEEVE DETAIL



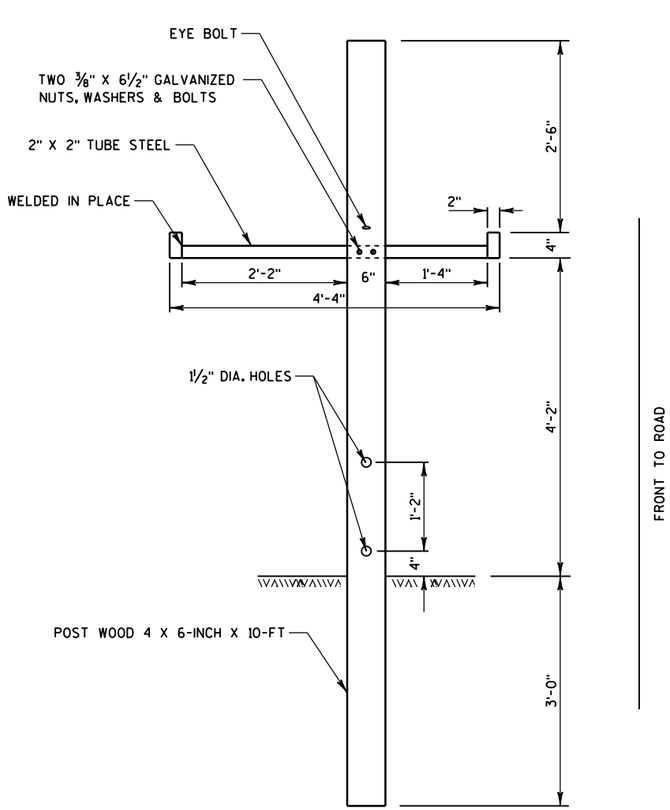
TOP COLLAR

RAMP GATE
SOLAR POWER

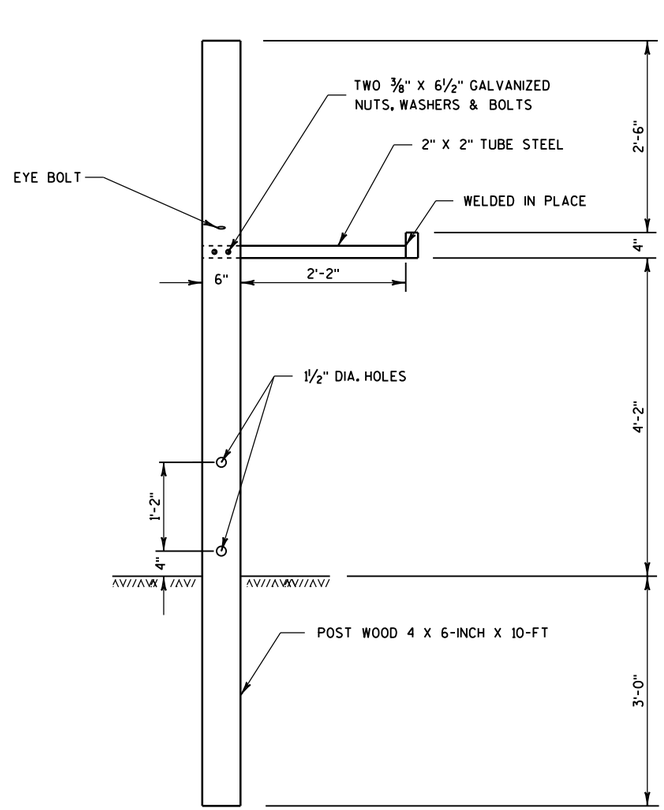
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-30-2013
DATE
/S/ Bill Wondrachek
STATE TRAFFIC ENGINEER
MANAGEMENT EN
FHWA

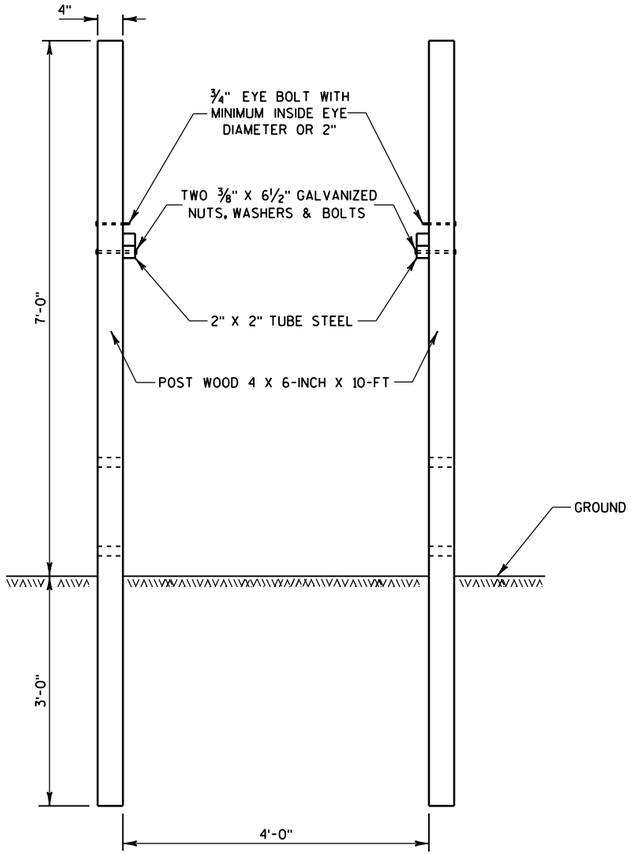
6
S.D.D. 15 D 34-1d



SIDE VIEW
(3 BARRICADE SYSTEM)



SIDE VIEW
(2 BARRICADE SYSTEM)



FRONT VIEW

BARRICADE RACK

* LOCATE OUTSIDE CLEAR ZONE AS DIRECTED BY ENGINEER

BARRICADE RACK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-30-2013
DATE

/S/ Bill Wondrachek
STATE TRAFFIC ENGINEER
MANAGEMENT EN

FHWA

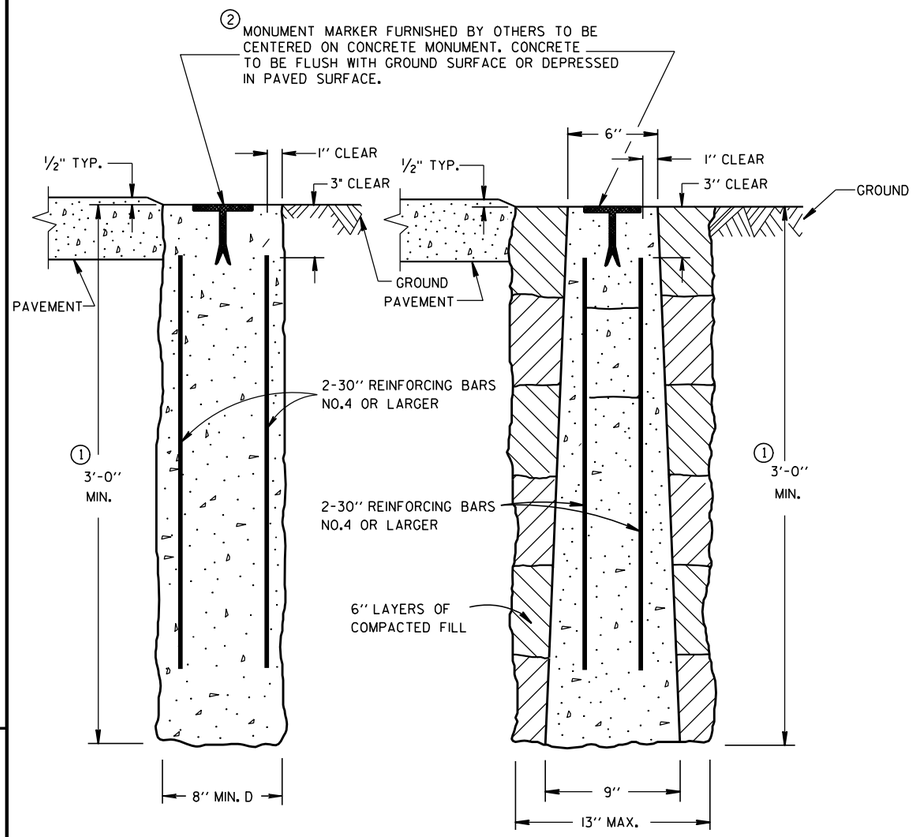
660

6

S.D.D. 15 D 36-1

6

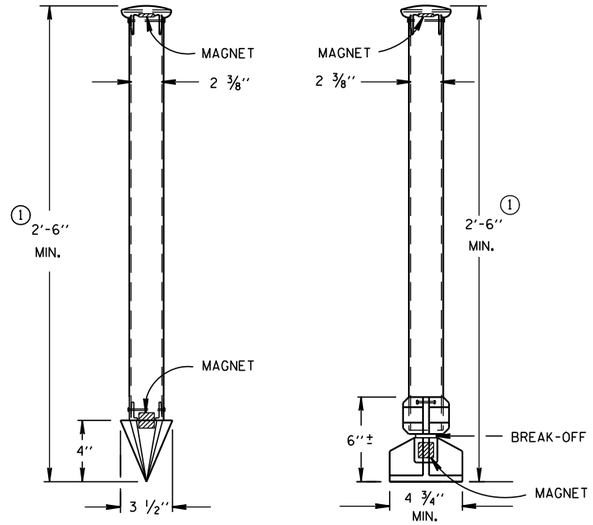
S.D.D. 15 D 36-1



CAST-IN-PLACE PRECAST

CONCRETE MONUMENTS

TYPE A



TYPE C DRIVE-IN MONUMENT

TYPE D BREAK-OFF MONUMENT

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.

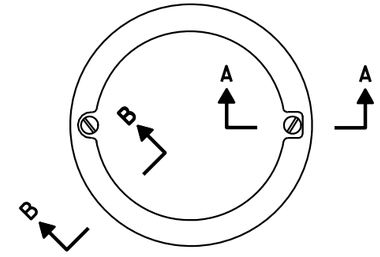
ALUMINUM MONUMENTS AND MONUMENT COVERS SHALL BE MADE FROM AN ALUMINUM AND MAGNESIUM ALLOY AS DETERMINED BY THE MANUFACTURER.

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.

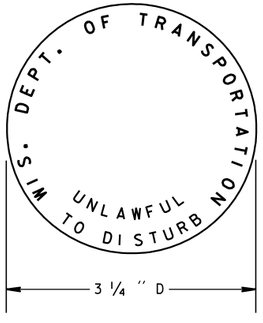
MONUMENT SHALL BE CAST-IN-PLACE CONCRETE UNLESS PRECAST CONCRETE OR ALUMINUM MONUMENTS ARE SPECIFIED IN THE CONTRACT OR PERMITTED BY THE ENGINEER.

① MINIMUM LENGTH SHALL BE 4'-0" FOR MONUMENTS INSTALLED IN PAVED AREAS.

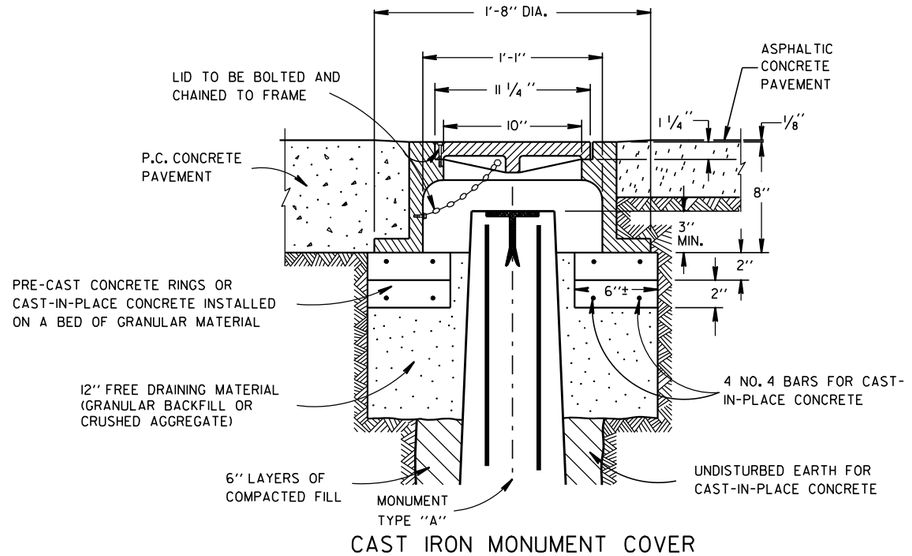
② AN OFFICIAL COUNTY MONUMENT MARKER SUPPLIED BY A COUNTY MAY BE REQUIRED FOR SOME SECTION CORNERS AND WITNESS MONUMENTS INSTEAD OF THIS WIS DOT MARKER.



TOP VIEW

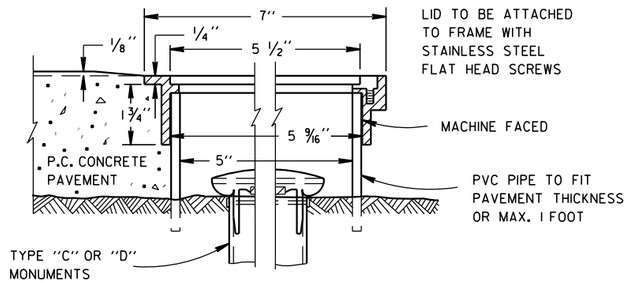


② WIS DOT MONUMENT MARKER LOGO FOR TYPES "A", "C" & "D"



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

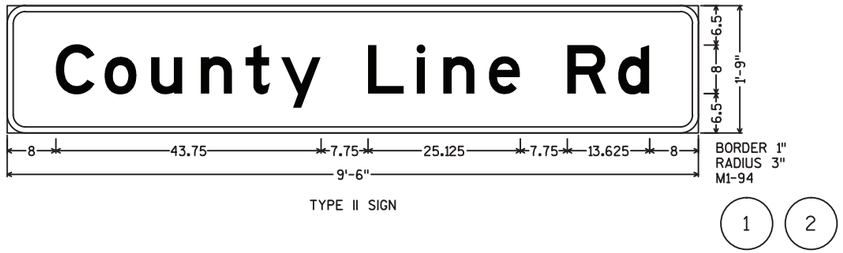
APPROVED

9/22/1999 DATE

/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER

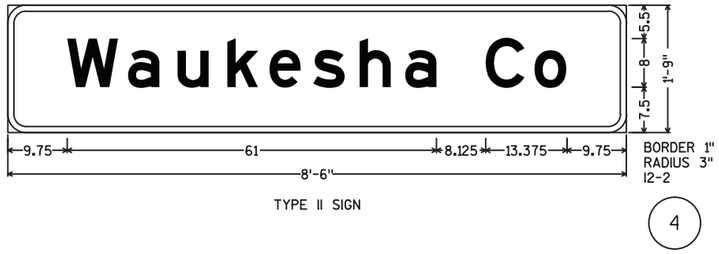
FHWA

6
S.D.D. 16 A 1-6



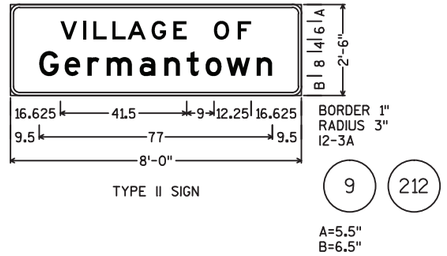
TYPE II SIGN

1 2



TYPE II SIGN

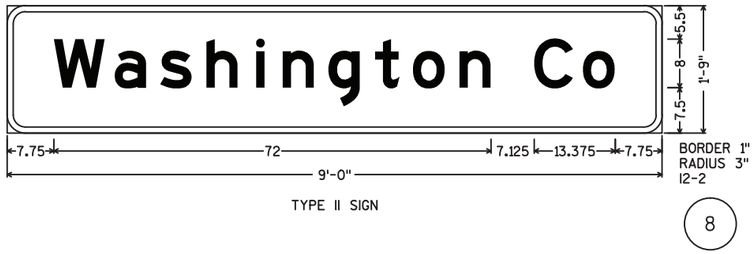
4



TYPE II SIGN

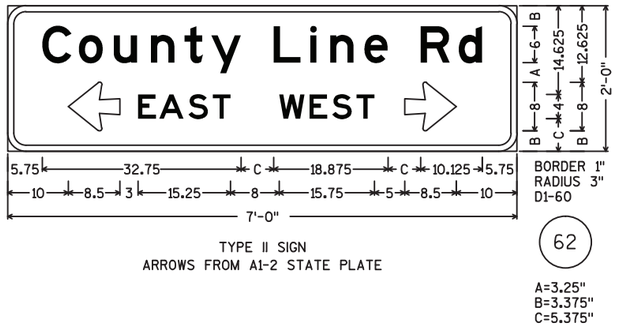
9 212

A=5.5"
B=6.5"



TYPE II SIGN

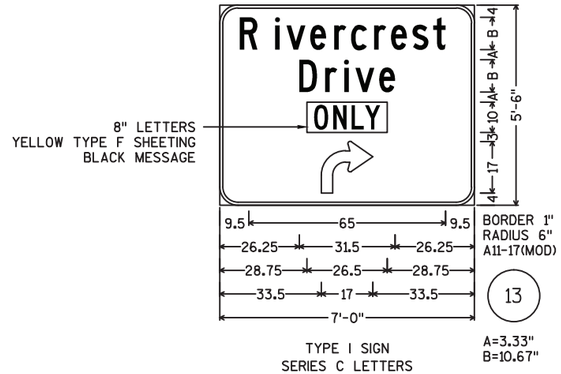
8



TYPE II SIGN
ARROWS FROM A1-2 STATE PLATE

62

A=3.25"
B=3.375"
C=5.375"



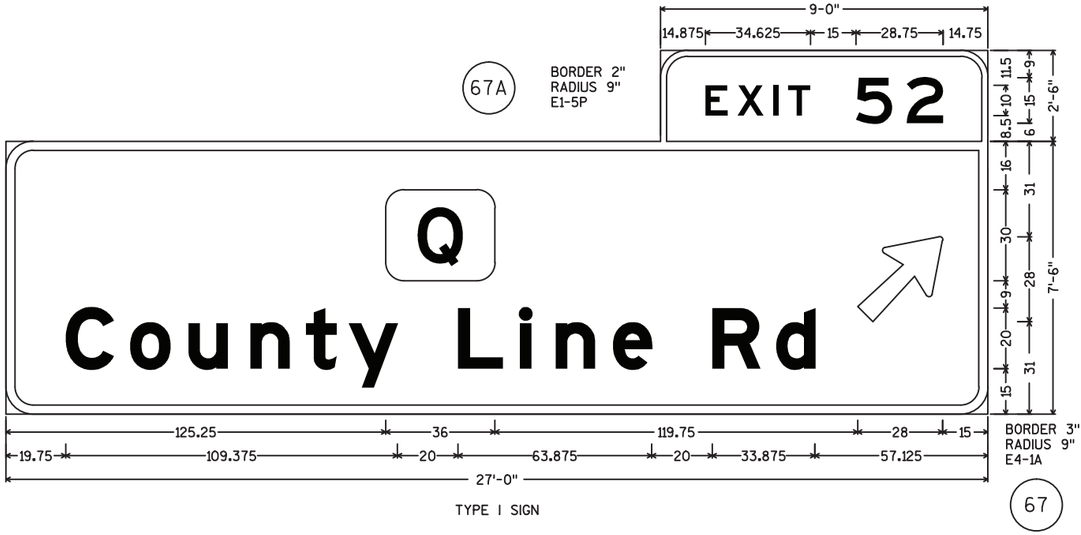
TYPE I SIGN
SERIES C LETTERS
S-66-607

13

A=3.33"
B=10.67"

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 II".
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 UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E". ALL LOWERCASE MESSAGE WITH AN INITIAL UPPERCASE LETTER SHALL BE "SERIES E".
6. TYPE I SIGNS ALL UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E MODIFIED". ALL LOWER CASE MESSAGE WITH AN INITIAL UPPERCASE 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.



TYPE I SIGN

67A

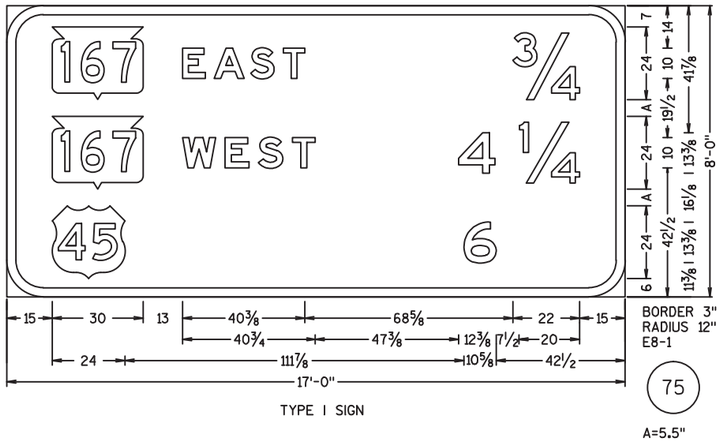
BORDER 2"
RADIUS 9"
E1-5P

67

SHEET 1 OF 11

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: MILWAUKEE	SIGNING DETAIL - TYPE I & II SIGNS	SCALE: 0 ½" 1"	SHEET 662	E

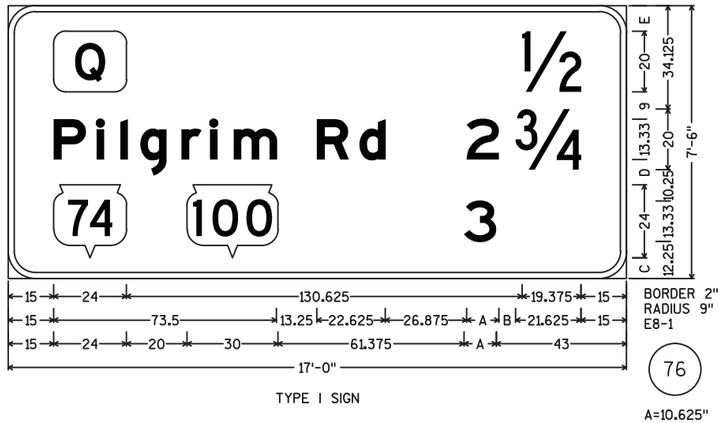
FILE NAME : N:\PDS\C3D\CAD\11003800\070101_MSTESTING.DWG PLOT DATE : 9/23/2013 4:47 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : ---------- PLOT SCALE : ******* WISDOT/CADDS SHEET 47



75

TYPE I SIGN

A=5.5"



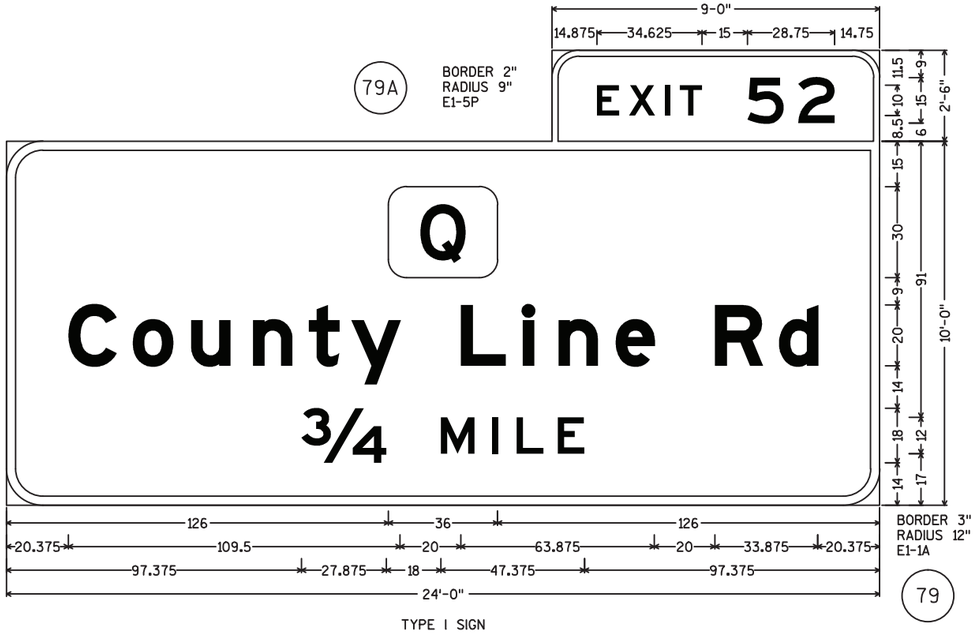
76

TYPE I SIGN

A=10.625"
B=5.5"
C=6.875"
D=8.375"
E=8.42"

79A

BORDER 2" RADIUS 9" E1-5P



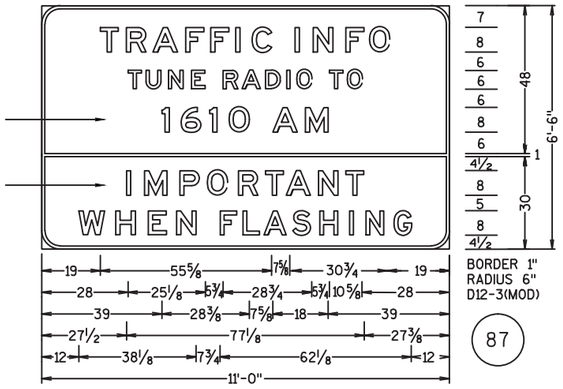
79

TYPE I SIGN

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 II".
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 UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E". ALL LOWERCASE MESSAGE WITH AN INITIAL UPPERCASE LETTER SHALL BE "SERIES E".
6. TYPE I SIGNS ALL UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E MODIFIED". ALL LOWER CASE MESSAGE WITH AN INITIAL UPPERCASE 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.

BLUE BACKGROUND WHITE MESSAGE

YELLOW TYPE F SHEETING BLACK MESSAGE

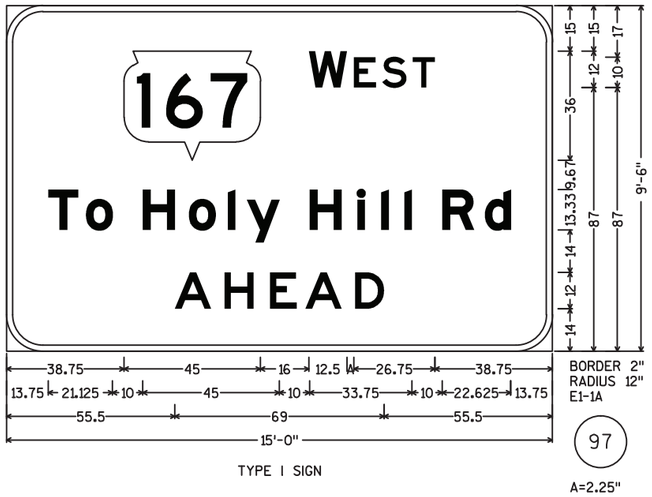


87

TYPE I SIGN

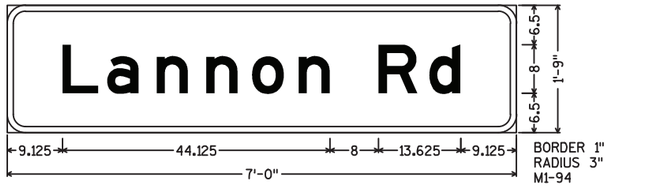
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: MILWAUKEE	SIGNING DETAIL - TYPE I & II SIGNS	SCALE: 0 1/2" 1"	SHEET 663	E

FILE NAME : N:\PDS\C3D\CAD\11003800\070101_MSTESTING.DWG PLOT DATE : 9/23/2013 4:47 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : ---------- PLOT SCALE : ******* WISDOT/CADDS SHEET 47

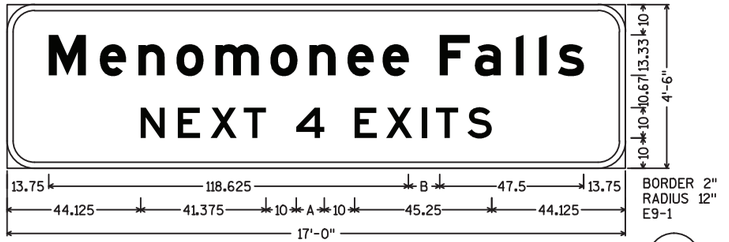


TYPE I SIGN

A=2.25"



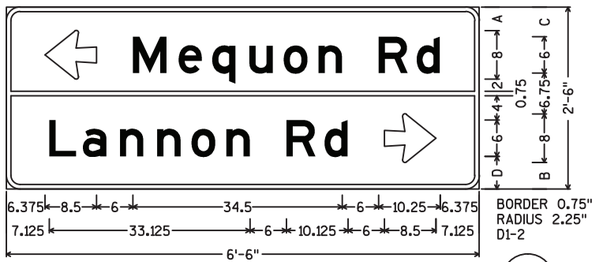
TYPE II SIGN



TYPE I SIGN

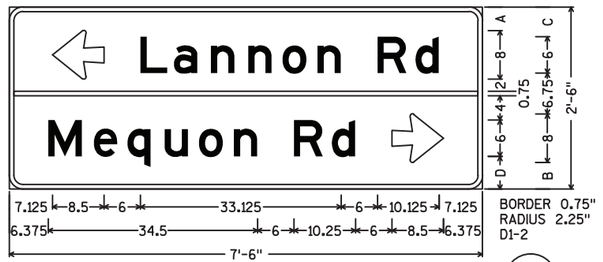
A=9.125"
B=10.375"

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 II".
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 UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E". ALL LOWERCASE MESSAGE WITH AN INITIAL UPPERCASE LETTER SHALL BE "SERIES E".
6. TYPE I SIGNS ALL UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E MODIFIED". ALL LOWER CASE MESSAGE WITH AN INITIAL UPPERCASE 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.



TYPE II SIGN
ARROWS FROM A1-2 STATE PLATE

A=3.875"
B=4.375"
C=4.875"
D=5.375"

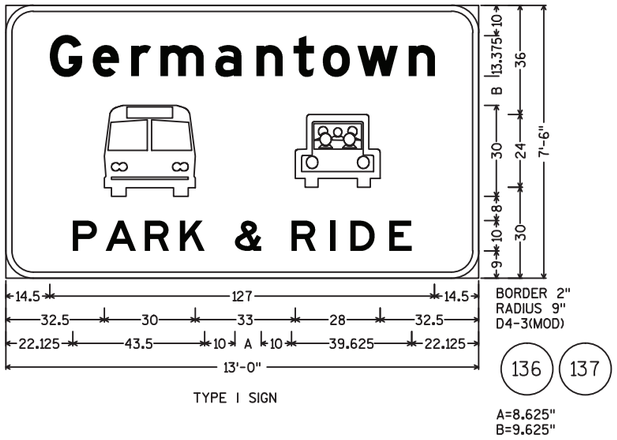


TYPE II SIGN
ARROWS FROM A1-2 STATE PLATE

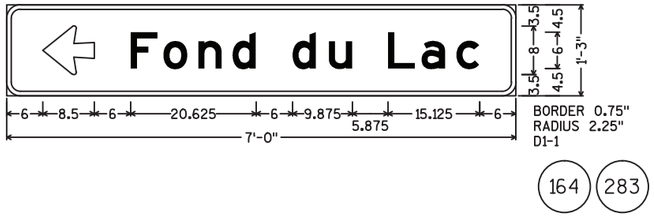
A=3.875"
B=4.375"
C=4.875"
D=5.375"

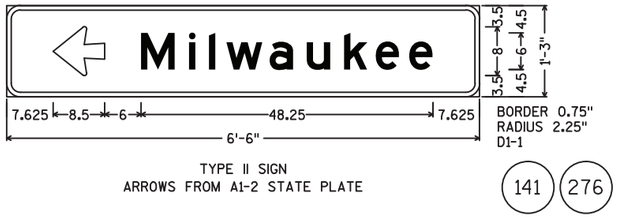
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: MILWAUKEE	SIGNING DETAIL - TYPE I & II SIGNS	SCALE: 0 ½" 1"	SHEET 664	E

FILE NAME : N:\PDS\C3D\CAD\11003800\070101_MSTESTING.DWG PLOT DATE : 9/23/2013 4:47 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : _____ PLOT SCALE : ******* WISDOT/CADDS SHEET 47

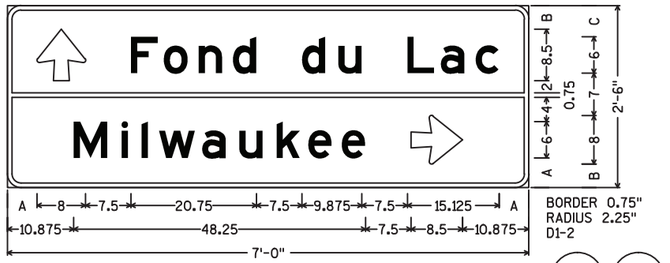


TYPE I SIGN

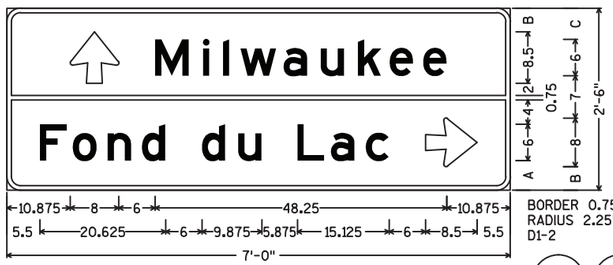




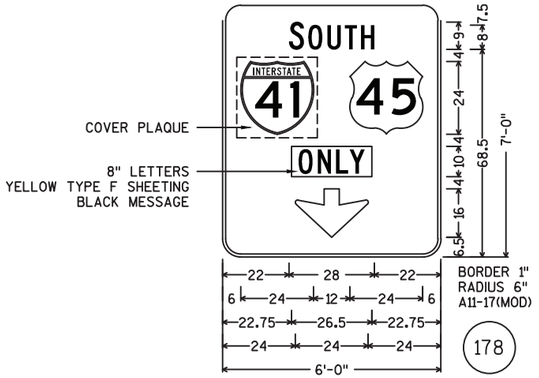
TYPE II SIGN
ARROWS FROM A1-2 STATE PLATE



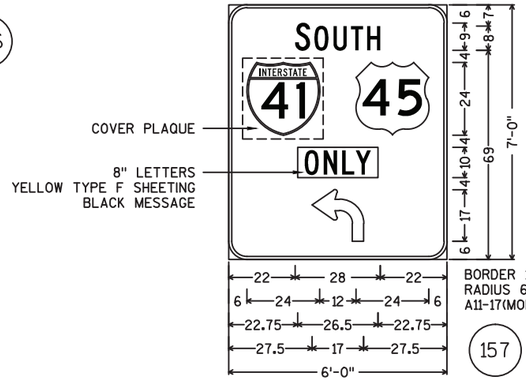
TYPE II SIGN
ARROWS FROM A1-2 STATE PLATE



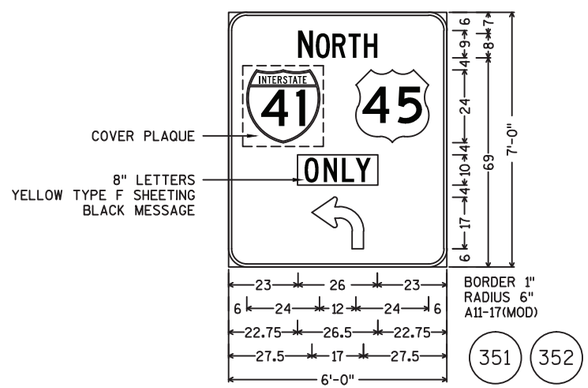
TYPE II SIGN
ARROWS FROM A1-2 STATE PLATE



TYPE I SIGN
SERIES C LETTERS
S-66-239



TYPE I SIGN
SERIES C LETTERS
S-66-203

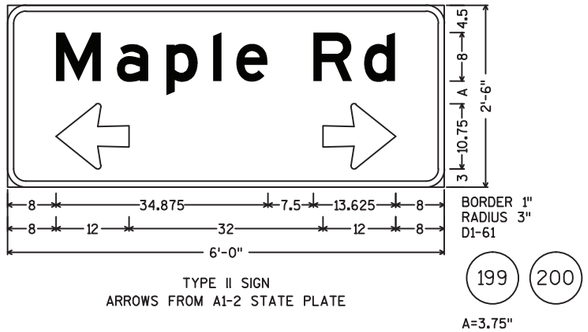


TYPE I SIGN
SERIES C LETTERS
S-66-240

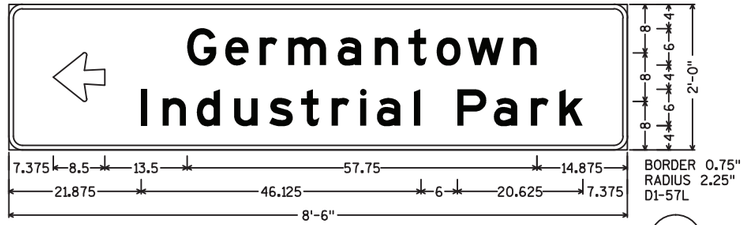
1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.
2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE II".
3. UNLESS OTHERWISE NOTED, 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 UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E". ALL LOWERCASE MESSAGE WITH AN INITIAL UPPERCASE LETTER SHALL BE "SERIES E".
6. TYPE I SIGNS ALL UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E MODIFIED". ALL LOWER CASE MESSAGE WITH AN INITIAL UPPERCASE 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: 1100-38-70	HWY: USH 41/45	COUNTY: MILWAUKEE	SIGNING DETAIL - TYPE I & II SIGNS	SCALE: 0 ½" 1"	SHEET 665	E

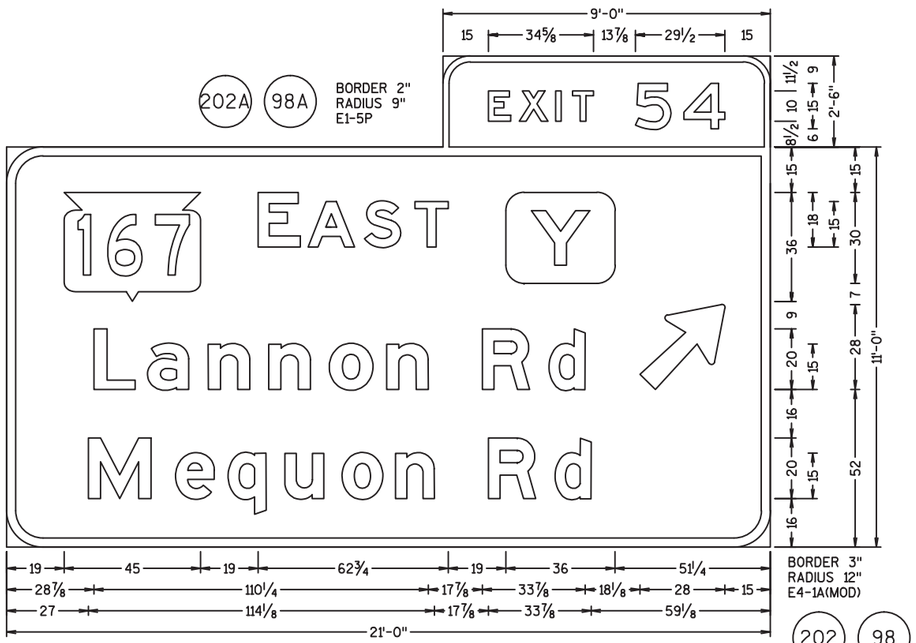
FILE NAME : N:\PDS\C3D\CAD\11003800\070101_MSTESTING.DWG PLOT DATE : 9/23/2013 4:47 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : _____ PLOT SCALE : *******
WISDOT/CADDS SHEET 47



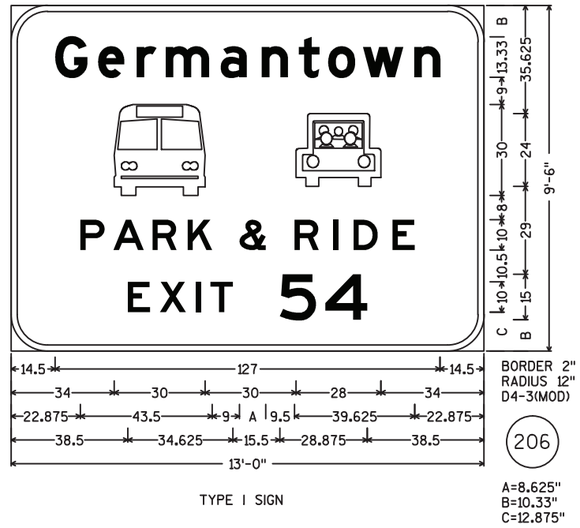
TYPE II SIGN
ARROWS FROM A1-2 STATE PLATE



TYPE II SIGN
ARROWS FROM A1-2 STATE PLATE

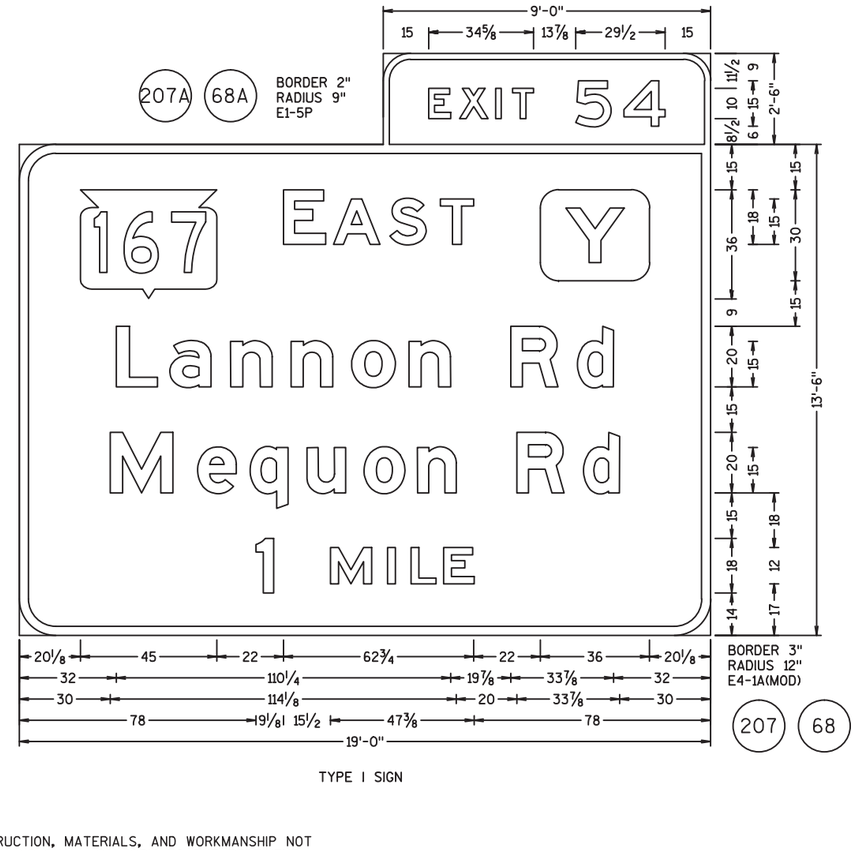


TYPE I SIGN

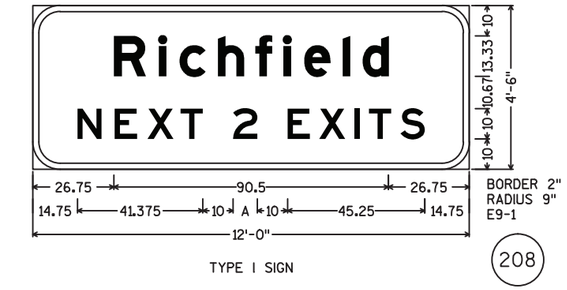


TYPE I SIGN

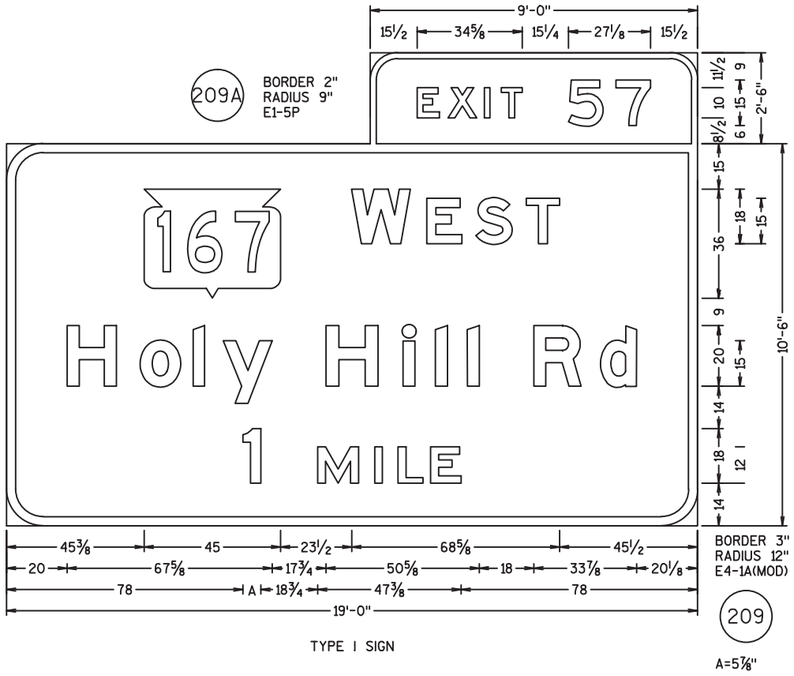
1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.
2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE II".
3. UNLESS OTHERWISE NOTED, 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 UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E". ALL LOWERCASE MESSAGE WITH AN INITIAL UPPERCASE LETTER SHALL BE "SERIES E".
6. TYPE I SIGNS ALL UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E MODIFIED". ALL LOWER CASE MESSAGE WITH AN INITIAL UPPERCASE 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.



TYPE I SIGN

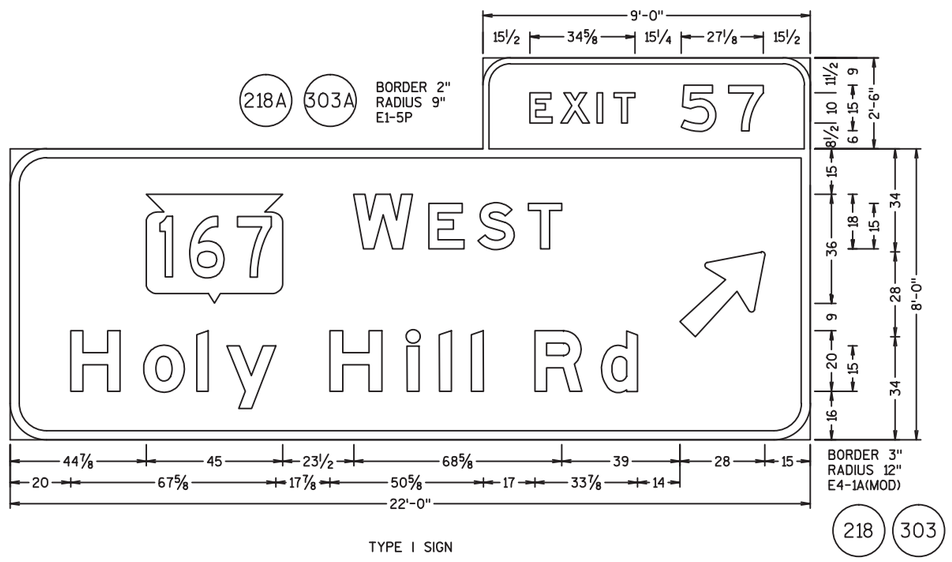


TYPE I SIGN

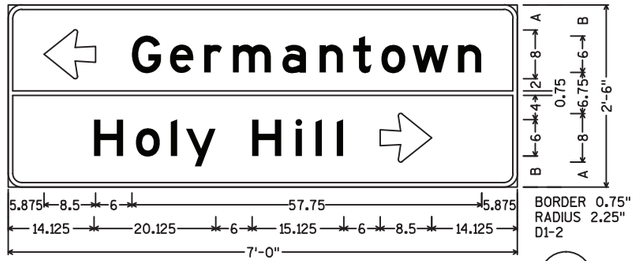


TYPE I SIGN

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 II".
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 UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E". ALL LOWERCASE MESSAGE WITH AN INITIAL UPPERCASE LETTER SHALL BE "SERIES E".
6. TYPE I SIGNS ALL UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E MODIFIED". ALL LOWER CASE MESSAGE WITH AN INITIAL UPPERCASE 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.

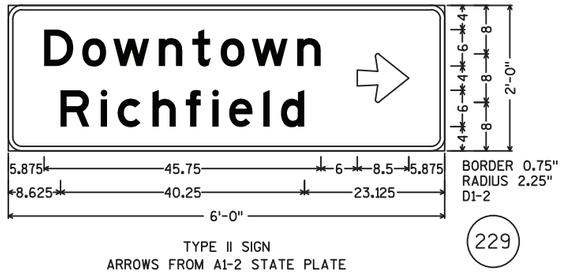


TYPE I SIGN



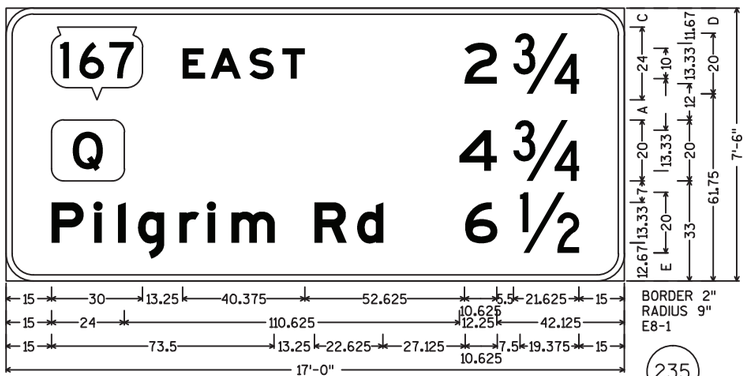
TYPE II SIGN
ARROWS FROM A1-2 STATE PLATE

A=4.125"
B=5.125"



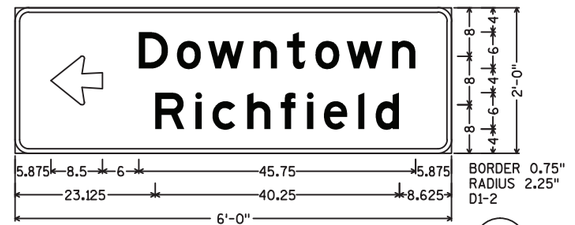
TYPE II SIGN
ARROWS FROM A1-2 STATE PLATE

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 II".
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 UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E". ALL LOWERCASE MESSAGE WITH AN INITIAL UPPERCASE LETTER SHALL BE "SERIES E".
6. TYPE I SIGNS ALL UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E MODIFIED". ALL LOWER CASE MESSAGE WITH AN INITIAL UPPERCASE 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.

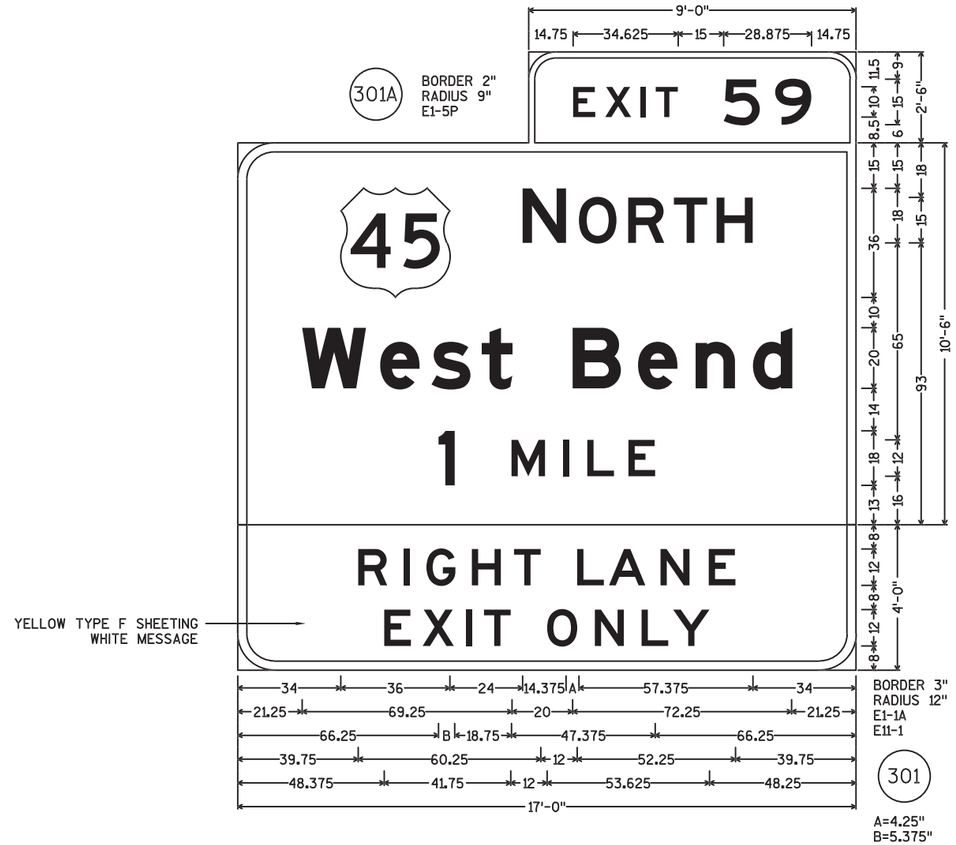


TYPE I SIGN

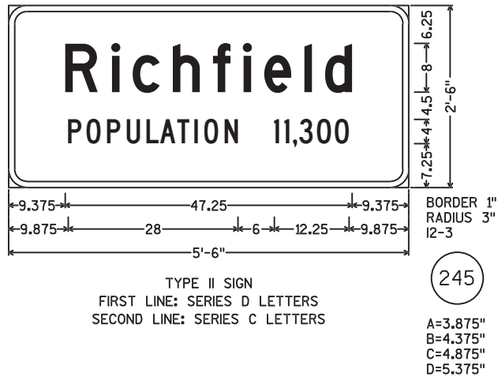
A=6.75"
B=7.125"
C=6.25"
D=8.25"
E=9.335"



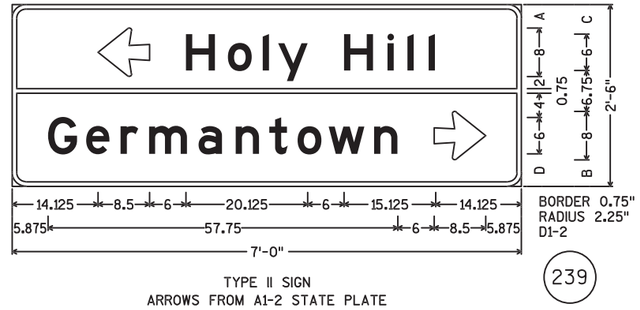
TYPE II SIGN
ARROWS FROM A1-2 STATE PLATE



TYPE I SIGN



TYPE II SIGN
FIRST LINE: SERIES D LETTERS
SECOND LINE: SERIES C LETTERS

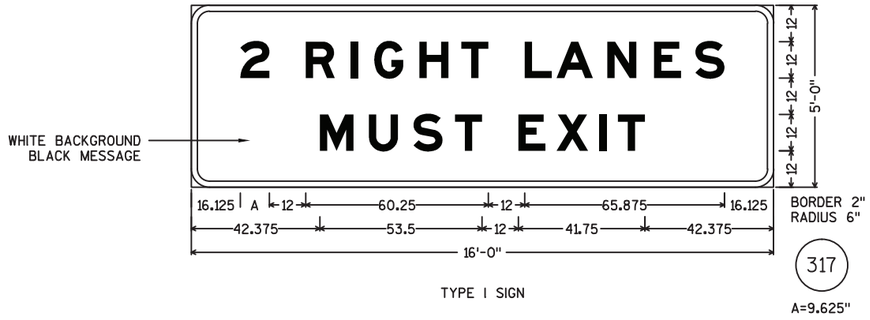


TYPE II SIGN
ARROWS FROM A1-2 STATE PLATE

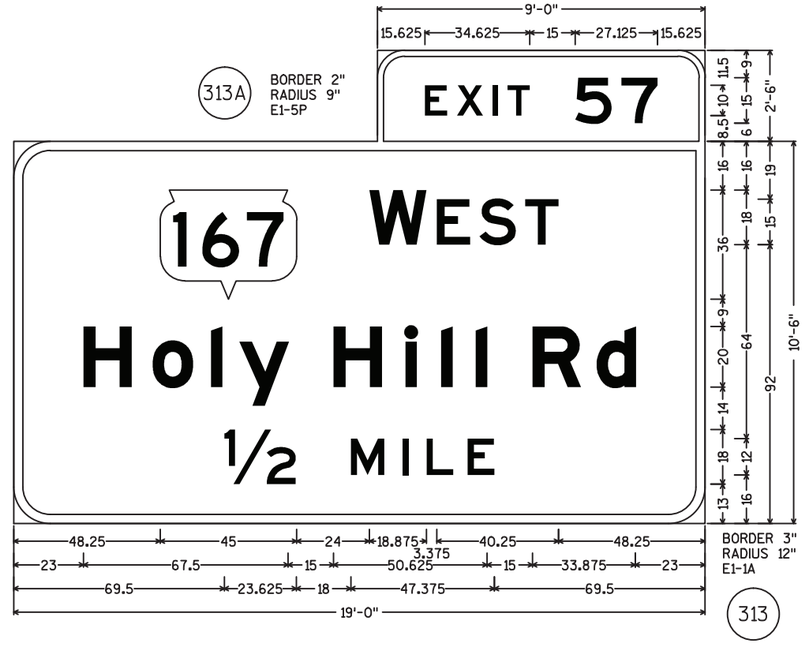
1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.
2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE II".
3. UNLESS OTHERWISE NOTED, 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 UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E". ALL LOWERCASE MESSAGE WITH AN INITIAL UPPERCASE LETTER SHALL BE "SERIES E".
6. TYPE I SIGNS ALL UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E MODIFIED". ALL LOWER CASE MESSAGE WITH AN INITIAL UPPERCASE 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: 1100-38-70	HWY: USH 41/45	COUNTY: MILWAUKEE	SIGNING DETAIL - TYPE I & II SIGNS	SCALE: 0 1/2" 1"	SHEET 669	E

FILE NAME : N:\PDS\C3D\CAD\11003800\070101_MSTESTING.DWG PLOT DATE : 9/23/2013 4:47 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : ---------- PLOT SCALE : *******
WISDOT/CADDS SHEET 47

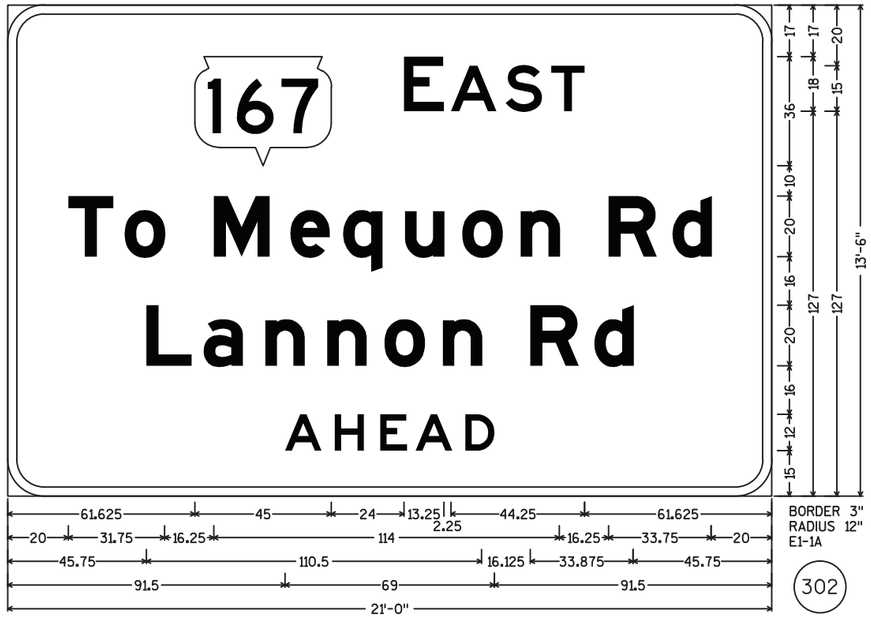


TYPE I SIGN



TYPE I SIGN

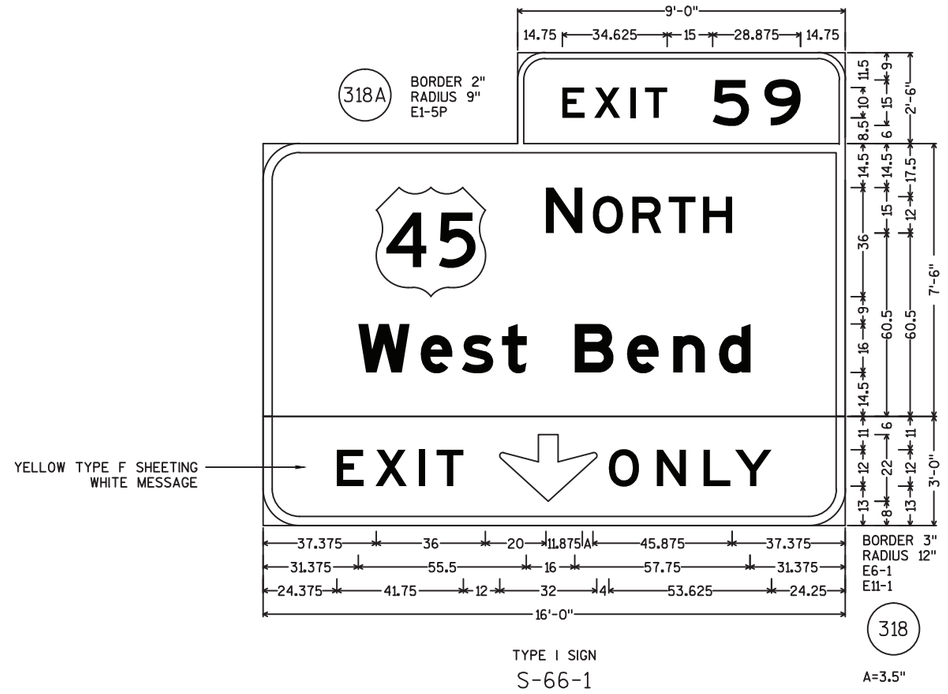
1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.
2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE II".
3. UNLESS OTHERWISE NOTED, 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 UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E". ALL LOWERCASE MESSAGE WITH AN INITIAL UPPERCASE LETTER SHALL BE "SERIES E".
6. TYPE I SIGNS ALL UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E MODIFIED". ALL LOWER CASE MESSAGE WITH AN INITIAL UPPERCASE 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.



TYPE I SIGN

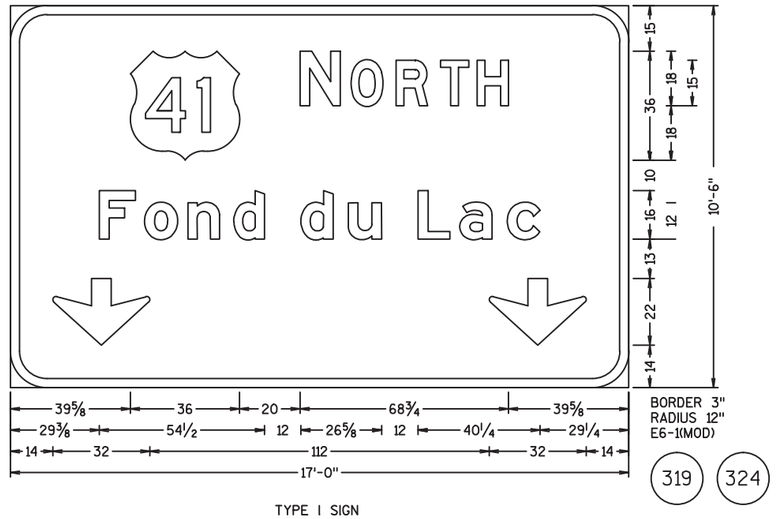
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: MILWAUKEE	SIGNING DETAIL - TYPE I & II SIGNS	SCALE: 0 1/2" 1"	SHEET 670	E

FILE NAME : N:\PDS\C3D\CAD\11003800\070101_MSTESTING.DWG PLOT DATE : 9/23/2013 4:47 PM PLOT BY : LAROSA, PHILIP P PLOT NAME : ---------- PLOT SCALE : *******
WISDOT/CADDS SHEET 47

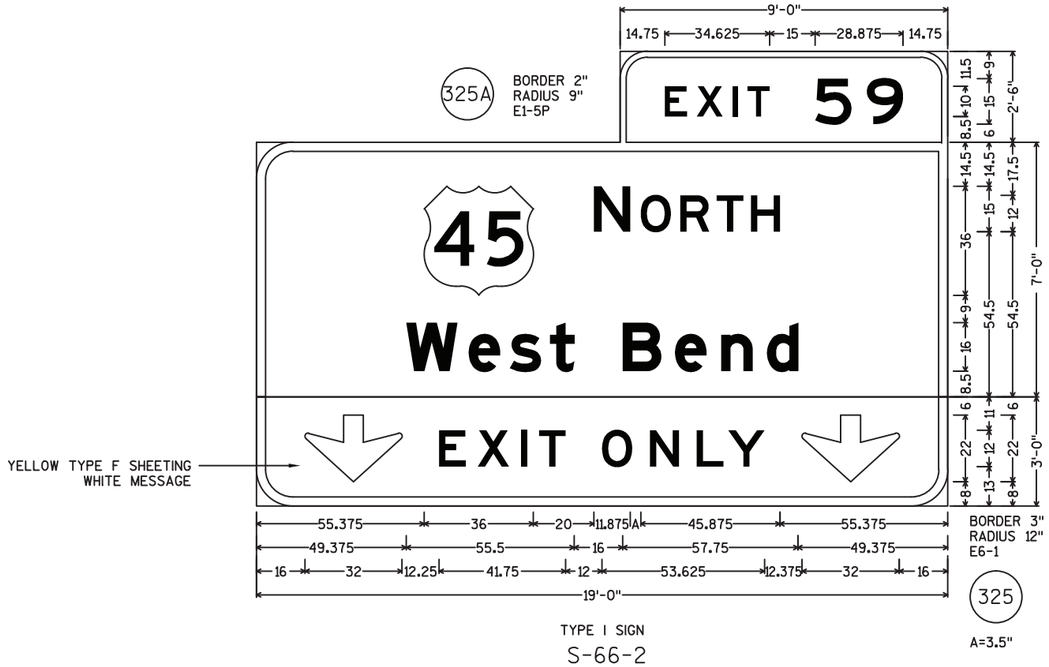


TYPE I SIGN

S-66-1



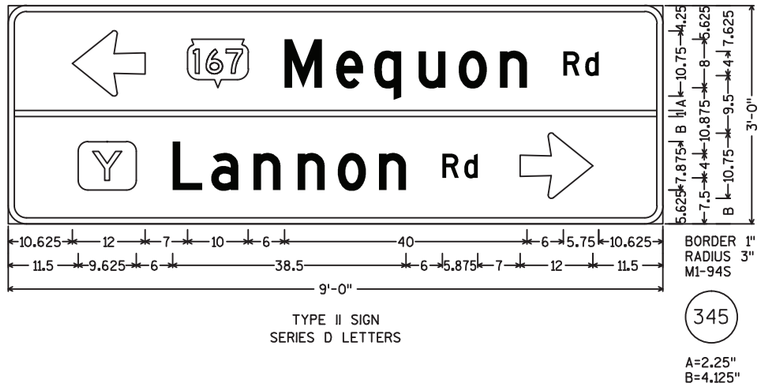
TYPE I SIGN



TYPE I SIGN

S-66-2

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 II".
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 UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E". ALL LOWERCASE MESSAGE WITH AN INITIAL UPPERCASE LETTER SHALL BE "SERIES E".
6. TYPE I SIGNS ALL UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E MODIFIED". ALL LOWER CASE MESSAGE WITH AN INITIAL UPPERCASE 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.



TYPE II SIGN
SERIES D LETTERS

BORDER 1"
RADIUS 3"
M1-94S

345

A=2.25"
B=4.125"

TYPE II SIGN
SERIES D LETTERS

BORDER 1"
RADIUS 3"
M1-94S

346

A=2.25"
B=4.125"

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 II".

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 UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E". ALL LOWERCASE MESSAGE WITH AN INITIAL UPPERCASE LETTER SHALL BE "SERIES E".

6. TYPE I SIGNS ALL UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E MODIFIED". ALL LOWER CASE MESSAGE WITH AN INITIAL UPPERCASE 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.

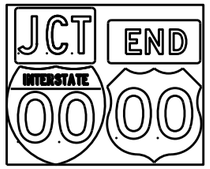
10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE "SERIES E" PER PLATES A11-7 AND A11-10.

11. DO NOT SCALE.

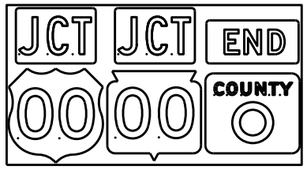
TYPICAL ASSEMBLIES



J1-1



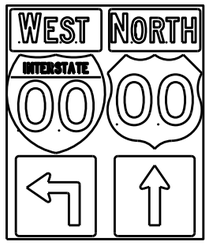
J1-2



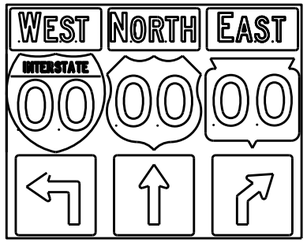
J1-3



J2-1



J2-2

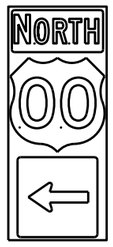


J2-3

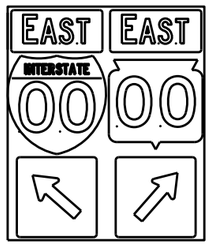


JV

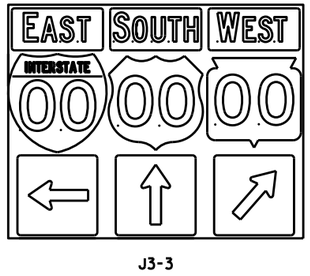
(Typical Vertical J-Assembly
See Note 10 and 11)



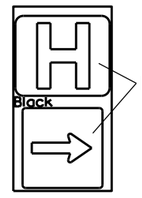
J3-1



J3-2



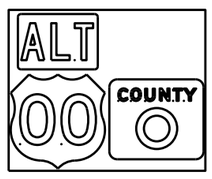
J3-3



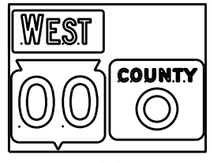
JH-1



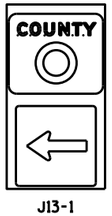
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1

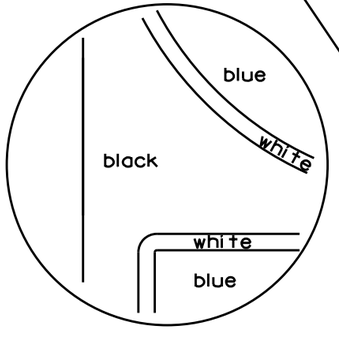


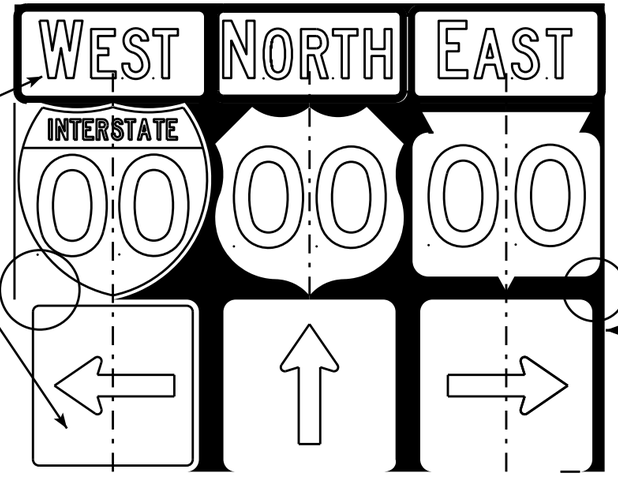
J23-1

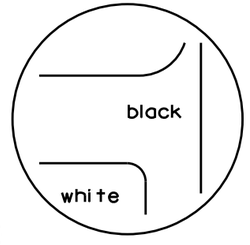


J22-1

blue background
with interstate







black background

NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Black Non-reflective
   Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inchs (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

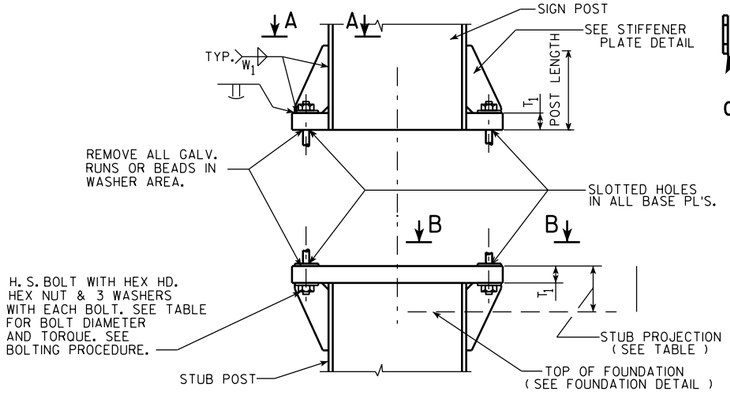
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

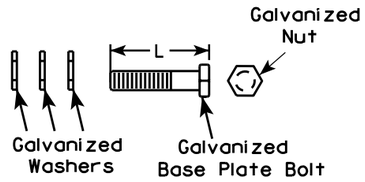
DATE 2/06/14 PL... A2-1S.8

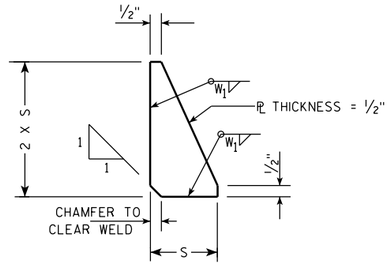
PROJECT NO: | SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :
WISDOT/CADDS SHEET 42



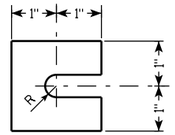
SIGN POST AND STUB POST ELEVATION





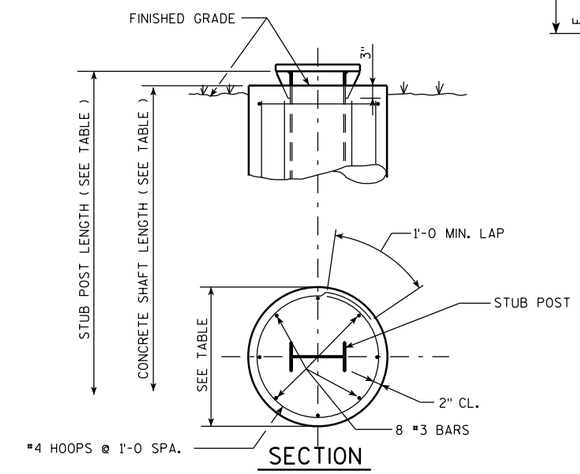
STIFFENER PLATE DETAIL

(SEE TABLE FOR DIMENSIONS)

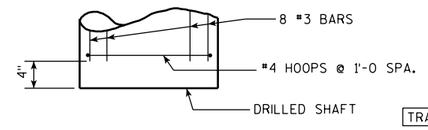


FURNISH 2 @ .012" ± THICK AND 2 @ .032" ± THICK SHIMS PER POST. SHIMS SHALL BE FABRICATED FROM BRASS SHIM STOCK OR STRIP CONFORMING TO A.S.T.M.- B36.

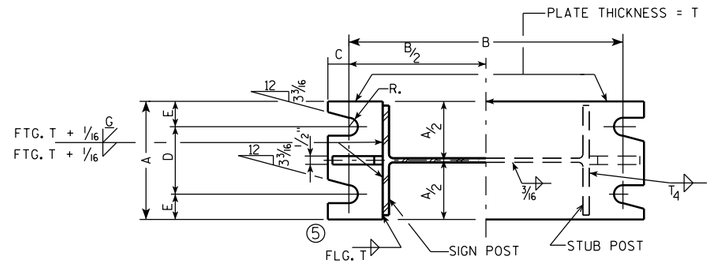
SHIM DETAIL



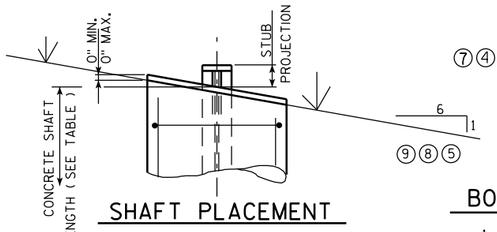
SECTION



FOUNDATION DETAIL



SECTION A-A SECTION B-B



SHAFT PLACEMENT

7 4

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 & ½ WIND[4]	140	[4]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.

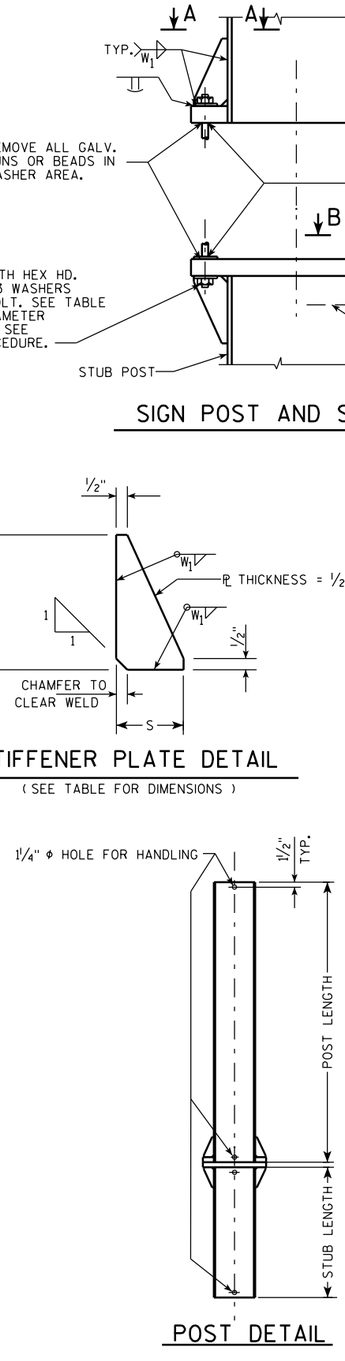
GENERAL NOTES

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. PRIOR TO BOLT TIGHTENING LUBRICATE BASE CONNECTION BOLTS WITH BEESWAX OR OTHER HIGH-WAX LUBRICANT.
4. 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)
5. BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

NOTE:
TIGHTEN THE HIGH STRENGTH BOLTS TO THE TORQUE SHOWN. DO NOT OVERTIGHTEN.



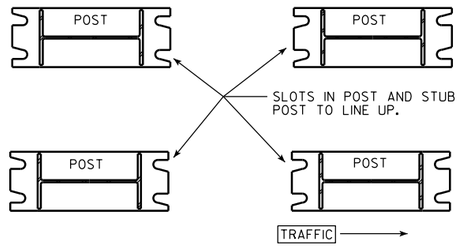
POST DETAIL

QUANTITIES FOR 1 FOOTING		
	CONC. MASONRY C.Y.	REINF. STEEL LBS.
A	0.6	34
B	0.8	49
C	0.9	50
D	0.9	56
E	1.0	62

7

REINF.	TYPE	#3	#4
	A	8 @ 4'-5	5 @ 6'-3
	B	8 @ 6'-5	7 @ 6'-3
	C	8 @ 6'-11	7 @ 6'-3
	D	8 @ 7'-5	8 @ 6'-3
	E	8 @ 7'-11	9 @ 6'-3

7



POST SLOT ORIENTATION 7

L	X	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	K
3 ¾	4	A	W10"X12.0 #/FT.	¾" Φ @ 75#-FT.	5¼"	1'-0⅜"	⅞"	3½"	⅞"	1"	3/16"	5/16"	13/32"	2⅛"	3'-6	3"	2'-0 Φ	5'-0	76.0# 4
4 ¾	4	B	W12"X16.0 #/FT.	⅞" Φ @ 85#-FT.	5½"	1'-4¼"	1"	3½"	1"	1¼"	¼"	5/16"	15/32"	3"	5'-6	3"	2'-0 Φ	7'-0	146.5# 4
5		C	W12"X19.0 #/FT.	⅞" Φ @ 85#-FT.	5½"	1'-4¼"	1"	3½"	1"	1½"	5/16"	5/16"	15/32"	3"	6'-0	3"	2'-0 Φ	7'-6	182.1#
5		D	W12"X22.0 #/FT.	⅞" Φ @ 85#-FT.	5½"	1'-4¼"	1"	3½"	1"	1½"	3/8"	5/16"	15/32"	3"	6'-6	3"	2'-0 Φ	8'-0	210.5#
5	3	E	W12"X26.0 #/FT.	1" Φ @ 90#-FT.	7"	1'-4¼"	1¼"	4"	1½"	1½"	3/8"	5/16"	17/32"	3"	7'-0	3"	2'-0 Φ	8'-6	293.0# 3

2

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 6/30/14 PLATE NO. A3-1.15

10	1-21-14	LUBRICATION OF BASE BOLTS
9	4-26-11	REMOVE NON-GALVANIZED
8	10-30-96	NOT GALVANIZED/GALVANIZED
7	10-30-92	QUANT., A588 EXCEPT., ADD SLOT VIEW
6	8-24-87	BASE CONN. WELD
5	10-13-81	BASE CONN. WELD & FUSE PL WASHERS
4	10-19-79	POST A & B, A572 GR. 50, & K
2	11-28-78	"K" 3 4-23-79 TYPE "E"
1	5-4-78	T_1 , T_2 & W_1
NO.	DATE	REVISION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

TYPE A, B, C, D, & E

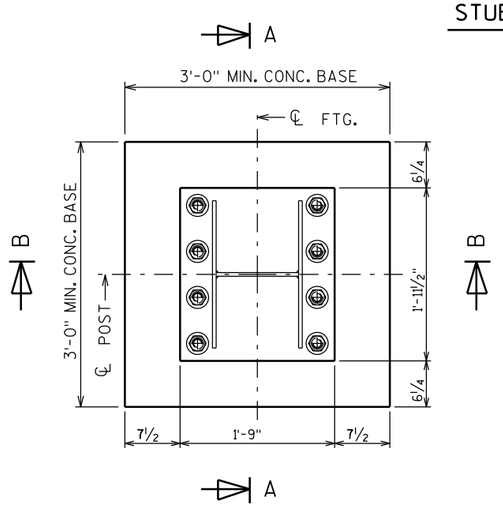
CONST. SPEC. 2011	DRAWN BY JPH	PLANS CK'D.

FTG. & SIGN SUPPORT DETAILS GROUND MOUNT BREAK-AWAY SIGNS

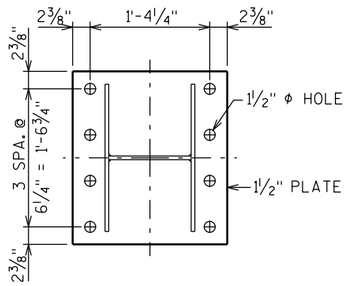
SHEET 674

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

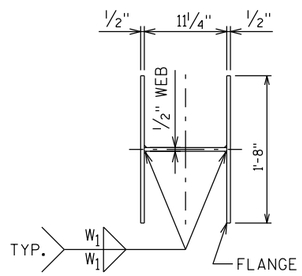
STUB AND MASONRY ANCHOR DETAILS



STUB SECTION



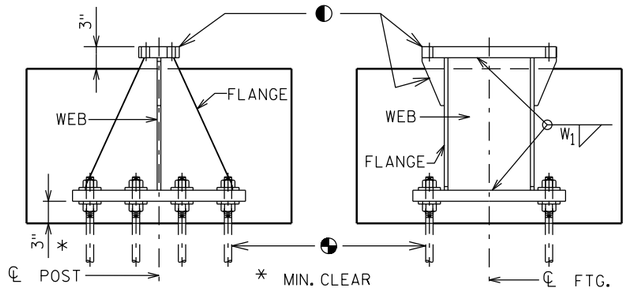
BASE PLATE



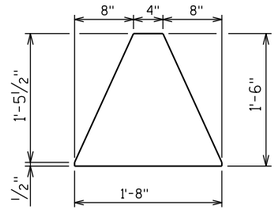
STUB

◐ SEE PLATE NO. A3-1 FOR DETAILS

◒ MASONRY ANCHORS TYPE S 1¼-INCHES (ADHESIVE). ALLOWABLE PULL OUT CAPACITY 14,995 KIPS. EMBED 1'-3" IN ROCK.



SECTION A SECTION B



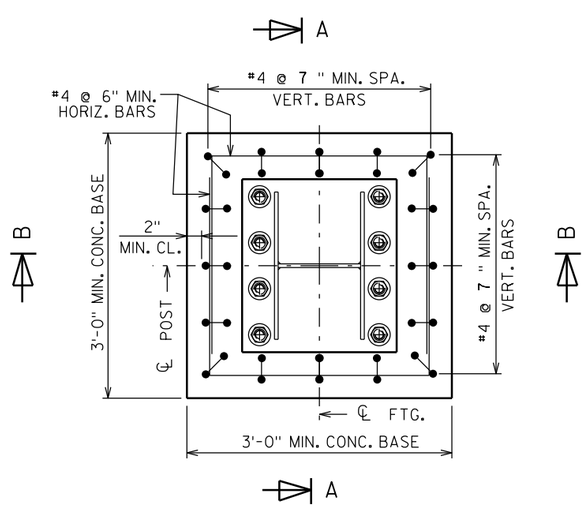
FLANGE

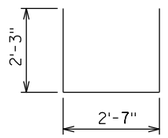
GENERAL NOTES

1. Quantities per Base:
   - REINFORCING BAR STEEL = 62 LBS
   - CONCRETE = 0.6 C.Y.
   - STEEL WEIGHT = 335 LBS
2. All materials, except anchor rod, nuts and washers, are to be A.S.T.M. A709 grade 50. All materials to be galvanized after fabrication.
3. If the contractor encounters rock before reaching the footing depth, per the A3-1 Sign Detail, determine the pull-out capacity of a test adhesive anchor installed in the rock. If the test result equals or exceeds the pull-out capacity of 14,995 KIPS, the contractor may install the breakaway stub for rock, according to this detail.

CONCRETE BASE AND REINFORCING STEEL DETAILS

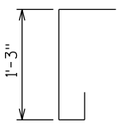
CONCRETE BASE SECTION





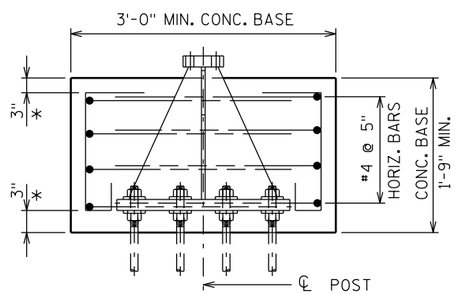
HORIZONTAL BAR

8 BARS @ 6'-11" LENGTH



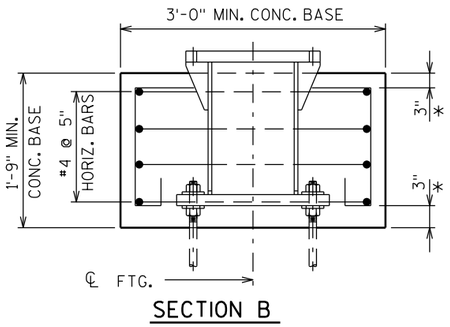
VERTICAL BARS

16 BARS @ 2'-4" LENGTH
MAY BE PLACED IN SKEW
FOR CLEARANCE NEED



SECTION A

* MIN. CLEAR



SECTION B

ALTERNATE BREAK-AWAY BASE ON ROCK
A3-1M

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 2/06/2014 PLATE 675 A3-1M.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

VERITCAL DIMENSION ⇨

HORIZONTAL DIMENSION ⇩

⇩ \ ⇨	2.5 ft.	3 ft.	3.5 ft.	4 ft.	4.5 ft.	5 ft.	5.5 ft.	6 ft.	6.5 ft.	7 ft.	7.5 ft.	8 ft.	8.5 ft.	9 ft.	9.5 ft.	10 ft.	10.5 ft.	11 ft.	11.5 ft.	12 ft.	12.5 ft.	13 ft.	13.5 ft.	14 ft.	14.5 ft.	15 ft.	15.5 ft.	16 ft.
10 ft.	25 Sq. Ft	30 Sq. Ft	35 Sq. Ft	40 Sq. Ft	45 Sq. Ft	50 Sq. Ft	55 Sq. Ft	60 Sq. Ft	65 Sq. Ft	70 Sq. Ft	75 Sq. Ft	80 Sq. Ft	85 Sq. Ft	90 Sq. Ft	95 Sq. Ft	100 Sq. Ft	105 Sq. Ft	110 Sq. Ft	115 Sq. Ft	120 Sq. Ft	125 Sq. Ft	130 Sq. Ft	135 Sq. Ft	140 Sq. Ft	145 Sq. Ft	150 Sq. Ft	155 Sq. Ft	160 Sq. Ft
11 ft.	27.5 Sq. Ft	33 Sq. Ft	38.5 Sq. Ft	44 Sq. Ft	49.5 Sq. Ft	55 Sq. Ft	60.5 Sq. Ft	66 Sq. Ft	71.5 Sq. Ft	77 Sq. Ft	82.5 Sq. Ft	88 Sq. Ft	93.5 Sq. Ft	99 Sq. Ft	104.5 Sq. Ft	110 Sq. Ft	115.5 Sq. Ft	121 Sq. Ft	126.5 Sq. Ft	132 Sq. Ft	137.5 Sq. Ft	143 Sq. Ft	148.5 Sq. Ft	154 Sq. Ft	159.5 Sq. Ft	165 Sq. Ft	170.5 Sq. Ft	176 Sq. Ft
12 ft.	30 Sq. Ft	36 Sq. Ft	42 Sq. Ft	48 Sq. Ft	54 Sq. Ft	60 Sq. Ft	66 Sq. Ft	72 Sq. Ft	78 Sq. Ft	84 Sq. Ft	90 Sq. Ft	96 Sq. Ft	102 Sq. Ft	108 Sq. Ft	114 Sq. Ft	120 Sq. Ft	126 Sq. Ft	132 Sq. Ft	138 Sq. Ft	144 Sq. Ft	150 Sq. Ft	156 Sq. Ft	162 Sq. Ft	168 Sq. Ft	174 Sq. Ft	180 Sq. Ft	186 Sq. Ft	192 Sq. Ft
13 ft.	32.5 Sq. Ft	39 Sq. Ft	45.5 Sq. Ft	52 Sq. Ft	58.5 Sq. Ft	65 Sq. Ft	71.5 Sq. Ft	78 Sq. Ft	84.5 Sq. Ft	91 Sq. Ft	97.5 Sq. Ft	104 Sq. Ft	110.5 Sq. Ft	117 Sq. Ft	123.5 Sq. Ft	130 Sq. Ft	136.5 Sq. Ft	143 Sq. Ft	149.5 Sq. Ft	156 Sq. Ft	162.5 Sq. Ft	169 Sq. Ft	175.5 Sq. Ft	182 Sq. Ft	188.5 Sq. Ft	195 Sq. Ft	201.5 Sq. Ft	208 Sq. Ft
14 ft.	35 Sq. Ft	42 Sq. Ft	49 Sq. Ft	56 Sq. Ft	63 Sq. Ft	70 Sq. Ft	77 Sq. Ft	84 Sq. Ft	91 Sq. Ft	98 Sq. Ft	105 Sq. Ft	112 Sq. Ft	119 Sq. Ft	126 Sq. Ft	133 Sq. Ft	140 Sq. Ft	147 Sq. Ft	154 Sq. Ft	161 Sq. Ft	168 Sq. Ft	175 Sq. Ft	182 Sq. Ft	189 Sq. Ft	196 Sq. Ft	203 Sq. Ft	210 Sq. Ft	217 Sq. Ft	224 Sq. Ft
15 ft.	37.5 Sq. Ft	45 Sq. Ft	52.5 Sq. Ft	60 Sq. Ft	67.5 Sq. Ft	75 Sq. Ft	82.5 Sq. Ft	90 Sq. Ft	97.5 Sq. Ft	105 Sq. Ft	112.5 Sq. Ft	120 Sq. Ft	127.5 Sq. Ft	135 Sq. Ft	142.5 Sq. Ft	150 Sq. Ft	157.5 Sq. Ft	165 Sq. Ft	172.5 Sq. Ft	180 Sq. Ft	187.5 Sq. Ft	195 Sq. Ft	202.5 Sq. Ft	210 Sq. Ft	217.5 Sq. Ft	225 Sq. Ft	232.5 Sq. Ft	240 Sq. Ft
16 ft.	40 Sq. Ft	48 Sq. Ft	56 Sq. Ft	64 Sq. Ft	72 Sq. Ft	80 Sq. Ft	88 Sq. Ft	96 Sq. Ft	104 Sq. Ft	112 Sq. Ft	120 Sq. Ft	128 Sq. Ft	136 Sq. Ft	144 Sq. Ft	152 Sq. Ft	160 Sq. Ft	168 Sq. Ft	176 Sq. Ft	184 Sq. Ft	192 Sq. Ft	200 Sq. Ft	208 Sq. Ft	216 Sq. Ft	224 Sq. Ft	232 Sq. Ft	240 Sq. Ft	248 Sq. Ft	256 Sq. Ft
17 ft.	42.5 Sq. Ft	51 Sq. Ft	59.5 Sq. Ft	68 Sq. Ft	76.5 Sq. Ft	85 Sq. Ft	93.5 Sq. Ft	102 Sq. Ft	110.5 Sq. Ft	119 Sq. Ft	127.5 Sq. Ft	136 Sq. Ft	144.5 Sq. Ft	153 Sq. Ft	161.5 Sq. Ft	170 Sq. Ft	178.5 Sq. Ft	187 Sq. Ft	195.5 Sq. Ft	204 Sq. Ft	212.5 Sq. Ft	221 Sq. Ft	229.5 Sq. Ft	238 Sq. Ft	246.5 Sq. Ft	255 Sq. Ft	263.5 Sq. Ft	272 Sq. Ft
18 ft.	45 Sq. Ft	54 Sq. Ft	63 Sq. Ft	72 Sq. Ft	81 Sq. Ft	90 Sq. Ft	99 Sq. Ft	108 Sq. Ft	117 Sq. Ft	126 Sq. Ft	135 Sq. Ft	144 Sq. Ft	153 Sq. Ft	162 Sq. Ft	171 Sq. Ft	180 Sq. Ft	189 Sq. Ft	198 Sq. Ft	207 Sq. Ft	216 Sq. Ft	225 Sq. Ft	234 Sq. Ft	243 Sq. Ft	252 Sq. Ft	261 Sq. Ft	270 Sq. Ft	279 Sq. Ft	288 Sq. Ft
19 ft.	47.5 Sq. Ft	57 Sq. Ft	66.5 Sq. Ft	76 Sq. Ft	85.5 Sq. Ft	95 Sq. Ft	104.5 Sq. Ft	114 Sq. Ft	123.5 Sq. Ft	133 Sq. Ft	142.5 Sq. Ft	152 Sq. Ft	161.5 Sq. Ft	171 Sq. Ft	180.5 Sq. Ft	190 Sq. Ft	199.5 Sq. Ft	209 Sq. Ft	218.5 Sq. Ft	228 Sq. Ft	237.5 Sq. Ft	247 Sq. Ft	256.5 Sq. Ft	266 Sq. Ft	275.5 Sq. Ft	285 Sq. Ft	294.5 Sq. Ft	304 Sq. Ft
20 ft.	50 Sq. Ft	60 Sq. Ft	70 Sq. Ft	80 Sq. Ft	90 Sq. Ft	100 Sq. Ft	110 Sq. Ft	120 Sq. Ft	130 Sq. Ft	140 Sq. Ft	150 Sq. Ft	160 Sq. Ft	170 Sq. Ft	180 Sq. Ft	190 Sq. Ft	200 Sq. Ft	210 Sq. Ft	220 Sq. Ft	230 Sq. Ft	240 Sq. Ft	250 Sq. Ft	260 Sq. Ft	270 Sq. Ft	280 Sq. Ft	290 Sq. Ft	300 Sq. Ft	310 Sq. Ft	320 Sq. Ft
21 ft.	52.5 Sq. Ft	63 Sq. Ft	73.5 Sq. Ft	84 Sq. Ft	94.5 Sq. Ft	105 Sq. Ft	115.5 Sq. Ft	126 Sq. Ft	136.5 Sq. Ft	147 Sq. Ft	157.5 Sq. Ft	168 Sq. Ft	178.5 Sq. Ft	189 Sq. Ft	199.5 Sq. Ft	210 Sq. Ft	220.5 Sq. Ft	231 Sq. Ft	241.5 Sq. Ft	252 Sq. Ft	262.5 Sq. Ft	273 Sq. Ft	283.5 Sq. Ft	294 Sq. Ft	304.5 Sq. Ft	315 Sq. Ft	325.5 Sq. Ft	336 Sq. Ft

Type "A" (2 Posts)
1.2 CY Conc.
68 LBs Bar Steel

Type "B" (2 Posts)
1.6 CY Conc.
98 LBs Bar Steel

Type "C" (2 Posts)
1.8 CY Conc.
100 LBs Bar Steel

Type "D" (2 Posts)
1.8 CY Conc.
112 LBs Bar Steel

Type "C" (3 Posts)
2.7 CY Conc.
150 LBs Bar Steel

STEEL POST SIZE

"A" - W10" x 12"
"B" - W12" x 16"
"C" - W12" x 19"
"D" - W12 x 22"

7

7

DETERMINATION OF HIGH STRENGTH STRUCTURAL STEEL SIGN SUPPORT TYPE

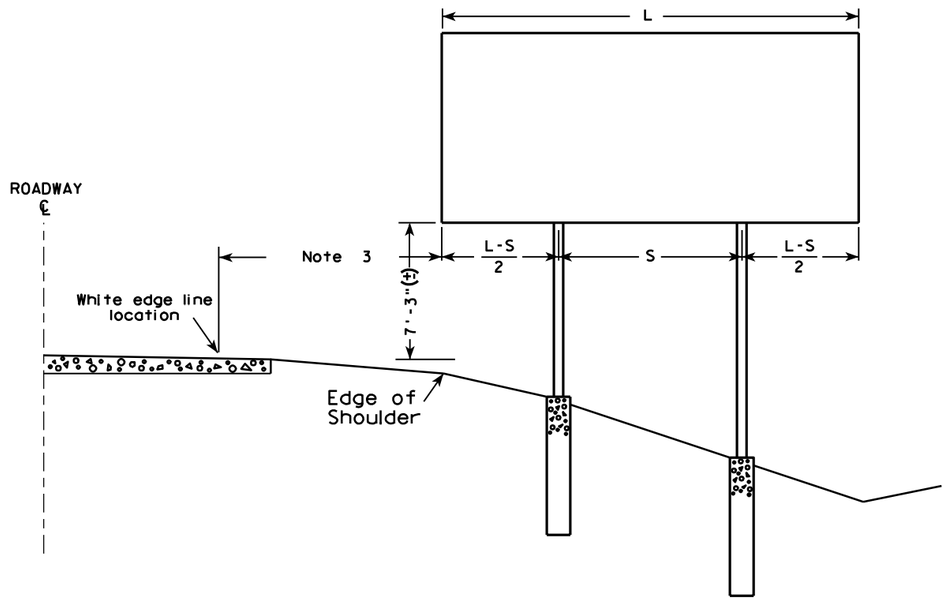
WISCONSIN DEPT OF TRANSPORTATION

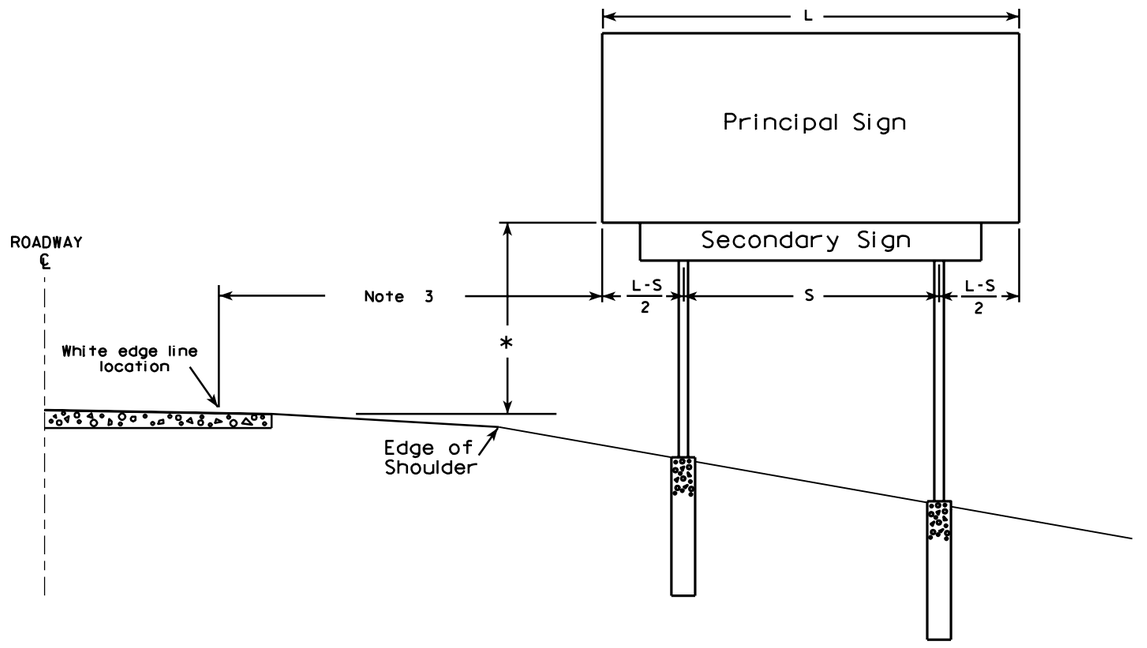
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/03/10 PLATE NO. A3-2.2

PROJECT NO: | SHEET NO: E

FILE NAME : C:\users\PROJECTS\tr_stdplate\A32.DGN PLOT DATE : 05-MAR-2010 10:10 PLOT BY : ditjph





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

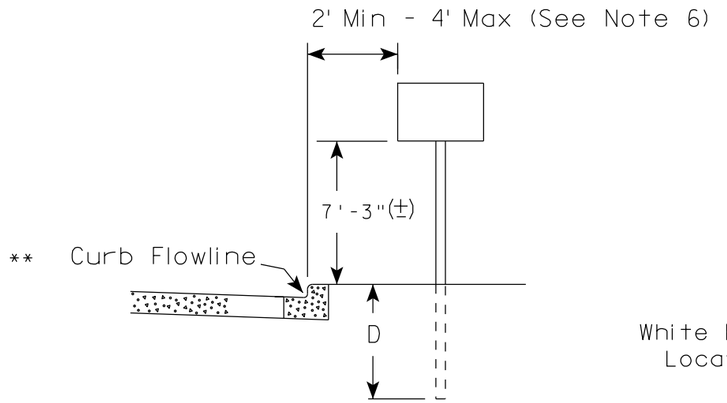
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

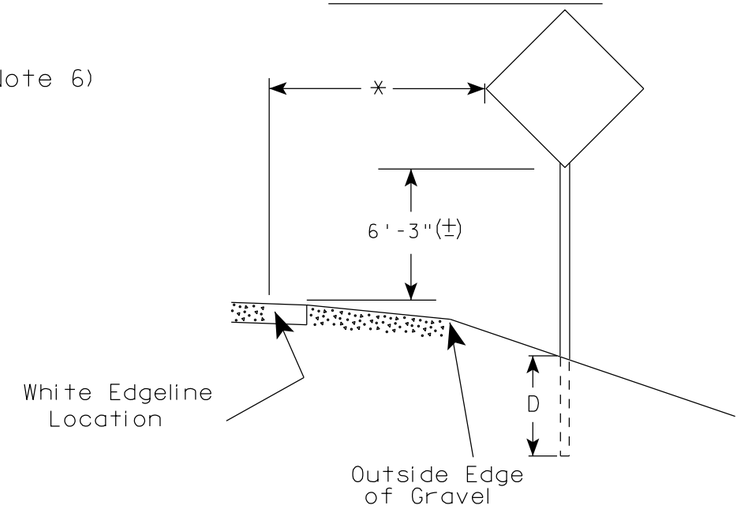
DATE 4/02/08 PLATE NO. A4-1.9

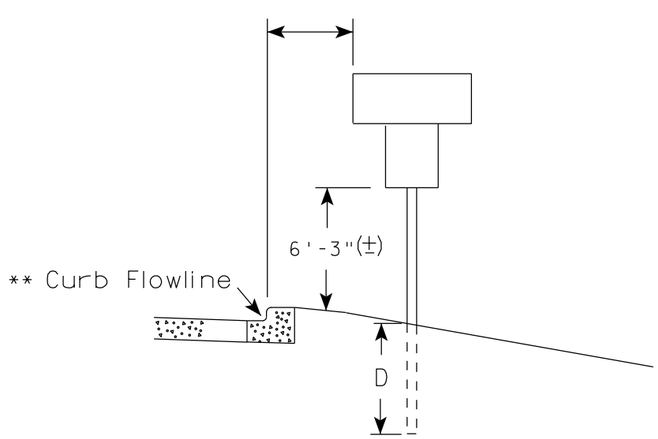
PROJECT NO:				SHEET NO: 677	E

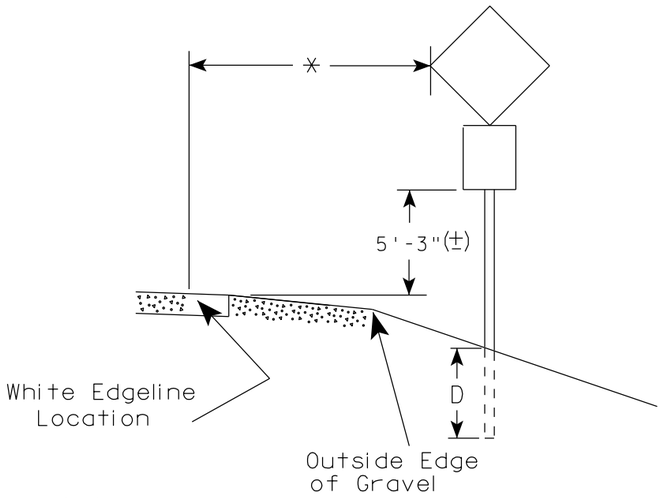
URBAN AREA



RURAL AREA (See Note 2)







GENERAL NOTES

1. Signs wider than 4 feet, 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

** 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.

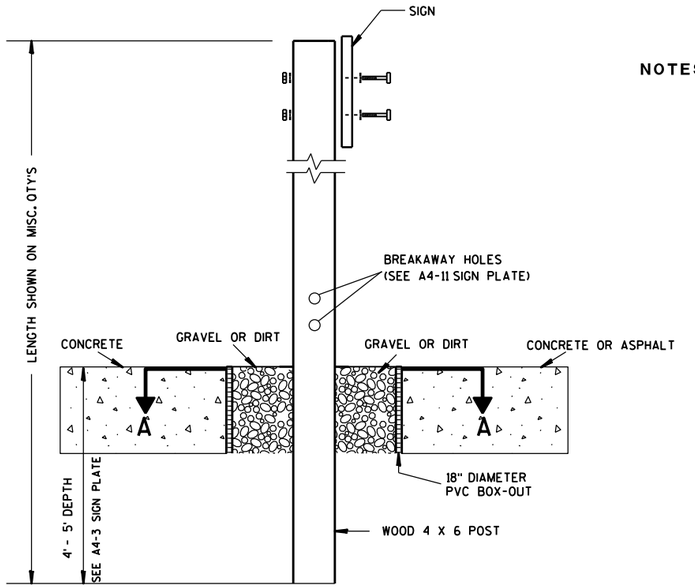
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/14 PLATE NO. A4-3.19

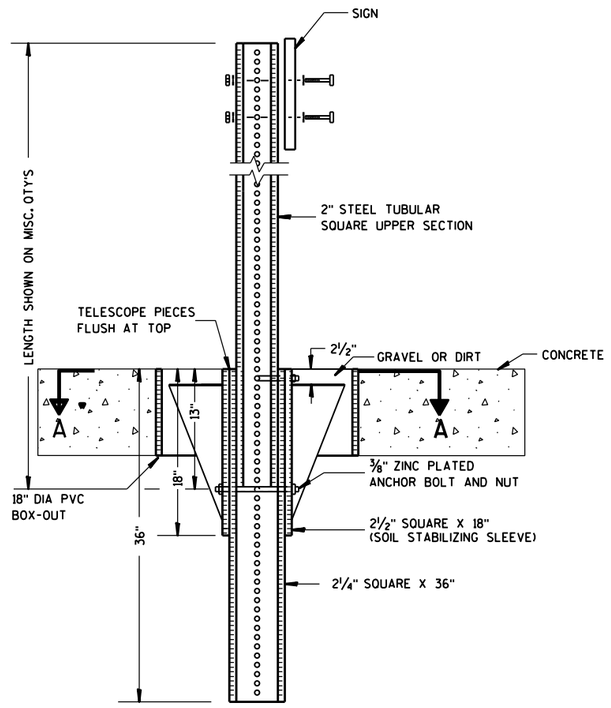
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



ELEVATION VIEW

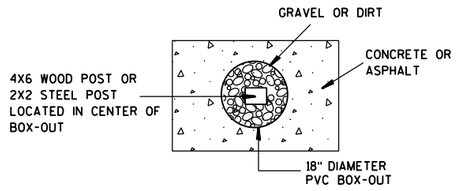
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

NOTES:
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

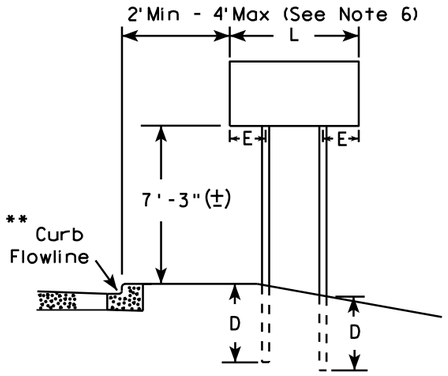
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

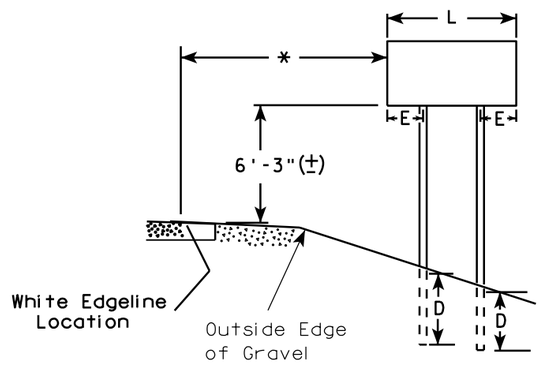
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

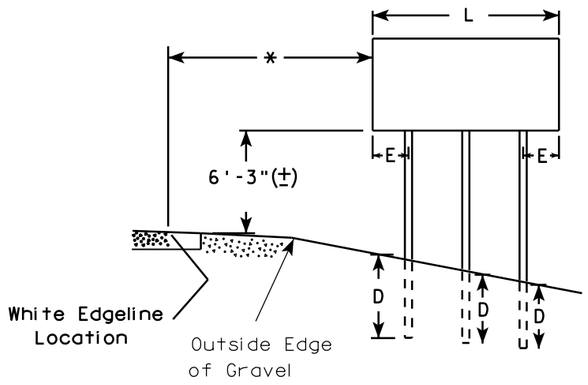
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

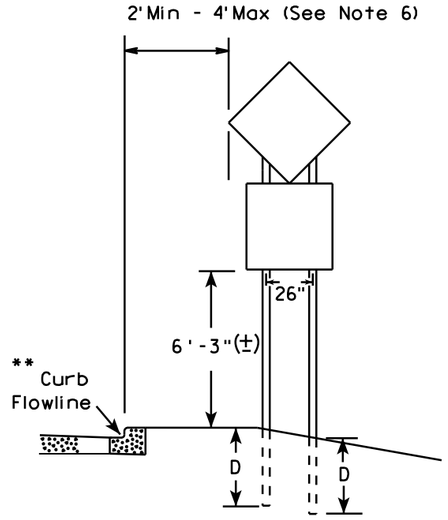
URBAN AREA



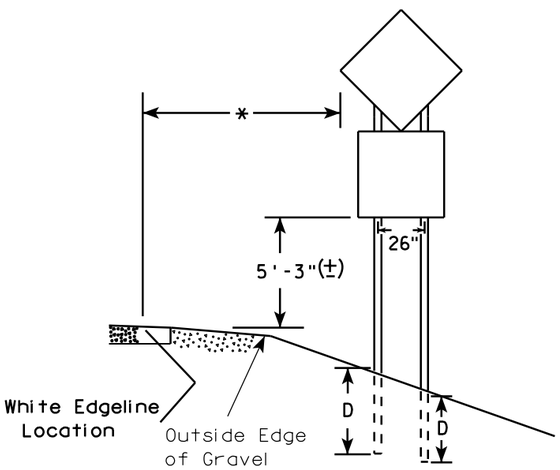
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

*** See A4-3 sign plate for signs 4' or less in width or less than 20 S.F. in area.

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 120"	L/5

***

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

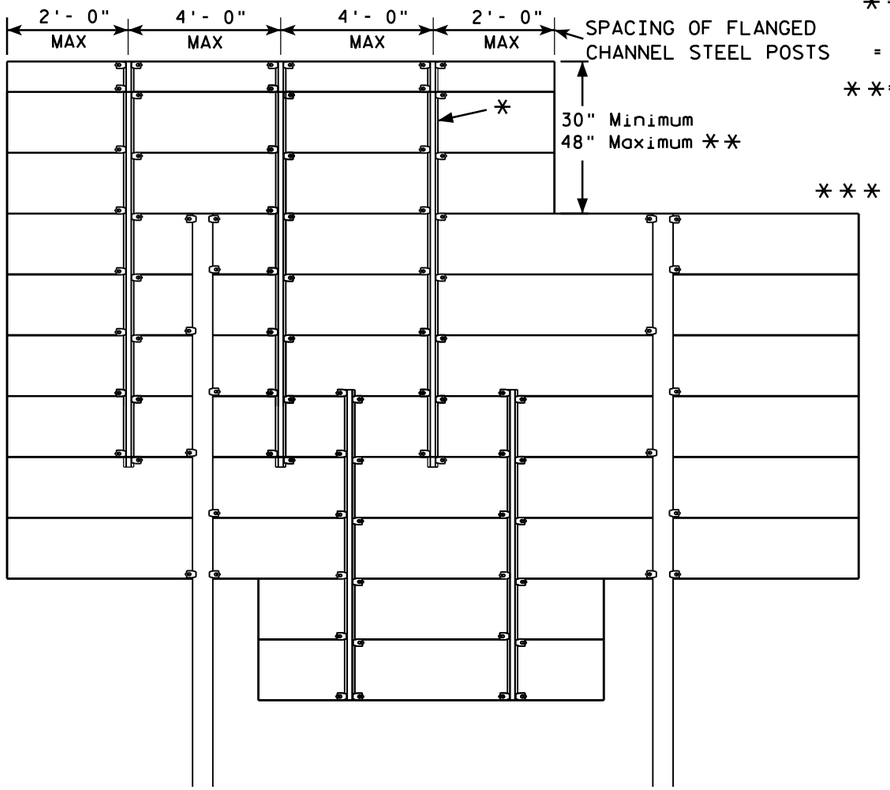
DATE 11/12/14 PLATE NO. A4-4 680 13

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A44.DGN PLOT DATE : 12-NOV-2014 14:01 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 107.021305:1.000000

WISDOT/CADDS SHEET 42

GROUND MOUNTED SIGN

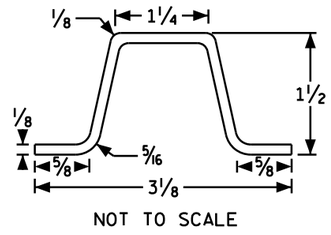


* =2.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

** =FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

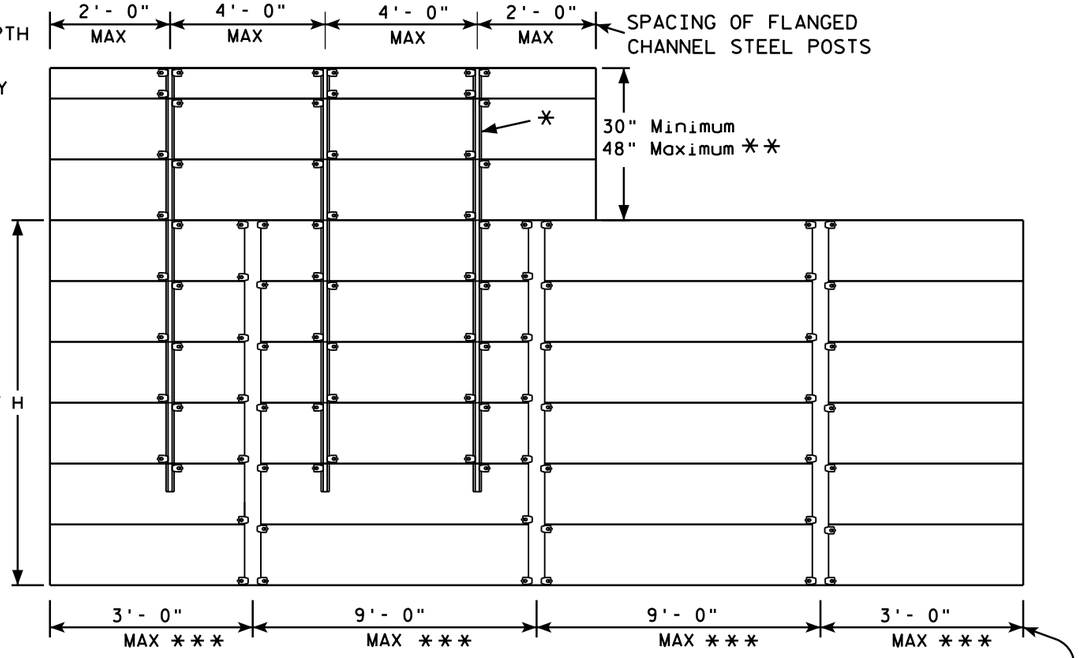
*** THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 16 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 16 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.

FLANGE CHANNEL DETAIL



NOT TO SCALE

SIGN BRIDGE MOUNTED SIGN



GENERAL NOTES

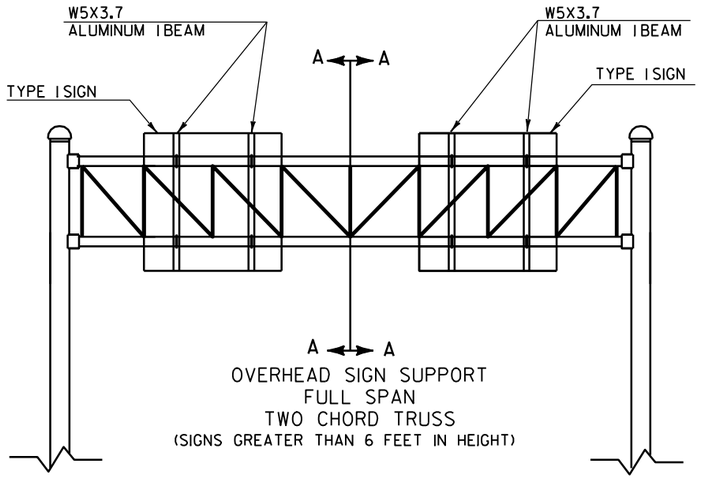
1. Flanged channel steel posts shall conform to size and material above, and shall be considered as incidental to other items in the contract.
2. Number of Flanged channel steel supports varies with length of panel and shall be spaced as shown:

   PANEL LENGTH 8'-0" OR LESS = 2 CHANNELS
   PANEL LENGTH 9'- 0" - 12'- 0" = 3 CHANNELS
   PANEL LENGTH 13'- 0" OR MORE = 4 CHANNELS

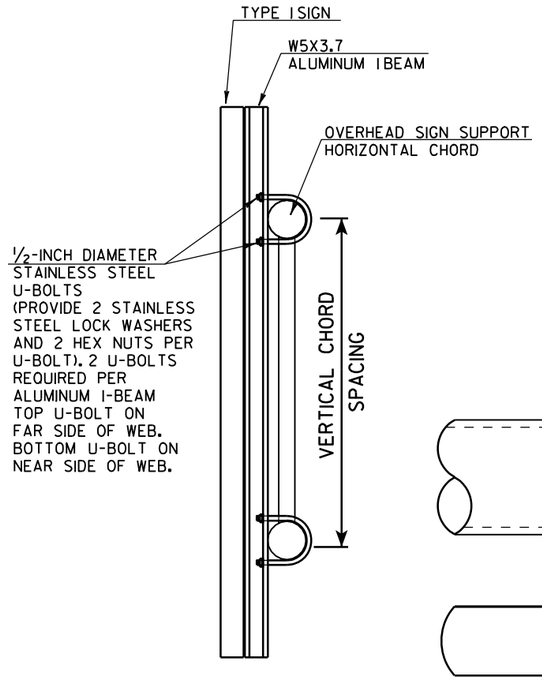
   If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.
3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER PANEL shall be aligned with the left edge of the guide sign.
4. If the bolt holes in the top panel (EXIT NUMBER), or sub panel (NEXT EXIT) line up with holes in main sign panel, stitch bolts shall be used in addition to the channels.
5. Provide post clips for each sign as shown. (Please note the differences between a ground mounted versus Sign bridge mounted sign as far as number of clips required on the main supports or beams)
6. Structural steel sign supports shall extend to the top of the main signs, as shown on the above details.

ATTACHMENT OF GUIDE SIGNS TO SUPPORTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	Matthew R Rauch for State Traffic Engineer
DATE 12/05/13	PLAT 681 A4-6.12

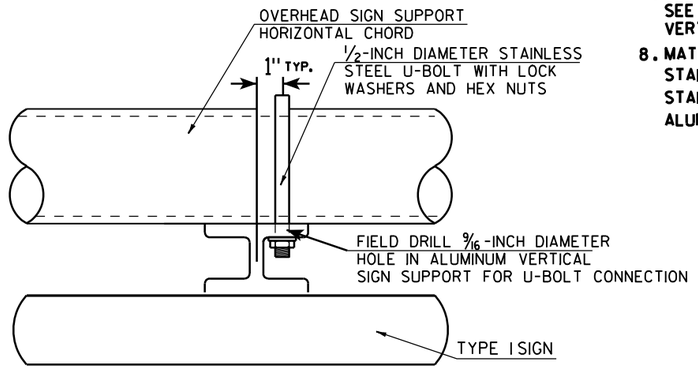
PROJECT NO:				SHEET NO:	E



OVERHEAD SIGN SUPPORT
FULL SPAN
TWO CHORD TRUSS
(SIGNS GREATER THAN 6 FEET IN HEIGHT)



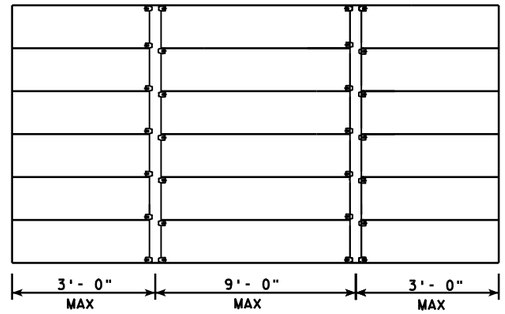
CUT SECTION A-A



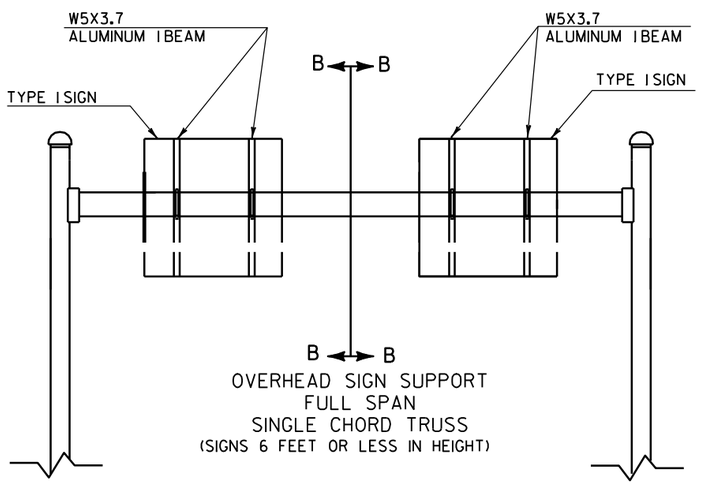
TYPICAL SIGN CONNECTION FOR
TWO CHORD TRUSS
PLAN VIEW

GENERAL NOTES

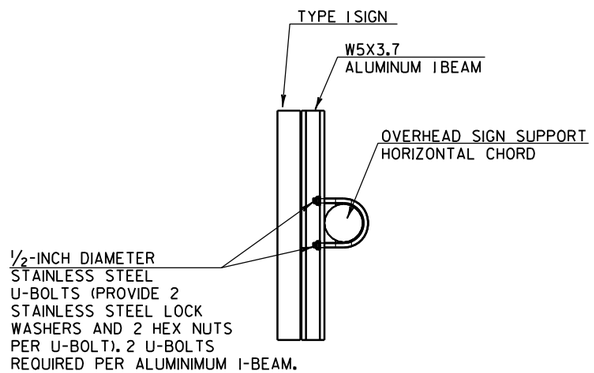
1. USE STAINLESS STEEL U-BOLTS, WASHERS, AND NUTS.
2. USE CLIPS ON EVERY EXTRUDED PANEL JOINT PER SIGN PLATE A4-6.
3. USE ALUMINUM VERTICAL SIGN SUPPORT BEAMS HAVING A 5 INCH BEAM DEPTH AND WEIGHT OF 3.7 LBS PER FOOT.
4. U-BOLTS SHALL BE STAINLESS STEEL AND MANUFACTURED TO THE PROPER SIZE TO FIT THE CHORDS OF THE OVERHEAD SIGN STRUCTURE.
5. DIAMETER OF U-BOLTS SHALL BE AS SHOWN.
6. THE LENGTH OF THE ALUMINUM VERTICAL SIGN SUPPORT BEAMS SHALL BE THE SAME AS THE HEIGHT OF THE SIGN THEY ARE SUPPORTING. BEAM LENGTHS MAY BE LONGER FOR PROPER ATTACHMENT TO CHORDS.
7. MINIMUM NUMBER OF BRACKETS PER SIGN IS TWO. SEE DETAIL BELOW FOR SPACING OF ALUMINUM VERTICAL SIGN SUPPORTS
8. MATERIAL NOTES:
   STAINLESS STEEL U-BOLTS AND LOCKWASHERS ASTM 304.
   STAINLESS STEEL HEX NUTS ASTM A276.
   ALUMINUM I-BEAMS ARE 6061-T6.



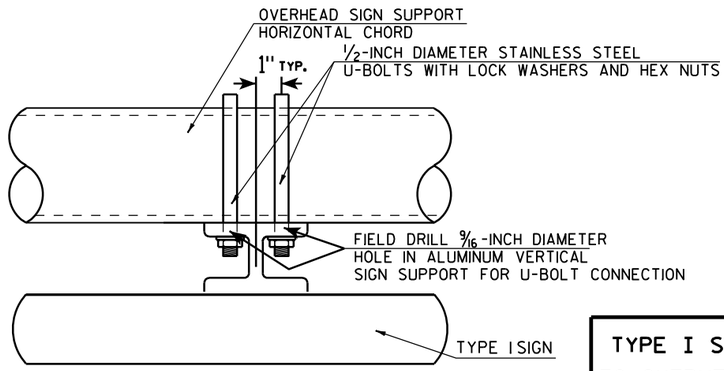
SPACING OF W5X3.7 ALUMINUM
VERTICAL SIGN SUPPORT



OVERHEAD SIGN SUPPORT
FULL SPAN
SINGLE CHORD TRUSS
(SIGNS 6 FEET OR LESS IN HEIGHT)



CUT SECTION B-B



TYPICAL SIGN CONNECTION FOR
SINGLE CHORD TRUSS
PLAN VIEW

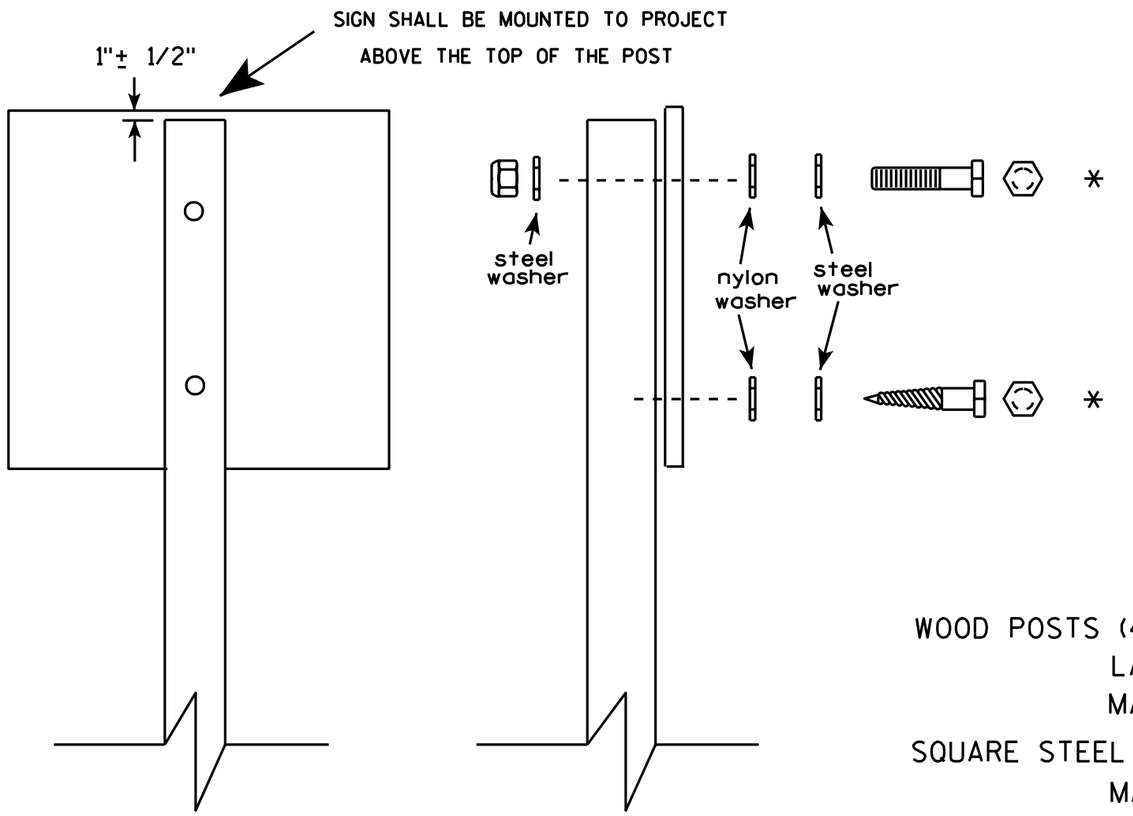
TYPE I SIGN CONNECTION TO OVERHEAD SIGN SUPPORT

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 11/12/12 PLATE NO. A4-7.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 682	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

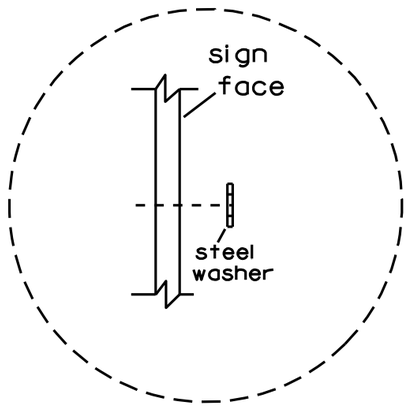
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

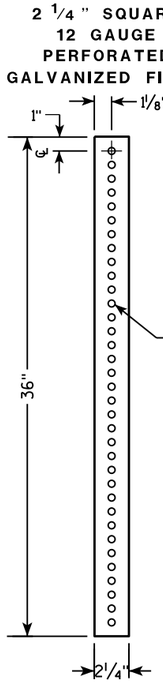
7

PROJECT NO:

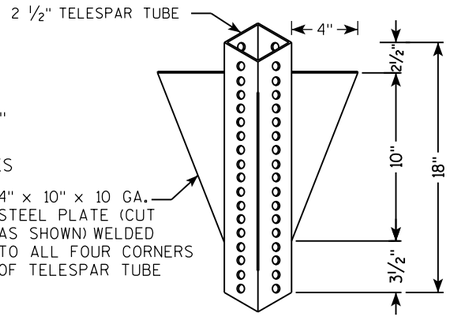
SHEET NO: 683 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

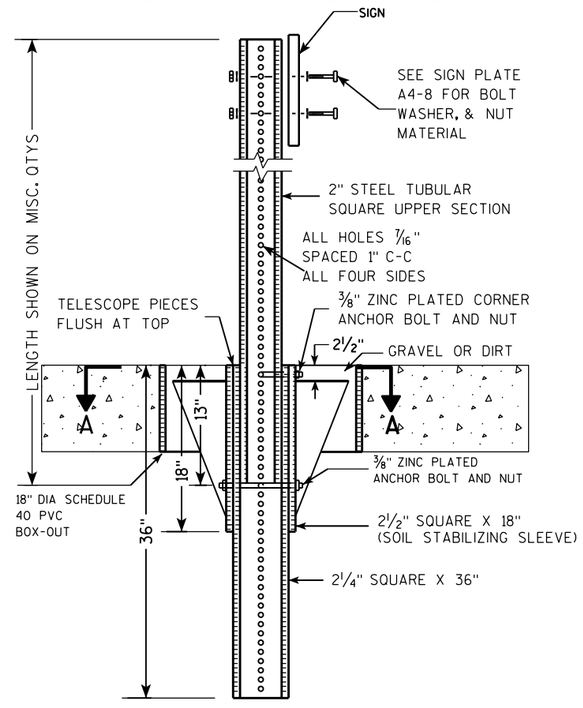
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



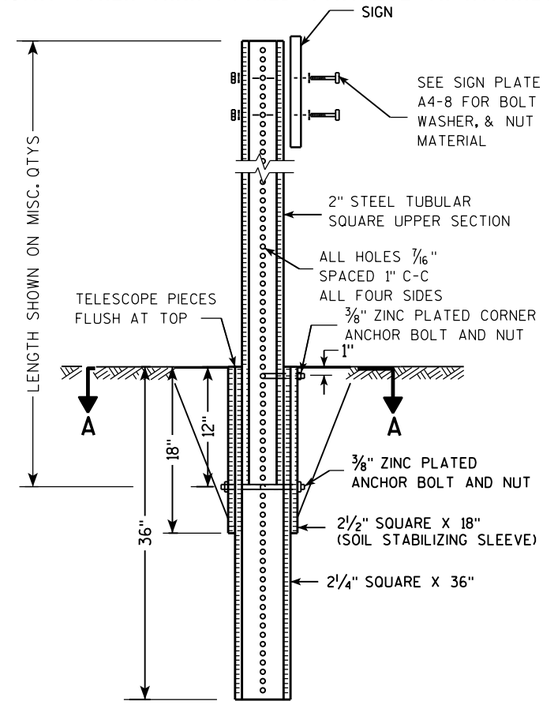
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

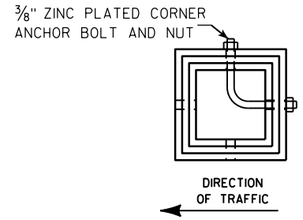


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)





SECTION A-A

Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

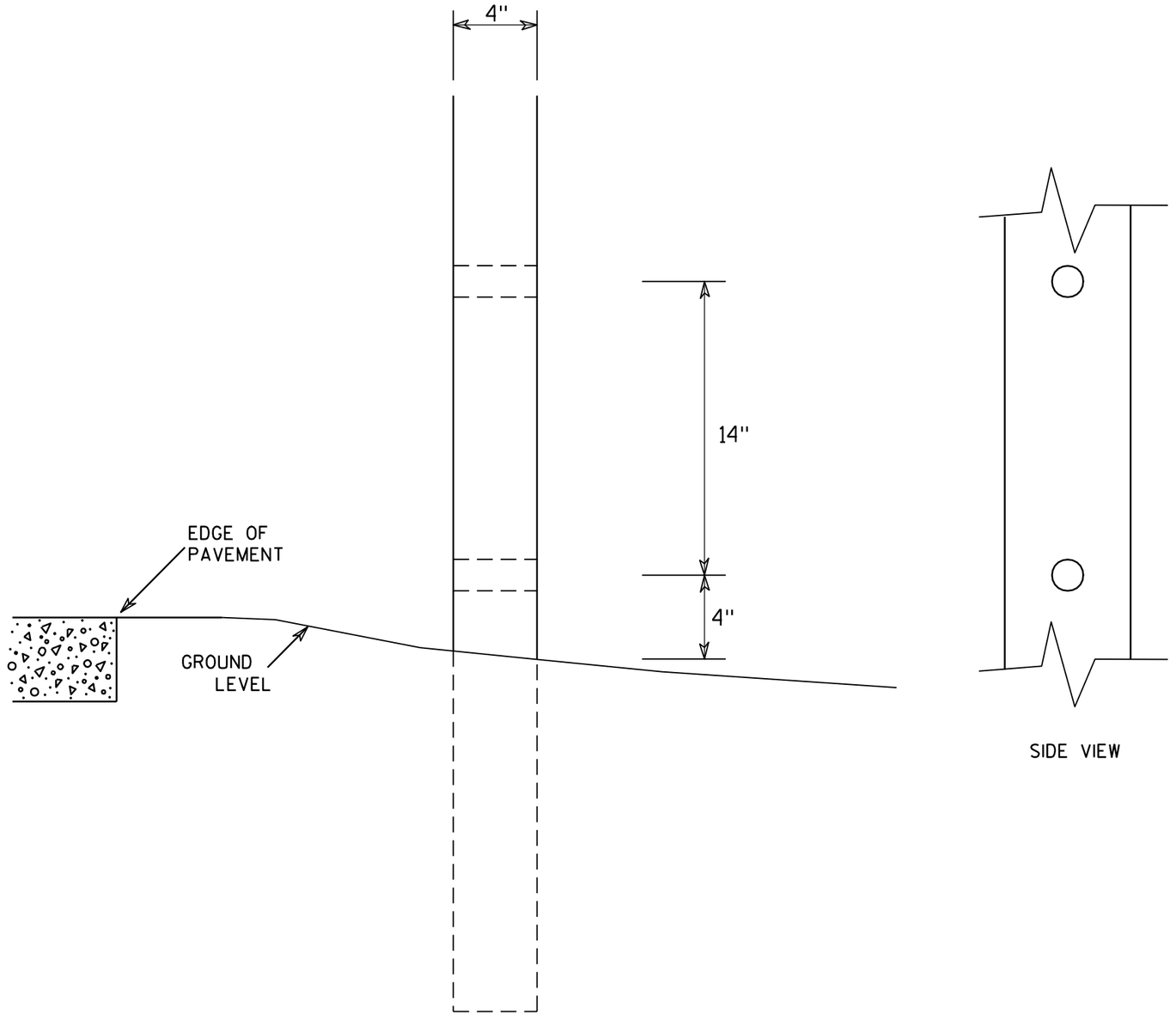
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 684 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE : 05-FEB-2015 17:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000

WISDOT/CADDS SHEET 42



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

7

4 X 6 WOOD POST MODIFICATIONS

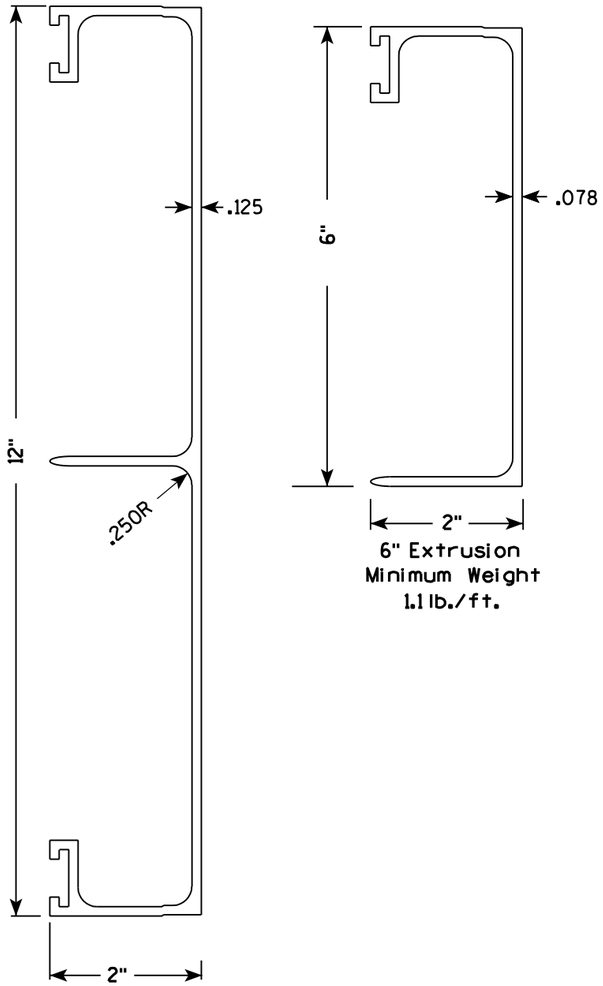
WISCONSIN DEPT OF TRANSPORTATION

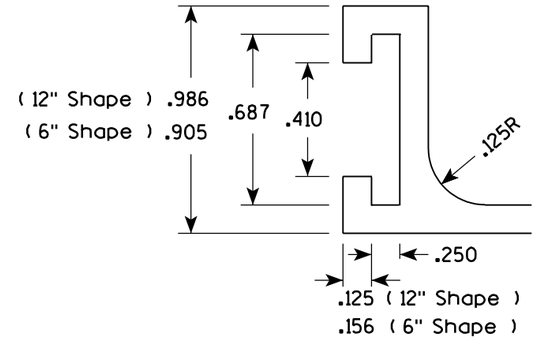
APPROVED Chester J Spang for State Traffic Engineer

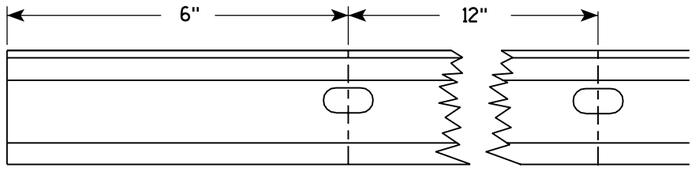
DATE 3/27/97 PLATE NO. A4-11.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 685	E

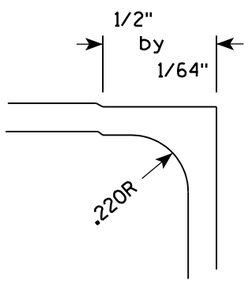
Extruded Shape







Punch 7/16" x 7/8" oval holes beginning 6" in from end of extrusion 12" CC on both edges of 6" and 12" panels.

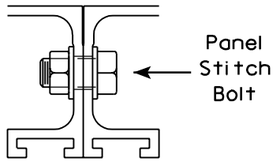


Hardware

STITCH BOLT, WASHER & NUT

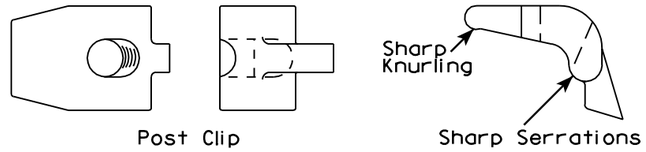
The hardware includes:

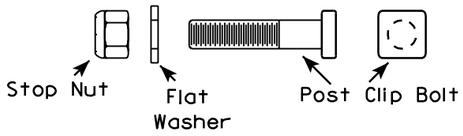
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy



POST CLIP, POST CLIP BOLT, WASHER & NUT

Post Clip shall be Alum. Alloy 356-T6
Post Clip Bolt shall be Stainless Steel.
Flat washer shall be 3/8" X .091, Stainless Steel.
Stop nut shall be stainless steel.





NOTES

1. The contractor may select any brand of extrusion that conforms to the illustrations or meets with the approval of the engineer, but all extrusions used on this contract shall be of the same brand.
2. Panel Stitch Bolts shall be used to assemble adjacent panels. Maximum stitch bolt spacing shall be 24" C-C, and a minimum of 4 bolts shall be used to connect any two extrusions.
3. Post Clips shall be used to attach the sign panel to the sign support.

ALUMINUM EXTRUSIONS FOR TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

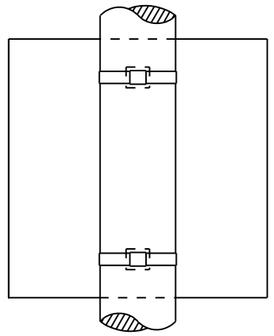
DATE 11/18/99 PLATE NO. A5-2.9

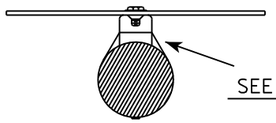
PROJECT NO:

SHEET NO: 686 E

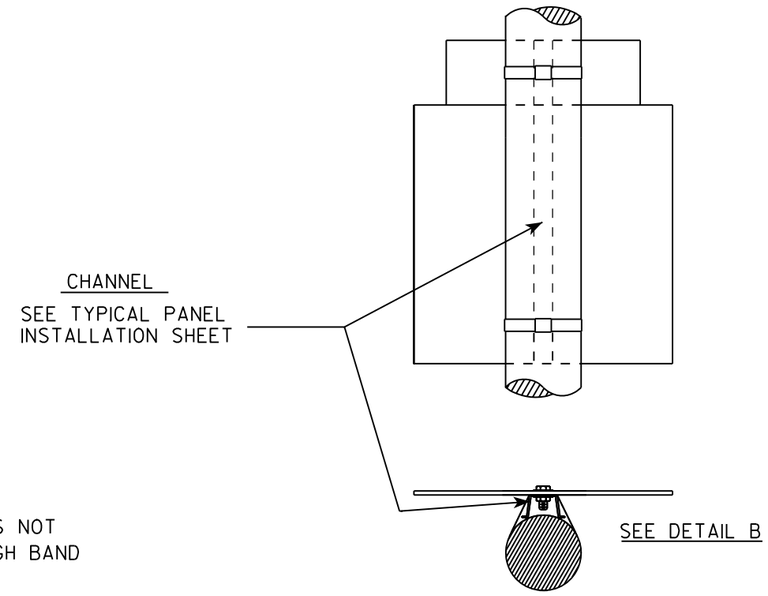
BANDING

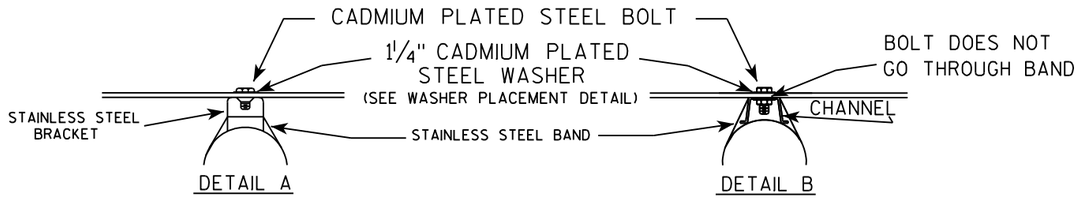
SINGLE SIGN



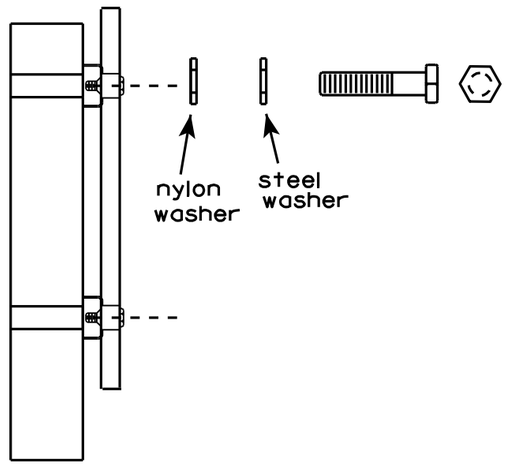


"J" ASSEMBLY





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 ¾" in width and 0.025" thickness.

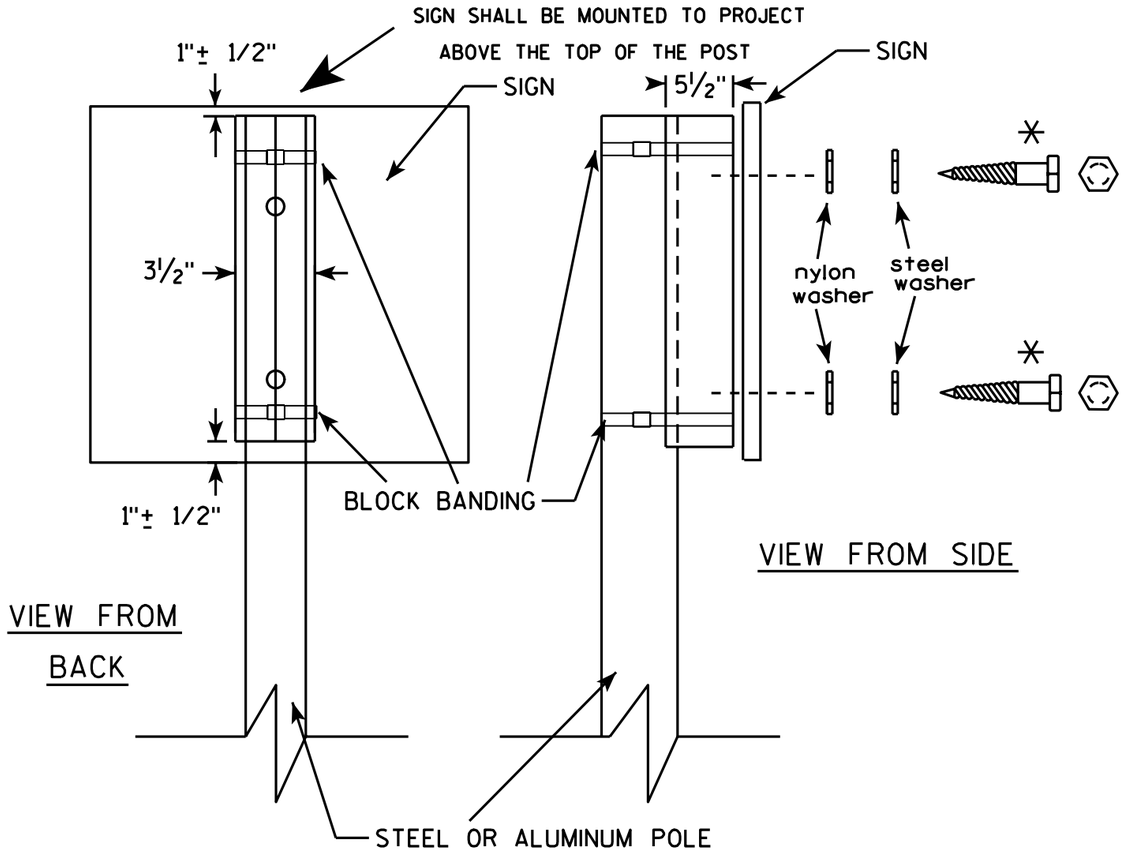
STANDARD SIGN
SIGN BANDING DETAILS

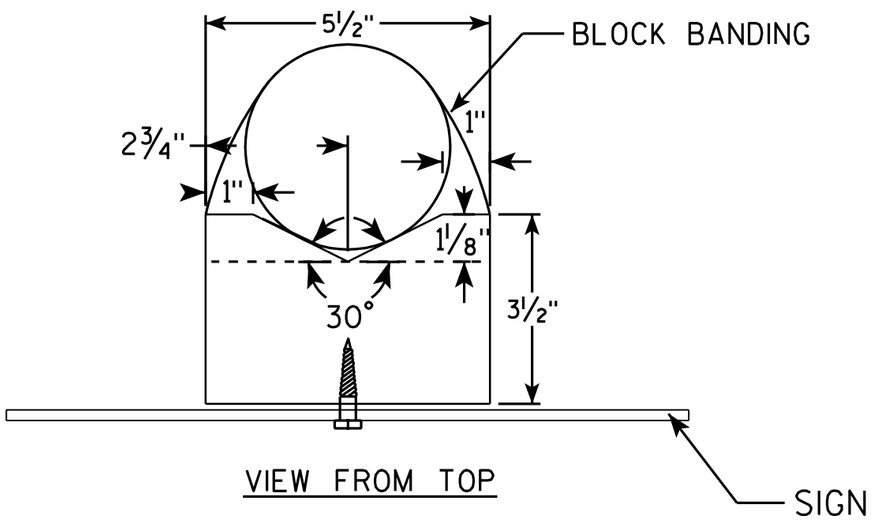
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 687	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

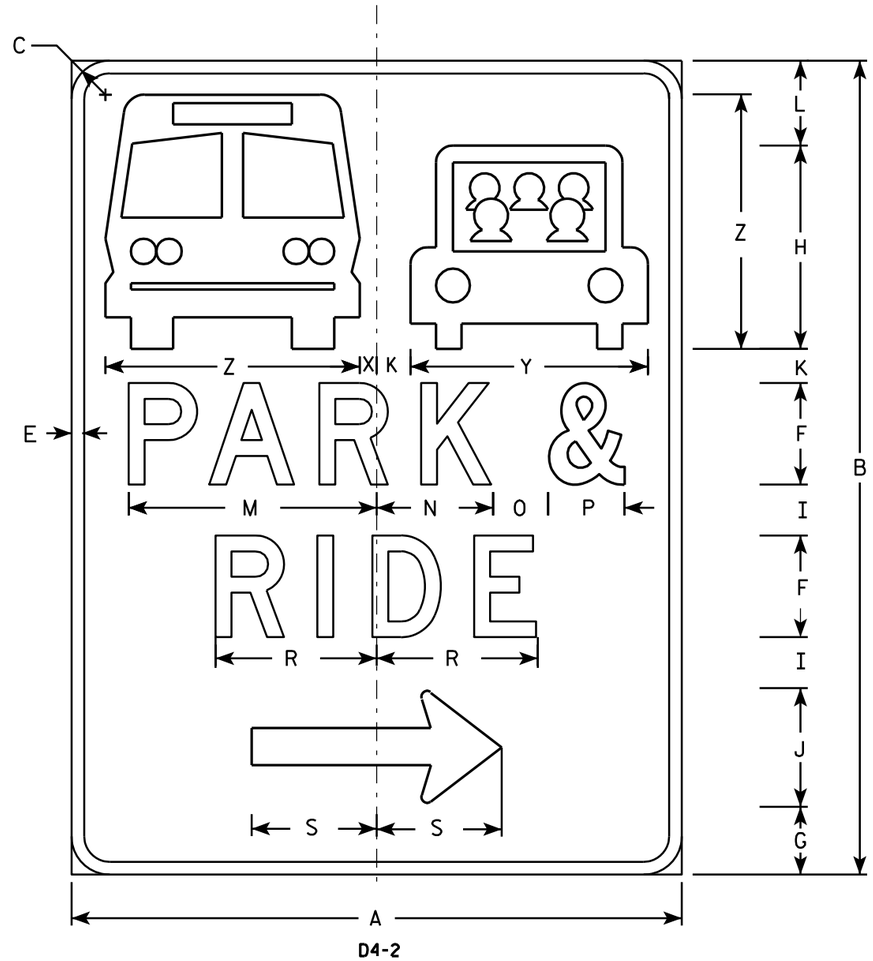
DATE 7/12/07 PLATE NO. A5-10.1

PROJECT NO:

SHEET NO: 688 E

FILE NAME : C:\Users\Projects\tr_stdplate\A510.dgn PLOT DATE : 06-AUG-2007 13:37 PLOT BY : ditjph

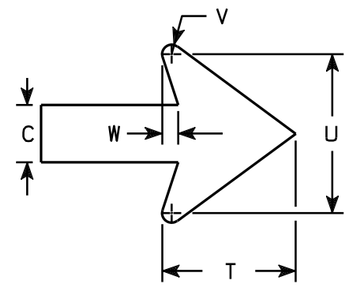
WISDOT/CADDS SHEET 42



D4-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White - Type H Reflective
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The D4-2L is the same as a D4-2R except the arrow is reversed.
6. The D4-2 sign may have either symbol or both symbols at the same time.



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	30	1 1/8		1/2	4	1 5/8	7 1/2	1 1/2	4 5/8	1 3/8	3 7/8	9 3/4	4	2 3/4	3		6 3/8	4 7/8	3 1/2	4 1/8	1/4	3/8	5/8	9 3/8	10	5.0
2	30	36	1 3/8		5/8	5	2	9	1 5/8	5 1/2	1 5/8	4 5/8	12 1/4	5 1/8	3 3/8	3 3/4		8	6 1/8	4 3/8	5 1/4	3/8	1/2	7/8	11 3/4	12 1/2	7.50
3	36	48	2 1/4		3/4	6	4	12	3	7	2	5	14 5/8	6 7/8	3 1/4	4 1/2		9 1/2	7 1/2	5 1/4	6 1/4	3/8	5/8	1	14	15	12.0
4																											
5																											

STANDARD SIGN
D4-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/20/10 PLATE NO. D4-2.5

PROJECT NO:

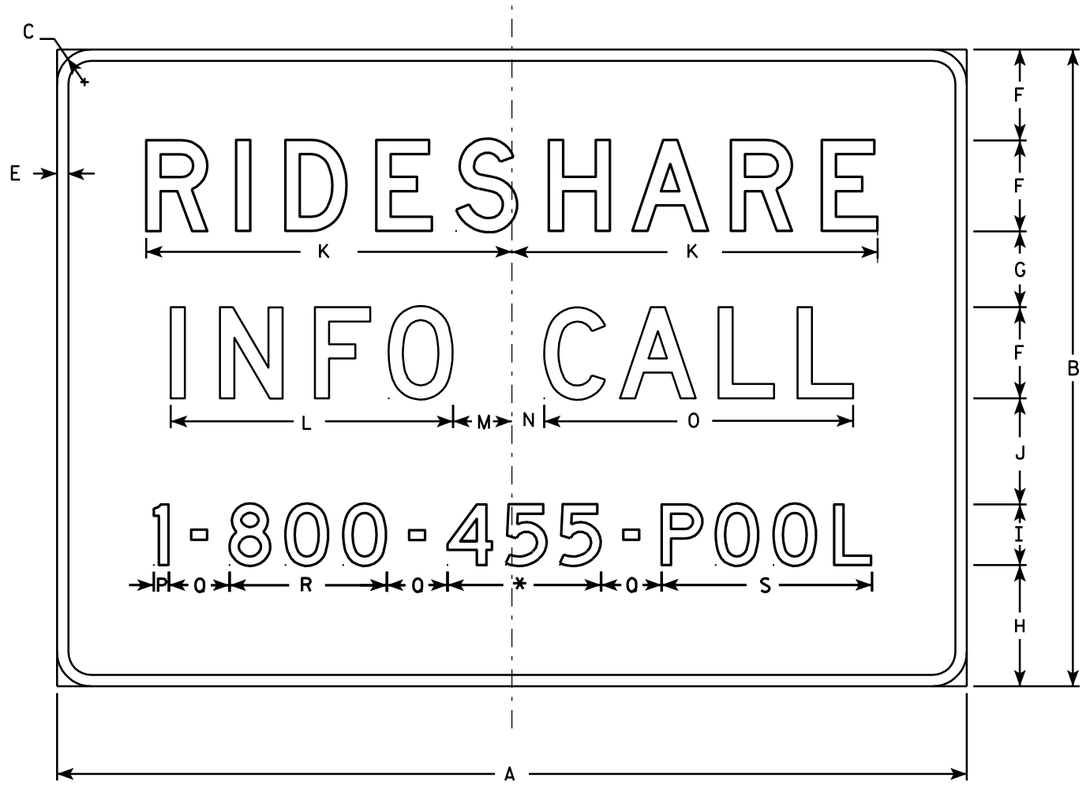
SHEET NO: 689 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\D42.dgn PLOT DATE : 10-FEB-2011 14:21 PLOT BY : mscsja

WISDOT/CADDS SHEET 42

7

7



D12-2A

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Blue
   Message - White - Type H Reflective
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and adjust spacing as required to achieve proper balance.

Metric equivalent for this sign is:

SIZE	
1	1200 mm X 525 mm
2	1500 mm X 1050 mm
3	
4	1500 mm X 1050 mm
5	1950 mm X 1350 mm

* Variable (See note 5)

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	48	21	1 1/2		1/2	3	2 3/4	3 1/2	3	2 3/4	12 1/8	9 3/8	2	1 1/8	10 1/4	3/4	3	7 3/4	10 5/8								7.0	0.63
2	60	42	2 1/4		3/4	6	5	8	4	7	24 1/8	18 5/8	3 7/8	2 1/8	20 1/8	1	4	10 3/8	13 7/8								17.5	1.58
3																												
4	60	42	2 1/4		3/4	6	5	8	4	7	24 1/8	18 5/8	3 7/8	2 1/8	20 1/8	1	4	10 3/8	13 7/8								17.5	1.58
5	78	54	3		1	8	6	10	6	8	30 7/8	23 5/8	4 7/8	2 1/8	26 3/8	1 1/2	5	15 1/2	21 1/4								29.25	2.63

STANDARD SIGN
D12-2A

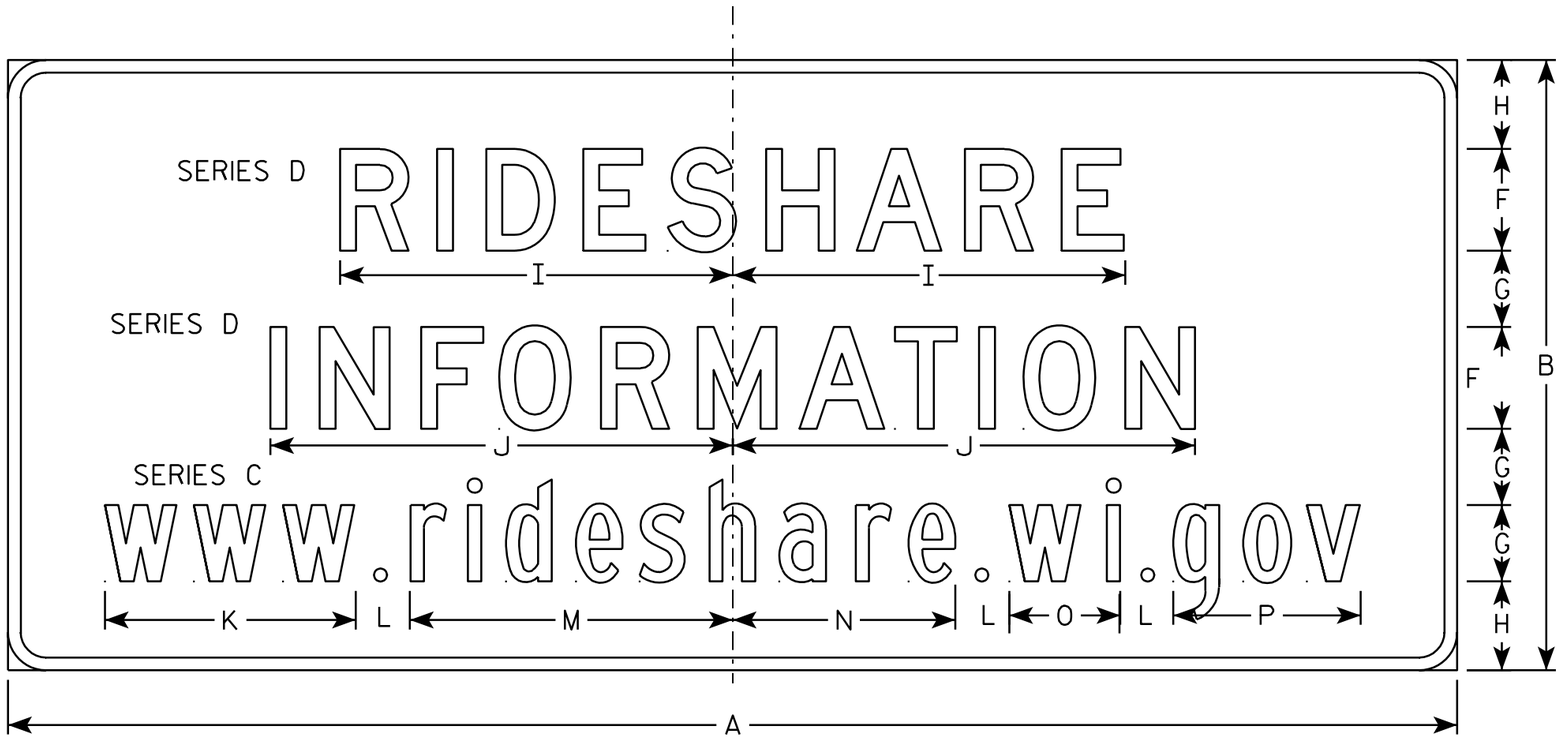
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spay for State Traffic Engineer

DATE 1/16/02 PLATE NO. D12-2A.3

PROJECT NO:

SHEET NO: 690 E



D12-2B

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Blue
   Message - White
3. Message Series - Lines 1 & 2 are Series D and Line 3 is 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	2100 mm X 900 mm
3	
4	2850 mm X 1200 mm
5	2850 mm X 1200 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	84	36	2 1/4		3/4	6	4 1/2	5 1/4	24 1/4	28 5/8	14 3/4	3	19	13 1/8	6 1/2	11											21.0	1.90
3																												
4	114	48	3		1	8	6	7	30 7/8	36 3/8	19 3/4	4 1/4	25 3/8	17 1/2	8 3/4	14 3/4											38.0	3.42
5	114	48	3		1	8	6	7	30 7/8	36 3/8	19 3/4	4 1/4	25 3/8	17 1/2	8 3/4	14 3/4											38.0	3.42

STANDARD SIGN
D12-2B

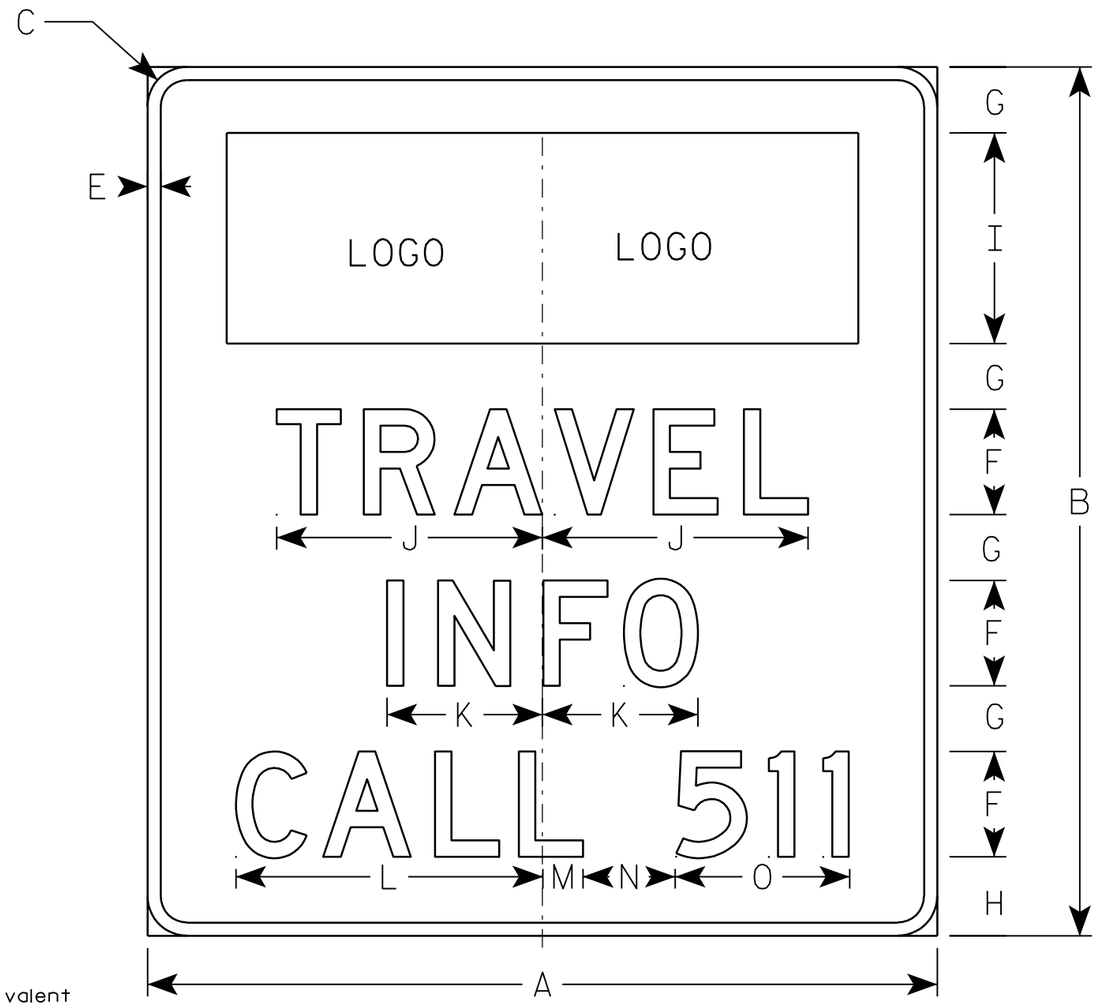
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/04/08 PLATE NO D12-2B.2

PROJECT NO:

SHEET NO: 691 E



D12-5

NOTES

1. Sign is Type II - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Blue
   Message - White - Type H Reflective
3. Message Series - 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.

Metric equivalent for this sign is:

SIZE	
1	
2	1500 mm X 1650 mm
3	
4	
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	60	66	2 1/4		1	8	5	6	16	20 1/4	11 7/8	23 3/8	3 1/8	7	13 1/4												27.5	2.48
3																												
4																												
5																												

STANDARD SIGN
D12-5

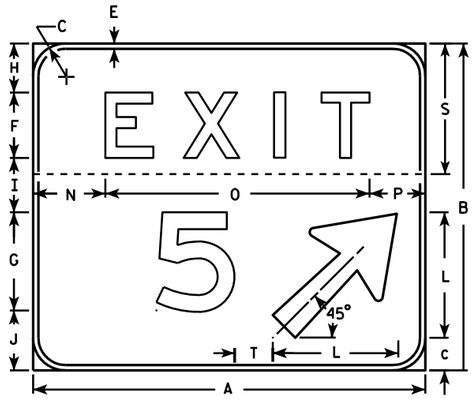
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

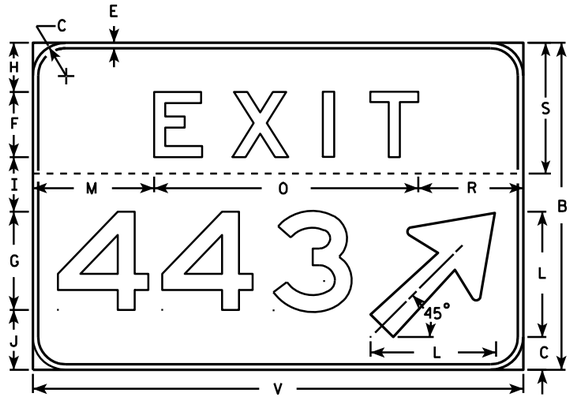
DATE 12/5/08 PLATE NO. D12-5.2

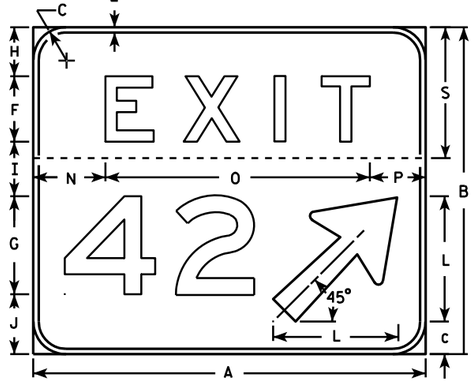
PROJECT NO:

SHEET NO: 692 E

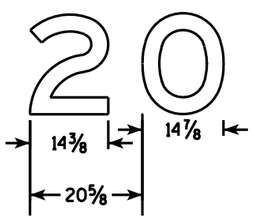


NOTE: T diminision shall be measured from the back of the number to the front of the arrow





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

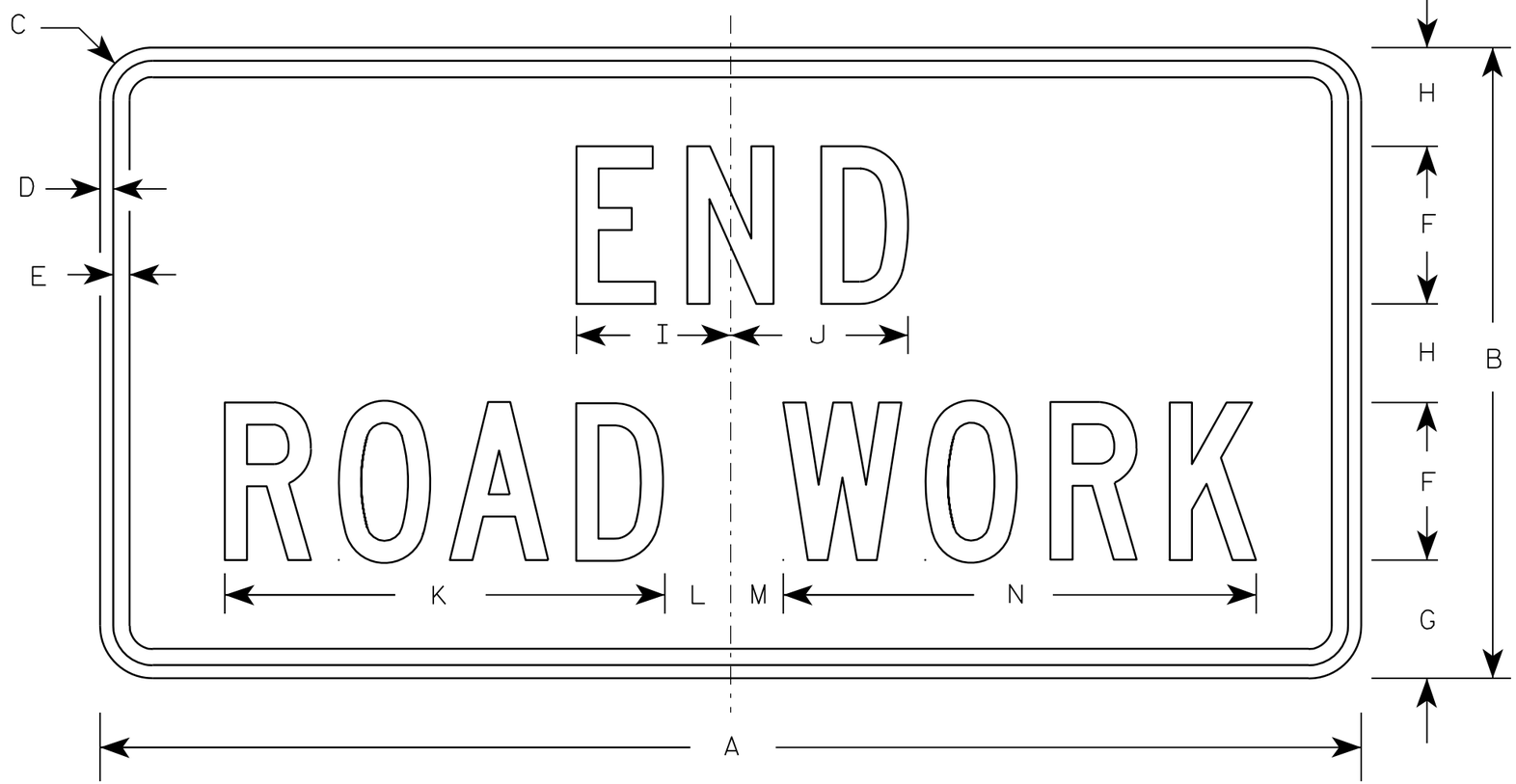
STANDARD SIGN
E5-1A

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: 693 | E



G20-2A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

Metric equivalent for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

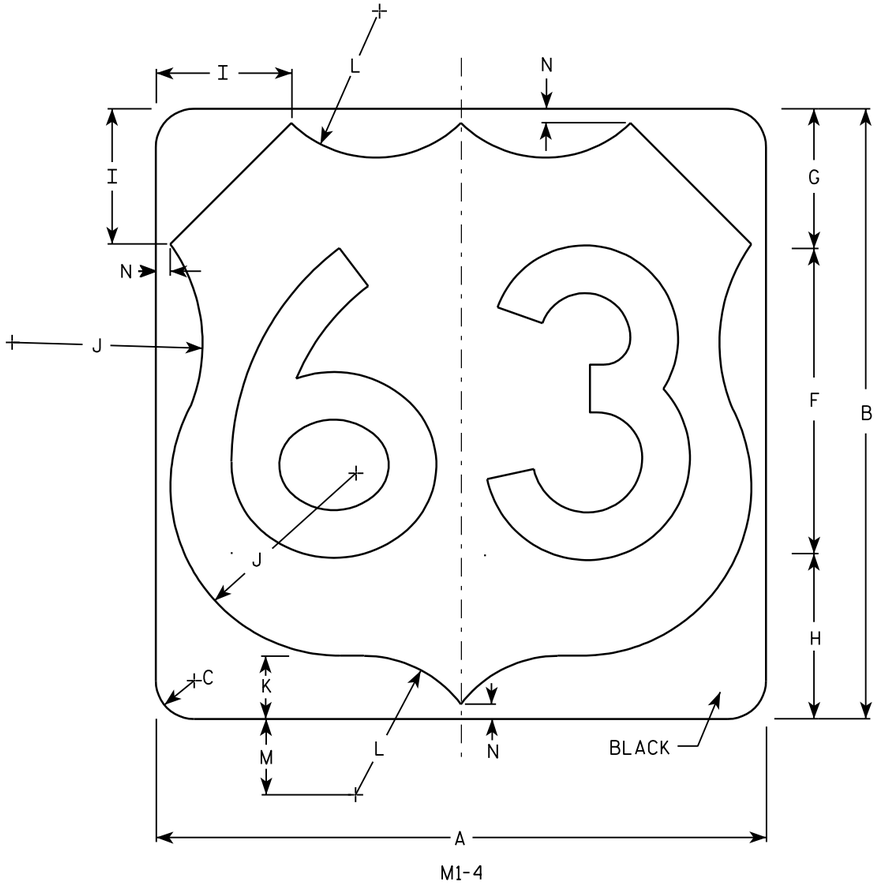
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

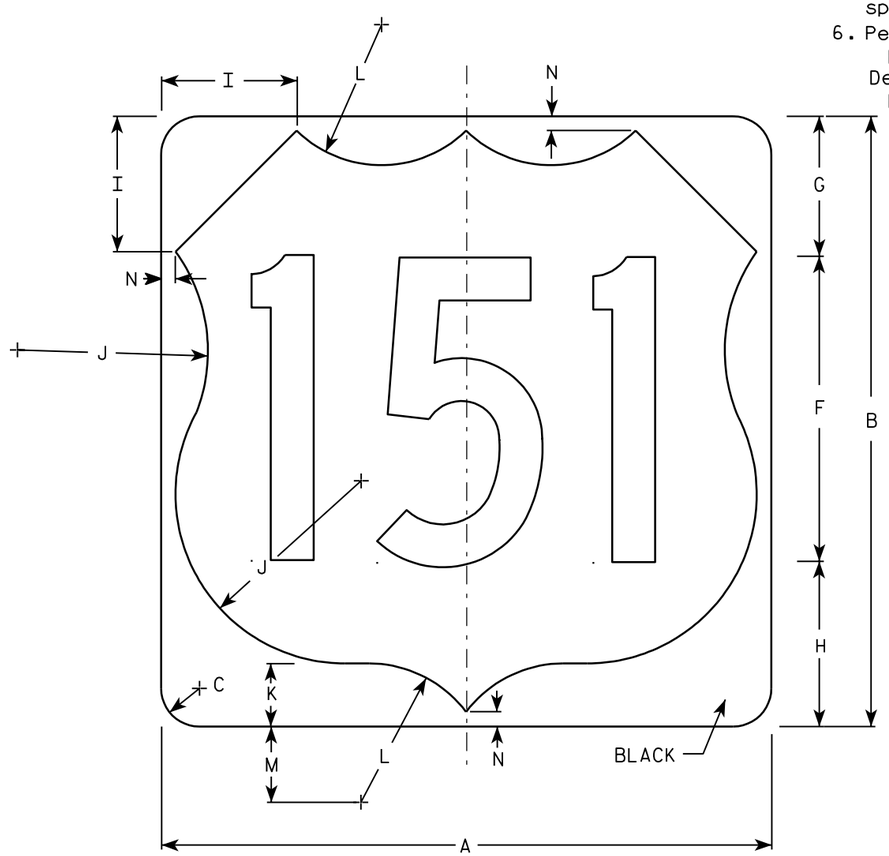
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 694	E

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

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

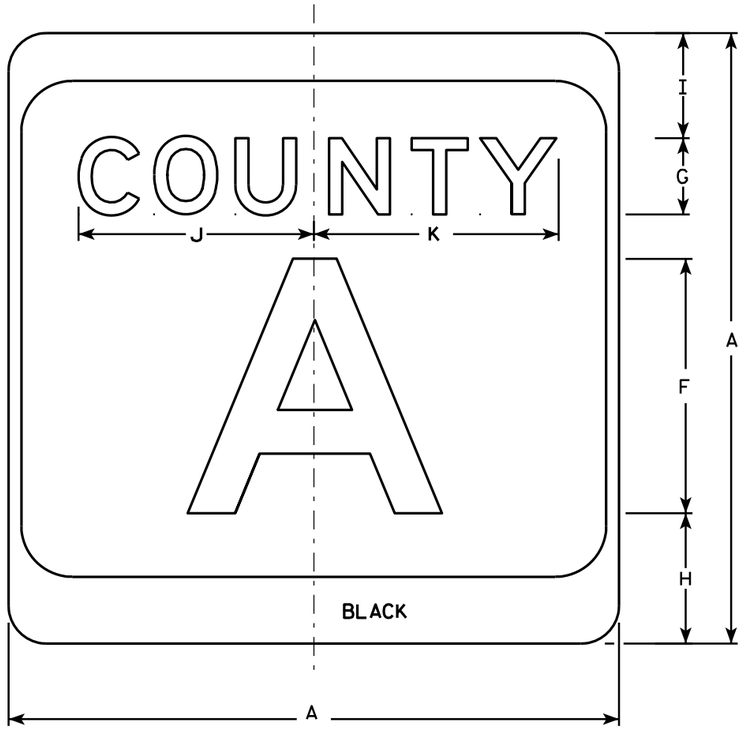
USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

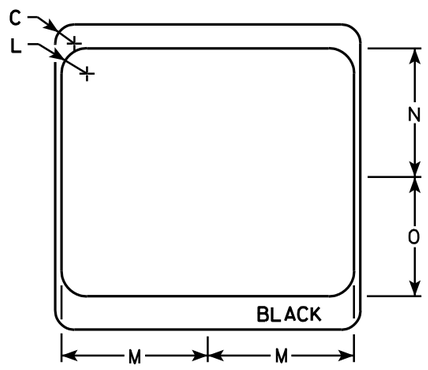
APPROVED Matthew R Rauch
for State Traffic Engineer

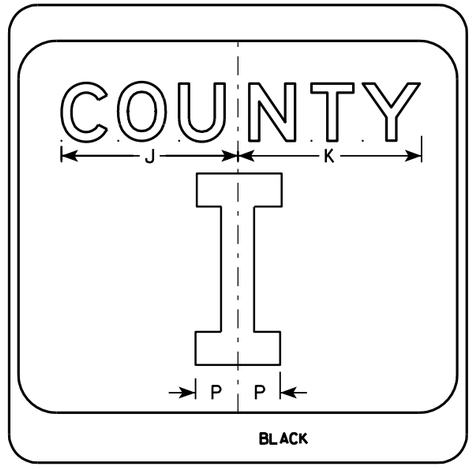
DATE 08/25/05 PLATE NO. M1-4.9

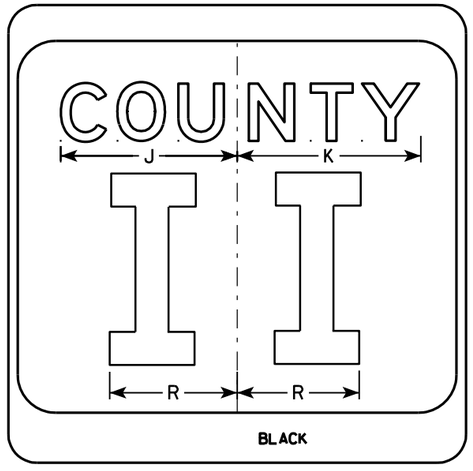
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 695 | E



M1-5A







NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 7
   Message - Black
3. Message Series - see Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Message Series E for 1 letter.
   Message Series D for 2 letters unless message is too big then Series C.
   Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

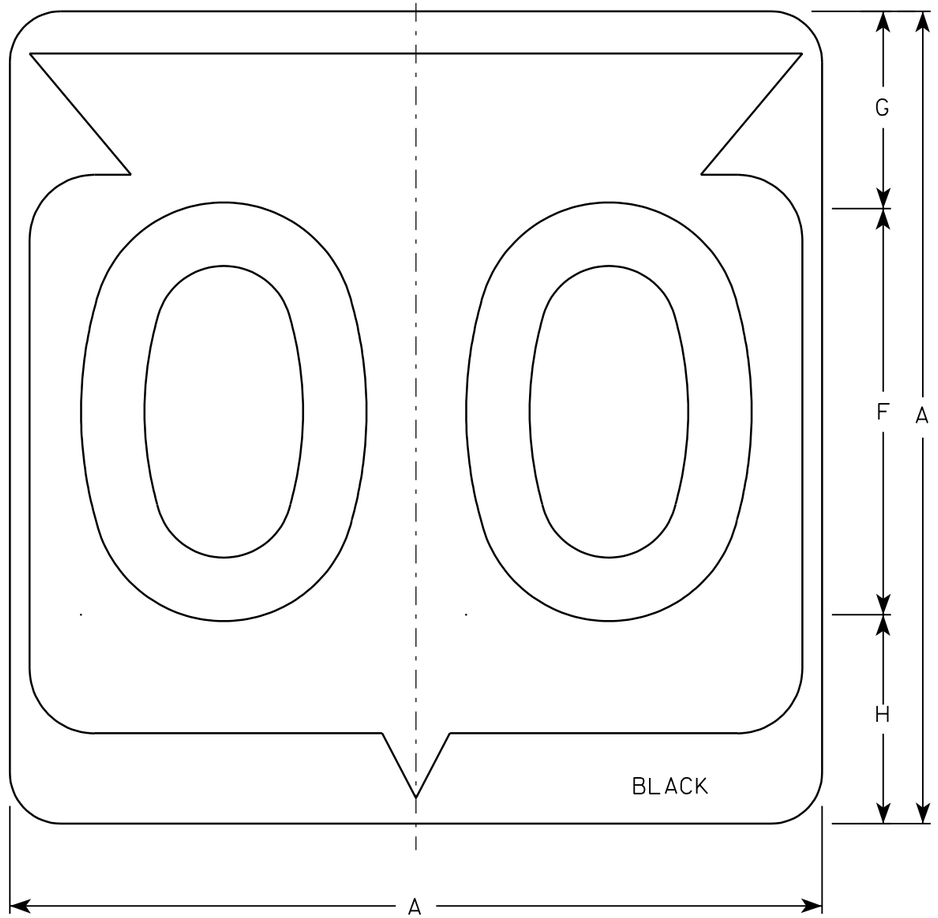
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8

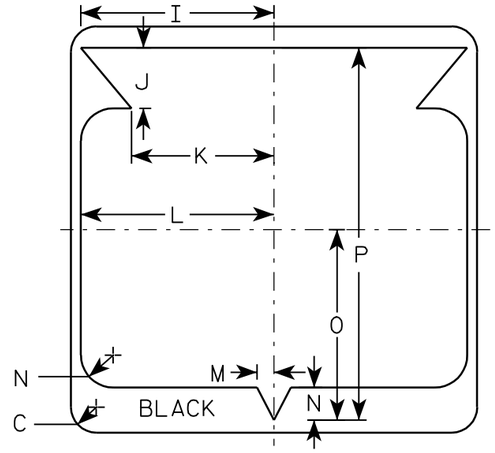
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 696	E



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

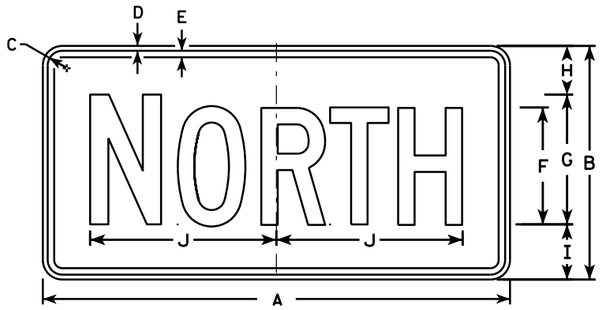
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

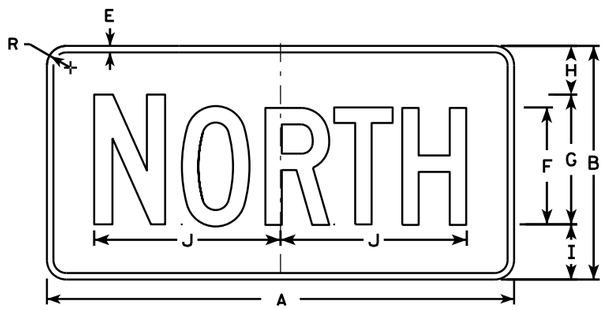
APPROVED Chester J Spang for State Traffic Engineer

DATE 3/20/02 PLATE NO. M1-6.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 697	E



M3-1
MK3-1
MM3-1
MN3-1



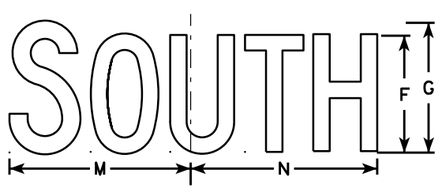
MB3-1



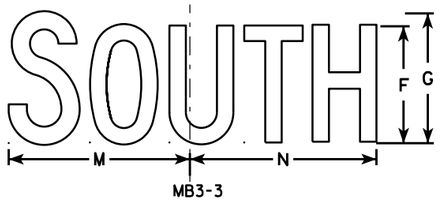
M3-2
MK3-2
MM3-2
MN3-2



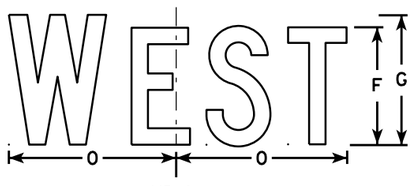
MB3-2



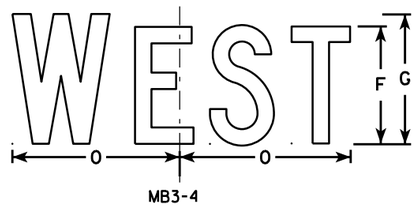
M3-3
MK3-3
MM3-3
MN3-3



MB3-3



M3-4
MK3-4
MM3-4
MN3-4



MB3-4

NOTES

1. All Signs Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White
   MK3-1 thru MK3-4 Background - Green
   Message - White
   MM3-1 thru MM3-4 Background - White
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White
6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS
M3-1 thur M3-4
SERIES

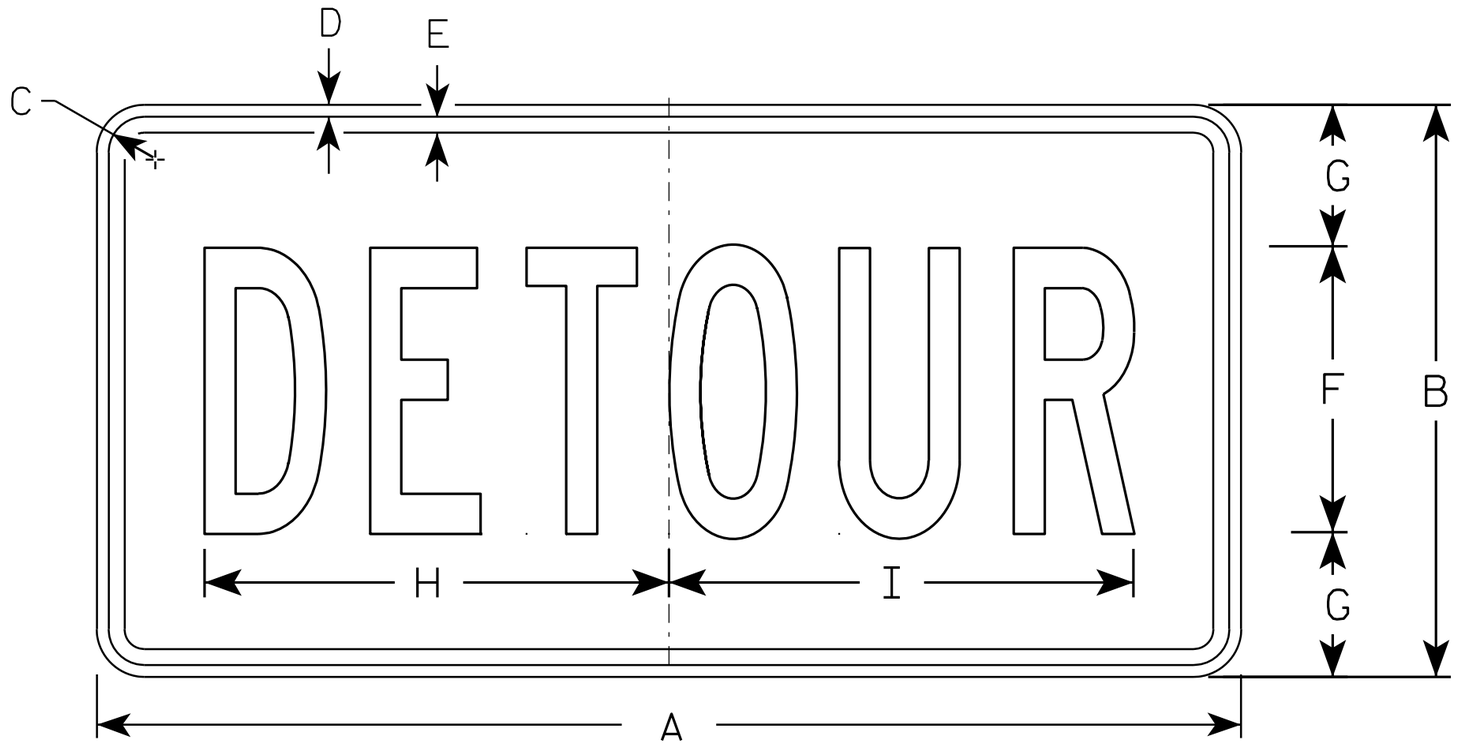
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 6/30/14 PLATE NO M3-1.13

PROJECT NO: | HWY: | COUNTY: | | SHEET NO: E

7



M4-8

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - 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																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

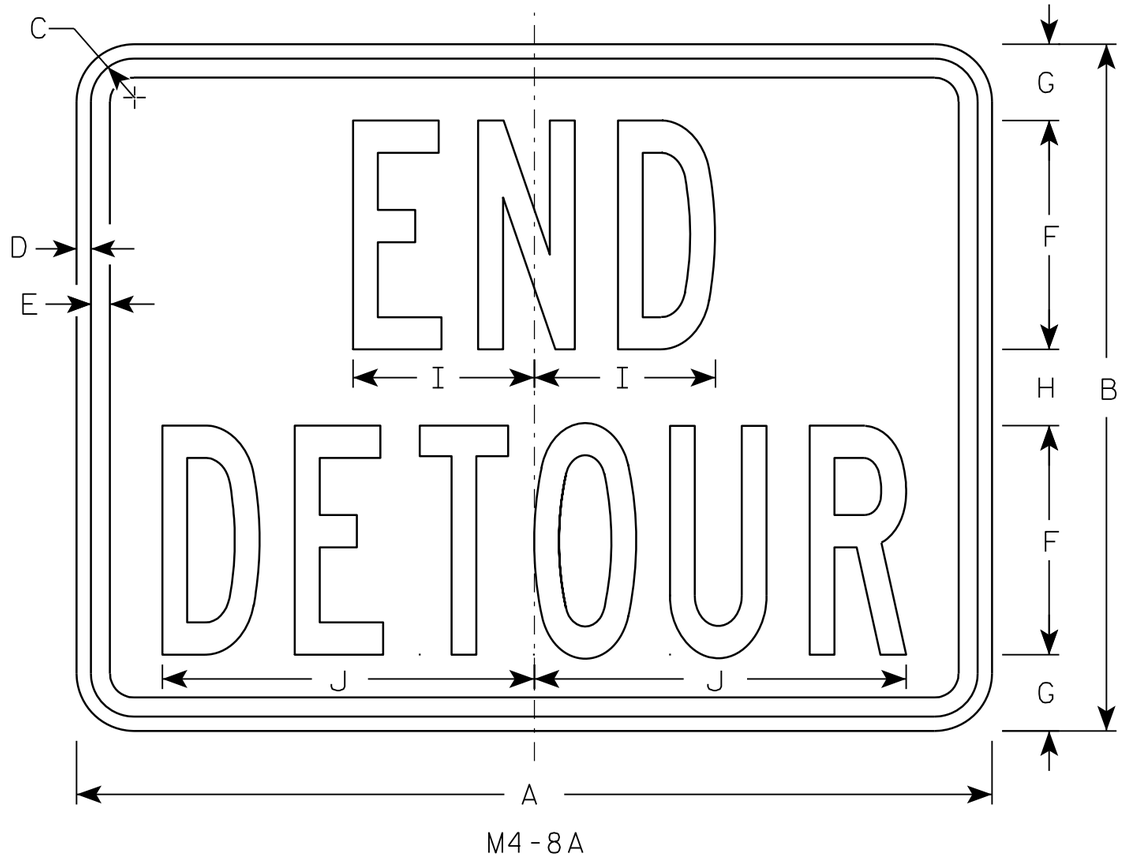
STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 699	E



M4-8A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - 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																											
2	24	18	1 1/8	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/8	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4																											
5																											

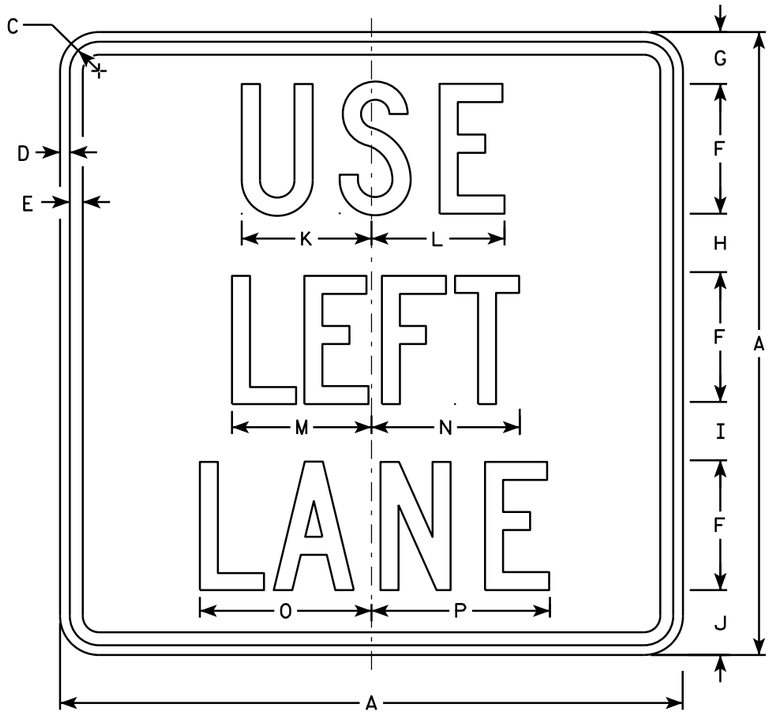
STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

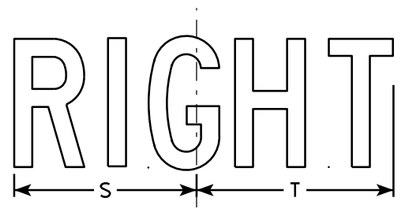
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-8A.2

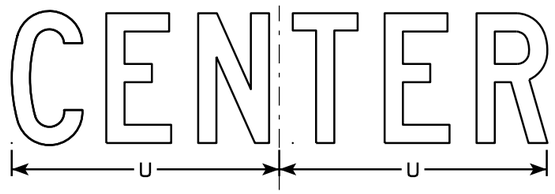
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 700	E



M4-20L
MB4-20L
MK4-20L
MM4-20L
MN4-20L
M04-20L
MP4-20L
MR4-20L



M4-20R
MB4-20R
MK4-20R
MM4-20R
MN4-20R
M04-20R
MP4-20R
MR4-20R



M4-20C
MB4-20C
MK4-20C
MM4-20C
MN4-20C
M04-20C
MP4-20C
MR4-20C

NOTES

1. Sign is Type II - Type H except as Shown
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. M4-20 Background - White
   Message - Black
   MB4-20 Background - Blue
   Message - White
   MK4-20 Background - Green
   Message - White
   MM4-20 Background - White
   Message - Green
   MN4-20 Background - Brown
   Message - White
   M04-20 Background - Orange - Type F Reflective
   Message - Black
   MP4-20 Background - White
   Message - Blue
   MR4-20 Background - Brown
   Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/8	3/8	1/2	5	2	2 1/4	2 1/4	2 1/2	5	5 1/8	5 3/8	5 3/4	6 5/8	6 7/8			7	7 5/8	10 1/4						4.0
3	36		1 5/8	5/8	3/4	7	4	3	3 1/2	4 1/2	7 1/2	7 3/4	8	8 5/8	9 7/8	10 1/4			10 3/8	11 3/8	14 3/8						9.0
4																											
5																											

STANDARD SIGN
M4-20

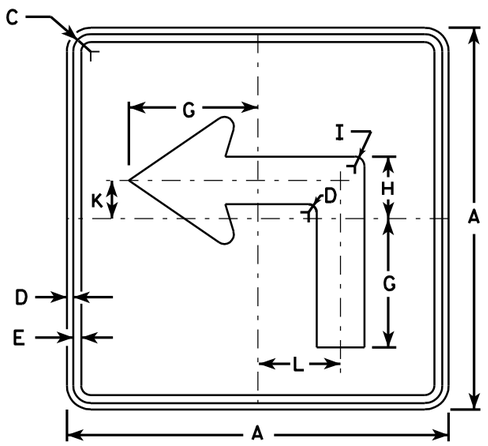
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

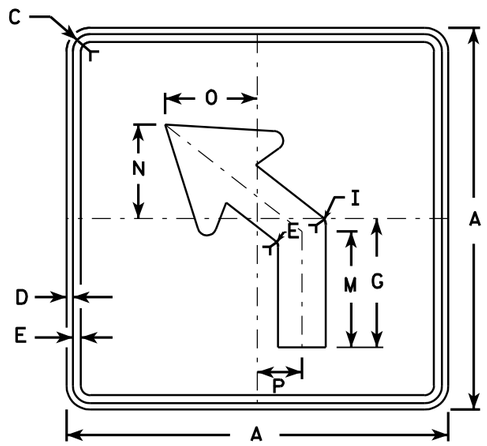
DATE 6/26/14 PLATE NO M4-20.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

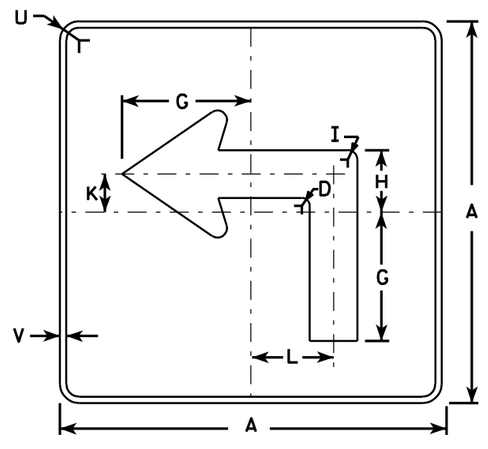
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\M420.DGN PLOT DATE : 03-JUL-2014 15:15 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.837526:1.000000 WISDOT/CADDS SHEET 42



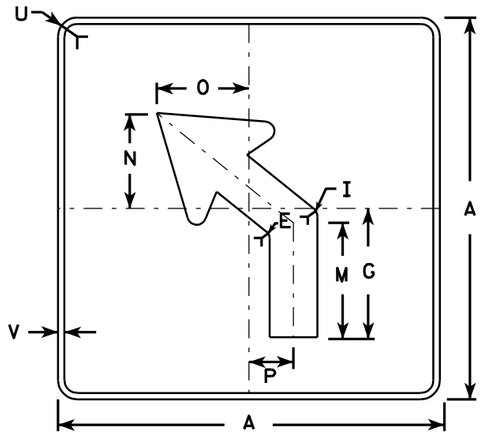
M5-1L
MK5-1L
MM5-1L
MO5-1L
MP5-1L
MR5-1L



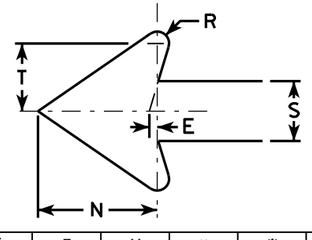
M5-2L
MK5-2L
MM5-2L
MO5-2L
MP5-2L
MR5-2L



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

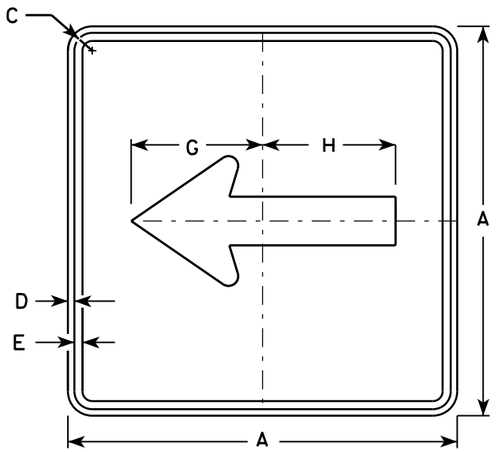
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/29/13 PLATE NO. M5-1.12

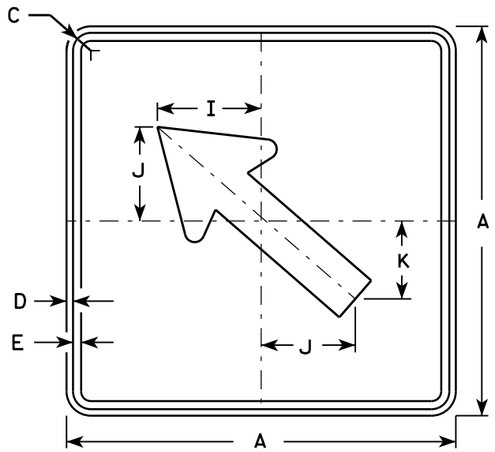
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 702	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\M51.DGN PLOT DATE : 29-JUL-2013 13:34 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 11.908552:1.000000

WISDOT/CADDS SHEET 42



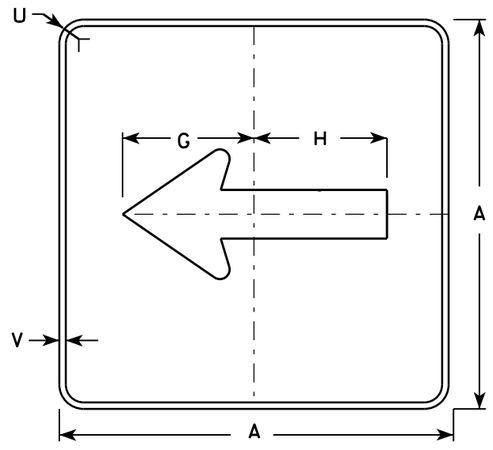
M6-1
MK6-1
MM6-1
MN6-1
MO6-1
MP6-1
MR6-1



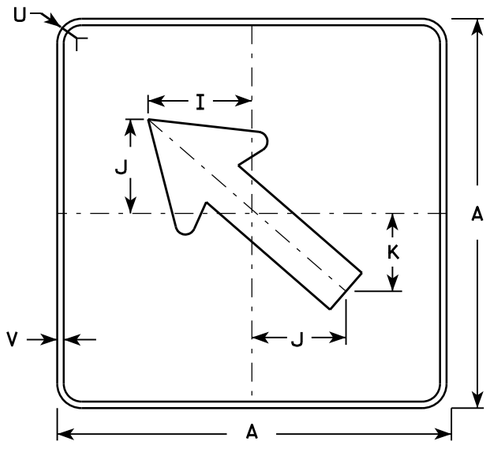
M6-2
MK6-2
MM6-2
MN6-2
MO6-2
MP6-2
MR6-2

NOTES

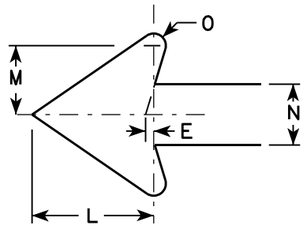
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MG6-1 and MG6-2 Background - Green
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow



MB6-1



MB6-2



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2						3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25

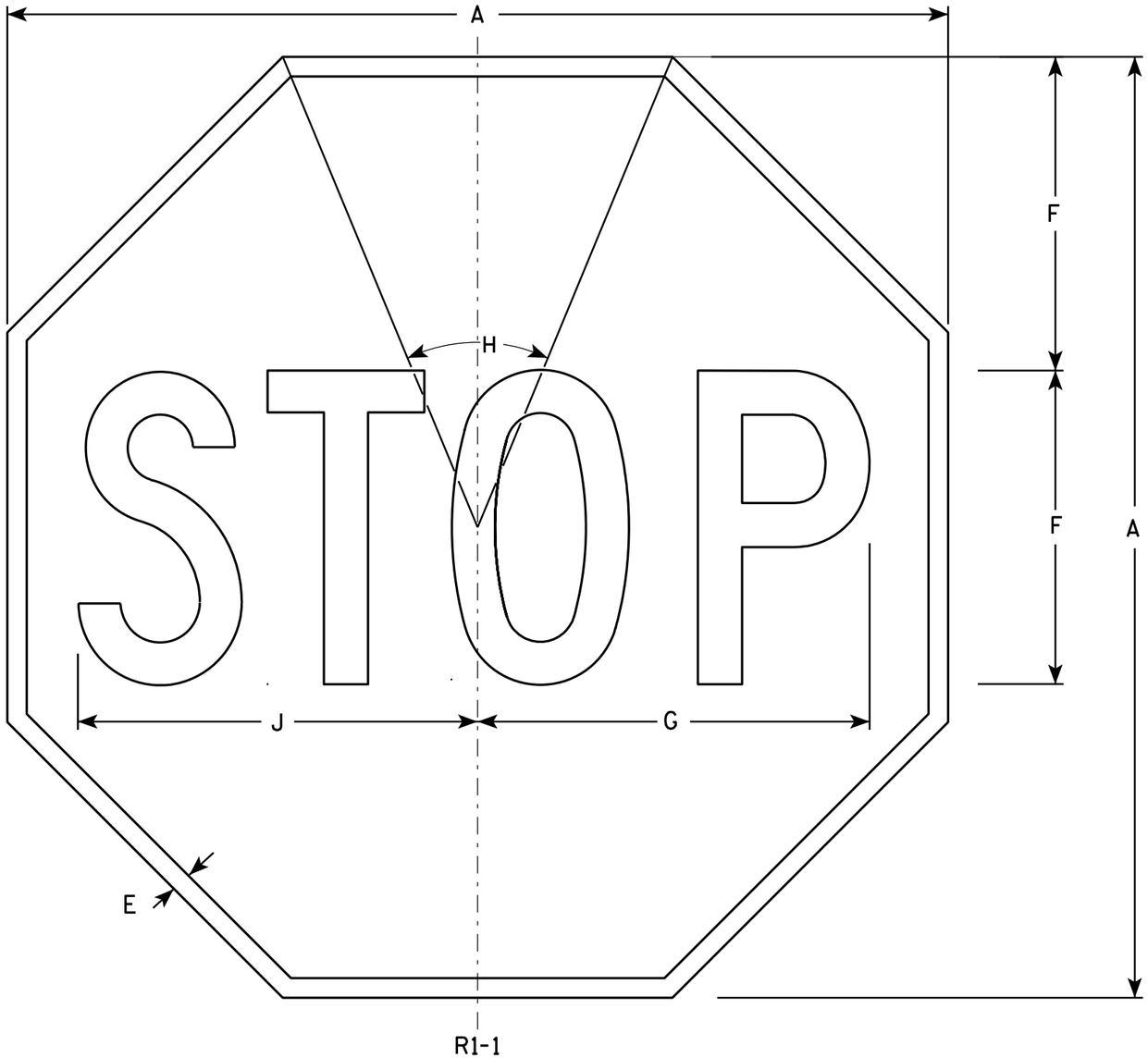
STANDARD SIGN M6-1 & M6-2 SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/03/14 PLATE 703 M6-1.14

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 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

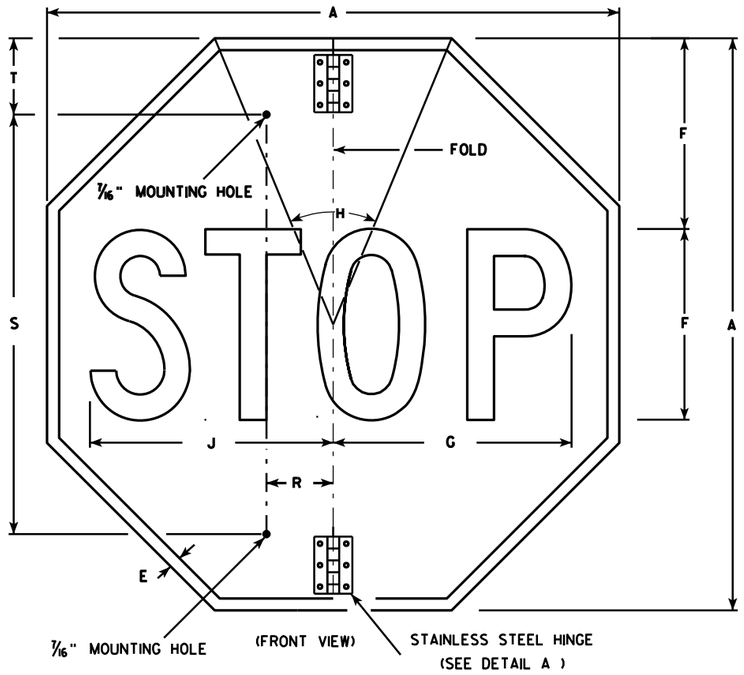
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 704	E

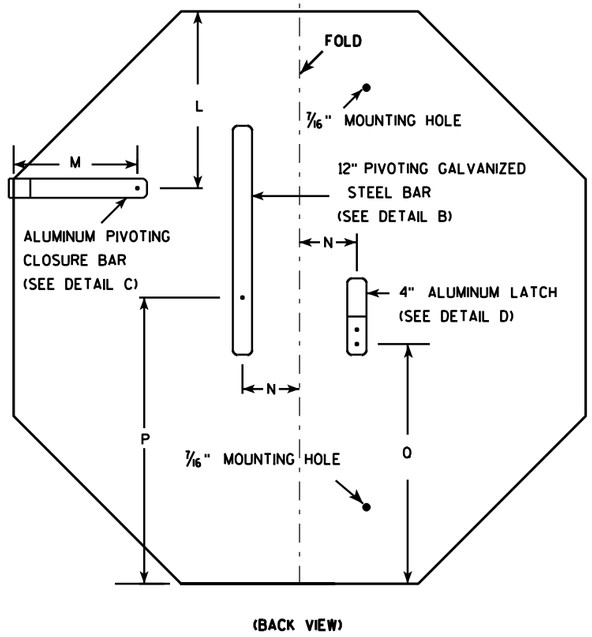
FILE NAME : C:\Users\PROJECTS\tr_stdplate\R11.DGN PLOT DATE : 02-DEC-2010 15:09 PLOT BY : dotsja PLOT NAME : PLOT SCALE : 4.469282:1.000000

WISDOT/CADDS SHEET 42

7

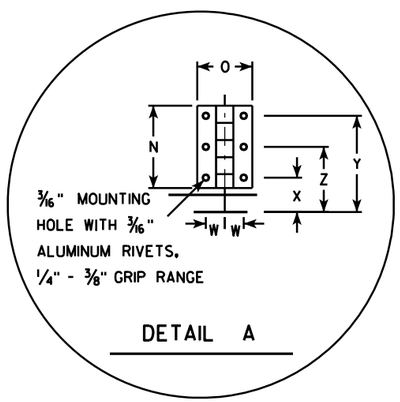
7



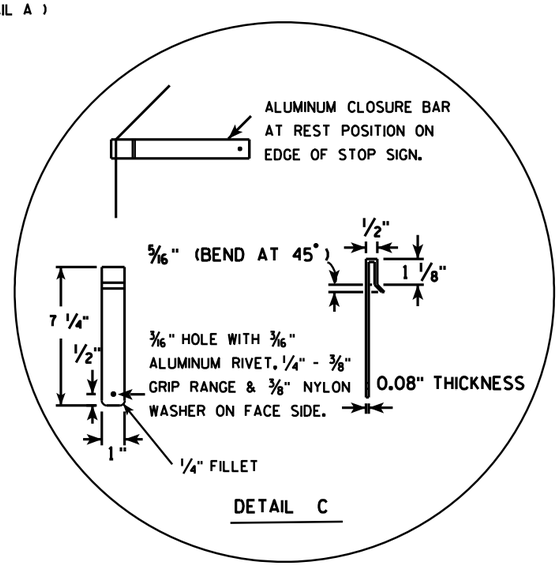


NOTES

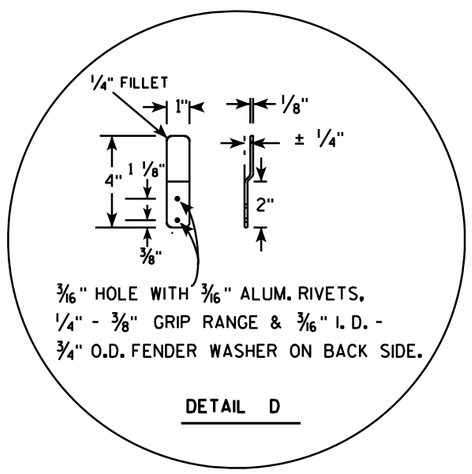
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C
4. All hardware used on the folding STOP sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.



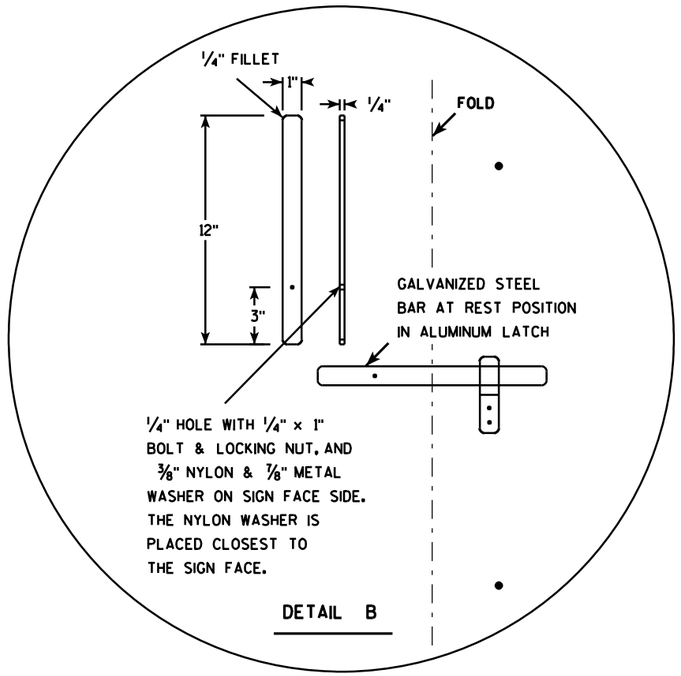
DETAIL A



DETAIL C



DETAIL D



DETAIL B

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				5/8	10	12 1/2	45		12 3/4		9 1/4	6 1/2	3	2	15	12 3/8	2 1/2	22	5			11/16	1 1/4	3 1/2	2 3/8	5.18
2M	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
3	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
4																											
5																											

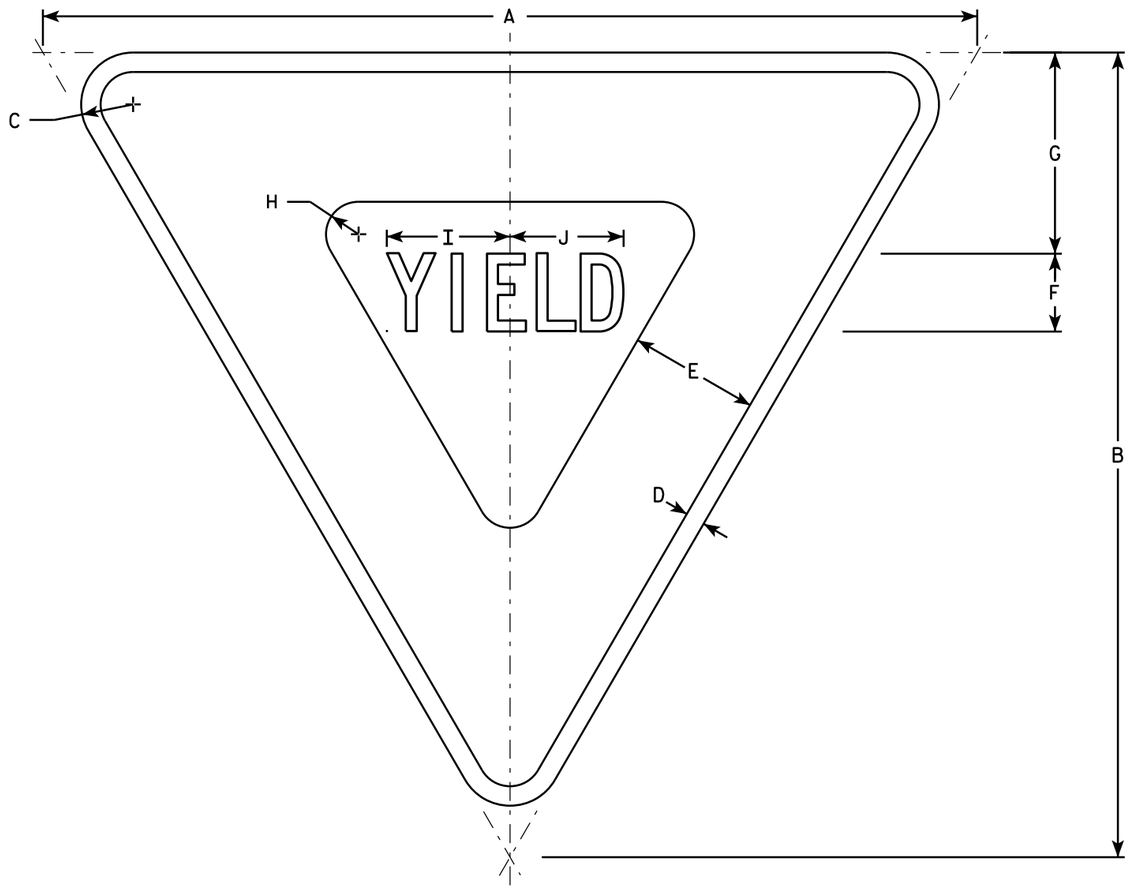
STANDARD SIGN
R1-1F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1F.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 705	E



R1-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The border strip and word message are reflectorized red.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	26	1 1/2	5/8	4	2 1/2	6 3/8	7/8	4	3 5/8																	2.71
2S	36	31	2	3/4	5	3	7 3/4	1 1/4	4 3/4	4 3/8																	3.88
2M	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
3	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
4	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
5	60	52	3	1 1/2	8	5	13	2 1/2	7 7/8	7 1/4																	10.83
6																											
7	18	15 1/2	1	3/8	2 1/2	1 1/2	3 7/8	5/8	2 3/8	2 1/4																	0.97

STANDARD SIGN
R1-2

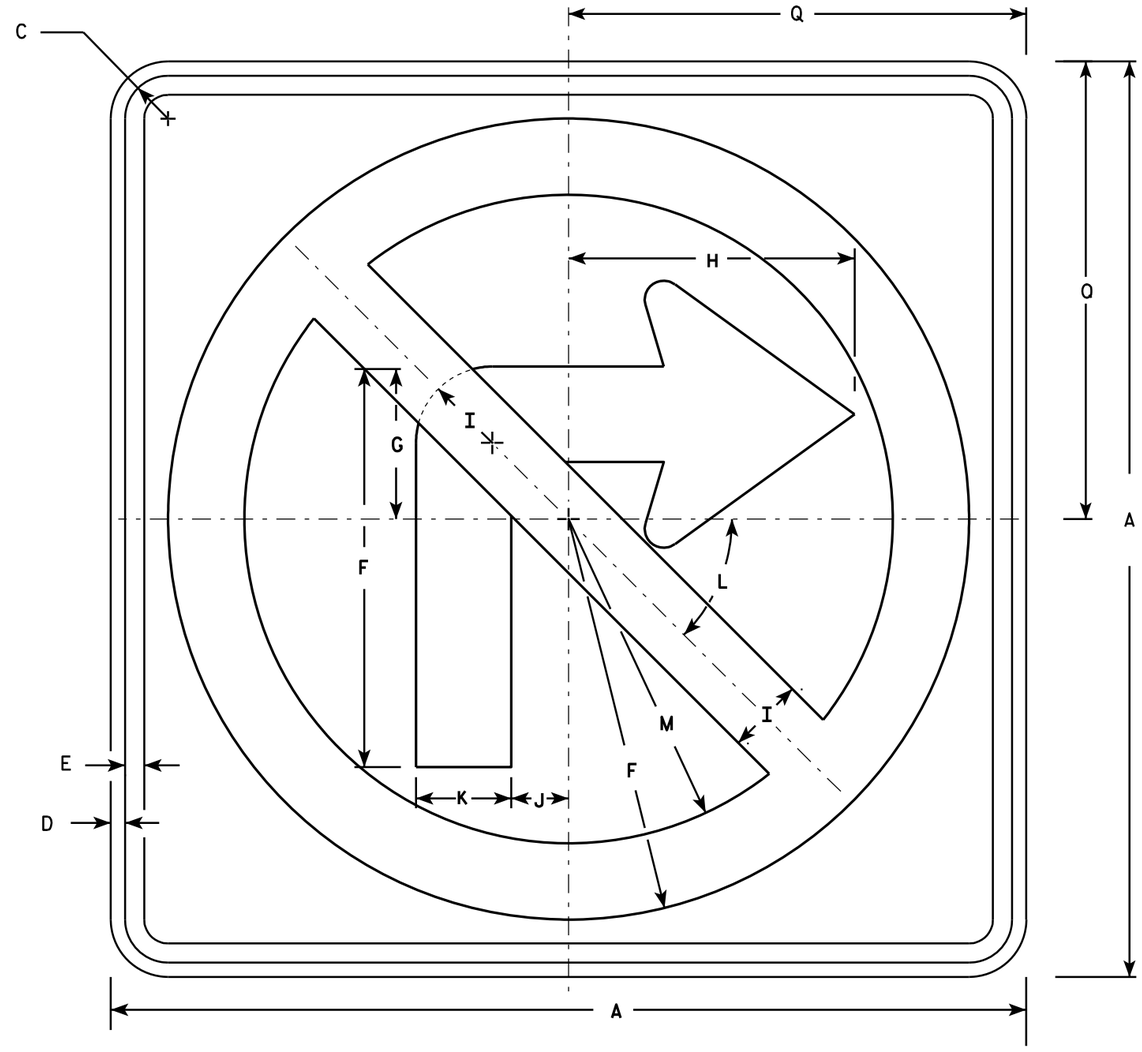
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/13/14 PLATE R1-2.12

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

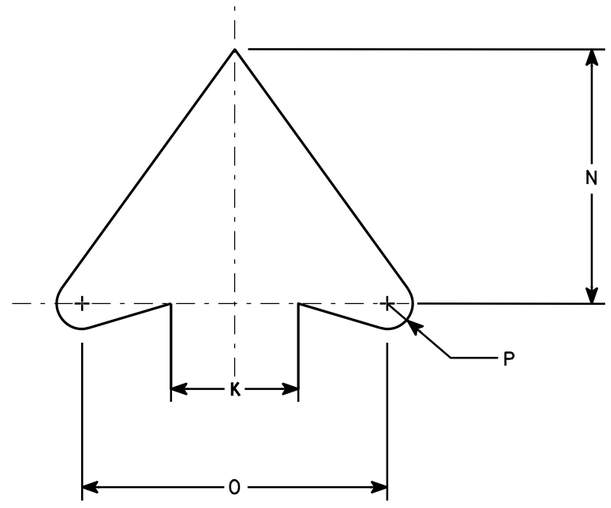
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R12.DGN PLOT DATE : 13-OCT-2014 15:12 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.837526:1.000000
WISDOT/CADDS SHEET 42



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

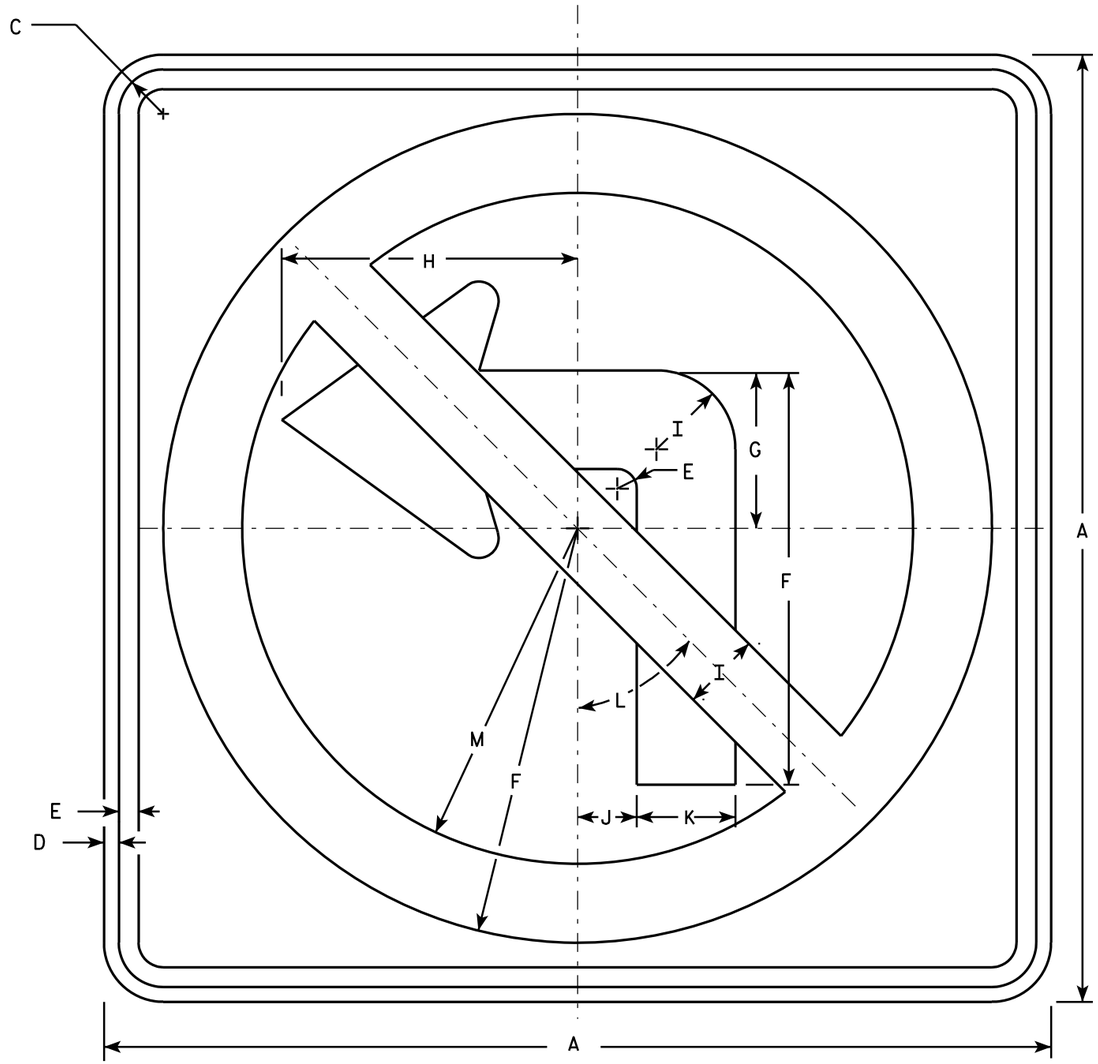
STANDARD SIGN
R3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-1.5

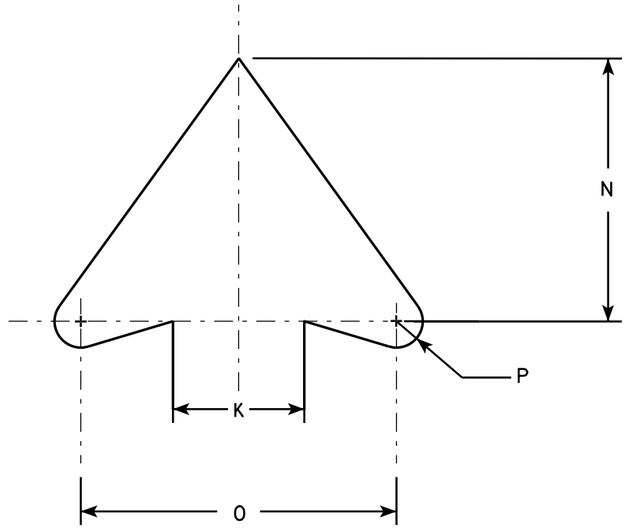
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 707	E



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

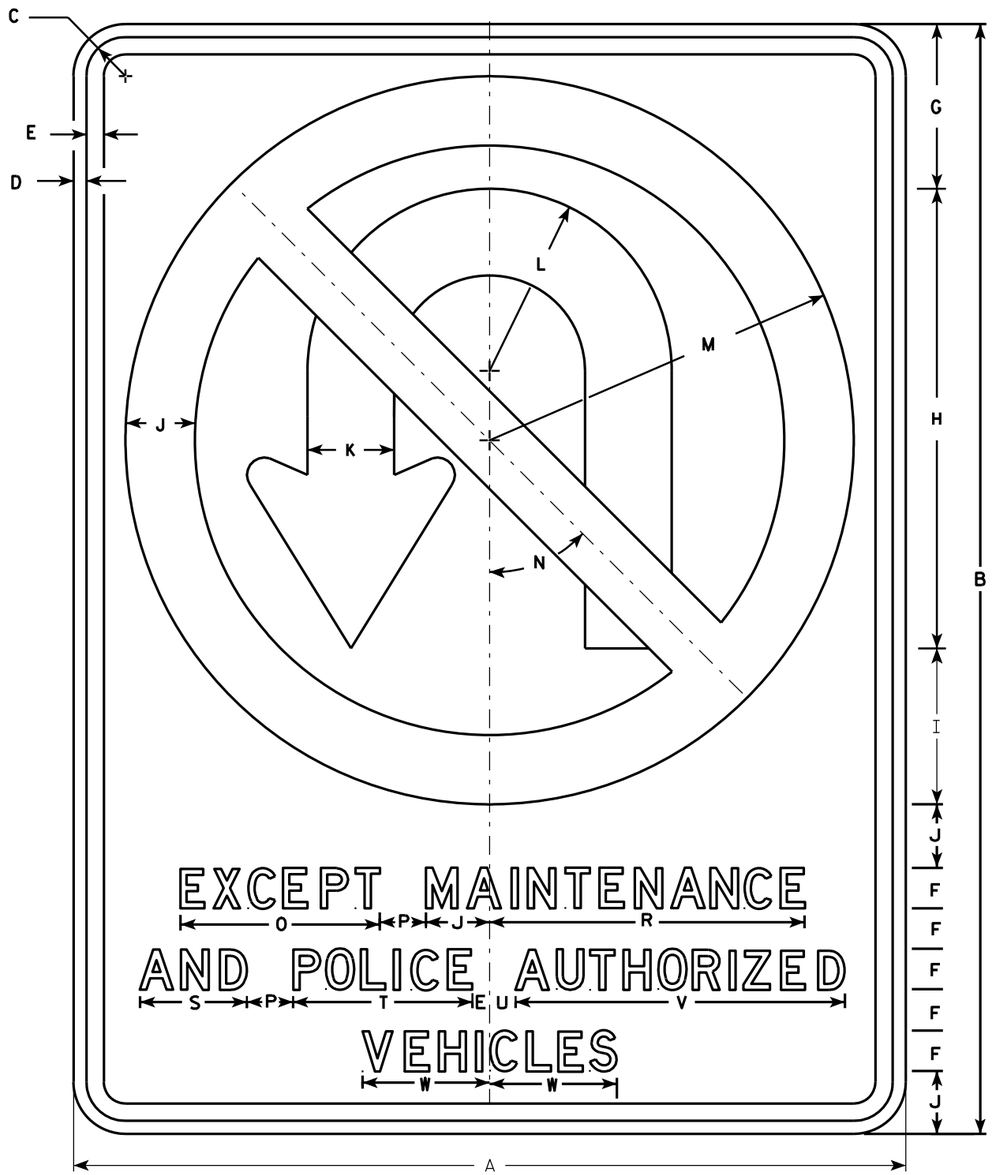
STANDARD SIGN
R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-2.10

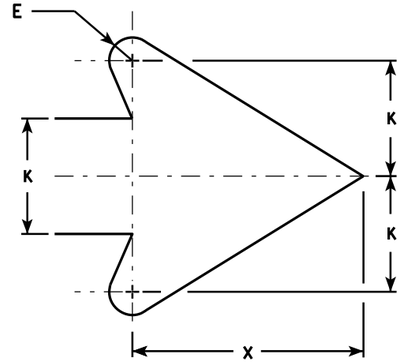
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 708	E



R3-4B

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																											
2M																											
3																											
4	36	48	1 5/8	5/8	3/4	1 3/4	7 1/8	19 7/8	6 3/4	2 3/4	3 3/4	7 7/8	15 3/4	45°	8 5/8	2		13 5/8	4 5/8	7 3/4	1 1/8	14 1/4	5 1/2	7 5/8			12.0
5	36	48	1 5/8	5/8	3/4	1 3/4	7 1/8	19 7/8	6 3/4	2 3/4	3 3/4	7 7/8	15 3/4	45°	8 5/8	2		13 5/8	4 5/8	7 3/4	1 1/8	14 1/4	5 1/2	7 5/8			12.0

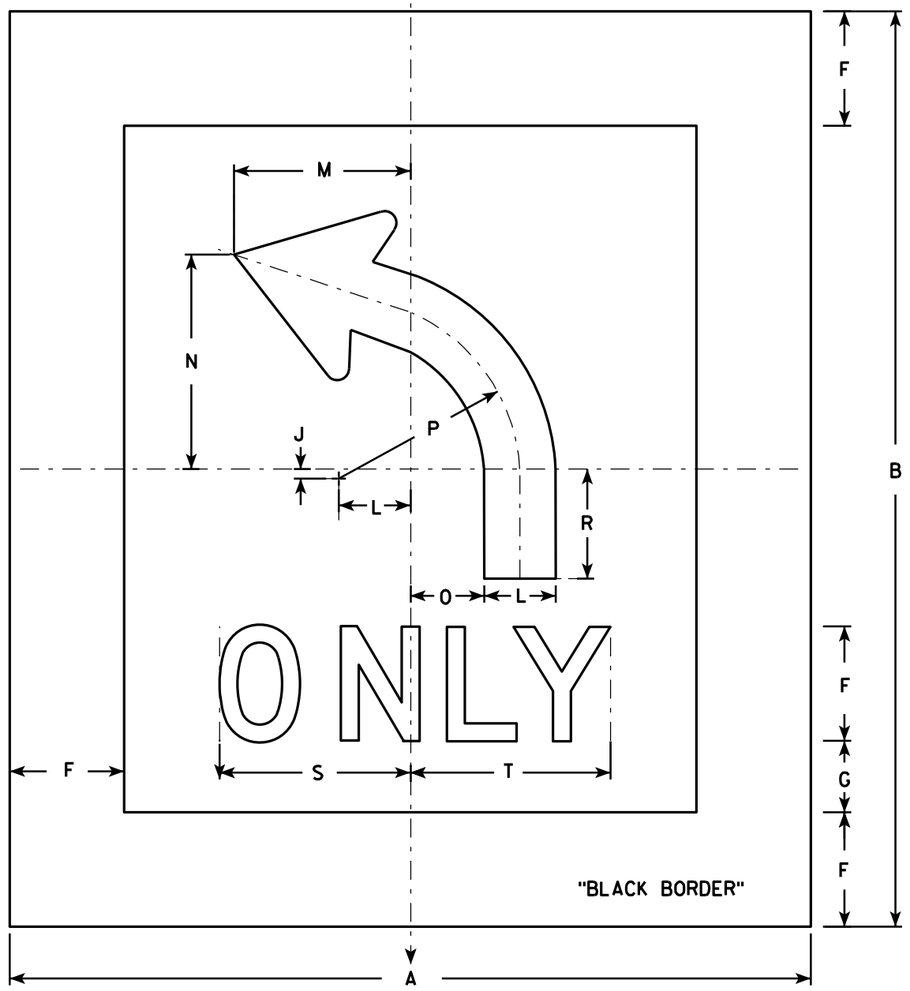
STANDARD SIGN
R3-4B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/17/2011 PLATE NO. R3-4B.2

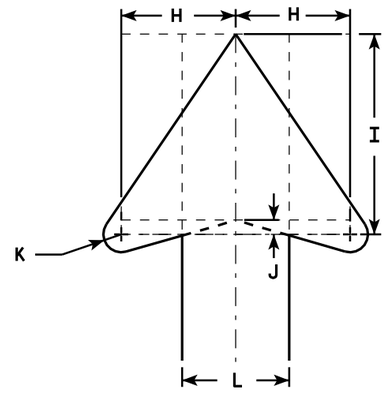
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 709	E



R3-5L

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. When base material is metal, the corners shall be rounded.
5. R3-5R is the same as R3-5L except curved portion of arrow points right.
6. The 6" border is non-reflective black.



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	42	48				6	3 3/4	4	7	1/2	5/8	3 3/4	9 1/4	11 1/4	3 7/8	9 1/2		5 3/4	10	10 1/2							1.26
2M	42	48				6	3 3/4	4	7	1/2	5/8	3 3/4	9 1/4	11 1/4	3 7/8	9 1/2		5 3/4	10	10 1/2							1.26
3																											
4																											
5																											

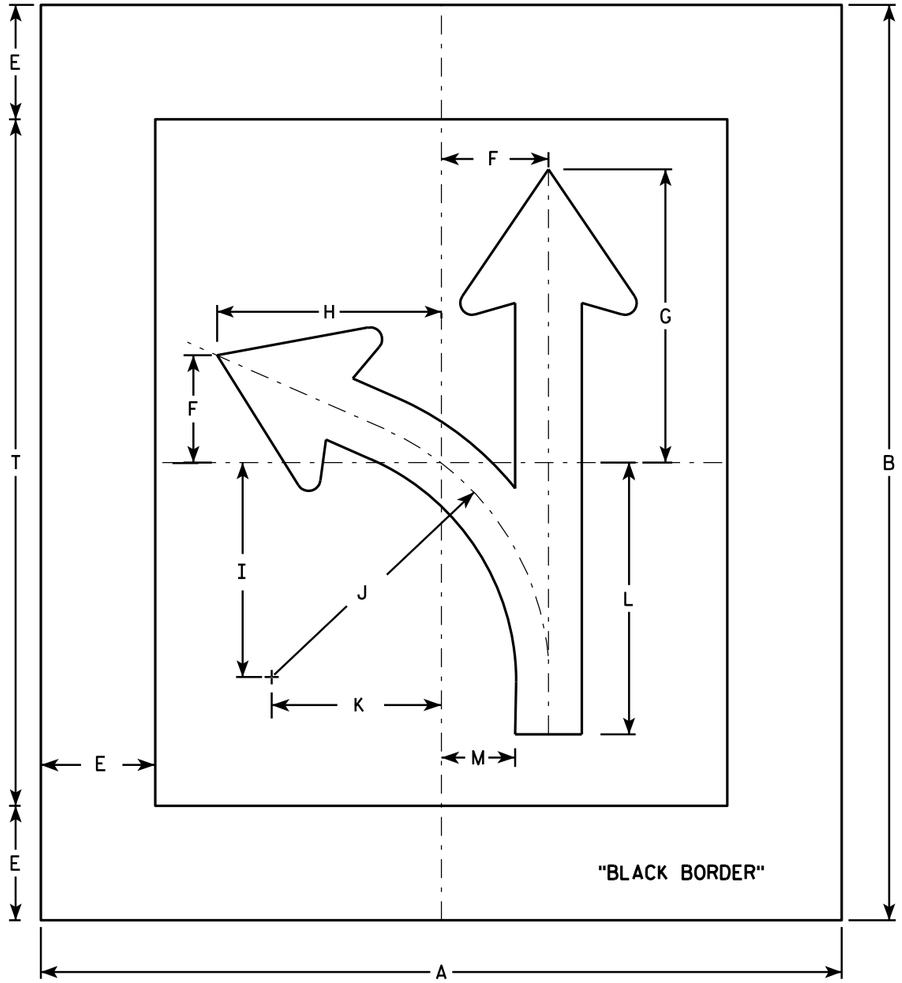
STANDARD SIGN
R3-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/24/11 PLATE NO. R3-5.6

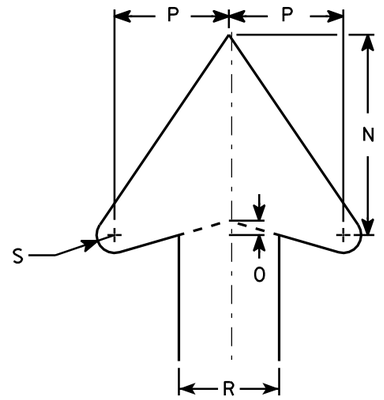
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 710 | E



R3-6L

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Corners may be square or rounded when base material is plywood. When base material is metal, the corners shall be rounded.
4. R3-6R is the same as R3-6L except curved portion of arrow points right.
5. The 6" border is non-reflective black.



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	42	48			6	5 5/8	15 3/8	11 3/4	11 1/4	14 1/2	8 7/8	14 1/4	3 7/8	7	1/2	4		3 1/2	5/8	36							14.0
2M	42	48			6	5 5/8	15 3/8	11 3/4	11 1/4	14 1/2	8 7/8	14 1/4	3 7/8	7	1/2	4		3 1/2	5/8	36							14.0
3																											
4																											
5																											

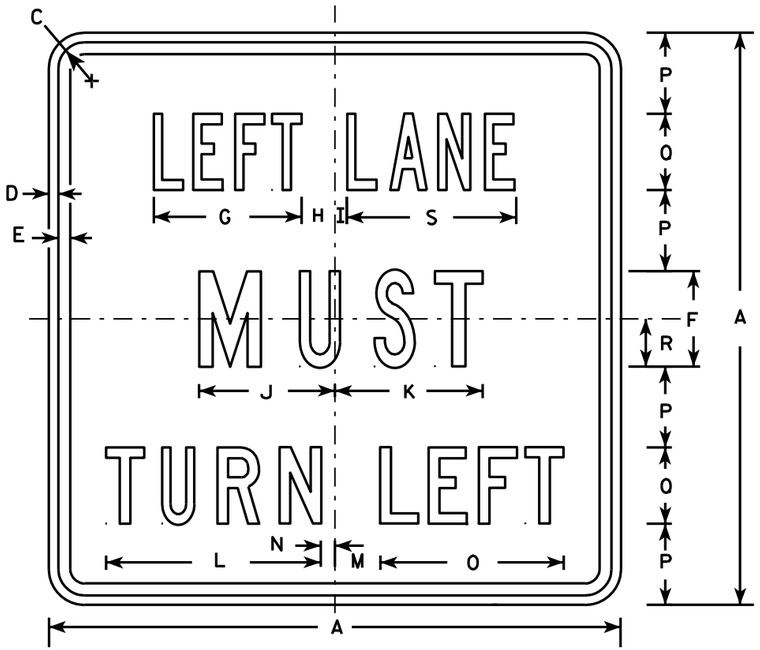
STANDARD SIGN
R3-6

WISCONSIN DEPT OF TRANSPORTATION

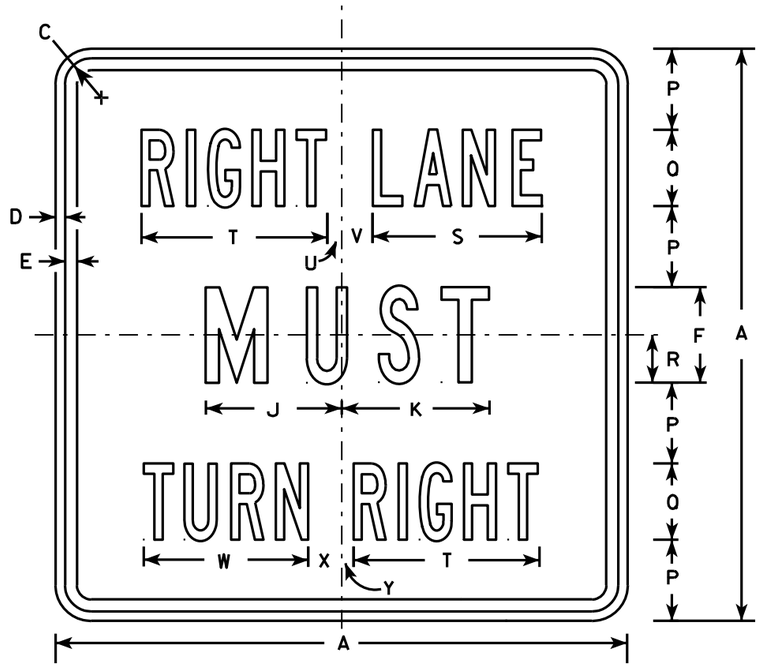
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/17/2011 PLATE NO. R3-6.5

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 711 | 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																											

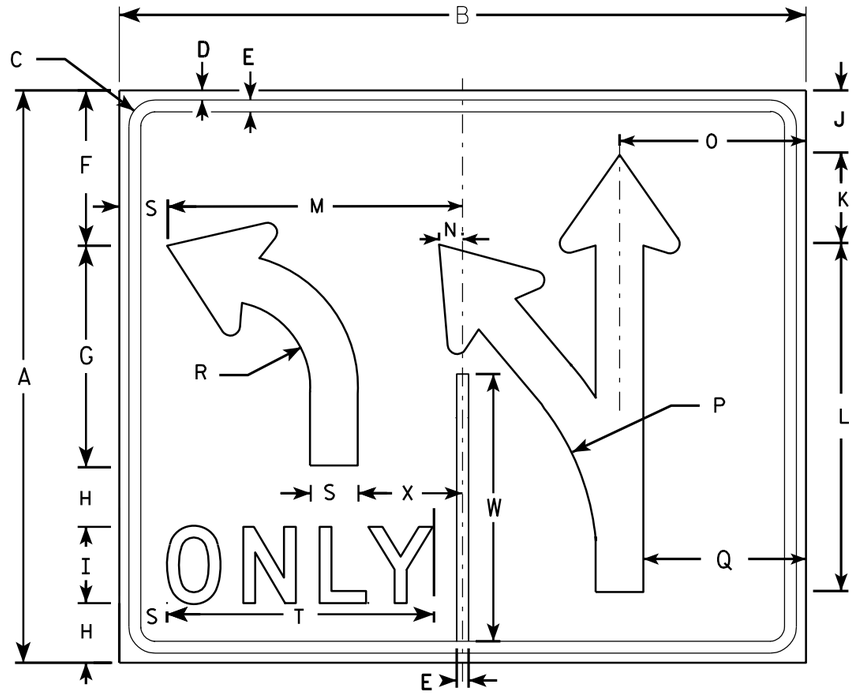
STANDARD SIGN
R3-7L & R3-7R

WISCONSIN DEPT OF TRANSPORTATION

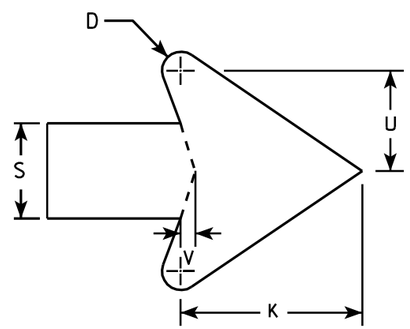
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-7.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 712 | E



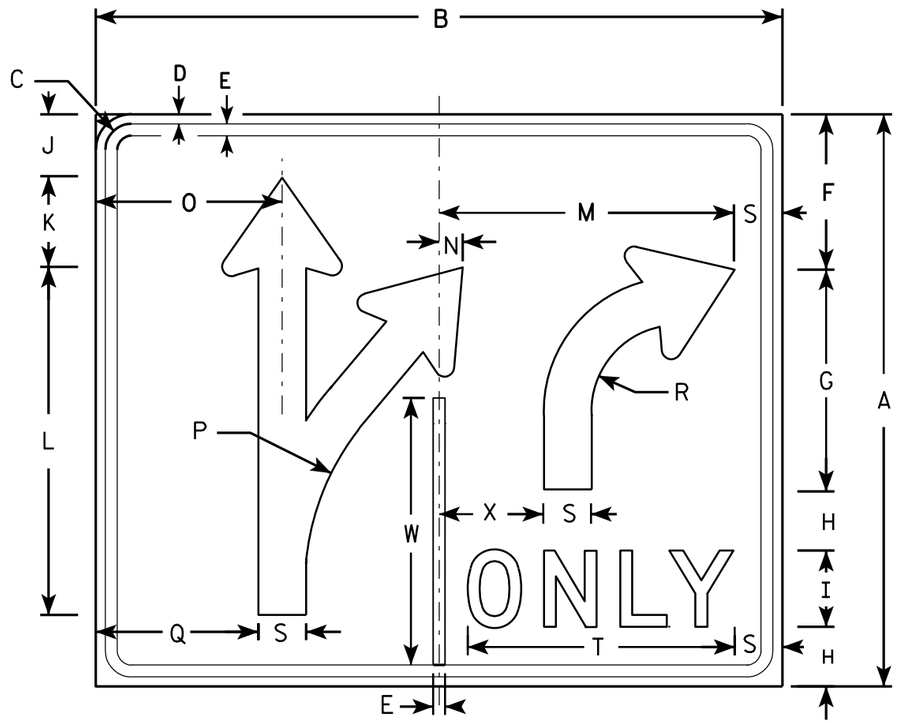
R3-8B



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.
5. R3-8B & R3-8C is the same but reversed.



R3-8C

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	3 1/4	4 3/4	18 1/4	15 1/2	1 1/4	9 3/4	13 1/4	8 1/2	4 1/2	2 1/2	14	2 5/8	3/8	14	5 1/4			7.5
2M	30	36	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	3 1/4	4 3/4	18 1/4	15 1/2	1 1/4	9 3/4	13 1/4	8 1/2	4 1/2	2 1/2	14	2 5/8	3/8	14	5 1/4			7.5
3																											
4	48	54	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	5 1/4	7 1/8	29 5/8	23 1/8	1 7/8	14 5/8	21 7/8	12 3/4	7 1/4	3 3/4	20 5/8	4	5/8	22 3/8	8 1/8			18.0
5	48	54	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	5 1/4	7 1/8	29 5/8	23 1/8	1 7/8	14 5/8	21 7/8	12 3/4	7 1/4	3 3/4	20 5/8	4	5/8	22 3/8	8 1/8			18.0

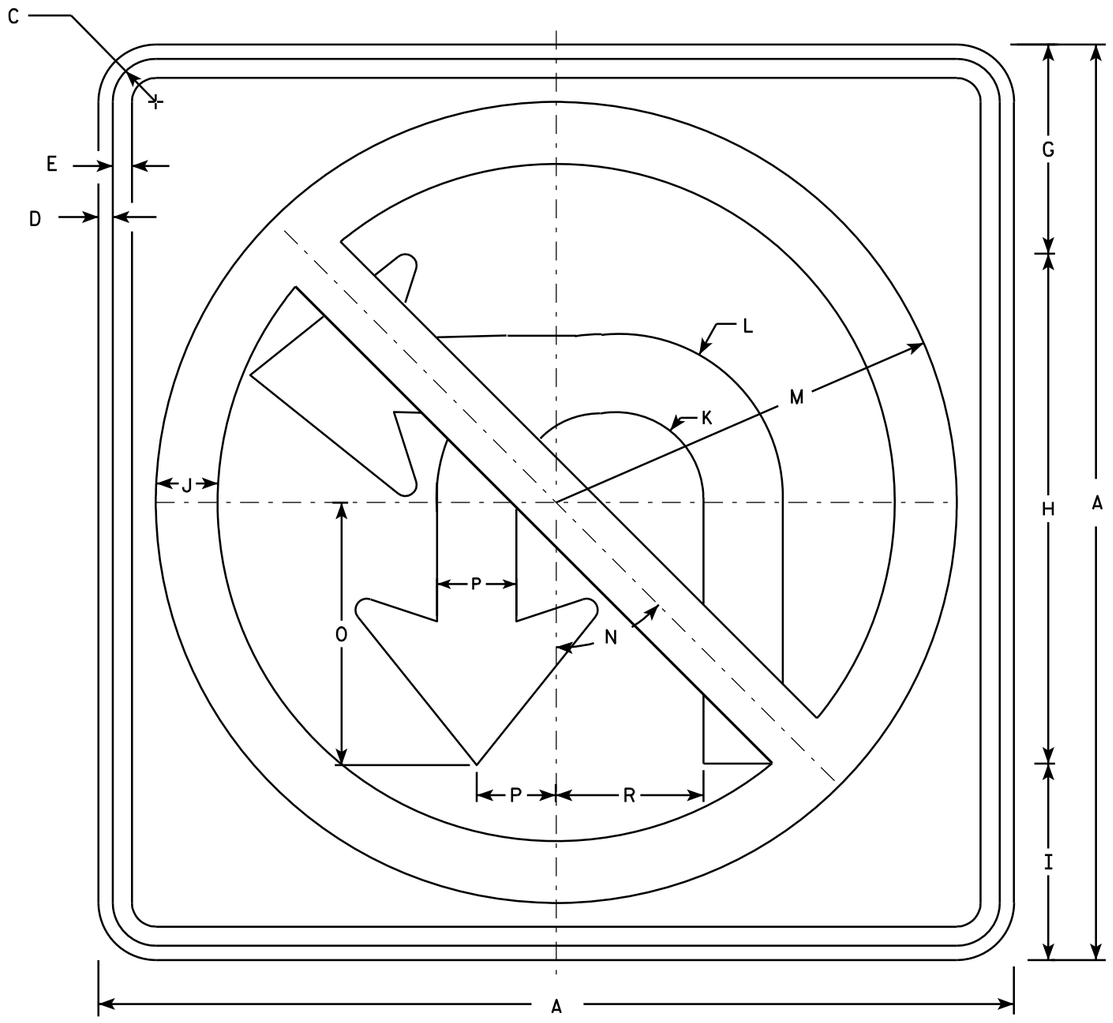
STANDARD SIGN
R3-8B & R3-8C

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-8B.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 713 | E



R3-18

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.

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		5 1/2	13 3/8	5 1/8	1 5/8	2 1/4	4 1/4	10 1/2	45°	6 7/8	2 1/8		3 7/8									4.0
2M	36		1 5/8	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45°	10 3/8	3 1/8		5 3/4									9.0
3	36		1 5/8	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45	10 3/8	3 1/8		5 3/4									9.0
4	36		1 5/8	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45	10 3/8	3 1/8		5 3/4									9.0
5	48		2 1/4	3/4	1		11	26 3/4	10 1/4	3 1/4	4 5/8	8 5/8	21	45°	13 3/4	4 1/8		7 3/4									16.0

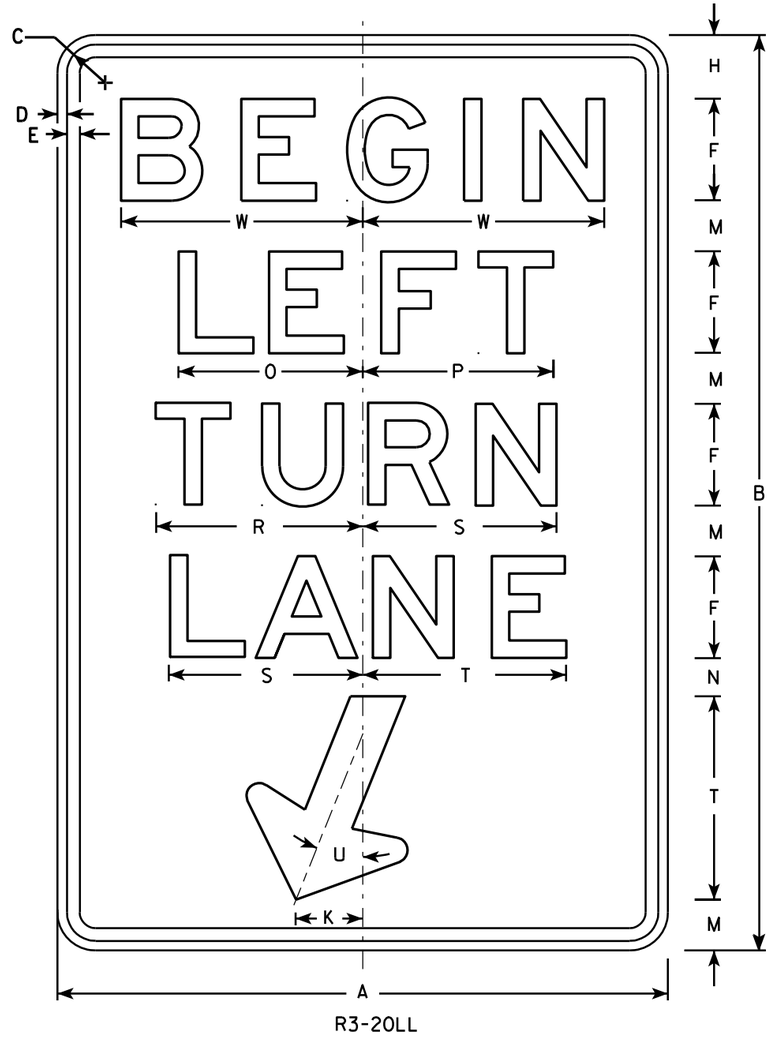
STANDARD SIGN
R3-18

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/21/10 PLATE NO. R3-18.2

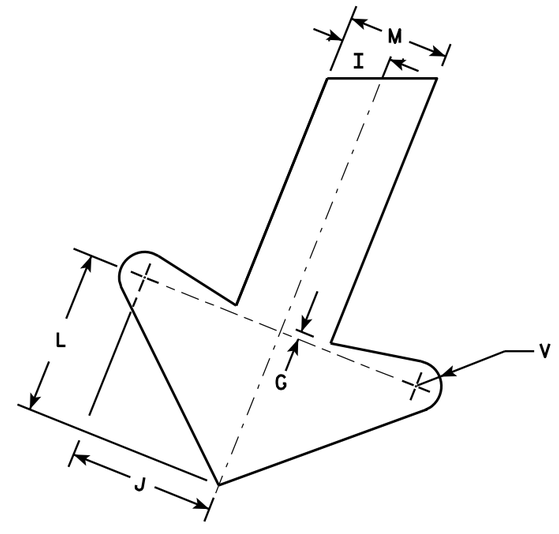
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 714	E



R3-20LL

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
2M	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
3	36	54	1 3/4	1/2	5/8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 7/8	3	2 1/4	10 7/8	11 1/4		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

STANDARD SIGN
R3-20LL

WISCONSIN DEPT OF TRANSPORTATION

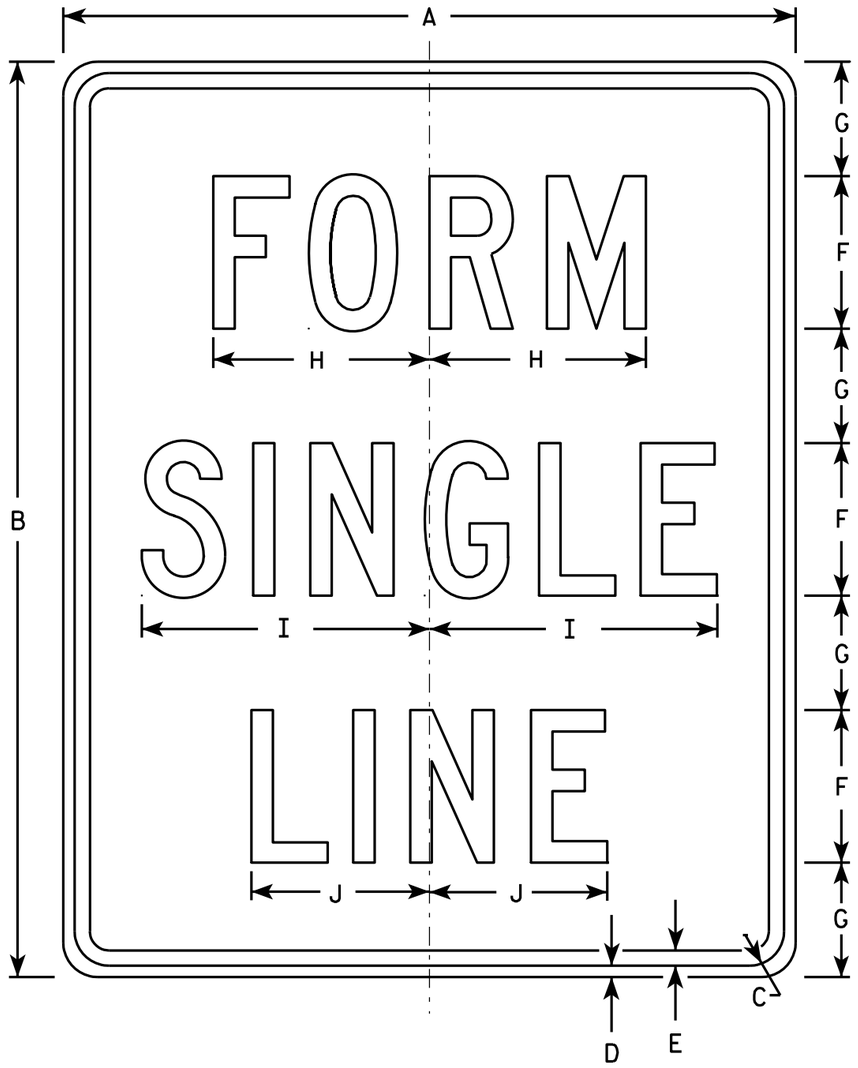
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20LL.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 715	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R320LL.DGN PLOT DATE : 15-OCT-2010 14:38 PLOT BY : dotsja PLOT NAME : PLOT SCALE : 5.959043:1.000000

WISDOT/CADDS SHEET 42



R3-58

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24	30	1 1/8	3/8	1/2	5	3 3/4	7 1/8	9 3/8	5 7/8																	5.0
2S	24	30	1 1/8	3/8	1/2	5	3 3/4	7 1/8	9 3/8	5 7/8																	5.0
2M	24	30	1 1/8	3/8	1/2	5	3 3/4	7 1/8	9 3/8	5 7/8																	5.0
3	36	48	1 3/8	1/2	5/8	8	6	11 3/8	15 1/8	9 3/8																	12.0
4	36	48	1 3/8	1/2	5/8	8	6	11 3/8	15 1/8	9 3/8																	12.0
5																											

STANDARD SIGN
R3-58

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-58.7

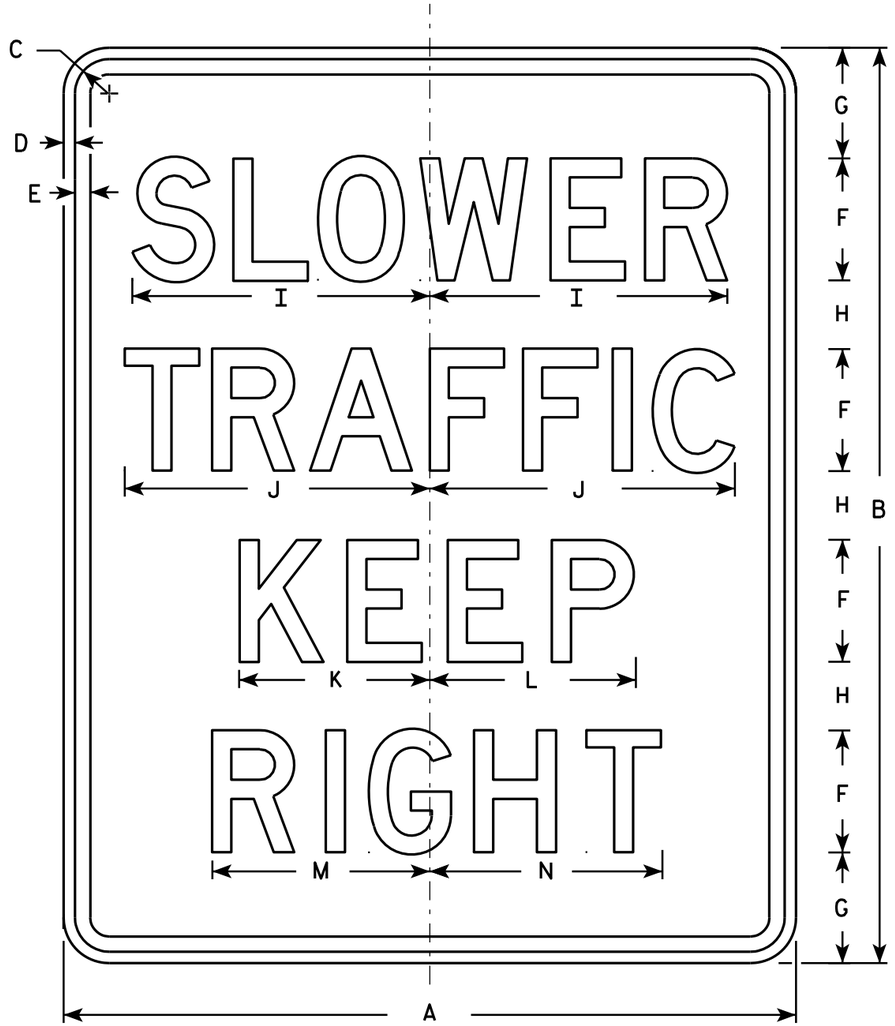
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 716	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R358.DGN PLOT DATE : 24-MAR-2011 15:27 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 4.965868:1.000000

WISDOT/CADDS SHEET 42

7

7



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:

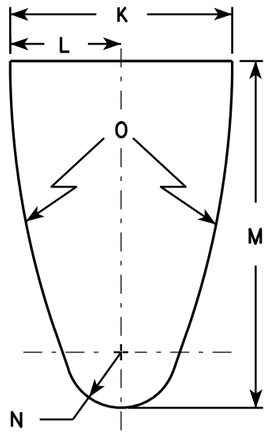
SHEET NO: 717 E

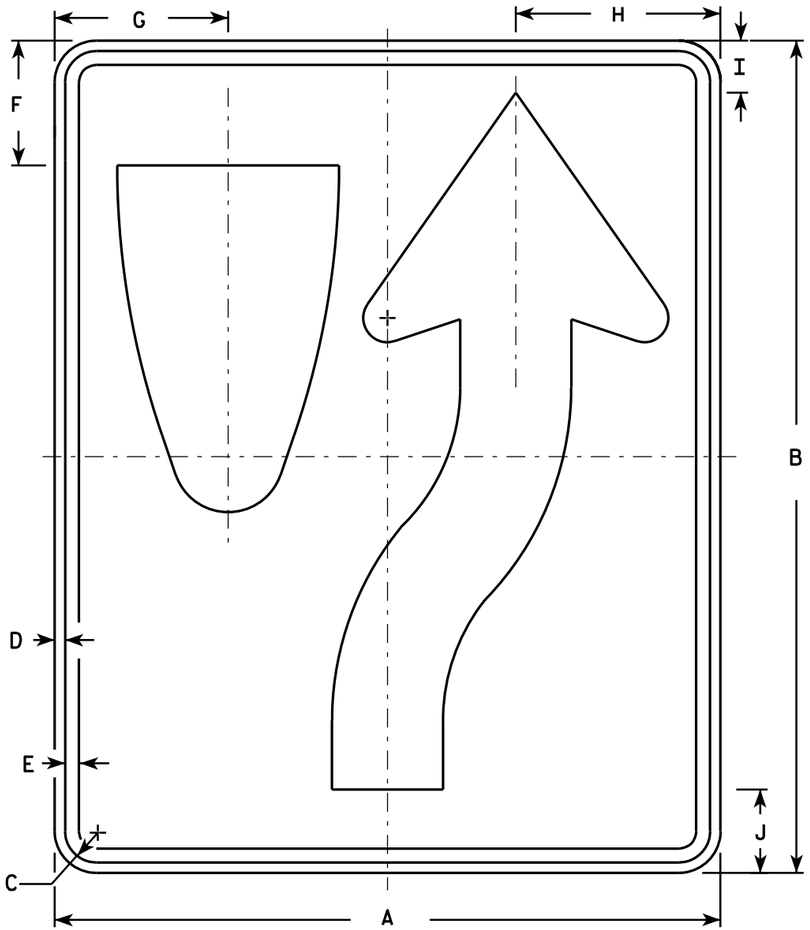
FILE NAME : C:\Users\PROJECTS\tr_stdplate\R43.DGN PLOT DATE : 25-MAR-2011 13:40 PLOT BY : mscsja

WISDOT/CADDS SHEET 42

7

7

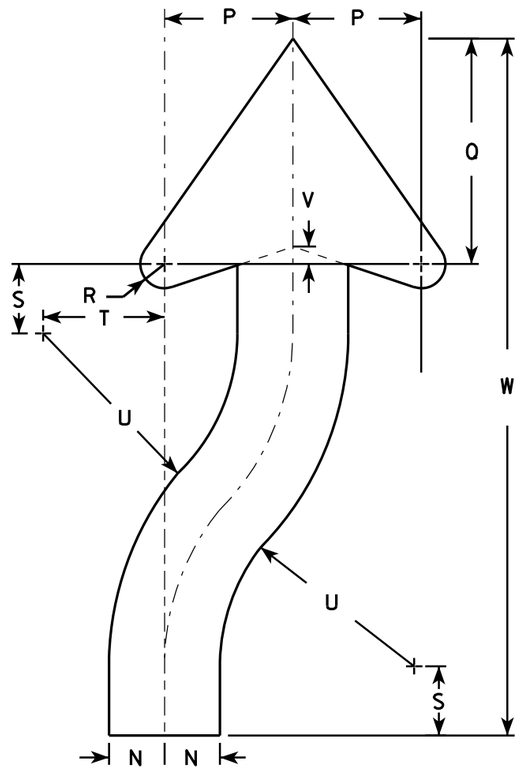




R4-7

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

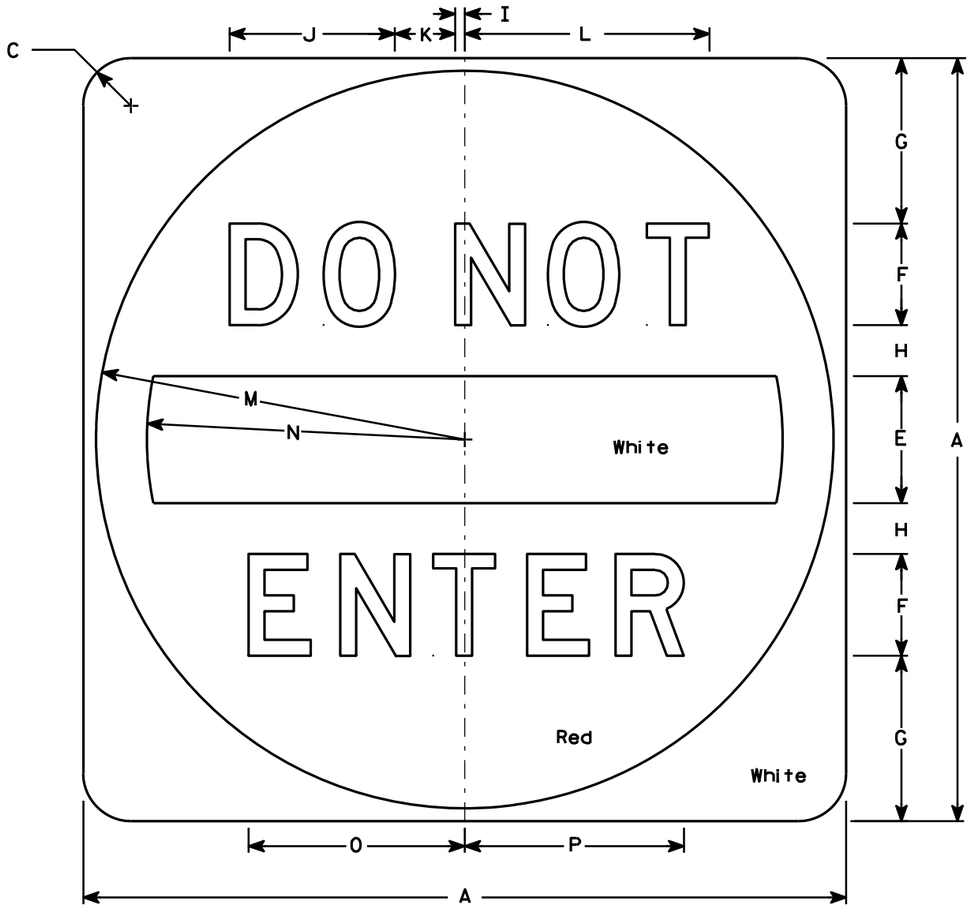
STANDARD SIGN
R4-7 & R4-8

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: 718	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

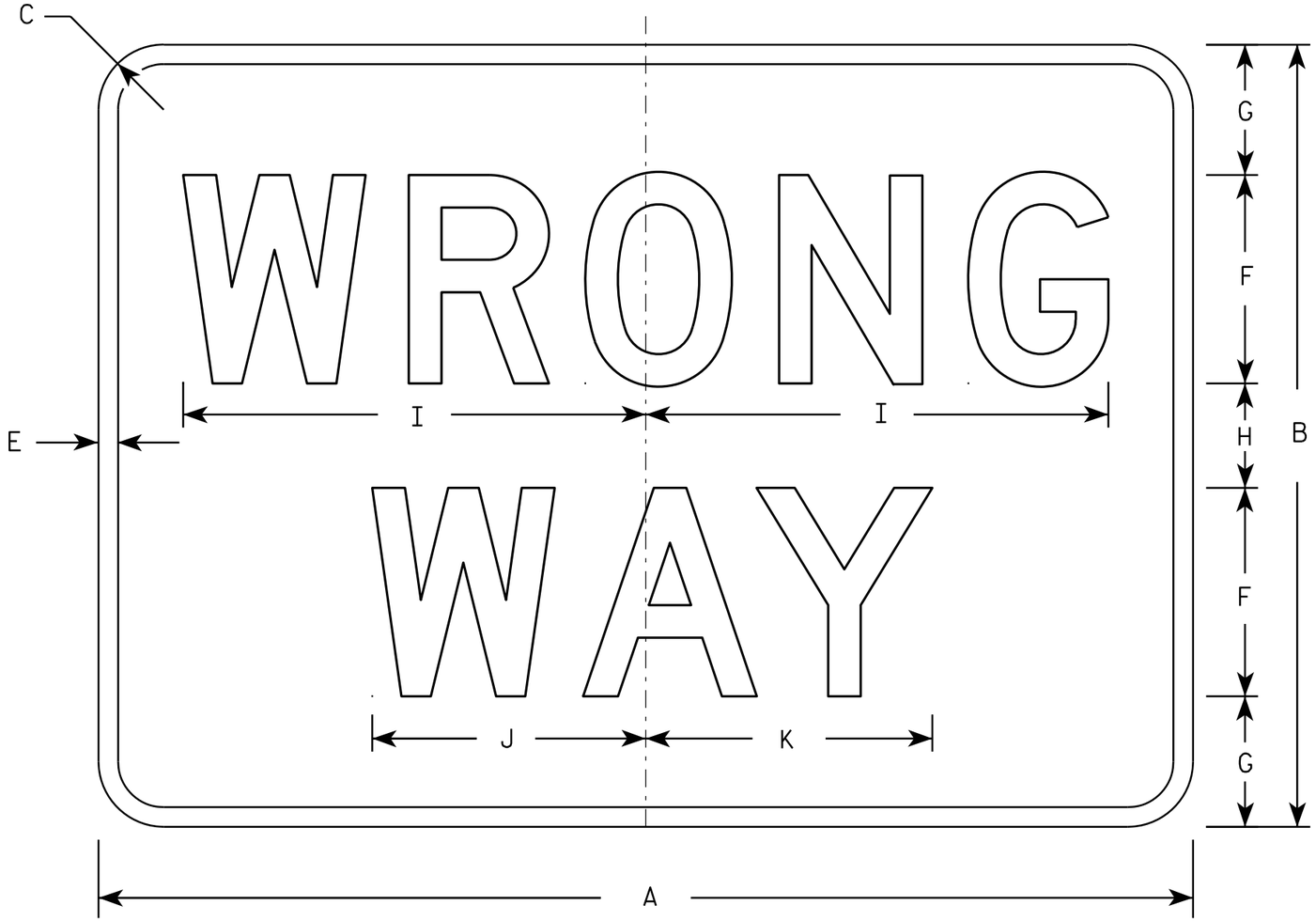
STANDARD SIGN
R5-1

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: 719 | E



R5-1A

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

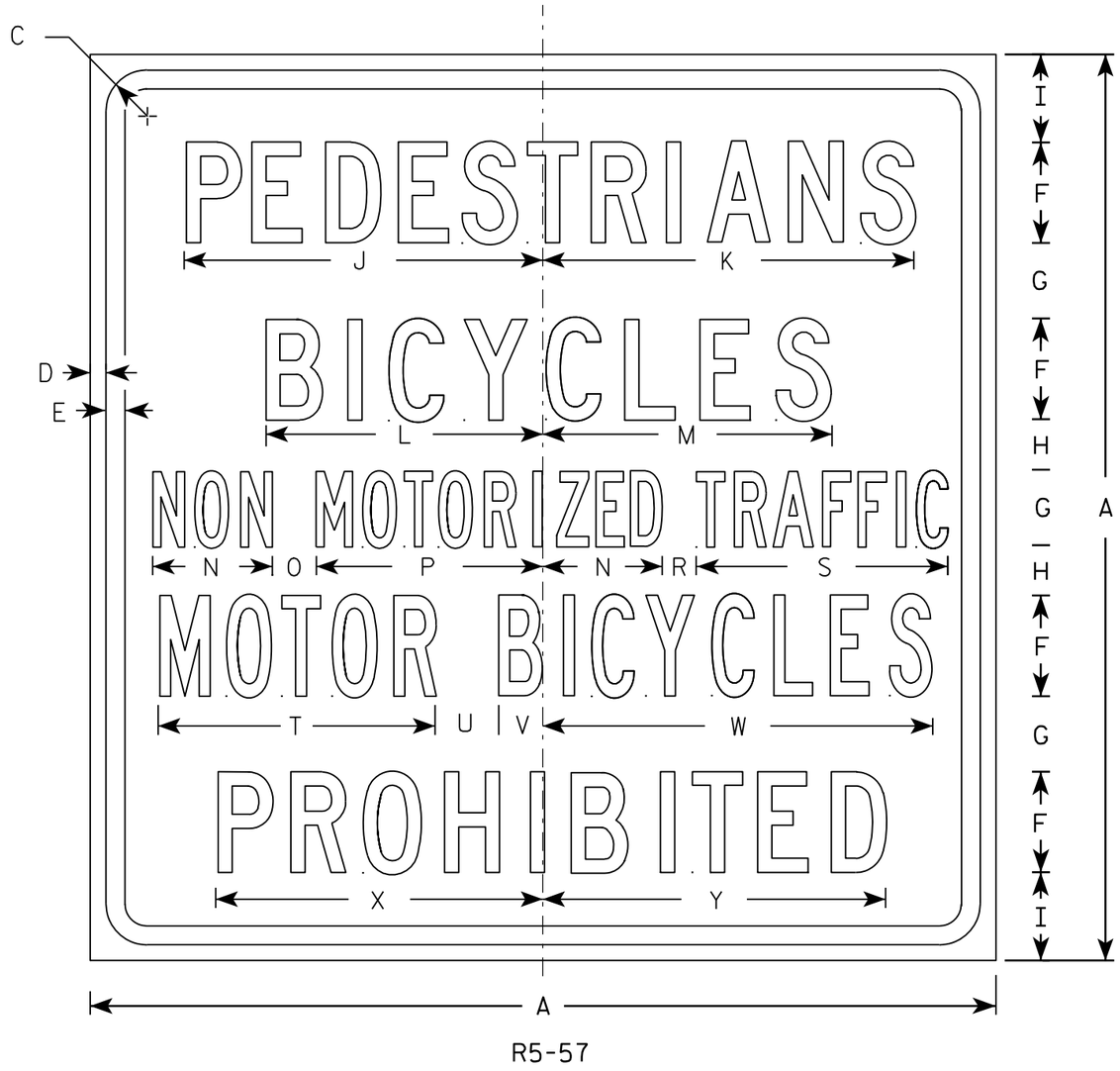
STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1A.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 720 | 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

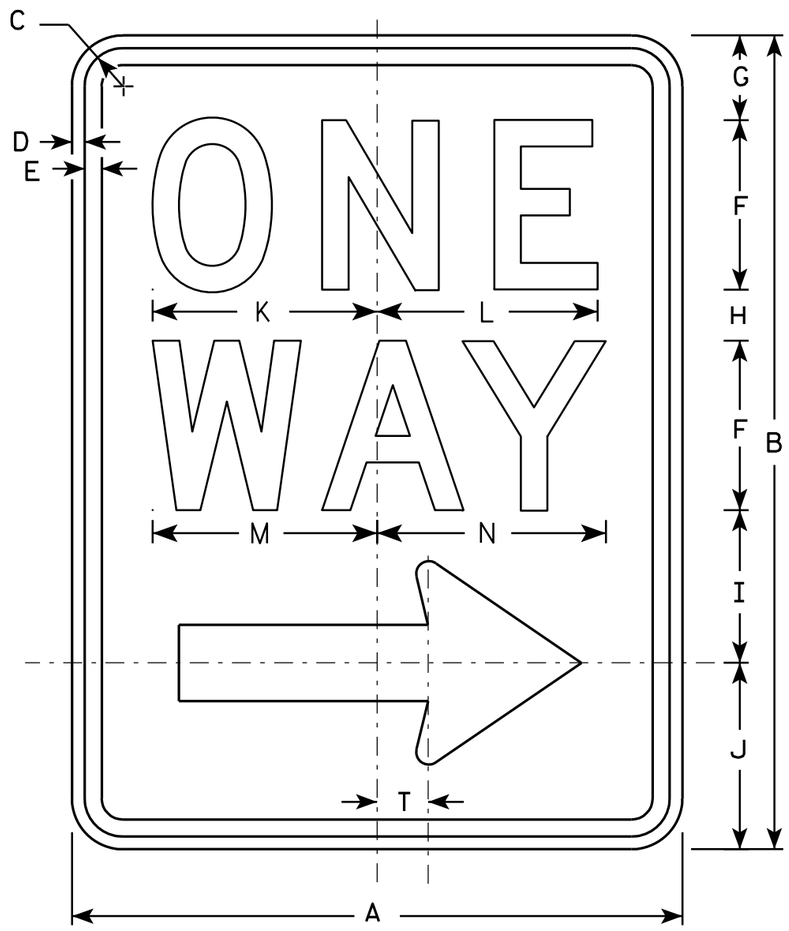
STANDARD SIGN
R5-57

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-57.10

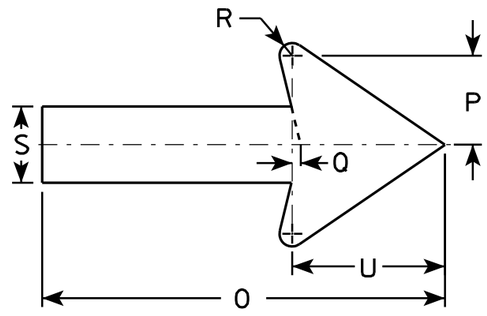
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 721 | E



R6-2R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R6-2L same as R6-2R except arrow points to the left.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

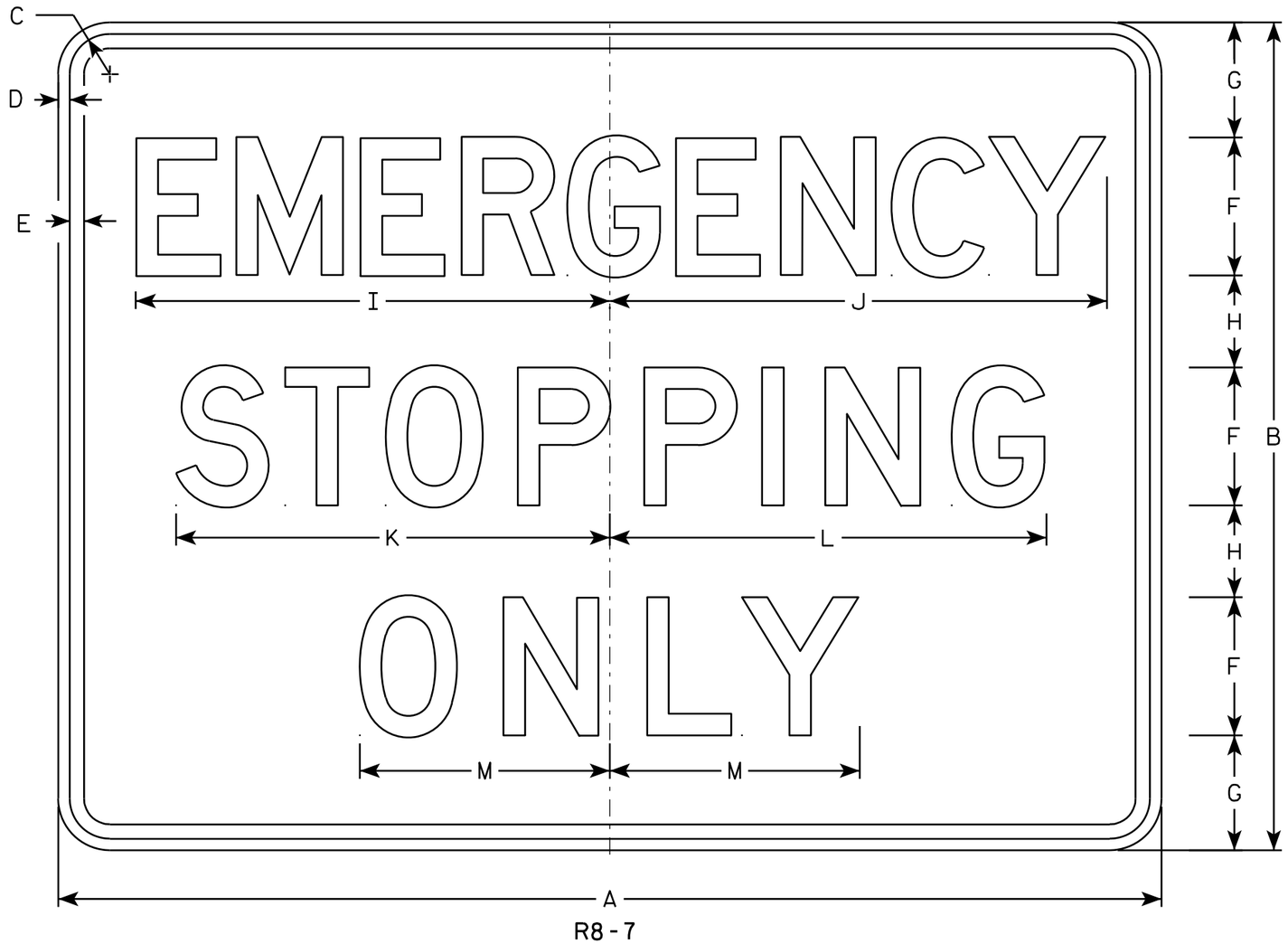
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 722	E



R8-7

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																											
2M																											
3																											
4	48	36	1 3/4	1/2	5/8	6	5	4	20 5/8	21 5/8	18 7/8	19	10 7/8														12.0
5	48	36	1 3/4	1/2	5/8	6	5	4	20 5/8	21 5/8	18 7/8	19	10 7/8														12.0

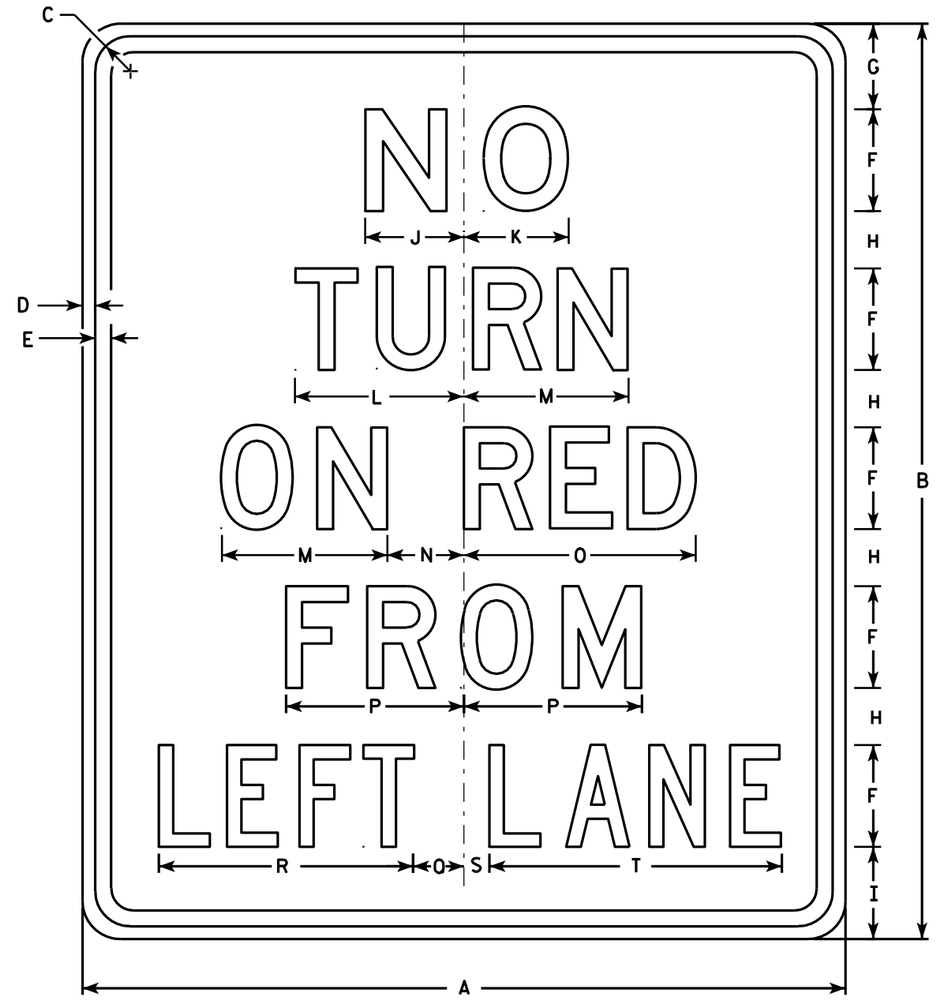
STANDARD SIGN
R8-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R8-7.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 723 | E



R10-11F

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 - 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 1 is Series E.
   Lines 2, 3 and 4 are Series D.
   Line 5 is 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																											
2S	30	36	1 3/8	1/2	5/8	4	3 3/8	2 1/4	3 5/8	3 7/8	4 1/8	6 5/8	6 1/2	3	9 1/8	7	2	10	1	11 1/2							7.5
2M	30	36	1 3/8	1/2	5/8	4	3 3/8	2 1/4	3 5/8	3 7/8	4 1/8	6 5/8	6 1/2	3	9 1/8	7	2	10	1	11 1/2							7.5
3																											
4																											
5																											

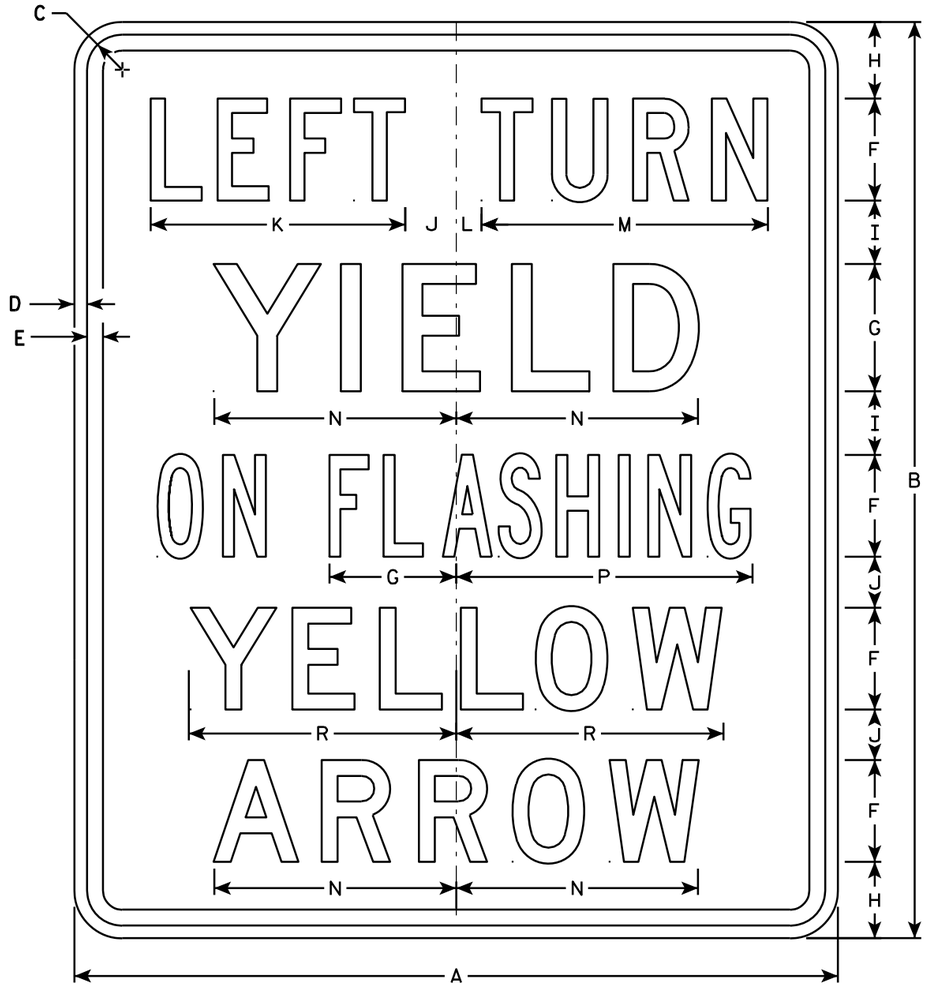
STANDARD SIGN
R10-11F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/5/11 PLATE NO. R10-11F.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 724	E

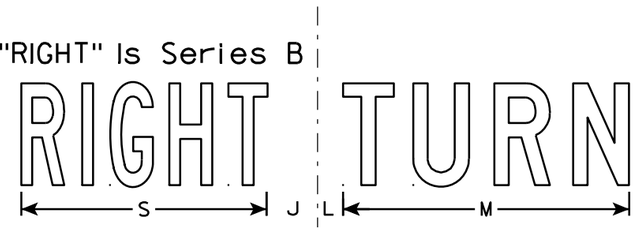


R10-50L

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 - 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 1 is Series C.
   Lines 2, 4 and 5 are Series D.
   Line 3 is Series B.

"RIGHT" Is Series B



R10-50R

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	36	1 3/8	1/2	5/8	4	5	3	2 1/2	2	10	1	11 1/4	9 1/2	4 1/4	11 5/8		10 1/2	9 5/8								7.5
2M	30	36	1 3/8	1/2	5/8	4	5	3	2 1/2	2	10	1	11 1/4	9 1/2	4 1/4	11 5/8		10 1/2	9 5/8								7.5
3																											
4																											
5																											

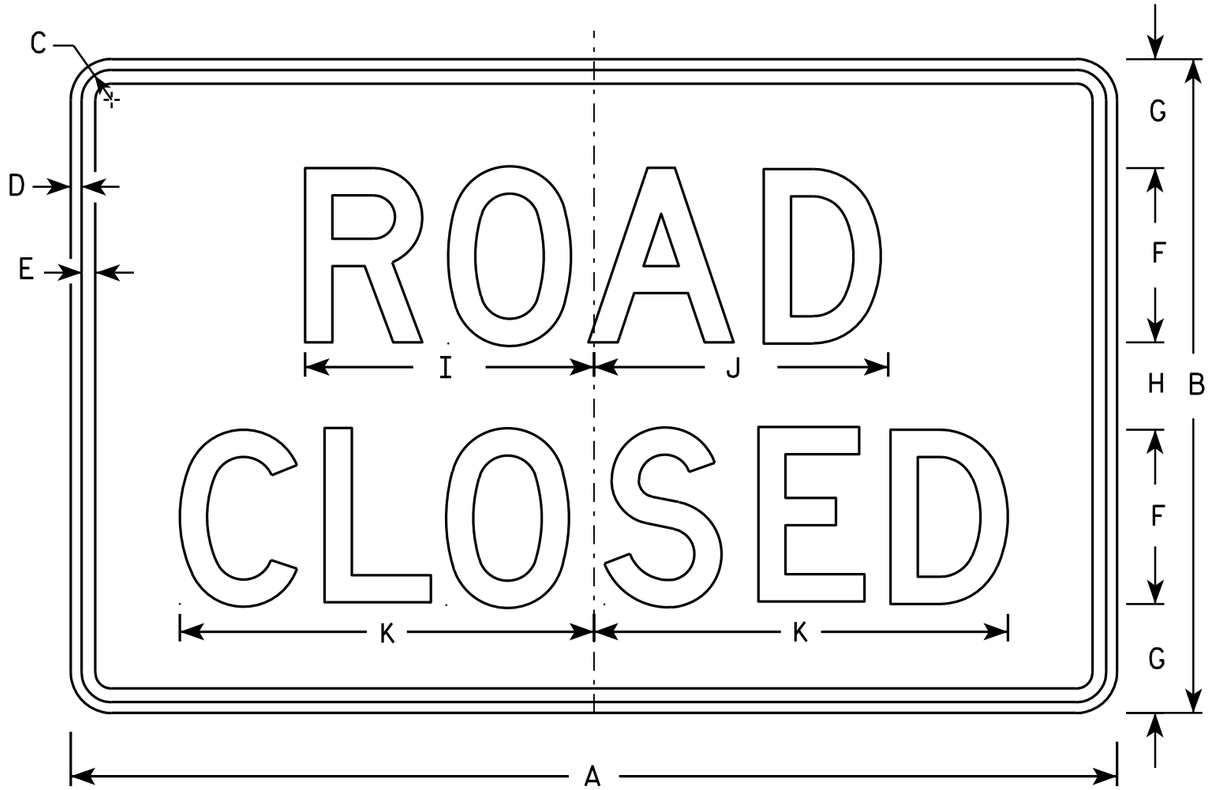
STANDARD SIGN
R10-50

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/11/13 PLATE NO. R10-50.2

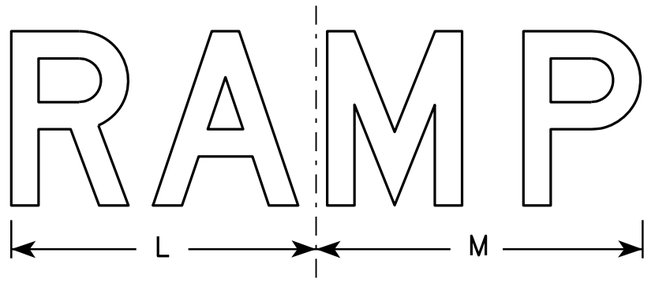
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 725	E



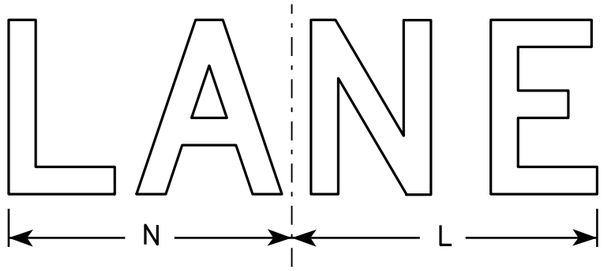
R11-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.



R11-2R



R11-2L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0

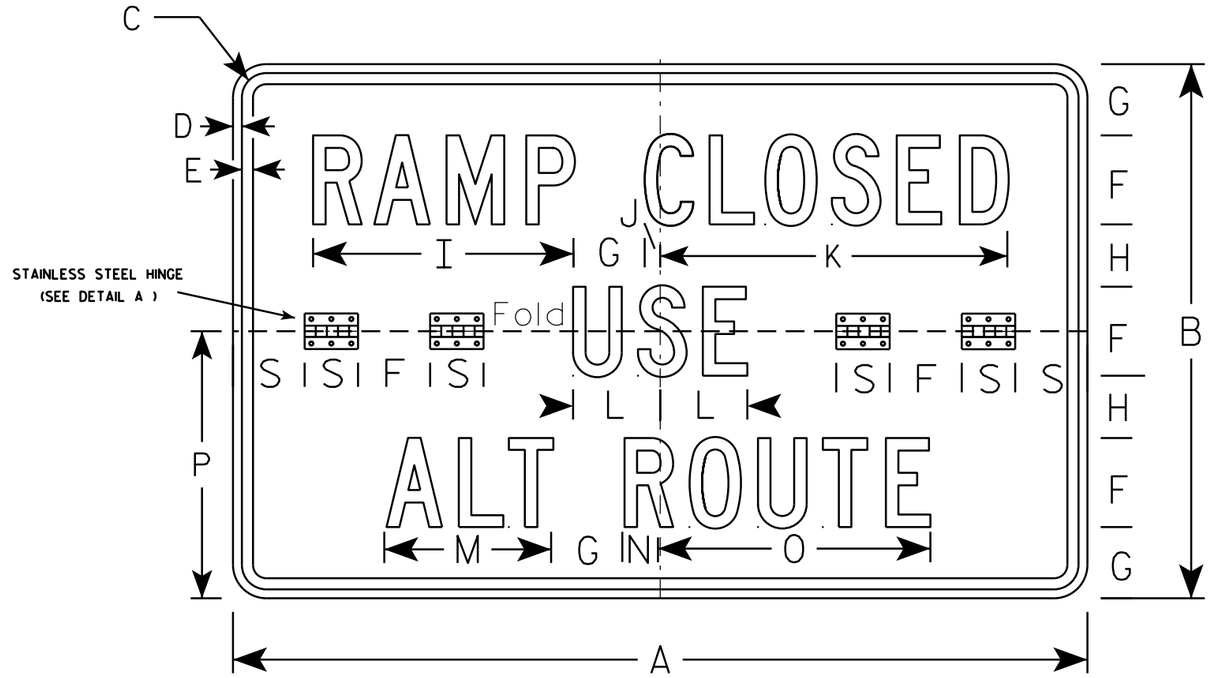
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

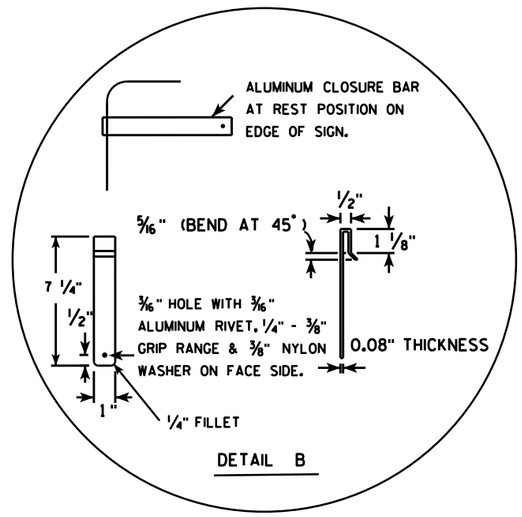
DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 726	E



R11-54F

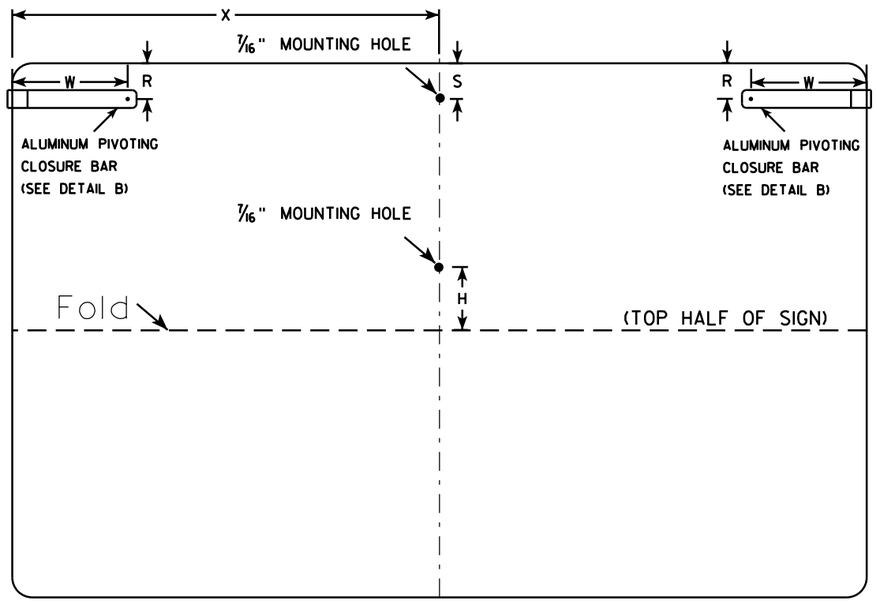
DETAIL A



DETAIL B

NOTES

1. Sign is Type II - Type H Reflective
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.
6. Refer to plate A5-3A for sign blank layout.



(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																											

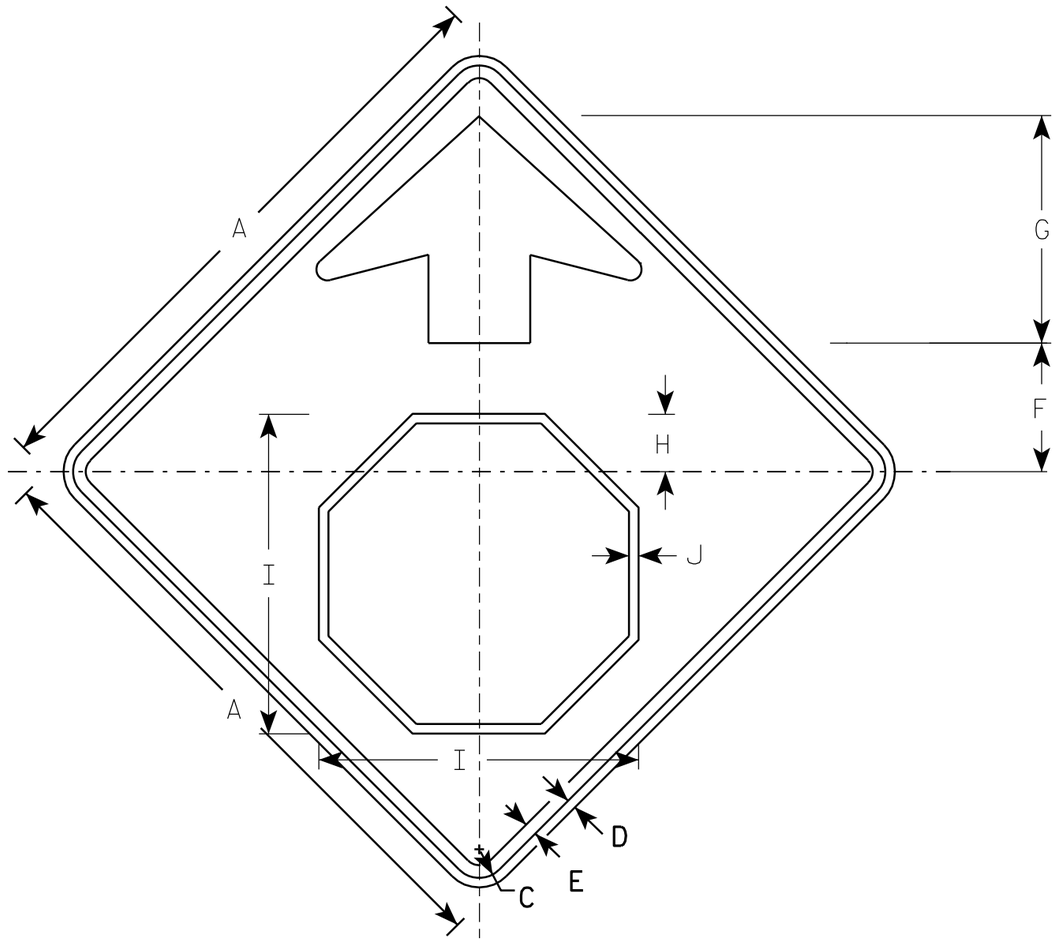
STANDARD SIGN
R11-54F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/28/14 PLATE NO. 727 R11-54F.3

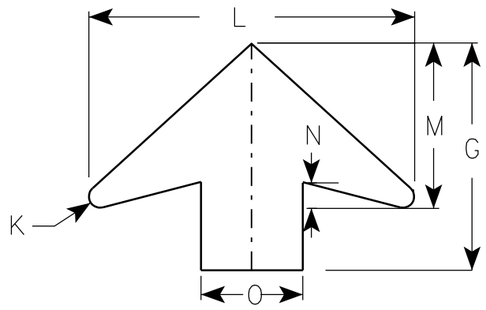
PROJECT NO:	HWY:	COUNTY:		SHEET NO: E



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

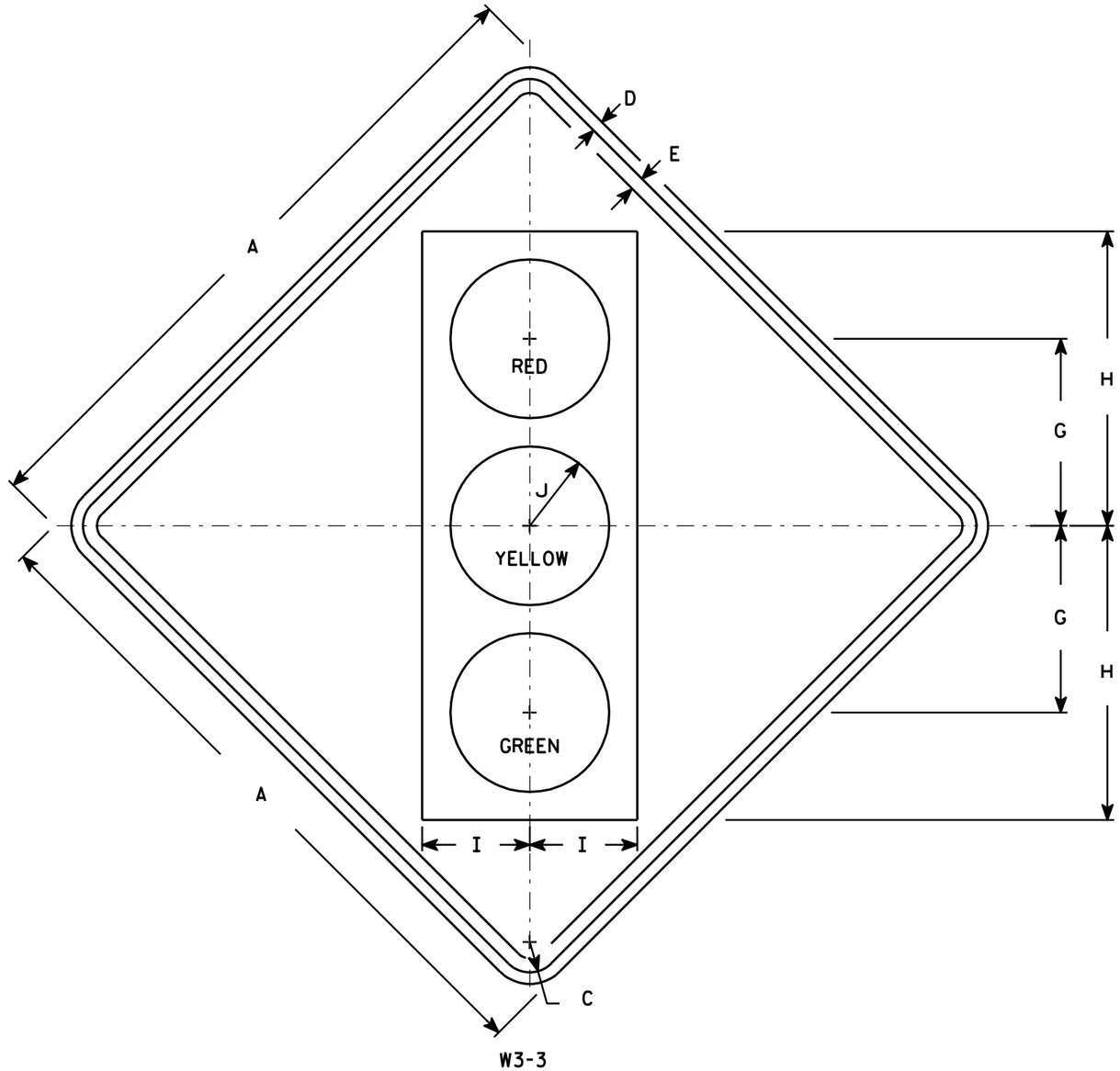
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-1.12

PROJECT NO:

SHEET NO: 728 E



W3-3

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - 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. Symbol and border are non-reflective black.
   Top circle - Type H Reflectorized Red
   Center circle - Same as background
   Bottom circle - Type H Reflectorized Green

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		8 3/4	13 3/4	5	3 3/4																	6.25
2S	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
2M	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
3	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
4	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
5	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0

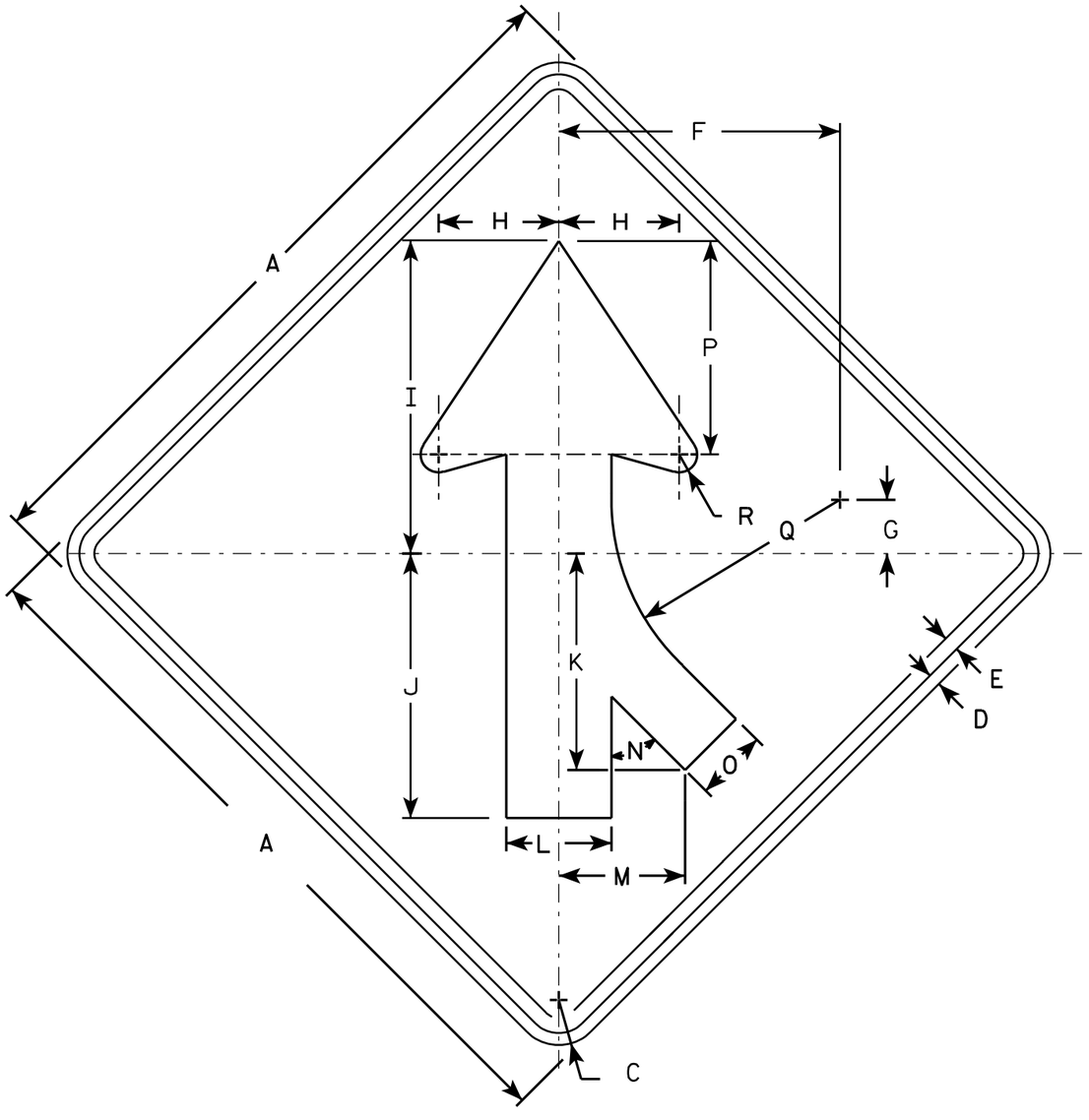
STANDARD SIGN
W3-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-3.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 729 | 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

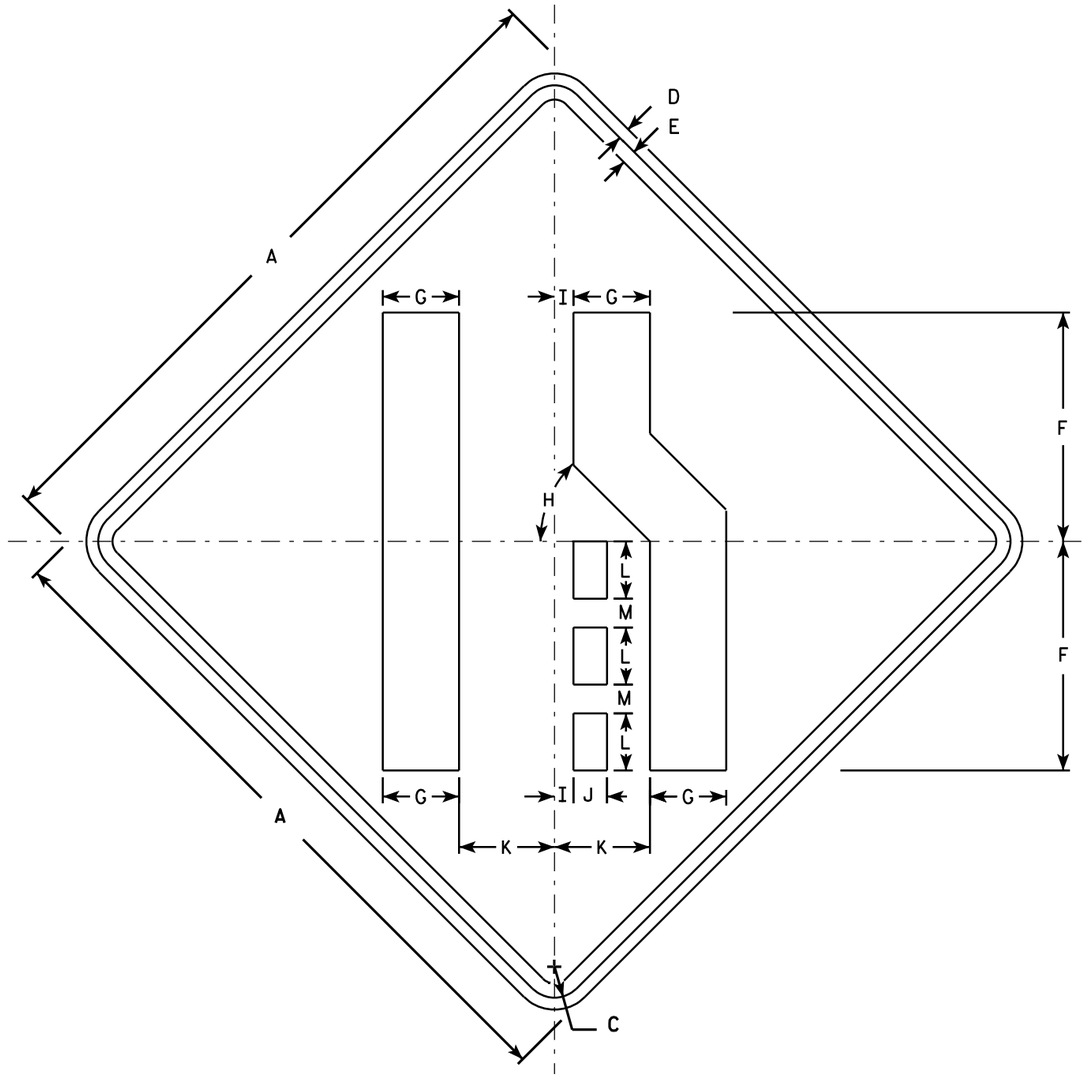
STANDARD SIGN
W4-1

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: 730	E



W4-2R

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. W4-2L is the same as W4-2R except the symbol 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	10	3 3/8	45°	7/8	1 1/2	4 1/4	2 1/2	1 1/4														6.25
2S	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2M	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
3	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

STANDARD SIGN
W4-2

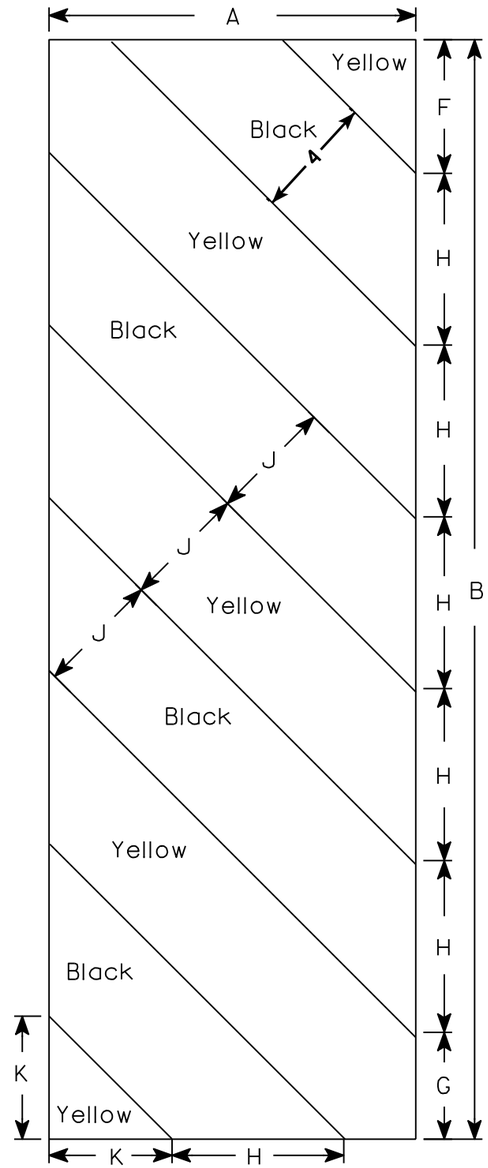
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

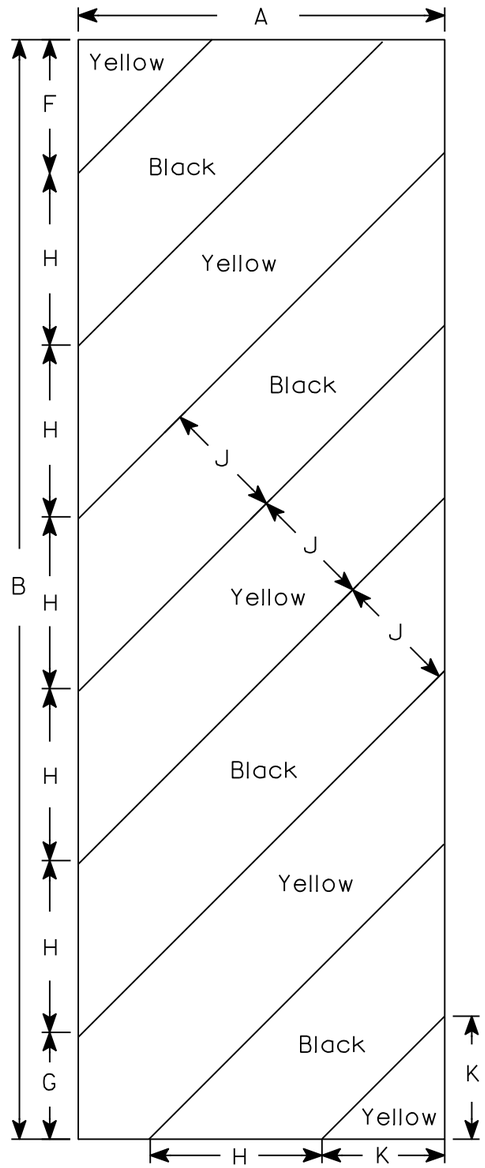
DATE 3/12/13 PLATE NO. W4-2.14

PROJECT NO:

SHEET NO: 731 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

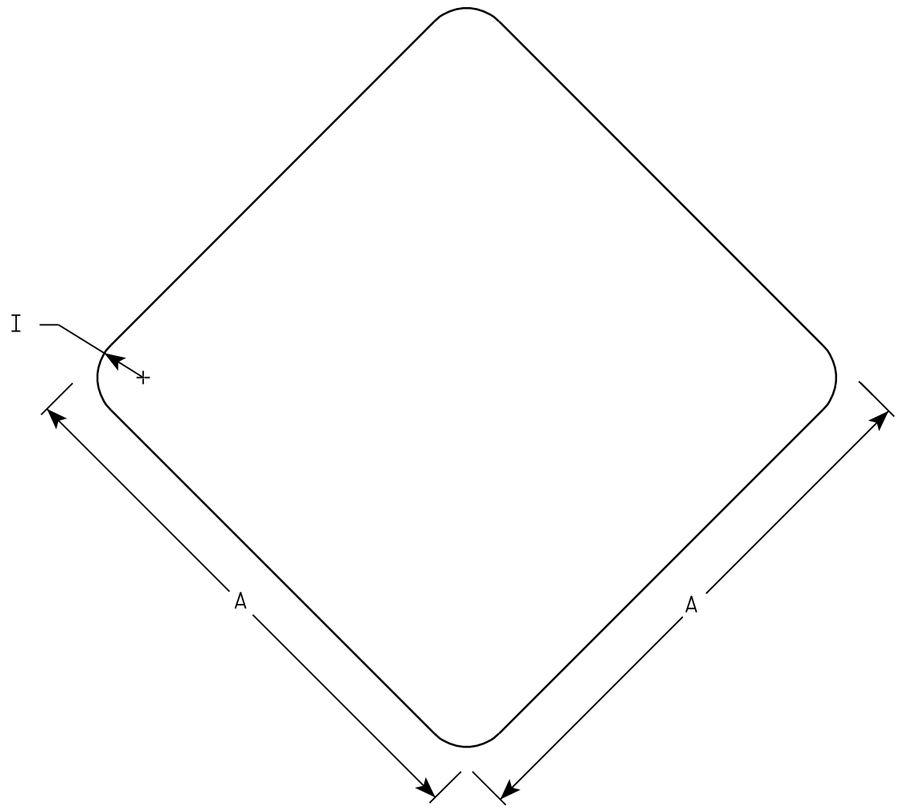
W5-52L & W5-52R

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: 732 | 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																											

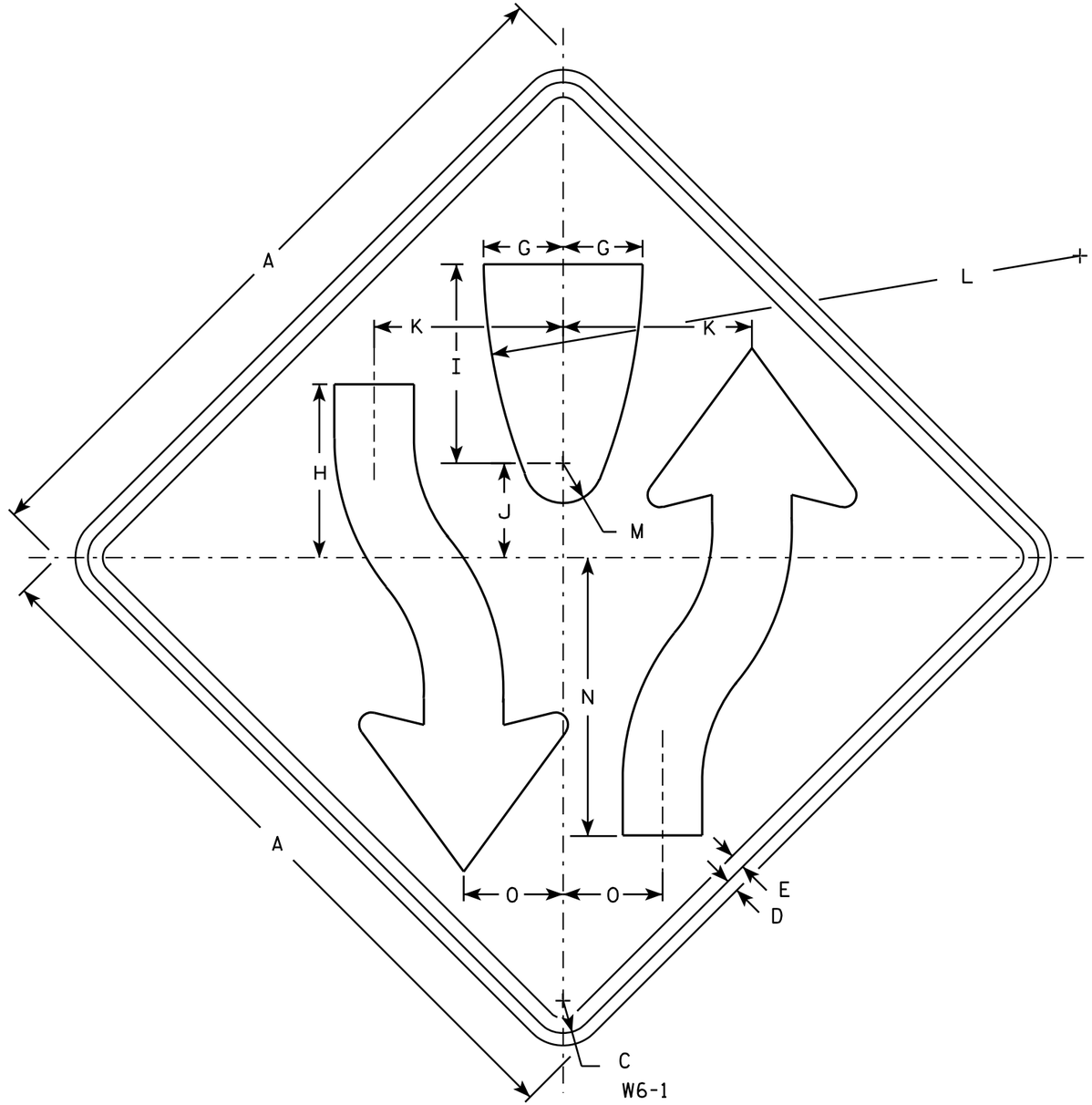
STANDARD SIGN
W5-54

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

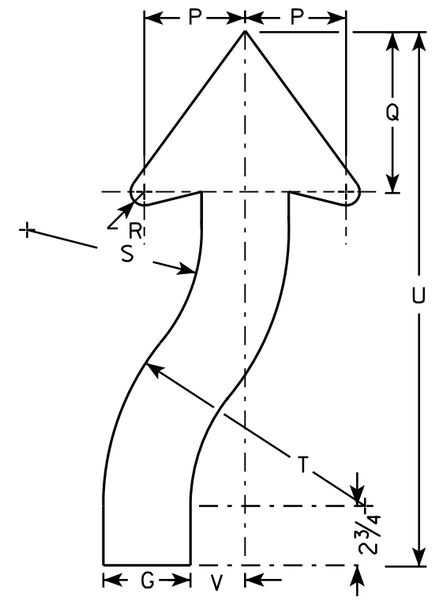
DATE 11/3/10 PLATE NO. W5-54.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 733	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

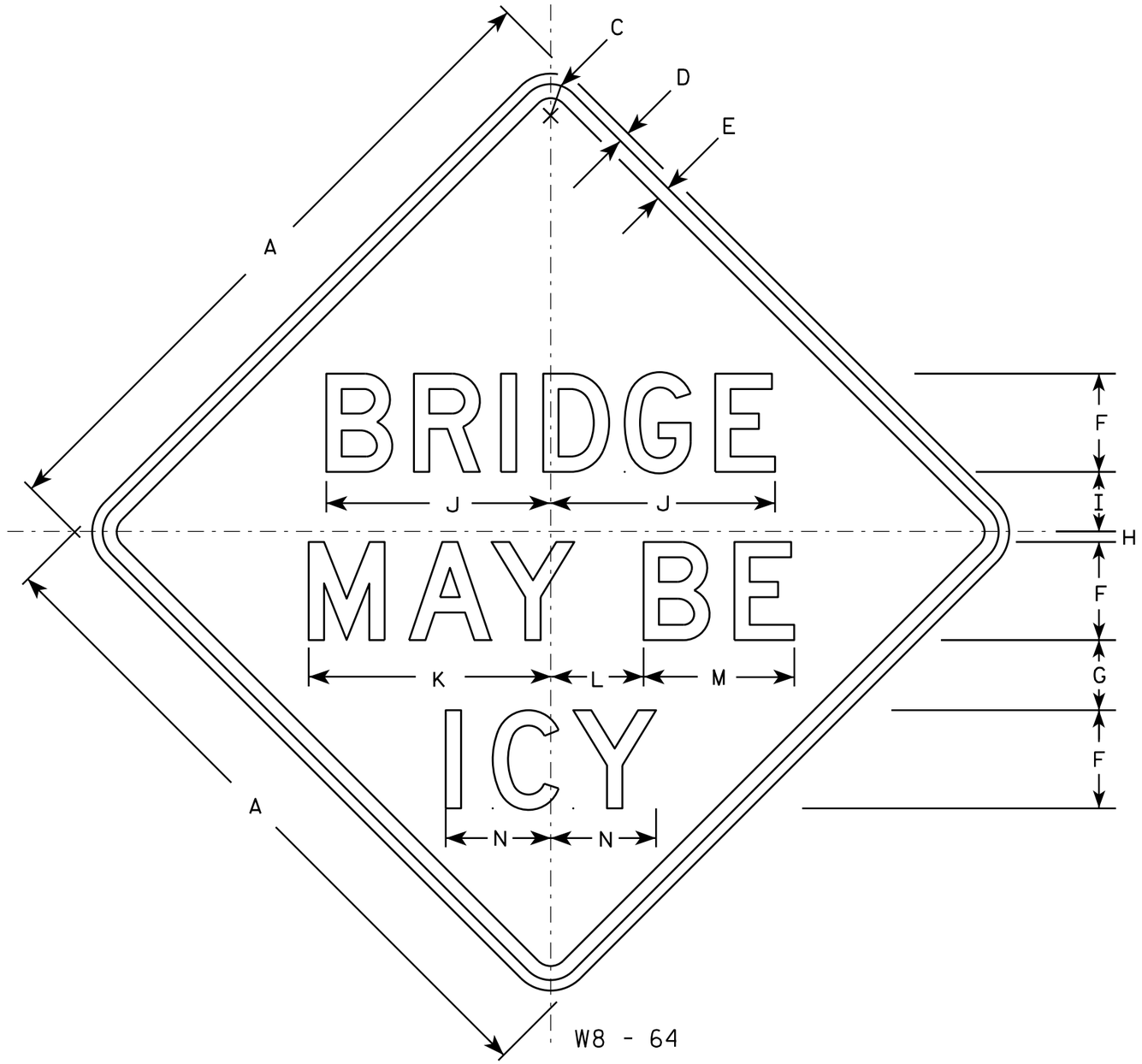
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W6-1.14

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 734	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. 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	36		1 5/8	5/8	3/4	5	3 3/4	5/8	3 1/8	12	13	5	8	5 5/8													9.0
2M	36		1 5/8	5/8	3/4	5	3 3/4	5/8	3 1/8	12	13	5	8	5 5/8													9.0
3																											
4	48		2 1/4	3/4	1	7	5	3/4	4 1/4	16	17 1/4	6 5/8	10 3/4	7 1/2													16.0
5	48		2 1/4	3/4	1	7	5	3/4	4 1/4	16	17 1/4	6 5/8	10 3/4	7 1/2													16.0

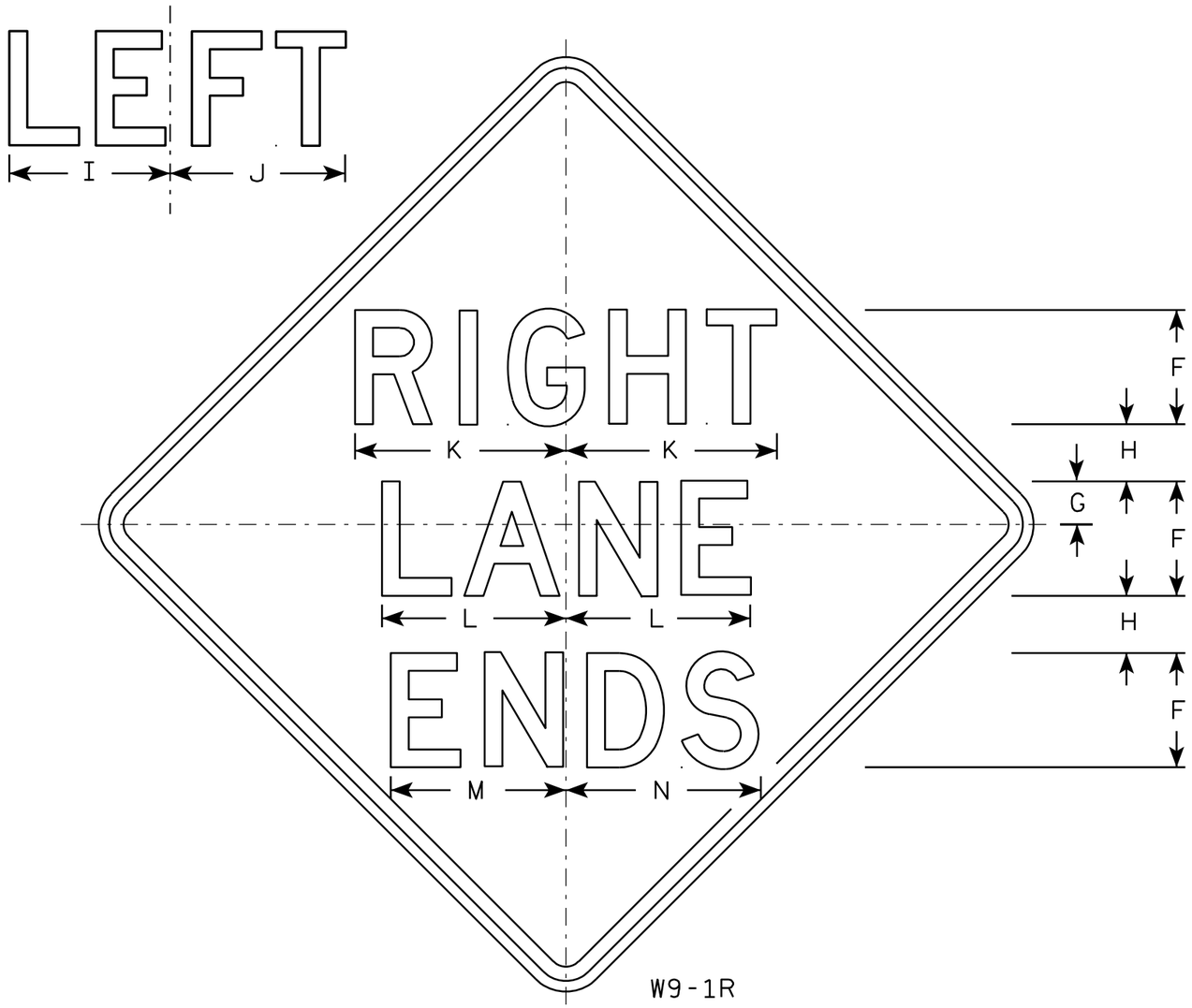
STANDARD SIGN
W8-64

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/14/13 PLATE 735 W8-64.6

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W9-1R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. 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. W9-1L same as W9-1R except the word Left replaces 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	30		1 3/8	1/2	5/8	5	1 1/2	2 1/2	7 1/8	7 5/8	9 1/4	8 1/8	7 5/8	8 5/8													6.25
2S	36		1 5/8	5/8	3/4	6	2	3	8 1/2	9 1/8	11	9 3/4	9	10 3/8													9.0
2M	36		1 5/8	5/8	3/4	6	2	3	8 1/2	9 1/8	11	9 3/4	9	10 3/8													9.0
3	36		1 5/8	5/8	3/4	6	2	3	8 1/2	9 1/8	11	9 3/4	9	10 3/8													9.0
4	36		1 5/8	5/8	3/4	6	2	3	8 1/2	9 1/8	11	9 3/4	9	10 3/8													9.0
5	48		2 1/4	3/4	1	8	3	4	11 1/4	12 1/4	14 3/4	12 7/8	12 1/4	13 5/8													16.0

STANDARD SIGN
W9-1

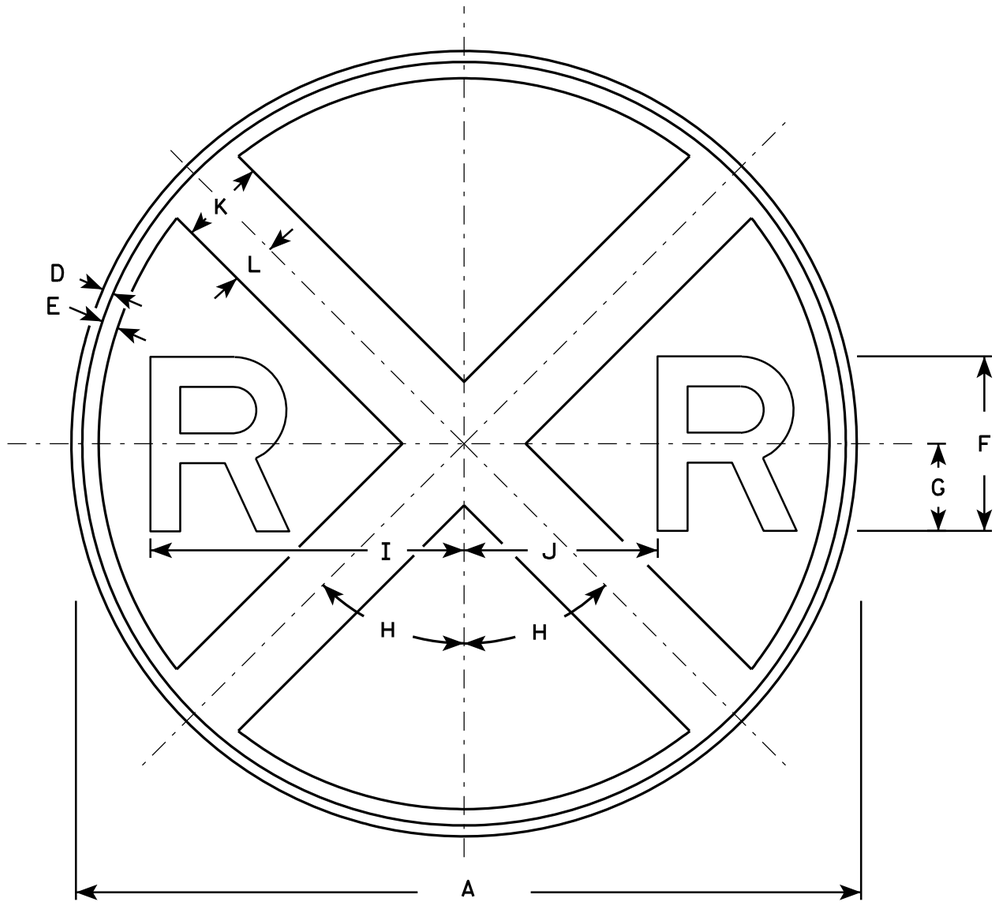
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 03/18/13 PLATE NO. W9-1.8

PROJECT NO:

SHEET NO: 736 E



W10-1

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 - E

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30			3/8	5/8	7	3 1/2	45°	12 3/8	7 1/8	3	1 1/2															4.91
2S	36			5/8	3/4	8	4	45°	14 3/8	8 5/8	4	2															7.07
2M	36			5/8	3/4	8	4	45°	14 3/8	8 5/8	4	2															7.07
3																											
4	48			3/4	1 1/4	10	5	45°	18 3/8	11 5/8	5	2 1/2															12.57
5																											

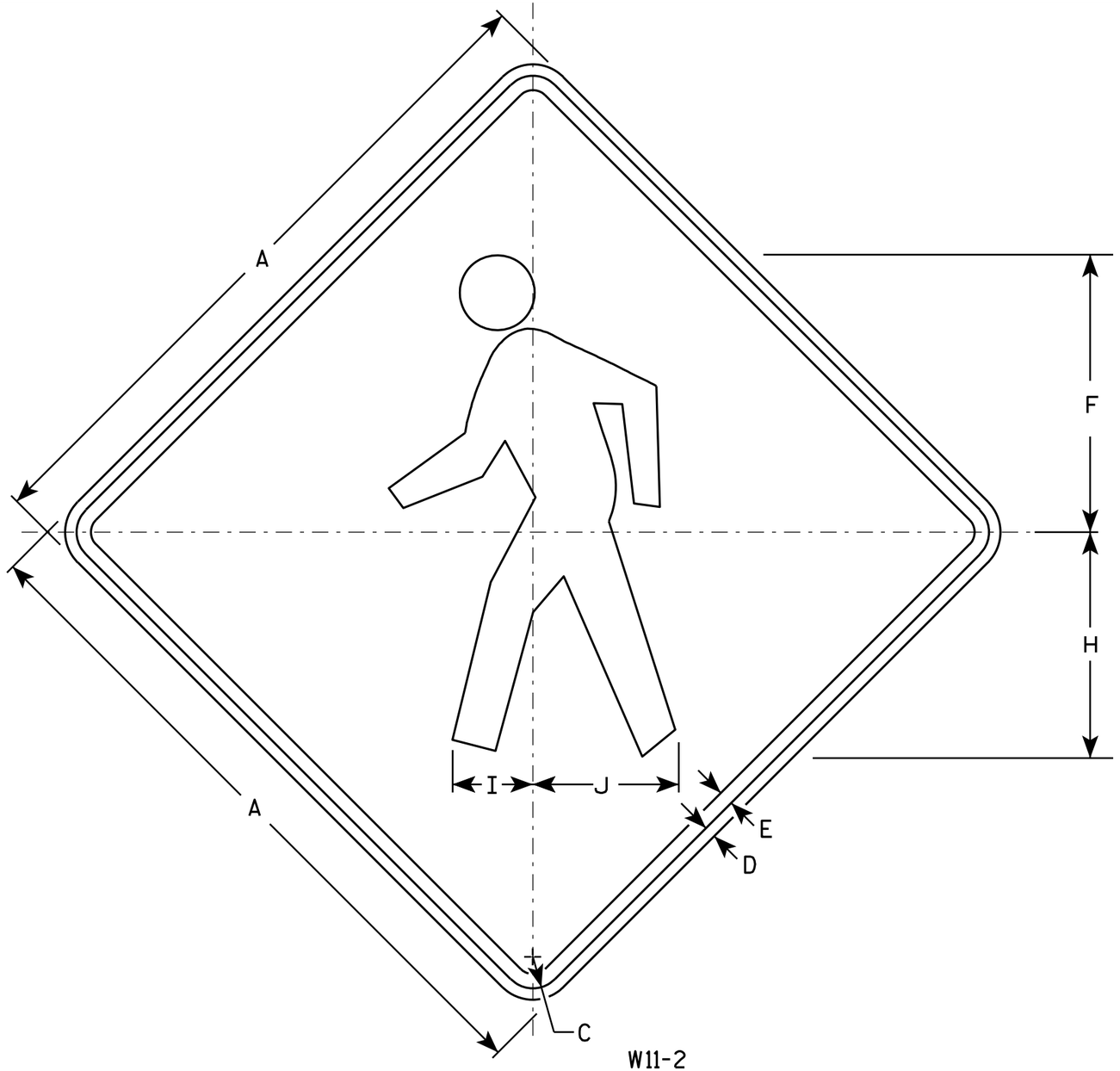
STANDARD SIGN
W10-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/13/13 PLATE NO. W10-1.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 737	E



W11-2

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	9 3/4		7 7/8	2 7/8	5 1/8																	4.0
2S	30		1 3/8	1/2	5/8	12 1/8		9 7/8	3 1/2	6 3/8																	6.25
2M	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
3	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
4	48		2 1/4	3/4	1	19 3/8		15 3/4	5 5/8	10 1/4																	16.0
5																											

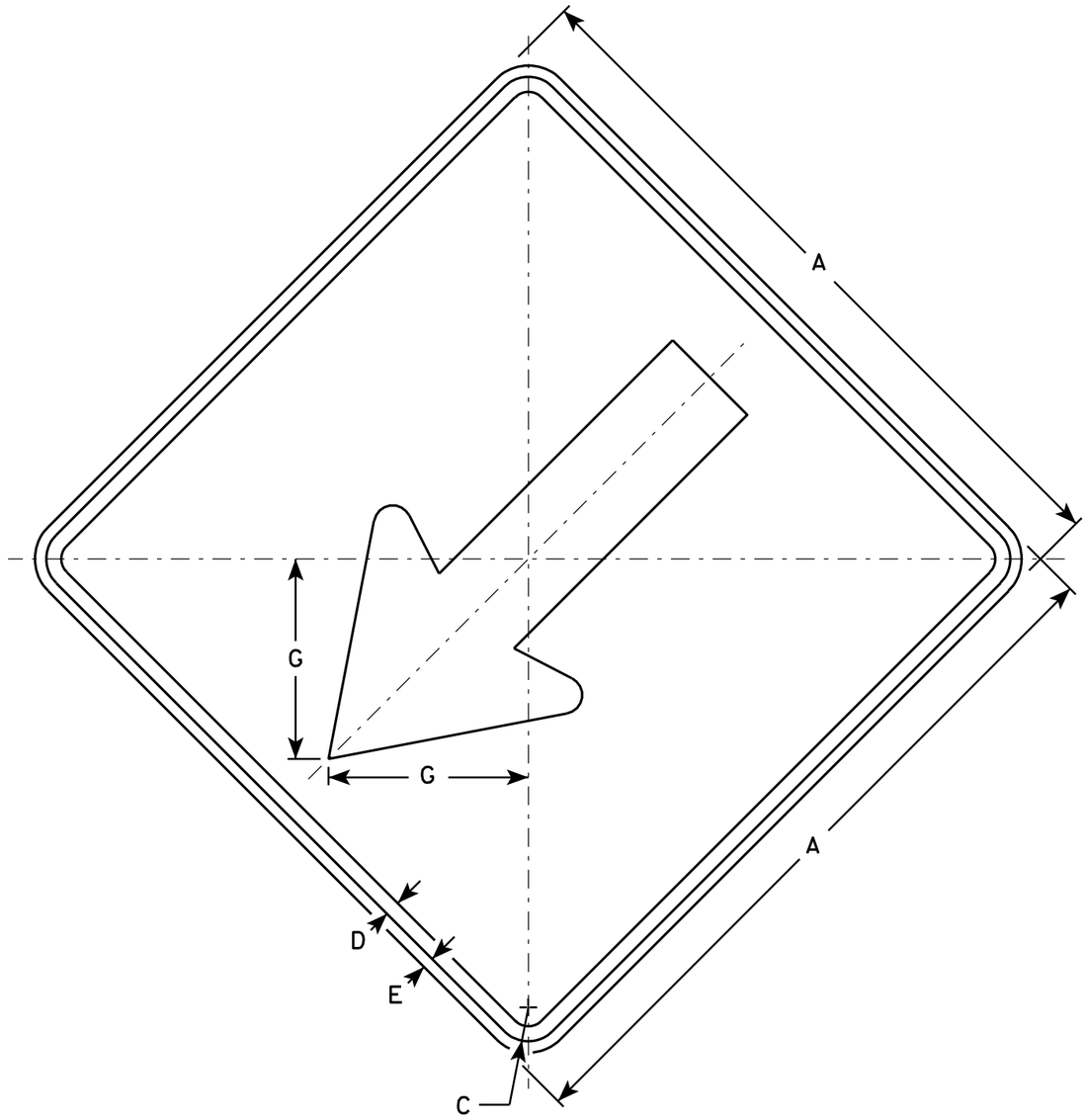
STANDARD SIGN
W11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W11-2.7

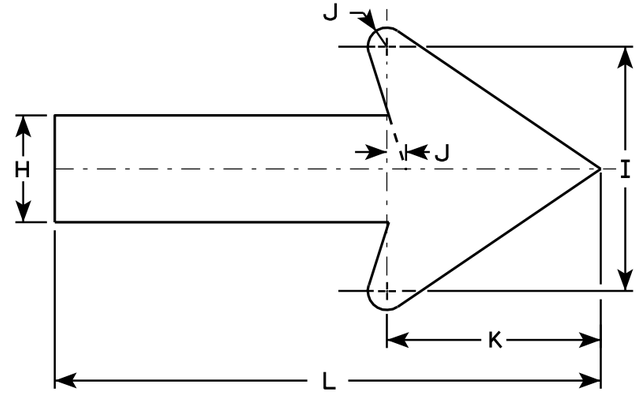
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 738	E



W12-1

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. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	1/2	3/8		6 5/8	3 1/2	8	5/8	7	18															4
2M	24		1 1/8	1/2	3/8		6 5/8	3 1/2	8	5/8	7	18															4
3	30		1 3/8	5/8	1/2		8 1/4	4 3/8	10	3/4	8 3/4	22 3/8															6.25
4	36		1 3/4	3/4	5/8		10 3/8	5 1/2	12 1/2	1	11	27 7/8															9.0
5	48		2 1/4	3/4	1		12 1/2	6 5/8	15	1 1/4	13 1/4	33 1/2															16

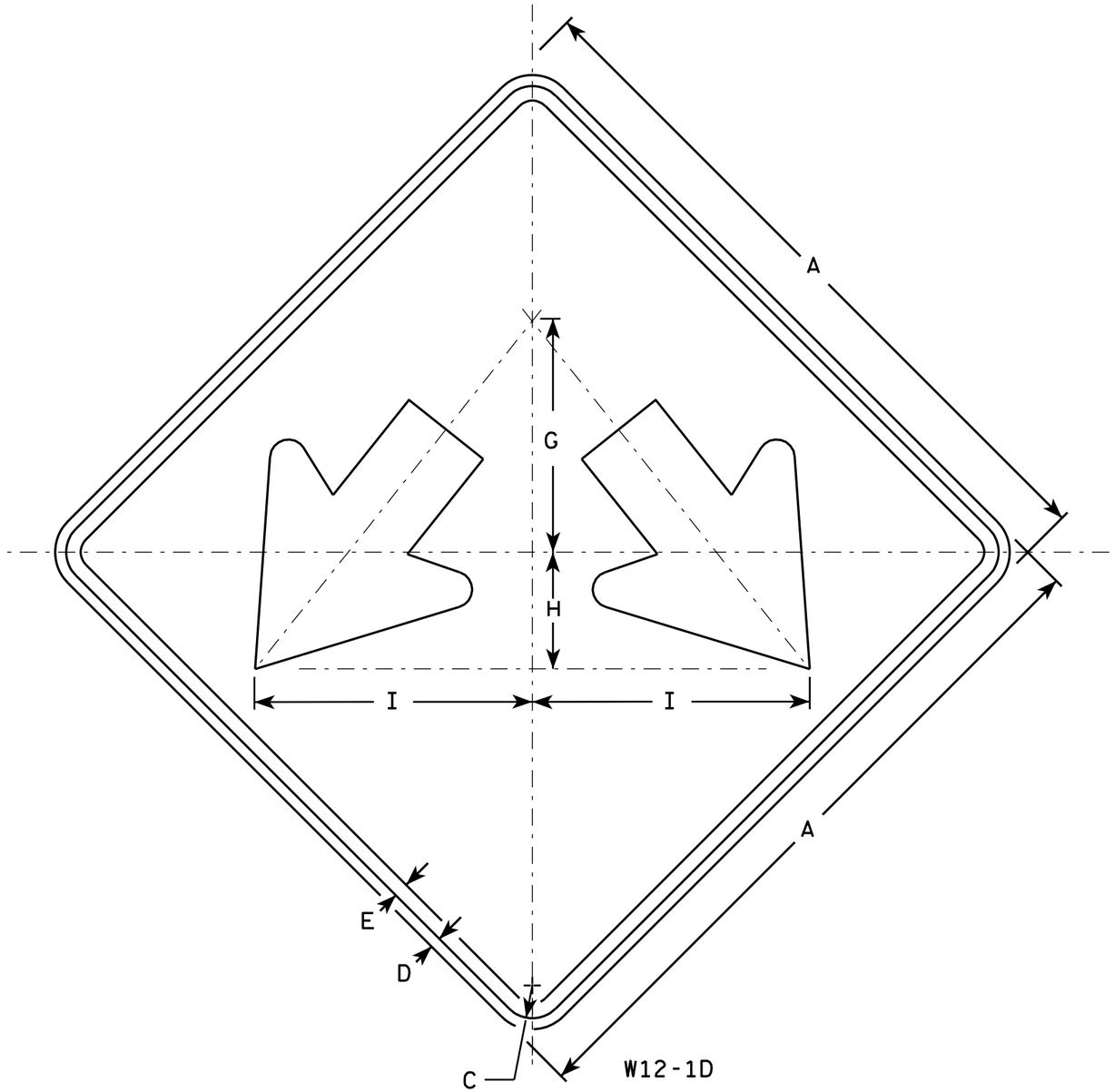
STANDARD SIGN
W12-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

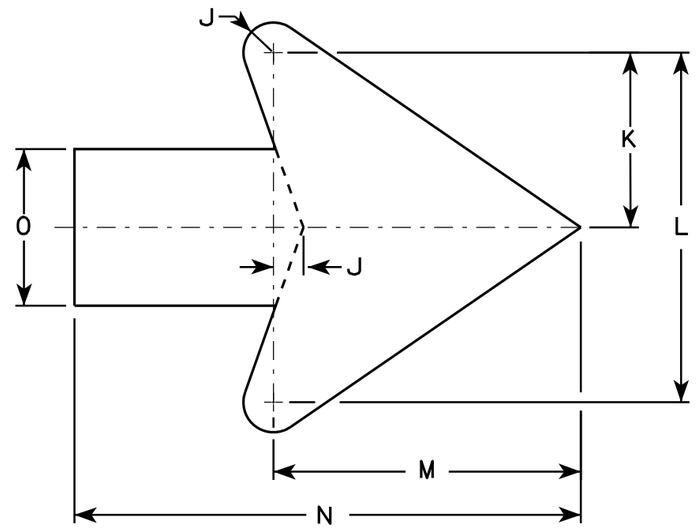
DATE 3/13/13 PLATE NO. W12-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 739	E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2M	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
3	30		1 3/8	1/2	5/8		10	5	11 7/8	3/4	4 1/2	9	7 7/8	13	4												6.25
4	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0
5	48		2 1/4	3/4	1		16	8	19	1 1/4	7 1/4	14 1/2	12 3/4	21	6 1/4												16.0

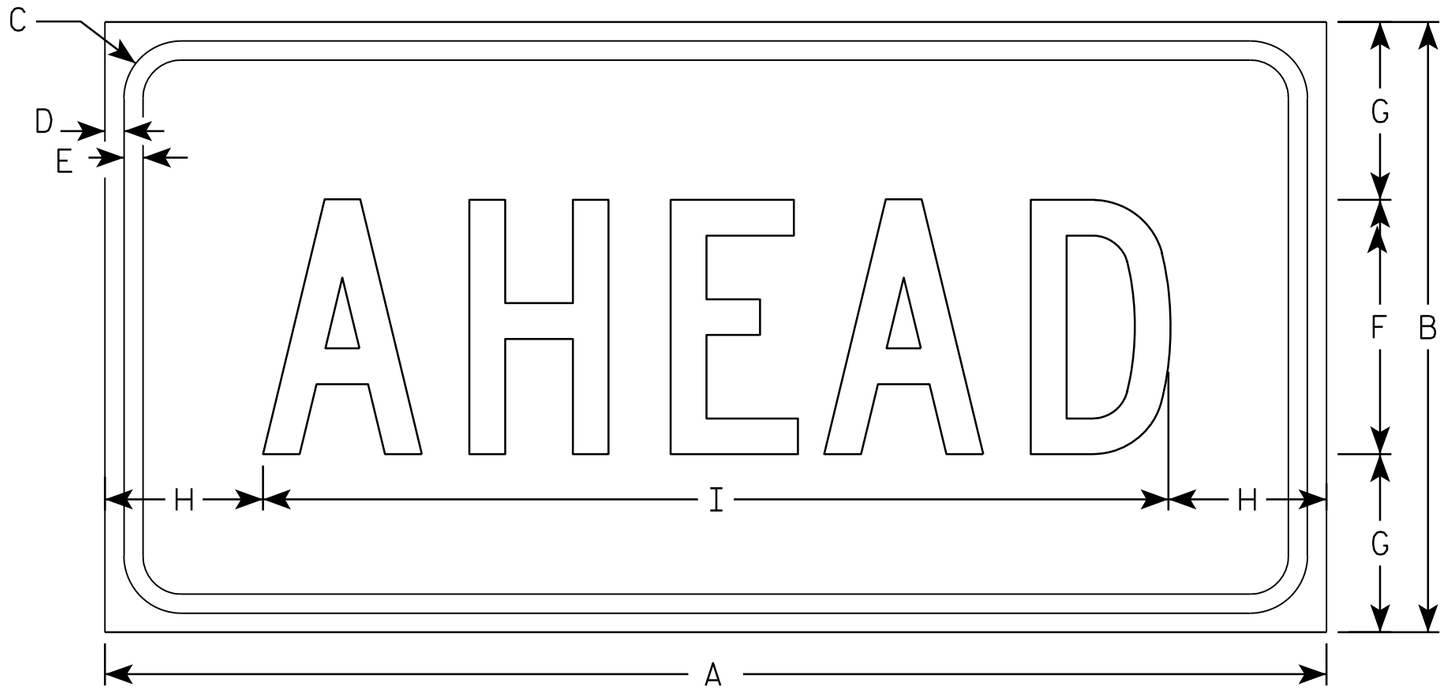
STANDARD SIGN
W12-1D

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W12-1D.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 740	E



W16-9P

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/8	3/8	3/8	5	3 1/2	3 1/8	17 3/4																		2.0
2M	30	18	1 1/8	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
3	30	18	1 1/8	3/8	1/2	7	3 1/2	2 3/4	24 1/2																		3.75
4	48	24	1 3/8	1/2	5/8	10	7	6 1/8	35 3/4																		8.0
5																											

STANDARD SIGN
W16-9P

WISCONSIN DEPT OF TRANSPORTATION

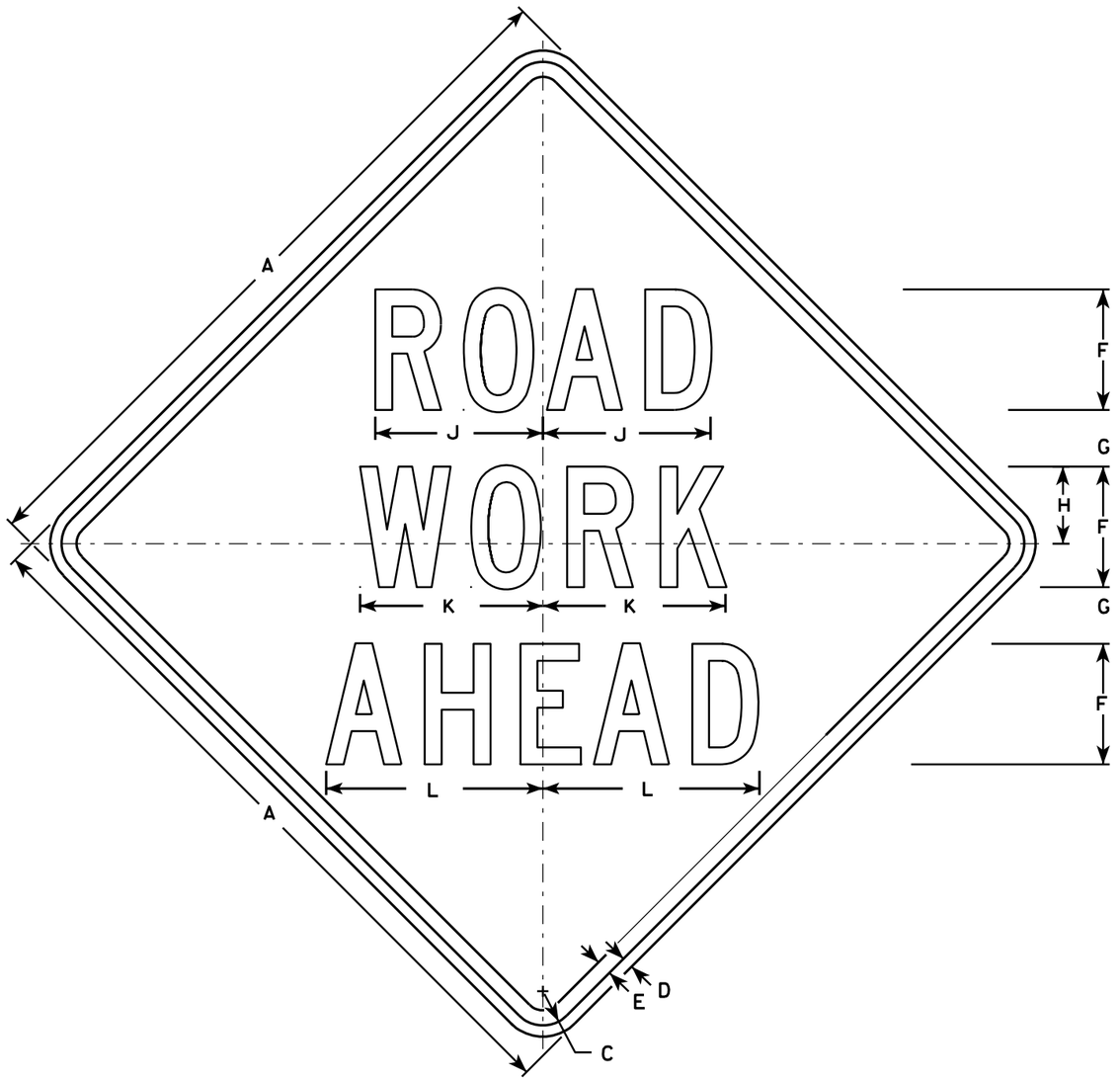
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/28/10 PLATE NO. W16-9P.6

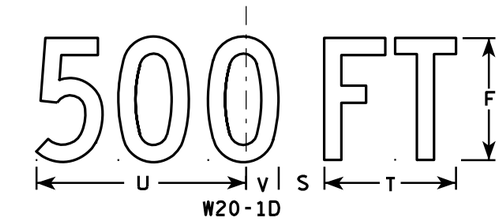
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 741 | E

7

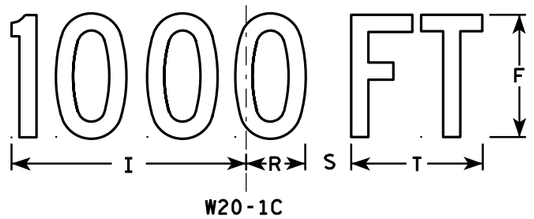
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W169P.DGN PLOT DATE : 28-DEC-2010 13:39 PLOT BY : dotsja PLOT NAME : PLOT SCALE : 2.979524:1.000000



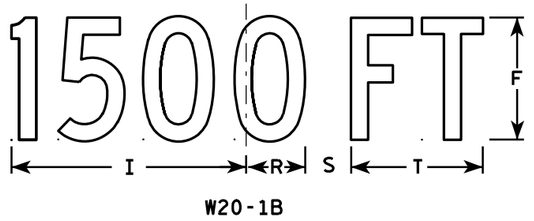
W20-1A



W20-1D



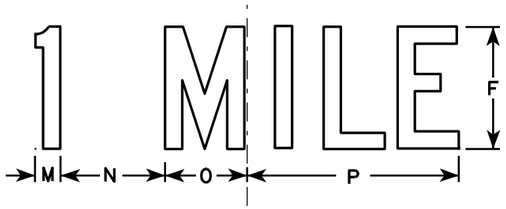
W20-1C



W20-1B



W20-1G



W20-1F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	1/2	5/8	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9		2 1/2	1 7/8	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew L Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-1.9

PROJECT NO:

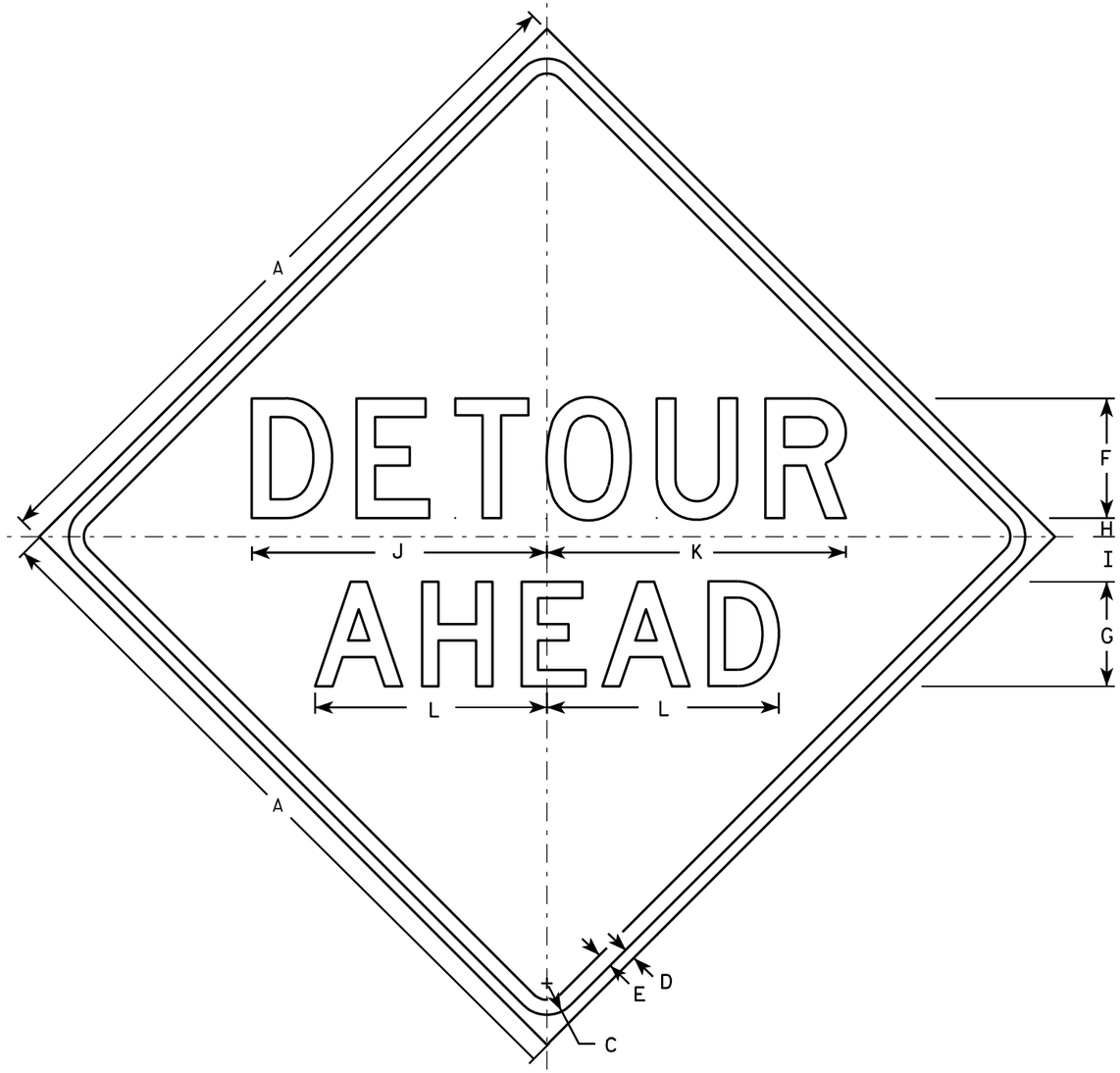
SHEET NO: 742 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W201.DGN PLOT DATE : 18-MAR-2011 09:56 PLOT BY : mscj9h

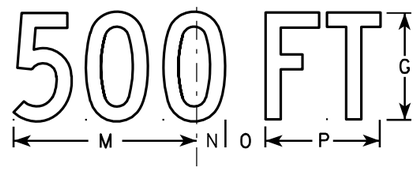
WISDOT/CADDS SHEET 42

7

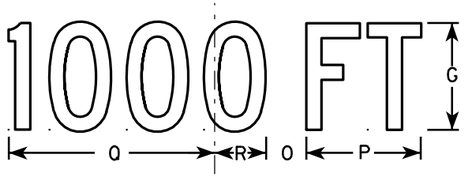
7



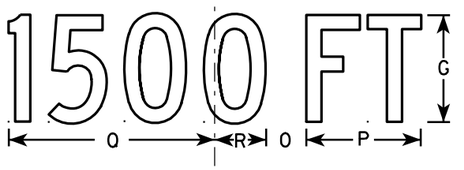
W20-2A



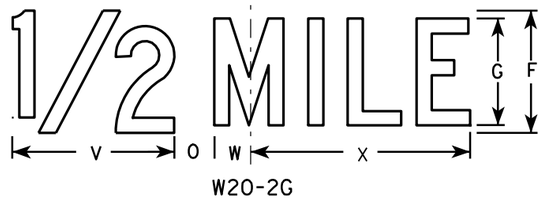
W20-2D



W20-2C



W20-2B



W20-2G



W20-2F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D.
   Line 2 is Series D for AHEAD and Series C for all other distances.

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	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

STANDARD SIGN
W20-2A,B,C,D,F & G

WISCONSIN DEPT OF TRANSPORTATION

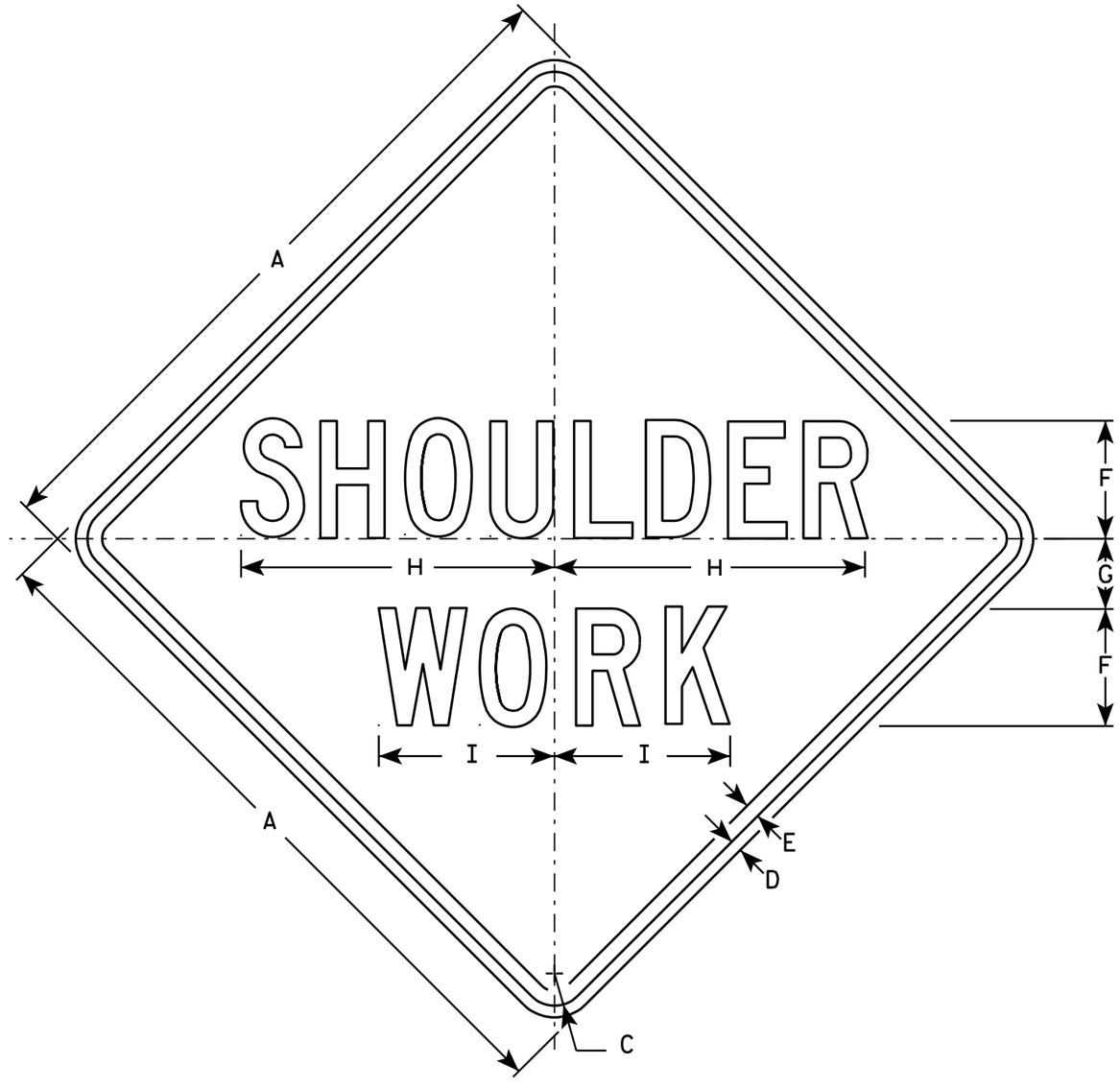
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-2.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 743 | E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W202.DGN PLOT DATE : 18-MAR-2011 10:00 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.931739:1.000000
WISDOT/CADDS SHEET 42



W21-5

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	4	2 1/2	10 3/4	6																		4.0
2S	30		1 3/8	1/2	5/8	5	3	13 3/8	7 1/2																		6.25
2M	30		1 3/8	1/2	5/8	5	3	13 3/8	7 1/2																		6.25
3	36		1 5/8	5/8	3/4	6	3 1/2	16	9																		9.0
4	48		2 1/4	3/4	1	8	5	21 3/8	11 1/4																		16.0
5	48		2 1/4	3/4	1	8	5	21 3/8	11 1/4																		16.0

STANDARD SIGN
W21-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-5.5

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 744 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W215.DGN PLOT DATE : 21-MAR-2011 08:01 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.207338:1.000000
WISDOT/CADDS SHEET 42

USH 41/45 SB OUTSIDE SHOULDER (STA 572+00 TO STA 608+00)

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut (205.0100) Note 1	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
572+00(1)	57200	0	5.52	0.21	0.00	0.00	0.00	0.00	0.00
572+50(1)	57250	50	4.93	0.51	9.68	0.67	9.68	0.84	8.84
573+00(1)	57300	50	5.61	0.11	9.76	0.58	19.44	1.56	17.88
573+50(1)	57350	50	3.79	0.39	8.70	0.47	28.14	2.15	26.00
574+00(1)	57400	50	2.09	2.19	5.44	2.40	33.59	5.14	28.45
574+50(1)	57450	50	1.91	4.51	3.71	6.21	37.30	12.90	24.40
575+00(1)	57500	50	1.53	7.70	3.19	11.30	40.48	27.03	13.45
575+50(2)	57551	51	1.82	13.06	3.16	19.60	43.64	51.53	-7.89
576+00(2)	57601	50	1.08	16.10	2.68	27.00	46.32	85.28	-38.96
576+50(2)	57651	50	1.74	14.50	2.61	28.33	48.93	120.69	-71.77
577+00(2)	57701	50	1.03	17.98	2.56	30.07	51.49	158.28	-106.80
577+50(2)	57751	50	1.15	14.75	2.01	30.30	53.50	196.16	-142.66
578+00(2)	57801	50	1.13	17.34	2.10	29.71	55.61	233.30	-177.69
578+50(2)	57851	50	1.53	14.09	2.46	29.10	58.07	269.67	-211.60
579+00(2)	57901	50	1.40	16.16	2.72	28.01	60.79	304.68	-243.89
579+50(2)	57951	50	1.69	13.00	2.87	27.00	63.66	338.43	-274.77
580+00(2)	58001	50	1.09	20.06	2.57	30.61	66.23	376.69	-310.46
580+50(2)	58051	50	1.20	19.85	2.12	36.95	68.35	422.87	-354.53
581+00(2)	58101	50	0.84	22.72	1.89	39.42	70.24	472.15	-401.91
581+50(2)	58151	50	1.13	18.31	1.83	38.00	72.07	519.64	-447.58
582+00(2)	58201	50	0.96	18.09	1.94	33.70	74.01	561.77	-487.77
582+50(2)	58251	50	1.25	21.48	2.05	36.63	76.06	607.56	-531.50
583+00(2)	58301	50	0.75	25.06	1.85	43.09	77.91	661.43	-583.52
583+50(2)	58351	50	1.40	22.12	1.99	43.69	79.90	716.04	-636.14
584+00(2)	58401	50	0.91	26.17	2.14	44.71	82.04	771.94	-689.90
584+50(2)	58451	50	1.28	22.70	2.03	45.25	84.07	828.50	-744.43
585+00(2)	58501	50	1.40	20.78	2.48	40.26	86.54	878.82	-792.28
585+50(2)	58551	50	1.94	17.96	3.09	35.87	89.63	923.66	-834.03
586+00(2)	58601	50	1.18	27.06	2.89	41.68	92.52	975.77	-883.24
586+50(2)	58651	50	1.58	23.63	2.56	46.94	95.08	1034.44	-939.35
587+00(2)	58701	50	1.40	20.85	2.75	41.18	97.83	1085.91	-988.07
587+50(2)	58751	50	1.80	17.94	2.95	35.91	100.79	1130.80	-1,030.01
588+00(2)	58801	50	1.27	17.18	2.84	32.52	103.62	1171.44	-1,067.82
588+50(2)	58851	50	1.41	14.78	2.48	29.59	106.10	1208.44	-1,102.33
589+00(2)	58901	50	1.92	13.09	3.08	25.80	109.18	1240.69	-1,131.51
589+50(2)	58951	50	1.55	15.32	3.21	26.31	112.39	1273.58	-1,161.18
590+00(2)	59001	50	1.10	19.77	2.46	32.49	114.85	1314.19	-1,199.34
590+50(2)	59051	50	1.42	19.76	2.34	36.60	117.19	1359.94	-1,242.75
591+00(2)	59101	50	1.21	20.08	2.44	36.89	119.63	1406.05	-1,286.42
591+50(2)	59151	50	1.46	19.74	2.47	36.88	122.10	1452.15	-1,330.04
592+00(2)	59201	50	1.33	18.17	2.59	35.10	124.69	1496.02	-1,371.33
592+50(2)	59251	50	1.26	26.05	2.40	40.94	127.10	1547.20	-1,420.10
593+00(2)	59301	50	1.02	34.20	2.11	55.78	129.21	1616.92	-1,487.71
593+50(2)	59351	50	1.56	17.71	2.39	48.07	131.61	1677.00	-1,545.40
594+00(2)	59401	50	1.20	19.74	2.55	34.68	134.16	1720.35	-1,586.19
594+50(2)	59451	50	0.95	14.80	1.99	31.97	136.15	1760.32	-1,624.17
595+00(2)	59501	50	1.09	11.76	1.89	24.59	138.04	1791.06	-1,653.01
595+50(2)	59551	50	1.11	9.77	2.04	19.94	140.08	1815.98	-1,675.89
596+00(2)	59601	50	1.64	11.54	2.55	19.72	142.63	1840.63	-1,698.00
596+50(2)	59651	50	1.22	11.95	2.66	21.74	145.29	1867.81	-1,722.52
597+00(2)	59701	50	1.18	15.69	2.23	25.59	147.52	1899.80	-1,752.28
597+50(2)	59751	50	1.35	22.09	2.35	34.99	149.87	1943.54	-1,793.67
598+00(2)	59801	50	11.87	9.44	12.25	29.20	162.11	1980.04	-1,817.93
598+50(2)	59851	50	10.34	9.92	20.56	17.93	182.68	2002.45	-1,819.77
599+00(2)	59901	50	10.45	14.90	19.25	22.98	201.93	2031.16	-1,829.24
599+50(2)	59951	50	9.37	19.62	18.35	31.96	220.28	2071.12	-1,850.84
600+00(2)	60001	50	9.99	21.25	17.92	37.85	238.20	2118.42	-1,880.22
600+50(2)	60051	50	12.15	20.25	20.50	38.43	258.70	2166.46	-1,907.76
601+00(2)	60101	50	9.09	21.38	19.67	38.55	278.37	2214.65	-1,936.28
601+50(2)	60151	50	7.97	18.52	15.80	36.94	294.17	2260.83	-1,966.66
602+00(2)	60201	50	9.88	15.81	16.53	31.78	310.70	2300.55	-1,989.85
602+50(2)	60251	50	8.47	15.94	16.99	29.40	327.69	2337.30	-2,009.61
603+00(2)	60301	50	8.75	18.42	15.94	31.82	343.64	2377.08	-2,033.44
603+50(2)	60351	50	6.33	22.38	13.96	37.78	357.60	2424.31	-2,066.70
604+00(2)	60401	50	5.67	23.79	11.12	42.75	368.72	2477.74	-2,109.03
604+50(2)	60451	50	6.63	21.67	11.39	42.09	380.11	2530.36	-2,150.25
605+00(2)	60501	50	6.44	21.14	12.10	39.64	392.21	2579.91	-2,187.70
605+50(2)	60551	50	10.59	14.63	15.76	33.13	407.97	2621.32	-2,213.35
606+00(2)	60601	50	11.05	10.58	20.04	23.35	428.01	2650.51	-2,222.50
606+50(2)	60651	50	9.32	8.99	18.86	18.13	446.87	2673.16	-2,226.30
607+00(2)	60701	50	9.20	9.35	17.14	16.98	464.01	2694.39	-2,230.38
607+50(2)	60751	50	9.24	8.05	17.07	16.11	481.08	2714.53	-2,233.45
608+00(2)	60801	50	9.26	6.43	17.13	13.40	498.21	2731.28	-2,233.07
				SUBTOTAL =	**498.21**	2,185.03	498.21	2,731.28	-2,233.07

USH 41/45 SB OFF RAMP AT CTH Q

STATION	Real Station	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
			Cut	Fill	Cut (205.0100) Note 1	Fill Note 3	Cut 1.00 Note 1	Expanded Fill 1.25	Note 8
353+69.80	35370	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
354+00.00	35400	30	42.57	0.00	23.80	0.00	23.80	0.00	23.80
354+50.00	35450	50	74.55	0.00	108.44	0.00	132.24	0.00	132.24
355+00.00	35500	50	28.21	131.06	95.14	121.35	227.39	151.69	75.70
355+50.00	35550	50	27.68	228.92	51.75	333.32	279.14	568.34	-289.20
356+00.00	35600	50	28.32	99.06	51.86	303.69	330.99	947.95	-616.96
356+50.00	35650	50	23.95	106.12	48.39	189.98	379.39	1185.43	-806.04
357+00.00	35700	50	20.69	101.57	41.33	192.30	420.72	1425.81	-1005.09
357+50.00	35750	50	18.08	66.24	35.90	155.38	456.62	1620.04	-1163.42
358+00.00	35800	50	19.71	34.09	35.00	92.90	491.62	1736.17	-1244.55
358+50.00	35850	50	20.80	15.41	37.51	45.84	529.13	1793.47	-1264.34
359+00.00	35900	50	21.38	36.04	39.06	47.64	568.19	1853.02	-1284.84
359+50.00	35950	50	18.64	20.30	37.05	52.17	605.24	1918.23	-1312.99
360+00.00	36000	50	24.04	1.46	39.52	20.14	644.76	1943.41	-1298.65
				SUBTOTAL =	**644.76**	1,554.73	644.76	1,943.41	-1,298.65

CTH Q LEFT

STATION	Real Station	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
			Cut	Fill	Cut (205.0100) Note 1	Fill Note 3	Cut 1.00 Note 1	Expanded Fill 1.25	Note 8
27+08.51	2709	0	13.77	0.00	0.00	0.00	0.00	0.00	0.00
27+50.00	2750	41	13.59	0.50	21.02	0.39	21.02	0.48	20.54
28+00.00	2800	50	14.31	2.69	25.83	2.95	46.85	4.17	42.68
28+50.00	2850	50	15.08	1.66	27.22	4.02	74.07	9.20	64.86
29+00.00	2900	50	39.09	0.00	50.16	1.54	124.23	11.12	113.11
29+50.00	2950	50	21.10	0.00	55.73	0.00	179.96	11.12	168.83
29+79.62	2980	30	0.00	0.00	11.57	0.00	191.53	11.12	180.41
				SUBTOTAL =	**191.53**	8.90	191.53	11.12	180.41

USH 41/45 SB OFF RAMP AT LANNON RD

STATION	Real Station	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
			Cut	Fill	Cut (205.0100) Note 1	Fill Note 3	Cut 1.00 Note 1	Expanded Fill 1.25	Note 8
1452+78.33	145278	0	47.24	0.00	0.00	0.00	0.00	0.00	0.00
1453+00.00	145300	22	102.85	0.20	60.22	0.08	60.22	0.10	60.12
1453+50.00	145350	50	65.62	5.51	155.99	5.29	216.20	6.71	209.49
1454+00.00	145400	50	37.00	15.18	95.02	19.16	311.22	30.66	280.56
1454+50.00	145450	50	38.32	4.75	69.74	18.45	380.96	53.73	327.23
1455+00.00	145500	50	42.14	1.89	74.50	6.15	455.46	61.42	394.04
1455+50.00	145550	50	41.96	1.07	77.87	2.74	533.33	64.84	468.49
1456+00.00	145600	50	34.20	1.35	70.52	2.24	603.85	67.64	536.21
1456+50.00	145650	50	26.99	1.72	56.66	2.84	660.51	71.20	589.31
1457+00.00	145700	50	31.91	0.00	54.53	1.59	715.04	73.19	641.86
1457+50.00	145750	50	28.51	0.00	55.94	0.00	770.98	73.19	697.80
1458+00.00	145800	50	29.10	0.00	53.34	0.00	824.32	73.19	751.14
1458+50.00	145850	50	27.46	0.00	52.38	0.00	876.70	73.19	803.51
1459+00.00	145900	50	24.20	0.00	47.84	0.00	924.54	73.19	851.35
1459+15.00	145915	15	22.61	0.00	13.00	0.00	937.54	73.19	864.36
				SUBTOTAL =	**937.54**	58.55	937.54	73.19	864.36

USH 41/45 NB ON RAMP AT LANNON RD

STATION	Real Station	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
			Cut	Fill	Cut (205.0100) Note 1	Fill Note 3	Cut 1.00 Note 1	Expanded Fill 1.25	Note 8
454+25.00	45425	0	31.74	0.00	0.00	0.00	0.00	0.00	0.00
454+50.00	45450	25	35.90	0.00	31.31	0.00	31.31	0.00	31.31
455+00.00	45500	50	22.31	54.09	53.90	50.08	85.21	62.60	22.61
455+50.00	45550	50	24.53	39.27	43.37	86.44	128.58	170.66	-42.07
455+75.00	45575	25	28.36	15.12	24.48	25.18	153.07	202.13	-49.07
456+00.00	45600	25	28.91	1.31	26.51	7.61	179.58	211.64	-32.06
456+50.00	45650	50	29.99	0.73	54.53	1.89	234.11	214.00	20.11
457+00.00	45700	50	28.28	0.35	53.95	1.00	288.07	215.25	72.82
457+50.00	45750	50	26.23	0.09	50.47	0.41	338.54	215.76	122.78
458+00.00	45800	50	23.89	0.00	46.40	0.09	384.94	215.87	169.07
458+50.00	45850	50	17.28	1.54	38.12	1.42	423.06	217.65	205.41
459+00.00	45900	50	19.03	0.03	33.63	1.45	456.69	219.45	237.23
459+42.66	45943	43	17.66	0.11	28.99	0.11	485.67	219.59	266.09
				SUBTOTAL =	**485.67**	175.67	485.67	219.59	266.09

LANNON RD - WEST MEDIAN NOSE

STATION	Real Station	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
			Cut	Fill	Cut (205.0100) Note 1	Fill Note 3	Cut 1.00 Note 1	Expanded Fill 1.25	Note 8
835+00.83	83501	0	26.63	24.87	0.00	0.00	0.00	0.00	0.00
835+50.00	83550	49	33.11	0.57	54.40	23.17	54.40	28.96	25.43
836+00.00	83600	50	40.05	0.91	67.75	1.37	122.14	30.68	91.47
836+07.85	83608	8	37.36	0.50	11.26	0.20	133.40	30.93	102.47
				SUBTOTAL =	**133.40**	24.75	133.40	30.93	102.47

LANNON RD EB LEFT TURN LANE

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut (205.0100) Note 1	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
841+50.99	84151	0	10.85	0.63	0.00	0.00	0.00	0.00	0.00
842+00.00	84200	49	11.23	0.21	20.04	0.77	20.04	0.96	19.08
842+50.00	84250	50	11.23	0.26	20.80	0.44	40.84	1.51	39.33
842+89.99	84290	40	18.17	0.01	21.77	0.20	62.61	1.76	60.85
843+00.00	84300	10	25.15	0.00	8.03	0.00	70.64	1.77	68.88
843+09.99	84310	10	29.17	0.00	10.05	0.00	80.69	1.77	78.93
				SUBTOTAL =	**80.69**	1.41	80.69	1.77	78.93

LANNON RD WB LEFT TURN LANE

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut (205.0100) Note 1	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
843+91.00	84391	0	52.59	0.01	0.00	0.00	0.00	0.00	0.00
844+00.00	84400	9	45.07	0.62	16.28	0.11	16.28	0.13	16.15
844+20.00	84420	20	44.35	2.66	33.12	1.21	49.40	1.65	47.75
844+50.00	84450	30	39.65	9.83	46.67	6.94	96.06	10.32	85.74
845+00.00	84500	50	37.89	13.41	71.80	21.52	167.86	37.22	130.64
845+50.00	84550	50	19.36	9.56	53.02	21.26	220.88	63.80	157.07
846+00.00	84600	50	20.94	0.44	37.31	9.25	258.19	75.37	182.82
846+50.00	84650	50	18.18	2.98	36.22	3.16	294.41	79.32	215.08
847+00.00	84700	50	16.02	1.43	31.66	4.08	326.07	84.42	241.65
847+50.00	84750	50	14.96	0.04	28.68	1.36	354.75	86.12	268.63
848+00.00	84800	50	13.99	0.00	26.80	0.04	381.55	86.17	295.38
848+15.00	84815	15	13.20	0.00	7.55	0.00	389.10	86.17	302.93
				SUBTOTAL =	**389.10**	68.94	389.10	86.17	302.93

LANNON RD WB AT USH 41/45 SB OFF RAMP

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut (205.0100) Note 1	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
834+87.60	83488	0	13.81	2.20	0.00	0.00	0.00	0.00	0.00
835+00.00	83500	12	16.83	1.20	7.03	0.78	7.03	0.98	6.06
835+50.00	83550	50	25.39	2.35	39.09	3.29	46.13	5.09	41.03
835+97.48	83597	47	0.00	0.00	22.33	2.07	68.45	7.68	60.77
				SUBTOTAL =	**68.45**	6.14	68.45	7.68	60.77

USH 41/45 NB PARALLEL EXIT RAMP TO HOLY HILL RD

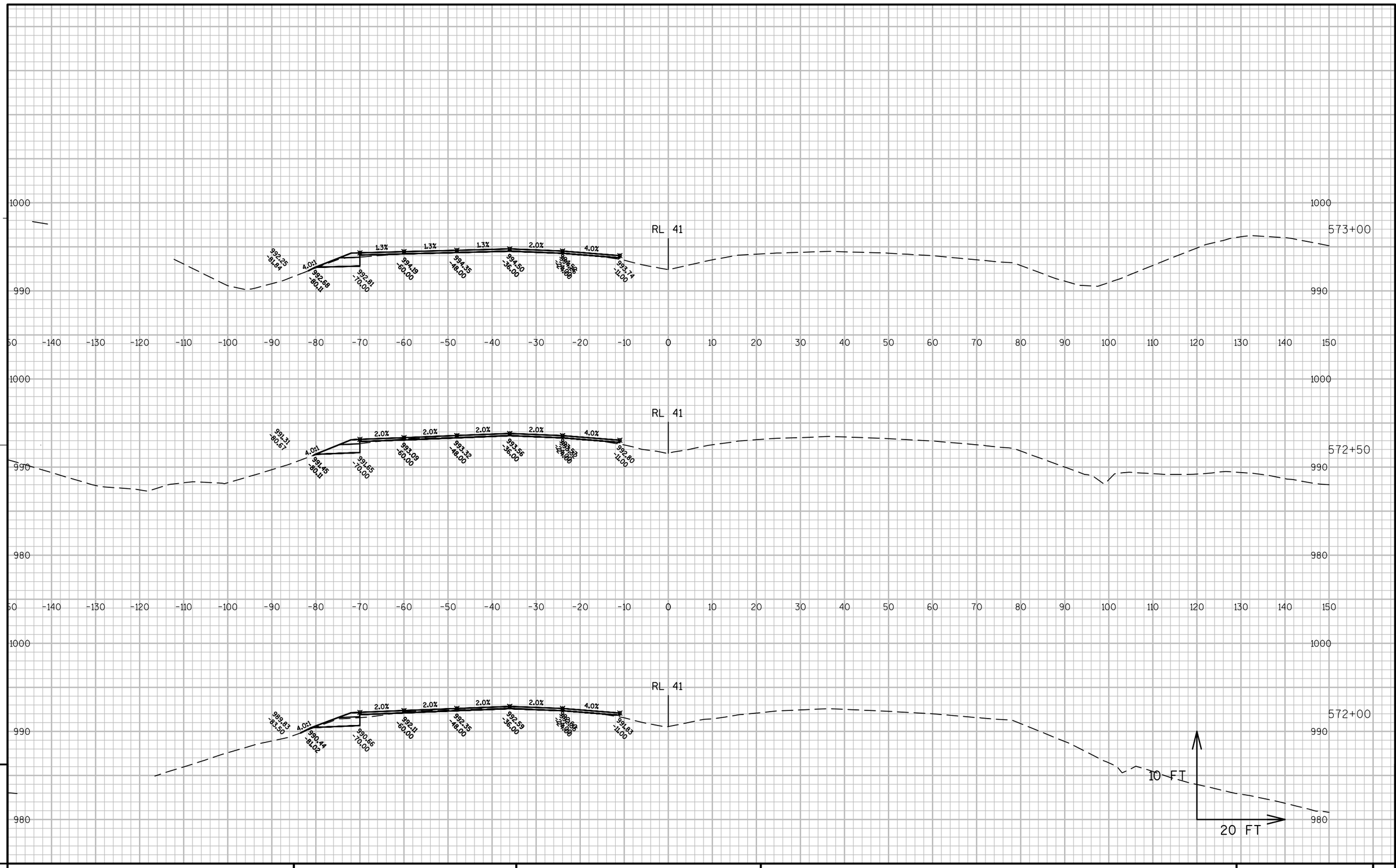
STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut (205.0100) Note 1	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
599+50(2)	59951.00	0.00	25.76	0.00	0.00	0.00	0.00	0.00	0.00
600+00(2)	60001.00	50.00	24.29	2.25	46.34	2.09	46.34	2.61	43.73
600+50(2)	60051.00	50.00	25.56	4.25	46.15	6.02	92.49	10.13	82.36
601+00(2)	60101.00	50.00	25.98	2.20	47.72	5.97	140.22	17.60	122.62
601+50(2)	60151.00	50.00	26.55	2.42	48.64	4.29	188.86	22.96	165.91
602+00(2)	60201.00	50.00	26.74	3.42	49.35	5.41	238.21	29.71	208.50
602+50(2)	60251.00	50.00	29.13	1.34	51.74	4.40	289.95	35.22	254.73
603+00(2)	60301.00	50.00	31.45	1.75	56.10	2.86	346.05	38.79	307.25
603+50(2)	60351.00	50.00	33.61	3.56	60.24	4.92	406.29	44.94	361.35
604+00(2)	60401.00	50.00	31.82	5.67	60.58	8.54	466.87	55.62	411.25
604+50(2)	60451.00	50.00	23.78	0.41	51.48	5.63	518.34	62.66	455.68
604+53(2)	60454.00	3.00	23.41	0.53	2.62	0.05	520.97	62.72	458.24
				SUBTOTAL =	**520.97**	50.18	520.97	62.72	458.24

USH 41/45 NB OFF RAMP TO HOLY HILL RD

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut (205.0100) Note 1	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
612+78.96	61278.96	0.00	30.38	0.00	0.00	0.00	0.00	0.00	0.00
613+00	61300.00	21.04	23.70	0.00	21.07	0.00	21.07	0.00	21.07
613+50	61350.00	50.00	11.46	1.47	32.56	1.36	53.63	1.70	51.92
614+00	61400.00	50.00	9.57	14.90	19.47	15.16	73.10	20.65	52.45
614+50	61450.00	50.00	11.48	21.95	19.49	34.12	92.59	63.31	29.28
615+00	61500.00	50.00	14.98	15.53	24.50	34.70	117.08	106.69	10.40
615+50	61550.00	50.00	14.69	6.05	27.47	19.98	144.55	131.66	12.89
616+00	61600.00	50.00	12.05	10.04	24.76	14.90	169.31	150.28	19.03
616+50	61650.00	50.00	11.56	15.88	21.86	24.00	191.17	180.28	10.89
617+00	61700.00	50.00	10.97	21.47	20.86	34.58	212.03	223.51	-11.48
617+50	61750.00	50.00	11.67	18.79	20.96	37.28	232.99	270.11	-37.12
618+00	61800.00	50.00	10.38	29.51	20.42	44.72	253.41	326.01	-72.61
618+50	61850.00	50.00	8.95	23.48	17.89	49.07	271.30	387.35	-116.05
619+00	61900.00	50.00	5.43	10.06	13.31	31.06	284.62	426.17	-141.55
619+50	61950.00	50.00	65.50	0.00	65.68	9.31	350.29	437.81	-87.52
				SUBTOTAL =	**350.29**	350.25	350.29	437.81	-87.52

USH 41/45 MEDIAN (STA 573+53 TO STA 608+00)

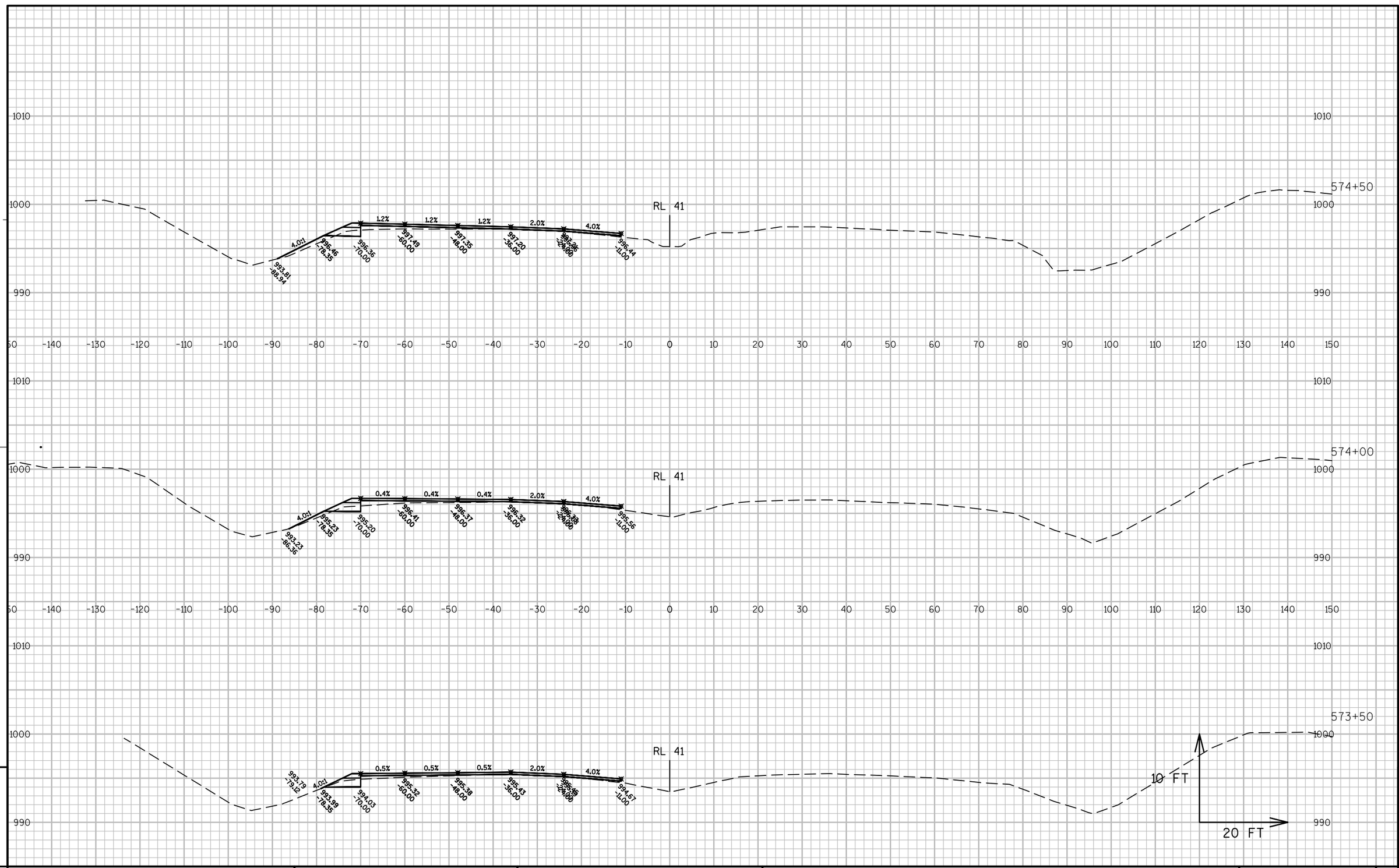
STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut (205.0100) Note 1	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
573+53(1)	57353	0	0.19	11.42	0.00	0.00	0.00	0.00	0.00
574+00(1)	57400	47	4.42	2.74	4.01	12.32	4.01	15.40	-11.40
574+50(1)	57450	50	10.12	0.40	13.46	2.91	17.46	19.04	-1.57
575+00(1)	57500	50	7.04	2.29	15.89	2.49	33.35	22.15	11.20
575+50(2)	57551	51	4.54	5.68	10.94	7.53	44.29	31.56	12.74
576+00(2)	57601	50	6.83	3.72	10.53	8.71	54.82	42.44	12.38
576+50(2)	57651	50	4.25	5.39	10.26	8.44	65.08	52.99	12.09
577+00(2)	57701	50	4.85	4.30	8.43	8.97	73.51	64.21	9.31
577+50(2)	57751	50	5.15	4.16	9.26	7.83	82.77	73.99	8.78
578+00(2)	57801	50	5.29	3.84	9.67	7.41	92.44	83.25	9.18
578+50(2)	57851	50	4.99	4.69	9.52	7.90	101.96	93.13	8.83
579+00(2)	57901	50	5.54	4.08	9.75	8.12	111.71	103.28	8.43
579+50(2)	57951	50	5.70	3.53	10.40	7.05	122.12	112.09	10.02
580+00(2)	58001	50	6.96	0.00	11.72	3.27	133.84	116.18	17.66
580+50(2)	58051	50	4.86	5.19	10.95	4.81	144.78	122.19	22.59
581+00(2)	58101	50	5.52	4.94	9.62	9.38	154.40	133.92	20.48
581+50(2)	58151	50	4.96	6.00	9.71	10.13	164.10	146.59	17.51
582+00(2)	58201	50	5.50	5.59	9.69	10.74	173.79	160.01	13.79
582+50(2)	58251	50	4.80	6.12	9.54	10.85	183.33	173.57	9.77
583+00(2)	58301	50	5.02	5.33	9.09	10.61	192.42	186.83	5.60
583+50(2)	58351	50	4.72	5.43	9.02	9.97	201.44	199.28	2.16
584+00(2)	58401	50	4.65	5.40	8.68	10.03	210.12	211.82	-1.70
584+50(2)	58451	50	5.10	6.57	9.03	11.09	219.15	225.68	-6.53
585+00(2)	58501	50	5.59	5.12	9.90	10.82	229.06	239.21	-10.15
585+50(2)	58551	50	4.76	5.19	9.58	9.54	238.64	251.13	-12.50
586+00(2)	58601	50	5.40	4.01	9.41	8.52	248.04	261.78	-13.74
586+50(2)	58651	50	4.31	5.24	8.99	8.57	257.04	272.49	-15.45
587+00(2)	58701	50	5.13	5.24	8.74	9.71	265.78	284.62	-18.85
587+50(2)	58751	50	5.41	3.87	9.76	8.44	275.54	295.17	-19.63
588+00(2)	58801	50	5.64	3.39	10.23	6.72	285.77	303.58	-17.80
588+50(2)	58851	50	5.37	4.70	10.19	7.49	295.96	312.94	-16.97
589+00(2)	58901	50	4.66	4.98	9.29	8.96	305.25	324.13	-18.88
589+50(2)	58951	50	4.66	5.23	8.63	9.45	313.88	335.95	-22.06
590+00(2)	59001	50	5.51	3.79	9.42	8.35	323.30	346.39	-23.08
590+50(2)	59051	50	4.95	4.53	9.68	7.71	332.98	356.02	-23.04
591+00(2)	59101	50	5.23	3.72	9.42	7.64	342.40	365.57	-23.17
591+50(2)	59151	50	4.82	3.59	9.30	6.77	351.71	374.04	-22.33
592+00(2)	59201	50	4.65	4.05	8.77	7.08	360.48	382.88	-22.40
592+50(2)	59251	50	4.75	4.72	8.70	8.12	369.18	393.03	-23.84
593+00(2)	59301	50	5.11	3.94	9.13	8.02	378.31	403.05	-24.74
593+50(2)	59351	50	5.11	4.15	9.47	7.49	387.78	412.42	-24.64
594+00(2)	59401	50	5.85	3.60	10.15	7.18	397.93	421.39	-23.45
594+50(2)	59451	50	5.00	5.25	10.05	8.20	407.98	431.63	-23.65
595+00(2)	59501	50	4.55	6.02	8.84	10.44	416.82	444.68	-27.87
595+50(2)	59551	50	4.74	5.22	8.60	10.41	425.41	457.70	-32.28
596+00(2)	59601	50	5.80	4.50	9.75	9.00	435.17	468.95	-33.78
596+50(2)	59651	50	5.17	4.72	10.15	8.53	445.32	479.62	-34.30
597+00(2)	59701	50	5.55	4.71	9.92	8.73	455.24	490.53	-35.28
597+50(2)	59751	50	5.96	2.75	10.66	6.91	465.91	499.16	-33.26
598+00(2)	59801	50	5.48	3.57	10.60	5.85	476.50	506.48	-29.98
598+50(2)	59851	50	5.44	4.13	10.11	7.13	486.61	515.39	-28.78
599+00(2)	59901	50	5.96	4.98	10.56	8.43	497.17	525.93	-28.77
599+50(2)	59951	50	4.84	4.90	10.00	9.15	507.16	537.37	-30.21
600+00(2)	60001	50	5.19	4.54	9.28	8.74	516.44	548.29	-31.85
600+50(2)	60051	50	4.84	6.18	9.28	9.92	525.73	560.70	-34.98
601+00(2)	60101	50	5.31	5.68	9.40	10.98	535.12	574.43	-39.31
601+50(2)	60151	50	5.28	5.25	9.80	10.12	544.92	587.08	-42.15
602+00(2)	60201	50	5.83	4.17	10.29	8.72	555.21	597.98	-42.77
602+50(2)	60251	50	5.02	4.67	10.05	8.18	565.26	608.21	-42.94
603+00(2)	60301	50	5.75	4.69	9.97	8.66	575.24	619.03	-43.79
603+50(2)	60351	50	4.59	6.00	9.58	9.89	584.82	631.40	-46.58
604+00(2)	60401	50	5.58	4.83	9.41	10.03	594.23	643.93	-49.70
604+50(2)	60451	50	5.52	4.63	10.28	8.76	604.51	654.88	-50.37
605+00(2)	60501	50	6.02	4.69	10.69	8.63	615.20	665.67	-50.47
605+50(2)	60551	50	5.67	5.03	10.82	9.00	626.02	676.92	-50.90
606+00(2)	60601	50	7.99	2.41	12.64	6.89	638.66	685.53	-46.87
606+50(2)	60651	50	7.66	2.58	14.49	4.63	653.15	691.31	-38.16
607+00(2)	60701	50	7.52	2.26	14.06	4.48	667.21	696.91	-29.70
608+00(2)	60801	100	10.31	0.00	33.02	4.18	700.23	702.13	-1.90
				SUBTOTAL =	**700.23**	561.71	700.23	702.13	-1.90



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND ON RAMP @ HOLY HILL RD	SHEET 751	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_SB HOLY HILL ON RAMP FOR PSE REV 1.DWG PLOT DATE : 2/17/2015 2:14 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

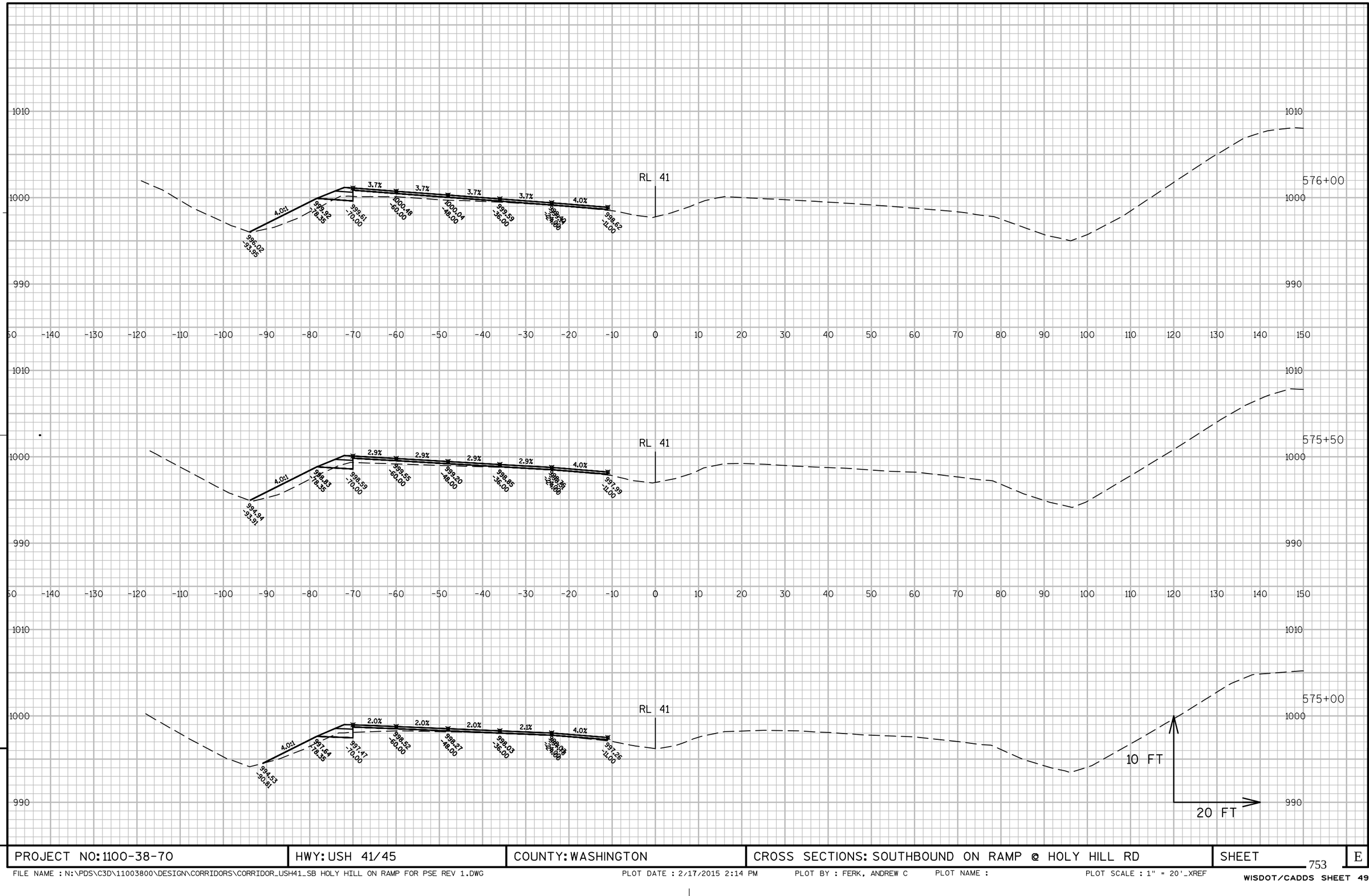
WISDOT/CADDS SHEET 49



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND ON RAMP @ HOLY HILL RD	SHEET 752 E

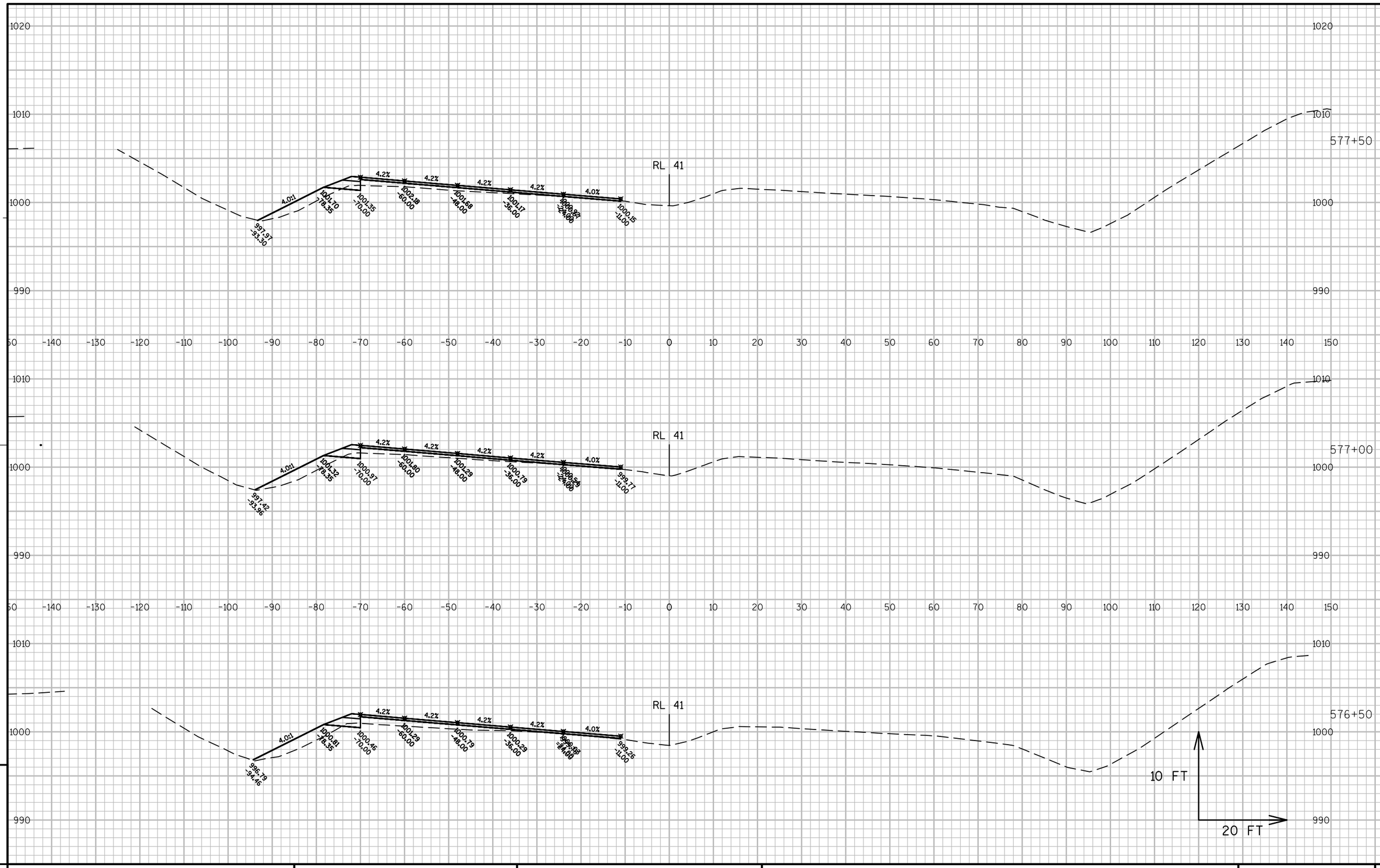
FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_SB HOLY HILL ON RAMP FOR PSE REV 1.DWG PLOT DATE : 2/17/2015 2:14 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND ON RAMP @ HOLY HILL RD	SHEET 753	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_SB HOLY HILL ON RAMP FOR PSE REV 1.DWG PLOT DATE : 2/17/2015 2:14 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF



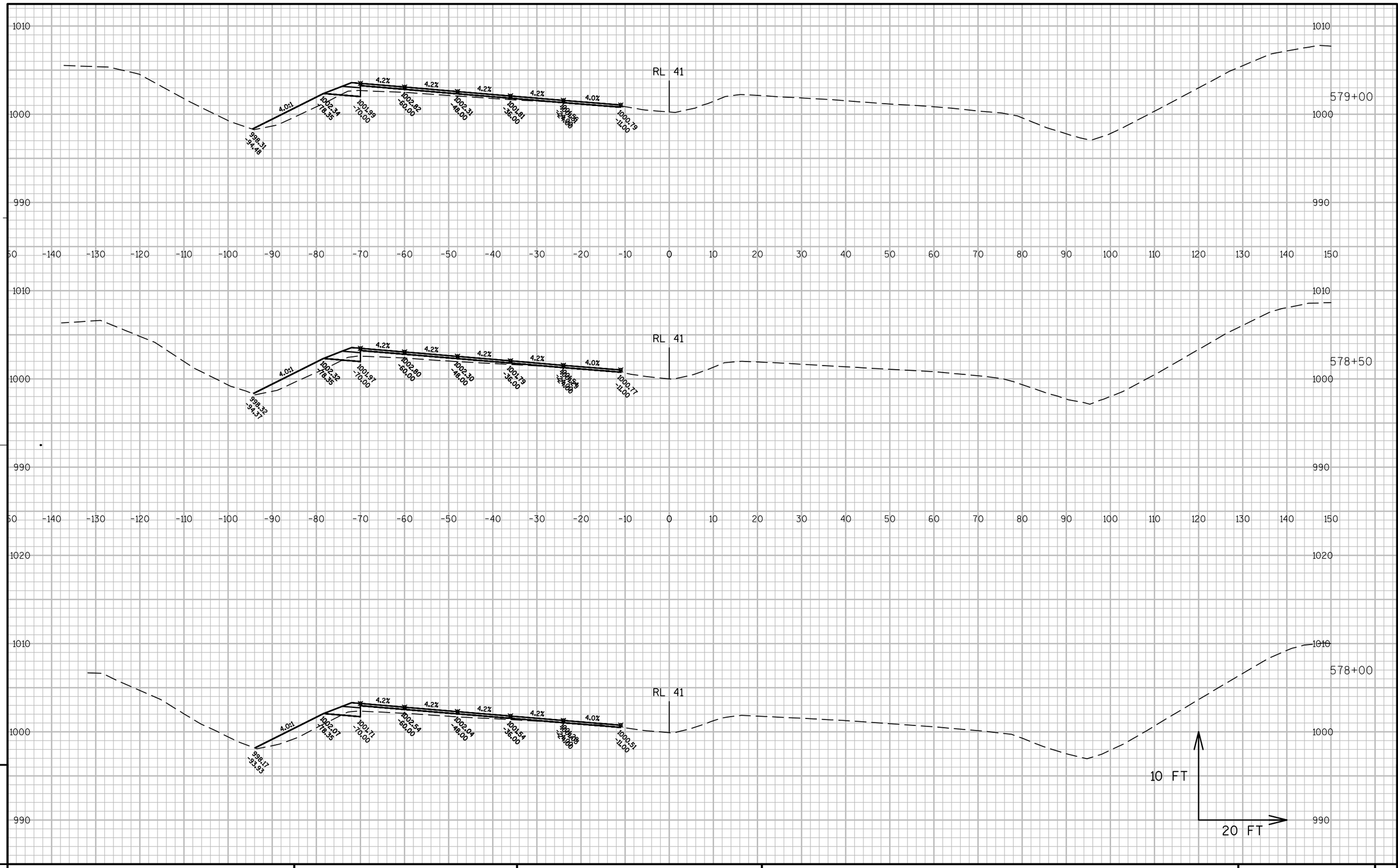
9

9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND ON RAMP @ HOLY HILL RD	SHEET 754	E

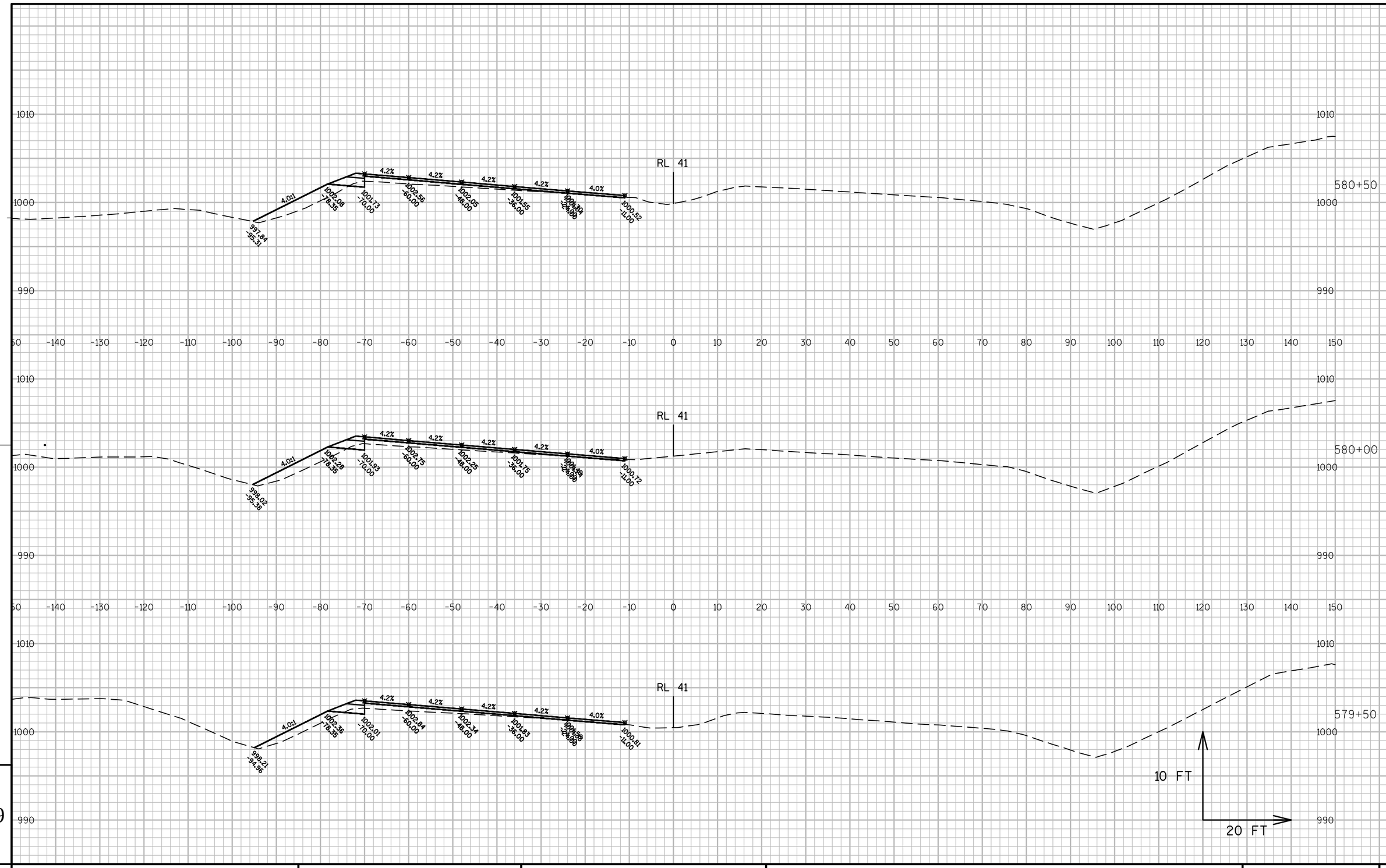
FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_SB HOLY HILL ON RAMP FOR PSE REV 1.DWG PLOT DATE : 2/17/2015 2:14 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND ON RAMP @ HOLY HILL RD	SHEET	E

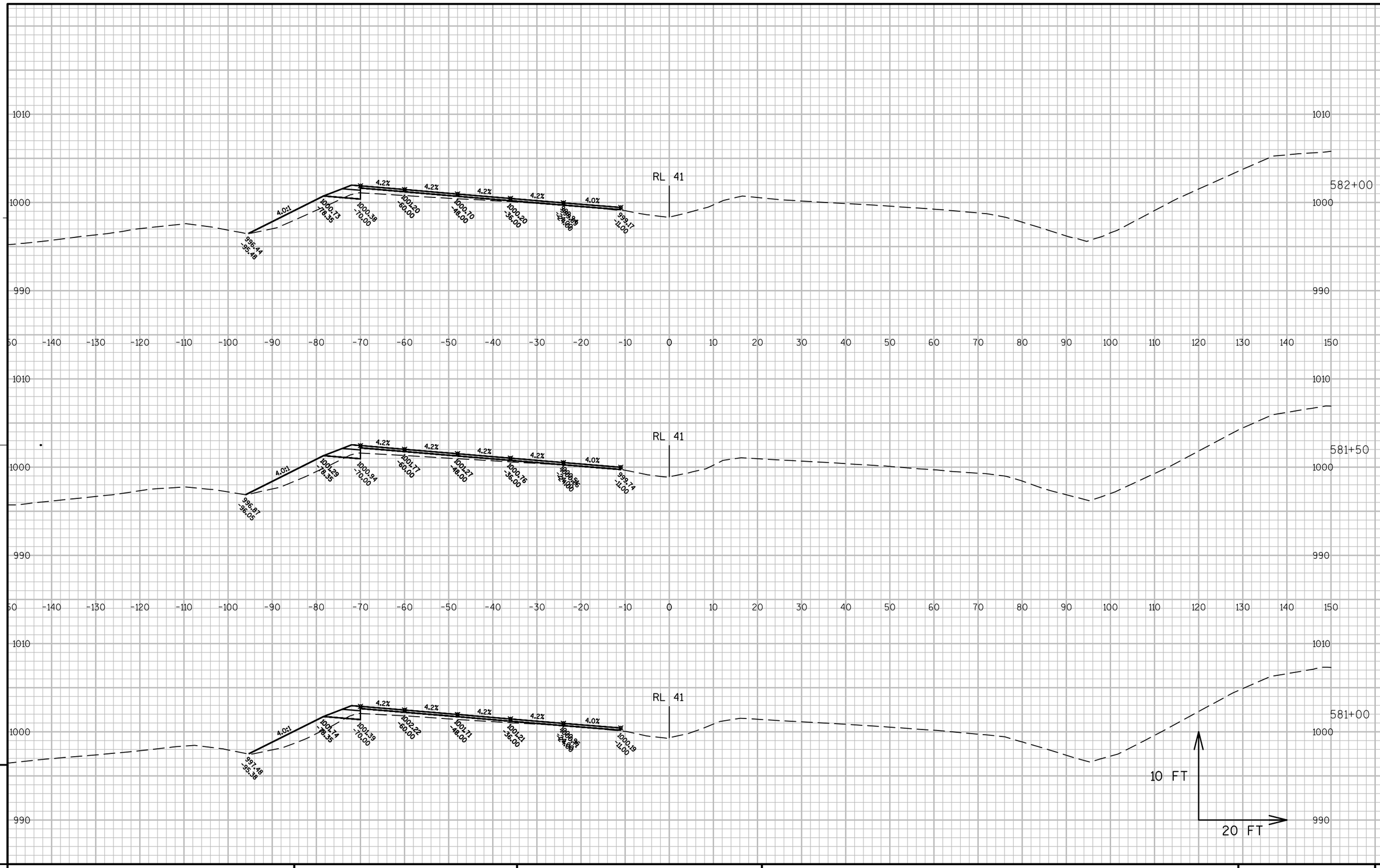
FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_SB HOLY HILL ON RAMP FOR PSE REV 1.DWG
PLOT DATE : 2/17/2015 2:15 PM
PLOT BY : FERK, ANDREW C
PLOT NAME :
PLOT SCALE : 1" = 20'_XREF
WISDOT/CADDS SHEET 49



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND ON RAMP @ HOLY HILL RD	SHEET 756	E

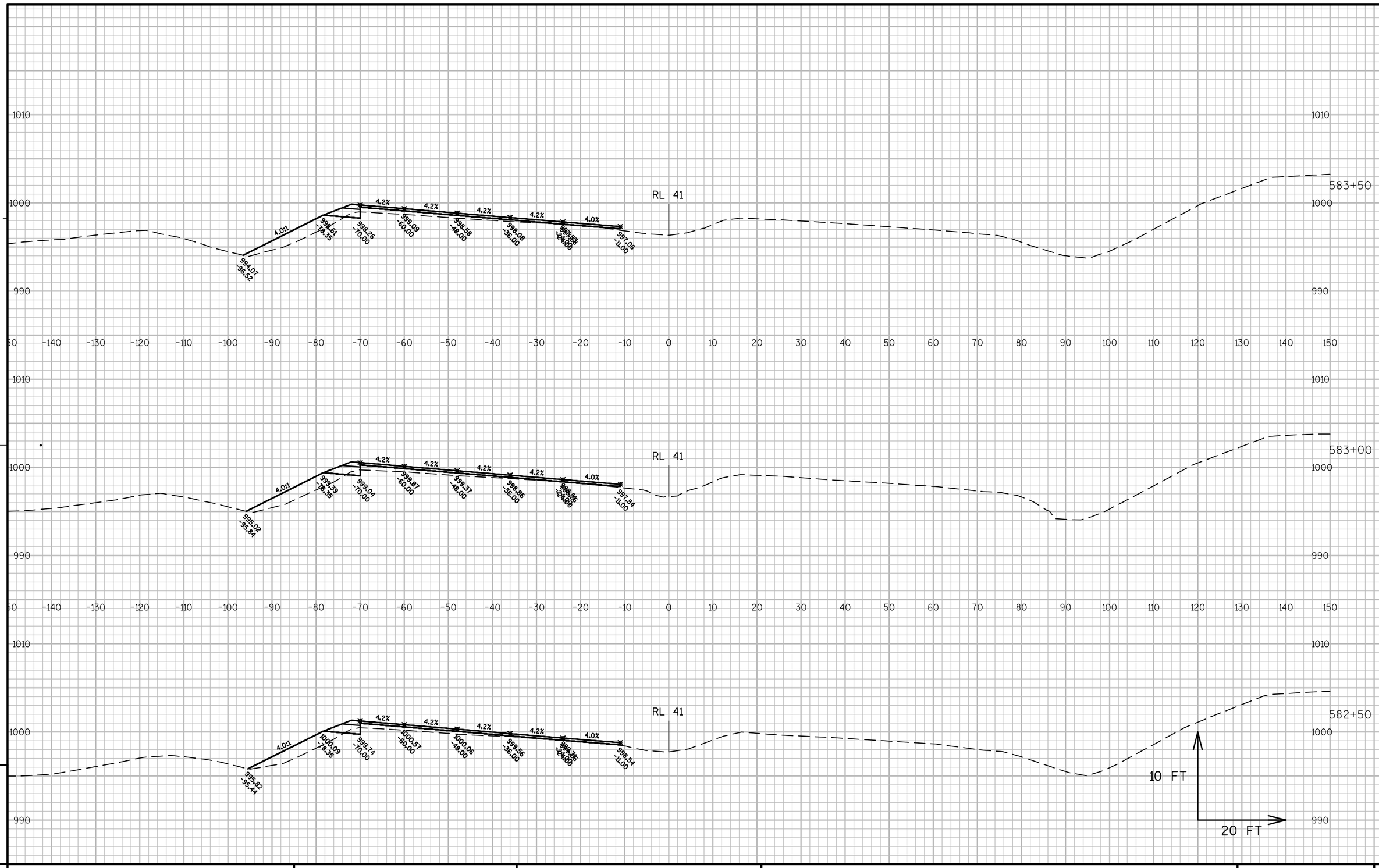
FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_SB HOLY HILL ON RAMP FOR PSE REV 1.DWG PLOT DATE : 2/17/2015 2:15 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND ON RAMP @ HOLY HILL RD	SHEET 757	E

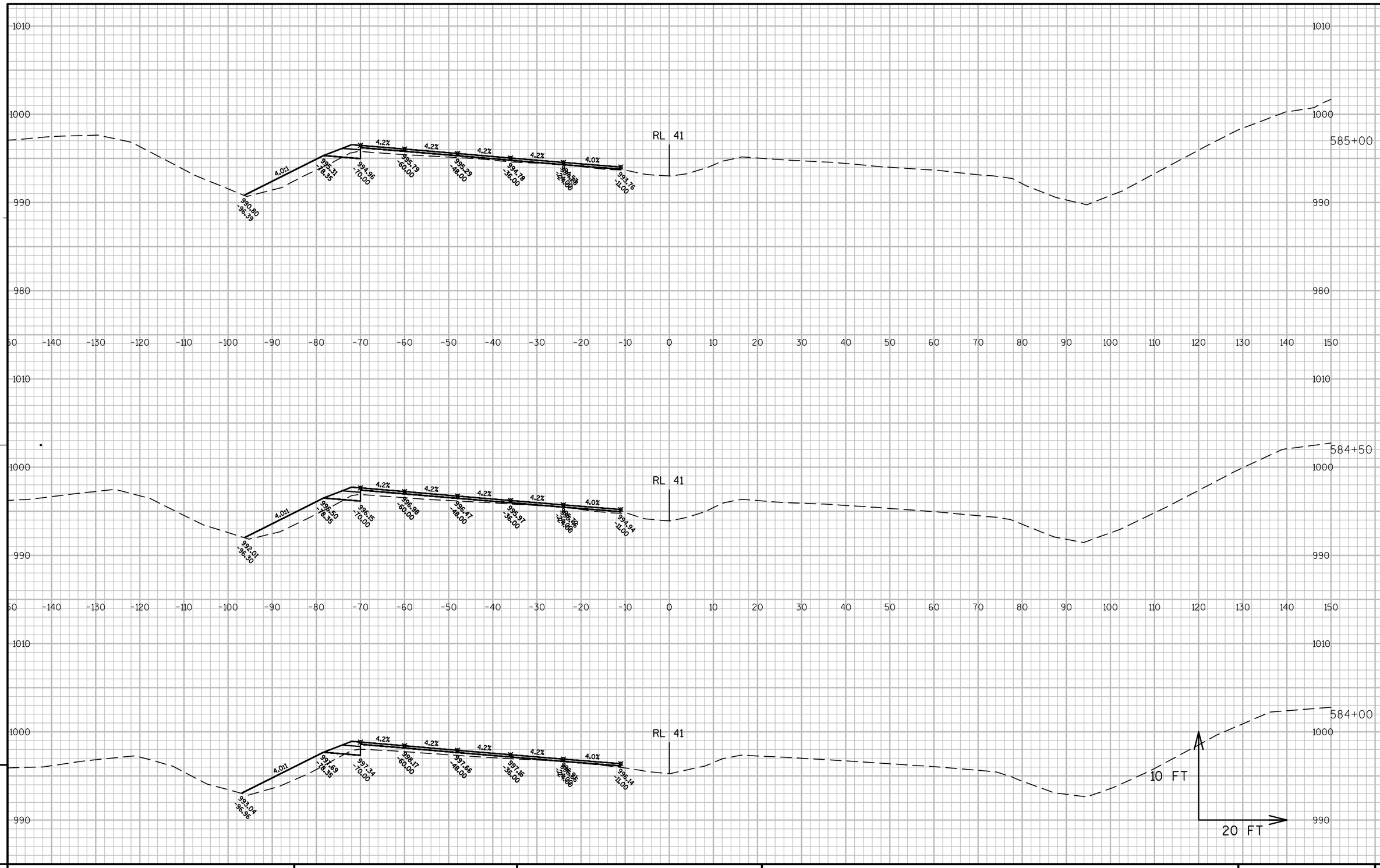
FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_SB HOLY HILL ON RAMP FOR PSE REV 1.DWG
PLOT DATE : 2/17/2015 2:15 PM
PLOT BY : FERK, ANDREW C
PLOT NAME :
PLOT SCALE : 1" = 20'_XREF
WISDOT/CADDS SHEET 49



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND ON RAMP @ HOLY HILL RD	SHEET 758	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_SB HOLY HILL ON RAMP FOR PSE REV 1.DWG PLOT DATE : 2/17/2015 2:15 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

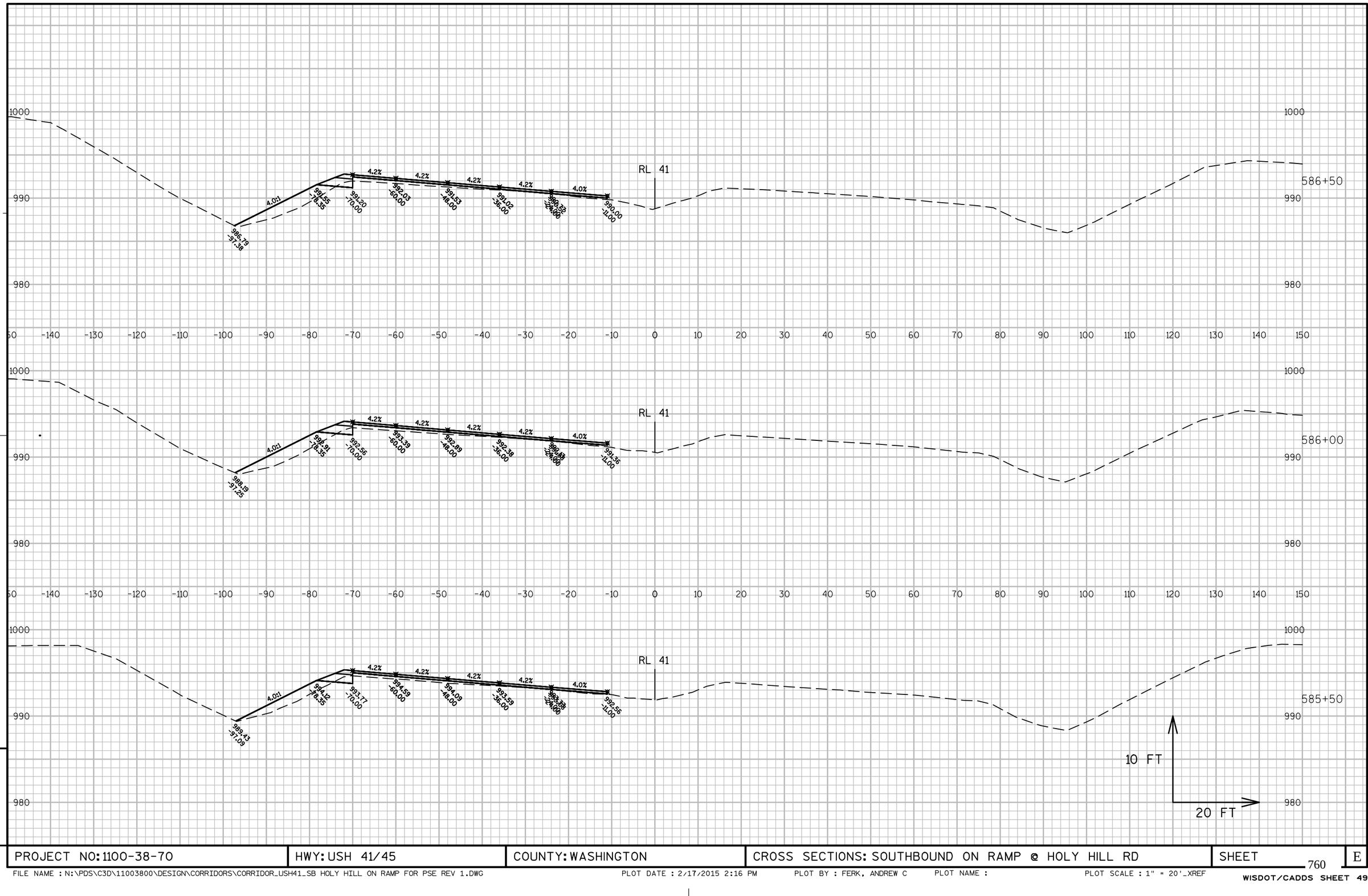
WISDOT/CADDS SHEET 49



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND ON RAMP @ HOLY HILL RD	SHEET 759 E

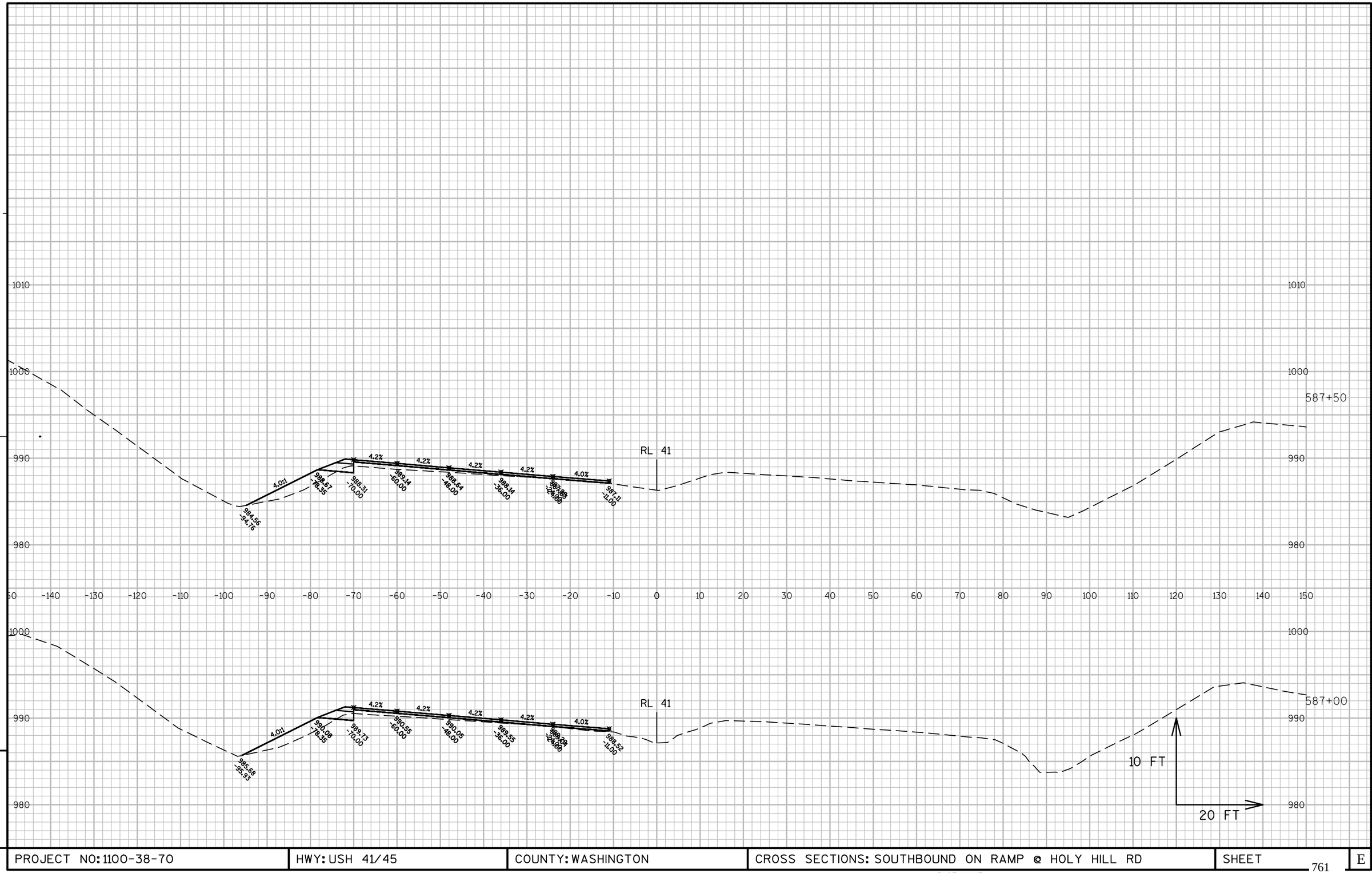
FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_SB HOLY HILL ON RAMP FOR PSE REV 1.DWG PLOT DATE : 2/17/2015 2:15 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND ON RAMP @ HOLY HILL RD	SHEET	E

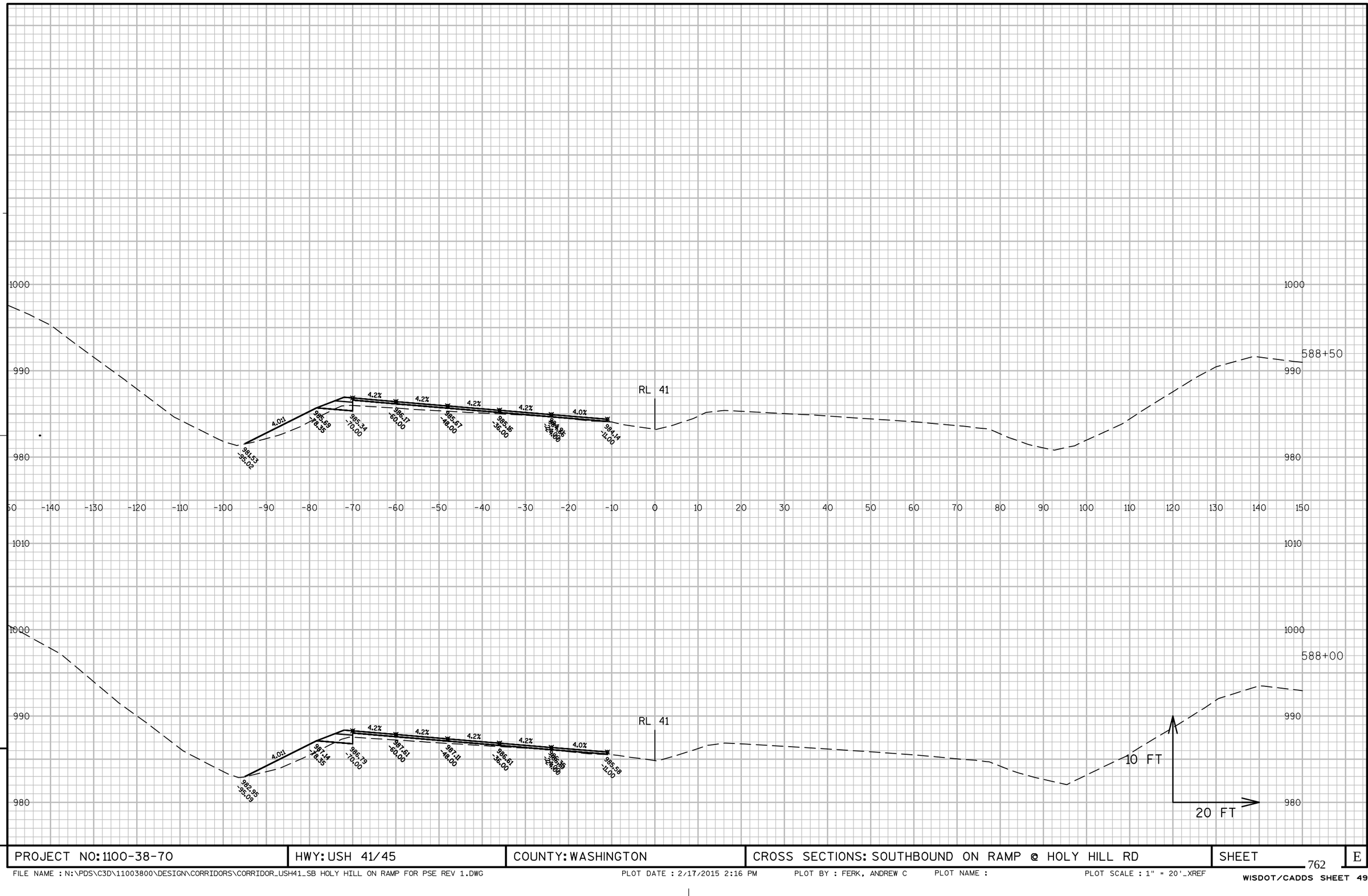
FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_SB HOLY HILL ON RAMP FOR PSE REV 1.DWG PLOT DATE : 2/17/2015 2:16 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF
WISDOT/CADDS SHEET 49



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND ON RAMP @ HOLY HILL RD	SHEET 761	E

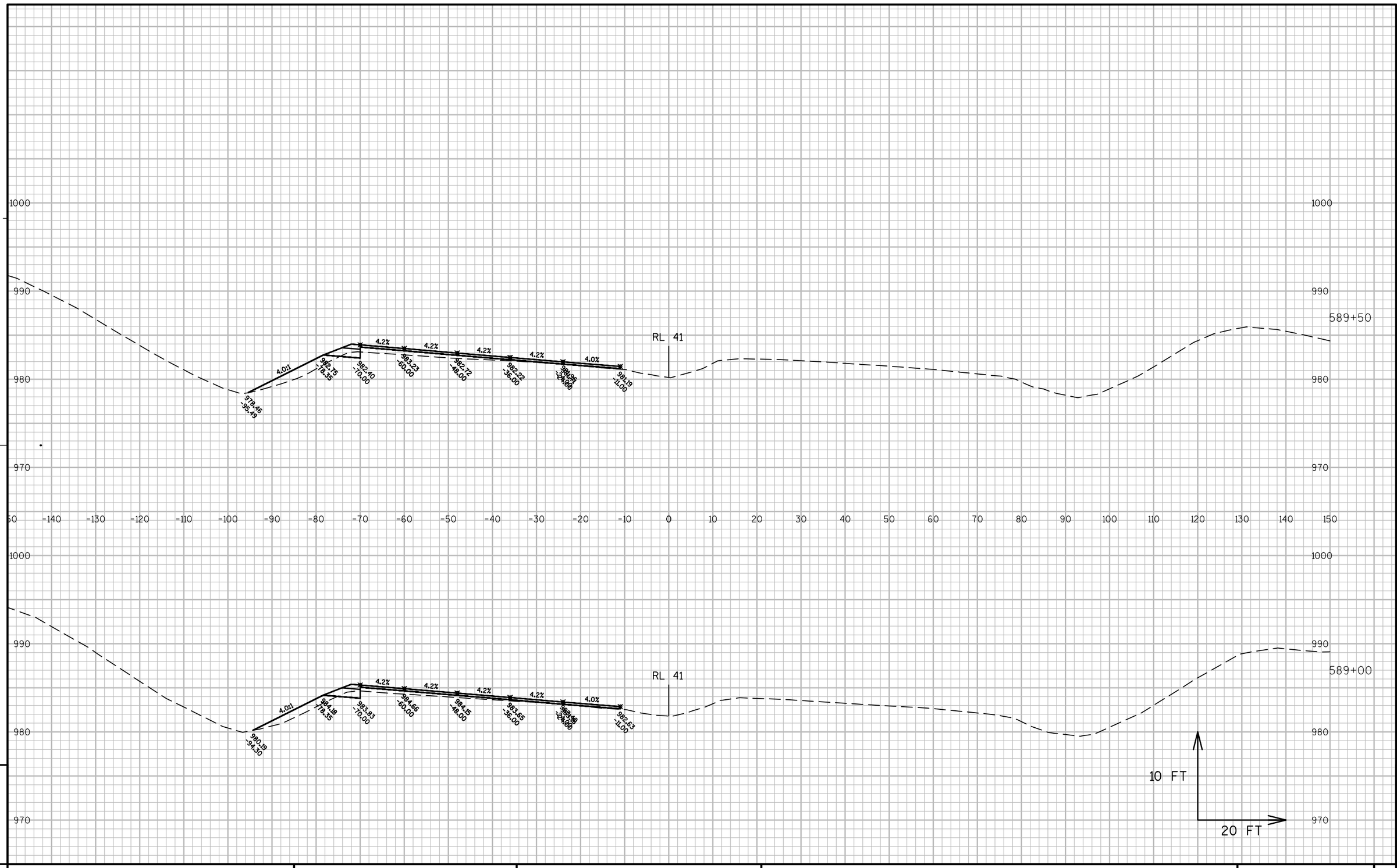
FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_SB HOLY HILL ON RAMP FOR PSE REV 1.DWG PLOT DATE : 2/17/2015 2:16 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND ON RAMP @ HOLY HILL RD	SHEET	E

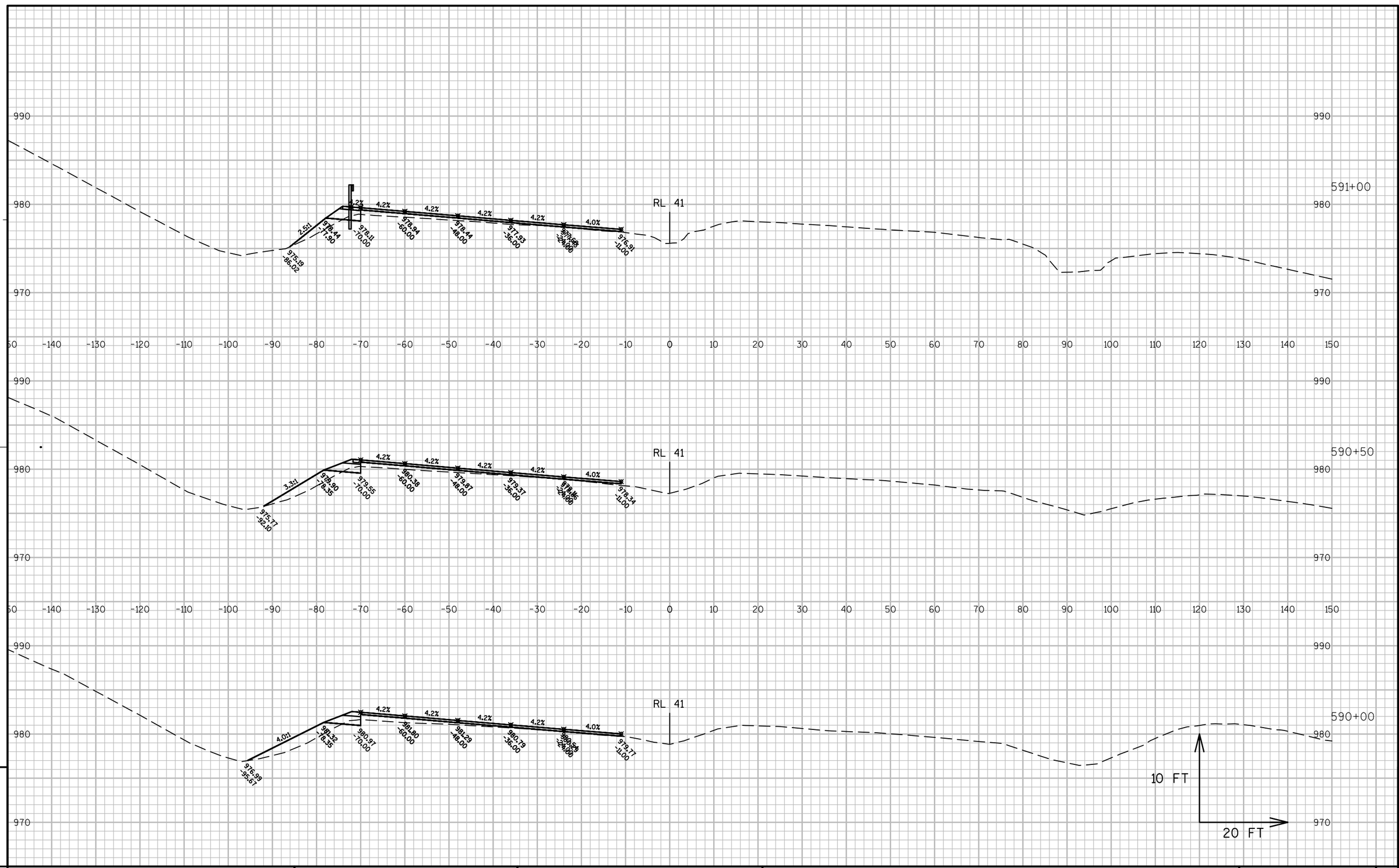
FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_SB HOLY HILL ON RAMP FOR PSE REV 1.DWG PLOT DATE : 2/17/2015 2:16 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF



9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND ON RAMP @ HOLY HILL RD	SHEET	E

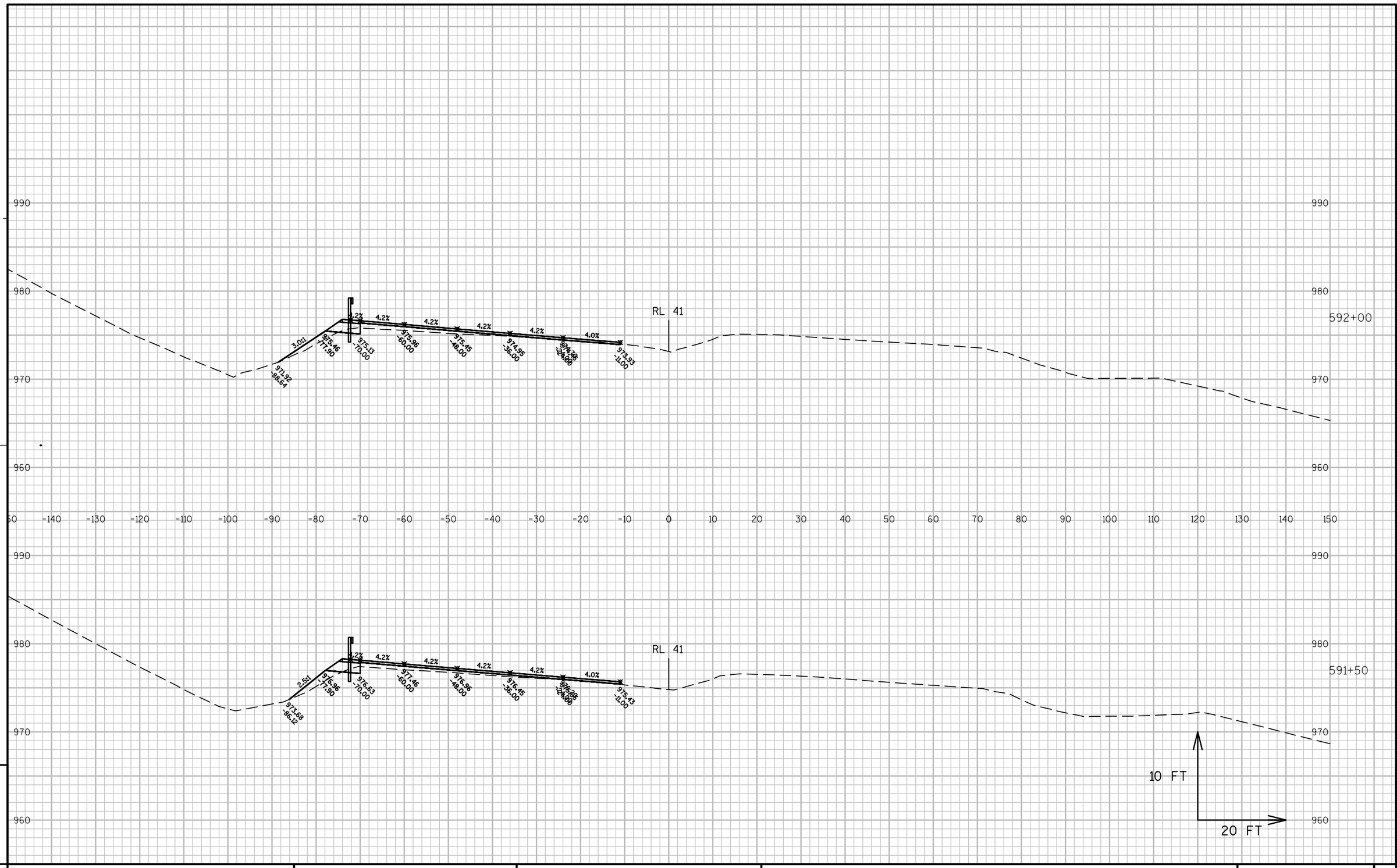
FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_SB HOLY HILL ON RAMP FOR PSE REV 1.DWG
PLOT DATE : 2/17/2015 2:16 PM
PLOT BY : FERK, ANDREW C
PLOT NAME :
PLOT SCALE : 1" = 20'_XREF
WISDOT/CADDS SHEET 49



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND ON RAMP @ HOLY HILL RD	SHEET 764	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_SB HOLY HILL ON RAMP FOR PSE REV 1.DWG PLOT DATE : 2/17/2015 2:16 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

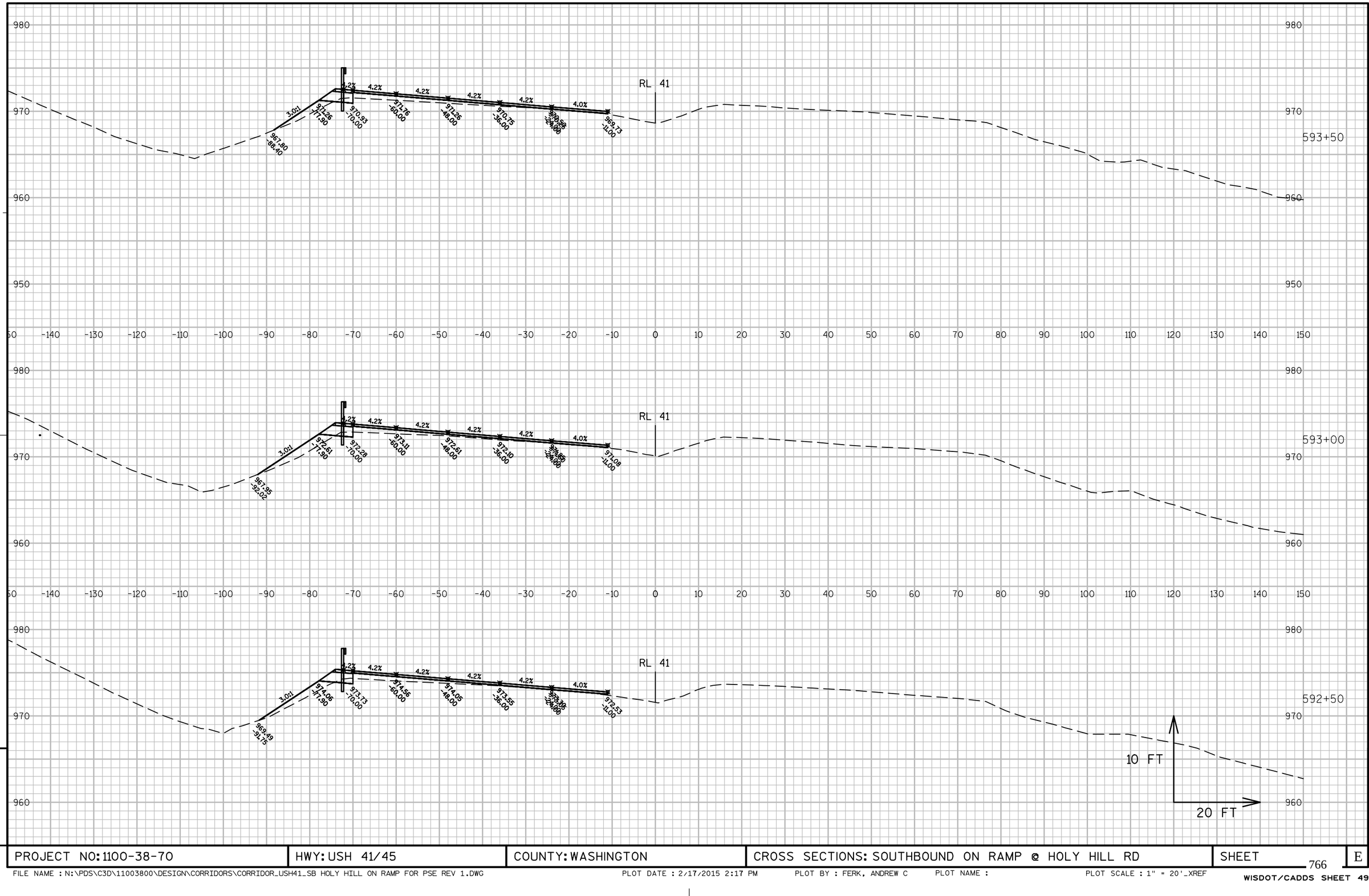
WISDOT/CADDS SHEET 49



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND ON RAMP @ HOLY HILL RD	SHEET 765 E

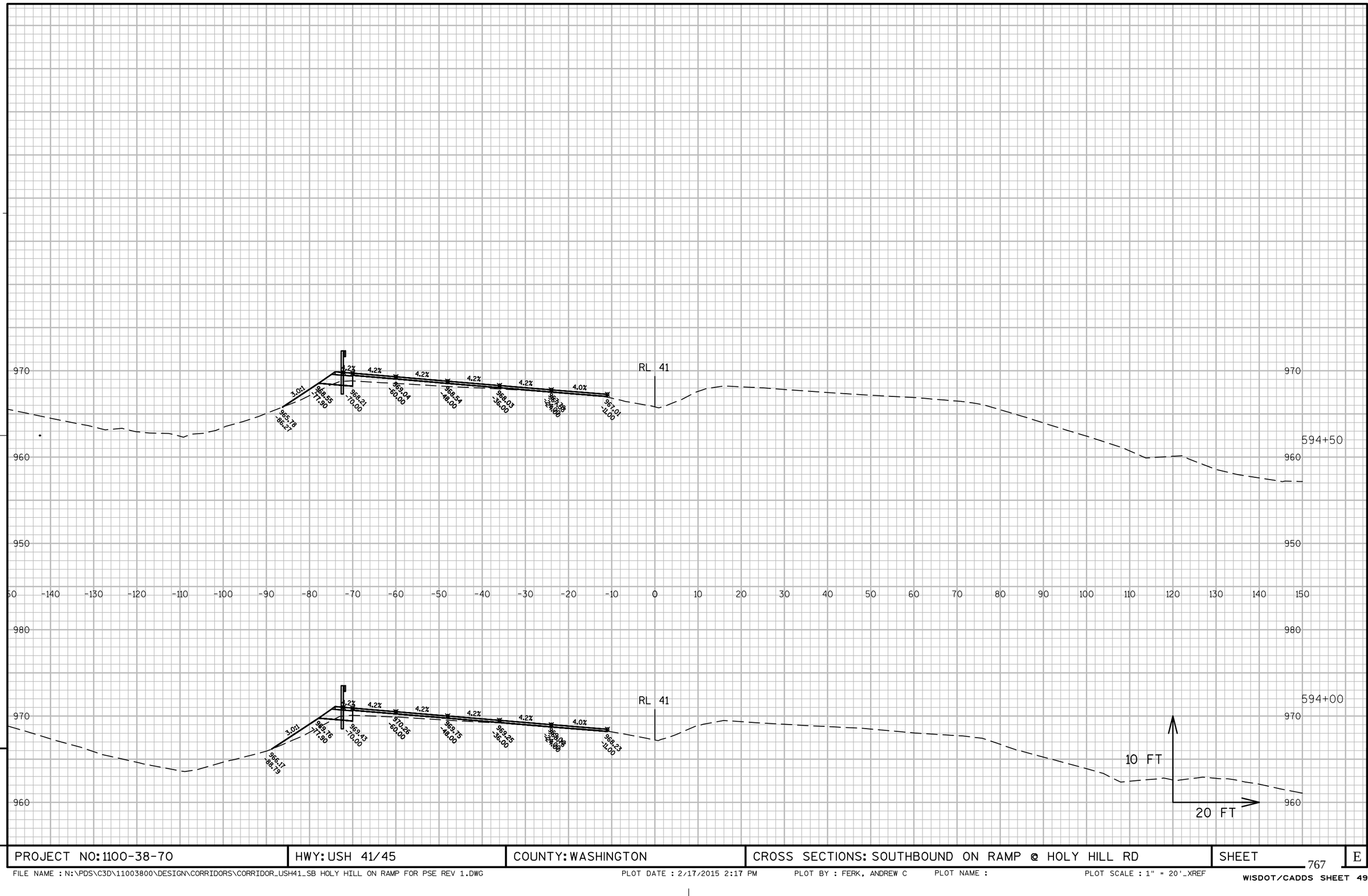
FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_SB HOLY HILL ON RAMP FOR PSE REV 1.DWG PLOT DATE : 2/17/2015 2:17 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND ON RAMP @ HOLY HILL RD	SHEET	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_SB HOLY HILL ON RAMP FOR PSE REV 1.DWG PLOT DATE : 2/17/2015 2:17 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF
WISDOT/CADDS SHEET 49



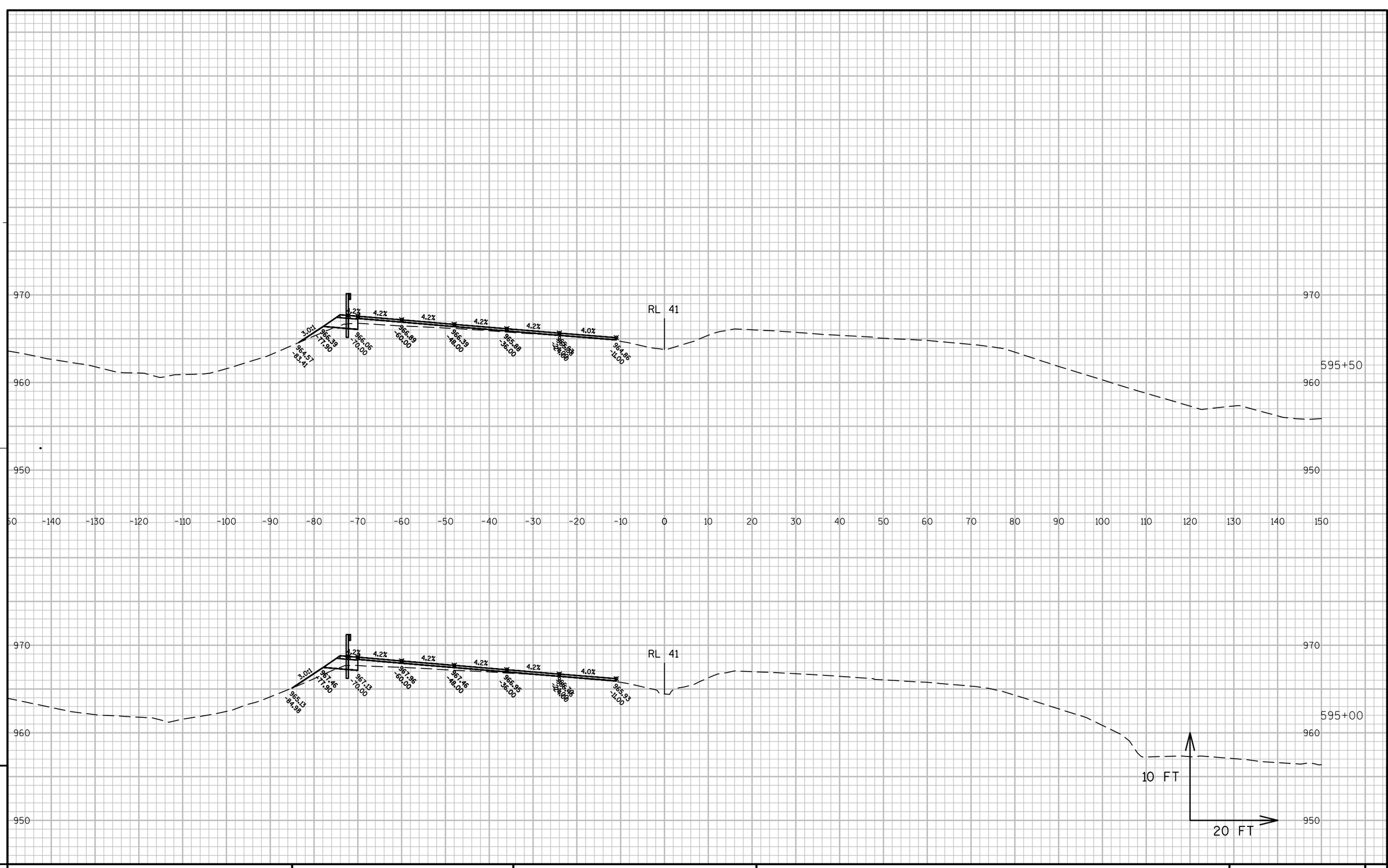
9

9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND ON RAMP @ HOLY HILL RD	SHEET 767	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_SB HOLY HILL ON RAMP FOR PSE REV 1.DWG PLOT DATE : 2/17/2015 2:17 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

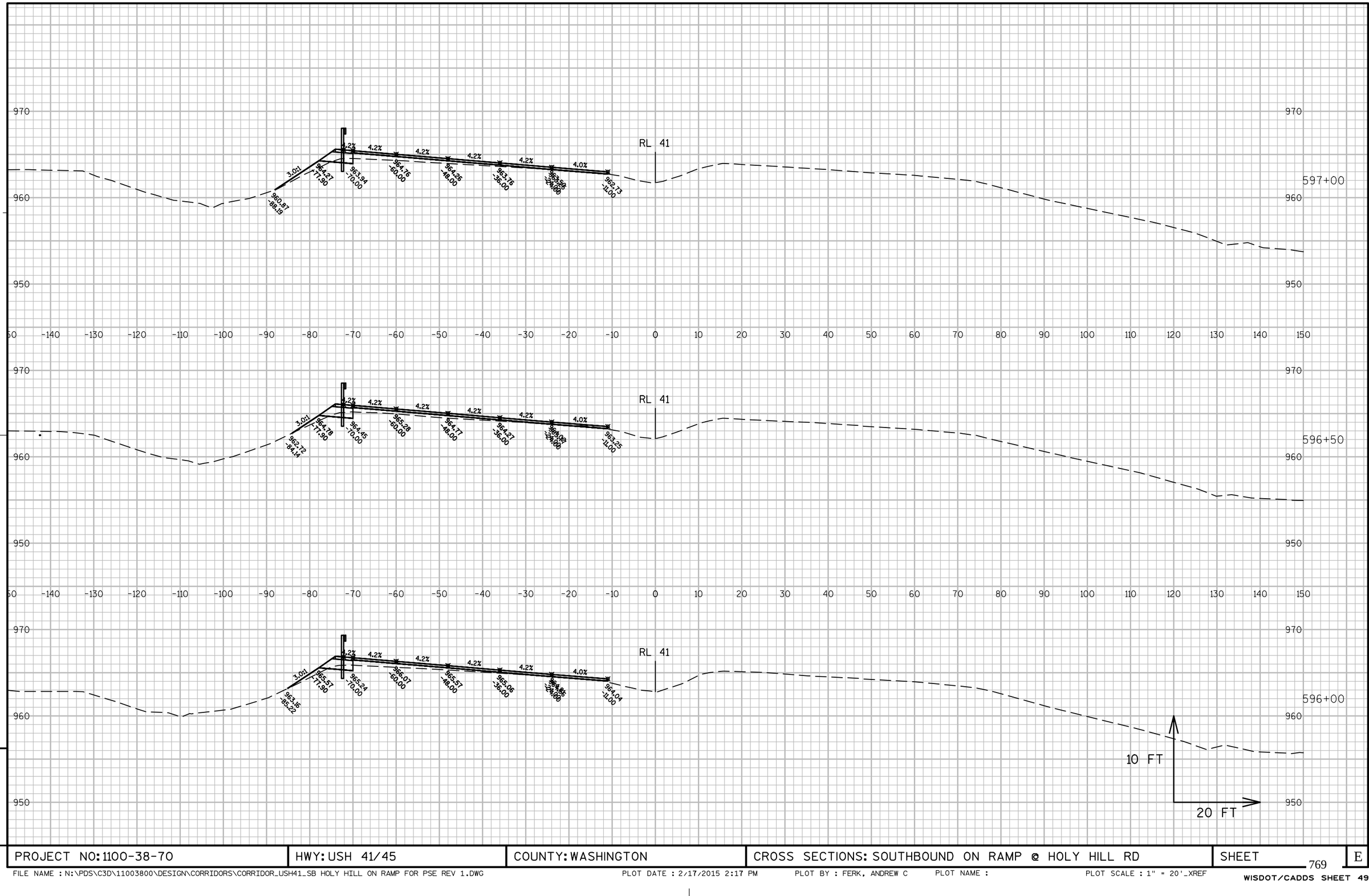
WISDOT/CADDS SHEET 49



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND ON RAMP @ HOLY HILL RD	SHEET 768 E

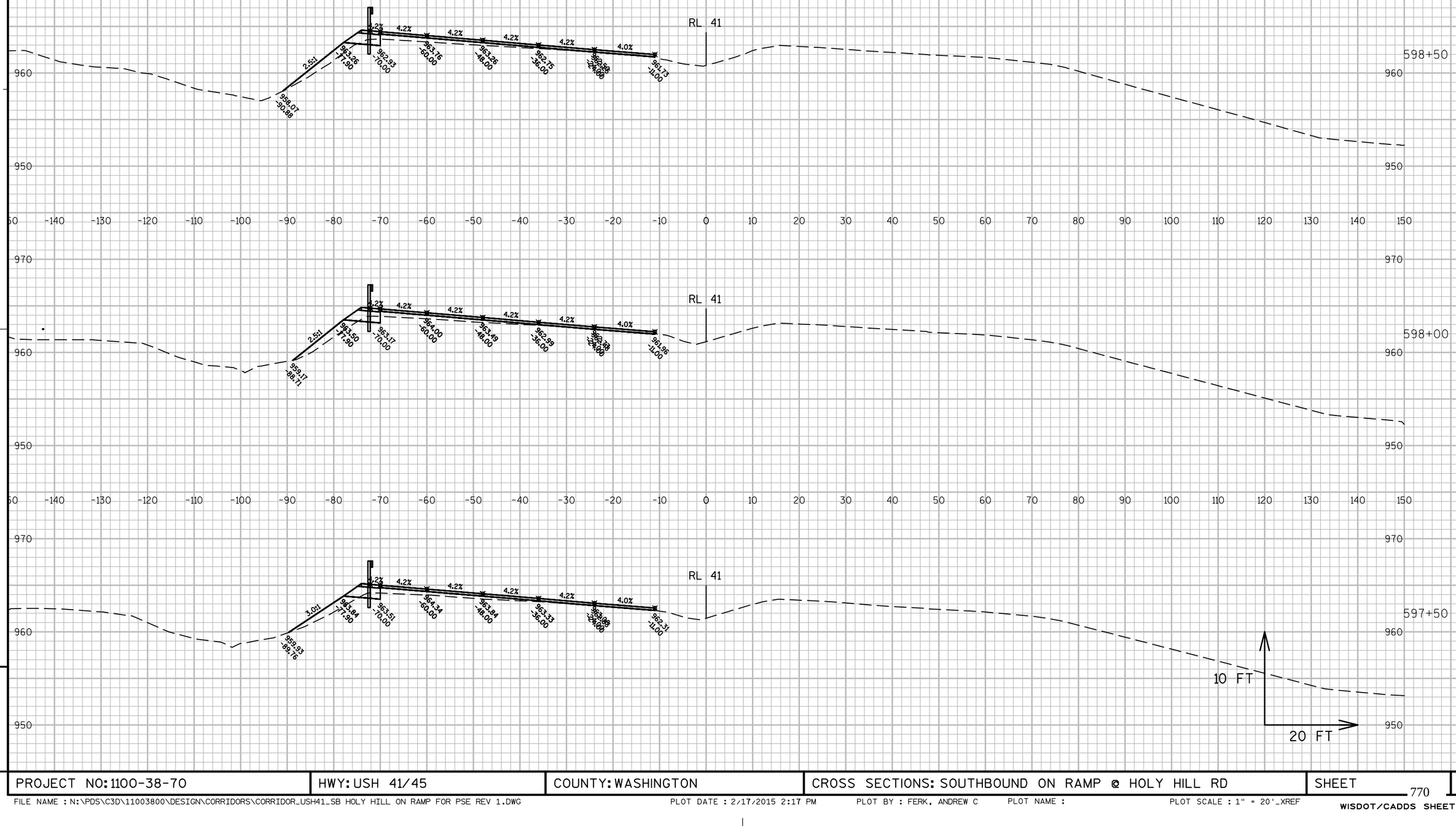
FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_SB HOLY HILL ON RAMP FOR PSE REV 1.DWG PLOT DATE : 2/17/2015 2:17 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49

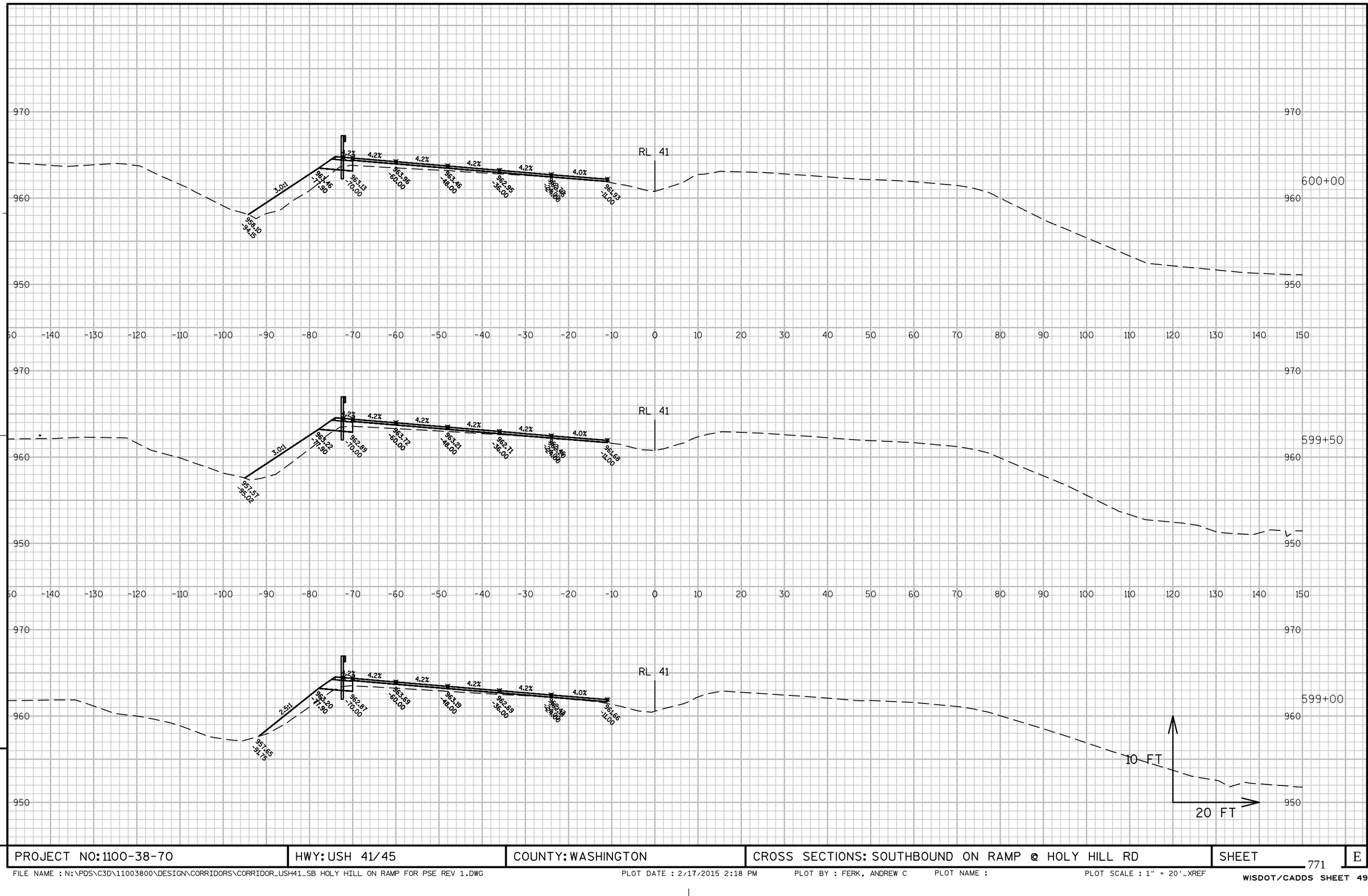


PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND ON RAMP @ HOLY HILL RD	SHEET	E

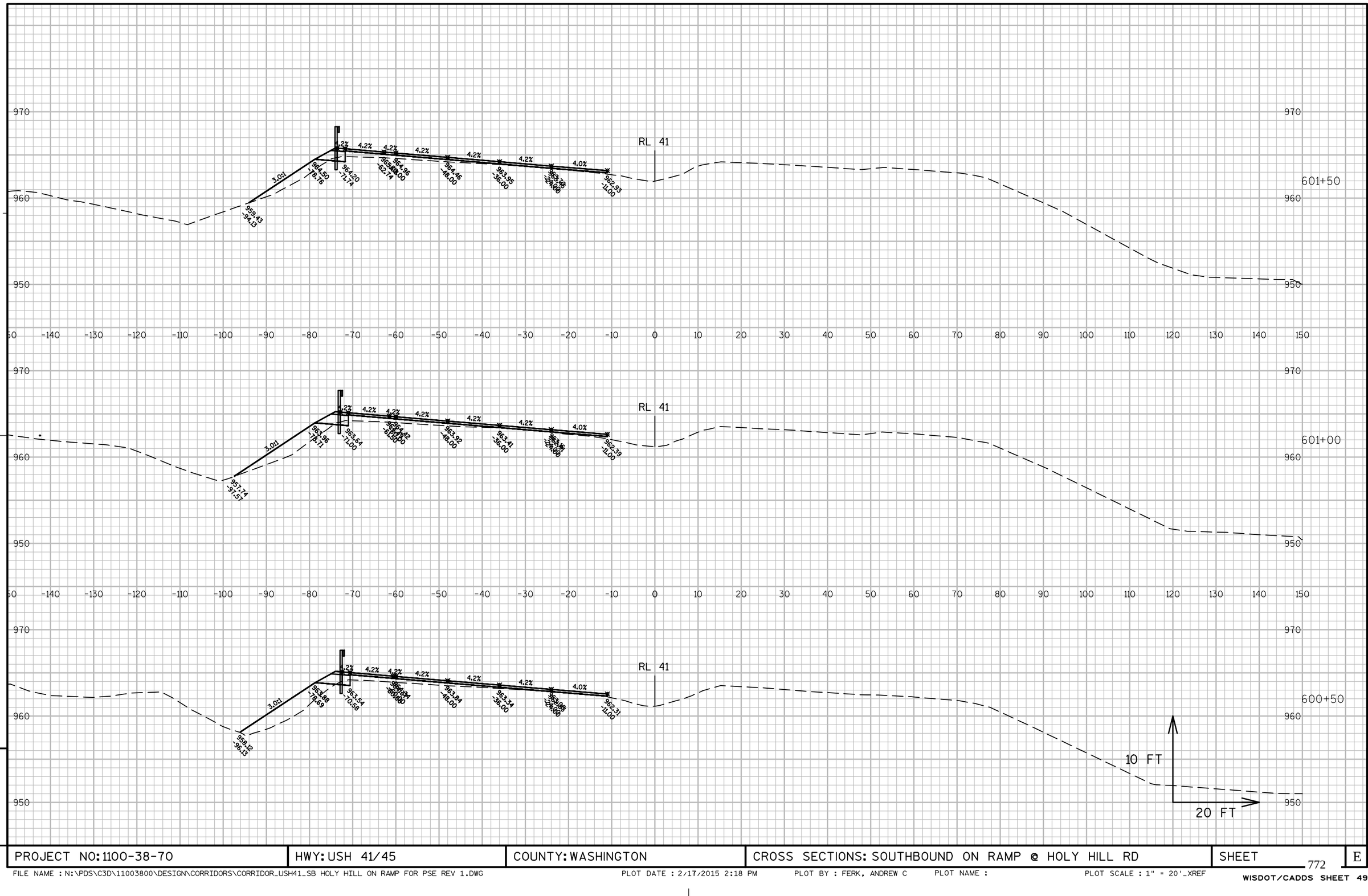
FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_SB HOLY HILL ON RAMP FOR PSE REV 1.DWG PLOT DATE : 2/17/2015 2:17 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF
WISDOT/CADDS SHEET 49



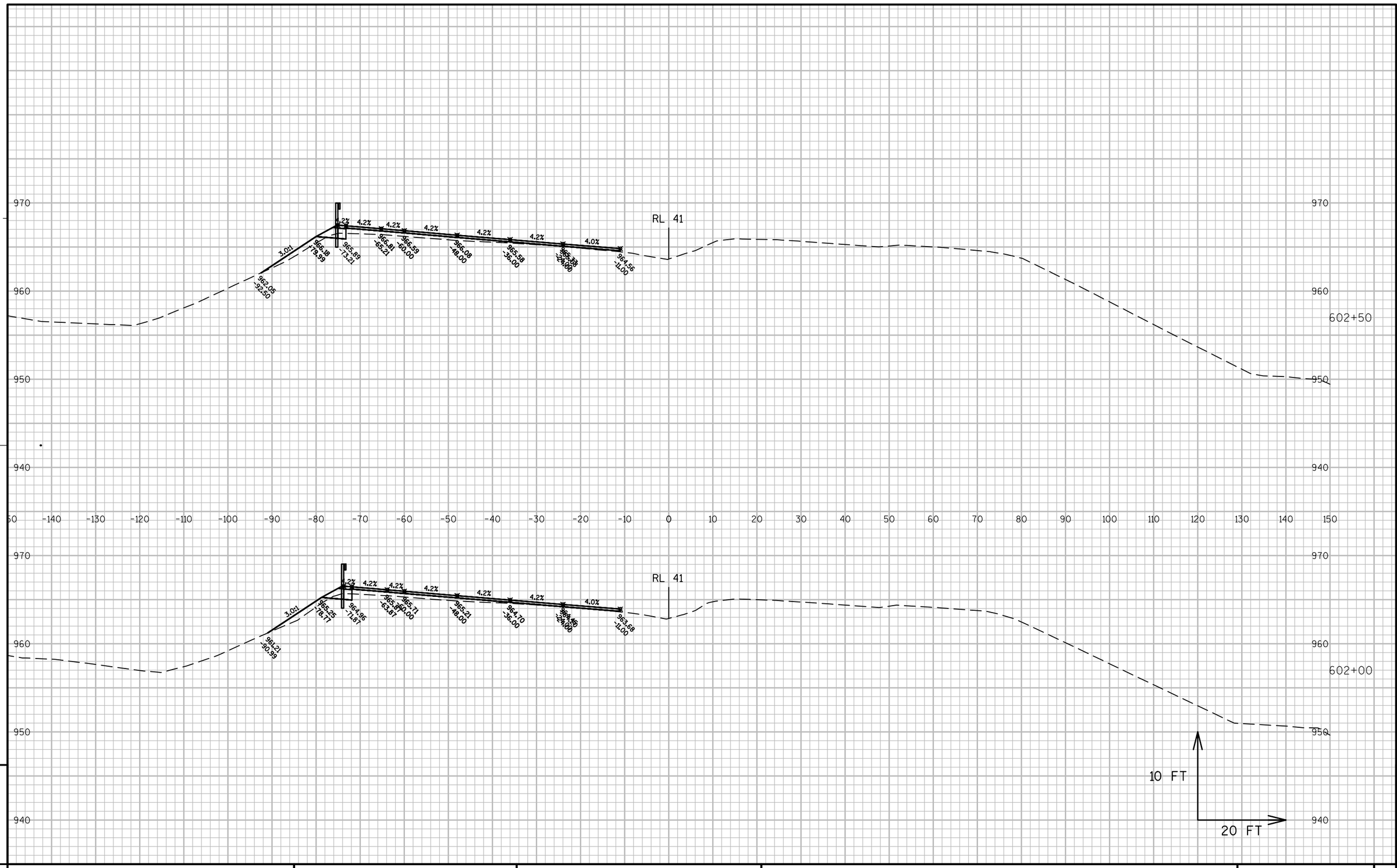
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND ON RAMP @ HOLY HILL RD	SHEET 770	E



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND ON RAMP @ HOLY HILL RD	SHEET 771	E



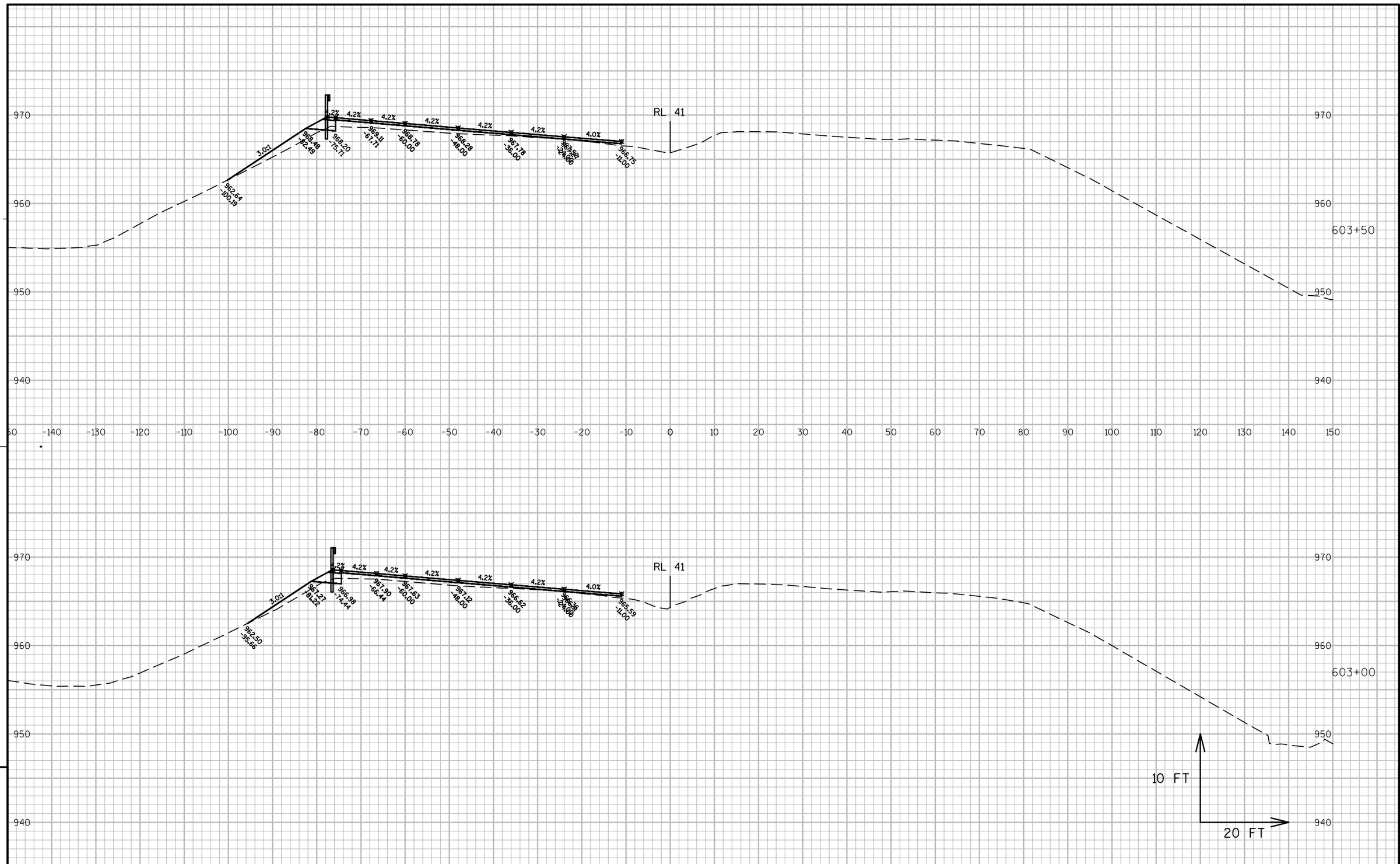
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND ON RAMP @ HOLY HILL RD	SHEET 772	E



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND ON RAMP @ HOLY HILL RD	SHEET	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_SB HOLY HILL ON RAMP FOR PSE REV 1.DWG PLOT DATE : 2/17/2015 2:18 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

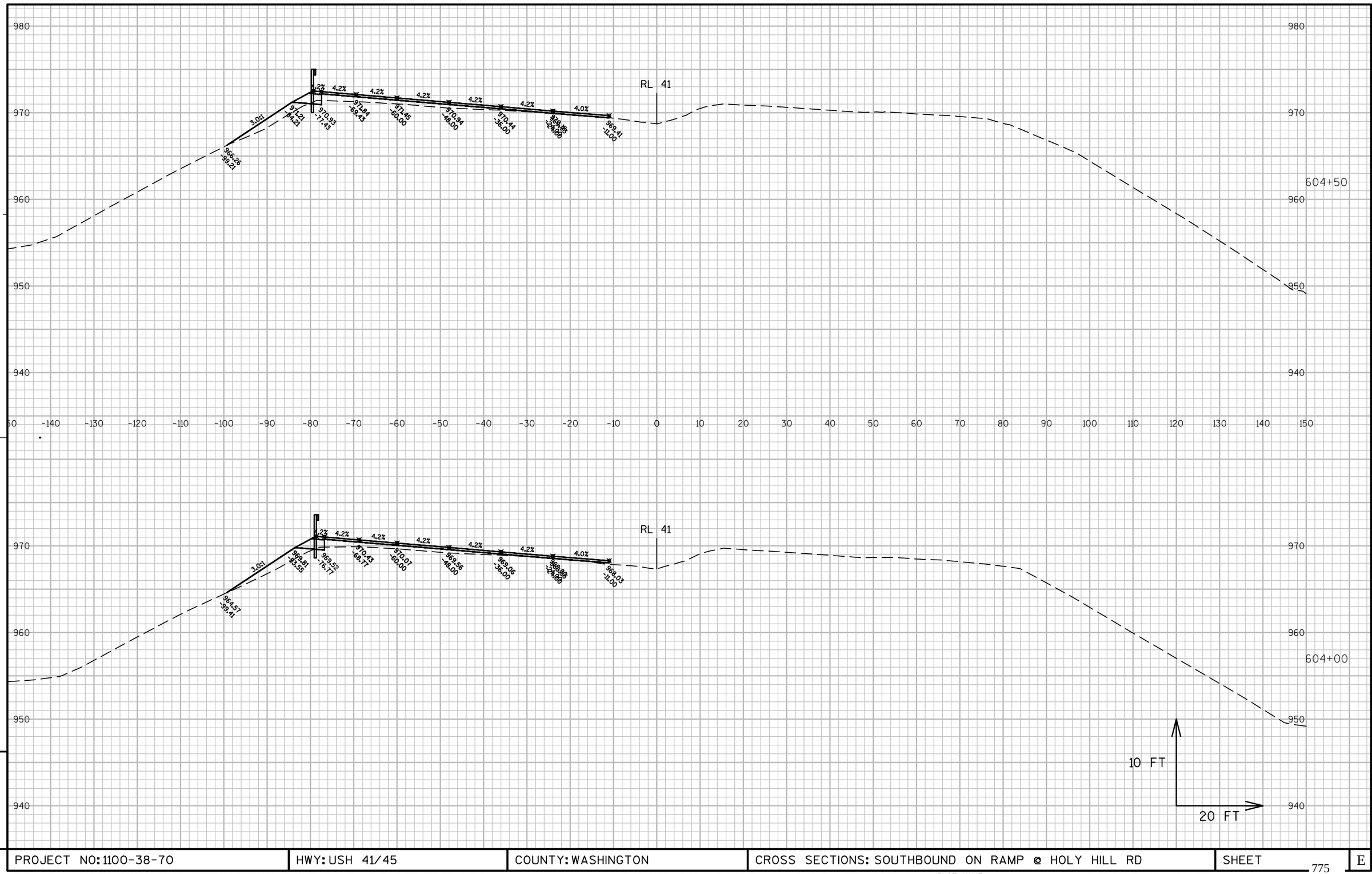
WISDOT/CADDS SHEET 49



9	PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND ON RAMP @ HOLY HILL RD	SHEET 774 E

9

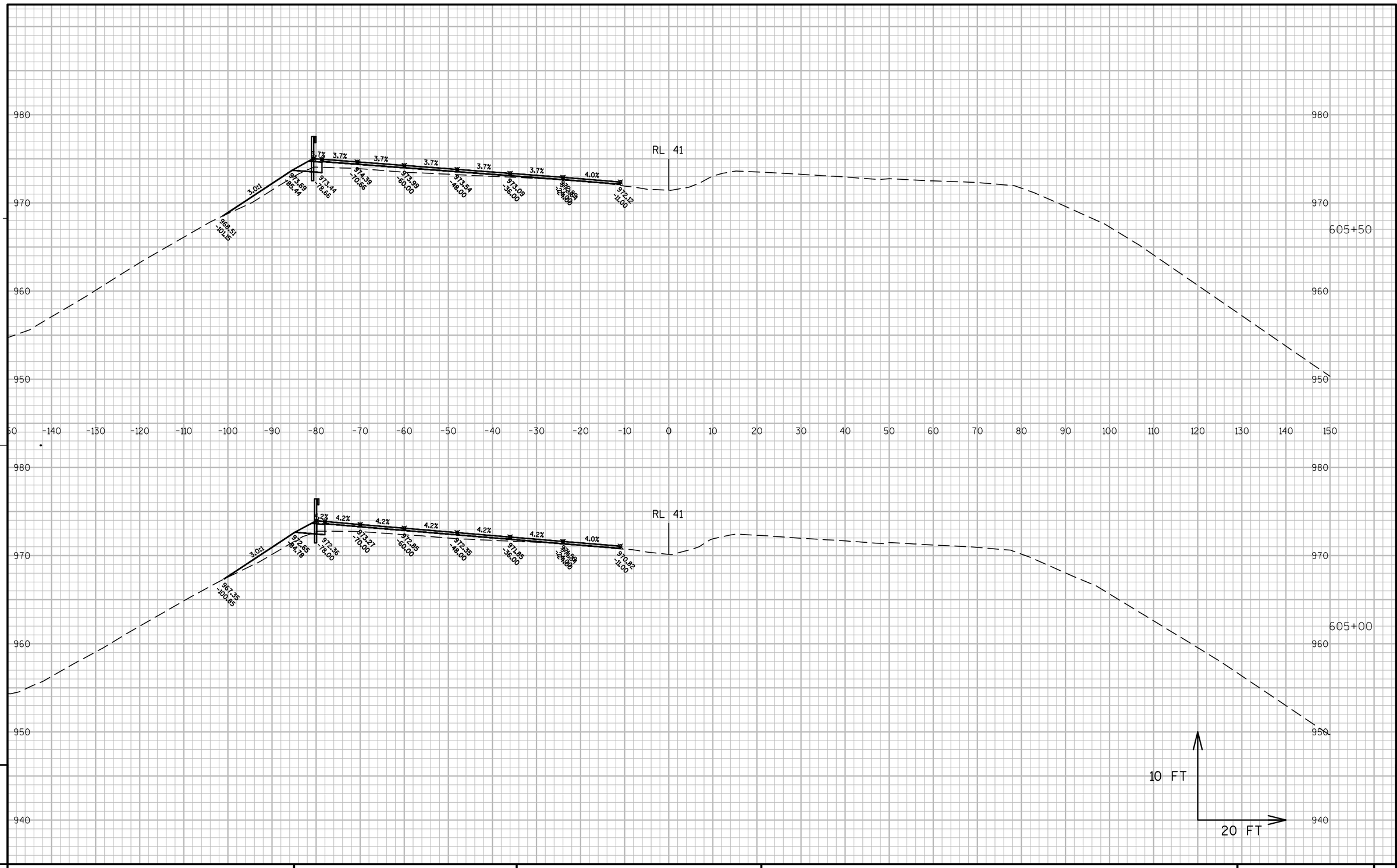
FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_SB HOLY HILL ON RAMP FOR PSE REV 1.DWG PLOT DATE : 2/17/2015 2:18 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF
WISDOT/CADDS SHEET 49



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND ON RAMP @ HOLY HILL RD	SHEET 775	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_SB HOLY HILL ON RAMP FOR PSE REV 1.DWG PLOT DATE : 2/17/2015 2:18 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

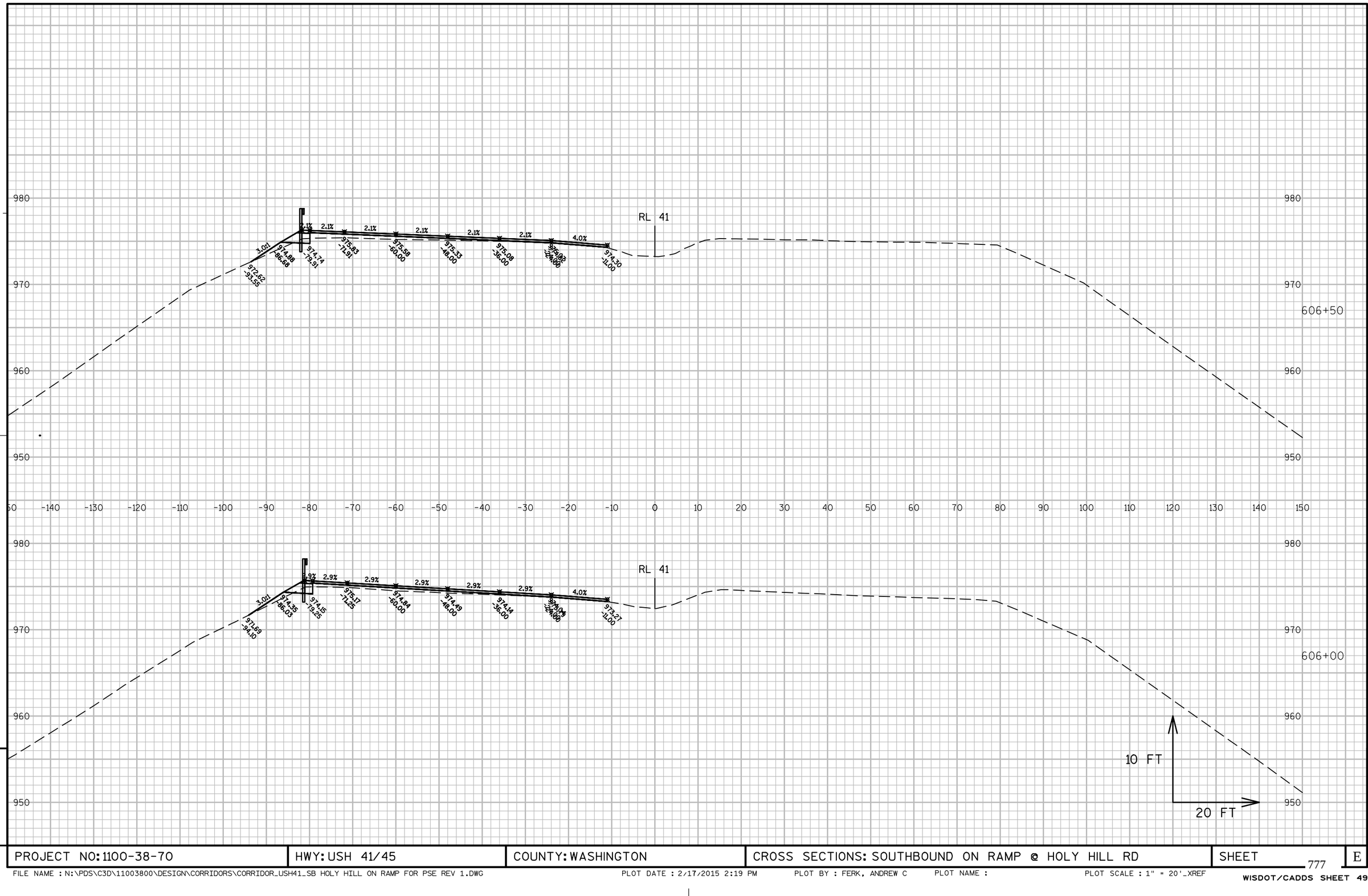
WISDOT/CADDS SHEET 49



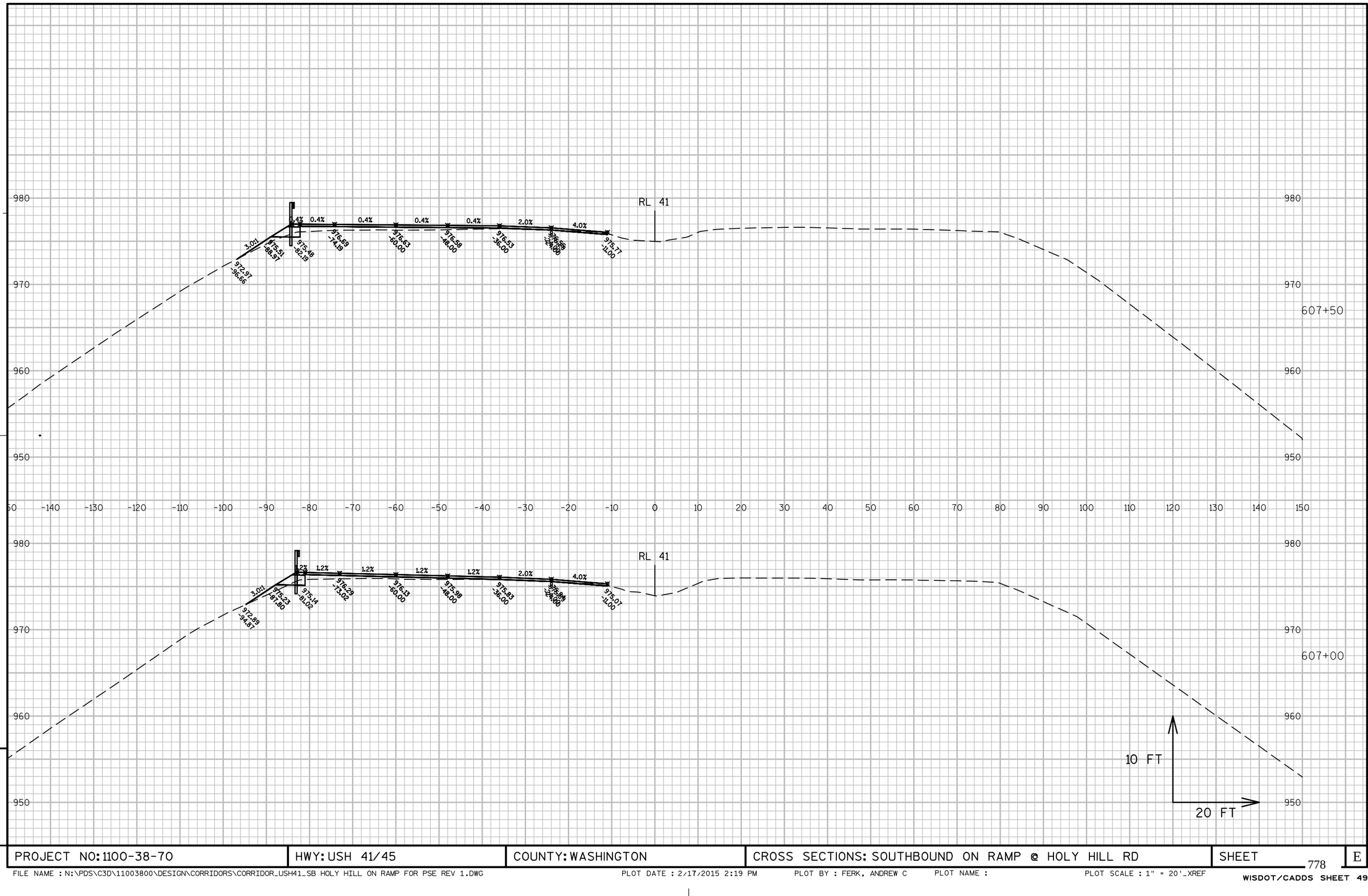
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND ON RAMP @ HOLY HILL RD	SHEET 776	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_SB HOLY HILL ON RAMP FOR PSE REV 1.DWG PLOT DATE : 2/17/2015 2:19 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

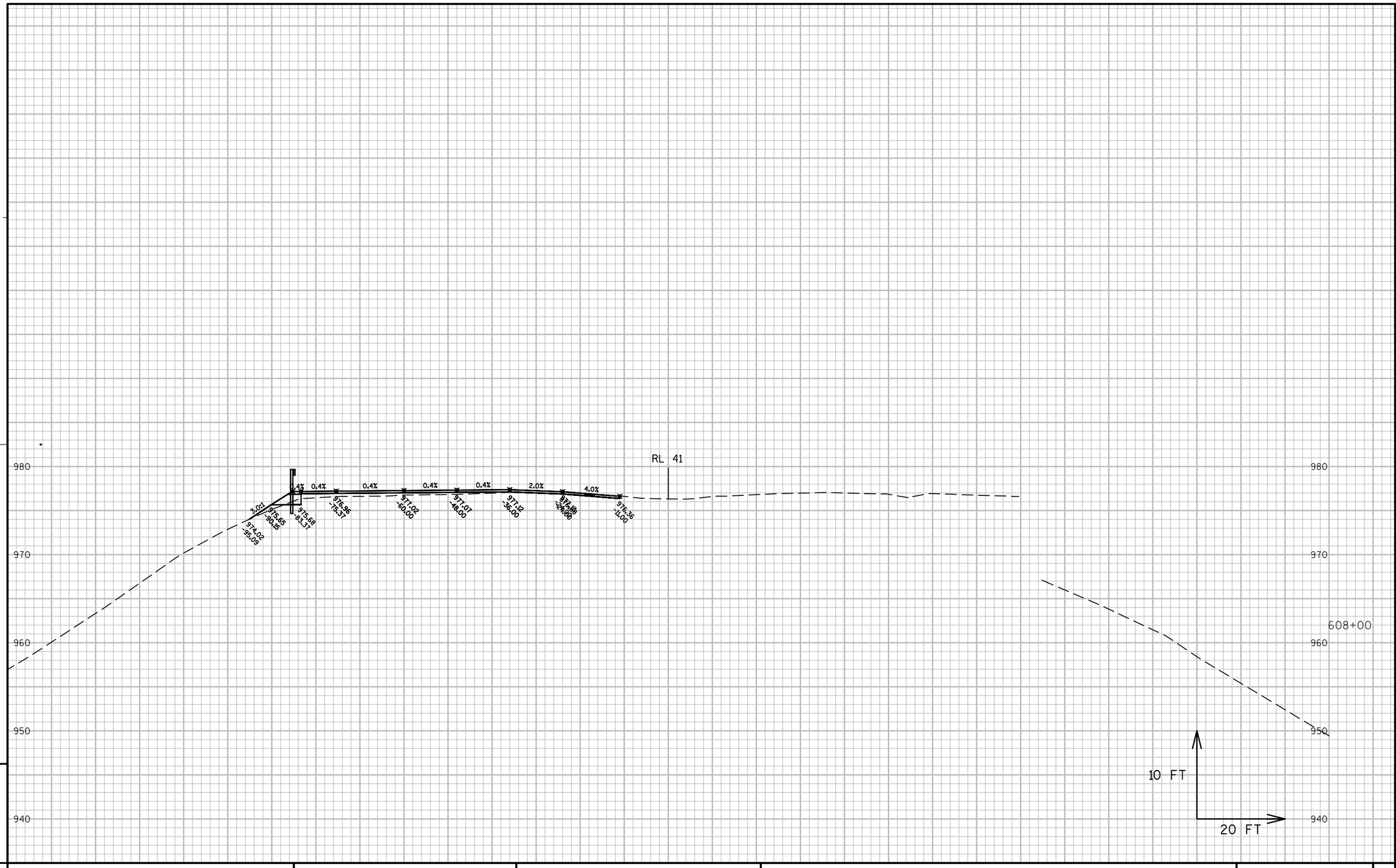
WISDOT/CADDS SHEET 49



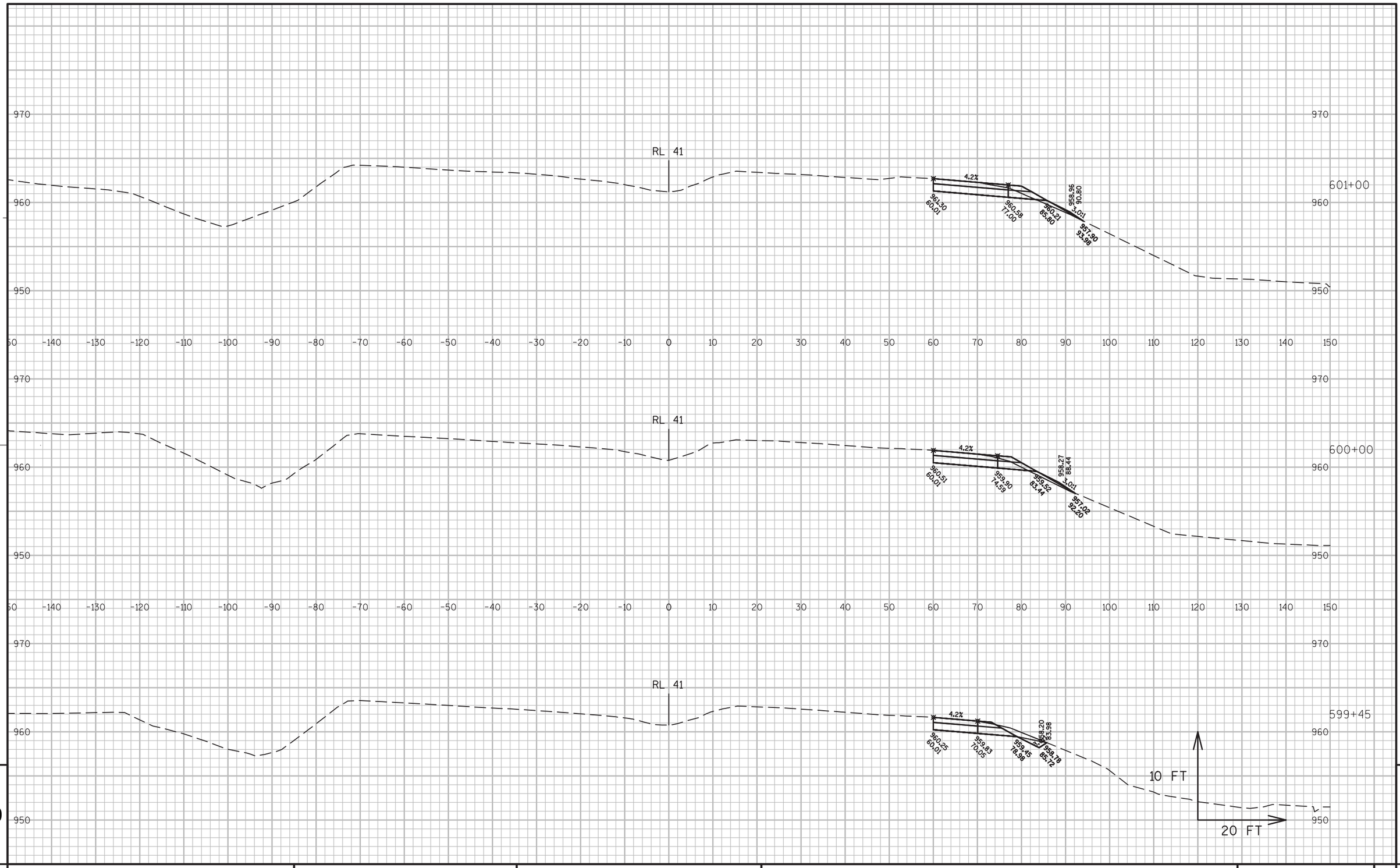
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND ON RAMP @ HOLY HILL RD	SHEET 777	E



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND ON RAMP @ HOLY HILL RD	SHEET 778	E



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND ON RAMP @ HOLY HILL RD	SHEET 779	E



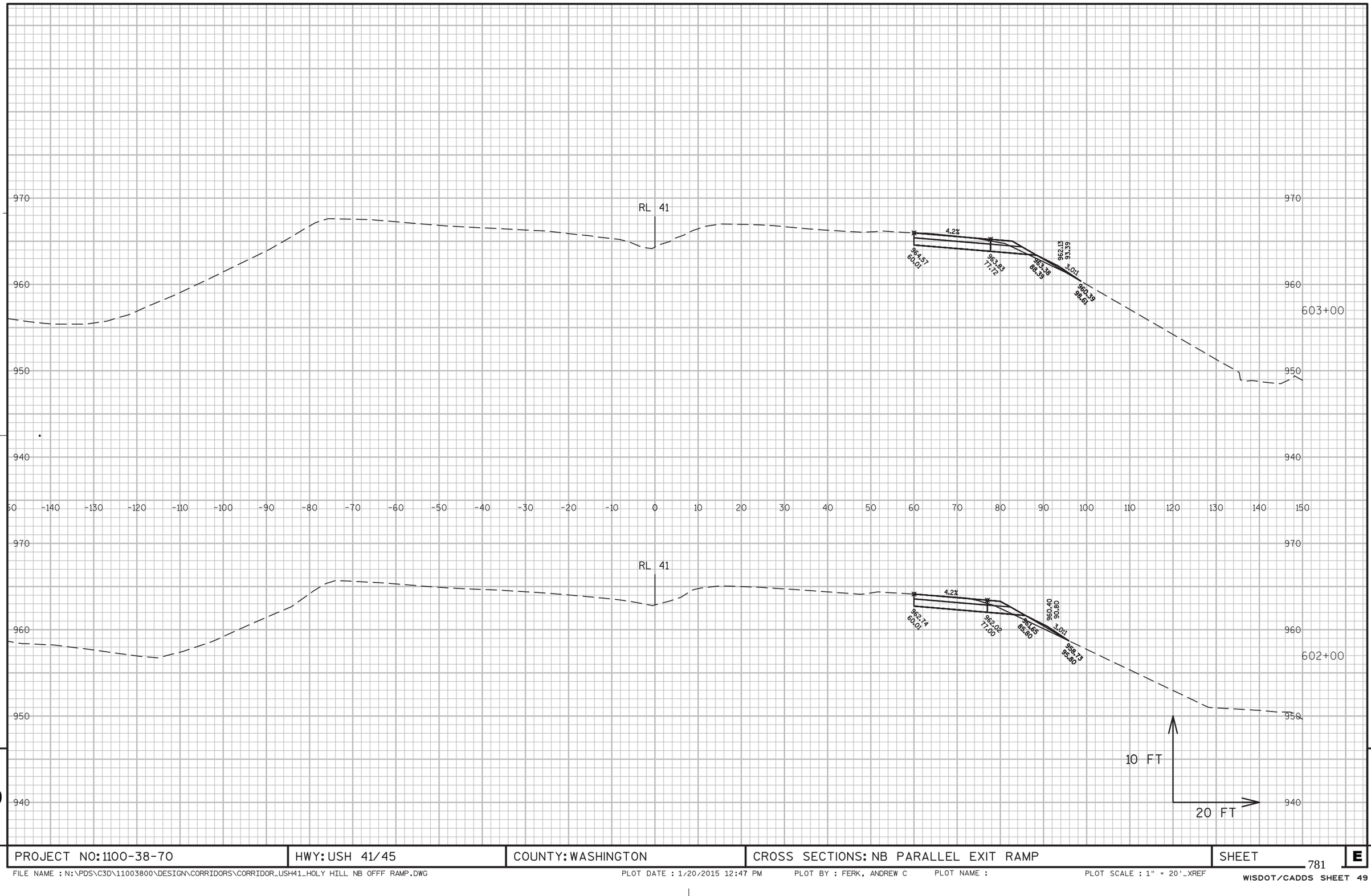
9

9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: NB PARALLEL EXIT RAMP	SHEET 780	E

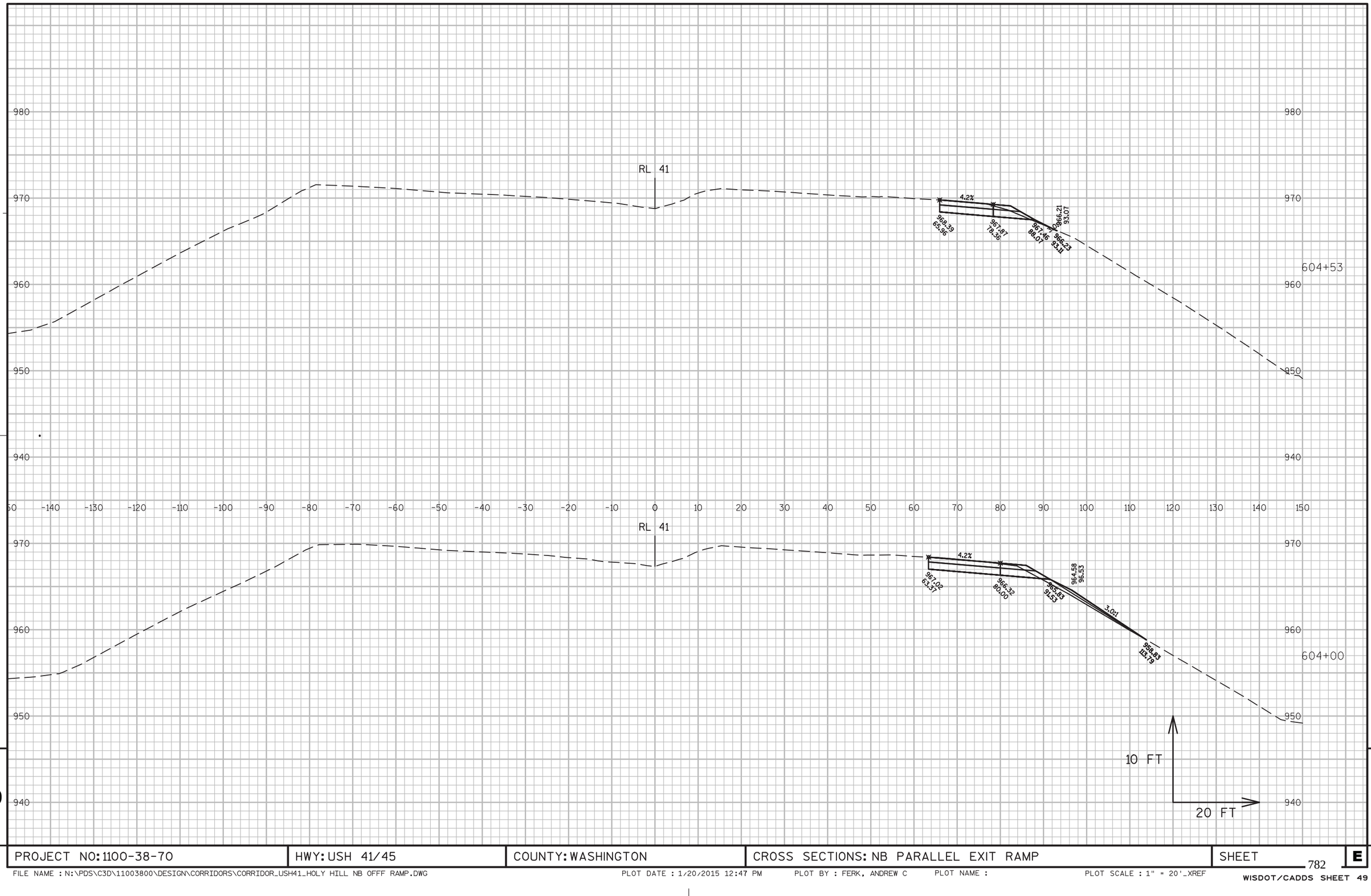
FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_HOLY HILL NB OFFF RAMP.DWG PLOT DATE : 1/20/2015 12:47 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49

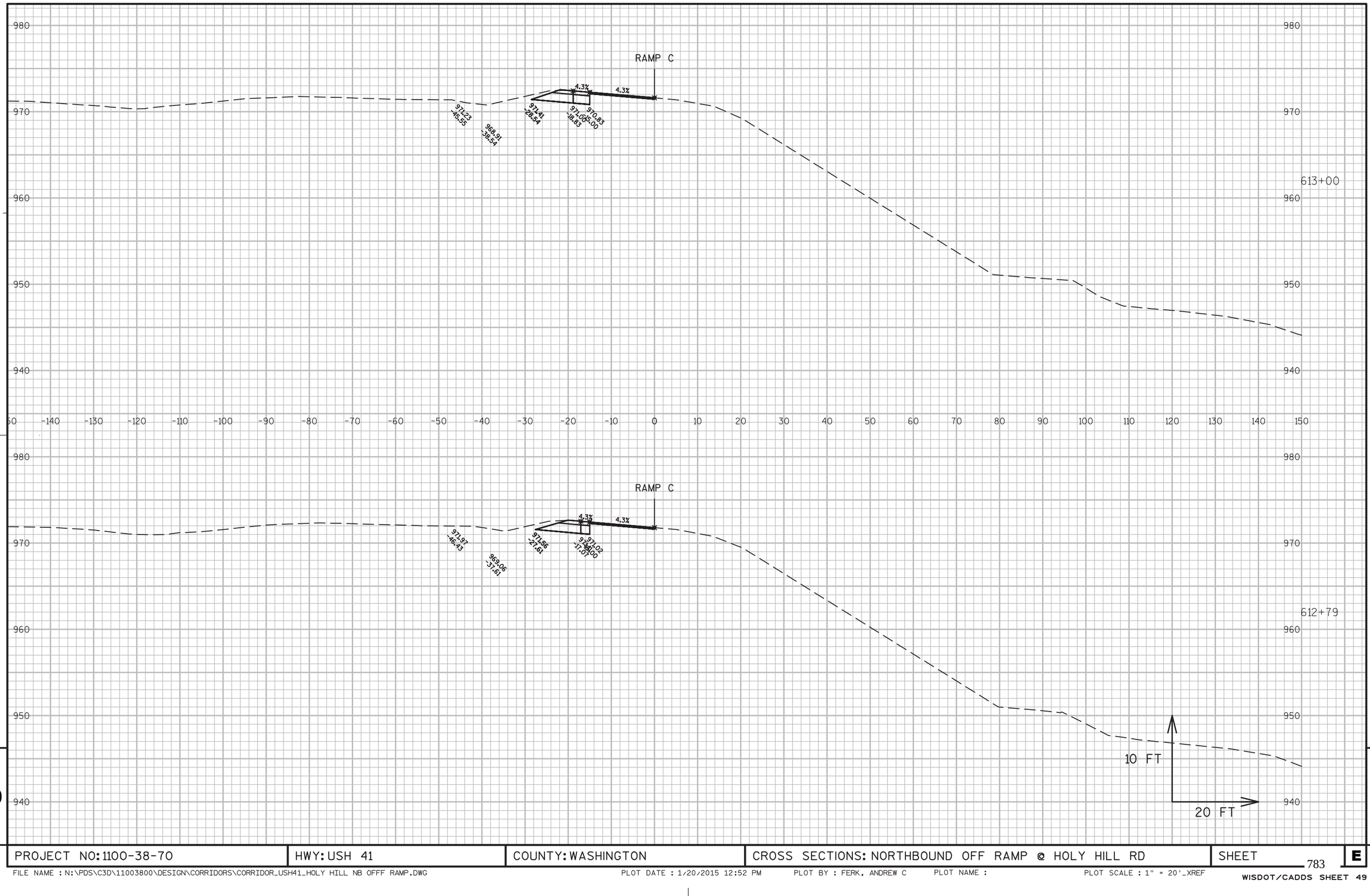


PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: NB PARALLEL EXIT RAMP	SHEET 781	E

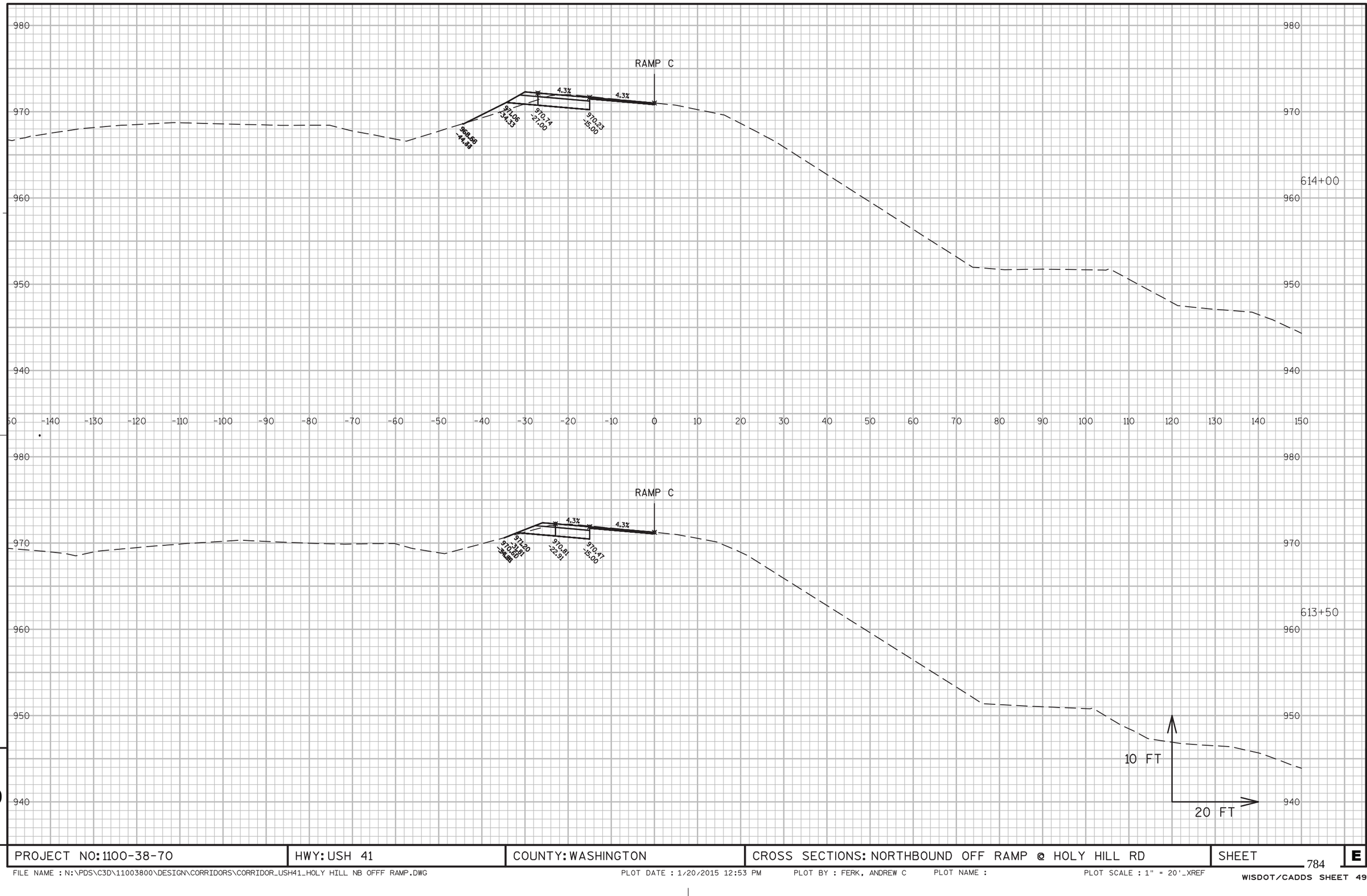
FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_HOLY HILL NB OFFF RAMP.DWG PLOT DATE : 1/20/2015 12:47 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF



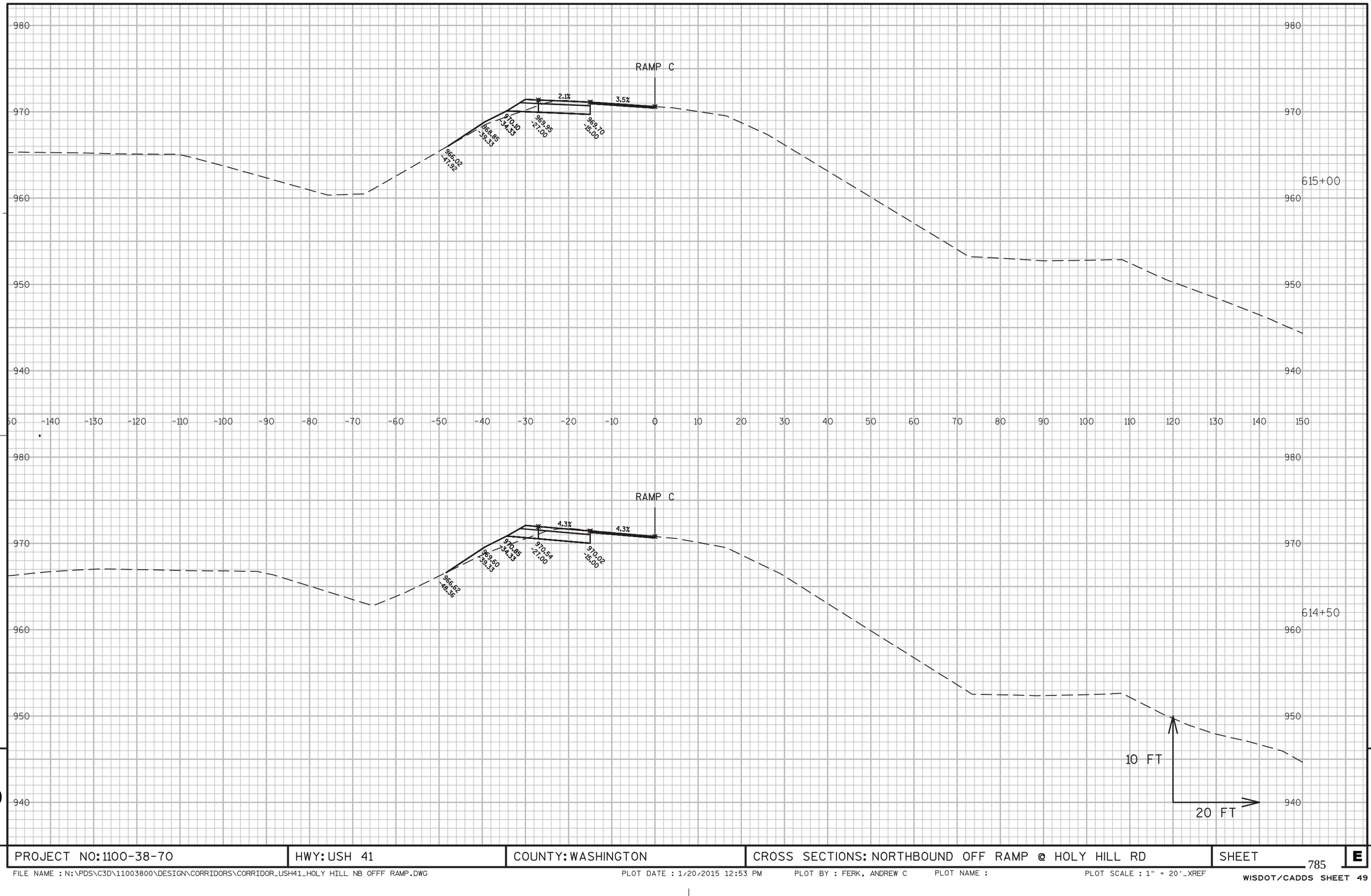
9	PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: NB PARALLEL EXIT RAMP	SHEET 782 E



9	PROJECT NO: 1100-38-70	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NORTHBOUND OFF RAMP @ HOLY HILL RD	SHEET 783 E

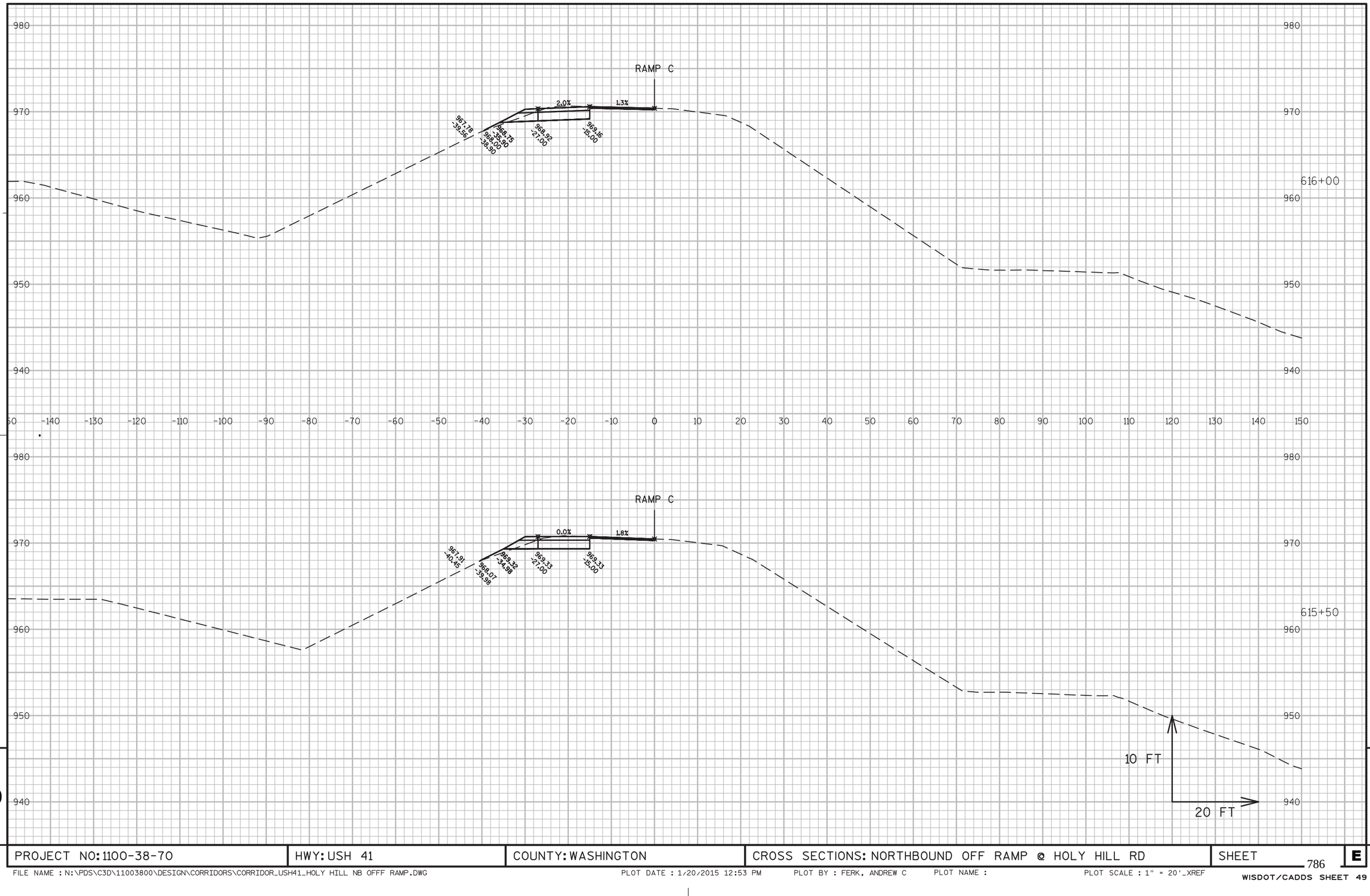


PROJECT NO: 1100-38-70	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NORTHBOUND OFF RAMP @ HOLY HILL RD	SHEET 784	E



PROJECT NO: 1100-38-70	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NORTHBOUND OFF RAMP @ HOLY HILL RD	SHEET 785	E

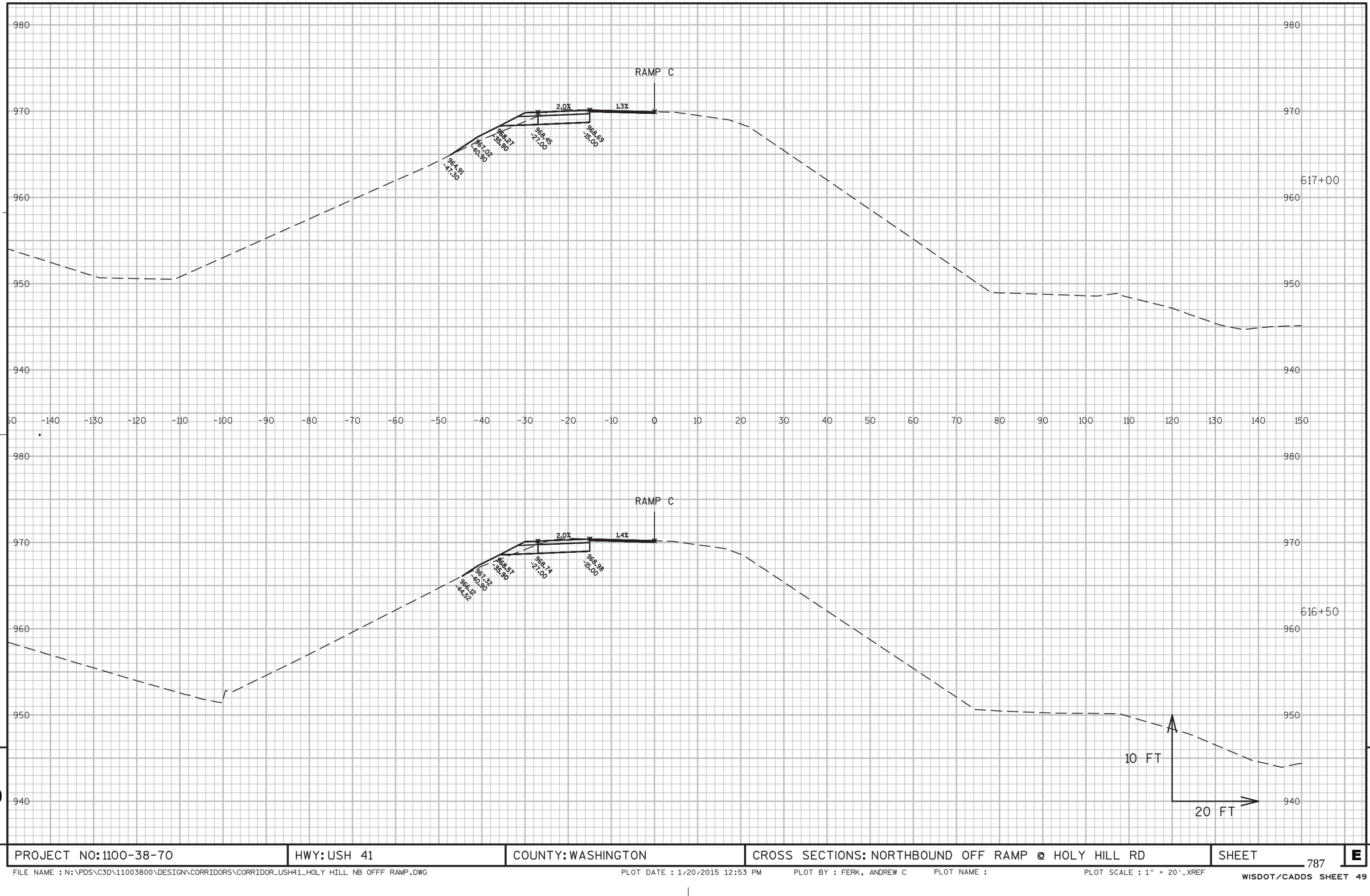
FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_HOLY HILL NB OFFF RAMP.DWG PLOT DATE : 1/20/2015 12:53 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF



PROJECT NO: 1100-38-70	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NORTHBOUND OFF RAMP @ HOLY HILL RD	SHEET 786	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_HOLY HILL NB OFFF RAMP.DWG PLOT DATE : 1/20/2015 12:53 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

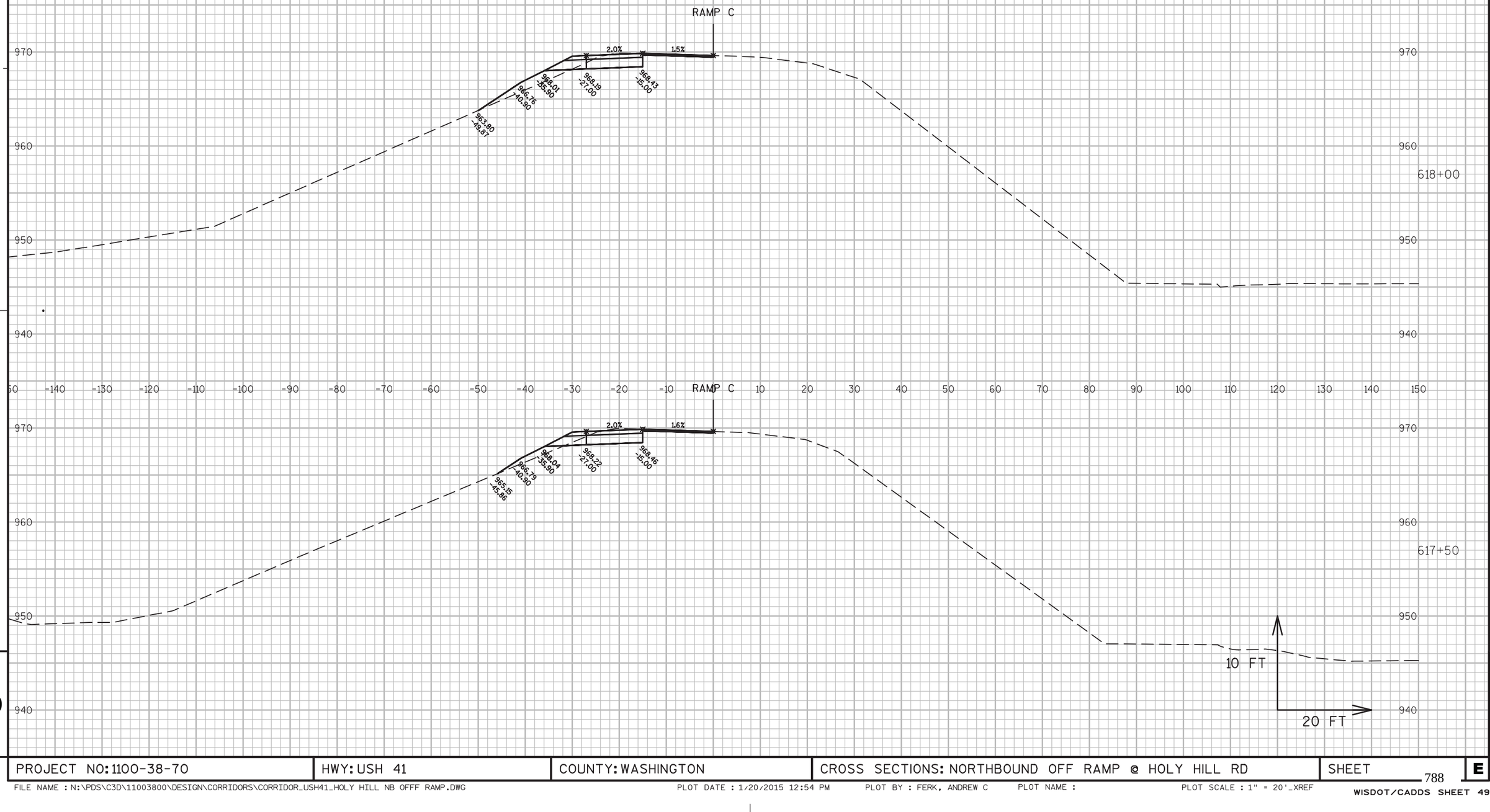
WISDOT/CADDS SHEET 49



PROJECT NO: 1100-38-70	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NORTHBOUND OFF RAMP @ HOLY HILL RD	SHEET 787	E

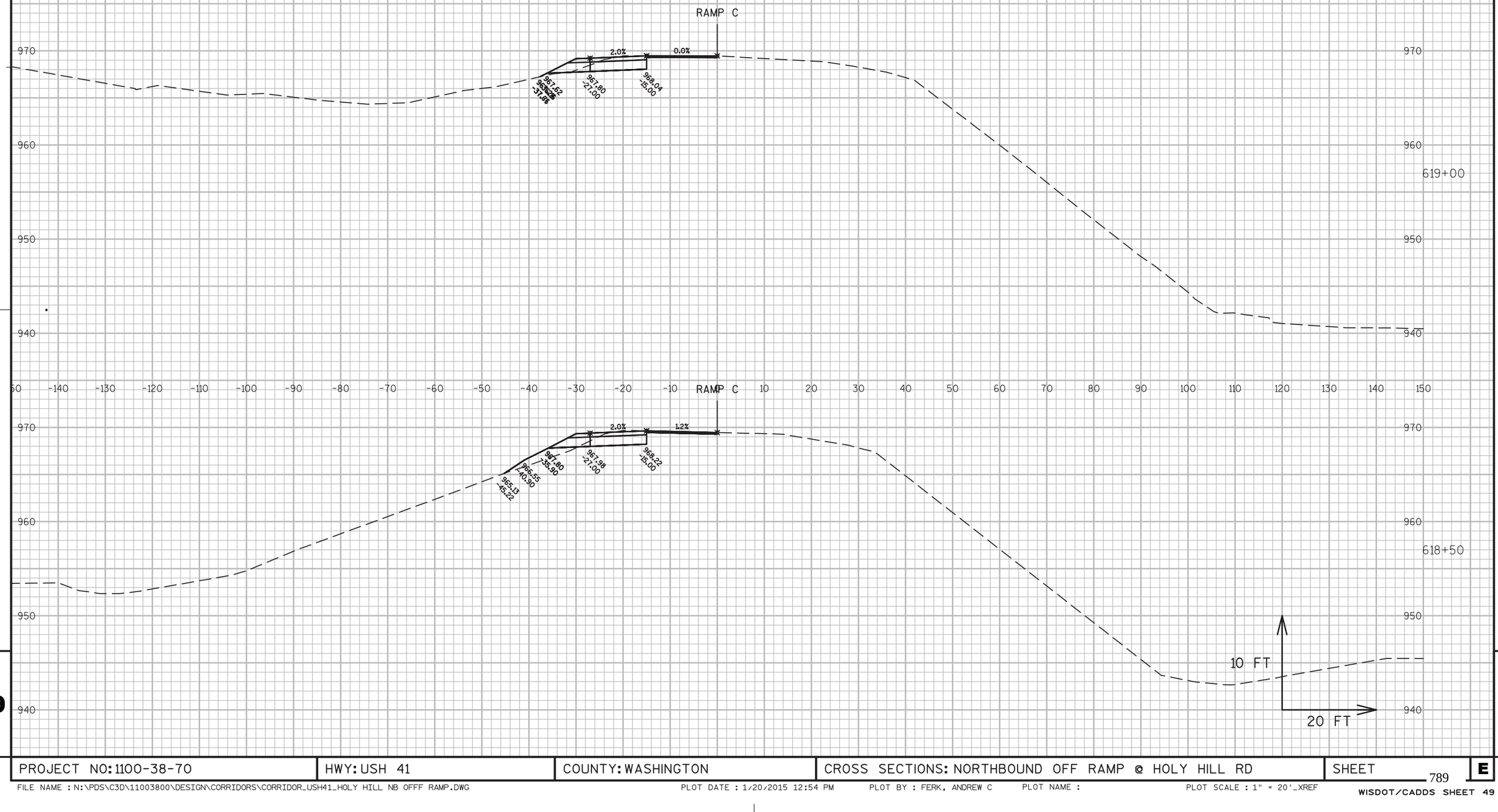
FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_HOLY HILL NB OFFF RAMP.DWG PLOT DATE : 1/20/2015 12:53 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



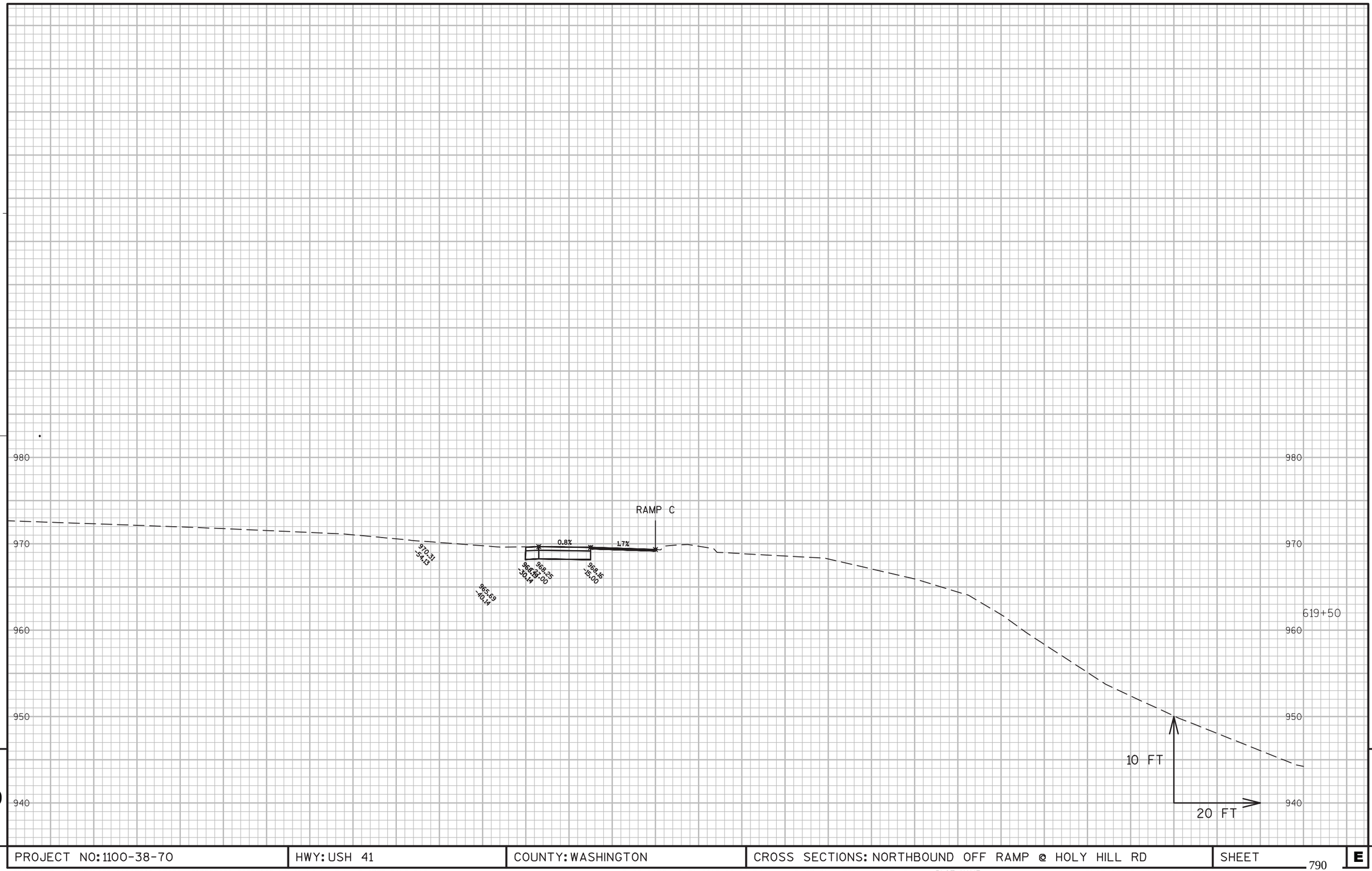
9	PROJECT NO: 1100-38-70	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NORTHBOUND OFF RAMP @ HOLY HILL RD	SHEET 788 E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_HOLY HILL NB OFFF RAMP.DWG PLOT DATE : 1/20/2015 12:54 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF



PROJECT NO: 1100-38-70	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NORTHBOUND OFF RAMP @ HOLY HILL RD	SHEET 789	E

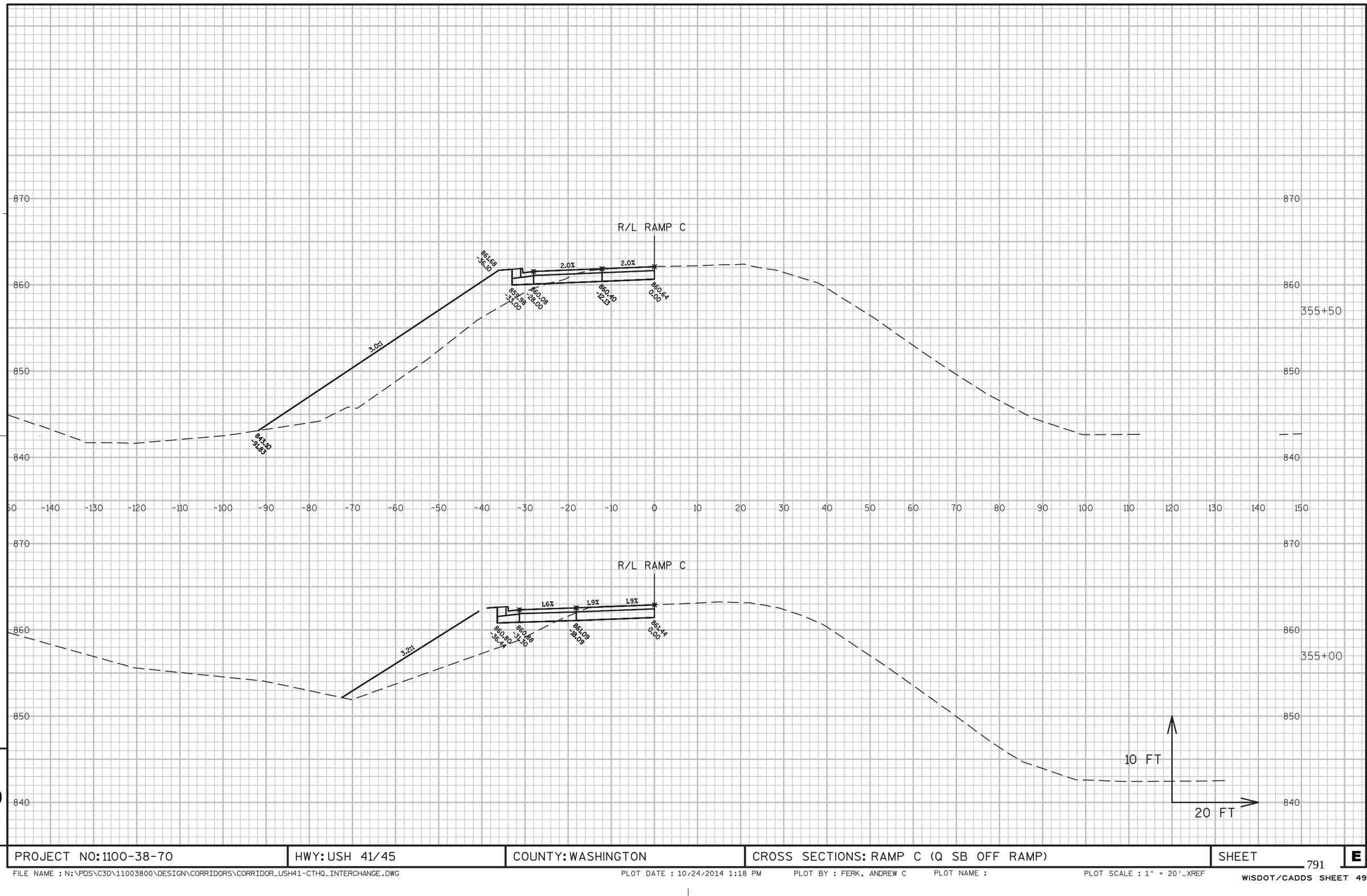
FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_HOLY HILL NB OFFF RAMP.DWG PLOT DATE : 1/20/2015 12:54 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF



PROJECT NO: 1100-38-70	HWY: USH 41	COUNTY: WASHINGTON	CROSS SECTIONS: NORTHBOUND OFF RAMP @ HOLY HILL RD	SHEET 790	E

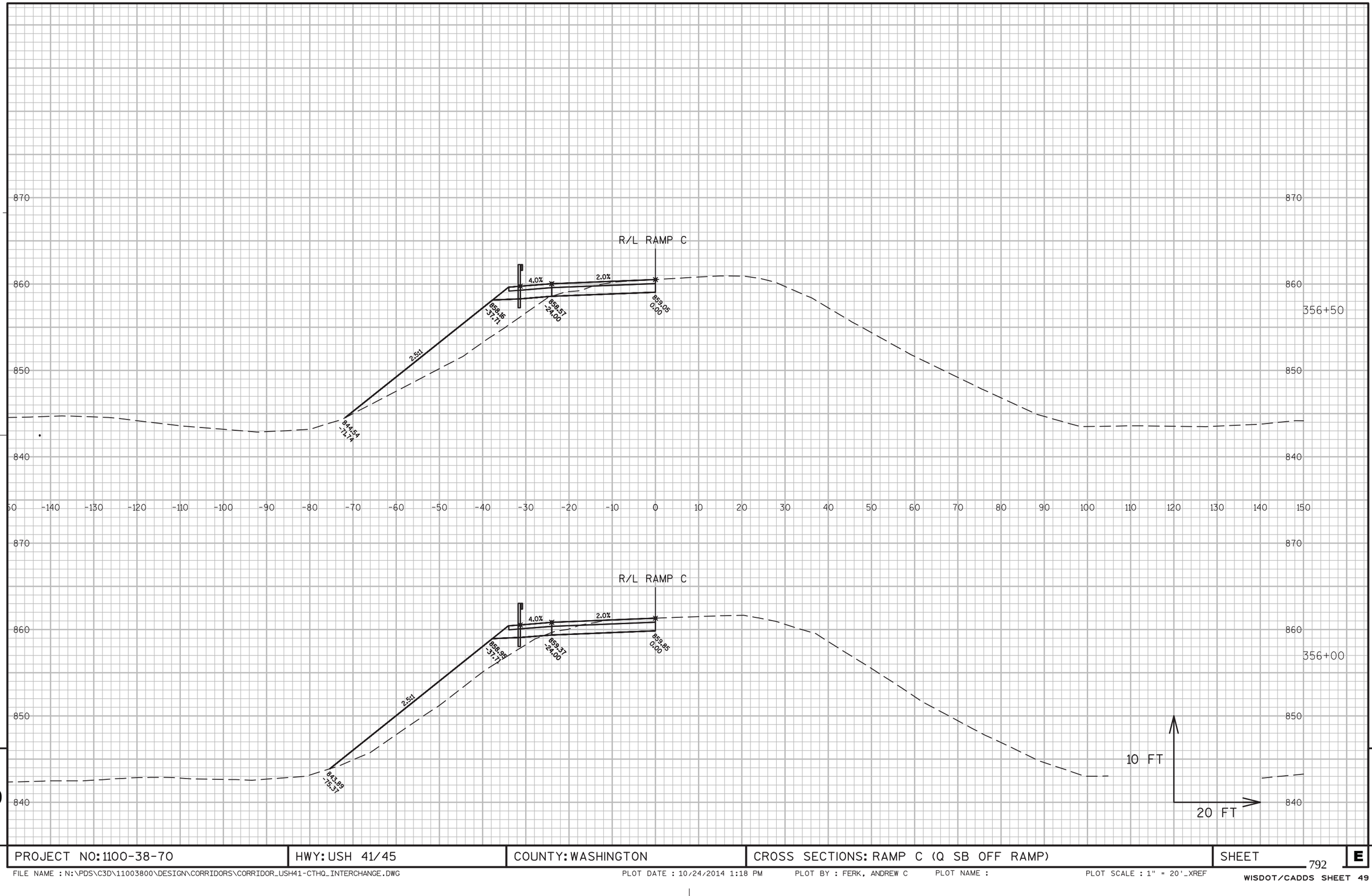
FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_HOLY HILL NB OFFF RAMP.DWG PLOT DATE : 1/20/2015 12:54 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



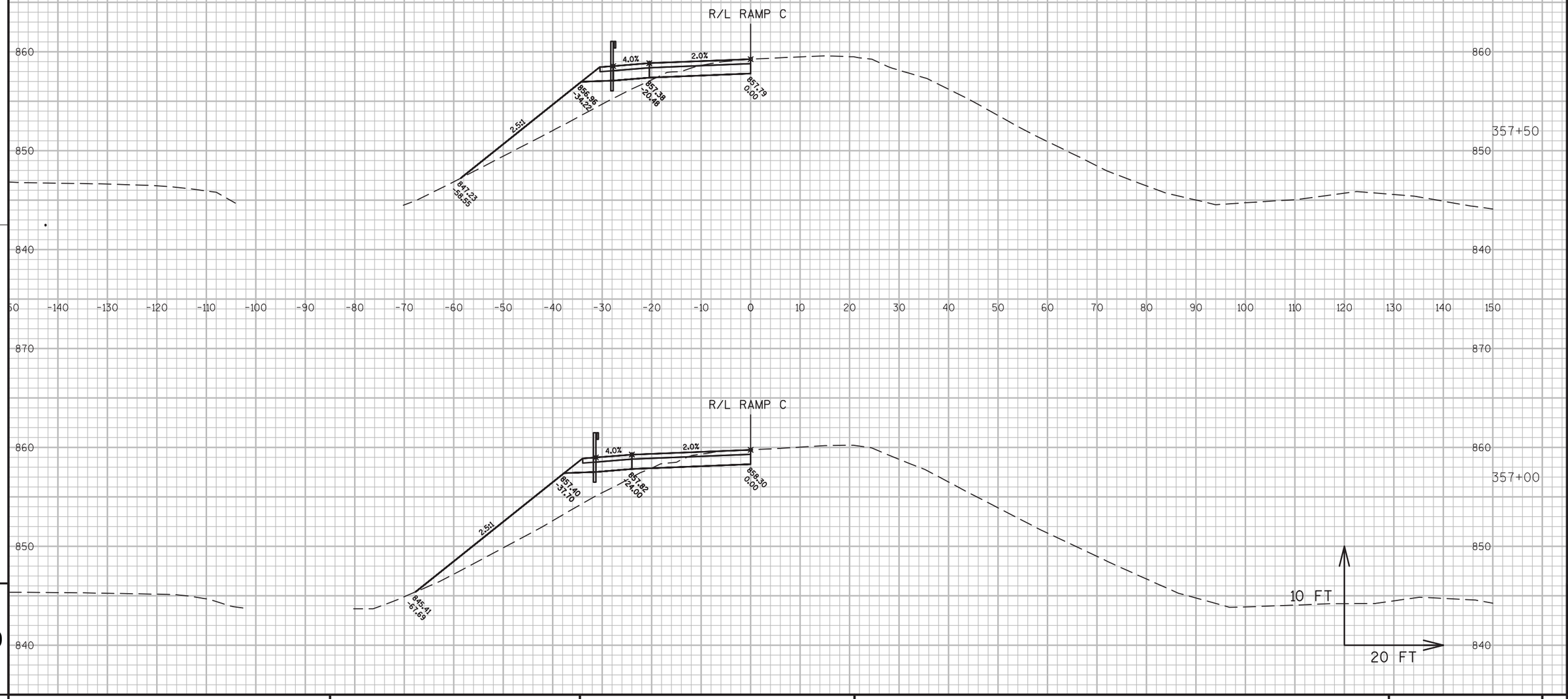
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: RAMP C (Q SB OFF RAMP)	SHEET 791	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41-CTHQ_INTERCHANGE.DWG PLOT DATE : 10/24/2014 1:18 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF



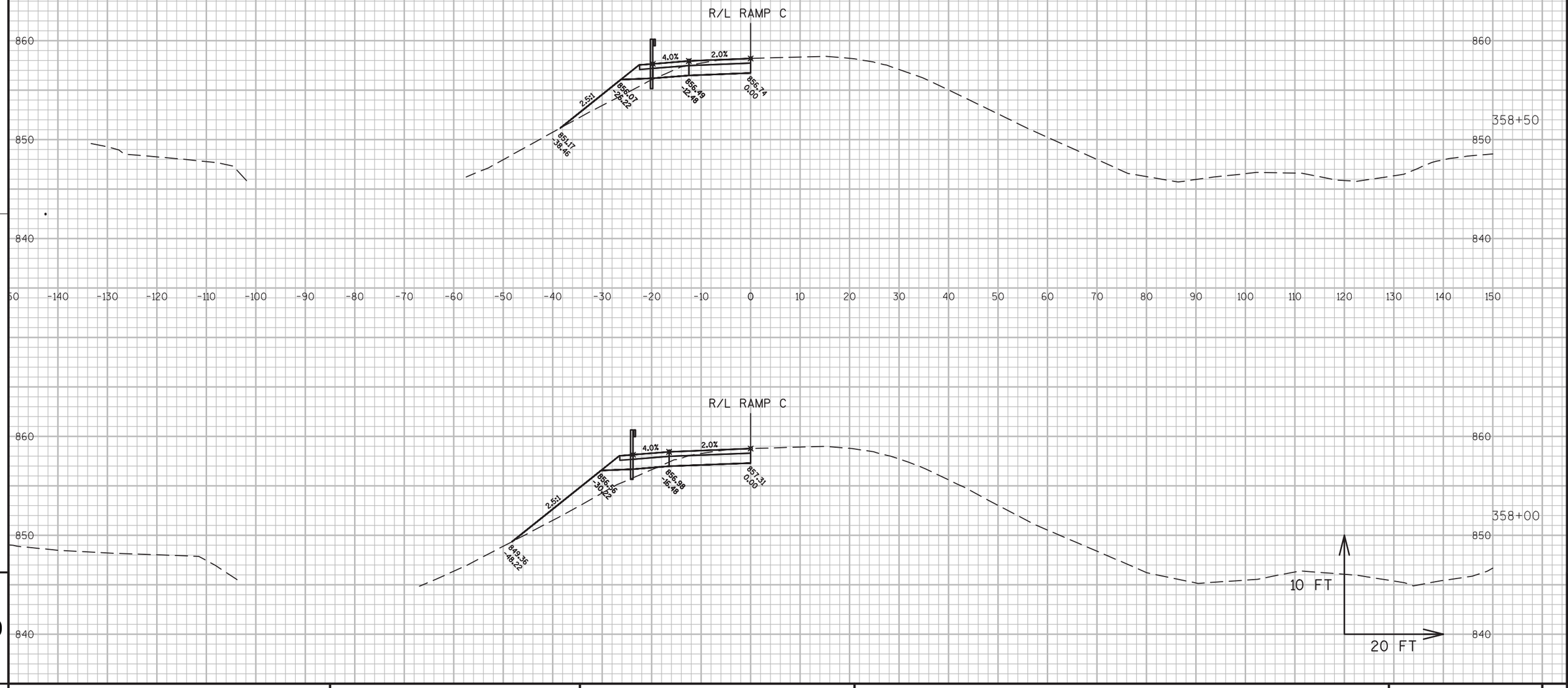
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: RAMP C (Q SB OFF RAMP)	SHEET 792	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41-CTHQ_INTERCHANGE.DWG PLOT DATE : 10/24/2014 1:18 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: RAMP C (Q SB OFF RAMP)	SHEET	E

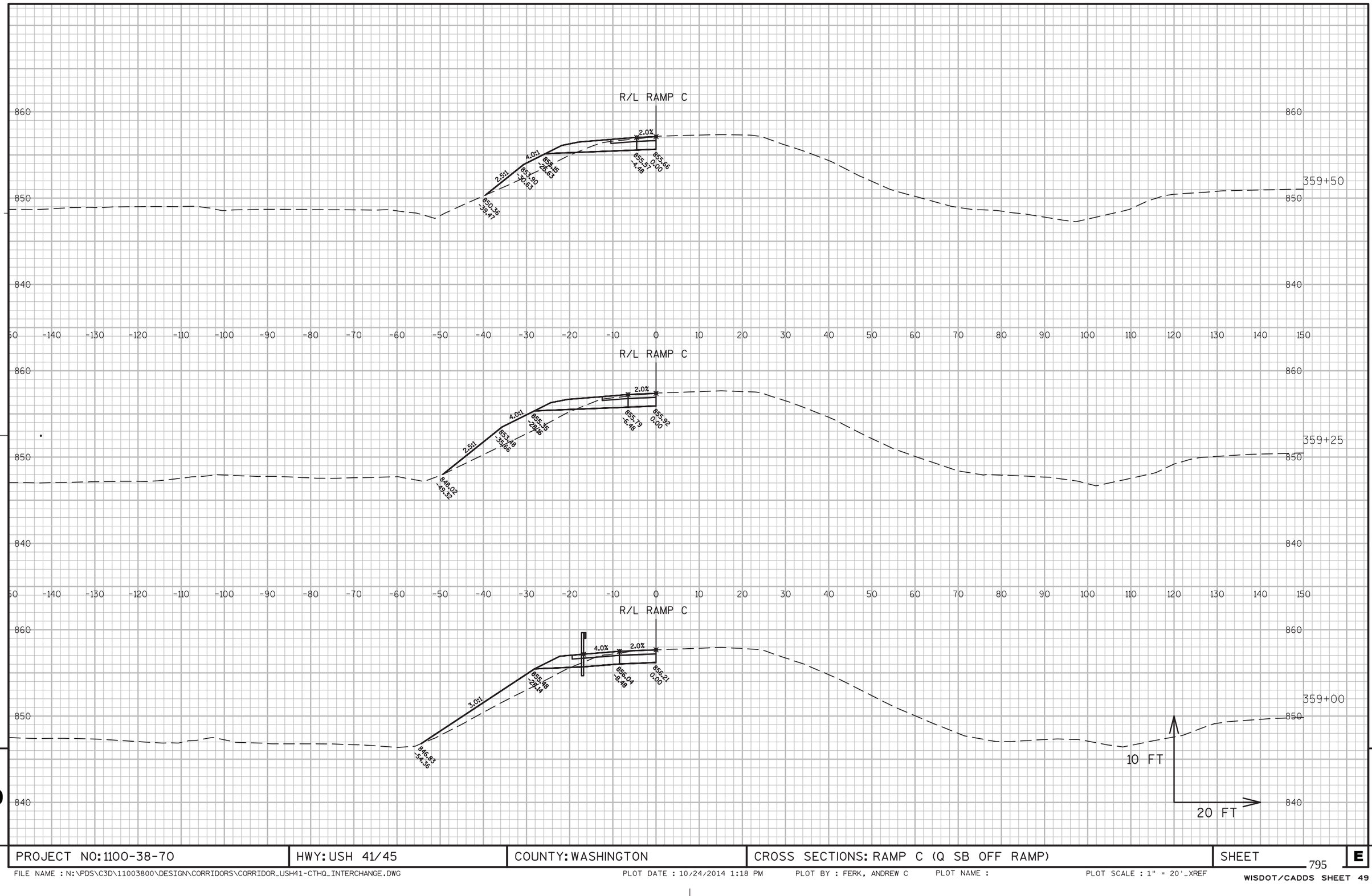
FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41-CTHQ_INTERCHANGE.DWG PLOT DATE : 10/24/2014 1:18 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: RAMP C (Q SB OFF RAMP)	SHEET 794	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41-CTHQ_INTERCHANGE.DWG PLOT DATE : 10/24/2014 1:18 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

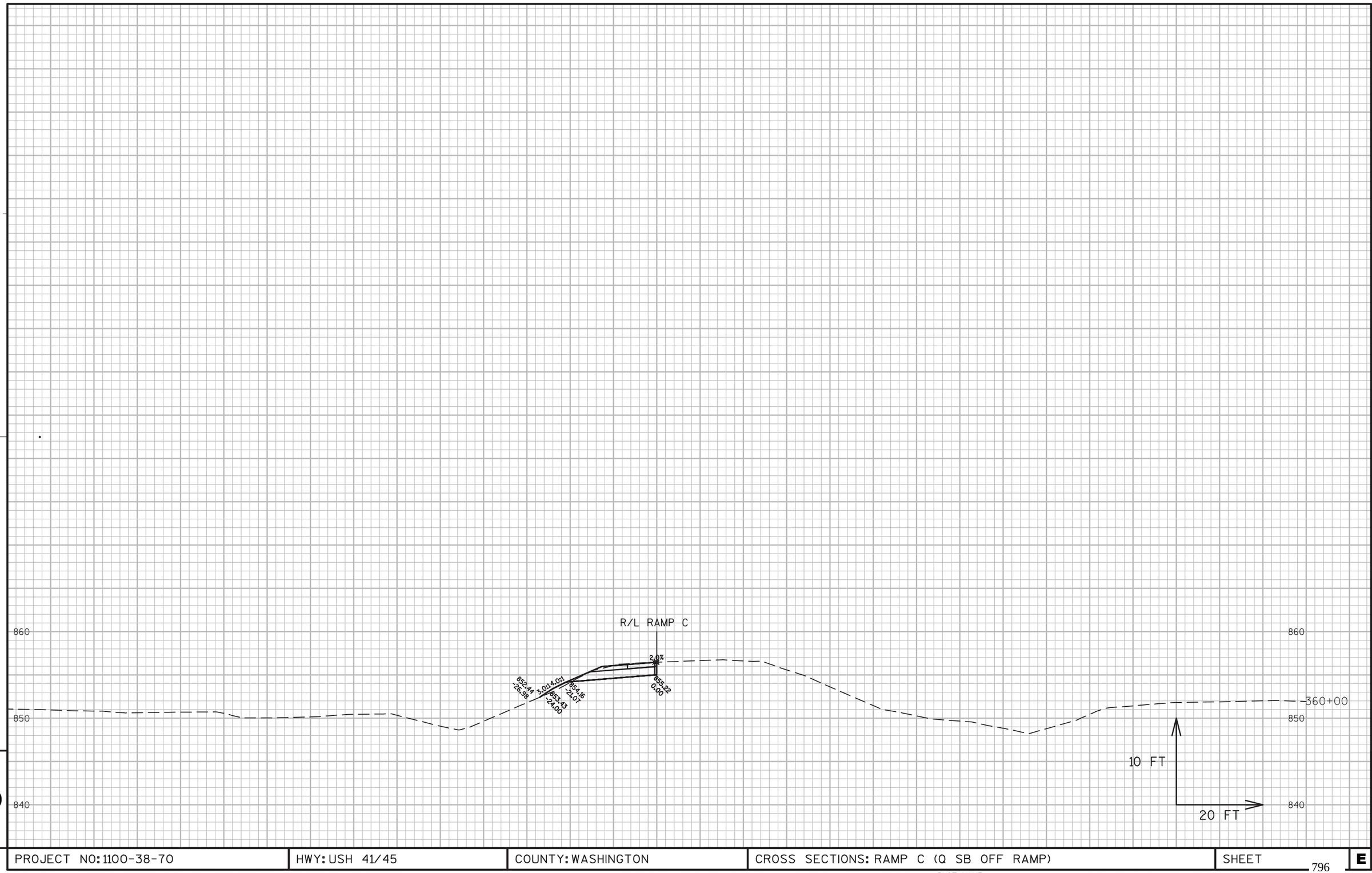
WISDOT/CADDS SHEET 49



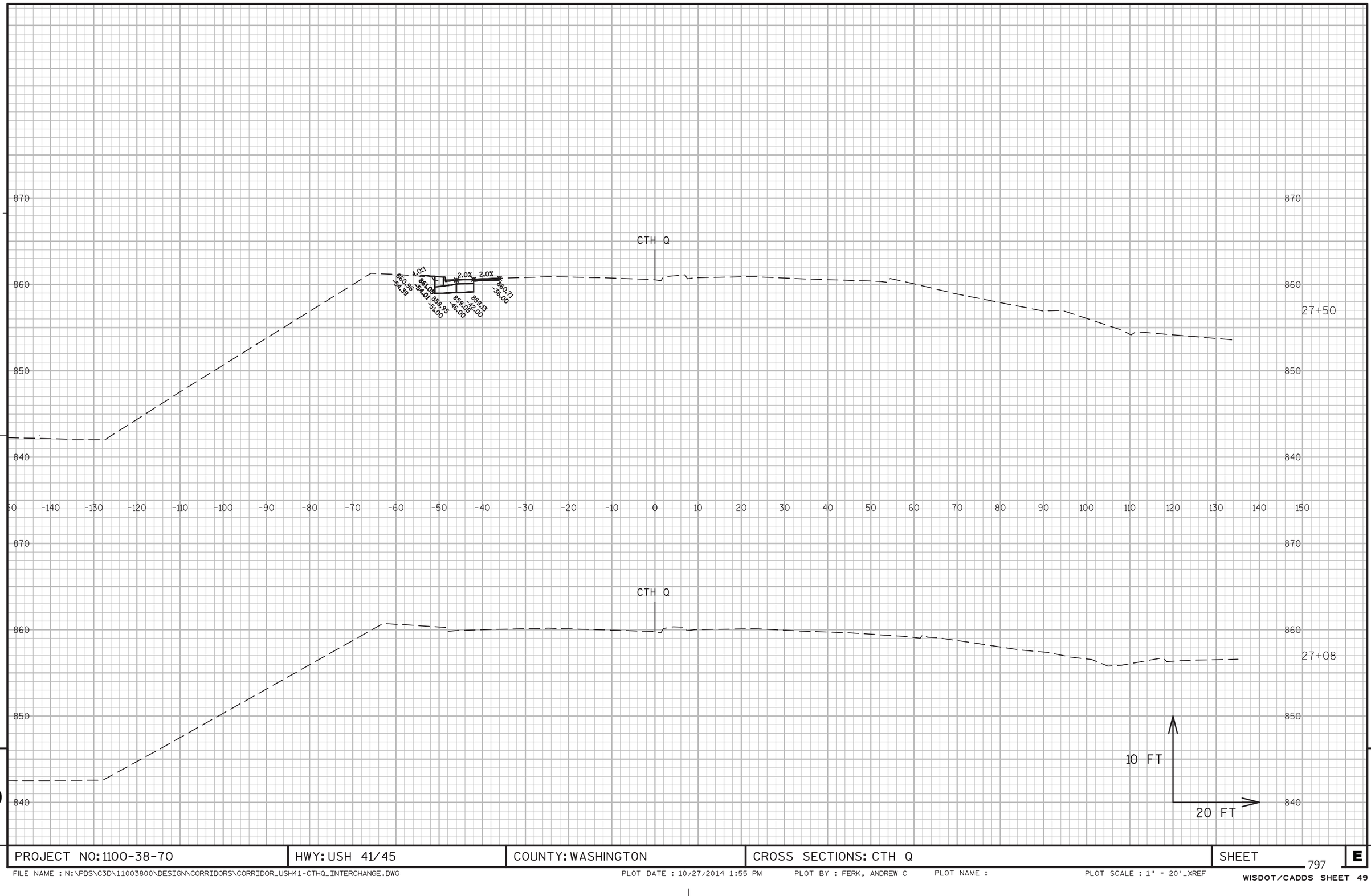
9

9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: RAMP C (Q SB OFF RAMP)	SHEET 795	E



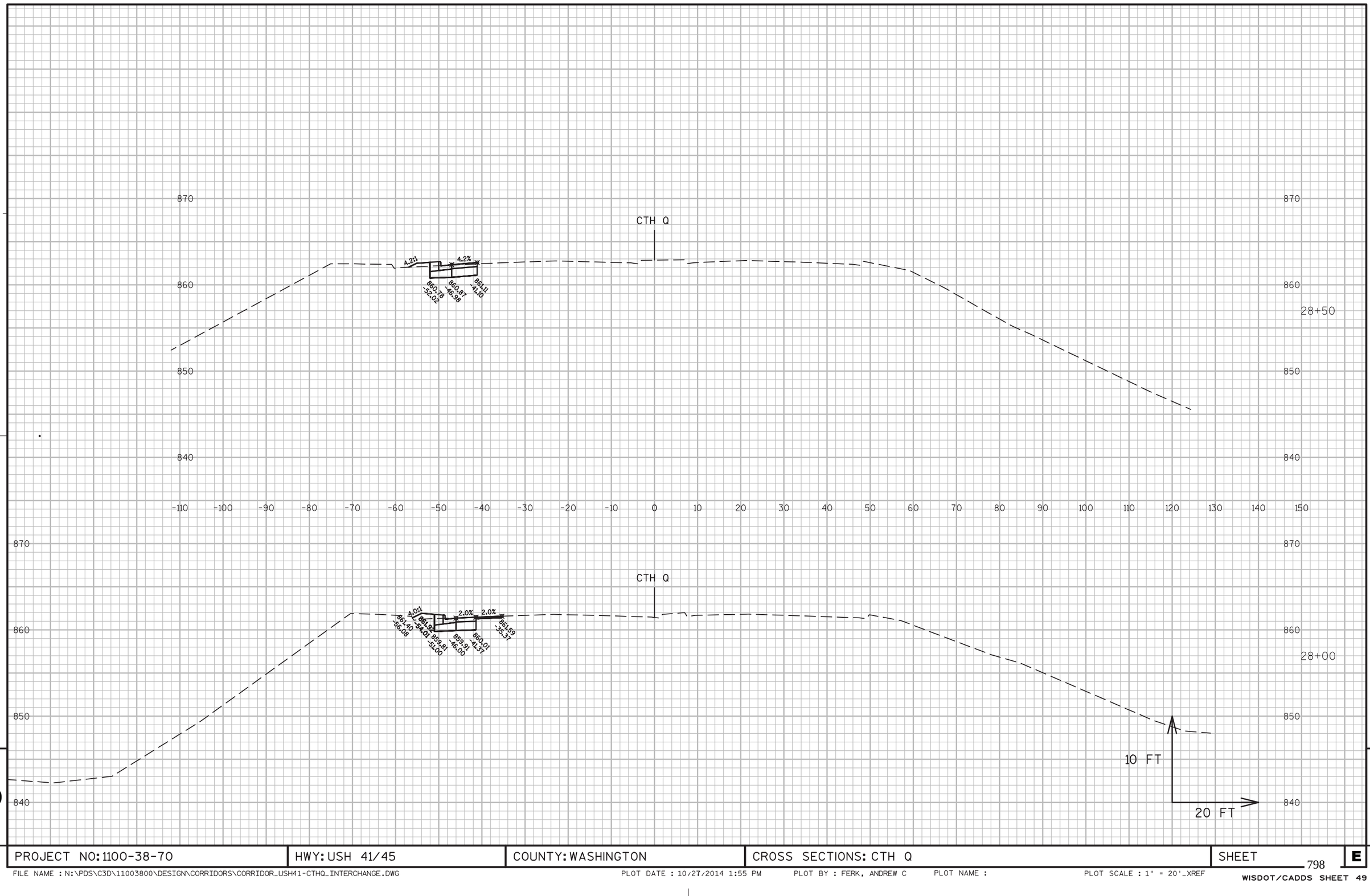
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: RAMP C (Q SB OFF RAMP)	SHEET	E



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: CTH Q	SHEET 797	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41-CTHQ_INTERCHANGE.DWG PLOT DATE : 10/27/2014 1:55 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

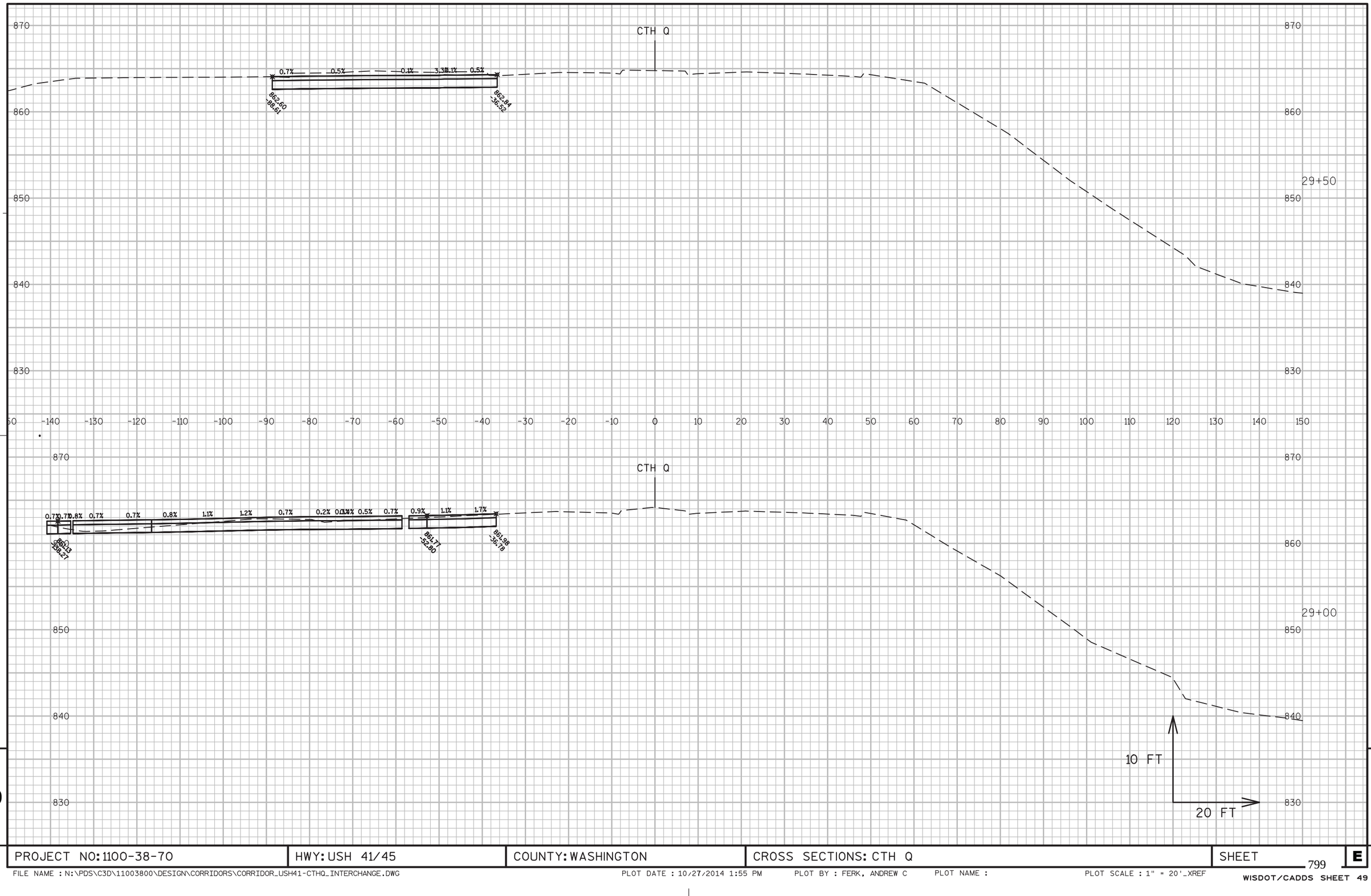
WISDOT/CADDS SHEET 49



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: CTH Q	SHEET 798	E

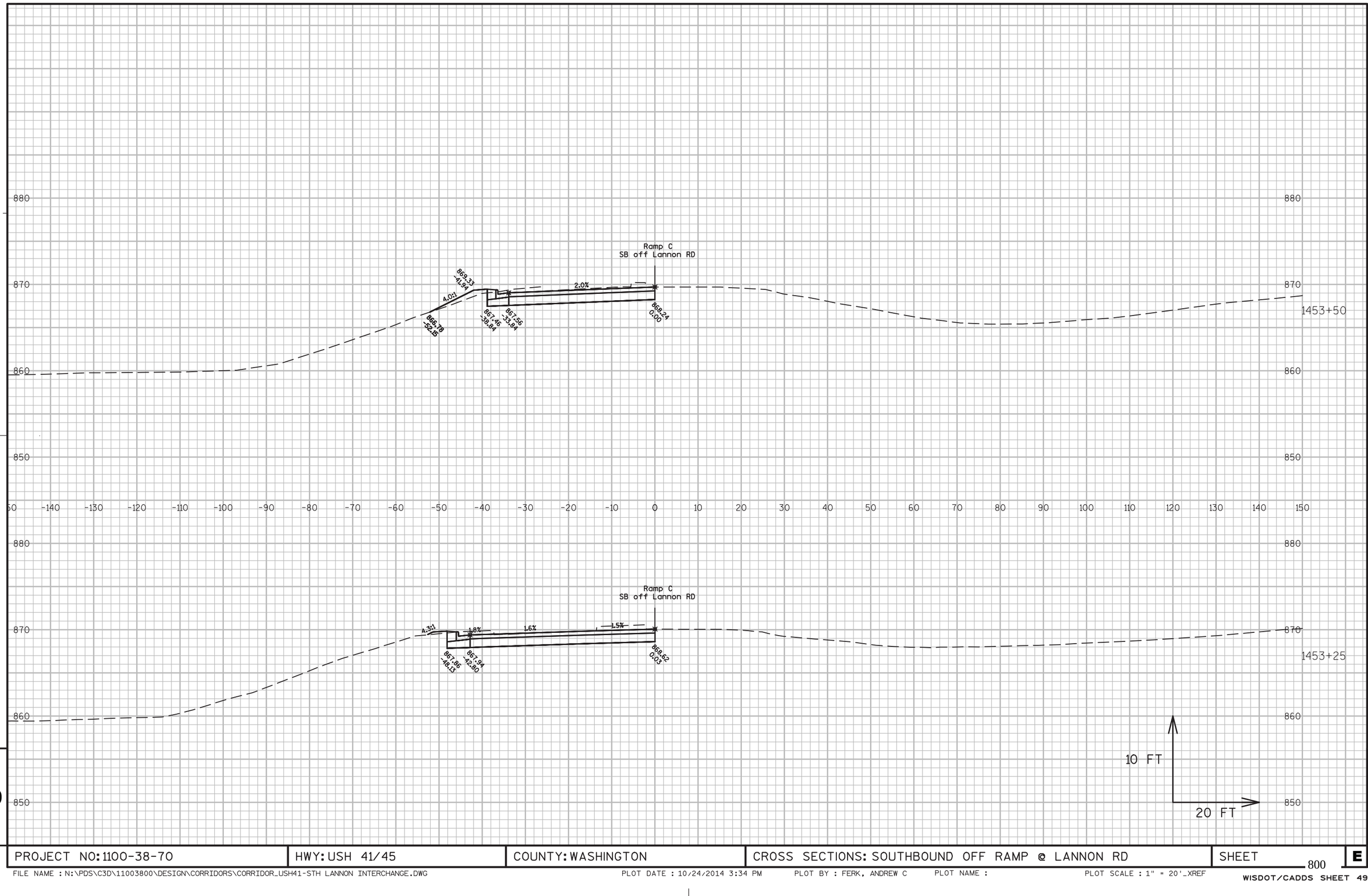
FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41-CTHQ_INTERCHANGE.DWG PLOT DATE : 10/27/2014 1:55 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49

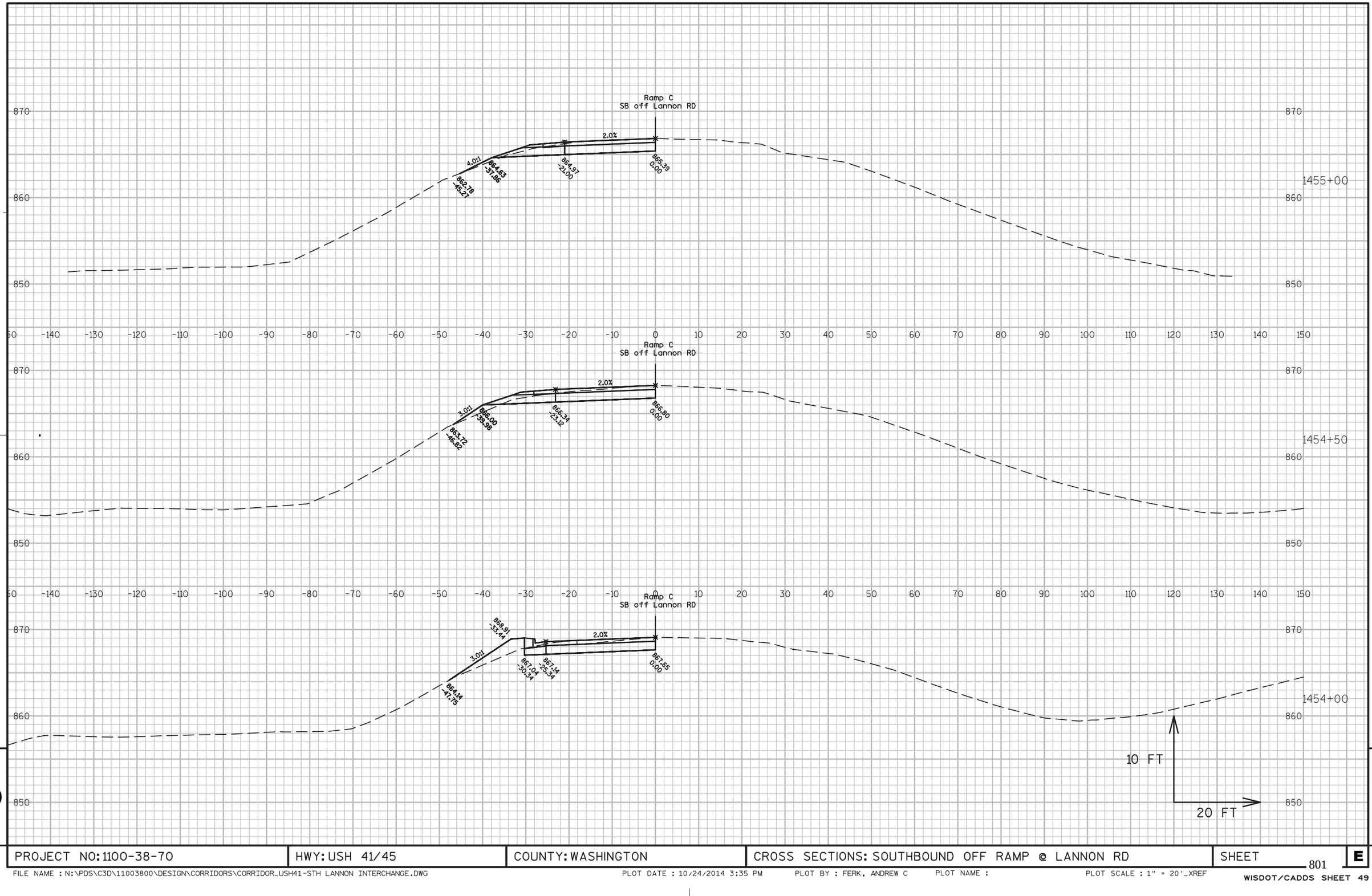


PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: CTH Q	SHEET 799 E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41-CTHQ_INTERCHANGE.DWG PLOT DATE : 10/27/2014 1:55 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF



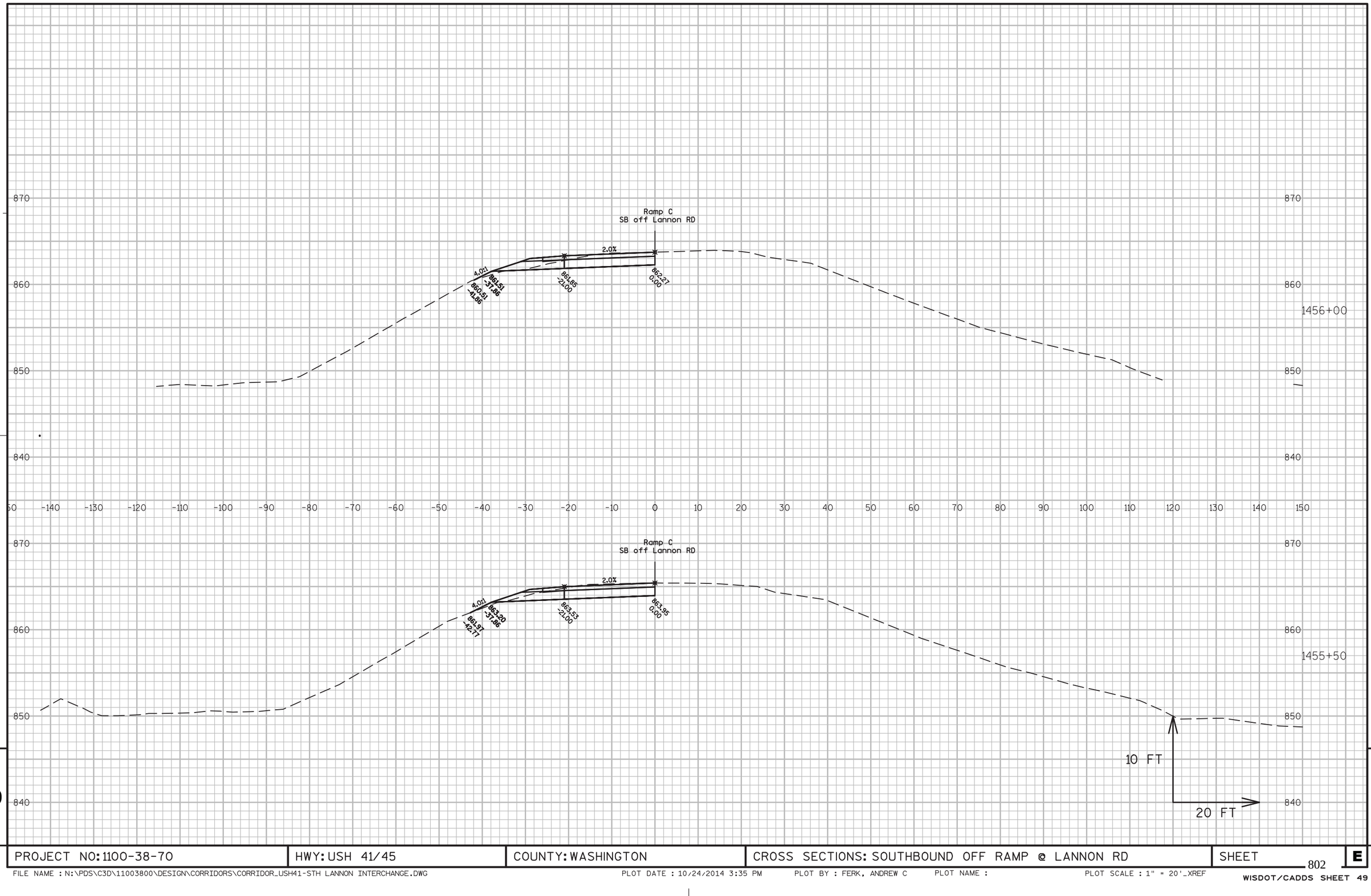
9	PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND OFF RAMP @ LANNON RD	SHEET 800 E



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND OFF RAMP @ LANNON RD	SHEET 801 E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41-STH LANNON INTERCHANGE.DWG PLOT DATE : 10/24/2014 3:35 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

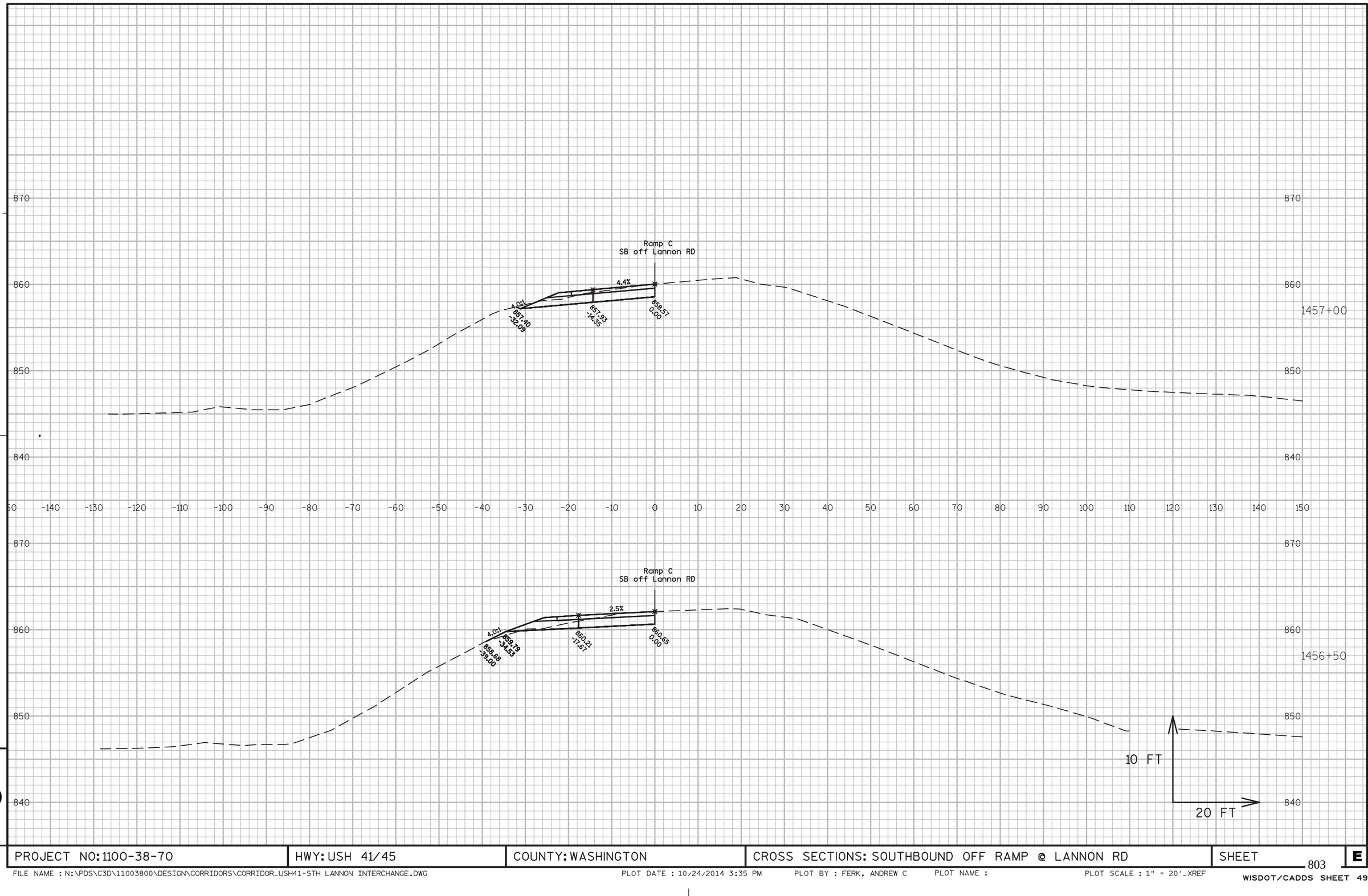
WISDOT/CADDS SHEET 49



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND OFF RAMP @ LANNON RD	SHEET 802	E

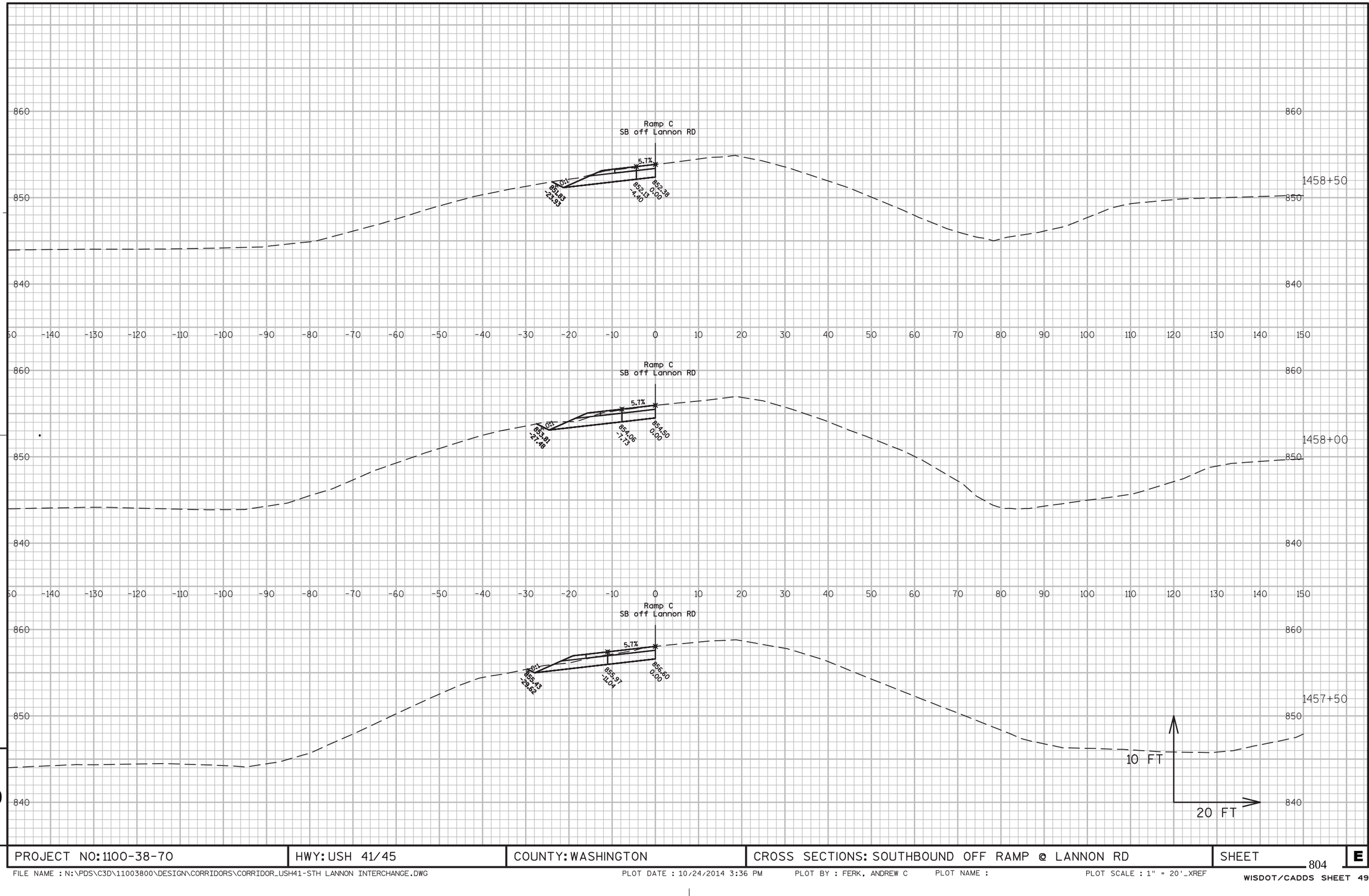
FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41-STH LANNON INTERCHANGE.DWG PLOT DATE : 10/24/2014 3:35 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND OFF RAMP @ LANNON RD	SHEET 803	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41-STH LANNON INTERCHANGE.DWG PLOT DATE : 10/24/2014 3:35 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND OFF RAMP @ LANNON RD	SHEET 804	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41-STH LANNON INTERCHANGE.DWG PLOT DATE : 10/24/2014 3:36 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF
WISDOT/CADDS SHEET 49

Ramp C
SB off Lannon RD

5.7%

1459+15

850.38
-30.00

849.99
-19.30

860
850
840

-150 -140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

Ramp C
SB off Lannon RD

5.7%

1459+00

850.81
-30.00

850.44
-20.51

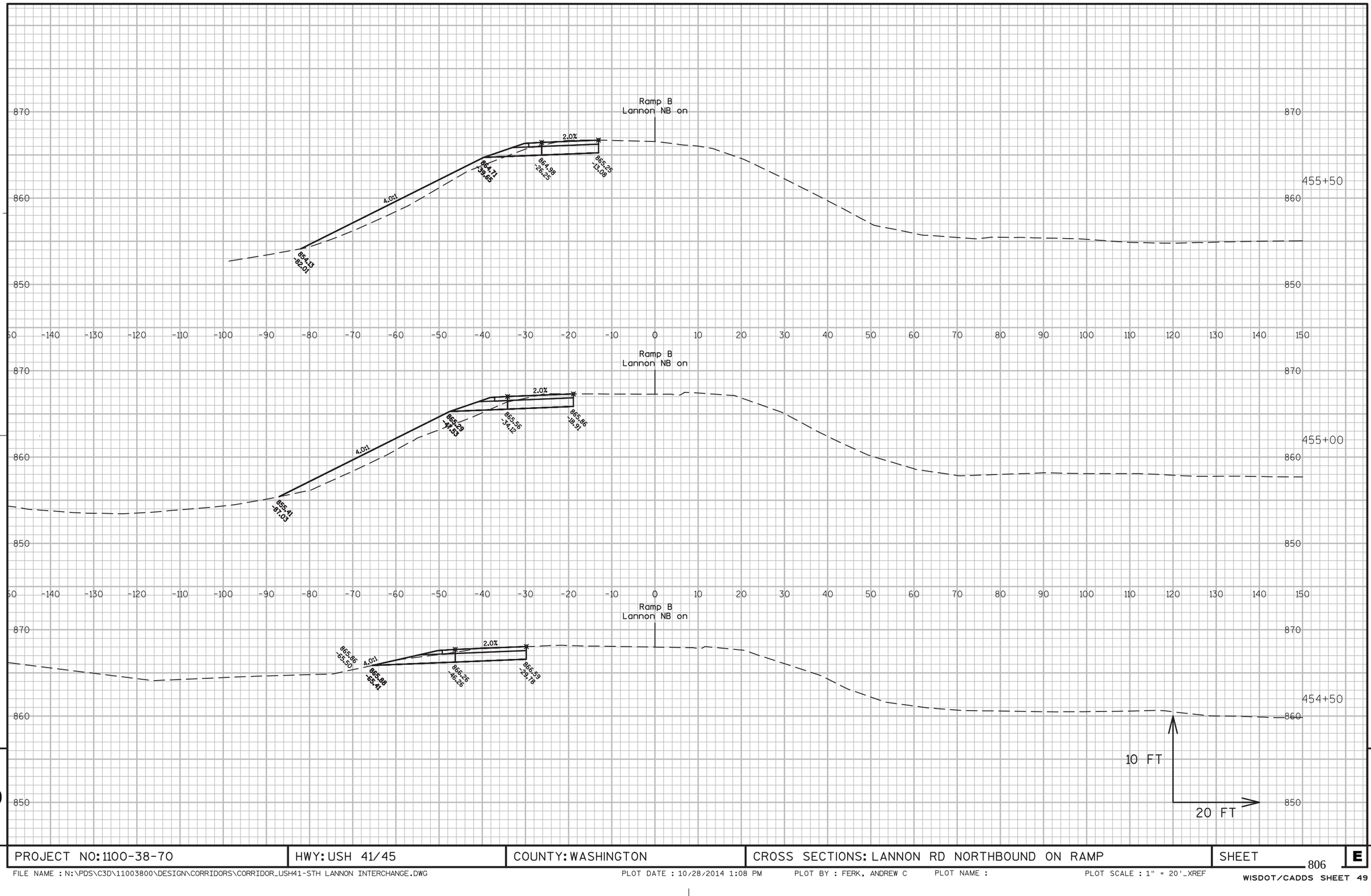
10 FT
20 FT

9

9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: SOUTHBOUND OFF RAMP @ LANNON RD	SHEET	E

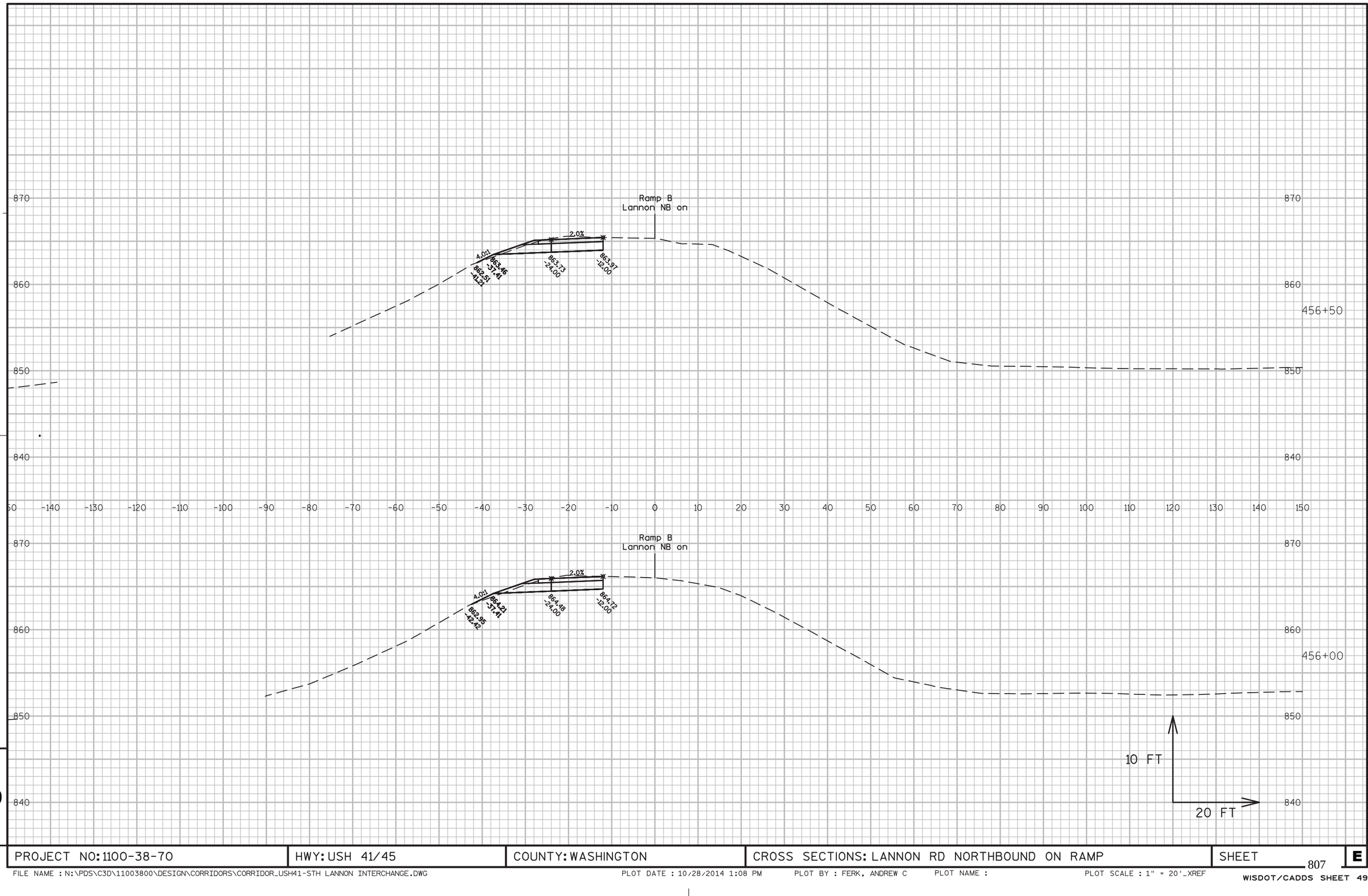
FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41-STH LANNON INTERCHANGE.DWG
PLOT DATE : 10/24/2014 3:36 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF
WISDOT/CADDS SHEET 49



9

9

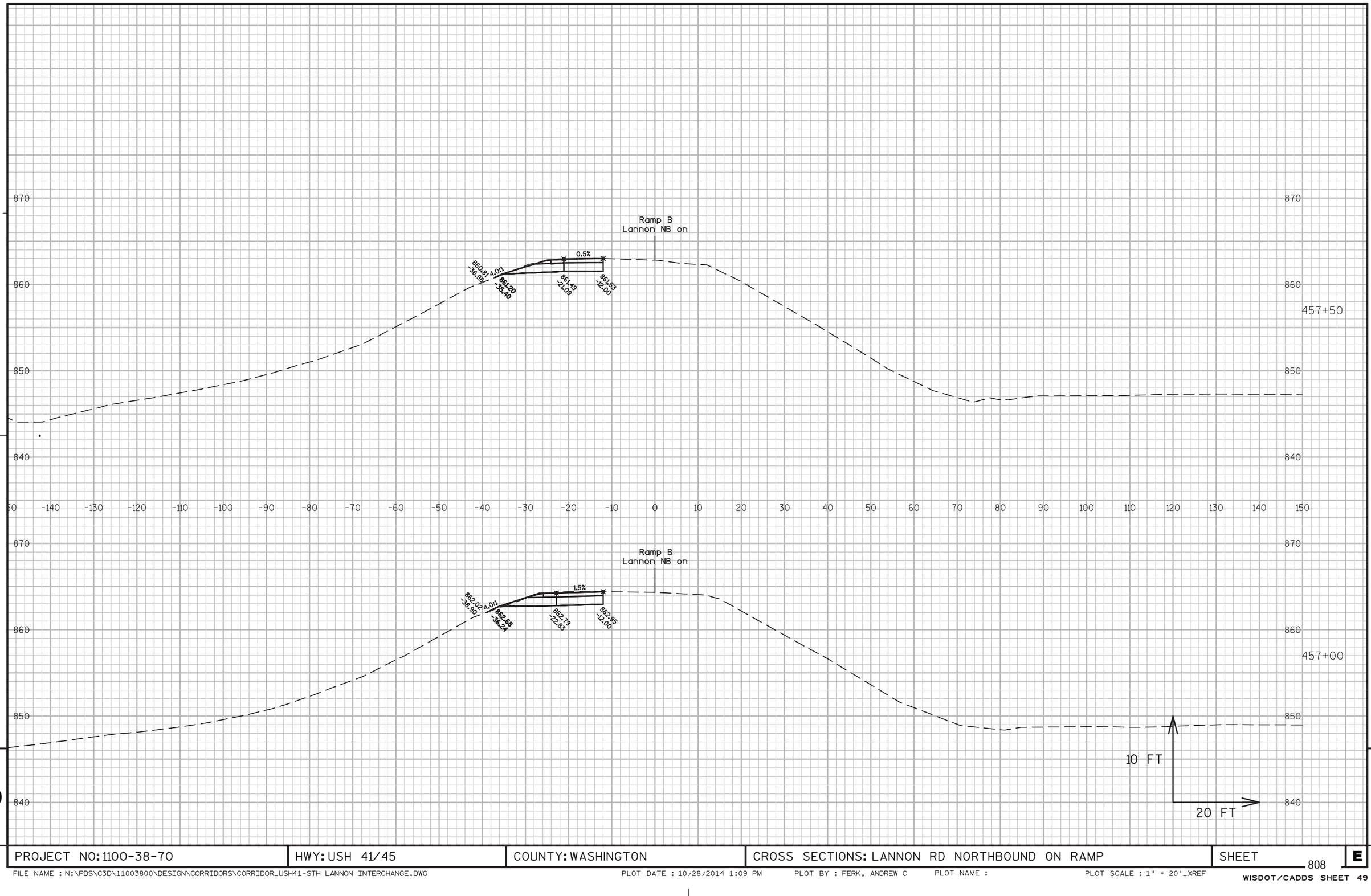
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: LANNON RD NORTHBOUND ON RAMP	SHEET 806	E



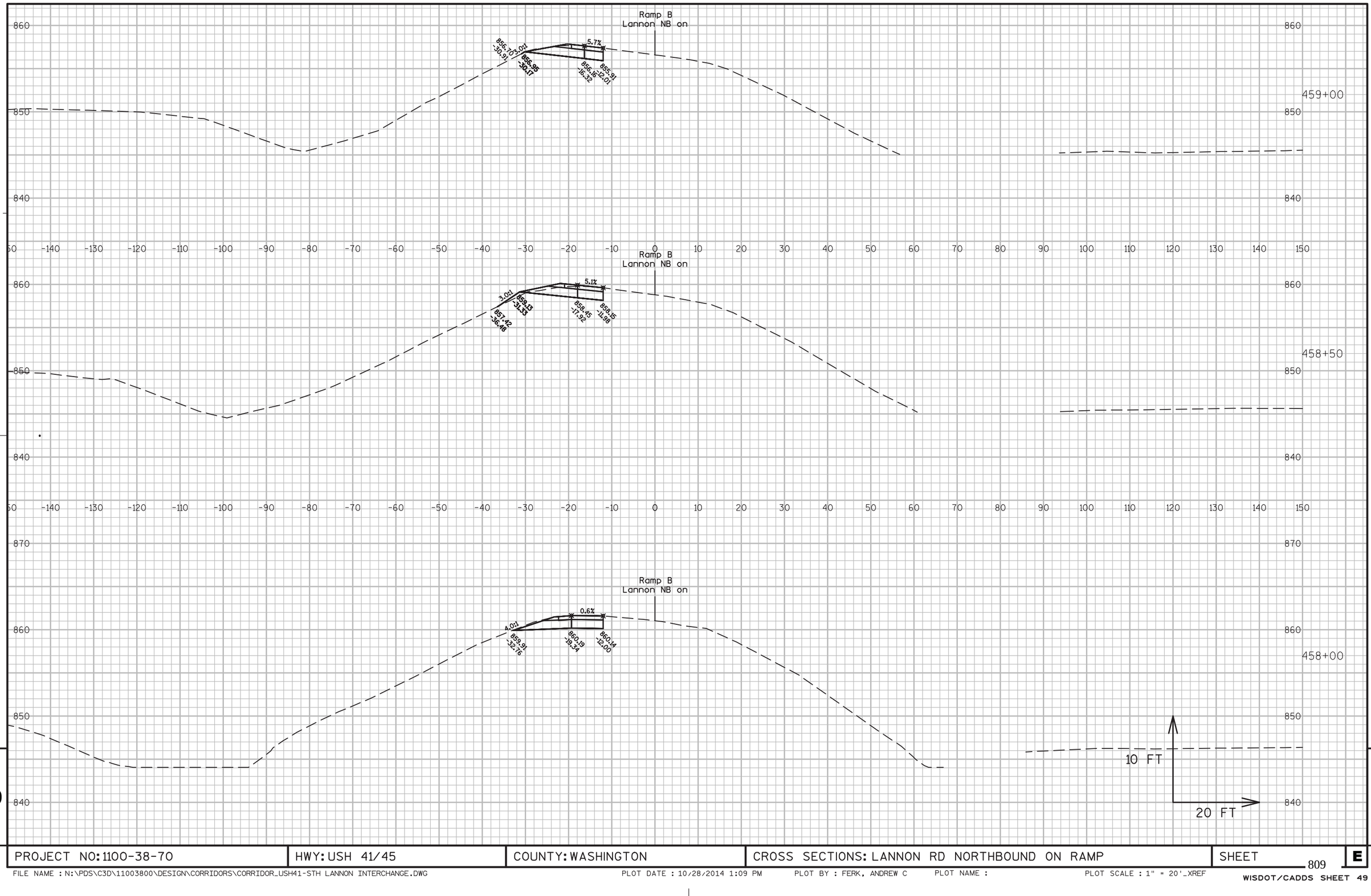
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: LANNON RD NORTHBOUND ON RAMP	SHEET 807	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41-STH LANNON INTERCHANGE.DWG PLOT DATE : 10/28/2014 1:08 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



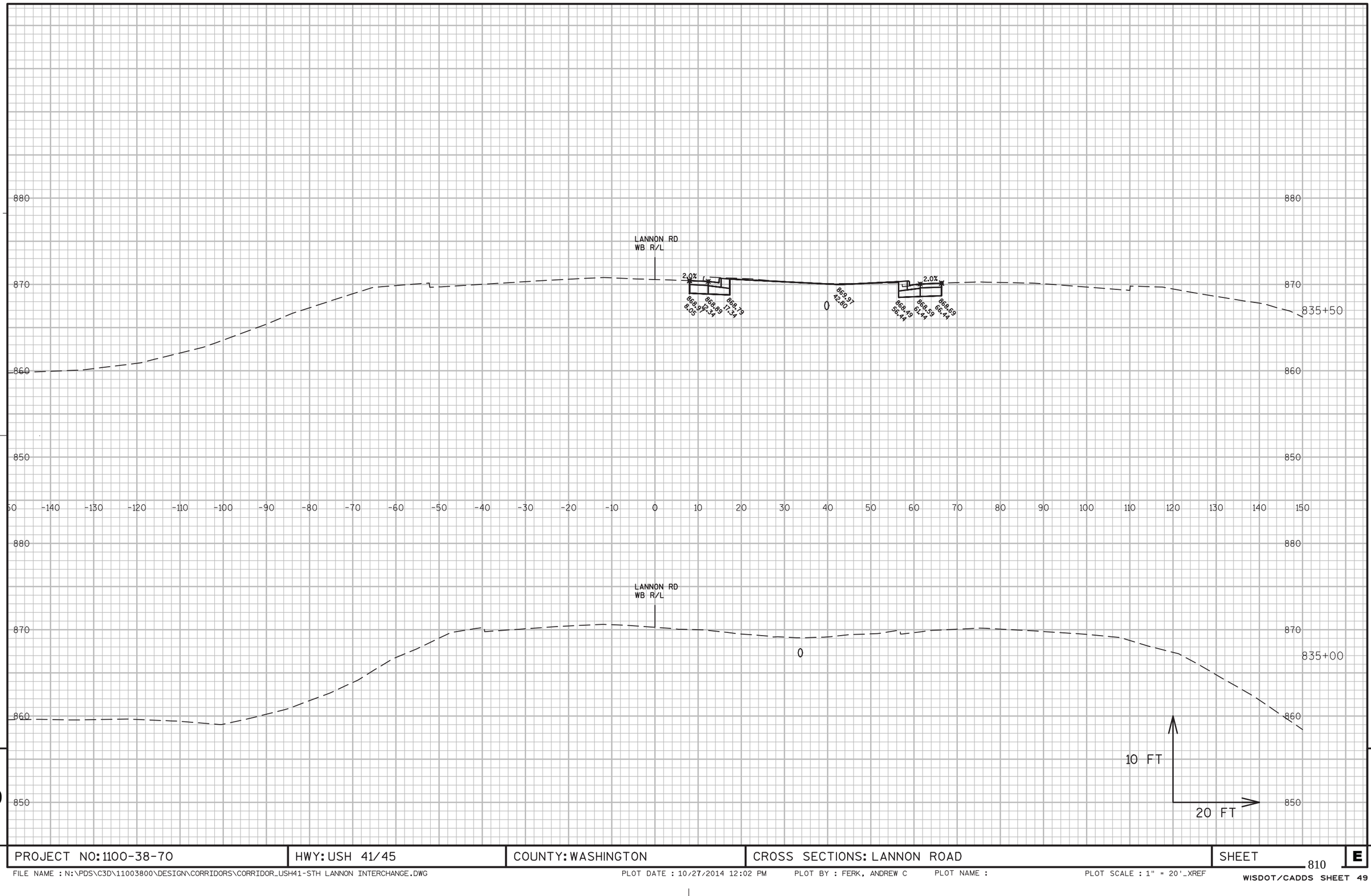
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: LANNON RD NORTHBOUND ON RAMP	SHEET 808	E



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: LANNON RD NORTHBOUND ON RAMP	SHEET 809	E

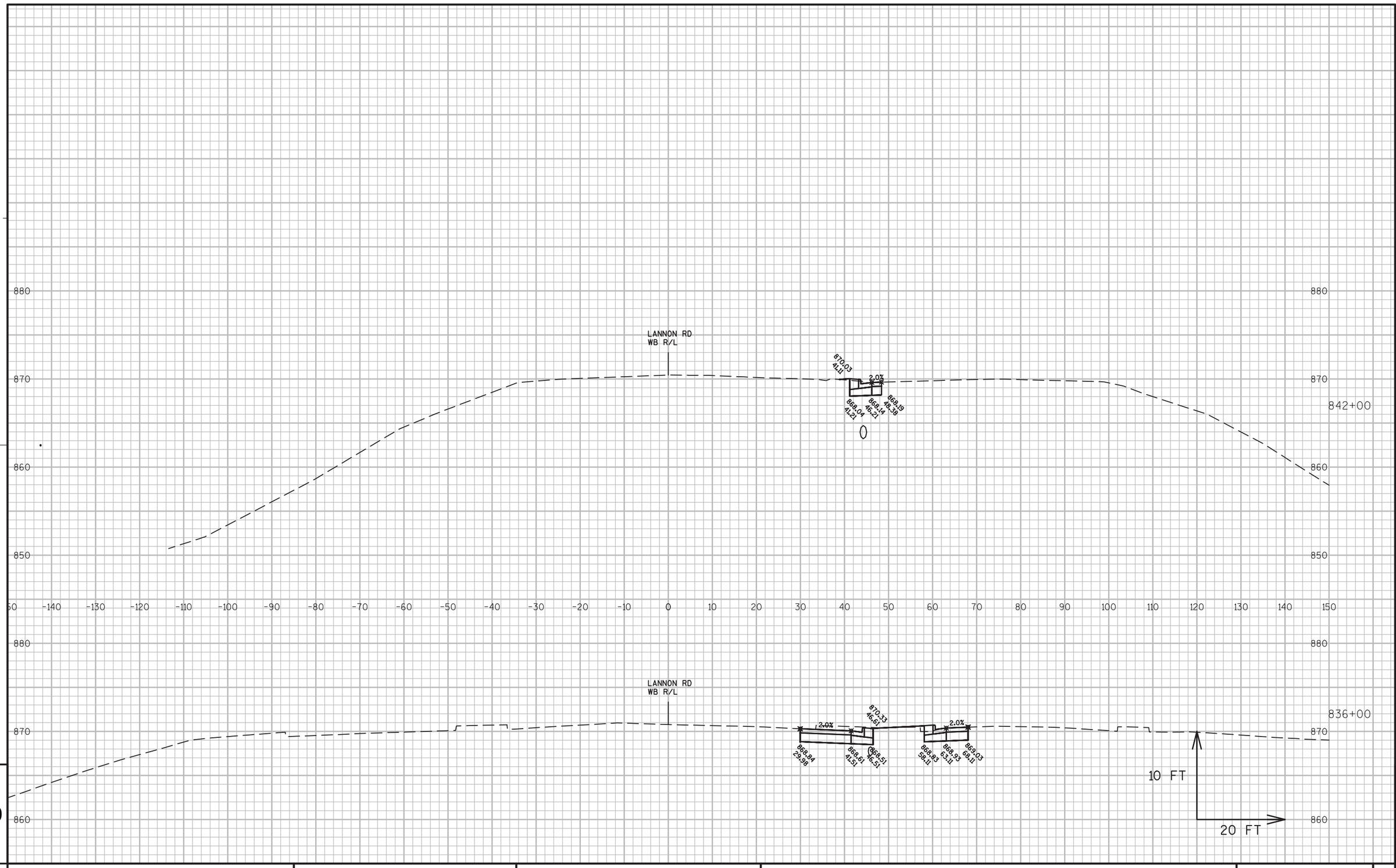
FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41-STH LANNON INTERCHANGE.DWG PLOT DATE : 10/28/2014 1:09 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: LANNON ROAD	SHEET 810	E

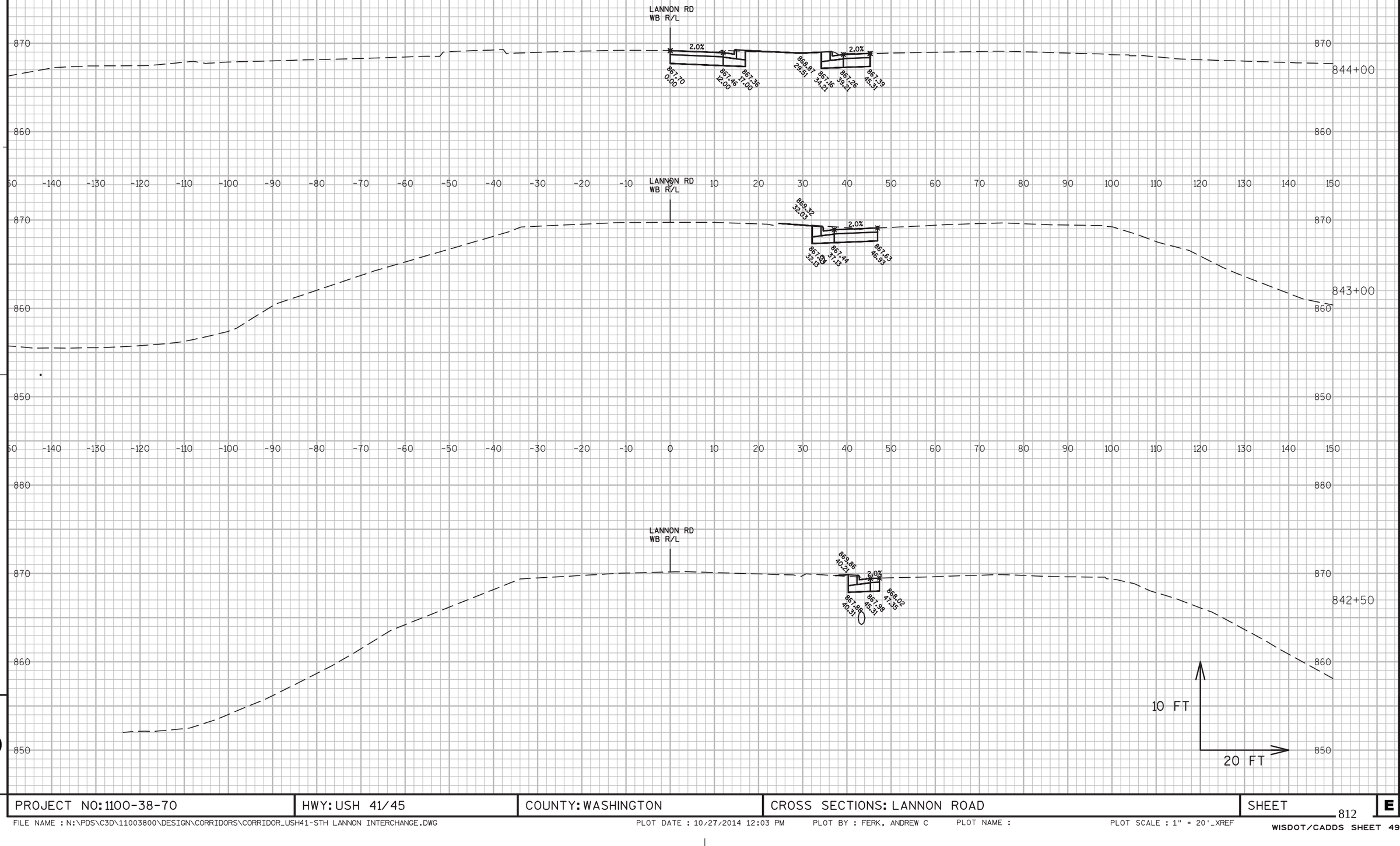
FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41-STH LANNON INTERCHANGE.DWG PLOT DATE : 10/27/2014 12:02 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: LANNON ROAD	SHEET 811	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41-STH LANNON INTERCHANGE.DWG PLOT DATE : 10/27/2014 12:03 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49

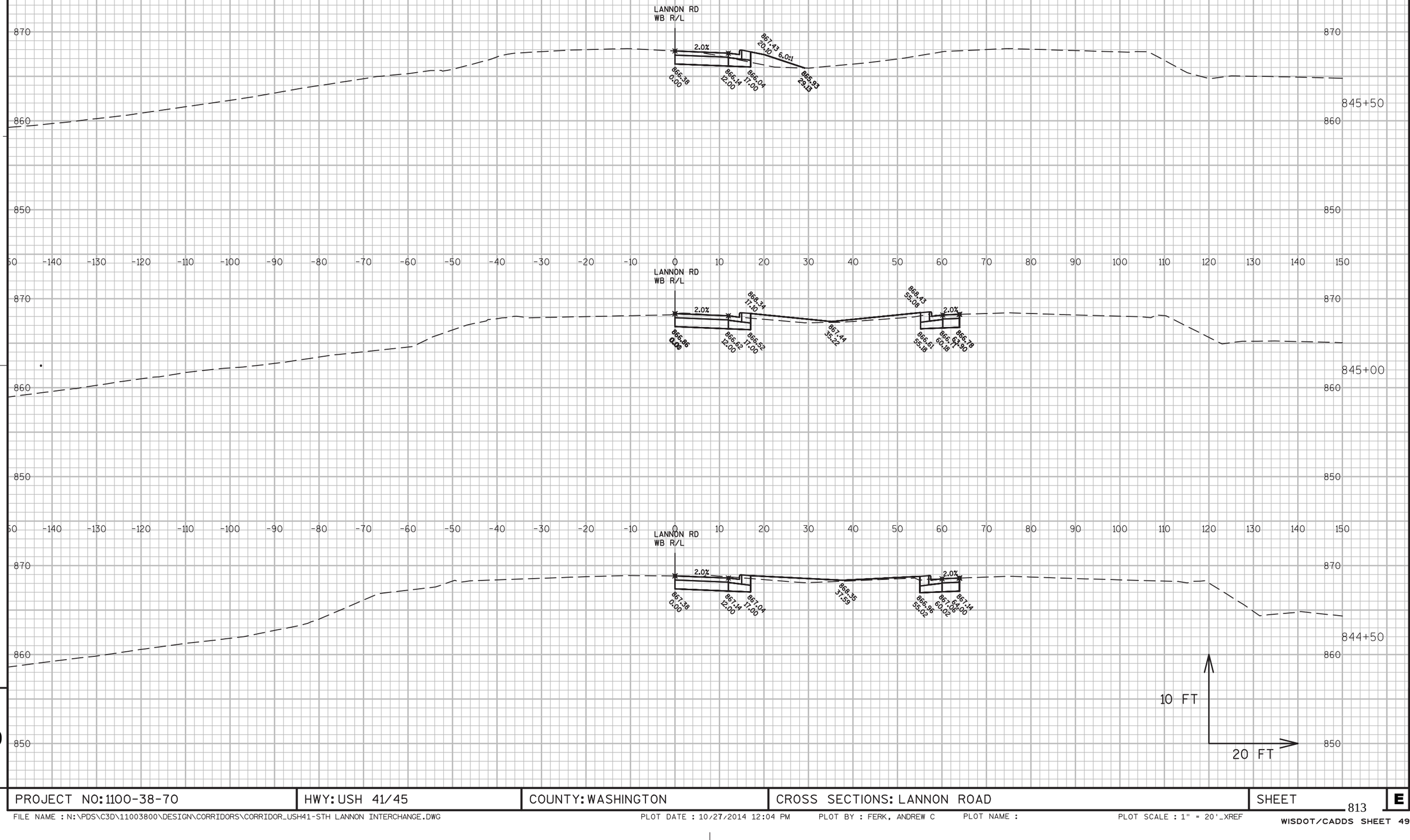


9

9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: LANNON ROAD	SHEET 812	E

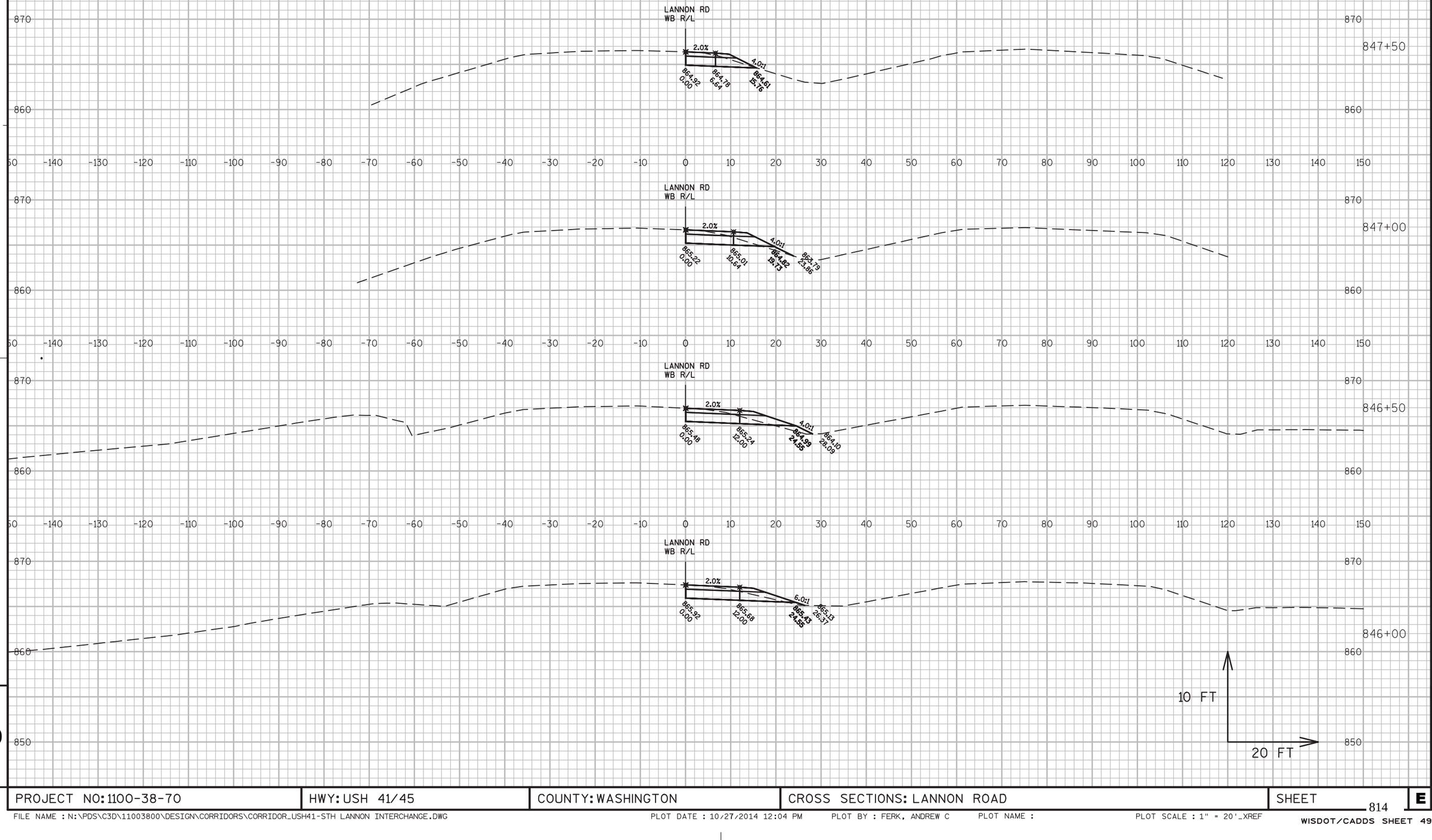
FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41-STH LANNON INTERCHANGE.DWG PLOT DATE : 10/27/2014 12:03 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF



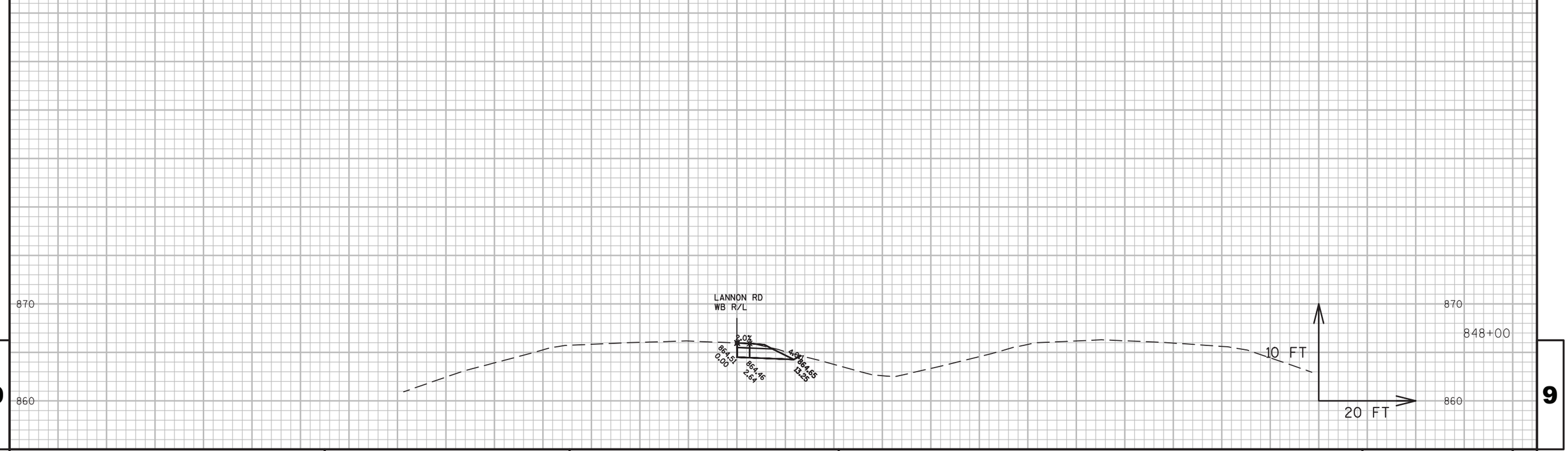
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: LANNON ROAD	SHEET 813	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41-STH LANNON INTERCHANGE.DWG PLOT DATE : 10/27/2014 12:04 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



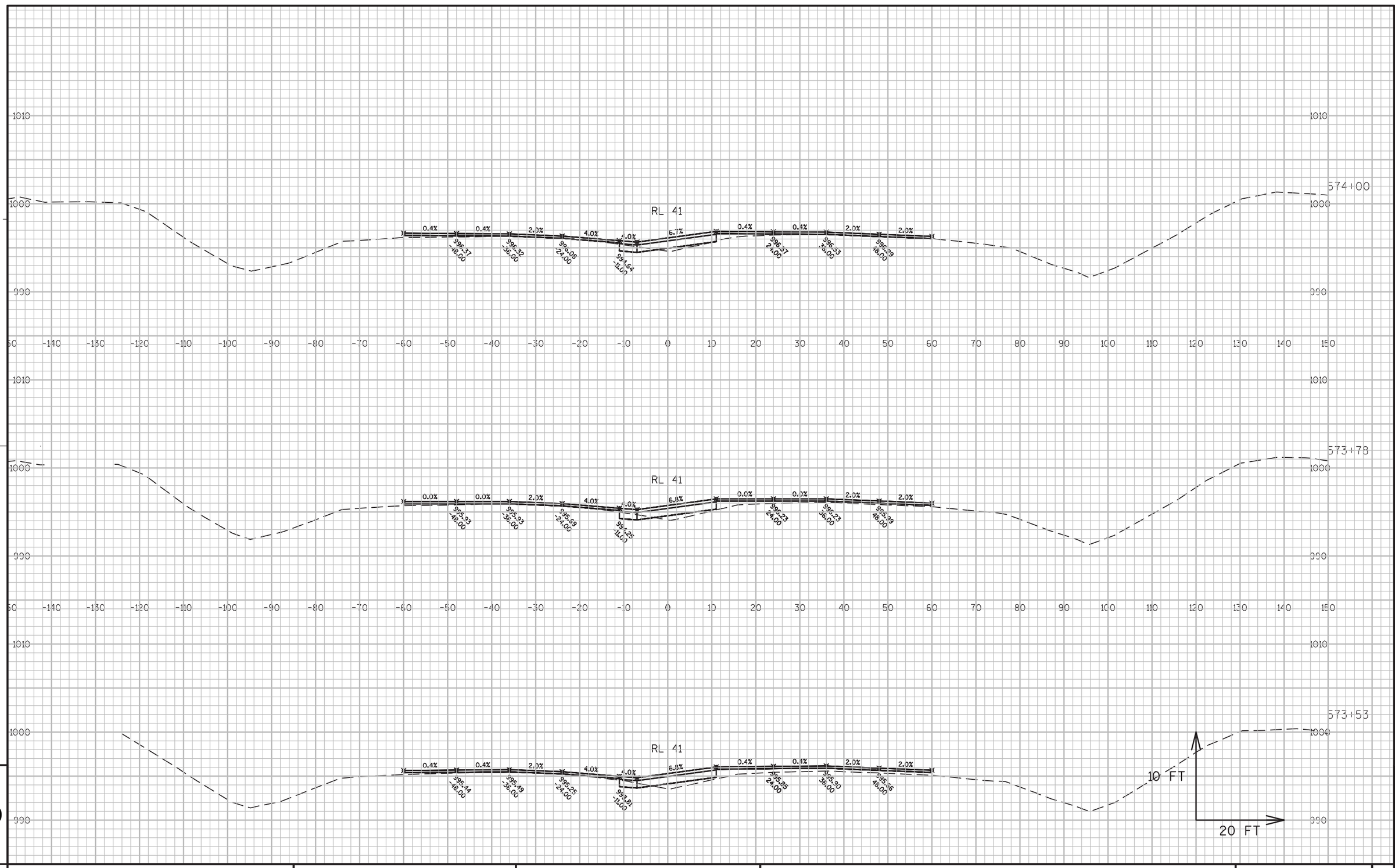
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: LANNON ROAD	SHEET 814	E



9

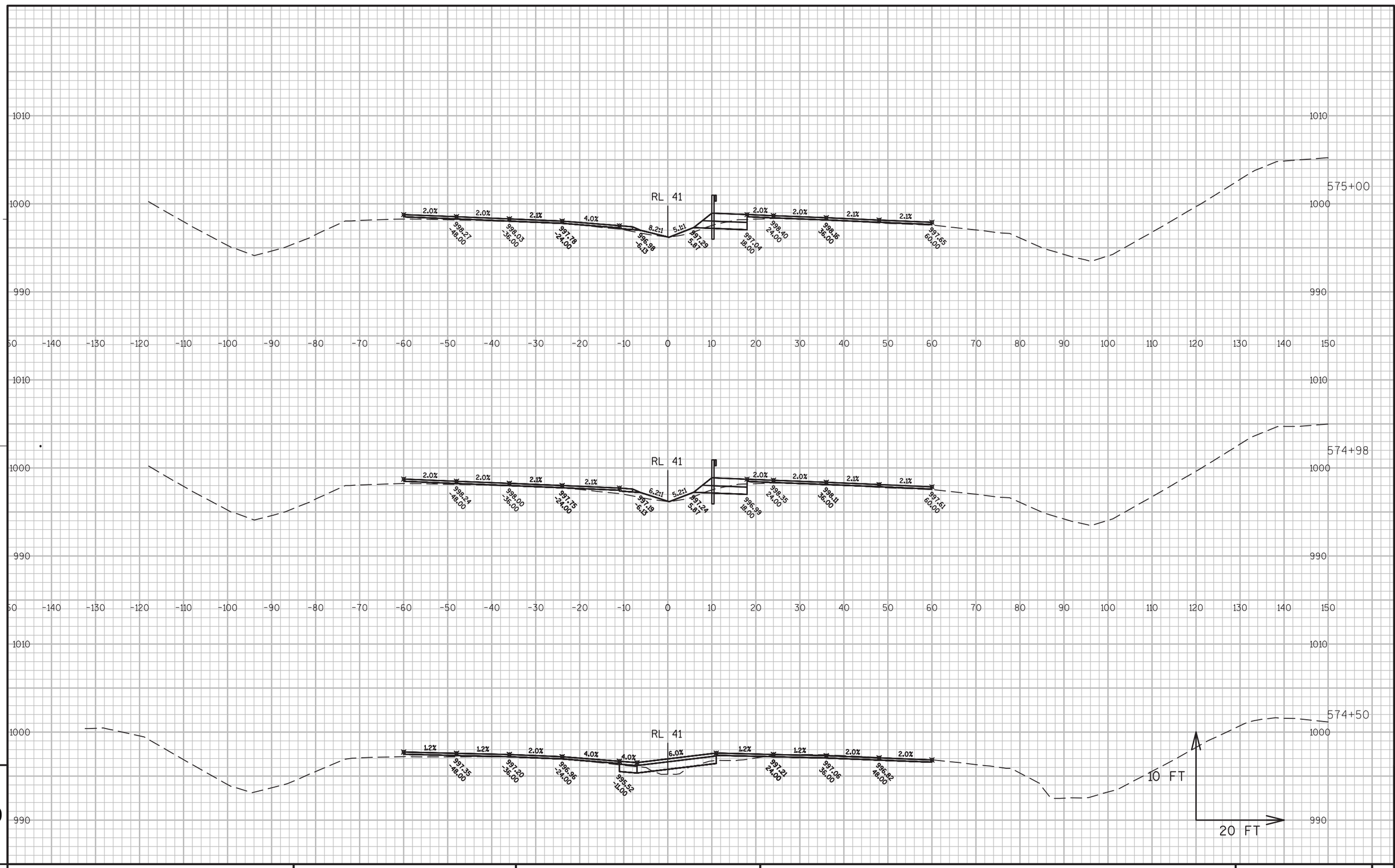
9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: LANNON ROAD	SHEET 815	E



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET E

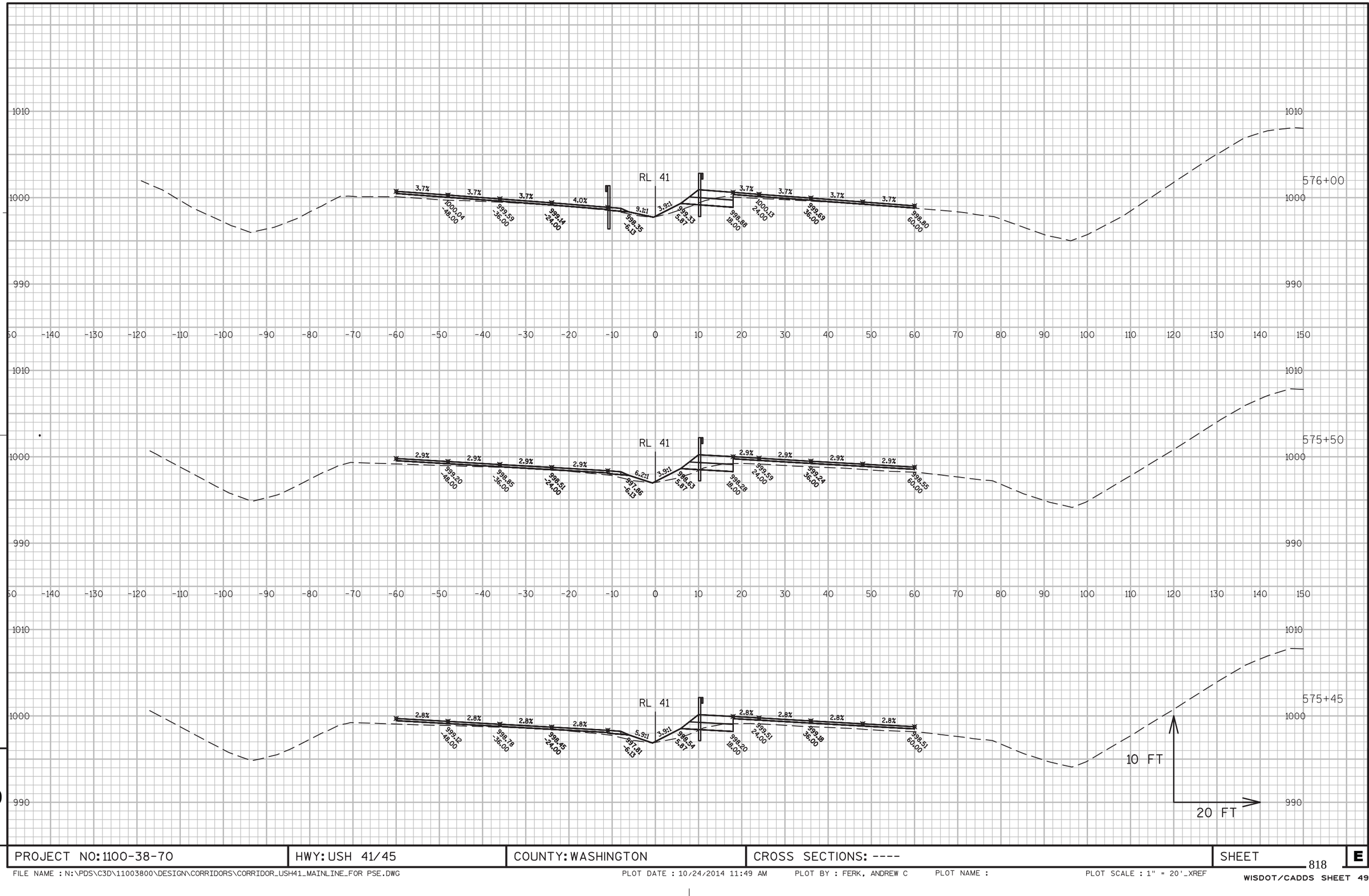
FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_MAINLINE_FOR PSE.DWG PLOT DATE : 10/24/2014 11:48 AM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_MAINLINE_FOR PSE.DWG PLOT DATE : 10/24/2014 11:49 AM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



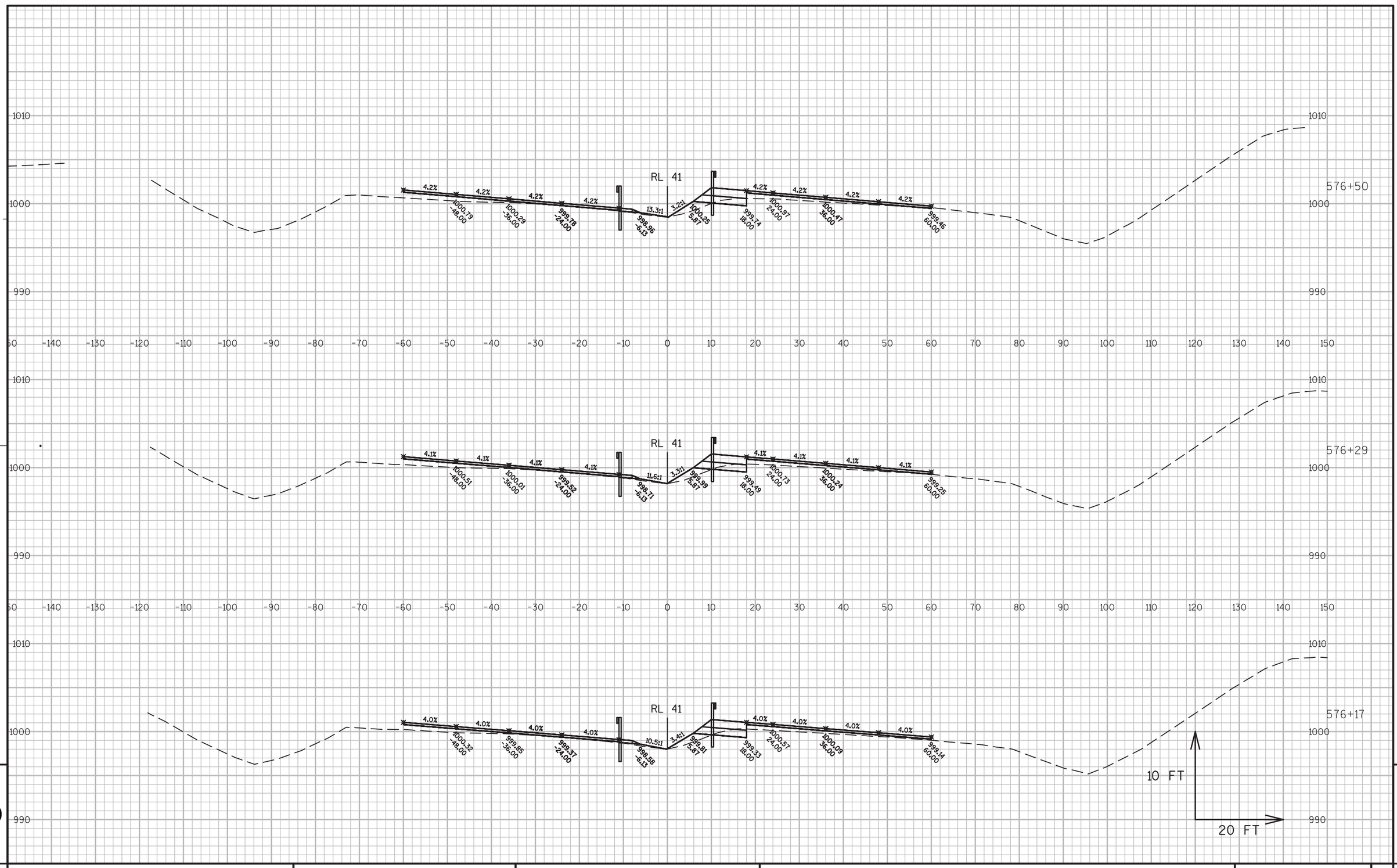
9

9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET 818	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_MAINLINE_FOR PSE.DWG PLOT DATE : 10/24/2014 11:49 AM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



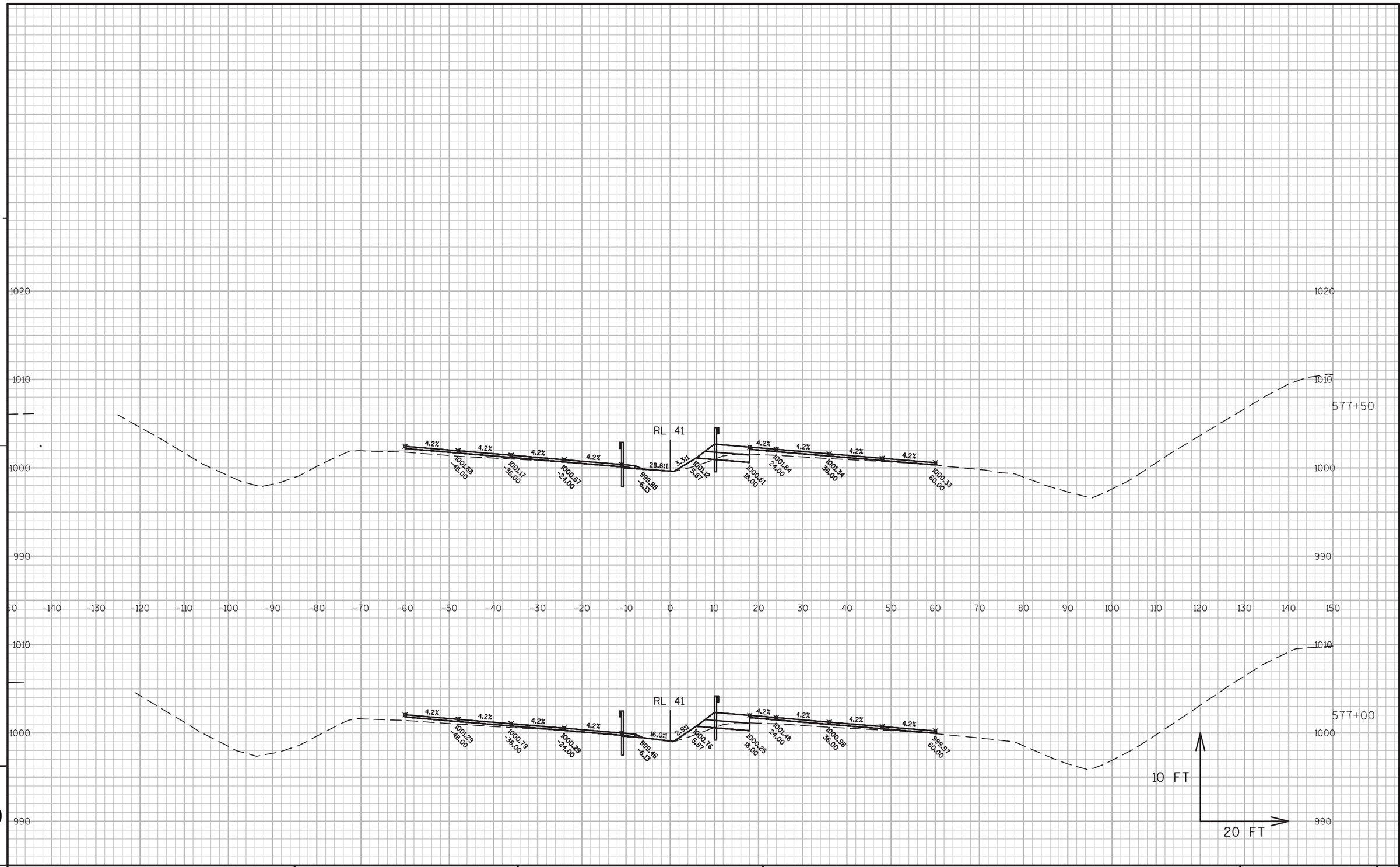
9

9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET 819	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_MAINLINE_FOR PSE.DWG PLOT DATE : 10/24/2014 11:50 AM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

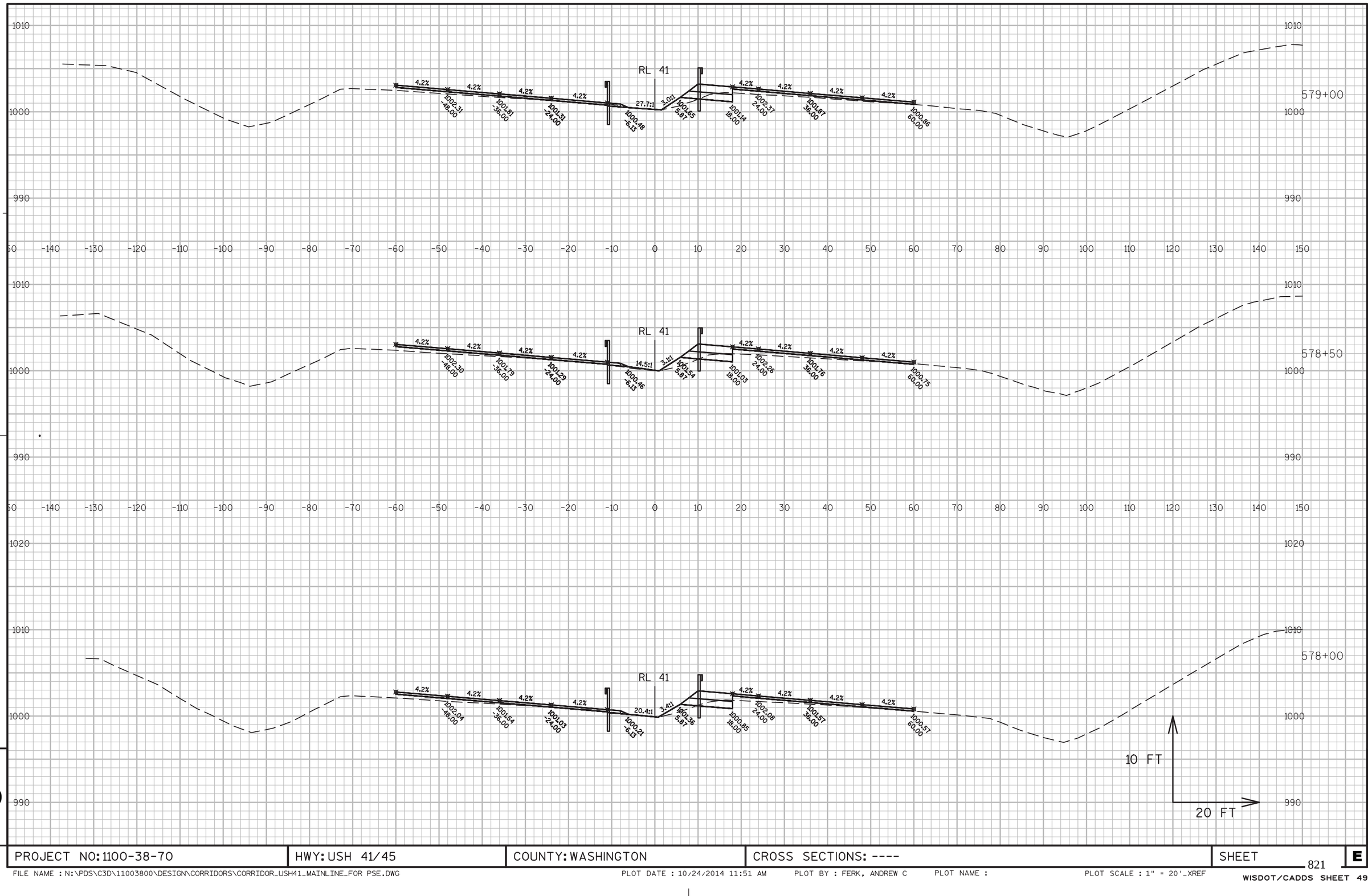
WISDOT/CADDS SHEET 49



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET 820	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_MAINLINE_FOR PSE.DWG PLOT DATE : 10/24/2014 11:50 AM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

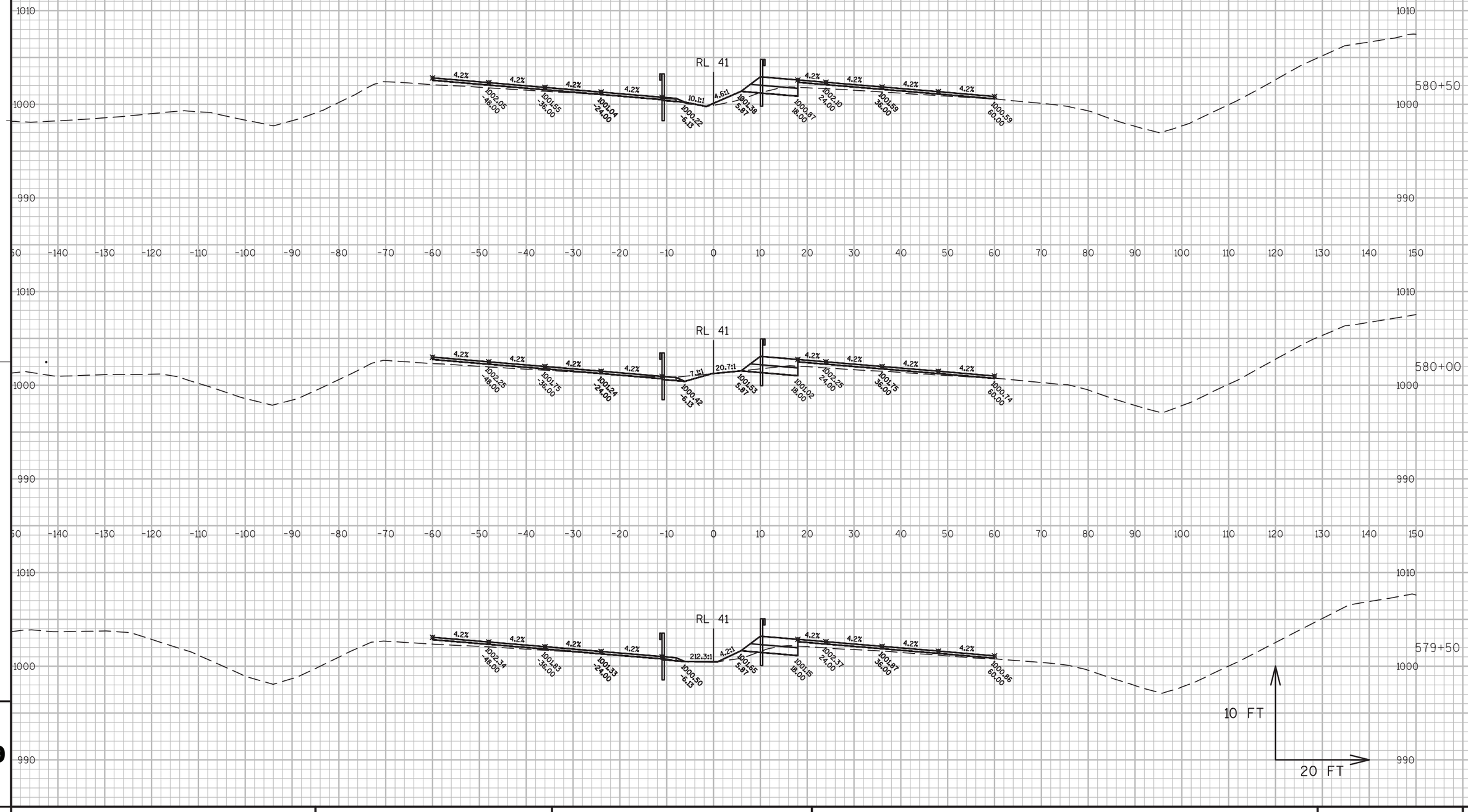
WISDOT/CADDS SHEET 49



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET 821	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_MAINLINE_FOR PSE.DWG PLOT DATE : 10/24/2014 11:51 AM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



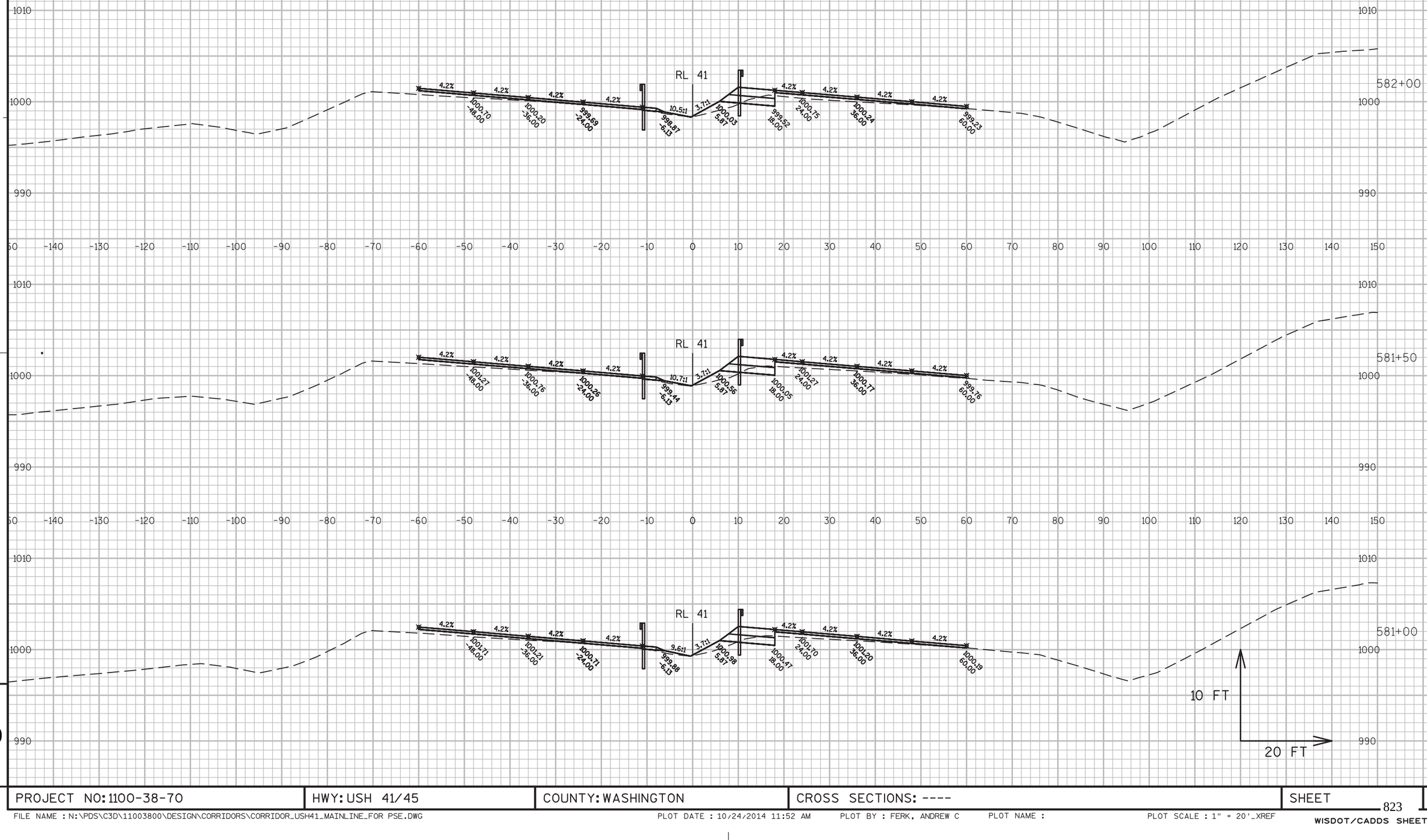
9

9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET	E

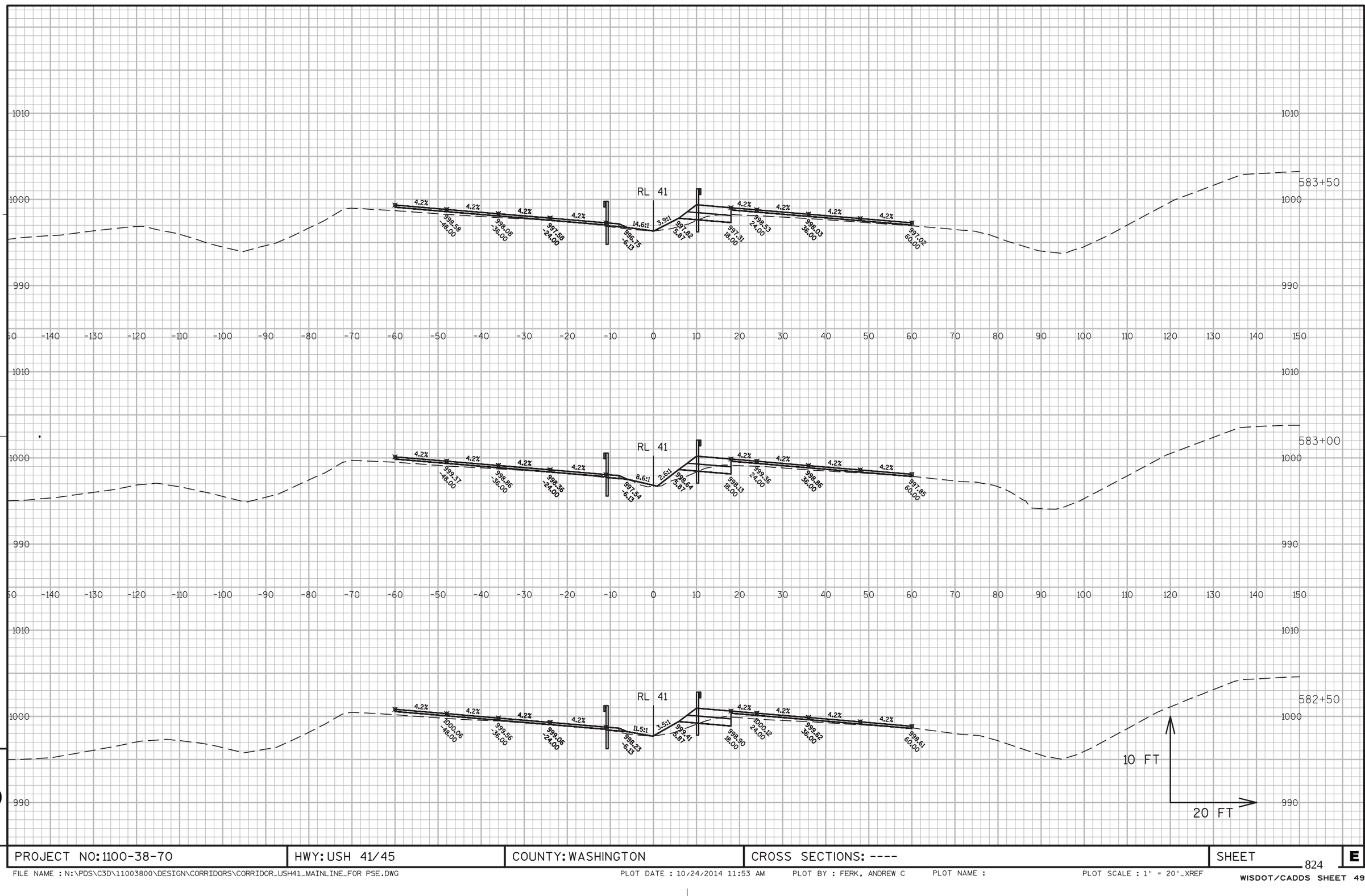
FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_MAINLINE_FOR PSE.DWG PLOT DATE : 10/24/2014 11:52 AM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



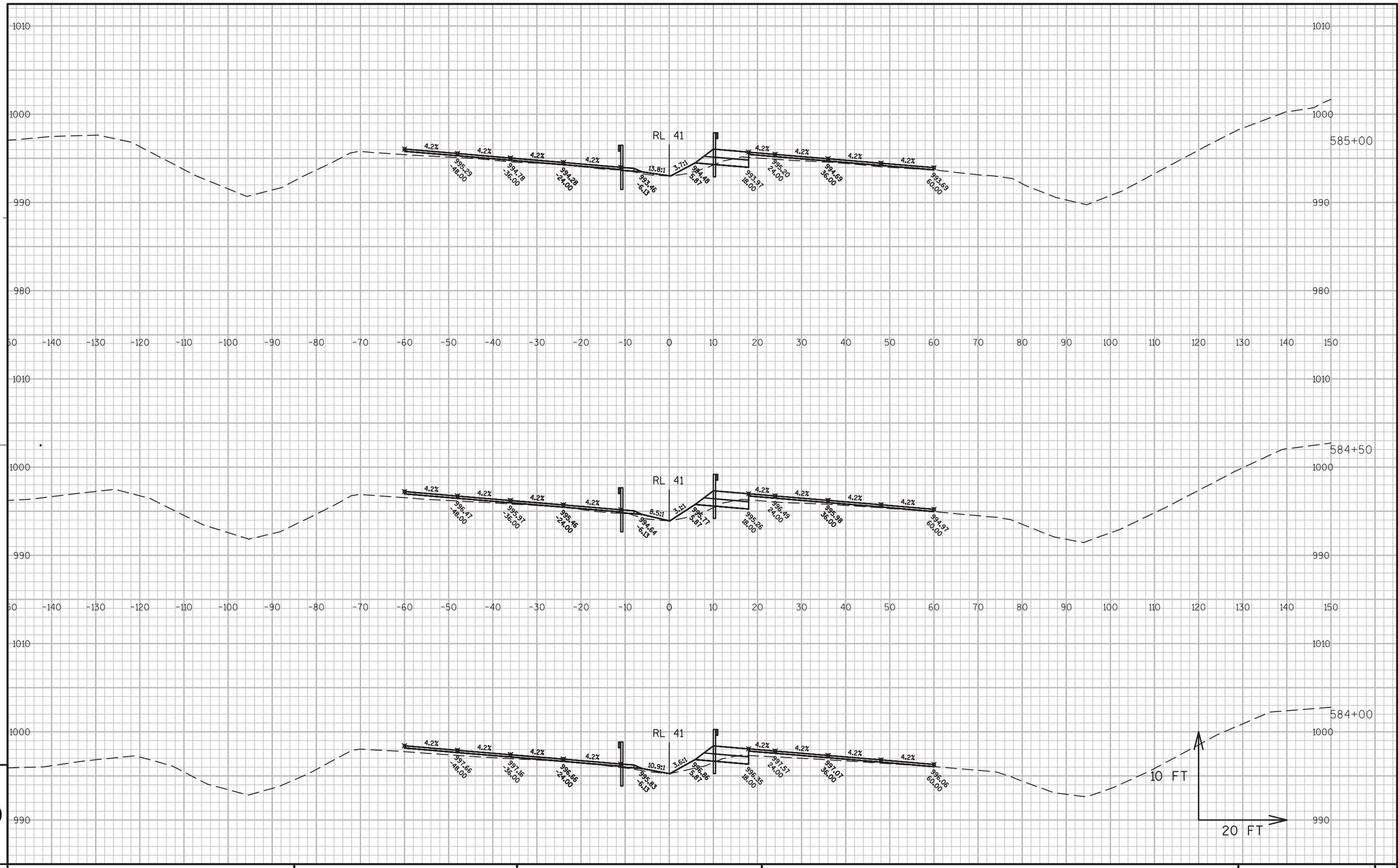
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_MAINLINE_FOR PSE.DWG PLOT DATE : 10/24/2014 11:52 AM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_MAINLINE_FOR PSE.DWG PLOT DATE : 10/24/2014 11:53 AM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF
WISDOT/CADDS SHEET 49



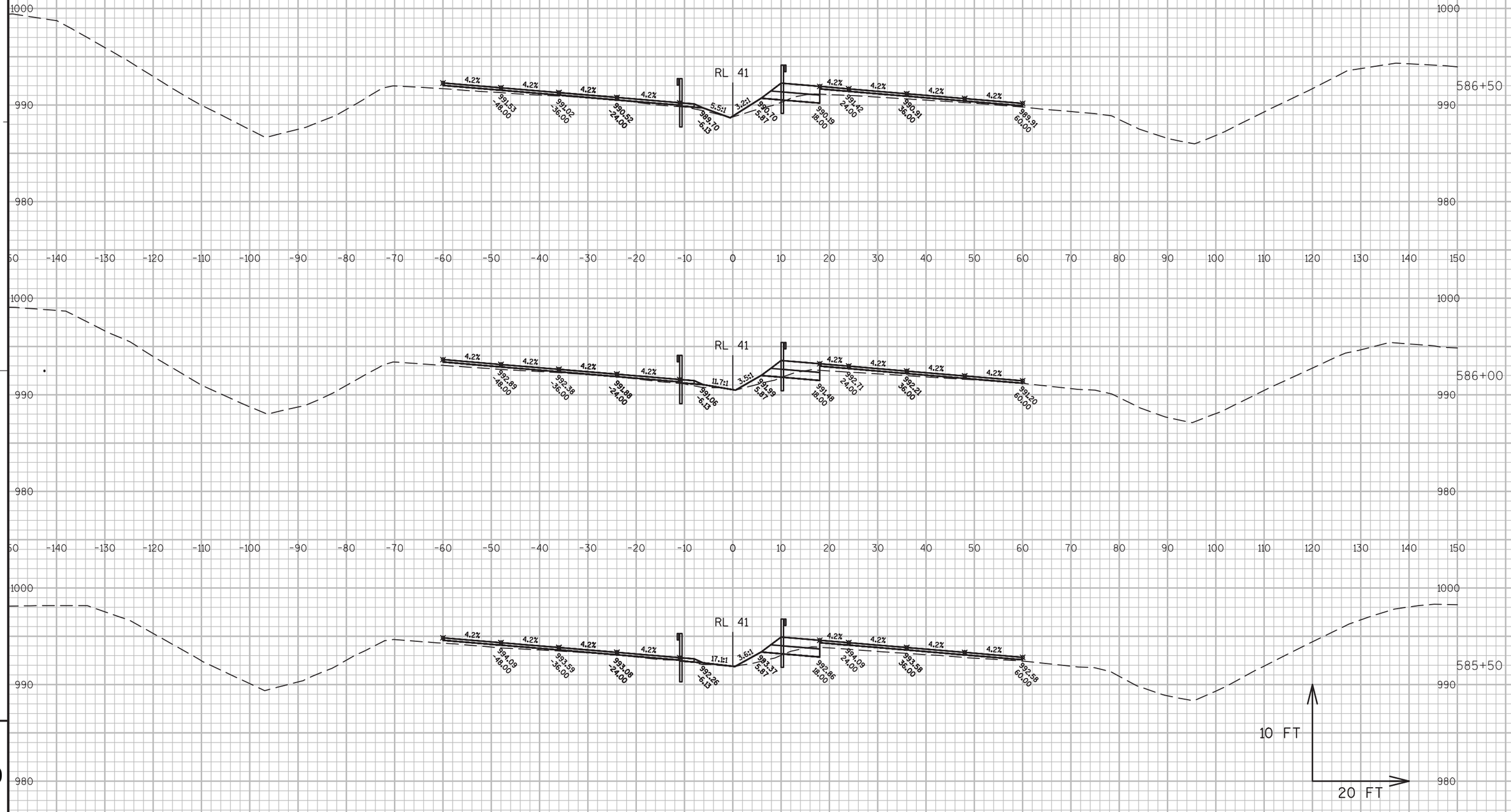
9

9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET	E

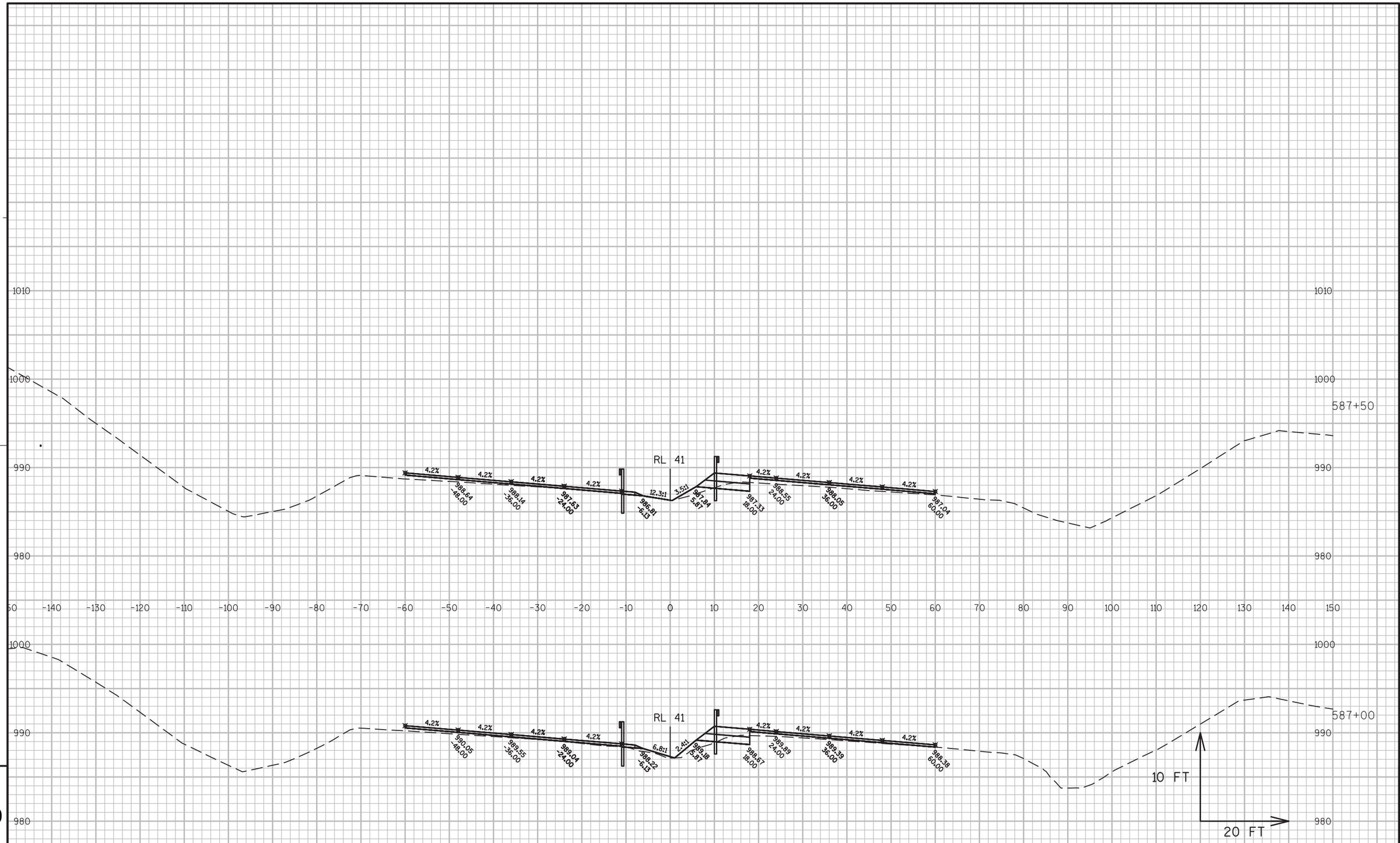
FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_MAINLINE_FOR PSE.DWG PLOT DATE : 10/24/2014 11:53 AM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_MAINLINE_FOR PSE.DWG PLOT DATE : 10/24/2014 11:54 AM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

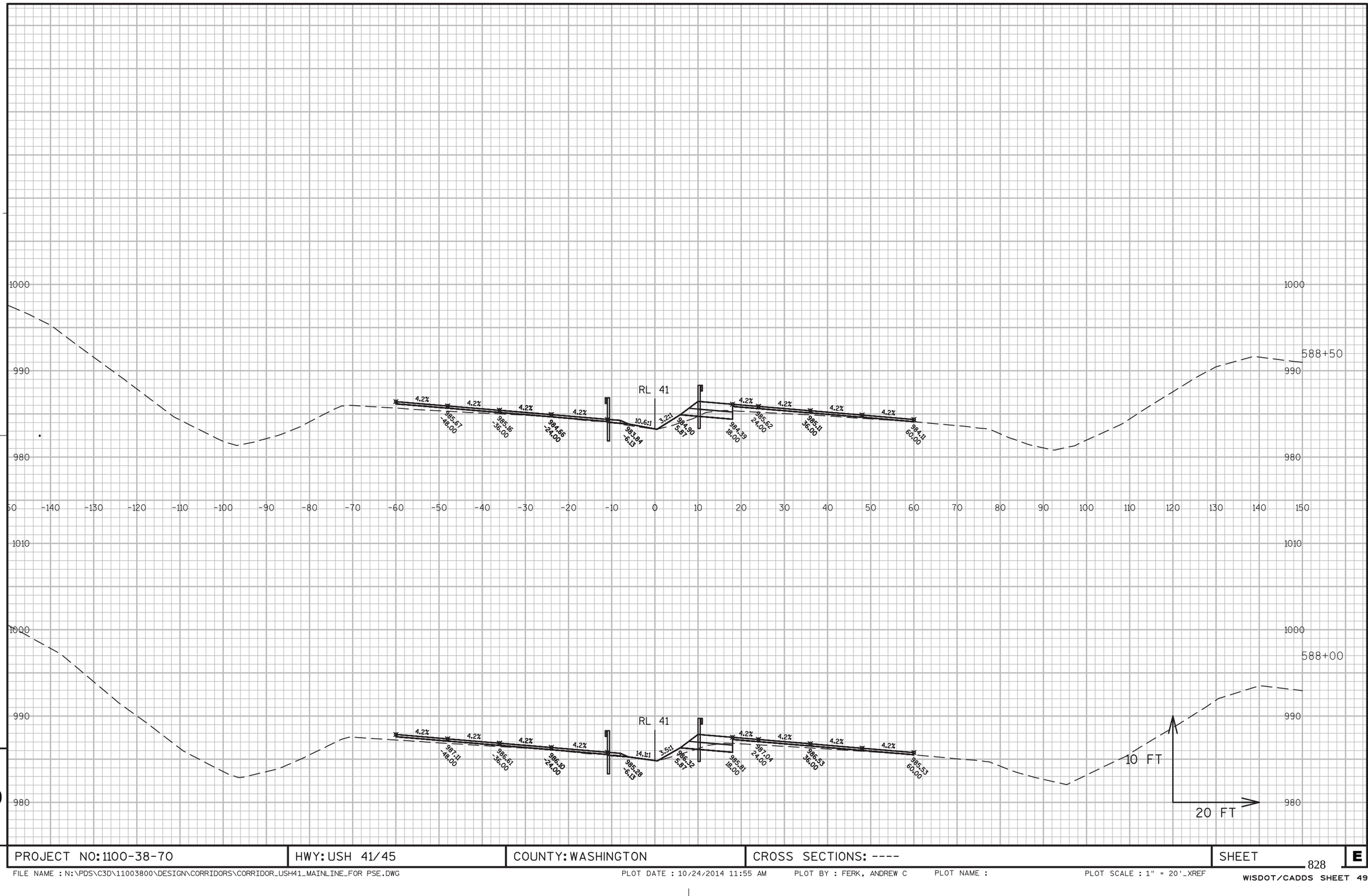


9

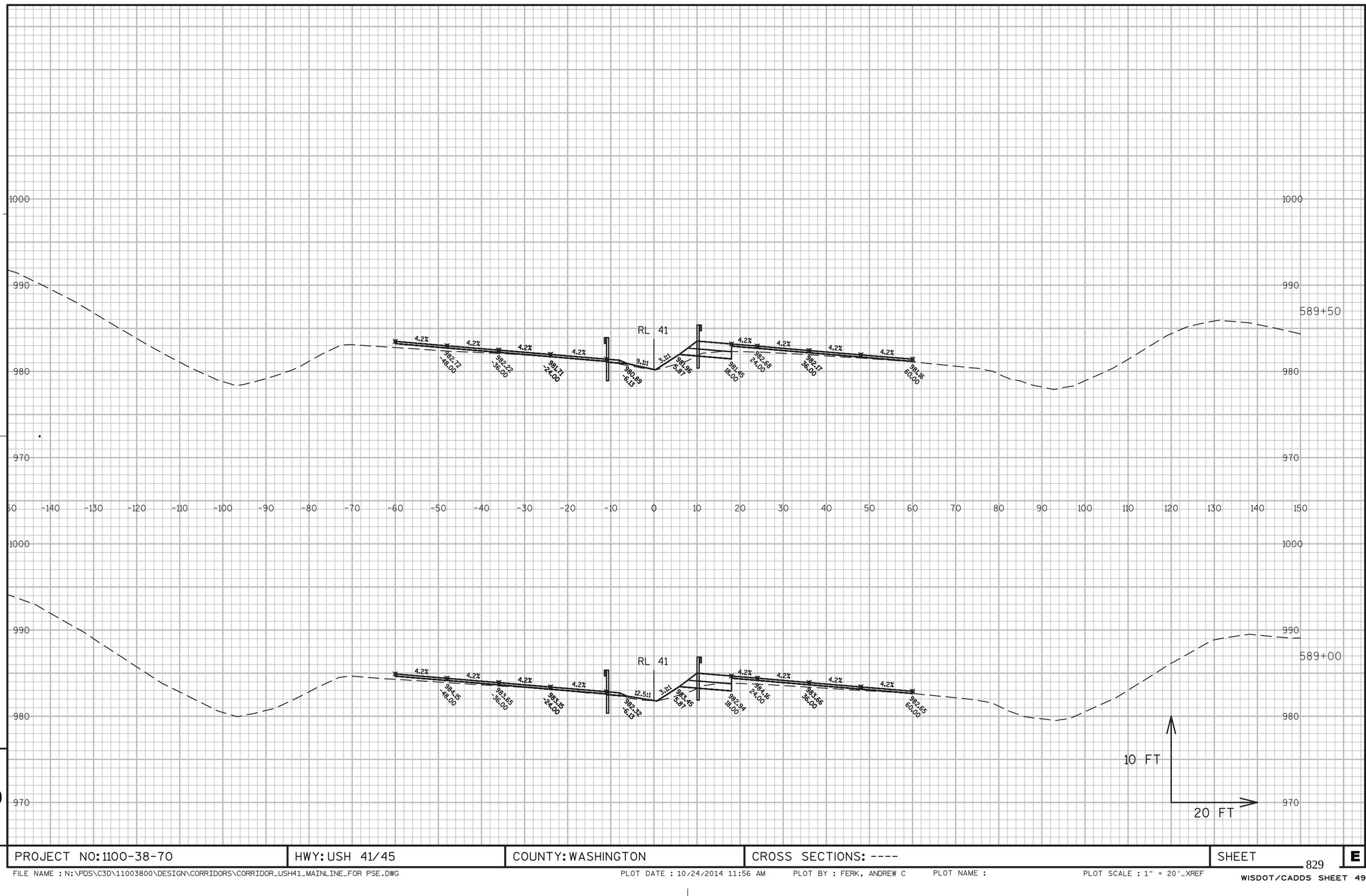
9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_MAINLINE_FOR PSE.DWG PLOT DATE : 10/24/2014 11:55 AM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

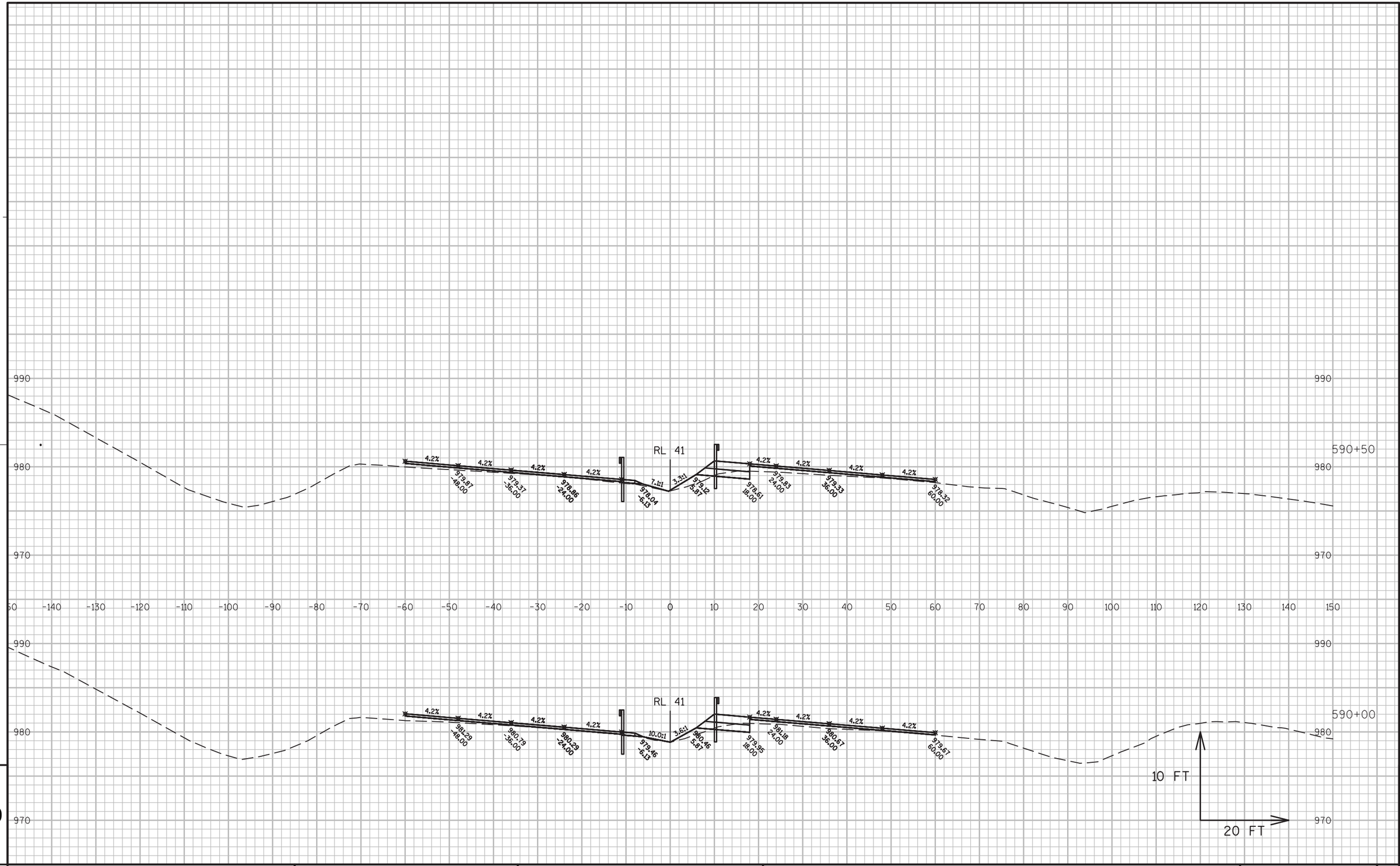


PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET	E



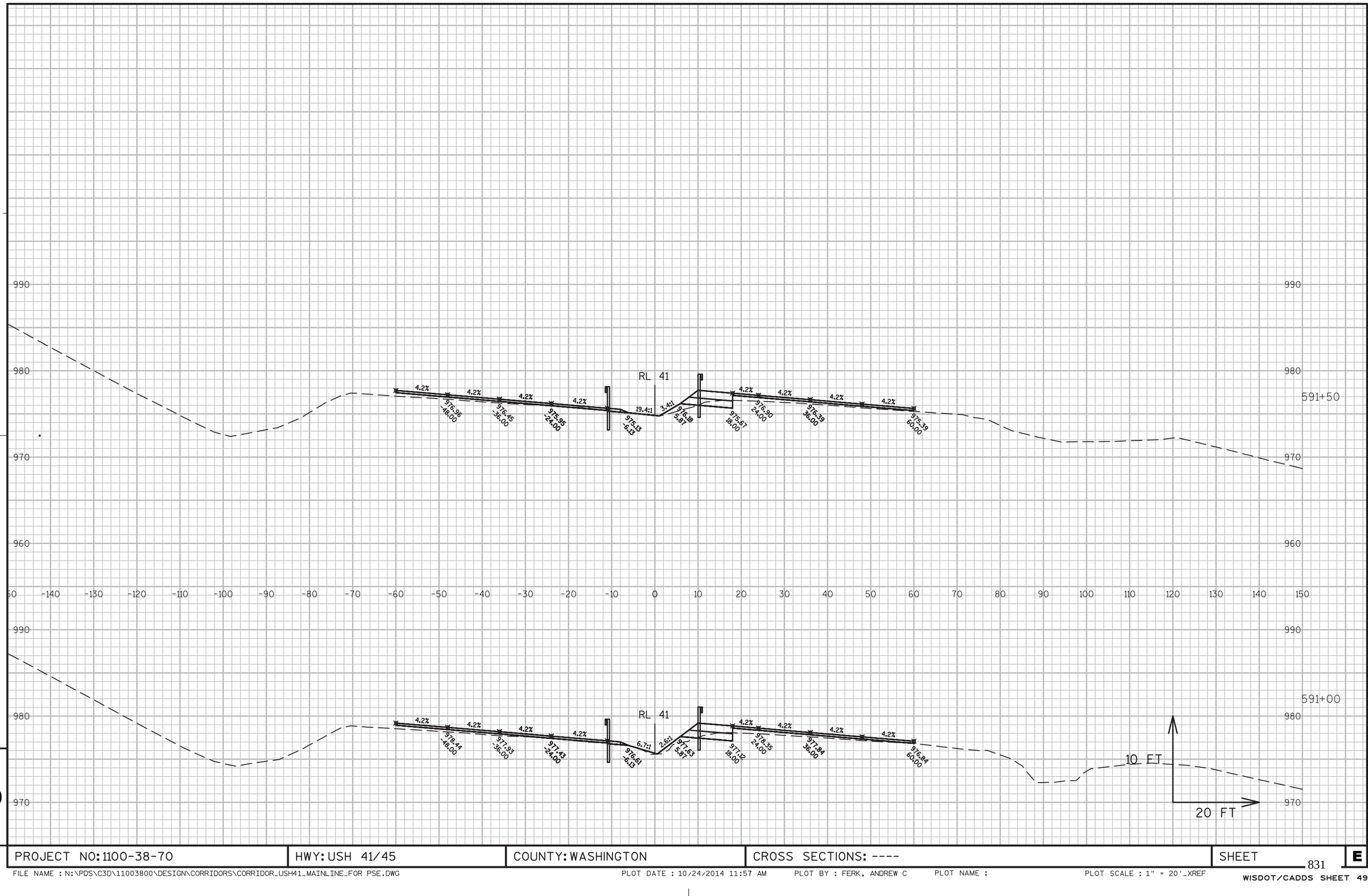
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET 829	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_MAINLINE_FOR PSE.DWG PLOT DATE : 10/24/2014 11:56 AM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

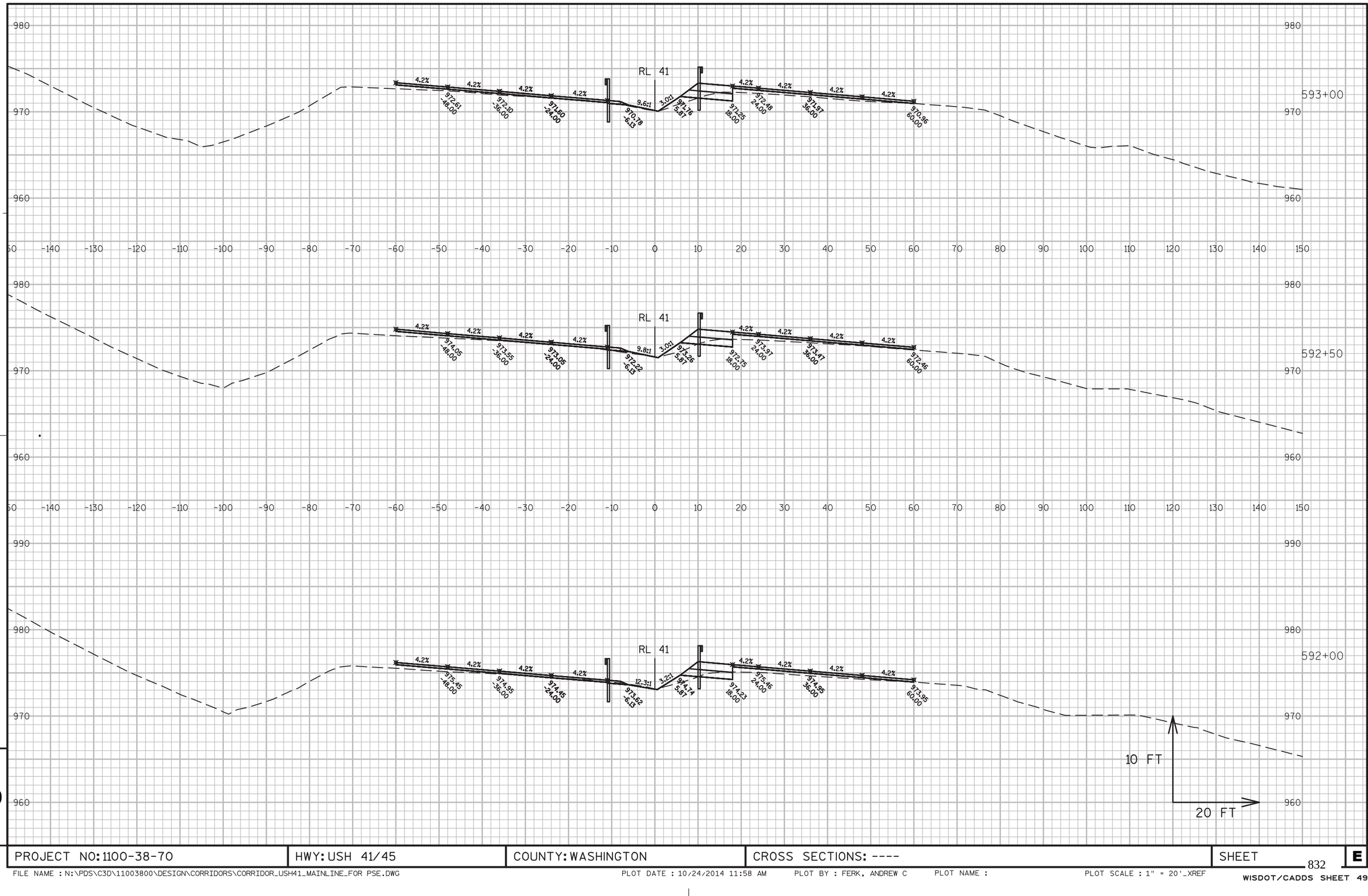


PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET 830	E

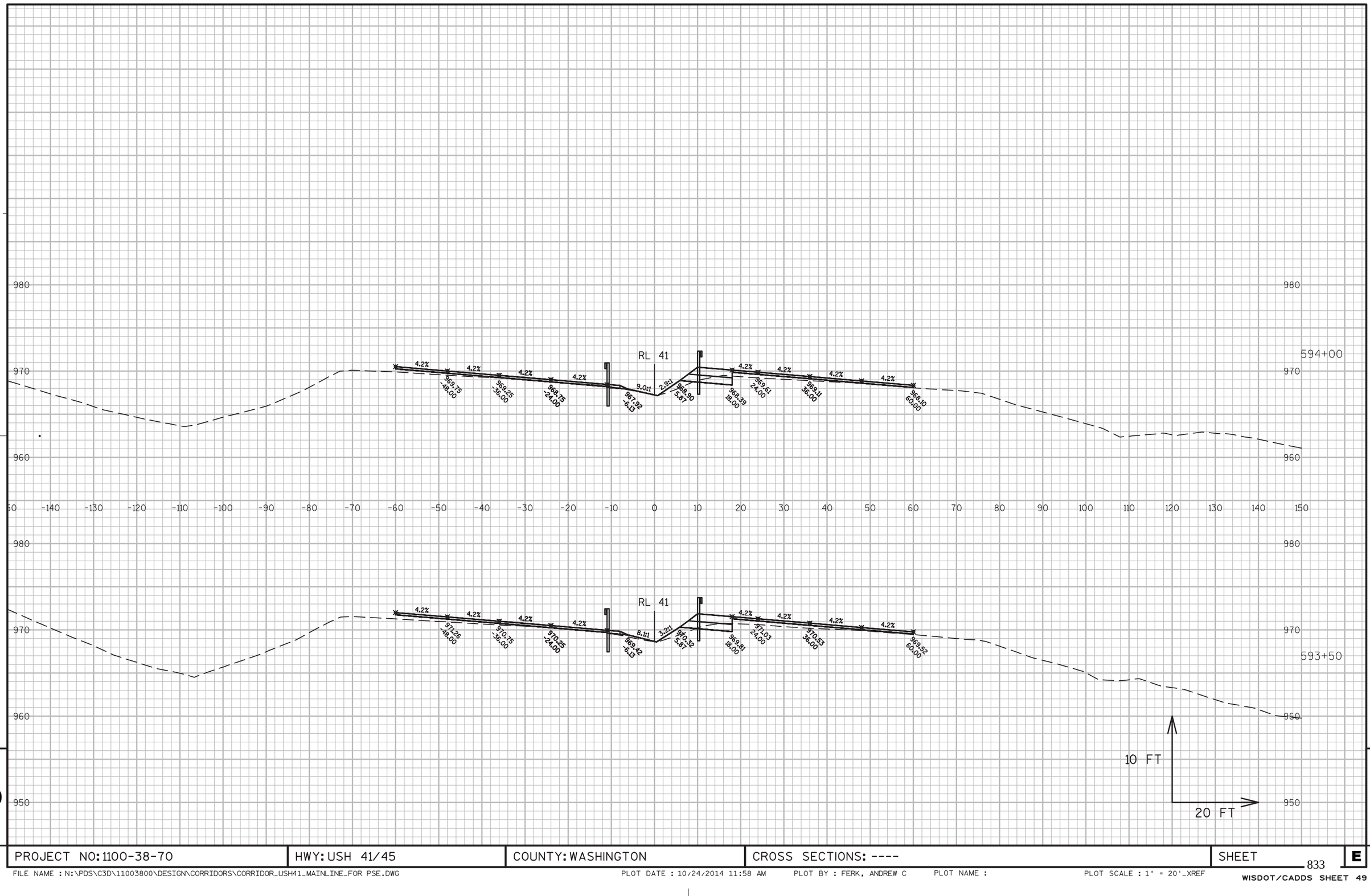
FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_MAINLINE_FOR PSE.DWG PLOT DATE : 10/24/2014 11:57 AM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF
WISDOT/CADDS SHEET 49



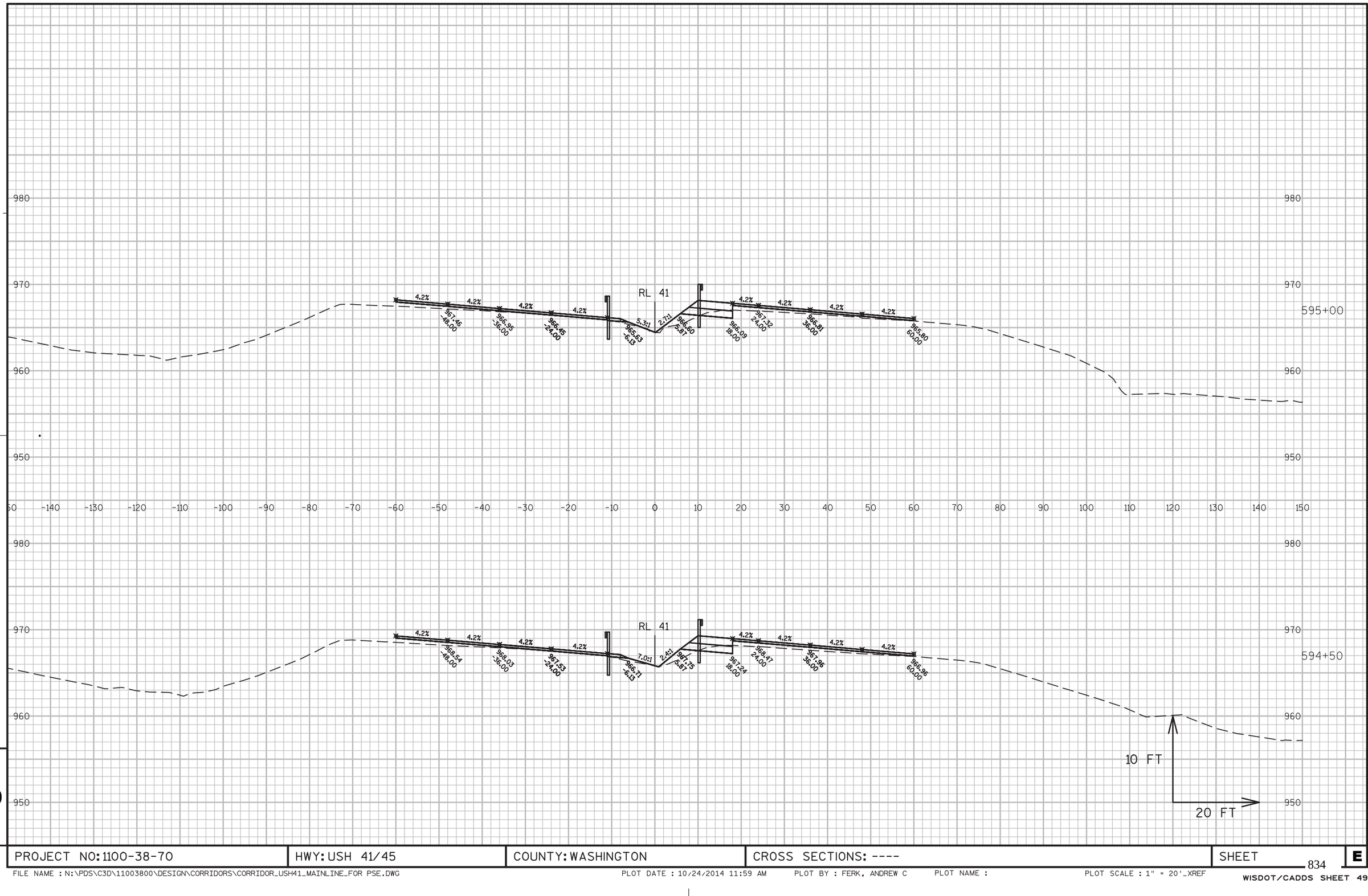
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET	E



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET 832	E



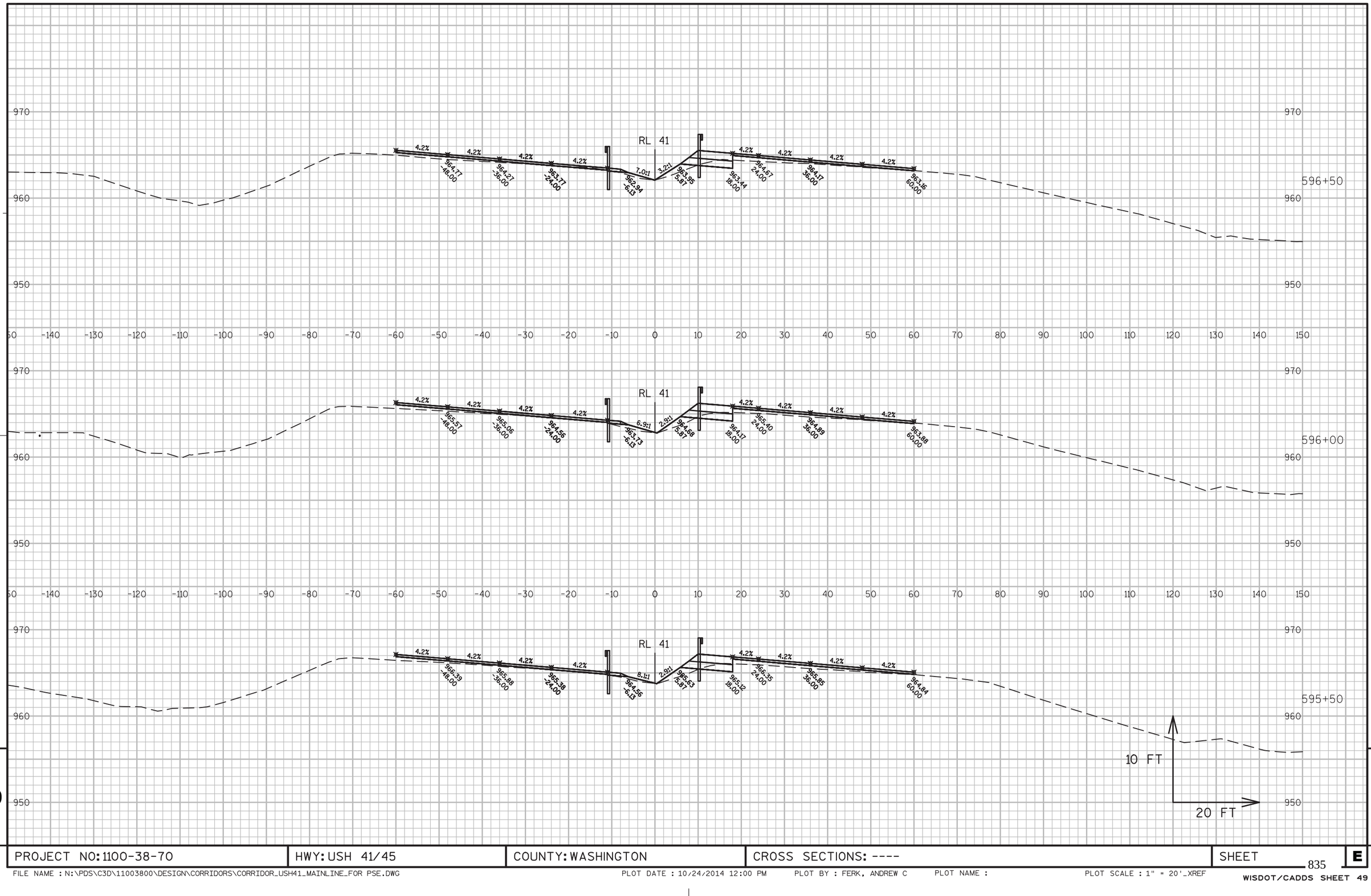
9	PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET 833 E



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET 834	E

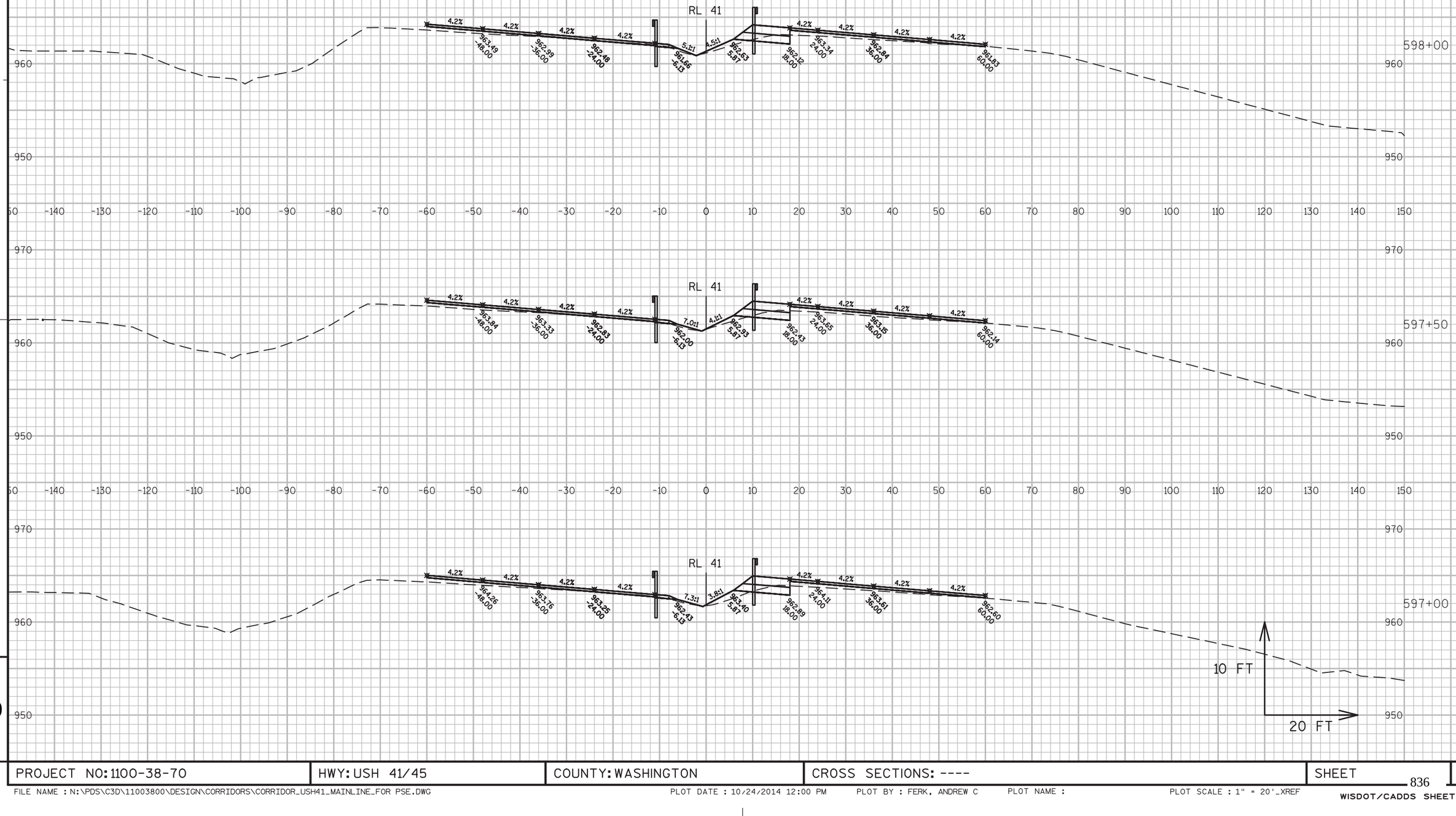
FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_MAINLINE_FOR PSE.DWG PLOT DATE : 10/24/2014 11:59 AM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49

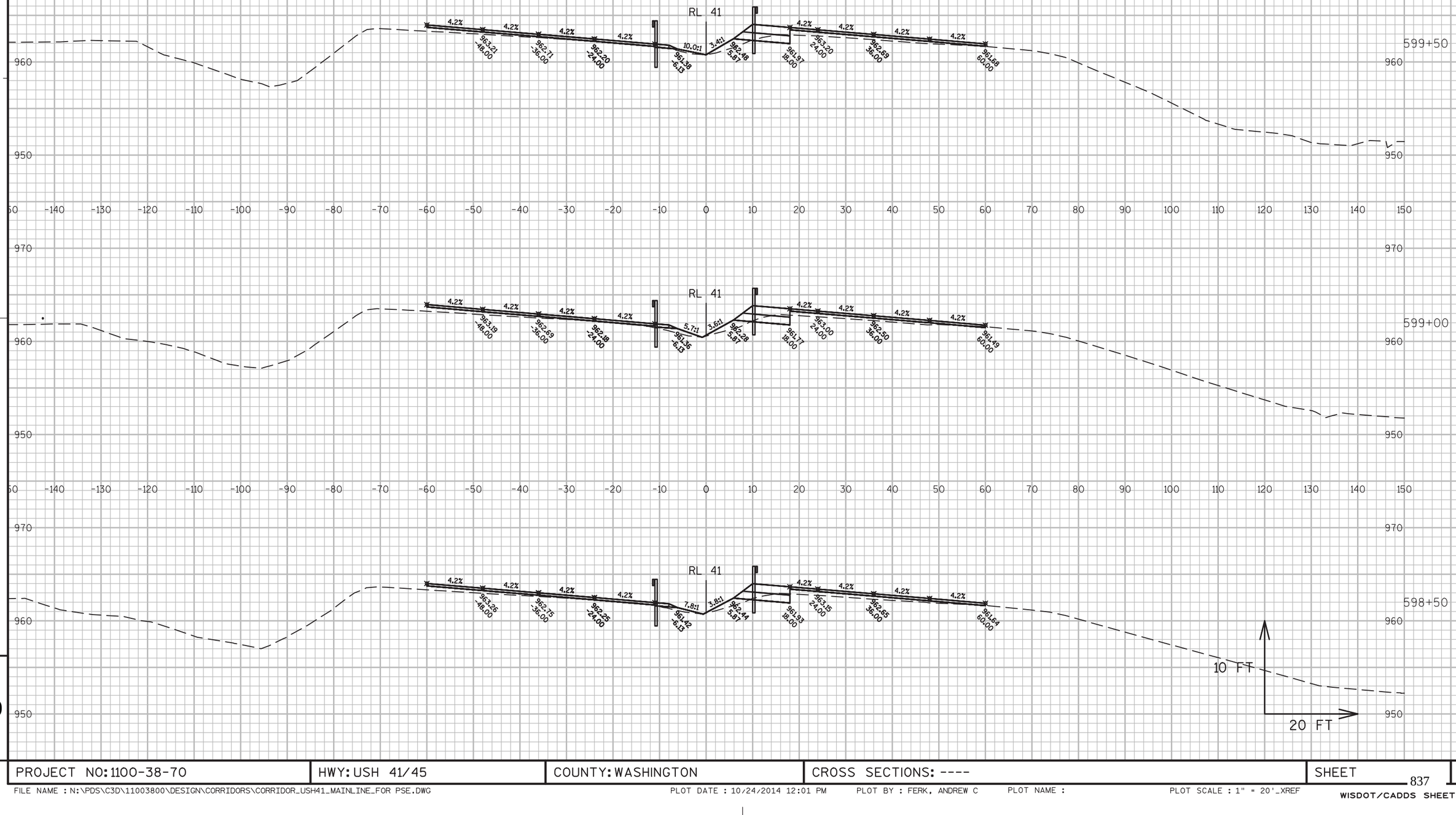


PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET 835 E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_MAINLINE_FOR PSE.DWG PLOT DATE : 10/24/2014 12:00 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET	E

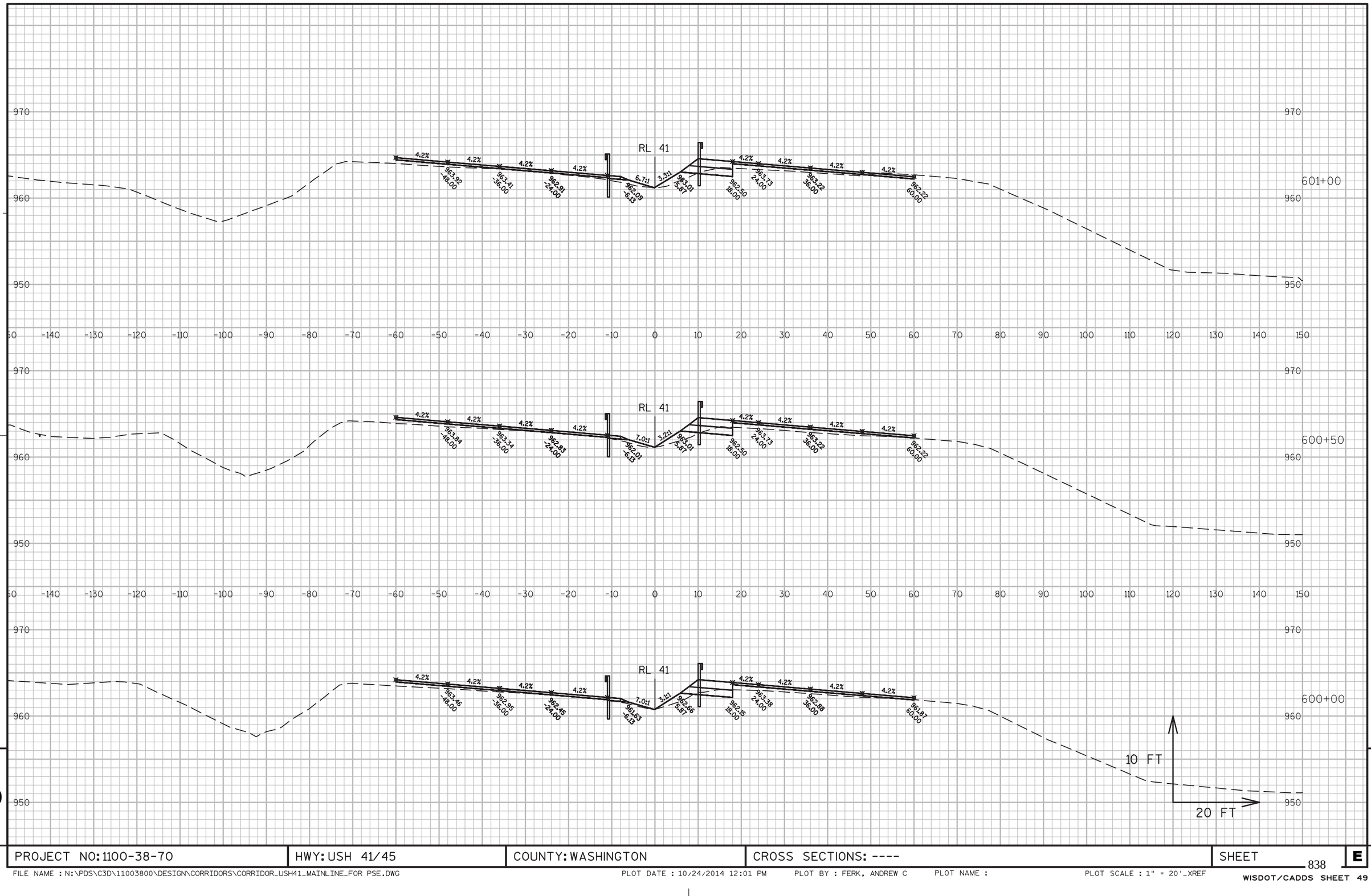


9

9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET	E

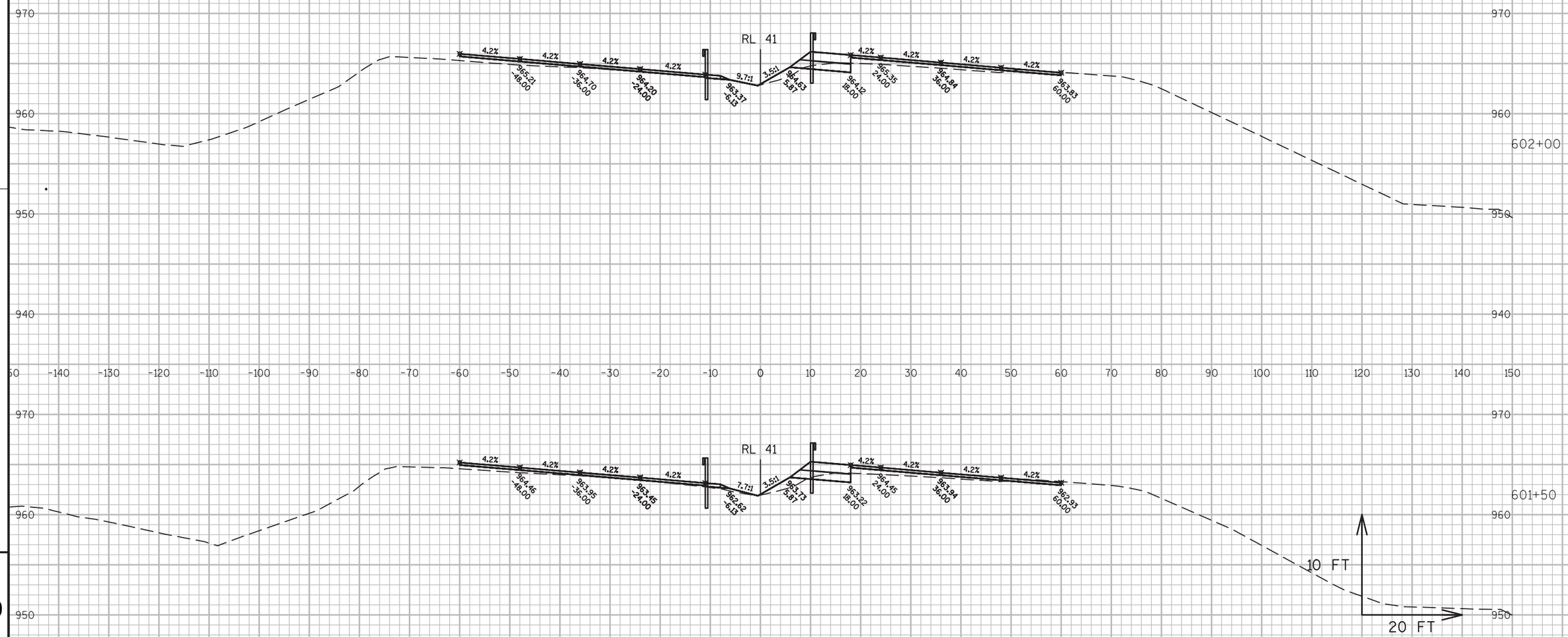
FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_MAINLINE_FOR PSE.DWG PLOT DATE : 10/24/2014 12:01 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_MAINLINE_FOR PSE.DWG PLOT DATE : 10/24/2014 12:01 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

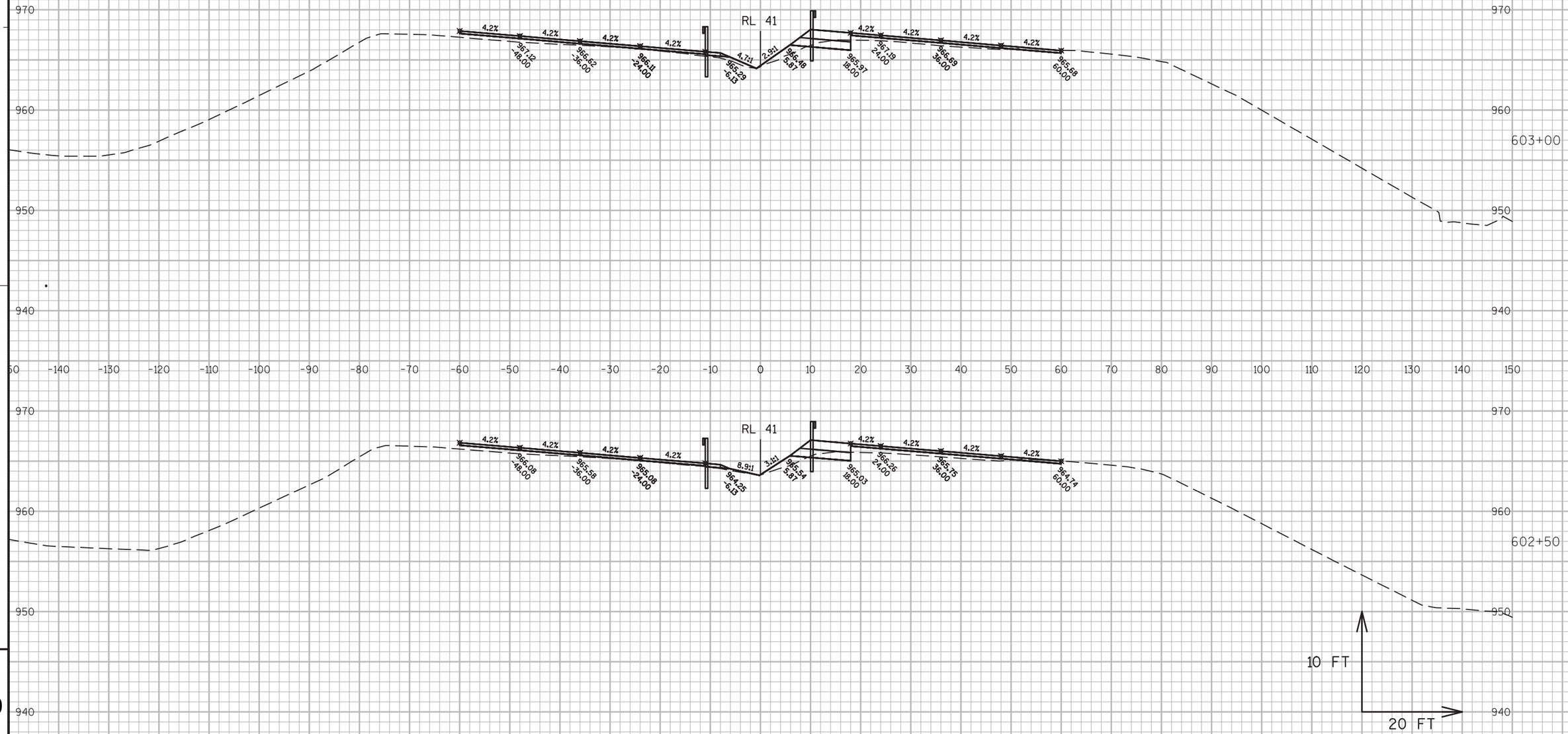
WISDOT/CADDS SHEET 49



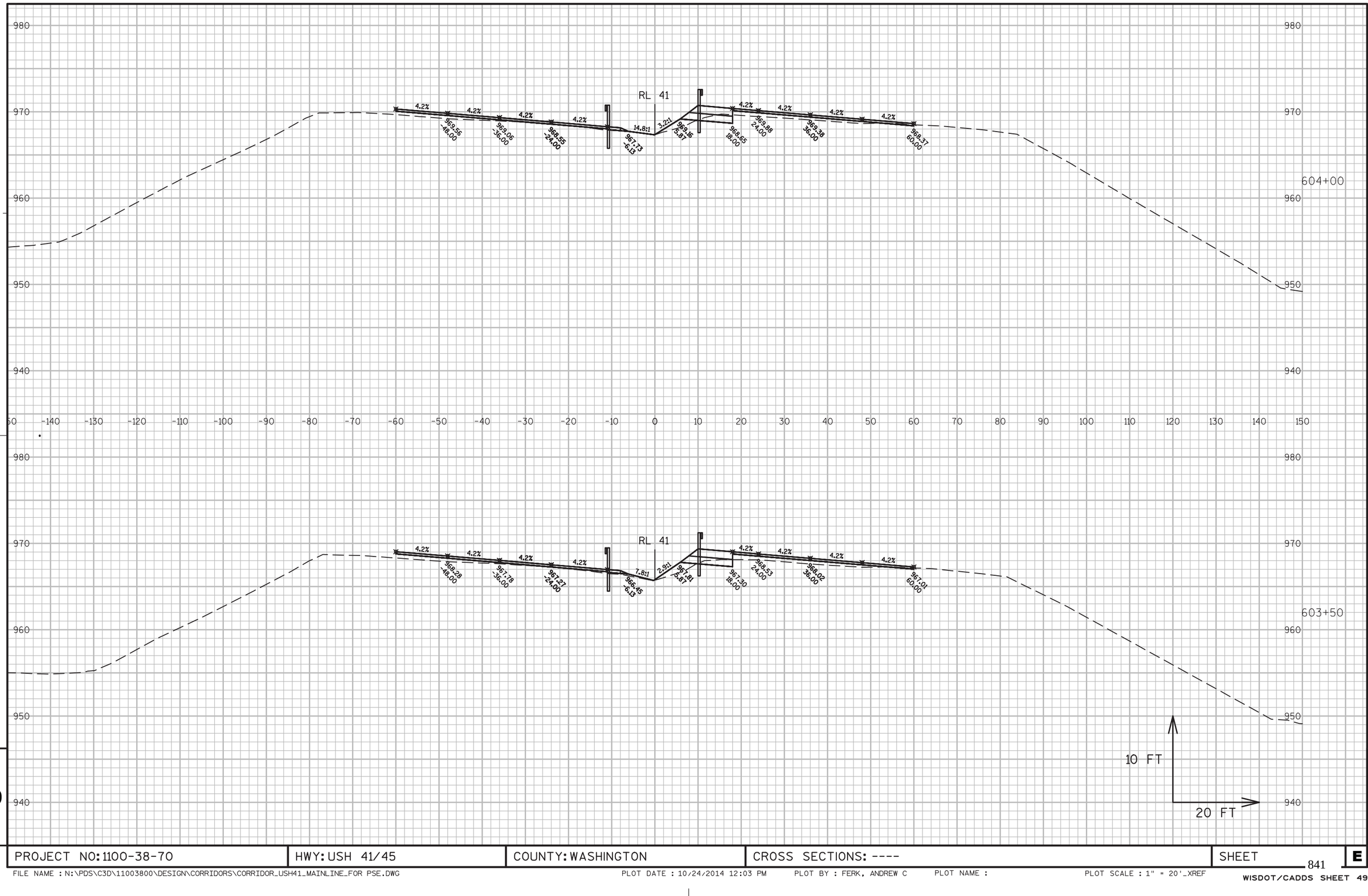
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET 839	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_MAINLINE_FOR PSE.DWG PLOT DATE : 10/24/2014 12:02 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



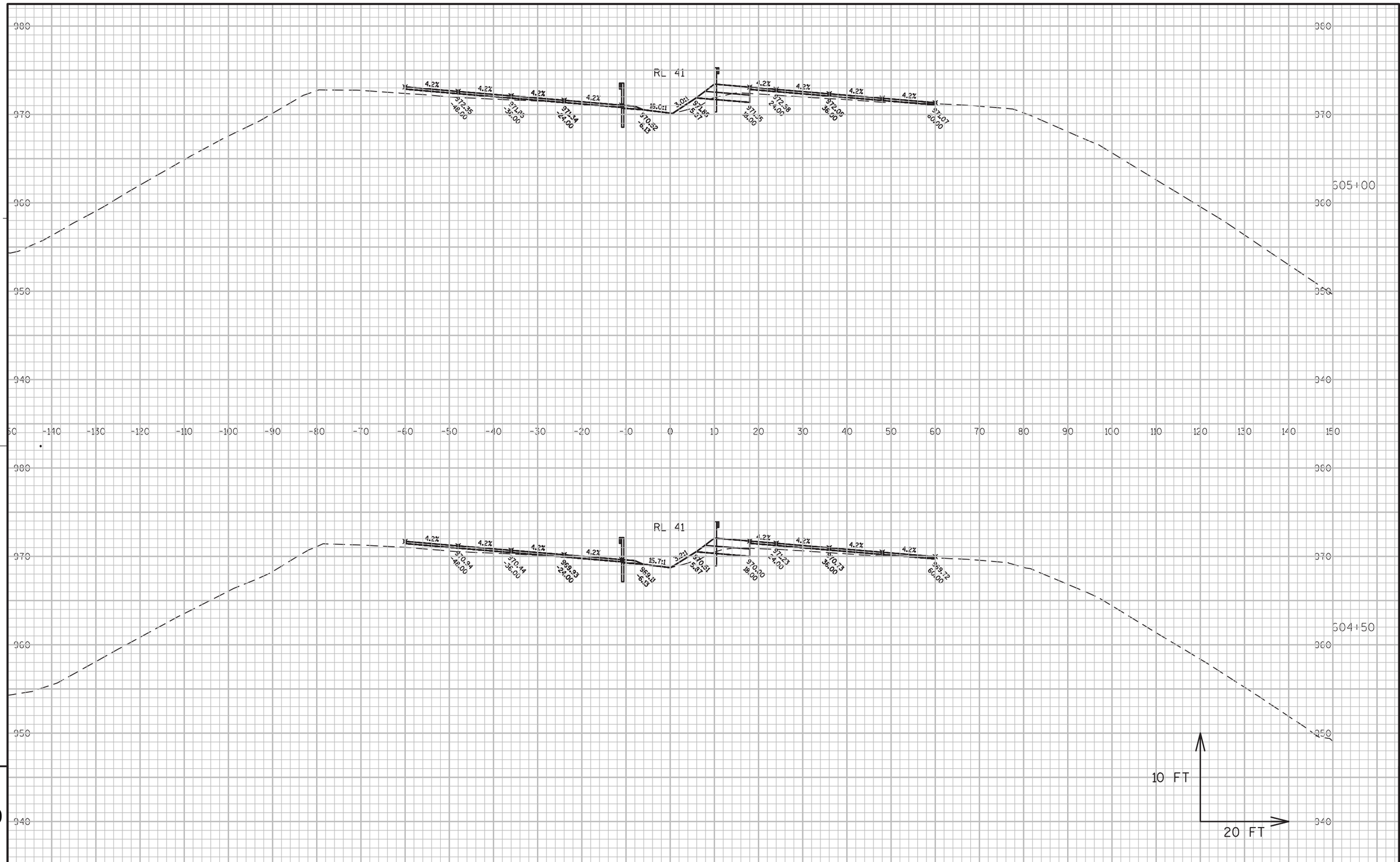
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET 840	E



9

9

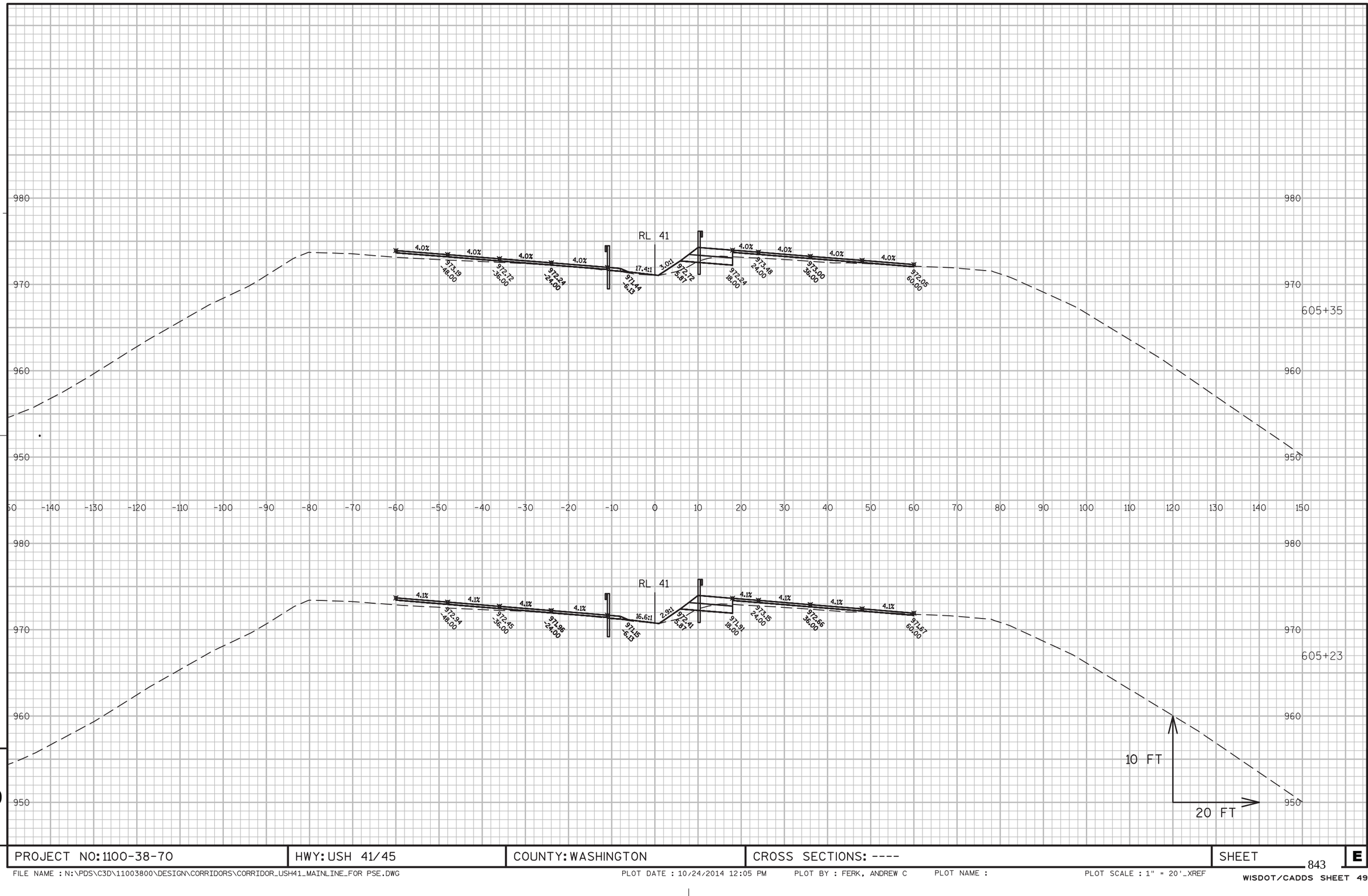
PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET 841	E



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_MAINLINE_FOR PSE.DWG PLOT DATE : 10/24/2014 12:04 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

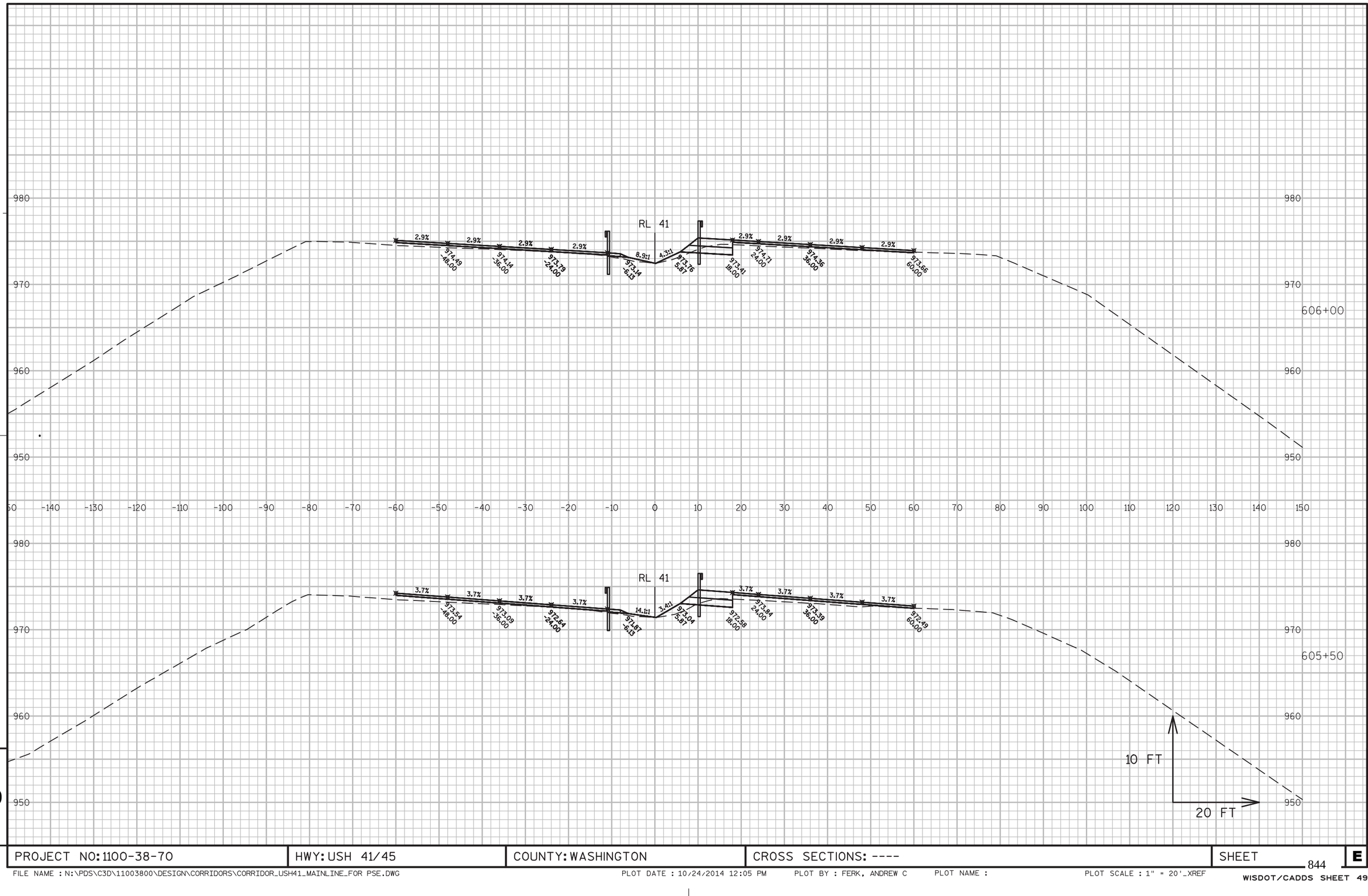
WISDOT/CADDS SHEET 49



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET 843	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_MAINLINE_FOR PSE.DWG PLOT DATE : 10/24/2014 12:05 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

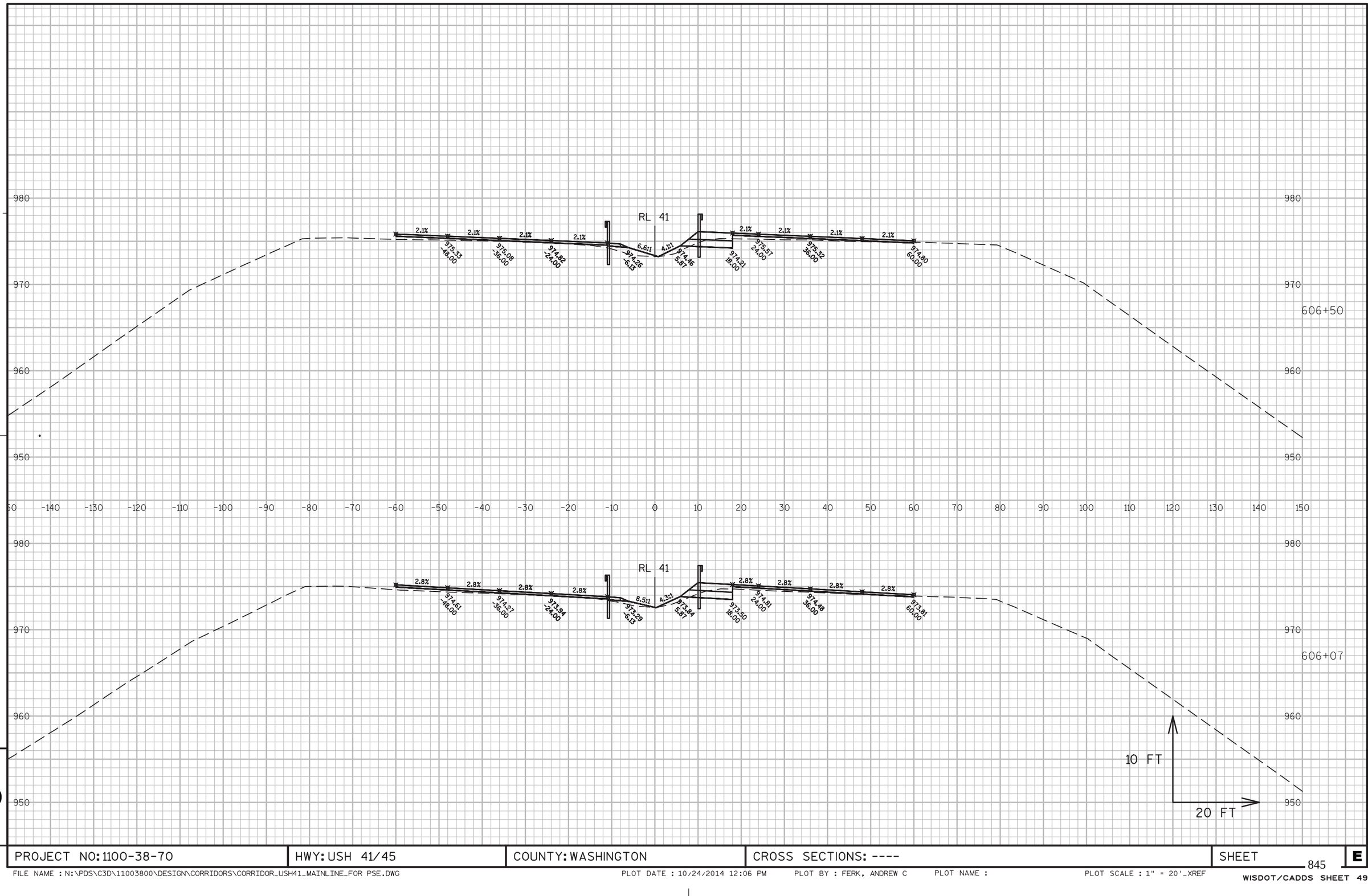
WISDOT/CADDS SHEET 49



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET 844	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_MAINLINE_FOR PSE.DWG PLOT DATE : 10/24/2014 12:05 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

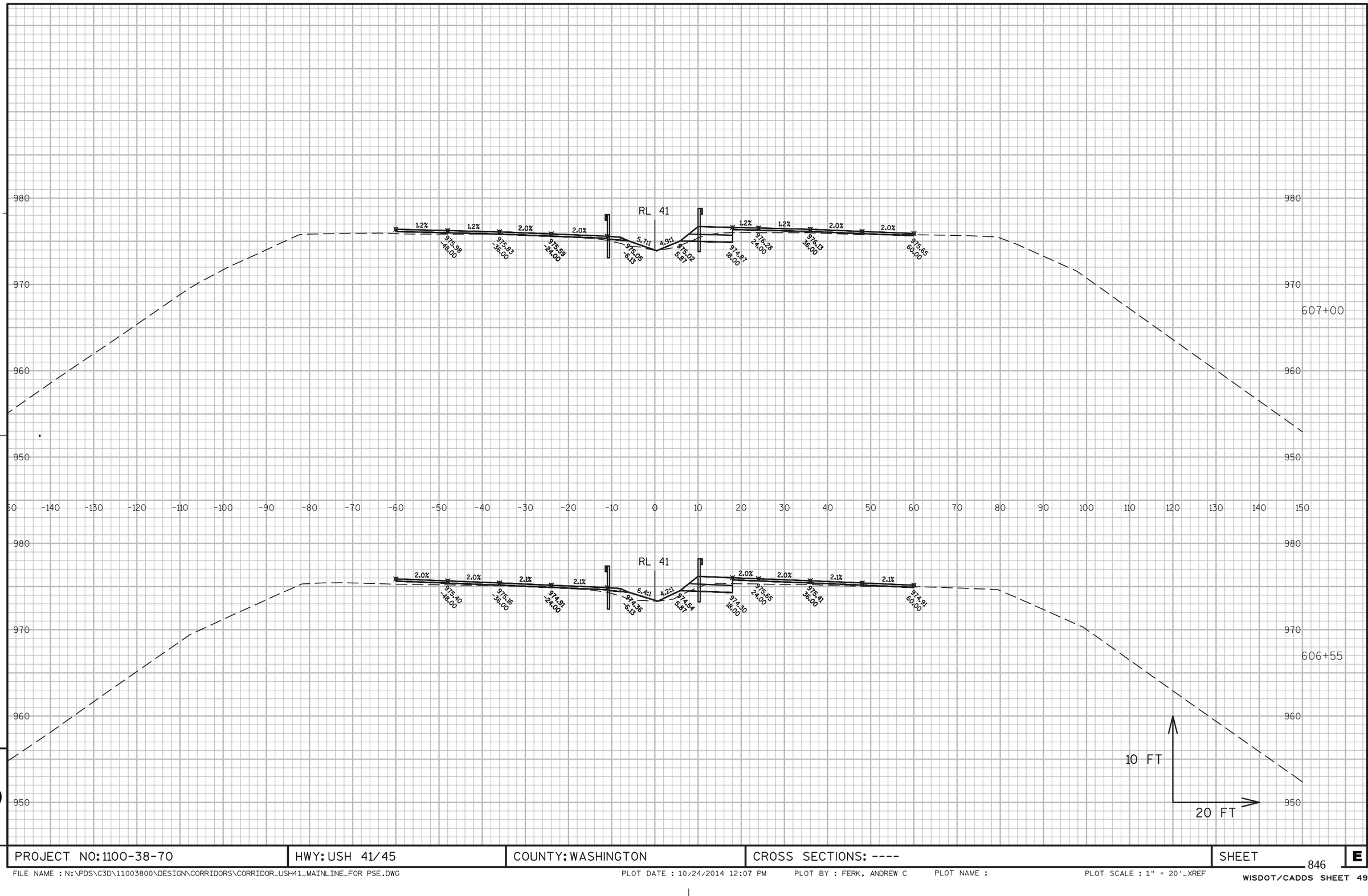
WISDOT/CADDS SHEET 49



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET 845	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_MAINLINE_FOR PSE.DWG PLOT DATE : 10/24/2014 12:06 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET 846	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_MAINLINE_FOR PSE.DWG PLOT DATE : 10/24/2014 12:07 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

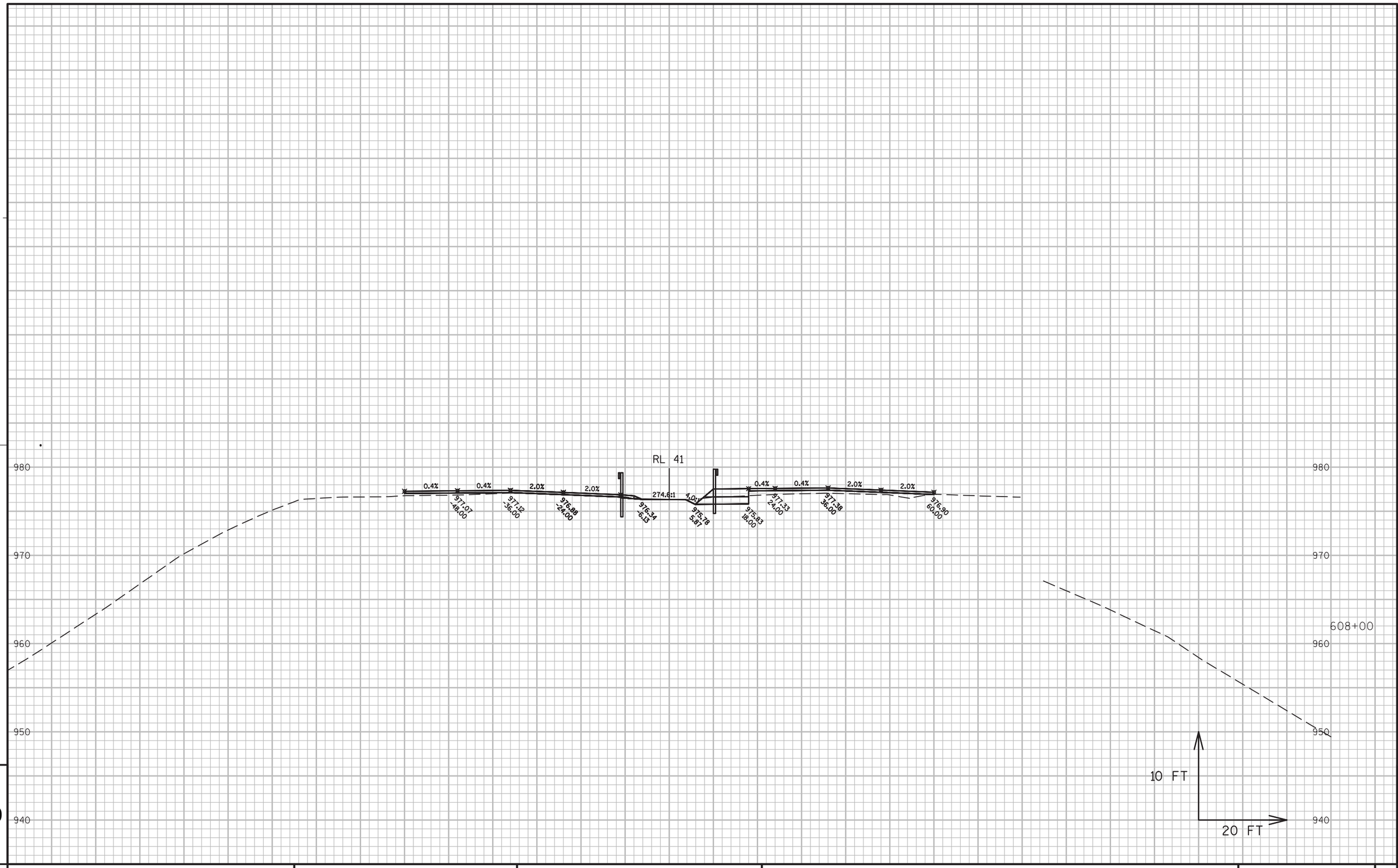
WISDOT/CADDS SHEET 49



PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET 847	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_MAINLINE_FOR PSE.DWG PLOT DATE : 10/24/2014 12:07 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1100-38-70	HWY: USH 41/45	COUNTY: WASHINGTON	CROSS SECTIONS: ----	SHEET	E

FILE NAME : N:\PDS\C3D\11003800\DESIGN\CORRIDORS\CORRIDOR_USH41_MAINLINE_FOR PSE.DWG PLOT DATE : 10/24/2014 12:08 PM PLOT BY : FERK, ANDREW C PLOT NAME : PLOT SCALE : 1" = 20'_XREF

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov