MAD MARCH 2015

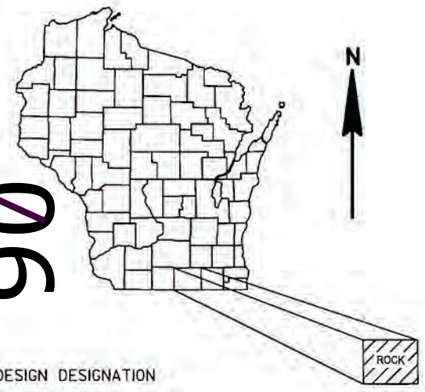
PROJECT ID: 1706-00-72
WITH: 5569-00-73

COUNTY: ROCK

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 = 56



DESIGN DESIGNATION

A.A.D.T. (2015)	=	100
A.A.D.T. (2035)	=	115
D.H.V. (2035)	=	10
D.D.	=	100/0
T.	=	100.0%
DESIGN SPEED	=	25-55 M.P.H.
ESALS	=	330,000

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	

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

DUBUQUE - JANESVILLE

W COURT STREET INTERSECTION

STH 11

ROCK COUNTY

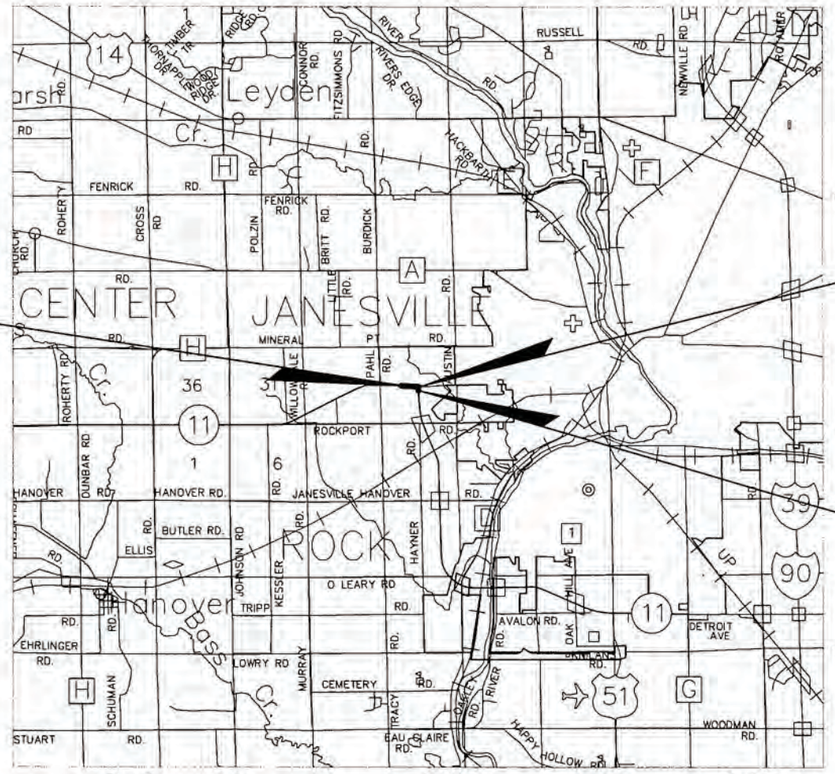
STATE PROJECT NUMBER
1706-00-72

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1706-00-72	———	—

BEGIN PROJECT 1706-00-72
STA 52+68.00'EB'
X = 477071.922
Y = 267674.800
MATCH EXISTING

END PROJECT 1706-00-72
STA 58+00.00'EB'
END CONSTRUCTION
STA 84+00.00'NB'

BEGIN CONSTRUCTION 1706-00-72
81+57.00'NB'
X = 267429.056
Y = 477610.940
MATCH EXISTING



LAYOUT

TOTAL NET LENGTH OF CENTERLINE = 0.000 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, ROCK 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.

ORIGINAL PLANS PREPARED BY

Mead & Hunt
Mead & Hunt, Inc.
2440 Deming Way
Middleton, WI. 53562
608.273.6380
fax: 608.273.6391
www.meadhunt.com

WISCONSIN PROFESSIONAL ENGINEER
TROY J. PANKRATZ
E-36644
OREGON, WI

1/23/2015

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	
Surveyor	JEWELL ASSOCIATES ENGINEERS, INC.
Designer	MEAD & HUNT
Project Manager	VICKI ROMENESKO
Regional Examiner	
Regional Supervisor	KURT JOHNSON
C.O. Reviewer	

APPROVED FOR THE DEPARTMENT
DATE: 01/22/2015 (Signature)

E

2

GENERAL NOTES

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO THE APPROXIMATE USGS DATUM NAVD 88 (2007).

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

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

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

CURVE DATA IS BASED ON THE ARC DEFINITION.

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

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, ARE TO BE 4-INCH TOPSOIL, FERTILIZED, SEEDED AND EROSION MATTED.

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

ALL CURB AND GUTTER RADII, PAVEMENT DIMENSIONS AND STATIONS ARE SHOWN TO THE EDGE OF PAVEMENT UNLESS NOTED OTHERWISE.

CONSTRUCT INSIDE EDGE OF TERRACE 1/4-INCH HIGHER THAN THE TOP OF CURB, WHEN THEY ARE ADJACENT TO EACH OTHER.

A VERTICAL SAWCUT SHALL BE MADE THROUGH EXISTING PAVEMENTS AT REMOVAL LIMITS.

EXCAVATION BELOW SUBGRADE (EBS) IS NOT USED TO BALANCE YARDAGE AND IS NOT SHOWN ON THE CROSS SECTIONS BUT IS MEASURED AND PAID FOR AS COMMON OR ROCK EXCAVATION.

SILT FENCE IS TO BE PLACED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

EXISTING PIPE CULVERT AND/OR CONCRETE BOX CULVERT SIZES SHOWN ARE APPROXIMATE AND THE CONTRACTOR SHALL BASE ITS BID ON ACTUAL FIELD CONDITIONS.

HMA PAVEMENT SHALL BE PLACED IN ONE SINGULAR LAYER AND HAVE A THICKNESS OF 4-INCHES.

HMA PAVEMENT SHALL CONTAIN ASPHALTIC MATERIAL PG64-28. ASPHALTIC MATERIAL IS CALCULATED USING 5.5% OF THE HMA PAVEMENT TONNAGE.

HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN.

ORDER OF SECTION 2 SHEETS

PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
EROSION CONTROL DETAILS
PERMANENT SIGNING AND MARKING DETAILS
TRAFFIC CONTROL DETAILS
ALIGNMENT DETAILS

UTILITY CONTACTS

* ALLIANT ENERGY
ELECTRICITY AND GAS/PETROLEUM
ATTN: MR. JASON HOGAN
SUITE 1000
4902 N. BILTMORE LANE
MADISON, WI 53718

TELEPHONE: (608) 458-4871
EMAIL: JASONHOGAN@ALLIANTENERGY.COM

* CHARTER COMMUNICATIONS
COMMUNICATION
ATTN: MR. BRANDON STORM
2701 DANIELS ST.
MADISON, WI 53718

TELEPHONE: (608) 274-3822
EMAIL: BRANDON.STORM@CHARTER.COM

* McLEOD USA TELECOMMUNICATION SERVICES INC.
COMMUNICATION
ATTN: MR. JIM KOSTUCH
13935 BISHOPS DRIVE
BROOKFIELD, WI 53005

TELEPHONE: (262) 792-7938
EMAIL: JAMES.KOSTUCH@WINDSTREAM.COM

* WISCONSIN DOT
ELECTRICITY
ATTN: MS. DENA DRAMM
2101 WRIGHT STREET
MADISON, WI 53714

TELEPHONE: (608) 246-5360
EMAIL: DENA.DRAMM@DOT.WI.GOV

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

* DENOTES DIGGERS HOTLINE MEMBER

WISDOT CONTACT
WISDOT, SOUTHWEST REGION
2101 WRIGHT ST.
MADISON, WI 53704

ATTN: MS. VICKI ROMENESKO, P.E.
TELEPHONE: 608-246-5333
E-MAIL: VICKI.ROMENESKO@DOT.WI.GOV

CONSULTANT CONTACT
MEAD & HUNT, INC.
2440 DEMING WAY
MIDDLETON, WI 53562

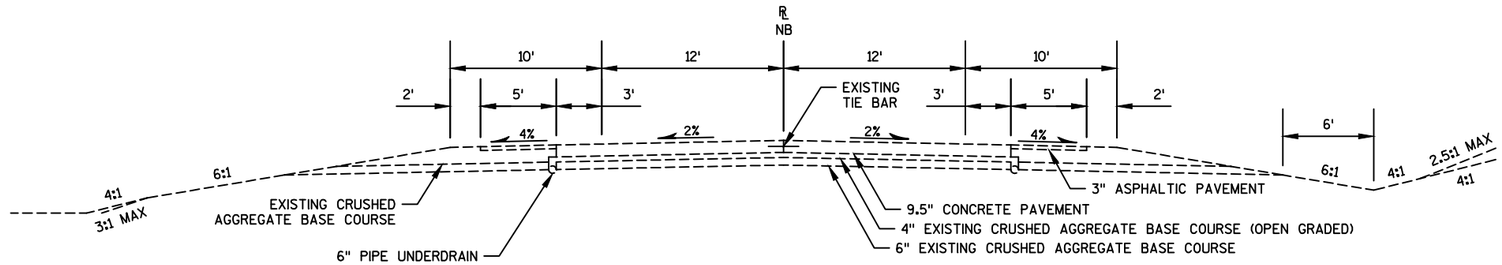
ATTN: MR. TROY PANKRATZ, P.E.
TELEPHONE: 608-273-6380
E-MAIL: TROY.PANKRATZ@MEADHUNT.COM

DNR LIAISON
DEPARTMENT OF NATURAL RESOURCES
SOUTH CENTRAL DISTRICT
3911 SOUTH FISH HATCHERY ROAD
FITCHBURG, WI 53711

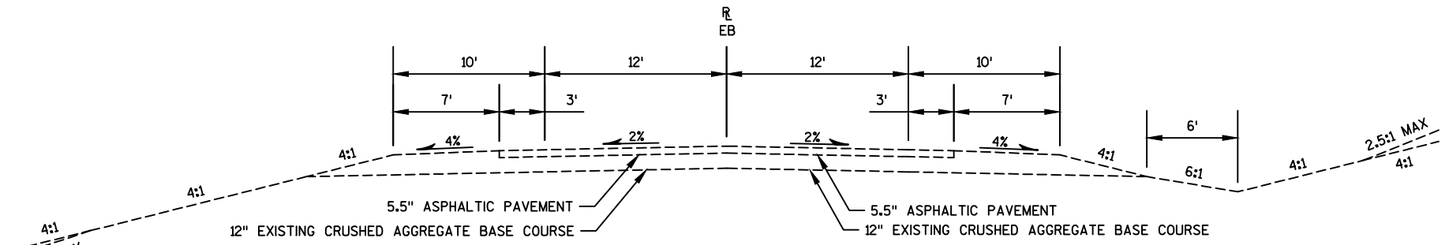
ATTN: MS. LAURA BUB
TELEPHONE: 608-275-3485
E-MAIL: LAURA.BUB@WISCONSIN.GOV

STANDARD ABBREVIATIONS

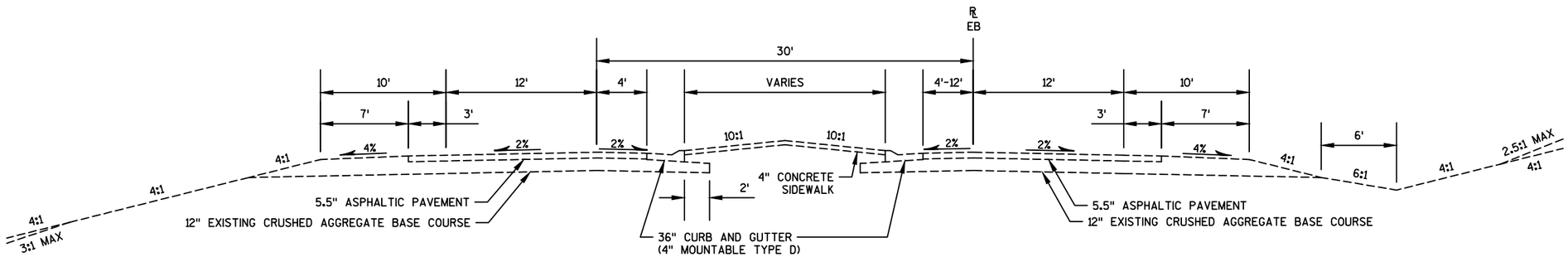
ABUT	ABUTMENT
AP	ACCESS POINT
AR	ACCESS RIGHTS
AC	ACRE
AGG	AGGREGATE
AH	AHEAD
ET AL	AND OTHERS
∠	ANGLE
ASPH	ASPHALTIC
APM	ASPHALTIC PLANT MIX
AVG	AVERAGE
AADT	ANNUAL AVERAGE DAILY TRAFFIC
BK	BACK
BF	BACK FACE
BL or B/L	BASE LINE
BM	BENCH MARK
BLK	BLOCK
BR	BRIDGE
CB	CATCH BASIN
CL or C/L	CENTER LINE
CC	CENTER TO CENTER
	CENTRAL ANGLE OR DELTA
CH	CHORD
CH BRG	CHORD BEARING
CE	COMMERCIAL ENTRANCE
CONC	CONCRETE
CB#	CONTROL BASE
CORR	CORRUGATED
CACP	CORRUGATED ALUMINUM CULVERT PIPE
CAPA	CORRUGATED ALUMINUM PIPE ARCH
CSCP	CORRUGATED STEEL CULVERT PIPE
CSPA	CORRUGATED STEEL PIPE ARCH
CSPCP	CORRUGATED STEEL PIPE CATTLE PASS
CO	COUNTY
CTH	COUNTY TRUNK HIGHWAY
CR	CREEK
CR	CRUSHED
CABC	CRUSHED AGGREGATE BASE COURSE
CY or CUYD	CUBIC YARD
CULV	CULVERT
CP	CULVERT PIPE
CG	C & G CURB AND GUTTER
D	DEGREE OF CURVE
DHV	DESIGN HOUR VOLUME
DIA	DIAMETER
DD	DIRECTIONAL DISTRIBUTION
DISCH	DISCHARGE
DIST	DISTRICT
DG	DITCH GRADE
DOC	DOCUMENT
DWY	DRIVEWAY
E	EAST
X	EAST GRID COORDINATE
EB	EASTBOUND
ELEC	ELECTRIC (AL)
EL or ELEV	ELEVATION
EMB	EMBANKMENT
EVP	EMERGENCY VEHICLE PREEMPT
EVPR	EMERGENCY VEHICLE PREEMPT RECEIVER
EW	ENDWALL
ENT	ENTRANCE
ESALS	EQUIVALENT SINGLE AXLE LOADS
EXC	EXCAVATION
EBS	EXCAVATION BELOW SUBGRADE
EX or EXIST	EXISTING
FL or F/L	FLOW LINE
FT	FOOT
FTG	FOOTING
FDN	FOUNDATION
FTMS	FREEWAY TRAFFIC MANAGEMENT SYSTEM
G	GARAGE
GN	GRID NORTH
EXP	EXPANSION
FF	FACE TO FACE OR FRONT FACE
FP	FENCE POST
FERT	FERTILIZE
FE	FIELD ENTRANCE
F	FILL
FG	FINISH GRADE
FAB	FLASHING ARROW BOARD
HES	HIGH EARLY STRENGTH
H	HOUSE
HYD	HYDRANT
IN DIA	INCH DIAMETER
INTERS	INTERSECTION
INV	INVERT
IP	IRON PIPE OR PIN
JT	JOINT
JCT	JUNCTION
LT	LEFT
LHF	LEFT-HAND FORWARD
L	LENGTH OF CURVE
LIN FT or LF	LINEAR FOOT
LC	LONG CHORD OF CURVE
LS	LUMP SUM
MAINT	MAINTENANCE
MH	MANHOLE
MP	MARKER POST
M	MARSH
ML or M/L	MATCH LINE
MATL	MATERIAL
MB	MESSAGE BOARD
NOM	NOMINAL
NRCPSS	NON REINFORCED CONCRETE PIPE STORM SEWER
NC	NORMAL CROWN
NW or N/W	NORMAL WATER
N	NORTH
Y	NORTH GRID COORDINATE
NB	NORTHBOUND
NO	NUMBER
OBLIT	OBLITERATE
OL	OUT LOT
OD	OUTSIDE DIAMETER
PAVT	PAVEMENT
PERM	PERMANENT
PLE	PERMANENT LIMITED EASEMENT
PU	PIPE UNDERDRAIN
PUDT	PIPE UNDERDRAIN DRAIN
PUU	PIPE UNDERDRAIN UNPERFORATED
PT	POINT
PCC	POINT OF COMPOUND CURVE
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PCC	PORTLAND CEMENT CONCRETE
LB Pound	LB POUND
PSI	POUNDS PER SQUARE INCH
PE	PRIVATE ENTRANCE
PROJ	PROJECT
PL	PROPERTY LINE
R	RADIUS
RP	RADIUS POINT
RR	RAILROAD
RM	RAMP METER
R	RANGE
RECY	RECYCLED
RL or R/L	REFERENCE LINE
RP	REFERENCE POINT
RCCP	REINFORCED CONCRETE CULVERT PIPE
CP	CULVERT PIPE
RCHECP	REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CULVERT PIPE
RCPA	REINFORCED CONCRETE PIPE ARCH
RCPCP	REINFORCED CONCRETE PIPE CATTLE PASS
RCPSS	REINFORCED CONCRETE PIPE STORM SEWER
REBAR	REINFORCEMENT BAR
REINF	REINFORCING OR REINFORCEMENT
REL	RELOCATE (D)
REM	REMAINING
REQD	REQUIRED
RES	RESIDENCE OR RESIDENTIAL
RW	RETAINING WALL
RT	RIGHT
RHF	RIGHT-HAND FORWARD
R/W	RIGHT-OF-WAY
R	RIVER
RD	ROAD
RDWY	ROADWAY
SALV	SALVAGED
SSS	SANITARY AND STORM SEWER
SAN S	SANITARY SEWER
SEC	SECTION
SHLDR	SHOULDER
SHR	SHRINKAGE
SW	SIDEWALK
SB#	SIGNAL BASE
S	SOUTH
SB	SOUTHBOUND
SP	SPECIAL
SC	SPECIAL CROSSING
SPECS	SPECIFICATIONS
SQ	SQUARE
SF or SQ FT	SQUARE FEET
SY or SQ YD	SQUARE YARD
STD	STANDARD
SDD	STANDARD DETAIL DRAWINGS
STH	STATE TRUNK HIGHWAYS
STA	STATION
SS	STORM SEWER
SE	SUPERELEVATION
SURF	SURFACE
T	TANGENT
TEL	TELEPHONE
TEMP	TEMPORARY
TI	TEMPORARY INTEREST
TLE	TEMPORARY LIMITED EASEMENT
TPM	TEMPORARY PAVEMENT MARKING
TPMRT	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE
†	TON
TC	TOP OF CURB
T or TN	TOWN
TRANS	TRANSITION
TL or T/L	TRANSIT LINE
T	TRUCKS (PERCENT OF)
TYP	TYPICAL
UG	UNDERGROUND
USH	UNITED STATES HIGHWAY
VAR	VARIABLE
V	VELOCITY OR DESIGN SPEED
VERT	VERTICAL
VC	VERTICAL CURVE
VPCC	VERTICAL POINT OF COMPOUND
Curve	CURVE
VPC	VERTICAL POINT OF CURVE
VPI	VERTICAL POINT OF INTERSECTION
VPRC	VERTICAL POINT OF REVERSE CURVE
VPT	VERTICAL POINT OF TANGENCY
VIT	VITRIFIED
VOL	VOLUME
W	WATER
WM	WATER MAIN
WV	WATER VALVE
W	WELL
W	WEST
WB	WESTBOUND
YD	YARD



EXISTING TYPICAL SECTION STH 11 (SOUTH LEG)
STA 81+57.00'NB' TO STA 83+32.12'NB'

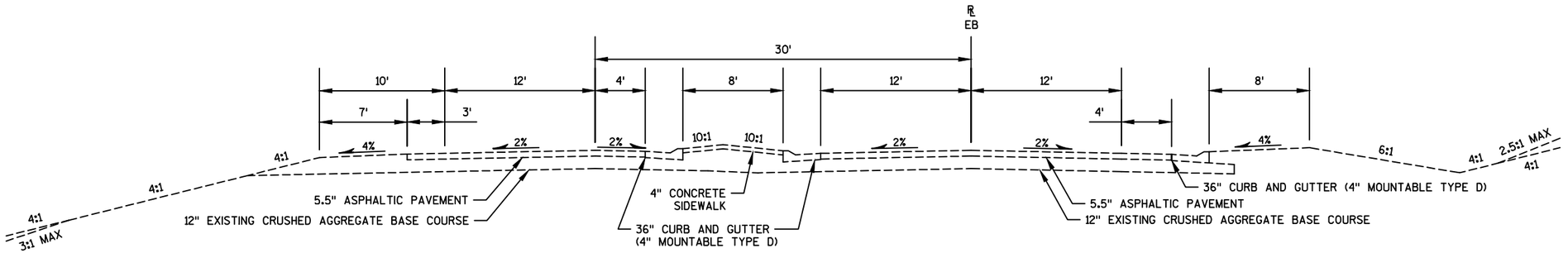


EXISTING TYPICAL SECTION STH 11 (WEST LEG)
STA 52+68.00'EB' TO STA 53+95.67'EB'



EXISTING TYPICAL SECTION STH 11 (WEST LEG)
STA 53+95.67 'EB' TO STA 56+81.77'EB'

PROJECT NO:1706-00-72	HWY: STH 11	COUNTY:ROCK	TYPICAL SECTIONS	SHEET 4

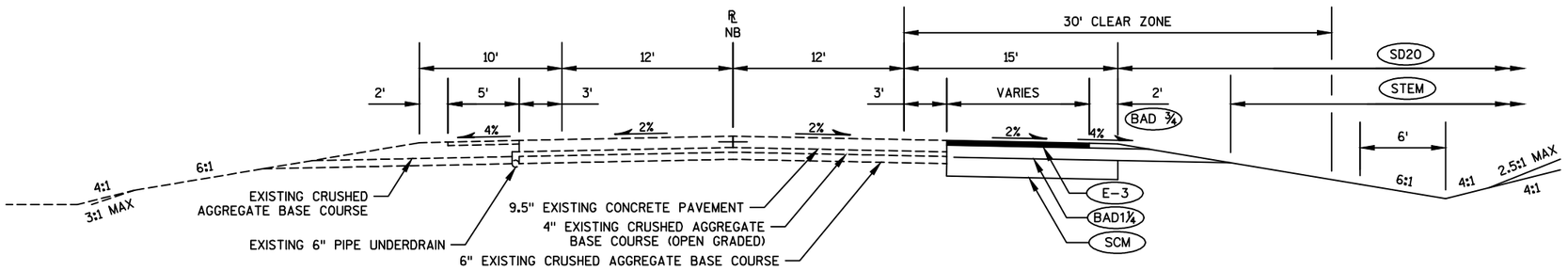


EXISTING TYPICAL SECTION STH 11 (WEST LEG)
STA 56+81.77'EB' TO STA 57+42.11'EB'

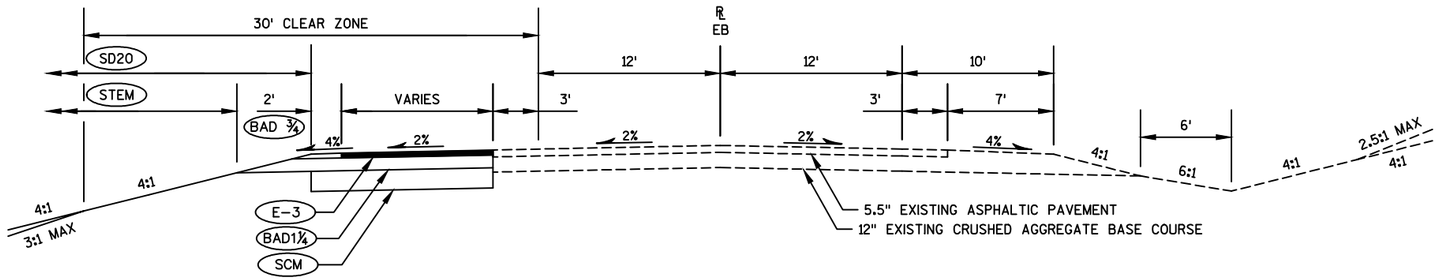
PROJECT NO:1706-00-72	HWY: STH 11	COUNTY:ROCK	TYPICAL SECTIONS	SHEET 5

FILE NAME : X:\3230900\150141.01\TECH\CAD\XXXXXXXX\SHEETSPLAN\COURT ST\020301_TS (COURT ST.).DWG PLOT DATE : 1/23/2015 8:40 AM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1 IN:10 FT

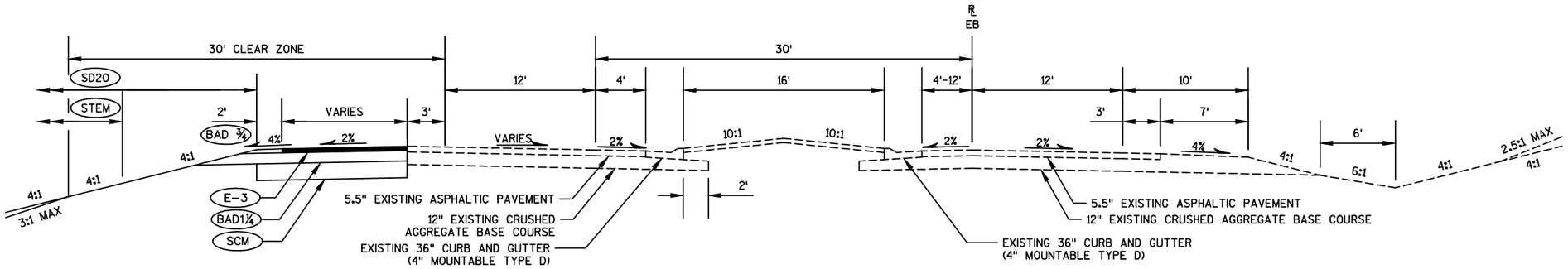
WISDOT/CADDS SHEET 42



FINISHED TYPICAL SECTION STH 11 (SOUTH LEG)
STA 81+57.00'NB' TO STA 83+32.12'NB'



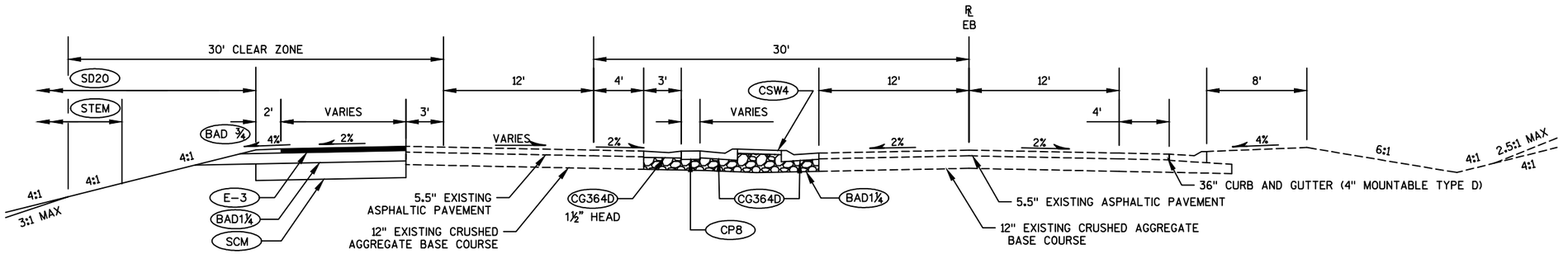
FINISHED TYPICAL SECTION STH 11 (WEST LEG)
STA 52+68.00'EB' TO STA 53+95.67'EB'



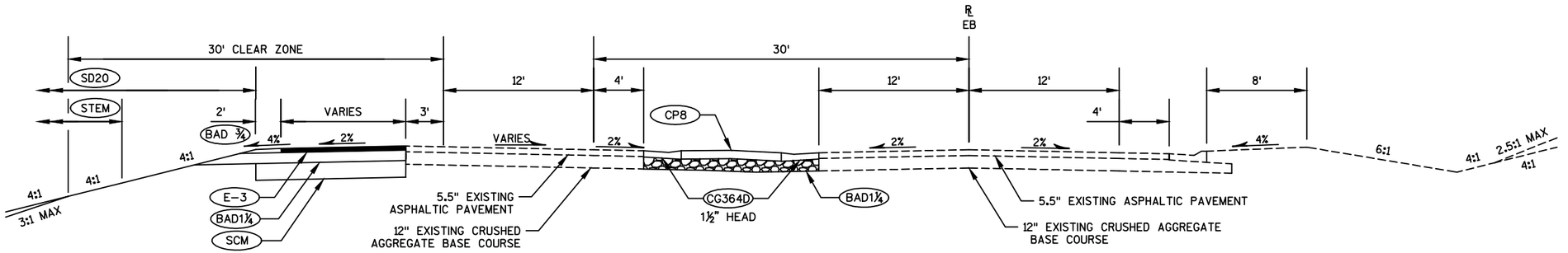
FINISHED TYPICAL SECTION STH 11 (WEST LEG)
STA 53+95.67'EB' TO STA 56+33.36'EB'

E-3	4" HMA PAVEMENT TYPE E-3
BAD1¼	10" BASE AGGREGATE DENSE 1¼-INCH
BAD ¾	4" BASE AGGREGATE DENSE ¾-INCH
SCM	16" SELECT CRUSHED MATERIAL
CP8	CONCRETE PAVEMENT 8-INCH (COLORING CONCRETE RED)
CSW4	CONCRETE SIDEWALK 4-INCH
CG364D	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D
SD20	SEEDING MIXTURE NO 20, FERTILIZER TYPE A
STEM	TOPSOIL AND EROSION MAT CLASS I TYPE B

PROJECT NO:1706-00-72	HWY: STH 11	COUNTY:ROCK	TYPICAL SECTIONS	SHEET 6



FINISHED TYPICAL SECTION STH 11 (WEST LEG)
STA 56+33.36'EB' TO STA 56+81.77'EB'



FINISHED TYPICAL SECTION STH 11 (WEST LEG)
STA 56+81.77'EB' TO STA 57+42.11'EB'

E-3	4" HMA PAVEMENT TYPE E-3
BAD1¼	10" BASE AGGREGATE DENSE 1¼-INCH
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CP8	CONCRETE PAVEMENT 8-INCH (COLORING CONCRETE RED)
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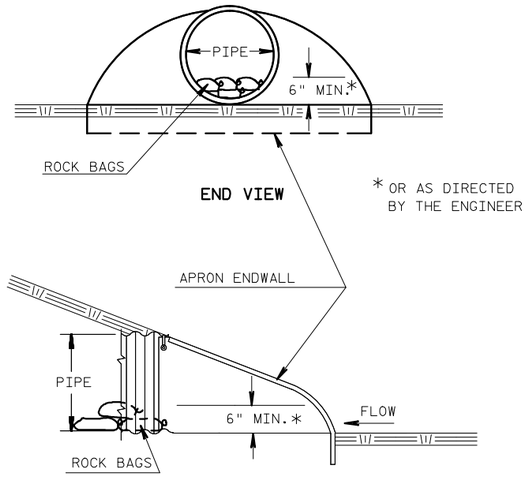
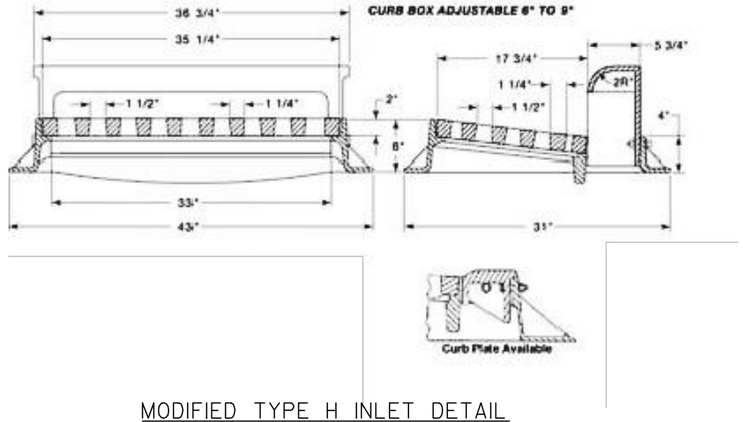
CG364D	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D
SD20	SEEDING MIXTURE NO 20, FERTILIZER TYPE A
STEM	TOPSOIL AND EROSION MAT CLASS I TYPE B

PROJECT NO:1706-00-72	HWY: STH 11	COUNTY:ROCK	TYPICAL SECTIONS	SHEET 7 E



CULVERT PIPE CHECKS

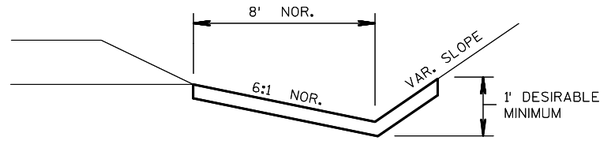


MODIFIED TYPE H INLET DETAIL

RUNOFF COEFFICIENT TABLE

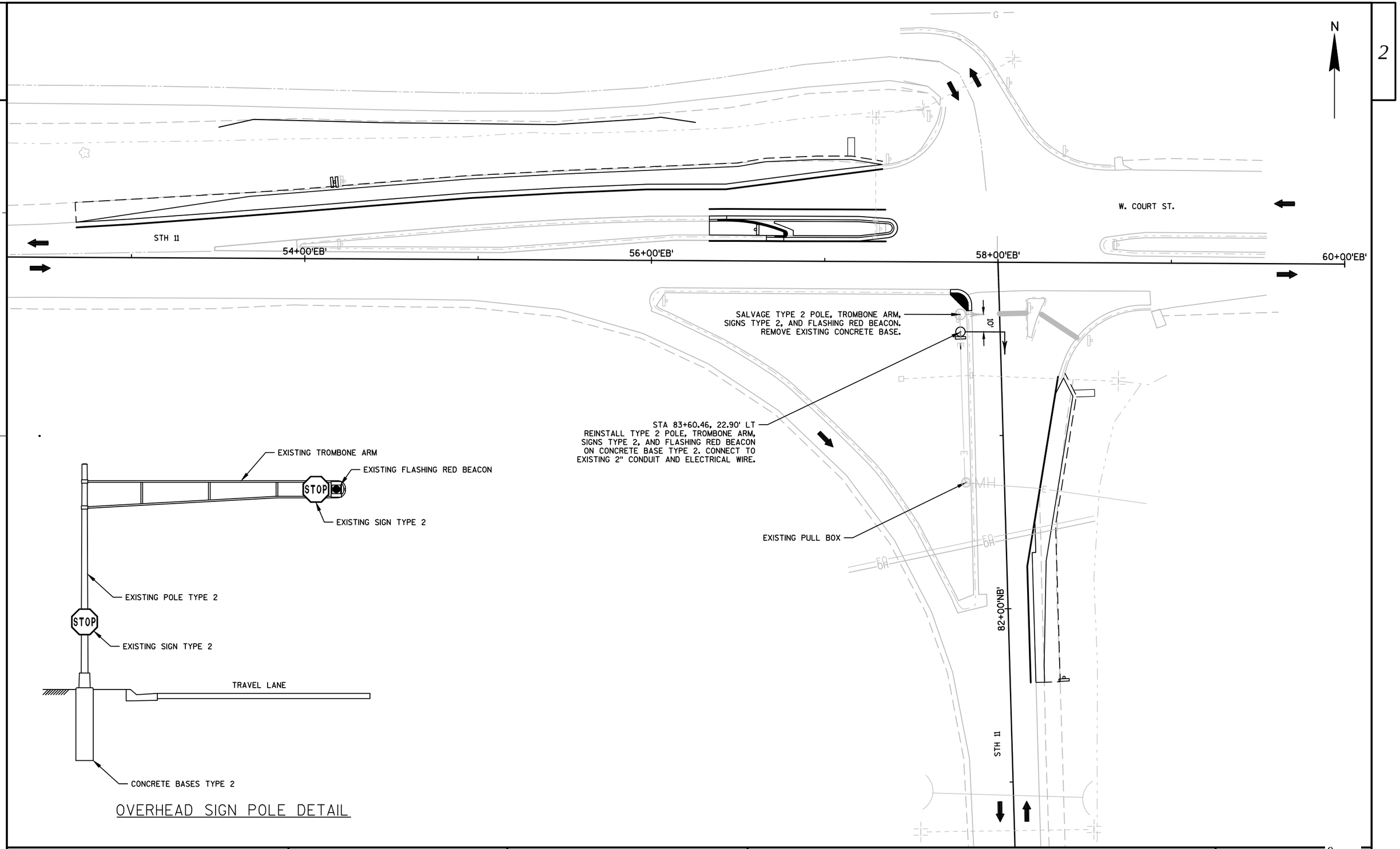
	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP- TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE- TURF			.25 .32			.27 .34			.28 .36			.30 .38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

TOTAL PROJECT AREA = 2.0 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.4 ACRES



EROSION MAT DETAIL FOR DITCHES

2

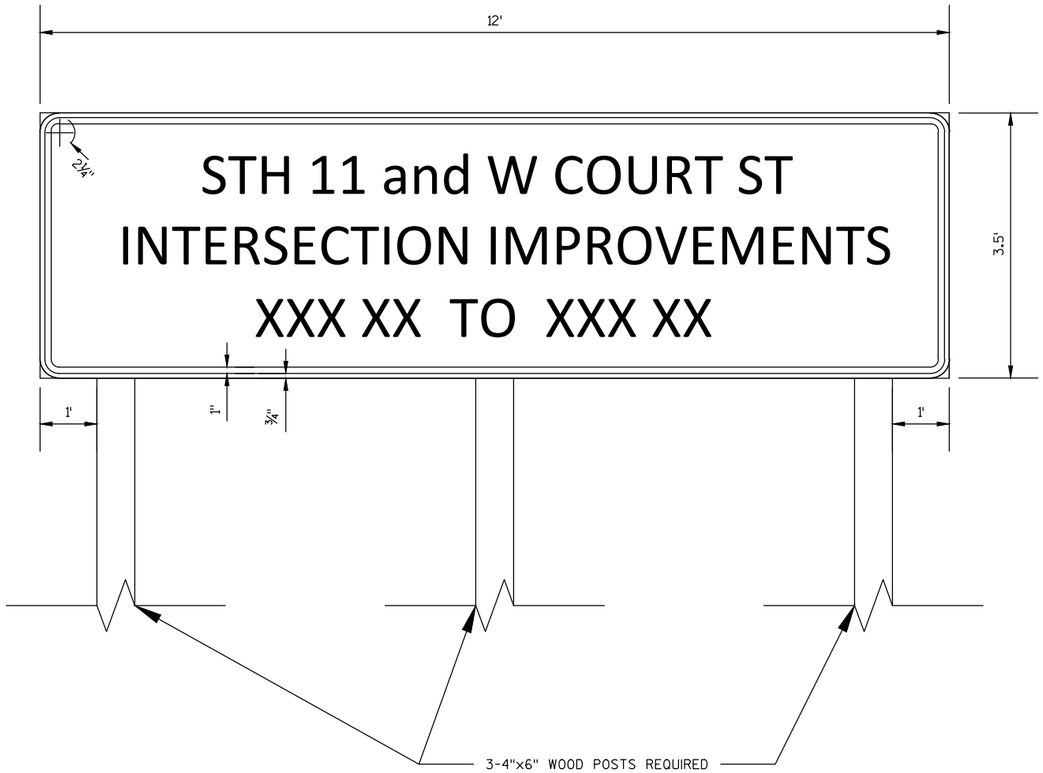


OVERHEAD SIGN POLE DETAIL

PROJECT NO:1706-00-72	HWY: STH 11	COUNTY:ROCK	CONSTRUCTION DETAIL	SHEET

FILE NAME : X:\3230900\150141.01\TECH\CAD\XXXXXXXX\SHEETSPLAN\COURT ST\024201_SP (COURT ST.).DWG PLOT DATE : 1/27/2015 4:00 PM PLOT BY : LUKE SENZ PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

NOTES
1. SIGN IS TYPE II - TYPE F REFLECTIVE - REFERENCE WISDOT STANDARD SPECIFICATION FOR HIGHWAY AND STRUCTURE CONSTRUCTION LATEST EDITION.
2. COLOR:
   BACKGROUND - ORANGE
   MESSAGE - BLACK
3. MESSAGE SERIES - D
4. SUBSTITUTE APPROPRIATE NUMERAL AND ADJUST SPACING TO ACHIEVE PROPER BALANCE.
5. AFTER SIGNS HAVE BEEN LOCATED IN THE FIELD, BUT BEFORE INSTALLATION, THE PROJECT ENGINEER SHALL VERIFY EACH SIGN LOCATION.
6. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ENGINEER FOR REVIEW PRIOR TO MANUFACTURING.
7. ALL SIGNS TO BE MOUNTED ON WOODEN POSTS SUPPORTS (4"X6"). 4X6 WOOD POSTS SHALL HAVE TWO HOLES PER STATE PLATE A4-11.



PROJECT NO:1706-00-72	HWY: STH 11	COUNTY:ROCK	CONSTRUCTION DETAILS - FIXED MESSAGE SIGN	SHEET 10	E

2

WESTWARD LANE

ALLIANT ENERGY GAS

END PROJECT
STA 58+00.00'EB'
END CONSTRUCTION
STA 84+00.00'NB'

N

W. COURT ST.

EP: 60+00.01'EB'

67.31 -31.64'
68.00 -20.24'
68.28 -35.72'
98.42 -22.14'
96.00 -37.98'
45.62 -25.85'
47.01 -42.41'
96.65 -30.01'
94.22 -46.36'
47.69 -34.44'
48.93 -49.62'
94.79 -38.38'
49.72 -54.48'
49.36 -41.63'
65.70 -57.26'
97.12 -43.94'
94.99 -58.67'
42.69 -44.28'
14.99 -58.82'
32.79 -55.95'

COLORING CONCRETE RED

R1.0'

33.32 -25.78'
33.37 -14.78'
66.31 -11.69'
56+76.32'EB' -15.72'
19.87 -25.96'
57+36.24'EB' -19.32'
R5.5'
31.02 -11.85'

53+00'EB' STH 11
54+00'EB'
55+00'EB'
56+00'EB'
57+00'EB'
58+00'EB'
59+00'EB'
60+00'EB'

EP: 84+00.00

72.60 -15.84'
72.57 -15.97'

R90.0'

56+44.32'EB'
64.10'

32.10 35.80'
23.34 31.09'
21.46 40.90'
21.73 43.00'

BEGIN PROJECT
52+68.00'EB'
Y = 267674.800
X = 477071.922

McLEOD USA TELECOMMUNICATIONS
CHARTER COMMUNICATIONS
ALLIANT ENERGY OVERHEAD ELECTRIC

WISDOT UNDERGROUND ELECTRIC

MH

49.65 16.96'
47.69 28.81'
31.95 14.82'
27.08 22.82'

82+00'NB'

57.00 14.88'
57.00 19.86'
57.00 28.86'

STH 11

BEGIN CONSTRUCTION
STA 81+57.00'NB'
Y = 267429.056
X = 477610.940

STATION OFFSET

PROJECT NO:1706-00-72	HWY: STH 11	COUNTY: ROCK	INTERSECTION LAYOUT DETAIL	SHEET 11

EXISTING PIPE TO REMAIN
FRENCH DRAIN (SELECT CRUSHED MATERIAL)
PIPE UNDERDRAIN WRAPPED AND PLOWED 6-INCH
WESTWARD LANE
SLOPE INTERCEPT
BASE AGGREGATE DENSE ¾-INCH
HMA PAVEMENT TYPE E-3
SAWCUT
REPLACE EXISTING CURB AND GUTTER WITH CONCRETE CURB AND GUTTER 4-INCH SLOPED TYPE D (DRIVEWAY ENTRANCE CURB ALONG APRON)
INLET COVERS TYPE H MODIFIED (WITH CURB PLATE)
CONCRETE MEDIAN SLOPED NOSE TYPE 1
RELOCATE OVERHEAD STOP SIGN
EXISTING STOP BARS TO REMAIN
CONCRETE SIDEWALK 4-INCH
CONCRETE PAVEMENT 8-INCH (COLORED CONCRETE RED)
FRENCH DRAIN (SELECT CRUSHED MATERIAL)
HMA PAVEMENT TYPE E-3
BASE AGGREGATE DENSE ¾-INCH
WISDOT UNDERGROUND ELECTRIC
McLEOD USA TELECOMMUNICATIONS
CHARTER COMMUNICATIONS
ALLIANT ENERGY OVERHEAD ELECTRIC
SLOPE INTERCEPT
SAWCUT
ALLIANT ENERGY GAS
W. COURT ST.
STH 11

53+00'EB' 54+00'EB' 55+00'EB' 56+00'EB' 57+00'EB' EP: 84+00.00 58+00'EB' 59+00'EB' 60+00'EB' EP: 60+00.01'EB'

82+00'NB'

10'

BEGIN PROJECT
52+68.00'EB'
Y = 267674.800
X = 477071.922

END PROJECT
STA 58+00.00'EB'
END CONSTRUCTION
STA 84+00.00'NB'

BEGIN CONSTRUCTION
STA 81+57.00'NB'
Y = 267429.056
X = 477610.940

N

PROJECT NO:1706-00-72	HWY: STH 11	COUNTY:ROCK	PLAN DETAIL	SHEET

FILE NAME : X:\3230900\150141.01\TECH\CAD\XXXXXXXX\SHEETSPLAN\COURT ST\021201_PD(COURT ST.) (1).DWG PLOT DATE : 1/27/2015 4:03 PM PLOT BY : LUKE SENZ PLOT NAME : PLOT SCALE : 1 IN:50 FT

WESTWARD LANE

ALLIANT ENERGY GAS

END PROJECT
STA 58+00.00'EB'
END CONSTRUCTION
STA 84+00.00'NB'

N

882.09
882.64
882.03
881.73
881.59
881.75
881.33
881.49
881.00
881.16
879.98
880.14
879.14
879.29
878.57
878.16
877.73
877.04
876.73
876.55
2%

STH 11

53+00'EB'
54+00'EB'
55+00'EB'
56+00'EB'
57+00'EB'
58+00'EB'
59+00'EB'
60+00'EB'

878.32
878.31
876.71
876.51
876.34
876.15
877.69
876.71
876.56
876.43
EP: 84+00.00

W. COURT ST.

EP: 60+00.01'EB'

875.31
875.11
874.75

BEGIN PROJECT
52+68.00'EB'
Y = 267674.800
X = 477071.922

873.35
873.46
873.26
873.06
2%

McLEOD USA TELECOMMUNICATIONS
CHARTER COMMUNICATIONS
ALLIANT ENERGY OVERHEAD ELECTRIC

MH

WISDOT UNDERGROUND ELECTRIC

874.41
874.12
874.66
874.57

82+00'NB'

875.56
875.66
875.20

STH 11

BEGIN CONSTRUCTION
STA 81+57.00'NB'
Y = 267429.056
X = 477610.940

PROJECT NO:1706-00-72	HWY: STH 11	COUNTY:ROCK	PAVING DETAIL	SHEET

FILE NAME : X:\3230900\150141.01\TECH\CAD\XXXXXXXX\SHEETSPLAN\COURT ST\021201_PD (COURT ST.).DWG
PLOT DATE : 1/27/2015 4:04 PM
PLOT BY : LUKE SENZ
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2

CULVERT PIPE CHECK

WESTWARD LANE

SLOPE INTERCEPT

END PROJECT
STA 58+00.00'EB'
END CONSTRUCTION
STA 84+00.00'NB'

N

W. COURT ST.

STH 11

54+00'EB'

56+00'EB'

58+00'EB'

60+00'EB'

BEGIN PROJECT
52+68.00'EB'
Y = 267674.800
X = 477071.922

MH

SLOPE INTERCEPT

82+00'NB'

STH 11

BEGIN CONSTRUCTION
STA 81+56.99'NB'
Y = 267429.056
X = 477610.940

LEGEND

- SURFACE WATER FLOW
- INLET PROTECTION TYPE B
- EROSION MAT CLASS 1 TYPE B, SEED MIXTURE NO. 20, FERTILIZER TYPE A
- TEMPORARY DITCH CHECKS
- SILT FENCE

PROJECT NO:1706-00-72	HWY: STH 11	COUNTY: ROCK	EROSION CONTROL	SHEET 14

2

N

WESTWARD LANE

STH 11

54+00'EB'

56+00'EB'

58+00'EB'

60+00'EB'

W. COURT ST.

END PROJECT
STA 58+00.00'EB'
END CONSTRUCTION
STA 84+00.00'NB'

BEGIN PROJECT
52+68.00'EB'
Y = 267674.800
X = 477071.922

E4W

E4Y

C-E

IN-E

EXISTING STOP BARS TO REMAIN

RELOCATE OVERHEAD STOP SIGN
SEE CONSTRUCTION DETAIL

10'

1-1 MOVE

1-3 MOVE

1-4 MOVE

DO NOT ENTER

1-2 MOVE

WEST 11 COUNTY B

82+00'NB'

STH 11

BEGIN CONSTRUCTION
STA 81+57.00'NB'
Y = 267429.056
X = 477610.940

LEGEND

E4W	PAVEMENT MARKING EPOXY 4-INCH (WHITE)
E4Y	PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
C-E	PAVEMENT MARKING CURB EPOXY
IN-E	PAVEMENT MARKING ISLAND NOSE EPOXY
1-1	DENOTES SIGN NUMBER

PROJECT NO:1706-00-72	HWY: STH 11	COUNTY:ROCK	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET

FILE NAME : X:\3230900\150141.01\TECH\CAD\XXXXXXXX\SHEETSPLAN\COURT ST\023201_PS (COURT ST.).DWG PLOT DATE : 1/27/2015 4:04 PM PLOT BY : LUKE SENZ PLOT NAME : PLOT SCALE : 1 IN:50 FT

STH 11 and W COURT ST
INTERSECTION IMPROVEMENTS
XXX XX TO XXX XX

FMS 500 FEET FROM
PROJECT LIMITS

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

END PROJECT
STA 58+00.00'EB'
END CONSTRUCTION
STA 84+00.00'NB'

SEE SDD TRAFFIC CONTROL,
ADVANCE WARNING SIGNS 45
M.P.H. OR GREATER, TWO WAY
UNDIVIDED ROAD OPEN TO
TRAFFIC.

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

N

W. COURT ST.

25'

52+00'EB'

STH 11

54+00'EB'

56+00'EB'

58+00'EB'

SEE SDD TRAFFIC CONTROL,
ADVANCE WARNING SIGNS 45
M.P.H. OR GREATER, TWO WAY
UNDIVIDED ROAD OPEN TO
TRAFFIC.

BEGIN PROJECT
52+68.00'EB'
Y = 267674.800
X = 477071.922

STH 11 and W COURT ST
INTERSECTION IMPROVEMENTS
XXX XX TO XXX XX

FMS 500 FEET FROM
PROJECT LIMITS

25'

MH

82+00'NB'

STH 11

BEGIN CONSTRUCTION
STA 81+57.00'NB'
Y = 267429.056
X = 477610.940

STH 11 and W COURT ST
INTERSECTION IMPROVEMENTS
XXX XX TO XXX XX

FMS 500 FEET FROM
PROJECT LIMITS

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

SEE SDD TRAFFIC CONTROL,
ADVANCE WARNING SIGNS 45
M.P.H. OR GREATER, TWO WAY
UNDIVIDED ROAD OPEN TO
TRAFFIC.

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- TYPE A WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC

PROJECT NO:1706-00-72	HWY: STH 11	COUNTY:ROCK	TRAFFIC CONTROL - STAGE 1	SHEET

FILE NAME : X:\3230900\150141.01\TECH\CAD\XXXXXXXX\SHEETSPLAN\COURT ST\025001_TC (COURT ST.)-STAGE 1.DWG PLOT DATE : 1/27/2015 4:05 PM PLOT BY : LUKE SENZ PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

STH 11 and W COURT ST
INTERSECTION IMPROVEMENTS
XXX XX TO XXX XX

FMS 500 FEET FROM
PROJECT LIMITS

WESTWARD LANE

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

SEE SDD TRAFFIC CONTROL
FOR LANE CLOSURES (SUITABLE
FOR MOVING OPERATIONS)

END PROJECT
STA 58+00.00'EB'
END CONSTRUCTION
STA 84+00.00'NB'

SEE SDD TRAFFIC CONTROL,
ADVANCE WARNING SIGNS 45
M.P.H. OR GREATER, TWO WAY
UNDIVIDED ROAD OPEN TO
TRAFFIC.

SEE SDD TRAFFIC CONTROL
FOR LANE CLOSURES (SUITABLE
FOR MOVING OPERATIONS)

N

W. COURT ST.

52+00'EB'

STH 11

54+00'EB'

56+00'EB'

58+00'EB'

25'

SEE SDD TRAFFIC CONTROL,
ADVANCE WARNING SIGNS 45
M.P.H. OR GREATER, TWO WAY
UNDIVIDED ROAD OPEN TO
TRAFFIC.

SEE SDD TRAFFIC CONTROL
FOR LANE CLOSURES (SUITABLE
FOR MOVING OPERATIONS)

BEGIN PROJECT
52+68.00'EB'
Y = 267674.800
X = 477071.922

A

R11-2
48" X 30"
LANE
CLOSED

TYPE III BARRICADE

STH 11 and W COURT ST
INTERSECTION IMPROVEMENTS
XXX XX TO XXX XX

FMS 500 FEET FROM
PROJECT LIMITS

25'

MH

6A

82+00'NB'

STH 11

BEGIN CONSTRUCTION
STA 81+57.00'NB'
Y = 267429.056
X = 477610.940

STH 11 and W COURT ST
INTERSECTION IMPROVEMENTS
XXX XX TO XXX XX

FMS 500 FEET FROM
PROJECT LIMITS

SEE SDD TRAFFIC CONTROL,
ADVANCE WARNING SIGNS 45
M.P.H. OR GREATER, TWO WAY
UNDIVIDED ROAD OPEN TO
TRAFFIC.

SEE SDD TRAFFIC CONTROL
FOR LANE CLOSURES (SUITABLE
FOR MOVING OPERATIONS)

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC

PROJECT NO:1706-00-72	HWY: STH 11	COUNTY: ROCK	TRAFFIC CONTROL - STAGE 1 OFF PEAK W/LANE CLOSURE	SHEET 17

STH 11 and W COURT ST
INTERSECTION IMPROVEMENTS
XXX XX TO XXX XX

FMS 500 FEET FROM
PROJECT LIMITS

SEE SDD TRAFFIC CONTROL,
ADVANCE WARNING SIGNS 45
M.P.H. OR GREATER, TWO WAY
UNDIVIDED ROAD OPEN TO
TRAFFIC.

BEGIN PROJECT
52+68.00'EB'
Y = 267674.800
X = 477071.922

52+00'EB'

STH 11

54+00'EB'

56+00'EB'

25'

58+00'EB'

A

R11-2
48" X 30"

LANE
CLOSED

TYPE III BARRICADE

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

END PROJECT
STA 58+00.00'EB'
END CONSTRUCTION
STA 84+00.00'NB'

N

SEE SDD TRAFFIC CONTROL,
ADVANCE WARNING SIGNS 45
M.P.H. OR GREATER, TWO WAY
UNDIVIDED ROAD OPEN TO
TRAFFIC.

W. COURT ST.

STH 11 and W COURT ST
INTERSECTION IMPROVEMENTS
XXX XX TO XXX XX

FMS 500 FEET FROM
PROJECT LIMITS

MH

82+00'NB'

STH 11

BEGIN CONSTRUCTION
STA 81+57.00'NB'
Y = 267429.056
X = 477610.940

SEE SDD TRAFFIC CONTROL,
ADVANCE WARNING SIGNS 45
M.P.H. OR GREATER, TWO WAY
UNDIVIDED ROAD OPEN TO
TRAFFIC.

LEGEND

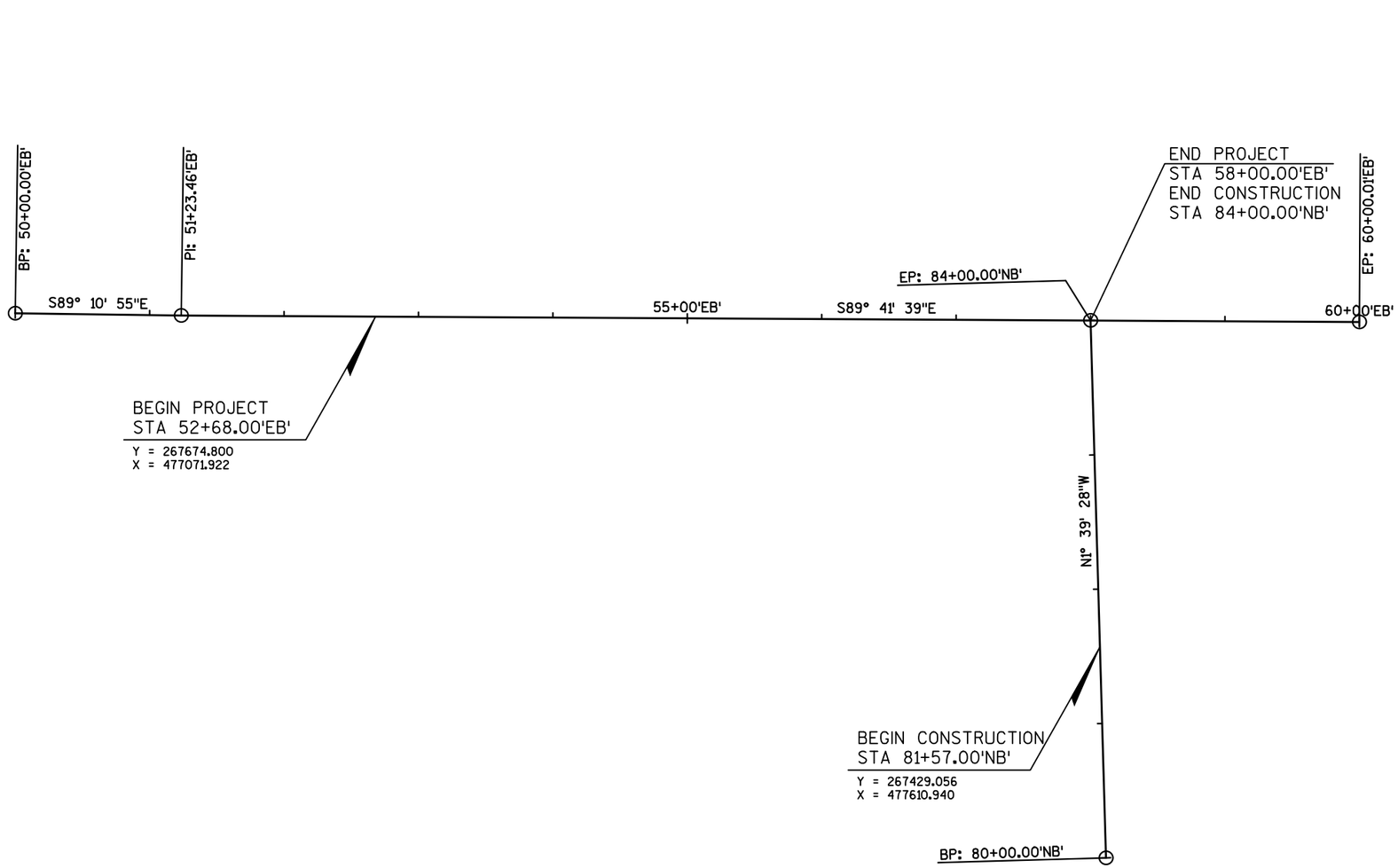
- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- (A) TYPE A WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC

NOTE:
OPEN EB LEFT TURN LANE DURING PEAK
TIMES AND WHEN CONTRACTOR IS NOT WORKING.

PROJECT NO:1706-00-72	HWY: STH 11	COUNTY: ROCK	TRAFFIC CONTROL - STAGE 2 OFF PEAK	SHEET

FILE NAME : X:\3230900\150141.01\TECH\CAD\XXXXXXXX\SHEETSPLAN\COURT ST\025003_TC (COURT ST.)-STAGE 2.DWG PLOT DATE : 1/27/2015 4:07 PM PLOT BY : LUKE SENZ PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2



PROJECT NO:1706-00-72	HWY: STH 11	COUNTY:ROCK	ALIGNMENT DETAIL	SHEET 19

DATE 27JAN15 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	1706-00-72 QUANTITY
0080	204.0150	Removing Curb & Gutter	LF	211.000	211.000
0100	204.0195	Removing Concrete Bases	EACH	1.000	1.000
0110	204.9060.S	Removing (item description) 001. Inlet Covers	EACH	2.000	2.000
0120	205.0100	Excavation Common	CY	635.000	635.000
0180	213.0100	Finishing Roadway (project) 002. 1706-00-72	EACH	1.000	1.000
0190	305.0110	Base Aggregate Dense 3/4-Inch	TON	70.000	70.000
0200	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	805.000	805.000
0220	312.0110	Select Crushed Material	TON	580.000	580.000
0230	405.0100	Coloring Concrete Red	CY	12.000	12.000
0240	415.0080	Concrete Pavement 8-Inch	SY	52.000	52.000
0350	455.0120	Asphaltic Material PG64-28	TON	9.000	9.000
0360	455.0605	Tack Coat	GAL	42.000	42.000
0380	460.1103	HMA Pavement Type E-3	TON	132.000	132.000
0400	460.2000	Incentive Density HMA Pavement	DOL	100.000	100.000
0480	601.0553	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type D	LF	236.000	236.000
0490	602.0405	Concrete Sidewalk 4-Inch	SF	285.000	285.000
0530	612.0506	Pipe Underdrain Wrapped and Plowed 6-Inch	LF	275.000	275.000
0640	618.0100	Maintenance And Repair of Haul Roads (project) 002. 1706-00-72	EACH	1.000	1.000
0650	619.1000	Mobilization	EACH	0.100	0.100
0660	620.0300	Concrete Median Sloped Nose	SF	90.000	90.000
0680	625.0100	Topsoil	SY	1,325.000	1,325.000
0710	628.1504	Silt Fence	LF	240.000	240.000
0720	628.1520	Silt Fence Maintenance	LF	240.000	240.000
0730	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0740	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0750	628.2004	Erosion Mat Class I Type B	SY	1,325.000	1,325.000
0780	628.7010	Inlet Protection Type B	EACH	2.000	2.000
0800	628.7504	Temporary Ditch Checks	LF	60.000	60.000
0810	628.7555	Culvert Pipe Checks	EACH	5.000	5.000
0820	629.0205	Fertilizer Type A	CWT	0.840	0.840
0830	630.0120	Seeding Mixture No. 20	LB	38.000	38.000
0920	638.2102	Moving Signs Type II	EACH	8.000	8.000
0950	638.4000	Moving Small Sign Supports	EACH	4.000	4.000
0980	643.0100	Traffic Control (project) 002. 1706-00-72	EACH	1.000	1.000
0990	643.0300	Traffic Control Drums	DAY	785.000	785.000
1000	643.0420	Traffic Control Barricades Type III	DAY	14.000	14.000
1010	643.0705	Traffic Control Warning Lights Type A	DAY	28.000	28.000
1040	643.0900	Traffic Control Signs	DAY	427.000	427.000
1050	643.1000	Traffic Control Signs Fixed Message	SF	126.000	126.000
1070	646.0106	Pavement Marking Epoxy 4-Inch	LF	850.000	850.000
1120	647.0456	Pavement Marking Curb Epoxy	LF	50.000	50.000
1140	647.0606	Pavement Marking Island Nose Epoxy	EACH	2.000	2.000
1210	650.4500	Construction Staking Subgrade	LF	770.000	770.000
1220	650.5000	Construction Staking Base	LF	705.000	705.000
1230	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	66.000	66.000
1240	650.7000	Construction Staking Concrete Pavement	LF	65.000	65.000
1250	650.9910	Construction Staking Supplemental Control (project) 01. 1706-00-72	LS	1.000	1.000

3

DATE 27JAN15 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	1706-00-72 QUANTITY
1270	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	10.000	10.000
1360	654.0102	Concrete Bases Type 2	EACH	1.000	1.000
1730	690.0150	Sawing Asphalt	LF	5.000	5.000
1740	690.0250	Sawing Concrete	LF	17.000	17.000
1790	SPV.0060	Special 004. Inlet Cover Type H Modified	EACH	2.000	2.000
1800	SPV.0060	Special 005. Salvage And Reinstall Type 2 Pole	EACH	1.000	1.000

3

REMOVING CURB & GUTTER

PROJECT NUMBER	STATION	-	STATION	LOCATION	204.0150 REMOVING CURB & GUTTER (LF)
1706-00-72	56+33 'EB'	-	57+42 'EB'	LT	190
	83+73 'NB'	-	83+85 'NB'	LT	21
PROJECT				TOTAL	211

REMOVING CONCRETE BASES

PROJECT NUMBER	STATION	LOCATION	204.0195 REMOVING CONCRETE BASES (EACH)
1706-00-72	83+70 'NB'	23' LT	1
PROJECT		TOTAL	1

REMOVING INLET COVERS

PROJECT NUMBER	STATION	LOCATION	204.9060.S REMOVING INLET COVERS (EA)
1706-00-72	57+29.24 'EB'	24.8' LT	1
	57+29.09 'EB'	13.5' LT	1
PROJECT		TOTAL	2

EXCAVATION

PROJECT NUMBER	STAGE	STATION	-	STATION	LOCATION	205.0100 EXCAVATION COMMON (1) CUT FROM EW DATA (CY)	(2) EXPANDED FILL FROM EW DATA (CY)	(3) EXPANDED FILL (CY)	(4) MASS ORDINATE (CY)	WASTE (CY)	REMARKS
1706-00-72	STAGE 1	52+68 'EB'	-	57+33 'EB'	SHOULDER LT	383	504	504	-121		
	STAGE 2	56+33 'EB'	-	57+42 'EB'	MEDIAN	64			64	64	
	STAGE 1	81+57 'NB'	-	83+32 'NB'	SHOULDER RT	185	59	59	126	5	USE WASTE ON NW SHOULDER
	STAGE 2	83+73 'NB'	-	83+85 'NB'	ISLAND NOSE LT	3			3	3	
		PROJECT			TOTAL	635	563	563	72	72	

(1) COMMON FROM COMPUTER EARTHWORK DATA, INCLUDES PAVEMENT REMOVAL(CONTAINS SALVAGED/UNUSABLE PAVEMENT MATERIAL)
(2) EXPANDED FILL FROM COMPUTER EARTHWORK DATA
(3) EXPANDED FILL FACTOR = 1.3
(4) MASS ORDINATE IS + OR - FOR STAGE. PLUS IS EXCESS, MINUS IS SHORTAGE.

PIPE UNDERDRAIN

PROJECT NUMBER	STATION	-	STATION	LOCATION	612.0506 PIPE UNDERDRAIN WRAPPED AND PLOWED 6-INCH (LF)
1706-00-72	53+50 'EB'	-	56+25 'EB'	LT	275
PROJECT				TOTAL	275

BASE AGGREGATE

PROJECT NUMBER	STATION	-	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH (TON)	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON)	312.0110 SELECT CRUSHED MATERIAL (TON)
1706-00-72	52+68 'EB'	-	57+33 'EB'	LT	45	415	500
	56+33 'EB'	-	57+42 'EB'	LT (MEDIAN)		211	
	81+57 'NB'	-	83+32 'NB'	RT	25	173	80
	83+73 'NB'	-	83+85 'NB'	LT		6	
PROJECT				TOTAL	70	805	580

CONCRETE CURB & GUTTER

PROJECT NUMBER	STATION	-	STATION	LOCATION	601.0553 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D (LF)	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB AND GUTTER	REMARKS
1706-00-72	56+33 'EB'	-	56+80 'EB'	LT	66	66	
	56+43 'EB'	-	57+42 'EB'	LT	170		1-1/2" HEAD
PROJECT				TOTAL	236	66	

CONCRETE SIDEWALK

PROJECT NUMBER	STATION	-	STATION	LOCATION	602.0405 CONCRETE SIDEWALK 4-INCH (SF)
1706-00-72	56+33 'EB'	-	56+76 'EB'	LT	285
PROJECT				TOTAL	285

CONCRETE PAVEMENT 8-INCH

PROJECT NUMBER	STATION	-	STATION	LOCATION	405.0100 COLORING CONCRETE RED (CY)	415.0080 CONCRETE PAVEMENT 8-INCH (SY)
5657-00-70	56+71 'EB'	-	57+39 'EB'	LT	12	52
PROJECT					12	52

EROSION CONTROL

PROJECT NUMBER	STATION	-	STATION	LOCATION	625.0100 TOPSOIL (SY)	628.2004 EROSION MAT CLASS I TYPE B (SY)	628.7010 INLET PROTECTION TYPE B (EACH)	628.7504 TEMPORARY DITCH CHECKS (LF)	628.7555 CULVERT PIPE CHECKS (EACH)	629.0205 FERTILIZER TYPE A (CWT)	630.0120 SEEDING MIXTURE No. 20 (LB)
1706-00-72	52+68 'EB'	-	57+42 'EB'	LT	1,050	1050		40	5	0.66	30
	57+29.24 'EB'			LT			1				
	57+29.09 'EB'			LT			1				
	81+57 'EB'	-	83+85 'NB'	RT	275	275		20		0.18	8
PROJECT				TOTAL	1,325	1,325	2	60	5	0.84	38

HMA PAVEMENT

PROJECT NUMBER	STATION	-	STATION	LOCATION	455.0120 ASPHALTIC MATERIAL PG64-28 (TON)	455.0605 TACK COAT (GAL)	460.1103 HMA PAVEMENT TYPE E-3 (TON)
1706-00-72	52+68 'EB'	-	57+33 'EB'	LT	6	30	96
	81+57 'NB'	-	83+32 'NB'	RT	3	12	36
PROJECT			TOTAL		9	42	132

SILT FENCE

PROJECT NUMBER	STATION	-	STATION	LOCATION	628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)
1706-00-72	53+65 'EB'	-	56+05 'EB'	LT	240	240
PROJECT				TOTAL	240	240

MOBILIZATIONS EROSION CONTROL

PROJECT NUMBER	LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL (EACH)	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL (EACH)
1706-00-72	PROJECT	2	2
PROJECT	TOTAL	2	2

3

CONCRETE MEDIAN SLOPED NOSE

PROJECT NUMBER	STATION	-	STATION	LOCATION	620.0300 CONCRETE MEDIAN SLOPED NOSE (SF)
1706-00-72	83+73 'NB'	-	83+85 'NB'	LT	90
	PROJECT				
PROJECT	TOTAL				90

MOVING SIGNS

PROJECT NUMBER	STATION	LOCATION	638.2102 MOVING SIGNS TYPE II (EACH)	638.4000 MOVING SMALL SIGN SUPPORTS (EACH)
1706--00-72	54+17 'EB'	44' LT	2	1
	57+32 'EB'	30' RT	1	1
	82+48 'NB'	30' RT	1	1
	82+48 'NB'	32' RT	1	1
	83+70 'NB'	23' LT	3	
PROJECT		TOTAL	8	4

CONSTRUCTION STAKING

PROJECT NUMBER	STATION	-	STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE (LF)	650.5000 CONSTRUCTION STAKING BASE (LF)	650.7000 CONSTRUCTION STAKING CONCRETE PAVEMENT (LF)	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (1706-00-72) (LS)
1706-00-72	52+68 ' EB'	-	57+33 'EB'	LT	465	465		
	56+33 'EB'	-	57+42 'EB'	LT (MEDIAN)	109	44	65	
	81+57 'NB'	-	83+32 'NB'	RT	175	175		
	83+73 'NB'	-	83+85 'NB'	LT	21	21		
	PROJECT							1
PROJECT	TOTAL				770	705	65	1

TRAFFIC CONTROL

PROJECT NUMBER	LOCATION	643.0300 TRAFFIC CONTROL DRUMS (DAY)	643.0420 TRAFFIC CONTROL BARRICADES TYPE III (DAY)	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A (DAY)	643.0900 TRAFFIC CONTROL SIGNS (DAY)	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE (SF)
1706-00-72	STAGE 1	380			147	
	STAGE 1 OFF PEAK	235	7	14	168	
	STAGE 2 OFF PEAK	170	7	14	112	
	PROJECT LIMITS					126
PROJECT	TOTAL	785	14	28	427	126

CONDUIT

PROJECT NUMBER	STATION	-	STATION	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH (LF)
1706-00-72	83+60 'NB'	-	83+70 'NB'	10
PROJECT			TOTAL	10

CONCRETE BASES TYPE 2

PROJECT NUMBER	STATION	LOCATION	654.0102 CONCRETE BASES TYPE 2 (EACH)
1706-00-72	83+60 'NB'	23' LT	1
PROJECT		TOTAL	1

PAVEMENT MARKING

PROJECT NUMBER	STATION	-	STATION	LOCATION	DESCRIPTION	646.0106 PAVEMENT MARKING EPOXY 4-INCH YELLOW (LF)	646.0106 PAVEMENT MARKING EPOXY 4-INCH WHITE (LF)	647.0456 PAVEMENT MARKING CURB EPOXY (LF)	647.0606 PAVEMENT MARKING ISLAND NOSE EPOXY (EACH)
1706-00-72	52+68 'EB'	-	57+33 'EB'	LT	OUTSIDE LANE EDGE		468		
	56+33 'EB'	-	57+35 'EB'	30' LT	MEDIAN LANE EDGE	102			
	56+33 'EB'	-	57+35 'EB'	12' LT	MEDIAN LANE EDGE	102			
	56+38 'EB'	-	56+78 'EB'	LT	CURB			50	
	56+76 'EB'			LT	MEDIAN ISLAND NOSE				1
	81+57 'NB'	-	83+32 'NB'	RT	LANE EDGE		178		
	83+77 'NB'			LT	ISLAND NOSE				1
PROJECT				TOTAL		204	646	50	2
						850			

SAWING PAVEMENT

PROJECT NUMBER	STATION	-	STATION	LOCATION	690.0150 SAWING ASPHALT (LF)	690.0250 SAWING CONCRETE (LF)
1706-00-72	56+33 'EB'			LT		11
	81+57 'NB'			RT	5	
	83+73 'NB'			LT		3
	83+85 'NB'			LT		3
PROJECT				TOTAL	5	17

TRAFFIC CONTROL PROJECT

PROJECT NUMBER	LOCATION	643.0100 TRAFFIC CONTROL 1706-00-72 (EACH)
1706-00-72	PROJECT LIMITS	1
PROJECT		1

INLET COVERS

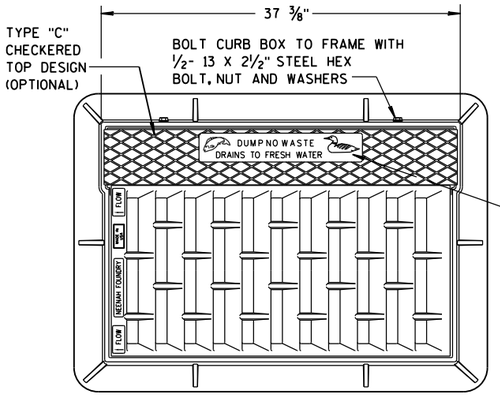
PROJECT NUMBER	STATION	OFFSET	CASTING ELEVATION	SPV.0060.004 INLET COVER TYPE H MODIFIED (EACH)
1706-00-72	57+29.24 'EB'	24.8' LT	876.44	1
	57+29.09 'EB'	13.5' LT	876.42	1
PROJECT				2

SALVAGE AND REINSTALL TYPE 2 POLE

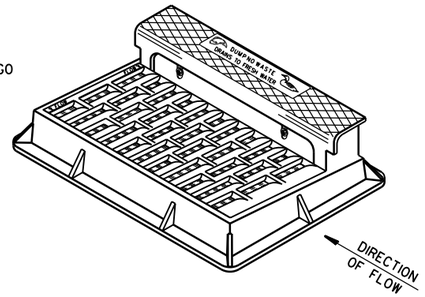
PROJECT NUMBER	STATION	OFFSET	SPV.0060.005 SALVAGE AND REINSTALL TYPE 2 POLE (EACH)
1706-00-72	83+60 'NB'	23' LT	1
PROJECT			1

Standard Detail Drawing List

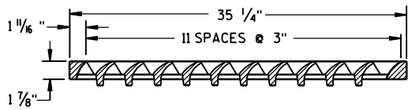
08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
09C02-07	CONCRETE BASES, TYPES 1, 2, 5, & 6
09E01-13A	POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2
09E01-13G	HARDWARE DETAILS FOR POLE MOUNTINGS
11B02-02	CONCRETE MEDIAN NOSE
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
15C08-16F	PAVEMENT MARKING (ISLANDS)
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15D28-02	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

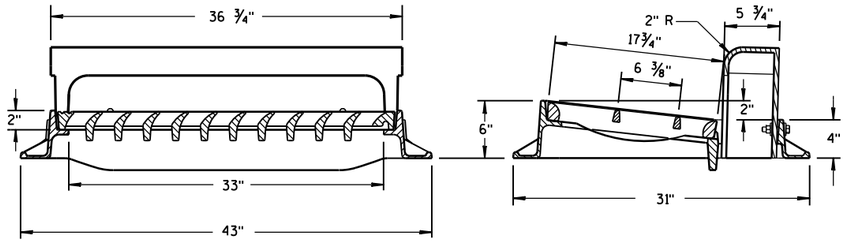


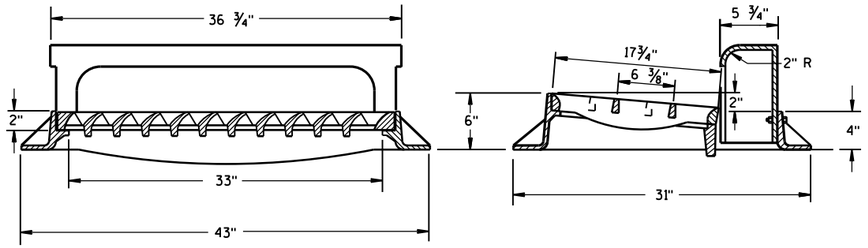
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

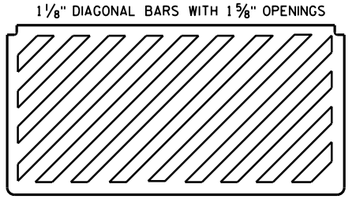






TYPE "H"

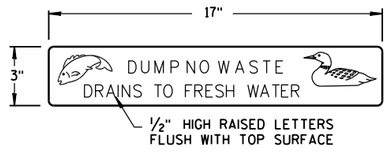
NOTE: EITHER CASTING IS ACCEPTABLE



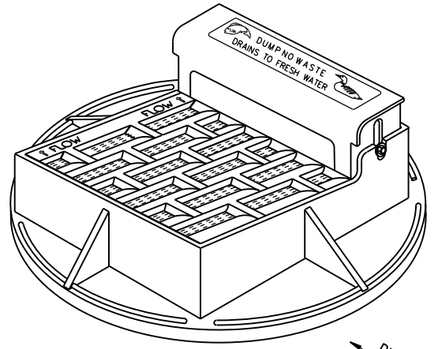
SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35 1/4" X 17 3/4" X 2")

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

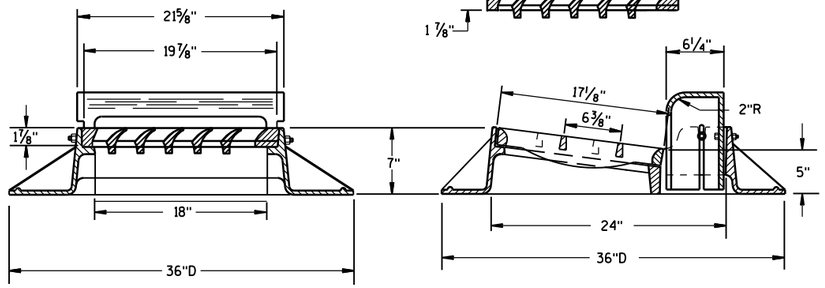


LOGO DETAIL



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

NOTE:
GRATE IS REVERSIBLE.



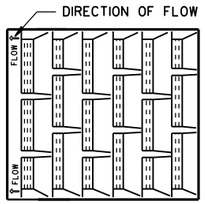
TYPE "A"

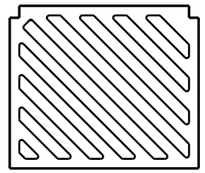
GENERAL NOTES

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.

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.

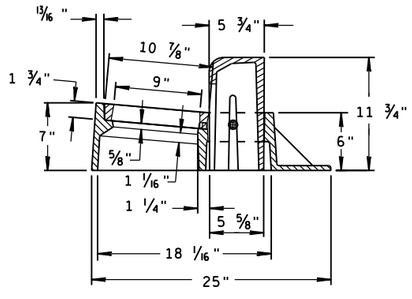


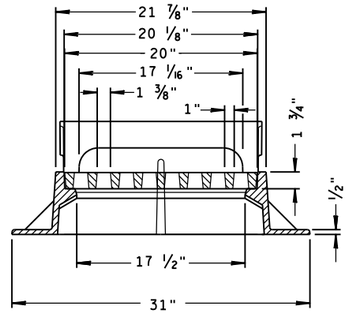


SPECIAL GRATE FOR TYPE "A" COVER

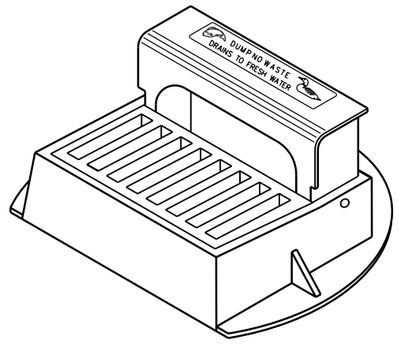
(MEASURES 19 3/4" X 17" X 1 7/8")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)





TYPE "Z"

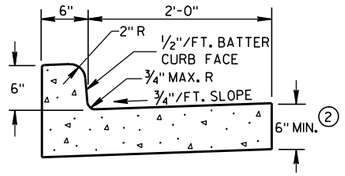


INLET COVERS TYPE A, H, A-S, H-S & Z

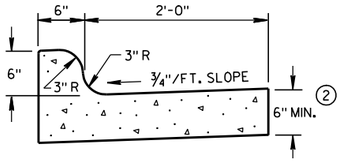
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11-27-13 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

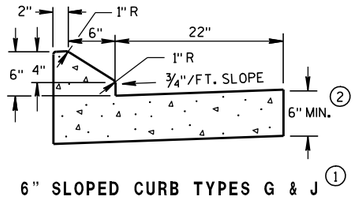
S.D.D. 8 A 5-19a



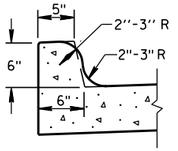
TYPES A & D (1)



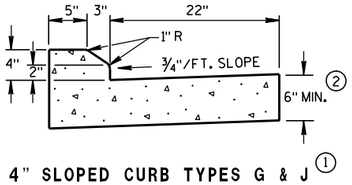
TYPES K & L (1)



6" SLOPED CURB TYPES G & J (1)

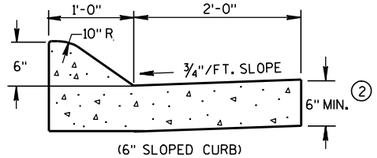


OPTIONAL CURB SHAPE FOR TYPES K & L (1)

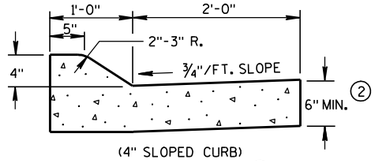


4" SLOPED CURB TYPES G & J (1)

CONCRETE CURB & GUTTER 30"

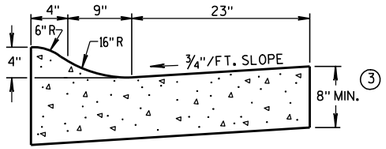


(6" SLOPED CURB)



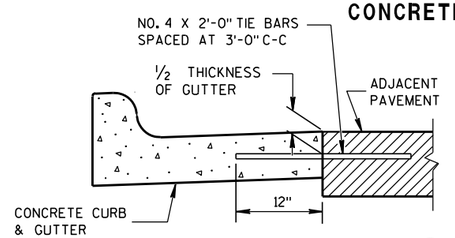
(4" SLOPED CURB)

TYPES A & D (1)

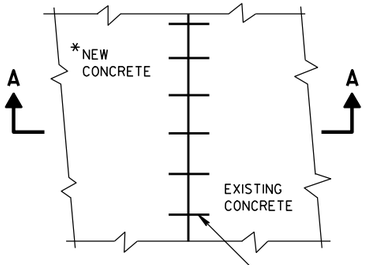


4" SLOPED CURB TYPES R & T (1) (4)

CONCRETE CURB & GUTTER 36"

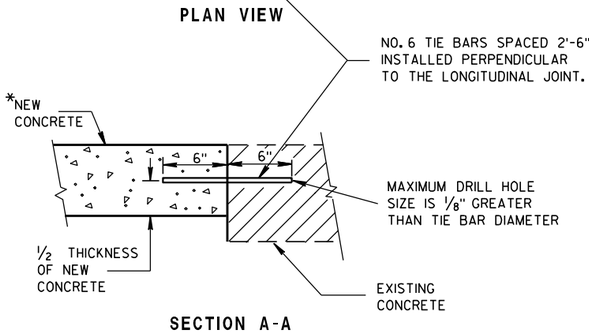


TYPICAL TIE BAR LOCATION (1)



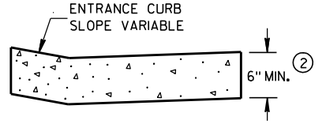
*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

PLAN VIEW

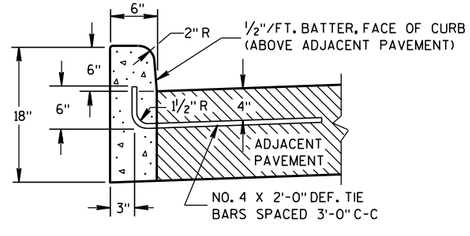


SECTION A-A

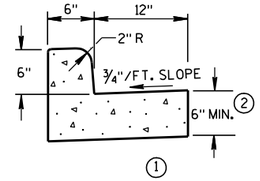
TIE BARS DRILLED INTO EXISTING PAVEMENT



DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

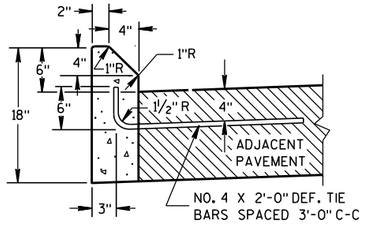


(1)
TYPES A & D



(1)
TYPES A & D

CONCRETE CURB & GUTTER 18"



(1)
TYPES G & J

CONCRETE CURB

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.

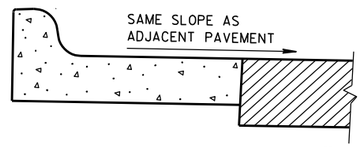
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.

(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.

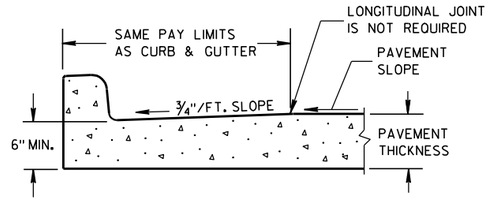
(3) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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

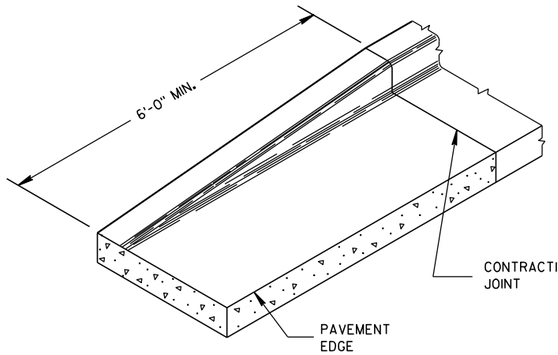
(5) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



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



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

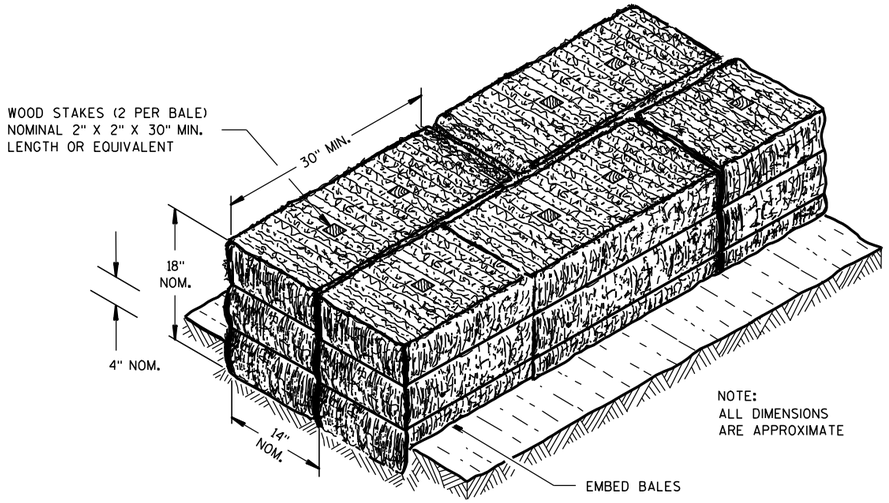
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

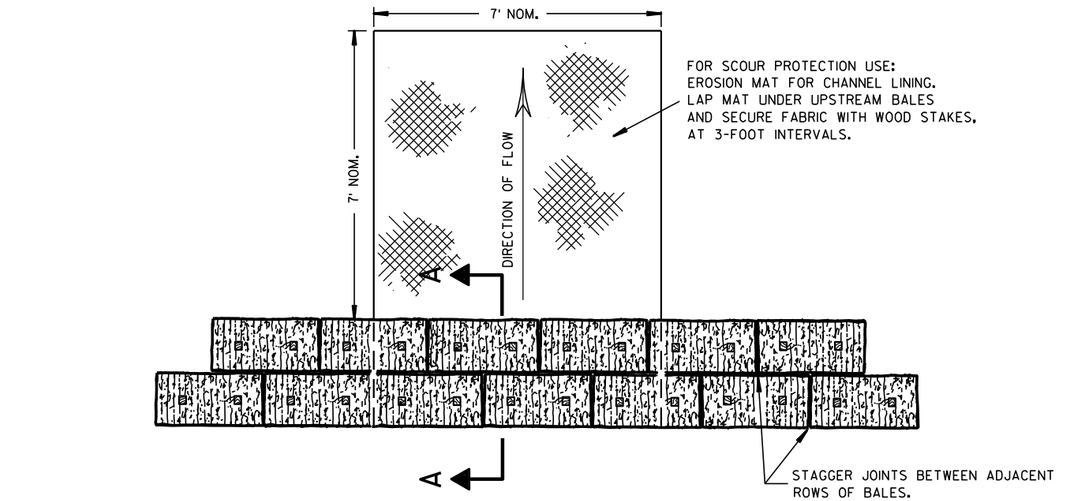
FHWA

6

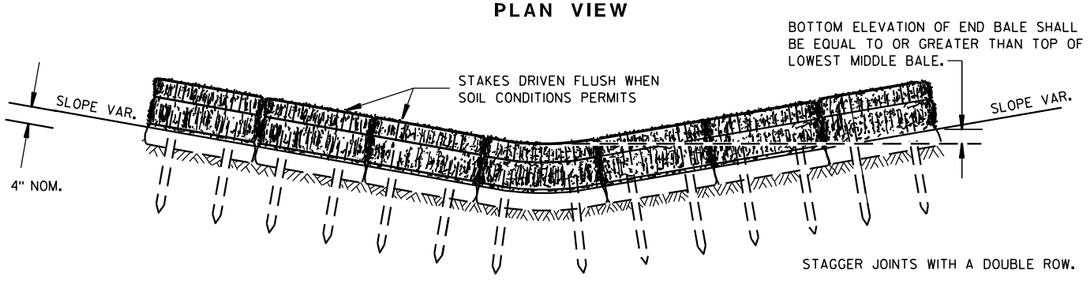
S.D.D. 8 D 1-17



SECTION A-A



PLAN VIEW



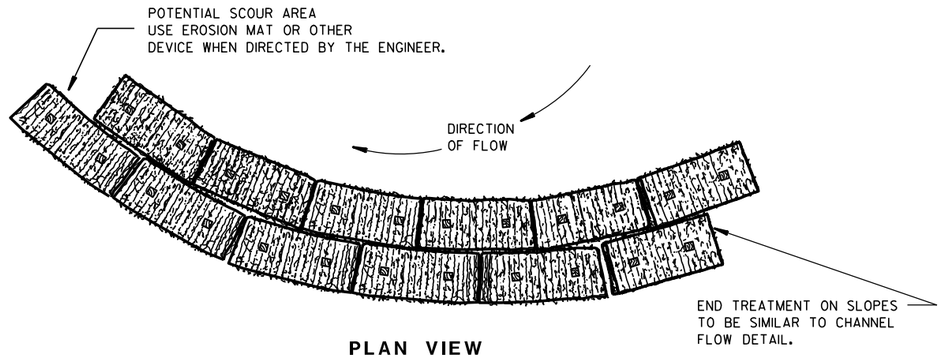
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

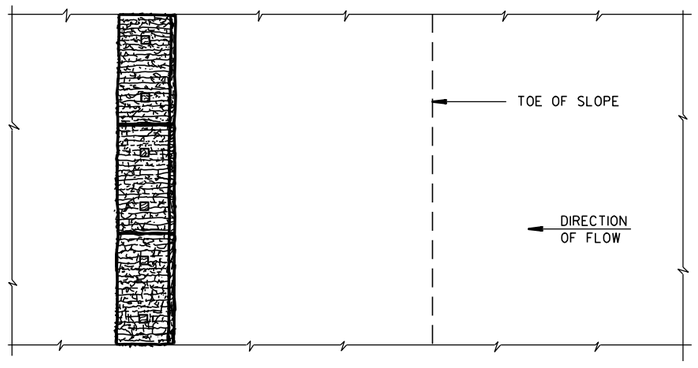
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

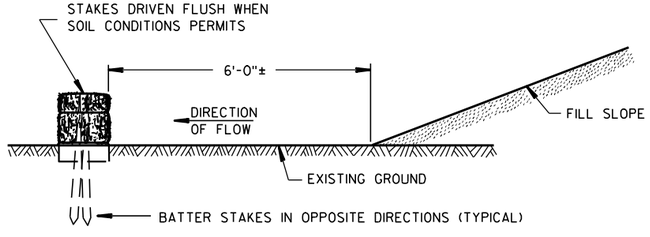


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

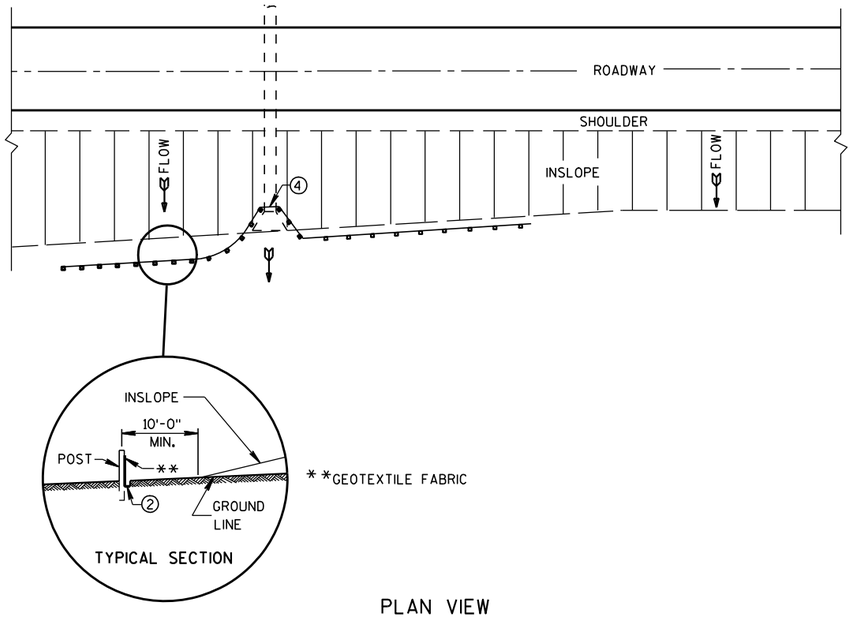
APPROVED
6/04/02 — DATE
/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 8-3

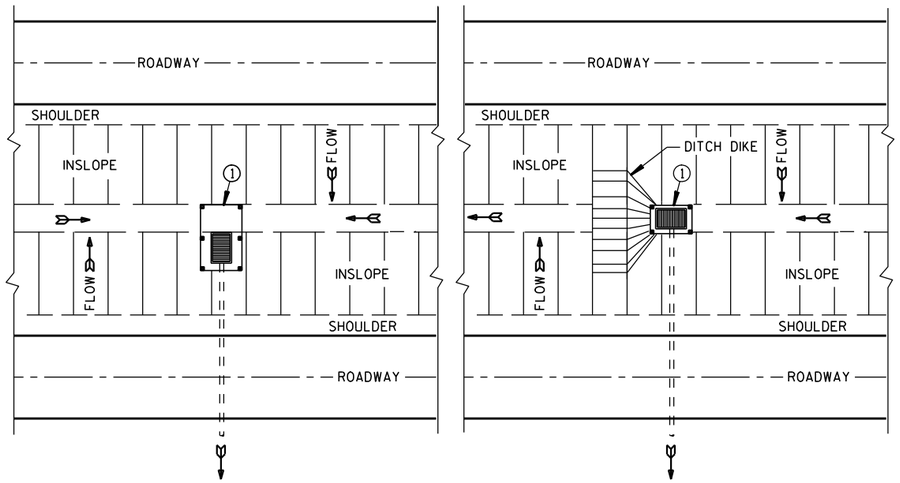
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



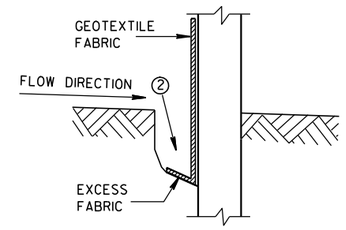
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

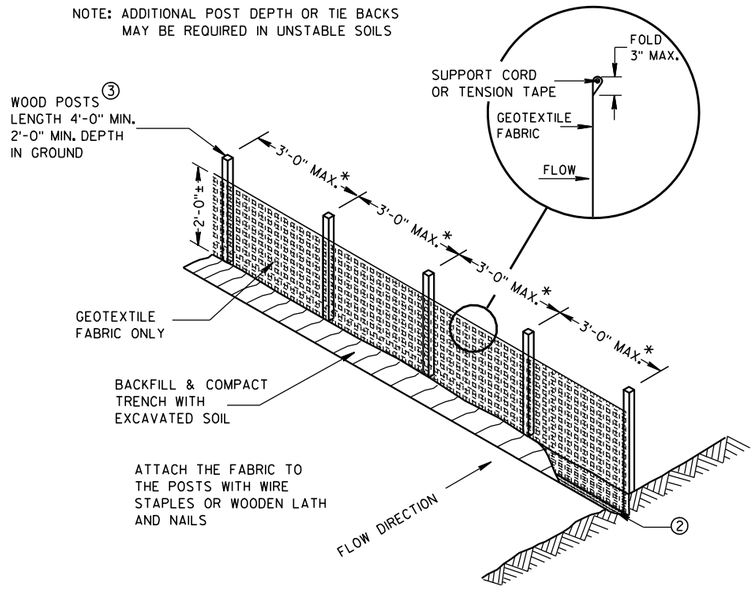
GENERAL NOTES

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

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

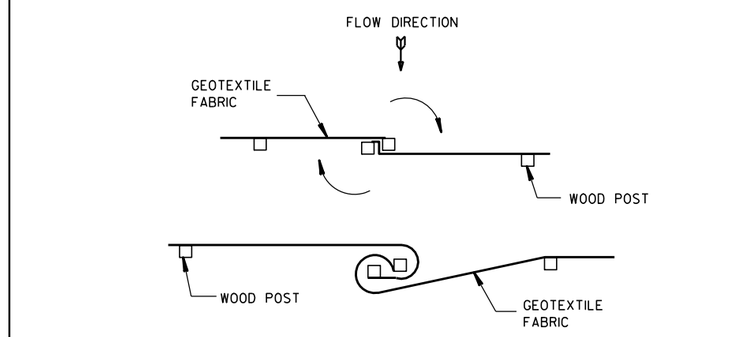


TRENCH DETAIL

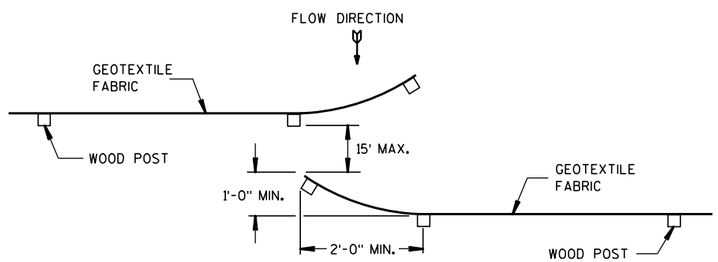


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

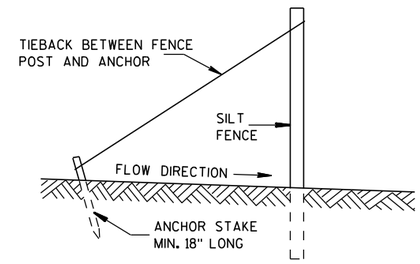


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

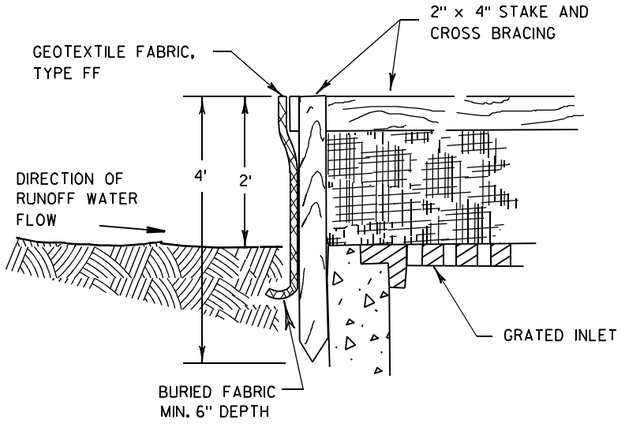
APPROVED
4-29-05
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

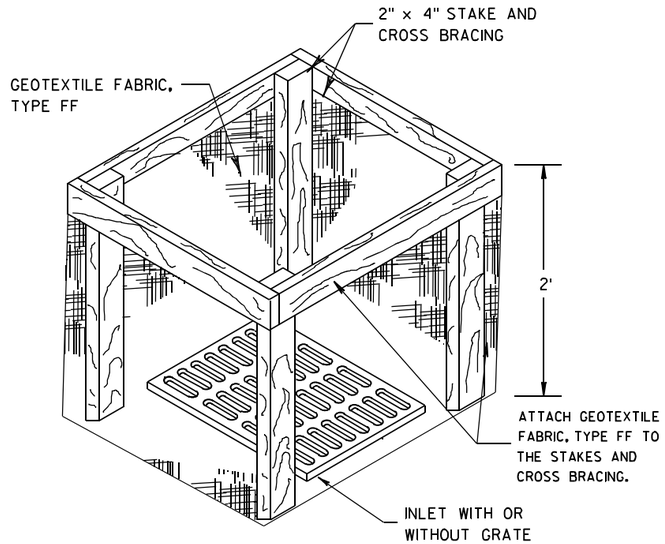
6

S.D.D. 8 E 9-6

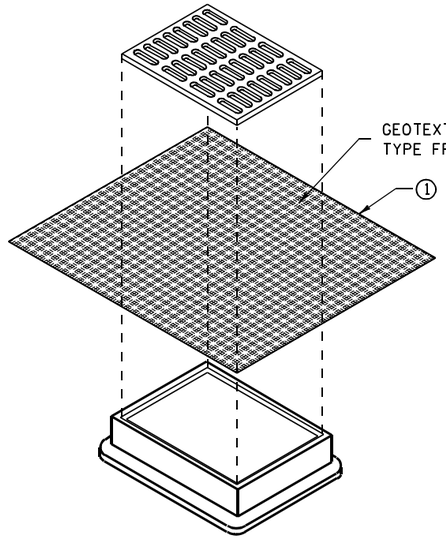
6

S.D.D. 8 E 9-6



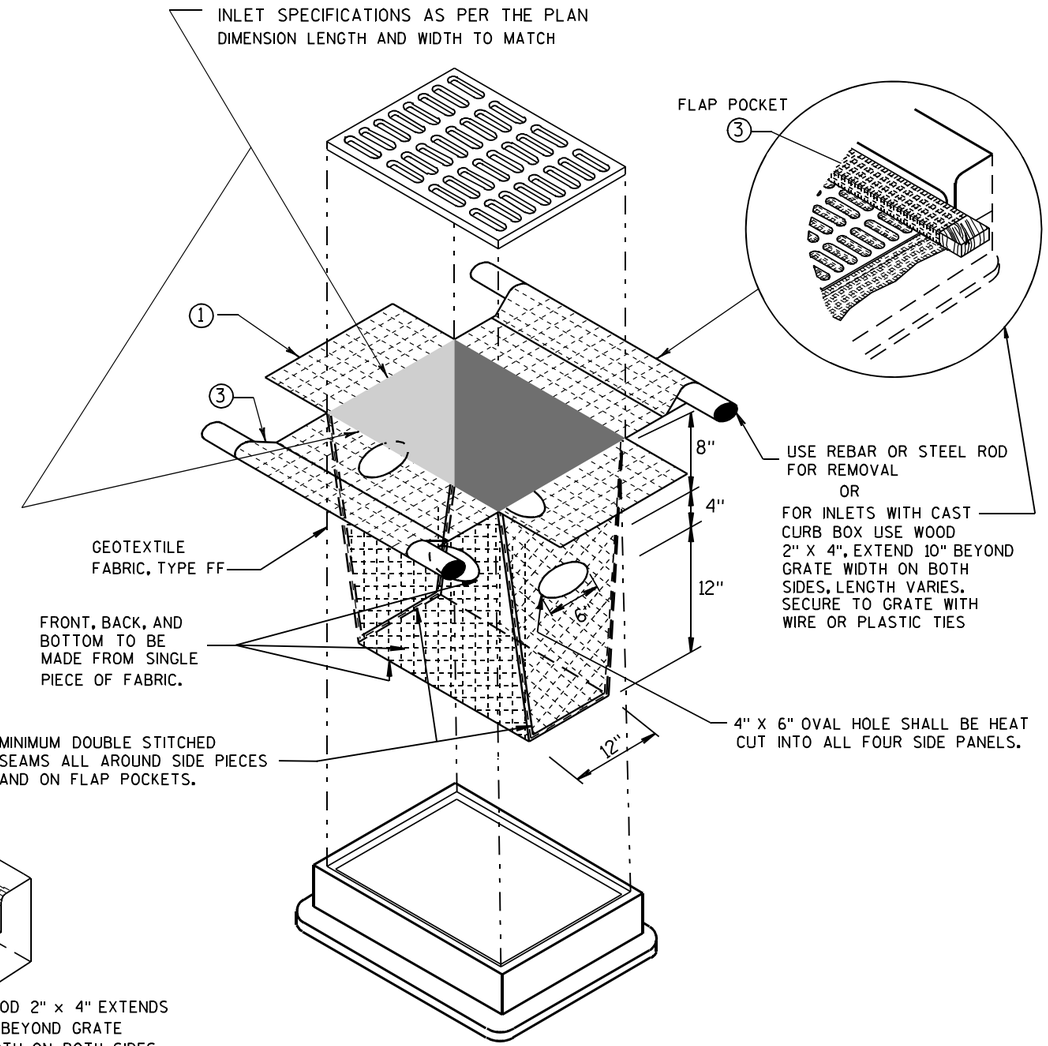


INLET PROTECTION, TYPE A



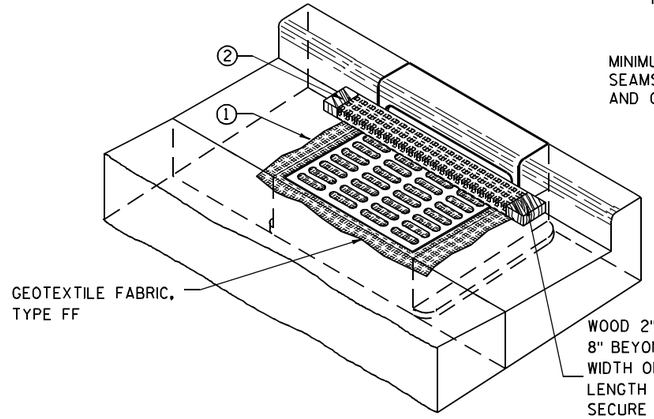
INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE D

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

GENERAL NOTES

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

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

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

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

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

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

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

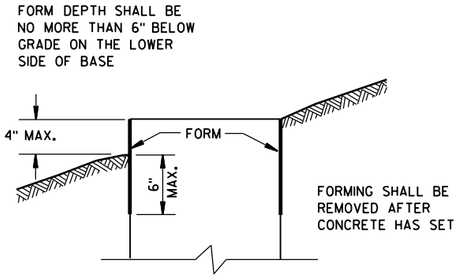
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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



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.

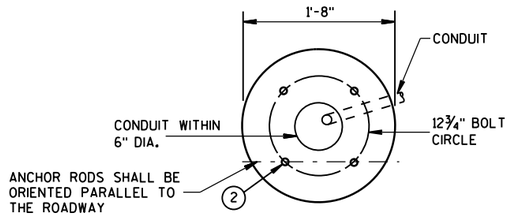
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

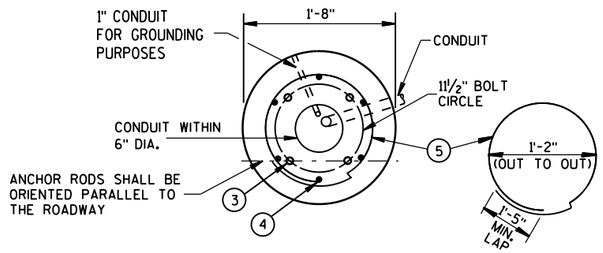
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

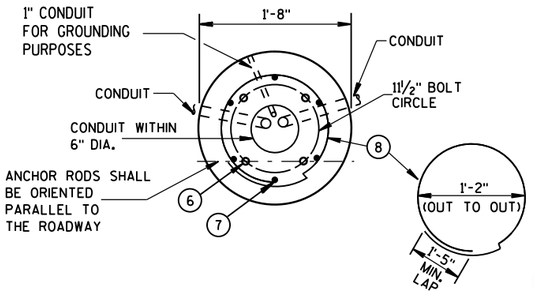
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

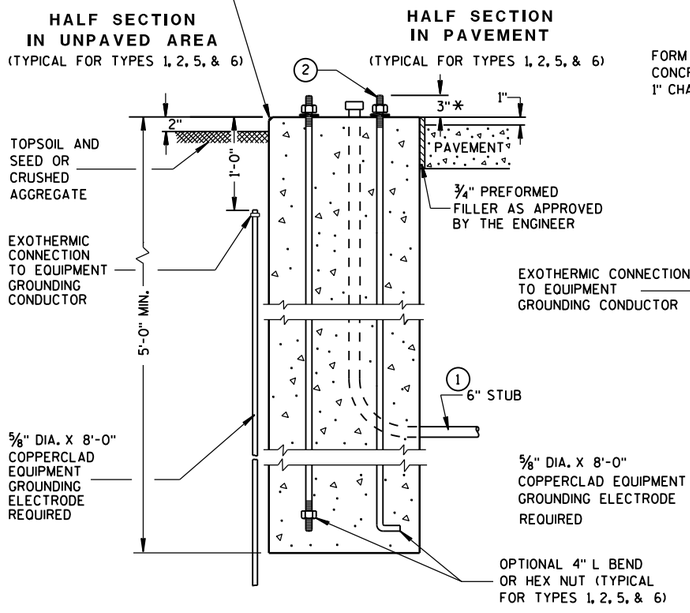
(7) (6) NO.4 X 4'-8" BAR STEEL REINFORCEMENT.

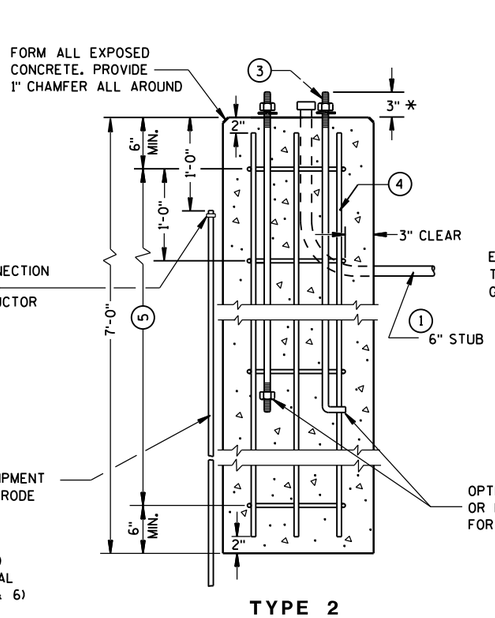
(8) (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.



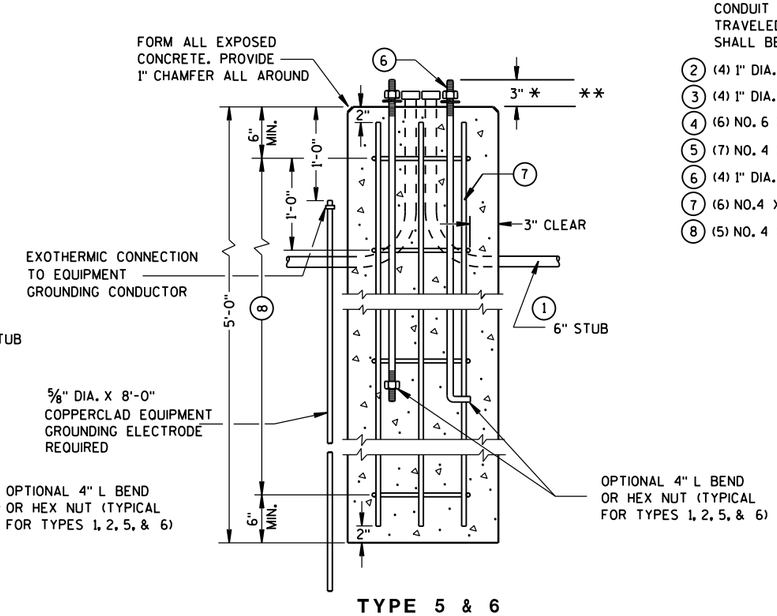








TYPE 2



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

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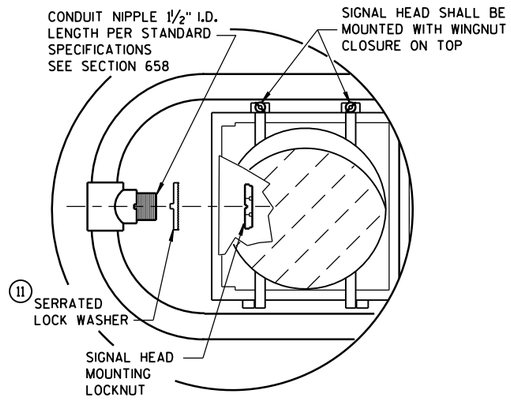
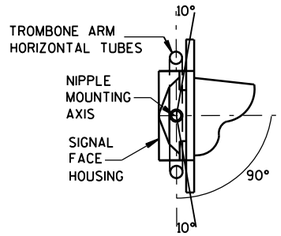
S.D.D. 9 C 2-7



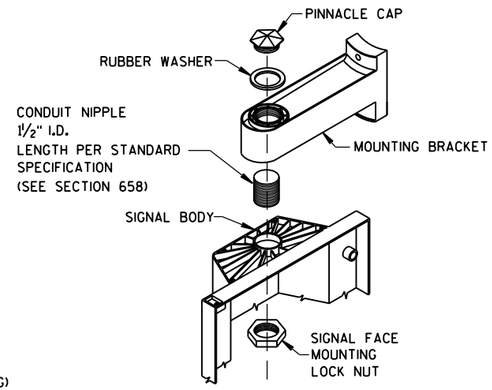
HORIZONTAL SIGNAL HEAD MOUNTING DETAIL *

* 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).

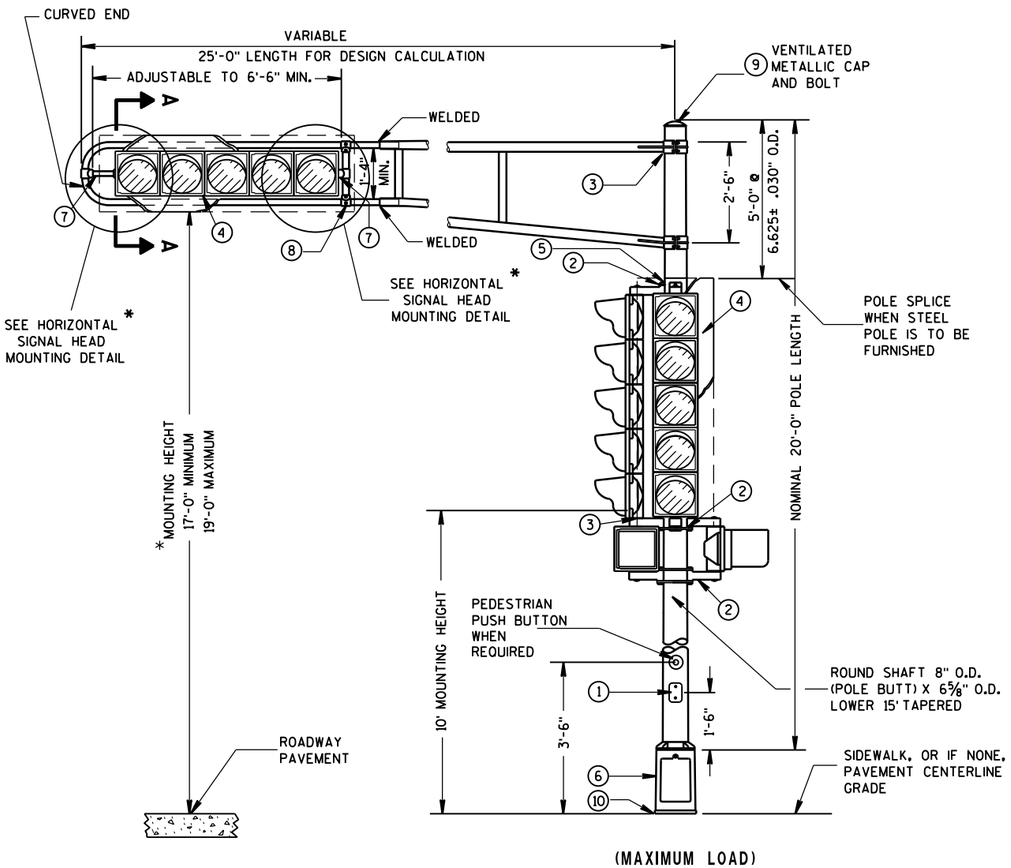
(8) VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW (¼" X ¾" LONG - 20 TPI, STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUT IS THE SLIDING TYPE.

(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.

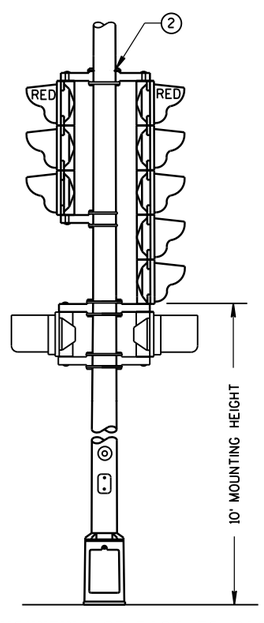
(10) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.

(11) USE SERRATED LOCK WASHERS WITH NOTCHES BETWEEN END TEE AND SIGNAL HEAD.

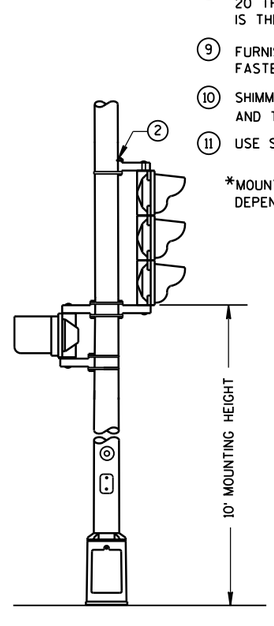
*MOUNTING HEIGHT LIMITATION DIMENSIONS OF THE TROMBONE MAST ARM WILL BE DEPENDENT UPON THE USE/NON-USE OF A TRANSFORMER BASE.



(MAXIMUM LOAD)



TYPICAL MOUNTING OF BACK TO BACK 3 AND 5 SECTION SIGNAL FACES

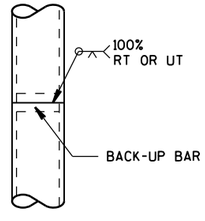


TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE

TYPE 2 POLE MOUNTING CONFIGURATION

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.



POLE SPLICE DETAIL

POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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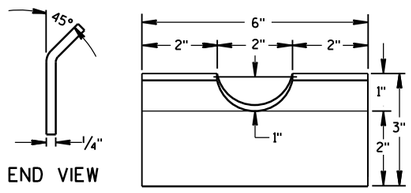
S.D.D. 9 E 1-13a

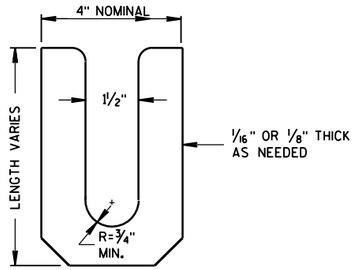


END VIEW

FRONT VIEW

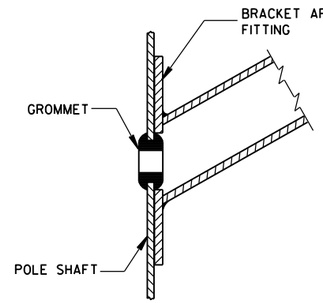
RECTANGULAR CLAMP SHIM

(4 TO A SET)

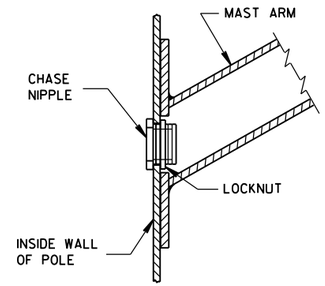


LEVELING SHIM (15)

SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

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

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

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

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

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

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

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

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

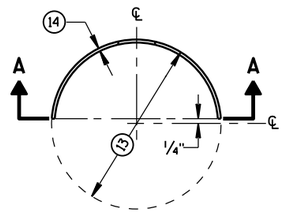
SHIM MATERIAL SHALL BE ALUMINUM ALLOY.

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

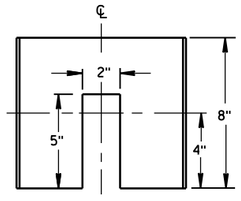
THE CONTRACTOR SHALL SUBMIT TWO COPIES OF ALL SHIM SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL.

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

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



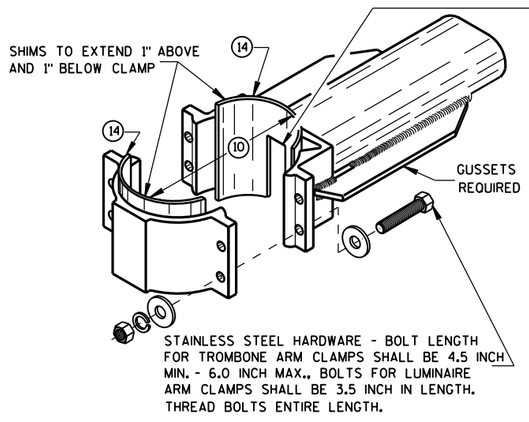
PLAN VIEW



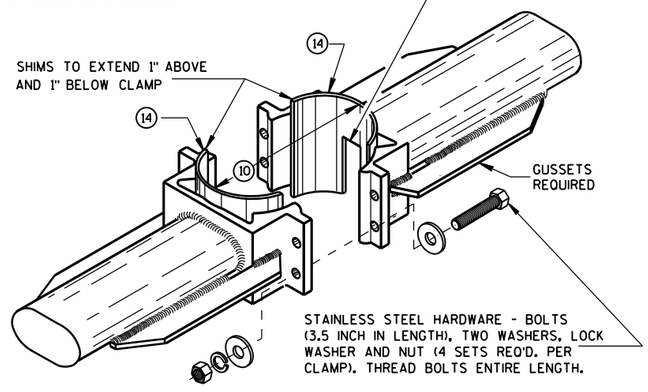
SECTION A-A

CIRCULAR CLAMP SHIM

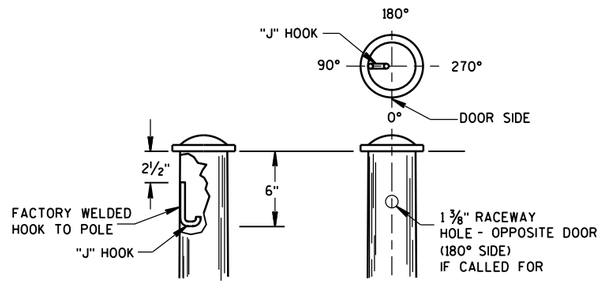
(2 TO A SET)



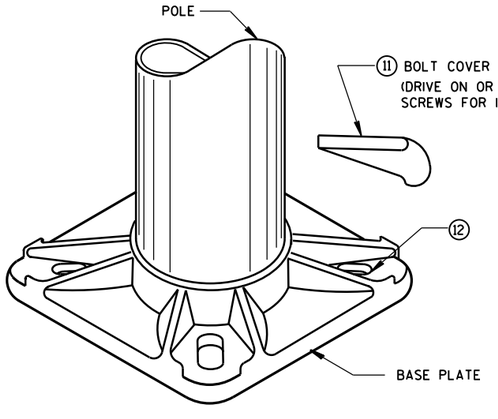
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



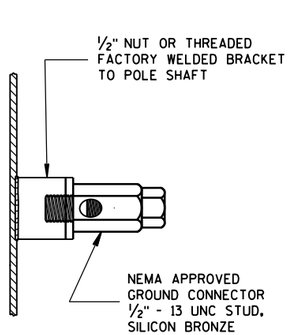
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

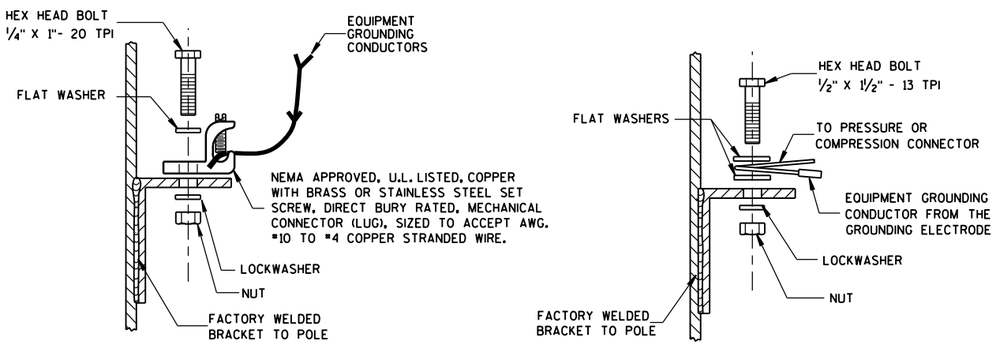


TYPICAL "J" HOOK LOCATION



BASE PLATE





TYPICAL GROUNDING CONNECTIONS

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

HARDWARE DETAILS FOR POLE MOUNTINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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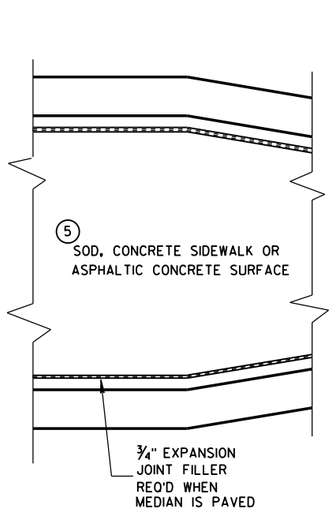
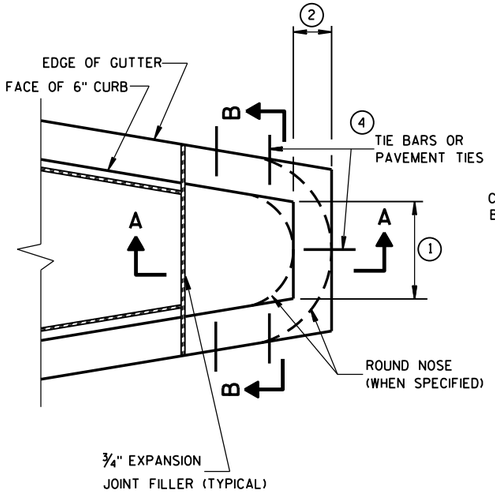
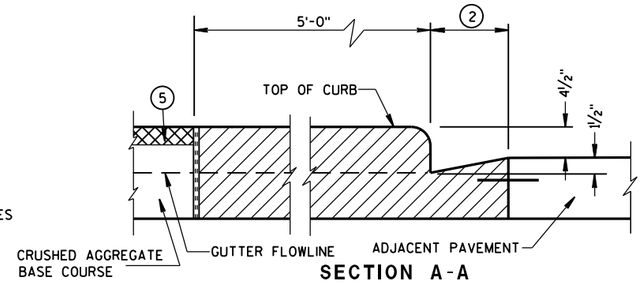
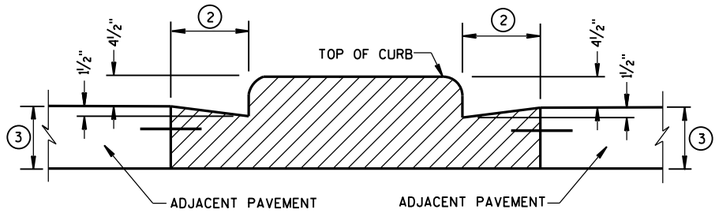






SECTION A-A



SECTION B-B

CONCRETE MEDIAN BLUNT NOSE DETAIL

GENERAL NOTES

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

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

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

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

(1) NEW OR EXISTING CONCRETE PAVEMENT.

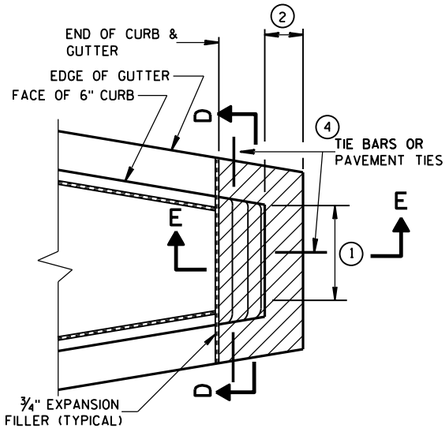
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

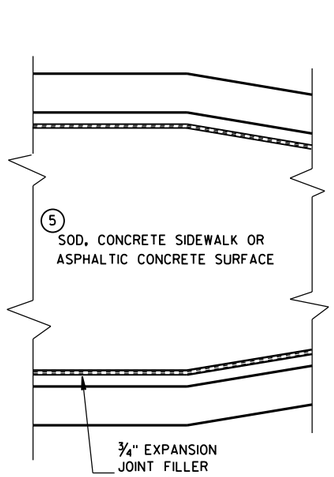
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

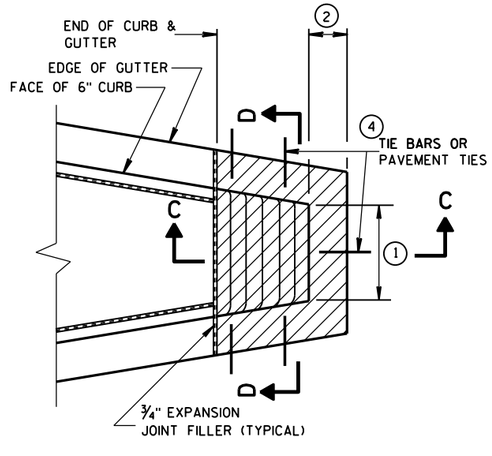
(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

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

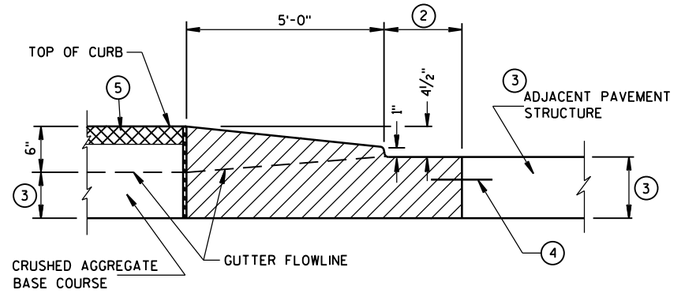
(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.



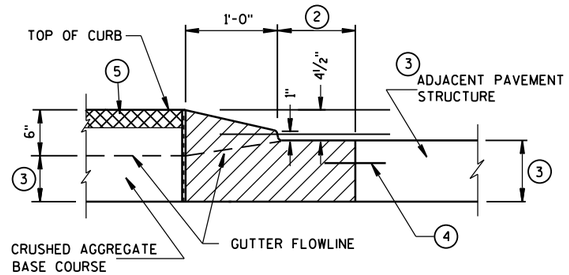




CONCRETE MEDIAN SLOPED NOSE TYPE 1

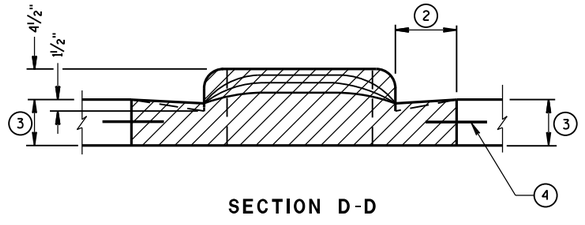


SECTION C-C



SECTION E-E

CONCRETE MEDIAN SLOPED NOSE TYPE 2



SECTION D-D

CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/8/2006
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

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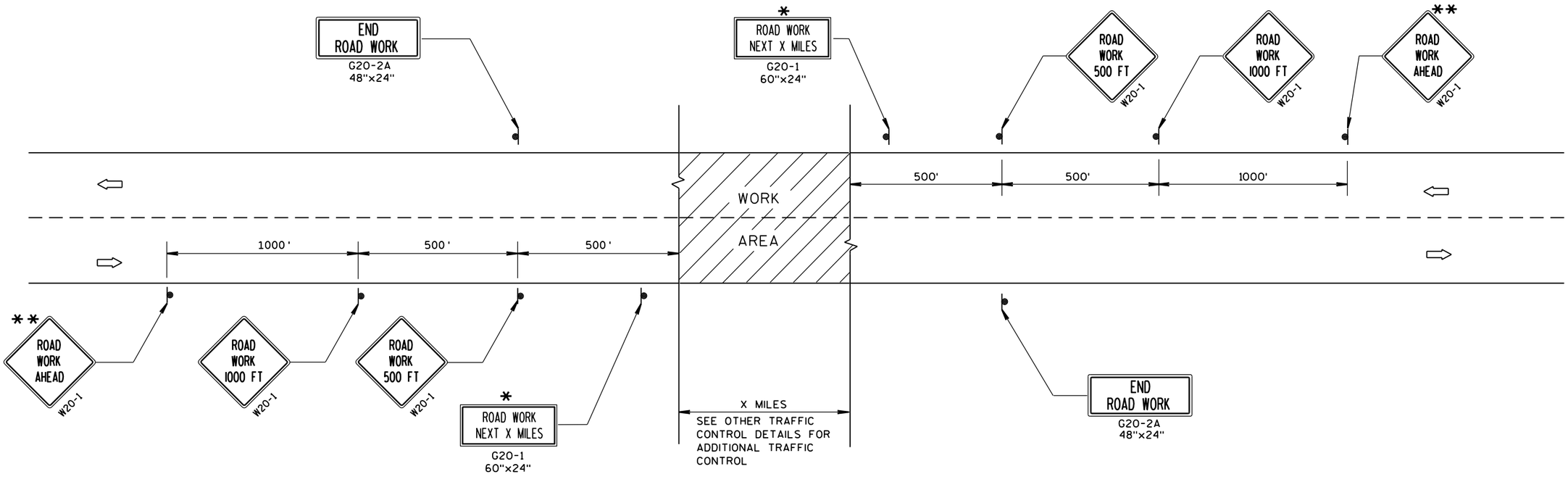
S.D.D. 11 B 2-2



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.

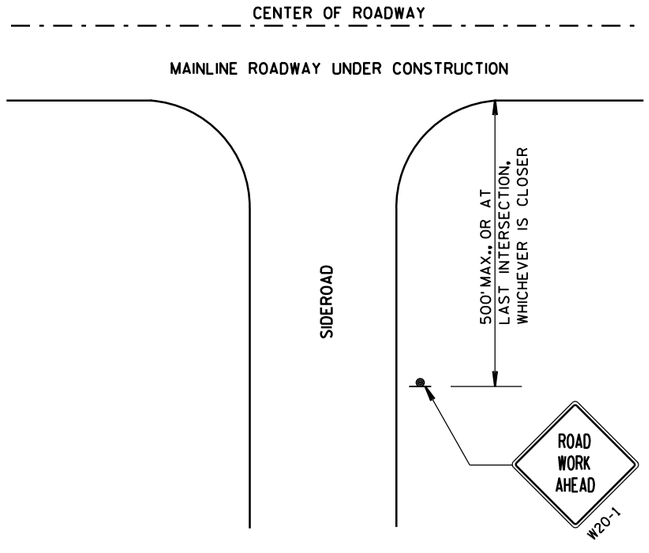
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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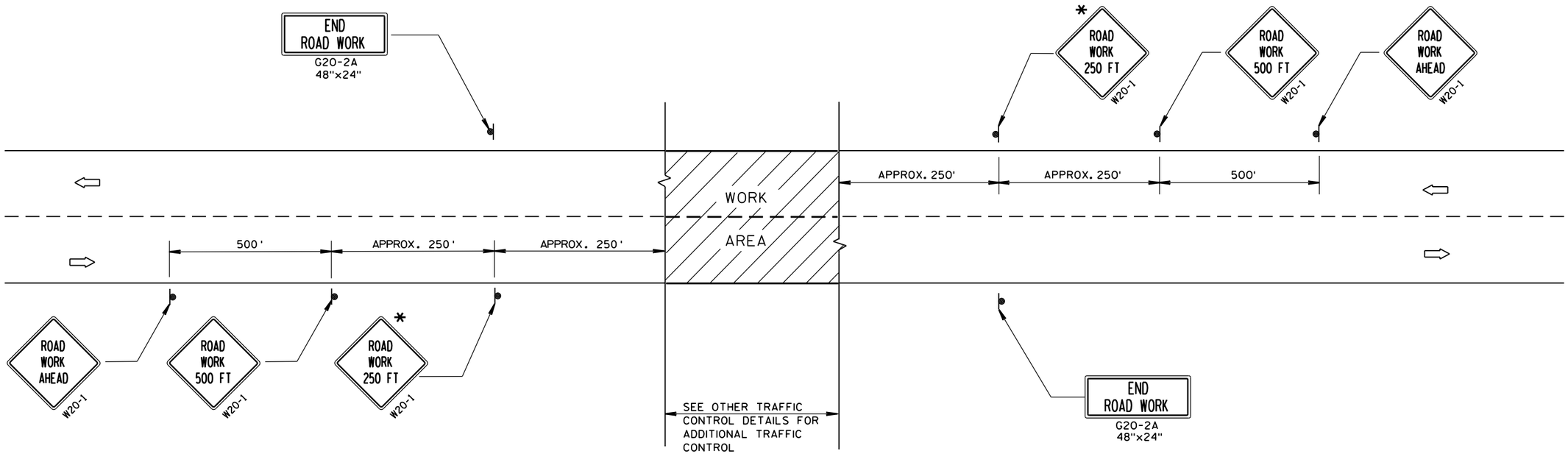
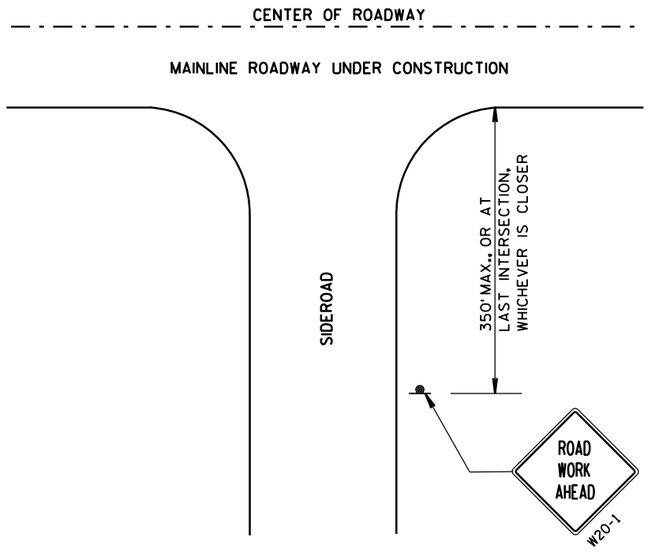


TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



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

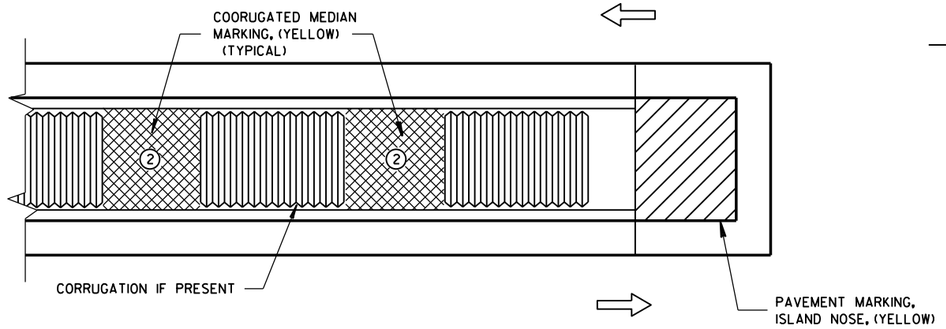
APPROVED

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

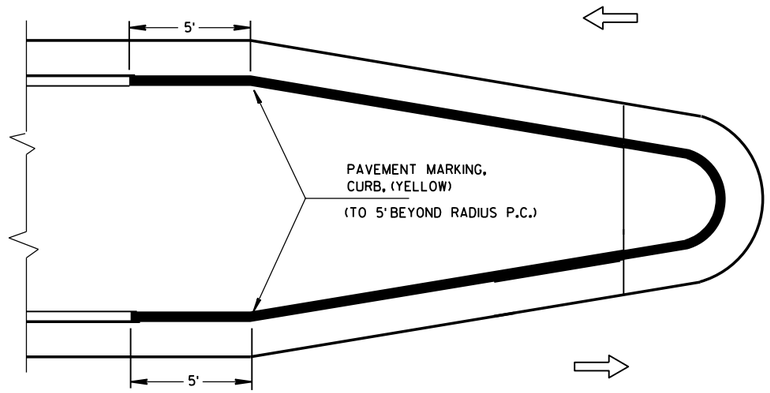
FHWA

6

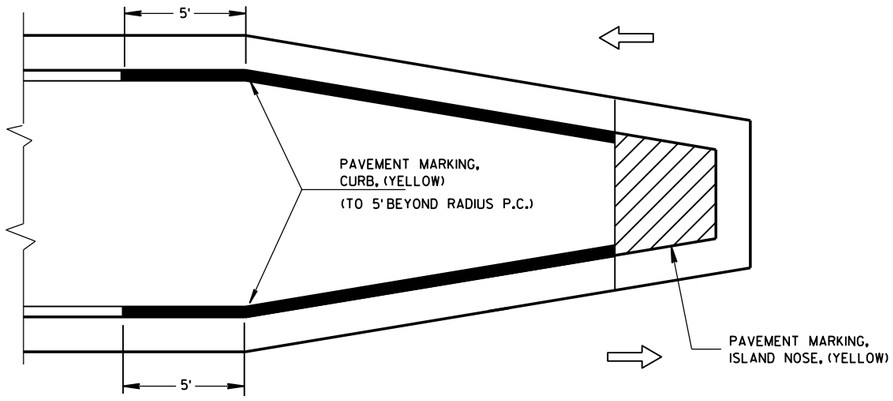
S.D.D. 15 C 5-2



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

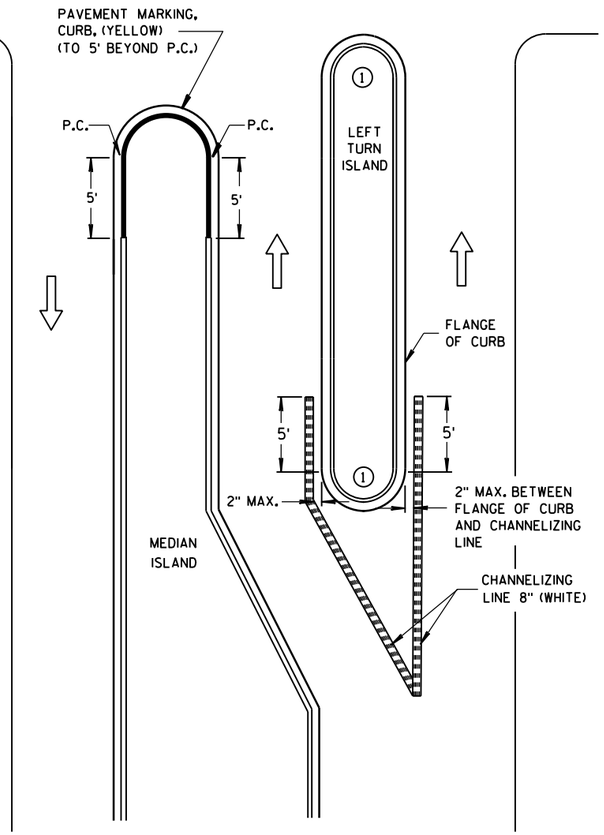


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

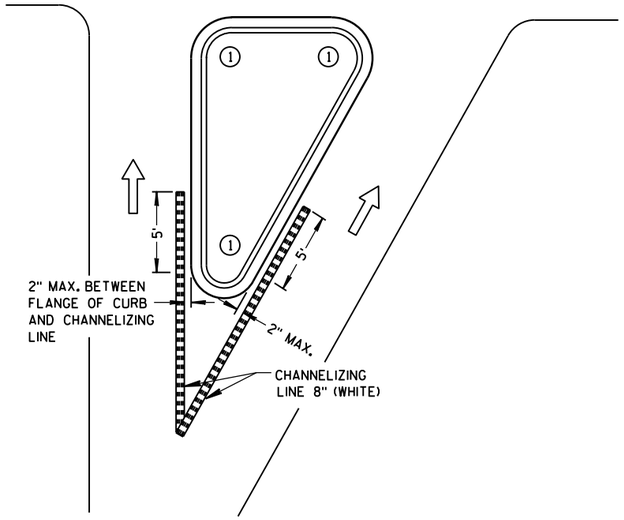


LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

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

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



RIGHT TURN ISLAND

LEGEND

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

PAVEMENT MARKING
(ISLANDS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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

6

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

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA

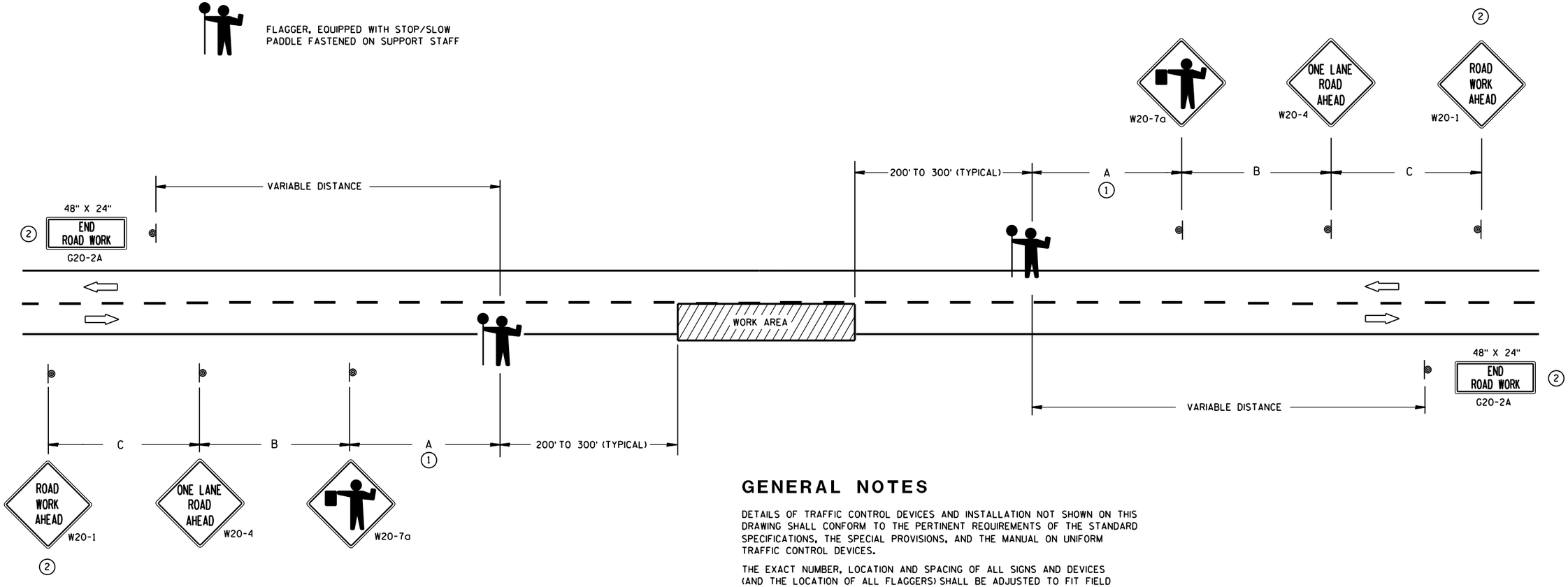
FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN SPACING TABLE

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

BE PREPARED TO STOP
W3-4

USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



(1) FOR A MOVING WORK OPERATION,
SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

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

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.

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

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 15 C 12-4

GENERAL NOTES

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

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

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

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

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

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

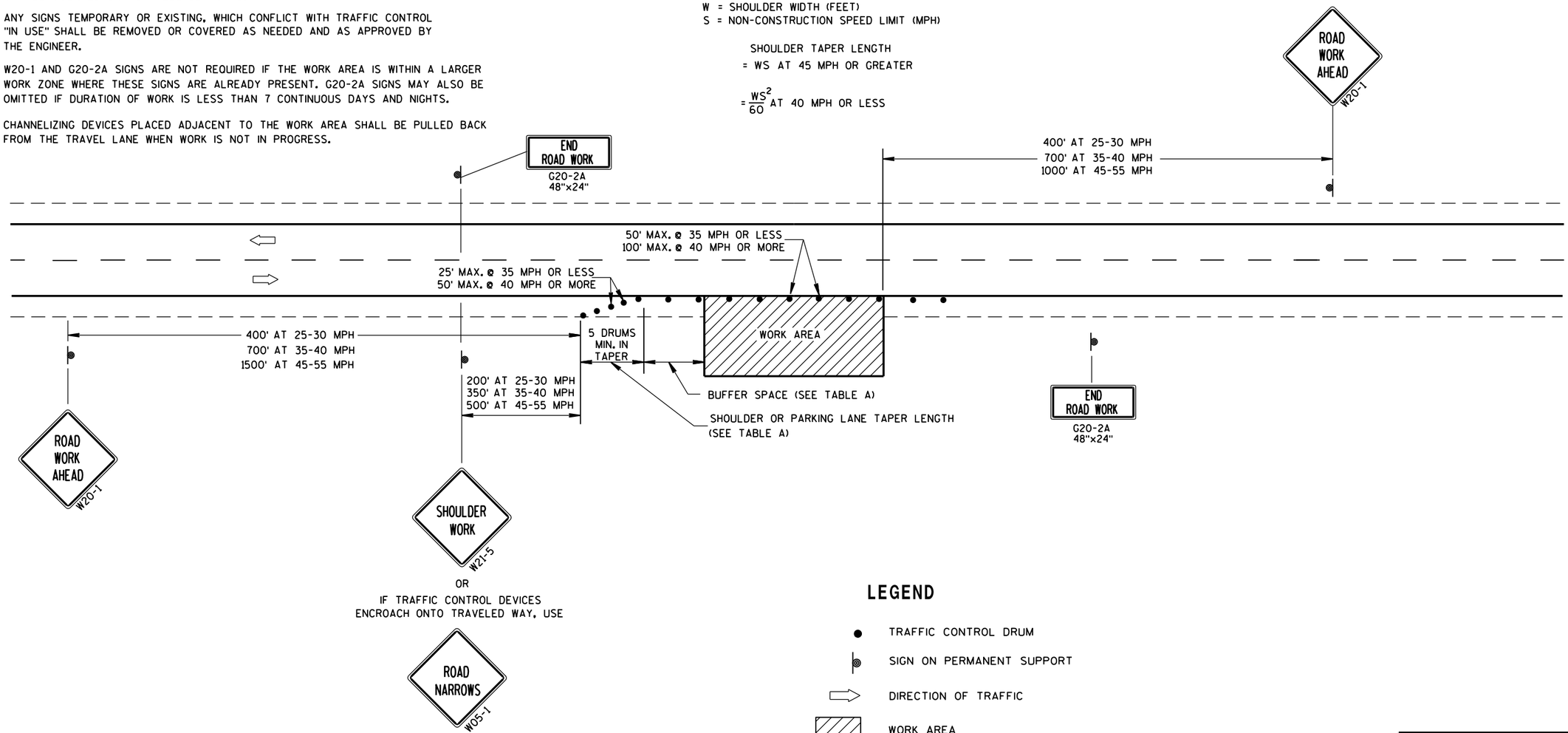
TABLE A

S \ W	SHOULDER TAPER LENGTH (FEET) 4	6	8	10	BUFFER SPACE (FEET)
30	20	30	40	50	85
35	30	45	55	70	120
40	40	55	75	90	170
45	60	90	120	150	220
50	70	100	135	170	280
55	75	110	150	185	335

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

SHOULDER TAPER LENGTH
= WS AT 45 MPH OR GREATER

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



LEGEND

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

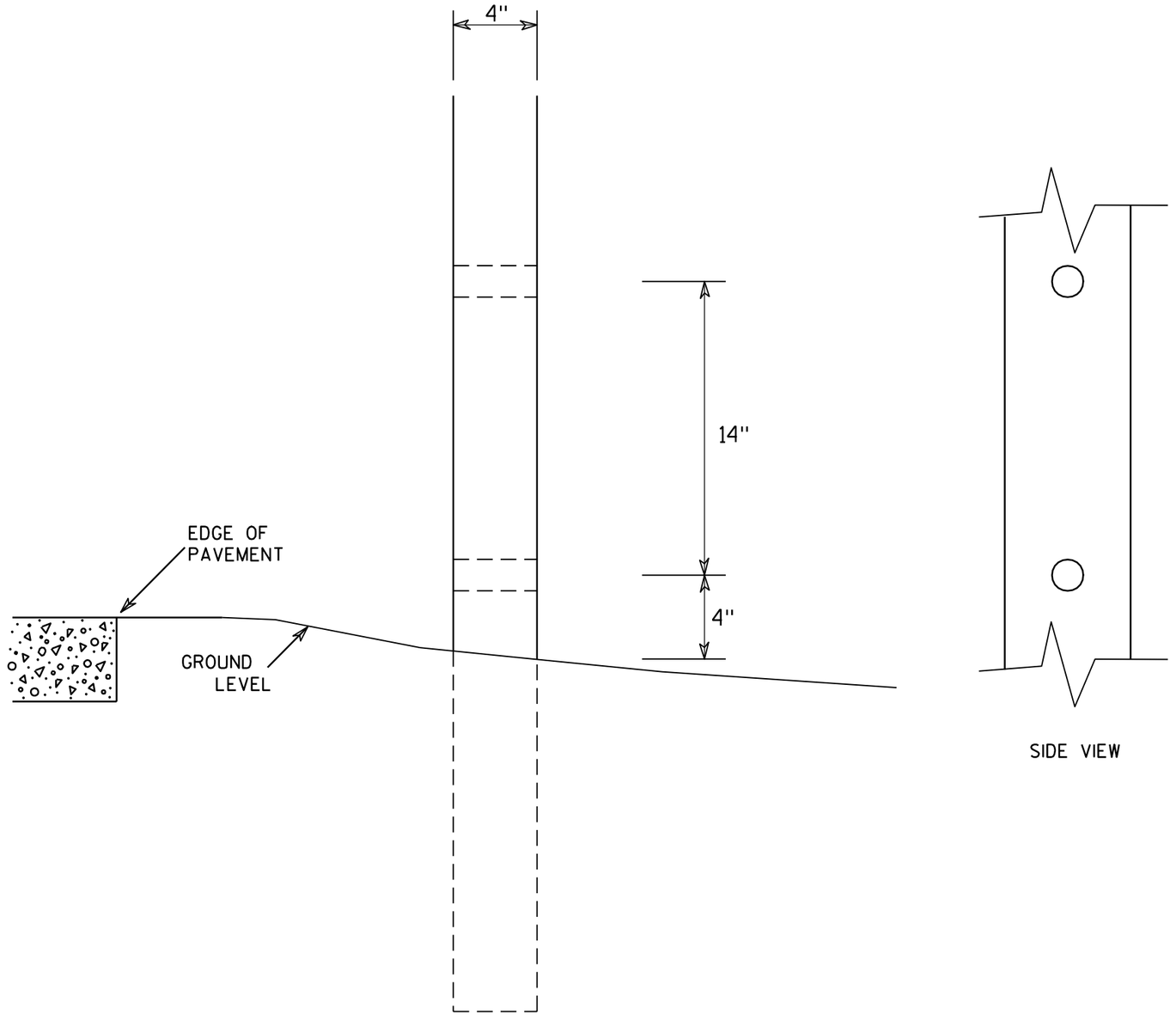
8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

6

S.D.D. 15 D 28-2



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

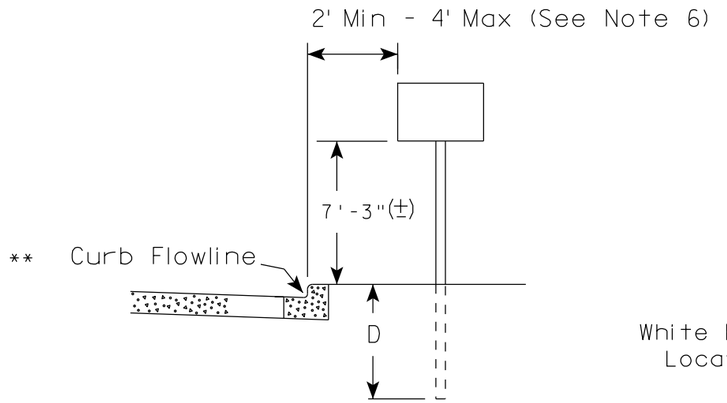
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

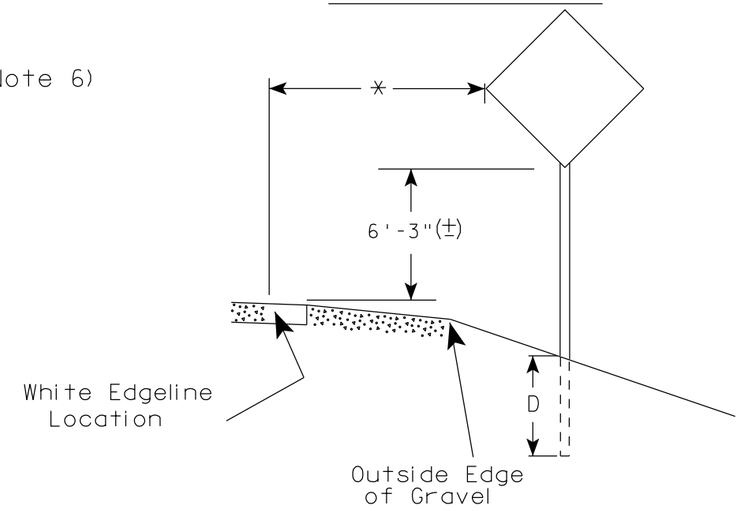
DATE 3/27/97 PLATE NO. A4-11.2

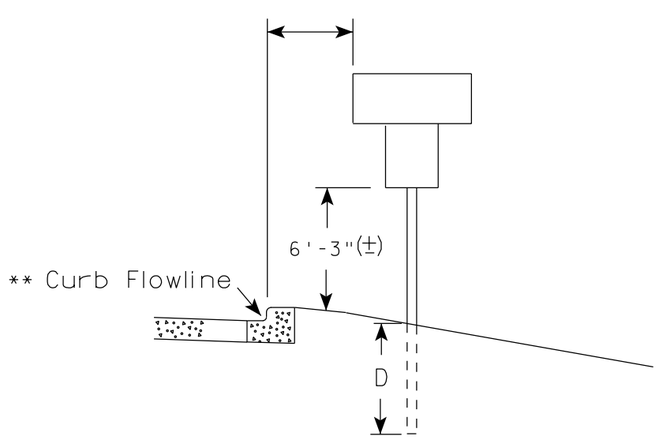
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 39	E

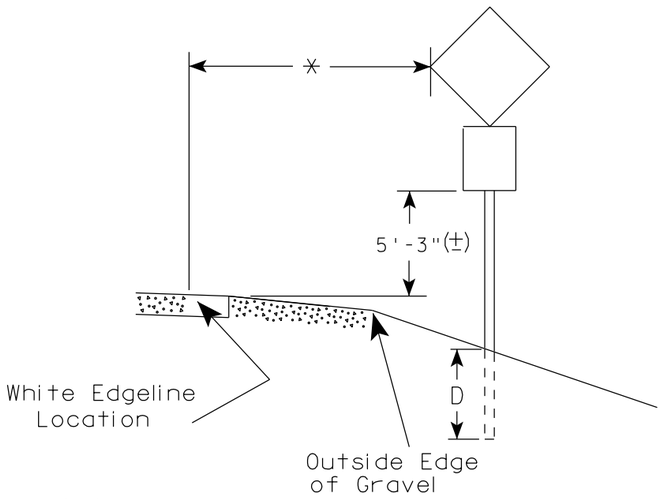
URBAN AREA



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.

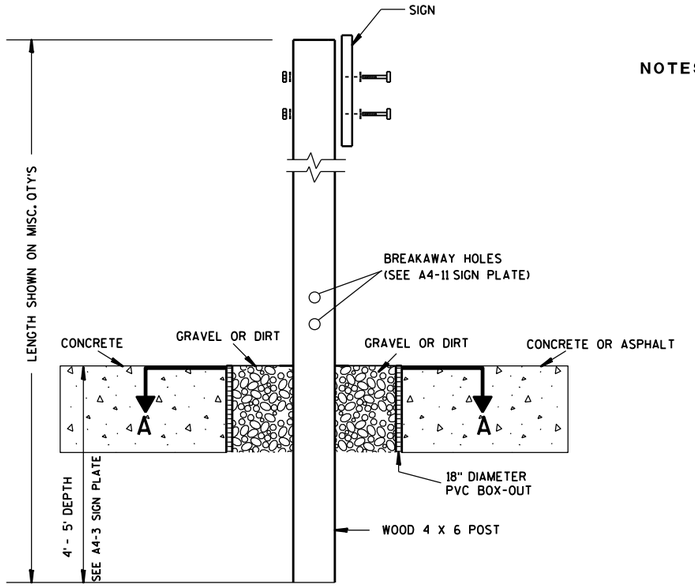
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/14 PLATE NO. A4-3.19

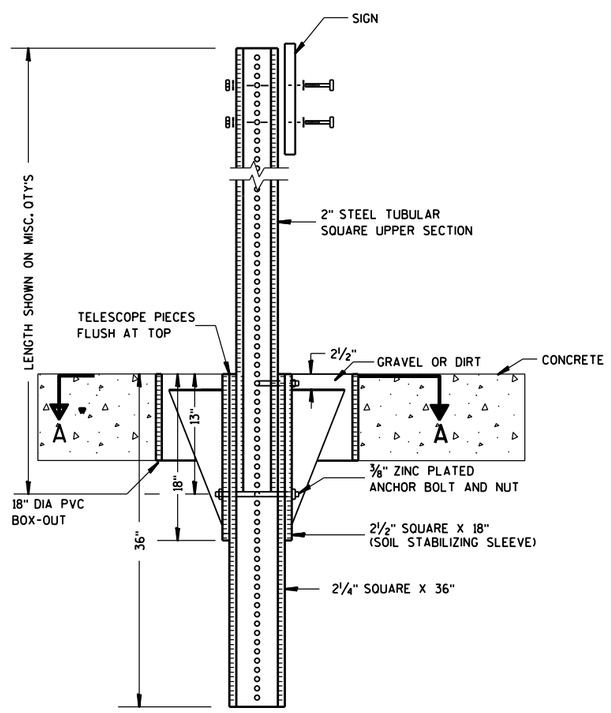
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



ELEVATION VIEW

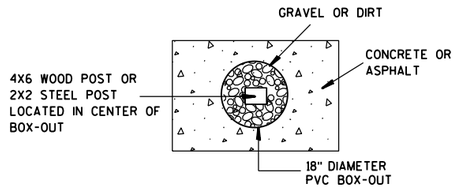
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

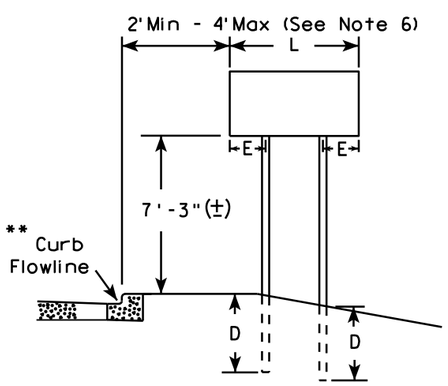
APPROVED Matthew R Rauch
for State Traffic Engineer

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

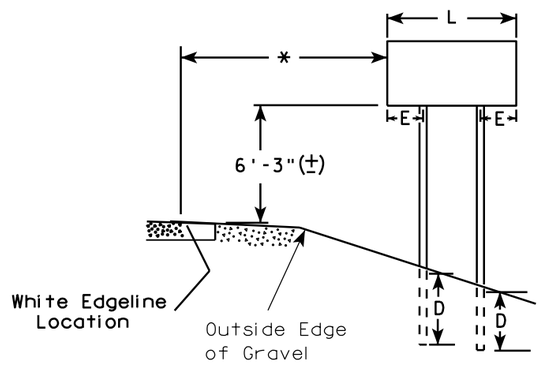
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

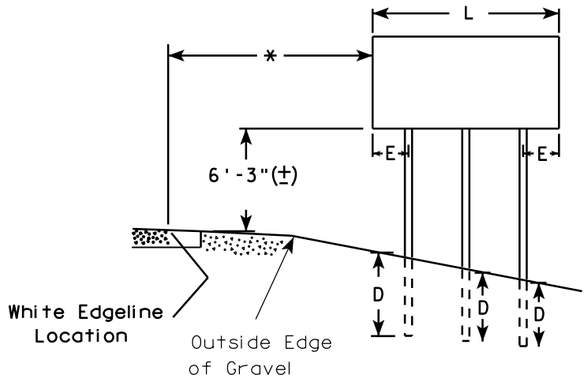
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

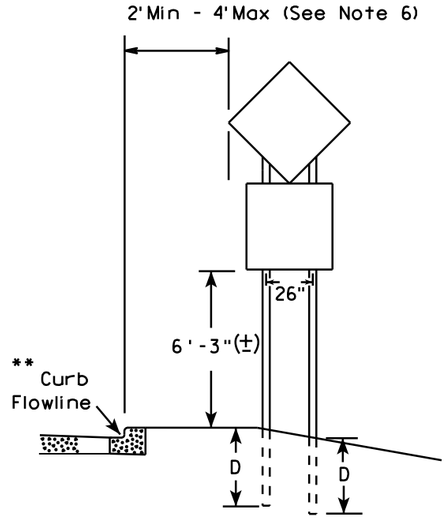
URBAN AREA



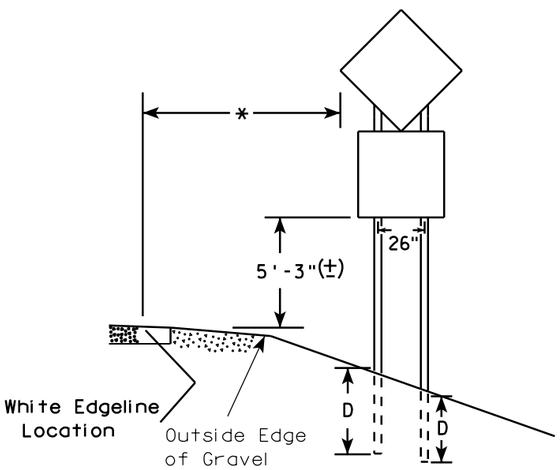
RURAL AREA (See Note 3)







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'

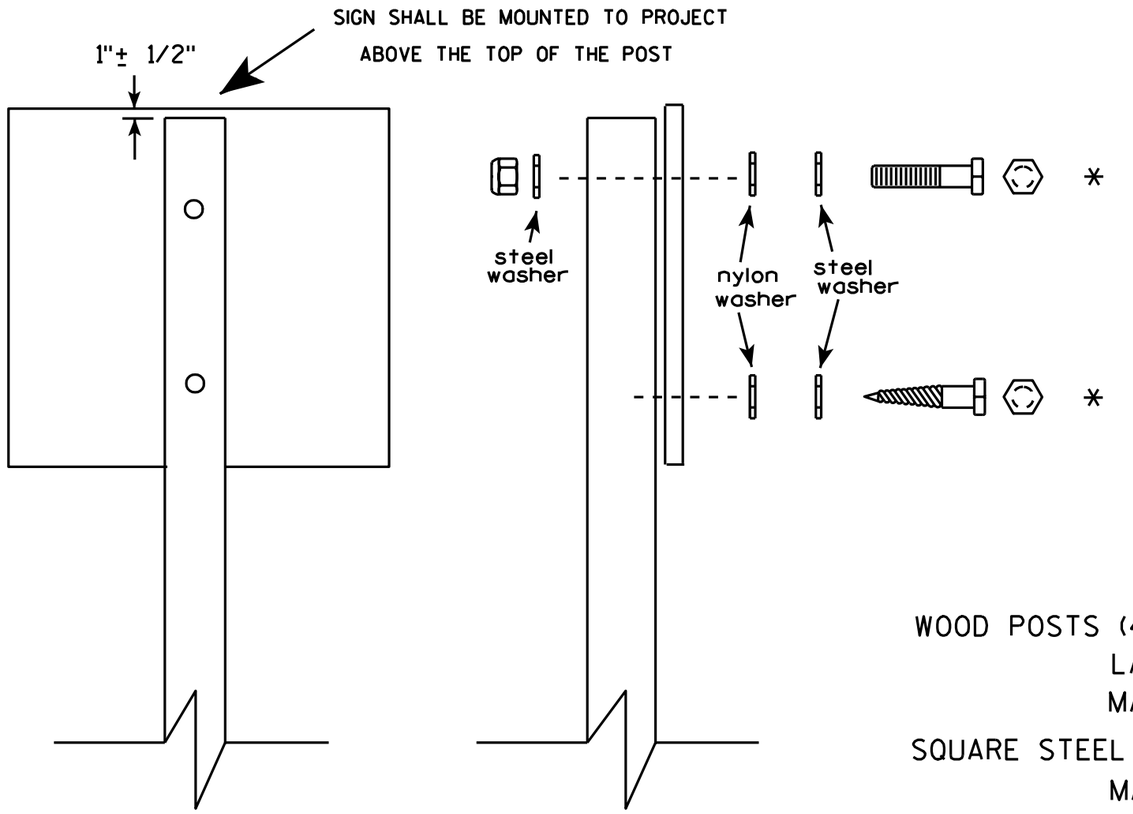
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/14 PLATE NO. A4-4 42 13

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

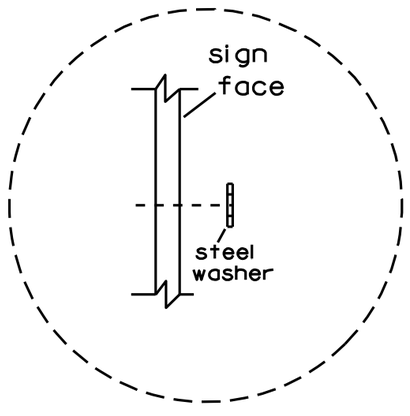
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3"
MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts

SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts
RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON for all Type H signs.



Washer Placement when Sign Has Other Than Type H or Type F Face

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

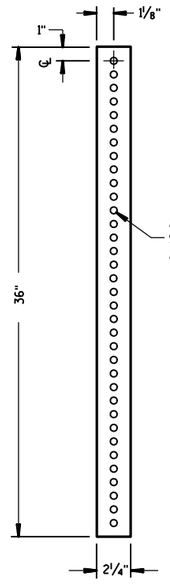
DATE 3/23/10 PLATE NO. A4-8.7

7

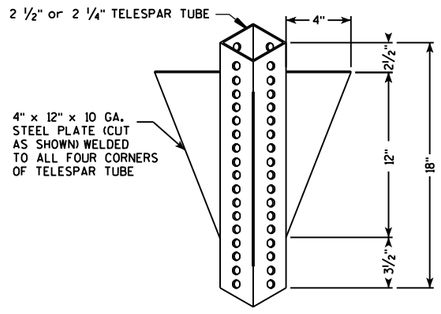
7

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

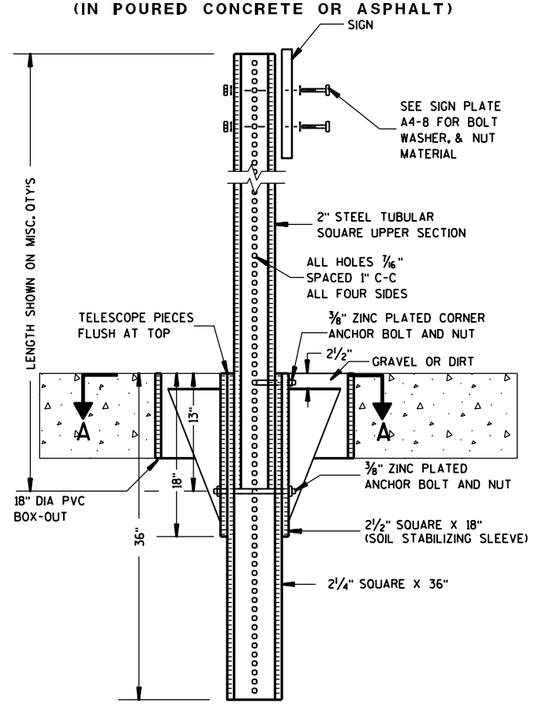
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



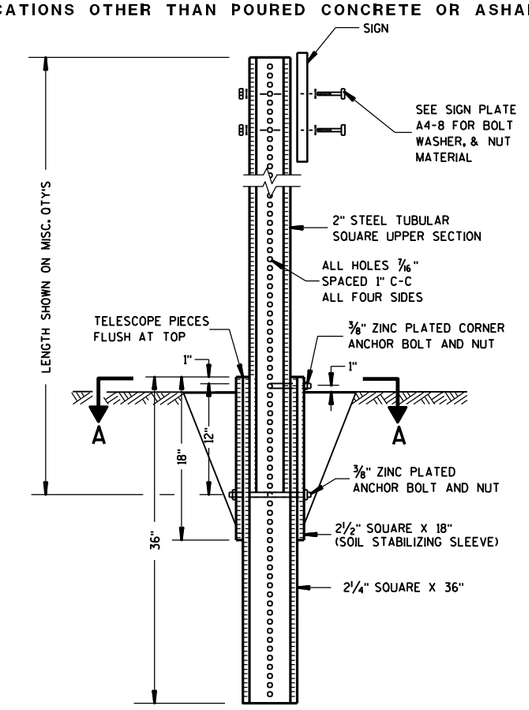
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

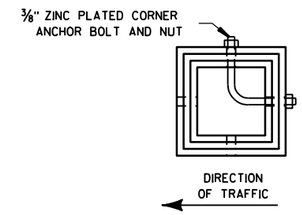


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

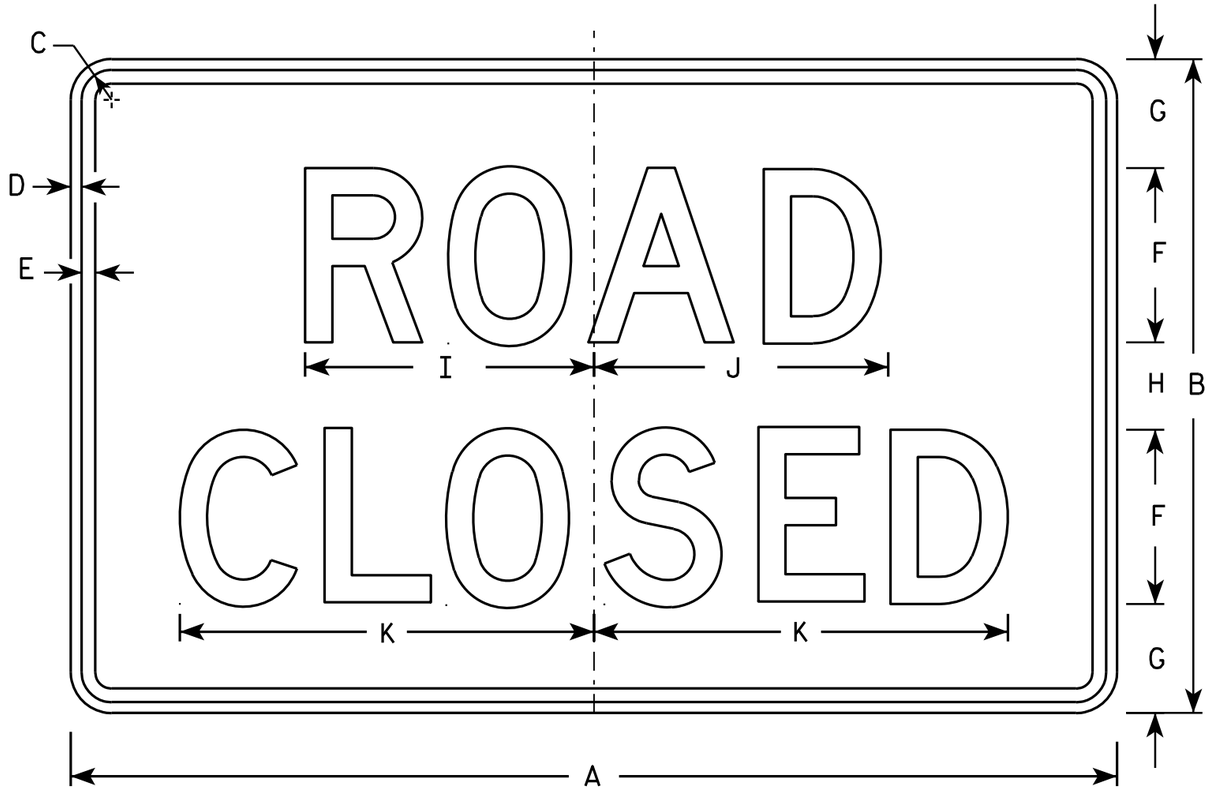
TUBULAR STEEL SIGN POST A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/30/12 PLATE NO. A4-9.7

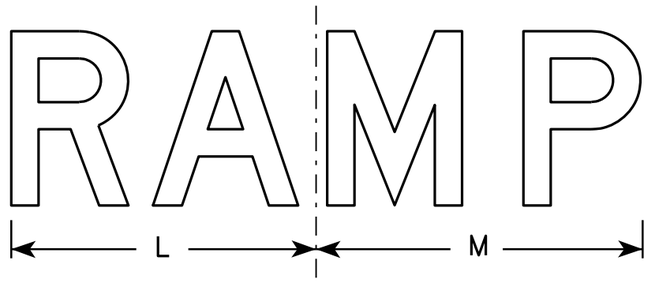
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 44	E



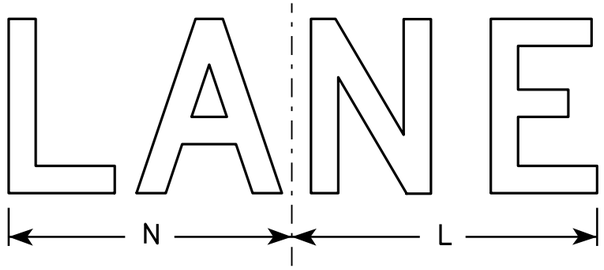
R11-2

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: 45 | E

EARTHWORK TABULATION - STH 11 - WEST LEG EXPANSION FACTOR = 1.3

STATION	END AREA CUT (SF)	END AREA FILL (SF)	INCREMENTAL VOLUME CUT (CY)	INCREMENTAL VOLUME EXP FILL (CY)	CUMMULATIVE VOLUME CUT (CY)	CUMMULATIVE VOLUME EXP FILL (CY)	MASS ORDINATE (CY)
52+68	24	5	0	0	0	0	0
53+00	25	10	29	12	29	12	17
53+50	24	23	45	40	74	51	23
53+96	23	33	40	62	114	113	1
54+00	23	34	3	6	118	120	-2
54+50	22	49	42	100	160	220	-60
55+00	23	47	42	116	201	335	-134
55+50	24	27	44	89	245	424	-180
56+00	25	11	45	46	290	470	-180
56+33	26	10	31	17	321	487	-165
56+43	26	9	10	5	331	491	-160
56+50	26	5	7	2	338	494	-156
56+66	26	6	15	4	353	498	-145
57+00	21	2	30	7	383	504	-122
		TOTAL	383	504			

EARTHWORK TABULATION - STH 11 - WEST LEG MEDIAN EXPANSION FACTOR = 1.3

STATION	END AREA CUT (SF)	END AREA FILL (SF)	INCREMENTAL VOLUME CUT (CY)	INCREMENTAL VOLUME EXP FILL (CY)	CUMMULATIVE VOLUME CUT (CY)	CUMMULATIVE VOLUME EXP FILL (CY)	MASS ORDINATE (CY)
56+33	11	0	0	0	0	0	0
56+43	11	0	4	0	4	0	4
56+50	11	0	3	0	7	0	7
56+66	20	0	9	0	16	0	16
57+00	20	0	25	0	41	0	41
57+36	14	0	23	0	64	0	64
		TOTAL	64	0			

EARTHWORK TABULATION - STH 11 - SOUTH LEG EXPANSION FACTOR = 1.3

STATION	END AREA CUT (SF)	END AREA FILL (SF)	INCREMENTAL VOLUME CUT (CY)	INCREMENTAL VOLUME EXP FILL (CY)	CUMMULATIVE VOLUME CUT (CY)	CUMMULATIVE VOLUME EXP FILL (CY)	MASS ORDINATE (CY)
81+57	30	9	0	0	0	0	0
82+00	30	10	48	20	48	20	28
82+27	31	7	31	11	78	31	48
82+38	33	4	13	3	91	34	58
82+50	30	3	14	2	105	36	70
83+00	27	11	53	17	158	53	106
83+23	35	0	26	6	185	59	126
		TOTAL	185	59			

9

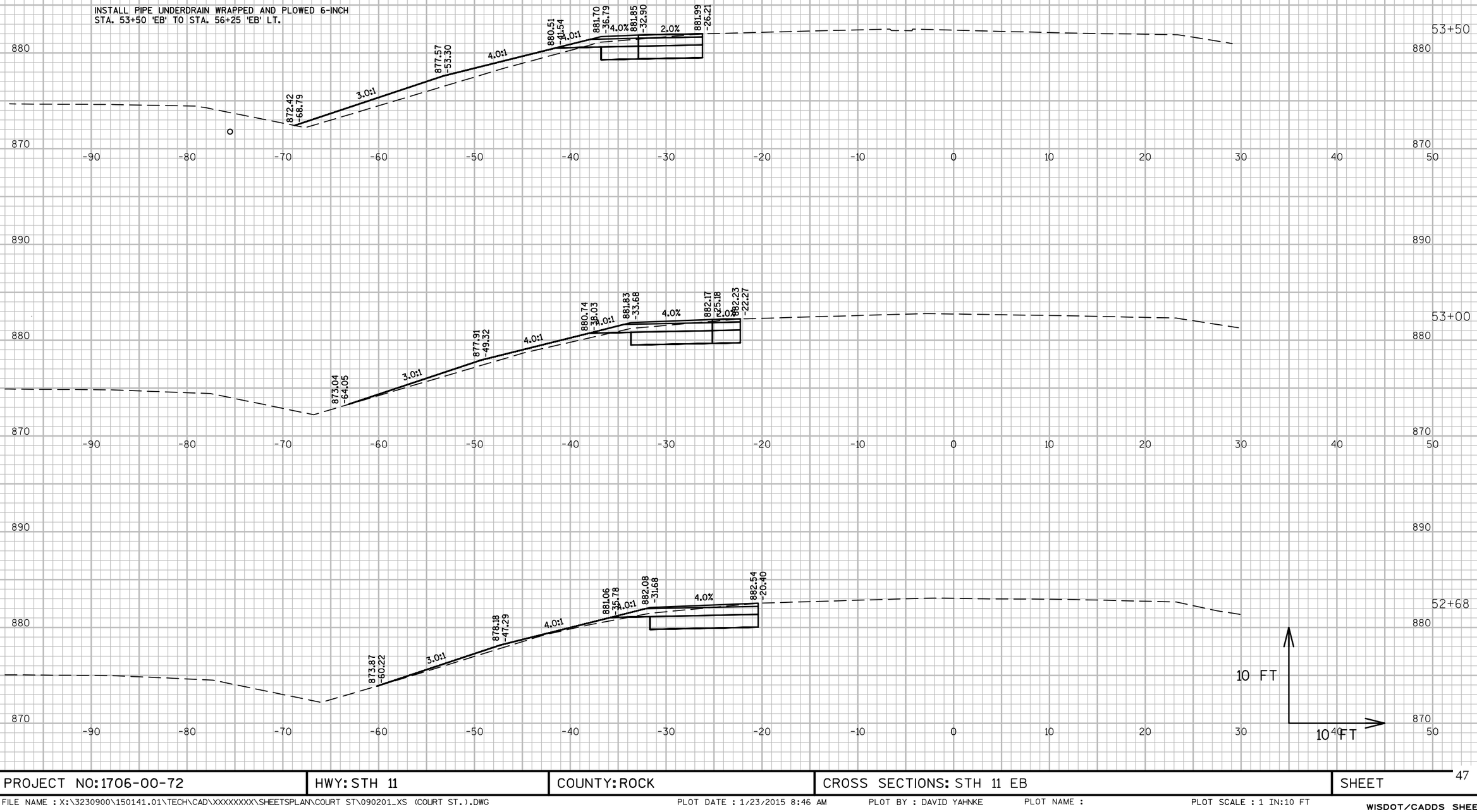
9

PROJECT NO:1706-00-72	HWY: STH 11	COUNTY: ROCK	EARTHWORK TABULATION	SHEET: 46	E

FILE NAME : Entp\32304-00\113690.01\TECH\Misc. Quantities

PLOT SCALE : 1:1

INSTALL PIPE UNDERDRAIN WRAPPED AND PLOWED 6-INCH
STA. 53+50 'EB' TO STA. 56+25 'EB' LT.

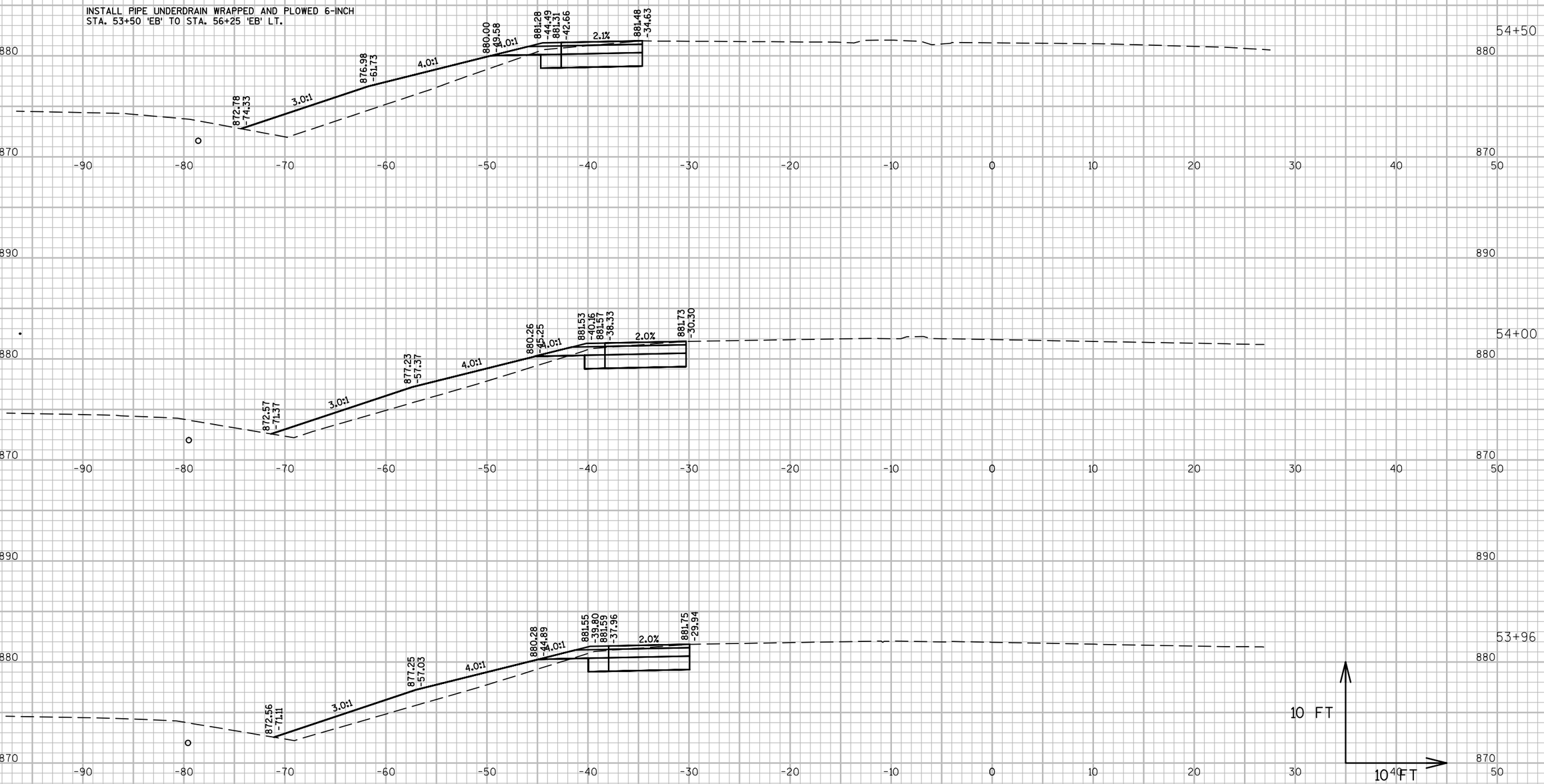


PROJECT NO:1706-00-72	HWY: STH 11	COUNTY: ROCK	CROSS SECTIONS: STH 11 EB	SHEET 47

FILE NAME : X:\3230900\150141.01\TECH\CAD\XXXXXXXX\SHEETSPLAN\COURT ST\090201_XS (COURT ST.).DWG PLOT DATE : 1/23/2015 8:46 AM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

INSTALL PIPE UNDERDRAIN WRAPPED AND PLOWED 6-INCH
STA. 53+50 'EB' TO STA. 56+25 'EB' LT.

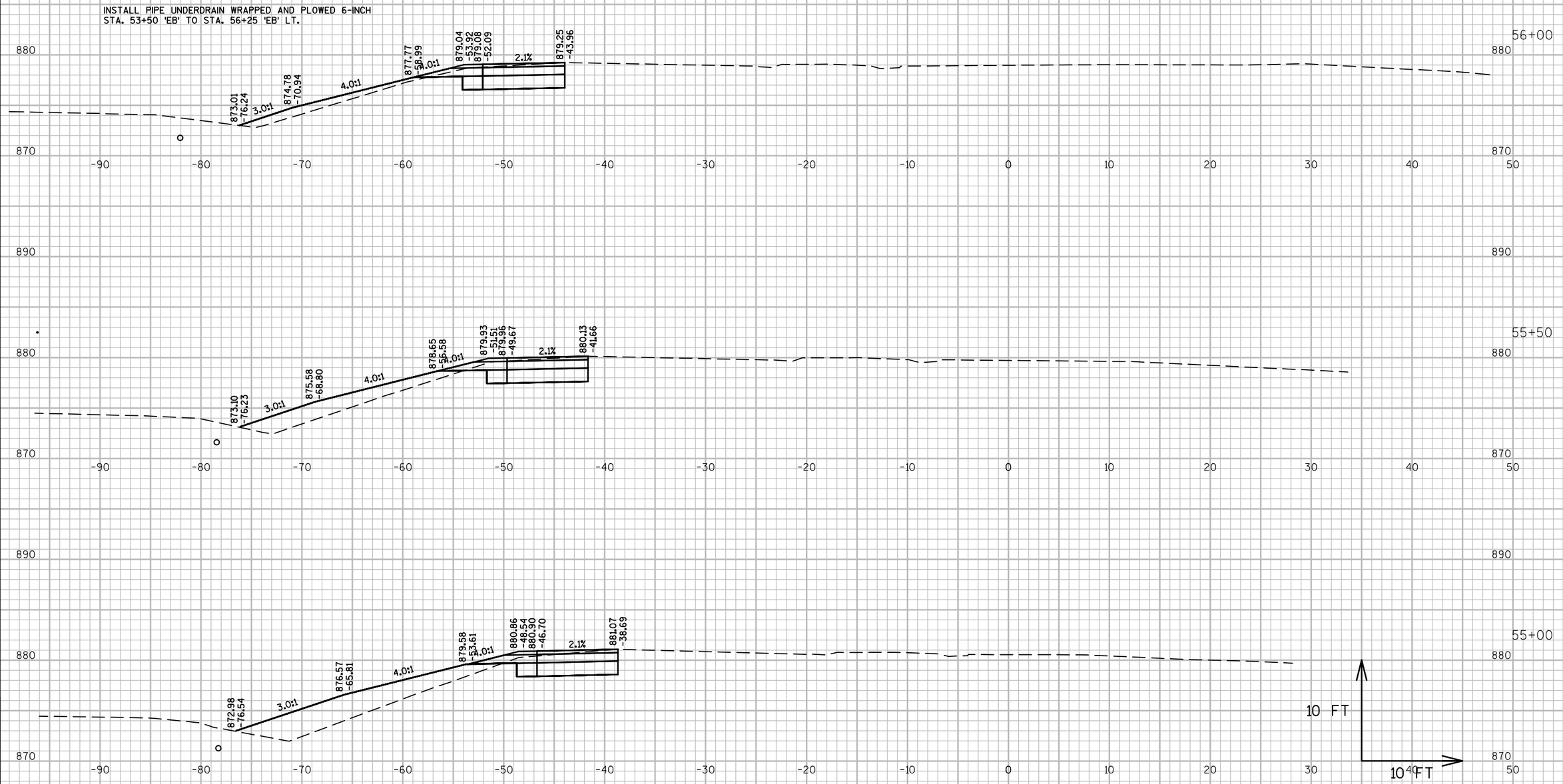


PROJECT NO:1706-00-72	HWY: STH 11	COUNTY: ROCK	CROSS SECTIONS: STH 11 EB	SHEET 48

FILE NAME : X:\3230900\150141.01\TECH\CAD\XXXXXXXX\SHEETSPLAN\COURT ST\090201_XS (COURT ST.).DWG PLOT DATE : 1/23/2015 8:46 AM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1 IN:10 FT

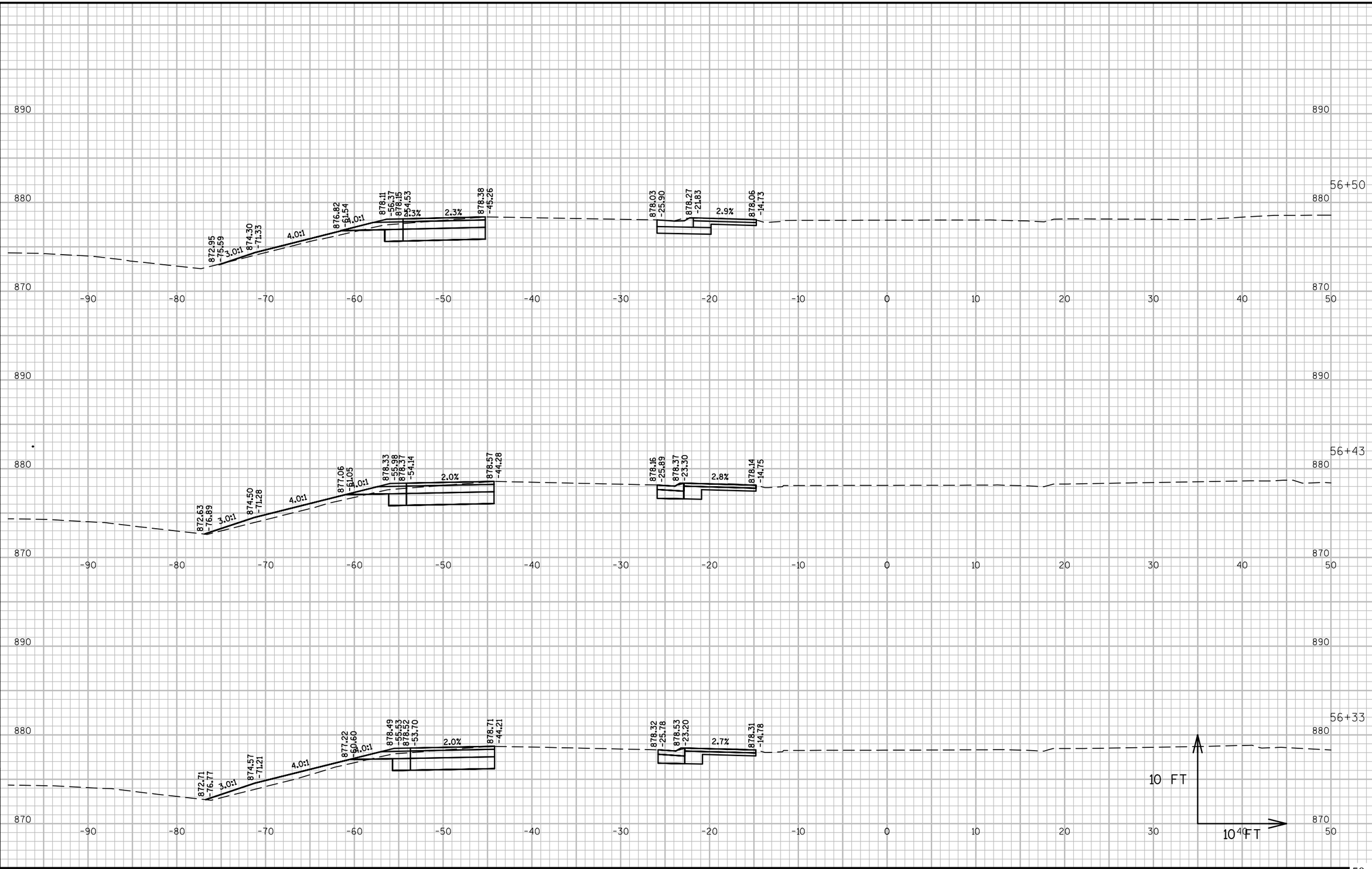
WISDOT/CADDS SHEET 49

INSTALL PIPE UNDERDRAIN WRAPPED AND PLOWED 6-INCH
STA. 53+50 'EB' TO STA. 56+25 'EB' LT.



PROJECT NO:1706-00-72	HWY: STH 11	COUNTY: ROCK	CROSS SECTIONS: STH 11 EB	SHEET 49

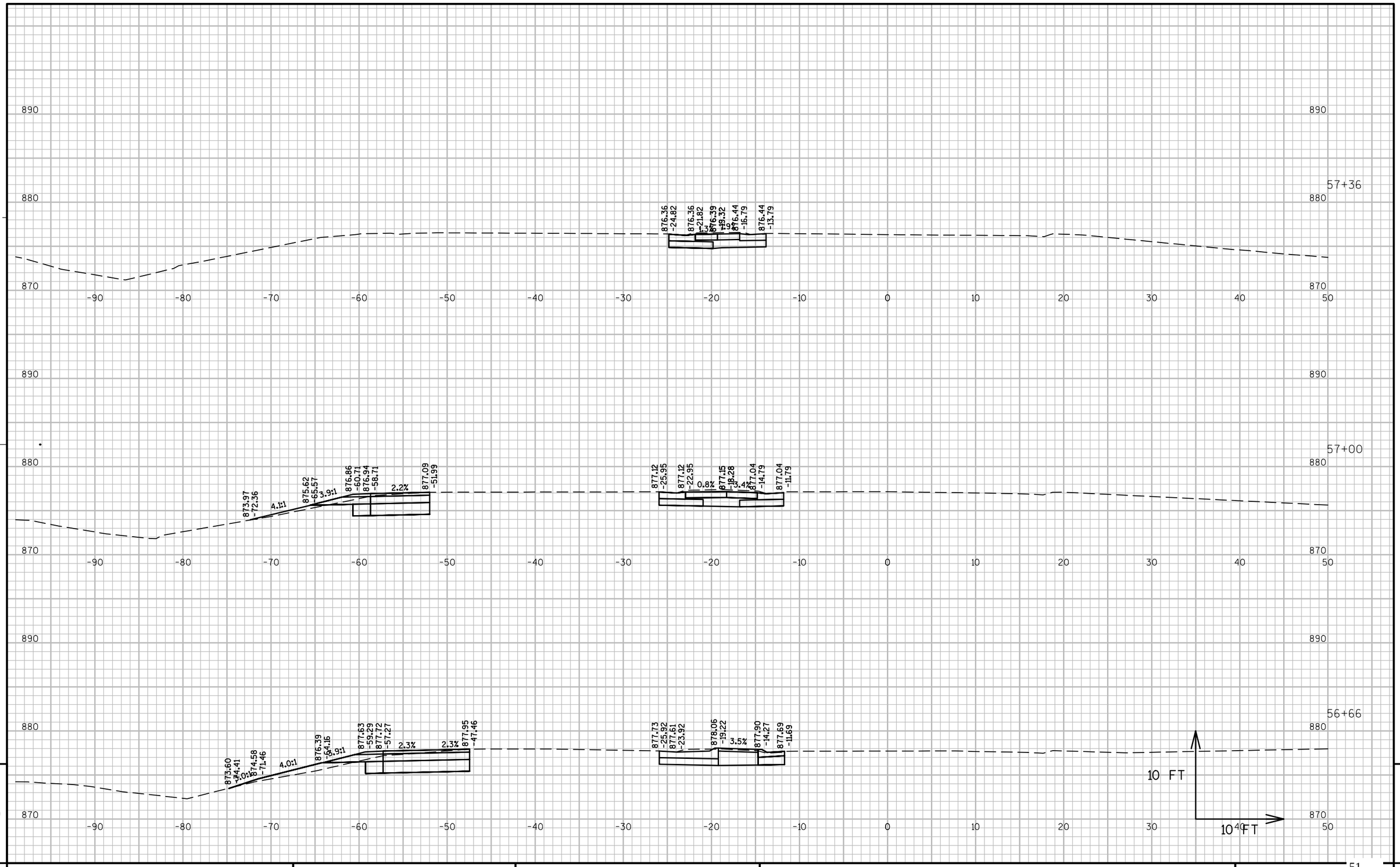
FILE NAME : X:\3230900\150141.01\TECH\CAD\XXXXXXXX\SHEETSPLAN\COURT ST\090201_XS (COURT ST.).DWG
PLOT DATE : 1/23/2015 8:46 AM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1 IN:10 FT



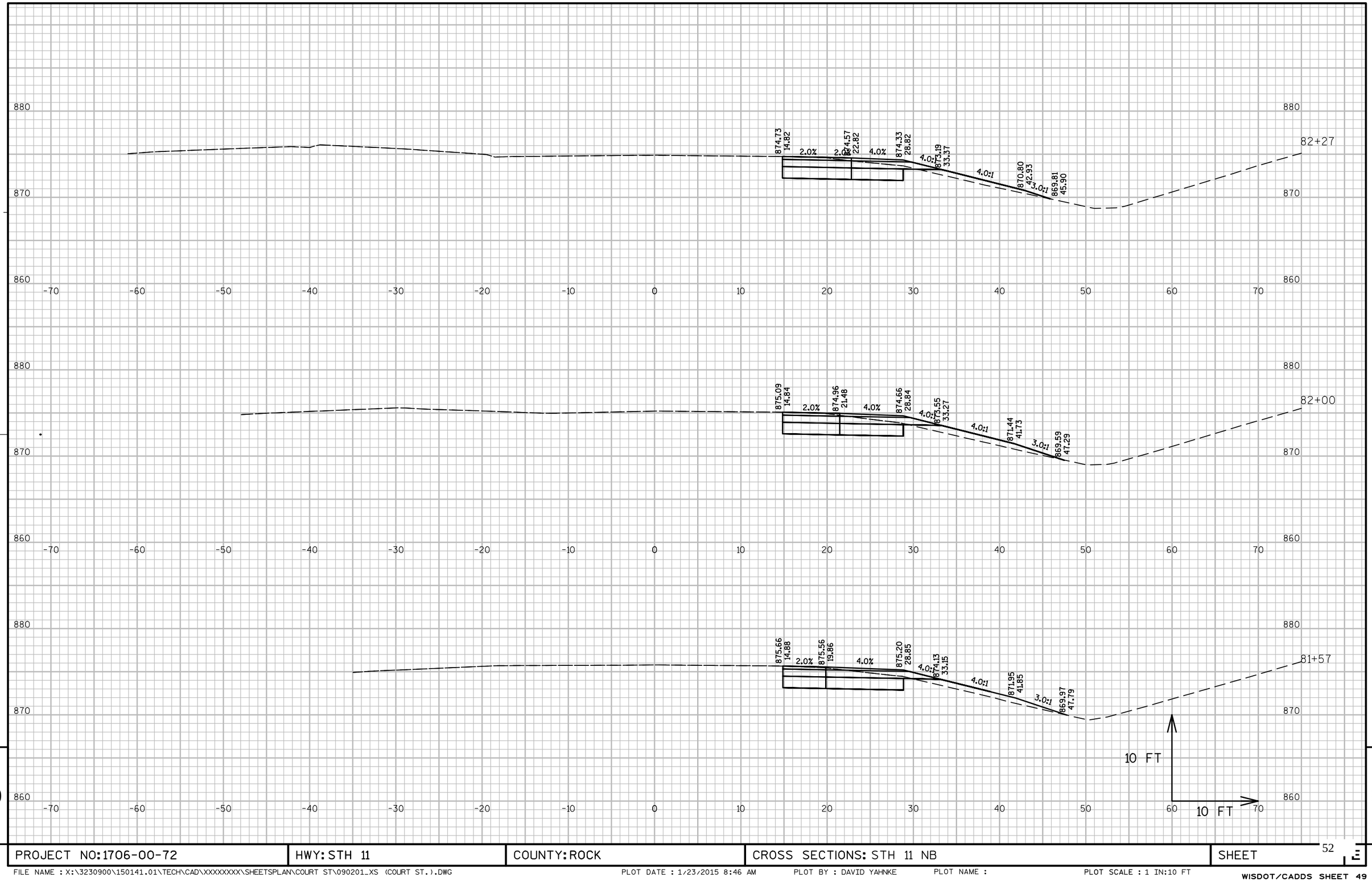
PROJECT NO:1706-00-72	HWY: STH 11	COUNTY: ROCK	CROSS SECTIONS: STH 11 EB	SHEET 50

FILE NAME : X:\3230900\150141.01\TECH\CAD\XXXXXXXX\SHEETSPLAN\COURT ST\090201_XS (COURT ST.).DWG PLOT DATE : 1/23/2015 8:46 AM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



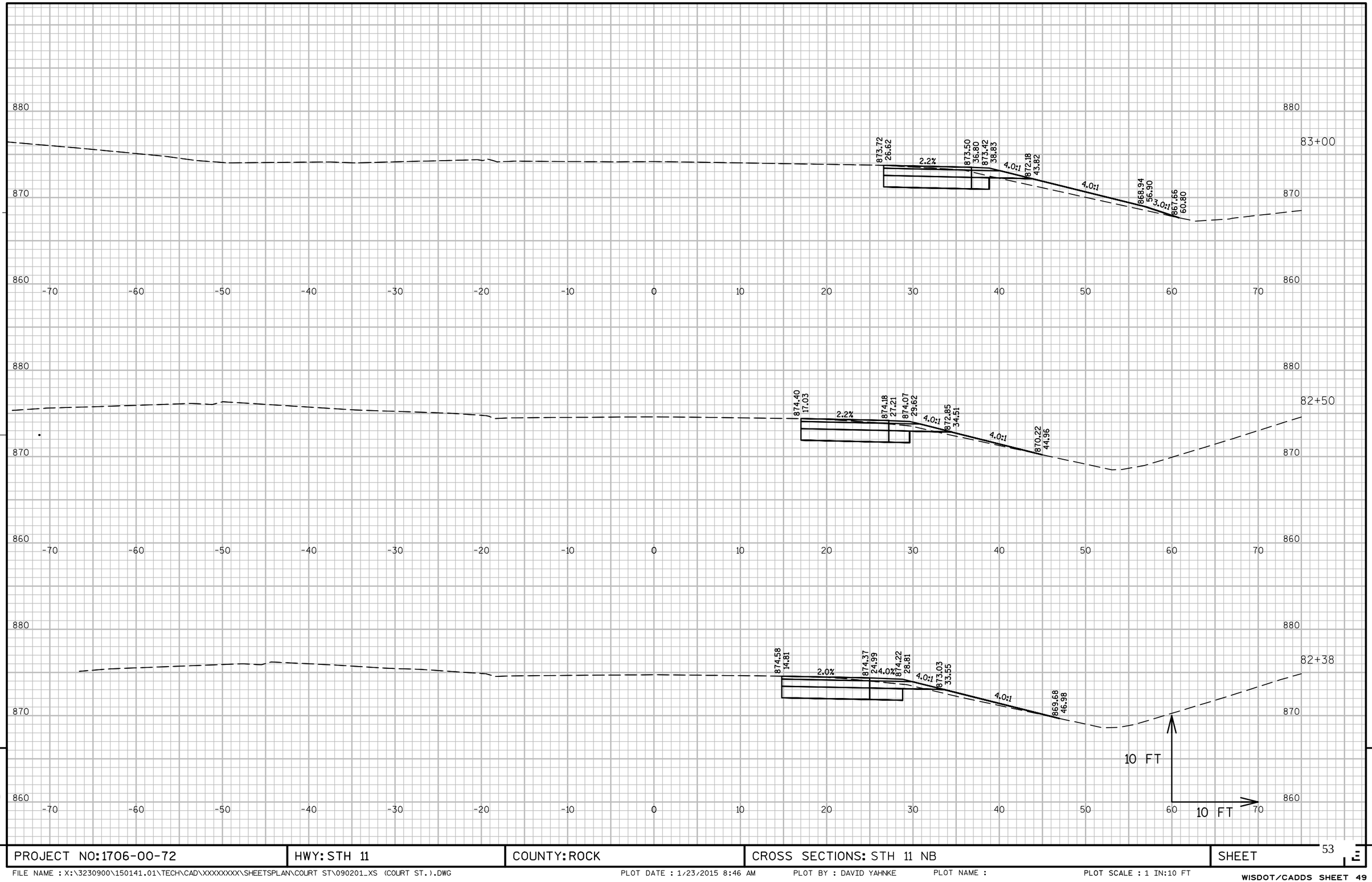
PROJECT NO:1706-00-72	HWY: STH 11	COUNTY: ROCK	CROSS SECTIONS: STH 11 EB	SHEET 51



PROJECT NO:1706-00-72	HWY: STH 11	COUNTY:ROCK	CROSS SECTIONS: STH 11 NB	SHEET

FILE NAME : X:\3230900\150141.01\TECH\CAD\XXXXXXXX\SHEETSPLAN\COURT ST\090201_XS (COURT ST.).DWG PLOT DATE : 1/23/2015 8:46 AM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



PROJECT NO:1706-00-72	HWY: STH 11	COUNTY:ROCK	CROSS SECTIONS: STH 11 NB	SHEET 53

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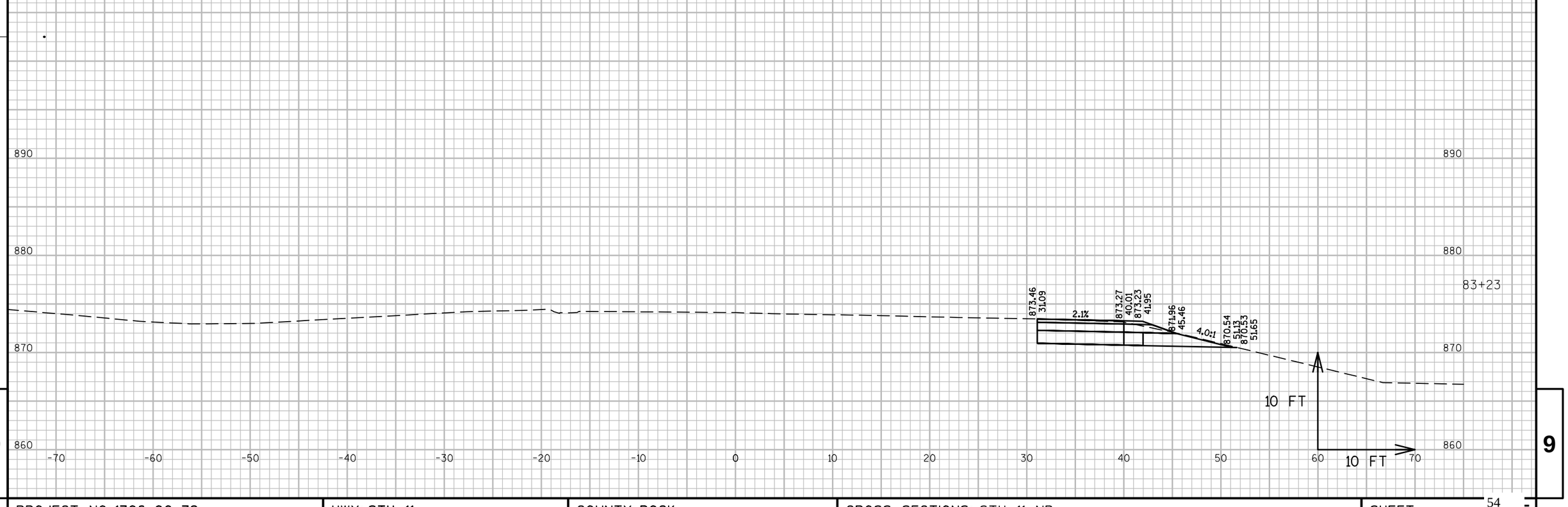


9

9

PROJECT NO:1706-00-72	HWY: STH 11	COUNTY:ROCK	CROSS SECTIONS: STH 11 NB	SHEET

FILE NAME : X:\3230900\150141.01\TECH\CAD\XXXXXXXX\SHEETSPLAN\COURT ST\090201_XS (COURT ST.).DWG PLOT DATE : 1/23/2015 8:46 AM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov

MAD MARCH 2015

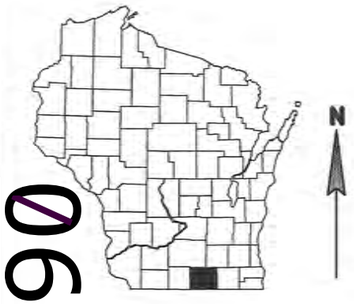
PROJECT ID: 5569-00-73

COUNTY: ROCK

ORDER OF SHEETS

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

TOTAL SHEETS = 350



DESIGN DESIGNATION

		USH 14
A.A.D.T.	(2016)	= 11,100
A.A.D.T.	(2036)	= 13,600
D.H.V.	(2036)	= 1800
D.D.		= 59/41
T.		= 15.1%
DESIGN SPEED		= 55 MPH
ESALS		= 3,080,600

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

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

UTILITIES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

EVANSVILLE - JANESVILLE

IH 39 TO STH 11

USH 14

ROCK COUNTY

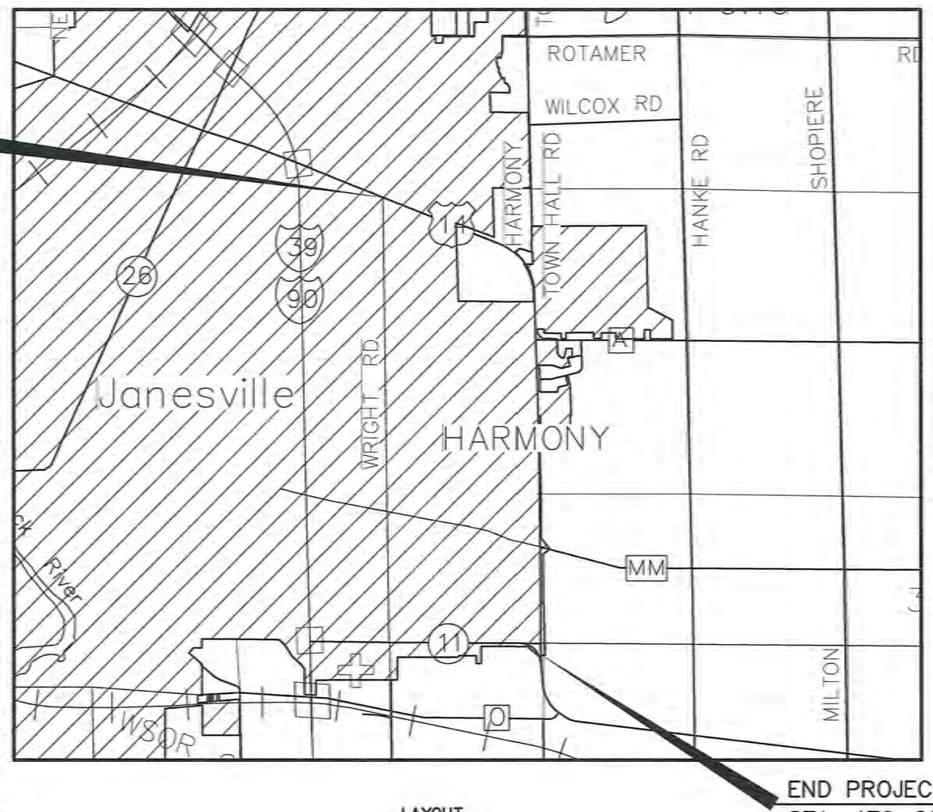
STATE PROJECT NUMBER
5569-00-73

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5569-00-73	———	—

R-13-E

T-3-N

T-2-N



BEGIN PROJECT
STA. 285+08.91 'HEA'
X = 506812.62
Y = 280190.15

END PROJECT
STA. 476+06.03 'HEA'

LAYOUT
SCALE 0 0.5 MI.

TOTAL NET LENGTH OF CENTERLINE = 3.617 MI.

Coordinates on this plan are referenced to the Wisconsin County Coordinate System (WCCS), Rock County, NAD 1983(2007)
Vertical Datum based on USGS (NAVD 88)

ORIGINAL PLANS PREPARED BY
KL Engineering
[A] Better Experience

WISCONSIN
BRAD R. HALVENSLEBEN
34638-006
BELLEVILLE, WI
PROFESSIONAL ENGINEER

OCTOBER 14, 2014 (Date)
(Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	KL ENGINEERING, INC.
Designer	KL ENGINEERING, INC.
Project Manager	DEREK POTTER
Regional Examiner	
Regional Supervisor	WAYNE CHASE
C.O. Examiner	

APPROVED FOR THE DEPARTMENT
DATE: 10/17/14 Wayne Chase (Signature)

E

ABBREVIATIONS

BAD	BASE AGGREGATE DENSE
BM	BENCH MARK
BLDG.	BUILDING
CTR	CENTER
C/L	CENTERLINE
C.E.	COMMERCIAL ENTRANCE
CONC.	CONCRETE
CSW	CONCRETE SIDEWALK
CMCP	CORRUGATED METAL CULVERT PIPE
CP	CULVERT PIPE
CPCS	CULVERT PIPE CORRUGATED STEEL
CPRC	CULVERT PIPE REINFORCED CONCRETE
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL
CPT	CONSTRUCTION PERMIT
EB	EASTBOUND
ELEC	ELECTRIC
IE	INVERT ELEVATION
EX.	EXISTING
FO	FIBER OPTIC
F.E.	FIELD ENTRANCE
GAS	GAS
HMA	HOT MIX ASPHALT
HSE.	HOUSE
LHF	LEFT HAND FORWARD
MH	MANHOLE
MAX.	MAXIMUM
MIN.	MINIMUM
NOR.	NORMAL
NTS	NOT TO SCALE
PLE	PERMANENT LIMITED EASEMENT
P.E.	PRIVATE ENTRANCE
P.L.	PROPERTY LINE
PRW	PROPOSED RIGHT-OF-WAY
RAD	RADIUS
R/L	REFERENCE LINE
RCCP	REINFORCED CONCRETE CULVERT PIPE
REQ'D.	REQUIRED
RHF	RIGHT HAND FORWARD
RW	RIGHT-OF-WAY LINE
SAN	SANITARY SEWER
SHLD	SHOULDER
SW	SIDEWALK
SF	SQUARE FEET
SY	SQUARE YARD
S.D.D.	STANDARD DETAIL DRAWING
STA	STATION
SS	STORM SEWER
TEL	TELEPHONE
TLE	TEMPORARY LIMITED EASEMENT
TYP	TYPICAL
WAT	WATER
WB	WESTBOUND

ORDER OF DETAIL SHEETS

PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
REMOVAL PLAN
PLAN DETAILS
EROSION CONTROL PLAN
STORM SEWER PLAN
PERMANENT SIGNING PLAN
PAVEMENT MARKING PLAN
LIGHTING PLAN
TRAFFIC SIGNAL PLAN
TRAFFIC CONTROL AND CONSTRUCTION STAGING PLAN
ALIGNMENT AND CONTROL POINT DETAILS

UTILITY CONTACTS

ELECTRIC

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ALLIANT ENERGY
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jasonhogan@alliantenergy.com

GAS

JASON HOGAN
ALLIANT ENERGY
SUITE 1000
4902 N BILTMORE LANE
MADISON, WI 53718
(608) 458-4871
jasonhogan@alliantenergy.com

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801 O'KEEFE ROAD
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DE PERE, WI 54115-6113
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CHARTER COMMUNICATIONS
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MADISON, WI 53718
(608) 274-3822
brandon.storm@chartercom.com

SIGNALS & STREET LIGHTING

GRAHAM HEITZ
WISDOT - SIGNALS
2101 WRIGHT STREET
MADISON, WI 53704
(608) 246-5362
heitz.graham@dot.wi.gov

SEWER

DENNIS RYAN
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18 N JACKSON STREET
PO BOX 5005
JANESVILLE, WI 53547-5005
(608) 755-3171
ryand@ci.janesville.wi.us

COMMUNICATIONS

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MADISON, WI 53703
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(920) 475-2799 (mobile)
ca2624@att.com

COMMUNICATIONS

JIM KOSTUCH
WINDSTREAM/McLEOD USA
13935 BISHOPS DR
BROOKFIELD, WI 53005
(262)792-7938
James.Kostuch@windstream.com

WATER

DENNIS RYAN
CITY OF JANESVILLE
18 N JACKSON STREET
PO BOX 5005
JANESVILLE, WI 53547-5005
(608) 755-3171
ryand@ci.janesville.wi.us

GAS

LAWRENCE HUBER
ANR PIPELINE COMPANY
W3925 PIPELINE LANE
EDEN, WI 53019
(920) 477-2235
lawrence_huber@transcanada.com

ROCK COUNTY HIGHWAY

BENJAMIN COOPMAN, P.E.
3715 NEWVILLE ROAD
JANESVILLE, WI 53545
(608) 757-5450
coopman@co.rock.wi.us

CITY OF JANESVILLE

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18 N JACKSON STREET
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JANESVILLE, WI 53547-5005
(608) 755-3160

DESIGN CONTACT

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KL ENGINEERING, INC.
5950 SEMINOLE CENTRE CT
SUITE 200
MADISON, WI 53711
(608) 663-1218
bhalvensleben@klengineering.com

DNR LIAISON

LAURA BUB
DEPARTMENT OF NATURAL RESOURCES
DNR SOUTH CENTRAL REGION HEADQUARTERS
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
(608) 275-3485
laura.bub@wisconsin.gov

GENERAL NOTES

ALL GRADES PROVIDED ALONG RADII ARE ALONG EDGE OF PAVEMENT.

EXPANSION JOINTS TO BE CONSTRUCTED AT ALL RADII POINTS IN THE CURB AND GUTTER OR AT LOCATIONS SHOWN ON THE PLAN.

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

UTILITY REFERENCE LINES ON THE CROSS SECTIONS ARE FOR APPROXIMATE HORIZONTAL LOCATION ONLY.

REMOVAL ITEMS REQUIRING RESTORATION OF CONCRETE OR ASPHALT SHALL BE REMOVED TO AN EXISTING JOINT OR SAWED AS DETERMINED BY THE ENGINEER.

EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. THE ENGINEER MAY MODIFY LOCATIONS AS NEEDED. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.

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

PIPE ELEVATIONS, LENGTHS, AND LOCATIONS AS SHOWN ON THE PLANS, MAY BE ADJUSTED TO FIT EXISTING FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

CONTRACTOR IS RESPONSIBLE FOR RESHAPING AND FINISHING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY THEIR OPERATION OUTSIDE THE NORMAL ANTICIPATED CONSTRUCTION LIMITS.

THE EXACT LOCATION OF DRIVEWAYS IS TO BE DETERMINED IN THE FIELD BY THE ENGINEER. ALL DRIVEWAYS ARE TO BE REPLACED IN KIND.

SIDEROAD PAVEMENT STRUCTURE SHALL BE THE SAME AS THE MAINLINE UNLESS OTHERWISE NOTED.

LOCATIONS OF INLETS AND MANHOLES AS SHOWN ON THE STORM SEWER SHEETS ARE BY STATION AND OFFSET TO THE CENTER OF THE STRUCTURE (SEE CONSTRUCTION DETAIL).

THE CONTRACTOR'S HMA PAVING OPERATION SHALL BE CONSISTENT WITH THE TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, PASSING OR PARKING LANE.

HMA PAVEMENT, WHEN INDICATED ON THE PLANS, SHALL CONSIST OF COURSES AS FOLLOWS UNLESS OTHERWISE NOTED ON THE PLANS.

USH 14 LOCATION	TOTAL DEPTH	LAYERS	TYPE	NOMINAL MAX SIZE GRADATION	PERFORMANCE GRADE
WRIGHT RD - SPRING BROOK TR	4.5-INCH	2" UPPER 2.5" LOWER	E-10 E-10	12.5 mm 19.0 mm	PG58-28 PG58-28
OLD HUMES RD/ HARMONY TOWN HALL RD INTERSECTIONS	4.75-INCH	2" UPPER 2.75" LOWER	E-3 E-3	12.5 mm 19.0 mm	PG64-28 PG58-28
MILWAUKEE ST INTERSECTION	4.25-INCH	2" UPPER 2.25" LOWER	E-3 E-3	12.5 mm 19.0 mm	PG64-28 PG58-28
MILWAUKEE ST INTERSECTION	6-INCH	2" UPPER 4" LOWER	E-3 E-3	12.5 mm 19.0 mm	PG64-28 PG58-28
RUGER AVE INTERSECTION	6.5-INCH	2.5" UPPER 4" LOWER	E-3 E-3	12.5 mm 19.0 mm	PG58-28 PG58-28
SHOULDER LOCATIONS	3.5-INCH	3.5" UPPER	E-0.3	12.5 mm	PG58-28

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www.DiggersHotline.com

BEGIN CONSTRUCTION
STA. 340+61.73 'HEA'

END CONSTRUCTION
STA. 344+42.94 'HEA'

END CONSTRUCTION
STA. 17+61.64 'RUA'

END CONSTRUCTION
STA. 441+37.94 'HEA'

N

HARMONY TOWN HALL RD

OLD HUMES RD

CTH A

CTH MM

MILWAUKEE ST

RUGER AVE

USH 14

B-53-0007

340'HEA' 350'HEA' 360'HEA' 370'HEA' 380'HEA' 390'HEA' 400'HEA' 410'HEA' 420'HEA' 430'HEA' 440'HEA' 450'HEA' 460'HEA' 470'HEA' 476'HEA'

0'REA' 5'REA' 30'REA'

END CONSTRUCTION
STA. 376+95.01 'HEA'

BEGIN CONSTRUCTION
STA. 357+78.75 'HEA'

CITY OF JANESVILLE LIMITS

END CONSTRUCTION
STA. 337+09.53 'HEA'

BEGIN CONSTRUCTION
STA. 418+35.72 'HEA'

BEGIN CONSTRUCTION
STA. 468+78.56 'HEA'

330'HEA' 320'HEA' 310'HEA'

BEGIN CONSTRUCTION
STA. 332+69.44 'HEA'

BEGIN CONSTRUCTION
STA. 13+40.15 'RUA'

BEGIN CONSTRUCTION
STA. 3+86.94 'REA'

SPRING BROOK TRAIL

300'HEA' USH 14

END USH 14 MILL AND OVERLAY
STA. 305+50.00 'HEA'

END PROJECT I.D. 5569-00-73
STA. 476+06.03 'HEA'

STH 11/RACINE ST

290'HEA'

BEGIN EB USH 14 MILL AND OVERLAY
STA. 289+26.76 'HEA'

BEGIN PROJECT I.D. 5569-00-73
BEGIN WB USH 14 MILL AND OVERLAY
STA. 285+08.91 'HEA'

WRIGHT RD

280'HEA' 270'HEA' 260'HEA'

WRIGHT RD

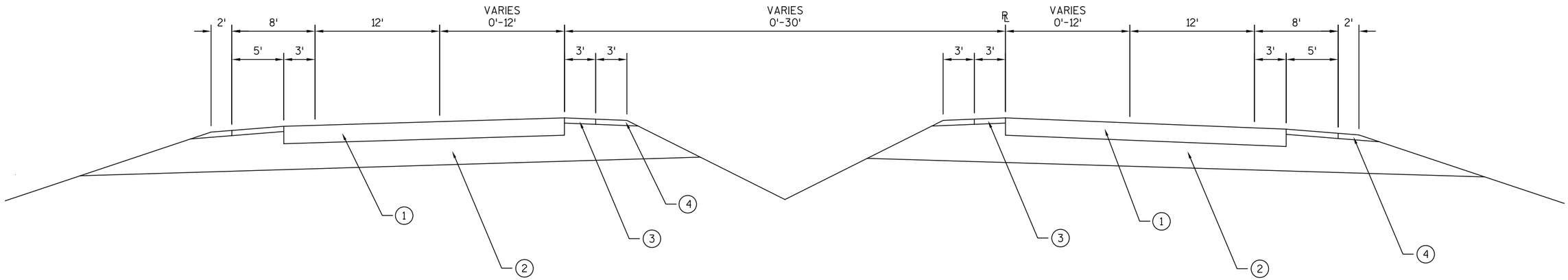
NB IH-39/90

SB IH-39/90

WZ

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PLAN: PROJECT OVERVIEW	SHEET 3 E

2



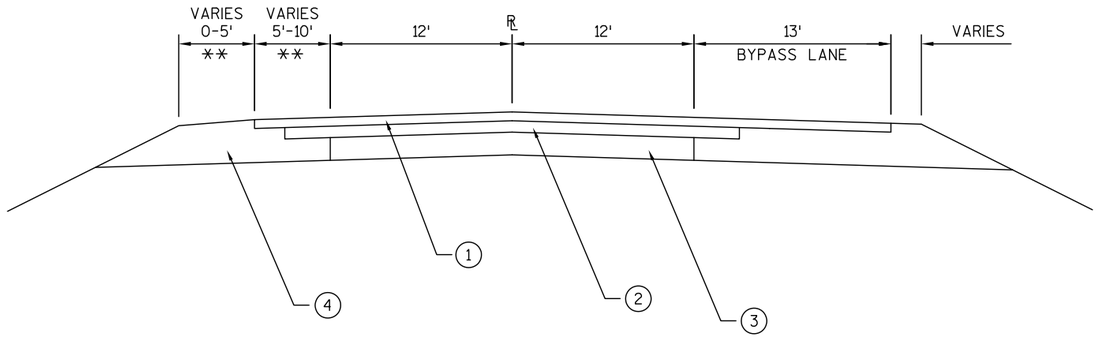
TYPICAL EXISTING SECTION
USH 14
STA. 285+08.91 'HEA' - STA. 305+50.00 'HEA'

LEGEND

(1)	6" ASPHALTIC CONCRETE PAVEMENT, TYPE HV
(2)	14" CRUSHED AGGREGATE BASE COURSE
(3)	3" ASPHALTIC CONCRETE PAVEMENT, TYPE LV
(4)	3" CRUSHED LIMESTONE

PROJECT NO:5569-00-73	HWY:USH 14	COUNTY:ROCK	PLAN: TYPICAL SECTIONS	SHEET 4	E

2

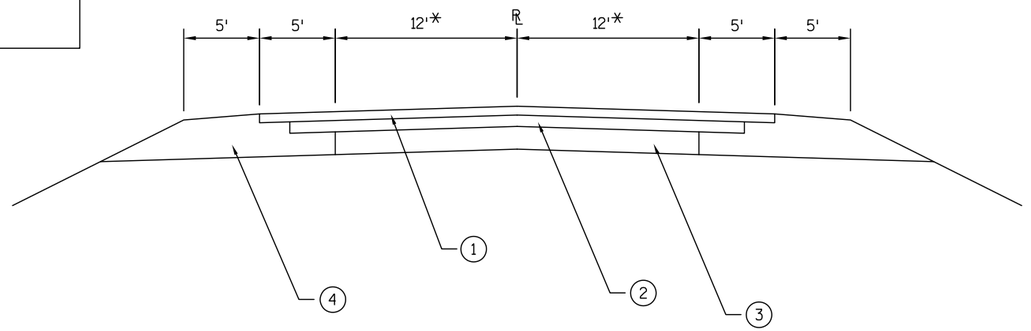


** 10' RIGHT TURN LANES
AT OLD HUMES ROAD AND
HARMONY TOWN HALL ROAD

TYPICAL EXISTING SECTION
USH 14
STA. 332+69.44 'HEA' - STA. 344+42.94 'HEA'

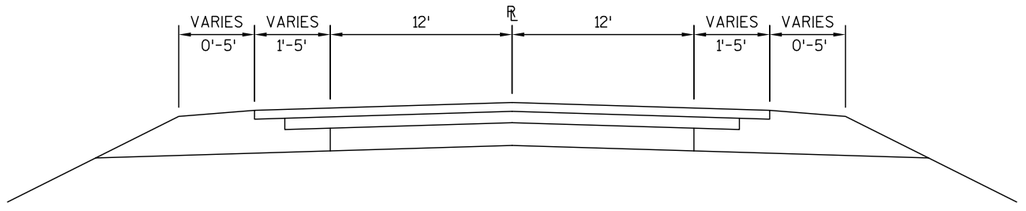
LEGEND

(1)	3 1/2" ASPHALT PAVEMENT TYPE E-3
(2)	ASPHALT PAVEMENT (VARIES 3" TO 4 1/2")
(3)	9" CONCRETE PAVEMENT
(4)	EXISTING BASE COURSE



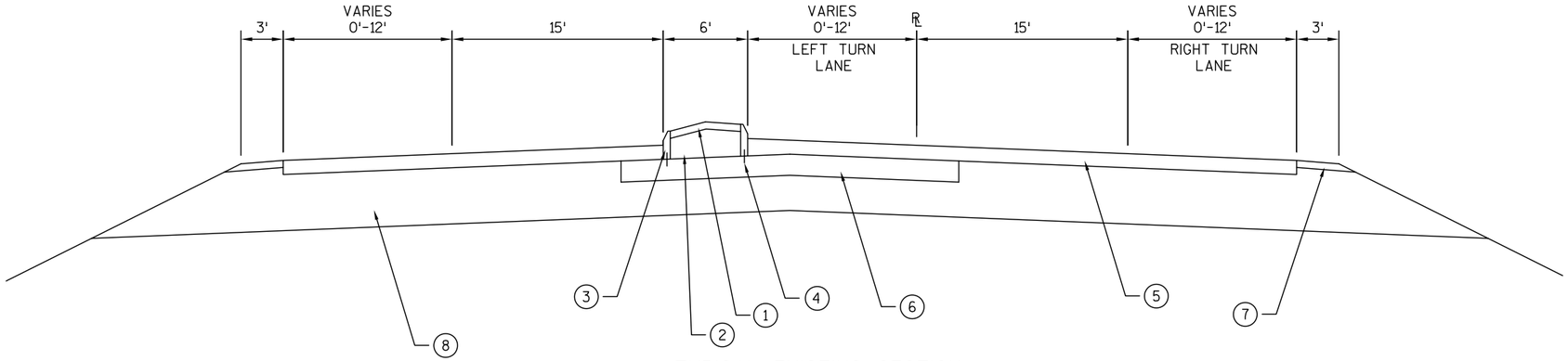
TYPICAL EXISTING SECTION
USH 14
STA. 418+35.72 'HEA' - STA. 439+00 'HEA'
STA. 439+00 'HEA' - STA. 441+37.94 'HEA'

* USH 14 TRANSITIONS FROM 2-LANE TO 4-LANE SECTION.
LANE WIDTH VARIES FROM 12'-24'



TYPICAL EXISTING SECTION
RUGER AVENUE
STA. 13+40.15 'RUA' - STA. 17+61.64 'RUA'
NO EXISTING PAVEMENT STRUCTURE INFORMATION AVAILABLE

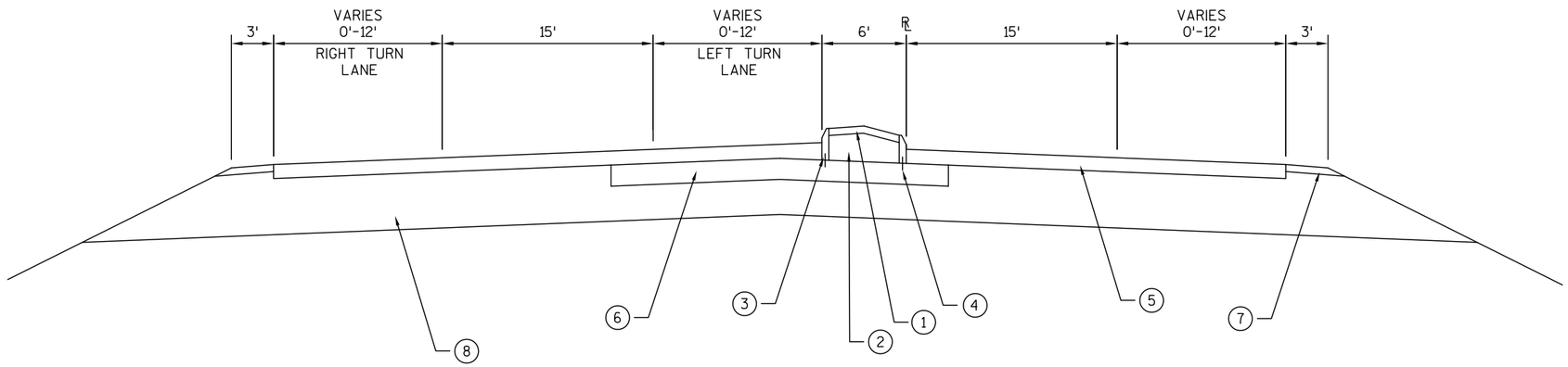
2



TYPICAL EXISTING SECTION
USH 14
STA. 357+78.75 'HEA' - STA. 362+33.30 'HEA'

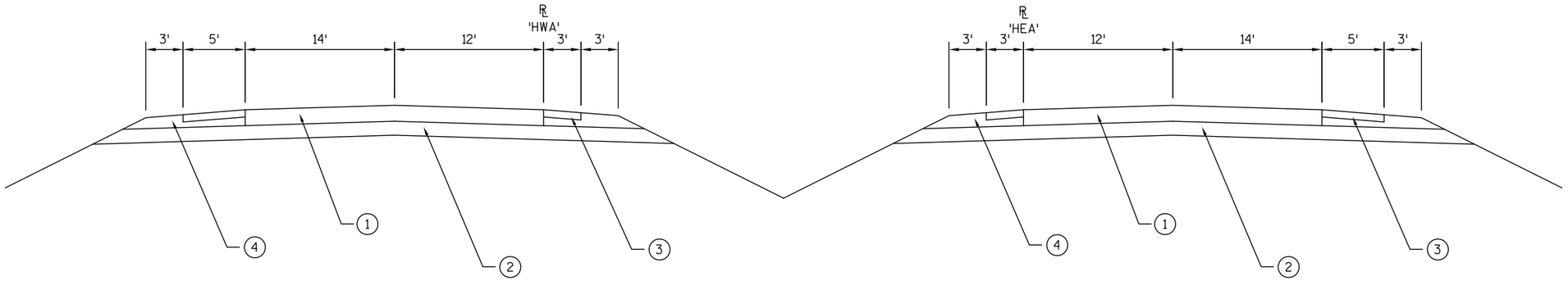
LEGEND

(1)	3" ASPHALTIC CONCRETE PAVEMENT, TYPE MV	(5)	6" ASPHALTIC CONCRETE PAVEMENT, TYPE MV
(2)	CRUSHED AGGREGATE BASE COURSE	(6)	9" CONCRETE PAVEMENT
(3)	CONCRETE CURB, TYPE J	(7)	CRUSHED AGGREGATE BASE COURSE, SHOULDERS
(4)	PAVEMENT TIES	(8)	15" BASE COURSE

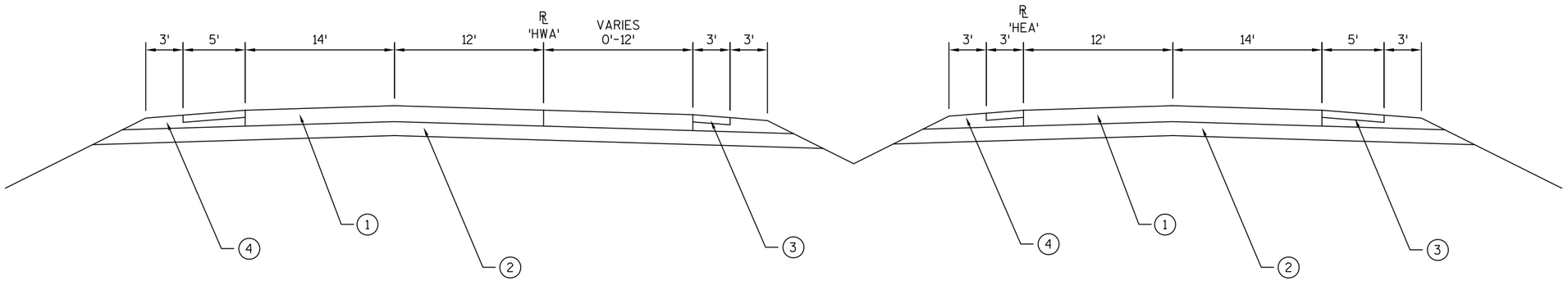


TYPICAL EXISTING SECTION
USH 14
STA. 366+55.00 'HEA' - STA. 376+95.01 'HEA'

PROJECT NO:5569-00-73	HWY: USH 14	COUNTY:ROCK	PLAN: TYPICAL SECTIONS	SHEET 6	E



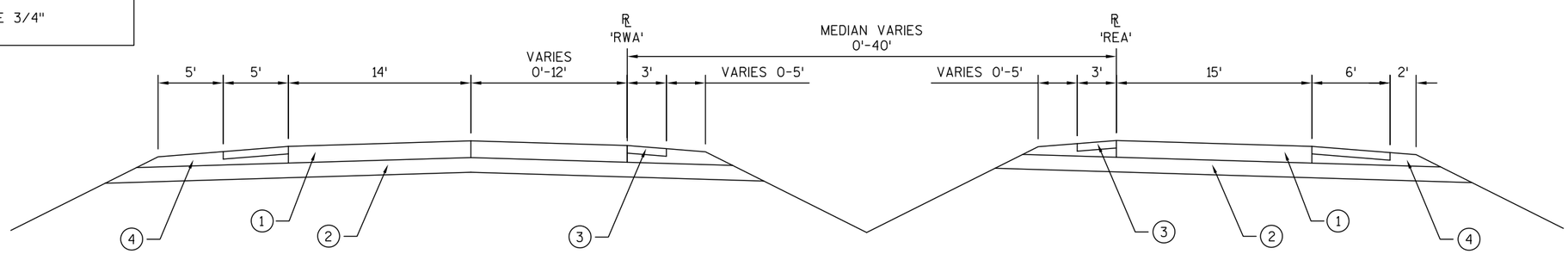
TYPICAL EXISTING SECTION
USH 14
STA 468+78.56 'HEA' - STA 471+00 'HEA'



LEGEND

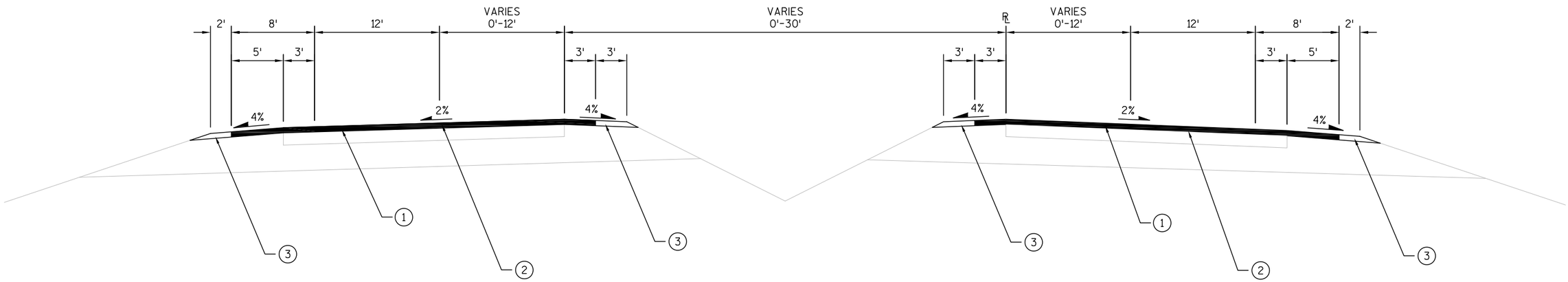
1	CONCRETE PAVEMENT 9-INCH
2	6" BASE AGGREGATE DENSE 1 1/4-INCH
3	3.5" HMA PAVEMENT, TYPE E-0.3
4	BASE AGGREGATE DENSE 3/4"

TYPICAL EXISTING SECTION
USH 14
STA 471+00 'HEA' - STA 476+08.53 'HEA'



TYPICAL EXISTING SECTION
STH 11 WB
STA 4+11 'RWA' - STA 9+05 'RWA'

TYPICAL EXISTING SECTION
STH 11 EB
STA 3+87 'REA' - STA 9+05 'REA'



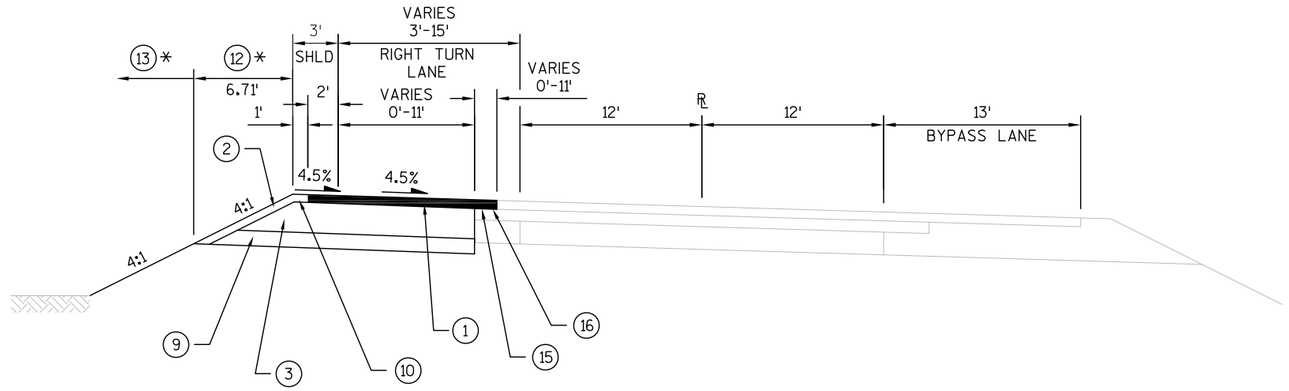
TYPICAL FINISHED SECTION

USH 14
STA. 285+08.91 'HEA' - STA. 305+50.00 'HEA' (WESTBOUND)
STA. 289+26.76 'HEA' - STA. 305+50.00 'HEA' (EASTBOUND)

LEGEND

1. REMOVING ASPHALTIC SURFACE MILLING 3-INCH
2. HMA PAVEMENT, TYPE E-10, 4.5-INCH
3. BASE AGGREGATE DENSE 3/4", 1.5 INCH

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PLAN: TYPICAL SECTIONS	SHEET 8	E

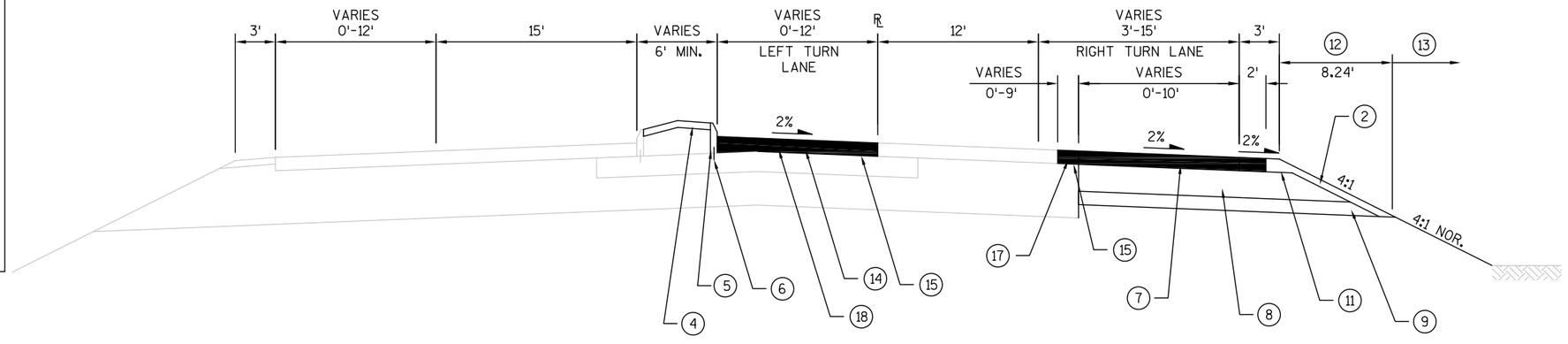


TYPICAL FINISHED SECTION
USH 14
STA 332+69.44 'HEA' - STA 337+09.53 'HEA'
STA 340+61.73 'HEA' - STA 344+42.94 'HEA'

LEGEND

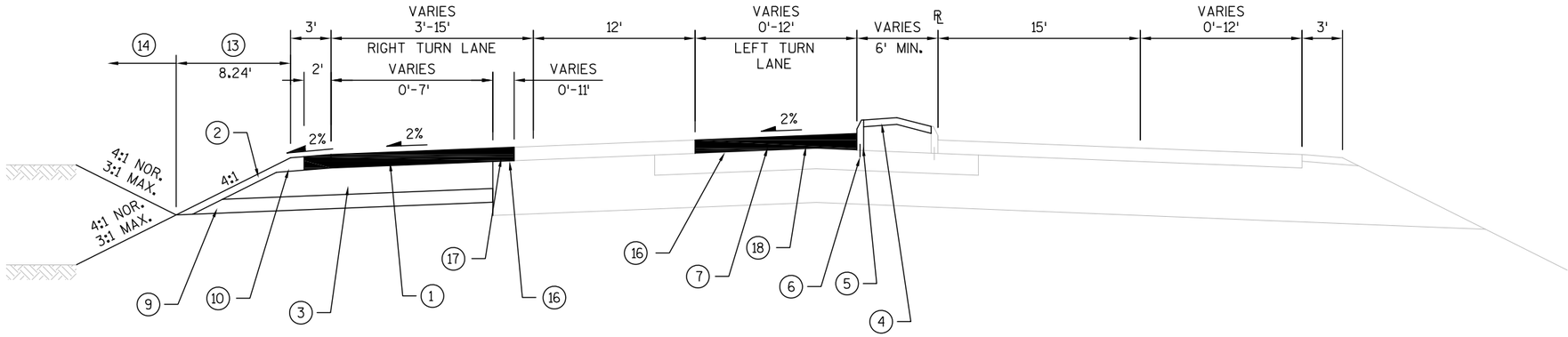
1	HMA PAVEMENT, TYPE E-3, 4.75-INCH
2	BASE AGGREGATE DENSE 3/4", 3-INCH
3	BASE AGGREGATE DENSE 1-1/4", 13-INCH
4	ASPHALTIC SURFACE, 3-INCH
5	CONCRETE CURB, TYPE J (SEE CONSTRUCTION DETAIL)
6	DRILLED TIE BARS
7	HMA PAVEMENT, TYPE E-3, 4.25-INCH
8	BASE AGGREGATE DENSE 1-1/4", 12.5-INCH
9	BASE AGGREGATE DENSE 3", 6-INCH
10	BASE AGGREGATE DENSE 3/4", 4.75-INCH
11	BASE AGGREGATE DENSE 3/4", 4.25-INCH
12	SEEDING MIXTURE NO. 40 & FERTILIZER TYPE A
13	SALVAGED TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE A, AND EROSION MAT CLASS I, TYPE B
14	HMA PAVEMENT, TYPE E-3, 6-INCH
15	PREPARE FOUNDATION FOR ASPHALTIC PAVING
16	REMOVING ASPHALTIC SURFACE, 4.75-INCH
17	REMOVING ASPHALTIC SURFACE, 4.25-INCH
18	REMOVING ASPHALTIC SURFACE, 6-INCH

* USE SEEDING MIXTURE NO. 20 FOR
HARMONY TOWN HALL ROAD RIGHT TURN LANE
(STA 340+61.73 'HEA' - STA 344+42.94 'HEA')



TYPICAL FINISHED SECTION
USH 14
STA 357+78.75 'HEA' - STA 362+33.30 'HEA'

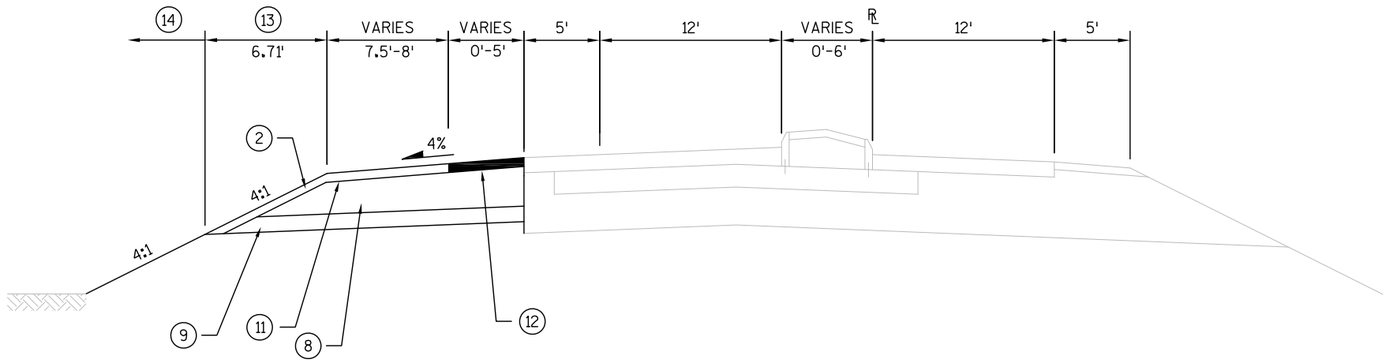
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PLAN: TYPICAL SECTIONS	SHEET 9	E



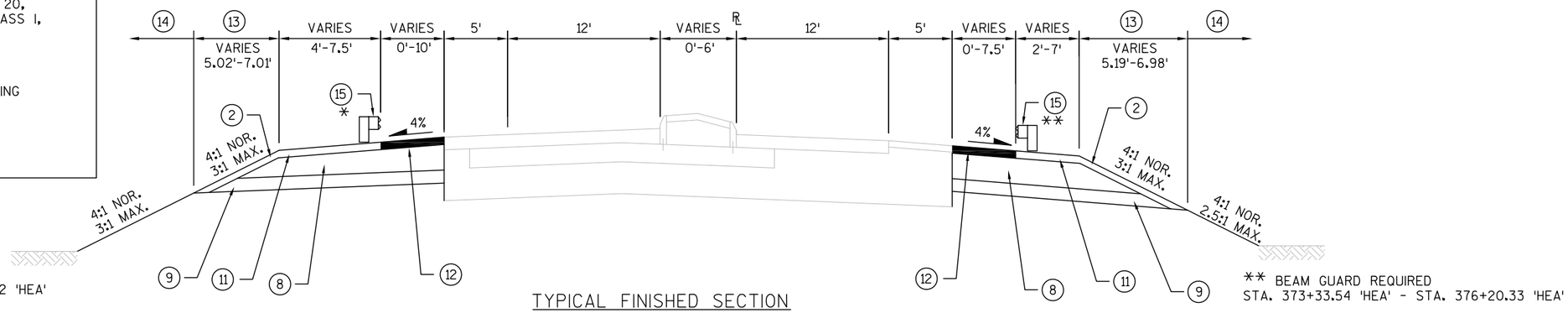
TYPICAL FINISHED SECTION
USH 14
STA 366+55.00 'HEA' - STA 372+20.73 'HEA'

LEGEND

1	HMA PAVEMENT, TYPE E-3, 4.25-INCH
2	BASE AGGREGATE DENSE 3/4", 3-INCH
3	BASE AGGREGATE DENSE 1-1/4", 12.5-INCH
4	ASPHALTIC SURFACE, 3-INCH
5	CONCRETE CURB, TYPE J (SEE CONSTRUCTION DETAIL)
6	DRILLED TIE BARS
7	HMA PAVEMENT, TYPE E-3, 6-INCH
8	BASE AGGREGATE DENSE 1-1/4", 12-INCH
9	BASE AGGREGATE DENSE 3", 6-INCH
10	BASE AGGREGATE DENSE 3/4", 4.25-INCH
11	BASE AGGREGATE DENSE 3/4", 3.5-INCH
12	HMA PAVEMENT, TYPE E-0.3, 3.5-INCH
13	SEEDING MIXTURE NO. 20 & FERTILIZER TYPE A
14	SALVAGED TOPSOIL, SEEDING MIXTURE NO. 20, FERTILIZER TYPE A, AND EROSION MAT CLASS I, TYPE B
15	MGS GUARDRAIL 3
16	PREPARE FOUNDATION FOR ASPHALTIC PAVING
17	REMOVING ASPHALTIC SURFACE, 4.25-INCH
18	REMOVING ASPHALTIC SURFACE, 6-INCH



TYPICAL FINISHED SECTION
USH 14
STA 372+20.73 'HEA' - STA 372+32.10 'HEA'



* BEAM GUARD REQUIRED
STA. 373+06.71 'HEA' - STA. 375+92.32 'HEA'

** BEAM GUARD REQUIRED
STA. 373+33.54 'HEA' - STA. 376+20.33 'HEA'

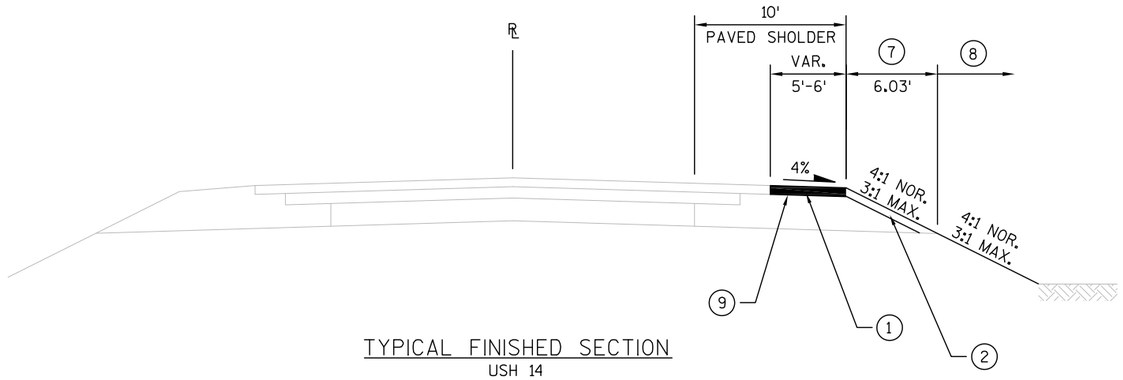
TYPICAL FINISHED SECTION
USH 14
STA 372+32.10 'HEA' - STA 376+95.01 'HEA'

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PLAN: TYPICAL SECTIONS	SHEET 10	E

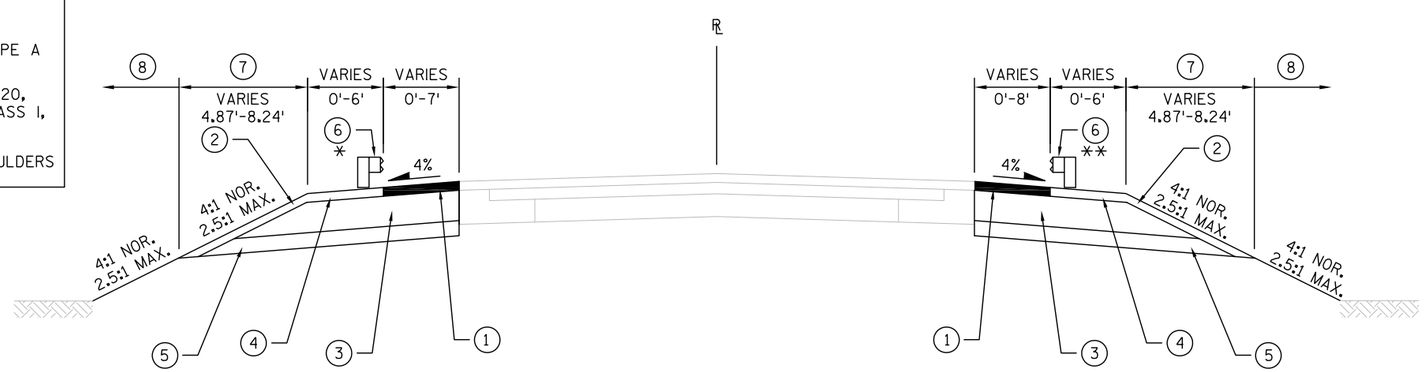
2

LEGEND

(1)	HMA PAVEMENT, TYPE E-0.3, 3.5-INCH
(2)	BASE AGGREGATE DENSE 3/4", 3-INCH
(3)	BASE AGGREGATE DENSE 1-1/4", 15-INCH
(4)	BASE AGGREGATE DENSE 3/4", 3.5-INCH
(5)	BASE AGGREGATE DENSE 3", 6-INCH
(6)	MGS GUARDRAIL 3
(7)	SEEDING MIXTURE NO. 20 & FERTILIZER TYPE A
(8)	SALVAGED TOPSOIL, SEEDING MIXTURE NO. 20, FERTILIZER TYPE A, AND EROSION MAT CLASS I, TYPE B
(9)	PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS



TYPICAL FINISHED SECTION
USH 14
STA 418+35.72 'HEA' - STA 423+69.60 'HEA'



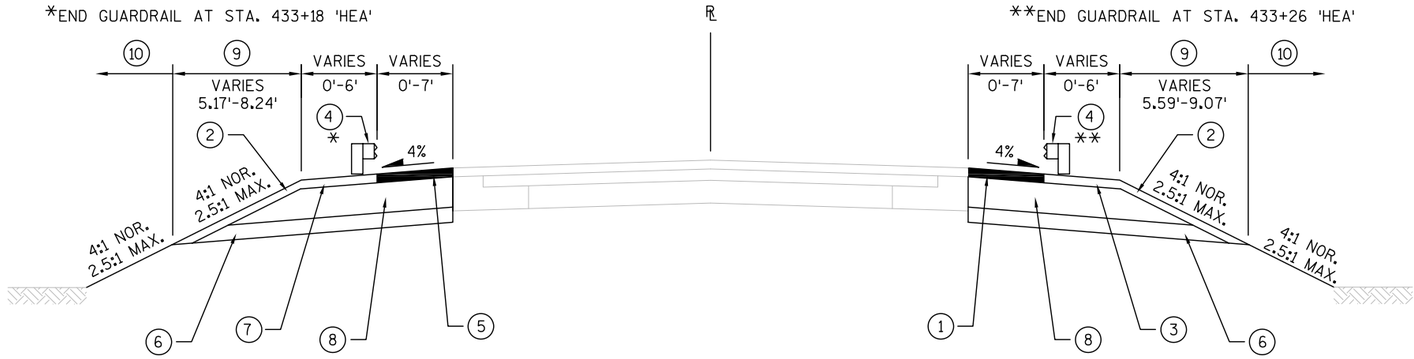
*BEGIN GUARDRAIL AT STA. 425+04

**BEGIN GUARDRAIL AT STA. 424+95

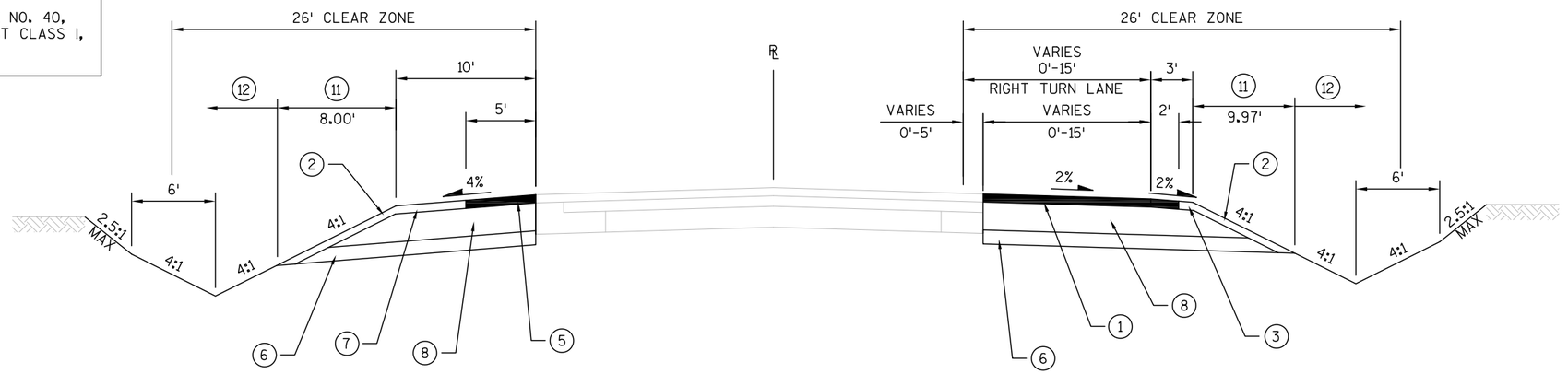
TYPICAL FINISHED SECTION
USH 14
STA 423+69.60 'HEA' - STA 429+34.57 'HEA'

LEGEND

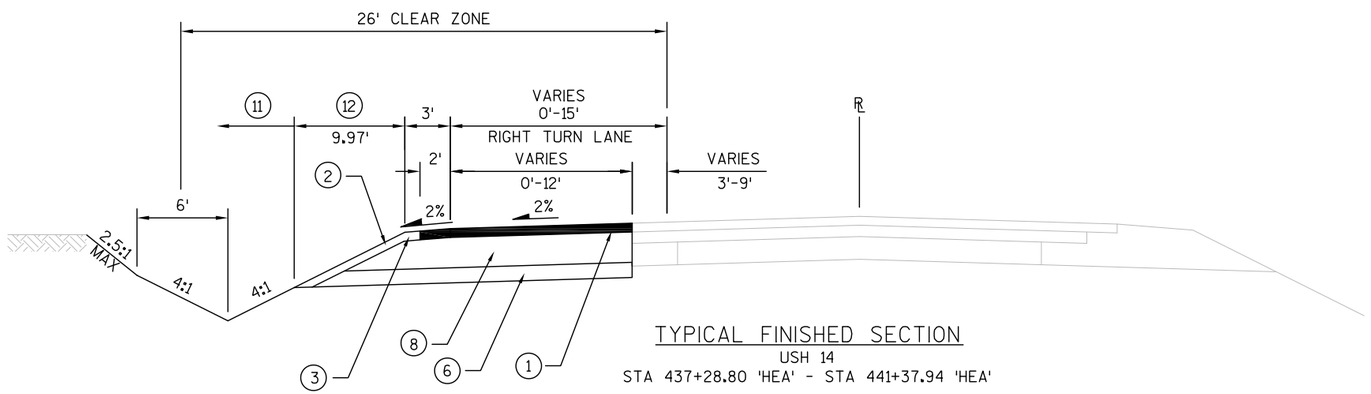
(1)	HMA PAVEMENT, TYPE E-3, 6.5-INCH
(2)	BASE AGGREGATE DENSE 3/4", 3-INCH
(3)	BASE AGGREGATE DENSE 3/4", 6.5-INCH
(4)	MGS GUARDRAIL 3
(5)	HMA PAVEMENT, TYPE E-0.3, 3.5-INCH
(6)	BASE AGGREGATE DENSE 3", 6-INCH
(7)	BASE AGGREGATE DENSE 3/4", 3.5-INCH
(8)	BASE AGGREGATE DENSE 1-1/4", 15-INCH
(9)	SEEDING MIXTURE NO. 20 & FERTILIZER TYPE A
(10)	SALVAGED TOPSOIL, SEEDING MIXTURE NO. 20, FERTILIZER TYPE A, AND EROSION MAT CLASS I, TYPE B
(11)	SEEDING MIXTURE NO. 40 & FERTILIZER TYPE A
(12)	SALVAGED TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE A, AND EROSION MAT CLASS I, TYPE B



TYPICAL FINISHED SECTION
USH 14
STA 430+66.53 'HEA' - STA 433+26.40 'HEA'

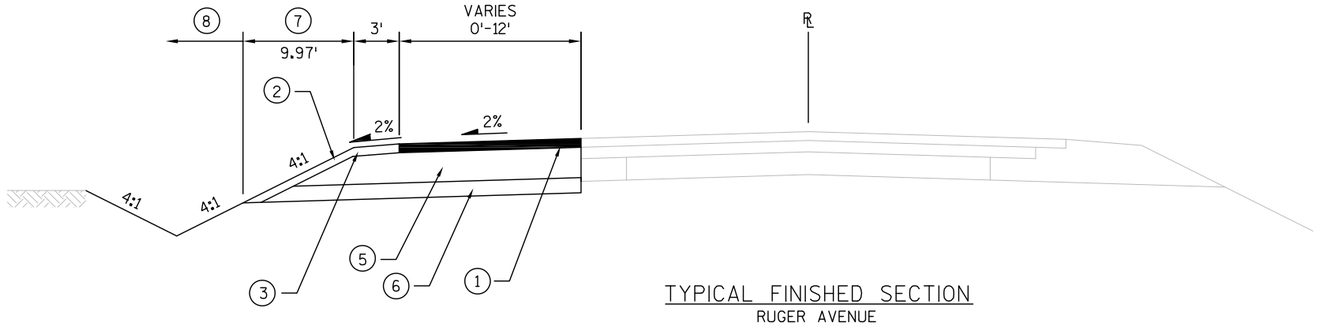


TYPICAL FINISHED SECTION
USH 14
STA 433+26.40 'HEA' - STA 436+62.56 'HEA'

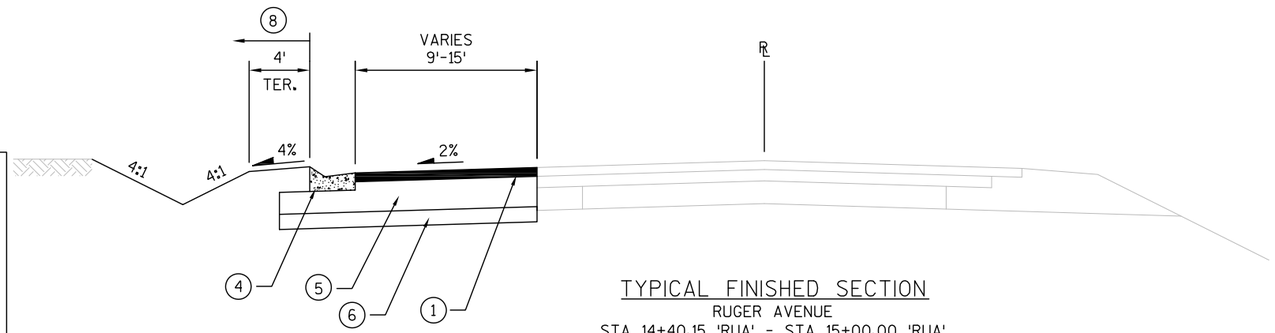


TYPICAL FINISHED SECTION
USH 14
STA 437+28.80 'HEA' - STA 441+37.94 'HEA'

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PLAN: TYPICAL SECTIONS	SHEET 12 E



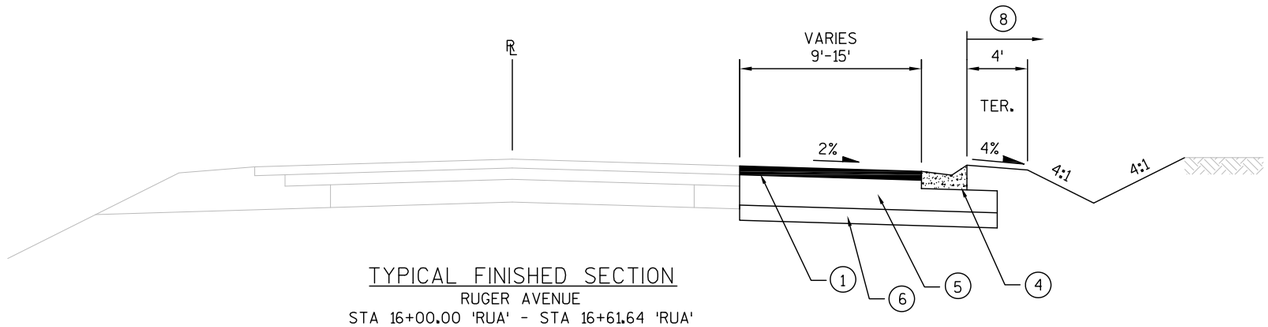
TYPICAL FINISHED SECTION
RUGER AVENUE
STA 13+40.15 'RUA' - STA 14+40.15 'RUA'



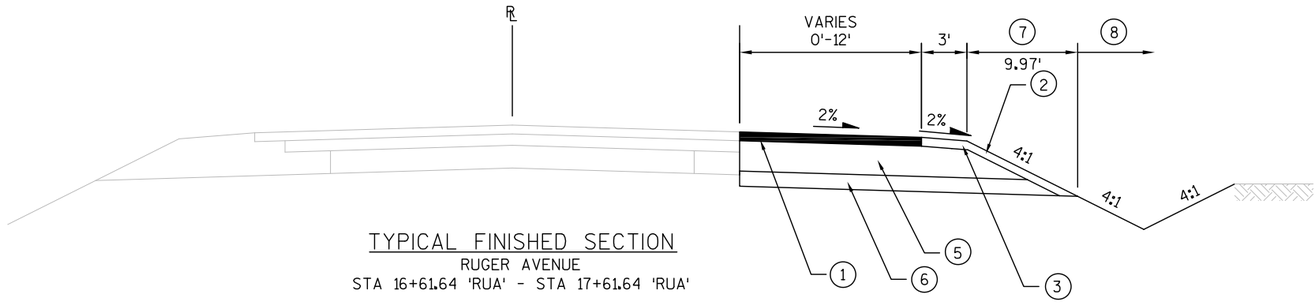
TYPICAL FINISHED SECTION
RUGER AVENUE
STA 14+40.15 'RUA' - STA 15+00.00 'RUA'

LEGEND

1	HMA PAVEMENT, TYPE E-3, 6.5-INCH
2	BASE AGGREGATE DENSE 3/4", 3-INCH
3	BASE AGGREGATE DENSE 3/4", 6.5-INCH
4	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
5	BASE AGGREGATE DENSE 1-1/4", 15-INCH
6	BASE AGGREGATE DENSE 3", 6-INCH
7	SEEDING MIXTURE NO. 40 & FERTILIZER TYPE A
8	SALVAGED TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE A, AND EROSION MAT CLASS I, TYPE B



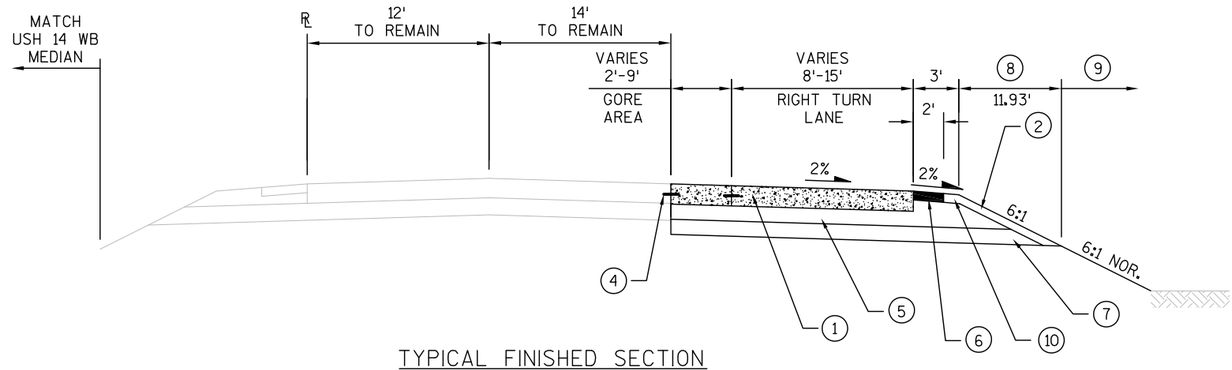
TYPICAL FINISHED SECTION
RUGER AVENUE
STA 16+00.00 'RUA' - STA 16+61.64 'RUA'



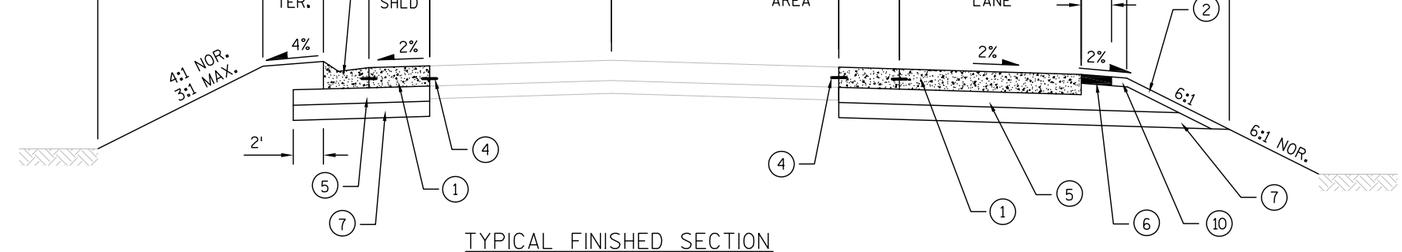
TYPICAL FINISHED SECTION
RUGER AVENUE
STA 16+61.64 'RUA' - STA 17+61.64 'RUA'

LEGEND

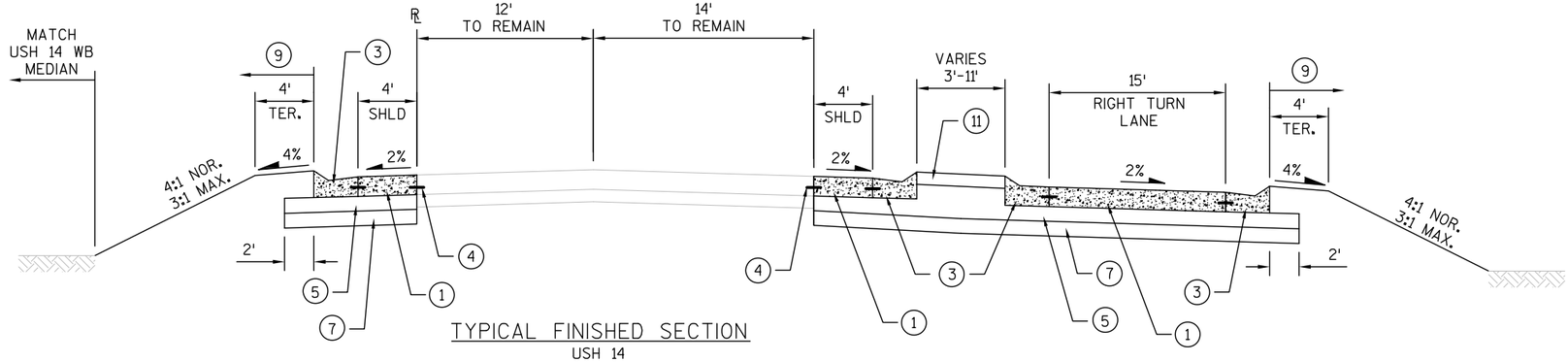
(1)	CONCRETE PAVEMENT 9-INCH (DOWELED)
(2)	BASE AGGREGATE DENSE 3/4", 3-INCH
(3)	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A
(4)	DRILLED TIE BARS
(5)	BASE AGGREGATE DENSE 1-1/4", 6-INCH
(6)	HMA PAVEMENT, TYPE E-0.3, 3.5-INCH
(7)	BASE AGGREGATE DENSE 3", 6-INCH
(8)	SEEDING MIXTURE NO. 20 & FERTILIZER TYPE A
(9)	SALVAGED TOPSOIL, SEEDING MIXTURE NO. 20, FERTILIZER TYPE A, AND EROSION MAT CLASS I, TYPE B
(10)	BASE AGGREGATE DENSE 3/4", 3.5-INCH
(11)	CONCRETE SIDEWALK, 5-INCH



TYPICAL FINISHED SECTION
USH 14 EB
STA 468+78.56 'HEA' - STA 469+41.51 'HEA'



TYPICAL FINISHED SECTION
USH 14 EB
STA 469+41.51 'HEA' - STA 469+67.00 'HEA'

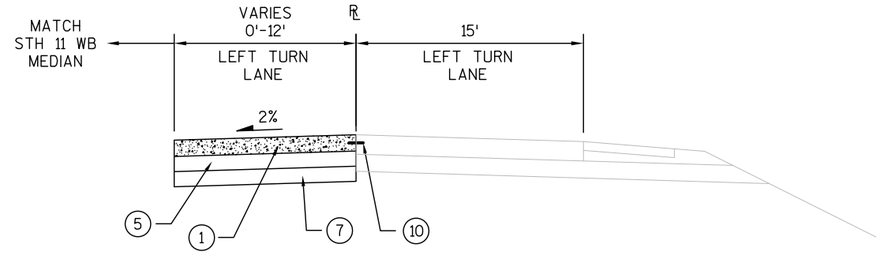


TYPICAL FINISHED SECTION
USH 14
STA 469+67.00 'HEA' - STA 470+11.00 'HEA'

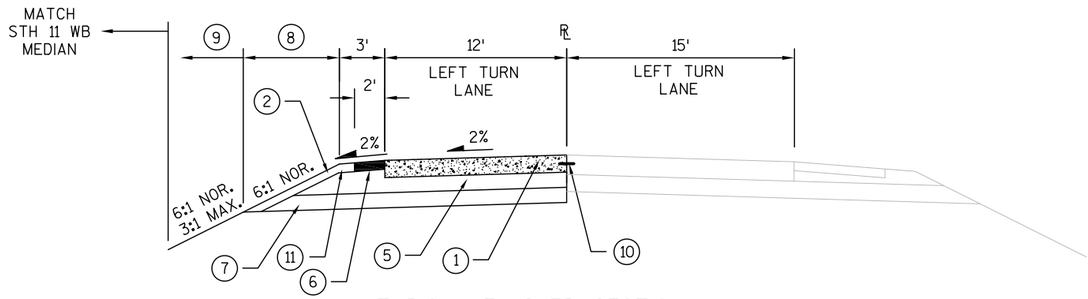
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PLAN: TYPICAL SECTIONS	SHEET 14	E

LEGEND

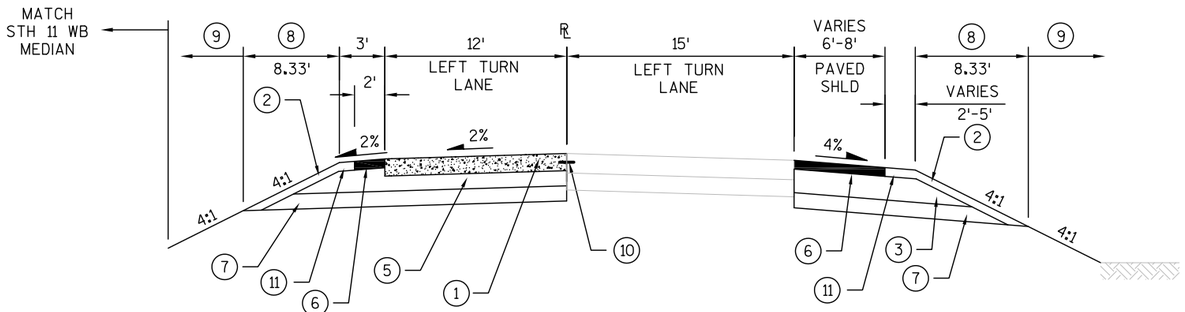
(1)	CONCRETE PAVEMENT 9-INCH (DOWELED)
(2)	BASE AGGREGATE DENSE 3/4", 3-INCH
(3)	BASE AGGREGATE DENSE 1-1/4", 12-INCH
(4)	BEAM GUARD - MGS GUARDRAIL 3
(5)	BASE AGGREGATE DENSE 1-1/4", 6-INCH
(6)	HMA PAVEMENT, TYPE E-0.3, 3.5-INCH
(7)	BASE AGGREGATE DENSE 3", 6-INCH
(8)	SEEDING MIXTURE NO. 20 & FERTILIZER TYPE A
(9)	SALVAGED TOPSOIL, SEEDING MIXTURE NO. 20, FERTILIZER TYPE A, AND EROSION MAT CLASS I, TYPE B
(10)	DRILLED TIE BARS
(11)	BASE AGGREGATE DENSE 3/4", 3.5-INCH
(12)	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A



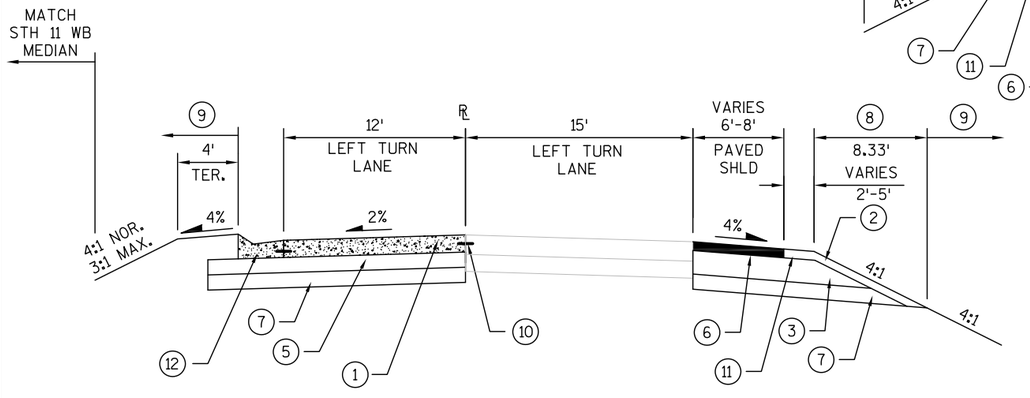
TYPICAL FINISHED SECTION
STH 11 EB
STA 3+86.94 'REA' - STA 5+88.45 'REA'



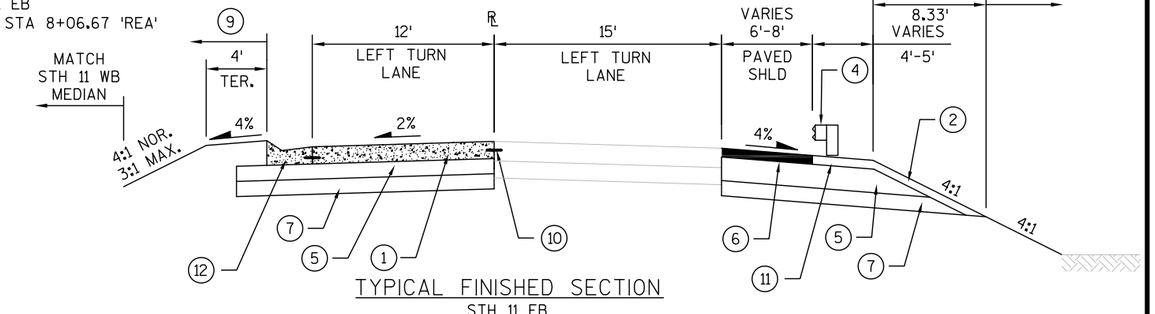
TYPICAL FINISHED SECTION
STH 11 EB
STA 5+88.45 'REA' - STA 7+74.83 'REA'



TYPICAL FINISHED SECTION
STH 11 EB
STA 7+74.83 'REA' - STA 8+06.67 'REA'



TYPICAL FINISHED SECTION
STH 11 EB
STA 8+06.67 'REA' - STA 8+29.94 'REA'

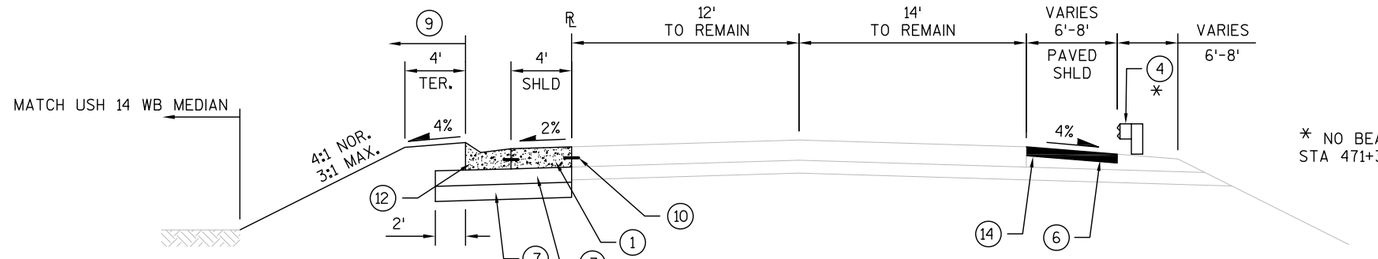


TYPICAL FINISHED SECTION
STH 11 EB
STA 8+29.94 'REA' - STA 9+04.47 'REA'

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PLAN: TYPICAL SECTIONS	SHEET 15	E

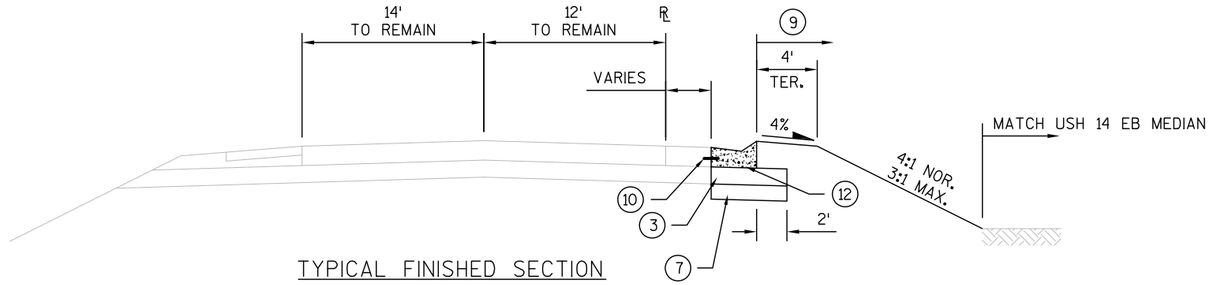
LEGEND

(1)	CONCRETE PAVEMENT 9-INCH (DOWELED)
(2)	BASE AGGREGATE DENSE 3/4", 3-INCH
(3)	BASE AGGREGATE DENSE 1-1/4", 6-INCH
(4)	BEAM GUARD - MGS GUARDRAIL 3
(5)	BASE AGGREGATE DENSE 1-1/4", 12-INCH
(6)	HMA PAVEMENT, TYPE E-0.3, 3.5-INCH
(7)	BASE AGGREGATE DENSE 3", 6-INCH
(8)	SEEDING MIXTURE NO. 20 & FERTILIZER TYPE A
(9)	SALVAGED TOPSOIL, SEEDING MIXTURE NO. 20, FERTILIZER TYPE A, AND EROSION MAT CLASS I, TYPE B
(10)	DRILLED TIE BARS
(11)	BASE AGGREGATE DENSE 3/4", 9-INCH
(12)	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A
(13)	BASE AGGREGATE DENSE 3/4", 3.5-INCH
(14)	PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS



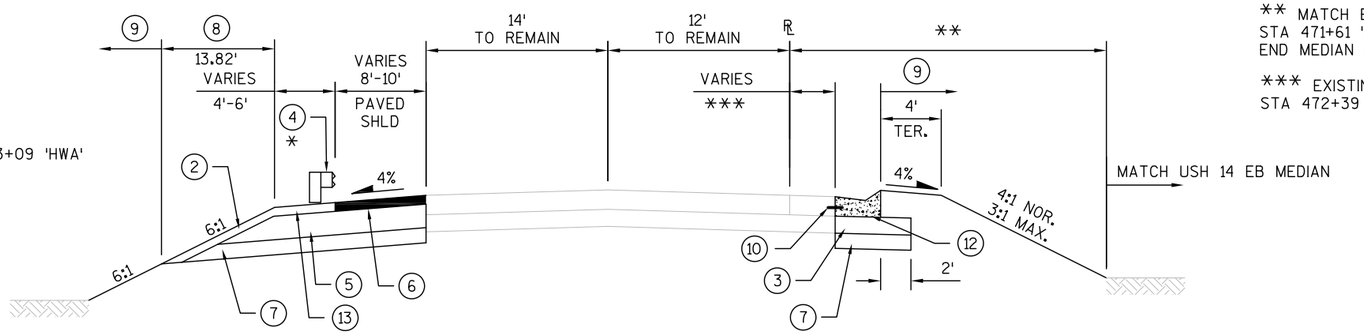
* NO BEAM GUARD
STA 471+36 'HEA' - STA 471+82 'HEA'

TYPICAL FINISHED SECTION
USH 14 EB
STA 470+93.60 'HEA' - STA 471+81.56 'HEA'



TYPICAL FINISHED SECTION
USH 14 WB
STA 470+75.34 'HWA' - STA 470+86.42 'HWA'

* BEAM GUARD REQ'D
FROM STA 471+16 'HWA' - 473+09 'HWA'

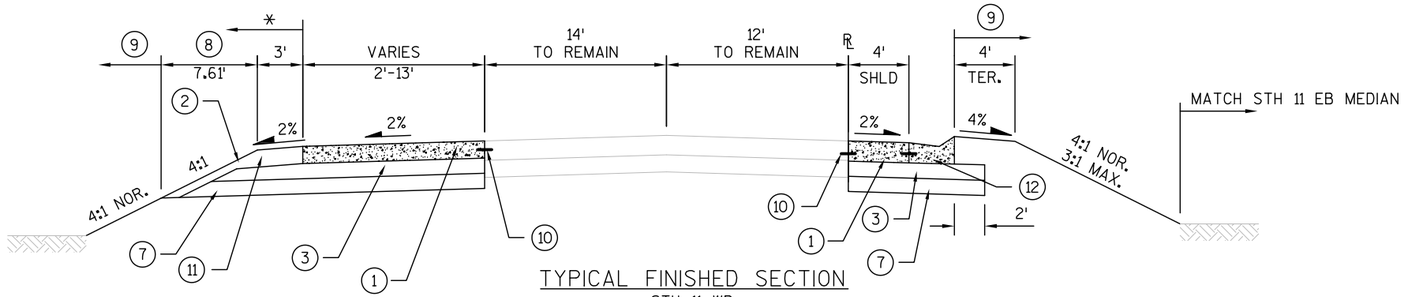


** MATCH EXISTING STH 11 INTERSECTION FROM
STA 471+61 'HWA' - STA 472+28 'HWA'
END MEDIAN CONSTRUCTION AT STA 472+99 'HWA'

*** EXISTING 12' LEFT TURN LANE
STA 472+39 'HEA' - 473+68 'HEA'

TYPICAL FINISHED SECTION
USH 14 WB
STA 470+86.42 'HWA' - STA 473+68.82 'HWA'

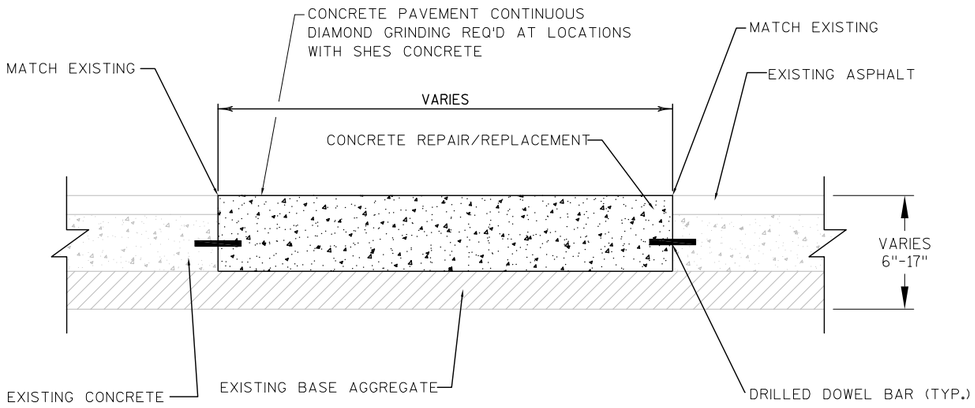
* MATCH CONCRETE PAVEMENT FOR RIGHT
TURN LANE FROM USH 14 EB TO USH 11 WB
AT STA 8+45 'RWA' TO STA 9+06 'RWA'



TYPICAL FINISHED SECTION
STH 11 WB
STA 7+38.91 'RWA' - STA 9+06.00 'RWA'

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP-TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE-TURF			.25 .32			.27 .34			.28 .36			.30 .38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

TOTAL PROJECT AREA = 29.5 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 4.6 ACRES

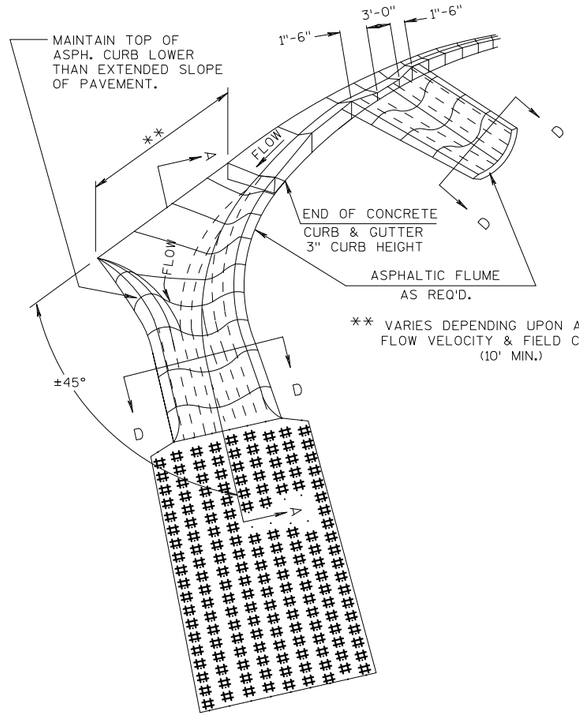


CONCRETE REPAIR AND REPLACEMENT

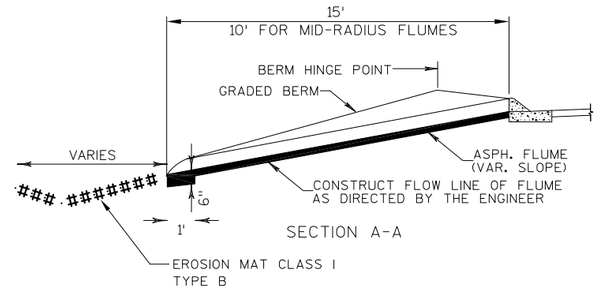
(LOOKING PERPENDICULAR TO CENTERLINE)
THIS DETAIL WILL BE USED IN AREAS WHERE THERE IS AN EXISTING HMA OVERLAY ON CONCRETE PAVEMENT.

SEE PLANS FOR LOCATIONS

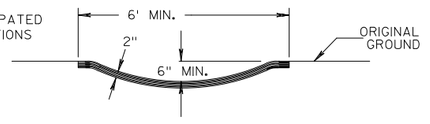
SEE SDD "CONCRETE PAVEMENT REPAIR AND REPLACEMENT" FOR DETAILS NOT SHOWN



** VARIES DEPENDING UPON ANTICIPATED FLOW VELOCITY & FIELD CONDITIONS (10' MIN.)



SECTION A-A

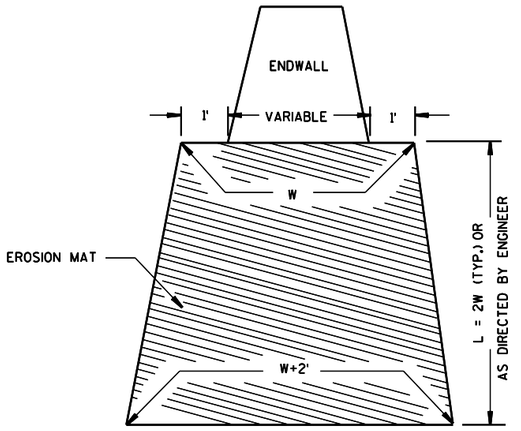


SECTION D-D

ASPHALTIC FLUME DETAIL

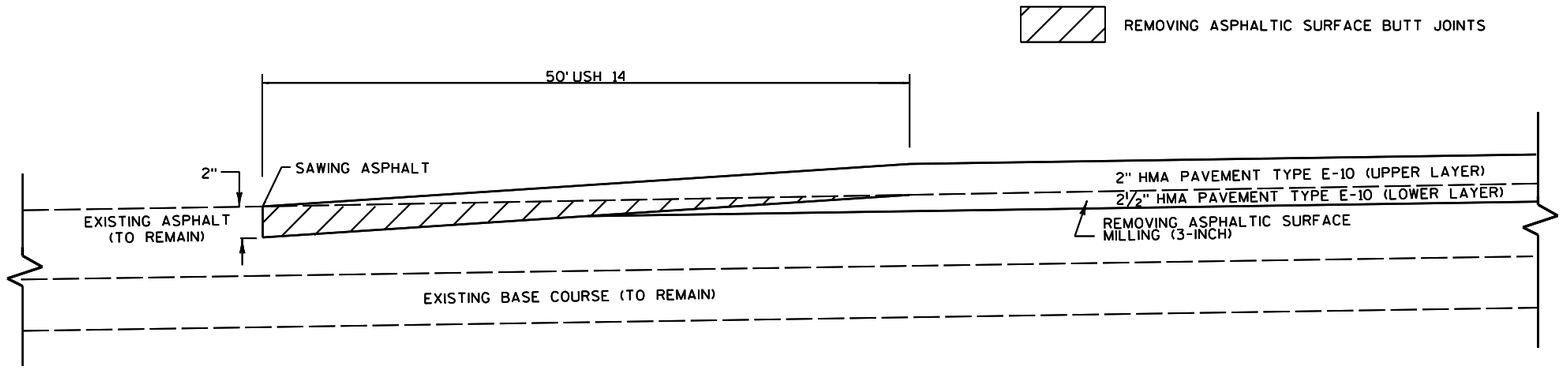
SEE EROSION CONTROL PLANS FOR LOCATIONS

SEE SDD "CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES" FOR DETAILS NOT SHOWN.



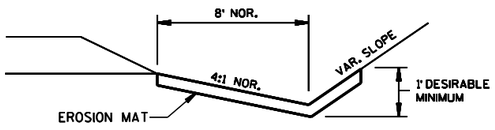
EROSION MAT TREATMENT AT CULVERTS

SEE EROSION CONTROL PLANS
FOR TYPES AND LOCATIONS.



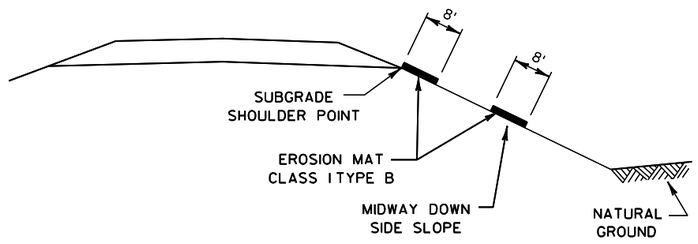
USH 14 BUTT JOINT DETAIL

STA. 285+08.91 'HEA' (WB)
STA. 289+26.76 'HEA' (EB)
STA. 305+50.00 'HEA'



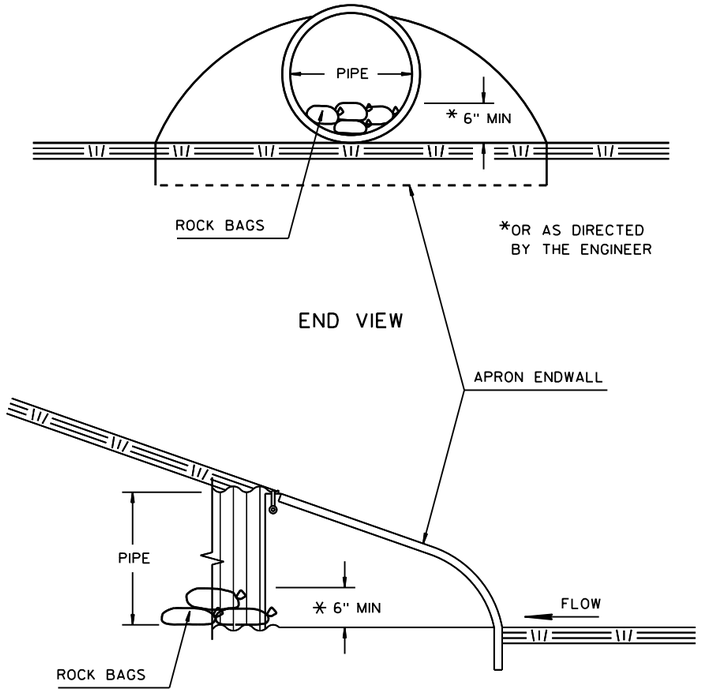
EROSION MAT DETAIL FOR DITCHES

SEE EROSION CONTROL PLANS
FOR TYPES AND LOCATIONS.



EROSION MAT DETAIL FOR SLOPES

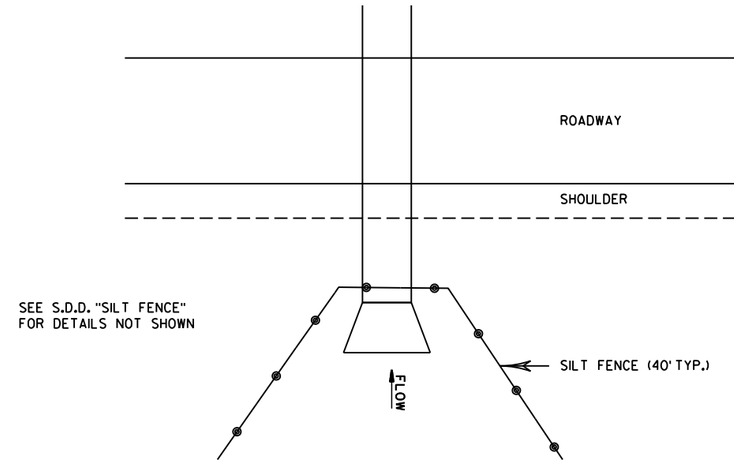
(SEE EROSION CONTROL PLAN FOR LOCATIONS)



SIDE VIEW

CULVERT PIPE CHECKS

(SEE EROSION CONTROL PLANS FOR LOCATIONS)



TYPICAL SILT FENCE DETAIL AT PIPE INLET

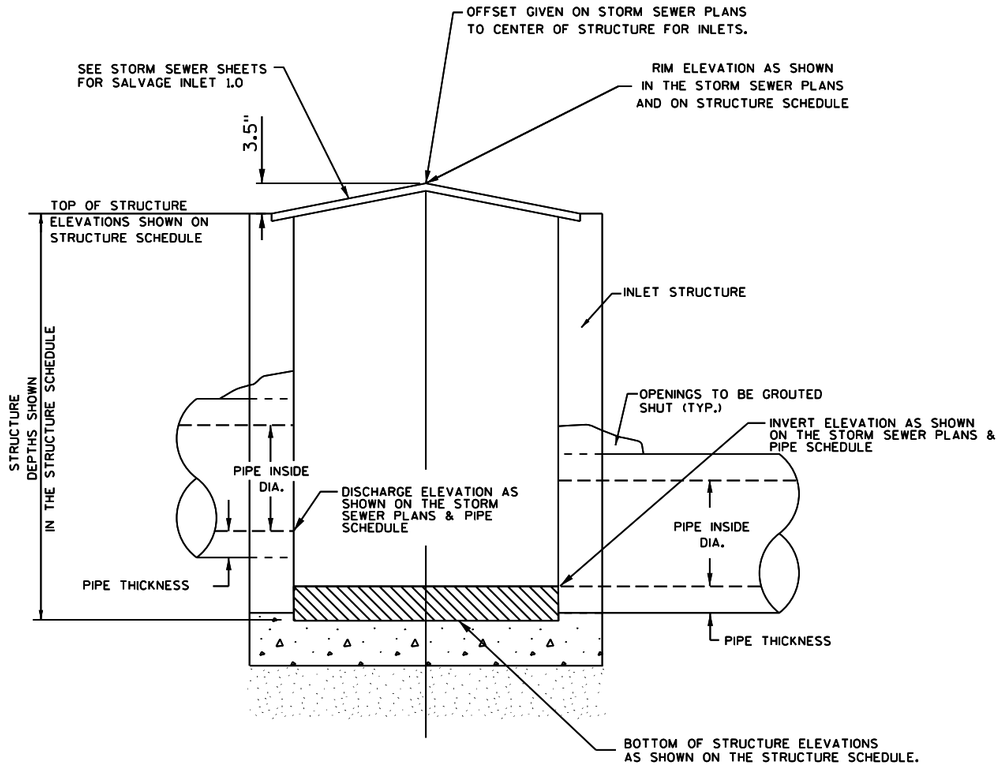
(SEE EROSION CONTROL PLANS FOR LOCATIONS)

2

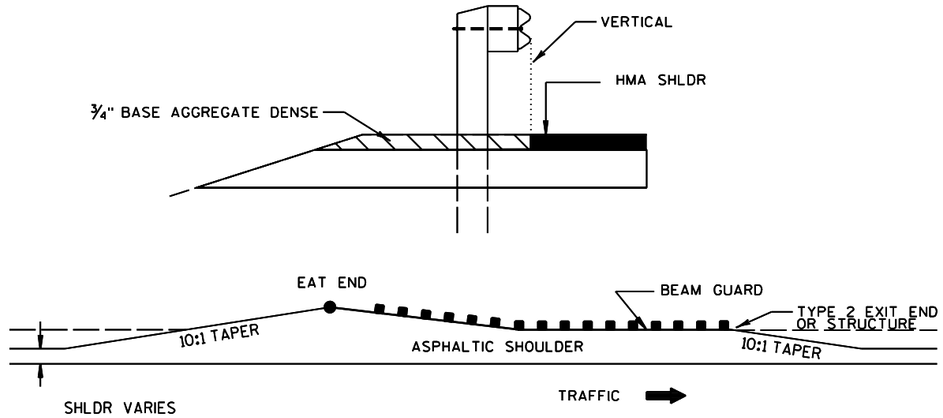
GENERAL NOTES:

GRANULAR BACKFILL REQUIRED AROUND INLET
(INCIDENTAL TO CONSTRUCTION OF INLET)

DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE SALVAGED INLET (SEE S.D.D. INLETS MEDIAN 2 GRATE)



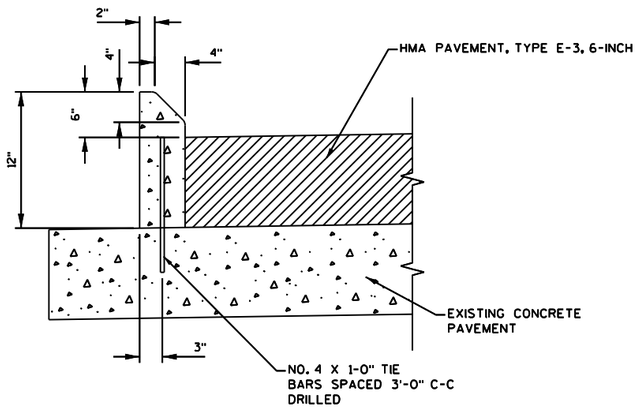
DETAIL OF INLET 1.0



NOTE: DETAIL IS SHOWN FOR INSIDE SHOULDER.
MIRROR DETAIL FOR OUTSIDE SHOULDER.

DETAIL FOR ASPHALTIC SHOULDER AT BEAM GUARD

SEE S.D.D. "MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL", "MIDWEST GUARDRAIL SYSTEM (MGS) TERMINAL", "STEEL PLATE BEAMGUARD, CLASS 'A'", AND/OR "STEEL PLATE BEAMGUARD, ENERGY ABSORBING TERMINAL" FOR DETAILS NOT SHOWN.



CONCRETE CURB TYPE 'J'

(SEE SDD "CONCRETE CURB, CONCRETE CURB & GUTTER, AND TIES" FOR DETAILS NOT SHOWN AND FOR PLACING CONCRETE CURB TYPE 'J' IN LOCATIONS WITH CONCRETE PAVEMENT REPAIR/REPLACEMENT)

2

2

N

USH 14

356+00'HEA'

357+00'HEA'

358+00'HEA'

359+00'HEA'

360+00'HEA'

361+00'HEA'

MATCH LINE STA. 361+25 'HEA'

REMOVAL LEGEND

REMOVING ASPHALTIC SURFACE

SLOPE INTERCEPT

SAWING CONCRETE/ASPHALT

MILWAUKEE STREET

N

MATCH LINE STA. 361+25 'HEA'

362+00'HEA'

363+00'HEA'

364+00'HEA'

365+00'HEA'

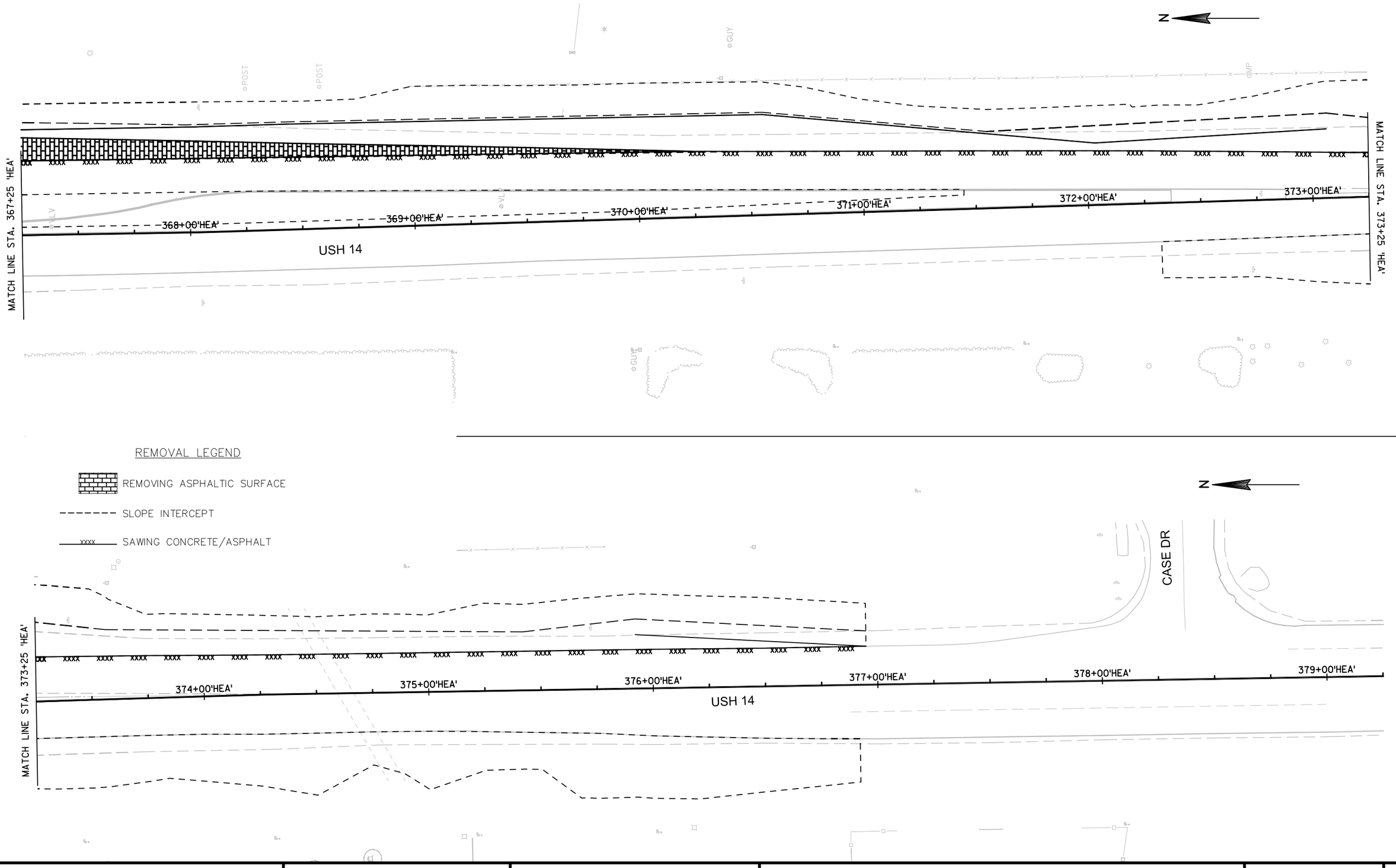
366+00'HEA'

367+00'HEA'

USH 14

MATCH LINE STA. 367+25 'HEA'

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	REMOVAL PLAN: USH 14/MILWAUKEE STREET - STAGE 1	SHEET 21	E



PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	REMOVAL PLAN: USH 14/MILWAUKEE STREET - STAGE 1	SHEET 22	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\PLAN DETAILS\5569-00-73\021004_RM_STAGE_1_MILWAUKEE.DWG PLOT DATE : 10/15/2014 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : 1:40_XREF

2

2

N

USH 14

356+00'HEA'

357+00'HEA'

358+00'HEA'

359+00'HEA'

360+00'HEA'

361+00'HEA'

MATCH LINE STA. 361+25 'HEA'

PAID FOR AS "CONCRETE PAVEMENT REPLACEMENT"

REMOVAL LEGEND

REMOVING ASPHALT PAVEMENT (QUANTITIES SUMMARIZED IN EARTHWORK TABLE)

REMOVING PAVEMENT

REMOVING ASPHALTIC SURFACE

REMOVING CURB

SLOPE INTERCEPT

SAWING CONCRETE/ASPHALT

MILWAUKEE STREET

N

MATCH LINE STA. 361+25 'HEA'

362+00'HEA'

363+00'HEA'

364+00'HEA'

365+00'HEA'

366+00'HEA'

367+00'HEA'

MATCH LINE STA. 367+25 'HEA'

USH 14

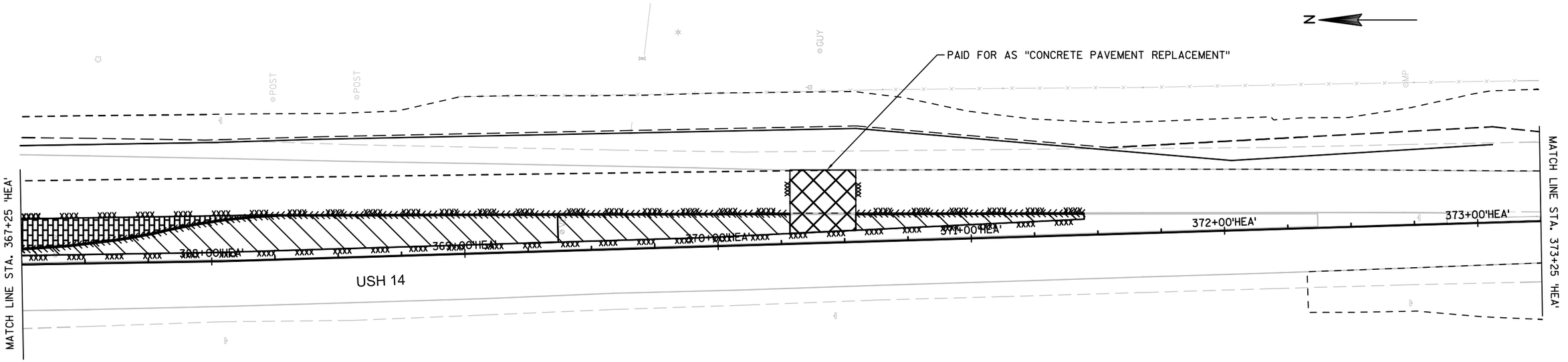
PAID FOR AS "CONCRETE PAVEMENT REPAIR"

PAID FOR AS "CONCRETE PAVEMENT REPAIR"

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	REMOVAL PLAN: USH 14/MILWAUKEE STREET - STAGE 2	SHEET 23	E

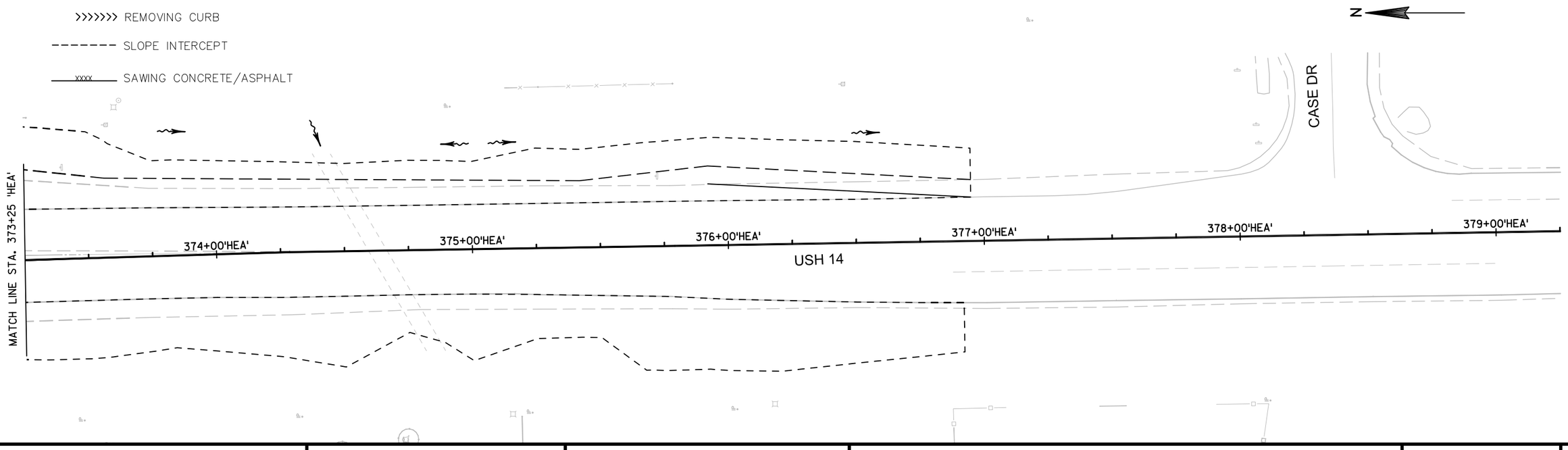
FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\PLAN DETAILS\5569-00-73\021004_RM_STAGE_2_MILWAUKEE.DWG PLOT DATE : 10/15/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42



REMOVAL LEGEND

- REMOVING ASPHALT PAVEMENT (QUANTITIES SUMMARIZED IN EARTHWORK TABLE)
- REMOVING PAVEMENT
- REMOVING ASPHALTIC SURFACE
- >>>>>>> REMOVING CURB
- ------- SLOPE INTERCEPT
- xxxx SAWING CONCRETE/ASPHALT



PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	REMOVAL PLAN: USH 14/MILWAUKEE STREET - STAGE 2	SHEET 24	E

2

2

N

418+00'HEA'

419+00'HEA'

420+00'HEA'

421+00'HEA'

USH 14

422+00'HEA'

423+0

MATCH LINE STA. 423+00 'HEA'

REMOVAL LEGEND

REMOVING ASPHALT PAVEMENT (QUANTITIES SUMMARIZED IN EARTHWORK TABLE)

REMOVING GUARDRAIL

SLOPE INTERCEPT

SAWING CONCRETE/ASPHALT

N

MATCH LINE STA. 423+00 'HEA'

0'HEA'

424+00'HEA'

425+00'HEA'

426+00'HEA'

427+00'HEA'

428+00'HEA'

429+0

USH 14

MATCH LINE STA. 429+00 'HEA'

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	REMOVAL PLAN: USH 14 SHOULDER IMPROVEMENT-RUGER AVE - STAGE 1	SHEET 25	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\PLAN DETAILS\5569-00-73\021004_RM_STAGE_1_BYPASS-RUGER.DWG PLOT DATE : 10/15/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1:40_XREF

2

N

MATCH LINE STA. 429+00 'HEA'

0'HEA' 430+00'HEA' 431+00'HEA' 432+00'HEA' 433+00'HEA' 434+00'HEA' 435+0

USH 14

MATCH LINE STA. 435+00 'HEA'

REMOVAL LEGEND

REMOVING ASPHALT PAVEMENT (QUANTITIES SUMMARIZED IN EARTHWORK TABLE)

REMOVING CURB & GUTTER

REMOVING GUARDRAIL

SLOPE INTERCEPT

SAWING CONCRETE/ASPHALT

N

MATCH LINE STA. 435+00 'HEA'

00'HEA' 436+00'HEA' 437+00'HEA' 438+00'HEA' 439+00'HEA' 440+00'HEA' 441+00'HEA'

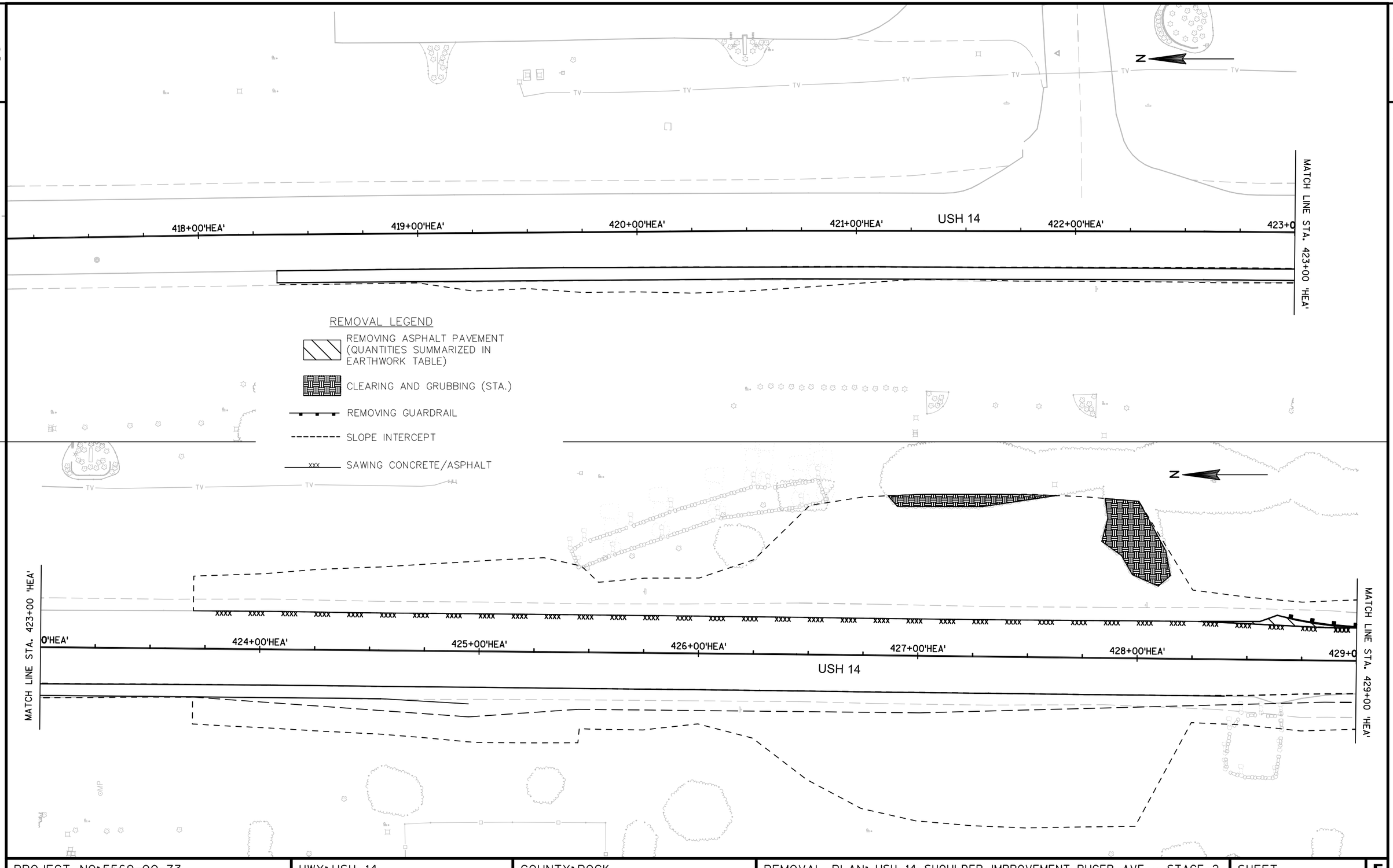
USH 14

CTH MM/RUGER AVENUE

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	REMOVAL PLAN: USH 14 SHOULDER IMPROVEMENT-RUGER AVE - STAGE 1	SHEET 26	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\PLAN DETAILS\5569-00-73\021004_RM_STAGE_1_BYPASS-RUGER.DWG PLOT DATE : 10/15/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1:40_XREF

2



2

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	REMOVAL PLAN: USH 14 SHOULDER IMPROVEMENT-RUGER AVE - STAGE 2	SHEET 27	E

2

2

MATCH LINE STA. 429+00 'HEA'

MATCH LINE STA. 435+00 'HEA'

0'HEA' 430+00'HEA' 431+00'HEA' 432+00'HEA' 433+00'HEA' 434+00'HEA' 435+0

USH 14

N

REMOVAL LEGEND

REMOVING ASPHALT PAVEMENT (QUANTITIES SUMMARIZED IN EARTHWORK TABLE)

REMOVING CURB & GUTTER

REMOVING GUARDRAIL

SLOPE INTERCEPT

xxx SAWING CONCRETE/ASPHALT

MATCH LINE STA. 435+00 'HEA'

00'HEA' 436+00'HEA' 437+00'HEA' 438+00'HEA' 439+00'HEA' 440+00'HEA' 441+00'HEA'

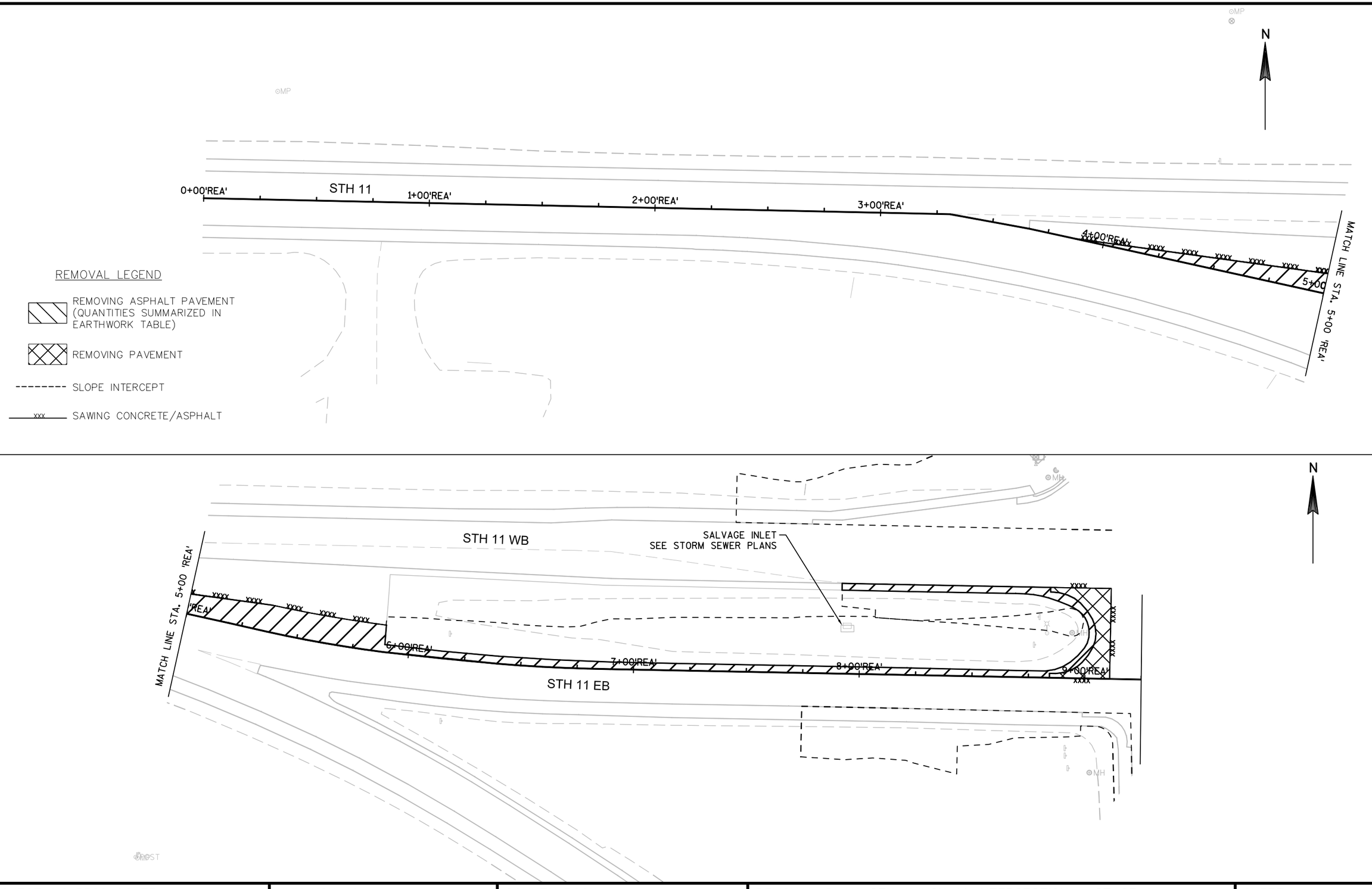
USH 14

CTH MM/RUGER AVENUE

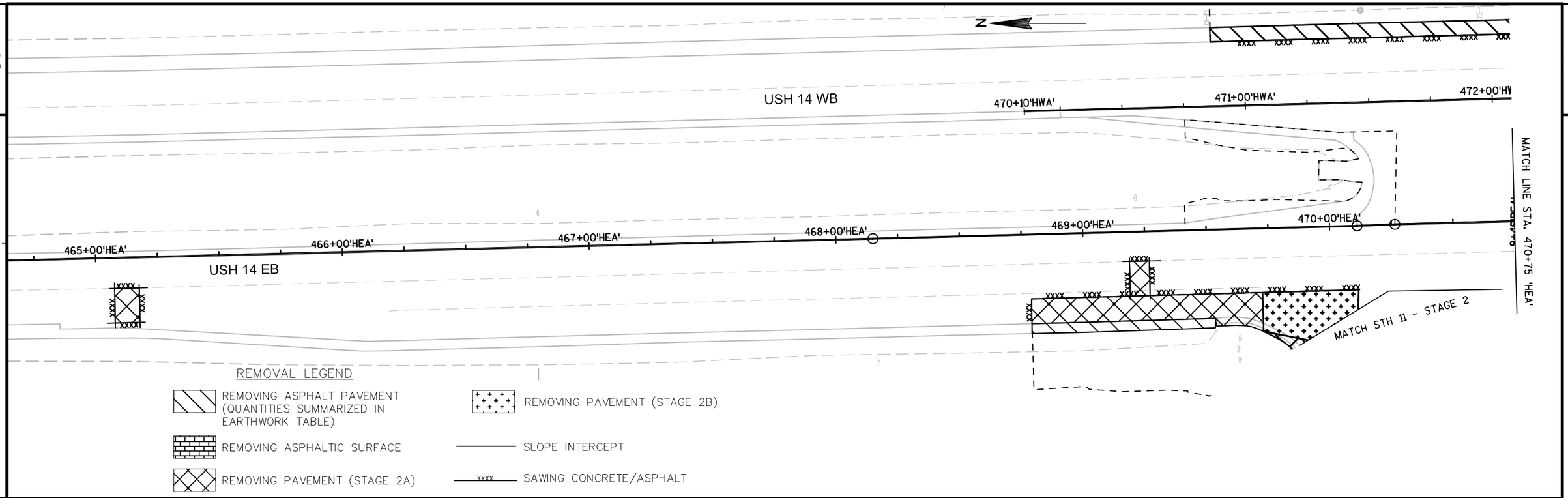
N

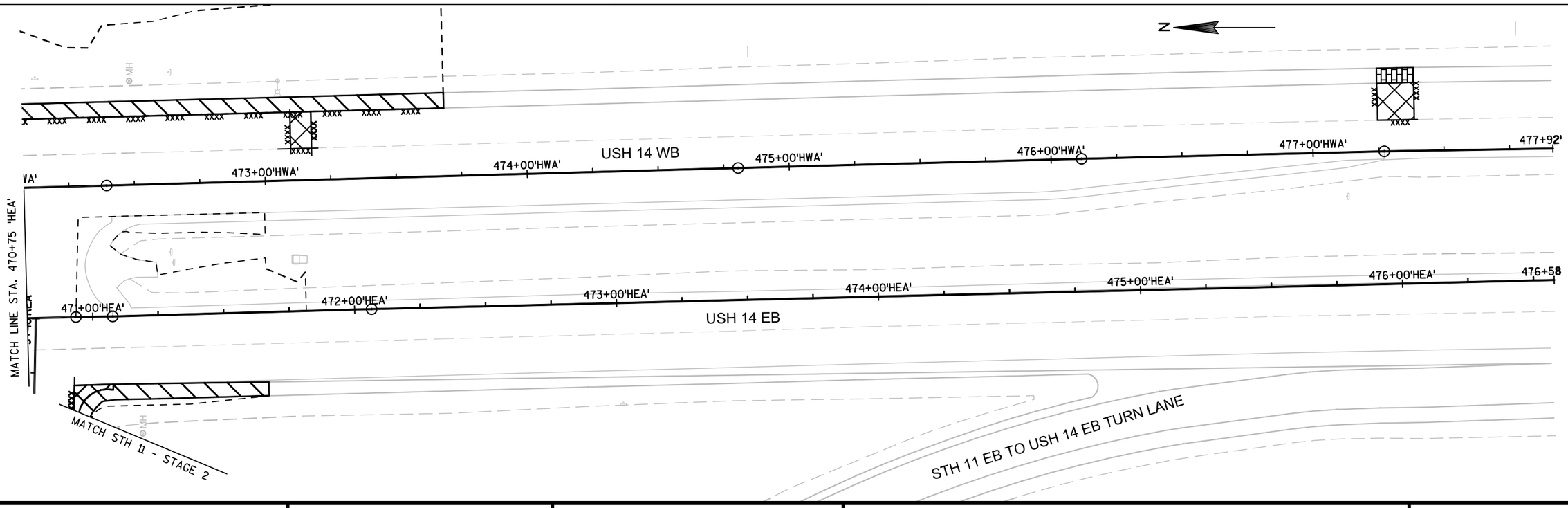
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	REMOVAL PLAN: USH 14 SHOULDER IMPROVEMENT-RUGER AVE - STAGE 2	SHEET 28	E

2



PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	REMOVAL PLAN: STH 11/USH 14 INTERSECTION - STAGE 1	SHEET 29	E



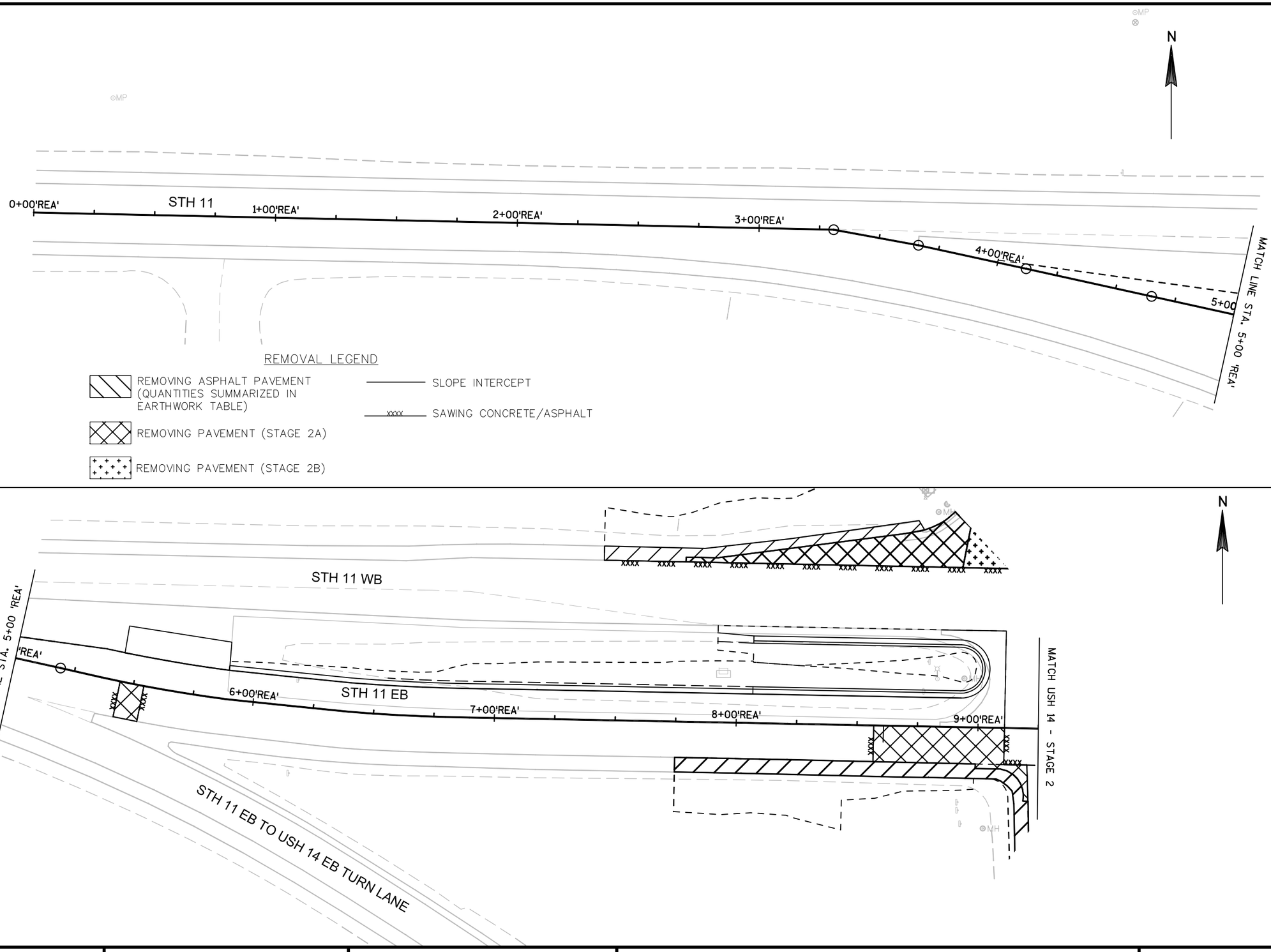


PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	REMOVAL PLAN: STH 11/USH 14 INTERSECTION - STAGE 2A/2B	SHEET 30	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\PLAN DETAILS\5569-00-73\021004_RM_STAGE_2_14-11.DWG PLOT DATE : 10/15/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1:40_XREF
WISDOT/CADDS SHEET 42

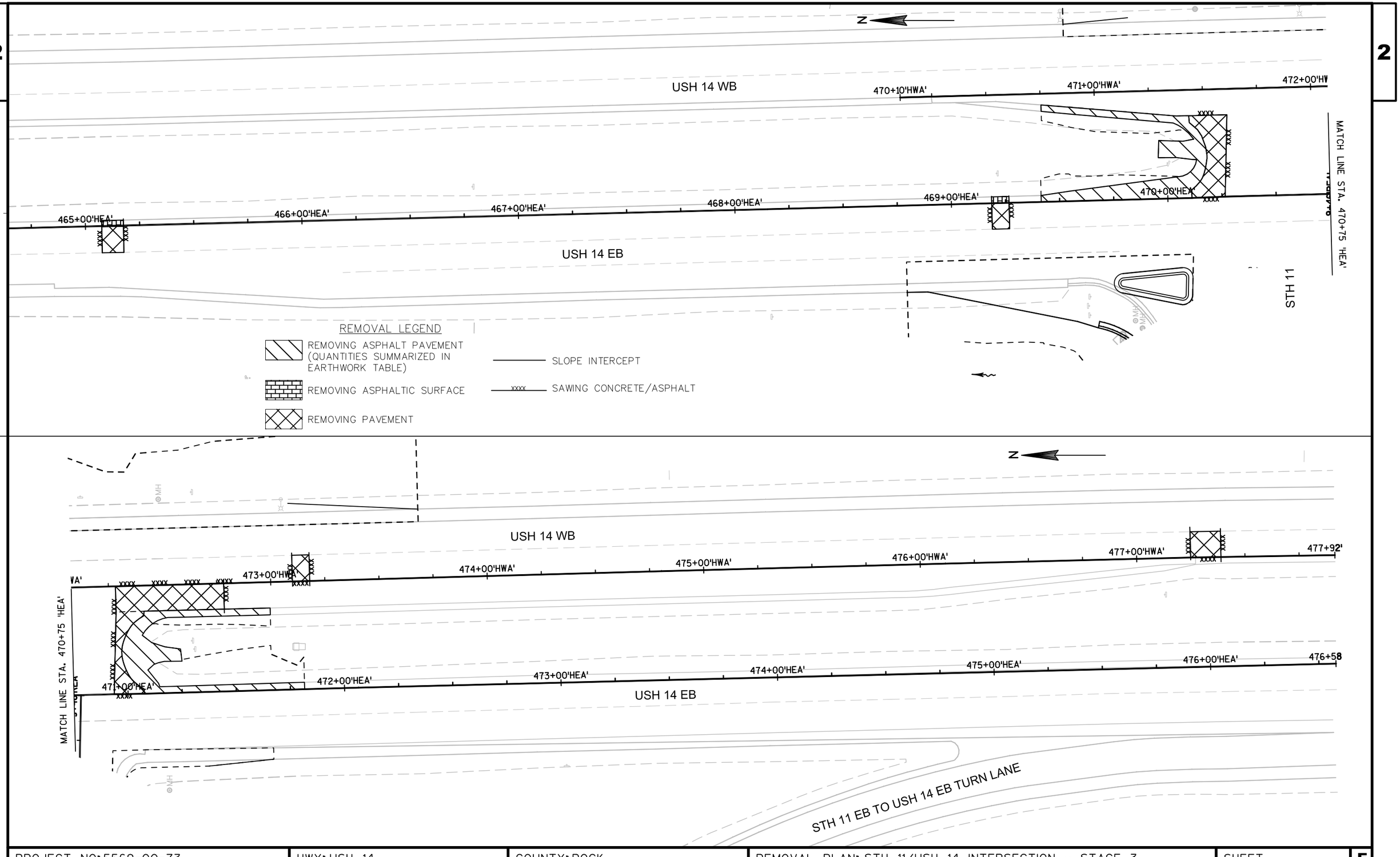
2

2



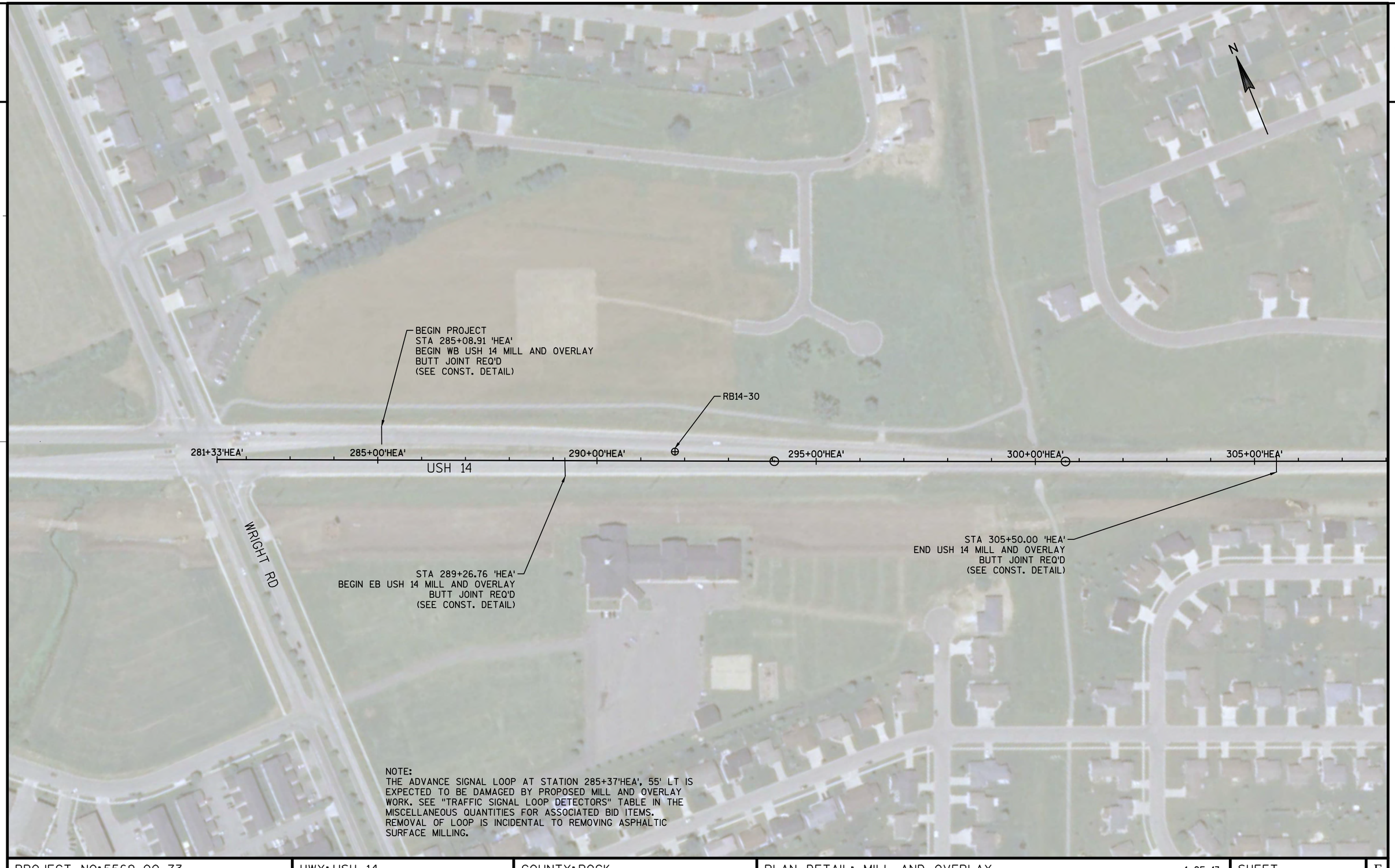
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	REMOVAL PLAN: STH 11/USH 14 INTERSECTION - STAGE 2A/2B	SHEET 31	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\PLAN DETAILS\5569-00-73\021004_RM_STAGE_2_14-11.DWG PLOT DATE : 10/15/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1:40_XREF



PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	REMOVAL PLAN: STH 11/USH 14 INTERSECTION - STAGE 3	SHEET 32	E

2



PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PLAN DETAIL: MILL AND OVERLAY 1 OF 13	SHEET 33	E

2

LEGEND

- xxxx SAWCUT
- (AG01) BASE AGGREGATE DENSE 3/4-INCH
- (AP01) HMA PAVEMENT TYPE E-3, 4.75-INCH
- (TS01) SALVAGED TOPSOIL, SEED, FERTILIZER, AND EROSION MAT
- (PIX-X) SEE TABLES AT END OF PLAN DETAIL SECTION FOR POINT INFORMATION
- ⊕ SOIL BORING

OLD HUMES RD

R/W

WISCONSIN POWER & LIGHT COMPANY

WISCONSIN POWER & LIGHT COMPANY

BEGIN CONSTRUCTION
STA. 332+69.44 'HEA'
MATCH EXISTING
SAWCUT REQ'D.

END CONSTRUCTION
STA. 337+09.53 'HEA'
MATCH EXISTING
SAWCUT REQ'D.

SLOPE INTERCEPTS (TYP.)

3' (2' PAVED)

(PI2-1) (PI2-2) (PI2-3) (AP01) (AG01) (TS01)

886.88 887.10 887.01 887.53 887.38 887.29 887.27 887.18 887.44 887.11 887.11 887.02 887.02 886.97 886.88 886.80 886.71 886.65 886.56 886.54 886.45 886.42 886.33 886.27 886.18 886.12 886.03 885.95 885.86 885.75 885.66 885.54 885.45 885.34 885.25 885.15 885.11 885.08 885.06 885.03 885.00

886.79 886.74 886.72 886.98 886.99 886.66 886.56 886.43 886.26 886.11 885.99 885.86 885.71 885.57 885.46 885.34 885.23

4.5% 4.5%

15' 12'

CAUTION

RB14-19 RB14-20

332+00'HEA' 333+00'HEA' 334+00'HEA' 335+00'HEA' 336+00'HEA' 337+00'HEA'

USH 14

R/W

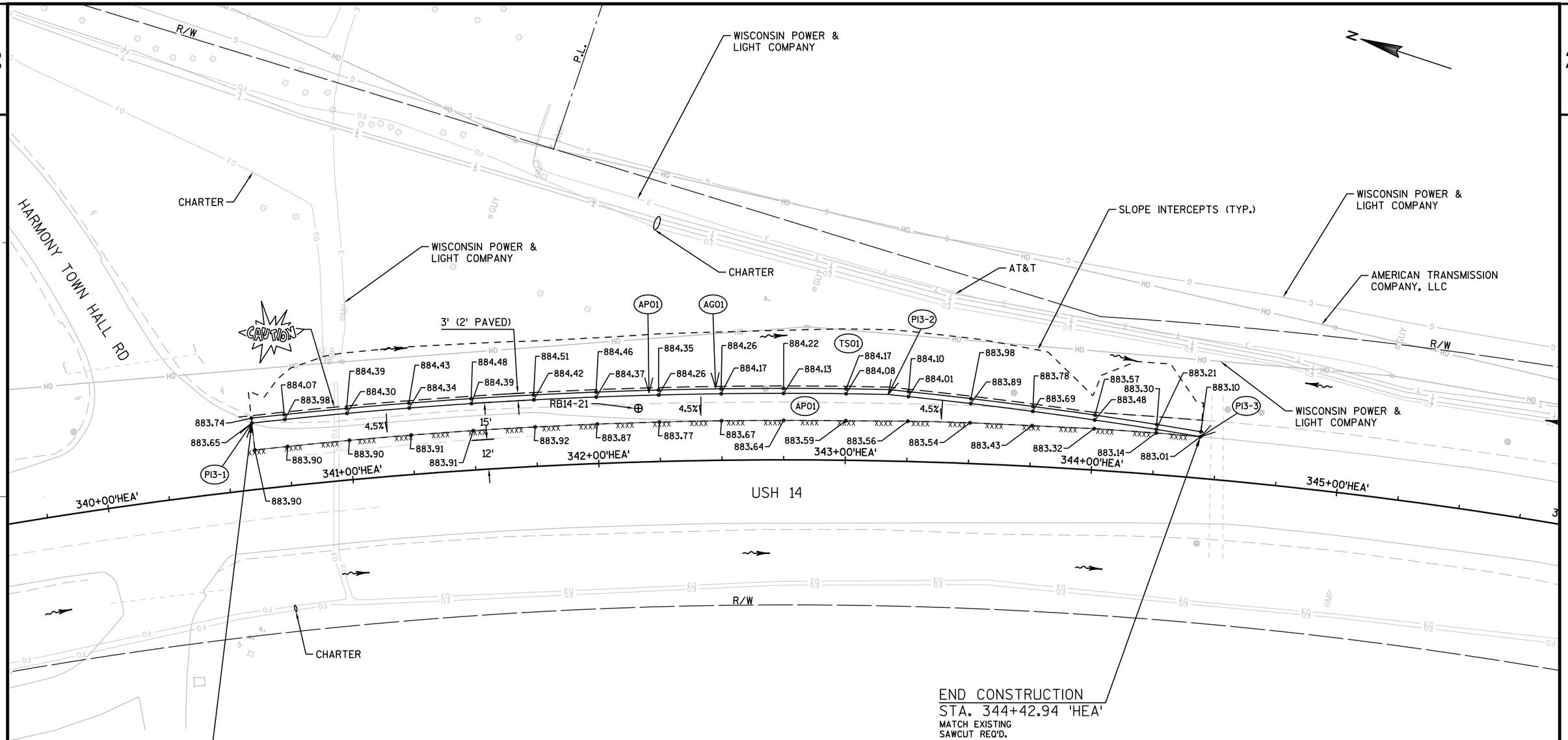
AMERICAN TRANSMISSION COMPANY, LLC

McLEOD USA

WISCONSIN POWER & LIGHT COMPANY

NOTES
RADIUS DIMENSIONS ARE SHOWN TO THE FACE OF CURB
PAVEMENT GRADES ARE GENERALLY SHOWN AT 25' INTERVALS
MATCH EXISTING ELEVATIONS AT ALL SAW CUT LOCATIONS
VERIFY EXISTING ELEVATIONS PRIOR TO BEGINNING WORK

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PLAN DETAIL: USH 14/OLD HUMES ROAD INTERSECTION 2 OF 13	SHEET 34	E



BEGIN CONSTRUCTION
STA. 340+61.73 'HEA'
MATCH EXISTING
SAWCUT REQ'D.

END CONSTRUCTION
STA. 344+42.94 'HEA'
MATCH EXISTING
SAWCUT REQ'D.

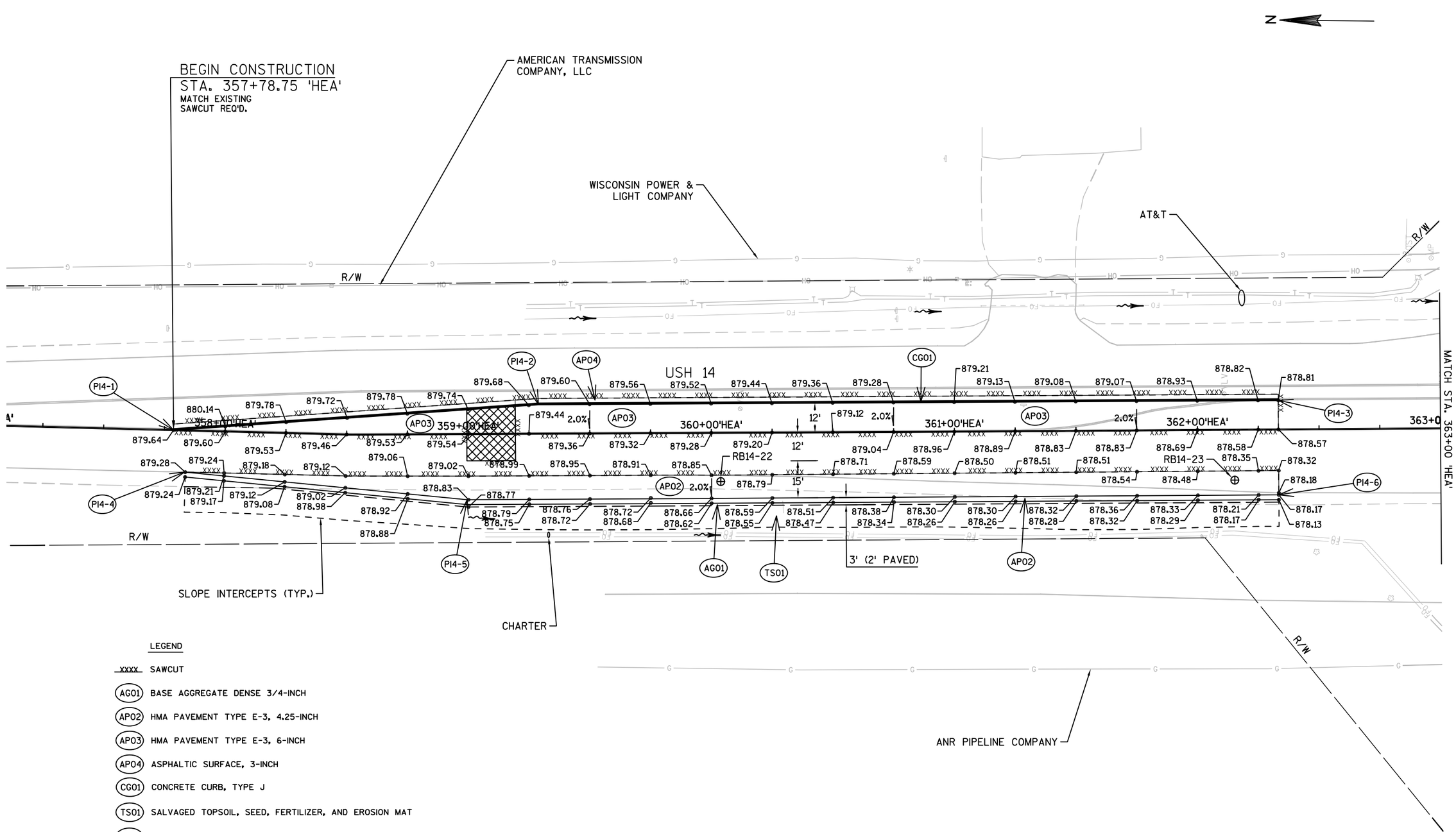
LEGEND

xxxx	SAWCUT
AG01	BASE AGGREGATE DENSE 3/4-INCH
AP01	HMA PAVEMENT TYPE E-3, 4.75-INCH
TS01	SALVAGED TOPSOIL, SEED, FERTILIZER, AND EROSION MAT
PIX-X	SEE TABLES AT END OF PLAN DETAIL SECTION FOR POINT INFORMATION
⊕	SOIL BORING

NOTES
RADIUS DIMENSIONS ARE SHOWN TO THE FACE OF CURB
PAVEMENT GRADES ARE GENERALLY SHOWN AT 25' INTERVALS
MATCH EXISTING ELEVATIONS AT ALL SAW CUT LOCATIONS
VERIFY EXISTING ELEVATIONS PRIOR TO BEGINNING WORK

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PLAN DETAIL: USH 14/HARMONY TOWN HALL RD INTERSECTION 3 OF 13	SHEET 35	E

2



LEGEND

- XXXX SAWCUT
- (AG01) BASE AGGREGATE DENSE 3/4-INCH
- (AP02) HMA PAVEMENT TYPE E-3, 4.25-INCH
- (AP03) HMA PAVEMENT TYPE E-3, 6-INCH
- (AP04) ASPHALTIC SURFACE, 3-INCH
- (CG01) CONCRETE CURB, TYPE J
- (TS01) SALVAGED TOPSOIL, SEED, FERTILIZER, AND EROSION MAT
- (PIX-X) SEE TABLES AT END OF PLAN DETAIL SECTION FOR POINT INFORMATION
- CONCRETE PAVEMENT REPAIR / REPLACEMENT SHES
- ⊕ SOIL BORING

NOTES
RADIUS DIMENSIONS ARE SHOWN TO THE FACE OF CURB
PAVEMENT GRADES ARE GENERALLY SHOWN AT 25' INTERVALS
MATCH EXISTING ELEVATIONS AT ALL SAW CUT LOCATIONS
VERIFY EXISTING ELEVATIONS PRIOR TO BEGINNING WORK

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PLAN DETAIL: USH 14/MILWAUKEE STREET/CTH A INTERSECTION 4 OF 13	SHEET 36	E

NOTES
RADIUS DIMENSIONS ARE SHOWN TO THE FACE OF CURB
PAVEMENT GRADES ARE GENERALLY SHOWN AT 25' INTERVALS
MATCH EXISTING ELEVATIONS AT ALL SAW CUT LOCATIONS
VERIFY EXISTING ELEVATIONS PRIOR TO BEGINNING WORK

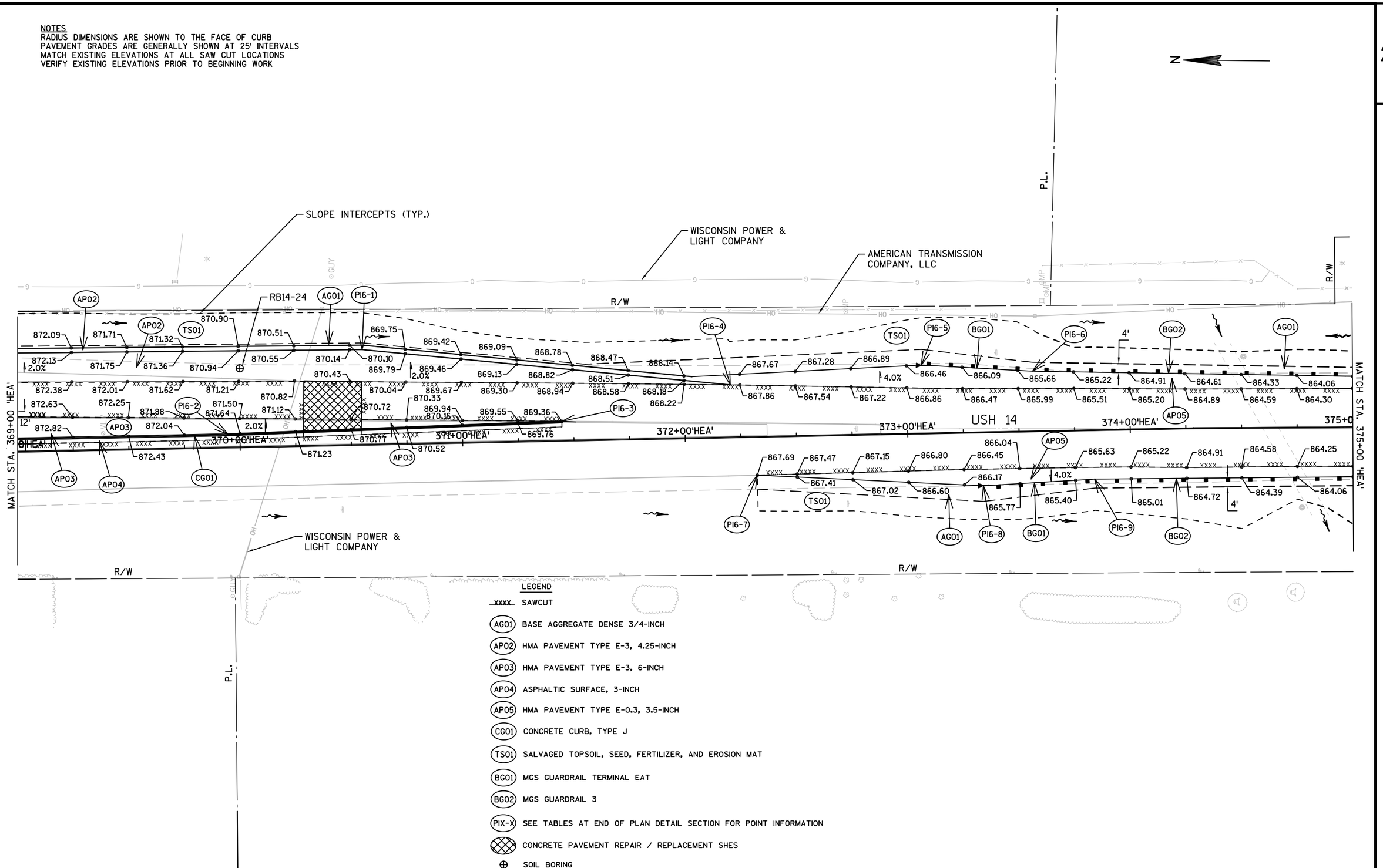
N

WISCONSIN POWER & LIGHT COMPANY
AT&T
AT&T
AT&T
AT&T
R/W
R/W
CTH A
AMERICAN TRANSMISSION COMPANY, LLC
27+00'MKA'
26+00'MKA'
25+00'MKA'
24+00'MKA'
USH 14
MILWAUKEE ST
MATCH STA. 363+00 'HEA'
MATCH STA. 369+00 'HEA'
363+00'HEA'
364+00'HEA'
365+00'HEA'
366+00'HEA'
367+00'HEA'
368+00'HEA'
SLOPE INTERCEPTS (TYP.)
WISCONSIN POWER & LIGHT COMPANY
AT&T
AP02
AG01
AP02
PI5-2
R/W
3' (2' PAVED)
TS01
PI5-1
PI5-2
PI5-3
AP03
CG01
AP04
2.0%
2.0%
15'
12'
12'
12'
875.46 875.32 875.10 874.80 874.49 874.23 873.98 873.64 873.27 872.89
875.50 875.14 874.84 874.53 874.27 874.02 873.68 873.52 873.32 872.93
875.72 875.51 875.24 875.01 874.73 874.45 874.20 873.87 873.16
875.40 875.16 874.91 874.67 874.40 873.70 873.35
875.64 875.40 874.91 874.64 874.05 873.92 873.56
875.15 874.28
WISCONSIN POWER & LIGHT COMPANY
CITY OF JANESVILLE
ANR PIPELINE COMPANY
CHARTER
AT&T
WISCONSIN POWER & LIGHT COMPANY
CHARTER
R/W
R/W
R/W
P.L.

LEGEND
- xxxx SAWCUT
- AG01 BASE AGGREGATE DENSE 3/4-INCH
- AP02 HMA PAVEMENT TYPE E-3, 4.25-INCH
- AP03 HMA PAVEMENT TYPE E-3, 6-INCH
- AP04 ASPHALTIC SURFACE, 3-INCH
- CG01 CONCRETE CURB, TYPE J
- TS01 SALVAGED TOPSOIL, SEED, FERTILIZER, AND EROSION MAT
- PIX-X SEE TABLES AT END OF PLAN DETAIL SECTION FOR POINT INFORMATION
- XXX CONCRETE PAVEMENT REPAIR / REPLACEMENT SHES

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PLAN DETAIL: USH 14/MILWAUKEE STREET/CTH A INTERSECTION 5 OF 13	SHEET 37 E

NOTES
RADIUS DIMENSIONS ARE SHOWN TO THE FACE OF CURB
PAVEMENT GRADES ARE GENERALLY SHOWN AT 25' INTERVALS
MATCH EXISTING ELEVATIONS AT ALL SAW CUT LOCATIONS
VERIFY EXISTING ELEVATIONS PRIOR TO BEGINNING WORK

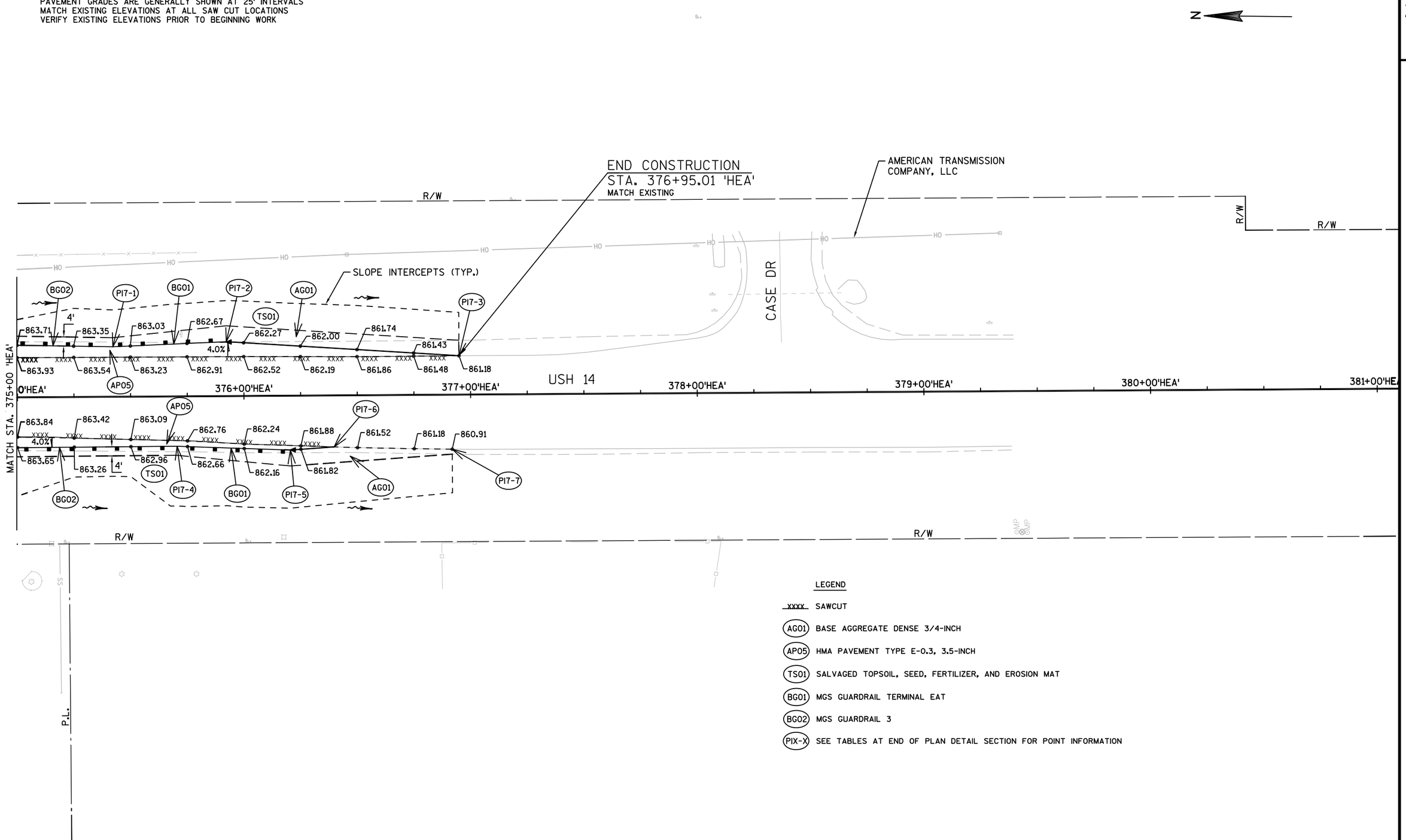


LEGEND

xxxx	SAWCUT
AG01	BASE AGGREGATE DENSE 3/4-INCH
AP02	HMA PAVEMENT TYPE E-3, 4.25-INCH
AP03	HMA PAVEMENT TYPE E-3, 6-INCH
AP04	ASPHALTIC SURFACE, 3-INCH
AP05	HMA PAVEMENT TYPE E-0.3, 3.5-INCH
CG01	CONCRETE CURB, TYPE J
TS01	SALVAGED TOPSOIL, SEED, FERTILIZER, AND EROSION MAT
BG01	MGS GUARDRAIL TERMINAL EAT
BG02	MGS GUARDRAIL 3
PIX-X	SEE TABLES AT END OF PLAN DETAIL SECTION FOR POINT INFORMATION
	CONCRETE PAVEMENT REPAIR / REPLACEMENT SHES
⊕	SOIL BORING

PROJECT NO:5569-00-73	HWY:USH 14	COUNTY:ROCK	PLAN DETAIL: USH 14/MILWAUKEE STREET/CTH A INTERSECTION 6 OF 13	SHEET 38 E

NOTES
RADIUS DIMENSIONS ARE SHOWN TO THE FACE OF CURB
PAVEMENT GRADES ARE GENERALLY SHOWN AT 25' INTERVALS
MATCH EXISTING ELEVATIONS AT ALL SAW CUT LOCATIONS
VERIFY EXISTING ELEVATIONS PRIOR TO BEGINNING WORK



LEGEND

XXXX	SAWCUT
AG01	BASE AGGREGATE DENSE 3/4-INCH
AP05	HMA PAVEMENT TYPE E-0.3, 3.5-INCH
TS01	SALVAGED TOPSOIL, SEED, FERTILIZER, AND EROSION MAT
BG01	MGS GUARDRAIL TERMINAL EAT
BG02	MGS GUARDRAIL 3
PIX-X	SEE TABLES AT END OF PLAN DETAIL SECTION FOR POINT INFORMATION

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PLAN DETAIL: USH 14/MILWAUKEE STREET/CTH A INTERSECTION 7 OF 13	SHEET 39	E

NOTES
RADIUS DIMENSIONS ARE SHOWN TO THE FACE OF CURB
PAVEMENT GRADES ARE GENERALLY SHOWN AT 25' INTERVALS
MATCH EXISTING ELEVATIONS AT ALL SAW CUT LOCATIONS
VERIFY EXISTING ELEVATIONS PRIOR TO BEGINNING WORK

BEGIN CONSTRUCTION
STA. 418+35.72 'HEA'
MATCH EXISTING

AMERICAN TRANSMISSION COMPANY, LLC

AT&T

WISCONSIN POWER & LIGHT COMPANY

CHARTER

WISCONSIN POWER & LIGHT COMPANY

USH 14

418+00'HEA' 419+00'HEA' 420+00'HEA' 421+00'HEA' 422+00'HEA' 423+00'HEA' 424+00'HEA'

PI8-1 PI8-2 PI8-3 AP05 AG01 TS01

863.89 863.81 863.68 863.66 863.59 863.51 863.44 863.34 863.28 863.13 863.10 862.94 862.90 862.75 862.71 862.56 862.52 862.33 862.33 862.09 862.11 861.83 861.85 861.57 861.61 861.31 861.35 861.05 861.09 860.78 860.83 860.49 860.56 860.17 860.26 859.86 859.95 859.55 859.65 859.25 859.34 859.03 858.95 858.72 858.61 858.39 858.42 858.15 858.60 857.99 858.21

4.0% 4.0%

VARIES 5'-6'

CAUTION

SLOPE INTERCEPTS (TYP.)

McLEOD USA

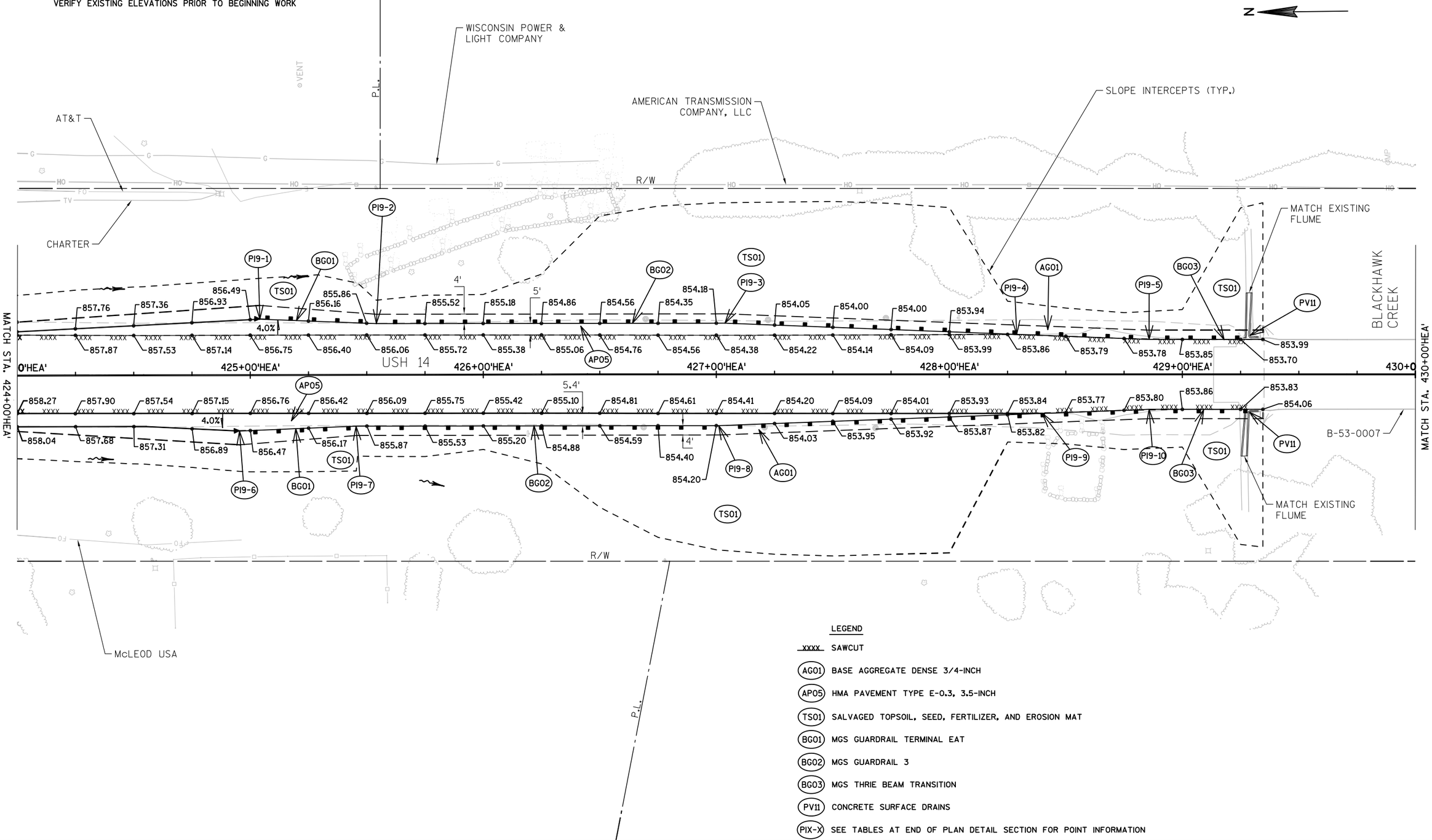
WISCONSIN POWER & LIGHT COMPANY

R/W

LEGEND

xxxx	SAWCUT
AG01	BASE AGGREGATE DENSE 3/4-INCH
AP05	HMA PAVEMENT TYPE E-0.3, 3.5-INCH
TS01	SALVAGED TOPSOIL, SEED, FERTILIZER, AND EROSION MAT
PIX-X	SEE TABLES AT END OF PLAN DETAIL SECTION FOR POINT INFORMATION

NOTES
RADIUS DIMENSIONS ARE SHOWN TO THE FACE OF CURB
PAVEMENT GRADES ARE GENERALLY SHOWN AT 25' INTERVALS
MATCH EXISTING ELEVATIONS AT ALL SAW CUT LOCATIONS
VERIFY EXISTING ELEVATIONS PRIOR TO BEGINNING WORK

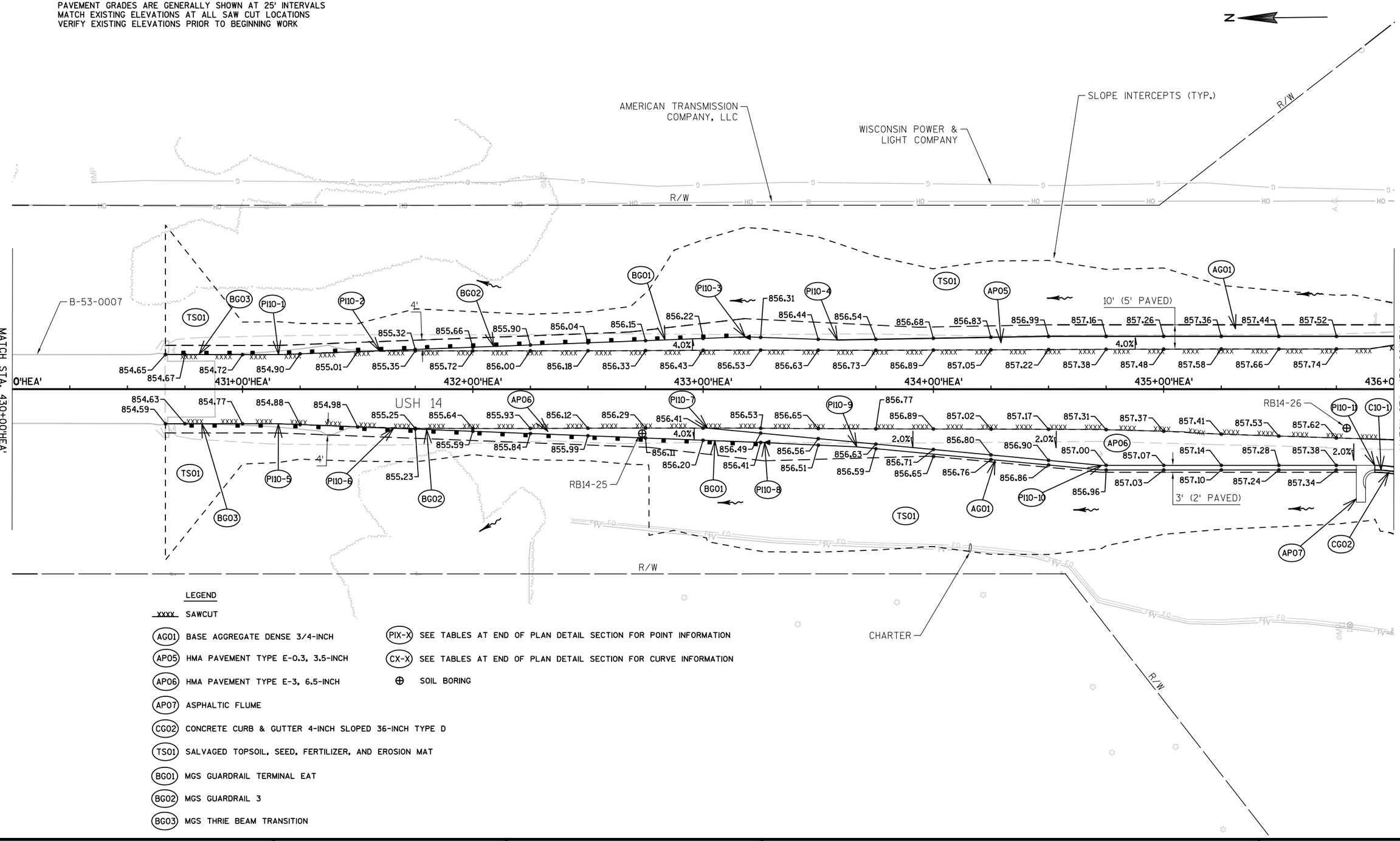


LEGEND

xxxx	SAWCUT
AG01	BASE AGGREGATE DENSE 3/4-INCH
AP05	HMA PAVEMENT TYPE E-0.3, 3.5-INCH
TS01	SALVAGED TOPSOIL, SEED, FERTILIZER, AND EROSION MAT
BG01	MGS GUARDRAIL TERMINAL EAT
BG02	MGS GUARDRAIL 3
BG03	MGS THRIE BEAM TRANSITION
PV11	CONCRETE SURFACE DRAINS
PIX-X	SEE TABLES AT END OF PLAN DETAIL SECTION FOR POINT INFORMATION

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PLAN DETAIL: USH 14/CTH MM/RUGER AVENUE INTERSECTION 9 OF 13	SHEET 41	E

NOTES
RADIUS DIMENSIONS ARE SHOWN TO THE FACE OF CURB
PAVEMENT GRADES ARE GENERALLY SHOWN AT 25' INTERVALS
MATCH EXISTING ELEVATIONS AT ALL SAW CUT LOCATIONS
VERIFY EXISTING ELEVATIONS PRIOR TO BEGINNING WORK



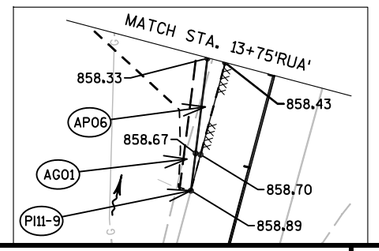
LEGEND

xxxx	SAWCUT
AG01	BASE AGGREGATE DENSE 3/4-INCH
AP05	HMA PAVEMENT TYPE E-0.3, 3.5-INCH
AP06	HMA PAVEMENT TYPE E-3, 6.5-INCH
AP07	ASPHALTIC FLUME
CG02	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
TS01	SALVAGED TOPSOIL, SEED, FERTILIZER, AND EROSION MAT
BG01	MGS GUARDRAIL TERMINAL EAT
BG02	MGS GUARDRAIL 3
BG03	MGS THRIE BEAM TRANSITION
PIX-X	SEE TABLES AT END OF PLAN DETAIL SECTION FOR POINT INFORMATION
CX-X	SEE TABLES AT END OF PLAN DETAIL SECTION FOR CURVE INFORMATION
⊕	SOIL BORING

NOTES
RADIUS DIMENSIONS ARE SHOWN TO THE FACE OF CURB
PAVEMENT GRADES ARE GENERALLY SHOWN AT 25' INTERVALS
MATCH EXISTING ELEVATIONS AT ALL SAW CUT LOCATIONS
VERIFY EXISTING ELEVATIONS PRIOR TO BEGINNING WORK

END CONSTRUCTION
STA. 441+37.94 'HEA'
MATCH EXISTING
SAWCUT REQ'D.

WISCONSIN POWER & LIGHT COMPANY
AMERICAN TRANSMISSION COMPANY, LLC
CTH MM
17+00'RUA'
16+00'RUA'
15+00'RUA'
14+00'RUA'
CAUTION
STA 16+13'RUA'
1-24" CPCS
EXTENSION, REQ'D
SKEW 13.55° RHF
CONCRETE COLLAR REQ'D
STA 16+27'RUA', 60.1' RT
WINDSTREAM
CHARTER
SLOPE INTERCEPTS (TYP.)
R/W
3' (2' PAVED)
RB14-27
USH 14
MATCH STA. 436+00'HEA'
437+00'HEA'
438+00'HEA'
439+00'HEA'
440+00'HEA'
441+00'HEA'
442+0
STA 14+76'RUA'
64.6' LT
STA 14+90'RUA'
1-24" CPCS EXTENSION, REQ'D
SKEW 12.48° RHF
CONCRETE COLLAR REQ'D
RUGER AVE
MATCH STA. 13+75'RUA'



LEGEND

xxxx	SAWCUT
AG01	BASE AGGREGATE DENSE 3/4-INCH
AP05	HMA PAVEMENT TYPE E-0.3, 3.5-INCH
AP06	HMA PAVEMENT TYPE E-3, 6.5-INCH
AP07	ASPHALTIC FLUME
CG02	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D
TS01	SALVAGED TOPSOIL, SEED, FERTILIZER, AND EROSION MAT
PIX-X	SEE TABLES AT END OF PLAN DETAIL SECTION FOR POINT INFORMATION
CX-X	SEE TABLES AT END OF PLAN DETAIL SECTION FOR CURVE INFORMATION
⊕	SOIL BORING

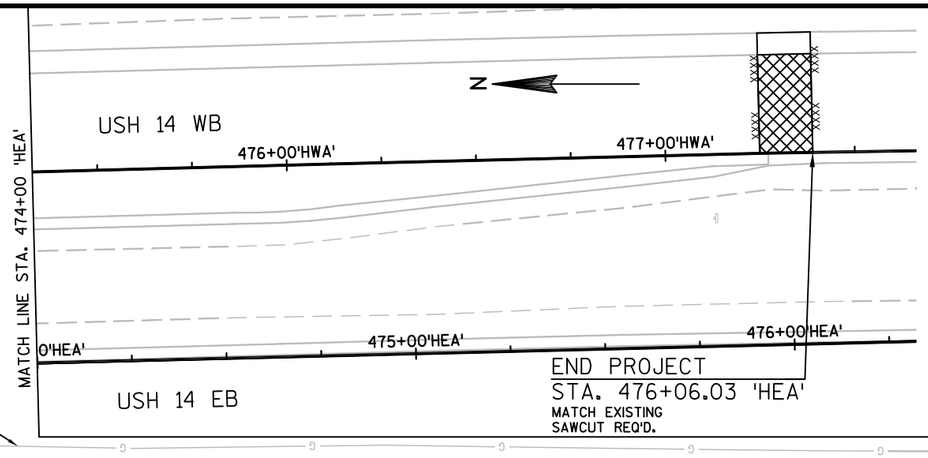
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PLAN DETAIL: USH 14/CTH MM/RUGER AVENUE INTERSECTION 11 OF 13	SHEET 43 E

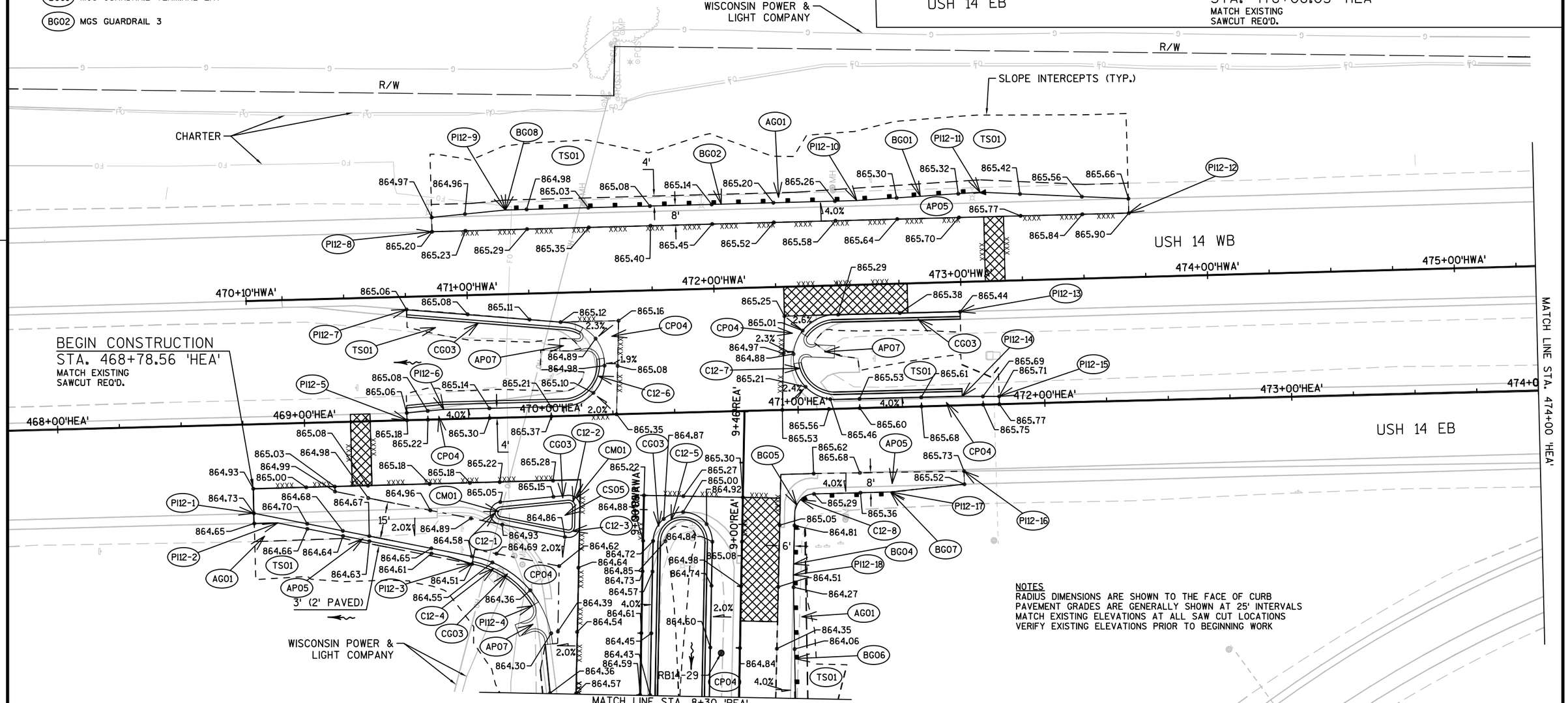
FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\PLAN DETAILS\5569-00-73\021202_PD_USH14-RUGER.DWG PLOT DATE : 12/9/2014 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : 1 IN:40 FT

LEGEND

xxxx SAWCUT

- (AG01) BASE AGGREGATE DENSE 3/4-INCH
- (AP05) HMA PAVEMENT TYPE E-0.3, 3.5-INCH
- (AP07) ASPHALTIC FLUME
- (CG03) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A
- (CM01) CONCRETE MEDIAN SLOPED NOSE TYPE 1
- (CP04) CONCRETE PAVEMENT 9-INCH, DOWELED AND TINED
- (CS05) CONCRETE SIDEWALK 5-INCH
- (TS01) SALVAGED TOPSOIL, SEED, FERTILIZER, AND EROSION MAT
- (BG01) MGS GUARDRAIL TERMINAL EAT
- (BG02) MGS GUARDRAIL 3
- (BG04) STEEL PLATE BEAM GUARD CLASS A
- (BG05) STEEL PLATE BEAM GUARD SHORT RADIUS
- (BG06) STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
- (BG07) ANCHORAGE FOR STEEL PLATE BEAM GUARD TYPE 2
- (BG08) MGS GUARDRAIL TERMINAL TYPE 2
- (PIX-X) SEE TABLES AT END OF PLAN DETAIL SECTION FOR POINT INFORMATION
- (CX-X) SEE TABLES AT END OF PLAN DETAIL SECTION FOR CURVE INFORMATION
- CONCRETE PAVEMENT REPAIR / REPLACEMENT SHES





NOTES
RADIUS DIMENSIONS ARE SHOWN TO THE FACE OF CURB
PAVEMENT GRADES ARE GENERALLY SHOWN AT 25' INTERVALS
MATCH EXISTING ELEVATIONS AT ALL SAW CUT LOCATIONS
VERIFY EXISTING ELEVATIONS PRIOR TO BEGINNING WORK

PROJECT NO:5569-00-73	HWY:USH 14	COUNTY:ROCK	PLAN DETAIL: USH 14/STH 11 INTERSECTION 12 OF 13	SHEET 44	E

2

LEGEND

- XXXX SAWCUT
- (AG01) BASE AGGREGATE DENSE 3/4-INCH
- (AP05) HMA PAVEMENT TYPE E-0.3, 3.5-INCH
- (CG03) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A
- (CP04) CONCRETE PAVEMENT 9-INCH, DOWELED AND TINED
- (TS01) SALVAGED TOPSOIL, SEED, FERTILIZER, AND EROSION MAT
- (PIX-X) SEE TABLES AT END OF PLAN DETAIL SECTION FOR POINT INFORMATION
- CONCRETE PAVEMENT REPAIR / REPLACEMENT SHES
- INLET/COVER (PROPOSED/ADJUSTED/SALVAGED)
- SOIL BORING

NOTES
RADIUS DIMENSIONS ARE SHOWN TO THE FACE OF CURB
PAVEMENT GRADES ARE GENERALLY SHOWN AT 25' INTERVALS
MATCH EXISTING ELEVATIONS AT ALL SAW CUT LOCATIONS
VERIFY EXISTING ELEVATIONS PRIOR TO BEGINNING WORK

N

AMERICAN TRANSMISSION COMPANY, LLC

R/W

BEGIN CONSTRUCTION
STA. 3+86.94 'REA'
MATCH EXISTING
SAWCUT REQ'D.

CHARTER

WISCONSIN POWER & LIGHT COMPANY

STH 11 WB

STH 11 EB

4+11'RWA' 4+00'REA' 5+00'RWA' 5+00'REA' 6+00'RWA' 6+00'REA' 7+00'RWA' 7+00'REA' 8+00'RWA' 8+00'REA'

PI13-1 PI13-2 PI13-3 PI13-4 PI13-5 PI13-6 PI13-7 PI13-8 PI13-9 PI13-10 PI13-11

RB14-28

AP05 AG01 TS01 CP04 CG03

3' (2' PAVED)

12.0' 15.0'

2.0%

SLOPE INTERCEPTS (TYP.)

MATCH LINE STA. 8+30 'REA'

PROJECT NO:5569-00-73	HWY:USH 14	COUNTY:ROCK	PLAN DETAIL: USH 14/STH 11 INTERSECTION	13 OF 13

SHEET 45 E

PLAN DETAILS - SHEET 2 OF 13			
POINT	STATION	OFFSET (FT)	COMMENT
PI2-1	332+69.44'HEA'	27.0' LT	START TURN LANE EXT.
PI2-2	335+84.12'HEA'	27.0' LT	DEFLECTION
PI2-3	337+09.53'HEA'	16.9' LT	END TURN LANE EXT.
PLAN DETAILS - SHEET 3 OF 13			
POINT	STATION	OFFSET (FT)	COMMENT
PI3-1	340+61.73'HEA'	27.0' LT	START TURN LANE EXT.
PI3-2	343+16.86'HEA'	27.0' LT	DEFLECTION
PI3-3	344+42.94'HEA'	16.8' LT	END TURN LANE EXT.
PLAN DETAILS - SHEET 4 OF 13			
POINT	STATION	OFFSET (FT)	COMMENT
PI4-1	357+78.75'HEA'	0.0	START CURB
PI4-2	359+28.91'HEA'	12.0' LT	DEFLECTION
PI4-3	362+33.31'HEA'	12.0' LT	END CURB
PI4-4	357+83.98'HEA'	17.1' RT	START TURN LANE EXT.
PI4-5	358+99.42'HEA'	27.0' RT	DEFLECTION
PI4-6	362+33.30'HEA'	26.9' RT	END TURN LANE EXT.
PLAN DETAILS - SHEET 5 OF 13			
POINT	STATION	OFFSET (FT)	COMMENT
PI5-1	366+55.00'HEA'	44.9' LT	START TURN LANE EXT.
PI5-2	368+03.33'HEA'	45.0' LT	DEFLECTION
PI5-3	367+00.03'HEA'	6.0' LT	START CURB
PI5-4	368+03.61'HEA'	6.0' LT	DEFLECTION
PLAN DETAILS - SHEET 6 OF 13			
POINT	STATION	OFFSET (FT)	COMMENT
PI6-1	370+55.65'HEA'	42.8 LT	DEFLECTION
PI6-2	369+94.66'HEA'	6.0 LT	DEFLECTION
PI6-3	371+44.74'HEA'	8.8' LT	END CURB
PI6-4	372+20.73HEA'	23.6 LT	END TURN LANE EXT.
PI6-5	373+06.71'HEA'	30.8' LT	POST 1 MGS EAT
PI6-6	373+56.71'HEA'	27.1' LT	POST 9 MGS EAT
PI6-7	372+32.06'HEA'	17.2' RT	START HMA PAVEMENT
PI6-8	373+33.54'HEA'	24.0' RT	POST 1 MGS EAT
PI6-9	373+83.54'HEA'	22.0' RT	POST 9 MGS EAT
PLAN DETAILS - SHEET 7 OF 13			
POINT	STATION	OFFSET (FT)	COMMENT
PI7-1	375+42.32'HEA'	22.1' LT	POST 9 MGS EAT
PI7-2	375+92.32'HEA'	24.0' LT	POST 1 MGS EAT
PI7-3	376+95.01'HEA'	17.2' LT	END HMA PAVEMENT
PI7-4	375+70.33'HEA'	22.0' RT	POST 9 MGS EAT
PI7-5	376+20.33'HEA'	24.0' RT	POST 1 MGS EAT
PI7-6	376+39.6'HEA'	22.7' RT	END HMA PAVEMENT
PI7-7	376+91.75'HEA'	24.0' RT	MATCH AGG SHOULDER
PLAN DETAILS - SHEET 8 OF 13			
POINT	STATION	OFFSET (FT)	COMMENT
PI8-1	418+35.72'HEA'	16.6' RT	START HMA PAVEMENT
PI8-2	423+68.28'HEA'	22.0' RT	DEFLECTION
PI8-3	423+69.60'HEA'	17.3' LT	START HMA PAVEMENT
PLAN DETAILS - SHEET 9 OF 13			
POINT	STATION	OFFSET (FT)	COMMENT
PI9-1	425+04.15'HEA'	24.0' LT	POST 1 MGS EAT
PI9-2	425+54.15'HEA'	22.0' LT	POST 9 MGS EAT
PI9-3	427+03.73'HEA'	22.0' LT	DEFLECTION
PI9-4	428+28.92'HEA'	17.2' LT	END HMA PAVEMENT
PI9-5	428+85.73'HEA'	15.0' LT	DEFLECTION
PI9-6	424+95.34'HEA'	23.8' RT	POST 1 MGS EAT
PI9-7	425+45.34'HEA'	22.0' RT	POST 9 MGS EAT
PI9-8	427+01.00'HEA'	22.0' RT	DEFLECTION
PI9-9	428+39.90'HEA'	16.7' RT	END HMA PAVEMENT
PI9-10	425+85.73'HEA'	15.0' RT	DEFLECTION

PLAN DETAILS - SHEET 10 OF 13			
POINT	STATION	OFFSET (FT)	COMMENT
PI10-1	431+15.65'HEA'	15.0' LT	DEFLECTION
PI10-2	431+59.52'HEA'	16.7' LT	START HMA PAVEMENT
PI10-3	433+17.96'HEA'	22.8' LT	POST 1 MGS EAT
PI10-4	433+58.29'HEA'	21.4' LT	DEFLECTION
PI10-5	431+15.57'HEA'	15.0' RT	DEFLECTION
PI10-6	431+65.63'HEA'	16.9' RT	START HMA PAVEMENT
PI10-7	433+01.82'HEA'	16.8' RT	START TURN LANE EXT.
PI10-8	433+26.40'HEA'	23.1' RT	POST 1 MGS EAT
PI10-9	433+66.71'HEA'	25.0' RT	DEFLECTION
PI10-10	434+73.04'HEA'	33.1' RT	DEFLECTION
PI10-11	435+91.71'HEA'	33.1' RT	START C & G
C10-1 (PC)	435+91.71'HEA'	35.1' RT	SAME CURVE AS C11-1
PLAN DETAILS - SHEET 11 OF 13			
POINT	STATION	OFFSET (FT)	COMMENT
PI11-1	436+37.17'HEA'	25.0' LT	END HMA PAVEMENT
PI11-2	17+61.62'RUA'	11.4' RT	START HMA PAVEMENT
PI11-3	16+61.63'RUA'	27.0' RT	START C & G (B.O.C)
PI11-4	437+99.51'HEA'	36.1' LT	START C & G (B.O.C)
PI11-5	438+09.50'HEA'	33.1' LT	DEFLECTION
PI11-6	440+70.00'HEA'	34.2' LT	DEFLECTION
PI11-7	441+37.94'HEA'	30.0' LT	END TURN LANE EXT.
PI11-8	14+40.12'RUA'	27.0' LT	START C & G (B.O.C)
PI11-9	13+40.14'RUA'	13.4' LT	END HMA PAVEMENT
C11-1 (CC)	436+33.55'HEA'	55.4' RT	53' RADIUS TO F.O.C.
C11-1 (PT)	436+43.22'HEA'	100.9' RT	SAME CURVE AS C10-1
C11-2 (PC)	437+47.69'HEA'	101.2' LT	–
C11-2 (CC)	437+57.37'HEA'	55.6 LT	53' RADIUS TO F.O.C.
C11-2 (PT)	437+99.51'HEA'	35.1' LT	–

PLAN DETAILS - SHEET 12 OF 13			
POINT	STATION	OFFSET (FT)	COMMENT
PI12-1	468+78.48'HEA'	36.0' RT	START CONC. PAVMENT
PI12-2	468+88.04'HEA'	40.2' RT	DEFLECTION
PI12-3	469+66.33'HEA'	58.8' RT	START C & G (B.O.C.)
PI12-4	469+90.23'HEA'	76.4' RT	START C & G (B.O.C.)
PI12-5	469+41.51'HEA'	0.0	START CONC. PAVMENT
PI12-6	469+56.51'HEA'	4.0' LT	DEFLECTION
PI12-7	470+75.34'HWA'	5.3' RT	START C & G
PI12-8	470+86.42'HWA'	26.1' LT	START HMA PAVEMENT
PI12-9	471+16.41'HWA'	34.1' LT	MGS TERMINAL TYPE 2
PI12-10	472+58.84'HWA'	34.1' LT	POST 9 MGS EAT
PI12-11	473+08.84'HWA'	36.1' LT	POST 1 MGS EAT
PI12-12	473+68.82'HWA'	26.0' LT	END HMA PAVEMENT
PI12-13	471+66.69'HEA'	37.9' LT	START C & G
PI12-14	471+66.57'HEA'	3.7' LT	START C & G
PI12-15	471+81.57'HEA'	3.2' RT	END CONC. PAVMENT
PI12-16	471+66.48'HEA'	26.7' RT	END HMA PAVEMENT
PI12-17	471+36.48'HEA'	34.2' RT	ANCHORAGE SPBG TYPE 2
PI12-18	8+79.94'REA'	21.1' RT	POST 9 SPBG EAT
C12-1 (PC)	469+78.62'HEA'	37.1' RT	–
C12-1 (CC)	469+77.23'HEA'	38.5' RT	2.5' RADIUS TO F.O.C.
C12-1 (PT)	469+78.39'HEA'	40.0' RT	–
C12-2 (PC)	470+05.97'HEA'	34.1' RT	–
C12-2 (CC)	470+07.89'HEA'	24.8' RT	2.5' RADIUS TO F.O.C.
C12-2 (PT)	470+08.65'HEA'	36.7' RT	–
C12-3 (PC)	470+08.27'HEA'	44.8' RT	–
C12-3 (CC)	470+07.28'HEA'	46.7' RT	2.5' RADIUS TO F.O.C.
C12-3 (PT)	470+05.22'HEA'	47.1' RT	–
C12-4 (PC)	469+68.53'HEA'	57.9' RT	–
C12-4 (CC)	469+80.71'HEA'	64.3' RT	38' RADIUS TO F.O.C.
C12-4 (PT)	469+91.09'HEA'	75.9' RT	–
C12-5 (PC)	8+92.61'REA	34.0 LT	–
C12-5 (CC)	9+02.56'REA'	24.1' LT	10' RADIUS TO F.O.C.
C12-5 (PT)	8+92.76'REA'	14.0' LT	–
C12-6 (PC)	470+06.69'HEA'	35.8' LT	–
C12-6 (CC)	470+20.28'HEA'	19.8' LT	15' RADIUS TO F.O.C.
C12-6 (PT)	470+05.08'HEA'	5.9' LT	–
C12-7 (PC)	471+14.60'HEA'	5.8' LT	–
C12-7 (CC)	471+00.57'HEA'	22.4' LT	15.2' RADIUS TO F.O.C.
C12-7 (PT)	471+14.71'HEA'	35.1' LT	–
C12-8 (PC)	471+06.94'HEA'	34.2' RT	–
C12-8 (CC)	471+00.38'HEA'	36.5' RT	8' RADIUS TO F.O.B.G.
C12-8 (PT)	470+97.95'HEA'	41.9' RT	–
PLAN DETAILS - SHEET 13 OF 13			
POINT	STATION	OFFSET (FT)	COMMENT
PI13-1	3+86.94'REA'	0.0	START CONC. PAVMENT
PI13-2	5+36.10'REA'	12.0' LT	DEFLECTION
PI13-3	5+88.53'REA'	14.0' LT	START HMA PAVEMENT
PI13-4	7+86.44'RWA'	0.0	START CONC. PAVMENT
PI13-5	8+01.44'RWA'	4.0' RT	START C & G
PI13-6	7+38.93'RWA'	26.0' LT	START CONC. PAVMENT
PI13-7	7+53.88'RWA'	28.0' LT	DEFLECTION
PI13-8	8+06.67'REA'	12.0' LT	START C & G
PI13-9	7+74.84'REA'	14.8' RT	START HMA PAVEMENT
PI13-10	8+02.39'REA'	20.8' RT	DEFLECTION
PI13-11	8+29.94'REA'	22.9' RT	POST 1 SPBG EAT

2

2

LEGEND

EROSION MAT CLASS I, TYPE B

SILT FENCE

SLOPE INTERCEPT

INLET PROTECTION TYPE Ⓐ Ⓑ Ⓓ

TEMPORARY DITCH CHECK

CULVERT PIPE CHECK

SURFACE WATER FLOW

N

OLD HUMES RD

R/W

SLOPE INTERCEPTS (TYP.)

TEMPORARY DITCH CHECK (TYP.)

332+00'HEA'

333+00'HEA'

334+00'HEA'

335+00'HEA'

336+00'HEA'

337+00'HEA'

USH 14

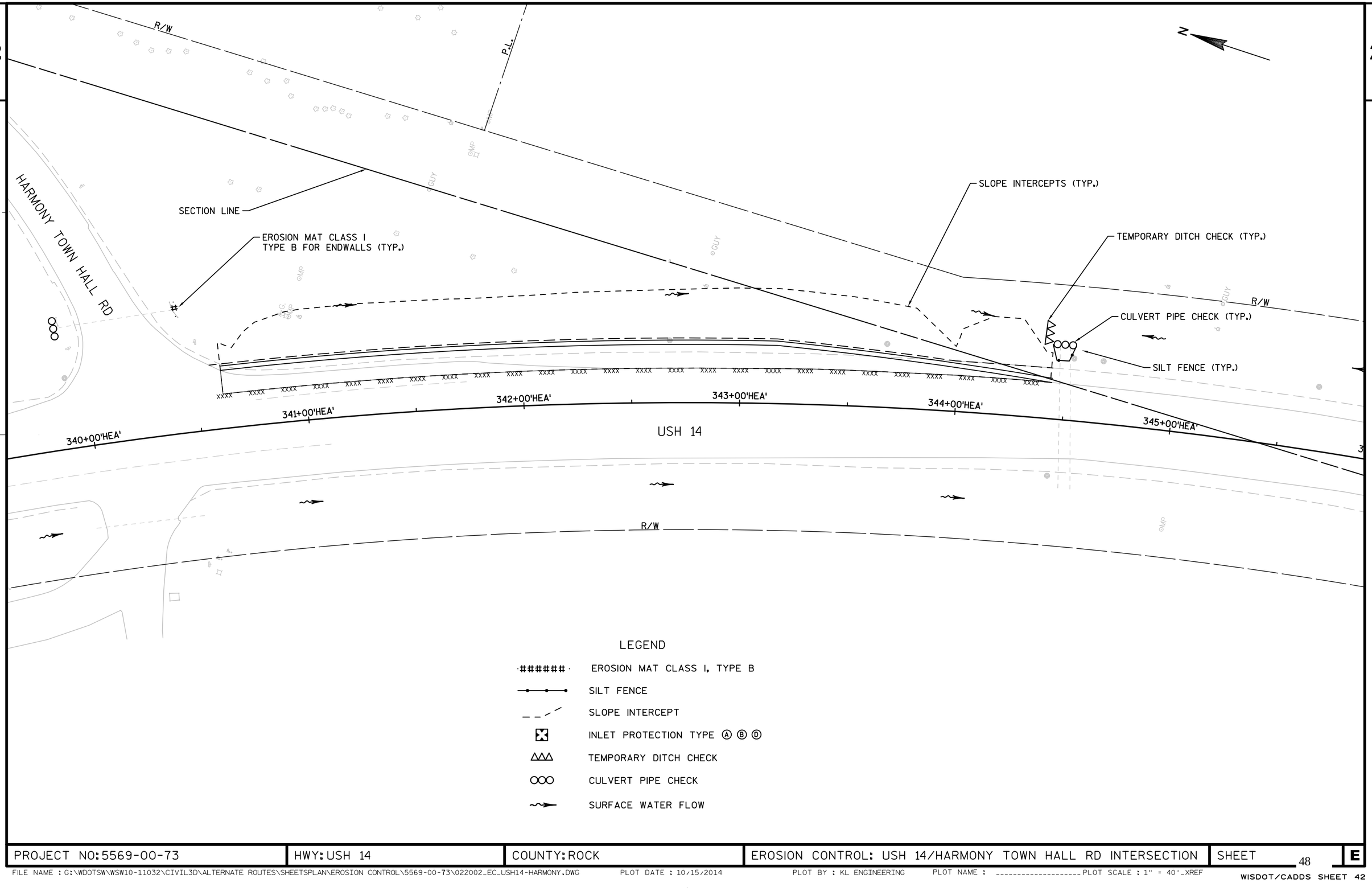
EROSION CONTROL GENERAL NOTES (ALL STAGES):

1. AREAS WITHIN THE SLOPE INTERCEPTS NOT USING EROSION MAT WILL HAVE SALVAGED TOPSOIL, FERTILIZER, SEED, AND MULCH PLACED.
2. WHEN INLET PROTECTION TYPE A AND TYPE B, C, OR D ARE INDICATED AT THE SAME LOCATION, USE TYPE A PRIOR TO THE PLACEMENT OF CURB AND GUTTER AND USE TYPE B, C, OR D AFTER THE INLET CASTINGS ARE IN PLACE.
3. PLACE SILT FENCE 2 FEET FROM SLOPE INTERCEPT LINE

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	EROSION CONTROL: USH 14/OLD HUMES ROAD INTERSECTION	SHEET 47	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\EROSION CONTROL\5569-00-73\022001_EC_USH14-HUMES.DWG PLOT DATE : 10/15/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1" = 40'_XREF

2



LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION TYPE Ⓐ Ⓑ Ⓓ
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

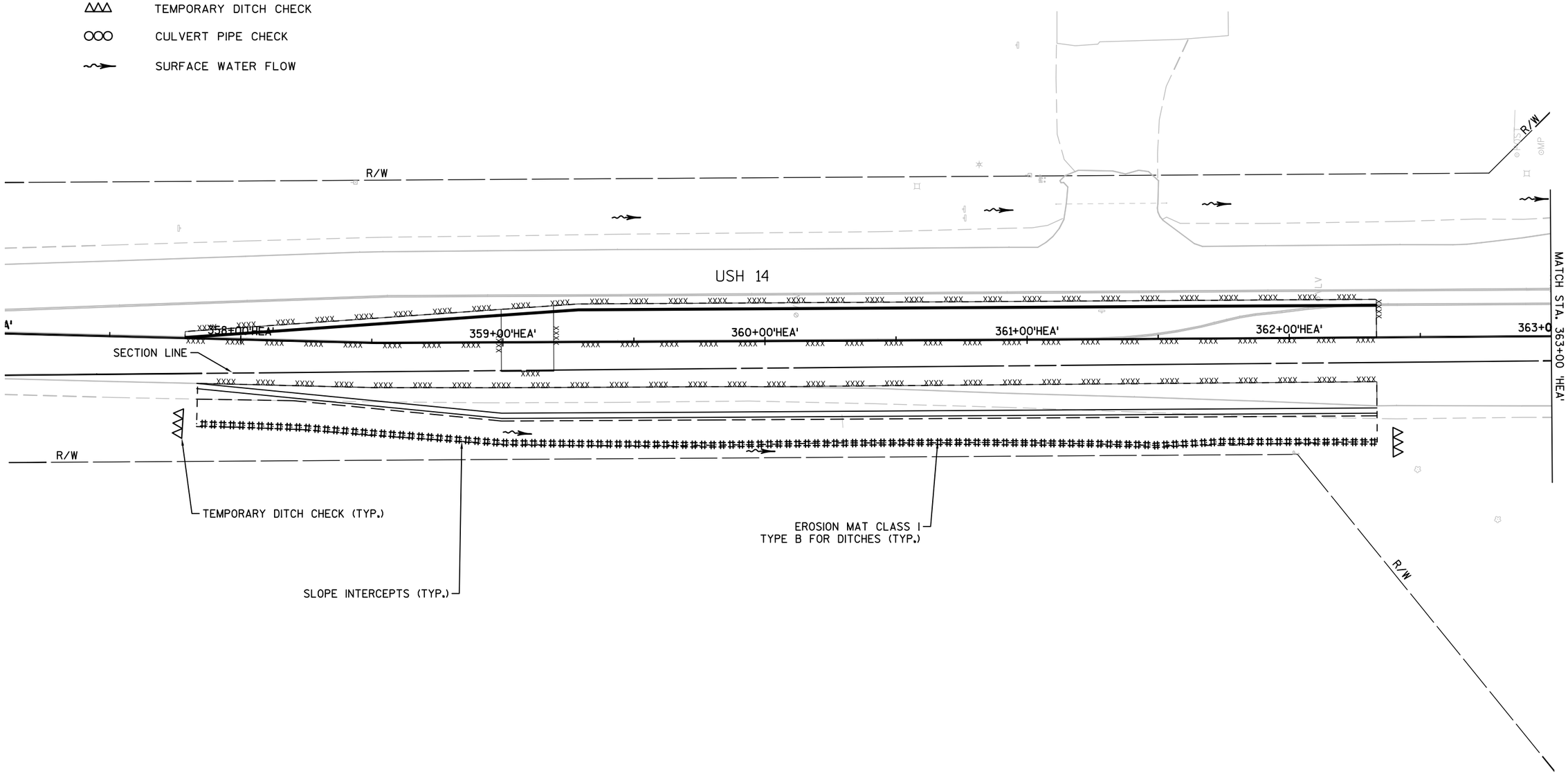
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	EROSION CONTROL: USH 14/HARMONY TOWN HALL RD INTERSECTION	SHEET 48	E

2

LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION TYPE Ⓐ Ⓑ Ⓓ
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

N



PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	EROSION CONTROL: USH 14/MILWAUKEE STREET/CTH A INTERSECTION	SHEET 49	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\EROSION CONTROL\5569-00-73\022003_EC_USH14-MILWAUKEE.DWG PLOT DATE : 10/15/2014 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42

2

N

CTH A

R/W

SLOPE INTERCEPTS (TYP.)

EROSION MAT CLASS I
TYPE B FOR DITCHES (TYP.)

R/W

27+00'MKA'

26+00'MKA'

PI: 25+94.13'MKA'

USH 14

MATCH STA. 363+00 'HEA'

364+00'HEA'

365+00'HEA'

366+00'HEA'

367+00'HEA'

368+00'HEA'

MATCH STA. 369+00 'HEA'

SECTION LINE

25+00'MKA'

24+00'MKA'

MILWAUKEE ST

R/W

P.I.

R/W

R/W

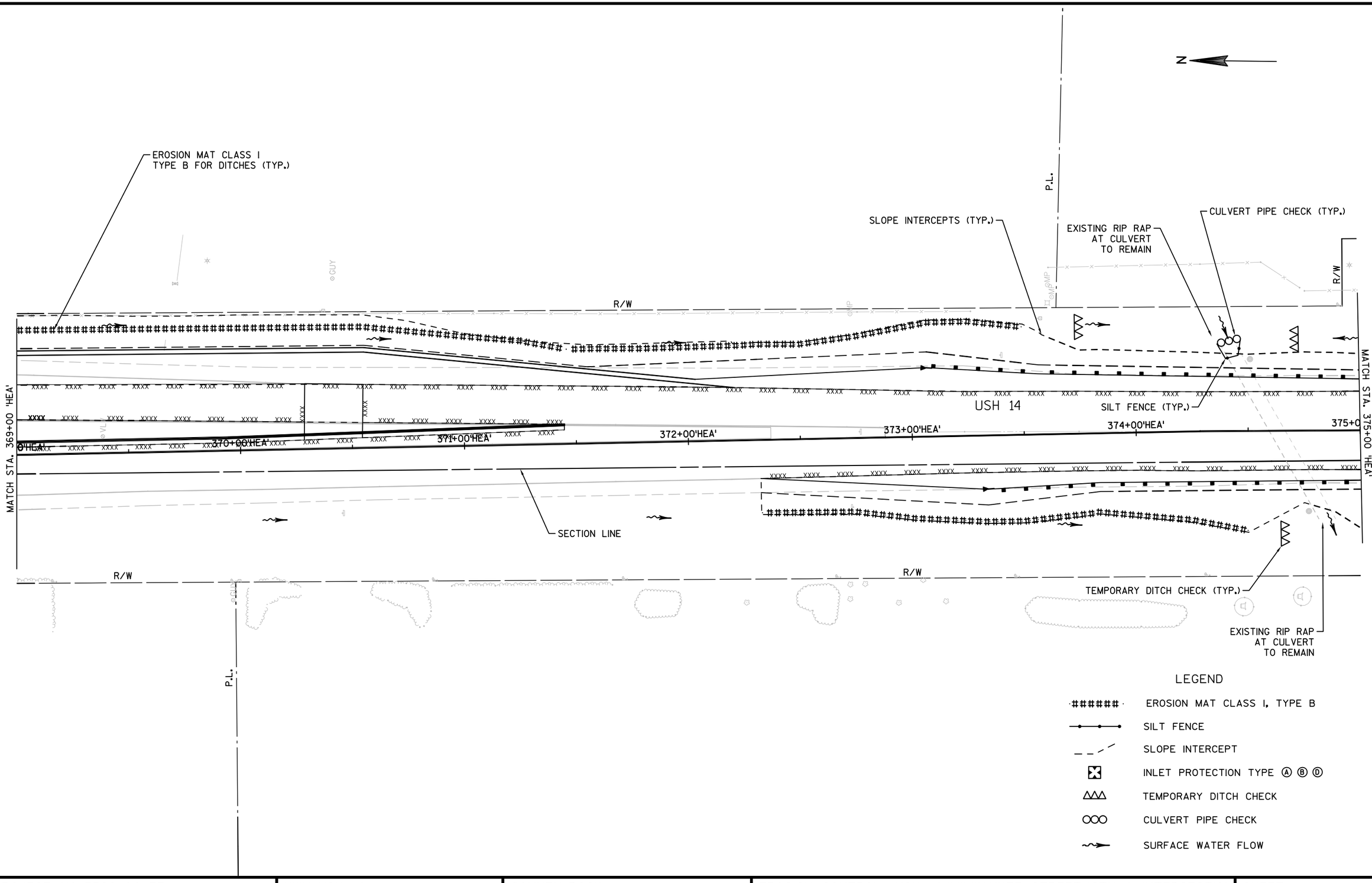
LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION TYPE Ⓐ Ⓑ Ⓓ
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	EROSION CONTROL: USH 14/MILWAUKEE STREET/CTH A INTERSECTION	SHEET 50	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\EROSION CONTROL\5569-00-73\022003_EC_USH14-MILWAUKEE.DWG PLOT DATE : 10/15/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1" = 40'_XREF

2



LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION TYPE Ⓐ Ⓑ Ⓓ
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	EROSION CONTROL: USH 14/MILWAUKEE STREET/CTH A INTERSECTION	SHEET 51	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\EROSION CONTROL\5569-00-73\022003_EC_USH14-MILWAUKEE.DWG PLOT DATE : 10/15/2014 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : 1" = 40'_XREF

2

N

R/W

EROSION MAT CLASS I
TYPE B FOR DITCHES (TYP.)

R/W

USH 14

MATCH STA. 375+00 'HEA'

375+00'HEA'

376+00'HEA'

377+00'HEA'

378+00'HEA'

379+00'HEA'

380+00'HEA'

381+00'HEA'

SECTION LINE

R/W

R/W

SLOPE INTERCEPTS (TYP.)

TEMPORARY DITCH CHECK (TYP.)

P.L.

LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION TYPE Ⓐ Ⓑ Ⓓ
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	EROSION CONTROL: USH 14/MILWAUKEE STREET/CTH A INTERSECTION	SHEET 52	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\EROSION CONTROL\5569-00-73\022003_EC_USH14-MILWAUKEE.DWG PLOT DATE : 10/15/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42

2

2

LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION TYPE Ⓐ Ⓑ Ⓓ
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

N

VENT

R/W

EROSION MAT CLASS I
TYPE B FOR DITCHES

EROSION MAT CLASS I
TYPE B FOR SLOPES

SLOPE INTERCEPTS (TYP.)

SECTION LINE

USH 14

424+00'HEA' 425+00'HEA' 426+00'HEA' 427+00'HEA' 428+00'HEA' 429+00'HEA'

MATCH STA. 429+85 'HEA'

EROSION MAT CLASS I
TYPE B FOR SLOPES

R/W

EROSION MAT CLASS I
TYPE B FOR DITCHES

TEMPORARY DITCH CHECK (TYP.)

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	EROSION CONTROL: USH 14/CTH MM/RUGER AVENUE INTERSECTION	SHEET 53	E

2

N

TEMPORARY DITCH CHECK (TYP.)

EROSION MAT CLASS I
TYPE B FOR SLOPES

R/W

SLOPE INTERCEPTS (TYP.)

SECTION LINE

EROSION MAT CLASS I
TYPE B FOR DITCHES

MATCH STA. 429+85'HEA'

430+00'HEA'

431+00'HEA'

432+00'HEA'

433+00'HEA'

434+00'HEA'

435+00'HEA'

436+00'HEA'

MATCH STA. 436+00'HEA'

USH 14

EROSION MAT CLASS I
TYPE B FOR DITCHES

R/W

EROSION MAT CLASS I
TYPE B FOR FLUMES (TYP.)

EROSION MAT CLASS I
TYPE B FOR SLOPES

R/W

LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- RIP RAP
- SLOPE INTERCEPT
- INLET PROTECTION TYPE Ⓐ Ⓑ Ⓒ Ⓓ
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	EROSION CONTROL: USH 14/CTH MM/RUGER AVENUE INTERSECTION	SHEET 54	E

2

LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION TYPE Ⓐ Ⓑ Ⓓ
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

N

CTH MM

R/W

17+00'RUA'

16+00'RUA'

15+00'RUA'

14+00'RUA'

RUGER AVE

EROSION MAT CLASS I
TYPE B FOR DITCHES (TYP.)

CULVERT PIPE CHECK (TYP.)

EROSION MAT CLASS I
TYPE B FOR FLUMES (TYP.)

SILT FENCE (TYP.)

SLOPE INTERCEPTS (TYP.)

SECTION LINE (TYP.)

USH 14

MATCH STA. 436+00'HEA'

437+00'HEA'

438+00'HEA'

439+00'HEA'

440+00'HEA'

441+00'HEA'

442+0

EROSION MAT CLASS I
TYPE B FOR ENDWALLS (TYP.)

GUY

POST

MP

MH

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	EROSION CONTROL: USH 14/CTH MM/RUGER AVENUE INTERSECTION	SHEET 55	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\EROSION CONTROL\5569-00-73\022005_EC_USH14-RUGER.DWG PLOT DATE : 10/15/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1:40_XREF

2

LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION TYPE Ⓐ Ⓑ Ⓓ
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

N

USH 14 EB

468+00'HEA'

469+00'HEA'

470+00'HEA'

471+00'HEA'

R/W

SLOPE INTERCEPTS (TYP.)

SILT FENCE (TYP.)

EROSION MAT CLASS I
TYPE B FOR FLUMES (TYP.)

EROSION MAT CLASS I
TYPE B FOR DITCHES (TYP.)

SECTION LINE

4+11'RWA'

4+00'REA'

5+00'RWA'

5+00'REA'

6+00'RWA'

6+00'REA'

7+00'RWA'

7+00'REA'

8+00'RWA'

8+00'REA'

9+00'RWA'

9+00'REA'

9+46'REA'

STH 11 WB

STH 11 EB

SILT FENCE (TYP.)

R/W

PROJECT NO:5569-00-73	HWY: USH 14	COUNTY: ROCK	EROSION CONTROL: USH 14/STH 11 INTERSECTION	SHEET 56	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\EROSION CONTROL\5569-00-73\022006_EC_USH14-STH11.DWG PLOT DATE : 10/17/2014 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

2

LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION TYPE Ⓐ Ⓑ Ⓓ
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

N

R/W

R/W

EROSION MAT CLASS I
TYPE B FOR DITCHES (TYP.)

SLOPE INTERCEPTS (TYP.)

SECTION LINE

USH 14 WB

474+00'HWA'

475+00'HWA'

470+10'HWA'

471+00'HWA'

472+00'HWA'

473+00'HWA'

EROSION MAT CLASS I
TYPE B FOR FLUMES (TYP.)

Ⓑ

468+00'HEA'

469+00'HEA'

470+00'HEA'

471+00'HEA'

472+00'HEA'

473+00'HEA'

474+00'HE

9+40'REA'

USH 14 EB

9+00'REA'

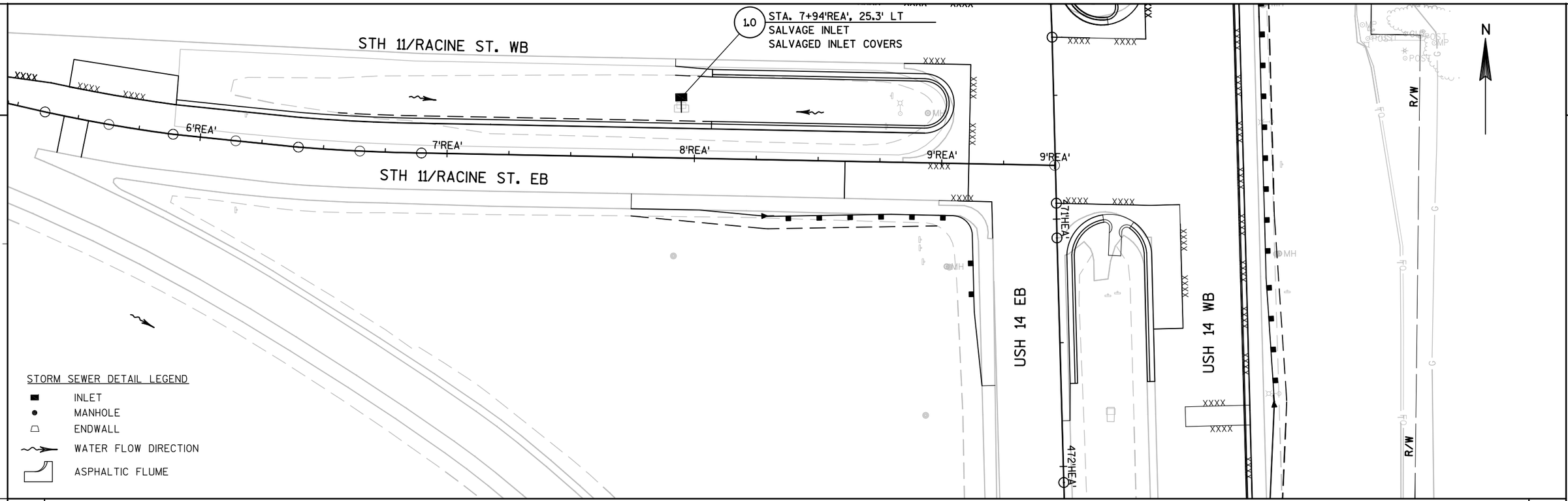
STH 11 WB

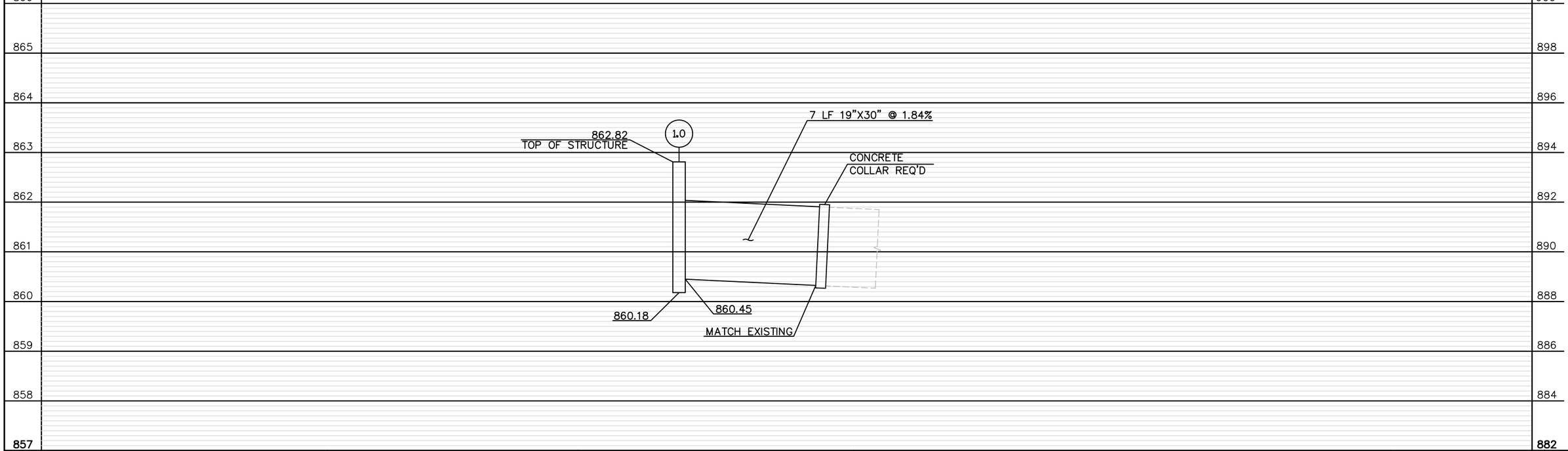
STH 11 EB

SILT FENCE (TYP.)

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	EROSION CONTROL: USH 14/STH 11 INTERSECTION	SHEET 57	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\EROSION CONTROL\5569-00-73\022006_EC_USH14-STH11.DWG PLOT DATE : 10/17/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1:40_XREF





PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	STORM SEWER - USH 14/STH 11/RACINE ST INTERSECTION	SHEET 58	E

2

N

327+00'HEA'

328+00'HEA'

329+00'HEA'

WB USH 14

EB USH 14

330+00'HEA'

331+00'HEA'

332+00'HEA'

333+0

STOP

R1-1
30" X 30"
ESTR

OLD HUMES ROAD

MATCH LINE STA. 333+00'HEA'

LEGEND

	EXISTING SIGN MOUNTED ON POST(S)
	EXISTING SIGN MOUNTED ON SIGN BRIDGE OR UTILITY POLES
XR-XX	DENOTES SIGN TO BE REMOVED
XM-XX	DENOTES SIGN TO BE MOVED
	PROPOSED SIGN MOUNTED ON POST(S)
	PROPOSED SIGN MOUNTED ON SIGN BRIDGE OR UTILITY POLES
X-XX	DENOTES SIGN NUMBER
ESTR	EXISTING SIGN TO REMAIN

NOTE: SIGNS NOT SHOWN SHALL BE REMOVED BY THE LOCAL MUNICIPALITY

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PERMANENT SIGNING: USH 14/HARMONY TOWN HALL RD INTERSECTION	SHEET 59	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\PERMANENT SIGNING\5569-00-73\023201_PS_USH14-HUMES&HARMONY.DWG PLOT DATE : 10/20/2014 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : *********

WISDOT/CADDS SHEET 42

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON SIGN BRIDGE OR UTILITY POLES
- (XR-XX) DENOTES SIGN TO BE REMOVED
- (XM-XX) DENOTES SIGN TO BE MOVED
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON SIGN BRIDGE OR UTILITY POLES
- (X-XX) DENOTES SIGN NUMBER
- ESTR EXISTING SIGN TO REMAIN

NOTE: SIGNS NOT SHOWN SHALL BE REMOVED BY THE LOCAL MUNICIPALITY

N

MH

MATCH LINE STA. 333+00'HEA'

0'HEA'

334+00'HEA'

335+00'HEA'

336+00'HEA'

337+00'HEA'

338+00'HEA'

339+0

MATCH LINE STA. 339+00'HEA'

WB USH 14

EB USH 14

BEGIN RIGHT TURN LANE
R3-20R
24" X 36"
2-01

ADOPT A HIGHWAY SPONSOR BEST BUY STORE 892 JANESVILLE
I55-56MOD
30" X 36"
2M-01

ADOPT A HIGHWAY SPONSOR BEST BUY STORE 892 JANESVILLE
I55-56MOD
30" X 36"
2M-01

ADOPT A HIGHWAY SPONSOR ROCK UNITED SOCCER RUFF FOOTBALL FED
I55-56MOD
30" X 36"
ESTR

SEPV SEPV SEPV

W4-2R
36" X 36"
ESTR

A.G.

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PERMANENT SIGNING: USH 14/HARMONY TOWN HALL RD INTERSECTION	SHEET 60	E

2

2

N

HARMONY TOWN HALL ROAD

STOP
R1-1
30" X 30"
ESTR

MATCH LINE STA. 339+00'HEA'

340+00'HEA'

341+00'HEA'

342+00'HEA'

343+00'HEA'

344+00'HEA'

345+00'HEA'

WB USH 14

EB USH 14

LEGEND

	EXISTING SIGN MOUNTED ON POST(S)
	EXISTING SIGN MOUNTED ON SIGN BRIDGE OR UTILITY POLES
XR-XX	DENOTES SIGN TO BE REMOVED
XM-XX	DENOTES SIGN TO BE MOVED
	PROPOSED SIGN MOUNTED ON POST(S)
	PROPOSED SIGN MOUNTED ON SIGN BRIDGE OR UTILITY POLES
X-XX	DENOTES SIGN NUMBER
ESTR	EXISTING SIGN TO REMAIN

NOTE: SIGNS NOT SHOWN SHALL BE REMOVED BY THE LOCAL MUNICIPALITY

BEGIN RIGHT TURN LANE
R3-20R
24" X 36"
3-01

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PERMANENT SIGNING: USH 14/HARMONY TOWN HALL RD INTERSECTION	SHEET 61 E

2

N

W1-2L
30" X 30"
ESTR

R4-7
24" X 30"
ESTR

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

W6-3
36" X 36"
ESTR

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

WB USH 14

354+00'HEA'

355+00'HEA'

356+00'HEA'

357+00'HEA'

358+00'HEA'

359+00'HEA'

EB USH 14

MATCH LINE STA. 359+75'HEA'

W3-3
36" X 36"
ESTR

JCT
COUNTY
A
J1-1
24" X 39"
ESTR

4-01
Johnstown
D1-1
78" X 15"

LEGEND

	EXISTING SIGN MOUNTED ON POST(S)
	EXISTING SIGN MOUNTED ON SIGN BRIDGE OR UTILITY POLES
XR-XX	DENOTES SIGN TO BE REMOVED
XM-XX	DENOTES SIGN TO BE MOVED
	PROPOSED SIGN MOUNTED ON POST(S)
	PROPOSED SIGN MOUNTED ON SIGN BRIDGE OR UTILITY POLES
X-XX	DENOTES SIGN NUMBER
ESTR	EXISTING SIGN TO REMAIN

NOTE: SIGNS NOT SHOWN SHALL BE REMOVED BY THE LOCAL MUNICIPALITY

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PERMANENT SIGNING: USH 14 / MILWAUKEE STREET INTERSECTION	SHEET 62	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\PERMANENT SIGNING\5569-00-73\023202_PS_USH14-MILWAUKEE.DWG PLOT DATE : 12/9/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : *********

2

N

ALTERNATE INTERSTATE 39
J4-1
24" X 36"
ESTR

WEST 14
J4-1
24" X 36"
ESTR

ONE WAY
R6-2R
24" X 30"
5-01

ONE WAY
R6-2R
24" X 30"
5R-02

COUNTY A
J12-1
24" X 45"

14
J12-1
24" X 45"
ESTR

STOP
R1-1F
30" X 30"
ESTR

STOP
R1-1
30" X 30"
ESTR

W12-1D
24" X 24"
ESTR

WEIGHT LIMIT CLASS B
R12-53
24" X 30"
ESTR

STOP
R1-1F
30" X 30"
ESTR

STOP
R1-1F
30" X 30"
ESTR

R4-7
24" X 30"
ESTR

WB USH 14

EB USH 14

MATCH LINE STA. 359+75'HEA'

360+00'HEA'

361+00'HEA'

362+00'HEA'

363+00'HEA'

364+00'HEA'

365+00'HEA'

MATCH LINE STA. 365+75'HEA'

5R-01

Johnstown
D1-1
90" X 15"

LEGEND

	EXISTING SIGN MOUNTED ON POST(S)
	EXISTING SIGN MOUNTED ON SIGN BRIDGE OR UTILITY POLES
XR-XX	DENOTES SIGN TO BE REMOVED
XM-XX	DENOTES SIGN TO BE MOVED
	PROPOSED SIGN MOUNTED ON POST(S)
	PROPOSED SIGN MOUNTED ON SIGN BRIDGE OR UTILITY POLES
X-XX	DENOTES SIGN NUMBER
ESTR	EXISTING SIGN TO REMAIN

NOTE: SIGNS NOT SHOWN SHALL BE REMOVED BY THE LOCAL MUNICIPALITY

STOP
R1-1F
30" X 30"
ESTR

NO ENGINE BRAKING EXCEPT IN EMERGENCY
R10-64
42" X 48"

WITHIN CITY LIMITS
R10-66F
30" X 18"
ESTR

SPEED LIMIT 35
R2-1
24" X 30"
ESTR

MILWAUKEE STREET

MH

COUNTY A
J12-1
24" X 45"

14
J12-1
24" X 45"
ESTR

STOP
R1-1F
30" X 30"
ESTR

STOP
R1-1F
30" X 30"
ESTR

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PERMANENT SIGNING: USH 14 / MILWAUKEE STREET INTERSECTION	SHEET 63	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\PERMANENT SIGNING\5569-00-73\023202_PS_USH14-MILWAUKEE.DWG PLOT DATE : 10/20/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : *********

2

N

ADOPT A HIGHWAY SPONSOR ROCK UNITED SOCCER RUFF FOOTBALL FED

I55-56MOD
30" X 36"
6M-01

ADOPT A HIGHWAY SPONSOR ROCK UNITED SOCCER RUFF FOOTBALL FED

I55-56MOD
30" X 36"
6M-01

Johnstown

D1-1
90" X 15"
6R-01

MATCH LINE STA. 365+75'HEA'

WB USH 14

366+00'HEA'

367+00'HEA'

368+00'HEA'

369+00'HEA'

370+00'HEA'

371+00'HEA'

MATCH LINE STA. 371+50'HEA'

EB USH 14

EAST
14
J4-1
24" X 36"
ESTR

ALTERNATE
INTERSTATE
39
J4-1
24" X 36"
ESTR

ADOPT A HIGHWAY SPONSOR JIM
I55-56MOD
30" X 36"
ESTR

WRONG WAY
R5-1A
36" X 24"

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

LEGEND

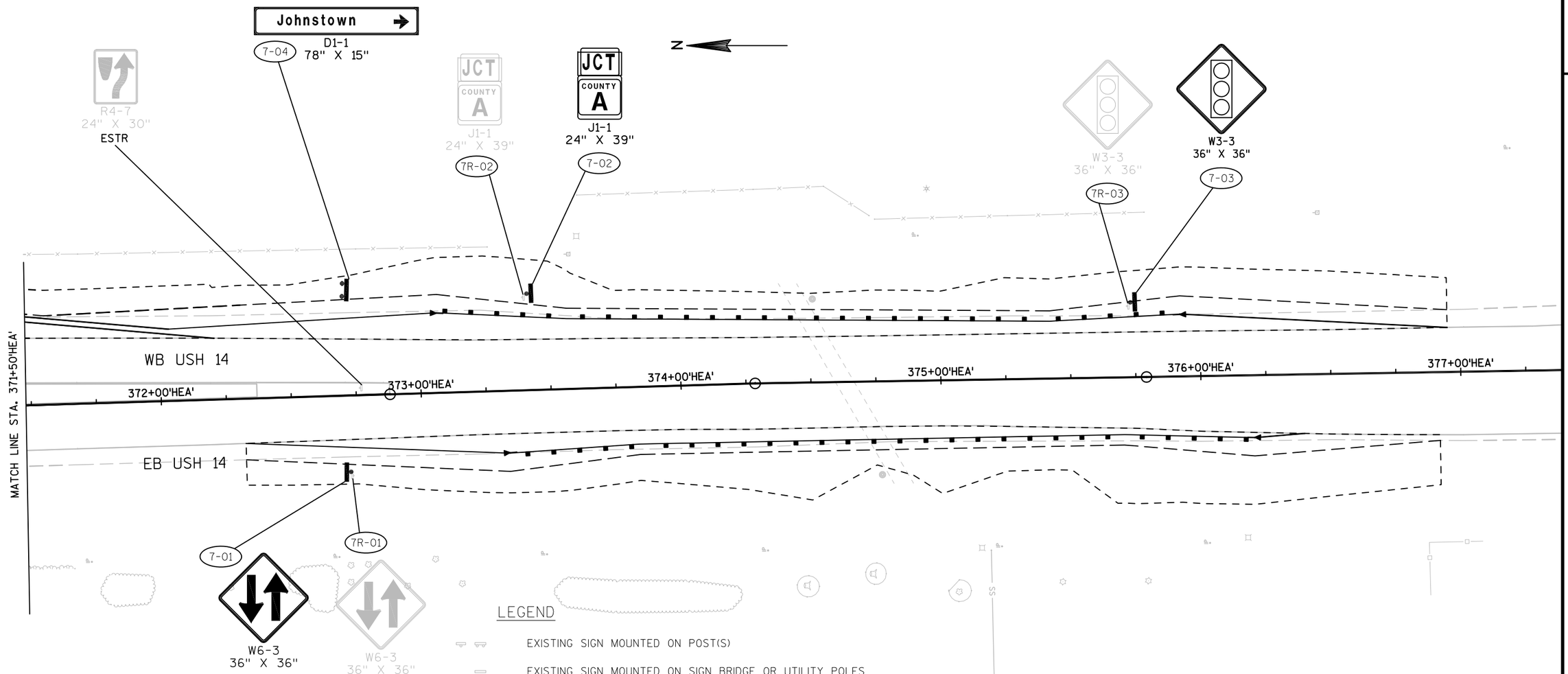
	EXISTING SIGN MOUNTED ON POST(S)
	EXISTING SIGN MOUNTED ON SIGN BRIDGE OR UTILITY POLES
XR-XX	DENOTES SIGN TO BE REMOVED
XM-XX	DENOTES SIGN TO BE MOVED
	PROPOSED SIGN MOUNTED ON POST(S)
	PROPOSED SIGN MOUNTED ON SIGN BRIDGE OR UTILITY POLES
X-XX	DENOTES SIGN NUMBER
ESTR	EXISTING SIGN TO REMAIN

NOTE: SIGNS NOT SHOWN SHALL BE REMOVED BY THE LOCAL MUNICIPALITY

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PERMANENT SIGNING: USH 14 / MILWAUKEE STREET INTERSECTION	SHEET 64	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\PERMANENT SIGNING\5569-00-73\023202_PS_USH14-MILWAUKEE.DWG PLOT DATE : 10/20/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : *********

WISDOT/CADDS SHEET 42



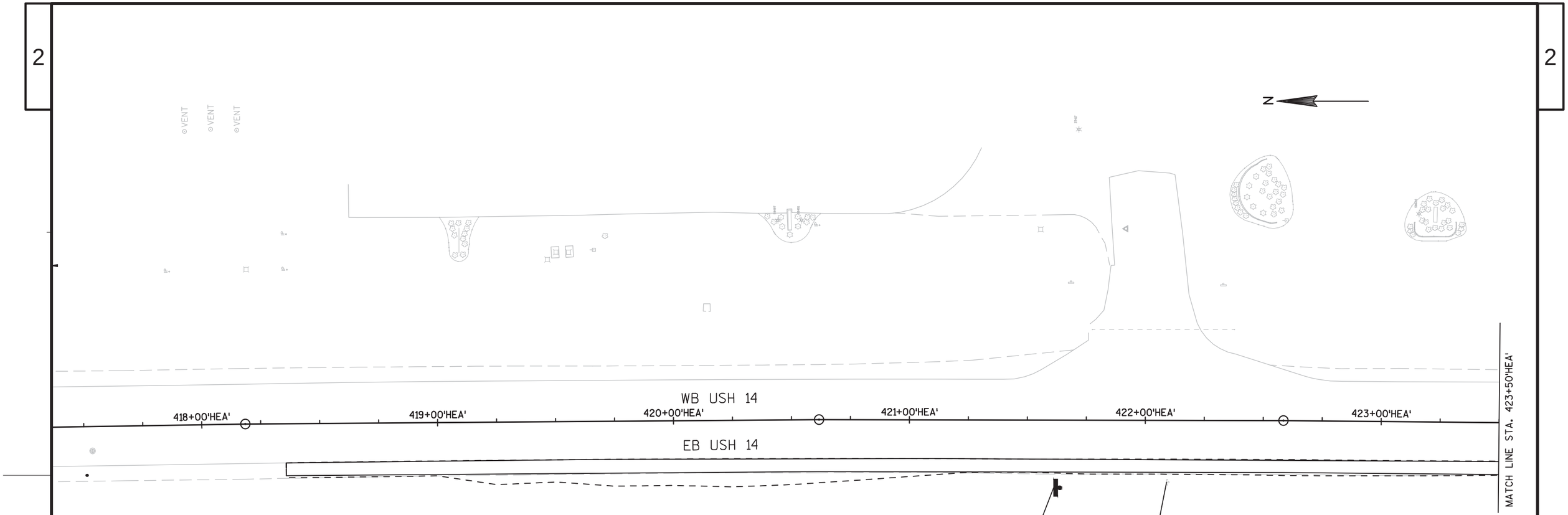
LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON SIGN BRIDGE OR UTILITY POLES
- (XR-XX) DENOTES SIGN TO BE REMOVED
- (XM-XX) DENOTES SIGN TO BE MOVED
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON SIGN BRIDGE OR UTILITY POLES
- (X-XX) DENOTES SIGN NUMBER
- ESTR EXISTING SIGN TO REMAIN

NOTE: SIGNS NOT SHOWN SHALL BE REMOVED BY THE LOCAL MUNICIPALITY

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PERMANENT SIGNING: USH 14 / MILWAUKEE STREET INTERSECTION	SHEET 65	E

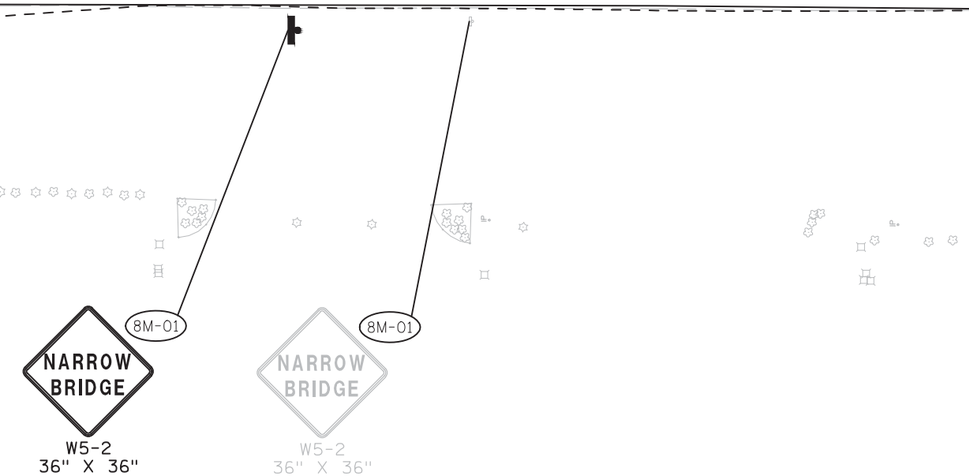
2



LEGEND

	EXISTING SIGN MOUNTED ON POST(S)
	EXISTING SIGN MOUNTED ON SIGN BRIDGE OR UTILITY POLES
XR-XX	DENOTES SIGN TO BE REMOVED
XM-XX	DENOTES SIGN TO BE MOVED
	PROPOSED SIGN MOUNTED ON POST(S)
	PROPOSED SIGN MOUNTED ON SIGN BRIDGE OR UTILITY POLES
X-XX	DENOTES SIGN NUMBER
ESTR	EXISTING SIGN TO REMAIN

NOTE: SIGNS NOT SHOWN SHALL BE REMOVED BY THE LOCAL MUNICIPALITY



PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PERMANENT SIGNING: USH 14 / RUGER ROAD INTERSECTION	SHEET 66	E

2

N

W5-52L
12" X 36"

9-02

W5-52L
12" X 36"

9R-02

© VENT

WB USH 14

424+00'HEA'

425+00'HEA'

426+00'HEA'

427+00'HEA'

428+00'HEA'

429+00'HEA'

EB USH 14

MATCH LINE STA. 423+50'HEA'

MATCH LINE STA. 429+50'HEA'

JCT
COUNTY
MM

J1-1
24" X 39"

9M-01

9M-01

JCT
COUNTY
MM

J1-1
24" X 39"

9-03

W5-52R
12" X 36"

9R-03

W5-52R
12" X 36"

LEGEND

	EXISTING SIGN MOUNTED ON POST(S)
	EXISTING SIGN MOUNTED ON SIGN BRIDGE OR UTILITY POLES
XR-XX	DENOTES SIGN TO BE REMOVED
XM-XX	DENOTES SIGN TO BE MOVED
	PROPOSED SIGN MOUNTED ON POST(S)
	PROPOSED SIGN MOUNTED ON SIGN BRIDGE OR UTILITY POLES
X-XX	DENOTES SIGN NUMBER
ESTR	EXISTING SIGN TO REMAIN

NOTE: SIGNS NOT SHOWN SHALL BE REMOVED BY THE LOCAL MUNICIPALITY

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PERMANENT SIGNING: USH 14 / RUGER ROAD INTERSECTION	SHEET 67	E

2

N

W5-52R
12" X 36"
10R-01

W5-52R
12" X 36"
10-01

MATCH LINE STA. 429+50'HEA'

430+00'HEA'

431+00'HEA'

432+00'HEA'

433+00'HEA'

434+00'HEA'

435+00'HEA'

MATCH LINE STA. 435+50'HEA'

WB USH 14

EB USH 14

10-02

W5-52L
12" X 36"

10R-02

W5-52L
12" X 36"

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON SIGN BRIDGE OR UTILITY POLES
- (XR-XX) DENOTES SIGN TO BE REMOVED
- (XM-XX) DENOTES SIGN TO BE MOVED
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON SIGN BRIDGE OR UTILITY POLES
- (X-XX) DENOTES SIGN NUMBER
- ESTR EXISTING SIGN TO REMAIN

NOTE: SIGNS NOT SHOWN SHALL BE REMOVED BY THE LOCAL MUNICIPALITY

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PERMANENT SIGNING: USH 14 / RUGER ROAD INTERSECTION	SHEET 68	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\PERMANENT SIGNING\5569-00-73\023203_PS_USH14-RUGER.DWG PLOT DATE : 10/20/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : *********

2

N

ALTERNATE WEST INTERSTATE 39 14
J4-2
48" X 36"
11M-01

14
J12-1
24" X 45"
ESTR

ALTERNATE WEST INTERSTATE 39 14
J4-2
48" X 36"
11M-01

STOP
R1-1
30" X 30"
ESTR

17+00'RUA'

16+00'RUA'

COUNTY MM
J12-1
24" X 45"
11M-03

COUNTY MM
J12-1
24" X 45"
11M-03

436+00'HEA'

437+00'HEA'

438+00'HEA'

439+00'HEA'

440+00'HEA'

441+00'HEA'

WB USH 14

EB USH 14

MATCH LINE STA. 429+50'HEA'

11M-02

COUNTY MM
J12-1
24" X 45"

11M-02

COUNTY MM
J12-1
24" X 45"

15+00'RUA'

RUGER AVENUE

14+00'RUA'

STOP
R1-1
30" X 30"
ESTR

14
J12-1
24" X 45"
ESTR

W6-1
36" X 36"
ESTR

LEGEND

	EXISTING SIGN MOUNTED ON POST(S)
	EXISTING SIGN MOUNTED ON SIGN BRIDGE OR UTILITY POLES
XR-XX	DENOTES SIGN TO BE REMOVED
XM-XX	DENOTES SIGN TO BE MOVED
	PROPOSED SIGN MOUNTED ON POST(S)
	PROPOSED SIGN MOUNTED ON SIGN BRIDGE OR UTILITY POLES
X-XX	DENOTES SIGN NUMBER
ESTR	EXISTING SIGN TO REMAIN

NOTE: SIGNS NOT SHOWN SHALL BE REMOVED BY THE LOCAL MUNICIPALITY

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PERMANENT SIGNING: USH 14 / RUGER ROAD INTERSECTION	SHEET 69 E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\PERMANENT SIGNING\5569-00-73\023203_PS_USH14-RUGER.DWG PLOT DATE : 10/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : *********

WISDOT/CADDS SHEET 42

SIGNS TO BE LOCATED AT STA. 462+00'HEA' (ON EB SIDE)

12-01

12-02

W3-3
36" X 36"

N

WEST 14 Madison 42
D2-1 ESTR

ONE WAY
R6-2L
24" X 30"

12R-06

WB USH 14

470+10'HWA'

471+00'HWA'

472+00'HWA'

12-15

ONE WAY
R6-2L
24" X 30"

MATCH LINE STA. 471+00'HEA'

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

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

STOP
R1-1F
36" X 36"

12-07

12-06

12R-05

12R-04

R4-7
24" X 30"

12-09

12-08

469+00'HEA'

470+00'HEA'

R4-7
24" X 30"

465+00'HEA'

466+00'HEA'

467+00'HEA'

468+00'HEA'

EB USH 14

WRONG WAY
R5-1A
36" X 24"

12-03

DO NOT ENTER
R5-1
36" X 36"

12-04

12-05

W12-1D
24" X 24"

R4-7
24" X 30"

9+00'REA'

9+00'RWA'

12M-01

12M-02

12-10

STOP
R1-1F
36" X 36"

DIVIDED HIGHWAY
R6-3A
30" X 24"

12-11

12-12

12-13

STOP
R1-1F
36" X 36"

12R-02

ONE WAY
R6-2R
24" X 30"

8+00'RWA'

8+00'REA'

Chicago Darien
D1-2

12M-01

12R-01

RIGHT LANE MUST TURN RIGHT
R3-7R
30" X 30"

12-16

SIGN TO BE LOCATED AT STA. 1+00'REA'

W3-3
36" X 36"

EAST WEST ALTERNATE
11 11 39 H
INTERSTATE
J3-4
96" X 57"

12M-02

EAST WEST ALTERNATE
11 11 39 H
INTERSTATE
J3-4
96" X 57"

STOP
DIVIDED HIGHWAY

WEST BUSINESS ALTERNATE ALTERNATE
11 14 39 43
INTERSTATE INTERSTATE
J4-4
96" X 39"

12M-03

12R-03

WRONG WAY
R5-1A
36" X 24"

12-14

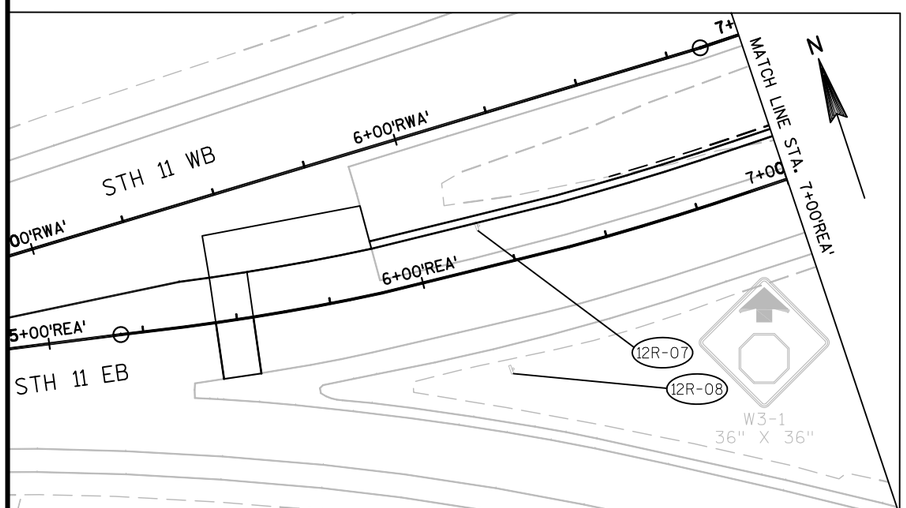
WEST BUSINESS ALTERNATE ALTERNATE
11 14 39 43
INTERSTATE INTERSTATE
J4-4
96" X 39"

WRONG WAY
R5-1A
36" X 24"

STH 11 WB

STH 11 EB

MATCH LINE STA. 7+00'REA'



LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON SIGN BRIDGE OR UTILITY POLES
- XR-XX — DENOTES SIGN TO BE REMOVED
- XM-XX — DENOTES SIGN TO BE MOVED
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON SIGN BRIDGE OR UTILITY POLES
- X-XX — DENOTES SIGN NUMBER
- ESTR — EXISTING SIGN TO REMAIN
- SIGN FLAGS, 18" MIN., ORANGE (6 MONTH INSTALLATION PERIOD) INCLUDED IN SIGNS TYPE II REFLECTIVE F

NOTE: SIGNS NOT SHOWN SHALL BE REMOVED BY THE LOCAL MUNICIPALITY

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PERMANENT SIGNING: USH 14 / STH 11 INTERSECTION	SHEET 70 E

2

MATCH LINE STA. 471+00'HEA'

DO NOT ENTER
R5-1
36" X 36"
13-01

13-02
STOP
R1-1F
36" X 36"
13-03

H
13M-01

H
13M-01

WEST BUSINESS 11 14
J3-2
48" X 57"
13M-02

WEST BUSINESS 11 14
J3-2
48" X 57"
13M-02

DO NOT ENTER
R5-1
36" X 36"
13-04

Janesville
POPULATION 63,575
I2-3
ESTR

WRONG WAY
R5-1A
36" X 24"
13-05
13-06

Madison
Janesville
D1-2
ESTR

N

W3-3
36" X 36"
13-07
13-08

SIGNS TO BE LOCATED AT STA.480+50'HEA'

USH 14 WB

473+00'HWA'
474+00'HWA'
475+00'HWA'
476+00'HWA'
477+00'HWA'
477+92'HWA'

LEFT TURN LANE
R3-55L
24" X 30"
ESTR

0'HEA'
472+00'HEA'
473+00'HEA'
474+00'HEA'
475+00'HEA'
476+00'HEA'
476+58'HEA'

USH 14 EB

WEST ALTERNATE INTERSTATE 14 39
J3-2
48" X 57"
13M-03

13M-04
ALTERNATE ALTERNATE INTERSTATE 39 43
J3-2
48" X 57"

13M-04
ALTERNATE ALTERNATE INTERSTATE 39 43
J3-2
48" X 57"

13M-03
WEST ALTERNATE INTERSTATE 14 39
J3-2
48" X 57"

STH 11

W4-1
36" X 36"
ESTR

13R-01
STOP
DIVIDED HIGHWAY

13-09
DIVIDED HIGHWAY
R6-3A
30" X 24"

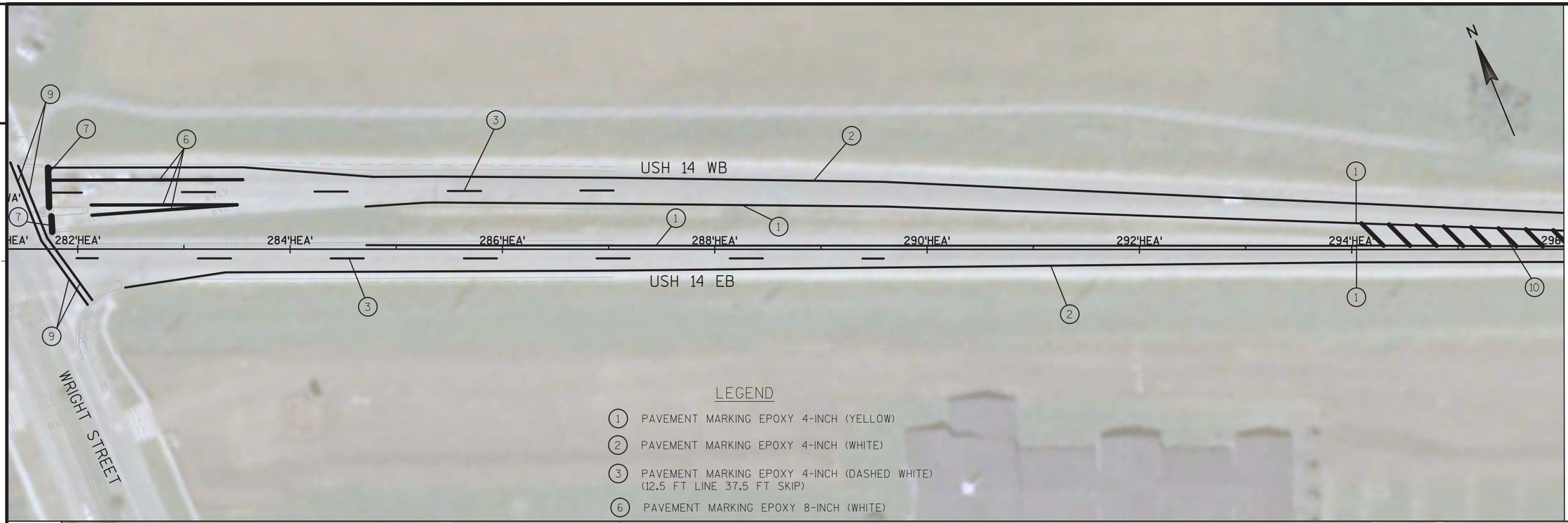
13-10
STOP
R1-1F
36" X 36"

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON SIGN BRIDGE OR UTILITY POLES
- (XR-XX) DENOTES SIGN TO BE REMOVED
- (XM-XX) DENOTES SIGN TO BE MOVED
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON SIGN BRIDGE OR UTILITY POLES
- (X-XX) DENOTES SIGN NUMBER
- ESTR EXISTING SIGN TO REMAIN
- SIGN FLAGS, 18" MIN., ORANGE (6 MONTH INSTALLATION PERIOD) INCLUDED IN SIGNS TYPE II REFLECTIVE F

NOTE: SIGNS NOT SHOWN SHALL BE REMOVED BY THE LOCAL MUNICIPALITY

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PERMANENT SIGNING: USH 14 / USH 51 INTERSECTION	SHEET 71	E

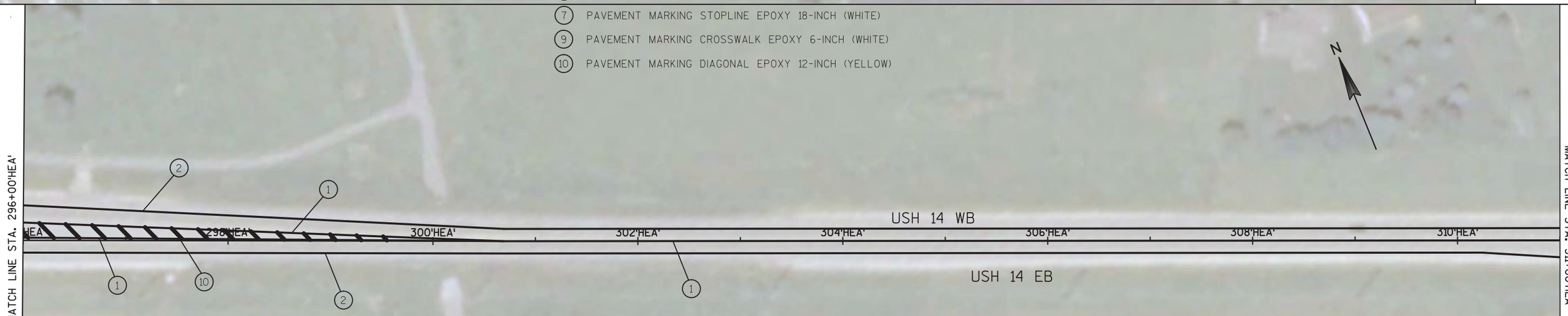


MATCH LINE STA. 296+00'HEA'

2

LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
6. PAVEMENT MARKING EPOXY 8-INCH (WHITE)
7. PAVEMENT MARKING STOPLINE EPOXY 18-INCH (WHITE)
9. PAVEMENT MARKING CROSSWALK EPOXY 6-INCH (WHITE)
10. PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)



MATCH LINE STA. 296+00'HEA'

MATCH LINE STA. 311+00'HEA'

PAVEMENT MARKING GENERAL NOTES:

1. INTENTION OF PAVEMENT MARKING PLAN IS TO MATCH EXISTING PAVEMENT MARKINGS

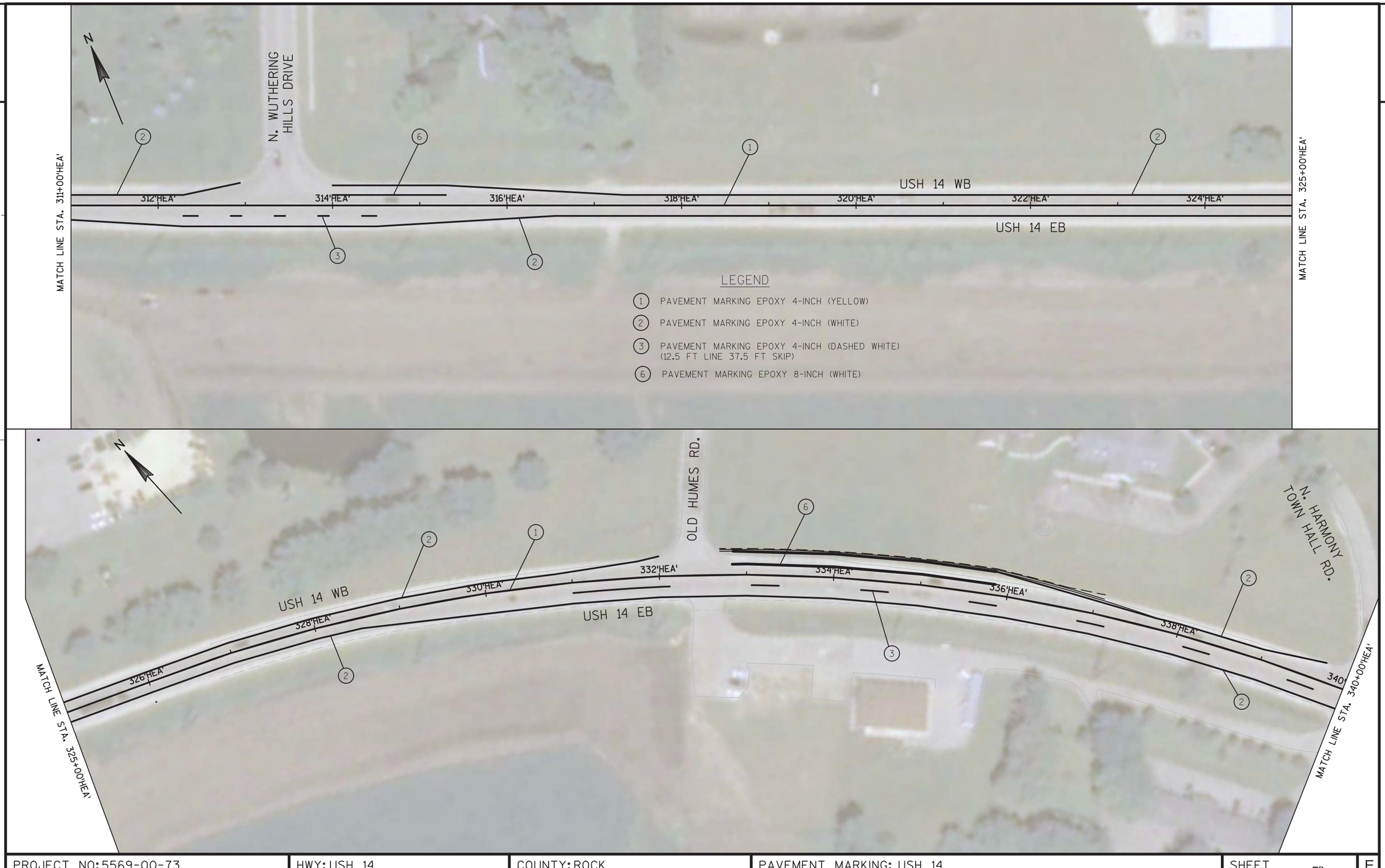
2. PASSING ZONE LOCATIONS TO BE VERIFIED BY "LOCATING NO-PASSING ZONES"

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PAVEMENT MARKING: USH 14	SHEET 72	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\PLAN DETAILS\5569-00-73\024501_PM.DWG PLOT DATE : 10/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : 1:100_XREF

WISDOT/CADDS SHEET 42

2



LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
6. PAVEMENT MARKING EPOXY 8-INCH (WHITE)

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PAVEMENT MARKING: USH 14	SHEET 73	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\PLAN DETAILS\5569-00-73\024501_PM.DWG PLOT DATE : 10/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

WISDOT/CADDS SHEET 42

2

N

MATCH LINE STA. 340+00'HEA'

342'HEA'

344'HEA'

346'HEA'

348'HEA'

350'HEA'

352'HEA'

354'HEA'

USH 14 WB

USH 14 EB

MATCH LINE STA. 355+00'HEA'

LEGEND

1	PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
2	PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3	PAVEMENT MARKING EPOXY 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
6	PAVEMENT MARKING EPOXY 8-INCH (WHITE)
7	PAVEMENT MARKING STOPLINE EPOXY 18-INCH (WHITE)
10	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
20	PAVEMENT MARKING CURB EPOXY (YELLOW)
21	PAVEMENT MARKING ISLAND NOSE EPOXY
38	PAVEMENT MARKING CONCRETE CORRUGATED MEDIAN EPOXY (YELLOW)

N

MATCH LINE STA. 355+00'HEA'

356'HEA'

358'HEA'

360'HEA'

362'HEA'

364'HEA'

366'HEA'

368'HEA'

370

CTH A
E. MILWAUKEE ST.

USH 14 WB

USH 14 EB

CTH A
E. MILWAUKEE ST.

MATCH LINE STA. 370+00'HEA'

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PAVEMENT MARKING: USH 14	SHEET 74 E

2

MATCH LINE STA. 370+00'HEA'

CASE DRIVE

N

USH 14 WB

USH 14 EB

HEA' 372'HEA' 374'HEA' 376'HEA' 378'HEA' 380'HEA' 382'HEA' 384'HEA'

25' (TYP.)

MATCH LINE STA. 385+00'HEA'

LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
6. PAVEMENT MARKING EPOXY 8-INCH (WHITE)
10. PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
20. PAVEMENT MARKING CURB EPOXY (YELLOW)
38. PAVEMENT MARKING CONCRETE CORRUGATED MEDIAN EPOXY (YELLOW)

DROTT DRIVE

MATCH LINE STA. 385+00'HEA'

N

USH 14 WB

USH 14 EB

386'HEA' 388'HEA' 390'HEA' 392'HEA' 394'HEA' 396'HEA' 398'HEA'

MATCH LINE STA. 399+00'HEA'

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PAVEMENT MARKING: USH 14	SHEET 75	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\PLAN DETAILS\5569-00-73\024501_PM.DWG PLOT DATE : 10/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

WISDOT/CADDS SHEET 42

2

2

MATCH LINE STA. 399+00'HEA'

MATCH LINE STA. 414+00'HEA'

N

USH 14 WB

USH 14 EB

400'HEA' 402'HEA' 404'HEA' 406'HEA' 408'HEA' 410'HEA' 412'HEA' 414'

LEGEND

1 PAVEMENT MARKING EPOXY 4-INCH (YELLOW)

2 PAVEMENT MARKING EPOXY 4-INCH (WHITE)

MATCH LINE STA. 414+00'HEA'

MATCH LINE STA. 429+00'HEA'

N

USH 14 WB

USH 14 EB

HEA' 416'HEA' 418'HEA' 420'HEA' 422'HEA' 424'HEA' 426'HEA' 428'HEA'

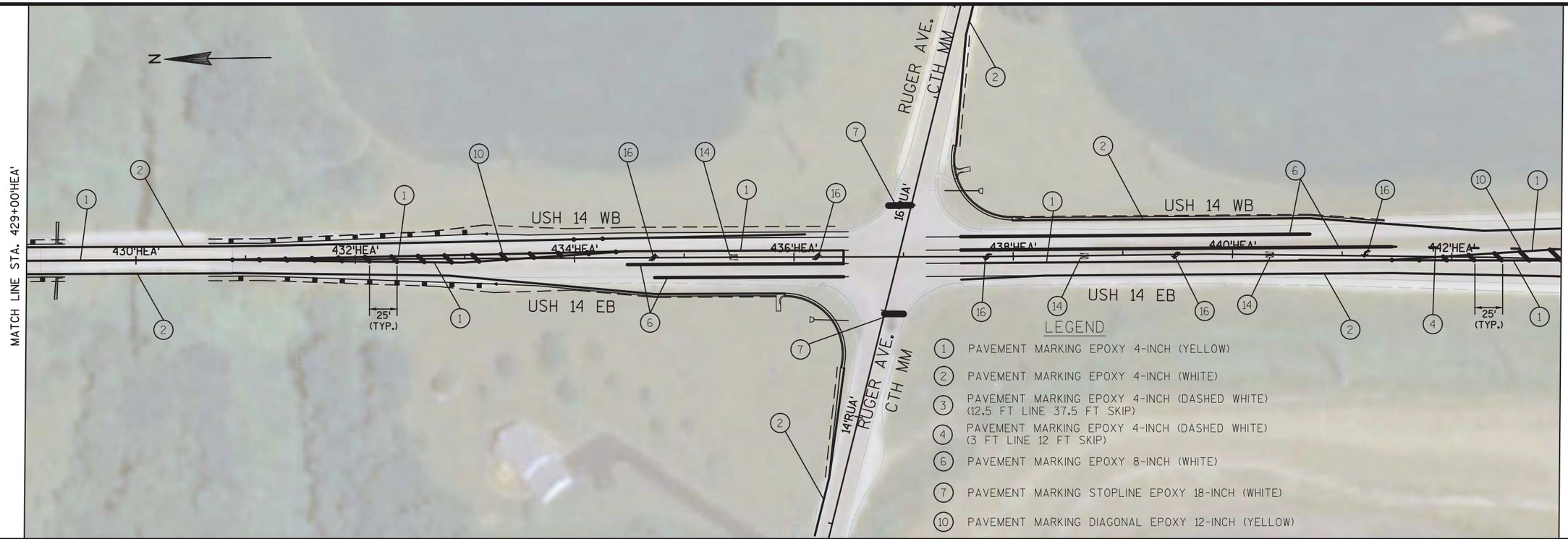
STA BACK = 417+04.22'HEA'

STA AHEAD = 417+04.07'HEA'

PROJECT NO:5569-00-73	HWY:USH 14	COUNTY:ROCK	PAVEMENT MARKING: USH 14	SHEET 76	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\PLAN DETAILS\5569-00-73\024501_PM.DWG PLOT DATE : 10/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

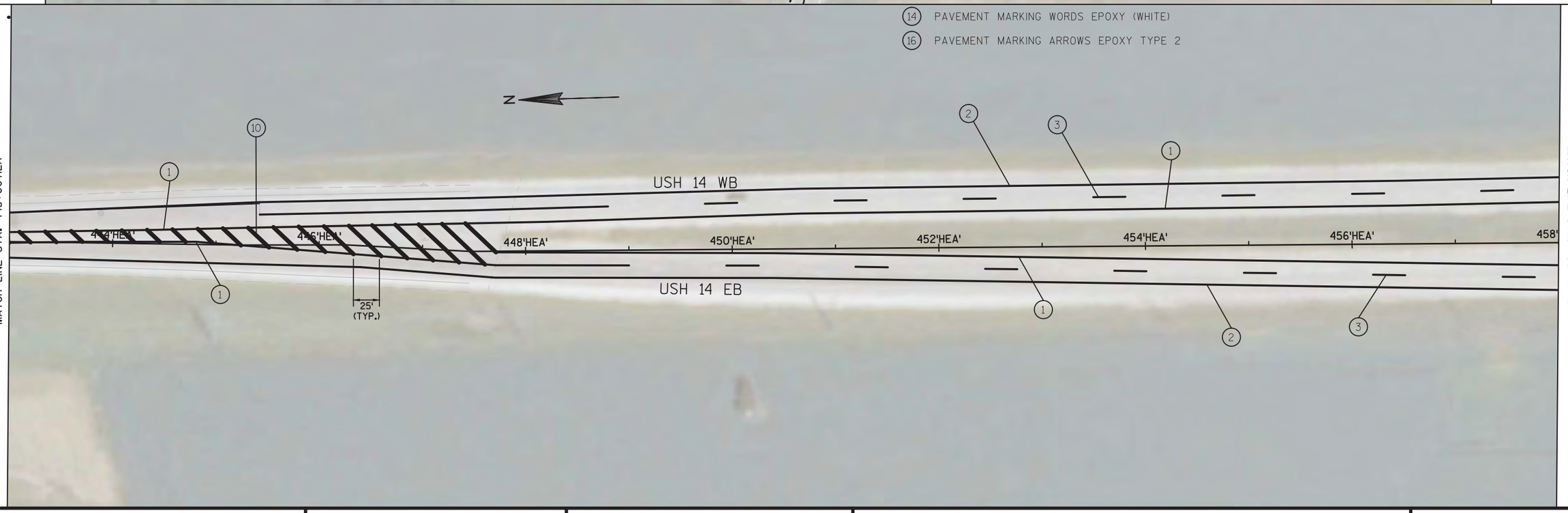
WISDOT/CADDS SHEET 42



2

LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
4. PAVEMENT MARKING EPOXY 4-INCH (DASHED WHITE) (3 FT LINE 12 FT SKIP)
6. PAVEMENT MARKING EPOXY 8-INCH (WHITE)
7. PAVEMENT MARKING STOPLINE EPOXY 18-INCH (WHITE)
10. PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
14. PAVEMENT MARKING WORDS EPOXY (WHITE)
16. PAVEMENT MARKING ARROWS EPOXY TYPE 2



2

N

USH 14 WB

USH 14 EB

460'HEA'

462'HEA'

464'HEA'

466'HEA'

468'HEA'

470'HWA'

472'HWA'

470'HEA'

472'

9'RWA'

9'REA'

8'RWA'

8'REA'

STH 11 EB

MATCH LINE STA. 458+00'HEA'

MATCH LINE STA. 472+00'HEA'

LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
4. PAVEMENT MARKING EPOXY 4-INCH (DOT PATTERN WHITE) (3 FT LINE 12 FT SKIP)
6. PAVEMENT MARKING EPOXY 8-INCH (WHITE)
7. PAVEMENT MARKING STOPLINE EPOXY 18-INCH (WHITE)
10. PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
37. PAVEMENT MARKING EPOXY 4-INCH (DOT PATTERN YELLOW) (3 FT LINE 12 FT SKIP)

N

USH 14 WB

USH 14 EB

474'HWA'

476'HWA'

477'HWA'

474'HEA'

476'HEA'

476'HEA'

MATCH EXISTING

MATCH EXISTING

MATCH EXISTING

MATCH EXISTING

MATCH LINE STA. 472+00'HEA'

STH 11

STH 11 WB

STH 11

6'RWA'

6'REA'

4'RWA'

4'REA'

MATCH EXISTING

MATCH EXISTING

MATCH EXISTING

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PAVEMENT MARKING: USH 14	SHEET 78	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\PLAN DETAILS\5569-00-73\024501_PM.DWG PLOT DATE : 10/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : 1:100_XREF

2

2

R/W

N

PB3

PB4

(L-53-0639-3)

(L-53-0639-4)

(L-53-0639-5)

USH 14/STH 11

PB2

PB5

468+00'HEA'

469+00'HEA'

470+00'HEA'

471+00'HEA'

472+00'HEA'

473+00'HEA'

USH 14

9+40'REA'

PB1

PB8

PB7

PB6

L639

(L-53-0639-1/2)

9+00'REA'

8+00'REA'

STH 11

EB STH 11 BYPASS

LEGEND

CONTROL CABINET

NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED

LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE

PULL BOX, 24" X 36"

NOTE: BOLD REPRESENTS ITEMS TO BE REMOVED OR ABANDONED.

R/W

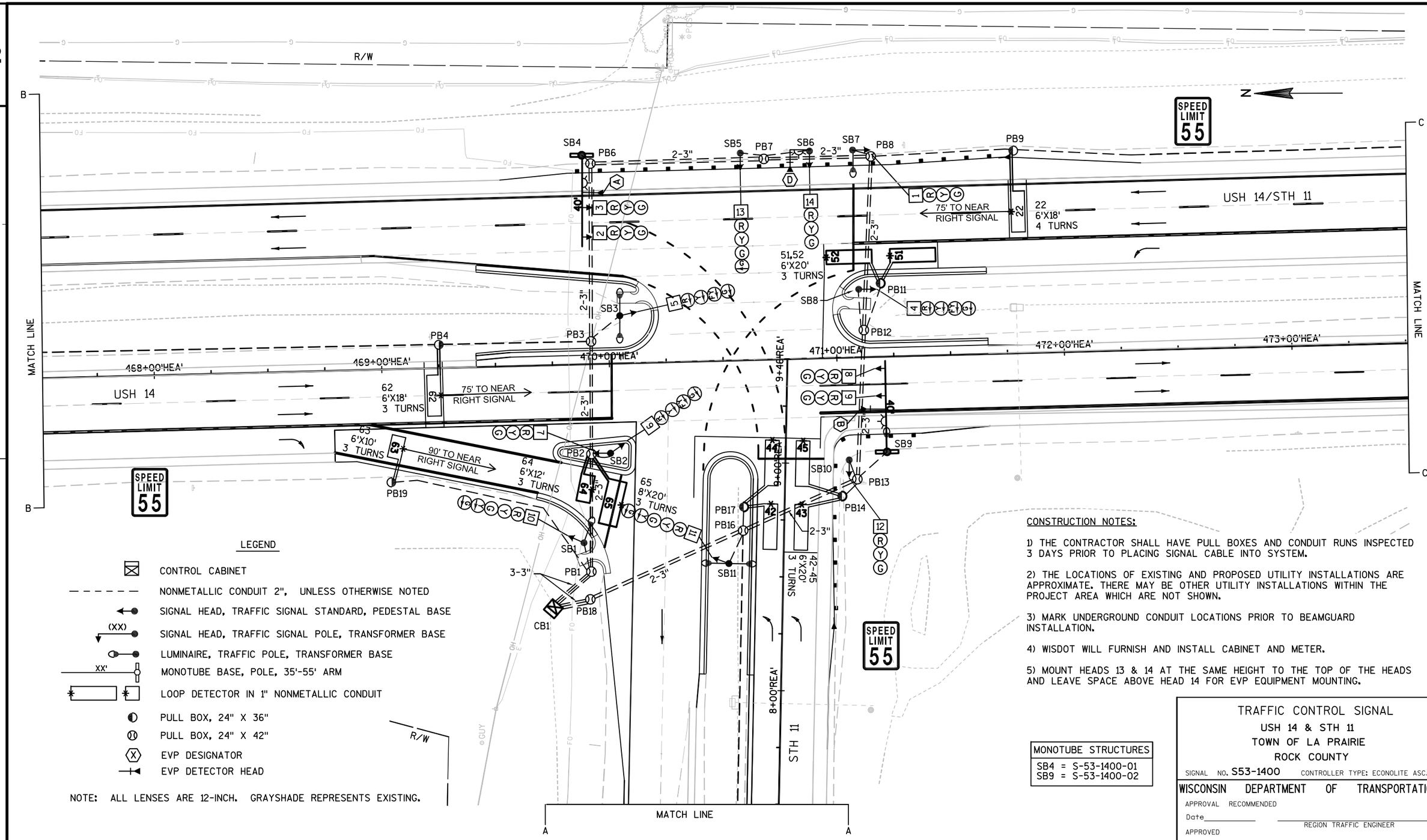
GENERAL NOTES:

1) THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.

HIGHWAY LIGHTING
USH 14 & STH 11
TOWN OF LA PRAIRIE ROCK COUNTY
LIGHTING NO. L0639

DIST. CONTACT: DENA DRAMM PAGE 1 OF 1

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	LIGHTING REMOVAL PLAN	SHEET 79	E



LEGEND

- 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
- XX' MONOTUBE BASE, POLE, 35'-55' ARM
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- EVP DESIGNATOR
- EVP DETECTOR HEAD

NOTE: ALL LENSES ARE 12-INCH. GRAYSHADE REPRESENTS EXISTING.

CONSTRUCTION NOTES:

1) THE CONTRACTOR SHALL HAVE PULL BOXES AND CONDUIT RUNS INSPECTED 3 DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM.

2) THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.

3) MARK UNDERGROUND CONDUIT LOCATIONS PRIOR TO BEAMGUARD INSTALLATION.

4) WISDOT WILL FURNISH AND INSTALL CABINET AND METER.

5) MOUNT HEADS 13 & 14 AT THE SAME HEIGHT TO THE TOP OF THE HEADS AND LEAVE SPACE ABOVE HEAD 14 FOR EVP EQUIPMENT MOUNTING.

MONOTUBE STRUCTURES
SB4 = S-53-1400-01
SB9 = S-53-1400-02

TRAFFIC CONTROL SIGNAL
USH 14 & STH 11
TOWN OF LA PRAIRIE
ROCK COUNTY

SIGNAL NO. S53-1400 CONTROLLER TYPE: ECONOLITE ASC/3

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
Date _____ REGION TRAFFIC ENGINEER
APPROVED
Date _____ STATE TRAFFIC ENGINEER

REGION CONTACT: GRAHAM HEITZ
DESIGNED BY: KL ENGINEERING
REVISED BY: _____

PAGE 1 OF 4

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC SIGNAL PLAN	SHEET 80 E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\PLAN DETAILS\5569-00-73\024001_SIG_USH14_STH11-HARMONY_TOWNHALL.DWG PLOT DATE : 10/16/2014 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42

2

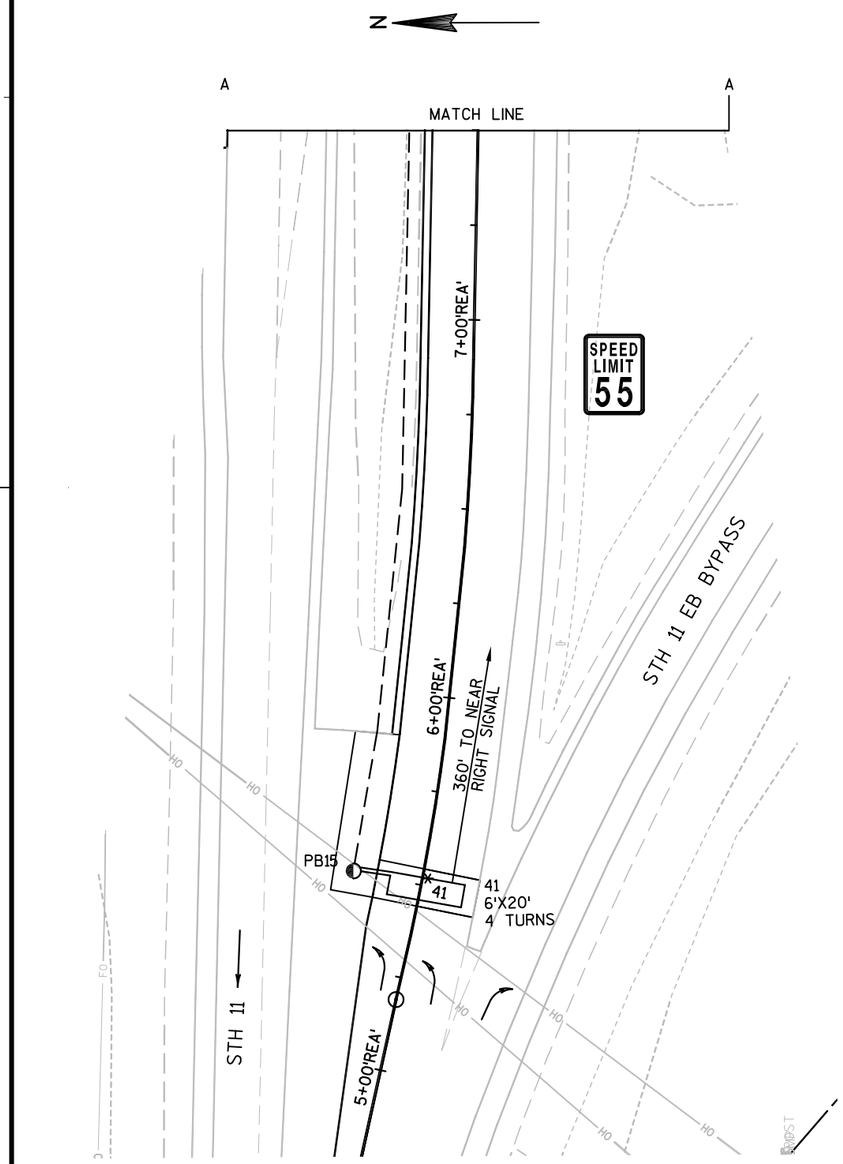
LEGEND

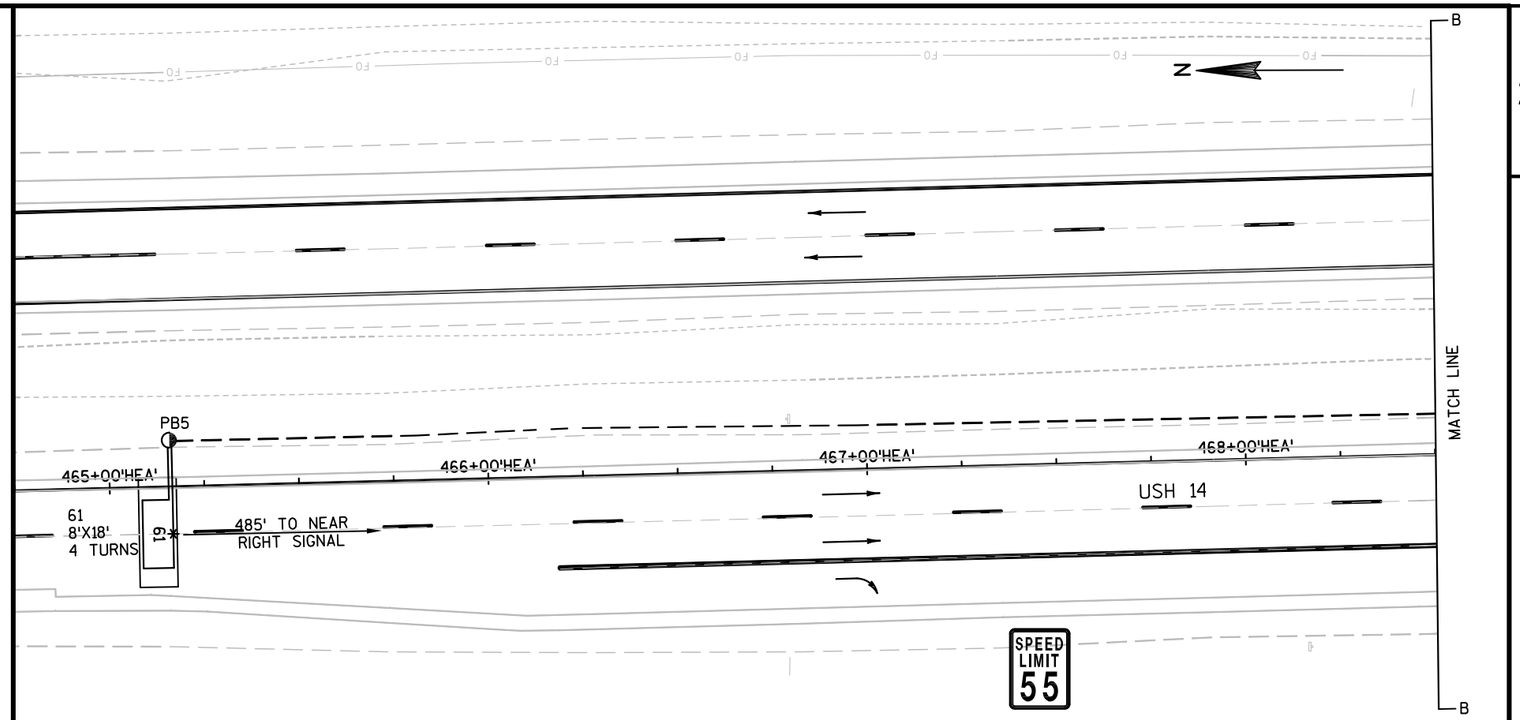
NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED

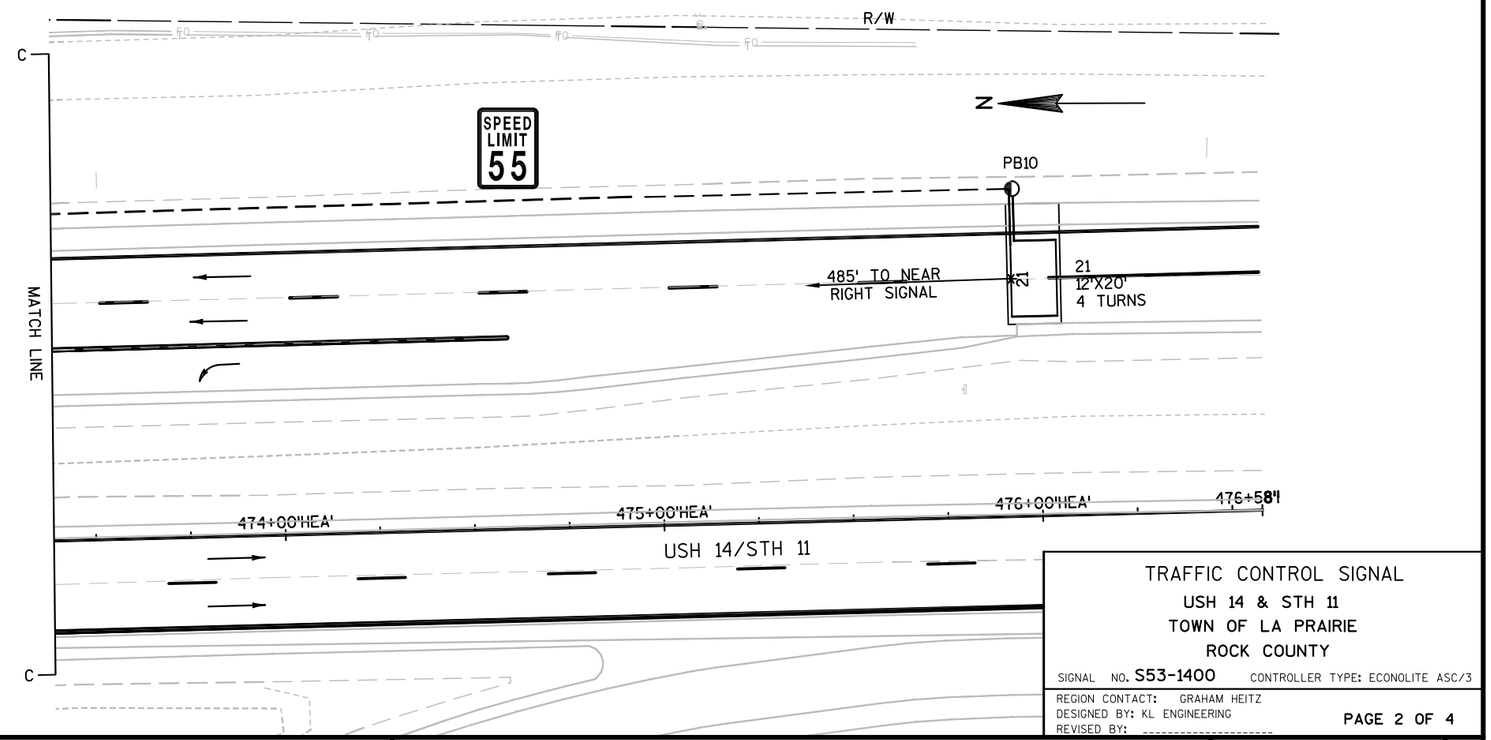
LOOP DETECTOR IN 1" NONMETALLIC CONDUIT

PULL BOX, 24" X 36"

PULL BOX, 24" X 42"







TRAFFIC CONTROL SIGNAL

USH 14 & STH 11

TOWN OF LA PRAIRIE

ROCK COUNTY

SIGNAL NO. S53-1400 CONTROLLER TYPE: ECONOLITE ASC/3

REGION CONTACT: GRAHAM HEITZ

DESIGNED BY: KL ENGINEERING

REVISED BY: ----------

PAGE 2 OF 4

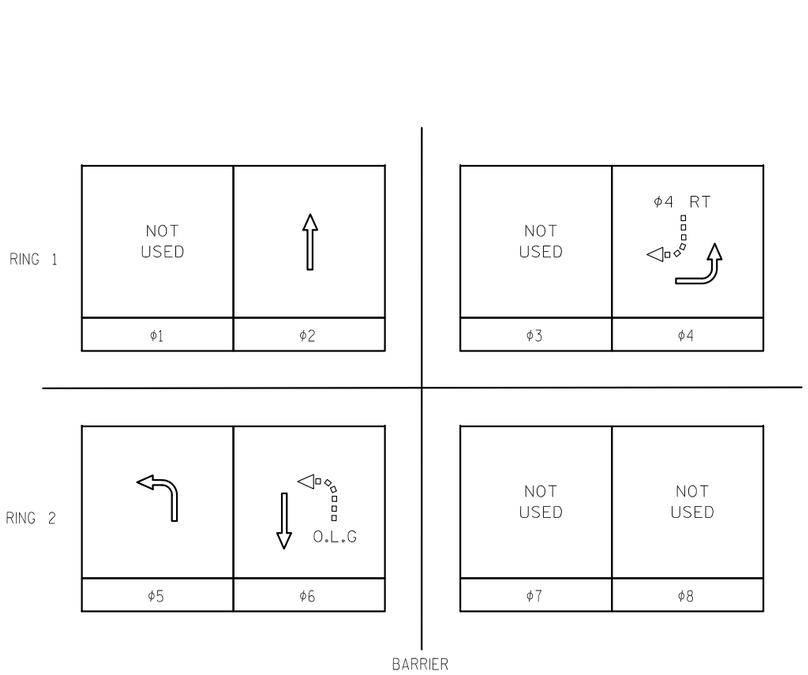
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC SIGNAL PLAN	SHEET 81 E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\PLAN DETAILS\5569-00-73\024001_SIG_USH14_STH11-HARMONY_TOWNHALL.DWG PLOT DATE : 10/16/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42

	HEAD NUMBERS	FLASH
φ1		
φ2	1-3	R
φ3		
φ4	10-14	R
φ5	4-6	
φ6	7-11	R
φ7		
φ8		
φ2 PED		
φ4 PED		
φ6 PED		
φ8 PED		

O.L. ASSIGNMENTS			
OLA			
OLB			
OLC			
OLD			
OLE			
OLF			
OLG	4-6	R	5 + 6
OLH			



CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / φ	PHASE RECALL	PHASE ACTIVE
1				
2	X	6	MIN.	X
3				
4	X			X
5				X
6	X	2	MIN.	X
7				
8				

TYPE OF INTERCONNECT	
NONE	X
TBC	
CLOSED LOOP TWISTED PAIR	
CLOSED LOOP FIBER OPTIC	
RADIO	

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF REMOTE COMMUNICATION	
NONE	
FIBER	
CELL MODEM	X
PHONE	

SYSTEM INFORMATION	
LOCATION OF MASTER CONTROLLER NO:	N/A
SIGNAL SYSTEM #:	SS-XX-XX

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13	19	17	23	21	27	25	31	29
DETECTOR #(S)	21	41	42	43	51	61	63	64								
PHASE CALLED	2	4	4	4	5	6	6	6								
PHASE EXTENDED	2	4	4	4	5	6	6	6								
DISCONNECT TIME																
CALLING DELAY																
EXTENSION STRETCH																
LOOP FUNCTION																

DETECTOR INPUT	4	2	8	6	12	10	16	14	20	18	24	22	28	26	32	30
DETECTOR #(S)	22		44	45	52	62		65								
PHASE CALLED	2		4	4	5	6		6								
PHASE EXTENDED	2		4	4	5	6		6								
DISCONNECT TIME																
CALLING DELAY																
EXTENSION STRETCH																
LOOP FUNCTION																

PREEMPTION ASSIGNMENTS			
PREEMPTION DESIGNATION	PREEMPTION TYPE	EVP CHANNEL	PHASE(S) CALLED
1	RESERVED		
2	RESERVED		
3	EVP	A	2&5
4	EVP	B	6
5	NOT USED		
6	EVP	D	4
7	NOT USED		
8	NOT USED		
9	NOT USED		
10	NOT USED		

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	
TOMAR	X
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

NOTE:
EVP CONFIRMATION LIGHT OPERATION SHALL CONFORM TO THE CITY OF JANESVILLE MODE OF OPERATION. THE ACTIVATED APPROACH SHALL HAVE A STEADY INDICATION. ALL APPROACHES SHALL HAVE FLASHING INDICATIONS.

TRAFFIC CONTROL SIGNAL

USH 14 & STH 11

TOWN OF LA PRAIRIE ROCK COUNTY

SIGNAL NO. S53-1400

REGION CONTACT: GRAHAM HEITZ
DESIGNED BY: KL ENGINEERING
REVISED BY:----------

PROJECT NO: 5569-00-73 | HWY: USH 14 | COUNTY: ROCK | SEQUENCE OF OPERATIONS | SHEET 82 | E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\PLAN DETAILS\5569-00-73\024001_SEQ_USH14_STH11-HARMONY_TOWNHALL.DWG PLOT DATE : 10/16/2014 2:39 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : ********
WISDOT/CADDS SHEET 42

USH 14 & STH 11 NO. 14 CABLE					
CABLE RUN	CABLE	HEAD NUMBER	MOVEMENT	LENS	CONDUCTOR COLOR
CABINET TO SB-1	7/C	10	SB RT (ϕ4 RT)	R	R
				Y	O
				G	G
				←Y	WHT/BLK
				←G	BLU
CABINET TO SB-2	9/C	7	SB	R	R
				Y	O
				G	G
		6	NB LT	←R	R/BLK
				←Y	WHT/BLK
				←FY	BLU
				←G	G/BLK
CABINET TO SB-3	7/C	5	NB LT	←R	R
				←Y	O
				←FY	BLU
				←G	G
CABINET TO SB-4	5/C	3	NB	R	R
				Y	O
				G	G
		2	NB	R	R
				Y	O
				G	G
CABINET TO SB-5	5/C	13	EB	R	R
				Y	O
				G	G
				←G	BLU
CABINET TO SB-6	5/C	14	EB	R	R
				Y	O
				G	G
CABINET TO SB-7	5/C	1	NB	R	R
				Y	O
				G	G
CABINET TO SB-8	7/C	4	NB LT	←R	R
				←Y	O
				←FY	BLU
				←G	G
CABINET TO SB-9	5/C	8	SB	R	R
				Y	O
				G	G
		9	SB	R	R
				Y	O
				G	G
CABINET TO SB-10	5/C	12	EB	R	R
				Y	O
				G	G
CABINET TO SB-11	7/C	11	SB RT (ϕ4 RT)	R	R
				Y	O
				G	G
				←Y	WHT/BLK
				←G	BLU

USH 14 & STH 11 LIGHTING CABLING CHART TYPE UF 12-2 AWG GROUNDED		
CABLE	CABLE RUN	LUMINAIRE LOCATION
2/C WITH GROUND	CABINET TO SB1	NW QUADRANT
	SB1 TO SB3	NORTH MEDIAN
	CABINET TO SB11	WEST MEDIAN
	SB11 TO SB9	SW QUAD
	SB9 TO SB7	SE QUAD

USH 14 & STH 11 EMERGENCY VEHICLE PREEMPT CABLE, CONFIRMATION LIGHT 14-2 AWG CABLE	
FROM	TO
CABINET	SB4
CABINET	SB6
CABINET	SB9

TRAFFIC CONTROL SIGNALS
USH 14 & STH 11

TOWN OF LA PRAIRIE — ROCK COUNTY

SIGNAL NO. S53-1400 — SCALE 0 5' 10' 20'

REGION CONTACT: GRAHAM HEITZ — PAGE 4 OF 4

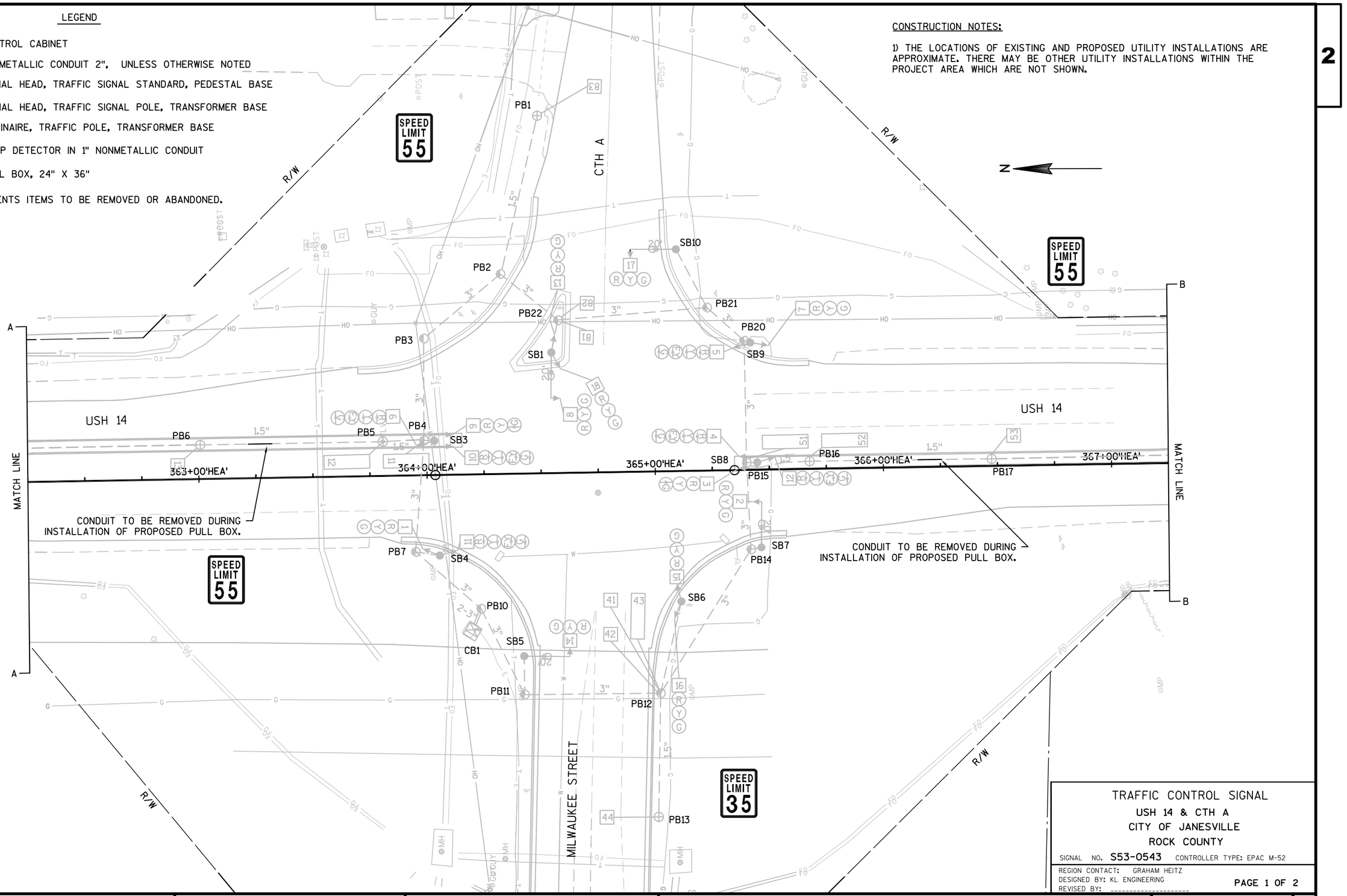
LEGEND

- 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 IN 1" NONMETALLIC CONDUIT
- PULL BOX, 24" X 36"

NOTE: BOLD REPRESENTS ITEMS TO BE REMOVED OR ABANDONED.

CONSTRUCTION NOTES:

1) THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.



TRAFFIC CONTROL SIGNAL
USH 14 & CTH A
CITY OF JANESVILLE
ROCK COUNTY

SIGNAL NO. S53-0543 CONTROLLER TYPE: EPAC M-52

REGION CONTACT: GRAHAM HEITZ
DESIGNED BY: KL ENGINEERING
REVISED BY: ----------

PAGE 1 OF 2

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 84 E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\PLAN DETAILS\5569-00-73\024001_SIG REMOVE_USH14_STH11-HARMONY_TRAFFIC.DWG 12/8/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

2

N

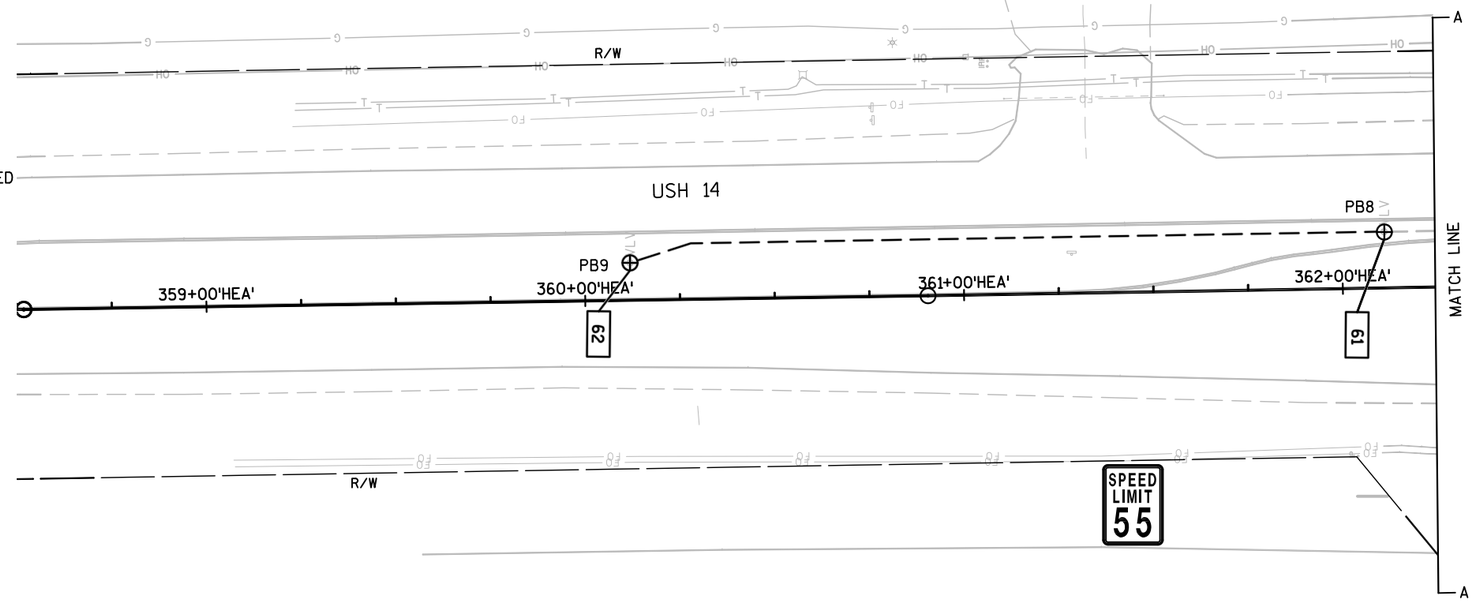
LEGEND

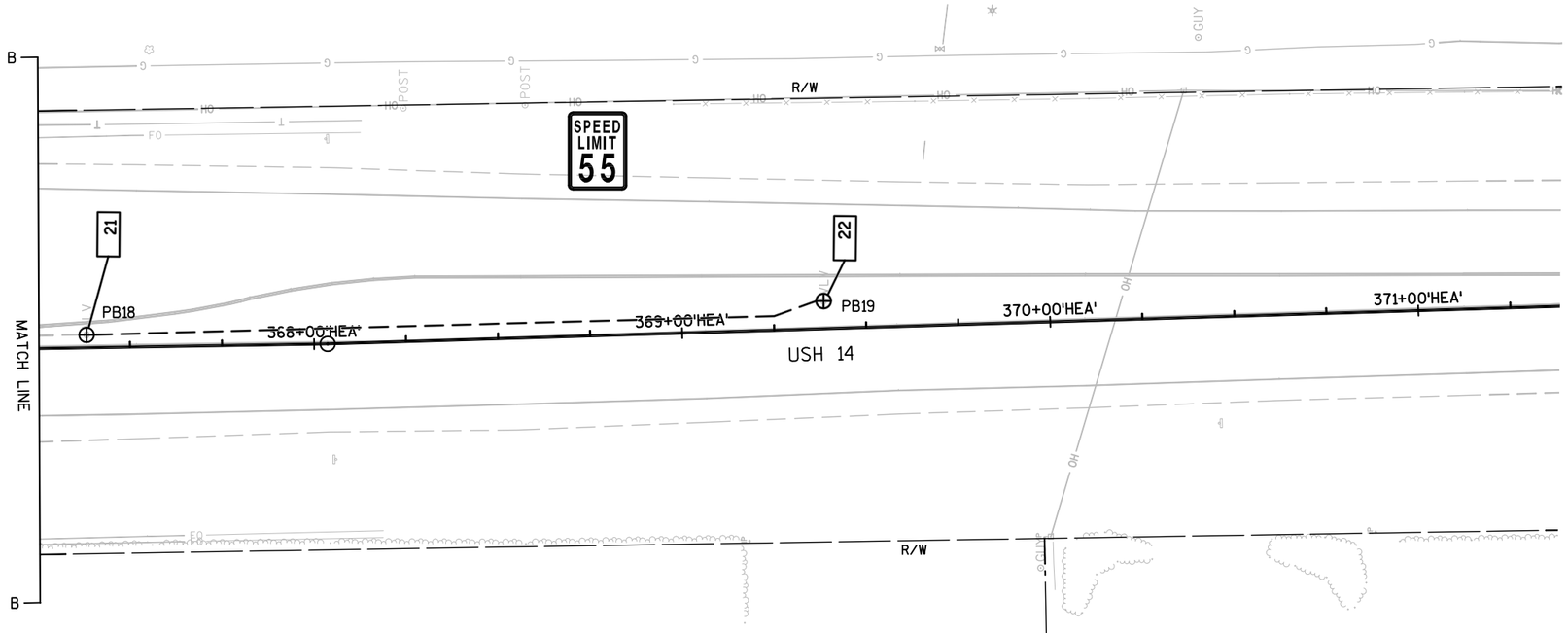
NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED

LOOP DETECTOR IN 1" NONMETALLIC CONDUIT

PULL BOX, 24" X 36"

NOTE: BOLD REPRESENTS ITEMS TO BE REMOVED OR ABANDONED.





TRAFFIC CONTROL SIGNAL
USH 14 & CTH A
CITY OF JANESVILLE
ROCK COUNTY

SIGNAL NO. S53-0543 CONTROLLER TYPE: EPAC M-52

REGION CONTACT: GRAHAM HEITZ
DESIGNED BY: KL ENGINEERING
REVISED BY: _____

PAGE 2 OF 2

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 85	E

LEGEND

- 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 IN 1" NONMETALLIC CONDUIT
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"

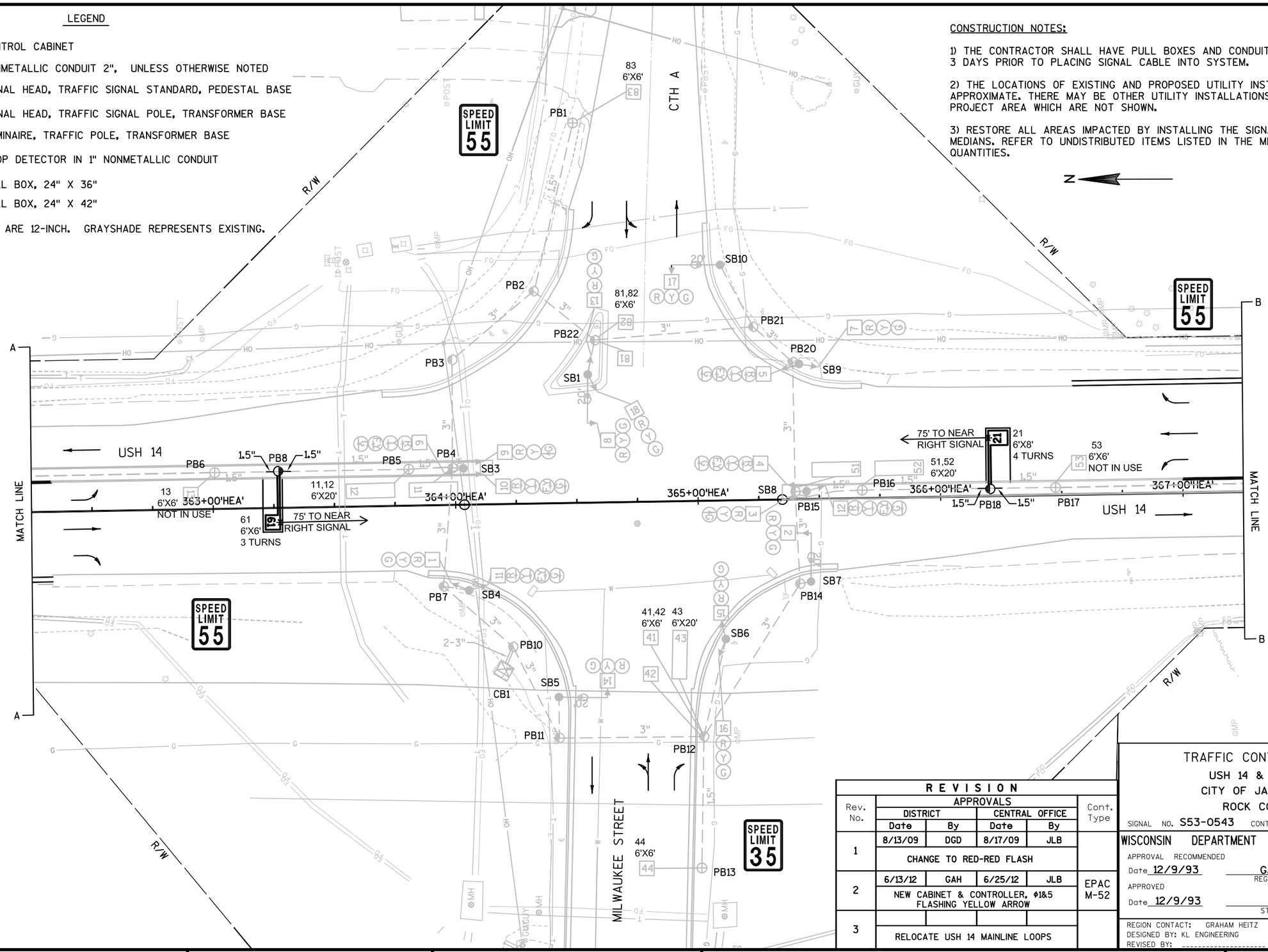
NOTE: ALL LENSES ARE 12-INCH. GRAYSHADE REPRESENTS EXISTING.

CONSTRUCTION NOTES:

1) THE CONTRACTOR SHALL HAVE PULL BOXES AND CONDUIT RUNS INSPECTED 3 DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM.

2) THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.

3) RESTORE ALL AREAS IMPACTED BY INSTALLING THE SIGNAL CONDUIT IN THE MEDIANS. REFER TO UNDISTRIBUTED ITEMS LISTED IN THE MISCELLANEOUS QUANTITIES.



REVISION					
Rev. No.	APPROVALS DISTRICT Date	By	CENTRAL OFFICE Date	By	Cont. Type
1	8/13/09	DGD	8/17/09	JLB	
	CHANGE TO RED-RED FLASH				
2	6/13/12	GAH	6/25/12	JLB	EPAC M-52
	NEW CABINET & CONTROLLER, ϕ1&5 FLASHING YELLOW ARROW				
3					
	RELOCATE USH 14 MAINLINE LOOPS				

TRAFFIC CONTROL SIGNAL
USH 14 & CTH A
CITY OF JANSEVILLE
ROCK COUNTY

SIGNAL NO. S53-0543 CONTROLLER TYPE: EPAC M-52

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
Date 12/9/93 G.W. MUELLER, REGION TRAFFIC ENGINEER

APPROVED
Date 12/9/93 R.I. MOE, STATE TRAFFIC ENGINEER

REGION CONTACT: GRAHAM HEITZ
DESIGNED BY: KL ENGINEERING
REVISED BY: ----------

PAGE 1 OF 4

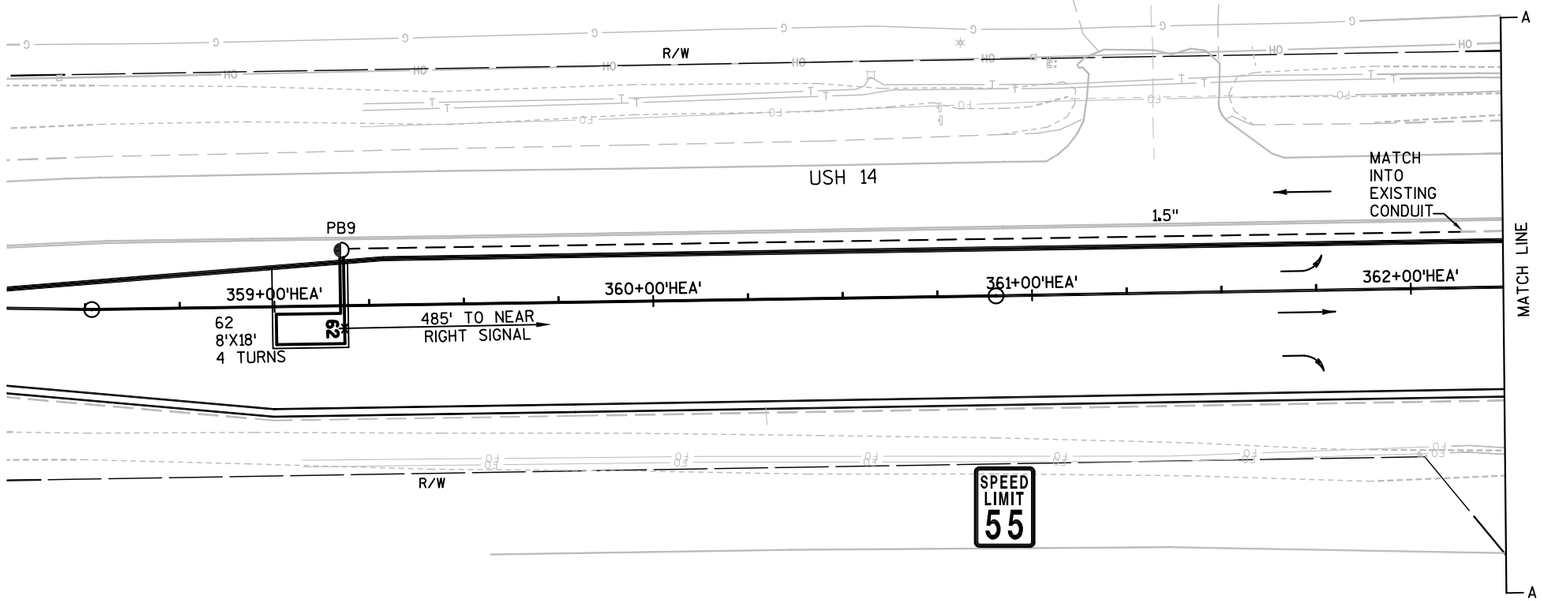
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC SIGNAL PLAN	SHEET 86	E

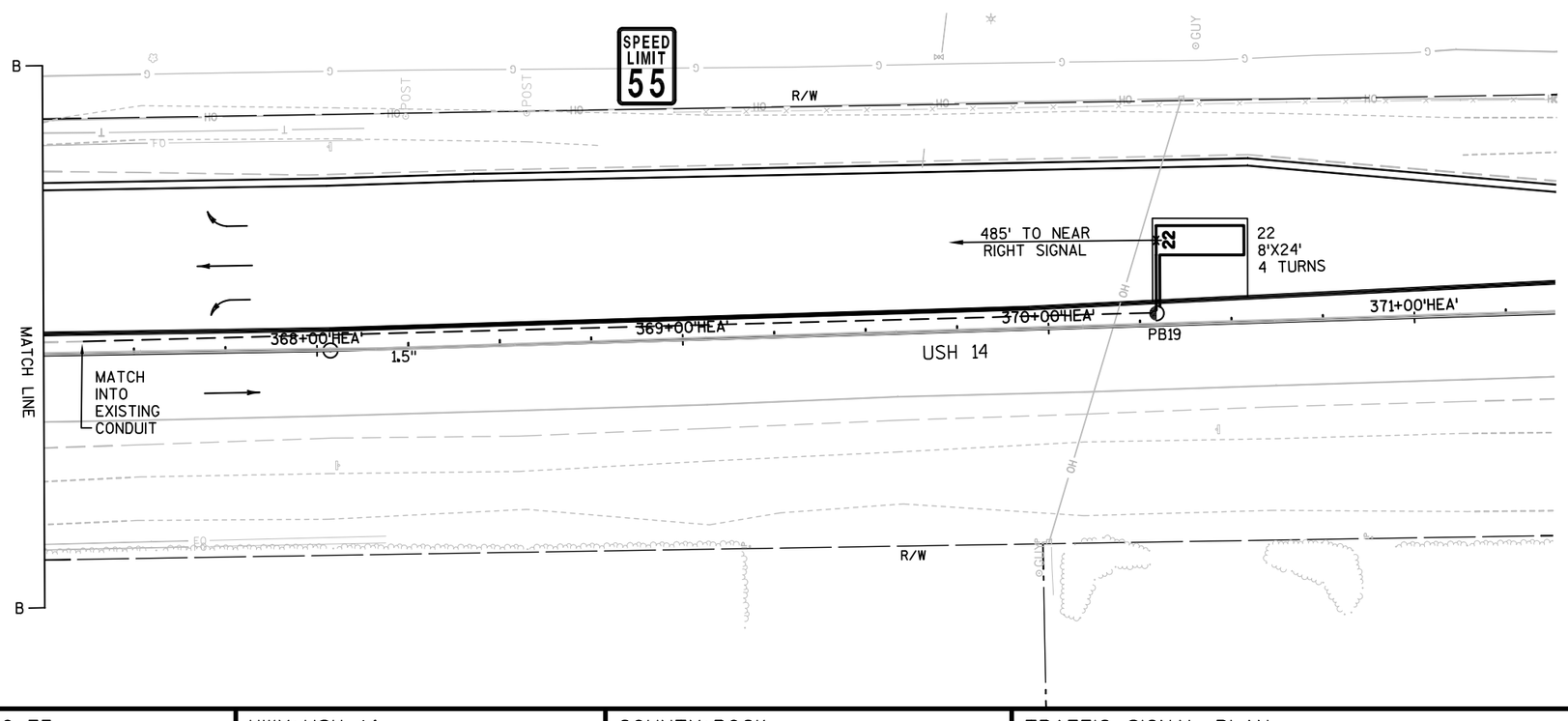
FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\PLAN DETAILS\5569-00-73\024001_SIG_USH14_STH11-HARMONY_TOWNHALLRD.DWG PLOT DATE : 12/8/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42

2

N





TRAFFIC CONTROL SIGNAL
USH 14 & CTH A
CITY OF JANESVILLE
ROCK COUNTY

SIGNAL NO. S53-0543 CONTROLLER TYPE: EPAC M-52

REGION CONTACT: GRAHAM HEITZ
DESIGNED BY: KL ENGINEERING
REVISED BY: _____

PAGE 2 OF 4

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC SIGNAL PLAN	SHEET 87 E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\PLAN DETAILS\5569-00-73\024001_SIG_USH14_STH11-HARMONY_TOWNHALLRD.DWG PLOT DATE : 10/20/2014 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : 1" = 40'_XREF

2

SEQUENCE OF OPERATION

RING 1

	HEAD NUMBERS	φ5 R/W	φ5 CLEAR TO **	φ6 R/W	φ6 CLEAR TO **	φ7 R/W	φ7 CLEAR TO **	φ8 R/W	φ8 CLEAR TO **	FLASH
φ1	4-6	G	- -	-	- -			-	- -	-
φ2	7-9	R	R R	G↑/G	Y R			R	R R	R
φ3								-	- -	-
φ4	16-18	R	R R	R	R R			G	Y R	R
φ5	10-12	-	- -	-	- -			-	- -	-
φ6	1-3	R	R R	R	R R			R	R R	R
φ7										
φ8	13-15	R	R R	R	R R			R	R R	R
O.L.A	4-6	-	Y R	FY	Y R			R	R R	R
O.L.B										
O.L.C	10-12	R	R R	R	R R			R	R R	R
O.L.D										

RING 2

	HEAD NUMBERS	φ5 R/W	φ5 CLEAR TO **	φ6 R/W	φ6 CLEAR TO **	φ7 R/W	φ7 CLEAR TO **	φ8 R/W	φ8 CLEAR TO **
φ1	4-6	-	- -	-	- -			-	- -
φ2	7-9	R	R R	R	R R			R	R R
φ3									
φ4	16-18	R	R R	R	R R			R	R R
φ5	10-12	G	- -	-	- -			-	- -
φ6	1-3	R	R R	G↑/G	Y R			R	R R
φ7									
φ8	13-15	R	R R	R	R R			G	Y R
O.L.A	4-6	R	R R	R	R R			R	R R
O.L.B									
O.L.C	10-12	-	Y R	FY	Y R			R	R R
O.L.D									

BARRIER

** CLEARANCE TO A PHASE IN CONFLICT WITH THIS PHASE ON (SEE CHART 1)
* WHEN CALLED, TIMED STEADY WALK,THEN FLASHING DON'T WALK, THEN GOES TO STEADY DON'T WALK

CHART 1

PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
1	5,6	2,4,8
2	5,6	1,4,8
3		
4	8	1,2,5,6
5	1,2	4,6,8
6	1,2	4,6,8
7		
8	4	1,2,5,6

N

DETECTOR LOGIC

DETECTOR NUMBER	DETECTOR INPUT	DETECTOR OPERATION: CALLS AND EXTENDS	CALLS ONLY	EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
11	1			X		1				6X20	3
12	2	X			1	1				6X20	3
13	NOT IN USE									6X6	4
21	12	X			2	2				6X8	4
22	3	X			2	2				8X24	4
41	4	X			4	4				6X6	4
42	4	X			4	4				6X6	4
43	5	X			4			20		6X20	3
44	6			X		4			1.5	6X6	4
51	7			X		5				6X20	3
52	8	X			5	5				6X20	3
53	NOT IN USE									6X6	5
61	13	X			6	6				6X6	4
62	9	X			6	6				8X18	4
81	10	X			8	8				6X6	4
82	10	X			8	8				6X6	4
83	11			X		8			1.25	6X6	5

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / φ	PHASE RECALL	PHASE ACTIVE
1				X
2	X	6	MIN.	X
3				
4		8		X
5				X
6	X	2	MIN.	X
7				
8		4		X

SPECIAL OVERLAPS

	PROTECTED	PERMISSIVE
O.L. "A" =	1	2
O.L. "B" =	-	-
O.L. "C" =	5	6
O.L. "D" =	-	-

TYPE OF INTERCONNECT COMMUNICATION	
NONE	X
TBC	
CLOSED LOOP TWISTED PAIR*	
CLOSED LOOP FIBER OPTIC*	
RADIO	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM #:	SS-

TYPE OF PRE-EMPT	
NONE	X
RAILROAD	
EMERGENCY VEHICLE	
3M	
TOMAR	
HARDWIRE	
OTHER (GPS)	
LIFT BRIDGE	
QUEUE DETECTOR	

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

GENERAL NOTES:

1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
2. WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL. (SEE CHART 1 AT LEFT.)
3. IF ANY OPPOSING THRU PHASES ARE TIMING CONCURRENTLY, THEY SHALL TERMINATE TOGETHER DUE TO PERMISSIVE LEFT TURN CONFLICT.

USH 14 & CTH A
CITY OF JANESVILLE
ROCK COUNTY

SIGNAL NO. S53-0543

CONTROLLER TYPE: EPAC M-52

Date: 11-1-14 PAGE 3 OF 4

USH 14 & CTH A NO. 14 CABLE					
CABLE RUN	CABLE	HEAD NUMBER	MOVEMENT	LENS	CONDUCTOR COLOR
CABINET TO SB-1	12/C	8	NB		R
				Y	O
				G	G
		18	EB	R	R/BLK
				Y	O/BLK
				G	G/BLK
		13	WHTB	R	BLK/WHT
				Y	WHT/BLK
				G	BLU/BLK
CABINET TO SB-3	12/C	6	SB	←R	R
				←Y	O
				←FY	BLK/WHT
				←G	G
		9	NB	R	R/BLK
				Y	O/BLK
				G↑	G/BLK
		10	NB	←R	BLK
			LT	←Y	WHT/BLK
				←FY	BLU/BLK
				←G	BLU
CABINET TO SB-4	9/C	11	NB	←R	R
			LT	←Y	O
				←FY	?
				←G	G
		1	SB	R	BLK
				Y	WHT/BLK
				G	BLU
CABINET TO SB-5	5/C	14	WHTB	R	R
				Y	O
				G	G
CABINET TO SB-6	12/C	2	SB	R	R
				Y	O
				G	G
		16	EB	R	R/BLK
				Y	O/BLK
				G	G/BLK
		15	WHTB	R	BLK
				Y	WHT/BLK
				G	BLU

USH 14 & CTH A NO. 14 CABLE					
CABLE RUN	CABLE	HEAD NUMBER	MOVEMENT	LENS	CONDUCTOR COLOR
SB-6 TO SB-7	5/C	2	SB	R	R
				Y	O
				G	G
CABINET TO SB-8	12/C	12	NB	←R	R
				←Y	O
				←FY	BLK/WHT
				←G	G
		3	SB	R	R/BLK
				Y	O/BLK
				G↑	G/BLK
		4	SB	←R	BLK
			LT	←Y	WHT/BLK
				←FY	BLU/BLK
				←G	BLU
CABINET TO SB-9	9/C	7	NB	←R	R
				←Y	O
				G	G
		5	SB	R	R/BLK
			LT	Y	?
				←FY	?
				←G	G/BLK
CABINET TO SB-10	5/C	17	EB	←R	R
				←Y	O
				G	G

NOTES:
NO CHANGES TO EXISTING SIGNAL CABLING
COMPLETE EXISTING CABLING INFORMATION FOR HEADS 5 AND 11 NOT KNOWN

USH 14 & CTH A LIGHTING CABLING CHART TYPE UF 12-2 AWG GROUNDED		
CABLE	CABLE RUN	LUMINAIRE LOCATION
2/C WITH GROUND	CABINET TO SB2	NE QUADRANT
	CABINET TO SB5	NW QUADRANT
	CABINET TO SB7	SW QUADRANT
	CABINET TO SB10	SE QUADRANT

TRAFFIC CONTROL SIGNALS
USH 14 & CTH A

CITY OF JANESVILLE — ROCK COUNTY

SIGNAL NO. S53-0543 — SCALE 0 5' 10' 20'

REGION CONTACT: GRAHAM HEITZ — PAGE 4 OF 4

STAGE 1

MAINTENANCE OF TRAFFIC:

- ALL TRAFFIC REMAINS ON EXISTING ROADWAYS WITH ALL LANES OPEN TO TRAFFIC EXCEPT INSIDE LANE CLOSURES ON USH 14 EB AND USH 14 WB
- MAINTAIN LOCAL ACCESS AT ALL TIMES

CONSTRUCTION TO BE COMPLETED:

- USH 14: MILL AND OVERLAY INSIDE OF USH 14 EB AND USH 14 WB.

NOTES - STAGE 1:

REFER TO THE FOLLOWING STANDARD DETAIL DRAWINGS, AS WELL AS OTHER STANDARD DETAIL DRAWINGS AS NECESSARY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

- TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

WORK ZONE

GENERAL NOTES (ALL STAGES AND LOCATIONS):

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. REMOVING/REPLACING OR COVERING/UNCOVERING SIGNS WILL BE INCIDENTAL TO OTHER TRAFFIC CONTROL ITEMS.

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

IF SIGNS ARE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TRAFFIC CONTROL SIGNING SHALL CONFORM TO: PART VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE WISCONSIN SUPPLEMENT TO THE MUTCD, AND OTHER CONTRACT DOCUMENTS.

THE TURNING OF TRAFFIC CONTROL DEVICES WHEN NOT IN USE TO OBSCURE THE MESSAGE WILL NOT BE ALLOWED.

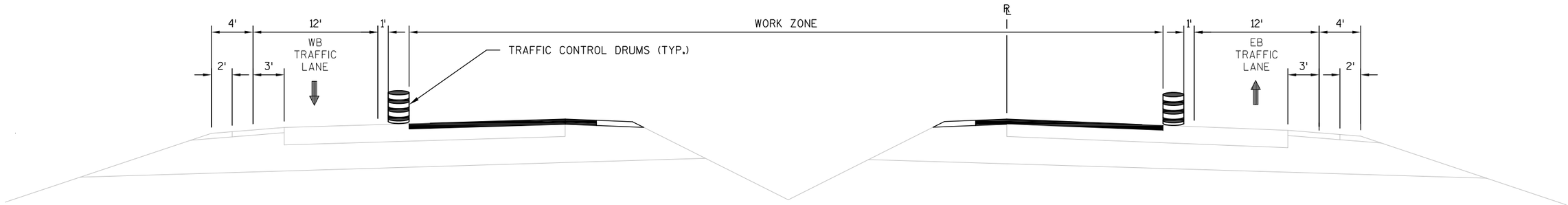
REMOVE PAVEMENT MARKINGS NOT APPROPRIATE FOR THE TRAVEL PATH IN USE.

MOVE, REMOVE OR INSTALL ROUTE MARKER SIGNS AS REQUIRED TO MAINTAIN NECESSARY ROUTE GUIDANCE THROUGHOUT CONSTRUCTION. REFER TO EXISTING SIGN REMOVAL PLANS FOR EXISTING ROUTE GUIDANCE.

CONTRACTORS EQUIPMENT AND MATERIAL STOCKPILES MAY NOT BE STORED WITHIN THE CLEAR ZONE OF USH 14 OR STH 11 UNLESS THEY ARE PROTECTED BY CONCRETE BARRIER TEMPORARY PRECAST.

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC CONTROL: USH 14 MILL & OVERLAY OVERVIEW - STAGE 1	SHEET 90	E

2



STAGE 1 TYPICAL SECTION
USH 14
ASPHALT MILL & OVERLAY

PROJECT NO:5569-00-73	HWY:USH 14	COUNTY:ROCK	PLAN: TYPICAL SECTIONS - TRAFFIC CONTROL STAGING	SHEET 91	E

SEE SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY" FOR ADVANCE WARNING SIGNS AND DETAILS NOT SHOWN IN PLANS.

N

END ROAD WORK
G20-2A
48" X 24"

USH 14 WB

20' TYP.

50' TYP.

282+00'HEA' 283+00'HEA' 284+00'HEA' 285+00'HEA' 286+00'HEA' 287+00'HEA' 288+00'HEA'

MATCH STA. 288+00 'HEA'

50' TYP.

USH 14 EB

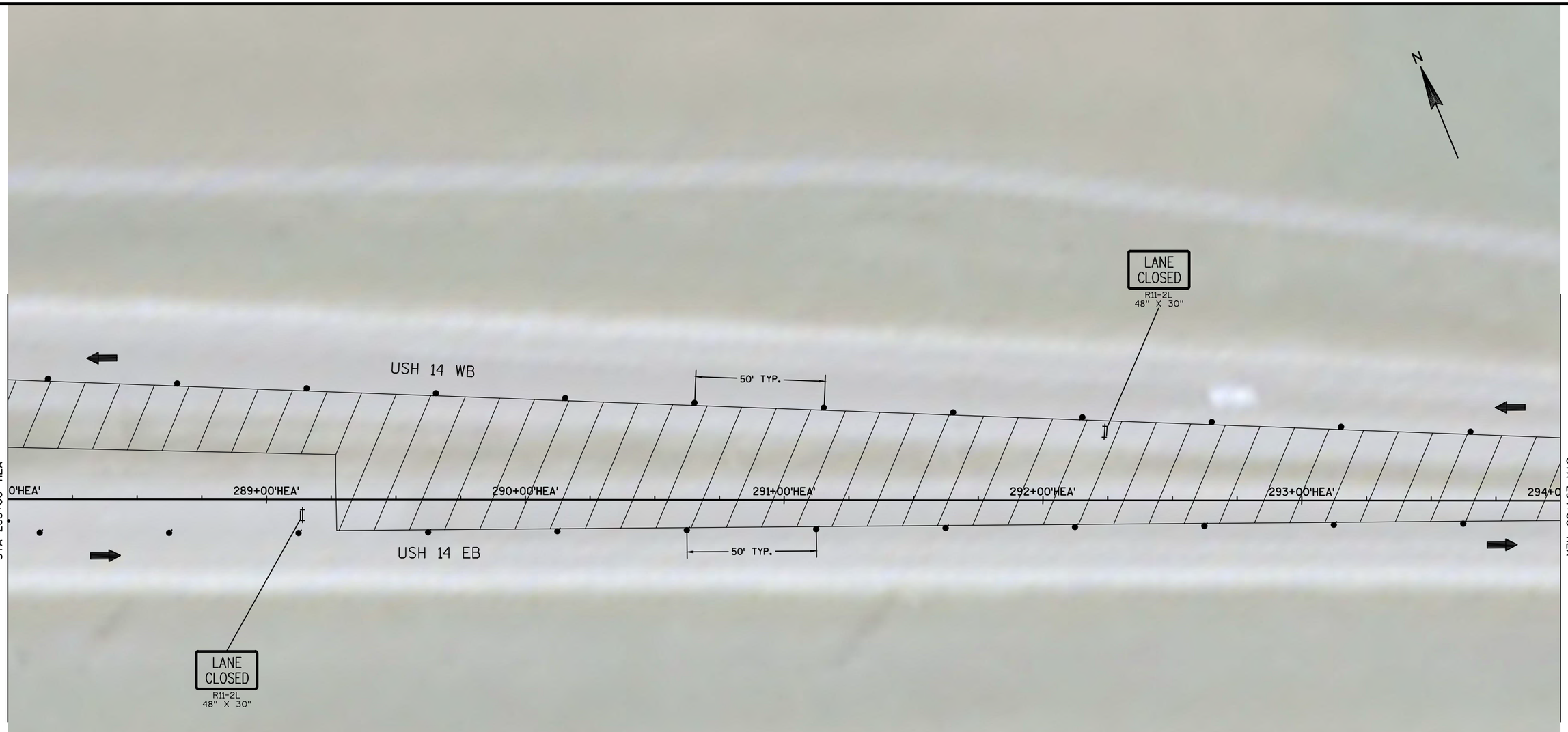
WRIGHT ROAD

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC

PROJECT NO:5569-00-73	HWY: USH 14	COUNTY:ROCK	TRAFFIC CONTROL: USH 14 MILL AND OVERLAY - STAGE 1	SHEET 92	E

2



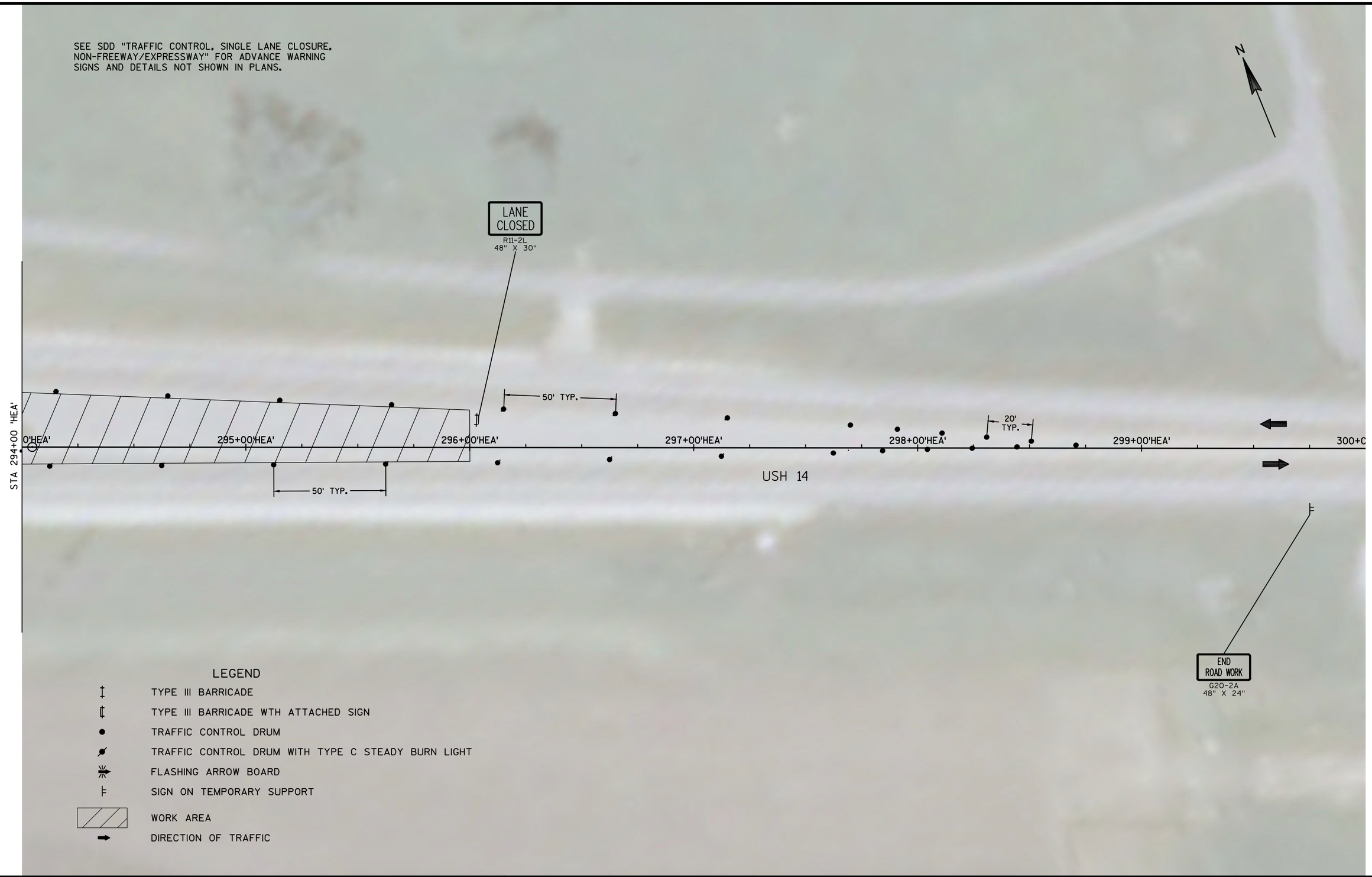
LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC CONTROL: USH 14 MILL AND OVERLAY - STAGE 1	SHEET 93	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\TRAFFIC CONTROL\5569-00-73\025005_TC_STAGE_1_USH14-WRIGHT.DWG PLOT DATE : 10/15/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1" = 40'_XREF

SEE SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY" FOR ADVANCE WARNING SIGNS AND DETAILS NOT SHOWN IN PLANS.



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC

PROJECT NO:5569-00-73	HWY:USH 14	COUNTY:ROCK	TRAFFIC CONTROL: USH 14 MILL AND OVERLAY - STAGE 1	SHEET 94	E

STAGE 2

MAINTENANCE OF TRAFFIC:

- ALL TRAFFIC REMAINS ON EXISTING ROADWAYS WITH ALL LANES OPEN TO TRAFFIC EXCEPT OUTSIDE LANE CLOSURES ON USH 14 EB AND USH 14 WB
- MAINTAIN LOCAL ACCESS AT ALL TIMES

CONSTRUCTION TO BE COMPLETED:

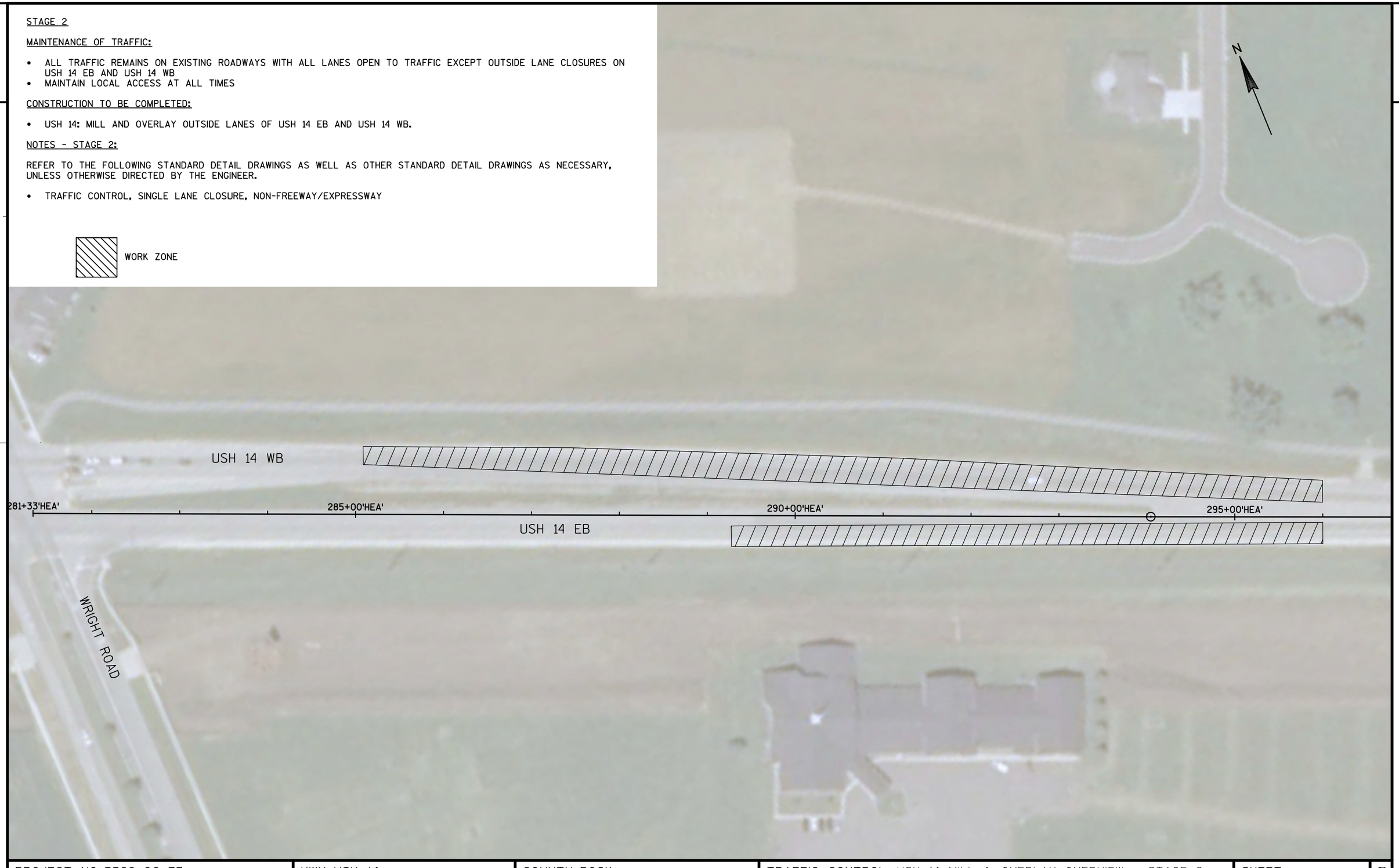
- USH 14: MILL AND OVERLAY OUTSIDE LANES OF USH 14 EB AND USH 14 WB.

NOTES - STAGE 2:

REFER TO THE FOLLOWING STANDARD DETAIL DRAWINGS AS WELL AS OTHER STANDARD DETAIL DRAWINGS AS NECESSARY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

- TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

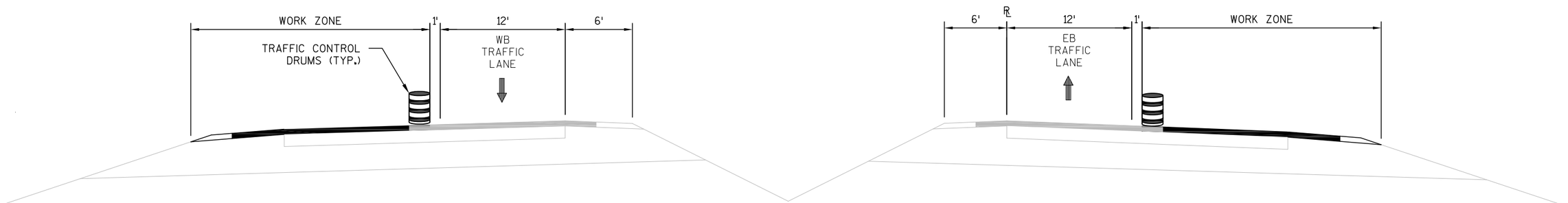
WORK ZONE



PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC CONTROL: USH 14 MILL & OVERLAY OVERVIEW - STAGE 2	SHEET	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\TRAFFIC CONTROL\5569-00-73\025005_TC_STAGE_2_USH14-WRIGHT_OVERVIEW.DWG PLOT DATE : 10/15/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1" = 100'_XREF

2



STAGE 2 TYPICAL SECTION
USH 14
ASPHALT MILL & OVERLAY

PROJECT NO:5569-00-73	HWY:USH 14	COUNTY:ROCK	PLAN: TYPICAL SECTIONS - TRAFFIC CONTROL STAGING	SHEET 96	E

SEE SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY" FOR ADVANCE WARNING SIGNS AND DETAILS NOT SHOWN IN PLANS.

N

END ROAD WORK
G20-2A
48" X 24"

20' TYP.

USH 14 WB

50' TYP.

282+00'HEA' 283+00'HEA' 284+00'HEA' 285+00'HEA' 286+00'HEA' 287+00'HEA' 288+00'HEA'

MATCH STA. 288+00 'HEA'

USH 14 EB

50' TYP.

WRIGHT ROAD

LEGEND

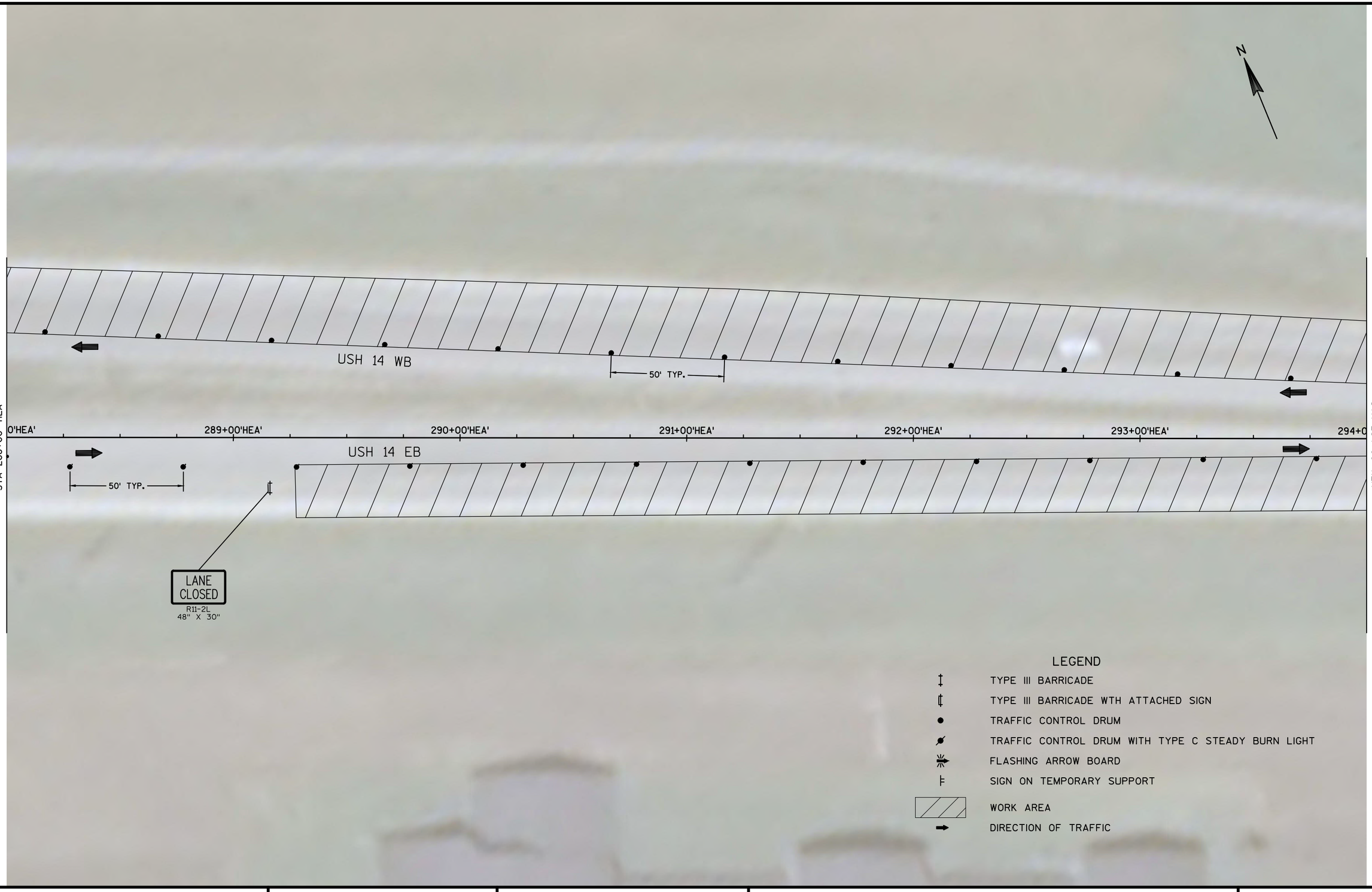
- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC

PROJECT NO:5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC CONTROL: USH 14 MILL AND OVERLAY - STAGE 2	SHEET 97	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\TRAFFIC CONTROL\5569-00-73\025005_TC_STAGE_2_USH14-WRIGHT.DWG PLOT DATE : 10/15/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1" = 40'_XREF

WISDOT/CADDS SHEET 42

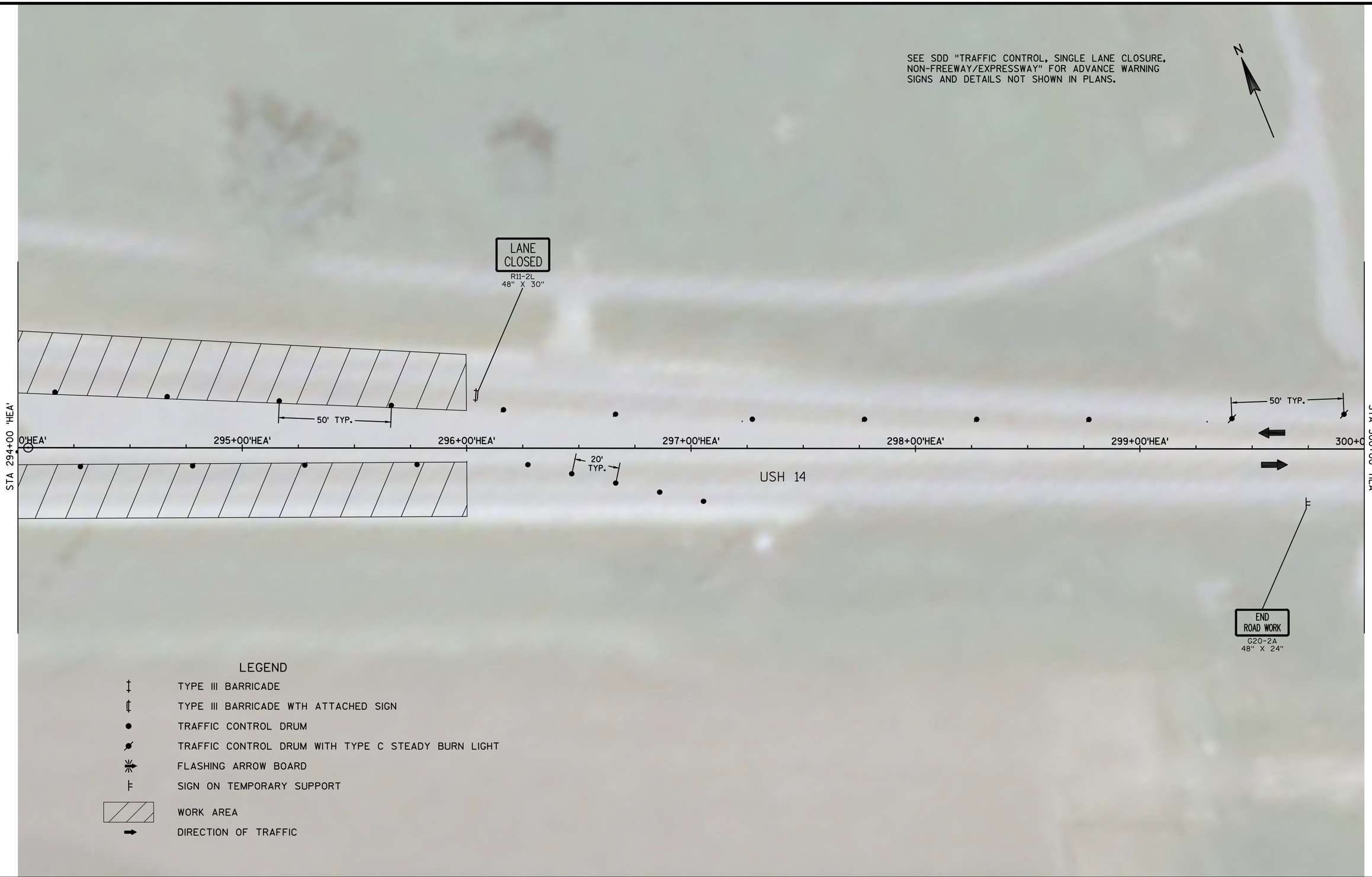
2



PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC CONTROL: USH 14 MILL AND OVERLAY - STAGE 2	SHEET 98	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\TRAFFIC CONTROL\5569-00-73\025005_TC_STAGE_2_USH14-WRIGHT.DWG PLOT DATE : 10/15/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1" = 40'_XREF
WISDOT/CADDS SHEET 42

SEE SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY" FOR ADVANCE WARNING SIGNS AND DETAILS NOT SHOWN IN PLANS.



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC CONTROL: USH 14 MILL AND OVERLAY - STAGE 2	SHEET 99 E

STAGE 3

MAINTENANCE OF TRAFFIC:

- ALL TRAFFIC REMAINS ON EXISTING ROADWAYS WITH ALL LANES OPEN TO TRAFFIC EXCEPT MOVING LANE CLOSURE ON USH 14 TO BE CONTROLLED WITH FLAGGING OPERATIONS.
- MAINTAIN LOCAL ACCESS AT ALL TIMES

CONSTRUCTION TO BE COMPLETED:

- USH 14: MILL AND OVERLAY USH 14.

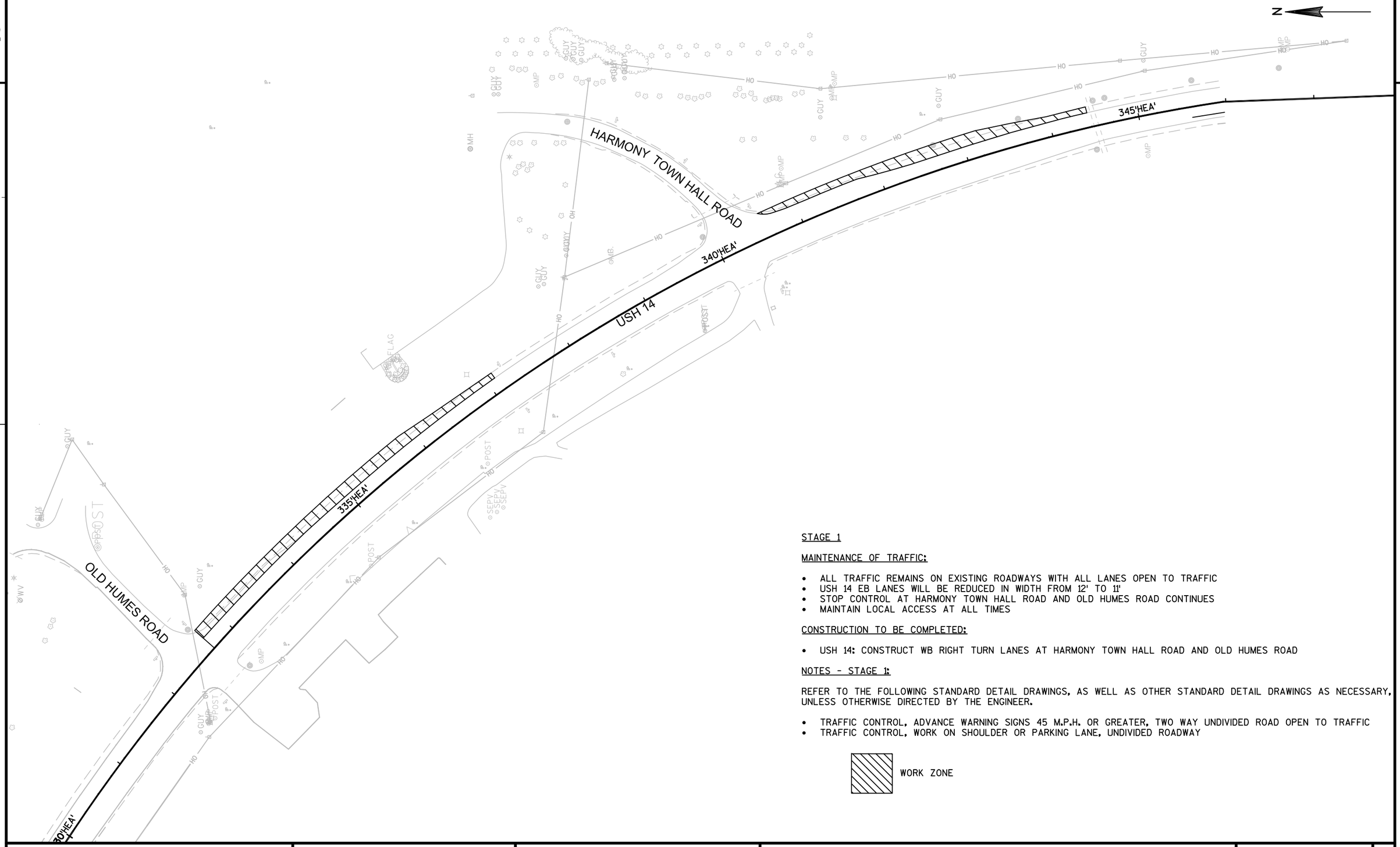
NOTES - STAGE 3:

REFER TO THE FOLLOWING STANDARD DETAIL DRAWINGS, AS WELL AS OTHER STANDARD DETAIL DRAWINGS AS NECESSARY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

- TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

WORK ZONE

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC CONTROL: USH 14 MILL & OVERLAY OVERVIEW - STAGE 3	SHEET 100	E



STAGE 1

MAINTENANCE OF TRAFFIC:

- ALL TRAFFIC REMAINS ON EXISTING ROADWAYS WITH ALL LANES OPEN TO TRAFFIC
- USH 14 EB LANES WILL BE REDUCED IN WIDTH FROM 12' TO 11'
- STOP CONTROL AT HARMONY TOWN HALL ROAD AND OLD HUMES ROAD CONTINUES
- MAINTAIN LOCAL ACCESS AT ALL TIMES

CONSTRUCTION TO BE COMPLETED:

- USH 14: CONSTRUCT WB RIGHT TURN LANES AT HARMONY TOWN HALL ROAD AND OLD HUMES ROAD

NOTES - STAGE 1:

REFER TO THE FOLLOWING STANDARD DETAIL DRAWINGS, AS WELL AS OTHER STANDARD DETAIL DRAWINGS AS NECESSARY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

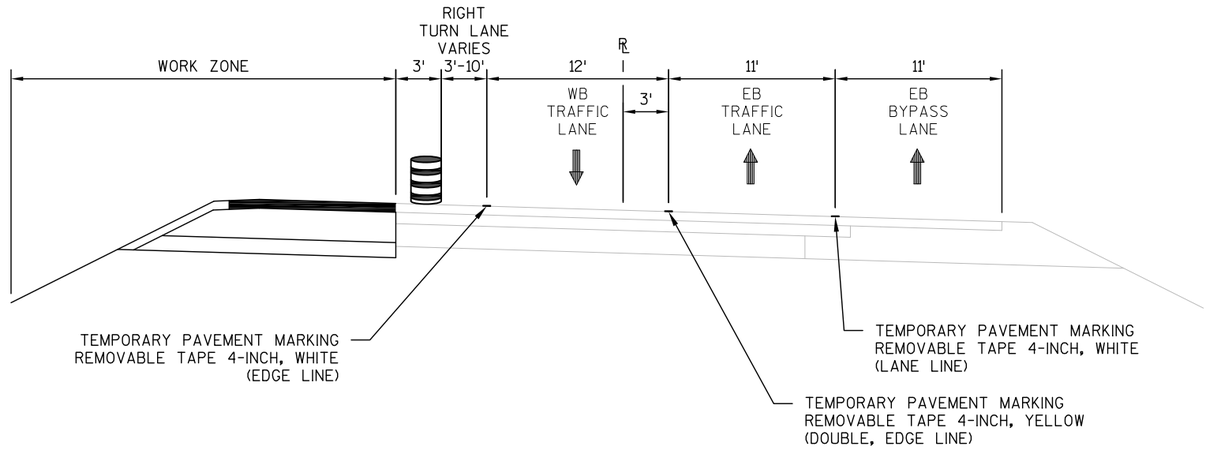
- TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
- TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

WORK ZONE

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC CONTROL: OLD HUMES RD/HARMONY TOWN HALL RD OVERVIEW- STAGE 1	SHEET 101	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\TRAFFIC CONTROL\5569-00-73\021201_TC_STAGE_1.DWG PLOT DATE : 10/15/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1:100_XREF
WISDOT/CADDS SHEET 42

2



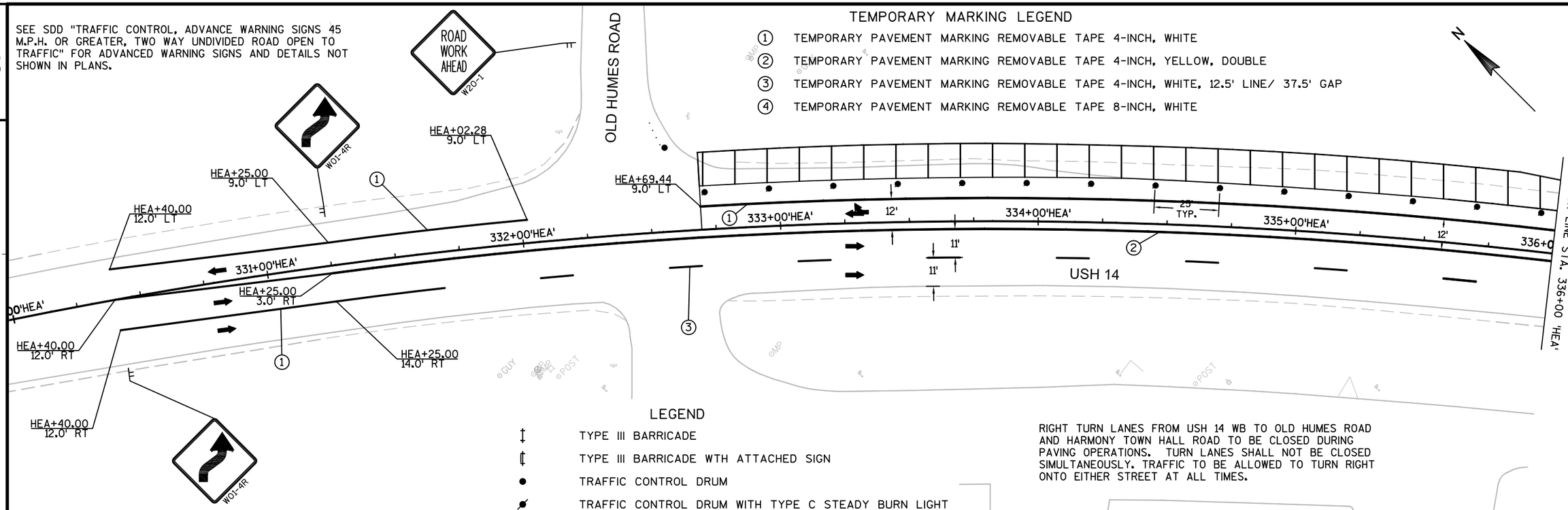
STAGE 1 TYPICAL SECTION

USH 14 AT OLD HUMES ROAD & USH 14 AT HARMONY TOWN HALL ROAD INTERSECTIONS

SEE SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC" FOR ADVANCED WARNING SIGNS AND DETAILS NOT SHOWN IN PLANS.

TEMPORARY MARKING LEGEND

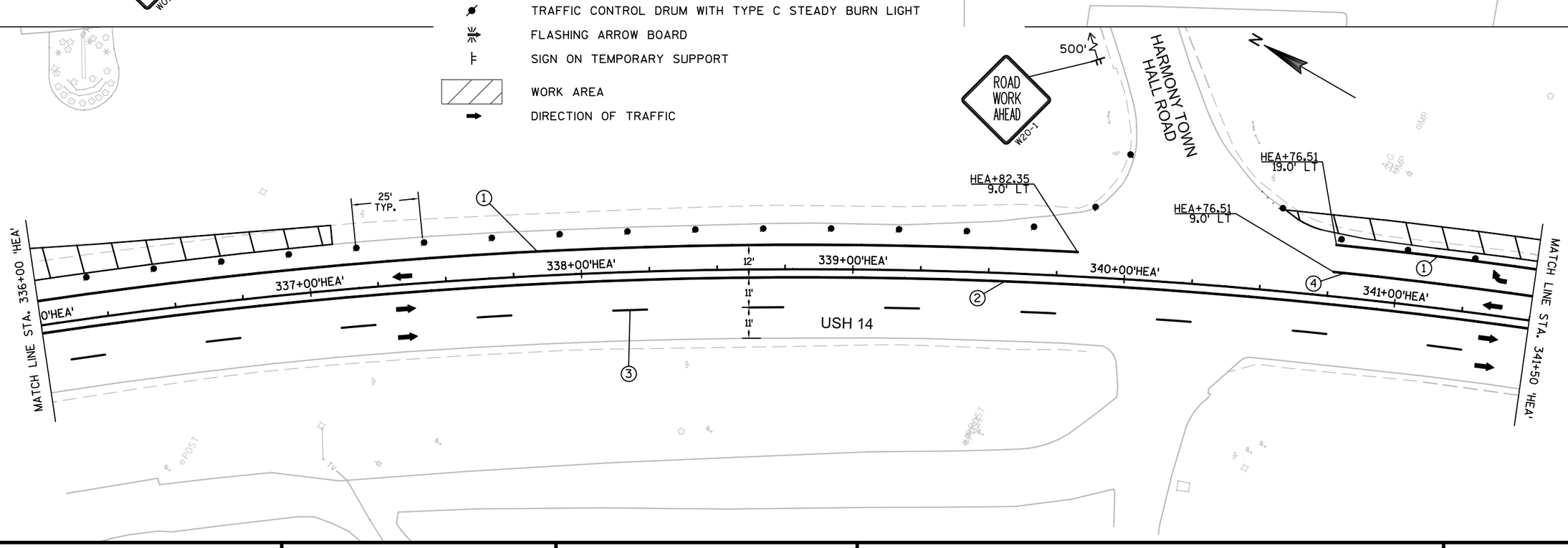
1. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH, WHITE
2. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH, YELLOW, DOUBLE
3. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH, WHITE, 12.5' LINE/ 37.5' GAP
4. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH, WHITE



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC

RIGHT TURN LANES FROM USH 14 WB TO OLD HUMES ROAD AND HARMONY TOWN HALL ROAD TO BE CLOSED DURING PAVING OPERATIONS. TURN LANES SHALL NOT BE CLOSED SIMULTANEOUSLY. TRAFFIC TO BE ALLOWED TO TURN RIGHT ONTO EITHER STREET AT ALL TIMES.



PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC CONTROL: USH 14 - STAGE 1	SHEET 103	E

2

TEMPORARY MARKING LEGEND

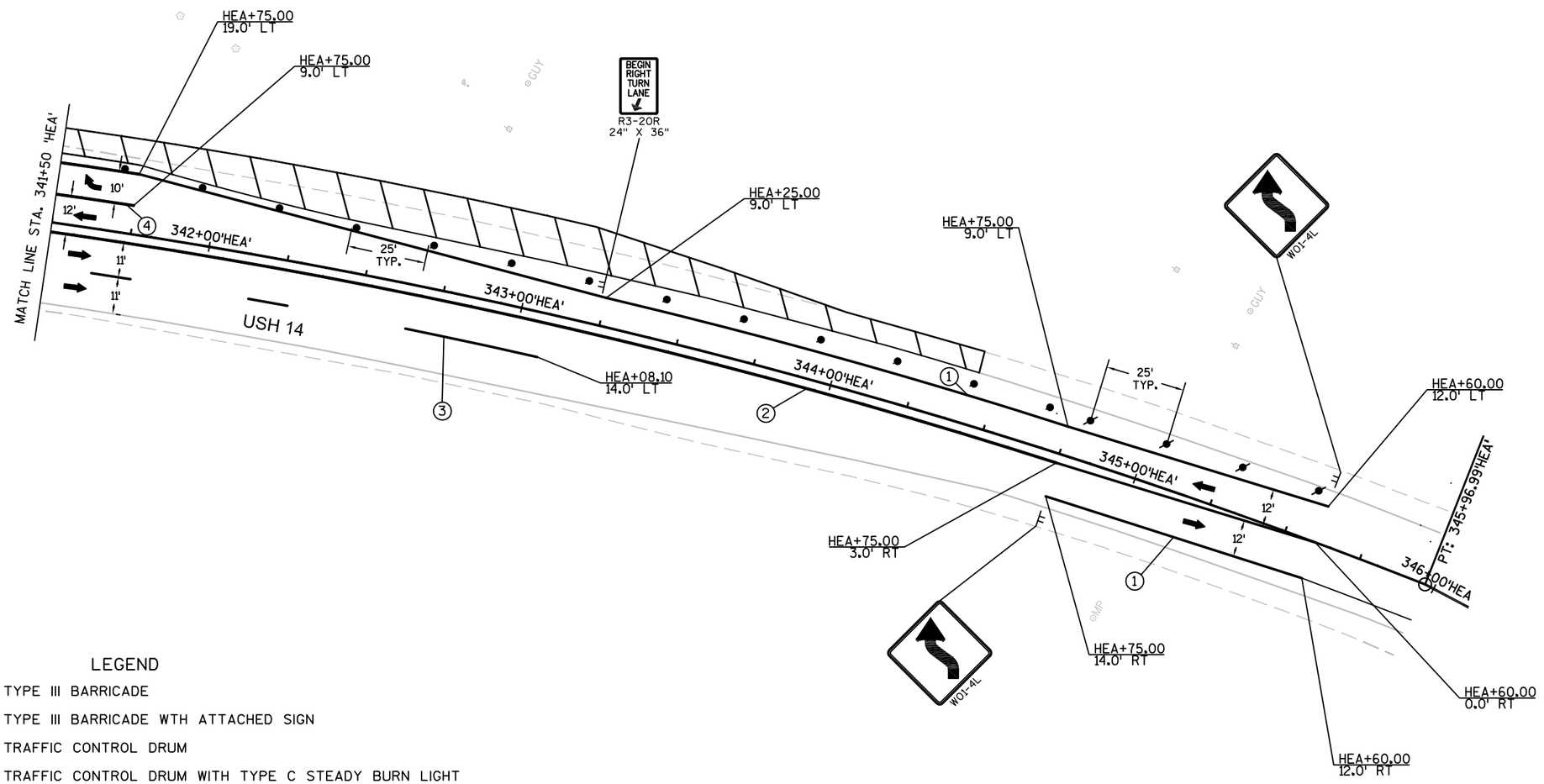
① TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH, WHITE

② TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH, YELLOW, DOUBLE

③ TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH, WHITE, 12.5' LINE/ 37.5' GAP

③ TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH, WHITE

SEE SDD "TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY" FOR ADVANCED WARNING SIGNS AND DETAILS NOT SHOWN IN PLANS.



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC

PROJECT NO:5569-00-73	HWY:USH 14	COUNTY:ROCK	TRAFFIC CONTROL: USH 14 - STAGE 1	SHEET 104	E

STAGE 1

MAINTENANCE OF TRAFFIC:

- ALL TRAFFIC REMAINS ON EXISTING ROADWAYS WITH ALL LANES OPEN TO TRAFFIC
- USH 14 THROUGH LANES REDUCED IN WIDTH FROM 15' TO 12'
- SIGNAL CONTROL AT MILWAUKEE ST CONTINUES
- MAINTAIN LOCAL ACCESS AT ALL TIMES

CONSTRUCTION TO BE COMPLETED:

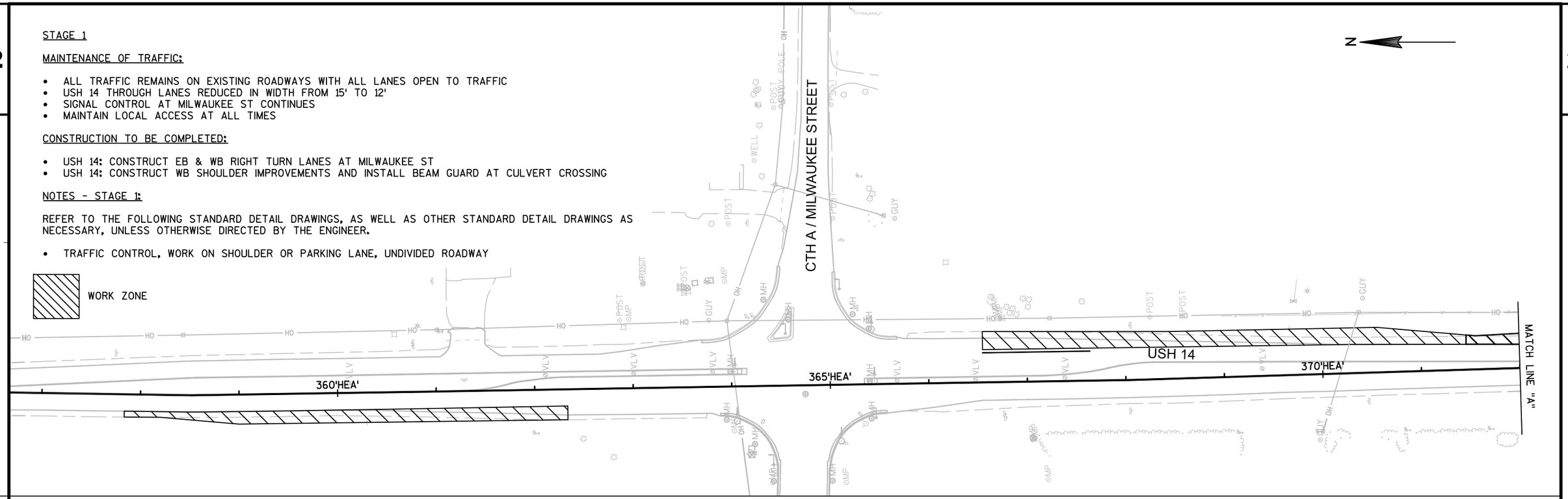
- USH 14: CONSTRUCT EB & WB RIGHT TURN LANES AT MILWAUKEE ST
- USH 14: CONSTRUCT WB SHOULDER IMPROVEMENTS AND INSTALL BEAM GUARD AT CULVERT CROSSING

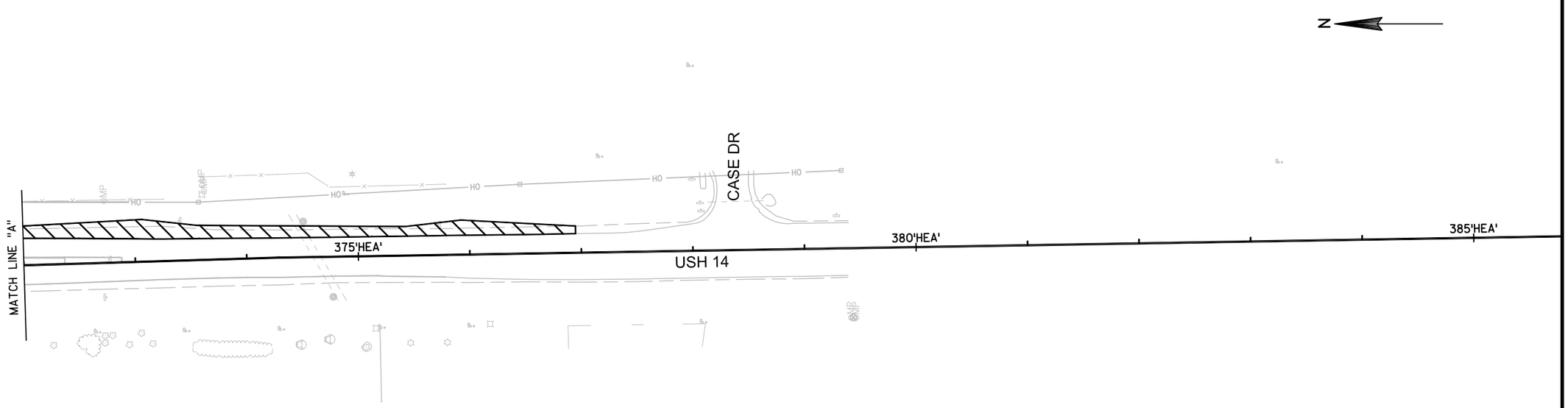
NOTES - STAGE 1:

REFER TO THE FOLLOWING STANDARD DETAIL DRAWINGS, AS WELL AS OTHER STANDARD DETAIL DRAWINGS AS NECESSARY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

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

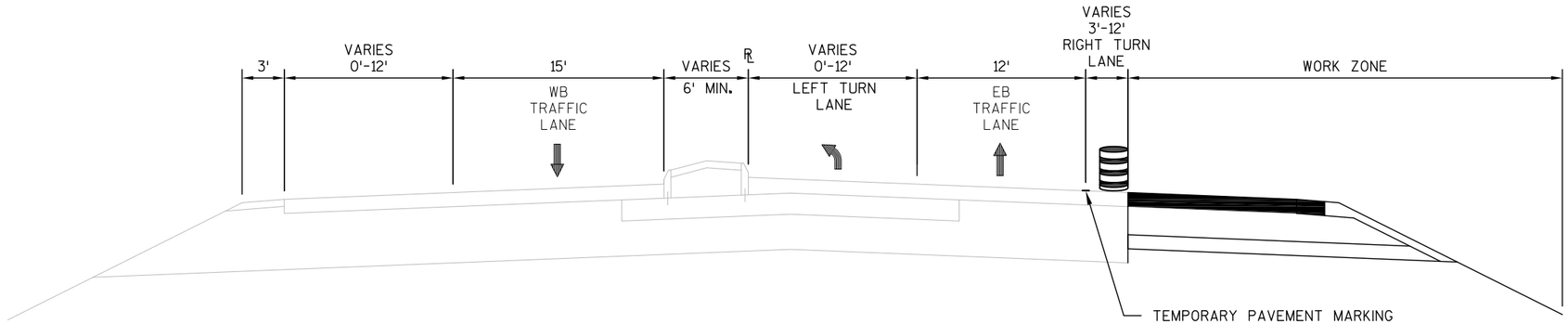
WORK ZONE





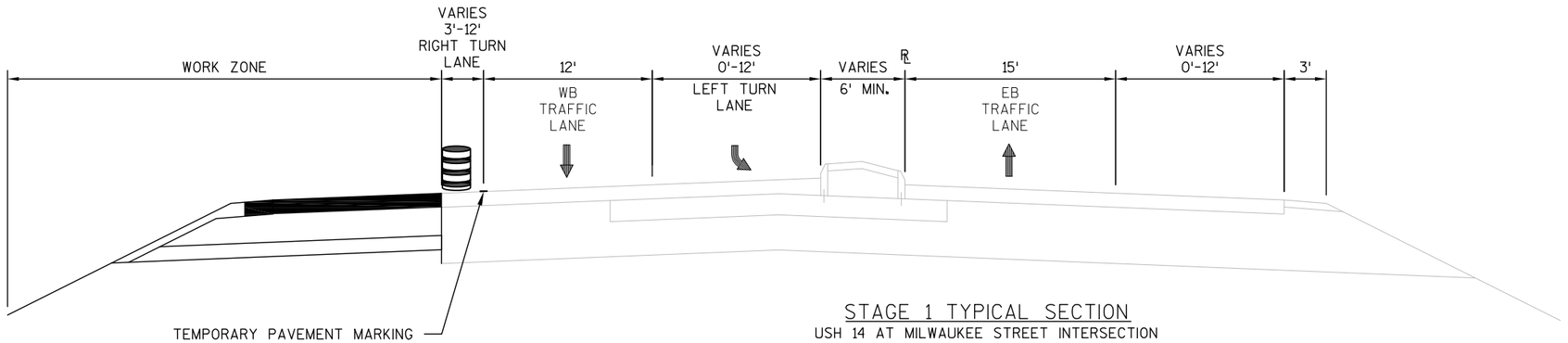
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC CONTROL: USH 14/MILWAUKEE STREET OVERVIEW - STAGE 1	SHEET 105	E

2



STAGE 1 TYPICAL SECTION

USH 14 AT MILWAUKEE STREET INTERSECTION
"NORTH APPROACH"



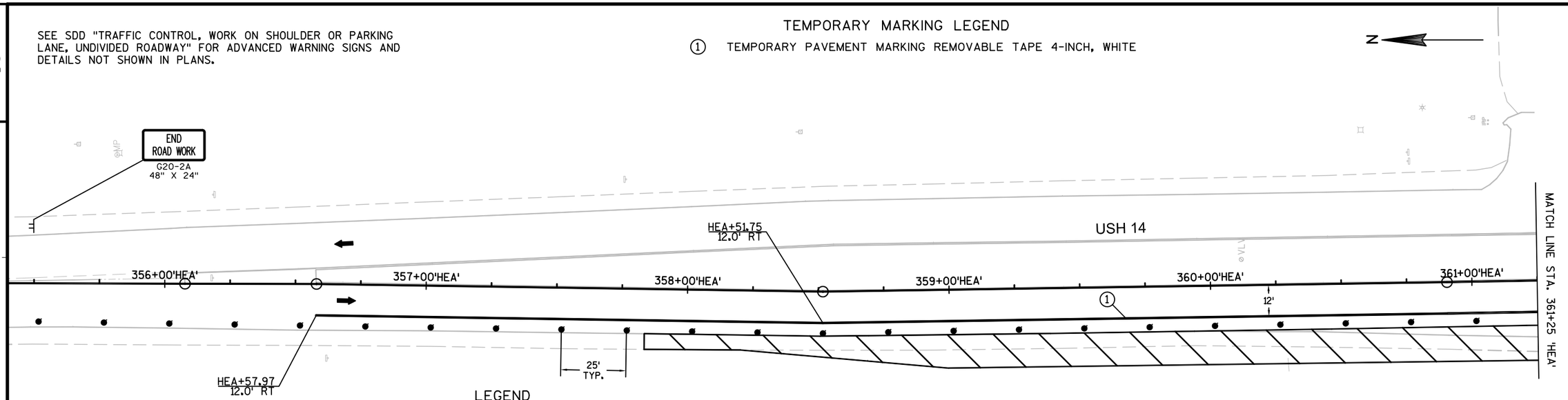
STAGE 1 TYPICAL SECTION

USH 14 AT MILWAUKEE STREET INTERSECTION
"SOUTH APPROACH"

SEE SDD "TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY" FOR ADVANCED WARNING SIGNS AND DETAILS NOT SHOWN IN PLANS.

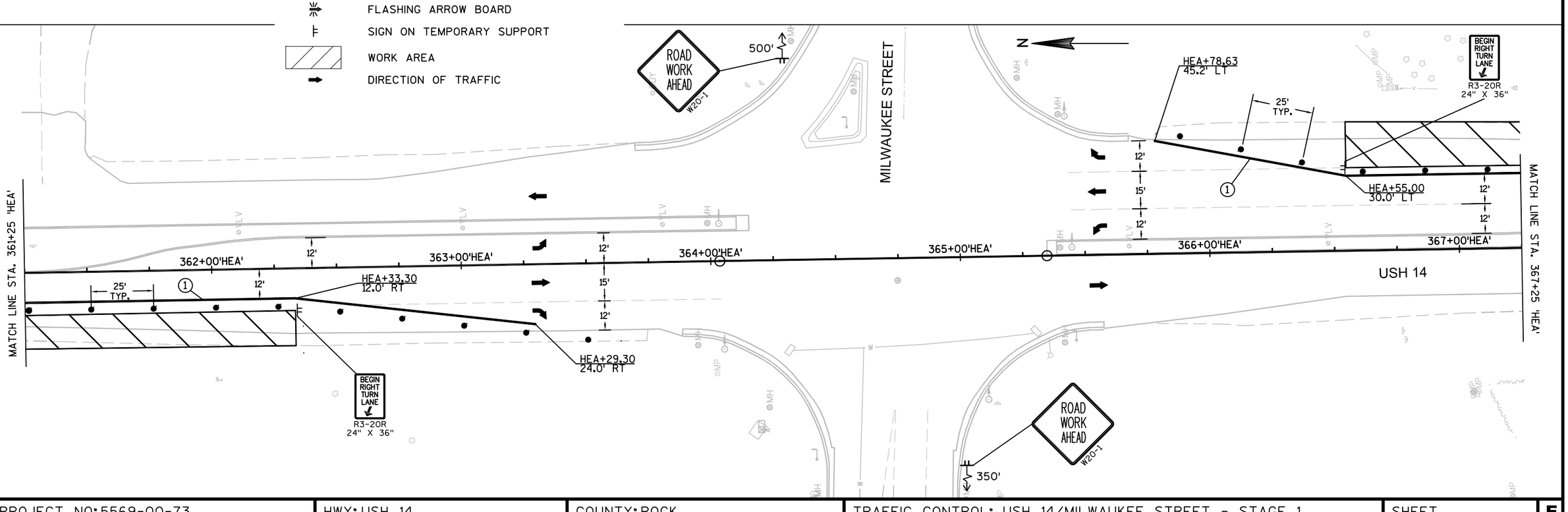
TEMPORARY MARKING LEGEND

① TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH, WHITE



LEGEND

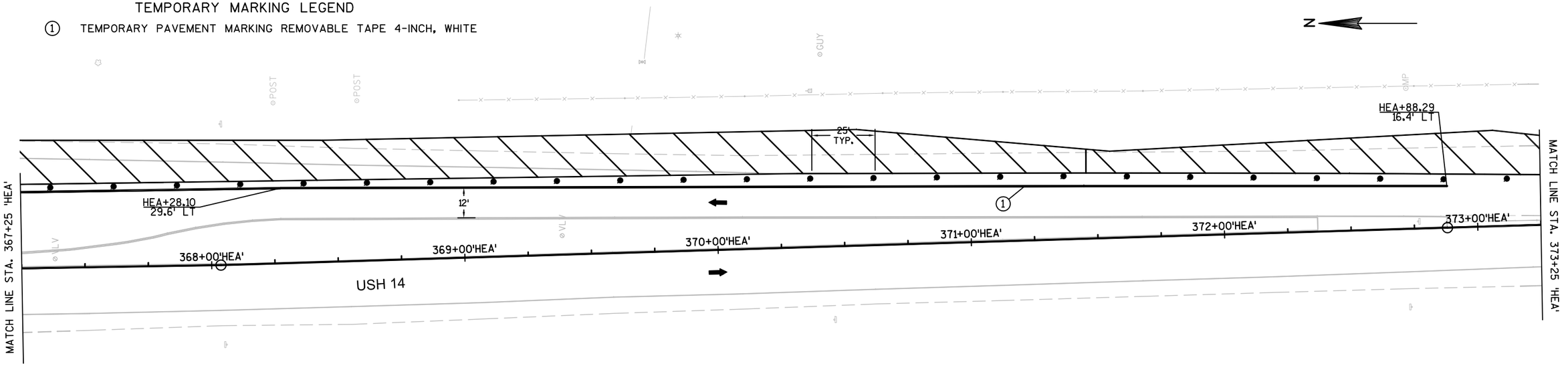
- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC



PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC CONTROL: USH 14/MILWAUKEE STREET - STAGE 1	SHEET 107	E

TEMPORARY MARKING LEGEND

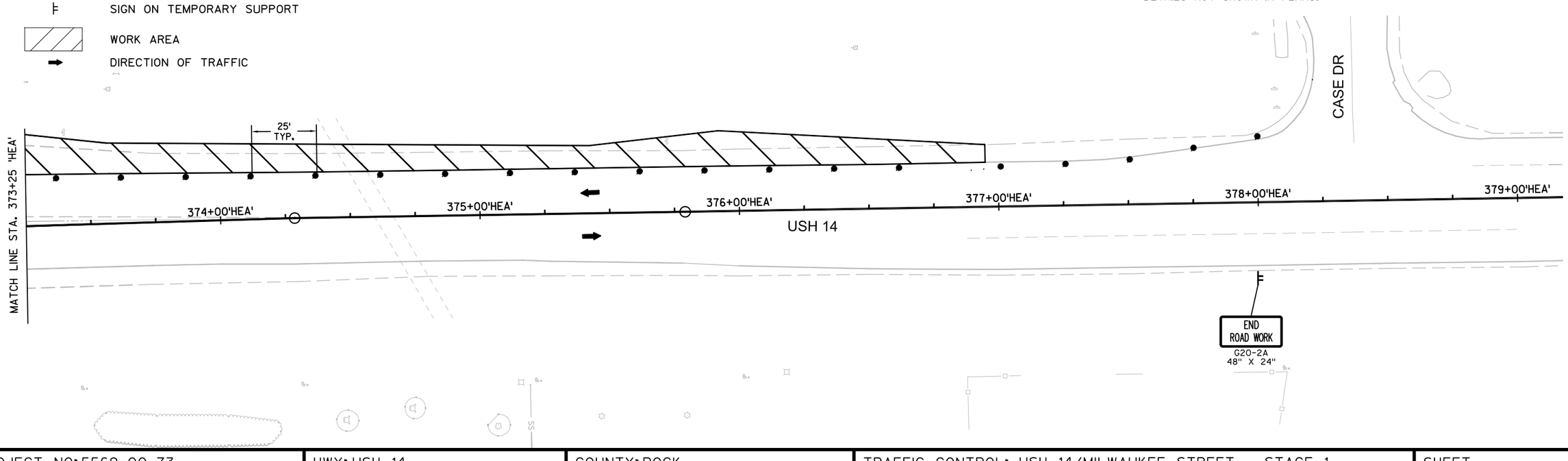
① TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH, WHITE



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC

SEE SDD "TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY" FOR ADVANCED WARNING SIGNS AND DETAILS NOT SHOWN IN PLANS.



PROJECT NO:5569-00-73	HWY:USH 14	COUNTY:ROCK	TRAFFIC CONTROL: USH 14/MILWAUKEE STREET - STAGE 1	SHEET 108	E

STAGE 2

MAINTENANCE OF TRAFFIC:

- USH 14 TRAFFIC ON EXISTING ROADWAY AND NEW PAVEMENT WITH ALL LANES OPEN TO TRAFFIC
- MILWAUKEE ST TRAFFIC REMAINS ON EXISTING ROADWAY WITH ALL LANES OPEN TO TRAFFIC
- USH 14 THROUGH LANES REDUCED IN WIDTH FROM 15' TO 12'
- SIGNAL CONTROL AT MILWAUKEE ST CONTINUES
- MAINTAIN LOCAL ACCESS AT ALL TIMES

CONSTRUCTION TO BE COMPLETED:

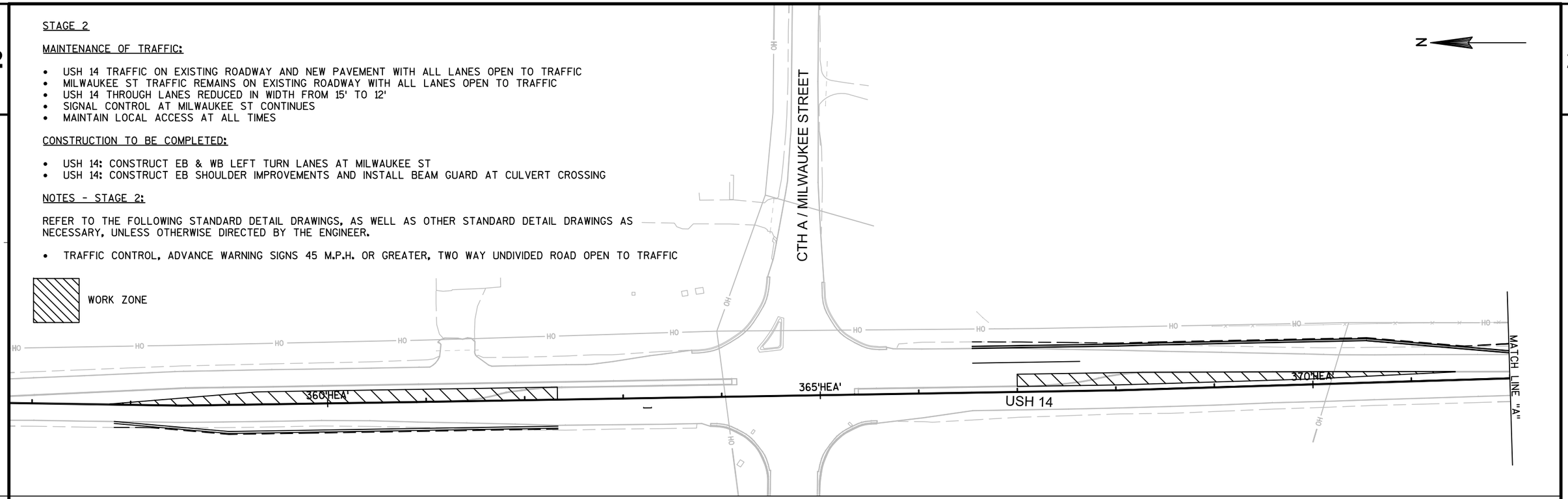
- USH 14: CONSTRUCT EB & WB LEFT TURN LANES AT MILWAUKEE ST
- USH 14: CONSTRUCT EB SHOULDER IMPROVEMENTS AND INSTALL BEAM GUARD AT CULVERT CROSSING

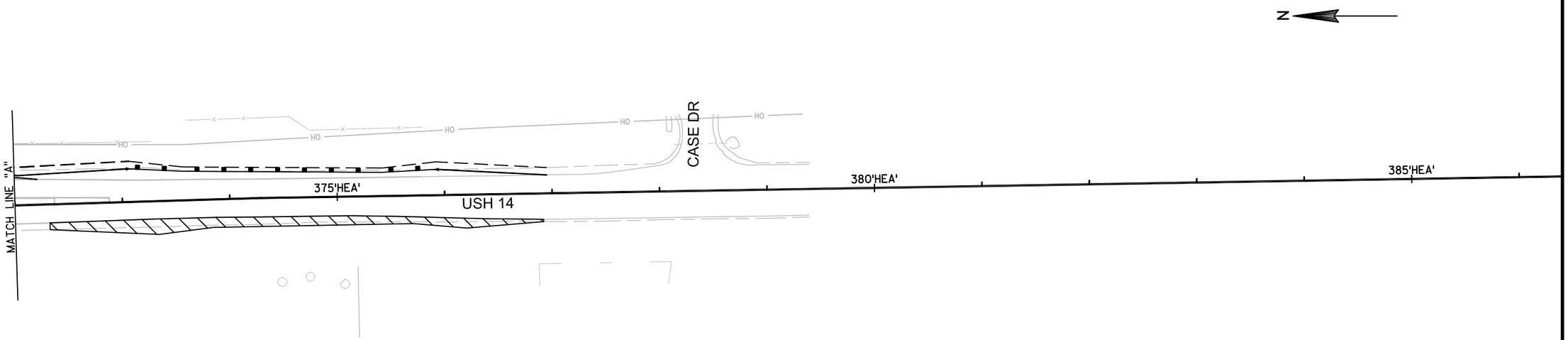
NOTES - STAGE 2:

REFER TO THE FOLLOWING STANDARD DETAIL DRAWINGS, AS WELL AS OTHER STANDARD DETAIL DRAWINGS AS NECESSARY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

- TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC

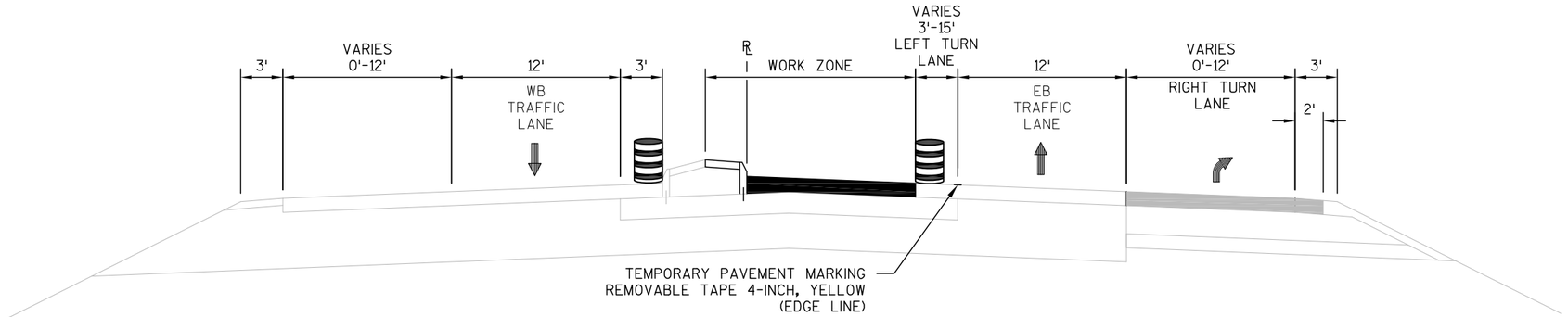
WORK ZONE



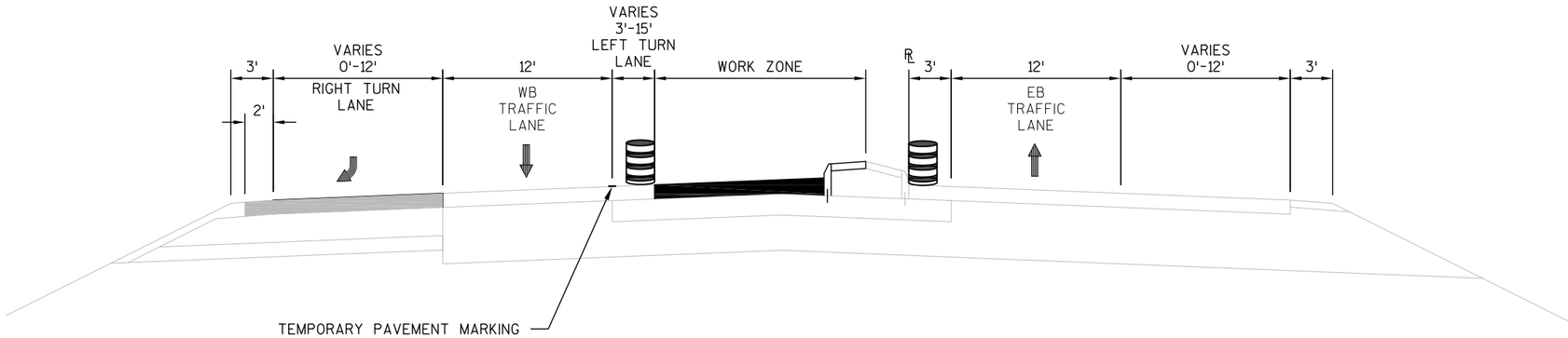


PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC CONTROL: USH 14/MILWAUKEE STREET OVERVIEW - STAGE 2	SHEET 109	E

2



STAGE 2 TYPICAL SECTION
USH 14 AT MILWAUKEE STREET INTERSECTION
"NORTH APPROACH"



STAGE 2 TYPICAL SECTION
USH 14 AT MILWAUKEE STREET INTERSECTION
"SOUTH APPROACH"

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PLAN: TYPICAL SECTIONS - TRAFFIC CONTROL STAGING	SHEET 110	E

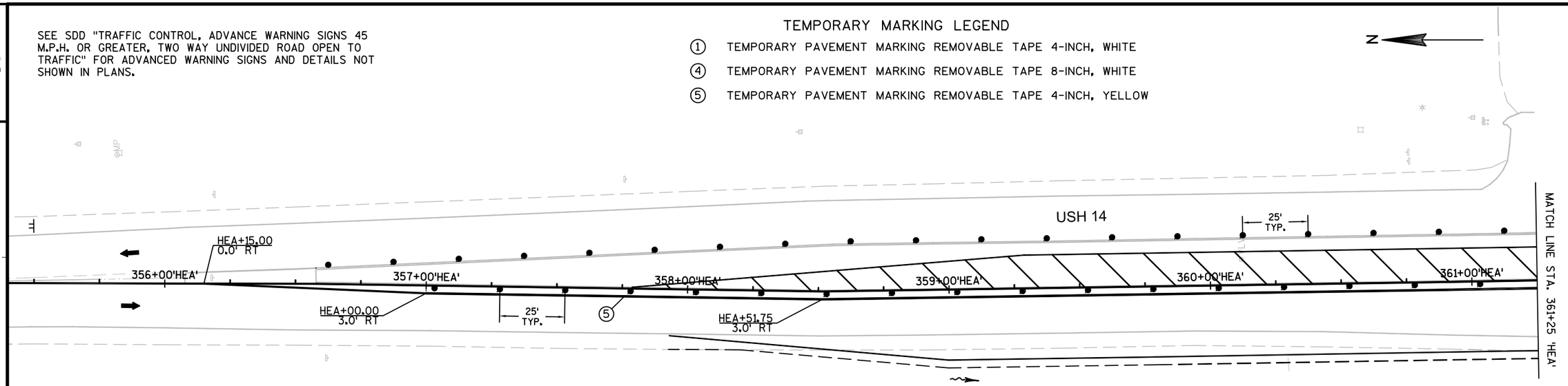
SEE SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC" FOR ADVANCED WARNING SIGNS AND DETAILS NOT SHOWN IN PLANS.

TEMPORARY MARKING LEGEND

① TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH, WHITE

④ TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH, WHITE

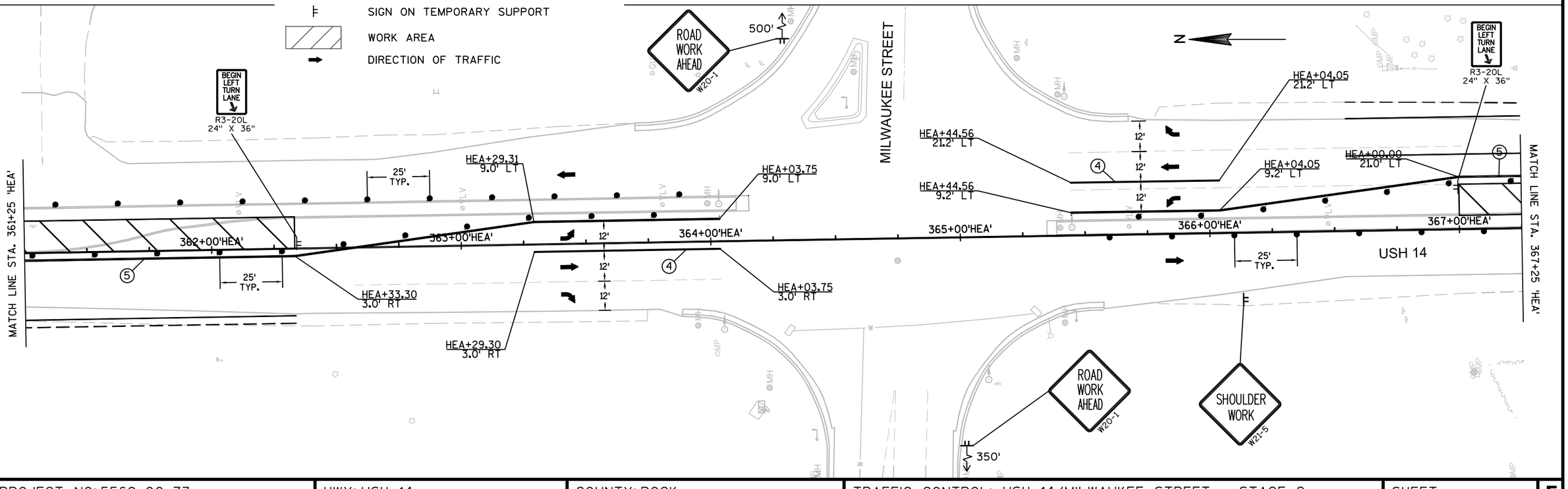
⑤ TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH, YELLOW



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC

DURING LOOP DETECTOR WORK, TRAFFIC ON EB AND WB USH 14 WILL BYPASS WORK ZONE USING RIGHT TURN LANE. AT INTERSECTION MAINTAIN LANES FOR LEFT TURNING, THROUGH, AND RIGHT TURNING MOVEMENTS FOR BOTH THE EB AND WB TRAFFIC.



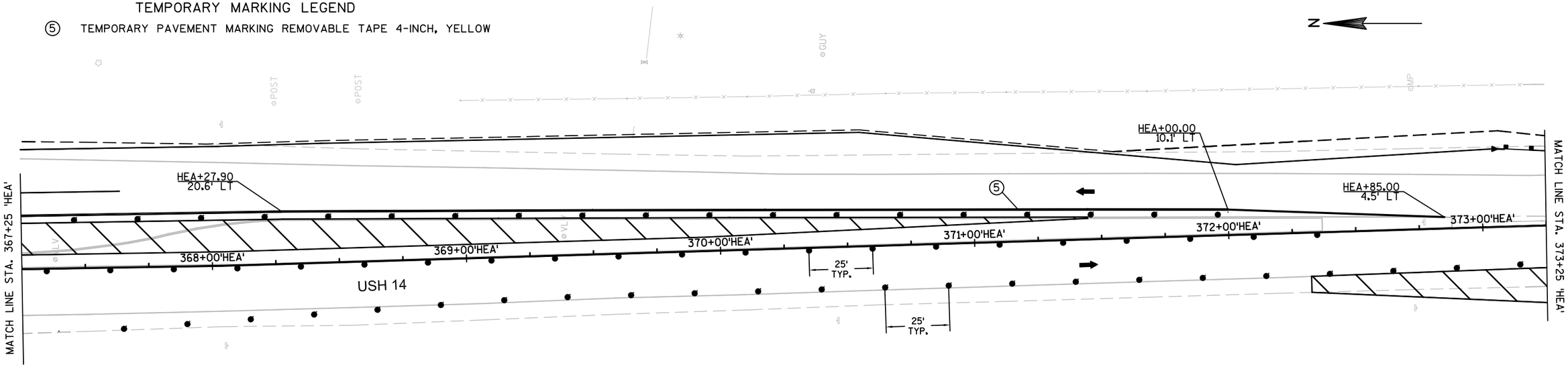
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC CONTROL: USH 14/MILWAUKEE STREET - STAGE 2	SHEET 111	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\TRAFFIC CONTROL\5569-00-73\025002_TC_STAGE_2_MILWAUKEE.DWG PLOT DATE : 10/15/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

TEMPORARY MARKING LEGEND

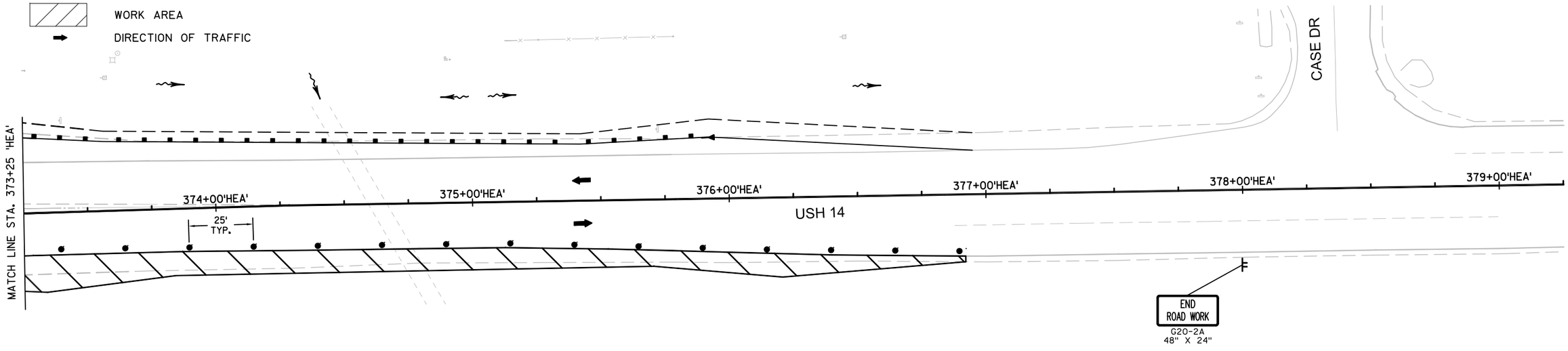
⑤ TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH, YELLOW



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC

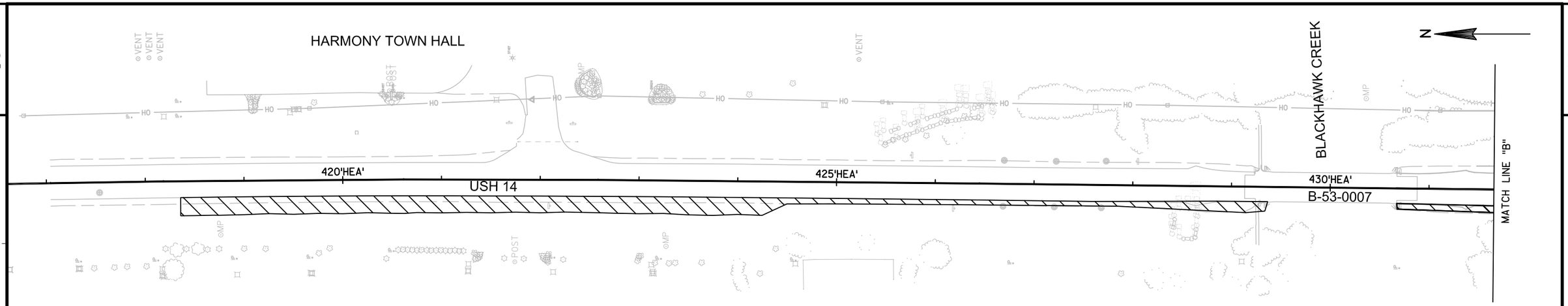
SEE SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC" FOR ADVANCED WARNING SIGNS AND DETAILS NOT SHOWN IN PLANS.



PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC CONTROL: USH 14/MILWAUKEE STREET - STAGE 2	SHEET 112	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\TRAFFIC CONTROL\5569-00-73\025002_TC_STAGE_2_MILWAUKEE.DWG PLOT DATE : 10/15/2014 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42



STAGE 1

MAINTENANCE OF TRAFFIC:

- ALL TRAFFIC REMAINS ON EXISTING ROADWAYS WITH ALL LANES OPEN TO TRAFFIC EXCEPT SHOULDER CLOSURES
- MAINTAIN LOCAL ACCESS AT ALL TIMES

CONSTRUCTION TO BE COMPLETED:

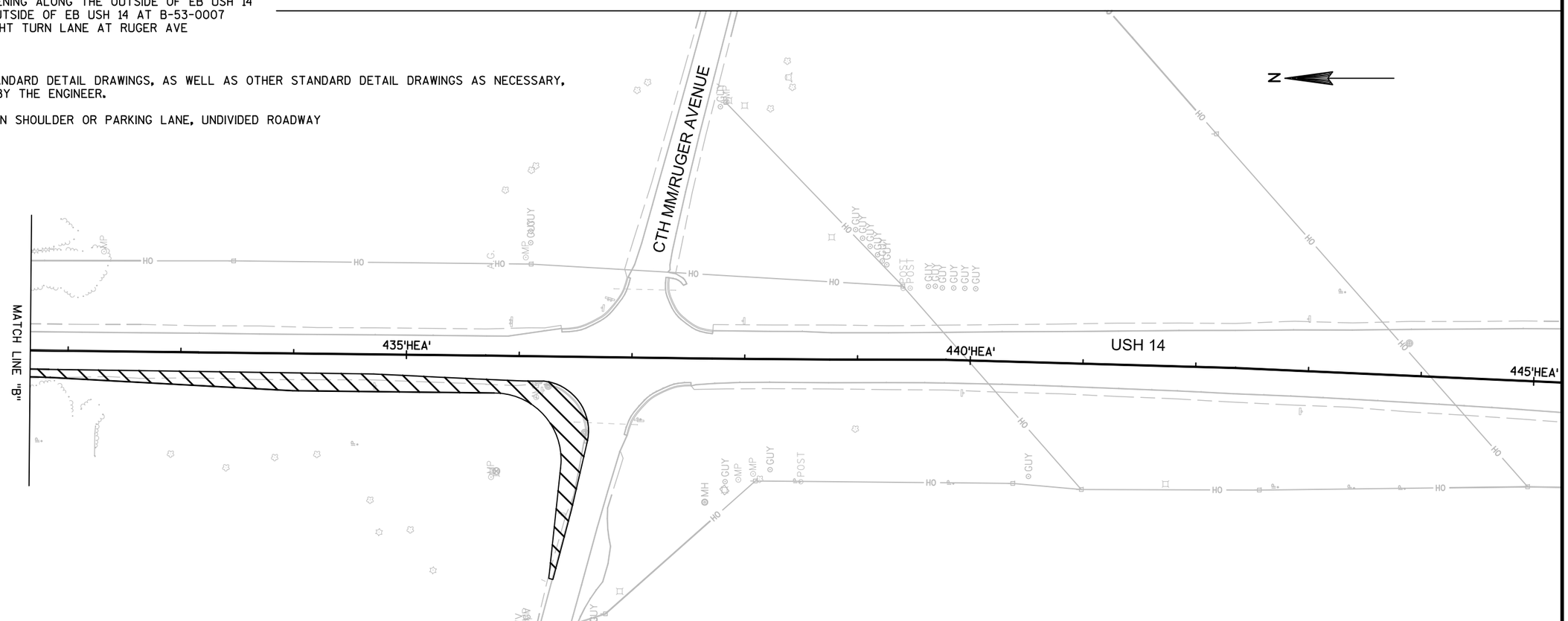
- CONSTRUCT SHOULDER WIDENING ALONG THE OUTSIDE OF EB USH 14
- REPLACE GUARDRAIL ON OUTSIDE OF EB USH 14 AT B-53-0007
- CONSTRUCT EB USH 14 RIGHT TURN LANE AT RUGER AVE

NOTES - STAGE 1:

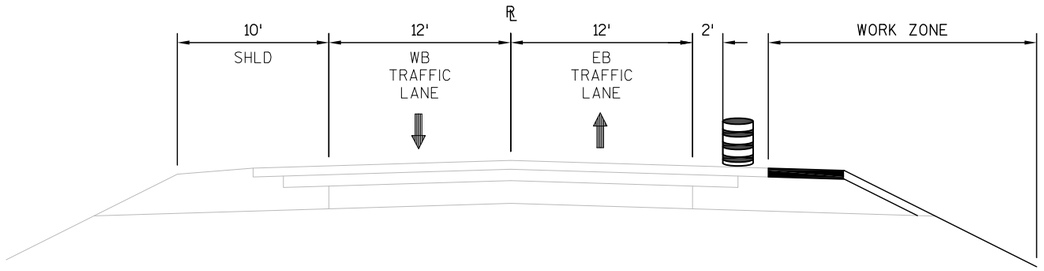
REFER TO THE FOLLOWING STANDARD DETAIL DRAWINGS, AS WELL AS OTHER STANDARD DETAIL DRAWINGS AS NECESSARY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

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

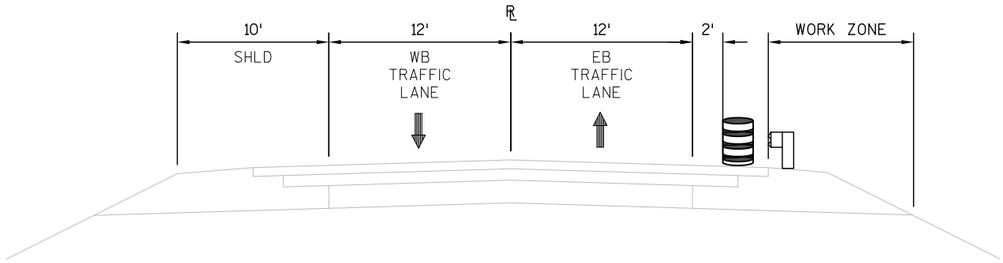
WORK ZONE



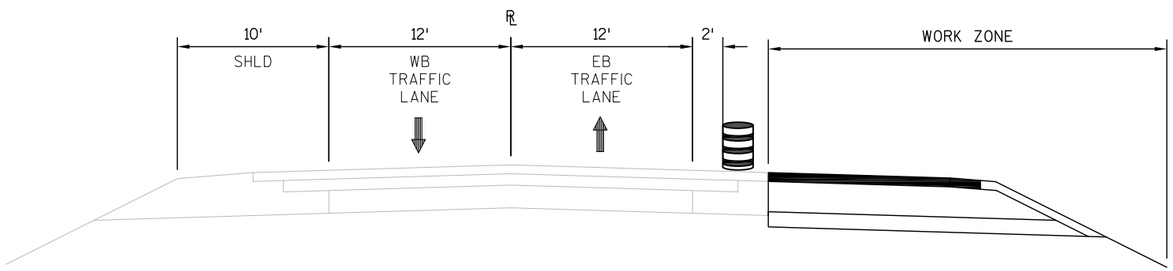
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC CONTROL: USH 14 SHOULDER IMPROVEMENT - RUGER OVERVIEW - STAGE 1	SHEET 113	E



STAGE 1 TYPICAL SECTION
USH 14
SHOULDER WIDENING



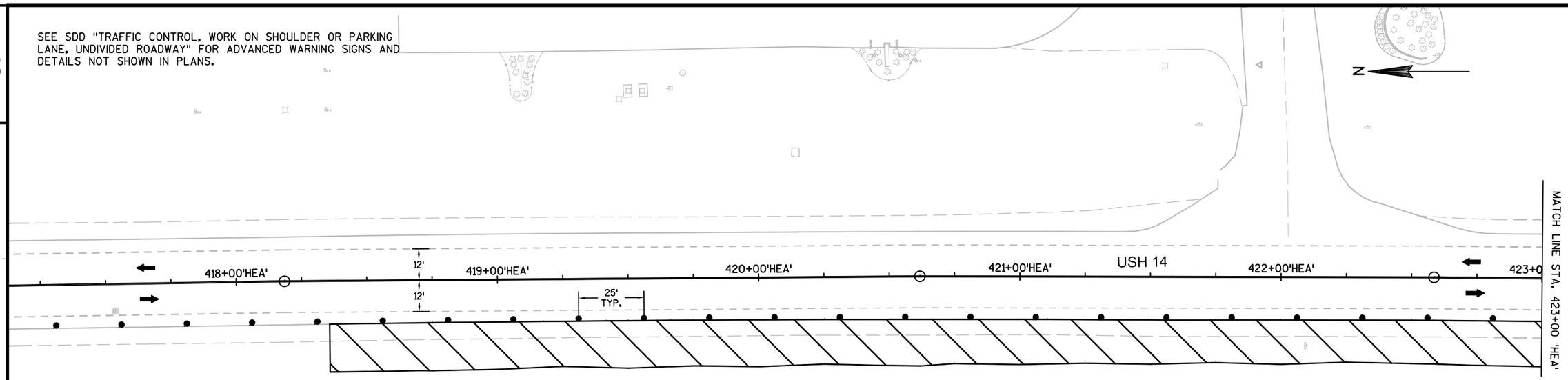
STAGE 1 TYPICAL SECTION
USH 14
GUARDRAIL REPLACEMENT



STAGE 1 TYPICAL SECTION
USH 14 AT RUGER AVENUE INTERSECTION
"NORTH APPROACH"

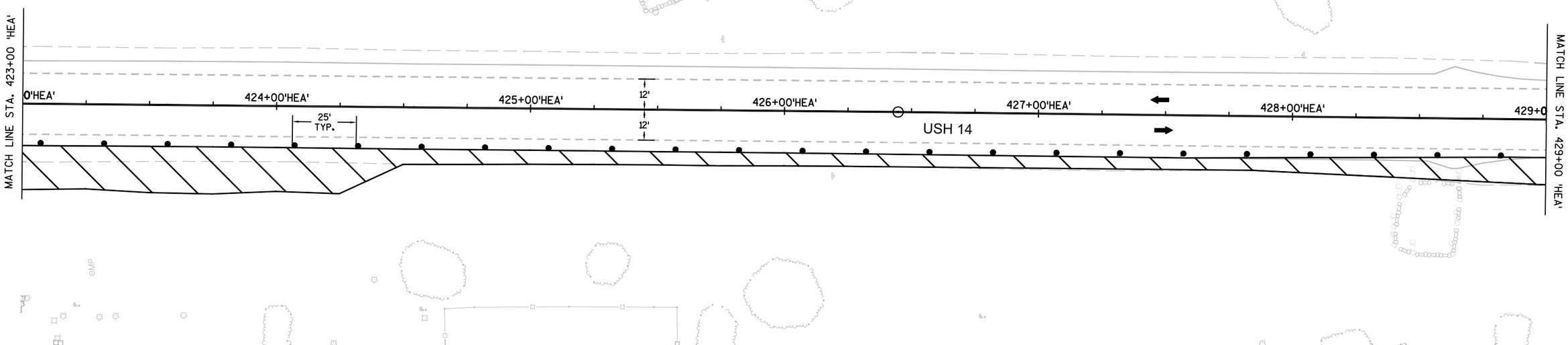
PROJECT NO:5569-00-73	HWY: USH 14	COUNTY:ROCK	PLAN: TYPICAL SECTIONS - TRAFFIC CONTROL STAGING	SHEET 114 E

SEE SDD "TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY" FOR ADVANCED WARNING SIGNS AND DETAILS NOT SHOWN IN PLANS.



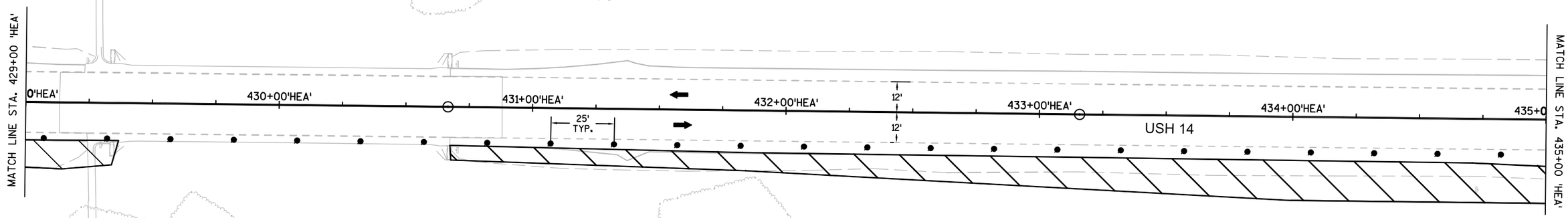
LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC



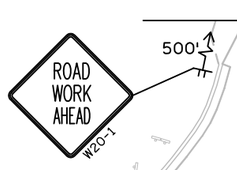
PROJECT NO:5569-00-73	HWY:USH 14	COUNTY:ROCK	TRAFFIC CONTROL: USH 14 - STAGE 1	SHEET 115	E

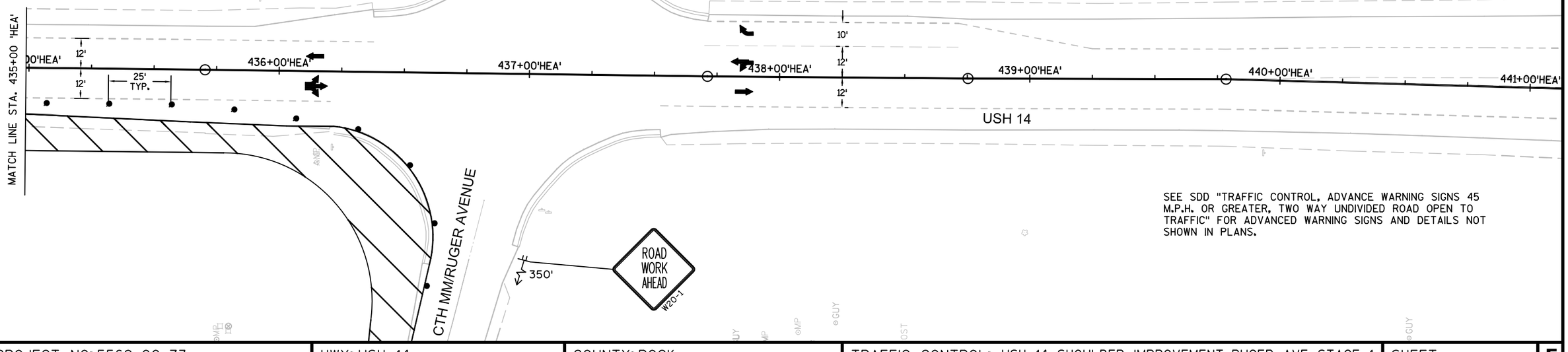
2



LEGEND

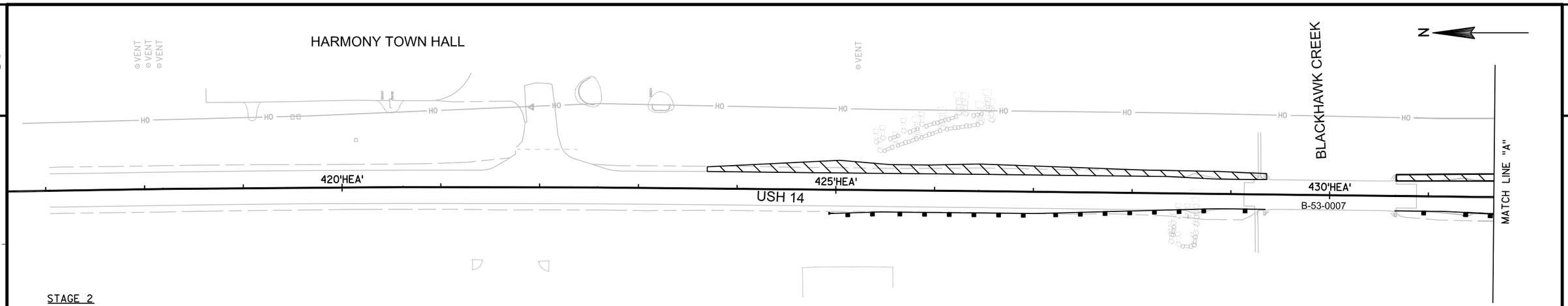
- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC





SEE SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC" FOR ADVANCED WARNING SIGNS AND DETAILS NOT SHOWN IN PLANS.

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC CONTROL: USH 14 SHOULDER IMPROVEMENT-RUGER AVE STAGE 1	SHEET 116	E



STAGE 2

MAINTENANCE OF TRAFFIC:

- USH 14 TRAFFIC ON EXISTING ROADWAY AND TEMPORARY PAVEMENT WITH ALL LANES OPEN TO TRAFFIC
- RUGER AVE TRAFFIC REMAINS ON EXISTING ROADWAY WITH ALL LANES OPEN TO TRAFFIC
- STOP CONTROL AT RUGER AVE CONTINUES
- MAINTAIN LOCAL ACCESS AT ALL TIMES

CONSTRUCTION TO BE COMPLETED:

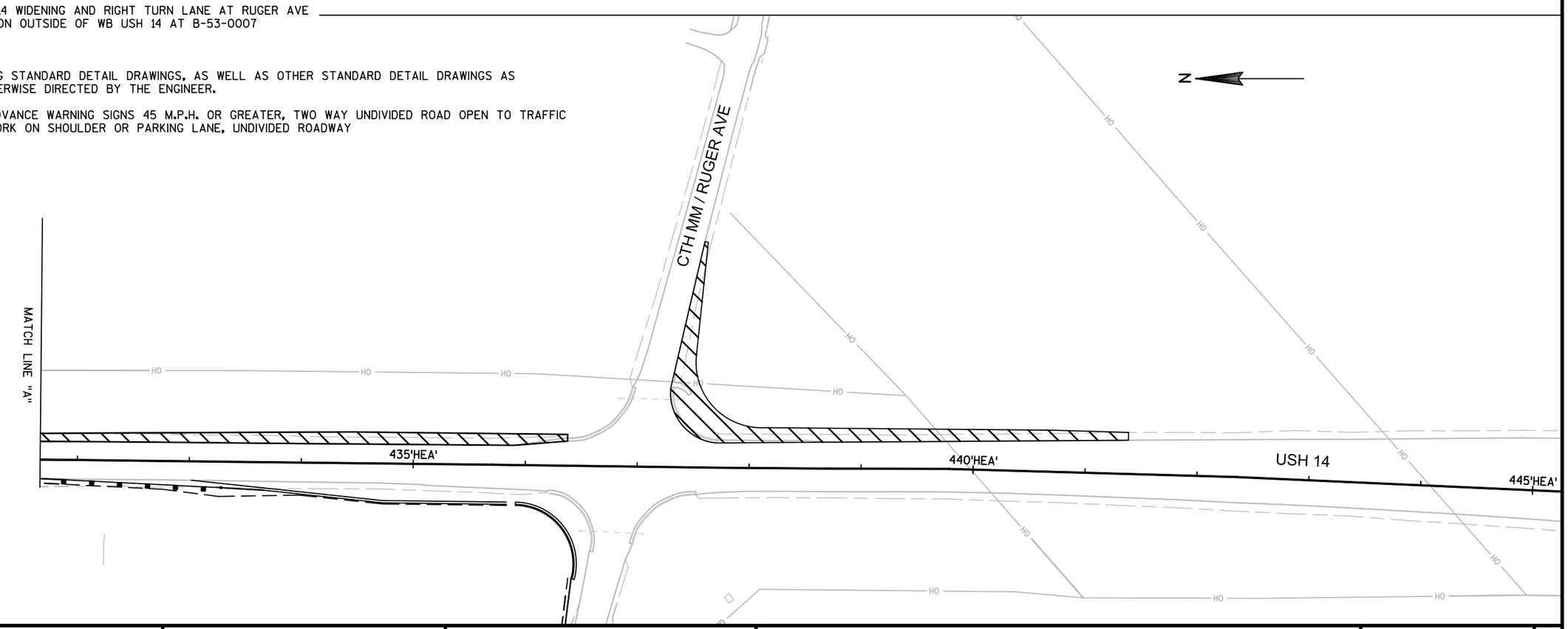
- CONSTRUCT WB USH 14 WIDENING AND RIGHT TURN LANE AT RUGER AVE
- REPLACE GUARDRAIL ON OUTSIDE OF WB USH 14 AT B-53-0007

NOTES - STAGE 2:

REFER TO THE FOLLOWING STANDARD DETAIL DRAWINGS, AS WELL AS OTHER STANDARD DETAIL DRAWINGS AS NECESSARY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

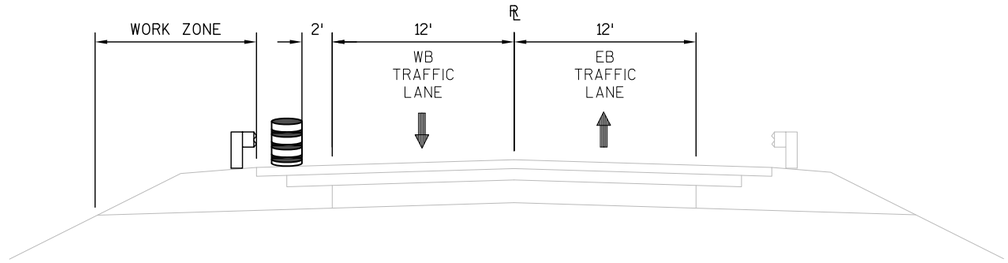
- TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
- TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

WORK ZONE

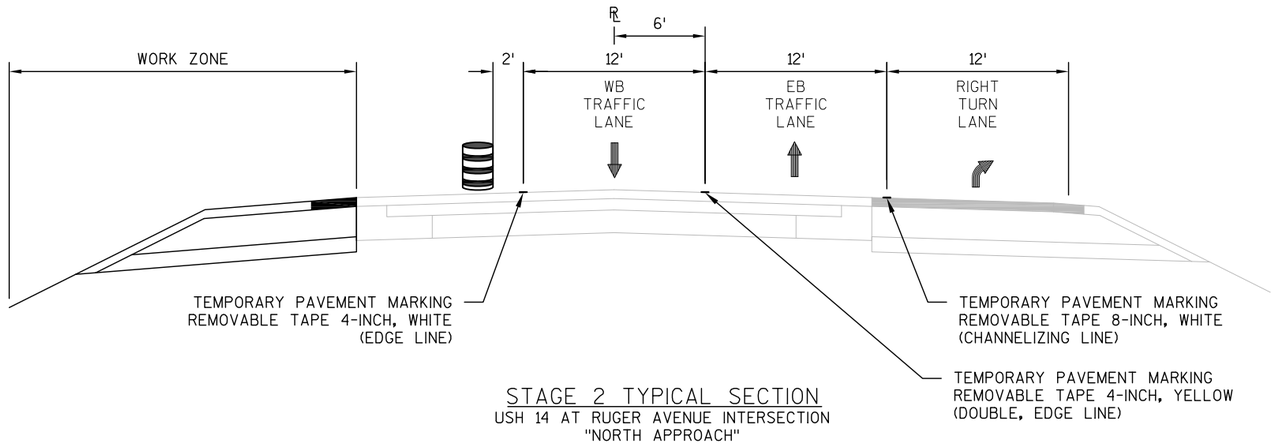


PROJECT NO:5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC CONTROL: OVERVIEW USH 14 SHOULDER IMPROVEMENT-RUGER STAGE 2	SHEET 117	E

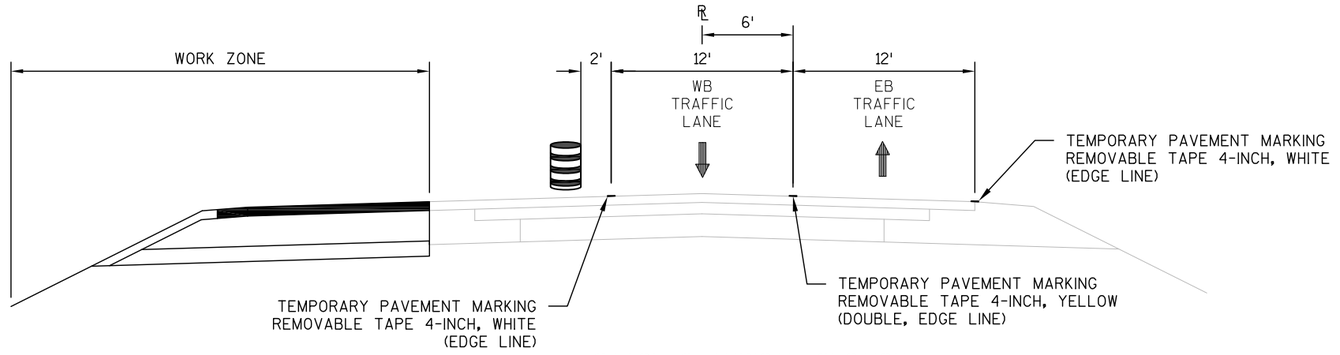
2



STAGE 2 TYPICAL SECTION
USH 14
GUARDRAIL REPLACEMENT

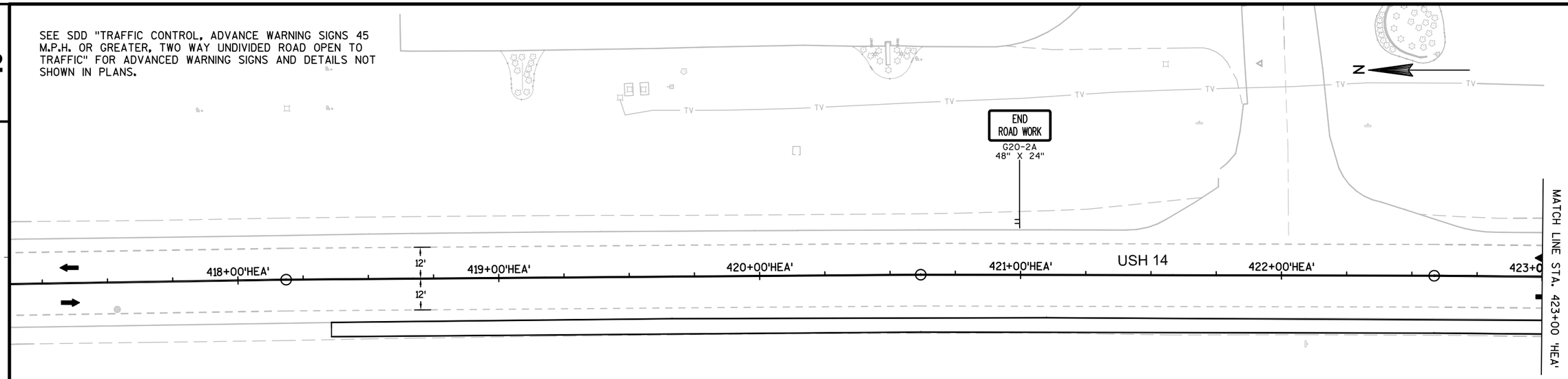


STAGE 2 TYPICAL SECTION
USH 14 AT RUGER AVENUE INTERSECTION
"NORTH APPROACH"



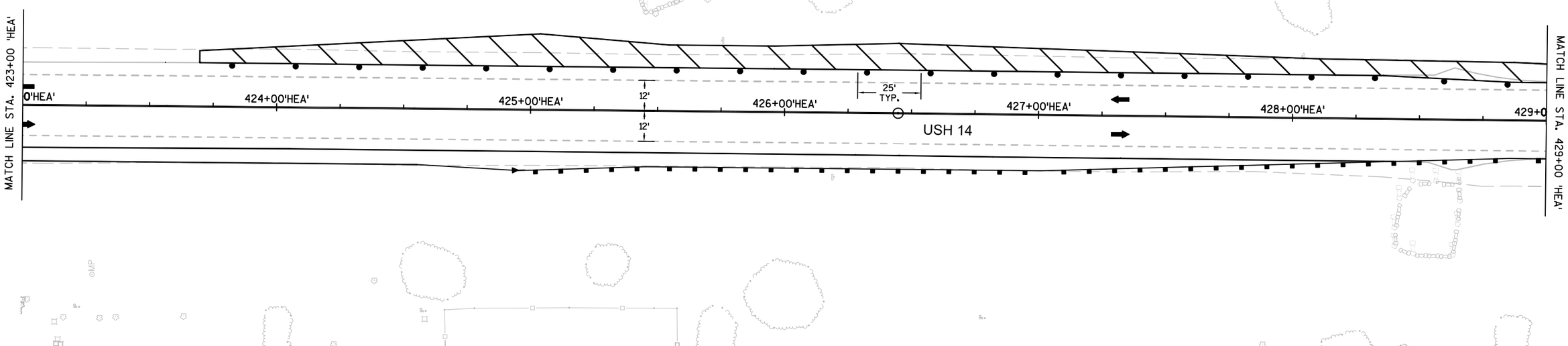
STAGE 2 TYPICAL SECTION
USH 14 AT RUGER AVENUE INTERSECTION
"SOUTH APPROACH"

SEE SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC" FOR ADVANCED WARNING SIGNS AND DETAILS NOT SHOWN IN PLANS.



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC



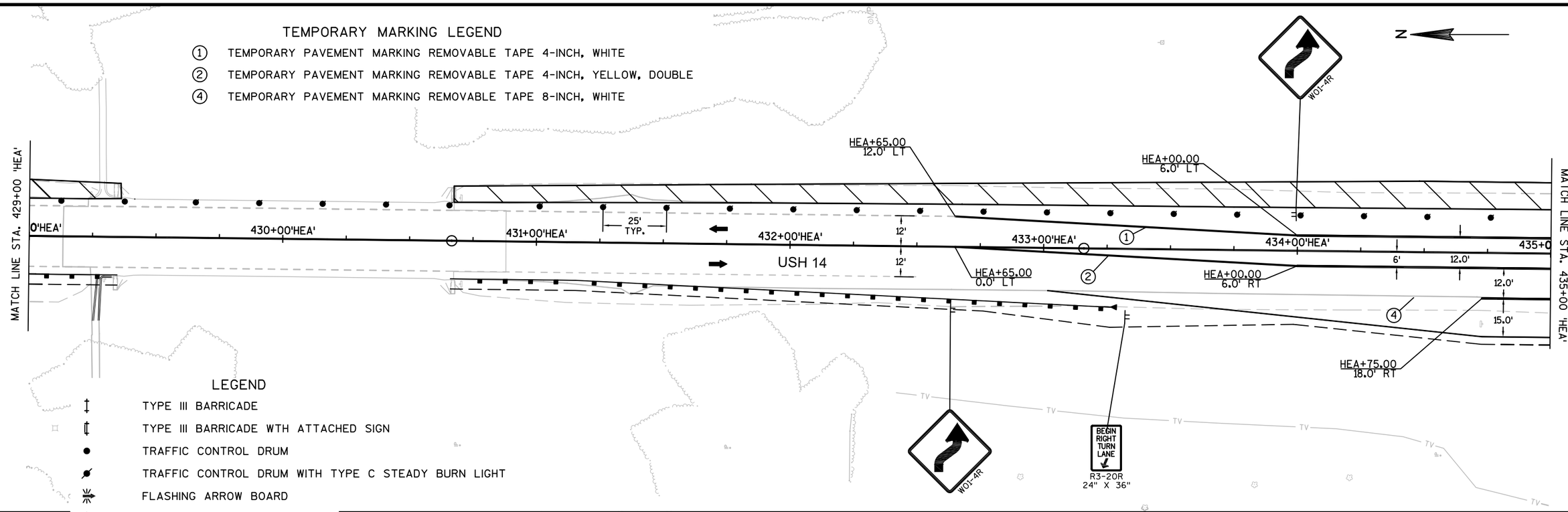
PROJECT NO:5569-00-73	HWY:USH 14	COUNTY:ROCK	TRAFFIC CONTROL: USH 14 - STAGE 2	SHEET 119	E

TEMPORARY MARKING LEGEND

① TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH, WHITE

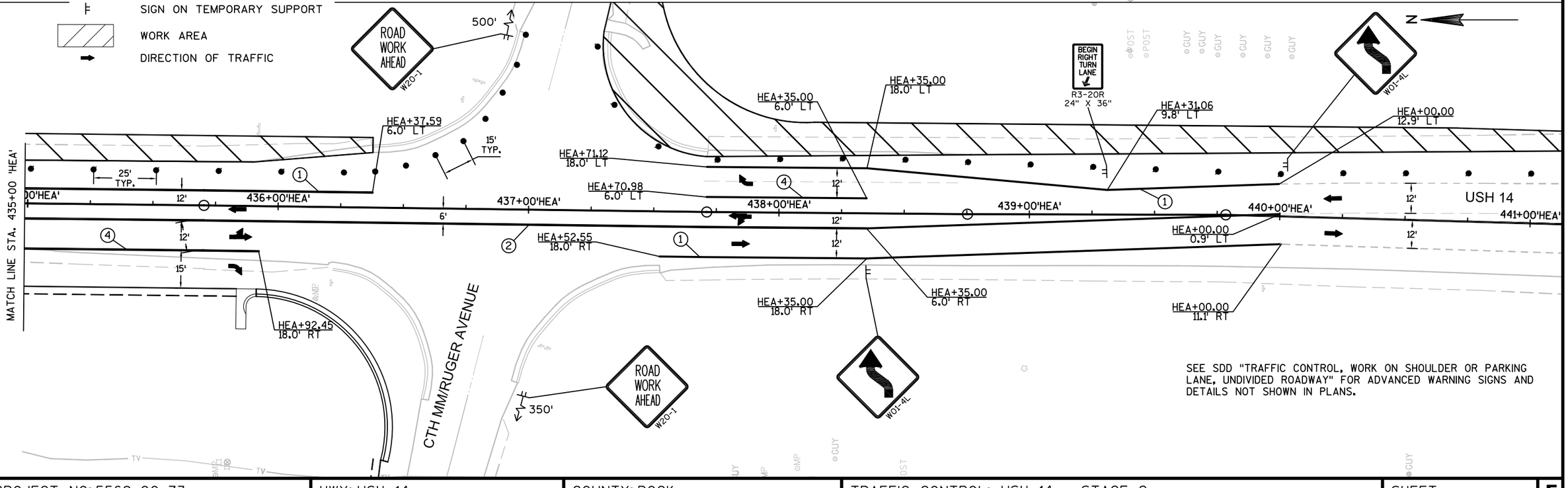
② TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH, YELLOW, DOUBLE

④ TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH, WHITE



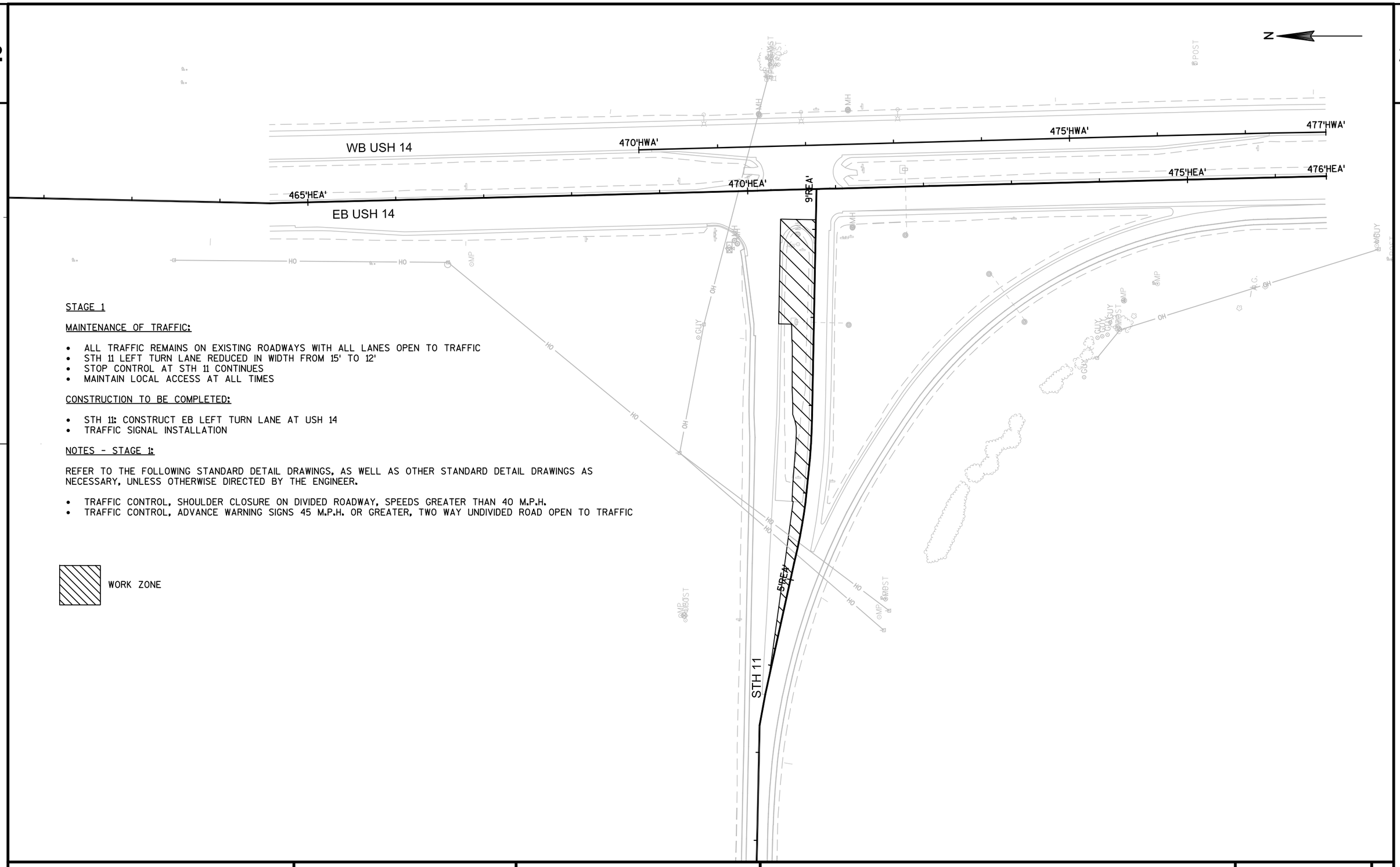
LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC



SEE SDD "TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY" FOR ADVANCED WARNING SIGNS AND DETAILS NOT SHOWN IN PLANS.

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC CONTROL: USH 14 - STAGE 2	SHEET 120	E



STAGE 1

MAINTENANCE OF TRAFFIC:

- ALL TRAFFIC REMAINS ON EXISTING ROADWAYS WITH ALL LANES OPEN TO TRAFFIC
- STH 11 LEFT TURN LANE REDUCED IN WIDTH FROM 15' TO 12'
- STOP CONTROL AT STH 11 CONTINUES
- MAINTAIN LOCAL ACCESS AT ALL TIMES

CONSTRUCTION TO BE COMPLETED:

- STH 11: CONSTRUCT EB LEFT TURN LANE AT USH 14
- TRAFFIC SIGNAL INSTALLATION

NOTES - STAGE 1:

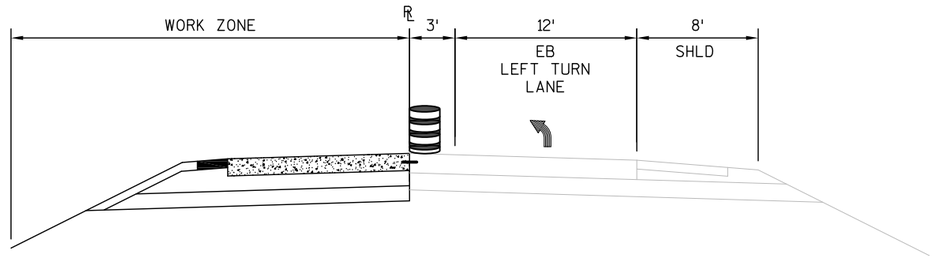
REFER TO THE FOLLOWING STANDARD DETAIL DRAWINGS, AS WELL AS OTHER STANDARD DETAIL DRAWINGS AS NECESSARY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

- TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H.
- TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC

WORK ZONE

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC CONTROL: STH 11/USH 14 INTERSECTION OVERVIEW - STAGE 1	SHEET 121	E

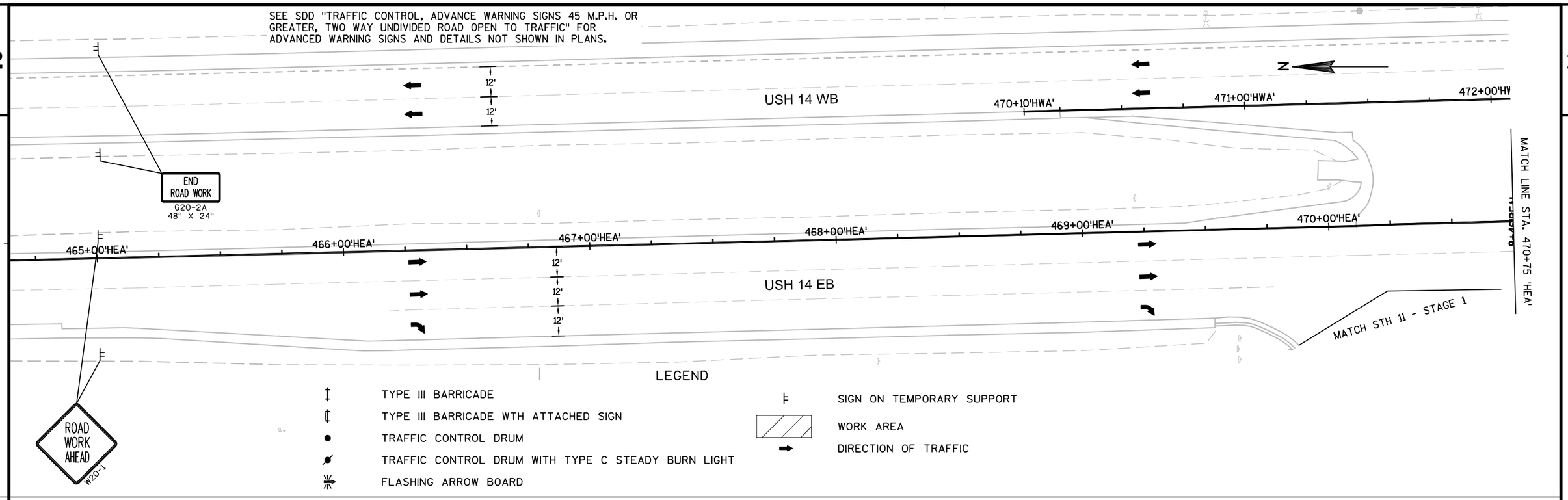
2



STAGE 1 TYPICAL SECTION
STH 11 AT USH 14 INTERSECTION
"WEST APPROACH"

PROJECT NO:5569-00-73	HWY:USH 14	COUNTY:ROCK	PLAN: TYPICAL SECTIONS - TRAFFIC CONTROL STAGING	SHEET 122	E

SEE SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC" FOR ADVANCED WARNING SIGNS AND DETAILS NOT SHOWN IN PLANS.

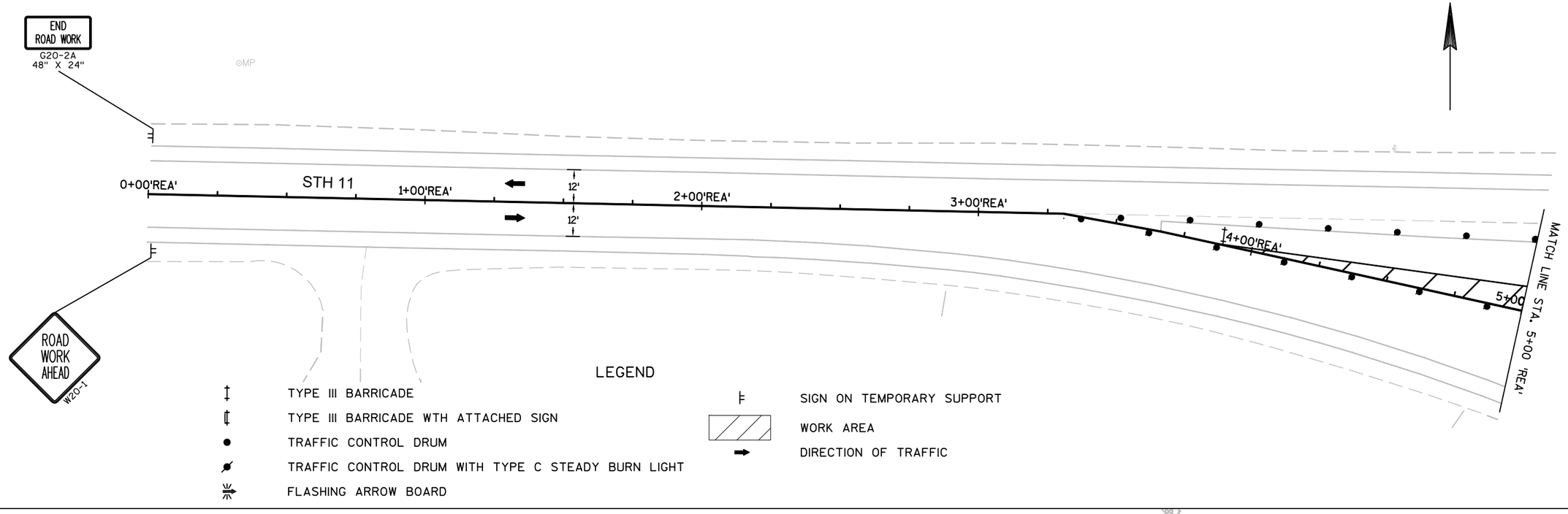


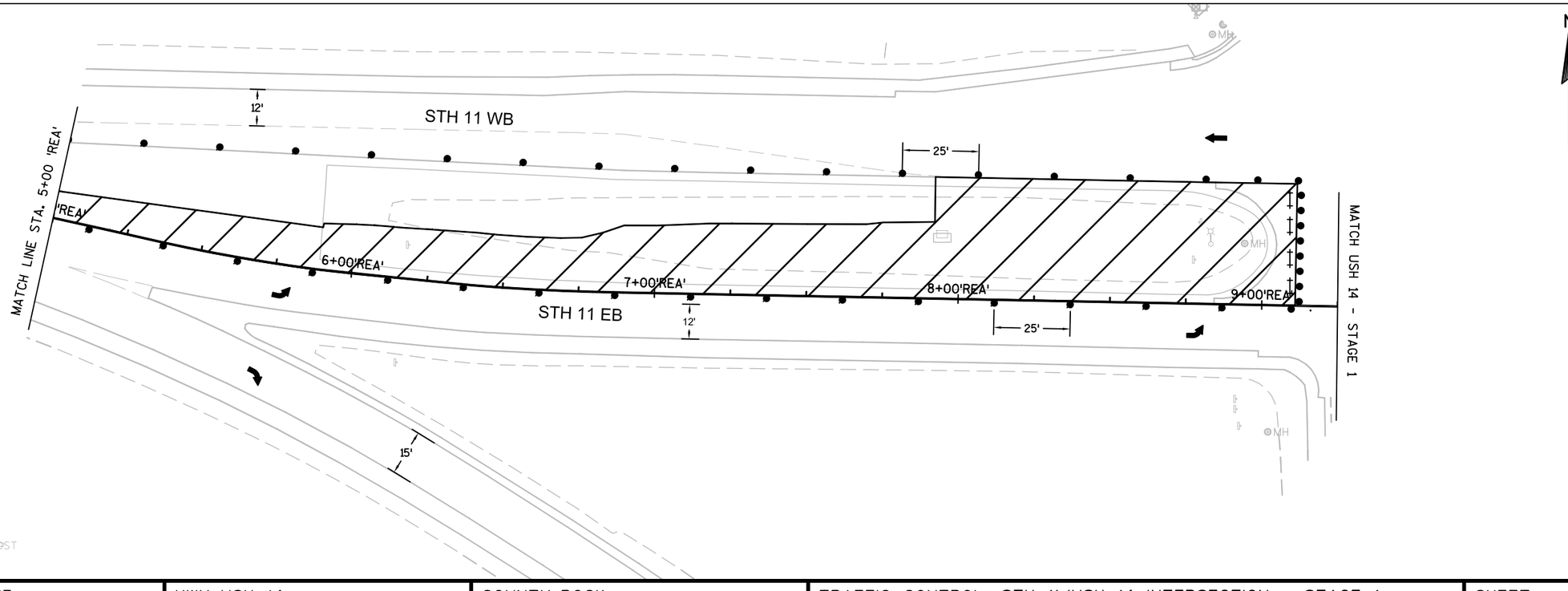
LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC CONTROL: STH 11/USH 14 INTERSECTION - STAGE 1	SHEET 123	E

SEE SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC" FOR ADVANCED WARNING SIGNS AND DETAILS NOT SHOWN IN PLANS.





PROJECT NO:5569-00-73	HWY:USH 14	COUNTY:ROCK	TRAFFIC CONTROL: STH 11/USH 14 INTERSECTION - STAGE 1	SHEET 124	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\TRAFFIC CONTROL\5569-00-73\025004_TC_STAGE_1_14-11.DWG PLOT DATE : 10/15/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1:40_XREF

STAGE 2A

MAINTENANCE OF TRAFFIC:

- STH 11 TRAFFIC USES LEFT TURN LANE BUILT IN STAGE 1 WITH EXISTING LANE CLOSED
- USH 14 WB TRAFFIC REMAINS ON EXISTING ROADWAY WITH ONE LANE OPEN TO TRAFFIC
- USH 14 EB REMAINS ON EXISTING ROADWAY WITH ONE LANE OPEN TO TRAFFIC
- MAINTAIN LOCAL ACCESS AT ALL TIMES

CONSTRUCTION TO BE COMPLETED:

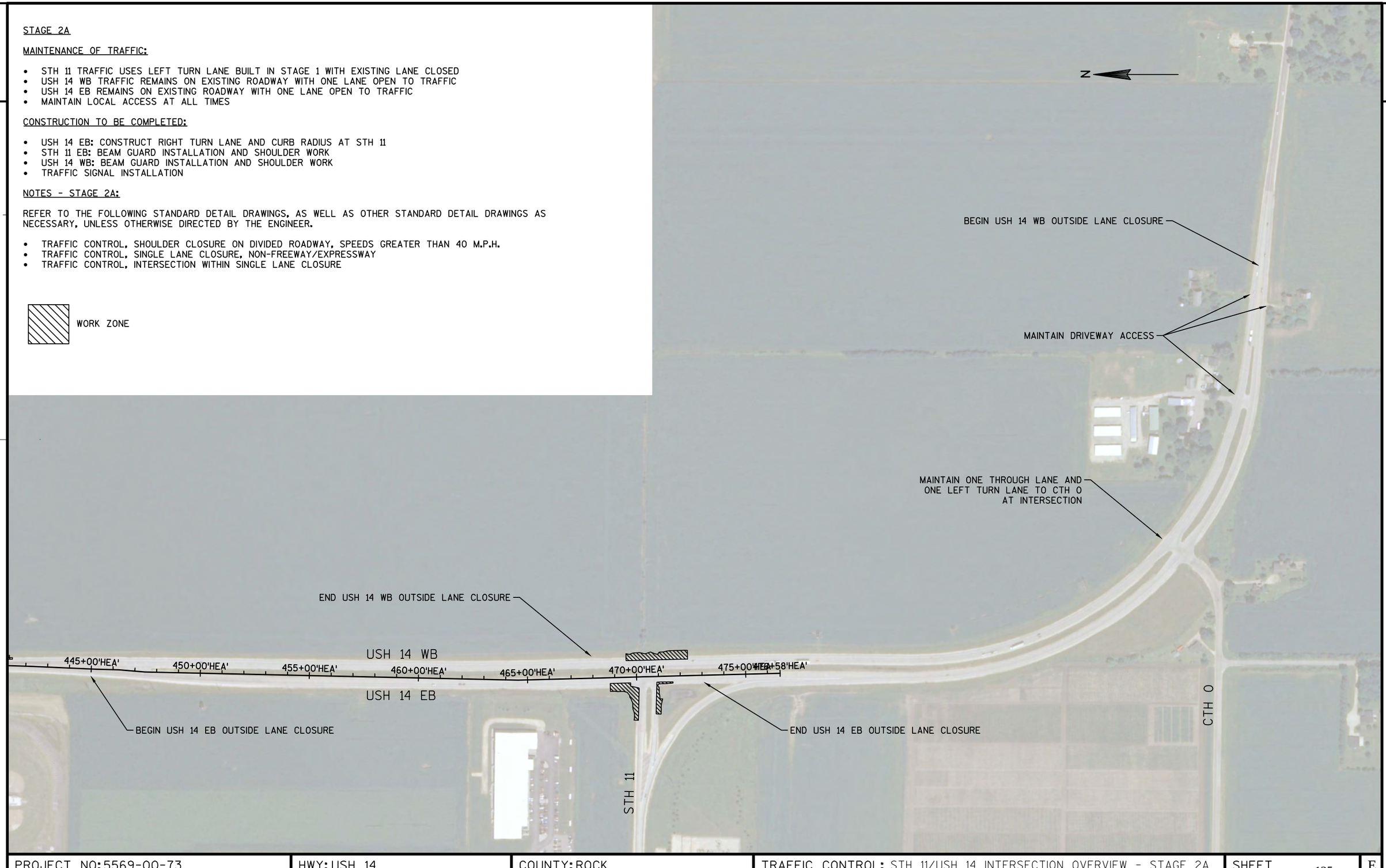
- USH 14 EB: CONSTRUCT RIGHT TURN LANE AND CURB RADIUS AT STH 11
- STH 11 EB: BEAM GUARD INSTALLATION AND SHOULDER WORK
- USH 14 WB: BEAM GUARD INSTALLATION AND SHOULDER WORK
- TRAFFIC SIGNAL INSTALLATION

NOTES - STAGE 2A:

REFER TO THE FOLLOWING STANDARD DETAIL DRAWINGS, AS WELL AS OTHER STANDARD DETAIL DRAWINGS AS NECESSARY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

- TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H.
- TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
- TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

WORK ZONE



PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC CONTROL: STH 11/USH 14 INTERSECTION OVERVIEW - STAGE 2A	SHEET 125	E

STAGE 2B

MAINTENANCE OF TRAFFIC:

- STH 11 TRAFFIC USES LEFT TURN LANE BUILT IN STAGE 1 WITH EXISTING LANE CLOSED
- USH 14 WB TRAFFIC REMAINS ON EXISTING ROADWAY WITH ONE LANE OPEN TO TRAFFIC
- USH 14 EB REMAINS ON EXISTING ROADWAY WITH ONE LANE OPEN TO TRAFFIC
- MAINTAIN LOCAL ACCESS AT ALL TIMES

CONSTRUCTION TO BE COMPLETED:

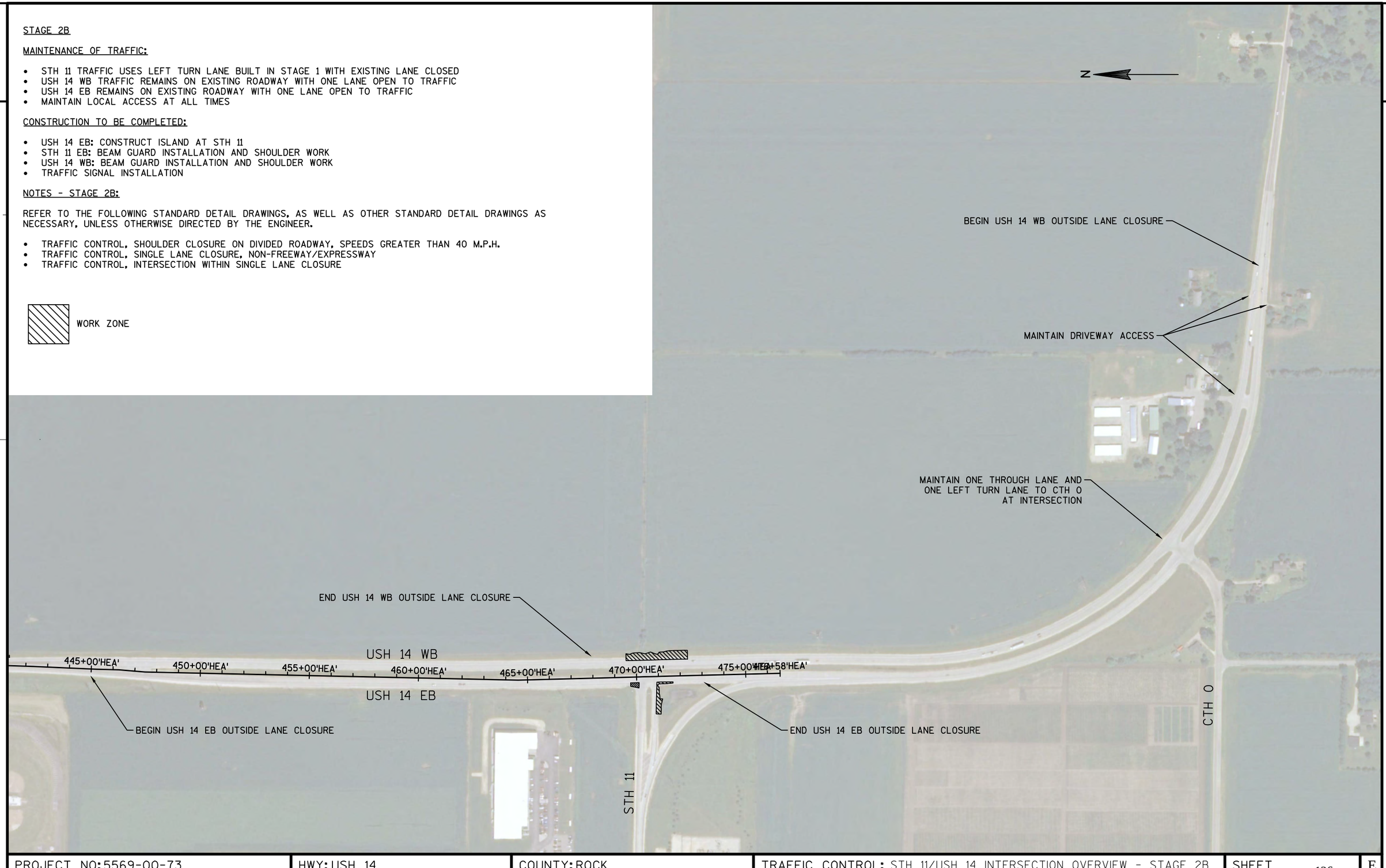
- USH 14 EB: CONSTRUCT ISLAND AT STH 11
- STH 11 EB: BEAM GUARD INSTALLATION AND SHOULDER WORK
- USH 14 WB: BEAM GUARD INSTALLATION AND SHOULDER WORK
- TRAFFIC SIGNAL INSTALLATION

NOTES - STAGE 2B:

REFER TO THE FOLLOWING STANDARD DETAIL DRAWINGS, AS WELL AS OTHER STANDARD DETAIL DRAWINGS AS NECESSARY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

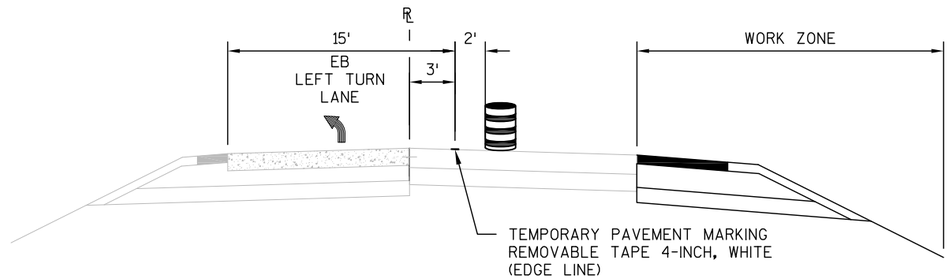
- TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H.
- TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
- TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

WORK ZONE

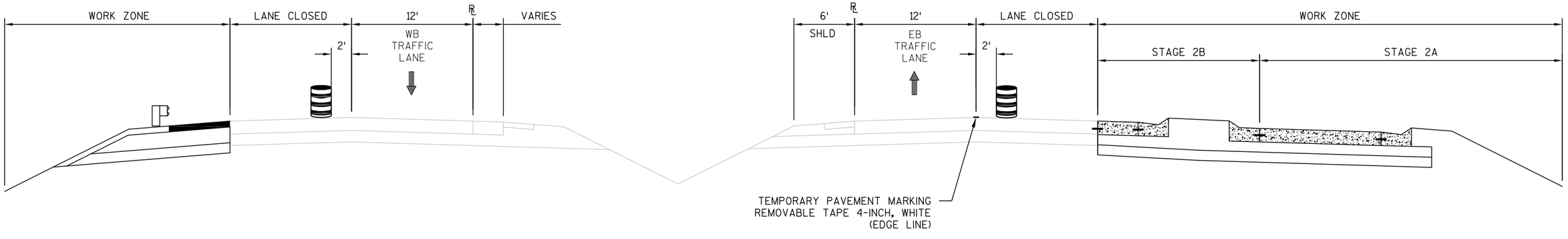


PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC CONTROL: STH 11/USH 14 INTERSECTION OVERVIEW - STAGE 2B	SHEET 126	E

2



STAGE 2 TYPICAL SECTION
STH 11 AT USH 14 INTERSECTION
"WEST APPROACH"



STAGE 2 TYPICAL SECTION
USH 14 AT STH 11 INTERSECTION

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PLAN: TYPICAL SECTIONS - TRAFFIC CONTROL STAGING	SHEET 127	E

2

SEE SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY" FOR ADVANCED WARNING SIGNS AND DETAILS NOT SHOWN IN PLANS.

N

440+00'HEA'

445+00'HEA'

450+00'HEA'

455+00'HEA'

460+00'HEA'

465+0

USH 14 WB

USH 14 EB

50' TYP.

50' TYP.

RIGHT LANE CLOSED AHEAD W20-5

LANE CLOSED R11-2L 48" X 30"

LANE CLOSED R11-2L 48" X 30"

CONTINUE USH 14 EB SINGLE LANE CLOSURE TO STH 11. SEE OTHER PLAN SHEETS FOR FURTHER DETAILS.

CONTINUE USH 14 WB SINGLE LANE CLOSURE TO STH 11. SEE OTHER PLAN SHEETS FOR FURTHER DETAILS.

LANE CLOSED R11-2L 48" X 30"

LANE CLOSED R11-2L 48" X 30"

N

RIGHT LANE CLOSED AHEAD W20-5

50' TYP.

50' TYP.

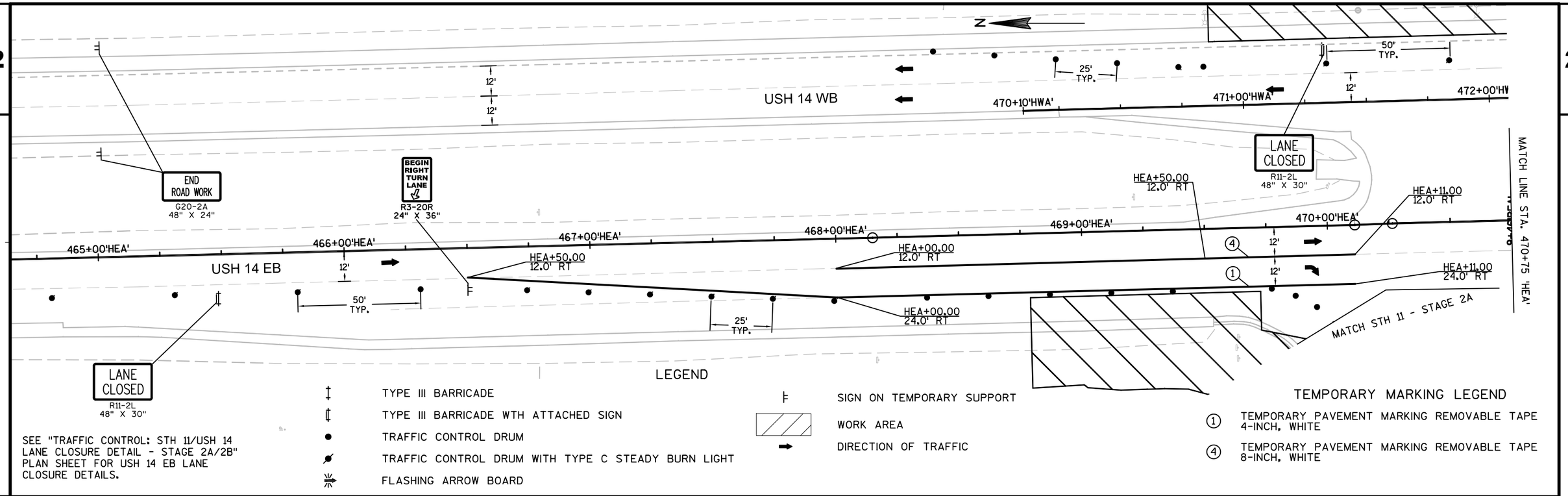
SEE SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY" FOR ADVANCED WARNING SIGNS AND DETAILS NOT SHOWN IN PLANS.

2

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC CONTROL: STH 11/USH 14 LANE CLOSURE DETAIL - STAGE 2A/2B	SHEET 128	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\TRAFFIC CONTROL\5569-00-73\025004_TC_STAGE_2A-B_14-11-LANE-CLOSURE-DETAIL.DWG 10/15/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1" = 200'_XREF

WISDOT/CADDS SHEET 42



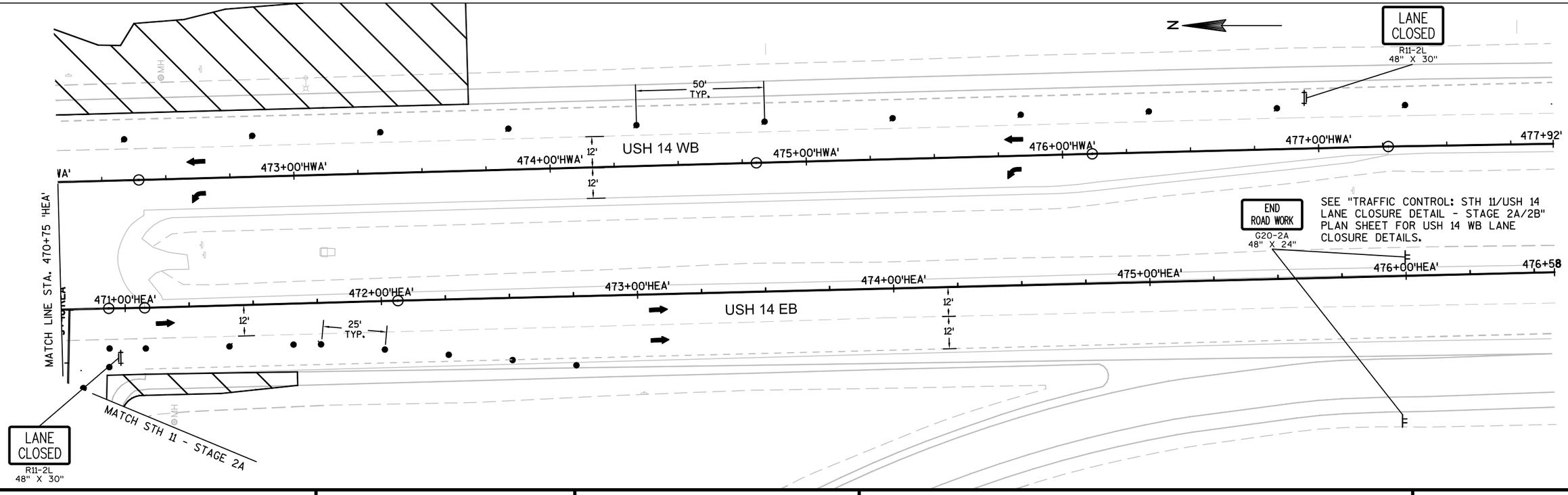
SEE "TRAFFIC CONTROL: STH 11/USH 14 LANE CLOSURE DETAIL - STAGE 2A/2B" PLAN SHEET FOR USH 14 EB LANE CLOSURE DETAILS.

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC

TEMPORARY MARKING LEGEND

1. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH, WHITE
4. TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH, WHITE



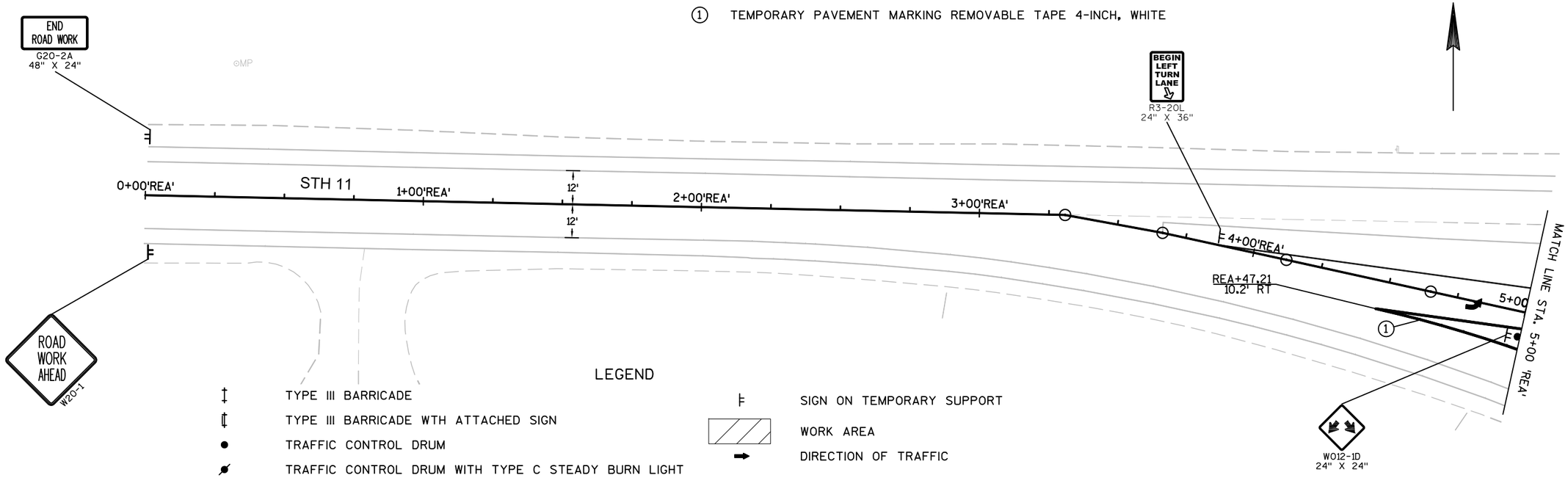
SEE "TRAFFIC CONTROL: STH 11/USH 14 LANE CLOSURE DETAIL - STAGE 2A/2B" PLAN SHEET FOR USH 14 WB LANE CLOSURE DETAILS.

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC CONTROL: STH 11/USH 14 INTERSECTION - STAGE 2A	SHEET 129	E

SEE SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY" FOR ADVANCED WARNING SIGNS AND DETAILS NOT SHOWN IN PLANS.

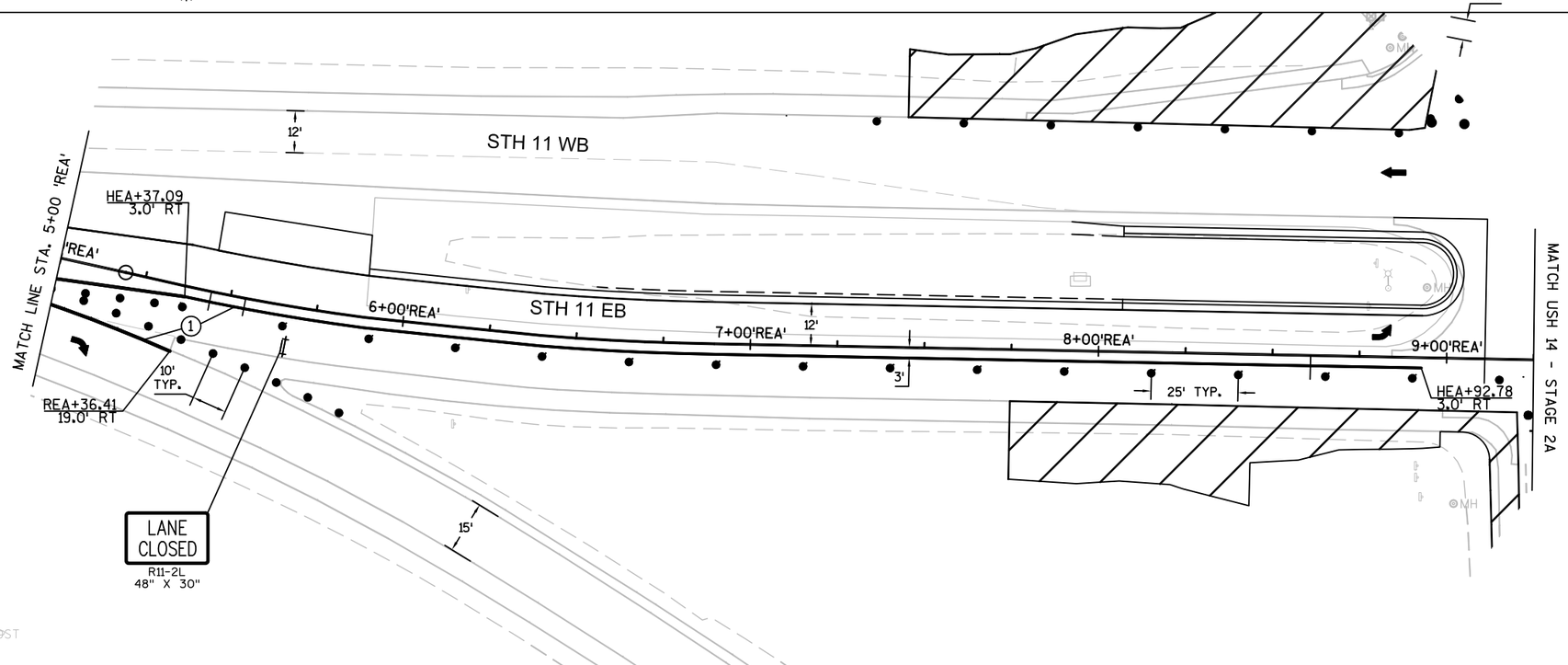
TEMPORARY MARKING LEGEND

① TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH, WHITE



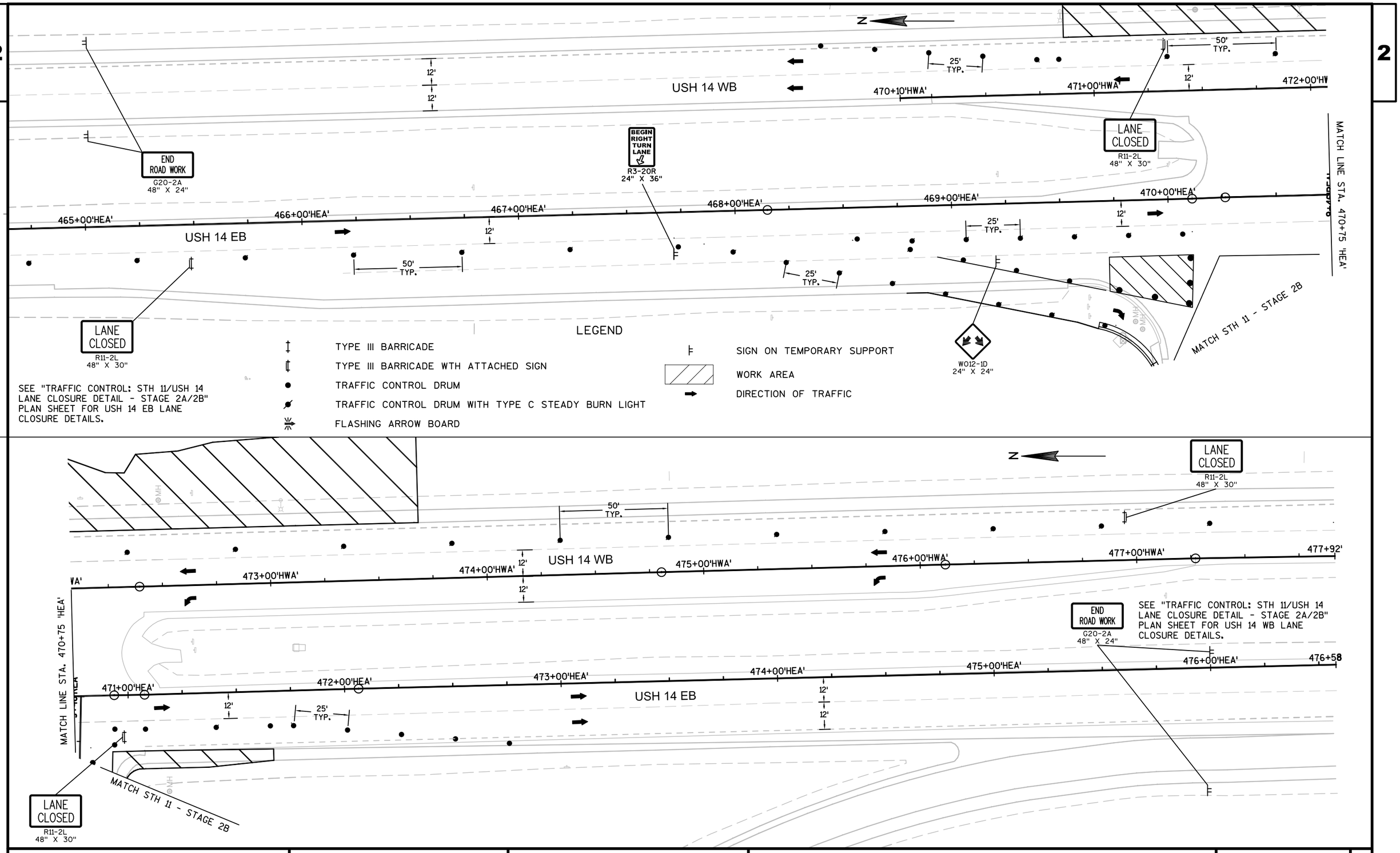
LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC



PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC CONTROL: STH 11/USH 14 INTERSECTION - STAGE 2A	SHEET 130	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\TRAFFIC CONTROL\5569-00-73\025004_TC_STAGE_2_14-11.DWG PLOT DATE : 10/15/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1:40_XREF

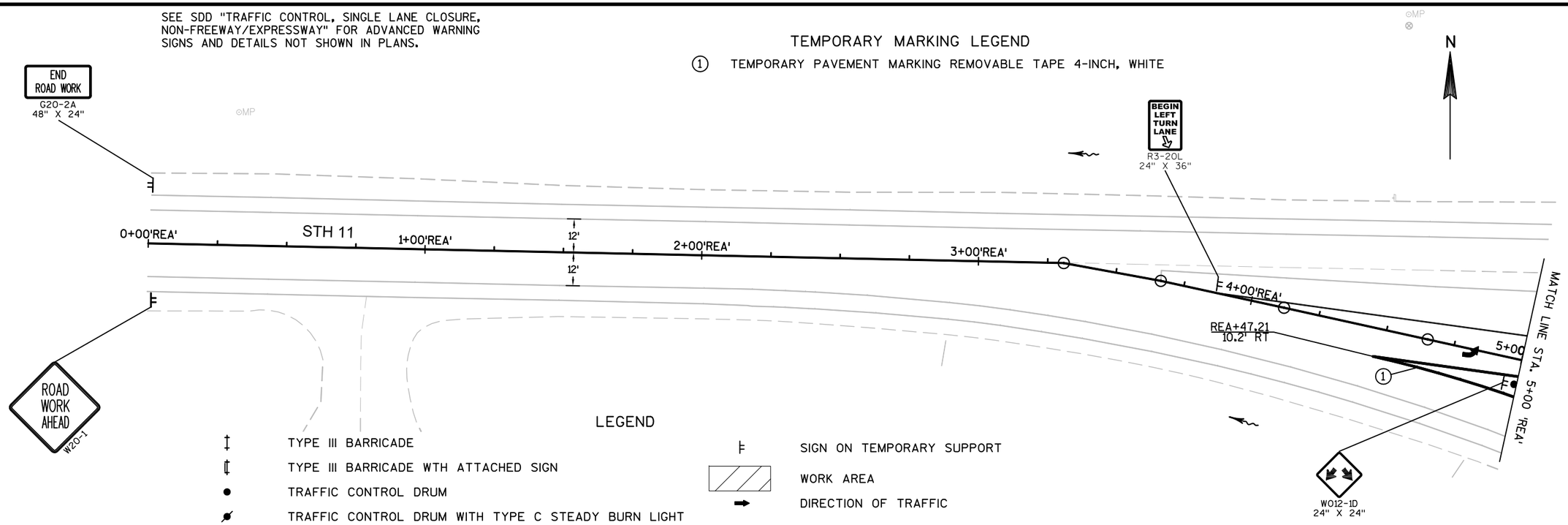


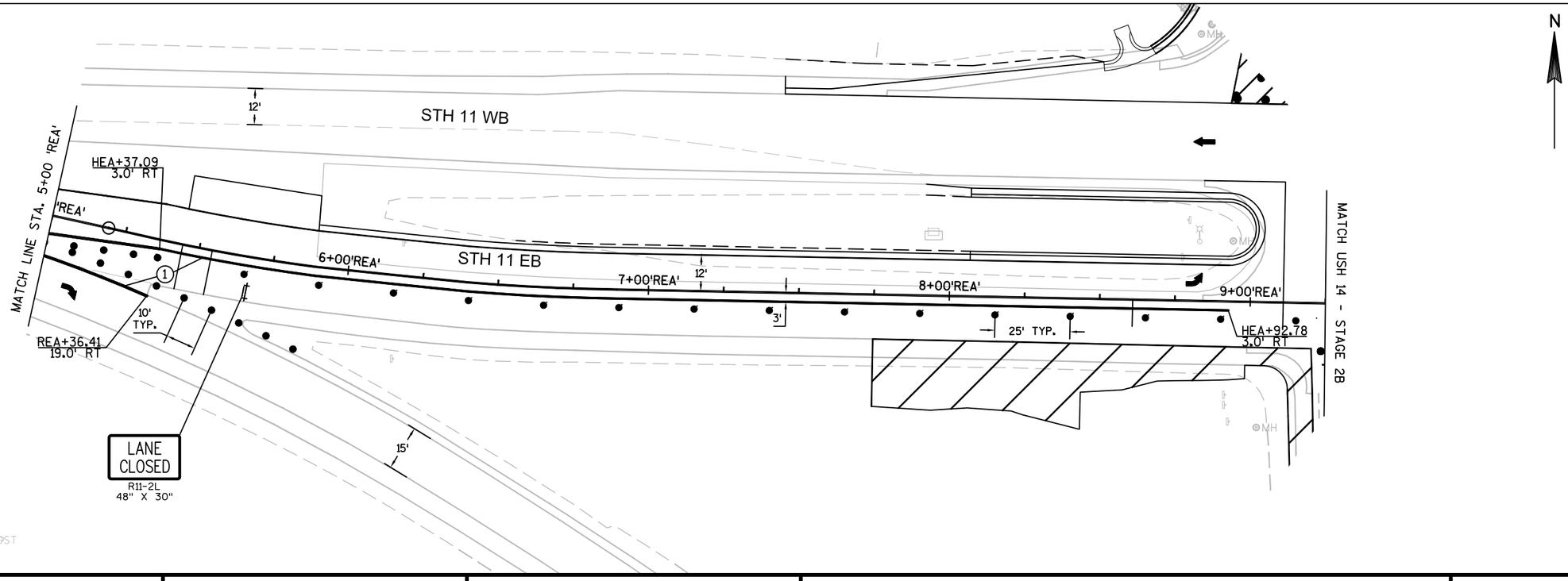
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC CONTROL: STH 11/USH 14 INTERSECTION - STAGE 2B	SHEET 131	E

SEE SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY" FOR ADVANCED WARNING SIGNS AND DETAILS NOT SHOWN IN PLANS.

TEMPORARY MARKING LEGEND

① TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH, WHITE





PROJECT NO:5569-00-73	HWY:USH 14	COUNTY:ROCK	TRAFFIC CONTROL: STH 11/USH 14 INTERSECTION - STAGE 2B	SHEET 132	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\TRAFFIC CONTROL\5569-00-73\025004_TC_STAGE_2B_14-11.DWG PLOT DATE : 10/15/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1:40_XREF

STAGE 3

MAINTENANCE OF TRAFFIC:

- STH 11 TRAFFIC USES EXISTING LEFT TURN LANE WITH NEW LANE CONSTRUCTED IN STAGE 1 CLOSED
- USH 14 EB TRAFFIC REMAINS ON EXISTING ROADWAY WITH ONE LANE OPEN TO TRAFFIC
- USH 14 WB TRAFFIC REMAINS ON EXISTING ROADWAY WITH ONE LANE OPEN TO TRAFFIC
- MAINTAIN LOCAL ACCESS AT ALL TIMES

CONSTRUCTION TO BE COMPLETED:

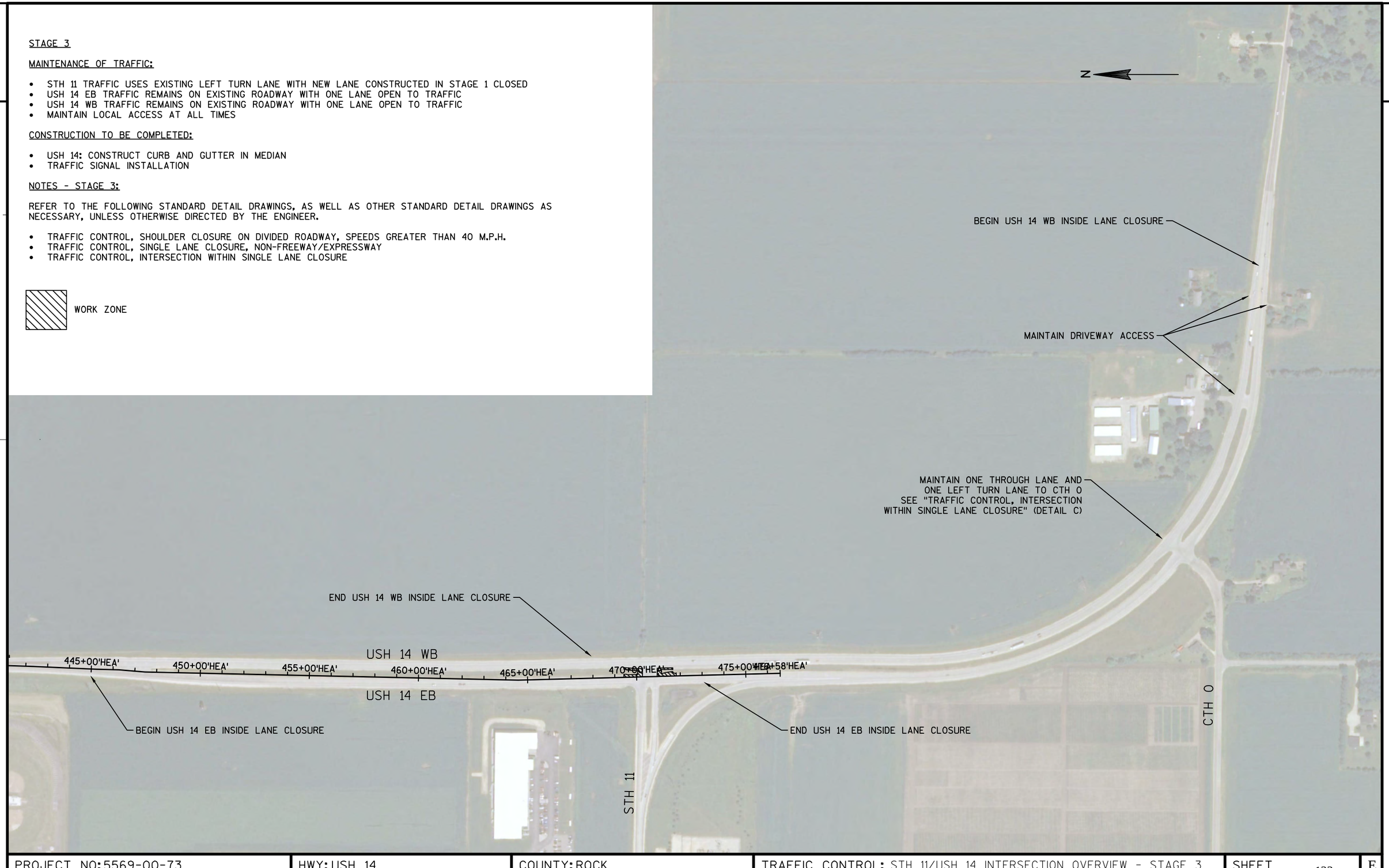
- USH 14: CONSTRUCT CURB AND GUTTER IN MEDIAN
- TRAFFIC SIGNAL INSTALLATION

NOTES - STAGE 3:

REFER TO THE FOLLOWING STANDARD DETAIL DRAWINGS, AS WELL AS OTHER STANDARD DETAIL DRAWINGS AS NECESSARY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

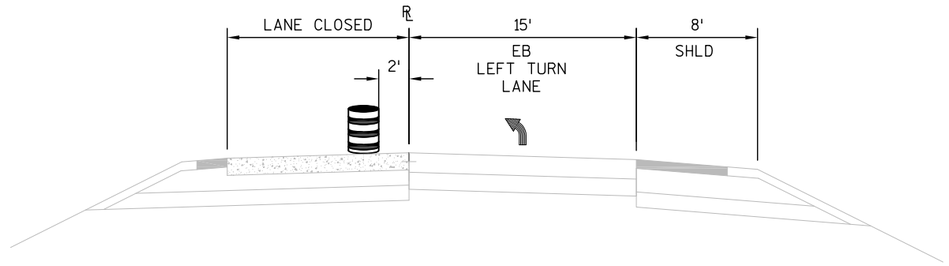
- TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H.
- TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
- TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

WORK ZONE

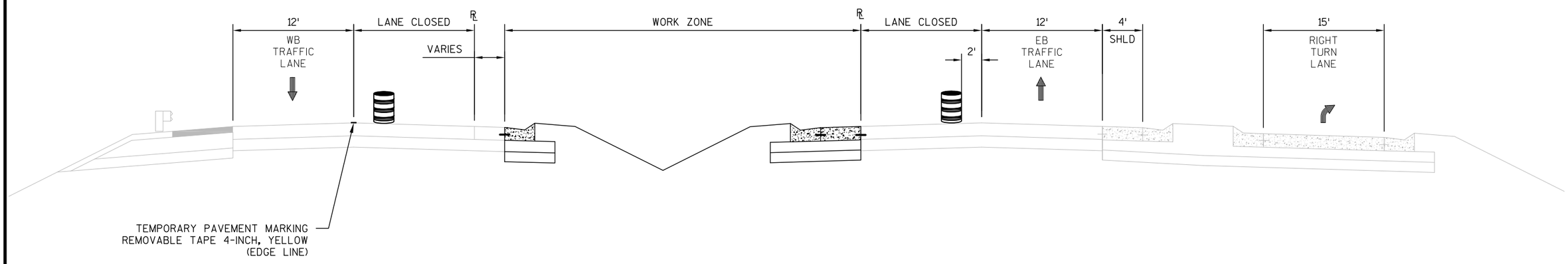


PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC CONTROL: STH 11/USH 14 INTERSECTION OVERVIEW - STAGE 3	SHEET 133	E

2

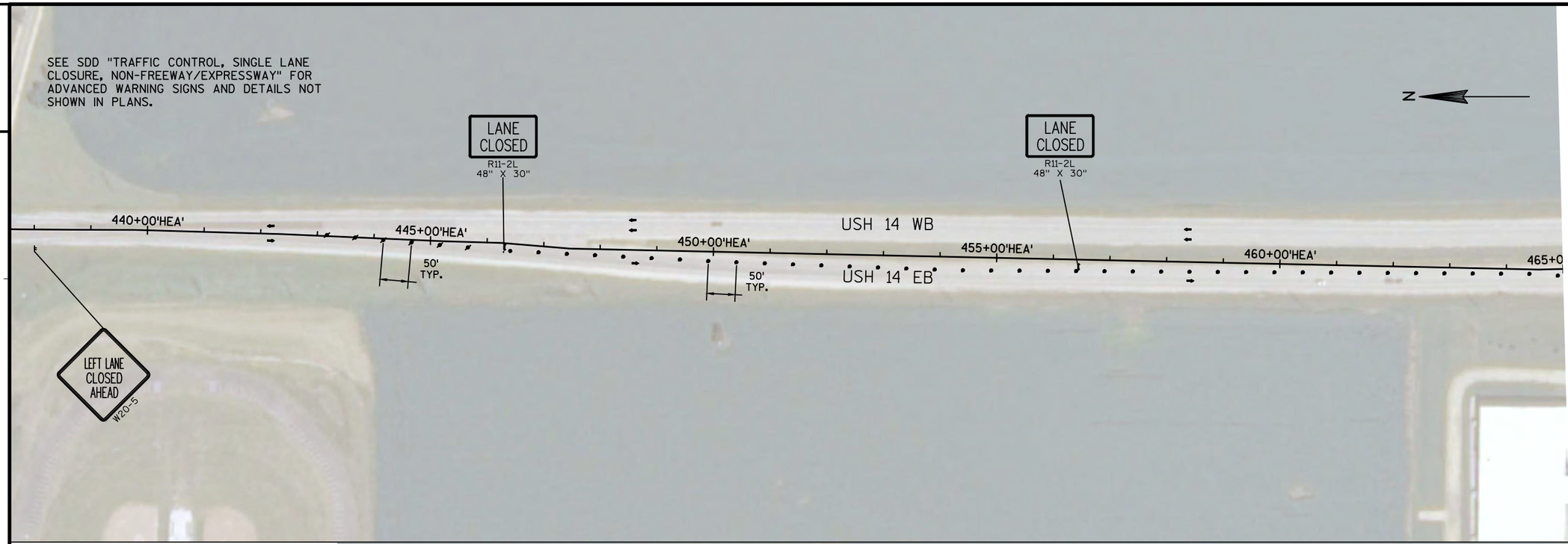


STAGE 3 TYPICAL SECTION
STH 11 AT USH 14 INTERSECTION
"WEST APPROACH"



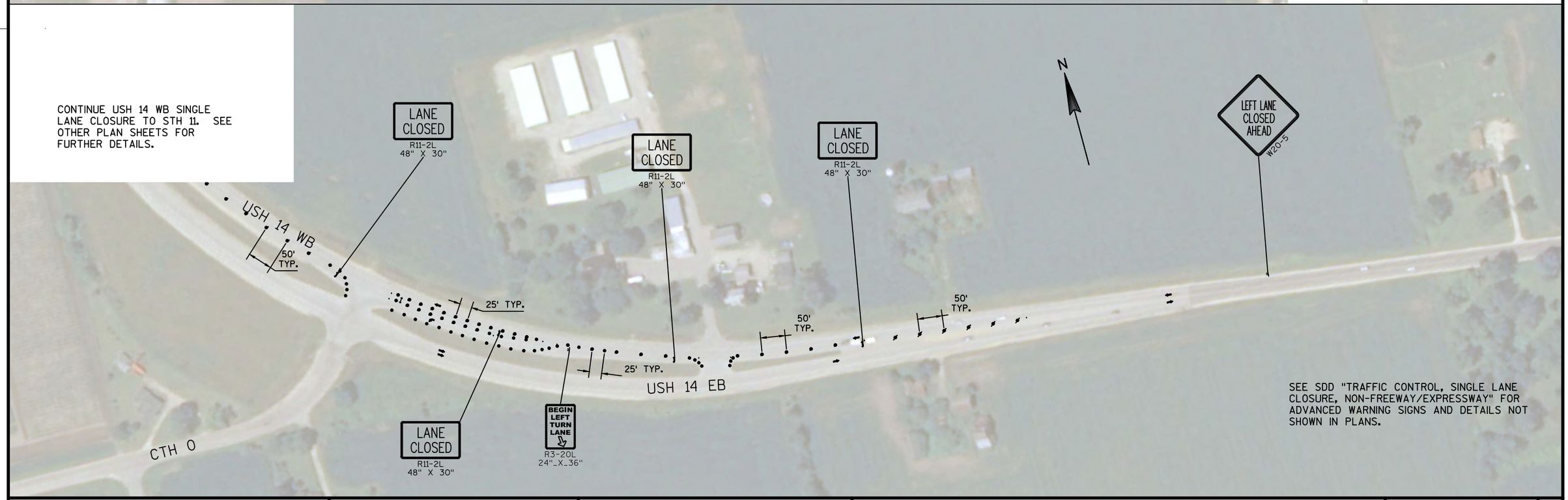
STAGE 3 TYPICAL SECTION
USH 14 AT STH 11 INTERSECTION

SEE SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY" FOR ADVANCED WARNING SIGNS AND DETAILS NOT SHOWN IN PLANS.



CONTINUE USH 14 EB SINGLE LANE CLOSURE TO STH 11. SEE OTHER PLAN SHEETS FOR FURTHER DETAILS.

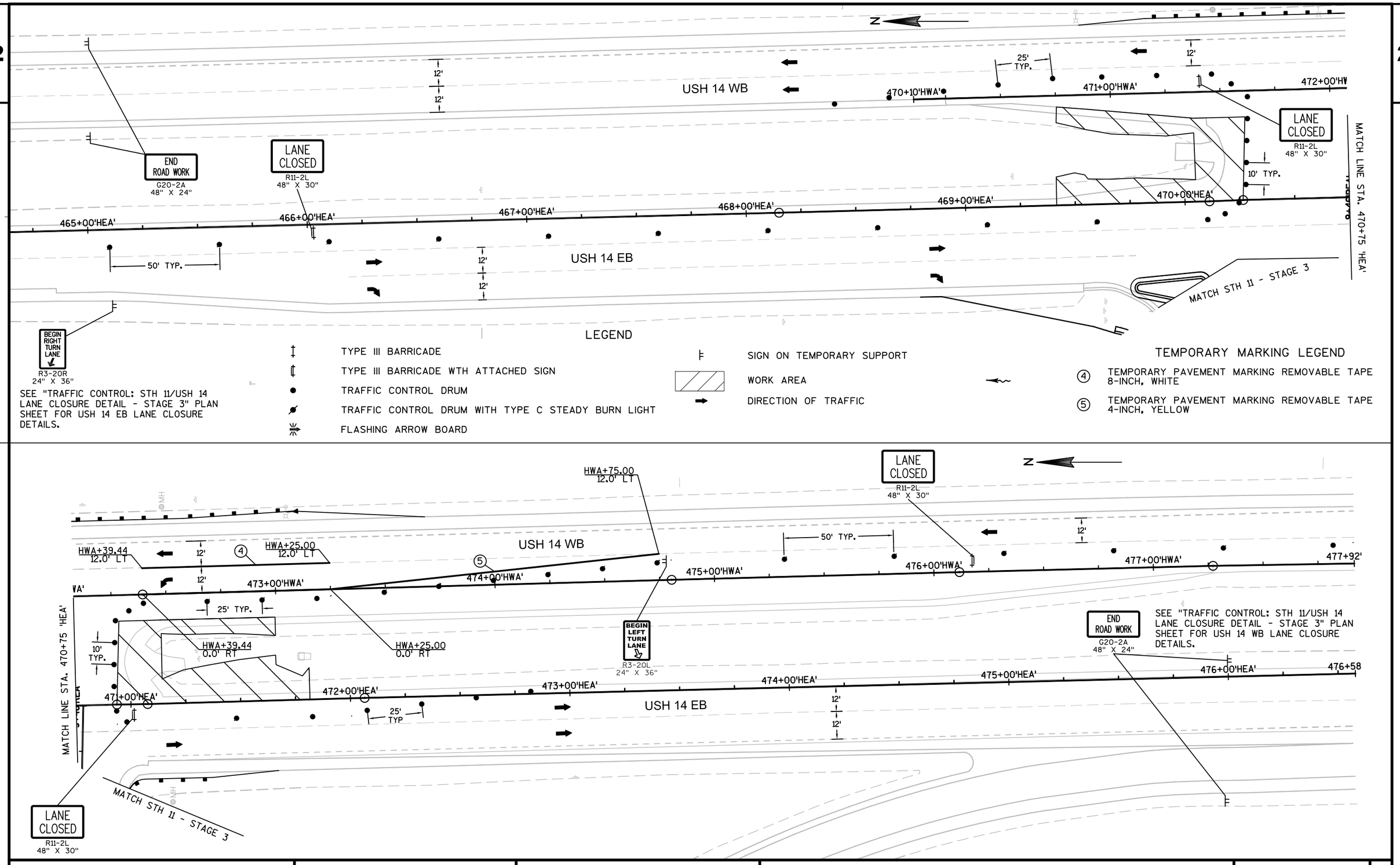
CONTINUE USH 14 WB SINGLE LANE CLOSURE TO STH 11. SEE OTHER PLAN SHEETS FOR FURTHER DETAILS.



SEE SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY" FOR ADVANCED WARNING SIGNS AND DETAILS NOT SHOWN IN PLANS.

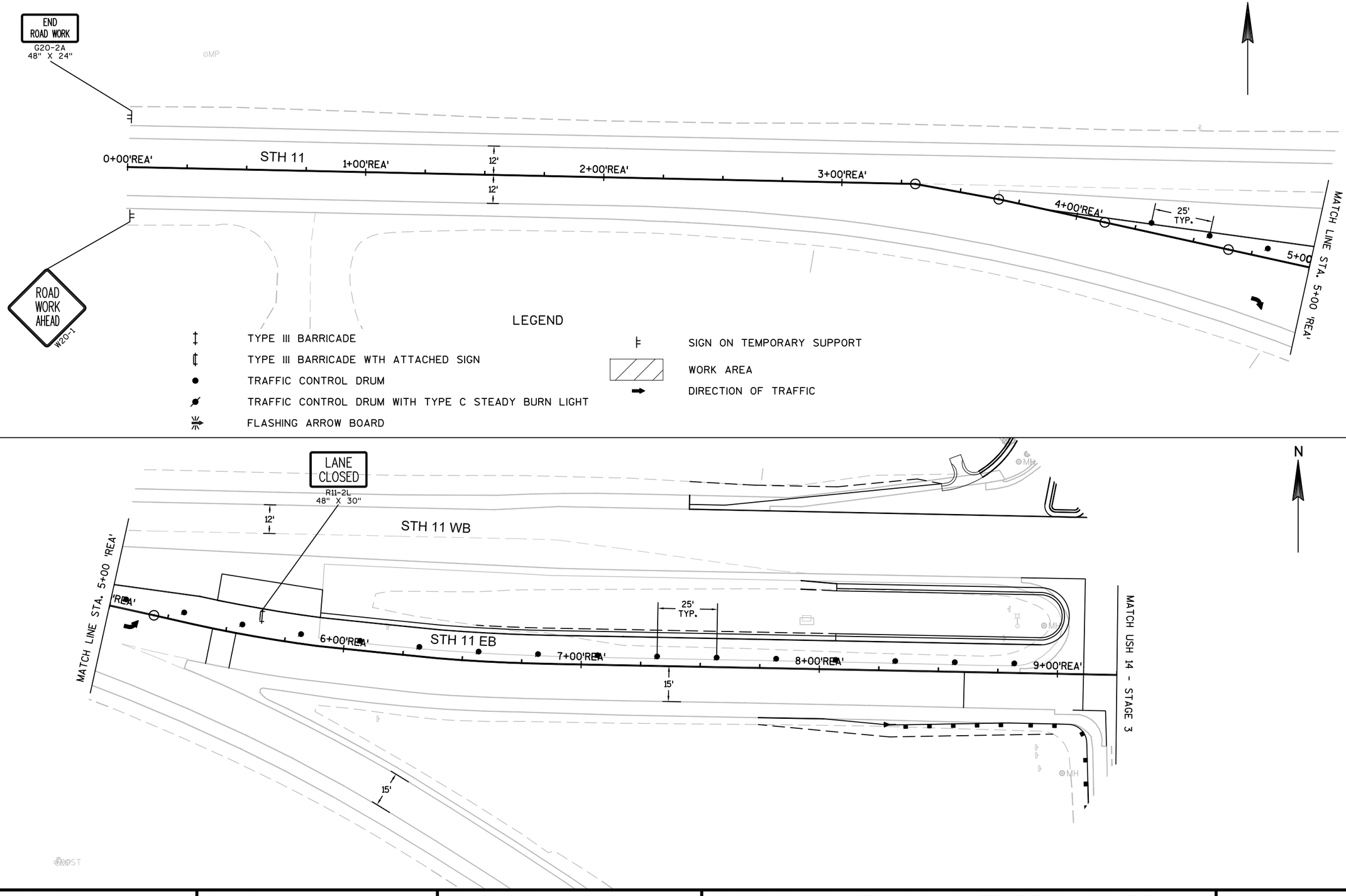
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC CONTROL: STH 11/USH 14 LANE CLOSURE DETAIL - STAGE 3	SHEET 135	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\TRAFFIC CONTROL\5569-00-73\025004_TC_STAGE_3_14-11-LANE-CLOSUREPDETAIL.DWG DETAILED: 10/15/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1" = 200'_XREF



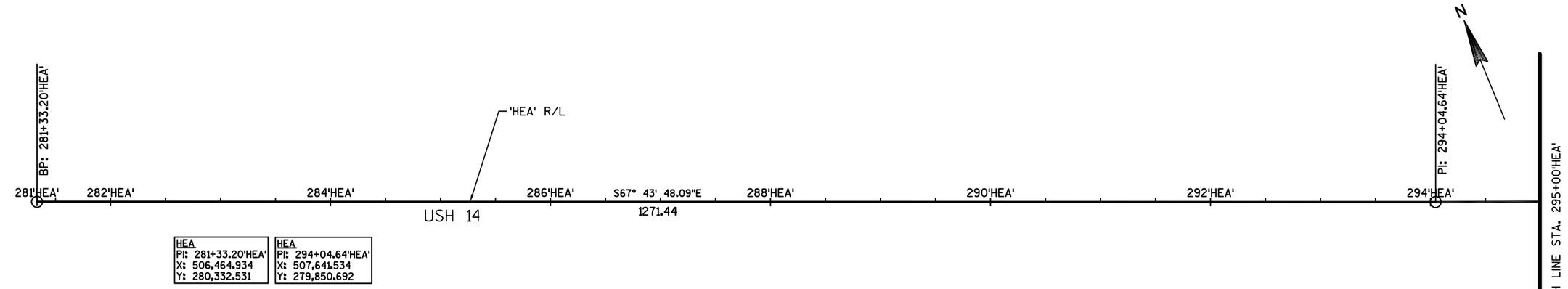
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC CONTROL: STH 11/USH 14 INTERSECTION - STAGE 3	SHEET 136	E

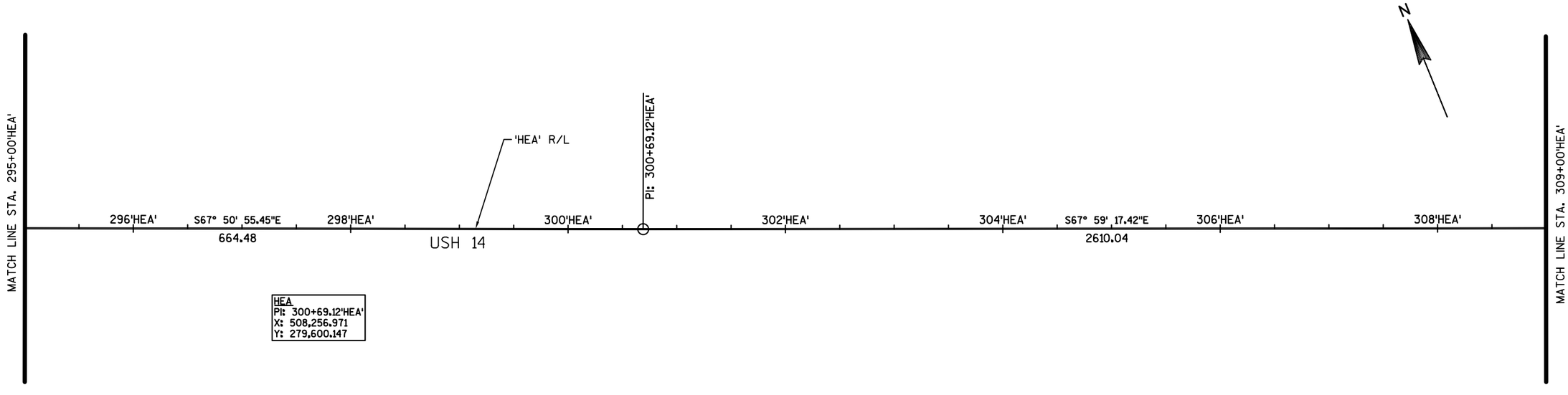
SEE SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY" FOR ADVANCED WARNING SIGNS AND DETAILS NOT SHOWN IN PLANS.



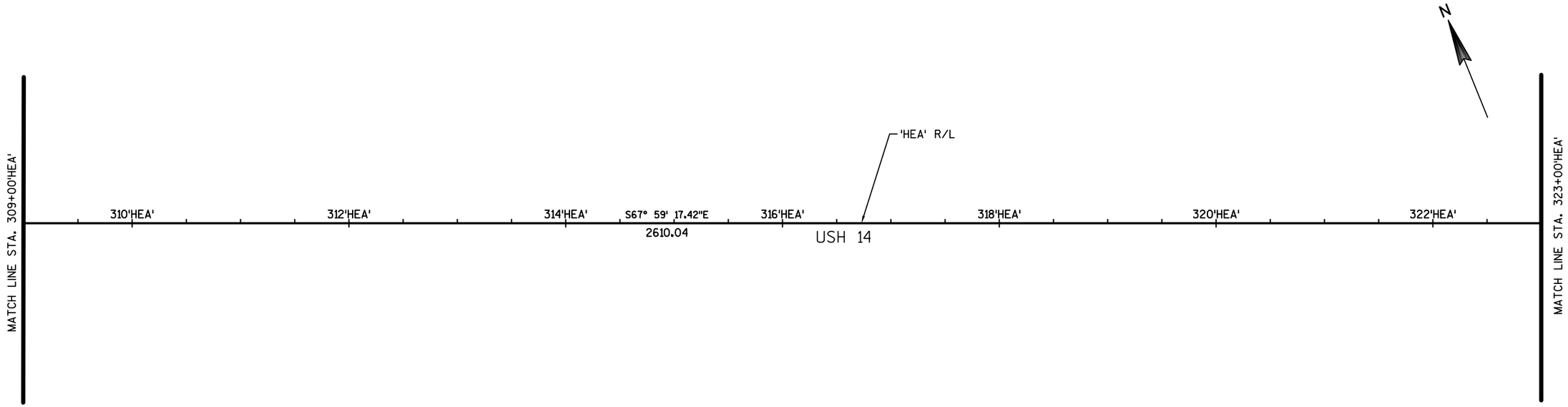
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	TRAFFIC CONTROL: STH 11/USH 14 INTERSECTION - STAGE 3	SHEET 137 E

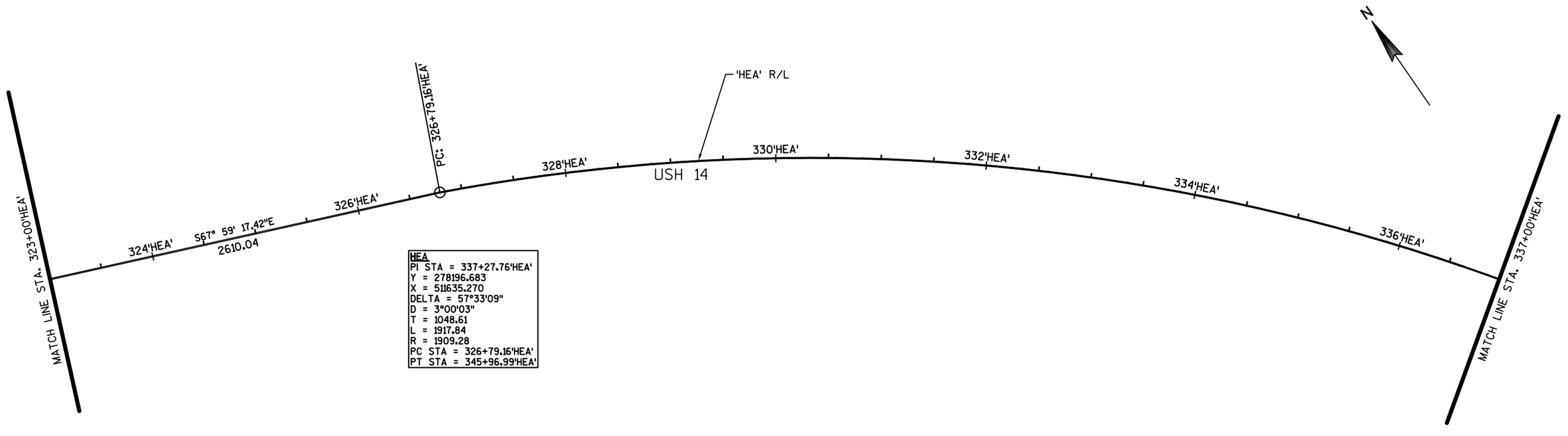
FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\TRAFFIC CONTROL\5569-00-73\025004_TC_STAGE_3_14-11.DWG PLOT DATE : 10/15/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1:40_XREF





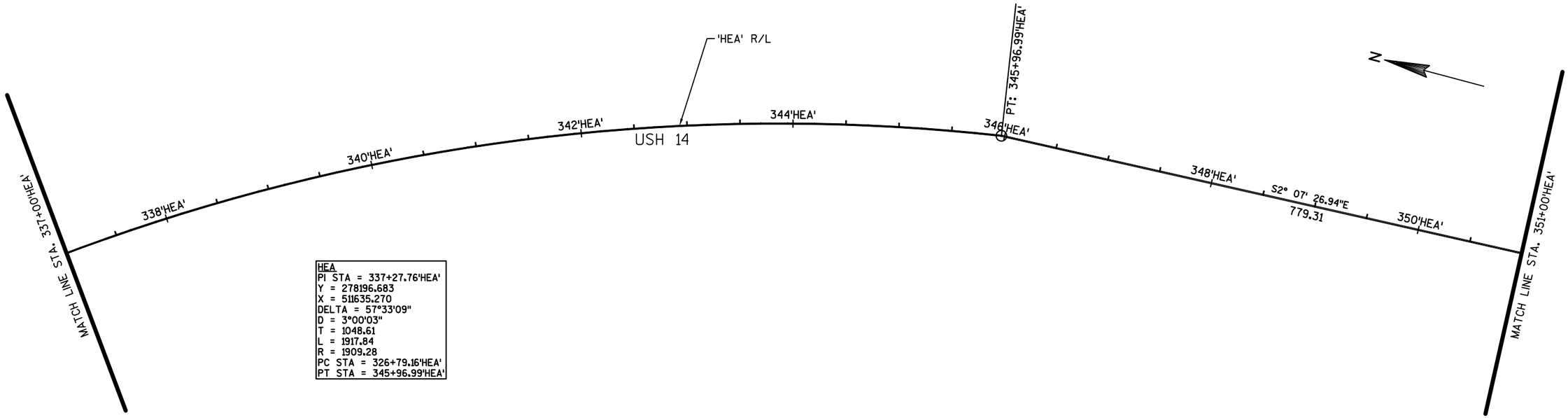
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	ALIGNMENT DIAGRAM	SHEET 138	E

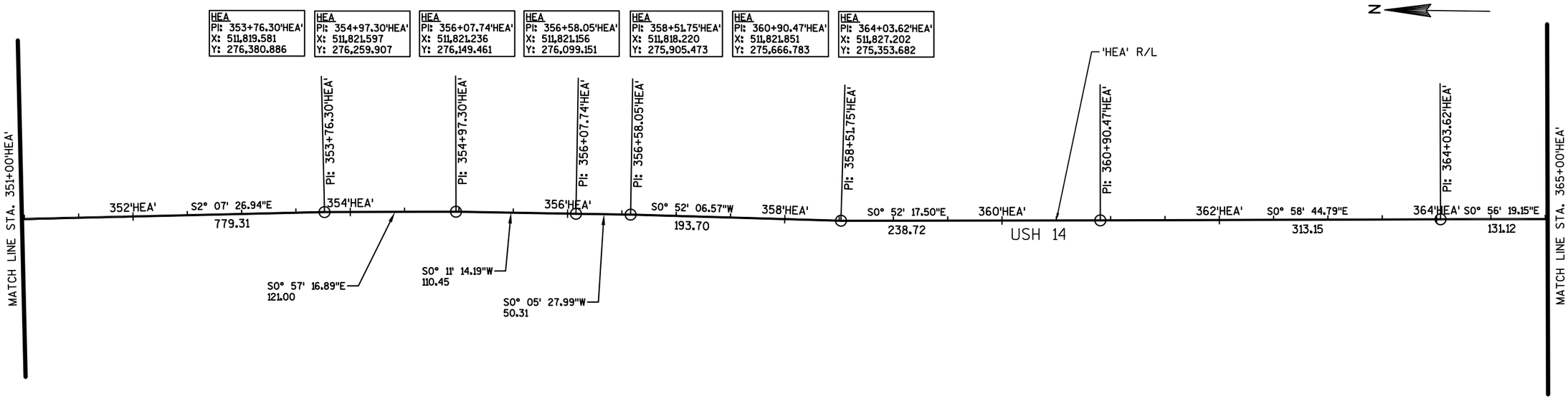




PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	ALIGNMENT DIAGRAM	SHEET 139 E

2





PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	ALIGNMENT DIAGRAM	SHEET 140	E

2

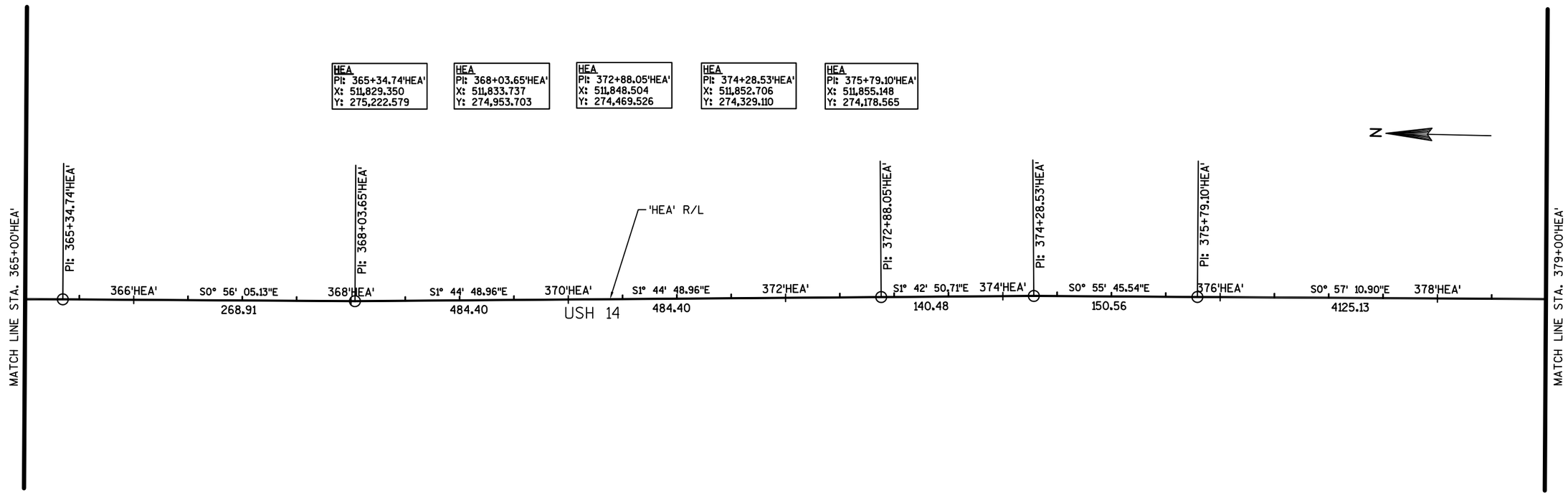
HEA
PI: 365+34.74'HEA'
X: 511,829.350
Y: 275,222.579

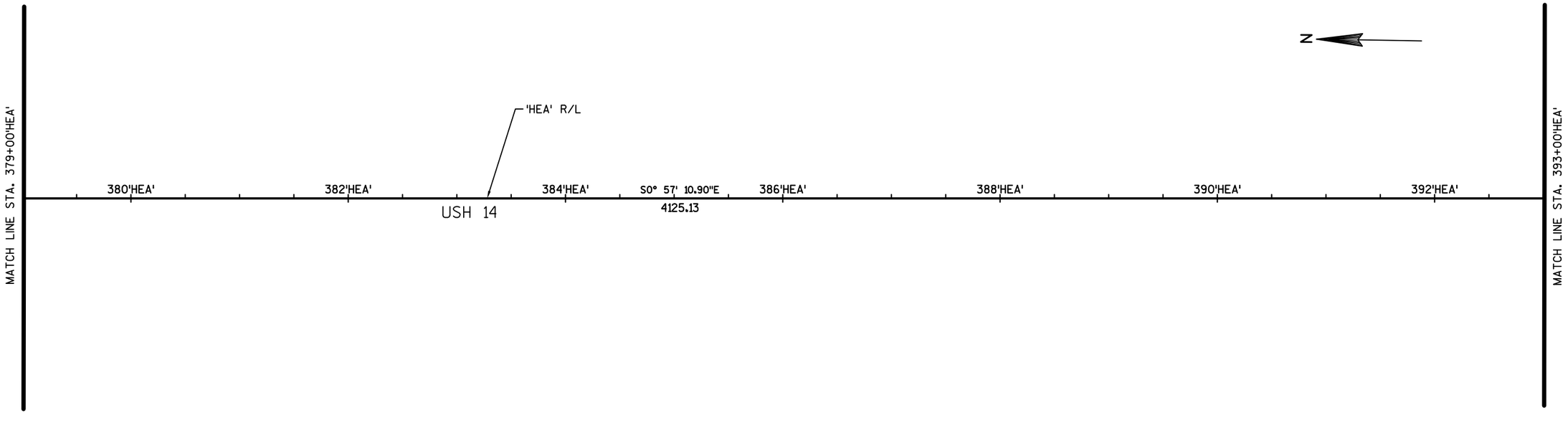
HEA
PI: 368+03.65'HEA'
X: 511,833.737
Y: 274,953.703

HEA
PI: 372+88.05'HEA'
X: 511,848.504
Y: 274,469.526

HEA
PI: 374+28.53'HEA'
X: 511,852.706
Y: 274,329.110

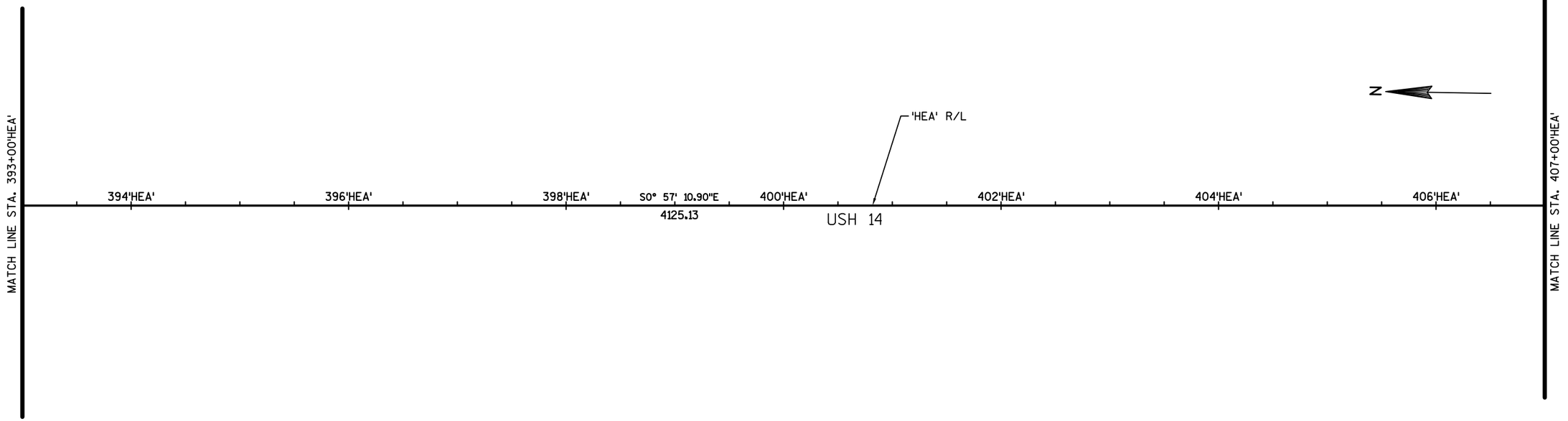
HEA
PI: 375+79.10'HEA'
X: 511,855.148
Y: 274,178.565

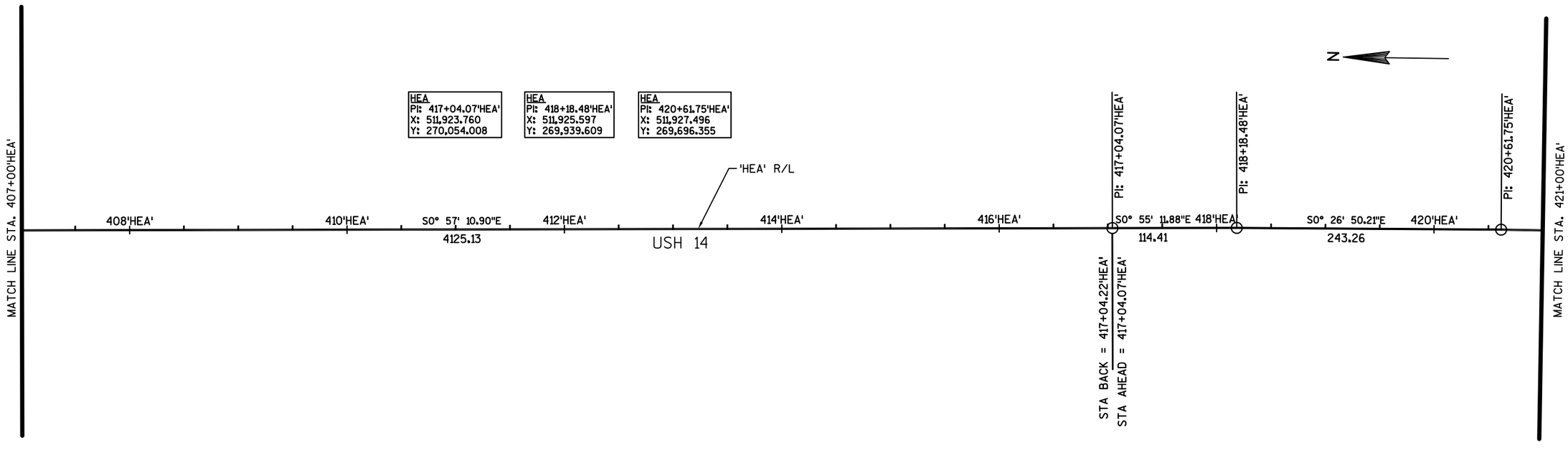




PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	ALIGNMENT DIAGRAM	SHEET 141	E

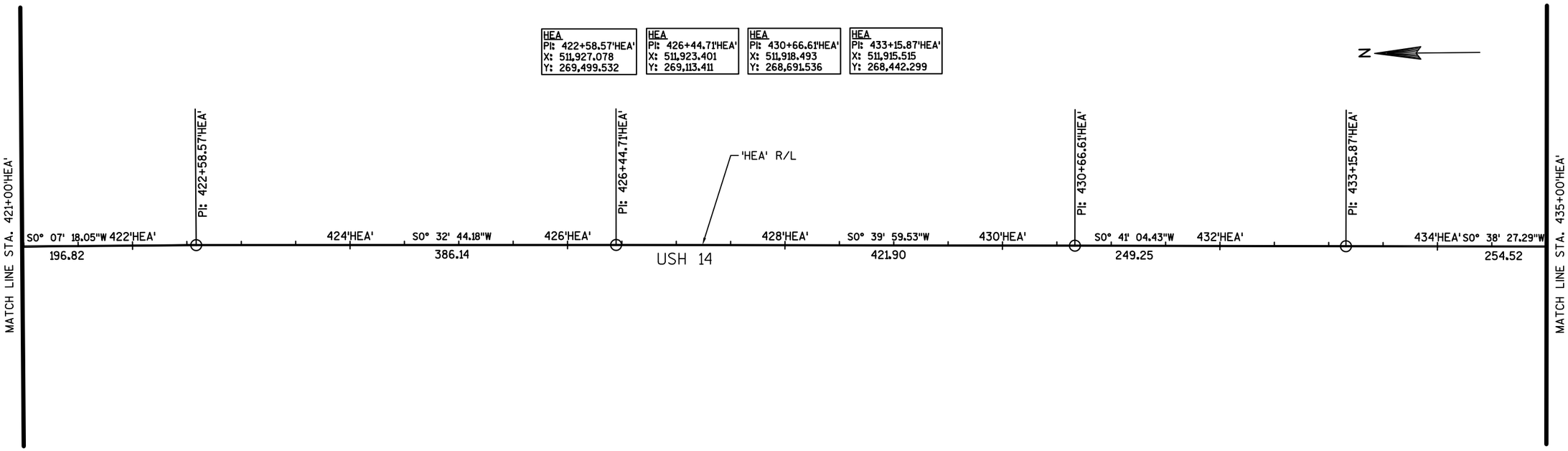
2

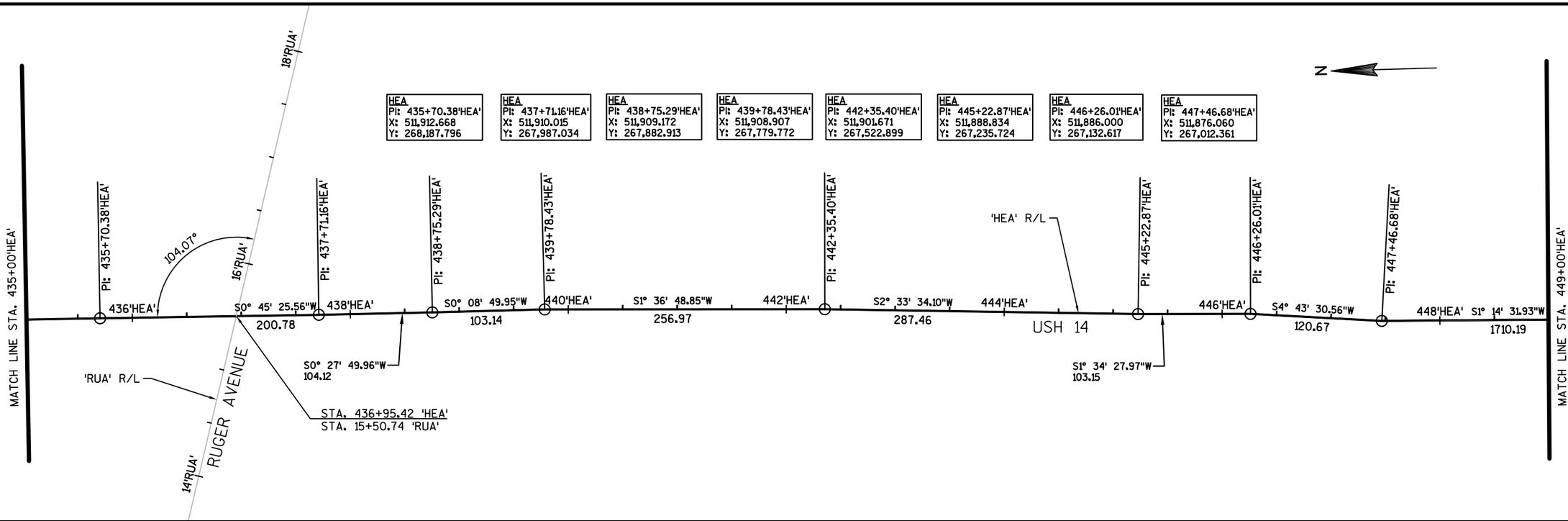




PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	ALIGNMENT DIAGRAM	SHEET 142	E

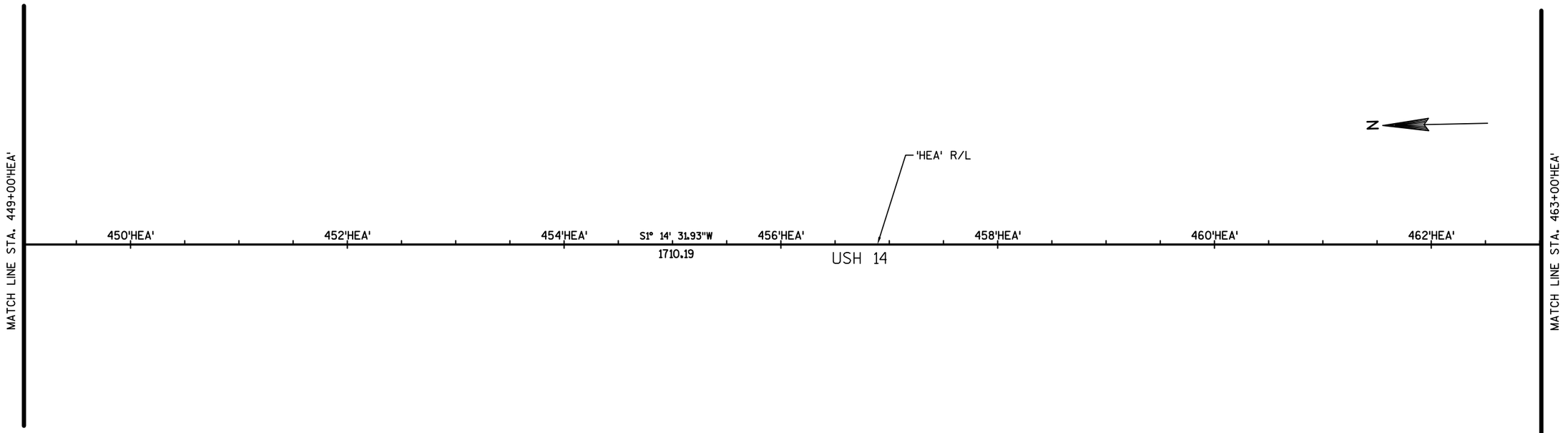
2

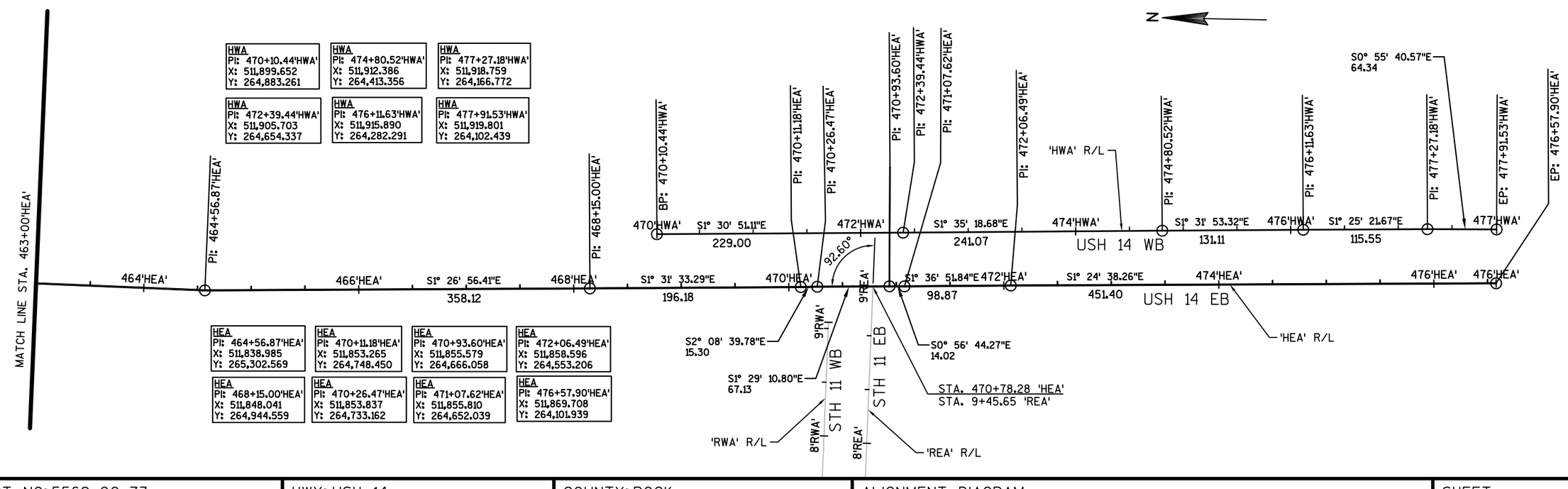




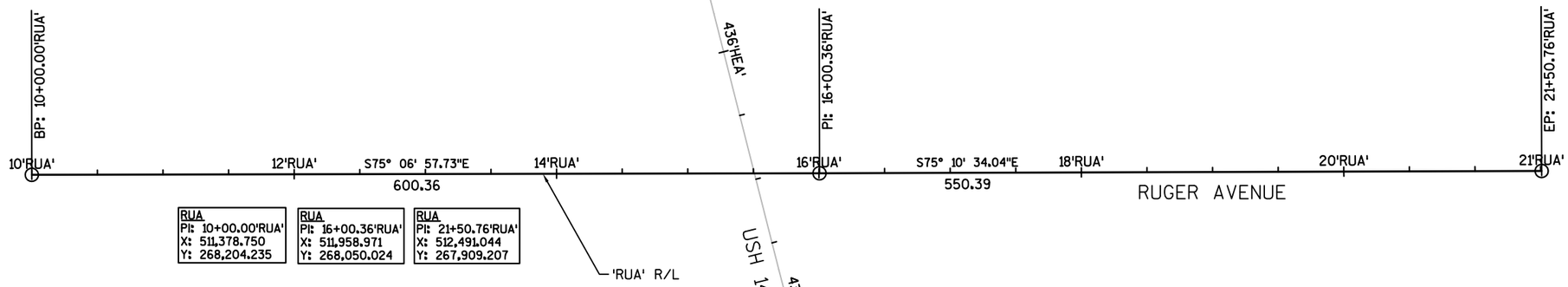
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	ALIGNMENT DIAGRAM	SHEET 143	E

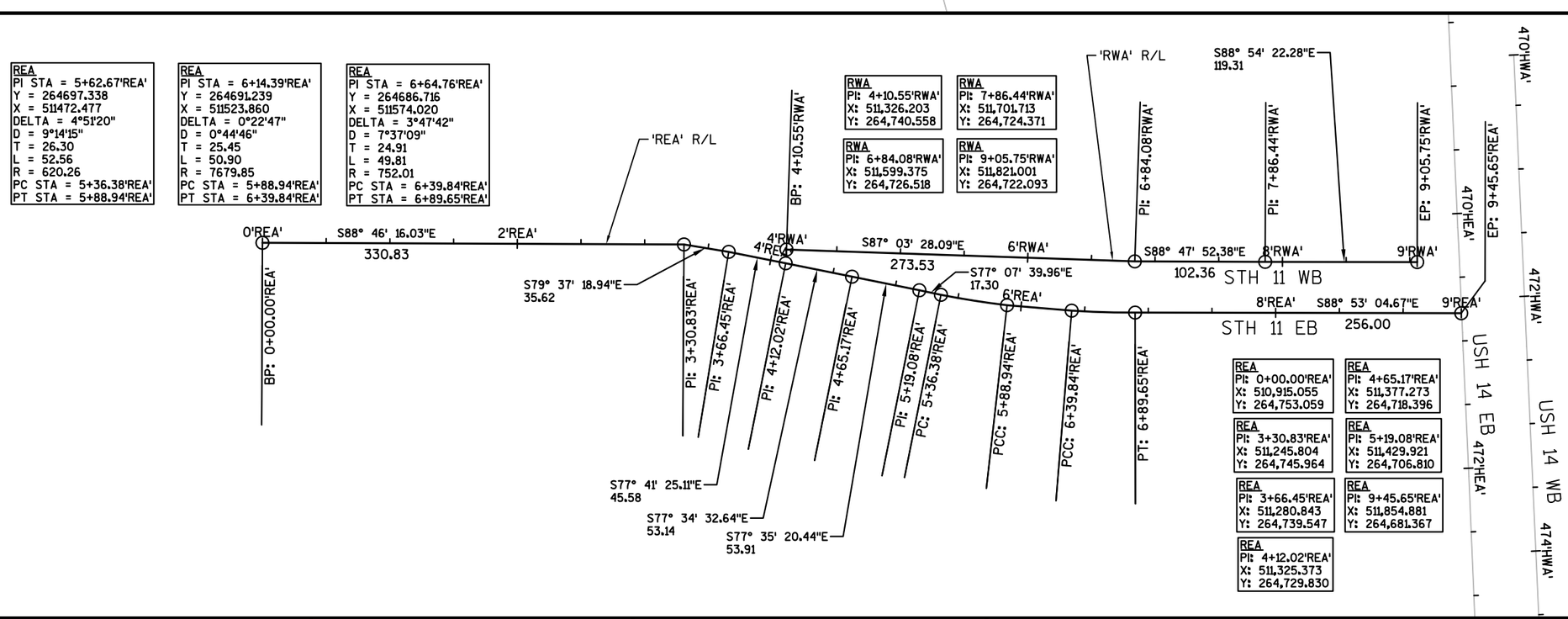
2





PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	ALIGNMENT DIAGRAM	SHEET 144 E





PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	ALIGNMENT DIAGRAM	SHEET 145	E

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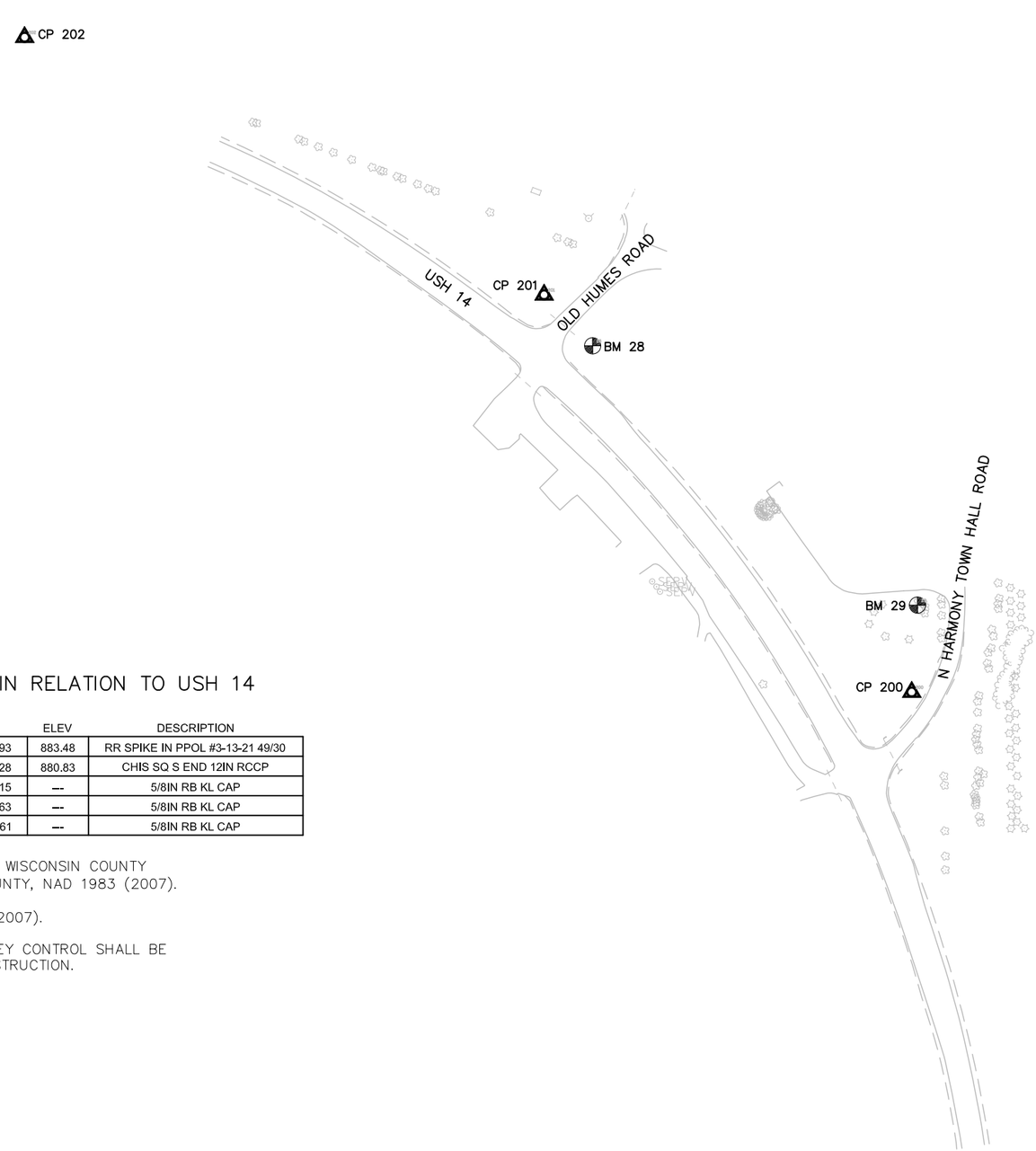

CONTROL POINT LOCATIONS IN RELATION TO USH 14

POINT NAME	TYPE	X	Y	ELEV	DESCRIPTION
28	BM	511231.619	278336.993	883.48	RR SPIKE IN PPOL #3-13-21 49/30
29	BM	511708.782	277956.128	880.83	CHIS SQ S END 12IN RCCP
200	CP	511700.227	277828.415	---	5/8IN RB KL CAP
201	CP	511160.268	278411.863	---	5/8IN RB KL CAP
202	CP	510397.235	278790.261	---	5/8IN RB KL CAP

NOTE:
THE COORDINATES ARE REFERENCED TO WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), ROCK COUNTY, NAD 1983 (2007).

VERTICAL DATUM BASED ON NAVD 88 (2007).

FOR INFORMATION ONLY. OFFICIAL SURVEY CONTROL SHALL BE OBTAINED FROM WISDOT PRIOR TO CONSTRUCTION.

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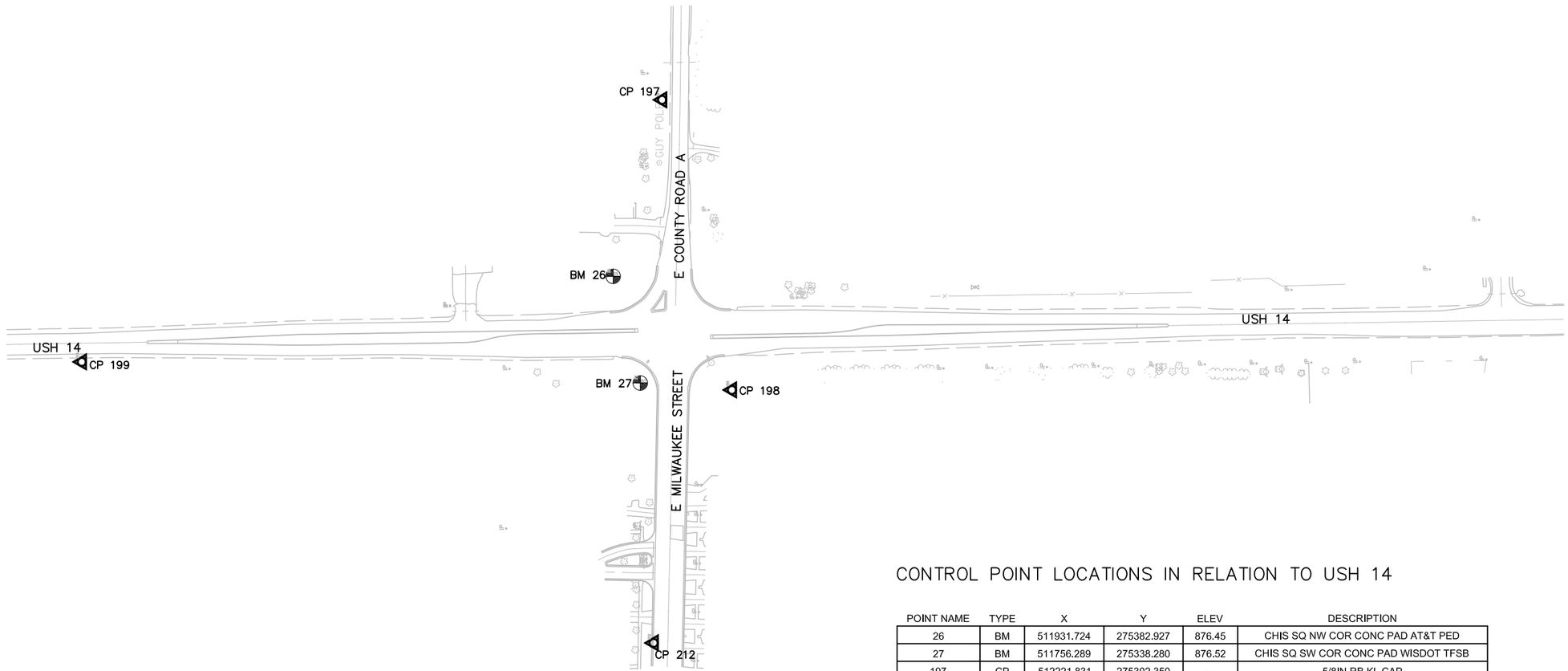


CONTROL POINT LOCATIONS IN RELATION TO USH 14

POINT NAME	TYPE	X	Y	ELEV	DESCRIPTION
26	BM	511931.724	275382.927	876.45	CHIS SQ NW COR CONC PAD AT&T PED
27	BM	511756.289	275338.280	876.52	CHIS SQ SW COR CONC PAD WISDOT TFSB
197	CP	512221.831	275302.350	---	5/8IN RB KL CAP
198	CP	511744.875	275187.484	---	5/8IN RB KL CAP
199	CP	511790.989	276257.280	---	5/8IN RB KL CAP
212	CP	511328.915	275316.352	---	MAG NAIL

NOTE:
THE COORDINATES ARE REFERENCED TO WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), ROCK COUNTY, NAD 1983 (2007).

VERTICAL DATUM BASED ON NAVD 88 (2007).

FOR INFORMATION ONLY. OFFICIAL SURVEY CONTROL SHALL BE OBTAINED FROM WISDOT PRIOR TO CONSTRUCTION.

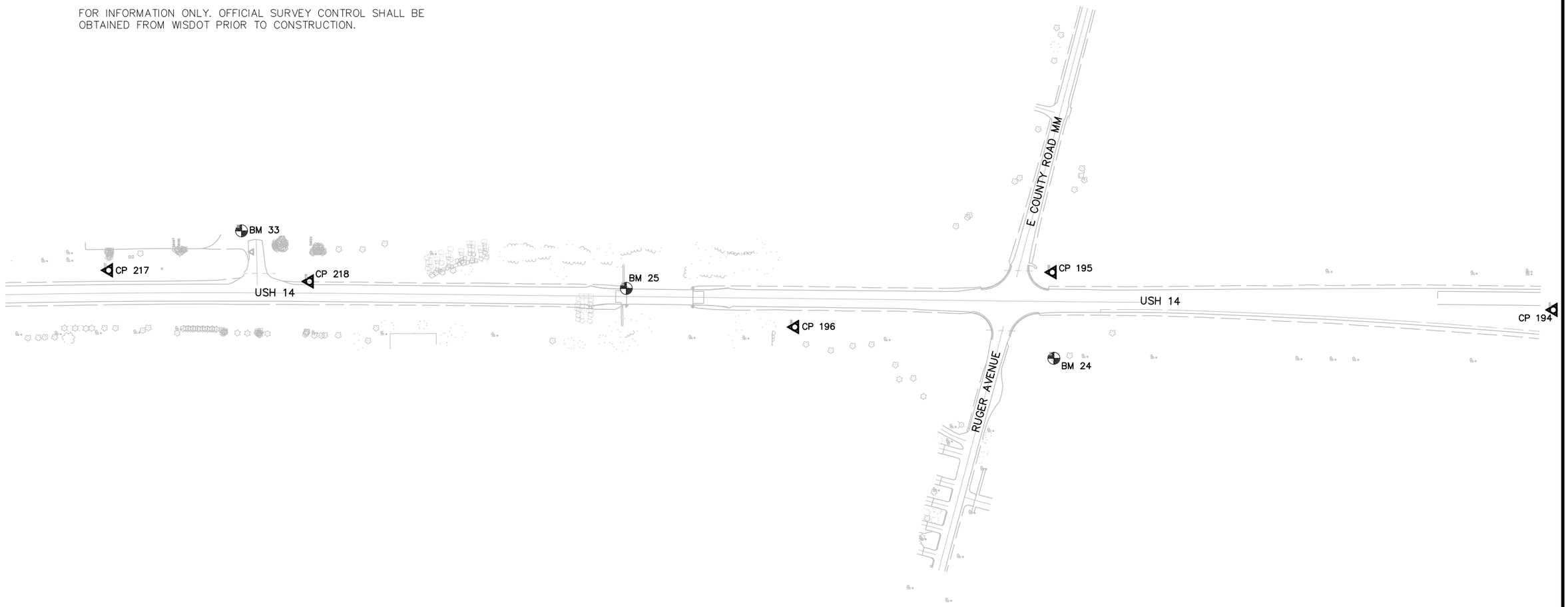
CONTROL POINT LOCATIONS IN RELATION TO USH 14

POINT NAME	TYPE	X	Y	ELEV	DESCRIPTION
24	BM	511797.731	267976.193	859.62	CHIS SQ SE COR CONC PAD AMERITECH PED #F10-HY14
25	BM	511936.143	268823.785	854.51	WISDOT VT CTL DISK TOP CONC WINGWALL NE QUAD B-53-7-94
33	BM	512050.116	269586.390	866.94	CHIS SQ
194	CP	511893.582	266986.194	—	MAG NAIL
195	CP	511968.058	267979.227	—	5/8IN RB KL CAP
196	CP	511859.611	268489.619	—	5/8IN RB KL CAP
217	CP	511971.965	269849.769	—	5/8IN RB KL CAP
218	CP	511949.851	269451.778	—	5/8IN RB KL CAP

NOTE:
THE COORDINATES ARE REFERENCED TO WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), ROCK COUNTY, NAD 1983 (2007).

VERTICAL DATUM BASED ON NAVD 88 (2007).

FOR INFORMATION ONLY. OFFICIAL SURVEY CONTROL SHALL BE OBTAINED FROM WISDOT PRIOR TO CONSTRUCTION.



PROJECT NO: 5569-00-72	HWY: USH 14	COUNTY: ROCK	PLAN: CONTROL POINTS	SHEET 148	E

CONTROL POINT LOCATIONS IN RELATION TO USH 14

POINT NAME	TYPE	X	Y	ELEV	DESCRIPTION
23	BM	511703.967	264702.638	862.66	CHIS SQ TOP CONC INL
30	BM	511704.586	264443.365	862.41	CHIS SQ E END 24IN RCCP
191	CP	511739.113	264544.175	—	5/8IN RB KL CAP
192	CP	511900.860	263896.170	—	5/8IN RB KL CAP
193	CP	511937.233	265345.279	—	5/8IN RB KL CAP

NOTE:
THE COORDINATES ARE REFERENCED TO WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), ROCK COUNTY, NAD 1983 (2007).

VERTICAL DATUM BASED ON NAVD 88 (2007).

FOR INFORMATION ONLY. OFFICIAL SURVEY CONTROL SHALL BE OBTAINED FROM WISDOT PRIOR TO CONSTRUCTION.

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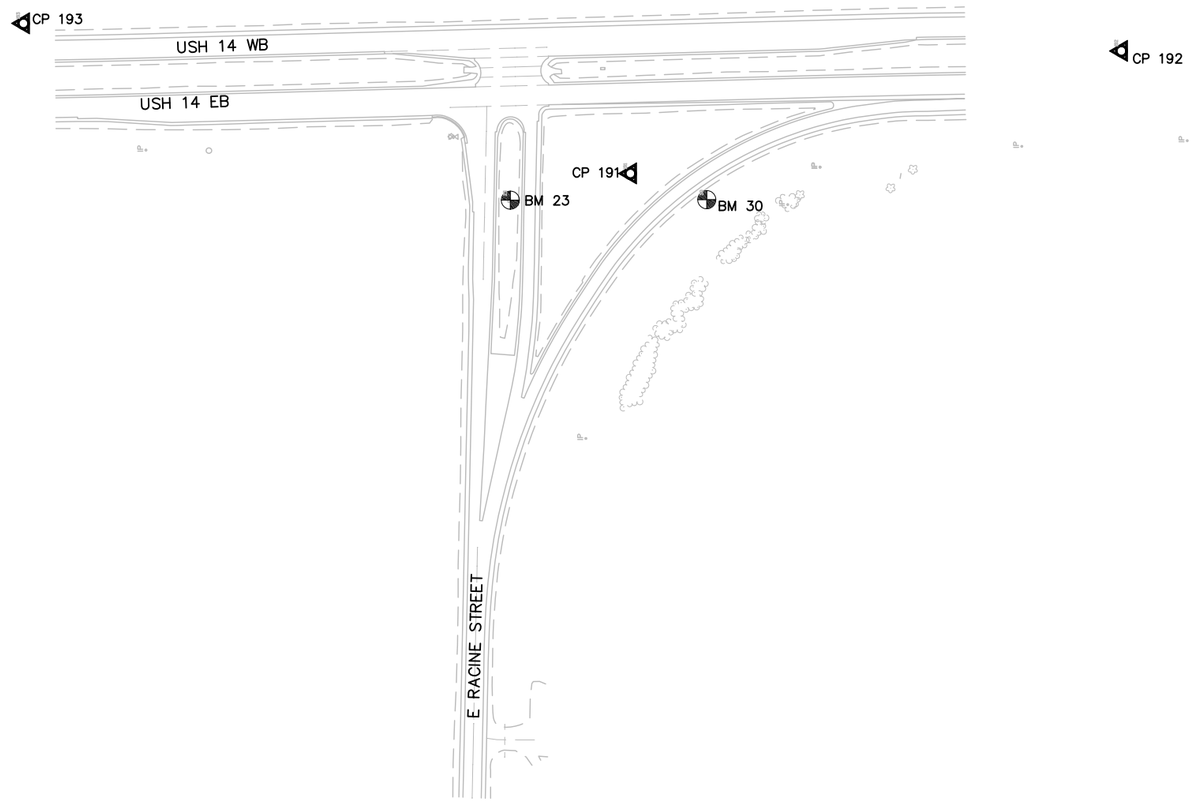

DATE 27JAN15 — E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	5569-00-73 QUANTITY
0010	201.0105	Clearing	STA	2.000	2.000
0020	201.0205	Grubbing	STA	2.000	2.000
0030	204.0100	Removing Pavement	SY	700.000	700.000
0040	204.0110	Removing Asphaltic Surface	SY	825.000	825.000
0050	204.0115	Removing Asphaltic Surface Butt Joints	SY	600.000	600.000
0060	204.0120	Removing Asphaltic Surface Milling	SY	13,000.000	13,000.000
0070	204.0130	Removing Curb	LF	855.000	855.000
0080	204.0150	Removing Curb & Gutter	LF	145.000	145.000
0090	204.0165	Removing Guardrail	LF	290.000	290.000
0100	204.0195	Removing Concrete Bases	EACH	5.000	5.000
0120	205.0100	Excavation Common	CY	7,952.000	7,952.000
0130	208.0100	Borrow	CY	1,122.000	1,122.000
0140	208.1100	Select Borrow	CY	2,012.000	2,012.000
0150	211.0100	Prepare Foundation for Asphaltic Paving (project) 001. 5569-00-73	LS	1.000	1.000
0160	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	7.000	7.000
0170	213.0100	Finishing Roadway (project) 001. 5569-00-73	EACH	1.000	1.000
0190	305.0110	Base Aggregate Dense 3/4-Inch	TON	1,750.000	1,750.000
0200	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	7,600.000	7,600.000
0210	305.0130	Base Aggregate Dense 3-Inch	TON	5,000.000	5,000.000
0250	415.0090	Concrete Pavement 9-Inch	SY	1,320.000	1,320.000
0260	415.0210	Concrete Pavement Gaps	EACH	5.000	5.000
0270	415.6000.S	Rout and Seal	LF	1,175.000	1,175.000
0280	416.0610	Drilled Tie Bars	EACH	2,250.000	2,250.000
0290	416.0620	Drilled Dowel Bars	EACH	7,500.000	7,500.000
0300	416.1010	Concrete Surface Drains	CY	5.000	5.000
0310	416.1715	Concrete Pavement Repair SHES	SY	3,000.000	3,000.000
0320	416.1725	Concrete Pavement Replacement SHES	SY	1,010.000	1,010.000
0330	420.1000.S	Concrete Pavement Continuous Diamond Grinding	SY	4,010.000	4,010.000
0340	455.0105	Asphaltic Material PG58-28	TON	275.000	275.000
0350	455.0120	Asphaltic Material PG64-28	TON	25.000	25.000
0360	455.0605	Tack Coat	GAL	1,970.000	1,970.000
0370	460.1100	HMA Pavement Type E-0.3	TON	415.000	415.000
0380	460.1103	HMA Pavement Type E-3	TON	1,225.000	1,225.000
0390	460.1110	HMA Pavement Type E-10	TON	3,400.000	3,400.000
0400	460.2000	Incentive Density HMA Pavement	DOL	3,310.000	3,310.000
0410	465.0105	Asphaltic Surface	TON	110.000	110.000
0420	465.0315	Asphaltic Flumes	SY	50.000	50.000
0430	520.8000	Concrete Collars for Pipe	EACH	4.000	4.000
0440	521.0124	Culvert Pipe Corrugated Steel 24-Inch	LF	64.000	64.000
0450	521.1024	Apron Endwalls for Culvert Pipe Steel 24-Inch	EACH	2.000	2.000
0460	601.0120	Concrete Curb Type J	LF	900.000	900.000
0470	601.0551	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type A	LF	590.000	590.000
0480	601.0553	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type D	LF	200.000	200.000
0500	602.0410	Concrete Sidewalk 5-Inch	SF	215.000	215.000
0510	610.0119	Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 19x30-Inch	LF	7.000	7.000
0520	611.9710	Salvaged Inlet Covers	EACH	1.000	1.000

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DATE 27JAN15 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	5569-00-73 QUANTITY
0540	614.0115	Anchorages for Steel Plate Beam Guard Type 2	EACH	1.000	1.000
0550	614.0305	Steel Plate Beam Guard Class A	LF	37.500	37.500
0560	614.0345	Steel Plate Beam Guard Short Radius	LF	31.250	31.250
0570	614.0370	Steel Plate Beam Guard Energy Absorbing Terminal	EACH	1.000	1.000
0580	614.2300	MGS Guardrail 3	LF	1,550.000	1,550.000
0590	614.2500	MGS Thrie Beam Transition	LF	160.000	160.000
0600	614.2610	MGS Guardrail Terminal EAT	EACH	9.000	9.000
0610	614.2620	MGS Guardrail Terminal Type 2	EACH	1.000	1.000
0620	616.0700.S	Fence Safety	LF	1,000.000	1,000.000
0630	618.0100	Maintenance And Repair of Haul Roads (project) 001. 5569-00-73	EACH	1.000	1.000
0650	619.1000	Mobilization	EACH	0.900	0.900
0660	620.0300	Concrete Median Sloped Nose	SF	130.000	130.000
0670	624.0100	Water	MGAL	480.000	480.000
0690	625.0500	Salvaged Topsoil	SY	8,940.000	8,940.000
0700	627.0200	Mulching	SY	4,050.000	4,050.000
0710	628.1504	Silt Fence	LF	695.000	695.000
0720	628.1520	Silt Fence Maintenance	LF	355.000	355.000
0730	628.1905	Mobilizations Erosion Control	EACH	8.000	8.000
0740	628.1910	Mobilizations Emergency Erosion Control	EACH	8.000	8.000
0750	628.2004	Erosion Mat Class I Type B	SY	5,595.000	5,595.000
0760	628.6510	Soil Stabilizer Type B	ACRE	2.000	2.000
0770	628.7005	Inlet Protection Type A	EACH	2.000	2.000
0780	628.7010	Inlet Protection Type B	EACH	2.000	2.000
0790	628.7020	Inlet Protection Type D	EACH	2.000	2.000
0800	628.7504	Temporary Ditch Checks	LF	160.000	160.000
0810	628.7555	Culvert Pipe Checks	EACH	20.000	20.000
0820	629.0205	Fertilizer Type A	CWT	10.000	10.000
0830	630.0120	Seeding Mixture No. 20	LB	155.000	155.000
0840	630.0140	Seeding Mixture No. 40	LB	95.000	95.000
0850	630.0200	Seeding Temporary	LB	375.000	375.000
0860	633.5200	Markers Culvert End	EACH	2.000	2.000
0870	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	25.000	25.000
0880	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	1.000	1.000
0890	637.2210	Signs Type II Reflective H	SF	120.750	120.750
0900	637.2215	Signs Type II Reflective H Folding	SF	52.220	52.220
0910	637.2230	Signs Type II Reflective F	SF	79.000	79.000
0920	638.2102	Moving Signs Type II	EACH	20.000	20.000
0930	638.2602	Removing Signs Type II	EACH	19.000	19.000
0940	638.3000	Removing Small Sign Supports	EACH	20.000	20.000
0950	638.4000	Moving Small Sign Supports	EACH	25.000	25.000
0960	642.5201	Field Office Type C	EACH	1.000	1.000
0970	643.0100	Traffic Control (project) 001. 5569-00-73	EACH	1.000	1.000
0990	643.0300	Traffic Control Drums	DAY	24,000.000	24,000.000
1000	643.0420	Traffic Control Barricades Type III	DAY	750.000	750.000
1010	643.0705	Traffic Control Warning Lights Type A	DAY	1,400.000	1,400.000
1020	643.0715	Traffic Control Warning Lights Type C	DAY	1,000.000	1,000.000
1030	643.0800	Traffic Control Arrow Boards	DAY	60.000	60.000
1040	643.0900	Traffic Control Signs	DAY	3,200.000	3,200.000
1060	643.1050	Traffic Control Signs PCMS	DAY	700.000	700.000
1070	646.0106	Pavement Marking Epoxy 4-Inch	LF	85,500.000	85,500.000

3

DATE 27JAN15 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	5569-00-73 QUANTITY
1080	646.0126	Pavement Marking Epoxy 8-Inch	LF	5,350.000	5,350.000
1090	646.0600	Removing Pavement Markings	LF	12,500.000	12,500.000
1100	647.0166	Pavement Marking Arrows Epoxy Type 2	EACH	5.000	5.000
1110	647.0356	Pavement Marking Words Epoxy	EACH	3.000	3.000
1120	647.0456	Pavement Marking Curb Epoxy	LF	3,230.000	3,230.000
1130	647.0566	Pavement Marking Stop Line Epoxy 18-Inch	LF	330.000	330.000
1140	647.0606	Pavement Marking Island Nose Epoxy	EACH	2.000	2.000
1150	647.0726	Pavement Marking Diagonal Epoxy 12-Inch	LF	1,530.000	1,530.000
1160	647.0766	Pavement Marking Crosswalk Epoxy 6-Inch	LF	315.000	315.000
1170	647.0856	Pavement Marking Concrete Corrugated Median Epoxy	SF	80.000	80.000
1180	648.0100	Locating No-Passing Zones	MI	3.620	3.620
1190	649.0400	Temporary Pavement Marking Removable Tape 4-Inch	LF	11,650.000	11,650.000
1200	649.0801	Temporary Pavement Marking Removable Tape 8-Inch	LF	950.000	950.000
1260	652.0220	Conduit Rigid Nonmetallic Schedule 40 1 1/2-Inch	LF	606.000	606.000
1270	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	1,558.000	1,558.000
1280	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	464.000	464.000
1290	652.0615	Conduit Special 3-Inch	LF	796.000	796.000
1300	652.0800	Conduit Loop Detector	LF	1,201.000	1,201.000
1310	652.0900	Loop Detector Slots	LF	80.000	80.000
1320	653.0135	Pull Boxes Steel 24x36-Inch	EACH	11.000	11.000
1330	653.0140	Pull Boxes Steel 24x42-Inch	EACH	10.000	10.000
1340	653.0905	Removing Pull Boxes	EACH	12.000	12.000
1350	654.0101	Concrete Bases Type 1	EACH	5.000	5.000
1360	654.0102	Concrete Bases Type 2	EACH	4.000	4.000
1370	654.0113	Concrete Bases Type 13	EACH	2.000	2.000
1380	654.0217	Concrete Control Cabinet Bases Type 9 Special	EACH	1.000	1.000
1390	655.0230	Cable Traffic Signal 5-14 AWG	LF	1,875.000	1,875.000
1400	655.0240	Cable Traffic Signal 7-14 AWG	LF	707.000	707.000
1410	655.0250	Cable Traffic Signal 9-14 AWG	LF	104.000	104.000
1420	655.0305	Cable Type UF 2-12 AWG Grounded	LF	642.000	642.000
1430	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	1,363.000	1,363.000
1440	655.0610	Electrical Wire Lighting 12 AWG	LF	966.000	966.000
1450	655.0700	Loop Detector Lead In Cable	LF	6,357.000	6,357.000
1460	655.0800	Loop Detector Wire	LF	5,274.000	5,274.000
1470	655.0900	Traffic Signal EVP Detector Cable	LF	947.000	947.000
1480	657.0100	Pedestal Bases	EACH	5.000	5.000
1490	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	4.000	4.000
1500	657.0310	Poles Type 3	EACH	4.000	4.000
1510	657.0420	Traffic Signal Standards Aluminum 13-FT	EACH	1.000	1.000
1520	657.0425	Traffic Signal Standards Aluminum 15-FT	EACH	4.000	4.000
1530	657.0614	Luminaire Arms Single Member 4-Inch Clamp 8-FT	EACH	6.000	6.000
1540	657.1355	Install Poles Type 12	EACH	1.000	1.000
1550	657.1360	Install Poles Type 13	EACH	1.000	1.000
1560	657.1540	Install Monotube Arms 40-FT	EACH	2.000	2.000
1570	657.1808	Install Luminaire Arms Steel 8-FT	EACH	1.000	1.000
1580	658.0110	Traffic Signal Face 3-12 Inch Vertical	EACH	8.000	8.000

3

DATE 27JAN15 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	5569-00-73 QUANTITY
1590	658.0115	Traffic Signal Face 4-12 Inch Vertical	EACH	4.000	4.000
1600	658.0120	Traffic Signal Face 5-12 Inch Vertical	EACH	2.000	2.000
1610	658.0215	Backplates Signal Face 3 Section 12-Inch	EACH	8.000	8.000
1620	658.0220	Backplates Signal Face 4 Section 12-Inch	EACH	4.000	4.000
1630	658.0225	Backplates Signal Face 5 Section 12-Inch	EACH	2.000	2.000
1640	658.0600	Led Modules 12-Inch Red Ball	EACH	11.000	11.000
1650	658.0605	Led Modules 12-Inch Yellow Ball	EACH	11.000	11.000
1660	658.0610	Led Modules 12-Inch Green Ball	EACH	11.000	11.000
1670	658.0615	Led Modules 12-Inch Red Arrow	EACH	3.000	3.000
1680	658.0620	Led Modules 12-Inch Yellow Arrow	EACH	8.000	8.000
1690	658.0625	Led Modules 12-Inch Green Arrow	EACH	6.000	6.000
1700	658.5069	Signal Mounting Hardware (location) 001. Ush 14 & Sth 11	LS	1.000	1.000
1710	659.0802	Plaques Sequence Identification	EACH	2.000	2.000
1720	659.1125	Luminaires Utility LED C	EACH	7.000	7.000
1730	690.0150	Sawing Asphalt	LF	7,950.000	7,950.000
1740	690.0250	Sawing Concrete	LF	14,400.000	14,400.000
1750	715.0415	Incentive Strength Concrete Pavement	DOL	500.000	500.000
1760	SPV.0060	Special 001. Baseline Cpm Progress Schedule	EACH	1.000	1.000
1770	SPV.0060	Special 002. Cpm Progress Schedule Updates And Accepted Revisions	EACH	1.000	1.000
1780	SPV.0060	Special 003. Salvage Inlet	EACH	1.000	1.000
1810	SPV.0060	Special 400. Install Cellular Modem	EACH	1.000	1.000
1820	SPV.0060	Special 450. Remove Existing Cabinet	EACH	1.000	1.000
1830	SPV.0060	Special 451. Remove Street Light	EACH	4.000	4.000
1840	SPV.0090	Special 001. Removing Hma Pavement Notched Wedge Longitudinal Joint Milling	LF	3,450.000	3,450.000
1850	SPV.0105	Special 001. Survey Project 5569-00-73	LS	1.000	1.000
1860	SPV.0105	Special 002. Concrete Pavement Joint Layout	LS	1.000	1.000
1870	SPV.0105	Special 450. Install State Furnished Emergency Veh Preemption Equipment Ush 14 & Sth 11	LS	1.000	1.000

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CLEARING AND GRUBBING

	STATION - STATION	ALIGNMENT	LOCATION	CLEARING 201.0105 (STA)	GRUBBING 201.0205 (STA)
CATEGORY 1000					
USH 14 - RUGER AVE/CTH MM INTERSECTION					
STAGE 2	426+75 - 428+25	HEA	USH 14, LT	1.5	1.5
UNDISTRIBUTED				0.5	0.5
PROJECT TOTAL				**2**	**2**

REMOVING CURB & GUTTER

	STATION - STATION	ALIGNMENT	LOCATION	REMOVING CURB 204.0130 (LF)	REMOVING CURB & GUTTER 204.0150 (LF)
CATEGORY 1000					
USH 14 - MILWAUKEE ST/CTH A INTERSECTION					
STAGE 2	357+78 - 358+99	HEA	MEDIAN	120	-
	359+19 - 362+33	HEA	MEDIAN	315	-
	367+00 - 370+29	HEA	MEDIAN	330	-
	370+55 - 371+45	HEA	MEDIAN	90	-
USH 14 - MILWAUKEE ST/CTH A INTERSECTION SUBTOTAL				855	-
USH 14 - RUGER AVE/CTH MM INTERSECTION					
STAGE 1			NW RADIUS	-	73
STAGE 2			SE RADIUS	-	72
USH 14 - RUGER AVE/CTH MM INTERSECTION SUBTOTAL				-	145
PROJECT TOTAL				**855**	**145**

REMOVING GUARDRAIL

	STATION	-	STATION	ALIGNMENT	LOCATION	204.0165 (LF)
CATEGORY 1000						
USH 14 - RUGER AVE/CTH MM INTERSECTION						
STAGE 1	428+65	-	429+37	HEA	USH 14, RT	73
	430+64	-	431+36	HEA	USH 14, RT	72
STAGE 2	428+65	-	429+37	HEA	USH 14, LT	73
	430+34	-	431+36	HEA	USH 14, LT	72
PROJECT TOTAL						**290**

PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS

	STATION - STATION	ALIGNMENT	211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS (STA)
CATEGORY 1000			
USH 14 - RUGER AVE INTERSECTION			
STAGE 1	418+35 - 423+69	HEA	6.0
USH 14 - STH 11 INTERSECTION			
STAGE 2	470+93 - 471+82	HEA	1.0
PROJECT TOTAL			**7.0**

REMOVING PAVEMENT

	STATION - STATION	ALIGNMENT	LOCATION	204.0100 REMOVING PAVEMENT (SY)	204.0110 REMOVING ASPHALTIC SURFACE (SY)	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS (SY)	204.0120 REMOVING ASPHALTIC SURFACE MILLING (SY)	SPV.0090.001 REMOVING HMA PAVEMENT NOTCHED WEDGE LONGITUDINAL JOINT MILLING (LF)
CATEGORY 1000								
USH 14 - MILL & OVERLAY SECTION								
STAGE 1	285+08 - 296+00	HEA		-	-	200	2,990	1100
STAGE 2	285+08 - 296+00	HEA		-	-	200	4,885	1100
STAGE 3	296+00 - 305+50	HEA		-	-	190	4,965	950
USH 14 - MILL & OVERLAY SECTION SUBTOTAL				0	0	590	12,840	3,150
USH 14 - OLD HUMES RD INTERSECTION								
STAGE 1	332+69 - 337+10	HEA	RIGHT TURN LANE	-	84	-	-	-
USH 14/OLD HUMES RD INTERSECTION SUBTOTAL				0	84	0	0	0
USH 14 - HARMONY TOWN HALL RD INTERSECTION								
STAGE 1	340+62 - 344+44	HEA	RIGHT TURN LANE	-	100	-	-	-
USH 14/HARMONY TOWN HALL RD INTERSECTION SUBTOTAL				0	100	0	0	0
USH 14 - MILWAUKEE ST/CTH A INTERSECTION								
STAGE 1	361+26 - 362+34	HEA	RIGHT TURN LANE	-	109	-	-	-
	366+55 - 368+28	HEA	RIGHT TURN LANE	-	260	-	-	-
STAGE 2	361+26 - 362+34	HEA	LEFT TURN LANE	-	78	-	-	-
	367+00 - 368+28	HEA	LEFT TURN LANE	-	101	-	-	-
USH 14 - MILWAUKEE ST/CTH A INTERSECTION SUBTOTAL				0	548	0	0	0
USH 14 - STH 11 INTERSECTION								
STAGE 1	8+84 - 9+11	REA	MEDIAN	55	-	-	-	-
STAGE 2A	468+78 - 469+72	HEA	RT	112	-	-	-	-
	477+25 - 477+39	HWA	RT	-	9	-	-	-
	8+57 - 9+21	REA	RT	100	-	-	-	-
	7+72 - 8+87	RWA	LT	127	-	-	-	-
STAGE 2B	469+72 - 470+11	HEA	RT	86	-	-	-	-
STAGE 3	465+08 - 465+18	HEA	MEDIAN	-	3	-	-	-
	469+19 - 469+27	HEA	MEDIAN	-	3	-	-	-
	470+11 - 470+26	HEA	MEDIAN	51	-	-	-	-
	470+94 - 471+54	HEA	MEDIAN	106	-	-	-	-
USH 14 - STH 11 INTERSECTION SUBTOTAL				636	16	0	0	0
UNDISTRUBUTED				64	77	10	160	300
PROJECT TOTAL				**700**	**825**	**600**	**13,000**	**3,450**

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EXCAVATION SUMMARY

Category		From/To Station	Location	Cut (2)	205.0100 Excavation Common (1) (CY) EBS Excavation (3)	Salvaged/ Unusable Pavement Material	Available Material (4)	Unexpanded Fill	Expanded Fill (5) Factor 1.30	Mass Ordinate +/- (6)	Waste	208.0100 Borrow (CY)	208.1100 Select Borrow (7) (CY)	Comment:
1000	DIV. 1	332+69 - 337+10	(DIV 1-1) WB USH 14 RT-TURN TO OLD HUMES ROAD 'HEA' - STAGE 1 CONSTRUCTION	255	13	0	255	244	318	-62	13	62	17	
	DIV. 2	16+83 - 21+70	(DIV 2-1) WB USH 14 RT-TURN TO HARMONY TOWN HALL ROAD 'HEA' - STAGE 1 CONSTRUCTION	236	12	0	236	222	288	-52	12	52	15	
	DIV. 3	358+69 - 362+33	(DIV 3-1) EB USH 14 RT-TURN TO WB MILWAUKEE STREET 'HEA' - STAGE 1 CONSTRUCTION	231	255	0	231	50	65	166	421	0	331	
		357+79 - 362+33	(DIV 3-2) EB USH 14 LT-TURN TO EB MILWAUKEE STREET 'HEA' - STAGE 2 CONSTRUCTION	182	9	55	128	0	0	128	137	0	12	
	DIV. 4	366+55 - 370+32	(DIV 4-1) WB USH 14 RT-TURN TO EB MILWAUKEE STREET 'HEA' - STAGE 1 CONSTRUCTION	359	820	0	359	26	34	325	1,145	0	1,066	
		367+00 - 371+45	(DIV 4-2) WB USH 14 LT-TURN TO WB MILWAUKEE STREET 'HEA' - STAGE 2 CONSTRUCTION	154	8	53	101	0	0	101	109	0	10	
	DIV. 5	371+47 - 376+95	(DIV 5-1) WB USH 14 'HEA' - STAGE 1 CONSTRUCTION	350	17	0	350	50	65	284	302	0	23	
		372+32 - 376+92	(DIV 5-2) EB USH 14 'HEA' - STAGE 2 CONSTRUCTION	255	13	0	255	120	156	99	112	0	17	
	DIV. 6	418+36 - 429+35	(DIV 6-1) EB USH 14 'HEA' - STAGE 1 CONSTRUCTION	379	19	2	378	777	1,010	-632	19	632	25	
		423+70 - 429+35	(DIV 6-2) WB USH 14 'HEA' - STAGE 2 CONSTRUCTION	341	17	2	339	550	715	-375	17	375	22	
	DIV. 7	430+67 - 435+92	(DIV 7-1) EB USH 14 'HEA' - STAGE 1 CONSTRUCTION	883	44	2	881	106	138	743	787	0	57	
		430+67 - 436+37	(DIV 7-2) WB USH 14 'HEA' - STAGE 2 CONSTRUCTION	457	23	2	456	109	142	314	337	0	30	
	DIV. 8	13+40 - 15+12	(DIV 8-1) RUGER AVENUE 'RUA' - STAGE 1 CONSTRUCTION	337	17	3	334	16	21	312	329	0	22	
		15+90 - 17+62	(DIV 8-2) RUGER AVENUE 'RUA' - STAGE 2 CONSTRUCTION	270	14	3	267	25	33	234	248	0	18	
	DIV. 9	437+99 - 441+38	(DIV 9-2) WB USH 14 'HEA' - STAGE 2 CONSTRUCTION	290	14	0	290	3	4	285	300	0	19	
	DIV. 10	4+00 - 9+11	(DIV 10-1) EB STH 11 'REA' - STAGE 1 CONSTRUCTION	475	205	51	424	71	92	331	537	0	267	
		7+74 - 9+05	(DIV 10-2) EB STH 11 'REA' - STAGE 2 CONSTRUCTION	117	6	7	110	0	0	110	115	0	8	
	DIV. 11	7+39 - 8+76	(DIV 11-2) WB STH 11 'RWA' - STAGE 2 CONSTRUCTION	116	6	19	97	0	0	96	102	0	8	
	DIV. 12	468+79 - 470+05	(DIV 12-2) EB USH 14 'HEA' - STAGE 2 CONSTRUCTION	218	11	33	185	0	0	185	196	0	14	
		469+42 - 470+28	(DIV 12-3) EB USH 14 'HEA' - STAGE 3 CONSTRUCTION	90	5	27	63	5	6	57	61	0	6	
	DIV. 13	471+06 - 471+66	(DIV 13-2) EB USH 14 'HEA' - STAGE 2 CONSTRUCTION	20	1	3	17	0	0	17	18	0	1	
	DIV. 14	470+87 - 473+69	(DIV 14-2) WB USH 14 'HWA' - STAGE 2 CONSTRUCTION	314	16	17	297	34	45	252	268	0	20	
		472+26 - 473+14	(DIV 14-3) WB USH 14 'HWA' - STAGE 3 CONSTRUCTION	75	4	12	63	11	15	48	52	0	5	
			CATEGORY 1000 SUBTOTAL	6,404	1,548	291	6,113	2,422	3,147	2,966	5,635	1,122	2,012	
			TOTALS		**7,952**							**1,122**	**2,012**	**5,635 CY WASTED**

Note 1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
Note 2) Salvaged/Unusable Pavement Material is included in Cut.
Note 3) EBS estimated at 5.0% undistributed quantity except where additional EBS areas noted in the Geotechnical Report.
EBS in Fill - Excavated EBS material is useable in Fills outside the 1.5:1 slope. EBS in Fill Reduction factor = 0.8. EBS quantity not factored into Fill quantity.
Note 4) Available Material = Cut - Salvaged/Unusable Pavement Material
Note 5) Expanded Fill Factor = 1.30
Note 6) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.
Note 7) Select Borrow to be used as EBS backfill.

BASE AGGREGATE

STAGE	STATION - STATION	ALI	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH (TON)	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON)	305.0130 BASE AGGREGATE DENSE 3-INCH (TON)
CATEGORY 1000						
USH 14- MILL & OVERLAY SECTION						
STAGE 1	285+08 - 296+00	HEA	USH 14	30	-	-
STAGE 2	285+08 - 296+00	HEA	USH 14	20	-	-
STAGE 3	296+00 - 305+50	HEA	USH 14	18	-	-
USH 14 - MILL & OVERLAY SECTION SUBTOTAL				68	0	0
USH 14 - OLD HUMES RD INTERSECTION						
STAGE 1	332+69 - 337+10	HEA	USH 14 WB RIGHT TURN LANE	73	439	271
USH 14 - OLD HUMES RD INTERSECTION SUBTOTAL				73	439	271
USH 14 - HARMONY TOWN HALL RD INTERSECTION						
STAGE 1	340+57 - 344+44	HEA	USH 14 WB RIGHT TURN LANE	64	374	231
USH 14 - HARMONY TOWN HALL RD INTERSECTION SUBTOTAL				64	374	231
USH 14 - MILWAUKEE ST/CTH A INTERSECTION						
STAGE 1	357+84 - 362+33	HEA	USH 14 EB RIGHT TURN LANE	82	431	290
	366+55 - 372+20	HEA	USH 14 WB RIGHT TURN LANE	111	575	383
	372+20 - 376+95	HEA	USH 14	124	461	323
STAGE 2	372+32 - 376+92	HEA	USH 14	111	346	253
USH 14 - MILWAUKEE ST/CTH A INTERSECTION SUBTOTAL				428	1813	1249
USH 14 - RUGER AVE/CTH MM INTERSECTION						
STAGE 1	418+36 - 429+35	HEA	USH 14	197	549	333
	430+66 - 436+63	HEA	USH 14 EB RIGHT TURN LANE	206	1044	557
STAGE 2	423+70 - 429+35	HEA	USH 14	145	518	319
	430+67 - 436+50	HEA	USH 14	156	570	344
	437+29 - 441+38	HEA	USH 14 WB RIGHT TURN LANE	115	776	411
USH 14 - RUGER AVE/CTH MM INTERSECTION SUBTOTAL				819	3457	1964
USH 14 - STH 11 INTERSECTION						
STAGE 1	3+86 - 9+11	REA	STH 11 EB LEFT TURN LANE	27	330	348
STAGE 2A	468+78 - 470+11	HEA	USH 14 EB RIGHT TURN LANE	44	240	239
	7+75 - 9+21	REA	STH 11	31	128	87
	473+69 - 470+86	HWA	USH 14	68	299	204
STAGE 2B	469+72 - 470+11	HEA	RIGHT TURN LANE ISLAND	-	29	31
STAGE 3	469+42 - 470+28	HEA	USH 14 MEDIAN	-	55	61
	470+94 - 471+82	HEA	USH 14 MEDIAN	-	49	54
USH 14 - STH 11 INTERSECTION SUBTOTAL				170	1130	1024
UNDISTRIBUTED				128	387	261
PROJECT TOTAL				**1,750**	**7,600**	**5,000**

CONCRETE PAVEMENT

STAGE	STATION - STATION	ALI	LOCATION	415.0090 CONCRETE PAVEMENT 9-INCH (SY)	415.0210 CONCRETE PAVEMENT GAPS (EA)	416.0610 DRILLED TIE BARS (EA)	416.0620 DRILLED DOWEL BARS (EA)	416.1715 CONCRETE PAVEMENT REPAIR SHES (SY)	416.1725 CONCRETE PAVEMENT REPLACEMENT SHES (SY)	420.1000.S CONCRETE PAVEMENT CONTINUOUS DIAMOND GRINDING (SY)
CATEGORY 1000										
USH 14/MILWAUKEE ST INTERSECTION										
STAGE 2	358+99 - 359+19	HEA	USH 14	-	-	13	31	-	54	54
	363+20 - 363+28	HEA	USH 14	-	-	5	33	22	-	22
	366+19 - 366+29	HEA	USH 14	-	-	7	33	28	-	28
	370+29 - 370+55	HEA	USH 14	-	-	17	33	-	71	71
USH 14/MILWAUKEE ST INTERSECTION SUBTOTAL				0	0	42	130	50	125	175
STH 11/USH 14 INTERSECTION										
STAGE 1	3+86 - 9+11	REA	STH 11 EB LEFT TURN LANE	673	1	195	27	-	-	-
STAGE 2A	468+78 - 470+10	HEA	USH 14 EB RIGHT TURN LANE	411	-	81	7	-	-	-
	5+44 - 5+54	REA	STH 11	-	-	3	20	17	-	17
	8+57 - 9+11	REA	STH 11	-	-	17	20	-	91	91
	465+08 - 465+18	HEA	USH 14	-	-	3	19	16	-	18
	473+10 - 473+18	HWA	USH 14	-	-	-	19	12	-	12
	477+25 - 477+39	HWA	USH 14	-	-	-	19	22	-	22
STAGE 2B	469+72 - 470+11	HEA	RIGHT TURN LANE ISLAND	35	-	29	45	12	-	12
STAGE 3	469+42 - 470+28	HEA	USH 14 MEDIAN	71	-	36	25	-	-	-
	470+94 - 471+82	HEA	USH 14 MEDIAN	65	-	36	25	-	-	-
	472+28 - 472+78	HWA	USH 14 WB LEFT TURN LANE	-	-	17	16	-	66	66
	465+08 - 465+18	HEA	USH 14	-	-	3	16	13	-	13
	469+18 - 469+26	HEA	USH 14	-	-	3	16	11	-	11
	473+10 - 473+18	HWA	USH 14	-	-	5	16	11	-	11
	477+25 - 477+39	HWA	USH 14	-	-	9	16	19	-	19
STH 11/USH 14 INTERSECTION SUBTOTAL				1,255	1	437	306	133	157	292
UNDISTRIBUTED				65	4	1,771	7,064	2,817	728	3,543
PROJECT TOTAL				**1,320**	**5**	**2,250**	**7,500**	**3,000**	**1,010**	**4,010**

ROUT AND SEAL

STAGE	STATION-STATION	ALI	LOCATION	415.6000.S (LF)
CATEGORY 1000				
USH 14 - STH 11 INTERSECTION				
STAGE 1	3+86 - 8+07	REA	LT	418
STAGE 2	7+74 - 9+20	REA	RT	146
	7+38 - 8+44	RWA	LT	106
	468+78 - 469+67	HEA	RT	90
	470+92 - 471+67	HEA	RT	75
	470+86 - 473+69	HWA	LT	282
USH 14 - STH 11 INTERSECTION TOTAL				1,117
UNDISTRIBUTED				58
PROJECT TOTAL				**1,175**

CONCRETE SURFACE DRAINS

STAGE	STATION	ALI	LOCATION	416.1010 (CY)
CATEGORY 1000				
USH 14 - RUGER AVE/CTH MM INTERSECTION				
STAGE 1	429+26	HEA	RIGHT	2
STAGE 2	469+77	HEA	LEFT	3
USH 14 - RUGER AVE/CTH MM INTERSECTION				5
PROJECT TOTAL				**5**

HMA PAVEMENT ITEMS

			455.0105 ASPHALTIC MATERIAL PG58-28 (TON)	455.0120 ASPHALTIC MATERIAL PG64-28 (TON)	455.0605 TACK COAT (GAL)	460.1100 HMA PAVEMENT TYPE E-0.3 (TON)	460.1103 HMA PAVEMENT TYPE E-3 (TON)	460.1110 HMA PAVEMENT TYPE E-10 (TON)	465.0105 ASPHALTIC SURFACE (TON)
STAGE - STATION		ALIGNMENT							
CATEGORY 1000									
USH 14 - MILL & OVERLAY SECTION									
STAGE 1	285+08 - 296+00	HEA	42	-	359	-	-	750	-
STAGE 2	285+08 - 296+00	HEA	68	-	586	-	-	1,230	-
STAGE 3	296+00 - 305+50	HEA	69	-	596	-	-	1,250	-
USH 14 - MILL & OVERLAY SECTION SUBTOTAL			179	0	1,541	0	0	3,230	0
USH 14 - OLD HUMES RD INTERSECTION									
STAGE 1	332+69 - 337+10	HEA	5	4	33	-	141	-	-
USH 14/OLD HUMES RD INTERSECTION SUBTOTAL			5	4	33	0	141	0	0
USH 14 - HARMONY TOWN HALL RD INTERSECTION									
STAGE 1	340+62 - 344+44	HEA	4	3	31	-	127	-	-
USH 14/HARMONY TOWN HALL RD INTERSECTION SUBTOTAL			4	3	31	0	127	0	0
USH 14 - MILWAUKEE ST/CTH A INTERSECTION									
STAGE 1	357+83 - 362+34	HEA	4	4	34	-	124	-	-
STAGE 1	366+55 - 372+20	HEA	6	6	60	-	197	-	-
STAGE 1	372+20 - 376+95	HEA	4	-	-	63	-	-	-
STAGE 2	357+78 - 362+34	HEA	6	3	60	-	166	-	54
STAGE 2	367+00 - 371+45	HEA	5	3	47	-	131	-	50
STAGE 2	372+32 - 376+40	HEA	2	-	-	37	-	-	-
USH 14 - MILWAUKEE ST/CTH A INTERSECTION SUBTOTAL			27	16	201	100	618	0	104
USH 14 - CTH MM/RUGER AVE INTERSECTION									
STAGE 1	418+35 - 428+40	HEA	7	-	-	115	-	-	-
STAGE 1	431+65 - 436+63	HEA	15	-	36	-	264	-	-
STAGE 2	423+69 - 428+29	HEA	3	-	-	40	-	-	-
STAGE 2	431+59 - 436+25	HEA	3	-	-	44	-	-	-
STAGE 2	437+29 - 441+38	HEA	13	-	32	-	13	-	-
USH 14/CTH MM/RUGER AVE INTERSECTION SUBTOTAL			41	0	68	199	277	0	0
USH 14 - STH 11 INTERSECTION									
STAGE 1	5+88 - 8+07	REA	0.5	-	-	9	-	-	-
STAGE 2A	468+78 - 469+67	HEA	0.5	-	-	4	-	-	-
STAGE 2A	470+86 - 473+69	HWA	3	-	-	49	-	-	-
STAGE 2A	7+74 - 9+21	REA	2	-	-	32	-	-	-
USH 14 - STH 11 INTERSECTION SUBTOTAL			6	0	0	94	0	0	0
UNDISTRIBUTED			13	2	96	22	62	170	6
PROJECT TOTAL			**275**	**25**	**1,970**	**415**	**1,225**	**3,400**	**110**

STORM SEWER STRUCTURE SCHEDULE

	STRUCT. NO.	ROADWAY	STATION	OFFSET	TOP STRUCTURE ELEV	RIM ELEV	BOTTOM STRUCTURE ELEV	DEPTH	611.9710 SALVAGED INLET COVERS (EACH)	SPV.0060.003 SALVAGE INLET (EACH)
CATEGORY 1000										
STAGE 1	1.0	STH 11 EB 'REA'	7+94	25.3' LT	862.81	863.10	860.18	2.63	1	1
PROJECT TOTAL									**1**	**1**

ASPHALTIC FLUMES

STAGE	STATION	ALI	LOCATION	465.0315 (SY)
CATEGORY 1000				
USH 14 - RUGER AVE/CTH MM INTERSECTION				
STAGE 1	435+86	HEA	USH 14	10
STAGE 2	437+74	HEA	USH 14	10
USH 14/RUGER AVE INTERSECTION SUBTOTAL				20
USH 14 - STH 11 INTERSECTION				
STAGE 2A	8+59	REA	STH 11	10
STAGE 3	470+15	HEA	USH 14	10
	471+07	HEA	USH 14	10
USH 14 - STH 11 INTERSECTION SUBTOTAL				30
PROJECT TOTAL				**50**

CULVERT PIPE

**STATION	**O/S	TO	**STATION	**O/S	LOCATION	STAGE	INLET ELEV	OUTLET ELEV	SLOPE %	PIPE THICKNESS STEEL (IN)	*520.8000 CONCRETE COLLARS FOR PIPE (EACH)	521.0124 CULVERT PIPE CORRUGATED STEEL 24-INCH (LF)	521.1024 APRON ENDWALLS FOR CULVERT PIPE STEEL 24-INCH (EACH)	633.5200 MARKERS CULVERT END (EACH)
CATEGORY 1000														
14+83.3 'RUA'	30.5' LT	-	14+75.8 'RUA'	64.6' LT	RUGER AVENUE	STAGE 1	854.24	853.90	0.97	0.064	1	32	1	1
16+27.5 'RUA'	60.1' RT	-	16+19.5 'RUA'	26.5' RT	RUGER AVENUE	STAGE 2	855.02	854.67	1.00	0.064	1	32	1	1
PROJECT TOTAL											**2**	**64**	**2**	**2**

* ADDITIONAL QUANTITY IN "STORM SEWER" TABLE
**STATIONS AND OFFSETS MEASURED TO ENDS OF APRON ENDWALLS WHERE PRESENT

CONCRETE CURB & GUTTER

STAGE	STATION - STATION	ALI	LOCATION	601.0120 CONCRETE CURB TYPE J (LF)	601.0551 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A (LF)	601.0553 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D (LF)
CATEGORY 1000						
USH 14 - MILWAUKEE STREET/CTH A INTERSECTION						
STAGE 2	357+78 - 362+34	HEA	USH 14 EB LEFT TURN LANE	455	-	
	367+00 - 371+45	HEA	USH 14 WB LEFT TURN LANE	445	-	-
USH 14 - MILWAUKEE STREET/CTH A INTERSECTION SUBTOTAL				900	0	0
USH 14 - RUGER AVE/CTH MM AVE INTERSECTION						
STAGE 1	435+91 - 436+44	HEA	NW QUADRANT OF INTERSECTION	-	-	100
STAGE 2	437+47 - 438+00	HEA	SE QUADRANT OF INTERSECTION	-	-	100
USH 14 - RUGER AVE/CTH MM INTERSECTION SUBTOTAL				0	0	200
USH 14 - STH 11 INTERSECTION						
STAGE 1	8+06 - 9+03	REA	STH 11 MEDIAN	-	205	-
STAGE 2A	469+67 - 469+91	HEA	NW STH 11/USH 14 RADIUS		32	
STAGE 2B	469+76 - 470+08	HEA	USH 14 EB ISLAND AT STH 11	-	53	-
STAGE 3	469+42 - 470+20	HEA	USH 14 MEDIAN	-	160	-
STAGE 3	471+00 - 471+67	HEA	USH 14 MEDIAN	-	140	-
USH 14 - STH 11 INTERSECTION SUBTOTAL				0	590	0
PROJECT TOTAL				**900**	**590**	**200**

BEAM GUARD

STAGE	STATION - STATION	ALI	O/S	LOCATION	614.0115 ANCHORAGES FOR STEEL PLATE BEAM GUARD TYPE 2 (EACH)	614.0305 STEEL PLATE BEAM GUARD CLASS A (LF)	614.0345 STEEL PLATE BEAM GUARD SHORT RADIUS (LF)	614.0370 STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL (EA)	614.2300 MGS GUARDRAIL 3 (LF)	614.2500 MGS THRIE BEAM TRANSITION (LF)	614.2610 MGS GUARDRAIL TERMINAL EAT (EA)	614.2620 MGS GUARDRAIL TERMINAL TYPE 2 (EA)
CATEGORY 1000												
USH 14 - MILWAUKEE ST/CTH A INTERSECTION												
STAGE 1	373+07 - 375+92	HEA	LT	USH 14	-	-	-	-	187.5	-	2	-
STAGE 2	373+34 - 376+20	HEA	RT	USH 14	-	-	-	-	187.5	-	2	-
USH 14 - MILWAUKEE ST/CTH A INTERSECTION SUBTOTAL					0	0	0	0	375.0	0	4	0
USH 14 - RUGER AVE/CTH MM INTERSECTION												
STAGE 1	424+95 - 429+35	HEA	RT	USH 14	-	-	-	-	350.0	40	1	-
	430+66 - 433+27	HEA	RT	USH 14	-	-	-	-	175.0	40	1	-
STAGE 2	425+04 - 429+35	HEA	LT	USH 14	-	-	-	-	337.5	40	1	-
	430+66 - 433+18	HEA	LT	USH 14	-	-	-	-	162.5	40	1	-
USH 14 - RUGER AVE/CTH MM INTERSECTION SUBTOTAL					0	0	0	0	1,025.0	160	4	0
USH 14 - STH 11 INTERSECTION												
STAGE 2A	8+30 - 9+14	REA	RT	STH 11	1	37.50	31.25	1	-	-	-	-
	476+16 - 473+09	HWA	LT	USH 14	-	-	-	-	150.0	-	1	1
USH 14 - STH 11 INTERSECTION SUBTOTAL					1	37.50	31.25	1	150.0	0	1	1
PROJECT TOTAL					**1**	**37.50**	**31.25**	**1**	**1,550.0**	**160**	**9**	**1**

STORM SEWER

	FROM STRUCTURE NO.	-	TO STRUCTURE NO.	INLET ELEV	OUTLET ELEV	SLOPE %	610.0119 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 19X30-INCH (LF)	*520.8000 CONCRETE COLLARS FOR PIPE (EACH)
CATEGORY 1000								
STAGE 1	1.0	-	EXISTING PIPE	860.45	860.32	1.84%	7	1
PROJECT TOTAL							**7**	**1**

* ADDITIONAL QUANTITY IN "CULVERT PIPE" TABLE

FENCE SAFETY

LOCATION	616.0700.S (LF)
PROJECT (UNDISTRIBUTED)	1,000
PROJECT TOTAL	**1,000**

CONCRETE MEDIAN SLOPED NOSE

	STATION	LOCATION	620.0300 SF
CATEGORY 1000			
USH 14 - STH 11 INTERSECTION			
STAGE 2	469+78 'HEA'	USH 14 EB ISLAND AT STH 11	59
STAGE 3	470+06 'HEA'	USH 14 EB ISLAND AT STH 11	71
USH 14 - INTERSECTION SUBTOTAL			130
PROJECT TOTAL			**130**

CONCRETE SIDEWALK 5-INCH

STAGE	STATION - STATION	ALI	LOCATION	602.0410 (SF)
CATEGORY 1000				
USH 14 - STH 11 INTERSECTION				
STAGE 2B	469+77 - 470+08	HEA	RIGHT TURN LANE ISLAND	215
USH 14 - STH 11 INTERSECTION SUBTOTAL				215
PROJECT TOTAL				**215**

WATER

LOCATION	USE	624.0100 WATER (MGAL)
PROJECT	BASE COMPACTION	240
PROJECT	DUST CONTROL	240
PROJECT TOTAL		**480**

INLET PROTECTION

STRUCT. NO.	ROADWAY	STATION	OFFSET	628.7005 INLET PROTECTION TYPE A (EACH)	628.7010 INLET PROTECTION TYPE B (EACH)	628.7020 INLET PROTECTION TYPE D (EACH)
CATEGORY 1000						
USH 14 - STH 11 INTERSECTION						
1.0	EB STH 11 'REA'	7+94	30' LT	1	1	--
EX	EB USH 14 'HEA'	471+80	20' LT	--	1	--
USH 14 - STH 11 INTERSECTION SUBTOTAL				1	2	0
		UNDISTRIBUTED		1	-	2
PROJECT TOTAL				**2**	**2**	**2**

3

EROSION CONTROL ITEMS

STATION - STATION	ALIGNMENT	*628.1504 SILT FENCE (LF)	*628.1520 SILT FENCE MAINTENANCE (LF)	*628.2004 EROSION MAT CLASS I TYPE B (SY)	628.6510 SOIL STABILIZER TYPE B (ACRE)	628.7504 TEMPORARY DITCH CHECKS (LF)
CATEGORY 1000						
USH 14 - OLD HUMES RD & HARMONY TOWN HALL RD INTERSECTIONS						
STAGE 1 332+50 - 345+50	HEA	-	-	-	-	20
USH 14 - OLD HUMES RD & HARMONY TOWN HALL RD SUBTOTAL		0	0	0	0	20
USH 14 - MILWAUKEE ST/CTH A INTERSECTION						
STAGE 1 357+50 - 363+00	HEA	-	-	400	-	20
363+00 - 377+00	HEA	-	-	769	-	30
STAGE 2 363+00 - 377+00	HEA	-	-	304	-	20
USH 14 - MILWAUKEE ST/CTH A INTERSECTION SUBTOTAL		0	0	1,473	0	70
USH 14 - RUGER AVE/CTH MM INTERSECTION						
STAGE 1 423+00 - 430+00	HEA	-	-	740	-	20
430+00 - 437+00	HEA	-	-	711	-	10
STAGE 2 423+00 - 430+00	HEA	-	-	784	-	10
430+00 - 437+00	HEA	-	-	572	-	10
437+00 - 441+50	HEA	-	-	444	-	-
USH 14 - RUGER AVE/CTH MM INTERSECTION SUBTOTAL		0	0	3,251	0	50
USH 14 - STH 11 INTERSECTION						
STAGE 1 3+00 - 9+00	REA	-	-	240	-	-
STAGE 2 468+50 - 472+00	HEA	497	249	108	-	-
470+50 - 474+00	HWA	-	-	187	-	-
USH 14 - STH 11 INTERSECTION SUBTOTAL		497	249	535	0	0
UNDISTRIBUTED		38	26	266	2	20
PROJECT TOTAL		**535**	**275**	**5,525**	**2**	**160**

*ADDITIONAL QUANTITY IN "EROSION CONTROL AT PIPE ENDWALLS AND FLUMES" TABLE

EROSION CONTROL AT PIPE ENDWALLS AND FLUMES

STATION	ALIGNMENT	LOCATION	*628.1504 SILT FENCE (LF)	*628.1520 SILT FENCE MAINTENANCE (LF)	*628.2004 EROSION MAT CLASS I TYPE B (SY)	628.7555 CULVERT PIPE CHECKS (EACH)
CATEGORY 1000						
USH 14 - OLD HUMES RD & HARMONY TOWN HALL RD INTERSECTIONS						
STAGE 1 339+89	HEA	LT	-	-	-	2
340+44	HEA	LT	-	-	4	-
344+48	HEA	LT	40	20	-	6
USH 14 - OLD HUMES RD & HARMONY TOWN HALL RD SUBTOTAL			40	20	4	8
USH 14 - MILWAUKEE ST/CTH A INTERSECTION						
STAGE 1 374+43	HEA	LT	40	20	-	8
USH 14 - MILWAUKEE ST/CTH A INTERSECTION SUBTOTAL			40	20	0	8
USH 14 - RUGER AVE/CTH MM INTERSECTION						
STAGE 1 435+86	HEA	RT, FLUME	-	-	9	-
436+14	HEA	RT	-	-	4	-
STAGE 2 437+72	HEA	LT	40	20	-	2
437+80	HEA	LT, FLUME	-	-	9	-
USH 14 - RUGER AVE/CTH MM INTERSECTION SUBTOTAL			40	20	22	2
USH 14 - STH 11 INTERSECTION						
STAGE 2 8+50	RWA	LT, FLUME	-	-	9	-
STAGE 3 470+03	HEA	MEDIAN, FLUME	-	-	9	-
471+16	HEA	MEDIAN, FLUME	-	-	9	-
USH 14 - STH 11 INTERSECTION SUBTOTAL			0	0	27	0
	UNDISTRIBUTED		40	20	17	2
	PROJECT TOTAL		**160**	**80**	**70**	**20**

*ADDITIONAL QUANTITY IN "EROSION CONTROL ITEMS" TABLE

MOBILIZATIONS EROSION CONTROL

	628.1905 (EACH)	628.1910 EMERGENCY (EACH)
CATEGORY 1000		
USH 14 - OLD HUMES RD & HARMONY TOWN HALL RD INTERSECTIONS		
STAGE 1	1	1
USH 14 - OLD HUMES RD & HARMONY TOWN HALL RD INTERSECTIONS SUBTOTAL	1	1
USH 14 - MILWAUKEE ST/ CTH A INTERSECTION		
STAGE 1	1	1
STAGE 2	1	1
USH 14 - MILWAUKEE ST/ CTH A INTERSECTION SUBTOTAL	2	2
USH 14 - RUGER AVE/ CTH MM INTERSECTION		
STAGE 1	1	1
STAGE 2	1	1
USH 14 - RUGER AVE/ CTH MM INTERSECTION SUBTOTAL	2	2
USH 14 - STH 11 INTERSECTION		
STAGE 1	1	1
STAGE 2	1	1
STAGE 3	1	1
USH 14 - STH 11 INTERSECTION SUBTOTAL	3	3
PROJECT TOTAL	**8**	**8**

LANDSCAPING ITEMS

	625.0500 SALVAGED TOPSOIL (SY)	627.0200 MULCHING (SY)	629.0205 FERTILIZER TYPE A (CWT)	630.0120 SEEDING MIXTURE NO. 20 (LB)	630.0140 SEEDING MIXTURE NO. 40 (LB)	630.0200 SEEDING TEMPORARY (LB)
CATEGORY 1000						
USH 14 - OLD HUMES RD/HARMONY TOWN HALL RD INTERSECTION						
STAGE 1	1,164	1,164	1.1	16	16	48
USH 14 - OLD HUMES RD/HARMONY TOWN HALL RD SUBTOTAL	1,164	1,164	1.1	16	16	48
USH 14 - MILWAUKEE ST/CTH A INTERSECTION						
STAGE 1	565	-	1.1	22	9	47
STAGE 2	330	25	0.4	12	-	18
USH 14 - MILWAUKEE ST/CTH A INTERSECTION SUBTOTAL	895	25	1.5	34	9	65
USH 14 - RUGER AVE/CTH MM INTERSECTION						
STAGE 1	2,510	1,059	2.2	33	29	92
STAGE 2	2,429	629	2.4	33	35	101
USH 14 - RUGER AVE/CTH MM INTERSECTION SUBTOTAL	4,939	1,688	4.6	66	64	193
USH 14 - STH 11 INTERSECTION						
STAGE 1	319	79	0.2	6	-	9
STAGE 2	950	655	0.8	22	-	33
STAGE 3	242	242	0.2	4	-	7
USH 14 - STH 11 INTERSECTION SUBTOTAL	1,511	976	1.2	32	0	49
UNDISTRIBUTED	431	197	1.6	7	6	20
PROJECT TOTAL	**8,940**	**4,050**	**10.0**	**155**	**95**	**375**

PERMANENT SIGNING TYPE II

SIGN #	SIGN CODE	SIGN SIZE W IN	X	H IN	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	634.0614 WOOD POSTS 4X6-INCH 14 FT EACH	634.0616 WOOD POSTS 4X6-INCH 16 FT EACH	SIGN MOUNTED ON SAME POST AS	REMARKS
CATEGORY 1000											
2-01	R3-20R	24	X	36	6	--	--	1	--	--	BEGIN RIGHT TURN LANE W/DOWN LEFT ARROW
3-01	R3-20R	24	X	36	6	--	--	1	--	--	BEGIN RIGHT TURN LANE W/DOWN LEFT ARROW
4-01	D1-1	78	X	15	8.125	--	--	2	--	--	ONE DESTINATION (ARROW)
5-01	R6-2R	24	X	30	5	--	--	1	--	--	ONE WAY RIGHT ARROW
7-01	W6-3	36	X	36	--	--	9	1	--	--	TWO WAY TRAFFIC
7-02	J1-1	24	X	39	6.5	--	--	1	--	--	JUNCTION OR END ASSEMBLY
7-03	W3-3	36	X	36	--	--	9	1	--	--	SIGNAL AHEAD
7-04	D1-1	78	X	15	8.125	--	--	2	--	--	ONE DESTINATION (ARROW)
9-02	W5-52L	12	X	36	--	--	3	1	--	--	CLEARANCE STRIPER DOWN RIGHT
9-03	W5-52R	12	X	36	--	--	3	1	--	--	CLEARANCE STRIPER DOWN LEFT
10-01	W5-52R	12	X	36	--	--	3	1	--	--	CLEARANCE STRIPER DOWN LEFT
10-02	W5-52L	12	X	36	--	--	3	1	--	--	CLEARANCE STRIPER DOWN RIGHT
12-01	W3-3	36	X	36	--	--	9	1	--	--	SIGNAL AHEAD
12-02	W3-3	36	X	36	--	--	9	1	--	--	SIGNAL AHEAD
12-03	R5-1A	36	X	24	6	--	--	--	--	12M-01	WRONG WAY
12-04	R5-1	36	X	36	9	--	--	1	--	--	DO NOT ENTER
12-05	W12-1D	24	X	24	--	--	4	1	--	--	DOUBLE DOWN ARROW
12-06	R1-1F	36	X	36	--	7.46	--	--	--	SIGNAL POLE	STOP SIGN (FOLDING)
12-07	R1-1F	36	X	36	--	7.46	--	--	--	SIGNAL POLE	STOP SIGN (FOLDING)
12-08	R4-7	24	X	30	5	--	--	1	--	--	KEEP RIGHT
12-09	R4-7	24	X	30	5	--	--	--	1	--	KEEP RIGHT
12-10	R1-1F	36	X	36	--	7.46	--	--	--	SIGNAL POLE	STOP SIGN (FOLDING)
12-11	R6-3A	30	X	24	5	--	--	--	--	12-09	DIVIDED HIGHWAY T INTERSECTION
12-12	R1-1F	36	X	36	--	7.46	--	--	--	12-09	STOP SIGN (FOLDING)
12-13	R6-2R	24	X	30	5	--	--	--	--	SIGNAL POLE	ONE WAY RIGHT ARROW
12-14	R5-1A	36	X	24	6	--	--	--	--	12M-03	WRONG WAY
12-15	R6-2L	24	X	30	5	--	--	--	--	SIGNAL POLE	ONE WAY LEFT ARROW
12-16	W3-3	36	X	36	--	--	9	1	--	--	SIGNAL AHEAD
13-01	R5-1	36	X	36	9	--	--	--	--	SIGNAL POLE	DO NOT ENTER
13-02	R1-1F	36	X	36	--	7.46	--	--	--	SIGNAL POLE	STOP SIGN (FOLDING)
13-03	R1-1F	36	X	36	--	7.46	--	--	--	SIGNAL POLE	STOP SIGN (FOLDING)
13-04	R5-1	36	X	36	9	--	--	1	--	--	DO NOT ENTER
13-05	R5-1A	36	X	24	6	--	--	1	--	--	WRONG WAY
13-06	R5-1A	36	X	24	6	--	--	1	--	--	WRONG WAY
13-07	W3-3	36	X	36	--	--	9	1	--	--	SIGNAL AHEAD
13-08	W3-3	36	X	36	--	--	9	1	--	--	SIGNAL AHEAD
13-09	R6-3A	30	X	24	5	--	--	--	--	SIGNAL POLE	DIVIDED HIGHWAY T INTERSECTION
13-10	R1-1F	36	X	36	--	7.46	--	--	--	SIGNAL POLE	STOP SIGN (FOLDING)
PROJECT TOTAL					**120.75**	**52.22**	**79.00**	**25**	**1**		

REMOVING & MOVING SIGNS

	SIGN #	SIGN CODE	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	638.2102 MOVING SIGNS TYPE II EACH	638.4000 MOVING SMALL SIGN SUPPORTS EACH	SIGN MOUNTED ON SAME POST AS	REMARKS
CATEGORY 1000								
	2M-01	I55-56	--	--	1	1	--	ADOPT A HIGHWAY SPONSOR
	5R-01	D1-1	1	2	--	--	--	ONE DESTINATION (ARROW)
	5R-02	R6-2R	1	1	--	--	--	ONE WAY RIGHT ARROW
	6M-01	I55-56	--	--	1	1	--	ADOPT A HIGHWAY SPONSOR
	6R-01	D1-1	1	2	--	--	--	ONE DESTINATION (ARROW)
	7R-01	W6-3	1	1	--	--	--	TWO WAY TRAFFIC
	7R-02	J1-1	1	1	--	--	--	JUNCTION OR END ASSEMBLY
	7R-03	W3-3	1	1	--	--	--	SIGNAL AHEAD
	8M-01	W5-2	--	--	1	1	--	NARROW BRIDGE WORD MESSAGE
	9M-01	J1-1	--	--	1	1	--	JUNCTION OR END ASSEMBLY
	9R-02	W5-52L	1	1	--	--	--	CLEARANCE STRIPER DOWN RIGHT
	9R-03	W5-52R	1	1	--	--	--	CLEARANCE STRIPER DOWN LEFT
	10R-01	W5-52R	1	1	--	--	--	CLEARANCE STRIPER DOWN LEFT
	10R-02	W5-52L	1	1	--	--	--	CLEARANCE STRIPER DOWN RIGHT
	11M-01	J4-2	--	--	1	1	--	REASSURANCE ASSEMBLY
	11M-02	J12-1	--	--	1	1	--	ROUTE TURN WITHOUT CARDINAL
	11M-03	J12-1	--	--	1	1	--	ROUTE TURN WITHOUT CARDINAL
	12M-01	D1-2	--	--	1	2	--	TWO DESTINATION (ARROWS)
	12M-02	J3-4	--	--	1	2	--	DIRECTIONAL ASSEMBLY
	12M-03	J4-4	--	--	1	2	--	REASSURANCE ASSEMBLY
	12R-01	R3-7R	1	1	--	--	--	RIGHT LANE MUST TURN RIGHT
	12R-02	R1-1	1	1	--	--	--	STOP SIGN
		R6-3A	--	--	--	--	12R-02	DIVIDED HIGHWAY T INTERSECTION
	12R-03	R5-1A	1	--	--	--	12M-03	WRONG WAY
	12R-04	R4-7	1	1	--	--	--	KEEP RIGHT
	12R-05	R4-7	1	1	--	--	--	KEEP RIGHT
	12R-06	R6-2L	1	1	--	--	--	ONE WAY LEFT ARROW
	12R-07	W3-1	1	1	--	--	--	STOP AHEAD
	12R-08	W3-1	1	1	--	--	--	STOP AHEAD
	13R-01	R1-1	1	1	--	--	--	STOP SIGN
		R6-3A	--	--	--	--	13R-01	DIVIDED HIGHWAY T INTERSECTION
	13M-01	D9-2	--	--	1	1	--	HOSPITAL
	13M-02	J3-2	--	--	1	1	--	DIRECTIONAL ASSEMBLY
	13M-03	J3-2	--	--	1	1	--	DIRECTIONAL ASSEMBLY
	13M-04	J3-2	--	--	1	1	--	DIRECTIONAL ASSEMBLY
	UNDISTRIBUTED		--	--	6	8		
	PROJECT TOTALS		**19**	**20**	**20**	**25**		

PAVEMENT MARKING

STATION		STATION	ALI	LOCATION	646.0106 EPOXY 4-INCH (WHITE) (LF)	646.0106 EPOXY 4-INCH (YELLOW) (LF)	646.0126 EPOXY 8-INCH (WHITE) (LF)	647.0166 ARROWS EPOXY TYPE 2 (EA)	647.0356 WORDS EPOXY (EA)	647.0456 CURB EPOXY (LF)	647.0566 STOP LINE EPOXY 18-INCH (LF)	647.0606 ISLAND NOSE EPOXY (EA)	647.0726 DIAGONAL EPOXY 12-INCH (LF)	647.0766 CROSSWALK EPOXY 6-INCH (LF)	647.0856 CONCRETE CORRUGATED MEDIAN EPOXY (SF)
CATEGORY 1000															
281+00	-	313+50	HEA	USH 14	6,514	7,087	458	-	-	-	52	-	382	300	-
313+50	-	332+50	HEA	USH 14	3,783	3,800	130	-	-	-	-	-	-	-	-
332+50	-	340+25	HEA	USH 14	1,654	1,550	303	-	-	-	-	-	-	-	-
340+25	-	364+75	HEA	USH 14	4,857	3,388	1,147	-	-	1,589	41	1	12	-	35
364+75	-	378+50	HEA	USH 14	2,606	1,706	748	-	-	1,489	43	1	57	-	38
378+50	-	391+00	HEA	USH 14	2,477	2,500	100	-	-	-	-	-	-	-	-
391+00	-	437+00	HEA	USH 14	9,033	9,812	424	2	1	-	-	-	68	-	-
437+00	-	470+50	HEA	USH 14	7,629	8,028	1,123	3	2	-	70	-	573	-	-
470+50	-	476+58	HEA	USH 14	985	790	365	-	-	-	38	-	-	-	-
3+25	-	9+45	REA	STH 11	852	1,734	298	-	-	-	29	-	371	-	-
12+80	-	19+50	RUA	RUGER AVE	420	-	-	-	-	-	39	-	-	-	-
PROJECT SUBTOTAL					40,810	40,395	5,096	5	3	3,078	312	2	1,463	300	73
UNDISTRIBUTED					2,190	2,105	254	0	0	152	18	0	67	15	7
PROJECT TOTAL					**43,000**	**42,500**	**5,350**	**5**	**3**	**3,230**	**330**	**2**	**1,530**	**315**	**80**
						85,500									

LOCATING NO-PASSING ZONES

PROJECT I.D.	648.0100 (MI)
CATEGORY 1000	
5569-00-73	3.62
PROJECT TOTAL	**3.62**

SAWING CONCRETE AND ASPHALT

	STATION - STATION	ALI	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF
CATEGORY 1000				
USH 14 - OLD HUMES RD & HARMONY TOWN HALL RD INTERSECTIONS				
STAGE 1	332+69 - 337+10	HEA, LT	454	-
	340+62 - 344+44	HEA, LT	396	-
USH 14 - OLD HUMES RD & HARMONY TOWN HALL RD INTERSECTIONS SUBTOTAL			850	0
USH 14 - MILWAUKEE ST/CTH A INTERSECTION				
STAGE 1	357+83 - 362+33	HEA, RT	460	-
	366+55 - 372+20	HEA, LT	578	-
	372+20 - 376+95	HEA, LT	475	-
STAGE 2	357+78 - 362+33	HEA, LT	471	575
	367+00 - 371+45	HEA, LT	540	484
	372+32 - 376+40	HEA, RT	408	-
USH 14 - MILWAUKEE ST/CTH A INTERSECTION SUBTOTAL			2932	1059
USH 14 - RUGER AVE/CTH MM INTERSECTION				
STAGE 1	418+35 - 429+35	HEA, RT	1100	-
	4303+66 - 436+61	HEA, RT	633	-
	13+40 - 14+68	RUA, LT	131	-
STAGE 2	423+69 - 429+35	HEA, LT	565	-
	430+66 - 436+24	HEA, LT	560	-
	437+29 - 441+38	HEA, LT	442	-
	16+28 - 17+62	RUA, RT	133	-
USH 14 - RUGER AVE/CTH MM INTERSECTION SUBTOTAL			3564	0
USH 14 - STH 11 INTERSECTION				
STAGE 1	3+86 - 5+89	REA, LT	200	-
	8+84 - 9+11	REA, LT	-	94
STAGE 2A	465+07 - 465+17	HEA, RT	-	48
	469+18 - 469+26	HEA, RT	-	38
	468+78 - 469+72	HEA, RT	-	108
	470+92 - 471+08	HEA, RT	-	15
	473+10 - 473+18	HWA, LT	-	36
	477+25 - 477+39	HWA, LT	-	54
	8+56 - 9+21	REA, RT	-	40
	7+38 - 8+87	RWA, LT	-	150
STAGE 2B	469+72 - 470+11	REA, RT	-	65
STAGE 3	465+07 - 465+17	HEA, RT	-	30
	469+18 - 469+26	HEA, RT	-	30
	470+11 - 470+27	HEA, LT	-	70
	470+93 - 471+08	HEA, LT	-	64
	472+28 - 472+78	HWA, RT	-	62
	473+10 - 473+18	HWA, LT	-	32
	477+25 - 477+39	HWA, LT	-	38
USH 14 - STH 11 INTERSECTION SUBTOTAL			200	974
UNDISTRIBUTED			404	12,367
	PROJECT TOTAL		**7,950**	**14,400**

TEMPORARY PAVEMENT MARKING

STAGE	LOCATION	646.0600 REMOVING PAVEMENT MARKINGS (LF)	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH YELLOW (LF)	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH WHITE (LF)	649.0801 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH WHITE (LF)
CATEGORY 1000					
USH 14 - OLD HUMES RD & HARMONY TOWN HALL RD INTERSECTIONS					
1	USH 14	5,000	3,040	1,652	200
USH 14 - OLD HUMES RD/HARMONY TOWN HALL RD SUBTOTAL		5,000	3,040	1,652	200
USH 14 - MILWAUKEE STREET/CTH A INTERSECTION					
1	USH 14/ MILWAUKEE ST	950	-	1,385	-
2	USH 14/ MILWAUKEE ST	2,150	1,530	-	135
USH 14 - MILWAUKEE ST/CTH A INTERSECTION SUBTOTAL		3,100	1,530	1,385	135
USH 14 - RUGER AVENUE/CTH MM INTERSECTION					
1	USH 14/RUGER AVE	-	-	-	-
2	USH 14/RUGER AVE	2,000	1,470	850	256
USH 14 - RUGER AVE/CTH MM INTERSECTION SUBTOTAL		2,000	1,470	850	256
USH 14 - STH 11 INTERSECTION					
1	USH 14	-	-	-	-
1	STH 11	-	-	-	-
2A	USH 14	200	-	360	210
2A	STH 11	550	-	536	-
2B	USH 14	400	-	-	-
2B	STH 11	-	-	-	-
3	USH 14	-	-	235	85
3	STH 11	-	-	-	-
USH 14 - STH 11 INTERSECTION SUBTOTAL		1,150	0	1,131	295
	UNDISTRIBUTED	1,250	335	257	64
	PROJECT TOTAL	**12,500**	**11,650**		**950**

TRAFFIC CONTROL DEVICES

STAGE	LOCATION	# OF DAYS	643.0300 DRUMS (DAYS)	643.0420 BARRICADES TYPE III (DAYS)	643.0705 WARNING LIGHTS TYPE A (DAYS)	643.0715 WARNING LIGHTS TYPE C (DAYS)	643.0800 ARROW BOARDS (DAYS)	643.0900 SIGNS (DAYS)	643.1050 SIGNS PCMS (DAYS)
CATEGORY 1000									
USH 14 - MILL & OVERLAY SECTION									
1	USH 14	8	592	24	48	48	-	120	16
2	USH 14	10	720	20	35	110	-	140	20
3	USH 14	10	0	0	0	0	-	100	20
USH 14 - MILL & OVERLAY SECTION SUBTOTAL			1,312	44	83	158	0	360	56
USH 14 - OLD HUMES RD & HARMONY TOWN HALL RD INTERSECTIONS									
1	USH 14	11	583	0	0	44	-	165	44
USH 14 - OLD HUMES RD/ HARMONY TOWN HALL RD INTERSECTIONS SUBTOTAL			583	0	0	44	0	165	44
USH 14 - MILWAUKEE STREET INTERSECTION									
1	USH 14/ MILWAUKEE ST	12	984	-	0	0	-	120	48
2	USH 14/ MILWAUKEE ST	25	3,750	-	-	0	-	325	100
USH 14 - MILWAUKEE ST INTERSECTION SUBTOTAL			4,734	0	0	0	0	445	148
USH 14 - RUGER AVENUE INTERSECTION									
1	USH 14/RUGER AVE	22	2,332	0	0	0	-	198	88
2	USH 14/RUGER AVE	21	2,310	0	0	0	-	315	84
USH 14 - RUGER AVE INTERSECTION SUBTOTAL			4,642	0	0	0	0	513	172
USH 14 - STH 11 INTERSECTION									
1	USH 14	22	0	-	-	0	-	176	44
1	STH 11		1,232	110	193	0	0	88	22
2A	USH 14	20	3,200	160	320	240	40	340	40
2A	STH 11		800	20	40	0	0	100	20
2B	USH 14	4	732	32	64	48	8	72	8
2B	STH 11		128	4	8	0	0	20	4
3	USH 14	22	4,576	242	396	264	0	462	44
3	STH 11		440	88	154	0	0	66	22
USH 14 - STH 11 INTERSECTION SUBTOTAL			11,108	656	1,175	552	48	1,324	204
	UNDISTRIBUTED		1,621	50	142	246	12	393	76
	PROJECT TOTAL		**24,000**	**750**	**1,400**	**1,000**	**60**	**3,200**	**700**

LIGHTING REMOVALS

LOCATION	STATION	OFFSET	LT/RT	204.0195 REMOVING CONCRETE BASES (EACH)	*653.0905 REMOVING PULL BOXES (EACH)	SPV.0060.450 REMOVE EXISTING CABINET (EACH)	SPV.0060.451 REMOVE STREET LIGHT (EACH)
CATEGORY 1100							
USH 14 & STH 11							
L639	469+79	61.3	RT	1	--	1	--
PB1	469+83	54.7'	RT	--	1	--	--
PB2	470+04	16.4'	LT	--	1	--	--
PB3	470+14	86.9'	LT	--	1	--	--
PB4	471+16	89.8'	LT	--	1	--	--
PB5	471+18	24.0'	LT	--	1	--	--
PB6	471+18	43.7'	RT	--	1	--	--
PB7	470+56	50.7'	RT	--	1	--	--
PB8	469+87	59.4'	RT	--	1	--	--
L-53-0639-1/2	470+55	61.6'	RT	1	--	--	1
L-53-0639-3	469+53	87.9'	LT	1	--	--	1
L-53-0639-4	470+63	87.6'	LT	1	--	--	1
L-53-0639-5	471+73	87.7'	LT	1	--	--	1
			PROJECT TOTAL	**5**	**8**	**1**	**4**

* ADDITIONAL QUANTITY FOUND IN TABLE "TRAFFIC SIGNAL REMOVALS"

TRAFFIC SIGNAL REMOVALS

LOCATION	STATION	OFFSET	LT/RT	*653.0905 REMOVING PULL BOXES (EACH)
CATEGORY 1300				
USH 14 & CTH A				
PB8	362+11'HEA'	15.0'	LT	1
PB9	360+12'HEA'	9.9'	LT	1
PB18	367+38'HEA'	3.5'	LT	1
PB19	369+39'HEA'	7.5	LT	1
		PROJECT TOTAL		**4**

* ADDITIONAL QUANTITY FOUND IN TABLE "LIGHTING REMOVALS"

TRAFFIC SIGNAL PULLBOXES

LOCATION / PULL BOX NUMBER	STATION	OFFSET	L/R	653.0135 PULL BOXES STEEL 24X36-INCH (EACH)	653.0140 PULL BOXES STEEL 24X42-INCH (EACH)
CATEGORY 1300					
USH 14 & STH 11					
PB1	8+51'REA'	84.3'	LT	--	1
PB2	9+02'REA'	85.3'	LT	--	1
PB3	469+92'HEA'	10.0'	LT	--	1
PB4	460+25'HEA'	10.2'	LT	1	--
PB5	465+16'HEA'	12.3'	LT	1	--
PB6	469+94'HEA'	88.1'	LT	--	1
PB7	470+70'HEA'	88.2'	LT	--	1
PB8	471+17'HEA'	88.1'	LT	--	1
PB9	471+80'HEA'	89.0'	LT	1	--
PB10	475+94'HEA'	86.5'	LT	1	--
PB11	471+20'HEA'	32.3'	LT	1	--
PB12	471+12'HEA'	11.9'	LT	--	1
PB13	8+94'REA'	31.7'	RT	--	1
PB14	8+86'REA'	25.1'	RT	1	--
PB15	5+50'REA'	18.3'	LT	1	--
PB16	8+70'REA'	18.0'	LT	--	1
PB17	8+80'REA'	18.0'	LT	1	--
PB18	8+38'REA'	84.6'	LT	--	1
PB19	469+03'HEA'	49.6'	RT	1	--
			SUBTOTAL	9	10
USH 14 & CTH A					
PB9	359+18'HEA'	14.8'	LT	1	--
PB19	370+30'HEA'	3.4'	LT	1	--
			SUBTOTAL	2	0
			PROJECT TOTAL	**11**	**10**

TRAFFIC SIGNAL CONDUIT

LOCATION	FROM	-	TO	652.0220 CONDUIT RIGID NONMETALLIC NONMETALLIC SCHEDULE 40 1.5-INCH (LF)	652.0225 2-INCH (LF)	652.0235 3-INCH (LF)	652.0615 CONDUIT SPECIAL 3-INCH (LF)	REMARKS
CATEGORY 1300								
USH 14 & STH 11								
	CB1	-	PB1	--	--	66	--	
	PB1	-	SB1	--	13	--	--	
	PB1	-	PB2	--	--	104	--	
	PB1	-	PB19	--	102	--	--	
	PB2	-	SB2	--	8	--	--	
	PB2	-	PB3	--	--	--	98	2 CONDUITS
	PB3	-	SB3	--	17	--	--	
	PB3	-	PB4	--	67	--	--	
	PB4	-	PB5	--	410	--	--	
	PB3	-	PB6	--	--	--	156	2 CONDUITS
	PB6	-	SB4	--	5	--	--	
	PB6	-	PB7	--	--	152	--	
	PB7	-	SB5	--	11	--	--	
	PB7	-	SB6	--	20	--	--	
	PB7	-	PB8	--	--	94	--	
	PB8	-	PB9	--	63	--	--	
	PB9	-	PB10	--	414	--	--	
	PB8	-	SB7	--	8	--	--	
	PB8	-	PB12	--	--	--	152	2 CONDUITS
	PB12	-	SB8	--	18	--	--	
	PB12	-	PB11	--	22	--	--	
	PB12	-	PB13	--	--	--	132	2 CONDUITS
	PB13	-	SB9	--	18	--	--	
	PB13	-	SB10	--	9	--	--	
	PB13	-	PB14	--	10	--	--	
	PB13	-	PB16	--	--	--	110	2 CONDUITS
	PB16	-	PB17	--	10	--	--	
	PB16	-	SB11	--	16	--	--	
	PB16	-	PB15	--	317	--	--	
	PB16	-	PB18	--	--	--	148	2 CONDUITS
	PB18	-	CB1	--	--	48	--	
			SUBTOTAL	0	1558	464	796	
USH 14 & CTH A								
	EXISTING	-	PB8	5	--	--	--	
	PB8	-	EXISTING	5	--	--	--	
	EXISTING	-	PB9	294	--	--	--	
	EXISTING	-	PB18	5	--	--	--	
	PB18	-	EXISTING	5	--	--	--	
	EXISTING	-	PB19	292	--	--	--	
			SUBTOTAL	606	0	0	0	
			PROJECT TOTAL	**606**	**1558**	**464**	**796**	

TRAFFIC SIGNAL LOOP DETECTORS

LOCATION / LOOP NO.	*STATION	*OFFSET	L/R	SIZE FT		FT	NO. OF TURNS	INSTALLATION METHOD	652.0800 CONDUIT LOOP DETECTOR (LF)	655.0800 LOOP DETECTOR WIRE (LF)	655.0700 LOOP DETECTOR LEAD IN CABLE (LF)	652.0900 LOOP DETECTOR SLOTS LF
CATEGORY 1300												
USH 14 & WRIGHT ST												
--	285+37'HEA'	53.6'	LT	10	X	20	4	A[B]	80	410	--	80
								SUBTOTAL	80	410	0	80
USH 14 & STH 11												
21	474+93'HEA'	62.7'	LT	12	X	20	4	A[B]	79	382	798	--
22	471+78'HEA'	62.3'	LT	6	X	18	3	A[B]	66	342	374	
41	5+52'REA'	1.4'	RT	6	X	20	4	A[B]	61	286	422	--
42	8+82'REA'	6.0'	LT	6	X	20	3	A	65	240	111	--
43	8+82'REA'	7.5'	RT	6	X	20	3	A	67	252	169	--
44	9+10'REA'	5.9'	LT	6	X	20	3	A	61	216	115	--
45	9+10'REA'	7.6'	RT	6	X	6	3	A	67	252	169	--
51	471+24'HEA'	44.2'	LT	6	X	20	3	A	63	228	257	--
52	470+96'HEA'	44.2'	LT	6	X	20	3	A	63	228	257	--
61	465+16'HEA'	12.4'	RT	8	X	18	4	A[B]	68	342	621	
62	469+26'HEA'	12.0'	RT	6	X	18	3	A[B]	62	234	207	--
63	469+09'HEA'	35.0'	RT	6	X	10	3	A	43	168	134	--
64	8+86'REA'	84.7'	LT	6	X	12	3	A	48	180	82	--
65	8+79'REA'	71.8'	LT	8	X	20	3	A	70	258	78	
								SUBTOTAL	883	3608	3794	0
USH 14 & CTH A												
21	366+20'HEA'	24.0'	LT	6	X	8	4	A[B]	46	262	336	--
22	370+30'HEA'	23.2'	LT	8	X	24	4	A[B]	80	390	766	--
61	363+27'HEA'	6.0'	RT	6	X	6	3	A[B]	43	254	189	--
62	359+18'HEA'	6.0'	RT	8	X	18	4	A[B]	69	350	617	--
13					EXISTING LOOP				--	--	250	--
53					EXISTING LOOP				--	--	405	--
								SUBTOTAL	238	1256	2563	0
								PROJECT TOTAL	**1201**	**5274**	**6357**	**80**

* LOCATION IS TO THE FRONT CENTER OF DETECTOR LOOP. FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD BASED ON EXISTING PAVEMENT JOINT LOCATIONS.
A = SDD: LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
B (SUPERSCRIPT) = LOOP INSTALLATION TO OCCUR OVER MULTIPLE STAGES

TRAFFIC SIGNAL BASES

BASE NUMBER	STATION	OFFSET	L/R	654.0101 CONCRETE BASES TYPE 1 (EACH)	654.0102 CONCRETE BASES TYPE 2 (EACH)	654.0113 CONCRETE BASES TYPE 13 (EACH)
CATEGORY 1300						
USH 14 & STH 11						
SB1	8+63'REA'	87.8'	RT	--	1	--
SB2	9+03'REA'	76.9'	RT	1	--	--
SB3	470+05'HEA'	21.0'	LT	--	1	--
SB4	469+90'HEA'	90.9'	LT	--	--	1
SB5	470+60'HEA'	91.1'	LT	1	--	--
SB6	470+90'HEA'	91.1'	LT	1	--	--
SB7	471+09'HEA'	91.1'	LT	--	1	--
SB8	471+10'HEA'	29.9'	LT	1	--	--
SB9	9+06'REA'	44.6'	RT	--	--	1
SB10	9+02'REA'	27.9'	RT	1	--	--
SB11	8+55'REA'	24.0'	LT	--	1	--
			PROJECT TOTAL	**5**	**4**	**2**

TRAFFIC SIGNAL CABLE AND WIRE - ABOVE GROUND

LOCATION	SIGNAL BASE	SIGNAL HEAD	*655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG (LF)	*655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG (LF)	*655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE (LF)	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG (LF)
CATEGORY 1300						
USH 14 & USH 11						
	SB1	13	--	17	--	--
		LUMINAIRE	--	--	--	138
	SB2	9	--	16	--	--
		10	16	--	--	--
	SB3	8	--	16	--	--
		LUMINAIRES	--	--	--	276
	SB4	5	44	--	--	--
		6	56	--	--	--
		EVP A	--	--	69	--
	SB5	3	--	16	--	--
	SB6	2	16	--	--	--
		EVP D	--	--	25	--
	SB7	4	14	--	--	--
		LUMINAIRE	--	--	--	138
	SB8	7	--	16	--	--
	SB9	11	45	--	--	--
		12	57	--	--	--
		EVP B	--	--	69	--
		LUMINAIRE	--	--	--	138
	SB10	1	14	--	--	--
	SB11	14	--	17	--	--
		LUMINAIRES	--	--	--	276
		PROJECT TOTAL	262	98	163	966

* ADDITIONAL QUANTITY FOUND IN TABLE "TRAFFIC SIGNAL CABLE AND WIRE - BELOW GROUND"

TRAFFIC SIGNAL WIRE

LOCATION	FROM - TO	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG (LF)
CATEGORY 1300		
USH 14 & USH 11		
	CB1 - SB1	52
	SB1 - SB2	94
	SB2 - SB3	96
	SB3 - SB4	121
	SB4 - SB5	112
	SB5 - SB6	45
	SB6 - SB7	96
	SB7 - SB8	123
	SB8 - SB9	121
	SB9 - SB10	41
	SB10 - SB11	100
	SB11 - CB1	129
	PB1 - SB1	24
	PB2 - SB2	20
	PB3 - SB3	27
	PB6 - SB4	20
	PB7 - SB5	20
	PB8 - SB7	20
	PB12 - SB8	29
	PB13 - SB10	20
	PB16 - SB11	26
	PB18 - CB1	27
	PROJECT TOTAL	**1363**

TRAFFIC SIGNAL CABLE AND WIRE - BELOW GROUND

LOCATION	FROM - TO	*655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG (LF)	*655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG (LF)	655.0250 CABLE TRAFFIC SIGNAL 9-14 AWG (LF)	*655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE (LF)	**655.0305 CABLE TYPE UF 2-12 GROUNDED (LF)
CATEGORY 1300						
USH 14 & USH 11						
	CB1 - SB1	--	52	--	--	51
	CB1 - SB2	--	--	104	--	--
	CB1 - SB3	--	169	--	--	159
	CB1 - SB4	241	--	--	243	--
	CB1 - SB5	328	--	--	330	--
	CB1 - SB6	338	--	--	--	--
	CB1 - SB7	335	--	--	--	195
	CB1 - SB8	--	262	--	--	--
	CB1 - SB9	190	--	--	211	110
	CB1 - SB10	181	--	--	--	--
	CB1 - SB11	--	126	--	--	127
	PROJECT TOTAL	**1613**	**609**	**104**	**784**	**642**

* ADDITIONAL QUANTITY FOUND IN TABLE "TRAFFIC SIGNAL CABLE AND WIRE - ABOVE GROUND"
**SEE CABLING CHART FOR ROUTING

TRAFFIC SIGNAL STRUCTURES

LOCATION / BASE NUMBER	657.0100 PEDESTAL BASES (EACH)	657.0255 TRANSFORMER BASE 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)	657.0614 LUMINAIRE ARMS SINGLE MEMBER 4 INCH CLAMP 8-FT (EACH)	*659.1125 LUMINAIRES UTILITY LED C (EACH)
CATEGORY 1300							
USH 14 & USH 11							
SB1	--	1	1	--	--	1	1
SB2	1	--	--	--	1	--	--
SB3	--	1	1	--	--	2	2
SB5	1	--	--	--	1	--	--
SB6	1	--	--	--	1	--	--
SB7	--	1	1	--	--	1	1
SB8	1	--	--	--	1	--	--
SB10	1	--	--	1	--	--	--
SB11	--	1	1	--	--	2	2
PROJECT TOTAL	5	4	4	1	4	6	6

* ADDITIONAL QUANTITY FOUND IN TABLE "TRAFFIC SIGNAL MONOTUBE STRUCTURES"

TRAFFIC SIGNAL HEADS

LOCATION / BASE NUMBER	HEAD NO.	658.0110 TRAFFIC SIGNAL FACE 3 -12 INCH (EACH)	658.0115 TRAFFIC SIGNAL FACE 4 -12 INCH (EACH)	658.0120 TRAFFIC SIGNAL FACE 5 -12 INCH (EACH)	658.0215 BACKPLATES SIGNAL FACE 3 SECTION 12-INCH (EACH)	658.0220 BACKPLATES SIGNAL FACE 4 SECTION 12-INCH (EACH)	658.0225 BACKPLATES SIGNAL FACE 5 SECTION 12-INCH (EACH)	658.0600 LED MODULES 12-INCH RED BALL (EACH)	658.0605 LED MODULES 12-INCH YELLOW BALL (EACH)	658.0610 LED MODULES 12-INCH GREEN BALL (EACH)	658.0615 LED MODULES 12-INCH RED ARROW (EACH)	658.0620 LED MODULES 12-INCH YELLOW ARROW (EACH)	658.0625 LED MODULES 12-INCH GREEN ARROW (EACH)
CATEGORY 1300													
USH 14 & USH 11													
SB1	10	--	--	1	--	--	1	1	1	1	--	1	1
SB2	6	--	1	--	--	1	--	--	--	--	1	2	1
	7	1	--	--	1	--	--	1	1	1	--	--	--
SB3	5	--	1	--	--	1	--	--	--	--	1	2	1
SB4	3	1	--	--	1	--	--	1	1	1	--	--	--
	2	1	--	--	1	--	--	1	1	1	--	--	--
SB5	13	--	1	--	--	1	--	1	1	1	--	--	1
SB6	14	1	--	--	1	--	--	1	1	1	--	--	--
SB7	1	1	--	--	1	--	--	1	1	1	--	--	--
SB8	4	--	1	--	--	1	--	--	--	--	1	2	1
SB9	8	1	--	--	1	--	--	1	1	1	--	--	--
	9	1	--	--	1	--	--	1	1	1	--	--	--
SB10	12	1	--	--	1	--	--	1	1	1	--	--	--
SB11	11	--	--	1	--	--	1	1	1	1	--	1	1
PROJECT TOTAL		**8**	**4**	**2**	**8**	**4**	**2**	**11**	**11**	**11**	**3**	**8**	**6**

3

TRAFFIC SIGNAL MONOTUBE STRUCTURES

BASE NUMBER	657.1355 INSTALL POLES TYPE 12 (EACH)	657.1360 INSTALL POLES TYPE 13 (EACH)	657.1540 INSTALL MONOTUBE ARMS 40-FT (EACH)	657.1808 INSTALL LUMINAIRE ARMS STEEL 8-FT (EACH)	659.0802 PLAQUES SEQUENCE INDENTIFICATION (EACH)	*659.1125 LUMINAIRES UTILITY LED C (EACH)
CATEGORY 1300						
USH 14 & STH 11	--	--	--	--	--	--
SB4	1	--	1	--	1	--
SB9	--	1	1	1	1	1
PROJECT TOTAL	1	1	2	1	2	1

* ADDITIONAL QUANTITY FOUND IN TABLE "TRAFFIC SIGNAL STRUCTURES"

TRAFFIC SIGNAL CONTROL CABINETS & SIGNAL MOUNTING HARDWARE

LOCATION	STATION	OFFSET	L/R	654.0217 CONCRETE CONTROL CABINET BASES CABINET BASES TYPE 9 SPECIAL (EA)	658.5069.001 SIGNAL MOUNTING HARDWARE (LOCATION) (LS)	SPV.0060.400 INSTALL CELLULAR MODEM (EACH)	SPV.0105.450 INSTALL STATE FURNISHED EMERGENCY VEHICLE PREEMPTION EQUIPMENT (LOCATION) (LS)
CATEGORY 1300							
USH 14 & USH 11							
CB1	8+35	100.1'	LT	1	1	1	1
PROJECT TOTAL				1	--	1	--

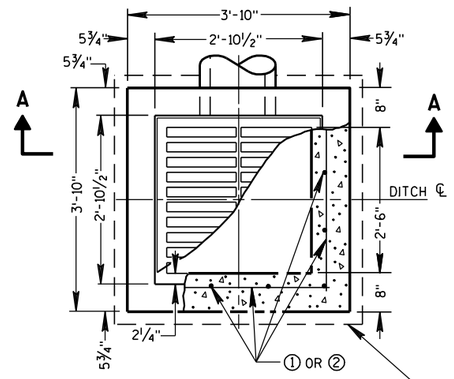
Standard Detail Drawing List

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
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-08	CONDUIT UNDER PAVED HIGHWAYS
09B04-11	PULL BOX
09C02-07	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C06-07	CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL
09C12-05A	CONCRETE BASE TYPE 13
09C12-05B	CONCRETE BASE TYPE 13
09C13-02	CONCRETE BASE TYPE 10 & TYPE 13 EXTENSION
09E01-13B	POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 3 (HEAVY DUTY)
09E01-13G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-05	NON-FREEWAY LIGHTING UNIT POLE WIRING
09E06-05	TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.
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
09F15-04B	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)
11B02-02	CONCRETE MEDIAN NOSE
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
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
14B16-04A	ANCHORAGE FOR STEEL PLATE BEAM GUARD TYPE 2
14B16-04B	ANCHORAGE FOR STEEL PLATE BEAM GUARD TYPE 2
14B18-06A	STEEL PLATE BEAM GUARD, CLASS "A" (AT BRIDGES, OBSTACLES AND SIDEROADS/DRIVEWAYS)
14B24-08A	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-08B	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-08C	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B27-01A	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
14B27-01B	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
14B27-01C	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
14B29-01	SAFETY EDGE
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
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END

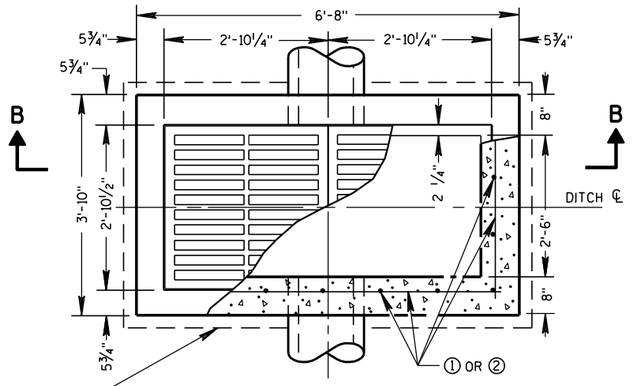
6

Standard Detail Drawing List

15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C06-07	SIGNING & MARKING FOR TWO LANE BRIDGES
15C07-12B	PAVEMENT MARKING WORDS
15C07-12C	PAVEMENT MARKING ARROWS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C08-16C	PAVEMENT MARKING (CLIMBING LANE & PASSING LANE)
15C08-16D	PAVEMENT MARKING (CLIMBING LANE & PASSING LANE)
15C08-16E	PAVEMENT MARKING (LEFT TURN LANE)
15C08-16F	PAVEMENT MARKING (ISLANDS)
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C18-03	MEDIAN ISLAND MARKING
15C19-02A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C19-02B	MOVING PAVEMENT MARKING OPERATION MULTI-LANE UNDIVIDED ROADWAY
15C19-02C	MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY
15C21-05	SIGNING AND MARKING FOR TWO LANE TO FOUR LANE DIVIDED TRANSITIONS
15C27-01	DOUBLE ARROW WARNING SIGN PLACEMENT
15C33-01	STOP LINE AND CROSSWALK PAVEMENT MARKING
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
15D28-02	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

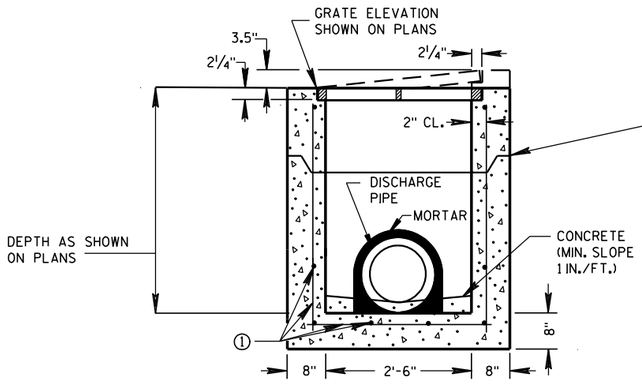


PLAN VIEW

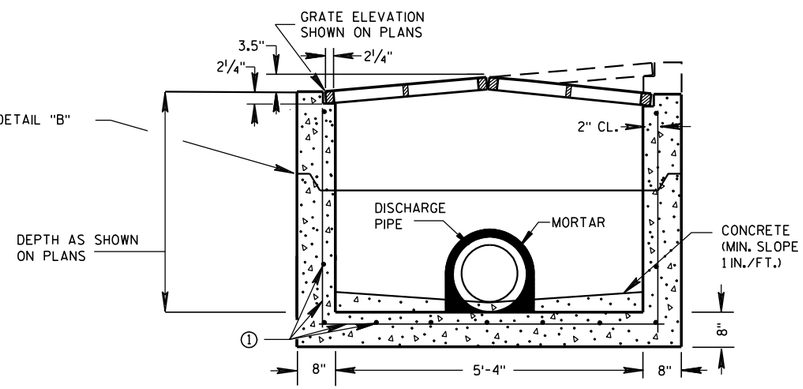


PLAN VIEW

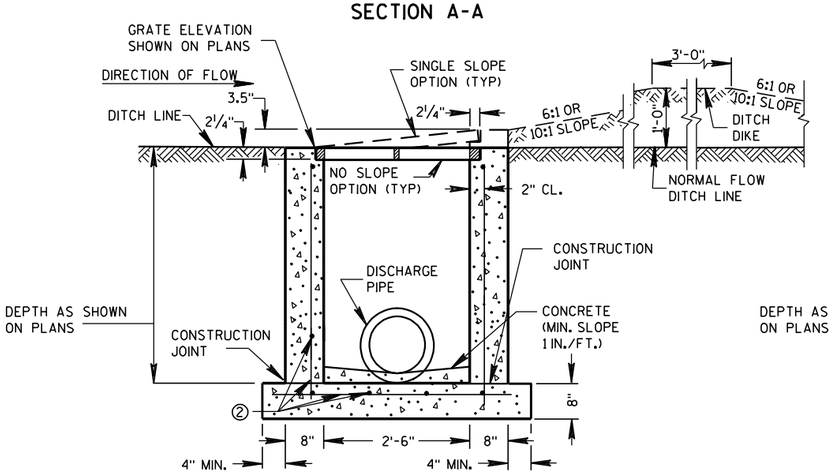
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



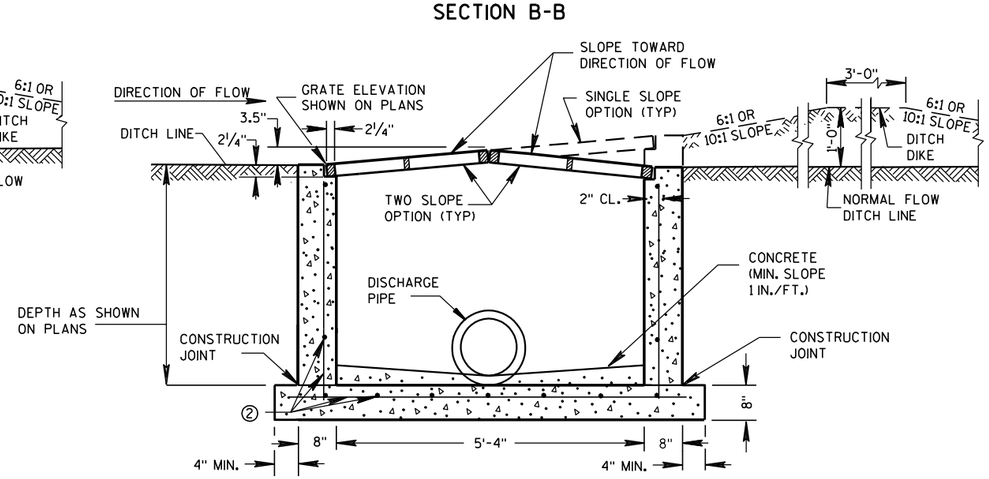
PRECAST REINFORCED CONCRETE SECTION A-A



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.

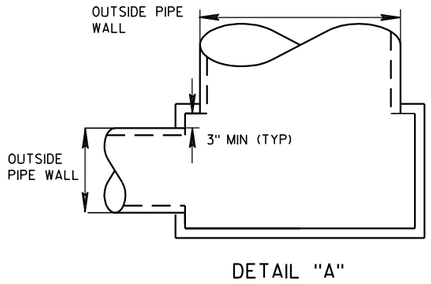
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

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.

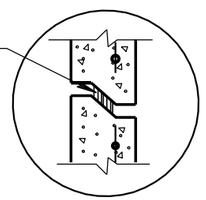
PIPE MATRIX

	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)



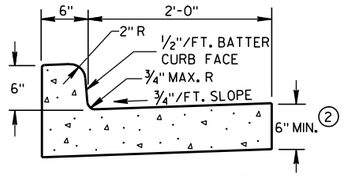
DETAIL "B"

INLETS MEDIAN 1 AND 2 GRATE

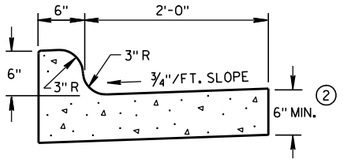
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

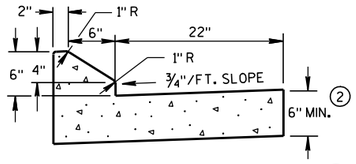
6
S.D.D. 8 C 8-1
6
S.D.D. 8 C 8-1



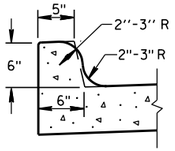
TYPES A & D (1)



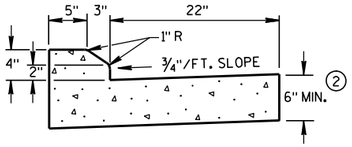
TYPES K & L (1)



6" SLOPED CURB TYPES G & J (1)

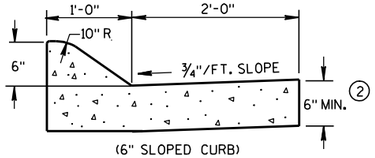


OPTIONAL CURB SHAPE FOR TYPES K & L (1)

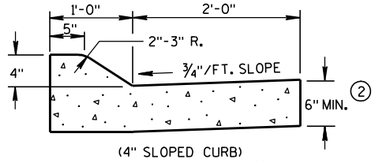


4" SLOPED CURB TYPES G & J (1)

CONCRETE CURB & GUTTER 30"

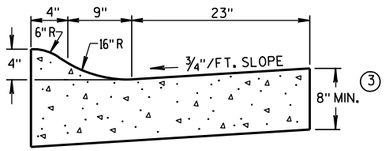


(6" SLOPED CURB)



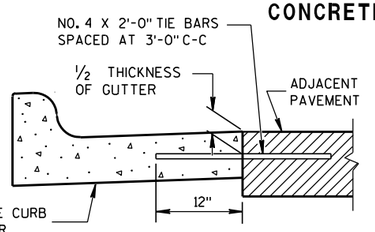
(4" SLOPED CURB)

TYPES A & D (1)

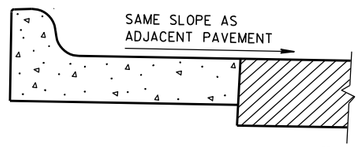


4" SLOPED CURB TYPES R & T (1) (4)

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.

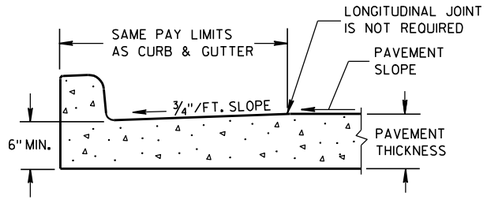
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.

(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.

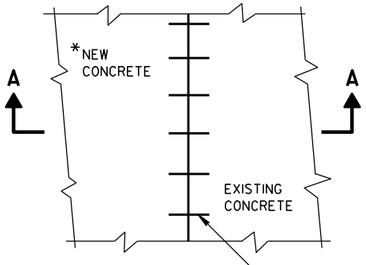
(3) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(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.

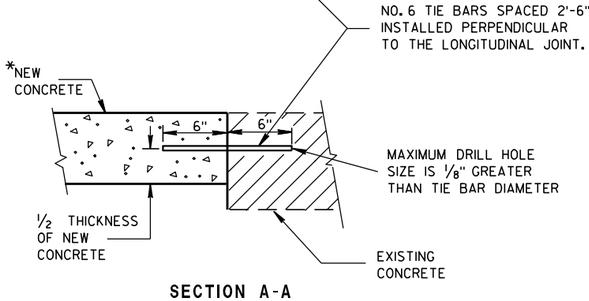


PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



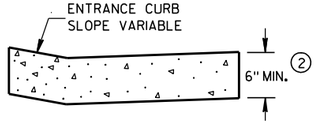
PLAN VIEW

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

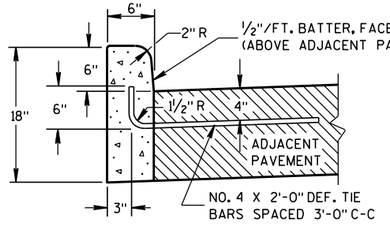


SECTION A-A

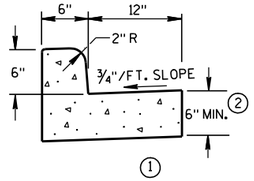
TIE BARS DRILLED INTO EXISTING PAVEMENT



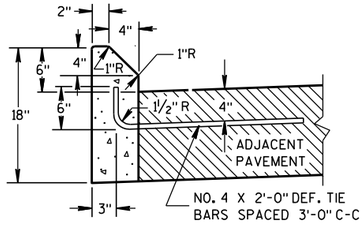
DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)



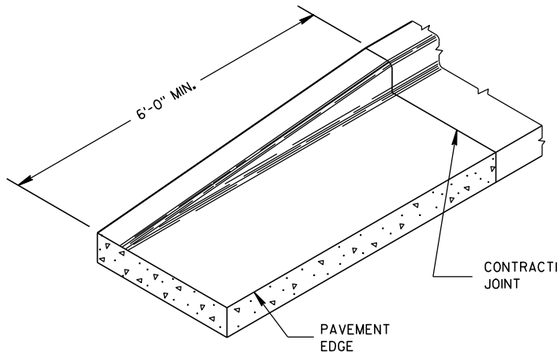
(1)
TYPES A & D



(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
FHWA

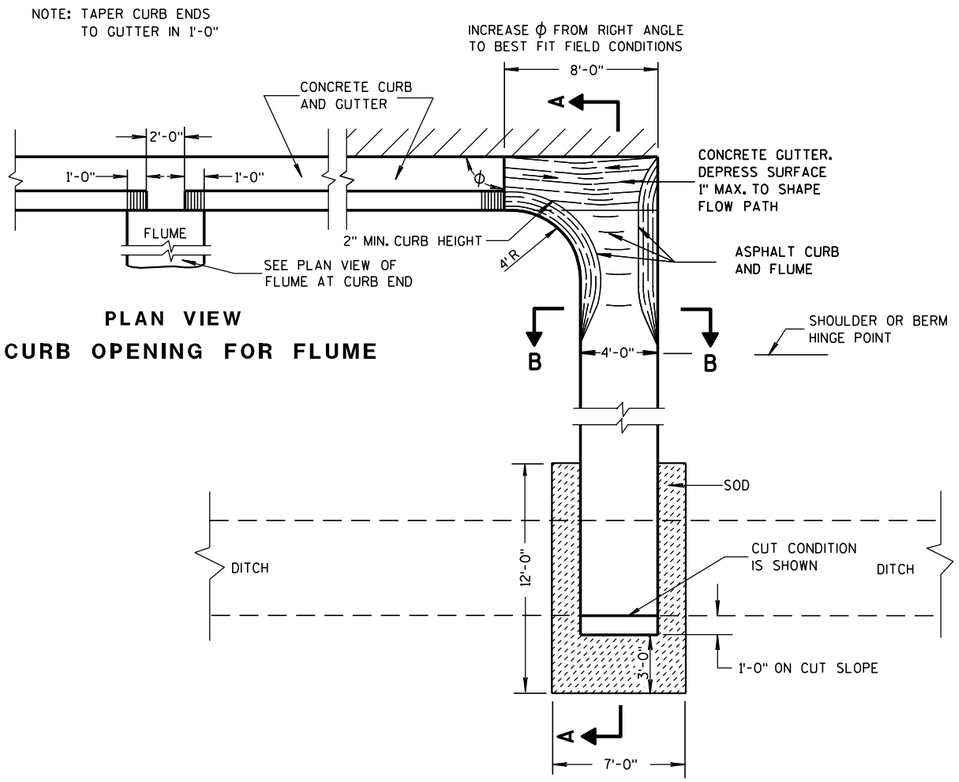
6

S.D.D. 8 D 1-17

6

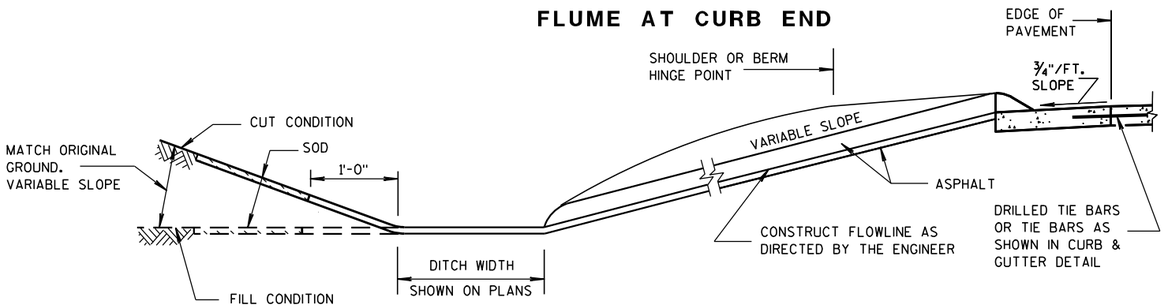
S.D.D. 8 D 1-17

ASPHALTIC FLUME

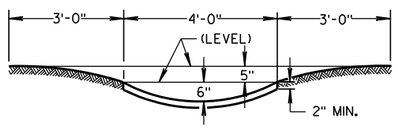


PLAN VIEW
CURB OPENING FOR FLUME

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.

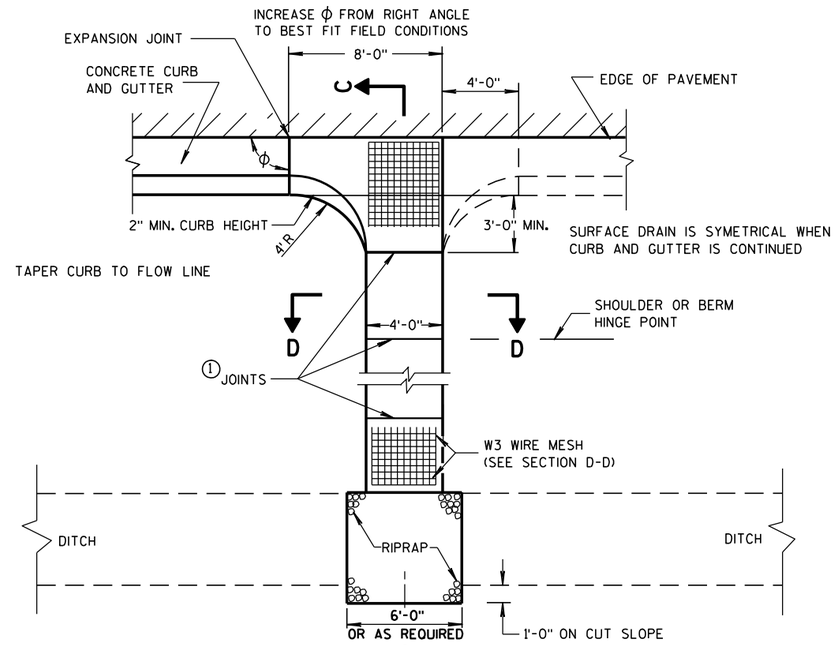
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

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

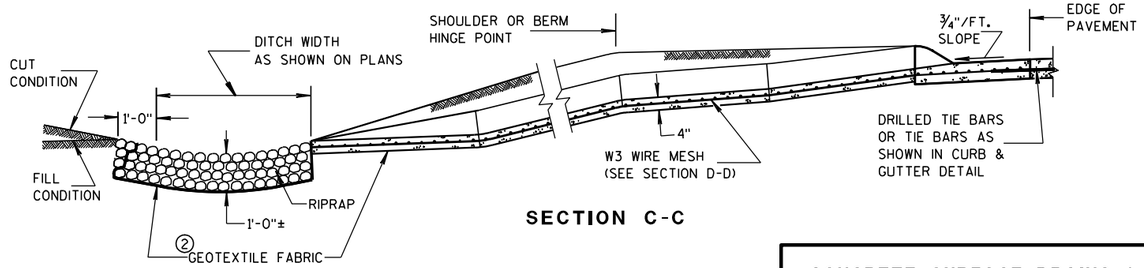
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

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

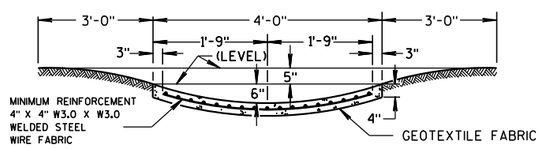
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



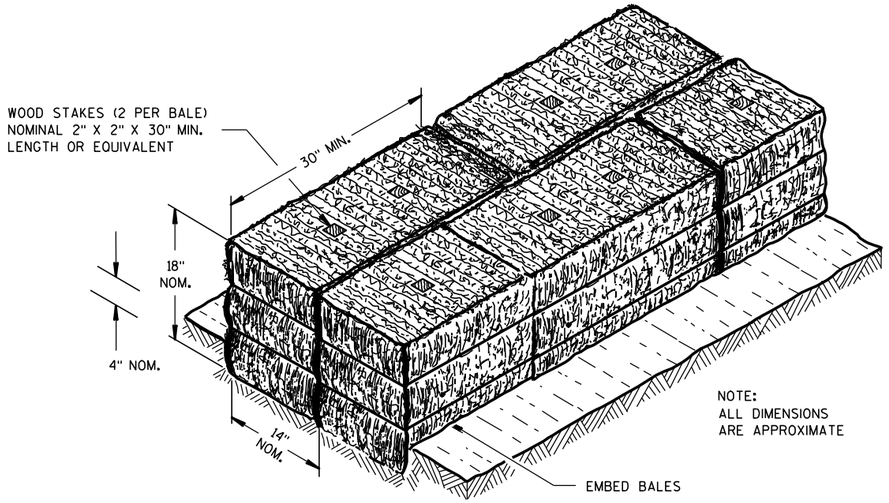
SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

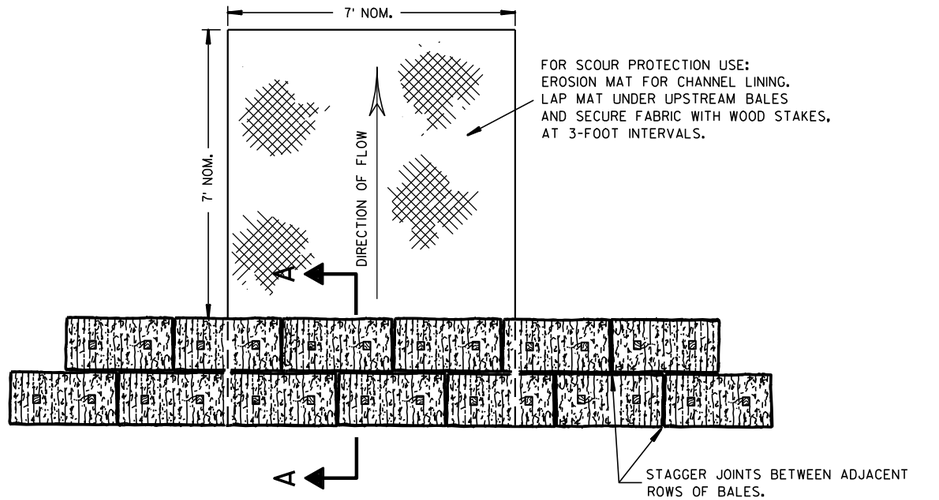
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

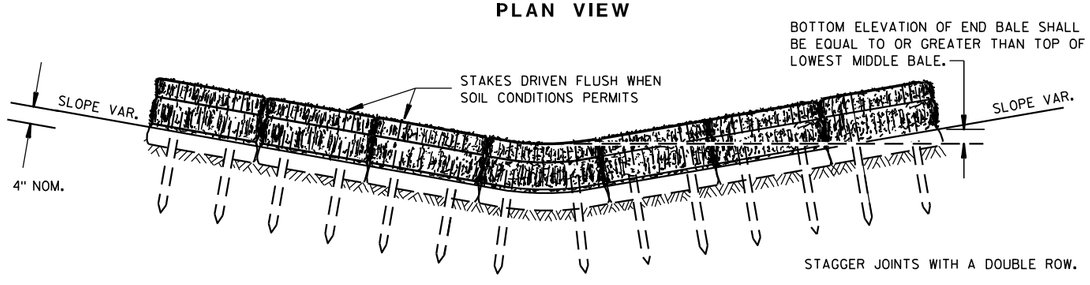
6
S.D.D. 8 D 4-5



SECTION A-A



PLAN VIEW



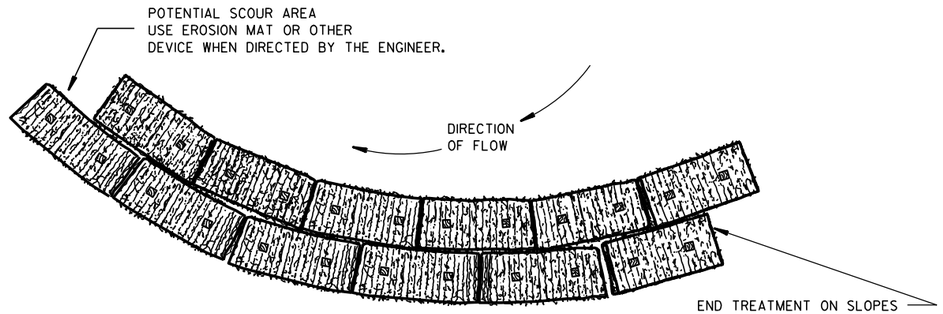
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

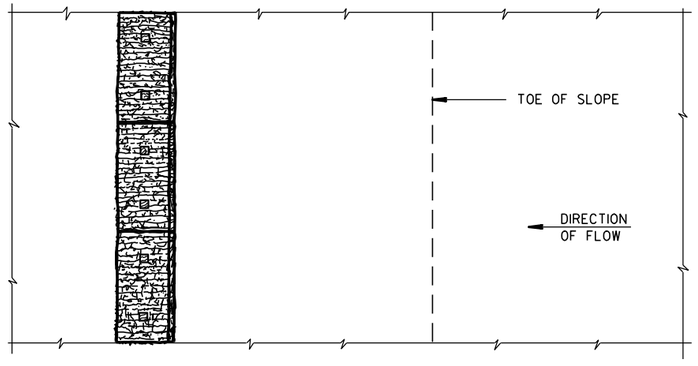
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

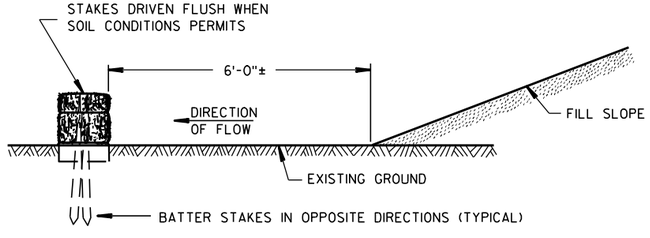


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

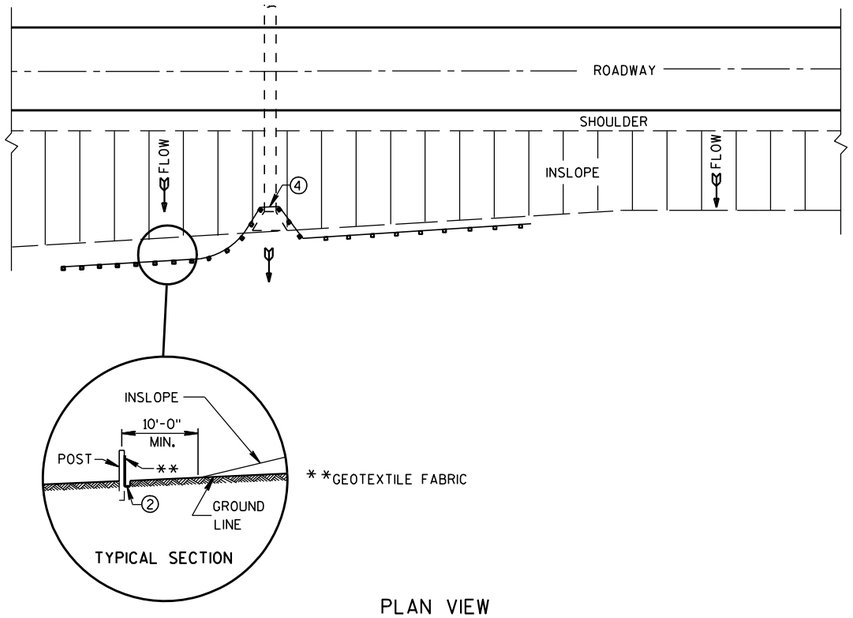
APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 8-3

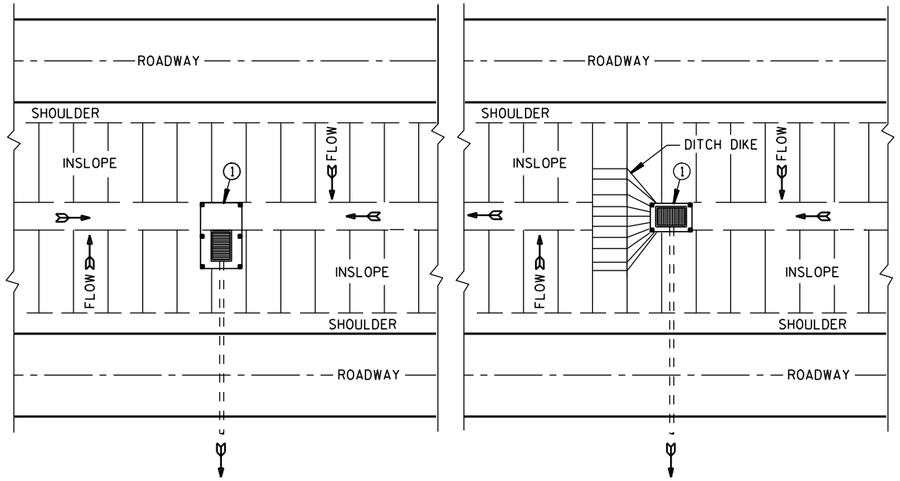
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



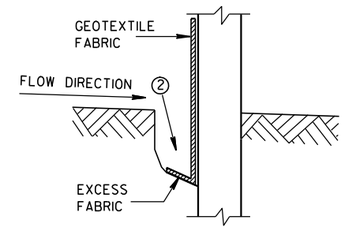
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

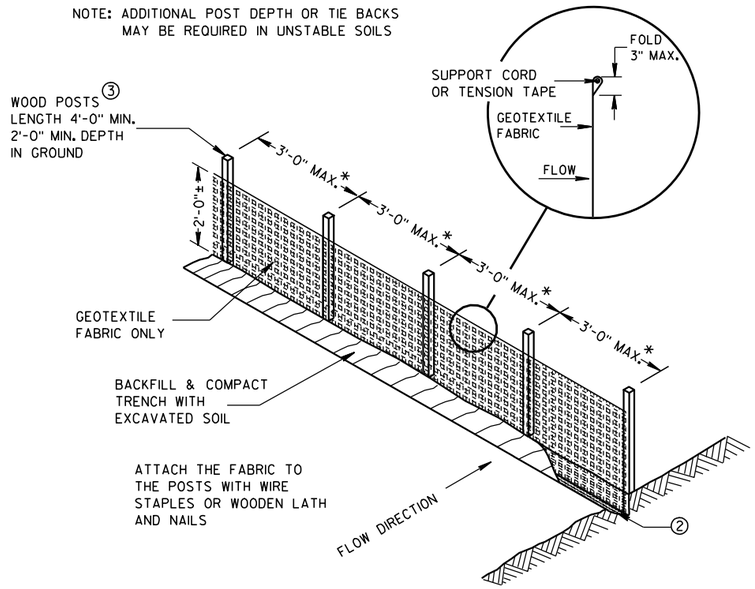
GENERAL NOTES

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

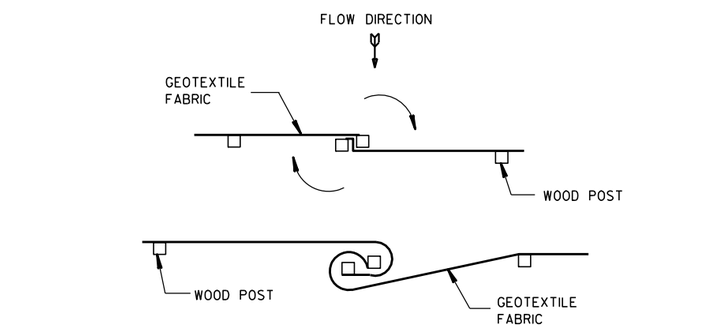
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



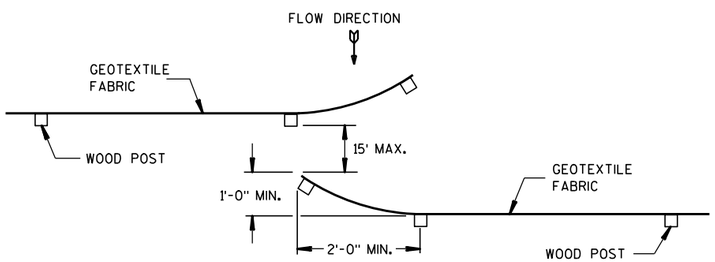
TRENCH DETAIL



SILT FENCE

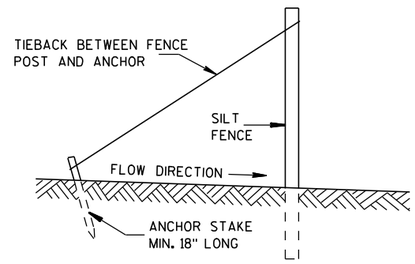


TWIST METHOD



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

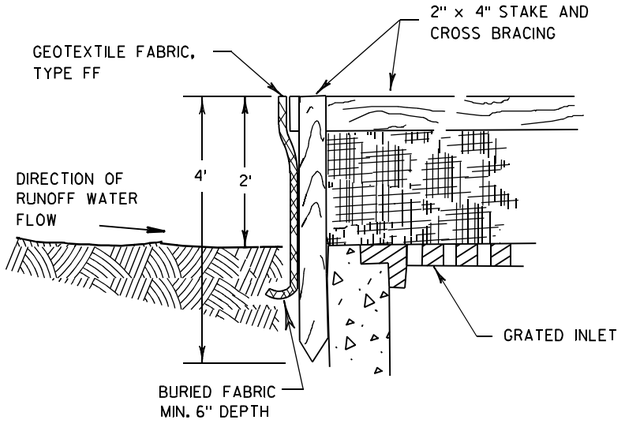
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

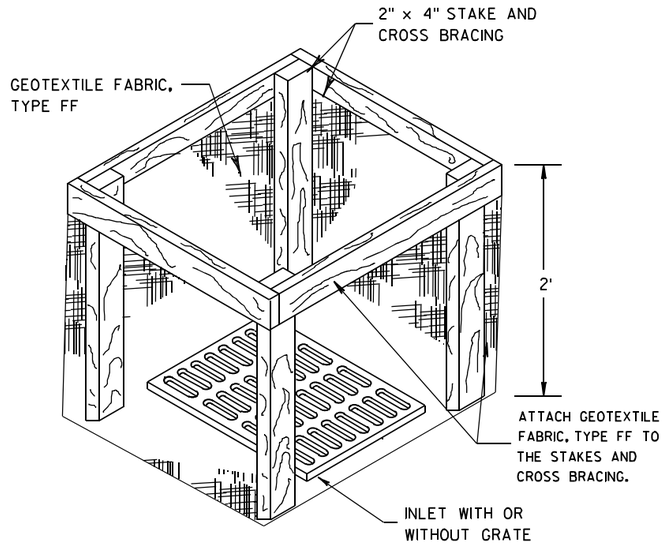
6

S.D.D. 8 E 9-6

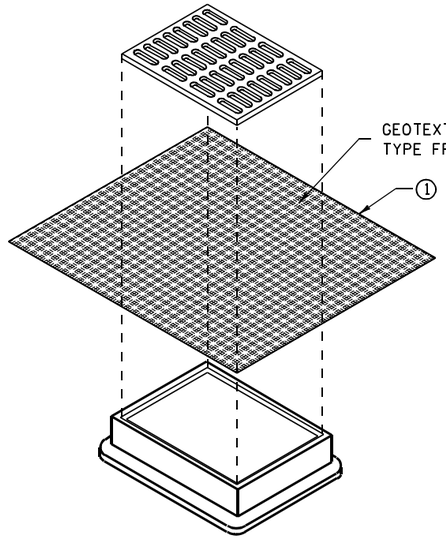
6

S.D.D. 8 E 9-6



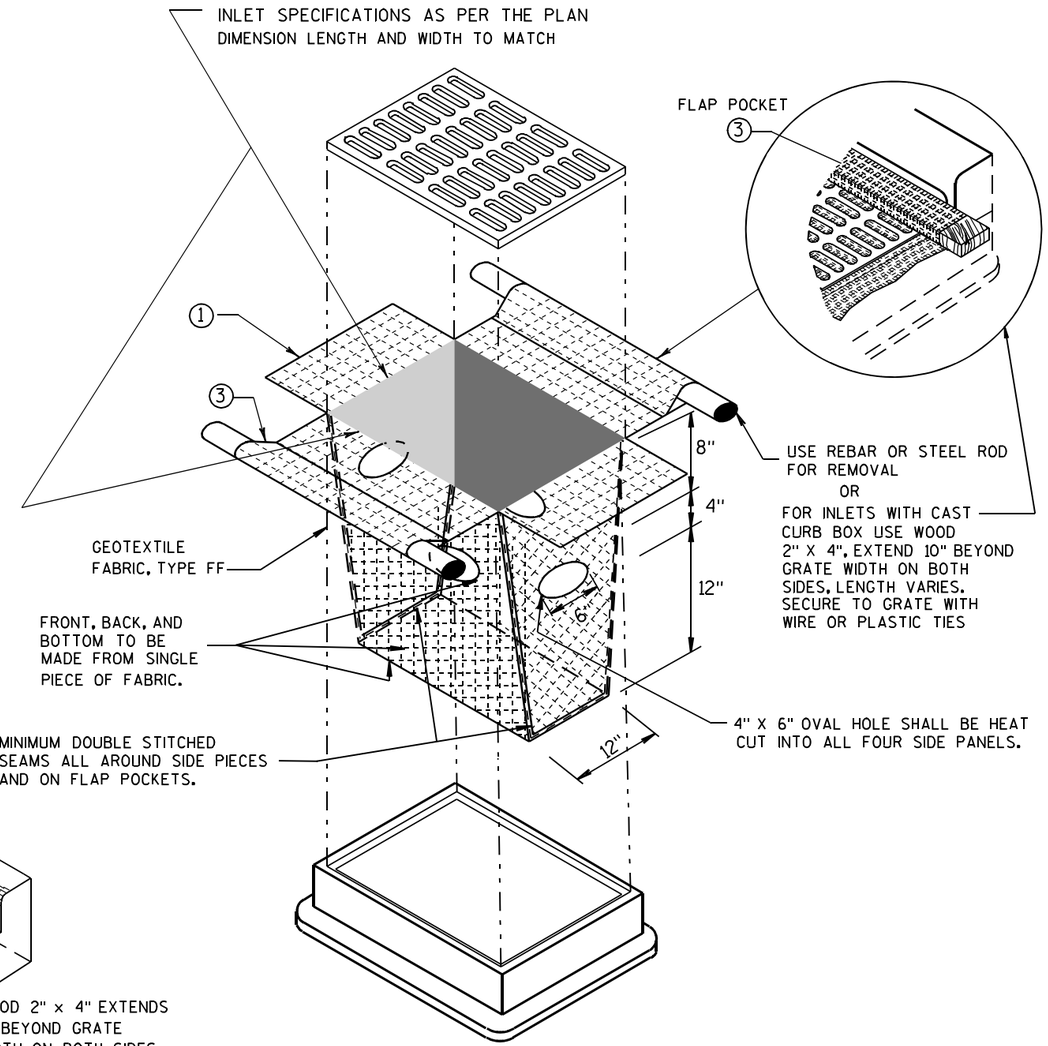


INLET PROTECTION, TYPE A



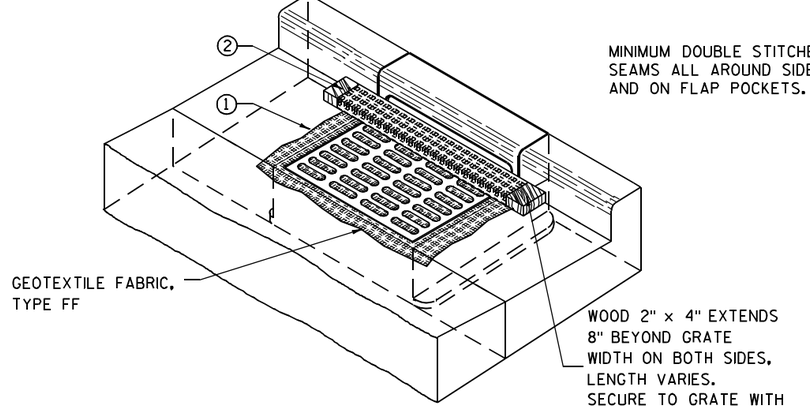
INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE D

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

GENERAL NOTES

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

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

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

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

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

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

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

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

METAL APRON ENDWALLS

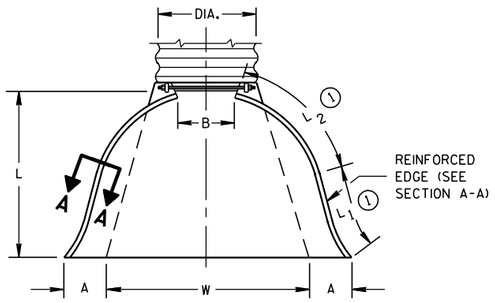
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

× EXCEPT CENTER PANEL SEE GENERAL NOTES

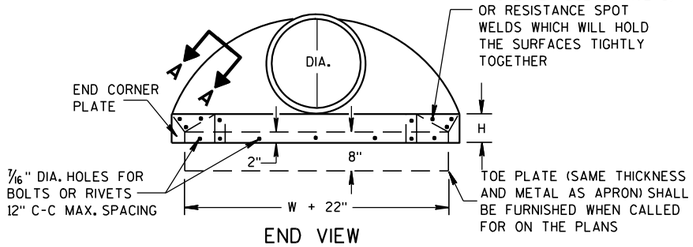
REINFORCED CONCRETE APRON ENDWALLS

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

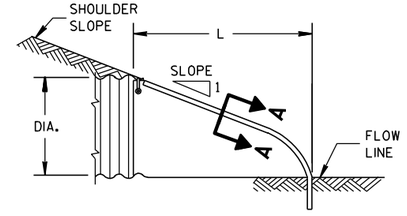
*MINIMUM
**MAXIMUM



PLAN VIEW

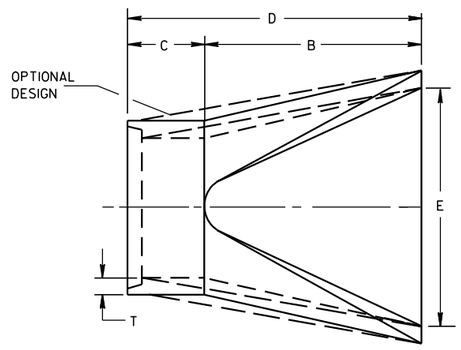


END VIEW

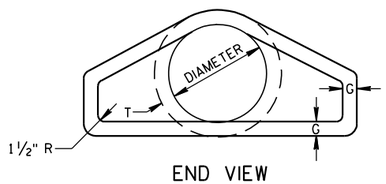


SIDE ELEVATION

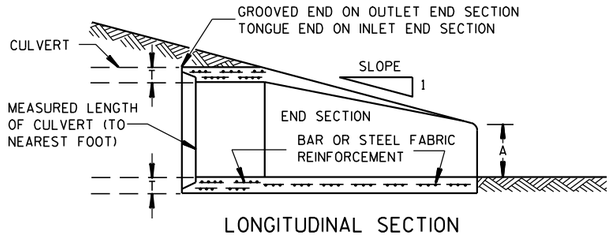
METAL ENDWALLS



PLAN

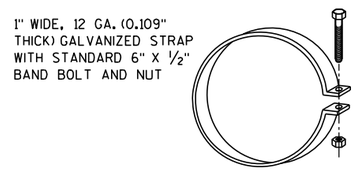


END VIEW



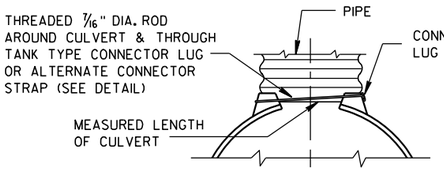
LONGITUDINAL SECTION

CONCRETE ENDWALLS

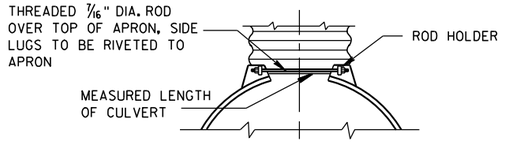


ALTERNATE FOR TYPE 1 CONNECTION

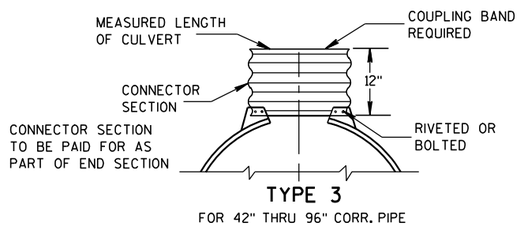
END SECTION CONNECTOR STRAP



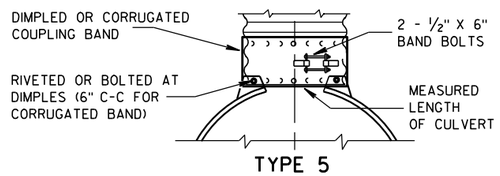
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

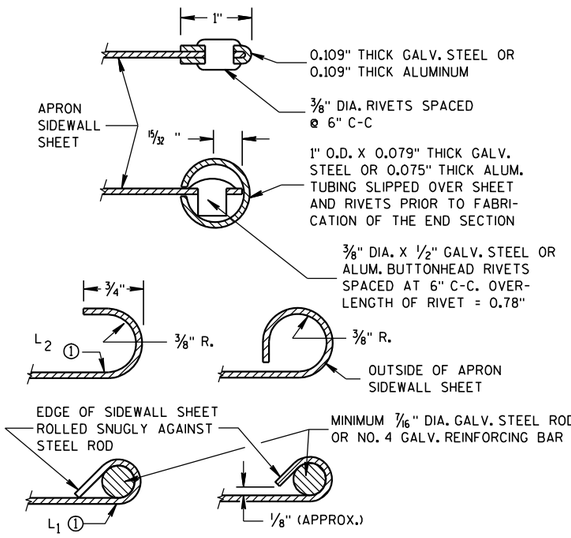
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

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

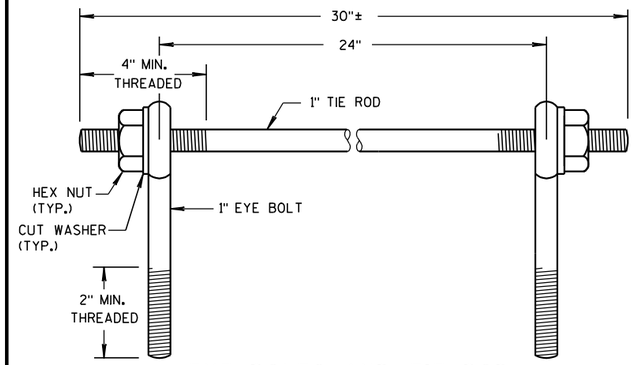
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

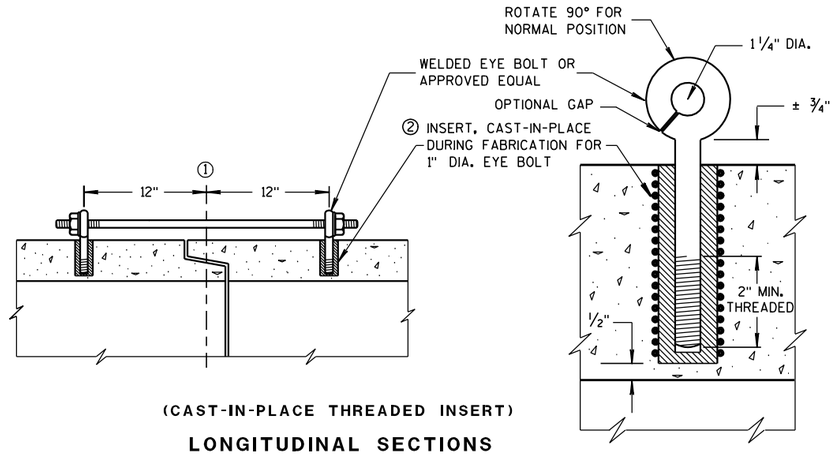
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

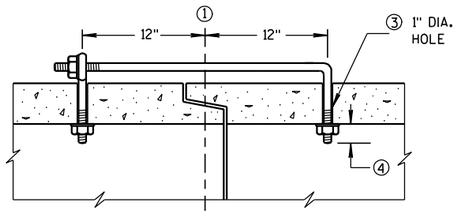
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

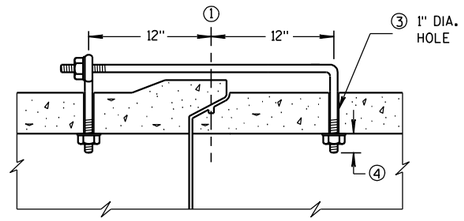
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

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)

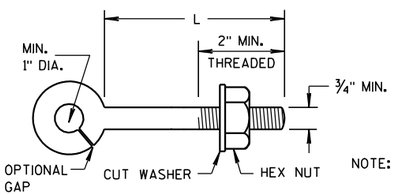


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

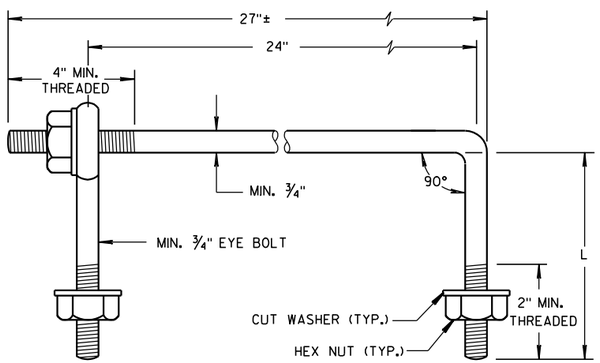
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



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

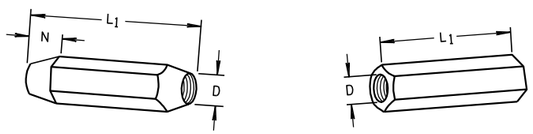
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

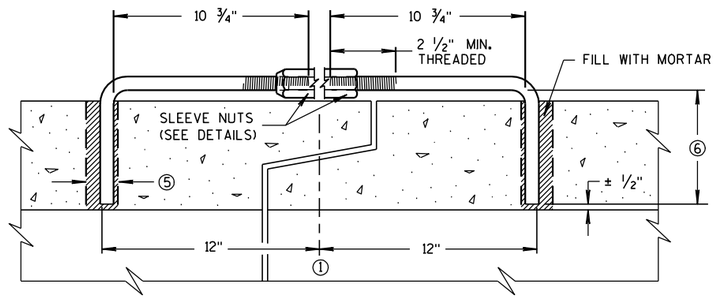
DIMENSIONS SHOWN ARE IN INCHES



TAPERED PLAIN

RIGHT AND LEFT THREADS

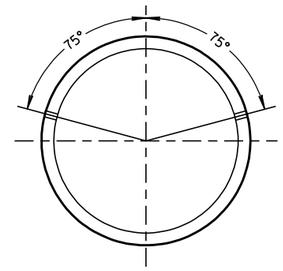
SLEEVE NUTS



LONGITUDINAL SECTION

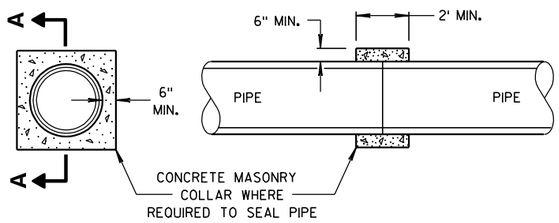
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

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

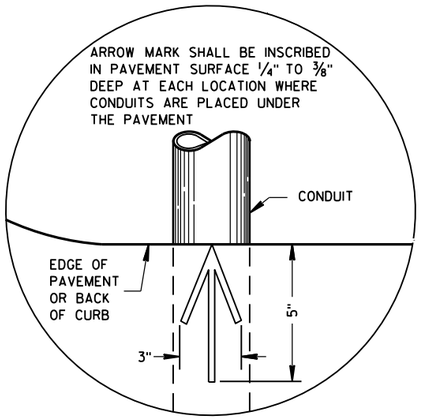
APPROVED
6/5/2012 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
174
FHWA

6

S.D.D. 8 F 4-7

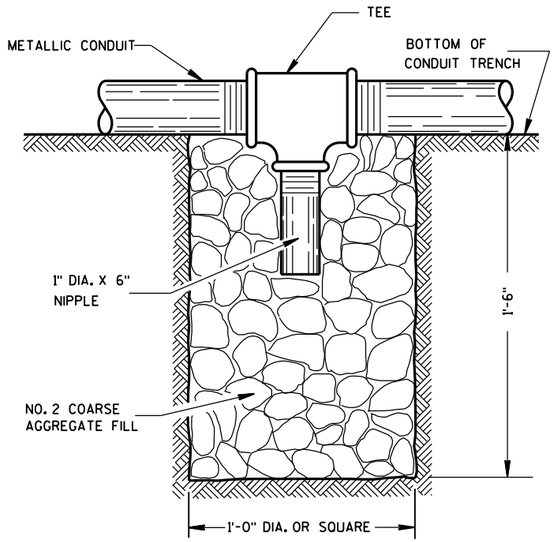
6

S.D.D. 8 F 4-7



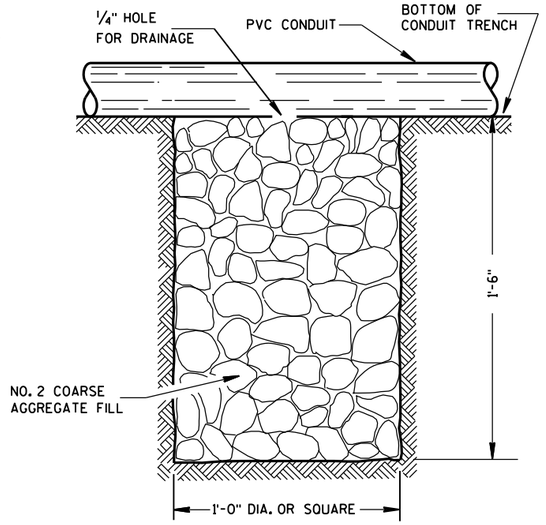
PLAN VIEW

ARROW MARK



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

DRAIN SUMP FOR METALLIC CONDUIT



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

DRAIN SUMP FOR PVC CONDUIT

GENERAL NOTES

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

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

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

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

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

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

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

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

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

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

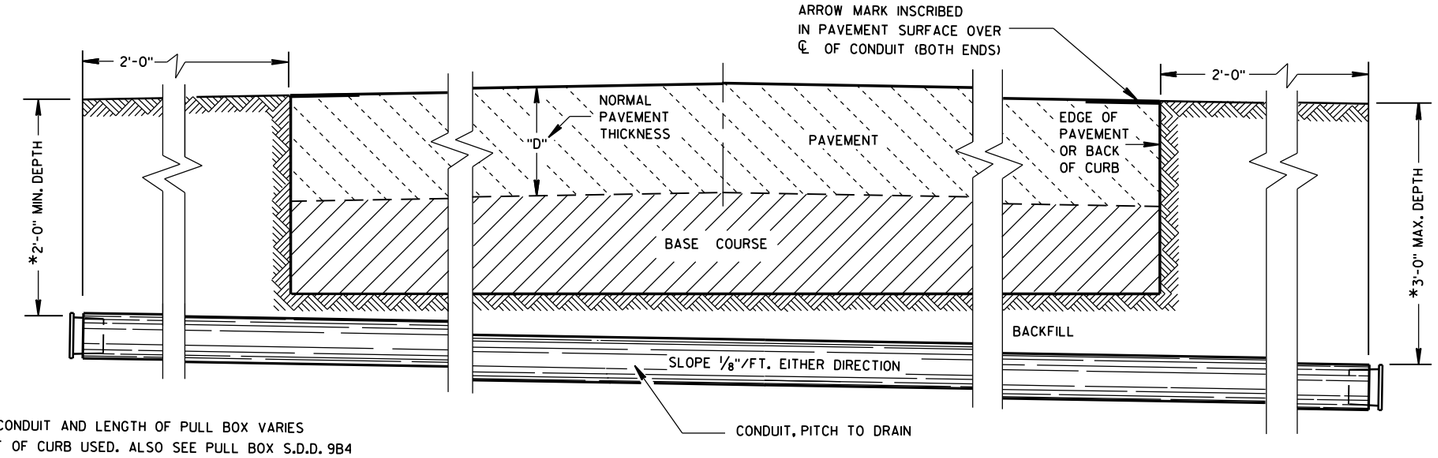
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

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

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

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

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



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

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

CONDUIT 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

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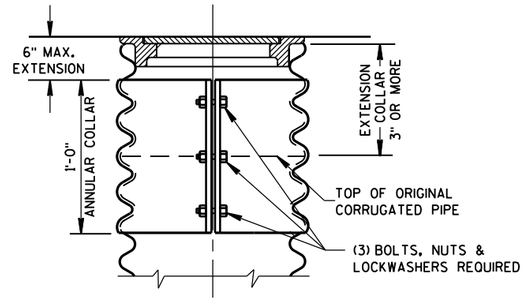
S.D.D. 9 B 2-8

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

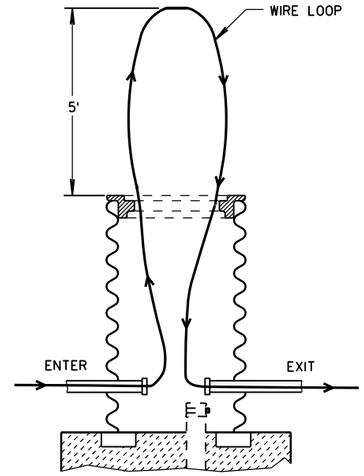
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2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

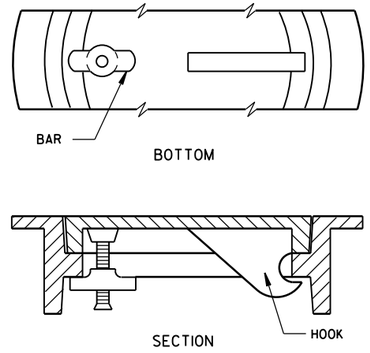
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

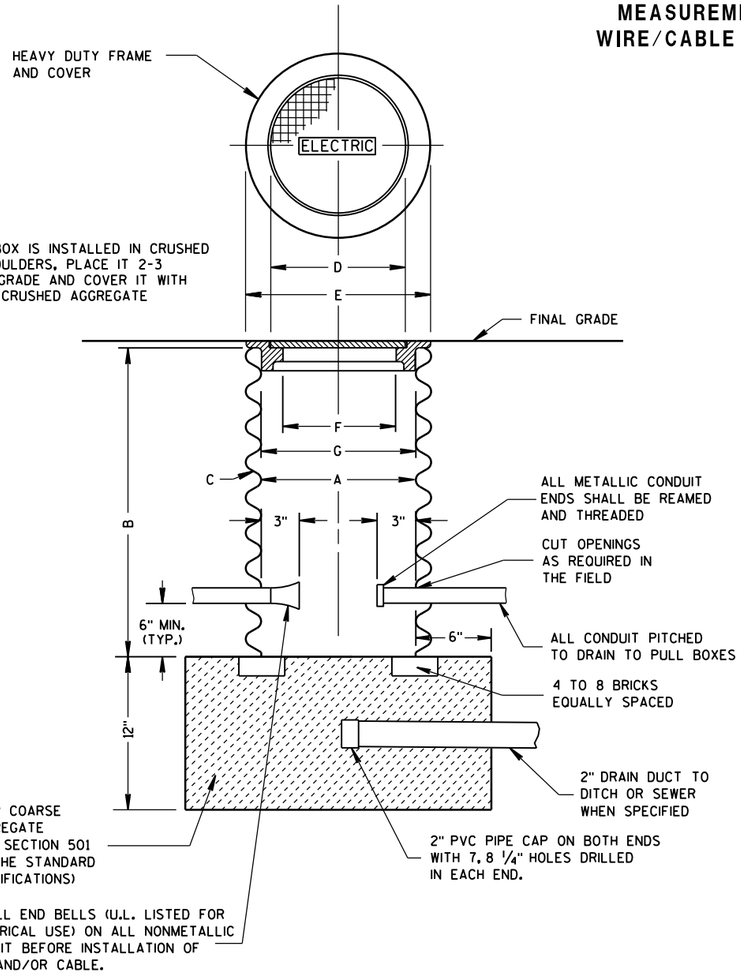


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



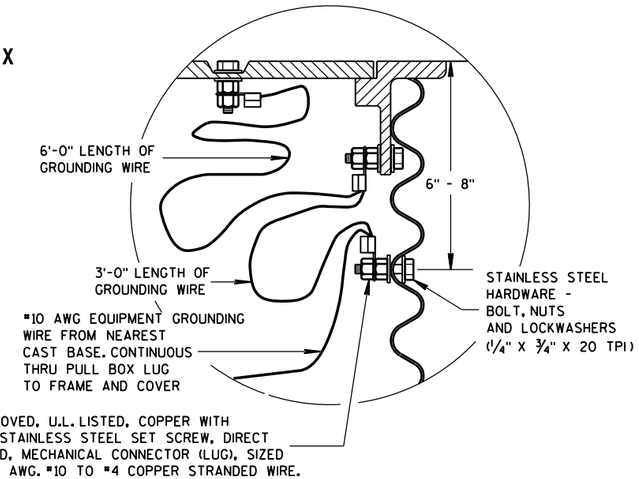
ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE

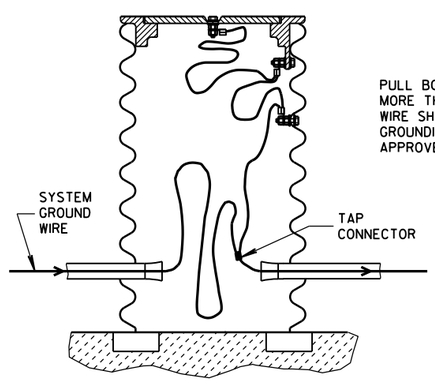


WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

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

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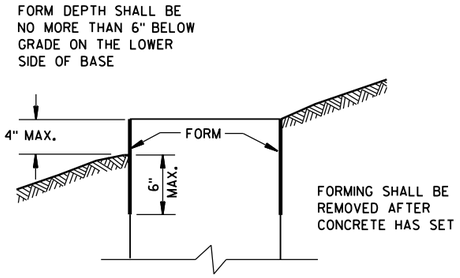
S.D.D. 9 B 4-11



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.

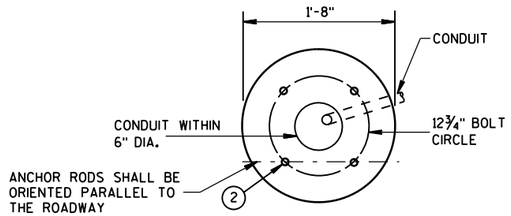
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

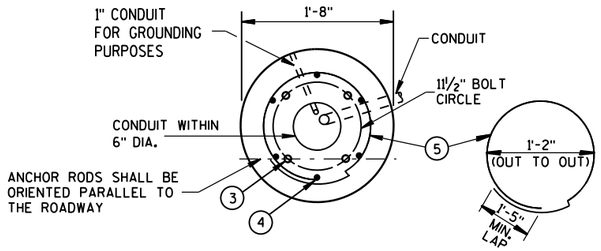
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

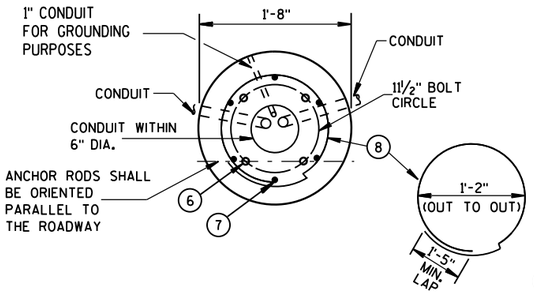
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

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

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

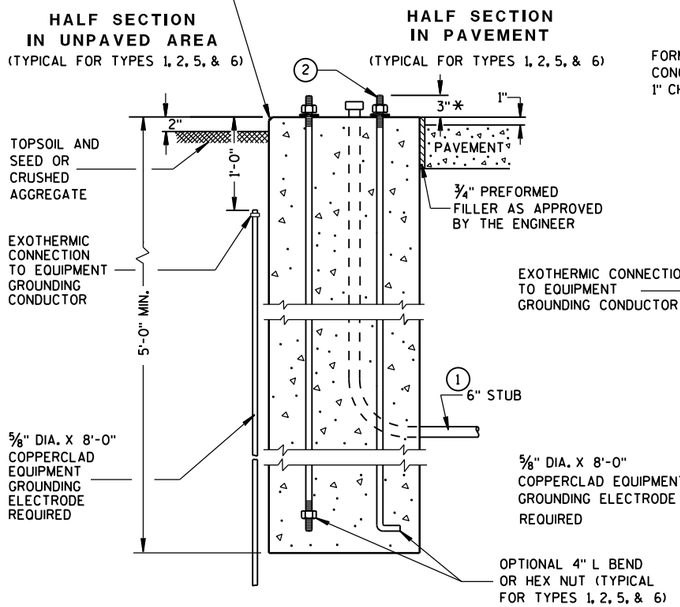






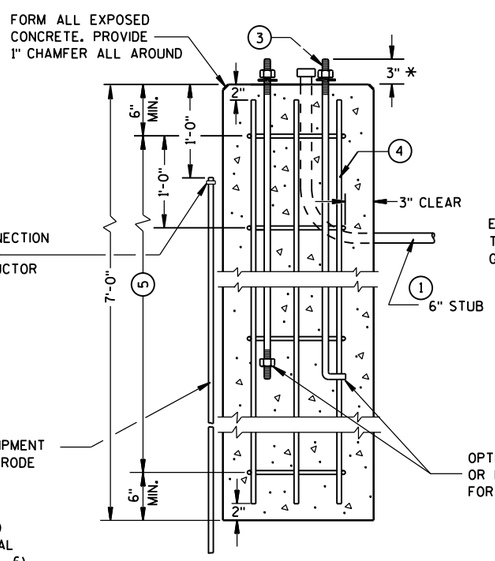
HALF SECTION IN UNPAVED AREA

(TYPICAL FOR TYPES 1, 2, 5, & 6)

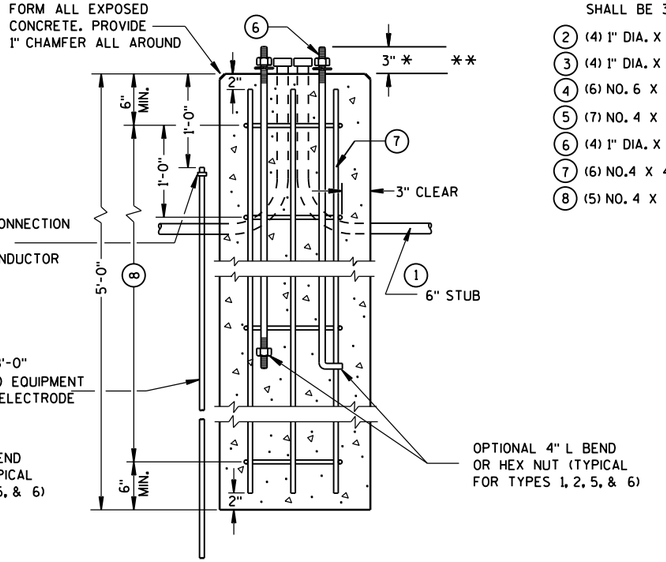


HALF SECTION IN PAVEMENT

(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

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S.D.D. 9 C 2-7

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.

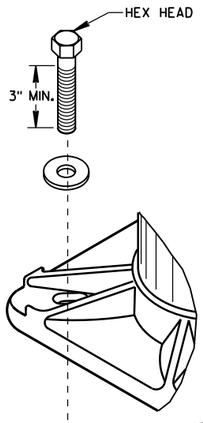
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

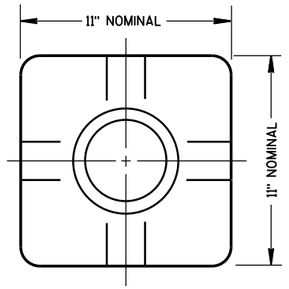
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

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

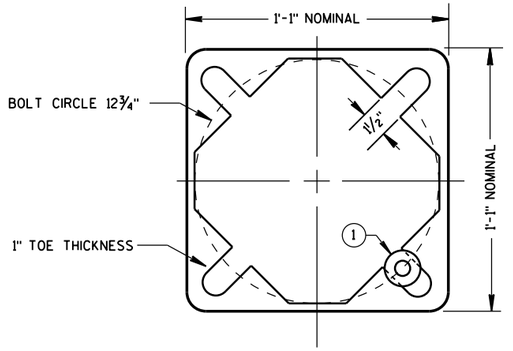
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

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

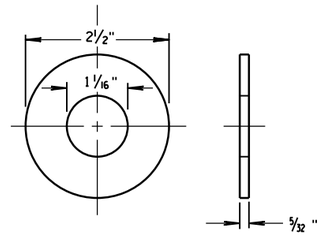




TOP VIEW
(PEDESTAL BASE)

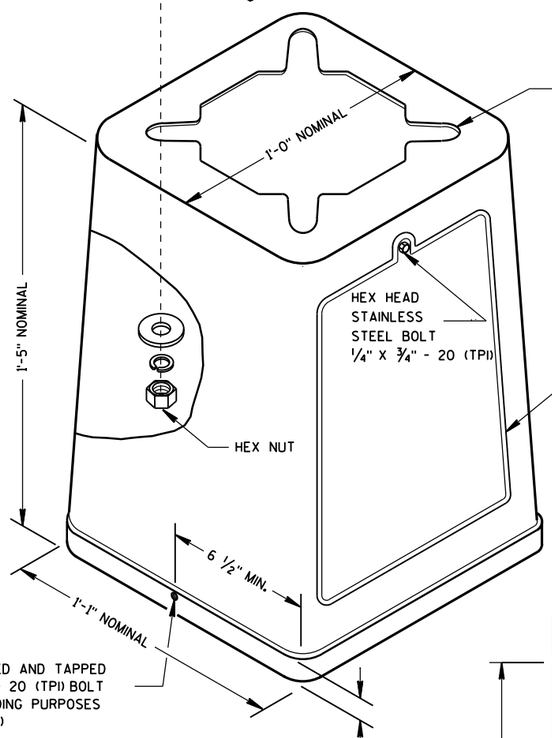


BOTTOM VIEW
(PEDESTAL BASE)

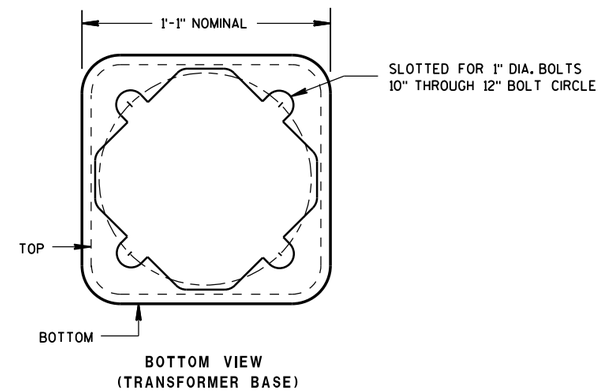


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

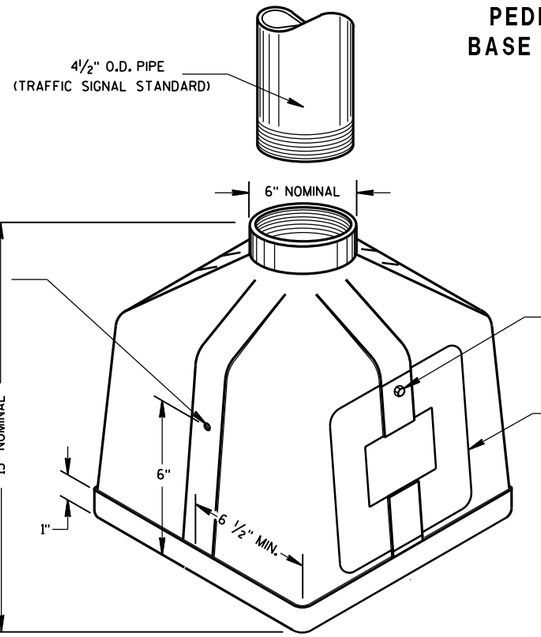
PEDESTAL BASE WASHER (1)



ISOMETRIC VIEW

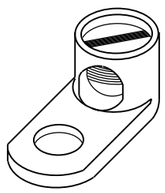


BOTTOM VIEW
(TRANSFORMER BASE)



ISOMETRIC VIEW

PEDESTAL BASE

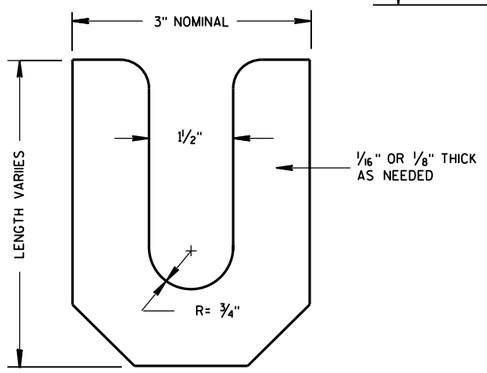


TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

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



LEVELING SHIM

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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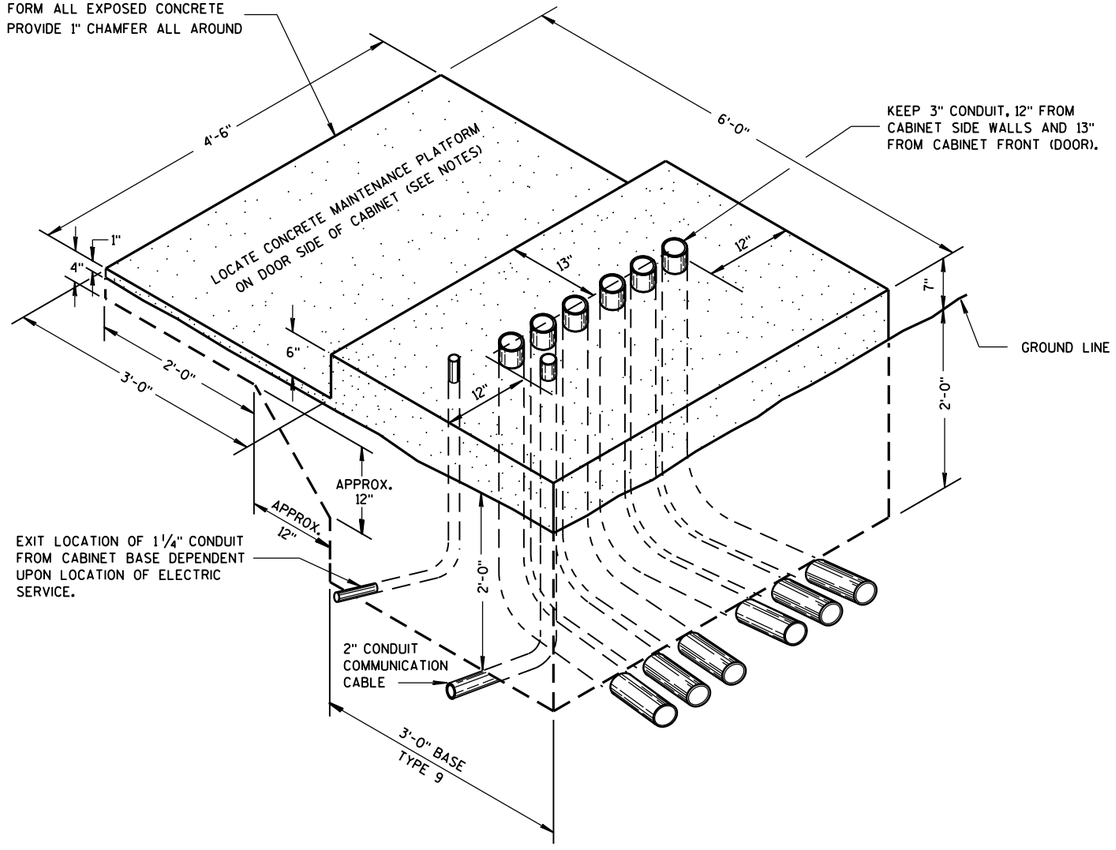
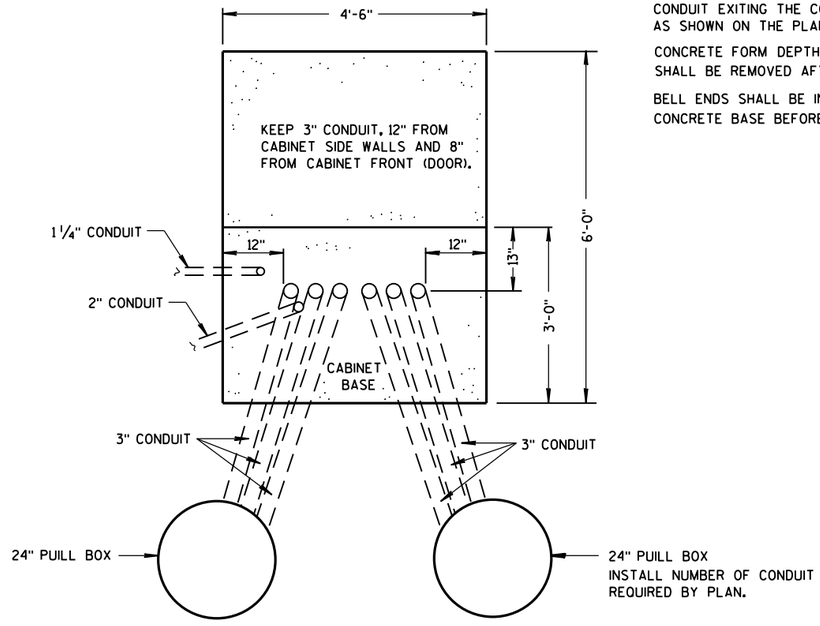


ISOMETRIC VIEW

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
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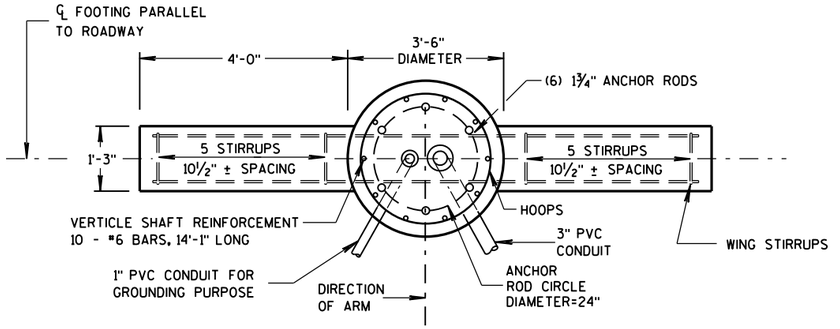
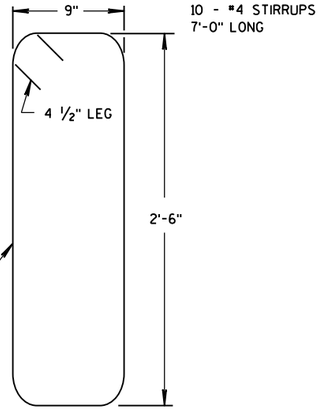
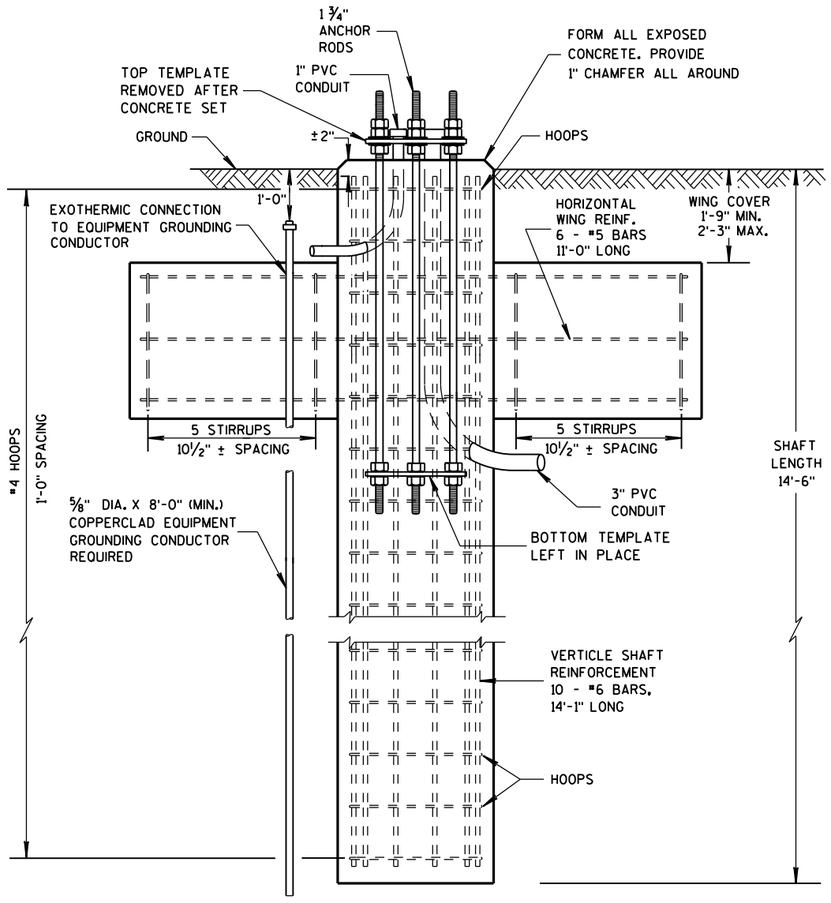
S.D.D. 9 C 6-7



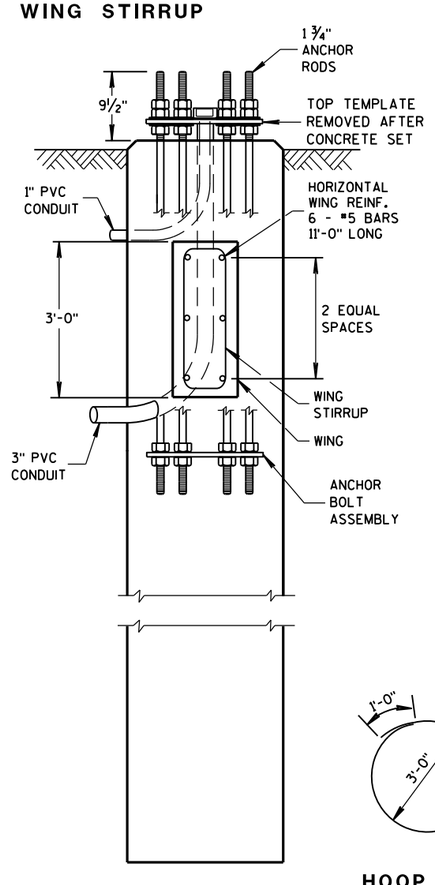
PLAN VIEW



WING STIRRUP

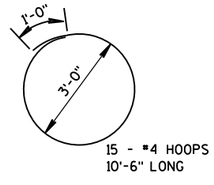


ELEVATION VIEW



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

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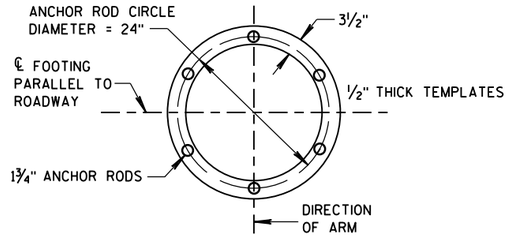
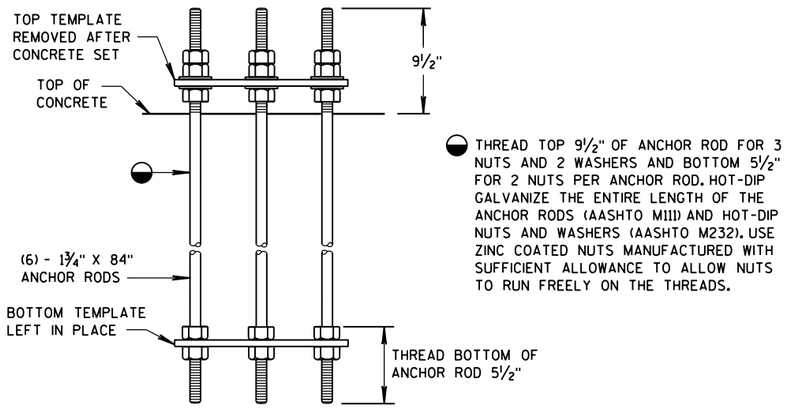
S.D.D. 9 C 12-5a

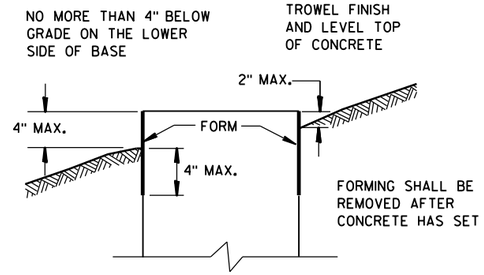


TOP AND BOTTOM TEMPLATES



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
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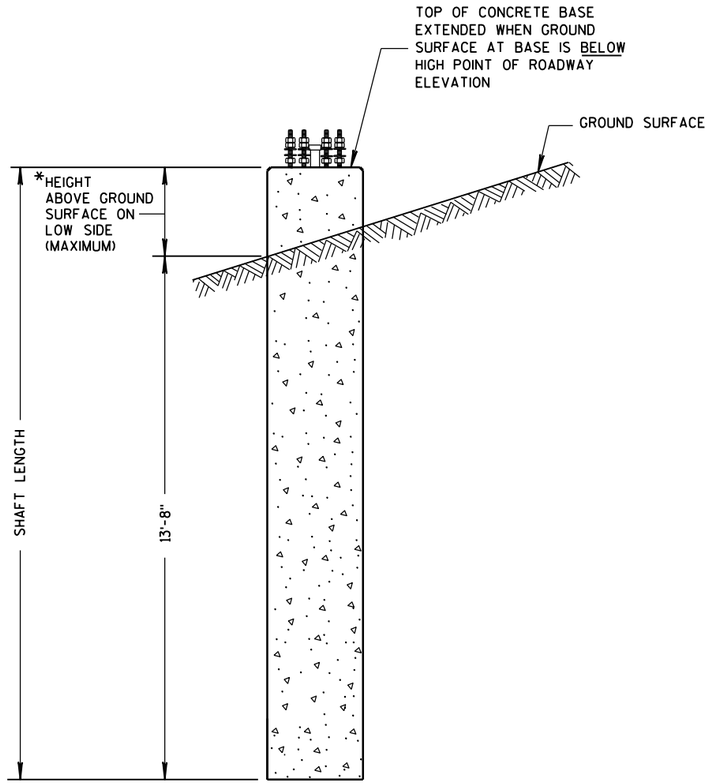
STATE ELECTRICAL
FHWA

S.D.D. 9 C 12-5b

REINFORCEMENT AND CONCRETE QUANTITIES
ADJUSTED FOR EXTENDED TYPE 10 CONCRETE BASE

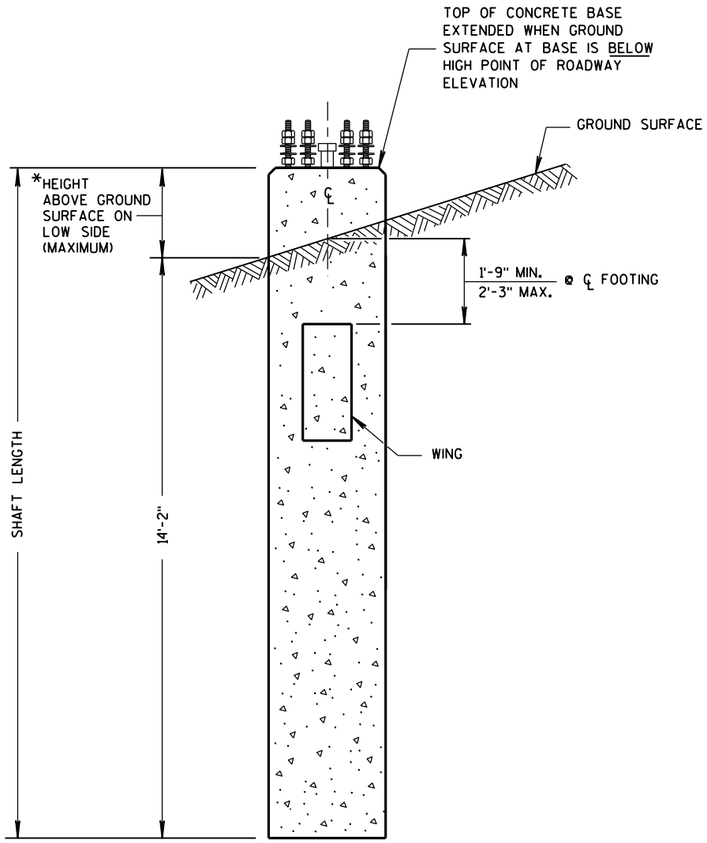
HEIGHT INCREASE REQUIRED	* HEIGHT ABOVE GROUND SURFACE ON LOW SIDE (MAXIMUM)	SHAFT LENGTH	LENGTH OF #6 VERTICAL REINF.	NO. OF #4 HOOPS	C.Y. OF CONCRETE	LBS. OF HOOP BAR STEEL	LBS. OF VERTICAL BAR STEEL
>0" TO 6"	10"	14'-6"	14'-1"	16	2.6	78	127
>6" TO 1'-0"	1'-4"	15'-0"	14'-7"	16	2.7	78	131
>1'-0" TO 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

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S.D.D. 9 C 13-2

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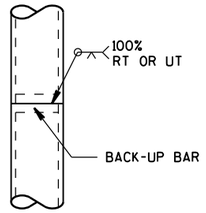
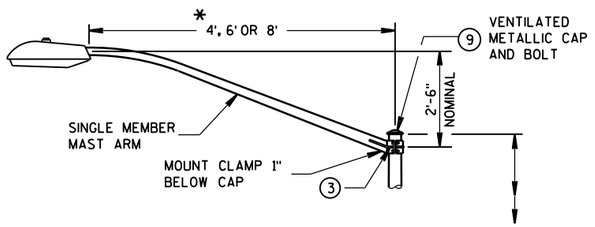
FOR MANUFACTURERS USE ONLY

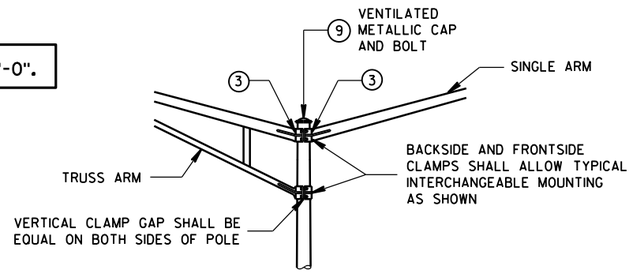
WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN/BRIDGE FOR VERIFICATION AND APPROVAL.



POLE SPLICE DETAIL

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

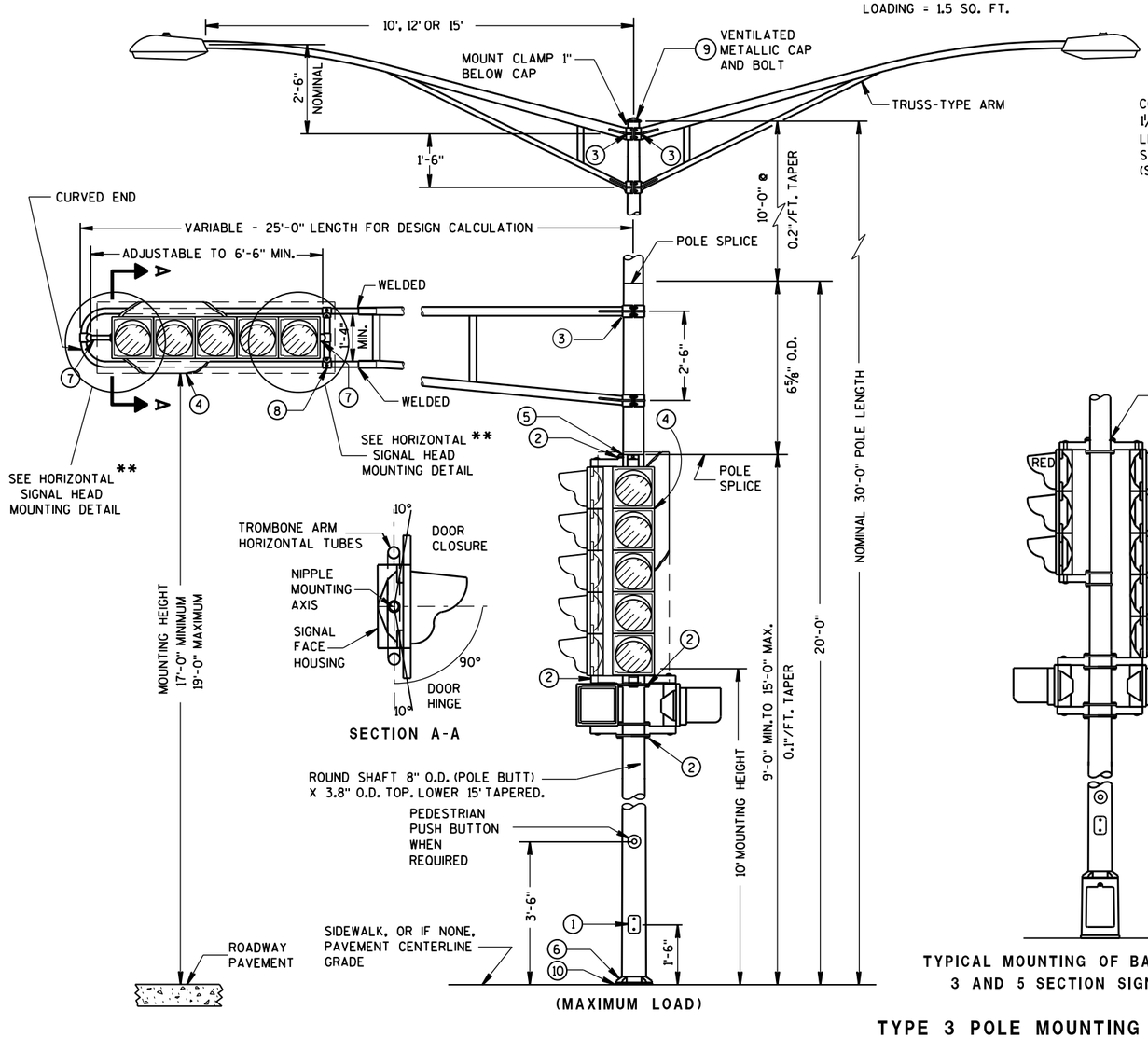


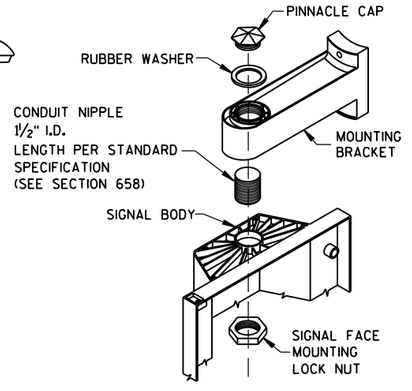


INTERCHANGEABLE MOUNTING DETAIL

LUMINAIRE

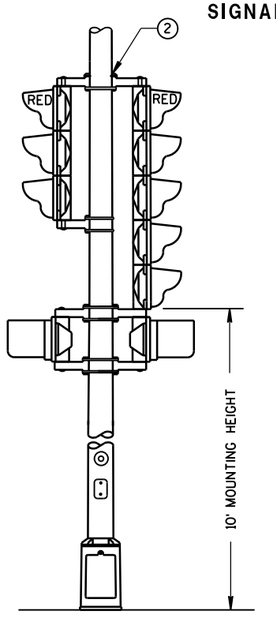
WT. - 50 LBS.
EFFECTIVE PROJECTED
AREA FOR WIND
LOADING = 1.5 SQ. FT.



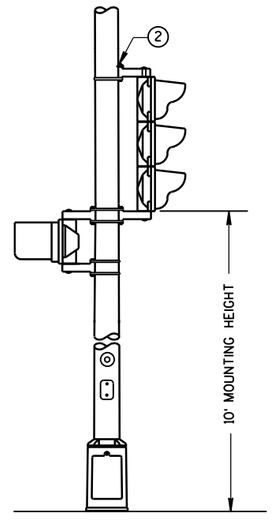


SIGNAL FACE MOUNTING DETAIL

(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.

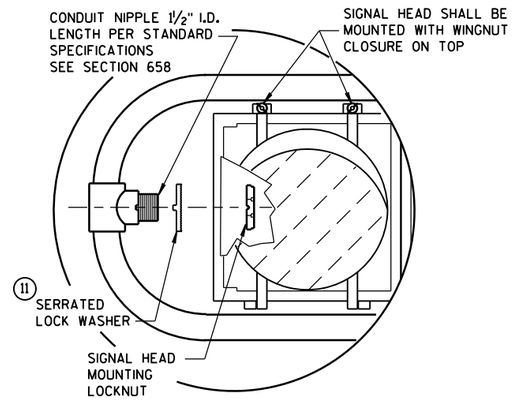
(7) MOUNTING BRACKET NIPPLES FOR THE SIGNAL FACE(S) SHALL BE 2 INCHES IN LENGTH AND 1½ INCHES IN DIAMETER. (SEE STANDARD SPECIFICATION - SECTION 658)

(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

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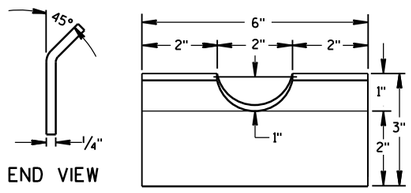
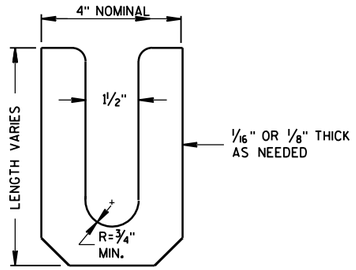


END VIEW

FRONT VIEW

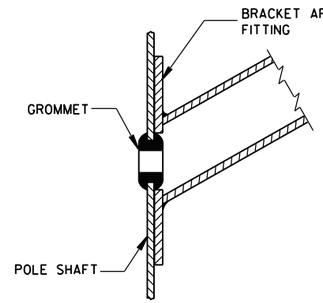
RECTANGULAR CLAMP SHIM

(4 TO A SET)

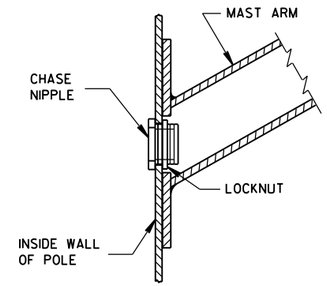


LEVELING SHIM (15)

SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

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

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

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

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

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

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

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

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

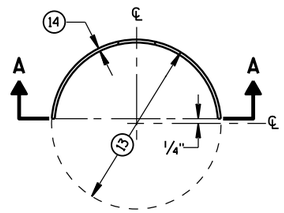
SHIM MATERIAL SHALL BE ALUMINUM ALLOY.

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

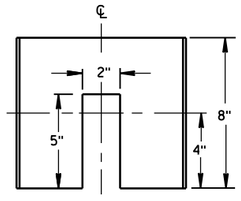
THE CONTRACTOR SHALL SUBMIT TWO COPIES OF ALL SHIM SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL.

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

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



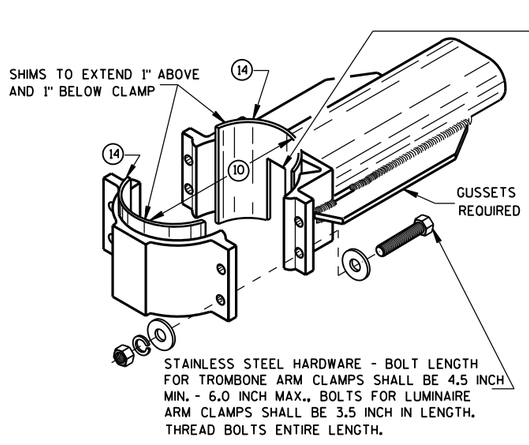
PLAN VIEW



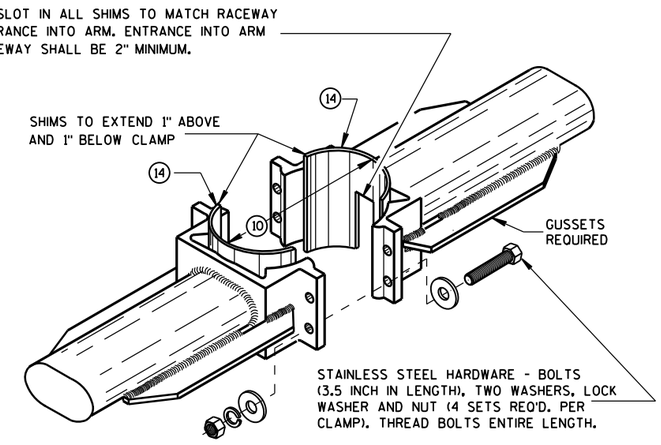
SECTION A-A

CIRCULAR CLAMP SHIM

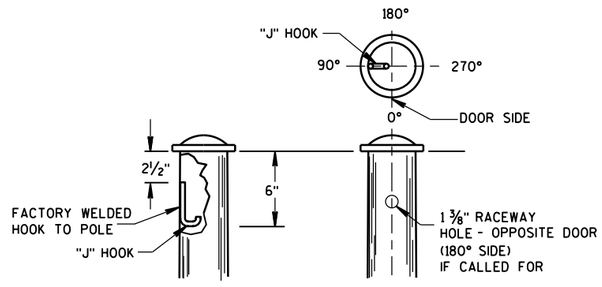
(2 TO A SET)



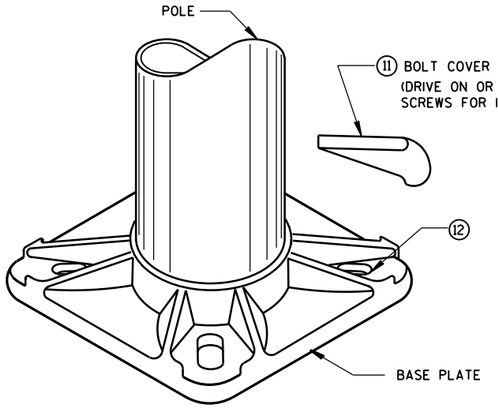
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



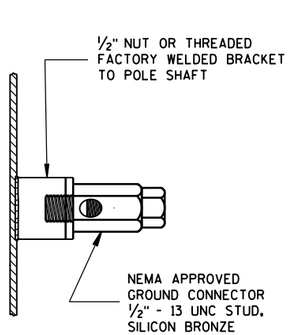
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

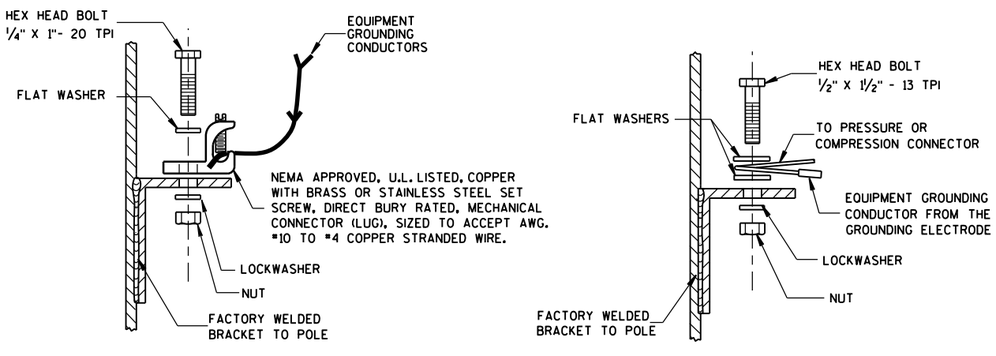


TYPICAL "J" HOOK LOCATION



BASE PLATE





TYPICAL GROUNDING CONNECTIONS

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

HARDWARE DETAILS FOR POLE MOUNTINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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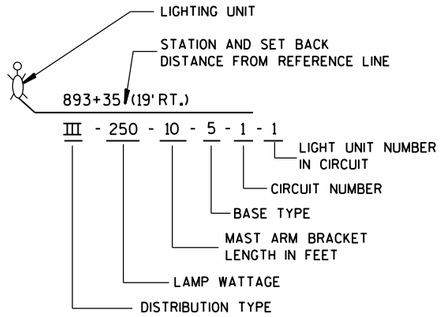
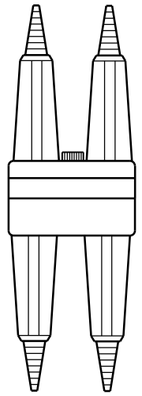
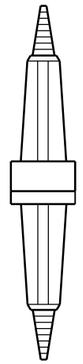


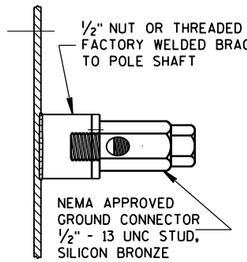
LIGHTING UNIT CODE
(TYPICAL)

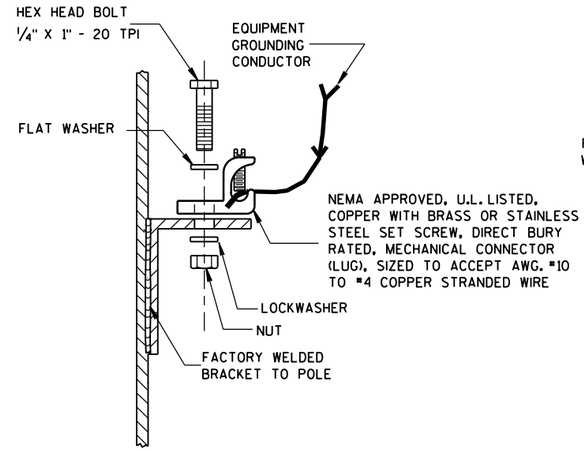


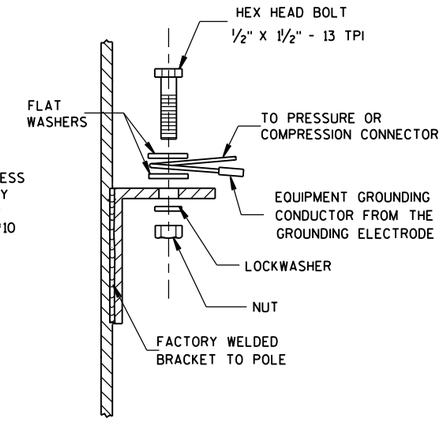
DETAIL "A"
BREAKAWY DOUBLE POLE WITH WATERPROOF INSULATING BOOT



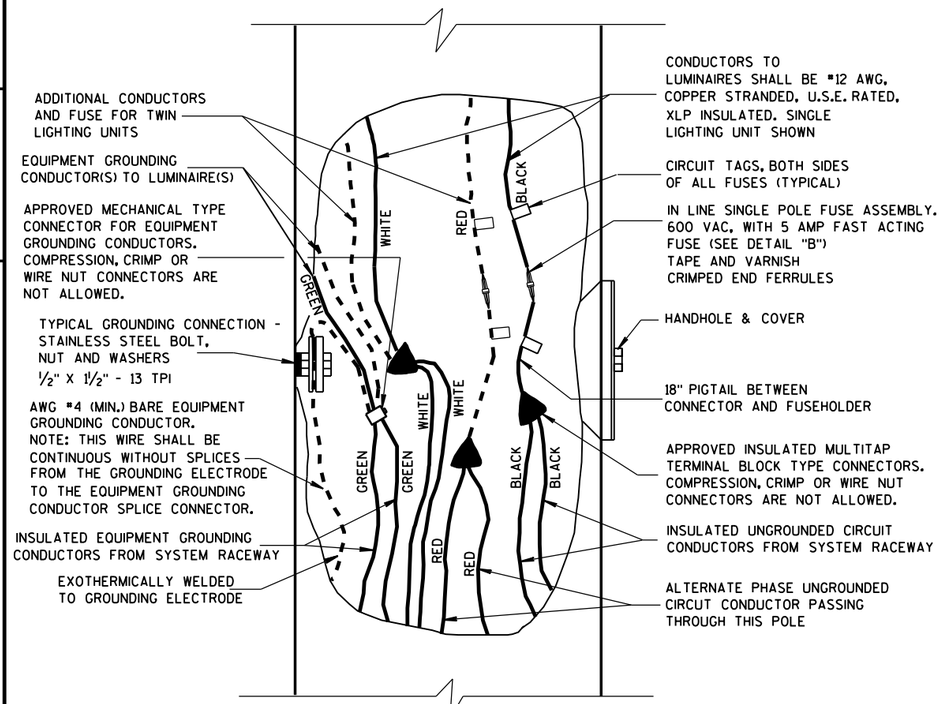
DETAIL "B"
BREAKAWY SINGLE POLE WITH WATERPROOF INSULATING BOOT



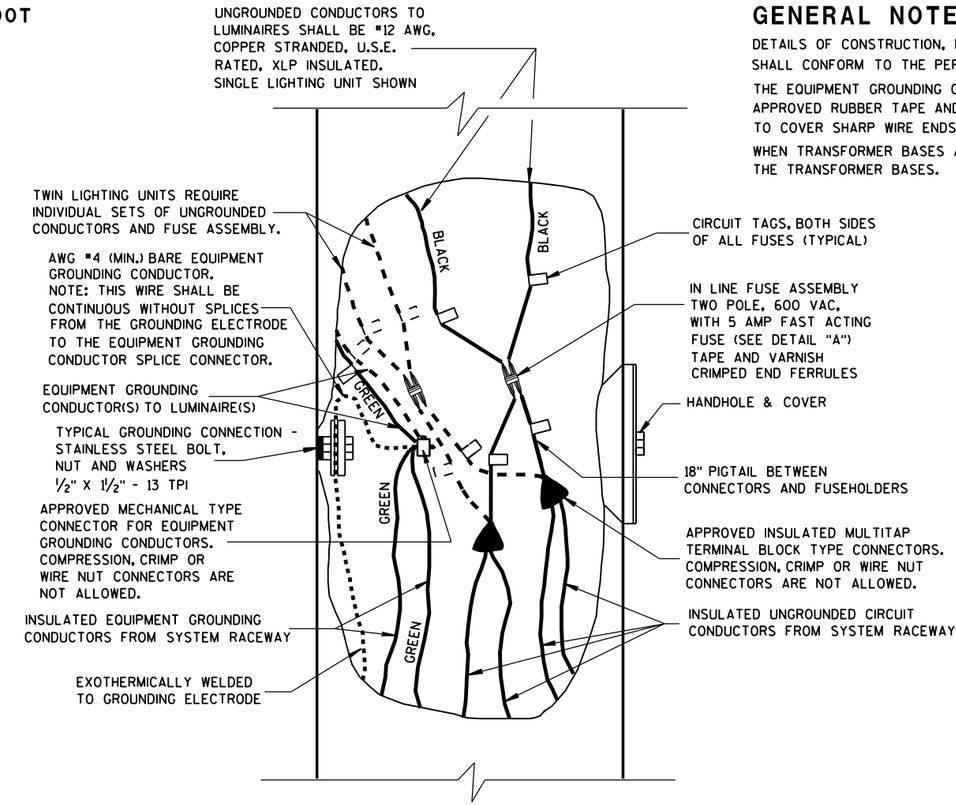




TYPICAL GROUNDING CONNECTIONS
NUT, BOLT, WASHERS AND LOCKWASHERS SHALL BE STAINLESS STEEL



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

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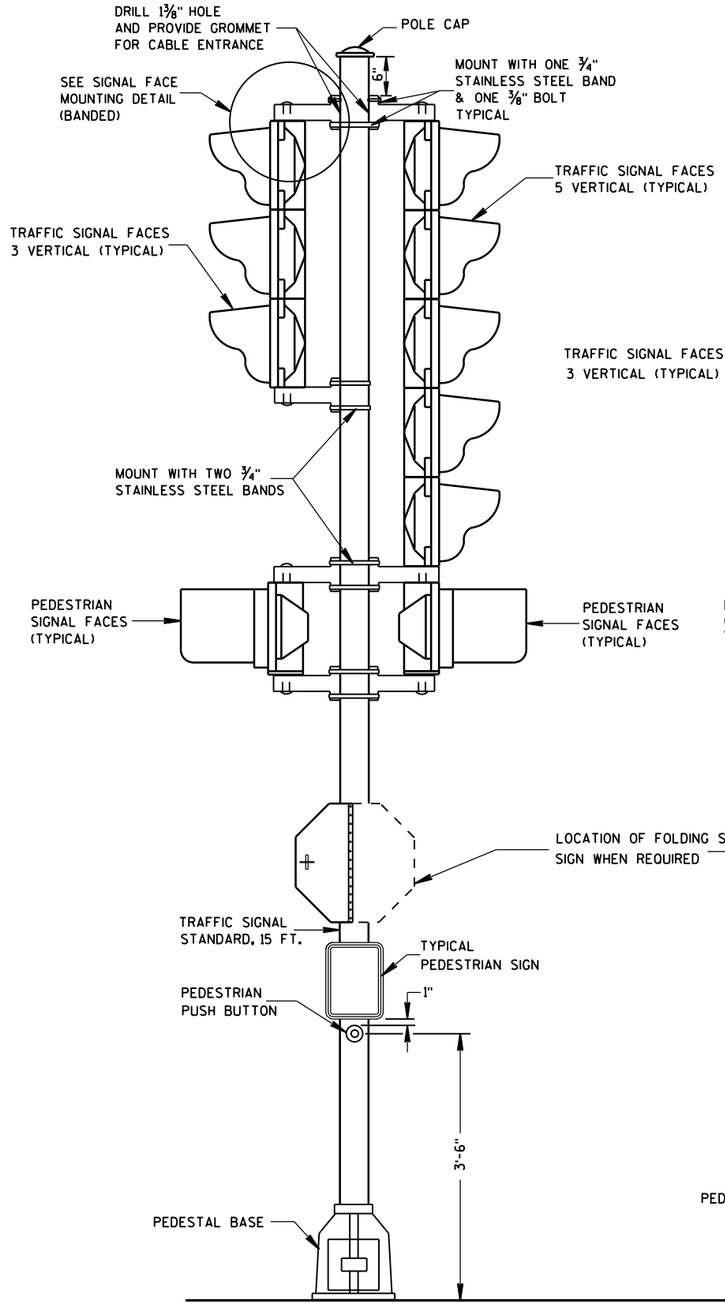
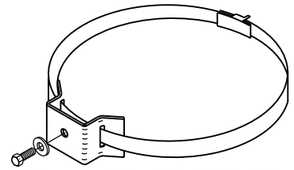
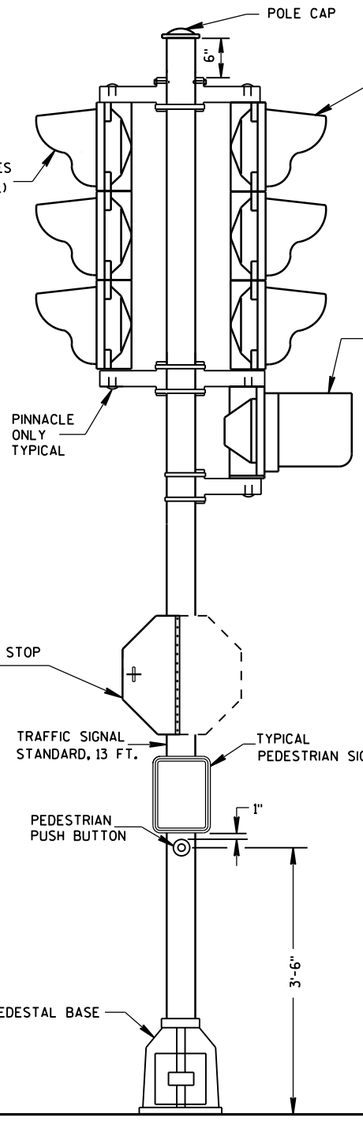


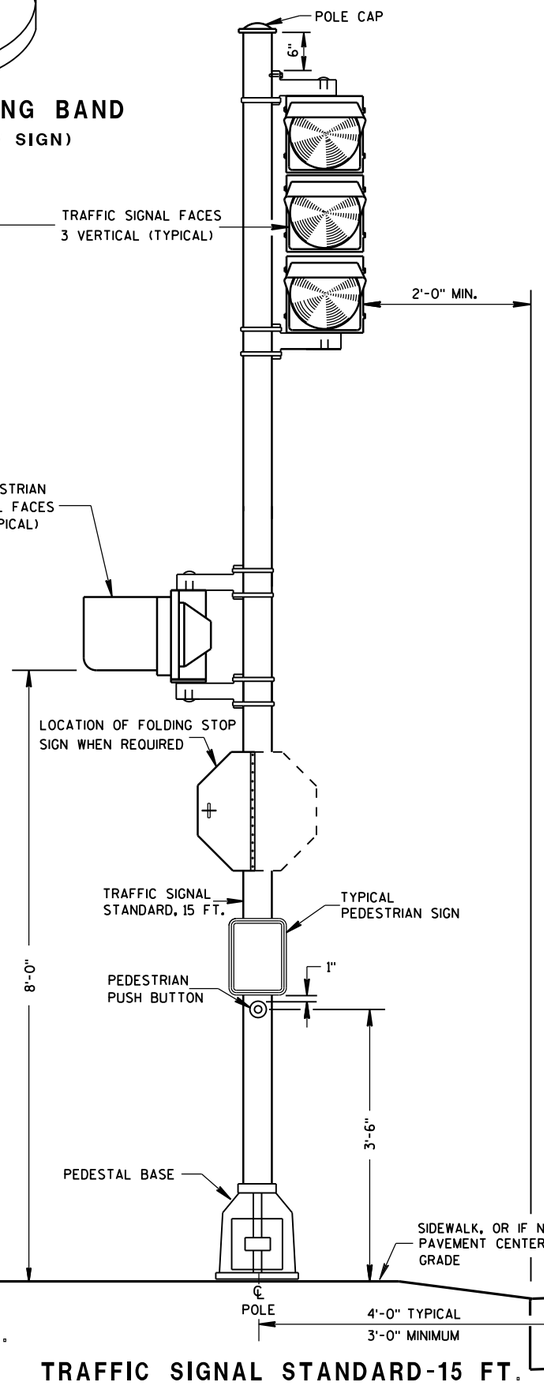
TRAFFIC SIGNAL STANDARD-15 FT.



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.

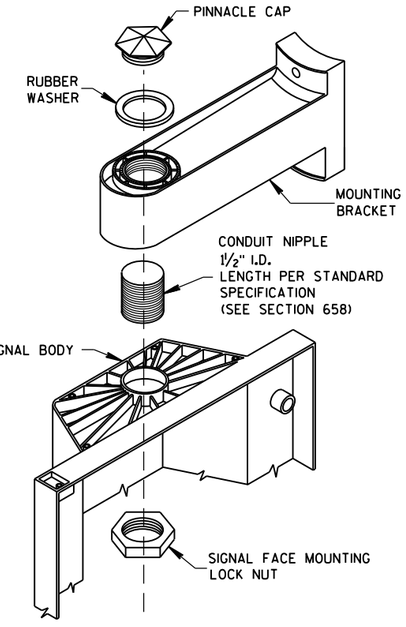
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

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
FHWA

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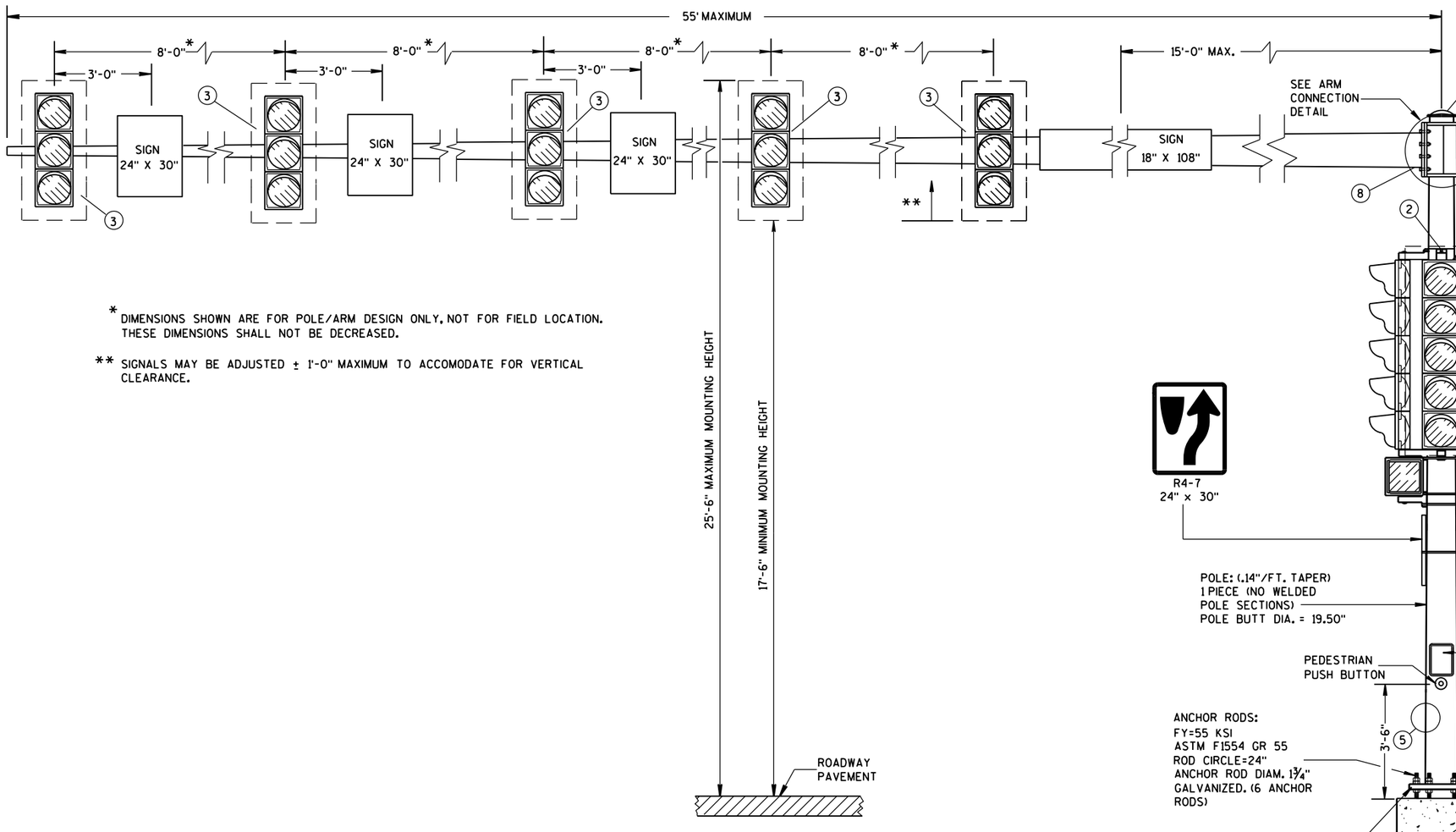
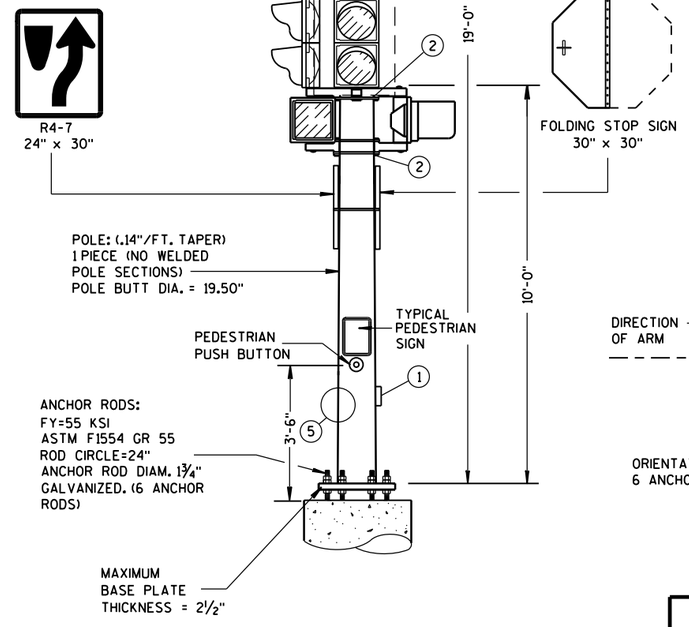
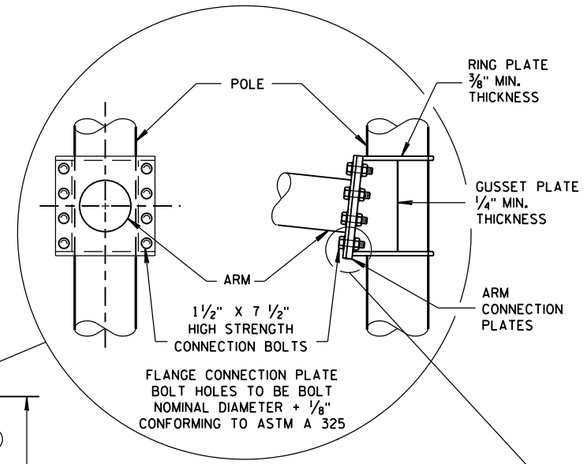
S.D.D. 9 E 6-5



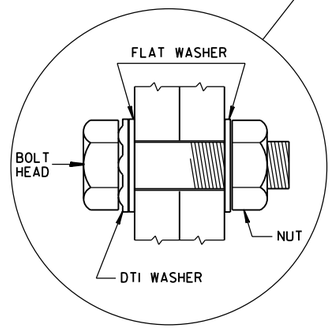
* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.

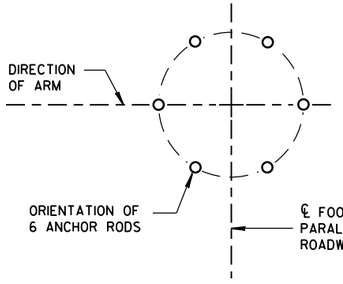




8 BOLT ARM CONNECTION DETAIL



RECOMMENDED
BOLT ASSEMBLY
DETAIL



ANCHOR ROD LOCATION

(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

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S.D.D. 9 E 8-6c

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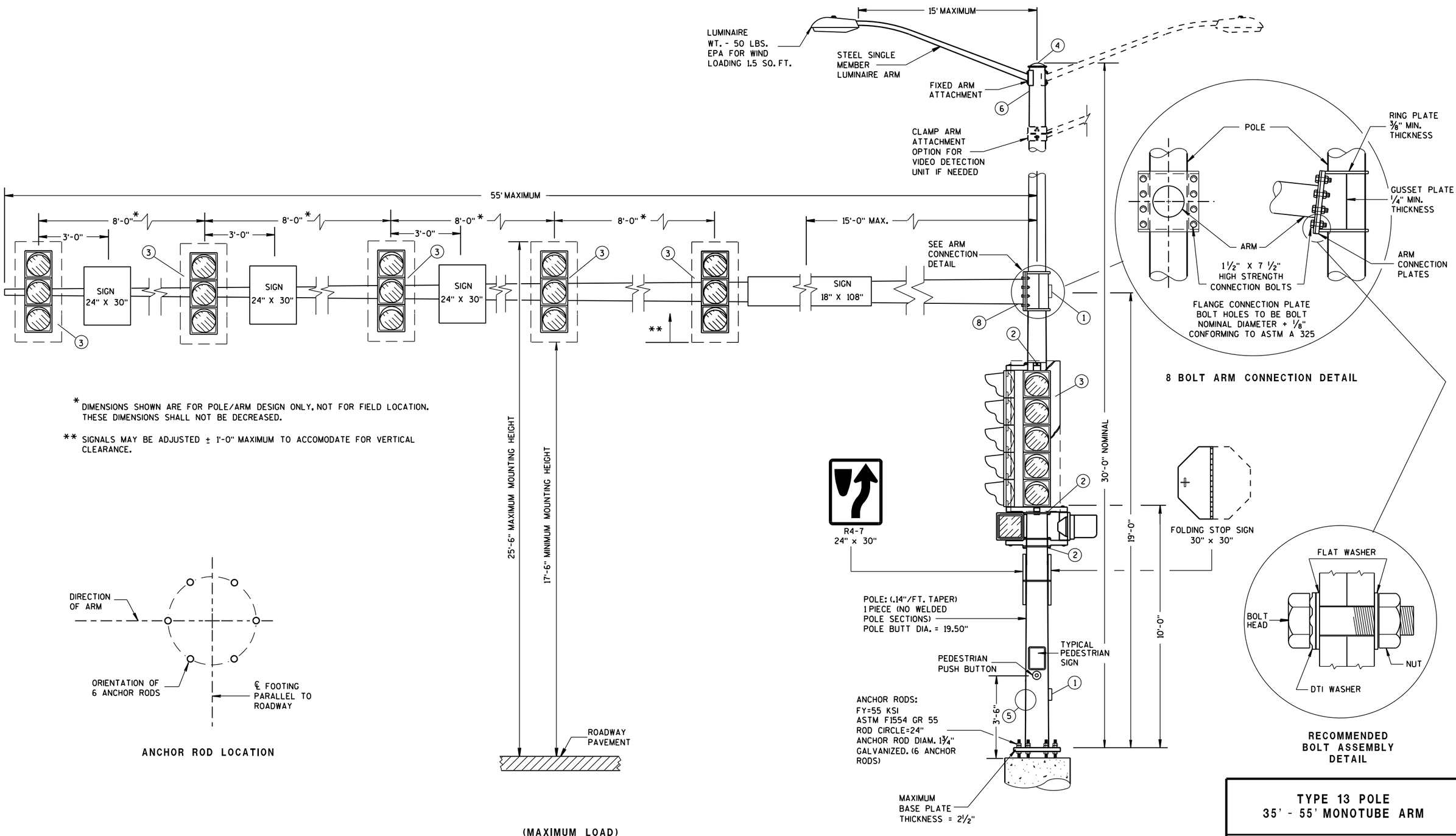
S.D.D. 9 E 8-6c



* 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

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GENERAL NOTES

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

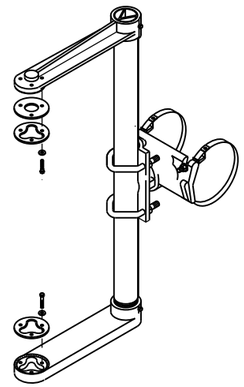
(6) FACTORY-WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.

(7) INSTALL DEPARTMENT PROVIDED STRUCTURAL IDENTIFICATION PLAQUES.

STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

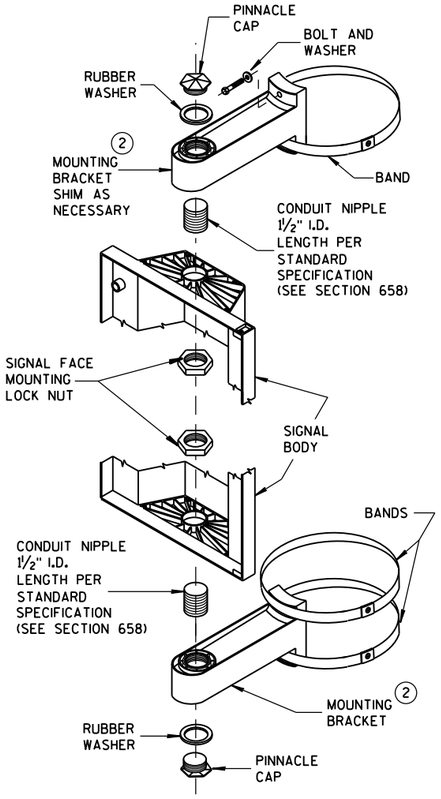
MOUNTING HEIGHT SHALL BE 5'-0" ABOVE THE CURB OR SHOULDER . ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.

(8) FACTORY DRILLED ½" DRAIN HOLE 2" FROM FLANGE CONNECTION PLATE.

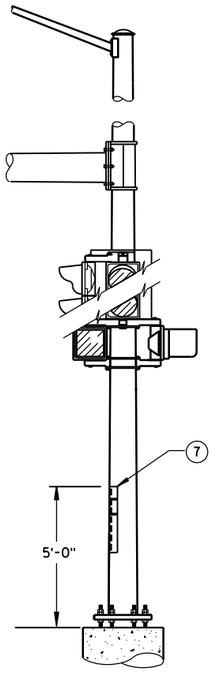


SIGNAL FACE MOUNTING BRACKET DETAIL FOR MONOTUBE ARM

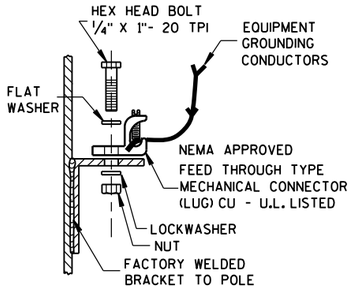
(MOUNT PER MANUFACTURER'S RECOMMENDATION)



SIGNAL FACE VERTICAL MOUNTING DETAIL

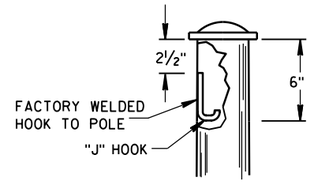


STRUCTURAL IDENTIFICATION PLAQUE PLACEMENT



TYPICAL GROUNDING CONNECTIONS (5)

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



"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

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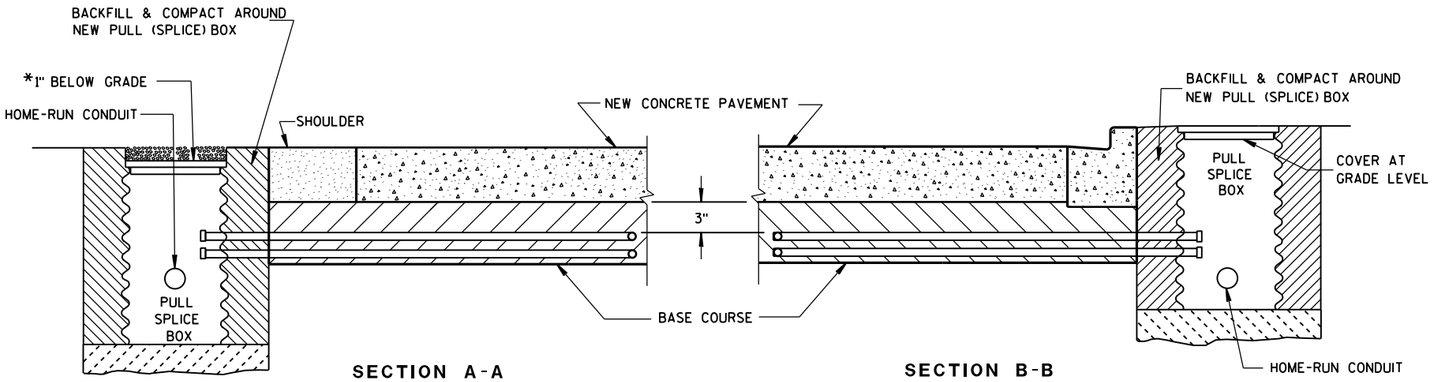
S.D.D. 9 E 8-6e



SECTION A-A
NO CURB & GUTTER

SECTION B-B
CURB & GUTTER

*RECESS PULL (SPLICE) BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

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

LOOP SIZE, CONFIGURATION LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL (SPLICE) BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

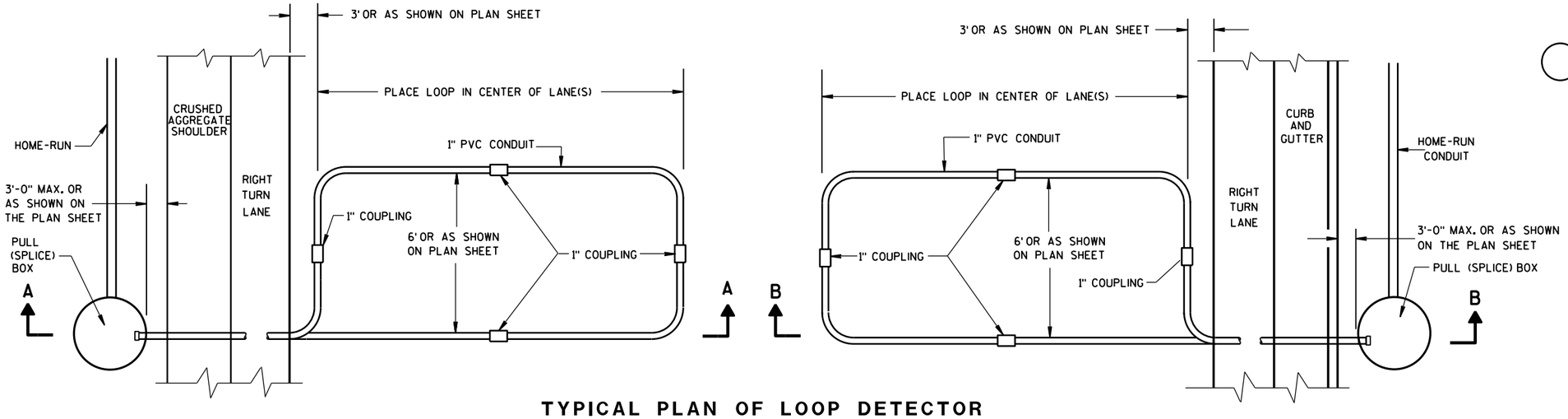
THE #12 AWG. LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL (SPLICE) BOXES AT THE SIDE OF THE ROAD.

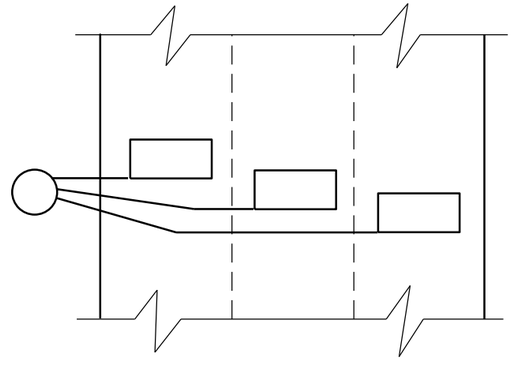
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPLICE) BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPLICE) BOX, AND BE INSTALLED IN ONE, NON-SPLICED CONTINUOUS LENGTH.

PROTECTION OF THE CONDUITS IN THE BASE COURSE SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW PAVEMENT IS INSTALLED.

SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE DONE UNDER THE DIRECTION OF THE PROJECT ENGINEER.

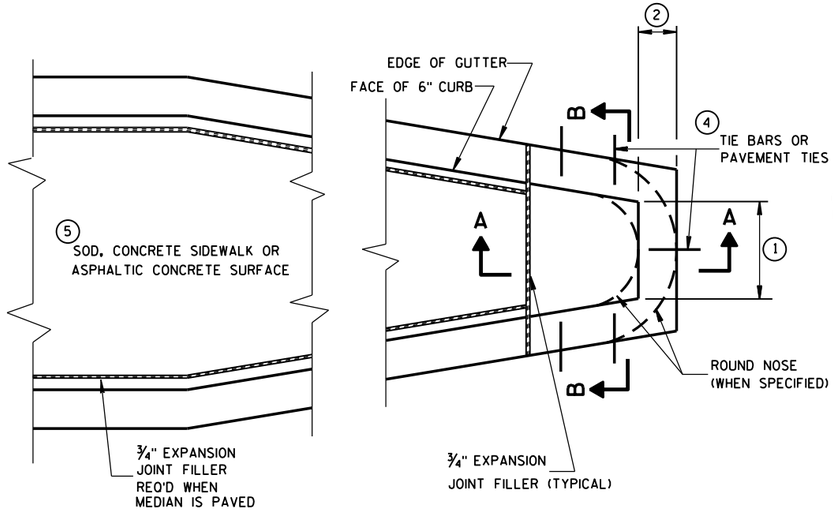


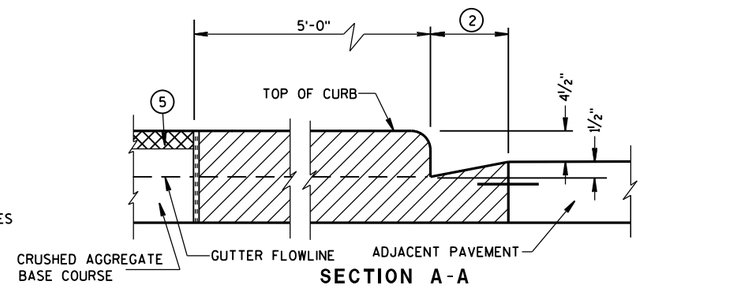
TYPICAL PLAN OF LOOP DETECTOR WITH 24" PULL (SPLICE) BOX

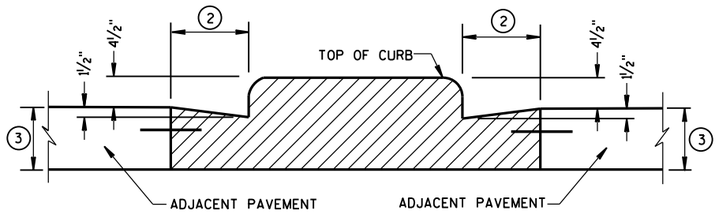


MULTI-LANE INSTALLATION

LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED Sept. 2014 — DATE /S/ Ahmet Demirbilek — STATE ELECTRICAL FHWA







CONCRETE MEDIAN BLUNT NOSE DETAIL

GENERAL NOTES

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

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

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

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

(1) NEW OR EXISTING CONCRETE PAVEMENT.

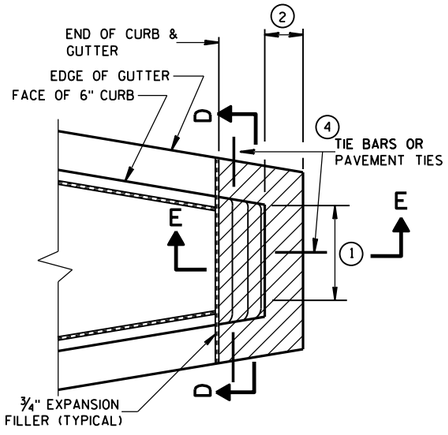
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

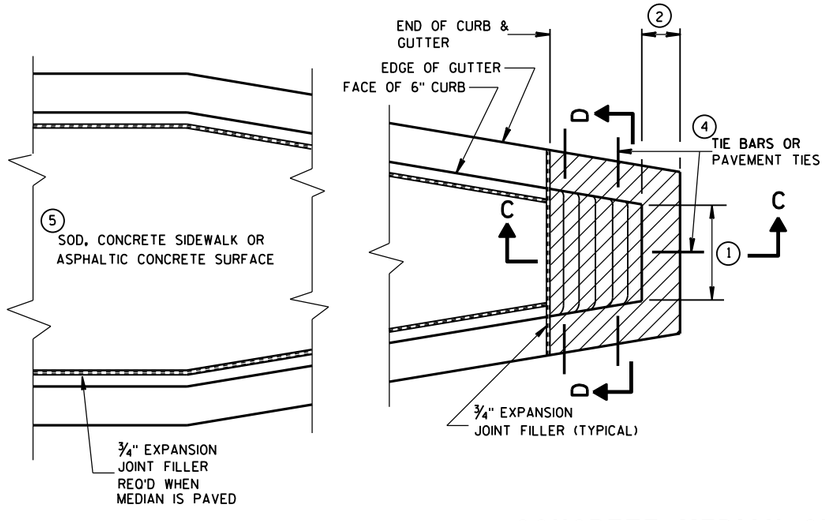
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

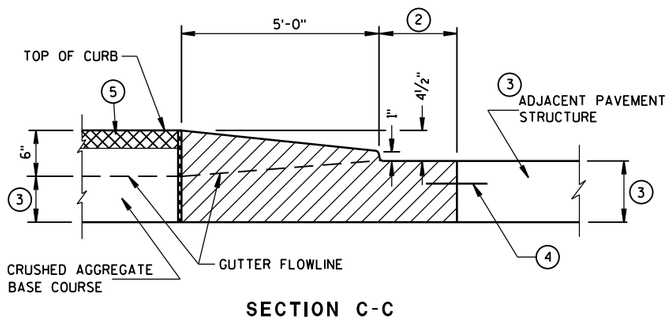
(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

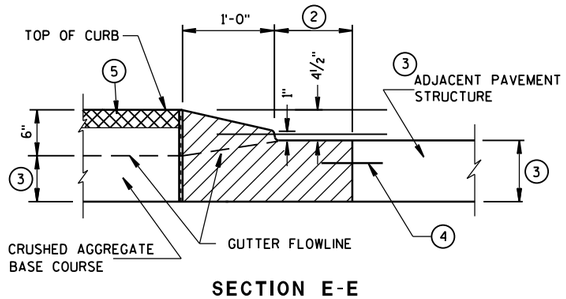
PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

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



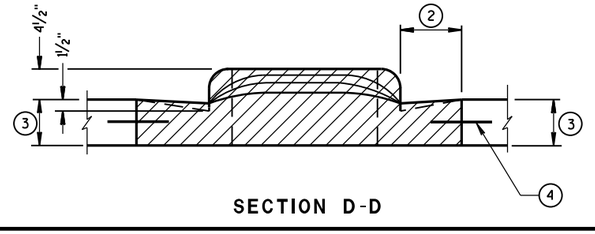






CONCRETE MEDIAN SLOPED NOSE TYPE 2

CONCRETE MEDIAN SLOPED NOSE TYPE 1



CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/8/2006
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS D ENGINEER
FHWA

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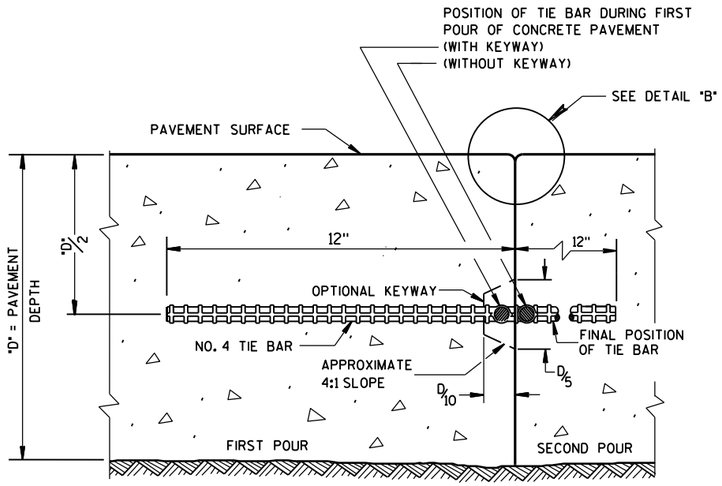
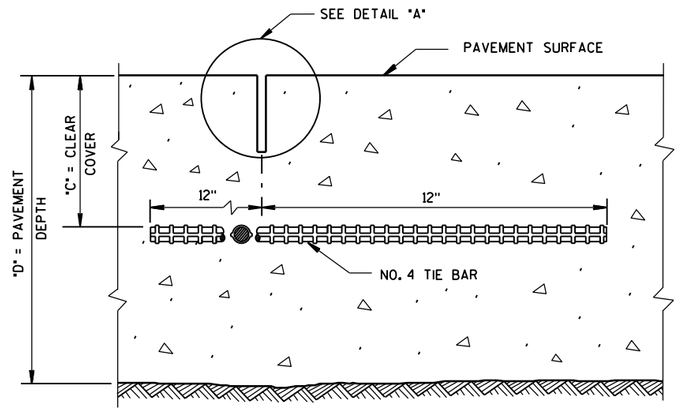
S.D.D. 11 B 2-2



CONSTRUCTION JOINT



SAWED JOINT

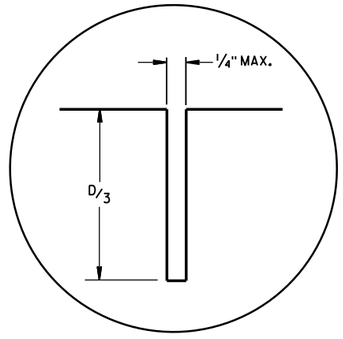
GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

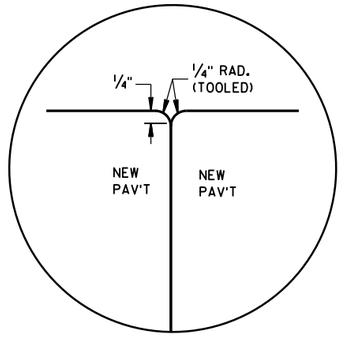
CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

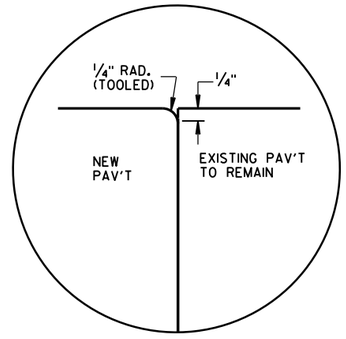
(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



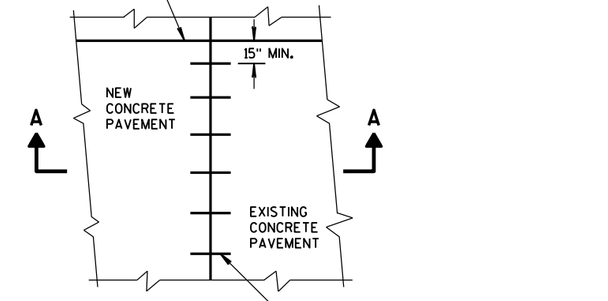
DETAIL "A"



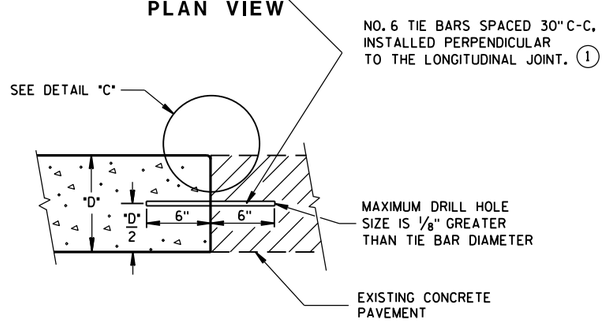
DETAIL "B"



DETAIL "C"



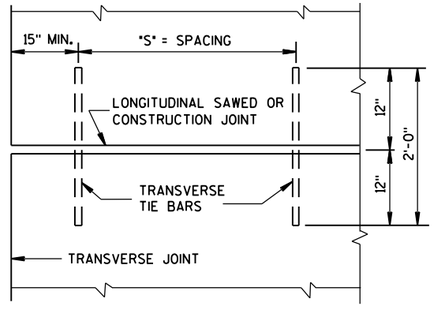
PLAN VIEW



SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT

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

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S.D.D. 13 C 1-17

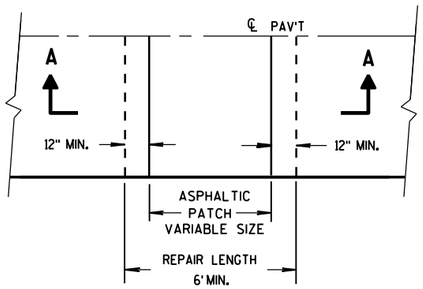
GENERAL NOTES

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.

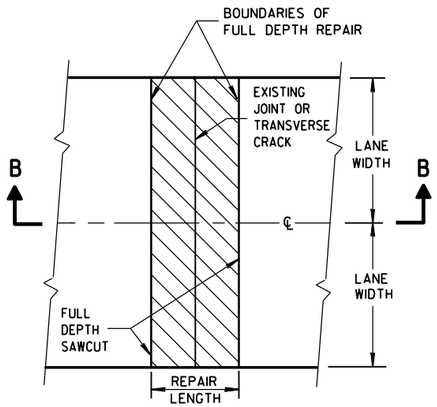
PROVIDE A 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK IN THE SAME LANE.

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.

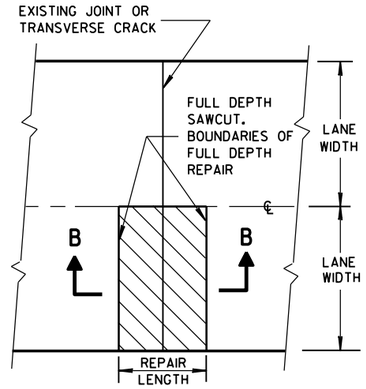
(1) DOWEL BARS MIGHT NOT EXIST.



PLAN VIEW



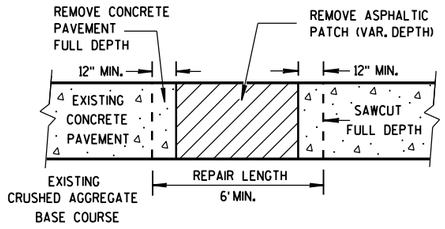
PLAN VIEW
(DOUBLE LANE REPAIR)



PLAN VIEW
(SINGLE LANE REPAIR)

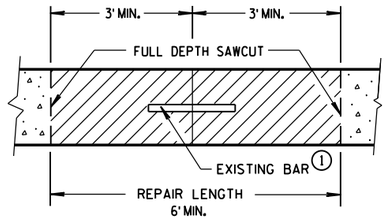
FULL DEPTH CONCRETE PAVEMENT REMOVAL

(SEE NOTE)



SECTION A-A

HMA PATCH REMOVAL



SECTION B-B

CONCRETE REMOVAL

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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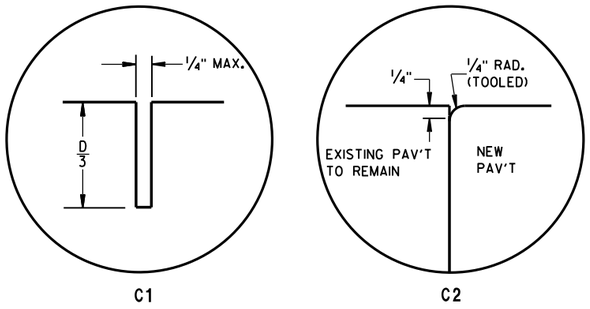
S.D.D. 13 C 9-11a

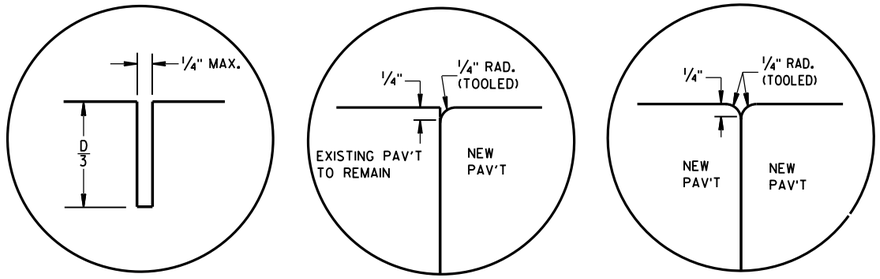


C1 C2

TRANSVERSE JOINTS

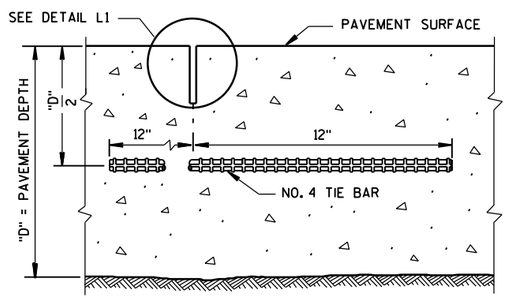
TIE BAR TABLE

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.

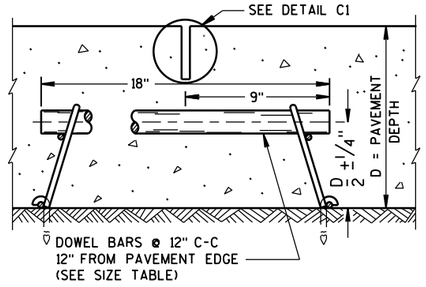
CONCRETE PAVEMENT REPAIRS OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

DO NOT SEAL OR FILL JOINTS.

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

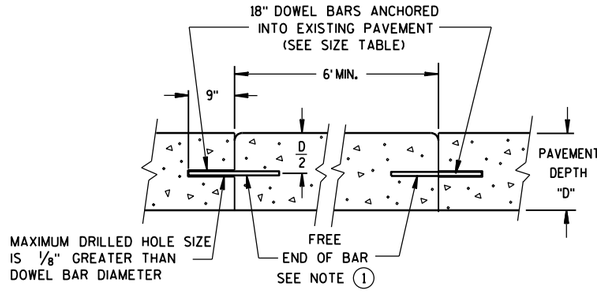
FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

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

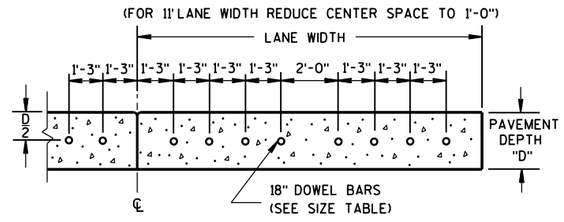


SECTION F-F

CONTRACTION JOINT



SECTION D-D

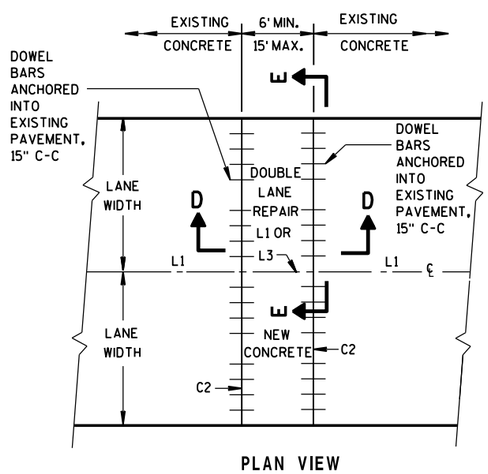


SECTION E-E

DRILLED DOWEL BAR CONSTRUCTION JOINT

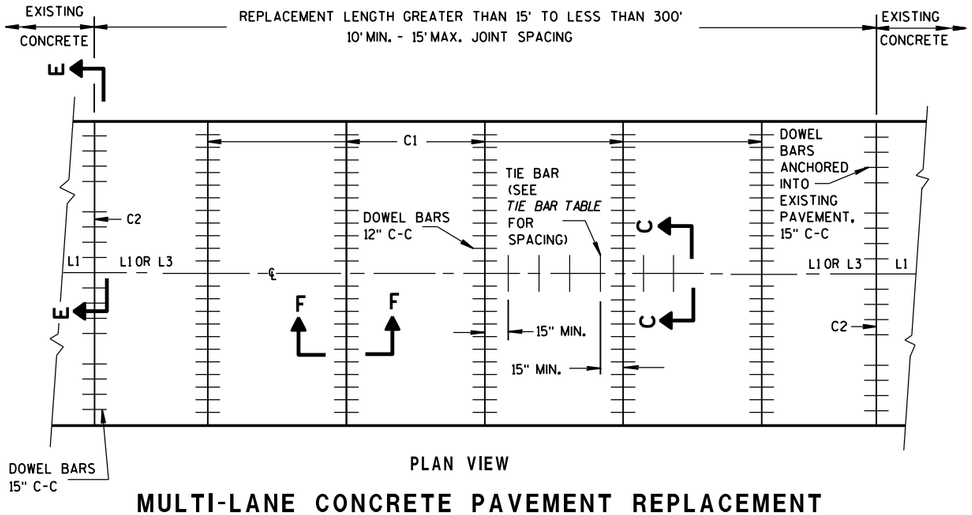
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

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

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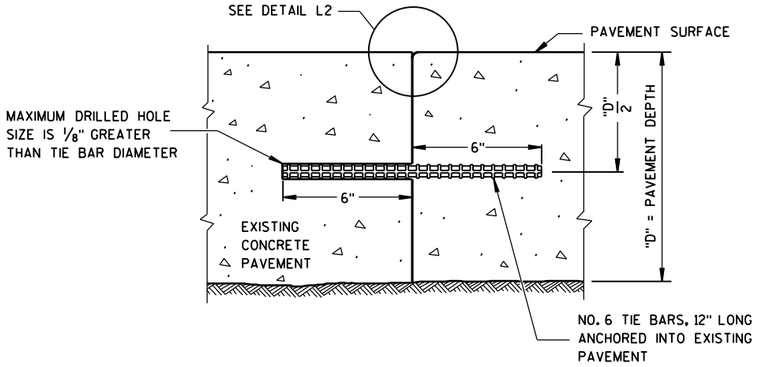
S.D.D. 13 C 9-11b



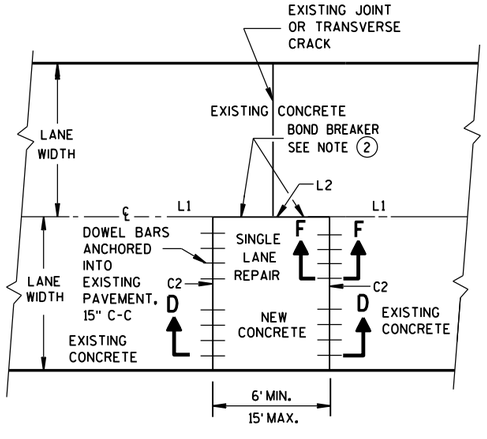
SECTION G-G

TIE BARS ANCHORED INTO EXISTING PAVEMENT

GENERAL NOTES

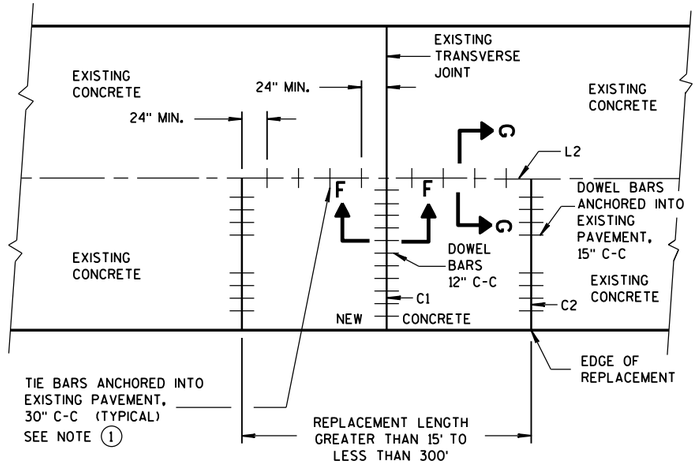
(1) WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES AND TO SUCH A DIAMETER AS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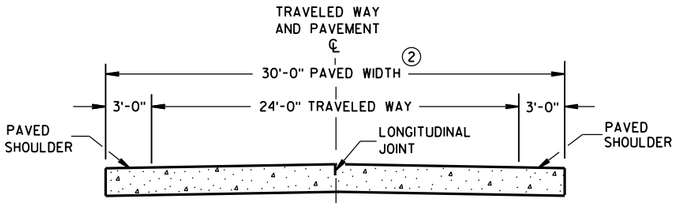
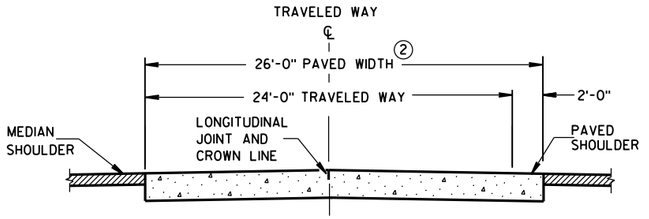
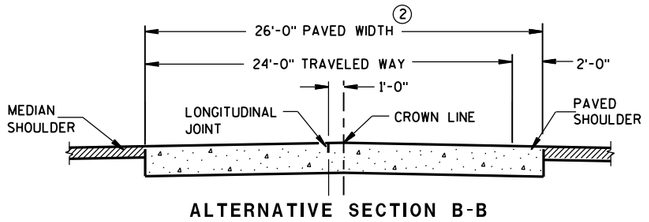


SECTION A-A ①

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

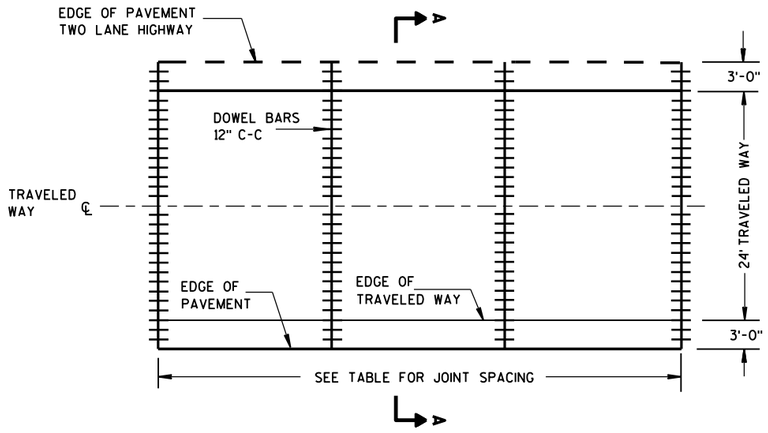
LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

① REFER TO TYPICAL CROSS SECTIONS FOR ADDITIONAL DETAILS.

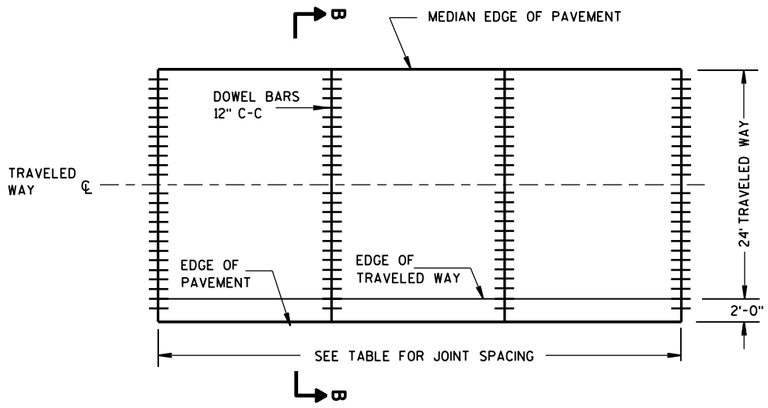
② MEASURE THE ENTIRE PAVED WIDTH INCLUDING THE PORTION(S) LABELED PAVED SHOULDER AS CONCRETE PAVEMENT.

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

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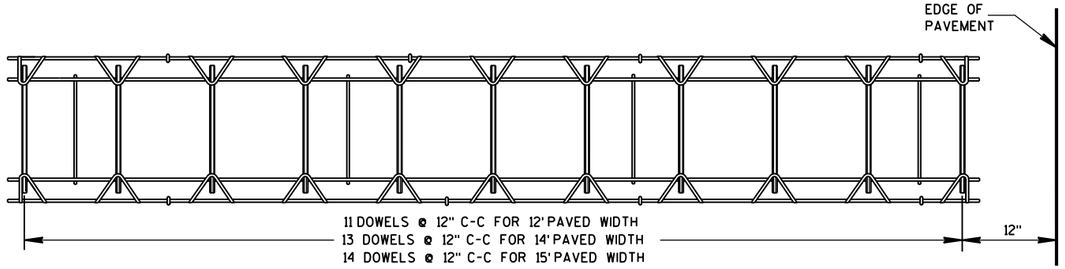
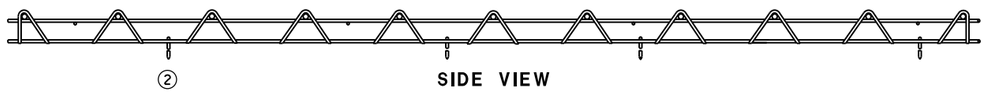
S.D.D. 13 C 11-11a



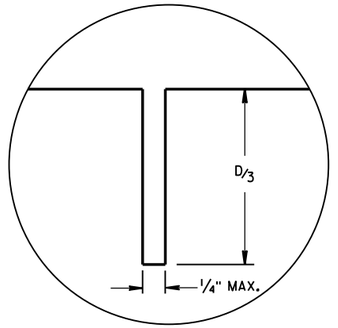
PLAN VIEW



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.

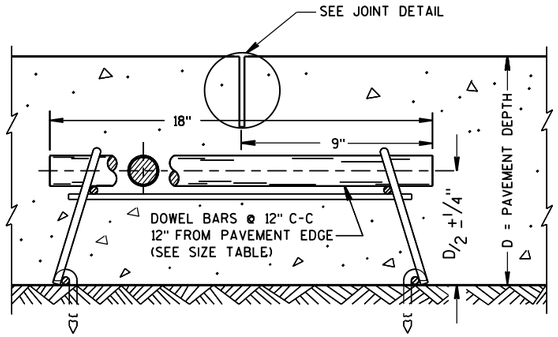
③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A 1/4-INCH RADIUS AT FORMED JOINTS.

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

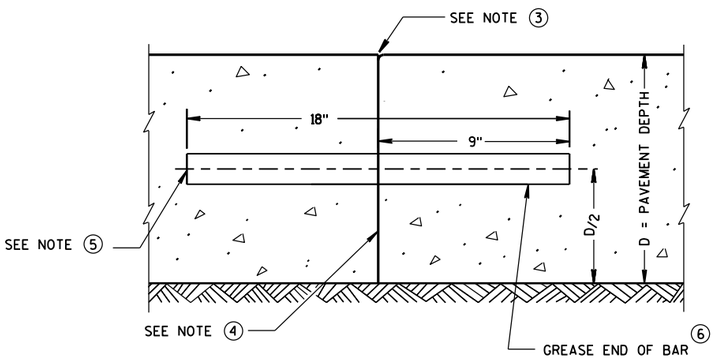
⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL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

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

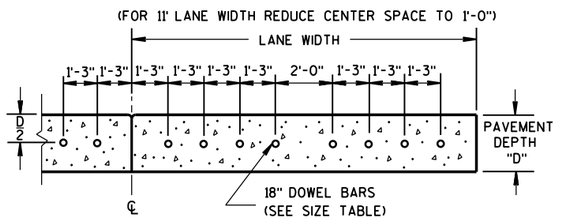
⑦ ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS 1/8-INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



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

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

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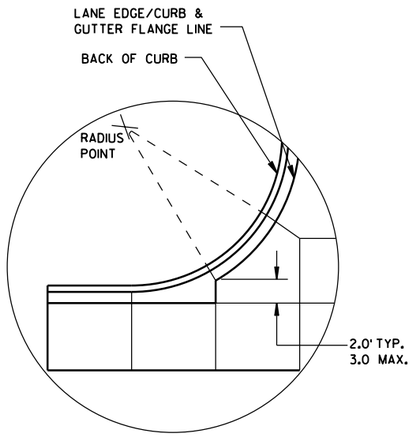
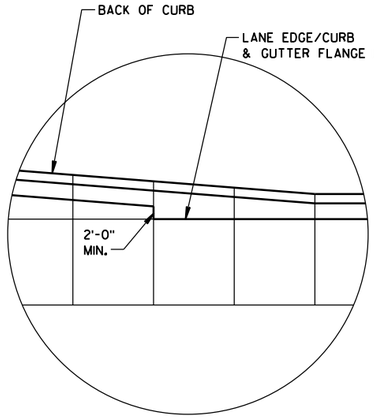
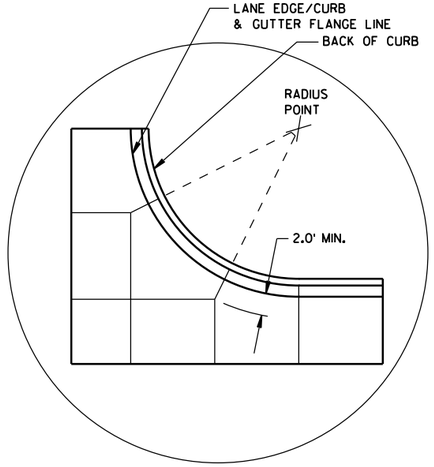
S.D.D. 13 C 11-11b



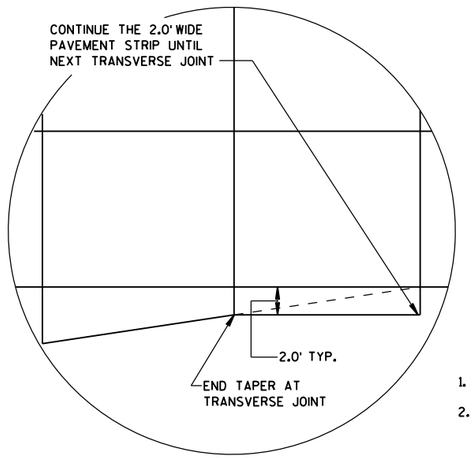
DETAIL "A"



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.

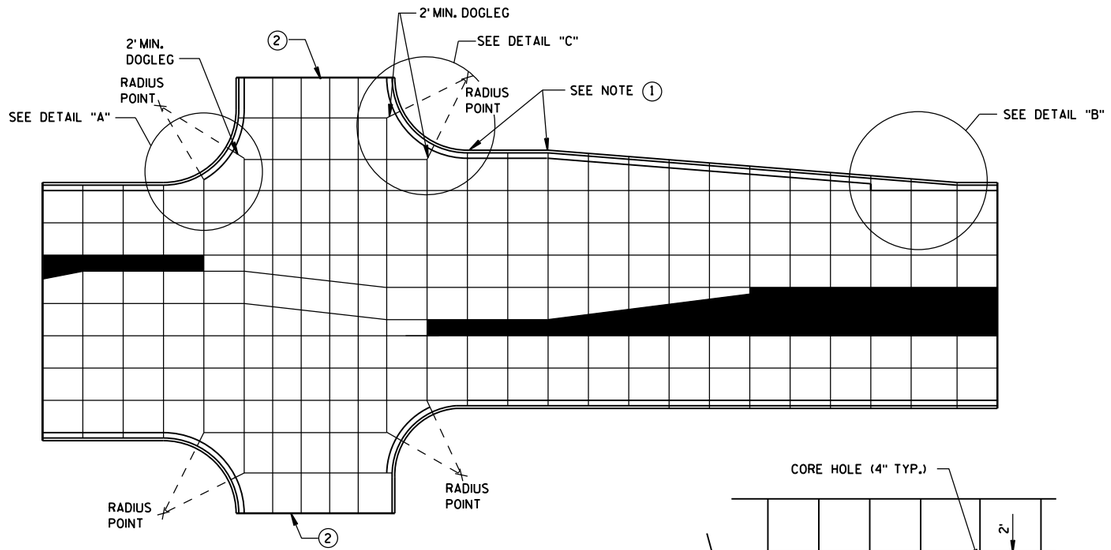
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

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.

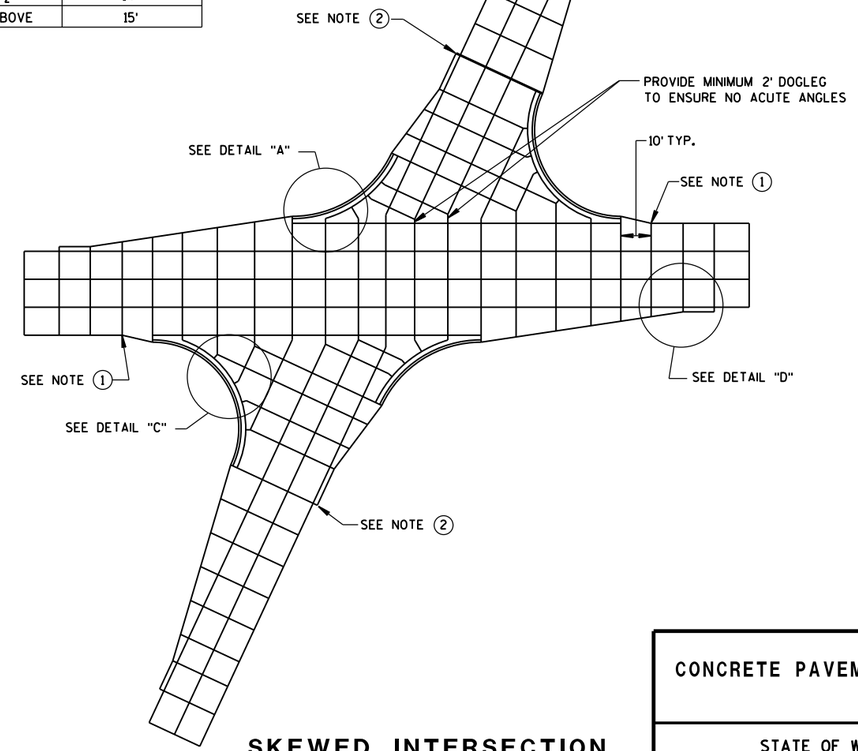
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM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



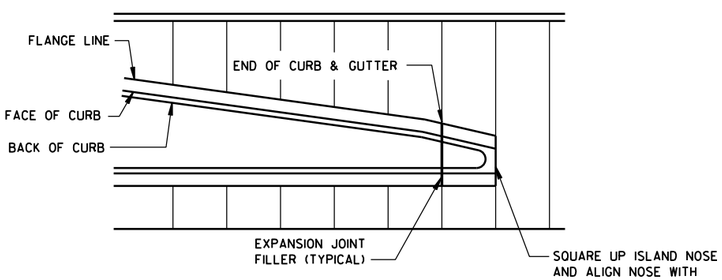
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

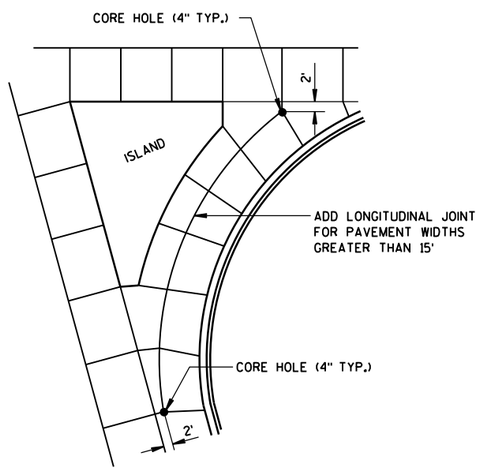
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6½"	12'
7", 7½"	14'
8" & ABOVE	15'



SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 198

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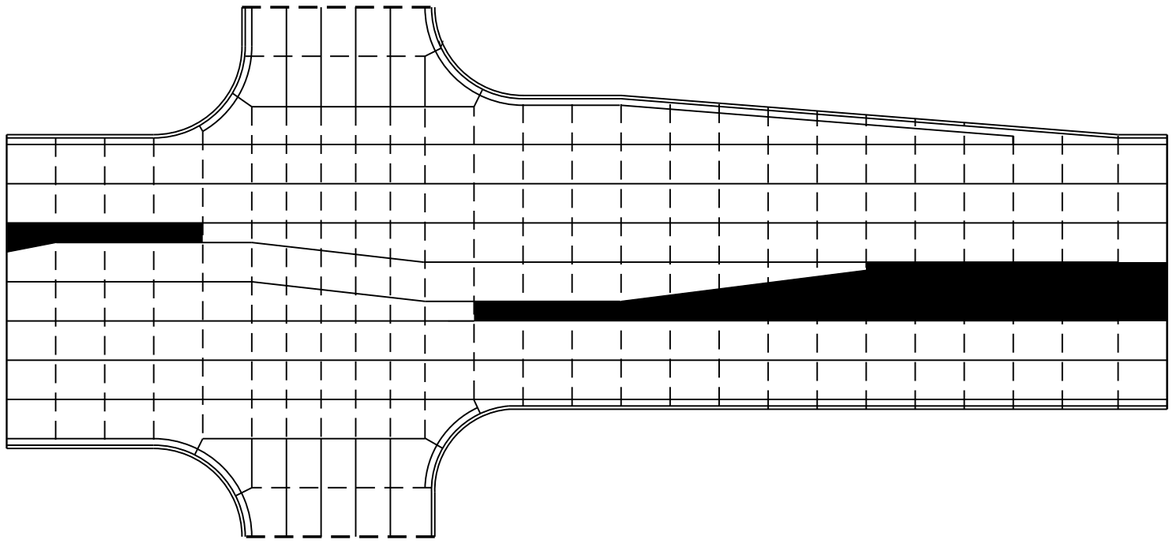
LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

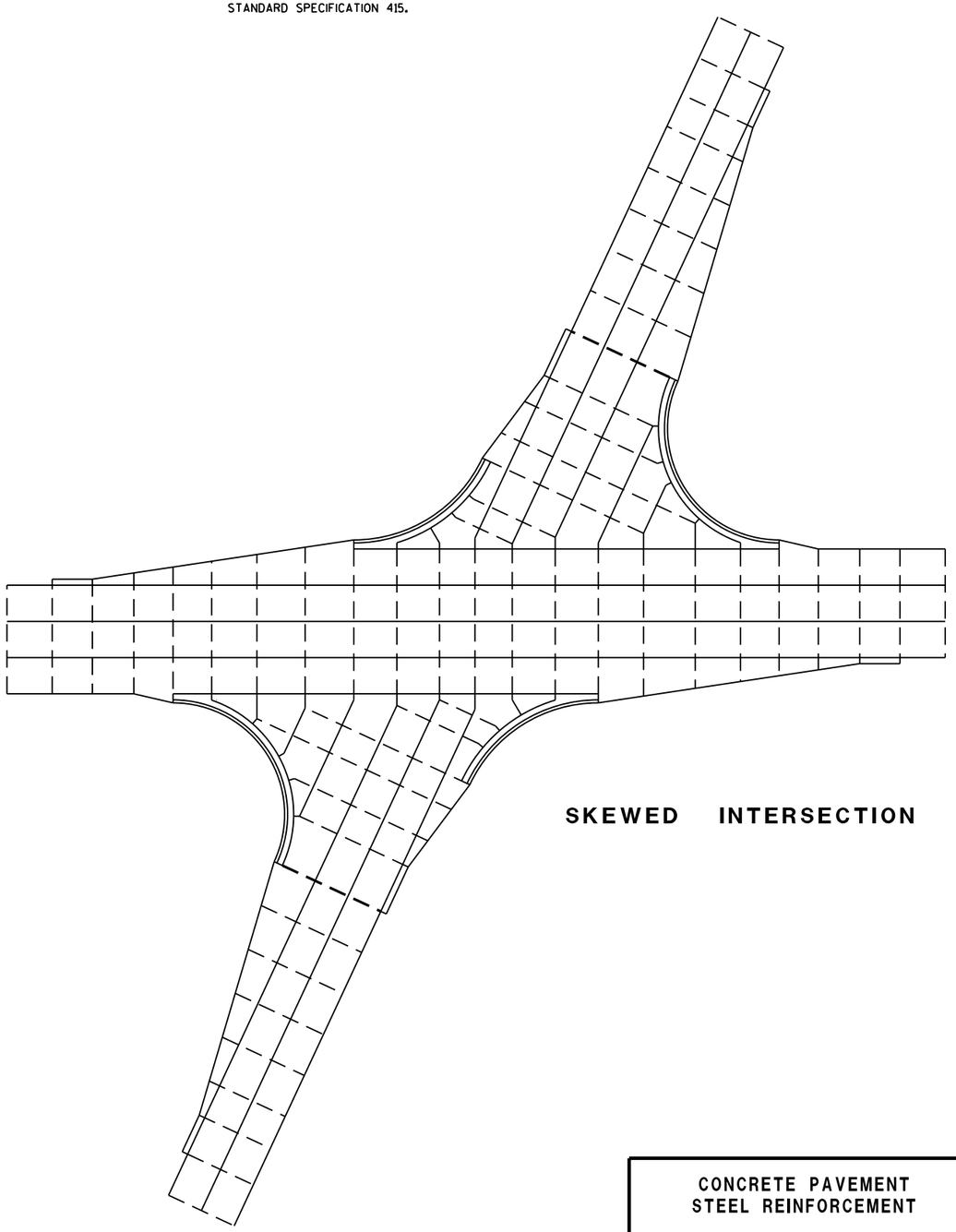
TIED JOINT



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

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

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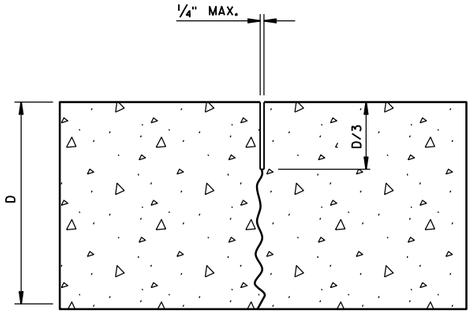
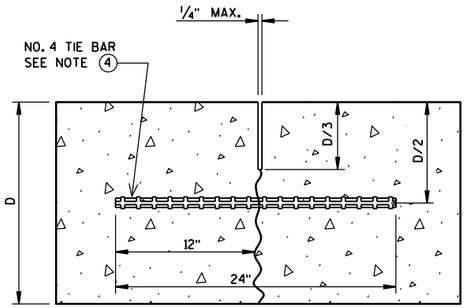
S.D.D. 13 C 18-2b



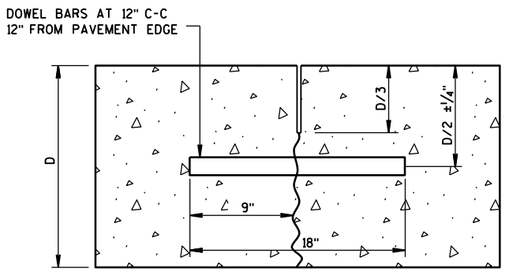
UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

GENERAL NOTES

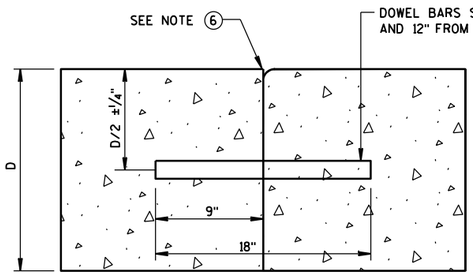
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 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.



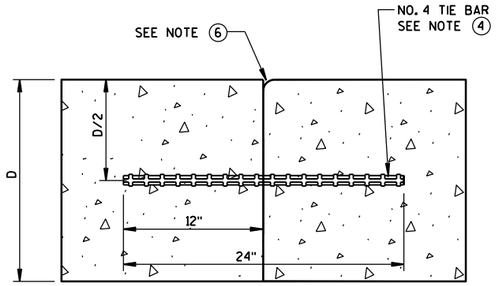
DOWELED-TRANSVERSE

CONTRACTION JOINTS

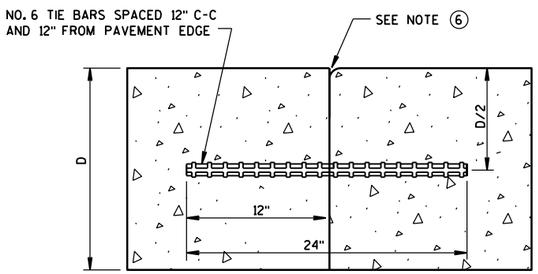
SEE NOTE (2)



DOWELED TRANSVERSE

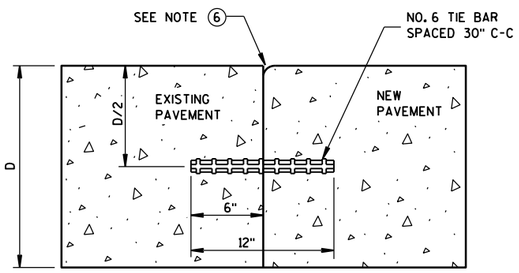


TIED LONGITUDINAL



TIED TRANSVERSE

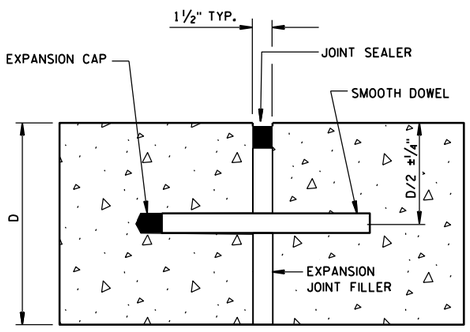
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



TIED LONGITUDINAL TO EXISTING

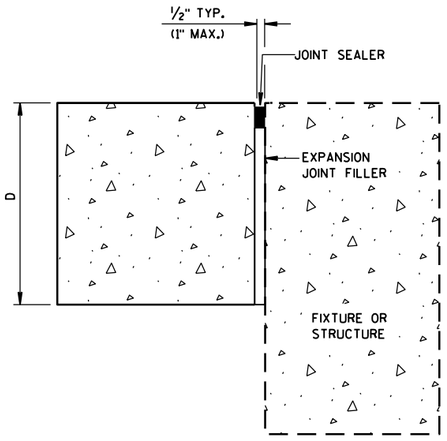
CONSTRUCTION JOINTS

SEE NOTE (5)



DOWELED-TRANSVERSE

SEE NOTE (1)



UNTIED-LONGITUDINAL

EXPANSION JOINTS

CONCRETE PAVEMENT
JOINT TYPES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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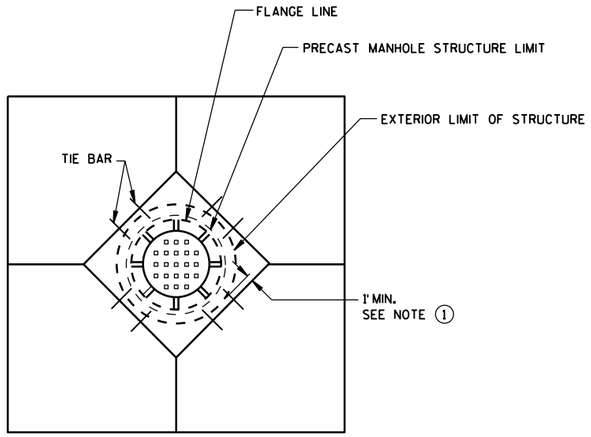
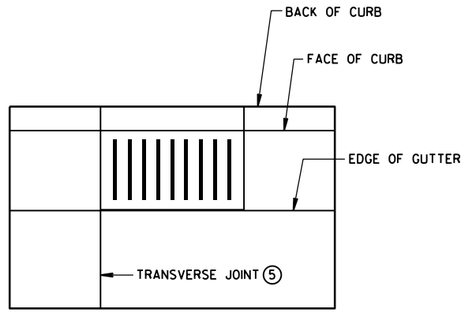
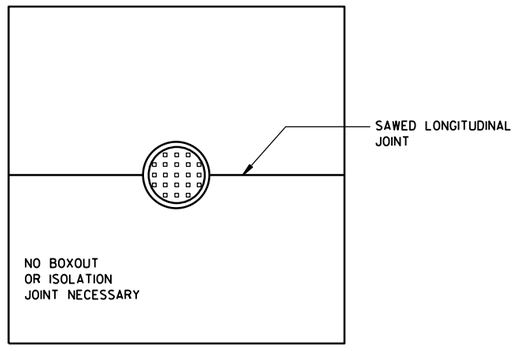
S.D.D. 13 C 18-2c



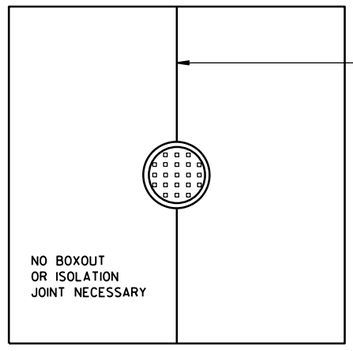
DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS



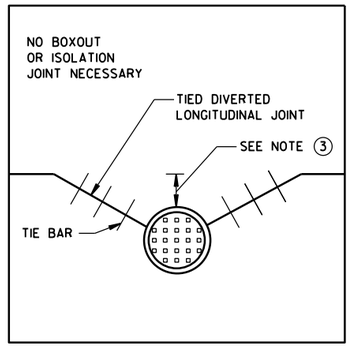
INLET WITH TRANSVERSE JOINT



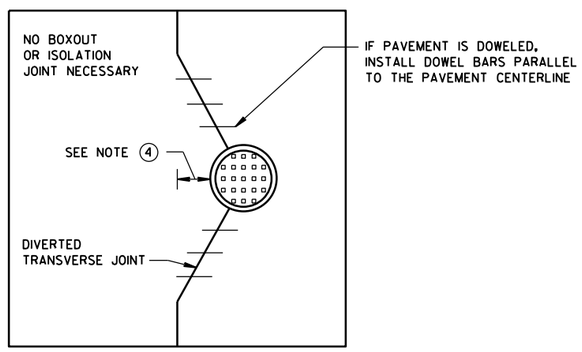
MANHOLE WITH LONGITUDINAL JOINT



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 — DATE

/S/ Deb Bischoff — PAVEMENT POLICY & DE

NEER

FHWA

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

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.

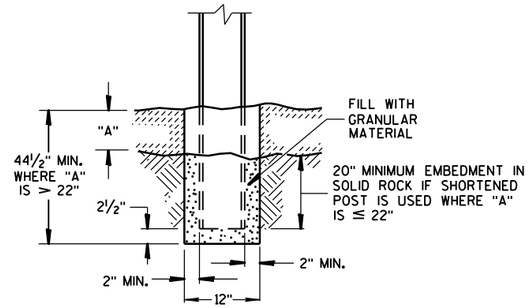
(5) IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).

(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.

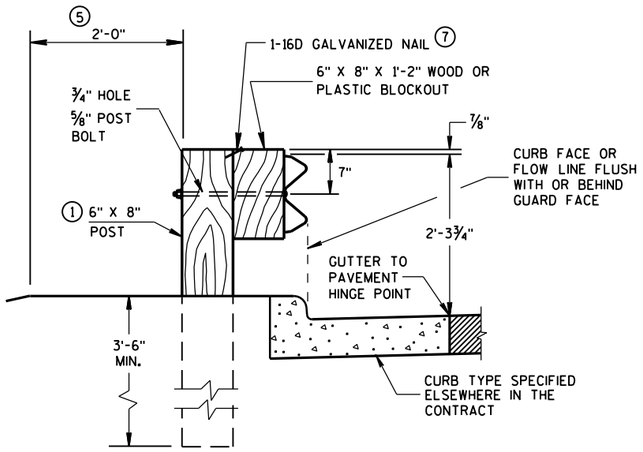
(7) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

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

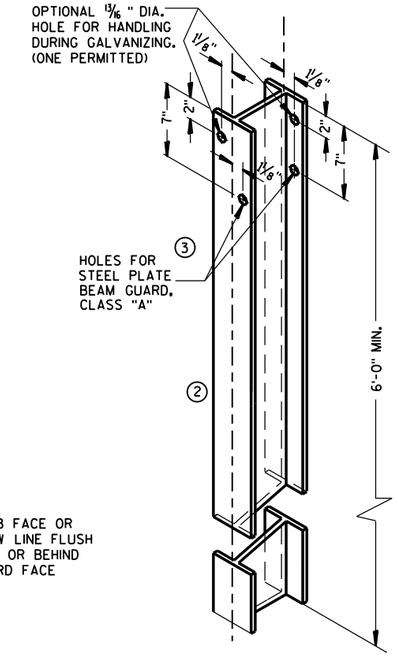
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



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

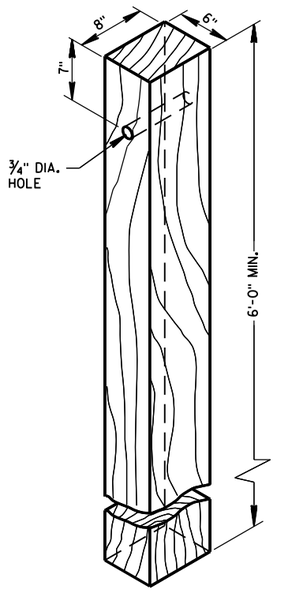


END VIEW
LOCATED ALONG A CURBED ROADWAY

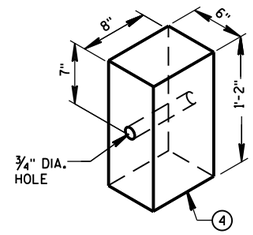


STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) (1)

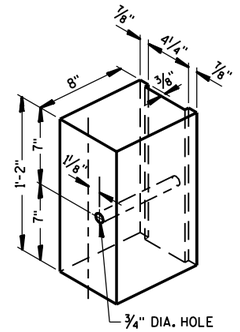
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



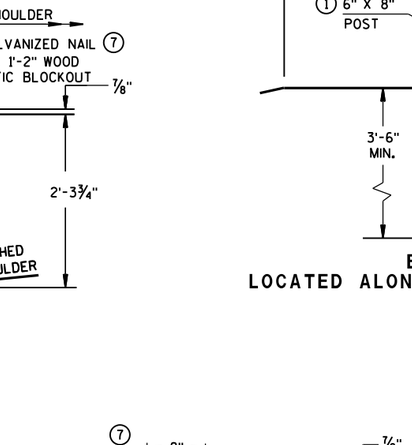
WOOD POST
(6"X8") NOMINAL



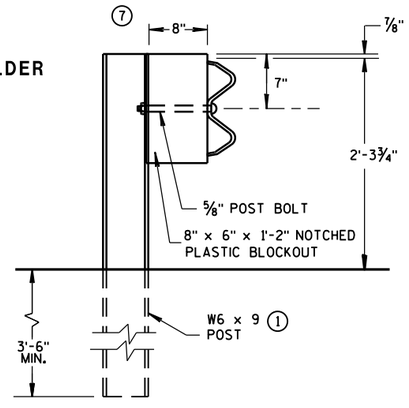
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



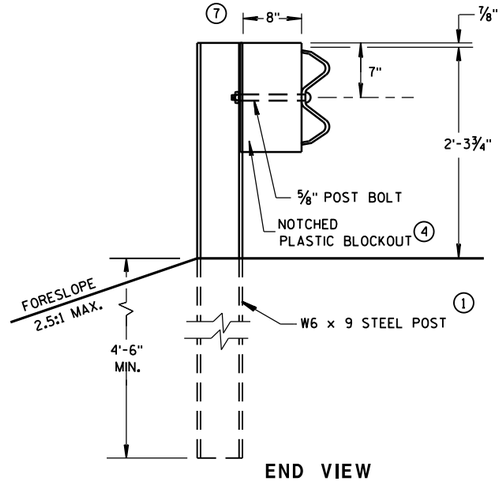
TYPICAL NOTCHED (1)
PLASTIC BLOCKOUT
FOR STEEL POSTS



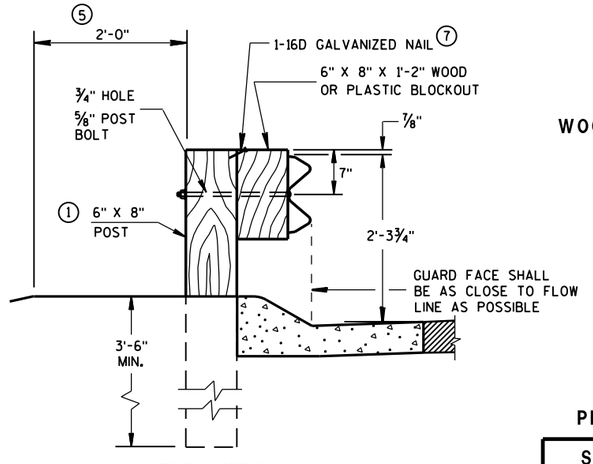
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



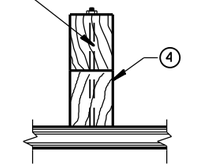
END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION



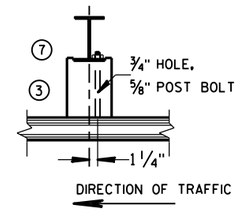
END VIEW
LONGER POST AT HALF
POST SPACING W BEAM
(LHW)



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 TRANSPOI 202

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

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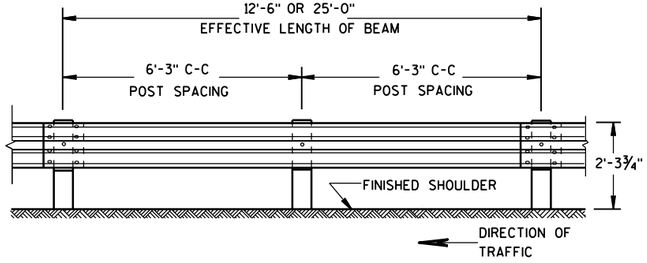
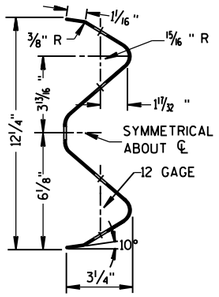
S.D.D. 14 B 15-8a

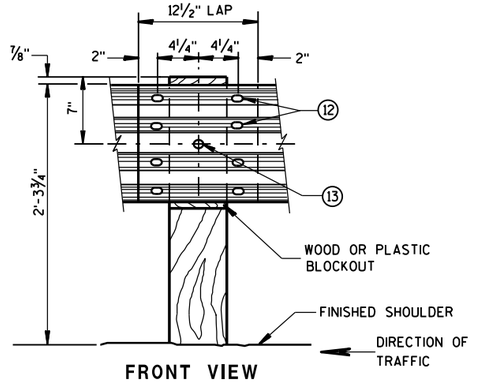


FRONT VIEW

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.

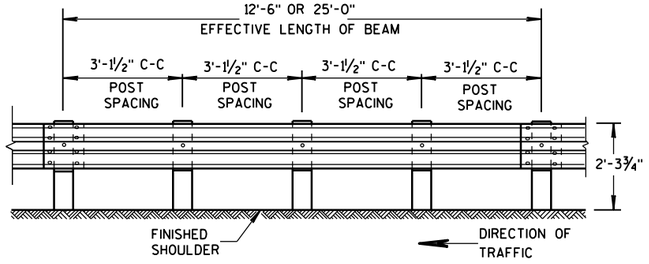
(9) DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

(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.

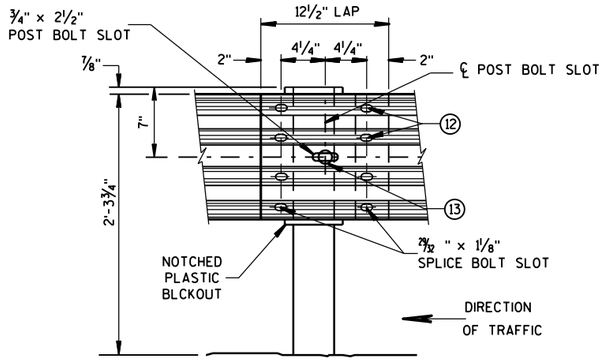
(12) 8 -⅝" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.

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



FRONT VIEW

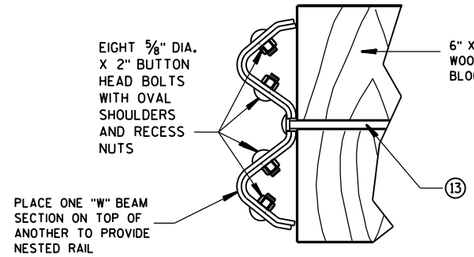
POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)



FRONT VIEW

BEAM SPLICE AT STEEL POST

TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD

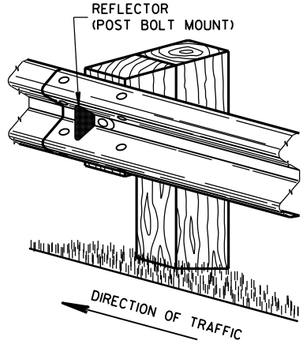


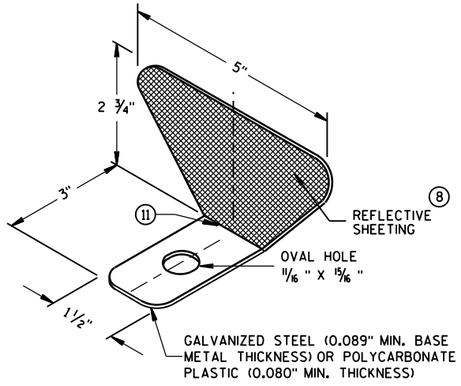
NESTED W BEAM (NW)

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

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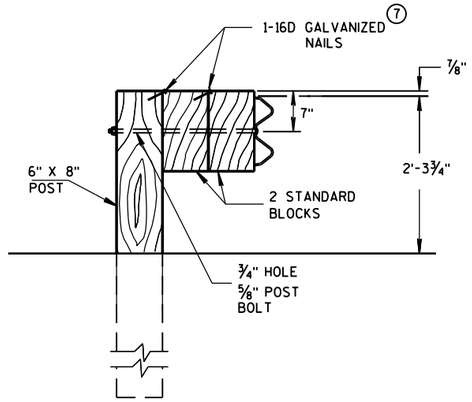
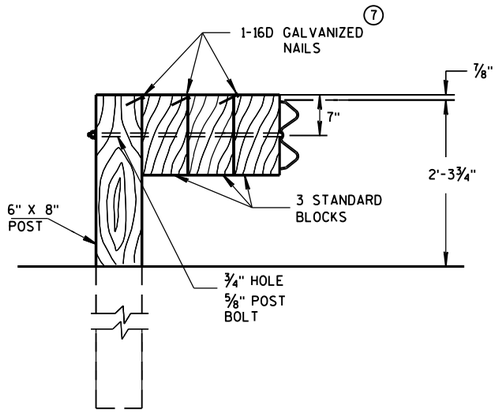
S.D.D. 14 B 15-8b



DETAIL FOR DOUBLE BLOCKS

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

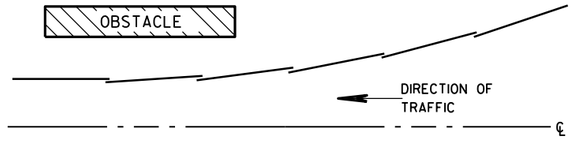


DETAIL FOR TRIPLE BLOCKS

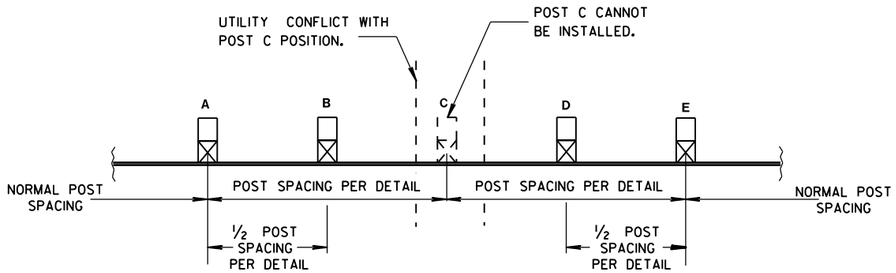
TRIPLE BLOCK DETAIL IS LIMITED TO ONE LOCATION WITHIN A BEAM GUARD RUN.

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

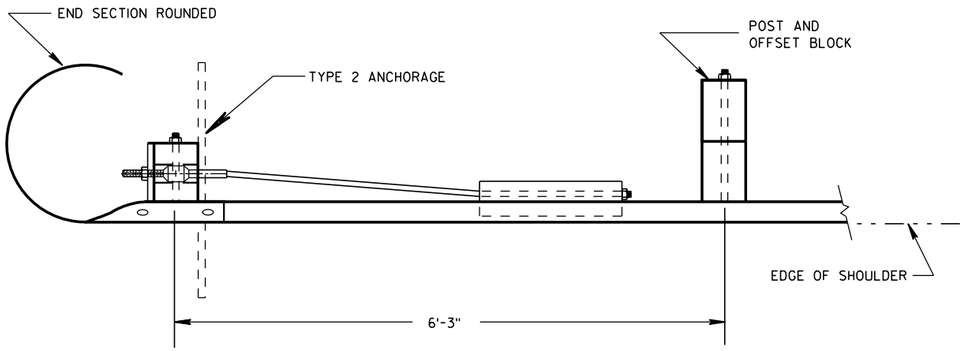
APPROVED
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

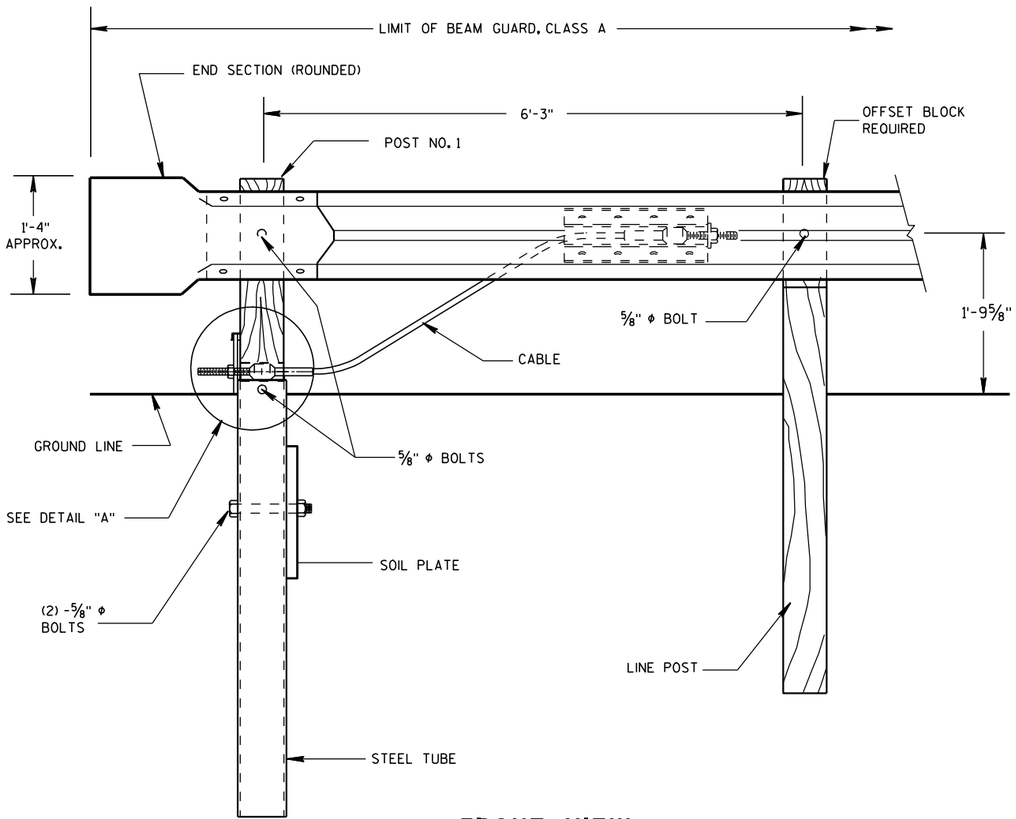
S.D.D. 14 B 15-8c

6

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



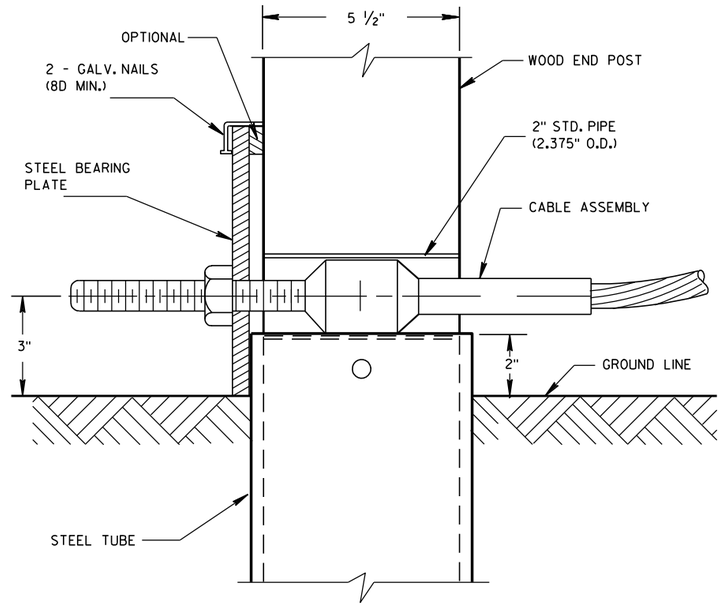
PLAN VIEW



FRONT VIEW

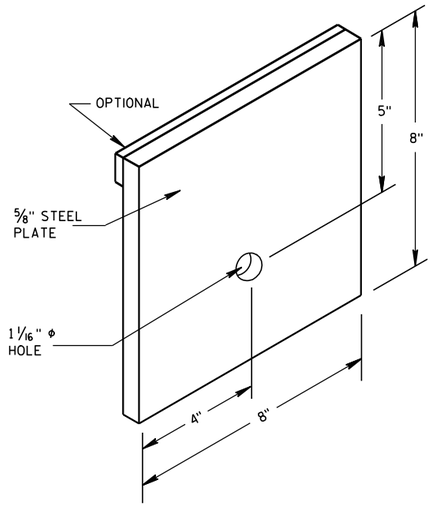
END TREATMENT WITH TYPE 2 ANCHORAGE

(USE ON ONE-WAY ROADWAYS ONLY - DEPARTING END)



DETAIL "A"

POST NO. 1

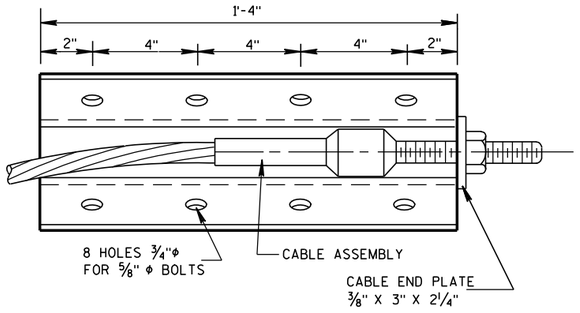


STEEL BEARING PLATE

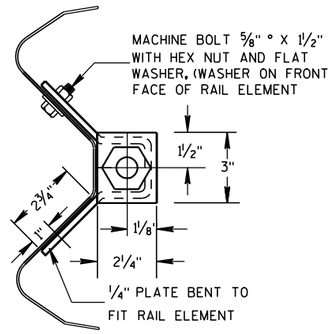
ANCHORAGE FOR STEEL PLATE BEAM GUARD TYPE 2

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 16-4a

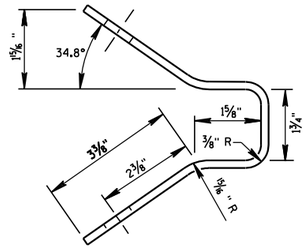


FRONT VIEW

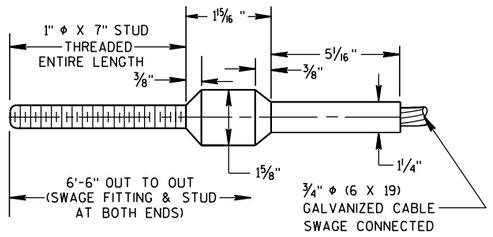


END VIEW

ANCHOR PLATE DETAIL



END VIEW OF BRACKET



CABLE ASSEMBLY

CABLE, SWAGE FITTING, STUD AND NUT SHALL DEVELOP
A MINIMUM BREAKING STRENGTH OF 40,000 LB
(TIGHTEN UNTIL TAUT)

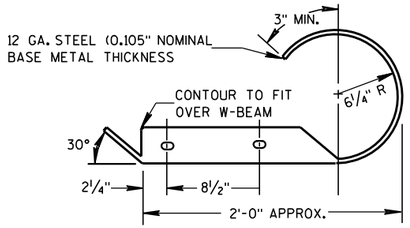
GENERAL NOTES

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

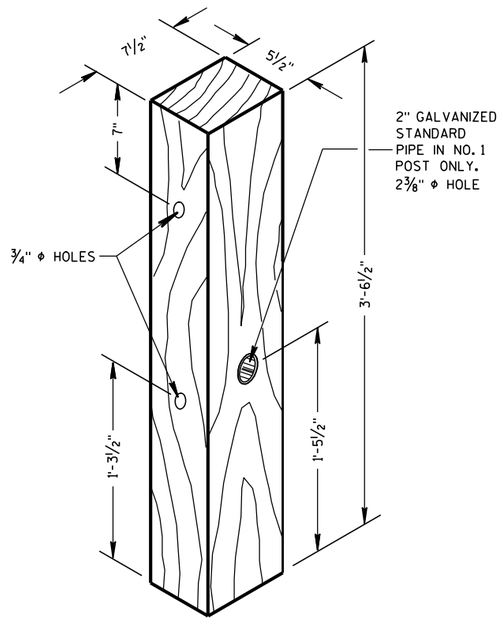
STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-500 GRADE B OR ASTM A-501.

POST NO. 1 SHALL BE WOOD BREAKAWAY POST INSERTED AND BOLTED INTO STEEL TUBE.

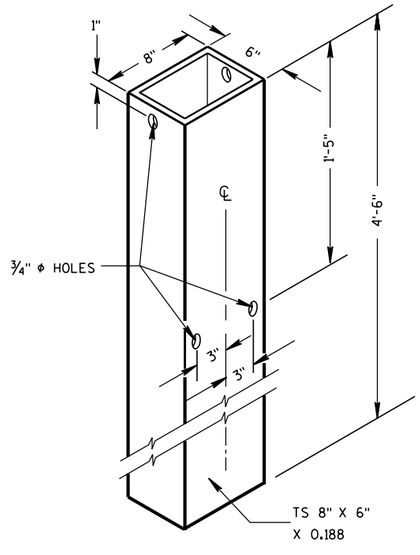
TYPE 2 ANCHORAGE SHALL CONSIST OF A STEEL TUBE, SOIL PLATE WOOD BREAKAWAY POST, BEARING PLATE, ANCHOR PLATE, CABLE ASSEMBLY AND ALL ASSOCIATED HARDWARE, ALL STEEL PARTS SHALL BE GALVANIZED.



PLAN VIEW

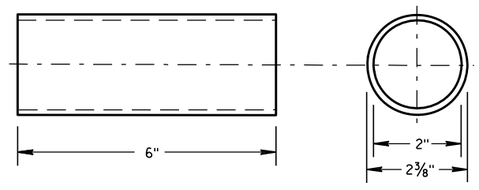


WOOD BREAKAWAY POST



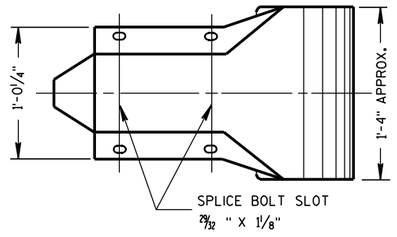
STEEL TUBE

STEEL TUBE SHALL CONFORM TO
REQUIREMENTS OF ASTM A500

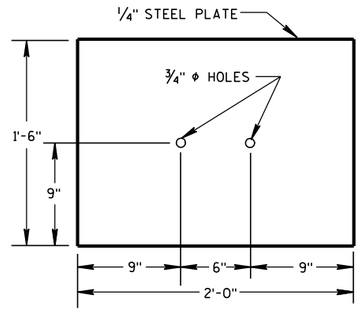


BREAKAWAY TERMINAL POST SLEEVE

GALVANIZED STANDARD STRENGTH STEEL PIPE, ASTM 53 GRADE "B"



FRONT VIEW
W BEAM END SECTION ROUNDED



SOIL PLATE

ANCHORAGE FOR STEEL
PLATE BEAM GUARD
TYPE 2

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

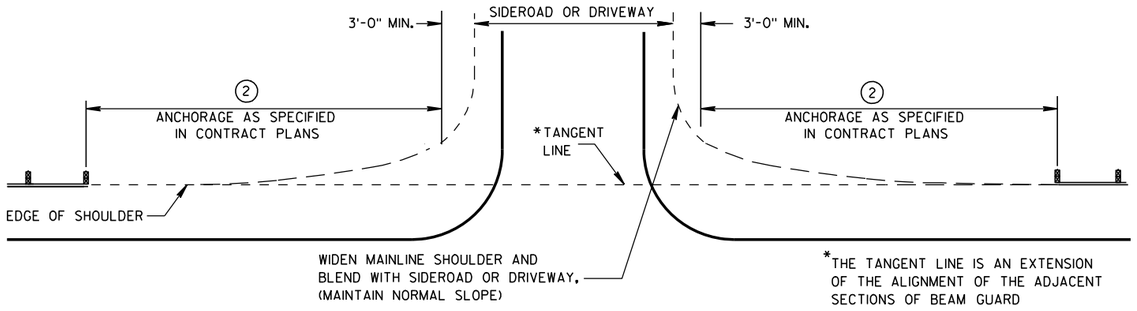
APPROVED
8/21/2007
DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
206
FHWA

6

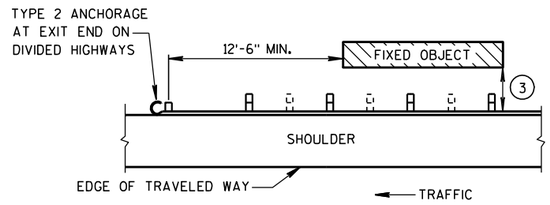
S.D.D. 14 B 16-4b

6

S.D.D. 14 B 16-4b



BEAM GUARD AT SIDEROADS OR DRIVEWAYS



BEAM GUARD AT OBSTACLES EXIT END - ONE WAY TRAFFIC

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE PERTINENT STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

W6 X 9 OR W6 X 8.5 STEEL POSTS WITH NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

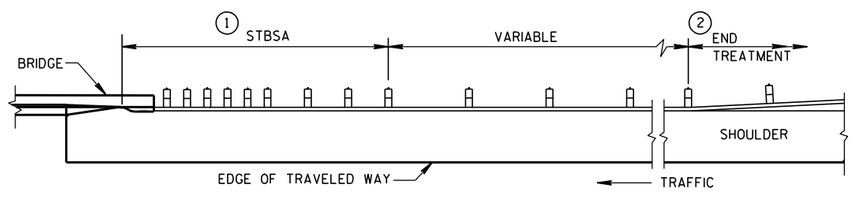
THE LOCATIONS AND LENGTHS OF BEAM GUARD ARE SHOWN ELSEWHERE IN THE PLAN.

(1) STEEL THRIE BEAM STRUCTURAL APPROACH (STBSA) - SEE CURRENT SDD 14B20.

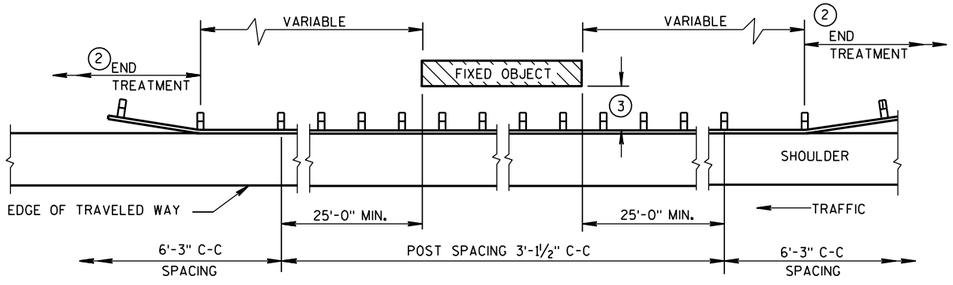
(2) USE AN APPROVED END TREATMENT FOR THE TRAFFIC APPROACH SIDE OF BRIDGE/OBSTACLES. USE TYPE 2 ANCHORAGE ONLY AT THE DOWNSTREAM ENDS OF BEAM GUARD LOCATED ALONG ROADWAYS WITH ONE WAY TRAFFIC.

(3)

MINIMUM LATERAL DISTANCE FROM FACE OF BEAM GUARD TO FIXED OBJECT	POST SPACING
3'-6"	3' - 1½"
4'-6"	6' - 3"

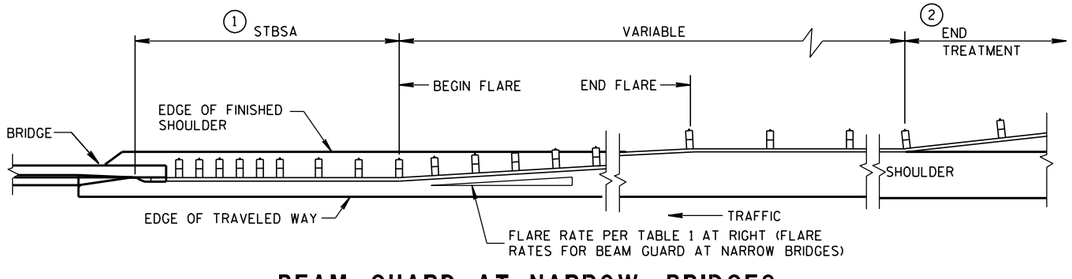


BEAM GUARD AT FULL WIDTH BRIDGES



BEAM GUARD AT OBSTACLES - TWO WAY TRAFFIC

(RAIL TO OBSTACLE CLEARANCE 3'-6" TO 4'-6")



BEAM GUARD AT NARROW BRIDGES
(FLARED TO SHOULDER EDGE, THEN PARALLEL TO ROADWAY)

TABLE 1
FLARE RATES FOR BEAM GUARD AT NARROW BRIDGES

POSTED SPEED (MPH)	FLARE RATE
25	13:1
30	15:1
35	16:1
40	18:1
45	21:1
50	24:1
55	26:1
65	30:1

STEEL PLATE BEAM GUARD CLASS "A" AT BRIDGES, OBSTACLES AND SIDEROADS/DRIVEWAYS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8-21-07 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 14 B 18-6a

BILL OF MATERIALS

NOTE NO.	QTY.	DESCRIPTION
(1)	4	WOOD BREAKAWAY TERMINAL POST: 5½" X 7½" X 3'-9"
(2)	**	STEEL TUBE: OPTION 1 - QUANITY OF 4 TS 8" X 6" X 0.188", 4'-6" LONG OR OPTION 2 - QUANITY OF 2 TS 8" X 6" X 0.188", 6'-0" AND 2 TS 8" X 6" X 0.188", 4'-6" LONG
(3)	2	SOIL PLATE: 2'-0" X 1'-6" X ¼" **
(4)	4	WOOD BREAKAWAY CRT POST: 6" X 8" X 6'-0"
(5)	6	WOOD OFFSET BLOCKS: 6' X 8" X 1'-2"
(6)	1	PIPE SLEEVE: 2" X 5 ½" STANDARD PIPE
(7)	1	BEARING PLATE
(8)	1	BCT CABLE ASSEMBLY
(9)	1	CABLE ANCHOR BOX
(10)	1	STRUT & YOKE
(11)	1	STEEL PLATE BEAM, END PANEL 12 GA. 13'-6½" LONG FOR SKT-350, ET-2000 AND ET-2000 PLUS
(12)	3	STEEL PLATE BEAM: 12 GA. 13'-6½"
(13)	1	ET-2000/ET-2000 PLUS GUARDRAIL EXTRUDER OR SKT-350 IMPACT HEAD: AS FURNISHED BY MANUFACTURER
(14)	1	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
(15)	1	E.A.T. MARKER POST

GENERAL NOTES

FOLLOW MANUFACTURE'S BOLTING RECOMMENDATIONS. IF NONE ARE AVAILABLE, INSTALL ⅝" ø X 1'-6" BUTTON HEAD BOLTS AT ALL POSTS EXCEPT FOR POST 1.

(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) THE 13 SLOT FIRST RAIL PANEL MAY BE USED IN LIEU OF THE 3 SLOT RAIL PANEL ON SKT-350 ONLY.

(D) THE TOP OF THE STEEL TUBE ON POSTS 1 THROUGH 4 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

(E) THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST 5 THROUGH 8 SHALL BE ¾" ABOVE THE FINISHED GROUND LINE.

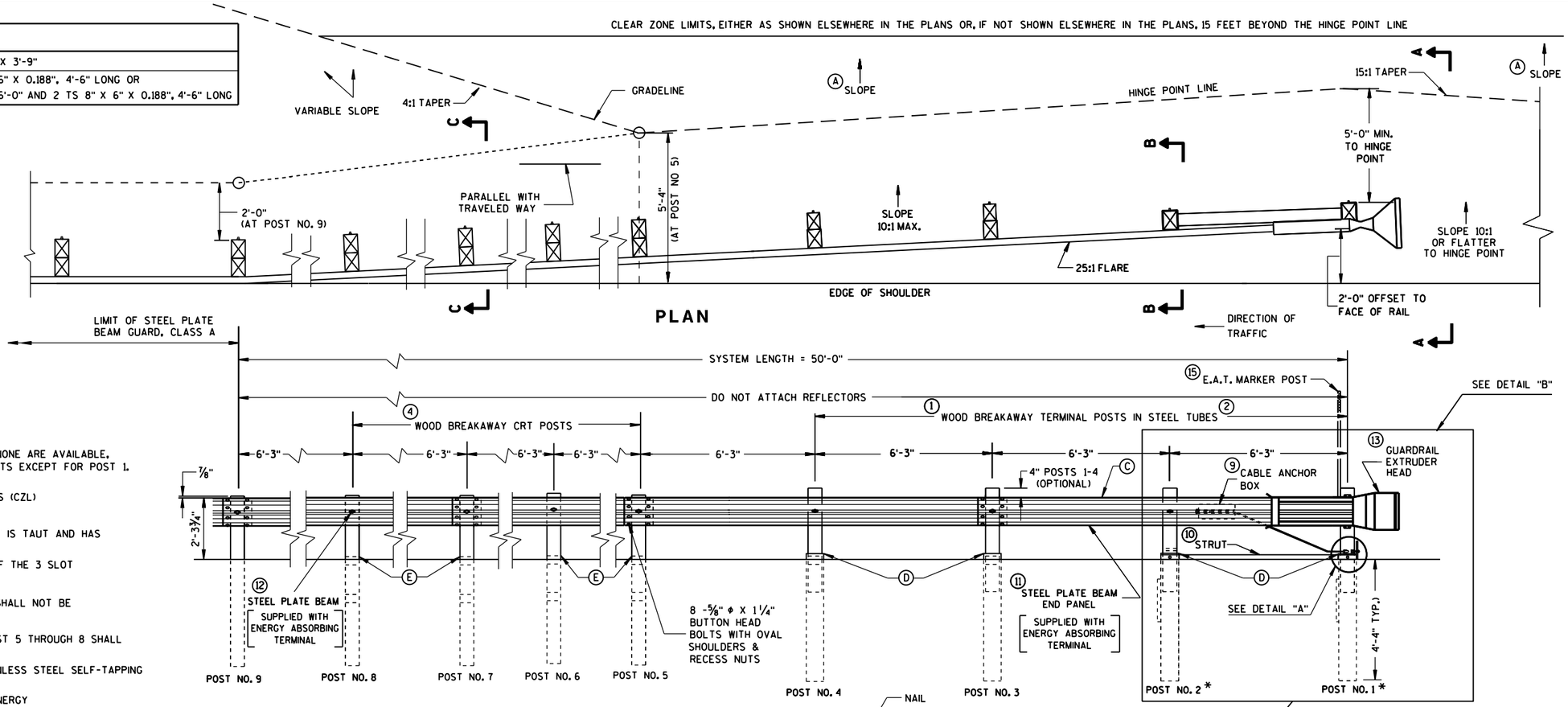
(F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

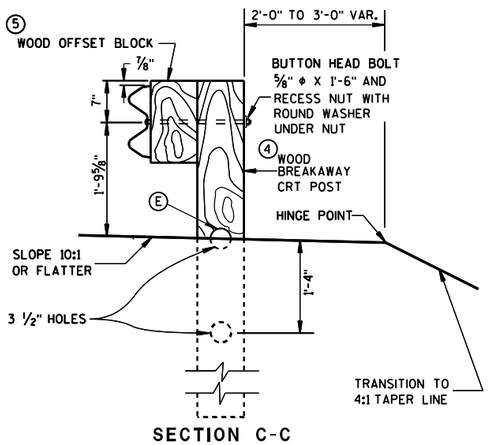
STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.

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

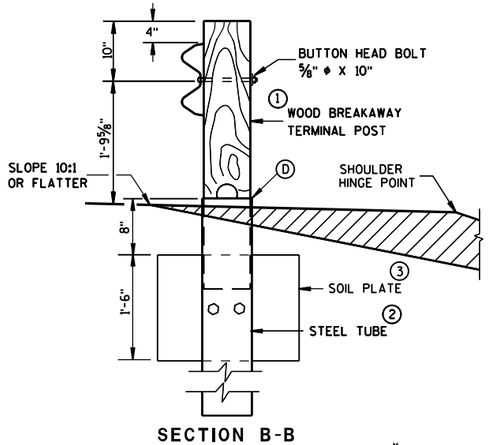
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

** SDD SHOWS 4 - 54 INCH STEEL TUBES WITH SOIL PLATES INSTALLED ON POST 1 AND POST 2. POST 3 AND 4 DO NOT NEED SOIL PLATES. AN ALTERNATIVE INSTALLATION WOULD CONSIST OF 2 - 72 INCH STEEL TUBES ON POST 1 AND POST 2 AND 54 INCH SOIL TUBES ON POSTS 3 AND 4. THE ALTERNATIVE INSTALLATION DOES NOT REQUIRE SOIL PLATES.

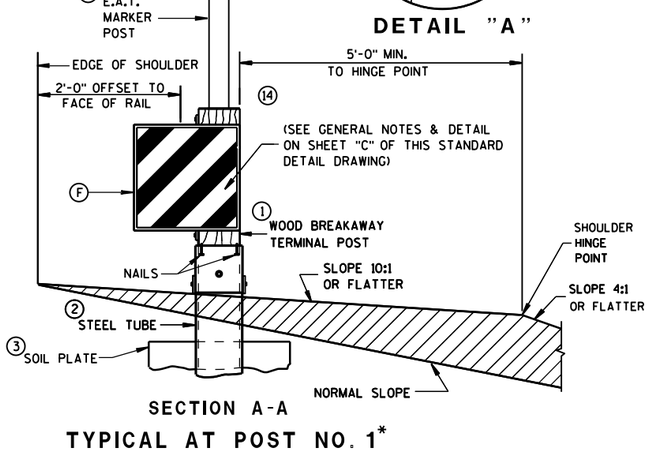




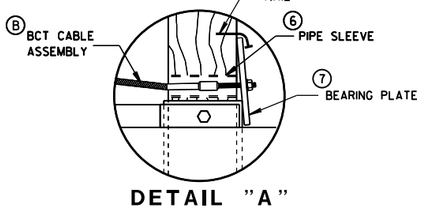
SECTION C-C
TYPICAL AT POST NOS. 6, 8



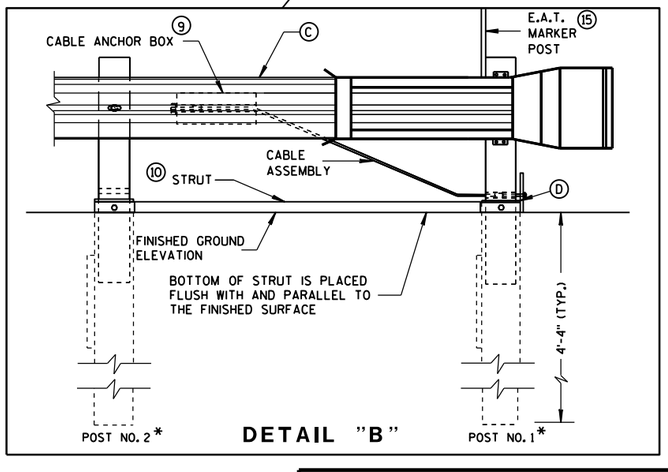
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



DETAIL "B"

STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO 208

S.D.D. 14 B 24-8a

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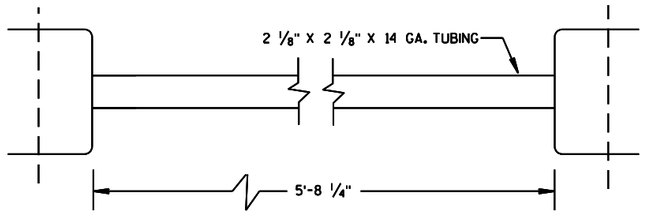
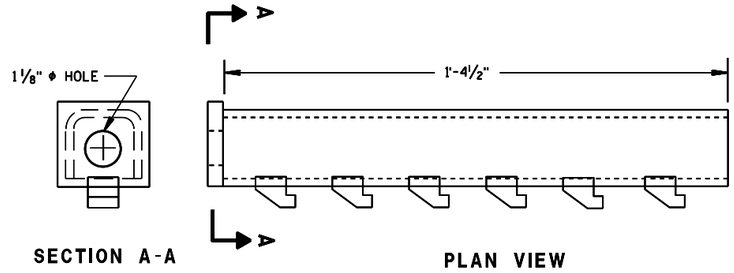
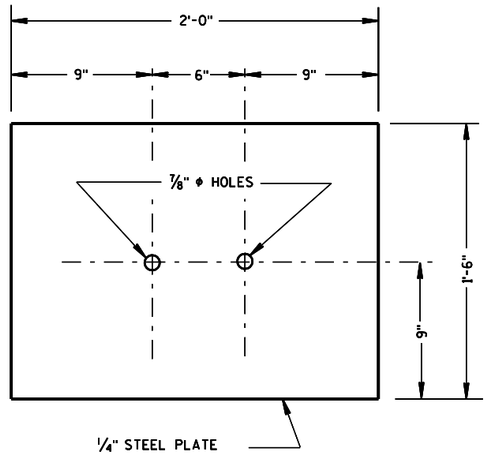


⑩ STRUT DETAIL (SKT-350)

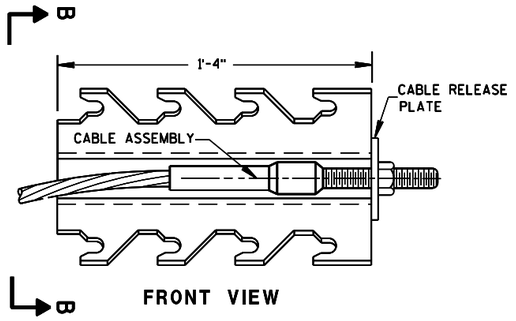


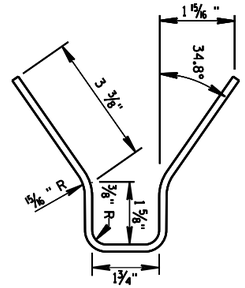
⑨ CABLE ANCHOR BOX (ET-2000/ET-2000 PLUS)



③ SOIL PLATE

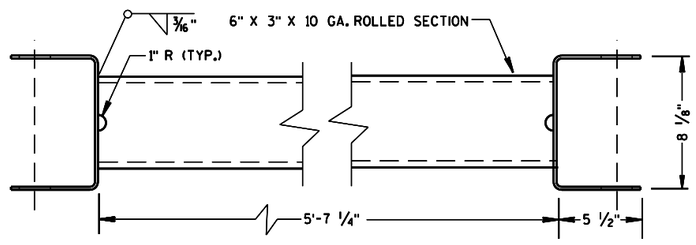
(SKT-350, ET-2000/ET-2000 PLUS)





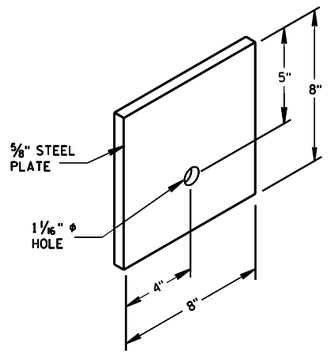
⑨ CABLE ANCHOR BOX (SKT-350)

(SKT-350)



⑩ STRUT DETAIL (ET-2000/ET-2000 PLUS)

(ET-2000/ET-2000 PLUS)



⑦ STEEL BEARING PLATE

(SKT-350, ET-2000/ET-2000 PLUS)

6

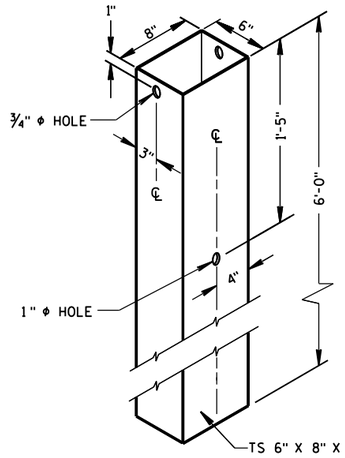
6

S.D.D. 14 B 24-8b

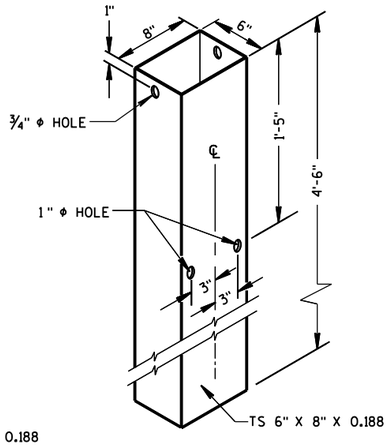
S.D.D. 14 B 24-8b

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

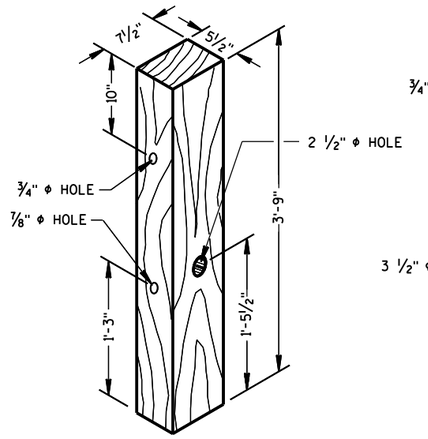
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI



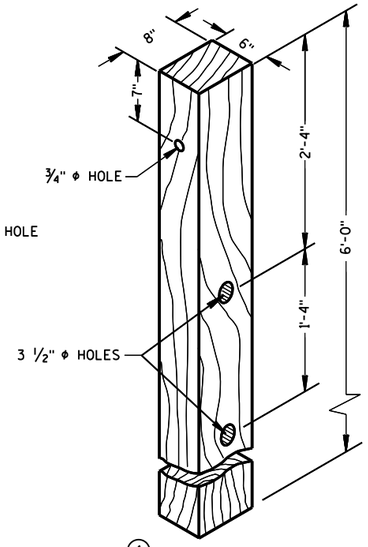
② 72" STEEL TUBE
(POSTS NO. 1-4



② 54" STEEL TUBE
(POSTS NO. 1-4



① TERMINAL POST
(POSTS NO. 1-4



④ CRT POST
(POSTS NO'S 5-8

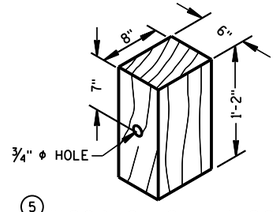
WOOD BREAKAWAY POSTS

GENERAL NOTES

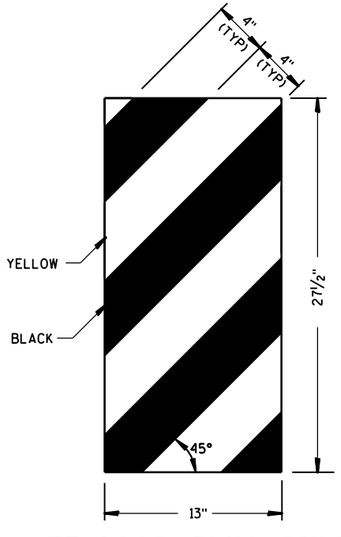
WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 ½" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH ADEQUATELY COMPACTED MATERIAL EXCAVATED FROM THE HOLE.

SEE APPROVED PRODUCTS LIST FOR ACCEPTABLE E. A. T. MARKER POST.

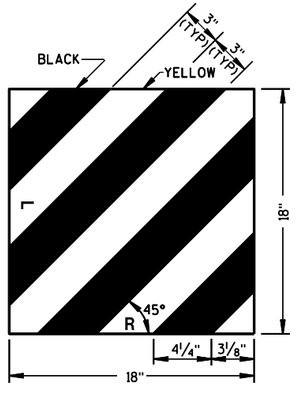
(G) ½" DIA. X 3" LAG BOLT WITH WASHER.



⑤ WOOD OFFSET BLOCK
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2

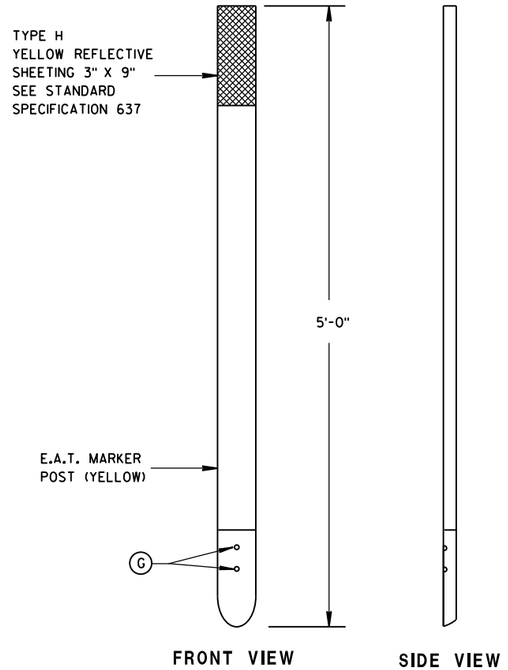


ET-2000 PLUS ONLY



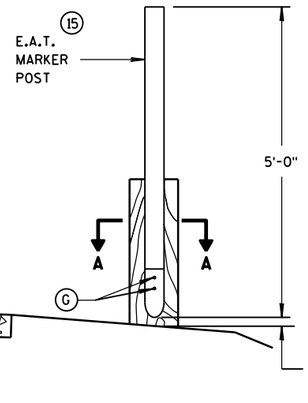
ET-2000 AND SKT-350

⑭ REFLECTIVE SHEETING DETAILS

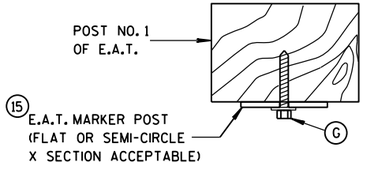


FRONT VIEW SIDE VIEW

⑮ E.A.T. MARKER POST



TYPICAL INSTALLATION OF E.A.T.
MARKER POST BACKSIDE OF POST NO. 1
(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

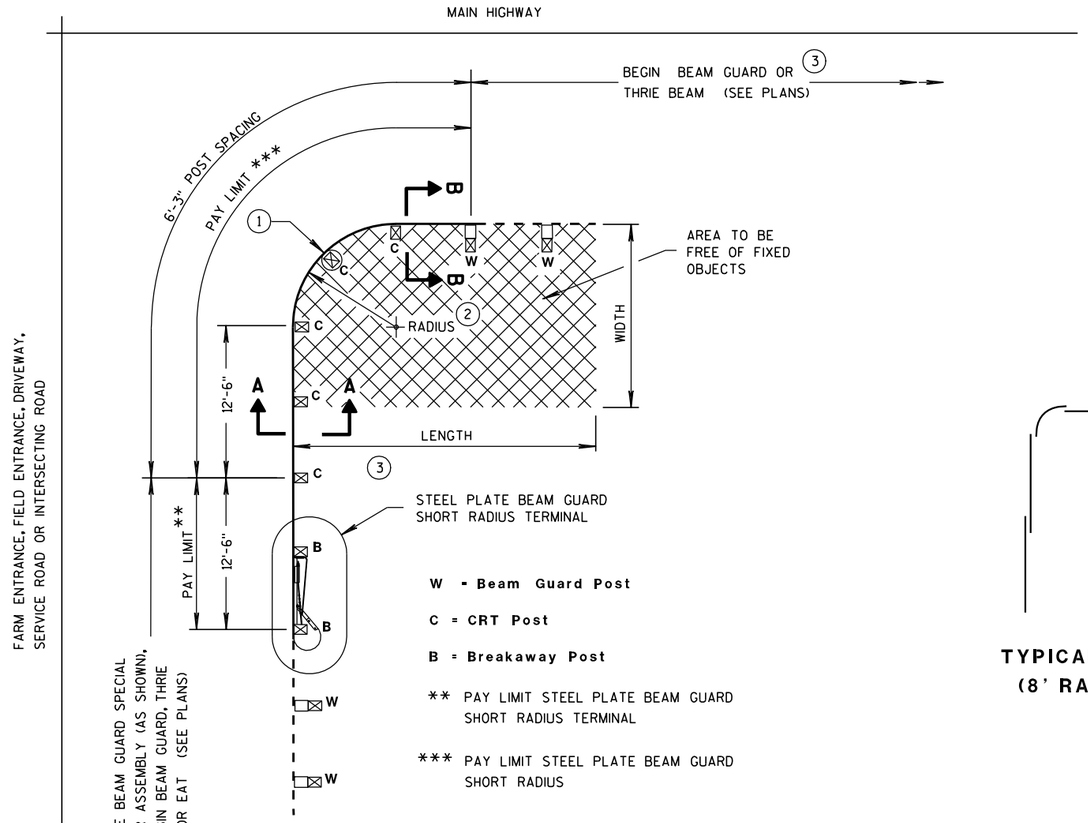
APPROVED
June 2014 — DATE
/S/ Jerry H. Zoda — ROADWAY STANDARDS ENGINEER
FHWA

6

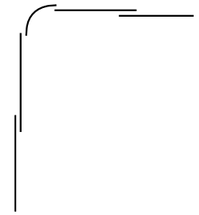
S.D.D. 14 B 24-8c

6

S.D.D. 14 B 24-8c



TYPICAL LAYOUT
(8' RADIUS SHOWN)



TYPICAL LAP SPLICES
(8' RADIUS SHOWN)

GENERAL NOTES

ALL ANGLES, CHANNELS, AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36 AND THE STRUCTURAL TUBING SHALL CONFORM TO ASTM A 500. WELDING SHALL MEET THE CURRENT REQUIREMENTS OF THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE ANSI/AWS D1.1. ALL STRUCTURAL STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 123. PUNCHING, DRILLING, CUTTING, OR WELDING WILL NOT BE PERMITTED AFTER GALVANIZING. FURNISH AND INSTALL HARDWARE PER STANDARD SPECIFICATION 614.2. UNLESS NOTED OTHERWISE.

SHOP BEND CURVED RAIL SECTIONS.

SEE STANDARD DETAIL DRAWING 14 B 15 FOR OTHER DETAIL.

(1) ON THE 8 FOOT RADIUS INSTALLATION, DO NOT INSTALL BUTTON HEAD BOLT AT CENTER CRT POST.

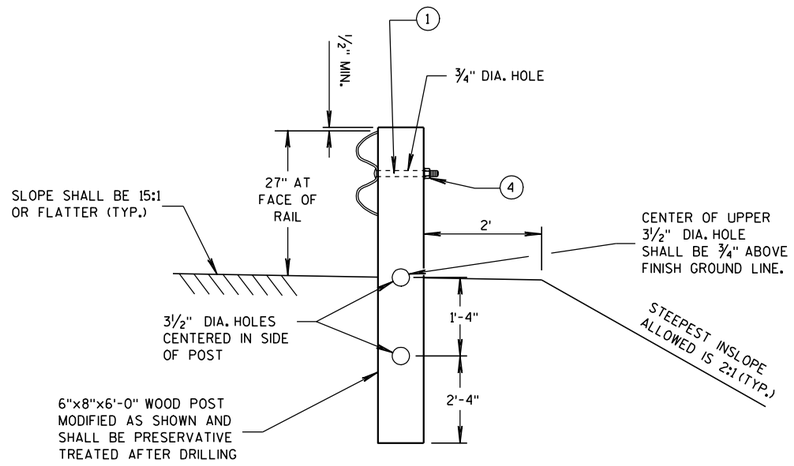
(2) RADIUS FROM 8' - 36'. SEE PLAN.

(3) HEIGHT TRANSITION MAY BE REQUIRED. SEE PLAN OR PROJECT ENGINEER.

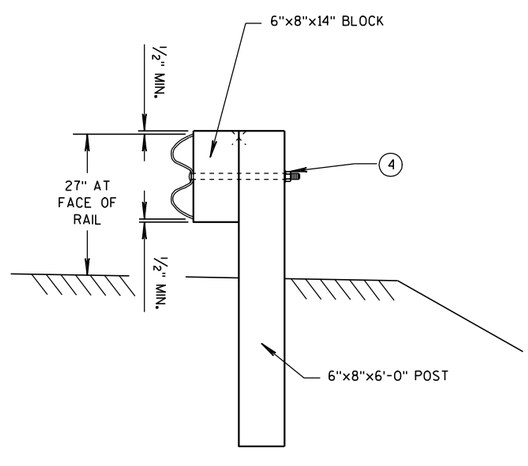
(4) 5/8" ø X 1'-6" BUTTON HEAD BOLT AND RECESS NUT WITH ROUND WASHER UNDER NUT.

RADIUS	NUMBER OF CRT POSTS	*NUMBER AND LENGTH OF CURVED RAILS	REQUIRED AREA FREE OF FIXED OBJECTS (LENGTH x WIDTH)
8'	5	1 at 12.5'	25' x 15'
16'	7	1 at 25'	30' x 15'
24'	9	1 at 25' and 1 at 12.5'	40' x 20'
32'	11	2 at 25'	50' x 20'

* THE NUMBER OF RAILS IS BASED ON A 90° INTERSECTION. SEE PLAN FOR NON 90° INSTALLATIONS.



SECTION A-A
(CRT POST)



SECTION B-B
(BEAM GUARD POST)

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

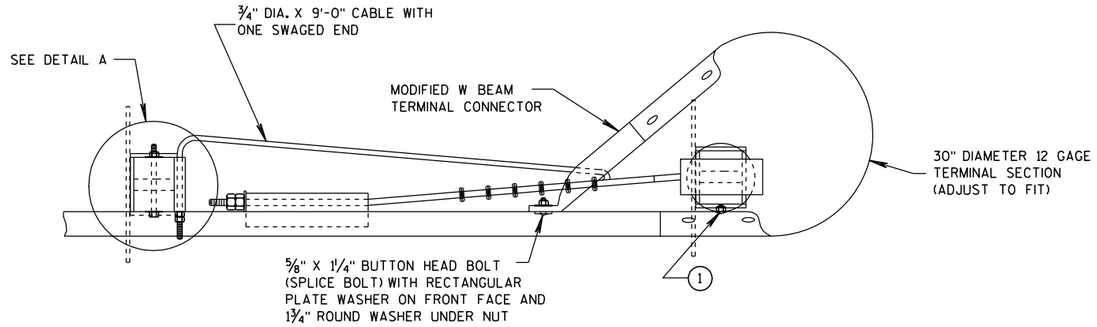
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

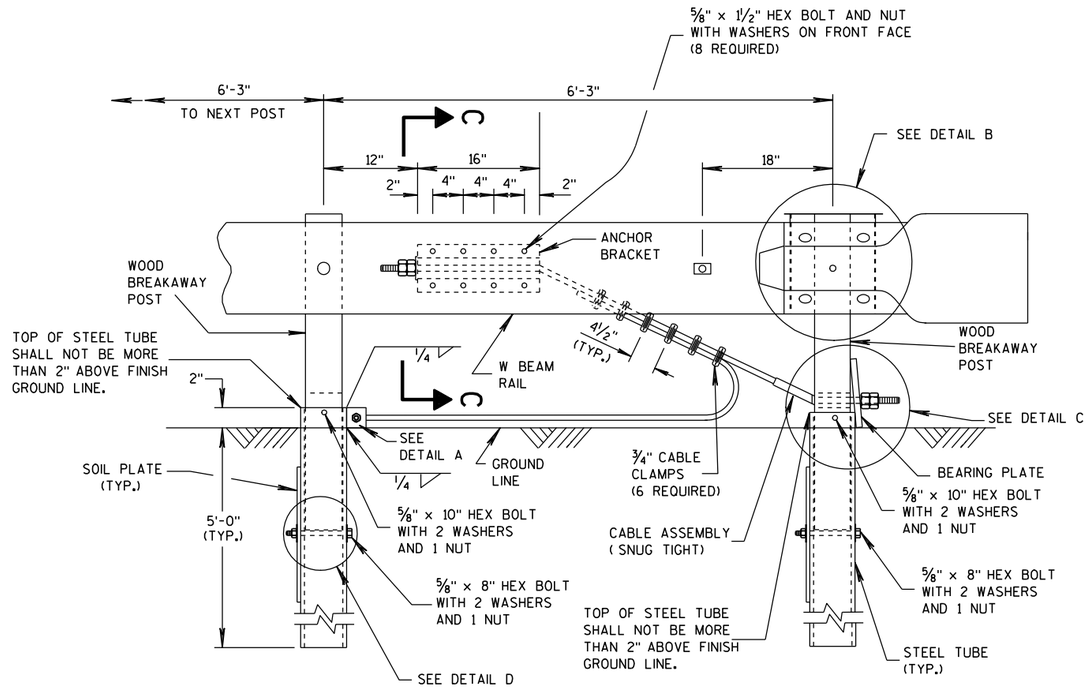
S.D.D. 14 B 27-1a

6

S.D.D. 14 B 27-1a



PLAN VIEW



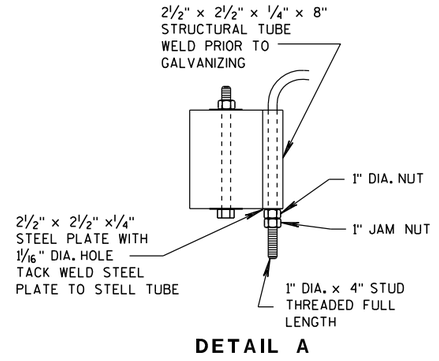
ELEVATION VIEW

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

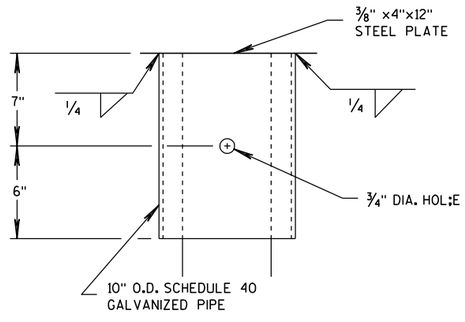
GENERAL NOTES

(1) ATTACH W BEAM RAIL TO THE STEEL PIPE WITH A ⅝" X 2" BUTTON HEAD BOLT WITH NO WASHER. CONNECTION TO THE POST IS NOT REQUIRED.

INSTALL GALVANIZED ¾" (6X19) PREFORMED WIRE OR INDEPENDENT WIRE ROPE CORE CONFORMING TO AASHTO M 30. MANUFACTURE WIRE ROPE OUT OF IMPROVED PLOW STEEL WITH A MINIMUM BREAKING STRENGTH OF 42,800 PSI.



DETAIL A



DETAIL B

(BEAM GUARD AND TERMINAL SECTION NOT SHOWN)

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

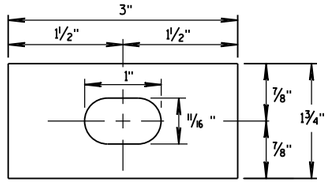
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

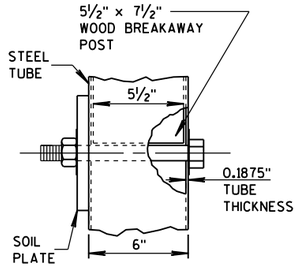
S.D.D. 14 B 27-1b

6

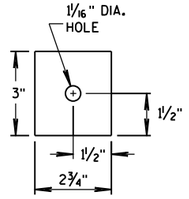
S.D.D. 14 B 27-1b



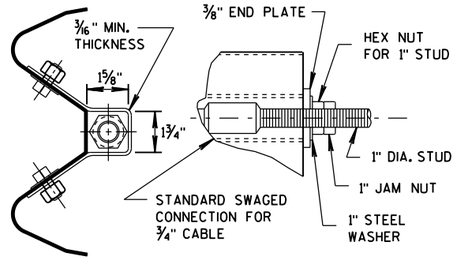
RECTANGULAR PLATE WASHER



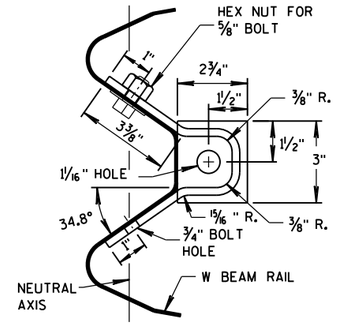
DETAIL D



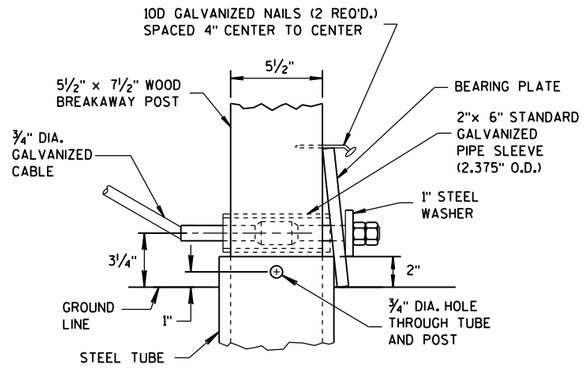
END PLATE



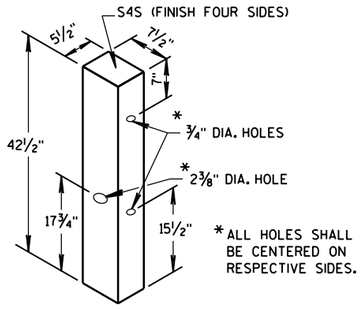
SECTION C-C
(END PLATE REMOVED)



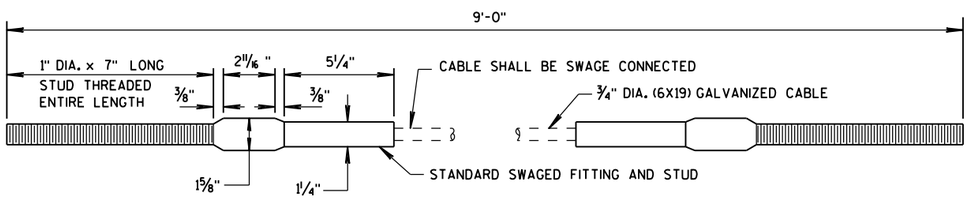
ANCHOR BRACKET



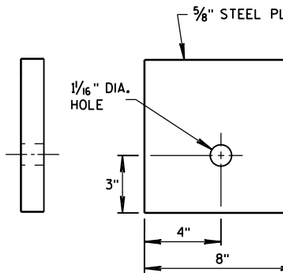
DETAIL C



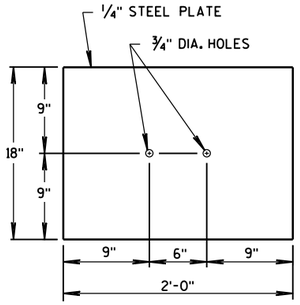
WOOD BREAKAWAY POST



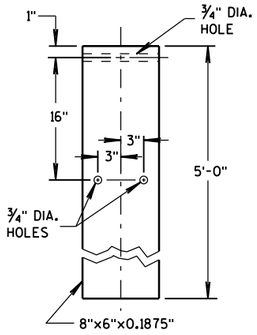
CABLE ASSEMBLY



BEARING PLATE



SOIL PLATE



STEEL TUBE

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

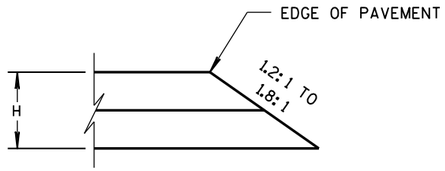
APPROVED
12/18/08 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 14 B 27-1c

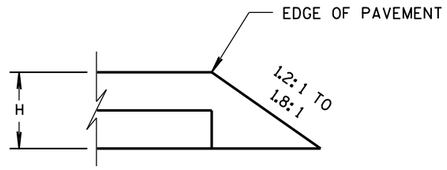
6

S.D.D. 14 B 27-1c



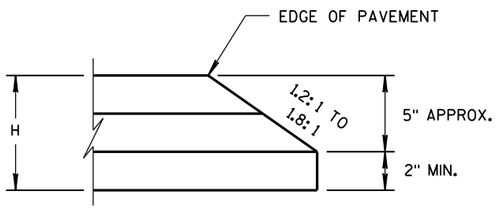
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



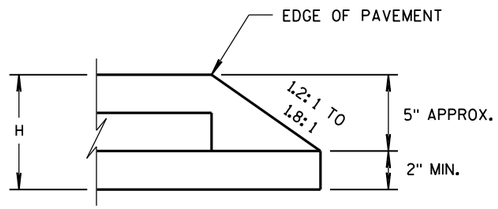
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

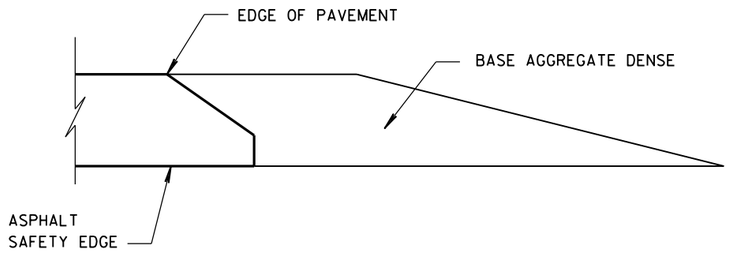
FOR H GREATER THAN 5"



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

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.

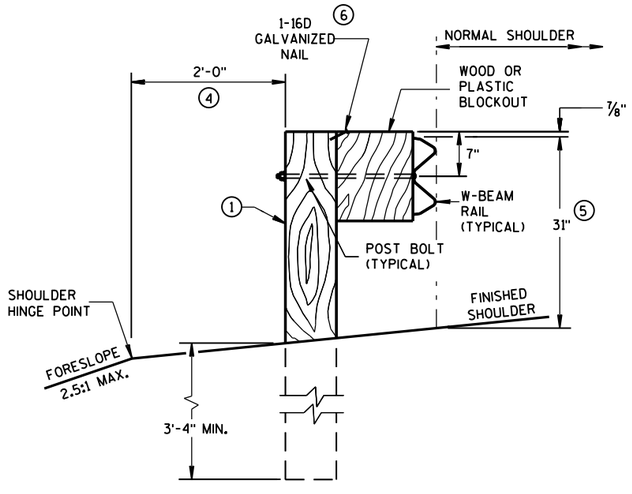
(2) USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

(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).

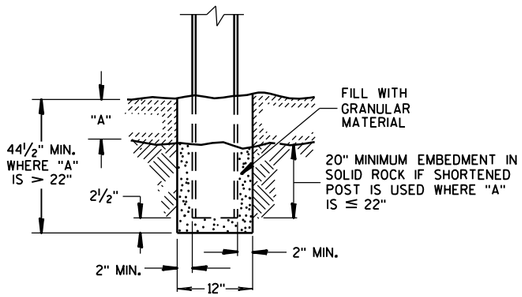
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

(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.



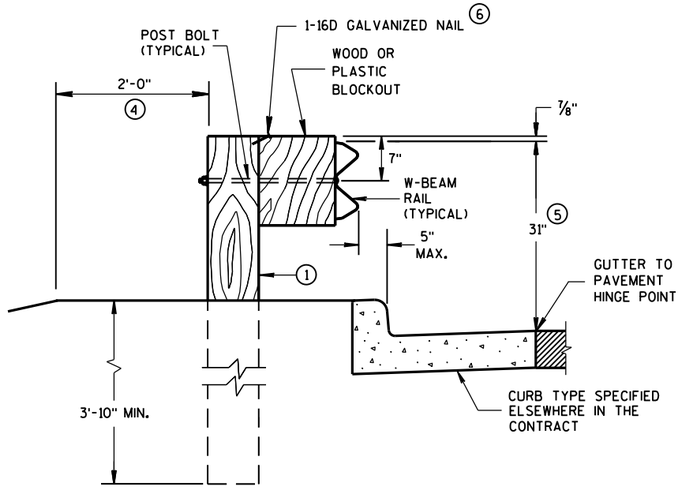
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



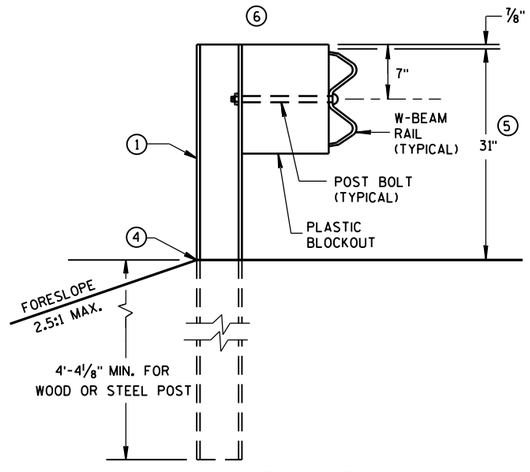
END VIEW

SETTING STEEL OR WOOD POST IN ROCK (3)



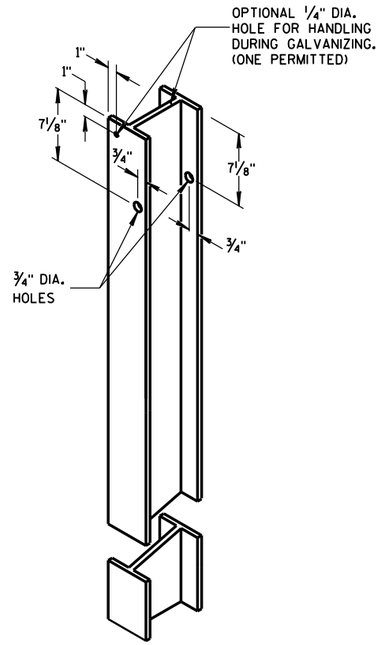
END VIEW

LOCATED ALONG A CURBED ROADWAY

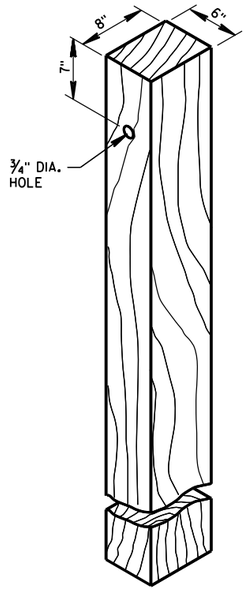


END VIEW

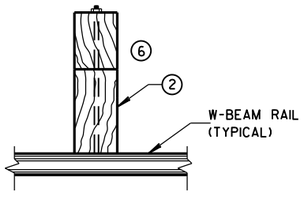
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



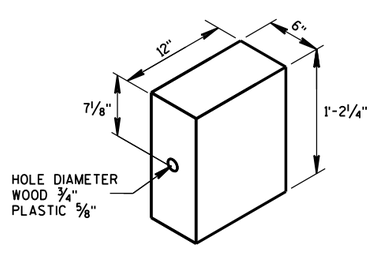
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) (1)



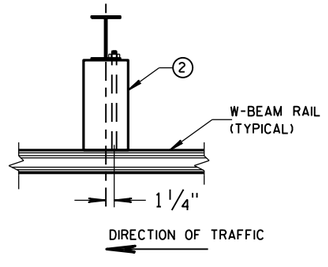
WOOD POST
(6" X 8") NOMINAL (1)



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 TRANSPOI

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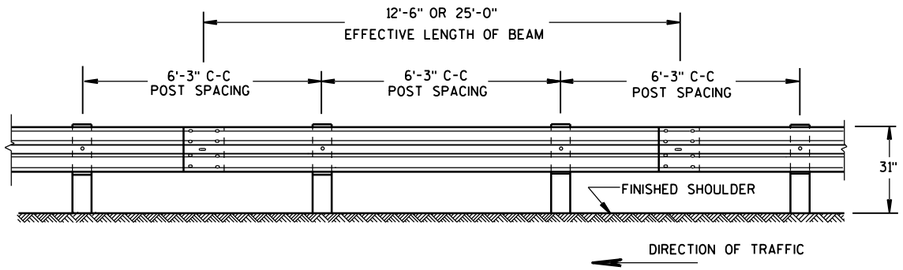
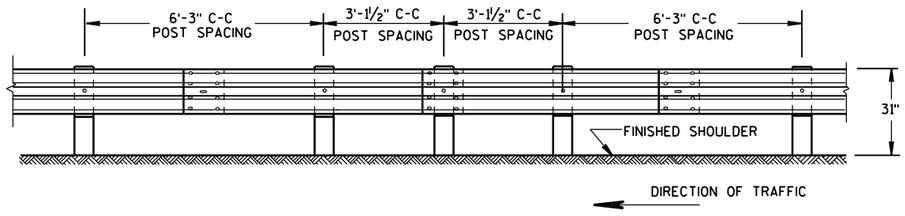
S.D.D. 14 B 42-3a



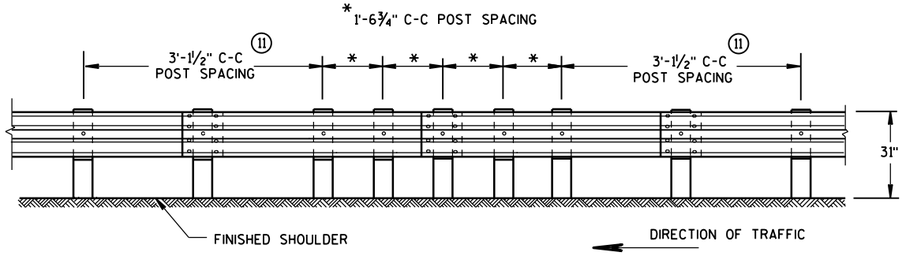
FRONT VIEW

POST SPACING STANDARD INSTALLATION



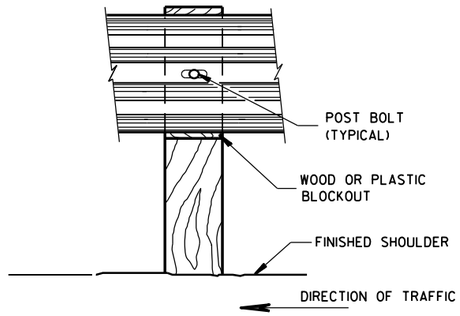
FRONT VIEW

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

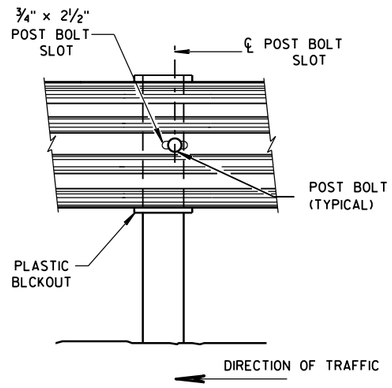


FRONT VIEW

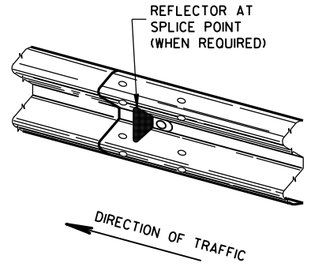
QUARTER POST SPACING (QS)

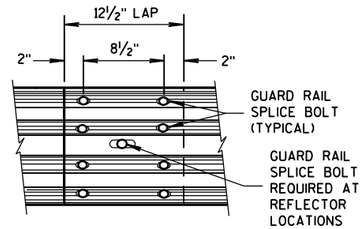


FRONT VIEW AT WOOD POST

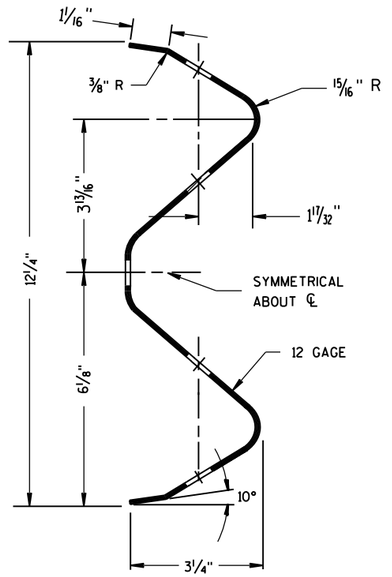


FRONT VIEW AT STEEL POST

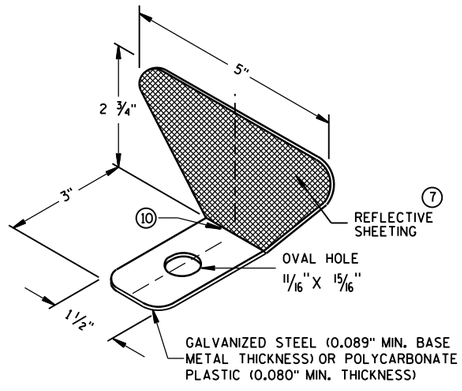




FRONT VIEW
MID-SPAN BEAM SPLICE



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION ⑦

GENERAL NOTES

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

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

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

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

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

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

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

REFLECTOR SPACING ⑧

	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	1 1	3
TWO WAY TRAFFIC	< 200' > 200'	25' C-C 50' C-C	1 ⑨ 1	6
TWO WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	2 2 ⑩	3

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
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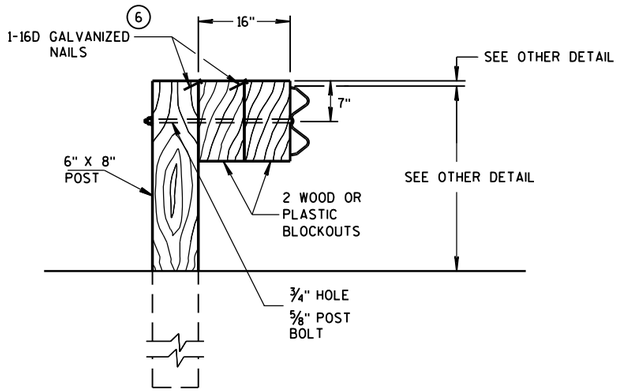
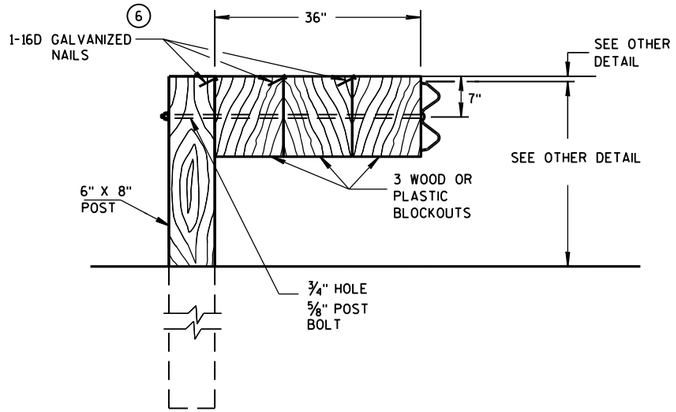


DETAIL FOR 16" BLOCKOUT DEPTH

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

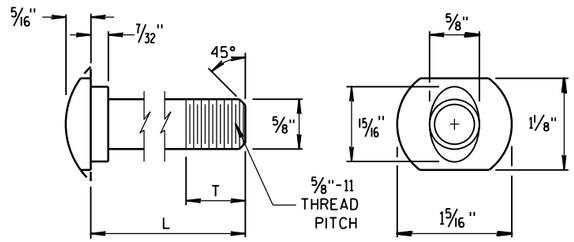


DETAIL FOR 36" BLOCKOUT DEPTH

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

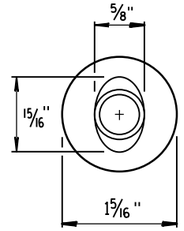
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

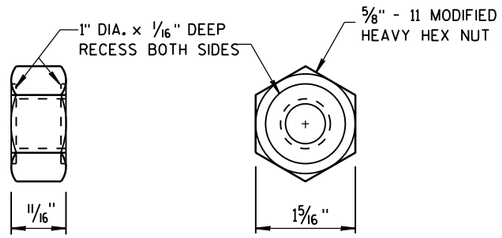


POST BOLT TABLE

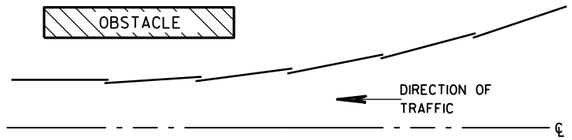
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

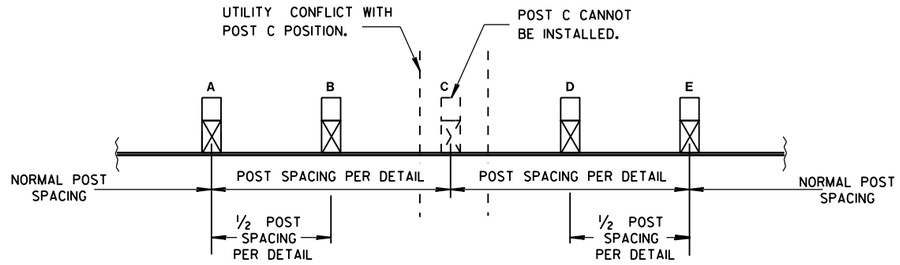


POST BOLT AND RECESS NUT

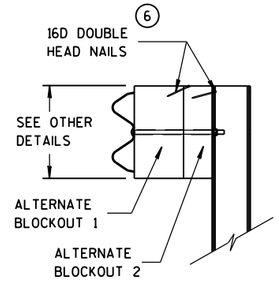


PLAN VIEW

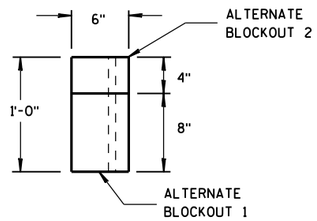
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

GENERAL NOTES

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

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

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

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

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

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

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

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

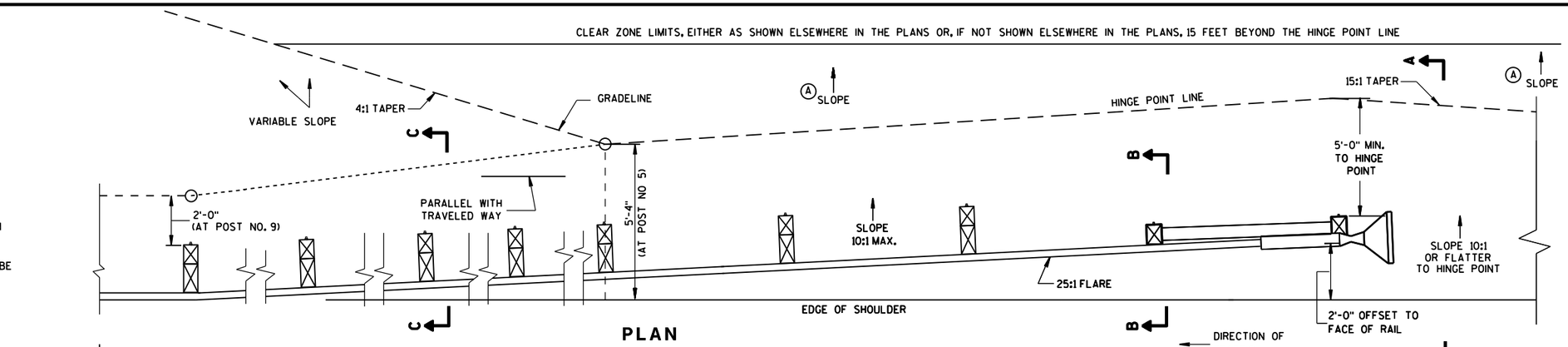
SEE SDD 14B42 FOR MORE INFORMATION.

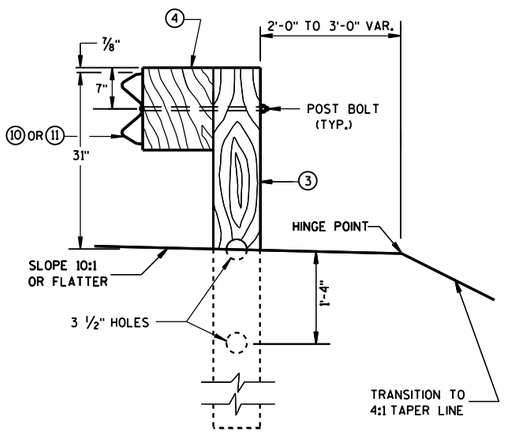
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

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

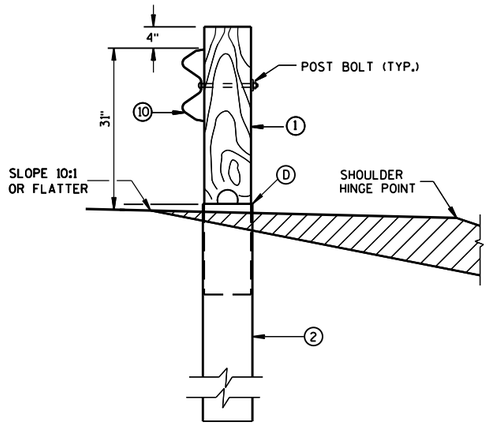
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

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

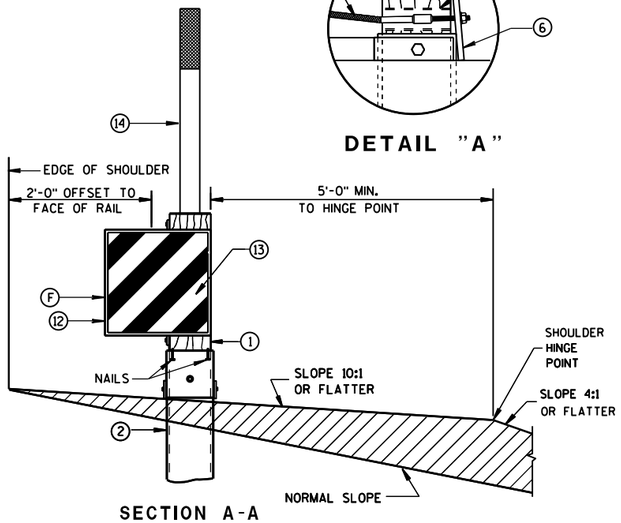




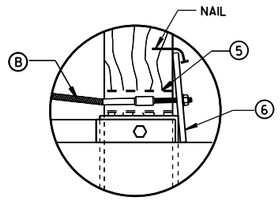
SECTION C-C
TYPICAL AT POST NOS. 3-9



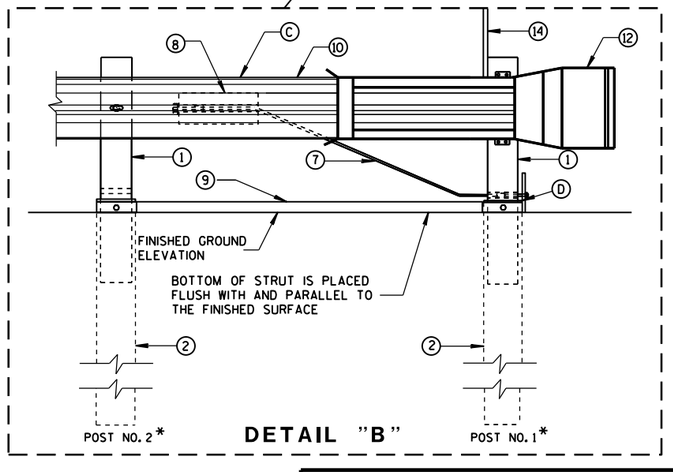
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



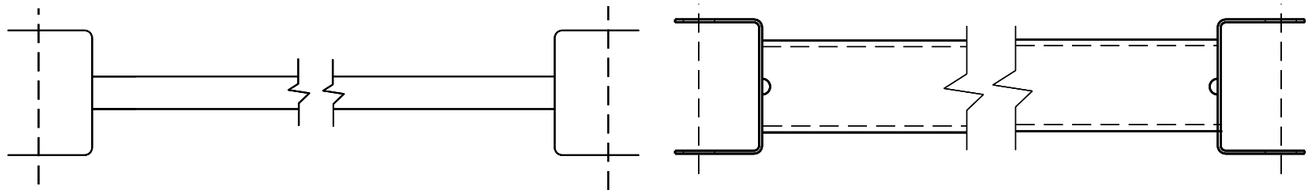
DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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

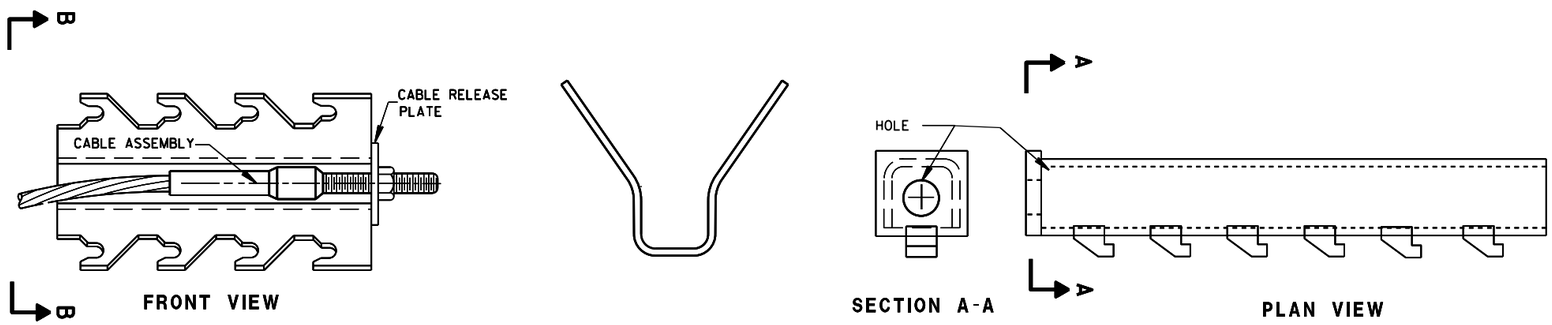
S.D.D. 14 B 44-2a



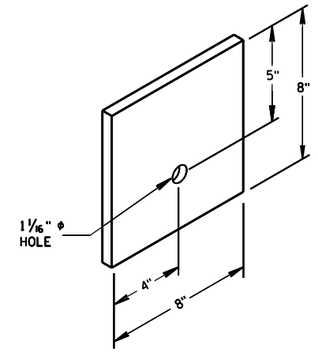
GENERIC GROUND STRUT (9) (H)

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)



GENERIC ANCHOR CABLE BOX (8) (H)

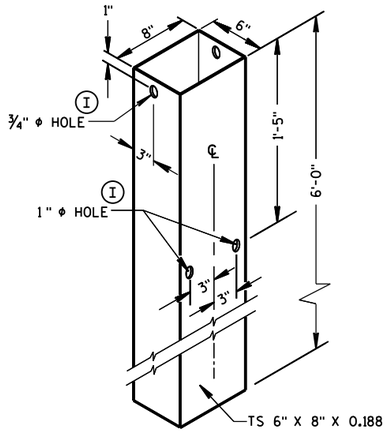


BEARING PLATE (6)

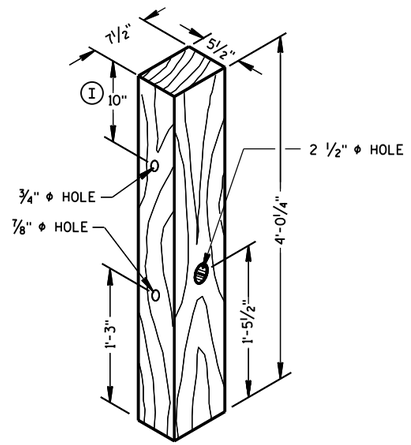
MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 44-2b

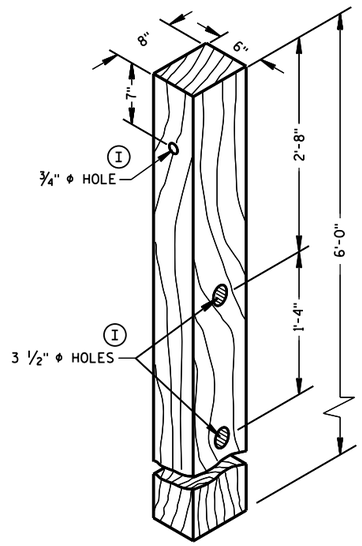


FOUNDATION TUBE (2)



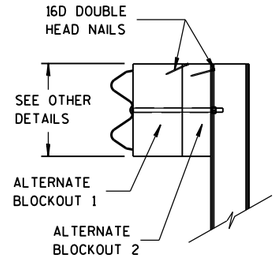
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

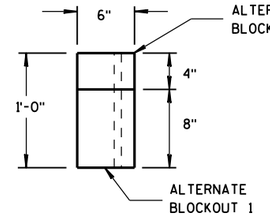


POSTS NUMBER 3-9

WOOD CRT POST (3)

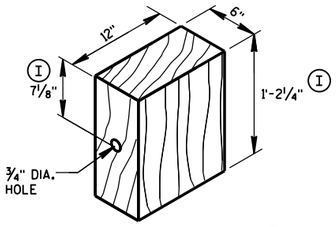


SIDE VIEW



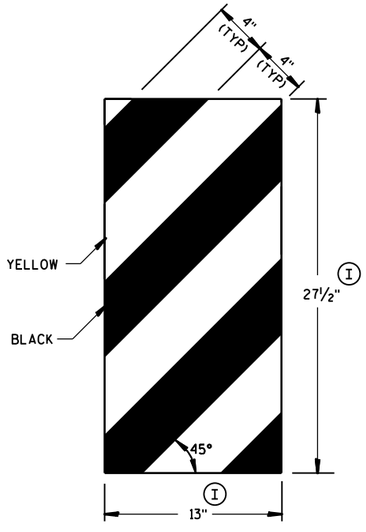
TOP VIEW

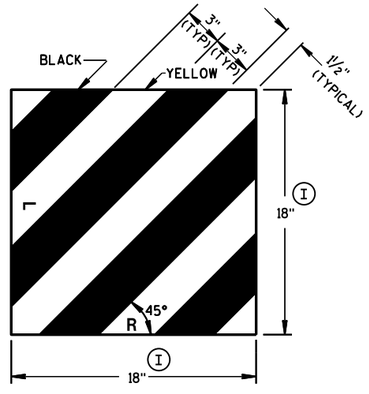
ALTERNATE WOOD BLOCKOUT DETAIL



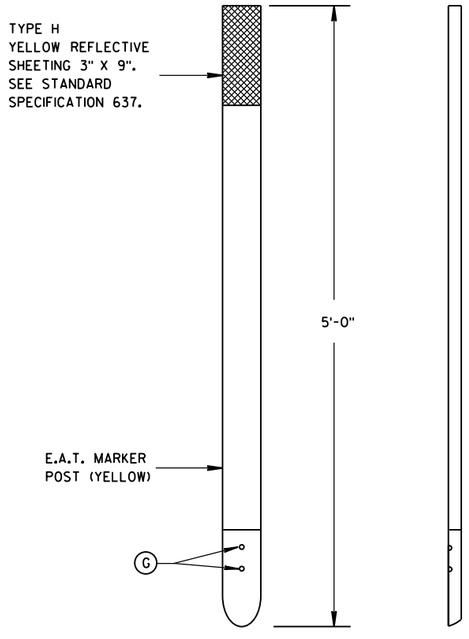
WOOD BLOCKOUT (4)

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





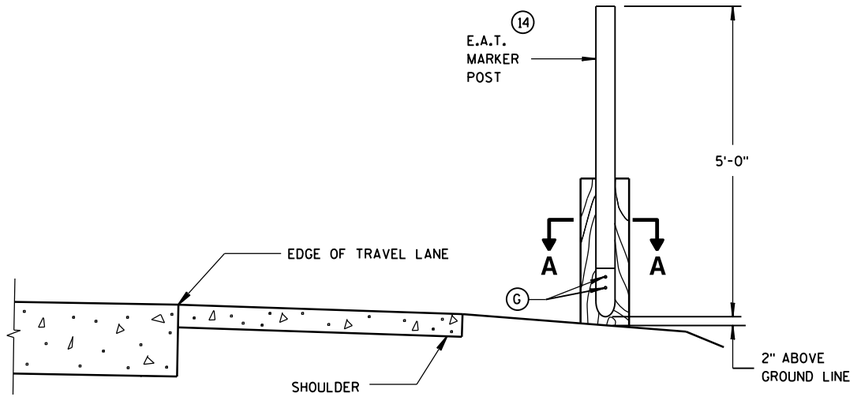
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

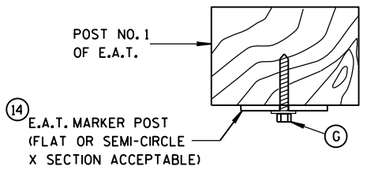
SIDE VIEW

E.A.T. MARKER POST (14)



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

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



SECTION A-A

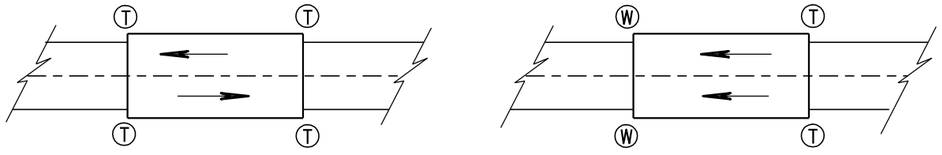
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

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



TWO WAY TRAFFIC

ONE WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

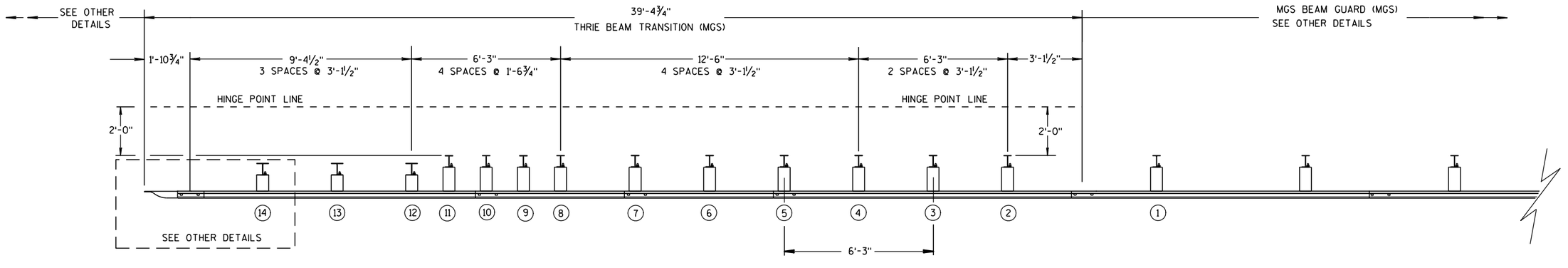
BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3.

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

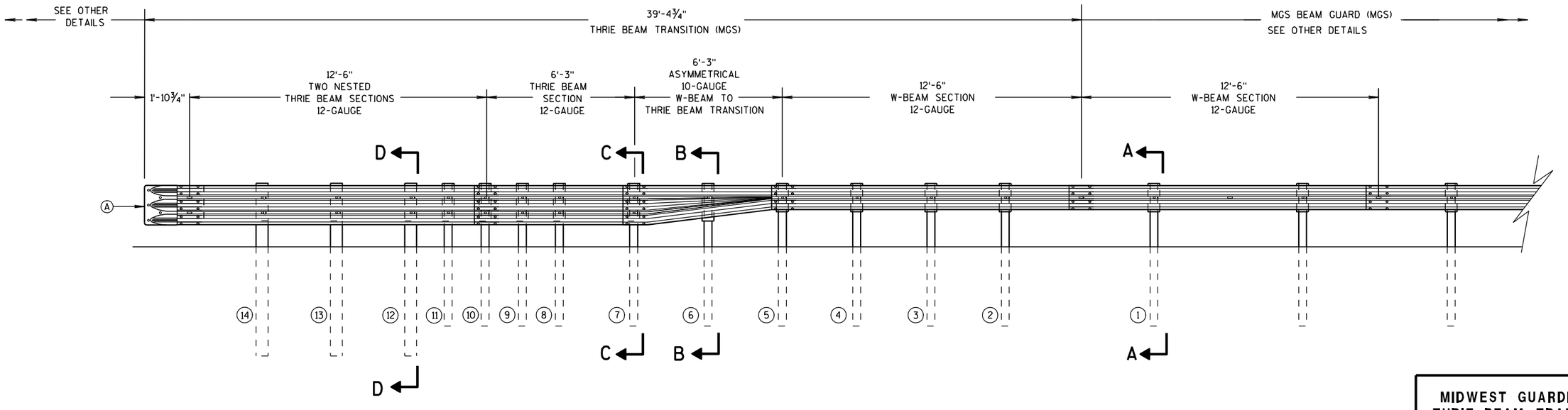
TRANSITION USES STEEL POSTS ONLY.

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

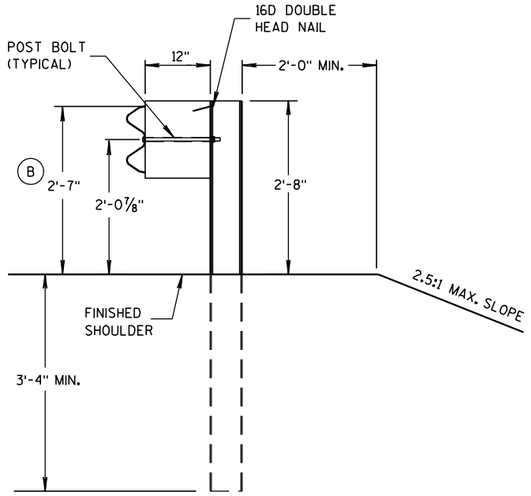
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

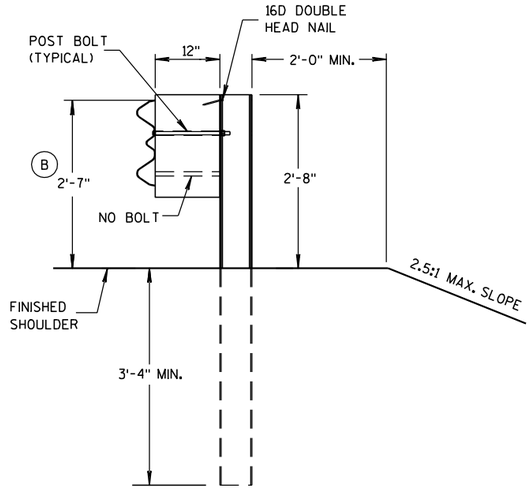
GENERAL NOTES

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



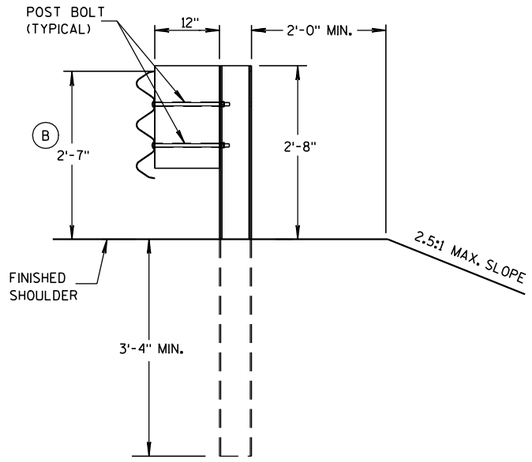
SECTION A-A

POSTS 1-5



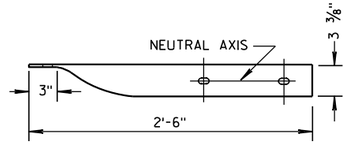
SECTION B-B

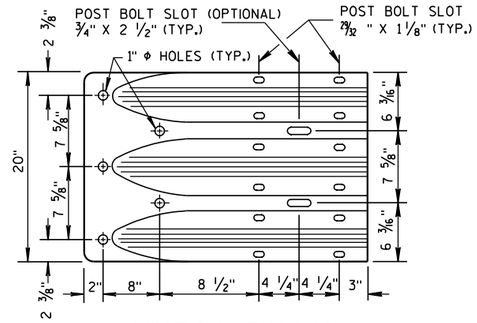
POST 6



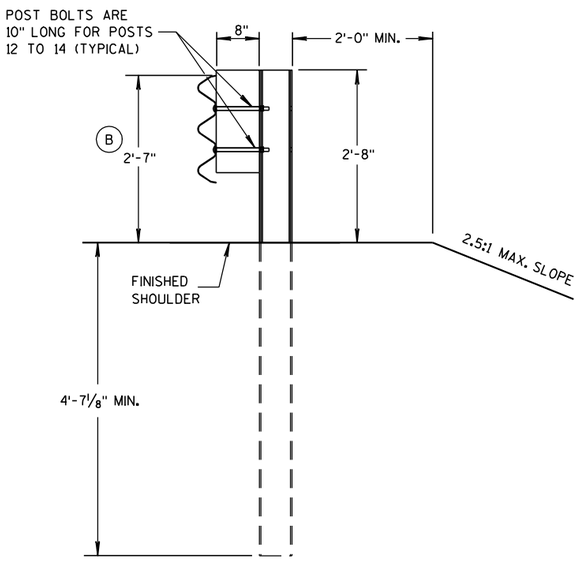
SECTION C-C

POSTS 7-11





THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-14

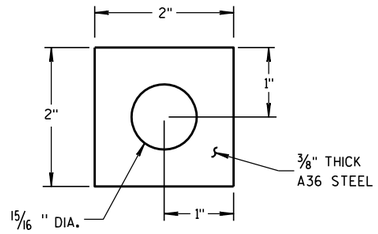
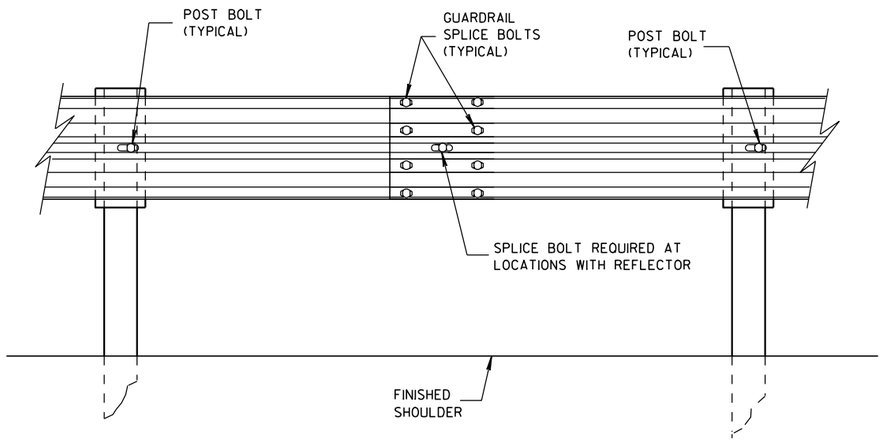
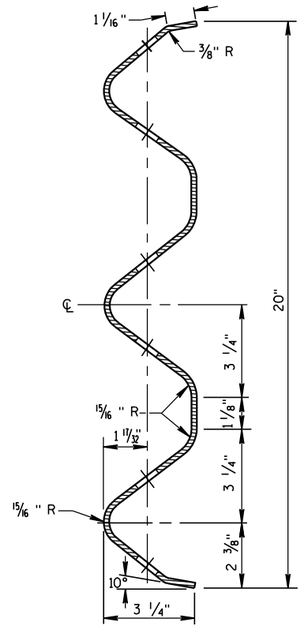


PLATE WASHER DETAIL



SPLICE DETAIL



SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

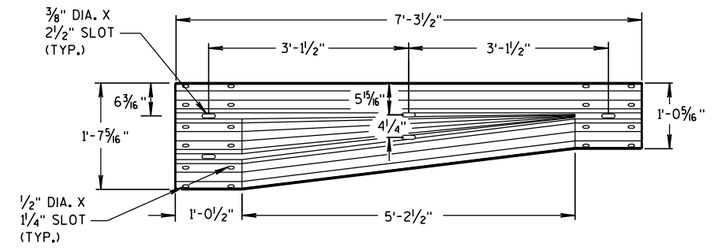
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

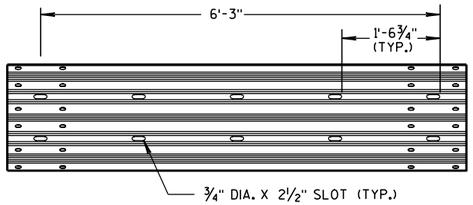
S.D.D. 14 B 45-3b

6

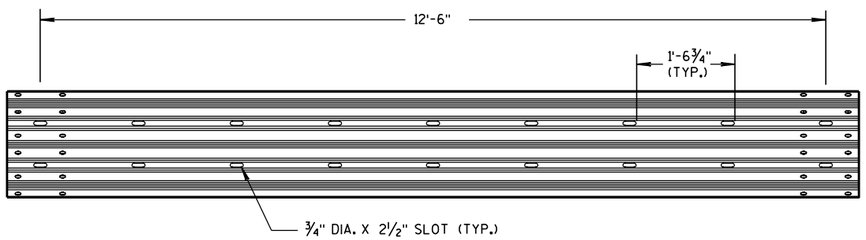
S.D.D. 14 B 45-3b



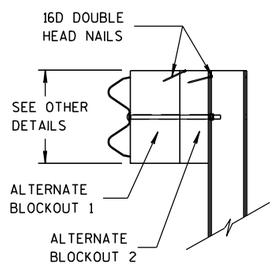
W-BEAM TO THRIE BEAM TRANSITION SECTION



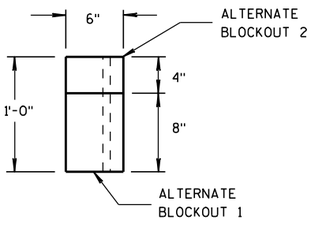
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

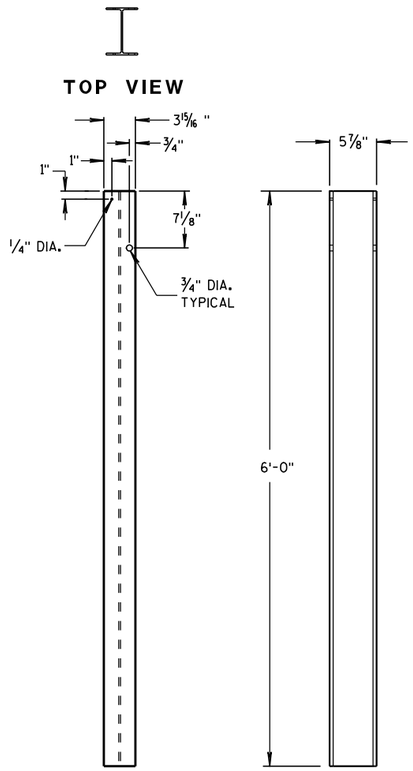


SIDE VIEW

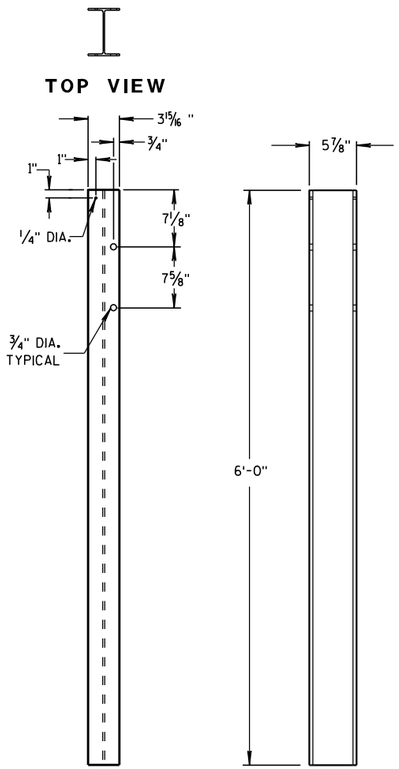


TOP VIEW

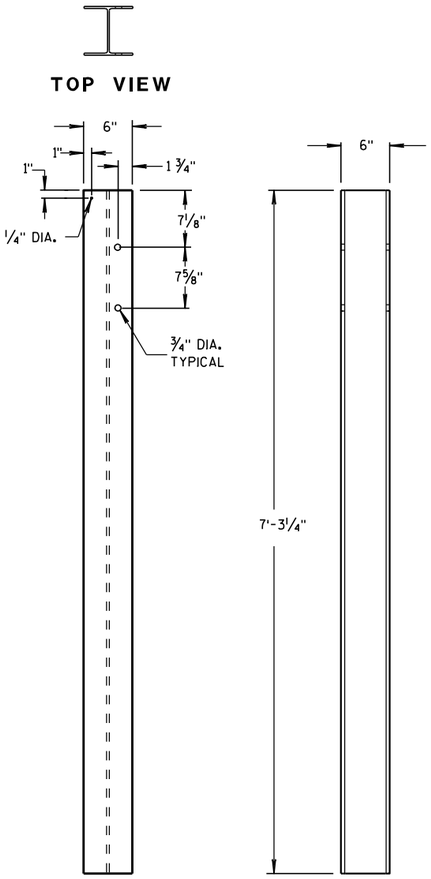
ALTERNATE WOOD BLOCKOUT DETAIL



STEEL POSTS 1-5

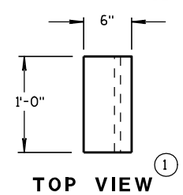


STEEL POSTS 6-11

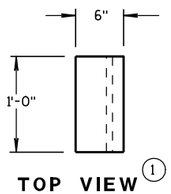


STEEL POSTS 12-14

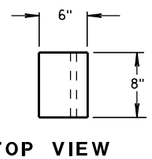
(1) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.



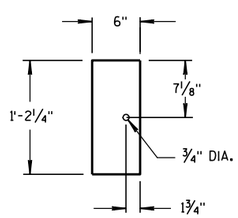
TOP VIEW (1)



TOP VIEW (1)

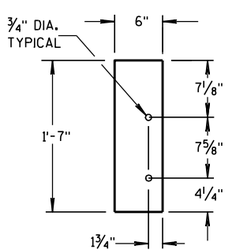


TOP VIEW



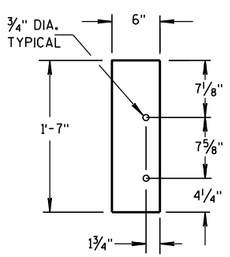
FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-11



FRONT VIEW

BLOCKOUT POSTS 12-14

STEEL POST SIZES

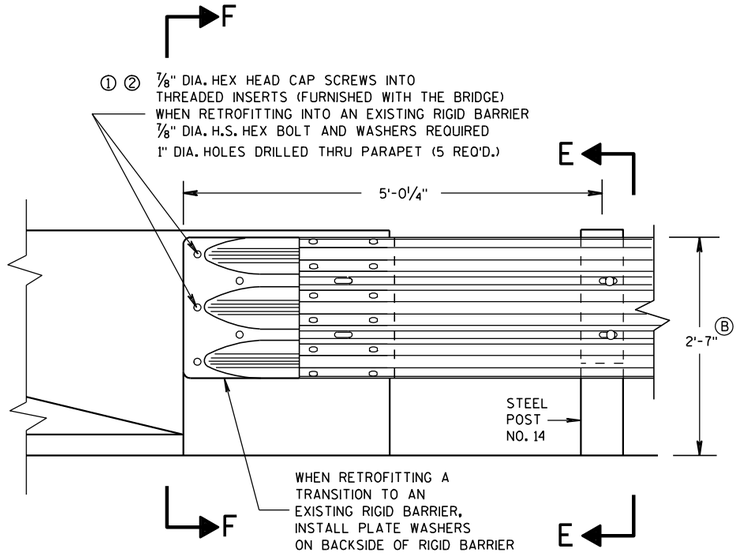
POST NUMBER	SECTION TYPE	LENGTH
(1)	W6x9	72"
(2)	W6x9	72"
(3)	W6x9	72"
(4)	W6x9	72"
(5)	W6x9	72"
(6)	W6x9	72"
(7)	W6x9	72"
(8)	W6x9	72"
(9)	W6x9	72"
(10)	W6x9	72"
(11)	W6x9	72"
(12)	W6x15	87 1/8"
(13)	W6x15	87 1/8"
(14)	W6x15	87 1/8"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

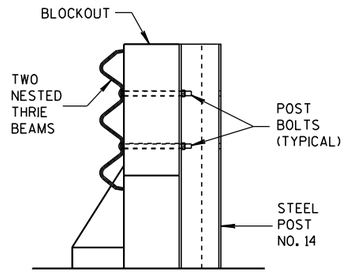
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

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



FRONT VIEW



SECTION E-E

GENERAL NOTES

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

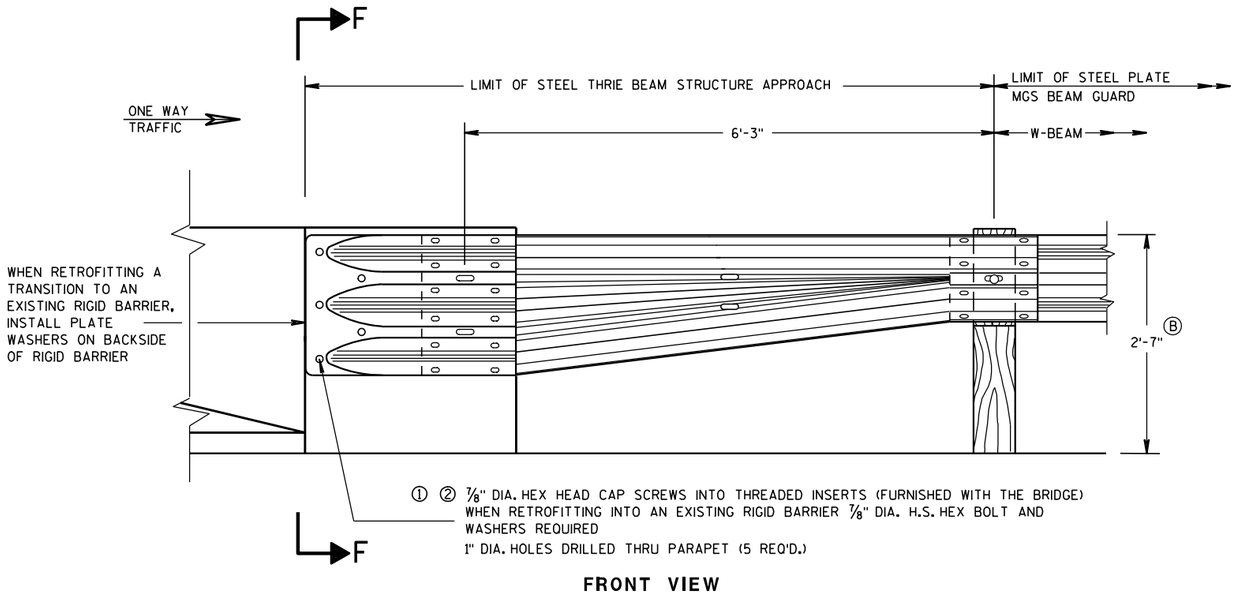
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

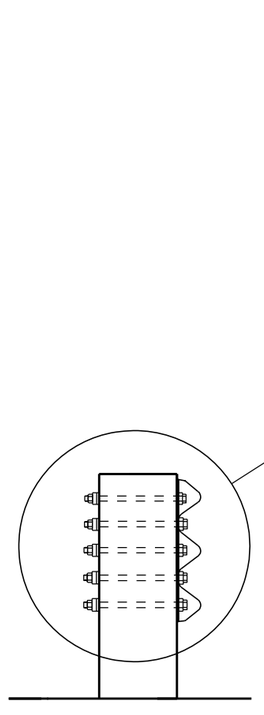
③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".

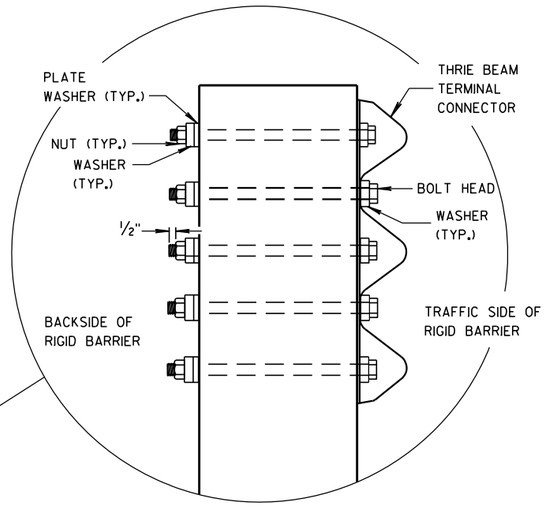
THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS



FRONT VIEW



SECTION F-F



W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012 — DATE

/S/ Jerry H. [illegible] — ROADWAY STANDARDS (224) — 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.

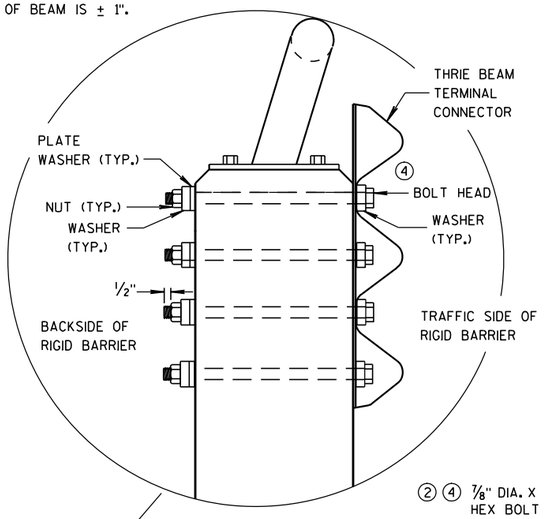
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

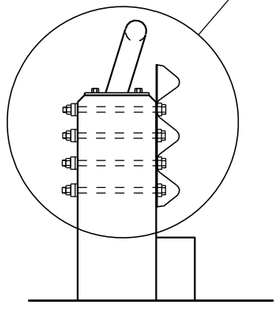
② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. 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.

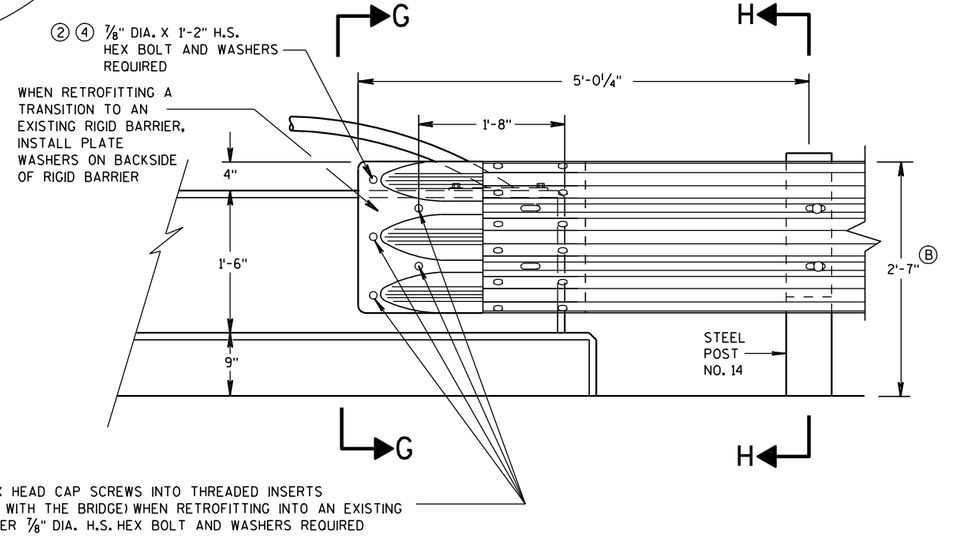
④ BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.

Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".

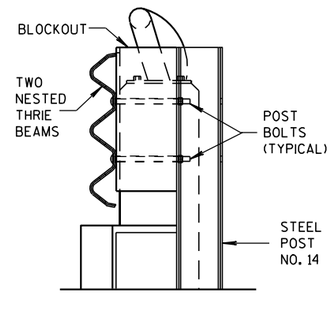




SECTION G-G

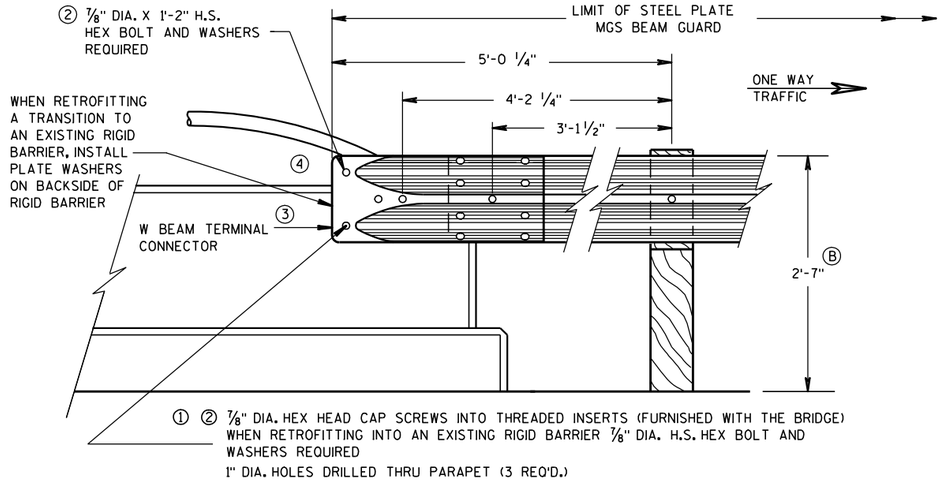


FRONT VIEW



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 (225 ENT
ENGINEER

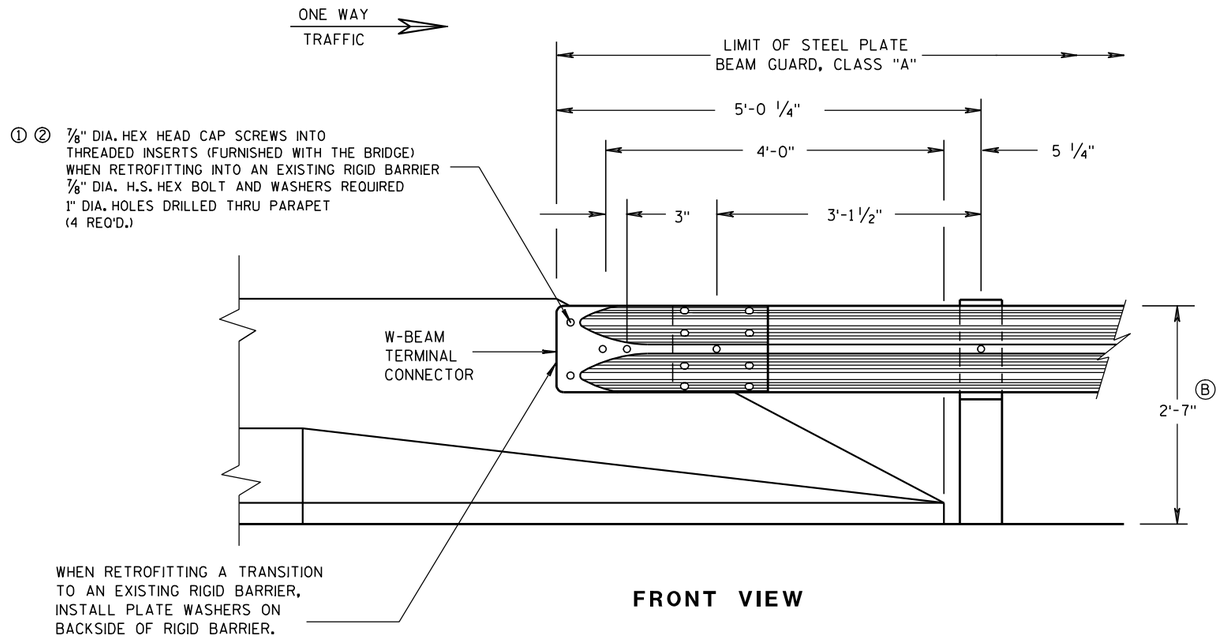
FHWA

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

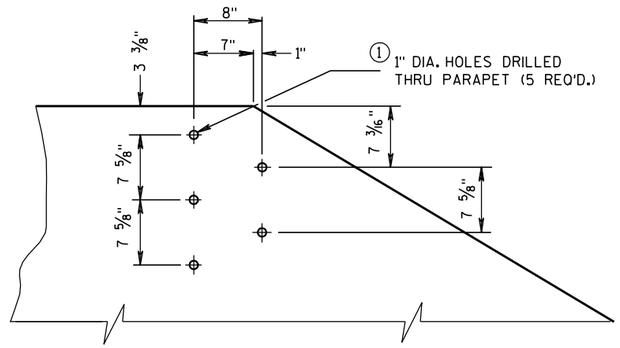
(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

GENERAL NOTES

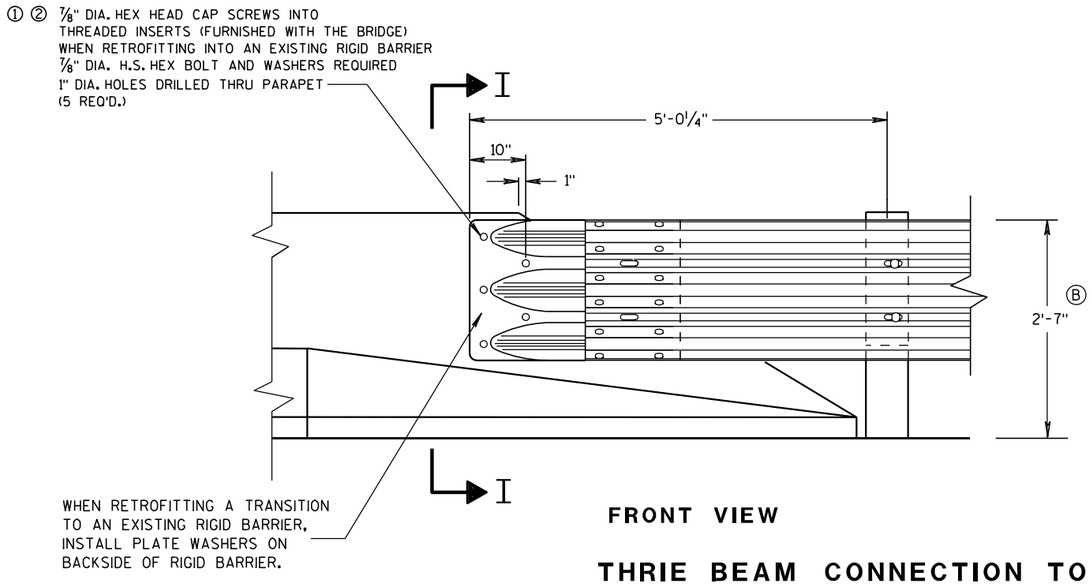
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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.

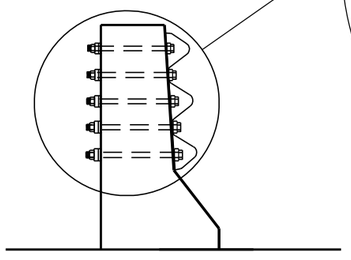
Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".



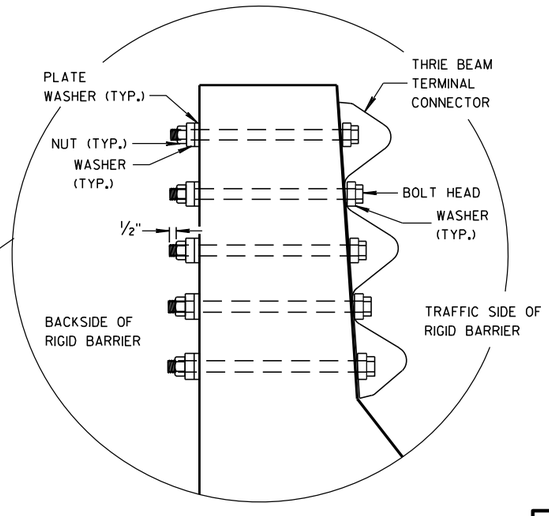
DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



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

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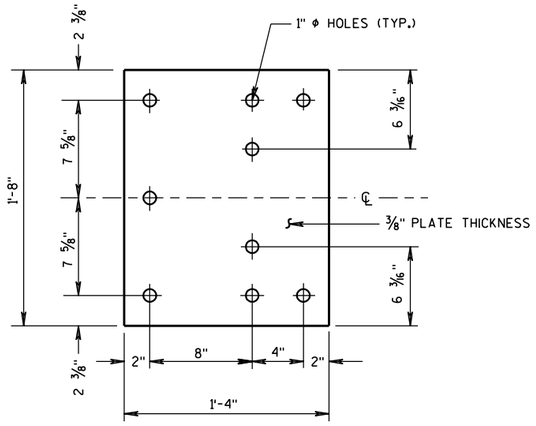
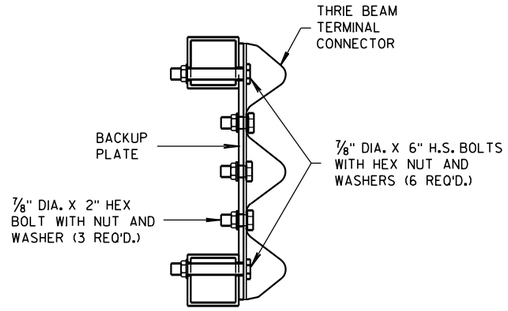


BACK-UP PLATE DETAIL

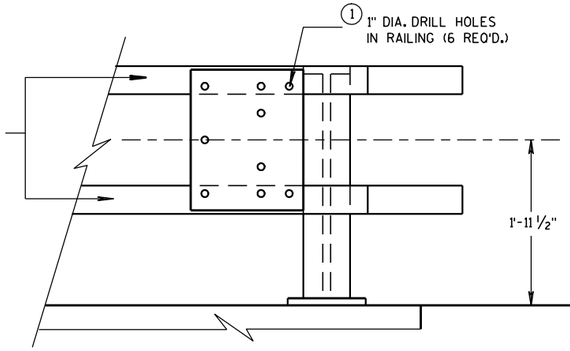


SECTION J-J

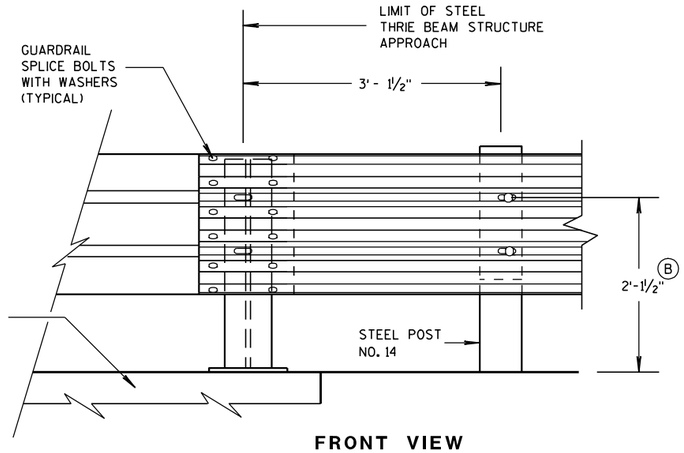
GENERAL NOTES

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

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

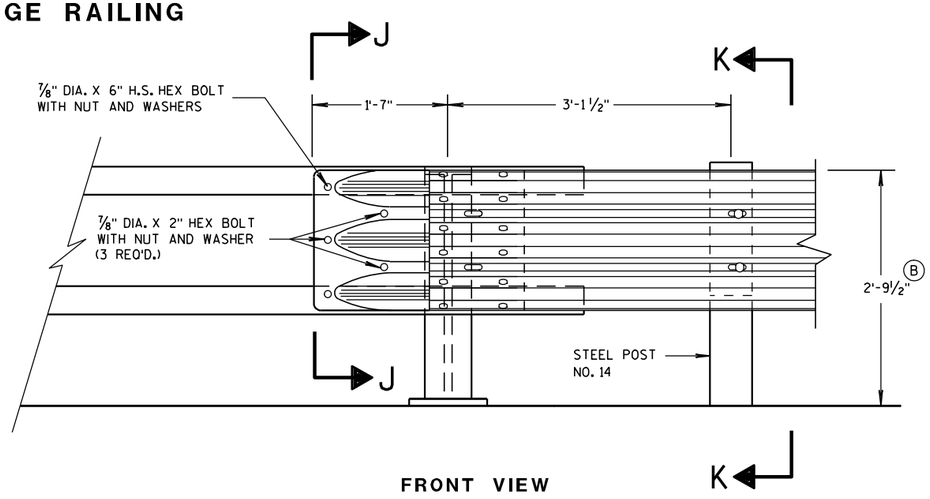


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

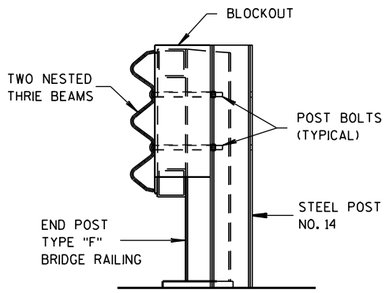


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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8/31/2012
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
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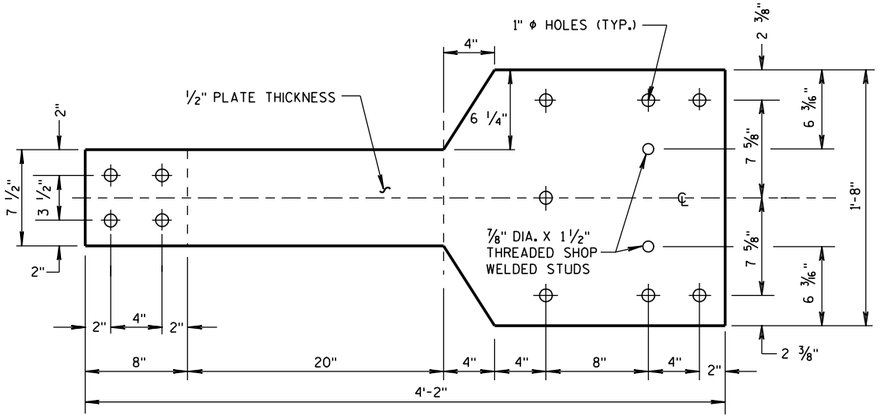
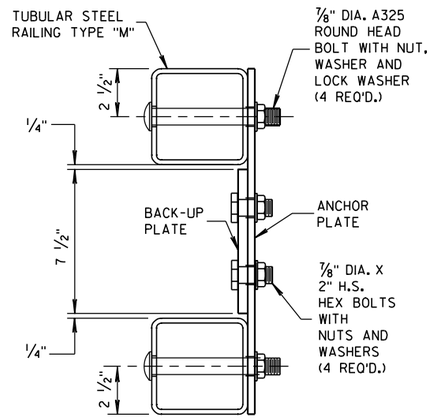
GENERAL NOTES

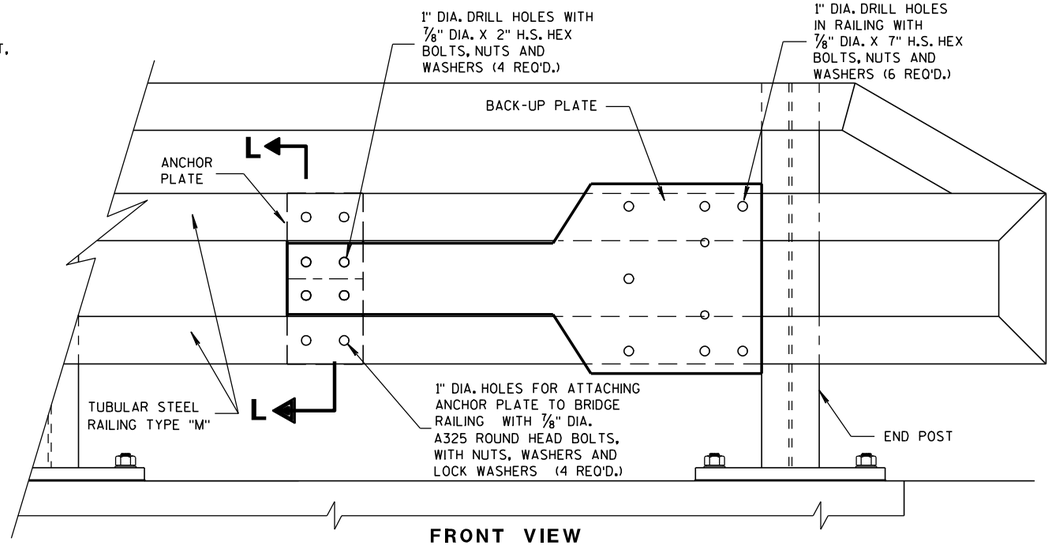
(B) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



FRONT VIEW

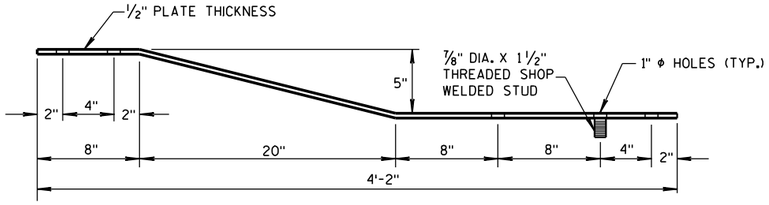


SECTION L-L



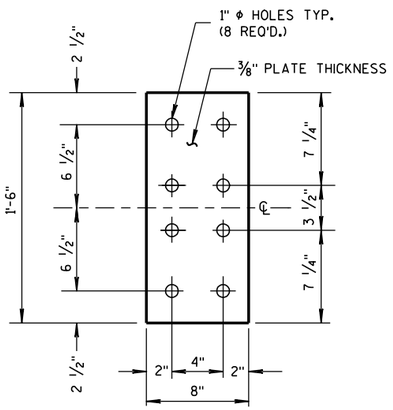
FRONT VIEW

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



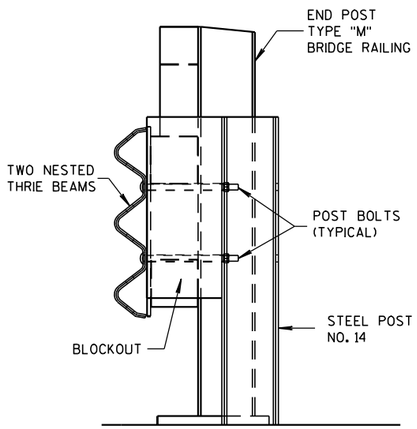
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

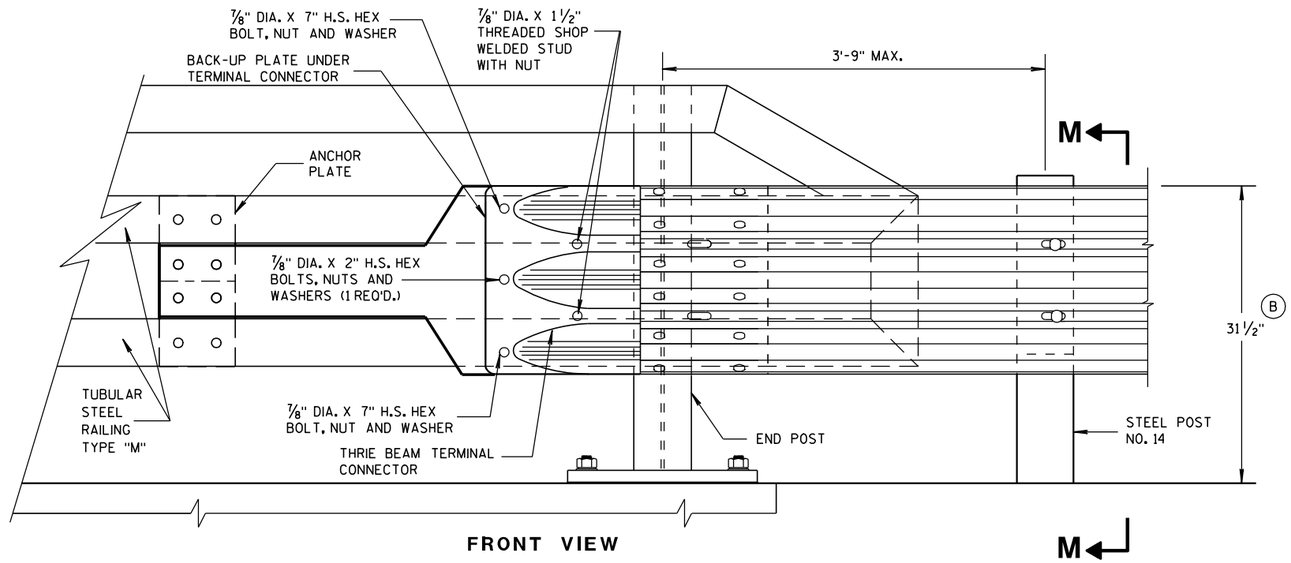


FRONT VIEW

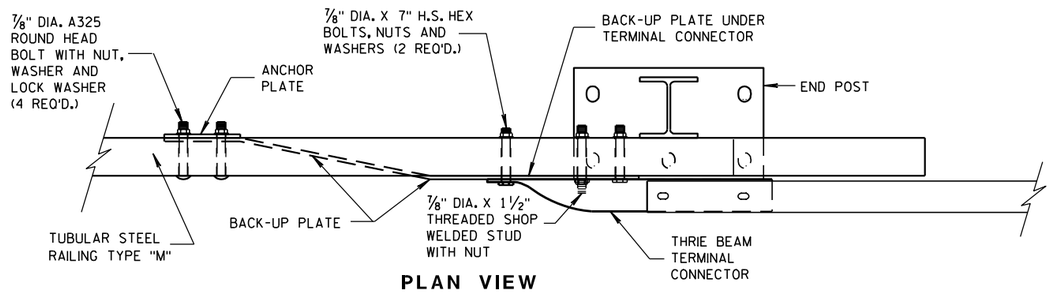
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8-31-2012
DATE

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

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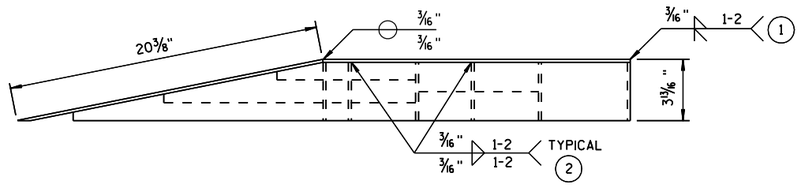

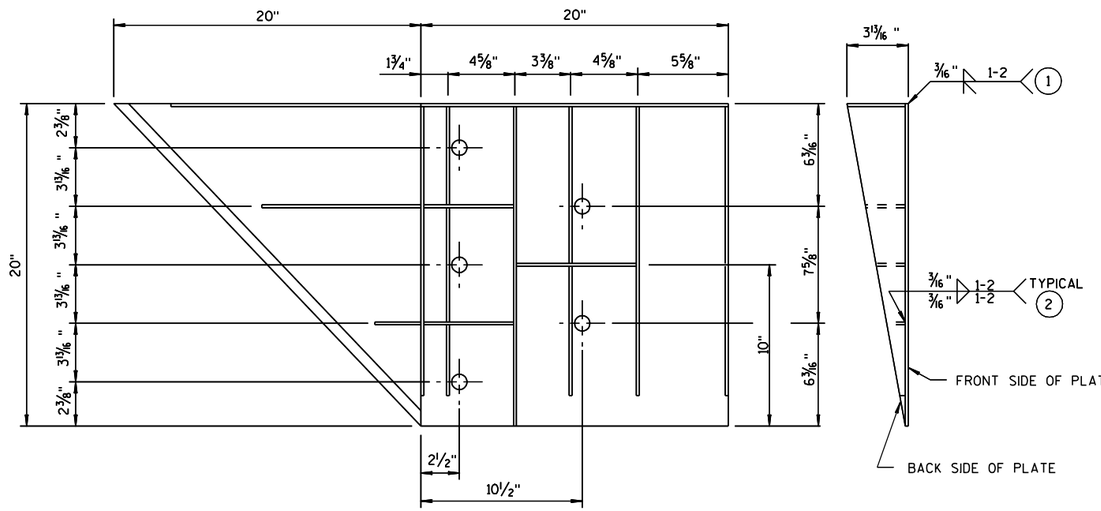

WELDING INSTRUCTION

(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".

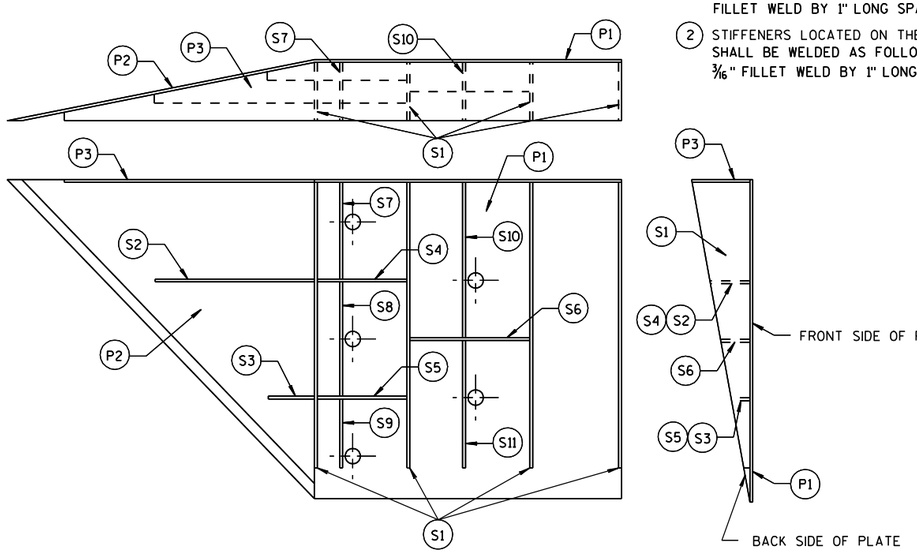

PLATE AND STIFFENER IDENTIFICATION

(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
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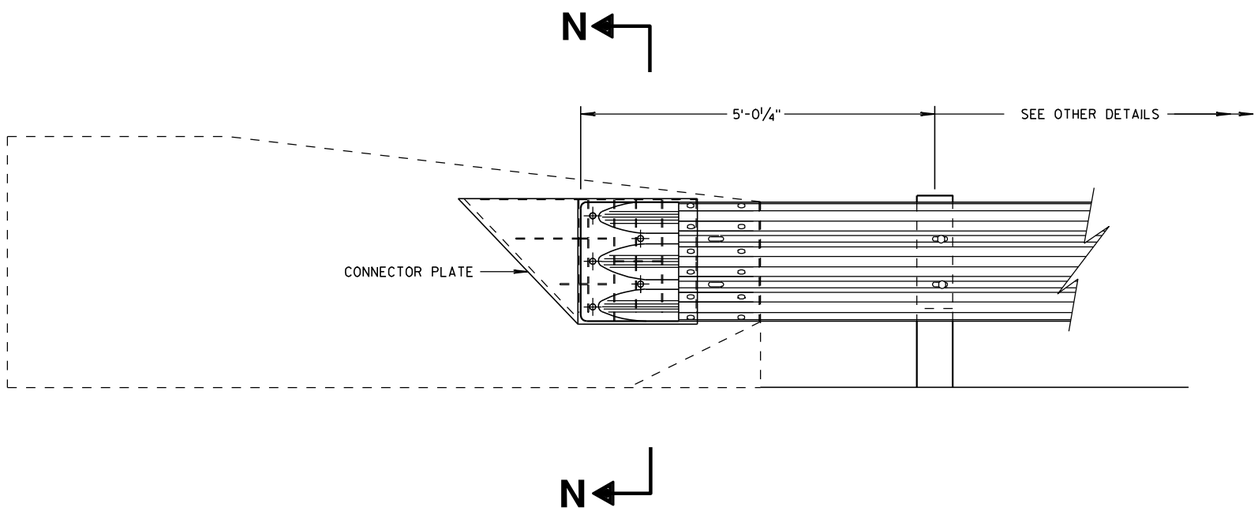
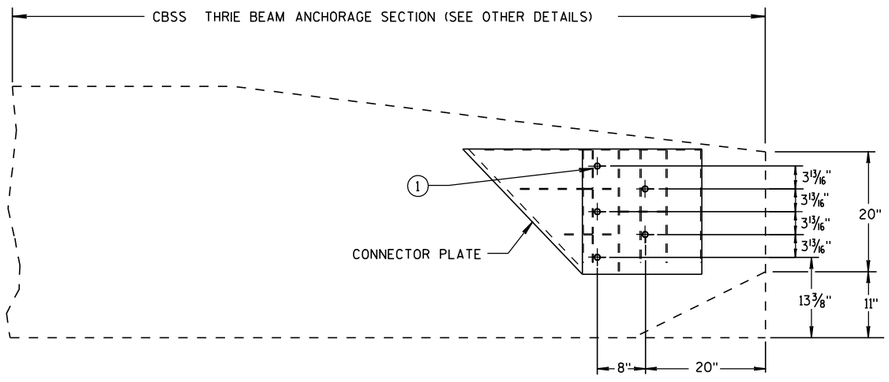


THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER

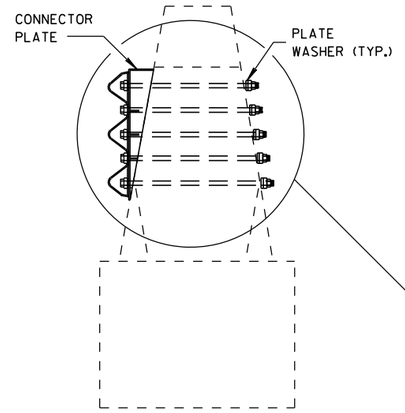


SINGLE SLOPE CONNECTION PLATE PLACEMENT

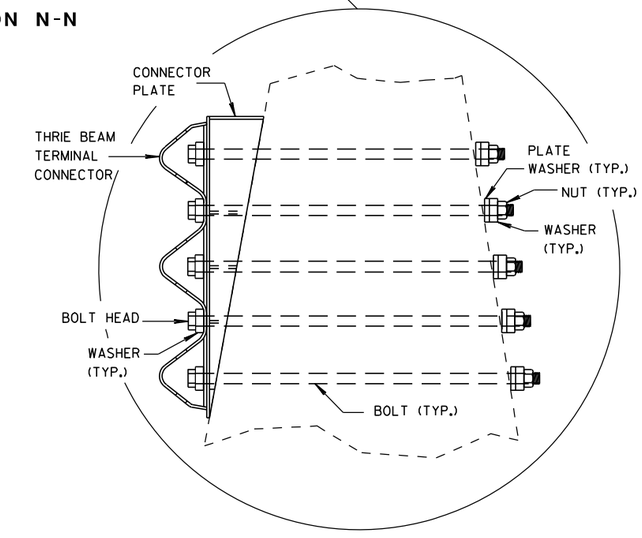
GENERAL NOTES

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

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8/31/2012
DATE

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

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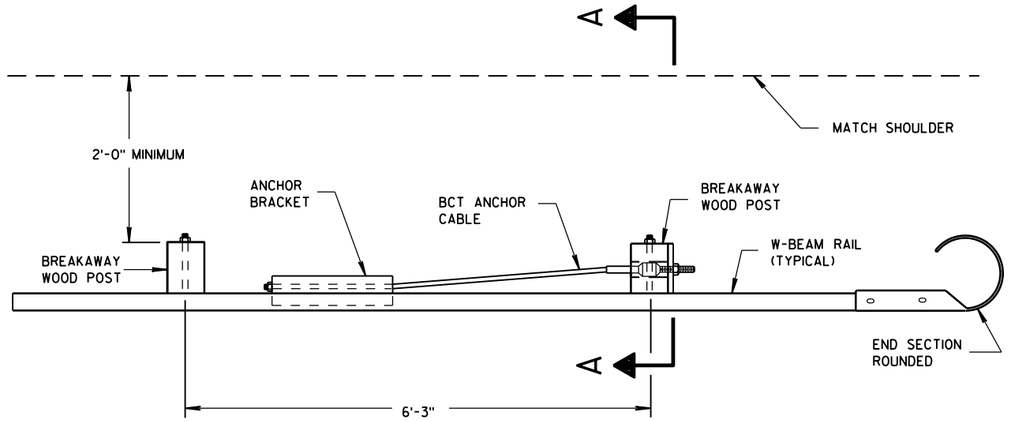
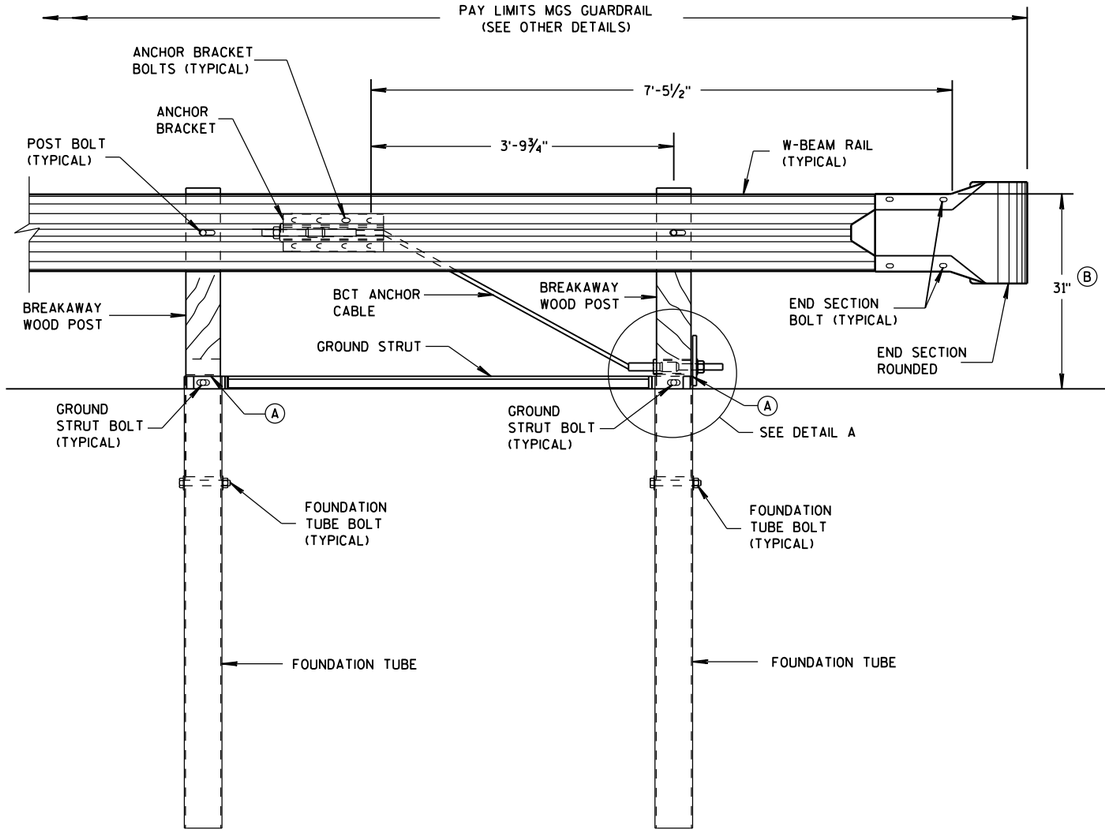
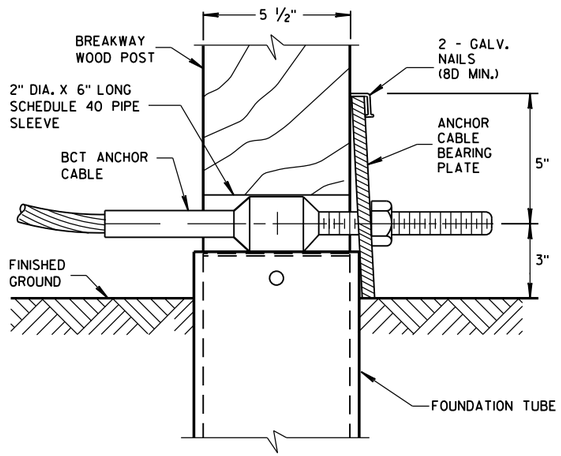


PLAN VIEW



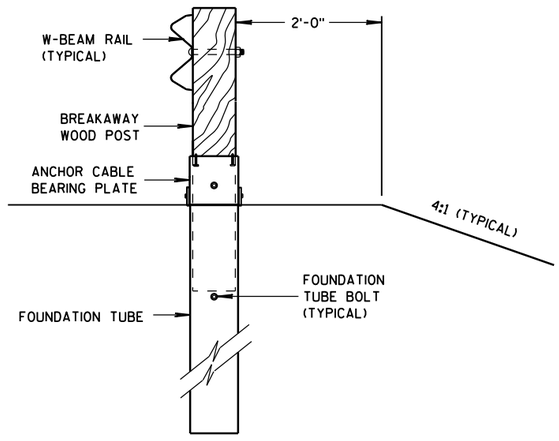
FRONT VIEW

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.

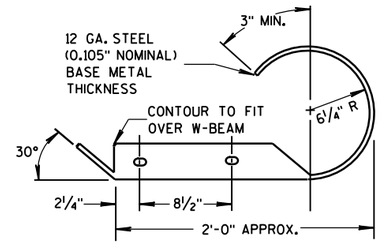
FOUNDATION TUBE BOLTS ARE ⅞" DIAMETER ASTM A307 HEX HEAD BOLT. FOUNDATION TUBE BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅞" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

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.

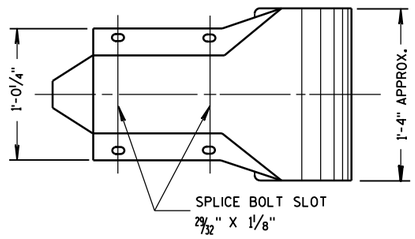
W-BEAM END SECTION ROUNDED HAS THE SAME MATERIAL PROPERTIES AS STANDARD STEEL RAIL.

(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

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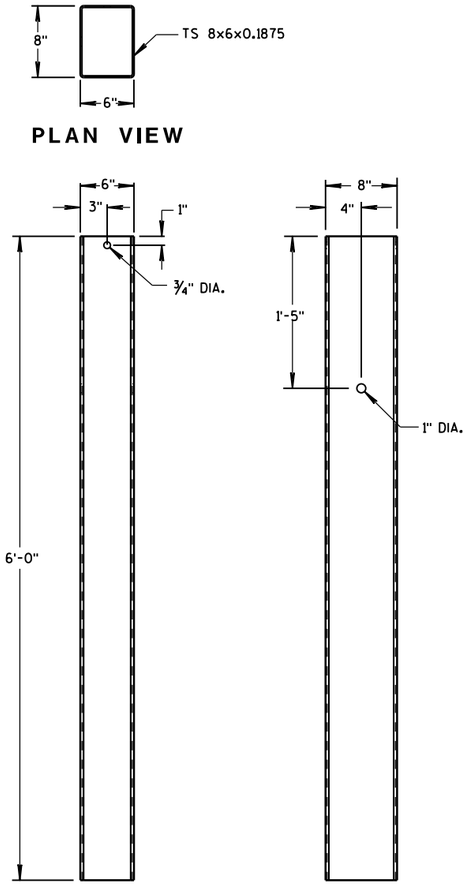
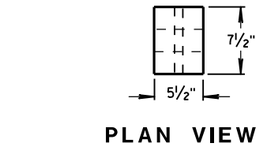
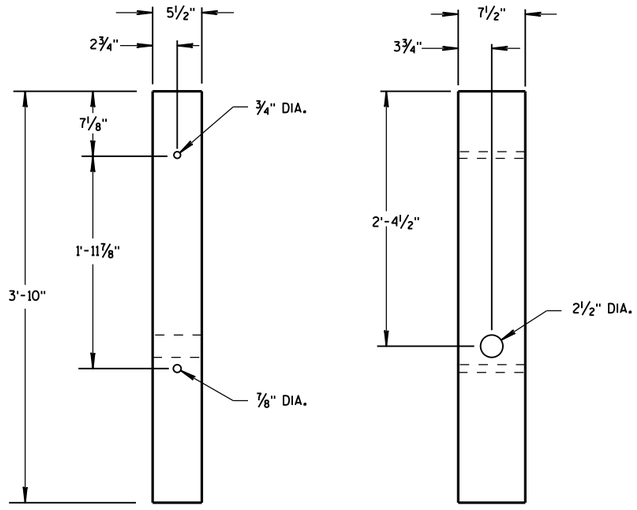
S.D.D. 14 B 47-2a



FOUNDATION TUBE

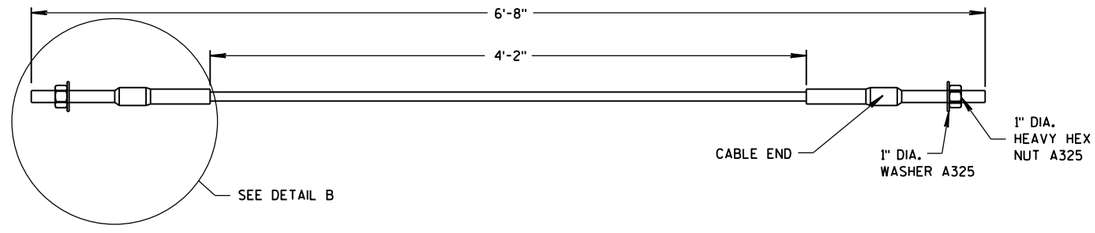




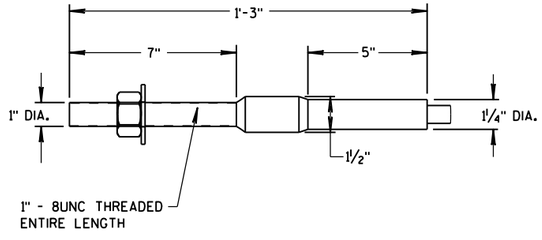
BREAKAWAY WOOD POST

GENERAL NOTES

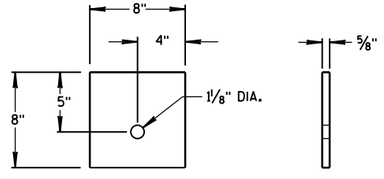
BCT ANCHOR CABLE IS A ¾" DIAMETER 6X19 IWRC IPS GALVANIZED WIRE ROPE. THE SWAGED FITTINGS AND STUD ARE REQUIRED. END FITTING SHALL BE MACHINED FROM HOT-ROLLED CARBON STEEL CONFORMING TO ASTM A576 GRADE 1035 AND GALVANIZED ACCORDING TO ASTM A123. TREADED STUD SHALL CONFORM TO ASTM A325 OR SAE GRADE 5.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

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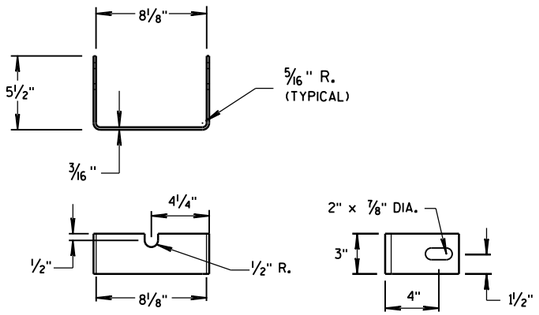
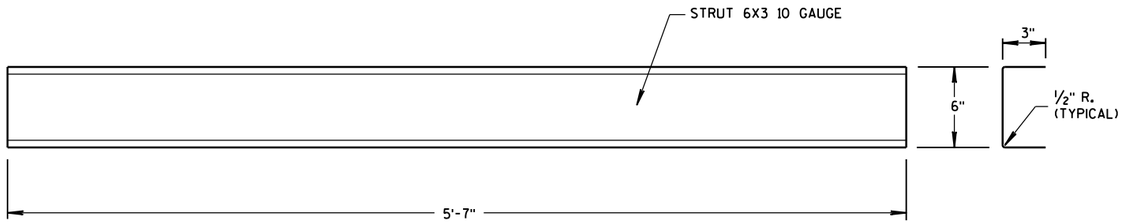
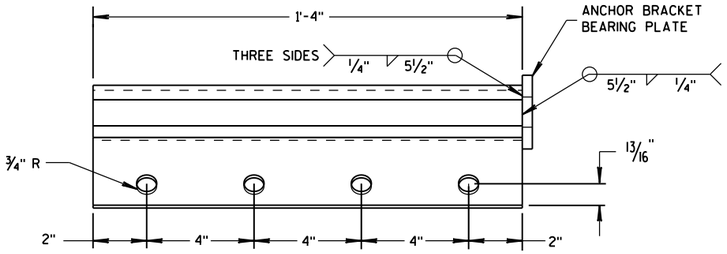
S.D.D. 14 B 47-2b

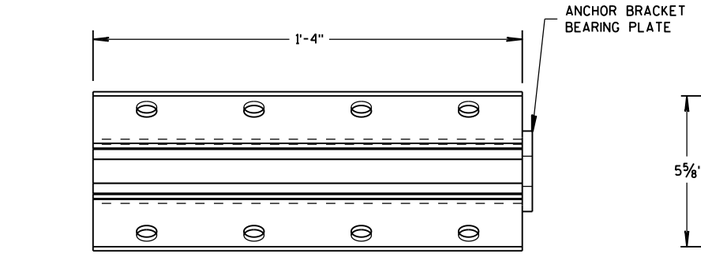


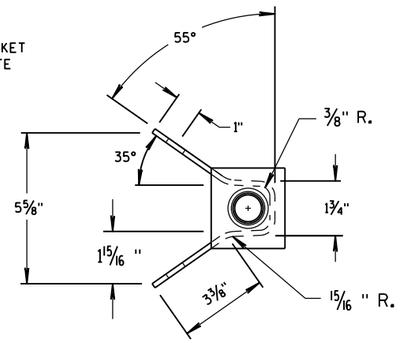
YOKE DETAIL



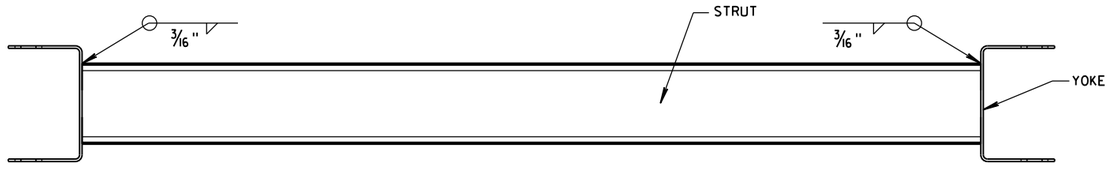
STRUT DETAIL



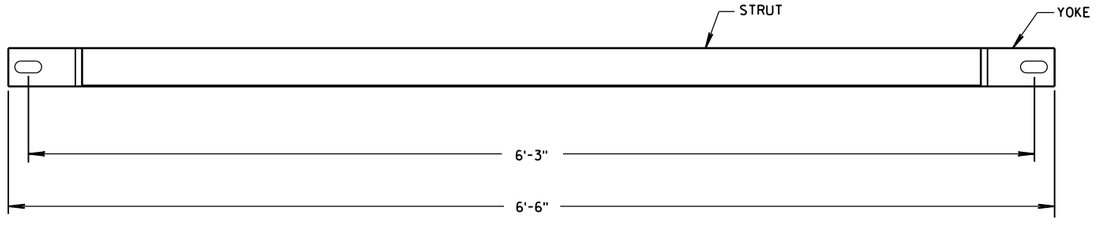




ANCHOR BRACKET

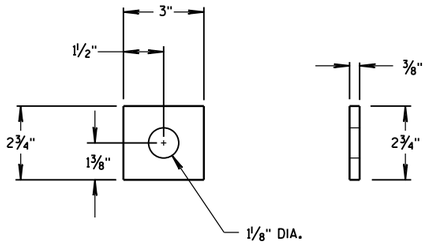


PLAN VIEW



FRONT VIEW

GROUND STRUT DETAIL



ANCHOR BRACKET BEARING PLATE

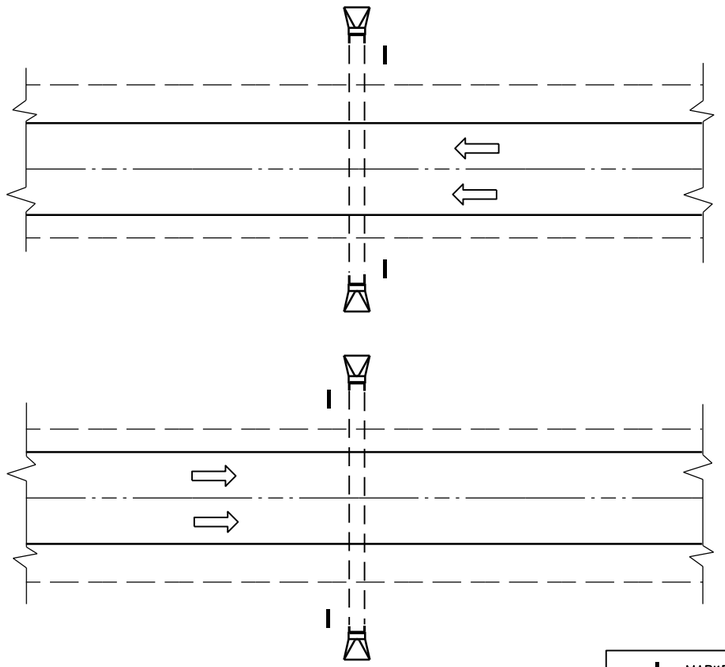
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

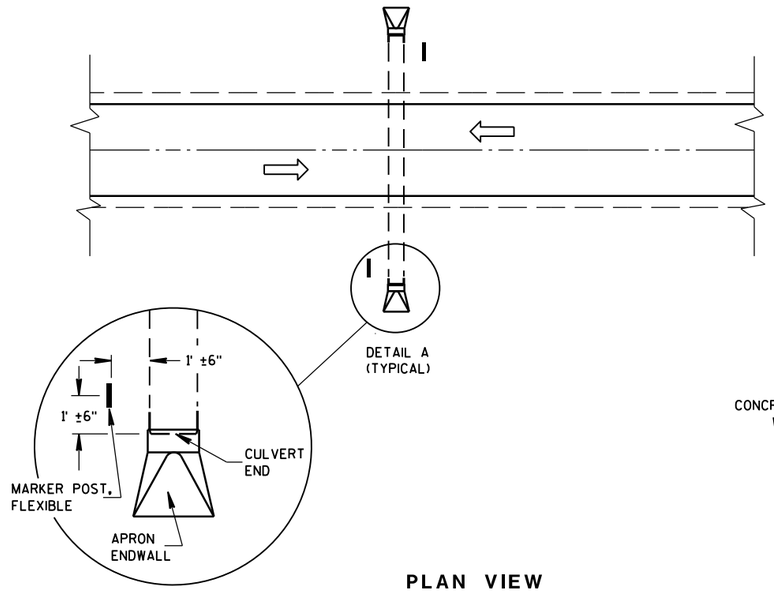
6

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



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

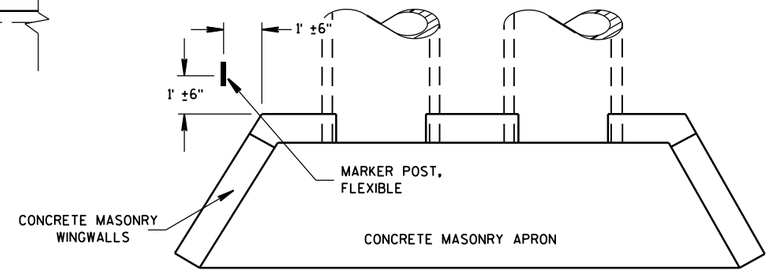
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

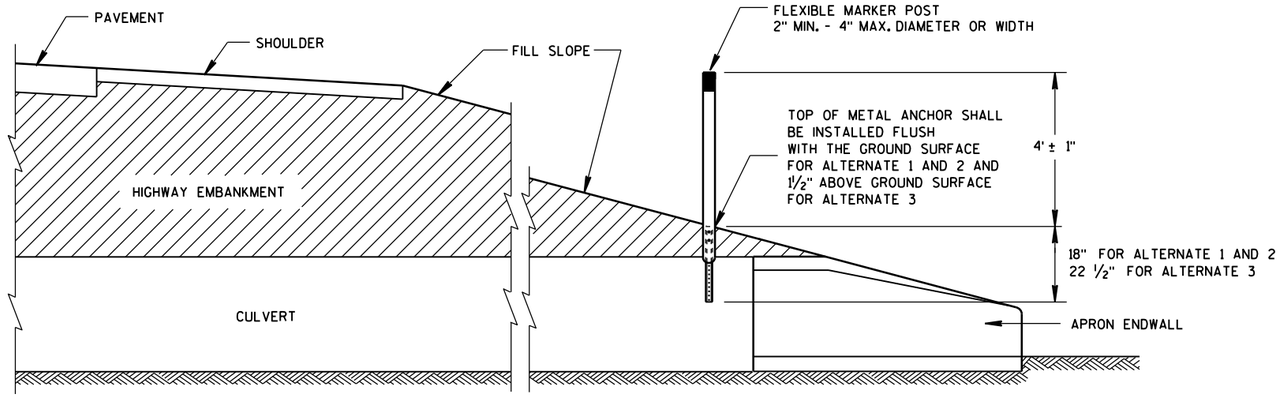
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 15 A 3-2a

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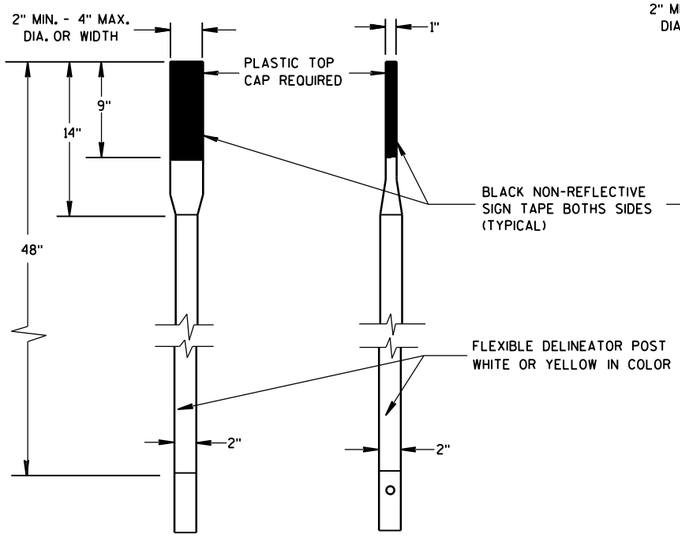
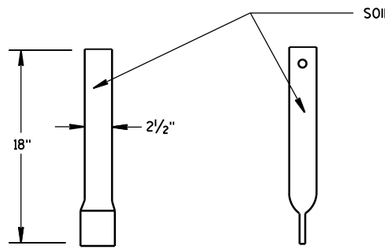
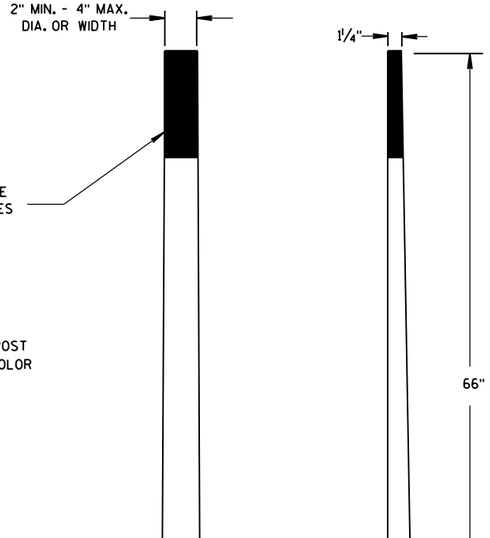
S.D.D. 15 A 3-2a





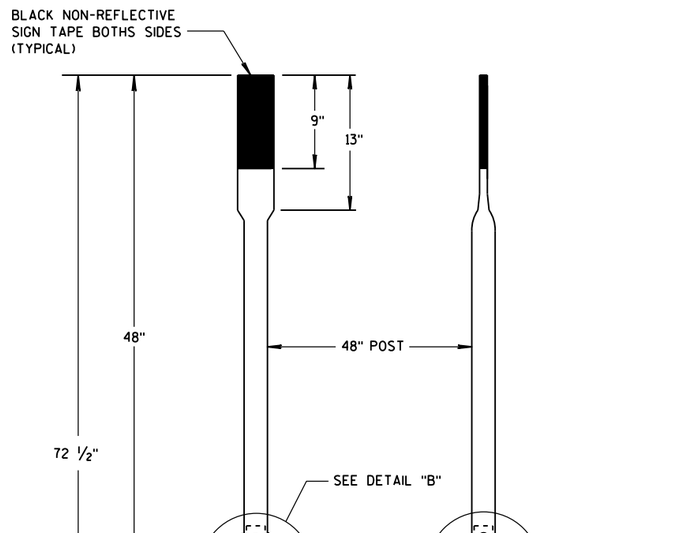
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

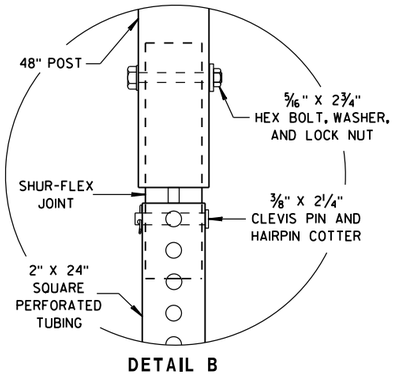
ALTERNATE 2



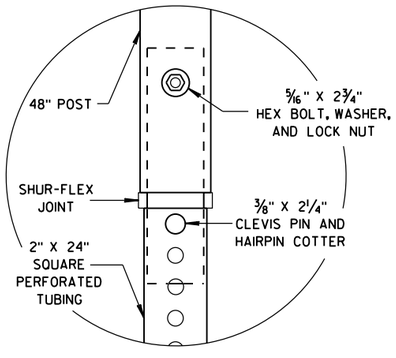
FRONT VIEW SIDE VIEW

ALTERNATE 3

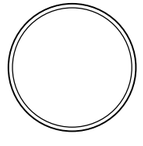
FLEXIBLE MARKER POSTS



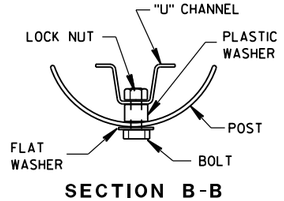
DETAIL B



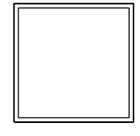
DETAIL C



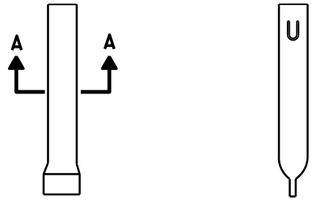
SECTION A-A



SECTION B-B

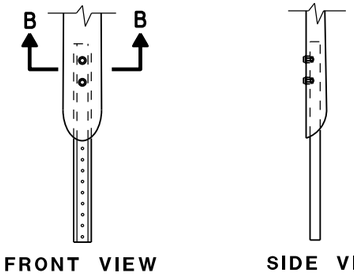


SECTION C-C



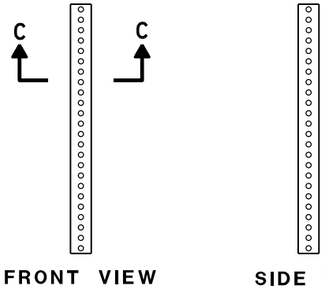
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

ALTERNATE 2



FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

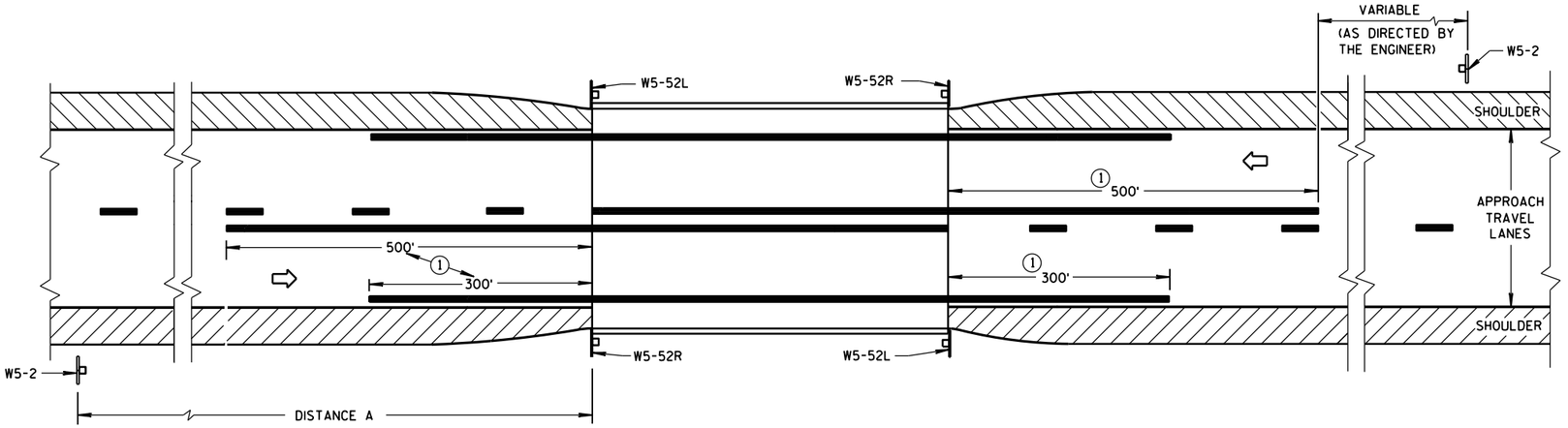
APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 A 3-2b

6

S.D.D. 15 A 3-2b



GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

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

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

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

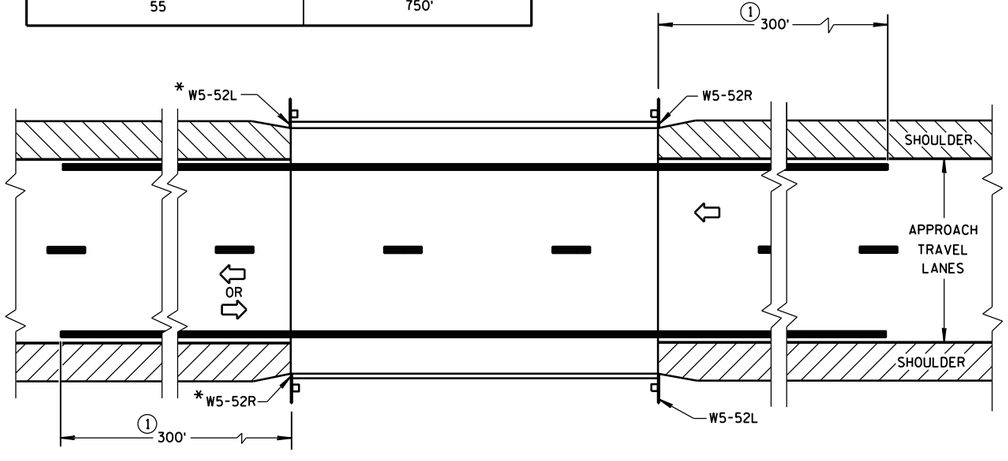
DISTANCE TABLE

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

SITUATION 1

WARRANTING CRITERIA:

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

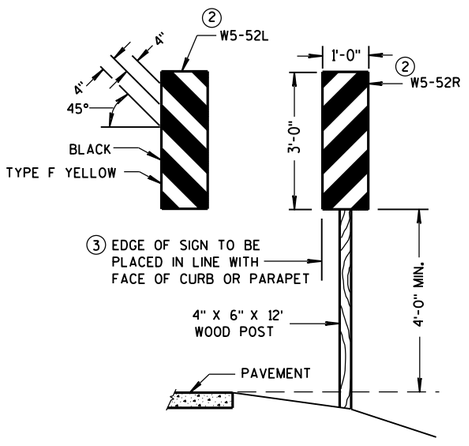


*OMIT ON ONE-WAY TRAVELLED WAYS

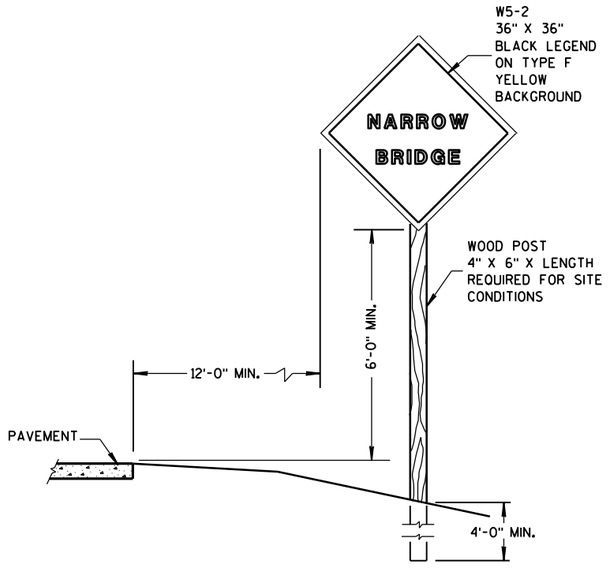
SITUATION 2

WARRANTING CRITERIA:

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



OBJECT MARKER PLACEMENT



SIGN PLACEMENT

SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3-2014 DATE

/S/ Travis Feltes STATE TRAFFIC ENGINEER

FHWA

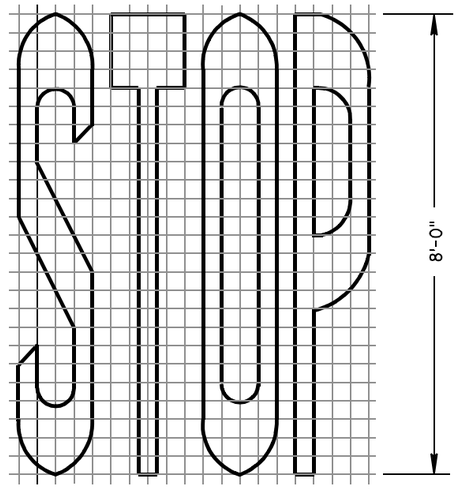
6

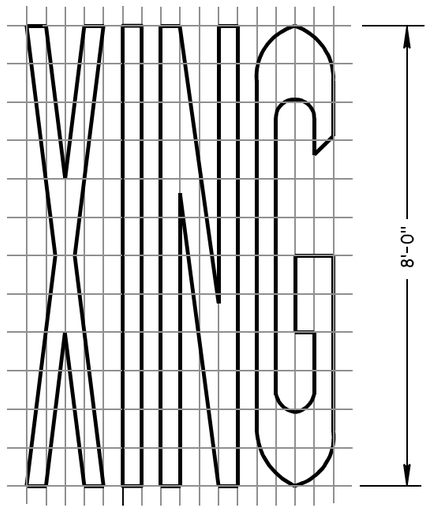
S.D.D. 15 C 6-7

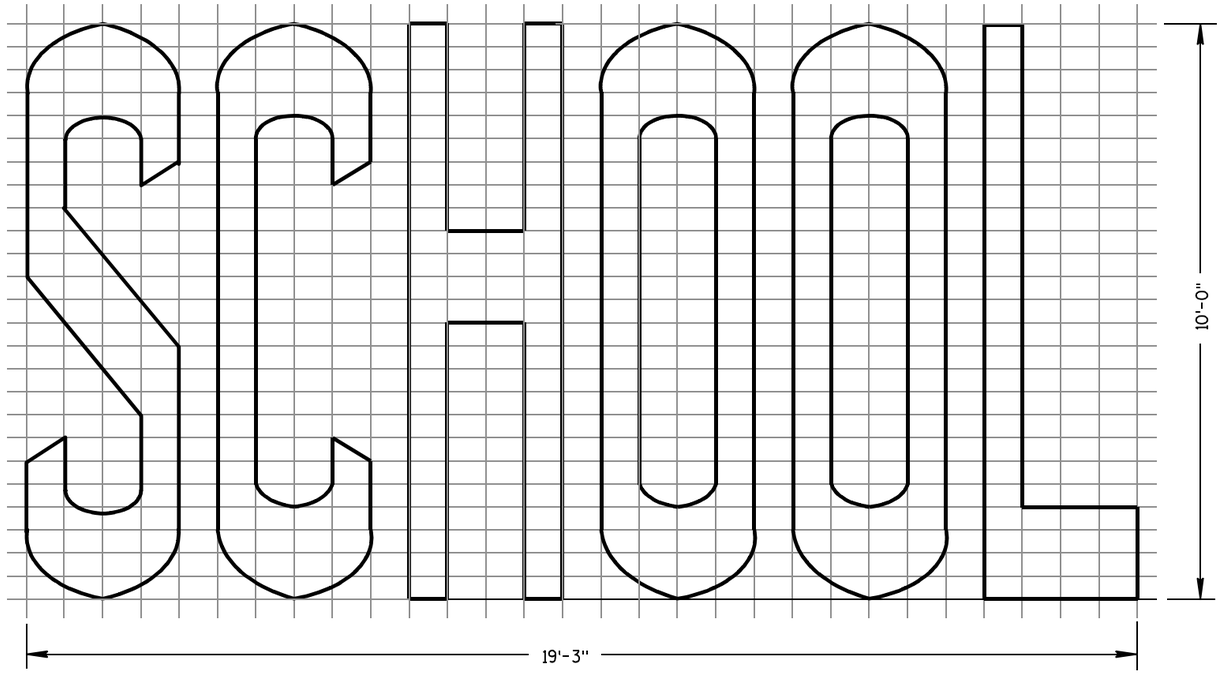
GENERAL NOTES

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

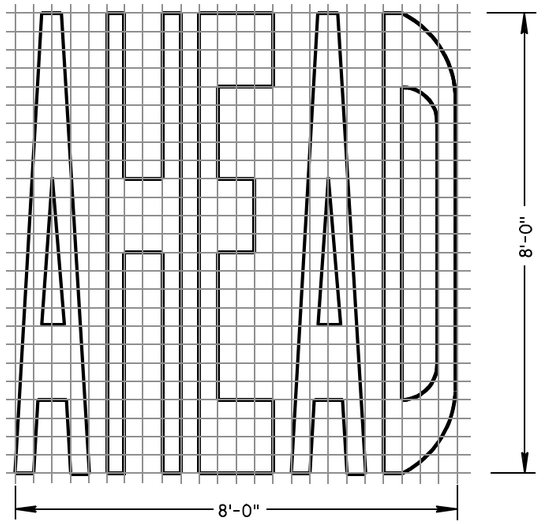
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.

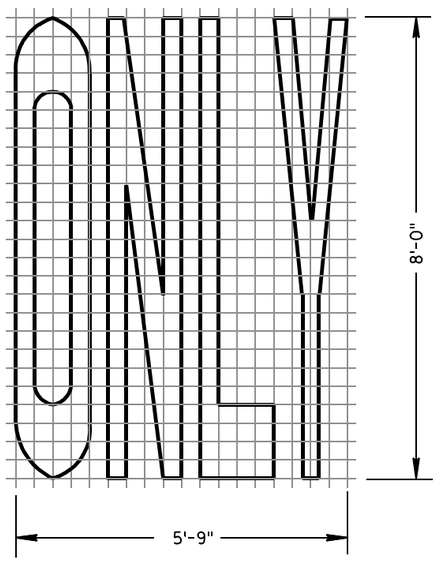


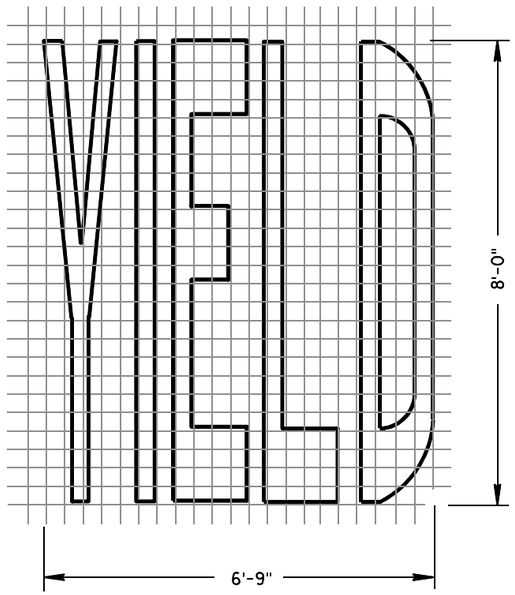


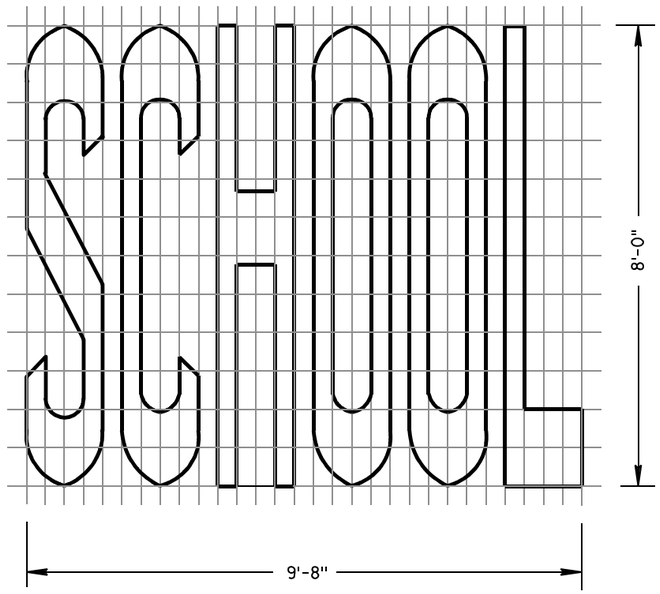


TWO-LANE









SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-1-11 DATE — /S/ Thomas N. Nothohm STATE TRAFFIC ENGINEER

FHWA

6

S.D.D. 15 C 7-12b

6

S.D.D. 15 C 7-12b

GENERAL NOTES

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

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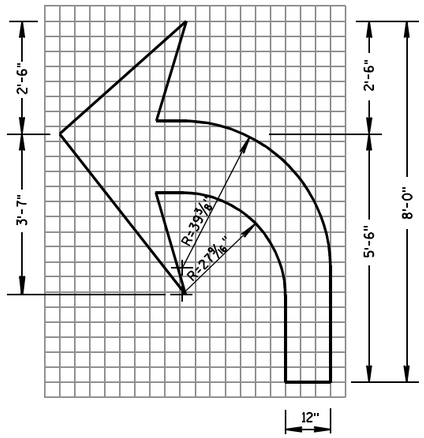
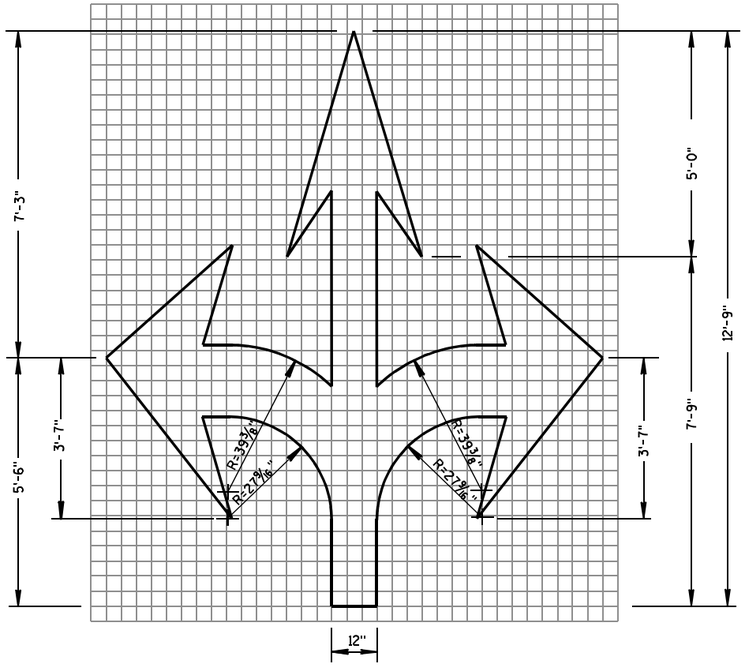


TYPE 2



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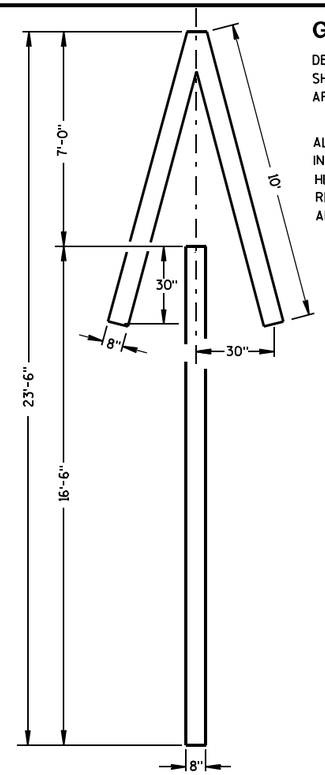

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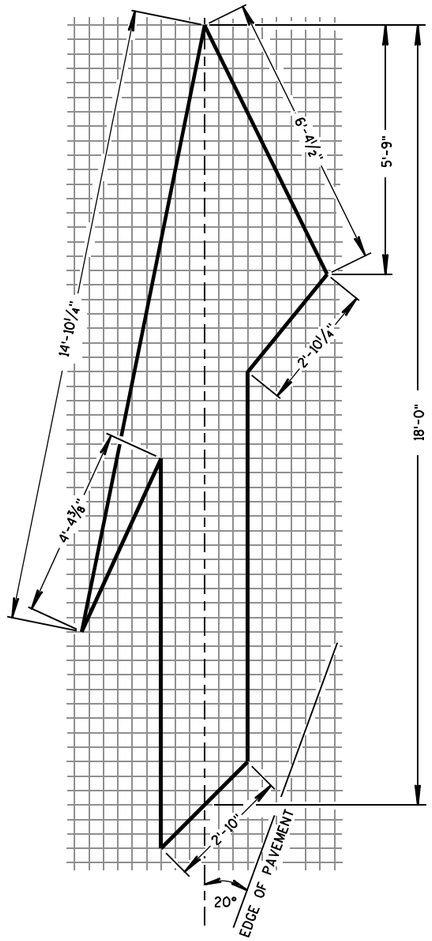
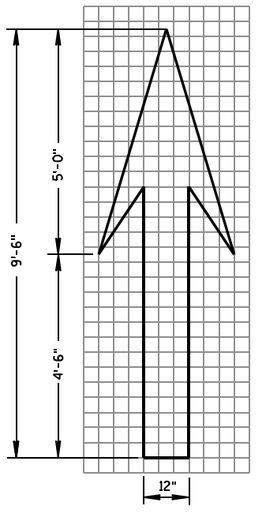
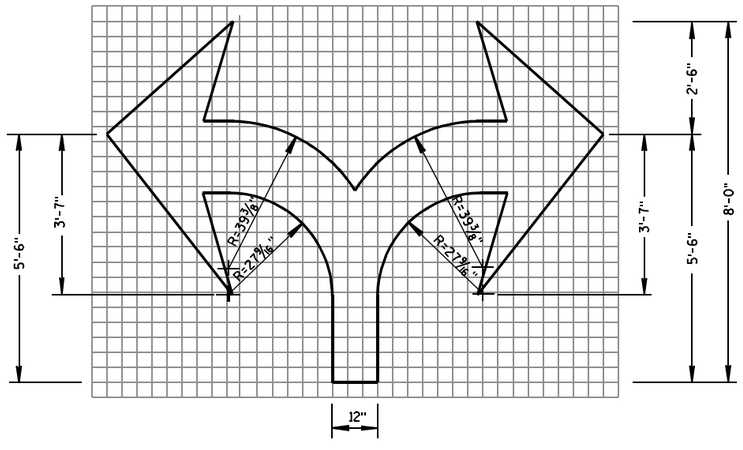


TYPE 5 LANE DROP ARROW



TYPE 1



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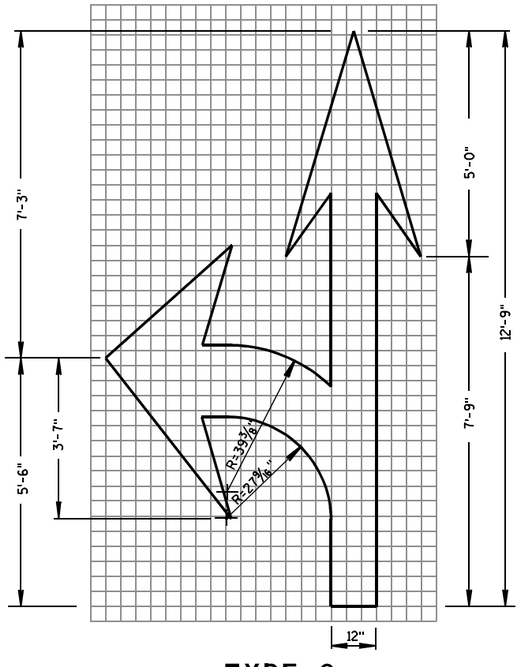


TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/1/11 — DATE

/S/ Thomas N. Nothdurft — STATE TRAFFIC ENGINEER

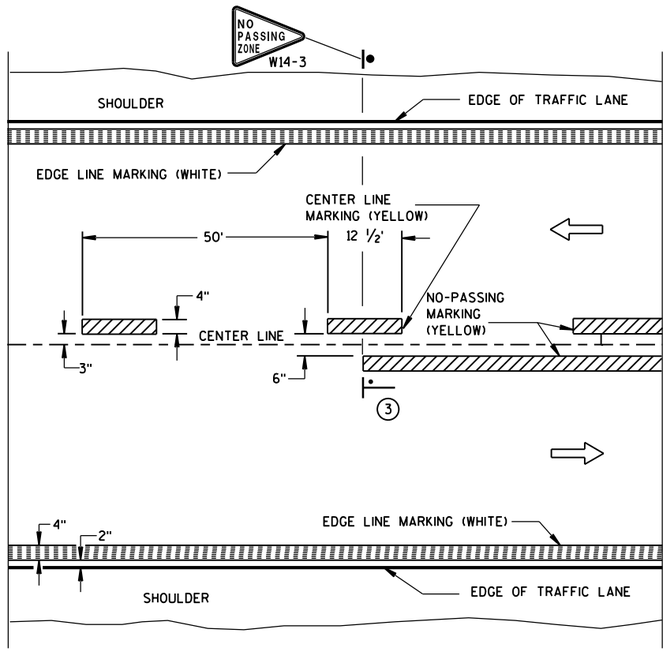
FHWA

6

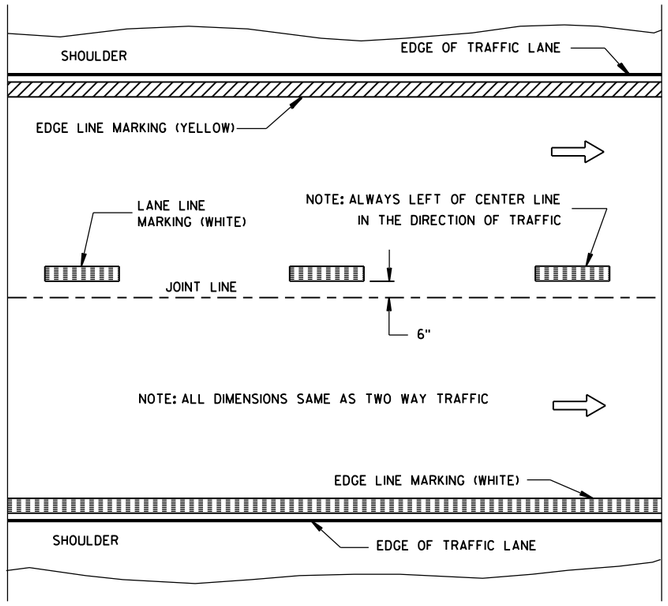
S.D.D. 15 C 7-12c

6

S.D.D. 15 C 7-12c

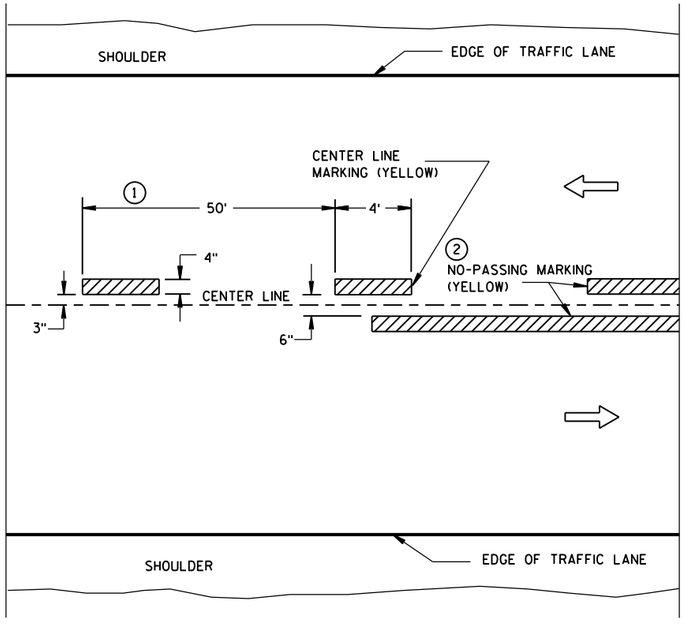


TWO WAY TRAFFIC

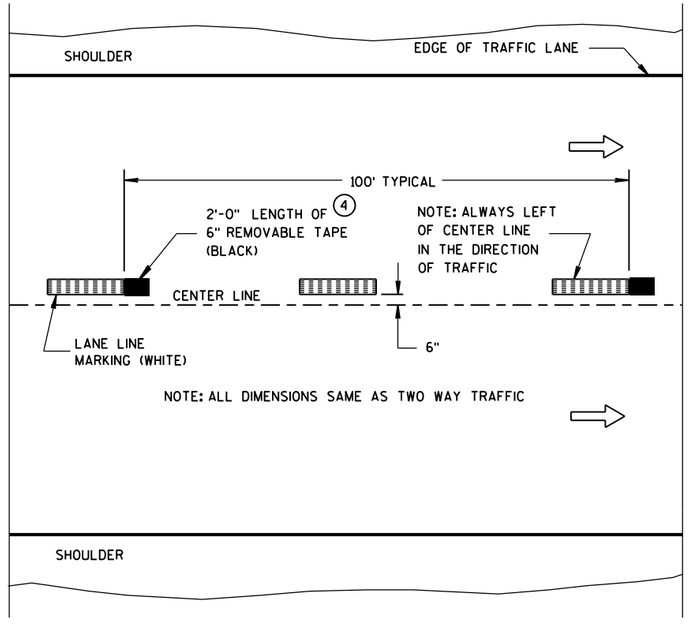


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

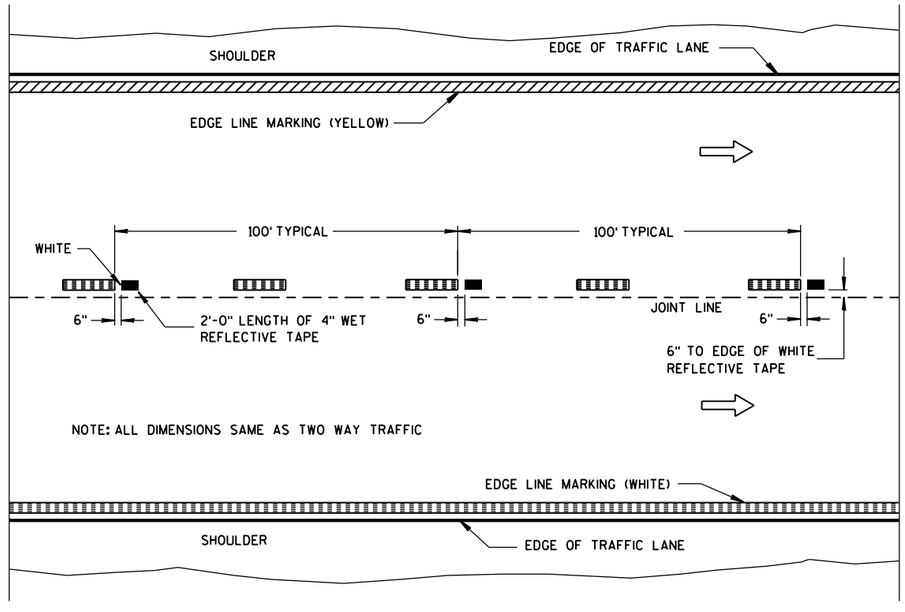
GENERAL NOTES

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

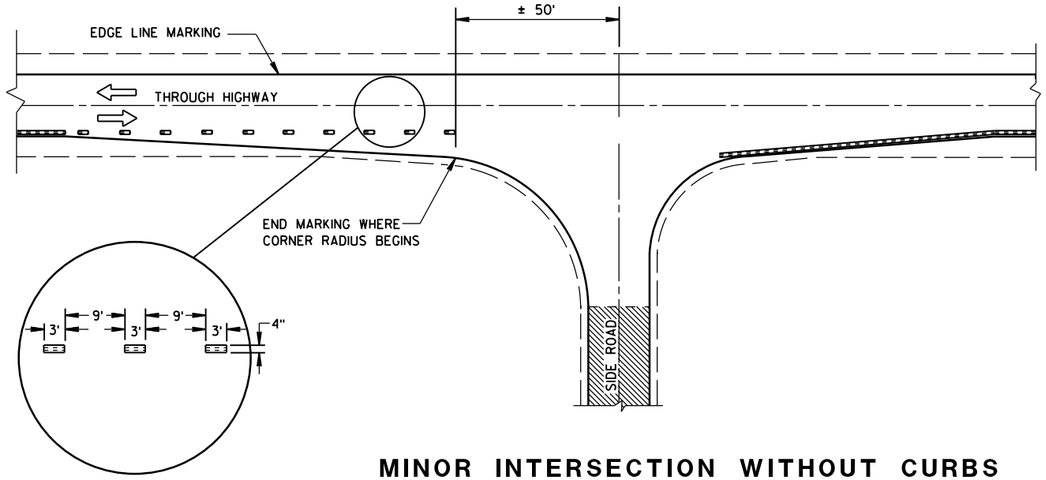
FHWA

6

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

6

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



MINOR INTERSECTION WITHOUT CURBS

GENERAL NOTES

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

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

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

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

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

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

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

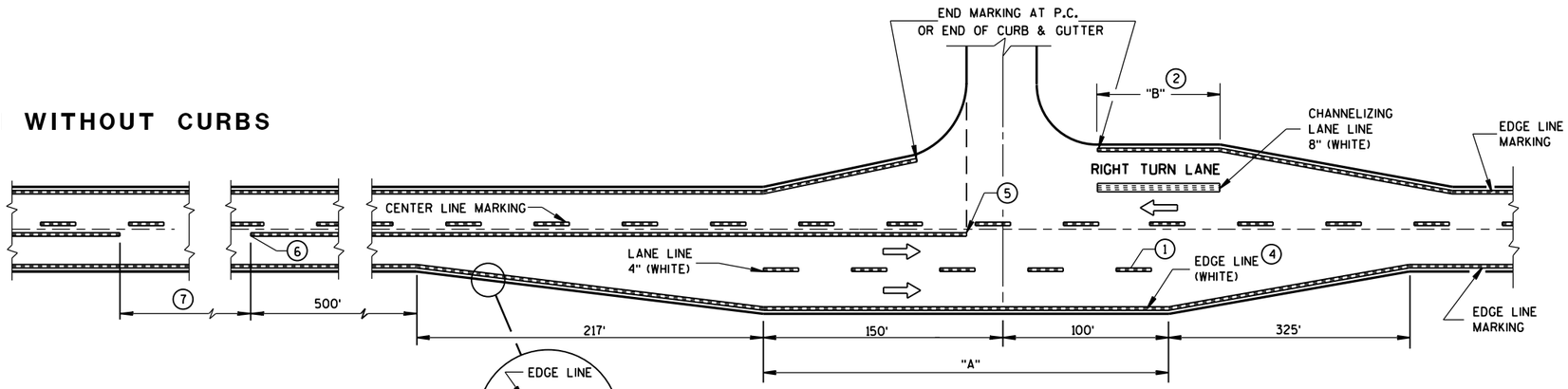
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

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

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

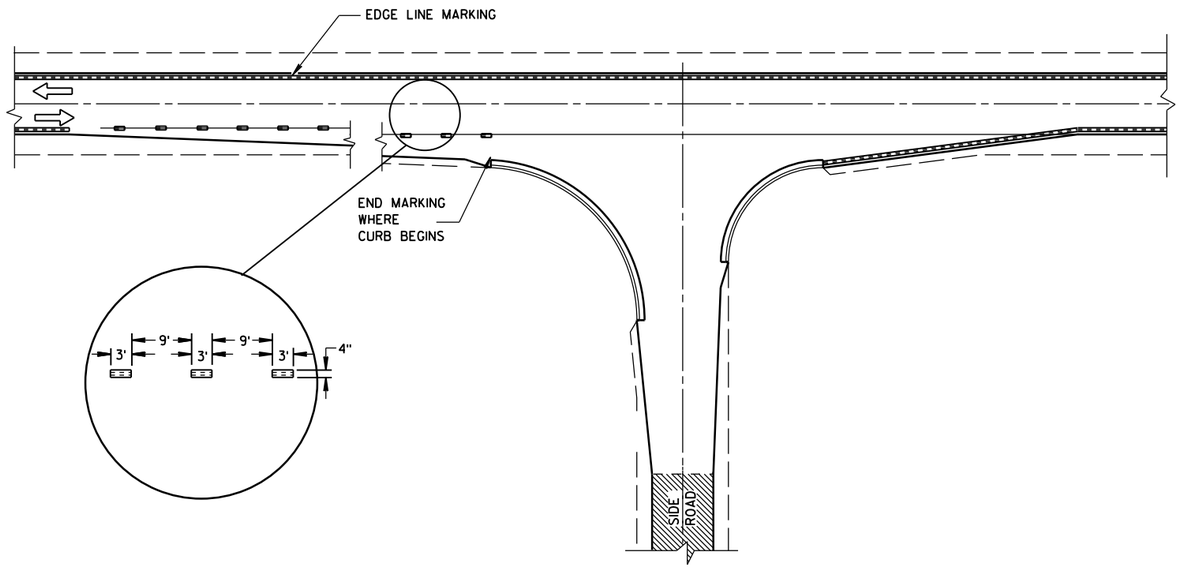
(7)

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



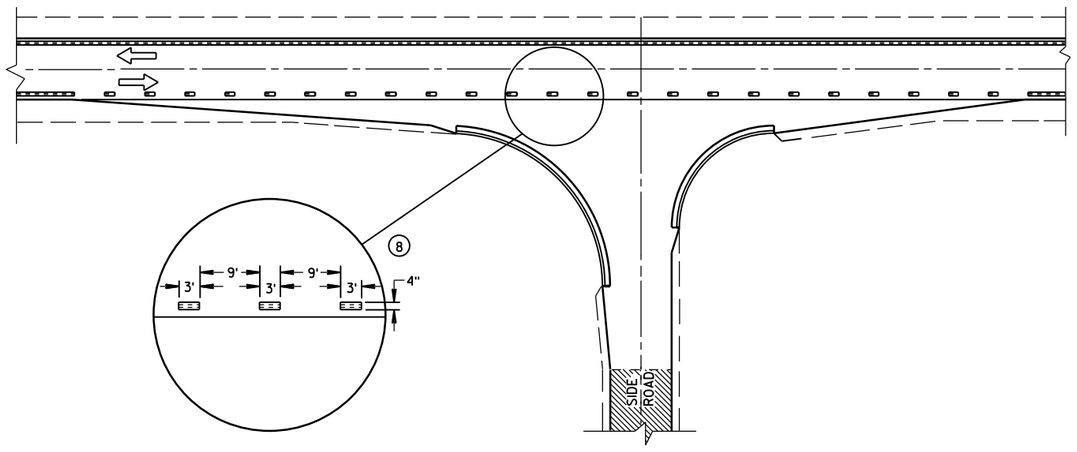
MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



MINOR INTERSECTION WITH CURBS

(TYPICAL MARKING)



MINOR INTERSECTION WITH CURBS

(3) (FOR SPECIAL CONDITIONS AS SPECIFIED)

PAVEMENT MARKING
(INTERSECTIONS)

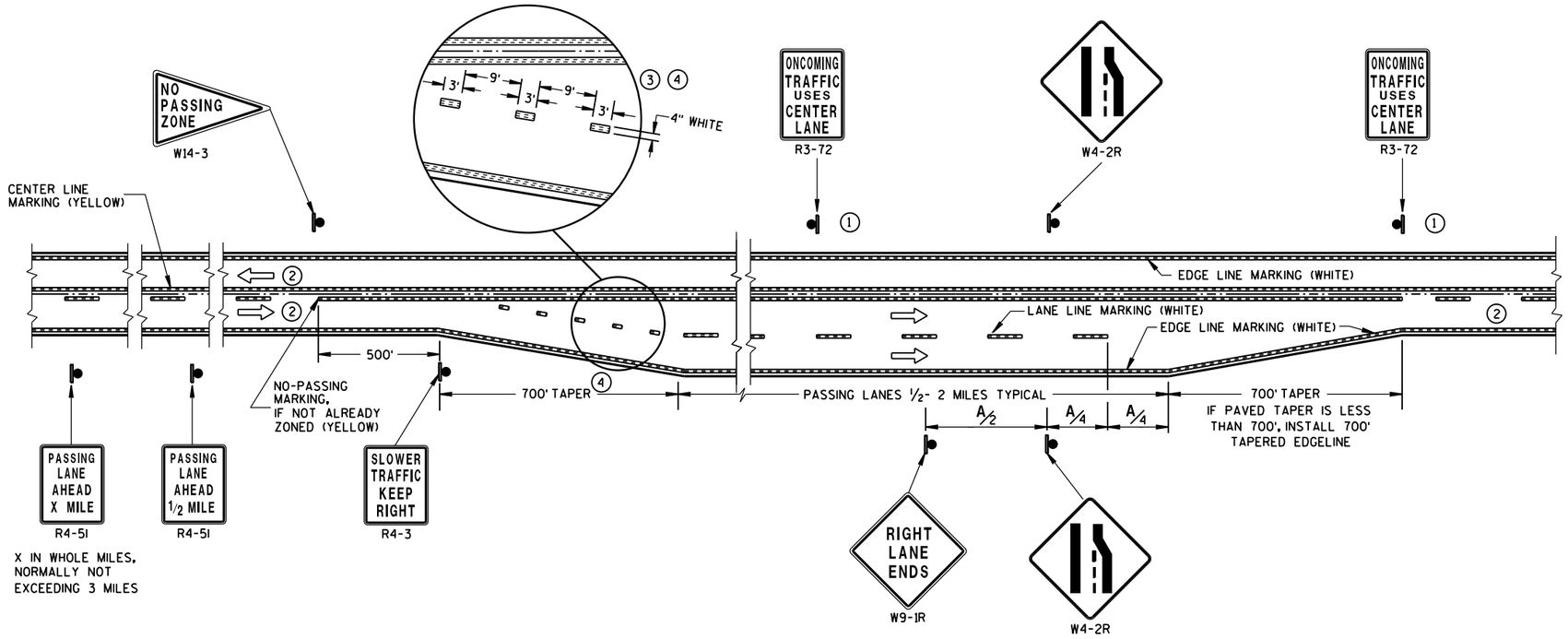
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

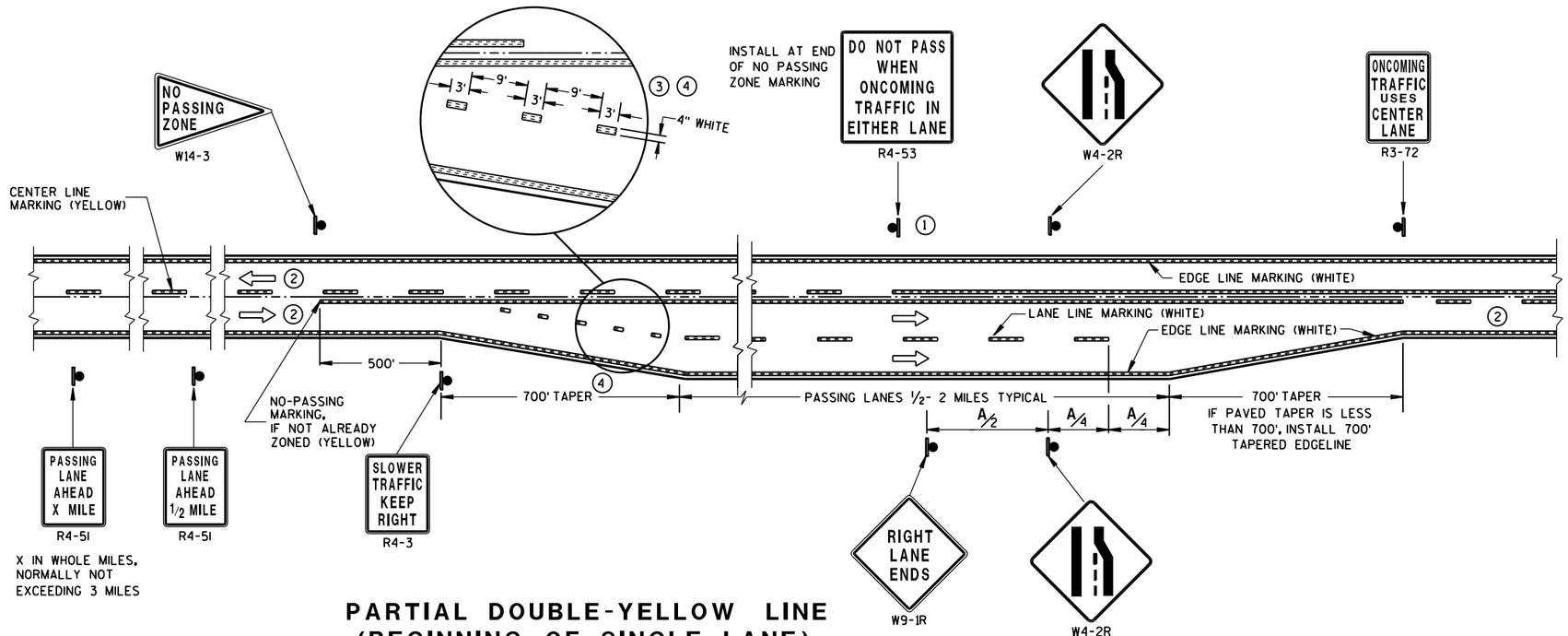
S.D.D. 15 C 8-16b

6

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



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



PARTIAL DOUBLE-YELLOW LINE
(BEGINNING OF SINGLE LANE)

GENERAL NOTES

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

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

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

PAVEMENT MARKING & SIGNING (CLIMBING LANE & PASSING LANE)

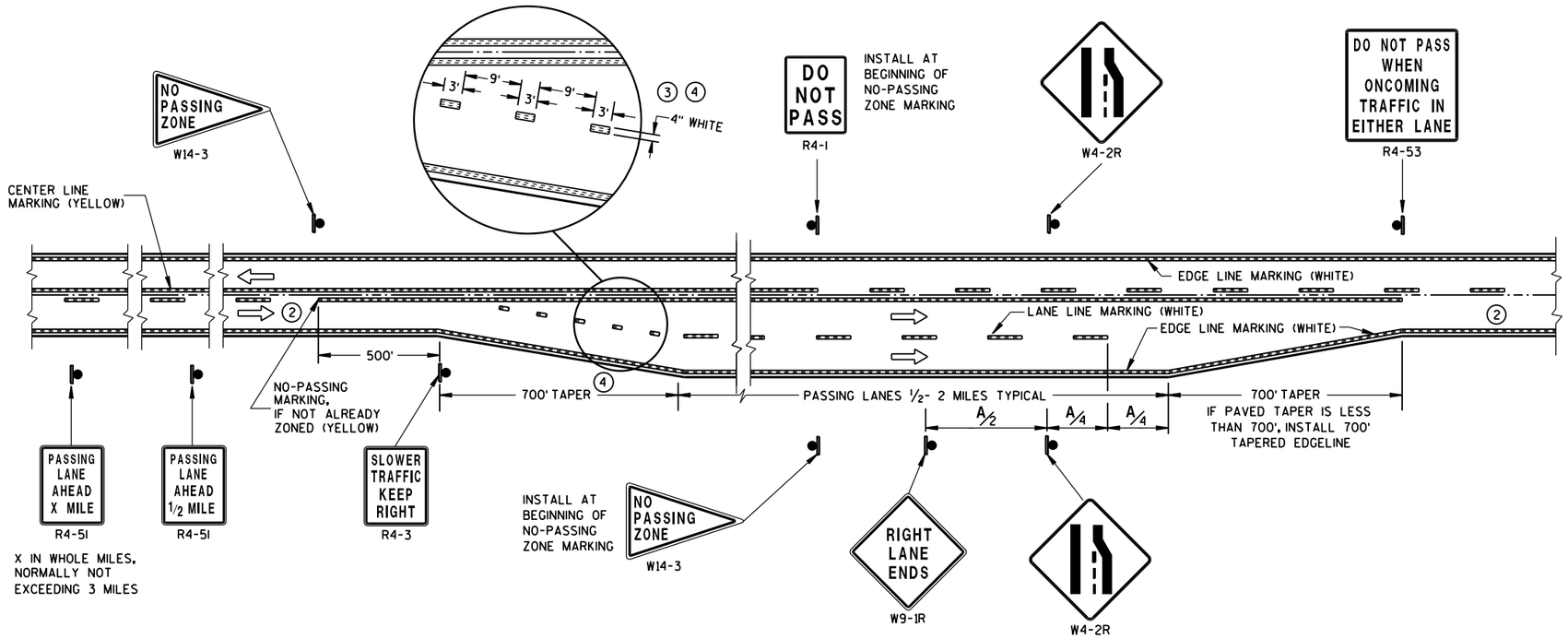
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

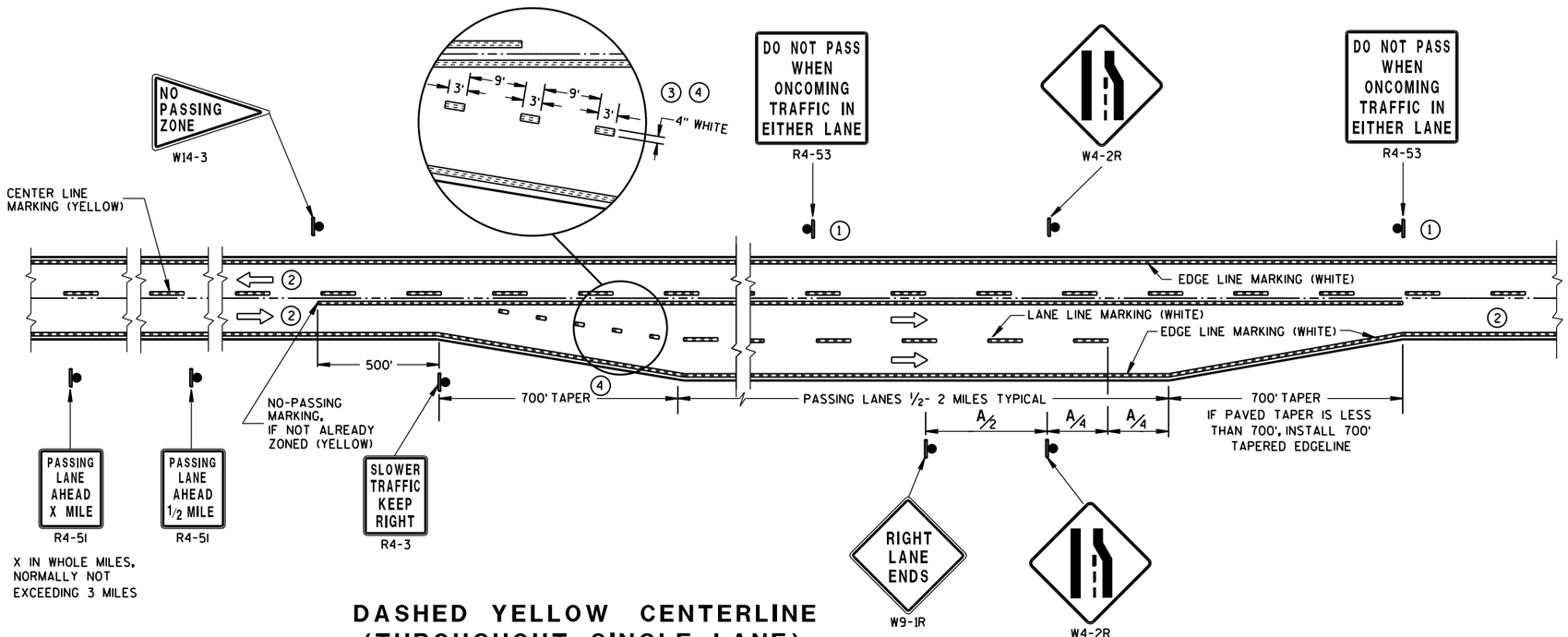
S.D.D. 15 C 8-16c

6

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



SOLID DOUBLE-YELLOW LINE (END OF SINGLE LANE)



DASHED YELLOW CENTERLINE (THROUGHOUT SINGLE LANE)

GENERAL NOTES

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

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

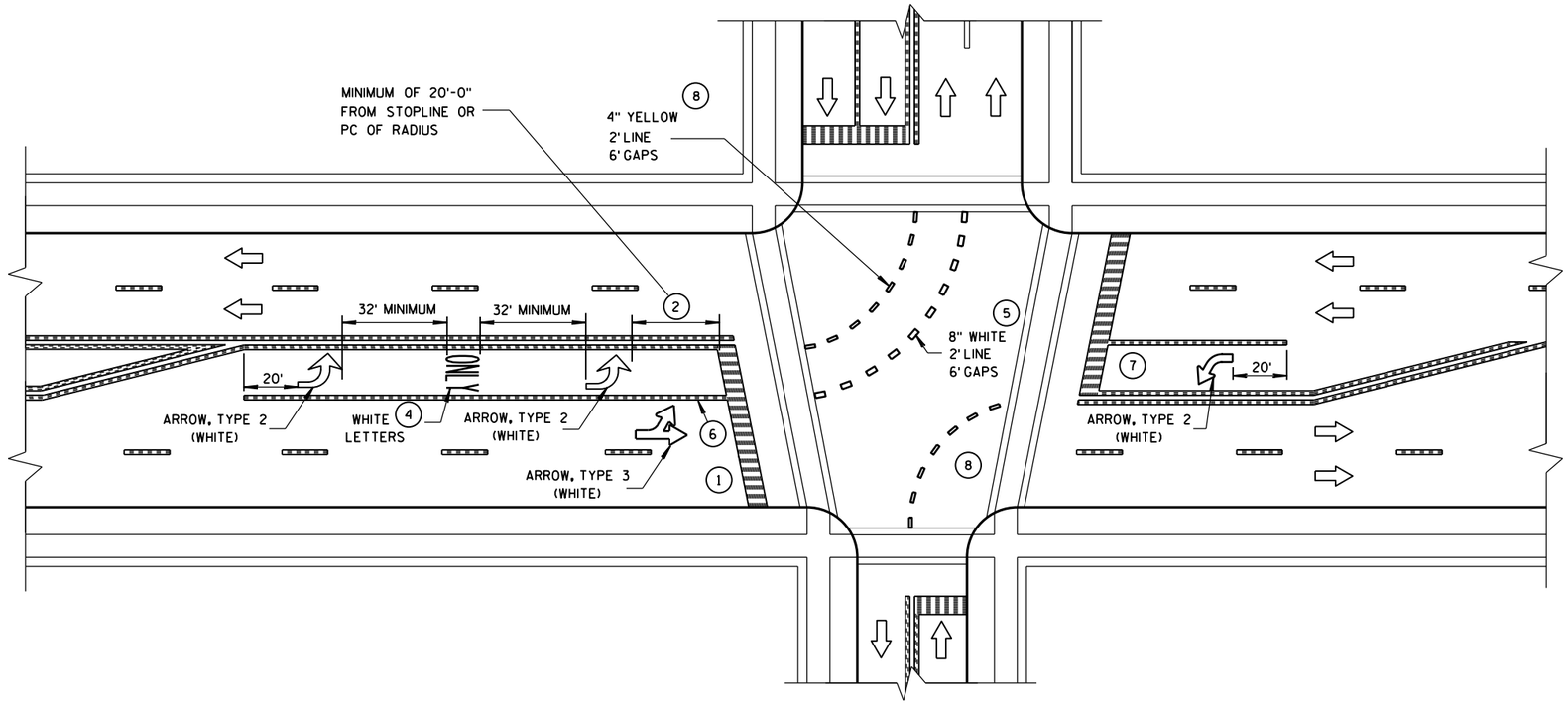
POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	750
50	850
55	950

6

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

PAVEMENT MARKING & SIGNING (CLIMBING LANE & PASSING LANE)

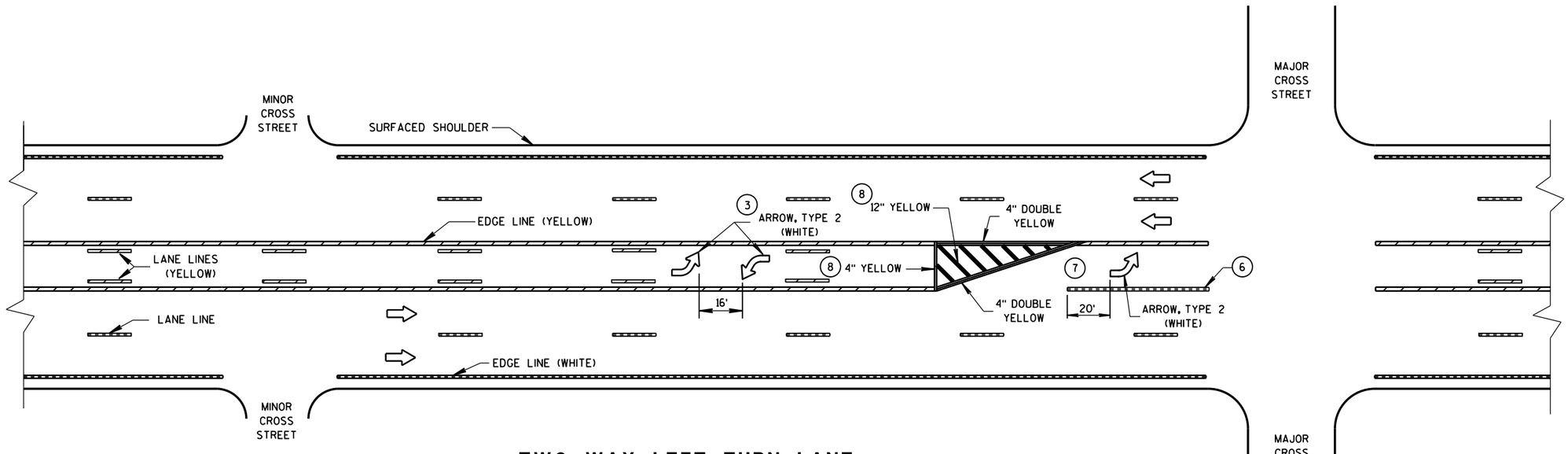
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO



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)

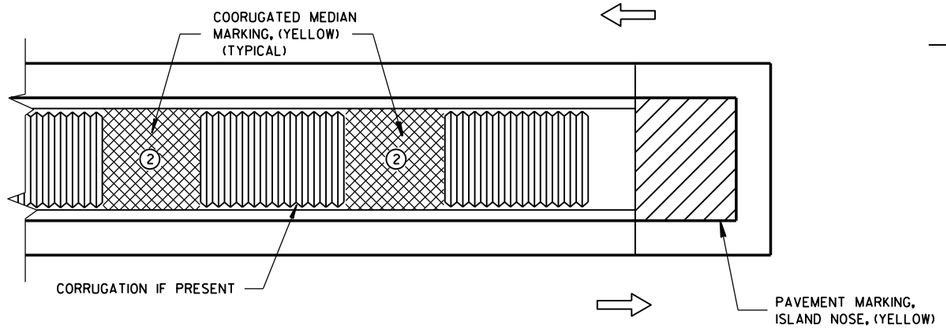
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

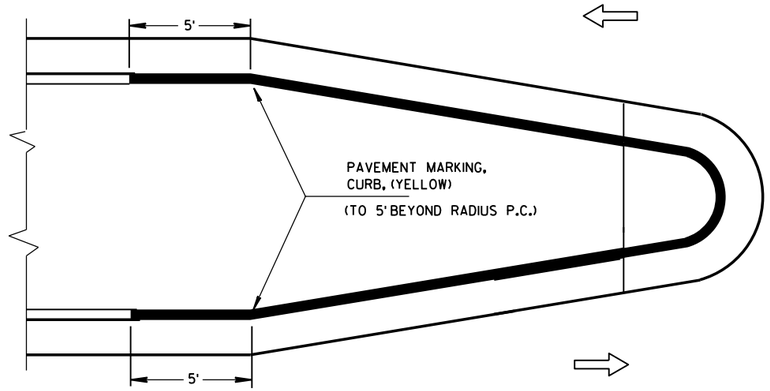
S.D.D. 15 C 8-16e

6

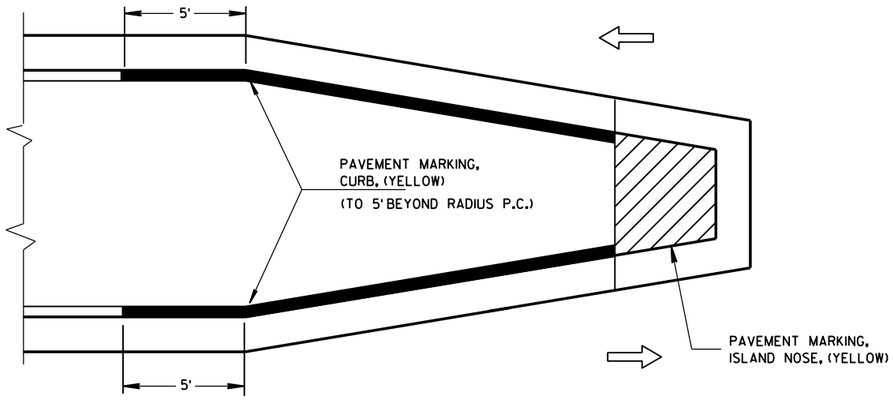
S.D.D. 15 C 8-16e



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

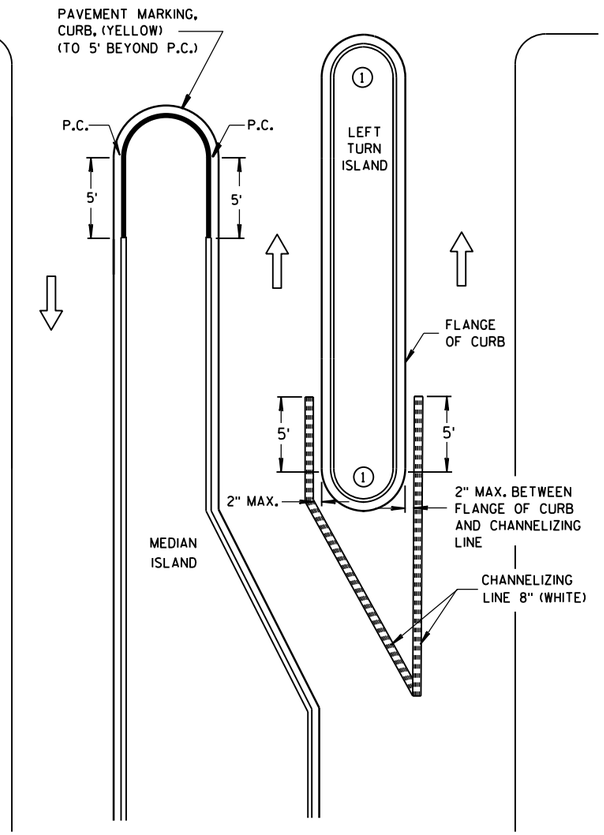


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

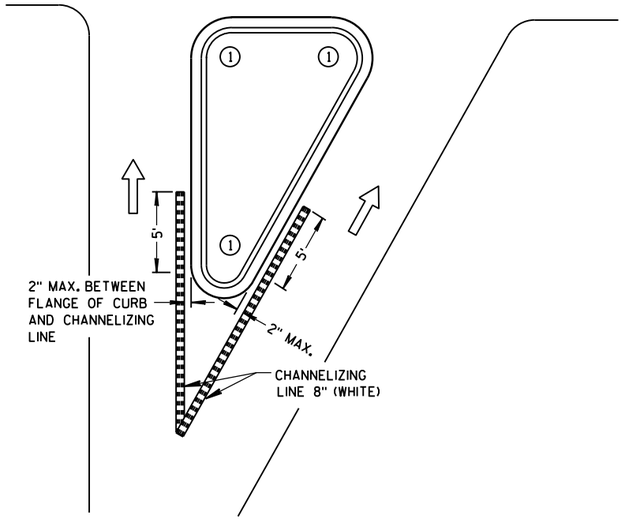


LEFT TURN & MEDIAN ISLAND

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

6

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

6

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

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA

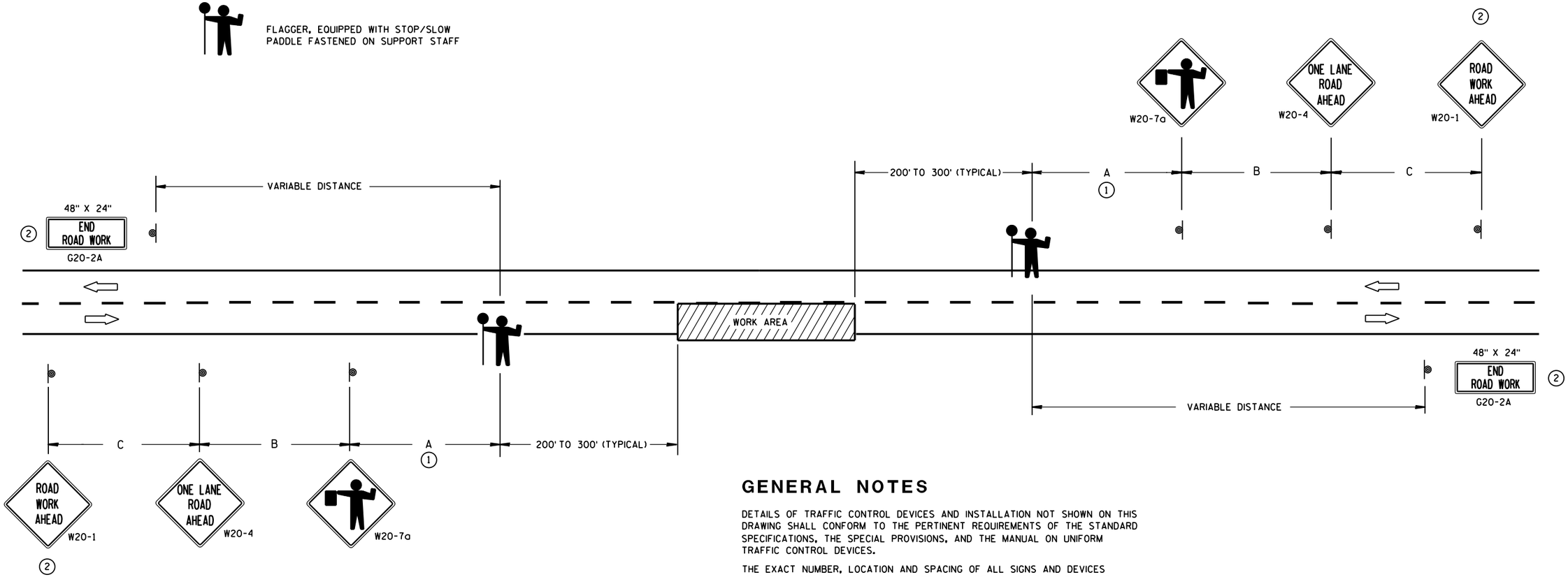
FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN SPACING TABLE

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

BE PREPARED TO STOP
W3-4

USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



(1) FOR A MOVING WORK OPERATION,
SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

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

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.

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

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

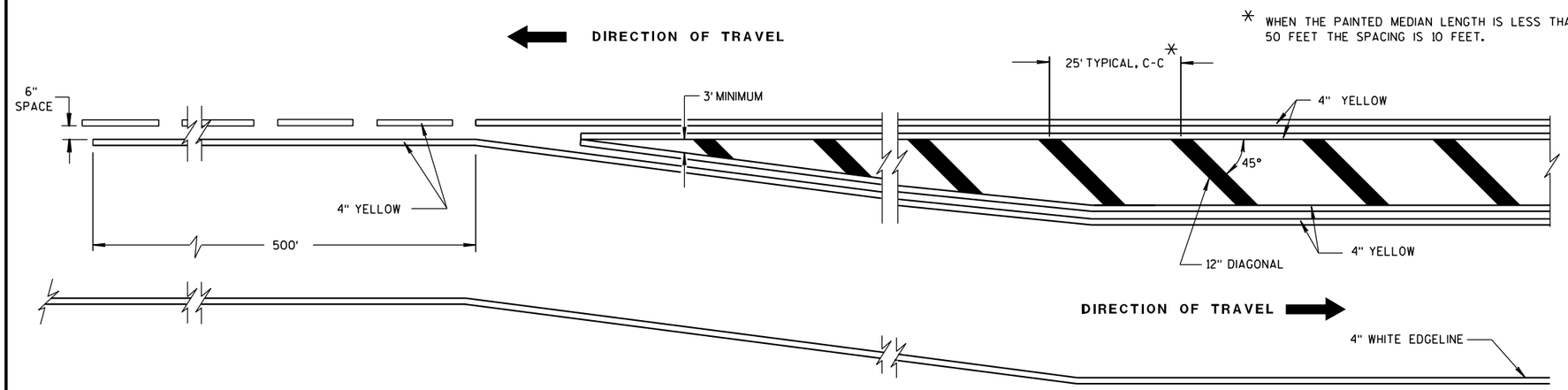
APPROVED
8/2013
DATE
/S/ Travis Feltes
STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 C 12-4

6

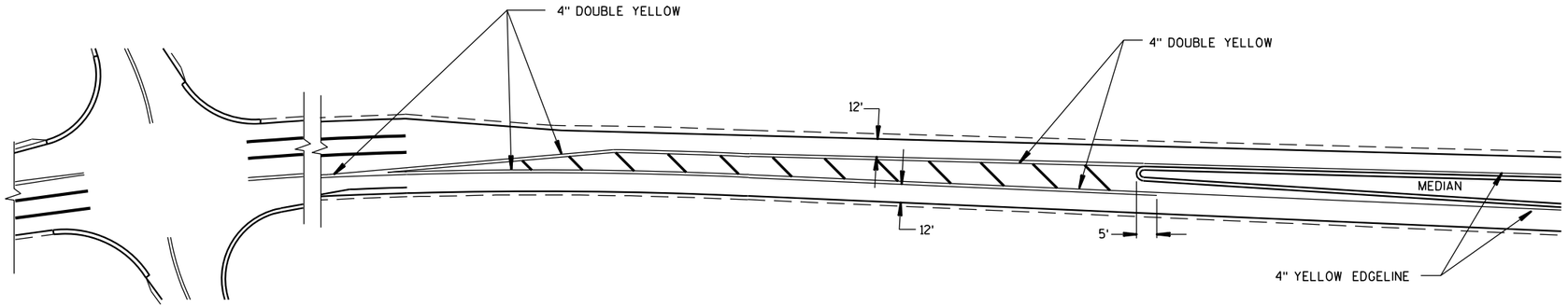
S.D.D. 15 C 12-4



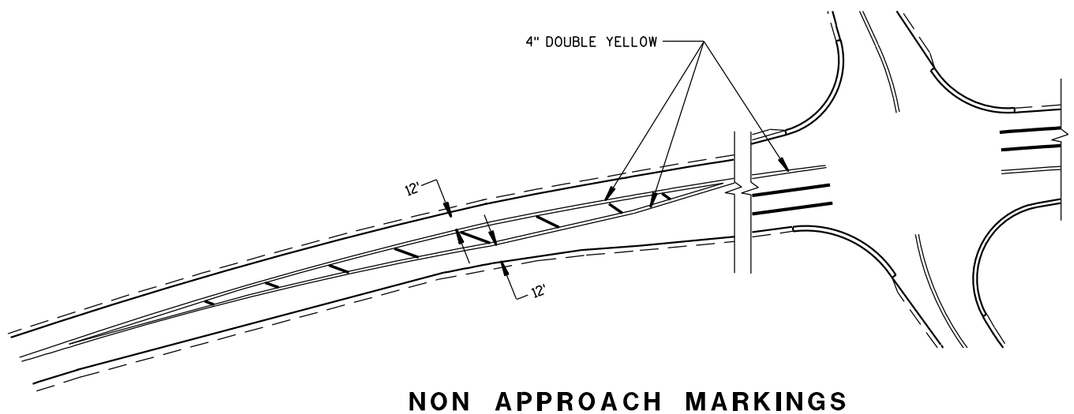
MEDIAN ISLAND DETAIL

GENERAL NOTE

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



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON APPROACH MARKINGS

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

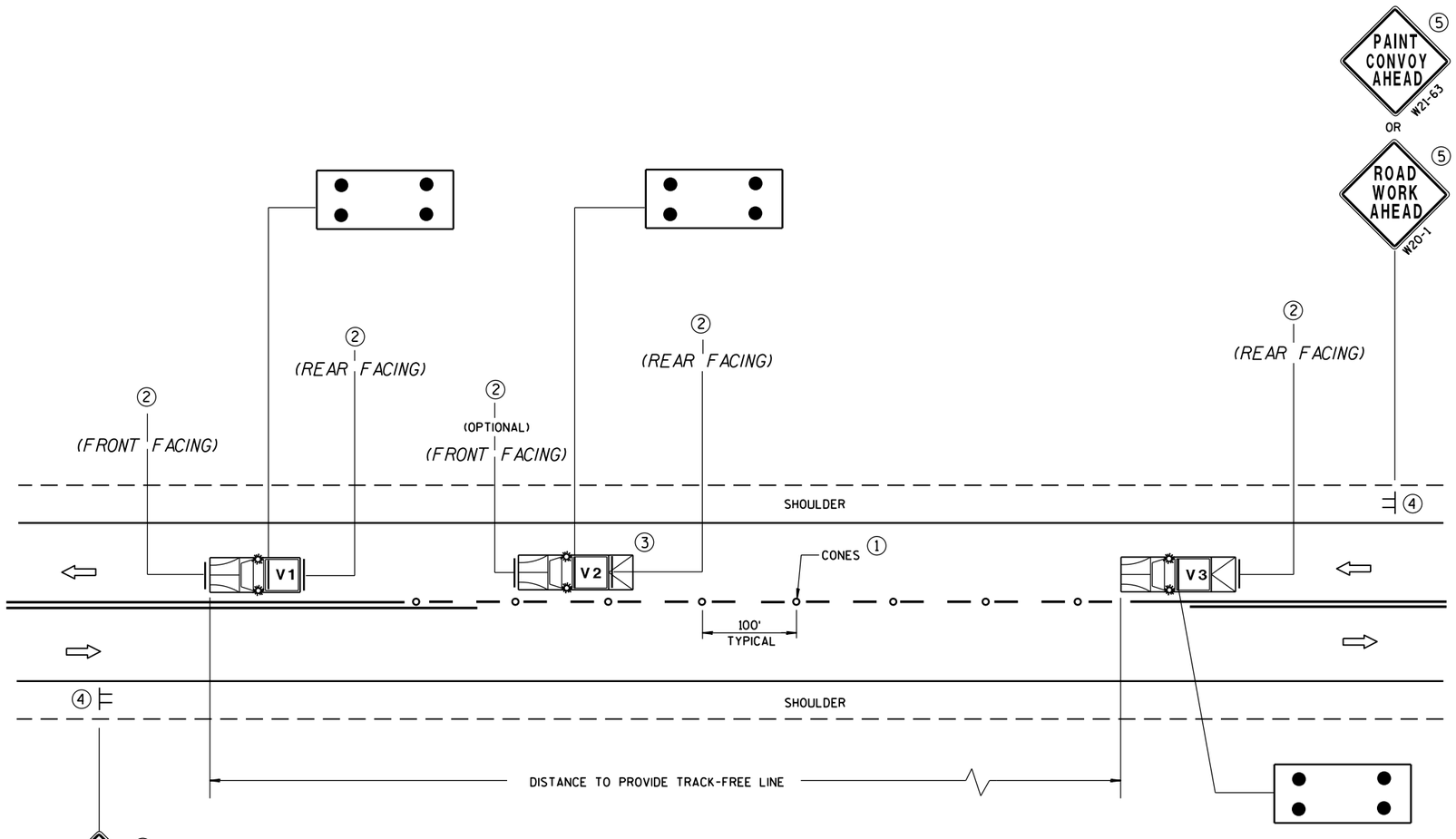
APPROVED

2-5-09 DATE

/S/ Thomas N. Nothohm
STATE TRAFFIC ENGINEER

246 IGN

FHWA



MOVING PAVEMENT MARKING OPERATIONS
TWO-LANE TWO-WAY 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.

VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE MARKING.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

(1) CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

(2) USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.

WET PAINT W21-64 OR WET PAINT W21-64

(3) OPTIONAL TRUCK-MOUNTED ATTENUATOR.

(4) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

(5) IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

LEGEND

- **V1** LEAD VEHICLE
- **V2** SHADOW VEHICLE
- **V3** TRAIL VEHICLE WITH TMA
- **TMA** TRUCK-MOUNTED ATTENUATOR
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- CONES
- FLASHING ARROW PANEL (CAUTION)

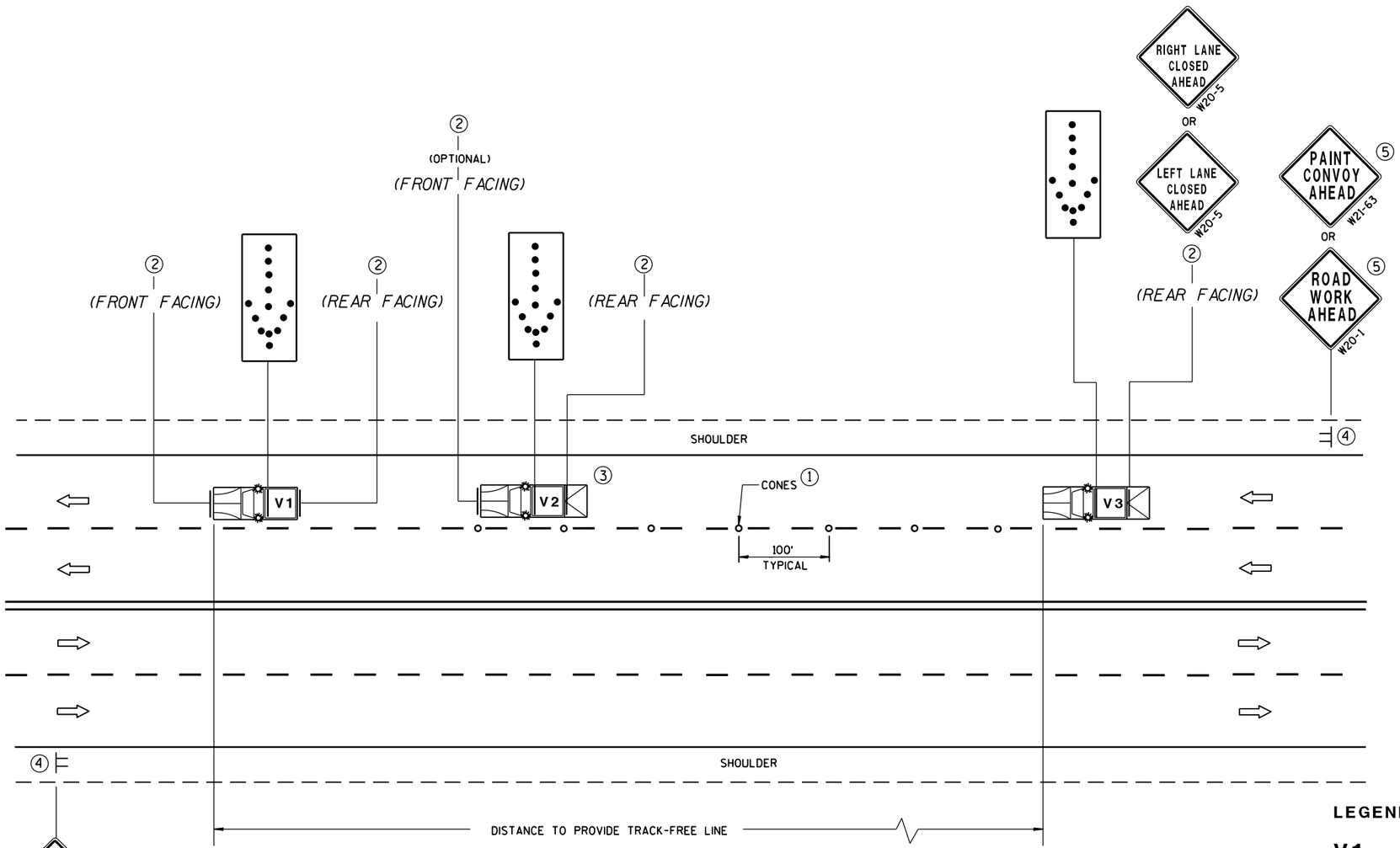
MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
5/3/2013 DATE	/S/ Travis Feltes STATE TRAFFIC E
FHWA	

6

S.D.D. 15 C 19-2a

6

S.D.D. 15 C 19-2a



PAINT CONVOY AHEAD W21-63
OR
ROAD WORK AHEAD W20-1

MOVING PAVEMENT MARKING OPERATIONS
MULTI-LANE UNDIVIDED ROADWAY

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

FOR EDGELINE MARKING OR IF CONES ARE NOT USED, POSITION THE REARMOST SHADOW VEHICLE ON THE SHOULDER AS SHOWN IN THE MUTCD IF THE SHOULDER HAS ADEQUATE WIDTH.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE OR LANELINE MARKING FOR MULTILANE UNDIVIDED ROADWAYS.

(1) CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

(2) USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.

WET PAINT W21-64 OR WET PAINT W21-64

(3) OPTIONAL TRUCK-MOUNTED ATTENUATOR.

(4) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

(5) IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

LEGEND

V1	LEAD VEHICLE
V2	SHADOW VEHICLE
V3	TRAIL VEHICLE WITH TMA
TMA	TRUCK-MOUNTED ATTENUATOR
	SIGN ON TEMPORARY SUPPORT
	DIRECTION OF TRAFFIC
	CONES
	FLASHING ARROW PANEL (MERGE)

MOVING PAVEMENT MARKING OPERATION
MULTI-LANE UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/3/2013 DATE
/S/ Travis Feltes STATE TRAFFIC EN
FHWA

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S.D.D. 15 C 19-2b

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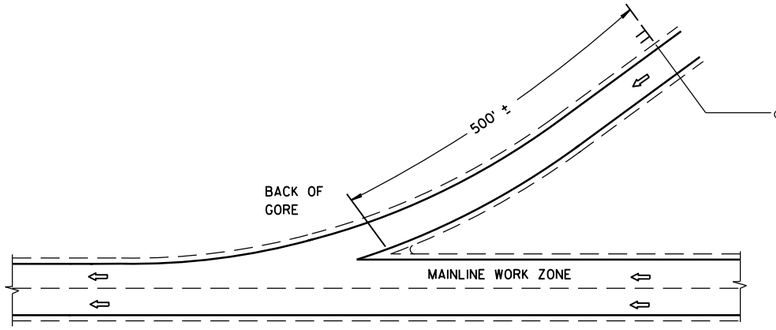
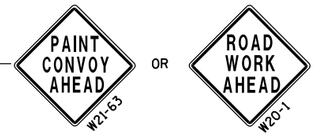
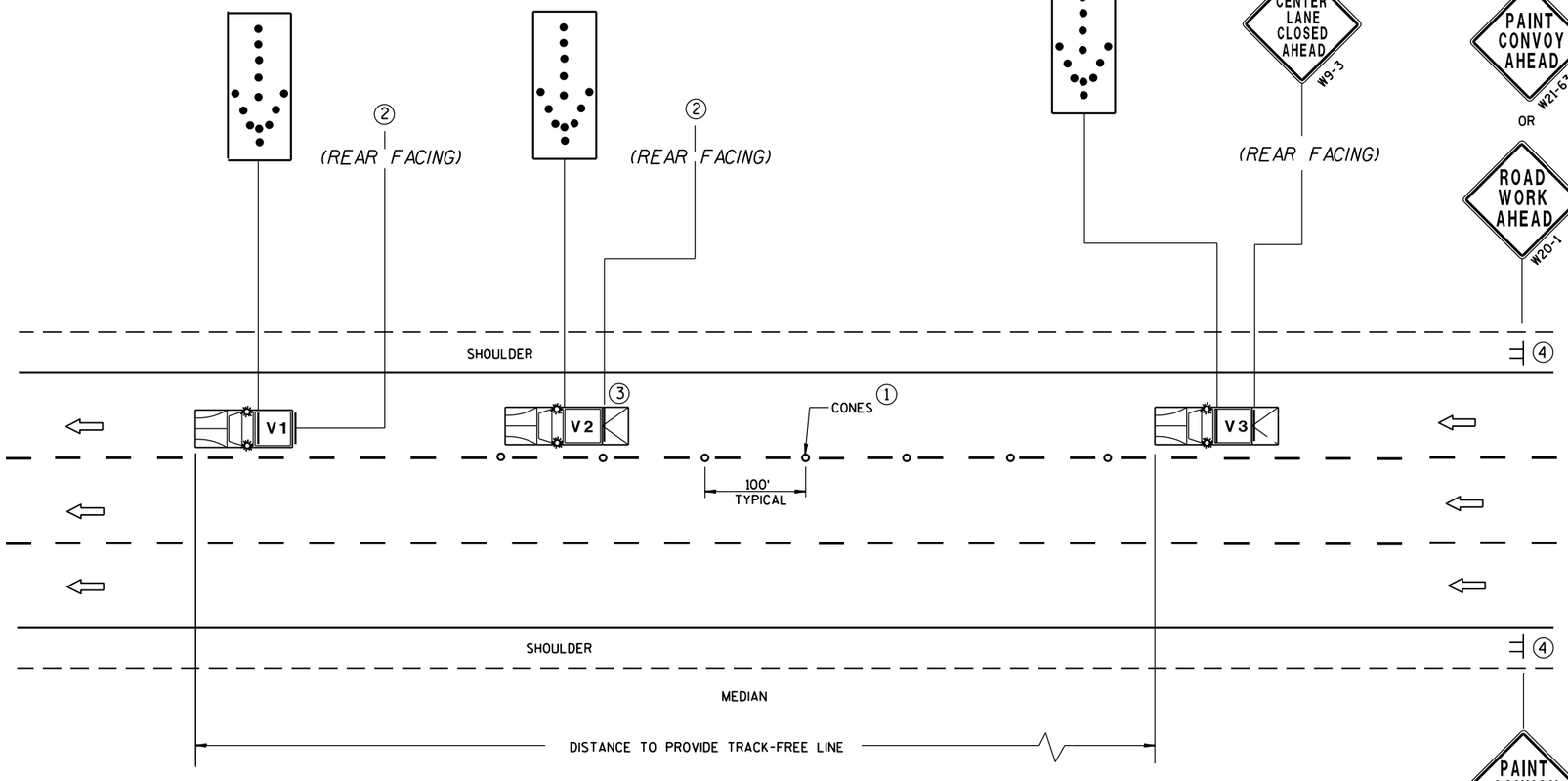
S.D.D. 15 C 19-2b







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.

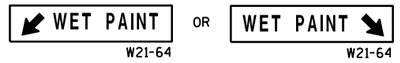
FOR EDGELINE MARKING OR IF CONES ARE NOT USED, POSITION THE REARMOST SHADOW VEHICLE ON THE SHOULDER AS SHOWN IN THE MUTCD IF THE SHOULDER HAS ADEQUATE WIDTH. USE DOUBLE ARROWS WHEN CONVOY IS IN CENTER LANE ONLY.

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.



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

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S.D.D. 15 C 19-2c

GENERAL NOTES

SIGNING AND MARKING IS SHOWN AS TYPICAL PLACEMENT. FIELD CONDITIONS MAY DICTATE CHANGES IN SIGNING AND MARKING PLACEMENT.

A DISTANCE DEPENDENT ON SPEED (SEE TABLE)

(1) WRONG WAY PREVENTION SIGNS ARE DISCUSSED IN T G M 2-15-12

(2) REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT

SYMBOLS

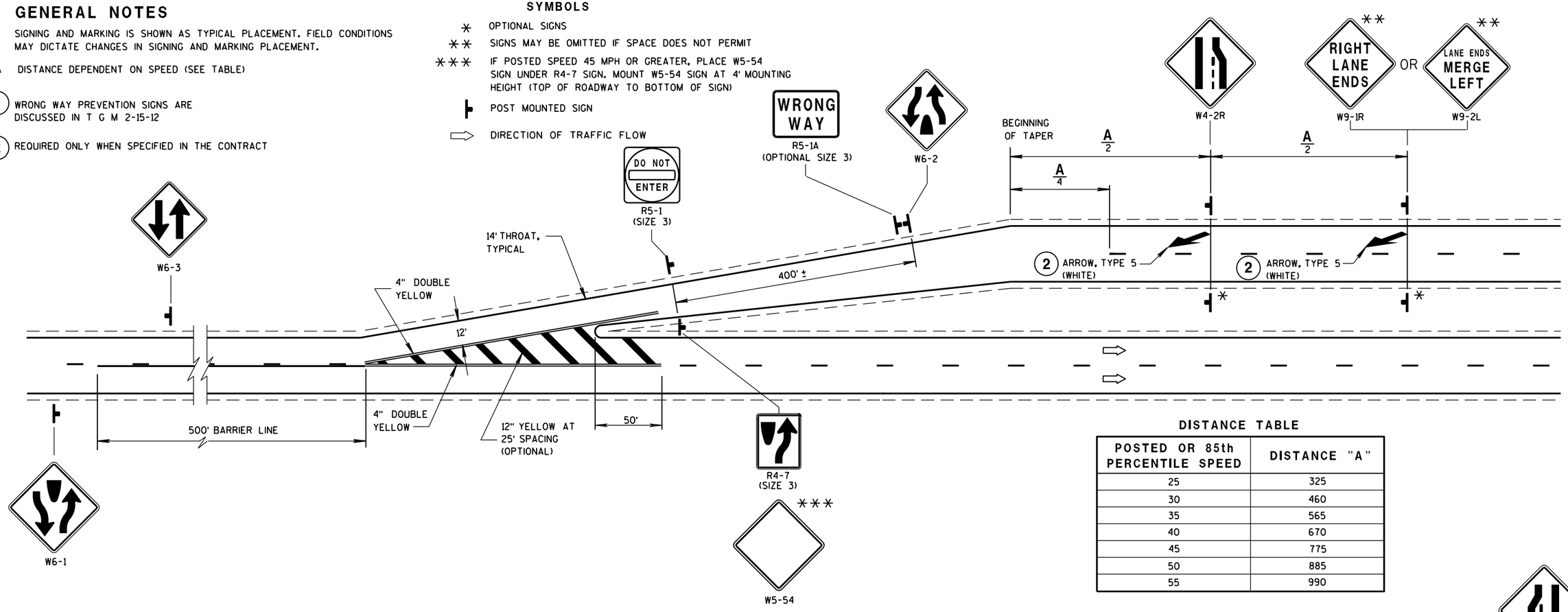
* OPTIONAL SIGNS

** SIGNS MAY BE OMITTED IF SPACE DOES NOT PERMIT

*** IF POSTED SPEED 45 MPH OR GREATER, PLACE W5-54 SIGN UNDER R4-7 SIGN. MOUNT W5-54 SIGN AT 4' MOUNTING HEIGHT (TOP OF ROADWAY TO BOTTOM OF SIGN)

POST MOUNTED SIGN

DIRECTION OF TRAFFIC FLOW



DISTANCE TABLE

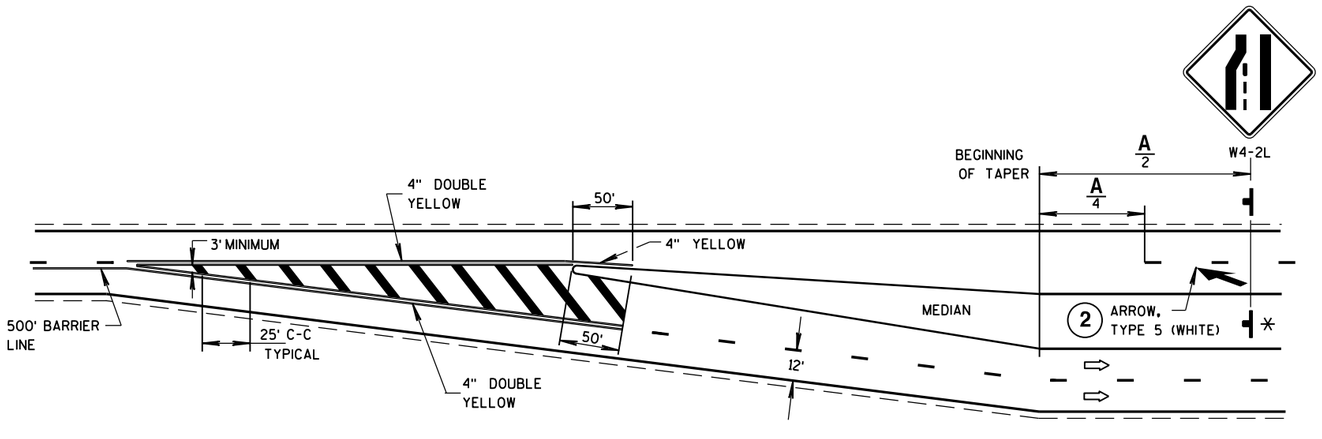
POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
25	325
30	460
35	565
40	670
45	775
50	885
55	990

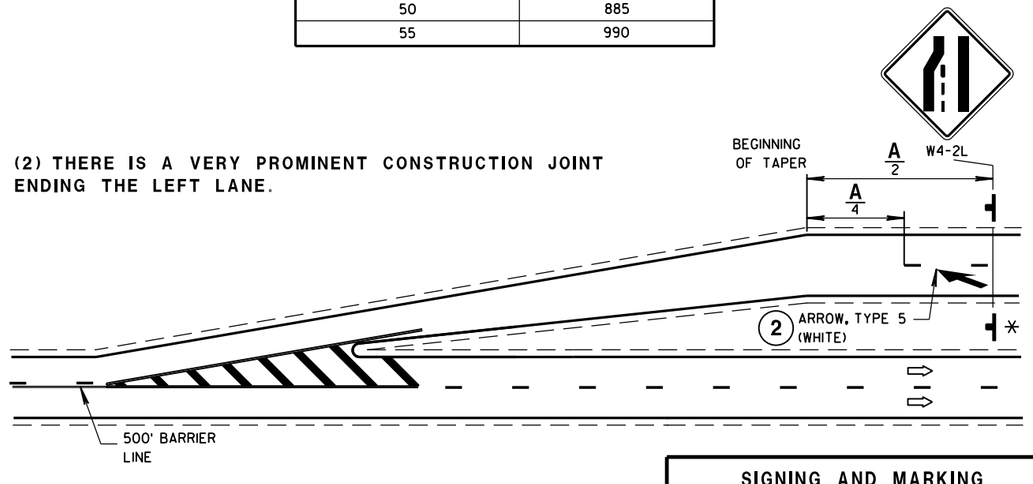
USE W4-2L IF :

(1) THE LEFT LANE IS PUSHED TO THE RIGHT:

OR

(2) THERE IS A VERY PROMINENT CONSTRUCTION JOINT ENDING THE LEFT LANE.





SIGNING AND MARKING
TWO LANE TO FOUR LANE DIVIDED TRANSITIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/3/2013 DATE — /S/ Travis Feltes STATE TRAFFIC EN

FHWA

S.D.D. 15 C 21-5

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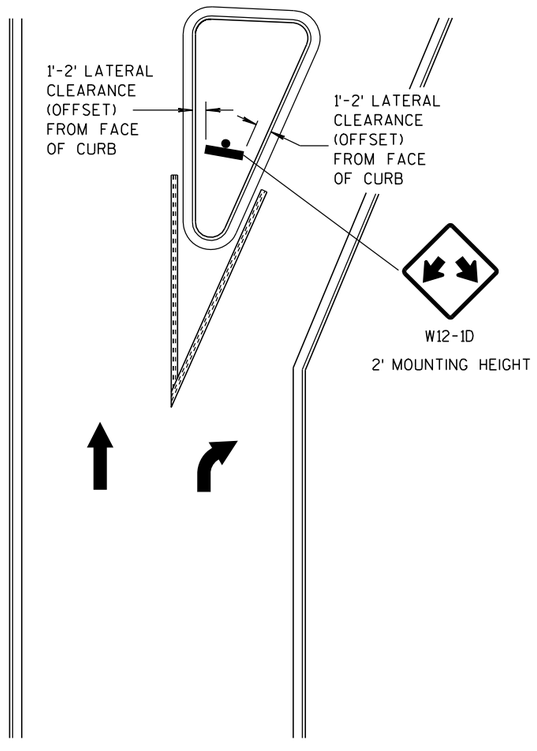
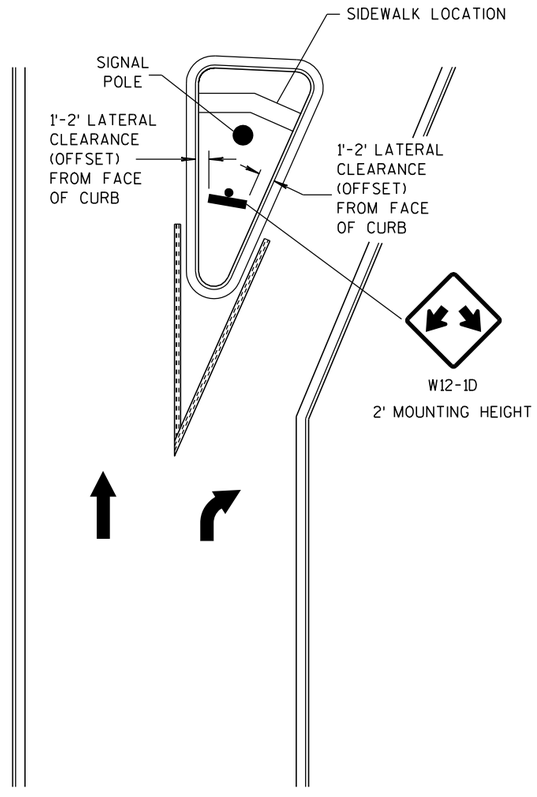
GENERAL NOTE

APPLIES TO ISLANDS AT LEFT TURNS AT ONE WAY ROADWAYS AS WELL.

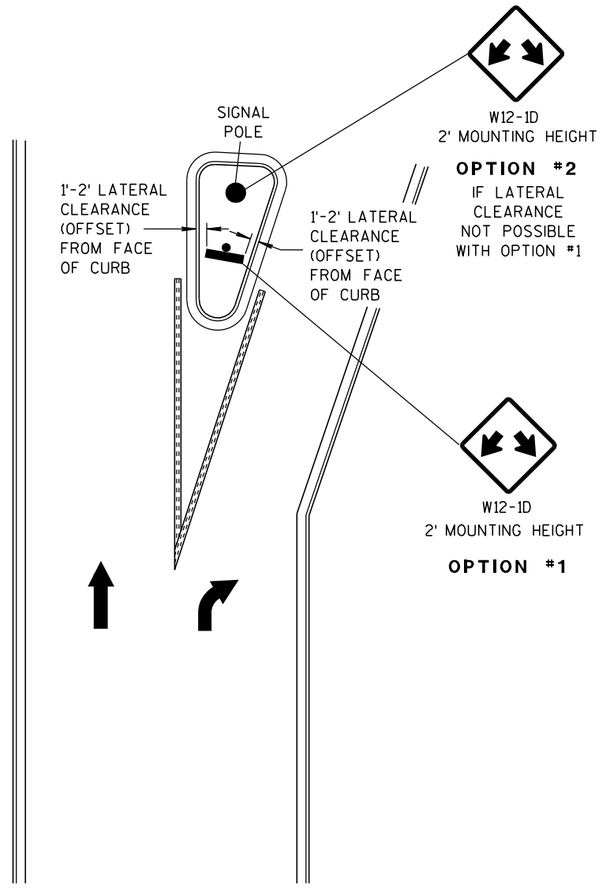
SEE MISCELLANEOUS QUANTITIES FOR SIGN SIZE.



LARGE RIGHT TURN ISLAND



LARGE RIGHT TURN ISLAND
WITH SIGNAL POLE



SMALL RIGHT TURN ISLAND

DOUBLE ARROW WARNING SIGN PLACEMENT

DOUBLE ARROW WARNING SIGN PLACEMENT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
10-22-08 DATE	/S/ Thomas N. Nothdurft STATE TRAFFIC ENGINEER
FHWA	251 IGN

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S.D.D. 15 C 27-1

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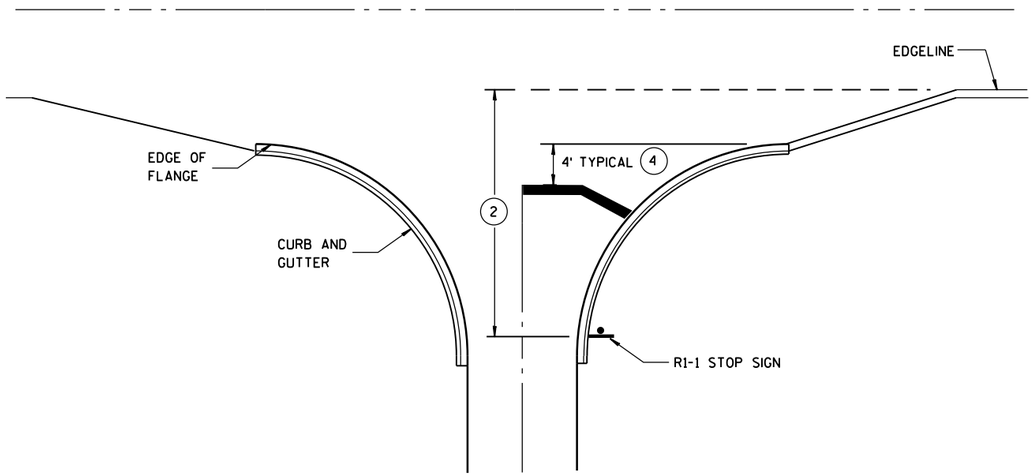
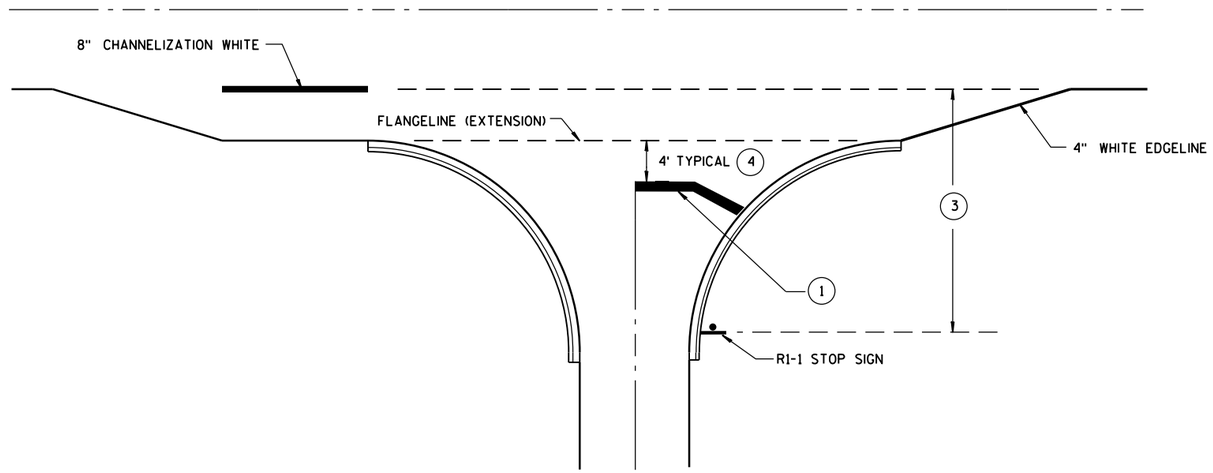
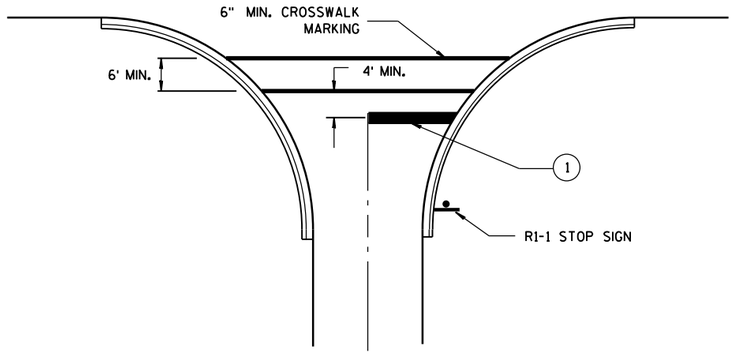
S.D.D. 15 C 27-1



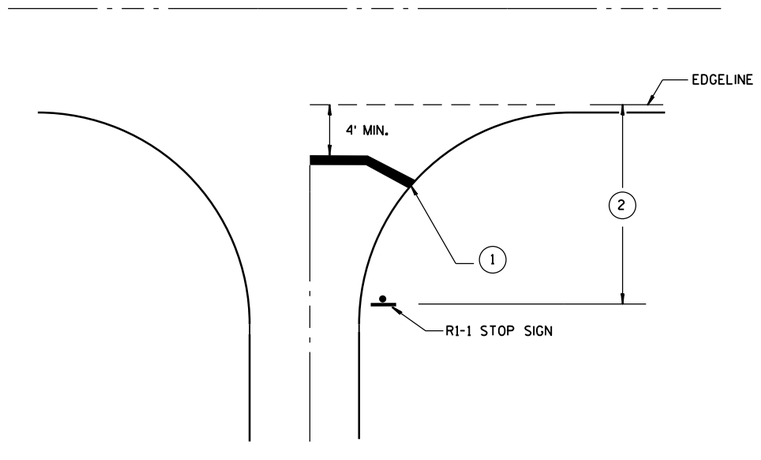
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



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 EI

FHWA

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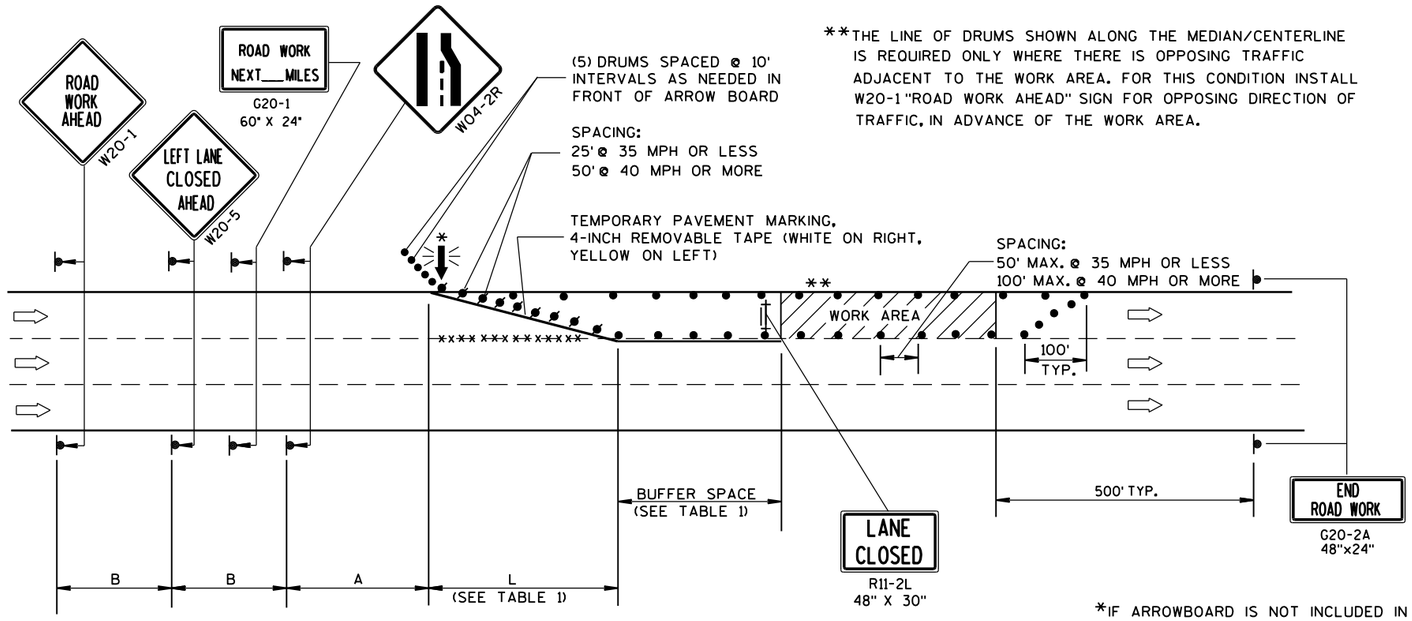
S.D.D. 15 C 33-1



**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"

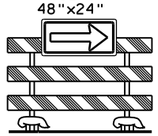


TABLE 1
TAPER AND BUFFER SPACE FOR 12' LANE WIDTH

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

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S.D.D. 15 D 20-2

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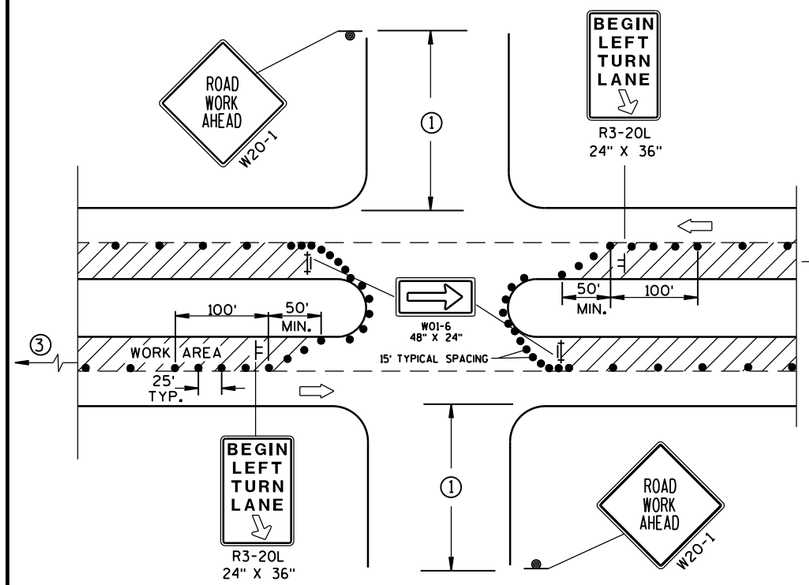
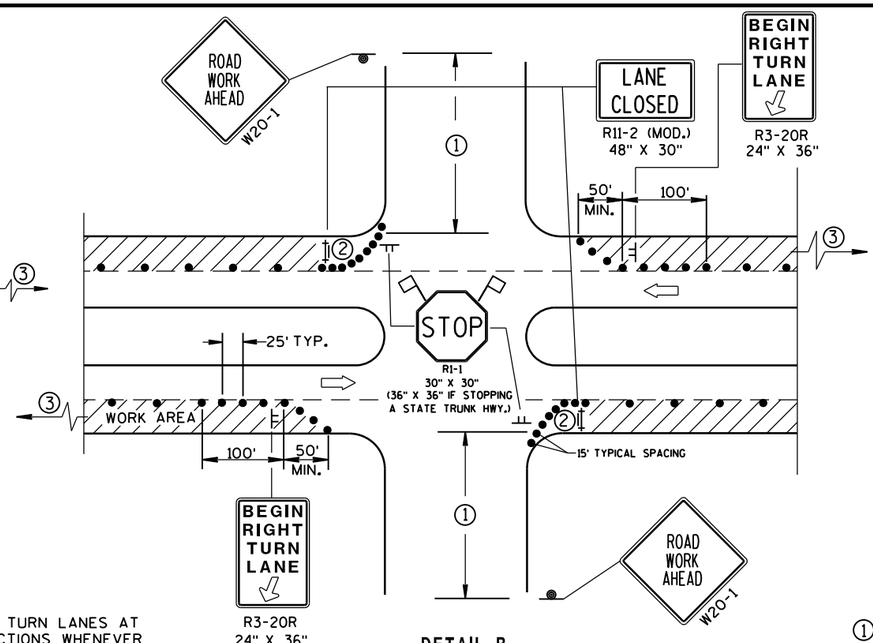
S.D.D. 15 D 20-2



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.

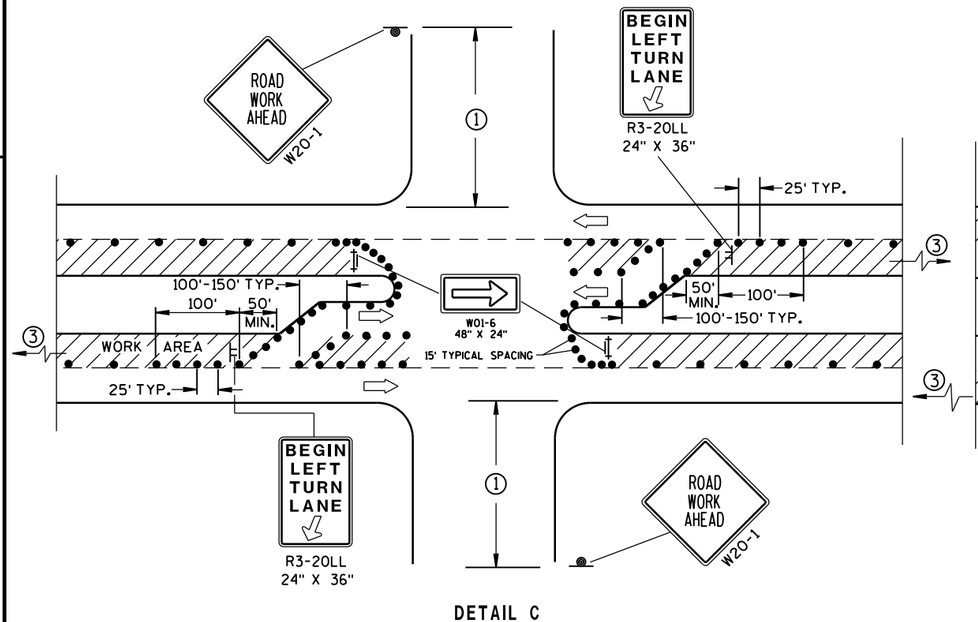
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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.

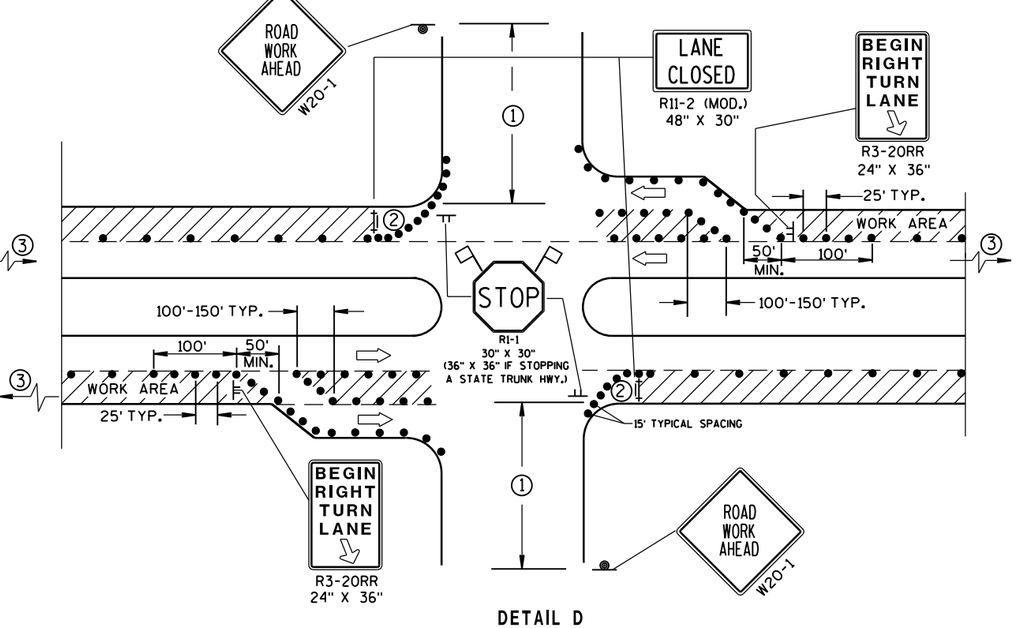
② ALSO USE BARRICADE AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.

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

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S.D.D. 15 D 21-2

LEGEND

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

GENERAL NOTES

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

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

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

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

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

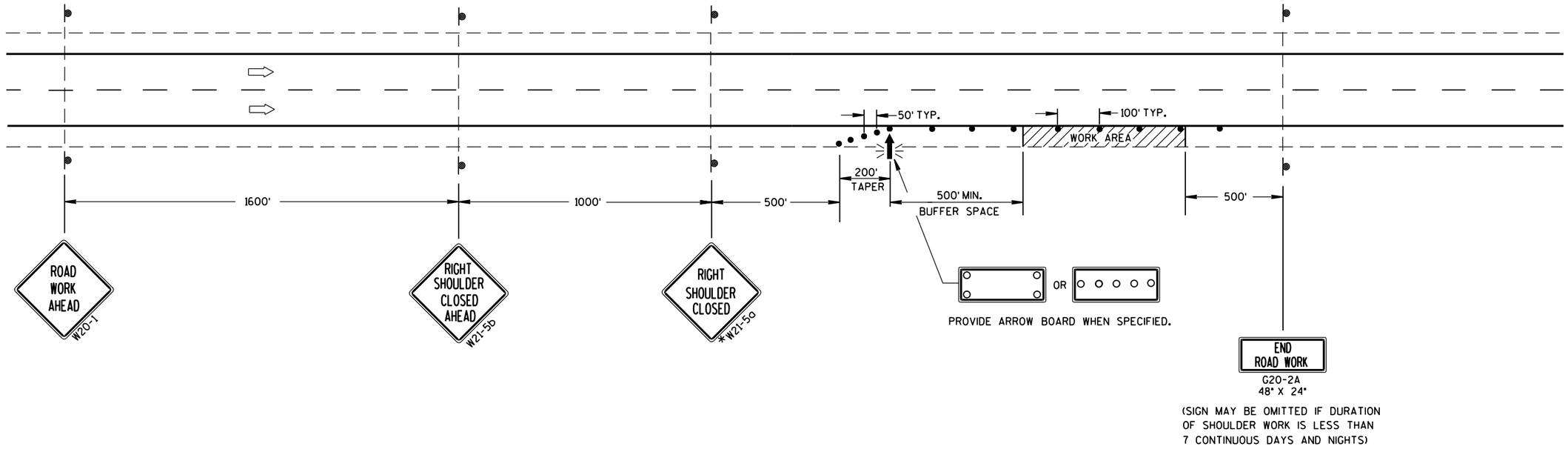
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

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

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



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

FHWA

6

S.D.D. 15 D 27-2

GENERAL NOTES

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

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

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

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

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

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

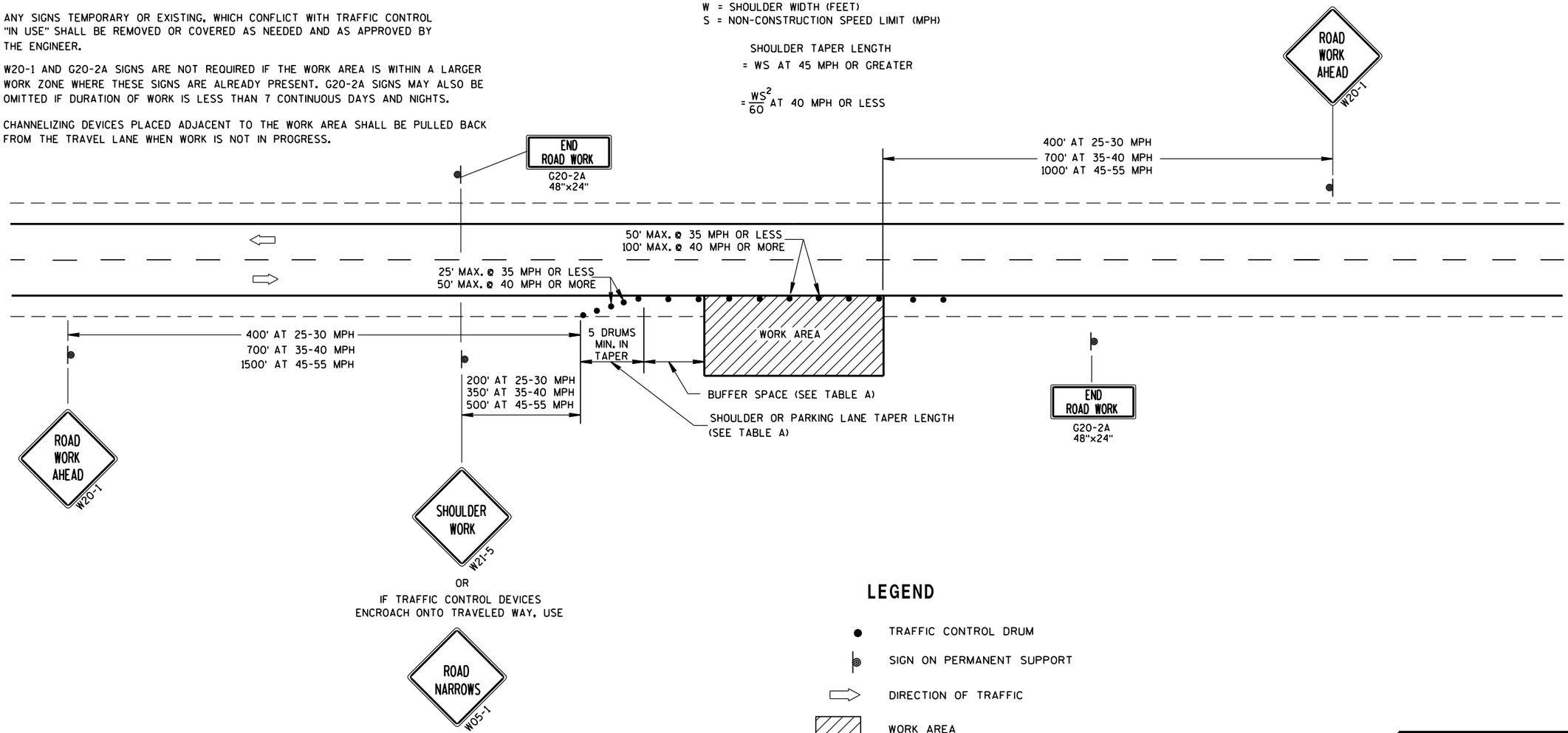
TABLE A

S \ W	SHOULDER TAPER LENGTH (FEET) 4	6	8	10	BUFFER SPACE (FEET)
30	20	30	40	50	85
35	30	45	55	70	120
40	40	55	75	90	170
45	60	90	120	150	220
50	70	100	135	170	280
55	75	110	150	185	335

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

SHOULDER TAPER LENGTH
= WS AT 45 MPH OR GREATER

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



LEGEND

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

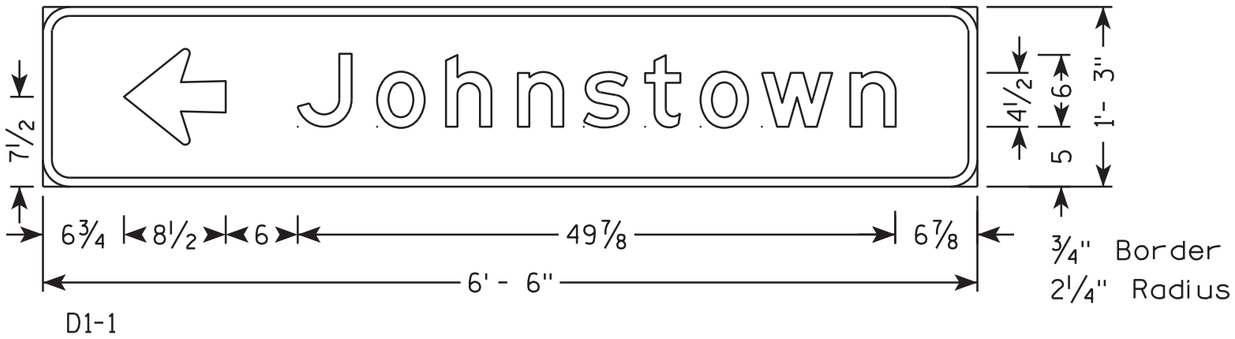
8/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

FHWA

6

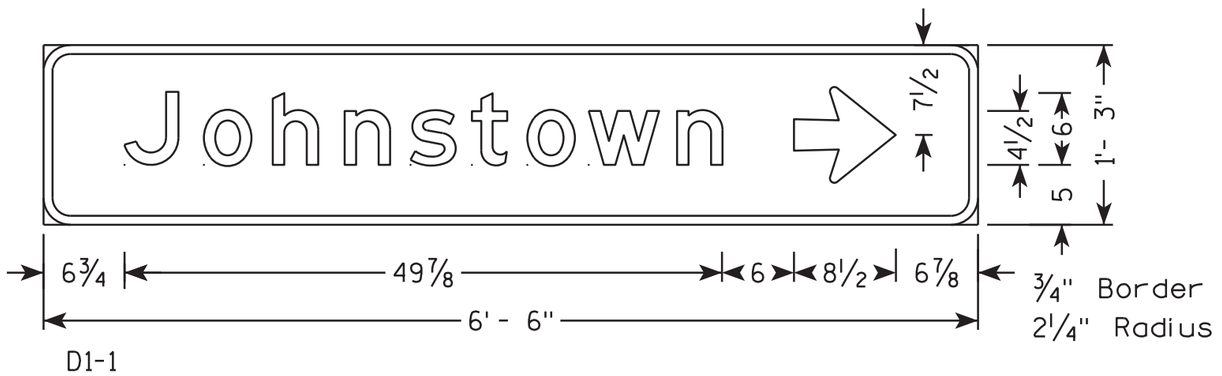
S.D.D. 15 D 28-2



D1-1

NOTES

1. All Signs Type II - Type H Reflective
2. Color:
   Background - GREEN
   Message - WHITE
3. Message Series - E



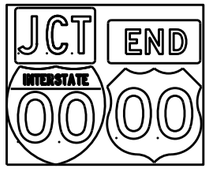
D1-1

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	PERMANENT SIGNING	SHEET NO:	E

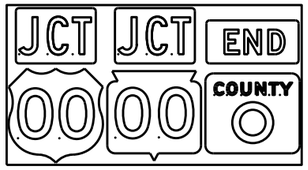
FILE NAME : C:\CAEFiles\Projects\tr_d1\1534A914.dgn PLOT DATE : 03-SEP-2014 15:33 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 12.647972:1.000000
WISDOT/CADDS SHEET 42

TYPICAL ASSEMBLIES

J1-1

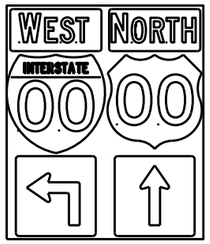


J1-2

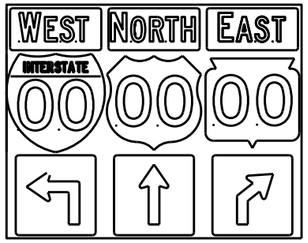


J1-3

J2-1



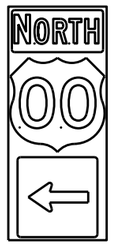
J2-2



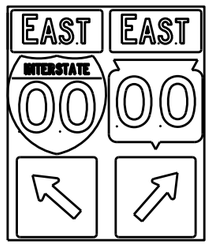
J2-3

JV

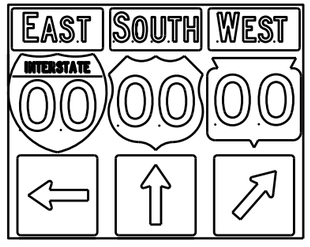
(Typical Vertical J-Assembly
See Note 10 and 11)



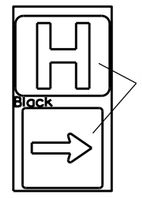
J3-1



J3-2



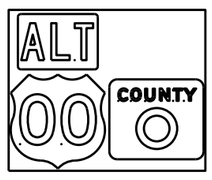
J3-3



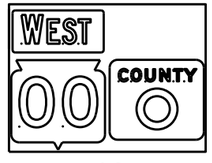
Blue Background

JH-1

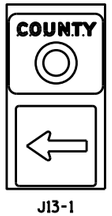
J4-1



J4-2



J4-2



J13-1

J12-1

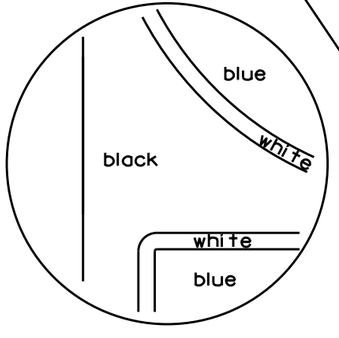
J32-1

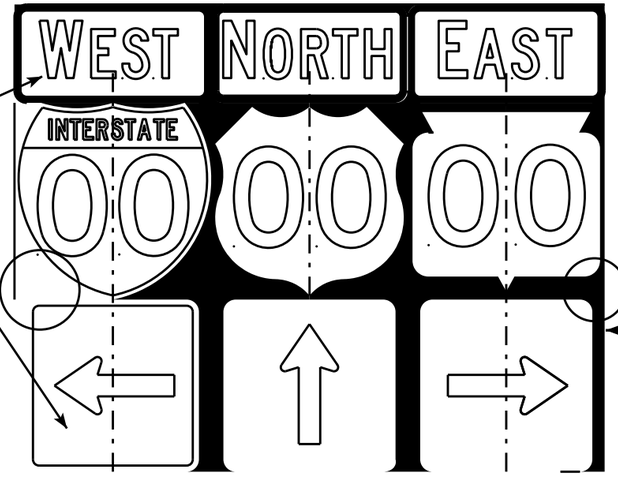
J33-1

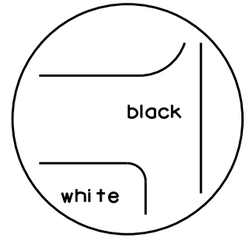
J23-1

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

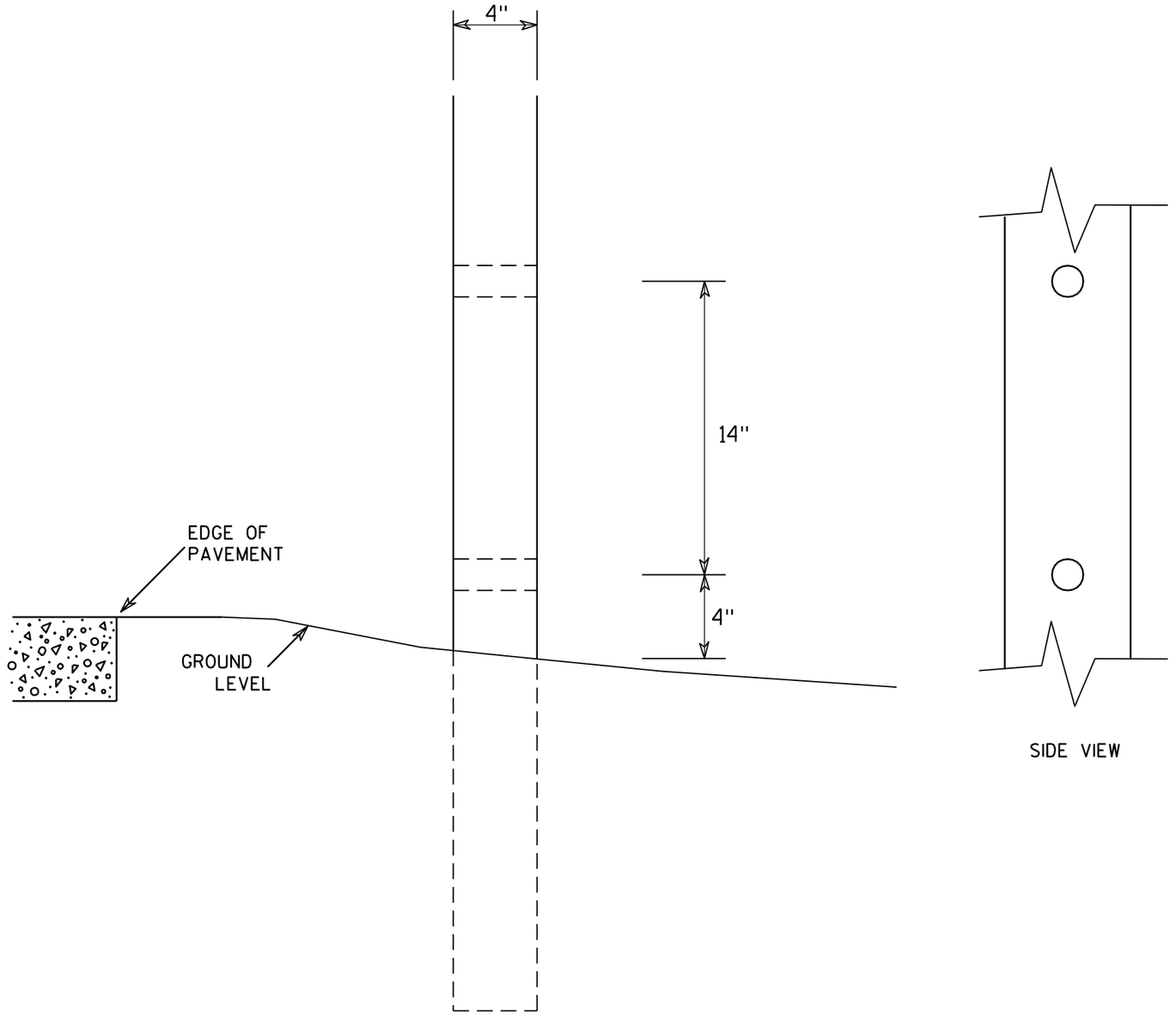
APPROVED Matthew R Rauch
for State Traffic Engineer

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



SIDE VIEW

GENERAL NOTES

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

4 X 6 WOOD POST MODIFICATIONS

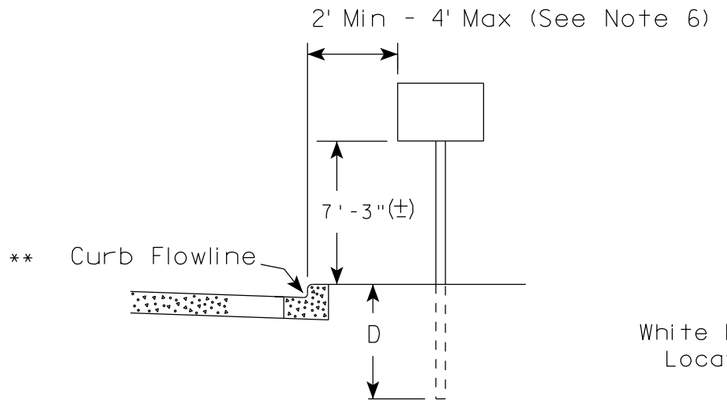
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

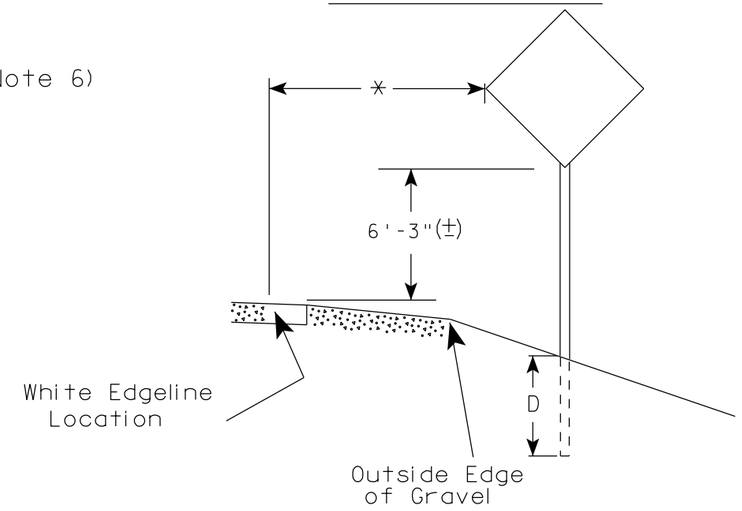
DATE 3/27/97 PLATE NO. A4-11.2

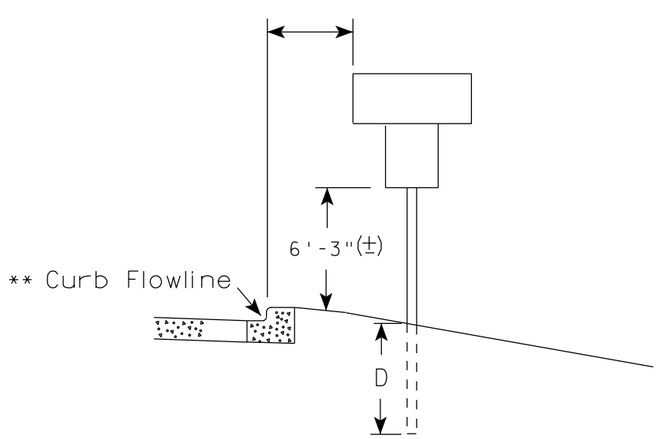
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 259	E

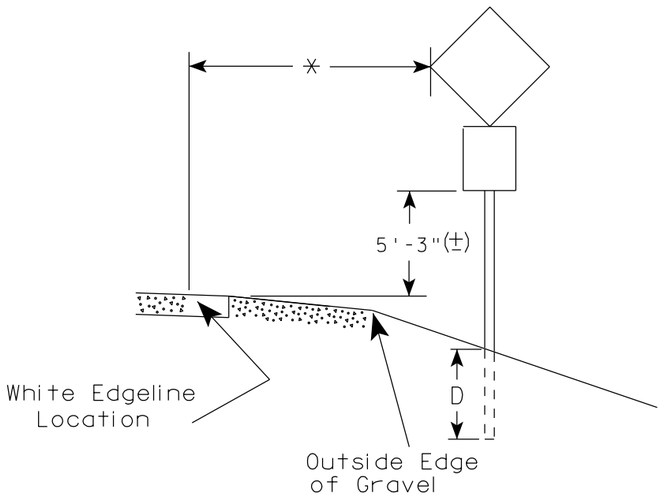
URBAN AREA



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.

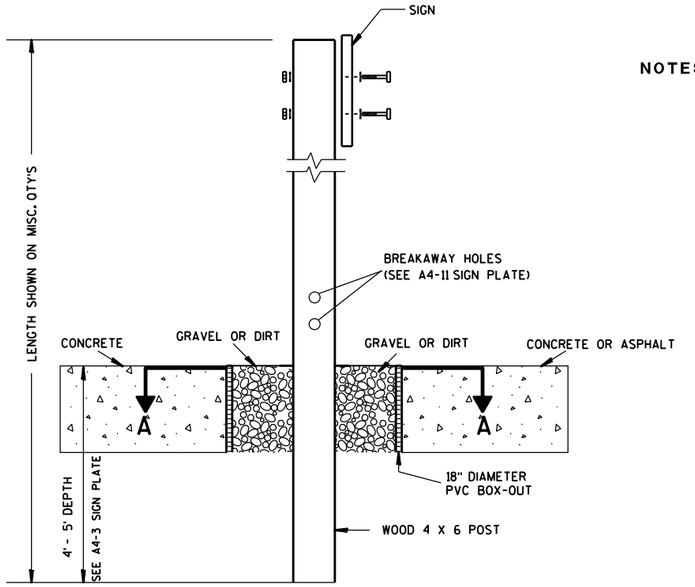
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/14 PLATE NO. A4-3.19

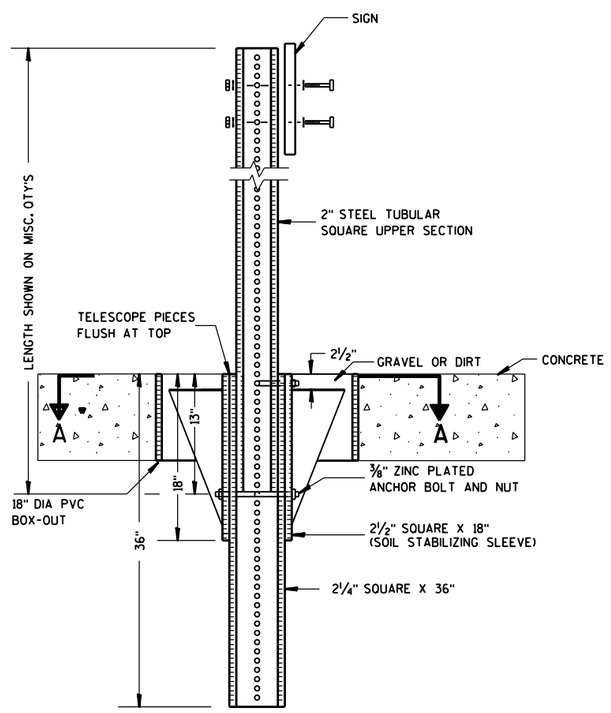
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



ELEVATION VIEW

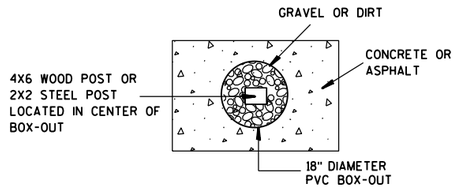
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

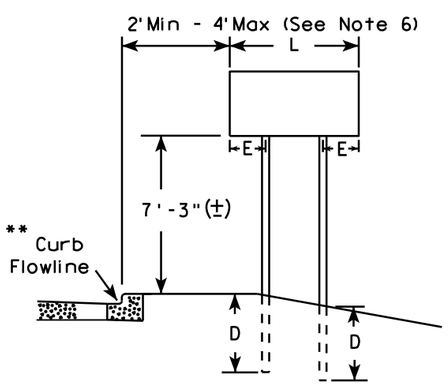
APPROVED Matthew R Rauch
for State Traffic Engineer

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

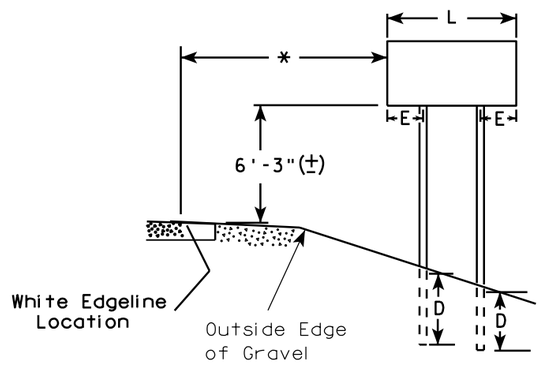
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

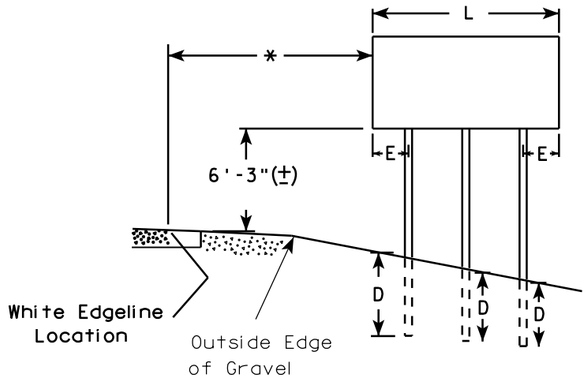
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

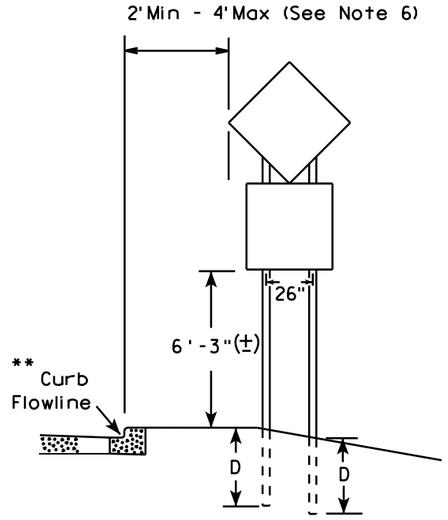
URBAN AREA



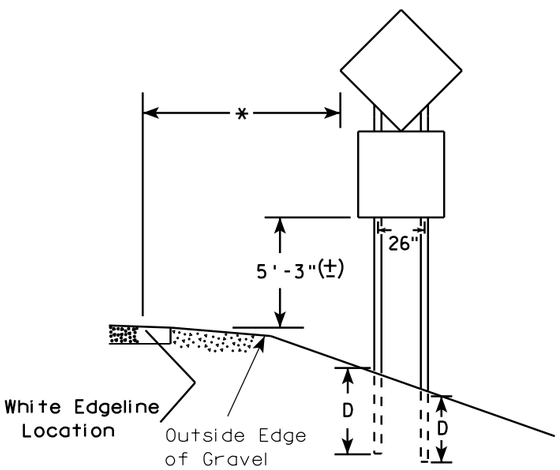
RURAL AREA (See Note 3)







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

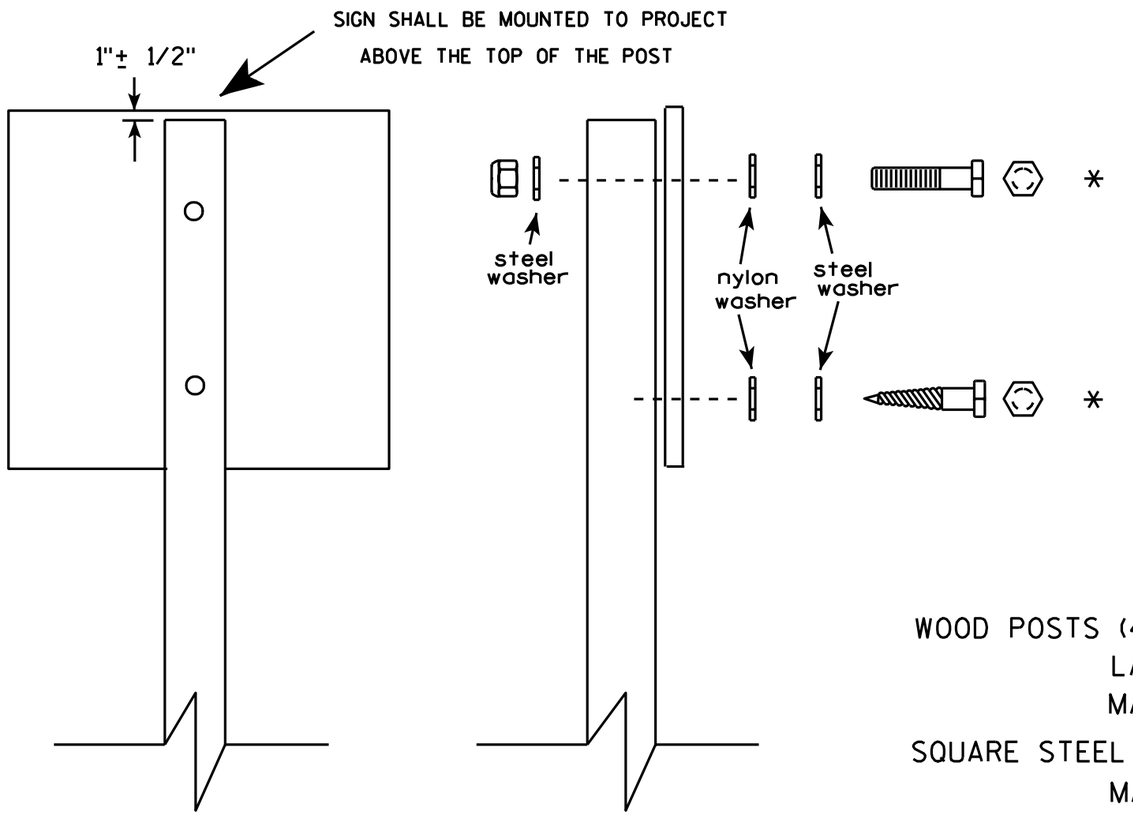
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/14 PLATE NO. A4-4 262 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



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

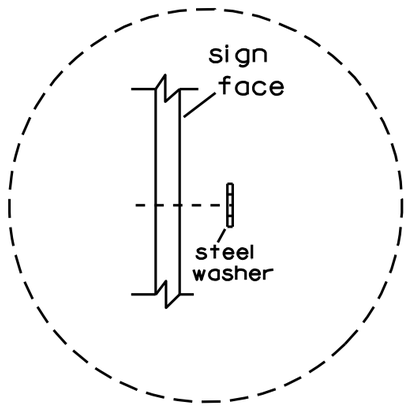
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

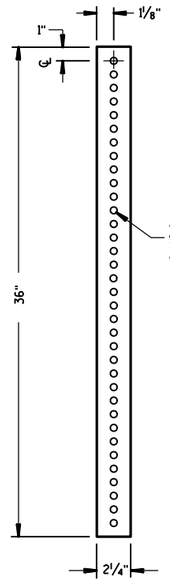
7

PROJECT NO:

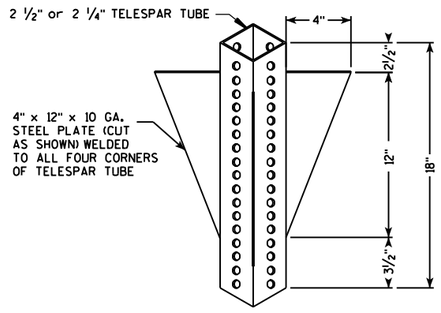
SHEET NO: 263 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

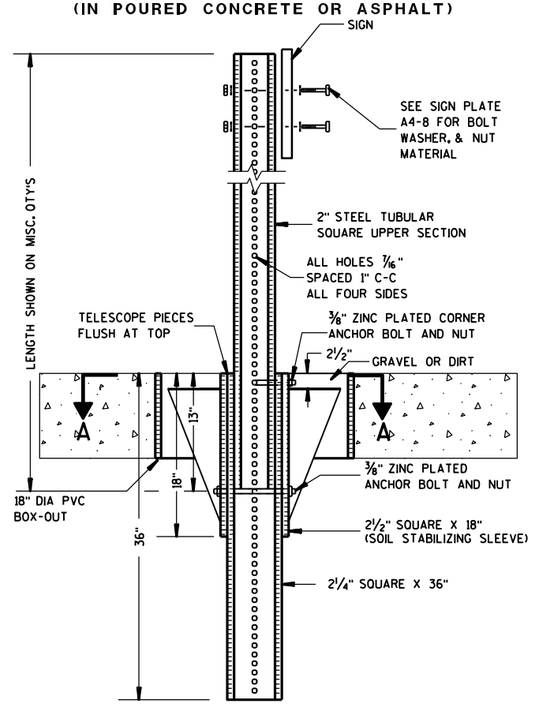
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



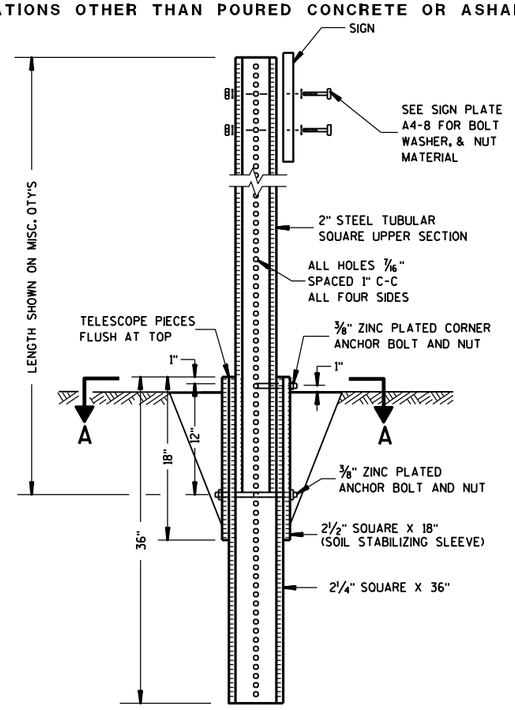
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

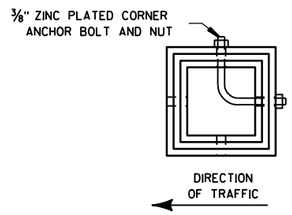


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

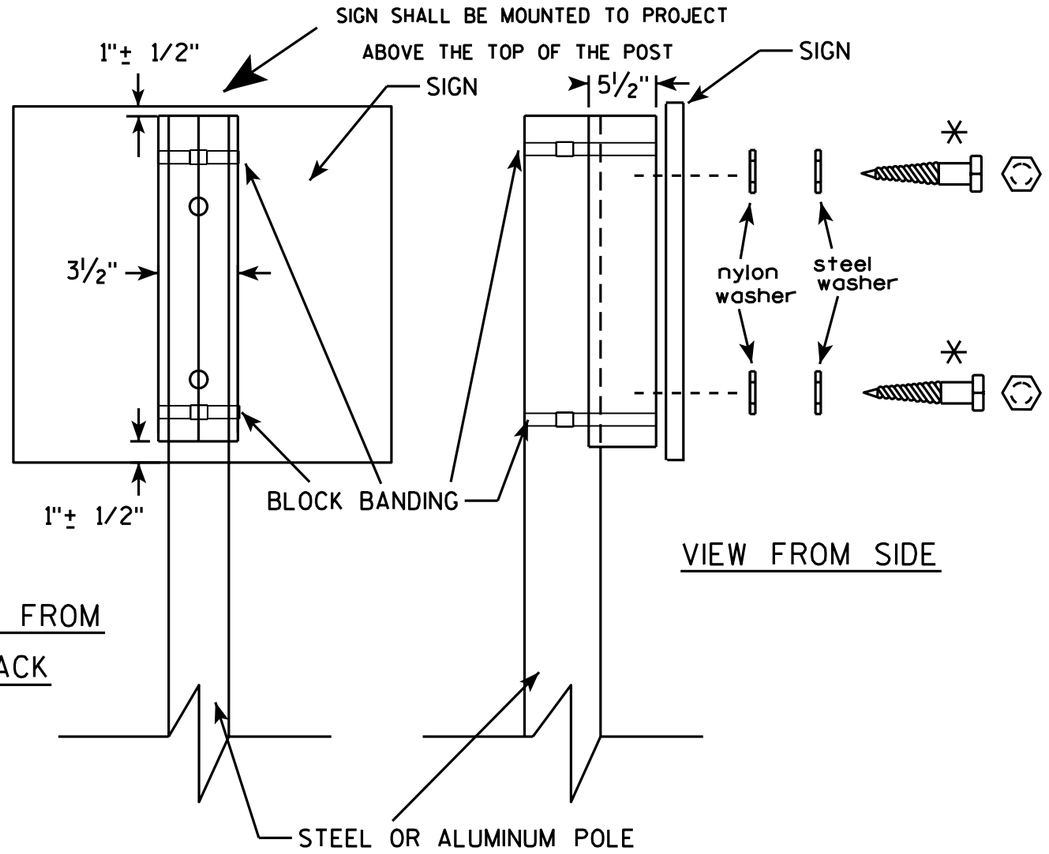
Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

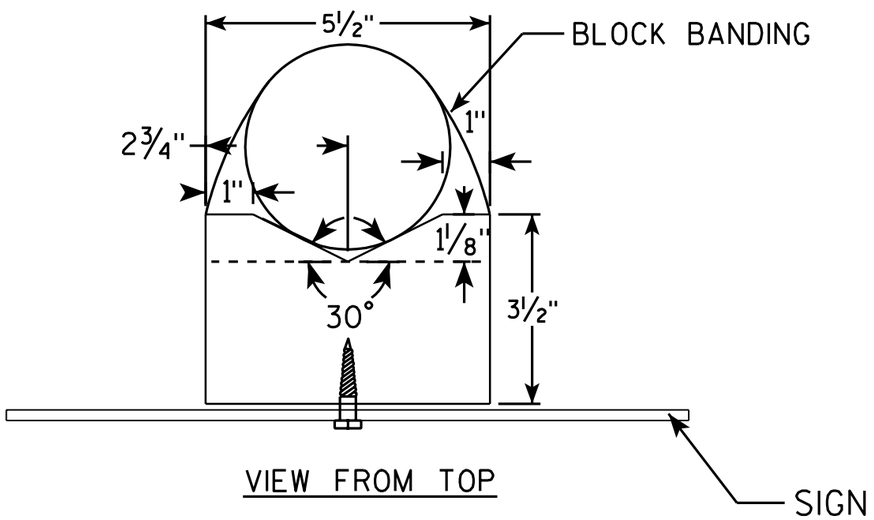
TUBULAR STEEL SIGN POST A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 5/30/12 PLATE NO. A4-9.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 264	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

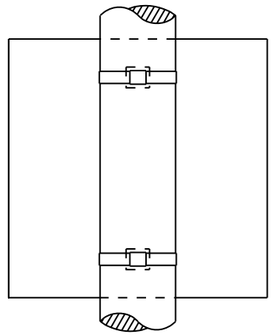
DATE 7/12/07 PLATE NO. A5-10.1

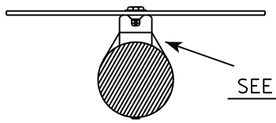
PROJECT NO:

SHEET NO: 265 E

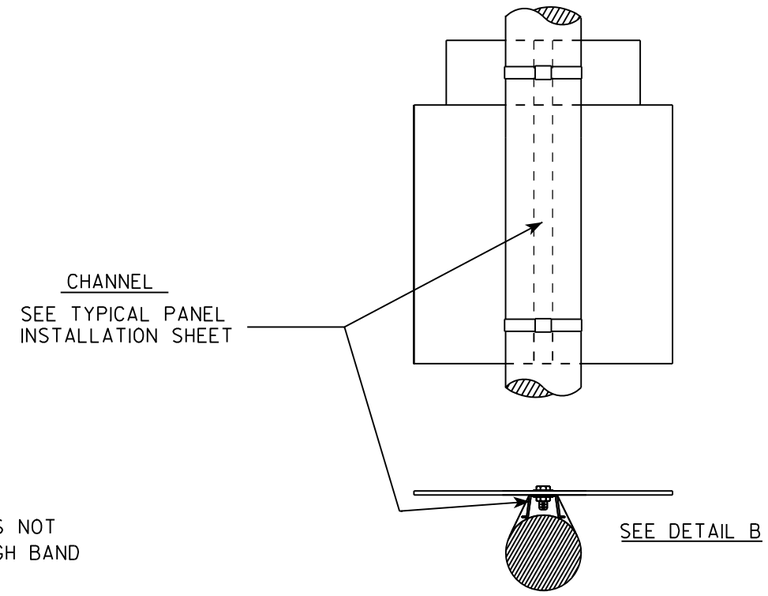
BANDING

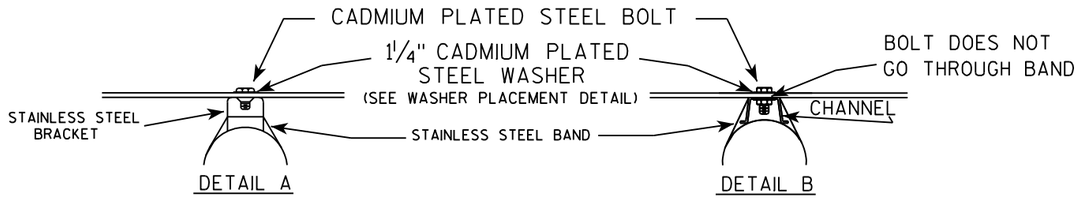
SINGLE SIGN



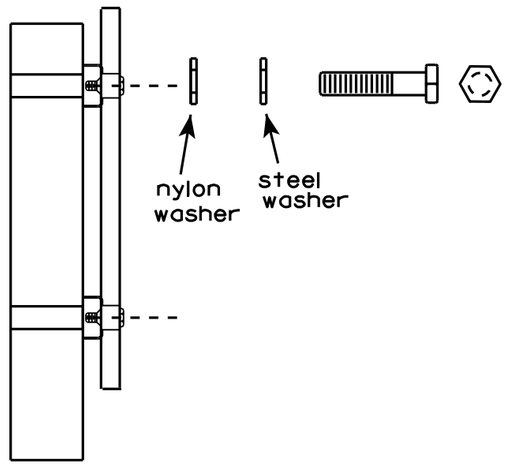


"J" ASSEMBLY





WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.

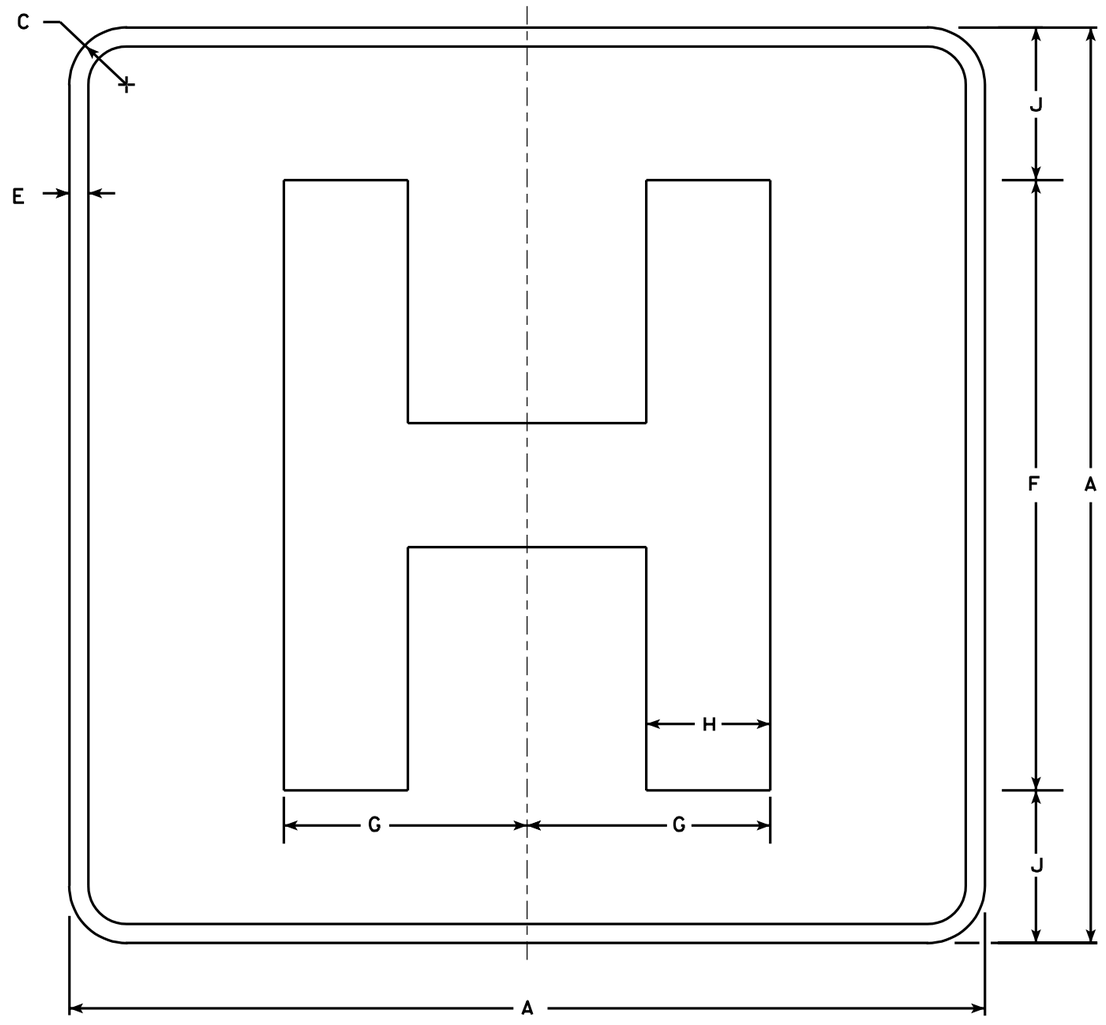
STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 266	E



D9-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Blue
   Message - White - Type H Reflective
3. Message Series - E Modified
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	450 mmX 450 mm
2	600 mmX 600 mm
3	900 mmX 900 mm
4	X
5	X

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18		1 1/8		1/2	12	4 3/4	2 3/8		3																	4.0
2	24		1 1/2		1/2	16	6 3/8	3 1/4		4																	4.0
3	36		2 1/4		3/4	24	9 1/2	4 7/8		6																	9.0
4																											
5																											

STANDARD SIGN
D9-2

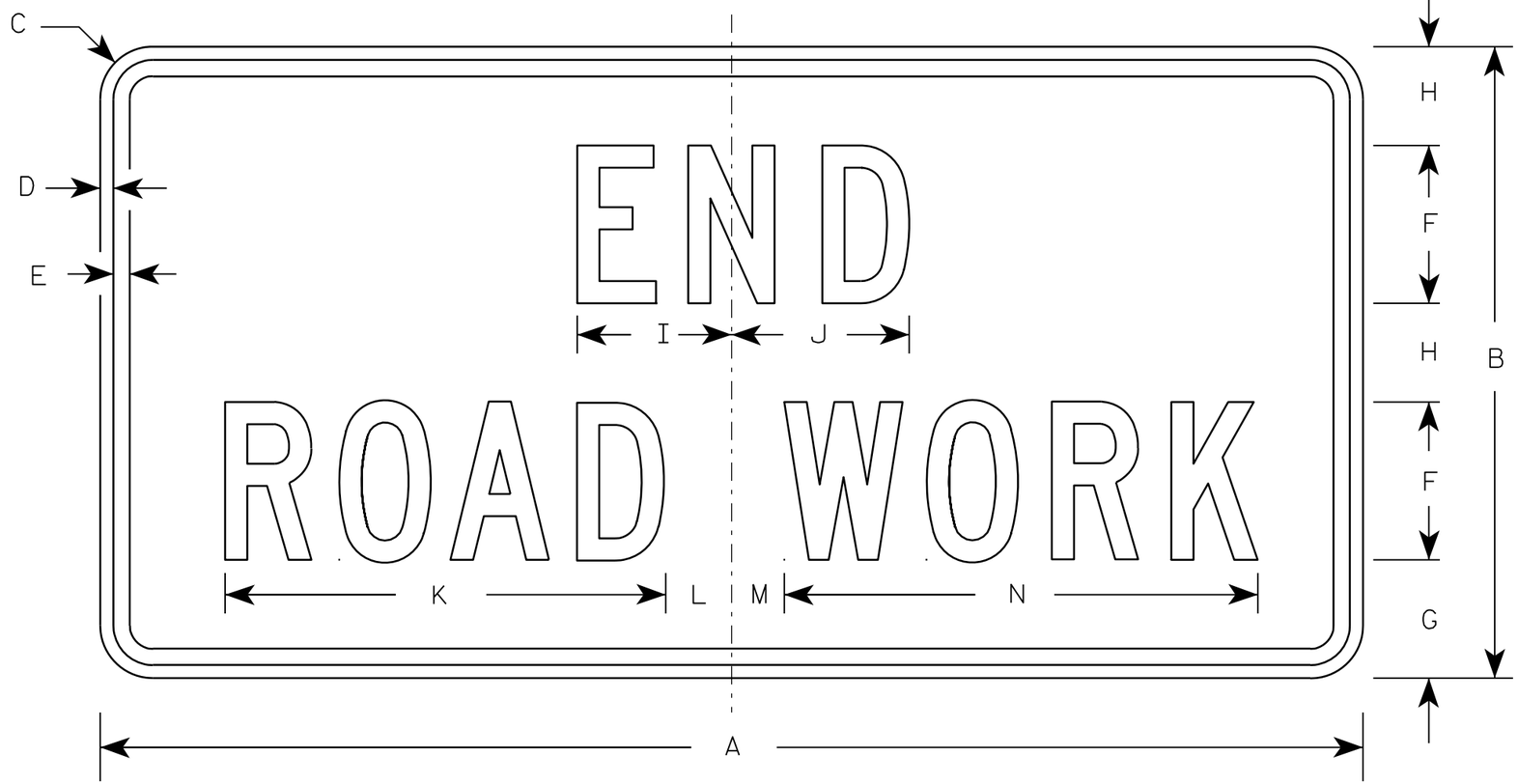
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spong
for State Traffic Engineer

DATE 1/15/02 PLATE NO. D9-2.4

PROJECT NO:

SHEET NO: 267 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

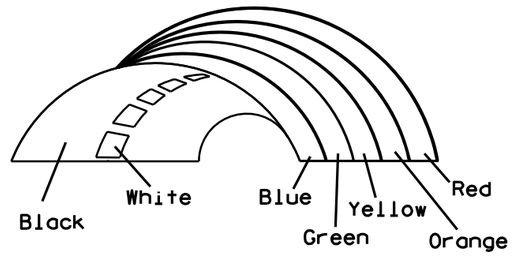
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 268	E

* VARIES

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - (See Note 5)
3. Message Series - (See Note 6)
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Border - Blue
   Line 1 - Red
   Line 2 - Black
   Line 3-5 - Blue
6. Line 1 - Dutch 8011L
   Line 2 - Series E
   Line 3-5 - Series C
7. Contractor shall provide and install a new post bracket in accordance with the I55-56B sign detail.

Background Colors of Symbol*



*1/4" Black Border between each color of rainbow and border of rainbow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	36	1 1/2	1/2	5/8	3	2	3 1/2	2 7/8	1	8	2 1/8	11 1/4	11 1/8	9 3/8	1 1/4		3/4	12 5/8	7 1/2							7.5
3																											
4																											
5																											

STANDARD SIGN
I55-56

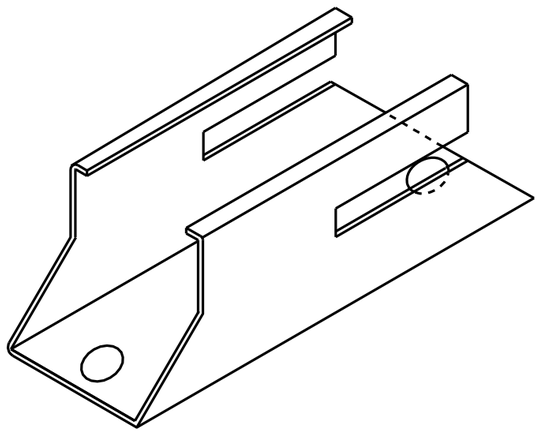
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

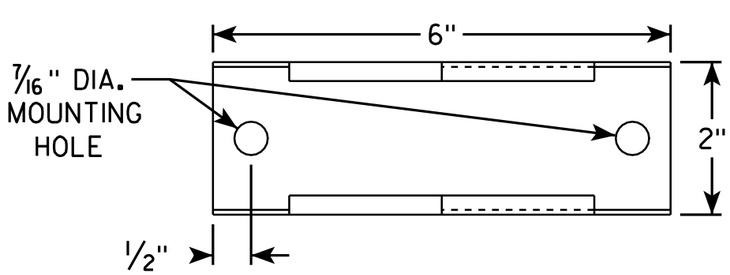
DATE 4/27/11 PLATE NO. 155-56.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 269

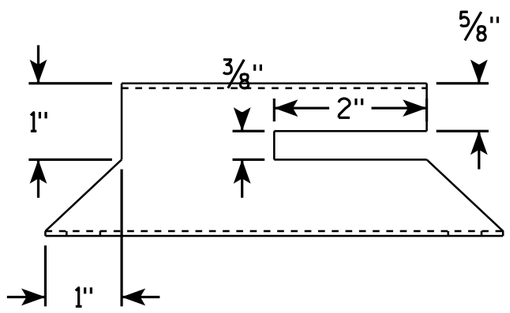
ISOMETRIC VIEW



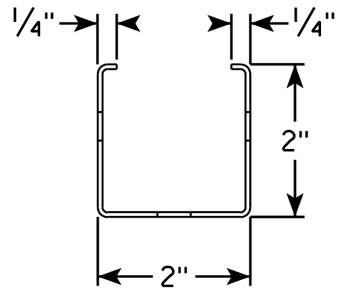
TOP VIEW



SIDE VIEW



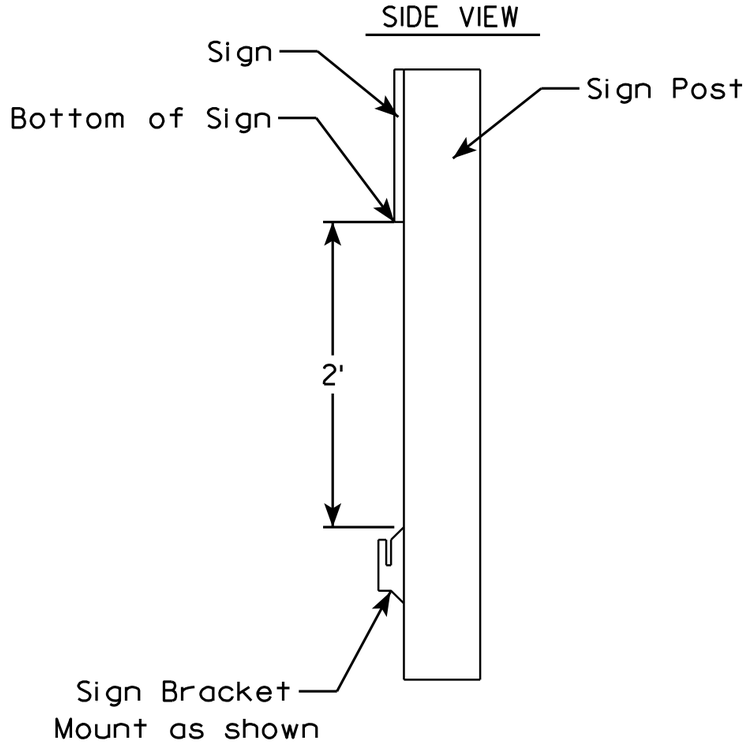
END VIEW



NOTES

1. Must be capable of permanent attachment to a wood or steel channel sign post utilizing the fastening hardware specified on the A4-8 sign plate.
2. Shall be entirely primed and painted with two coats of a black powder coated enamel paint.
3. Shall be made with 12 gauge steel, and incorporate no welds, no hinged components, no threaded lock-type components, and no parts which are loose or can be separated from the main body.
4. Shall have rounded edges with at least 1/8" radii.
5. Shall not have unrounded and uncoated metal edges which can contact the back surface of the roll-up sign.
6. Top of bracket shall be mounted 2' below the bottom of the I55-56 sign.
7. Cost of bracket and fastening hardware shall be incidental to the I55-56 sign.

SIDE VIEW



ROLLUP SIGN BRACKET
I55-56B

WISCONSIN DEPT OF TRANSPORTATION

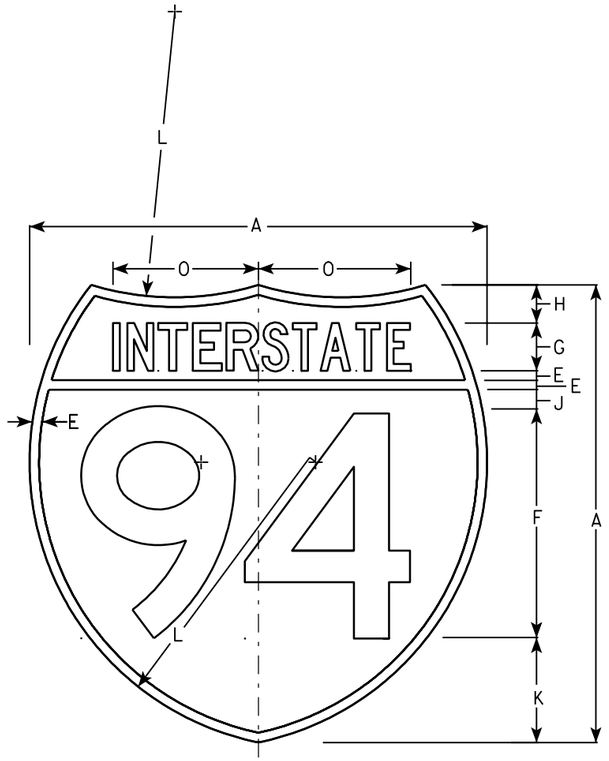
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/5/10 PLATE NO. I55-56B.1

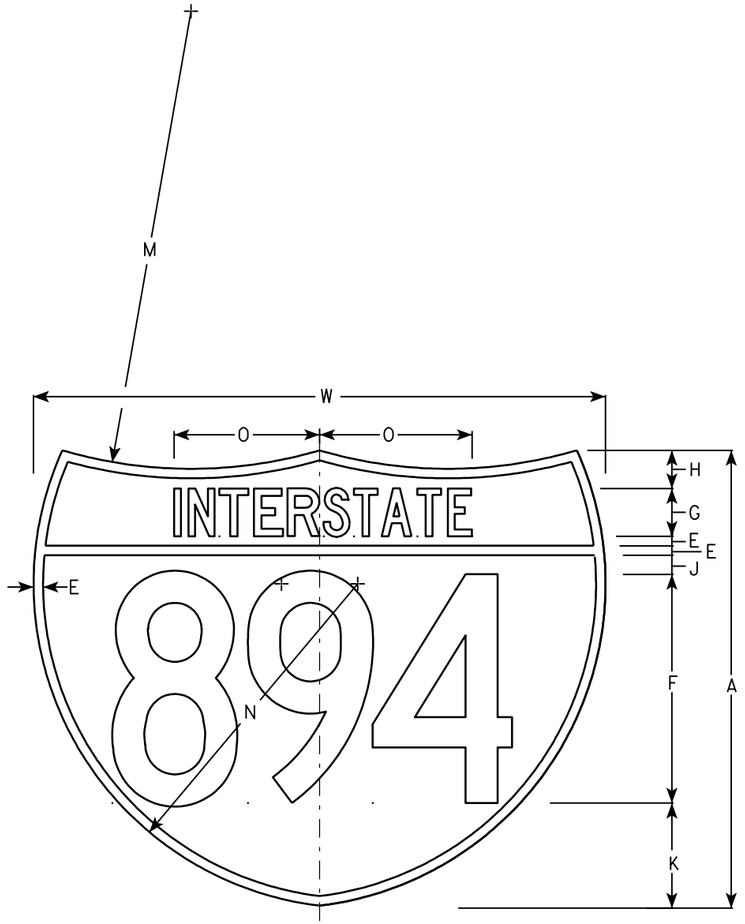
7

7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 270	E



M1-1



M1-1A

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Top Red - Bottom Blue (See Note 6)
   Message - White - See Note 6
3. Message Series - See note 5
4. Substitute appropriate numerals & ajust spacing as per plate A10-1.
5. M1-1 - Numerals - D
   Interstate - C
   M1-1A - All copy - C
6. Permanent Signs
   Message - Type H Reflective
   Detour or other temporary signs
   Background - Reflective
   Message - Reflective

Metric equivalent for these signs are:

SIZE	M1-1	SIZE	M1-1A
1			
2	600 mm X 600 mm	2	600 mm X 750 mm
3	900 mm X 900 mm	3	900 mm X 1125 mm
4	900 mm X 900 mm	4	900 mm X 1125 mm
5	900 mm X 900 mm	5	900 mm X 1125 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	M1-1 Area sq. ft.	M1-1A Area sq. ft.	M1-1 Area m2	M1-1A Area m2
1																													
2	24				1/2	12	2 1/2	2		1	5 1/2	15	24	17	7 7/8								30			3.13	3.91	.36	.46
3	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
4	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
5	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05

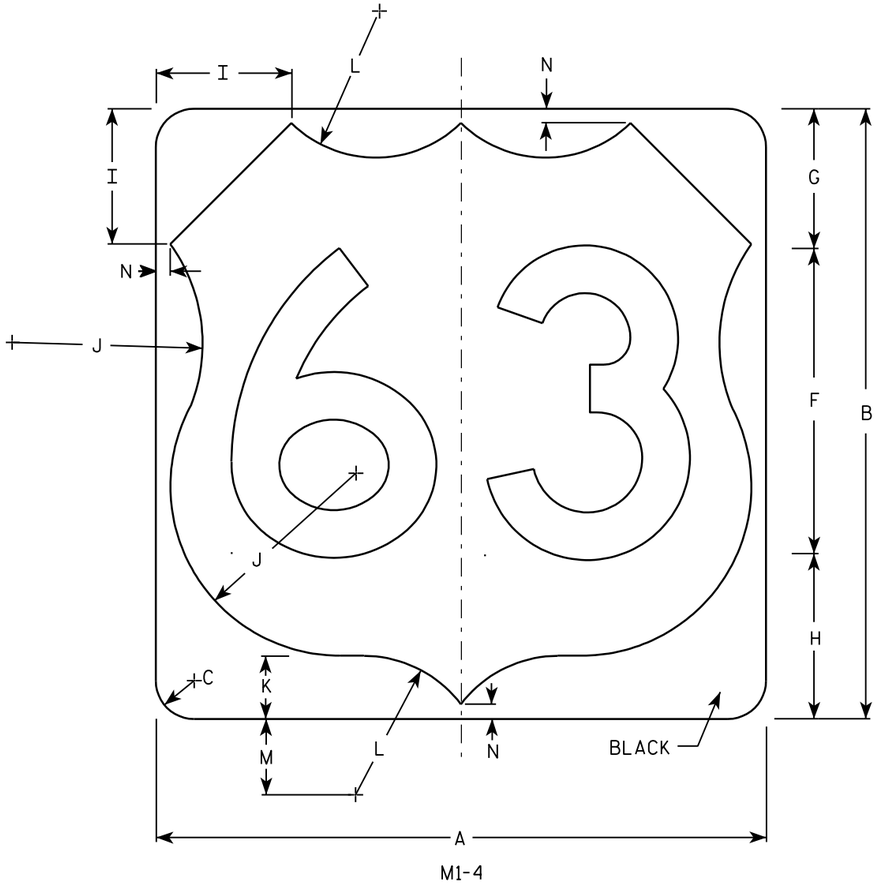
INTERSTATE ROUTE MARKER
M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

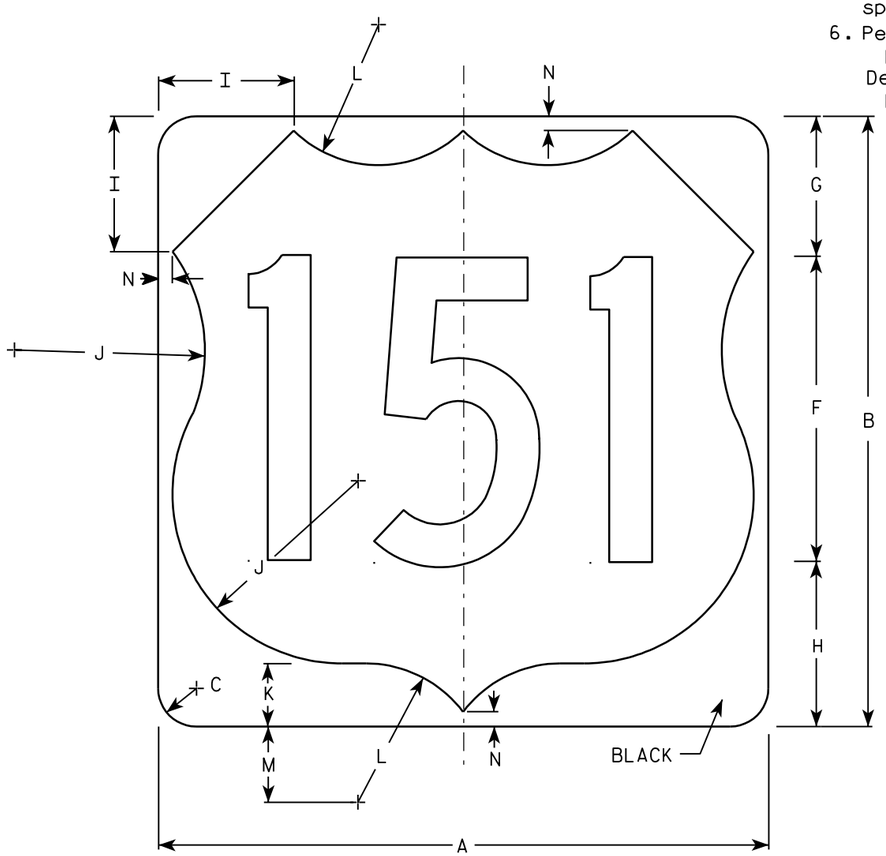
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/23/05 PLATE NO. M1-1.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 271	E



M1-4



M1-4

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

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

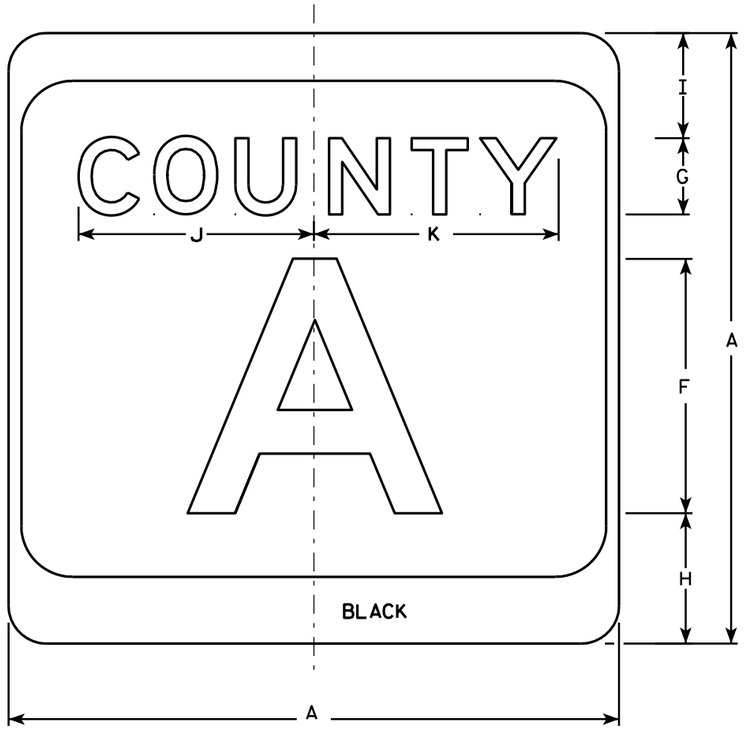
USH MARKER
M1-4 FOR ASSEMBLIES

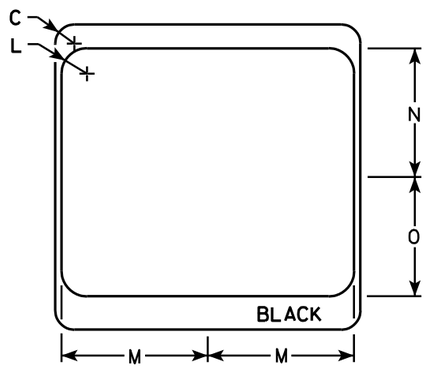
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/25/05 PLATE NO. M1-4.9

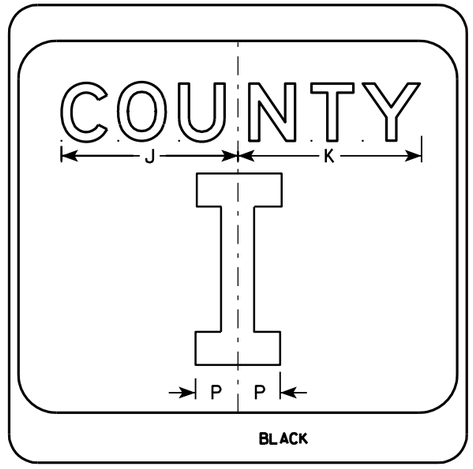
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 272 | E

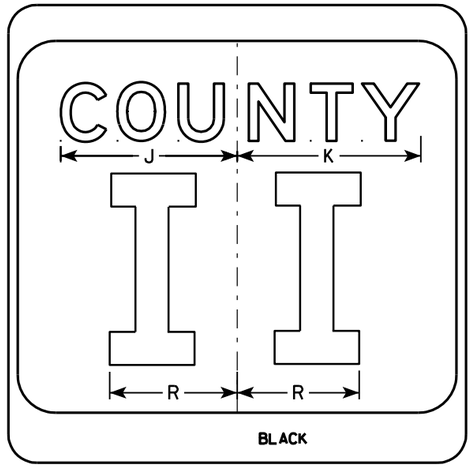




NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 7
   Message - Black
3. Message Series - see Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Message Series E for 1 letter.
   Message Series D for 2 letters unless message is too big then Series C.
   Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective





SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

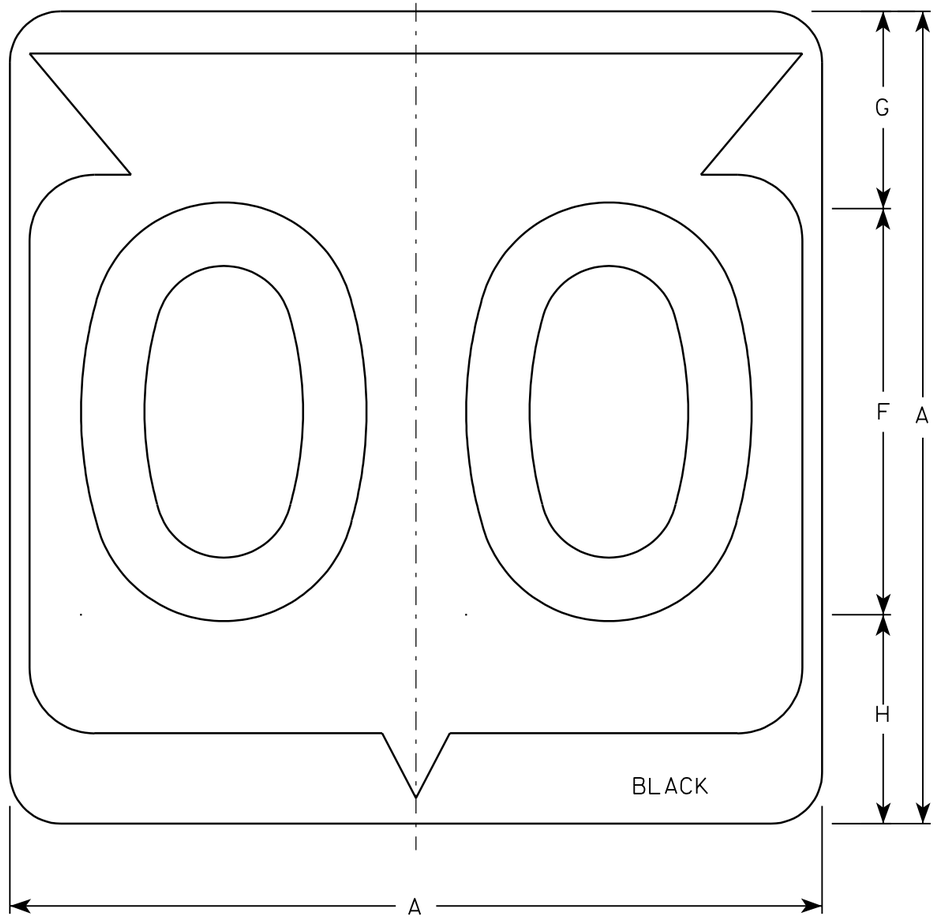
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8

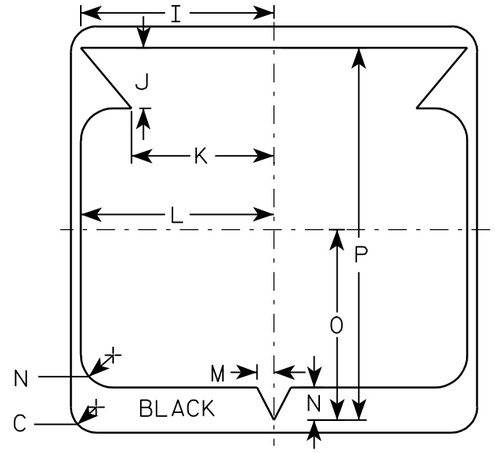
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 273	E



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

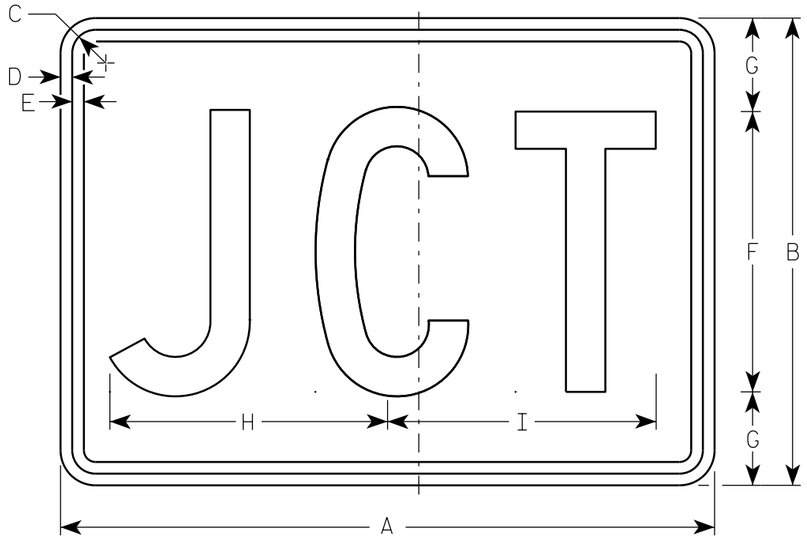
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

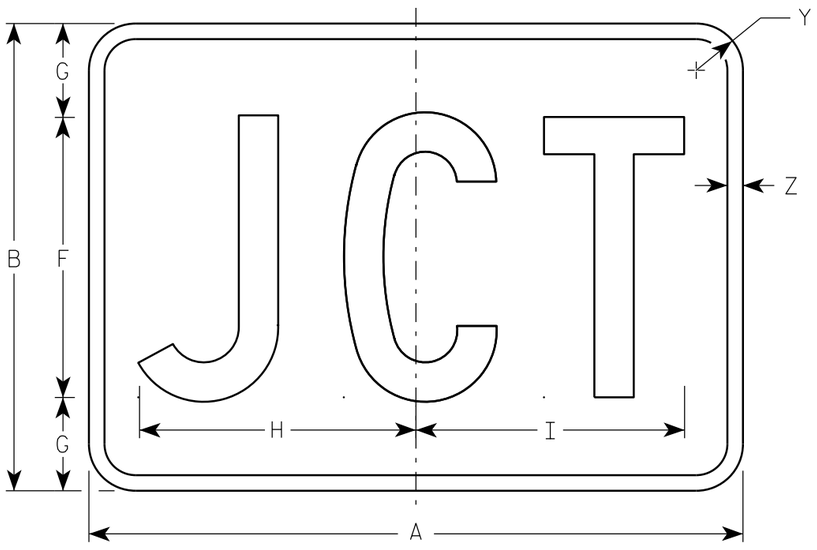
APPROVED Chester J Spang for State Traffic Engineer

DATE 3/20/02 PLATE NO. M1-6.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 274	E



M2-1
MK2-1
MM2-1
MN2-1
MR2-1



MB2-1

NOTES

1. Sign is 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. M2-1 Background - White
   Message - Black
   MB2-1 Background - Blue
   Message - White
   MK2-1 Background - Green
   Message - White
   MM2-1 Background - White
   Message - Green
   MN2-1 Background - Brown
   Message - White
   MR2-1 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	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40

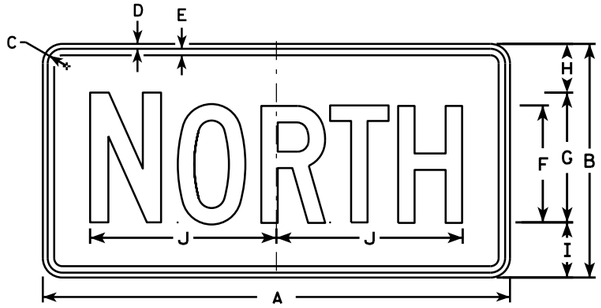
STANDARD SIGN
M2-1

WISCONSIN DEPT OF TRANSPORTATION

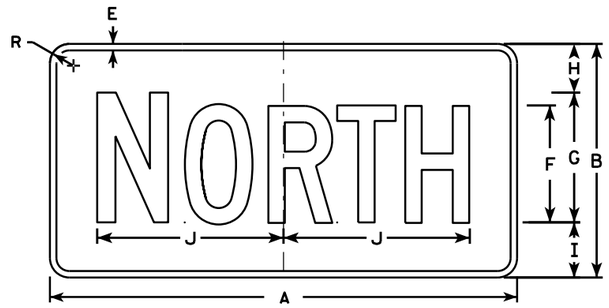
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 6/30/14 PLATE 275 12-1.11

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

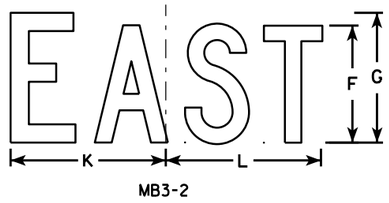


M3-1
MK3-1
MM3-1
MN3-1

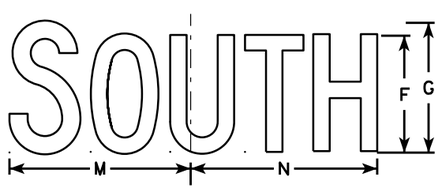


MB3-1

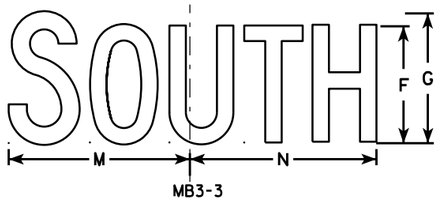
M3-2
MK3-2
MM3-2
MN3-2



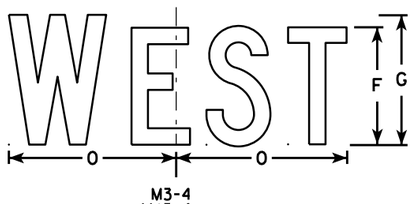
MB3-2



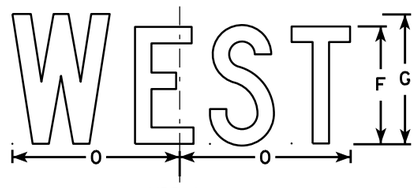
M3-3
MK3-3
MM3-3
MN3-3



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

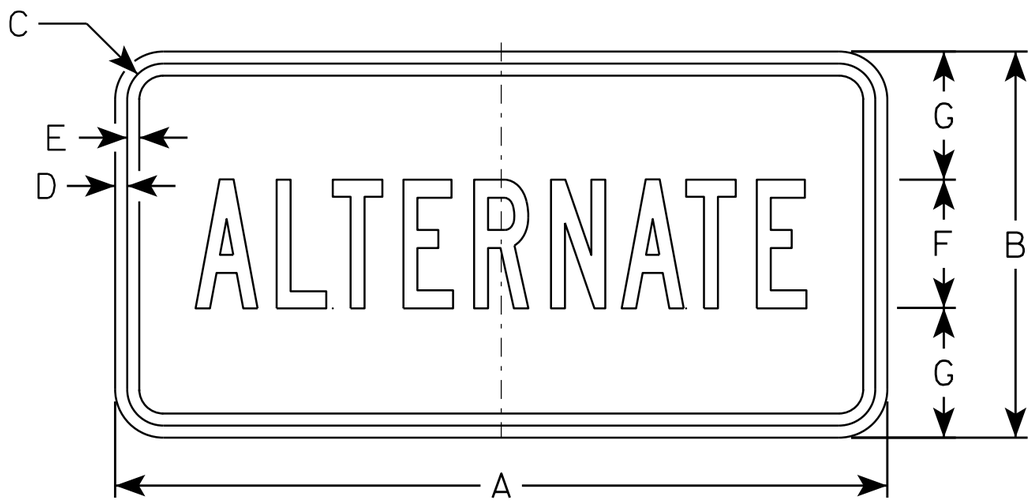
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

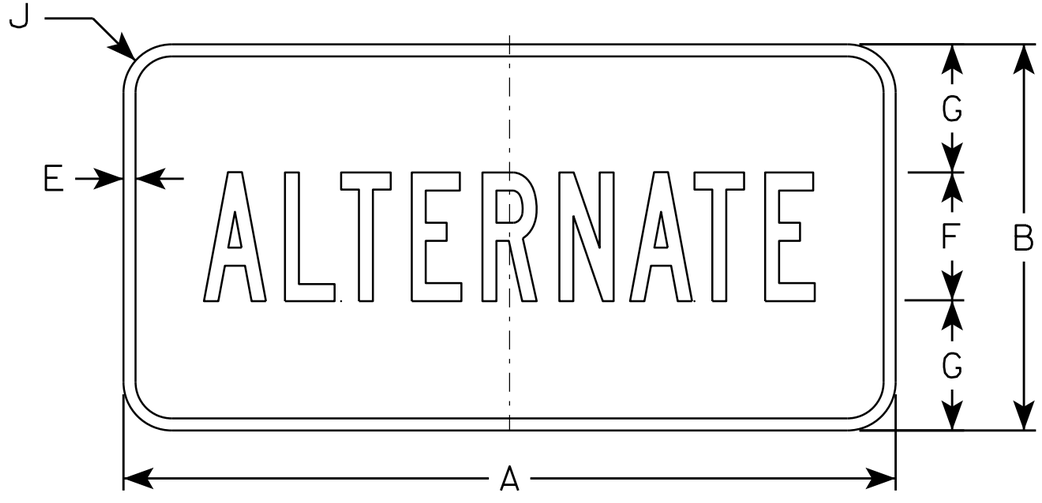
DATE 6/30/14 PLATE NO M3-1.13

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

7



M4-1
M04-1



MB4-1

NOTES

1. Sign is Type II - Type H except as Shown
2. Color:
   Background - See Note 5
   Message - See note 5
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-1 Background - White
   Message - Black

   MB4-1 Background - Blue
   Message - White

   M04-1 Background - Orange - Type F
   Message - Black

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	4	4	9 3/4	9 1/2	1 1/2																	2.00
3	36	18	1 1/8	3/8	1/2	7	5 1/2	16 3/8	16 1/2	1 1/2																	4.5
4	36	18	1 1/8	3/8	1/2	7	5 1/2	16 3/8	16 1/2	1 1/2																	4.5
5	36	18	1 1/8	3/8	1/2	7	5 1/2	16 3/8	16 1/2	1 1/2																	4.5

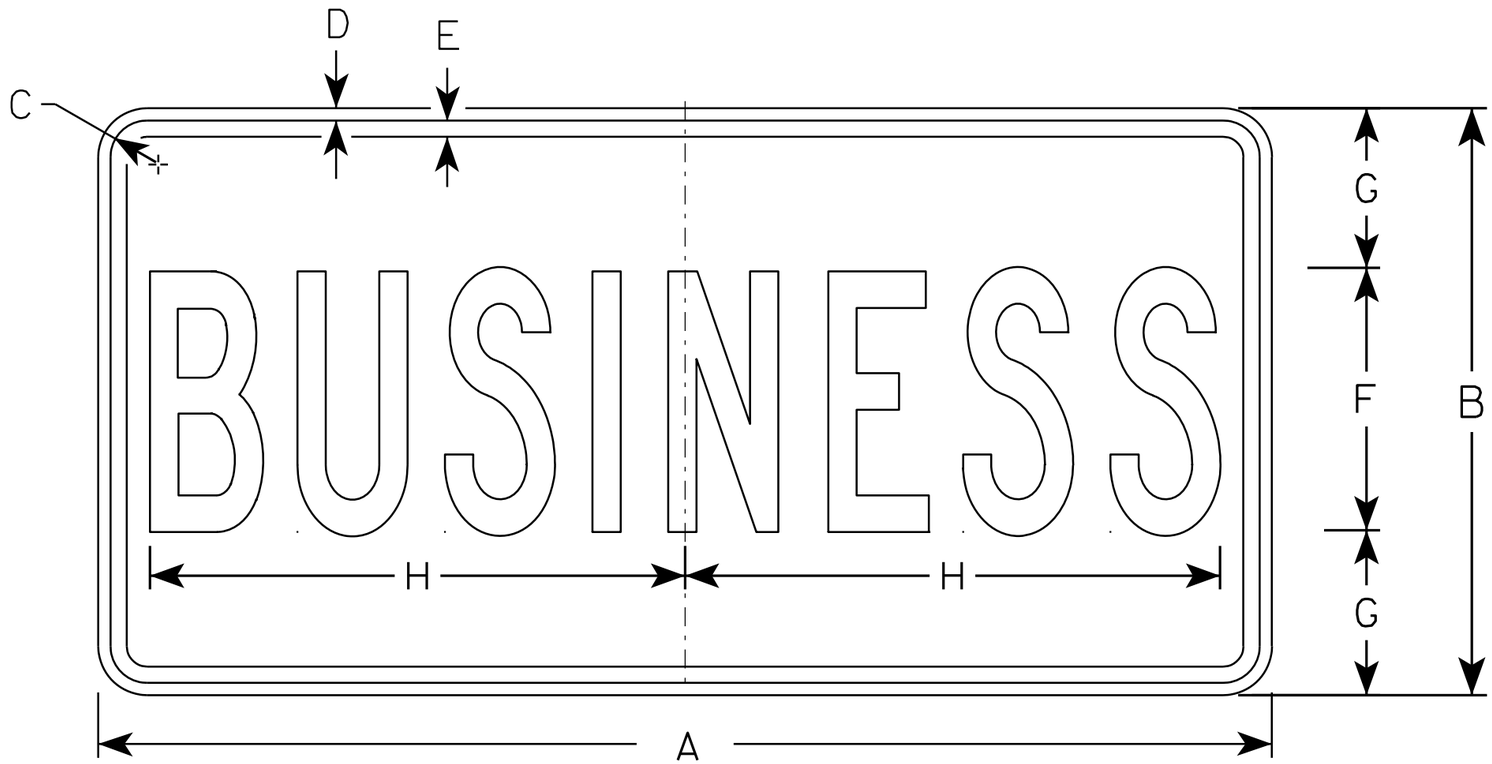
STANDARD SIGN
M4-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/30/14 PLATE 277 '14-1.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



M4-3

NOTES

1. Sign is Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White - See Note 5
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Permanent Signs
   Background - Type H Reflective
   Detour or other temporary Signs
   Background - Reflective

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	5	3 1/2	9 5/8																			2.0
3	36	18	1 1/8	3/8	1/2	8	5	16 3/8																			4.5
4																											
5																											

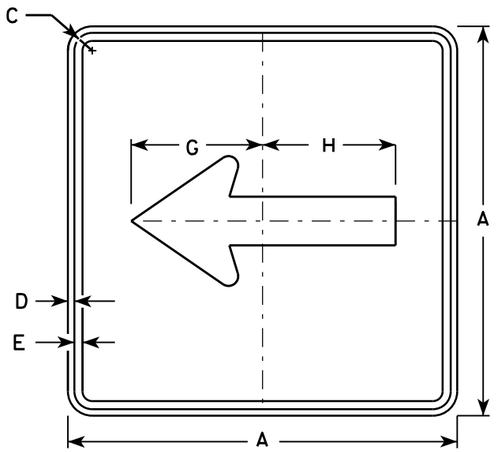
STANDARD SIGN
M4-3

WISCONSIN DEPT OF TRANSPORTATION

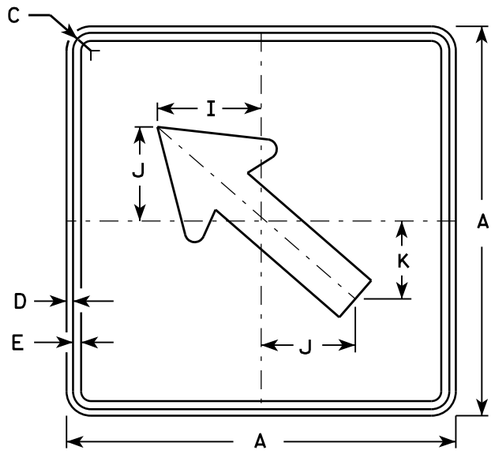
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-3.5

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 278 | E



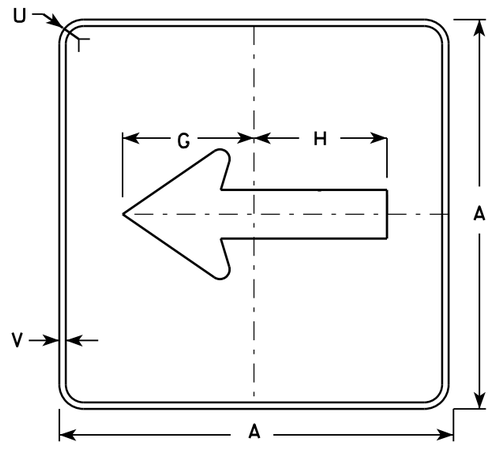
M6-1
MK6-1
MM6-1
MN6-1
MO6-1
MP6-1
MR6-1



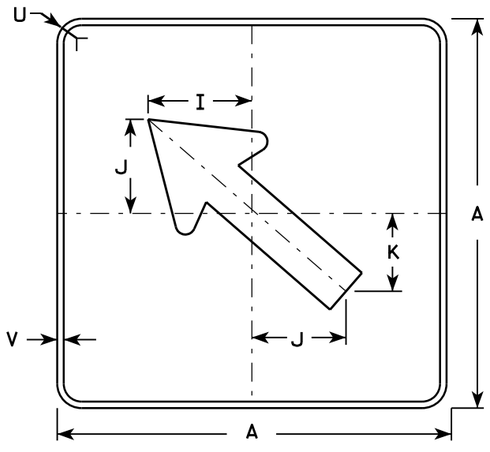
M6-2
MK6-2
MM6-2
MN6-2
MO6-2
MP6-2
MR6-2

NOTES

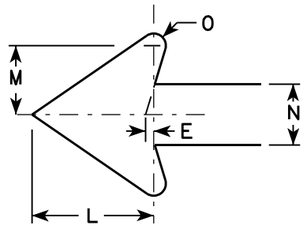
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - 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

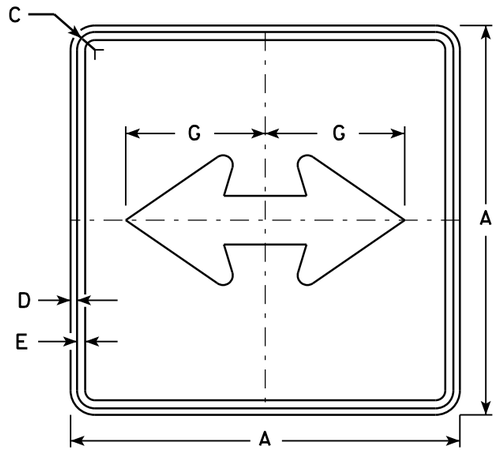
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

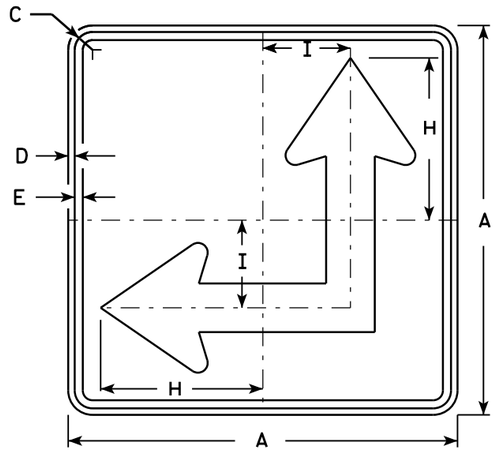
DATE 7/03/14 PLATE 279 M6-1.14

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

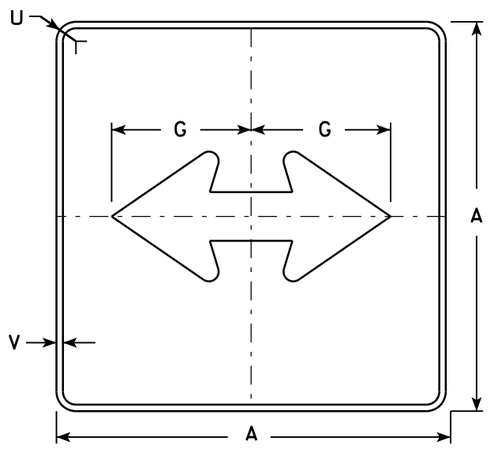
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\M61.DGN PLOT DATE : 03-JUL-2014 14:28 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 11.675051:1.000000
WISDOT/CADDS SHEET 42



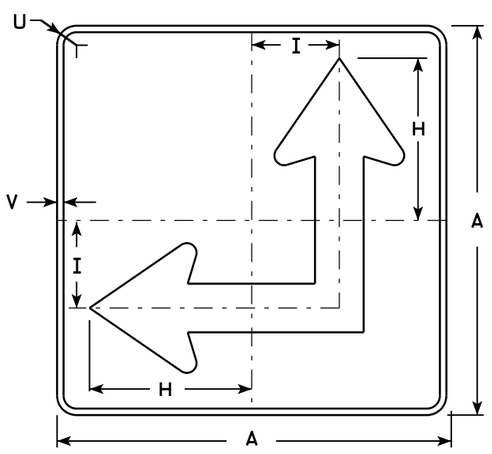
M6-4
MK6-4
MM6-4
MN6-4
MO6-4
MP6-4
MR6-4



M6-6
MK6-6
MM6-6
MN6-6
MO6-6
MP6-6
MR6-6



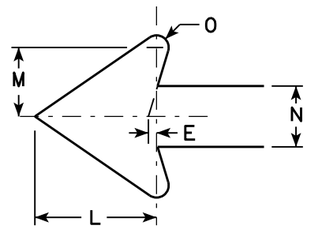
MB6-4



MB6-6

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. M6-4 and M6-6 Background - White
   Message - Black
   MB6-4 and MB6-6 Background - Blue
   Message - White
   MK6-4 and MK6-6 Background - Green
   Message - White
   MM6-4 and MM6-6 Background - White
   Message - Green
   MN6-4 and MN6-6 Background - Brown
   Message - White
   MO6-4 and MO6-6 Background - Orange - Type F Reflective
   Message - Black
   MP6-4 and MP6-6 Background - White
   Message - Blue
   MR6-4 and MR6-6 Background - Brown
   Message - Yellow
5. M6-6R same as M6-6L except arrow points ahead and 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 1/2	8 3/4	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	12 1/2	6 3/4			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	12 1/2	6 3/4			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	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

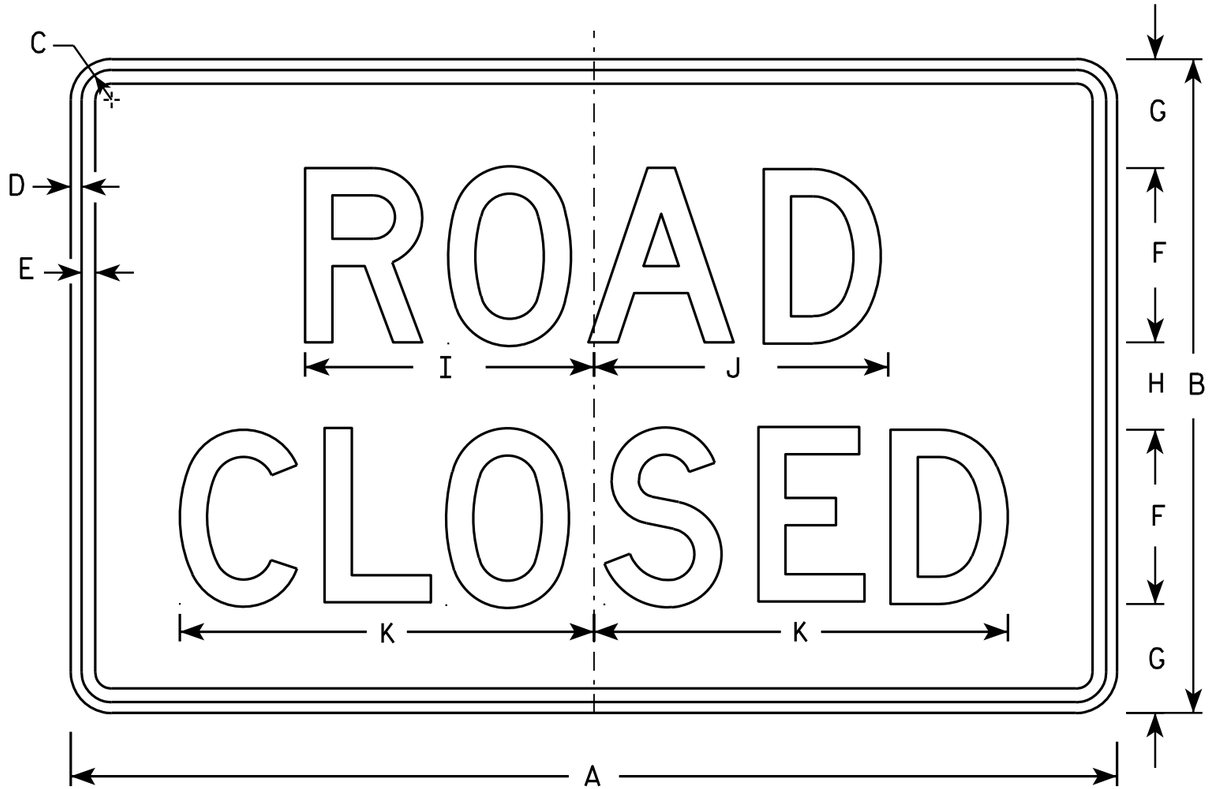
STANDARD SIGN M6-4 & M6-6 SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 7/03/14 PLATE 280 M6-4.9

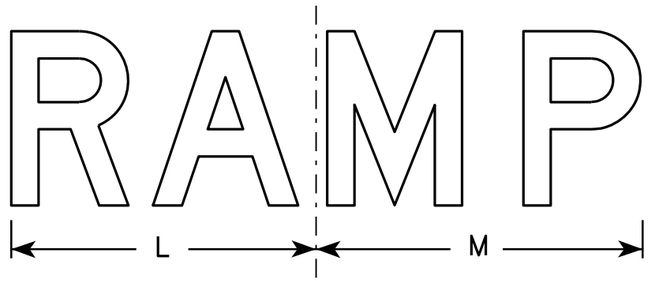
PROJECT NO: | HWY: | COUNTY: | SHEET NO: E



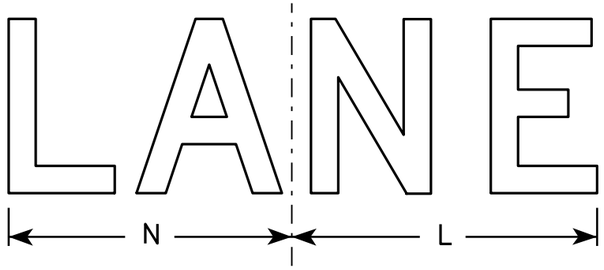
R11-2

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

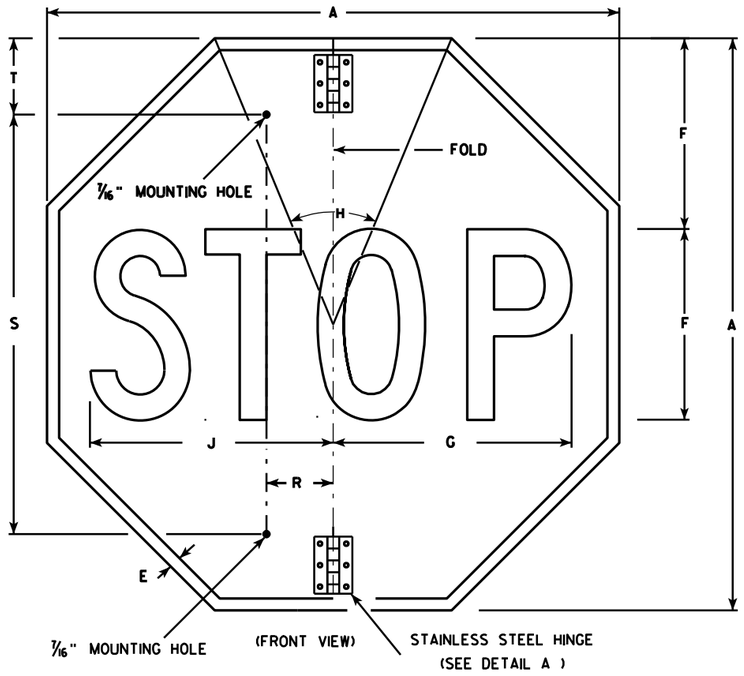
STANDARD SIGN
R11-2

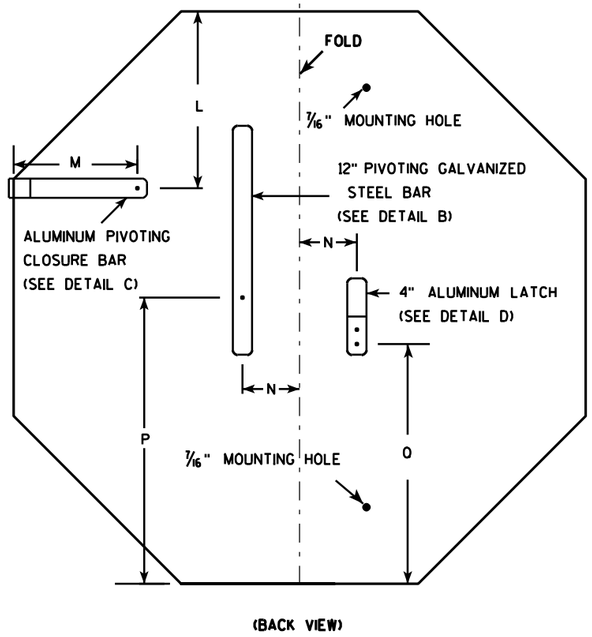
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

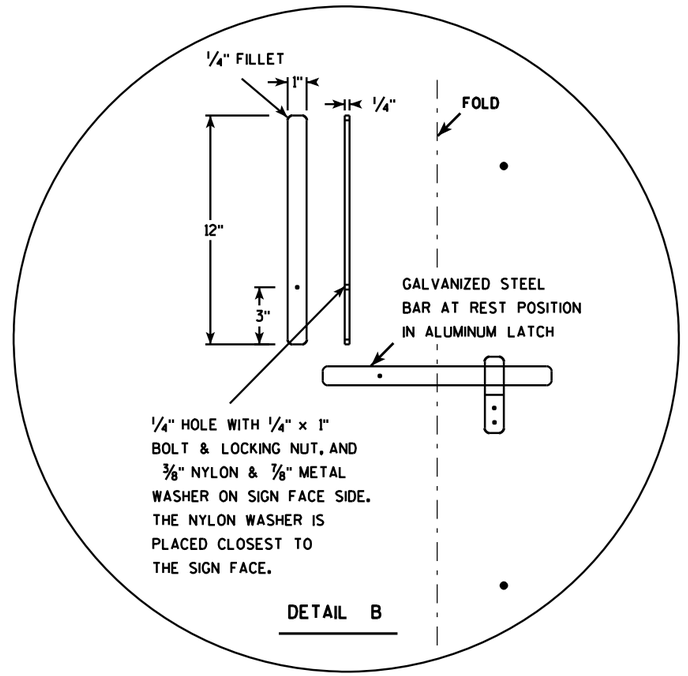
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 281	E

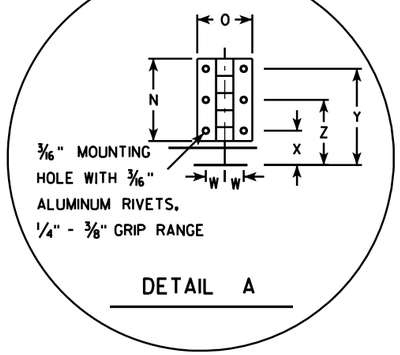


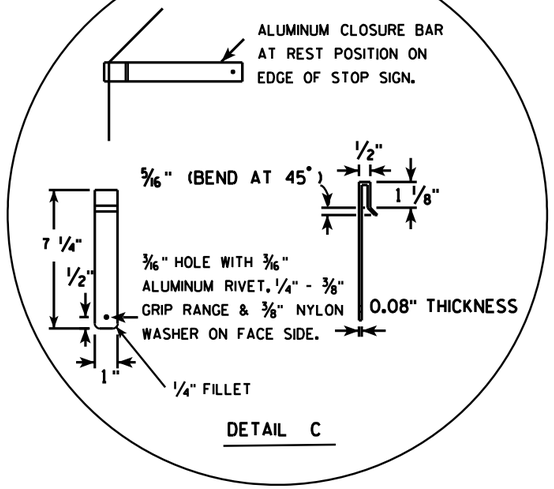


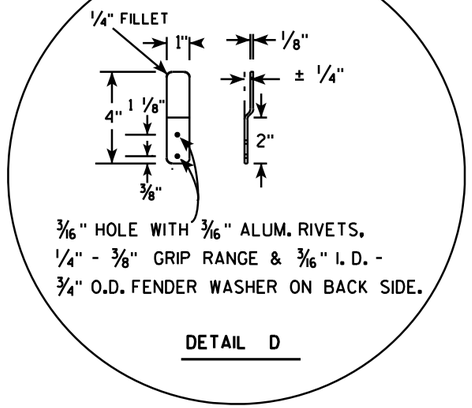
NOTES

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
4. All hardware used on the folding STOP sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.









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																											

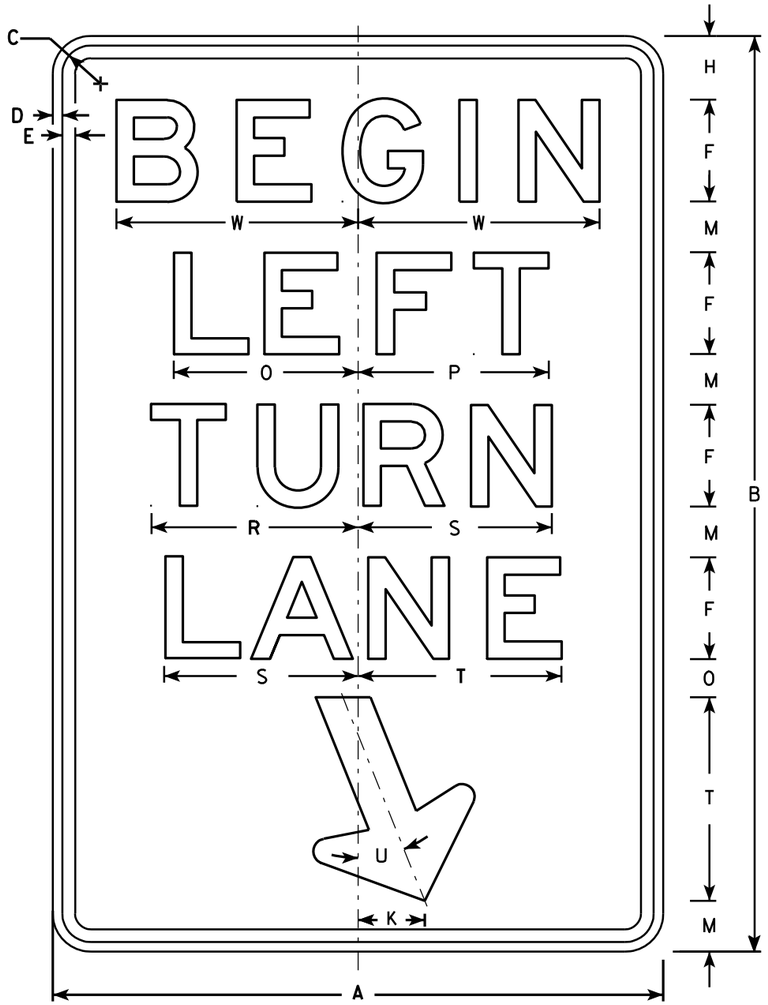
STANDARD SIGN
R1-1F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1F.3

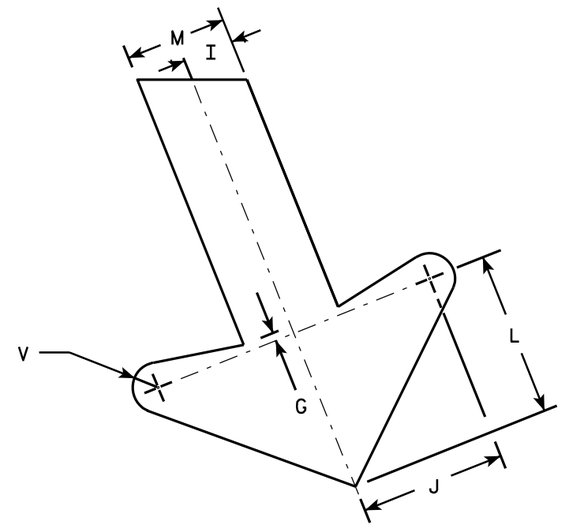
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 282 | E



R3-20L

NOTES

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



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
2M	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
3	36	54	1 3/4	1/2	5/8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 7/8	3	2 1/4	10 7/8	11 1/4		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

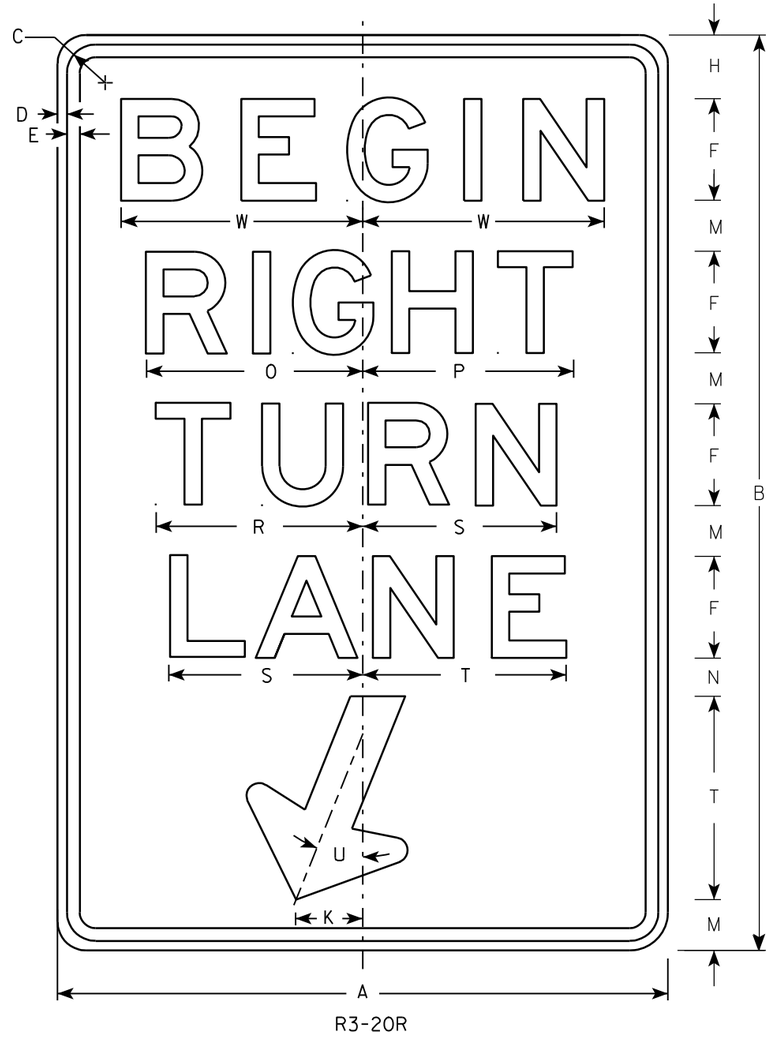
STANDARD SIGN
R3-20L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20L.7

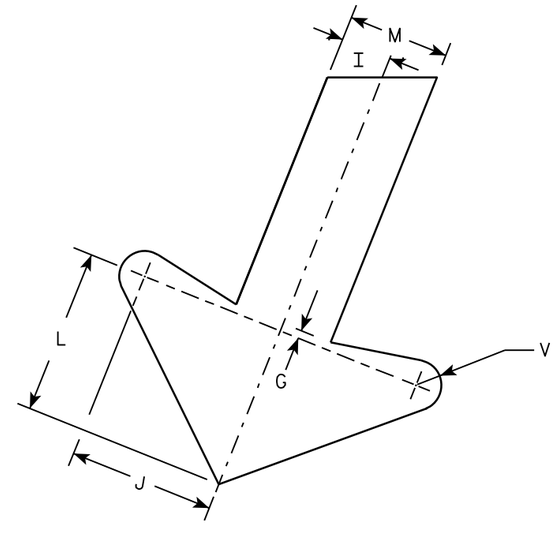
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 283 | E



R3-20R

NOTES

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



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	8 1/2	8 1/4		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
2M	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	8 1/2	8 1/4		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
3	36	54	1 3/4	1/2	5/8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 7/8	3	2 1/4	12 3/4	12 1/2		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

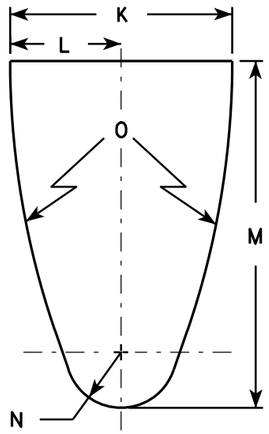
STANDARD SIGN
R3-20R

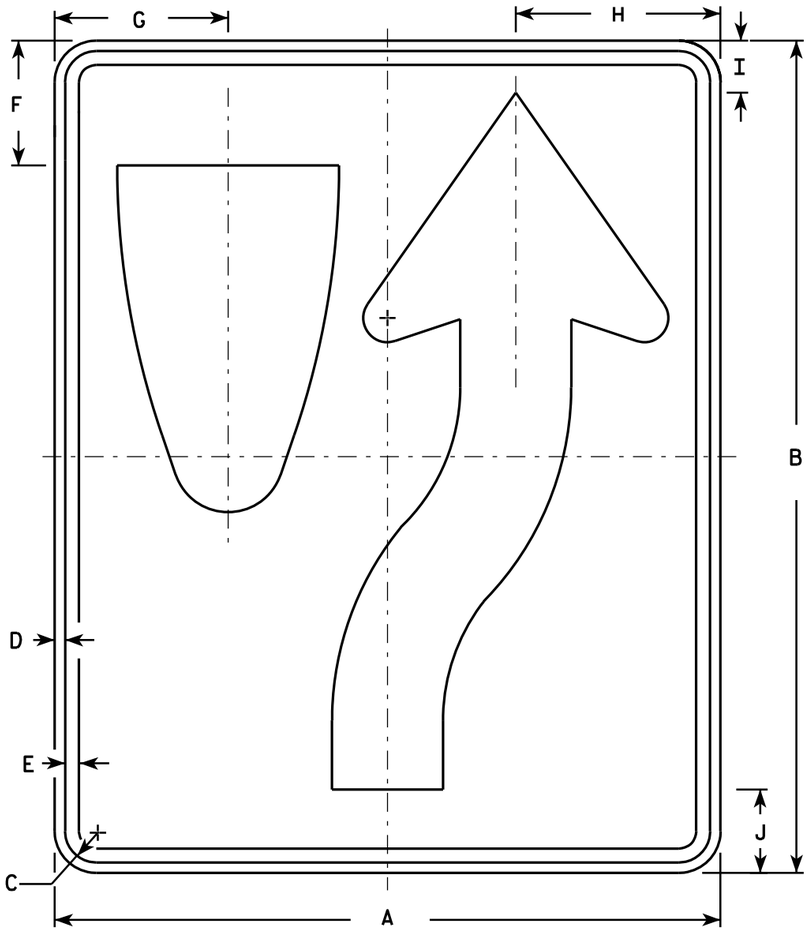
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20R.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 284 | E

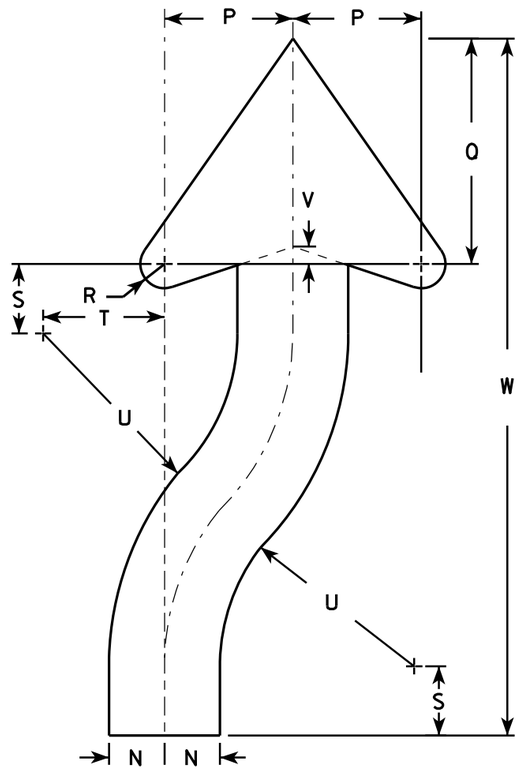




R4-7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:
   Background - White
   Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend is reversed.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

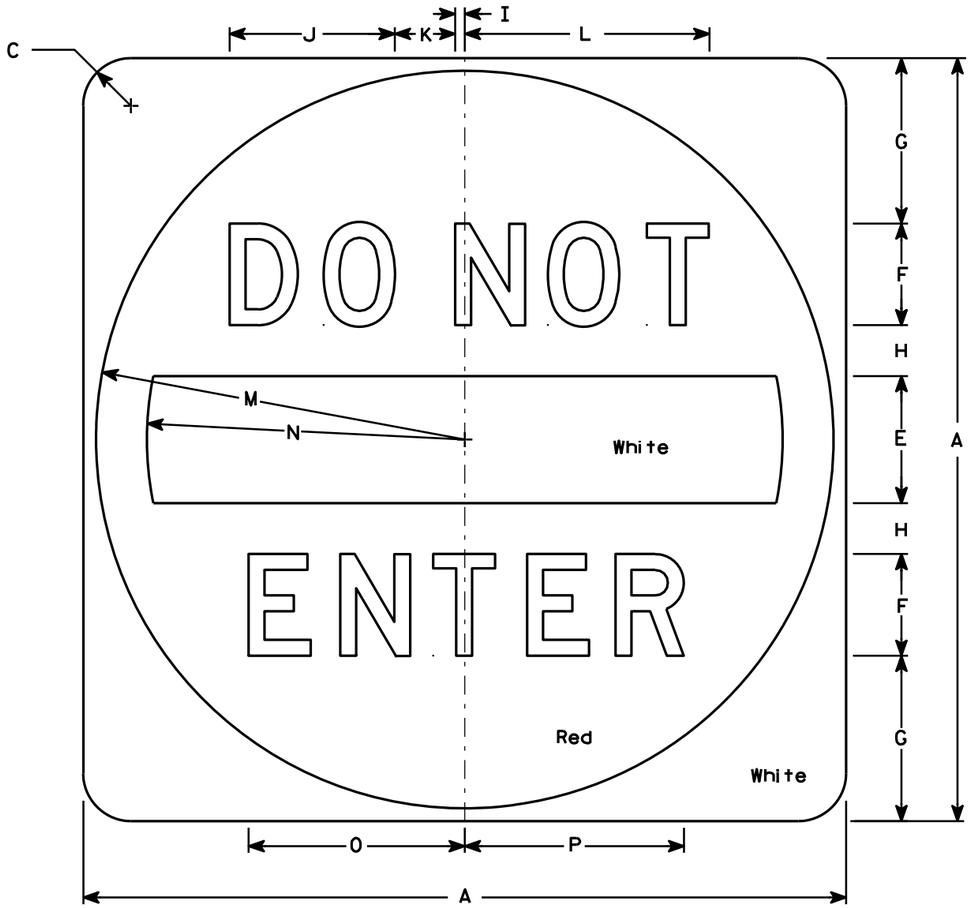
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 285	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

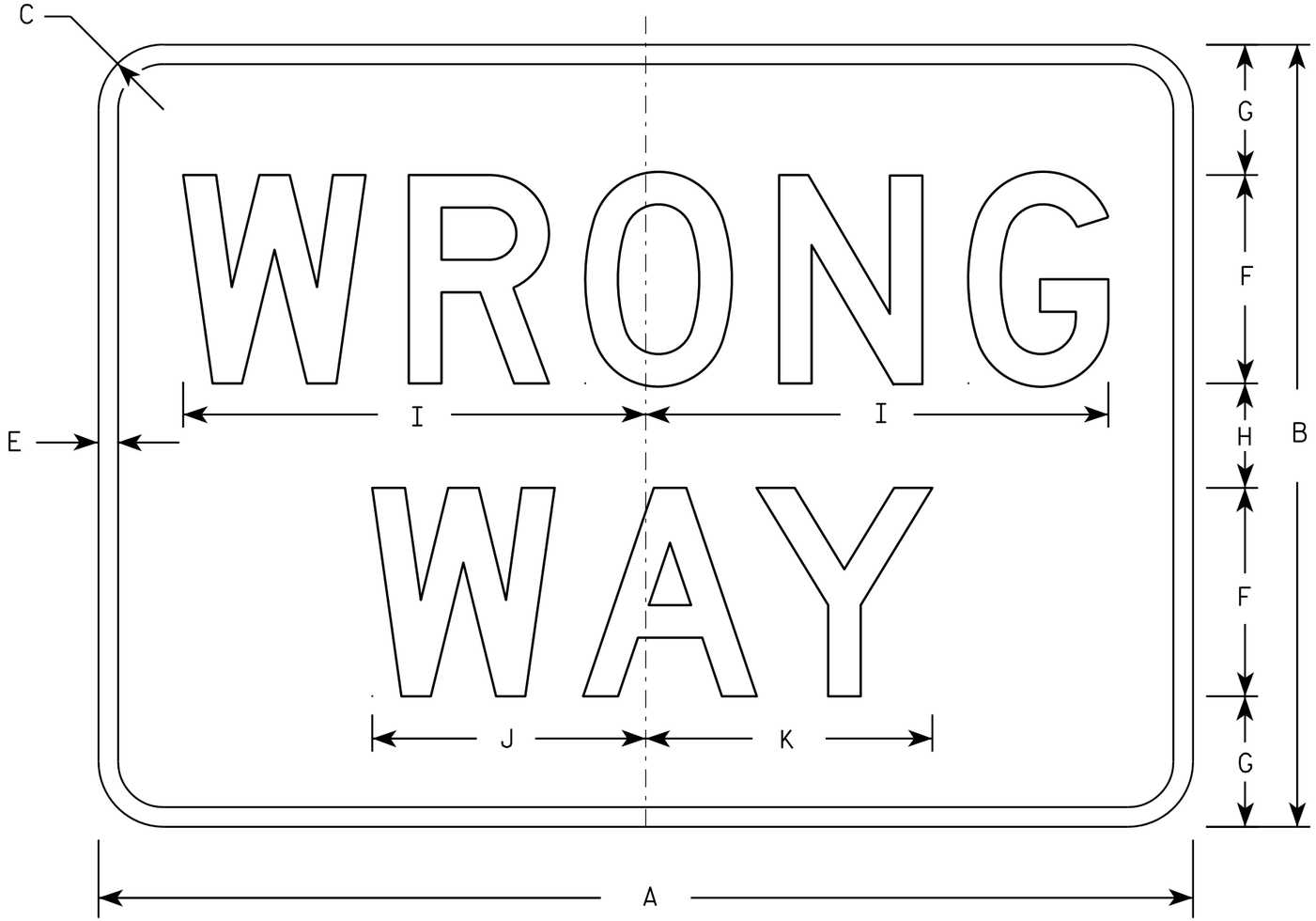
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1.15

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 286 | E

7



R5-1A

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1A.2

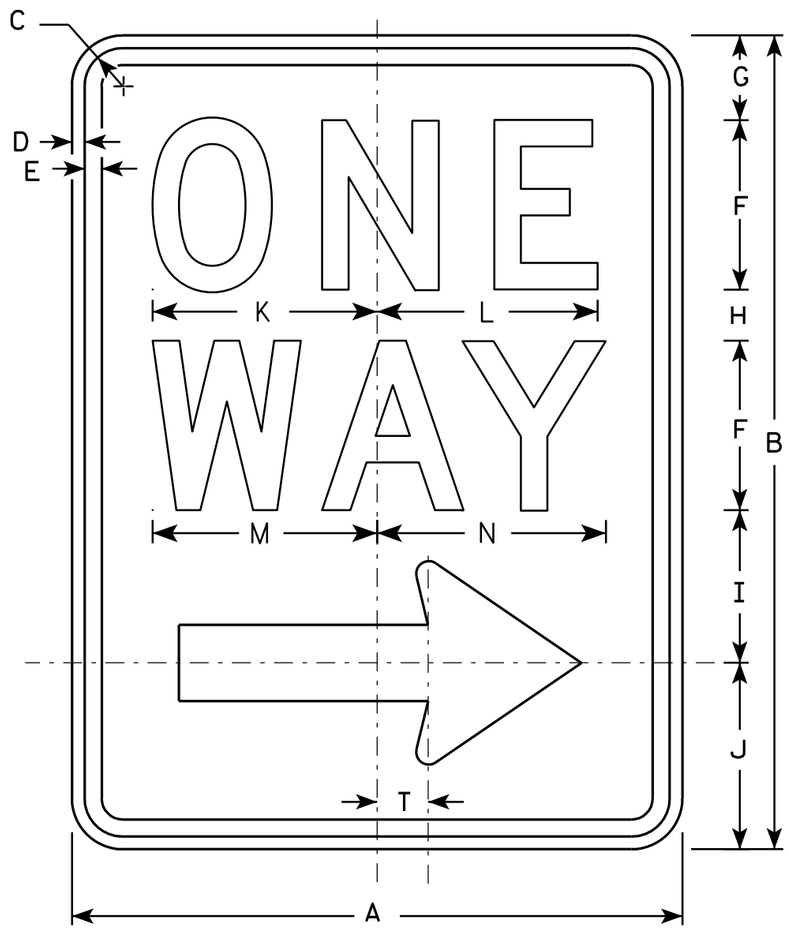
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 287 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R51A.DGN PLOT DATE : 17-DEC-2010 12:42 PLOT BY : dotsja PLOT NAME : PLOT SCALE : 5.462457:1.000000

WISDOT/CADDS SHEET 42

7

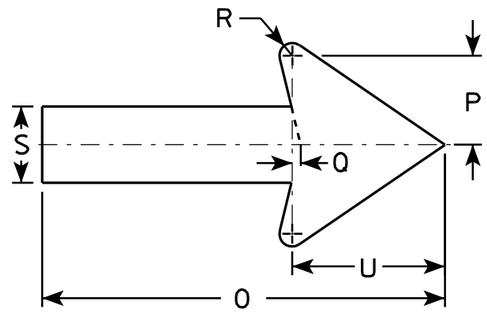
7



R6-2R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R6-2L same as R6-2R except arrow points to the left.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

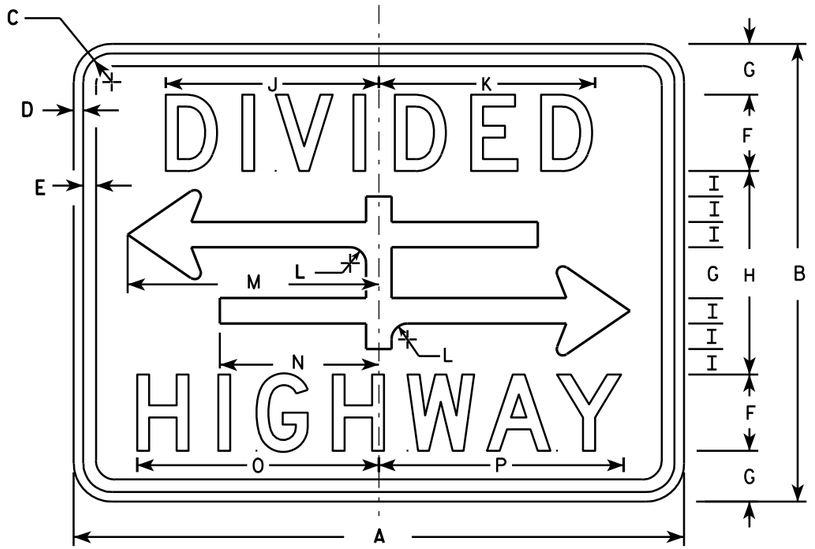
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

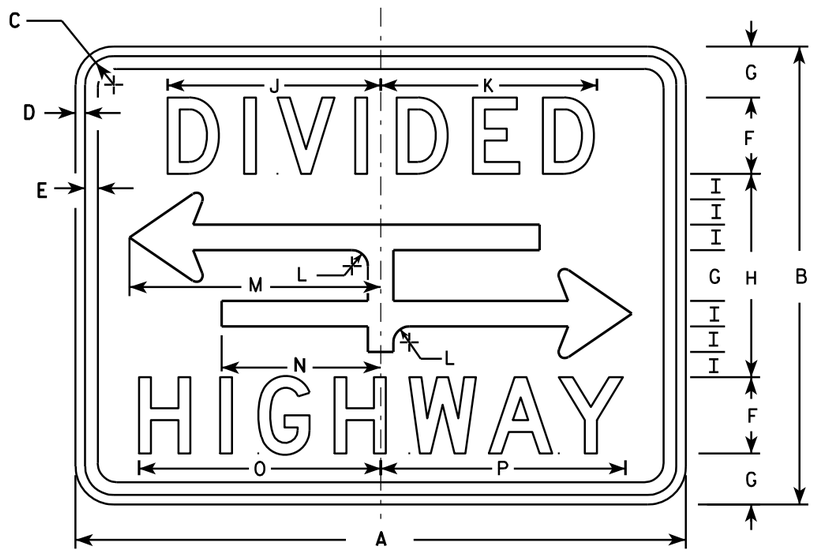
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 288	E



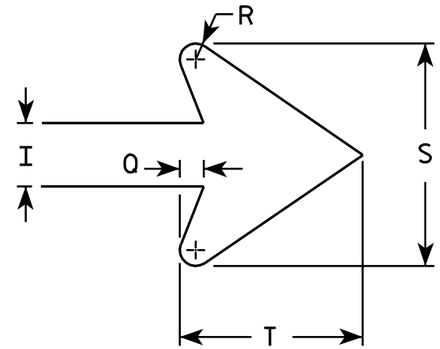
R6-3

NOTES

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



R6-3A



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24	18	1 1/8	3/8	3/8	3	2	8	1	8 3/8	8 1/2	5/8	9 7/8	6 1/4	9 1/2	9 5/8	3/8	1/4	3 1/2	2 3/4							3.0
2S	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
2M	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
3																											
4																											
5																											

STANDARD SIGN
R6-3 & R6-3A

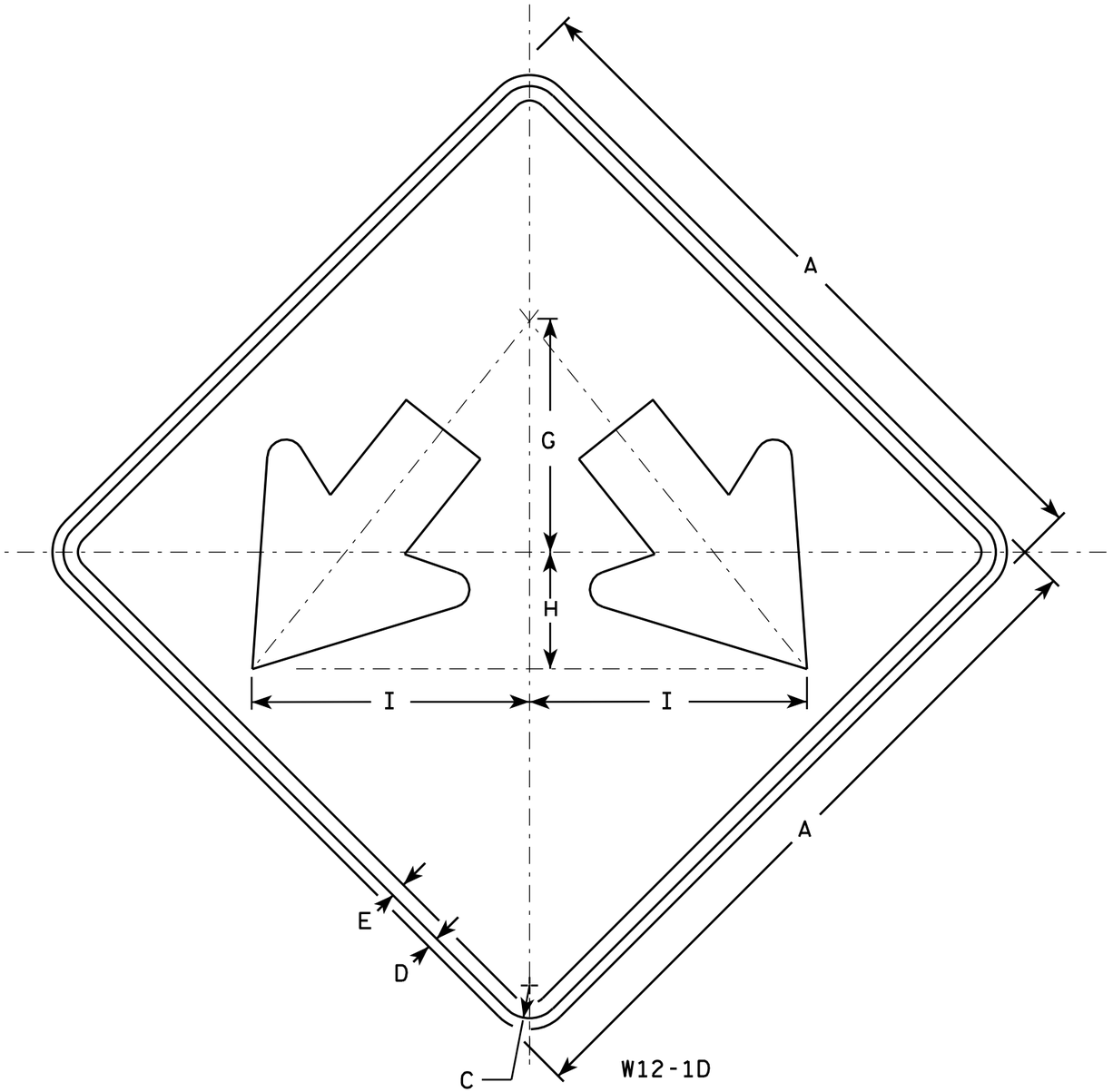
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R6-3.5

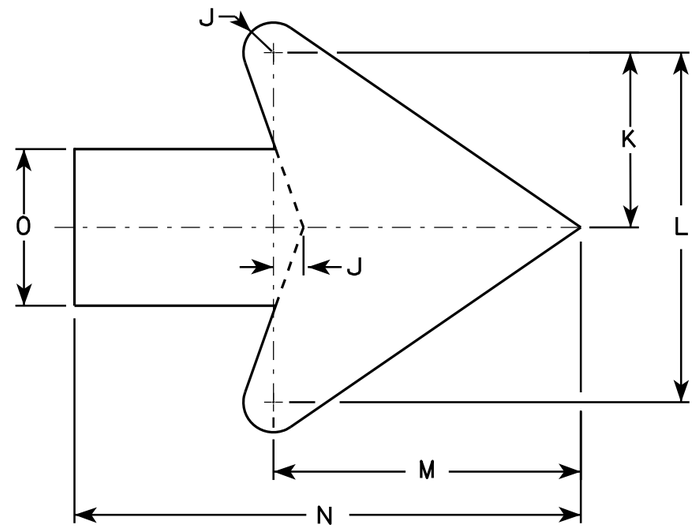
PROJECT NO:

SHEET NO: 289 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

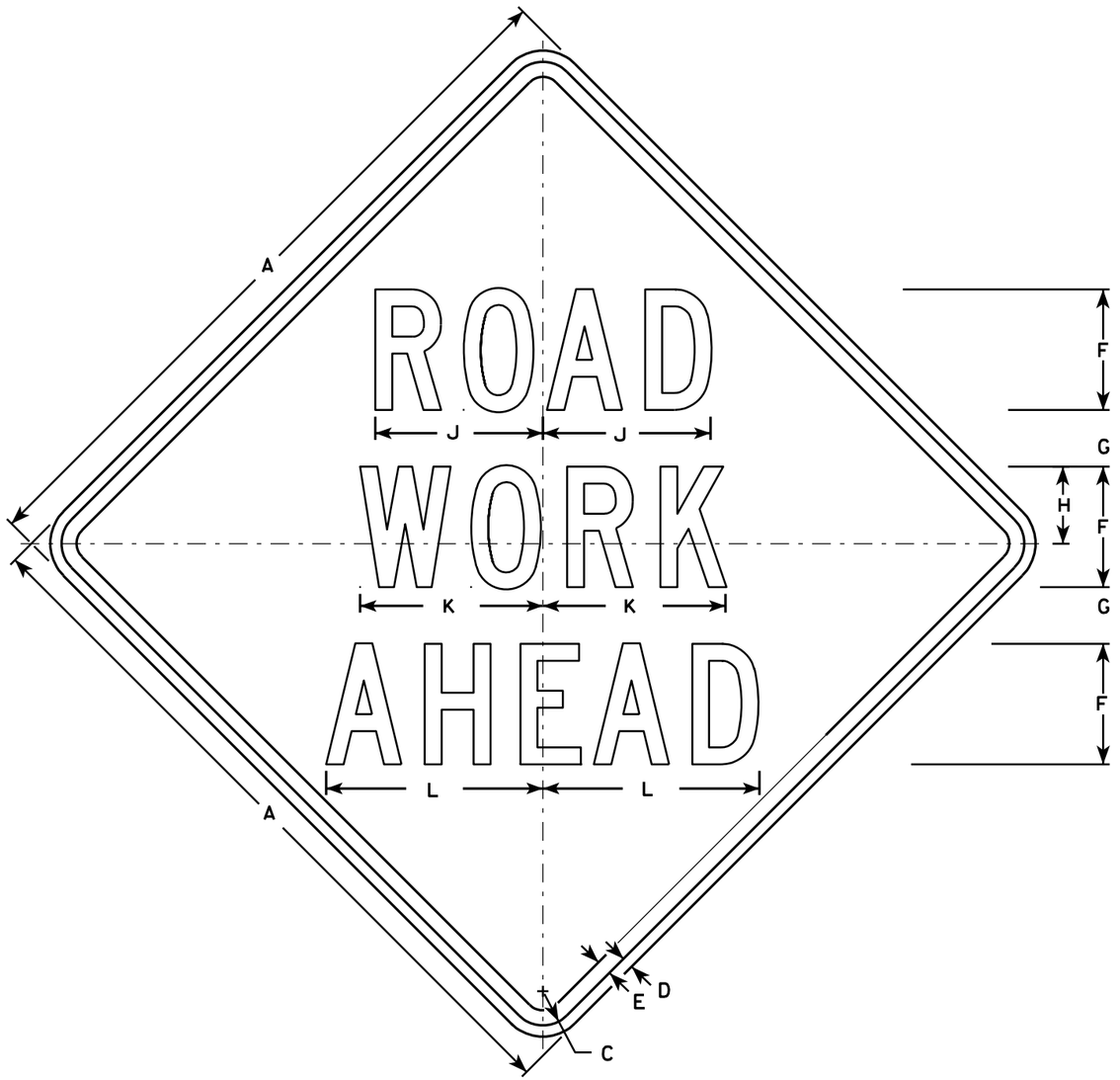
STANDARD SIGN
W12-1D

WISCONSIN DEPT OF TRANSPORTATION

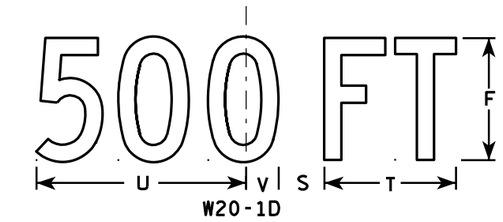
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W12-1D.15

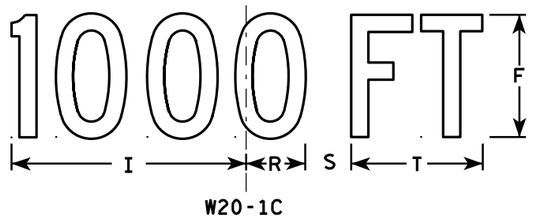
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 290 | E



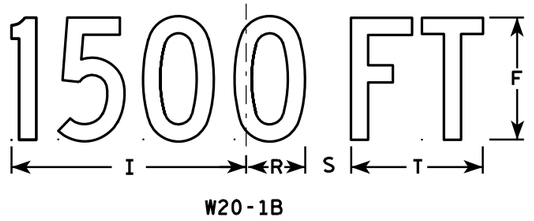
W20-1A



W20-1D

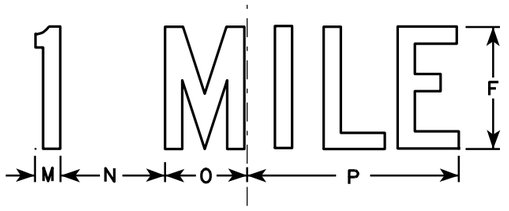


W20-1C



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 R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-1.9

PROJECT NO:

SHEET NO: 291 E

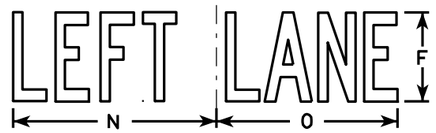
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W201.DGN PLOT DATE : 18-MAR-2011 09:56 PLOT BY : mscj9h

WISDOT/CADDS SHEET 42

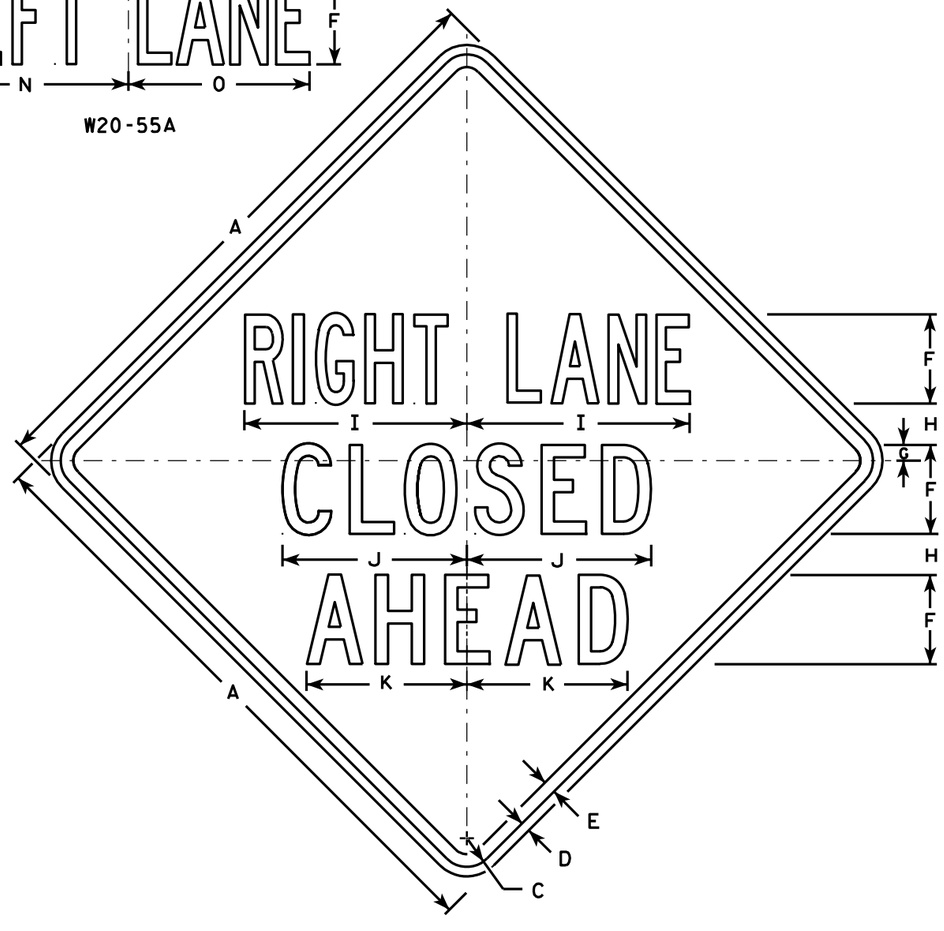
7

7

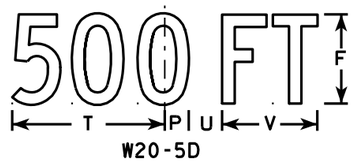
W20-56A



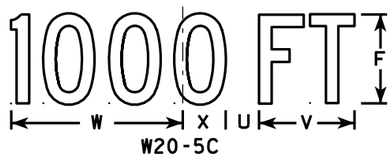
W20-55A



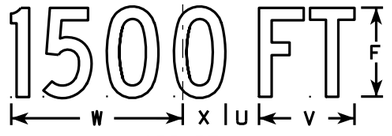
W20-5A



W20-5D



W20-5C



W20-5B

W20-5G

W20-5F

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. " _____ LANE" is Series B.
   All other copy 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	36	6	1 5/8	5/8	3/4	5	1/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 1/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

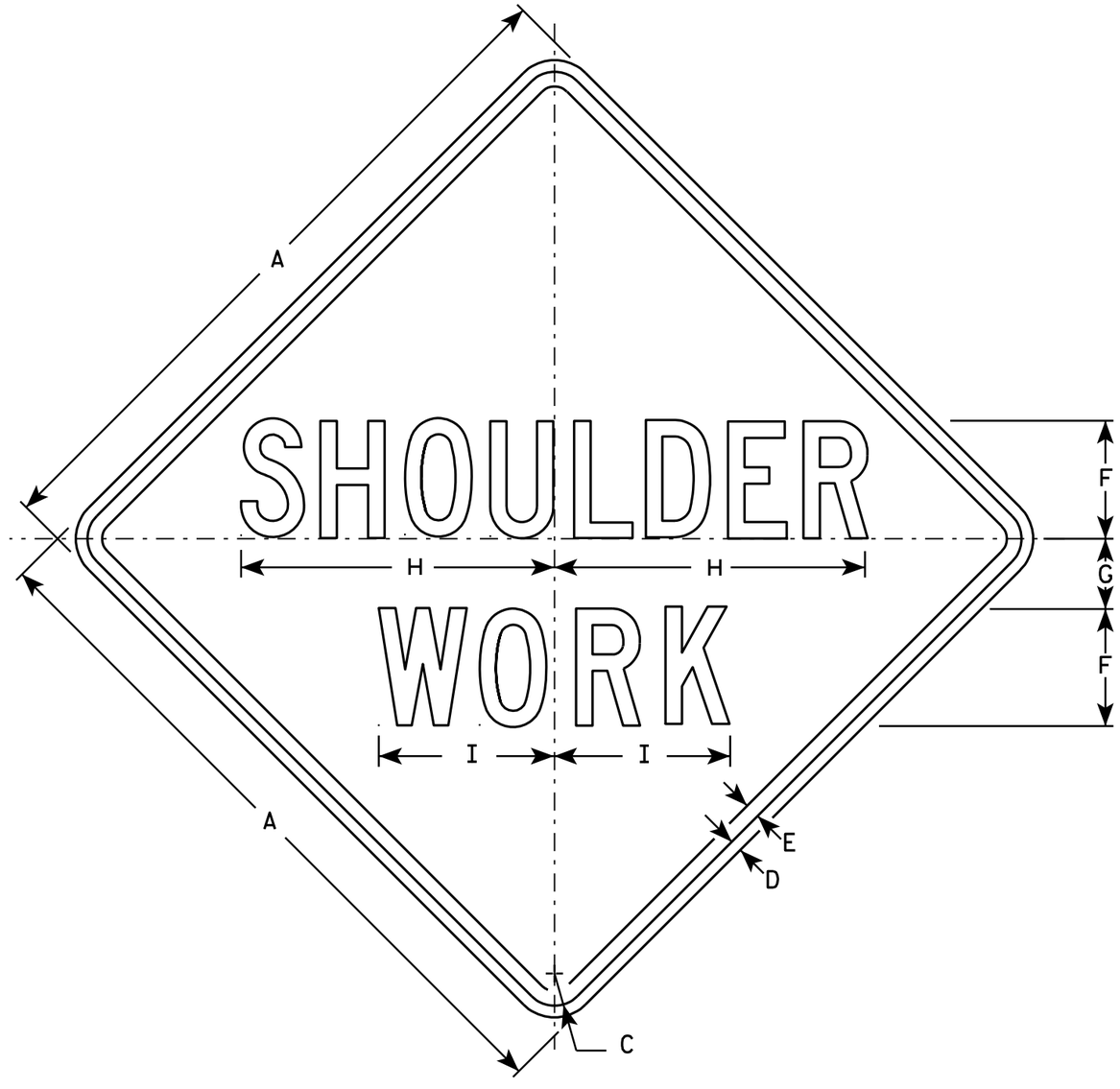
STANDARD SIGN
W20-5A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-5.11

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 292	E



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

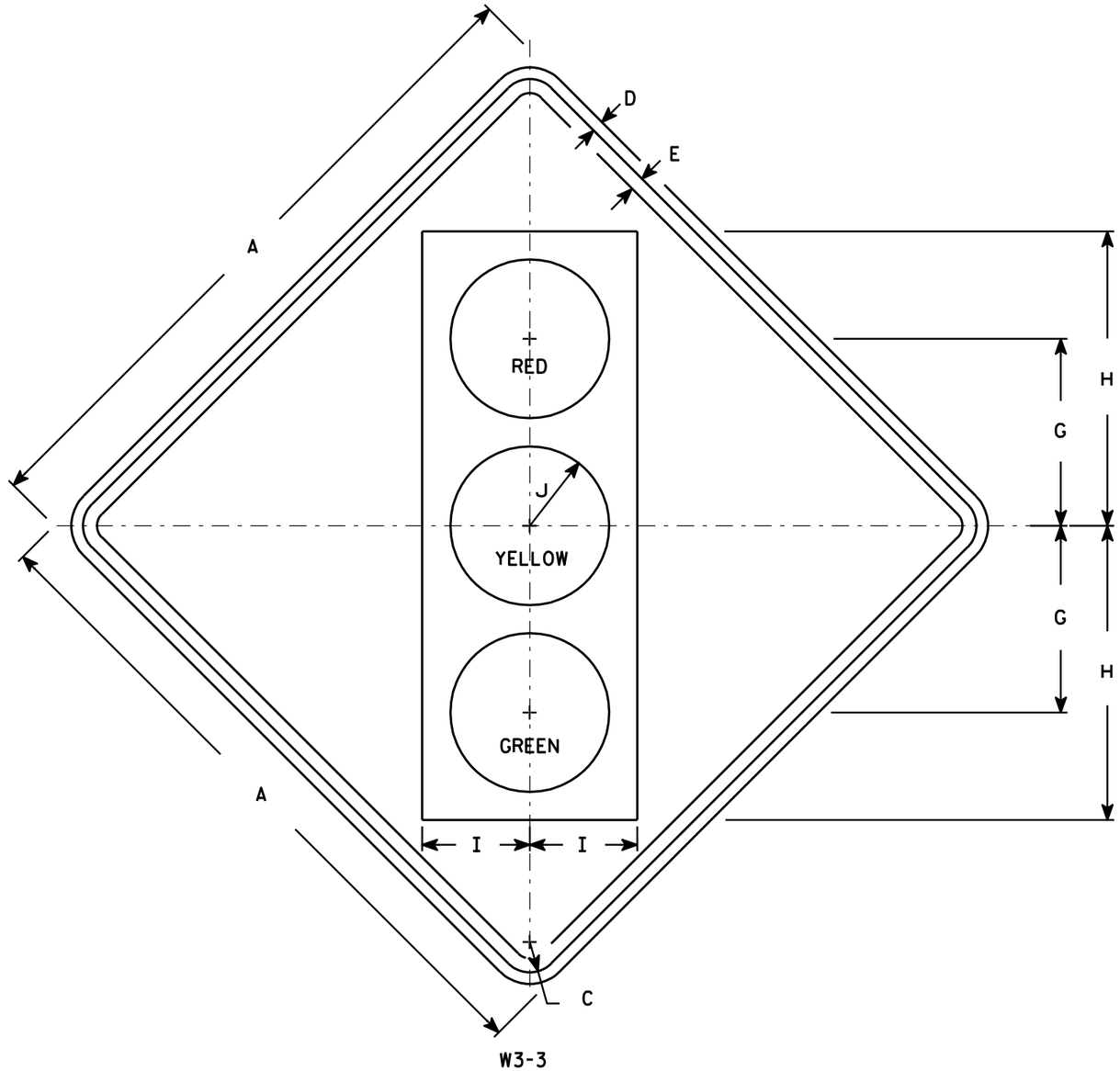
STANDARD SIGN
W21-5

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: 293 | 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 - 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

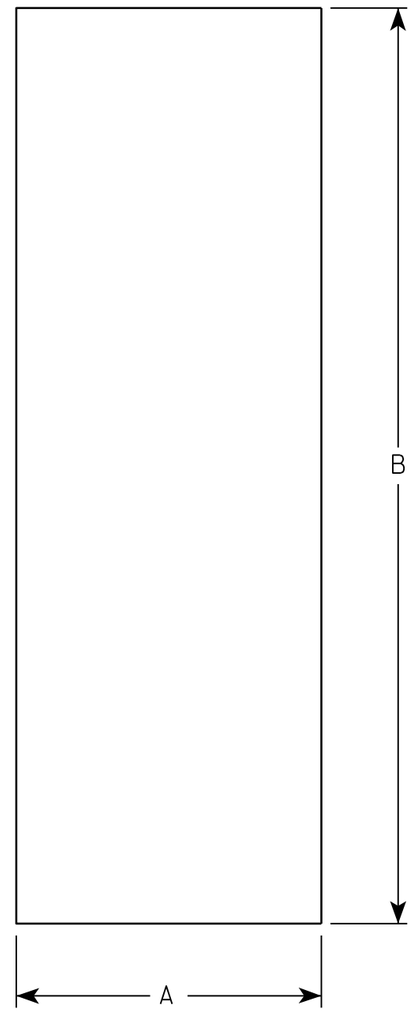
STANDARD SIGN
W3-3

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: 294 | E



W5-53

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																											
2S	4	12																									.33
2M	4	12																									.33
3																											
4																											
5																											

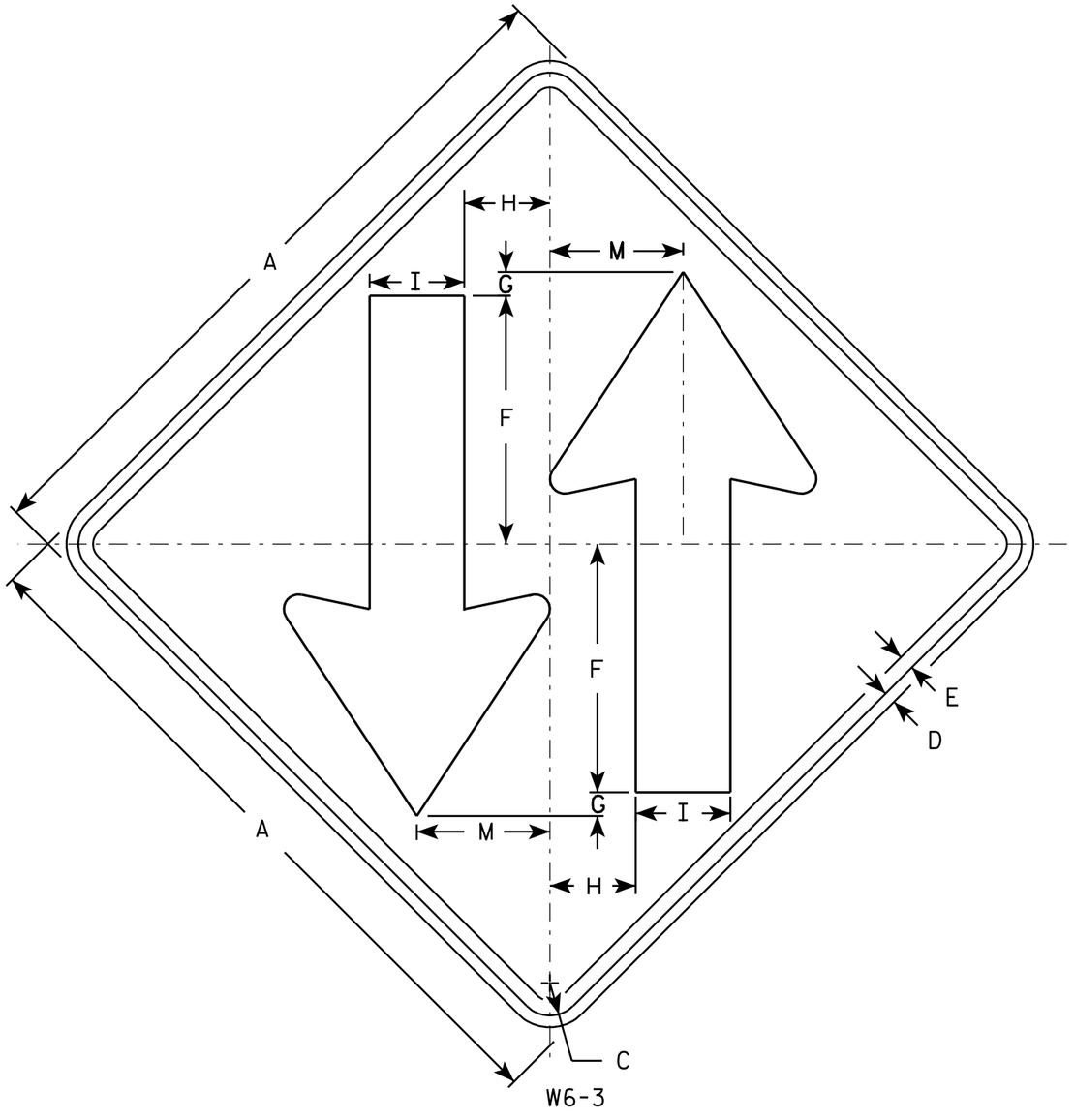
STANDARD SIGN
W5-53

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/3/10 PLATE NO. W5-53.7

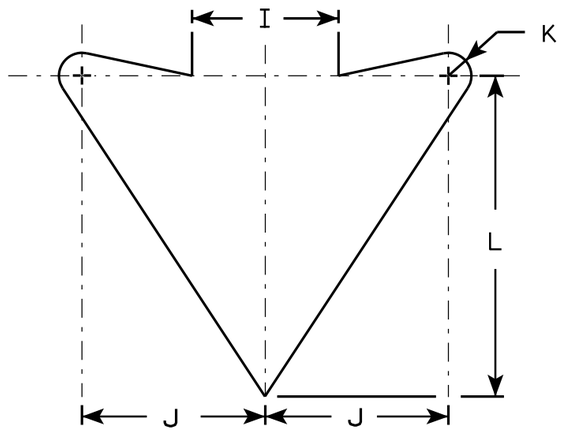
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 295	E



W6-3

NOTES

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



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	10 1/2	1	3 5/8	4	5	5/8	8 3/4	5 5/8														6.25
2S	36		1 5/8	5/8	3/4	12	1	4 1/4	5	6	3/4	10 1/2	6 3/4														9.0
2M	36		1 5/8	5/8	3/4	12	1	4 1/4	5	6	3/4	10 1/2	6 3/4														9.0
3																											
4	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0
5	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0

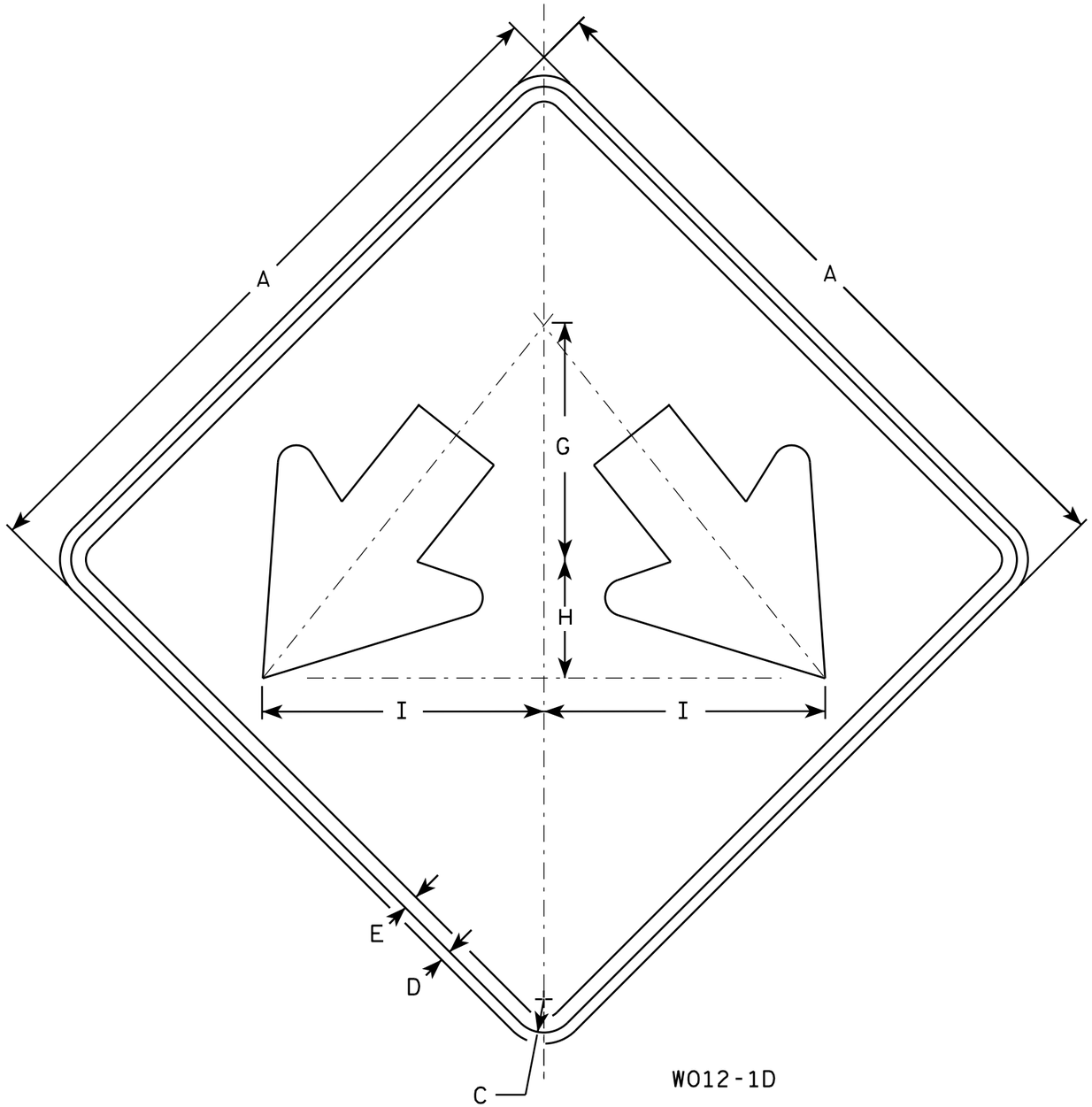
STANDARD SIGN
W6-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W6-3.10

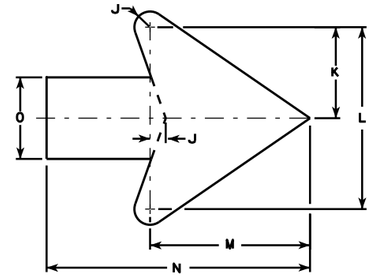
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 296 | E



W012-1D

NOTES

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



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	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
2S	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
2M	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
3	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
4	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
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

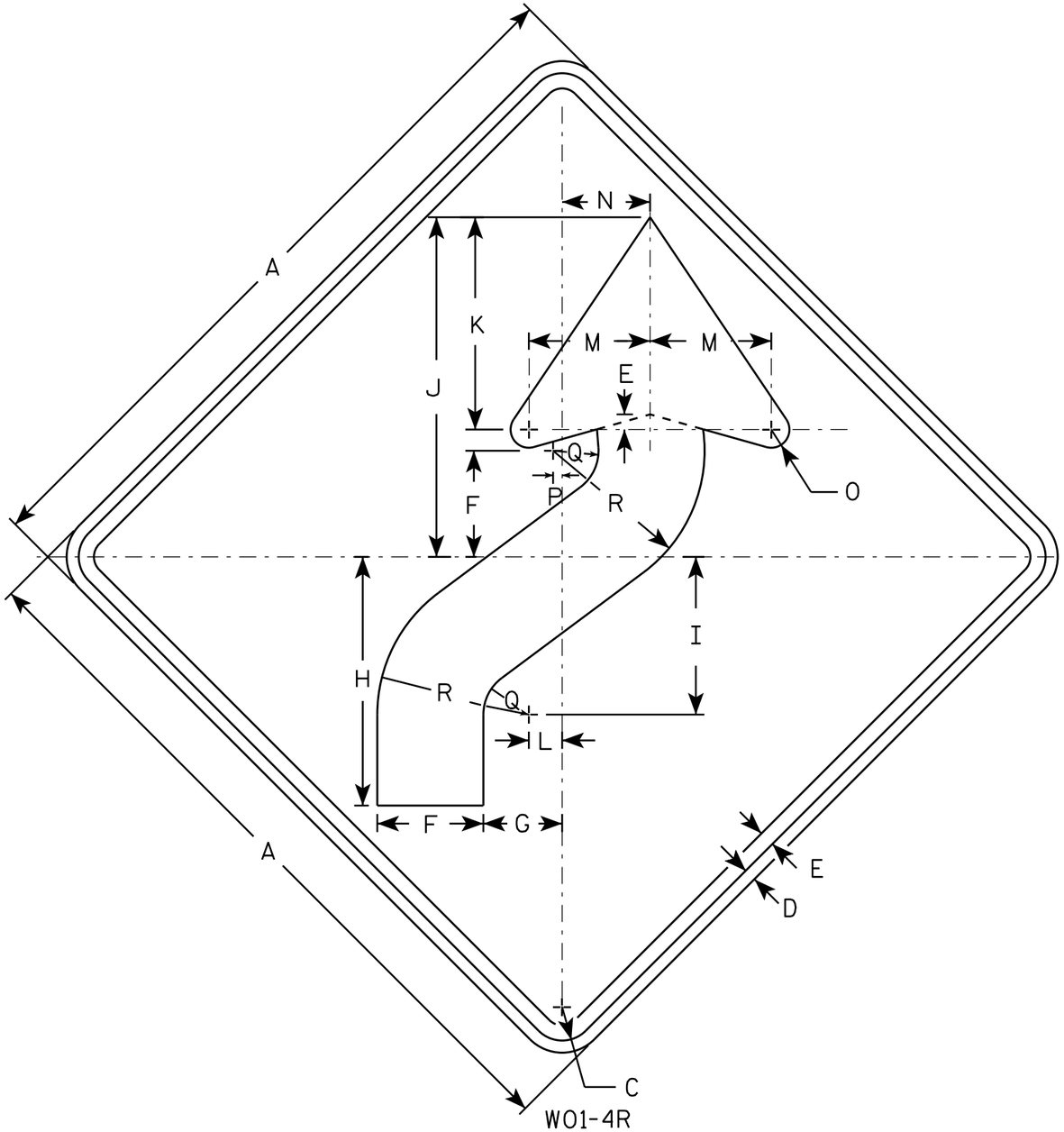
STANDARD SIGN
W012-1D

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 11/20/13 PLATE 297 W012-1D.1

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



W01-4R

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
2S	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
2M	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
3	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
4	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
5	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

STANDARD SIGN
W01-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO W01-4.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W014.DGN PLOT DATE : 28-FEB-2014 11:35 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.755110:1.000000
WISDOT/CADDS SHEET 42

Notes:
1 - Cut: Cut includes Salvaged/Unusable Pavement Material
2 - Salvaged/Unusable Pavement Material: This does not show up in cross sections
3 - Fill: Does not include Unusable Pavement Exc volume
4 - Mass Ordinate: [(Cut) - (Fill * Fill Factor)]

DIVISION 1-1/CAT. 1000 (STA 332+69 - STA 337+10): STAGE 1 CONSTRUCTION - WB USH 14 RT-TURN TO OLD HUMES ROAD 'HEA'

STATION	Distance	Area			Incremental Volume (Unadjusted)			Cumulative Vol		Mass Ordinate
		Cut (SF)	Salvaged/Unusable Pavement Material (SF)	Fill (SF)	Cut Note 1 (CY)	Salvaged/Unusable Pavement Material Note 2 (CY)	Fill Note 3 (CY)	Cut 1.00 Note 1	Expanded Fill 1.3	Note 4
332+69		18.6	0.00	0						
332+75	6	17.7	0.00	0	4	0	0	4	0	4
333+00	25	11.5	0.00	14.1	13	0	7	18	8	9
333+25	25	9.61	0.00	26.7	10	0	19	27	33	-6
333+50	25	9.21	0.00	22.5	9	0	23	36	63	-27
333+75	25	11.1	0.00	16.1	9	0	18	45	86	-41
334+00	25	11.3	0.00	19.1	10	0	16	56	107	-51
334+25	25	15.1	0.00	28.7	12	0	22	68	136	-68
334+50	25	16.5	0.00	19.5	15	0	22	83	165	-82
334+75	25	17.5	0.00	22.9	16	0	20	98	190	-92
335+00	25	18.7	0.00	15.8	17	0	18	115	214	-99
335+25	25	18.2	0.00	21.2	17	0	17	132	236	-104
335+50	25	18.3	0.00	13.5	17	0	16	149	257	-108
335+75	25	17	0.00	21.7	16	0	16	165	278	-113
336+00	25	18.1	0.00	9.71	16	0	15	182	297	-115
336+25	25	17.6	0.00	11.5	17	0	10	198	310	-111
336+50	25	18.3	0.00	0.58	17	0	6	215	317	-102
336+75	25	18	0.00	0.25	17	0	0	232	317	-86
337+00	25	18.6	0.00	0	17	0	0	249	318	-69
337+10	10	18.7	0.00	0	7	0	0	255	318	-62
					255	0	244			

DIVISION 2-1/CAT. 1000 (STA 340+62 - STA 344+43): STAGE 1 CONSTRUCTION - WB USH 14 RT-TURN TO HARMONY TOWN HALL ROAD 'HEA'

STATION	Distance	Area			Incremental Volume (Unadjusted)			Cumulative Vol		Mass Ordinate
		Cut (SF)	Salvaged/Unusable Pavement Material (SF)	Fill (SF)	Cut Note 1 (CY)	Salvaged/Unusable Pavement Material Note 2 (CY)	Fill Note 3 (CY)	Cut 1.00 Note 1	Expanded Fill 1.3	Note 4
340+62		0	0.00	16.1						
340+75	13	2.21	0.00	14.6	1	0	7	1	10	-9
341+00	25	15.1	0.00	12	8	0	12	9	26	-17
341+25	25	12.2	0.00	11.8	13	0	11	21	40	-19
341+50	25	24.9	0.00	9.44	17	0	10	38	53	-14
341+75	25	20.2	0.00	11.5	21	0	10	59	65	-6
342+00	25	27.2	0.00	13.7	22	0	12	81	80	1
342+25	25	25.6	0.00	16.3	24	0	14	106	98	7
342+50	25	26.8	0.00	17.6	24	0	16	130	119	11
342+75	25	28	0.00	18.8	25	0	17	155	141	15
343+00	25	23	0.00	19.5	24	0	18	179	164	15
343+25	25	19.9	0.00	18.9	20	0	18	199	187	12
343+50	25	16.4	0.00	17.3	17	0	17	216	209	7
343+75	25	6.43	0.00	17.9	11	0	16	226	230	-4
344+00	25	0.32	0.00	17.5	3	0	16	229	251	-22
344+25	25	7.87	0.00	17.6	4	0	16	233	272	-39
344+43	18	0	0.00	19.2	3	0	12	236	288	-52
					236	0	222			

DIVISION 3-1/CAT. 1000 (STA 357+84 - STA 362+33): STAGE 1 CONSTRUCTION - EB USH 14 RT-TURN TO WB MILWAUKEE STREET 'HEA'

STATION	Distance	Area				Incremental Volume (Unadjusted)				Cumulative Vol		Mass Ordinate
		Cut (SF)	Salvaged/Unusable Pavement Material (SF)	Fill (SF)	EBS (SF)	Cut Note 1 (CY)	Salvaged/Unusable Pavement Material Note 2 (CY)	Fill Note 3 (CY)	EBS (CY)	Cut 1.00 Note 1	Expanded Fill 1.3	Note 4
357+84		13.2	0.00	2.16	0.00							
358+00	16	12.9	0.00	2.19	0.00	8	0	1	0	8	2	6
358+25	25	12.9	0.00	1.97	0.00	12	0	2	0	20	4	16
358+50	25	11.9	0.00	4.4	0.00	11	0	3	0	31	8	23
358+75	25	14.2	0.00	3.75	0.00	12	0	4	0	43	13	30
359+00	25	12.9	0.00	5.88	19.20	13	0	4	9	56	9	46
359+25	25	12.8	0.00	6.67	19.20	12	0	4	7	68	8	60
359+50	25	14	0.00	6.31	19.20	12	0	6	18	80	-3	83
359+75	25	13.3	0.00	6.16	19.20	13	0	6	18	93	-14	107
360+00	25	13	0.00	5.05	19.20	12	0	5	18	105	-26	131
360+25	25	13.7	0.00	3.93	19.20	12	0	4	18	117	-39	156
360+50	25	14.1	0.00	2.81	19.20	13	0	3	18	130	-53	184
360+75	25	13.9	0.00	1.76	19.20	13	0	2	18	143	-69	212
361+00	25	14.1	0.00	1.32	22.40	13	0	1	19	156	-87	243
361+25	25	14.2	0.00	1.41	22.40	13	0	1	21	169	-107	276
361+50	25	15.6	0.00	1.39	22.40	14	0	1	21	183	-127	310
361+75	25	16.5	0.00	0.17	22.40	15	0	1	21	198	-148	346
362+00	25	15.3	0.00	0.35	24.00	15	0	0	21	213	-170	382
362+25	25	15	0.00	0	24.00	14	0	0	22	227	-193	419
362+33	8	14.2	0.00	0	24.00	4	0	0	7	231	-200	431
						231	0	50	255			

DIVISION 3-2/CAT. 1000 (STA 357+79 - STA 362+33): STAGE 2 CONSTRUCTION - EB USH 14 LT-TURN TO EB MILWAUKEE STREET 'HEA'

STATION	Distance	Area			Incremental Volume (Unadjusted)			Cumulative Vol		Mass Ordinate
		Cut (SF)	Salvaged/Unusable Pavement Material (SF)	Fill (SF)	Cut Note 1 (CY)	Salvaged/Unusable Pavement Material Note 2 (CY)	Fill Note 3 (CY)	Cut 1.00 Note 1	Expanded Fill 1.3	Note 4
357+79		2.29	0.50	0						
358+00	21	4.38	0.75	0	3	0	0	3	0	2
358+25	25	6.98	1.00	0	5	1	0	8	0	7
358+50	25	9.15	1.25	0	7	1	0	15	0	13
358+75	25	8.93	2.00	0	8	2	0	24	0	20
359+00	25	10.3	2.50	0	9	2	0	33	0	27
359+25	25	11.9	3.50	0	10	3	0	43	0	34
359+50	25	12.5	3.50	0	11	3	0	54	0	42
359+75	25	12.4	3.50	0	12	3	0	66	0	50
360+00	25	12.3	3.50	0	11	3	0	77	0	59
360+25	25	13.4	3.50	0	12	3	0	89	0	67
360+50	25	14.3	3.50	0	13	3	0	102	0	77
360+75	25	14.8	3.50	0	13	3	0	115	0	87
361+00	25	14.4	3.50	0	14	3	0	129	0	97
361+25	25	13.3	3.50	0	13	3	0	142	0	107
361+50	25	12.4	3.50	0	12	3	0	154	0	116
361+75	25	9.92	5.25	0	10	4	0	164	0	122
362+00	25	8.67	6.25	0	9	5	0	172	0	125
362+25	25	7.93	6.25	0	8	6	0	180	0	127
362+33	8	7.8	6.25	0	2	2	0	182	0	128
					182	55	0			

DIVISION 4-1/CAT. 1000 (STA 366+55 - STA 372+20): STAGE 1 CONSTRUCTION - WB USH 14 RT-TURN TO EB MILWAUKEE STREET 'HEA'

STATION	Distance	Area				Incremental Volume (Unadjusted)				Cumulative Vol		Mass Ordinate
		Cut (SF)	Salvaged/Unusable Pavement Material (SF)	Fill (SF)	EBS (SF)	Cut Note 1 (CY)	Salvaged/Unusable Pavement Material Note 2 (CY)	Fill Note 3 (CY)	EBS (CY)	Cut 1.00 Note 1	Expanded Fill 1.3	Note 4
366+55		18.9	0.00	0	39.20							
366+75	20	18.4	0.00	0.03	39.20	14	0	0	29	14	-30	44
367+00	25	16.9	0.00	0.69	39.20	16	0	0	36	30	-67	98
367+25	25	17.7	0.00	0.43	39.20	16	0	1	36	46	-105	151
367+50	25	20.3	0.00	0.05	39.20	18	0	0	36	64	-142	206
367+75	25	20.2	0.00	0.07	39.20	19	0	0	36	83	-180	262
368+00	25	19.7	0.00	0.28	39.20	18	0	0	36	101	-217	318
368+25	25	19.8	0.00	0.92	39.20	18	0	1	36	119	-254	374
368+50	25	19.5	0.00	1.43	39.20	18	0	1	36	137	-291	428
368+75	25	18.5	0.00	1.35	39.20	18	0	1	36	155	-327	482
369+00	25	21.1	0.00	0.98	39.20	18	0	1	36	173	-363	536
369+25	25	22	0.00	1.35	39.20	20	0	1	36	193	-399	593
369+50	25	20.8	0.00	2.47	39.20	20	0	2	36	213	-435	648
369+75	25	20.7	0.00	2.95	39.20	19	0	3	36	232	-469	702
370+00	25	22.5	0.00	2.02	39.20	20	0	2	36	252	-504	756
370+25	25	24.5	0.00	1.85	39.20	22	0	2	36	274	-539	814
370+50	25	25.4	0.00	2.17	39.20	23	0	2	36	297	-575	872
370+75	25	20.4	0.00	2.74	39.20	21	0	2	36	318	-609	928
371+00	25	17.1	0.00	3.04	39.20	17	0	3	36	336	-644	979
371+25	25	16.9	0.00	2.7	39.20	16	0	3	36	351	-678	1029
371+50	25	0	0.00	0	39.20	8	0	2	36	359	-713	1072
371+75	25	0	0.00	0	39.20	0	0	0	36	359	-751	1110
372+00	25	0	0.00	0	39.20	0	0	0	36	359	-789	1148
372+20	20	0	0.00	0	39.20	0	0	0	29	359	-819	1178
						359	0	26	820			

DIVISION 4-2/CAT. 1000 (STA 367+00 - STA 371+45): STAGE 2 CONSTRUCTION - WB USH 14 LT-TURN TO WB MILWAUKEE STREET 'HEA'

STATION	Distance	Area			Incremental Volume (Unadjusted)			Cumulative Vol		Mass Ordinate
		Cut (SF)	Salvaged/Unusable Pavement Material (SF)	Fill (SF)	Cut Note 1 (CY)	Salvaged/Unusable Pavement Material Note 2 (CY)	Fill Note 3 (CY)	Cut 1.00 Note 1	Expanded Fill 1.3	Note 4
367+00		0	6.50	0						
367+25	25	8.49	6.50	0	4	6	0	4	0	-2
367+50	25	9.67	6.25	0	8	6	0	12	0	0
367+75	25	10.2	5.25	0	9	5	0	22	0	4
368+00	25	13.3	4.00	0	11	4	0	32	0	11
368+25	25	13.2	3.50	0	12	3	0	45	0	20
368+50	25	14.6	3.50	0	13	3	0	58	0	29
368+75	25	14.1	3.25	0	13	3	0	71	0	39
369+00	25	13	3.25	0	13	3	0	83	0	49
369+25	25	11.3	3.25	0	11	3	0	95	0	57
369+50	25	11.3	2.75	0	10	3	0	105	0	65
369+75	25	10.7	2.75	0	10	3	0	115	0	73
370+00	25	9.63	2.75	0	9	3	0	125	0	79
370+25	25	7.71	2.00	0	8	2	0	133	0	85
370+50	25	6.71	1.75	0	7	2	0	139	0	90
370+75	25	5.41	1.25	0	6	1	0	145	0	94
371+00	25	4.15	1.00	0	4	1	0	149	0	98
371+25	25	3.05	0.75	0	3	1	0	153	0	100
371+45	20	0	0.50	0	1	0	0	154	0	101
					154	53	0			

DIVISION 5-1/CAT. 1000 (STA 372+21 - STA 376+95): STAGE 1 CONSTRUCTION - WB USH 14 'HEA'

STATION	Distance	Area			Incremental Volume (Unadjusted)			Cumulative Vol		Mass Ordinate
		Cut (SF)	Salvaged/Unusable Pavement Material (SF)	Fill (SF)	Cut Note 1 (CY)	Salvaged/Unusable Pavement Material Note 2 (CY)	Fill Note 3 (CY)	Cut 1.00 Note 1	Expanded Fill 1.3	Note 4
372+21		21.2	0.00	0.15						
372+25	4	21.9	0.00	0.16	3	0	0	3	0	3
372+50	25	24.2	0.00	0	21	0	0	25	0	24
372+75	25	23.9	0.00	1.23	22	0	1	47	1	46
373+00	25	23.8	0.00	6.68	22	0	4	69	6	63
373+25	25	22.7	0.00	7.93	22	0	7	90	14	76
373+50	25	22.8	0.00	6.52	21	0	7	112	23	88
373+75	25	23.6	0.00	0	21	0	3	133	27	106
374+00	25	22.7	0.00	0	21	0	0	154	27	127
374+25	25	19.6	0.00	0.14	20	0	0	174	27	147
374+50	25	21.2	0.00	0	19	0	0	193	27	166
374+75	25	20.6	0.00	0	19	0	0	212	27	185
375+00	25	19.7	0.00	0	19	0	0	231	27	204
375+25	25	18.4	0.00	1.57	18	0	1	248	28	220
375+50	25	17.3	0.00	2.47	17	0	2	265	31	234
375+75	25	16.2	0.00	5.72	16	0	4	280	36	245
376+00	25	16.9	0.00	7.28	15	0	6	296	43	252
376+25	25	15.4	0.00	6.38	15	0	6	311	52	259
376+50	25	14.8	0.00	5.42	14	0	5	325	59	266
376+75	25	15.1	0.00	2.67	14	0	4	339	64	275
376+95	20	14.8	0.00	1.13	11	0	1	350	65	284
					350	0	50			

DIVISION 5-2/CAT. 1000 (STA 372+32 - STA 376+92): STAGE 2 CONSTRUCTION - EB USH 14 'HEA'

STATION	Distance	Area			Incremental Volume (Unadjusted)			Cumulative Vol		Mass Ordinate
		Cut (SF)	Salvaged/Unusable Pavement Material (SF)	Fill (SF)	Cut Note 1 (CY)	Salvaged/Unusable Pavement Material Note 2 (CY)	Fill Note 3 (CY)	Cut 1.00 Note 1	Expanded Fill 1.3	Note 4
372+32		18.1	0.00	0						
372+50	18	18.8	0.00	0	12	0	0	12	0	12
372+75	25	19.3	0.00	0	18	0	0	30	0	30
373+00	25	18.9	0.00	0.54	18	0	0	48	0	47
373+25	25	19.3	0.00	1.43	18	0	1	65	2	64
373+50	25	20.1	0.00	0.8	18	0	1	83	3	81
373+75	25	18.1	0.00	0.92	18	0	1	101	4	97
374+00	25	18.6	0.00	0.41	17	0	1	118	5	113
374+25	25	17.3	0.00	2.25	17	0	1	135	6	128
374+50	25	17.2	0.00	7.16	16	0	4	151	12	139
374+75	25	17.6	0.00	0.01	16	0	3	167	16	151
375+00	25	14.3	0.00	11.3	15	0	5	182	23	158
375+25	25	16.4	0.00	0.11	14	0	5	196	30	166
375+50	25	14.1	0.00	0.35	14	0	0	210	30	180
375+75	25	12.6	0.00	14.4	12	0	7	222	39	183
376+00	25	9.18	0.00	24.8	10	0	18	232	63	170
376+25	25	7.45	0.00	27.3	8	0	24	240	94	146
376+50	25	5.84	0.00	21.2	6	0	22	246	123	123
376+75	25	5.4	0.00	15.1	5	0	17	251	145	106
376+92	17	5.56	0.00	10.2	3	0	8	255	156	99
					255	0	120			

DIVISION 6-1/CAT. 1000 (STA 418+36 - STA 429+35): STAGE 1 CONSTRUCTION - EB USH 14 'HEA'

STATION	Distance	Area			Incremental Volume (Unadjusted)			Cumulative Vol		Mass Ordinate
		Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Expanded Fill	
		(SF)	(SF)	(SF)	Note 1 (CY)	Note 2 (CY)	Note 3 (CY)	1.00 Note 1	1.3	Note 4
418+36		1.17	0.00	0.07						
418+50	14	1.19	0.00	0.07	1	0	0	1	0	1
418+75	25	1.23	0.00	0.06	1	0	0	2	0	2
419+00	25	1.27	0.00	0.04	1	0	0	3	0	3
419+25	25	1.26	0.00	0.36	1	0	0	4	0	4
419+50	25	1.2	0.00	0.31	1	0	0	5	1	4
419+75	25	1.18	0.00	0.71	1	0	0	6	1	5
420+00	25	1.15	0.00	0.39	1	0	1	7	2	5
420+25	25	1.14	0.00	0.46	1	0	0	8	3	6
420+50	25	1.19	0.00	0.82	1	0	1	10	3	6
420+75	25	1.31	0.00	0.33	1	0	1	11	4	7
421+00	25	1.46	0.00	0.01	1	0	0	12	4	8
421+25	25	1.53	0.00	0	1	0	0	13	4	9
421+50	25	1.57	0.00	0	1	0	0	15	4	10
421+75	25	1.61	0.00	0	1	0	0	16	4	12
422+00	25	1.69	0.00	0	2	0	0	18	4	13
422+25	25	1.79	0.00	0	2	0	0	19	4	15
422+50	25	2.02	0.00	0	2	0	0	21	4	17
422+75	25	2.01	0.00	0	2	0	0	23	4	19
423+00	25	1.87	0.00	0	2	0	0	25	4	21
423+25	25	1.72	0.00	0	2	0	0	26	4	22
423+50	25	1.7	0.00	0	2	0	0	28	4	24
423+75	25	17.8	0.00	1.26	9	0	1	37	5	32
424+00	25	18.2	0.00	1.84	17	0	1	54	7	47
424+25	25	18.2	0.00	3.46	17	0	2	71	10	60
424+50	25	18.3	0.00	4.87	17	0	4	87	15	72
424+75	25	17.9	0.00	6.45	17	0	5	104	22	82
425+00	25	17.3	0.00	9.26	16	0	7	121	31	89
425+25	25	19.2	0.00	7.51	17	0	8	137	41	96
425+50	25	16.7	0.00	3.45	17	0	5	154	48	106
425+75	25	17.1	0.00	2.35	16	0	3	170	52	118
426+00	25	18.4	0.00	0.18	16	0	1	186	53	133
426+25	25	18.2	0.00	1.18	17	0	1	203	54	149
426+50	25	14.9	0.00	30.4	15	0	15	218	73	146
426+75	25	15.1	0.00	76.3	14	0	49	232	137	95
427+00	25	14.8	0.00	108	14	0	86	246	248	-2
427+25	25	14.9	0.00	124	14	0	108	260	388	-128
427+50	25	14.4	0.00	128	14	0	117	273	540	-266
427+75	25	13.5	0.00	128	13	0	118	286	694	-407
428+00	25	13.9	0.00	111	13	0	110	299	837	-538
428+25	25	15.3	0.00	0	14	0	51	313	904	-591
428+50	25	18.8	1.00	0	16	0	0	328	904	-576
428+75	25	19	1.00	0	17	1	0	346	904	-560
429+00	25	17.4	0.00	0	17	0	0	363	904	-543
429+25	25	10.7	0.00	87.2	13	0	40	376	956	-583
429+35	10	9.42	0.00	135	4	0	41	379	1010	-632
					379	2	777			

DIVISION 6-2/CAT. 1000 (STA 423+70 - STA 429+35): STAGE 2 CONSTRUCTION - WB USH 14 'HEA'

STATION	Distance	Area			Incremental Volume (Unadjusted)			Cumulative Vol		Mass Ordinate
		Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Expanded Fill	
		(SF)	(SF)	(SF)	Note 1 (CY)	Note 2 (CY)	Note 3 (CY)	1.00 Note 1	1.3	Note 4
423+70		17.6	0.00	0.38						
423+75	5	17.7	0.00	0.52	3	0	0	3	0	3
424+00	25	17.7	0.00	1.27	16	0	1	20	1	18
424+25	25	16.7	0.00	3.09	16	0	2	36	4	32
424+50	25	16.7	0.00	5.22	15	0	4	51	9	42
424+75	25	17.1	0.00	6.63	16	0	5	67	16	51
425+00	25	19.4	0.00	6.74	17	0	6	84	24	60
425+25	25	17.7	0.00	4.94	17	0	5	101	31	70
425+50	25	18.4	0.00	0.78	17	0	3	118	34	83
425+75	25	20.3	0.00	0	18	0	0	135	35	101
426+00	25	16.7	0.00	1.16	17	0	1	153	36	117
426+25	25	16.8	0.00	3.97	16	0	2	168	39	129
426+50	25	15.8	0.00	28.6	15	0	15	183	58	125
426+75	25	16	0.00	51.6	15	0	37	198	107	91
427+00	25	15.6	0.00	74.6	15	0	58	213	183	30
427+25	25	15.4	0.00	88.5	14	0	76	227	281	-54
427+50	25	14.9	0.00	84.8	14	0	80	241	385	-144
427+75	25	14.2	0.00	76.2	13	0	75	254	482	-228
428+00	25	13.8	0.00	68.7	13	0	67	267	569	-302
428+25	25	14	0.00	0	13	0	32	280	611	-330
428+50	25	16.1	1.00	0	14	0	0	294	611	-317
428+75	25	16.8	1.00	0	15	1	0	309	611	-303
429+00	25	16.4	0.00	0	15	0	0	325	611	-288
429+25	25	10.9	0.00	85.1	13	0	39	337	662	-326
429+35	10	9.8	0.00	134	4	0	41	341	715	-375
					341	2	550			

DIVISION 7-1/CAT. 1000 (STA 430+67 - STA 435+92): STAGE 1 CONSTRUCTION - EB USH 14 'HEA'

STATION	Distance	Area			Incremental Volume (Unadjusted)			Cumulative Vol		Mass Ordinate
		Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Expanded Fill	
		(SF)	(SF)	(SF)	Note 1 (CY)	Note 2 (CY)	Note 3 (CY)	1.00 Note 1	1.3	Note 4
430+67		3.39	0.00	145						
430+75	8	15.9	0.00	74.2	3	0	32	3	42	-39
431+00	25	23.1	0.00	0	18	0	34	21	87	-66
431+25	25	21.8	1.00	0	21	0	0	42	87	-46
431+50	25	19.2	1.00	0	19	1	0	61	87	-28
431+75	25	17.6	0.00	0	17	0	0	78	87	-11
432+00	25	17.4	0.00	0	16	0	0	94	87	5
432+25	25	17.4	0.00	0.16	16	0	0	110	87	21
432+50	25	20.4	0.00	0	18	0	0	128	87	39
432+75	25	19	0.00	0.65	18	0	1	145	88	56
433+00	25	69.9	0.00	4.14	41	0	2	186	91	94
433+25	25	101	0.00	3.69	79	0	4	266	95	169
433+50	25	94.2	0.00	3.46	90	0	3	356	100	255
433+75	25	83.8	0.00	3.05	82	0	3	438	104	334
434+00	25	84.4	0.00	2.93	78	0	3	516	107	408
434+25	25	99.8	0.00	3.09	85	0	3	601	111	489
434+50	25	74.4	0.00	3.54	81	0	3	682	115	566
434+75	25	46.2	0.00	3.93	56	0	3	738	119	617
435+00	25	39.2	0.00	3.7	40	0	4	777	124	652
435+25	25	32.5	0.00	3.57	33	0	3	811	128	681
435+50	25	29.4	0.00	3.71	29	0	3	839	133	705
435+75	25	27.4	0.00	2.96	26	0	3	866	137	728
435+92	17	28.8	0.00	1.17	18	0	1	883	138	744
					883	2	106			

DIVISION 7-2/CAT. 1000 (STA 430+67 - STA 436+37): STAGE 2 CONSTRUCTION - WB USH 14 'HEA'										
		Area			Incremental Volume (Unadjusted)			Cumulative Vol		
STATION	Distance	Cut (SF)	Salvaged/Unusable Pavement Material (SF)	Fill (SF)	Cut Note 1 (CY)	Salvaged/Unusable Pavement Material Note 2 (CY)	Fill Note 3 (CY)	Cut 1.00 Note 1	Expanded Fill 1.3	Mass Ordinate Note 4
430+67		9.15	0.00	138						
430+75	8	9.56	0.00	62.1	3	0	30	3	38	-36
431+00	25	16.7	0.00	0	12	0	29	15	76	-61
431+25	25	18	1.00	0	16	0	0	31	76	-45
431+50	25	17.3	1.00	0	16	1	0	47	76	-30
431+75	25	19	0.00	0	17	0	0	64	76	-14
432+00	25	18.8	0.00	0.34	17	0	0	82	76	4
432+25	25	20.8	0.00	0	18	0	0	100	76	22
432+50	25	20.8	0.00	0.04	19	0	0	119	76	41
432+75	25	21.4	0.00	1.3	20	0	1	139	78	59
433+00	25	32.6	0.00	3.39	25	0	2	164	81	81
433+25	25	42.5	0.00	4.57	35	0	4	199	85	111
433+50	25	35.9	0.00	3.82	36	0	4	235	90	142
433+75	25	29.1	0.00	3.15	30	0	3	265	95	168
434+00	25	24	0.00	3.64	25	0	3	290	99	189
434+25	25	22.5	0.00	4.64	21	0	4	311	104	205
434+50	25	23.5	0.00	4.48	21	0	4	332	109	221
434+75	25	22.5	0.00	4.84	21	0	4	354	115	237
435+00	25	20.8	0.00	4.86	20	0	4	374	121	251
435+25	25	18	0.00	5.15	18	0	5	392	127	263
435+50	25	16.2	0.00	5.13	16	0	5	407	133	272
435+75	25	15.8	0.00	4.2	15	0	4	422	139	282
436+00	25	16.7	0.00	0.16	15	0	2	437	141	294
436+25	25	13	0.00	0.31	14	0	0	451	141	308
436+37	12	15.2	0.00	0	6	0	0	457	142	314
					457	2	109			

DIVISION 8-1/CAT. 1000 (STA 13+40 - STA 15+12): STAGE 1 CONSTRUCTION - RUGER AVENUE 'RUA'										
		Area			Incremental Volume (Unadjusted)			Cumulative Vol		
STATION	Distance	Cut (SF)	Salvaged/Unusable Pavement Material (SF)	Fill (SF)	Cut Note 1 (CY)	Salvaged/Unusable Pavement Material Note 2 (CY)	Fill Note 3 (CY)	Cut 1.00 Note 1	Expanded Fill 1.3	Mass Ordinate Note 4
13+40		6.8	0.00	0.02						
13+60	20	12.5	0.00	0.74	7	0	0	7	0	7
13+75	15	52.6	0.00	0	18	0	0	25	1	25
14+00	25	63	0.00	0	54	0	0	79	1	78
14+25	25	62.8	0.00	0	58	0	0	137	1	136
14+40	15	58.7	0.00	0	34	0	0	171	1	170
14+60	20	41.4	1.33	5.19	37	0	2	208	3	204
14+75	15	53.2	1.33	17	26	1	6	234	11	222
15+00	25	112	1.33	0	76	1	8	310	21	287
15+12	12	6.89	1.33	0	26	1	0	337	21	312
					337	3	16			

DIVISION 8-2/CAT. 1000 (STA 15+90 - STA 17+62): STAGE 2 CONSTRUCTION - RUGER AVENUE 'RUA'										
		Area			Incremental Volume (Unadjusted)			Cumulative Vol		
STATION	Distance	Cut (SF)	Salvaged/Unusable Pavement Material (SF)	Fill (SF)	Cut Note 1 (CY)	Salvaged/Unusable Pavement Material Note 2 (CY)	Fill Note 3 (CY)	Cut 1.00 Note 1	Expanded Fill 1.3	Mass Ordinate Note 4
15+90		10.4	1.67	0						
16+00	10	136	1.67	0	27	1	0	27	0	27
16+25	25	38.9	1.67	16.4	81	2	8	108	10	96
16+50	25	30	0.00	9.18	32	1	12	140	25	112
16+61	11	27.7	0.00	8.7	12	0	4	152	30	119
16+75	14	36	0.00	0	16	0	2	168	33	133
17+00	25	35.1	0.00	0	33	0	0	201	33	165
17+25	25	31.1	0.00	0	31	0	0	232	33	196
17+50	25	26.9	0.00	0	27	0	0	259	33	223
17+62	12	25.4	0.00	0	12	0	0	270	33	234
					270	3	25			

DIVISION 9-2/CAT. 1000 (STA 437+99 - STA 441+38): STAGE 2 CONSTRUCTION - WB USH 14 'HEA'										
		Area			Incremental Volume (Unadjusted)			Cumulative Vol		
STATION	Distance	Cut (SF)	Salvaged/Unusable Pavement Material (SF)	Fill (SF)	Cut Note 1 (CY)	Salvaged/Unusable Pavement Material Note 2 (CY)	Fill Note 3 (CY)	Cut 1.00 Note 1	Expanded Fill 1.3	Mass Ordinate Note 4
437+99		23.2	0.00	0.49						
438+00	1	23.1	0.00	0.49	1	0	0	1	0	1
438+25	25	19.8	0.00	0.4	20	0	0	21	1	20
438+50	25	22.2	0.00	0.09	19	0	0	40	1	39
438+75	25	25	0.00	0.15	22	0	0	62	1	61
439+00	25	23.2	0.00	0.45	22	0	0	84	1	83
439+25	25	22.4	0.00	0.71	21	0	1	105	2	103
439+50	25	28.2	0.00	0.45	23	0	1	129	3	126
439+75	25	26	0.00	0.75	25	0	1	154	3	150
440+00	25	23.6	0.00	0.35	23	0	1	177	4	173
440+25	25	23.4	0.00	0	22	0	0	199	4	194
440+50	25	24.8	0.00	0.01	22	0	0	221	4	217
440+75	25	22.3	0.00	0.07	22	0	0	243	4	238
441+00	25	19.6	0.00	0.03	19	0	0	262	4	258
441+25	25	19.5	0.00	0	18	0	0	280	4	276
441+38	13	19.6	0.00	0	9	0	0	290	4	285
					290	0	3			

DIVISION 10-1/CAT. 1000 (STA 4+00 - STA 9+11): STAGE 1 CONSTRUCTION - EB STH 11 'REA'

STATION	Distance	Area				Incremental Volume (Unadjusted)				Cumulative Vol		Mass Ordinate
		Cut (SF)	Salvaged/Unusable Pavement Material (SF)	Fill (SF)	EBS (SF)	Cut Note 1 (CY)	Salvaged/Unusable Pavement Material Note 2 (CY)	Fill Note 3 (CY)	EBS (CY)	Cut 1.00 Note 1	Expanded Fill 1.3	Note 4
4+00		1.79	1.00	0	1.70							
4+25	25	5.31	1.50	0	5.10	3	1	0	3	3	-3	5
4+50	25	8.97	2.00	0	8.50	7	2	0	6	10	-10	17
4+75	25	12.5	3.50	0	11.90	10	3	0	9	20	-20	34
5+00	25	16	4.00	0	15.30	13	3	0	13	33	-33	57
5+25	25	19.3	5.50	0	18.70	16	4	0	16	49	-49	85
5+50	25	21.2	6.00	0	20.40	19	5	0	18	68	-68	117
5+75	25	20.6	6.00	0	22.10	19	6	0	20	87	-88	152
6+00	25	23.2	1.50	0.37	23.80	20	3	0	21	108	-110	190
6+25	25	23.1	1.50	0.64	23.80	21	1	0	22	129	-133	233
6+50	25	23.4	1.50	0.58	23.80	22	1	1	22	151	-155	275
6+75	25	24.3	1.50	0.67	23.80	22	1	1	22	173	-177	318
7+00	25	22.6	1.50	4.22	23.80	22	1	2	22	194	-197	358
7+25	25	19.8	1.50	7.99	0.00	20	1	6	11	214	-201	381
7+50	25	40.2	1.50	9.33	0.00	28	1	8	0	242	-191	397
7+75	25	40.3	1.50	11	0.00	37	1	9	0	279	-178	420
7+92	17	27.8	1.50	14.2	0.00	21	1	8	0	301	-168	430
8+00	8	29.7	1.50	14.3	0.00	9	0	4	0	309	-163	433
8+25	25	33.4	1.50	13.6	0.00	29	1	13	0	338	-146	444
8+50	25	36.4	1.50	9.01	0.00	32	1	10	0	371	-132	461
8+75	25	38.5	1.50	4.59	0.00	35	1	6	0	405	-124	486
8+93	18	44.2	2.50	0.61	0.00	28	1	2	0	433	-122	510
9+00	7	64.8	7.00	0.69	0.00	14	1	0	0	447	-122	523
9+11	11	70.1	20.00	0	0.00	27	6	0	0	475	-121	545
						475	51	71	205			

DIVISION 10-2/CAT. 1000 (STA 7+74 - STA 9+05): STAGE 2 CONSTRUCTION - EB STH 11 'REA'

STATION	Distance	Area			Incremental Volume (Unadjusted)			Cumulative Vol		Mass Ordinate
		Cut (SF)	Salvaged/Unusable Pavement Material (SF)	Fill (SF)	Cut Note 1 (CY)	Salvaged/Unusable Pavement Material Note 2 (CY)	Fill Note 3 (CY)	Cut 1.00 Note 1	Expanded Fill 1.3	Note 4
7+74		27.4	1.50	0						
7+75	1	27.4	1.50	0	1	0	0	1	0	1
8+00	25	30.1	1.50	0	27	1	0	28	0	26
8+25	25	29.5	1.50	0	28	1	0	55	0	52
8+44	19	30.2	1.50	0	21	1	0	76	0	72
8+50	6	20.8	1.50	0.69	6	0	0	82	0	78
8+75	25	19.8	1.50	0.02	19	1	0	101	1	95
9+00	25	10.8	1.50	0	14	1	0	115	1	107
9+05	5	11.1	1.50	0	2	0	0	117	1	109
					117	7	0			

DIVISION 11-2/CAT. 1000 (STA 7+39 - STA 8+76): STAGE 2 CONSTRUCTION - WB STH 11 'RWA'

STATION	Distance	Area			Incremental Volume (Unadjusted)			Cumulative Vol		Mass Ordinate
		Cut (SF)	Salvaged/Unusable Pavement Material (SF)	Fill (SF)	Cut Note 1 (CY)	Salvaged/Unusable Pavement Material Note 2 (CY)	Fill Note 3 (CY)	Cut 1.00 Note 1	Expanded Fill 1.3	Note 4
7+39		20.9	1.50	0.44						
7+50	11	21	1.50	0.11	9	1	0	9	0	8
7+75	25	22.1	1.50	0	20	1	0	28	0	26
8+00	25	30.6	2.50	0	24	2	0	53	0	49
8+25	25	40.6	5.00	0	33	3	0	86	0	78
8+45	20	0.02	6.50	0	15	4	0	101	0	89
8+50	5	14	6.50	0	1	1	0	102	0	89
8+75	25	14.1	6.40	0	13	6	0	115	0	96
8+76	1	14.1	6.40	0	1	0	0	116	0	96
					116	19	0			

DIVISION 12-2/CAT. 1000 (STA 468+79 - STA 470+05): STAGE 2 CONSTRUCTION - EB USH 14 'HEA'

STATION	Distance	Area			Incremental Volume (Unadjusted)			Cumulative Vol		Mass Ordinate
		Cut (SF)	Salvaged/Unusable Pavement Material (SF)	Fill (SF)	Cut Note 1 (CY)	Salvaged/Unusable Pavement Material Note 2 (CY)	Fill Note 3 (CY)	Cut 1.00 Note 1	Expanded Fill 1.3	Note 4
468+79		49.3	6.00	0						
469+00	21	48.8	6.00	0	38	5	0	38	0	33
469+25	25	47.2	6.00	0	44	6	0	83	0	72
469+50	25	47.9	6.00	0	44	6	0	127	0	111
469+66	16	71.8	6.67	0	35	4	0	162	0	143
469+68	2	0.33	7.17	0	3	1	0	165	0	145
469+75	7	28.7	8.67	0	4	2	0	169	0	146
469+78	3	50.4	8.67	0	4	1	0	173	0	150
470+00	22	45.6	11.00	0	39	8	0	212	0	181
470+05	5	17.8	11.00	0	6	2	0	218	0	185
					218	33	0			

DIVISION 12-3/CAT. 1000 (STA 469+42 - STA 470+28): STAGE 3 CONSTRUCTION - EB USH 14 'HEA'

STATION	Distance	Area			Incremental Volume (Unadjusted)			Cumulative Vol		Mass Ordinate
		Cut (SF)	Salvaged/Unusable Pavement Material (SF)	Fill (SF)	Cut Note 1 (CY)	Salvaged/Unusable Pavement Material Note 2 (CY)	Fill Note 3 (CY)	Cut 1.00 Note 1	Expanded Fill 1.3	Note 4
469+42		12	3.00	0.95						
469+43	1	19.1	3.00	1.56	1	0	0	1	0	0
469+50	7	20.2	3.75	1.82	5	1	0	6	1	4
469+75	25	21.1	6.50	2.41	19	5	2	25	3	16
470+00	25	21.3	8.50	1.42	20	7	2	44	5	26
470+25	25	67.4	18.50	0	41	13	1	85	6	54
470+26	1	66.7	18.50	0	2	1	0	88	6	56
470+28	2	0.14	18.50	0	2	1	0	90	6	57
					90	27	5			

DIVISION 13-2/CAT. 1000 (STA 471+06 - STA 471+66): STAGE 2 CONSTRUCTION - EB USH 14 'HEA'

STATION	Distance	Area			Incremental Volume (Unadjusted)			Cumulative Vol		Mass Ordinate
		Cut (SF)	Salvaged/Unusable Pavement Material (SF)	Fill (SF)	Cut Note 1 (CY)	Salvaged/Unusable Pavement Material Note 2 (CY)	Fill Note 3 (CY)	Cut 1.00 Note 1	Expanded Fill 1.3	Note 4
471+06		13.8	1.50	0						
471+25	19	12	1.50	0	9	1	0	9	0	8
471+50	25	6.58	1.50	0	9	1	0	18	0	15
471+66	16	1.82	1.50	0	2	1	0	20	0	17
					20	3	0			

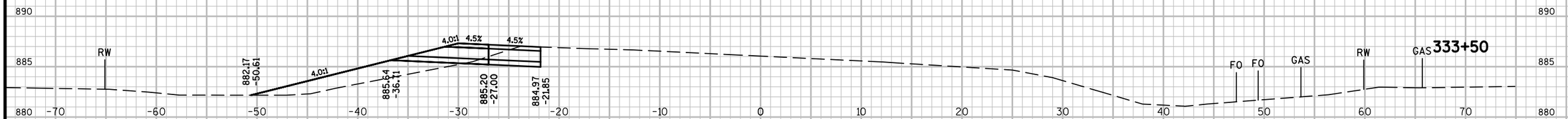
DIVISION 14-2/CAT. 1000 (STA 470+87 - STA 473+69): STAGE 2 CONSTRUCTION - WB USH 14 'HWA'

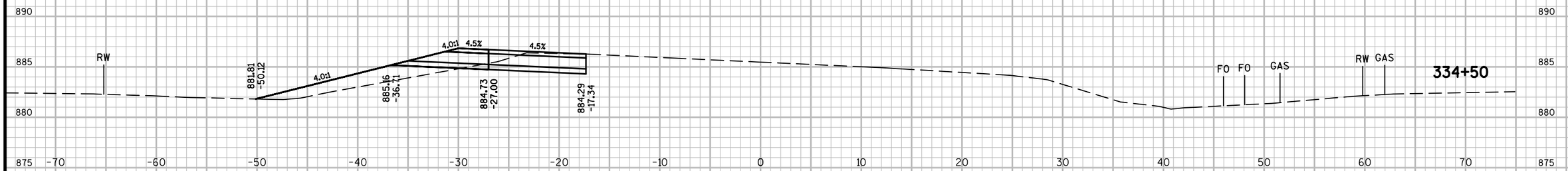
STATION	Distance	Area			Incremental Volume (Unadjusted)			Cumulative Vol		Mass Ordinate
		Cut (SF)	Salvaged/Unusable Pavement Material (SF)	Fill (SF)	Cut Note 1 (CY)	Salvaged/Unusable Pavement Material Note 2 (CY)	Fill Note 3 (CY)	Cut 1.00 Note 1	Expanded Fill 1.3	Note 4
470+87		27.8	1.63	0.98						
471+00	13	27.2	1.63	0.81	13	1	0	13	1	12
471+25	25	27.2	1.63	0.8	25	2	1	38	2	35
471+50	25	27.6	1.63	1.07	25	2	1	64	3	57
471+75	25	28.1	1.63	0.21	26	2	1	90	3	81
472+00	25	30.2	1.63	1.04	27	2	1	117	4	106
472+25	25	32.7	1.63	0	29	2	0	146	5	133
472+50	25	34.4	1.63	1.36	31	2	1	177	6	161
472+75	25	34	1.63	3.92	32	2	2	208	9	188
473+00	25	33.6	1.63	7.46	31	2	5	240	16	211
473+25	25	29.5	1.63	8.98	29	2	8	269	26	229
473+50	25	28	1.63	8.9	27	2	8	295	36	243
473+68	18	26.6	1.63	10.8	18	1	7	314	45	252
					314	17	34			

DIVISION 14-3/CAT. 1000 (STA 472+26 - STA 473+14): STAGE 3 CONSTRUCTION - WB USH 14 'HWA'

STATION	Distance	Area			Incremental Volume (Unadjusted)			Cumulative Vol		Mass Ordinate
		Cut (SF)	Salvaged/Unusable Pavement Material (SF)	Fill (SF)	Cut Note 1 (CY)	Salvaged/Unusable Pavement Material Note 2 (CY)	Fill Note 3 (CY)	Cut 1.00 Note 1	Expanded Fill 1.3	Note 4
472+26		0.08	18.50	0						
472+28	2	66.6	18.50	0	2	1	0	2	0	1
472+50	22	20.7	1.25	1.56	36	8	1	38	1	28
472+75	25	19.7	1.25	7.69	19	1	4	57	6	40
472+99	24	13.6	1.25	3.47	15	1	5	72	13	47
473+00	1	6.42	1.25	2.63	0	0	0	72	13	47
473+14	14	5.56	1.25	2.76	3	1	1	75	15	48
					75	12	11			

BEGIN CONSTRUCTION
STA. 332+69.44 'HEA'





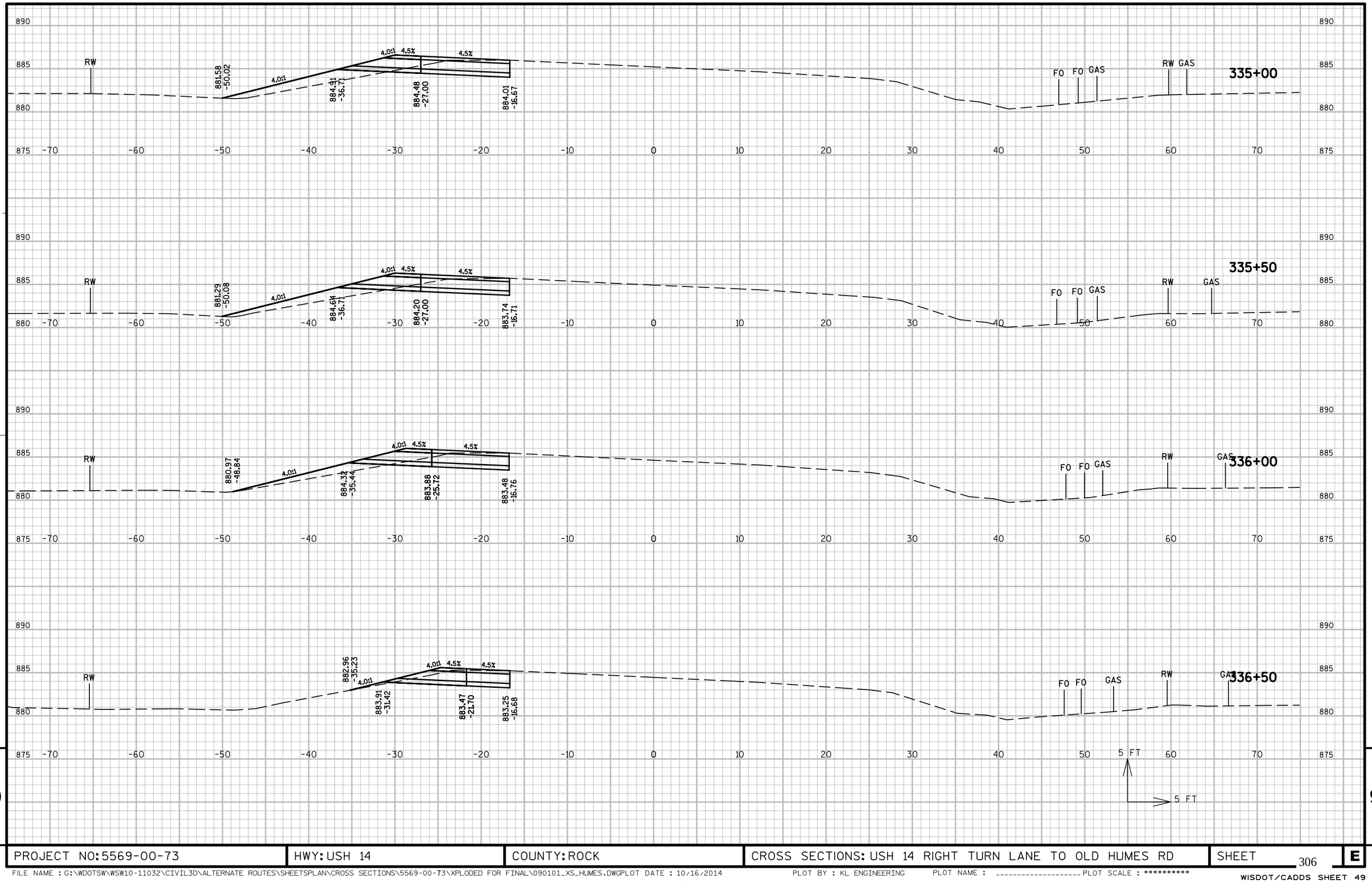
9

9

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: USH 14 RIGHT TURN LANE TO OLD HUMES RD	SHEET 305	E

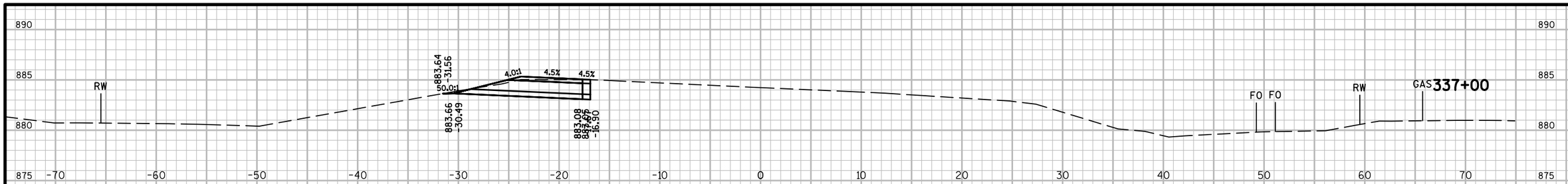
FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\CROSS SECTIONS\5569-00-73\XPLODED FOR FINAL\090101_XS_HUMES.DWGPLOT DATE : 10/16/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : **********

WISDOT/CADDS SHEET 49

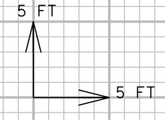


9

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: USH 14 RIGHT TURN LANE TO OLD HUMES RD	SHEET 306 E



END CONSTRUCTION
STA. 337+09.53 'HEA'

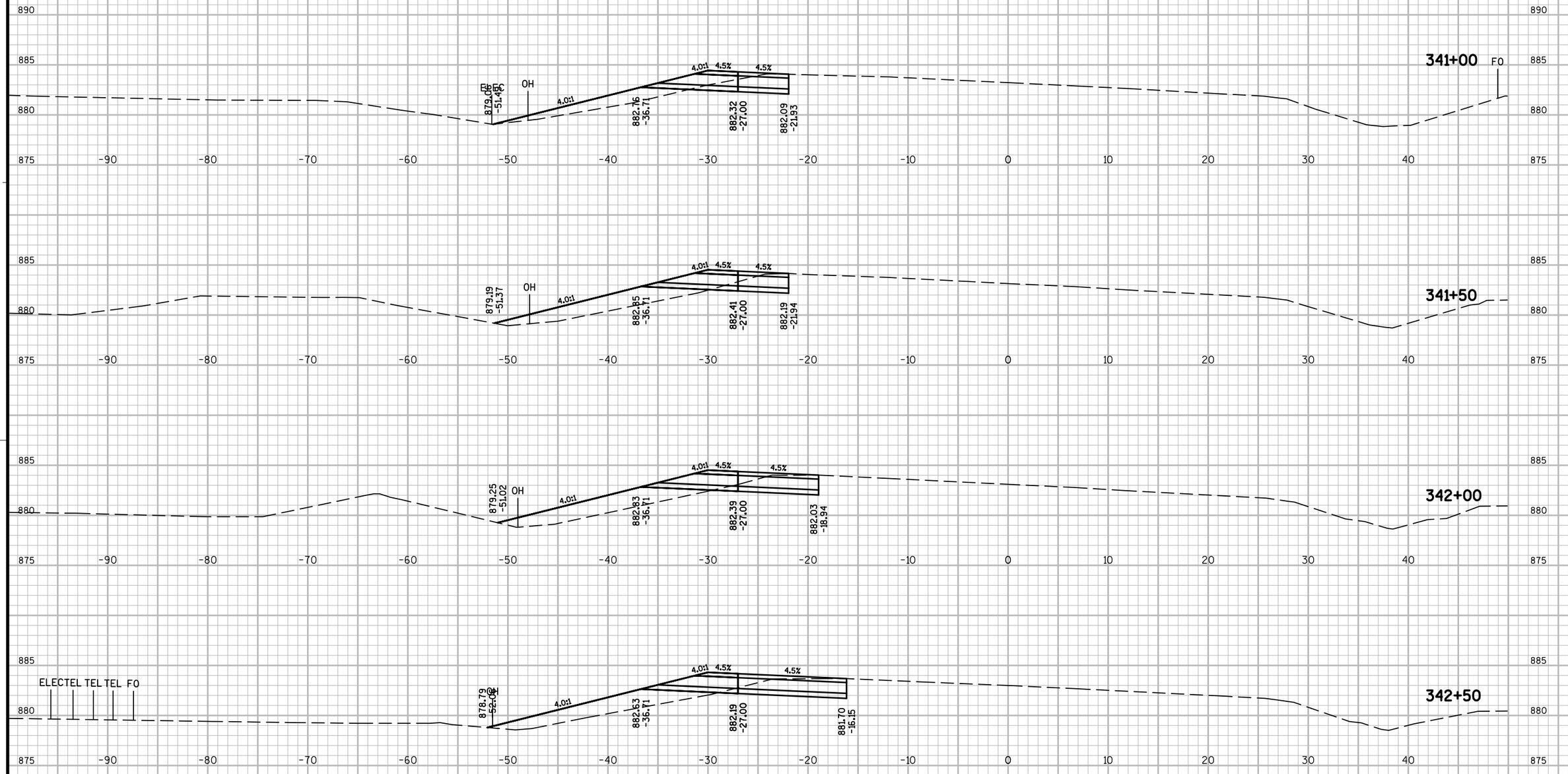


9

9

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: USH 14 RIGHT TURN LANE TO OLD HUMES RD	SHEET 307	E

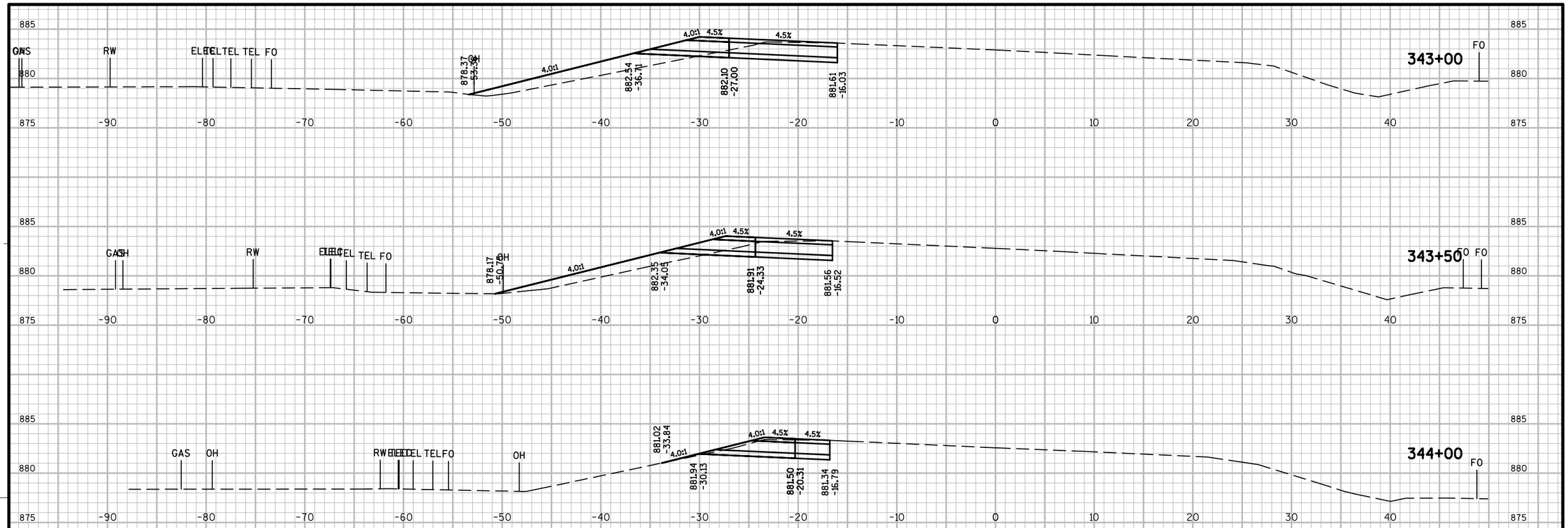
BEGIN CONSTRUCTION
STA. 340+61.73 'HEA'



9

9

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: USH 14 TURN LANE TO HARMONY TOWN HALL RD	SHEET 308	E



END CONSTRUCTION
STA. 344+42.94 'HEA'

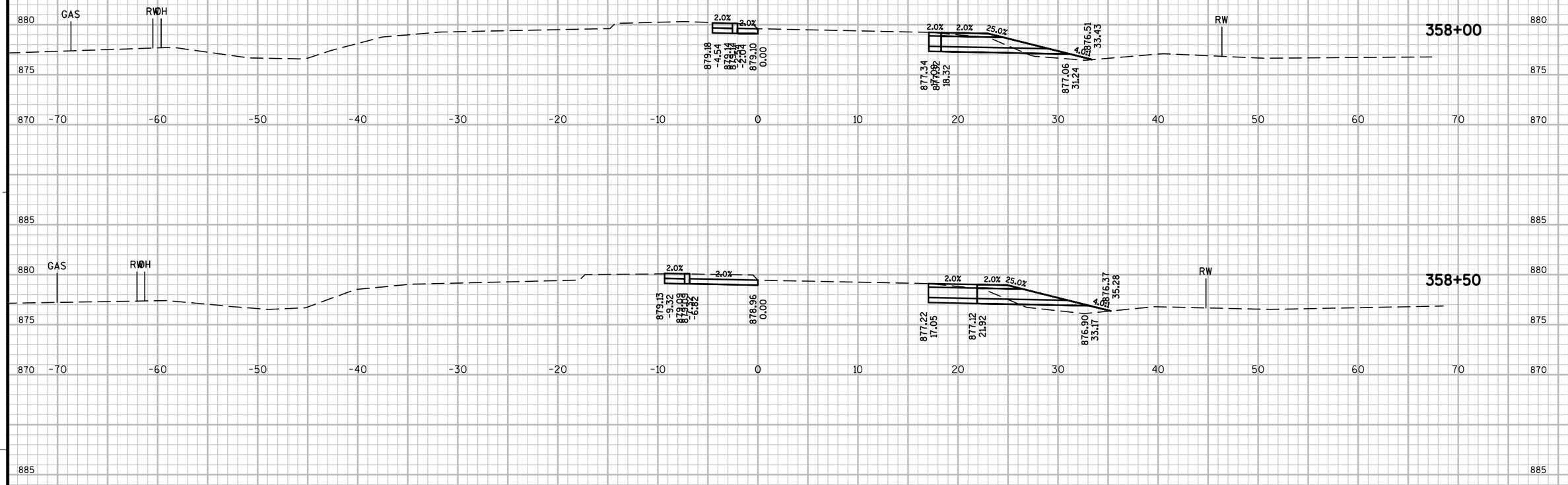
5 FT
5 FT

9

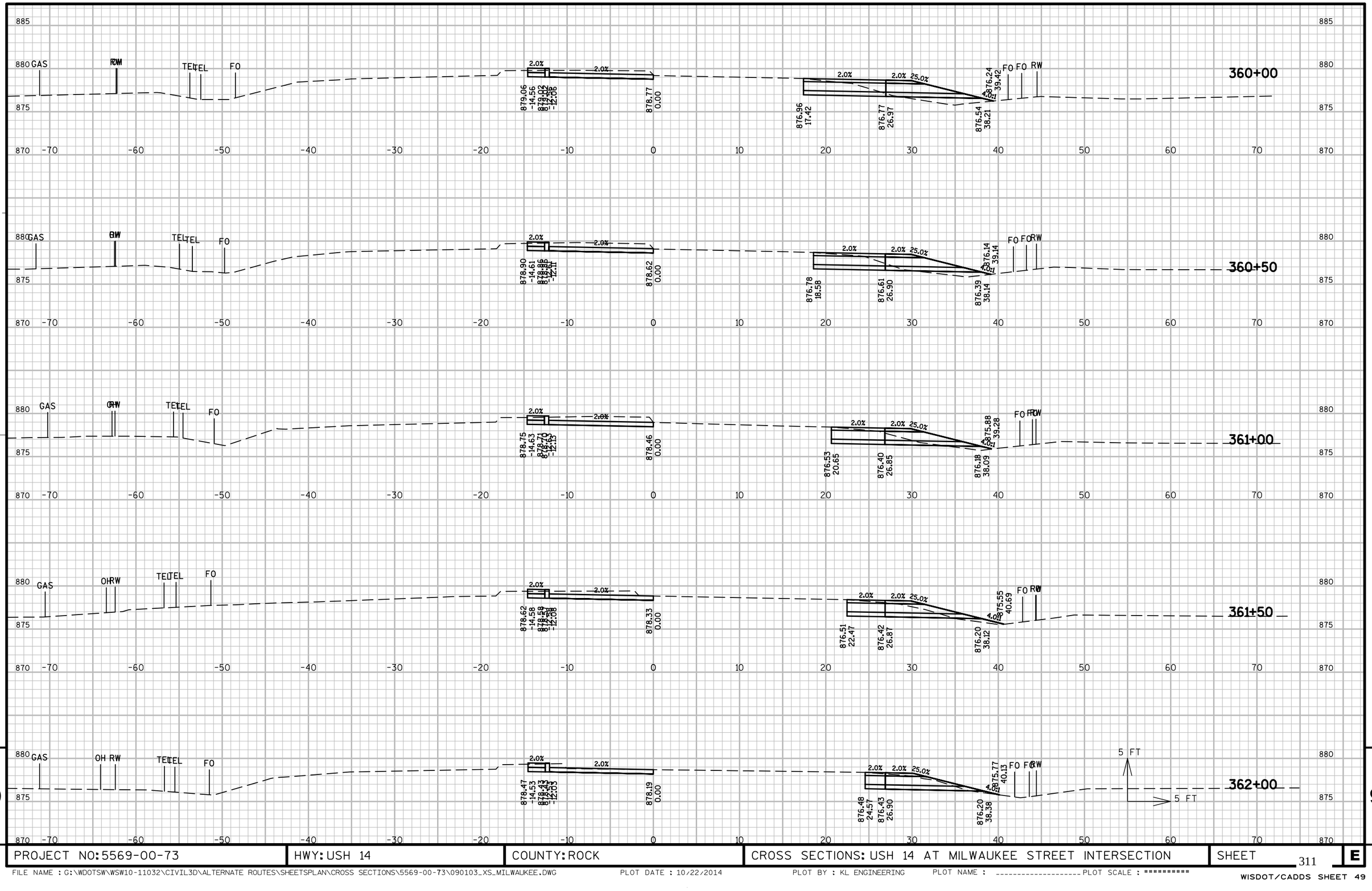
9

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: USH 14 TURN LANE TO HARMONY TOWN HALL RD	SHEET 309	E

BEGIN CONSTRUCTION
STA. 357+78.75 'HEA'



PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: USH 14 AT MILWAUKEE STREET INTERSECTION	SHEET 310 E



9

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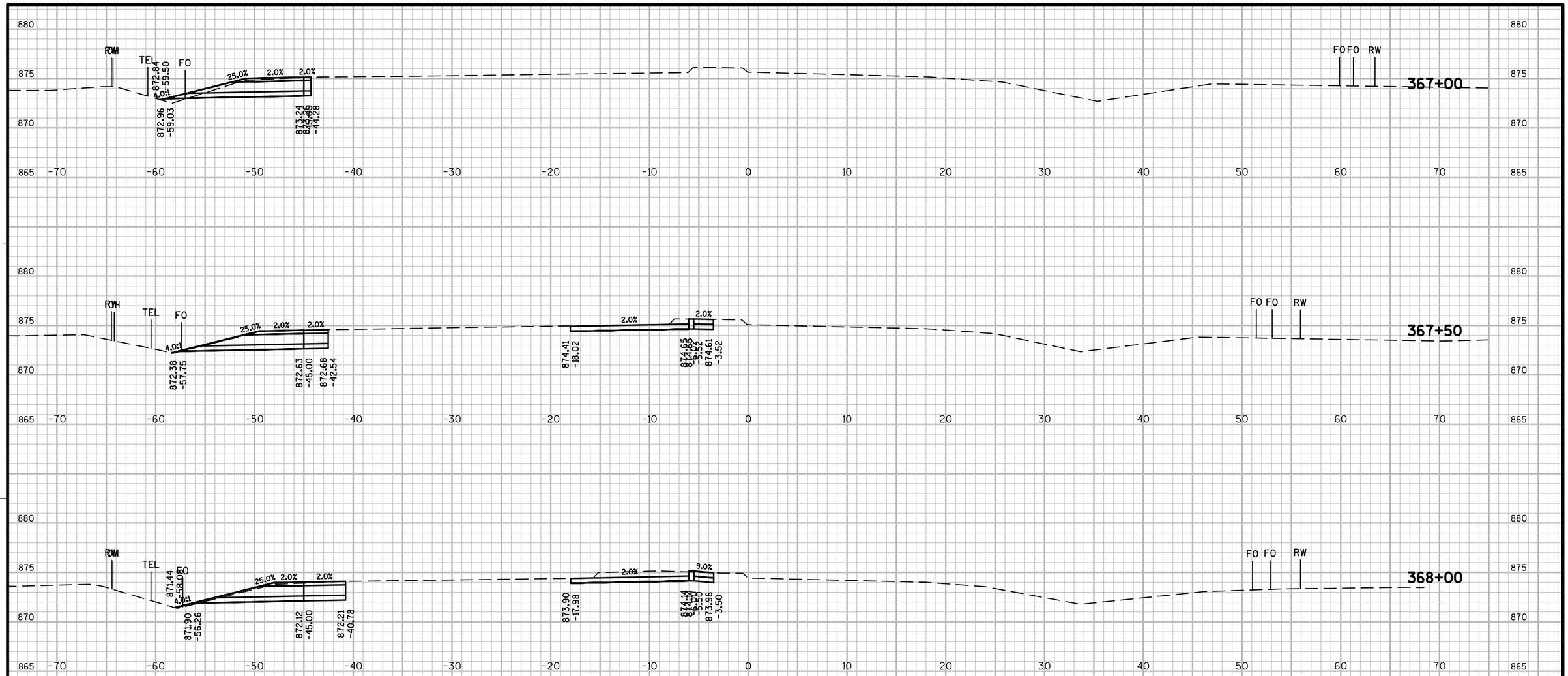
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: USH 14 AT MILWAUKEE STREET INTERSECTION	SHEET 311	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\CROSS SECTIONS\5569-00-73\090103_XS_MILWAUKEE.DWG PLOT DATE : 10/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : **********

WISDOT/CADDS SHEET 49

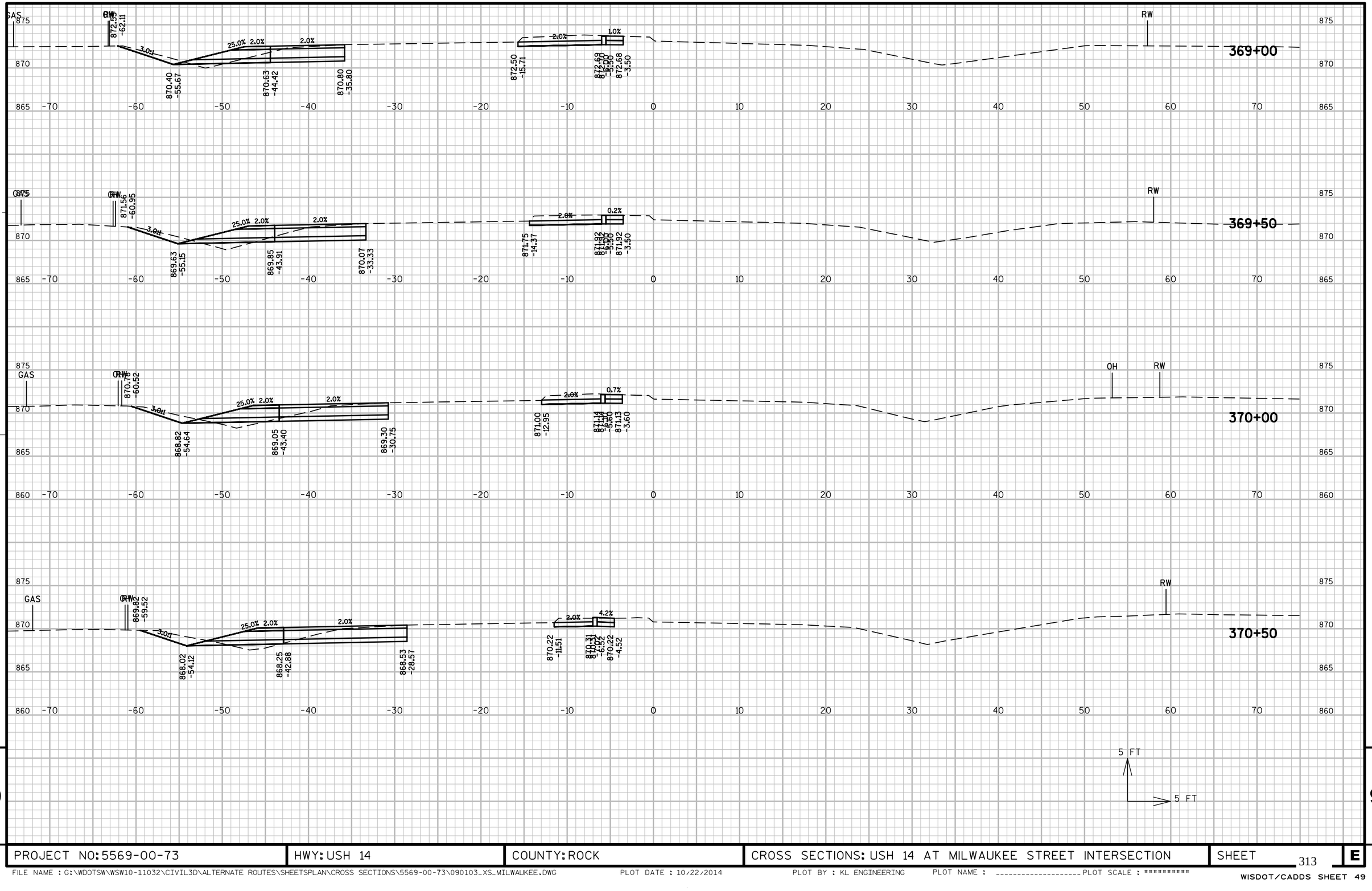


9

9

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: USH 14 AT MILWAUKEE STREET INTERSECTION	SHEET 312 E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\CROSS SECTIONS\5569-00-73\090103_XS_MILWAUKEE.DWG PLOT DATE : 10/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



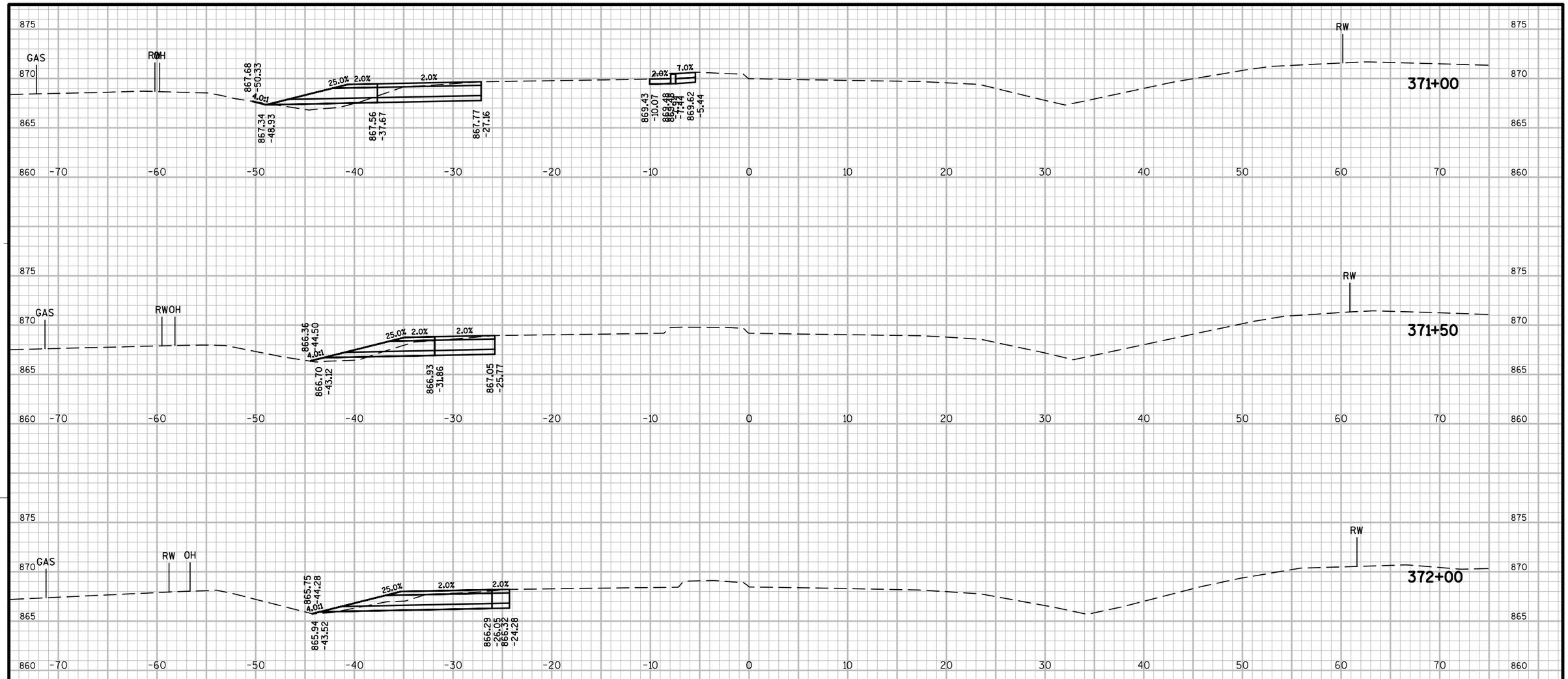
9

9

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: USH 14 AT MILWAUKEE STREET INTERSECTION	SHEET 313	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\CROSS SECTIONS\5569-00-73\090103_XS_MILWAUKEE.DWG PLOT DATE : 10/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : **********

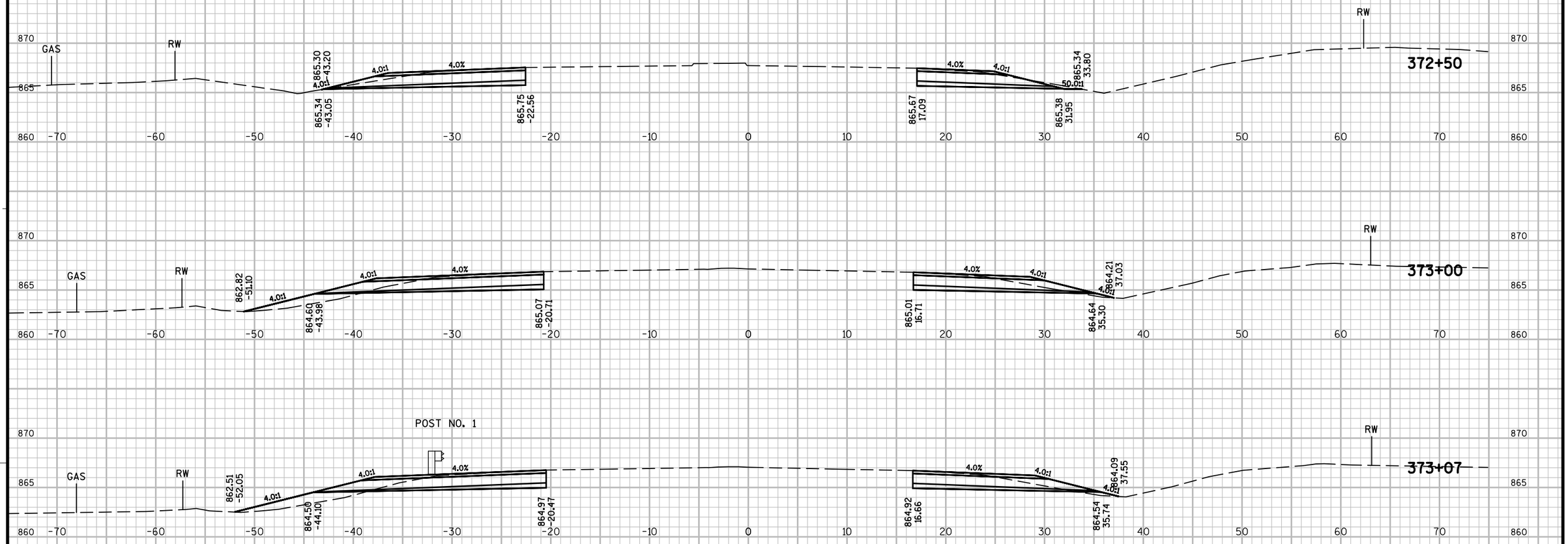
WISDOT/CADDS SHEET 49

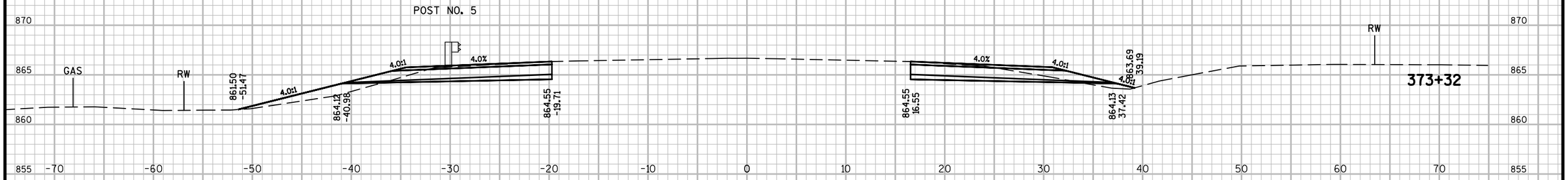


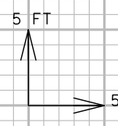
9

9

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: USH 14 AT MILWAUKEE STREET INTERSECTION	SHEET 314	E







9

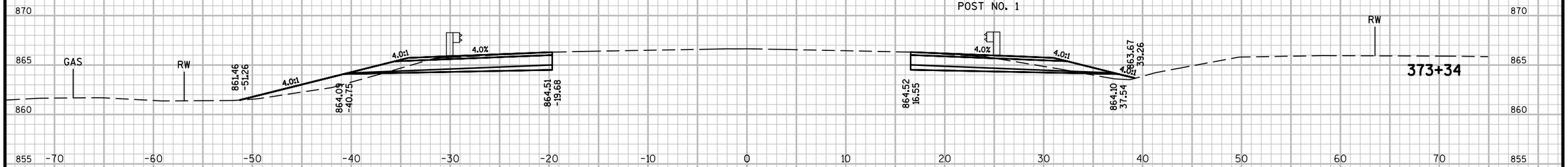
9

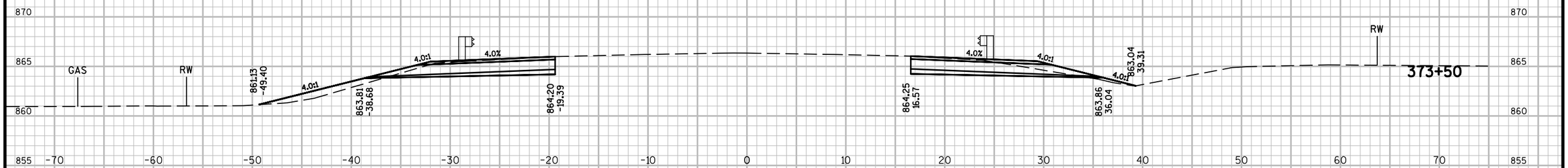
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: BEAM GUARD AT CULVERT	SHEET	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\CROSS SECTIONS\5569-00-73\XPLODED FOR FINAL\090103A_XS_CULVERT-BEAMGUARD.DWG 10/16/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : **********

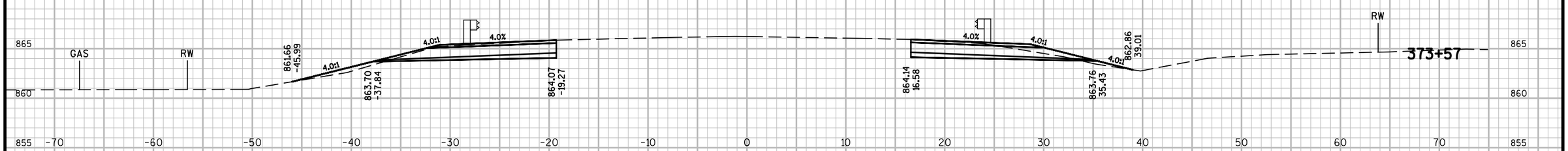
WISDOT/CADDS SHEET 49

POST NO. 1

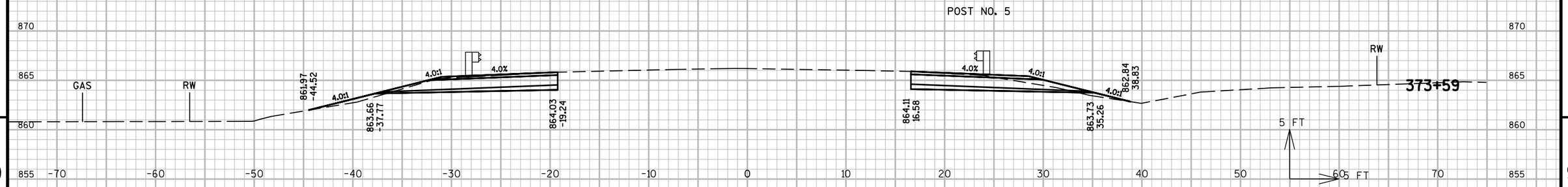




POST NO. 9



POST NO. 5



9

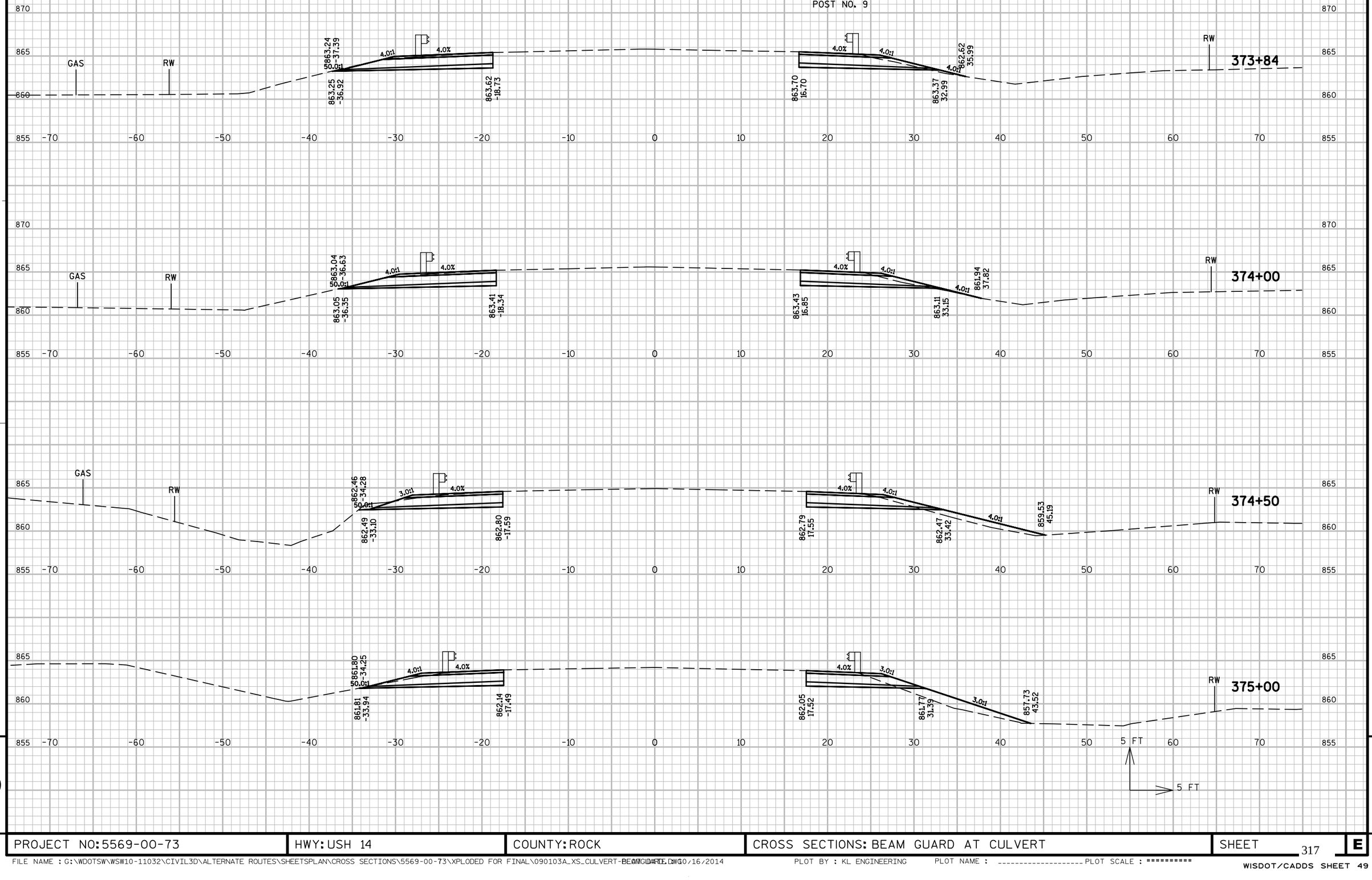
9

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: BEAM GUARD AT CULVERT	SHEET 316	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\CROSS SECTIONS\5569-00-73\XPLODED FOR FINAL\090103A_XS_CULVERT-BEAMGUARD.DWG 10/16/2014 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : **********

WISDOT/CADDS SHEET 49

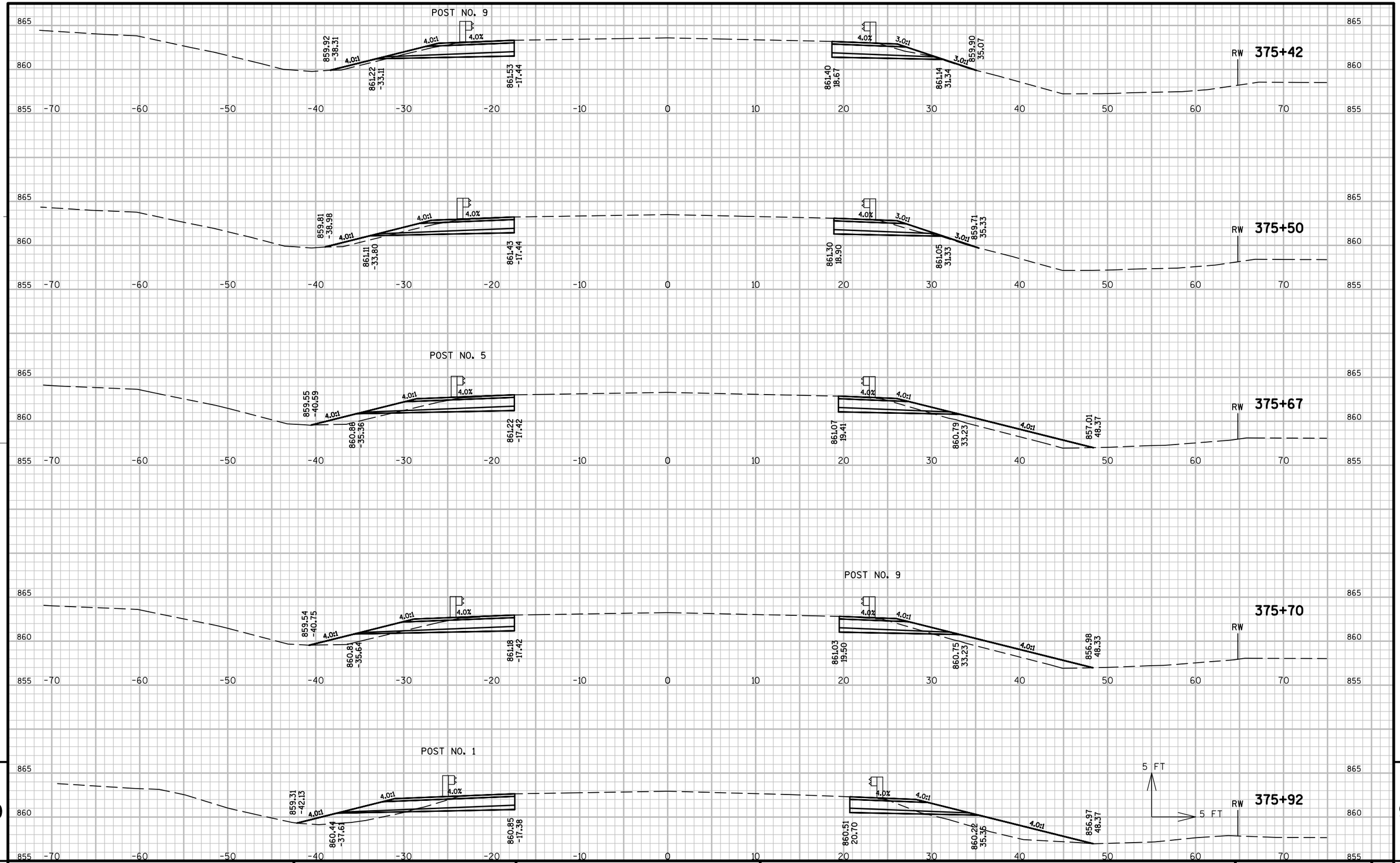
POST NO. 9



9

9

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: BEAM GUARD AT CULVERT	SHEET 317 E

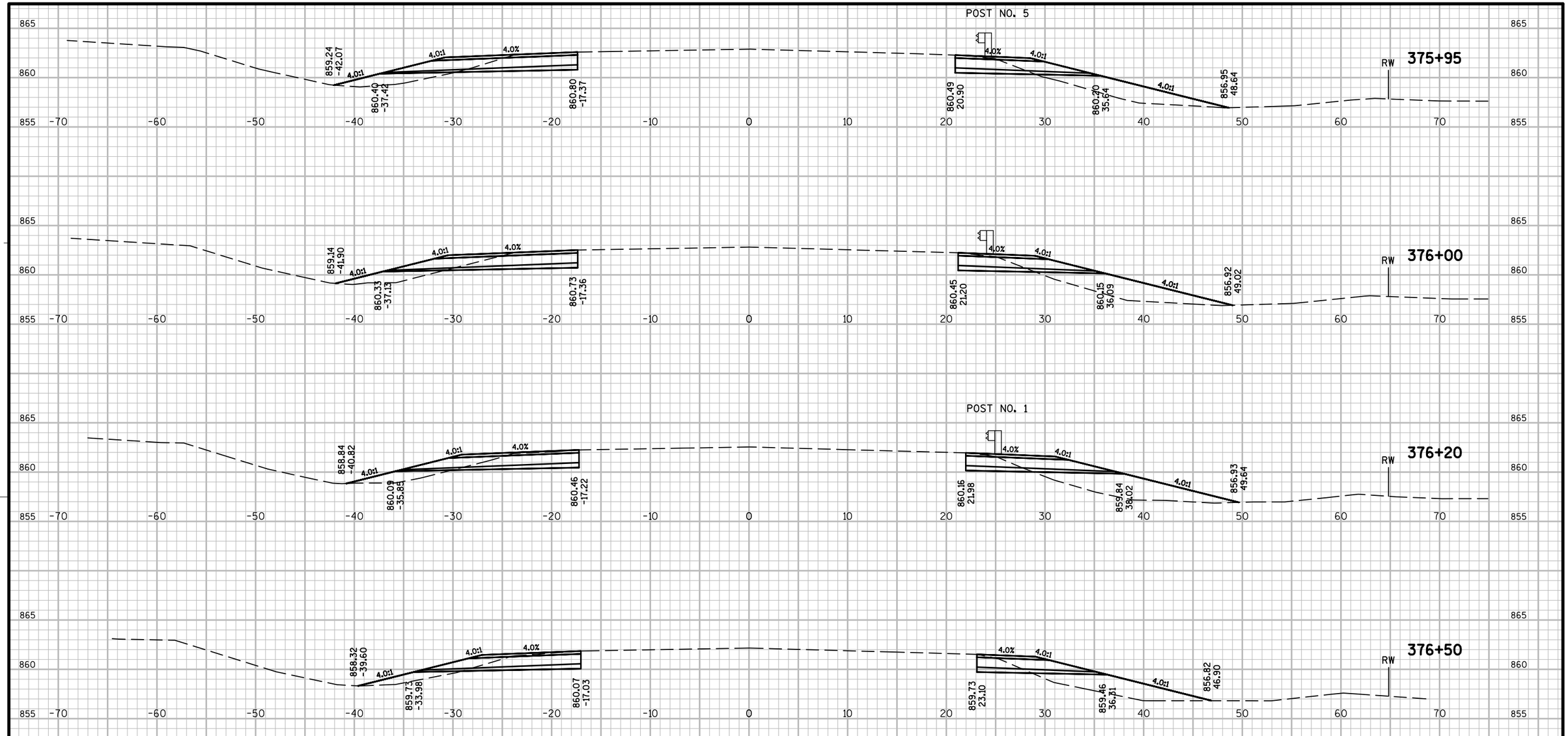


9

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: BEAM GUARD AT CULVERT	SHEET	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\CROSS SECTIONS\5569-00-73\XPLODED FOR FINAL\090103A_XS_CULVERT-BEAMGUARD.DWG 10/16/2014 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : **********

WISDOT/CADDS SHEET 49



END CONSTRUCTION
STA. 376+95.01 'HEA'

5 FT
5 FT

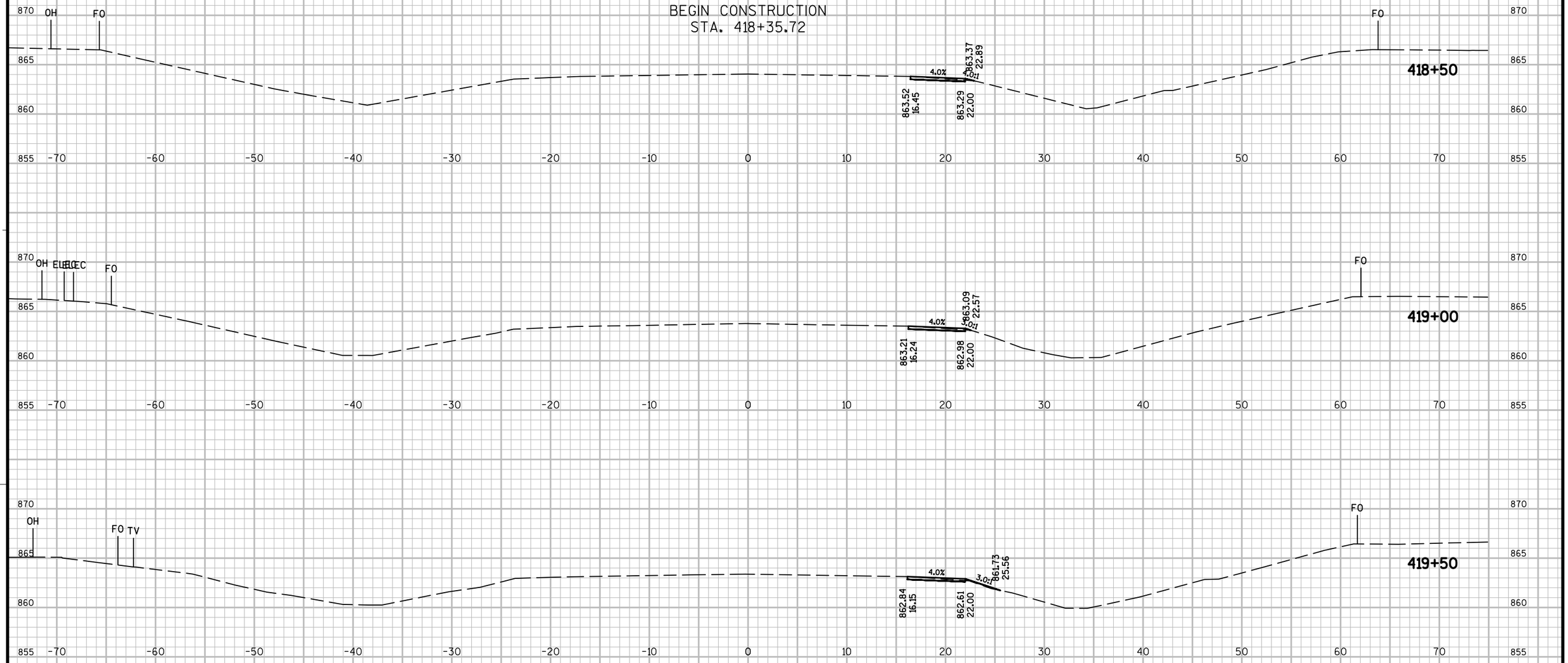
9

9

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: BEAM GUARD AT CULVERT	SHEET	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\CROSS SECTIONS\5569-00-73\XPLODED FOR FINAL\090103A_XS_CULVERT-BEAMGUARD.DWG 10/16/2014 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : **********

BEGIN CONSTRUCTION
STA. 418+35.72

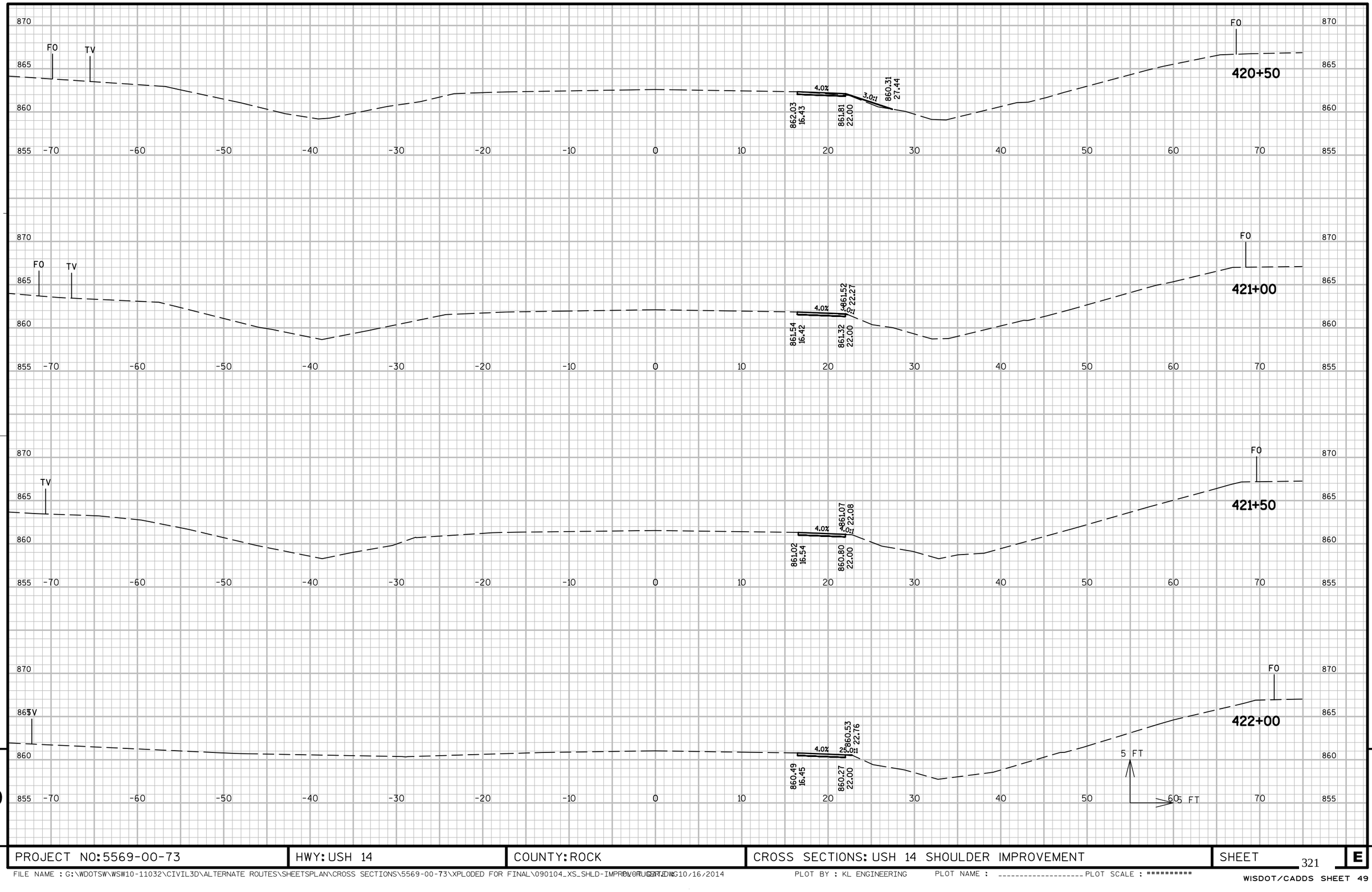


9

9

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: USH 14 SHOULDER IMPROVEMENT	SHEET 320 E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\CROSS SECTIONS\5569-00-73\XPLODED FOR FINAL\090104_XS_SHLD-IMPROVEMENT.DWG 10/16/2014
PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : **********
WISDOT/CADDS SHEET 49



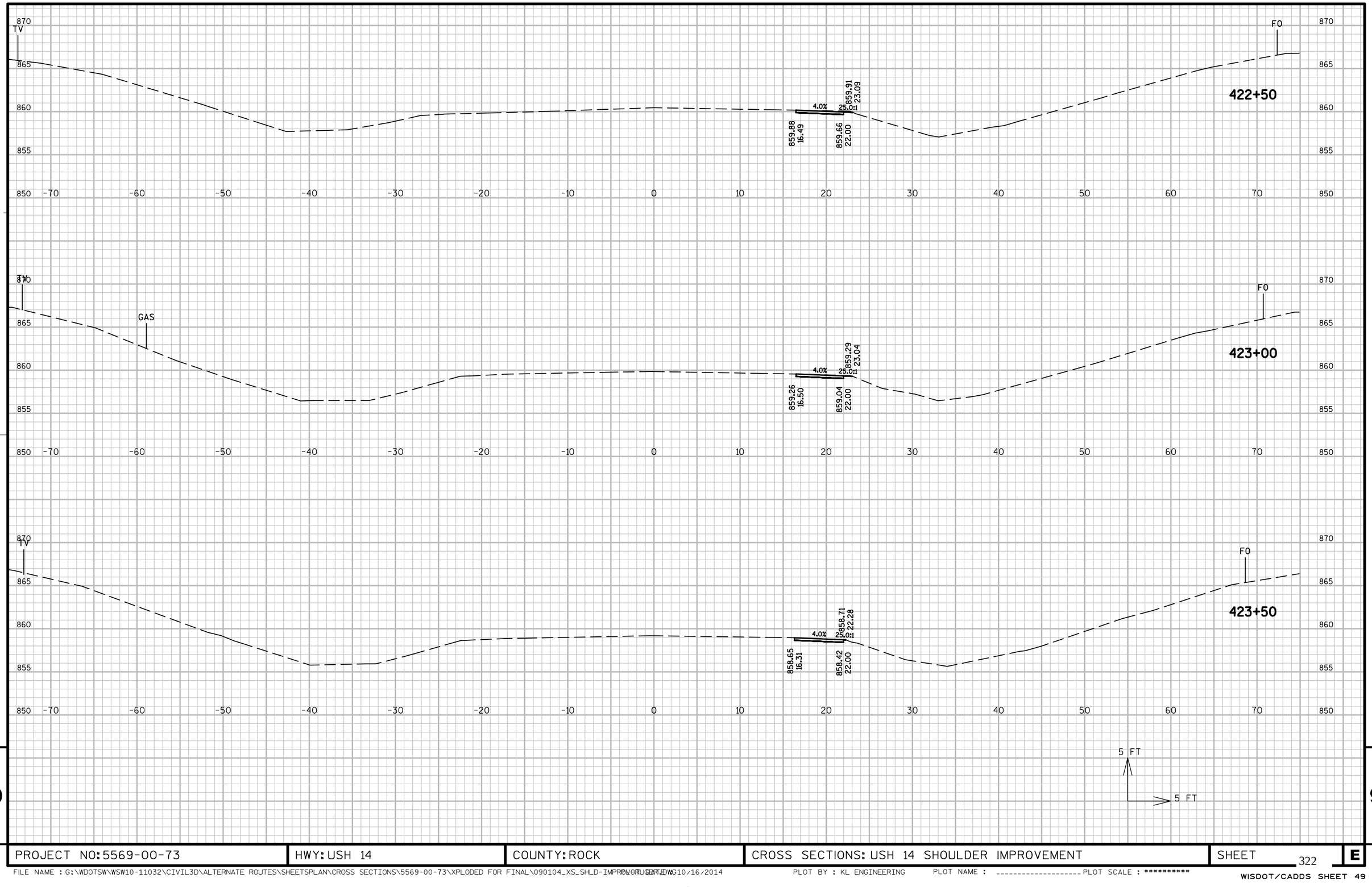
9

9

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: USH 14 SHOULDER IMPROVEMENT	SHEET 321 E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\CROSS SECTIONS\5569-00-73\XPLODED FOR FINAL\090104_XS_SHLD-IMPROVEMENT.DWG 10/16/2014 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : **********

WISDOT/CADDS SHEET 49



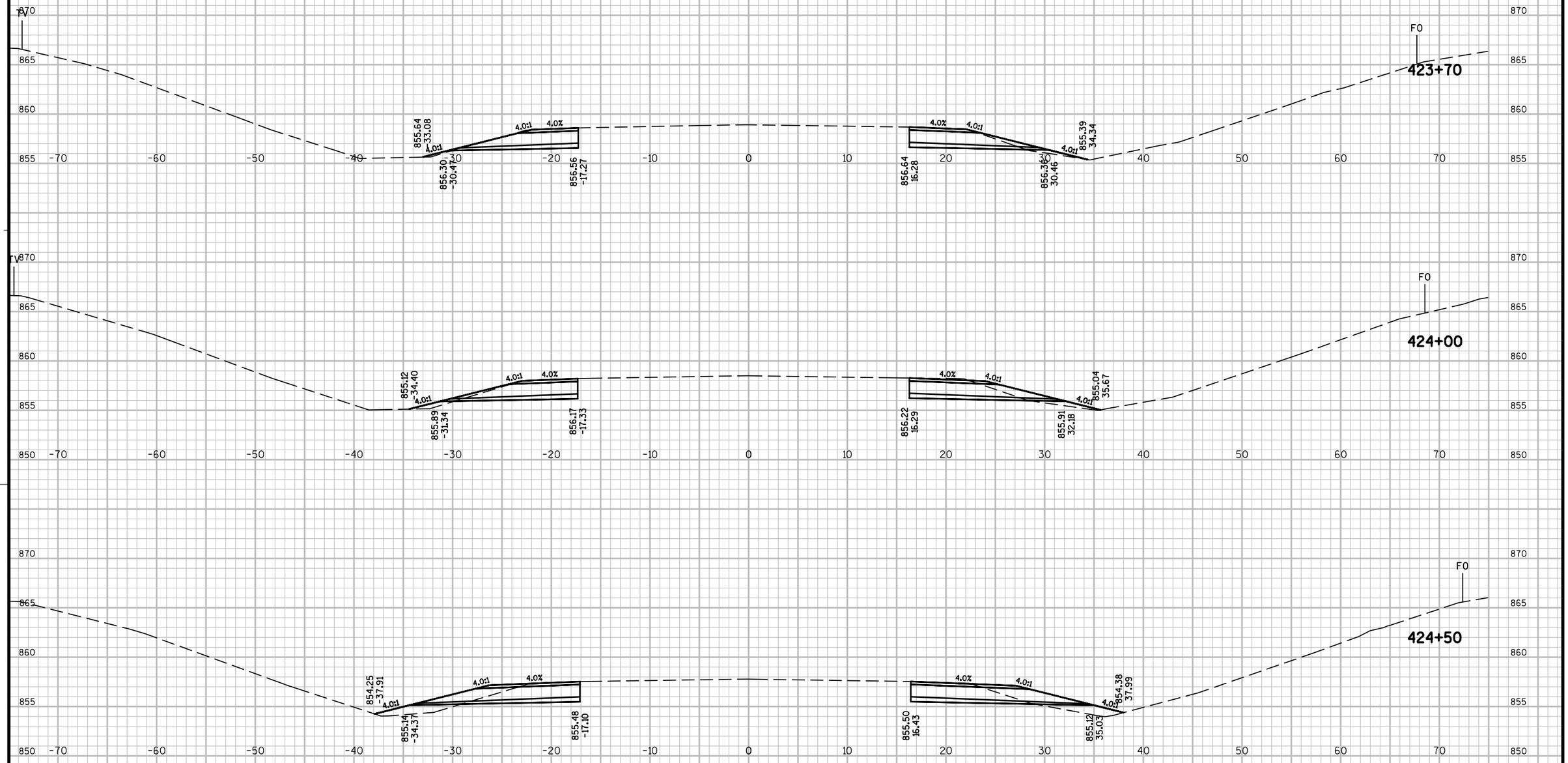
9

9

PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: USH 14 SHOULDER IMPROVEMENT	SHEET 322	E

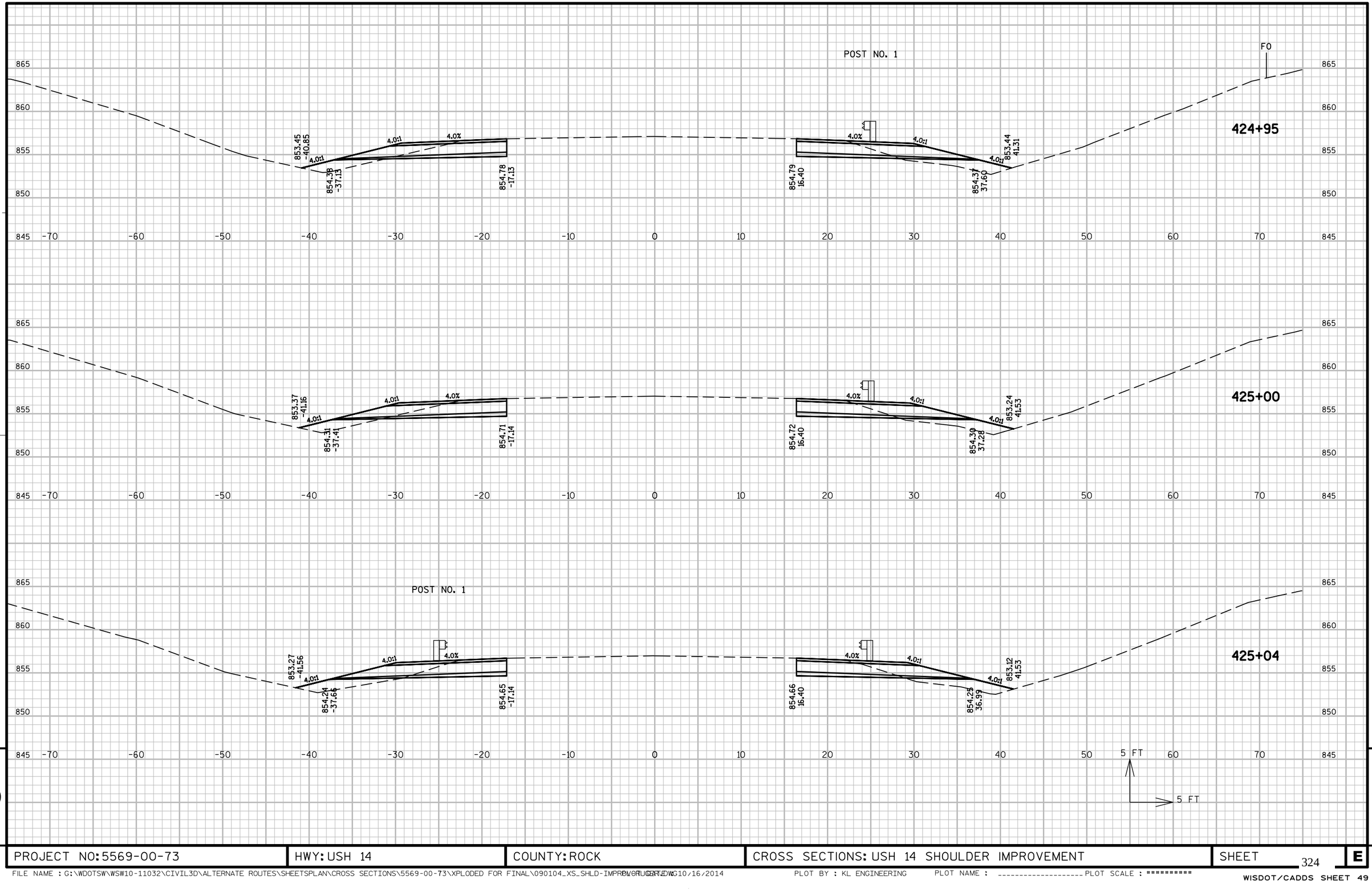
FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\CROSS SECTIONS\5569-00-73\XPLODED FOR FINAL\090104_XS_SHLD-IMPROVEMENT.DWG 10/16/2014 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : **********

WISDOT/CADDS SHEET 49



PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: USH 14 SHOULDER IMPROVEMENT	SHEET E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\CROSS SECTIONS\5569-00-73\XPLODED FOR FINAL\090104_XS_SHLD-IMPROVEMENT.DWG PLOTTED: 10/16/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



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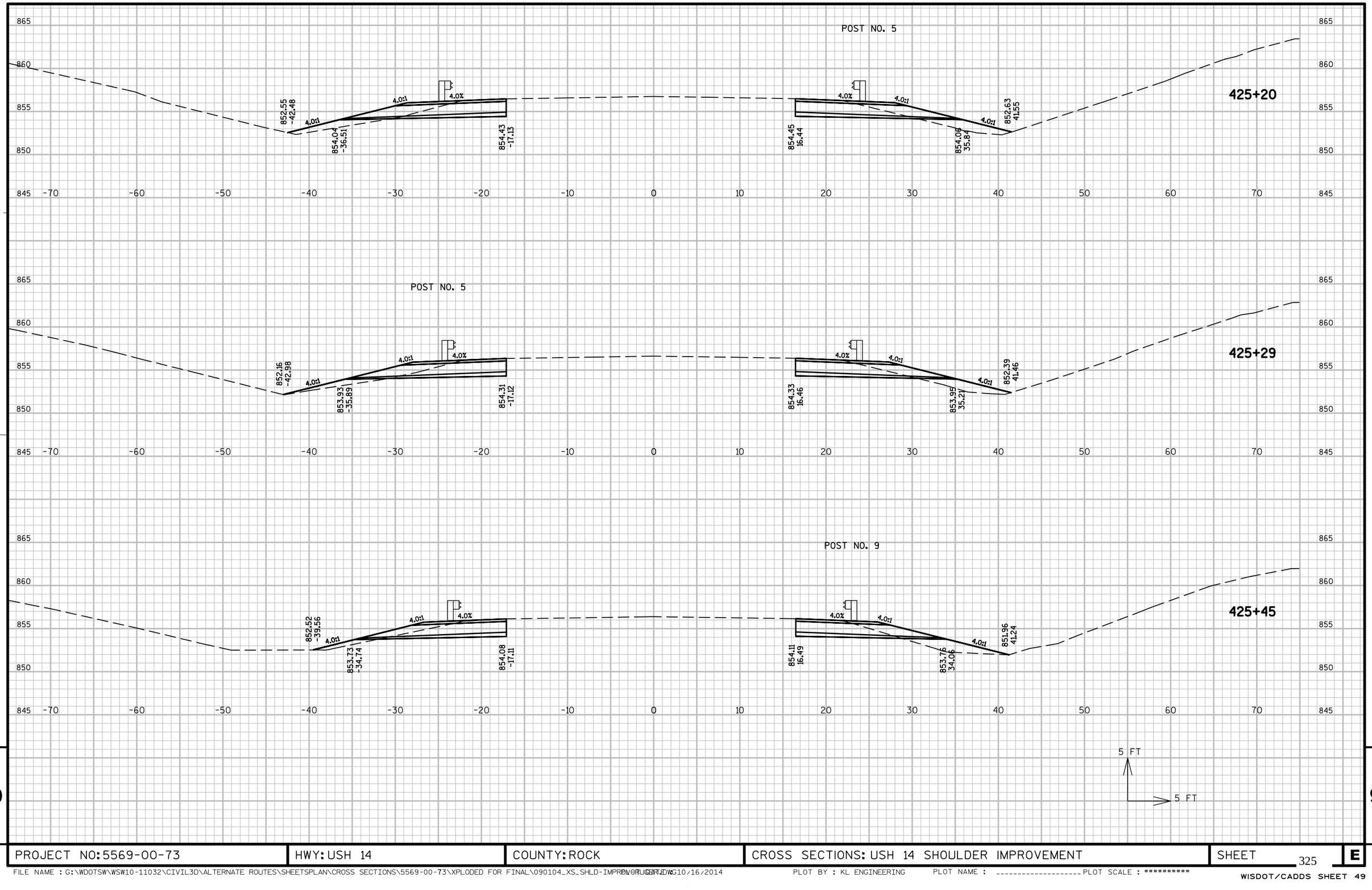
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: USH 14 SHOULDER IMPROVEMENT	SHEET 324 E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\CROSS SECTIONS\5569-00-73\XPLODED FOR FINAL\090104_XS_SHLD-IMPROVEMENT.DWG 10/16/2014 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : **********

WISDOT/CADDS SHEET 49



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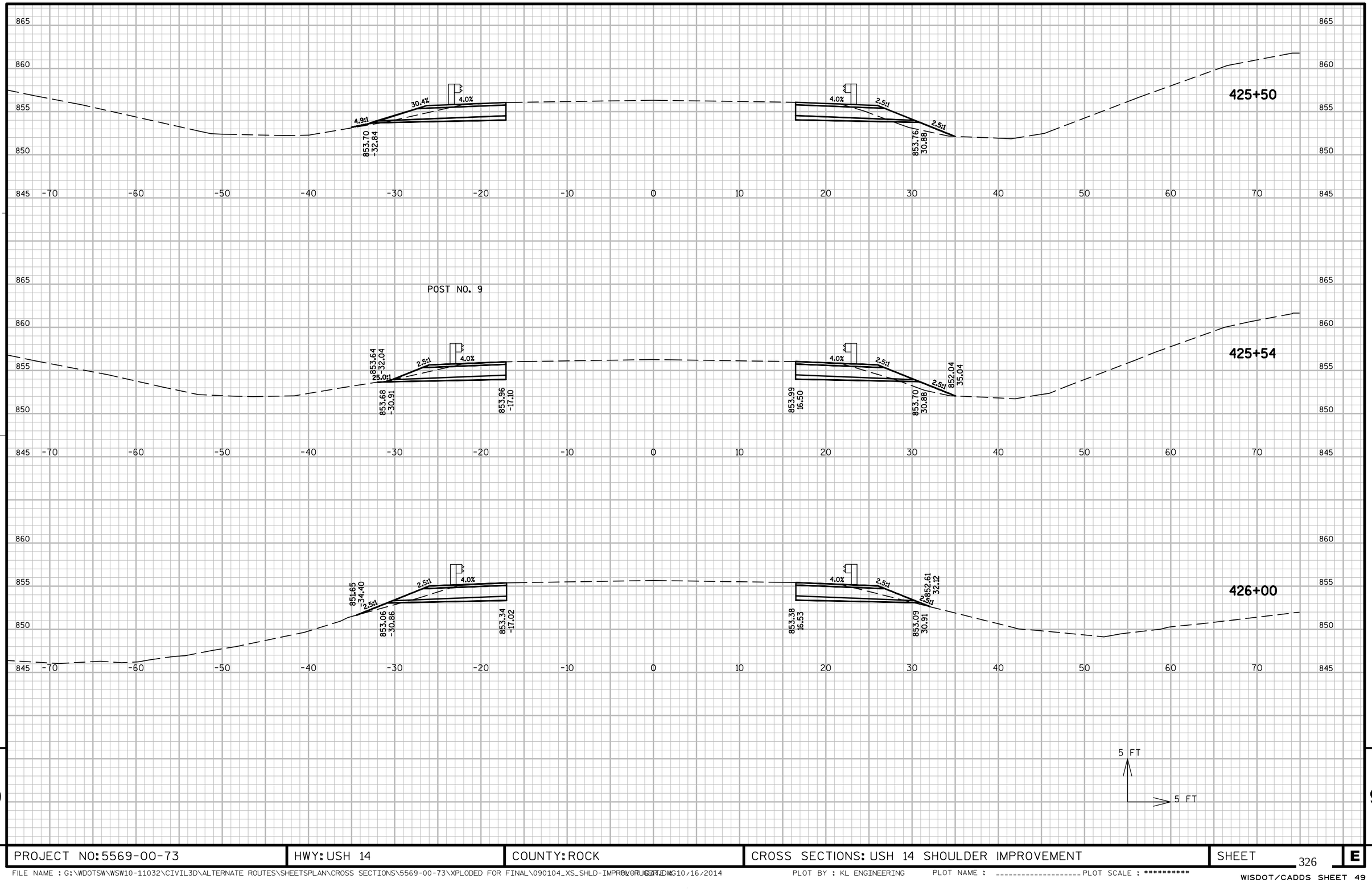
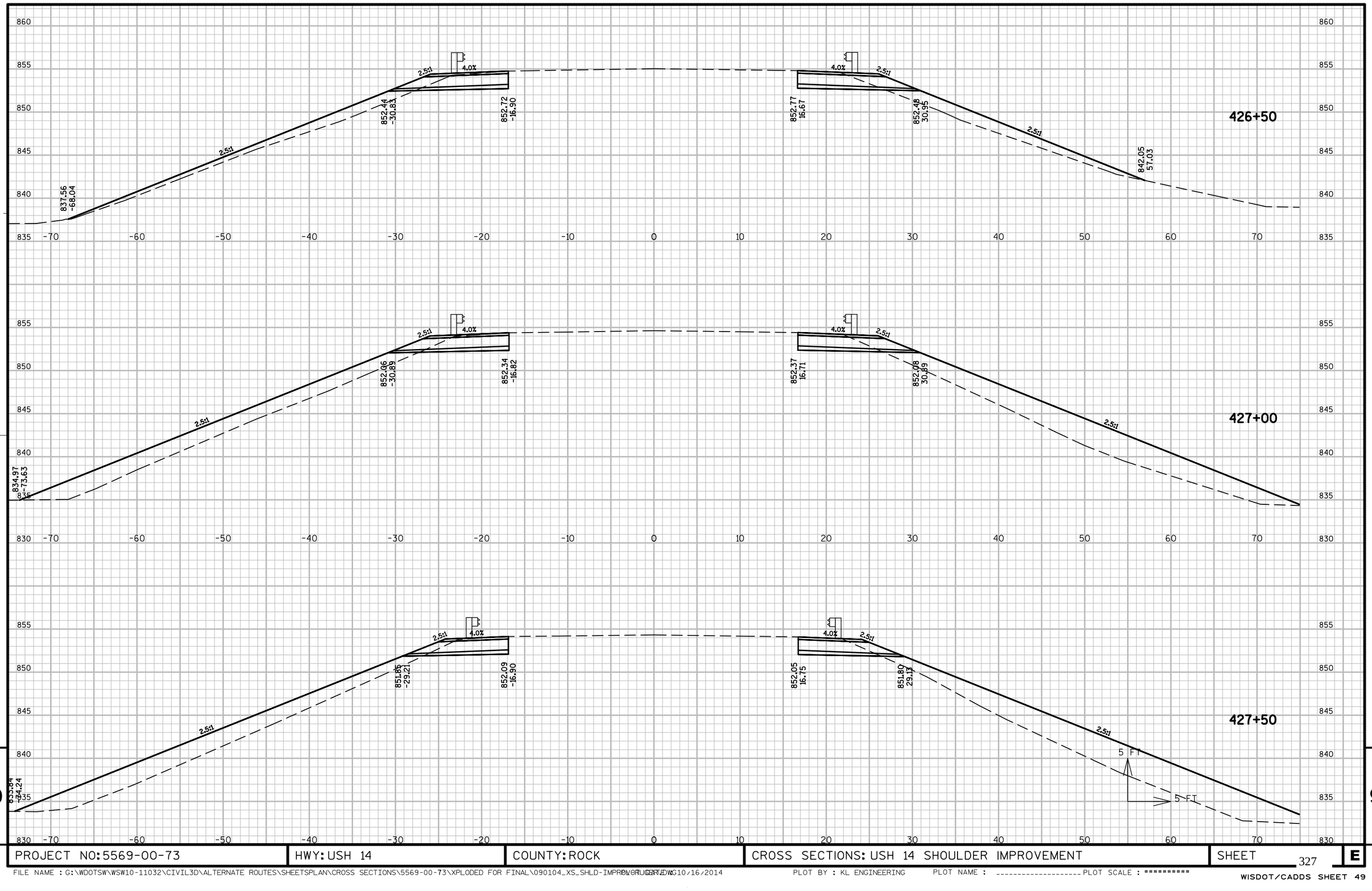
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: USH 14 SHOULDER IMPROVEMENT	SHEET 325 E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\CROSS SECTIONS\5569-00-73\XPLODED FOR FINAL\090104_XS_SHLD-IMPROVEMENT.DWG 10/16/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49

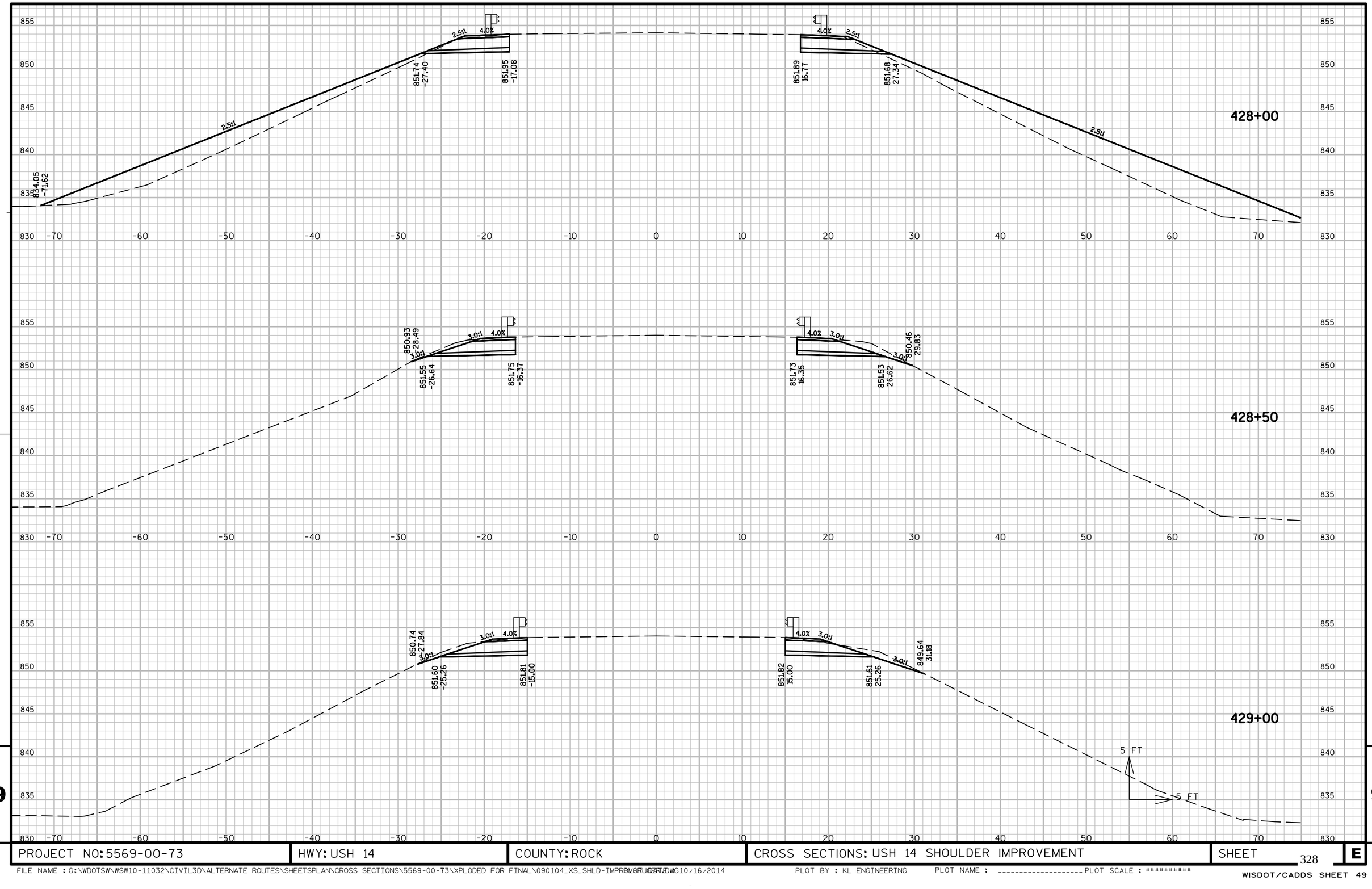


PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: USH 14 SHOULDER IMPROVEMENT	SHEET E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\CROSS SECTIONS\5569-00-73\XPLODED FOR FINAL\090104_XS_SHLD-IMPROVEMENT.DWG PLOTTED : 10/16/2014
PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : **********
WISDOT/CADDS SHEET 49



PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: USH 14 SHOULDER IMPROVEMENT	SHEET	E



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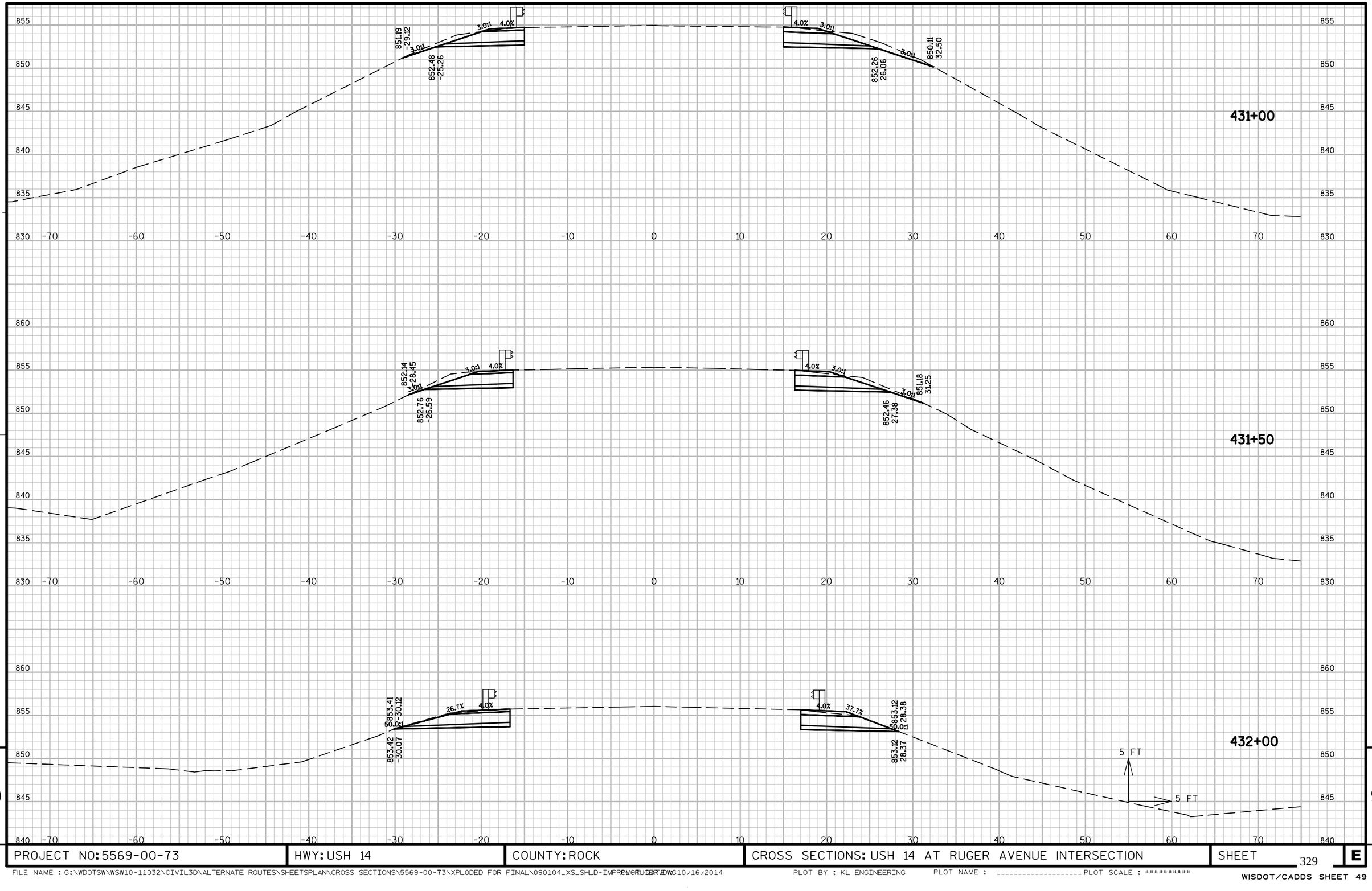
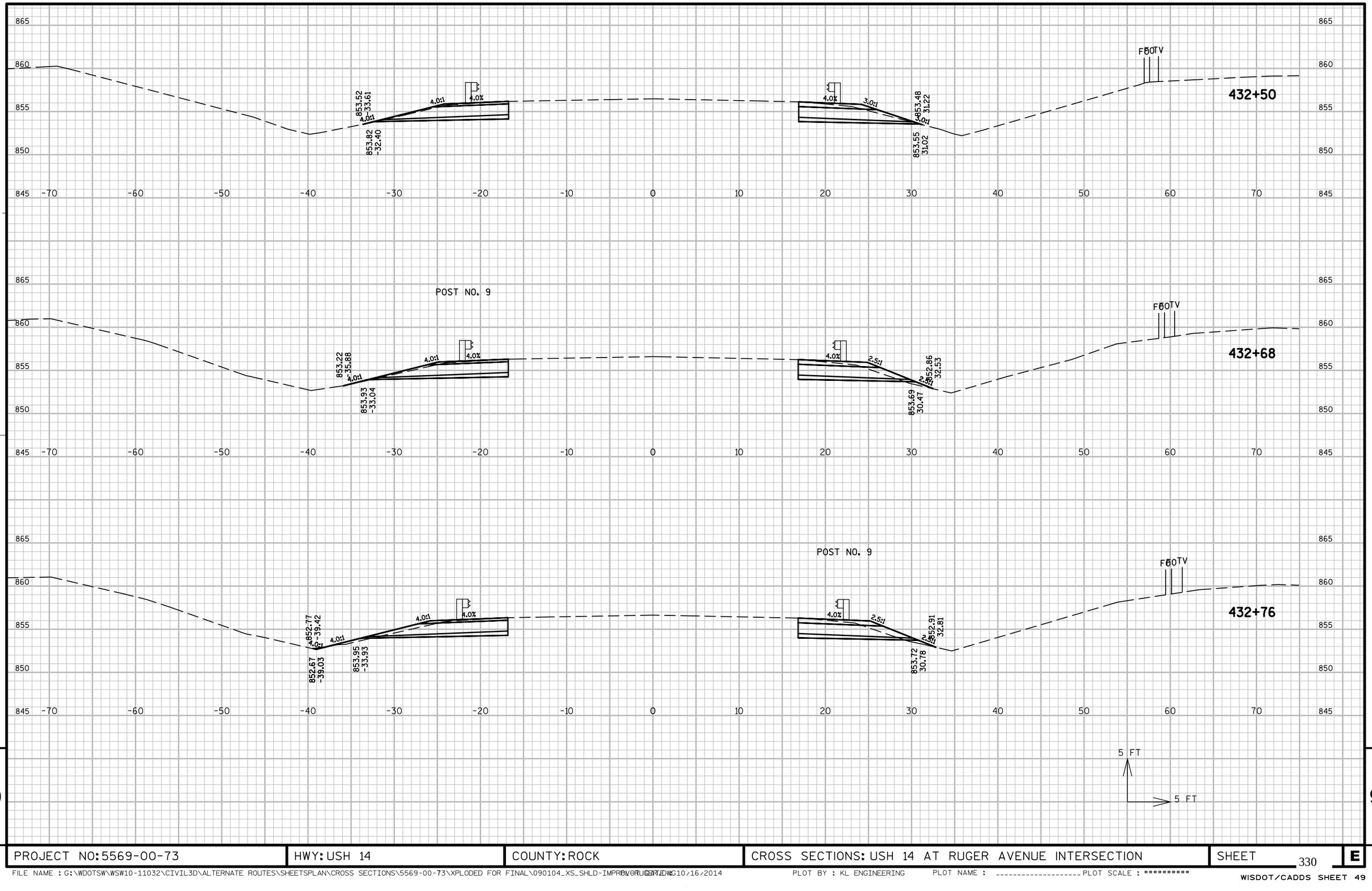
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: USH 14 SHOULDER IMPROVEMENT	SHEET 328	E



PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: USH 14 AT RUGER AVENUE INTERSECTION	SHEET	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\CROSS SECTIONS\5569-00-73\XPLODED FOR FINAL\090104_XS_SHLD-IMPROVERUGER.DWG 10/16/2014 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : **********

WISDOT/CADDS SHEET 49



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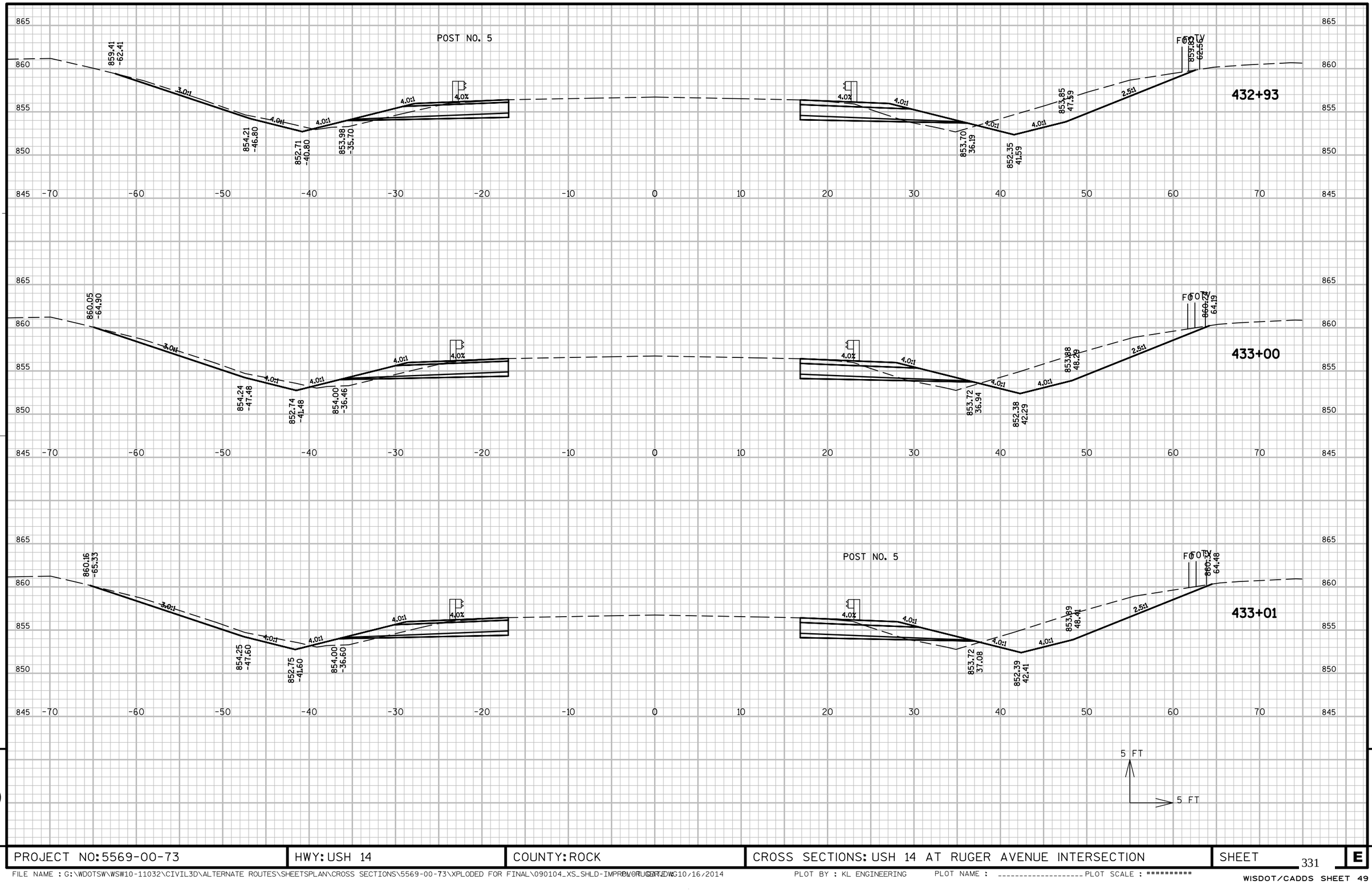
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: USH 14 AT RUGER AVENUE INTERSECTION	SHEET	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\CROSS SECTIONS\5569-00-73\XPLODED FOR FINAL\090104_XS_SHLD-IMPRV_RUGER.DWG 10/16/2014

PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : **********

WISDOT/CADDS SHEET 49



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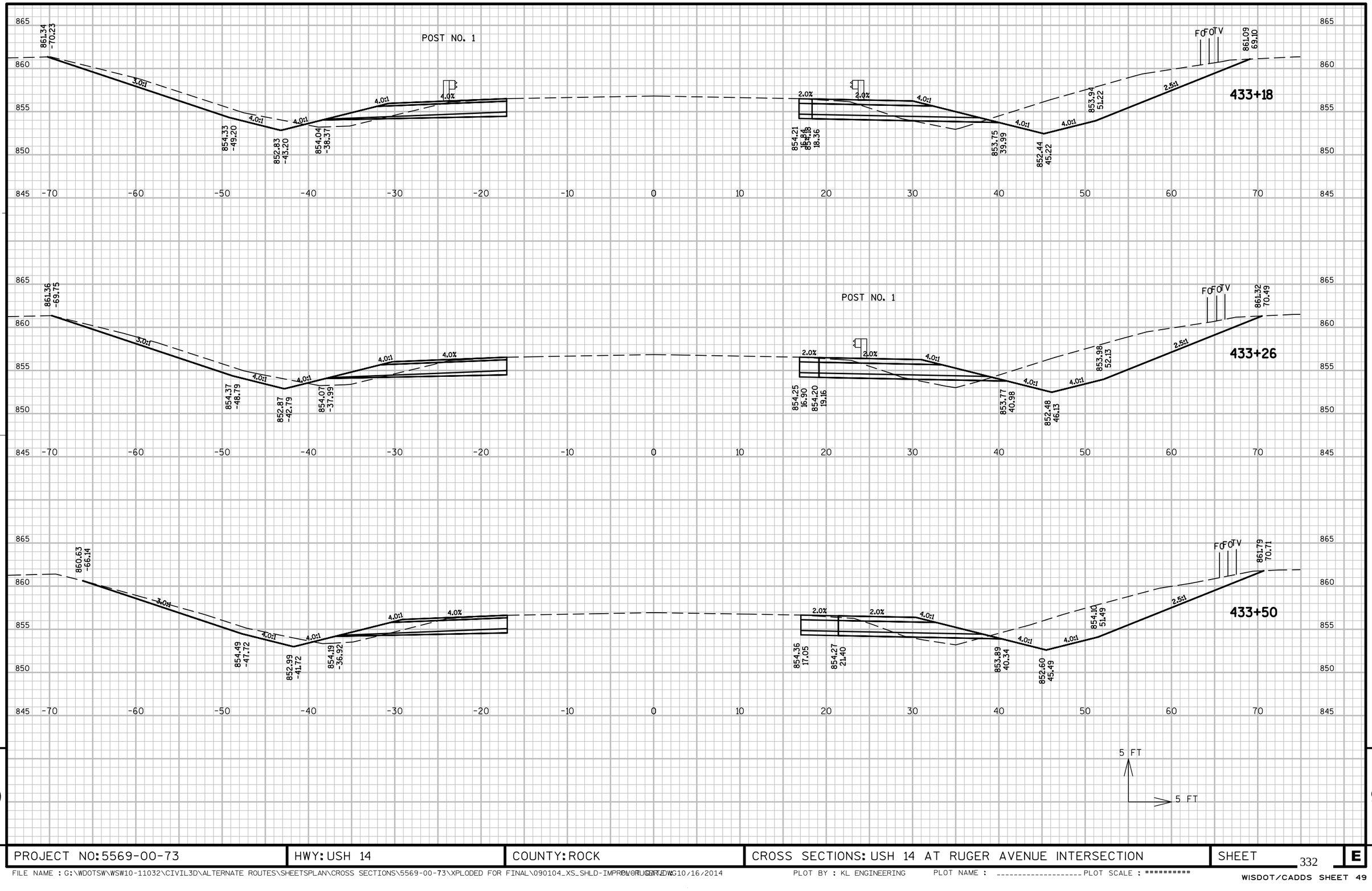
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: USH 14 AT RUGER AVENUE INTERSECTION	SHEET 331 E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\CROSS SECTIONS\5569-00-73\XPLODED FOR FINAL\090104_XS_SHLD-IMPRV_RUGER.DWG 10/16/2014 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : **********



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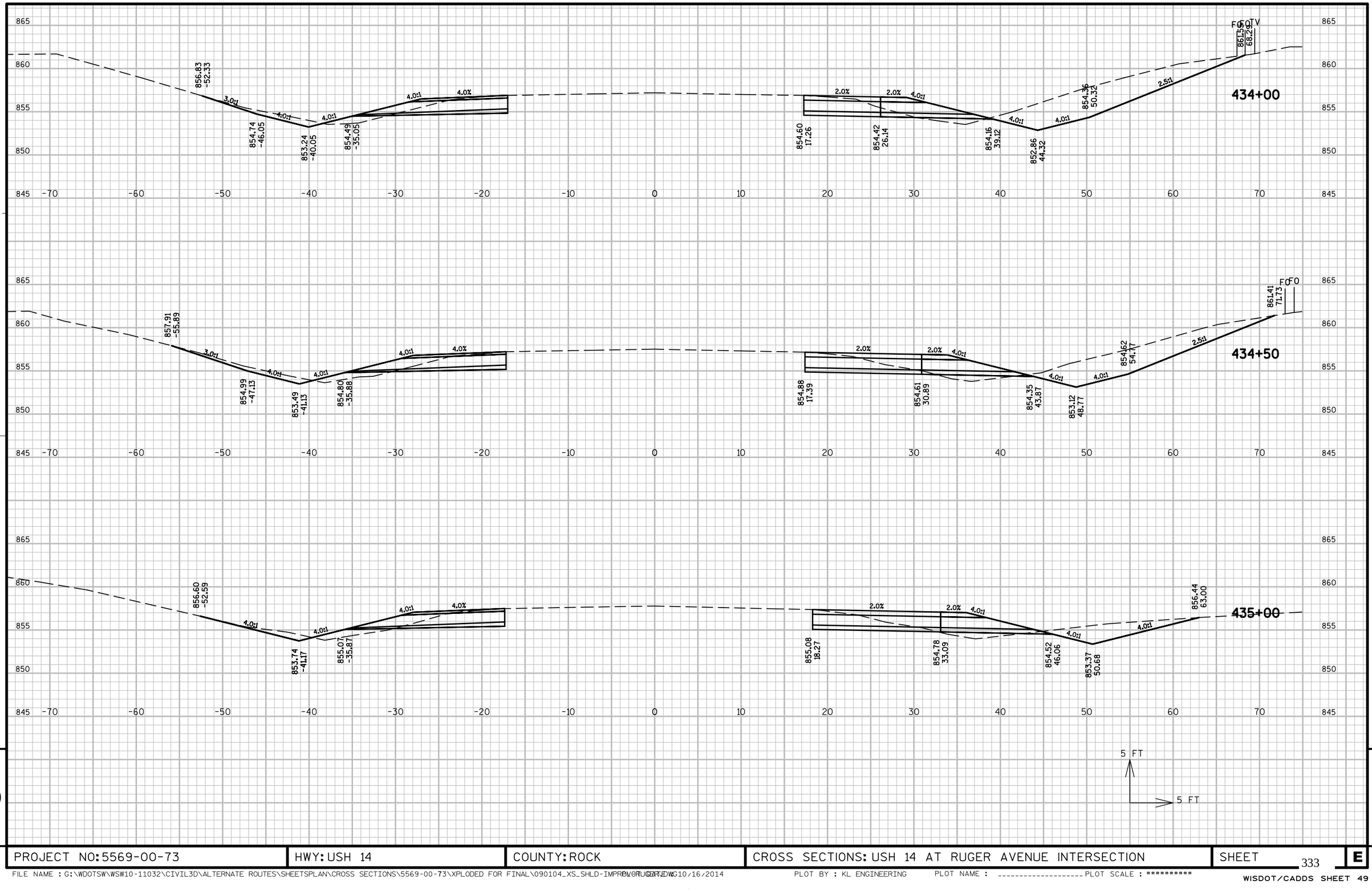
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: USH 14 AT RUGER AVENUE INTERSECTION	SHEET 332	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\CROSS SECTIONS\5569-00-73\XPLODED FOR FINAL\090104_XS_SHLD-IMPRV_RUGER.DWG 10/16/2014 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : **********

WISDOT/CADDS SHEET 49



9

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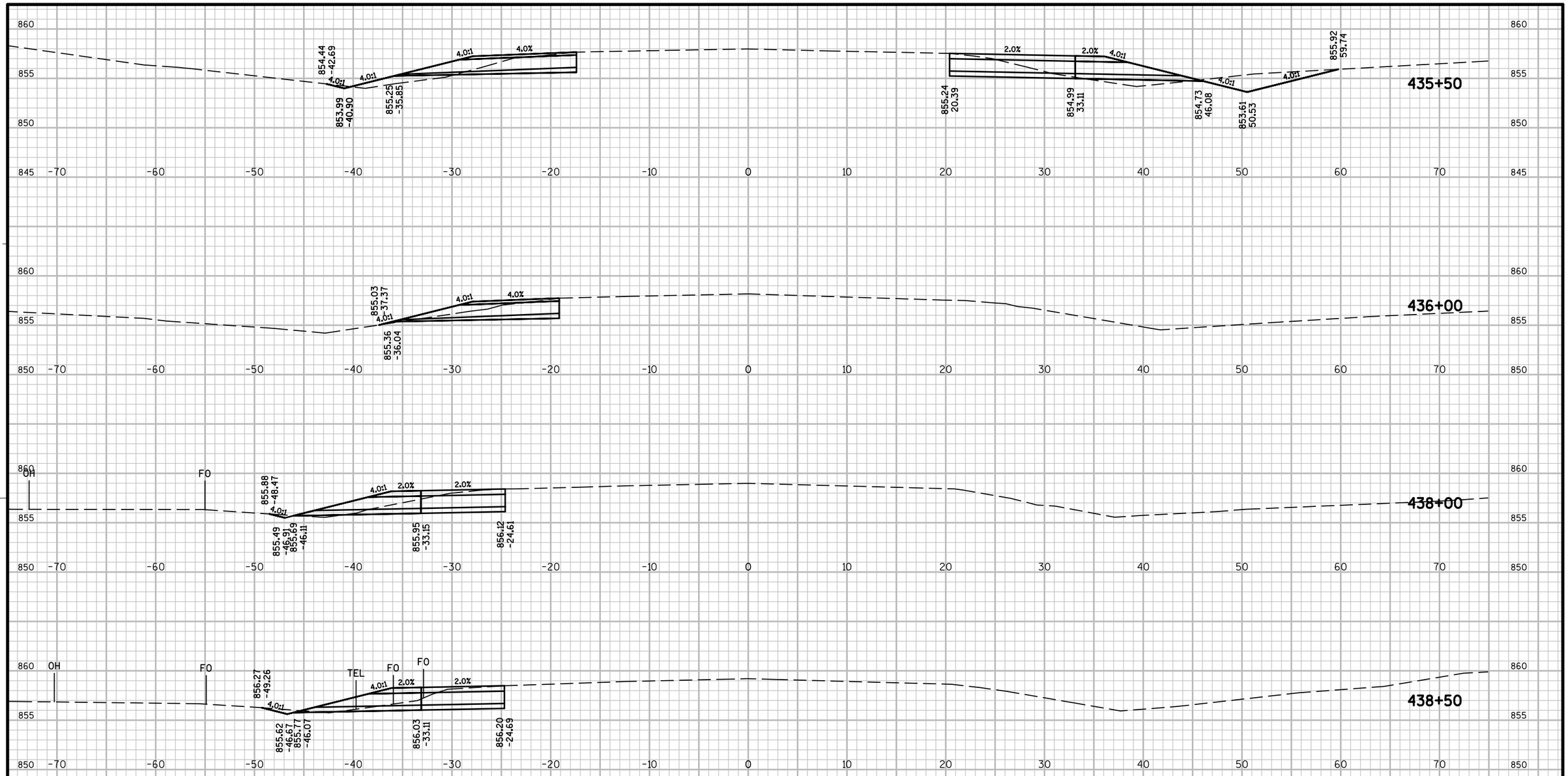
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: USH 14 AT RUGER AVENUE INTERSECTION	SHEET 333 E

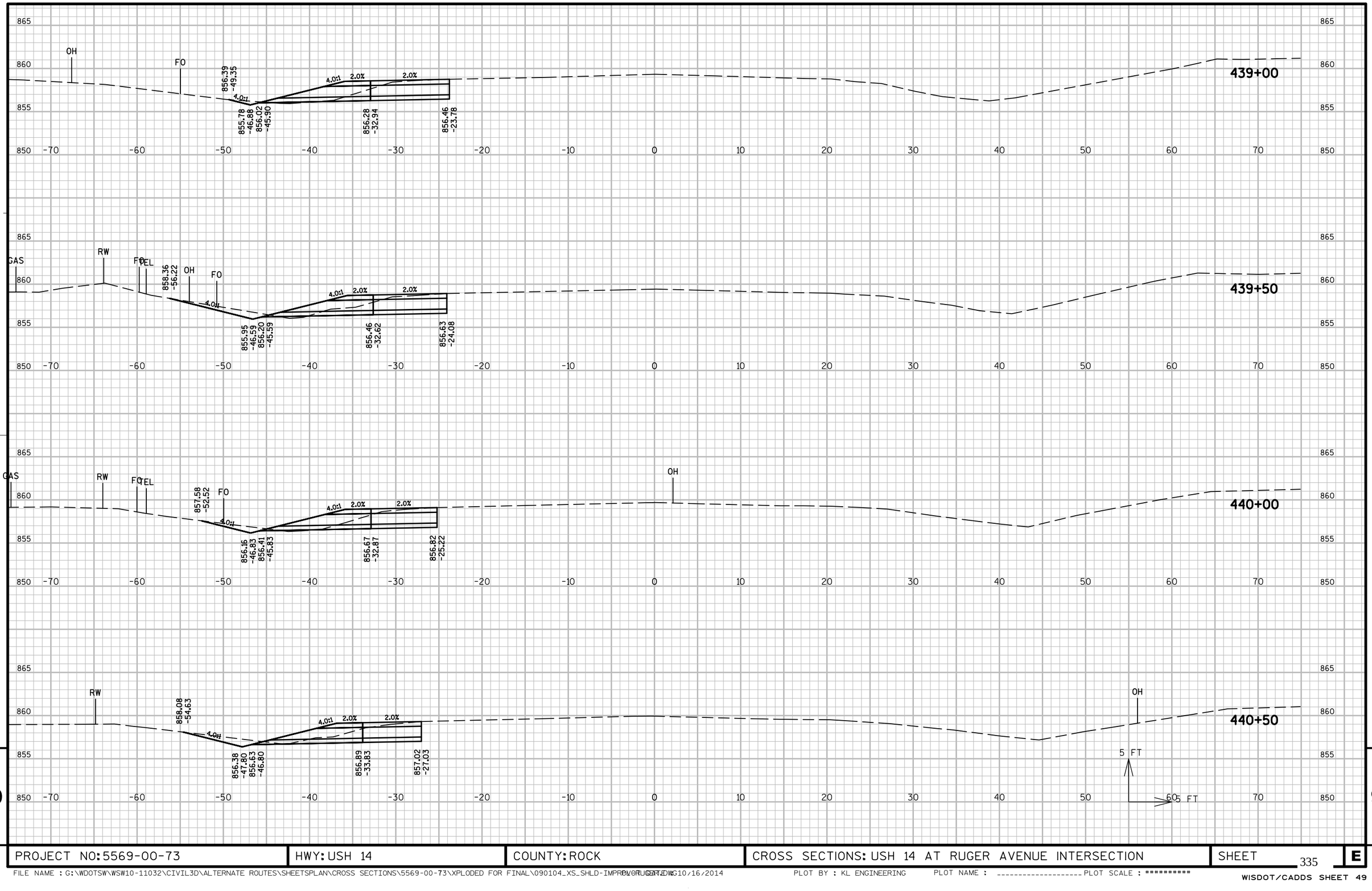
FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\CROSS SECTIONS\5569-00-73\XPLODED FOR FINAL\090104_XS_SHLD-IMPRV_RUGER.DWG 10/16/2014 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : **********

WISDOT/CADDS SHEET 49



PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: USH 14 AT RUGER AVENUE INTERSECTION	SHEET 334 E

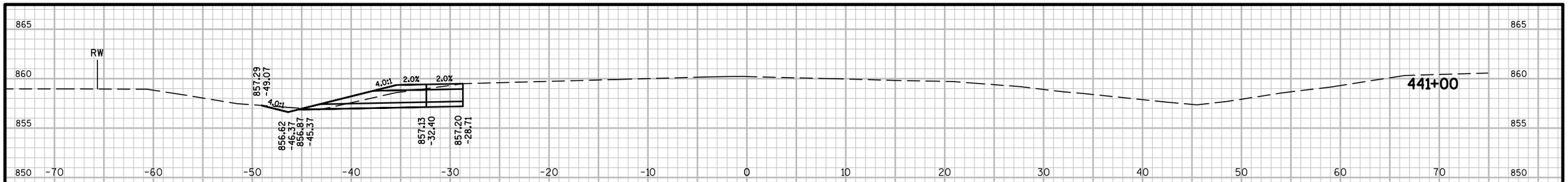
FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\CROSS SECTIONS\5569-00-73\XPLODED FOR FINAL\090104_XS_SHLD-IMPR_RUGER.DWG 10/16/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



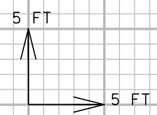
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: USH 14 AT RUGER AVENUE INTERSECTION	SHEET 335 E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\CROSS SECTIONS\5569-00-73\XPLODED FOR FINAL\090104_XS_SHLD-IMPRV@RUGER.DWG 10/16/2014 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : **********

WISDOT/CADDS SHEET 49



END CONSTRUCTION
STA. 441+37.94



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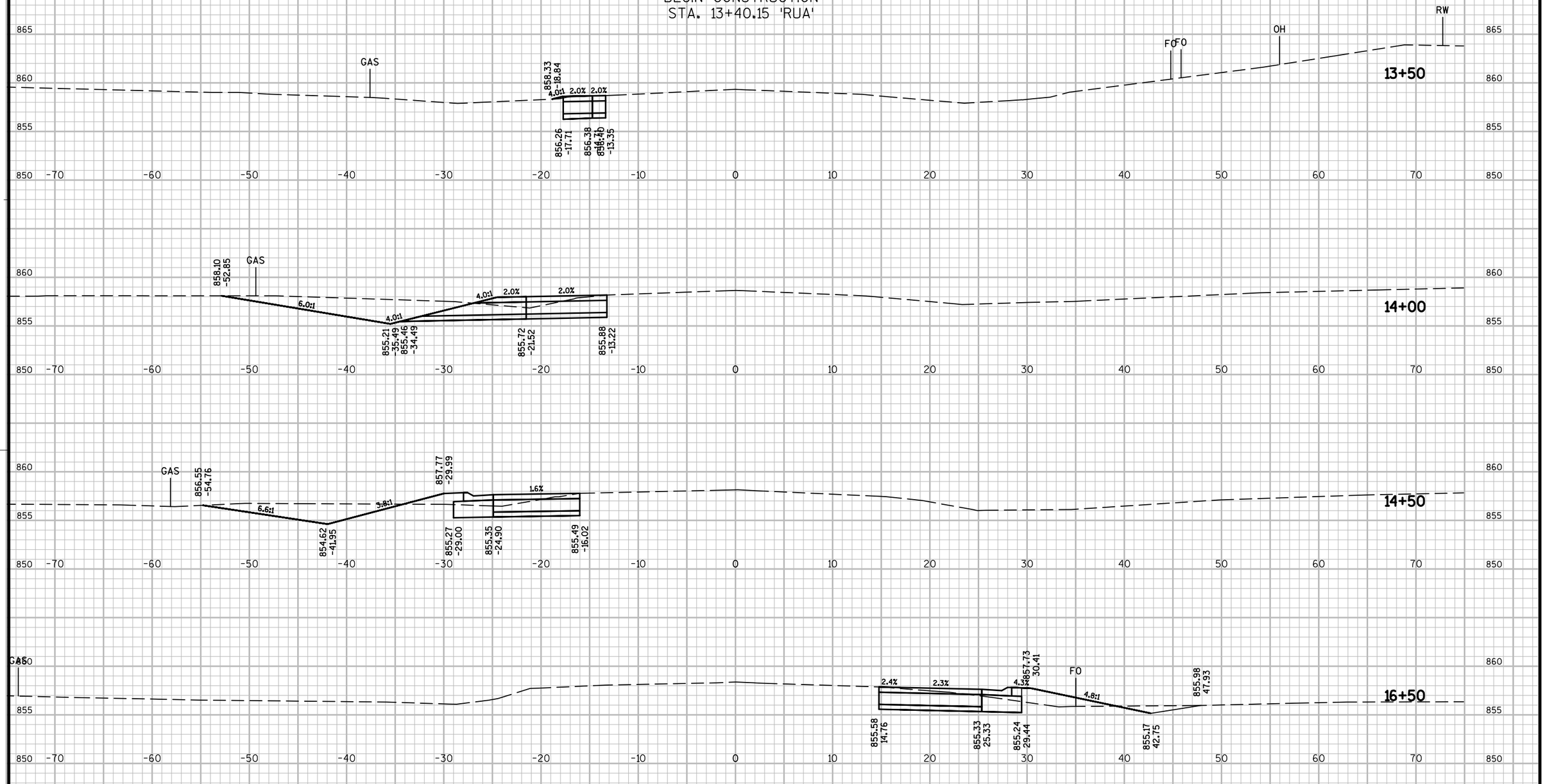
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: USH 14 AT RUGER AVENUE INTERSECTION	SHEET	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\CROSS SECTIONS\5569-00-73\XPLODED FOR FINAL\090104_XS_SHLD-IMPROVERUGER.DWG 10/16/2014
PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : **********
WISDOT/CADDS SHEET 49

BEGIN CONSTRUCTION
STA. 13+40.15 'RUA'



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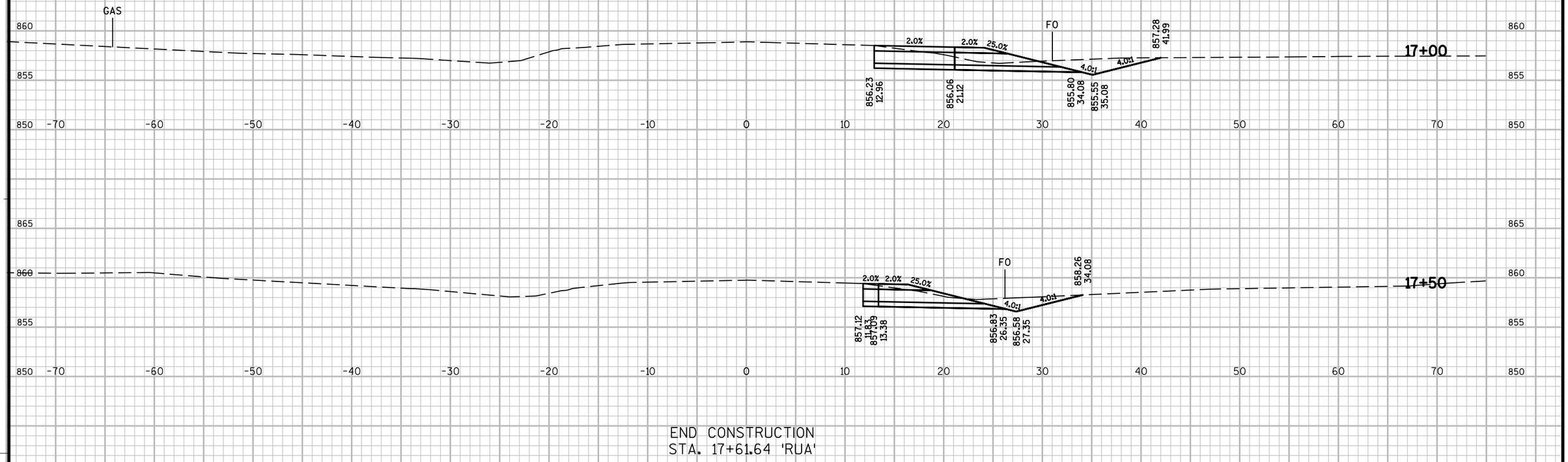
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: RUGER AVENUE	SHEET 337 E



END CONSTRUCTION
STA. 17+61.64 'RUA'

5 FT
5 FT

9

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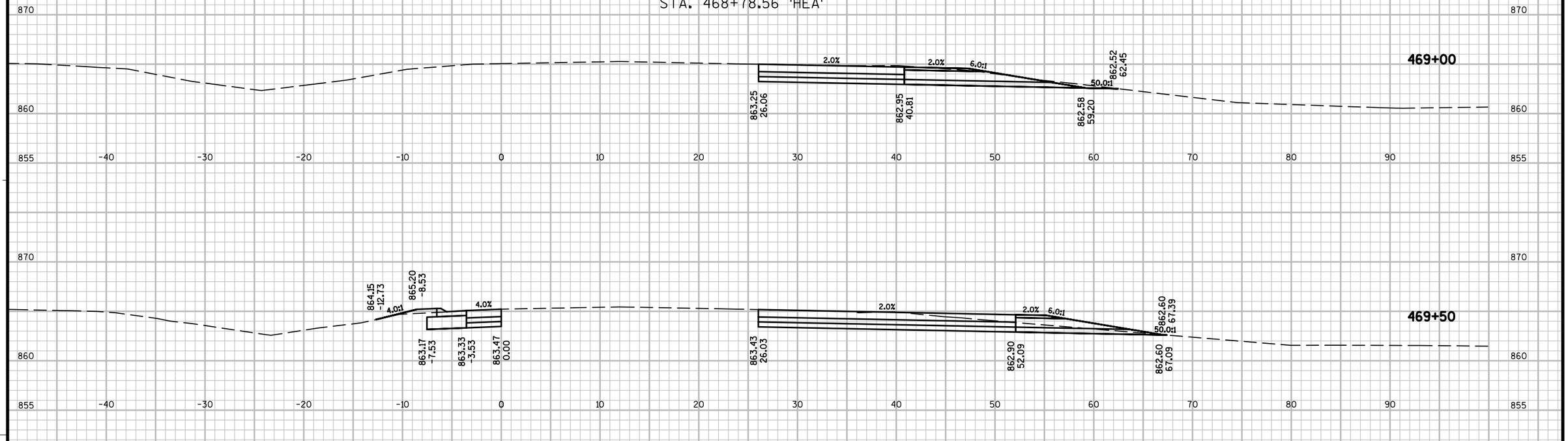
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: RUGER AVENUE	SHEET 338	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\CROSS SECTIONS\5569-00-73\XPLODED FOR FINAL\090105_XS_RUGER.DWGPLOT DATE : 10/16/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : **********

WISDOT/CADDS SHEET 49

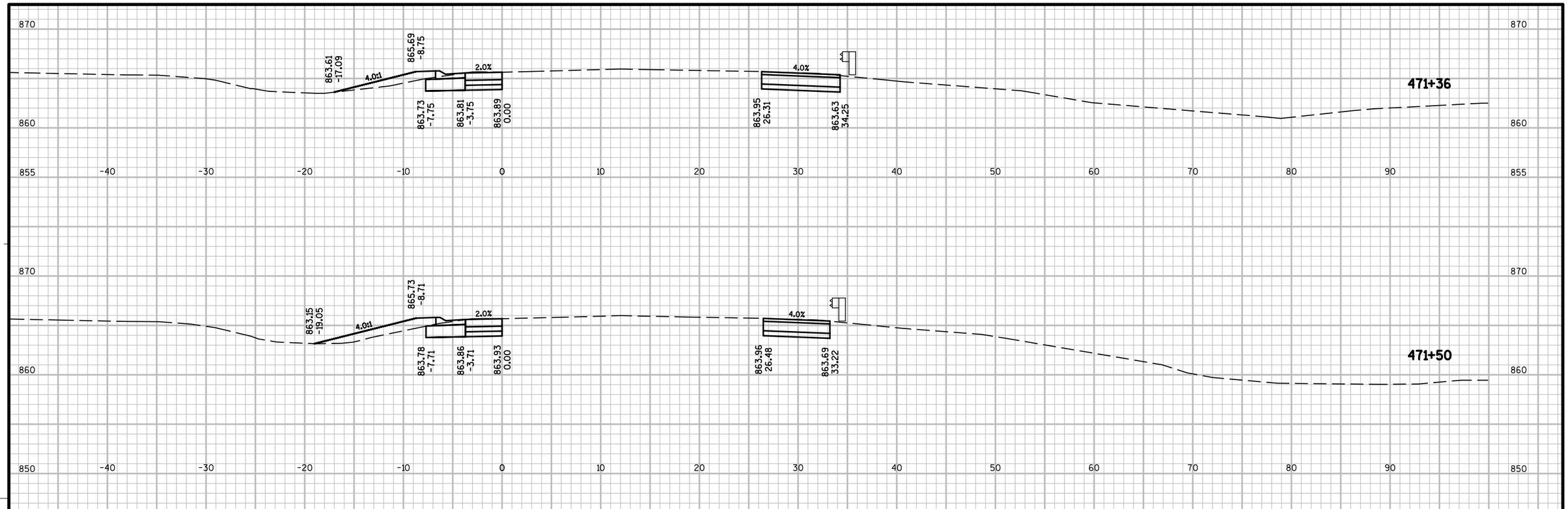
BEGIN CONSTRUCTION
STA. 468+78.56 'HEA'



PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: USH 14 EB 'HEA' AT STH 11 INTERSECTION	SHEET 339 E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\CROSS SECTIONS\5569-00-73\XPLODED FOR FINAL\090106_XS_STH11-HEA.DWG DATE : 10/16/2014 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : **********

WISDOT/CADDS SHEET 49

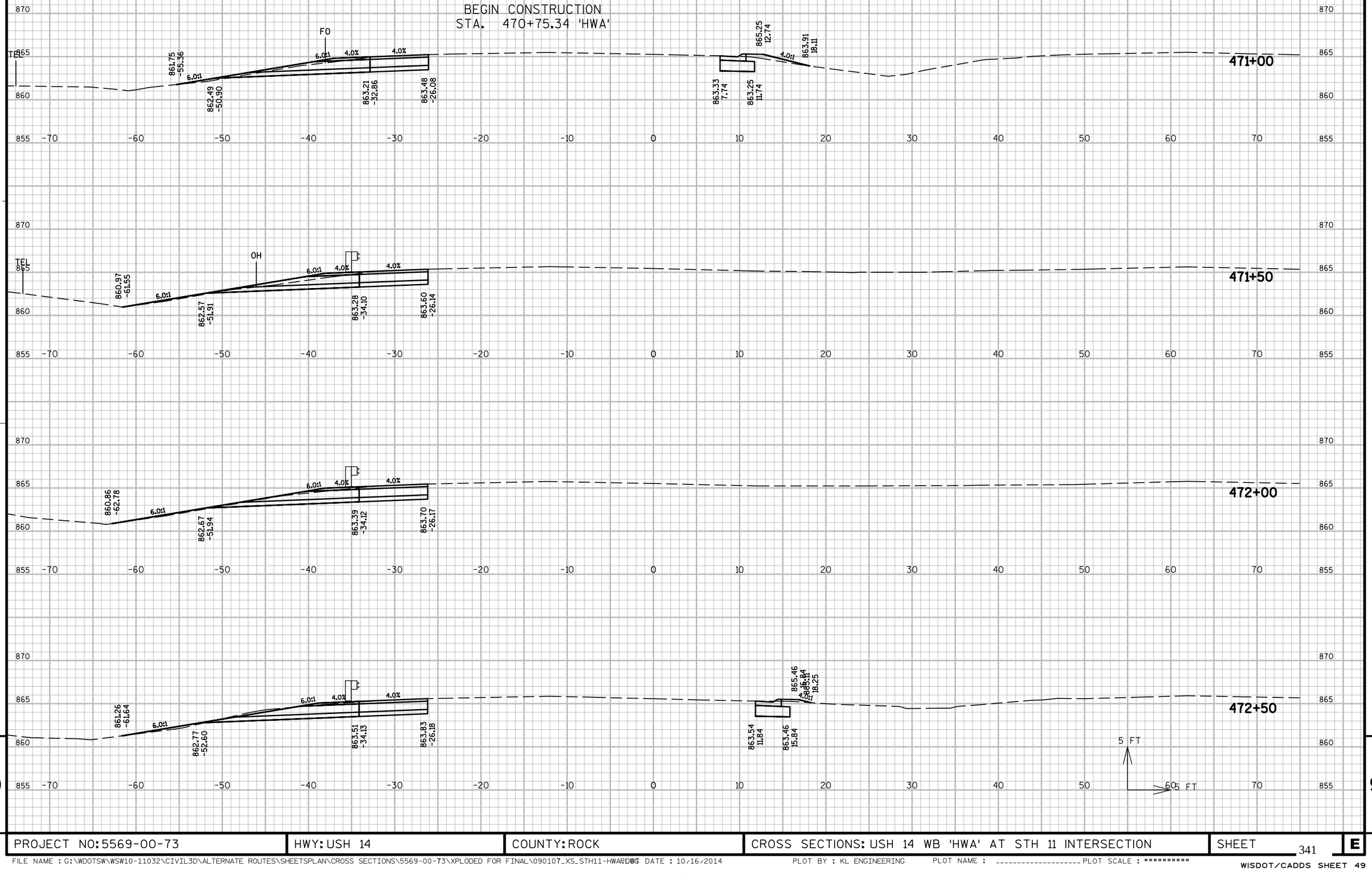


PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: USH 14 EB 'HEA' AT STH 11 INTERSECTION	SHEET 340	E

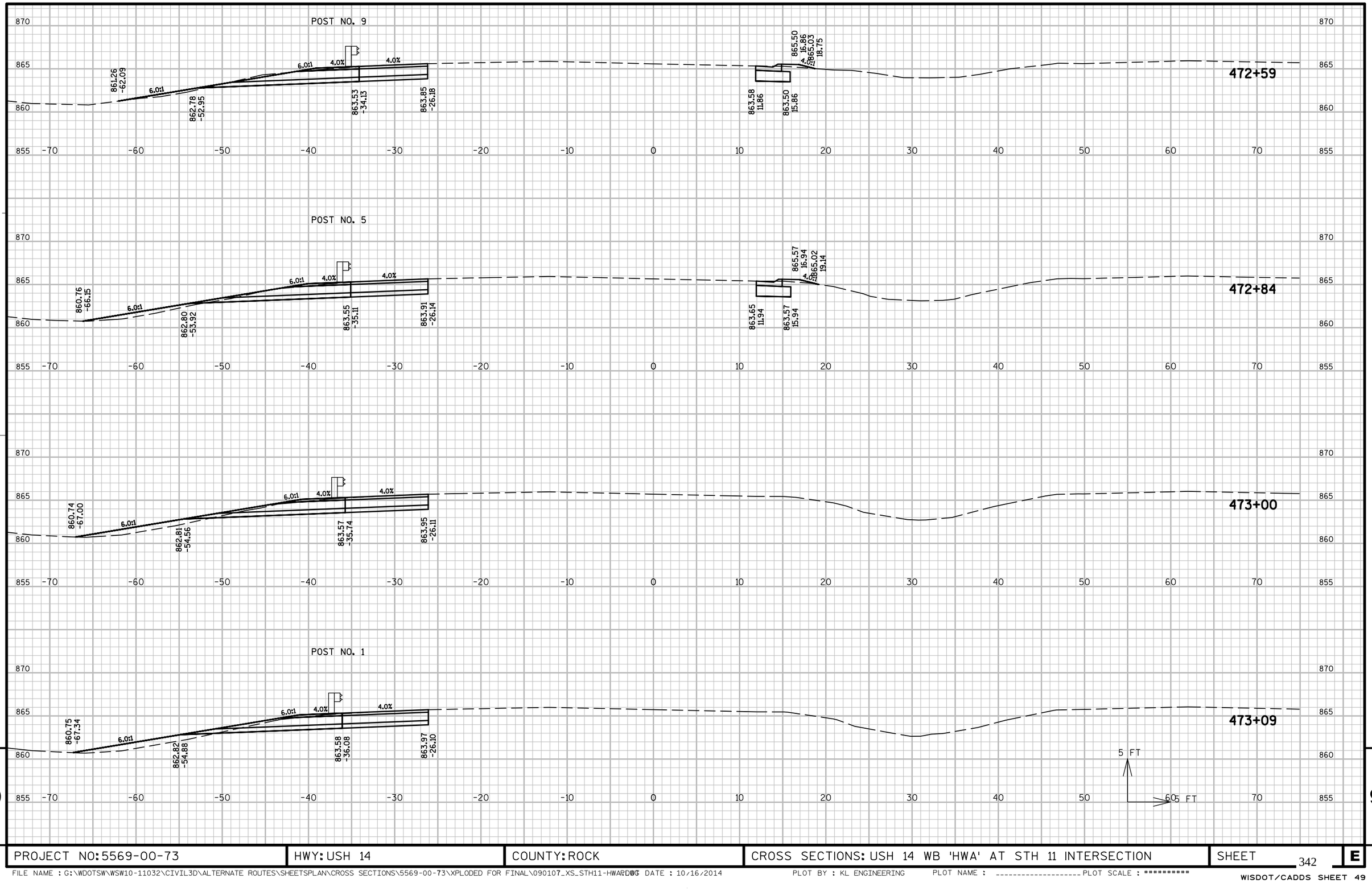
FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\CROSS SECTIONS\5569-00-73\XPLODED FOR FINAL\090106_XS_STH11-HEA.DWG DATE : 10/16/2014 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : **********

WISDOT/CADDS SHEET 49

BEGIN CONSTRUCTION
STA. 470+75.34 'HWA'



PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: USH 14 WB 'HWA' AT STH 11 INTERSECTION	SHEET 341 E



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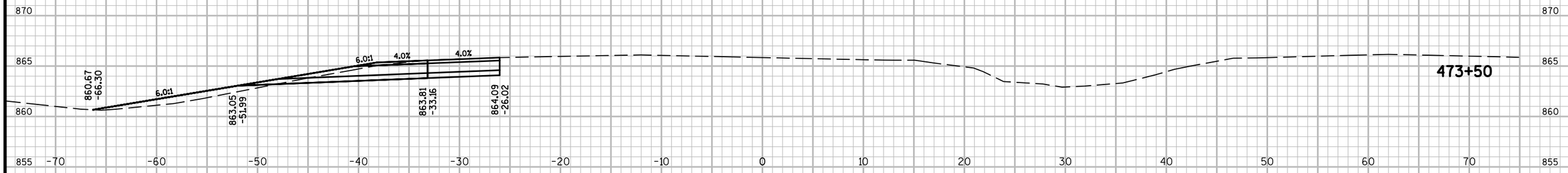
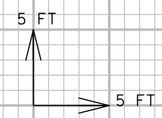
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: USH 14 WB 'HWA' AT STH 11 INTERSECTION	SHEET 342 E



END CONSTRUCTION
STA. 473+68.82 'HWA'



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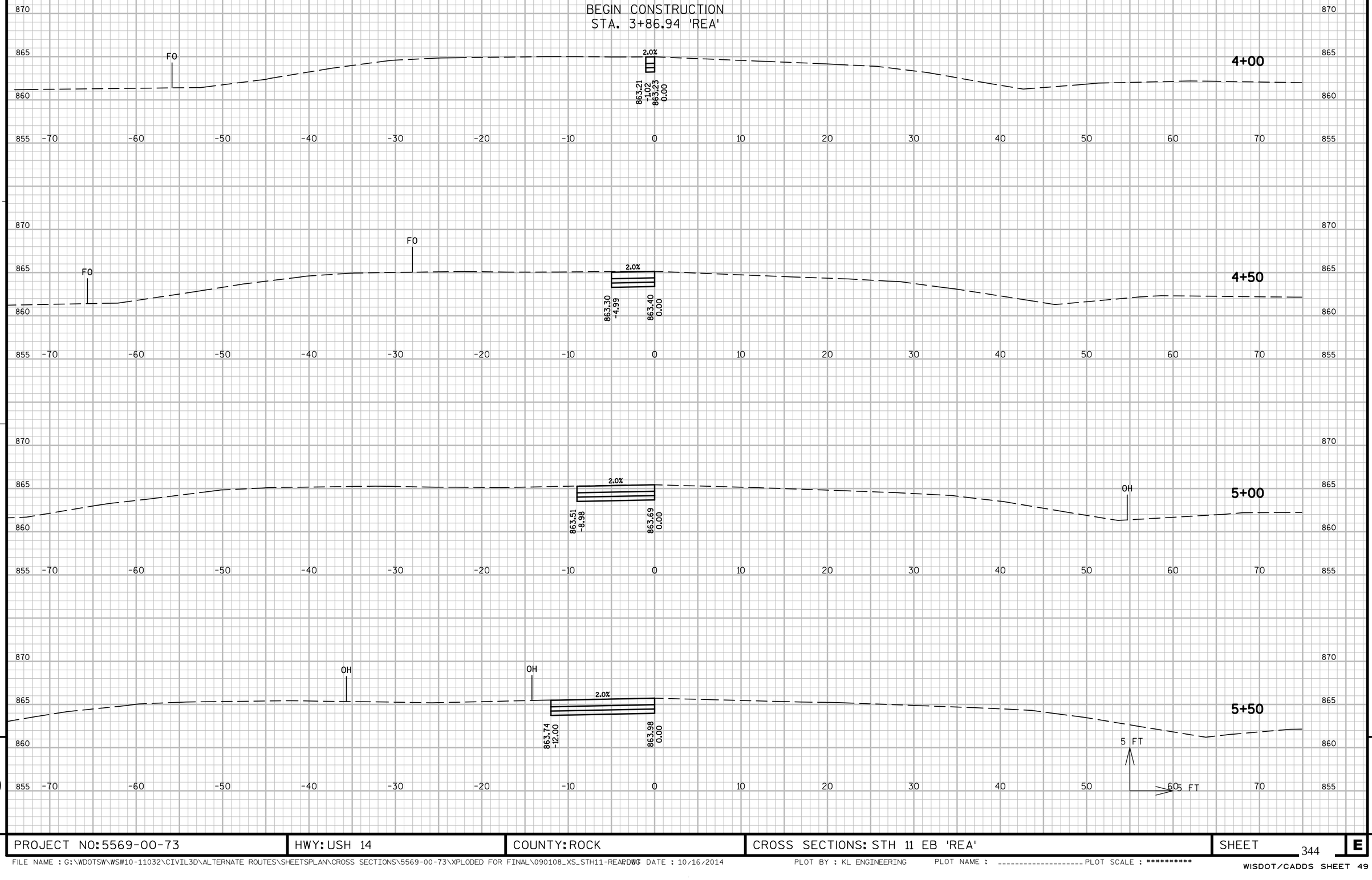
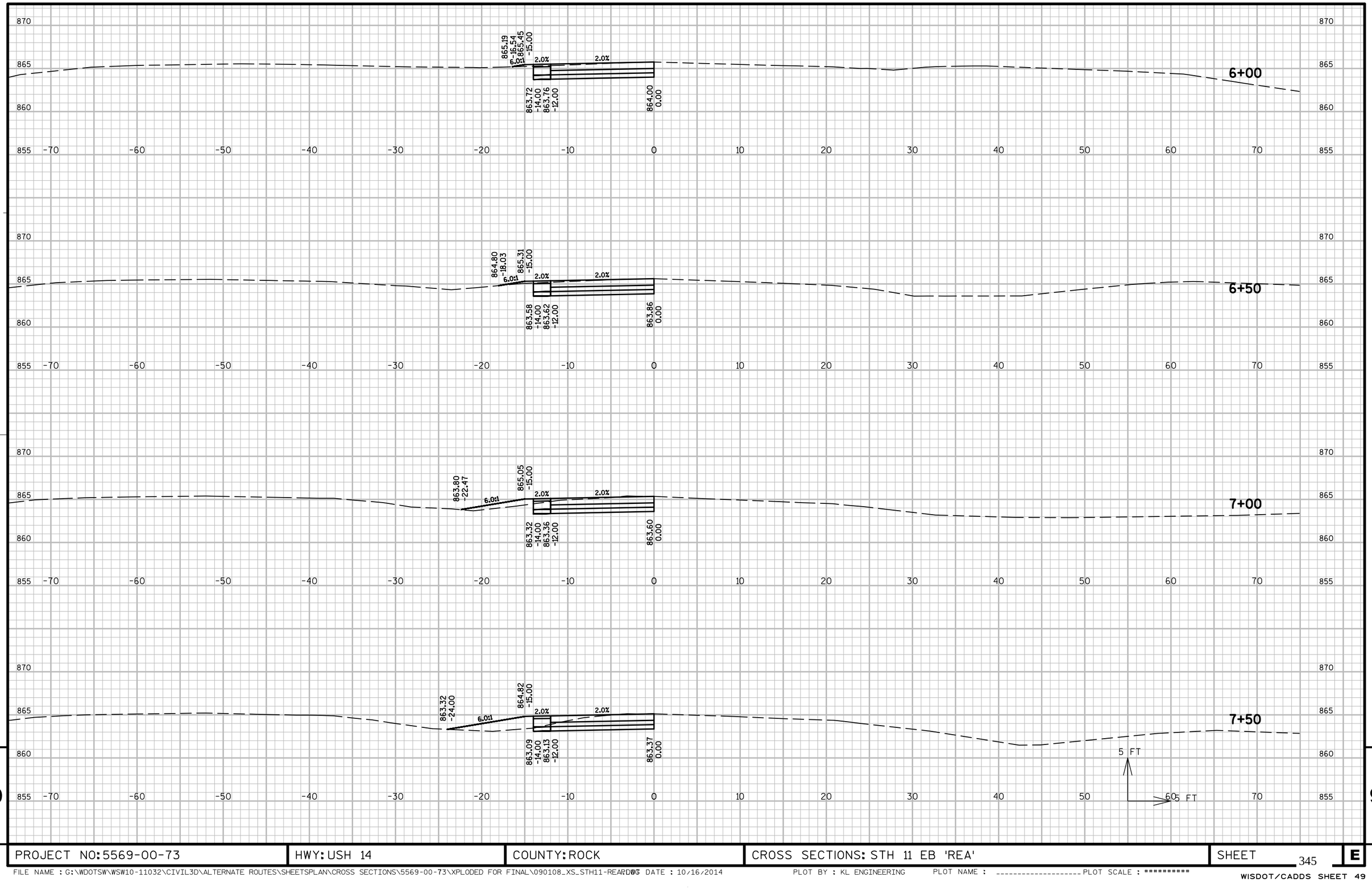
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: USH 14 WB 'HWA' AT STH 11 INTERSECTION	SHEET 343	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\CROSS SECTIONS\5569-00-73\XPLODED FOR FINAL\090107_XS_STH11-HWA.DWG DATE : 10/16/2014 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : **********

WISDOT/CADDS SHEET 49

BEGIN CONSTRUCTION
STA. 3+86.94 'REA'





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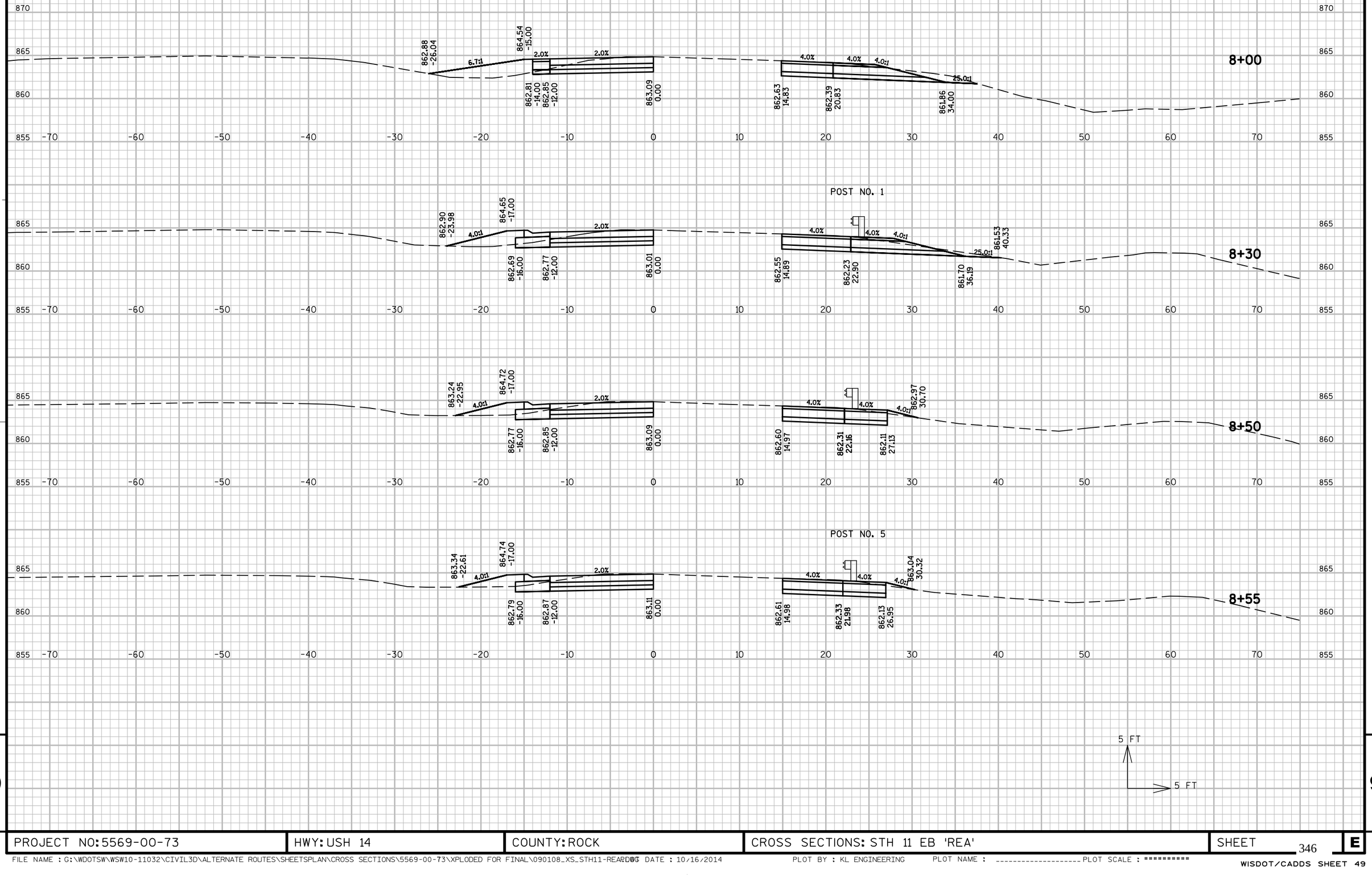
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: STH 11 EB 'REA'	SHEET 345	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\CROSS SECTIONS\5569-00-73\XPLODED FOR FINAL\090108_XS_STH11-REA.DWG DATE : 10/16/2014 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : **********



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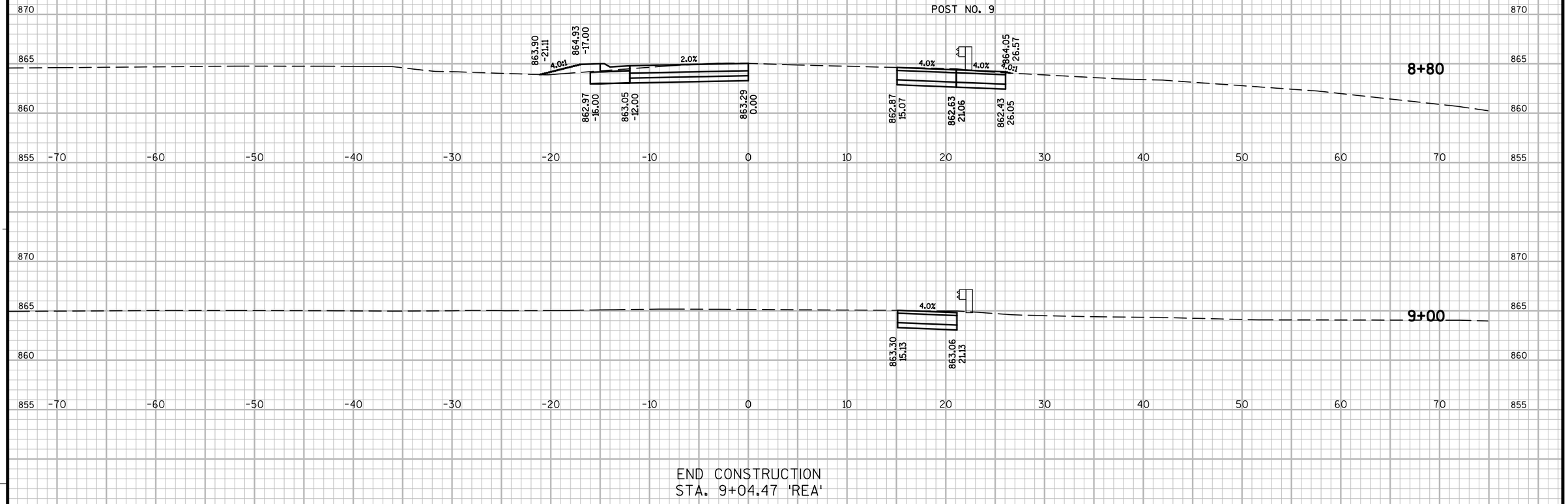
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: STH 11 EB 'REA'	SHEET E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\CROSS SECTIONS\5569-00-73\XPLODED FOR FINAL\090108_XS_STH11-REA.DWG DATE : 10/16/2014 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : **********

POST NO. 9



END CONSTRUCTION
STA. 9+04.47 'REA'

5 FT
5 FT

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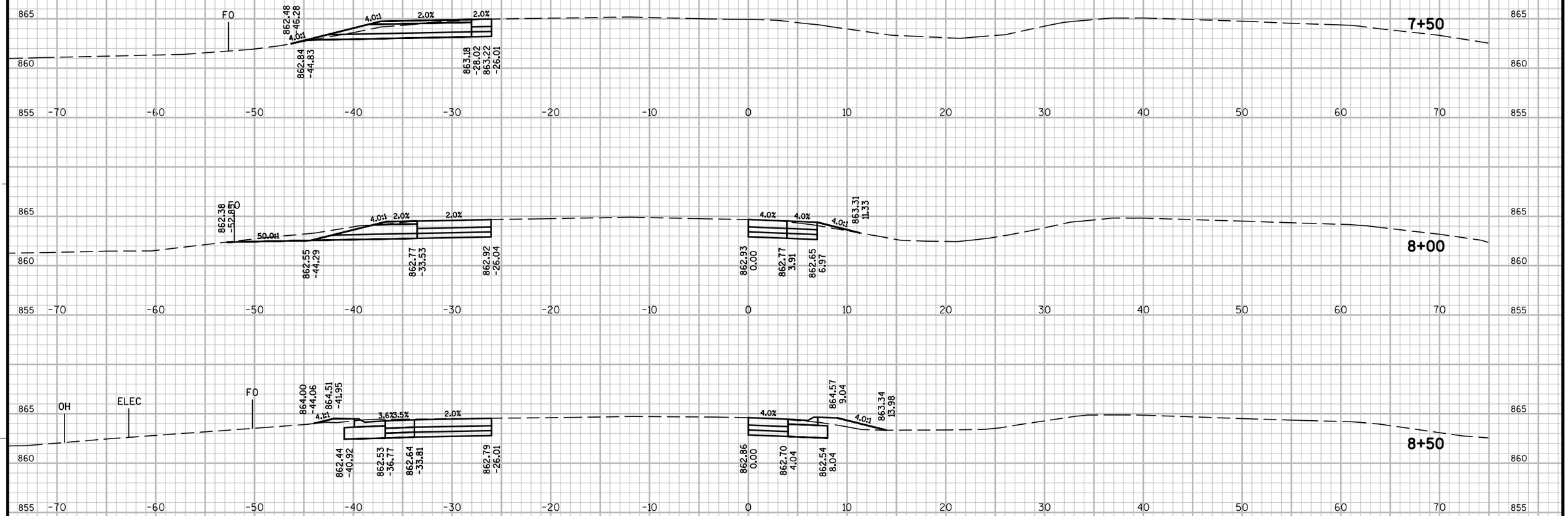
PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: STH 11 EB 'REA'	SHEET 347	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\CROSS SECTIONS\5569-00-73\XPLODED FOR FINAL\090108_XS_STH11-REA.DWG DATE : 10/16/2014 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : **********

WISDOT/CADDS SHEET 49

BEGIN CONSTRUCTION
STA. 7+38.91 'RWA'



END CONSTRUCTION
STA. 8+87.37 'RWA'

5 FT
5 FT

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PROJECT NO: 5569-00-73	HWY: USH 14	COUNTY: ROCK	CROSS SECTIONS: STH 11 WB 'RWA'	SHEET	E

FILE NAME : G:\WDOTSW\WSW10-11032\CIVIL3D\ALTERNATE ROUTES\SHEETSPLAN\CROSS SECTIONS\5569-00-73\XPLODED FOR FINAL\090109_XS_STH11-RWA.DWG DATE : 10/16/2014 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : **********

Notes

Wisconsin Department of Transportation

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