

SUP
PROJECT ID: 1550-02-76

JANUARY 2023

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 Plan
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plans
Section No.	8	Structure Plans
Section No.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 118



STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

BALDWIN - CUMBERLAND

ST CROIX / POLK CO LN TO CTH J

USH 63

POLK COUNTY

STATE PROJECT NUMBER
1550-02-76

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1550-02-76	WISC 2022518	1

32

COUNTY: POLK

DESIGN DESIGNATION

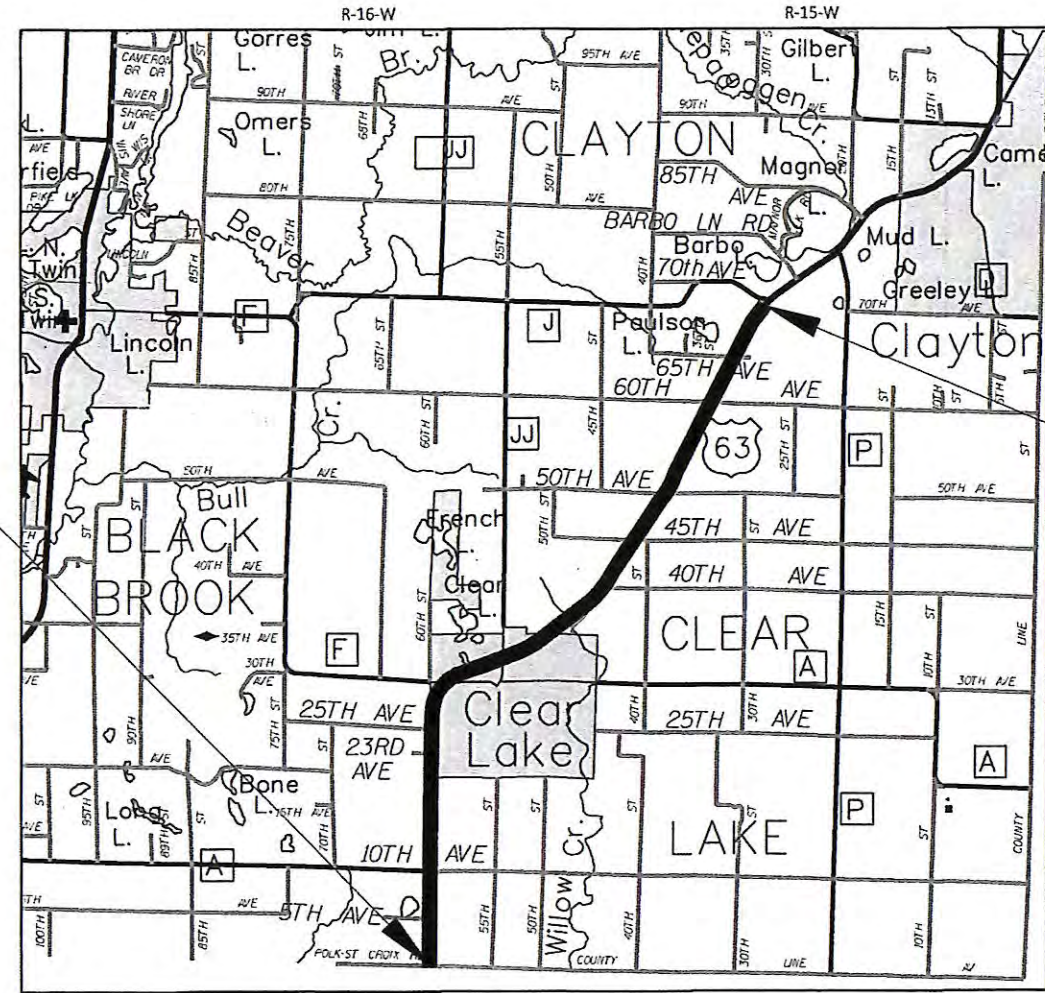
A.A.D.T.	2025	=	5430
A.A.D.T.	2045	=	6120
D.H.V.		=	827
D.D.		=	61/39%
T.		=	18.0%
DESIGN SPEED		=	45-55 MPH
ESALS		=	3,000,000

BEGIN PROJECT
STA 1+96.17
Y = 200263.572
X = 555049.609

END PROJECT
STA 443+00.00

CONVENTIONAL SYMBOLS

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



LAYOUT
SCALE 0 2 MI
TOTAL NET LENGTH OF CENTERLINE = 8.39 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), POLK COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

ORIGINAL PLANS PREPARED BY

DATE: 4/26/22

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	Surveyor	SEH
	Designer	SEH
	Project Manager	JESSICA BOWKER
	Regional Examiner	TOU YANG
	Regional Supervisor	TYLER RONGSTAD

APPROVED FOR THE DEPARTMENT
DATE: 4/26/22

(Signature)

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ORDER OF TYPICAL SECTION AND DETAIL SHEETS

GENERAL NOTES
 PROJECT OVERVIEW
 TYPICAL SECTIONS
 CONSTRUCTION DETAILS
 INTERSECTION DETAILS
 STORM SEWER
 PAVEMENT MARKING & PERMANENT SIGNING
 TRAFFIC CONTROL

HMA MIXTURE ACCEPTANCE - 1550-02-76 - CATEGORY 0010						
LOCATION	STATION	LAYER	THICKNESS	MIX ACCEPTANCE	DENSITY ACCEPTANCE	
12-FOOT DRIVING LANES	1+96 TO 443+00	LOWER	1 3/4"	INCENTIVE AIR VOIDS HMA PAVEMENT ITEM 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT ITEM 460.2005	
		UPPER	1 1/2"	INCENTIVE AIR VOIDS HMA PAVEMENT ITEM 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT ITEM 460.2005	
SHOULDERS, SIDEROADS AND EXISTING RT LANES	1+96 TO 443+00	LOWER	1 3/4"	INCENTIVE AIR VOIDS HMA PAVEMENT ITEM 460.2010	ACCEPTED BY DEPARTMENT TESTING, NOT ELIGIBLE FOR INCENTIVE	
		UPPER	1 1/2"	INCENTIVE AIR VOIDS HMA PAVEMENT ITEM 460.2010	ACCEPTED BY DEPARTMENT TESTING, NOT ELIGIBLE FOR INCENTIVE	
NEW RT LANES AT CTH A/F	152+63 TO 163+84	LOWER	2"	QMP PER STANDARD SPECIFICATION 465	ACCEPTED BY DEPARTMENT TESTING, NOT ELIGIBLE FOR INCENTIVE	
		MID	1 1/2"	QMP PER STANDARD SPECIFICATION 465	ACCEPTED BY DEPARTMENT TESTING, NOT ELIGIBLE FOR INCENTIVE	
		UPPER	1 1/2"	INCENTIVE AIR VOIDS HMA PAVEMENT ITEM 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT ITEM 460.2005	
DRIVEWAYS, LOCAL SIDEROADS, PATCHING AND AT CULVERTS	1+96 TO 443+00	ANY	VARIABLES	QMP PER STANDARD SPECIFICATION 465	ACCEPTED BY ORDINARY COMPACTION	
		ANY	VARIABLES	QMP PER STANDARD SPECIFICATION 465	ACCEPTED BY ORDINARY COMPACTION	
CTH A, CTH JJ COUNTY SIDEROADS	52+43 & 192+77	LOWER	1 3/4"	QMP PER STANDARD SPECIFICATION 465	ACCEPTED BY ORDINARY COMPACTION	
	52+43 & 192+77	UPPER	1 1/2"	INCENTIVE AIR VOIDS HMA PAVEMENT ITEM 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT ITEM 460.2005	

HMA MIXTURE ACCEPTANCE - 1550-02-76 - CATEGORY 0020						
LOCATION	STATION	LAYER	THICKNESS	MIX ACCEPTANCE	DENSITY ACCEPTANCE	
CTH A/F	16+00 TO 20+87	LOWER	2"	QMP PER STANDARD SPECIFICATION 465	ACCEPTED BY DEPARTMENT TESTING, NOT ELIGIBLE FOR INCENTIVE	
		MID	1 1/2"	QMP PER STANDARD SPECIFICATION 465	ACCEPTED BY DEPARTMENT TESTING, NOT ELIGIBLE FOR INCENTIVE	
		UPPER	1 1/2"	INCENTIVE AIR VOIDS HMA PAVEMENT ITEM 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT ITEM 460.2005	

GENERAL NOTES

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.

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

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, ARE TO BE 4-INCH TOPSOILED, FERTILIZED, SEEDED, AND MULCHED OR EROSION MATTED AS SHOWN IN THE PLANS. FINISHED SEEDED SURFACE SHALL BE 1-INCH BELOW THE TOP OF ADJACENT CONCRETE.

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

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

UTILITY CONTACTS

CLEAR LAKE TELEPHONE - COMMUNICATION LINE
 316 THIRD AVE
 PO BOX 47
 CLEAR LAKE WI 54005
 TELEPHONE: 715.263.2755
 ATTENTION: BRETT ANDERSON
 EMAIL: BRETT.ANDERSON@CLTCOMM.NET

NORTHERN NATURAL GAS COMPANY - GAS/PETROLEUM
 6579 420TH STREET
 HARRIS MN 55032-2116
 TELEPHONE: 763.312.9058
 ATTENTION: DAVE BECKER
 EMAIL: DAVID.BECKER@NNGCO.COM

VILLAGE OF CLEAR LAKE - SEWER & WATER
 PO BOX 48
 CLEAR LAKE WI 54005-0048
 TELEPHONE: 715.263.2157
 ATTENTION: AL BANNINK
 EMAIL: ABANNINK@CLEARLAKE-WI.GOV

WE ENERGIES - GAS
 104 W SOUTH STREET
 RICE LAKE, WI 54868
 TELEPHONE: 715-234-9605
 ATTENTION: STEVEN CHAVERS
 EMAIL: STEVEN.CHAVERS@WE-ENERGIES.COM

XCEL ENERGY - DISTRIBUTION
 801 KELLER AVE S
 AMERY, WI 54001
 TELEPHONE: 715-441-7120
 ATTENTION: JAKE MILLER
 EMAIL: JAKE.I.MILLER@XCELENERGY.COM

XCEL ENERGY - TRANSMISSION
 414 NICOLLET MALL, 5TH FLOOR
 MINNEAPOLIS, MN 54401
 ATTENTION: MITCHELL DIENGER
 TELEPHONE: 612-321-3109
 EMAIL: MITCHELLA.DIENGER@XCELENERGY.COM

DESIGN CONTACT

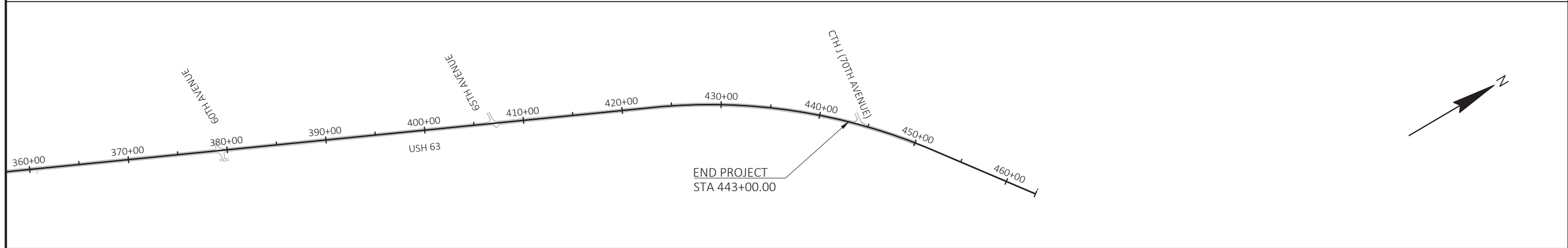
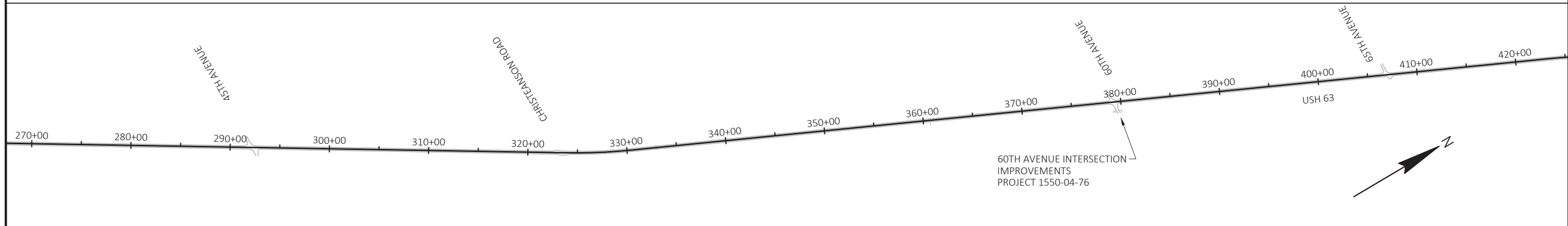
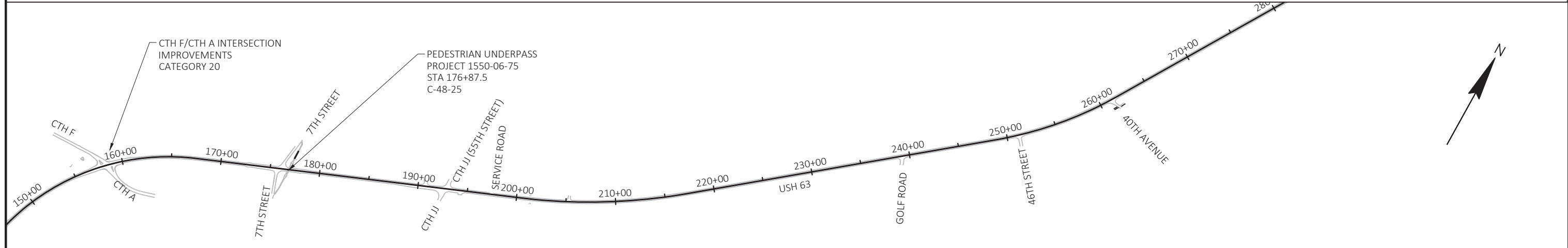
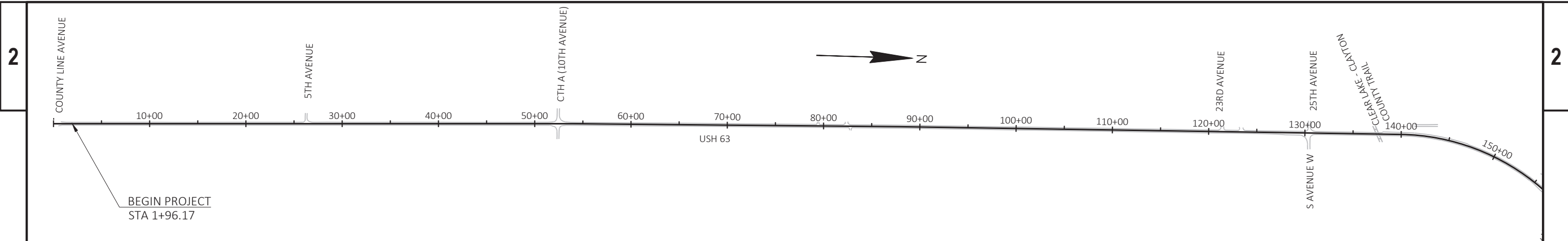
SEH
 1701 W KNAPP ST STE B
 RICE LAKE, WI 54868
 TELEPHONE: 715.790.6615
 ATTENTION: DAN PENZKOVER
 EMAIL: DPENZKOVER@SEHINC.COM

DNR CONTACT

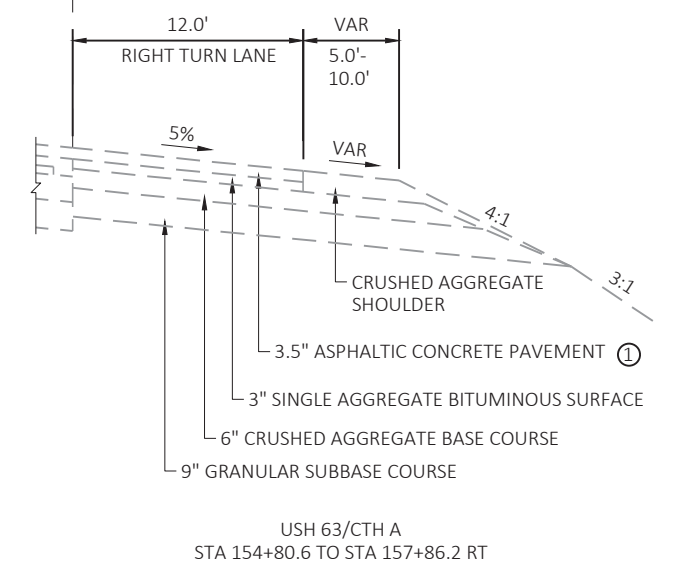
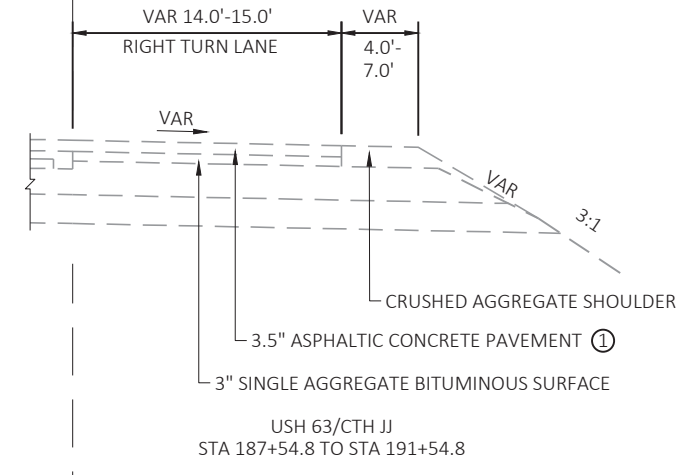
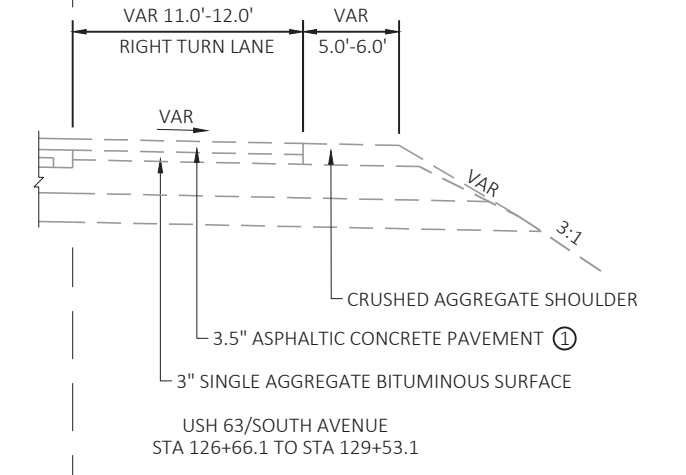
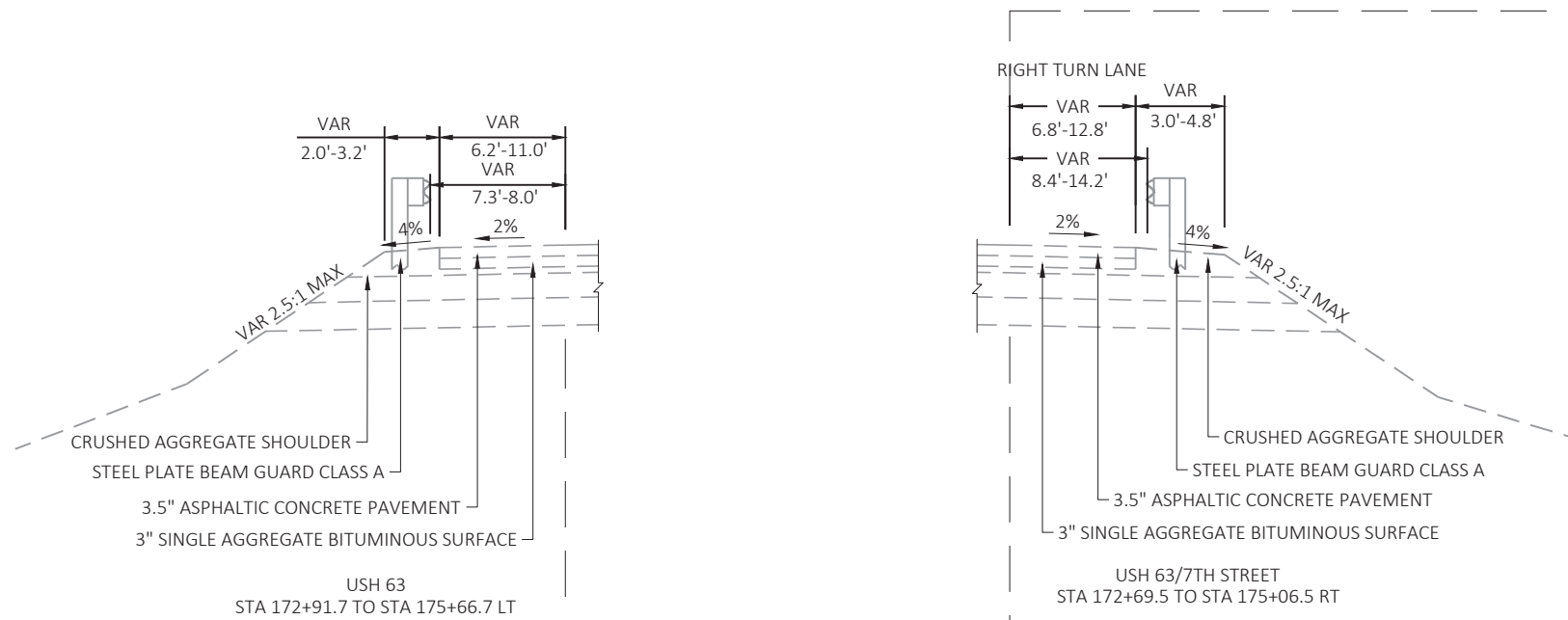
DNR NORTHERN REGION HQ
 810 W. MAPLE STREET
 SPOONER, WI 54801
 TELEPHONE: 715.635.4229
 ATTENTION: AMY CRONK
 EMAIL: AMY.CRONK@WISCONSIN.GOV



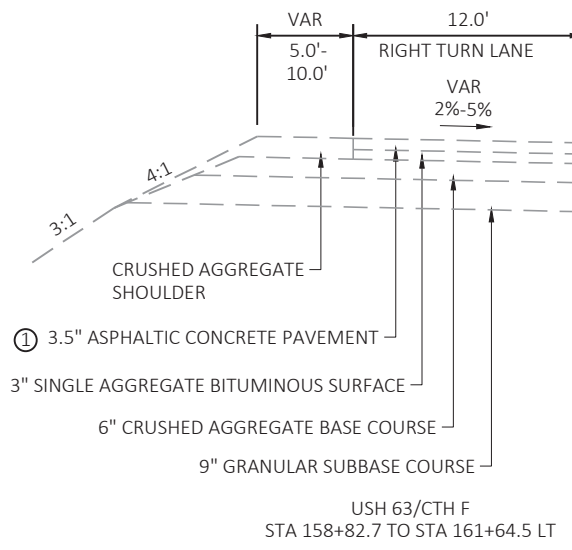
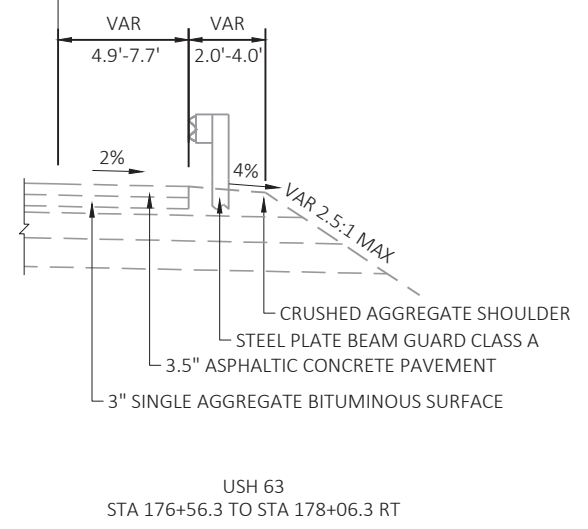
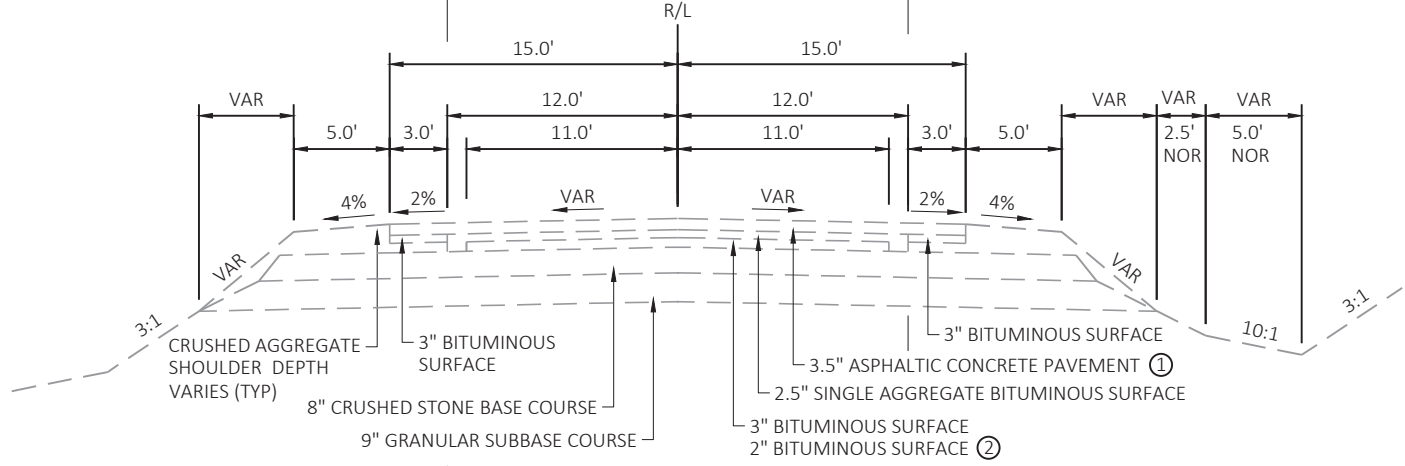
Dial 811 or (800)242-8511
 www.DiggersHotline.com

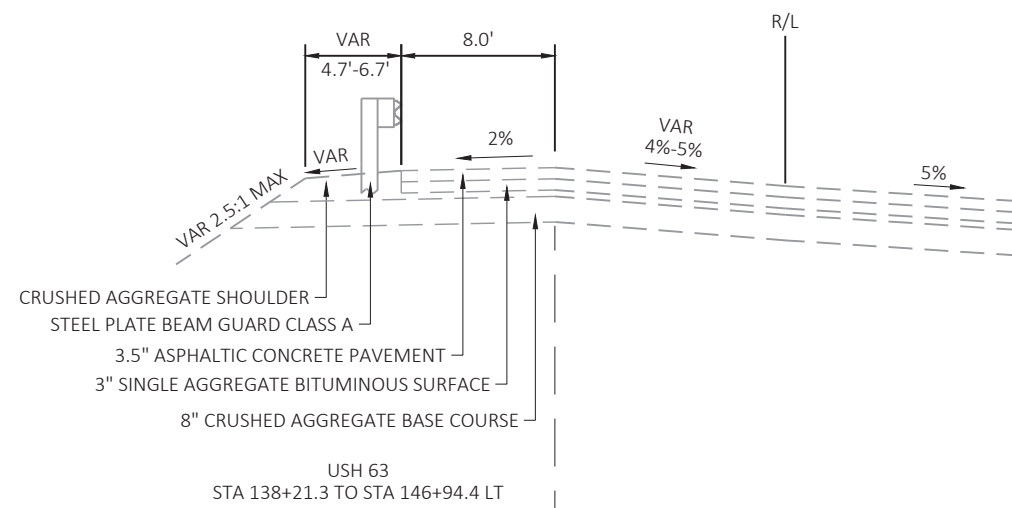


PROJECT NO: 1550-02-76	HWY: USH 63	COUNTY: POLK	PROJECT OVERVIEW	SHEET	E
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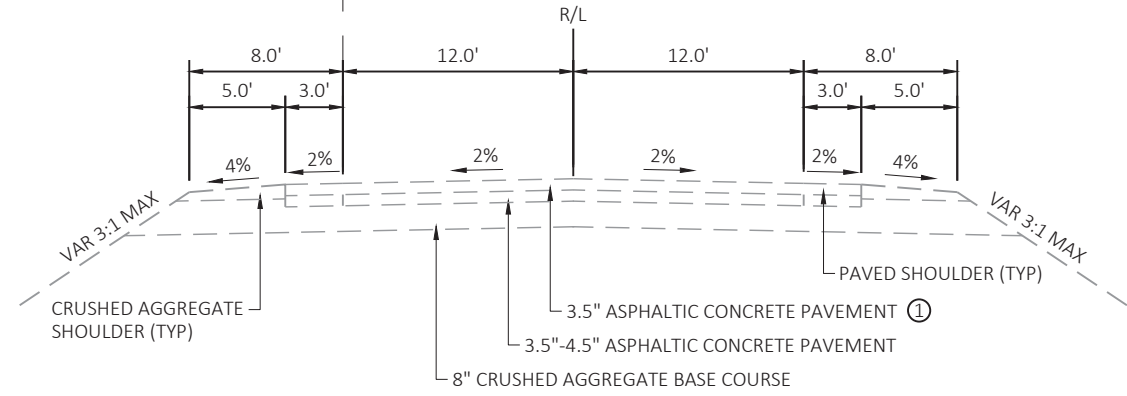


- NOTES:
- ① 3.5" ASPHALTIC CONCRETE SURFACE
STA 0+01.7 TO STA 135+73.9
STA 147+48.3 TO STA 445+00.0
 - ② 2" BITUMINOUS SURFACE LOCATIONS

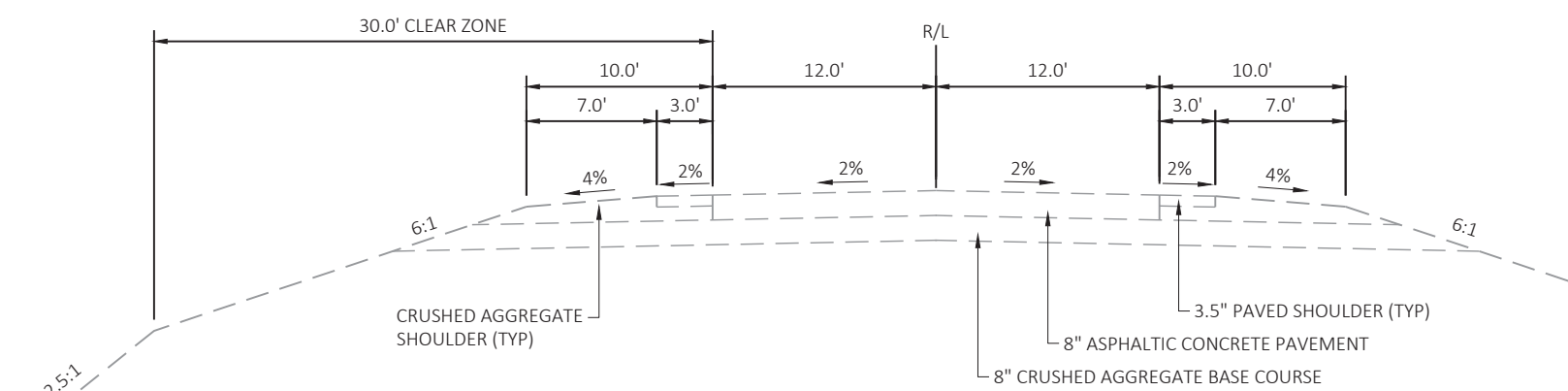




CRUSHED AGGREGATE SHOULDER
 STEEL PLATE BEAM GUARD CLASS A
 3.5" ASPHALTIC CONCRETE PAVEMENT
 3" SINGLE AGGREGATE BITUMINOUS SURFACE
 8" CRUSHED AGGREGATE BASE COURSE
 USH 63
 STA 138+21.3 TO STA 146+94.4 LT

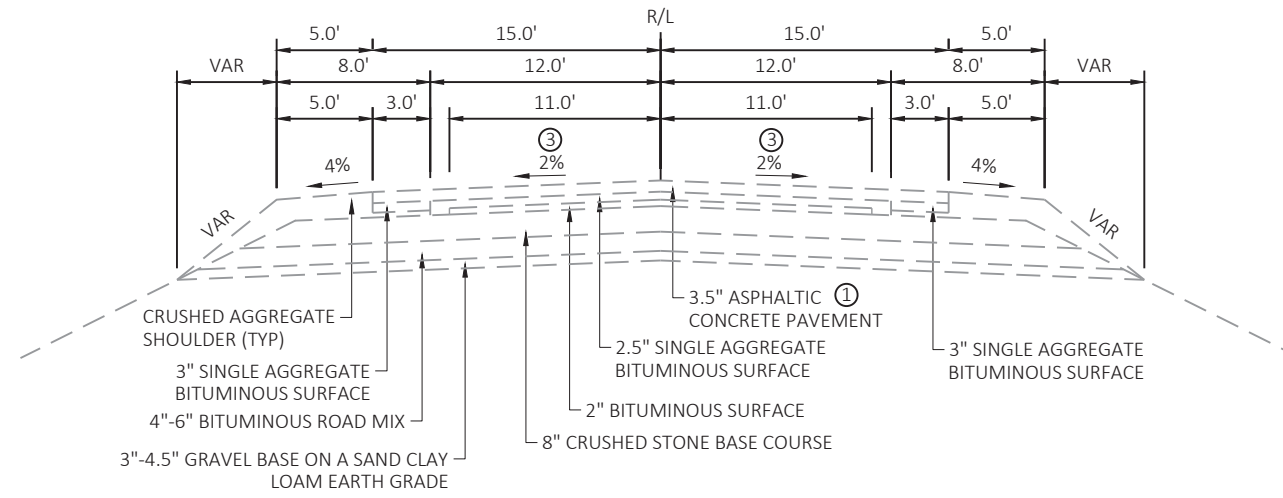


TYPICAL EXISTING SECTION
 USH 63
 STA 120+65.7 TO STA 136+83.1
 STA 138+80.6 TO STA 152+80.9



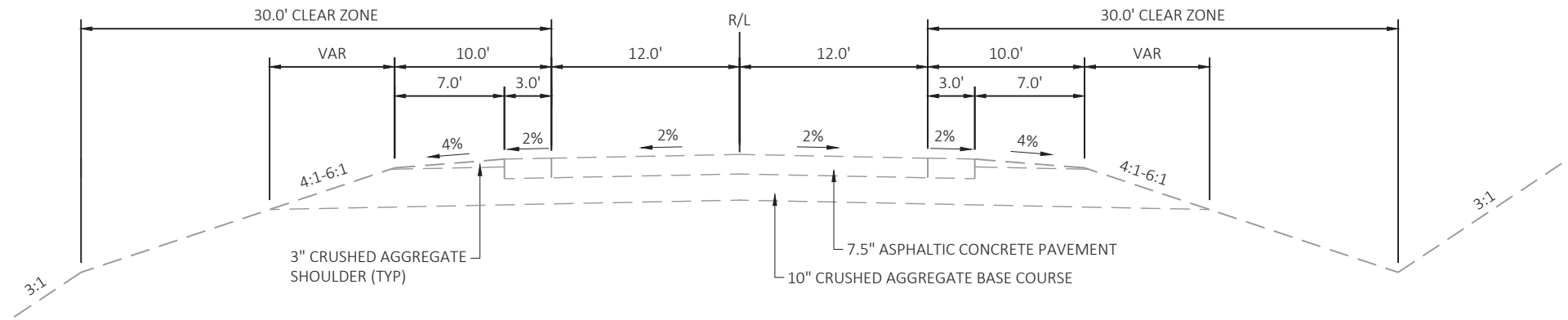
TYPICAL EXISTING SECTION
 USH 63
 STA 136+83.1 TO STA 138+40.6

- NOTES:
- ① 3.5" ASPHALTIC CONCRETE SURFACE
 STA 0+01.7 TO STA 135+73.9
 STA 147+48.3 TO STA 445+00.0



TYPICAL EXISTING SECTION

USH 63
STA 293+00.0 TO STA 346+63.6
STA 349+63.6 TO STA 445+00.0

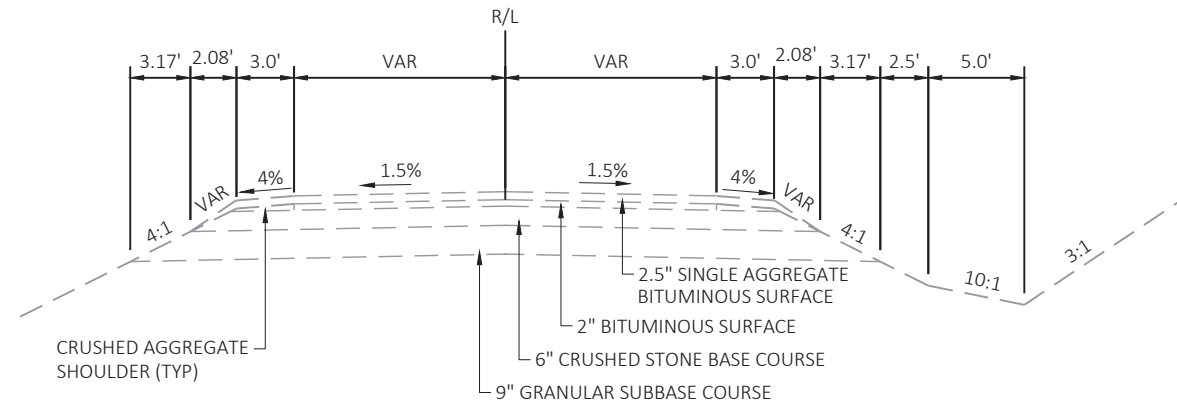


TYPICAL EXISTING SECTION

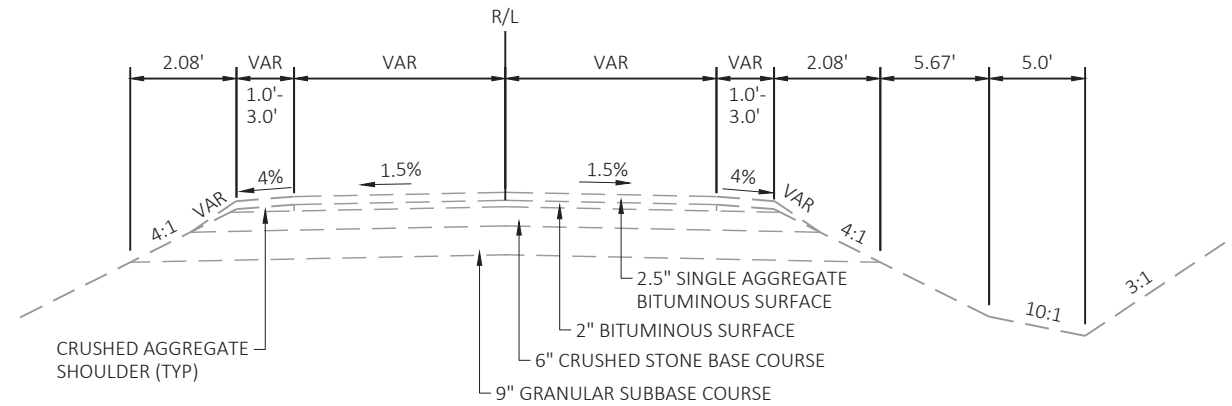
USH 63
STA 346+63.6 TO STA 349+63.6

NOTES:

- ① 3.5" ASPHALTIC CONCRETE SURFACE
STA 0+01.7 TO STA 135+73.9
STA 147+48.3 TO STA 445+00.0
- ② EXISTING BEAM GUARD LOCATIONS
7TH AVENUE
- ③ EXISTING SUPERELEVATION
VAR FROM 2%-6%

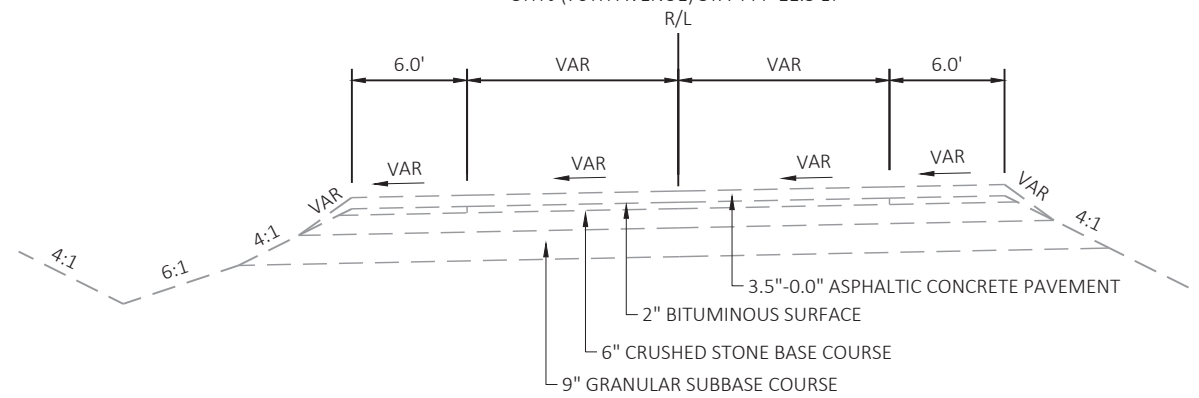


TYPICAL EXISTING SECTION
 GOLF ROAD RT
 STA 239+17.1

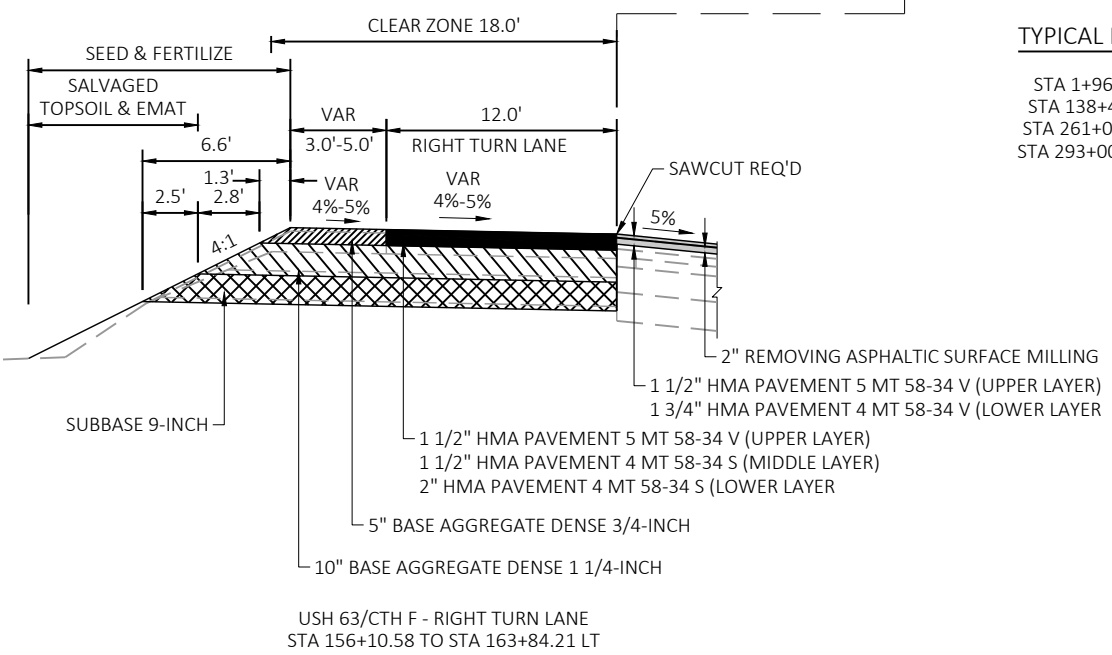
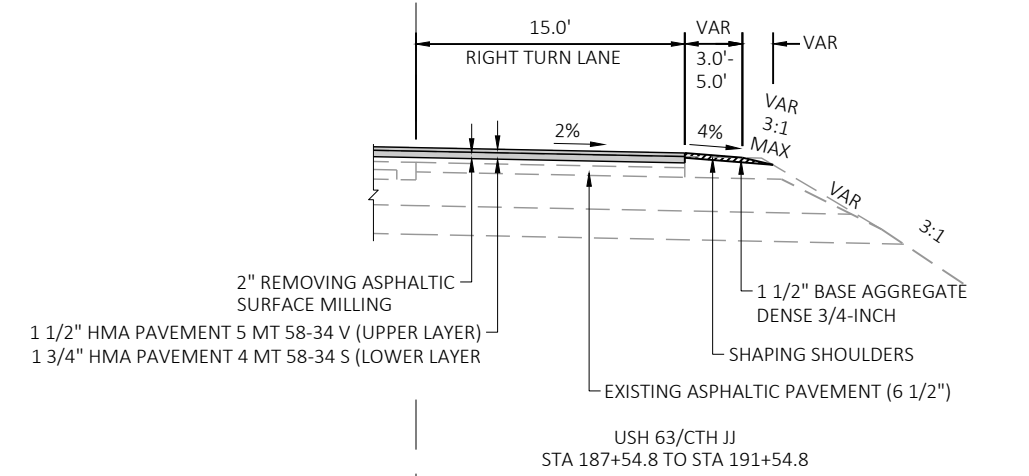
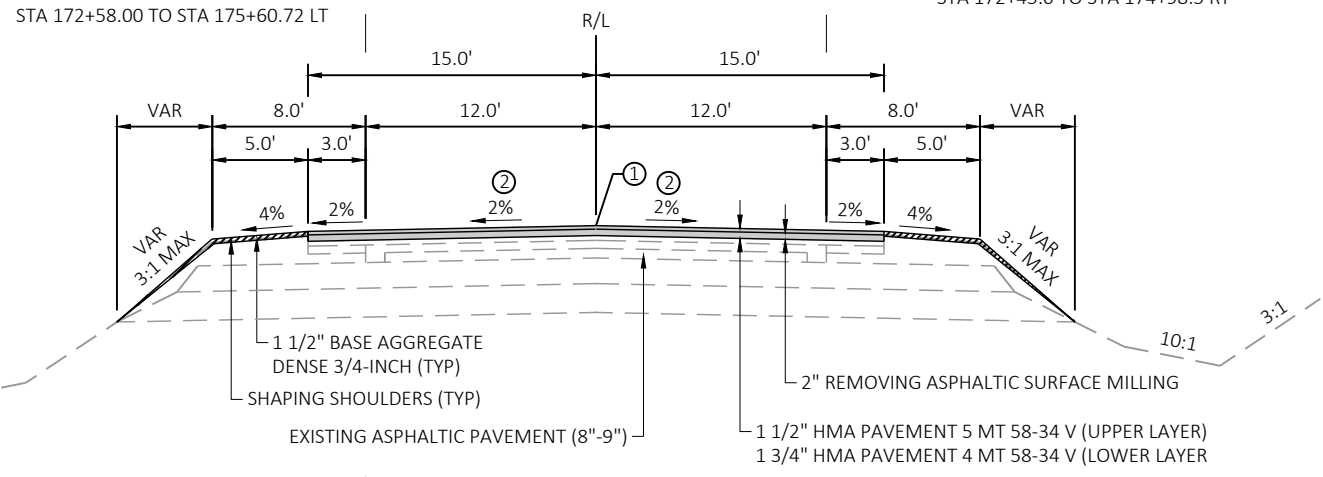
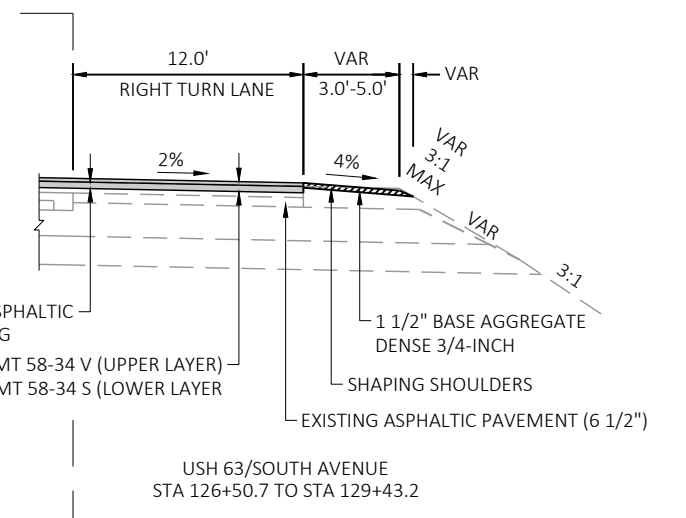
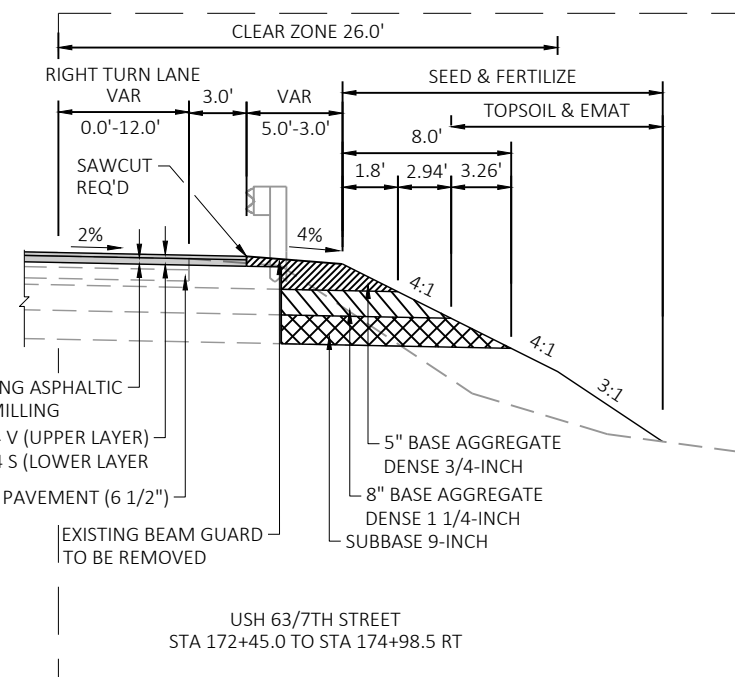
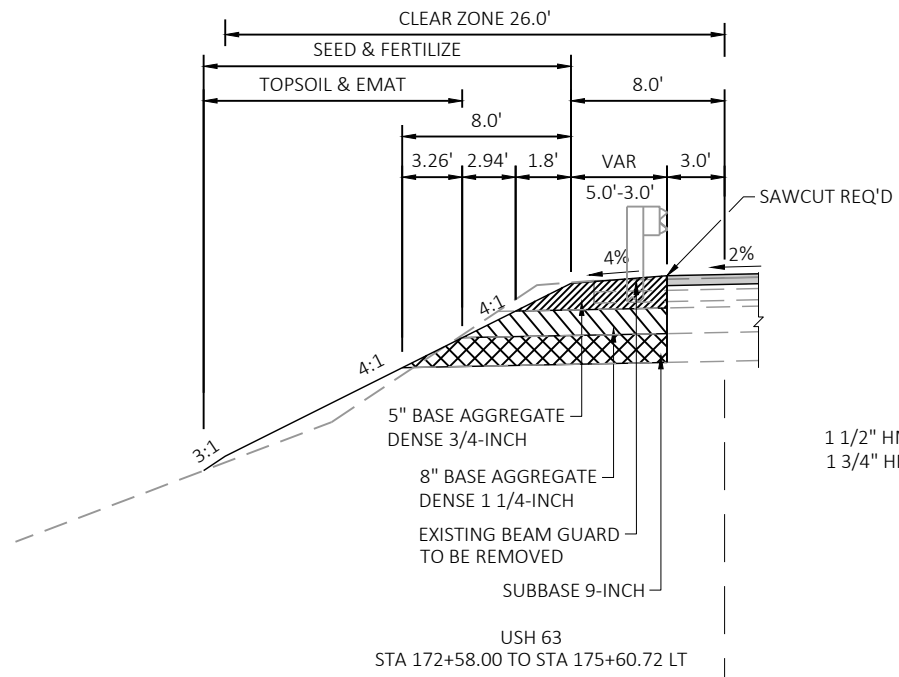


TYPICAL EXISTING SIDE ROAD SECTION

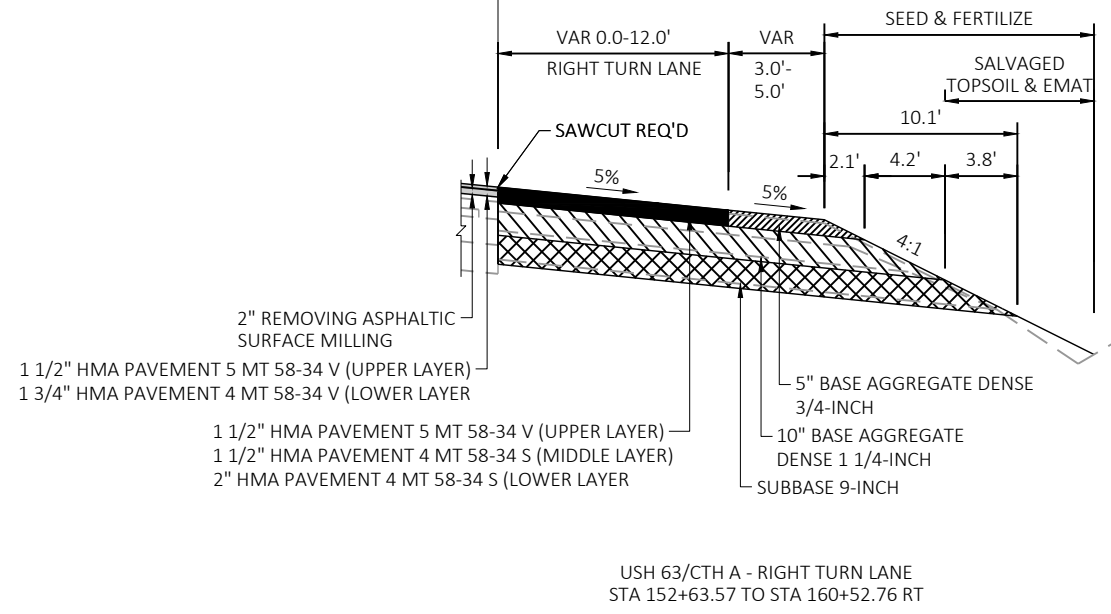
- 5TH AVENUE STA 26+22.9 LT
- 10TH AVENUE STA 52+43.4 LT & RT
- SOUTH AVENUE W STA 130+37.2 RT
- 25TH AVENUE STA 130+38.5 LT
- 7TH STREET STA 175+67.2 RT
- 7TH STREET STA 175+95.3 LT
- CTH JJ STA 192+77.1 LT & RT
- 46TH STREET STA 251+23.6 RT
- 40TH AVENUE STA 261+13.5 RT
- 45TH AVENUE STA 292+16.9 LT
- 45TH AVENUE STA 292+46.7 RT
- CHRISTEANSON ROAD STA 323+15.5 LT
- CHRISTEANSON ROAD STA 323+37.3 RT
- 60TH AVENUE STA 379+18.8 LT
- 60TH AVENUE STA 379+23.0 RT
- 65TH AVENUE STA 406+98.3 LT
- 65TH AVENUE STA 407+16.2 RT
- CTH J (70TH AVENUE) STA 444+11.5 LT



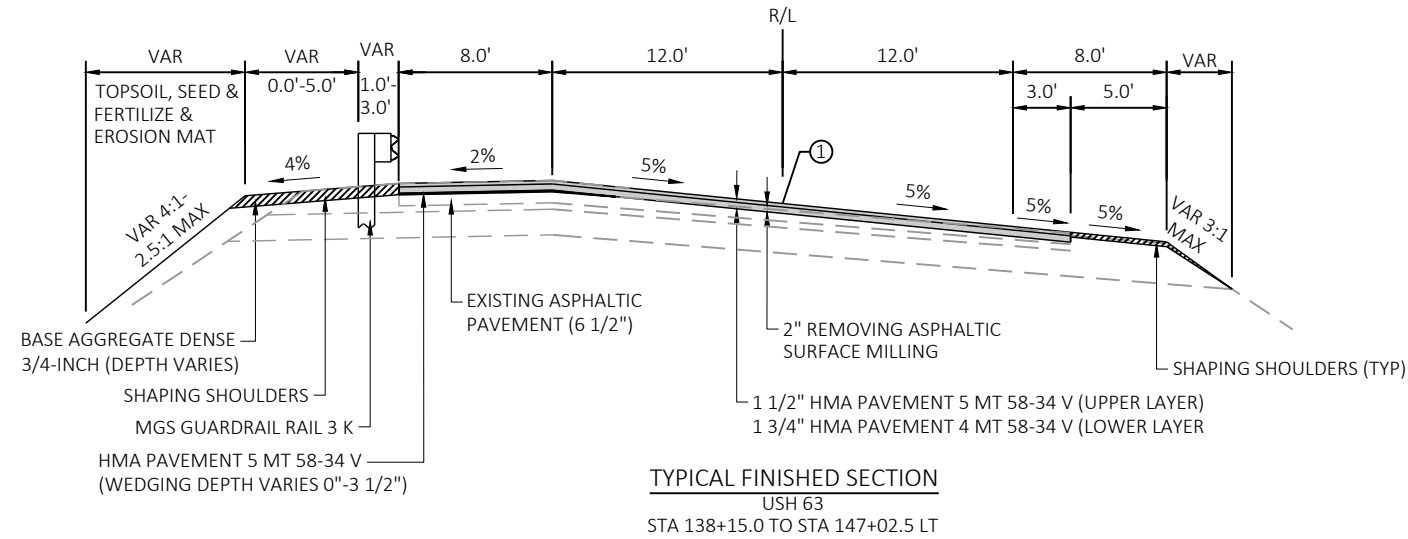
TYPICAL EXISTING SECTION
 CTH F & CTH A
 STA 16+00.0 TO STA 30+39



TYPICAL FINISHED SECTION
 USH 63
 STA 1+96.17 TO STA 136+83.1
 STA 138+40.6 TO STA 261+04.0
 STA 261+04.0 TO STA 293+00.00
 STA 293+00.00 TO STA 430+00.00

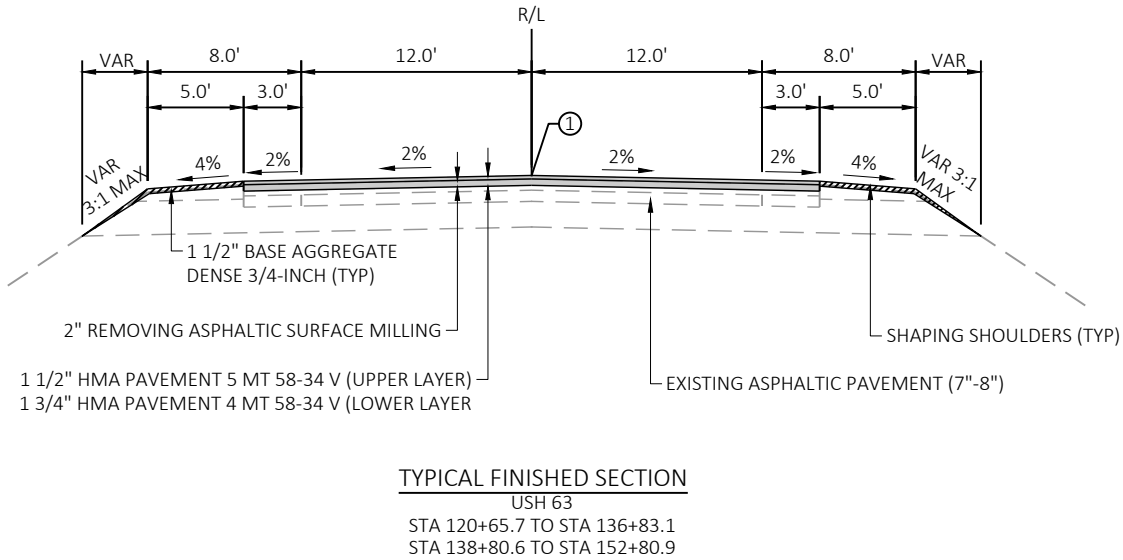


- NOTES:
- ① 2-LANE RURAL CENTERLINE RUMBLE STRIP MILLING. SEE MISCELLANEOUS QUANTITIES FOR LOCATIONS.
 - ② EXISTING SUPERELEVATION VARIES FROM 2%-6% MATCH EXISTING SE.

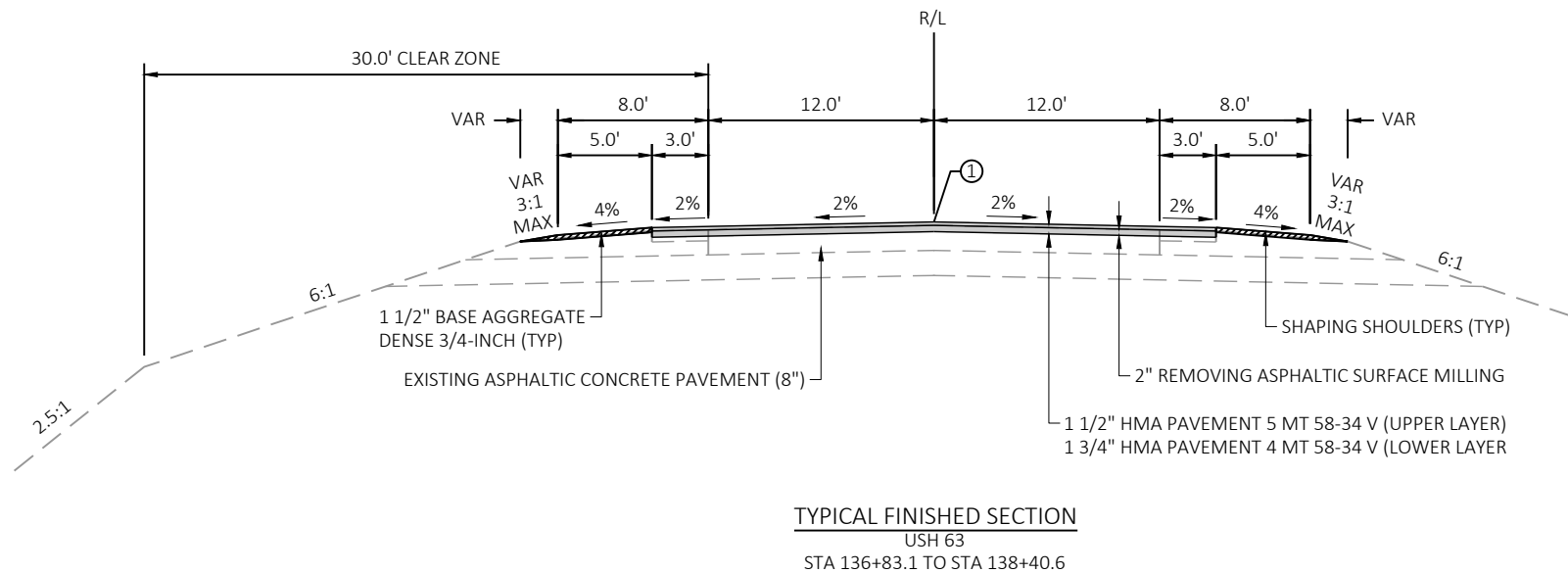


TYPICAL FINISHED SECTION
USH 63
STA 138+15.0 TO STA 147+02.5 LT

NOTES:
① 2-LANE RURAL CENTERLINE RUMBLE STRIP MILLING. SEE MISCELLANEOUS QUANTITIES FOR LOCATIONS.



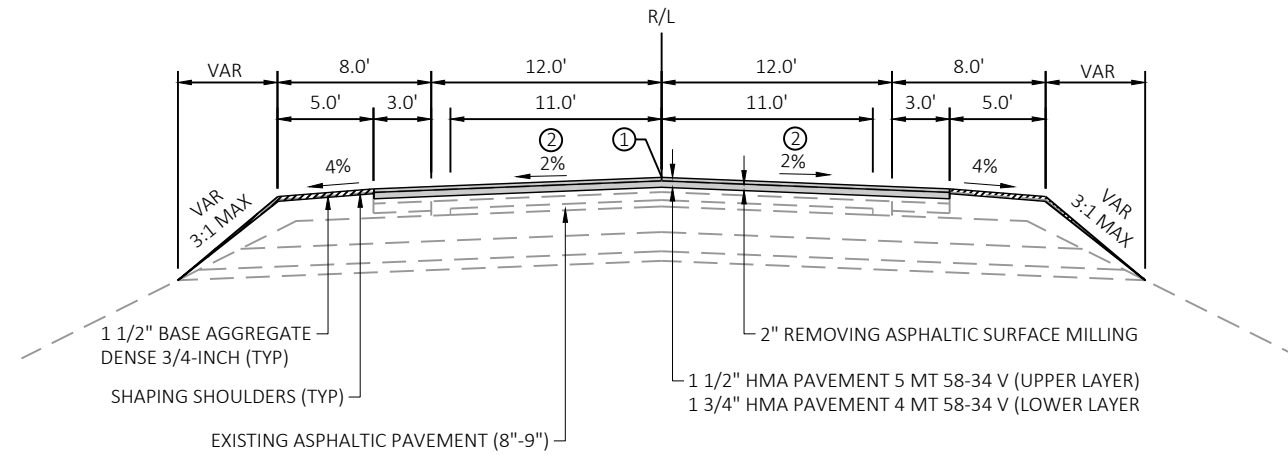
TYPICAL FINISHED SECTION
USH 63
STA 120+65.7 TO STA 136+83.1
STA 138+80.6 TO STA 152+80.9



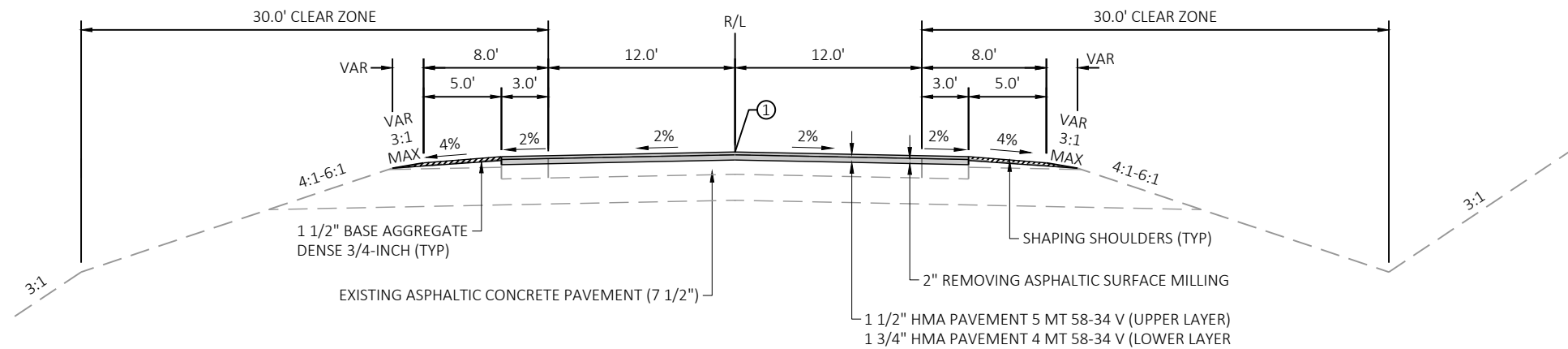
TYPICAL FINISHED SECTION
USH 63
STA 136+83.1 TO STA 138+40.6

SUPER ELEVATION TABLE

Station	Description	Left Outside		Right Outside	
		Shoulder	Lane	Shoulder	Lane
0+01.70'	Begin Alignment	-4.00%	-2.00%	-4.00%	-2.00%
138+48.24'	End Normal Shoulder	-4.00%	-2.00%	-4.00%	-2.00%
138+48.24'	End Normal Crown	-2.00%	-2.00%	-4.00%	-2.00%
139+01.57'	Level Crown	0.00%	0.00%	-4.00%	-2.00%
139+54.90'	Reverse Crown	2.00%	2.00%	-4.00%	-2.00%
140+08.24'	Low Shoulder Match	4.00%	4.00%	-4.00%	-4.00%
140+37.57'	Begin Full Super	5.10%	5.10%	-5.10%	-5.10%
166+95.99'	End Full Super	5.10%	5.10%	-5.10%	-5.10%
167+25.33'	Low Shoulder Match	4.00%	4.00%	-4.00%	-4.00%
167+78.66'	Reverse Crown	2.00%	2.00%	-4.00%	-2.00%
168+31.99'	Level Crown	0.00%	0.00%	-4.00%	-2.00%
168+85.33'	Begin Normal Crown	-2.00%	-2.00%	-4.00%	-2.00%
168+85.33'	Begin Normal Shoulder	-4.00%	-2.00%	-4.00%	-2.00%
199+42.51'	End Normal Shoulder	-4.00%	-2.00%	-4.00%	-2.00%
199+42.51'	End Normal Crown	-4.00%	-2.00%	-2.00%	-2.00%
199+95.84'	Level Crown	-4.00%	-2.00%	0.00%	0.00%
200+49.18'	Reverse Crown	-4.00%	-2.00%	2.00%	2.00%
200+67.84'	Begin Full Super	-4.00%	-2.70%	2.70%	2.70%
216+97.27'	End Full Super	-4.00%	-2.70%	2.70%	2.70%
217+15.93'	Reverse Crown	-4.00%	-2.00%	2.00%	2.00%
217+69.27'	Level Crown	-4.00%	-2.00%	0.00%	0.00%
218+22.60'	Begin Normal Crown	-4.00%	-2.00%	-2.00%	-2.00%
218+22.60'	Begin Normal Shoulder	-4.00%	-2.00%	-4.00%	-2.00%
247+67.16'	End Normal Shoulder	-4.00%	-2.00%	-4.00%	-2.00%
247+67.16'	End Normal Crown	-4.00%	-2.00%	-2.00%	-2.00%
248+20.68'	Level Crown	-4.00%	-2.00%	0.00%	0.00%
248+74.19'	Reverse Crown	-4.00%	-2.00%	2.00%	2.00%
249+19.68'	Begin Full Super	-4.00%	-3.70%	3.70%	3.70%
261+53.87'	End Full Super	-4.00%	-3.70%	3.70%	3.70%
261+99.35'	Reverse Crown	-4.00%	-2.00%	2.00%	2.00%
262+52.87'	Level Crown	-4.00%	-2.00%	0.00%	0.00%
263+06.38'	Begin Normal Crown	-4.00%	-2.00%	-2.00%	-2.00%
263+06.38'	Begin Normal Shoulder	-4.00%	-2.00%	-4.00%	-2.00%
322+79.41'	End Normal Shoulder	-4.00%	-2.00%	-4.00%	-2.00%
322+79.41'	End Normal Crown	-4.00%	-2.00%	-2.00%	-2.00%
323+32.75'	Level Crown	-4.00%	-2.00%	0.00%	0.00%
323+86.08'	Reverse Crown	-4.00%	-2.00%	2.00%	2.00%
324+04.75'	Begin Full Super	-4.00%	-2.70%	2.70%	2.70%
330+22.66'	End Full Super	-4.00%	-2.70%	2.70%	2.70%
330+41.33'	Reverse Crown	-4.00%	-2.00%	2.00%	2.00%
330+94.66'	Level Crown	-4.00%	-2.00%	0.00%	0.00%
331+48.00'	Begin Normal Crown	-4.00%	-2.00%	-2.00%	-2.00%
331+48.00'	Begin Normal Shoulder	-4.00%	-2.00%	-4.00%	-2.00%
422+15.00'	End Normal Shoulder	-4.00%	-2.00%	-4.00%	-2.00%
422+15.00'	End Normal Crown	-2.00%	-2.00%	-4.00%	-2.00%
422+68.33'	Level Crown	0.00%	0.00%	-4.00%	-2.00%
423+21.67'	Reverse Crown	2.00%	2.00%	-4.00%	-2.00%
423+40.33'	Begin Full Super	2.70%	2.70%	-4.00%	-2.70%
451+70.68'	End Full Super	2.70%	2.70%	-4.00%	-2.70%
451+89.35'	Reverse Crown	2.00%	2.00%	-4.00%	-2.00%
452+42.68'	Level Crown	0.00%	0.00%	-4.00%	-2.00%
452+96.02'	Begin Normal Crown	-2.00%	-2.00%	-4.00%	-2.00%
452+96.02'	Begin Normal Shoulder	-4.00%	-2.00%	-4.00%	-2.00%
463+19.11'	End Alignment	-4.00%	-2.00%	-4.00%	-2.00%



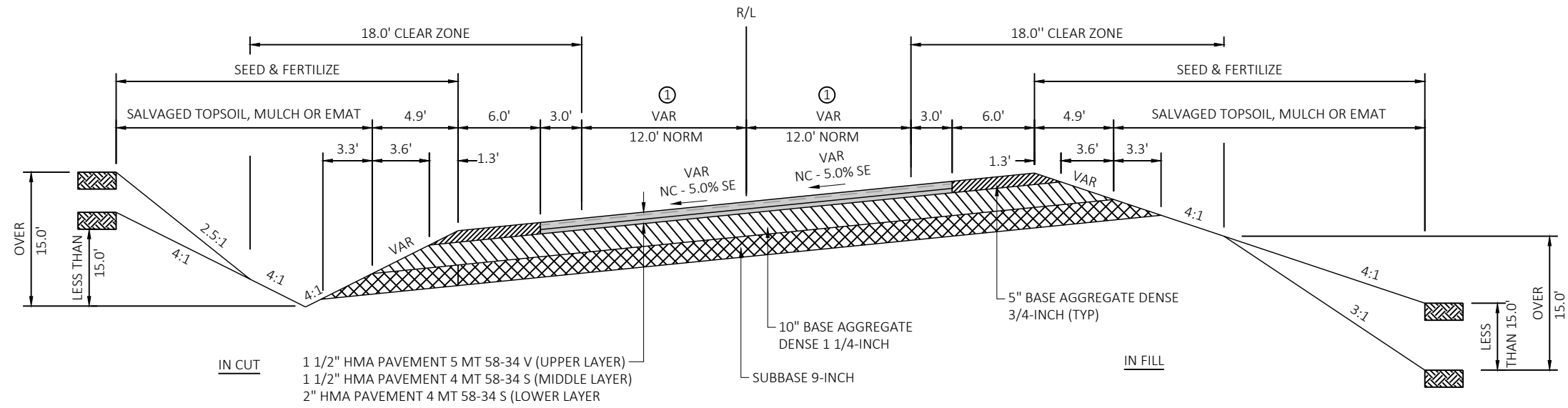
TYPICAL FINISHED SECTION
 USH 63
 STA 293+00.0 TO STA 346+63.6
 STA 349+63.6 TO STA 443+00.0



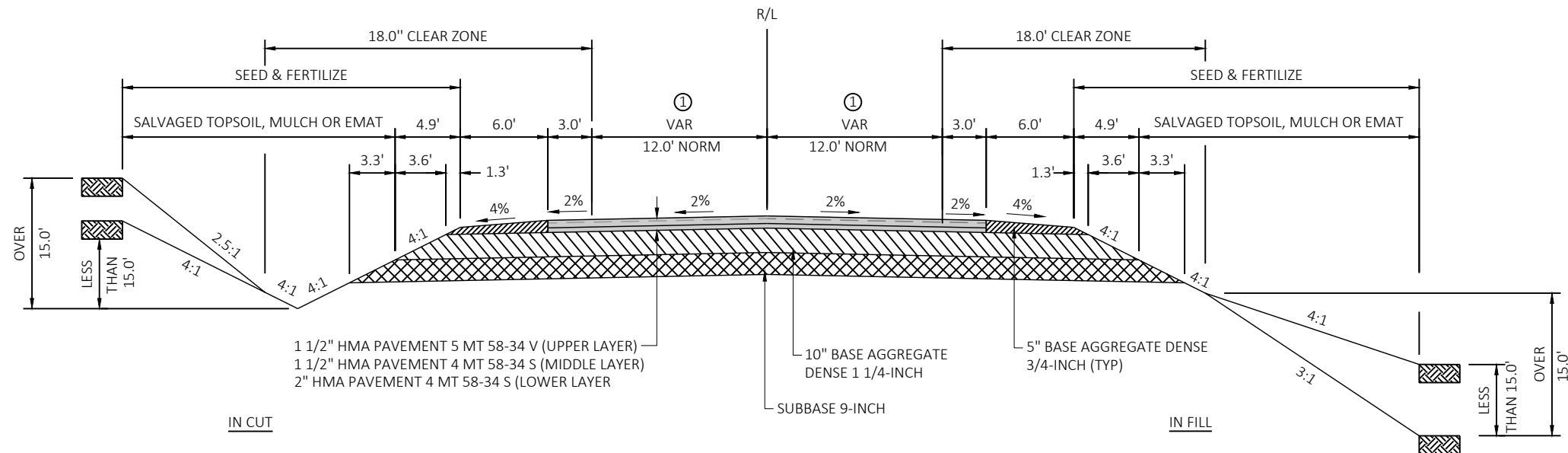
TYPICAL FINISHED SECTION
 USH 63
 STA 346+63.6 TO STA 349+63.6

NOTES:

- ① 2-LANE RURAL CENTERLINE RUMBLE STRIP MILLING. SEE MISCELLANEOUS QUANTITIES FOR LOCATIONS.
- ② EXISTING SUPERELEVATION VARIES FROM 2%-6% MATCH EXISTING SE.

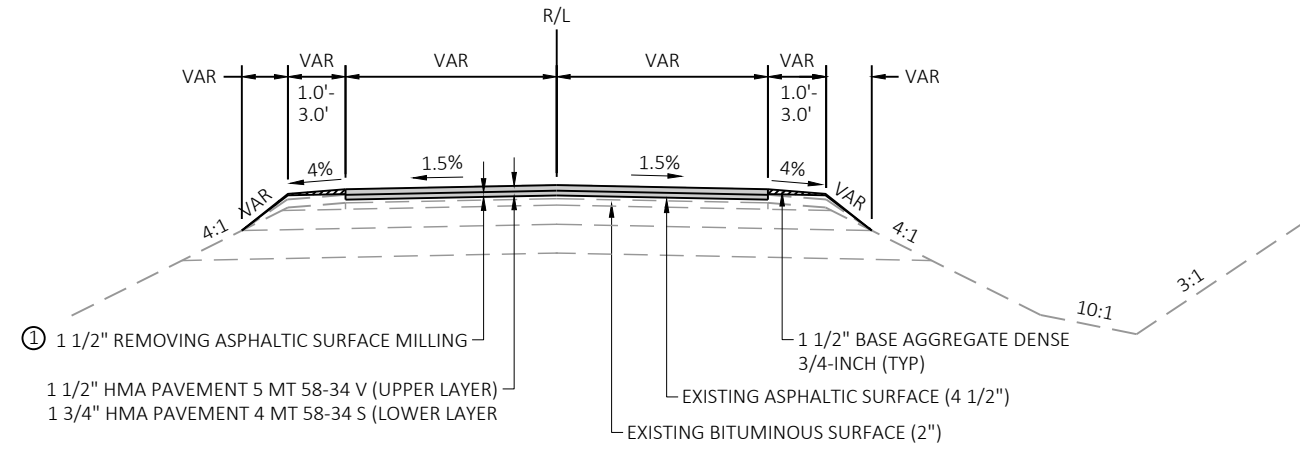


TYPICAL FINISHED SECTION
 CTH A
 STA 18+35.41 TO STA 20+87.51

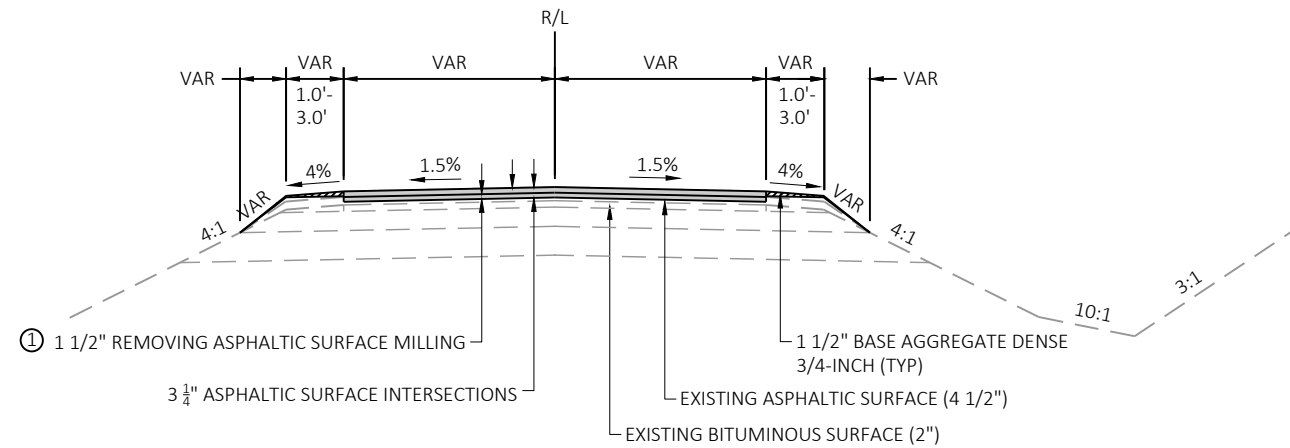


TYPICAL FINISHED SECTION
 CTH F
 STA 16+00.00 TO STA 18+31.10

NOTES:
 ① SEE INTERSECTION DETAIL SHEETS FOR VARYING WIDTHS.



TYPICAL FINISHED COUNTY SIDE ROAD SECTION
 CTH A STA 52+43.4 LT
 CTH JJ STA 192+77.1 LT & RT

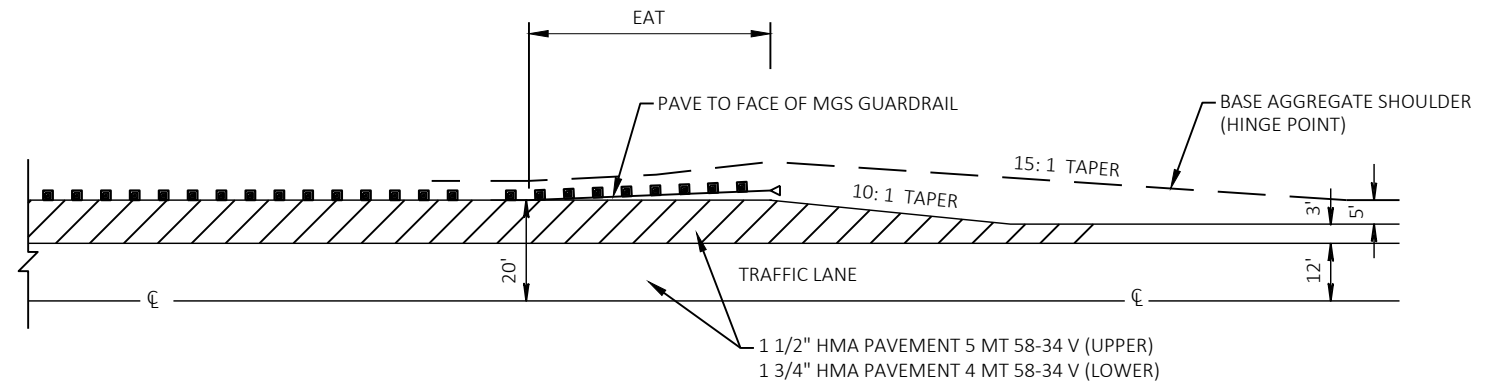


TYPICAL FINISHED LOCAL SIDE ROAD SECTION

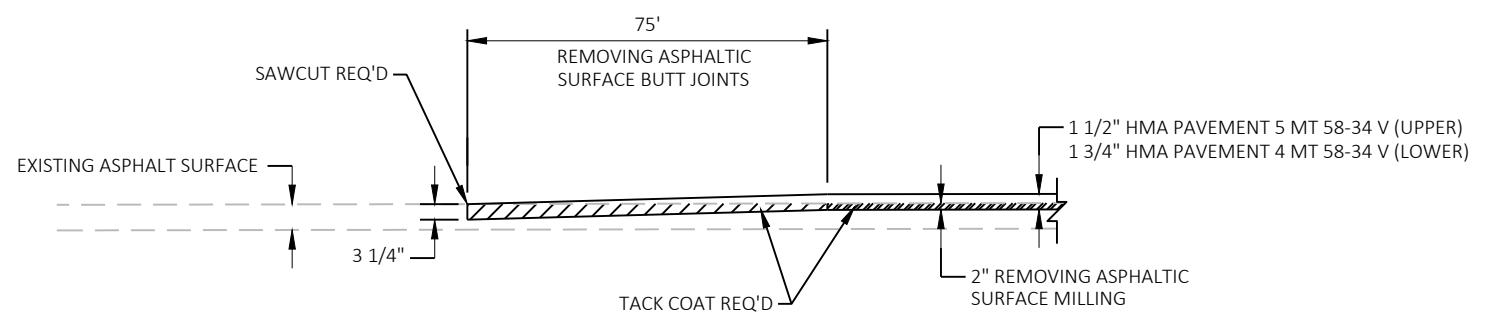
- 5TH AVENUE STA 26+22.9 LT
- 10TH AVENUE STA 52+43.4 RT
- SOUTH AVENUE W STA 130+37.2 RT
- 25TH AVENUE STA 130+38.5 LT
- 7TH STREET STA 175+67.2 RT
- 7TH STREET STA 175+95.3 LT
- GOLF ROAD STA 239+17 RT
- 46TH STREET STA 251+23.6 RT
- 40TH AVENUE STA 261+13.5 RT
- 45TH AVENUE STA 292+16.9 LT
- 45TH AVENUE STA 292+46.7 RT
- CHRISTEANSON ROAD STA 323+15.5 LT
- CHRISTEANSON ROAD STA 323+37.3 RT
- 60TH AVENUE STA 379+18.8 LT
- 60TH AVENUE STA 379+23.0 RT
- 65TH AVENUE STA 406+98.3 LT
- 65TH AVENUE STA 407+16.2 RT

NOTES:

- ① THE EXACT DEPTH AND LIMITS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD. AT SIDE ROAD LOCATION SEE SIDE ROAD PAVING DETAIL.

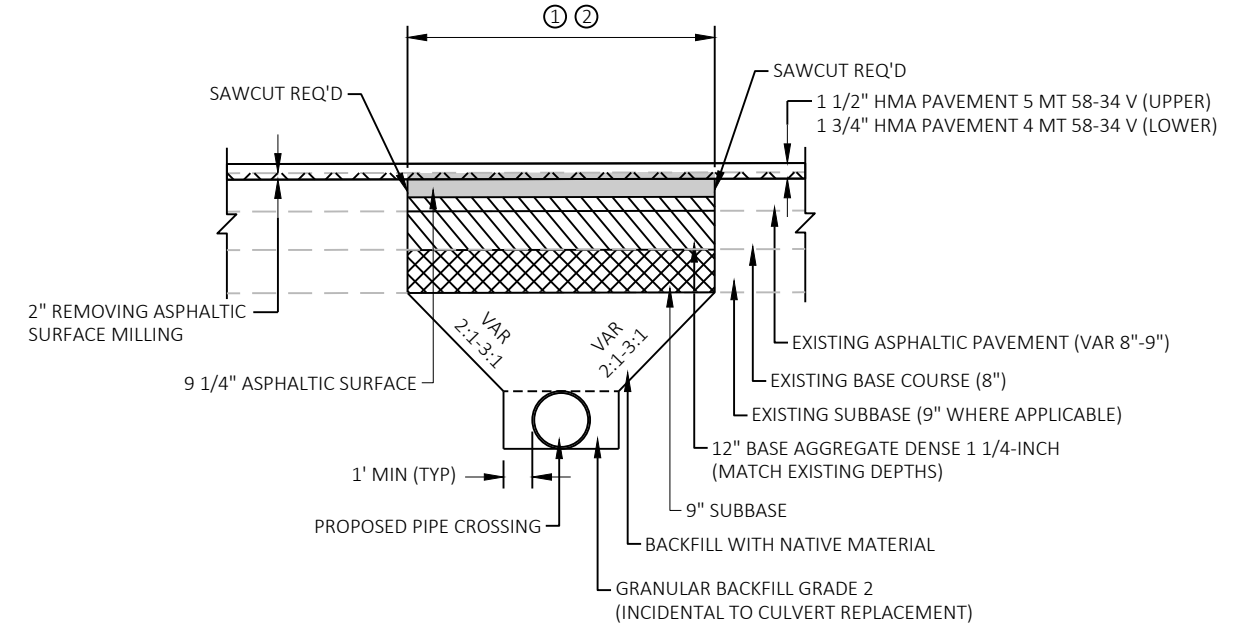


PAVING ALONG BEAM GUARD

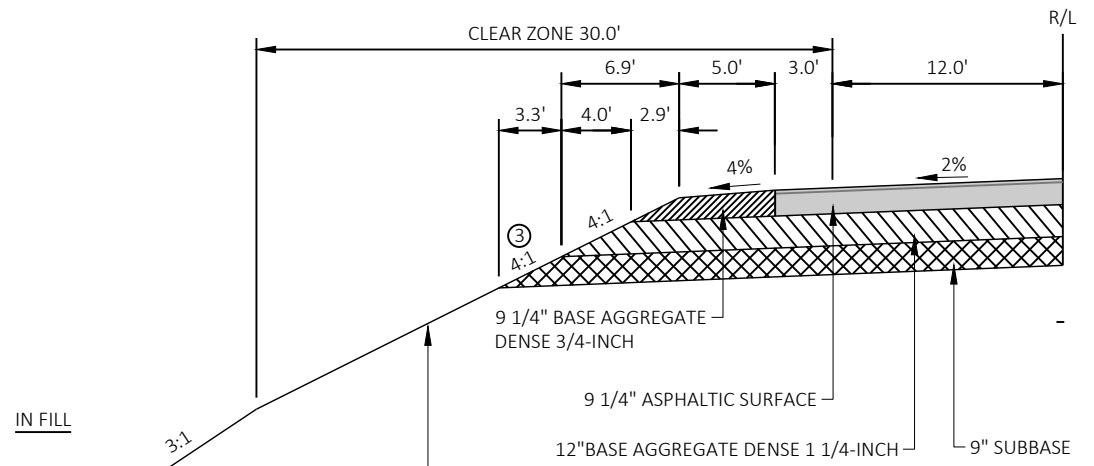


BUTT JOINT

USH 63
STA 1+96.17
STA 443+00.00

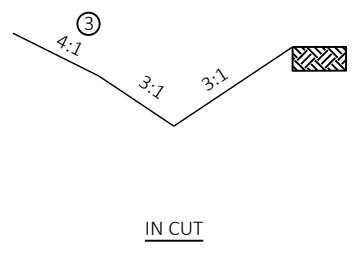


TYPICAL PIPE CROSSING REPLACEMENT



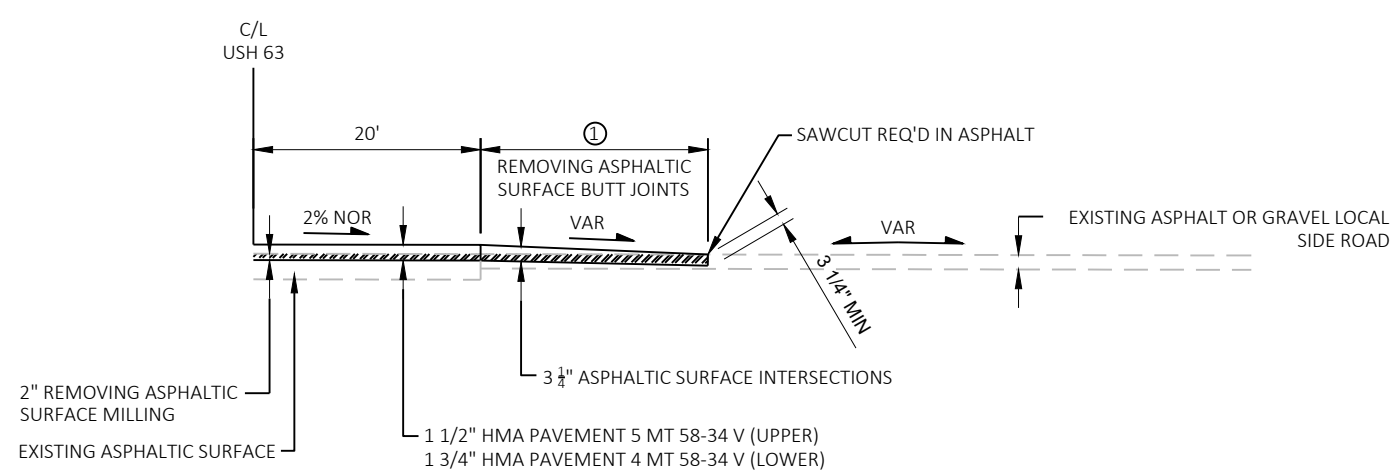
TYPICAL TEMPORARY FINISHED SECTION - PIPE REPLACEMENTS

USH 63
STA 19+02
STA 85+00
STA 156+98
STA 256+57
STA 262+00



NOTE:

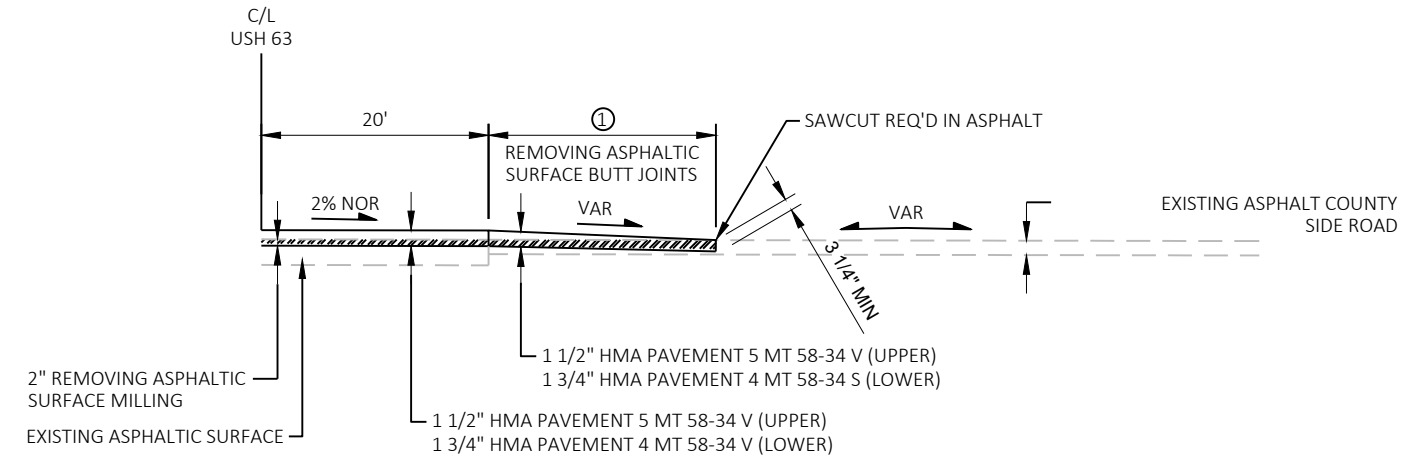
- ① THE EXACT DISTANCE SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
- ② ALL PIPE REPLACEMENTS SHALL BE CONSTRUCTED PRIOR TO REMOVING ASPHALTIC SURFACE MILLING OPERATIONS. PLACE 9-1/4" ASPHALTIC SURFACE TO MATCH EXISTING DEPTH OF HMA SURFACE.
- ③ SLOPE TRANSITION FROM 4:1 AT PIPE LOCATION DOWN TO 3:1 TO MATCH EXISTING CONDITIONS.



SIDE ROAD BUTT JOINT AT LOCAL ROADS

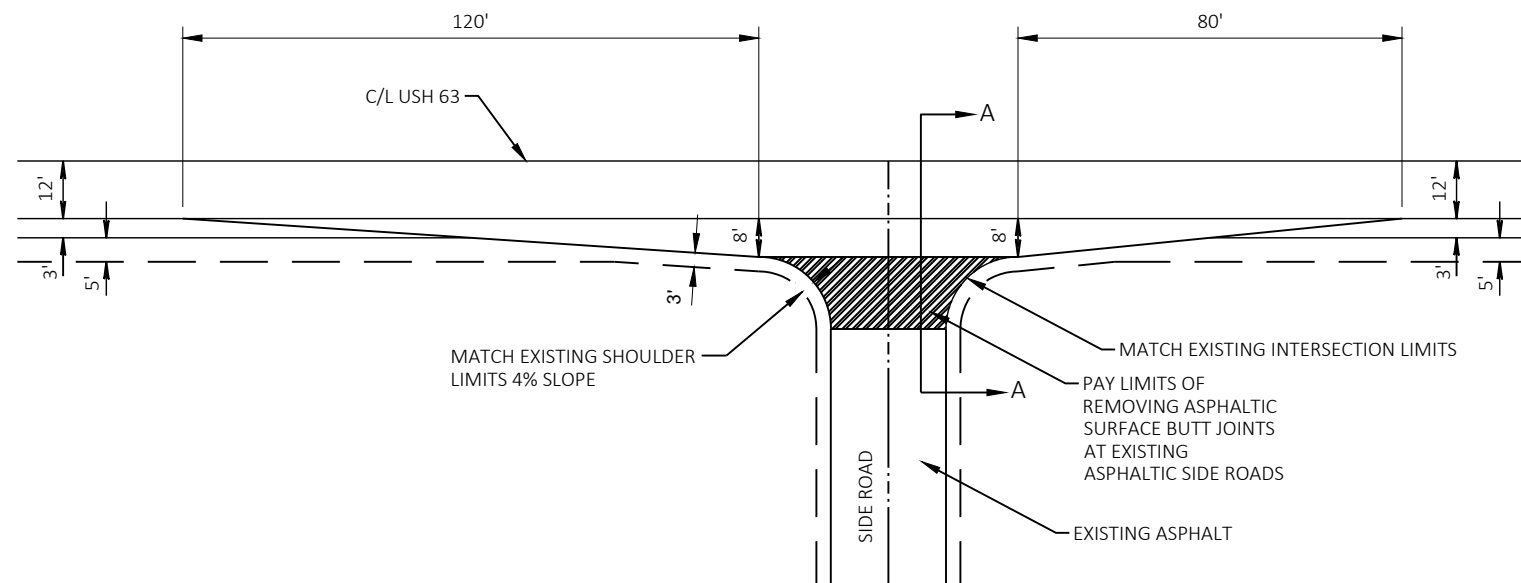
SECTION A-A

NOTE:
 23RD AVE
 CHRISTEANSON ROAD
 65TH AVE (EAST LEG)
 DO NOT REQUIRE SAWCUTS.
 REMOVING ASPHALTIC SURFACE
 BUTT JOINTS NOT REQUIRED.



SIDE ROAD BUTT JOINT AT CTH A, CTH JJ

SECTION A-A



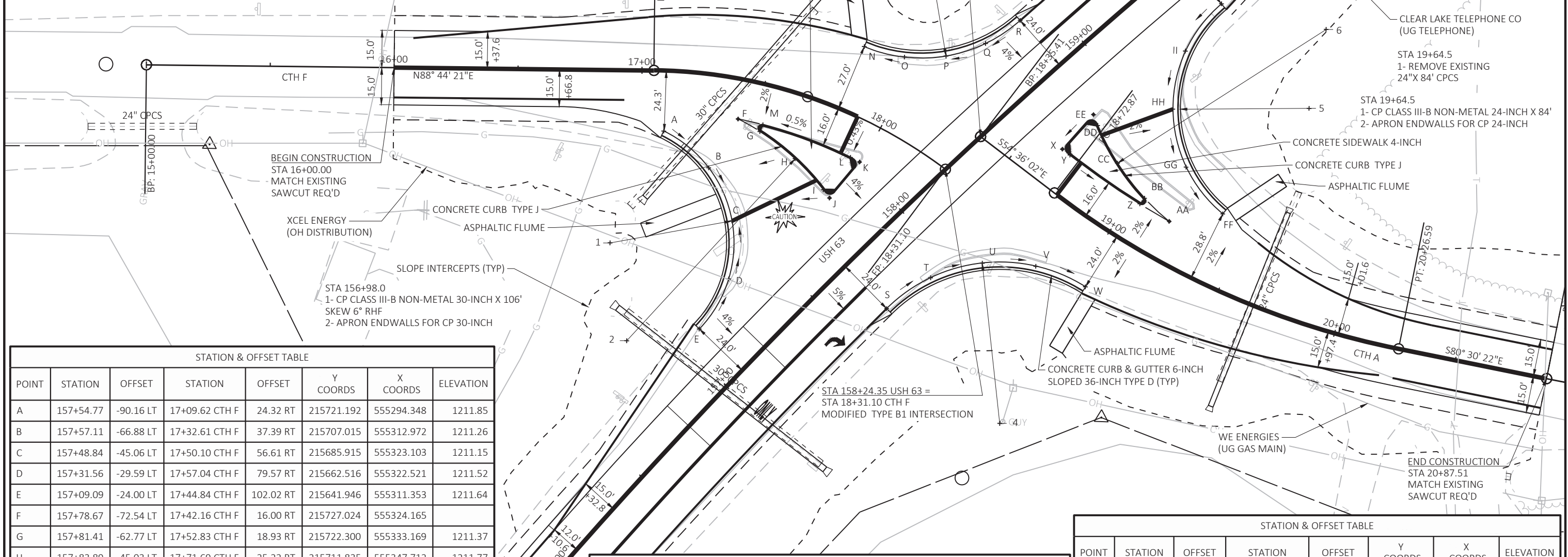
SIDE ROAD PAVING DETAIL

USE AT ALL ASPHALT AND GRAVEL SIDE ROADS

NOTE:

① 30' NORMAL. THE EXACT DISTANCE WILL BE DETERMINED BY THE ENGINEER IN THE FIELD. EXISTING GRAVEL SIDEROADS DO NOT REQUIRE A SAWCUT AND BUTT JOINT.

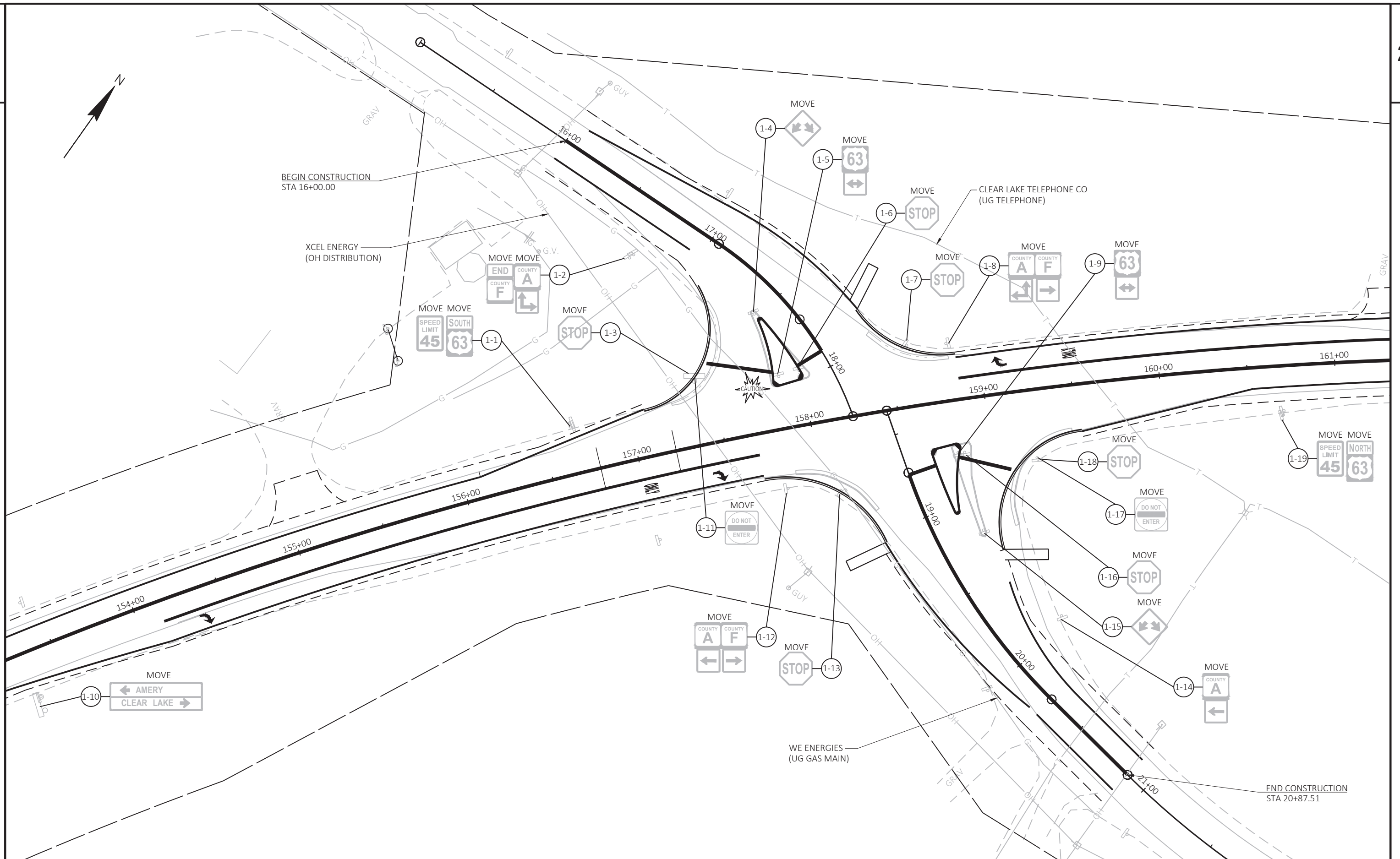
STATION & OFFSET TABLE							
POINT	STATION	OFFSET	STATION	OFFSET	Y COORDS	X COORDS	RADIUS
1	157+09.09 USH 63	-74.00 LT	16+87.90 CTH F	69.69 RT	215675.425	555274.216	50.0'
2	156+85.79 USH 63	-41.90 LT	16+95.08 CTH F	109.05 RT	215636.226	555282.264	100.0'
3	158+86.80 USH 63	-84.00 LT	17+81.38 CTH F	-87.00 LT	215814.035	555395.316	60.0'
4	157+68.09 USH 63	89.00 RT	19+03.62 CTH A	89.00 RT	215607.913	555433.793	65.0'
5	159+52.69 USH 63	79.00 RT	19+54.14 CTH A	-82.08 LT	215738.986	555554.317	55.0'
6	159+79.10 USH 63	58.89 RT	19+44.47 CTH A	-113.91 LT	215771.027	555560.153	100.0'

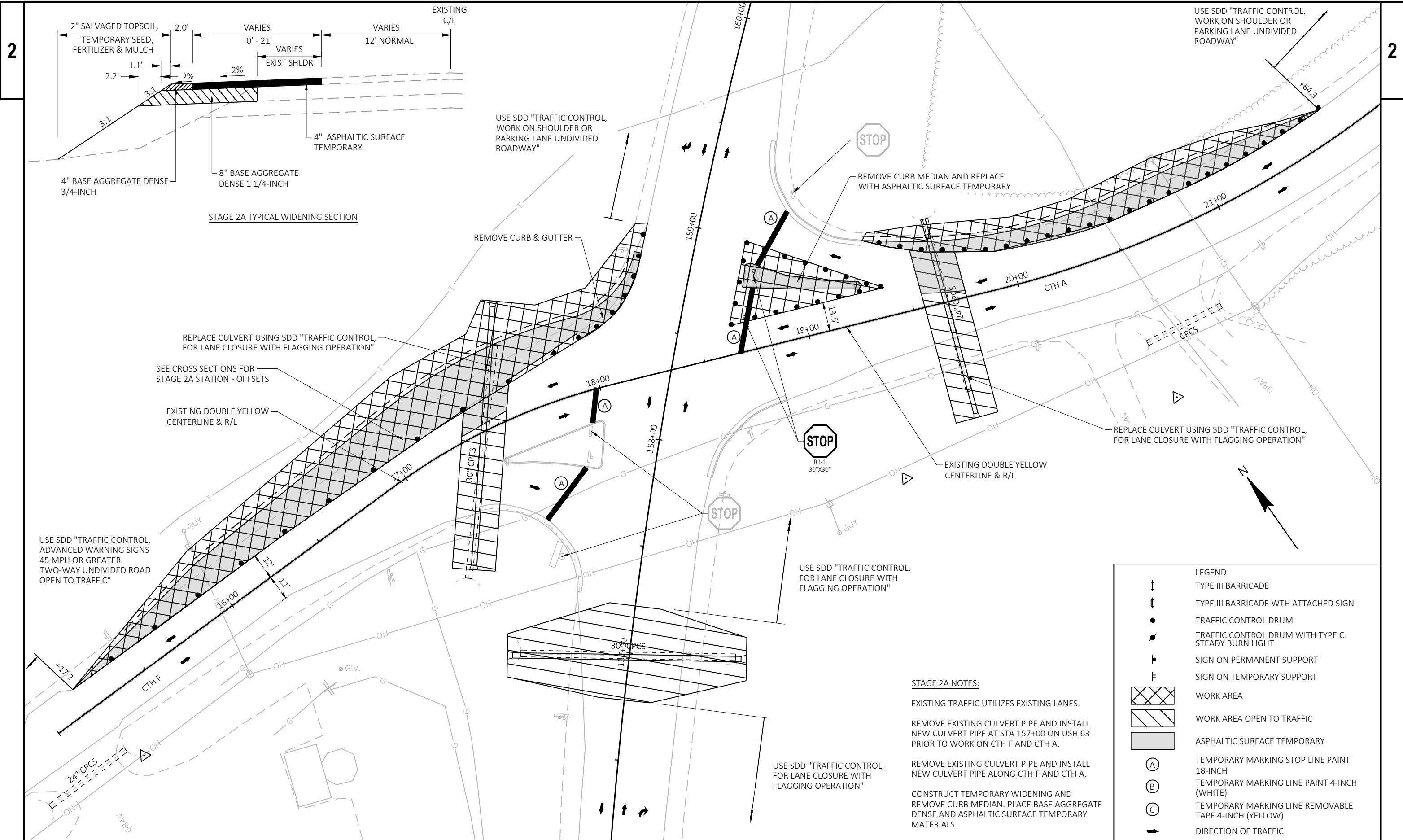


STATION & OFFSET TABLE							
POINT	STATION	OFFSET	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
A	157+54.77	-90.16 LT	17+09.62 CTH F	24.32 RT	215721.192	555294.348	1211.85
B	157+57.11	-66.88 LT	17+32.61 CTH F	37.39 RT	215707.015	555312.972	1211.26
C	157+48.84	-45.06 LT	17+50.10 CTH F	56.61 RT	215685.915	555323.103	1211.15
D	157+31.56	-29.59 LT	17+57.04 CTH F	79.57 RT	215662.516	555322.521	1211.52
E	157+09.09	-24.00 LT	17+44.84 CTH F	102.02 RT	215641.946	555311.353	1211.64
F	157+78.67	-72.54 LT	17+42.16 CTH F	16.00 RT	215727.024	555324.165	
G	157+81.41	-62.77 LT	17+52.83 CTH F	18.93 RT	215722.300	555333.169	1211.37
H	157+83.89	-45.03 LT	17+71.69 CTH F	25.22 RT	215711.835	555347.712	1211.77
I	157+83.35	-28.09 LT	17+89.61 CTH F	32.47 RT	215699.695	555359.541	1211.86
J	157+82.79	-24.00 LT	17+93.99 CTH F	34.41 RT	215696.448	555362.097	
K	158+01.38	-26.00 LT	17+98.87 CTH F	16.00 RT	215711.335	555373.742	
L	158+00.04	-29.90 LT	17+94.38 CTH F	16.00 RT	215713.082	555370.003	1212.02
M	157+84.08	-63.89 LT	17+53.34 CTH F	16.00 RT	215725.055	555334.261	1211.82
N	158+34.12	-58.50 LT	17+81.38 CTH F	-27.00 LT	215757.898	555374.133	1211.50
O	158+42.96	-44.39 LT	17+95.82 CTH F	-29.94 LT	215754.230	555390.479	1211.73
P	158+55.38	-33.39 LT	18+08.21 CTH F	-38.31 LT	215755.224	555407.201	1211.90
Q	158+70.40	-26.40 LT	18+17.18 CTH F	-50.98 LT	215760.802	555422.997	1212.08
R	158+86.80	-24.00 LT	18+22.21 CTH F	-66.42 LT	215770.530	555436.635	1212.17

STATION & OFFSET TABLE							
POINT	STATION	OFFSET	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
S	157+68.09	24.00 RT	18+47.27 CTH A	78.08 RT	215652.663	555386.650	1209.67
T	157+89.70	27.51 RT	18+53.85 CTH A	57.45 RT	215665.666	555403.966	1209.56
U	158+09.10	37.67 RT	18+66.84 CTH A	40.13 RT	215672.259	555424.593	1209.27
V	158+24.25	53.43 RT	18+83.89 CTH A	28.23 RT	215671.710	555446.240	1208.96
W	158+33.45	73.15 RT	19+03.62 CTH A	24.00 RT	215664.081	555466.506	1208.73
X	158+64.82	26.00 RT	18+64.73 CTH A	-16.00 LT	215719.233	555455.381	1209.85
Y	158+65.54	29.81 RT	18+68.60 CTH A	-16.00 LT	215716.988	555458.540	1209.77
Z	158+73.42	63.33 RT	19+04.50 CTH A	-16.00 LT	215698.223	555487.366	1209.06

STATION & OFFSET TABLE							
POINT	STATION	OFFSET	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
AA	158+77.65	76.46 RT	19+18.95 CTH A	-16.00 LT	215691.582	555499.420	1208.79
BB	158+76.45	62.89 RT	19+04.92 CTH A	-18.95 LT	215700.578	555489.182	1209.03
CC	158+77.75	45.07 RT	18+86.85 CTH A	-24.71 LT	215714.327	555477.782	1209.73
DD	158+82.00	28.41 RT	18+70.26 CTH A	-32.23 LT	215729.257	555469.295	1209.76
EE	158+83.65	24.00 RT	18+66.24 CTH A	-34.67 LT	215733.576	555467.430	1209.87
FF	158+96.47	88.57 RT	19+37.88 CTH A	-28.77 LT	215695.291	555520.913	1208.44
GG	158+97.88	64.63 RT	19+13.47 CTH A	-38.34 LT	215713.656	555505.496	1208.65
HH	159+09.51	43.52 RT	18+93.79 CTH A	-55.28 LT	215736.836	555499.359	1209.25
II	159+28.98	29.11 RT	18+82.40 CTH A	-77.44 LT	215760.424	555503.667	1209.61
JJ	159+52.69	24.00 RT	18+83.44 CTH A	-101.41 LT	215779.938	555517.602	1209.71





STAGE 2A TYPICAL WIDENING SECTION

REPLACE CULVERT USING SDD "TRAFFIC CONTROL, FOR LANE CLOSURE WITH FLAGGING OPERATION"

SEE CROSS SECTIONS FOR STAGE 2A STATION - OFFSETS

EXISTING DOUBLE YELLOW CENTERLINE & R/L

USE SDD "TRAFFIC CONTROL, ADVANCED WARNING SIGNS 45 MPH OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC"

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

REMOVE CURB MEDIAN AND REPLACE WITH ASPHALTIC SURFACE TEMPORARY

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

REPLACE CULVERT USING SDD "TRAFFIC CONTROL, FOR LANE CLOSURE WITH FLAGGING OPERATION"

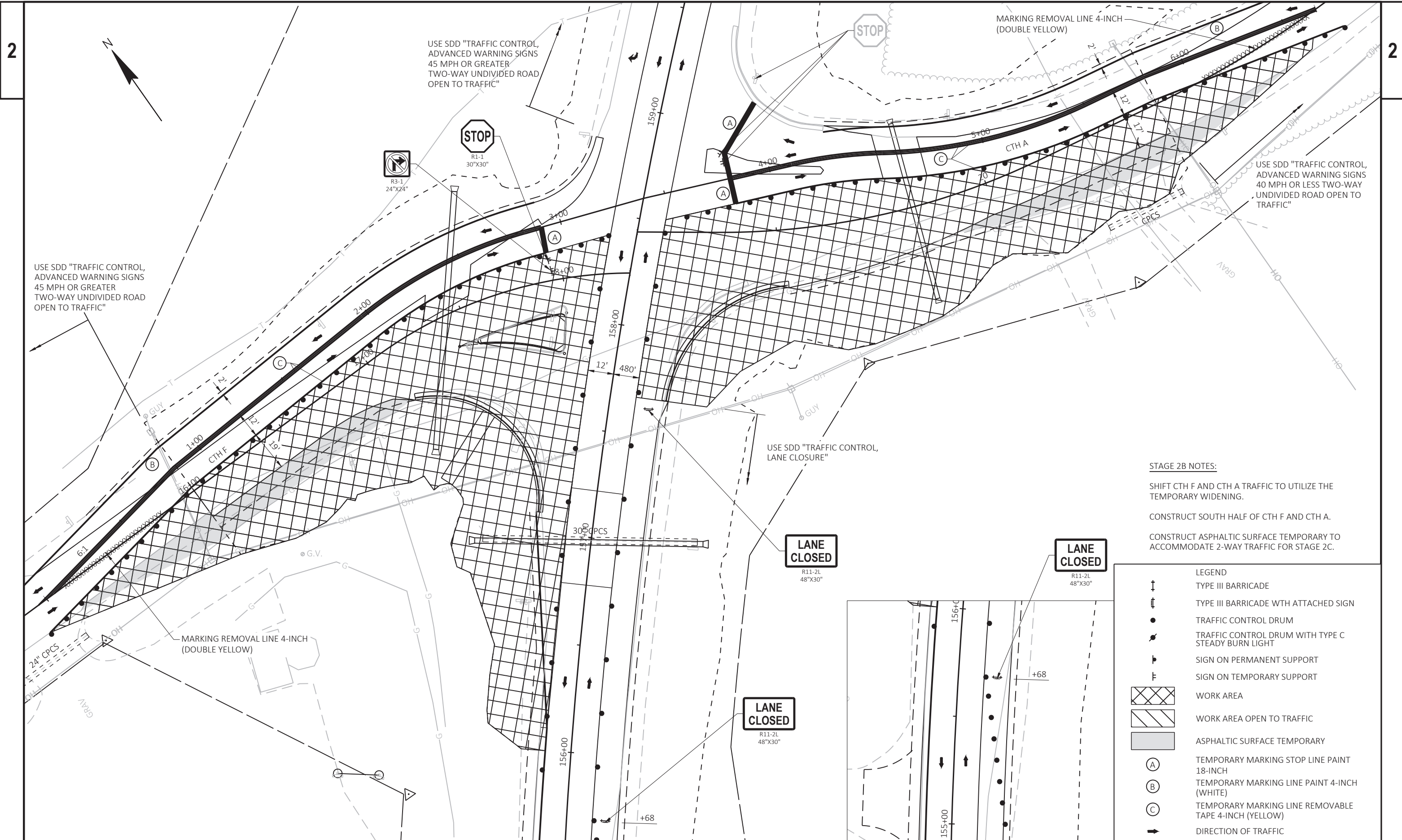
EXISTING DOUBLE YELLOW CENTERLINE & R/L

USE SDD "TRAFFIC CONTROL, FOR LANE CLOSURE WITH FLAGGING OPERATION"

USE SDD "TRAFFIC CONTROL, FOR LANE CLOSURE WITH FLAGGING OPERATION"

STAGE 2A NOTES:
 EXISTING TRAFFIC UTILIZES EXISTING LANES.
 REMOVE EXISTING CULVERT PIPE AND INSTALL NEW CULVERT PIPE AT STA 157+00 ON USH 63 PRIOR TO WORK ON CTH F AND CTH A.
 REMOVE EXISTING CULVERT PIPE AND INSTALL NEW CULVERT PIPE ALONG CTH F AND CTH A.
 CONSTRUCT TEMPORARY WIDENING AND REMOVE CURB MEDIAN. PLACE BASE AGGREGATE DENSE AND ASPHALTIC SURFACE TEMPORARY MATERIALS.

LEGEND	
	TYPE III BARRICADE
	TYPE III BARRICADE WTH ATTACHED SIGN
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	WORK AREA
	WORK AREA OPEN TO TRAFFIC
	ASPHALTIC SURFACE TEMPORARY
	TEMPORARY MARKING STOP LINE PAINT 18-INCH
	TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
	DIRECTION OF TRAFFIC



USE SDD "TRAFFIC CONTROL, ADVANCED WARNING SIGNS 45 MPH OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC"

STOP
R1-1
30"x30"

R3-1
24"x24"

USE SDD "TRAFFIC CONTROL, ADVANCED WARNING SIGNS 45 MPH OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC"

USE SDD "TRAFFIC CONTROL, ADVANCED WARNING SIGNS 40 MPH OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC"

USE SDD "TRAFFIC CONTROL, LANE CLOSURE"

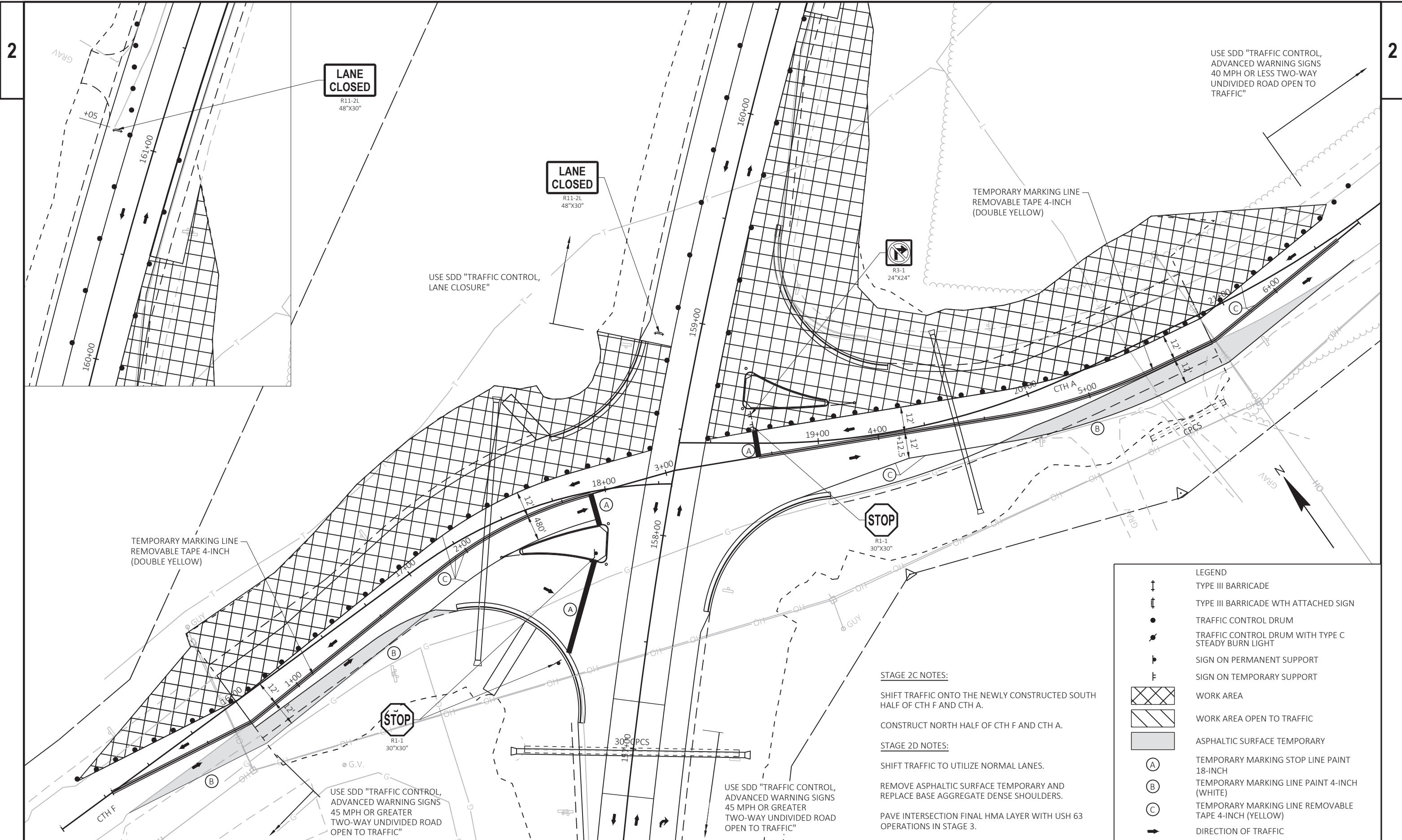
STAGE 2B NOTES:
SHIFT CTH F AND CTH A TRAFFIC TO UTILIZE THE TEMPORARY WIDENING.
CONSTRUCT SOUTH HALF OF CTH F AND CTH A.
CONSTRUCT ASPHALTIC SURFACE TEMPORARY TO ACCOMMODATE 2-WAY TRAFFIC FOR STAGE 2C.

LANE CLOSED
R11-2L
48"x30"

LANE CLOSED
R11-2L
48"x30"

LANE CLOSED
R11-2L
48"x30"

LEGEND	
	TYPE III BARRICADE
	TYPE III BARRICADE WTH ATTACHED SIGN
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	WORK AREA
	WORK AREA OPEN TO TRAFFIC
	ASPHALTIC SURFACE TEMPORARY
	TEMPORARY MARKING STOP LINE PAINT 18-INCH
	TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
	DIRECTION OF TRAFFIC



LANE CLOSED
R11-2L
48"x30"

LANE CLOSED
R11-2L
48"x30"

STOP
R1-1
30"x30"

STOP
R1-1
30"x30"

USE SDD "TRAFFIC CONTROL, ADVANCED WARNING SIGNS 40 MPH OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC"

USE SDD "TRAFFIC CONTROL, LANE CLOSURE"

TEMPORARY MARKING LINE
REMOVABLE TAPE 4-INCH
(DOUBLE YELLOW)

TEMPORARY MARKING LINE
REMOVABLE TAPE 4-INCH
(DOUBLE YELLOW)

USE SDD "TRAFFIC CONTROL, ADVANCED WARNING SIGNS 45 MPH OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC"

USE SDD "TRAFFIC CONTROL, ADVANCED WARNING SIGNS 45 MPH OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC"

STAGE 2C NOTES:

SHIFT TRAFFIC ONTO THE NEWLY CONSTRUCTED SOUTH HALF OF CTH F AND CTH A.
CONSTRUCT NORTH HALF OF CTH F AND CTH A.

STAGE 2D NOTES:

SHIFT TRAFFIC TO UTILIZE NORMAL LANES.
REMOVE ASPHALTIC SURFACE TEMPORARY AND REPLACE BASE AGGREGATE DENSE SHOULDERS.
PAVE INTERSECTION FINAL HMA LAYER WITH USH 63 OPERATIONS IN STAGE 3.

LEGEND	
	TYPE III BARRICADE
	TYPE III BARRICADE WTH ATTACHED SIGN
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	WORK AREA
	WORK AREA OPEN TO TRAFFIC
	ASPHALTIC SURFACE TEMPORARY
	TEMPORARY MARKING STOP LINE PAINT 18-INCH
	TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
	DIRECTION OF TRAFFIC

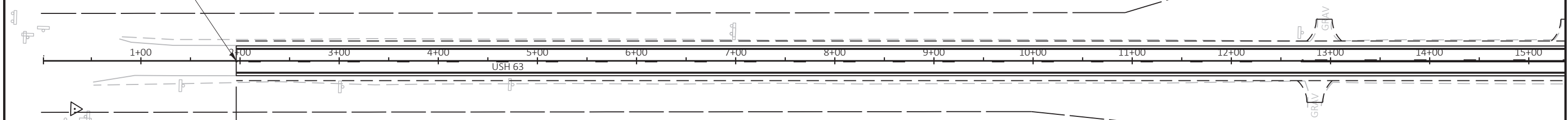
USE SDD "TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE UNDIVIDED HIGHWAY" FOR BEAM GUARD REPLACEMENT WORK AND CULVERT LINING WORK IN BOTH NB & SB DIRECTIONS.
 STA 143+00 CULVERT LINING
 STA 147+00 - 177+00 BEAM GUARD

- ① ALSO USE AT:
 CTH A (10TH AVENUE)
 23RD AVENUE
 25TH AVENUE
 5TH AVENUE W
 7TH STREET
 CTH JJ
 GOLF ROAD
 46TH STREET
 40TH AVENUE
 45TH AVENUE
 CHRISTEANSON ROAD
 60TH AVENUE
 65TH AVENUE

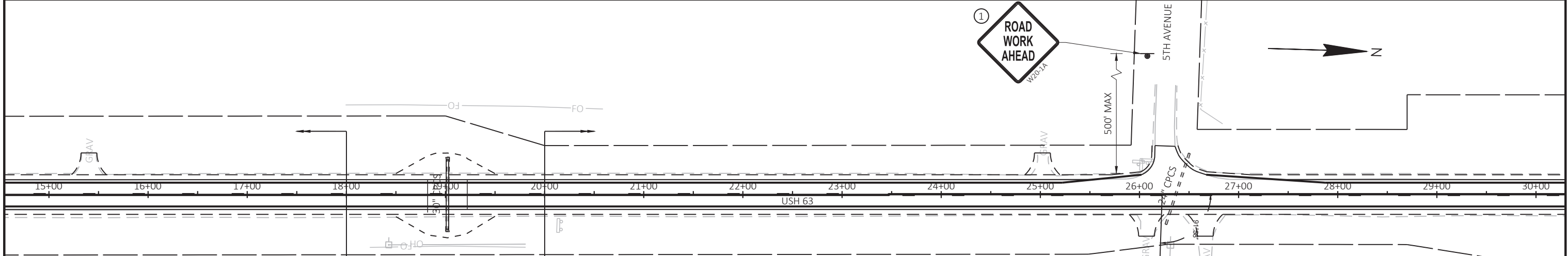
- ② ALSO USE AT CULVERTS NEAR:
 STA 85+00
 STA 157+00
 STA 256+50
 STA 264+00



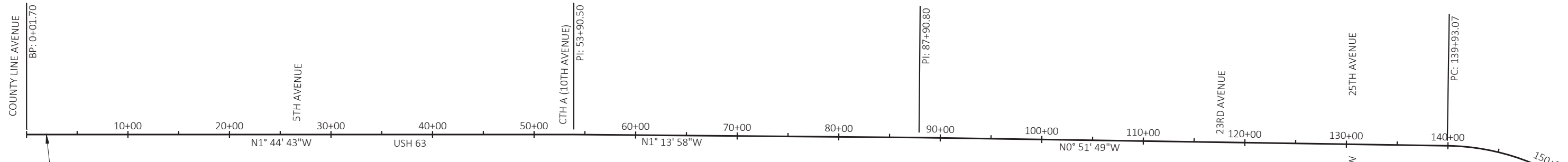
BEGIN PROJECT
 STA 1+96.17



USE SDD "TRAFFIC CONTROL, ADVANCED WARNING SIGNS 45 MPH OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC" AND "TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES" AND "TRAFFIC CONTROL, FOR LANE CLOSURE WITH FLAGGING OPERATION" IN BOTH NB & SB DIRECTIONS



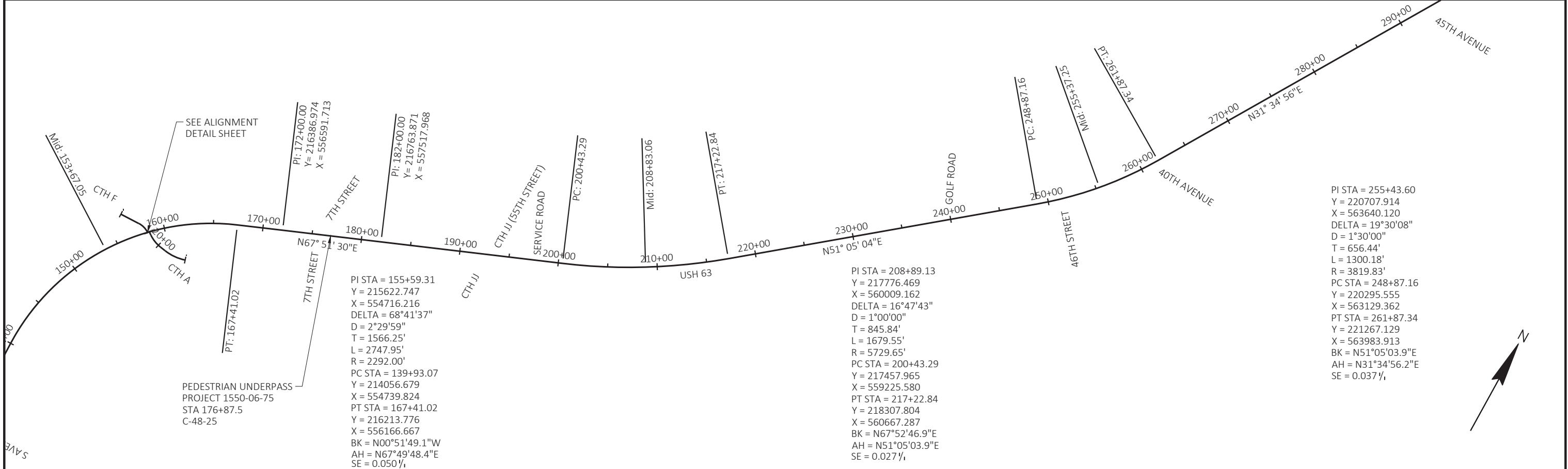
USE SDD "TRAFFIC CONTROL, FOR LANE CLOSURE WITH FLAGGING OPERATION" TO REPLACE THE CULVERT AT STA 19+02



BEGIN PROJECT
 STA 1+96.17
 Y=200263.572
 X=555049.609

PI STA = 155+59.31
 Y = 215622.747
 X = 554716.216
 DELTA = 68°41'37"
 D = 2°29'59"
 T = 1566.25'
 L = 2747.95'
 R = 2292.00'
 PC STA = 139+93.07
 Y = 214056.679
 X = 554739.824
 PT STA = 167+41.02
 Y = 216213.776
 X = 556166.667
 BK = N00°51'49.1"W
 AH = N67°49'48.4"E
 SE = 0.050%

PT: 167+41



SEE ALIGNMENT
 DETAIL SHEET

PEDESTRIAN UNDERPASS
 PROJECT 1550-06-75
 STA 176+87.5
 C-48-25

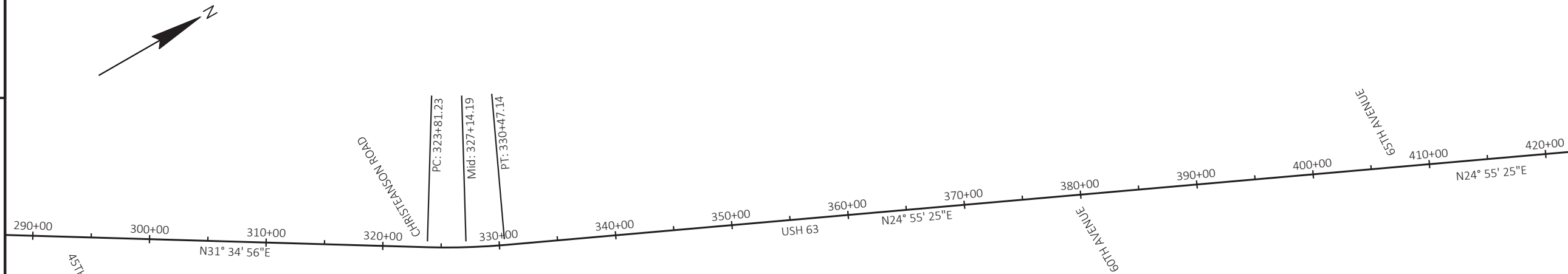
PI STA = 155+59.31
 Y = 215622.747
 X = 554716.216
 DELTA = 68°41'37"
 D = 2°29'59"
 T = 1566.25'
 L = 2747.95'
 R = 2292.00'
 PC STA = 139+93.07
 Y = 214056.679
 X = 554739.824
 PT STA = 167+41.02
 Y = 216213.776
 X = 556166.667
 BK = N00°51'49.1"W
 AH = N67°49'48.4"E
 SE = 0.050%

PI STA = 208+89.13
 Y = 217776.469
 X = 560009.162
 DELTA = 16°47'43"
 D = 1°00'00"
 T = 845.84'
 L = 1679.55'
 R = 5729.65'
 PC STA = 200+43.29
 Y = 217457.965
 X = 559225.580
 PT STA = 217+22.84
 Y = 218307.804
 X = 560667.287
 BK = N67°52'46.9"E
 AH = N51°05'03.9"E
 SE = 0.027%

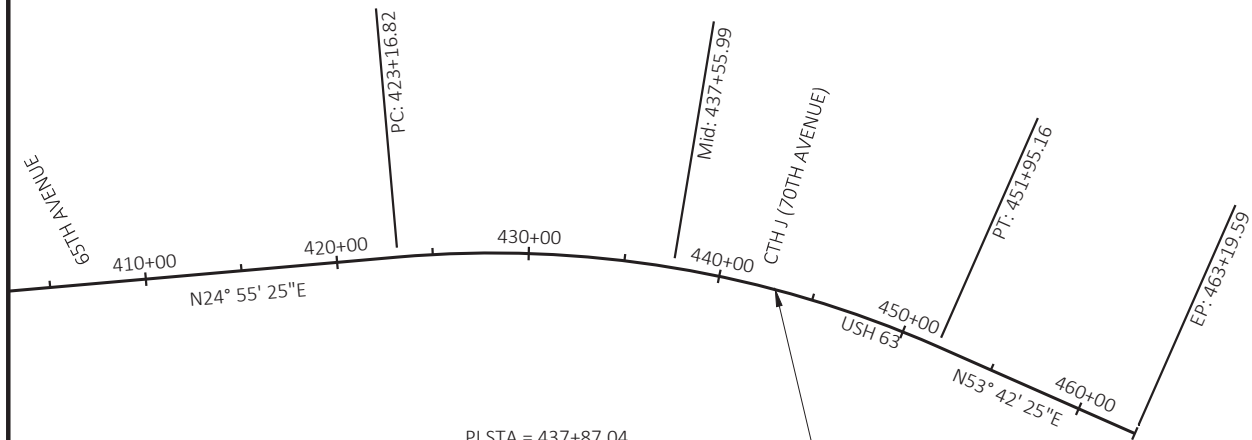
PI STA = 255+43.60
 Y = 220707.914
 X = 563640.120
 DELTA = 19°30'08"
 D = 1°30'00"
 T = 656.44'
 L = 1300.18'
 R = 3819.83'
 PC STA = 248+87.16
 Y = 220295.555
 X = 563129.362
 PT STA = 261+87.34
 Y = 221267.129
 X = 563983.913
 BK = N51°05'03.9"E
 AH = N31°34'56.2"E
 SE = 0.037%



PROJECT NO: 1550-02-76	HWY: USH 63	COUNTY: POLK	ALIGNMENT	SHEET	E
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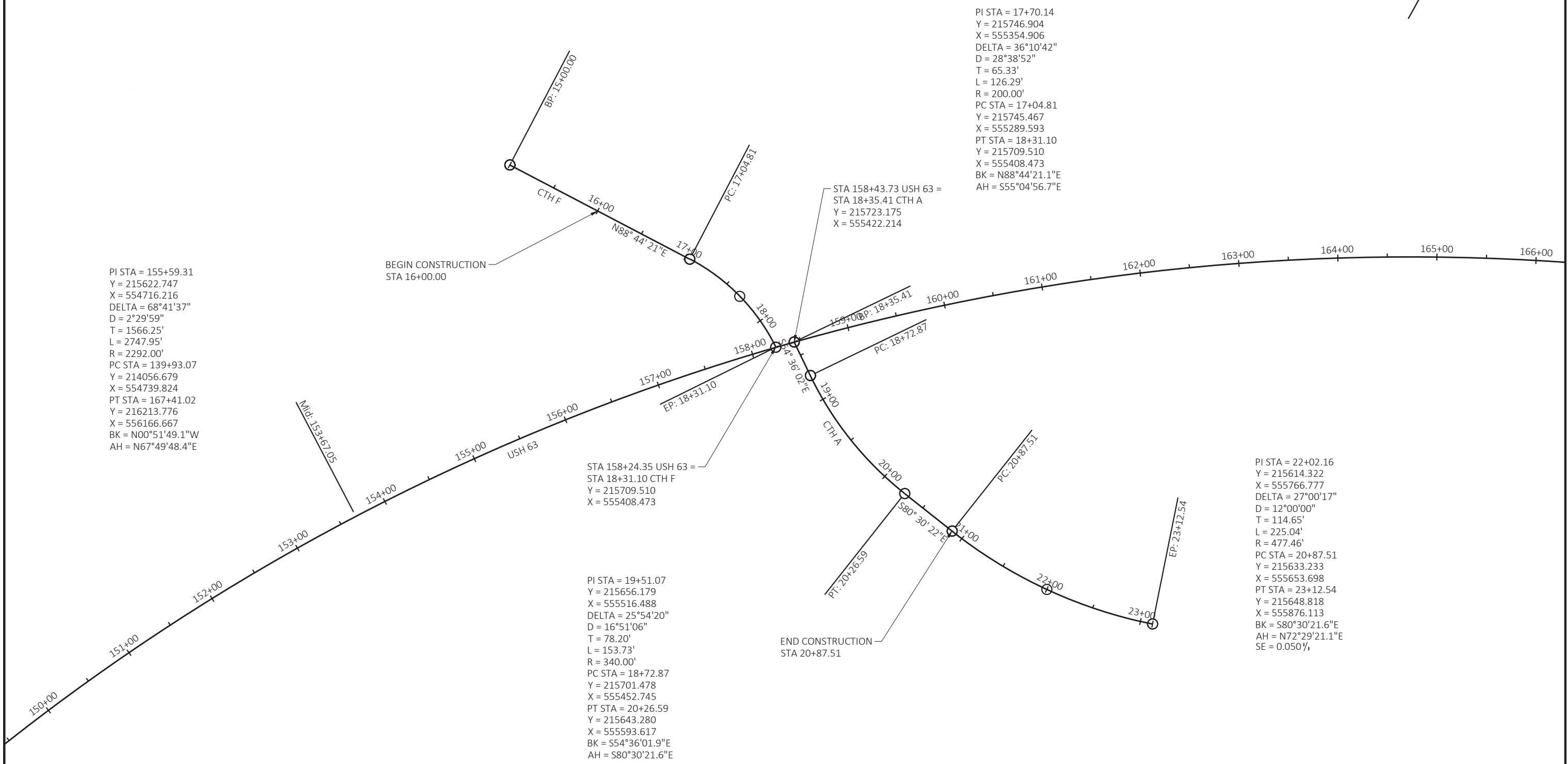


PI STA = 327+14.56
 Y = 226827.594
 X = 567402.362
 DELTA = 6°39'31"
 D = 1°00'00"
 T = 333.33'
 L = 665.91'
 R = 5730.00'
 PC STA = 323+81.23
 Y = 226543.633
 X = 567227.789
 PT STA = 330+47.14
 Y = 227129.881
 X = 567542.831
 BK = N31°34'56.2"E
 AH = N24°55'25.1"E
 SE = 0.027%



PI STA = 437+87.04
 Y = 236869.576
 X = 572068.734
 DELTA = 28°47'00"
 D = 1°00'00"
 T = 1470.22'
 L = 2878.34'
 R = 5729.60'
 PC STA = 423+16.82
 Y = 235536.275
 X = 571449.167
 PT STA = 451+95.16
 Y = 237739.824
 X = 573253.734
 BK = N24°55'25.1"E
 AH = N53°42'25.1"E
 SE = 0.027%

END PROJECT
 STA 443+00.00



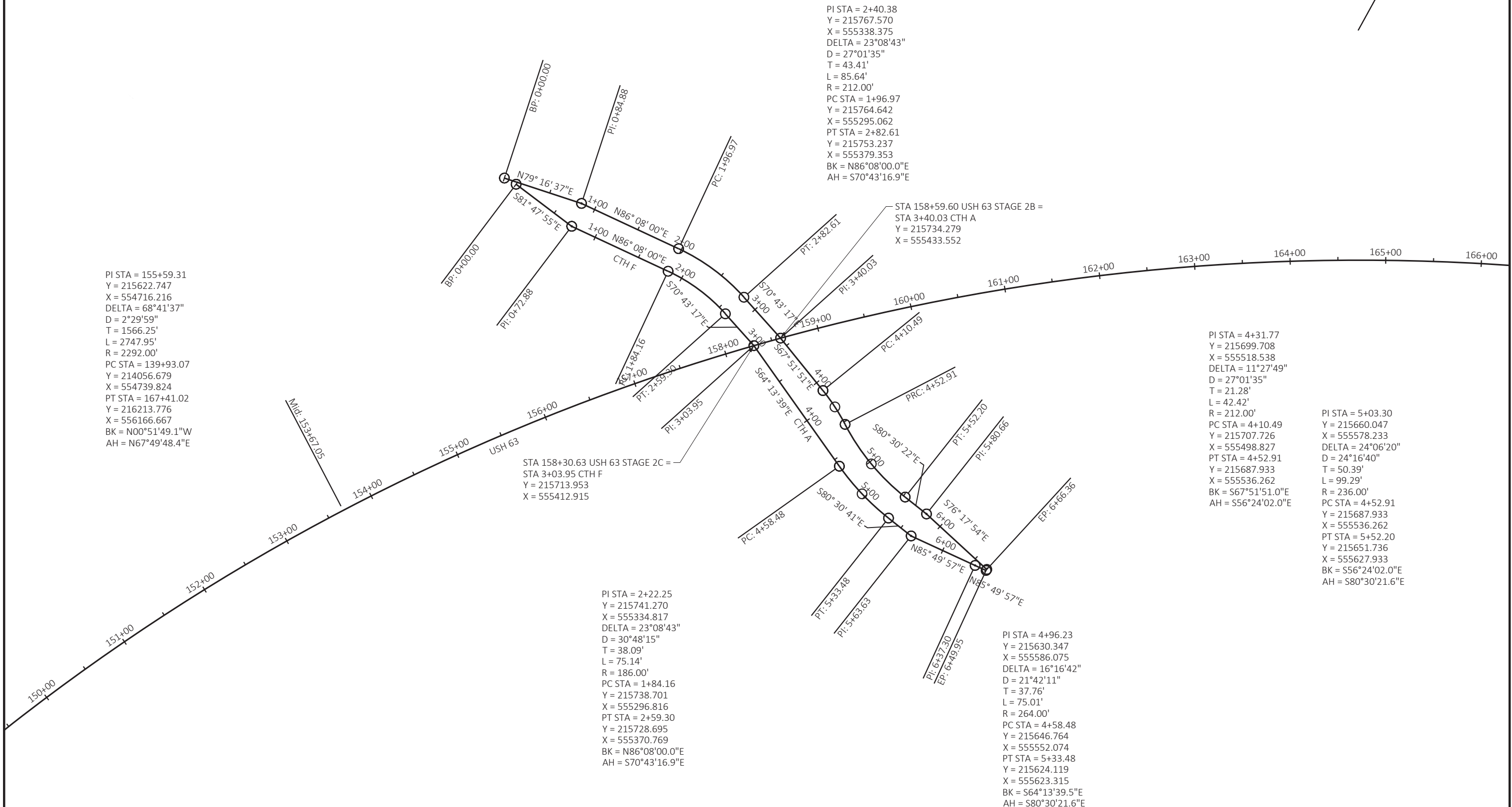
PI STA = 155+59.31
 Y = 215622.747
 X = 554716.216
 DELTA = 68°41'37"
 D = 2°29'59"
 T = 1566.25'
 L = 2747.95'
 R = 2292.00'
 PC STA = 139+93.07
 Y = 214056.679
 X = 554739.824
 PT STA = 167+41.02
 Y = 216213.776
 X = 556166.667
 BK = N00°51'49.1"W
 AH = N67°49'48.4"E

PI STA = 17+70.14
 Y = 215746.904
 X = 555354.906
 DELTA = 36°10'42"
 D = 28°38'52"
 T = 65.33'
 L = 126.29'
 R = 200.00'
 PC STA = 17+04.81
 Y = 215745.467
 X = 555289.593
 PT STA = 18+31.10
 Y = 215709.510
 X = 555408.473
 BK = N88°44'21.1"E
 AH = S55°04'56.7"E

STA 158+24.35 USH 63 =
 STA 18+31.10 CTH F
 Y = 215709.510
 X = 555408.473

PI STA = 19+51.07
 Y = 215656.179
 X = 555516.488
 DELTA = 25°54'20"
 D = 16°51'06"
 T = 78.20'
 L = 153.73'
 R = 340.00'
 PC STA = 18+72.87
 Y = 215701.478
 X = 555452.745
 PT STA = 20+26.59
 Y = 215643.280
 X = 555593.617
 BK = S54°36'01.9"E
 AH = S80°30'21.6"E

PI STA = 22+02.16
 Y = 215614.322
 X = 555766.777
 DELTA = 27°00'17"
 D = 12°00'00"
 T = 114.65'
 L = 225.04'
 R = 477.46'
 PC STA = 20+87.51
 Y = 215633.233
 X = 555653.698
 PT STA = 23+12.54
 Y = 215648.818
 X = 555876.113
 BK = S80°30'21.6"E
 AH = N72°29'21.1"E
 SE = 0.050%



PI STA = 155+59.31
 Y = 215622.747
 X = 554716.216
 DELTA = 68°41'37"
 D = 2°29'59"
 T = 1566.25'
 L = 2747.95'
 R = 2292.00'
 PC STA = 139+93.07
 Y = 214056.679
 X = 554739.824
 PT STA = 167+41.02
 Y = 216213.776
 X = 556166.667
 BK = N00°51'49.1"W
 AH = N67°49'48.4"E

PI STA = 2+40.38
 Y = 215767.570
 X = 555338.375
 DELTA = 23°08'43"
 D = 27°01'35"
 T = 43.41'
 L = 85.64'
 R = 212.00'
 PC STA = 1+96.97
 Y = 215764.642
 X = 555295.062
 PT STA = 2+82.61
 Y = 215753.237
 X = 555379.353
 BK = N86°08'00.0"E
 AH = S70°43'16.9"E

STA 158+30.63 USH 63 STAGE 2C =
 STA 3+03.95 CTH F
 Y = 215713.953
 X = 555412.915

STA 158+59.60 USH 63 STAGE 2B =
 STA 3+40.03 CTH A
 Y = 215734.279
 X = 555433.552

PI STA = 4+31.77
 Y = 215699.708
 X = 555518.538
 DELTA = 11°27'49"
 D = 27°01'35"
 T = 21.28'
 L = 42.42'
 R = 212.00'
 PC STA = 4+10.49
 Y = 215707.726
 X = 555498.827
 PT STA = 4+52.91
 Y = 215687.933
 X = 555536.262
 BK = S67°51'51.0"E
 AH = S56°24'02.0"E

PI STA = 5+03.30
 Y = 215660.047
 X = 555578.233
 DELTA = 24°06'20"
 D = 24°16'40"
 T = 50.39'
 L = 99.29'
 R = 236.00'
 PC STA = 4+52.91
 Y = 215687.933
 X = 555536.262
 PT STA = 5+52.20
 Y = 215651.736
 X = 555627.933
 BK = S56°24'02.0"E
 AH = S80°30'21.6"E

PI STA = 2+22.25
 Y = 215741.270
 X = 555334.817
 DELTA = 23°08'43"
 D = 30°48'15"
 T = 38.09'
 L = 75.14'
 R = 186.00'
 PC STA = 1+84.16
 Y = 215738.701
 X = 555296.816
 PT STA = 2+59.30
 Y = 215728.695
 X = 555370.769
 BK = N86°08'00.0"E
 AH = S70°43'16.9"E

PI STA = 4+96.23
 Y = 215630.347
 X = 555586.075
 DELTA = 16°16'42"
 D = 21°42'11"
 T = 37.76'
 L = 75.01'
 R = 264.00'
 PC STA = 4+58.48
 Y = 215646.764
 X = 555552.074
 PT STA = 5+33.48
 Y = 215624.119
 X = 555623.315
 BK = S64°13'39.5"E
 AH = S80°30'21.6"E

Estimate Of Quantities By Plan Sets

1550-02-76

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	2.000	2.000
0004	201.0205	Grubbing	STA	2.000	2.000
0006	203.0100	Removing Small Pipe Culverts	EACH	7.000	7.000
0010	204.0115	Removing Asphaltic Surface Butt Joints	SY	4,560.000	4,560.000
0012	204.0120	Removing Asphaltic Surface Milling	SY	154,210.000	154,210.000
0014	204.0130	Removing Curb	LF	234.000	234.000
0016	204.0150	Removing Curb & Gutter	LF	240.000	240.000
0018	204.0165	Removing Guardrail	LF	1,611.000	1,611.000
0020	205.0100	Excavation Common	CY	4,911.000	4,911.000
0030	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 1550-02-76	EACH	1.000	1.000
0032	213.0100	Finishing Roadway (project) 01. 1550-02-76	EACH	1.000	1.000
0038	305.0110	Base Aggregate Dense 3/4-Inch	TON	5,871.000	5,871.000
0040	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	4,352.000	4,352.000
0042	305.0500	Shaping Shoulders	STA	885.000	885.000
0046	350.0130	Subbase 9-Inch	SY	8,852.000	8,852.000
0048	455.0605	Tack Coat	GAL	18,895.000	18,895.000
0050	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	2.000	2.000
0052	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	2.000	2.000
0054	460.2005	Incentive Density PWL HMA Pavement	DOL	28,000.000	28,000.000
0056	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	44,300.000	44,300.000
0058	460.2010	Incentive Air Voids HMA Pavement	DOL	28,000.000	28,000.000
0060	460.6244	HMA Pavement 4 MT 58-34 S	TON	943.000	943.000
0062	460.6644	HMA Pavement 4 MT 58-34 V	TON	12,645.000	12,645.000
0064	460.6645	HMA Pavement 5 MT 58-34 V	TON	15,354.000	15,354.000
0066	460.9000.S	Material Transfer Vehicle 01. 1550-02-76	EACH	1.000	1.000
0068	465.0105	Asphaltic Surface	TON	335.000	335.000
0070	465.0110	Asphaltic Surface Patching	TON	100.000	100.000
0072	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	144.000	144.000
0074	465.0125	Asphaltic Surface Temporary	TON	250.000	250.000
0076	465.0315	Asphaltic Flumes	SY	56.000	56.000
0078	465.0475	Asphalt Centerline Rumble Strips 2-Lane Rural	LF	28,679.000	28,679.000
0092	520.1024	Apron Endwalls for Culvert Pipe 24-Inch	EACH	2.000	2.000
0094	520.1030	Apron Endwalls for Culvert Pipe 30-Inch	EACH	6.000	6.000
0096	520.1036	Apron Endwalls for Culvert Pipe 36-Inch	EACH	1.000	1.000
0098	520.3624	Culvert Pipe Class III-B Non-metal 24-Inch	LF	84.000	84.000
0100	520.3630	Culvert Pipe Class III-B Non-metal 30-Inch	LF	296.000	296.000
0102	520.3636	Culvert Pipe Class III-B Non-metal 36-Inch	LF	85.000	85.000
0104	520.8700	Cleaning Culvert Pipes	EACH	5.000	5.000
0106	520.9700.S	Culvert Pipe Liners (size) 01. 24-Inch	LF	168.000	168.000
0108	520.9750.S	Cleaning Culvert Pipes for Liner Verification	EACH	1.000	1.000
0118	522.0424	Culvert Pipe Reinforced Concrete Class IV 24-Inch	LF	122.000	122.000
0120	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	4.000	4.000
0122	601.0120	Concrete Curb Type J	LF	200.000	200.000
0124	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	330.000	330.000
0126	602.0405	Concrete Sidewalk 4-Inch	SF	657.000	657.000
0144	614.2330	MGS Guardrail 3 K	LF	787.500	787.500
0146	614.2610	MGS Guardrail Terminal EAT	EACH	2.000	2.000
0148	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1550-02-76	EACH	1.000	1.000
0154	619.1000	Mobilization	EACH	0.800	0.800

Estimate Of Quantities By Plan Sets

1550-02-76

Line	Item	Item Description	Unit	Total	Qty
0158	625.0100	Topsoil	SY	3,711.000	3,711.000
0160	625.0500	Salvaged Topsoil	SY	7,265.000	7,265.000
0164	628.1504	Silt Fence	LF	3,675.000	3,675.000
0166	628.1520	Silt Fence Maintenance	LF	3,675.000	3,675.000
0168	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0170	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0172	628.2002	Erosion Mat Class I Type A	SY	10,009.000	10,009.000
0176	628.2006	Erosion Mat Urban Class I Type A	SY	3,086.000	3,086.000
0180	628.7504	Temporary Ditch Checks	LF	325.000	325.000
0182	628.7555	Culvert Pipe Checks	EACH	8.000	8.000
0184	628.7570	Rock Bags	EACH	13.000	13.000
0186	629.0210	Fertilizer Type B	CWT	7.000	7.000
0188	630.0120	Seeding Mixture No. 20	LB	353.500	353.500
0192	633.5200	Markers Culvert End	EACH	52.000	52.000
0196	638.2102	Moving Signs Type II	EACH	22.000	22.000
0200	638.4000	Moving Small Sign Supports	EACH	21.000	21.000
0202	642.5401	Field Office Type D	EACH	0.800	0.800
0204	643.0300	Traffic Control Drums	DAY	250.000	250.000
0206	643.0420	Traffic Control Barricades Type III	DAY	4.000	4.000
0208	643.0705	Traffic Control Warning Lights Type A	DAY	8.000	8.000
0210	643.0715	Traffic Control Warning Lights Type C	DAY	61.000	61.000
0212	643.0800	Traffic Control Arrow Boards	DAY	2.000	2.000
0214	643.0900	Traffic Control Signs	DAY	251.000	251.000
0216	643.3105	Temporary Marking Line Paint 4-Inch	LF	884.000	884.000
0218	643.3120	Temporary Marking Line Epoxy 4-Inch	LF	63,104.000	63,104.000
0220	643.3150	Temporary Marking Line Removable Tape 4-Inch	LF	3,846.000	3,846.000
0224	643.3805	Temporary Marking Stop Line Paint 18-Inch	LF	241.000	241.000
0226	643.5000	Traffic Control	EACH	0.800	0.800
0234	646.1020	Marking Line Epoxy 4-Inch	LF	32,360.000	32,360.000
0236	646.1040	Marking Line Grooved Wet Ref Epoxy 4-Inch	LF	86,200.000	86,200.000
0238	646.3020	Marking Line Epoxy 8-Inch	LF	1,155.000	1,155.000
0240	646.4520	Marking Line Same Day Epoxy 4-Inch	LF	31,552.000	31,552.000
0242	646.5020	Marking Arrow Epoxy	EACH	6.000	6.000
0244	646.5120	Marking Word Epoxy	EACH	2.000	2.000
0246	646.6120	Marking Stop Line Epoxy 18-Inch	LF	100.000	100.000
0250	646.8120	Marking Curb Epoxy	LF	160.000	160.000
0252	646.8220	Marking Island Nose Epoxy	EACH	6.000	6.000
0254	646.9000	Marking Removal Line 4-Inch	LF	150.000	150.000
0258	650.4500	Construction Staking Subgrade	LF	2,663.000	2,663.000
0260	650.5000	Construction Staking Base	LF	2,663.000	2,663.000
0262	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	530.000	530.000
0264	650.6000	Construction Staking Pipe Culverts	EACH	7.000	7.000
0268	650.8000	Construction Staking Resurfacing Reference	LF	44,104.000	44,104.000
0272	650.9911	Construction Staking Supplemental Control (project) 01. 1550-02-76	EACH	1.000	1.000
0278	650.9920	Construction Staking Slope Stakes	LF	4,139.000	4,139.000
0292	690.0150	Sawing Asphalt	LF	2,703.000	2,703.000
0296	740.0440	Incentive IRI Ride	DOL	33,560.000	33,560.000
0298	ASP.1TOA	On-the-Job Training Apprentice at \$5.00/HR	HRS	1,500.000	1,500.000
0300	ASP.1TOG	On-the-Job Training Graduate at \$5.00/HR	HRS	990.000	990.000

Estimate Of Quantities By Plan Sets

0308	SPV.0195	Special 01. Asphaltic Surface Intersections	TON	577.000	1550-02-76 577.000
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3

CLEARING AND GRUBBING

STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
CATEGORY 0020			
STAGE 2			
CTH A			
20+20.00 - 21+21.00	LT	2	2
STAGE 2 SUBTOTAL		2	2
CATEGORY 0020 SUBTOTAL		2	2
ITEM TOTALS		2	2

REMOVING CURB

STATION	LOCATION	204.0130 LF	COMMENTS
CATEGORY 0020			
STAGE 2			
CTH A			
18+66.46 - 19+25.87	LT	119	ISLAND
CTH F			
17+45.21 - 17+99.31	RT	115	ISLAND
STAGE 2 SUBTOTAL		234	
CATEGORY 0020 SUBTOTAL		234	
ITEM TOTAL		234	

PREPARE FOUNDATION FOR

STATION	211.0101 ASPHALTIC PAVING (1550-02-76) EACH
CATEGORY 0010	
STAGE 3	
USH 63	
1+96.17 - 443+00.00	1
STAGE 3 SUBTOTAL	
1	
CATEGORY 0010 SUBTOTAL	
1	
ITEM TOTAL	
1	

3

REMOVING SMALL CULVERT PIPE CULVERTS

STATION	LOCATION	203.0100 EACH	COMMENTS
CATEGORY 0010			
STAGE 3			
USH 63			
19+02	R/L	1	30"X75' CPCS
85+00	R/L	1	24"X64' CPCS
156+98	R/L	1	30"X100' CPCS
256+57	R/L	1	24"X68' CPCS
261+63	R/L	1	36"X80' CPCS
STAGE 3 SUBTOTAL		5	
CATEGORY 0010 SUBTOTAL		5	
CATEGORY 0020			
STAGE 2			
CTH F			
17+43.24	R/L	1	30"X110' CPCS
CTH A			
19+64.50	R/L	1	24"X84' CPCS
STAGE 2 SUBTOTAL		2	
CATEGORY 0020 SUBTOTAL		2	
ITEM TOTAL		7	

REMOVING CURB & GUTTER

STATION	LOCATION	204.0150 LF
CATEGORY 0020		
STAGE 2		
CTH F		
17+20.02 - 17+57.37	RT	69
17+94.77 - 18+21.74	LT	48
CTH A		
18+50.38 - 18+85.59	RT	53
18+82.15 - 19+28.56	LT	70
STAGE 2 SUBTOTAL		240
CATEGORY 0020 SUBTOTAL		240
ITEM TOTAL		240

FINISHING ROADWAY (PROJECT)

STATION	LOCATION	213.0100 EACH
CATEGORY 0010		
USH 63		
1+96.17 - 443+00.00	LT & RT	1
CATEGORY 0010 SUBTOTAL		1
ITEM TOTAL		1

REMOVING ASPHALTIC SURFACE

STATION	LOCATION	MILLING 204.0120 SY	BUTT JOINTS 204.0115 SY
CATEGORY 0010			
STAGE 3			
USH 63			
1+96.17 - 158+24.35	LT & RT	54330	
158+24.35 - 342+00.00	LT & RT	65450	
342+00.00 - 443+00.00	LT & RT	34430	
5TH AVENUE	LT		110
10TH AVENUE	LT		320
10TH AVENUE	RT		280
25TH AVENUE	LT		200
25TH AVENUE	RT		520
7TH AVENUE	LT		390
7TH AVENUE	RT		370
CTH JJ	LT		320
CTH JJ	RT		640
GOLF ROAD	RT		200
46TH STREET	RT		140
40TH AVENUE	RT		200
45TH AVENUE	LT		250
45TH AVENUE	RT		220
60TH AVENUE	LT		160
60TH AVENUE	RT		130
65TH AVENUE	LT		110
STAGE 3 SUBTOTAL		154210	4560
CATEGORY 0010 SUBTOTAL		154210	4560
ITEM TOTAL		154210	4560

EARTHWORK SUMMARY

DIVISION	STATION	LOCATION	(1)	(2)(3)	(4)	(5)	(6)	WASTE CY	COMMENTS
			205.0100 EXCAVATION COMMON CY	SALVAGED/ UNUSABLE MATERIAL CY	AVAILABLE MATERIAL CY	UNEXPANDED FILL CY	EXPANDED FILL CY		
DIVISION 1 (STAGE 1)									
PROJECT 1550-06-75 US 63	176+22 - 177+53	US 63 LT & RT	0	0	0	0	0	0	SEE PEDESTRIAN UNDERPASS
PROJECT 1550-06-75 SUBTOTAL			0	0	0	0	0	0	
DIVISION 1 (STAGE 1) TOTAL			0	0	0	0	0	0	
DIVISION 2 (STAGE 2)									
PROJECT 1550-02-76 CATEGORY 0020	15+17 - 18+24	CTH F LT	27	3	24	279	363	-339	STAGE 2A TEMPORARY WIDENING
	18+75 - 19+30	CTH ALT	11	5	6	0	0	6	STAGE 2A REMOVE ISLAND
	19+34 - 21+64	CTH ALT	30	0	30	12	16	14	STAGE 2A TEMPORARY WIDENING
	15+24.80 - 18+18.84	CTH F RT	787	124	663	4	5	658	STAGE 2B
	156+10 - 157+22	USH 63 LT	130	32	98	105	135	-37	STAGE 2B - INT. TAPER OUT
	18+47.60 - 21+50	CTH ART	617	80	537	131	169	368	STAGE 2B
	15+40 - 18+18.84	CTH F LT	741	143	598	0	0	598	STAGE 2C
	18+47.60 - 21+50	CTH ALT	956	205	751	0	0	751	STAGE 2C
	159+52.69 - 161+00	USH 63 RT	302	17	285	0	0	285	STAGE 2C - INT. TAPER OUT
PROJECT 1550-02-76 SUBTOTAL CATEGORY 0020 TOTAL			3601	609	2992	531	688	2304	8
DIVISION 2 (STAGE 2) TOTAL			3601	609	2992	531	688	2304	8
DIVISION 3 (STAGE 3)									
PROJECT 1550-02-76 CATEGORY 0010	136+95 - 148+21	US 63 LT	31	0	31	132	172	-141	EAT'S AND GUARDRAIL
	152+63.57 - 157+68.09	US 63 RT	555	96	459	308	400	59	RIGHT TURN LANE - CTH A
	158+86.8 - 163+84.23	US 63 LT	426	73	353	66	87	266	RIGHT TURN LANE - CTH F
	172+45 - 175+53	US 63 RT	156	12	144	55	72	72	RIGHT TURN LANE - 7TH STREET
	172+58 - 175+61	US 63 LT	142	16	126	82	106	20	GUARDRAIL REMOVAL AND SLOPES
PROJECT 1550-02-76 SUBTOTAL CATEGORY 0010 TOTAL			1310	197	1113	643	837	276	0
DIVISION 3 (STAGE 3) TOTAL			1310	197	1113	643	837	276	0
PROJECT 1550-02-76 TOTAL		CATEGORY 0010	1310						
		CATEGORY 0020	3601						
	GRAND TOTALS		4911						

- (1) EXCAVATION COMMON IS THE TOTAL VOLUME OF CUT. ITEM NUMBER 205.0100
 - (2) SALVAGED/ UNUSABLE PAVEMENT MATERIAL ARE INCLUDED IN THE QUANTITY OF EXCAVATION COMMON.
 - (3) SALVAGED/ UNUSABLE PAVEMENT MATERIAL. INCLUDES ASPHALT, CURB AND GUTTER AND CURBS.
 - (4) AVAILABLE MATERIAL = EXCAVATION COMMON - UNUSABLE PAVEMENT MATERIAL.
 - (5) STAGES 2 AND 3 EXPANDED FILL FACTOR = 1.30
 - (6) THE MASS ORDINATE + OR - QTY FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL AND A MINUS QUANTITY INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.
- THE MASS ORDINATE IS = EXCAVATION COMMON - SALVAGED/UNUSABLE PAVEMENT MATERIAL - EXPANDED FILL.
- STAGE 2B & 2C EARTHWORK VOLUMES WERE COMPUTED TO THE FINISHED REFERENCE LINE. EARTHWORK ADJUSTMENTS WILL BE NEEDED TO FIT ACTUAL STAGING LIMITS

BASE AGGREGATE

STATION	LOCATION	305.0110 DENSE 3/4-INCH TON	305.0120 DENSE 1 1/4-INCH TON	350.0130 SUBBASE 9-INCH SY	COMMENTS
CATEGORY 0010					
STAGE 3					
USH 63					
1+96.17 - 18+82.00	LT & RT	164			SHOULDERS
18+82.00 - 19+22.00	LT & RT	32	148	254	CULVERT REPLACEMENT
19+22.00 - 84+82.00	LT & RT	638			SHOULDERS
84+82.00 - 85+17.00	LT & RT	28	130	222	CULVERT REPLACEMENT
85+17.00 - 136+95.25	LT & RT	504			SHOULDERS
136+95.25 - 148+20.95	LT	80			BEAM GUARD REPLACEMENT
136+95.25 - 152+63.57	RT	77			SHOULDERS
148+20.95 - 156+10.58	LT	39			SHOULDERS
156+78.00 - 157+22.00	LT & RT	34	163	280	CULVERT REPLACEMENT
152+63.57 - 157+68.09	RT	70	547	1206	RT TURN LANE
158+86.80 - 163+84.21	LT	70	503	1056	RT TURN LANE
160+52.76 - 172+48.19	RT	59			SHOULDERS
163+84.21 - 172+50.00	LT	43			SHOULDERS
172+50.00 - 176+00	LT	72	159	512	SLOPE GRADING
172+48.19 - 176+00	RT	49	117	387	SLOPE GRADING AND RT TURN LANE
179+00.00 - 256+40.00	LT & RT	753			SHOULDERS
256+40.00 - 256+74.00	LT & RT	27	126	216	CULVERT REPLACEMENT
256+74.00 - 261+50.00	LT & RT	47			SHOULDERS
261+50.00 - 262+20.00	LT & RT	55	259	444	CULVERT REPLACEMENT
262+20.00 - 443+00.00	LT & RT	1758			SHOULDERS
DRIVEWAYS					
12+84.2	RT	5			
12+93.7	LT	5			
15+40.4	LT	5			
25+02.1	LT	5			
26+07.2	RT	5			
26+66.3	RT	5			
42+23.6	RT	6			
64+28.6	LT	5			
74+67.8	RT	6			
78+09.5	RT	5			
79+43.6	LT	7			
82+38.3	LT	10			
82+78.9	RT	7			
90+60.6	LT	5			
90+66.2	RT	5			
94+94.2	RT	5			
96+84.8	LT	5			
117+19.29 23RD AVE	LT	6			
121+41.6	LT	11			
123+38.3	LT	12			
125+40.9	LT	9			
151+94.5	LT	5			
155+10.7	LT	7			
161+27.8	LT	2			
190+73.1	LT	11			
194+28.9	RT	13			
195+26.7	RT	7			
197+43.6	RT	5			
197+48.85 SERVICE RD	LT	8			
205+31.1	LT	9			
215+92.9	RT	5			
221+91.4	LT	5			
232+24.4	RT	5			
232+33.7	LT	5			
243+83.9	LT	5			
251+09.9	LT	7			
260+98.9	LT	5			
278+09.1	RT	6			
279+14.6	LT	5			
303+17.7	RT	5			
305+32.6	LT	5			

BASE AGGREGATE (CONTD)

STATION	LOCATION	305.0110 DENSE 3/4-INCH TON	305.0120 DENSE 1 1/4-INCH TON	350.0130 SUBBASE 9-INCH SY	COMMENTS
307+23.2	LT	5			
316+88.4	LT	5			
331+87.9	LT	5			
341+21.5	LT	5			
358+90.6	LT	5			
360+70.6	RT	5			
376+03.9	LT	5			
442+24.5	LT	5			
UNDISTRIBUTED		820			20% OF SHOULDERS
STAGE 3 SUBTOTAL		5718	2152	4576	
CATEGORY 0010 SUBTOTAL		5718	2152	4576	
CATEGORY 0020					
STAGE 2A					
CTH F					
15+17.20 - 159+00 (ML)	LT	20	190		TEMPORARY WIDENING
CTH A					
18+66.50 - 19+25.90	LT		31		ISLAND
19+29.80 - 21+64.20	LT	13	78		CULVERTS/ROADWAY
UNDISTRIBUTED		5	26		
STAGE 2A SUBTOTAL		38	325		
STAGE 2D					
CTH F					
15+29.50 - 17+08.23	RT	28			REPLACE SHOULDER
CTH A					
19+80.25 - 21+55.90	RT	28			REPLACE SHOULDER
STAGE 2D SUBTOTAL		56			
STAGE 2					
CTH F					
16+00.00 - 18+18.84	LT & RT	71	1071	2080	EXCLUDES RT TURN LANE
CTH A					
18+47.60 - 20+87.51	LT & RT	82	1129	2196	EXCLUDES RT TURN LANE
STAGE 2 SUBTOTAL		153	2200	4276	
CATEGORY 0020 SUBTOTAL		153	2200	4276	
ITEM TOTALS		5965	4677	8853	

SHAPING SHOULDERS

STATION	LOCATION	305.0500 STA
CATEGORY 0010		
USH 63		
1+96.17 - 443+00.00	LT & RT	885
CATEGORY 0010 SUBTOTAL		885
ITEM TOTAL		885

ASPHALTIC CONCRETE PAVEMENT ITEMS

ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES

STATION	LOCATION	455.0605 TACK COAT GAL	460.6645 HMA PAVEMENT 5 MT 58-34 V TON	460.6244 HMA PAVEMENT 4 MT 58-34 S TON	460.6644 HMA PAVEMENT 4 MT 58-34 V TON	465.0105 ASPHALTIC SURFACE TON	465.0110 ASPHALTIC SURFACE PATCHING TON	465.0125 ASPHALTIC SURFACE TEMPORARY TON	465.0315 ASPHALTIC FLUMES SY	SPV.0195.01 ASPHALTIC SURFACE INTERSECTIONS TON	COMMENTS
CATEGORY 0010											
STAGE 3											
USH 63											
1+96.17 - 18+82.00	LT & RT	674	551		472						
18+82.00 - 19+22.00	LT & RT	16			11	58					
19+22.00 - 84+82.00	LT & RT	2690	2197	38	1883					67	
84+82.00 - 85+17.00	LT & RT	14			10	51					
85+17.00 - 136+95.25	LT & RT	2121	1732	33	1485					111	
136+95.25 - 148+20.95	LT	288	235		202						
136+95.25 - 152+63.57	RT	314	256		220						
148+20.95 - 152+63.57	LT	158	129		111						
152+63.57 - 156+78.00	LT & RT	166	135		116						
156+78.00 - 157+22.00	LT & RT	18			12	64					
157+22.00 - 163+84.21	LT & RT	265	216		185						
152+63.57 - 157+68.09	RT	69	113	48							
158+86.80 - 163+84.21	LT	69	113	48							
163+84.21 - 256+40.00	LT & RT	3785	3091	187	2649					181	
256+40.00 - 256+74.00	LT & RT	14			10	49					
256+74.00 - 261+50.00	LT & RT	201	164		141					29	
261+50.00 - 262+20.00	LT & RT	31			22	114					
262+20.00 - 350+00.00	LT & RT	3552	2901		2486					109	
350+00.00 - 443+00.00	LT & RT	3758	3069		2631					81	
UNDISTRIBUTED		200	200								
UNDISTRIBUTED						100					
STAGE 3 SUBTOTAL		18402	15102	355	12645	335	100			577	
CATEGORY 0010 SUBTOTAL		18402	15102	355	12645	335	100			577	
CATEGORY 0020											
STAGE 2A											
CTH F											
15+17.20 - 159+00 (ML)	LT	63						117			TEMPORARY WIDENING
CTH A											
18+66.50 - 19+25.90	LT	4						9			ISLAND
19+29.60 - 21+64.20	LT	27						51			TEMPORARY WIDENING
STAGE 2A SUBTOTAL		94						177			
STAGE 2B											
CTH F											
15+29.50 - 17+08.23	RT	22						41			TEMPORARY WIDENING
CTH A											
19+80.25 - 21+55.90	RT	17						32			TEMPORARY WIDENING
STAGE 2B SUBTOTAL		39						73			
STAGE 2											
CTH F											
16+00.00 - 18+18.84	LT & RT	177	124	289					22		
CTH A											
18+47.60 - 20+87.51	LT & RT	183	128	299					34		
STAGE 2 SUBTOTAL		360	252	588					56		
CATEGORY 0020 SUBTOTAL		493	252	588				250	56		
ITEM TOTALS		18895	15354	943	12645	335	100	250	56	577	

STATION	LOCATION	465.0120 TON
CATEGORY 0010		
STAGE 3		
USH 63		
79+43.63	LT	13
82+38.39	RT	18
82+78.86	LT	13
121+41.60	LT	20
123+38.25	LT	22
190+73.57	RT	20
194+29.53	RT	23
197+48.85	LT	15
205+31.60	LT	16
STAGE 3 SUBTOTAL		144
CATEGORY 0010 SUBTOTAL		144
ITEM TOTAL		144

RT LANES TO CTH A
RT LANES TO CTH F

WEDGING
FOR REPAIRS AFTER MILLING

RUMBLE STRIPS

STATION	LOCATION	465.0475 ASPHALT CENTERLINE RUMBLE STRIPS 2-LANE RURAL LF
CATEGORY 0010		
STAGE 3		
USH 63		
1+96.17 - 24+25	CL	2229
28+25 - 50+50	CL	2225
54+50 - Clear Lake Limits (104+25)	CL	4975
Clear Lake Limits (222+50) - 237+00	CL	1450
241+00 - 249+00	CL	800
253+00 - 259+00	CL	600
263+00 - 290+00	CL	2700
294+00 - 321+00	CL	2700
325+00 - 377+00	CL	5200
381+00 - 405+00	CL	2400
409+00 - 443+00	CL	3400
STAGE 3 SUBTOTAL		28679
CATEGORY 0010 SUBTOTAL		28679
ITEM TOTAL		28679

CULVERT PIPE

STATION	LOCATION	520.3624 24-INCH LF	520.3630 CLASS III-B NON-METAL 30-INCH LF	520.3636 36-INCH	520.8700 CLEANING CULVERT PIPES EACH	520.9700.S CULVERT PIPE LINERS 24-INCH LF	520.9750.S CLEANING CULVERT PIPES FOR LINER VERIFICATION EACH	522.0424 REINFORCED CONCRETE CLASS IV 24-INCH LF	COMMENTS
CATEGORY 0010									
STAGE 3									
USH 63									
19+02.0	R/L		70						
26+36.6	R/L				1				
85+00.0	R/L							56	
92+98.0	R/L				1				
113+04.0	R/L				1				
142+97.0	R/L					168	1		24-INCH
156+98.0	R/L		106						
190+96.3	R/L				1				
256+57.0	R/L			85				66	
262+00.0	R/L				1				
421+33.6	R/L								
STAGE 3 SUBTOTAL			176	85	5	168	1	122	
CATEGORY 0010 SUBTOTAL			176	85	5	168	1	122	
CATEGORY 0020									
STAGE 2									
CTH F									
17+42.6	R/L		120						
CTH A									
19+64.5	R/L	84							
STAGE 2 SUBTOTAL		84	120						
CATEGORY 0020 SUBTOTAL		84	120						
ITEM TOTALS		84	296	85	5	168	1	122	

APRON ENDWALLS FOR CULVERT PIPE

STATION	LOCATION	520.1024 24-INCH EACH	520.1030 30-INCH EACH	520.1036 36-INCH EACH	522.1024 REINFORCED CONCRETE 24-INCH EACH
CATEGORY 0010					
STAGE 3					
USH 63					
19+02.0			2		
85+00.0					2
156+98.0			2		
256+57.0					2
262+00.0				1	
STAGE 3 SUBTOTAL			4	1	4
CATEGORY 0010 SUBTOTAL			4	1	4
CATEGORY 0020					
STAGE 2					
CTH F					
17+42.6	R/L		2		
CTH A					
19+64.5	R/L	2			
STAGE 2 SUBTOTAL		2	2		
CATEGORY 0020 SUBTOTAL		2	2		
ITEM TOTALS		2	6	1	4

NOTE:

① POLK COUNTY WILL SUPPLY AND INSTALL APRON ENDWALL 36-INCH ON EAST END OF CULVERT.

CONCRETE CURB TYPE J

STATION	LOCATION	601.012 LF
CATEGORY 0020		
STAGE 2		
CTH F		
17+51.72 - 17+94.89	RT	102
CTH A		
18+64.95 - 19+07.07	LT	98
STAGE 2 SUBTOTAL		200
CATEGORY 0020 SUBTOTAL		200
ITEM TOTAL		200

CONCRETE CURB & GUTTER 6-INCH SLOPED

STATION	LOCATION	601.0557 36-INCH TYPE D LF
CATEGORY 0020		
STAGE 2		
CTH F		
17+09.62 - 17+44.84	RT	90
17+81.38 - 18+22.21	LT	64
CTH A		
18+42.27 - 19+03.62	RT	84
18+83.44 - 19+37.88	LT	92
STAGE 2 SUBTOTAL		330
CATEGORY 0020 SUBTOTAL		330
ITEM TOTALS		330

CONCRETE SIDEWALK 4-INCH

STATION	LOCATION	602.0405 LF	COMMENTS
CATEGORY 0020			
STAGE 2			
CTH F			
17+51.72 - 17+94	RT	344	ISLAND
CTH A			
18+64.95 - 19+07	LT	313	ISLAND
STAGE 2 SUBTOTAL		657	
CATEGORY 0020 SUBTOTAL		657	
ITEM TOTAL		657	

REMOVING GUARDRAIL

STATION	LOCATION	204.0165 LF	COMMENTS
CATEGORY 0010			
STAGE 3			
USH 63			
138+21.29 - 146+94.46	LT	880	
172+70.07 - 175+47.35	RT	341	INCLUDES 7TH ST
172+92.19 - 176+38.82	LT	390	INCLUDES 7TH ST
STAGE 3 SUBTOTAL		1611	
CATEGORY 0010 SUBTOTAL		1611	
ITEM TOTAL		1611	

MGS GUARDRAIL

STATION	LOCATION	614.2330 GUARDRAIL 3 K LF	614.2610 TERMINAL EAT EACH
CATEGORY 0010			
STAGE 3			
USH 63			
138+14.98 - 138+68.07	LT		1
138+68.07 - 146+49.84	LT	787.5	
146+49.84 - 147+02.45	LT		1
STAGE 3 SUBTOTAL		787.5	2
CATEGORY 0010 SUBTOTAL		787.5	2
ITEM TOTALS		787.5	2

MOBILIZATION

STATION	LOCATION	619.1000 EACH
CATEGORY 0010		
USH 63		
1+96.17 - 443+00.00	LT & RT	0.9
CATEGORY 0010 SUBTOTAL		0.9
CATEGORY 0020		
USH 63		
1+96.17 - 443+00.00	LT & RT	0.1
CATEGORY 0020 SUBTOTAL		0.1
ITEM TOTAL		1

3

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TOPSOIL ITEMS

STATION	LOCATION	625.0100 TOPSOIL SY	625.0500 SALVAGED TOPSOIL SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB
CATEGORY 0010					
STAGE 3					
USH 63					
18+50.0 - 19+50.0	LT & RT		322	0.20	8.7
84+50.0 - 85+50.0	LT & RT		264	0.17	7.1
136+95.2 - 148+20.9	LT	1318		0.83	35.6
152+63.5 - 157+68.1	RT		1638	1.03	44.2
158+86.8 - 163+84.2	LT		306	0.19	8.3
158+87 - 163+83.0	LT		673	0.42	18.2
159+53 - 161+00	RT		408	0.26	11.0
172+45.0 - 176+00.0	RT	878		0.55	23.7
172+58.0 - 176+00.0	LT	1014		0.64	27.4
255+50.0 - 257+00.0	LT & RT		368	0.23	9.9
261+20.0 - 263+00.0	LT & RT		818	0.52	22.1
UNDISTRIBUTED					54.0
STAGE 3 SUBTOTAL		3211	4796	5	270.2
CATEGORY 0010 SUBTOTAL		3211	4796	5	270.2
CATEGORY 0020					
STAGE 2					
CTH F					
16+00.00 - 18+18.84	LT & RT		1147	0.72	31.0
CTH A					
18+61.62 - 20+87.51	LT & RT		1322	0.83	35.7
UNDISTRIBUTED		500			16.6
STAGE 2 SUBTOTAL		500	2469	2	83.3
CATEGORY 0020 SUBTOTAL		500	2469	2	83.3
ITEM TOTALS		3711	7265	7	354.0

EROSION CONTROL ITEMS

STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.2002 EROSION MAT CLASS I TYPE A SY	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	628.7570 ROCK BAGS EACH
CATEGORY 0010									
STAGE 3									
USH 63									
19+02	LT & RT	135	135	1	1	322	18	1	1
85+00	LT & RT					264	18	1	1
137+00 - 148+21	LT	1163	1163			1318	20		1
152+64 - 157+68	RT	503	503			1638	18		1
156+00 - 157+09	LT					306	18	1	1
158+87 - 163+84	LT					673	18		1
159+53 - 161+00	RT					408	18		1
172+45 - 175+47	RT	379	379			878	18		1
172+58 - 176+65	LT	463	463			1014	18		
256+57	LT & RT	117	117			368	18	1	1
261+63	LT & RT					818	18	1	1
UNDISTRIBUTED		690	690			2002	50	1	3
STAGE 3 SUBTOTAL		3450	3450	1	1	10009	250	6	13
CATEGORY 0010 SUBTOTAL		3450	3450	1	1	10009	250	6	13
CATEGORY 0020									
STAGE 2									
CTH F									
16+00.00 - 18+08.12	LT & RT			2	1	1147	30	1	
CTH A									
18+61.62 - 20+87.51	LT & RT	180	180	2	1	1322	30	1	
UNDISTRIBUTED		45	45			617	15	1	
STAGE 2 SUBTOTAL		225	225	4	2	3086	75	3	
CATEGORY 0020 SUBTOTAL		225	225	4	2	3086	75	3	
ITEM TOTALS		3675	3675	5	3	13095	325	9	13

MARKERS CULVERT END

STATION	LOCATION	633.5200 EACH
CATEGORY 0010		
STAGE 3		
USH 63		
19+02	R/L	2
26+36	R/L	2
40+00	R/L	2
62+32	R/L	2
66+48	R/L	2
85+00	R/L	2
92+98	R/L	2
113+04	R/L	2
142+98	R/L	2
156+98	R/L	2
174+83	R/L	2
190+96	R/L	2
199+27	R/L	2
201+39	R/L	2
207+93	R/L	2
235+96	R/L	2
256+57	R/L	2
261+63	R/L	2
291+66	R/L	2
357+03	R/L	2
368+16	R/L	2
393+33	R/L	2
404+40	R/L	2
421+34	R/L	2
STAGE 3 SUBTOTAL		48
CATEGORY 0010 SUBTOTAL		48
CATEGORY 0020		
STAGE 2		
CTH F		
17+43.24	R/L	2
CTH A		
18+47.60 - 20+87.51	R/L	2
STAGE 2 SUBTOTAL		4
CATEGORY 0020 SUBTOTAL		4
ITEM TOTAL		52

FIELD OFFICE TYPE D

STATION	LOCATION	642.5401 EACH
CATEGORY 0010		
USH 63		
1+96.17 - 443+00.00	LT & RT	0.9
CATEGORY 0010 SUBTOTAL		0.9
CATEGORY 0020		
USH 63		
1+96.17 - 443+00.00	LT & RT	0.1
CATEGORY 0020 SUBTOTAL		0.1
ITEM TOTAL		1

TRAFFIC CONTROL ITEMS

STATION - STATION	DAYS	NO.	DRUMS DAY	NO.	BARRICADES TYPE III DAY	NO.	WARNING LIGHTS TYPE A DAY	NO.	TYPE C DAY	NO.	ARROW BOARDS DAY	NO.	SIGNS DAY	646.9000 MARKING REMOVAL LINE 4-INCH LF	643.3105 MARKING LINE 4-INCH LF	643.3120 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH LF	643.3805 STOP LINE PAINT 18-INCH LF
CATEGORY 0010																	
USH 63																	
STAGE 3																	
1+96.17 - 443+00.00	1	0	0	0	0	0	0	0	0	0	0	144	144				
STAGE 3 SUBTOTAL			0	0	0	0	0	0	0	0	0	144	144				
CATEGORY 0010 SUBTOTAL			0	0	0	0	0	0	0	0	0	144	144				
CATEGORY 0020																	
STAGE 2A																	
CTH F																	
1	18	18	0	0	0	0	0	0	0	0	15	15					47
CTH A																	
1	41	41	0	0	0	0	0	0	0	0	13	13					60
STAGE 2A SUBTOTAL		2	59	0	0	0	0	0	0	0	28	28					107
STAGE 2B																	
CTH F																	
1	45	45	0	0	0	20	20	0	18	18	80	18	80	301	906	12	12
CTH A																	
1	52	52	2	2	4	4	16	16	1	1	22	22	70	226	994	51	51
STAGE 2B SUBTOTAL			97	2	4	36	36	1	40	40	150	40	150	527	1900	63	63
STAGE 2C																	
CTH F																	
1	49	49	2	2	4	4	15	15	1	1	21	21		168	929	59	59
CTH A																	
1	45	45	0	0	0	10	10	0	18	18		18	18	189	1017	12	12
STAGE 2C SUBTOTAL		2	94	2	4	25	25	1	39	39	357	39	357	1946	71	71	71
CATEGORY 0020 SUBTOTAL			250	4	8	61	61	2	107	107	150	107	150	884	3846	241	241
ITEM TOTALS			250	4	8	61	61	2	251	251	150	251	150	884	3846	241	241

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MARKING ITEMS

STATION	LOCATION	646.1020		646.1040	646.3020		646.4520	646.5020	646.5120	646.6120	646.8120	646.8220	643.3120
		MARKING LINE EPOXY 4-INCH (YELLOW) LF	DASHED (YELLOW) LF	MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE) LF	MARKING LINE EPOXY 8-INCH (WHITE) LF	MARKING LINE SAME DAY EPOXY 4-INCH LF	ARROW EPOXY EACH	WORD EPOXY EACH	MARKING STOP LINE EPOXY 18-INCH LF	CURB EPOXY LF	MARKING ISLAND NOSE EPOXY EACH	TEMPORARY MARKING LINE PAINT 4-INCH LF	
CATEGORY 0010													
USH 63													
1+96.17 - 158+24	LT & RT	10327	3246	30405	555	13573		2	1				27146
158+24 - 323+00	LT & RT	8355	3678	31620	600	12033		4	1				24066
323+00 - 443+00	LT & RT	3200	2746	23550		5946							11892
CATEGORY 0010 SUBTOTAL		21882	9670	85575	1155	31552		6	2				63104
CATEGORY 0020													
CTH F													
16+00.00 - 18+31.10	LT & RT	380		285						54	84	3	
CTH A													
18+35.41 - 20+87.51	LT & RT	428		340						46	76	3	
CATEGORY 0020 SUBTOTAL		808		625						100	160	6	
ITEM TOTALS		22690	9670	86200	1155			6	2	100	160	6	63104

CONSTRUCTION STAKING

STATION	LOCATION	650.4500	650.5000	650.9920
		SUBGRADE LF	BASE LF	SLOPE STAKES LF
CATEGORY 0010				
STAGE 3				
USH 63				
18+50 - 19+50	LT & RT			100
18+82 - 19+22	LT & RT	40	40	
84+50 - 85+50	LT & RT			100
84+82 - 85+17	LT & RT	35	35	
136+95 - 148+20	LT			1125
152+63 - 157+68	RT	505	505	505
158+86 - 163+86	LT	500	500	500
172+45 - 176+42	LT	432	432	432
172+58 - 176+53	RT	364	364	364
255+50 - 257+00	LT & RT			150
256+40 - 256+74	LT & RT	34	34	
261+20 - 263+00	LT & RT			180
261+50 - 262+20	LT & RT	70	70	
STAGE 3 SUBTOTAL		1980	1980	3456
CATEGORY 0010 SUBTOTAL		1980	1980	3456
CATEGORY 0020				
STAGE 2				
CTH F				
16+00.00 - 18+31.10	LT & RT	231	231	231
156+10 - 157+10	LT	100	100	100
159+52 - 160+52	RT	100	100	100
CTH A				
18+35.41 - 20+87.51	LT & RT	252	252	252
STAGE 2 SUBTOTAL		683	683	683
CATEGORY 0020 SUBTOTAL		683	683	683
ITEM TOTALS		2663	2663	4139

SIGN ITEMS

STATION	LOCATION	638.2101	638.4000
		MOVING SIGNS TYPE I EACH	MOVING SMALL SIGN SUPPORTS EACH
CATEGORY 0020			
NB USH 63			
	AMERY / CLEAR LAKE	1	2
	CTH A / CTH F	1	1
	SPEED LIMIT 45	1	1
	NORTH US 63	1	1
SB USH 63			
	CTH A / CTH F	1	1
	SPEED LIMIT 45	1	1
	SOUTH US 63	1	1
CTH A			
	CTH A	1	1
	MEDIAN ARROWS	1	1
	STOP SIGNS	3	3
	DO NOT ENTER (ON BACK OF STOP SIGN)	1	
	US 63	1	1
CTH F			
	END CTH F	1	1
	CTH A	1	1
	MEDIAN ARROWS	1	1
	STOP SIGNS	3	3
	DO NOT ENTER (ON BACK OF STOP SIGN)	1	
	US 63	1	1
ITEM TOTALS		22	21

CONSTRUCTION STAKING

STATION	LOCATION	650.5500 CURB GUTTER AND CURB & GUTTER LF
CATEGORY 0020		
STAGE 2		
CTH F		
17+09.62 - 17+44.84	RT	90
17+51.72 - 17+94.89	RT	102
17+81.38 - 18+22.21	LT	64
CTH A		
18+42.27 - 19+03.62	RT	84
18+64.95 - 19+07.07	LT	98
18+83.44 - 19+37.88	LT	92
STAGE 2 SUBTOTAL		530
CATEGORY 0020 SUBTOTAL		530
ITEM TOTAL		530

CONSTRUCTION STAKING

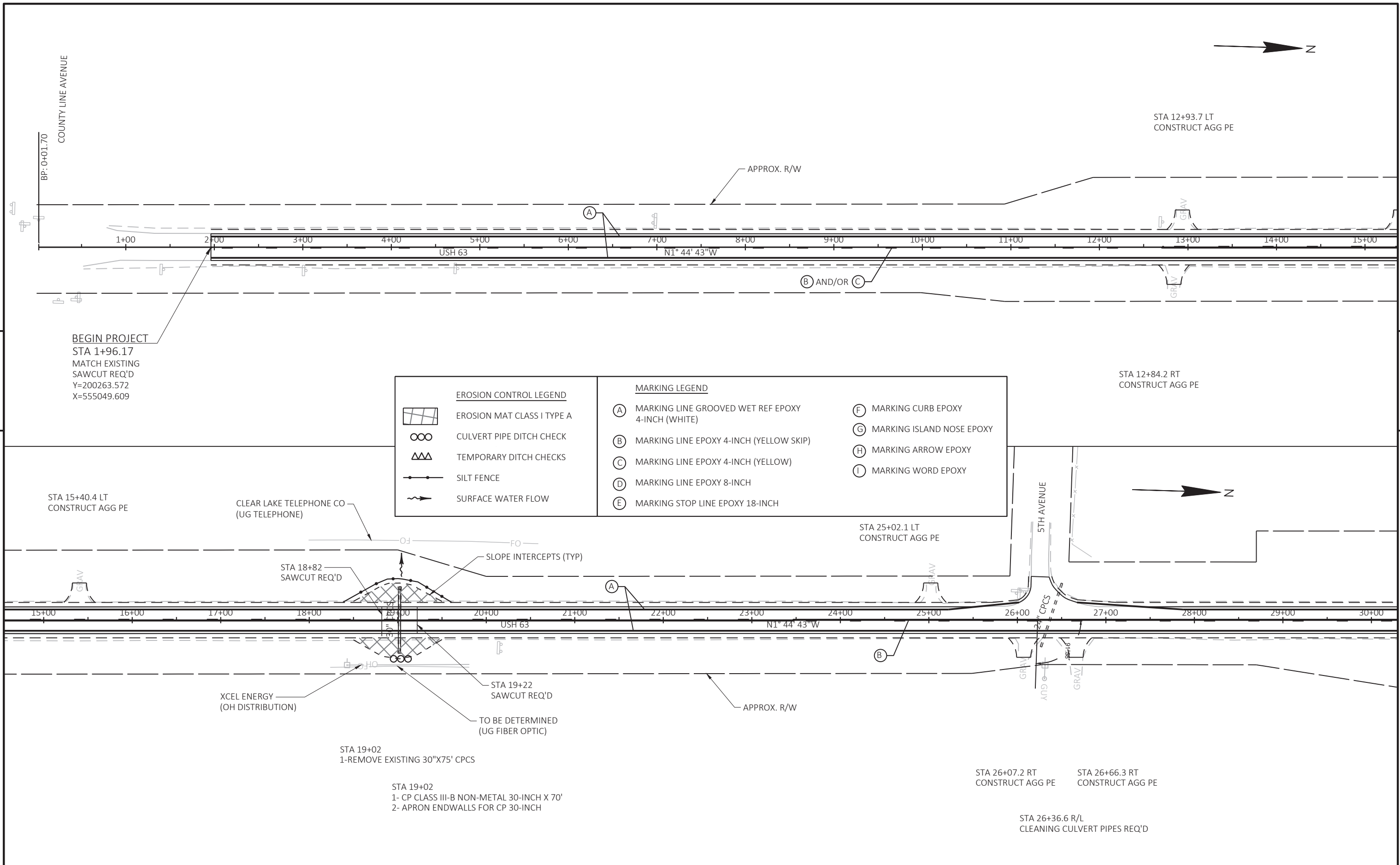
STATION	LOCATION	650.6000 PIPE CULVERTS EACH
CATEGORY 0010		
STAGE 3		
USH 63		
19+02		1
85+00		1
156+98		1
256+57		1
261+63		1
STAGE 3 SUBTOTAL		5
CATEGORY 0010 SUBTOTAL		5
CATEGORY 0020		
STAGE 2		
CTH F		
17+43.24	R/L	1
CTH A		
18+47.60 - 20+87.51	R/L	1
STAGE 2 SUBTOTAL		2
CATEGORY 0020 SUBTOTAL		2
ITEM TOTAL		7

CONSTRUCTION STAKING

STATION	LOCATION	650.8000 RESURFACING REFERENCE LF	650.9911 SUPPLEMENTAL CONTROL (1550-02-76) EACH
CATEGORY 0010			
STAGE 3			
USH 63			
1+96.17 - 443+00.00	LT & RT	44104	1
STAGE 3 SUBTOTAL		44104	1
CATEGORY 0010 SUBTOTAL		44104	1
ITEM TOTAL		44104	1

SAWING ASPHALT

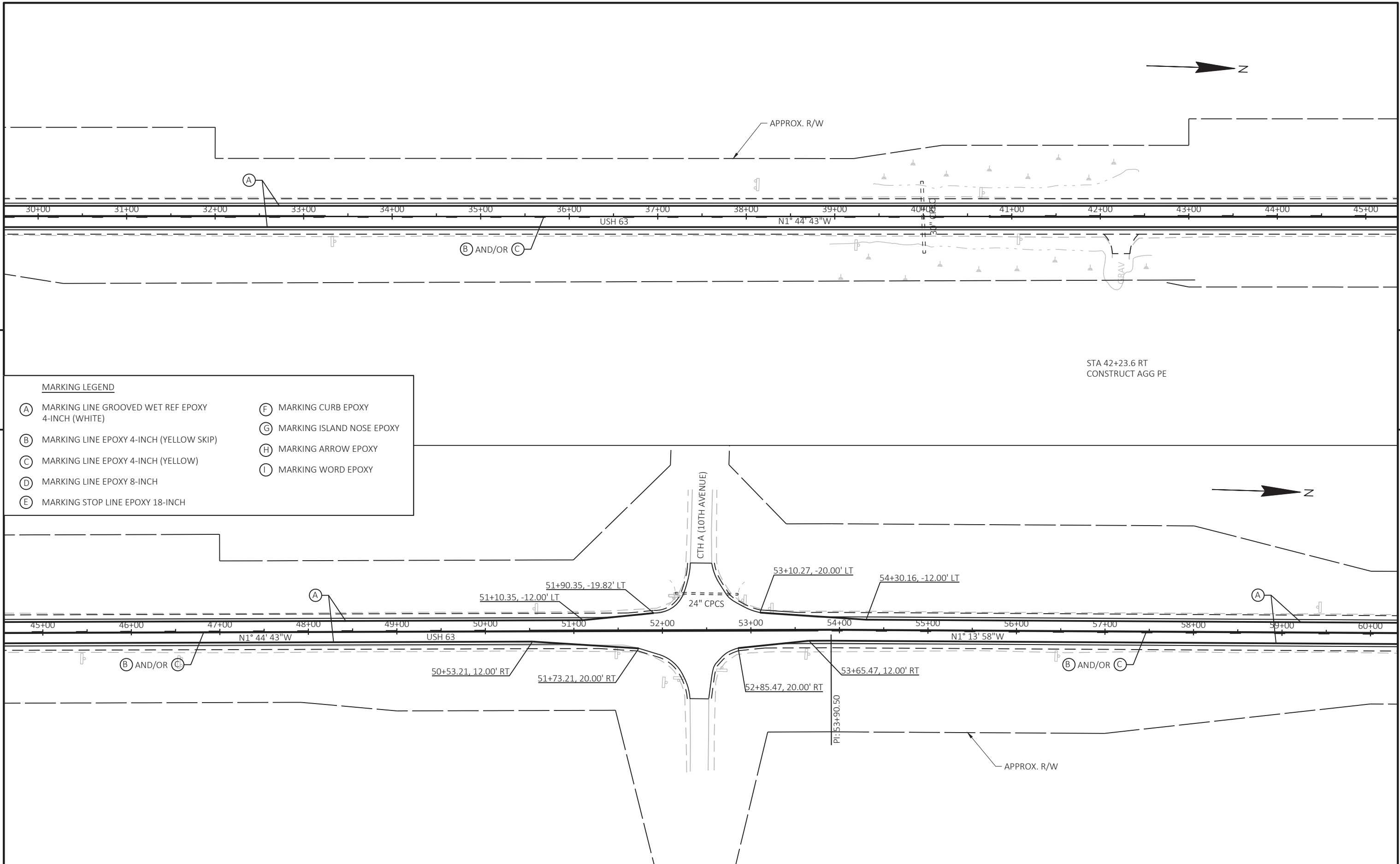
STATION	LOCATION	690.0150 LF	COMMENTS
CATEGORY 0010			
STAGE 3			
USH 63			
1+96.17	LT & RT	30	
18+82	LT & RT	30	
19+22	LT & RT	30	
26+25.58	LT	20	5TH AVENUE
52+41.50	RT	21	10TH AVENUE
52+43.81	LT	24	10TH AVENUE
79+43.63	LT	16	
82+38.39	RT	26	
82+78.86	LT	16	
84+82.00	LT & RT	30	
85+17.00	LT & RT	30	
121+41.60	LT	30	
123+38.25	LT	35	
130+40.96	LT	26	25TH AVENUE
130+43.60	RT	23	25TH AVENUE
152+63 - 157+68	RT	505	
158+86 - 163+86	LT	500	
156+78.00	LT & RT	24	
157+22.00	LT & RT	24	
175+63.60	RT	22	7TH STREET
176+51.67	LT	22	7TH STREET
190+73.57	LT	32	
192+29.01	RT	27	CTH JJ
193+07.73	LT	34	CTH JJ
194+29.53	RT	35	
197+48.85	LT	20	
205+31.60	LT	23	
239+15.19	RT	33	GOLF ROAD
251+22.74	RT	28	46TH STREET
256+40.00	LT & RT	30	
256+74.00	LT & RT	30	
261+38.95	RT	22	40TH AVENUE
261+50.00	LT & RT	42	
262+20.00	LT & RT	30	
291+80.87	LT	21	45TH AVENUE
292+68.58	RT	27	45TH AVENUE
322+87.07	LT	22	CHRISTEANSON ROAD
323+66.44	RT	22	CHRISTEANSON ROAD
378+95.82	LT	20	60TH AVENUE
379+48.06	RT	37	60TH AVENUE
406+76.93	LT	22	65TH AVENUE
407+28.42	RT	16	65TH AVENUE
443+00.00	LT & RT	30	
STAGE 3 SUBTOTAL		2087	
CATEGORY 0010 SUBTOTAL		2087	
CATEGORY 0020			
STAGE 2			
CTH F			
16+00.00	LT & RT	24	
CTH A			
20+87.51	LT & RT	30	
USH 63			
156+10 - 158+87	12' LT	278	
157+68 - 160+53	12' RT	284	
STAGE 2 SUBTOTAL		616	
CATEGORY 0020 SUBTOTAL		616	
ITEM TOTAL		2703	



5

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PROJECT NO: 1550-02-76	HWY: USH 63	COUNTY: POLK	PLAN	SHEET	E
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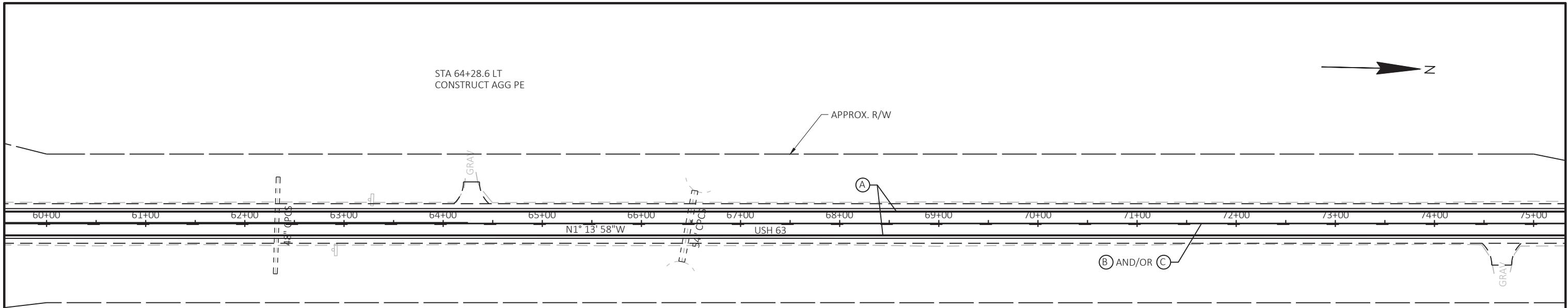
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MARKING LEGEND

(A) MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE)	(F) MARKING CURB EPOXY
(B) MARKING LINE EPOXY 4-INCH (YELLOW SKIP)	(G) MARKING ISLAND NOSE EPOXY
(C) MARKING LINE EPOXY 4-INCH (YELLOW)	(H) MARKING ARROW EPOXY
(D) MARKING LINE EPOXY 8-INCH	(I) MARKING WORD EPOXY
(E) MARKING STOP LINE EPOXY 18-INCH	

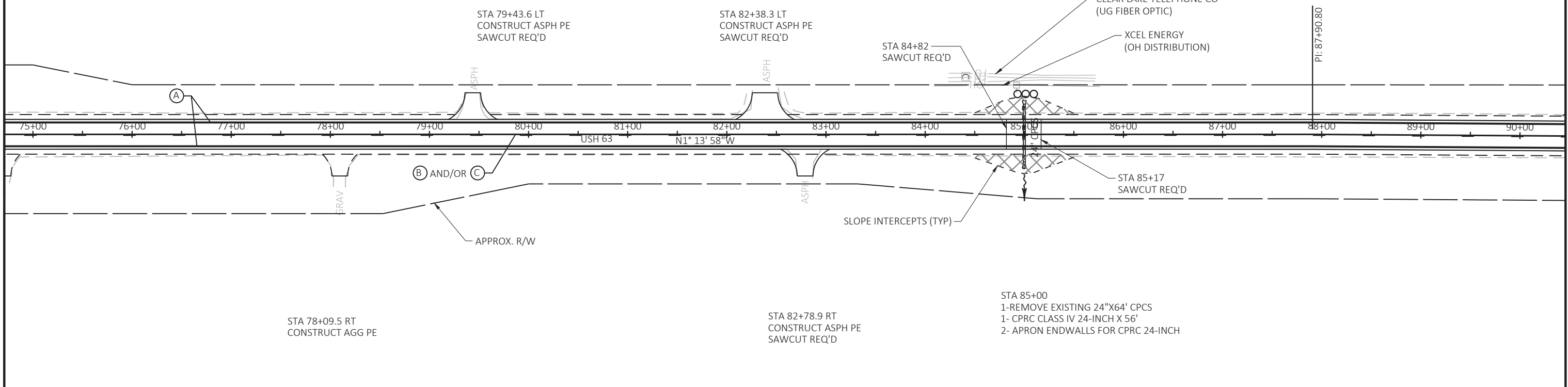
STA 42+23.6 RT
CONSTRUCT AGG PE



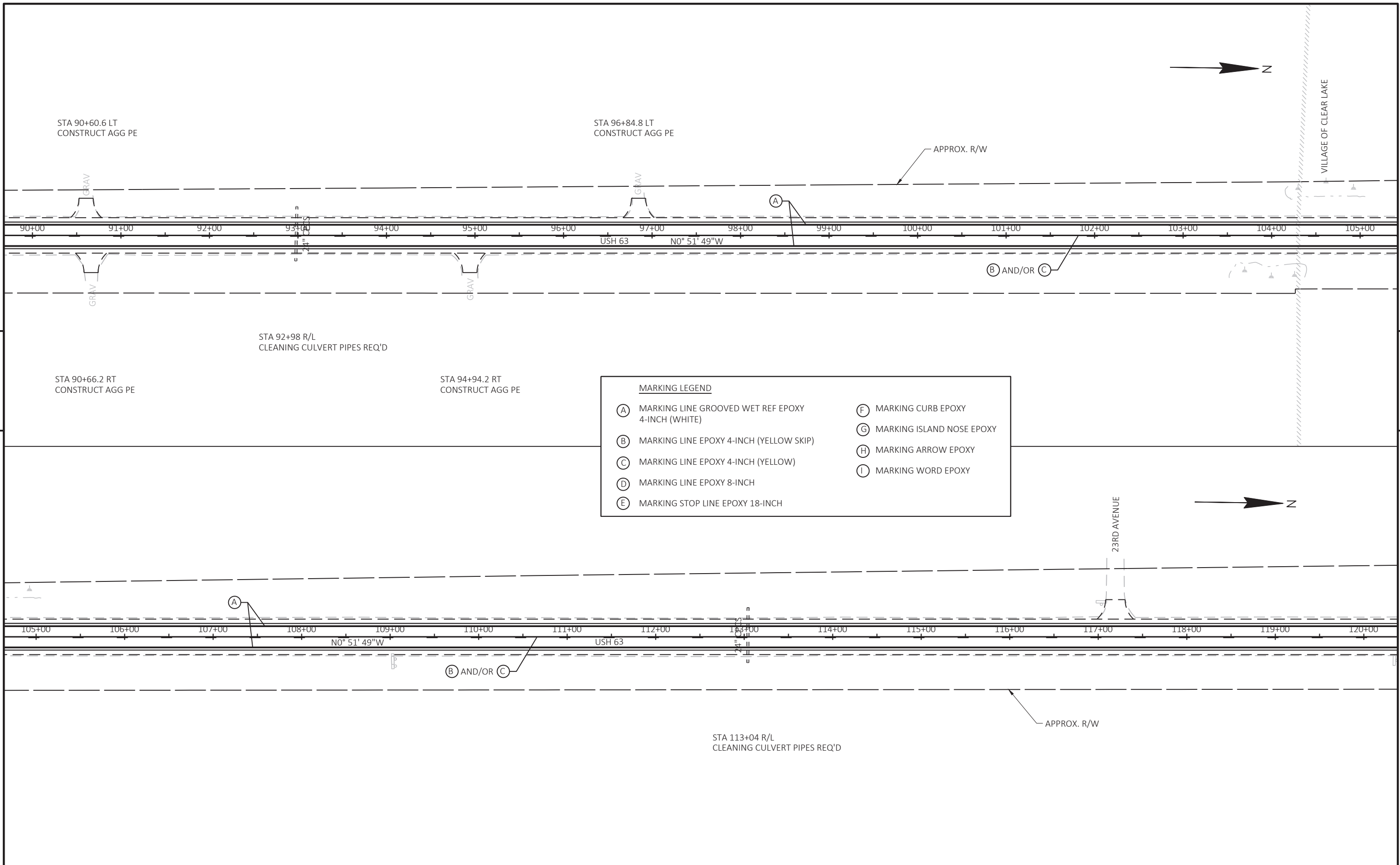
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MARKING LEGEND		EROSION CONTROL LEGEND	
(A) MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE)	(F) MARKING CURB EPOXY	EROSION MAT CLASS I TYPE A	
(B) MARKING LINE EPOXY 4-INCH (YELLOW SKIP)	(G) MARKING ISLAND NOSE EPOXY	CULVERT PIPE DITCH CHECK	
(C) MARKING LINE EPOXY 4-INCH (YELLOW)	(H) MARKING ARROW EPOXY	TEMPORARY DITCH CHECKS	
(D) MARKING LINE EPOXY 8-INCH	(I) MARKING WORD EPOXY	SILT FENCE	
(E) MARKING STOP LINE EPOXY 18-INCH		SURFACE WATER FLOW	



PROJECT NO: 1550-02-76	HWY: USH 63	COUNTY: POLK	PLAN	SHEET	E
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MARKING LEGEND	
(A)	MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE)
(B)	MARKING LINE EPOXY 4-INCH (YELLOW SKIP)
(C)	MARKING LINE EPOXY 4-INCH (YELLOW)
(D)	MARKING LINE EPOXY 8-INCH
(E)	MARKING STOP LINE EPOXY 18-INCH
(F)	MARKING CURB EPOXY
(G)	MARKING ISLAND NOSE EPOXY
(H)	MARKING ARROW EPOXY
(I)	MARKING WORD EPOXY

PROJECT NO: 1550-02-76

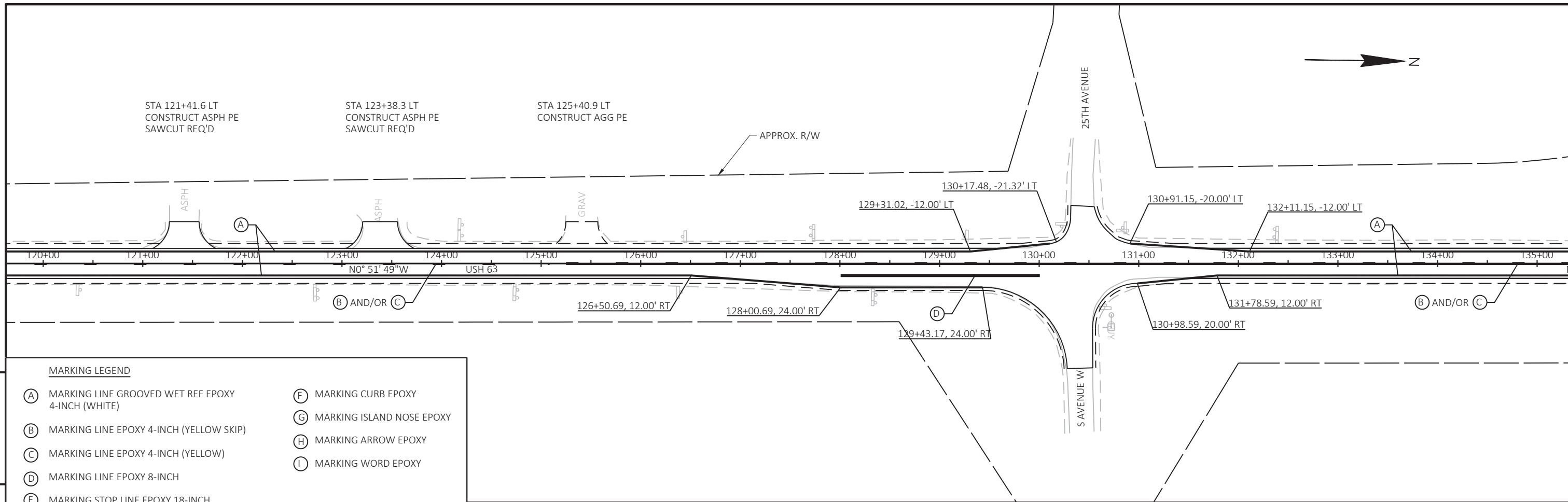
HWY: USH 63

COUNTY: POLK

PLAN

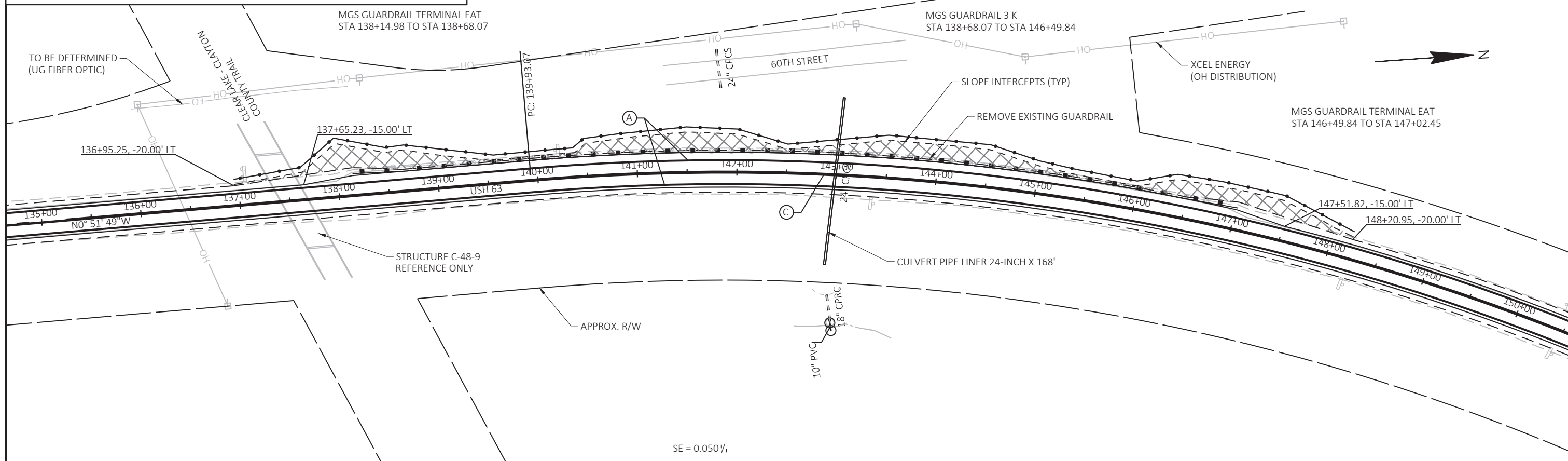
SHEET

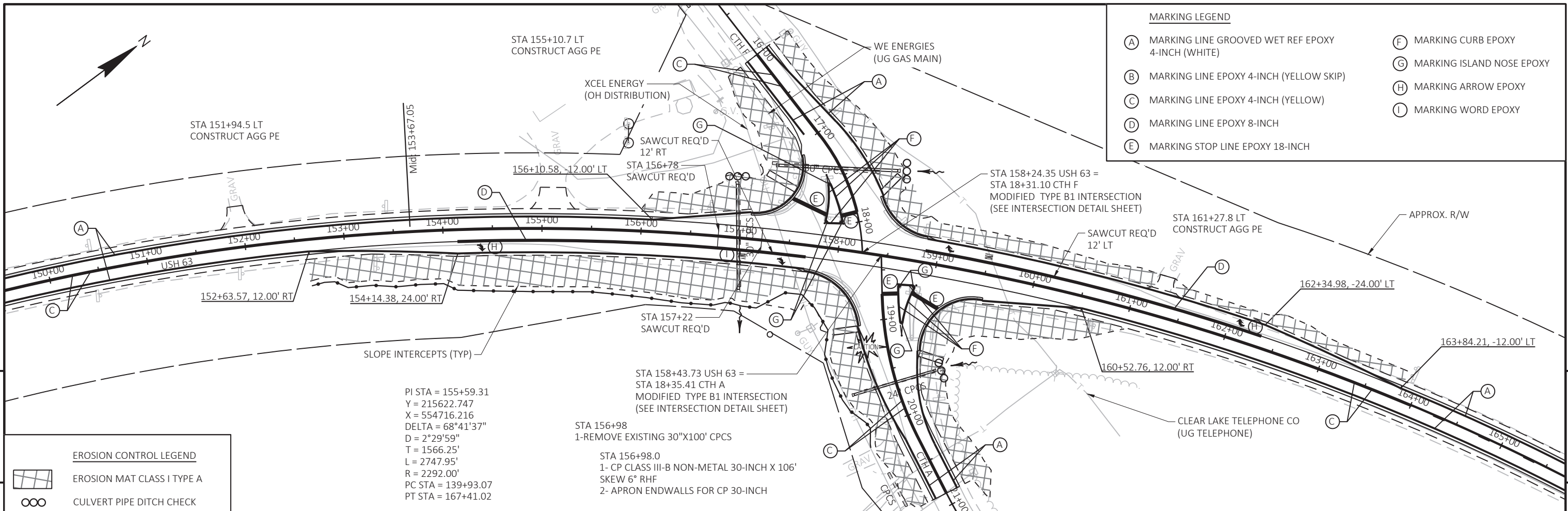
E



MARKING LEGEND

- | | |
|---|-------------------------------|
| (A) MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE) | (F) MARKING CURB EPOXY |
| (B) MARKING LINE EPOXY 4-INCH (YELLOW SKIP) | (G) MARKING ISLAND NOSE EPOXY |
| (C) MARKING LINE EPOXY 4-INCH (YELLOW) | (H) MARKING ARROW EPOXY |
| (D) MARKING LINE EPOXY 8-INCH | (I) MARKING WORD EPOXY |
| (E) MARKING STOP LINE EPOXY 18-INCH | |





MARKING LEGEND

(A) MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE)	(F) MARKING CURB EPOXY
(B) MARKING LINE EPOXY 4-INCH (YELLOW SKIP)	(G) MARKING ISLAND NOSE EPOXY
(C) MARKING LINE EPOXY 4-INCH (YELLOW)	(H) MARKING ARROW EPOXY
(D) MARKING LINE EPOXY 8-INCH	(I) MARKING WORD EPOXY
(E) MARKING STOP LINE EPOXY 18-INCH	

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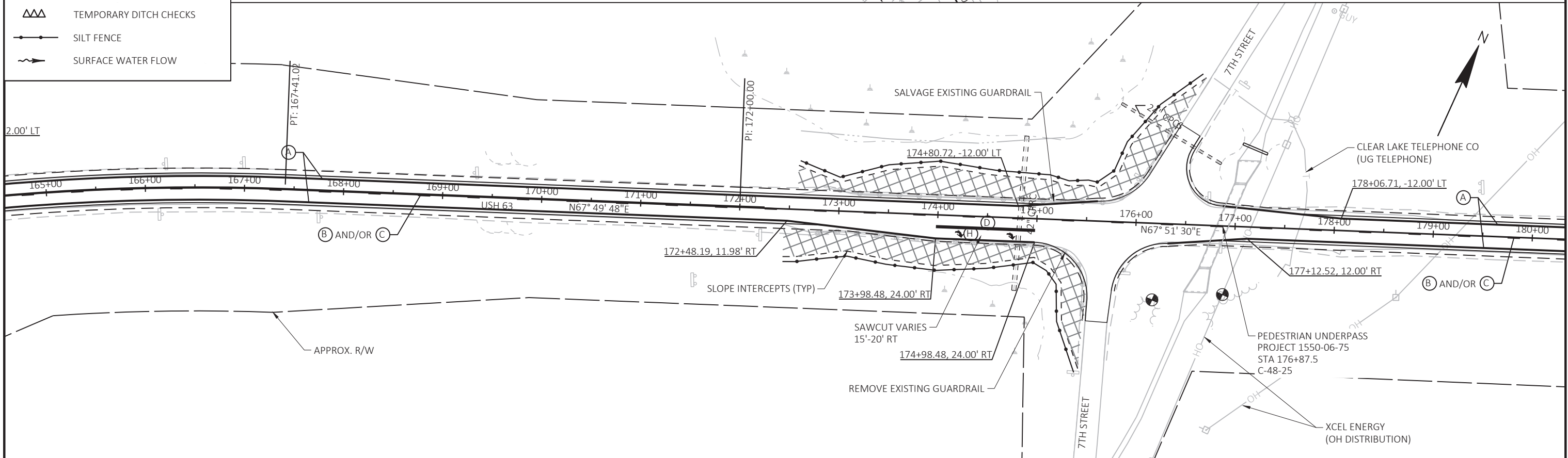
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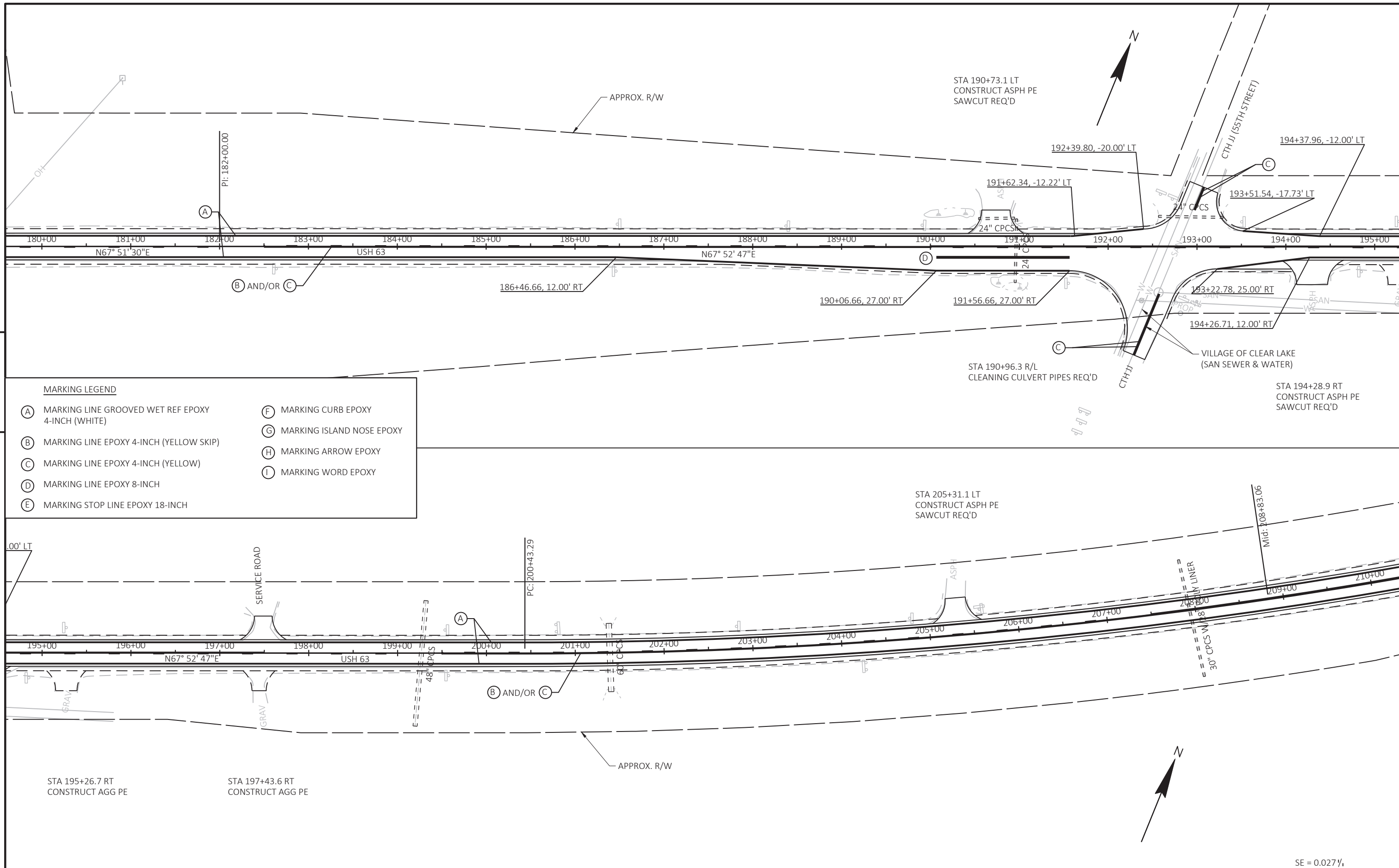
EROSION CONTROL LEGEND

	EROSION MAT CLASS I TYPE A
	CULVERT PIPE DITCH CHECK
	TEMPORARY DITCH CHECKS
	SILT FENCE
	SURFACE WATER FLOW

PI STA = 155+59.31
 Y = 215622.747
 X = 554716.216
 DELTA = 68°41'37"
 D = 2°29'59"
 T = 1566.25'
 L = 2747.95'
 R = 2292.00'
 PC STA = 139+93.07
 PT STA = 167+41.02

STA 156+98
 1- REMOVE EXISTING 30"x100" CPCS
 STA 156+98.0
 1- CP CLASS III-B NON-METAL 30-INCH X 106"
 SKEW 6° RHF
 2- APRON ENDWALLS FOR CP 30-INCH





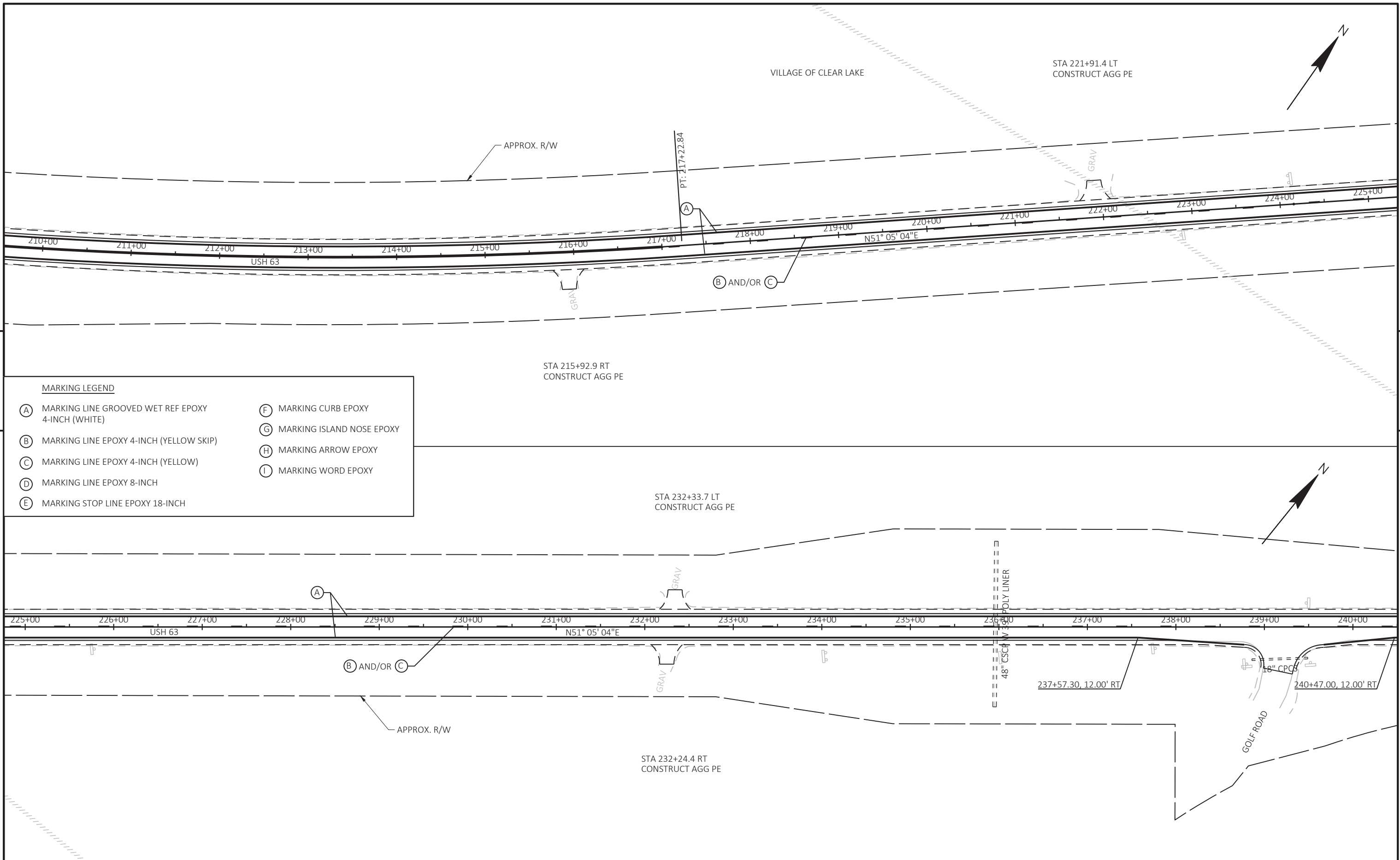
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5

MARKING LEGEND

(A) MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE)	(F) MARKING CURB EPOXY
(B) MARKING LINE EPOXY 4-INCH (YELLOW SKIP)	(G) MARKING ISLAND NOSE EPOXY
(C) MARKING LINE EPOXY 4-INCH (YELLOW)	(H) MARKING ARROW EPOXY
(D) MARKING LINE EPOXY 8-INCH	(I) MARKING WORD EPOXY
(E) MARKING STOP LINE EPOXY 18-INCH	

PROJECT NO: 1550-02-76	HWY: USH 63	COUNTY: POLK	PLAN	SHEET	E
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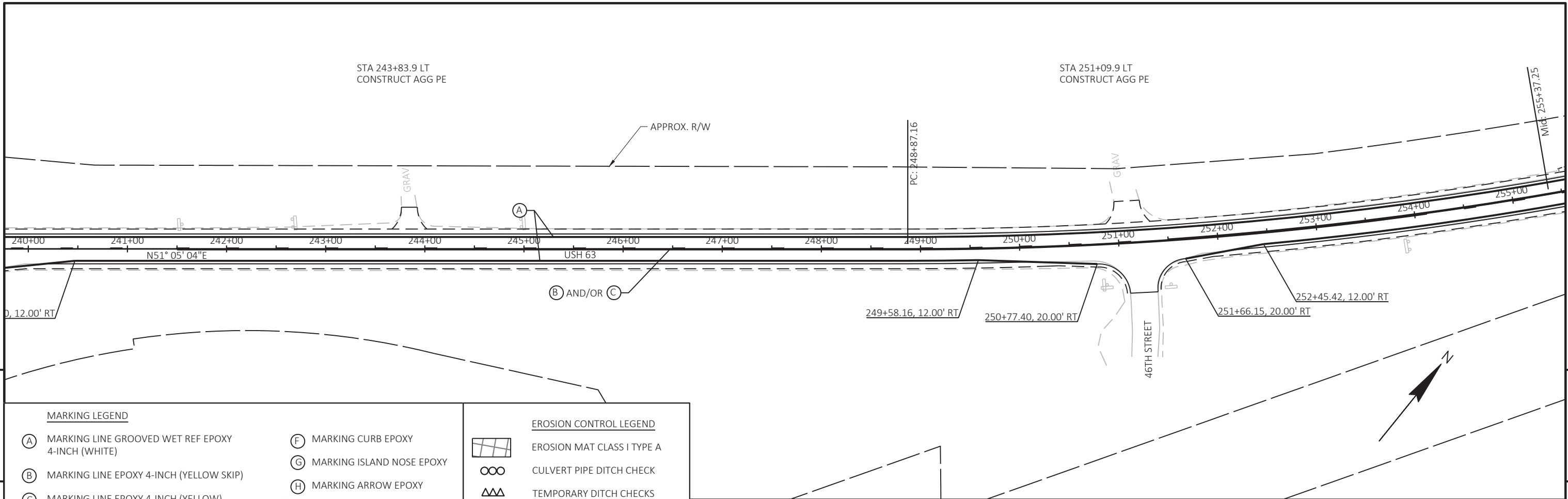


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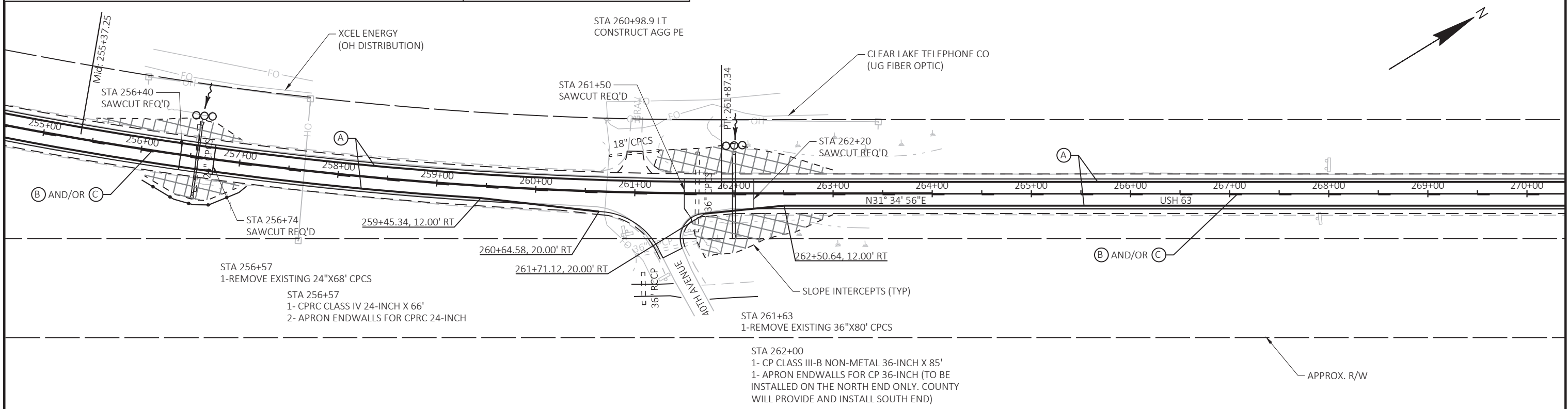
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MARKING LEGEND

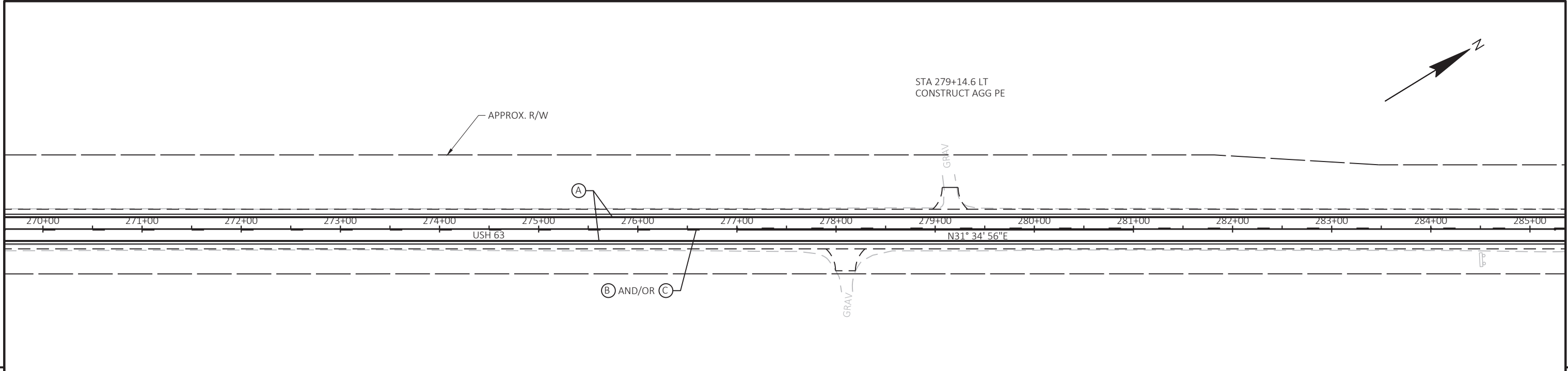
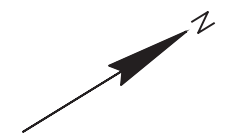
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(B) MARKING LINE EPOXY 4-INCH (YELLOW SKIP)	(G) MARKING ISLAND NOSE EPOXY
(C) MARKING LINE EPOXY 4-INCH (YELLOW)	(H) MARKING ARROW EPOXY
(D) MARKING LINE EPOXY 8-INCH	(I) MARKING WORD EPOXY
(E) MARKING STOP LINE EPOXY 18-INCH	



MARKING LEGEND		EROSION CONTROL LEGEND	
(A)	MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE)		EROSION MAT CLASS I TYPE A
(B)	MARKING LINE EPOXY 4-INCH (YELLOW SKIP)		CULVERT PIPE DITCH CHECK
(C)	MARKING LINE EPOXY 4-INCH (YELLOW)		TEMPORARY DITCH CHECKS
(D)	MARKING LINE EPOXY 8-INCH		SILT FENCE
(E)	MARKING STOP LINE EPOXY 18-INCH		SURFACE WATER FLOW
(F)	MARKING CURB EPOXY		
(G)	MARKING ISLAND NOSE EPOXY		
(H)	MARKING ARROW EPOXY		
(I)	MARKING WORD EPOXY		



PROJECT NO: 1550-02-76	HWY: USH 63	COUNTY: POLK	PLAN	SHEET	E
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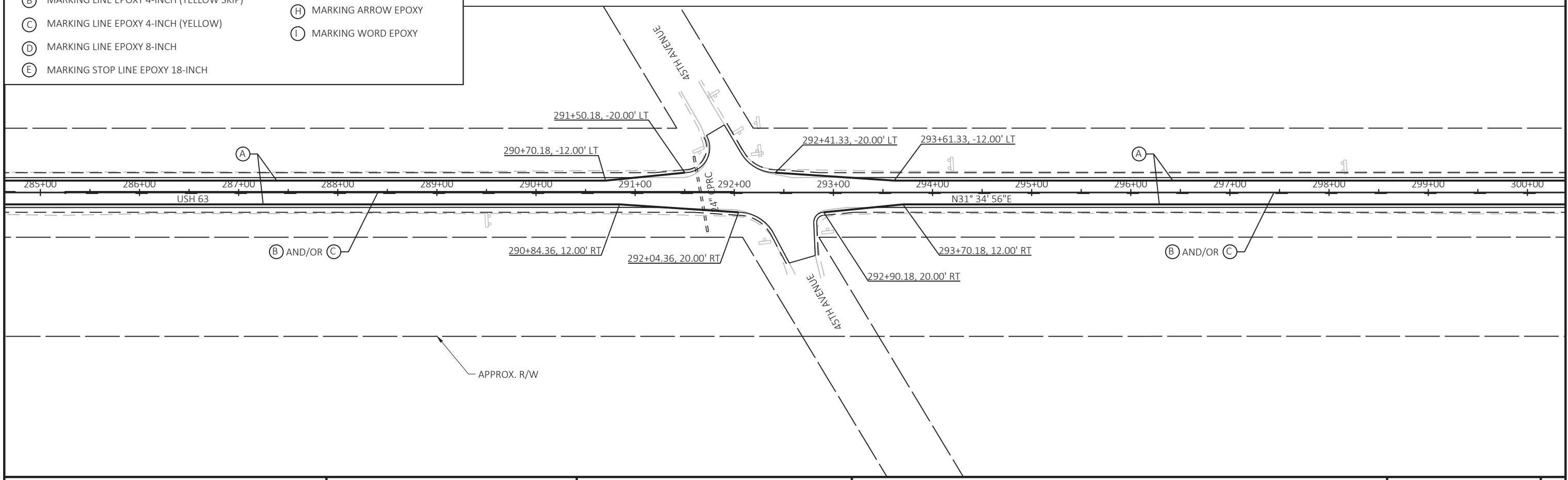


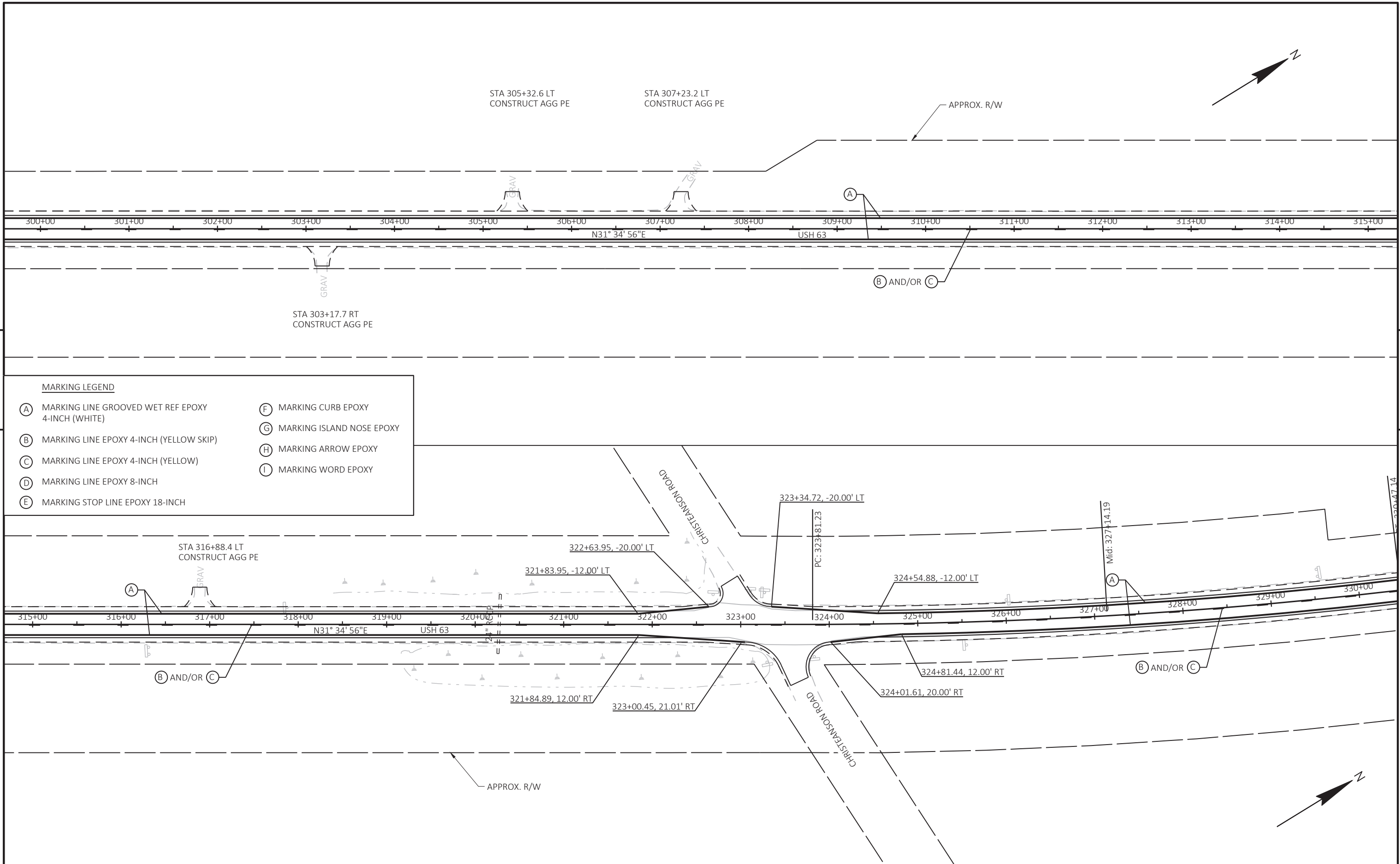
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MARKING LEGEND

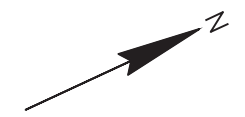
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(B) MARKING LINE EPOXY 4-INCH (YELLOW SKIP)	(G) MARKING ISLAND NOSE EPOXY
(C) MARKING LINE EPOXY 4-INCH (YELLOW)	(H) MARKING ARROW EPOXY
(D) MARKING LINE EPOXY 8-INCH	(I) MARKING WORD EPOXY
(E) MARKING STOP LINE EPOXY 18-INCH	



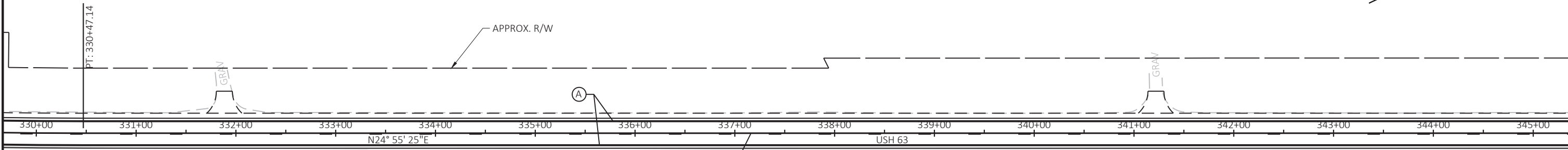


STA 331+87.9 LT
CONSTRUCT AGG PE

STA 341+21.5 LT
CONSTRUCT AGG PE



APPROX. R/W



(B) AND/OR (C)

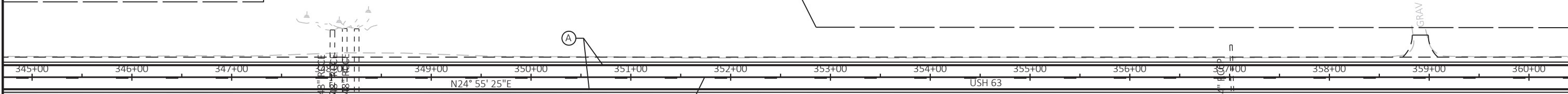
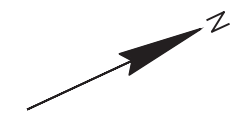
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MARKING LEGEND

- (A) MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE)
- (B) MARKING LINE EPOXY 4-INCH (YELLOW SKIP)
- (C) MARKING LINE EPOXY 4-INCH (YELLOW)
- (D) MARKING LINE EPOXY 8-INCH
- (E) MARKING STOP LINE EPOXY 18-INCH
- (F) MARKING CURB EPOXY
- (G) MARKING ISLAND NOSE EPOXY
- (H) MARKING ARROW EPOXY
- (I) MARKING WORD EPOXY

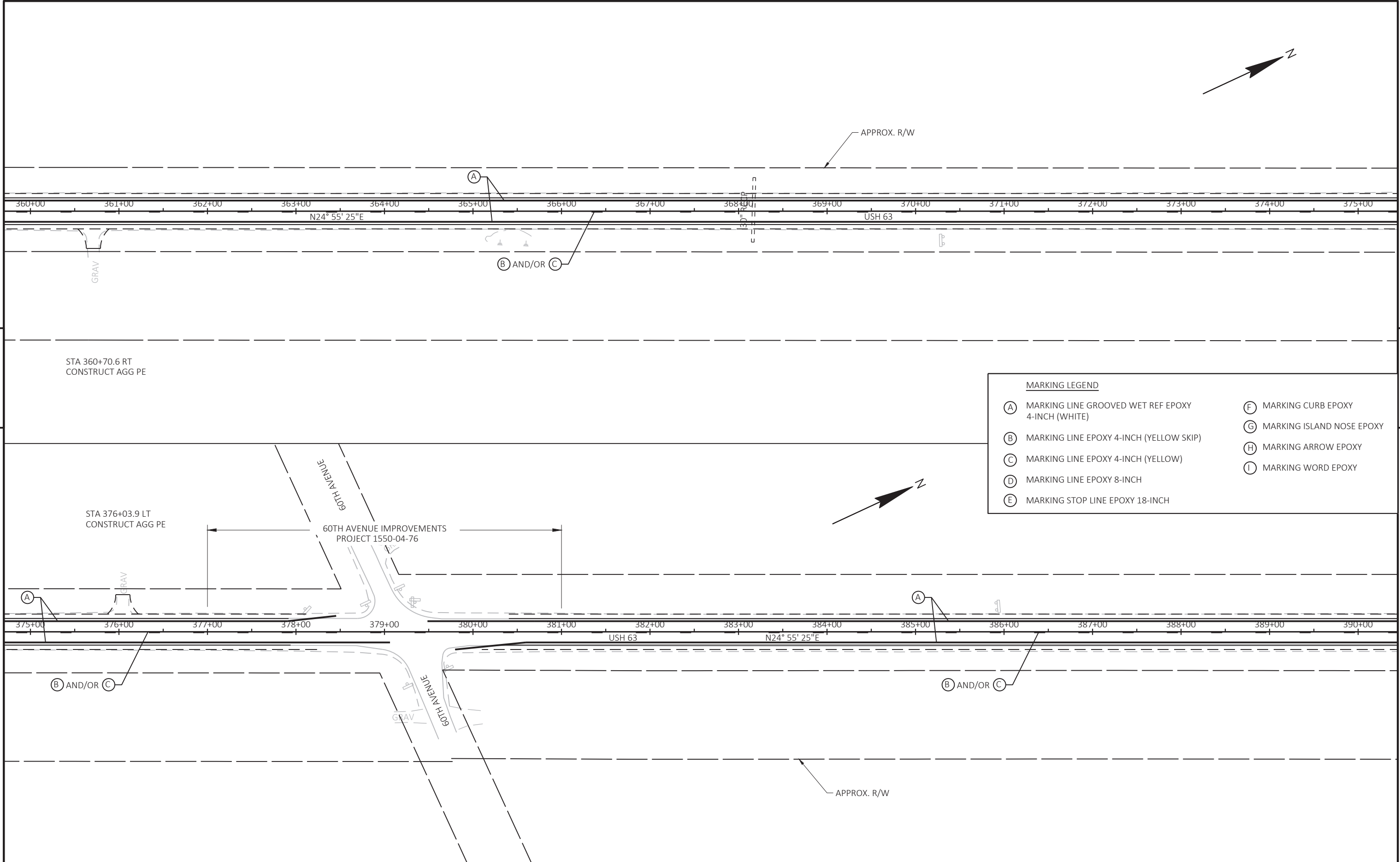
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STA 358+90.6 LT
CONSTRUCT AGG PE



(B) AND/OR (C)

APPROX. R/W



STA 360+70.6 RT
CONSTRUCT AGG PE

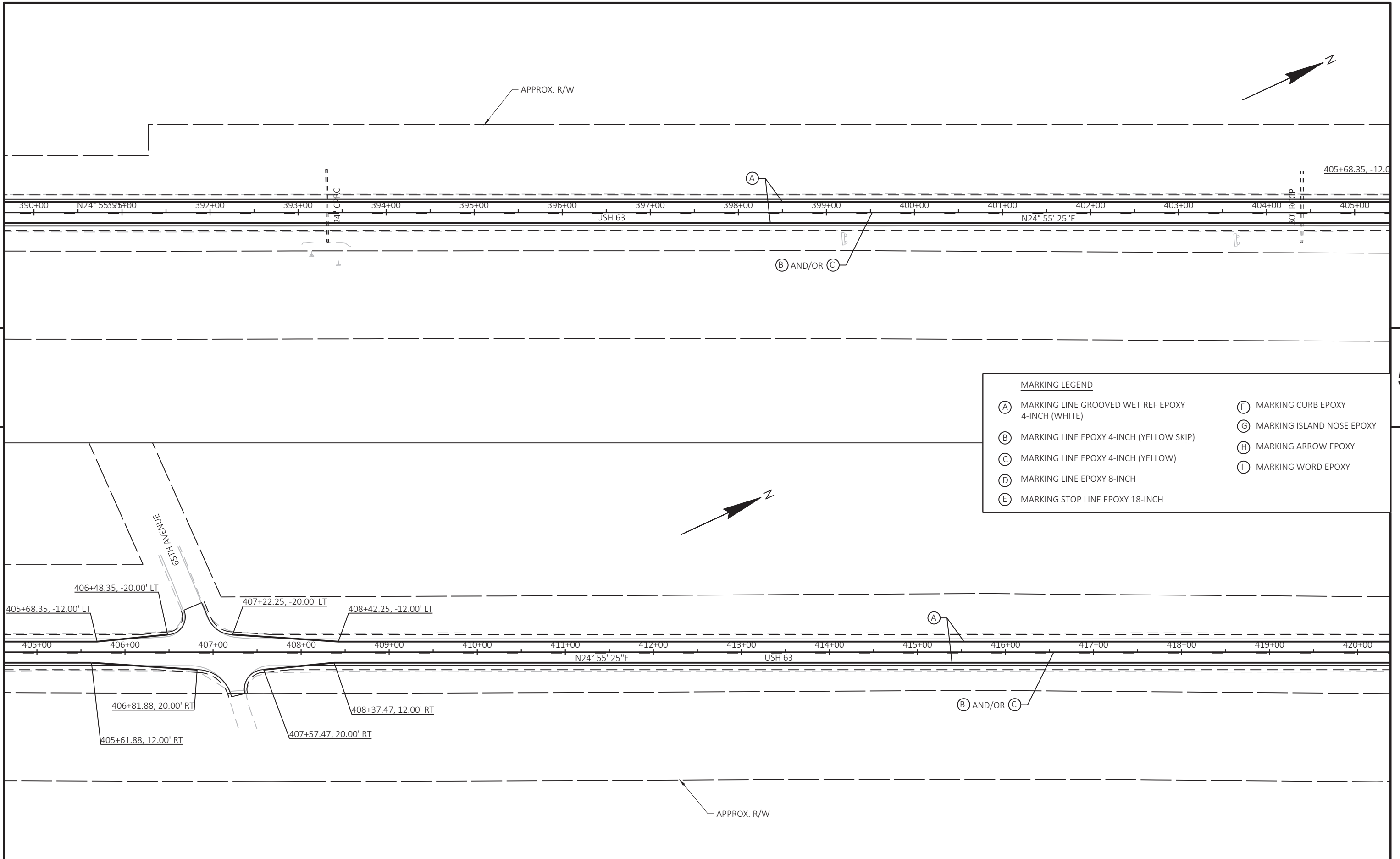
STA 376+03.9 LT
CONSTRUCT AGG PE

60TH AVENUE IMPROVEMENTS
PROJECT 1550-04-76

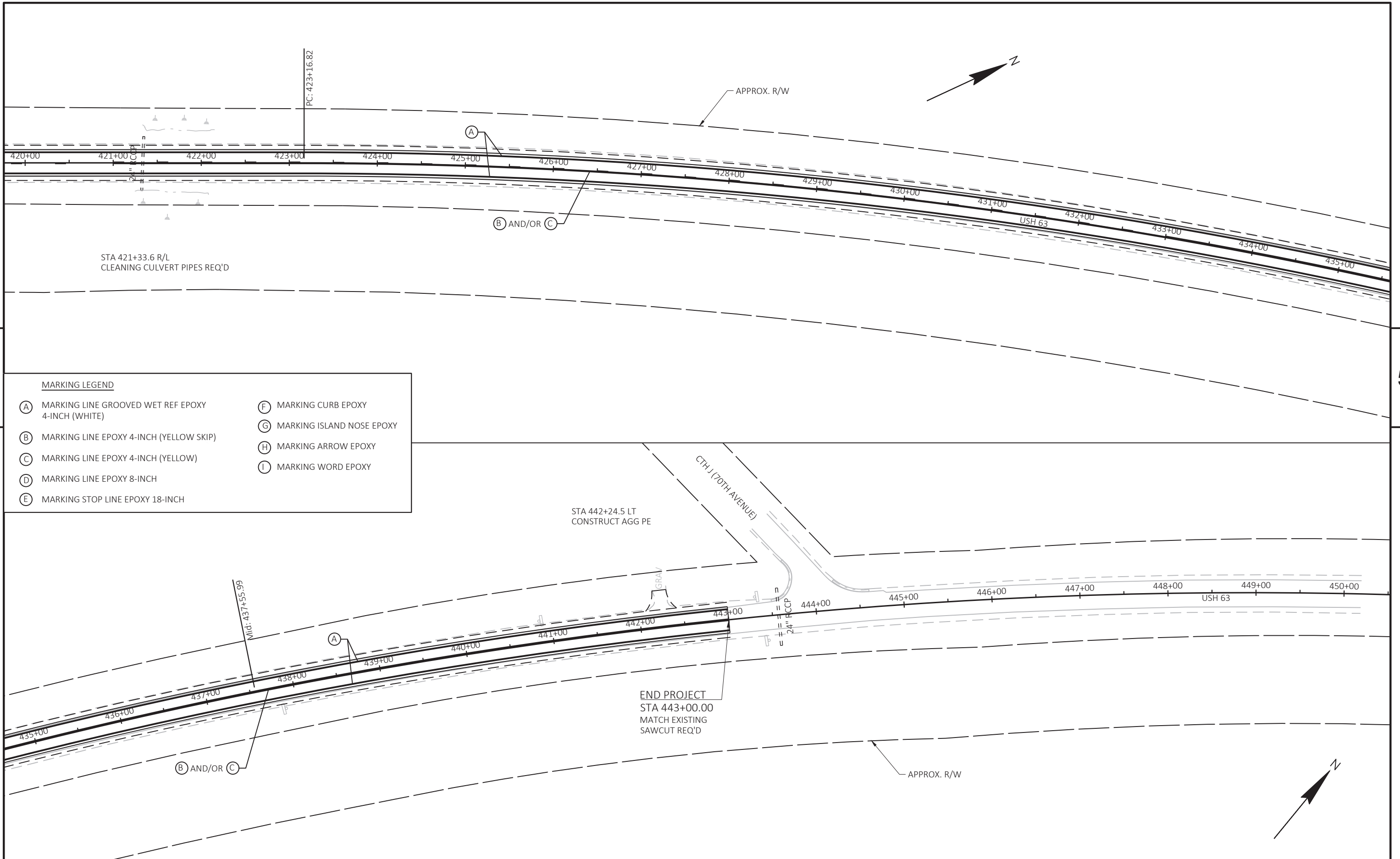
MARKING LEGEND	
(A) MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE)	(F) MARKING CURB EPOXY
(B) MARKING LINE EPOXY 4-INCH (YELLOW SKIP)	(G) MARKING ISLAND NOSE EPOXY
(C) MARKING LINE EPOXY 4-INCH (YELLOW)	(H) MARKING ARROW EPOXY
(D) MARKING LINE EPOXY 8-INCH	(I) MARKING WORD EPOXY
(E) MARKING STOP LINE EPOXY 18-INCH	

5

5



MARKING LEGEND	
(A)	MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE)
(B)	MARKING LINE EPOXY 4-INCH (YELLOW SKIP)
(C)	MARKING LINE EPOXY 4-INCH (YELLOW)
(D)	MARKING LINE EPOXY 8-INCH
(E)	MARKING STOP LINE EPOXY 18-INCH
(F)	MARKING CURB EPOXY
(G)	MARKING ISLAND NOSE EPOXY
(H)	MARKING ARROW EPOXY
(I)	MARKING WORD EPOXY

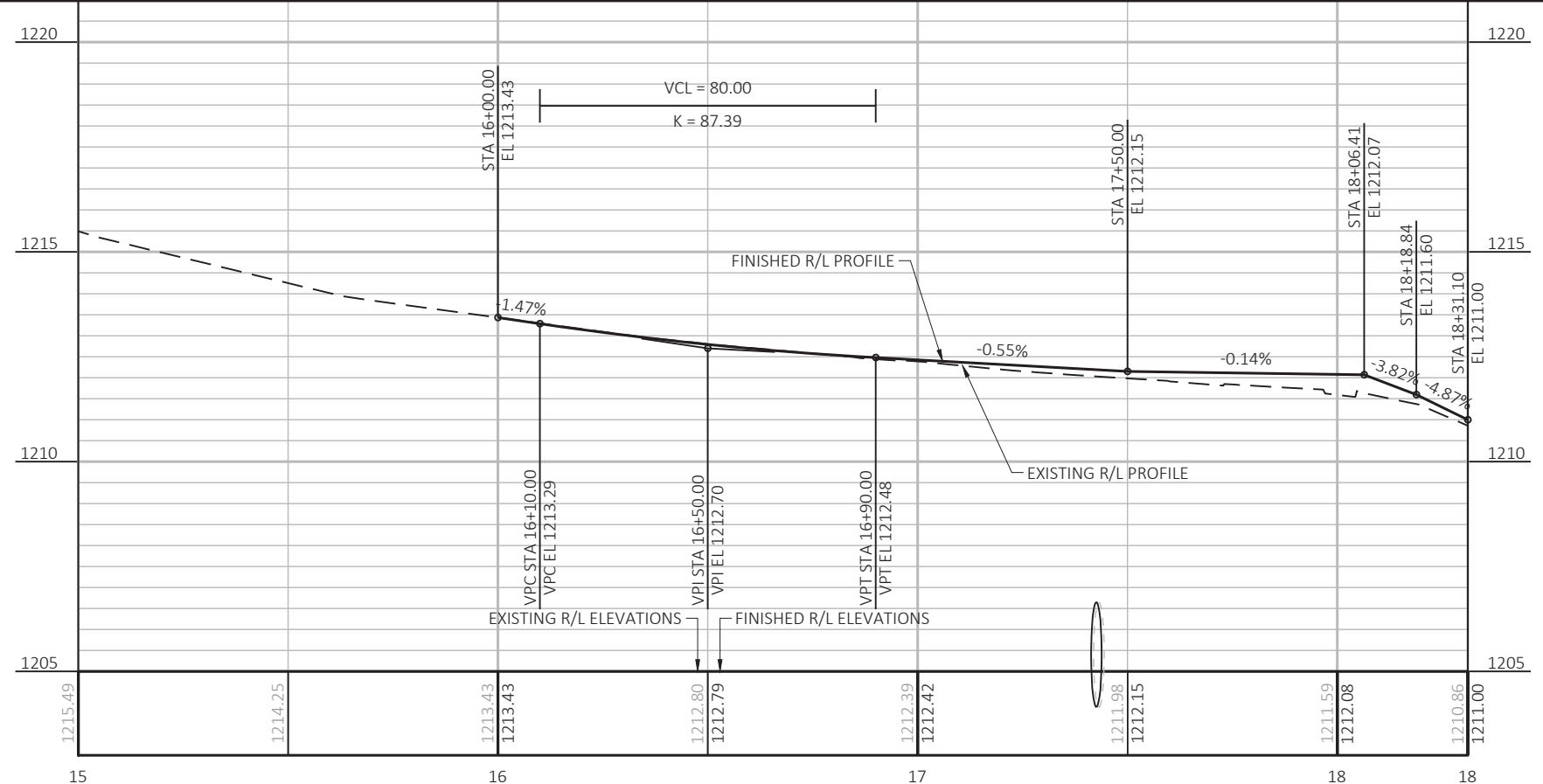
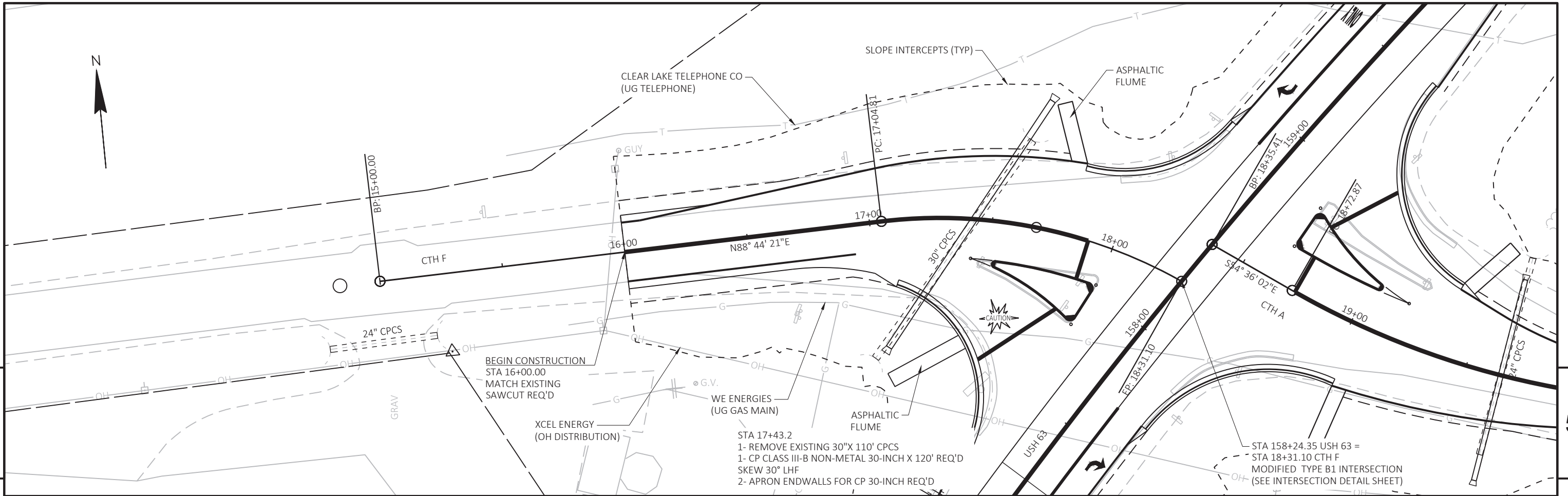


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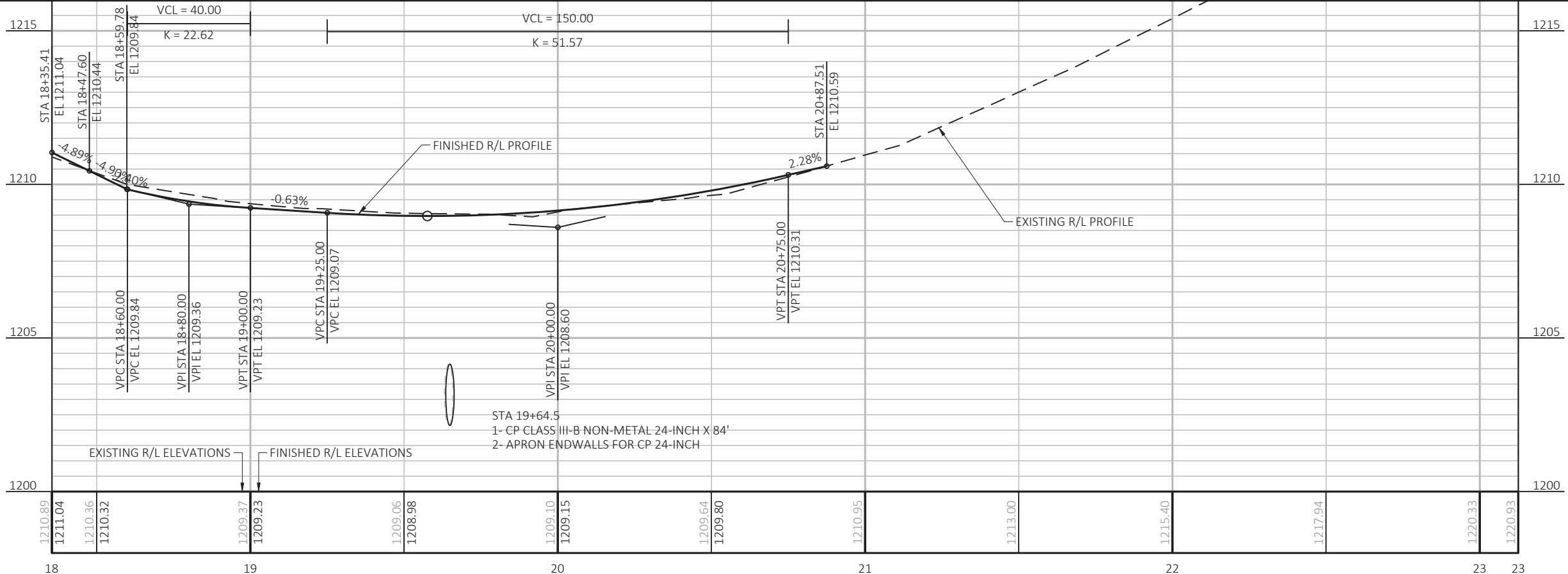
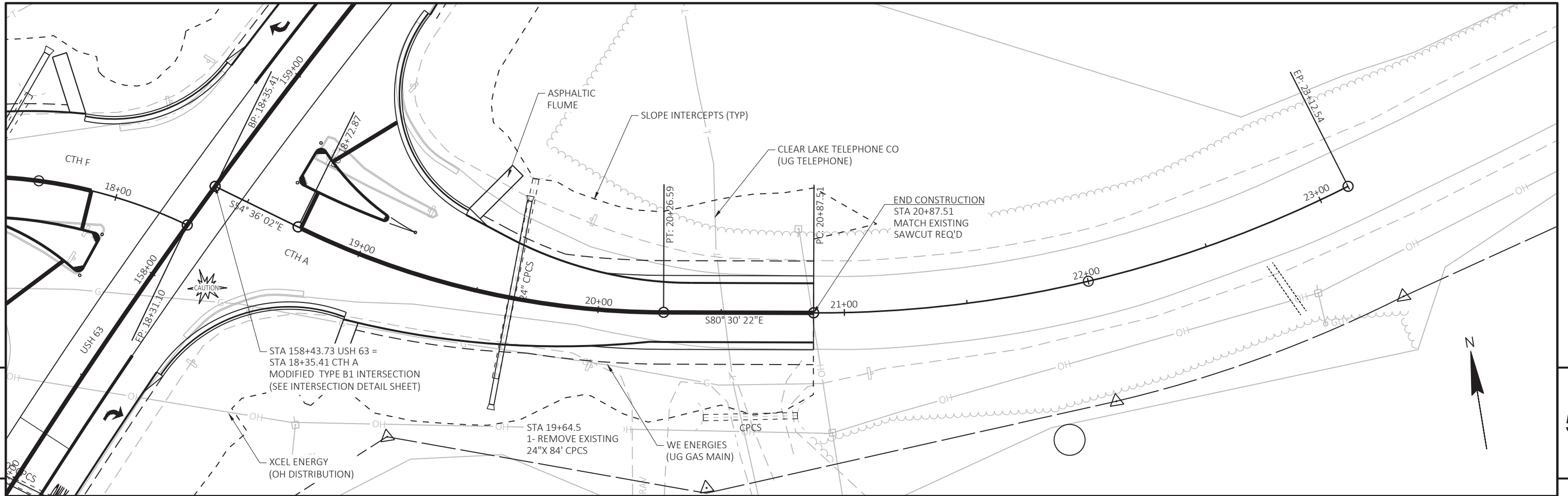
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MARKING LEGEND

(A) MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE)	(F) MARKING CURB EPOXY
(B) MARKING LINE EPOXY 4-INCH (YELLOW SKIP)	(G) MARKING ISLAND NOSE EPOXY
(C) MARKING LINE EPOXY 4-INCH (YELLOW)	(H) MARKING ARROW EPOXY
(D) MARKING LINE EPOXY 8-INCH	(I) MARKING WORD EPOXY
(E) MARKING STOP LINE EPOXY 18-INCH	



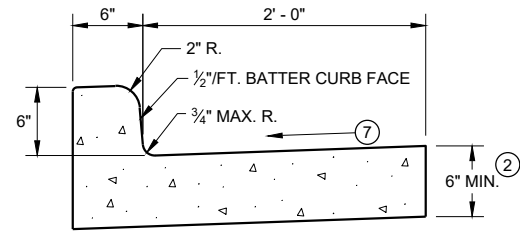
PROJECT NO: 1550-02-76 HWY: USH 63 COUNTY: POLK PLAN AND PROFILE: CTH F SHEET: E



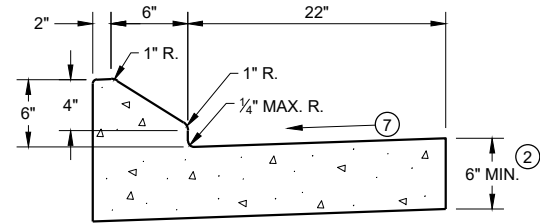
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Standard Detail Drawing List

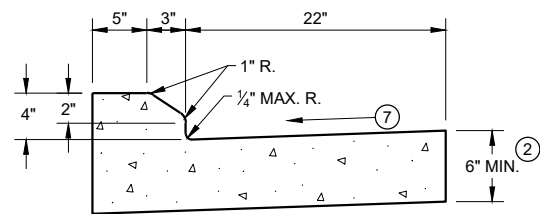
08D01-22A	CONCRETE CURB & GUTTER
08D04-06	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
09A01-13A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
11B02-02	CONCRETE MEDIAN NOSE
13A11-03A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-03B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M. P. H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M. P. H. OR LESS
15C07-15B	PAVEMENT MARKING WORDS
15C07-15C	PAVEMENT MARKING ARROWS
15C08-22A	LONGITUDINAL MARKING (MAINLINE)
15C08-22B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C08-22C	PAVEMENT MARKING (TURN LANES)
15C08-22D	PAVEMENT MARKING (TURN LANES)
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C18-06B	MEDIAN ISLAND MARKING MEDIAN ISLAND NOSE
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-05A	PAVEMENT MARKING (INTERSECTIONS)
15D12-10A	TRAFFIC CONTROL, LANE CLOSURE
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES
15D45-03	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL
15D51-01	TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY



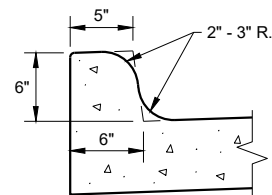
TYPES A^① & D



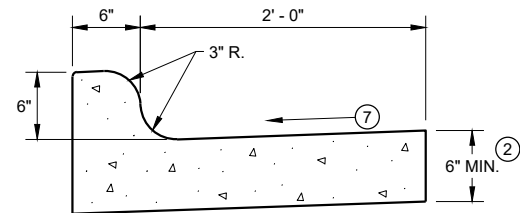
6" SLOPED CURB TYPES G^① & J



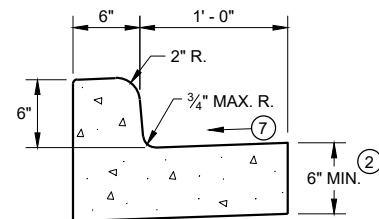
4" SLOPED CURB TYPES G^① & J



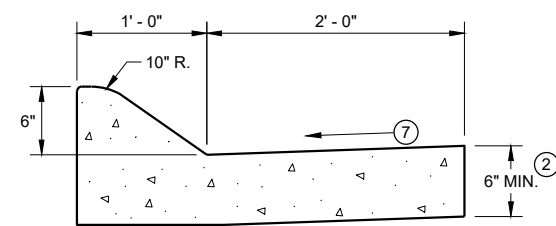
TYPES K^① & L
(OPTIONAL CURB SHAPE)



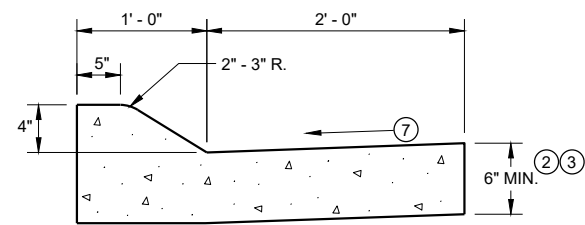
TYPES K^① & L
CONCRETE CURB AND GUTTER 30"



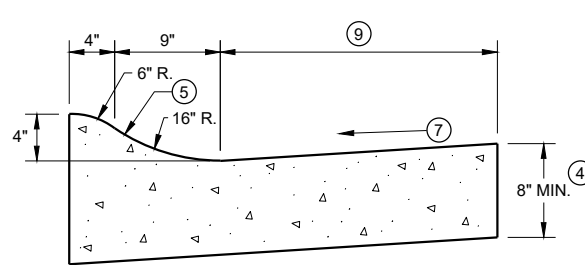
TYPES A^① & D
CONCRETE CURB AND GUTTER 18"



6" SLOPED CURB TYPES A^① & D

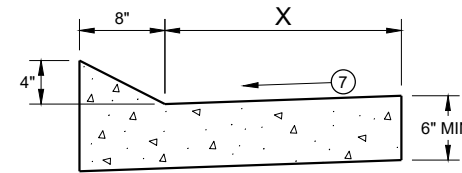


4" SLOPED CURB TYPES A^① & D
CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R^① & T

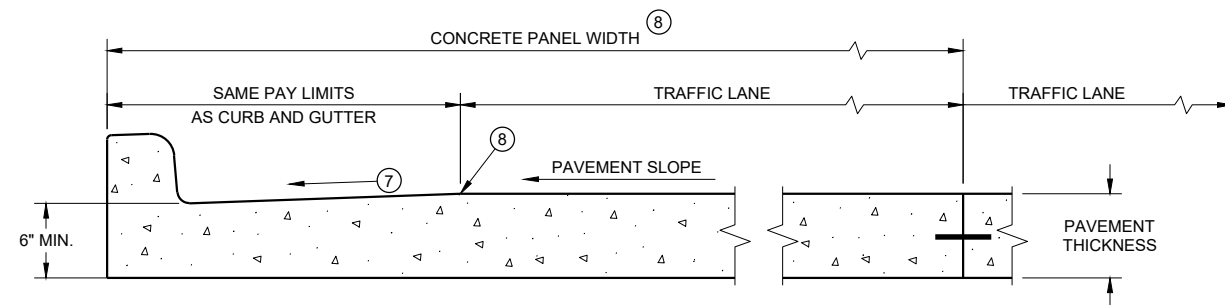
TBT & TBTT	X
30"	22"
36"	28"



TYPES TBT & TBTT^①
CONCRETE CURB AND GUTTER

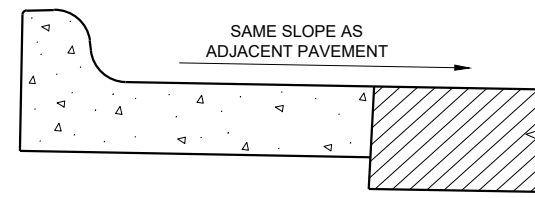
PAVEMENT THICKNESS
AND MAXIMUM CONCRETE
PANEL WIDTH TABLE

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'



PARTIAL SECTION OF PAVEMENT *
WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



REVERSE SLOPE GUTTER^⑥
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

DETAILS OF CONSTRUCTION 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.

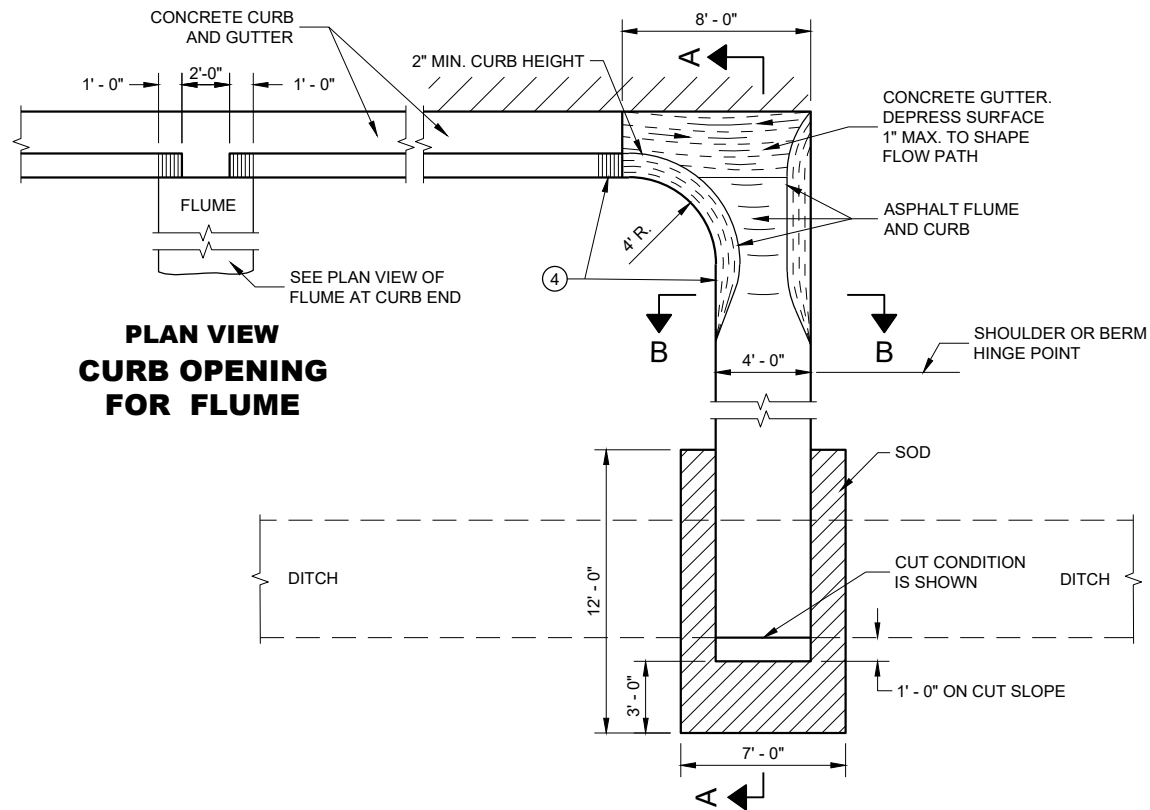
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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 GUTTERS TYPES A, G, K, R, AND TBTT.
- 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 USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- ④ 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.
- ⑤ UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
- ⑦ USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
- ⑧ INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.
- ⑨ CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

NOTE: TAPER CURB ENDS TO GUTTER IN 1' - 0"

ASPHALTIC FLUME



**PLAN VIEW
CURB OPENING
FOR FLUME**

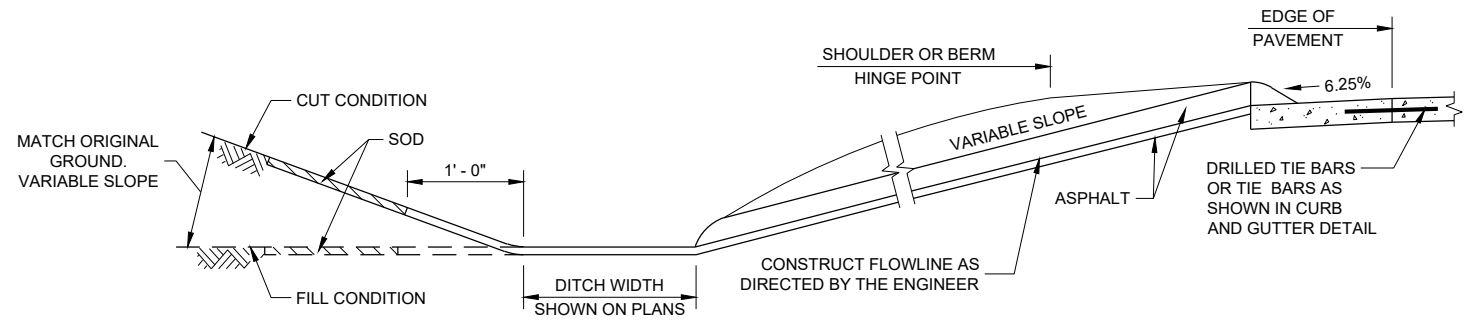
**PLAN VIEW
FLUME AT CURB END**

GENERAL NOTES

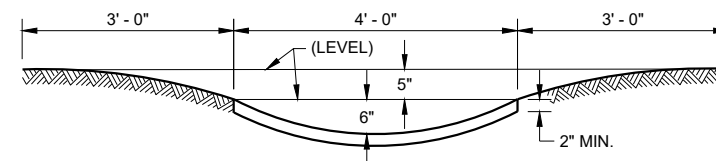
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

4" X 4" - W3.0 X W3.0 CONCRETE REINFORCEMENT SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

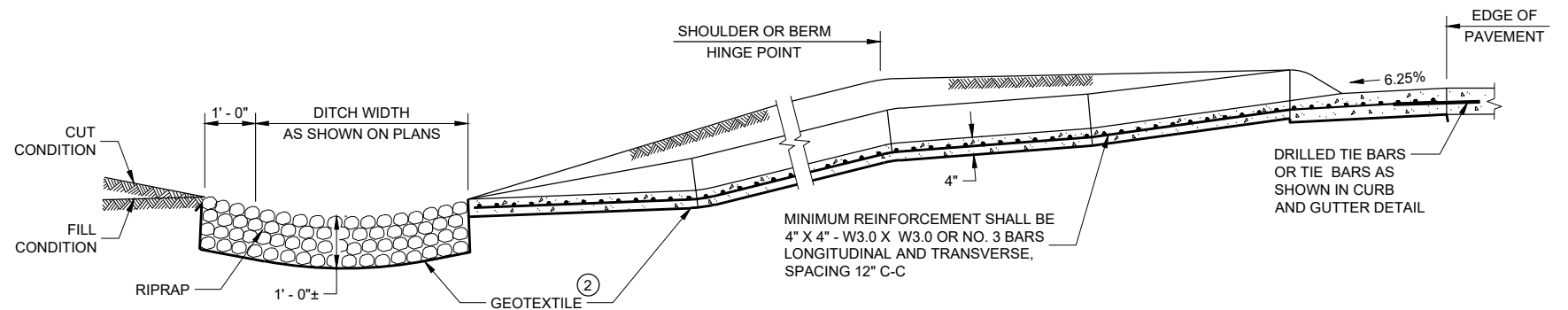
- ① JOINTS SHALL BE 1/8" TO 1/4" WIDE BY 1 1/2" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- ③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.
- ④ ANGLE OF FLUME IN RELATION TO BACK OF CURB TO BE CONSTRUCTED PER THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER. ANGLE OF FLUME MAY BE OTHER THAN 90 DEGREES AS SHOWN.



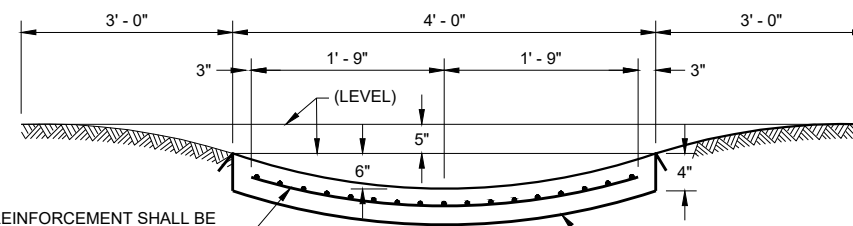
SECTION A - A



SECTION B - B

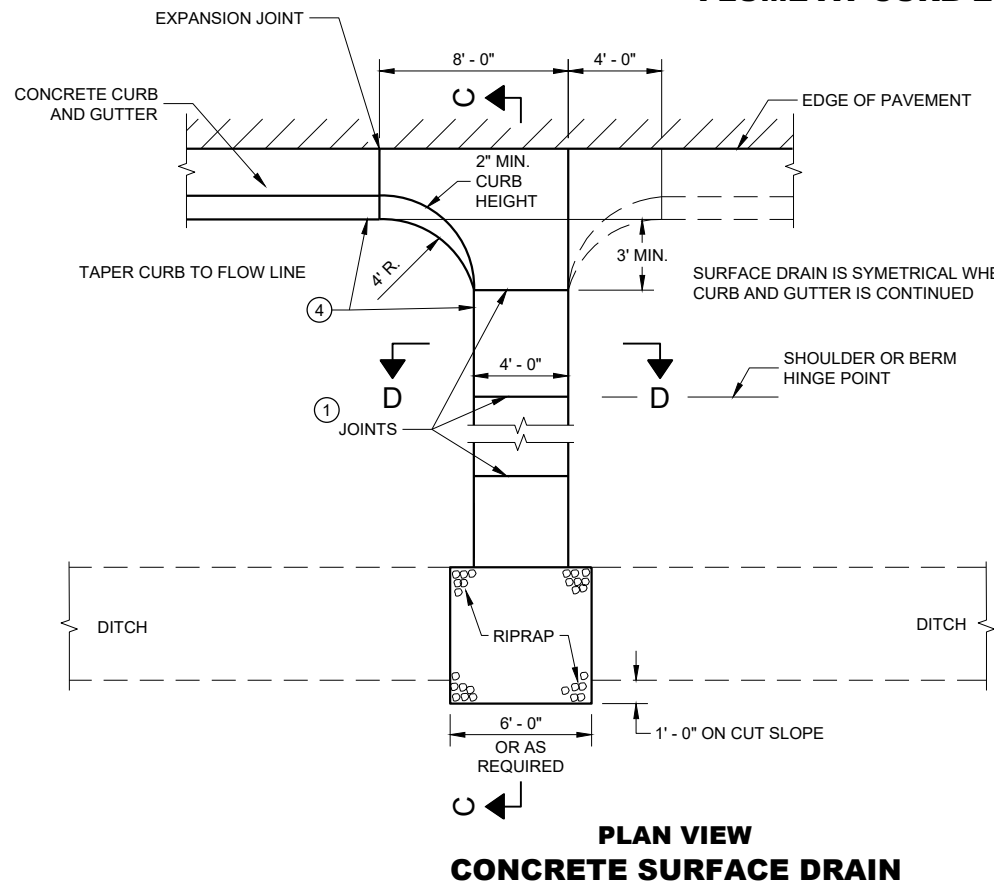


SECTION C - C



SECTION D - D

MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE, SPACING 12" C-C



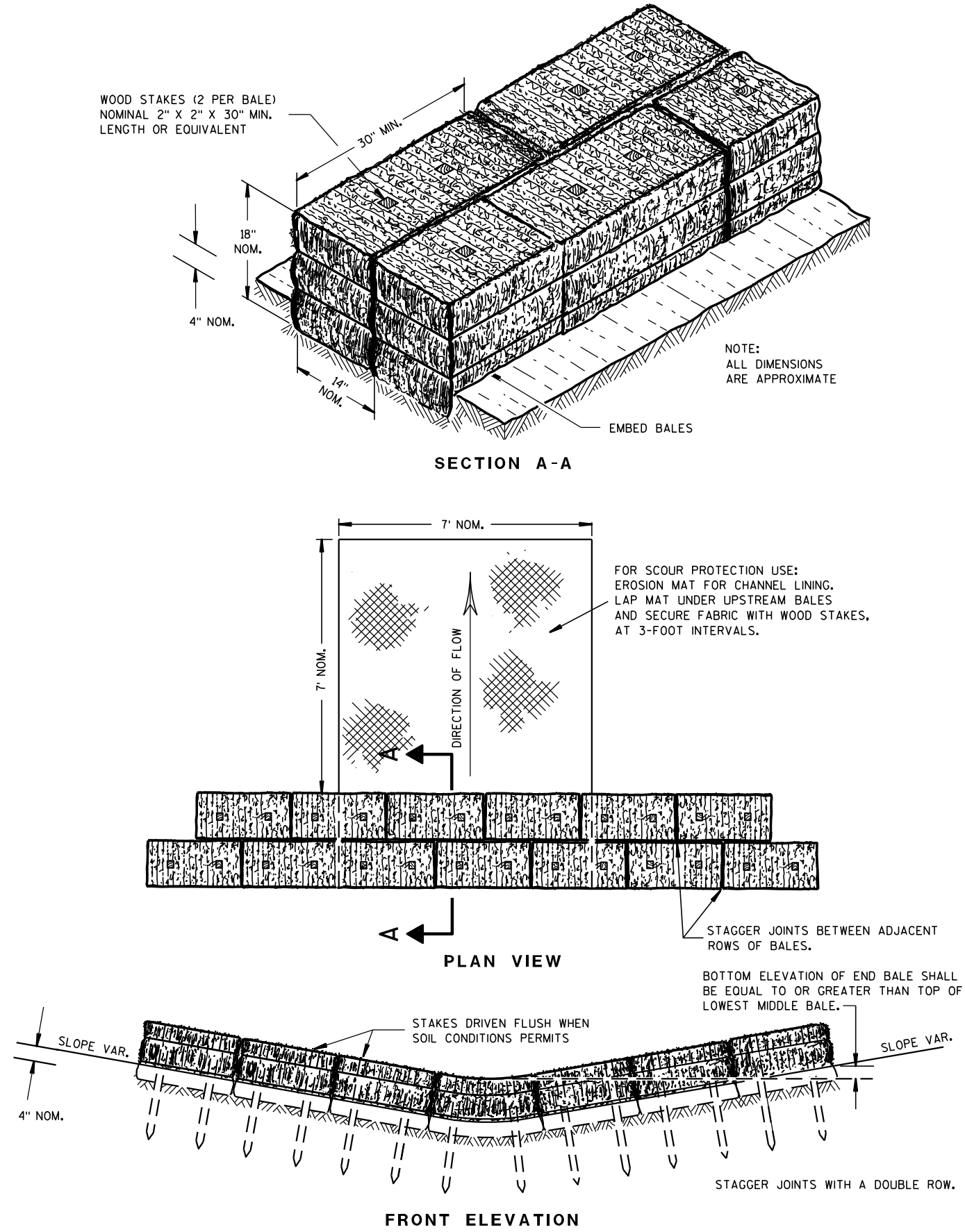
**PLAN VIEW
CONCRETE SURFACE DRAIN**

CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER

FHWA

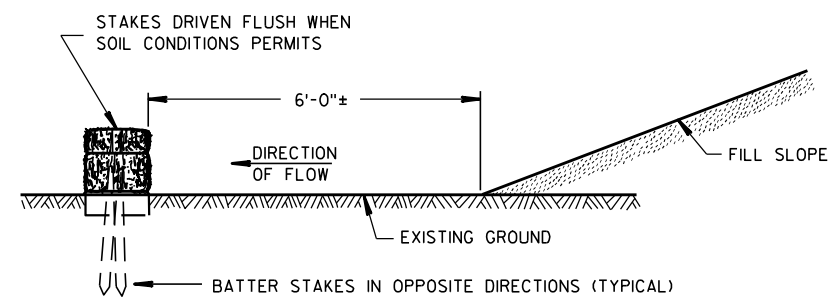
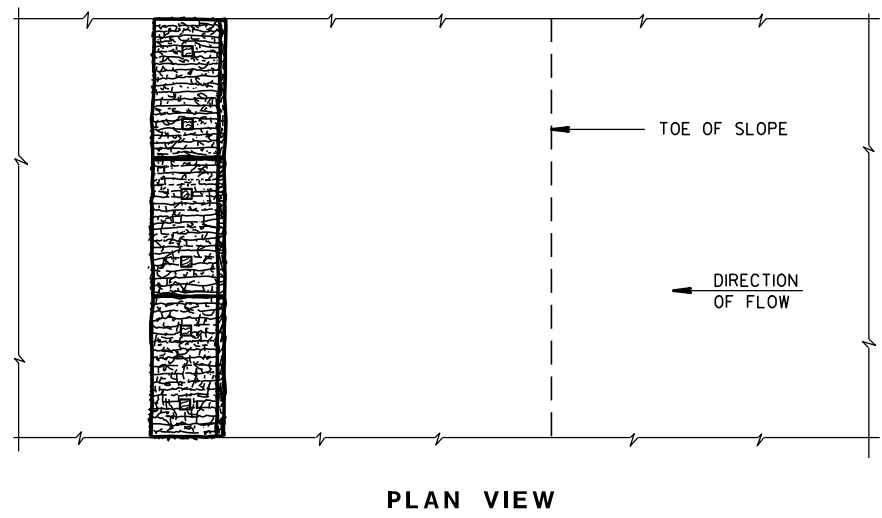
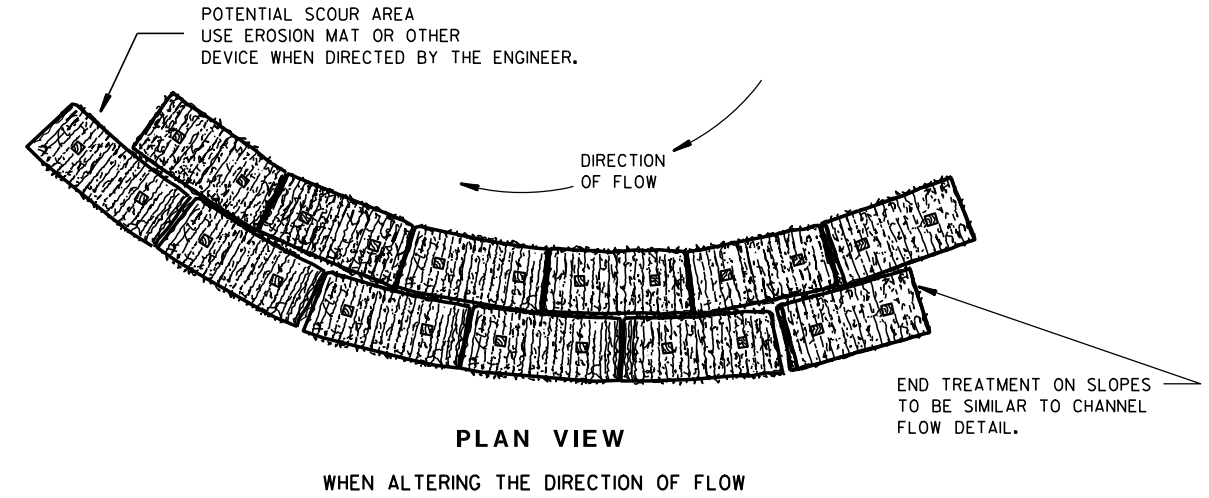


TEMPORARY DITCH CHECK USING EROSION BALES ①

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.

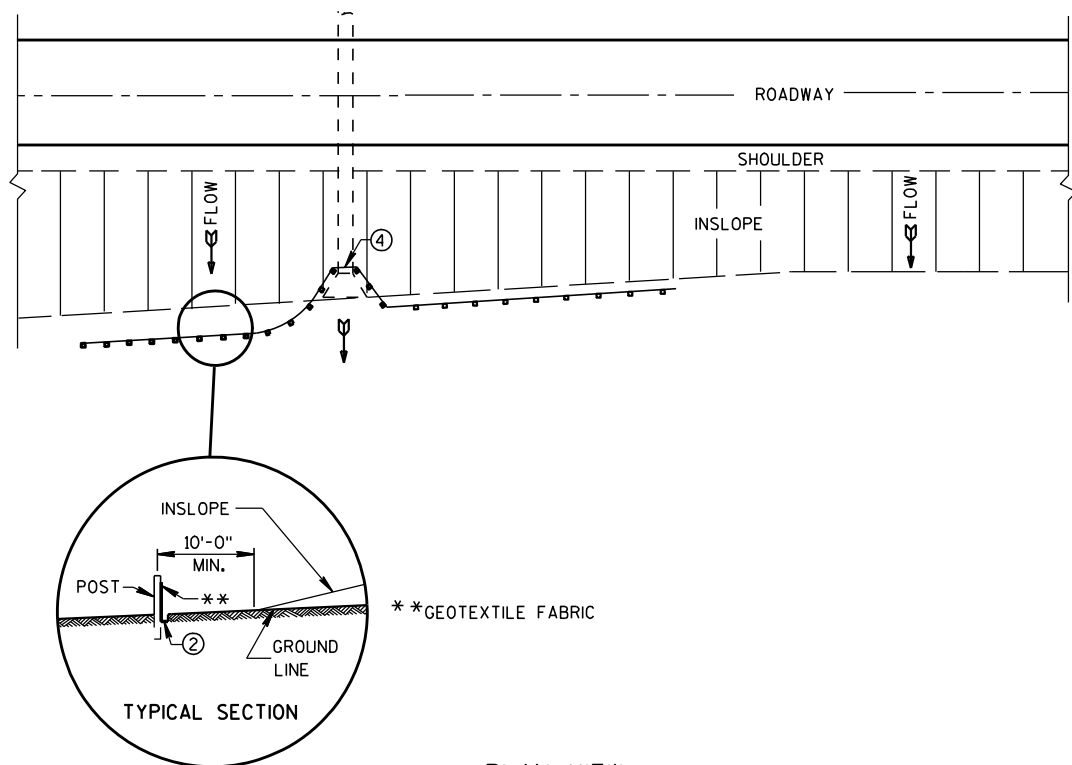


EROSION BALES FOR SHEET FLOW

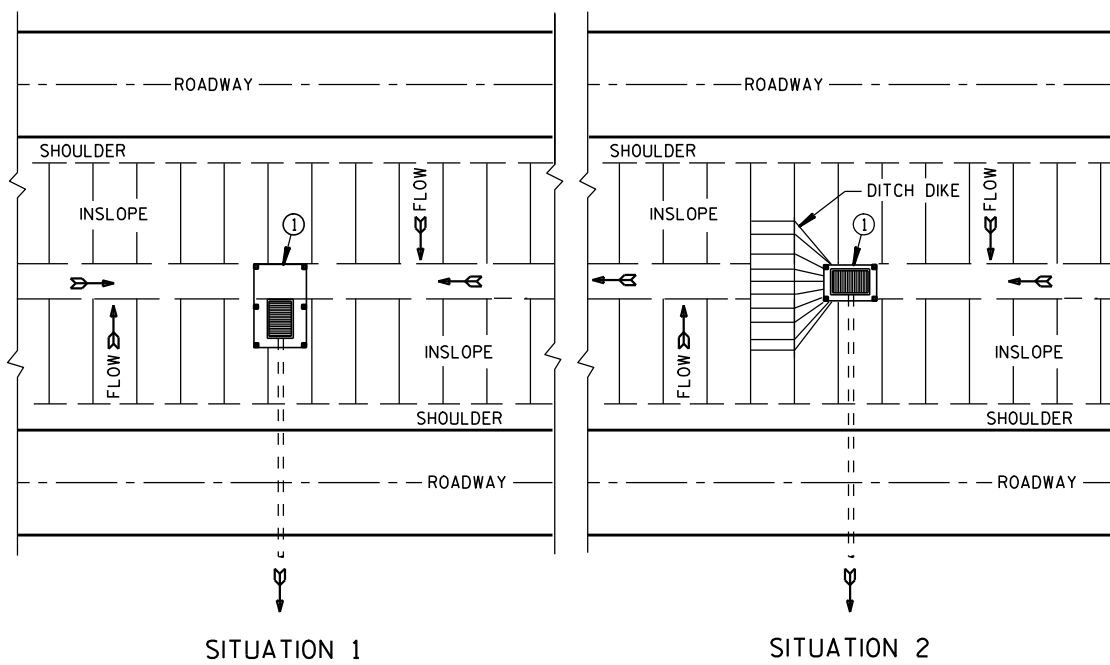
TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

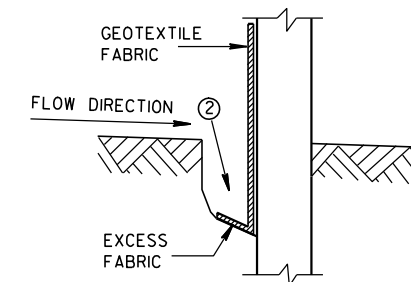


SITUATION 1 SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

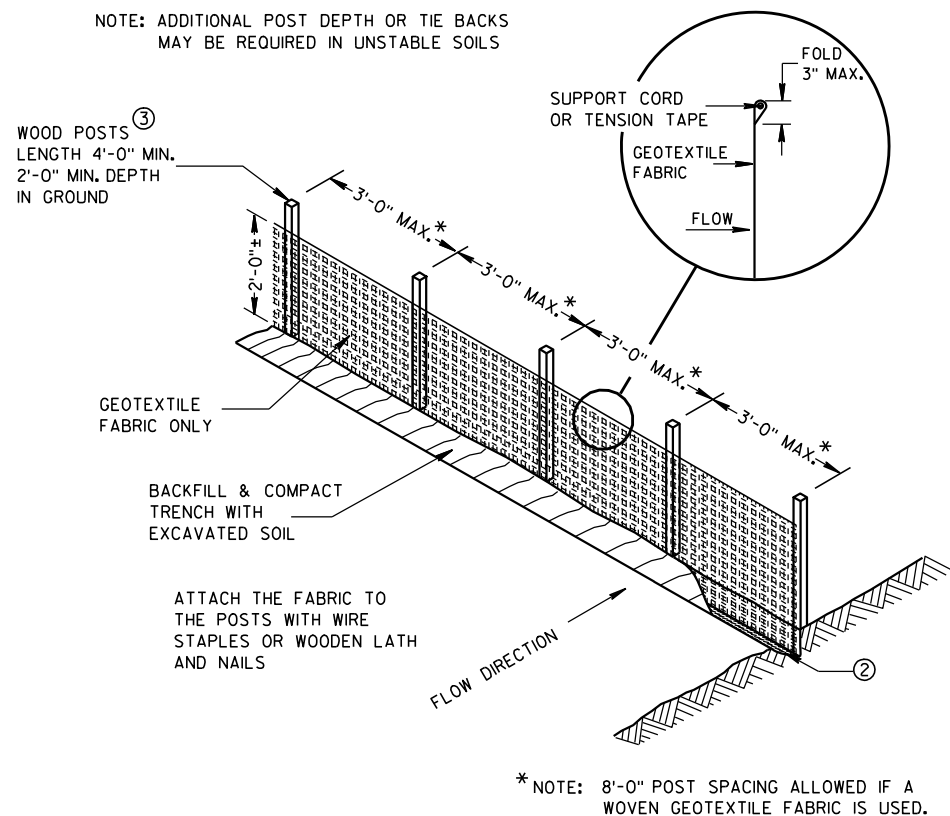
GENERAL NOTES

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

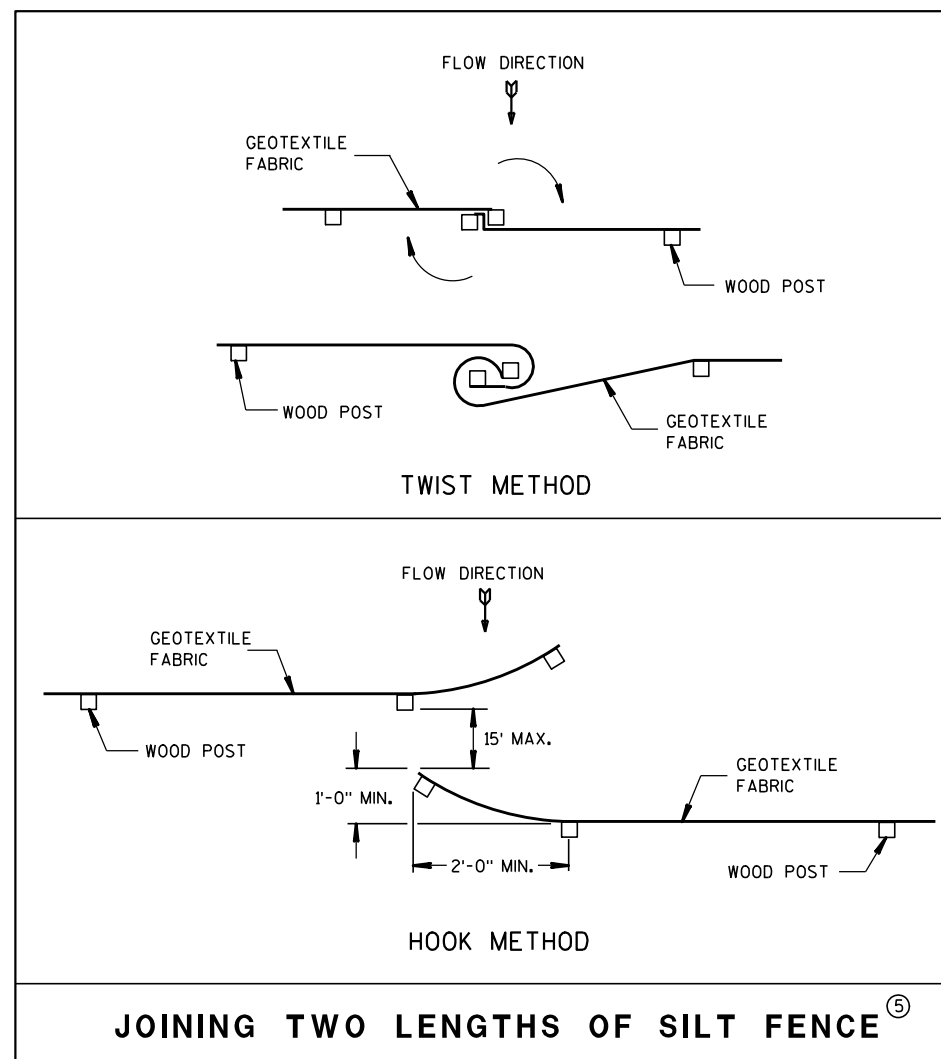
- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1 1/8" X 1 1/8" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



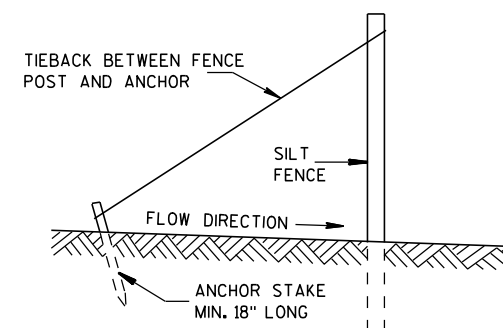
TRENCH DETAIL



SILT FENCE



JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

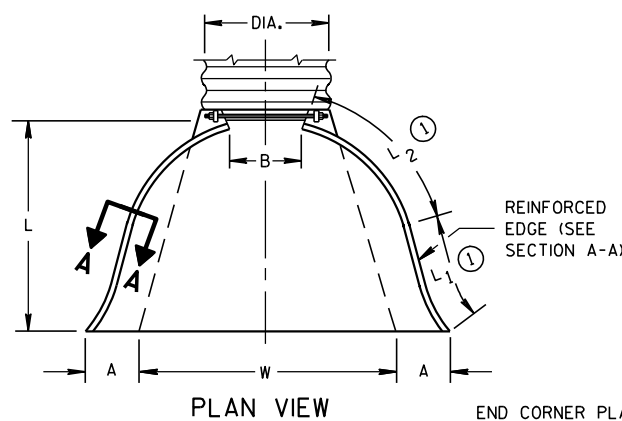
APPROVED
4-29-05 /S/ Beth Canestra
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

METAL APRON ENDWALLS											
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1	L2	W (±2")		
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	.109x	.105x	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109x	.105x	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109x	.105x	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109x	.105x	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109x	.105x	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109x	.105x	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109x	.105x	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

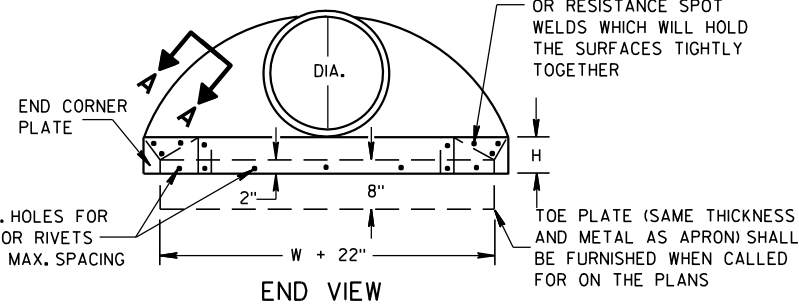
* EXCEPT CENTER PANEL SEE GENERAL NOTES

REINFORCED CONCRETE APRON ENDWALLS									
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE	
	T	A	B	C	D	E	G		
12	2	4	24	48 1/8	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 1/2 to 1	
60	6	30-35	60	39	99	96	5	2 to 1	
66	6 1/2	30-35	72-78	21-27	99	102	5 1/2	2 to 1	
72	7	30-35	78	21	99	108	6	2 to 1	
78	7 1/2	30-35	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	

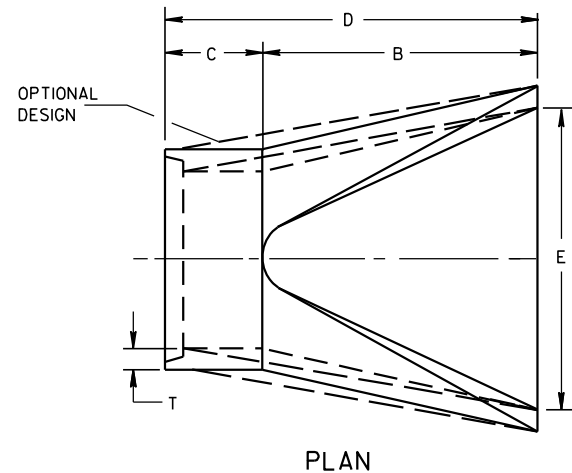
* MINIMUM
** MAXIMUM



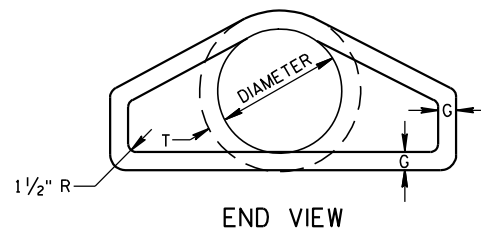
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



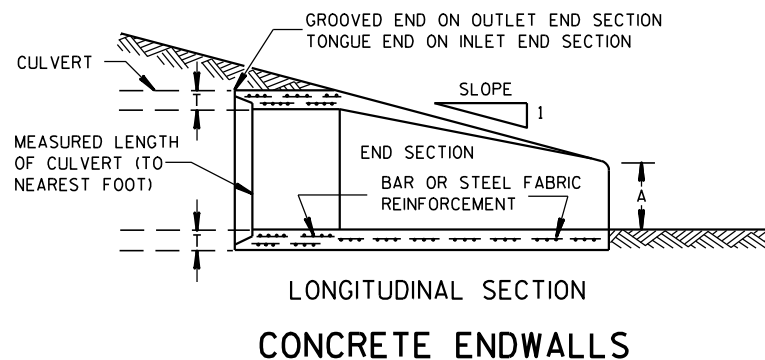
SIDE ELEVATION
METAL ENDWALLS



PLAN

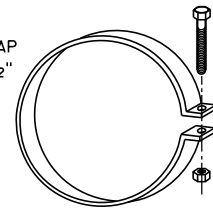


END VIEW

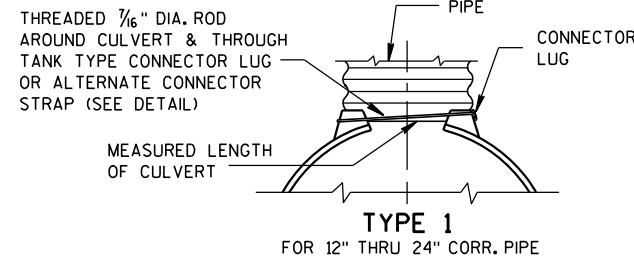


LONGITUDINAL SECTION
CONCRETE ENDWALLS

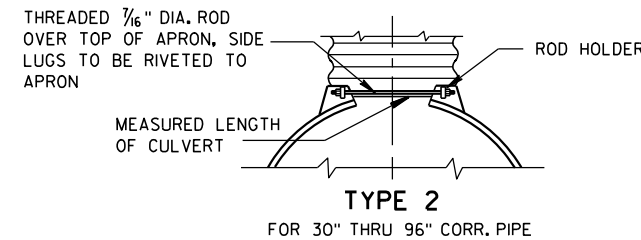
1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



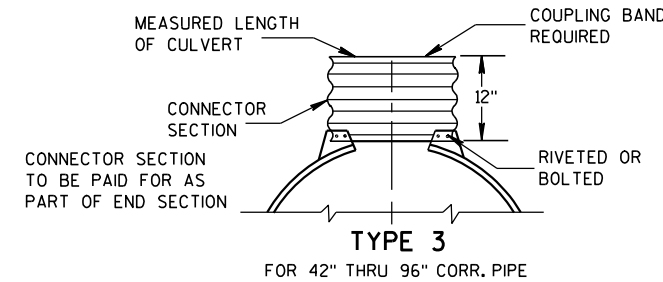
ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



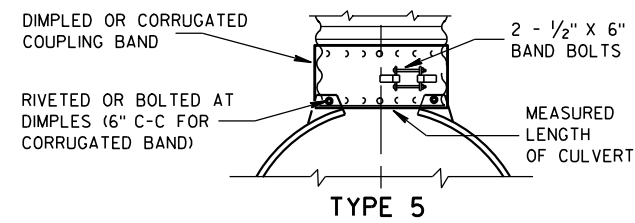
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

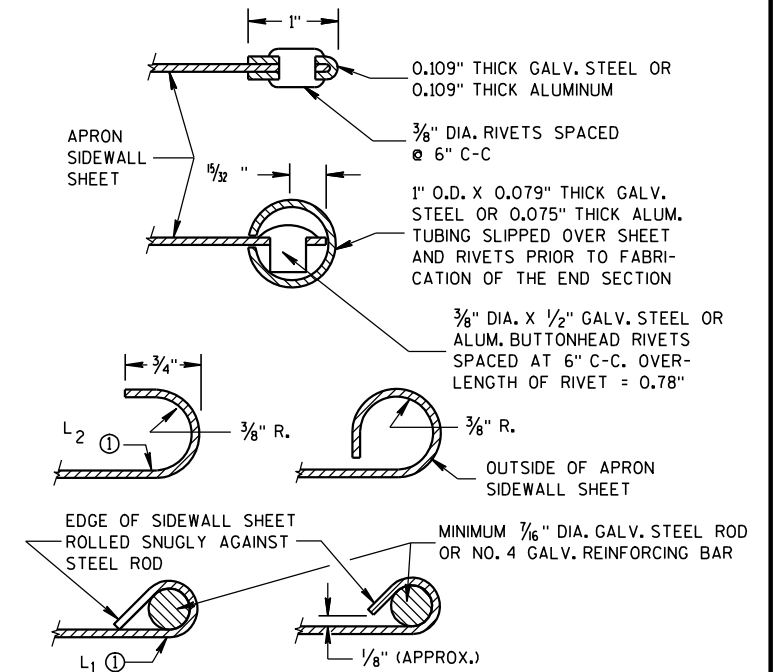
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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 VICE 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.

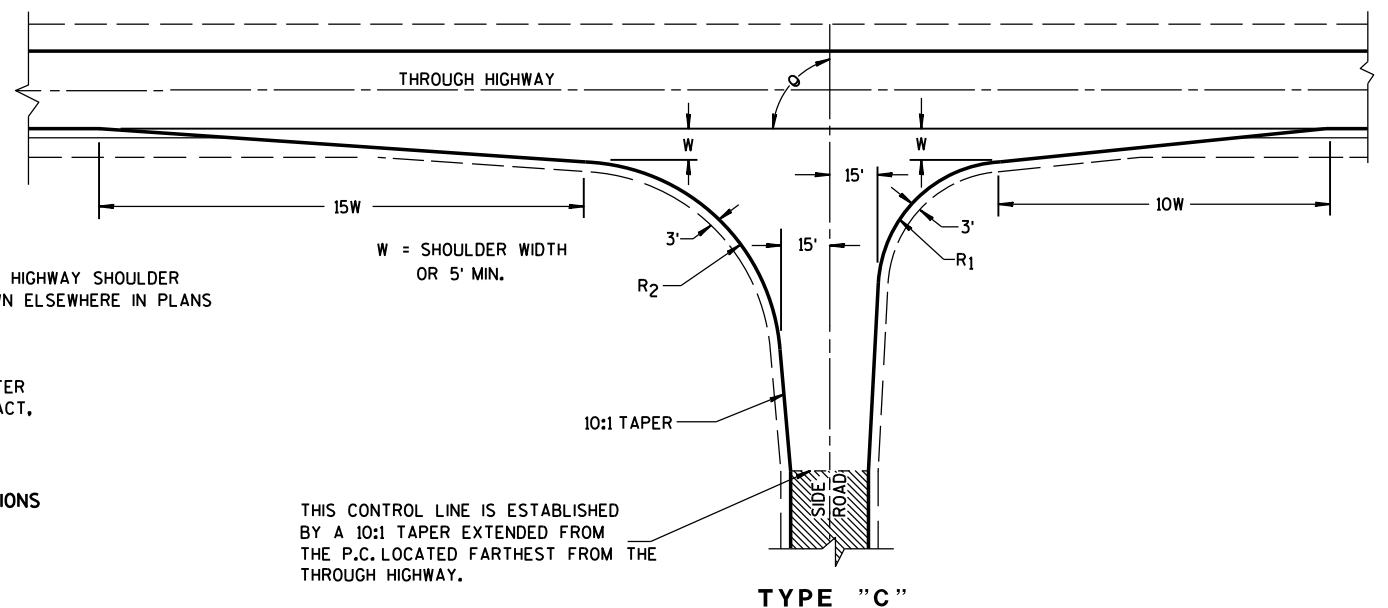
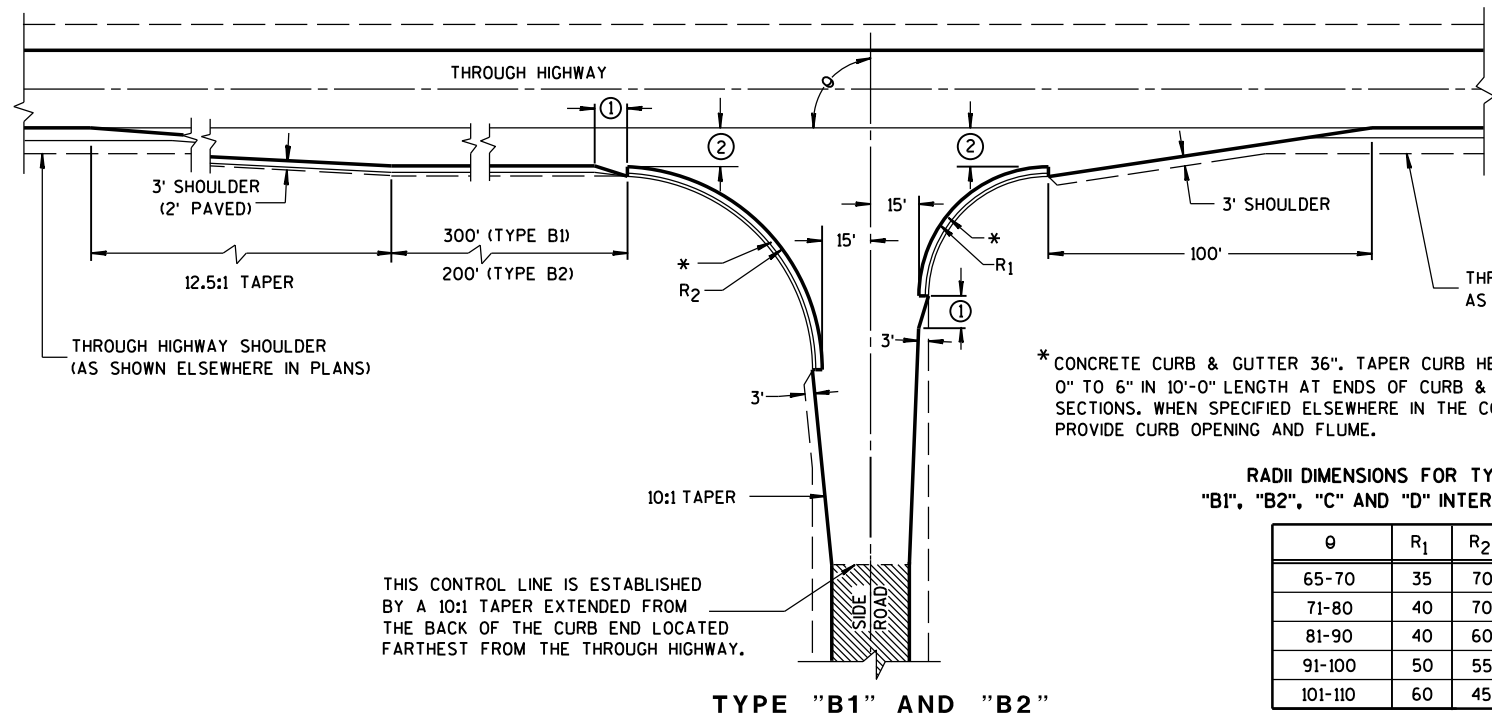
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



GENERAL NOTES

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

SIDE ROAD SURFACING NOTE

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

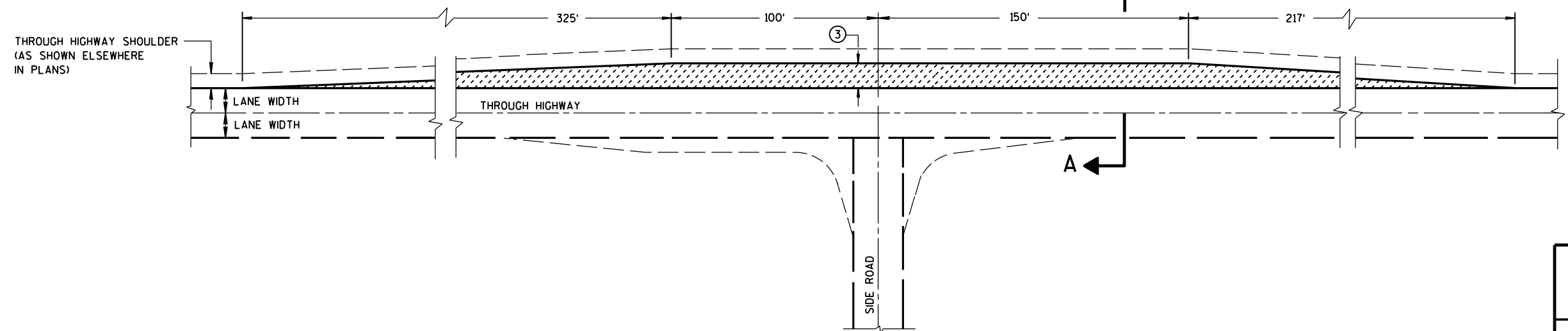
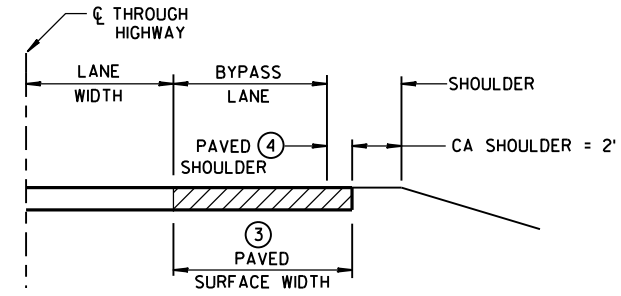
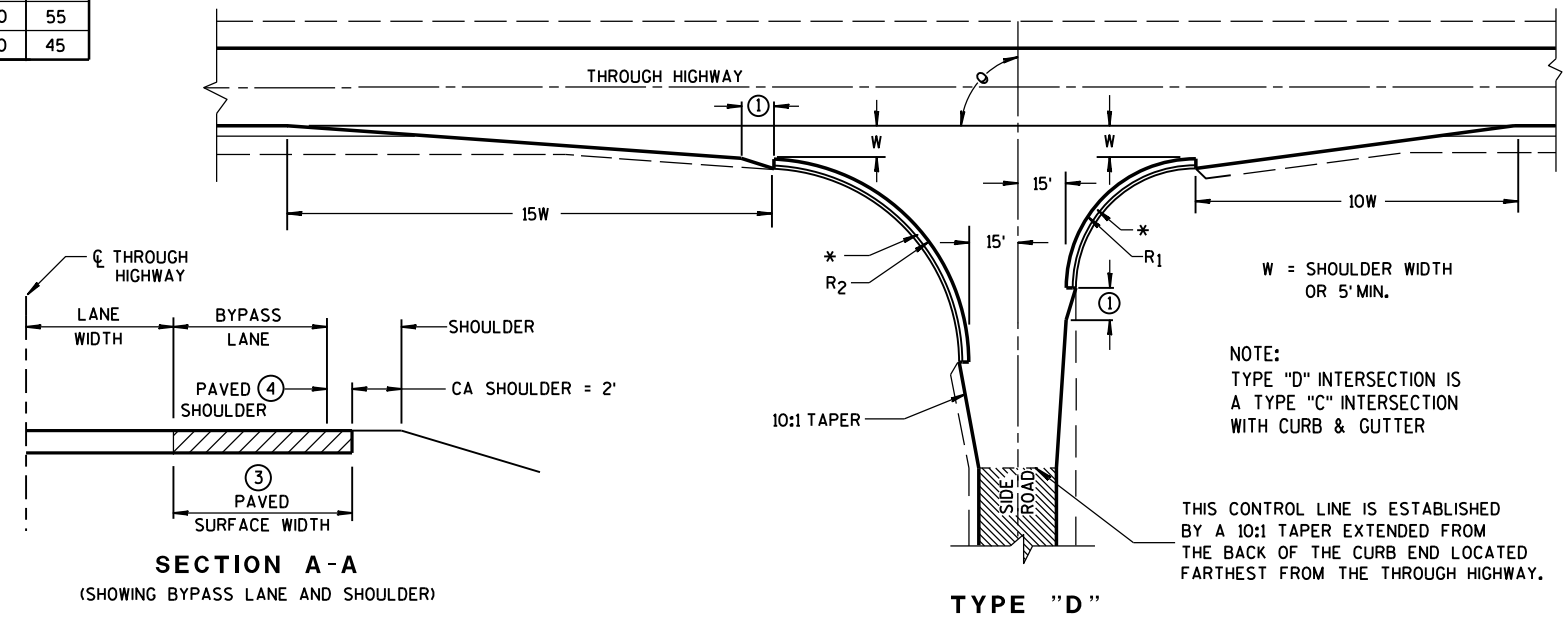
WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

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

EXISTING PAVED SURFACE

BYPASS LANE

- ① 10-FT TYPICAL.
- ② 12-FT** PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLAN.
- **10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.
- ③ BYPASS LANE PAVED SURFACE WIDTH OUTSIDE OF TRAVEL LANE
-ASPHALT = 12-FT PLUS PAVED SHOULDER WIDTH.
-PC CPNCRETE = 13-FT PLUS PAVED SHOULDER WIDTH.
- ④ BYPASS LANE PAVED SHOULDER WIDTH = THE GREATER OF 1-FT OR THE PAVED SHOULDER WIDTH OF THE THROUGH HIGHWAY.



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

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

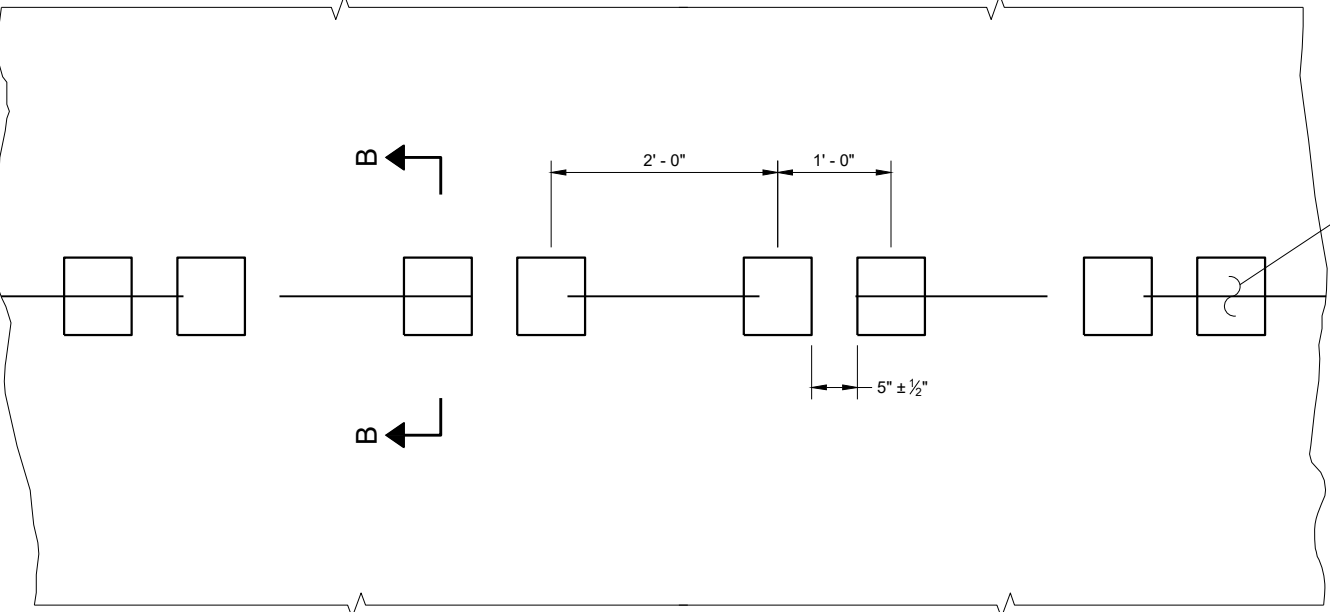
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

DO NOT MILL CENTERLINE GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

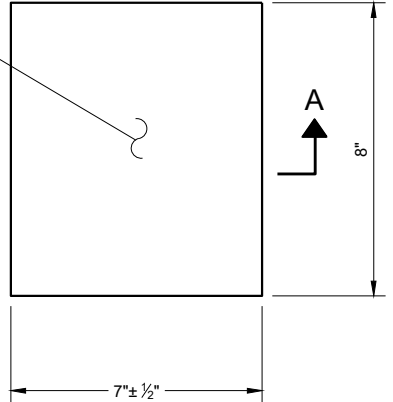
INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

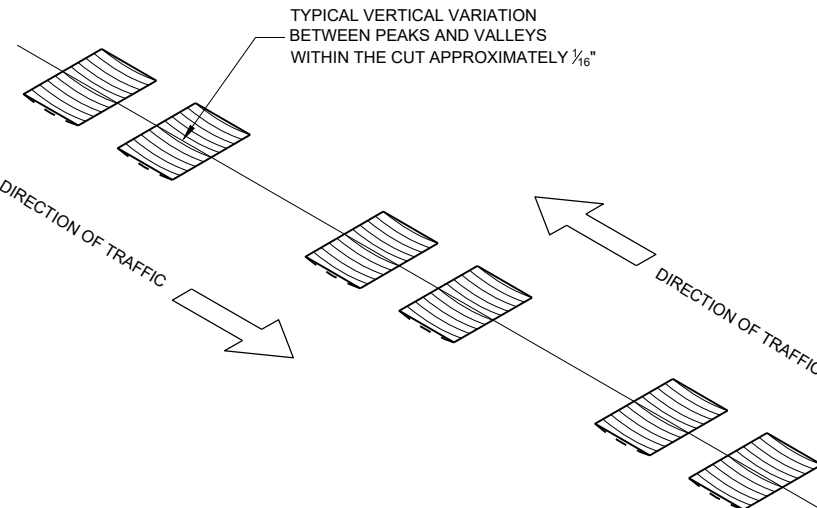
- ① CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.



**PLAN VIEW
SHOULDER WITH GROOVES**

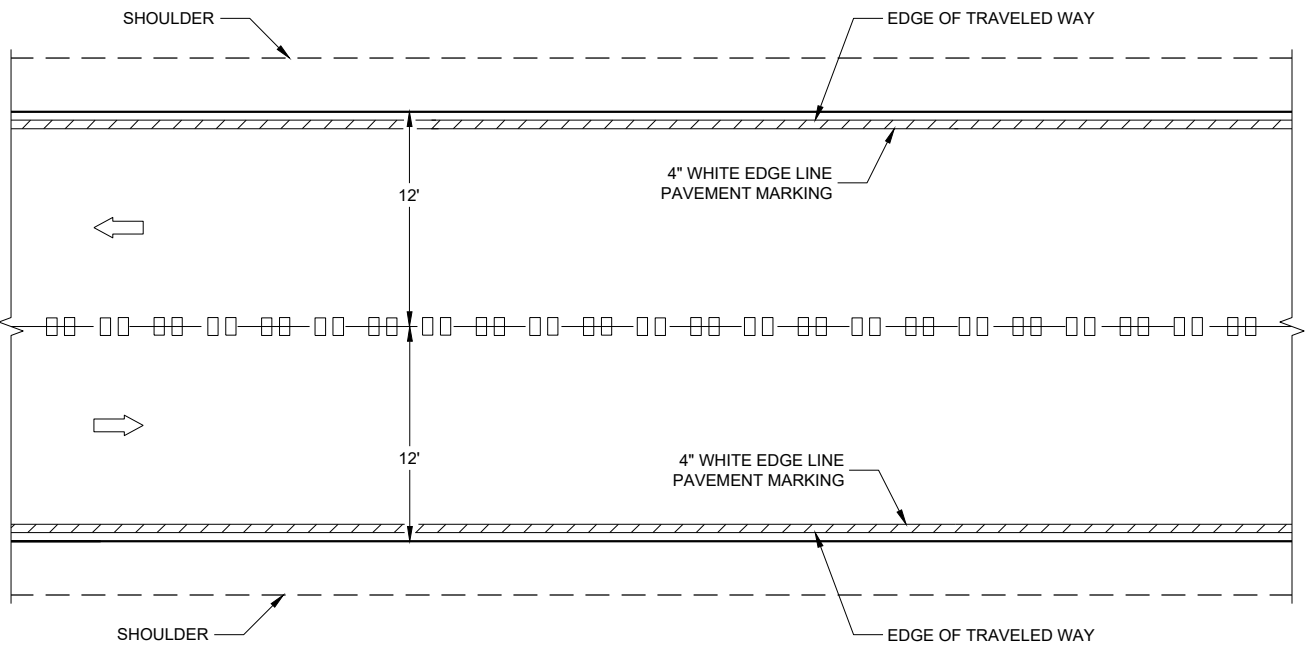


**PLAN VIEW
(SINGLE GROOVE)**

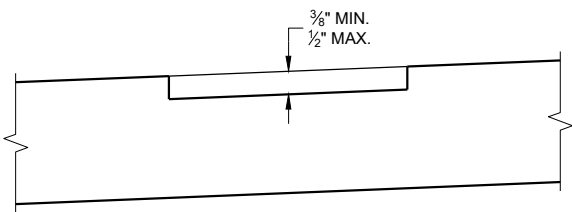


ISOMETRIC

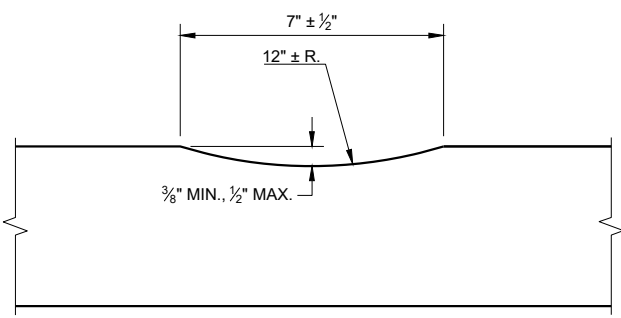
PLACEMENT DETAIL FOR TYPE 1 MILLED RUMBLE STRIP



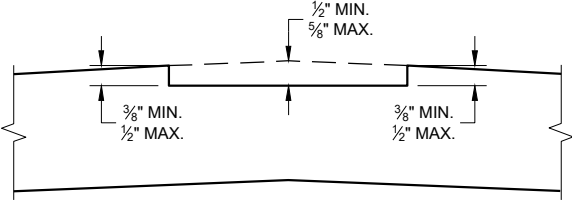
CENTERLINE GROOVES ON TWO-WAY ROADWAYS



**SECTION B - B
SUPERELEVATED ROADWAY**

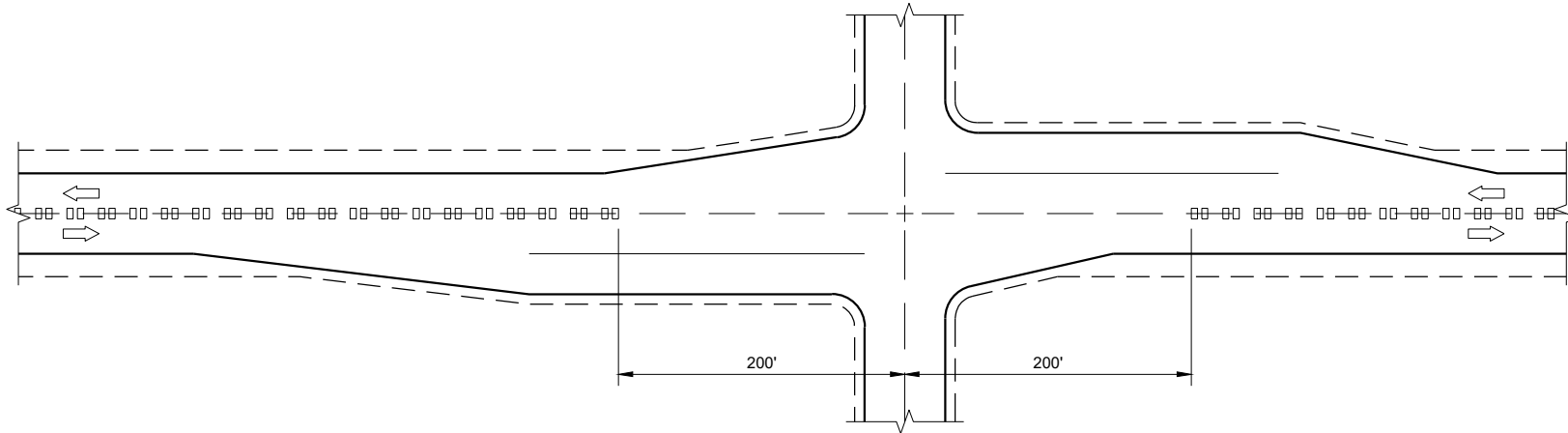


SECTION A - A

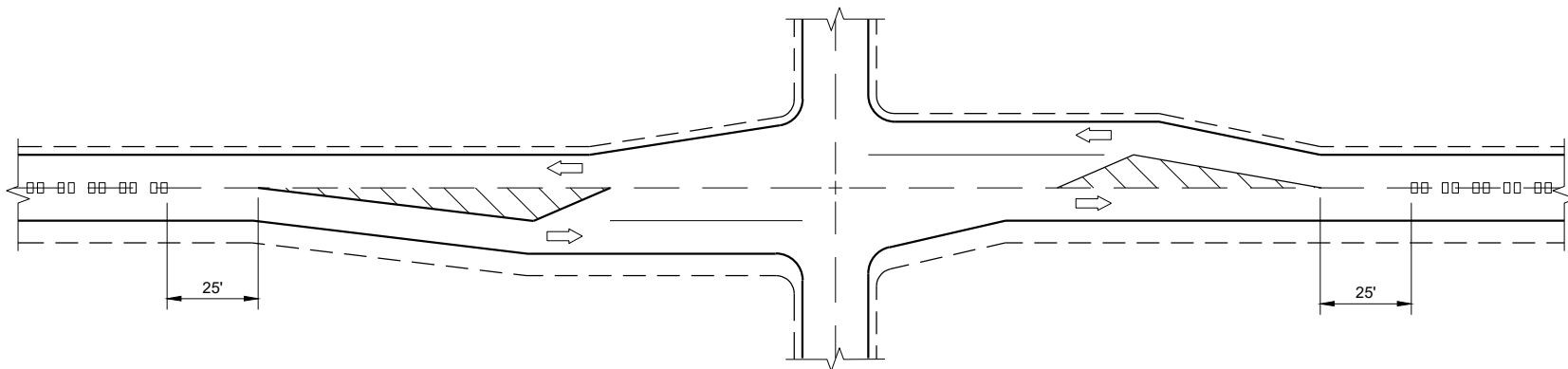


**SECTION B - B
CROWNED ROADWAY**

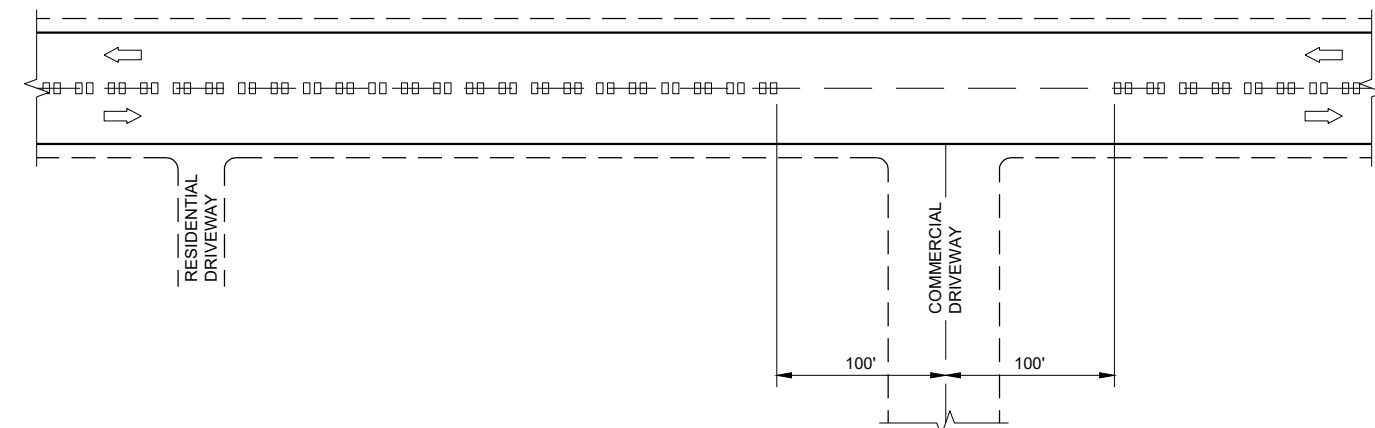
<p>2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING</p>
<p>STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION</p>



CENTERLINE GROOVES AT INTERSECTIONS



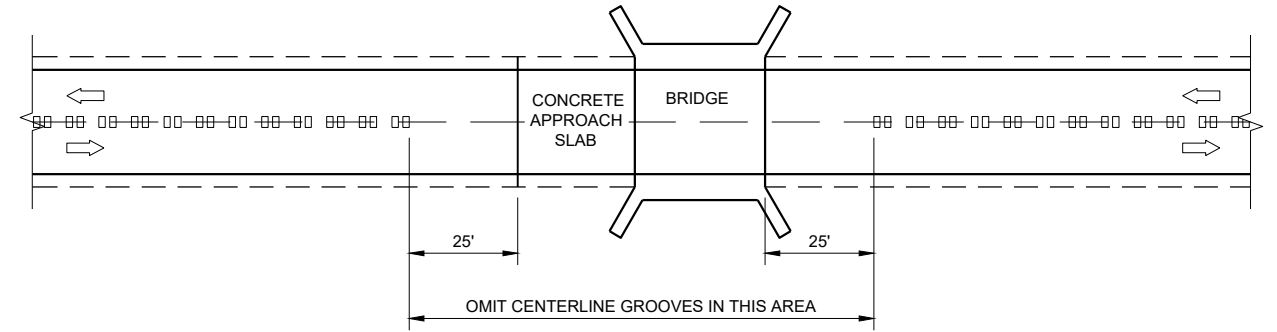
**CENTERLINE GROOVES AT INTERSECTIONS
(WITH LEFT TURN LANES)**



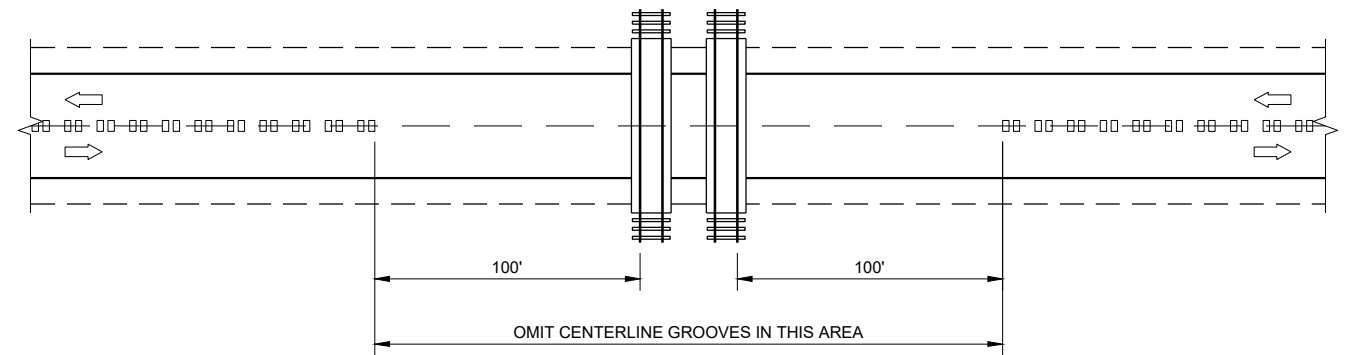
CENTERLINE GROOVES AT DRIVEWAYS^①

GENERAL NOTES

- ① CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.



CENTERLINE GROOVES AT BRIDGES



CENTERLINE GROOVES AT RAILROADS

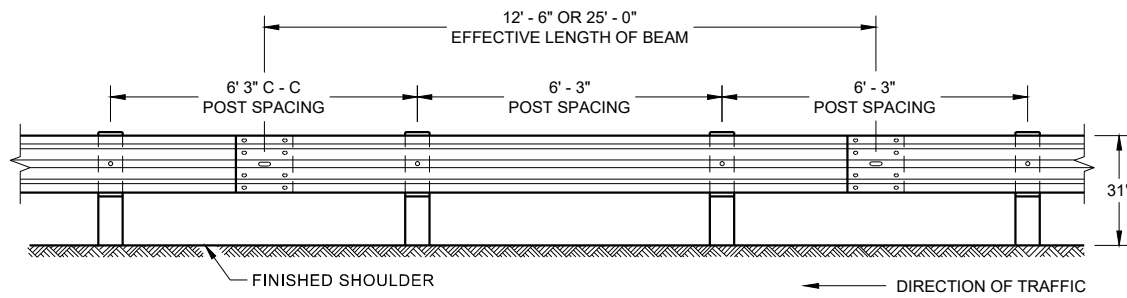
6

6

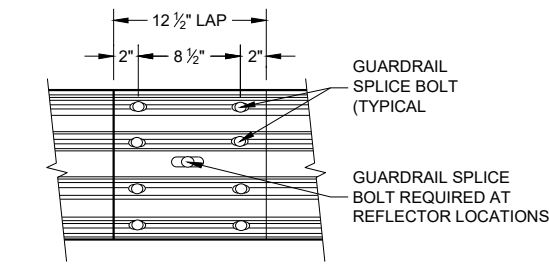
SDD 13A11 - 03b

SDD 13A11 - 03b

2-LANE RURAL CENTERLINE RUMBLE STRIP, MILLING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE 7/2018	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	



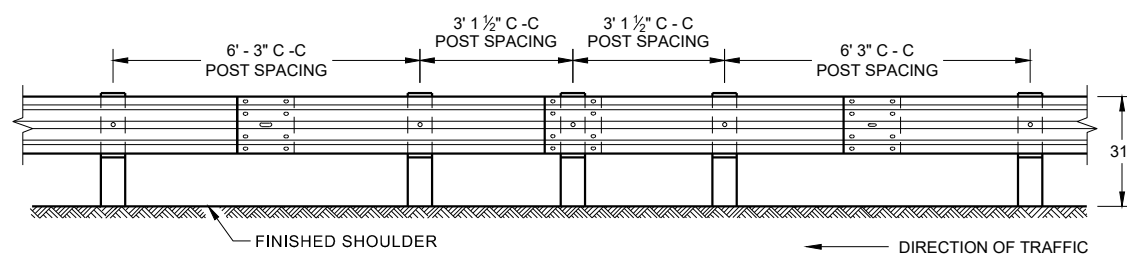
**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



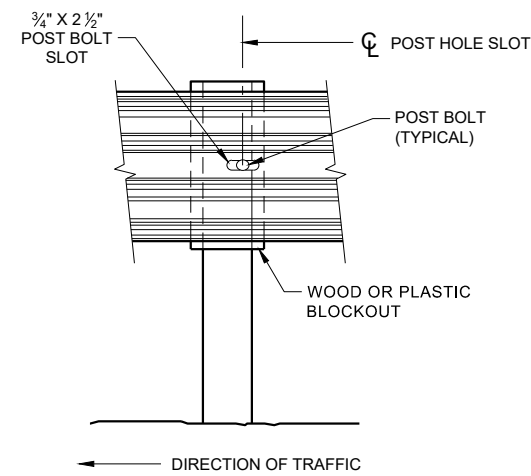
**FRONT VIEW
MID-SPAN BEAM SPLICE**

GENERAL NOTES

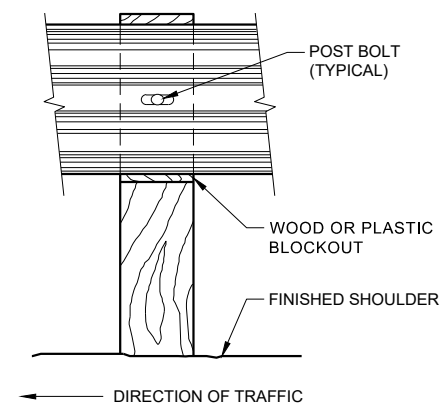
- ⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
 - ⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.
- POST BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 3/4" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 3/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.
- GUARD RAIL SPLICE BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 3/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



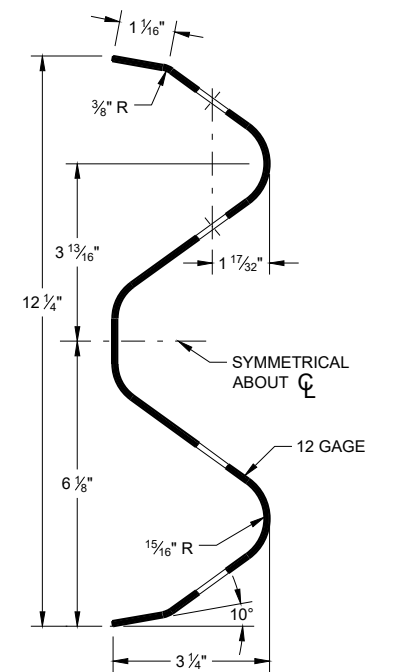
**FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



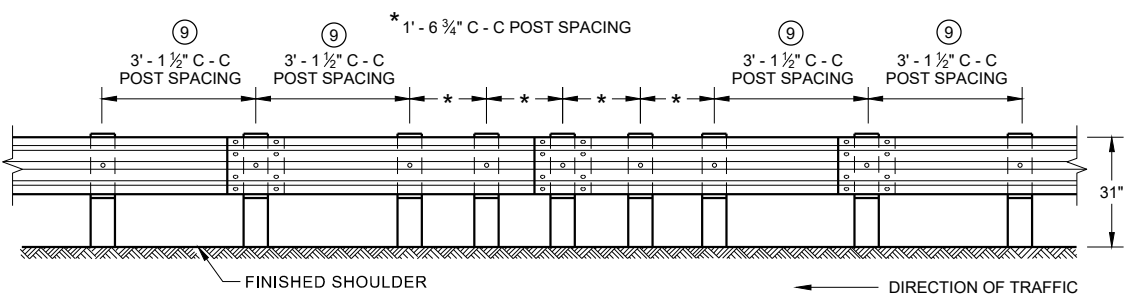
FRONT VIEW AT STEEL POST



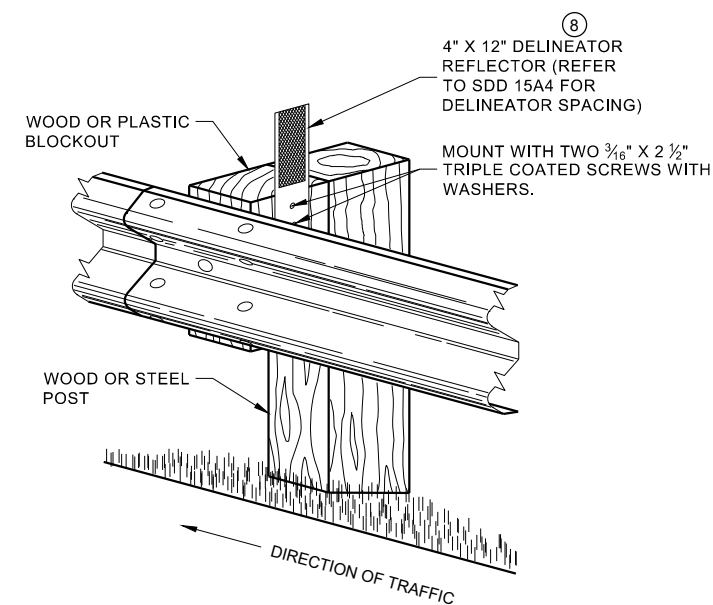
FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



**FRONT VIEW
QUARTER POST SPACING (QS)**



**ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION**

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

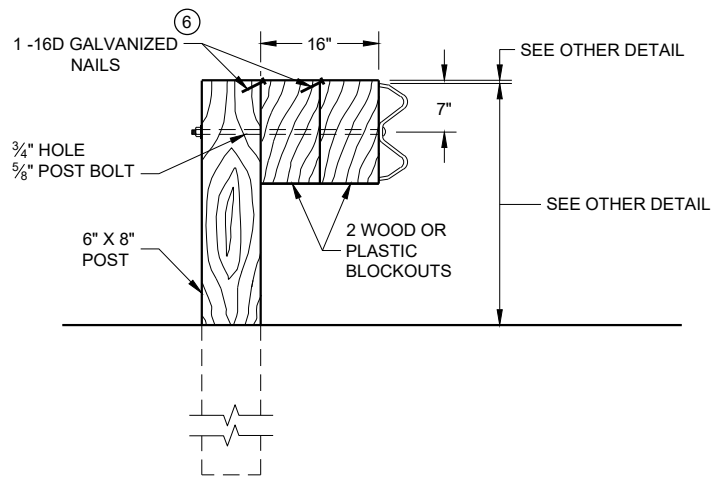
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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6

SDD 14B42 - 07b

SDD 14B42 - 07b

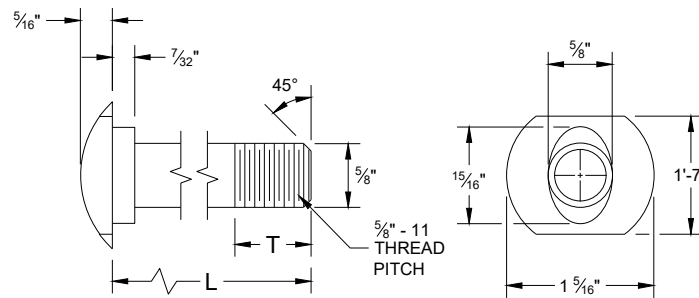


DETAIL FOR 16" BLOCKOUT DEPTH

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.

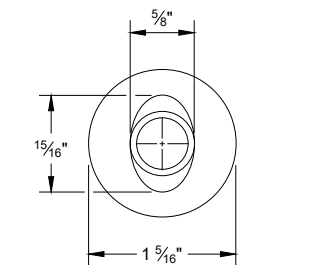
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

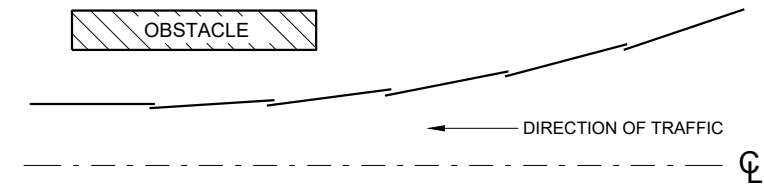


POST BOLT TABLE

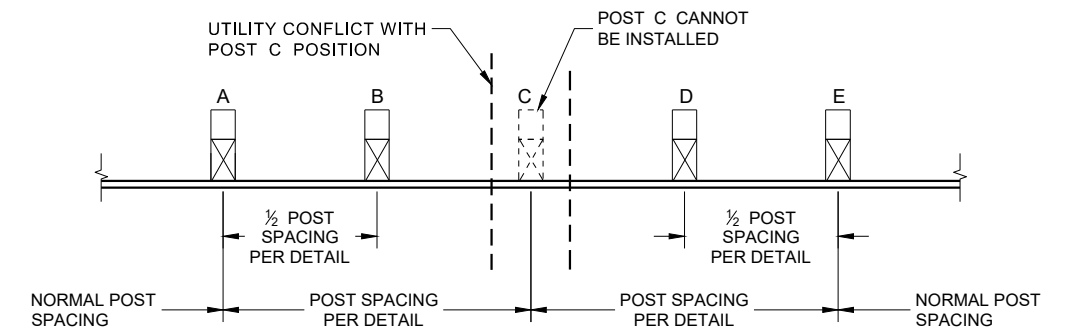
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



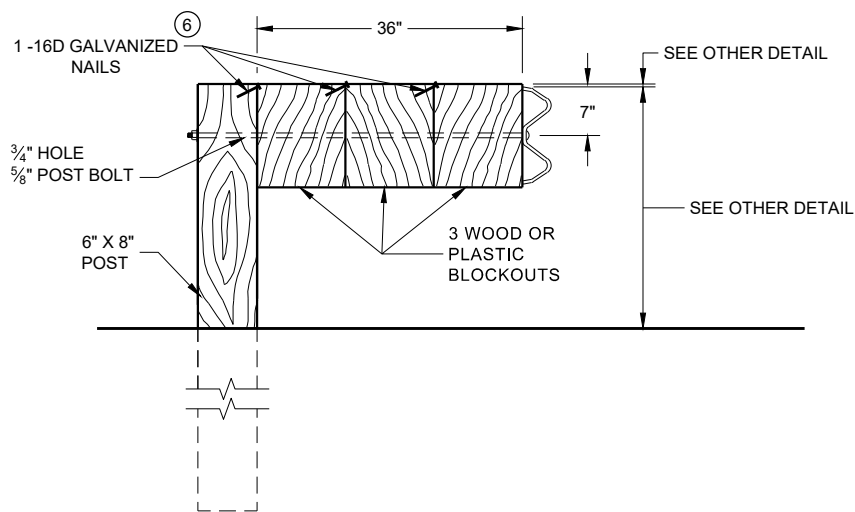
ALTERNATE BOLT HEAD



**PLAN VIEW
BEAM LAPPING DETAIL**

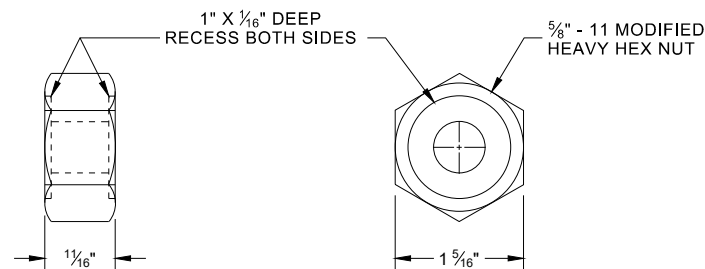


**POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION**

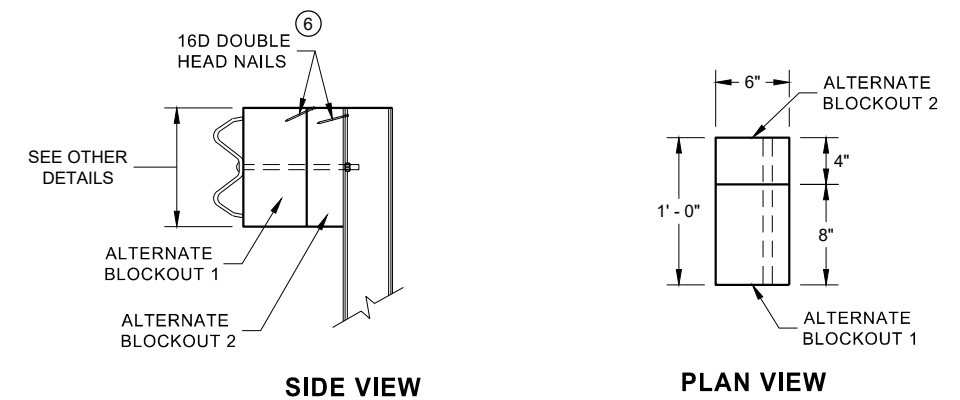


DETAIL FOR 36" BLOCKOUT DEPTH

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.



**POST BOLT, SPLICE BOLT
AND RECESS NUT**

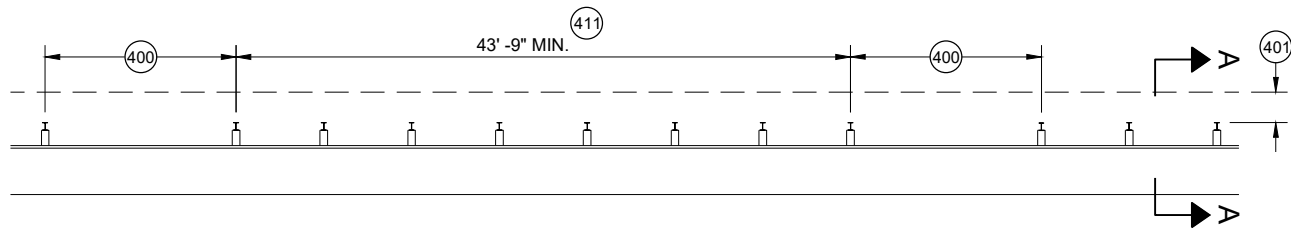


**ALTERNATE WOOD
BLOCKOUT DETAIL**

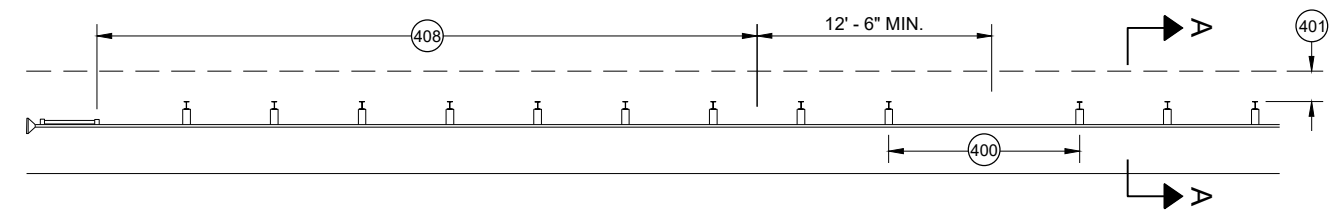
6 WHEN USING STEEL POST AND WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

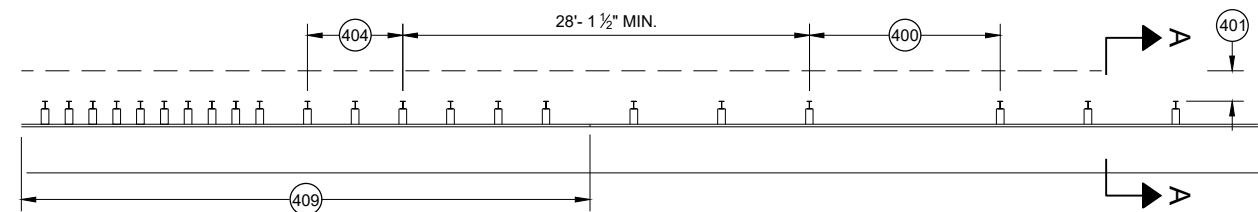
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



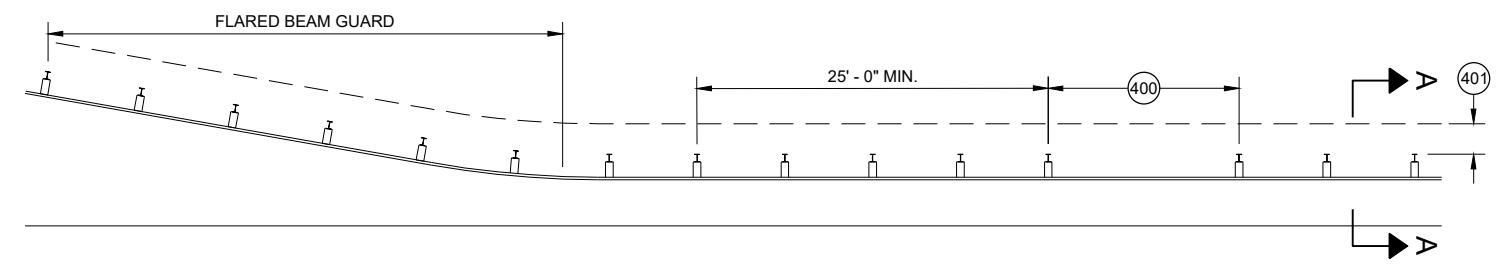
MISSING POST IN MGS GUARDRAIL



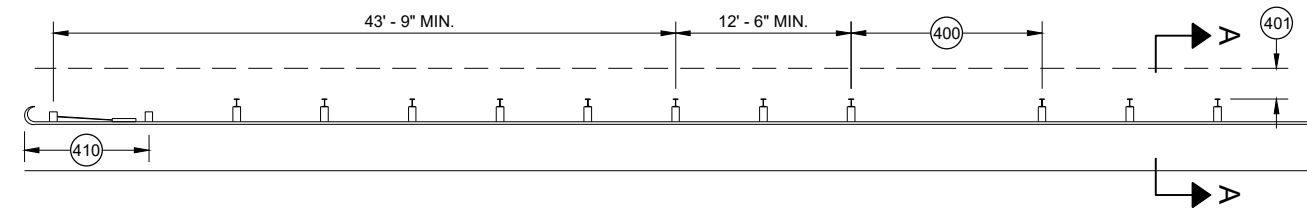
MISSING POST IN MGS GUARDRAIL NEAR EAT



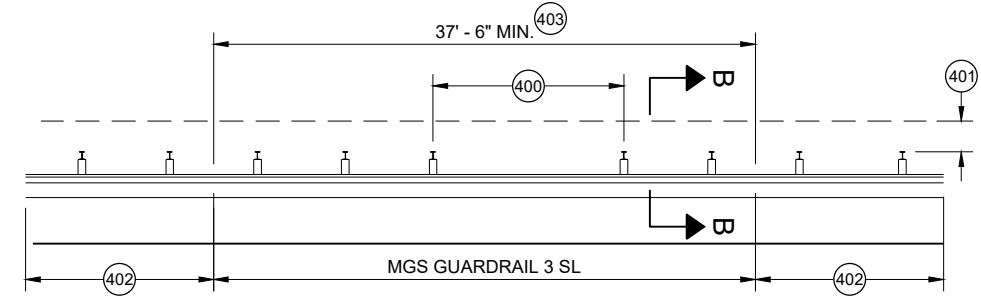
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

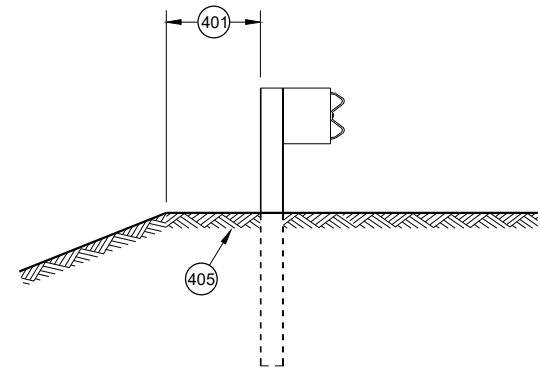


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

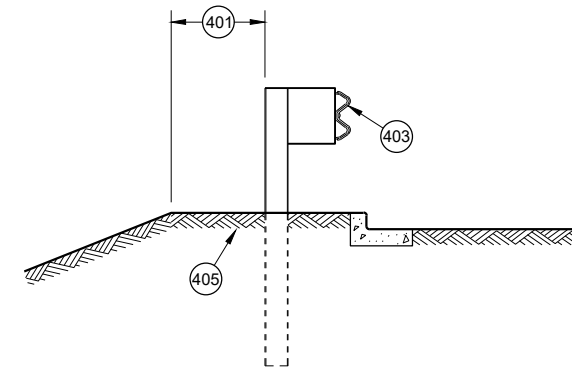


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)

- ④00 MAX SPAN 12' - 6"
- ④01 2' MIN.
- ④02 MGS GUARDRAIL 3
- ④03 NESTING BEAM GUARD
- ④04 ASYMMETRIC TRANSITION
- ④05 SOIL WELL DRAINED AND COMPACTED
- ④06 SEE OTHER DRAWINGS IN THIS SDD
- ④07 SEE OTHER DRAWINGS FOR MIN. SPACING BETWEEN SPANS
- ④08 SEE SDD 14B44
- ④09 SEE SDD 14B45
- ④10 SEE SDD 14B47
- ④11 MINIMUM DISTANCE BETWEEN MISSING POST SPANS.



SECTION A - A



SECTION B - B

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2021 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
<small>FHWA</small>	

GENERAL NOTES

- (A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE 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 MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.
 - (D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.
 - (E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.
- DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

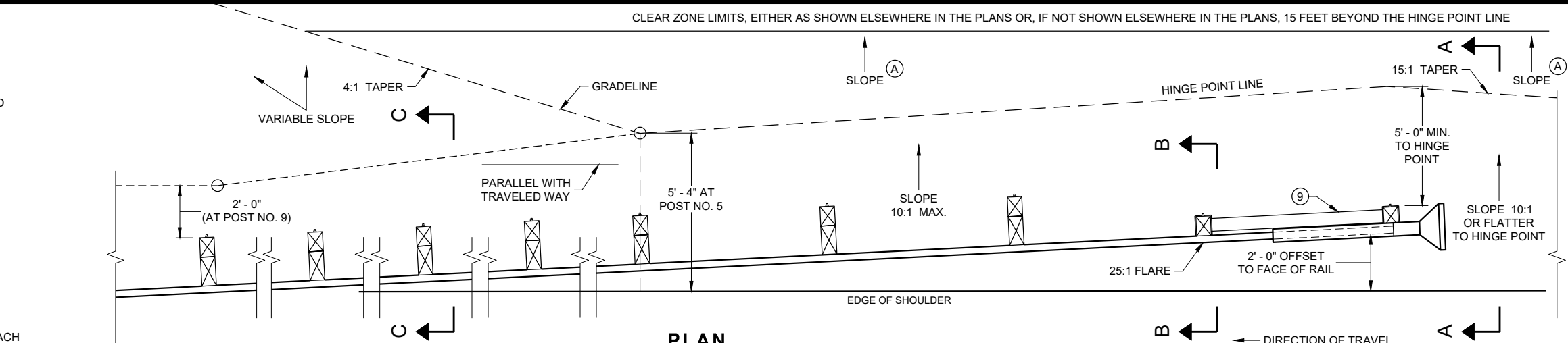
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

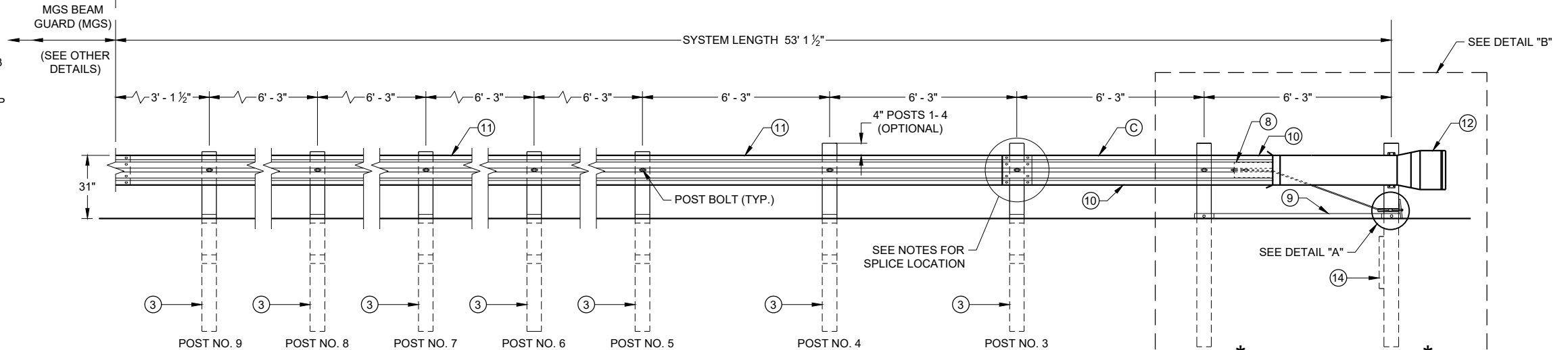
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

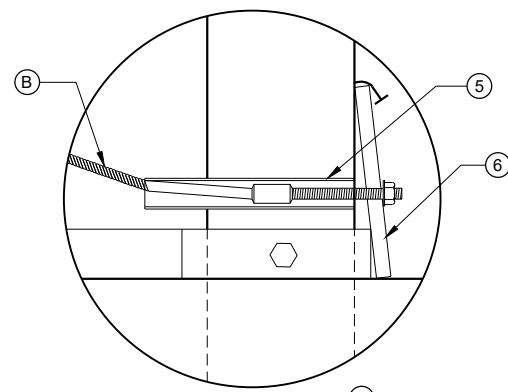
THE CENTER OF THE UPPER 3 1/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



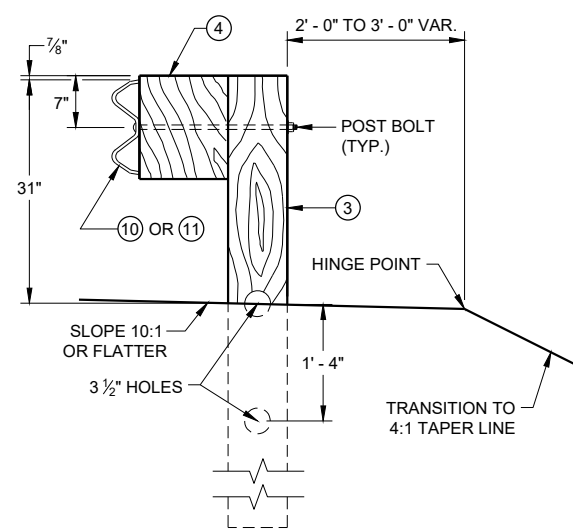
PLAN



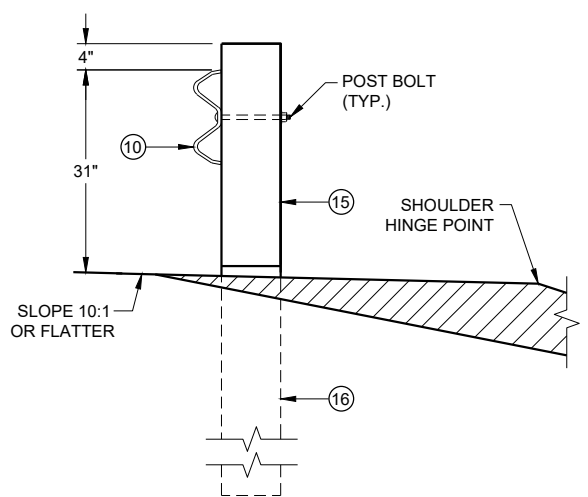
ELEVATION



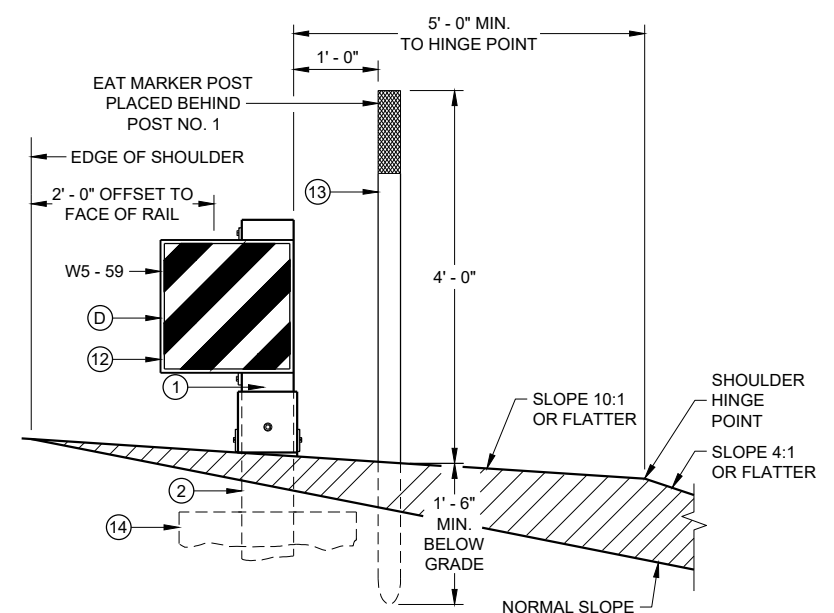
DETAIL "A"



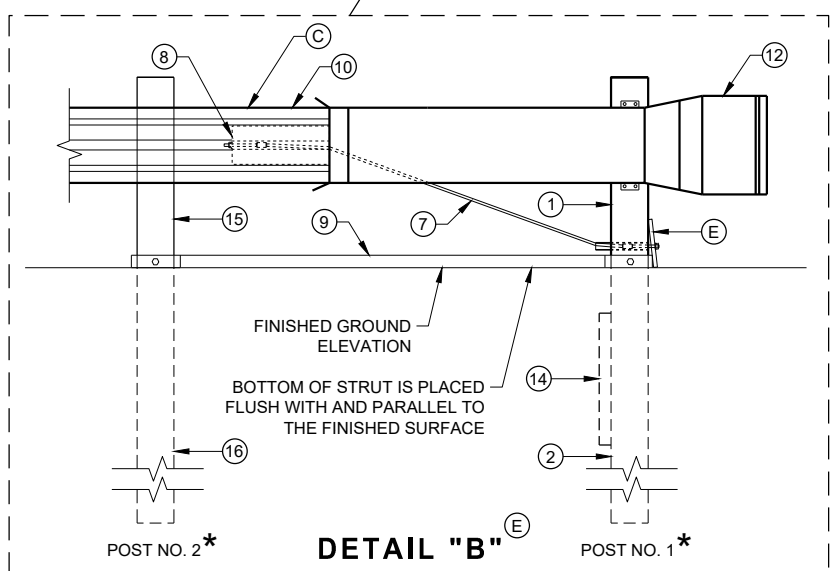
**SECTION C - C
TYPICAL AT POST NOS. 3 - 9**



**SECTION B - B
TYPICAL AT POST NO. 2***



**SECTION A - A
TYPICAL AT POST NO. 1***



DETAIL "B"

**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

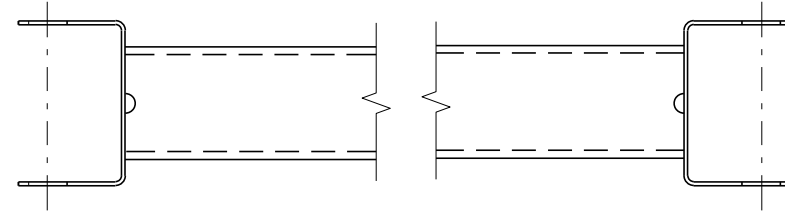
6

SDD 14B44 - 04a

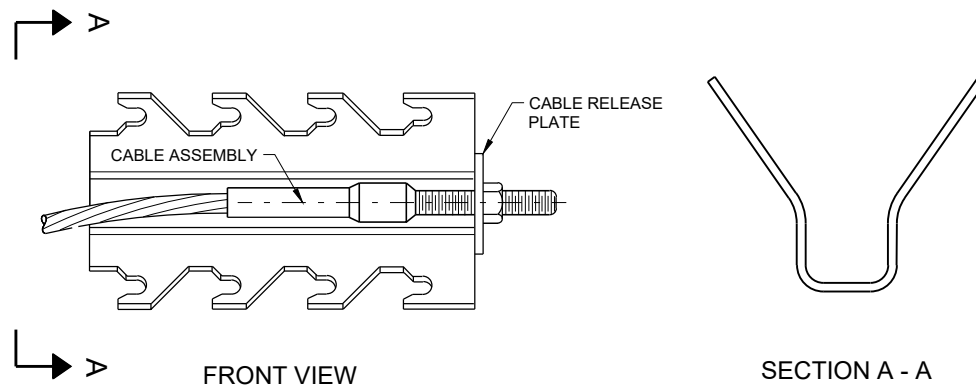
SDD 14B44 - 04a

BILL OF MATERIALS

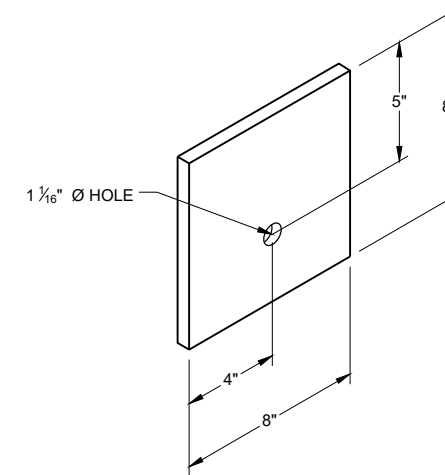
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
⑪	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
⑫	IMPACT HEAD
⑬	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
⑭	SOIL PLATE
⑮	UPPER POST NO. 2
⑯	LOWER POST NO. 2



GENERIC GROUND STRUT ⑨ ⑤



GENERIC ANCHOR CABLE BOX ⑨ ⑤



BEARING PLATE ⑥ ⑤

6

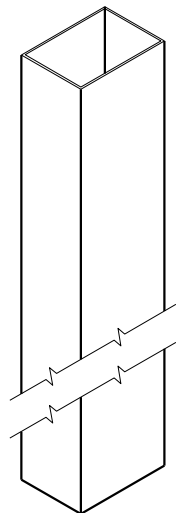
6

SDD 14B44 - 04b

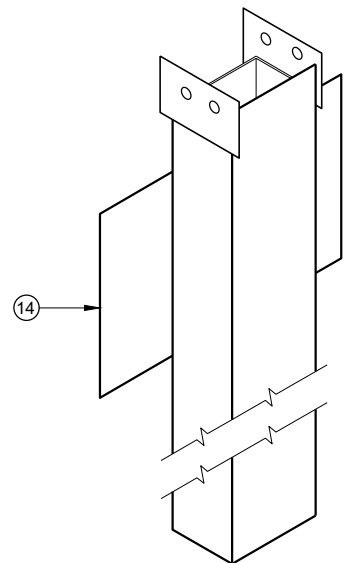
SDD 14B44 - 04b

**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

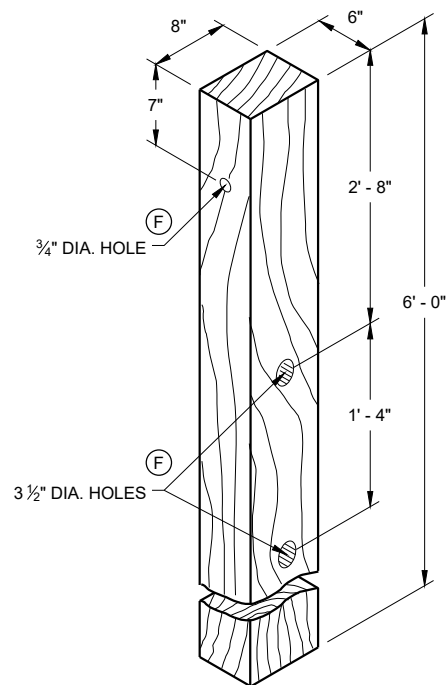
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



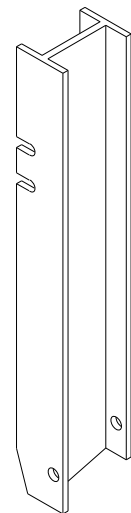
UPPER POST NO. 1 ⁽¹⁾ (E)



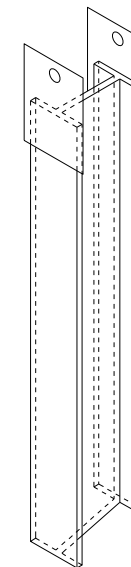
LOWER POST NO. 1 ⁽²⁾ (E)



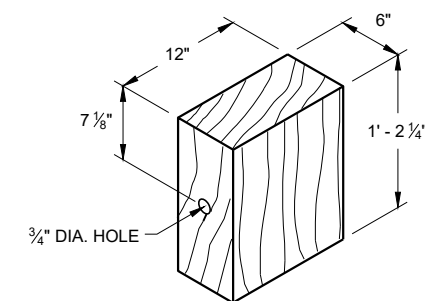
WOOD CRT POST ⁽³⁾ (E)
POSTS NUMBER 3-9



UPPER POST NO. 2 ⁽¹⁵⁾ (E)

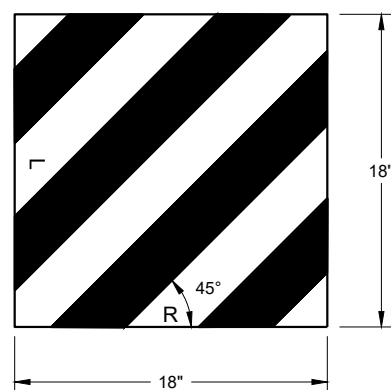


LOWER POST NO. 2 ⁽¹⁶⁾ (E)

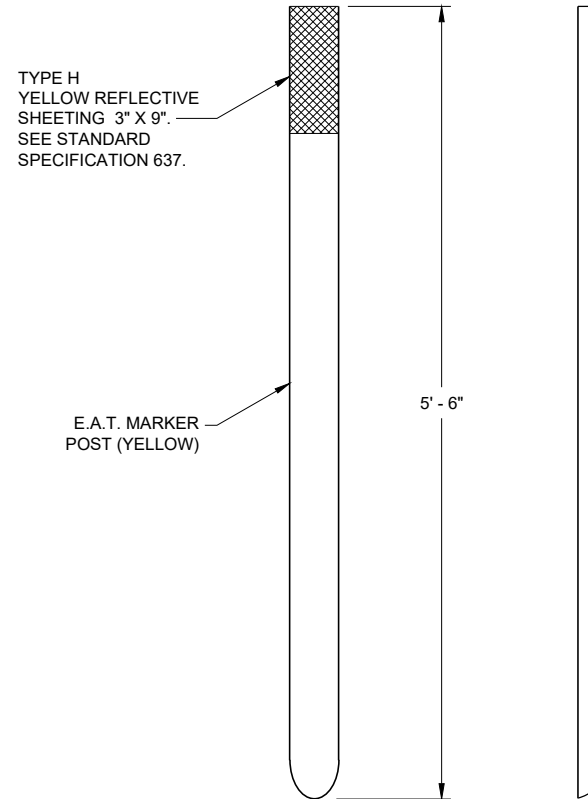


WOOD BLOCKOUT ⁽⁴⁾
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2

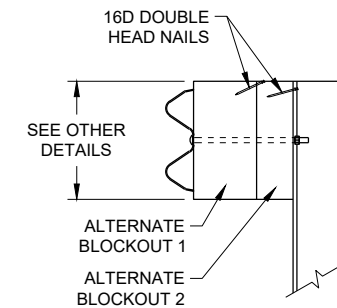
6



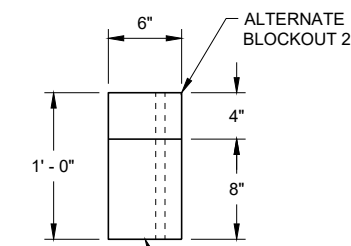
W5 - 59
REFLECTIVE SHEETING DETAIL ^(E)



FRONT VIEW SIDE VIEW
E.A.T. MARKER POST ⁽¹³⁾



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

6

SDD 14B44 - 04c

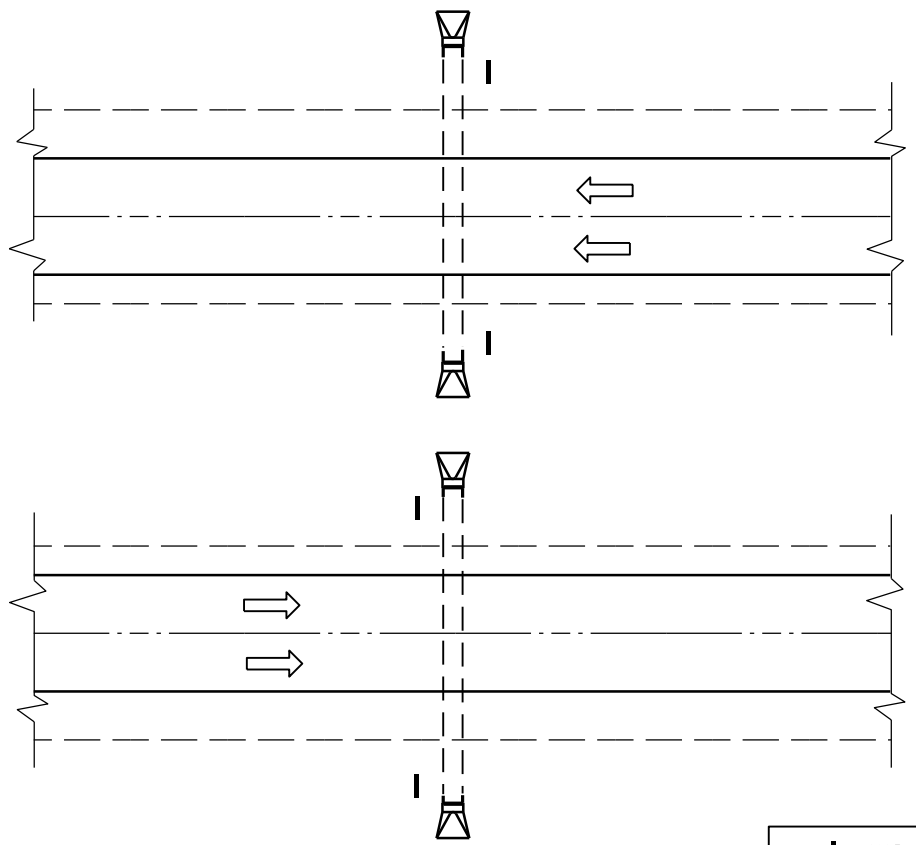
SDD 14B44 - 04c

**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

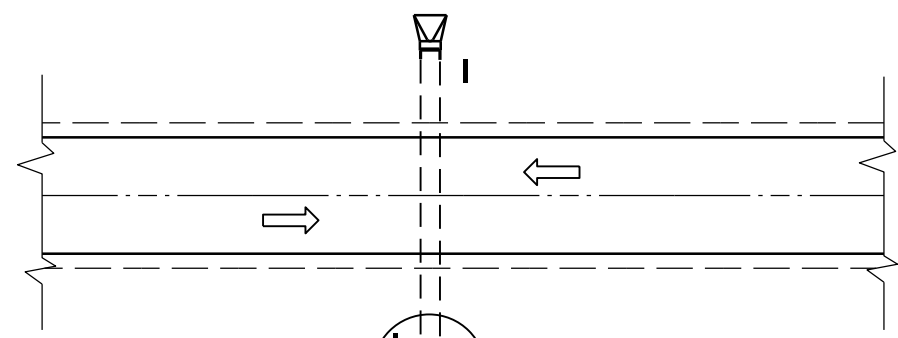
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

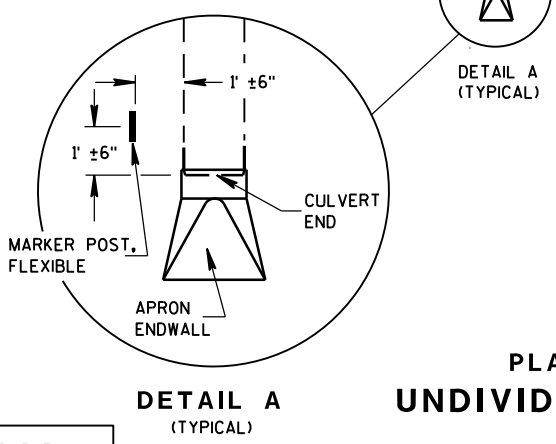
FHWA



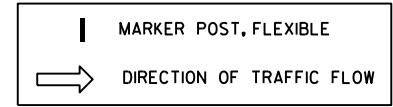
PLAN VIEW
DIVIDED HIGHWAY



PLAN VIEW
UNDIVIDED HIGHWAY

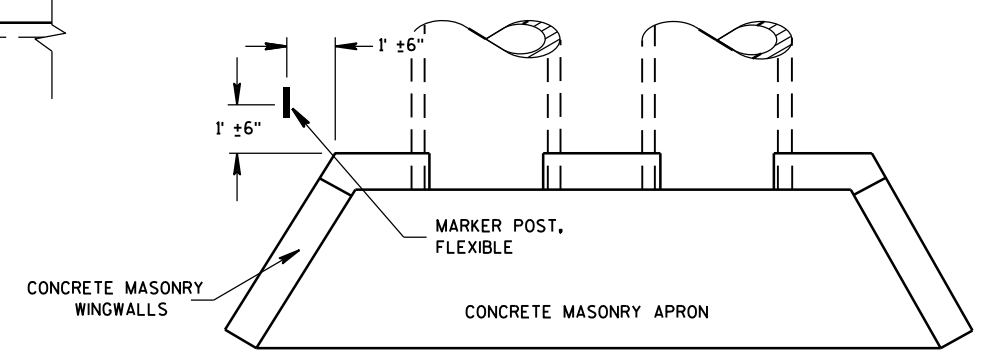


DETAIL A
(TYPICAL)



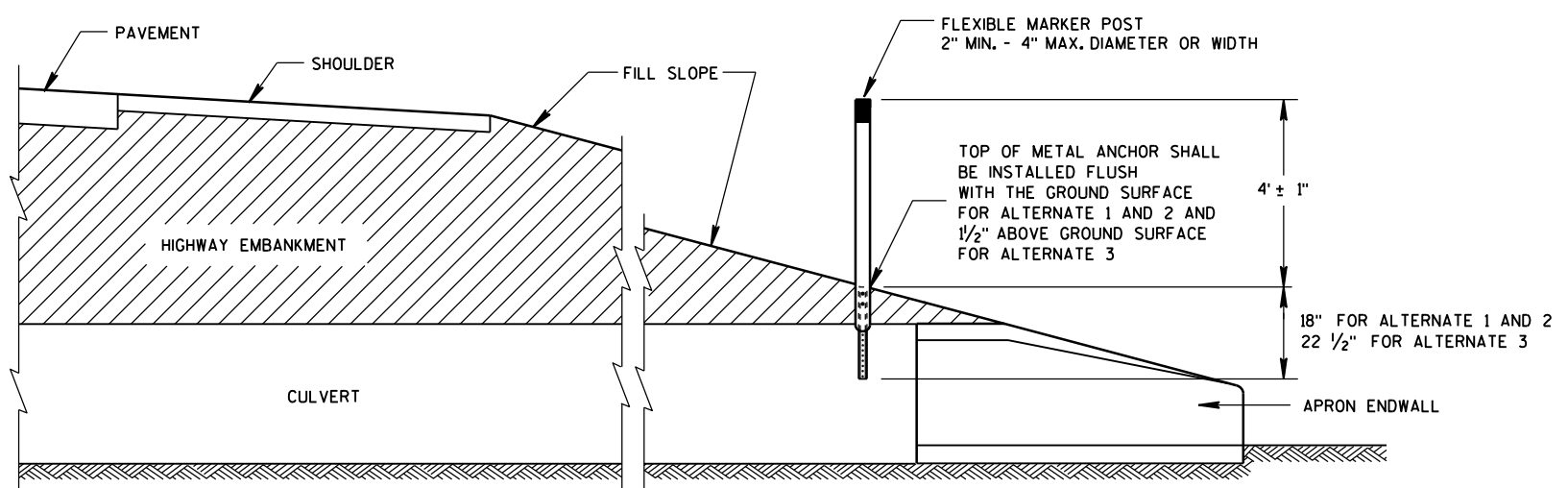
GENERAL NOTES

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**

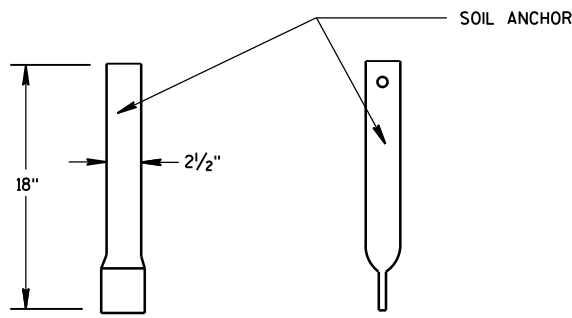
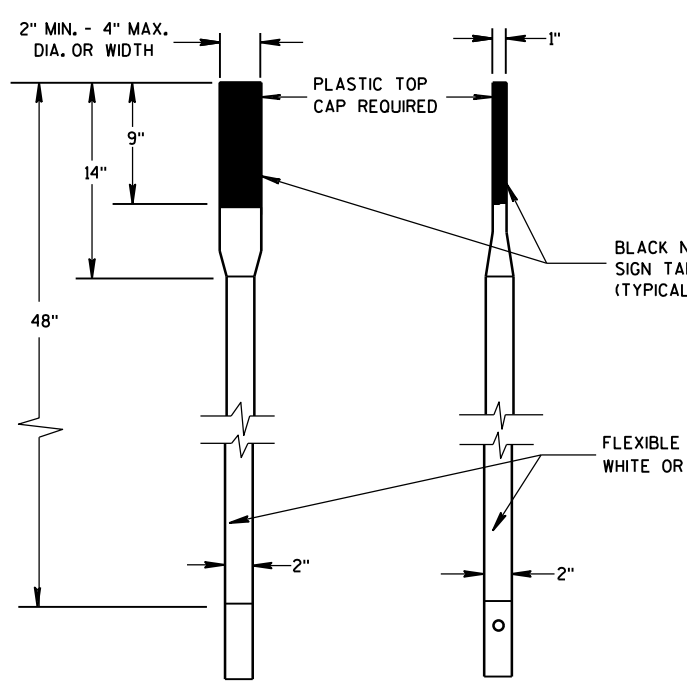
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

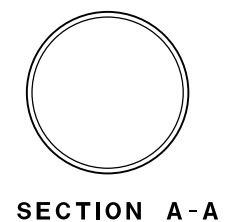
6

S.D.D. 15 A 3-2a

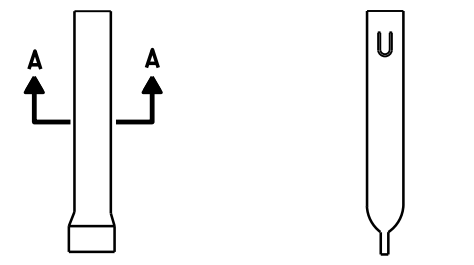
S.D.D. 15 A 3-2a



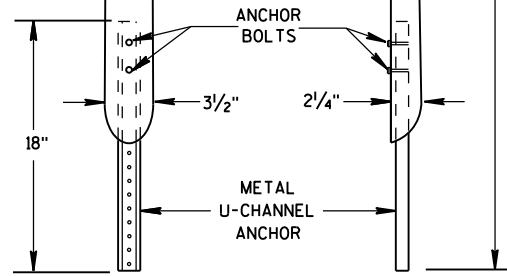
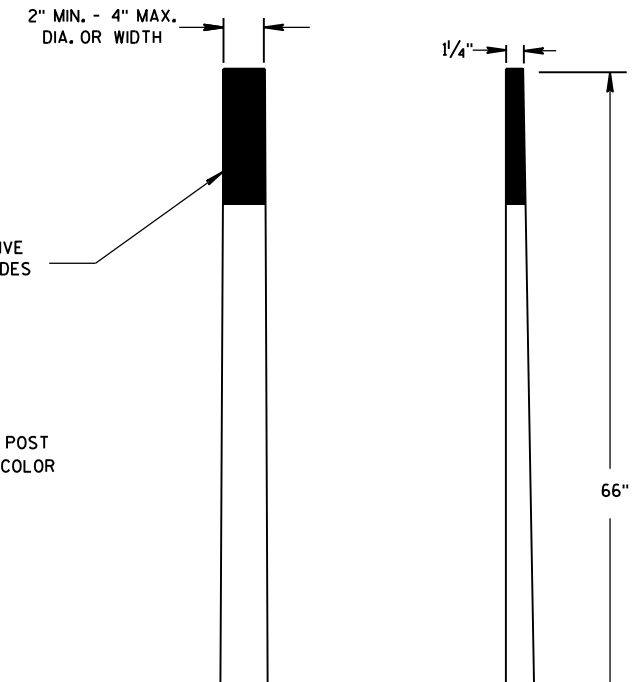
FRONT VIEW SIDE VIEW
ALTERNATE 1



SECTION A-A

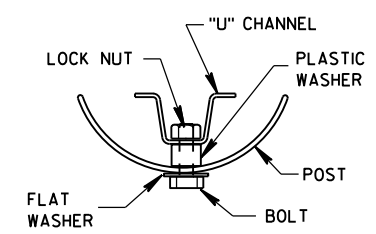


FRONT VIEW SIDE VIEW
ALTERNATE 1

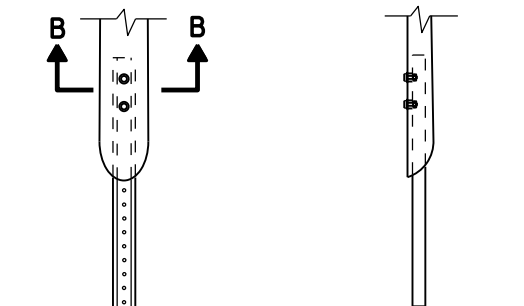


FRONT VIEW SIDE VIEW
ALTERNATE 2

FLEXIBLE MARKER POSTS

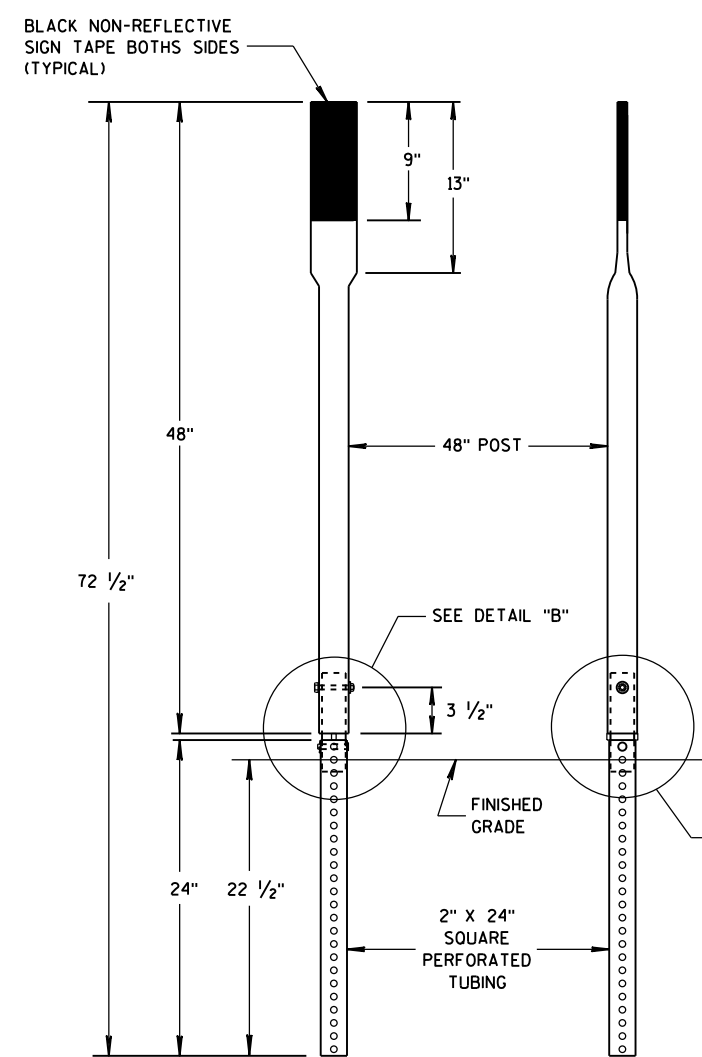


SECTION B-B

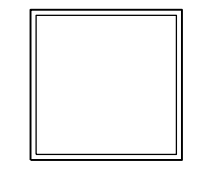


FRONT VIEW SIDE VIEW
ALTERNATE 2

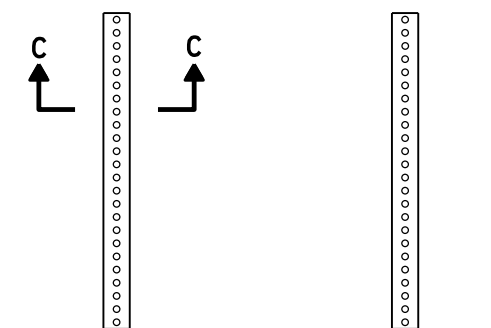
FLEXIBLE MARKER POST ANCHORS



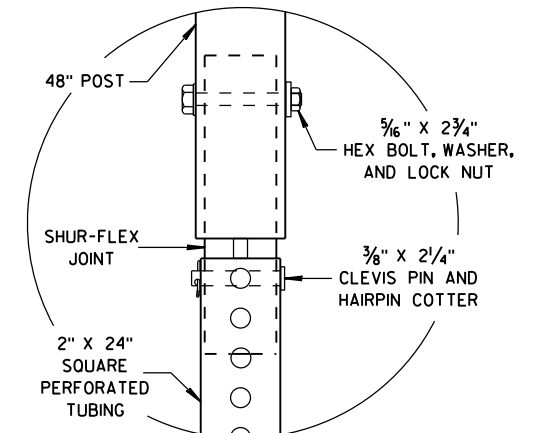
FRONT VIEW SIDE VIEW
ALTERNATE 3



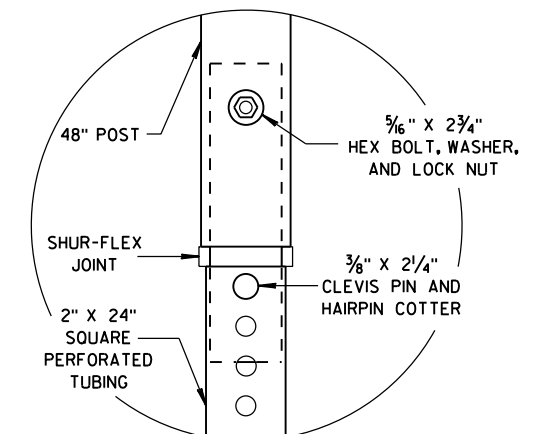
SECTION C-C



FRONT VIEW SIDE VIEW
ALTERNATE 3



DETAIL B



DETAIL C

FLEXIBLE MARKER POST FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/1/2012 DATE /S/ Travis Feltes
STATE TRAFFIC ENGINEER OF DESIGN
FHWA

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" X 48" UNLESS OTHERWISE NOTED.

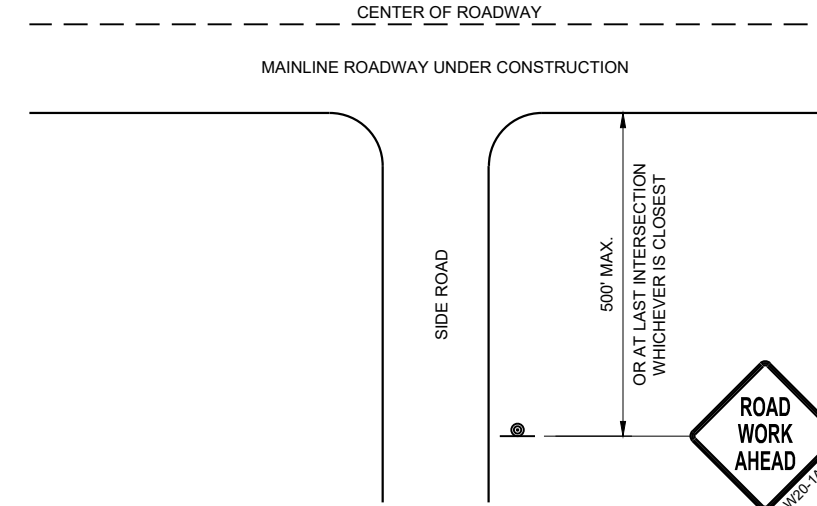
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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 REESTABLISHED.

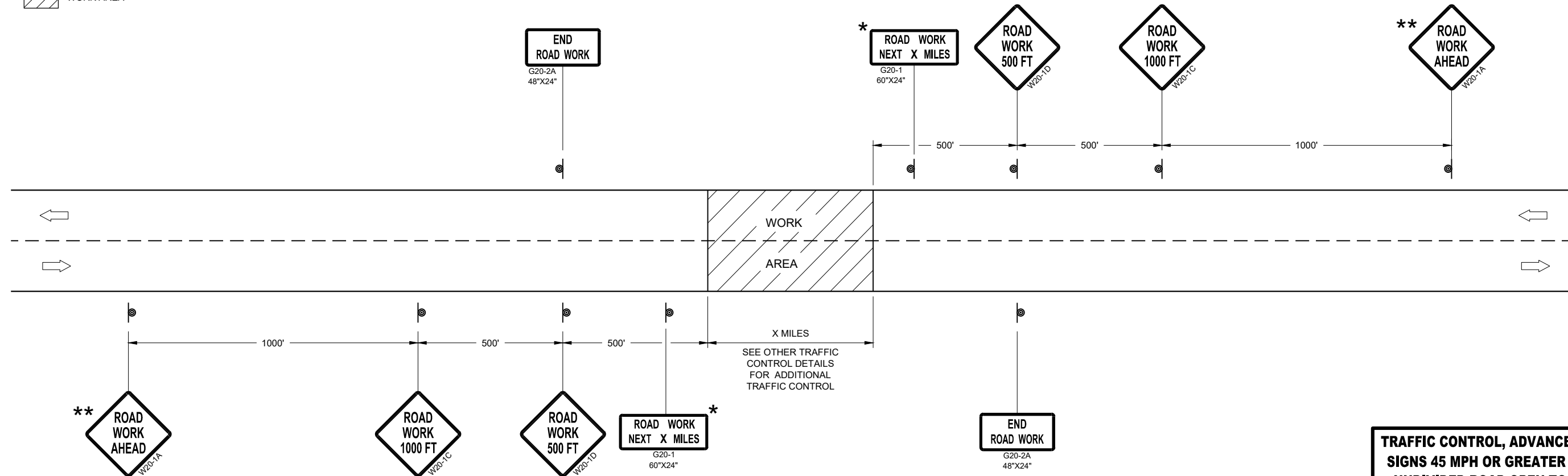
- * OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- ** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

LEGEND

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



TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 MPH OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE July 2018 /S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

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" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"X36" SIGNS MAY BE USED INSTEAD OF 48" X 48" SIGNS.

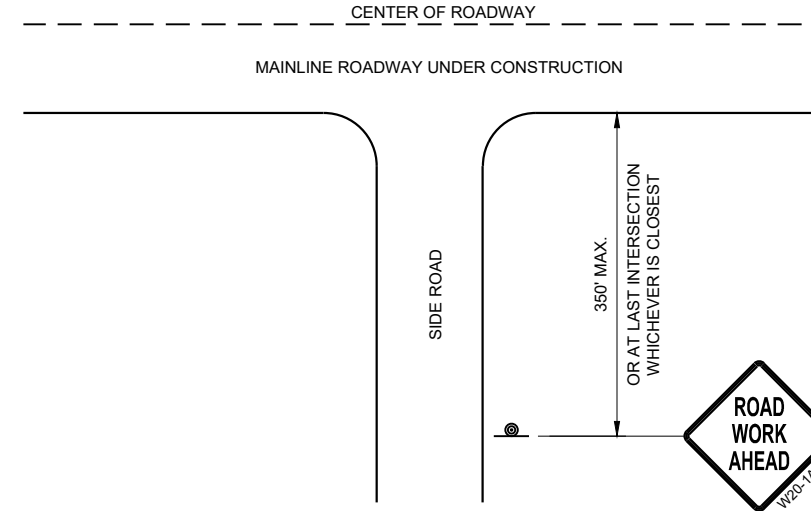
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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 REESTABLISHED.

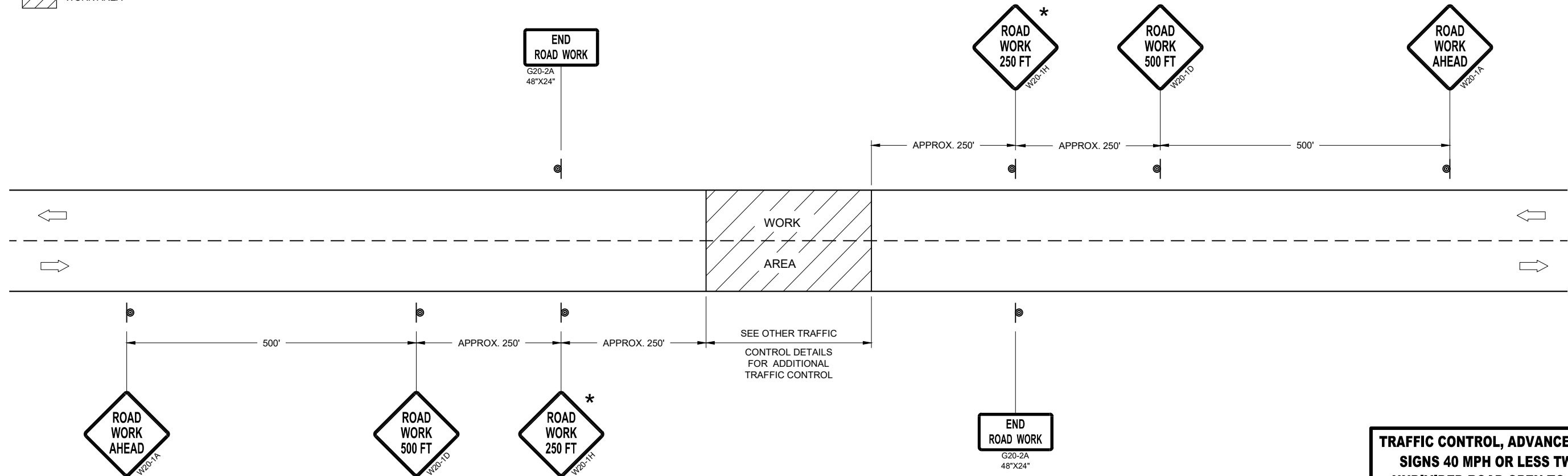
* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.

LEGEND

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



**TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL**



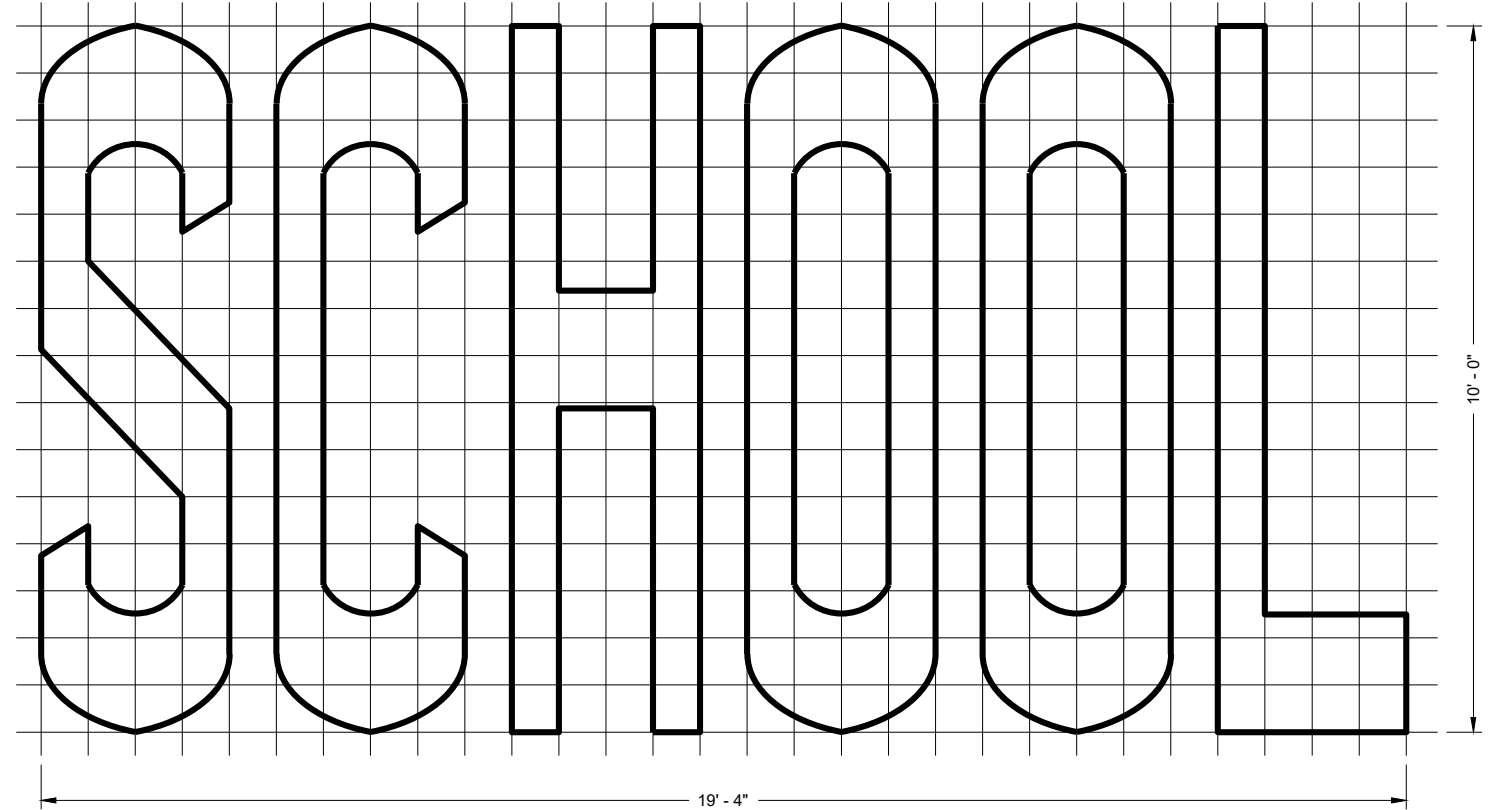
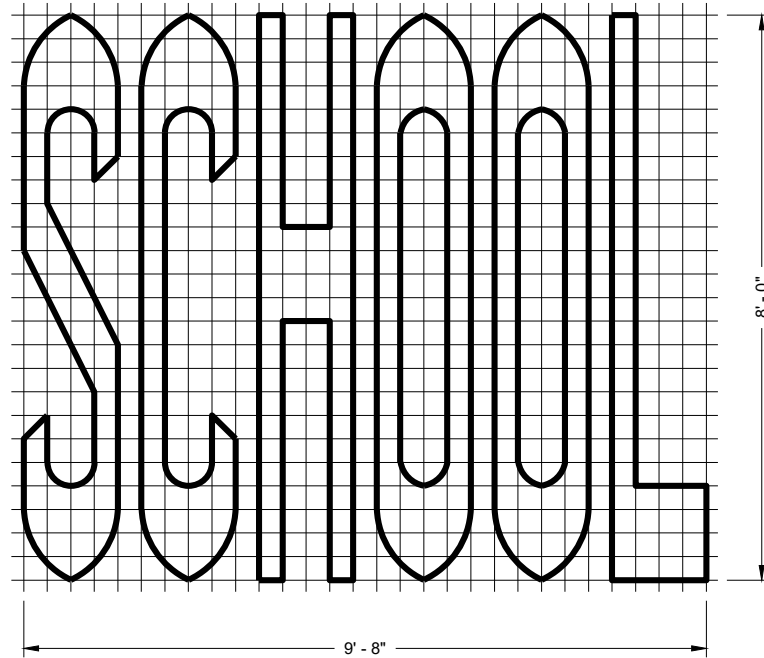
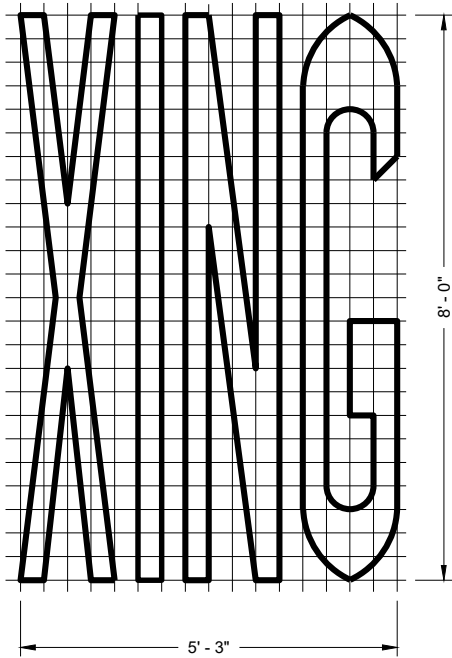
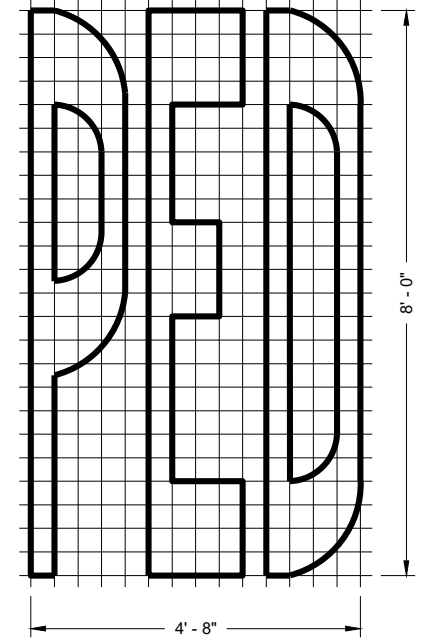
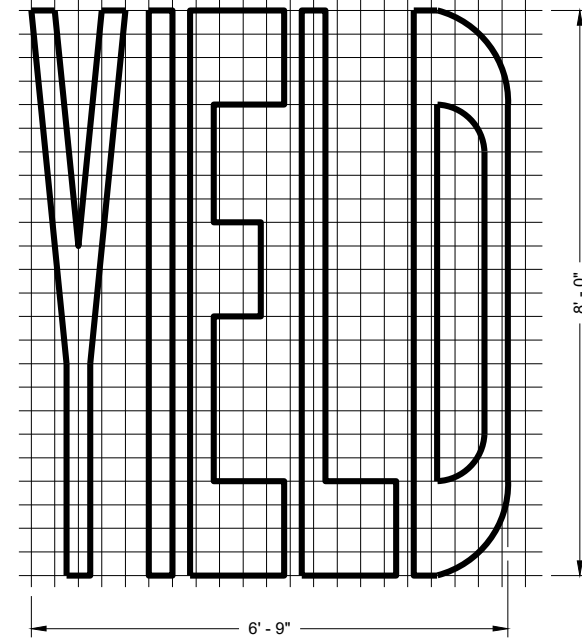
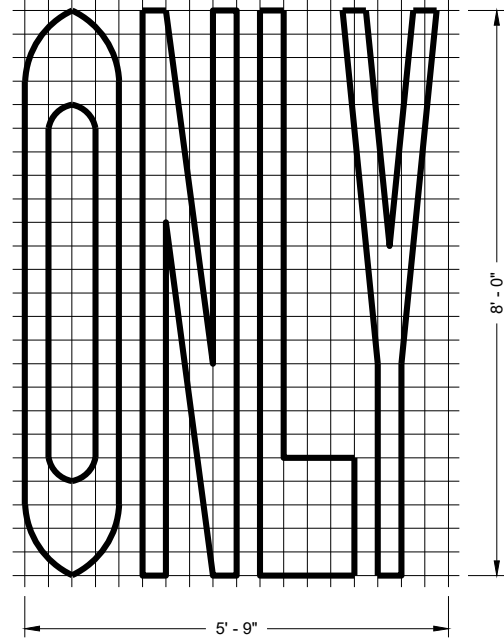
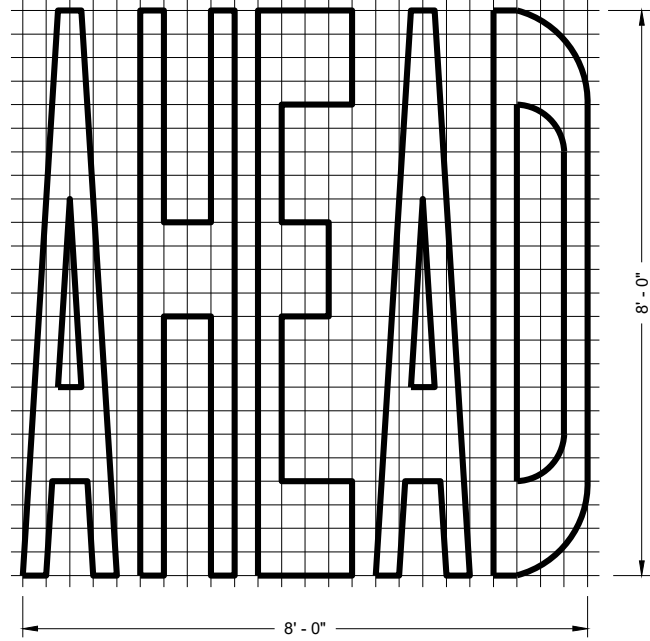
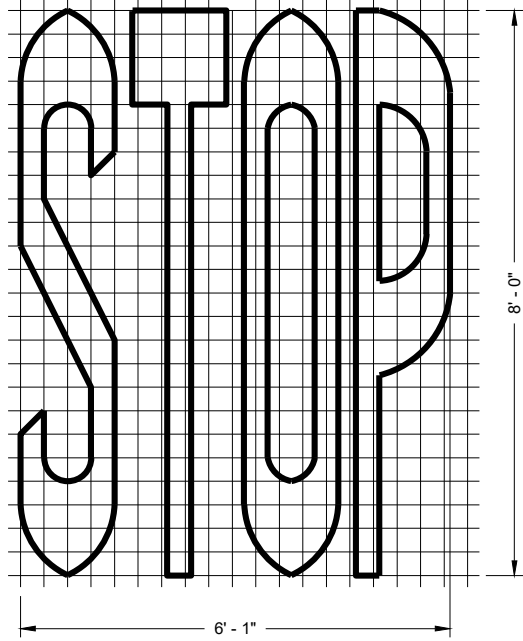
TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

**TRAFFIC CONTROL, ADVANCE WARNING
SIGNS 40 MPH OR LESS TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFIC**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA



SINGLE LANE

TWO - LANE

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.

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

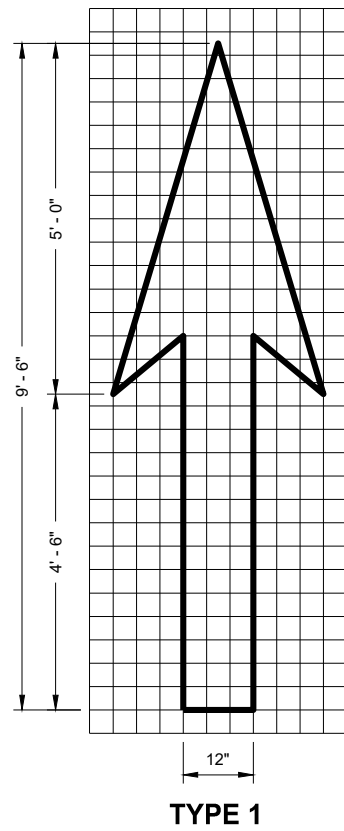
APPROVED

November 2019

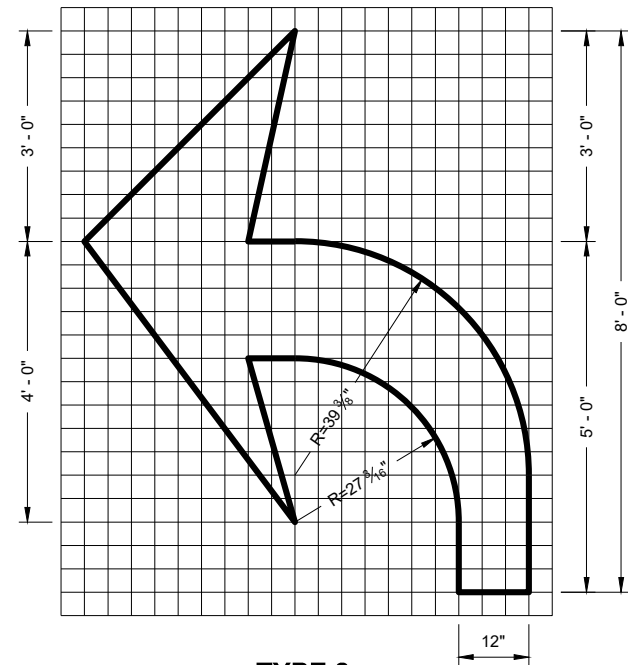
DATE

FHWA

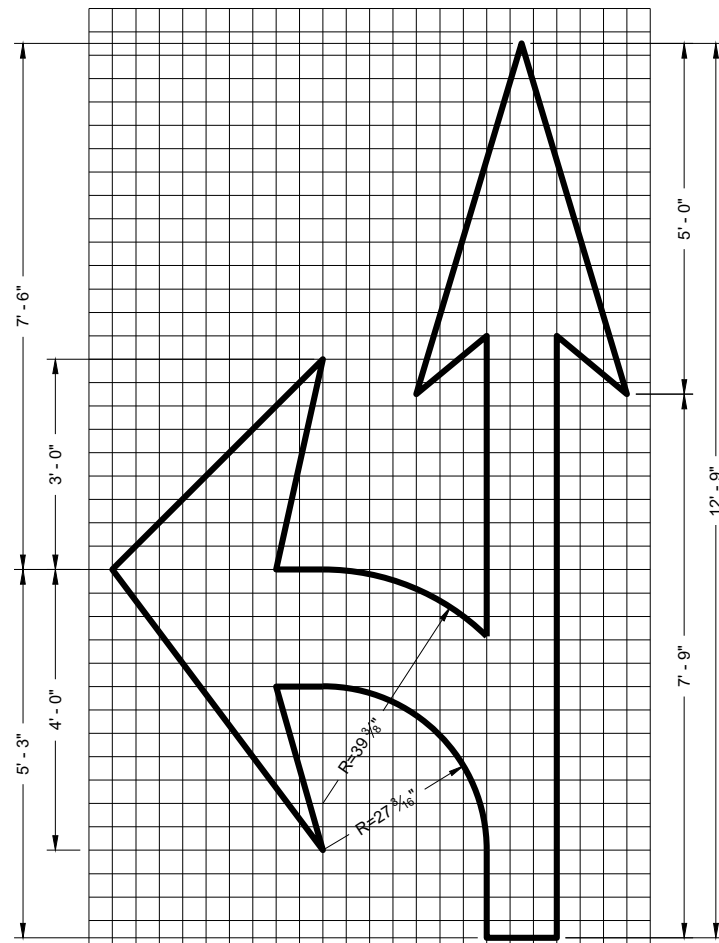
/S/ Matthew Rauch
STATE SIGNING AND MARKING
ENGINEER



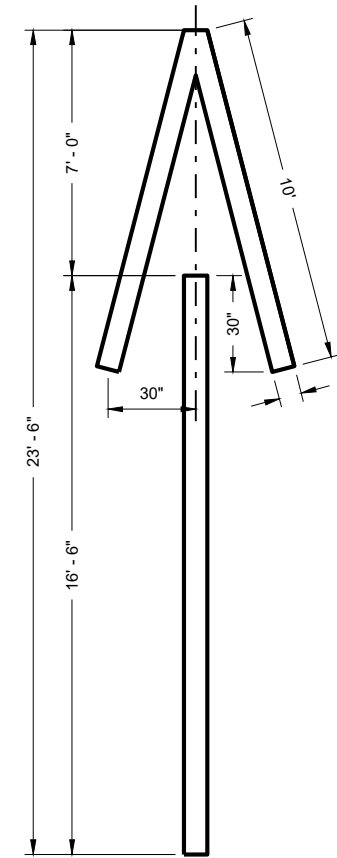
TYPE 1



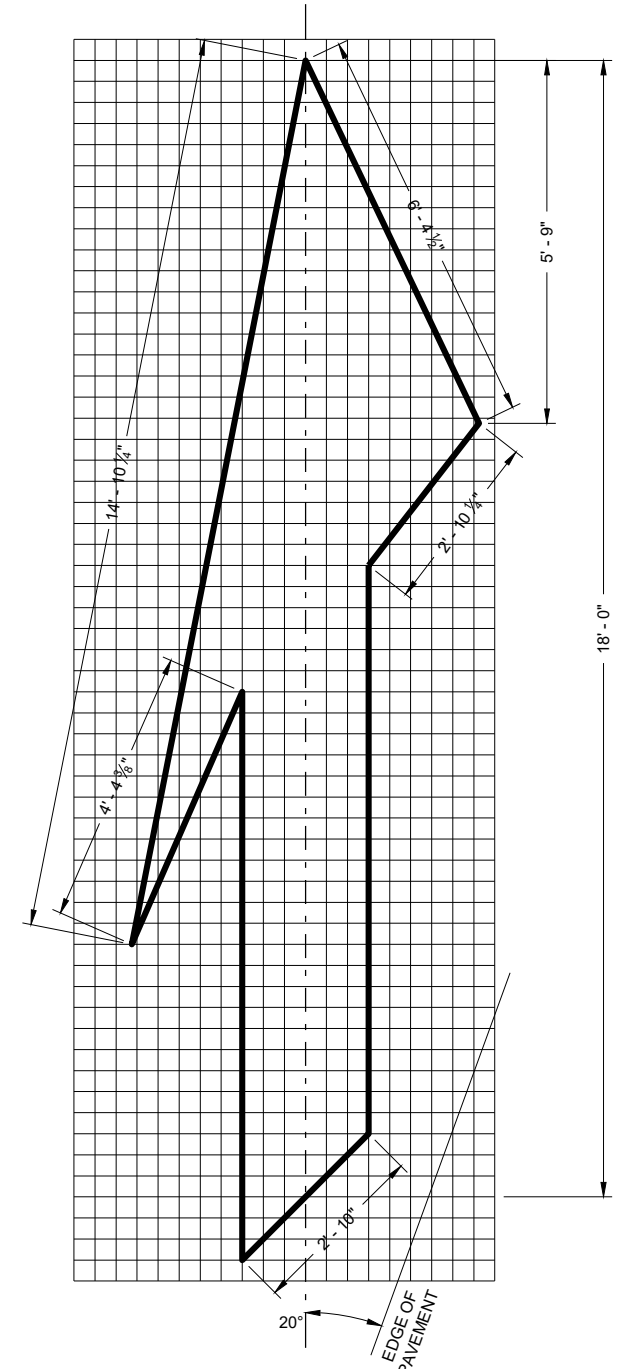
TYPE 2



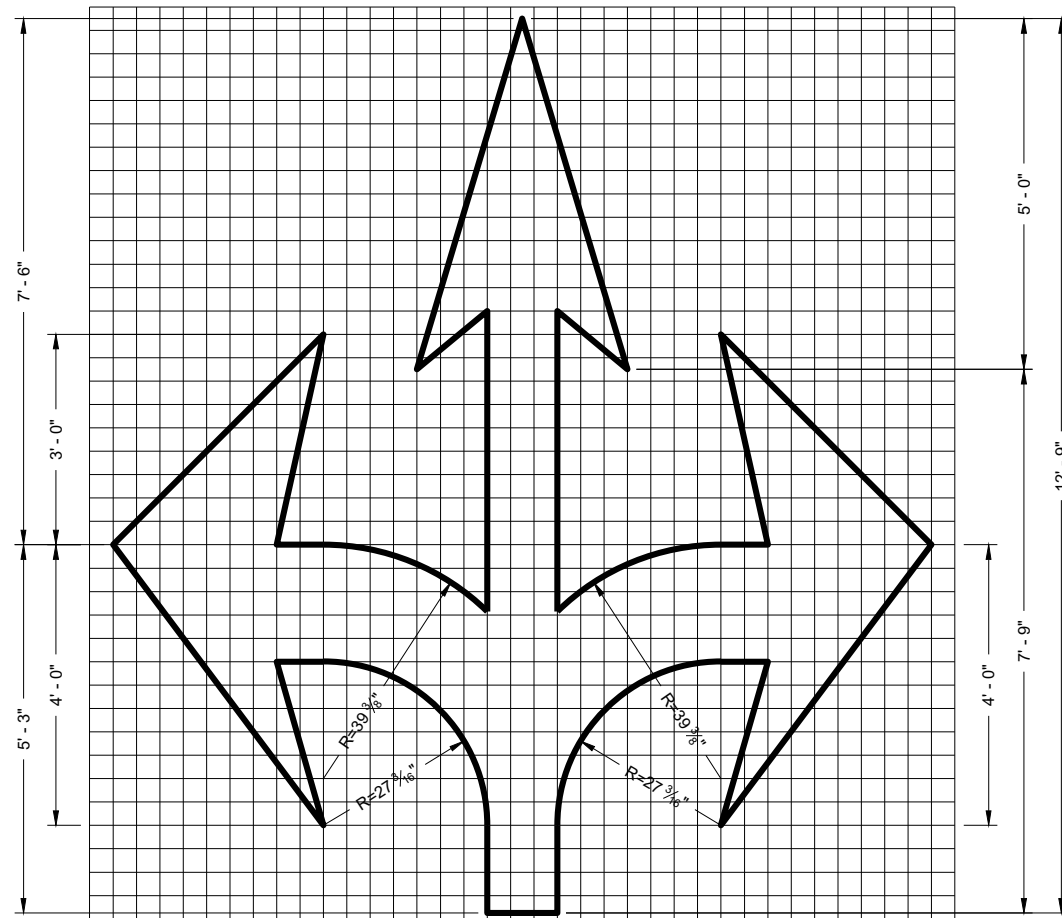
TYPE 3



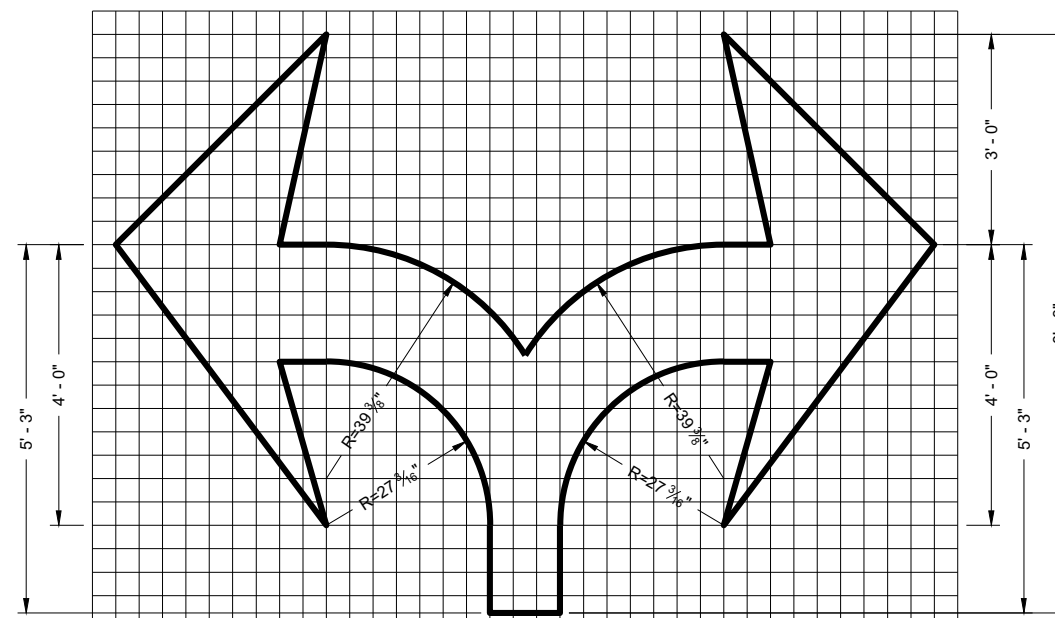
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 6



TYPE 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.

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

November 2019

DATE

FHWA




/s/ Matthew Rauch
STATE SIGNING AND MARKING
ENGINEER

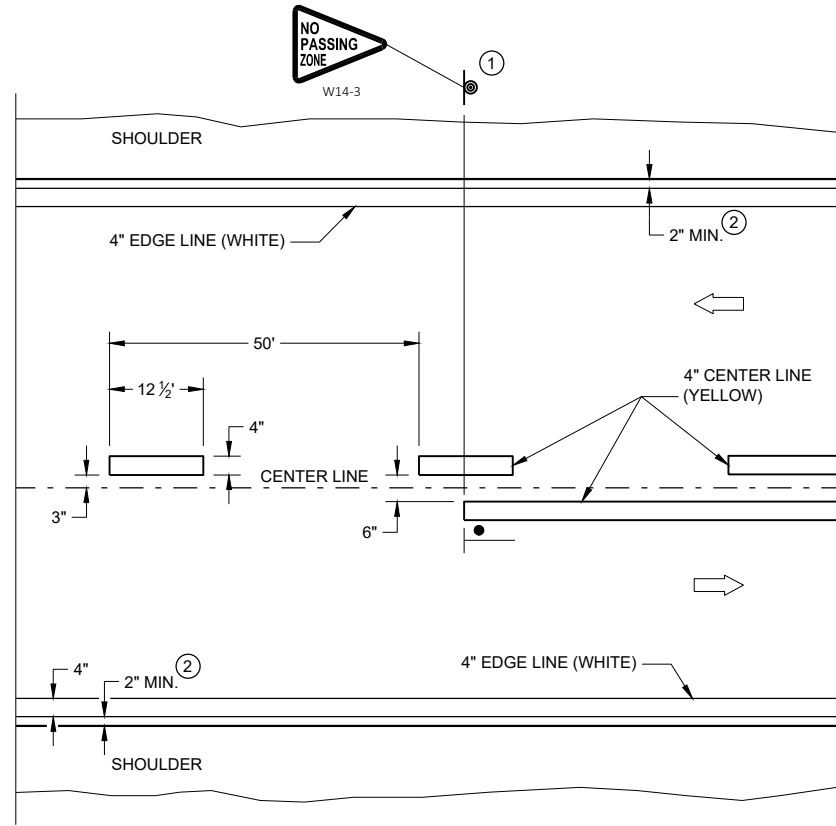
GENERAL NOTES

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

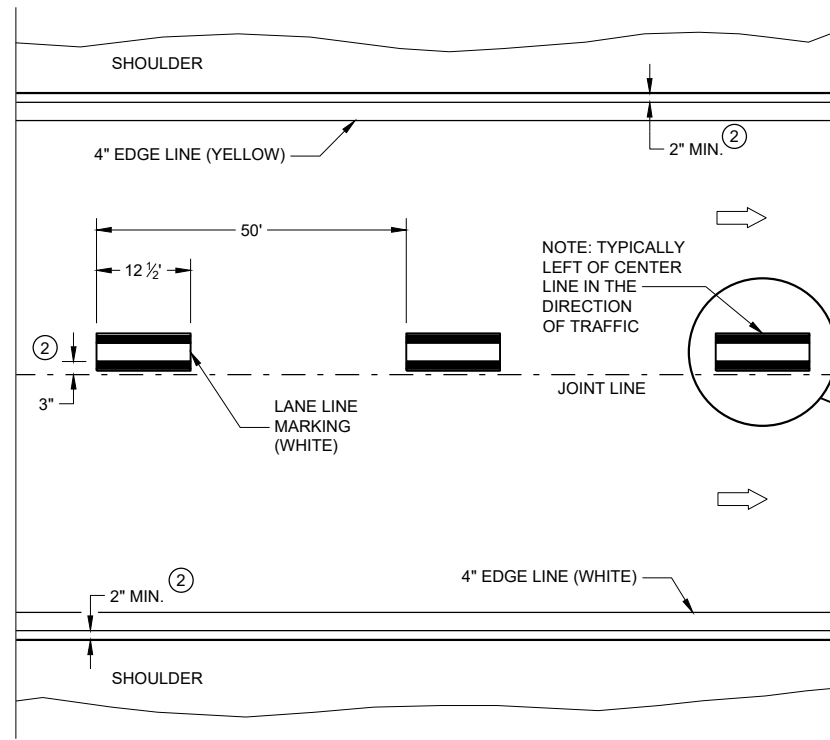
- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

-  "T" MARKING
-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC

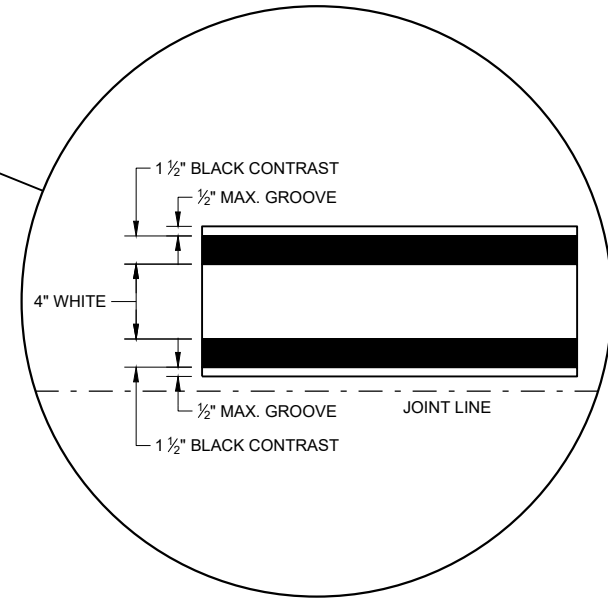


TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



6

6

SDD 15C08 - 22a

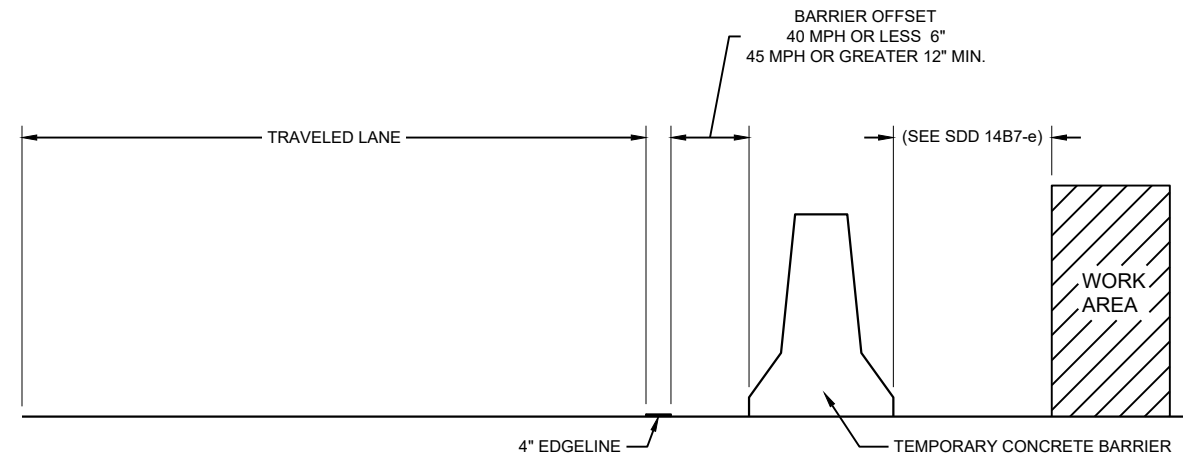
SDD 15C08 - 22a

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE: May 2022 /S/ Jeannie Silver
STATEWIDE SIGNING AND MARKING ENGINEER

FHWA



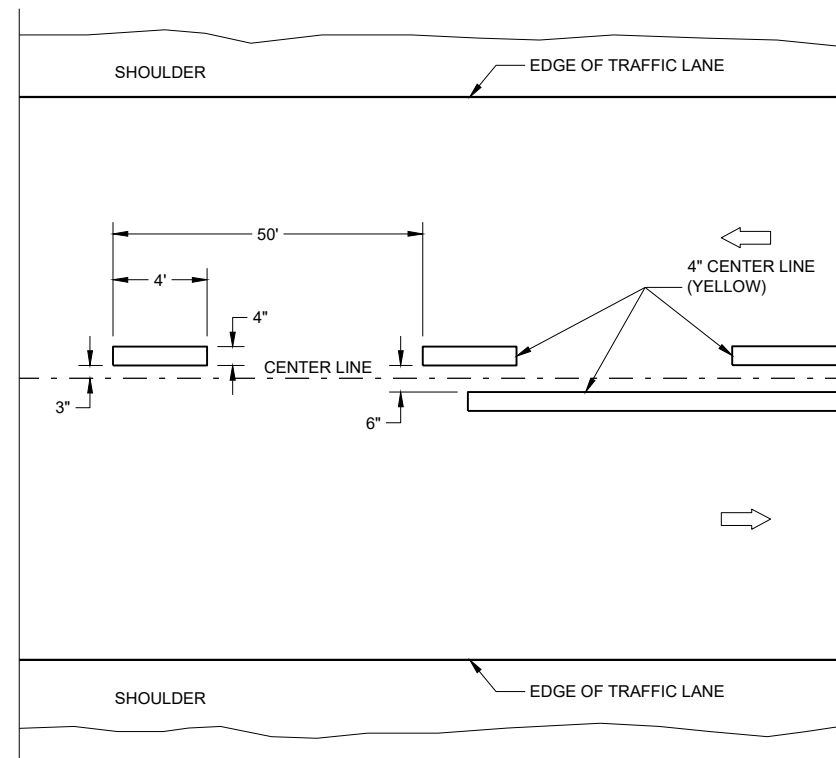
TEMPORARY BARRIER OFFSET FROM EDGELINE

GENERAL NOTES

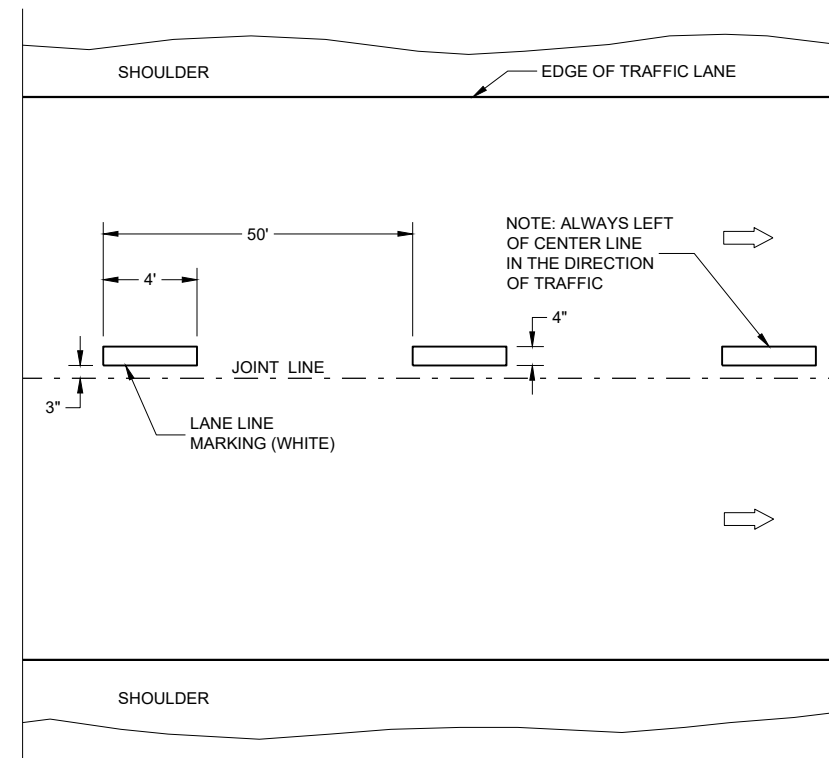
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

LEGEND

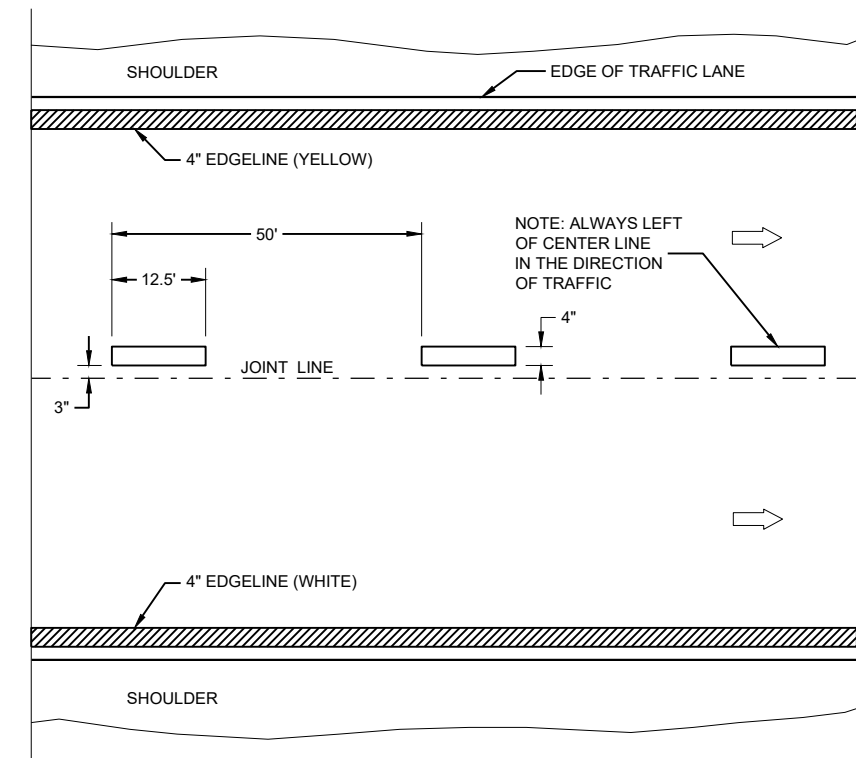
➡ DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

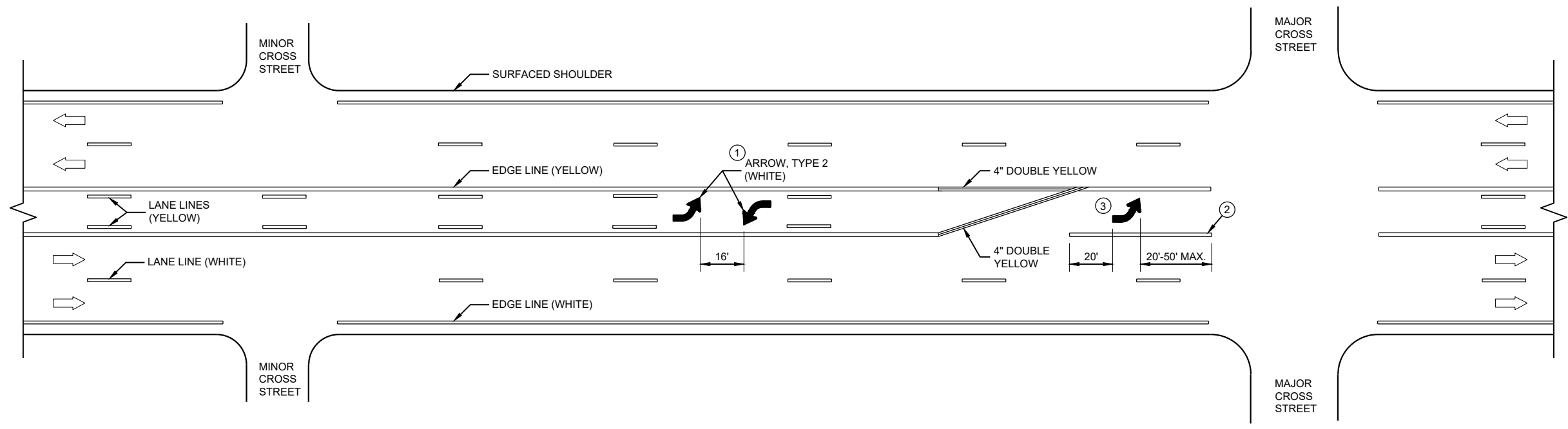
APPROVED
May 2022 DATE /S/ Jeannie Silver
STATEWIDE SIGNING AND MARKING ENGINEER

FHWA

GENERAL NOTES

- ① A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- ② 8" WHITE
- ③ TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT.

➡ DIRECTION OF TRAFFIC



TWO WAY LEFT TURN LANE

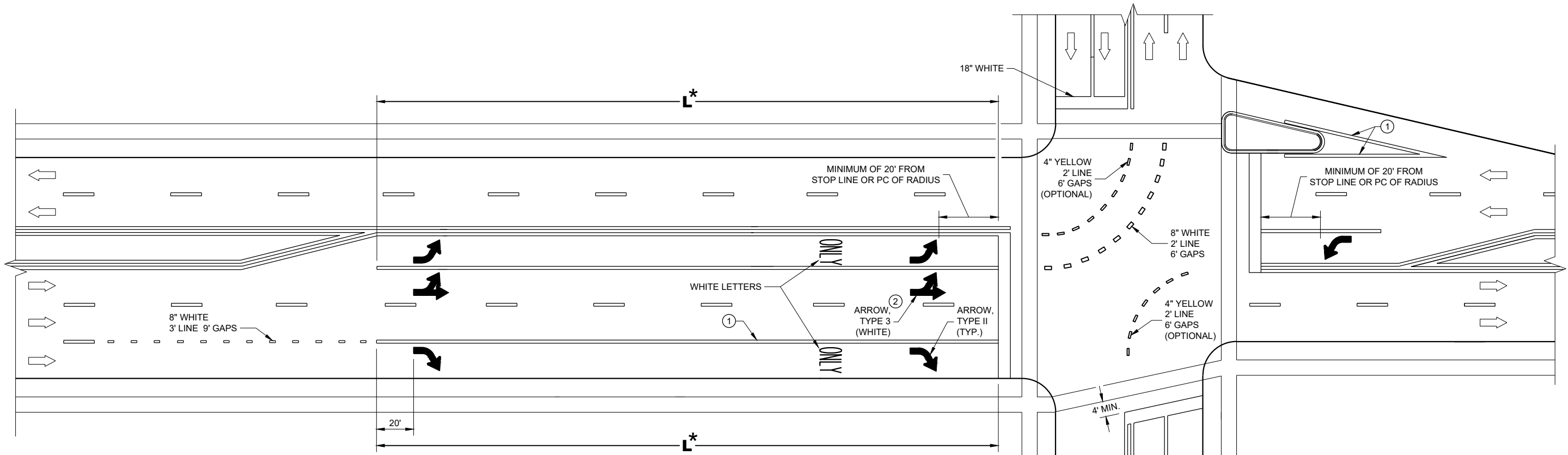
6

6

SDD 15C08 - 22c

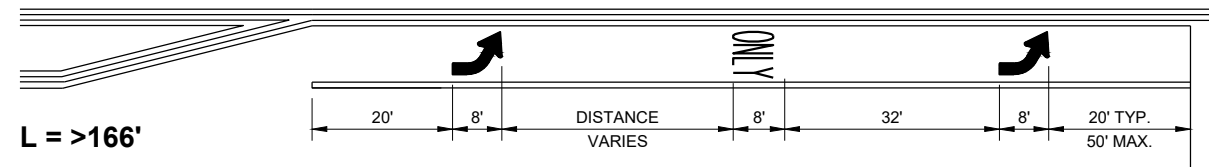
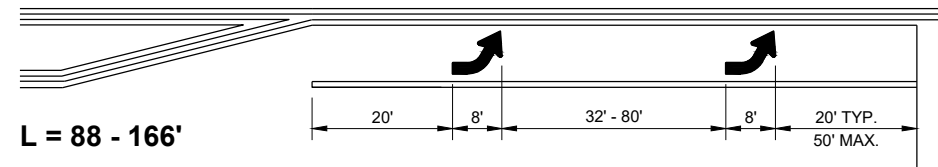
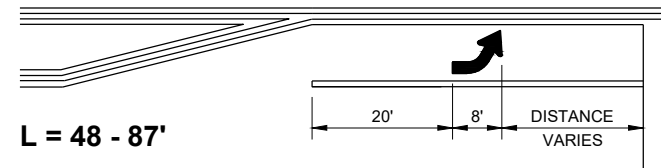
SDD 15C08 - 22c

<p>PAVEMENT MARKING (TURN LANES)</p>
<p>STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION</p>



TURN LANE OPTIONS

LENGTH OF TURN BAY (L) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



*(SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

GENERAL NOTES

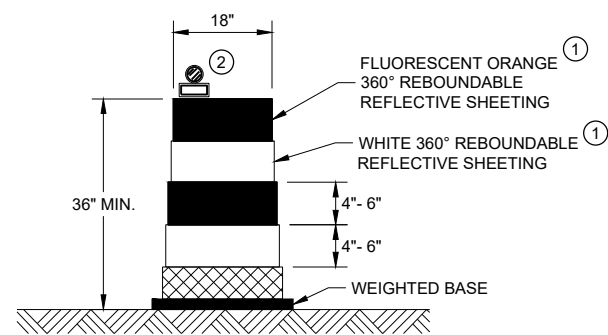
- ① 8" WHITE
- ② QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

➡ DIRECTION OF TRAFFIC

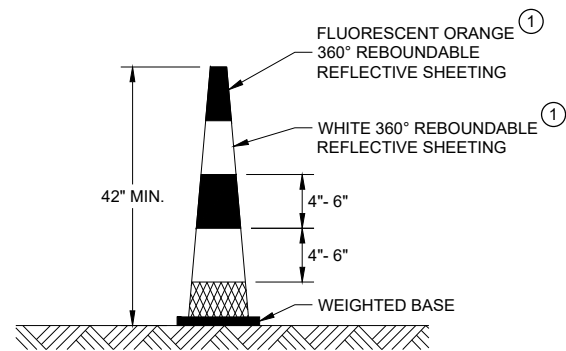
L = LENGTH OF TURN BAY

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

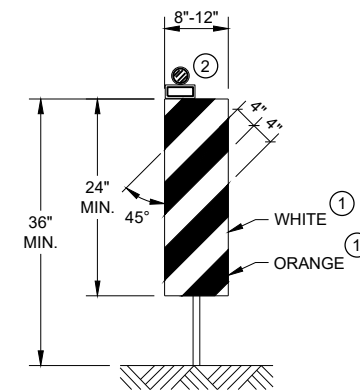


DRUM



42" CONE

DO NOT USE IN TAPERS
1/2 SPACING OF DRUMS

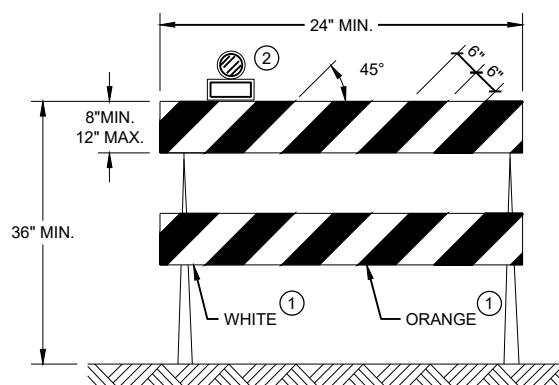


VERTICAL PANEL

THE STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.

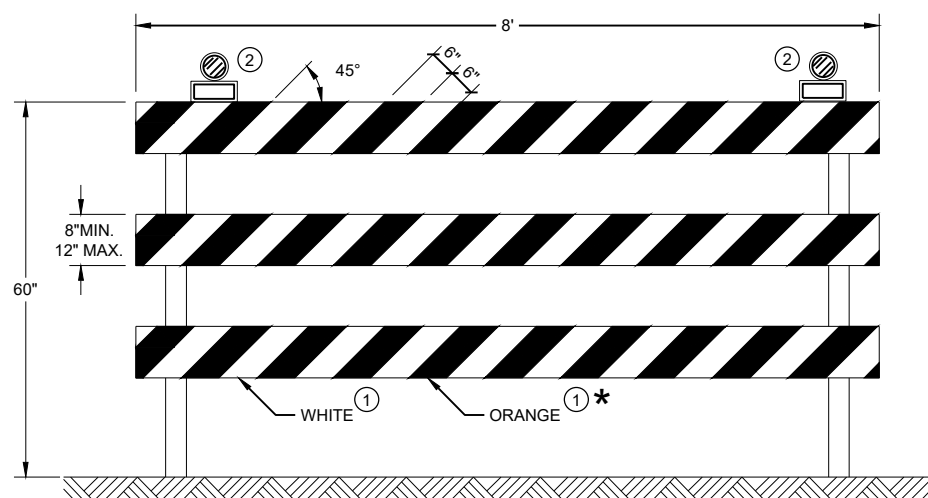
GENERAL NOTES

- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.



TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE III BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.






* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

**CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

LEGEND

-  SIGN ON PORTABLE OR PERMANENT SUPPORT
-  TEMPORARY PORTABLE RUMBLE STRIP ARRAY
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

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.

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

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

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS, DEVICES, AND 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.

FLAGGING

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 REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

- ① FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' 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.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

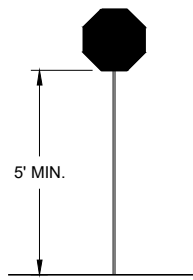
- ③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.



STOP/SLOW PADDLE ON SUPPORT STAFF

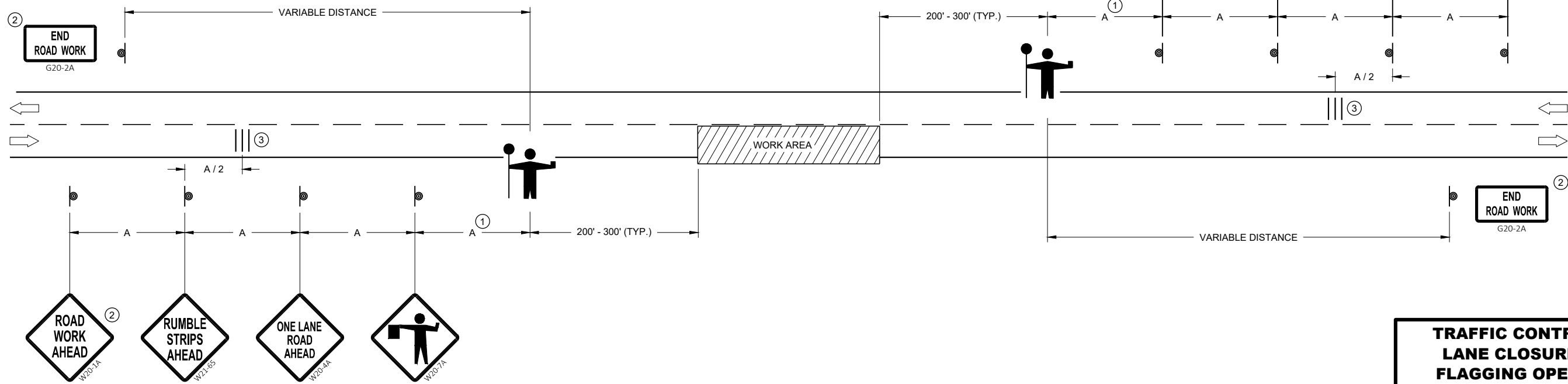
SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



W03-4

USE OF W03-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".

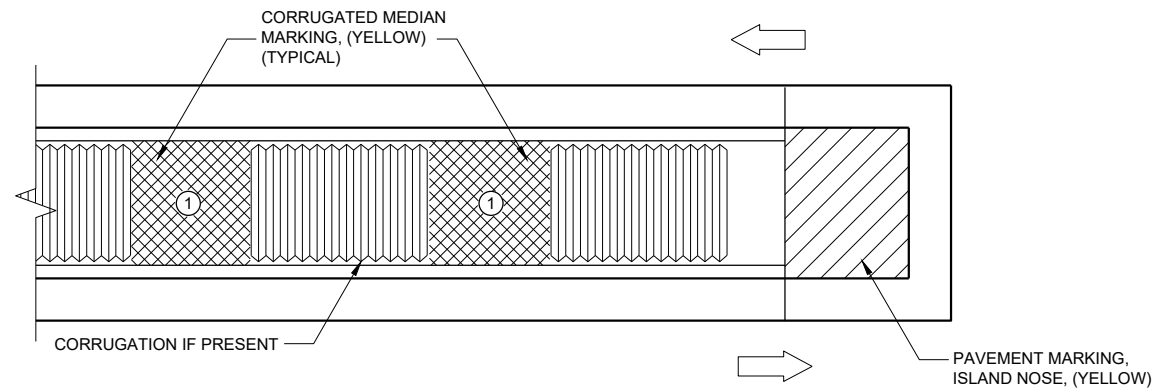


TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

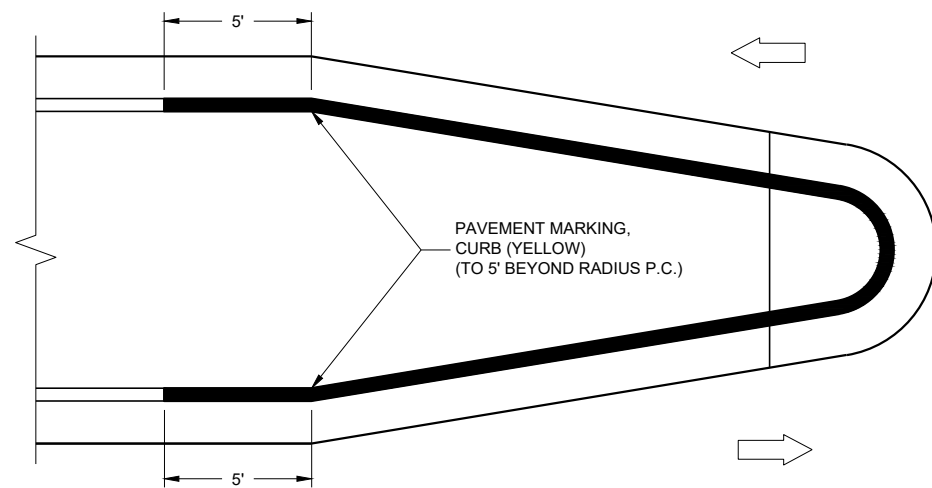
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE: May 2022 /S/ Andrew Heidtke
WORK ZONE ENGINEER

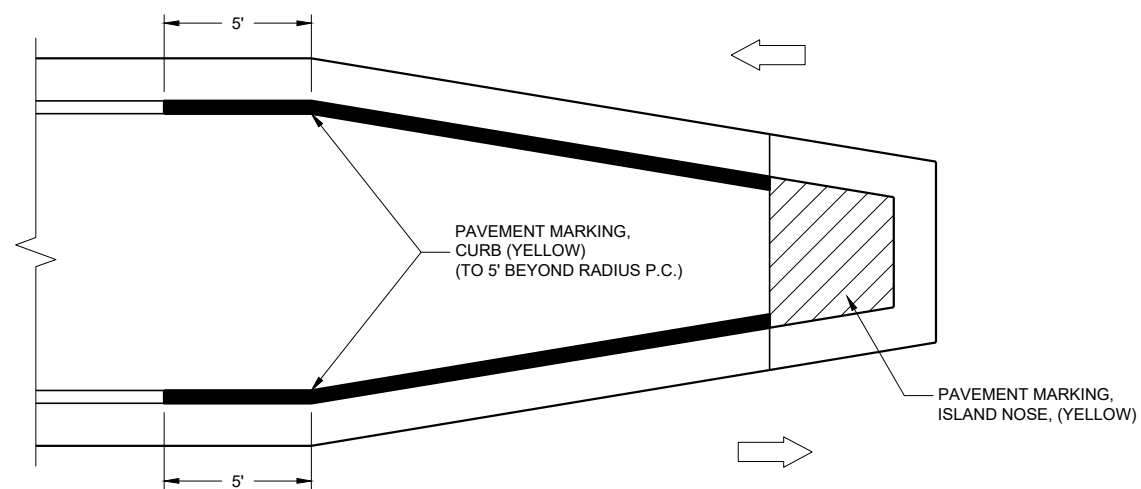
FHWA



MEDIAN ISLAND WITH SQUARE BLUNT NOSE



MEDIAN ISLAND WITH ROUND BLUNT NOSE



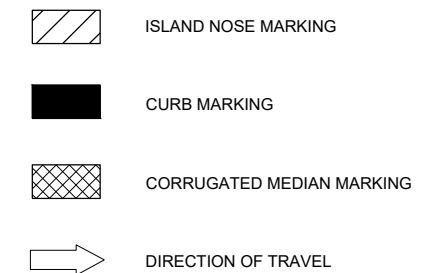
MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

GENERAL NOTES

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 ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.

- ① APPLY PAVEMENT MARKING TO THE FLAT PORTION OF CORRUGATED MEDIAN.



**PAVEMENT MARKINGS,
MEDIAN ISLAND NOSE**

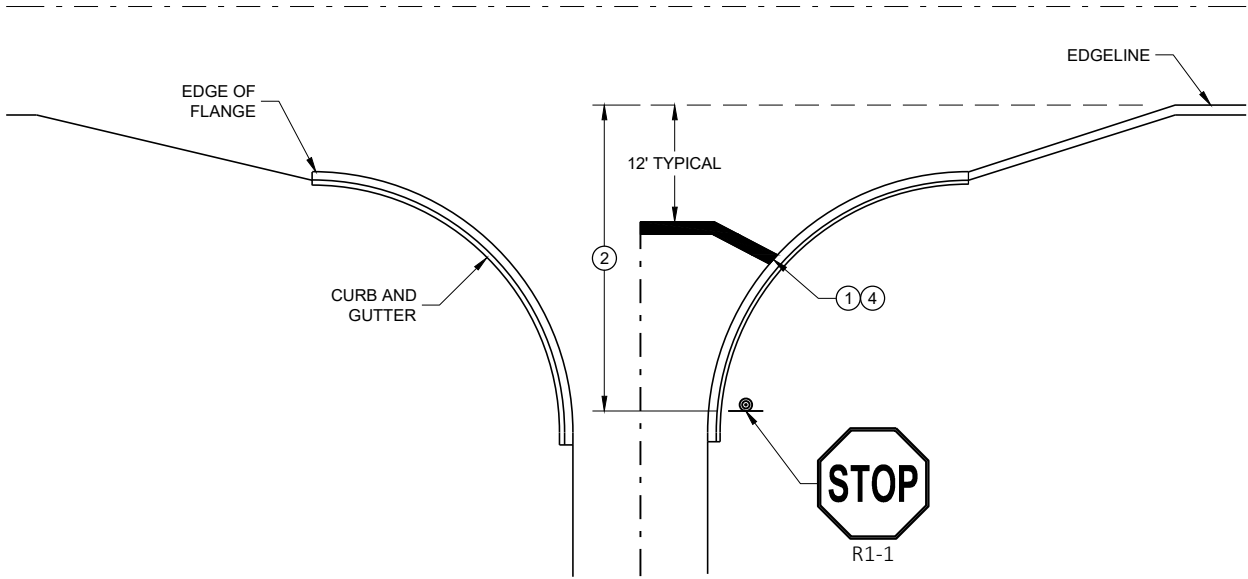
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022 /S/ Jeannie Silver
DATE STATE SIGNING AND MARKING
ENGINEER

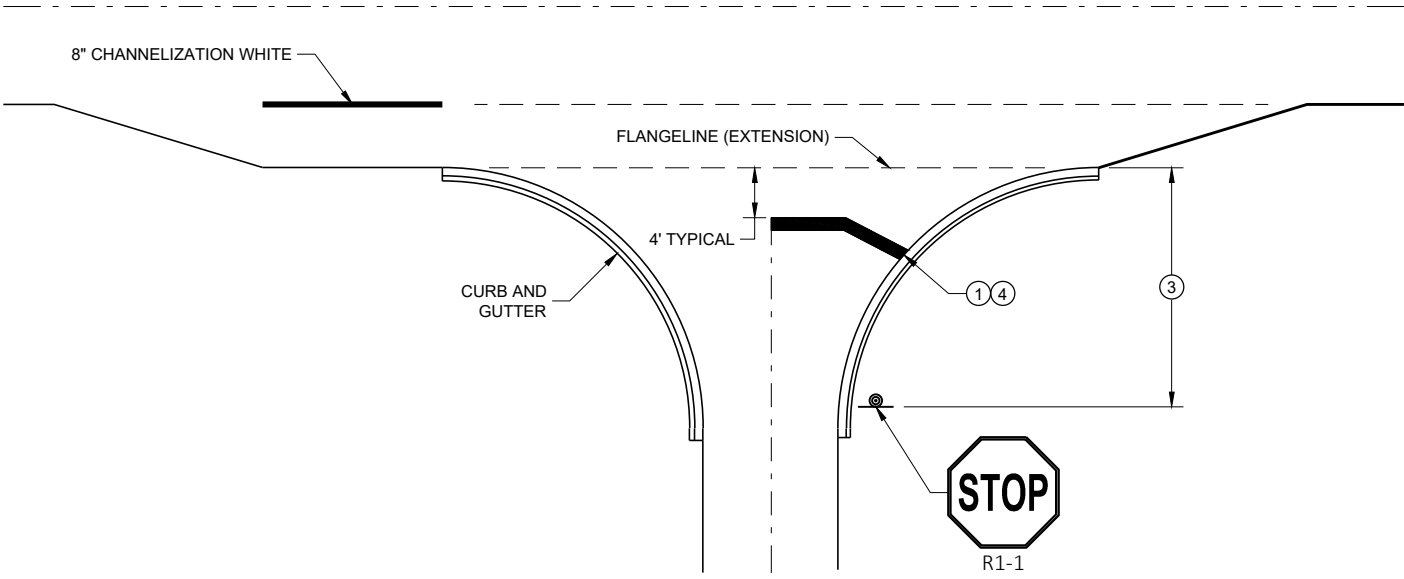
GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

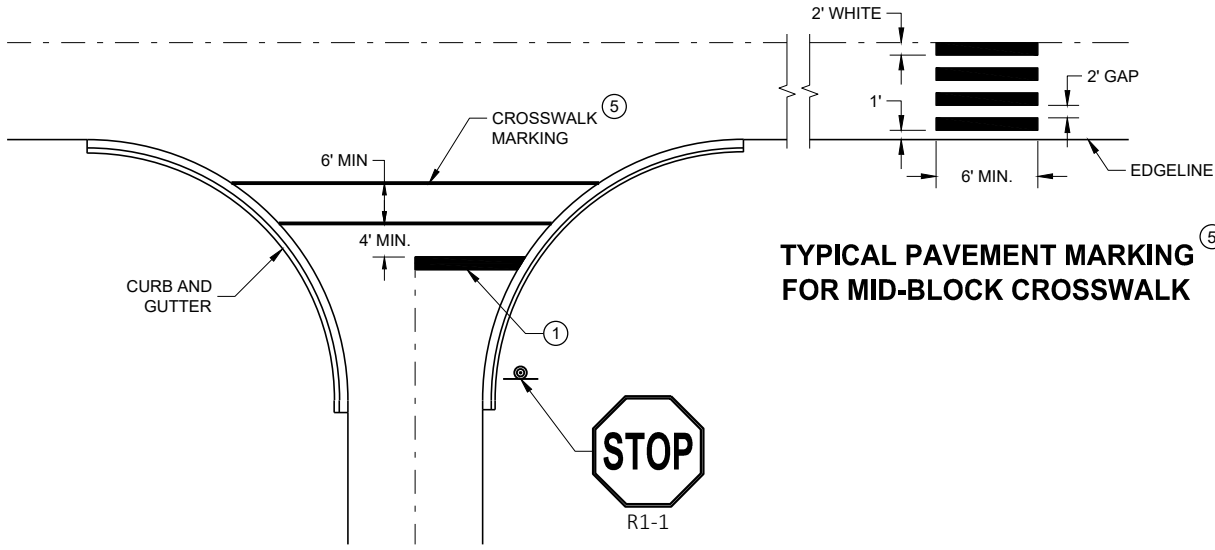
- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
- ③ NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION.
- ④ MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
- ⑤ LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES INSTEAD.



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

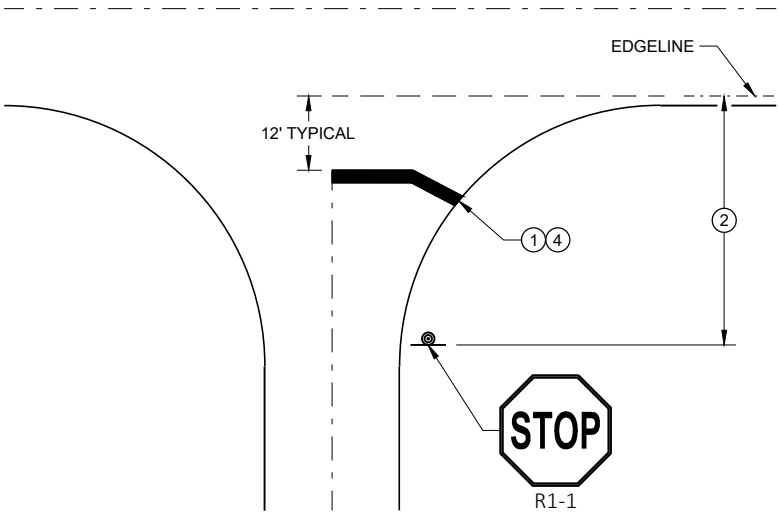


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING

TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 /S/ Matthew Rauch
DATE STATE SIGNING AND MARKING ENGINEER

FHWA

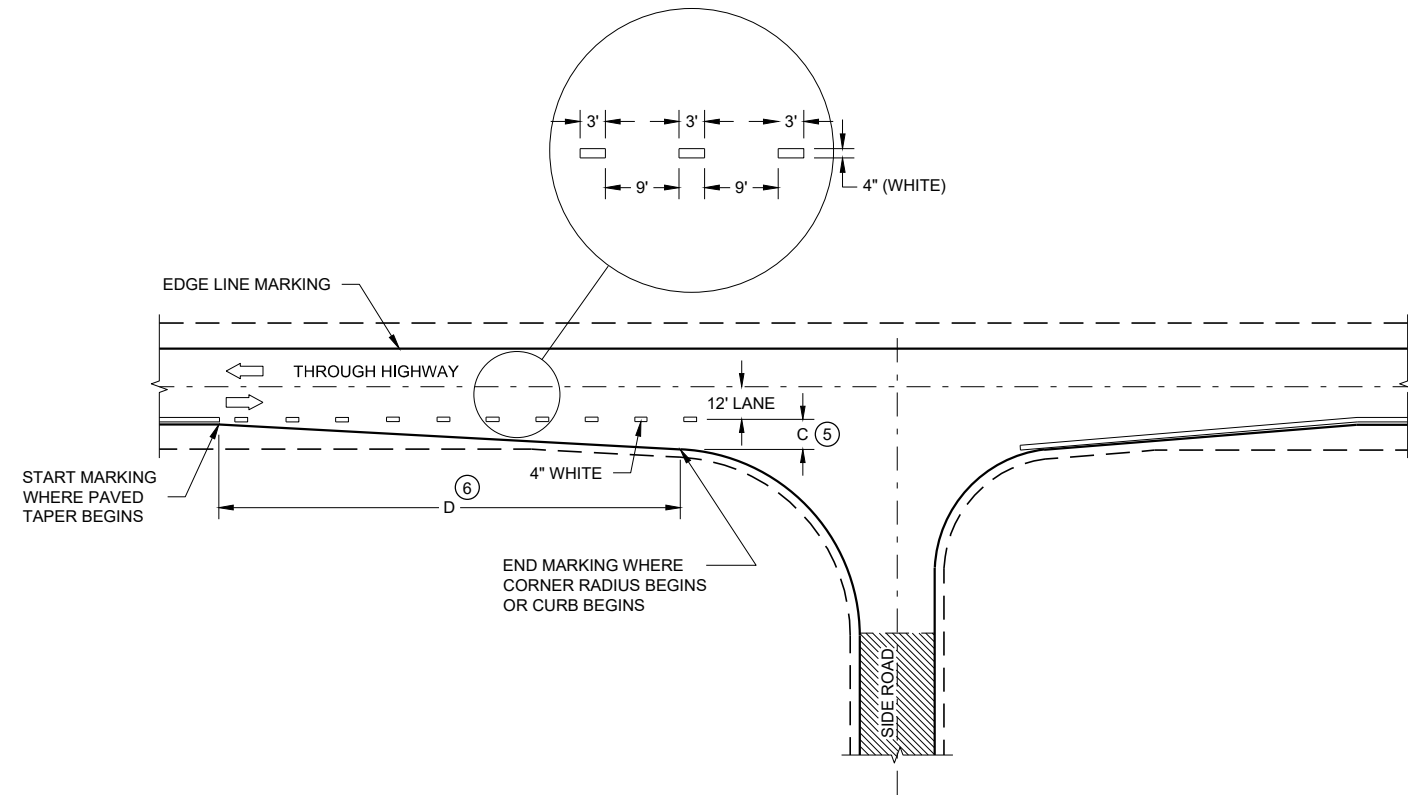
GENERAL NOTES

OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

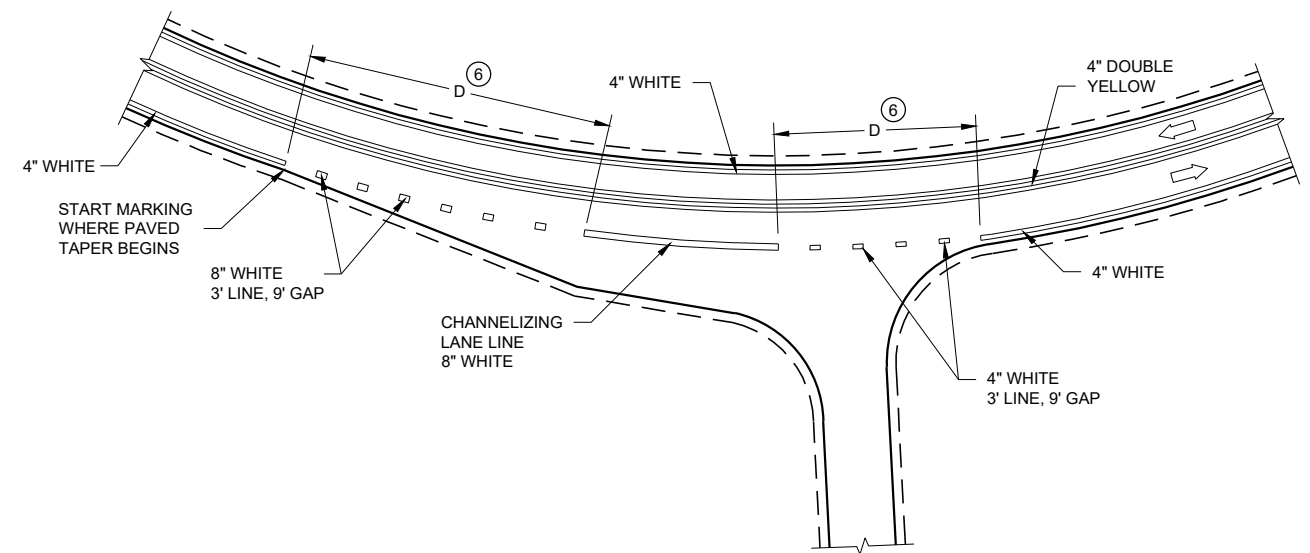
- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
- ④ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
- ⑤ WHEN DISTANCE "C" IS LESS THAN 4 FEET, OMIT DOTTED EXTENSION.
- ⑥ WHEN DISTANCE "D" IS LESS THAN 50 FEET, OMIT DOTTED EXTENSION.

LEGEND

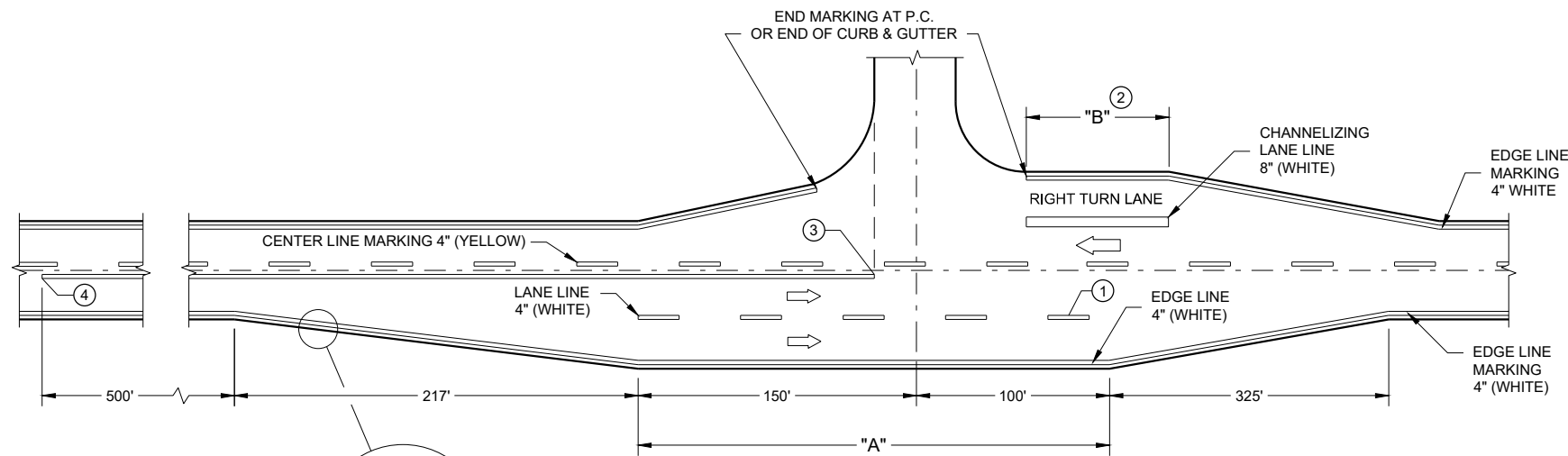
➡ DIRECTION OF TRAVEL



MINOR INTERSECTION

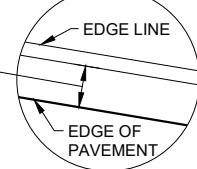


INTERSECTION ON OUTSIDE OF CURVE



**MAJOR INTERSECTIONS
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)**

BYPASS LANE PAVED SHOULDER WIDTH (AS SHOWN ELSEWHERE IN PLANS) - PLUS 2 INCHES



**PAVEMENT MARKING
(INTERSECTIONS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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

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

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

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

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

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

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

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

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










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

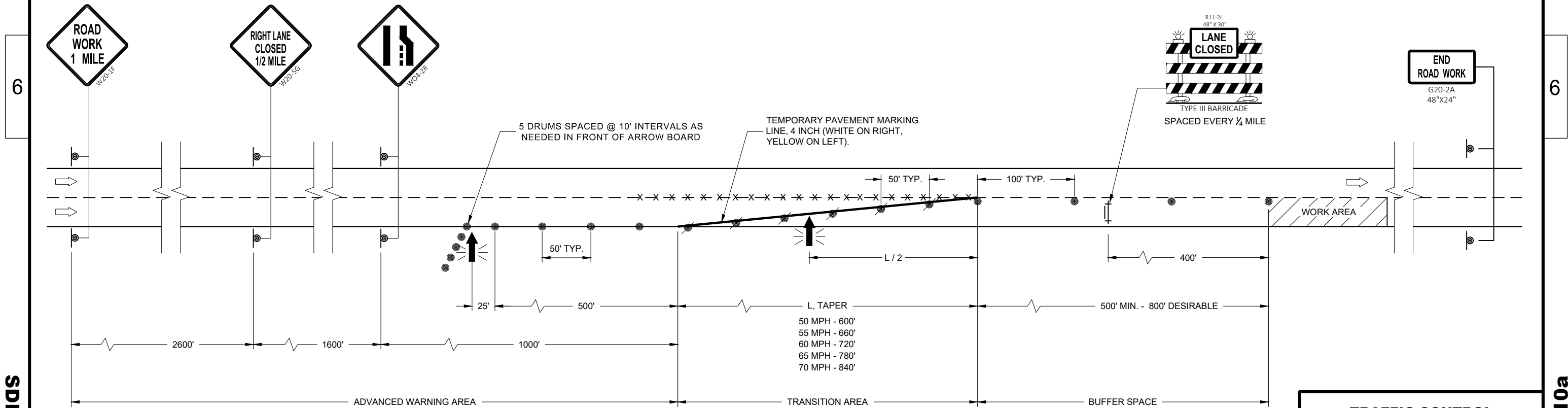
ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS

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

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

LEGEND

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







TRAFFIC CONTROL LANE CLOSURE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED February 2022 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

SDD 15D12 - 10a

SDD 15D12 - 10a

LEGEND

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

GENERAL NOTES

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 THE REGIONAL TRAFFIC UNIT.

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

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

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

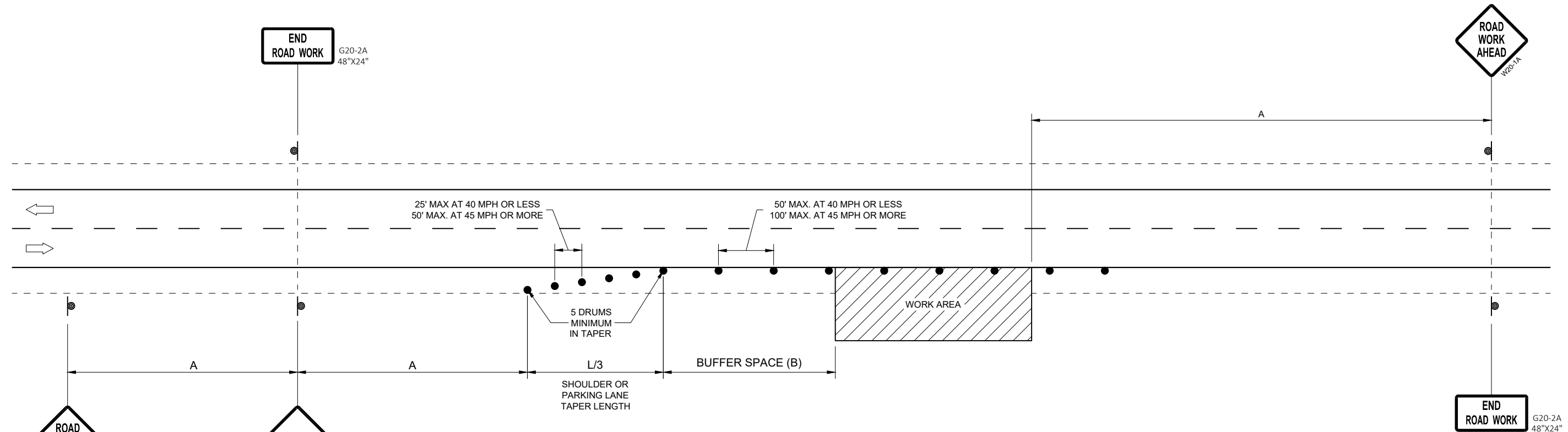
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

W20-1A 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.

6

6



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHOULDER TAPER L / 3 W, LATERAL OFFSET (FT)						BUFFER SPACE (B) FEET
		3	4	5	6	7	8	
25	200'	10	14	17	21	24	28	55
30	200'	15	20	25	30	35	40	85
35	350'	20	27	34	40	47	54	120
40	350'	26	35	44	53	62	70	170
45	500'	45	59	74	89	104	119	220
50	500'	50	66	83	99	116	132	280
55	500'	54	73	91	109	127	145	335'

SDD 15D28 - 04

SDD 15D28 - 04

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020 /S/ Andrew Heidtke
DATE STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER

FHWA

GENERAL NOTES

DRAWING NOT TO SCALE. ALL SIGNS AND POSTS ON THIS SHEET SHALL BE PAID FOR WITH 'TRAFFIC CONTROL SIGNS' BID ITEM. ALL SIDE ROADS WHICH ARE UNDER CONSTRUCTION OF CURB AND GUTTER AND/OR GRADING SHALL BE ADEQUATELY SIGNED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

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

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



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

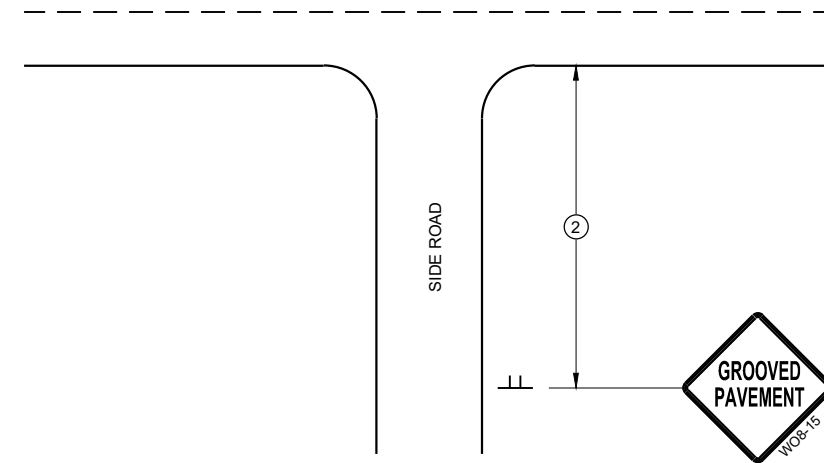
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

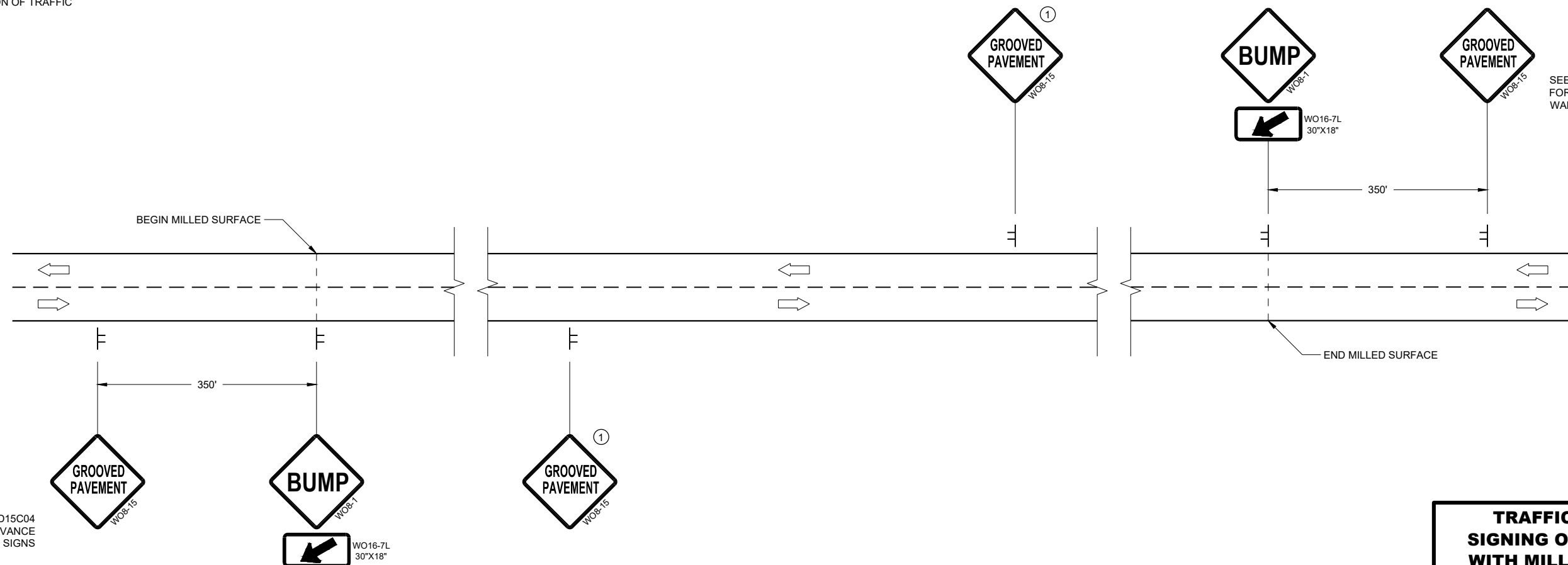
- ① PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- ② PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



SEE SDD15C04 FOR ADVANCE WARNING SIGNS

SEE SDD15C04 FOR ADVANCE WARNING SIGNS

DETAIL FOR SIGNING ON MILLED SURFACES

TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

GENERAL NOTES

DRAWING NOT TO SCALE. ALL SIGNS AND POSTS ON THIS SHEET SHALL BE PAID FOR WITH 'TRAFFIC CONTROL SIGNS' BID ITEM. ALL SIDE ROADS WHICH ARE UNDER CONSTRUCTION OF CURB AND GUTTER AND/OR GRADING SHALL BE ADEQUATELY SIGNED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

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

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

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

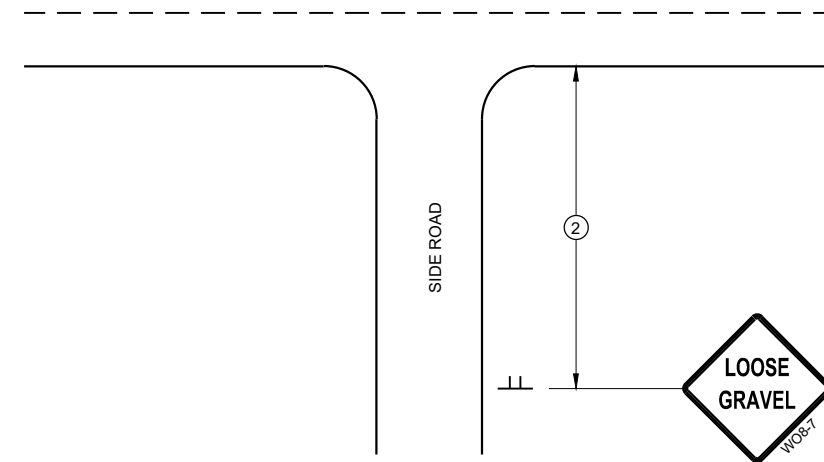
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

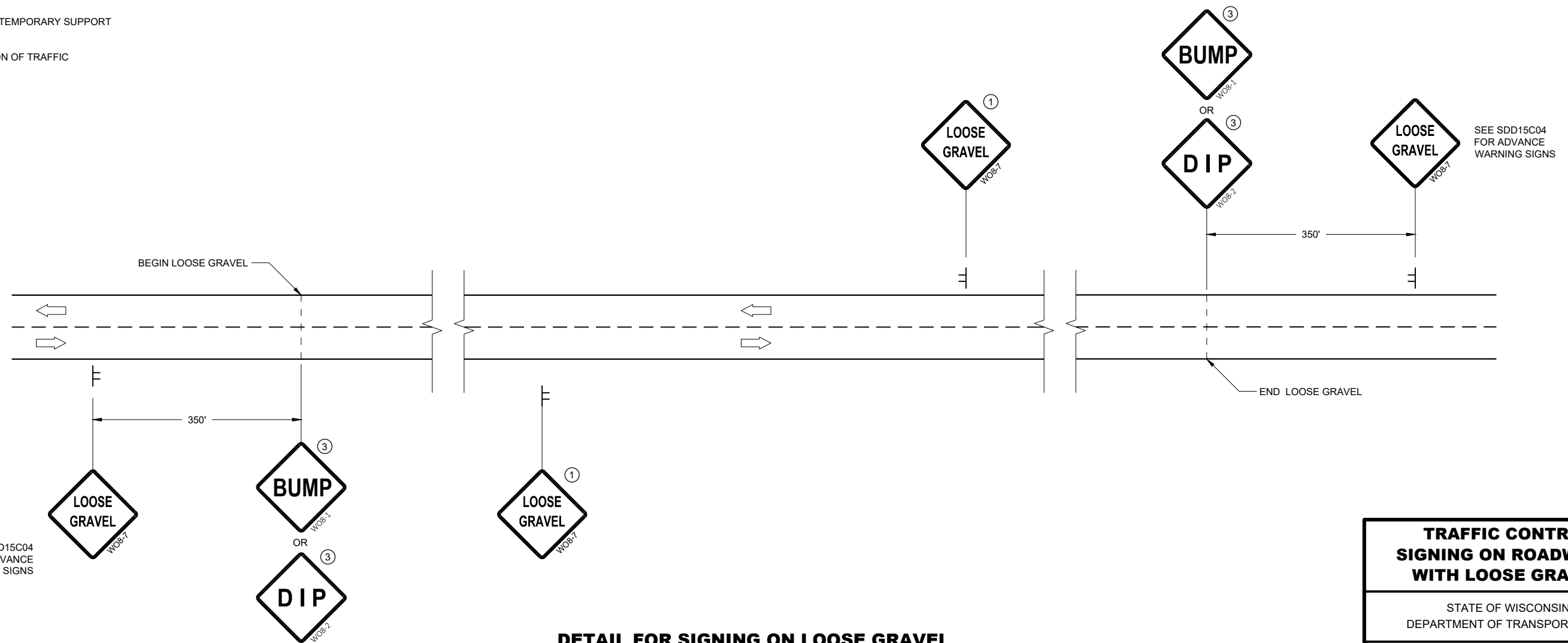
- ① PLACE SIGNS 350' IN ADVANCE OF CHIP SEALED OR LOOSE GRAVEL SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- ② PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.
- ③ ADD WO8-1 OR WO8-2 SIGN WHEN THE CONDITION IS PRESENT.

LEGEND

- ⊥ SIGN ON TEMPORARY SUPPORT
- ➡ DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON LOOSE GRAVEL OR CHIP SEALED SURFACES

SEE SDD15C04 FOR ADVANCE WARNING SIGNS





TRAFFIC CONTROL SIGNING ON ROADWAYS WITH LOOSE GRAVEL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

LEGEND

- V1 WORK VEHICLE
- V2 SHADOW VEHICLE
-  TRUCK MOUNTED ATTENUATOR (TMA)
-  FLASHING ARROW PANEL (CAUTION)
-  WORK AREA
-  DIRECTION OF TRAFFIC

POSTED SPEED PRIOR TO WORK STARTING (MPH)	DECISION SIGHT DISTANCE (D)
0 - 25	550'
30	550'
35	700'
40	700'
45	900'
50	900'
55	1200'

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

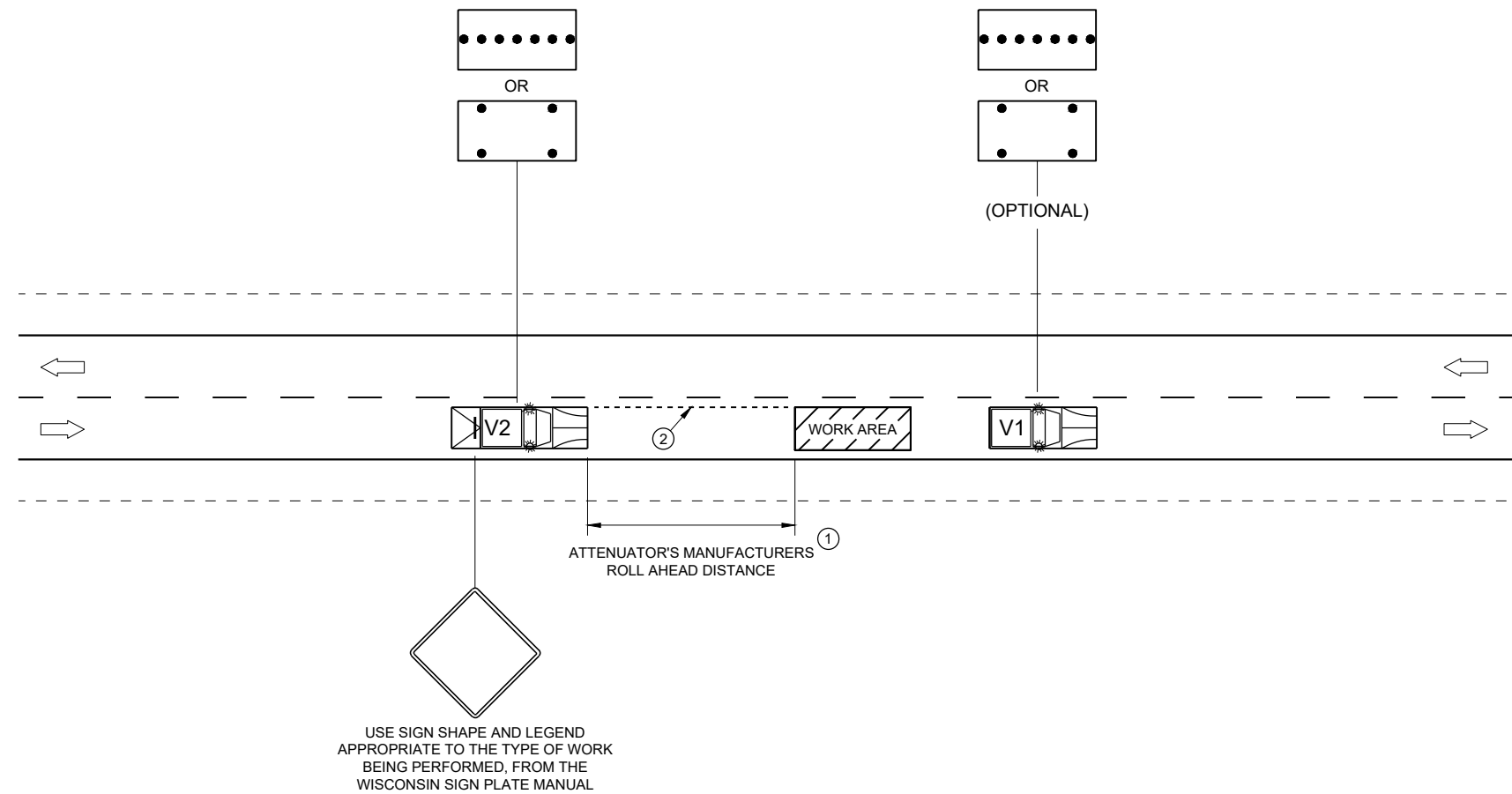
MOBILE IS WORK THAT MOVES CONTINUOUSLY OR MOVES AT LEAST THE DECISION SIGHT DISTANCE EVERY 15 MINUTES.

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL ARROW PANELS SHALL BE REAR FACING, TYPE "B" OR "C", AND DISPLAYING THE FLASHING CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

- ① DISTANCE BETWEEN VEHICLES MAY INCREASE FROM THE ATTENUATOR'S ROLL AHEAD BASED ON TERRAIN, SIGHT DISTANCE, 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.
- ② ALIGN LEFT SIDE OF SHADOW VEHICLE WITH EDGE OF WORK AREA.



6

6

SDD 15D51 - 01

SDD 15D51 - 01

**TRAFFIC CONTROL,
MOBILE OPERATIONS ON
AN UNDIVIDED ROADWAY**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 DATE /S/ Andrew Heidtke
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER

FHWA

STAGE 2A - CTH F - TEMPORARY WIDENING LT EXP Fact = 1.3

STATION	END AREA		VOLUME		CUMULATIVE VOLUME		MASS HAUL (CY)
	CUT (SF)	FILL (SF)	CUT (CY)	FILL (CY)	CUT (CY)	FILL (CY)	
15+17	0.0	0.0					
16+10	2.3	20.2	4	45	4	45	-41
16+50	2.9	26.4	4	45	8	90	-82
17+00	3.3	30.0	6	68	14	158	-144
17+50	4.0	35.3	7	79	21	237	-216
17+68	2.6	46.5	2	35	23	272	-249
18+13	2.3	30.0	4	83	27	355	-328
18+24	0.0	0.0	0	8	27	363	-336

STAGE 2A - CTH A - TEMPORARY WIDENING LT EXP Fact = 1.3

STATION	END AREA		VOLUME		CUMULATIVE VOLUME		MASS HAUL (CY)
	CUT (SF)	FILL (SF)	CUT (CY)	FILL (CY)	CUT (CY)	FILL (CY)	
19+34	0.0	0.0					
19+50	1.0	0.0	0	0	0	0	0
19+64	1.3	8.2	1	3	1	3	-2
20+00	3.6	0.5	3	8	4	11	-7
20+50	3.2	2.2	6	3	10	14	-4
20+88	7.7	0.0	8	2	18	16	2
21+43	3.5	0.0	11	0	29	16	13
21+64	0.0	0.0	1	0	30	16	14

STAGE 2B - CTH F RT EXP Fact = 1.3

STATION	END AREA		VOLUME		CUMULATIVE VOLUME		MASS HAUL (CY)
	CUT (SF)	FILL (SF)	CUT (CY)	FILL (CY)	CUT (CY)	FILL (CY)	
15+25	0.0	0.0					
16+00	42.1	0.0	58	0	58	0	58
16+10	42.1	3.8	16	1	74	1	73
16+50	47.3	0.0	66	4	140	5	135
17+00	91.8	0.0	129	0	269	5	264
18+07	138.8	0.0	457	0	726	5	721
18+19	142.5	0.0	61	0	787	5	782

STAGE 2B - CTH A RT EXP Fact = 1.3

STATION	END AREA		VOLUME		CUMULATIVE VOLUME		MASS HAUL (CY)
	CUT (SF)	FILL (SF)	CUT (CY)	FILL (CY)	CUT (CY)	FILL (CY)	
18+48	96.8	0.0					
18+60	99.3	0.0	45	0	45	0	45
19+04	58.7	6.1	129	6	174	6	168
19+50	41.9	54.6	86	67	260	73	187
19+64	41.0	64.1	21	40	281	113	168
20+00	60.3	0.1	67	56	348	169	179
20+50	71.8	3.2	122	0	470	169	301
20+88	52.2	0.0	87	0	557	169	388
21+50	0.0	0.0	60	0	617	169	448

STAGE 2B - USH 63 LT - INT TAPER OUT EXP Fact = 1.3

STATION	END AREA		VOLUME		CUMULATIVE VOLUME		MASS HAUL (CY)
	CUT (SF)	FILL (SF)	CUT (CY)	FILL (CY)	CUT (CY)	FILL (CY)	
156+10	17.4	0.0					
156+50	17.4	0.0	26	0	26	0	26
156+78	22.7	52.4	21	35	47	35	12
156+78	50.6	52.4	0	0	47	35	12
156+98	50.6	52.4	38	50	85	85	0
157+09	51.0	41.2	21	25	106	110	-4
157+22	51.0	41.5	24	25	130	135	-5
157+22	23.6	41.5	0	0	130	135	-5

STAGE C - USH 63 RT - INT TAPER OUT EXP Fact = 1.3

STATION	END AREA		VOLUME		CUMULATIVE VOLUME		MASS HAUL (CY)
	CUT (SF)	FILL (SF)	CUT (CY)	FILL (CY)	CUT (CY)	FILL (CY)	
159+53	87.8	0.0					
160+00	73.3	0.0	141	0	141	0	141
160+53	48.2	0.0	119	0	260	0	260
161+00	0.0	0.0	42	0	302	0	302

STAGE 2C - CTH F LT EXP Fact = 1.3

STATION	END AREA		VOLUME		CUMULATIVE VOLUME		MASS HAUL (CY)
	CUT (SF)	FILL (SF)	CUT (CY)	FILL (CY)	CUT (CY)	FILL (CY)	
15+40	0.0	0.0					
16+00	51.7	0.0	57	0	57	0	57
16+10	79.2	0.0	24	0	81	0	81
16+50	85.1	0.0	122	0	203	0	203
17+00	85.0	0.0	158	0	361	0	361
17+50	86.5	0.0	159	0	520	0	520
17+68	88.9	0.0	58	0	578	0	578
18+07	85.5	0.0	126	0	704	0	704
18+19	81.6	0.0	37	0	741	0	741

STAGE 2C - CTH A LT EXP Fact = 1.3

STATION	END AREA		VOLUME		CUMULATIVE VOLUME		MASS HAUL (CY)
	CUT (SF)	FILL (SF)	CUT (CY)	FILL (CY)	CUT (CY)	FILL (CY)	
18+48	125.8	0.0					
18+60	121.5	0.0	57	0	57	0	57
19+50	135.3	0.0	428	0	485	0	485
19+64	123.2	0.0	67	0	552	0	552
20+00	76.8	0.0	133	0	685	0	685
20+50	46.1	0.1	114	0	799	0	799
20+88	67.3	3.2	80	0	879	0	879
21+50	0.0	0.0	77	0	956	0	956

STAGE 3 - USH 63 - CULVERT REPLACEMENT 19+02 EXP Fact = 1.3

STATION	END AREA		VOLUME		CUMULATIVE VOLUME		MASS HAUL
	CUT (SF)	FILL (SF)	CUT (CY)	FILL (CY)	CUT (CY)	FILL (CY)	
18+50	0.0	0.0					
18+82	3.5	10.4	2	8	2	8	-6
18+82	116.1	10.4	0	0	2	8	-6
19+22	116.1	10.4	171	20	173	28	145
19+22	3.5	10.4	0	0	173	28	145
19+50	0.0	0.0	2	7	175	35	140

STAGE 3 - USH 63 - CULVERT REPLACEMENT 85+00 EXP Fact = 1.3

STATION	END AREA		VOLUME		CUMULATIVE VOLUME		MASS HAUL
	CUT (SF)	FILL (SF)	CUT (CY)	FILL (CY)	CUT (CY)	FILL (CY)	
84+50	0.0	0.0					
84+82	5.4	6.8	3	5	3	5	-2
84+82	99.3	6.8	0	0	3	5	-2
85+17	99.3	6.8	128	11	131	16	115
85+17	5.4	6.8	0	0	131	16	115
85+50	0.0	0.0	3	5	134	21	113

STAGE 3 - USH 63 - CULVERT REPLACEMENT 256+57 EXP Fact = 1.3

STATION	END AREA		VOLUME		CUMULATIVE VOLUME		MASS HAUL
	CUT (SF)	FILL (SF)	CUT (CY)	FILL (CY)	CUT (CY)	FILL (CY)	
255+50	0.0	0.0					
256+40	0.7	24.0	1	52	1	52	-51
256+40	103.6	24.0	0	0	1	52	-51
256+74	103.6	24.0	130	39	131	91	40
256+74	0.0	24.0	0	0	131	91	40
257+00	0.0	0.0	0	15	131	106	25

STAGE 3 - USH 63 - CULVERT REPLACEMENT 262+00 EXP Fact = 1.3

STATION	END AREA		VOLUME		CUMULATIVE VOLUME		MASS HAUL
	CUT (SF)	FILL (SF)	CUT (CY)	FILL (CY)	CUT (CY)	FILL (CY)	
261+19	0.0	0.0					
261+50	14.7	36.5	8	27	8	27	-19
261+50	114.7	36.5	0	0	8	27	-19
262+20	114.7	36.5	297	123	305	150	155
262+20	14.7	36.5	0	0	305	150	155
263+00	0.0	0.0	22	70	327	220	107

STAGE 3 - USH 63 LT - EATS AND GUARDRAIL EXP Fact = 1.3

STATION	END AREA		VOLUME		CUMULATIVE VOLUME		MASS HAUL
	CUT (SF)	FILL (SF)	CUT (CY)	FILL (CY)	CUT (CY)	FILL (CY)	
136+95	0.0	0.0					
138+15	0.0	12.8	0	37	0	37	-37
138+40	0.0	24.4	0	22	0	59	-59
138+65	0.0	11.7	0	22	0	81	-81
139+00	4.4	0.0	3	10	3	91	-88
139+50	0.0	0.0	4	0	7	91	-84
140+00	0.0	3.1	0	4	7	95	-88
140+50	1.2	0.0	1	4	8	99	-91
141+00	3.2	0.0	4	0	12	99	-87
141+50	4.9	0.0	7	0	19	99	-80
142+00	2.4	0.0	7	0	26	99	-73
142+50	0.0	0.0	2	0	28	99	-71
143+00	0.0	0.8	0	1	28	100	-72
143+50	0.0	2.5	0	4	28	104	-76
144+00	0.0	6.4	0	11	28	115	-87
144+50	0.0	4.5	0	13	28	128	-100
145+00	0.0	0.0	0	5	28	133	-105
145+50	0.0	0.0	0	0	28	133	-105
146+00	0.0	0.0	0	0	28	133	-105
146+53	1.7	0.0	2	0	30	133	-103
146+78	0.0	6.4	1	4	31	137	-106
147+02	0.0	9.2	0	9	31	146	-115
148+21	0.0	0.0	0	26	31	172	-141

STAGE 3 - USH 63 RT - RIGHT TURN LANE CTH A EXP Fact = 1.3

STATION	END AREA		VOLUME		CUMULATIVE VOLUME		MASS HAUL
	CUT (SF)	FILL (SF)	CUT (CY)	FILL (CY)	CUT (CY)	FILL (CY)	
152+64	20.5	3.9					
153+00	20.0	6.2	27	9	27	9	18
153+50	20.4	8.6	37	18	64	27	37
154+00	21.5	19.0	39	33	103	60	43
154+50	21.9	20.2	40	47	143	107	36
155+00	21.8	17.7	40	46	183	153	30
155+50	25.7	19.3	44	45	227	198	29
156+00	32.0	16.9	53	44	280	242	38
156+50	35.6	30.2	63	57	343	299	44
156+78	36.0	13.4	37	29	380	328	52
156+78	63.9	13.4	0	0	380	328	52
156+98	63.9	13.4	47	13	427	341	86
157+09	64.5	36.1	26	13	453	354	99
157+22	64.5	36.1	31	22	484	376	108
157+22	41.5	36.1	0	0	484	376	108
157+50	41.5	0.0	43	24	527	400	127
157+68	43.8	0.0	28	0	555	400	155

STAGE 3 - USH 63 LT - RIGHT TURN LANE CTH F EXP Fact = 1.3

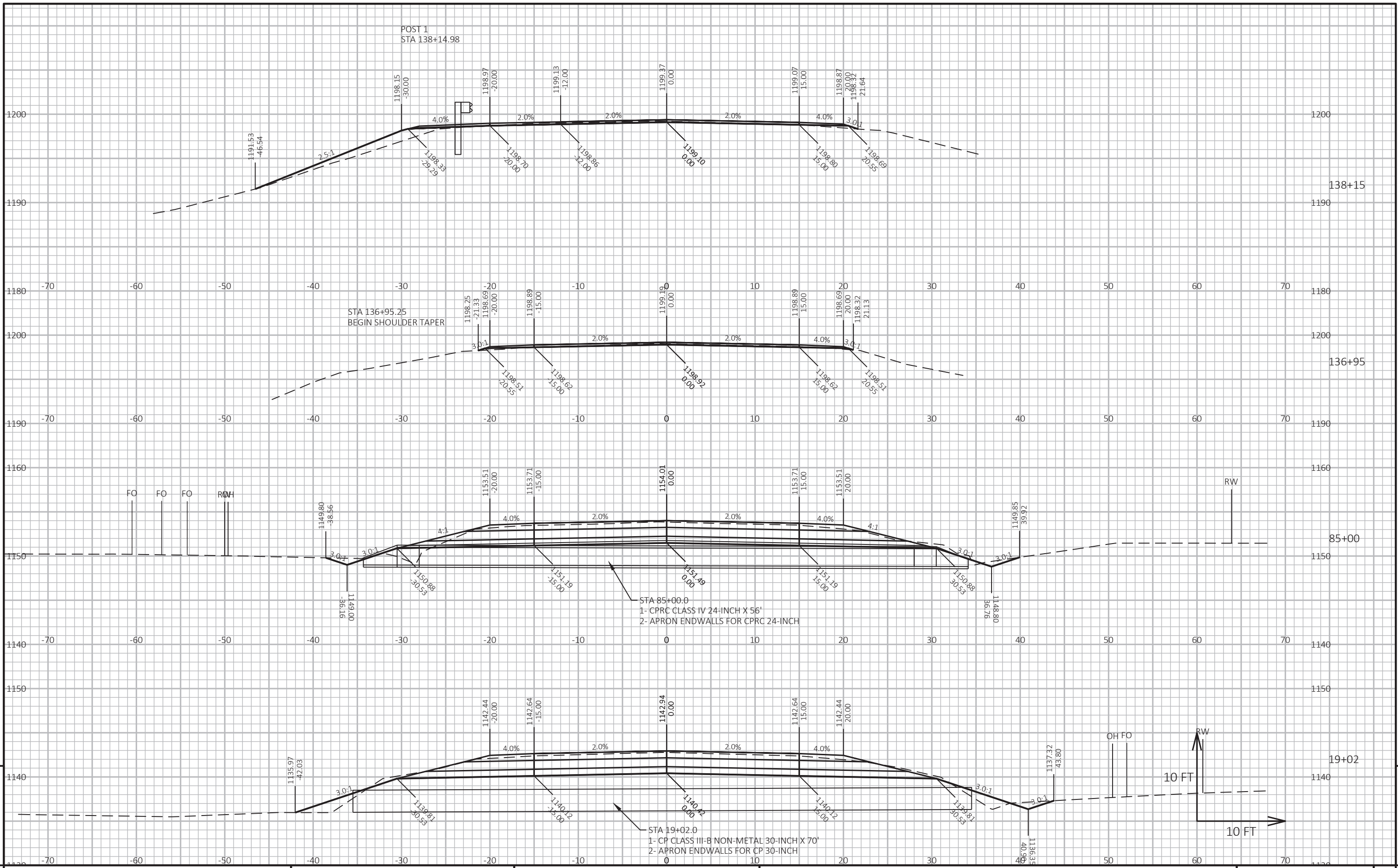
STATION	END AREA		VOLUME		CUMULATIVE VOLUME		MASS HAUL
	CUT (SF)	FILL (SF)	CUT (CY)	FILL (CY)	CUT (CY)	FILL (CY)	
158+87	27.5	0.0					
159+00	27.9	0.0	13	0	13	0	13
159+53	27.9	7.0	55	9	68	9	59
160+00	27.4	5.0	48	14	116	23	93
160+53	28.8	1.7	55	9	171	32	139
161+00	28.5	1.7	50	4	221	36	185
161+50	23.7	2.8	48	5	269	41	228
162+00	18.8	5.2	39	10	308	51	257
162+50	16.7	6.0	33	13	341	64	277
163+00	17.5	3.9	32	12	373	76	297
163+50	16.7	1.2	32	6	405	82	323
163+84	17.4	5.0	21	5	426	87	339

STAGE 3 - USH 63 RT - RIGHT TURN LANE 7TH STREET EXP Fact = 1.3

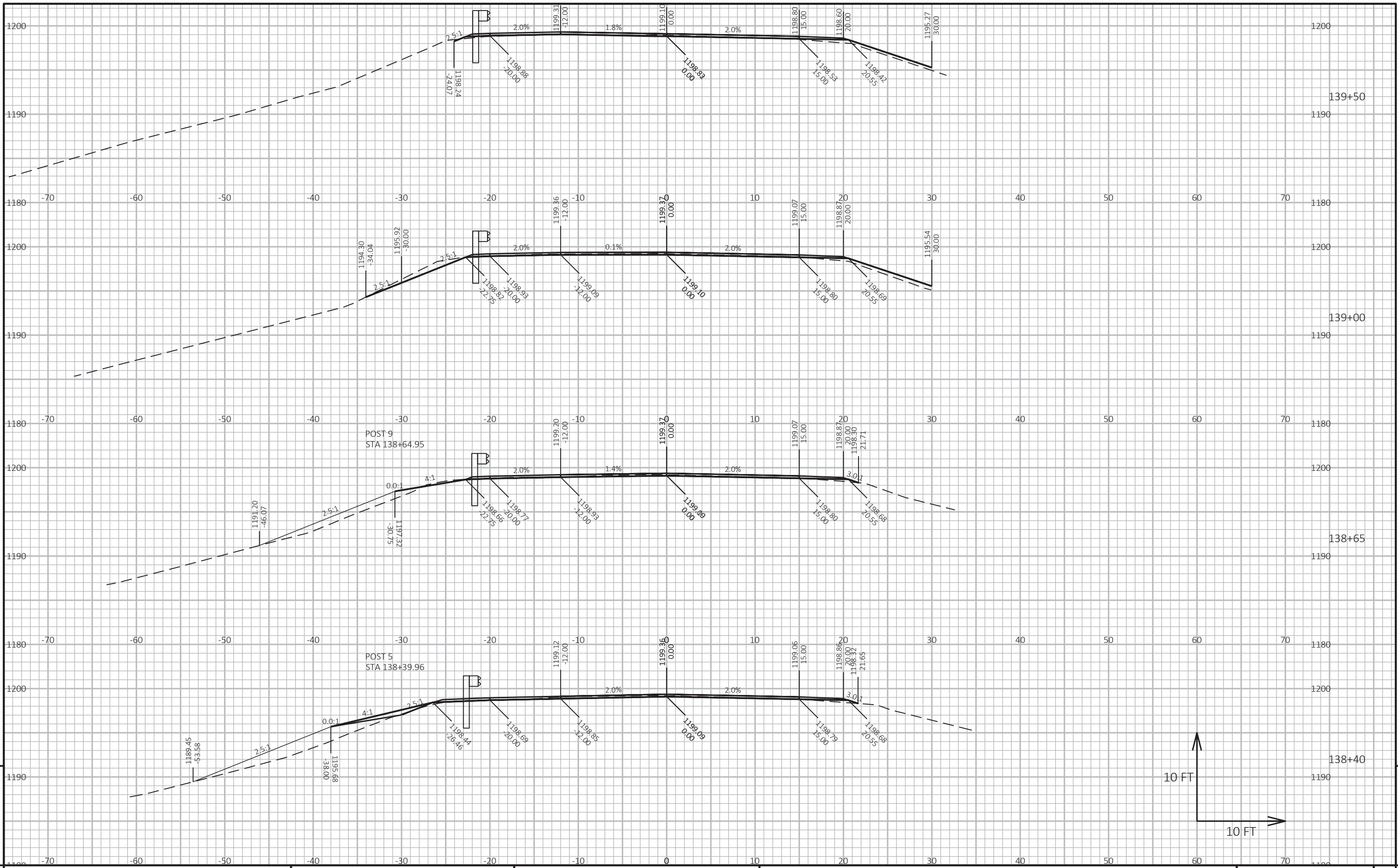
STATION	END AREA		VOLUME		CUMULATIVE VOLUME		MASS HAUL
	CUT (SF)	FILL (SF)	CUT (CY)	FILL (CY)	CUT (CY)	FILL (CY)	
172+45	19.5	4.7					
172+58	21.3	4.3	10	3	10	3	7
173+00	19.7	1.0	32	5	42	8	34
173+50	14.4	6.8	32	9	74	17	57
174+00	12.0	11.4	24	22	98	39	59
174+50	8.8	7.4	19	23	117	62	55
174+98	10.9	0.8	17	9	134	71	63
175+53	10.9	0.0	22	1	156	72	84

STAGE 3 - USH 63 LT - GUARDRAIL REMOVAL AND SLOPE EXP Fact = 1.3

STATION	END AREA		VOLUME		CUMULATIVE VOLUME		MASS HAUL
	CUT (SF)	FILL (SF)	CUT (CY)	FILL (CY)	CUT (CY)	FILL (CY)	
172+58	12.9	9.2					
173+00	18.7	0.0	25	9	25	9	16
173+50	13.3	7.6	30	9	55	18	37
174+00	12.6	17.0	24	30	79	48	31
174+50	11.3	9.0	22	31	101	79	22
174+98	12.8	4.8	21	16	122	95	27
175+50	6.0	3.5	18	10	140	105	35
175+61	4.4	1.7	2	1	142	106	36



PROJECT NO: 1550-02-76 HWY: USH 63 COUNTY: POLK CROSS SECTIONS: USH 63 SHEET E



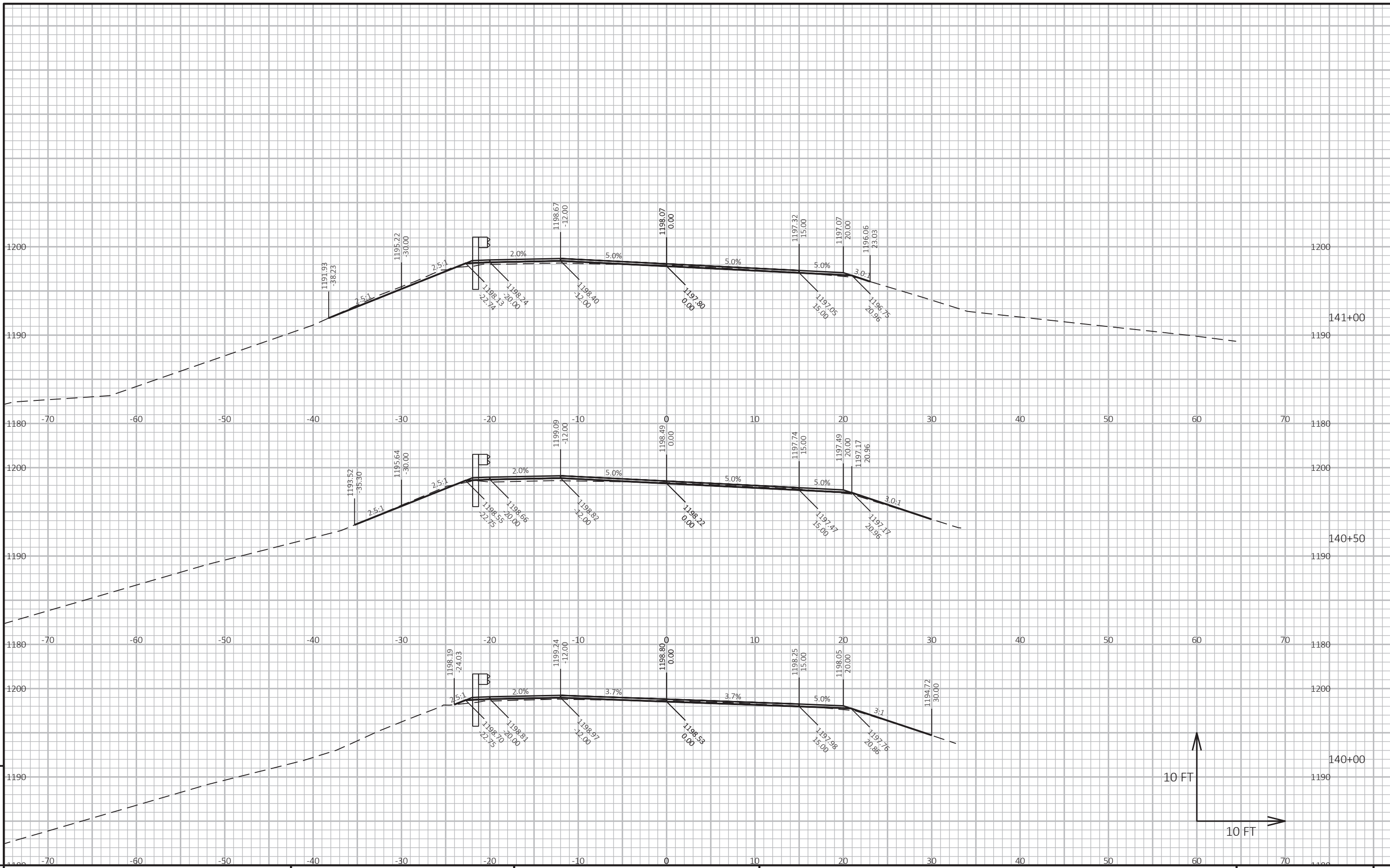
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PROJECT NO: 1550-02-76 HWY: USH 63 COUNTY: POLK CROSS SECTIONS: USH 63 SHEET E

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LAYOUT NAME - 02



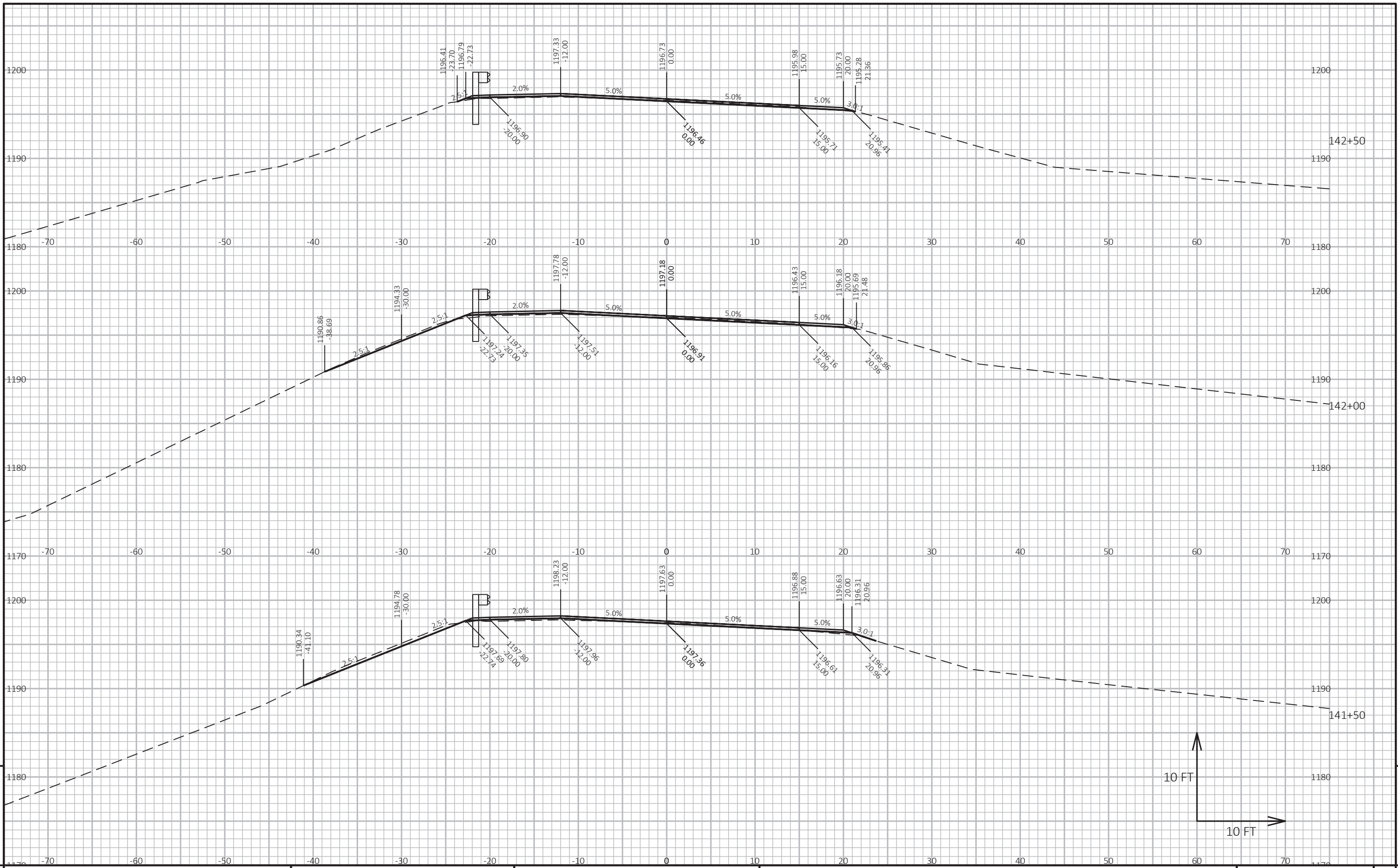
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PROJECT NO: 1550-02-76 HWY: USH 63 COUNTY: POLK CROSS SECTIONS: USH 63 SHEET E

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LAYOUT NAME - 03



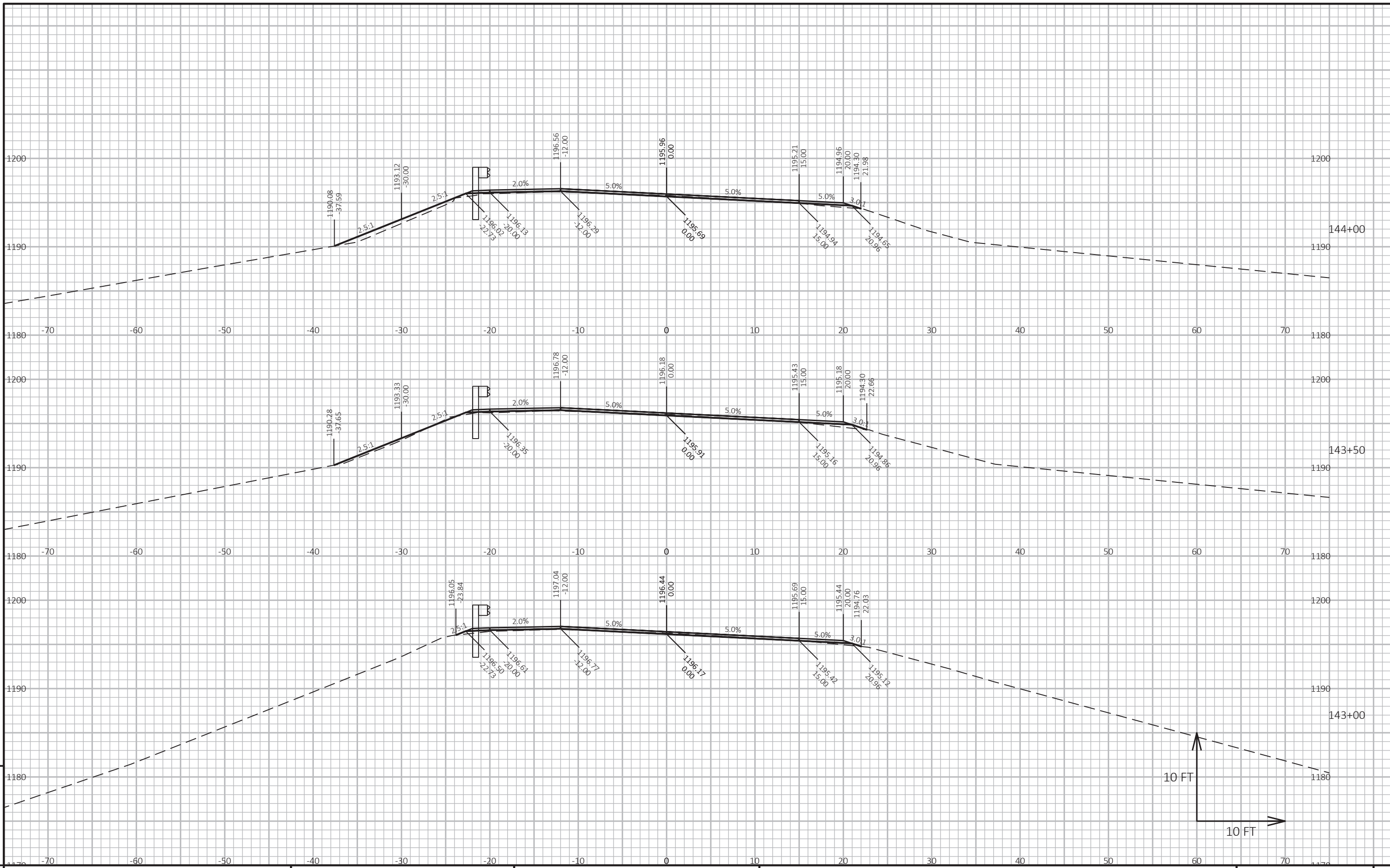
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PROJECT NO: 1550-02-76 HWY: USH 63 COUNTY: POLK CROSS SECTIONS: USH 63 SHEET E

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LAYOUT NAME - 04



9

1180

1190

1200

-70

-60

-50

-40

-30

-20

-10

0

10

20

30

40

50

60

70

1180

1190

1200

144+00

143+50

143+00

1180

1190

1200

10 FT

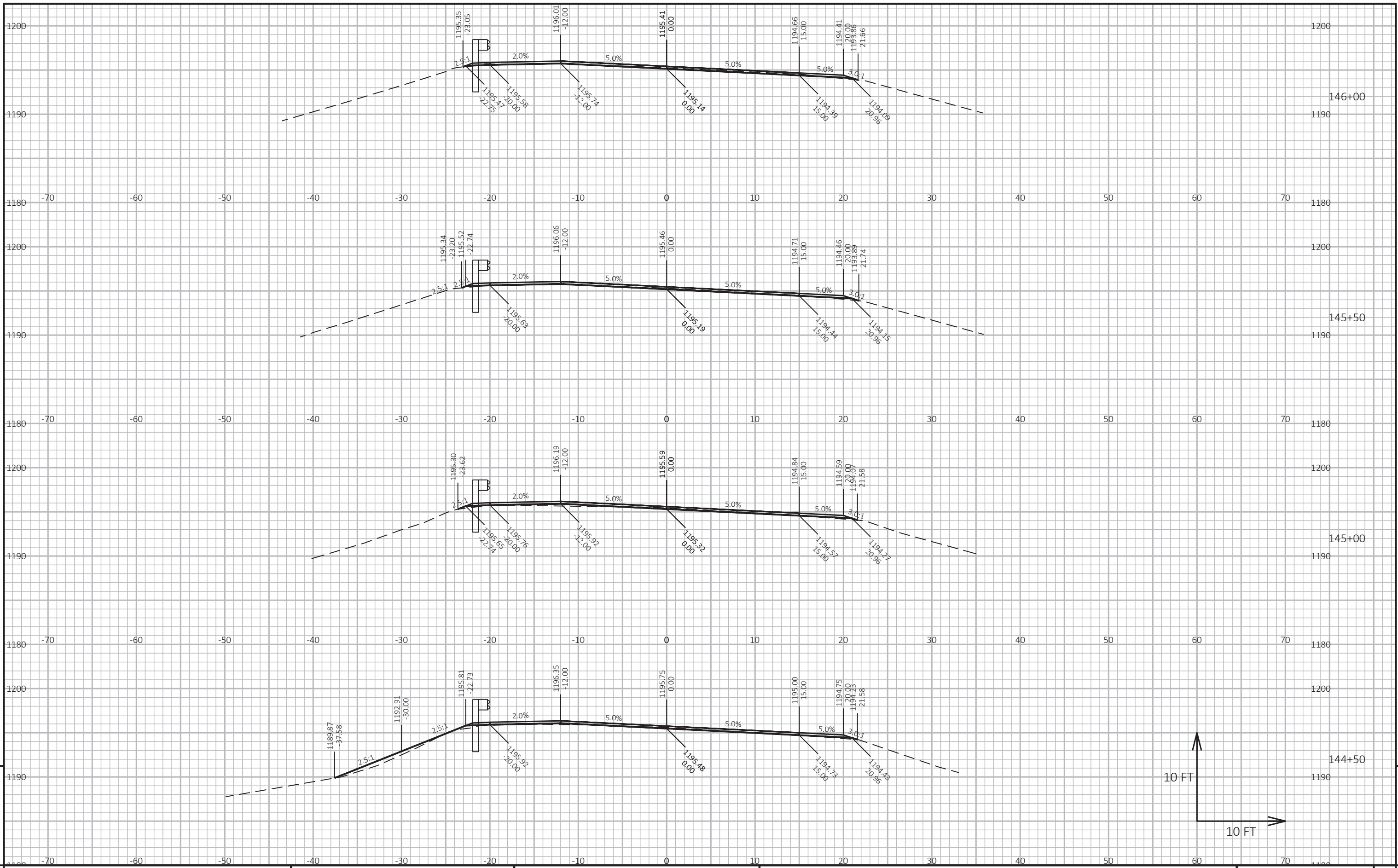
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PROJECT NO: 1550-02-76 HWY: USH 63 COUNTY: POLK CROSS SECTIONS: USH 63 SHEET E

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LAYOUT NAME - 05



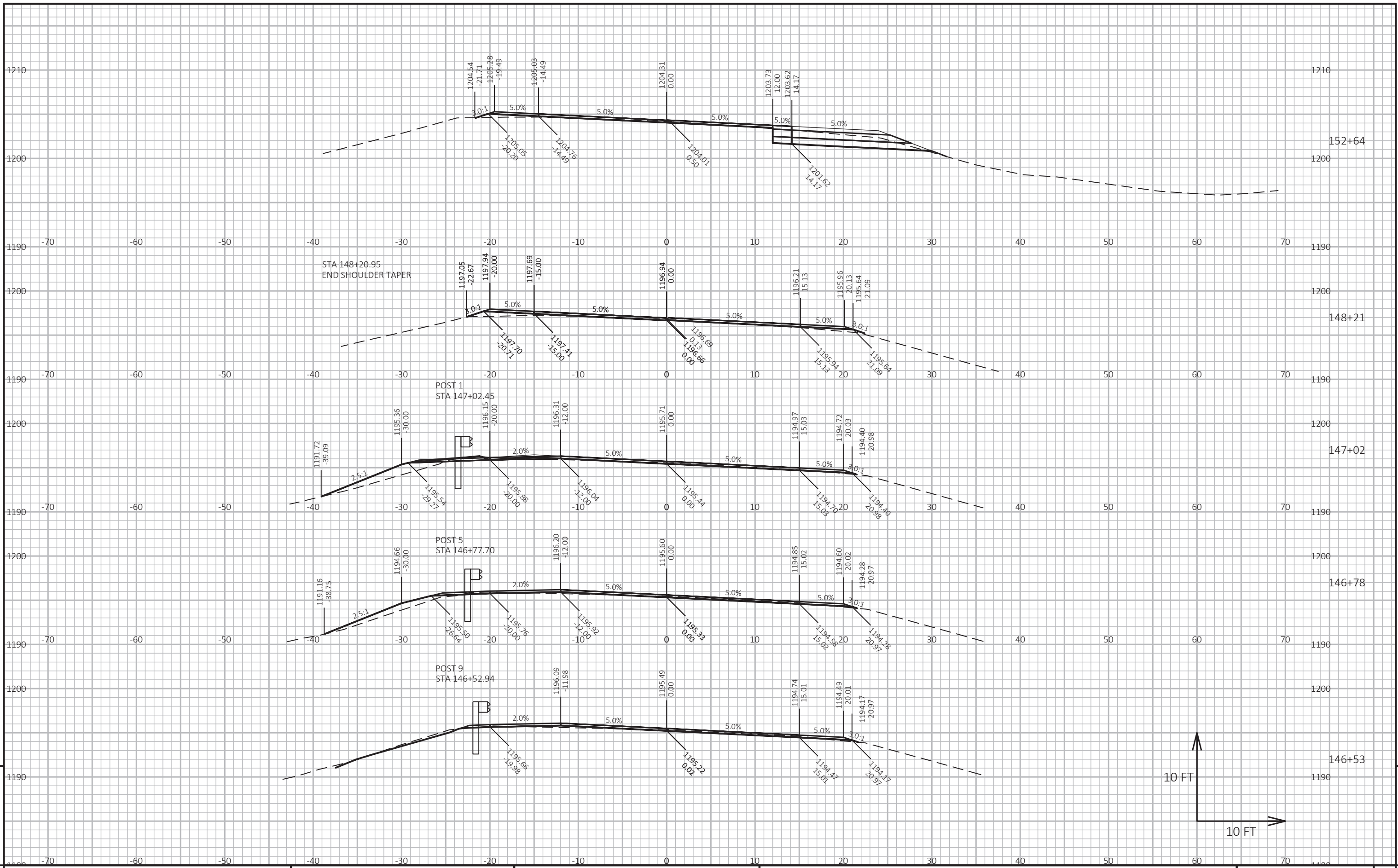
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PROJECT NO: 1550-02-76 HWY: USH 63 COUNTY: POLK CROSS SECTIONS: USH 63 SHEET E

FILE NAME : O:\U2\W\WITNW\151792\C3D\15500206\SHEETSPLAN\090201 XS.DWG PLOT DATE : 4/25/2022 7:38 AM PLOT BY : ANNIE JEROME PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 06



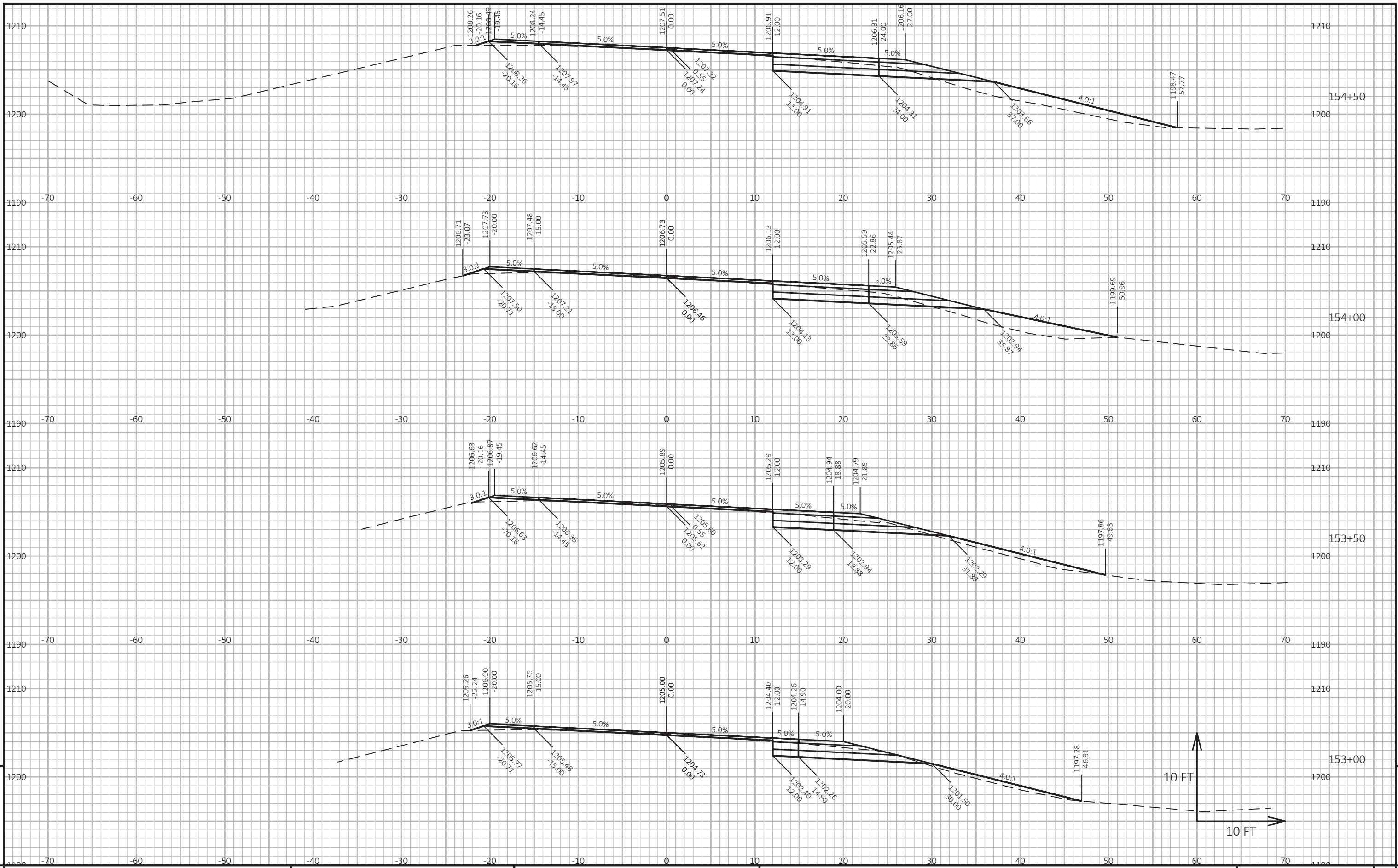
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PROJECT NO: 1550-02-76 HWY: USH 63 COUNTY: POLK CROSS SECTIONS: USH 63 SHEET E

FILE NAME : O:\U2\W\WITNW\151792\C3D\15500206\SHEETS\PLAN\090201 XS.DWG PLOT DATE : 4/25/2022 7:38 AM PLOT BY : ANNIE JEROME PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 07



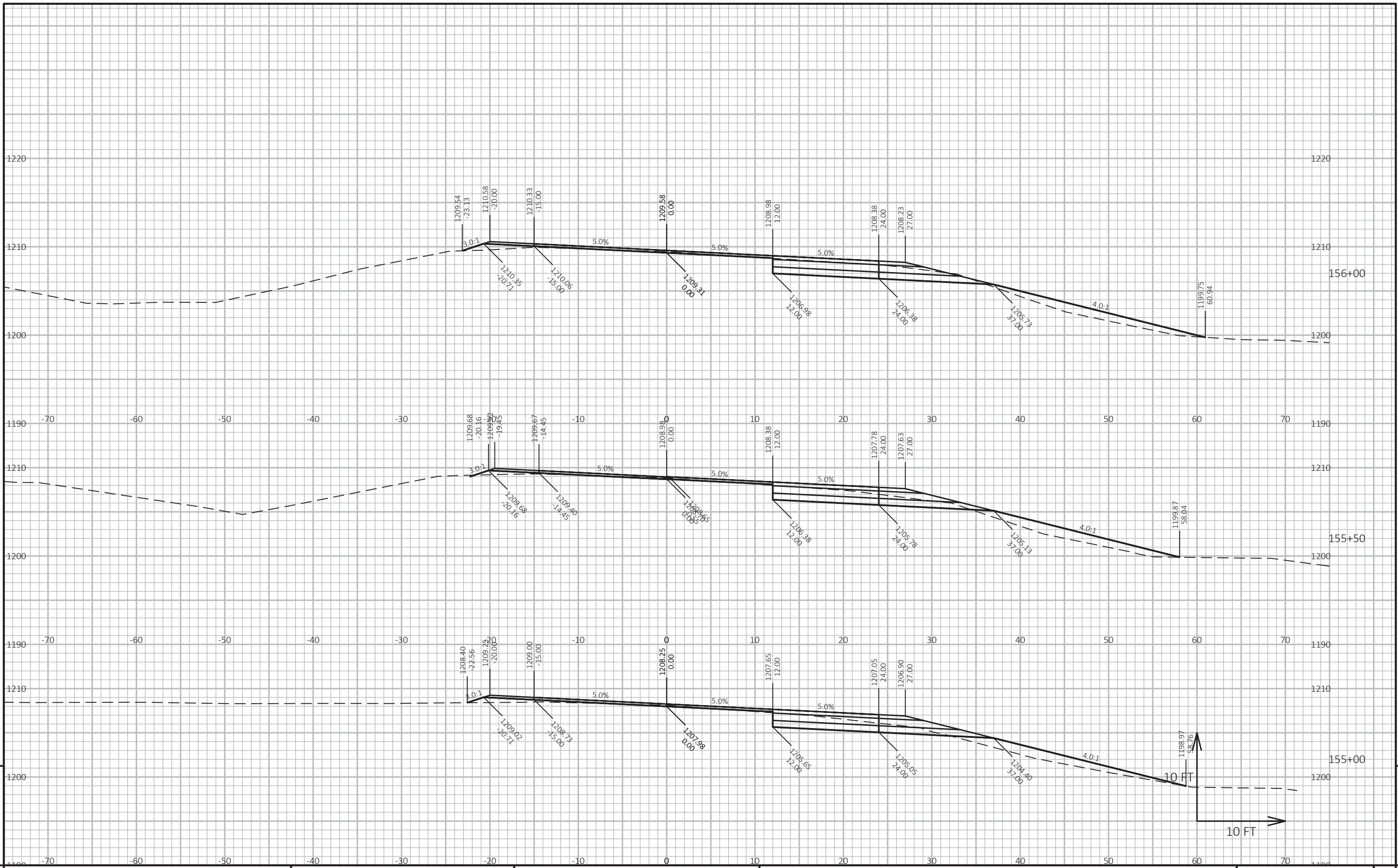
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9

PROJECT NO: 1550-02-76 HWY: USH 63 COUNTY: POLK CROSS SECTIONS: USH 63 SHEET E

FILE NAME : O:\U2\W\WITNW\151792\C3D\15500206\SHEETSPLAN\090201 XS.DWG PLOT DATE : 4/25/2022 7:38 AM PLOT BY : ANNIE JEROME PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 08

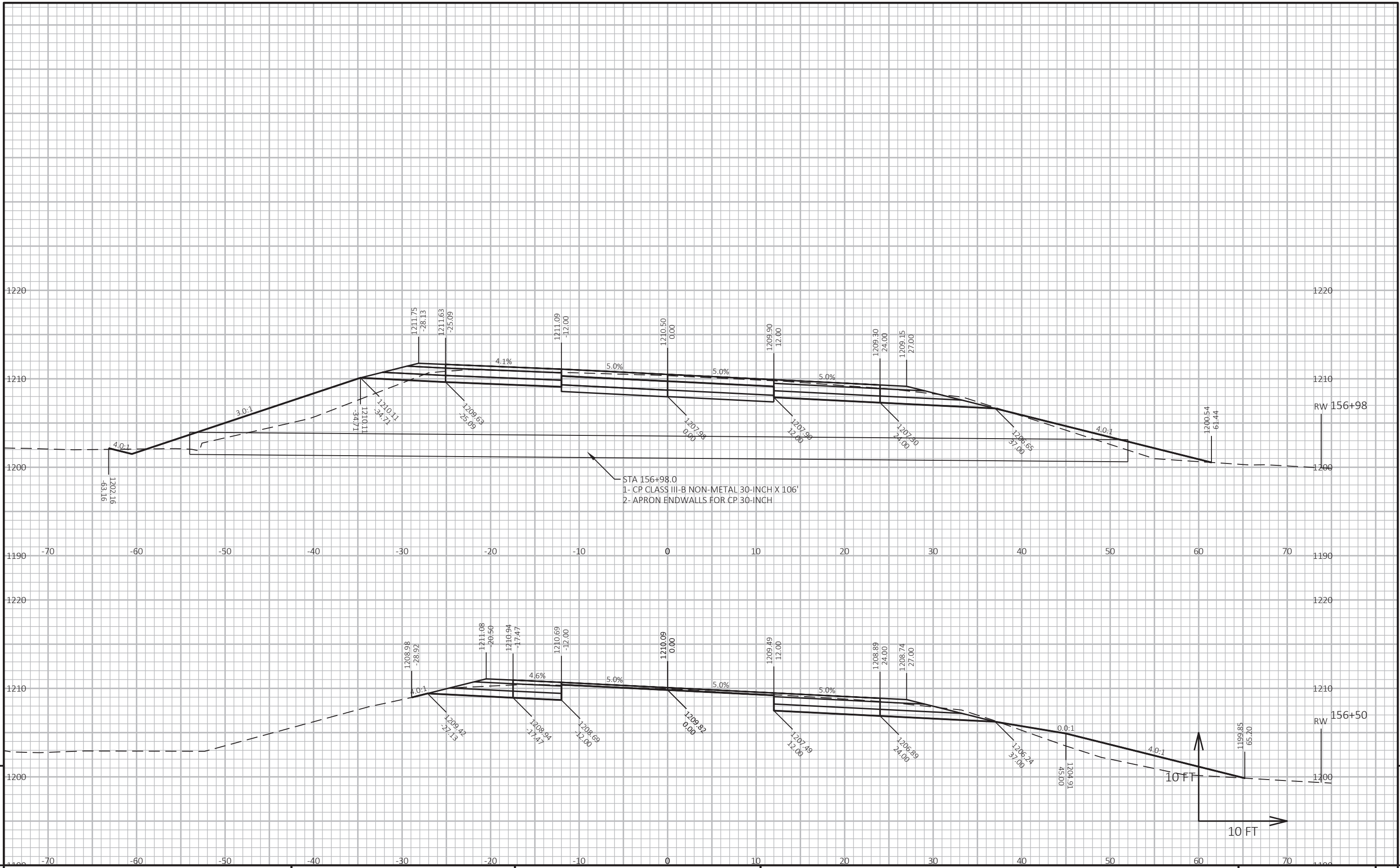


9

9

PROJECT NO: 1550-02-76 HWY: USH 63 COUNTY: POLK CROSS SECTIONS: USH 63 SHEET E

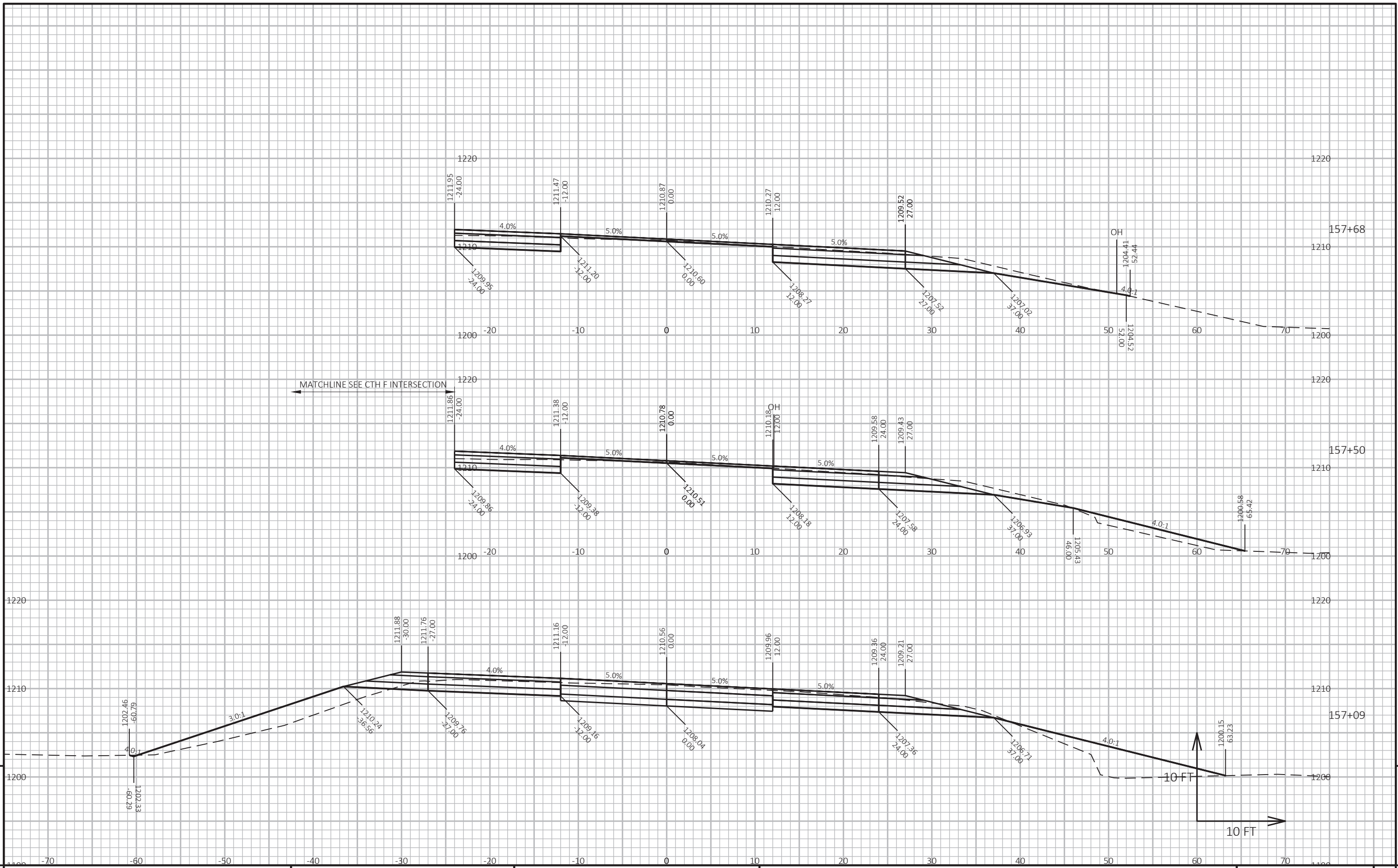
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9

9

PROJECT NO: 1550-02-76	HWY: USH 63	COUNTY: POLK	CROSS SECTIONS: USH 63	SHEET	E
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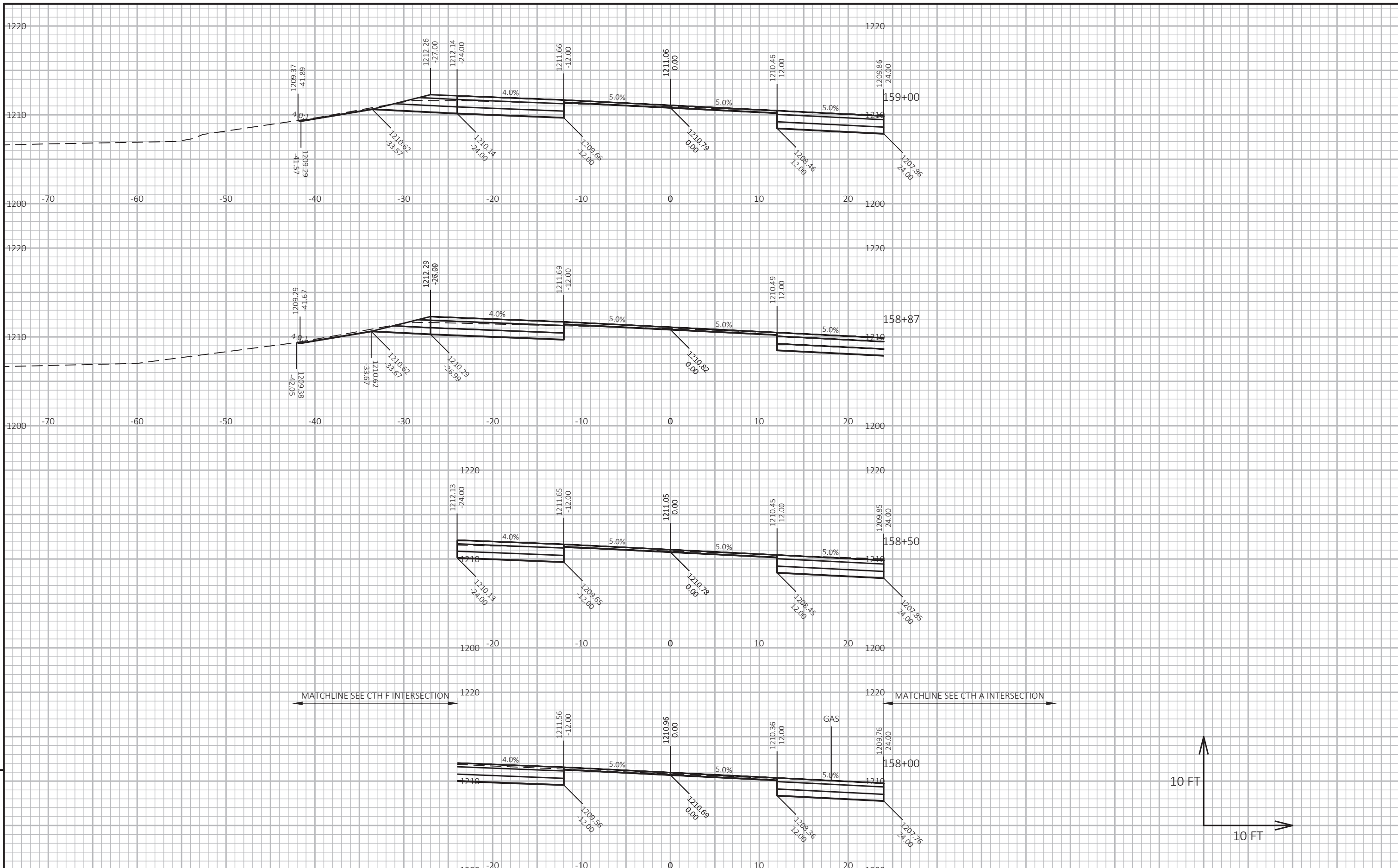


MATCHLINE SEE CTH F INTERSECTION

PROJECT NO: 1550-02-76 HWY: USH 63 COUNTY: POLK CROSS SECTIONS: USH 63 SHEET 9

FILE NAME : O:\U2\W\WITNW\151792\C3D\15500206\SHEETS\PLAN\090201 XS.DWG PLOT DATE : 4/25/2022 7:38 AM PLOT BY : ANNIE JEROME PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 11



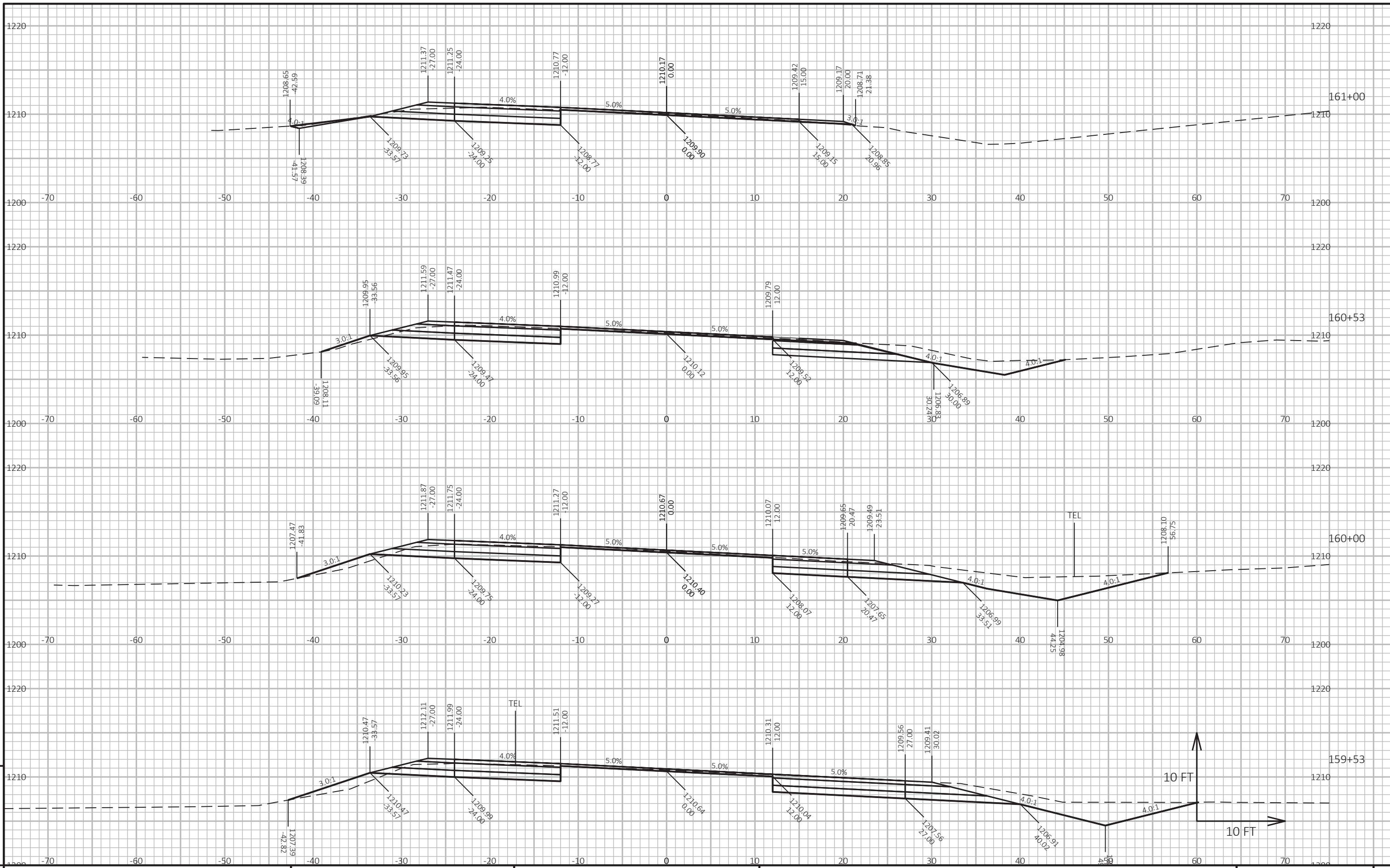
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PROJECT NO: 1550-02-76 HWY: USH 63 COUNTY: POLK CROSS SECTIONS: USH 63 SHEET E

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LAYOUT NAME - 12



PROJECT NO: 1550-02-76

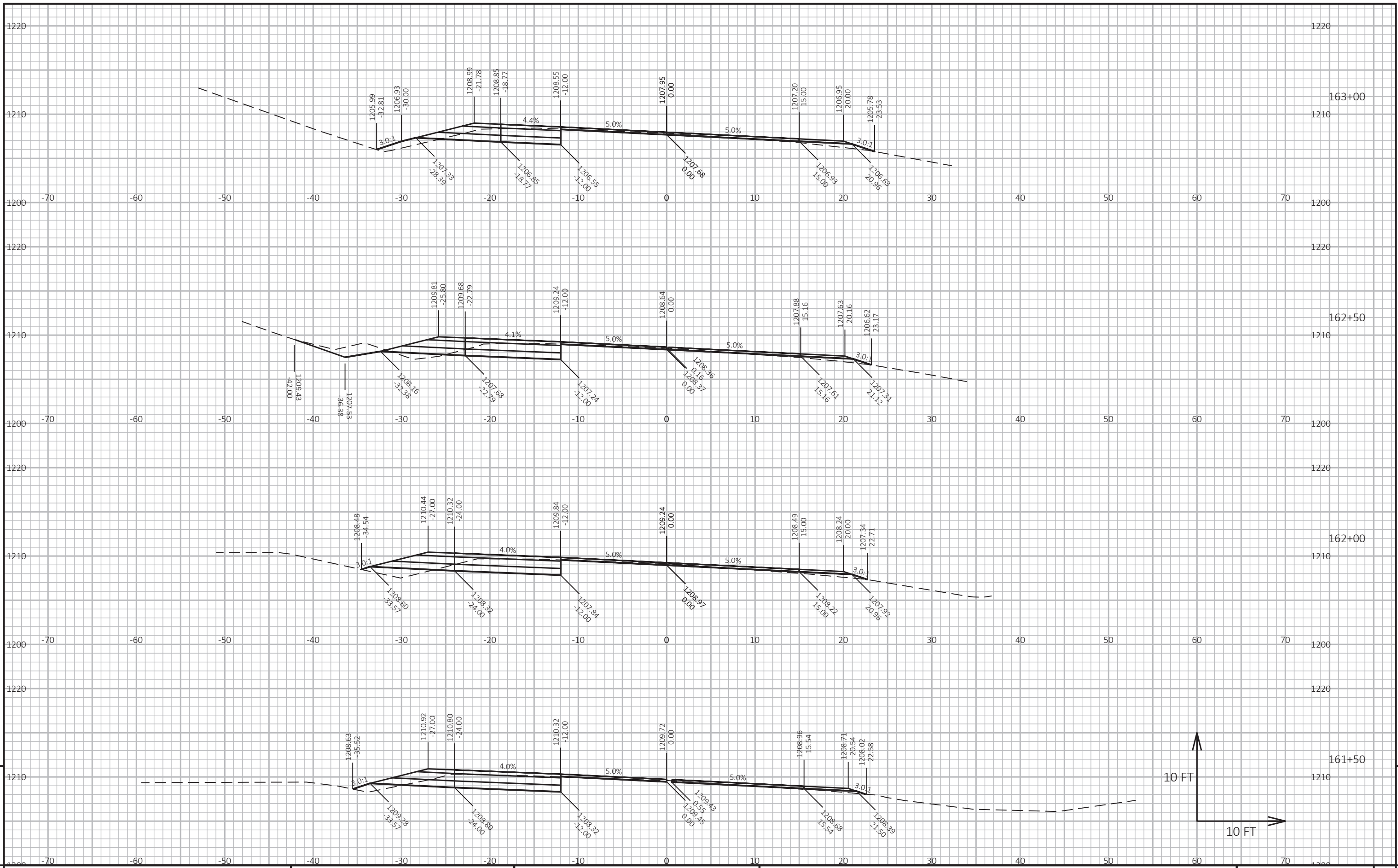
HWY: USH 63

COUNTY: POLK

CROSS SECTIONS: USH 63

SHEET

E



PROJECT NO: 1550-02-76

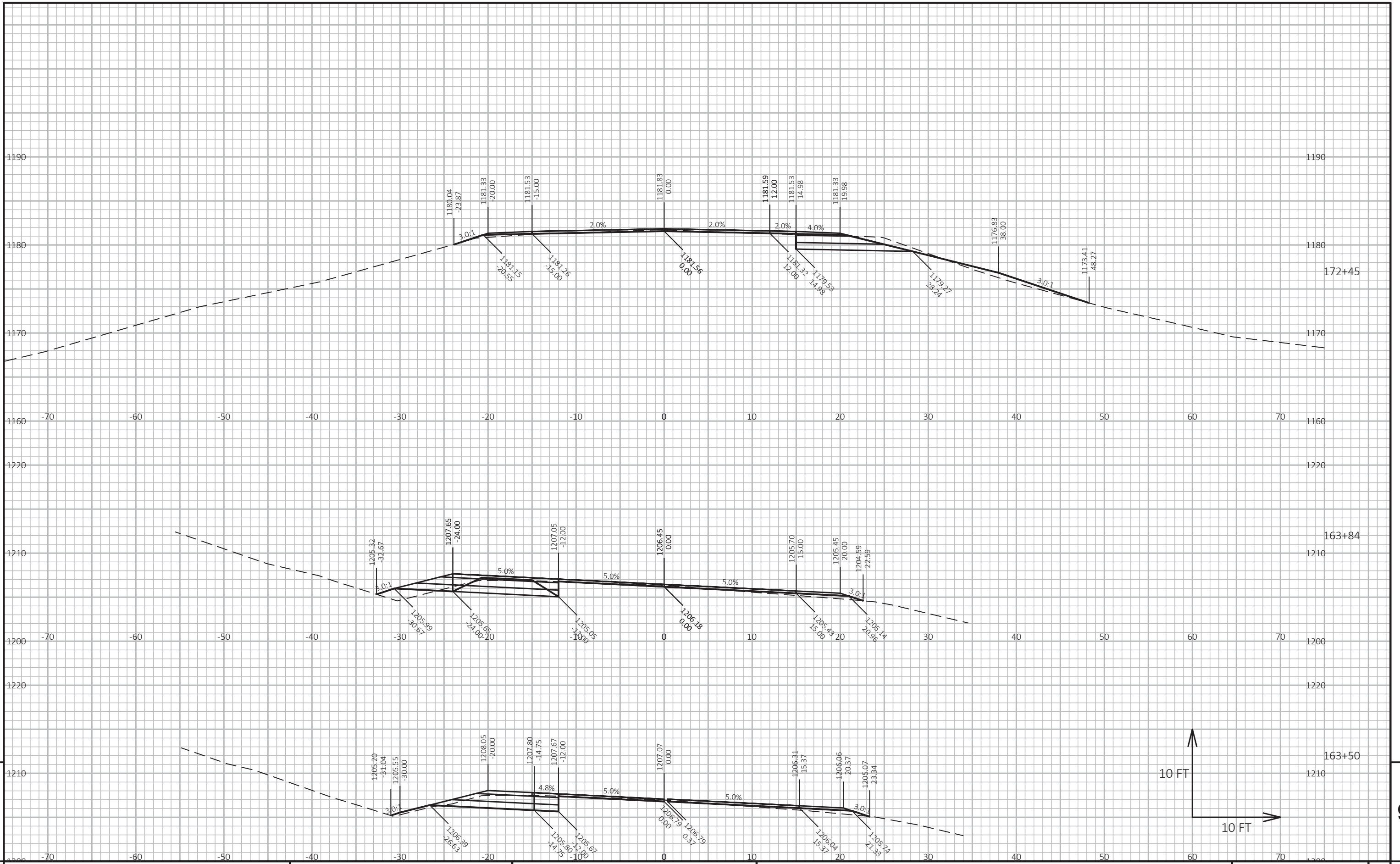
HWY: USH 63

COUNTY: POLK

CROSS SECTIONS: USH 63

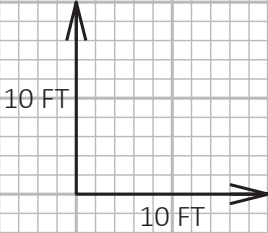
SHEET

E

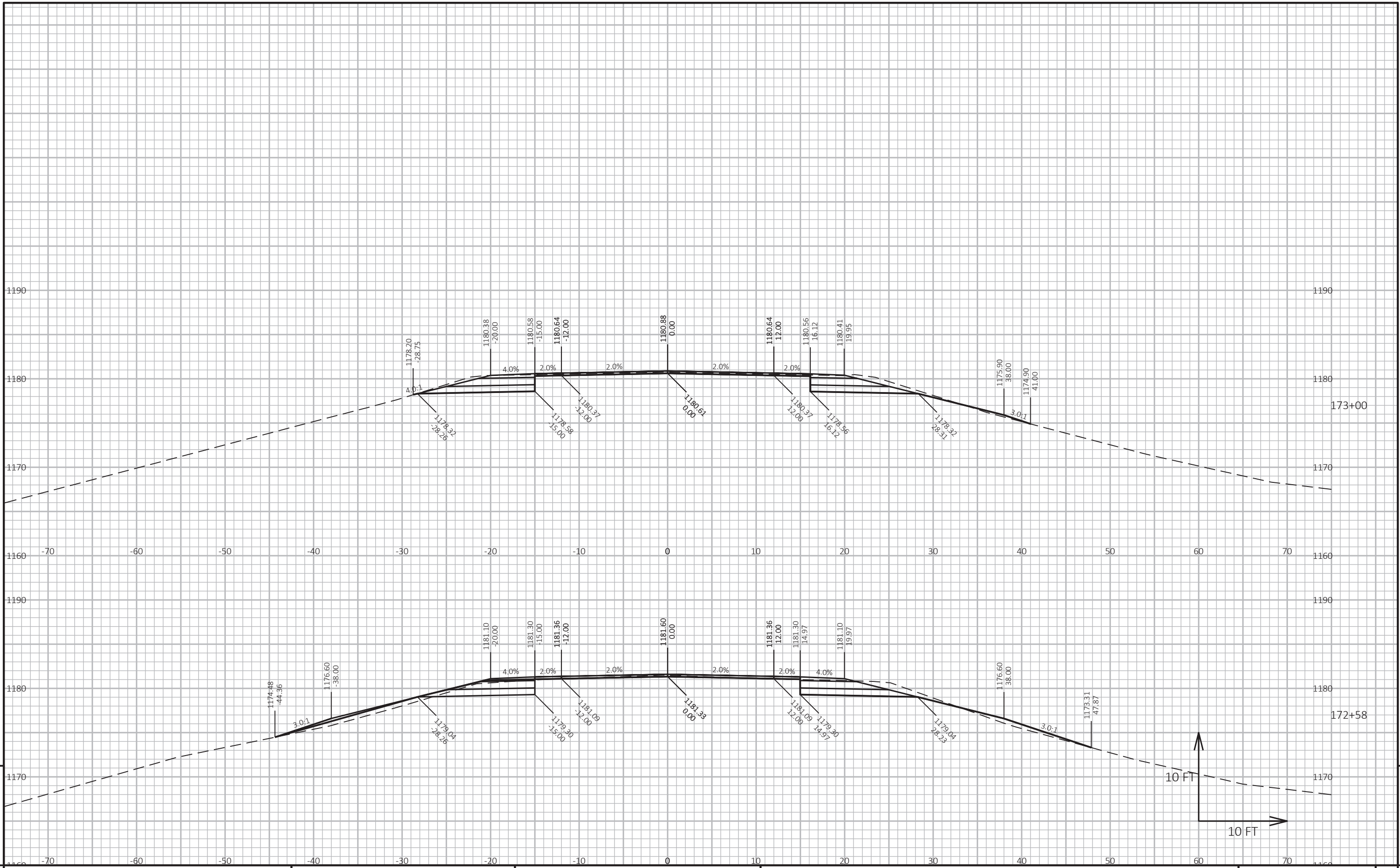


9

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PROJECT NO: 1550-02-76 HWY: USH 63 COUNTY: POLK CROSS SECTIONS: USH 63 SHEET E



PROJECT NO: 1550-02-76

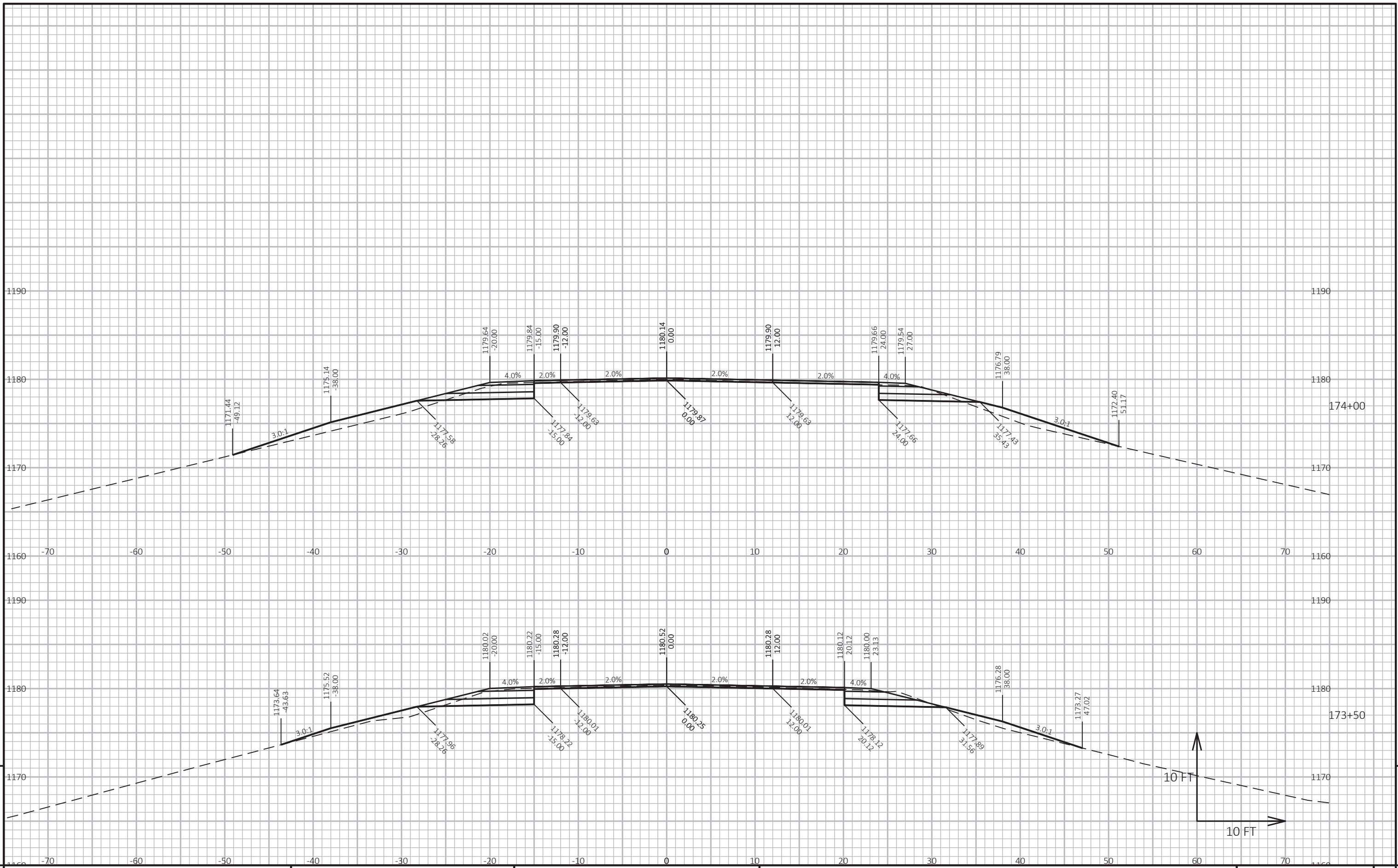
HWY: USH 63

COUNTY: POLK

CROSS SECTIONS: USH 63

SHEET

E



PROJECT NO: 1550-02-76

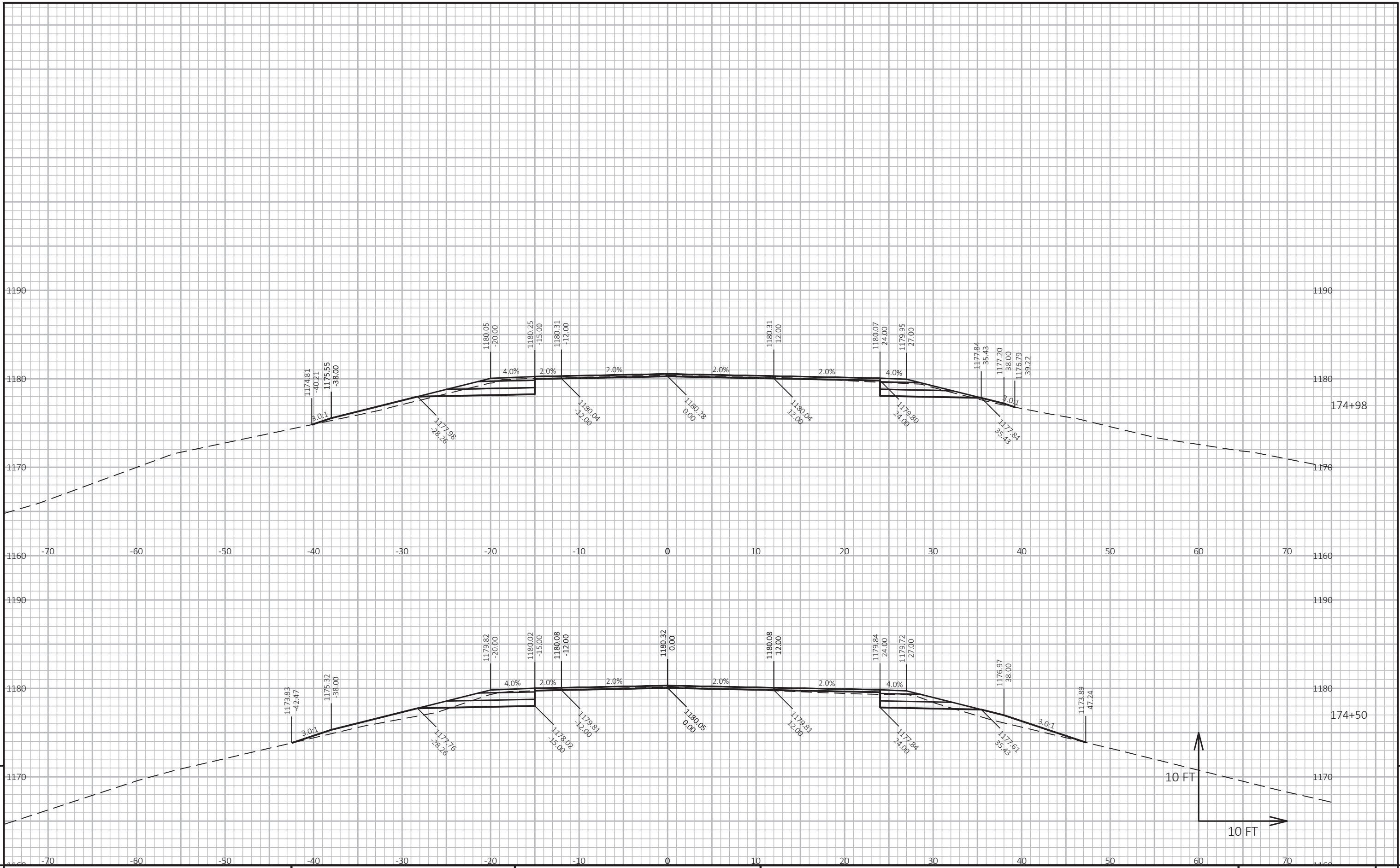
HWY: USH 63

COUNTY: POLK

CROSS SECTIONS: USH 63

SHEET

E

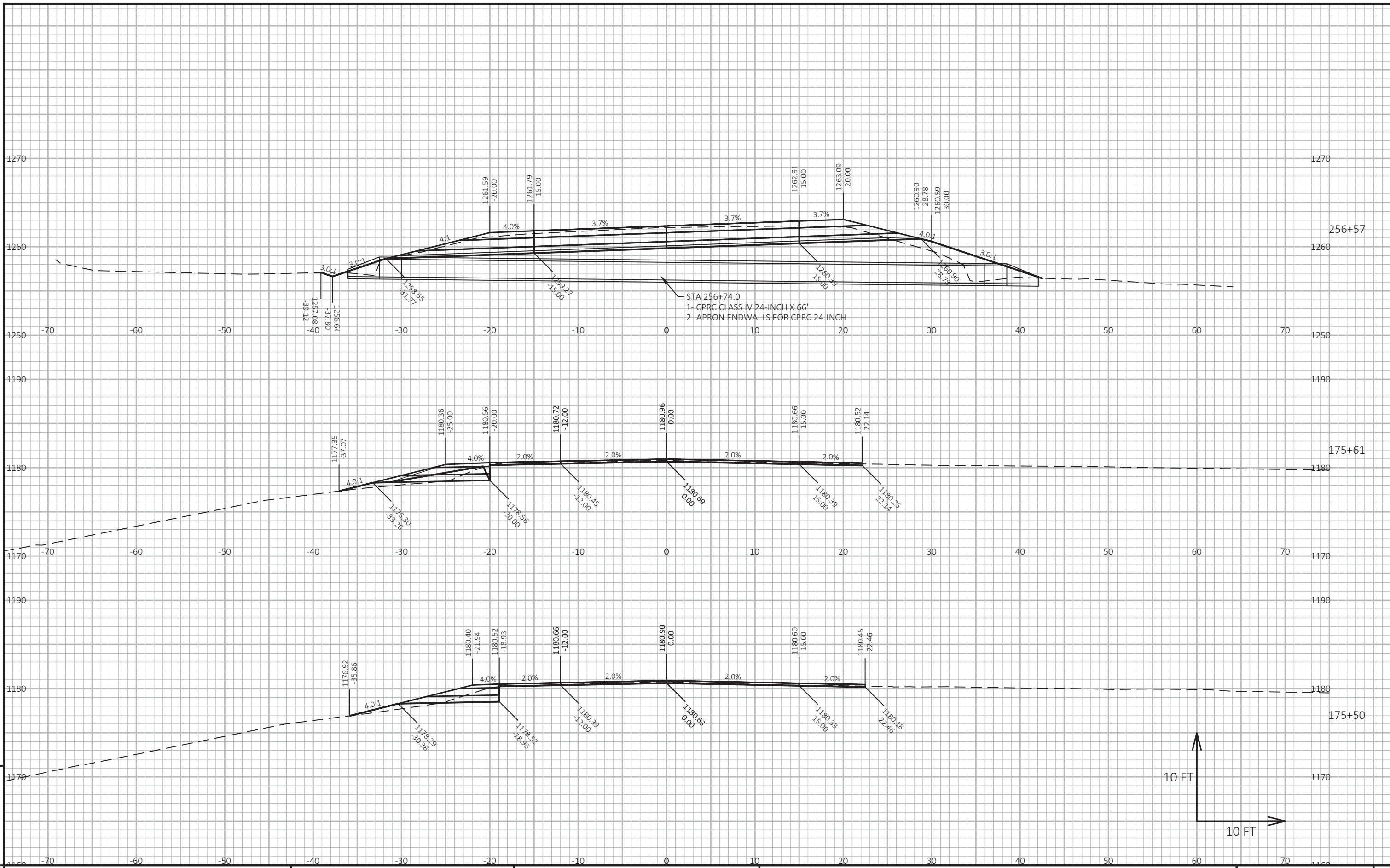


9

9

PROJECT NO: 1550-02-76 HWY: USH 63 COUNTY: POLK CROSS SECTIONS: USH 63 SHEET E

FILE NAME : O:\U2\W\WITNW\151792\C3D\15500206\SHEETSPLAN\090201 XS.DWG PLOT DATE : 4/25/2022 7:40 AM PLOT BY : ANNIE JEROME PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49



PROJECT NO: 1550-02-76

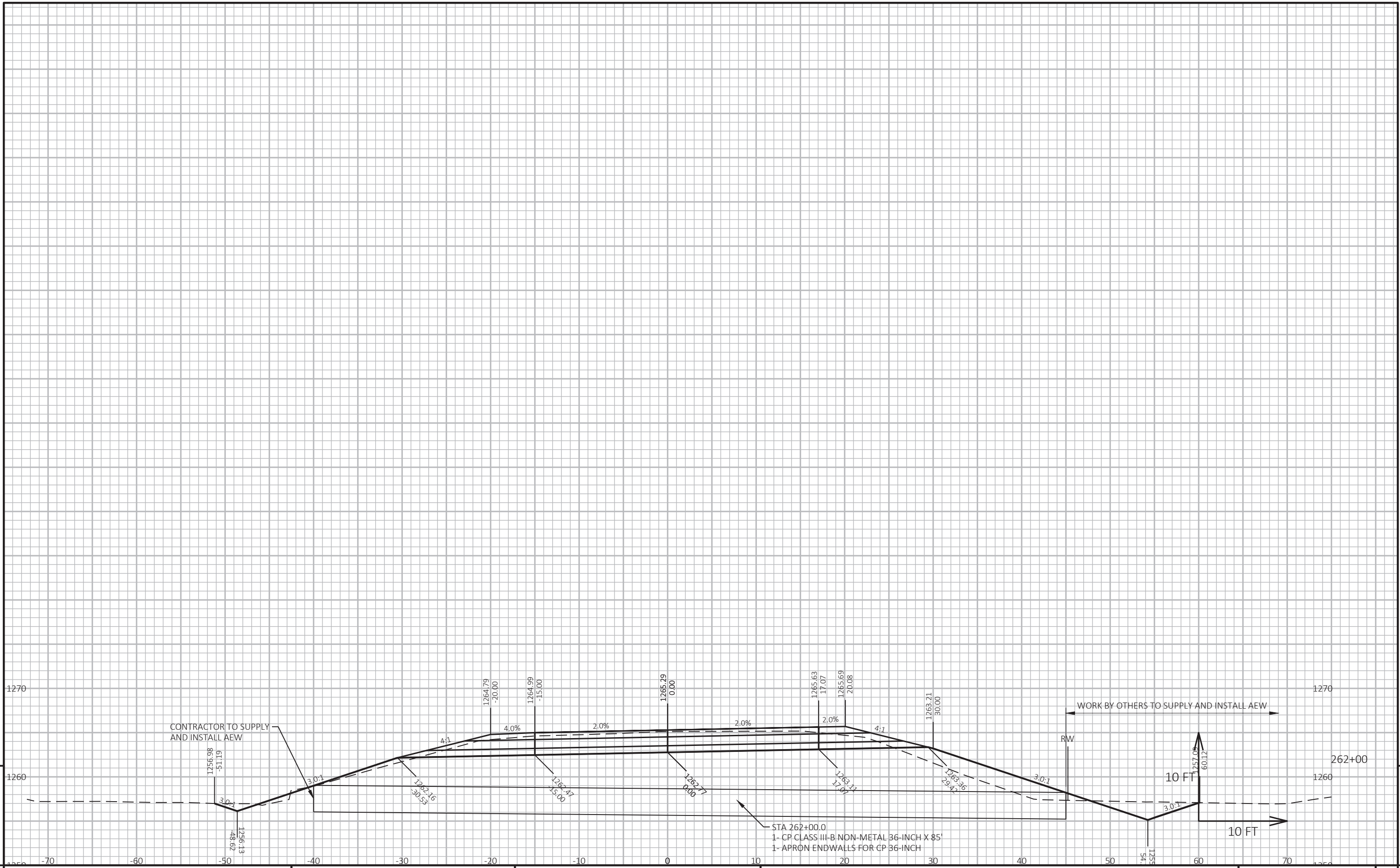
HWY: USH 63

COUNTY: POLK

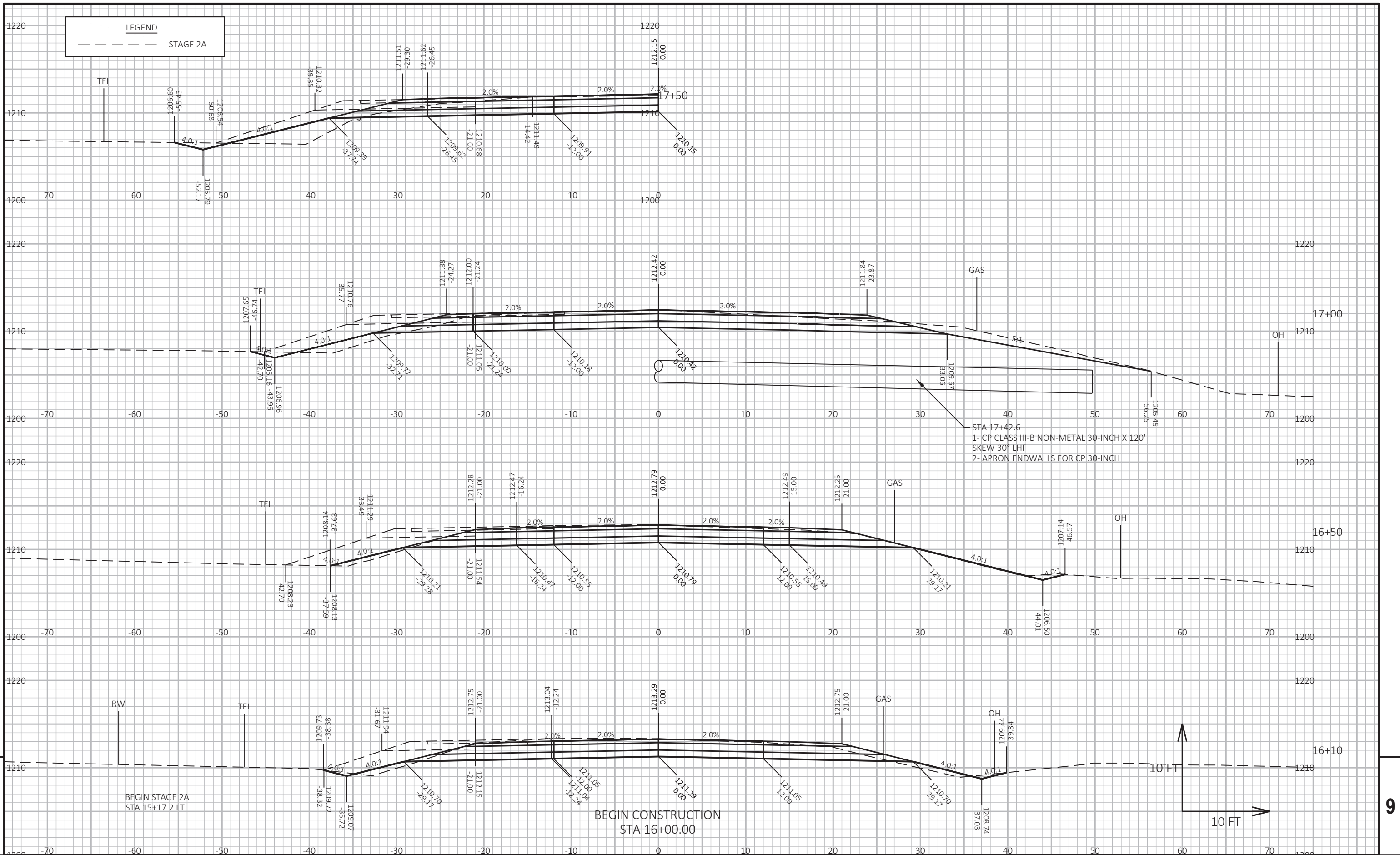
CROSS SECTIONS: USH 63

SHEET

E



PROJECT NO: 1550-02-76 HWY: USH 63 COUNTY: POLK CROSS SECTIONS: USH 63 SHEET E



PROJECT NO: 1550-02-76

HWY: USH 63

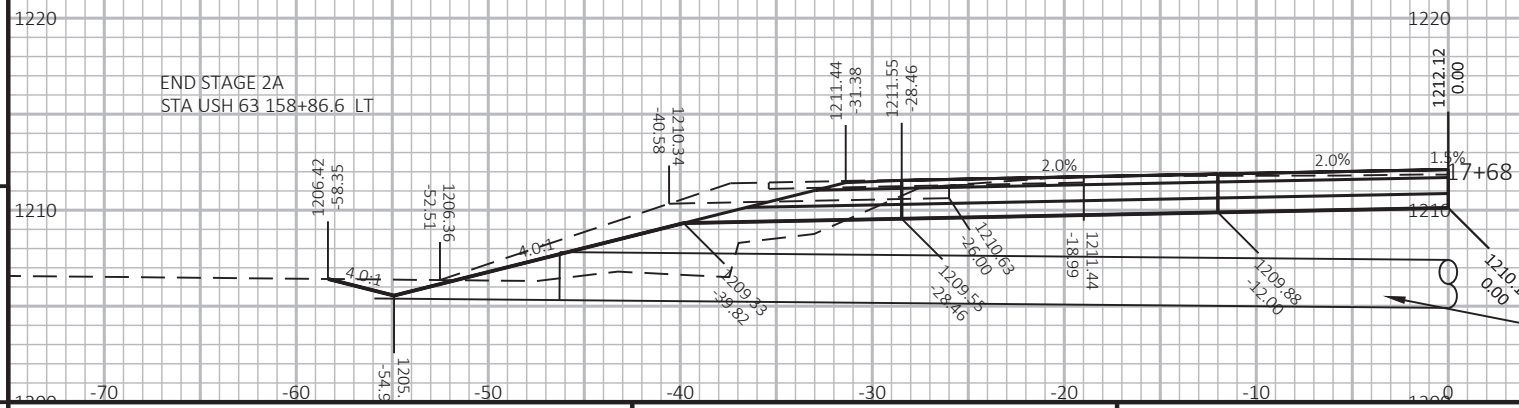
COUNTY: POLK

CROSS SECTIONS: CTH F

SHEET

E

LEGEND
 - - - - - STAGE 2A



STA 17+42.6
 1- CP CLASS III-B NON-METAL 30-INCH X 120"
 SKEW 30° LHF
 2- APRON ENDWALLS FOR CP 30-INCH

PROJECT NO: 1550-02-76

HWY: USH 63

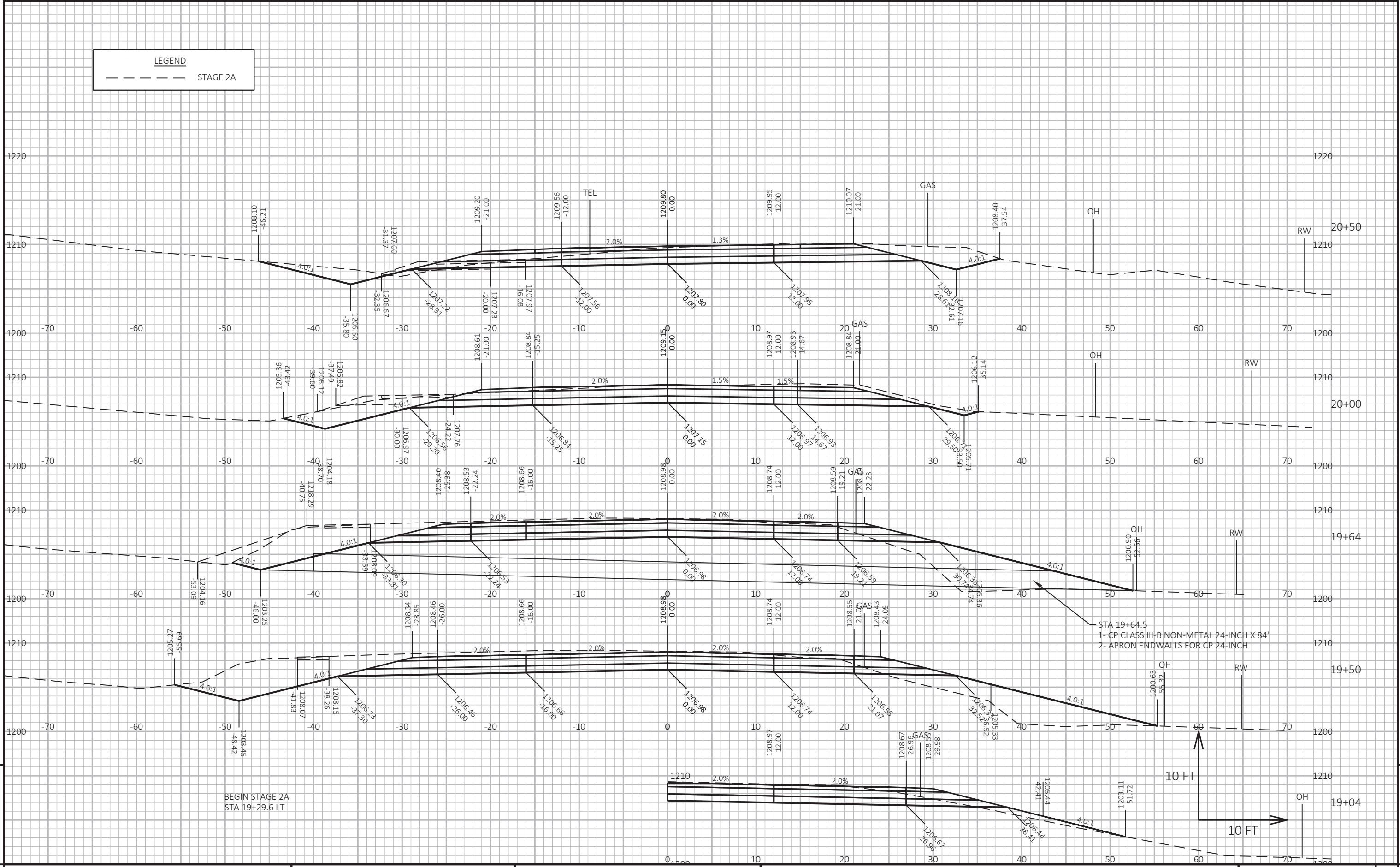
COUNTY: POLK

CROSS SECTIONS: CTH F

SHEET

E

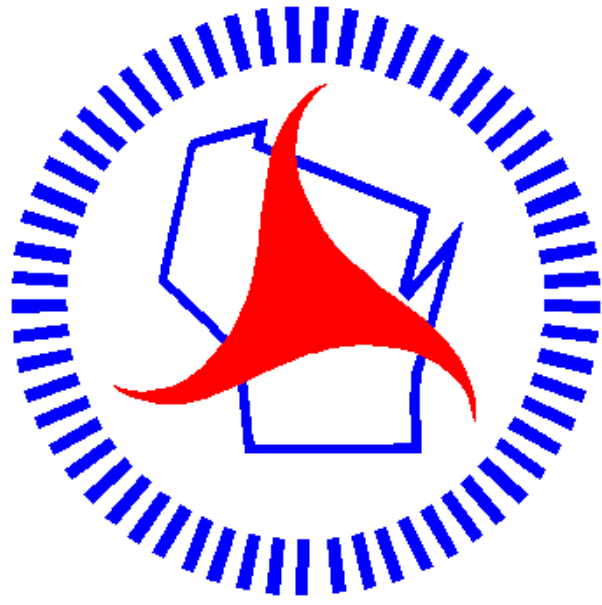
LEGEND
 - - - STAGE 2A



BEGIN STAGE 2A
 STA 19+29.6 LT

STA 19+64.5
 1- CP CLASS III-B NON-METAL 24-INCH X 84'
 2- APRON ENDWALLS FOR CP 24-INCH

10 FT
 10 FT



Wisconsin Department of Transportation

Dedicated people creating transportation solutions through innovation and exceptional service.

<http://www.dot.wisconsin.gov>

SUP

JANUARY 2023

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

CLEAR LAKE - CUMBERLAND
 60TH AVENUE INTERSECTION

USH 63
 POLK

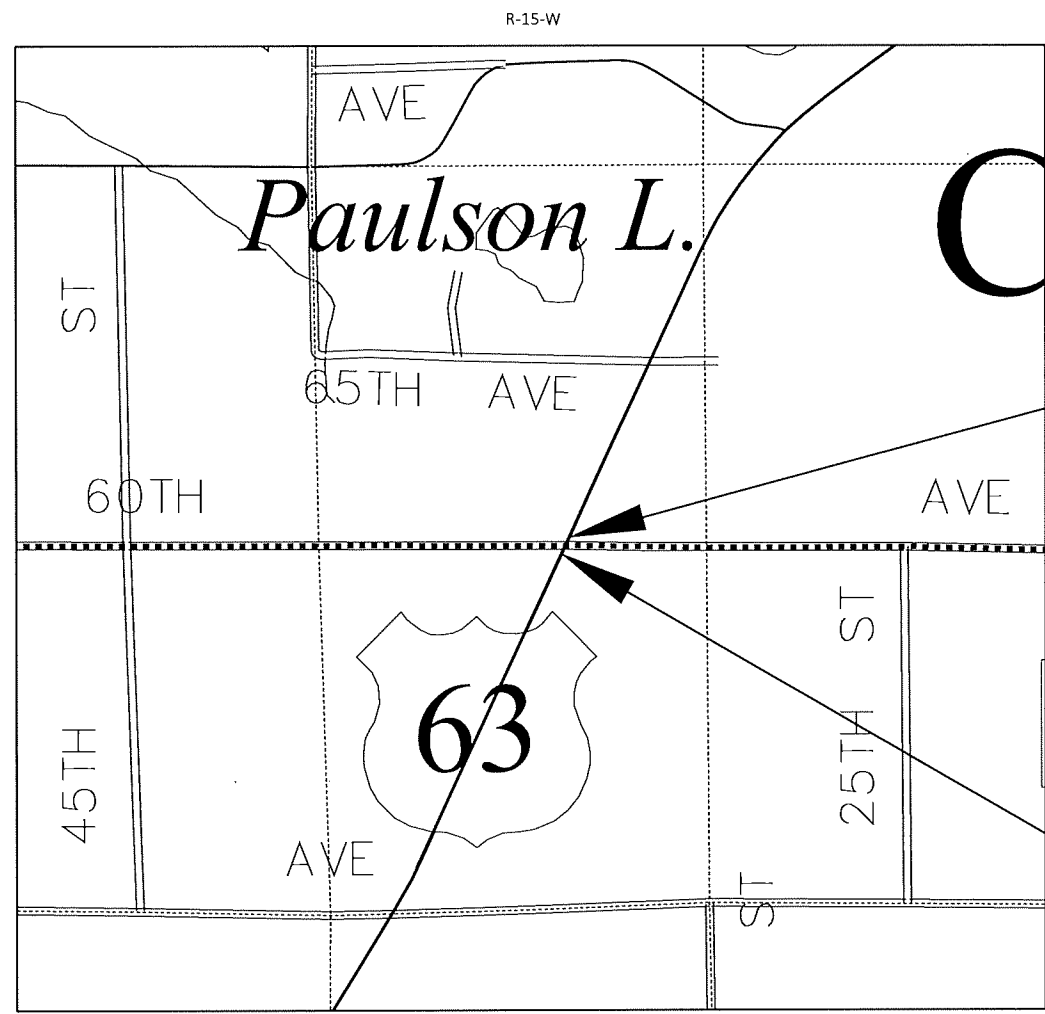
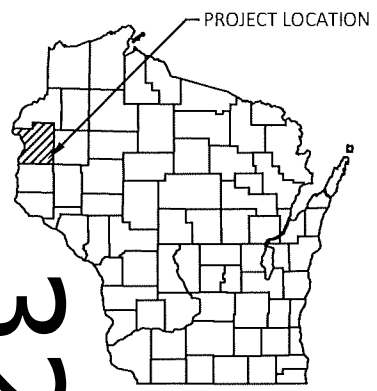
STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1550-04-76	WISC 2022519	1

ORDER OF SHEETS

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

TOTAL SHEETS = 40

STATE PROJECT NUMBER
1550-04-76



END PROJECT
 STA 380+40.49

BEGIN PROJECT
 STA 377+91.72
 Y=231432.596
 X=569542.240

LAYOUT
 SCALE 0 0.5 MI
 TOTAL NET LENGTH OF CENTERLINE = 0.047 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), POLK COUNTY NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

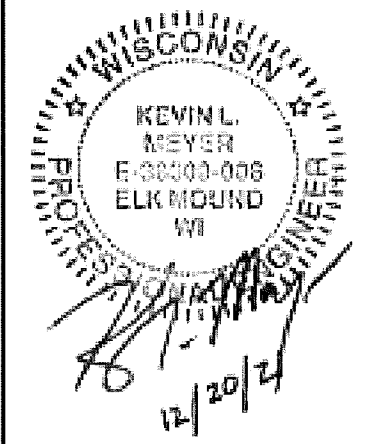
DESIGN DESIGNATION

A.A.D.T.	2023	=	5600
A.A.D.T.	2043	=	6800
D.H.V.		=	998
D.D.		=	61/39
T.		=	9.5%
DESIGN SPEED		=	55 MPH
ESALS		=	1,540,300

CONVENTIONAL SYMBOLS

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

ORIGINAL PLANS PREPARED BY
CORRE
 ENGINEERING
 MADISON | OCONOMOWOC | EAU CLAIRE | GREEN BAY | WITTEBERG



DATE: _____ (Signature)

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT
Designer	DESIGNER
Project Manager	JESSICA BOWKER
Regional Examiner	TOU YANG
Regional Supervisor	REGIONAL SUPERVISOR

APPROVED FOR THE DEPARTMENT
 DATE: 10/14/22 *Jessica Bowker* (Signature)

E

PROJECT ID: 1550-04-76

32

COUNTY: POLK

GENERAL NOTES

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

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

RIGHT OF WAY LINES SHOWN ON THE CROSS SECTIONS ARE APPROXIMATE.

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

MINIMUM ASPHALTIC SURFACE MIX SHALL BE 4 MT 58-34 S.

CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY HIS OPERATION OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS.

DISTURBED AREAS WITHIN THE RIGHT OF WAY ARE TO BE TOPSOILED, FERTILIZED, SEEDED, AND COVERED WITH EROSION MAT AS DIRECTED BY THE ENGINEER.

IN ORDER TO AVOID IMPACTS TO THE HABITAT ADJACENT TO THE ROADWAY, THERE SHALL BE NO PARKING, STAGING, OR STORAGE OF EQUIPMENT IN UNDISTURBED, NATIVE AREAS. UTILIZE EXISTING PARKING LOTS, DRIVEWAYS AND SHOULDERS, PROVIDED ADEQUATE PROTECTION IS PROVIDED TO THE HABITAT BEYOND THE TOE OF SLOPE.

THE CONTRACTOR SHALL NOT TRAP WATER ON THE ROADWAY OR BASE AGGREGATE SURFACE.

ALL DEBRIS AND MATERIALS FROM CONSTRUCTION SHALL BE CONTAINED AND NOT DEPOSITED INTO ADJACENT WETLANDS AND WATERWAYS. IF CULVERTS HAVE STANDING OR FLOWING WATER IN THEM, THE WATER SHOULD BE MANAGED SO THAT THE CULVERT WORK CAN OCCUR UNDER DRY CONDITIONS.

UTILITY CONTACTS

COMMUNICATIONS

CLEAR LAKE TEL CO
 BRETT ANDERSON
 316 3RD AVE
 CLEAR LAKE, WI, 54005
 PHONE: 715-641-2292
 EMAIL: BRETT.ANDERSON@CLTCOMM.NET

RUNOFF COEFFICIENT TABLE

LAND USE:	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
	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 AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.44 ACRES



POLK COUNTY CONTACT

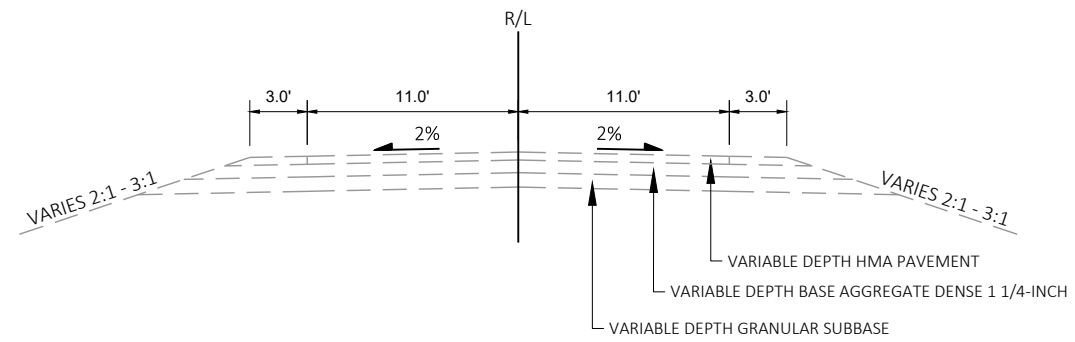
POLK COUNTY
 EMIL NORBY - HIGHWAY COMMISSIONER
 900 PHEASANT LANE
 PO BOX 248
 BALSAM LAKE, WI 54810
 PHONE: 715-485-8723
 EMAIL: EMIL.NORBY@CO.POLK.WI.US

DNR CONTACT

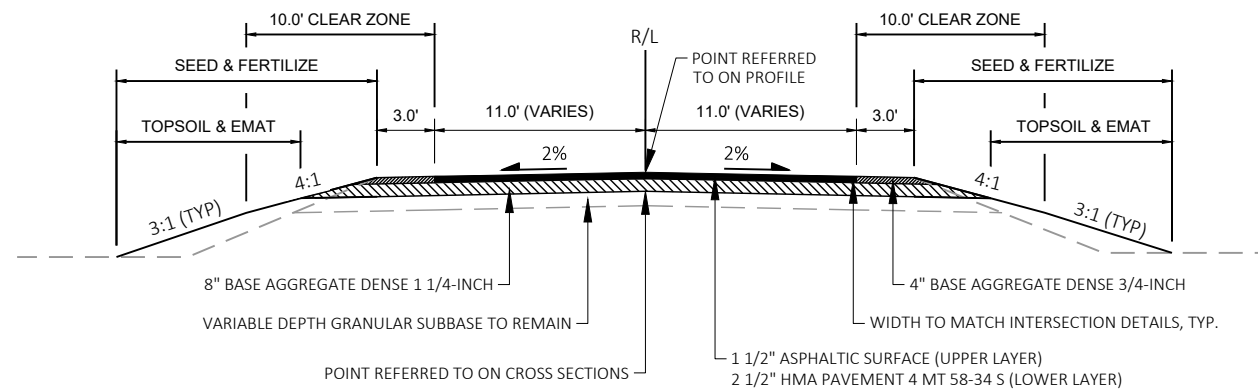
DEPARTMENT OF NATURAL RESOURCES
 NORTHERN REGION HQ
 810 W MAPLE STREET
 SPOONER, WI 54801
 AMY CRONK
 PHONE: 715-635-4229
 EMAIL: AMY.CRONK@WISCONSIN.GOV

DESIGN CONTACT

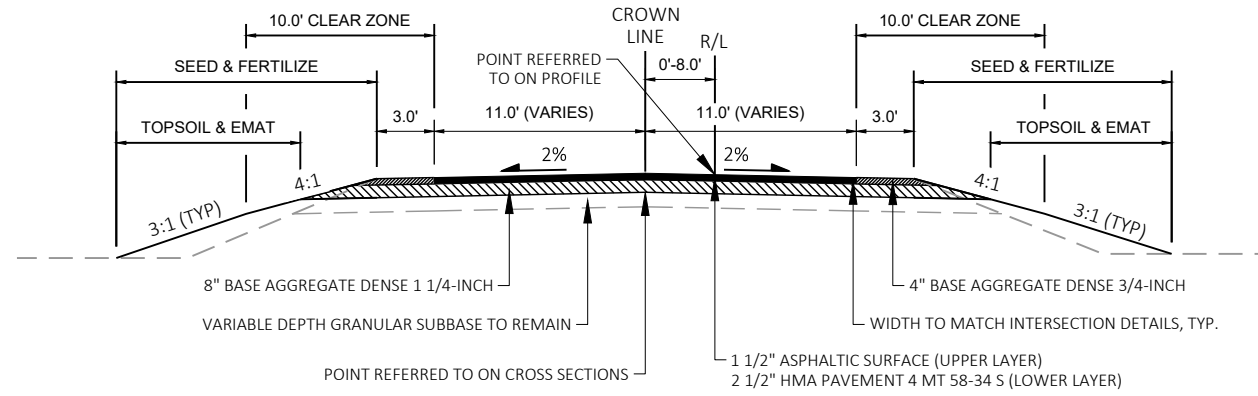
CORRE, INC.
 1802 WARDEN STREET
 EAU CLAIRE, WI 54703
 KEVIN MEYER
 PHONE: 608-828-1011
 EMAIL: KMEYER@CORREINC.COM



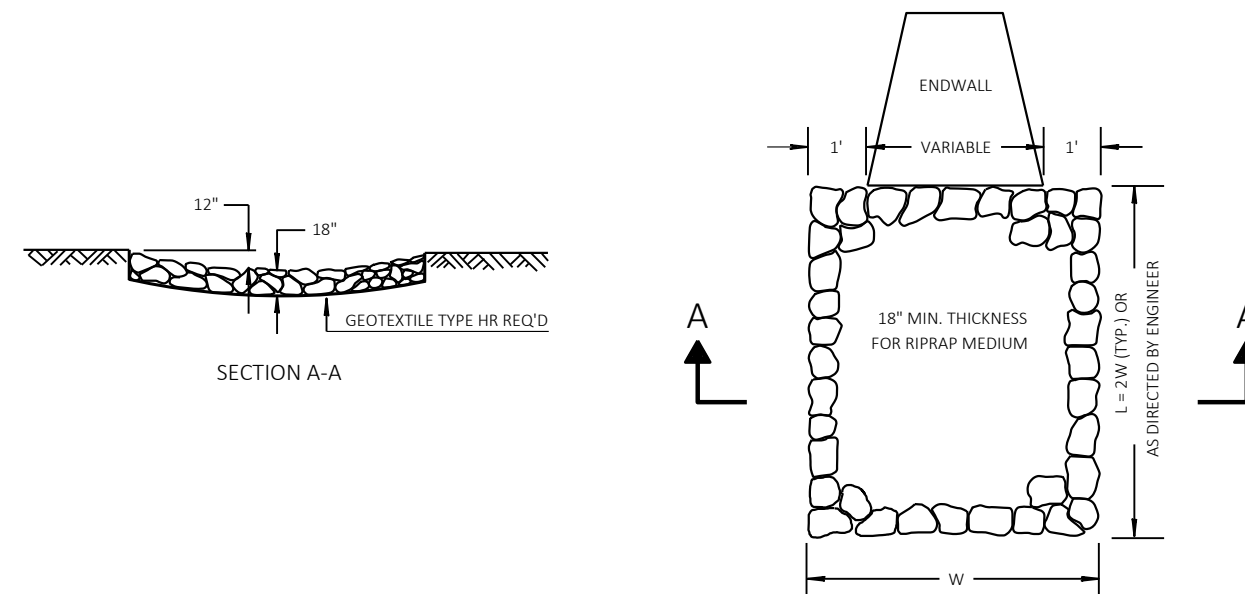
TYPICAL EXISTING SECTION
60TH AVENUE
STA 3+42 TO 4+48 (WEST)
STA 0+13 TO 1+43 (EAST)



TYPICAL FINISHED SECTION
60TH AVENUE
STA 3+42 TO 4+48 (WEST)



TYPICAL FINISHED SECTION
 60TH AVENUE
 STA 0+13 TO 1+43 (EAST)

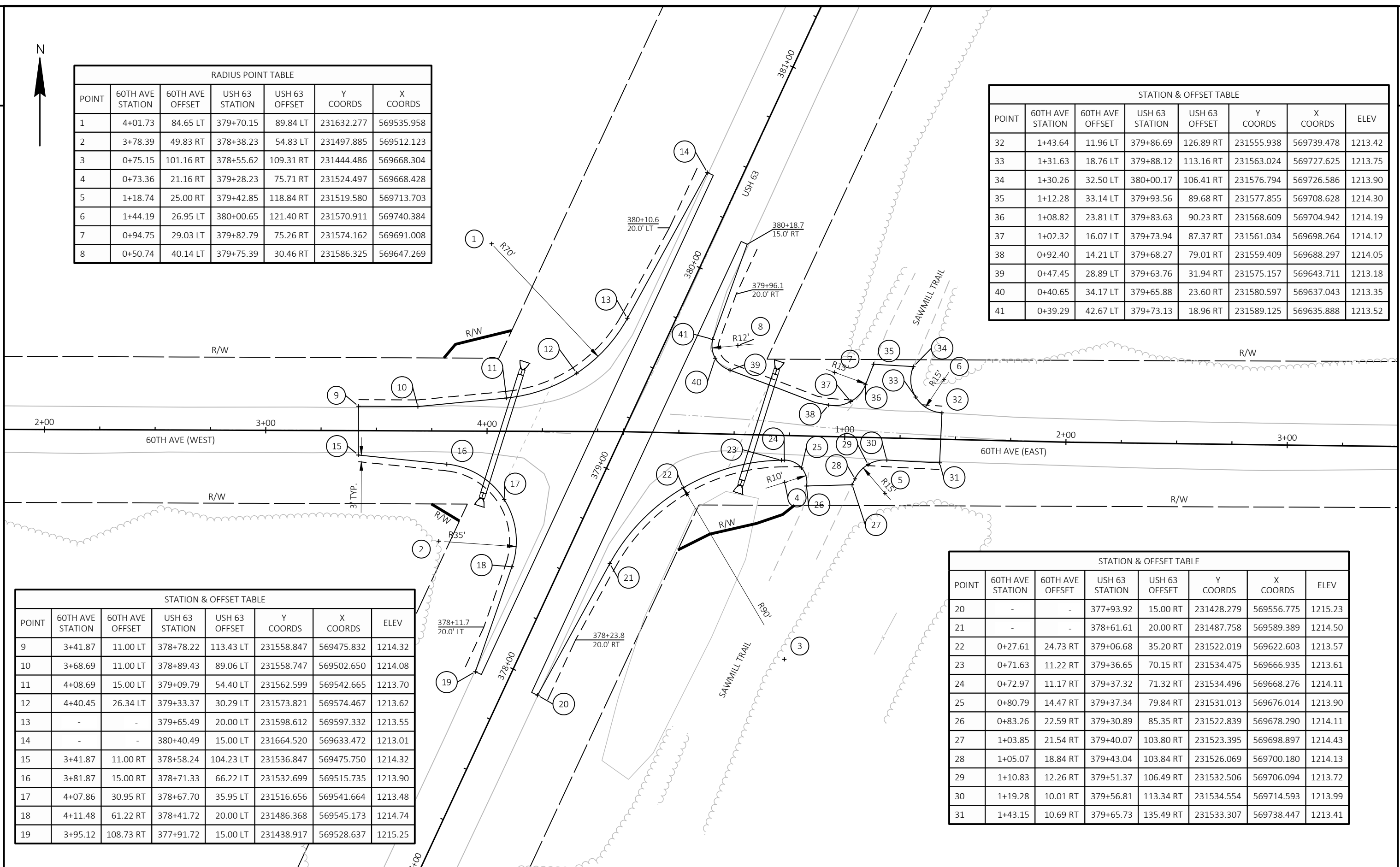


RIPRAP TREATMENT AT CULVERTS



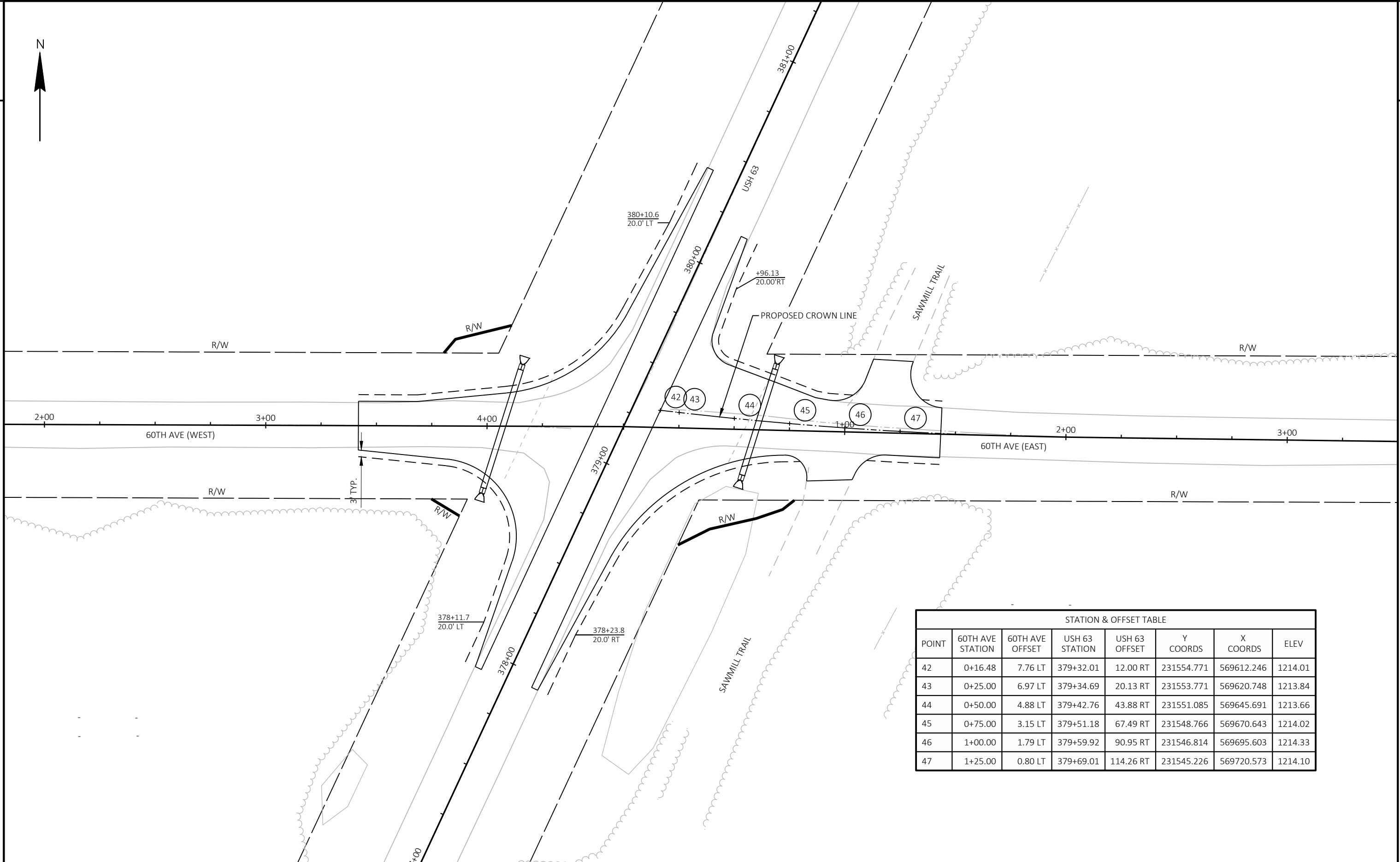
RADIUS POINT TABLE						
POINT	60TH AVE STATION	60TH AVE OFFSET	USH 63 STATION	USH 63 OFFSET	Y COORDS	X COORDS
1	4+01.73	84.65 LT	379+70.15	89.84 LT	231632.277	569535.958
2	3+78.39	49.83 RT	378+38.23	54.83 LT	231497.885	569512.123
3	0+75.15	101.16 RT	378+55.62	109.31 RT	231444.486	569668.304
4	0+73.36	21.16 RT	379+28.23	75.71 RT	231524.497	569668.428
5	1+18.74	25.00 RT	379+42.85	118.84 RT	231519.580	569713.703
6	1+44.19	26.95 LT	380+00.65	121.40 RT	231570.911	569740.384
7	0+94.75	29.03 LT	379+82.79	75.26 RT	231574.162	569691.008
8	0+50.74	40.14 LT	379+75.39	30.46 RT	231586.325	569647.269

STATION & OFFSET TABLE							
POINT	60TH AVE STATION	60TH AVE OFFSET	USH 63 STATION	USH 63 OFFSET	Y COORDS	X COORDS	ELEV
32	1+43.64	11.96 LT	379+86.69	126.89 RT	231555.938	569739.478	1213.42
33	1+31.63	18.76 LT	379+88.12	113.16 RT	231563.024	569727.625	1213.75
34	1+30.26	32.50 LT	380+00.17	106.41 RT	231576.794	569726.586	1213.90
35	1+12.28	33.14 LT	379+93.56	89.68 RT	231577.855	569708.628	1214.30
36	1+08.82	23.81 LT	379+83.63	90.23 RT	231568.609	569704.942	1214.19
37	1+02.32	16.07 LT	379+73.94	87.37 RT	231561.034	569698.264	1214.12
38	0+92.40	14.21 LT	379+68.27	79.01 RT	231559.409	569688.297	1214.05
39	0+47.45	28.89 LT	379+63.76	31.94 RT	231575.157	569643.711	1213.18
40	0+40.65	34.17 LT	379+65.88	23.60 RT	231580.597	569637.043	1213.35
41	0+39.29	42.67 LT	379+73.13	18.96 RT	231589.125	569635.888	1213.52



STATION & OFFSET TABLE							
POINT	60TH AVE STATION	60TH AVE OFFSET	USH 63 STATION	USH 63 OFFSET	Y COORDS	X COORDS	ELEV
9	3+41.87	11.00 LT	378+78.22	113.43 LT	231558.847	569475.832	1214.32
10	3+68.69	11.00 LT	378+89.43	89.06 LT	231558.747	569502.650	1214.08
11	4+08.69	15.00 LT	379+09.79	54.40 LT	231562.599	569542.665	1213.70
12	4+40.45	26.34 LT	379+33.37	30.29 LT	231573.821	569574.467	1213.62
13	-	-	379+65.49	20.00 LT	231598.612	569597.332	1213.55
14	-	-	380+40.49	15.00 LT	231664.520	569633.472	1213.01
15	3+41.87	11.00 RT	378+58.24	104.23 LT	231536.847	569475.750	1214.32
16	3+81.87	15.00 RT	378+71.33	66.22 LT	231532.699	569515.735	1213.90
17	4+07.86	30.95 RT	378+67.70	35.95 LT	231516.656	569541.664	1213.48
18	4+11.48	61.22 RT	378+41.72	20.00 LT	231486.368	569545.173	1214.74
19	3+95.12	108.73 RT	377+91.72	15.00 LT	231438.917	569528.637	1215.25

STATION & OFFSET TABLE							
POINT	60TH AVE STATION	60TH AVE OFFSET	USH 63 STATION	USH 63 OFFSET	Y COORDS	X COORDS	ELEV
20	-	-	377+93.92	15.00 RT	231428.279	569556.775	1215.23
21	-	-	378+61.61	20.00 RT	231487.758	569589.389	1214.50
22	0+27.61	24.73 RT	379+06.68	35.20 RT	231522.019	569622.603	1213.57
23	0+71.63	11.22 RT	379+36.65	70.15 RT	231534.475	569666.935	1213.61
24	0+72.97	11.17 RT	379+37.32	71.32 RT	231534.496	569668.276	1214.11
25	0+80.79	14.47 RT	379+37.34	79.84 RT	231531.013	569676.014	1213.90
26	0+83.26	22.59 RT	379+30.89	85.35 RT	231522.839	569678.290	1214.11
27	1+03.85	21.54 RT	379+40.07	103.80 RT	231523.395	569698.897	1214.43
28	1+05.07	18.84 RT	379+43.04	103.84 RT	231526.069	569700.180	1214.13
29	1+10.83	12.26 RT	379+51.37	106.49 RT	231532.506	569706.094	1213.72
30	1+19.28	10.01 RT	379+56.81	113.34 RT	231534.554	569714.593	1213.99
31	1+43.15	10.69 RT	379+65.73	135.49 RT	231533.307	569738.447	1213.41



STATION & OFFSET TABLE							
POINT	60TH AVE STATION	60TH AVE OFFSET	USH 63 STATION	USH 63 OFFSET	Y COORDS	X COORDS	ELEV
42	0+16.48	7.76 LT	379+32.01	12.00 RT	231554.771	569612.246	1214.01
43	0+25.00	6.97 LT	379+34.69	20.13 RT	231553.771	569620.748	1213.84
44	0+50.00	4.88 LT	379+42.76	43.88 RT	231551.085	569645.691	1213.66
45	0+75.00	3.15 LT	379+51.18	67.49 RT	231548.766	569670.643	1214.02
46	1+00.00	1.79 LT	379+59.92	90.95 RT	231546.814	569695.603	1214.33
47	1+25.00	0.80 LT	379+69.01	114.26 RT	231545.226	569720.573	1214.10

STA 4+19
 REMOVING SMALL PIPE CULVERTS
 54 LF 24" CPCS

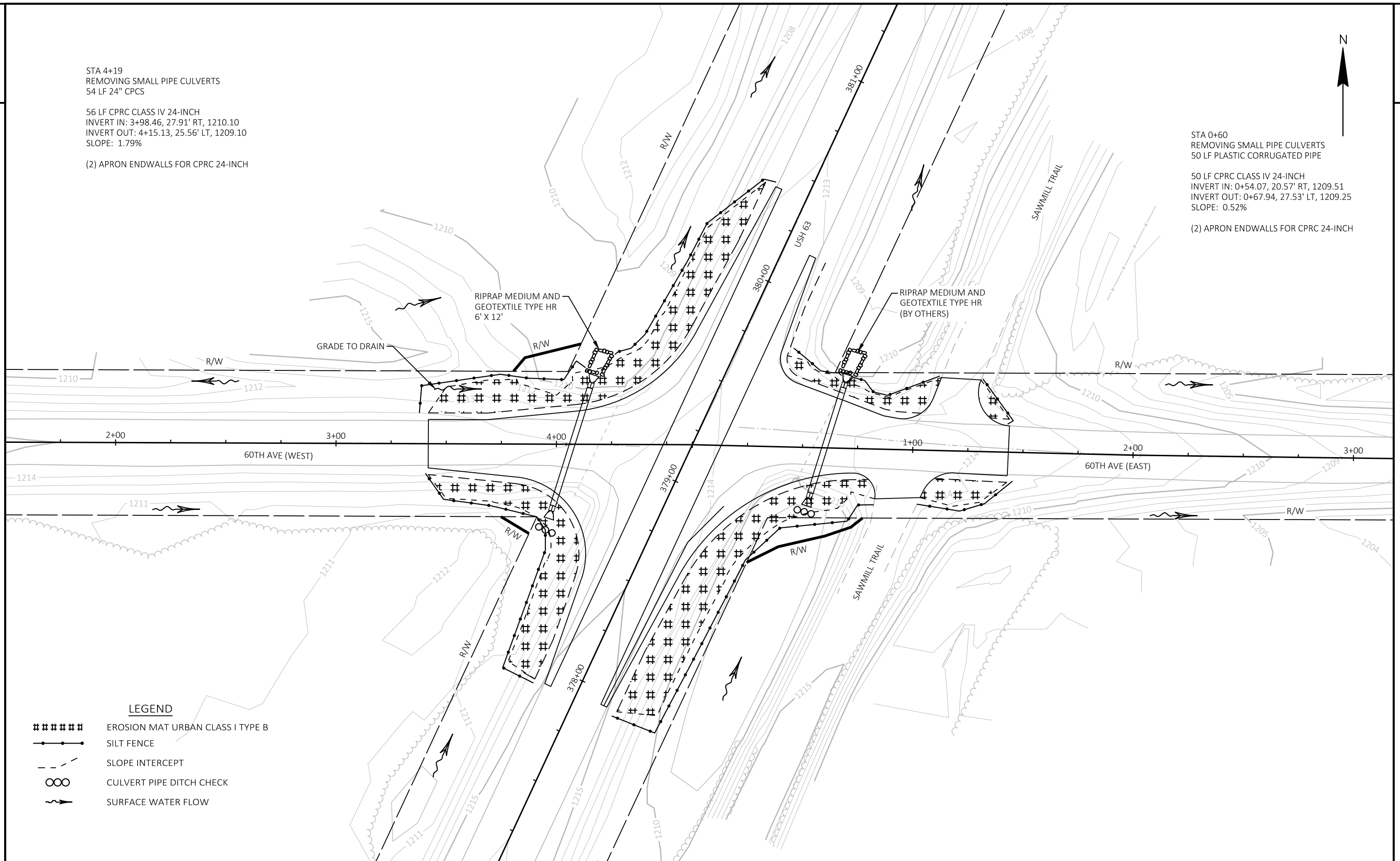
56 LF CPRC CLASS IV 24-INCH
 INVERT IN: 3+98.46, 27.91' RT, 1210.10
 INVERT OUT: 4+15.13, 25.56' LT, 1209.10
 SLOPE: 1.79%

(2) APRON ENDWALLS FOR CPRC 24-INCH

STA 0+60
 REMOVING SMALL PIPE CULVERTS
 50 LF PLASTIC CORRUGATED PIPE

50 LF CPRC CLASS IV 24-INCH
 INVERT IN: 0+54.07, 20.57' RT, 1209.51
 INVERT OUT: 0+67.94, 27.53' LT, 1209.25
 SLOPE: 0.52%

(2) APRON ENDWALLS FOR CPRC 24-INCH

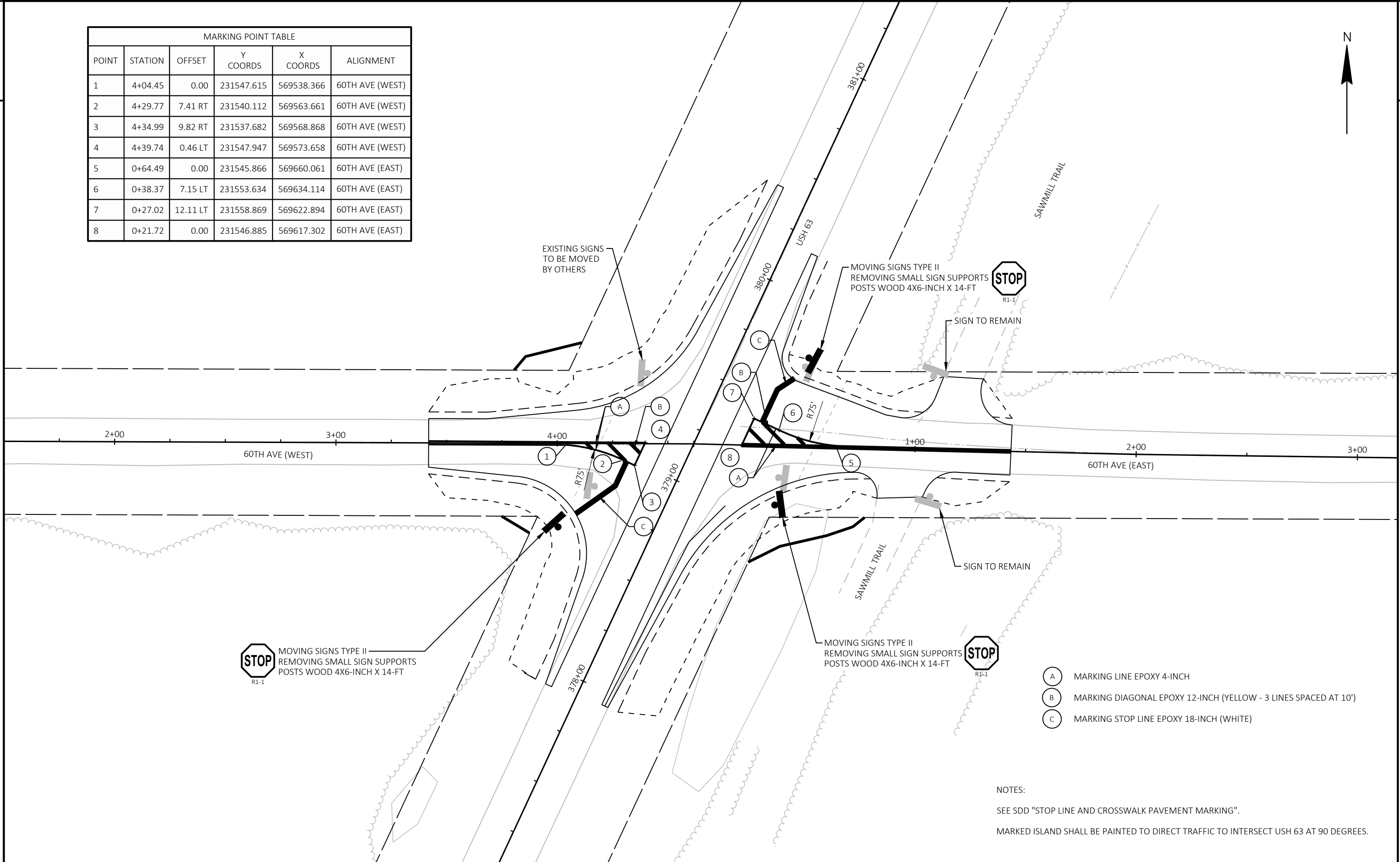



LEGEND


- ##### EROSION MAT URBAN CLASS I TYPE B
- |—|—|—|— SILT FENCE
- - - - SLOPE INTERCEPT
- ⊗ CULVERT PIPE DITCH CHECK
- ~> SURFACE WATER FLOW



MARKING POINT TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ALIGNMENT
1	4+04.45	0.00	231547.615	569538.366	60TH AVE (WEST)
2	4+29.77	7.41 RT	231540.112	569563.661	60TH AVE (WEST)
3	4+34.99	9.82 RT	231537.682	569568.868	60TH AVE (WEST)
4	4+39.74	0.46 LT	231547.947	569573.658	60TH AVE (WEST)
5	0+64.49	0.00	231545.866	569660.061	60TH AVE (EAST)
6	0+38.37	7.15 LT	231553.634	569634.114	60TH AVE (EAST)
7	0+27.02	12.11 LT	231558.869	569622.894	60TH AVE (EAST)
8	0+21.72	0.00	231546.885	569617.302	60TH AVE (EAST)

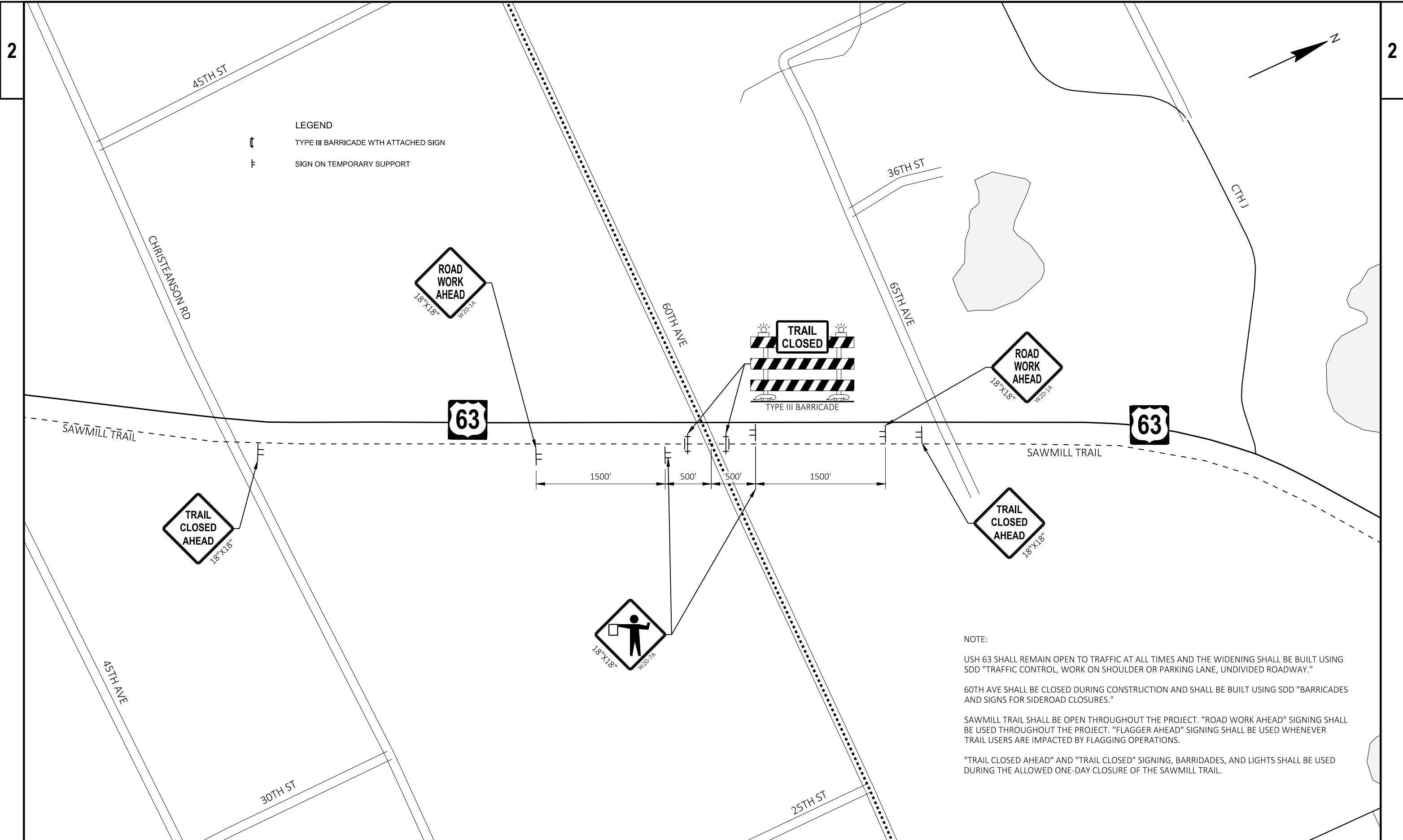


 MOVING SIGNS TYPE II
REMOVING SMALL SIGN SUPPORTS
POSTS WOOD 4X6-INCH X 14-FT
R1-1

 MOVING SIGNS TYPE II
REMOVING SMALL SIGN SUPPORTS
POSTS WOOD 4X6-INCH X 14-FT
R1-1

- (A) MARKING LINE EPOXY 4-INCH
- (B) MARKING DIAGONAL EPOXY 12-INCH (YELLOW - 3 LINES SPACED AT 10')
- (C) MARKING STOP LINE EPOXY 18-INCH (WHITE)

NOTES:
SEE SDD "STOP LINE AND CROSSWALK PAVEMENT MARKING".
MARKED ISLAND SHALL BE PAINTED TO DIRECT TRAFFIC TO INTERSECT USH 63 AT 90 DEGREES.



LEGEND

⌄ TYPE III BARRICADE WITH ATTACHED SIGN

F SIGN ON TEMPORARY SUPPORT

NOTE:

USH 63 SHALL REMAIN OPEN TO TRAFFIC AT ALL TIMES AND THE WIDENING SHALL BE BUILT USING SDD "TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY."

60TH AVE SHALL BE CLOSED DURING CONSTRUCTION AND SHALL BE BUILT USING SDD "BARRICADES AND SIGNS FOR SIDEROAD CLOSURES."

SAWMILL TRAIL SHALL BE OPEN THROUGHOUT THE PROJECT. "ROAD WORK AHEAD" SIGNING SHALL BE USED THROUGHOUT THE PROJECT. "FLAGGER AHEAD" SIGNING SHALL BE USED WHENEVER TRAIL USERS ARE IMPACTED BY FLAGGING OPERATIONS.

"TRAIL CLOSED AHEAD" AND "TRAIL CLOSED" SIGNING, BARRICADES, AND LIGHTS SHALL BE USED DURING THE ALLOWED ONE-DAY CLOSURE OF THE SAWMILL TRAIL.

Estimate Of Quantities By Plan Sets

1550-04-76

Line	Item	Item Description	Unit	Total	Qty
0006	203.0100	Removing Small Pipe Culverts	EACH	2.000	2.000
0020	205.0100	Excavation Common	CY	397.000	397.000
0034	213.0100	Finishing Roadway (project) 02. 1550-04-76	EACH	1.000	1.000
0038	305.0110	Base Aggregate Dense 3/4-Inch	TON	72.000	72.000
0040	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	780.000	780.000
0048	455.0605	Tack Coat	GAL	68.000	68.000
0060	460.6244	HMA Pavement 4 MT 58-34 S	TON	157.000	157.000
0068	465.0105	Asphaltic Surface	TON	95.000	95.000
0118	522.0424	Culvert Pipe Reinforced Concrete Class IV 24-Inch	LF	106.000	106.000
0120	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	4.000	4.000
0136	606.0200	Riprap Medium	CY	5.000	5.000
0150	618.0100	Maintenance And Repair of Haul Roads (project) 02. 1550-04-76	EACH	1.000	1.000
0154	619.1000	Mobilization	EACH	0.040	0.040
0156	624.0100	Water	MGAL	10.000	10.000
0158	625.0100	Topsoil	SY	820.000	820.000
0164	628.1504	Silt Fence	LF	860.000	860.000
0166	628.1520	Silt Fence Maintenance	LF	860.000	860.000
0168	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0170	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000
0178	628.2008	Erosion Mat Urban Class I Type B	SY	820.000	820.000
0182	628.7555	Culvert Pipe Checks	EACH	10.000	10.000
0186	629.0210	Fertilizer Type B	CWT	0.600	0.600
0188	630.0120	Seeding Mixture No. 20	LB	23.000	23.000
0192	633.5200	Markers Culvert End	EACH	4.000	4.000
0194	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	3.000	3.000
0196	638.2102	Moving Signs Type II	EACH	3.000	3.000
0198	638.3000	Removing Small Sign Supports	EACH	3.000	3.000
0202	642.5401	Field Office Type D	EACH	0.040	0.040
0204	643.0300	Traffic Control Drums	DAY	1,050.000	1,050.000
0206	643.0420	Traffic Control Barricades Type III	DAY	128.000	128.000
0208	643.0705	Traffic Control Warning Lights Type A	DAY	172.000	172.000
0214	643.0900	Traffic Control Signs	DAY	340.000	340.000
0226	643.5000	Traffic Control	EACH	0.040	0.040
0232	645.0120	Geotextile Type HR	SY	15.000	15.000
0234	646.1020	Marking Line Epoxy 4-Inch	LF	501.000	501.000
0246	646.6120	Marking Stop Line Epoxy 18-Inch	LF	61.000	61.000
0248	646.7120	Marking Diagonal Epoxy 12-Inch	LF	54.000	54.000
0258	650.4500	Construction Staking Subgrade	LF	481.000	481.000
0260	650.5000	Construction Staking Base	LF	481.000	481.000
0264	650.6000	Construction Staking Pipe Culverts	EACH	2.000	2.000
0274	650.9911	Construction Staking Supplemental Control (project) 02. 1550-04-76	EACH	1.000	1.000
0278	650.9920	Construction Staking Slope Stakes	LF	481.000	481.000
0292	690.0150	Sawing Asphalt	LF	530.000	530.000

3

3

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1)	SALVAGED/UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (13)	MASS ORDINATE +/- (14)	WASTE	208.0100 BORROW	COMMENT
			CUT (2)				FACTOR 1.25				
DIVISION 1											
USH 63	377+91.715/380+40.486	LT/RT	149	27	122	138	173	-51	0	0	USE AVAILABLE MATERIAL FROM DIVISIONS 2 AND 3 FOR FILL
DIVISION 1 SUBTOTAL			149	27	122	138	173	-51	0	0	
DIVISION 2											
60TH AVE (WEST)	03+41.872/04+48.462	LT/RT	106	12	94	30	38	57	57	0	
DIVISION 2 SUBTOTAL			106	12	94	30	38	57	57	0	
DIVISION 3											
60TH AVE (EAST)	00+12.608/01+39.772	LT/RT	142	14	128	25	31	97	97	0	
DIVISION 3 SUBTOTAL			142	14	128	25	31	97	97	0	
GRAND TOTAL			397	53	344	193	241	103	153	0	
TOTAL COMMON EXC			397								

NOTES:

- (1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
- (2) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
- (3) EBS EXCAVATION TO BE BACKFILLED WITH SELECT BORROW MATERIAL. NOTE: THIS IS DESIGNERS CHOICE, CAN BE BACKFILLED WITH BORROW, OR CUT AS WELL.
- (4) SALVAGED/UNUSABLE PAVEMENT MATERIAL
- (5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL
- (13) EXPANDED FILL FACTOR = 1.25 **EXPANDED FILL = UNEXPANDED FILL * FILL FACTOR**
- (14) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

CATEGORY	STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4- INCH TON
0010	3+42	-	4+48	USH 63/60TH AVE (WEST)	29	360
0010	0+13	-	1+40	USH 63/60TH AVE (EAST)	43	420
TOTAL 0010					72	780

CATEGORY	STATION	LOCATION	203.0100 REMOVING SMALL PIPE CULVERTS EACH	CATEGORY	STATION	LOCATION	606.0200 RIPRAP MEDIUM CY	645.0120 GEOTEXTILE TYPE HR SY
0010	4+19	60TH AVE (WEST)	1	0010	4+18	60TH AVE (WEST) - LT	5	15
0010	0+53	60TH AVE (EAST)	1			TOTAL 0010	5	15
TOTAL 0010			2					

CATEGORY	STATION	TO	STATION	LOCATION	455.0605 TACK COAT GAL	460.6244 HMA PAVEMENT 4 MT 58-34 S TON	465.0105 ASPHALTIC SURFACE TON
0010	3+42	-	4+48	USH 63/60TH AVE (WEST)	31	71	43
0010	0+13	-	1+40	USH 63/60TH AVE (EAST)	37	86	52
TOTAL 0010					68	157	95

Location	Station	Mixture Use:	Underlying Surface:	Bid Item	Tons	Thickness	Quality Management Program to be used for:	
							Mixture Acceptance	Density Acceptance
Intersection	3+42 - 4+48	Upper Layer	4 MT 58-34 S	Asphaltic Surface	43	1 1/2"	QMP as per SS 465.	Acceptance by ordinary compaction
Intersection	3+42 - 4+48	Lower Layer	Base Aggregate	4 MT 58-34 S	71	2 1/2"	QMP as per SS 460.	Acceptance testing by the department; Not eligible for incentive or disincentive
Intersection	0+13 - 1+40	Upper Layer	4 MT 58-34 S	Asphaltic Surface	52	1 1/2"	QMP as per SS 465.	Acceptance by ordinary compaction
Intersection	0+13 - 1+40	Lower Layer	Base Aggregate	4 MT 58-34 S	86	2 1/2"	QMP as per SS 460.	Acceptance testing by the department; Not eligible for incentive or disincentive

3

3

CATEGORY	STATION	LOCATION	522.0424 CULVERT PIPE REINFORCED CONCRETE CLASS IV 24-INCH LF	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24- INCH EACH	633.5200 MARKERS CULVERT END EACH	650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH
0010	4+07	60TH AVE (WEST)	56	2	2	1
0010	0+60	60TH AVE (EAST)	50	2	2	1
TOTAL 0010			106	4	4	2

CATEGORY	LOCATION	624.0100 WATER MGAL
0010	PROJECT	10
TOTAL 0010		10

CATEGORY	LOCATION	634.0614 POSTS WOOD 4X6-INCH X 14- FT EACH	638.2102 MOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH
0010	PROJECT	3	3	3
TOTAL 0010		3	3	3

CATEGORY	LOCATION	625.0100 TOPSOIL SY	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.7555 CULVERT PIPE CHECKS EACH	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB
0010	PROJECT	820	820	10	0.6	23
TOTAL 0010		820	820	10	0.6	23

CATEGORY	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
0010	PROJECT	860	860	2	1
TOTAL 0010		860	860	2	1

CATEGORY	LOCATION	DURATION DAYS	643.0300 TRAFFIC CONTROL DRUMS EACH	643.0420 TRAFFIC CONTROL BARRICADES EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	643.0900 TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	643.0900 TRAFFIC CONTROL SIGNS EACH	643.0900 TRAFFIC CONTROL SIGNS EACH	REMARKS
0010	USH 63	21	40	840	-	-	-	8	168	SHOULDER CLOSURE
0010	60TH AVE & SAWMILL TRAIL	21	10	210	6	126	8	168	8	ONE-DAY TRAIL CLOSURE
0010	SAWMILL TRAIL	1	-	-	2	2	4	4	4	ONE-DAY TRAIL CLOSURE
TOTAL 0010				1,050		128		172	340	

CATEGORY	STATION	TO	STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH LF	646.6120 MARKING STOP LINE EPOXY 18- INCH LF	646.7120 MARKING DIAGONAL EPOXY 12-INCH LF
0010	3+03	-	4+40	60TH AVE (WEST)	206	35	25
0010	0+21	-	1+48	60TH AVE (EAST)	295	26	29
TOTAL 0010					501	61	54

CATEGORY	STATION	TO	STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
0010	3+42	-	4+48	60TH AVE (WEST)	106	106	106
0010	0+13	-	1+40	60TH AVE (EAST)	127	127	127
0010	377+92	-	380+40	USH 63	248	248	248
TOTAL 0010					481	481	481

CATEGORY	STATION	TO	STATION	LOCATION	690.0150 SAWING ASPHALT LF
0010	3+03	-	4+49	USH 63/60TH AVE (WEST)	275
0010	0+12	-	1+48	USH 63/60TH AVE (EAST)	255
TOTAL 0010					530

TRANSPORTATION PROJECT PLAT NO: 1550-04-26-4.01

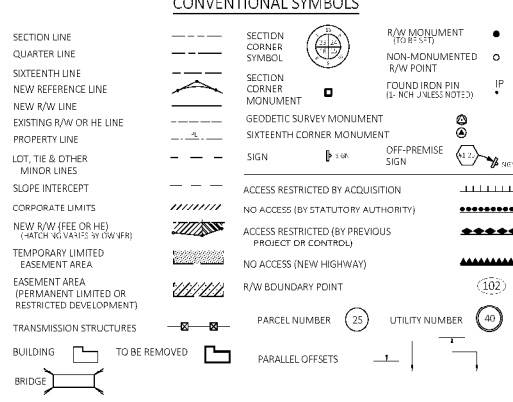
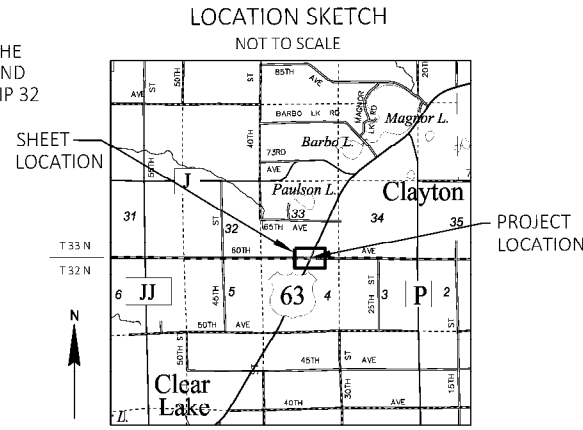
THAT PART OF LOT 1, CSM 3387, V 15, P 154, DOC 614125, LOCATED IN AND INCLUDING PART OF THE SW 1/4 OF THE SE 1/4, SECTION 33, TOWN OF CLAYTON, TOWNSHIP 33 NORTH, RANGE 15 WEST, AND LOCATED IN PART OF THE FRL NW 1/4 OF THE NE 1/4, SECTION 4, TOWN OF CLEAR LAKE, TOWNSHIP 32 NORTH, RANGE 15 WEST, POLK COUNTY, WISCONSIN.

RELOCATION ORDER OF USH 63, 60TH AVENUE INTERSECTION, TOWN OF CLAYTON AND TOWN OF CLEAR LAKE, POLK COUNTY.

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE NAMED PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3), 84.09 AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:

- THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
- THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.



SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	R/W SQUARE FEET REQUIRED			HE SQUARE FEET
			NEW	EXISTING	TOTAL	
1	JAN D & MARY L KNUTSON	HE	-	-	-	260
2	CATHERINE J RAUCHWARTER LIVING TRUST	HE	-	-	-	79
3	POLK COUNTY	HE	-	-	-	7644

UTILITY NUMBER	OWNER (S)	INTEREST REQUIRED
50	CLEAR LAKE TELEPHONE COMPANY, LLC	RELEASE OF RIGHTS
51	NORTHERN NATURAL GAS COMPANY	RELEASE OF RIGHTS
52	POLK-BURNETT ELECTRIC COOPERATIVE	RELEASE OF RIGHTS

UTILITY NUMBER	PARCEL	RECORDING INFORMATION	UTILITY EASEMENT NAME
50	1,3	NO RECORD OF EASEMENT	
51	2	DOC 302052, V 238, P 459	NORTHERN NATURAL GAS COMPANY
52	1, 2	DOC 364012, V 375, P 909	POLK-BURNETT ELECTRIC COOPERATIVE

Doc # 879895
Envelope #: 3388
Polk County, Wisconsin
Sally L. Spaul, Register of Deeds
PLAT # 25.00
Total: 25.00
RECORDED ON: 02/12/2020 12:59 PM
PAGES: 1

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 1550-04-26-4.01

CONVENTIONAL ABBREVIATIONS

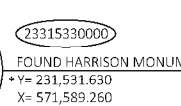
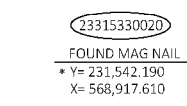
ACCESS RIGHTS	AK	POINT OF INTERSECTION	PI
ACRES	AC	PROPERTY LINE	PL
AHEAD	AH	REFERENCE LINE	RL
ALUMINUM	ALUM	REMAINING	REM
BACK	BK	RIGHT	RT
BUILDING	B	RIGHT OF WAY	R/W
CENTERLINE	CL	SECTION	SEC
CERTIFIED SURVEY MAP	CSM	SEPTIC VENT	SEP V
COUNTY	CO	SQUARE FEET	SF
COUNTY TRUNK HIGHWAY	CTH	STATE TRUNK HIGHWAY	STH
CORNER	COB	STATION	STA
DOCUMENT NUMBER	DOC	TEMPORARY LIMITED EASEMENT	TLE
EASEMENT	EASE	TRANSPORTATION PROJECT	TPP
EXISTING	EX	UNITED STATES HIGHWAY	USH
FRACTIONAL	FRL	VOLUME	V
GAS VALVE	GV		
HIGHWAY EASEMENT	HE		
IDENTIFICATION	ID		
LEFT	LT		
LAND CONTRACT	LC		
MONUMENT	MGN		
NATIONAL GEODETIC SURVEY	NGS		
NUMBER	NO		
OUTLOT	OL		
PAGE	P		
POINT OF TANGENCY	PT		
PERMANENT LIMITED EASEMENT	PLE		
POINT OF BEGINNING	POB		
POINT OF CURVATURE	PC		
POINT OF COMPOUND CURVE	PCC		

CONVENTIONAL UTILITY SYMBOLS

WATER	W
GAS	G
TELEPHONE	T
OVERHEAD TRANSMISSION LINES	OH
ELECTRIC	E
CABLE TELEVISION	TV
FIBER OPTIC	FO
SANITARY SEWER	SSW
STORM SEWER	SS
ELECTRIC TOWER	ET
NON-COMPENSABLE	NC
COMPENSABLE	C
POWER POLE	PP
TELEPHONE POLE	TP
TELEPHONE PEDESTAL	TPD

CURVE DATA

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE	CA
LENGTH OF CURVE	L
TANGENT	T
DIRECTION AHEAD	DA
DIRECTION BACK	DB



* POLK COUNTY PUBLISHED COORDINATE VALUE. COORDINATE VALUES FIELD VERIFIED WITH CORNER TIE SHEETS.

NOTES:
POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCONSIN POLK COUNTY, NAD83 (2011), IN U.S. SURVEY FEET). VALUES SHOWN ARE GRID COORDINATES. GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES. NGS POINT UTILIZED WAS AC9062

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 1" X 3/4" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

ALL RIGHT-OF-WAY LINES DEPICTED IN THE NON-ACQUISITION AREAS ARE INTENDED TO RE-ESTABLISH EXISTING RIGHT-OF-WAY LINES AS DETERMINED FROM PREVIOUS PROJECTS, OTHER RECORDED DOCUMENTS, OR FROM CENTERLINE OF EXISTING PAVEMENTS.

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

DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

FOR CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN THE NW REGION.

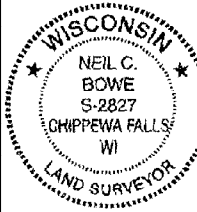
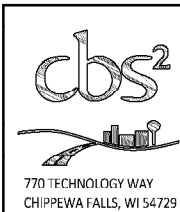
PARCEL AND UTILITY IDENTIFICATION NUMBERS MAY NOT POINT TO ALL AREAS OF ACQUISITION, AS NOTED ON THE TPP DETAIL PAGE.

AN EASEMENT FOR HIGHWAY PURPOSES (HE), AS LONG AS SO USED, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE.

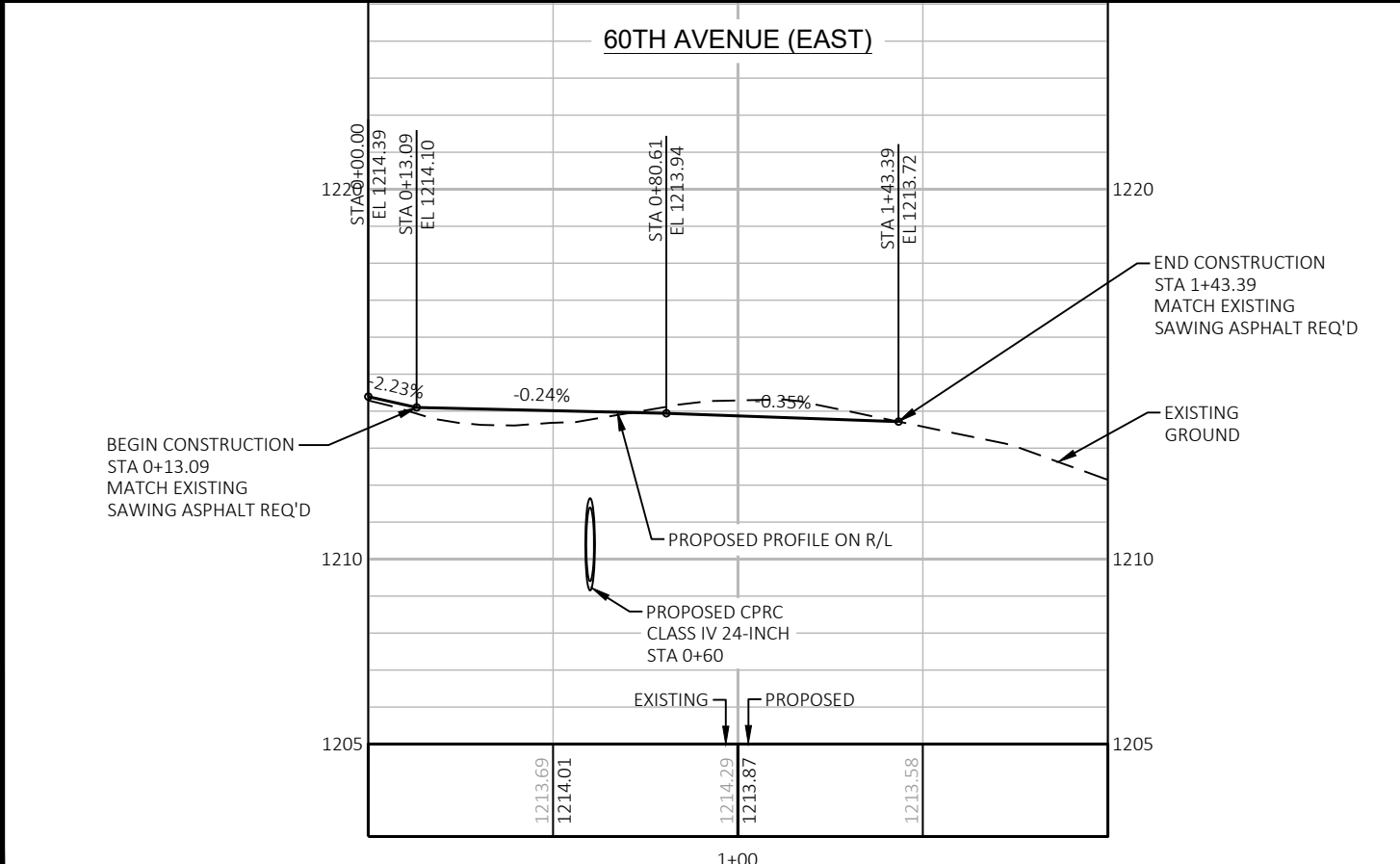
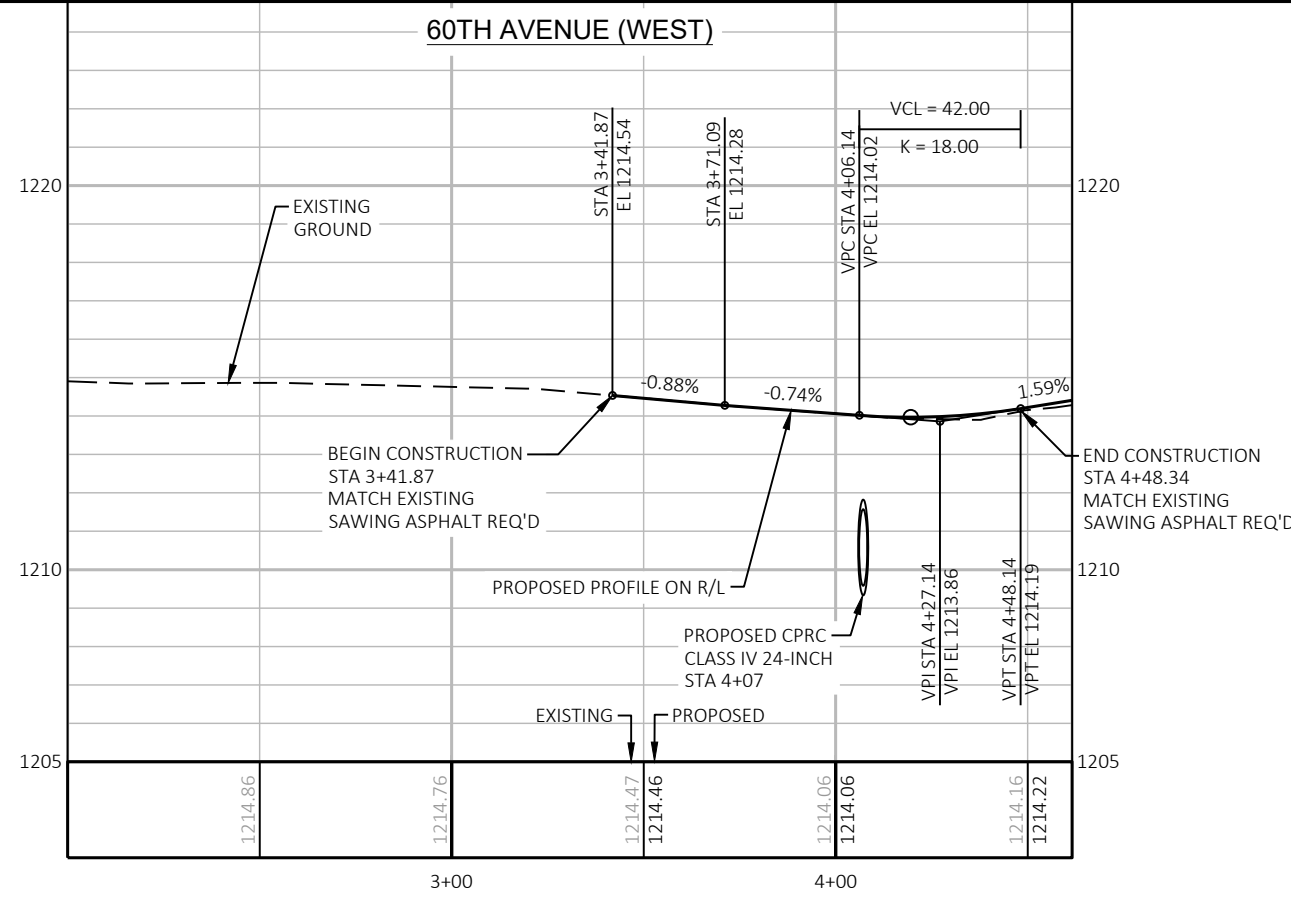
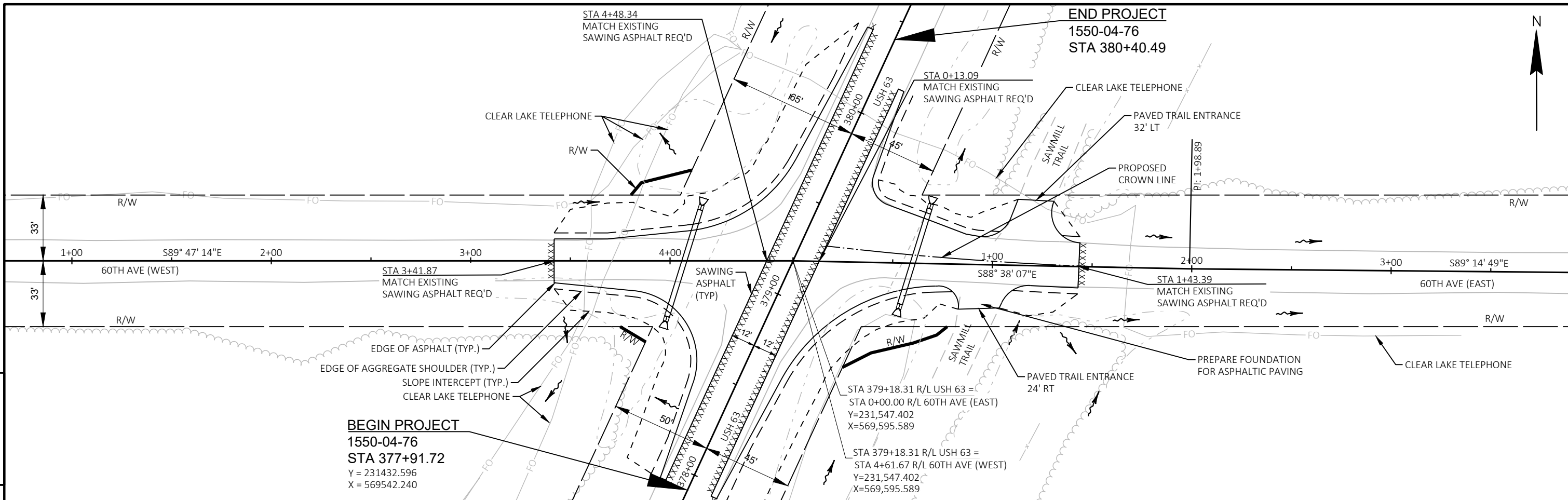
EXISTING ACCESS CONTROL ALONG USH 63 ESTABLISHED FROM CONTROLLED ACCESS PLAN ID 8071-02-29.

ROAD NAME	BASIS OF EXISTING R/W	YEAR
USH 63	CONTROLLED ACCESS PLAN 8071-02-29	2017
USH 63	CSM 3387, V 15, P 154, DOC 614125	2001
USH 63	R/W PLAT DIVISION JOB NO 8635	1938
USH 63	RIGHT OF WAY AND TRACK MAP NORTHERN DIVISION - NORTHLINE TO TREGO	1917
60TH AVE	WI STATUTE 82.31 (2)	

RECOVERED MONUMENTS			
POINT	Y	X	DESCRIPTION
1002	231577.457	569538.068	1" IRON PIPE



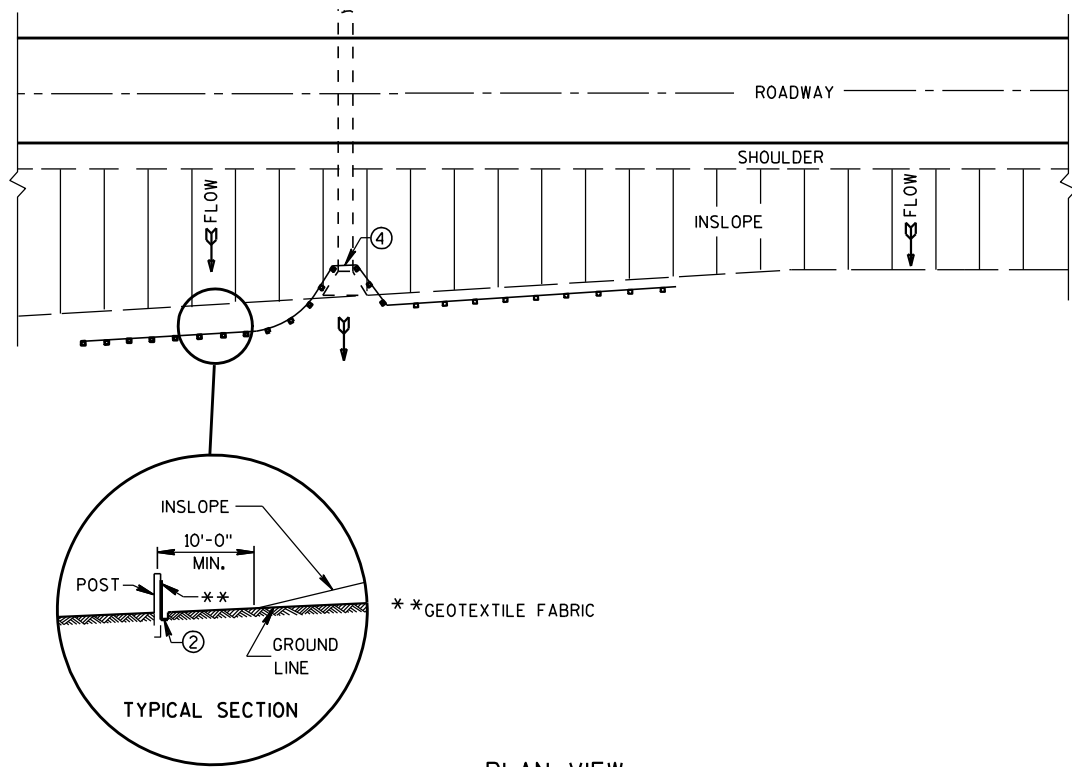
SIGNATURE: *Neil C. Bowe* DATE: 2/5/20
PRINT NAME: NEIL C. BOWE
REGISTRATION NUMBER: S-2827
THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION.
SIGNATURE: *Debra B. Stensland* DATE: 2/5/20
PRINT NAME: DEBRA B. STENSLAND



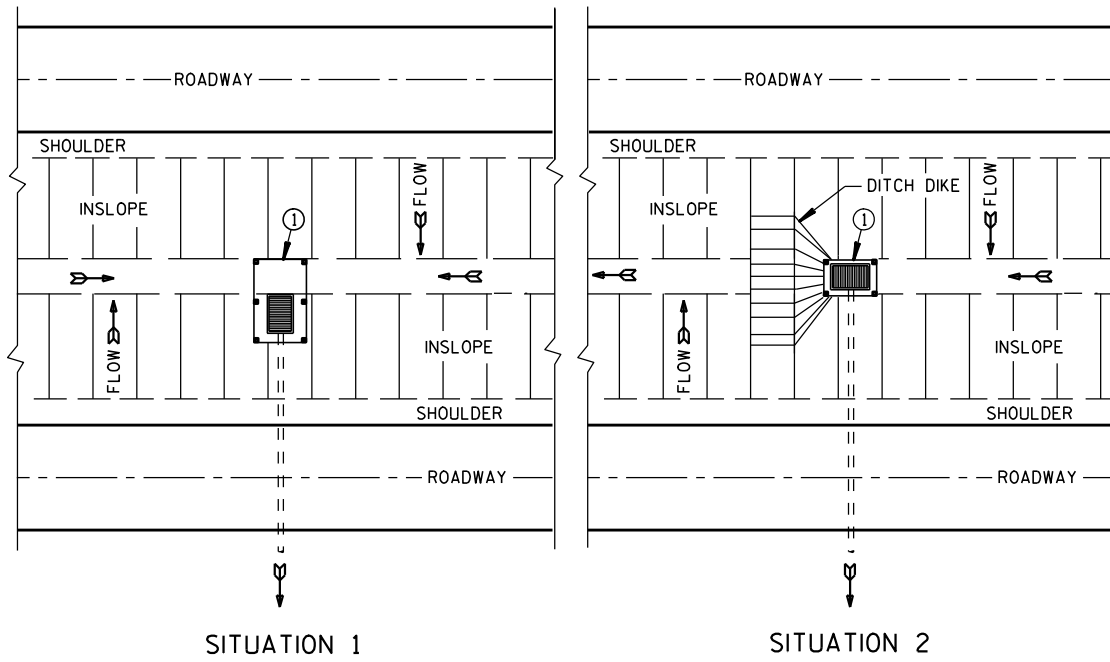
PROJECT NO: 1550-04-76 | HWY: USH 63 | COUNTY: POLK | PLAN AND PROFILE: 60TH AVENUE | SHEET | E

Standard Detail Drawing List

08E09-06	SILT FENCE
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09A01-13A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M. P. H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C18-06A	MEDIAN ISLAND MARKING PAVEMENT MARKINGS
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-05A	PAVEMENT MARKING (INTERSECTIONS)
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING



PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

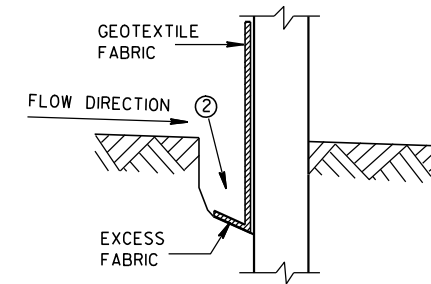


SITUATION 1 SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

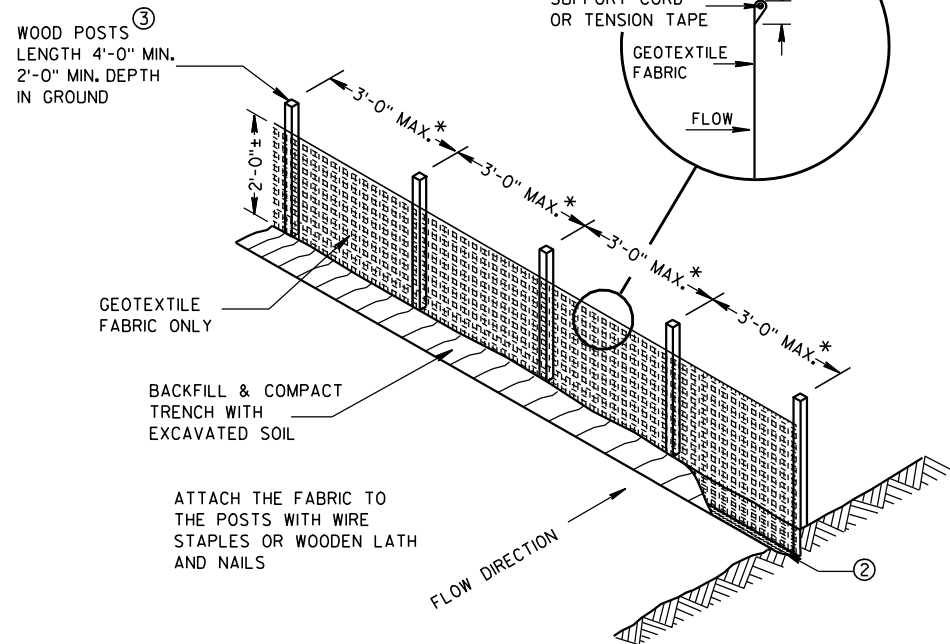
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

- 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 1 1/8" X 1 1/8" 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.



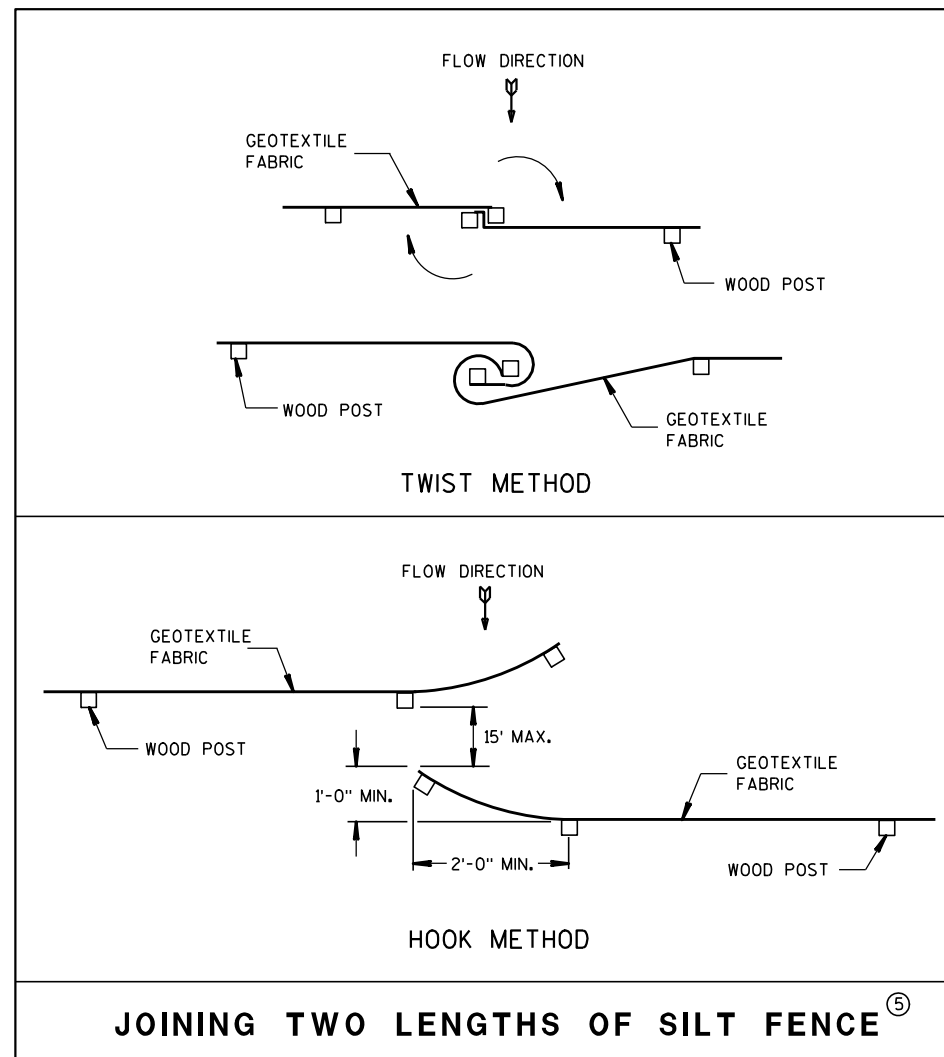
TRENCH DETAIL

NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS

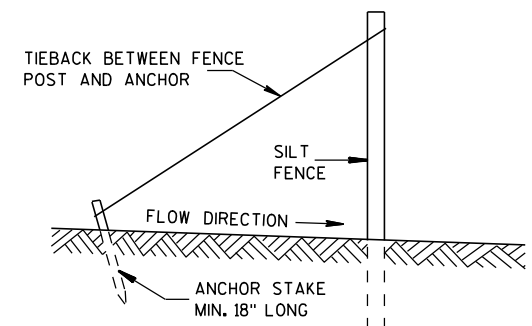


SILT FENCE

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



JOINING TWO LENGTHS OF SILT FENCE ⑤

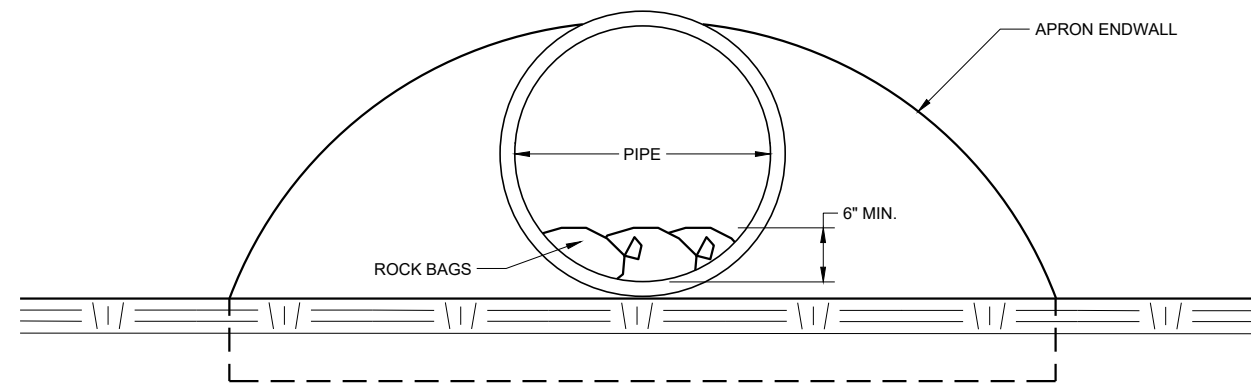


SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

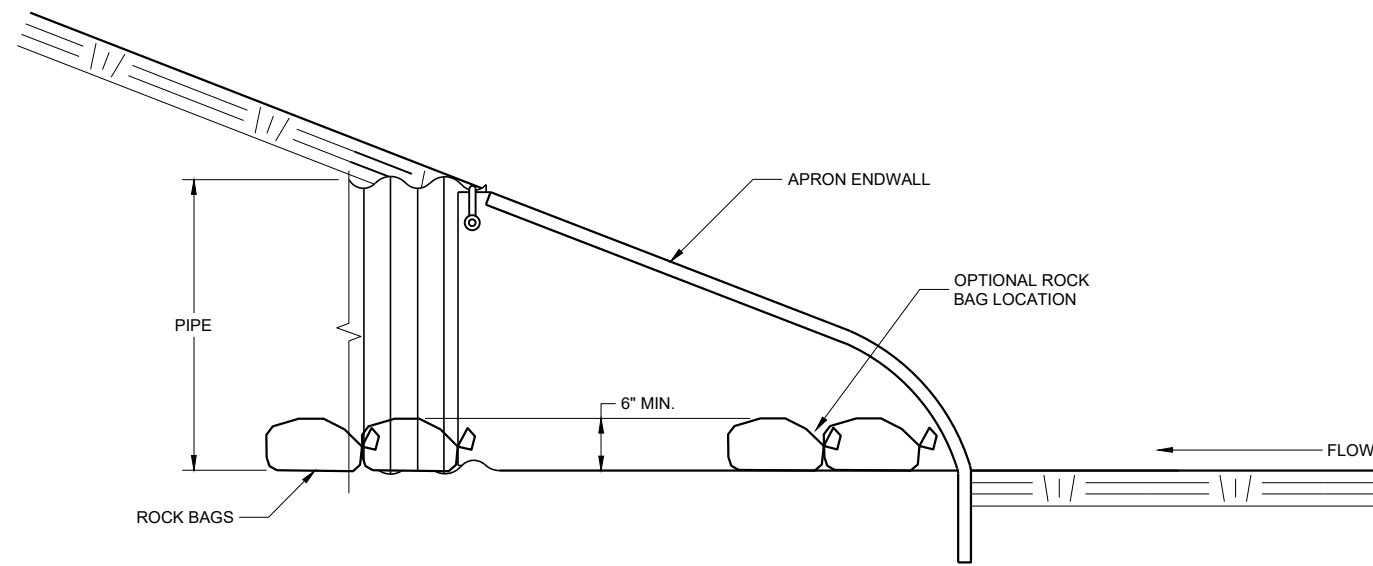
SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



END VIEW



SIDE VIEW

CULVERT PIPE CHECK
(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019 /S/ Daniel Schave
DATE EROSION CONTROL ENGINEER

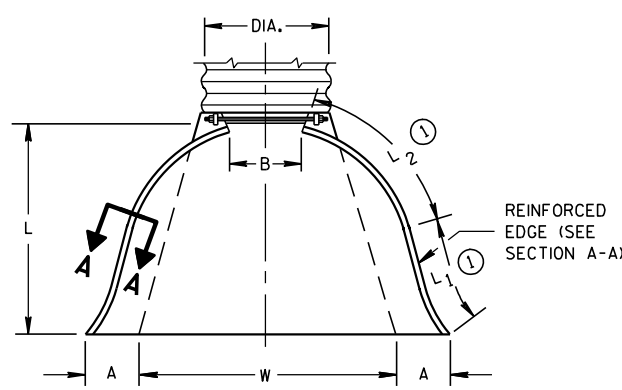
FHWA

METAL APRON ENDWALLS											
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1	L2	W (±2")		
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	.109x	.105x	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109x	.105x	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109x	.105x	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109x	.105x	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109x	.105x	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109x	.105x	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109x	.105x	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

* EXCEPT CENTER PANEL SEE GENERAL NOTES

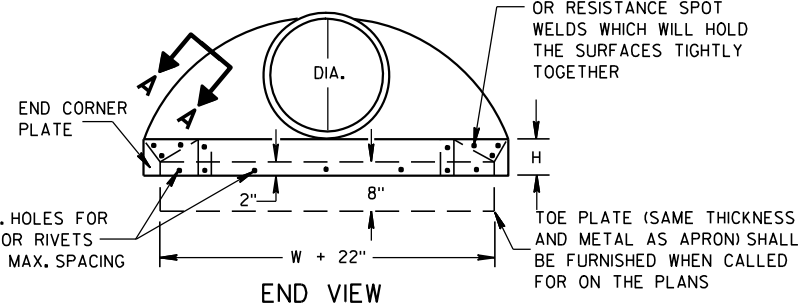
REINFORCED CONCRETE APRON ENDWALLS									
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE	
	T	A	B	C	D	E	G		
12	2	4	24	48 1/8	72 1/8	24	2	3 to 1	
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1	
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1	
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1	
24	3	9 1/2	43 1/2	30	73 1/2	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 1/2 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

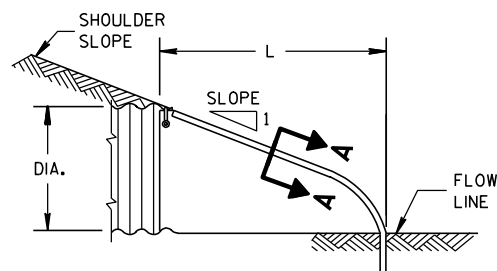


PLAN VIEW

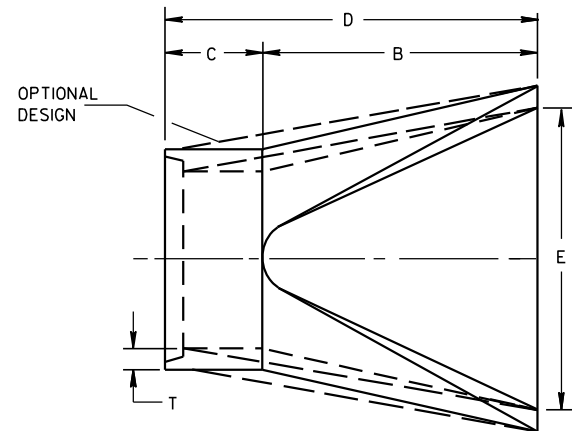
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



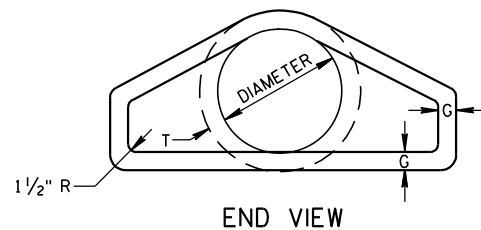
END VIEW



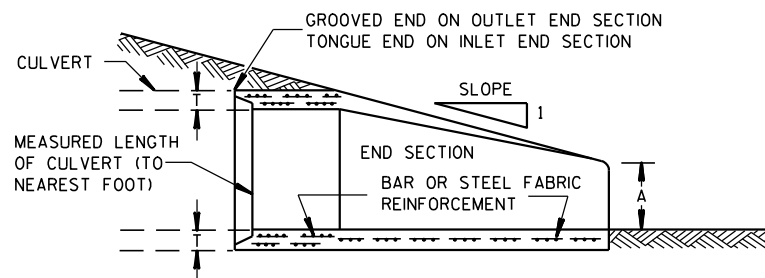
SIDE ELEVATION
METAL ENDWALLS



PLAN

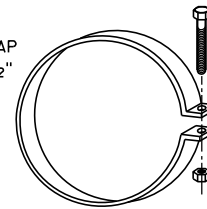


END VIEW



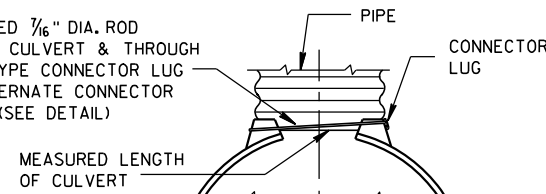
LONGITUDINAL SECTION
CONCRETE ENDWALLS

1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



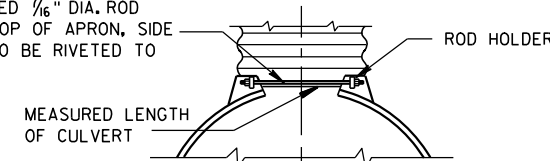
ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP

THREADED 3/16" DIA. ROD AROUND CULVERT & THROUGH TANK TYPE CONNECTOR LUG OR ALTERNATE CONNECTOR STRAP (SEE DETAIL)



TYPE 1
FOR 12" THRU 24" CORR. PIPE

THREADED 3/16" DIA. ROD OVER TOP OF APRON, SIDE LUGS TO BE RIVETED TO APRON



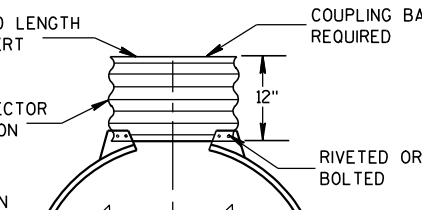
TYPE 2
FOR 30" THRU 96" CORR. PIPE

MEASURED LENGTH OF CULVERT

CONNECTOR SECTION TO BE PAID FOR AS PART OF END SECTION

COUPLING BAND REQUIRED

RIVETED OR BOLTED



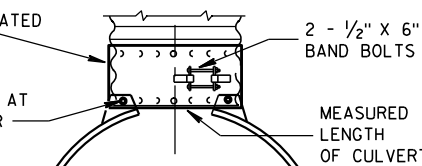
TYPE 3
FOR 42" THRU 96" CORR. PIPE

DIMPLED OR CORRUGATED COUPLING BAND

RIVETED OR BOLTED AT DIMPLES (6" C-C FOR CORRUGATED BAND)

MEASURED LENGTH OF CULVERT

2 - 1/2" X 6" BAND BOLTS



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

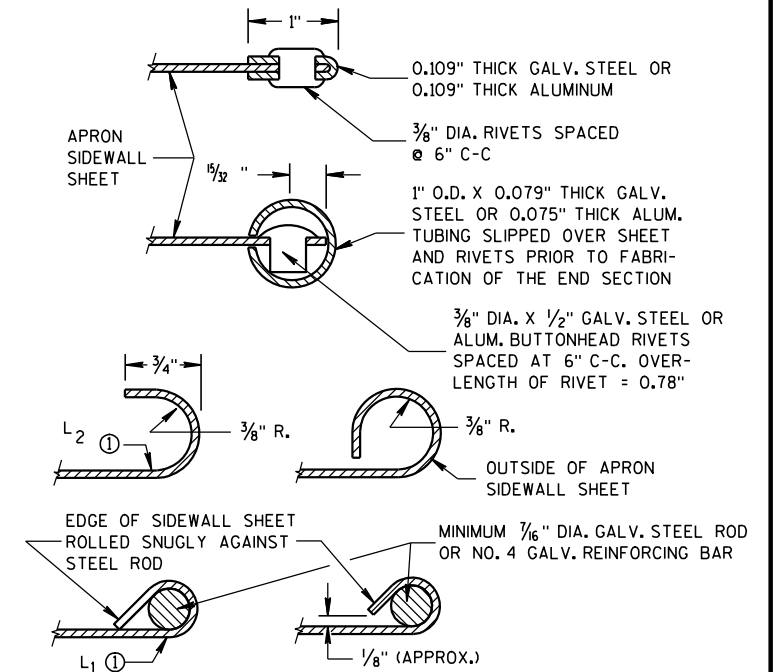
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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 VICE 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.

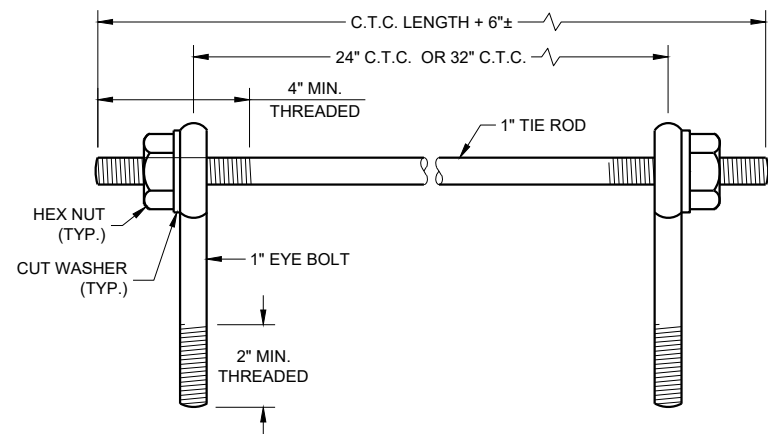
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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

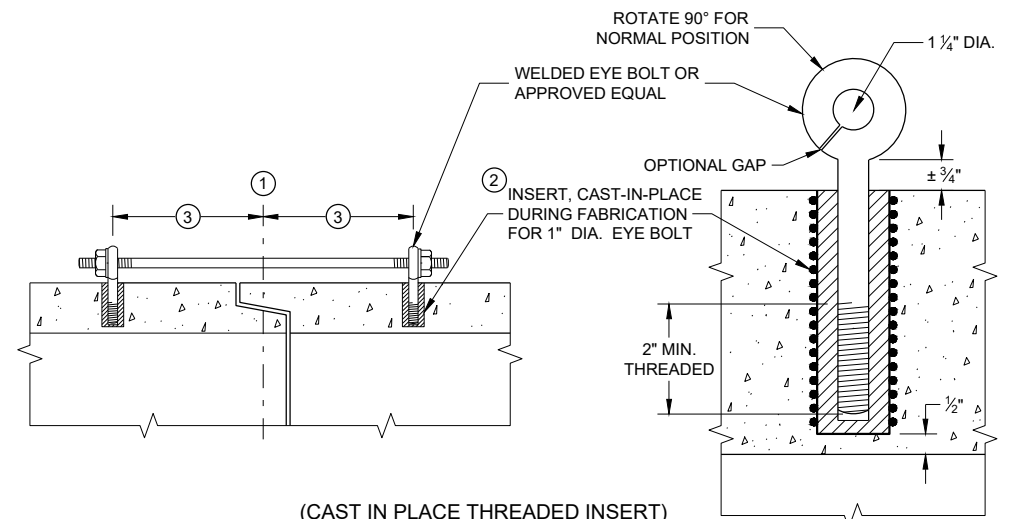
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



EYE BOLTS AND TIE ROD

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)



(CAST IN PLACE THREADED INSERT)
LONGITUDINAL SECTIONS

GENERAL NOTES

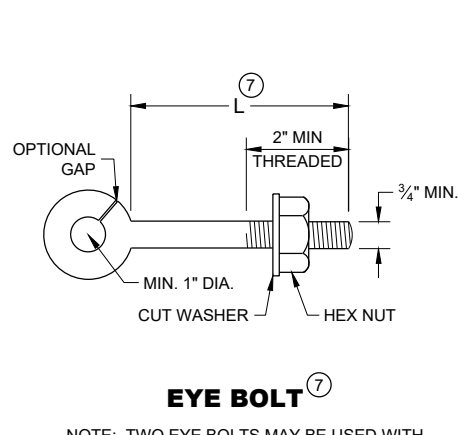
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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.

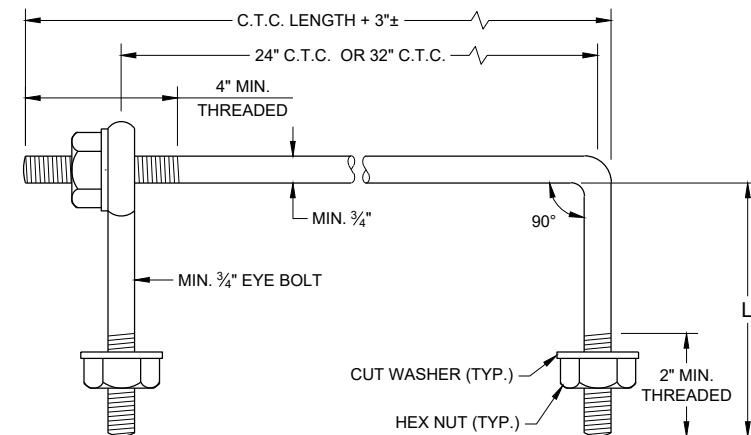
JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

- ① CENTER LINE 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 PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.
- 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.
- ⑦ EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.

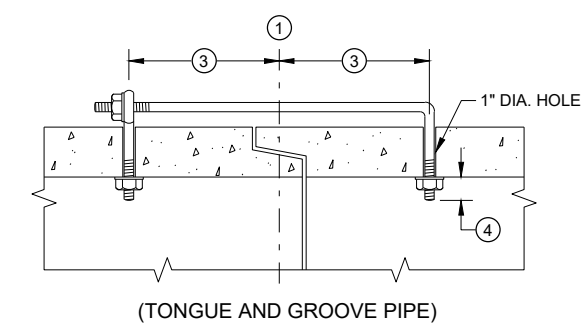


EYE BOLT

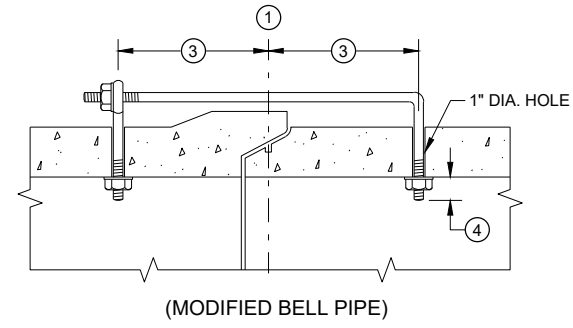
NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD



(TONGUE AND GROOVE PIPE)



(MODIFIED BELL PIPE)

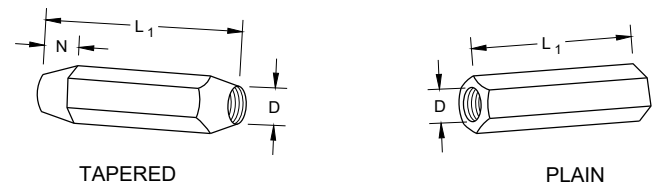
LONGITUDINAL SECTION
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

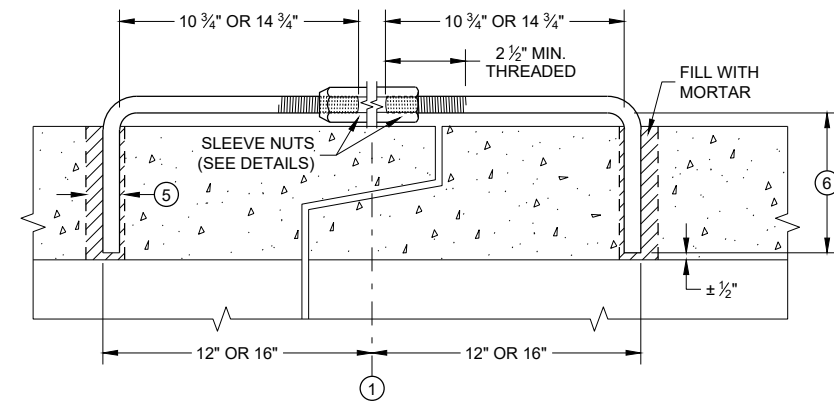
ADJUSTABLE TIE ROD TABLE

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 - 144	1	1	7	1 1/16

DIMENSIONS SHOWN ARE IN INCHES

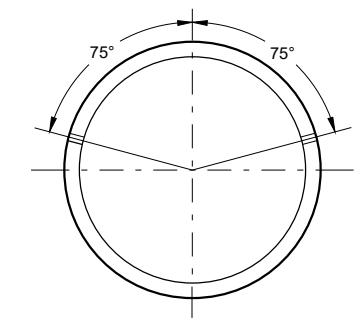


RIGHT AND LEFT THREADS SLEEVE NUTS



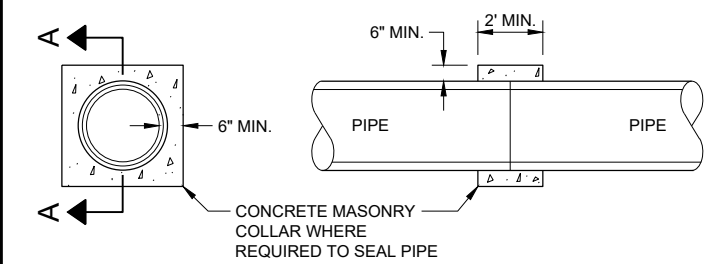
LONGITUDINAL SECTION

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



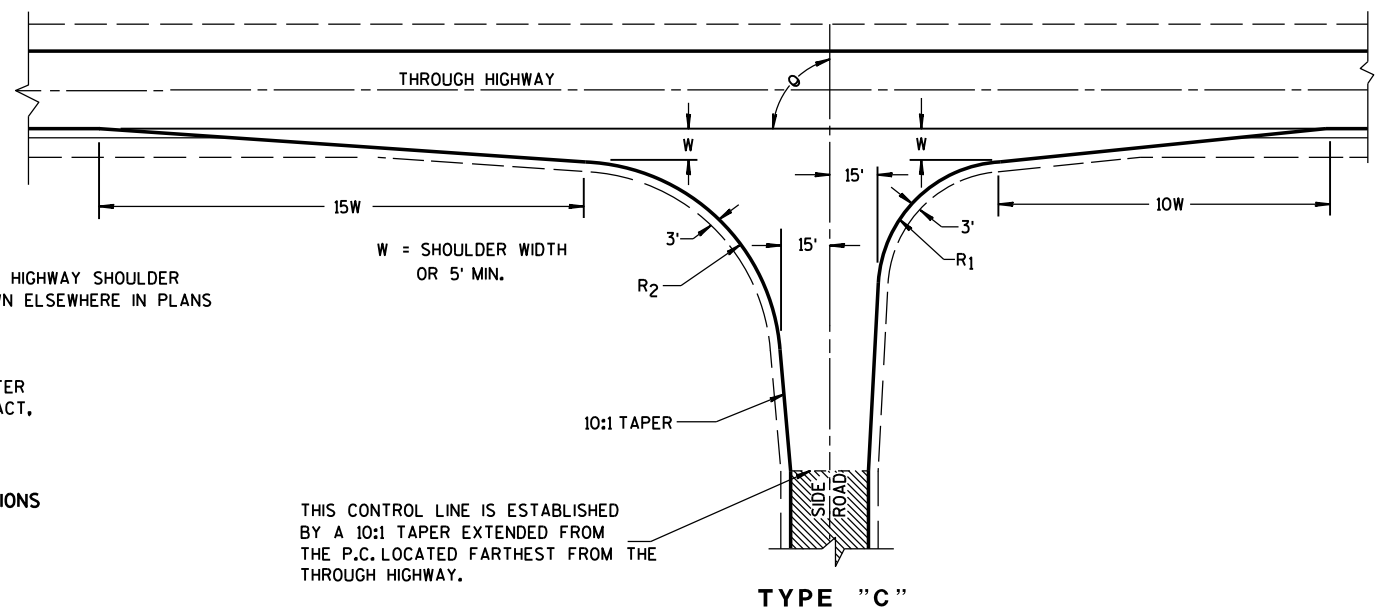
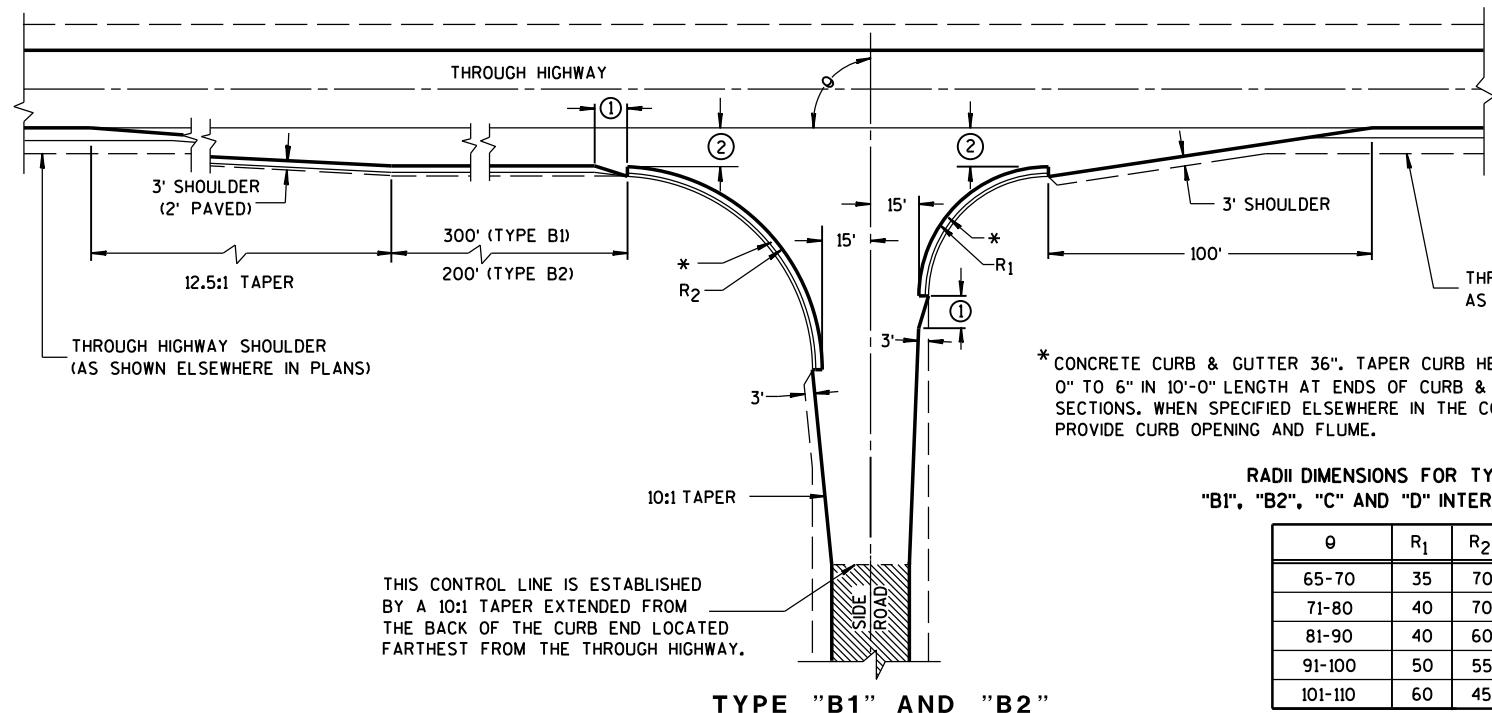
SECTION A - A
CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA



GENERAL NOTES

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

SIDE ROAD SURFACING NOTE

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

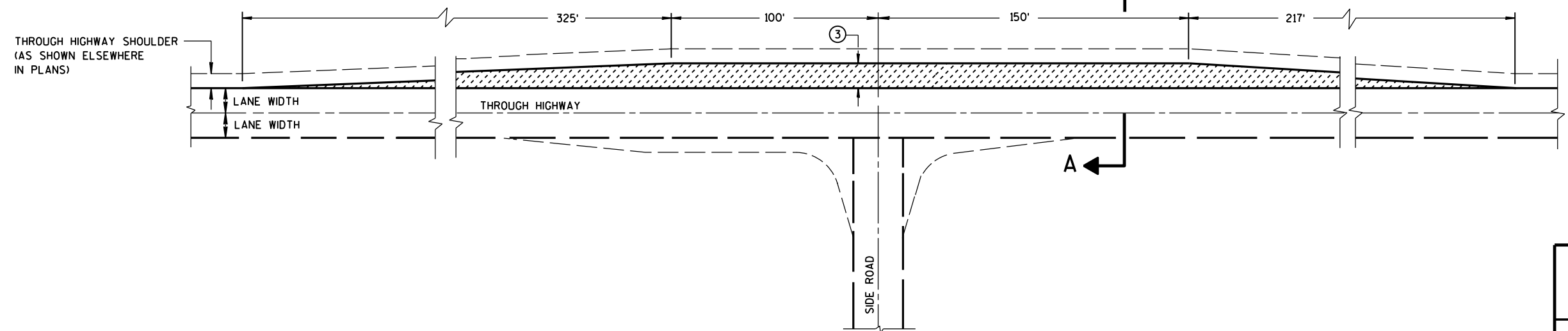
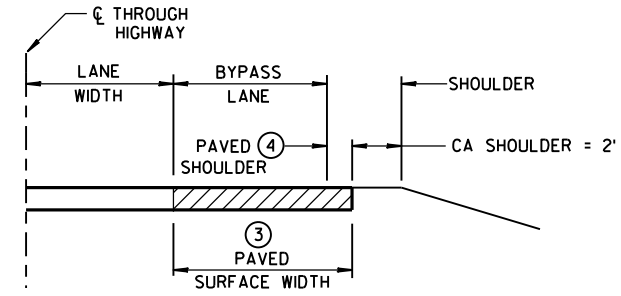
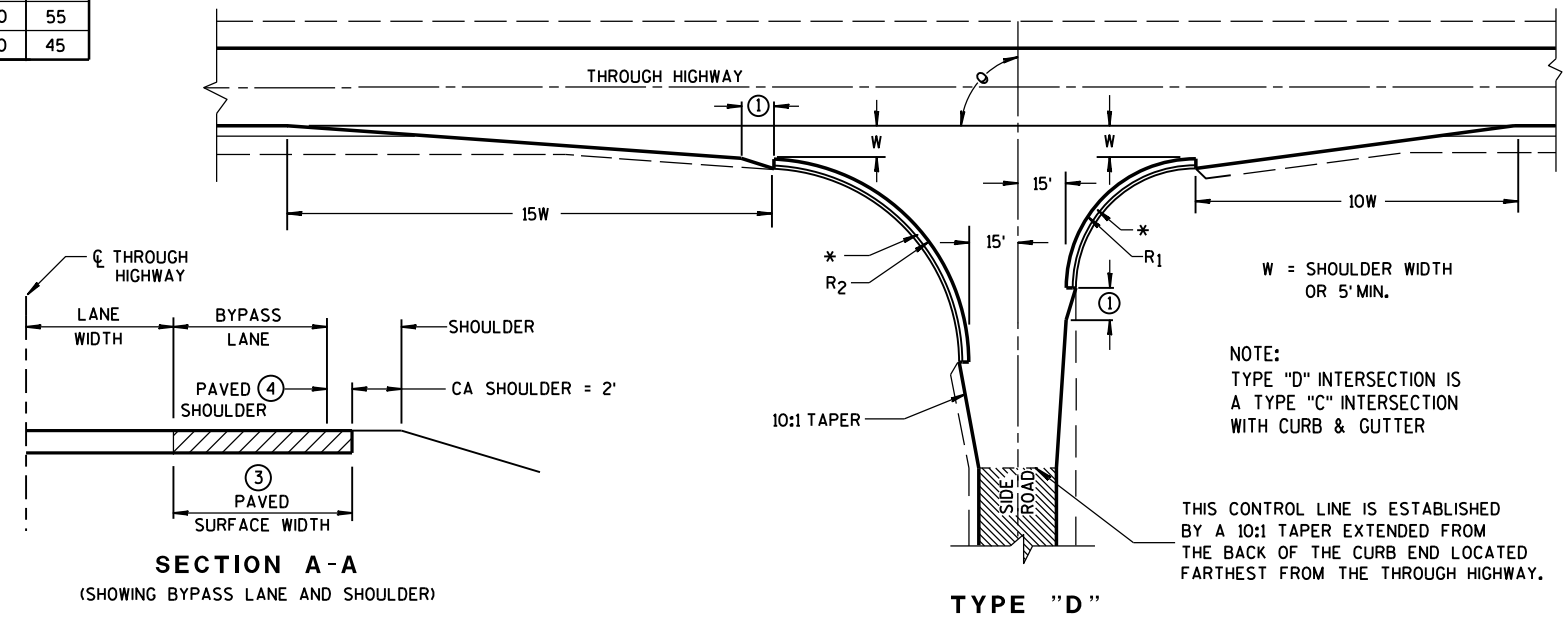
WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

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

EXISTING PAVED SURFACE

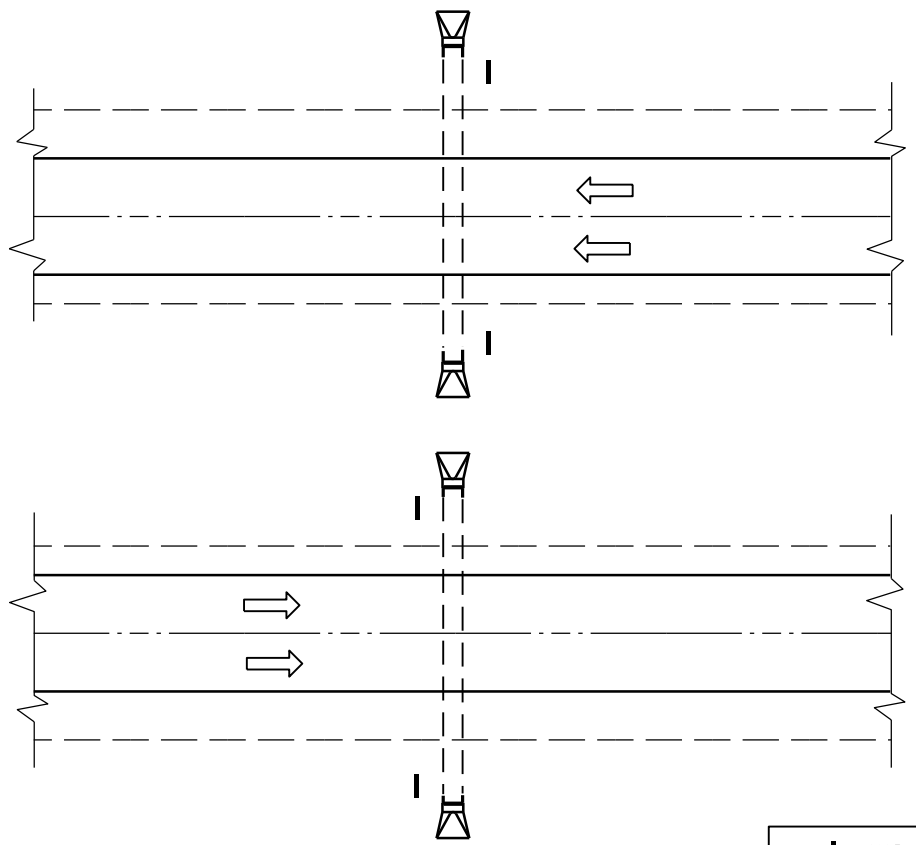
BYPASS LANE

- ① 10-FT TYPICAL.
- ② 12-FT** PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLAN.
- **10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.
- ③ BYPASS LANE PAVED SURFACE WIDTH OUTSIDE OF TRAVEL LANE
-ASPHALT = 12-FT PLUS PAVED SHOULDER WIDTH.
-PC CPNCRETE = 13-FT PLUS PAVED SHOULDER WIDTH.
- ④ BYPASS LANE PAVED SHOULDER WIDTH = THE GREATER OF 1-FT OR THE PAVED SHOULDER WIDTH OF THE THROUGH HIGHWAY.

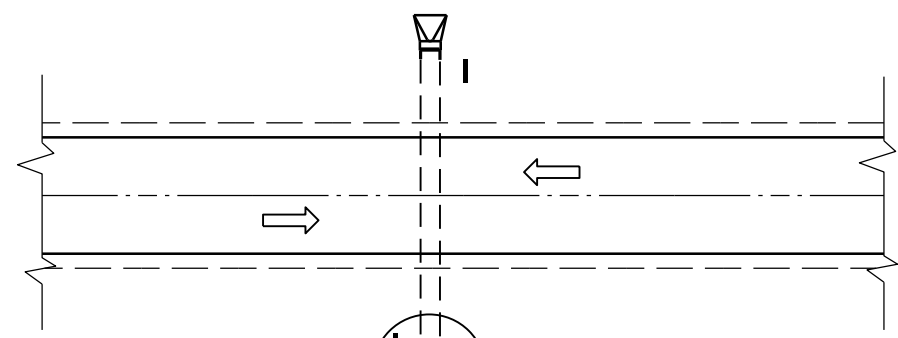


AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND "D" AND TEE INTERSECTION BYPASS LANE

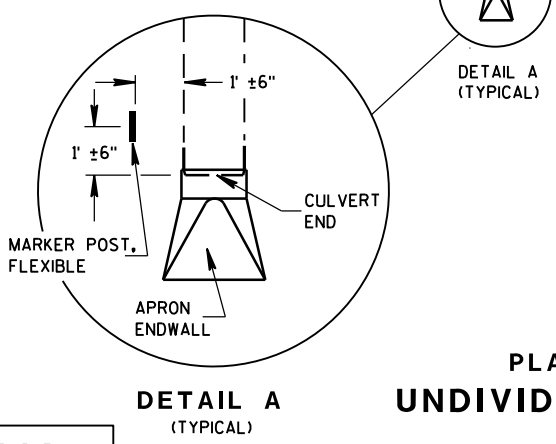
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION



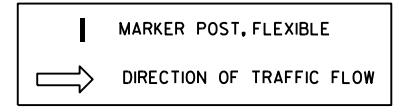
PLAN VIEW
DIVIDED HIGHWAY



PLAN VIEW
UNDIVIDED HIGHWAY

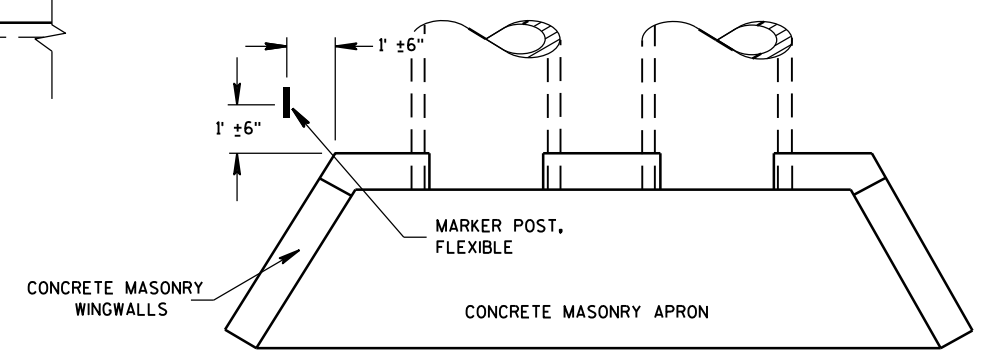


DETAIL A
(TYPICAL)



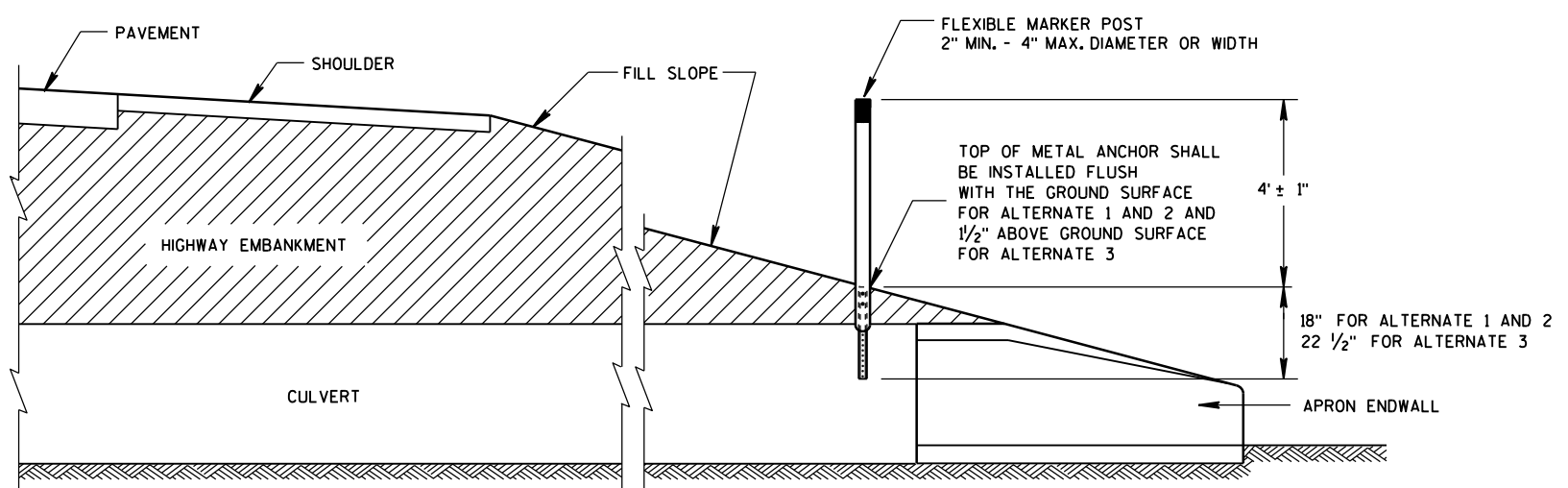
GENERAL NOTES

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**

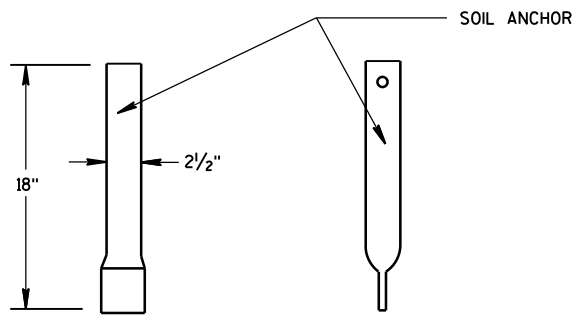
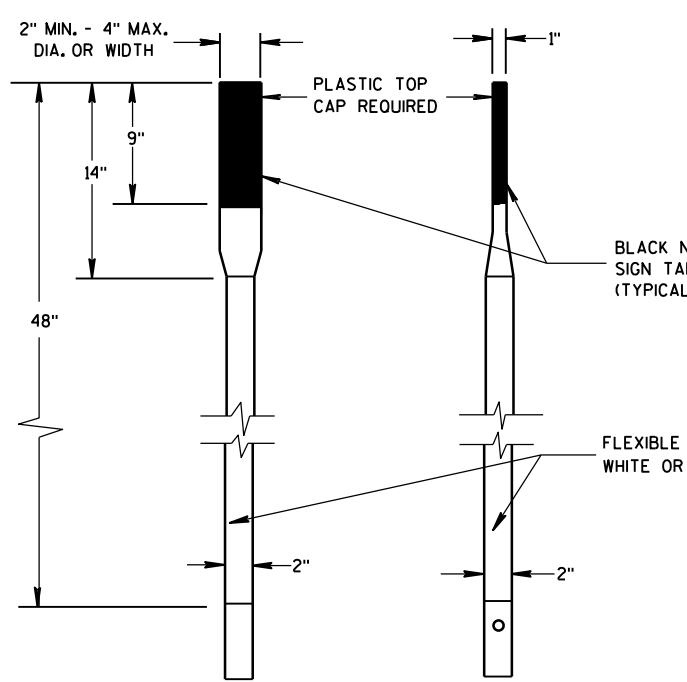
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

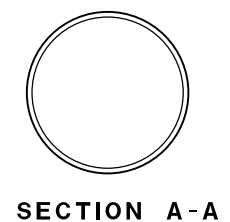
6

S.D.D. 15 A 3-2a

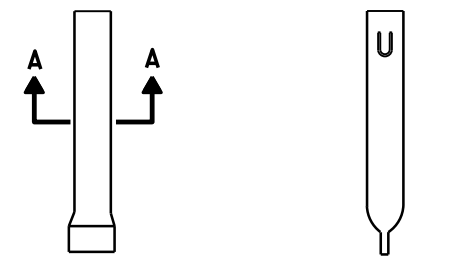
S.D.D. 15 A 3-2a



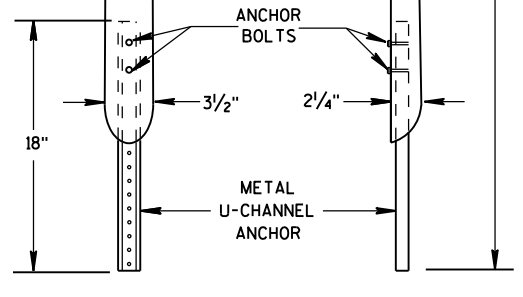
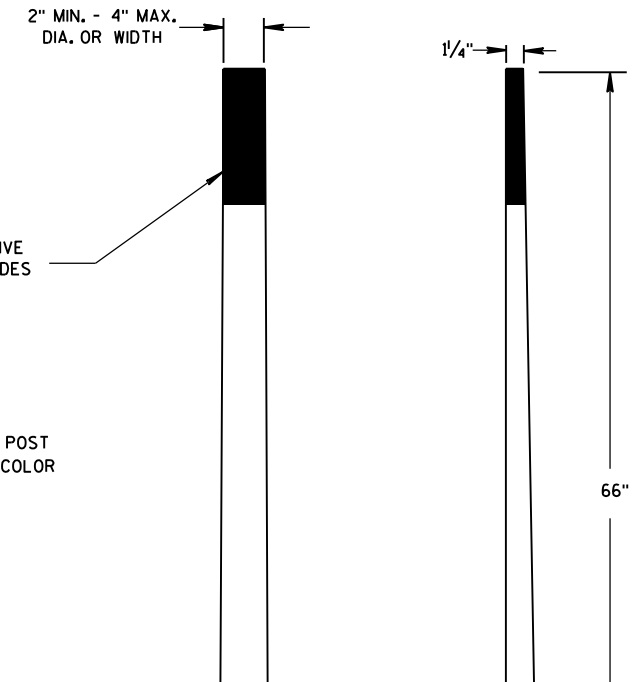
FRONT VIEW SIDE VIEW
ALTERNATE 1



SECTION A-A

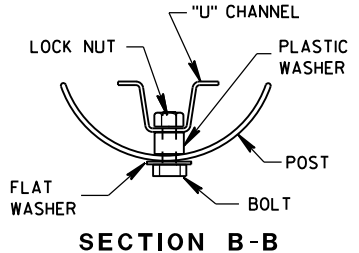


FRONT VIEW SIDE VIEW
ALTERNATE 1

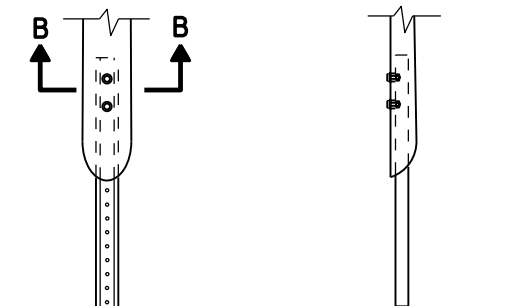


FRONT VIEW SIDE VIEW
ALTERNATE 2

FLEXIBLE MARKER POSTS

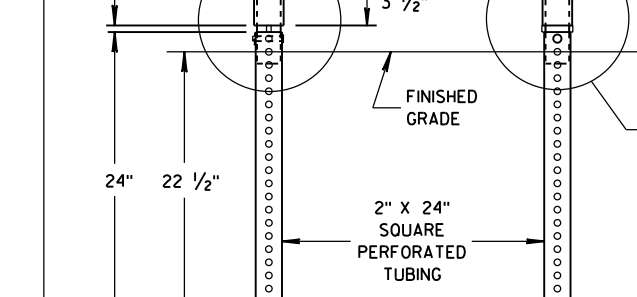
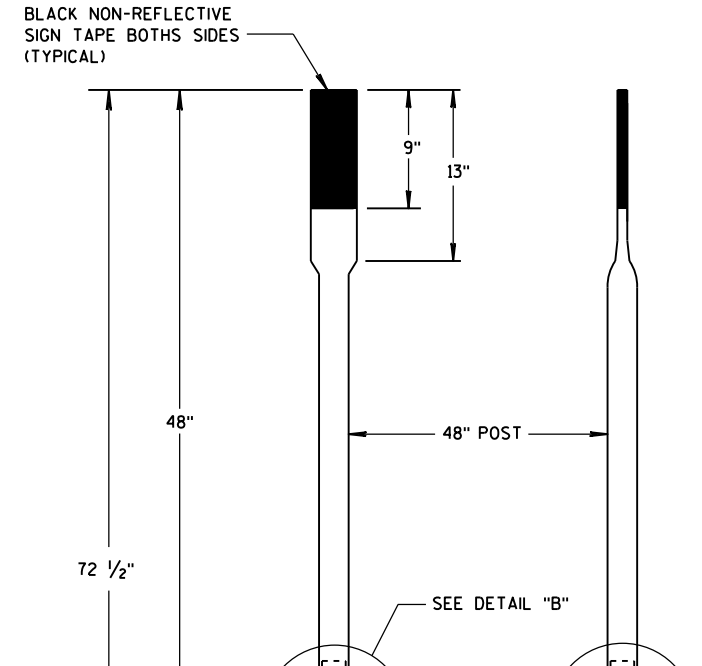


SECTION B-B

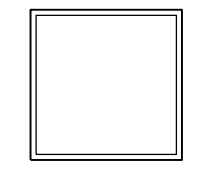


FRONT VIEW SIDE VIEW
ALTERNATE 2

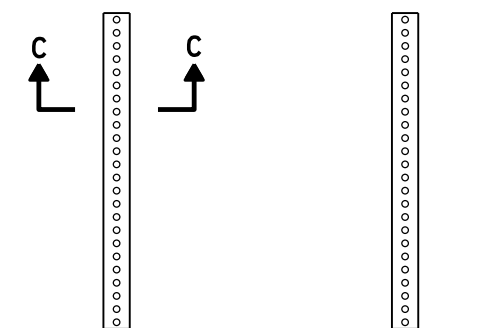
FLEXIBLE MARKER POST ANCHORS



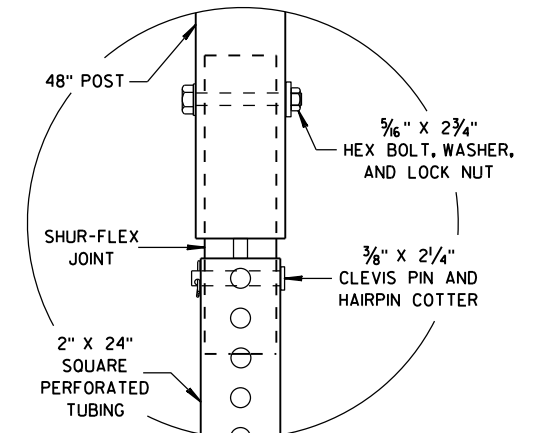
FRONT VIEW SIDE VIEW
ALTERNATE 3



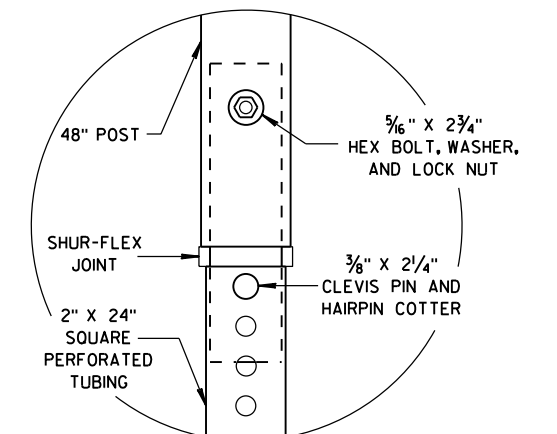
SECTION C-C



FRONT VIEW SIDE VIEW
ALTERNATE 3



DETAIL B

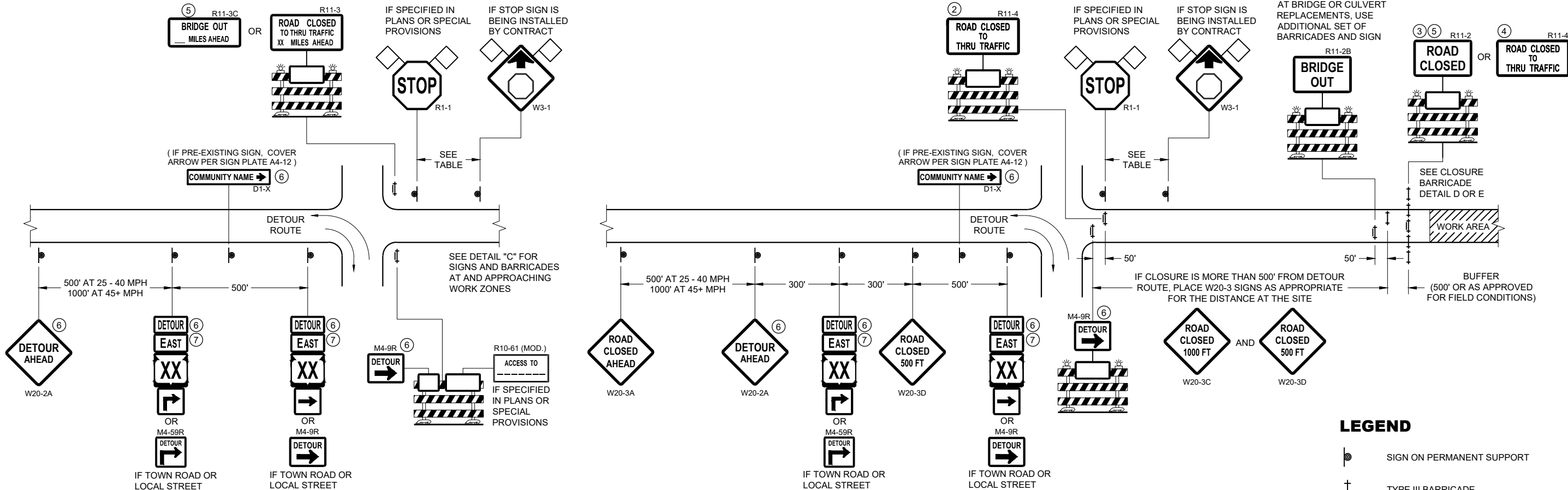


DETAIL C

FLEXIBLE MARKER POST FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/1/2012 DATE /S/ Travis Feltes
STATE TRAFFIC ENGINEER OF DESIGN
FHWA



**DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR**

WORK ZONE GREATER THAN OR EQUAL TO 1/2 MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)

**DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR**

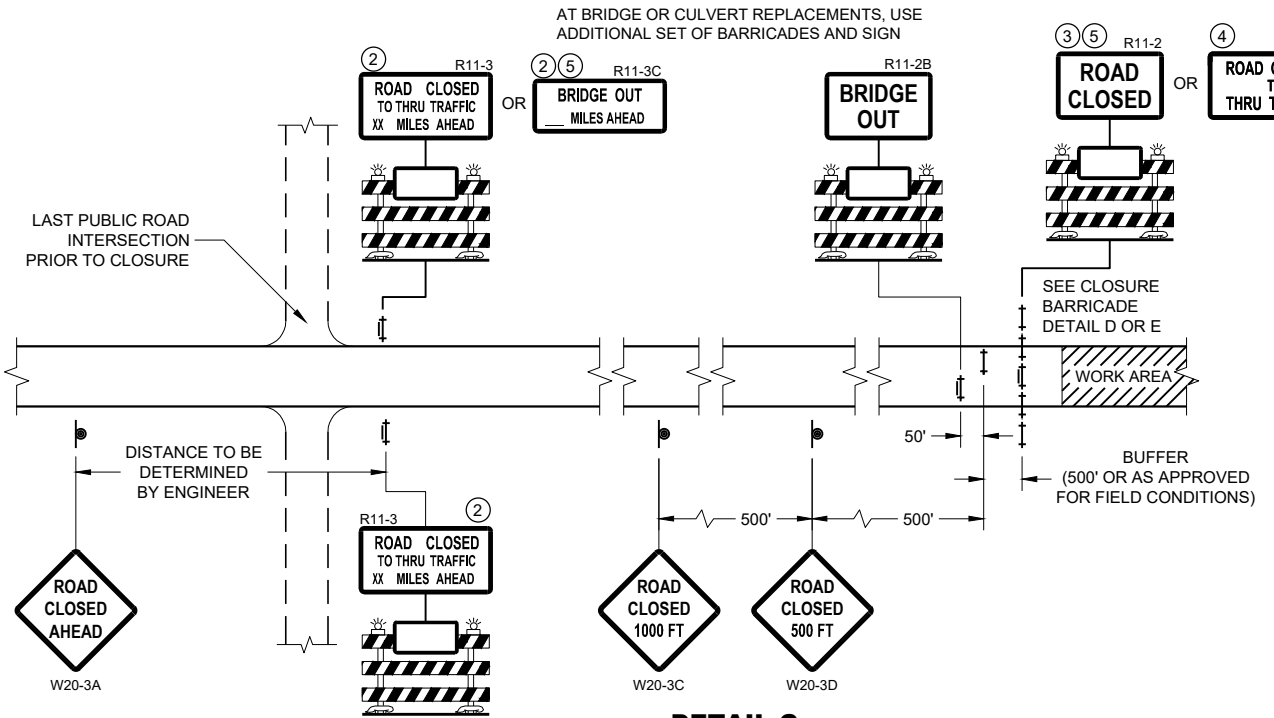
WORK ZONE LESS THAN 1/2 MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

- M4 - 8
- M3 - X
- OR OR M1 - 4 M1 - 6 M1 - 5A
- OR M05 - 1 M06 - 1



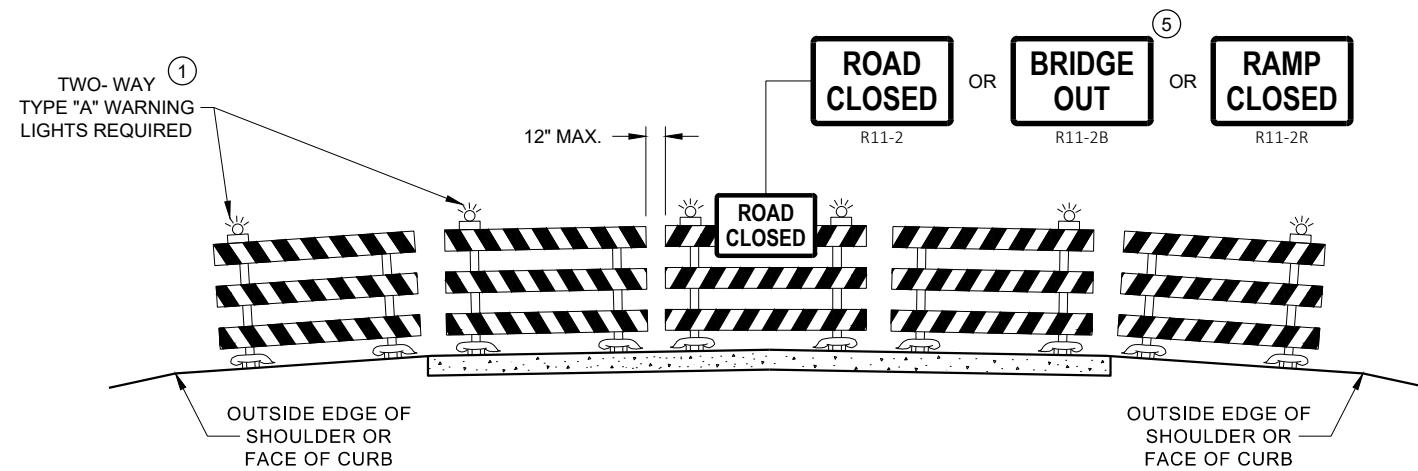
**DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR**

SEE SDD 15C2-SHEET "b"
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

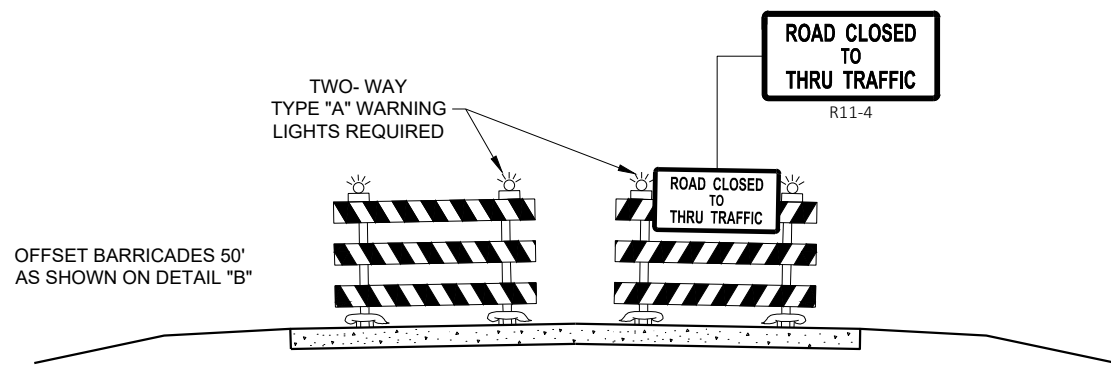
**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER



**DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW**



**DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW**

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW - INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

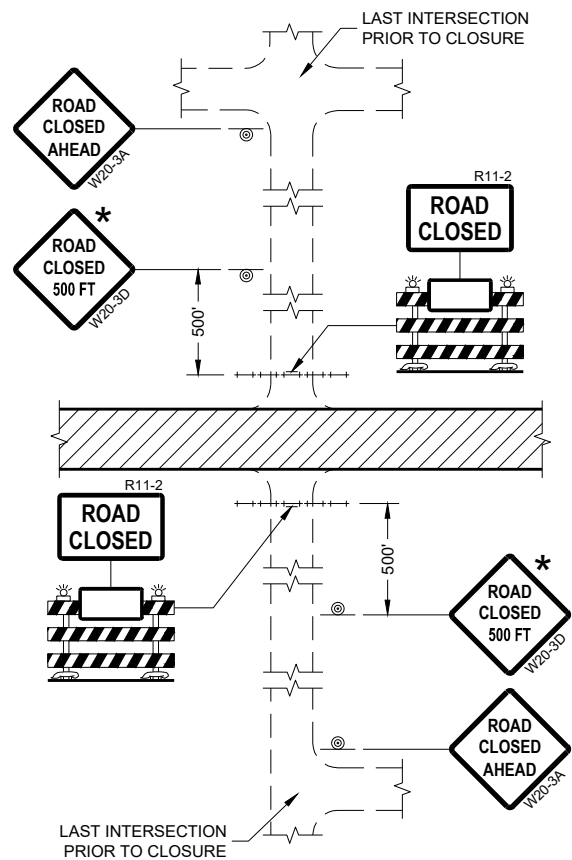
- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60" X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

- ① TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- ② THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.
- ③ FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".
- ④ FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".
- ⑤ FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.
- ⑥ INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- ⑦ "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

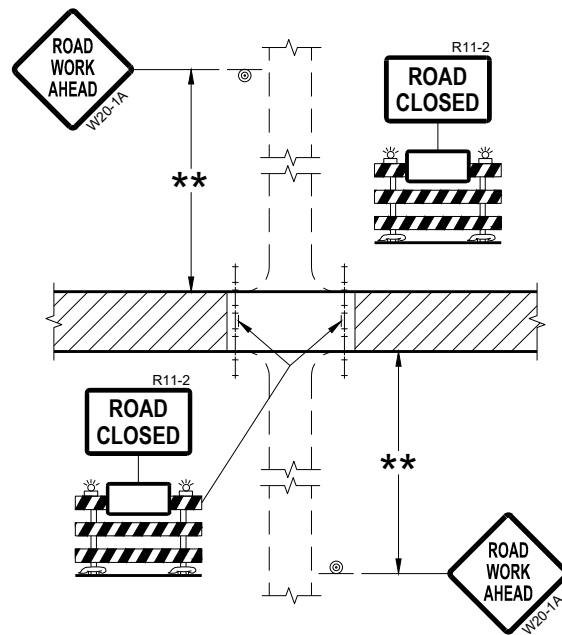
**BARRICADES AND SIGNS
FOR
VARIOUS CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

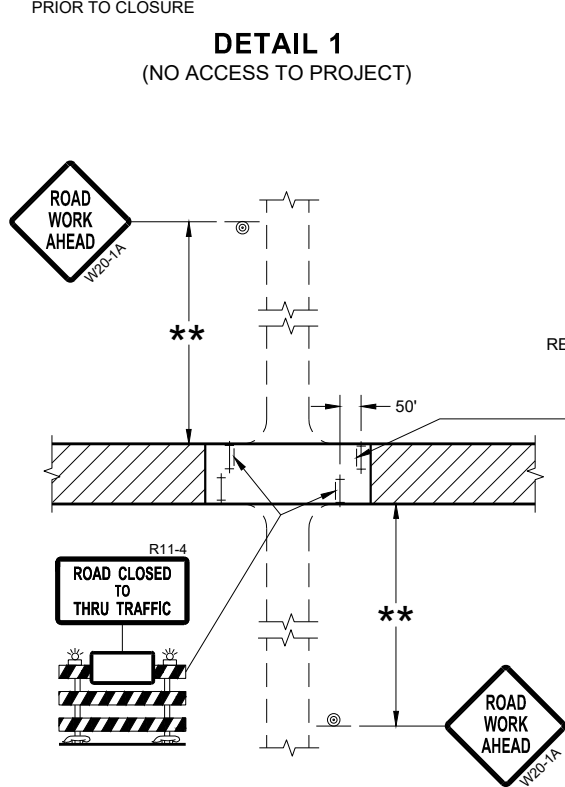
APPROVED
February 2020 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER



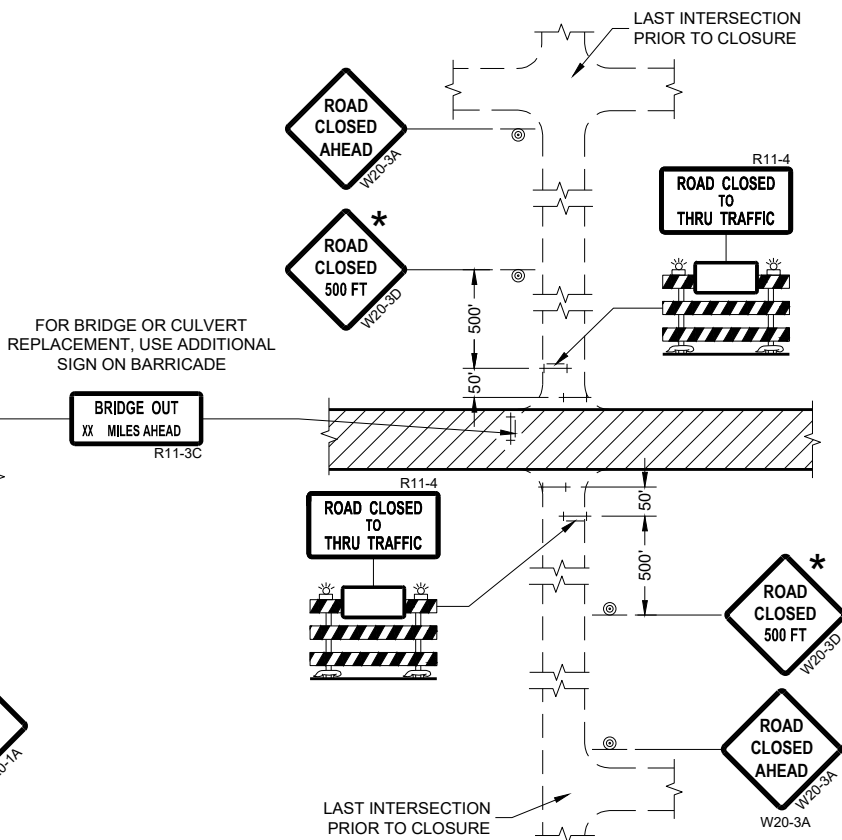
DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT)



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED.
CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE (500 FEET DESIRABLE) TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

- * OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.
- ** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

LEGEND

- ⊙ SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- ⚡ TYPE "A" WARNING LIGHT (FLASHING)
- ▨ WORK AREA

**BARRICADES AND SIGNS
FOR
SIDEROAD CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

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" X 48" UNLESS OTHERWISE NOTED.

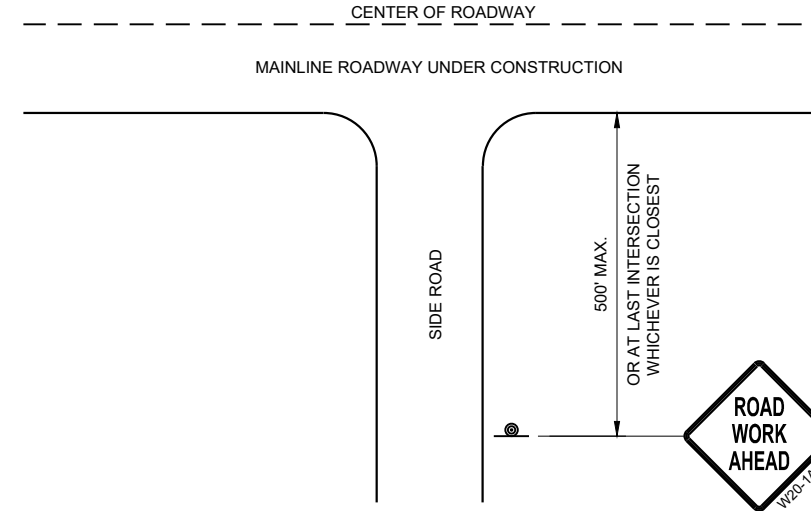
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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 REESTABLISHED.

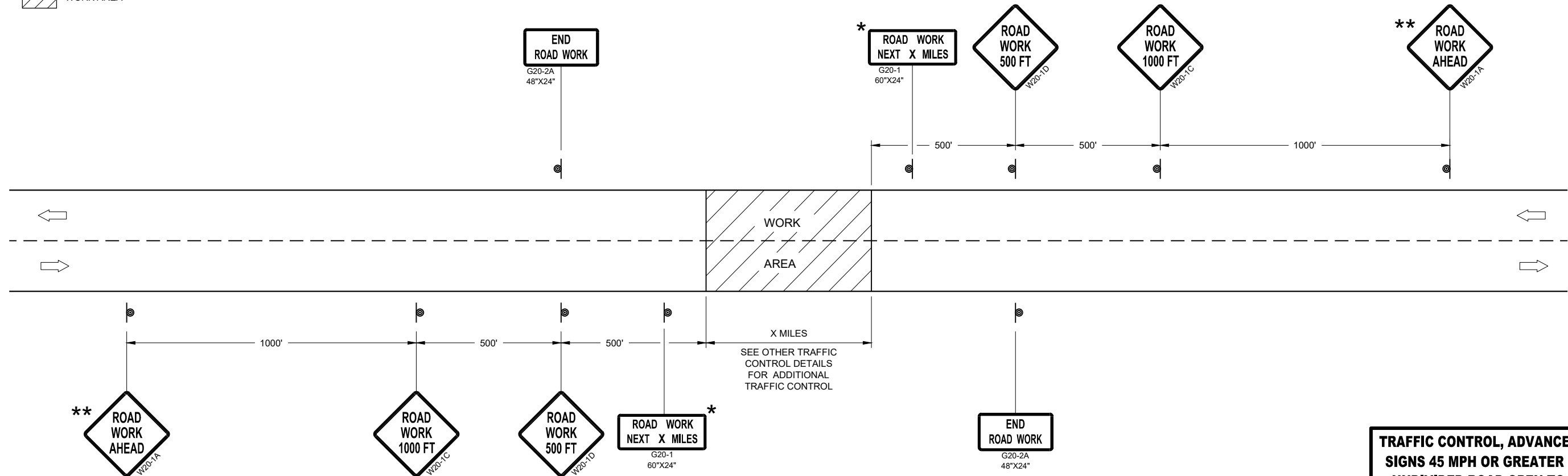
- * OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- ** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

LEGEND

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



**TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL**



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

**TRAFFIC CONTROL, ADVANCE WARNING
SIGNS 45 MPH OR GREATER TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFIC**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE July 2018 /S/ Andrew Heidtke
WORK ZONE ENGINEER

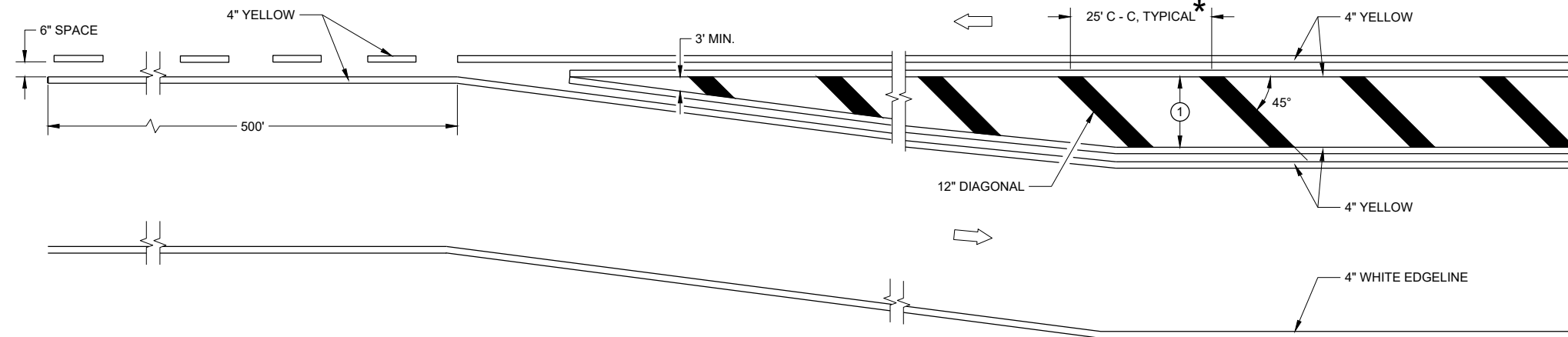
FHWA

GENERAL NOTES

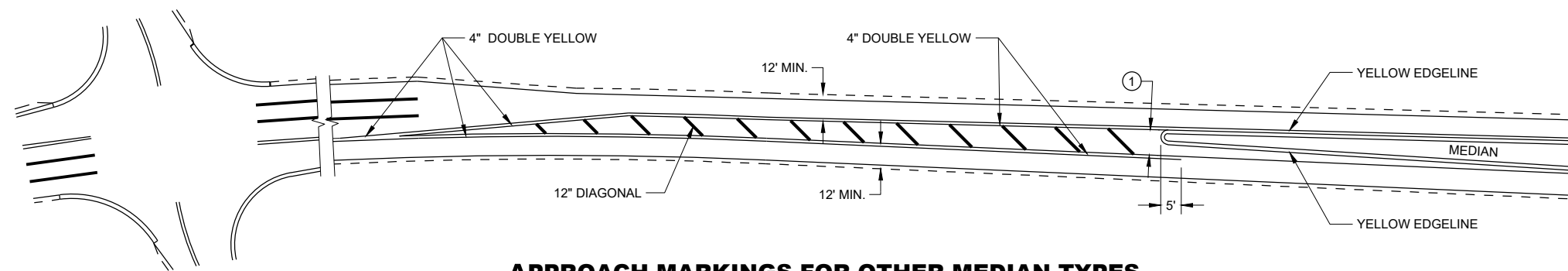
- ① DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT THE WIDEST POINT. OMIT DIAGONALS IF WIDTH IS LESS THAN 4 FEET.

➔ DIRECTION OF TRAVEL

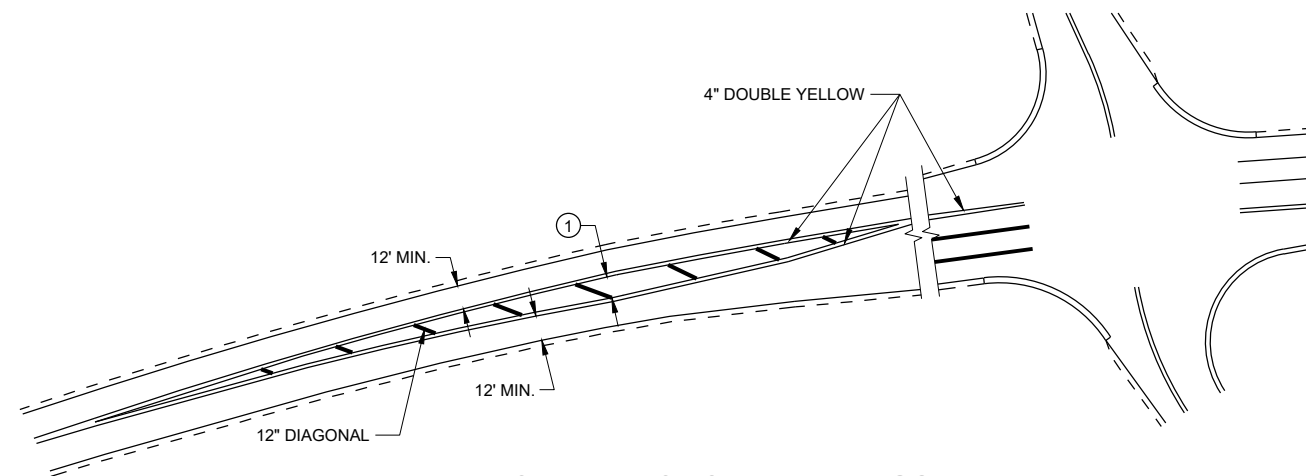
* WHEN THE PAINTED MEDIAN LENGTH IS LESS THAN 50 FEET THE SPACING IS 10'.



MEDIAN ISLAND DETAIL



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON-APPROACH MARKINGS

6

6

SDD 15C18 - 06a

SDD 15C18 - 06a

**MEDIAN ISLAND
PAVEMENT MARKINGS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

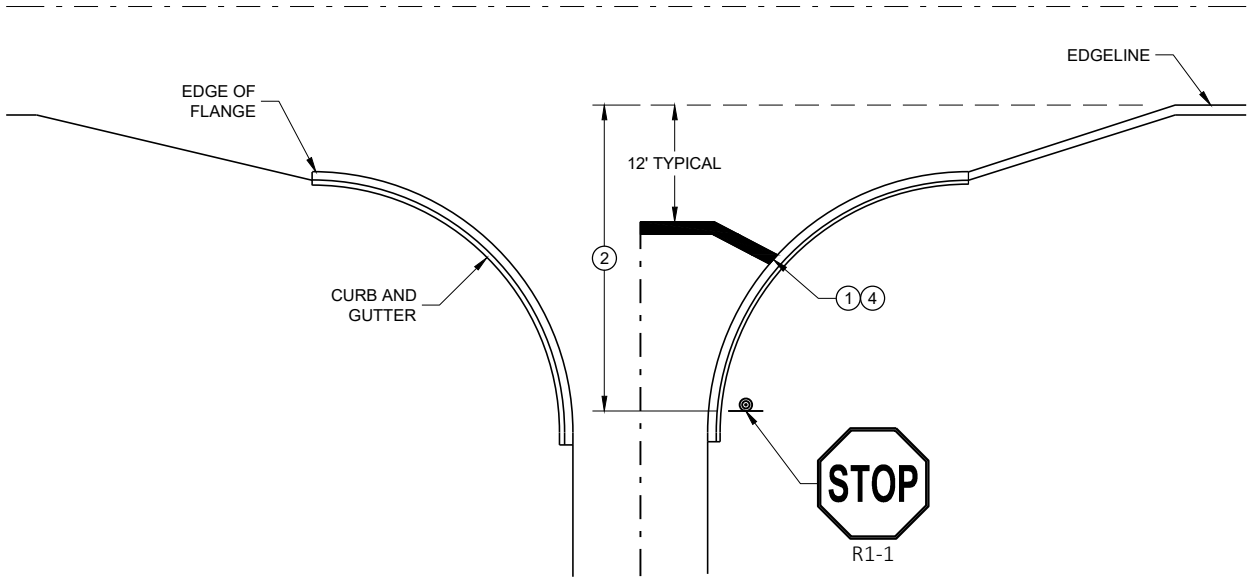
APPROVED
May 2022 DATE /S/ Jeannie Silver
STATE SIGNING AND MARKING
ENGINEER

FHWA

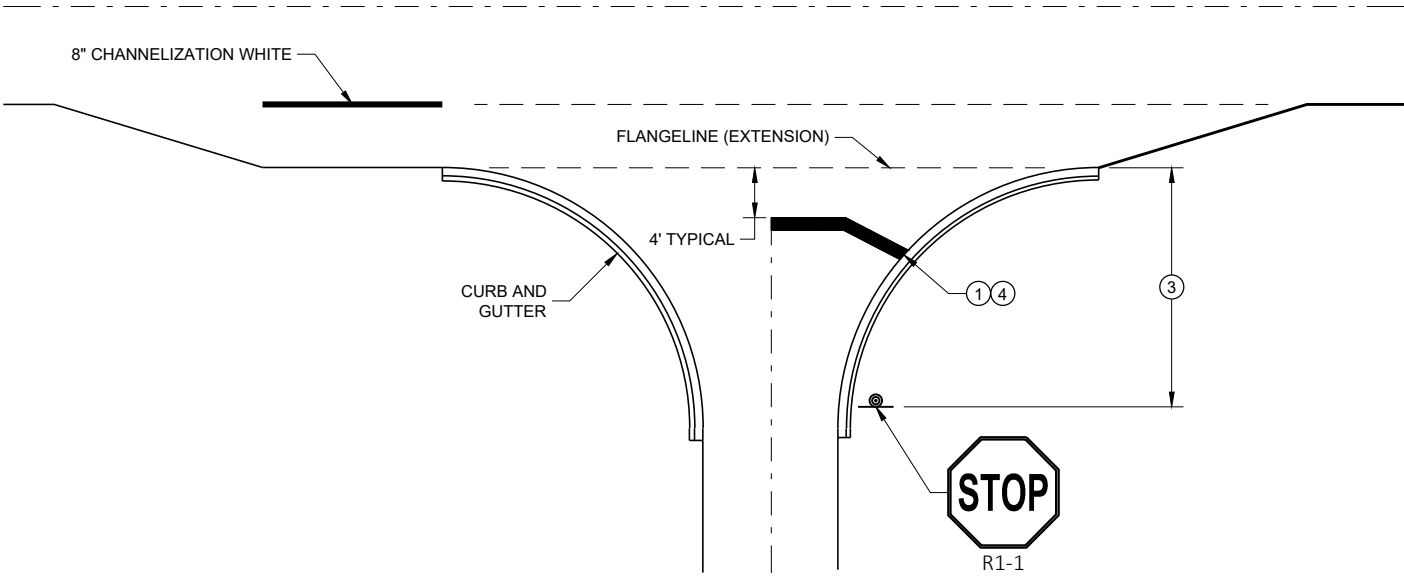
GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

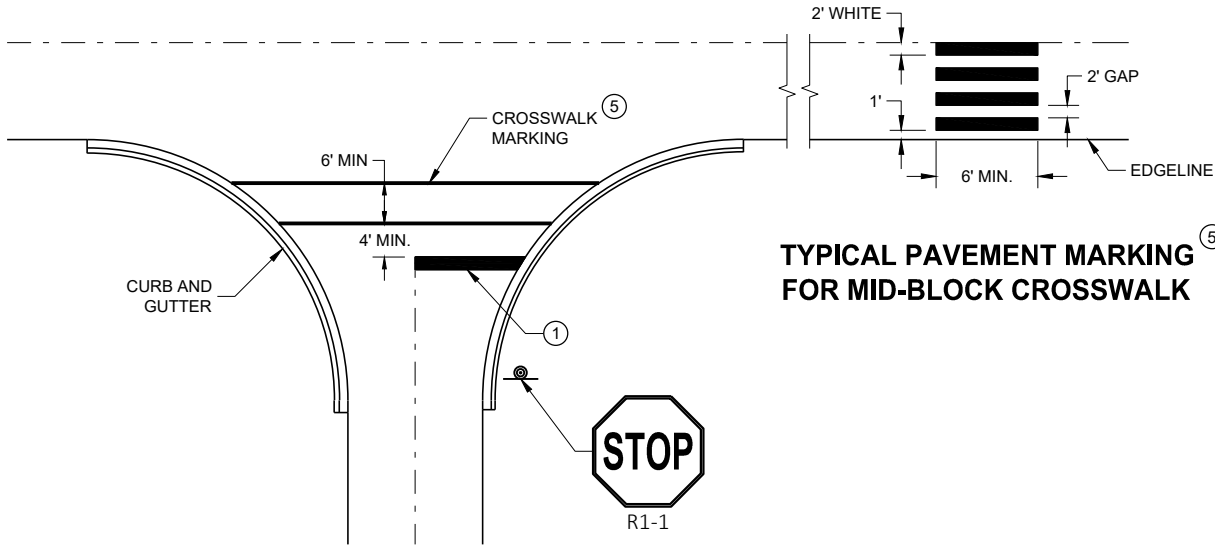
- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
- ③ NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION.
- ④ MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
- ⑤ LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES INSTEAD.



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

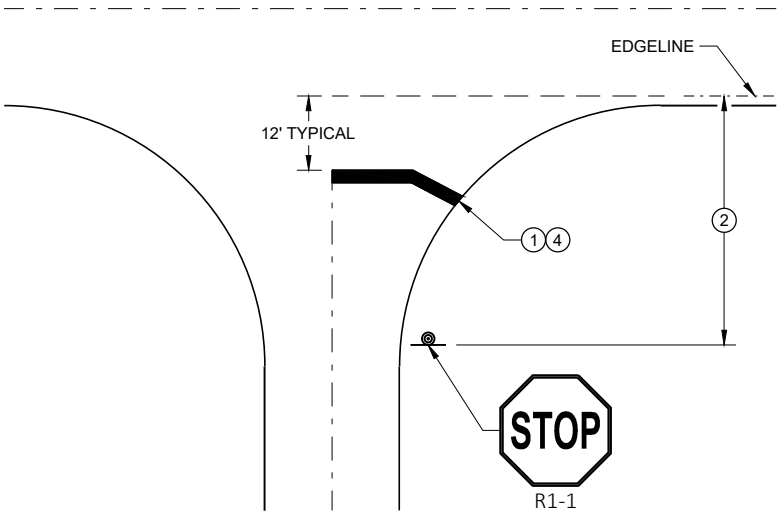


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING

TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 /S/ Matthew Rauch
DATE STATE SIGNING AND MARKING ENGINEER

FHWA

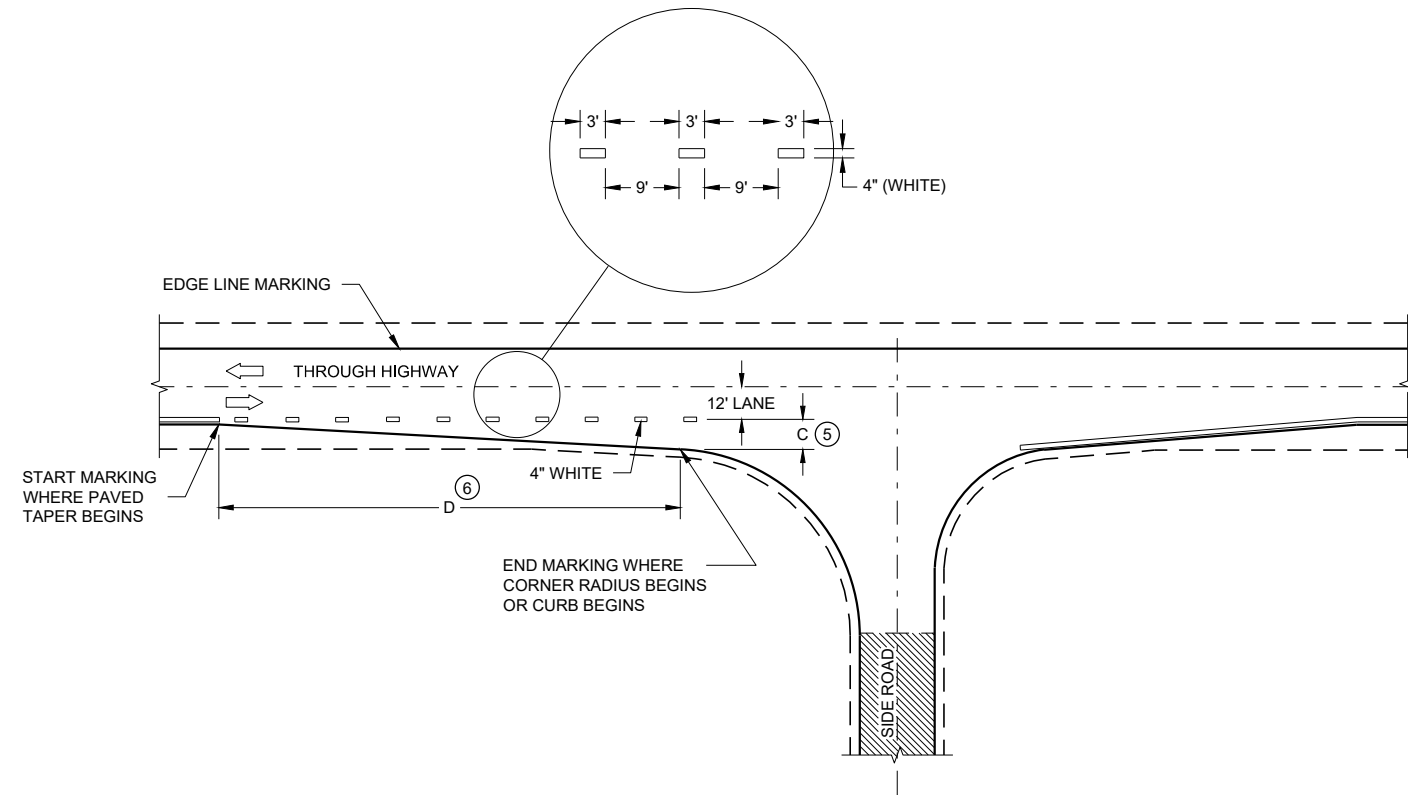
GENERAL NOTES

OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

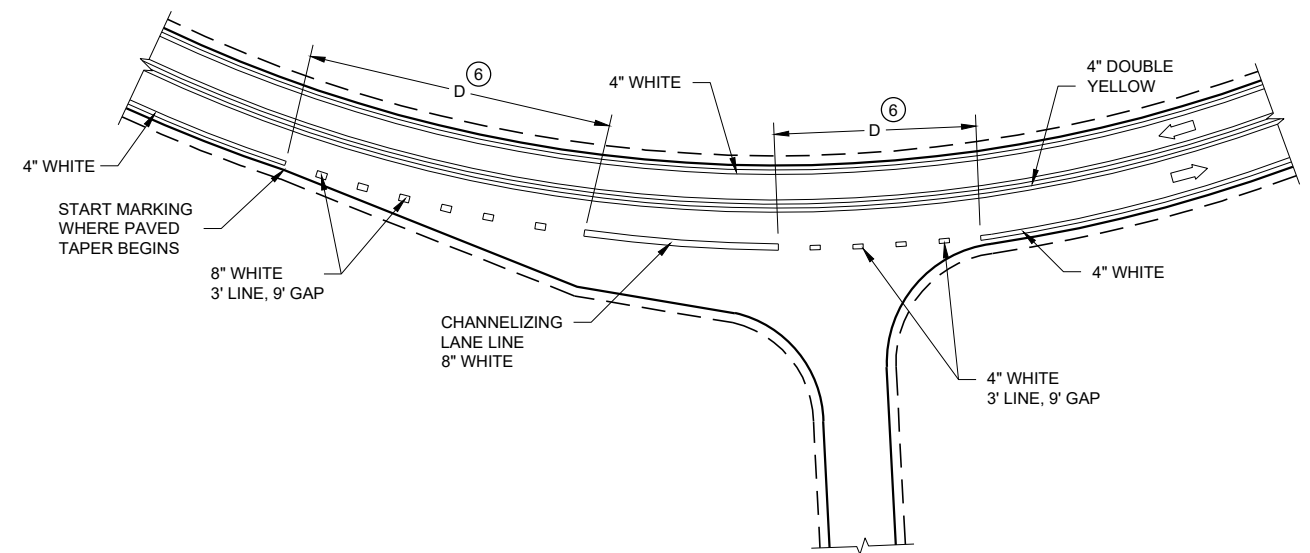
- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
- ④ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
- ⑤ WHEN DISTANCE "C" IS LESS THAN 4 FEET, OMIT DOTTED EXTENSION.
- ⑥ WHEN DISTANCE "D" IS LESS THAN 50 FEET, OMIT DOTTED EXTENSION.

LEGEND

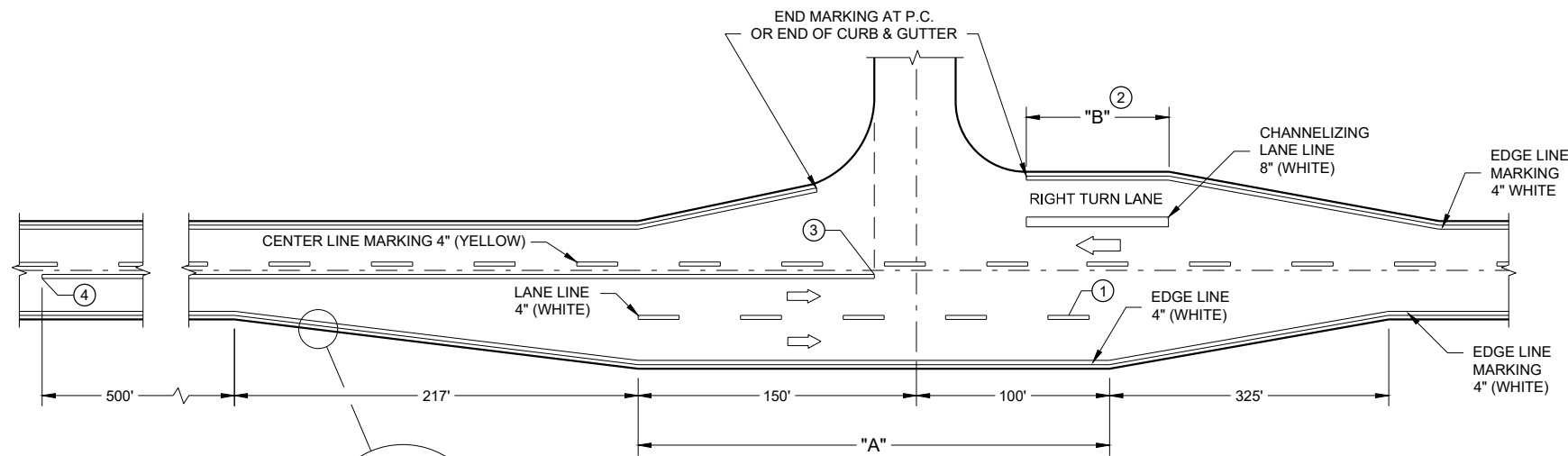
➡ DIRECTION OF TRAVEL



MINOR INTERSECTION

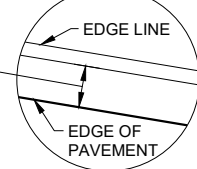


INTERSECTION ON OUTSIDE OF CURVE



**MAJOR INTERSECTIONS
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)**





BYPASS LANE PAVED SHOULDER WIDTH (AS SHOWN ELSEWHERE IN PLANS) - PLUS 2 INCHES



**PAVEMENT MARKING
(INTERSECTIONS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

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

GENERAL NOTES

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 THE REGIONAL TRAFFIC UNIT.

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

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

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

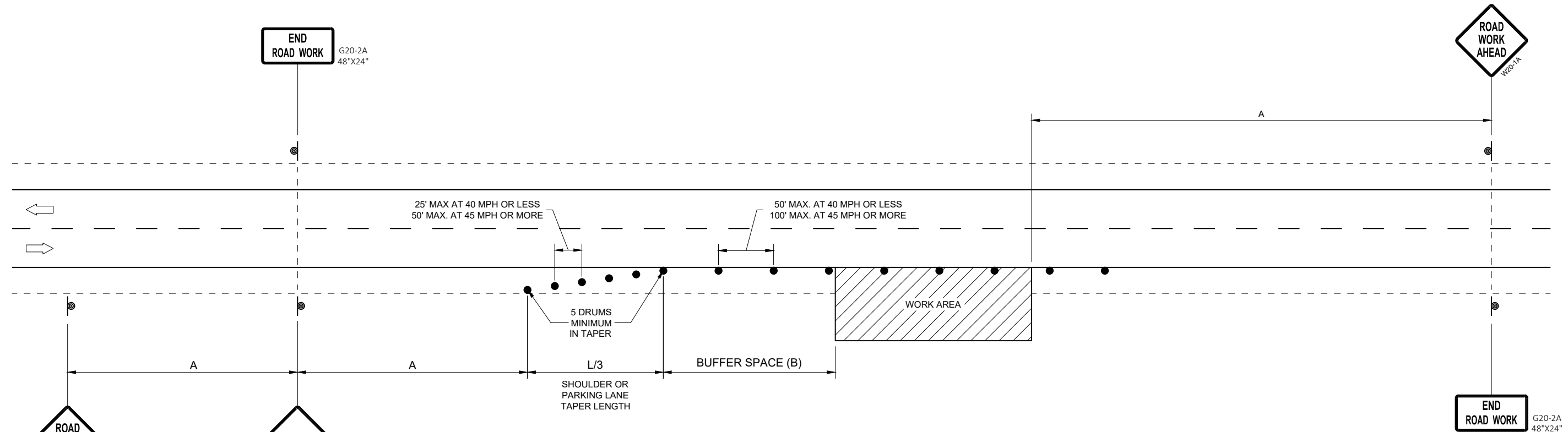
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

W20-1A 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.

6

6



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHOULDER TAPER L / 3 W, LATERAL OFFSET (FT)						BUFFER SPACE (B) FEET
		3	4	5	6	7	8	
25	200'	10	14	17	21	24	28	55
30	200'	15	20	25	30	35	40	85
35	350'	20	27	34	40	47	54	120
40	350'	26	35	44	53	62	70	170
45	500'	45	59	74	89	104	119	220
50	500'	50	66	83	99	116	132	280
55	500'	54	73	91	109	127	145	335'

OR
IF TRAFFIC CONTROL DEVICES
ENCROACH ONTO TRAVELED WAY, USE



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

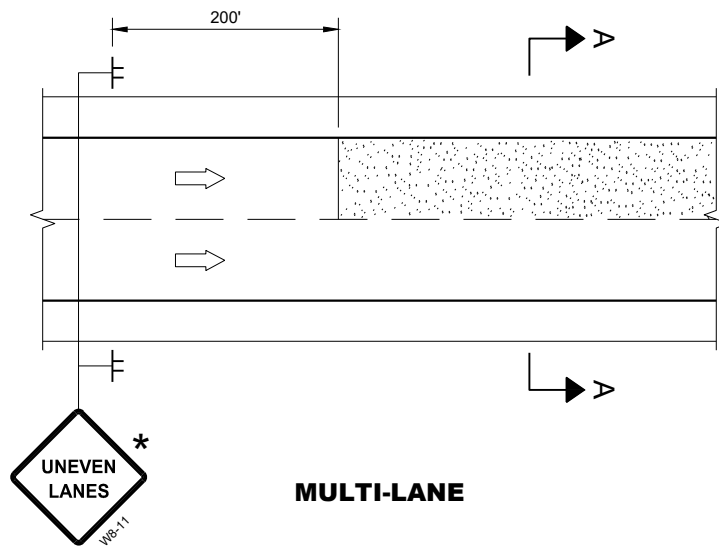
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020 /S/ Andrew Heidtke
DATE STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER

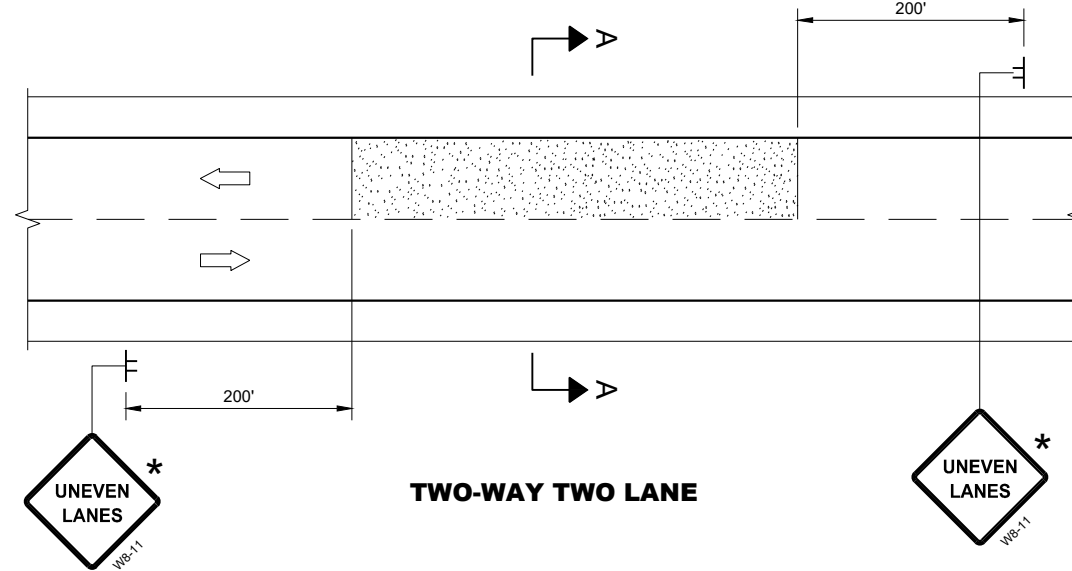
FHWA

SDD 15D28 - 04

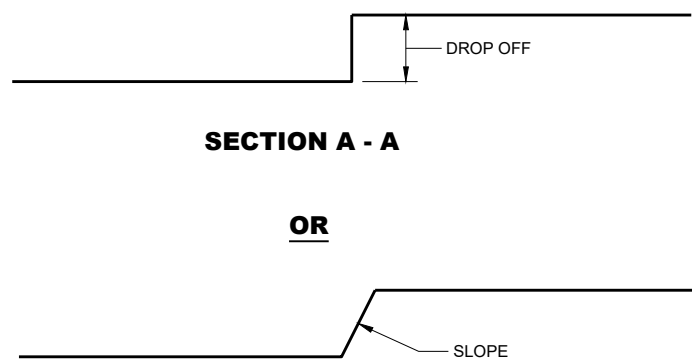
SDD 15D28 - 04



MULTI-LANE



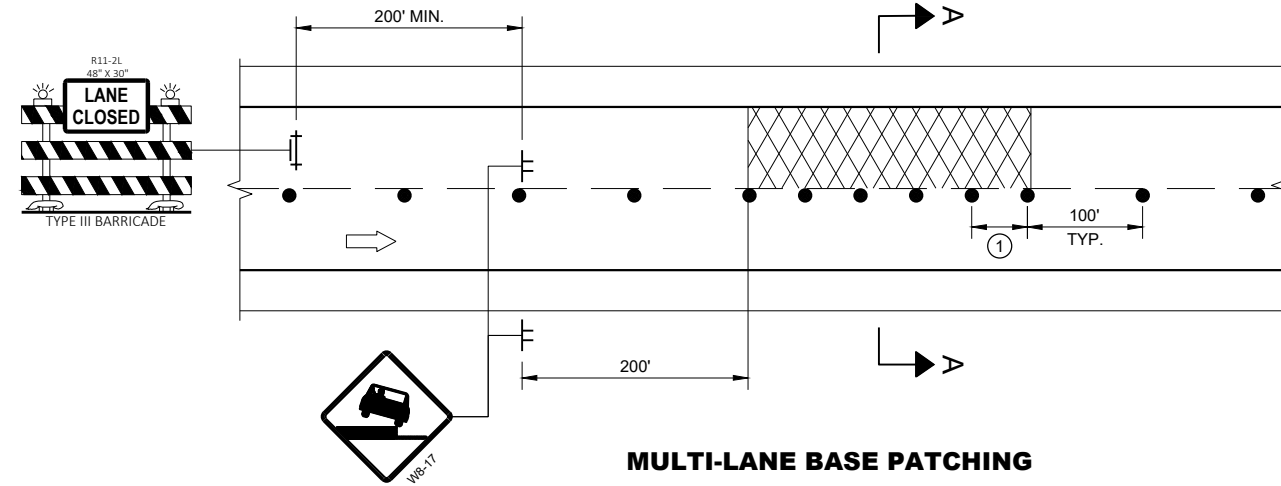
TWO-WAY TWO LANE



SECTION A - A

OR

SECTION A - A



MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS

GENERAL NOTES

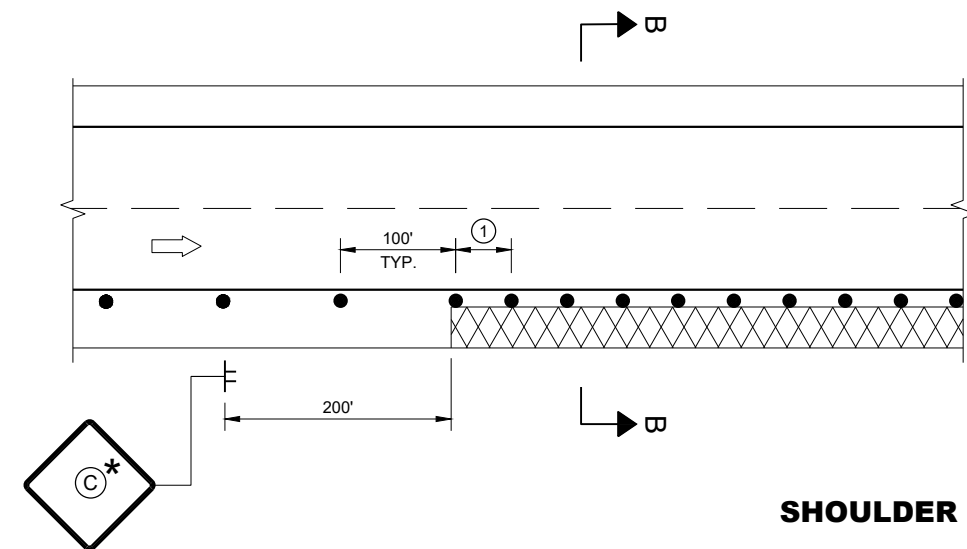
- FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.
- ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
- "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
- WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.
- * IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.
- ① USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

LEGEND

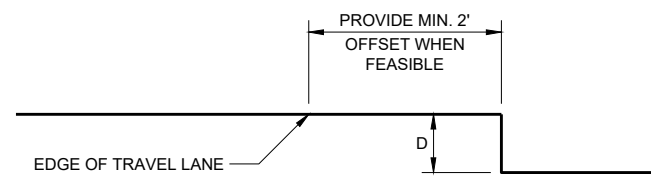
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE

6

6



SHOULDER DROP-OFFS



SECTION B - B

D	SIGN (C)
< 2" WITH A SLOPE STEEPER THAN 3:1	 LOW SHOULDER WO8-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	 SHOULDER DROP - OFF W8-9A PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT

SDD 15D39 - 02

SDD 15D39 - 02

**TRAFFIC CONTROL,
DROP-OFF SIGNING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 /S/ Andrew Heidtke
DATE DATE WORK ZONE ENGINEER

FHWA

DIVISION 1 - USH 63

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
377+91.715	37791.72	0.00	6.91	4.00	4.57	0	0	0	0	0	0
377+93.925	37793.92	2.21	14.25	4.00	8.49	1	0	1	1	1	0
3/8+00	37800.00	6.08	13.97	4.00	8.96	3	1	2	4	4	-1
378+41.715	37841.72	41.72	17.33	4.00	20.12	24	6	22	28	31	-10
378+68.925	37868.92	27.21	26.59	4.00	31.93	22	4	26	50	64	-25
379+05.081	37905.08	36.16	22.87	4.00	22.38	33	5	36	83	109	-42
379+12.789	37912.79	7.71	20.07	2.00	2.79	6	1	4	89	114	-42
379+19.496	37919.50	6.71	47.04	4.00	17.33	8	1	2	97	116	-37
379+32.013	37932.01	12.52	11.50	2.00	30.91	14	1	11	111	130	-38
379+65.486	37965.49	33.47	8.98	2.00	9.60	13	2	25	124	161	-58
379+73.131	37973.13	7.64	9.21	2.00	7.76	3	1	2	127	164	-59
380+00	38000.00	26.87	8.71	2.00	3.06	9	2	5	136	170	-58
380+40.486	38040.49	40.49	8.14	2.00	0.00	13	3	2	149	173	-51

DIVISION 2 - 60TH AVE (WEST)

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
03+41.872	341.87	0.00	31.29	3.00	2.18	0	0	0	0	0	0
03+68.691	368.69	26.82	41.05	3.00	1.19	36	3	2	36	3	31
03+81.872	381.87	13.18	37.31	3.00	4.70	19	1	1	55	4	47
04+00	400.00	18.13	28.33	3.00	22.19	22	2	9	77	15	56
04+05.472	405.47	5.47	29.01	3.00	17.77	6	1	4	83	20	56
04+48.462	448.46	42.99	0.00	3.00	0.00	23	5	14	106	38	57

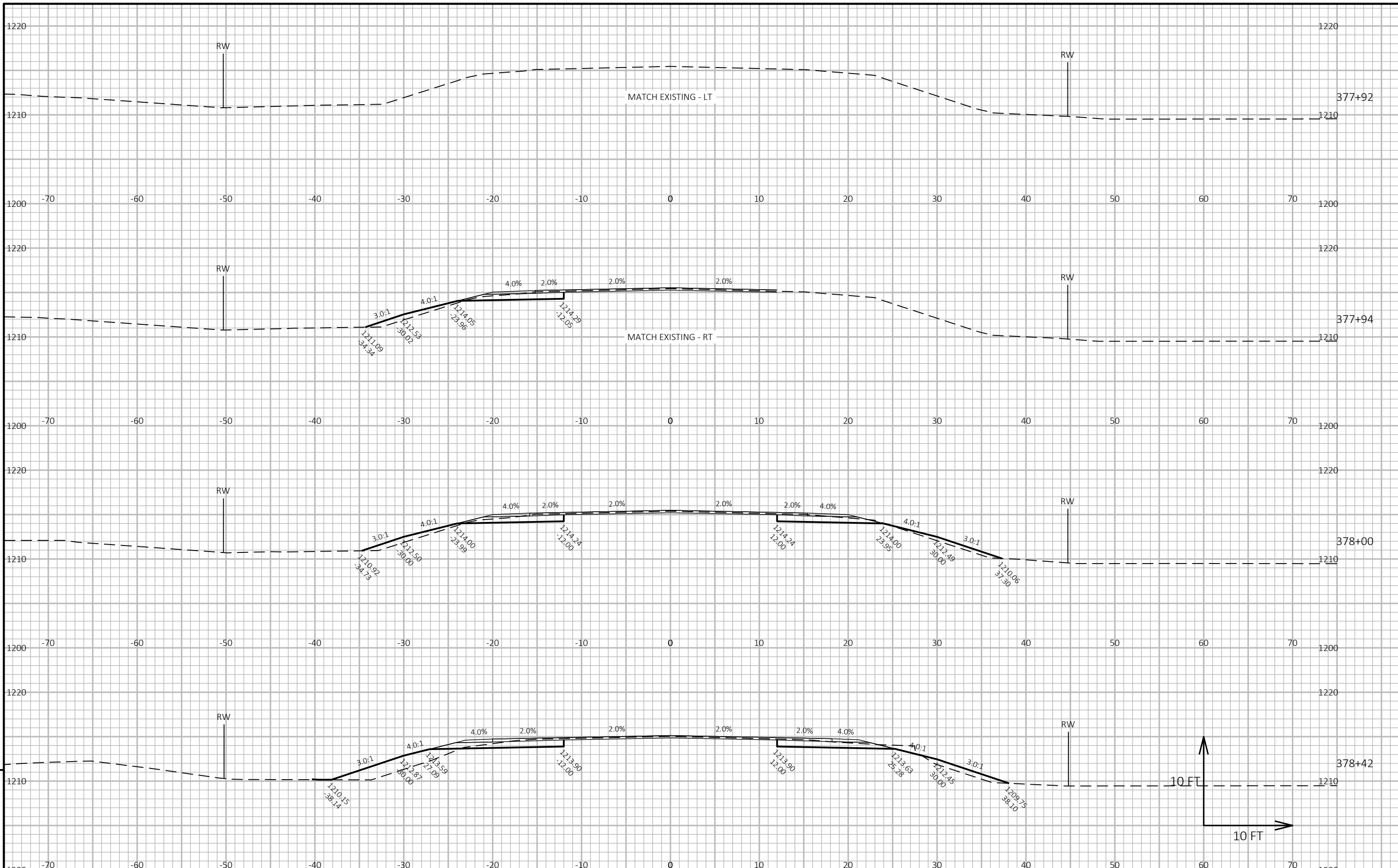
DIVISION 3 - 60TH AVE (EAST)

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
00+12.608	12.61	0.00	0.00	3.00	0.00	0	0	0	0	0	0
00+25.217	25.22	12.61	50.38	3.00	0.00	12	1	0	12	0	11
00+38.922	38.92	13.70	52.53	3.00	29.29	26	2	7	38	7	28
00+64.621	64.62	25.70	42.71	3.00	2.27	45	3	15	83	22	55
01+39.772	139.77	75.15	0.00	3.00	0.00	59	8	3	142	25	103

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
8 - MASS ORDINATE	(CUT - SALVAGED PAV) * (FILL * FILL FACTOR)

9

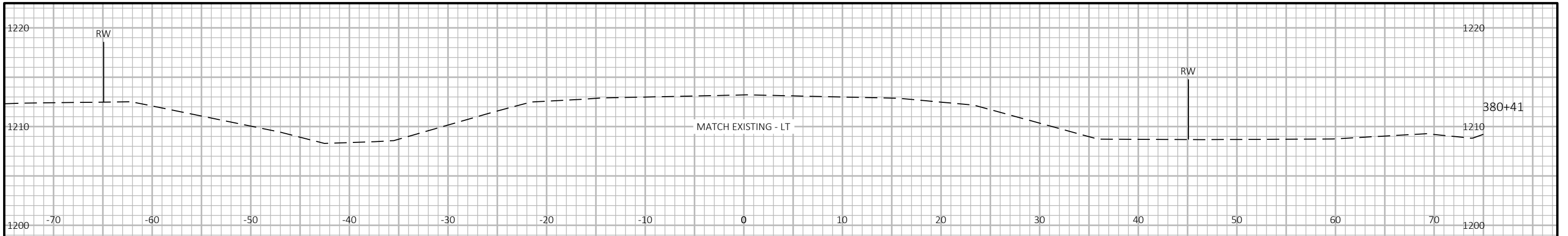
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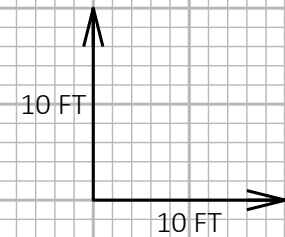
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PROJECT NO: 1550-04-76	HWY: USH 63	COUNTY: POLK	CROSS SECTIONS: USH 63	SHEET	E
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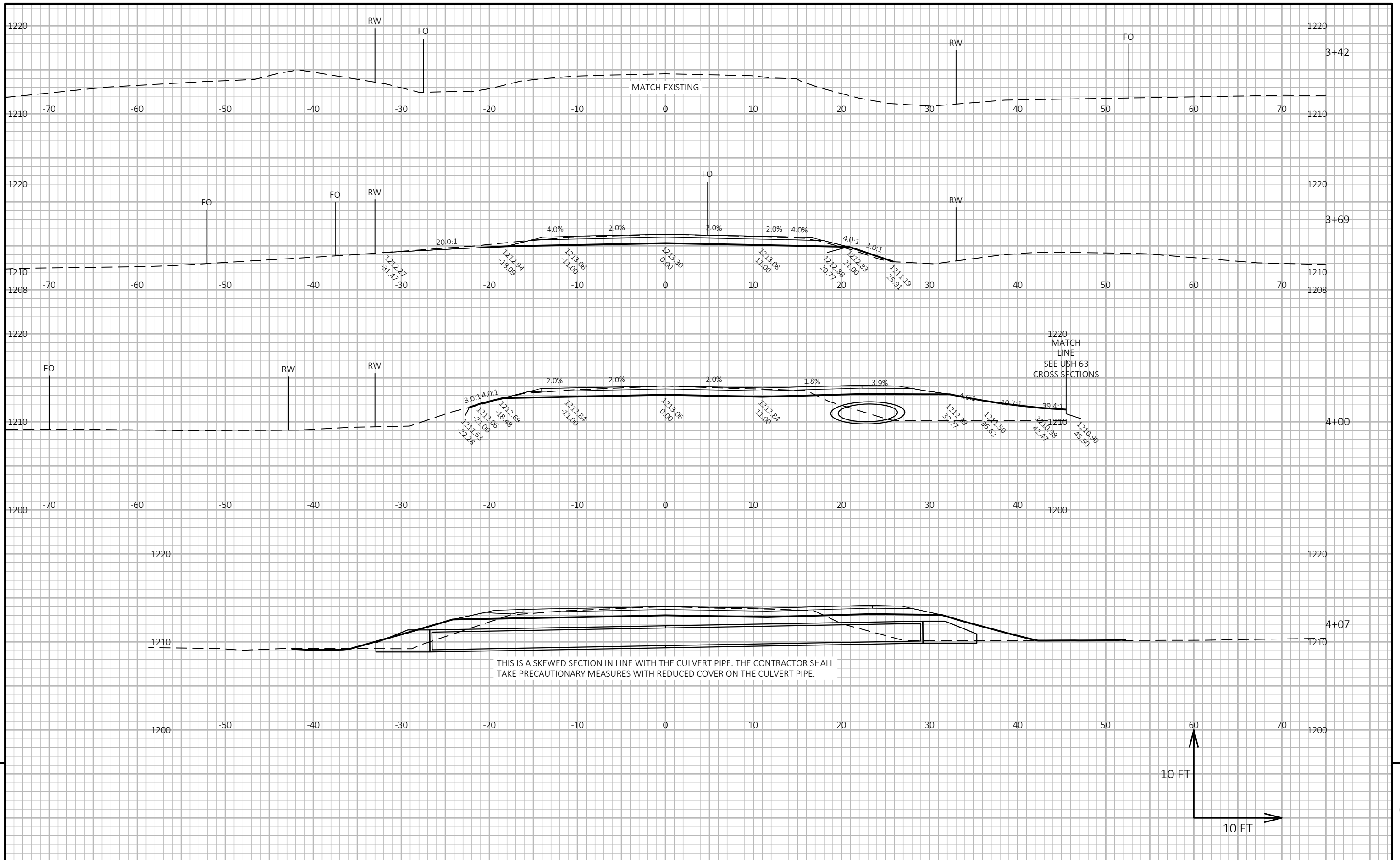


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9

PROJECT NO: 1550-04-76	HWY: USH 63	COUNTY: POLK	CROSS SECTIONS: USH 63	SHEET	E
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PROJECT NO: 1550-04-76

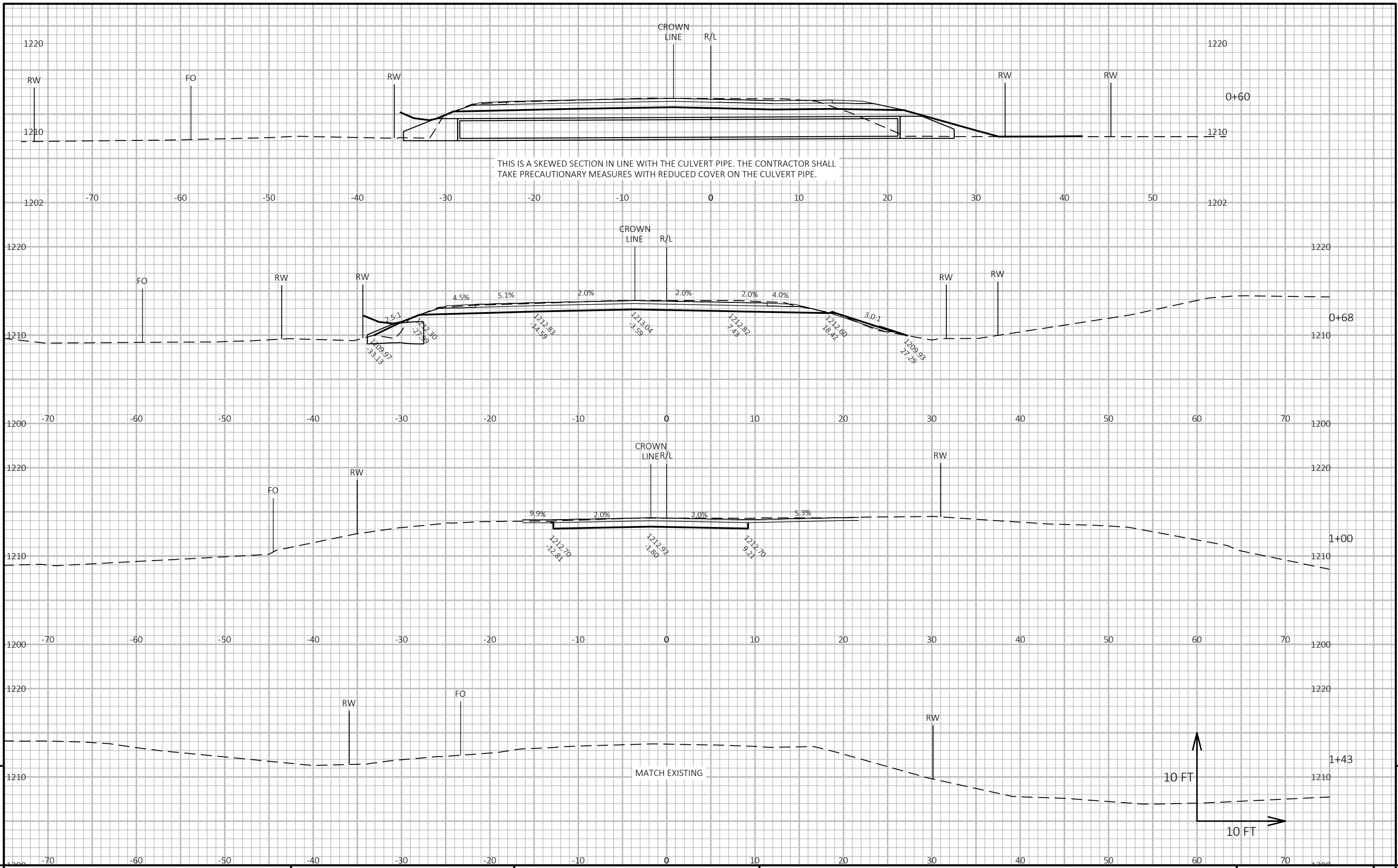
HWY: USH 63

COUNTY: POLK

CROSS SECTIONS: 60TH AVE - WEST

SHEET

E

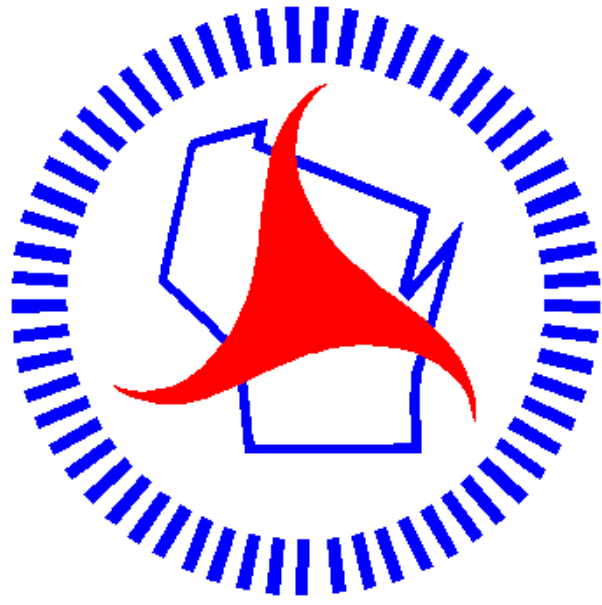


PROJECT NO: 1550-04-76 HWY: USH 63 COUNTY: POLK CROSS SECTIONS: 60TH AVE - EAST SHEET E

9

9

Notes



Wisconsin Department of Transportation

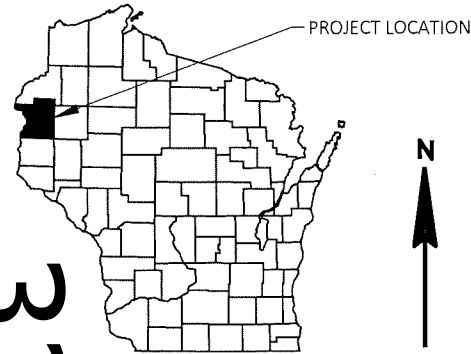
Dedicated people creating transportation solutions through innovation and exceptional service.

<http://www.dot.wisconsin.gov>

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 = 62



DESIGN DESIGNATION 1550-06-05

A.A.D.T. (2023)	=	6300
A.A.D.T. (2043)	=	7600
D.H.V.	=	960
D.D.	=	50/50
T.	=	8.4
DESIGN SPEED	=	45 MPH
ESALS	=	1,284,800

CONVENTIONAL SYMBOLS

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

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

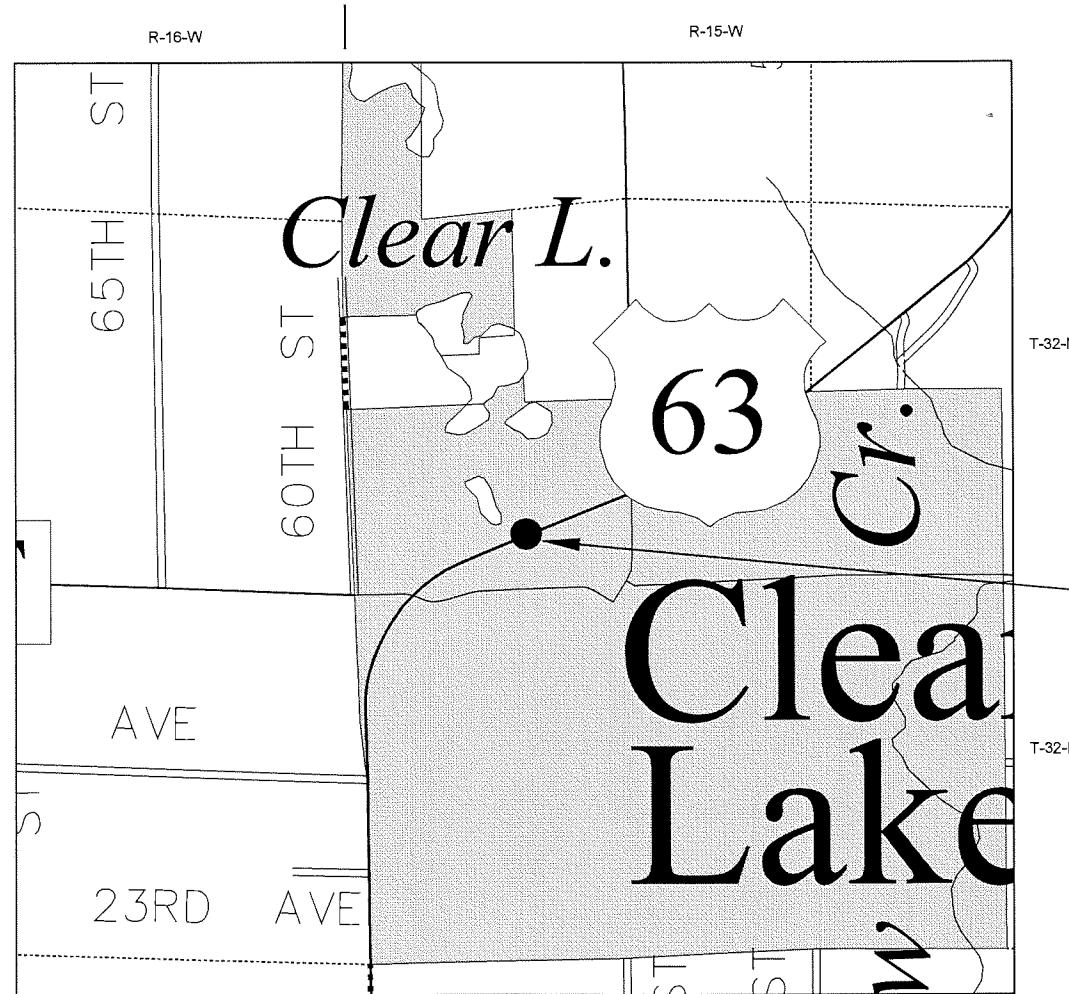
PLAN OF PROPOSED IMPROVEMENT

BALDWIN - CLEAR LAKE

PEDESTRIAN TRAIL C-48-0025

USH 63
POLK COUNTY

STATE PROJECT NUMBER
1550-06-75



PROJECT 1550-06-75
 STA 176+87.50
 X= 557,043.26
 Y= 216,570.71

LAYOUT
 SCALE 0 0.5 MI
 TOTAL NET LENGTH OF CENTERLINE = 0.03 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), POLK COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1550-06-75	WISC 2022520	1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	NW REGION
Designer	MATTHEW BECKLIN, PE
Project Manager	BETH CUNNINGHAM, PE
Regional Examiner	NW REGION
Regional Supervisor	TYLER RONGSTAD, PE

APPROVED FOR THE DEPARTMENT

04/24/2023 *Beth Cunningham*
 (Signature)

LIST OF STANDARD ABBREVIATIONS

ABUT.	ABUTMENT
AGG.	AGGREGATE
APPROX.	APPROXIMATE
A.E.W	APRON ENDWALL
ASPH.	ASPHALTIC
A.D.T.	AVERAGE DAILY TRAFFIC
AZ.	AZIMUTH
BK.	BACK
BEG.	BEGIN
B.M.	BENCH MARK
C/L	CENTER LINE
CONC.	CONCRETE
CONST.	CONSTRUCTION
CO.	COUNTY
C.T.H.	COUNTY TRUNK HIGHWAY
X-SEC.	CROSS SECTION
CR.	CRUSHED
CFS.	CUBIC FEET/SECOND
C.Y., CU. YD.	CUBIC YARD
CULV.	CULVERT
C.P.	CULVERT PIPE
D.O.T.	DEPARTMENT OF TRANSPORTATION
D.H.V.	DESIGN HOUR VOLUME
DIA.	DIAMETER
D.	DIRECTIONAL DISTRIBUTION
DISCH. OR DIS.	DISCHARGE
EA.	EACH
ELECT.	ELECTRIC
EL. OR ELEV.	ELEVATION
EMB.	EMBANKMENT
E.B.S.	EXCAVATION BELOW SUBGRADE
EXIST.	EXISTING
FERT.	FERTILIZE
F.E.	FIELD ENTRANCE
FIN.	FINISHED
FT.	FOOT
F.L.	FLOW LINE
GA.	GAUGE
HORIZ.	HORIZONTAL
CWT.	HUNDREDWEIGHT
INL.	INLET
LT.	LEFT
L.H.F.	LEFT-HAND FORWARD
LIN.	LINEAR
LIN. FT.	LINEAR FOOT
L.S.	LUMP SUM
MAX.	MAXIMUM
MI.	MILE
MISC.	MISCELLANEOUS
N.E.	NORTH EAST
N.W.	NORTH WEST
PAV'T	PAVEMENT
P.C.	POINT OF CURVATURE
P.I.	POINT OF INTERSECTION
P.T.	POINT OF TANGENCY
P.O.T.	POINT OF TANGENT
LB.	POUND
P.E.	PRIVATE ENTRANCE
PROJ.	PROJECT
R.	RANGE
REQ'D	REQUIRED
RT.	RIGHT
R.H.F.	RIGHT-HAND FORWARD
R/W	RIGHT OF WAY
RD.	ROAD
SHR.	SHRINKAGE
SL.	SLOPE
STD.	STANDARD
S.D.D.	STANDARD DETAIL DRAWING
S.T.H.	STATE TRUNK HIGHWAY
STA.	STATION
S.P.P.A.	STRUCTURAL PLATE PIPE ARCH
STRUCT.	STRUCTURE
SURF.	SURFACE
TEL.	TELEPHONE
TN.	TOWN
T.	TRUCKS (PERCENT OF)
UNCL.	UNCLASSIFIED
U.G.	UNDERGROUND
V.	VELOCITY
V.C.	VERTICAL CURVE

UTILITIES

COMMUNICATION LINE
 CLEAR LAKE TELEPHONE
 BRETT ANDERSON
 316 3RD AVE
 CLEAR LAKE, WI 54005
 OFFICE: 715-263-2755
 CELL: 715-641-2292
 BRETT.ANDERSON@CLTCOMM.NET

ELECTRICITY - DISTRIBUTION
 XCEL ENERGY
 JAKE MILLER
 801 KELLER AVE S
 AMERY, WI 54001
 715-441-7120
 JAKE.I.MILLER@XCELENERGY.COM

ELECTRICITY - TRANSMISSION
 XCEL ENERGY
 MITCHELL DIENGER
 414 NICOLLET MALL, 5TH FLOOR
 MINNEAPOLIS, MN 55401
 612-321-3109
 MITCHELL.A.DIENGER@XCELENERGY.COM

GENERAL NOTES

HORIZONTAL CONTROL POINTS AND ANY OTHER SURVEY INFORMATION WILL BE PROVIDED BY NORTHWEST REGIONAL TECHNICAL SERVICES UPON REQUEST.

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

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

DISTRIBUTED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE SALVAGED TOPSOIL, FERTILIZED, SEEDED AND MULCHED OR EMATTED AS DIRECTED BY THE ENGINEER.

PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL CONTACT THE COUNTY SURVEYOR REGARDING MONUMENT AND PROPERTY CORNER PRESERVATION.

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

IT IS THE CONTRACTORS RESPONSIBILITY TO CALL DIGGERS HOTLINE PRIOR TO BEGINNING WORK OPERATIONS AND TO CONFIRM ALL UTILITY LOCATIONS.

EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

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

TYPICAL FINISHED SECTIONS SHOW THE GENERAL ROADWAY FEATURES THROUGHOUT THE PROJECT. SLOPES AND DISTANCES MAY VARY WITHIN THE STATION LIMITS.

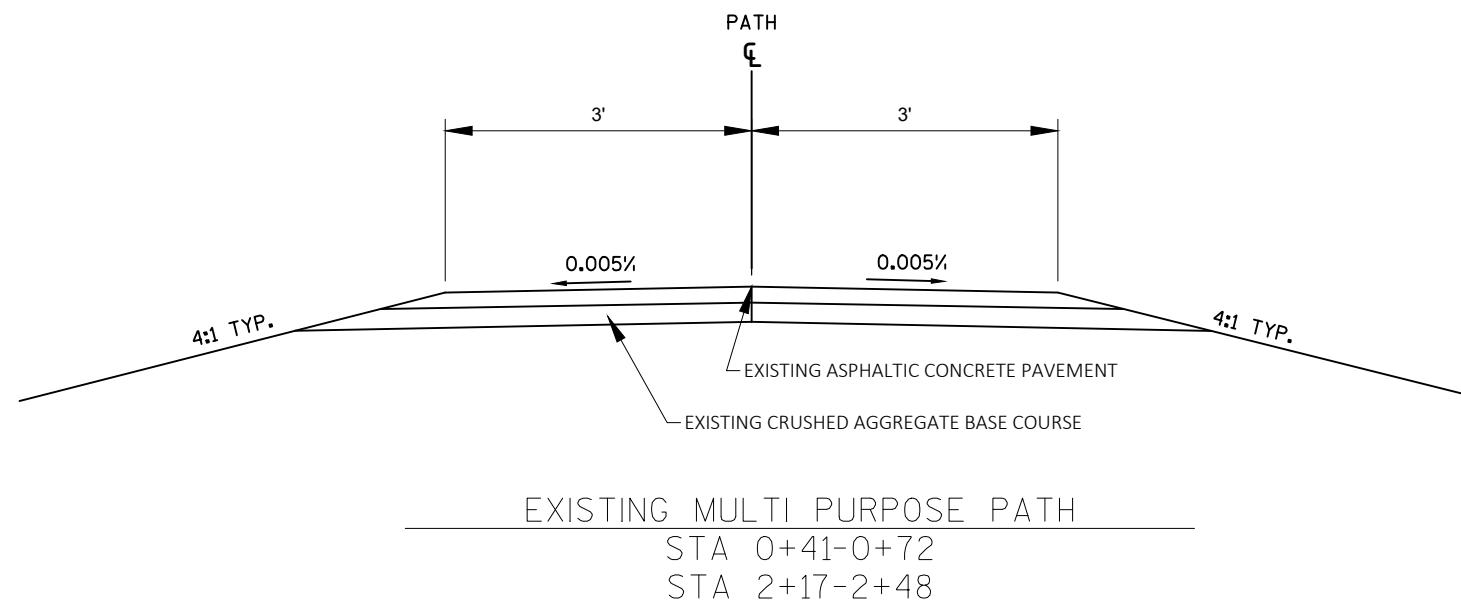
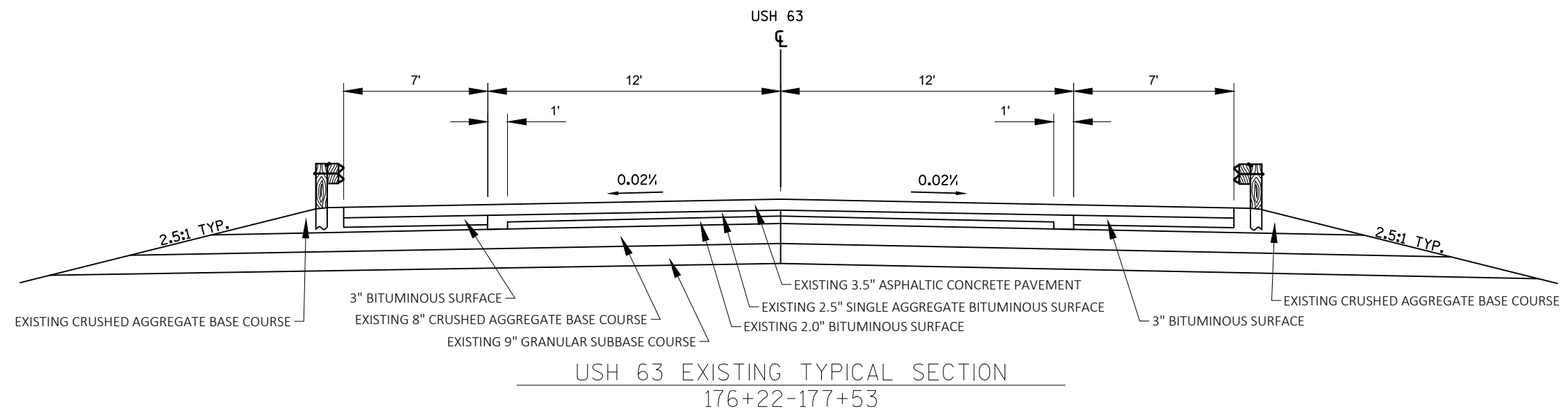


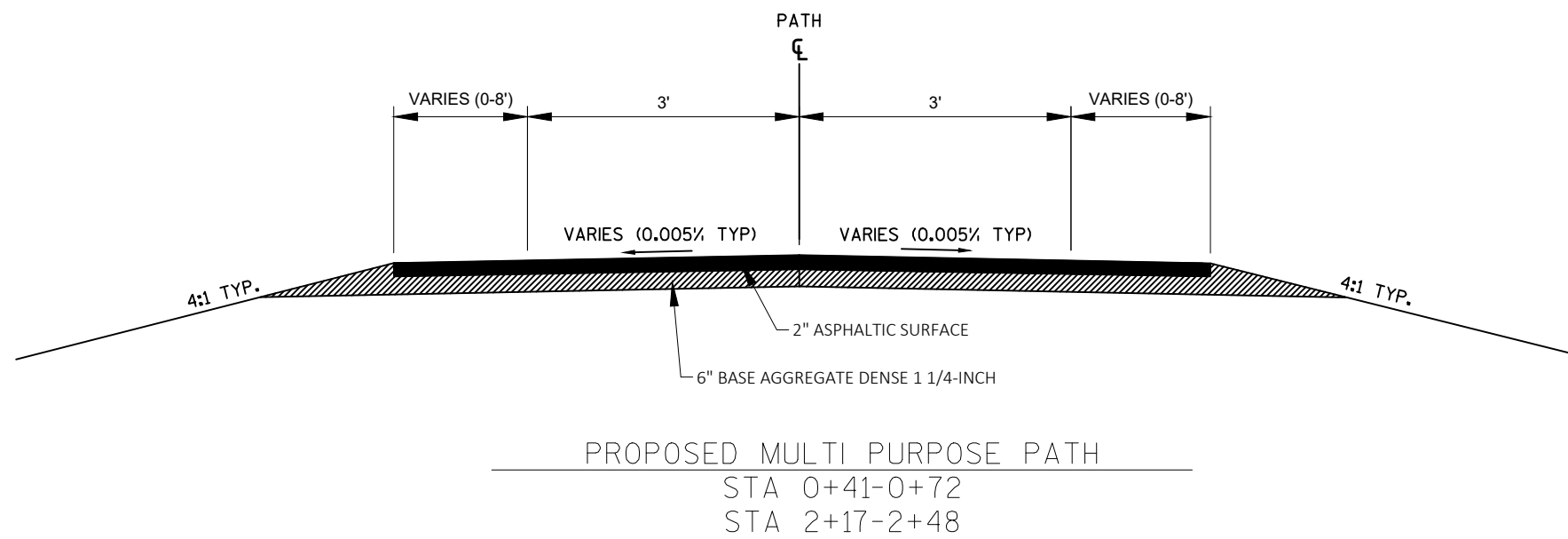
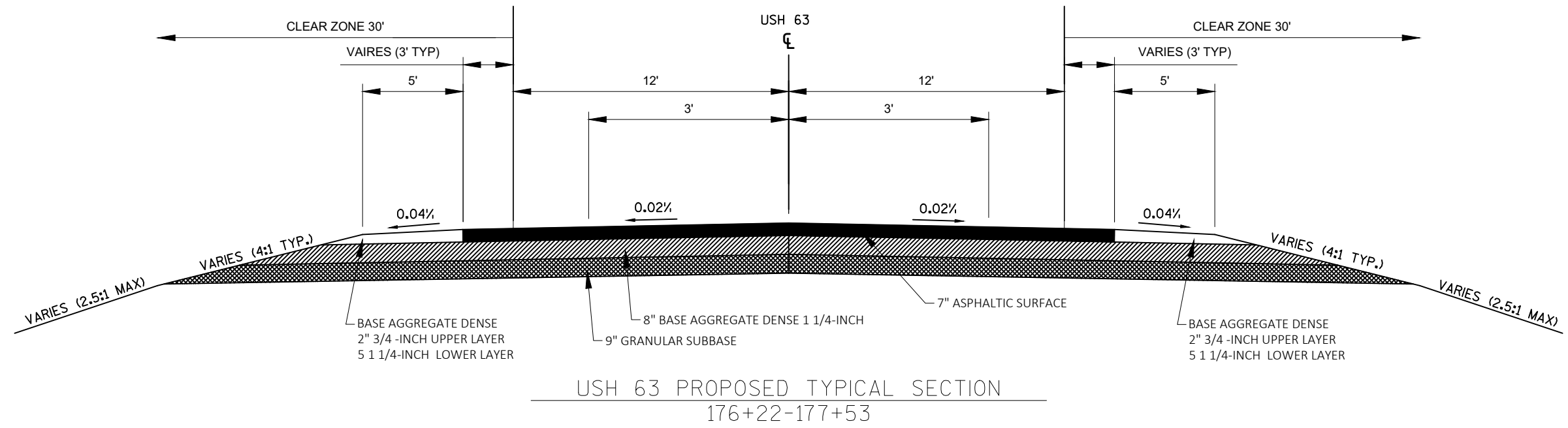
POLK COUNTY HIGHWAY DEPARTMENT

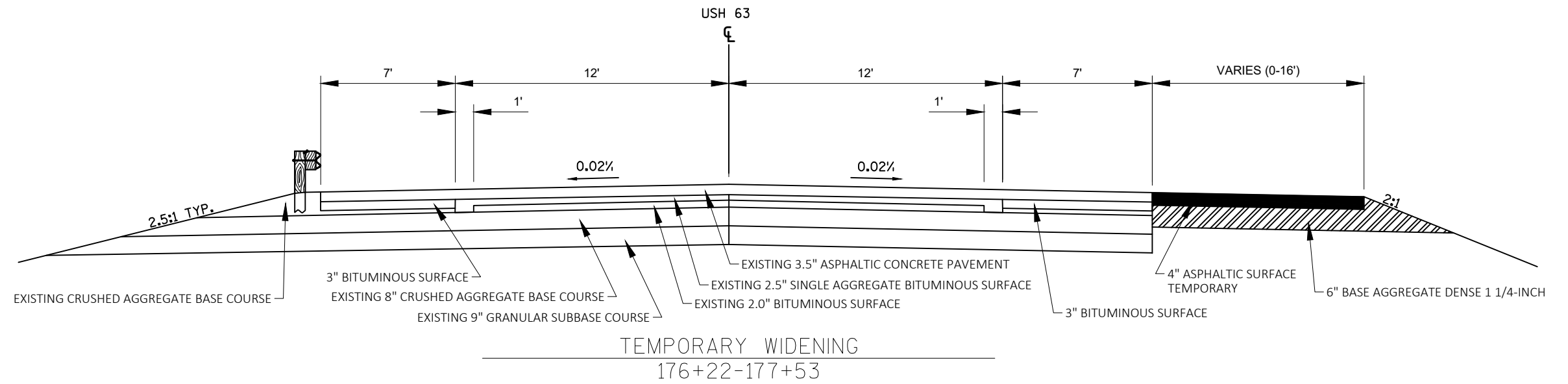
EMIL (MOE) NORBY, HIGHWAY COMMISSIONER
 POLK COUNTY HIGHWAY DEPARTMENT
 PO BOX 248
 900 PHEASANT LANE
 BALSAM LAKE, WI 54810
 (715) 485-8700

WISCONSIN DNR - LIAISON

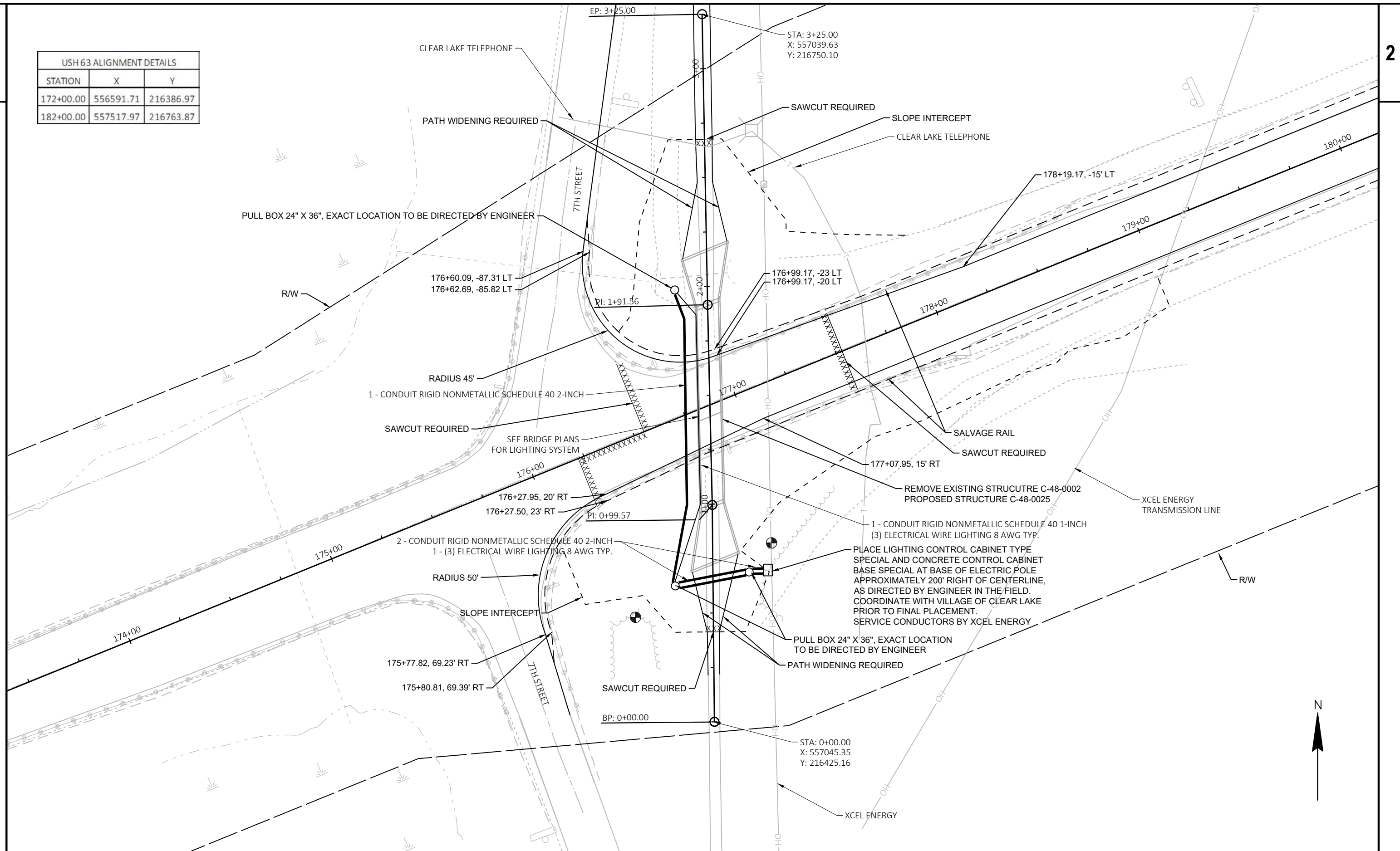
DEPARTMENT OF NATURAL RESOURCES
 SPOONER - DNR SERVICE CENTER
 810 W MAPLE ST
 SPOONER, WI 54801
 ATTN: AMY CRONK
 (715) 635-4229
 AMY.CRONK@WISCONSIN.GOV

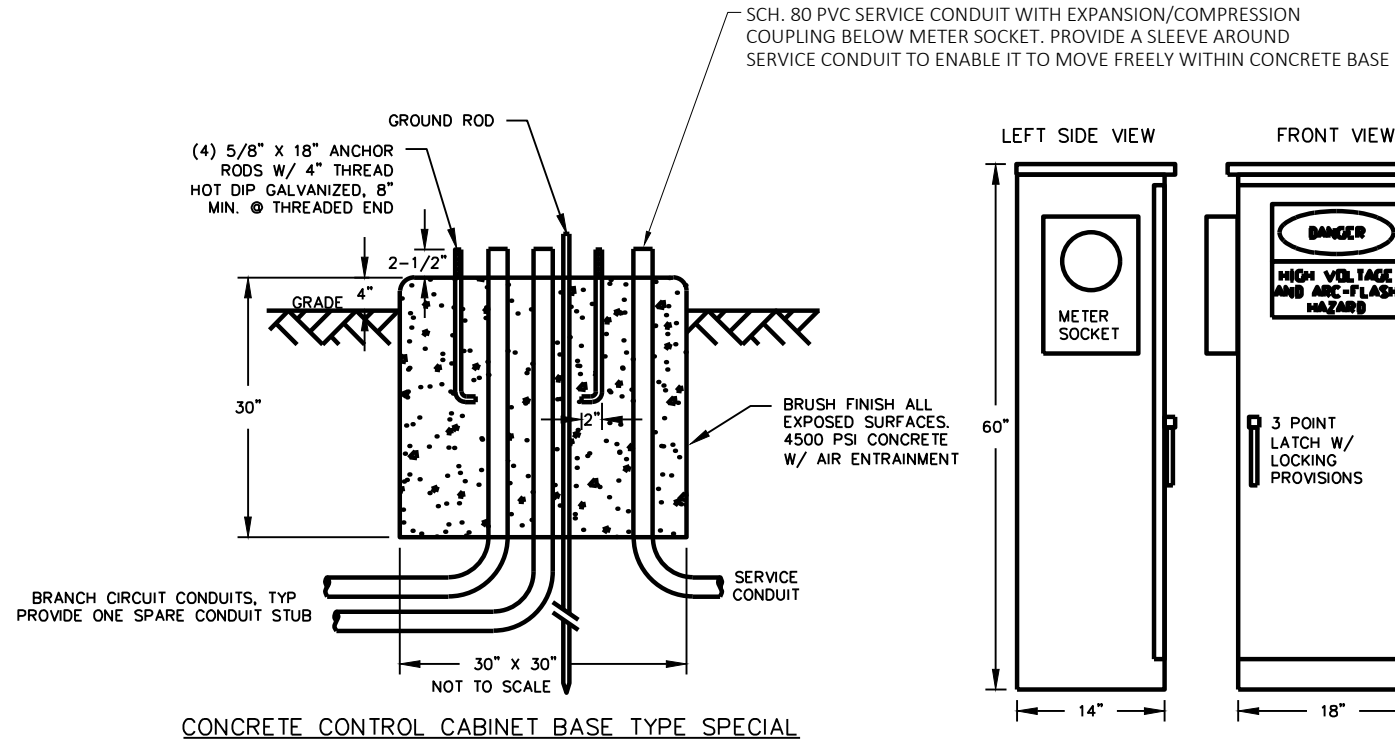
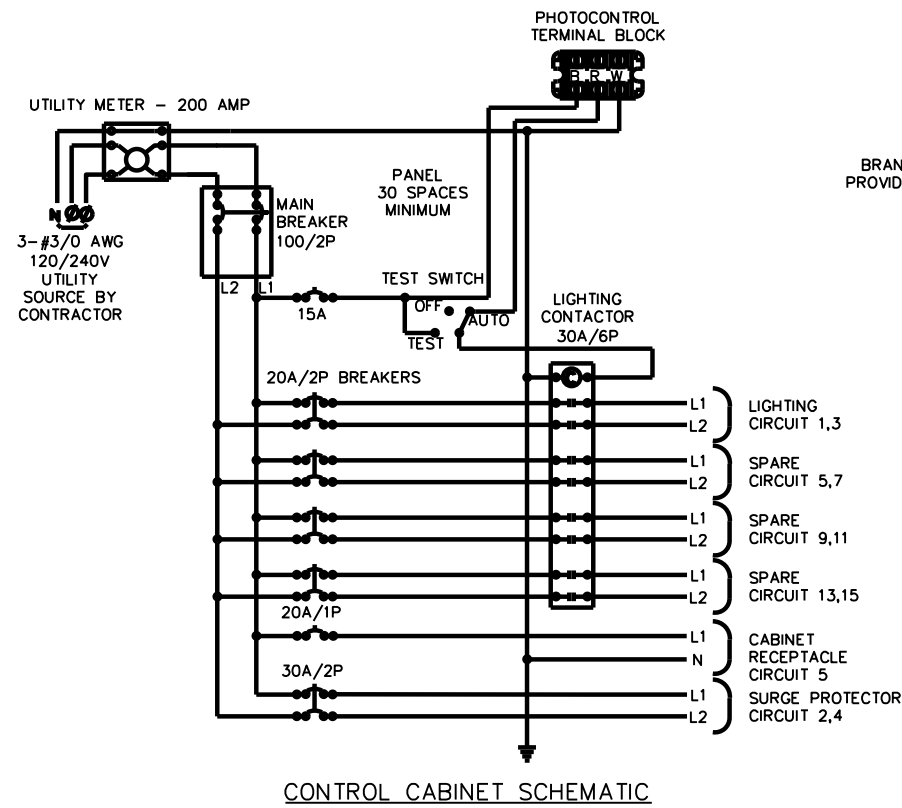






USH 63 ALIGNMENT DETAILS		
STATION	X	Y
172+00.00	556591.71	216386.97
182+00.00	557517.97	216763.87





- CABINET CONSTRUCTION**
- NEMA 3R
 - INTERIOR COMPONENTS MOUNTED ON BACK
 - PANEL BEHIND DEAD FRONT
 - 1/8" ANODIZED ALUMINUM (60 MINUTE CLEAR)
 - NEOPRENE GASKETED DOORS
 - STAINLESS STEEL HARDWARE
 - ETL LISTED IN ACCORDANCE WITH UL508A

- SERVICE CABINET NOTES:**
- A. PROVIDE METER SOCKET PER UTILITY COMPANY REQUIREMENTS.
 - B. CIRCUIT BREAKERS SHALL BE 120/240 VOLT AC, 60Hz AND SHALL BE CLEARLY MARKED WITH THE "ON" AND "OFF" POSITIONS AND IDENTIFIED WITH THE LOAD WHICH IT IS CARRYING.
 - C. SHORT CIRCUIT RATING - 22,000 AIC SYMMETRICAL.
 - D. 3-POSITION SELECTOR SWITCH #800T-J2A STYLE
 - E. CIRCUIT CONTACTORS SHALL HAVE A 240 VOLT RATING, WITH 120 VOLT COIL.
 - F. PROVIDE 50KA SURGE PROTECTOR.
 - G. PROVIDE PANEL WITH DIMENSIONS AS REQUIRED TO FIT EQUIPMENT PROPOSED.
 - H. PROVIDE A 25-OHM GROUND AT CABINET AS PER NEC.
 - I. PROVIDE 20A WR-RATED GFCI RECEPTACLE MOUNTED TO CABINET DEAD-FRONT.
 - J. BOTH PHOTOCONTROL AND ITS SOCKET SHALL BE 3 TERMINAL, POLARIZED, TWIST-LOCK TYPE. IT SHALL BE EQUIPPED WITH A MOV TYPE LIGHTNING ARRESTER.
 - K. COORDINATE XCEL ENERGY SERVICE CONNECTION WITH JAKE MILLER AT 715.268.3227.

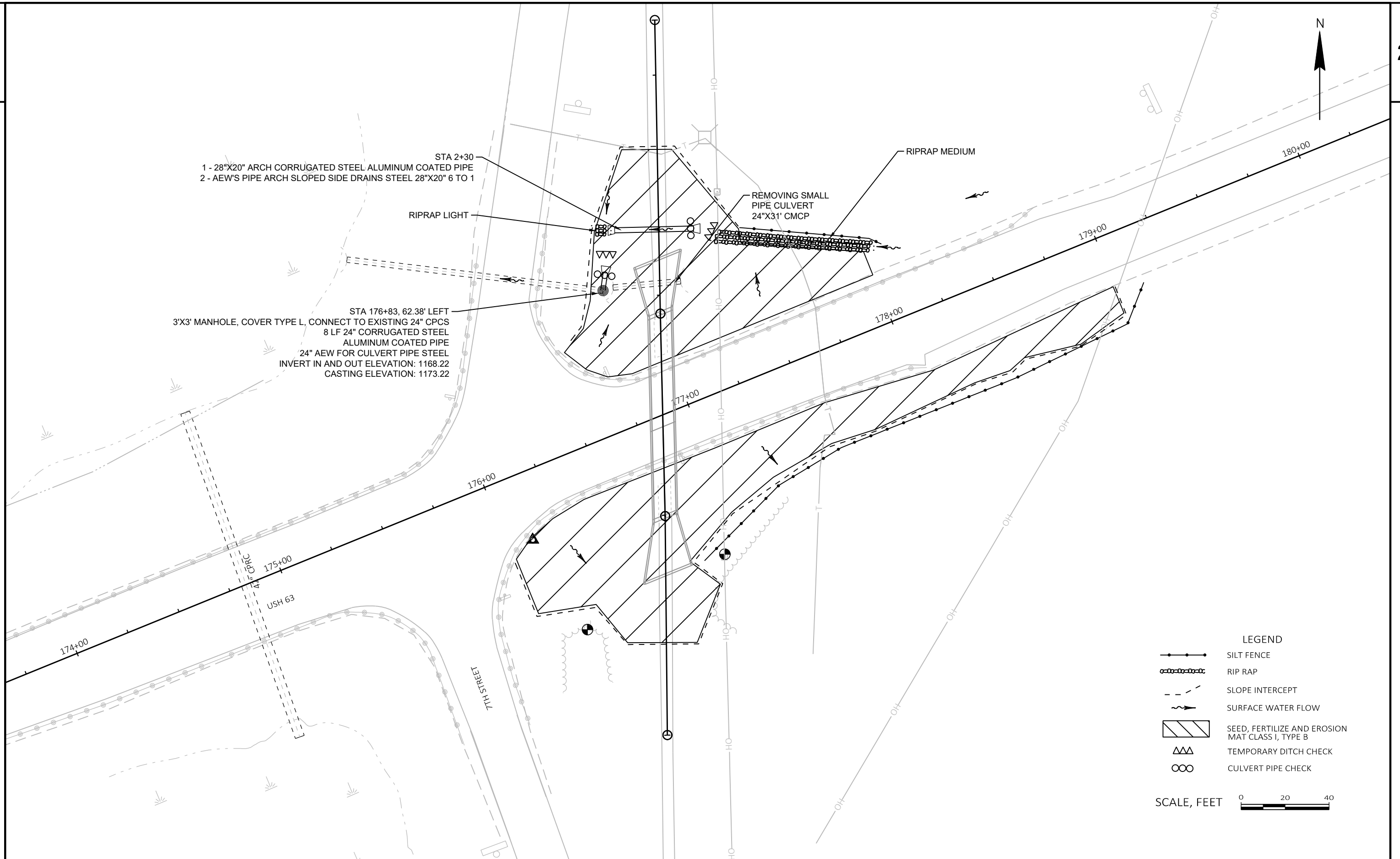
LIGHTING CONTROL CABINET TYPE SPECIAL

PEDESTRIAN UNDERPASS C-48-0025 ELECTRICAL/LIGHTING COMPONENTS DESIGNED BY:

John P. Carlson

WISCONSIN PROFESSIONAL ENGINEER

JOHN P. CARLSON
E-31823
SHOREVIEW, MN



1 - 28"X20" ARCH CORRUGATED STEEL ALUMINUM COATED PIPE
 2 - AEW'S PIPE ARCH SLOPED SIDE DRAINS STEEL 28"X20" 6 TO 1

STA 2+30

RIPRAP MEDIUM

REMOVING SMALL
 PIPE CULVERT
 24"X31' CMCP

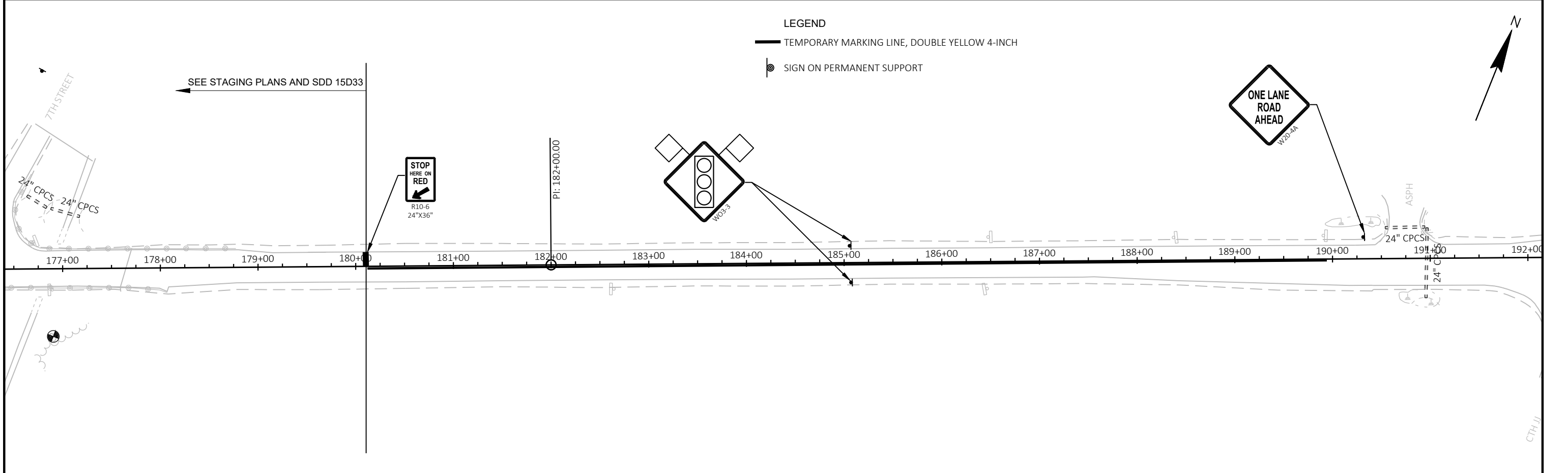
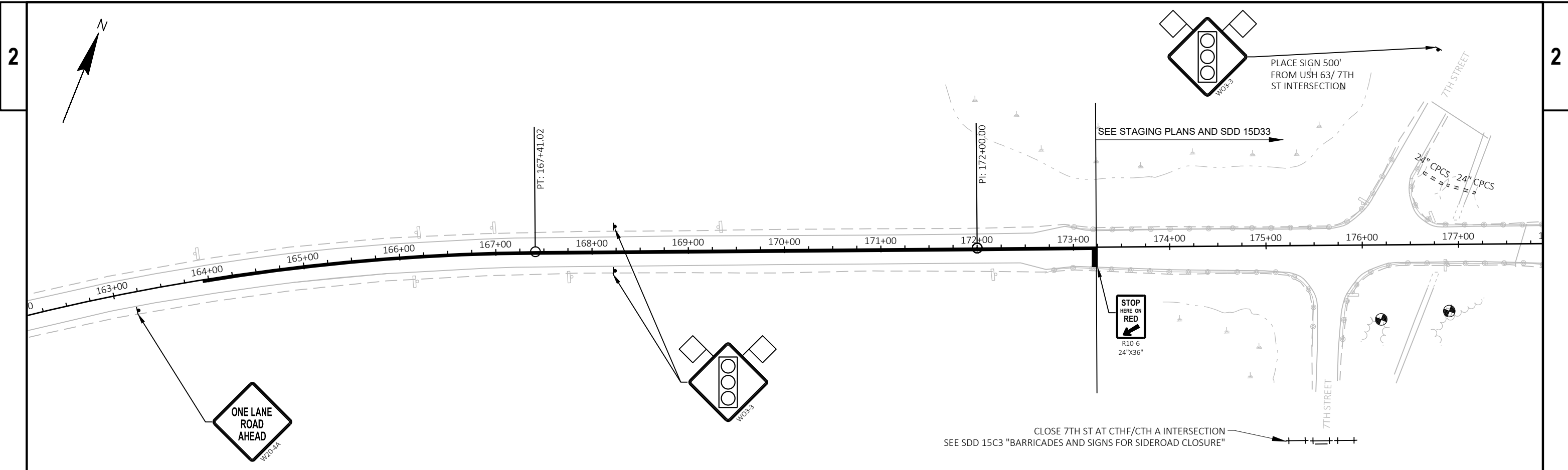
RIPRAP LIGHT

3'X3' MANHOLE, COVER TYPE L, CONNECT TO EXISTING 24" CPCS
 8 LF 24" CORRUGATED STEEL ALUMINUM COATED PIPE
 24" AEW FOR CULVERT PIPE STEEL
 INVERT IN AND OUT ELEVATION: 1168.22
 CASTING ELEVATION: 1173.22

STA 176+83, 62.38' LEFT

- LEGEND**
- SILT FENCE
 - RIP RAP
 - SLOPE INTERCEPT
 - SURFACE WATER FLOW
 - SEED, FERTILIZE AND EROSION MAT CLASS I, TYPE B
 - TEMPORARY DITCH CHECK
 - CULVERT PIPE CHECK

SCALE, FEET



LEGEND

- TEMPORARY MARKING LINE, DOUBLE YELLOW 4-INCH
- ⊙ SIGN ON PERMANENT SUPPORT

PROJECT NO: 1550-06-75	HWY: USH 63	COUNTY: POLK	ADVANCE WARNING	SHEET	E
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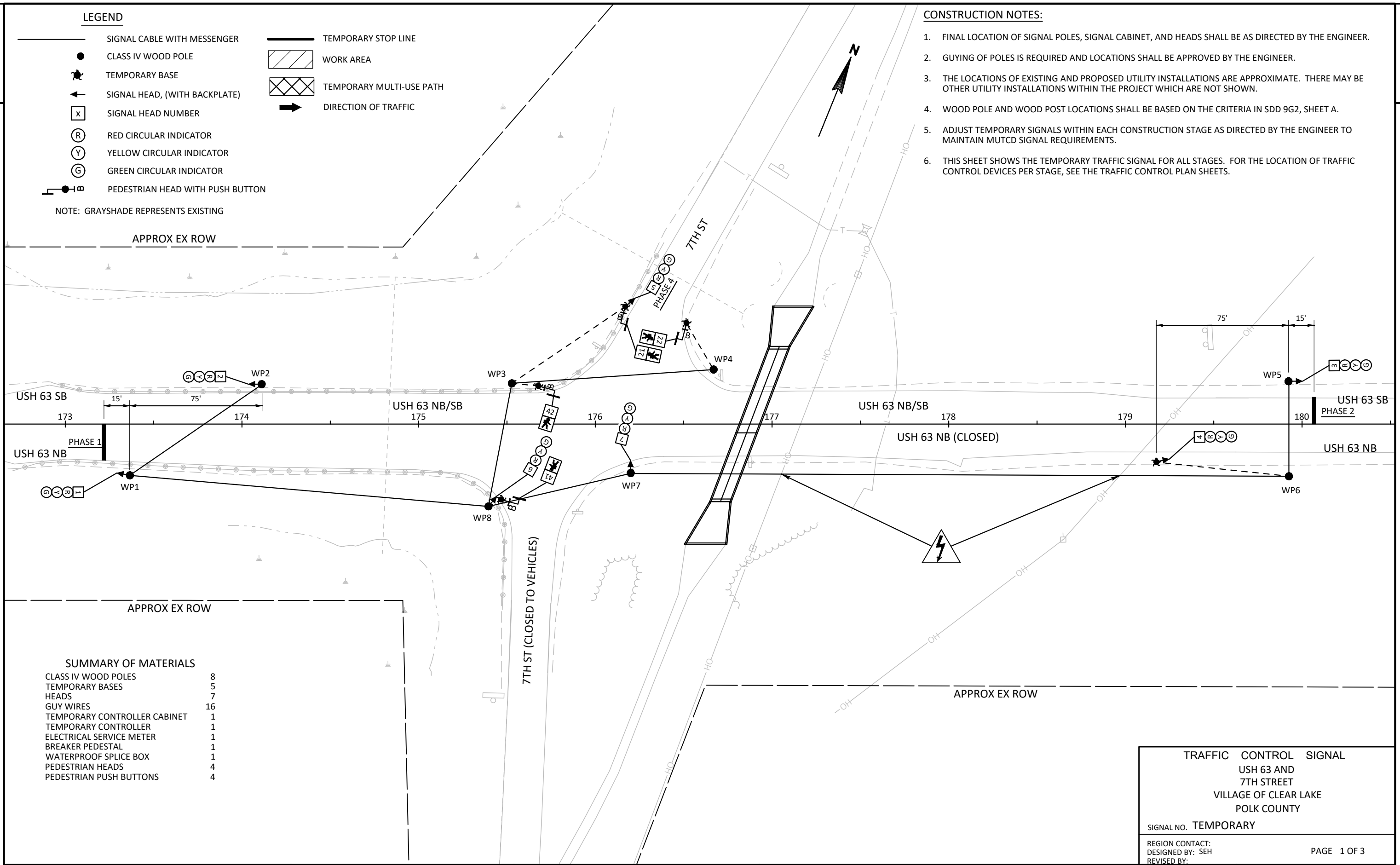
LEGEND

- SIGNAL CABLE WITH MESSENGER
- CLASS IV WOOD POLE
- ⚡ TEMPORARY BASE
- ← SIGNAL HEAD, (WITH BACKPLATE)
- ⓧ SIGNAL HEAD NUMBER
- Ⓡ RED CIRCULAR INDICATOR
- Ⓢ YELLOW CIRCULAR INDICATOR
- Ⓣ GREEN CIRCULAR INDICATOR
- ⚡ PEDESTRIAN HEAD WITH PUSH BUTTON
- TEMPORARY STOP LINE
- ▨ WORK AREA
- ▩ TEMPORARY MULTI-USE PATH
- ➔ DIRECTION OF TRAFFIC

NOTE: GRAYSHADE REPRESENTS EXISTING

CONSTRUCTION NOTES:

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET, AND HEADS SHALL BE AS DIRECTED BY THE ENGINEER.
2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
4. WOOD POLE AND WOOD POST LOCATIONS SHALL BE BASED ON THE CRITERIA IN SDD 9G2, SHEET A.
5. ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
6. THIS SHEET SHOWS THE TEMPORARY TRAFFIC SIGNAL FOR ALL STAGES. FOR THE LOCATION OF TRAFFIC CONTROL DEVICES PER STAGE, SEE THE TRAFFIC CONTROL PLAN SHEETS.



SUMMARY OF MATERIALS

CLASS IV WOOD POLES	8
TEMPORARY BASES	5
HEADS	7
GUY WIRES	16
TEMPORARY CONTROLLER CABINET	1
TEMPORARY CONTROLLER	1
ELECTRICAL SERVICE METER	1
BREAKER PEDESTAL	1
WATERPROOF SPLICE BOX	1
PEDESTRIAN HEADS	4
PEDESTRIAN PUSH BUTTONS	4

TRAFFIC CONTROL SIGNAL
USH 63 AND
7TH STREET
VILLAGE OF CLEAR LAKE
POLK COUNTY

SIGNAL NO. TEMPORARY

REGION CONTACT:
DESIGNED BY: SEH
REVISED BY:

PAGE 1 OF 3

SIGNAL TIMING INFORMATION

PHASE	Φ1	Φ2	Φ4**
DIRECTION	NB	SB	EB
MIN GREEN	15.0	15.0	10.0
WALK	0.0	7.0	7.0
PED CLEAR*	0.0	10.0	20.0
VEHICLE EXT	5.0	5.0	3.5
MAX1	40.0	40.0	20.0
MAX2	40.0	40.0	20.0
YELLOW	2.8	2.8	2.8
RED CLEAR	19.1	19.1	13.3
MIN GAP	3.0	3.0	3.5

*PED CLEAR TO UTILIZE RED CLEAR TIME
 **7 SECOND CALLING DELAY FOR STOP LINE DETECTION
 ***ALL SIGNALS SHALL REST IN RED UNTIL A CALL IS RECEIVED BY THE STOP LINE DETECTION

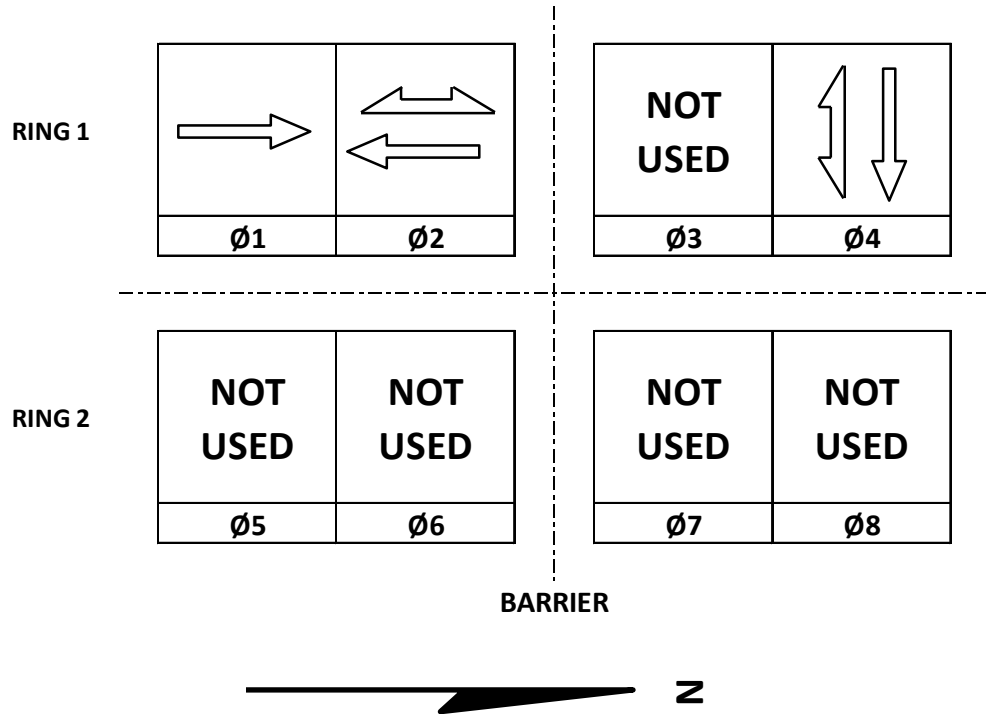
TRAFFIC CONTROL SIGNAL
 USH 63 AND
 7TH STREET
 VILLAGE OF CLEAR LAKE
 POLK COUNTY

SIGNAL NO. TEMPORARY

REGION CONTACT:
 DESIGNED BY: SEH
 REVISED BY:

PAGE 2 OF 3

	HEAD NUMBERS	FLASH
Ø1	1,2	R
Ø2	3,4	R
Ø3		
Ø4	5,6,7	R
Ø5		
Ø6		
Ø7		
Ø8		
Ø2P	21,22	
Ø4P	41,42	
Ø6P		
Ø8P		
OLA		
OLB		
OLC		
OLD		



CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1			---	X
2			---	X
3				
4			---	X
5				
6				
7				
8				

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	X
CLOSED LOOP	
TWISTED PAIR	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	
CELL MODEM	

TYPE OF COORDINATION	
NONE	X
TBC	
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER	
CONTROLLER NO:	S-
SIGNAL SYSTEM NO:	SS-

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

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

DETECTOR LOGIC

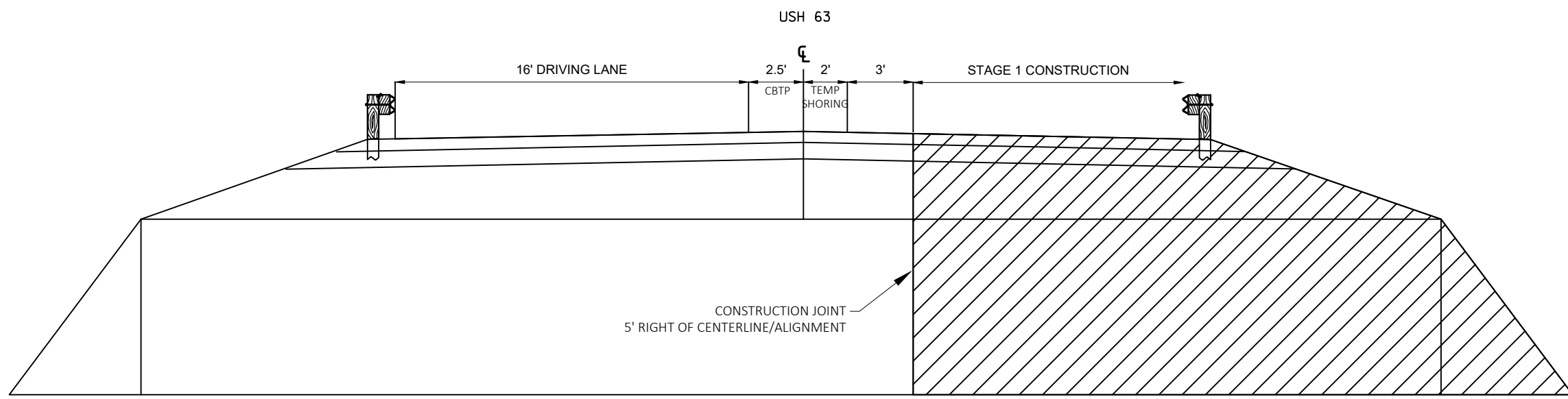
DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR*(S)	11	21	41					
CALLED PHASE	1	2	2					
CALL OPTION	X	X	X					
DELAY TIME			X					
EXTENTION OPTION	X	X	X					
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

DETECTOR INPUT	19	17	23	21	27	25	31	29
PLAN LOOP DETECTOR*(S)								
CALLED PHASE								
CALL OPTION								
DELAY TIME								
EXTENTION OPTION								
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

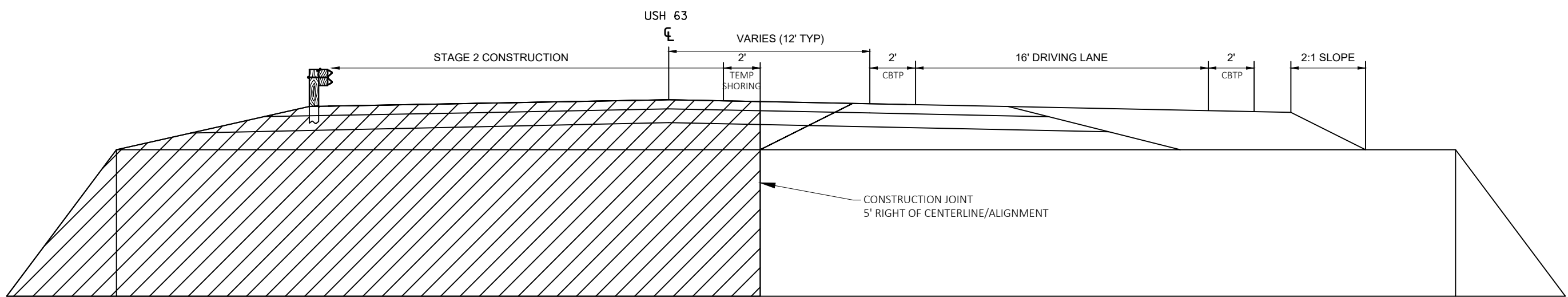
DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR*(S)								
CALLED PHASE								
CALL OPTION								
DELAY TIME								
EXTENTION OPTION								
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

DETECTOR INPUT	20	18	24	22	28	26	32	30
PLAN LOOP DETECTOR*(S)								
CALLED PHASE								
CALL OPTION								
DELAY TIME								
EXTENTION OPTION								
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

USH 63 & 7TH STREET (TEMP SIGNAL)	
VILLAGE OF CLEAR LAKE	
POLK COUNTY	
SIGNAL NO: TEMP	CABINET TYPE: TS1-S
CONTROLLER TYPE: ECONOLITE	
DATE: 5/2022	PAGE NO. 4 OF 4







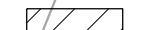








STAGE 1 CONSTRUCTION

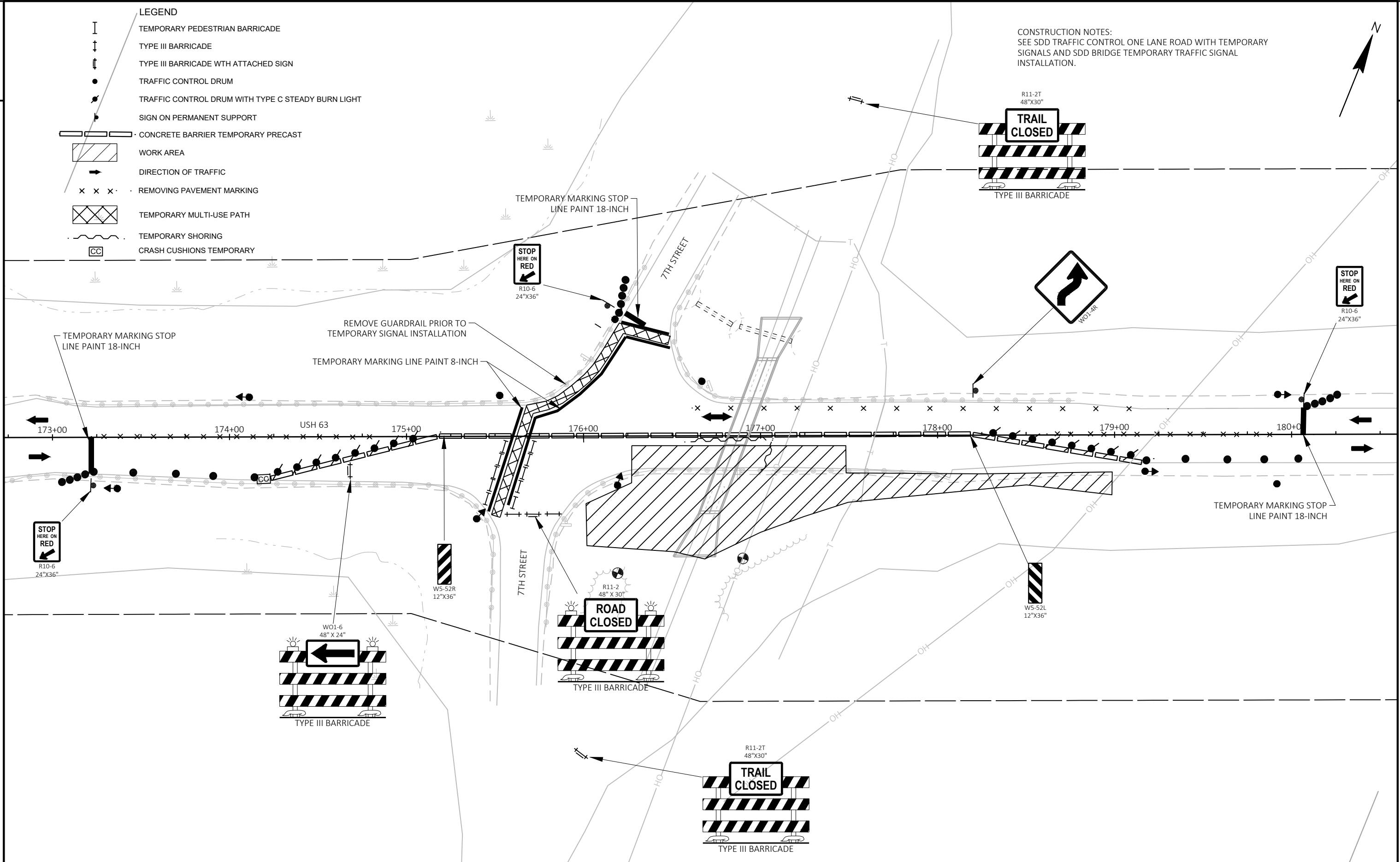


STAGE 2 CONSTRUCTION

LEGEND

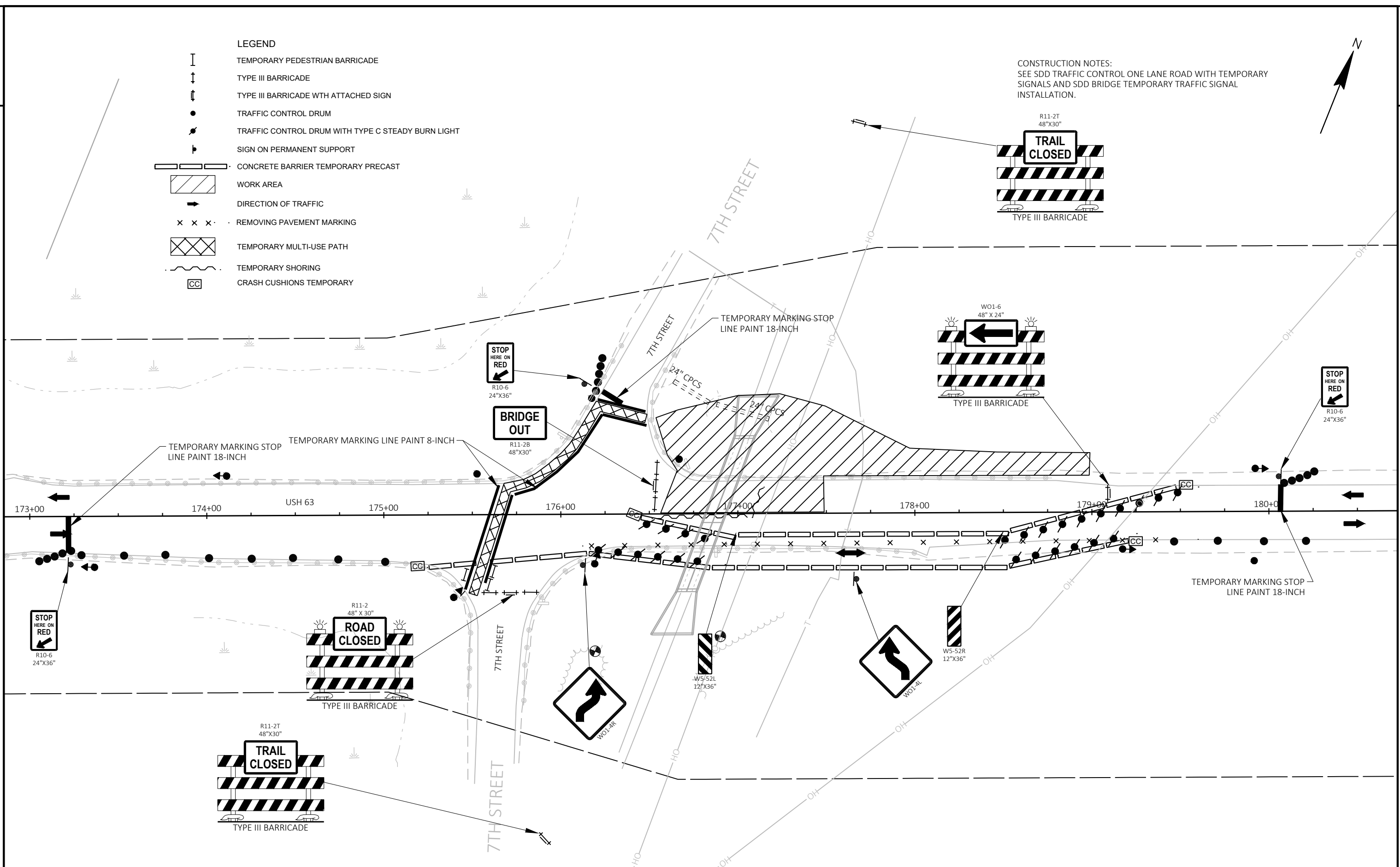
-  TEMPORARY PEDESTRIAN BARRICADE
-  TYPE III BARRICADE
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
-  SIGN ON PERMANENT SUPPORT
-  CONCRETE BARRIER TEMPORARY PRECAST
-  WORK AREA
-  DIRECTION OF TRAFFIC
-  REMOVING PAVEMENT MARKING
-  TEMPORARY MULTI-USE PATH
-  TEMPORARY SHORING
-  CRASH CUSHIONS TEMPORARY

CONSTRUCTION NOTES:
SEE SDD TRAFFIC CONTROL ONE LANE ROAD WITH TEMPORARY SIGNALS AND SDD BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION.



- LEGEND**
- TEMPORARY PEDESTRIAN BARRICADE
 - TYPE III BARRICADE
 - TYPE III BARRICADE WITH ATTACHED SIGN
 - TRAFFIC CONTROL DRUM
 - TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
 - SIGN ON PERMANENT SUPPORT
 - CONCRETE BARRIER TEMPORARY PRECAST
 - WORK AREA
 - DIRECTION OF TRAFFIC
 - REMOVING PAVEMENT MARKING
 - TEMPORARY MULTI-USE PATH
 - TEMPORARY SHORING
 - CRASH CUSHIONS TEMPORARY

CONSTRUCTION NOTES:
SEE SDD TRAFFIC CONTROL ONE LANE ROAD WITH TEMPORARY SIGNALS AND SDD BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION.



Estimate Of Quantities By Plan Sets

1550-06-75

Line	Item	Item Description	Unit	Total	Qty
0006	203.0100	Removing Small Pipe Culverts	EACH	1.000	1.000
0008	203.0220	Removing Structure (structure) 01. C-48-0002	EACH	1.000	1.000
0018	204.0165	Removing Guardrail	LF	583.000	583.000
0020	205.0100	Excavation Common	CY	334.000	334.000
0022	206.2001	Excavation for Structures Culverts (structure) 01. C-48-0025	EACH	1.000	1.000
0024	208.0100	Borrow	CY	648.000	648.000
0026	208.1100	Select Borrow	CY	180.000	180.000
0028	210.2500	Backfill Structure Type B	TON	1,951.000	1,951.000
0036	213.0100	Finishing Roadway (project) 03. 1550-06-75	EACH	1.000	1.000
0038	305.0110	Base Aggregate Dense 3/4-Inch	TON	30.000	30.000
0040	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	490.000	490.000
0044	311.0115	Breaker Run	CY	126.000	126.000
0048	455.0605	Tack Coat	GAL	104.000	104.000
0068	465.0105	Asphaltic Surface	TON	245.000	245.000
0074	465.0125	Asphaltic Surface Temporary	TON	100.000	100.000
0080	504.0100	Concrete Masonry Culverts	CY	179.000	179.000
0082	505.0400	Bar Steel Reinforcement HS Structures	LB	18,680.000	18,680.000
0084	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	4,160.000	4,160.000
0086	511.1200	Temporary Shoring (structure) 01. C-48-0025	SF	795.000	795.000
0088	516.0500	Rubberized Membrane Waterproofing	SY	24.000	24.000
0090	516.0610.S	Sheet Membrane Waterproofing for Buried Structures 01. C-48-0025	SY	321.000	321.000
0110	521.1024	Apron Endwalls for Culvert Pipe Steel 24-Inch	EACH	1.000	1.000
0112	521.1228	Apron Endwalls for Pipe Arch Steel 28x20-Inch	EACH	2.000	2.000
0114	521.6124	Culvert Pipe Corrugated Steel Aluminum Coated 24-Inch	LF	8.000	8.000
0116	521.6728	Pipe Arch Corrugated Steel Aluminum Coated 28x20-Inch	LF	36.000	36.000
0128	603.8000	Concrete Barrier Temporary Precast Delivered	LF	706.000	706.000
0130	603.8125	Concrete Barrier Temporary Precast Installed	LF	1,209.000	1,209.000
0132	603.8500	Anchoring Concrete Barrier Temporary Precast	LF	1,209.000	1,209.000
0134	606.0100	Riprap Light	CY	3.000	3.000
0136	606.0200	Riprap Medium	CY	22.000	22.000
0138	611.0545	Manhole Covers Type L	EACH	1.000	1.000
0140	611.2033	Manholes 3x3-FT	EACH	1.000	1.000
0142	614.0905	Crash Cushions Temporary	EACH	5.000	5.000
0152	618.0100	Maintenance And Repair of Haul Roads (project) 03. 1550-06-75	EACH	1.000	1.000
0154	619.1000	Mobilization	EACH	0.160	0.160
0160	625.0500	Salvaged Topsoil	SY	2,065.000	2,065.000
0162	627.0200	Mulching	SY	400.000	400.000
0164	628.1504	Silt Fence	LF	310.000	310.000
0166	628.1520	Silt Fence Maintenance	LF	310.000	310.000
0168	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0170	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0174	628.2004	Erosion Mat Class I Type B	SY	1,665.000	1,665.000
0180	628.7504	Temporary Ditch Checks	LF	40.000	40.000
0182	628.7555	Culvert Pipe Checks	EACH	8.000	8.000
0186	629.0210	Fertilizer Type B	CWT	1.310	1.310
0188	630.0120	Seeding Mixture No. 20	LB	46.000	46.000
0190	630.0200	Seeding Temporary	LB	11.000	11.000
0202	642.5401	Field Office Type D	EACH	0.160	0.160
0204	643.0300	Traffic Control Drums	DAY	2,700.000	2,700.000

Estimate Of Quantities By Plan Sets

1550-06-75

Line	Item	Item Description	Unit	Total	Qty
0206	643.0420	Traffic Control Barricades Type III	DAY	540.000	540.000
0208	643.0705	Traffic Control Warning Lights Type A	DAY	540.000	540.000
0210	643.0715	Traffic Control Warning Lights Type C	DAY	1,200.000	1,200.000
0214	643.0900	Traffic Control Signs	DAY	1,200.000	1,200.000
0216	643.3105	Temporary Marking Line Paint 4-Inch	LF	5,563.000	5,563.000
0222	643.3205	Temporary Marking Line Paint 8-Inch	LF	236.000	236.000
0224	643.3805	Temporary Marking Stop Line Paint 18-Inch	LF	45.000	45.000
0226	643.5000	Traffic Control	EACH	0.160	0.160
0228	644.1810	Temporary Pedestrian Barricade	LF	80.000	80.000
0230	645.0105	Geotextile Type C	SY	354.000	354.000
0232	645.0120	Geotextile Type HR	SY	106.000	106.000
0254	646.9000	Marking Removal Line 4-Inch	LF	1,025.000	1,025.000
0256	650.4000	Construction Staking Storm Sewer	EACH	1.000	1.000
0258	650.4500	Construction Staking Subgrade	LF	687.000	687.000
0260	650.5000	Construction Staking Base	LF	687.000	687.000
0264	650.6000	Construction Staking Pipe Culverts	EACH	1.000	1.000
0266	650.6501	Construction Staking Structure Layout (structure) 01. C-48-0025	EACH	1.000	1.000
0270	650.8501	Construction Staking Electrical Installations (project) 01. 1550-06-75	EACH	1.000	1.000
0276	650.9911	Construction Staking Supplemental Control (project) 03. 1550-06-75	EACH	1.000	1.000
0278	650.9920	Construction Staking Slope Stakes	LF	987.000	987.000
0280	652.0210	Conduit Rigid Nonmetallic Schedule 40 1-Inch	LF	170.000	170.000
0282	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	340.000	340.000
0284	653.0154	Pull Boxes Non-Conductive 24x36-Inch	EACH	3.000	3.000
0286	653.0210	Junction Boxes 10x10x6-Inch	EACH	2.000	2.000
0288	655.0620	Electrical Wire Lighting 8 AWG	LF	930.000	930.000
0290	661.0101	Temporary Traffic Signals for Bridges (structure) 01. C-48-0025	EACH	1.000	1.000
0292	690.0150	Sawing Asphalt	LF	486.000	486.000
0294	715.0502	Incentive Strength Concrete Structures	DOL	1,800.000	1,800.000
0302	SPV.0060	Special 01. Lighting Control Cabinet Type Special	EACH	1.000	1.000
0304	SPV.0060	Special 02. Concrete Control Cabinet Base Type Special	EACH	1.000	1.000
0306	SPV.0060	Special 03. Underdeck Luminaire Type Special	EACH	4.000	4.000

3

203.0100
REMOVING SMALL
PIPE/CULVERT
EACH

CATEGORY	STATION	LOCATION	EACH
0010	2+05	PATH	1
TOTAL 0010			1

204.0165
REMOVING
GUARDRAIL
LF

CATEGORY	STATION TO	STATION	LOCATION	LF
0010	175+78	- 178+07	USH 63	290
0010	176+68	- 178+77	USH 63	293
TOTAL 0010				583

205.0100
EXCAVATION
COMMON
CY

CATEGORY	STATION TO	STATION	LOCATION	CY	REMARKS
0010	0+41	- 0+69	PATH	28	
0010	2+20	- 2+50	PATH	96	
0010	176+23	- 179+21	USH 63	210	BY PASS REMOVAL
TOTAL 0010				334	

3

208.0100
BORROW
CY

CATEGORY	STATION TO	STATION	LOCATION	CY	REMARKS
0010	176+00	- 179+00	USH 63	398	
0010	176+23	- 179+21	USH 63	250	BY PASS
TOTAL 0010				648	

208.1100
SELECT BORROW
(GRADE 2)
CY

CATEGORY	STATION TO	STATION	LOCATION	CY	REMARKS
0010	176+22	- 177+53	USH 63	80	STAGE 1
0010	176+55	- 177+53	USH 63	100	STAGE 2
TOTAL 0010				180	

213.0100.01
FINISHING ROADWAY
(PROJECT) (01. 1550-06-75)
EACH

CATEGORY	STATION TO	STATION	LOCATION	EACH
0010	176+00	- 179+00	USH 63	1
TOTAL 0010				1

305.0110
BASE AGGREGATE
DENSE 3/4-INCH
TON

CATEGORY	STATION TO	STATION	LOCATION	TON	REMARKS
0010	176+55	- 177+53	USH 63	15	LT, TOP DRESS
0010	176+22	- 177+53	USH 63	15	RT, TOP DRESS
TOTAL 0010				30	

305.0120
BASE AGGREGATE
DENSE 1 1/4-INCH
TON

CATEGORY	STATION TO	STATION	LOCATION	TON	REMARKS
0010	176+22	- 177+53	USH 63	120	STAGE 1
0010	176+55	- 177+53	USH 63	180	STAGE 2
0010	176+17	- 179+22	USH 63	150	BY PASS
0010	0+41	- 0+72	PATH	20	
0010	2+17	- 2+48	PATH	20	
TOTAL 0010				490	

455.0605
TACK COAT
GAL

CATEGORY	STATION TO	STATION	LOCATION	GAL	REMARKS
0010	176+23	- 179+21	USH 63	20	BY PASS
0010	176+22	- 177+53	USH 63	44	STAGE 1
0010	176+55	- 177+53	USH 63	40	STAGE 2
TOTAL 0010				104	

465.0105
ASPHALTIC
SURFACE
TON

CATEGORY	STATION TO	STATION	LOCATION	TON	REMARKS
0010	176+22	- 177+53	USH 63	123	STAGE 1
0010	176+55	- 177+53	USH 63	110	STAGE 2
0010	0+41	- 0+72	PATH	6	
0010	2+17	- 2+48	PATH	6	
TOTAL 0010				245	

465.0125
ASPHALTIC SURFACE
TEMPORARY
TON

CATEGORY	STATION TO	STATION	LOCATION	TON	REMARKS
0010	176+23	- 179+21	USH 63	100	BY PASS
TOTAL 0010				100	

3

3

521.1024
APRON ENDWALLS FOR
CULVERT PIPE STEEL 24-INCH

CATEGORY	STATION	LOCATION	EACH
0010	176+83	STH 48	1
TOTAL 0010			1

521.1228
APRON ENDWALLS FOR PIPE
ARCH STEEL 28X20-INCH

CATEGORY	STATION	LOCATION	EACH
0010	2+30	PATH	2
TOTAL 0010			2

521.6124
CULVERT PIPE CORRUGATED STEEL
ALUMINUM COATED 24-INCH

CATEGORY	STATION	LOCATION	LF
0010	176+83	STH 48	8
TOTAL 0010			8

521.6728
PIPE ARCH CORRUGATED STEEL
ALUMINUM COATED 28X20-INCH

CATEGORY	STATION	LOCATION	LF
0010	2+30	PATH	36
TOTAL 0010			36

603.8000
CONCRETE BARRIER TEMPORARY
PRECAST DELIVERED

CATEGORY	STATION	TO	STATION	LOCATION	LF	REMARKS
0010	174+22	-	179+25	USH 63	503	STAGE 1
0010	176+43	-	179+50	USH 63	203	STAGE 2
TOTAL 0010					706	

603.8125
CONCRETE BARRIER
TEMPORARY
PRECAST INSTALLED

603.8500
ANCHORING
CONCRETE BARRIER
TEMPORARY PRECAST

CATEGORY	STATION	TO	STATION	LOCATION	LF	LF	REMARKS
0010	174+22	-	179+25	USH 63	503	503	STAGE 1
0010	175+24	-	179+23	USH 63	399	399	STAGE 2
0010	176+43	-	179+50	USH 63	307	307	STAGE 2
TOTAL 0010					1,209	1,209	

606.0200
RIPRAP
MEDIUM

CATEGORY	STATION	TO	STATION	LOCATION	CY	REMARKS
0010	177+34	-	178+08	USH 63	22	DITCH (8'X75')
TOTAL 0010					22	

606.0100
RIPRAP
LIGHT

CATEGORY	STATION	LOCATION	CY
0010	2+30	PATH	3
TOTAL 0010			3

611.0545
MANHOLE
COVERS TYPE L

CATEGORY	STATION	LOCATION	EACH
0010	176+83	STH 48	1
TOTAL 0010			1

611.2033
MANHOLES 3X3-FT

CATEGORY	STATION	LOCATION	EACH
0010	176+83	STH 48	1
TOTAL 0010			1

614.0905
CRASH CUSHION
TEMPORARY

CATEGORY	STATION	LOCATION	EACH	BACK WIDTH FT	OBJECT MARKING PATTERN	CRASH TEST LEVEL	TRAFFIC DIRECTION	CRASH CUSHION SHIELDS	REMARKS
0010	174+24	USH 63	1	2	OM-3R (W05-58R)	TL-3	BIDIRECTIONAL	TEMPORARY BARRIER	STAGE 1
0010	175+25	USH 63	1	2	OM-3R (W05-58R)	TL-3	BIDIRECTIONAL	TEMPORARY BARRIER	STAGE 2
0010	176+50	USH 63	1	2	OM-3L (W05-58L)	TL-3	BIDIRECTIONAL	TEMPORARY BARRIER	STAGE 2
0010	179+20	USH 63	1	2	OM-3L (W05-58L)	TL-3	BIDIRECTIONAL	TEMPORARY BARRIER	STAGE 2
0010	179+47	USH 63	1	2	OM-3R (W05-58R)	TL-3	BIDIRECTIONAL	TEMPORARY BARRIER	STAGE 2
TOTAL 0010			5						

3

3

				619.1000
				MOBILIZATION
CATEGORY	STATION	TO	STATION	LOCATION
				EACH
0010	176+00	-	179+00	USH 63
				0.16
TOTAL 0010				0.16

				625.0500		
				SALVAGED		
				TOPSOIL		
CATEGORY	STATION	TO	STATION	LOCATION	SY	REMARKS
0010	176+00	-	179+00	USH 63	865	SOUTH
0010	176+55	-	178+00	USH 63	800	NORTH
0010	176+23	-	179+21	USH 63	400	BY PASS
TOTAL 0010					2,065	

				627.0200		
				MULCHING		
CATEGORY	STATION	TO	STATION	LOCATION	SY	REMARKS
0010	176+23	-	179+21	USH 63	400	BY PASS
TOTAL 0010					400	

				628.1504	628.1520
				SILT FENCE	SILT FENCE
				MAINTENANCE	
CATEGORY	STATION	TO	STATION	LOCATION	LF
0010	177+40	-	178+05	USH 63	65
0010	176+80	-	179+13	USH 63	245
TOTAL 0010					310

				628.1905	628.1910
				MOBILIZATIONS	MOBILIZATIONS
				EROSION CONTROL	EROSION CONTROL
CATEGORY	STATION	TO	STATION	LOCATION	EACH
0010	176+00	-	179+00	USH 63	3
TOTAL 0010					3

				628.2004		
				EROSION MAT		
				CLASS I TYPE B		
CATEGORY	STATION	TO	STATION	LOCATION	SY	REMARKS
0010	176+00	-	179+00	USH 63	865	SOUTH
0010	176+55	-	178+00	USH 63	800	NORTH
TOTAL 0010					1,665	

				628.7504
				TEMPORARY
				DITCH CHECKS
CATEGORY	STATION	TO	STATION	LOCATION
				LF
0010	2+10	-		PATH
0010	2+30	-		PATH
TOTAL 0010				40

				628.7555
				CULVERT
				PIPE CHECK
CATEGORY	STATION	TO	STATION	LOCATION
				EACH
0010	176+83	-		USH 63
0010	2+30	-		PATH
TOTAL 0010				8

				629.0210		
				FERTILIZER TYPE B		
CATEGORY	STATION	TO	STATION	LOCATION	CWT	REMARKS
0010	176+00	-	179+00	USH 63	0.55	SOUTH
0010	176+55	-	178+00	USH 63	0.51	NORTH
0010	176+23	-	179+21	USH 63	0.25	BY PASS
TOTAL 0010					1.31	

3

3

630.0120 SEEDING MIXTURE NO. 20					
CATEGORY	STATION TO	STATION	LOCATION	LB	REMARKS
0010	176+00 -	179+00	USH 63	24	SOUTH
0010	176+55 -	178+00	USH 63	22	NORTH
TOTAL 0010				46	

630.0200 SEEDING TEMPORARY					
CATEGORY	STATION TO	STATION	LOCATION	LB	REMARKS
0010	176+23 -	179+21	USH 63	11	BY PASS
TOTAL 0010				11	

642.5401 FIELD OFFICE TYPE D EACH					
CATEGORY	STATION TO	STATION	LOCATION		REMARKS
0010	176+00 -	179+00	USH 63	0.16	
TOTAL 0010				0.16	

643.0300 TRAFFIC CONTROL DRUMS					
CATEGORY	STATION TO	STATION	LOCATION	DAY	REMARKS
0010	173+00 -	180+25	USH 63	1200	STAGE 1 (40/DAY)
0010	174+50 -	180+25	USH 63	1500	STAGE 2 (50/DAY)
TOTAL 0010				2,700	

643.0420 TRAFFIC CONTROL BARRICADES TYPE III					
CATEGORY	STATION TO	STATION	LOCATION	DAY	REMARKS
0010	173+00 -	180+25	USH 63	240	STAGE 1 (8/DAY)
0010	174+50 -	180+25	USH 63	300	STAGE 2 (10/DAY)
TOTAL 0010				540	

643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A					
CATEGORY	STATION TO	STATION	LOCATION	DAY	REMARKS
0010	173+00 -	180+25	USH 63	240	STAGE 1 (8/DAY)
0010	174+50 -	180+25	USH 63	300	STAGE 2 (10/DAY)
TOTAL 0010				540	

643.3105 TEMPORARY MARKING LINE PAINT 4-INCH					
CATEGORY	STATION TO	STATION	LOCATION	LF	REMARKS
0010	174+21 -	179+03	USH 63	482	STAGE 1
0010	166+21 -	173+21	USH 63	1400	STAGE 1
0010	167+76 -	174+76	USH 63	1400	STAGE 2
0010	175+24 -	179+23	USH 63	399	STAGE 2
0010	176+43 -	179+50	USH 63	307	STAGE 2
0010	180+06 -	187+06	USH 63	1400	STAGE 2
0010	173+00 -	180+00	USH 63	175	PASSING DASH
TOTAL 0010				5,563	

643.3205 TEMPORARY MARKING PAINT 8-INCH					
CATEGORY	STATION TO	STATION	LOCATION	LF	REMARKS
0010	175+46 -	176+50	USH 63	236	TEMP PATH
TOTAL 0010				236	

643.3805 TEMPORARY MARKING STOP LINE PAINT 18-INCH			
CATEGORY	STATION	LOCATION	LF
0010	174+75	USH 63	15
0010	180+15	USH 63	15
0010		7TH STREET	15
TOTAL 0010			45

3

3

643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C						
CATEGORY	STATION	TO	STATION	LOCATION	DAY	REMARKS
0010	173+00	-	180+25	USH 63	450	STAGE 1 (15/DAY)
0010	174+50	-	180+25	USH 63	750	STAGE 2 (25/DAY)
				TOTAL 0010	1,200	

643.0900 TRAFFIC CONTROL SIGNS						
CATEGORY	STATION	TO	STATION	LOCATION	DAY	REMARKS
0010	173+00	-	180+25	USH 63	600	STAGE 1 (20/DAY)
0010	174+50	-	180+25	USH 63	600	STAGE 2 (20/DAY)
				TOTAL 0010	1,200	

CATEGORY	STATION	TO	STATION	LOCATION	EACH
0010	176+00	-	179+00	USH 63	0.16
				TOTAL 0010	0.16

644.181 TEMPORARY PEDESTRIAN BARRICADE				
CATEGORY	STATION	LOCATION	LF	REMARKS
0010	175+75	USH 63	80	
			TOTAL 0010	80

645.0120 GEOTEXTILE TYPE HR						
CATEGORY	STATION	TO	STATION	LOCATION	SY	REMARKS
0010	177+34	-	178+08	USH 63	90	DITCH
0010	2+30			PATH	16	
				TOTAL 0010	106	

646.9000 MARKING REMOVAL LINE 4-INCH						
CATEGORY	STATION	TO	STATION	LOCATION	LF	REMARKS
0010	173+25	-	175+25	USH 63	200	
0010	178+25	-	180+25	USH 63	200	
0010	176+50	-	179+25	USH 63	275	
0010	176+00	-	179+50	USH 63	350	
				TOTAL 0010	1,025	

650.4500 CONSTRUCTION STAKING SUBGRADE						
CATEGORY	STATION	TO	STATION	LOCATION	LF	REMARKS
0010	176+22	-	177+53	USH 63	131	STAGE 1
0010	175+55	-	177+53	USH 63	198	STAGE 2
0010	176+23	-	179+23	USH 63	300	BY PASS
0010	0+41	-	0+69	PATH	28	
0010	2+20	-	2+50	PATH	30	
				TOTAL 0010	687	

650.5000 CONSTRUCTION STAKING BASE						
CATEGORY	STATION	TO	STATION	LOCATION	LF	REMARKS
0010	176+22	-	177+53	USH 63	131	STAGE 1
0010	175+55	-	177+53	USH 63	198	STAGE 2
0010	176+23	-	179+23	USH 63	300	BY PASS
0010	0+41	-	0+69	PATH	28	
0010	2+20	-	2+50	PATH	30	
				TOTAL 0010	687	

650.6000 CONSTRUCTION STAKING PIPE CULVERTS			
CATEGORY	STATION	LOCATION	EACH
0010	2+30	PATH	1
		TOTAL 0010	1

650.9910.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 1550-06-75)					
CATEGORY	STATION	TO	STATION	LOCATION	LS
0010	176+00	-	179+00	USH 63	1
				TOTAL 0010	1

650.4000 CONSTRUCTION STAKING STORM SEWER			
CATEGORY	STATION	LOCATION	EACH
0010	176+83	USH 63	1
		TOTAL 0010	1

650.9920
CONSTRUCTION
STAKING SLOPE STAKES

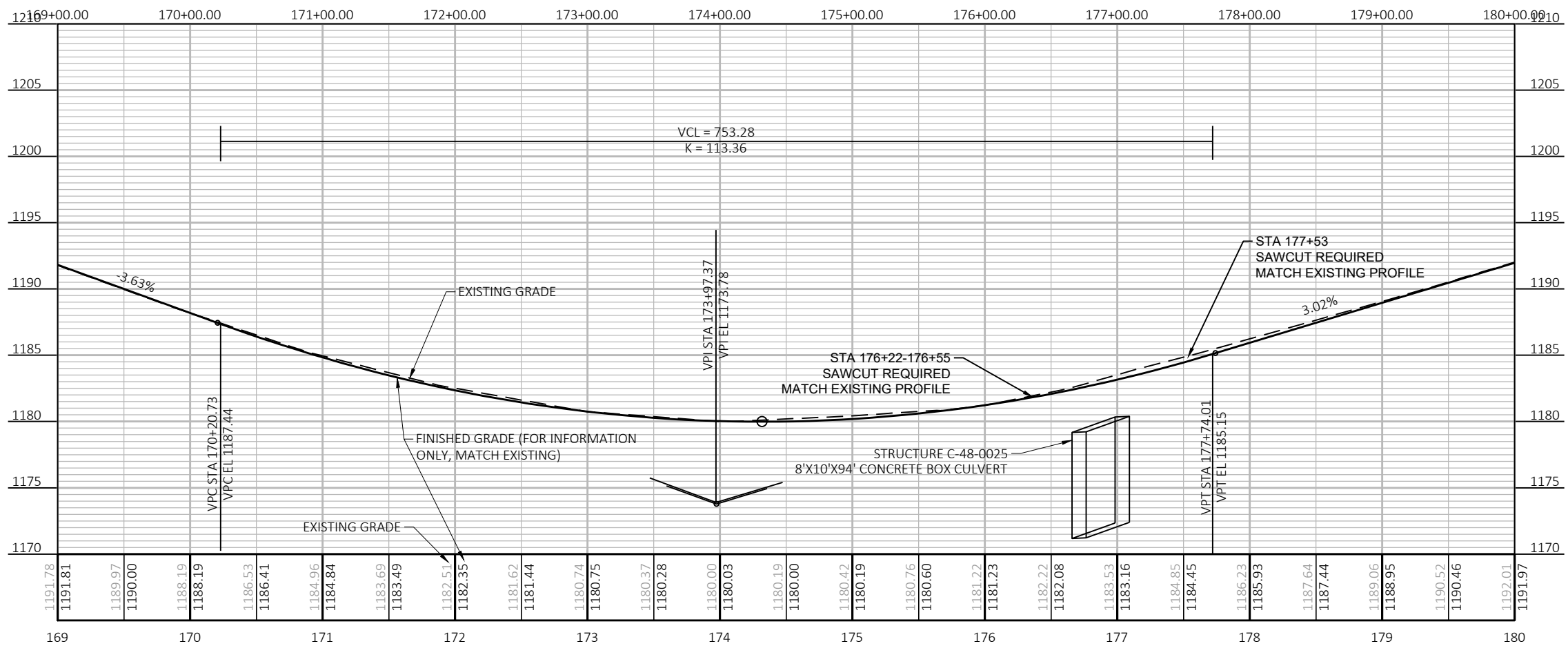
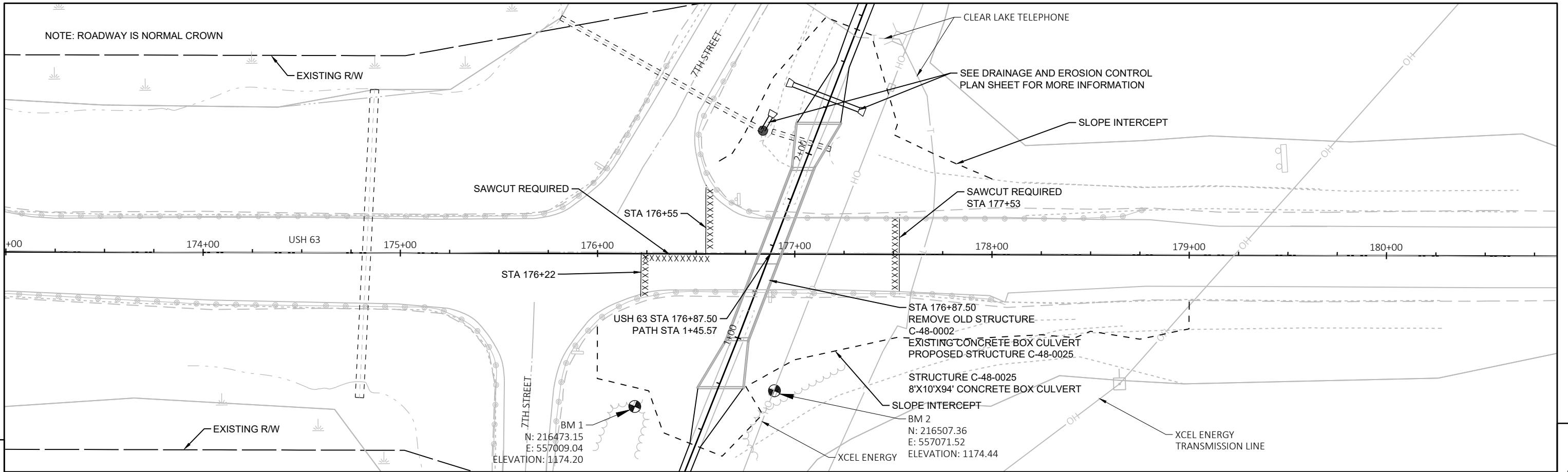
CATEGORY	STATION	TO	STATION	LOCATION	LF	REMARKS
0010	176+22	-	177+53	USH 63	131	STAGE 1
0010	175+55	-	177+53	USH 63	198	STAGE 2
0010	176+23	-	179+23	USH 63	300	BY PASS
0010	0+41	-	0+69	PATH	28	
0010	2+20	-	2+50	PATH	30	
0010	176+23	-	179+23	USH 63	300	BY PASS REMOVAL
TOTAL 0010					987	

661.0100.01
TEMPORARY TRAFFIC SIGNALS FOR
BRIDGES (STRUCTURE) (01. C-48-0025)

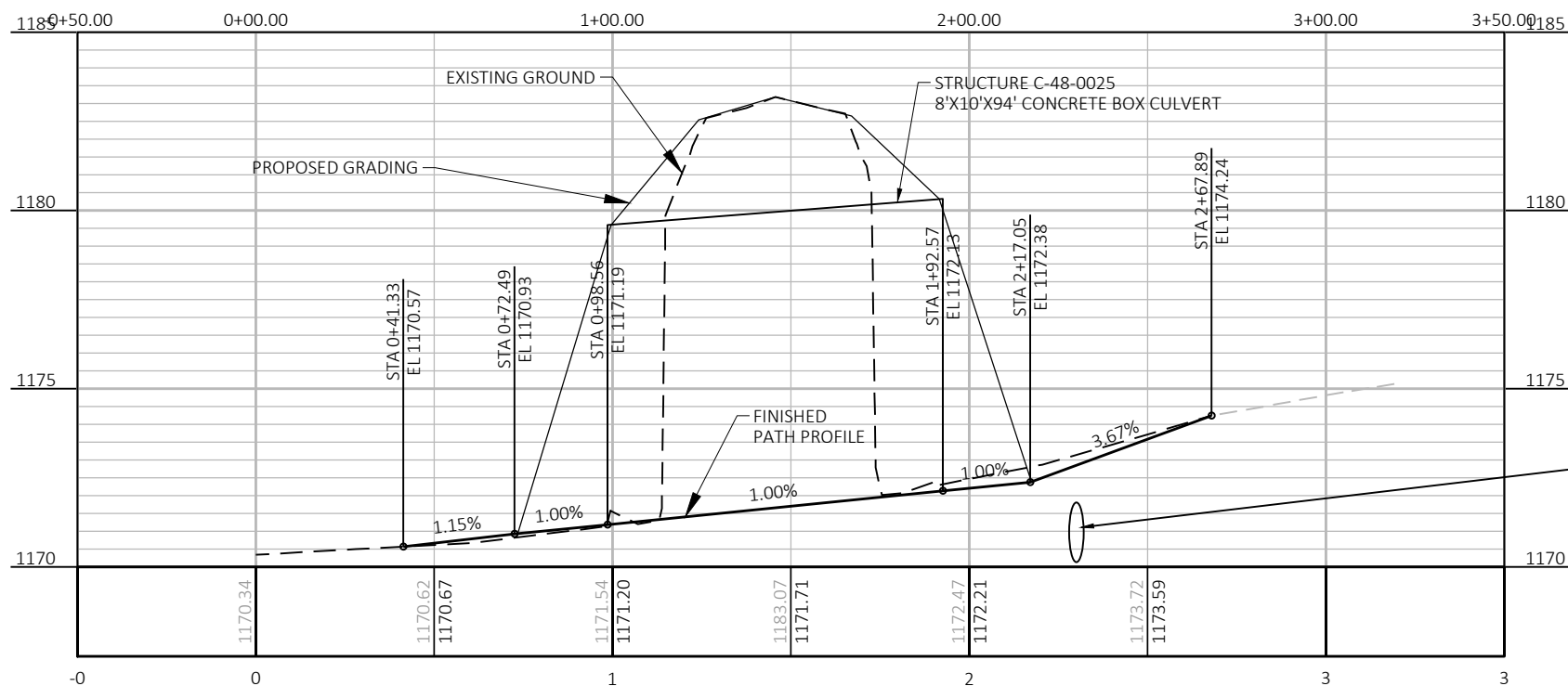
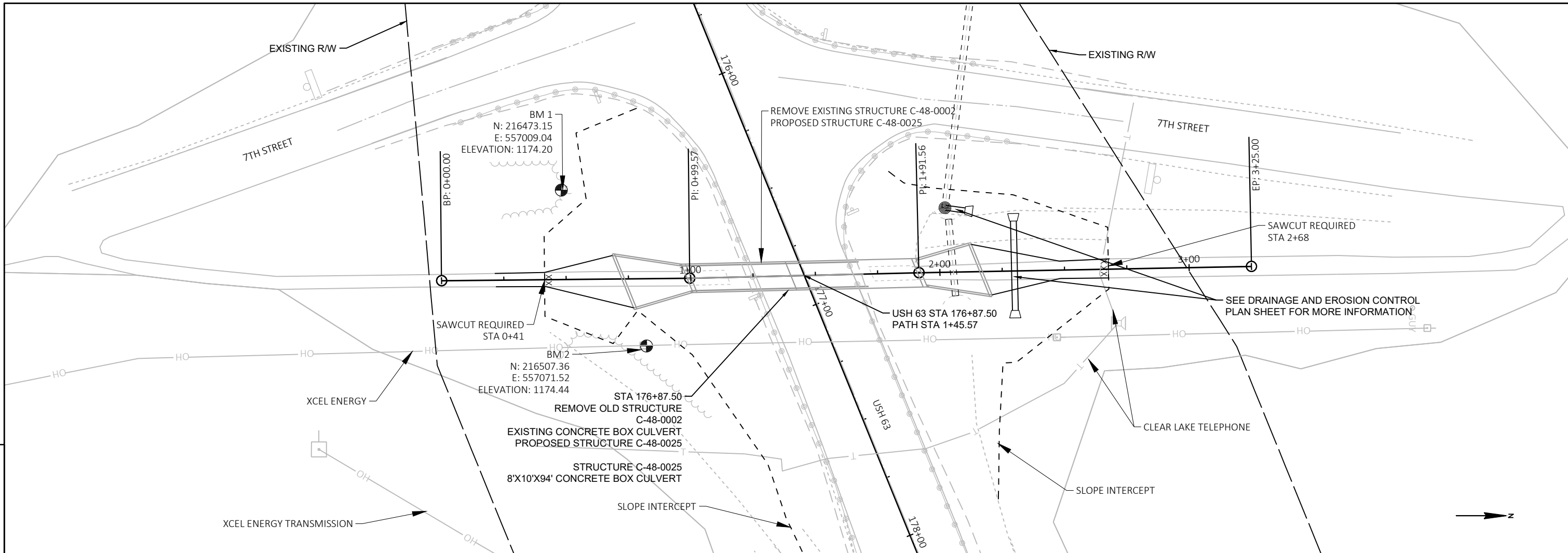
CATEGORY	STATION	TO	STATION	LOCATION	LS
0010	176+00	-	179+00	USH 63	1
TOTAL 0010					1

690.0150
SAWING
ASPHALT

CATEGORY	STATION	TO	STATION	LOCATION	LF	REMARKS
0010	176+22	-	176+55	USH 63	90	
0010	176+22	-	177+56	USH 63	134	
0010	177+53	-		USH 63	40	
0010	0+41	-		PATH	6	
0010	2+48	-		PATH	6	
0010	176+23	-	179+21	USH 63	210	BY PASS REMOVAL
TOTAL 0010					486	



PROJECT NO: 1550-06-75 HWY: USH 63 COUNTY: POLK USH 63 PLAN AND PROFILE SHEET **E**



PROJECT NO: 1550-06-75

HWY: USH 63

COUNTY: POLK

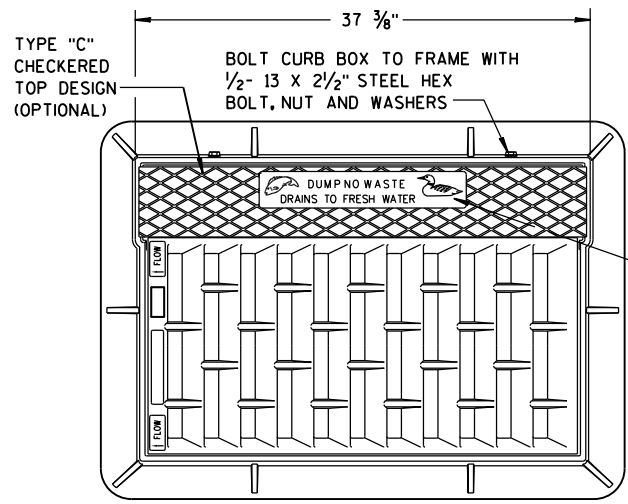
PATH PLAN AND PROFILE

SHEET

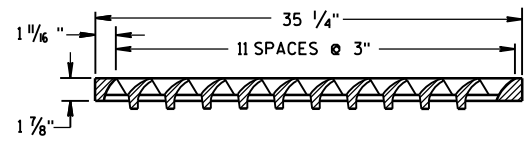
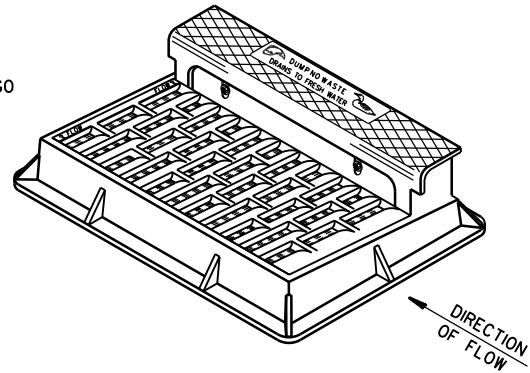
E

Standard Detail Drawing List

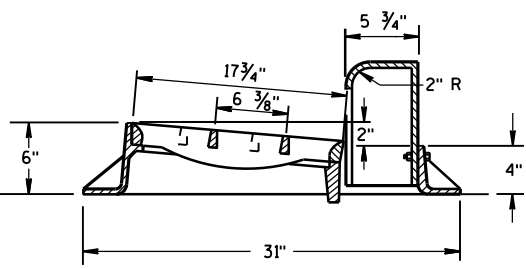
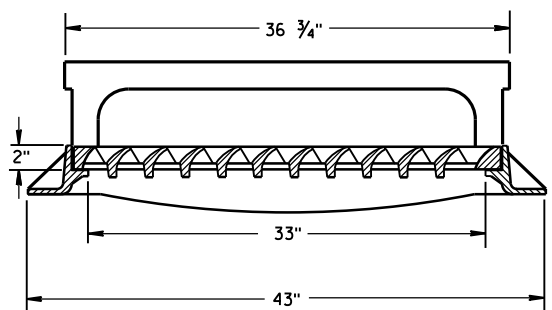
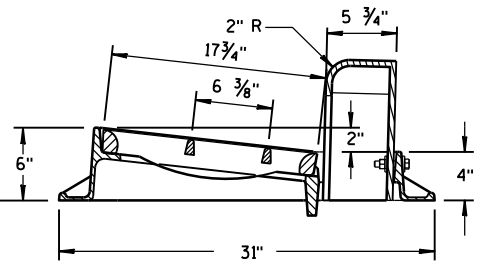
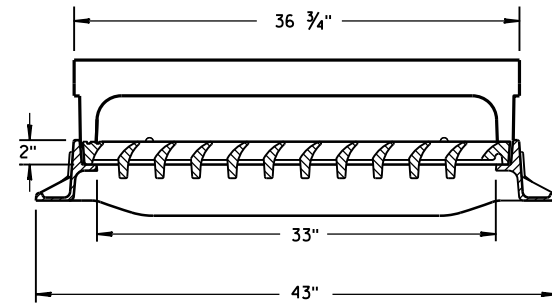
08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08B10-02	MANHOLES 3X3-FT, 4X4-FT, 5X5-FT AND 6X6-FT
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
09A01-13A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
09B02-10	CONDUIT
09B04-12	PULL BOX
09G02-05A	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-05B	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M. P. H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D33-07	TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
15D40-04A	TRAFFIC CONTROL, FULL LANE SHIFT NON-FREEWAY OR MULTI LANE DIVIDED 45 MPH AND UNDER



**NOTE:
GRATE IS REVERSIBLE.**

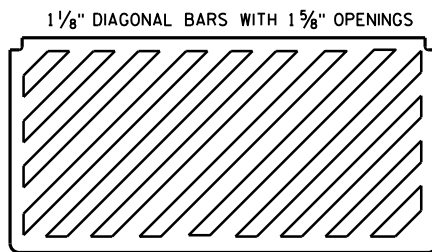


NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

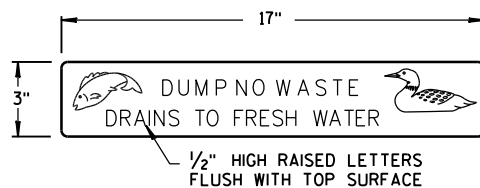


TYPE "H"

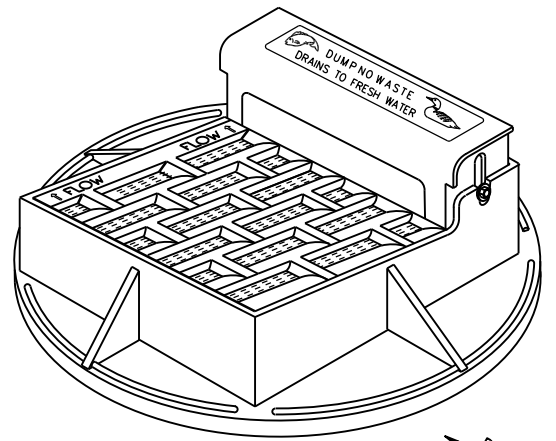
NOTE: EITHER CASTING IS ACCEPTABLE



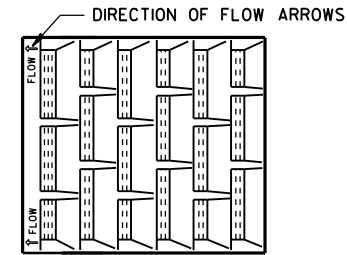
**SPECIAL GRATE FOR
TYPE "H" COVER**
(MEASURES 35 1/4" X 17 3/4" X 2")
(NOTED AS TYPE H-S ON DRAINAGE TABLE)



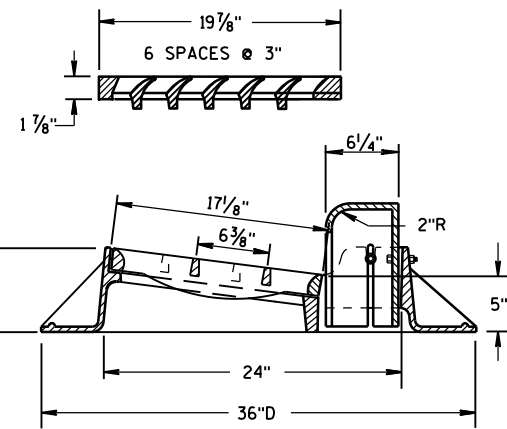
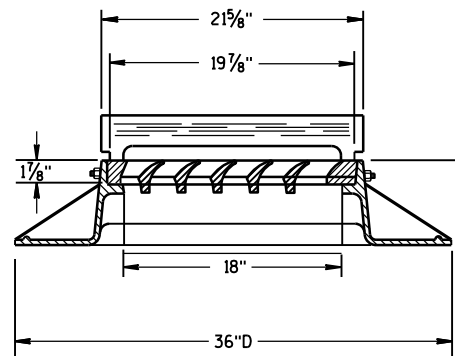
LOGO DETAIL



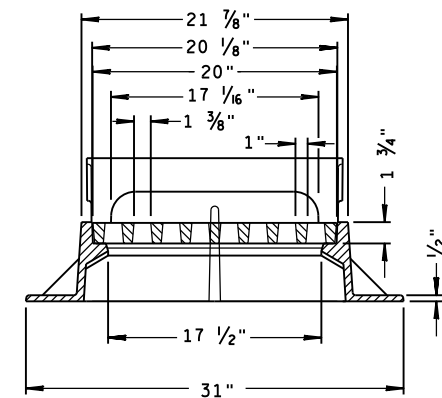
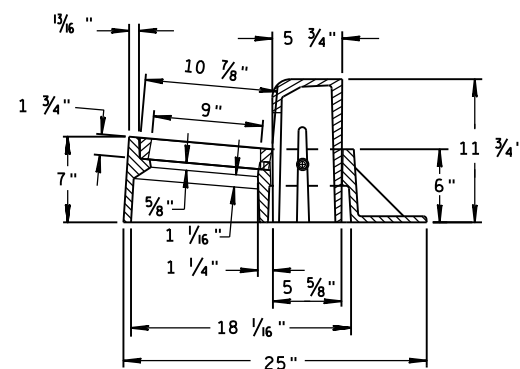
**NOTE:
GRATE IS REVERSIBLE.**



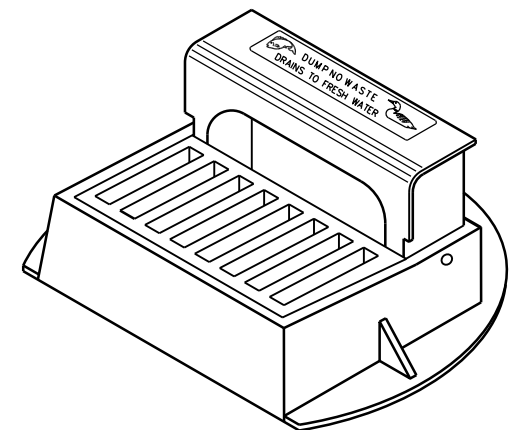
**SPECIAL GRATE FOR
TYPE "A" COVER**
(MEASURES 19 3/4" X 17" X 1 1/8")
(NOTED AS TYPE A-S ON DRAINAGE TABLE)



TYPE "A"



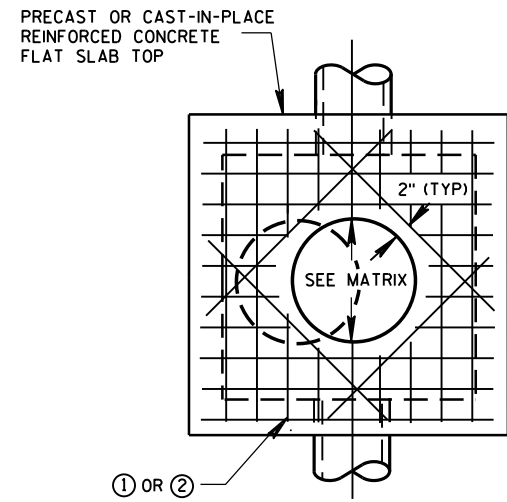
TYPE "Z"



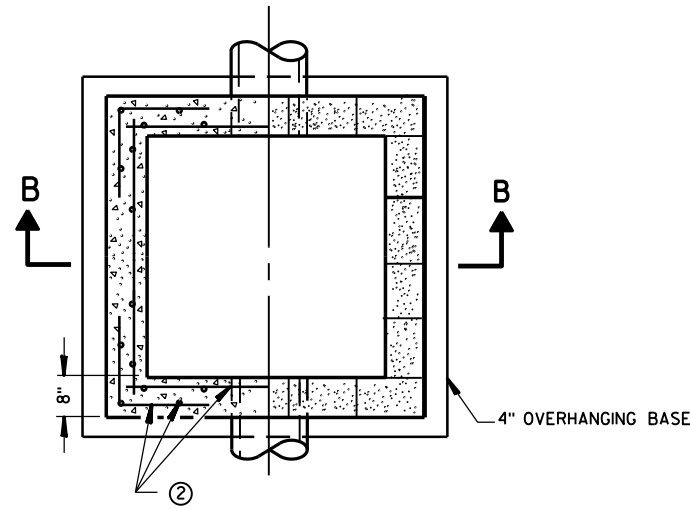
**INLET COVERS
TYPE A, H, A-S, H-S & Z**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

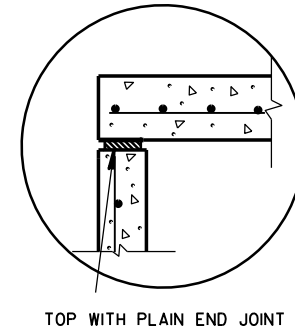
APPROVED
DATE: 11-27-13
DATE: /S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA



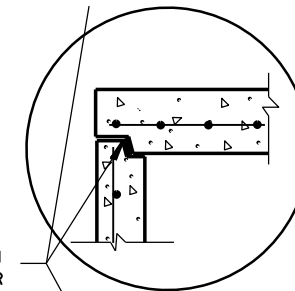
**PLAN VIEW
CIRCULAR OPENING**



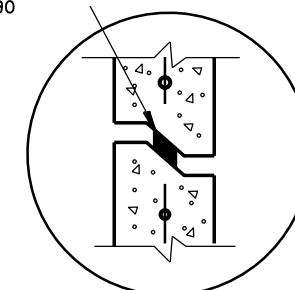
**SECTION A-A
PLAN VIEW**



TOP WITH PLAIN END JOINT



TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

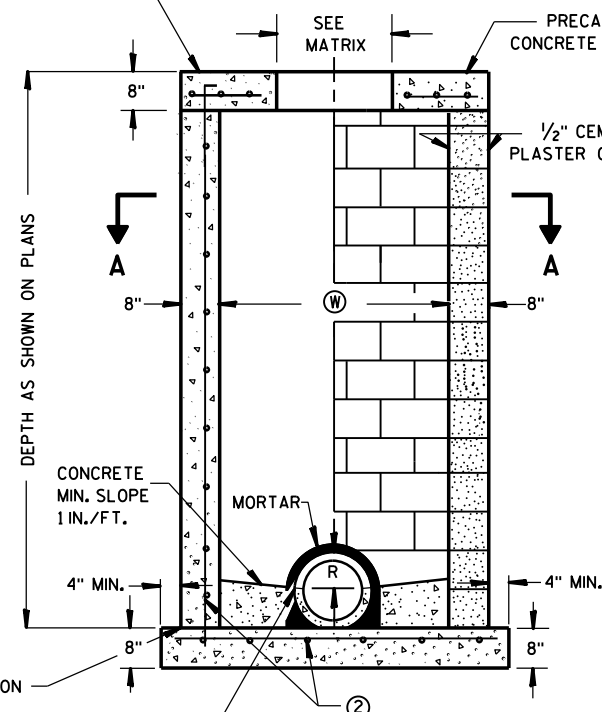
DETAIL "B"

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)

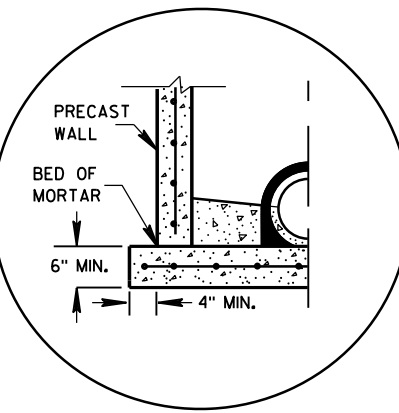
CAST-IN-PLACE REINFORCED CONCRETE TOP (SHOWN) OR PRECAST REINFORCED CONCRETE FLAT SLAB TOP (SEE DETAIL "B")

PRECAST REINFORCED CONCRETE FLAT SLAB TOP

1/2" CEMENT PLASTER COAT



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "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.

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

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

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

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

PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

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

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2 INCH AND MEET THE REQUIREMENTS OF ASTM A615.

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

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED. CONCRETE BLOCK WILL NOT BE PERMITTED FOR STRUCTURES GREATER THAN 4 FEET IN WIDTH.

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

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

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

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

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

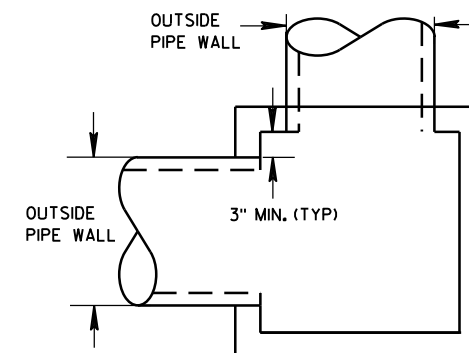
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (W) (IN)	LENGTH (L) (IN)
3X3-FT	24	24
4X4-FT	30	30
5X5-FT	42	42
6X6-FT	54	54



DETAIL "C"

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE

CAST-IN-PLACE REINFORCED CONCRETE

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

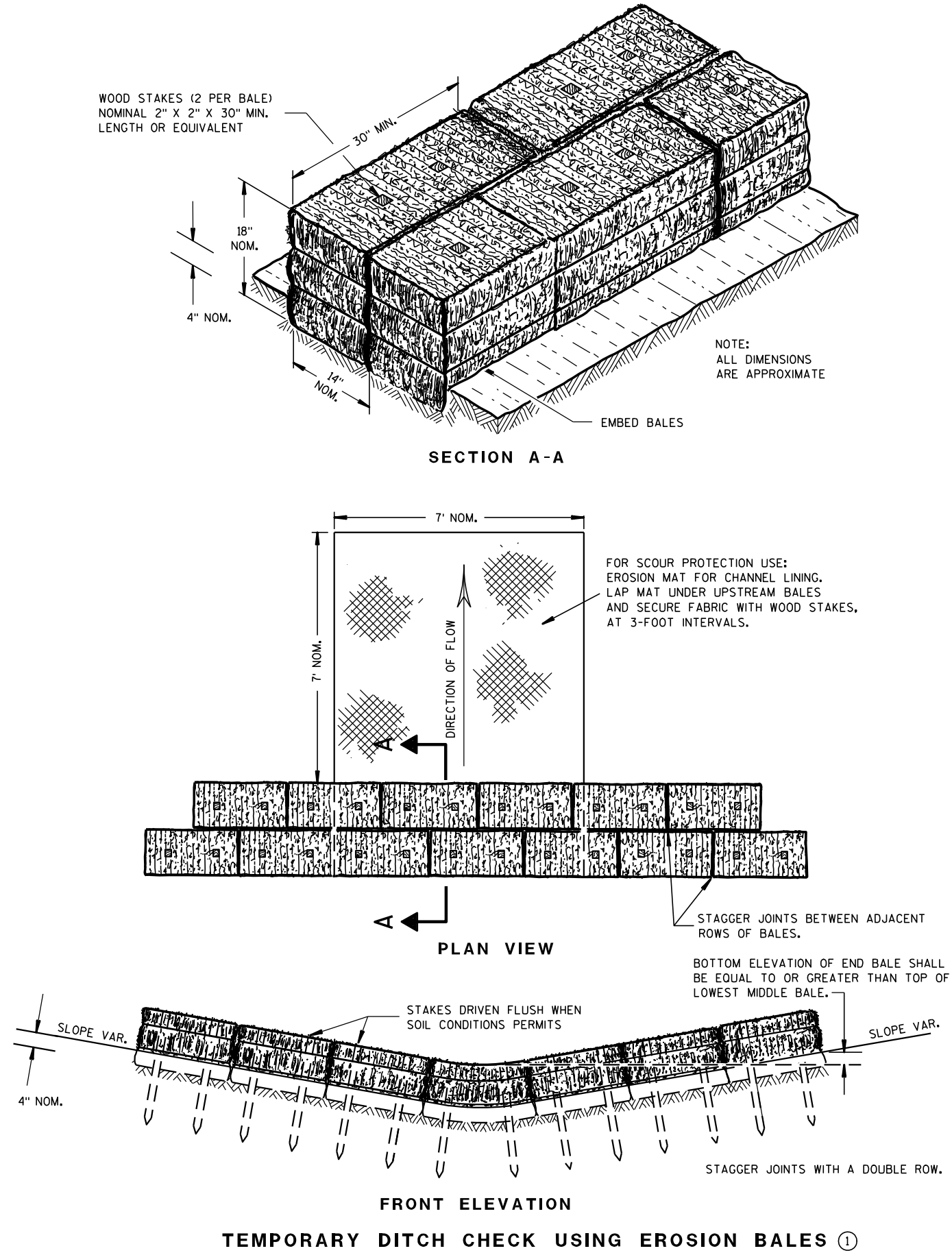
SQUARE MANHOLES W/ FLAT TOP

MANHOLES 3X3-FT, 4X4-FT, 5X5-FT AND 6X6-FT

MANHOLES 3X3-FT, 4X4-FT
5X5-FT AND 6X6-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sep 1, 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR

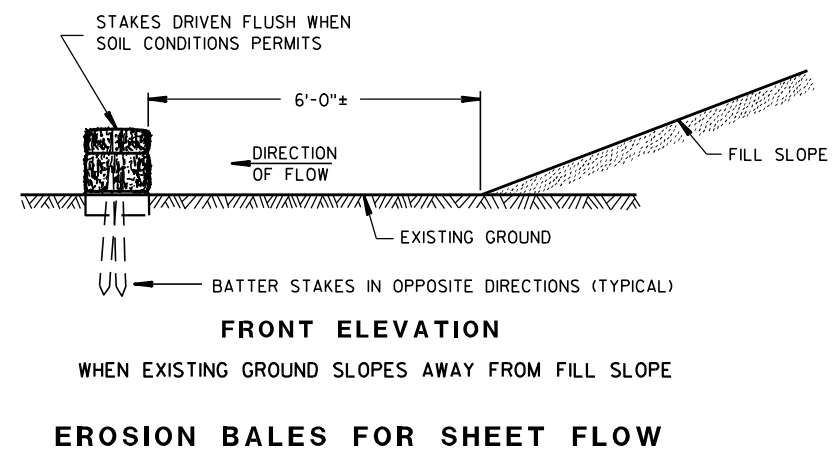
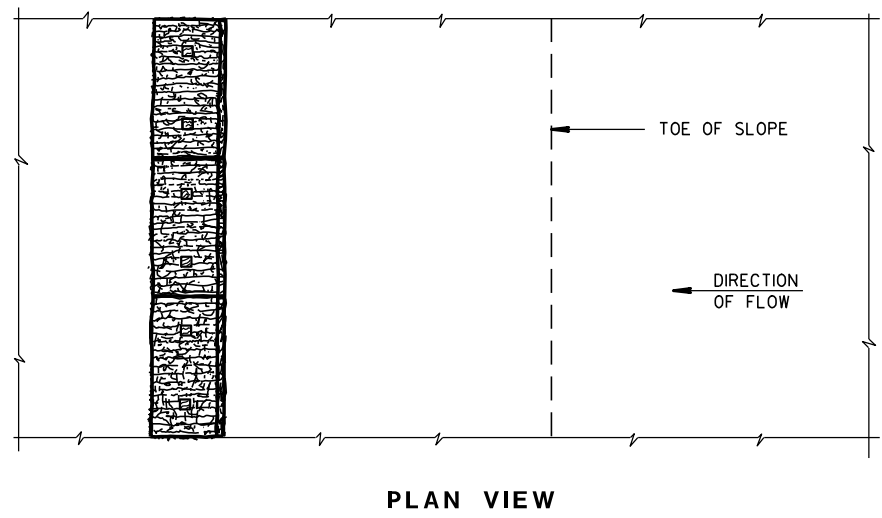
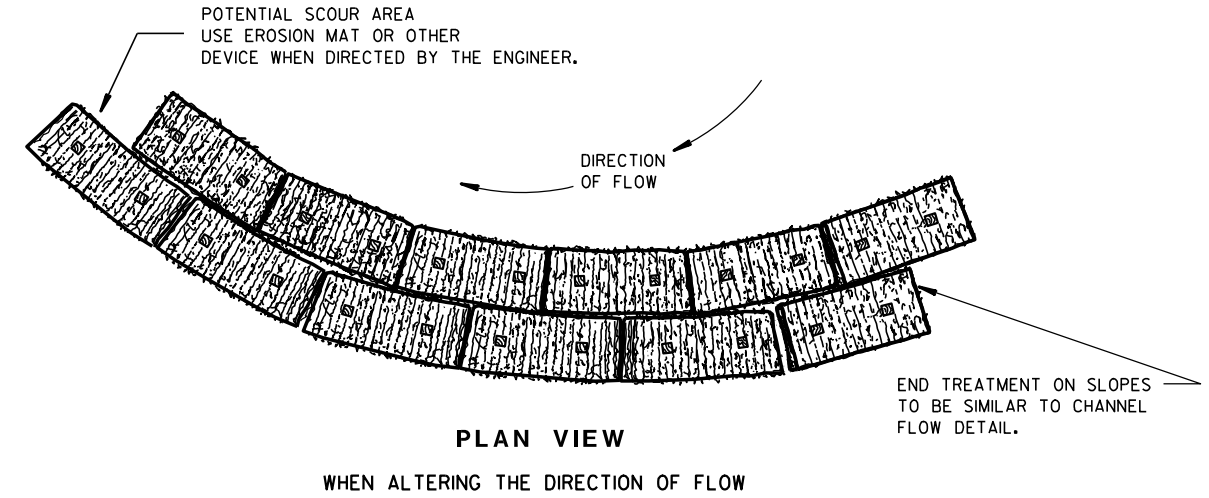


TEMPORARY DITCH CHECK USING EROSION BALES ①

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.

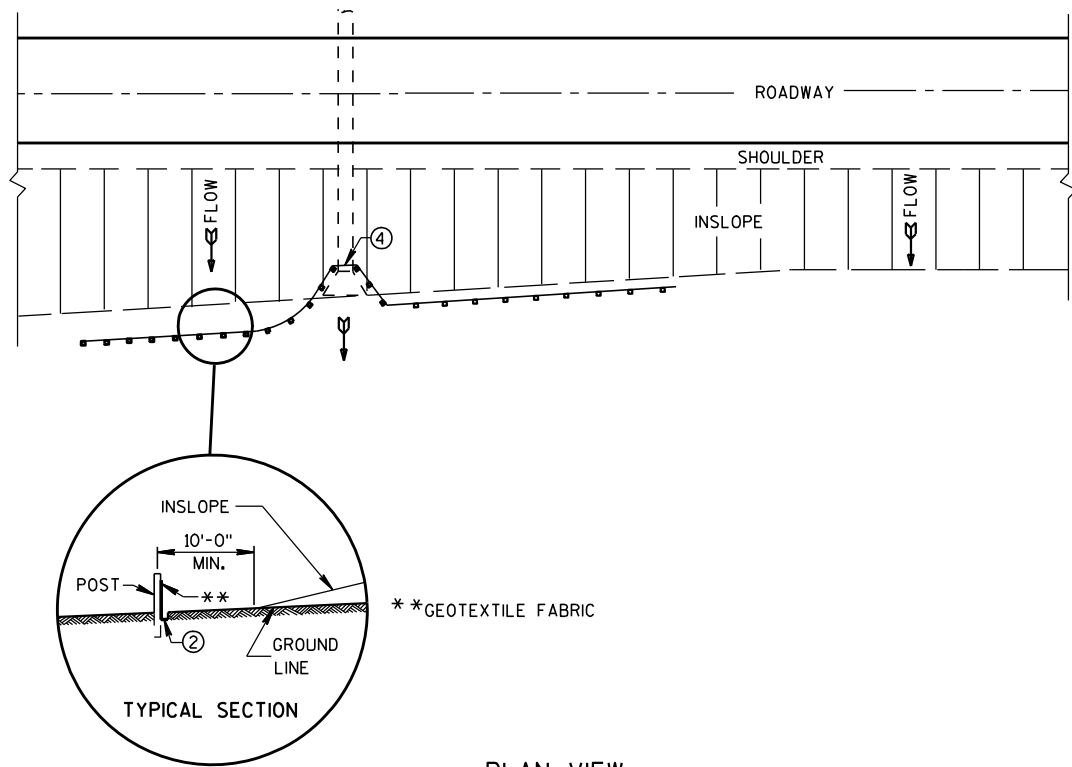
- ① TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.



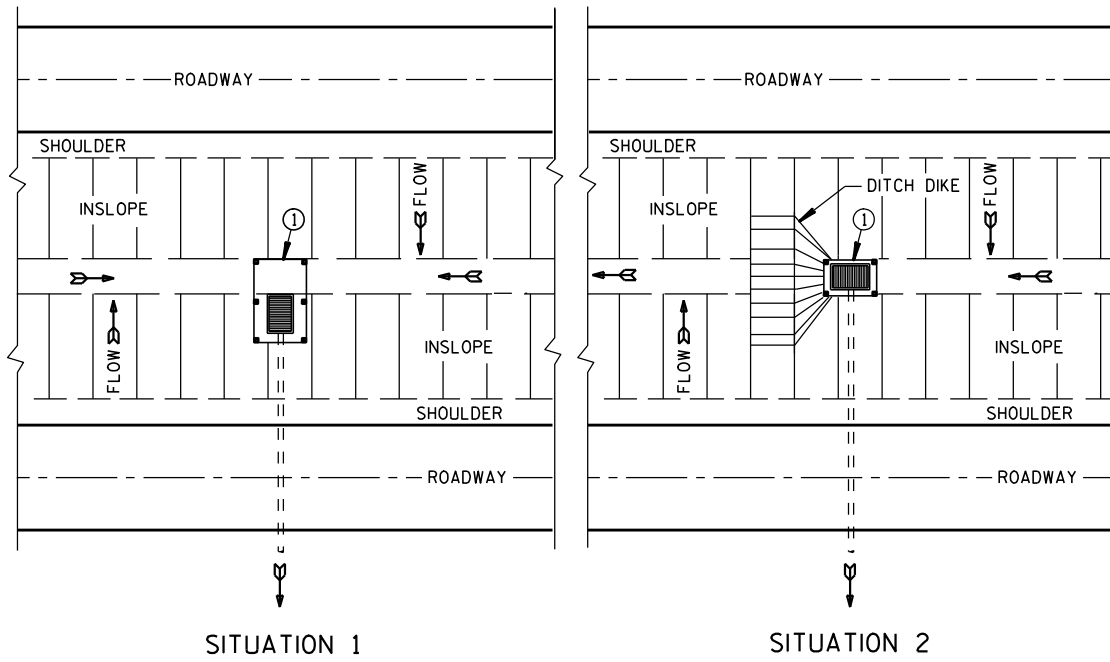
TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

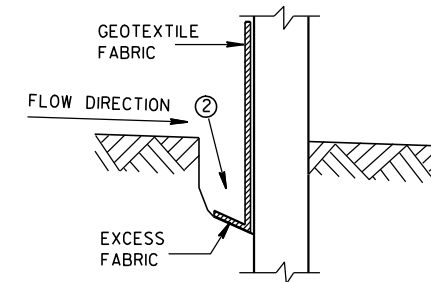


SITUATION 1 SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

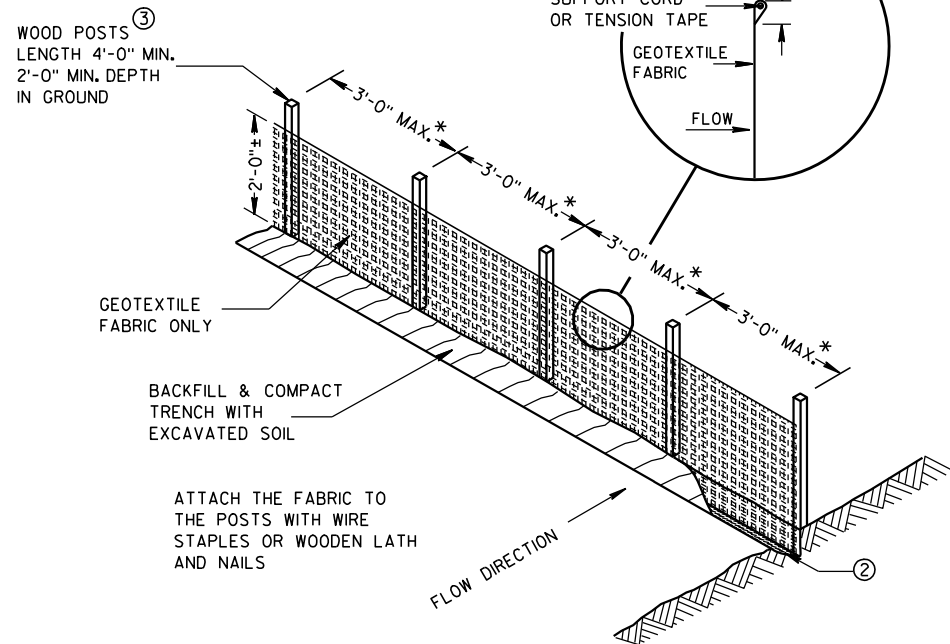
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

- 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 1 1/8" X 1 1/8" 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.



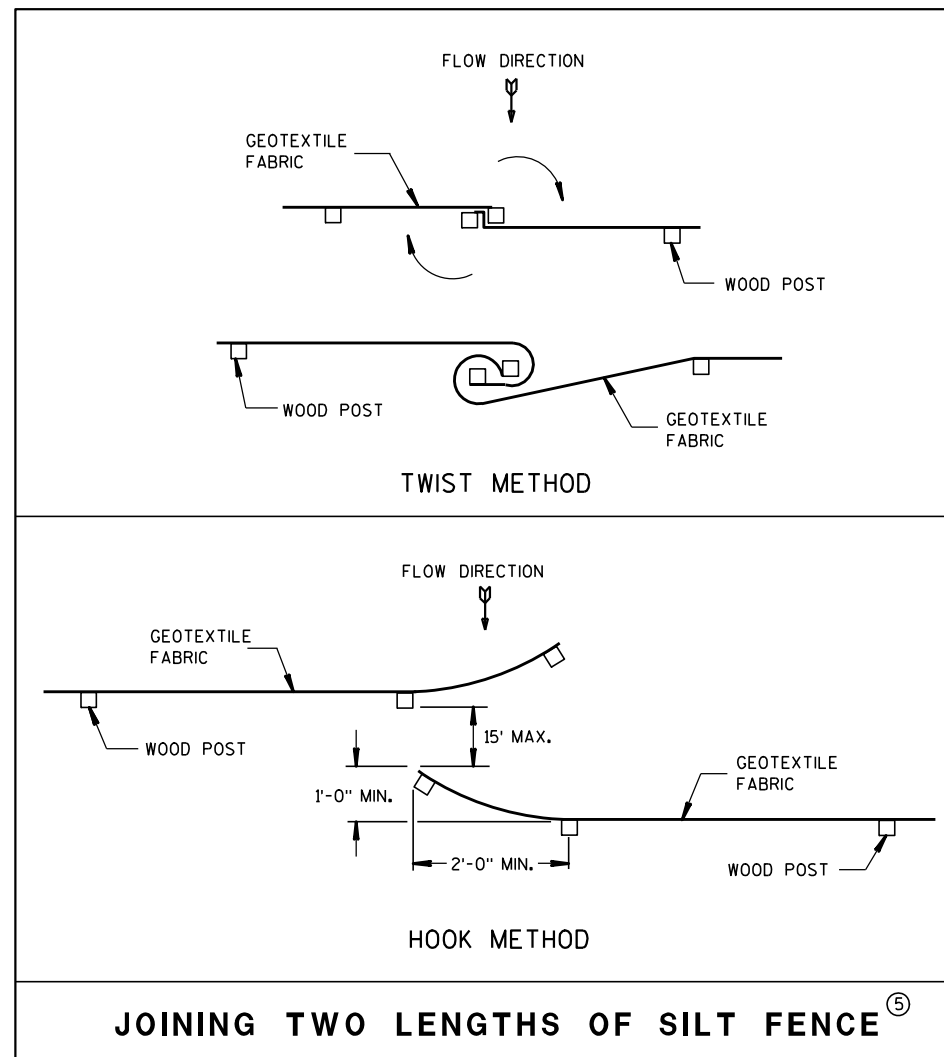
TRENCH DETAIL

NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS

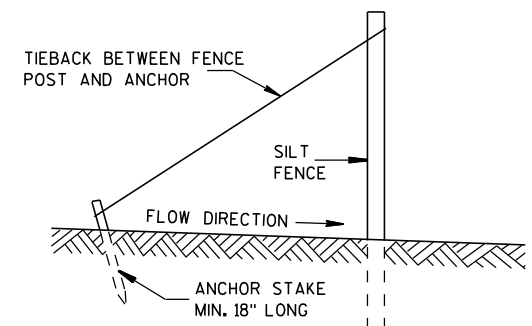


SILT FENCE

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



JOINING TWO LENGTHS OF SILT FENCE ⑤

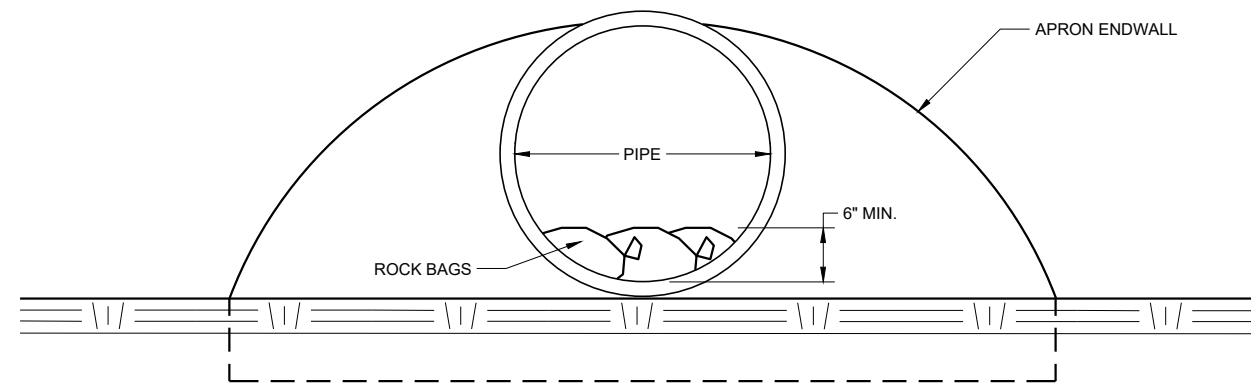


SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

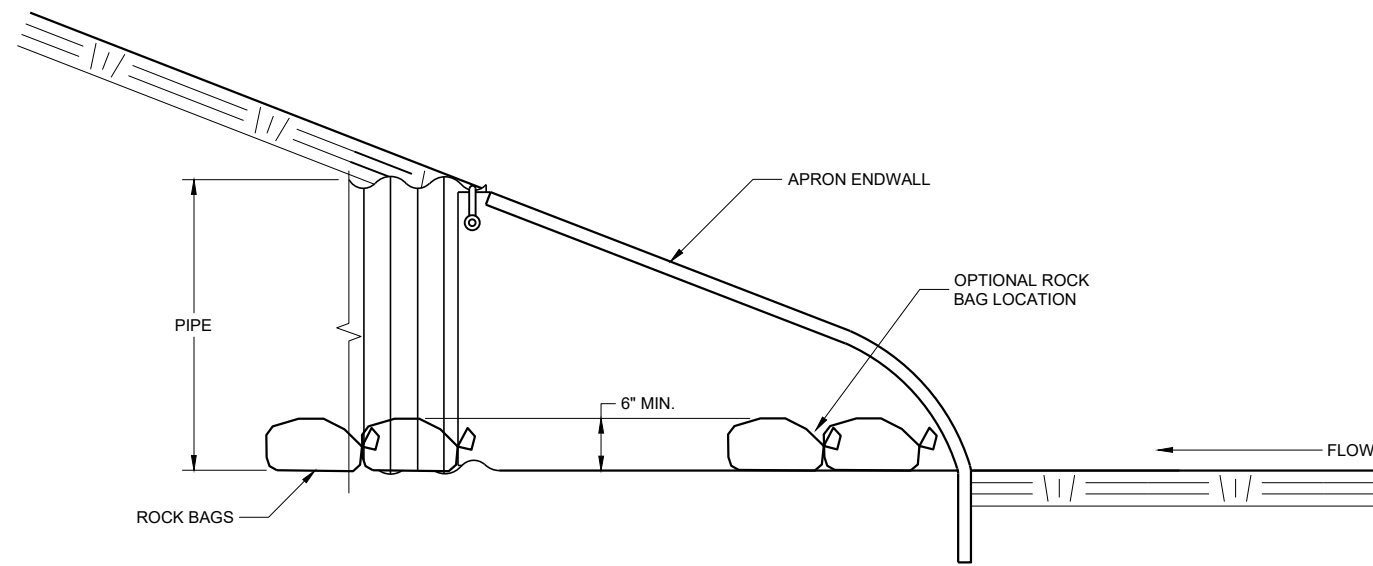
SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



END VIEW



SIDE VIEW

CULVERT PIPE CHECK
(INSTALL ON INLET END ONLY)

6

6

SDD 08E15 - 01

SDD 08E15 - 01

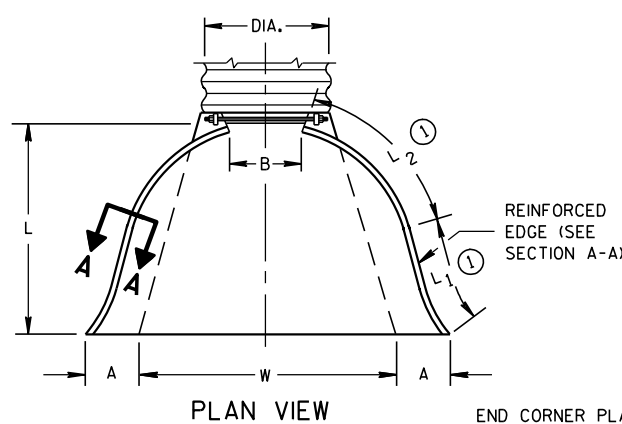
CULVERT PIPE CHECK	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGINEER
<small>FHWA</small>	

METAL APRON ENDWALLS											
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1	L2	W (±2")		
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	.109x	.105x	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109x	.105x	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109x	.105x	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109x	.105x	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109x	.105x	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109x	.105x	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109x	.105x	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

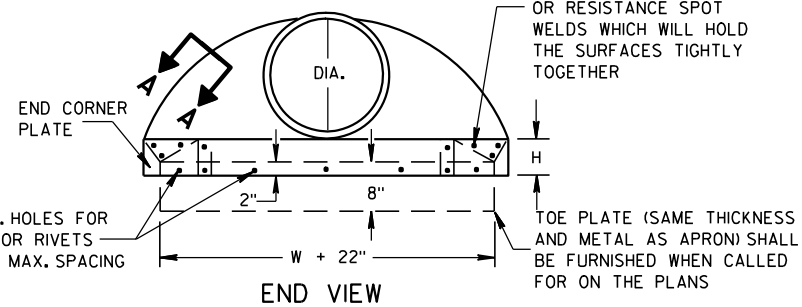
* EXCEPT CENTER PANEL SEE GENERAL NOTES

REINFORCED CONCRETE APRON ENDWALLS									
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE	
	T	A	B	C	D	E	G		
12	2	4	24	48 1/8	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 1/2 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	

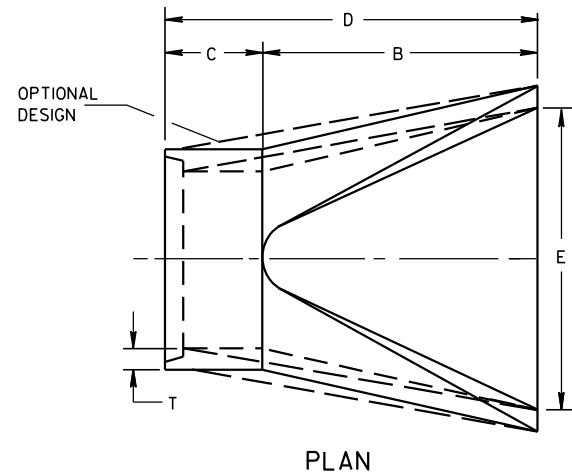
* MINIMUM
** MAXIMUM



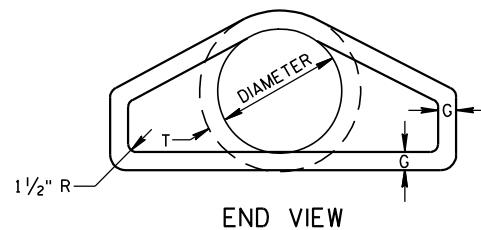
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



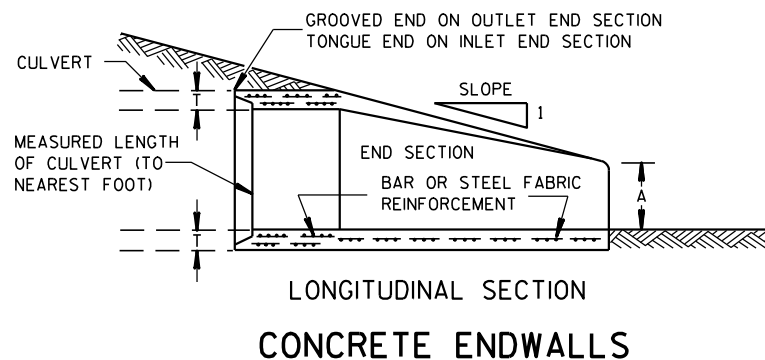
SIDE ELEVATION
METAL ENDWALLS



PLAN

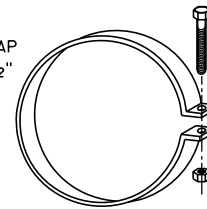


END VIEW

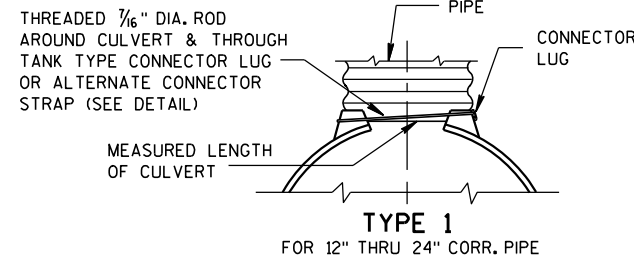


LONGITUDINAL SECTION
CONCRETE ENDWALLS

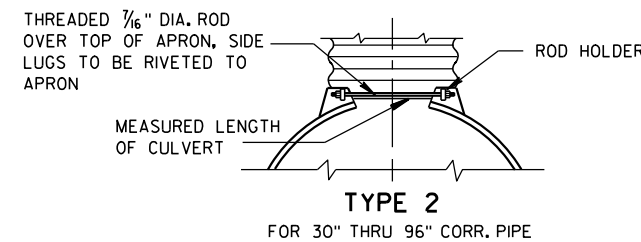
1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



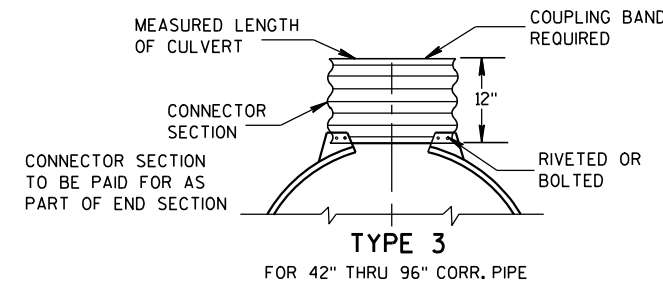
ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



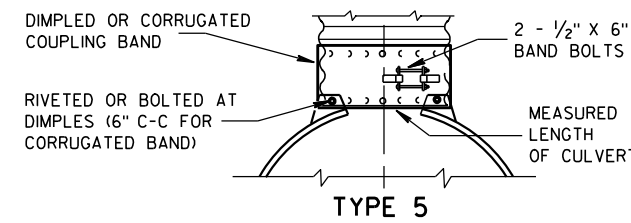
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

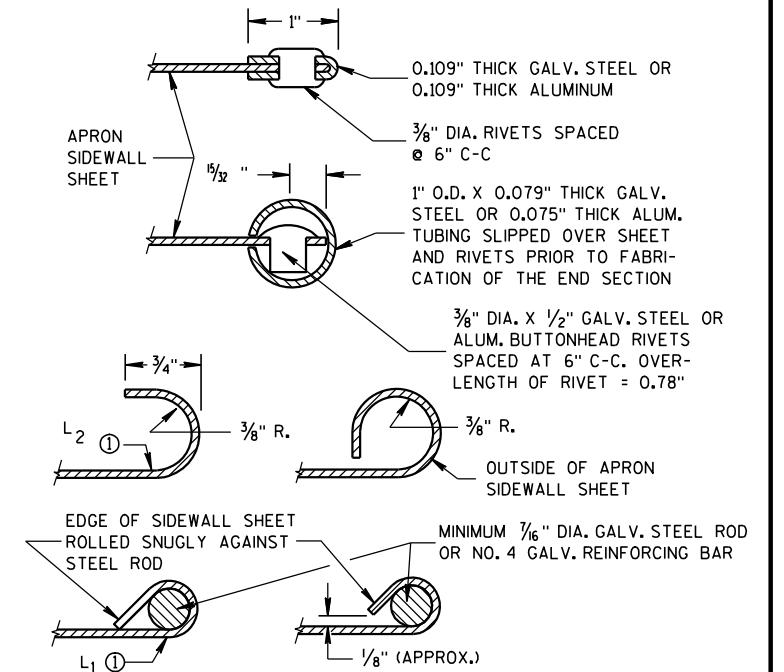
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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 VICE 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.

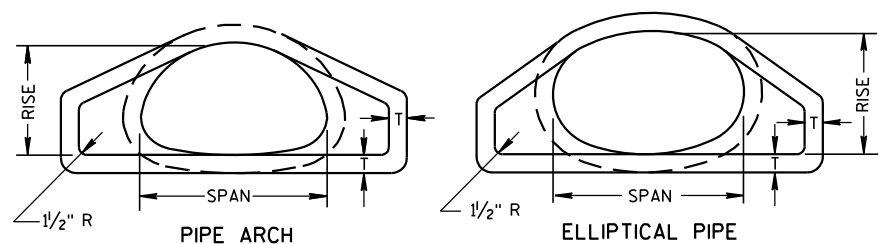
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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

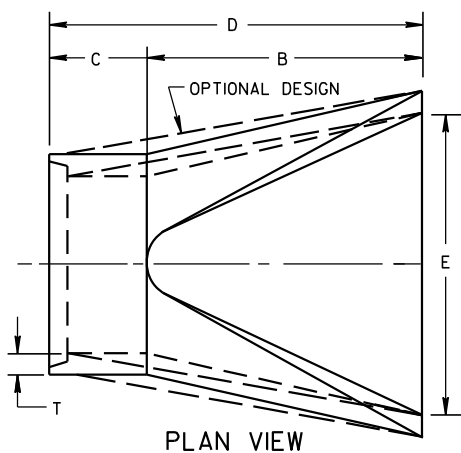
APRON ENDWALLS FOR
CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

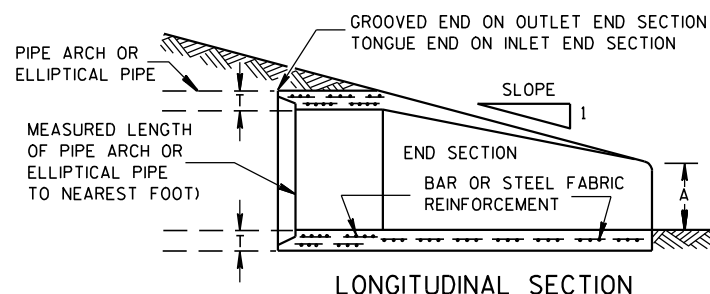
APPROVED
11/30/94 /S/ Rory L. Rhinesmith
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



END VIEW



PLAN VIEW



LONGITUDINAL SECTION

CONCRETE ENDWALLS

2- 2 2/3" X 1/2" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches)		MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	SPAN	RISE	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 (⓪)	L2 (⓪)	W (±2")		
15	17	13	.064	.060	7	9	6	19	14	16	30	2 1/2 to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19 3/8	36	2 1/2 to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21 3/4	42	2 1/2 to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27 1/2	48	2 1/2 to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37 5/8	60	2 1/2 to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45 3/8	75	2 1/2 to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54 3/4	85	2 1/2 to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2 1/2 to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72 3/4	102	2 1/4 to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82 1/4	114	2 1/4 to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

3" X 1" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches)		MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	SPAN	RISE	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 (⓪)	L2 (⓪)	W (±2")		
48	53	41	.109	.105	18	26	12	63	24	72 3/4	90	2 1/2 to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82 1/4	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1 1/2 to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1 1/2 to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1 1/2 to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1 1/2 to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1 1/2 to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1 1/2 to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED. * EXCEPT CENTER PANEL SEE GENERAL NOTES

REINFORCED CONCRETE PIPE ARCH

EQUIV. DIA. (Inches)	DIMENSIONS (Inches)								APPROX. SLOPE
	**SPAN	**RISE	T	A	B	C	D	E	
24	29	18	3	8 1/2	39	33	72	48	3 to 1
30	36	22	3 1/2	9 1/2	50	46	96	60	3 to 1
36	44	27	4	11 1/8	60	36	96	72	3 to 1
42	51	31	4 1/2	15 1/8	60	36	96	78	3 to 1
48	58	36	5	21	60	36	96	84	3 to 1
54	65	40	5 1/2	25 1/2	60	36	96	90	3 to 1
60	73	45	6	31	60	36	96	96	3 to 1
72	88	54	7	31	60	39	99	120	2 to 1
84	102	62	8	28 1/2	83	19	102	144	2 to 1

REINFORCED CONCRETE ELLIPTICAL PIPE

EQUIV. DIA. (Inches)	DIMENSIONS (Inches)								APPROX. SLOPE
	**SPAN	**RISE	T	A	B	C	D	E	
24	30	19	3 1/4	8 1/2	39	33	72	48	3 to 1
30	38	24	3 3/4	9 1/2	54	18	72	60	3 to 1
36	45	29	4 1/2	11 1/8	60	24	84	72	2 1/2 to 1
42	53	34	5	15 3/4	60	36	96	78	2 1/2 to 1
48	60	38	5 1/2	21	60	36	96	84	2 1/2 to 1
54	68	43	6	25 1/2	60	36	96	90	2 1/2 to 1
60	76	48	6 1/2	30	60	36	96	96	2 1/2 to 1

**NOMINAL SIZE

GENERAL NOTES

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

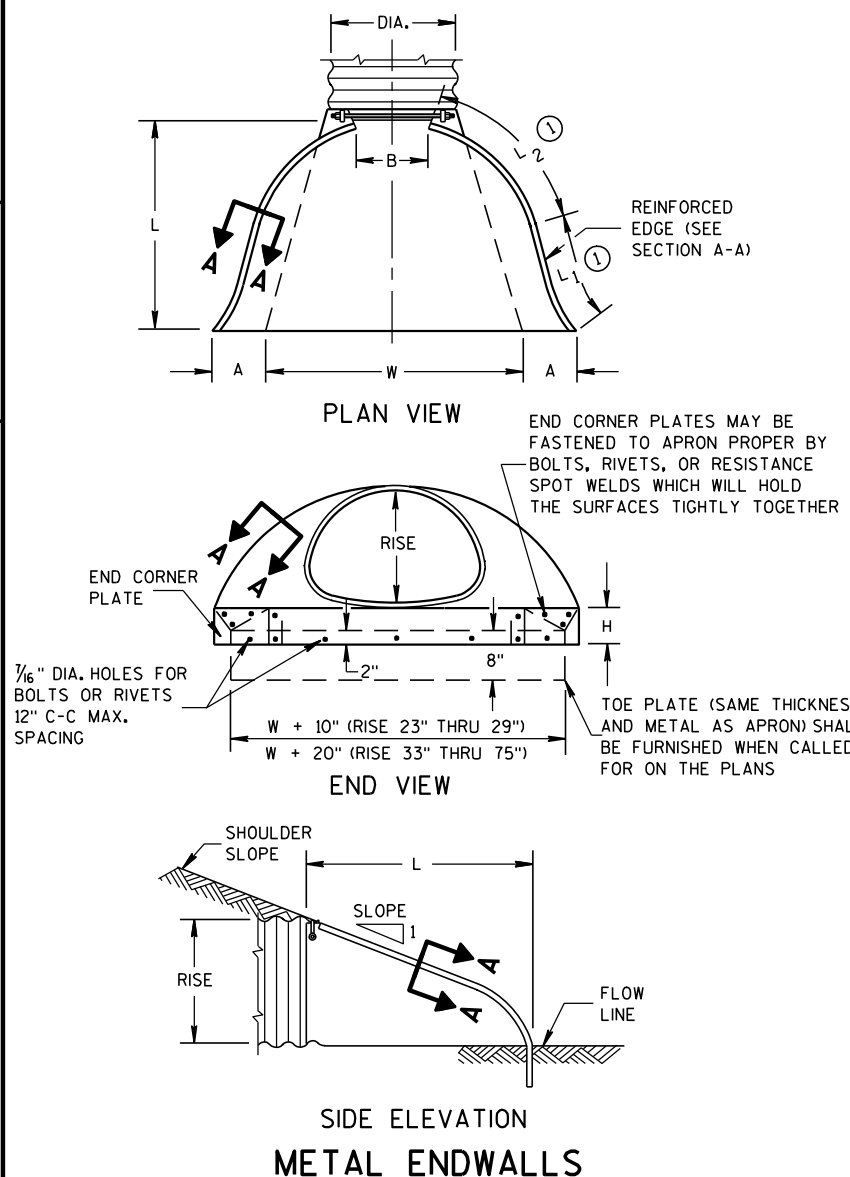
CONCRETE APRON ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM APRON ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE ARCH PERIMETER.

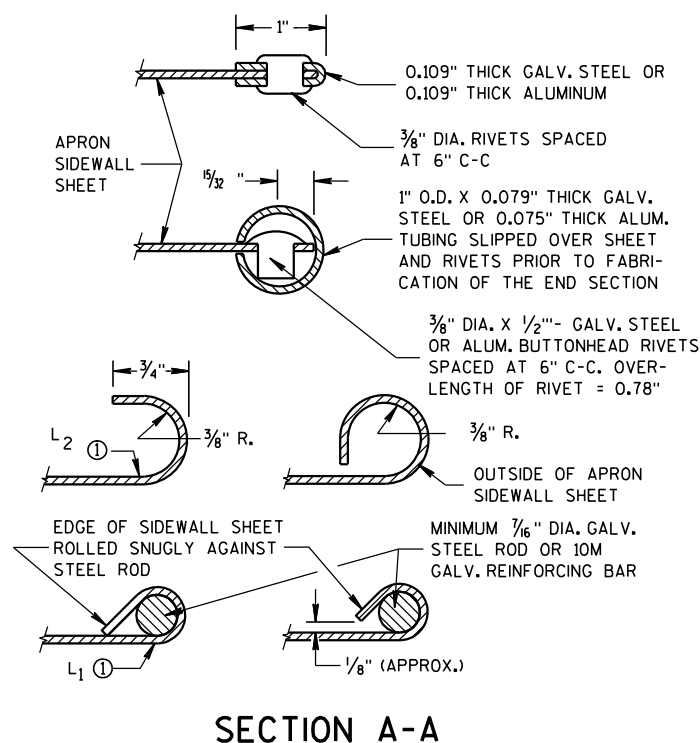
LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 77" X 52" THROUGH 112" X 75" APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

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

⓪ FOR PIPE ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.



METAL ENDWALLS

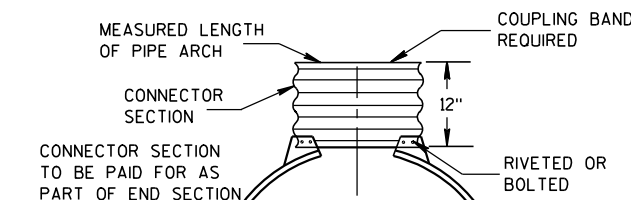


SECTION A-A



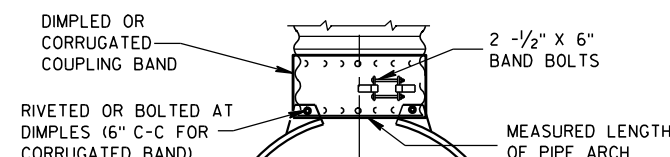
TYPE 2

FOR 17" X 13" THRU 112" X 75" PIPE ARCH



TYPE 3

FOR 64" X 43" THRU 112" X 75" PIPE ARCH



TYPE 5

ALTERNATE FOR: ALL SIZES CORRUGATED PIPE ARCHES

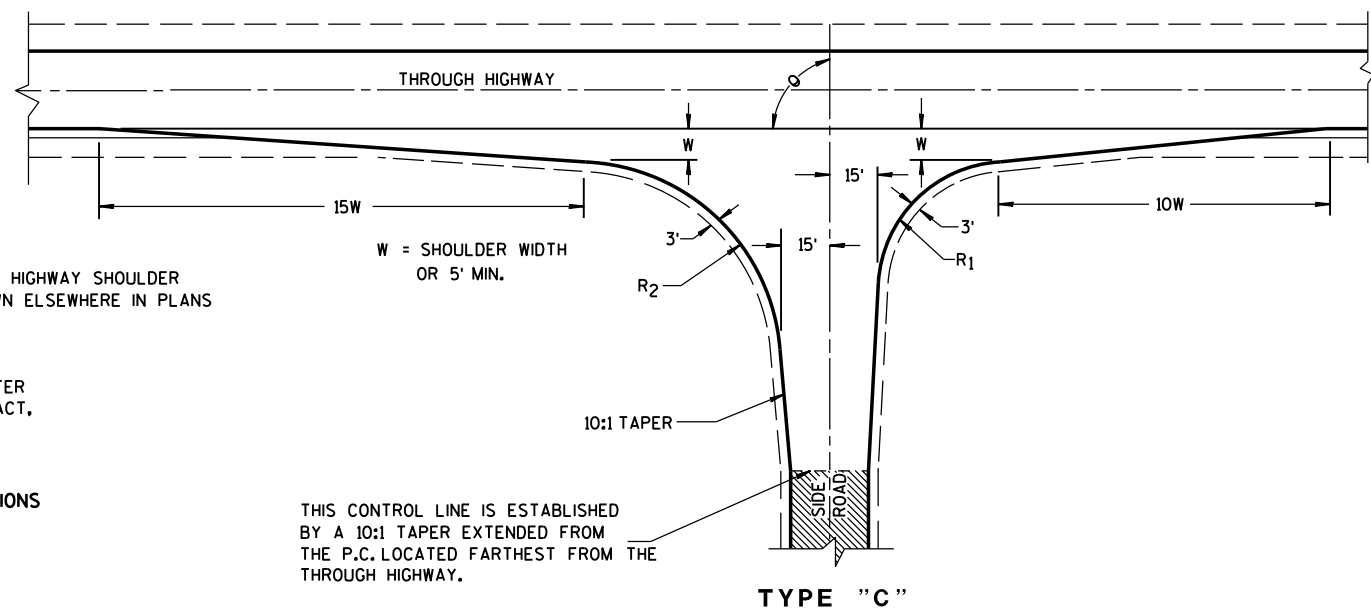
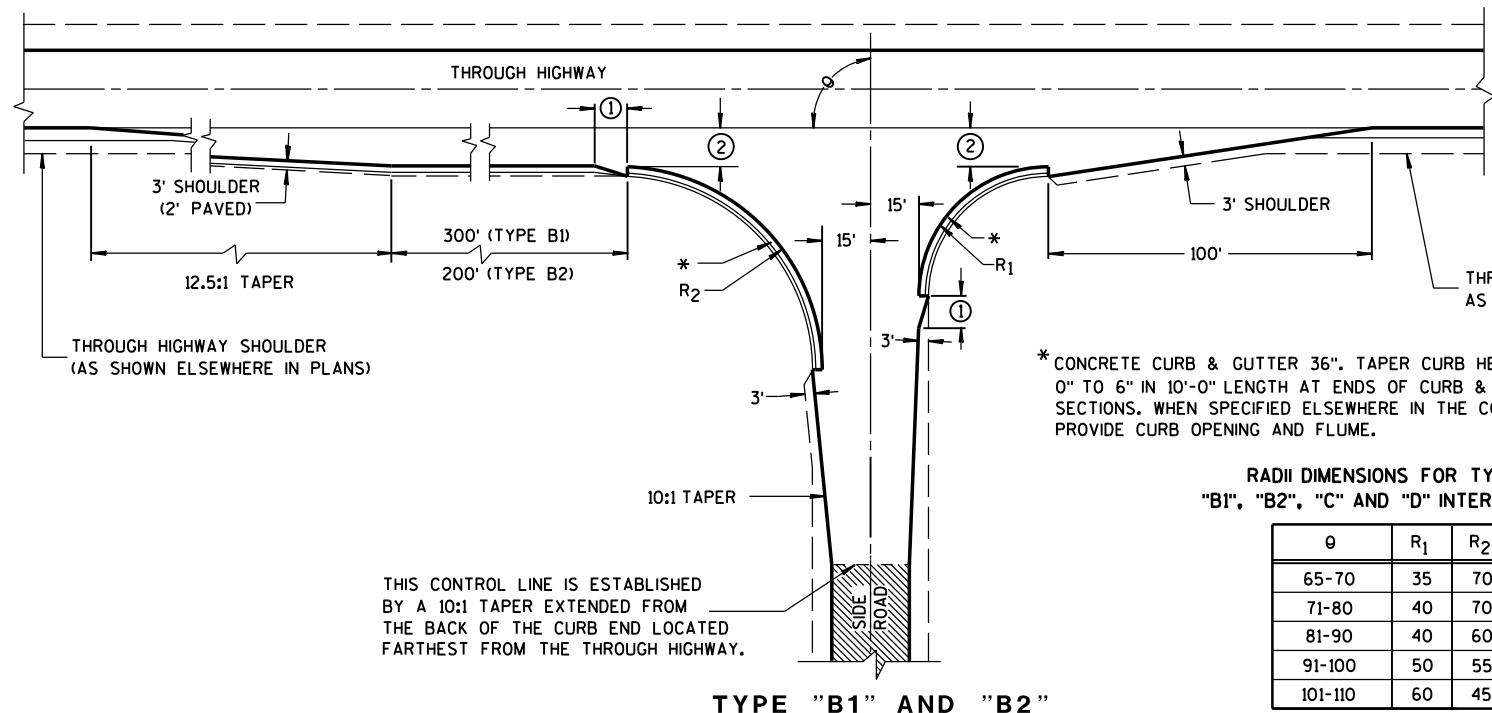
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL.

CONNECTION DETAILS

APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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

θ	R ₁	R ₂
65-70	35	70
71-80	40	70
81-90	40	60
91-100	50	55
101-110	60	45

GENERAL NOTES

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

SIDE ROAD SURFACING NOTE

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

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

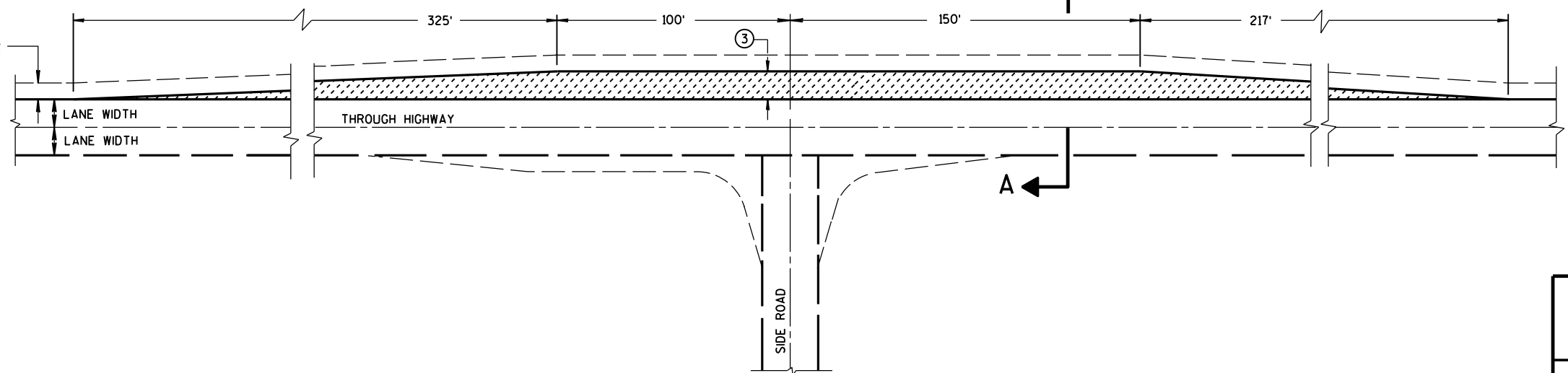
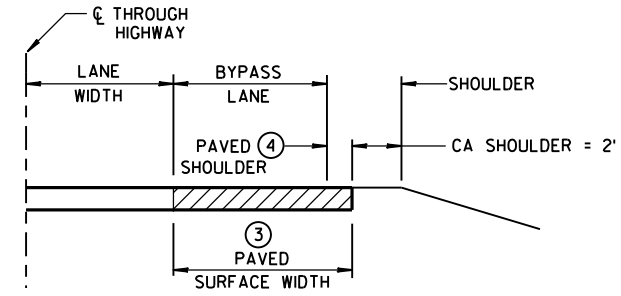
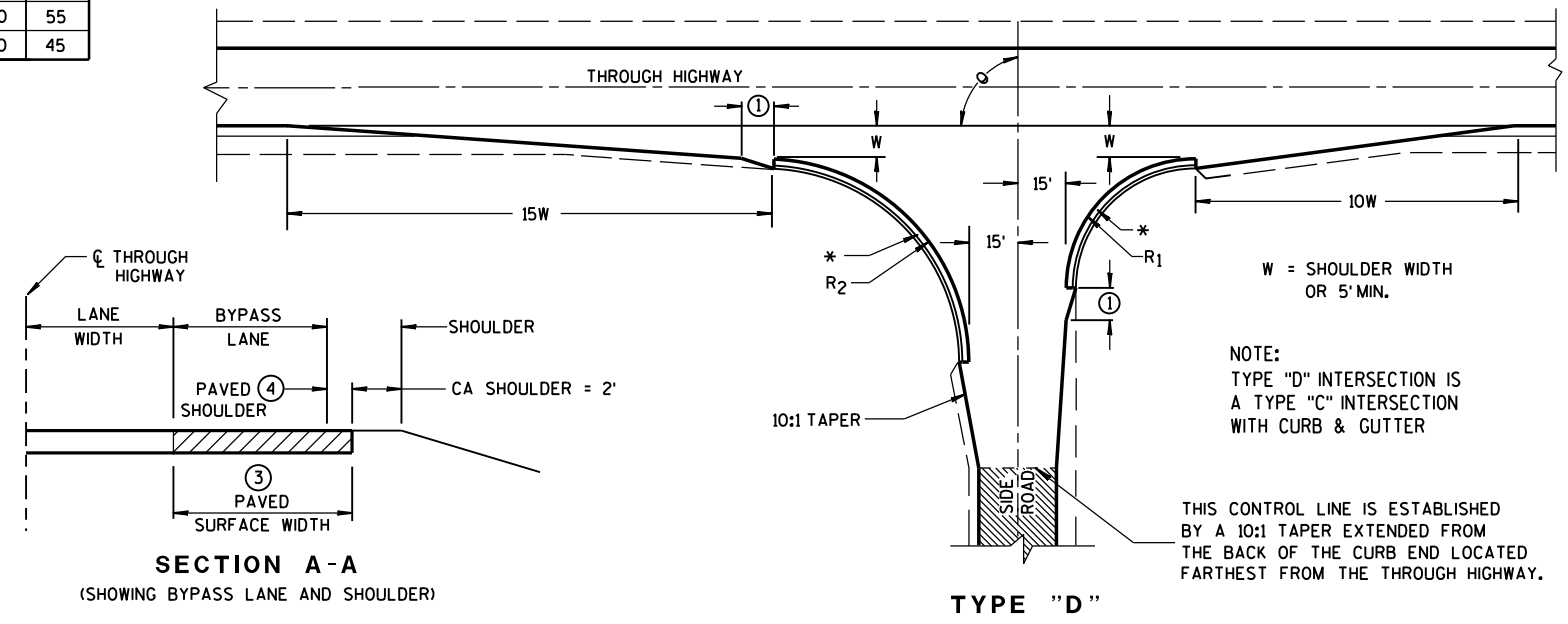
WHEN THE SIDE ROAD IS THE CONSTRUCTION PROJECT, THE INTERSECTION SURFACING SHALL BE THE SAME AS FOR THE PROJECT.

EXISTING PAVED SURFACE

BYPASS LANE

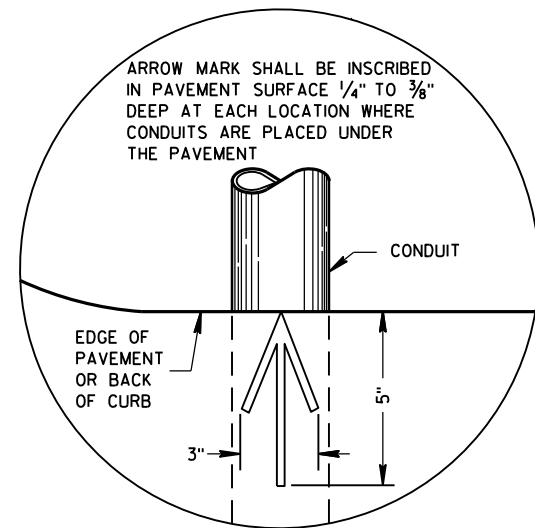
- ① 10-FT TYPICAL.
- ② 12-FT** PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLAN.

**10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.
- ③ BYPASS LANE PAVED SURFACE WIDTH OUTSIDE OF TRAVEL LANE
-ASPHALT = 12-FT PLUS PAVED SHOULDER WIDTH.
-PC CPNCRETE = 13-FT PLUS PAVED SHOULDER WIDTH.
- ④ BYPASS LANE PAVED SHOULDER WIDTH = THE GREATER OF 1-FT OR THE PAVED SHOULDER WIDTH OF THE THROUGH HIGHWAY.

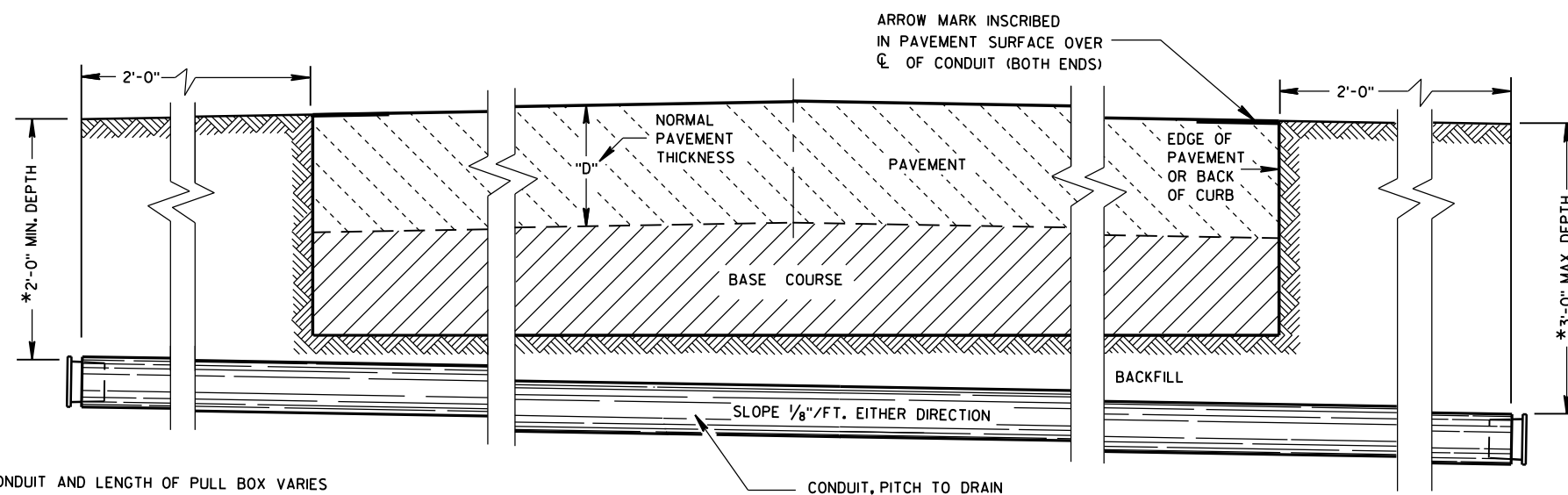


TEE INTERSECTION BYPASS LANE DETAIL

AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND "D" AND TEE INTERSECTION BYPASS LANE
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION



**PLAN VIEW
ARROW MARK**



**SIDE ELEVATION
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS**

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

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 EMERSON 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.).

TRACER 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.

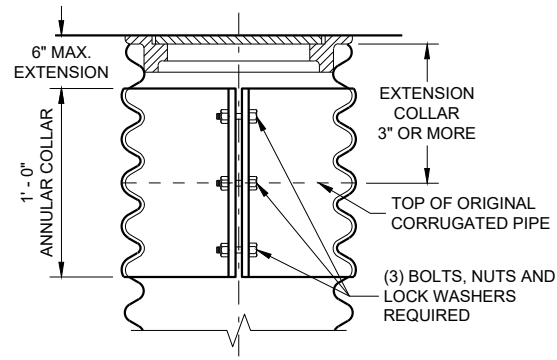
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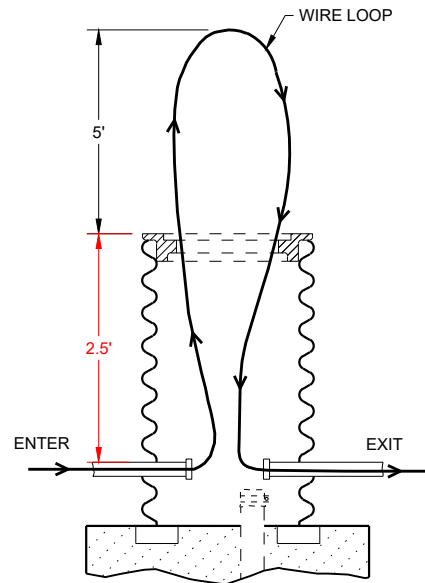
S.D.D. 9 B 2-10

S.D.D. 9 B 2-10

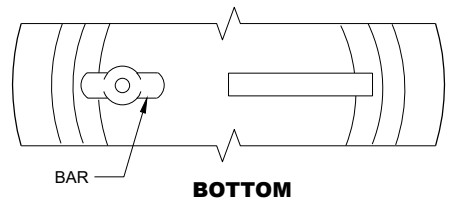
CONDUIT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March, 2017 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA	



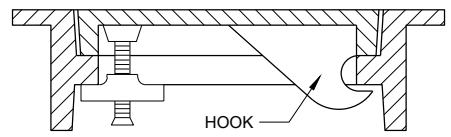
CORRUGATED PIPE EXTENDER



MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



BOTTOM



SECTION

**ALTERNATE COVER (LOCKING)
TIGHTENING BAR TYPE**

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.

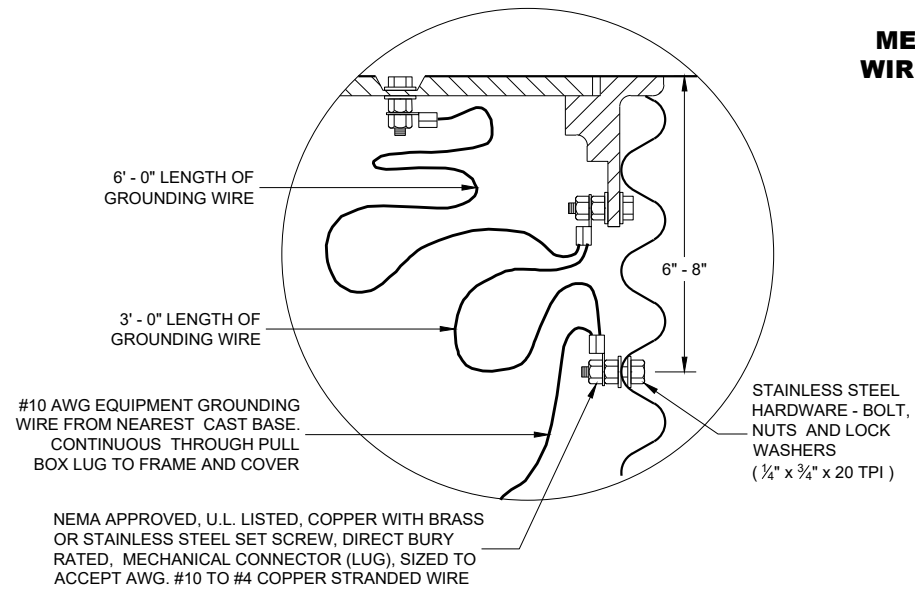
WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

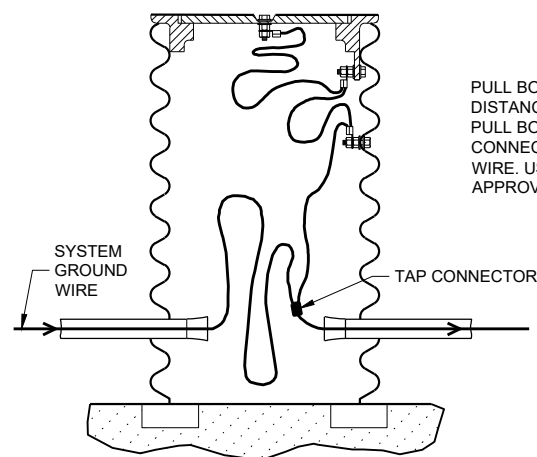
DIMENSION IN INCHES	CORRUGATED STEEL PIPE										
	PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24	
PIPE LENGTH**	B	24	30	36	24	30	36	36	42	48	
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	
COVER	D	10 1/4	10 1/4	10 1/4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



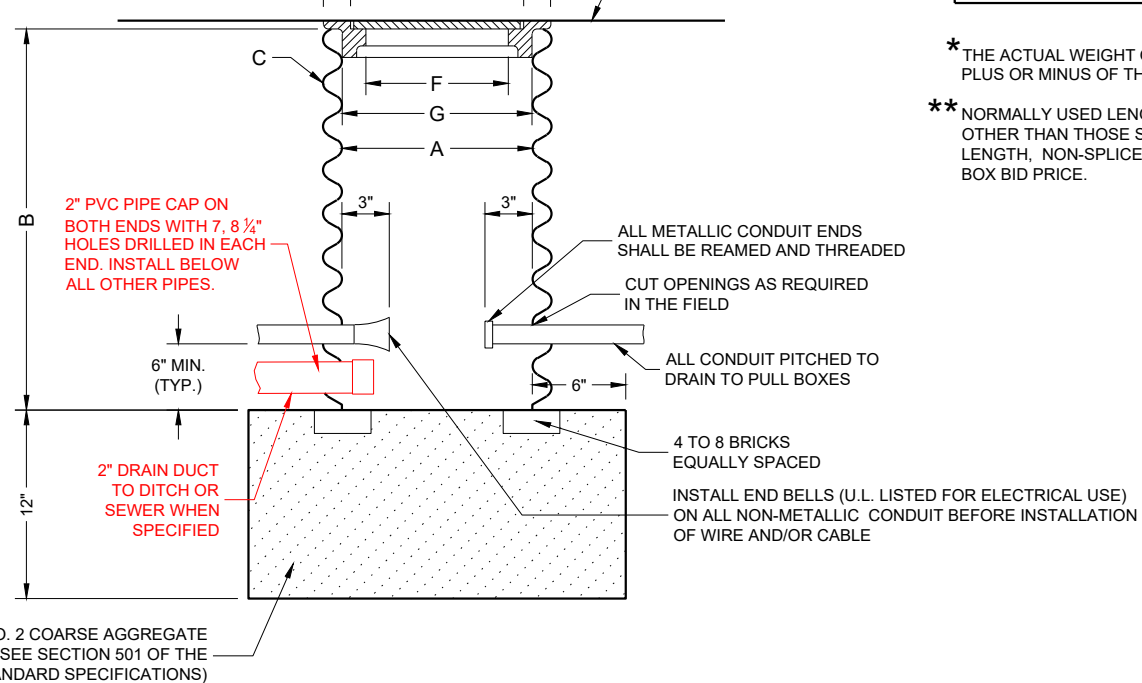
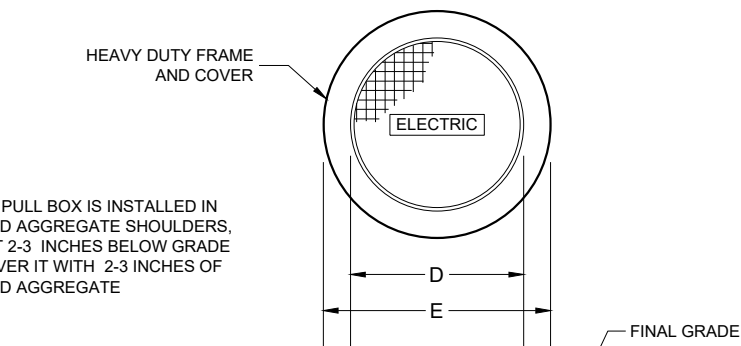
EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



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.

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



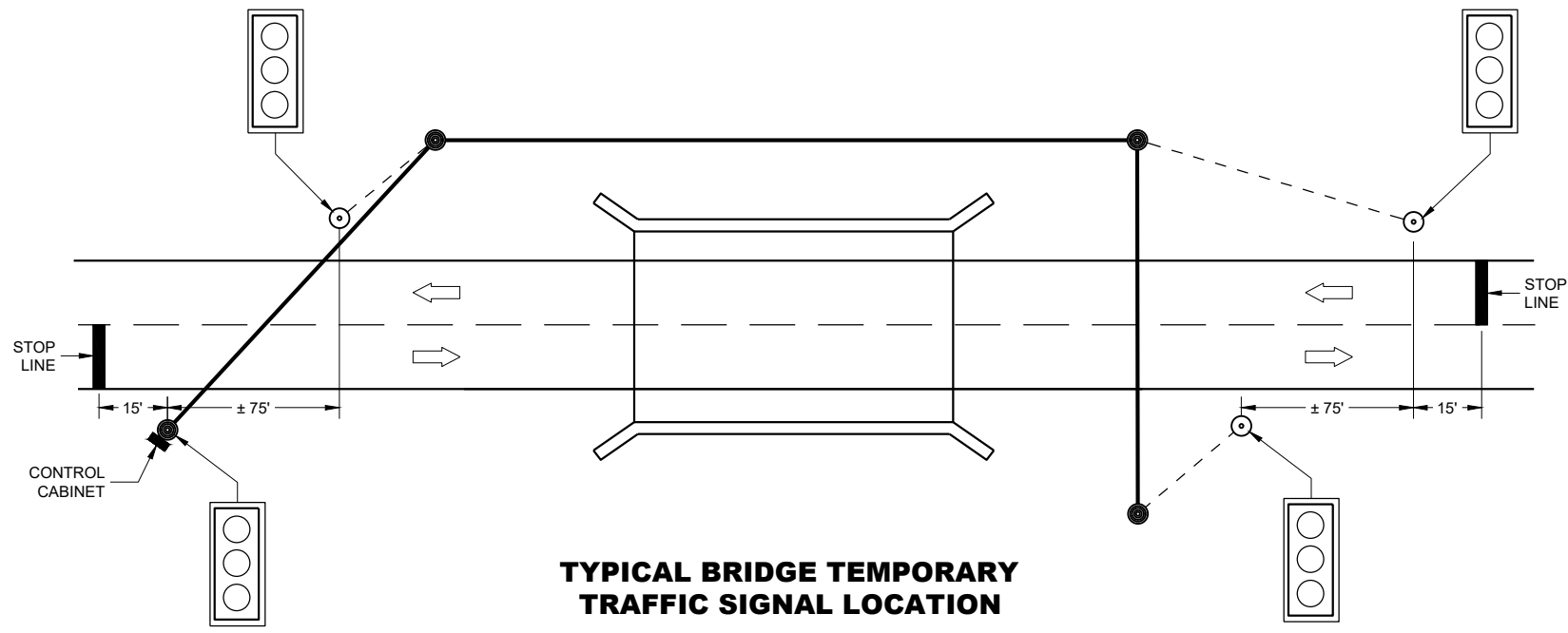
PULL BOX

PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE: May 2022 /S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER

FHWA



TYPICAL BRIDGE TEMPORARY TRAFFIC SIGNAL LOCATION

LEGEND

- WOOD POLE (NON-BREAKAWAY)
- WOOD POST (BREAKAWAY)
- - - SIGNAL CABLE
- SIGNAL CABLE W/MESSENGER
- ➔ DIRECTION OF TRAFFIC
- LED TRAFFIC SIGNAL WITH BACKPLATE
3-12"

GENERAL NOTES

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

POLE MOUNTED TRAFFIC SIGNAL CONTROL CABINET MAY BE MOUNTED ON THE SERVICE POLE IF THE ELECTRICAL UTILITY ALLOWS THE INSTALLATION.

WHEN UTILITY POLES ARE USED TO SPAN THE TEMPORARY OVERHEAD CABLE, WRITTEN PERMISSION MUST BE OBTAINED FROM THE OWNER OF THE POLES AND GIVEN TO THE PROJECT MANAGER. ALL PERTINENT UTILITY AND CODE CLEARANCES SHALL BE MAINTAINED.

WOOD POLES (NON-BREAKAWAY) SHALL BE NO CLOSER TO EDGE OF PAVEMENT THAN OFFSET DISTANCE CHART ALLOWS OR 4 FEET BEHIND PROTECTIVE BARRIER (BEAM GUARD, ETC.).

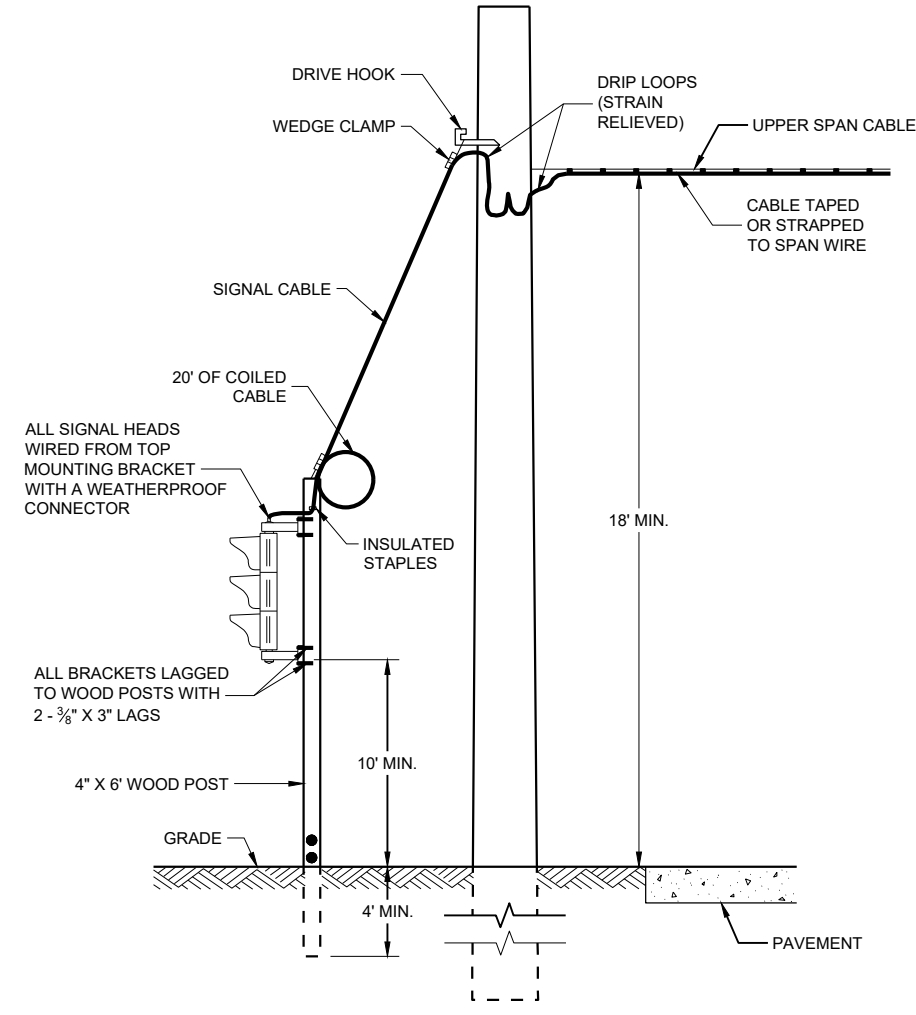
WOOD POSTS (BREAKAWAY) SHALL BE NO CLOSER THAN 2 FEET OUTSIDE OF SHOULDER.

VERTICAL CLEARANCE ETC. PER NEC.

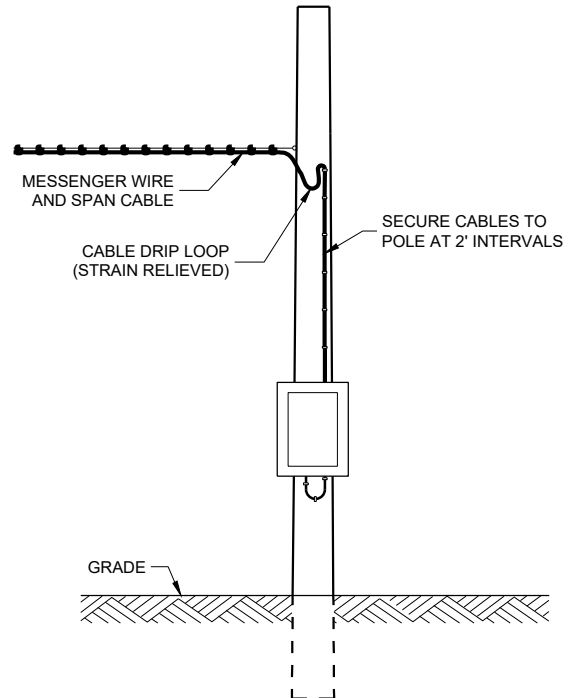
TRAFFIC SIGNAL FACES SHALL BE TYPICALLY PLACED 12 FEET FROM EDGE OF PAVEMENT.

EACH TRAFFIC SIGNAL SHALL HAVE A BACKPLATE.

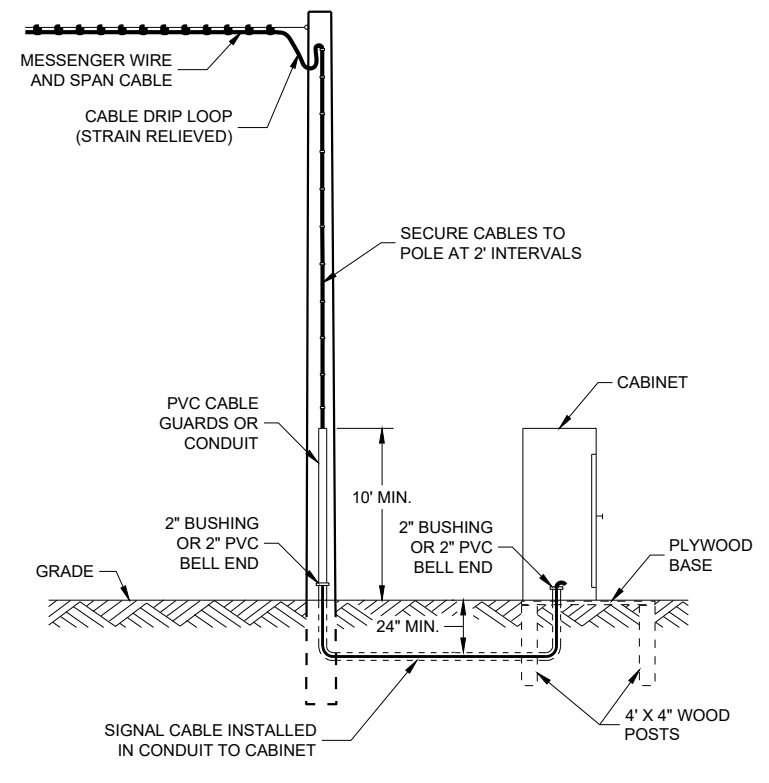
SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15D33.



TYPICAL DROP TO TRAFFIC SIGNAL FACE



POLE MOUNT CABINET INSTALLATION



GROUND MOUNT CABINET INSTALLATION

MINIMUM POLE LENGTHS	CLASS	POLE BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

OFFSET DISTANCES FOR TEMPORARY NON-BREAKAWAY POLES	
SPEED LIMIT	OFFSET DISTANCE*
GREATER THAN 45 MPH	18 FT
45 MPH OR LESS	12 FT
45 MPH OR LESS W/CURBS	2 FT

* NOTE: OFFSET MEASURED FROM OUTER EDGE OF OUTSIDE THRU LANE.

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 /S/ Ahmet Demirelek
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

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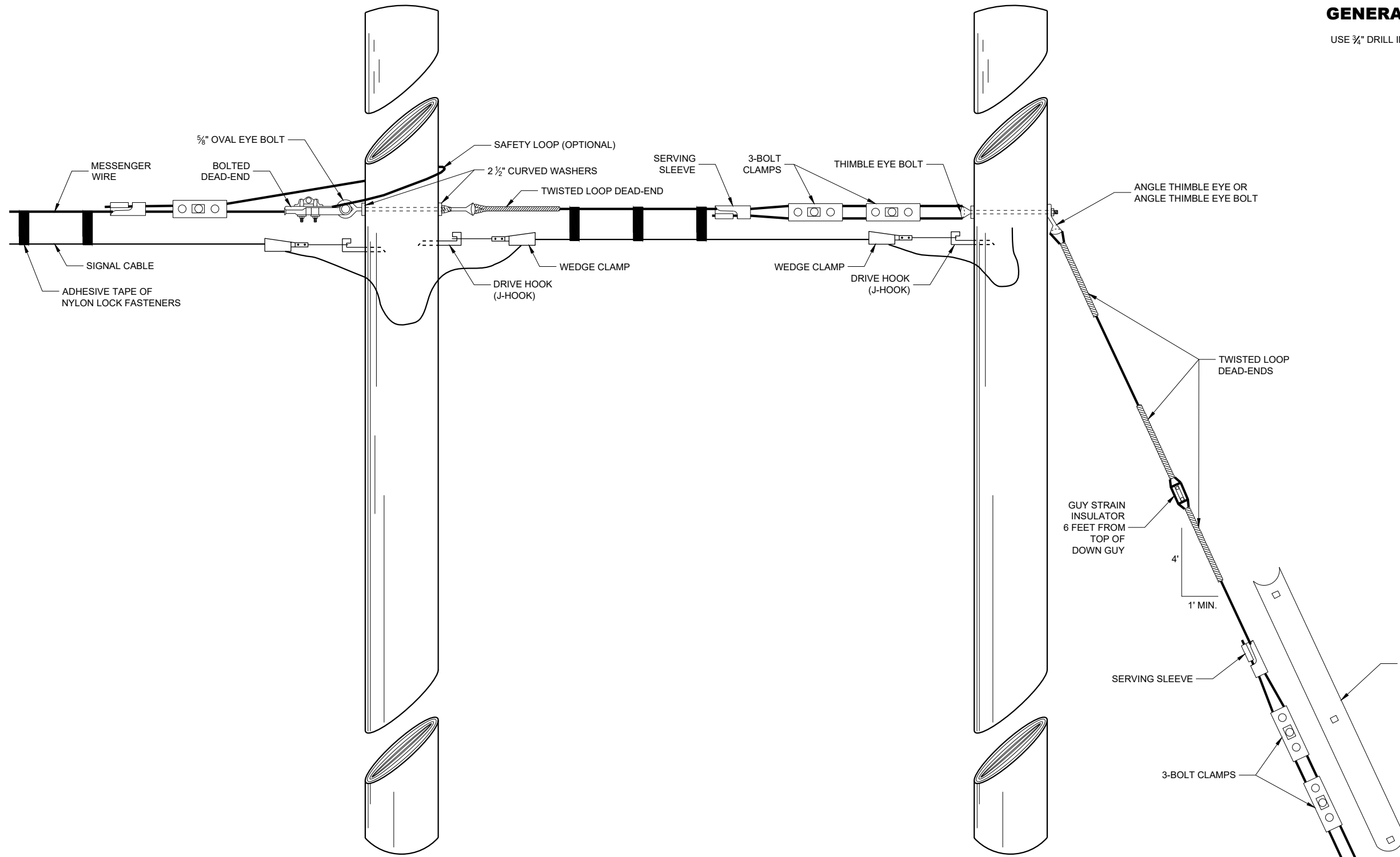
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SDD09G02 - 05a

SDD09G02 - 05a

GENERAL NOTES

USE 3/4" DRILL IN WOOD POLE TO PROVIDE FOR 5/8" BOLTS.



SPAN WIRE POLE

GUY POLE

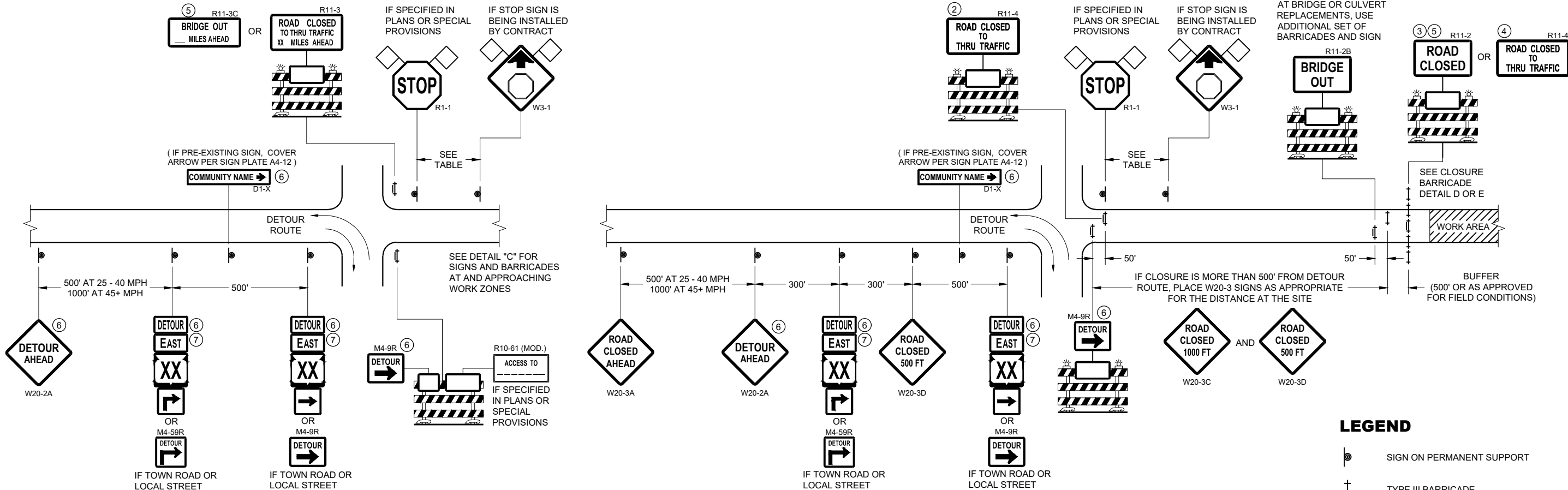
TYPICAL DEAD-ENDINGS OR GUYING

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2015 /S/ Ahmet Demerbilek
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA



**DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR**

WORK ZONE GREATER THAN OR EQUAL TO 1/2 MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)

**DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR**

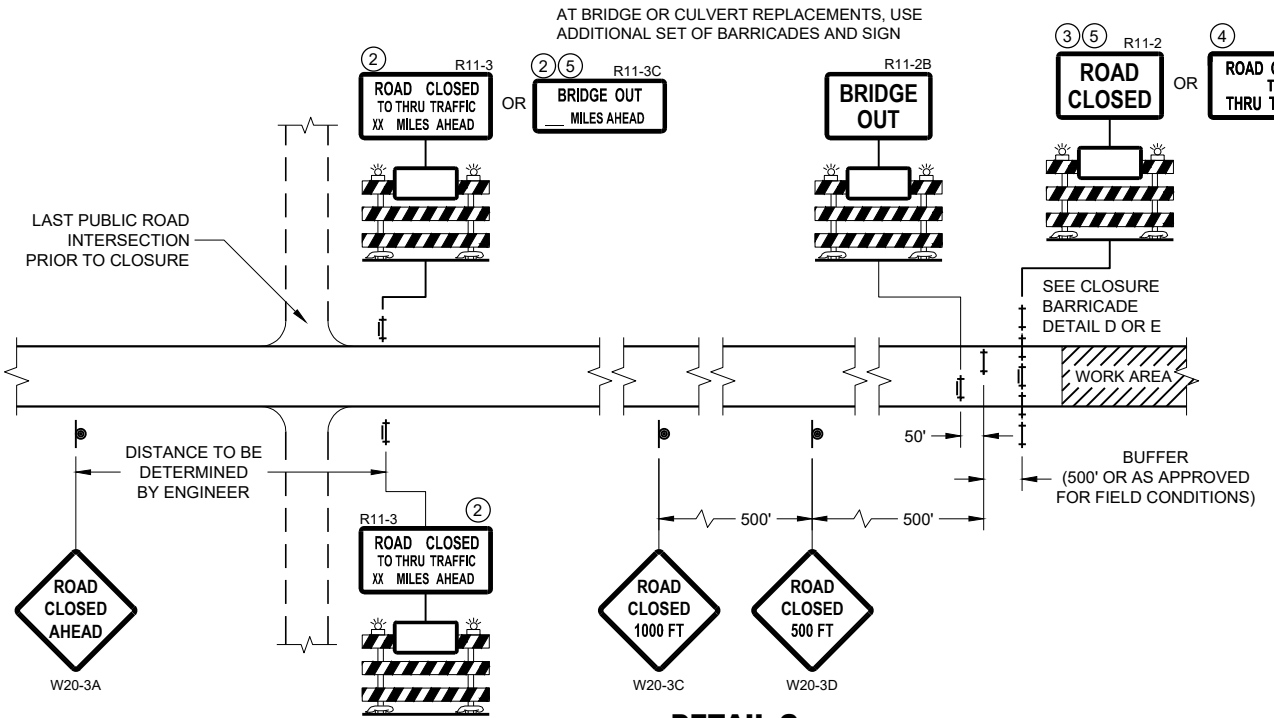
WORK ZONE LESS THAN 1/2 MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

- M4 - 8
- M3 - X
- M1 - 4
- M1 - 6
- M1 - 5A
- M05 - 1
- M06 - 1



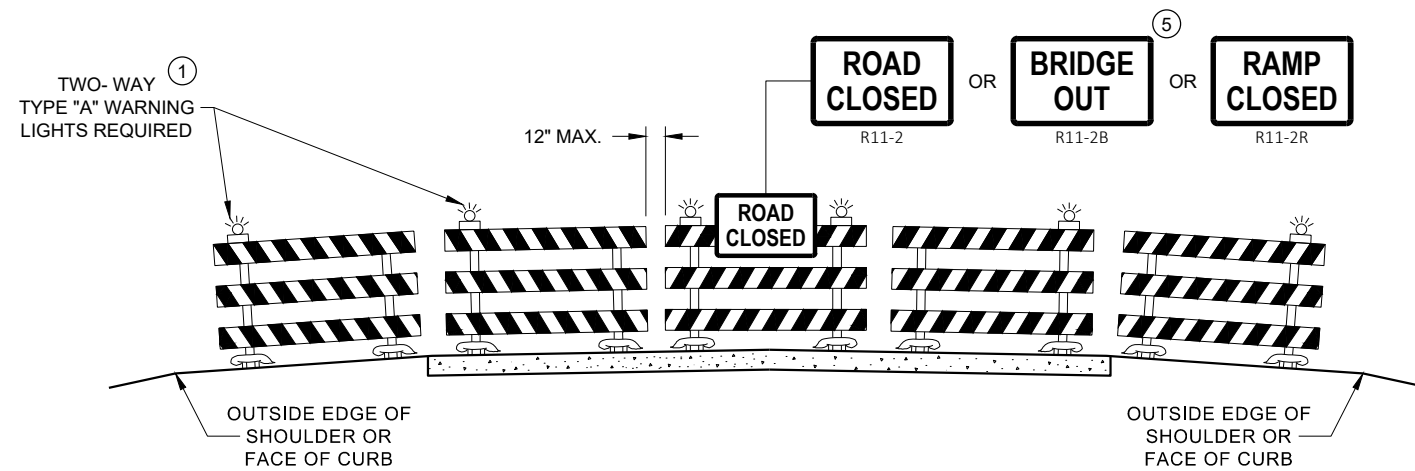
**DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR**

SEE SDD 15C2-SHEET "b"
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

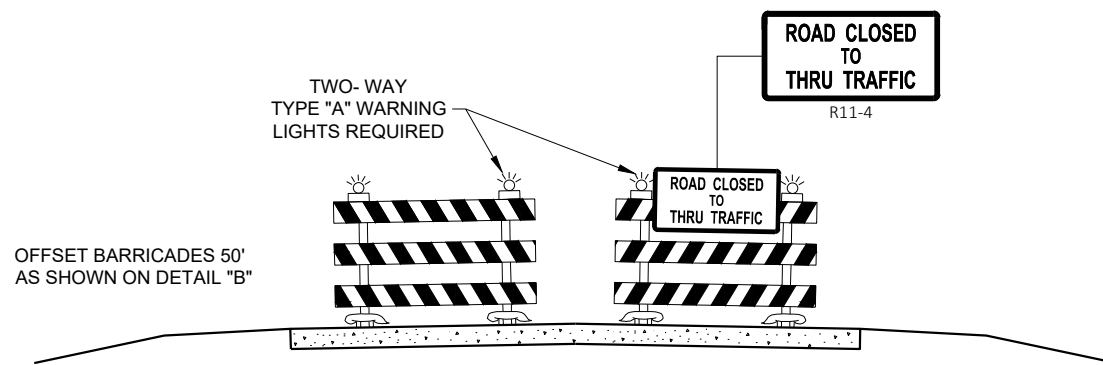
**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 /S/ Andrew Heidtke
DATE DATE WORK ZONE ENGINEER
FHWA



**DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW**



**DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW**

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW - INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

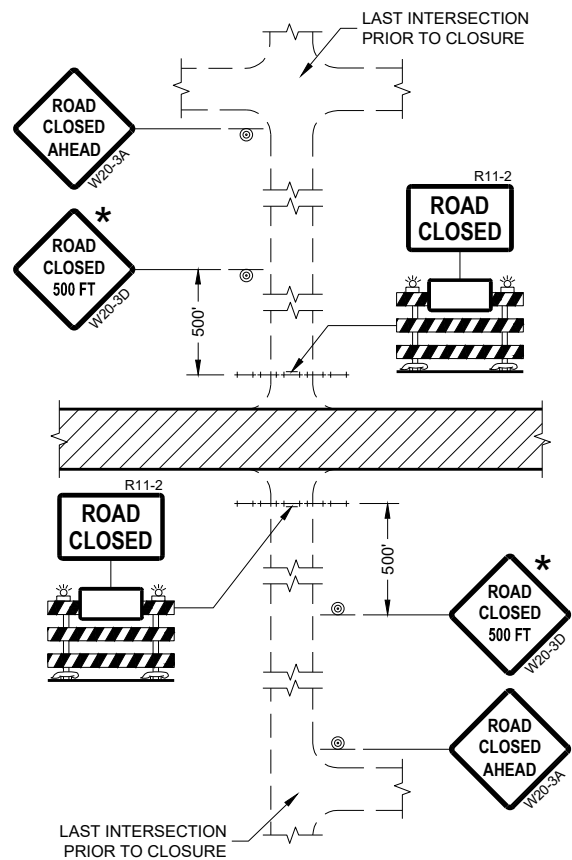
- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60" X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

- ① TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- ② THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.
- ③ FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".
- ④ FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".
- ⑤ FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.
- ⑥ INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- ⑦ "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

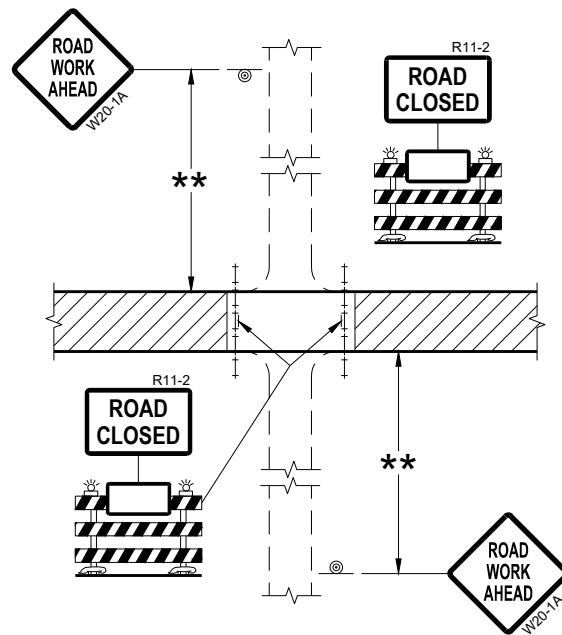
**BARRICADES AND SIGNS
FOR
VARIOUS CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

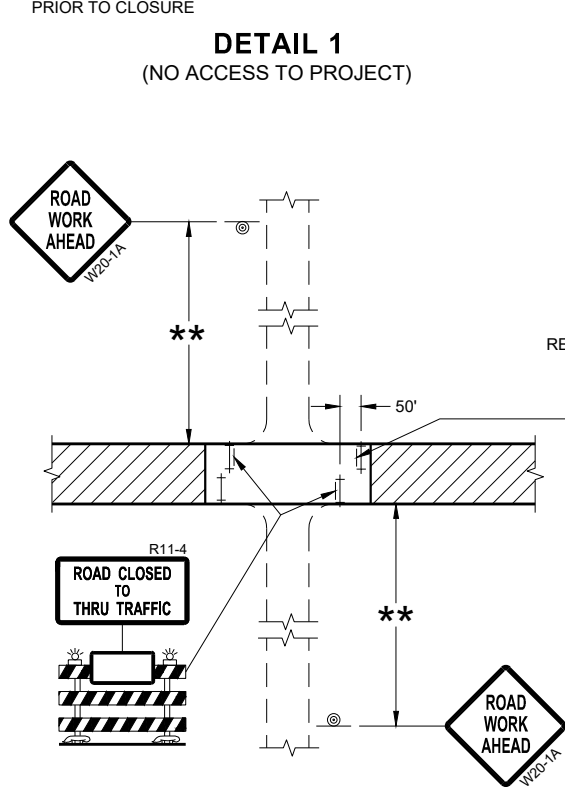
APPROVED
February 2020 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA



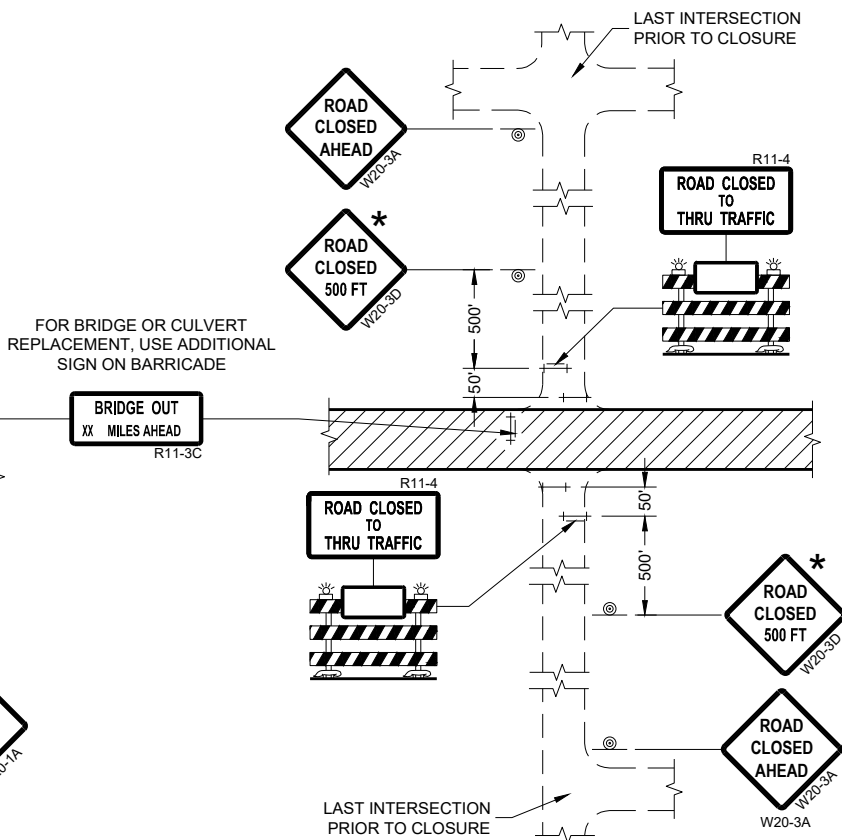
DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT)



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED.
CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE (500 FEET DESIRABLE) TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

- * OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.
- ** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

LEGEND

- ⊙ SIGN ON PERMANENT SUPPORT
- ⊥ TYPE III BARRICADE
- ⊥ TYPE III BARRICADE WITH ATTACHED SIGN
- ⚡ TYPE "A" WARNING LIGHT (FLASHING)
- ▨ WORK AREA

**BARRICADES AND SIGNS
FOR
SIDEROAD CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

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" X 48" UNLESS OTHERWISE NOTED.

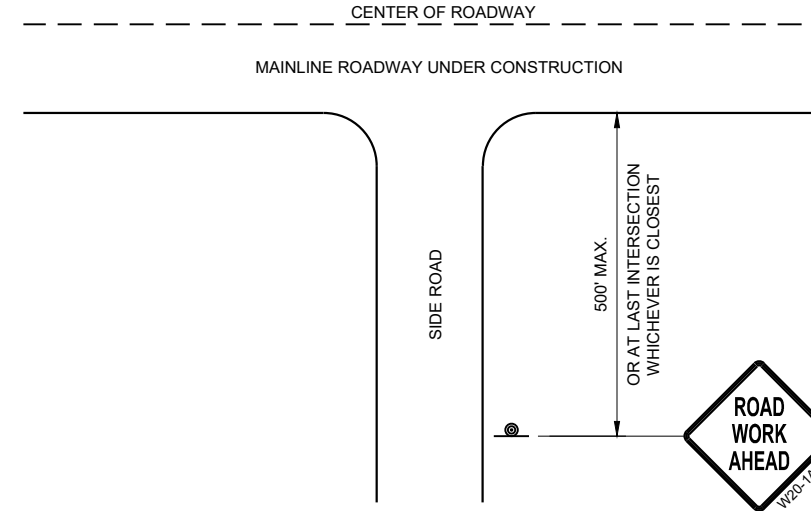
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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 REESTABLISHED.

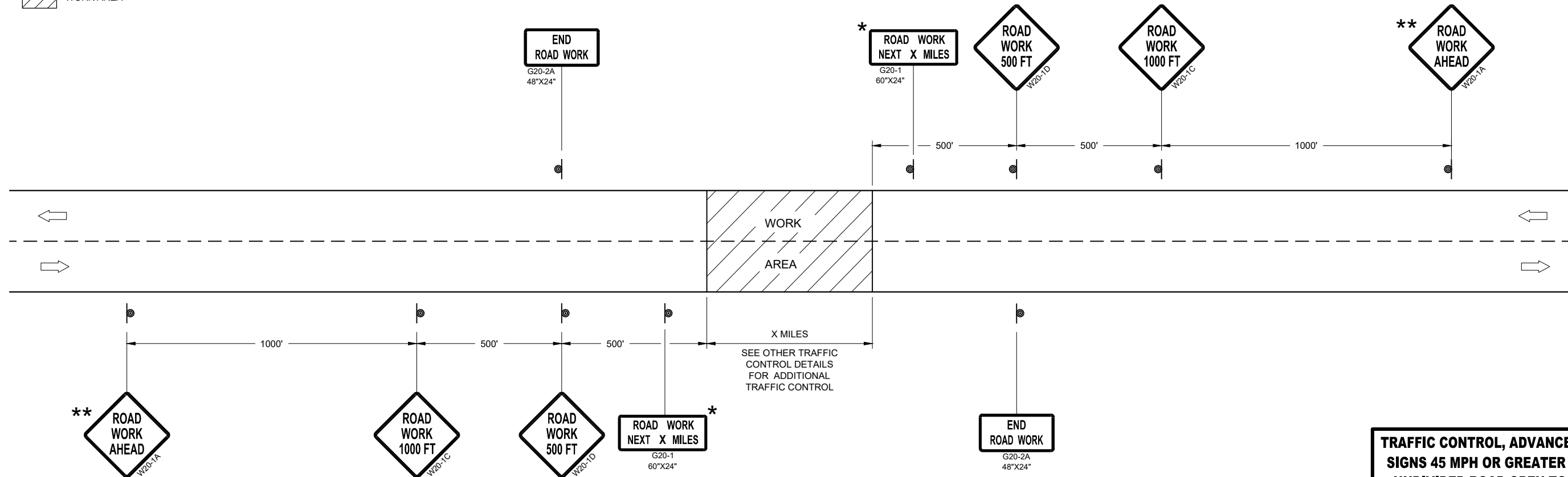
- * OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- ** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

LEGEND

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



**TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL**



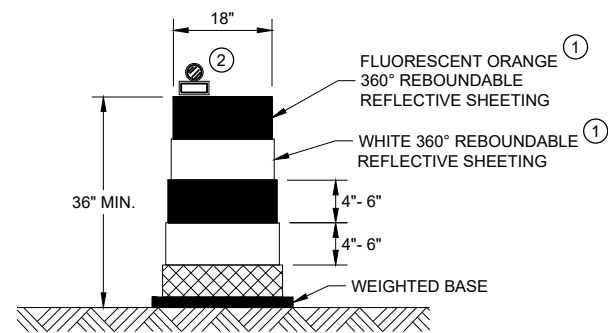
TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

**TRAFFIC CONTROL, ADVANCE WARNING
SIGNS 45 MPH OR GREATER TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFIC**

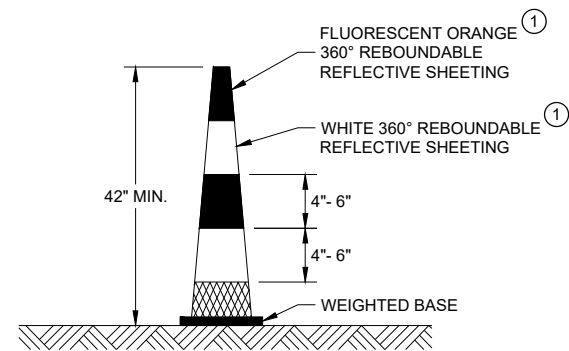
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE July 2018 /S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

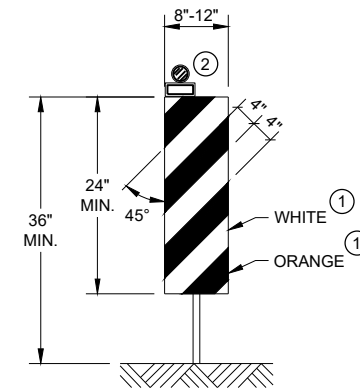


DRUM



42" CONE

DO NOT USE IN TAPERS
 1/2 SPACING OF DRUMS

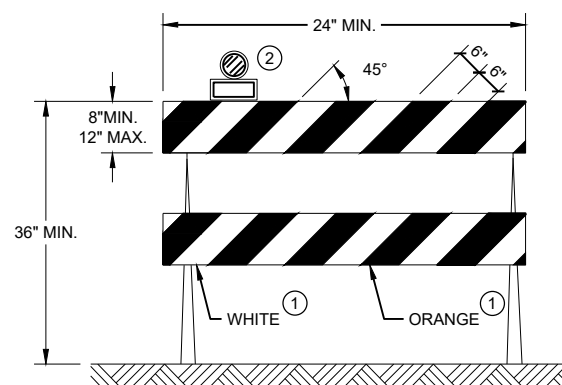


VERTICAL PANEL

THE STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.

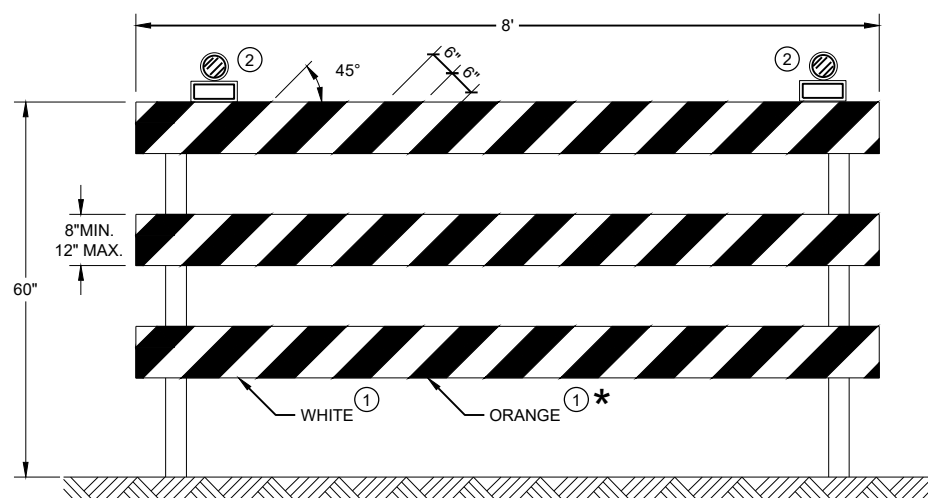
GENERAL NOTES

- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.



TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE III BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

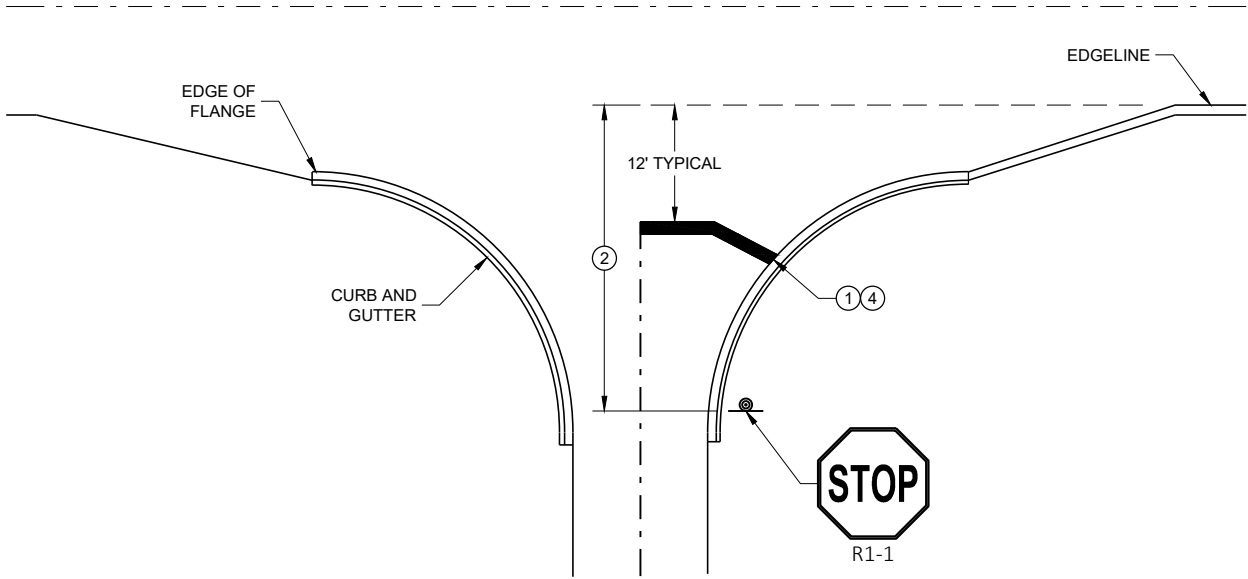
* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2021 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
<small>FHWA</small>	

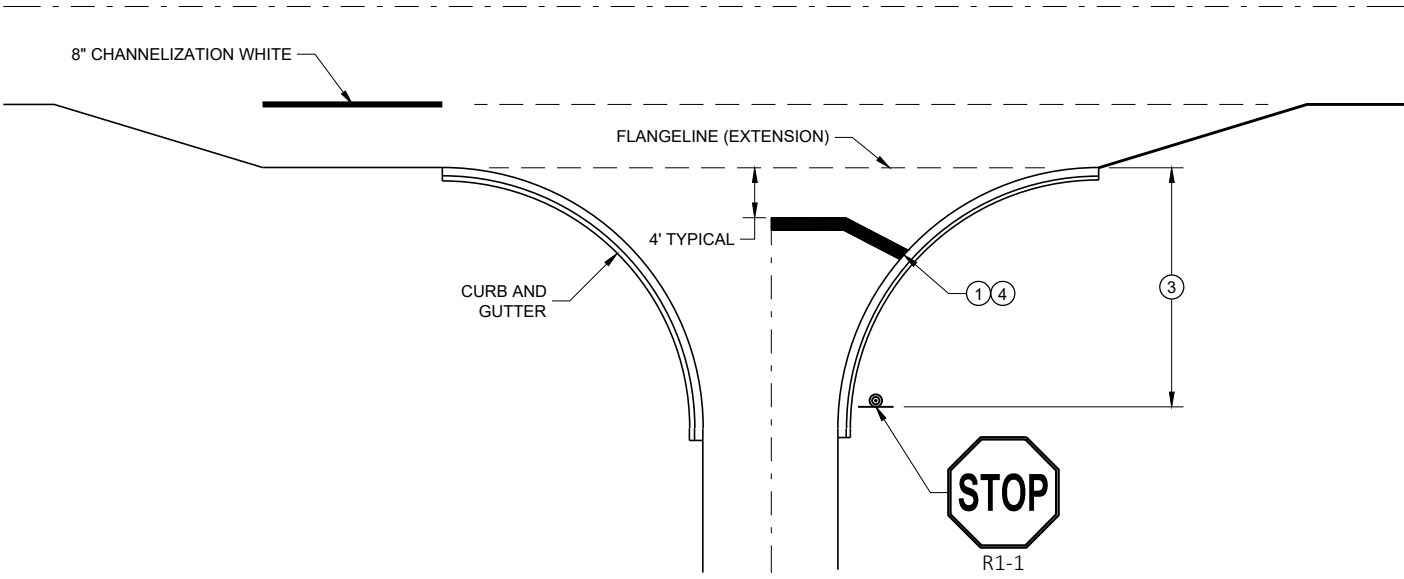
GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

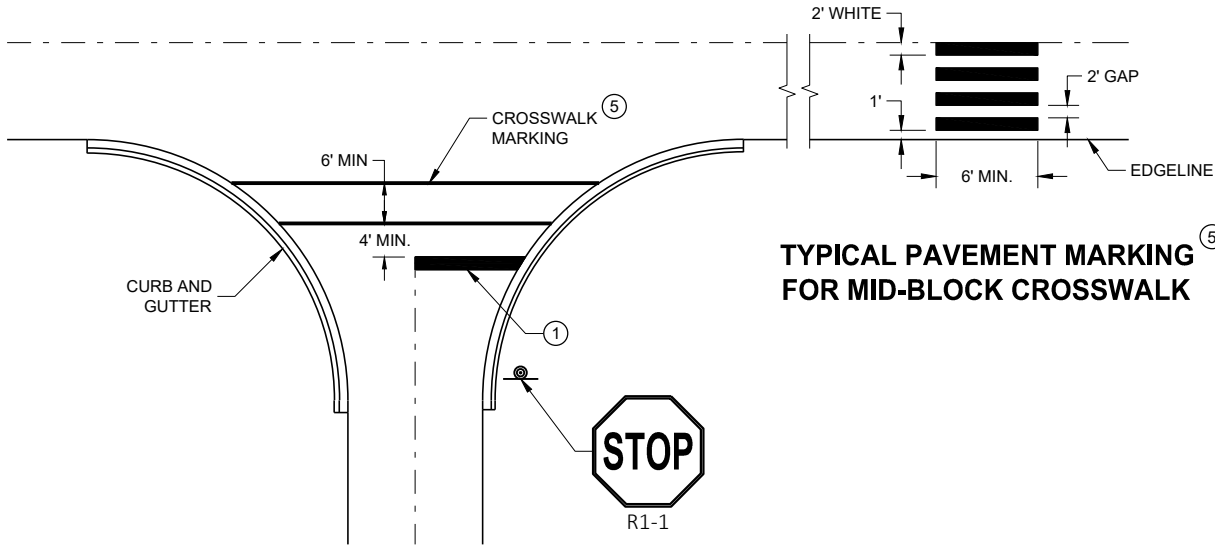
- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
- ③ NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION.
- ④ MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
- ⑤ LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES INSTEAD.



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

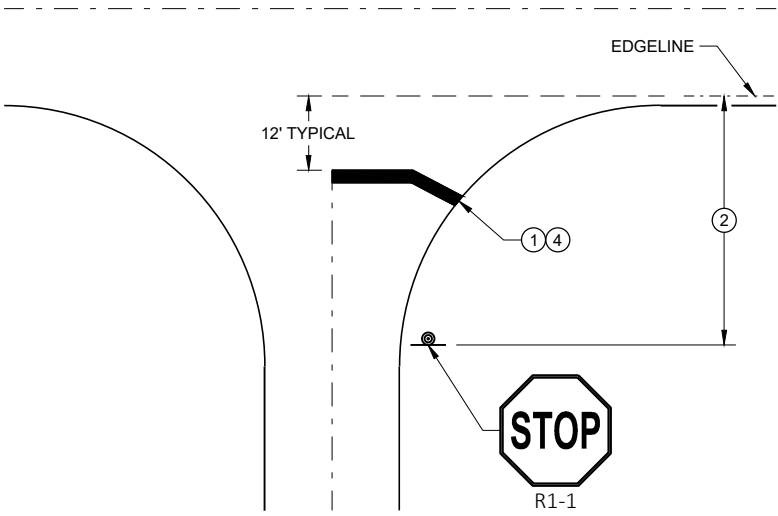


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING

TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER





STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 /S/ Matthew Rauch
DATE STATE SIGNING AND MARKING ENGINEER

FHWA

LEGEND

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

GENERAL NOTES

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 THE REGIONAL TRAFFIC UNIT.

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

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

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

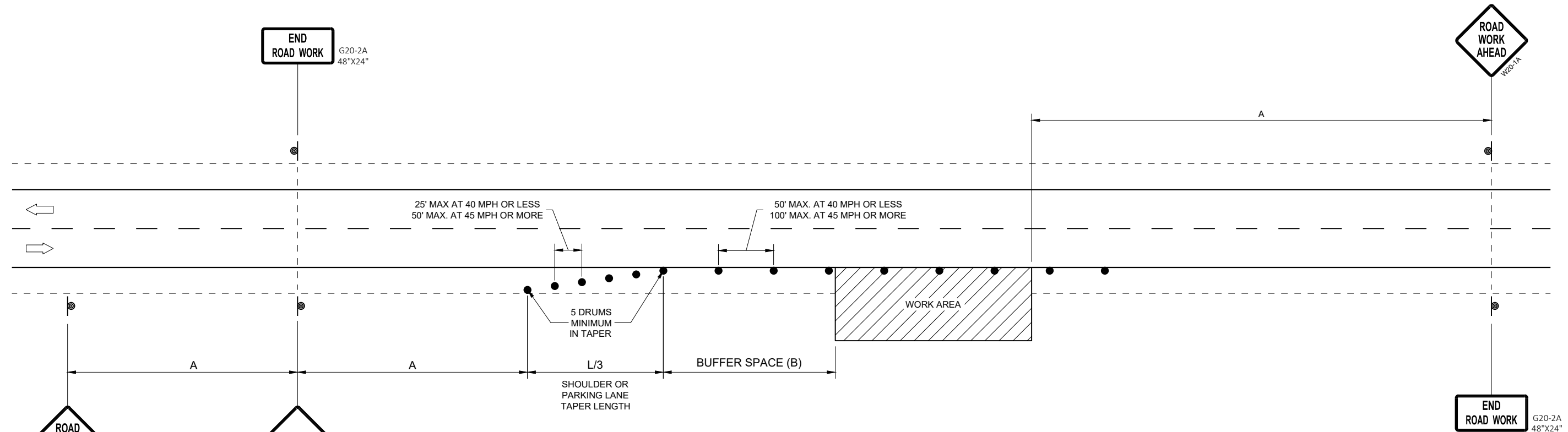
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

W20-1A 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.

6

6



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHOULDER TAPER L / 3 W, LATERAL OFFSET (FT)						BUFFER SPACE (B) FEET
		3	4	5	6	7	8	
25	200'	10	14	17	21	24	28	55
30	200'	15	20	25	30	35	40	85
35	350'	20	27	34	40	47	54	120
40	350'	26	35	44	53	62	70	170
45	500'	45	59	74	89	104	119	220
50	500'	50	66	83	99	116	132	280
55	500'	54	73	91	109	127	145	335'

SDD 15D28 - 04

SDD 15D28 - 04

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

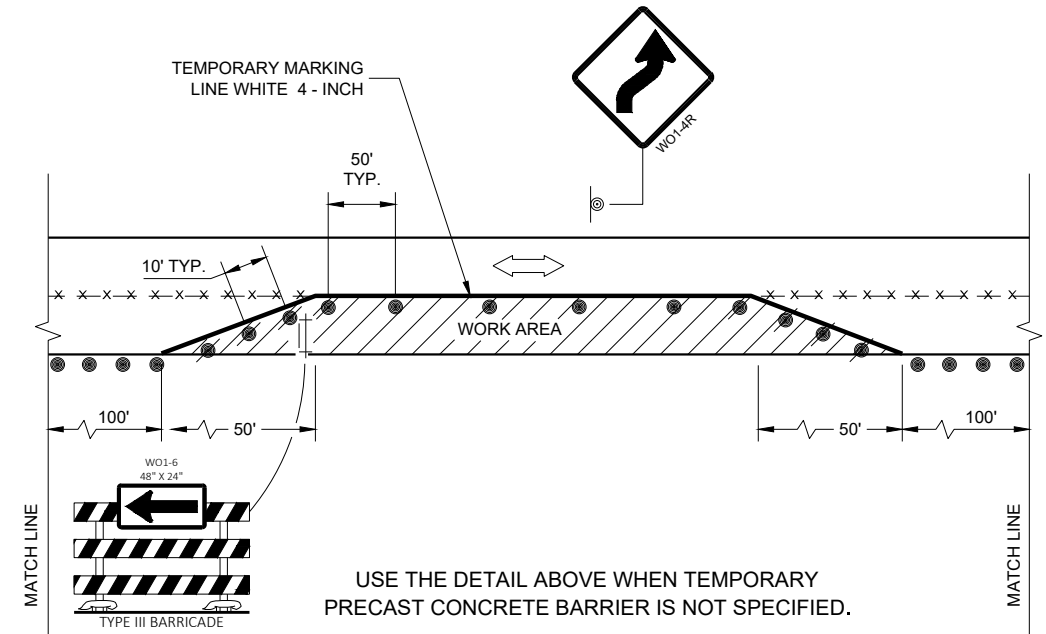
APPROVED
May 2020 /S/ Andrew Heidtke
DATE STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER

FHWA

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLAGS, 16" X 16" MIN. (ORANGE)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- ASPHALTIC PAVEMENT WIDENING
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY SIGNAL. SEE SDD 09G02 FOR EXACT PLACEMENT

WIDTH ON SIGN TO BE APPROX. 1-FOOT LESS THAN AVAILABLE WIDTH. (OMIT IF AVAILABLE WIDTH IS MORE THAN 16 FEET)



TEMPORARY PAVEMENT MARKING LINE, 4 INCH WHITE (STOPLINE TO STOPLINE). REMOVE EXISTING EDGELINE AND OFFSET THE TEMPORARY EDGELINE IF THE DISTANCE FROM THE EDGELINE TO CONCRETE BARRIER WALL IS LESS THAN 9 FEET.

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 TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE..

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

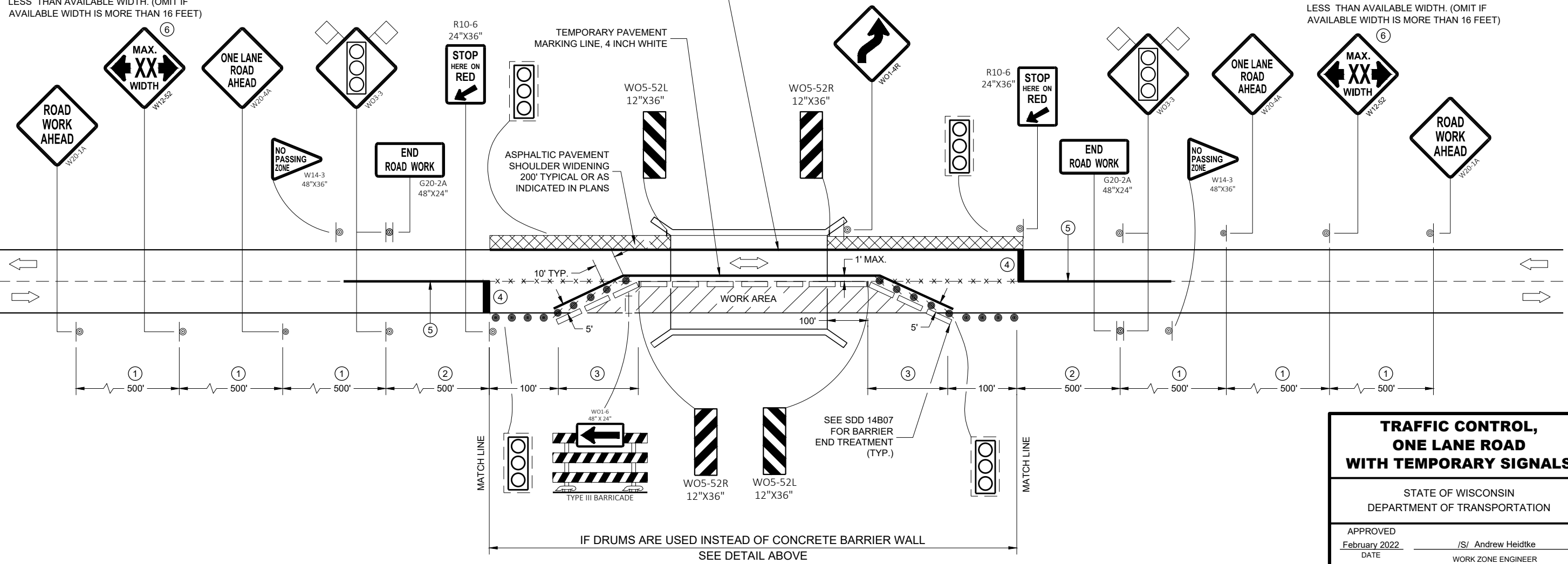
ALL SIGNS ARE 48" x 48" UNLESS OTHERWISE NOTED.

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

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

REMOVE PAVEMENT MARKING AND PLACE TEMPORARY PAVEMENT MARKING LINES IF THE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

- ① 500 FOOT SPACING SHOWN IS FOR ROADWAYS WITH A PRE-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35 - 40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25 - 30 MPH, USE 200 FOOT TYPICAL SPACING.
- ② USE 300 FOOT SPACING IF THE PRE - CONSTRUCTION REGULATORY SPEED IS 35 MPH OR LESS.
- ③ DIMENSION DETERMINED BY CBTP TAPER FROM EDGE LINE TO TANGENT SECTION OF THE ROAD.
- ④ TEMPORARY PAVEMENT MARKING LINE, 18 INCH WHITE STOP LINE.
- ⑤ 700 FOOT TEMPORARY PAVEMENT MARKING LINE, 4 INCH DOUBLE YELLOW . WHEN THE DISTANCE FOR THE PRECEDING NO - PASSING ZONE IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES AS INDICATED IN THE SPECIFICATIONS, THE TWO ZONES SHALL BE CONNECTED.
- ⑥ SEE SDD 15C02 - SHEET "F" FOR ADVANCED WIDTH RESTRICTION SIGNING.

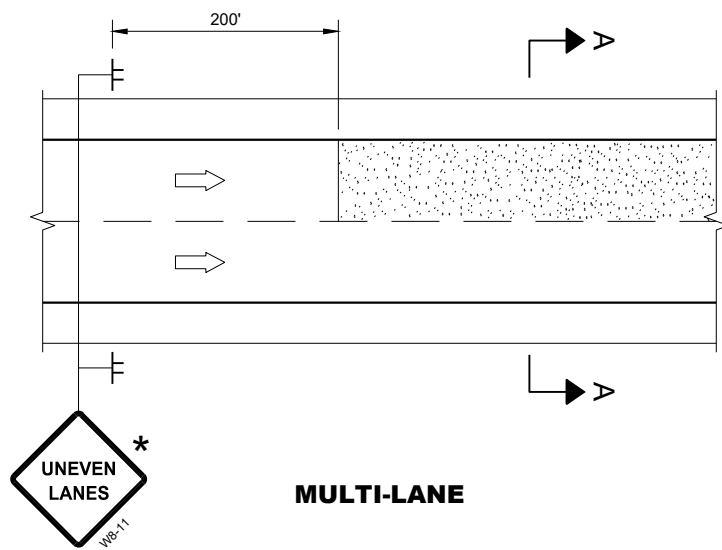


**TRAFFIC CONTROL,
ONE LANE ROAD
WITH TEMPORARY SIGNALS**

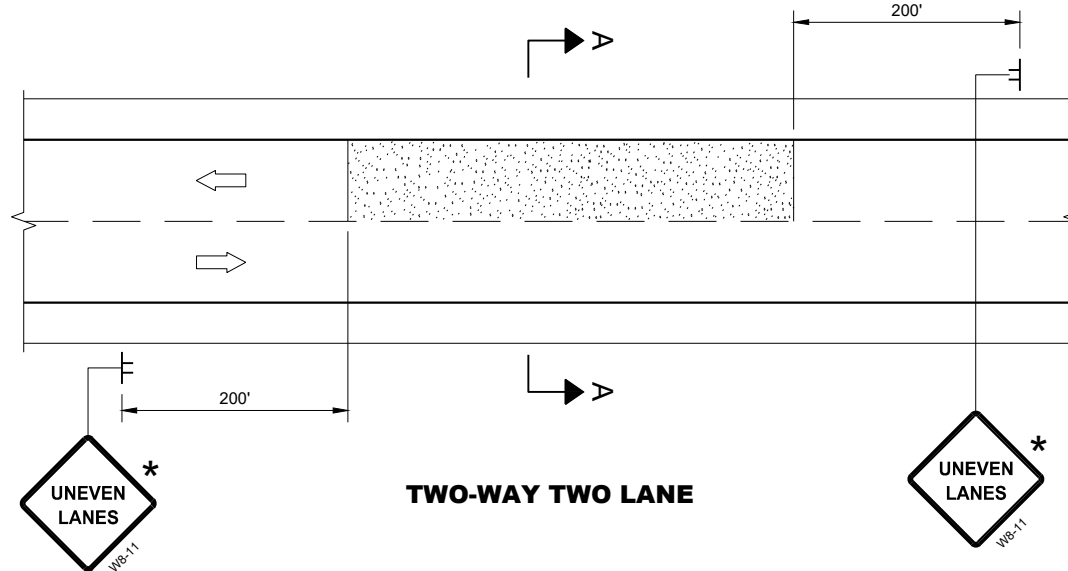
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2022 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

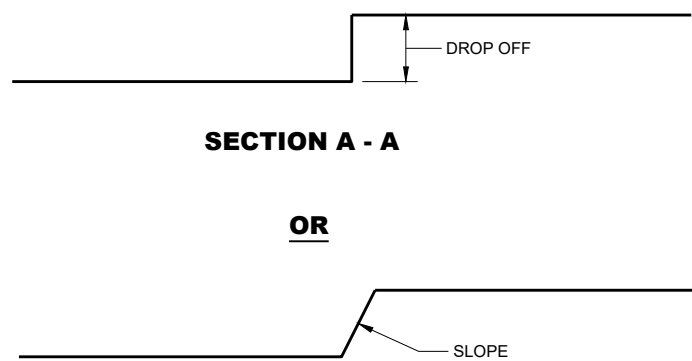
FHWA



MULTI-LANE



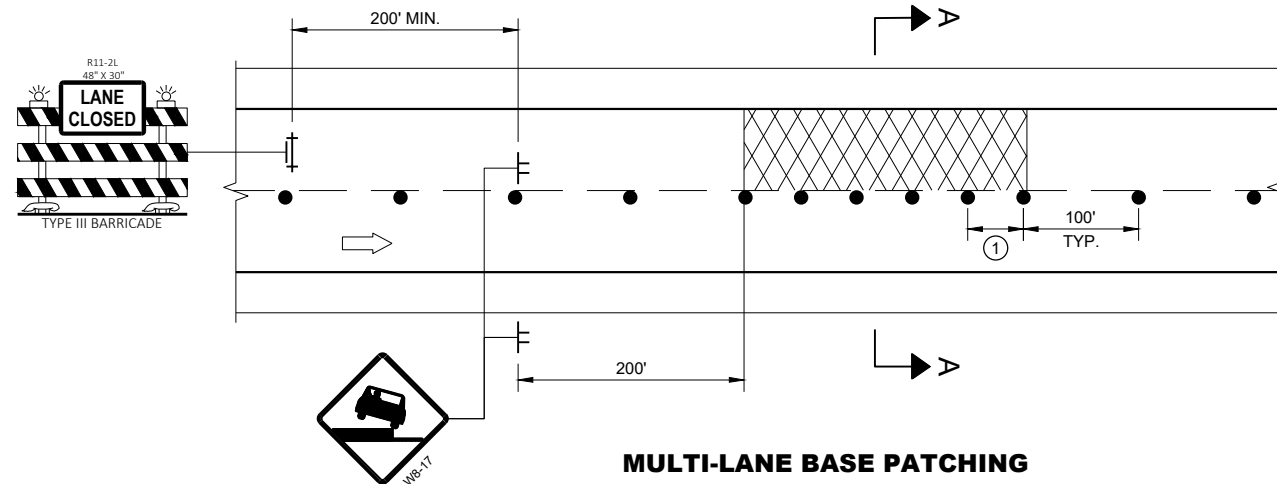
TWO-WAY TWO LANE



SECTION A - A

OR

SECTION A - A



MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS

GENERAL NOTES

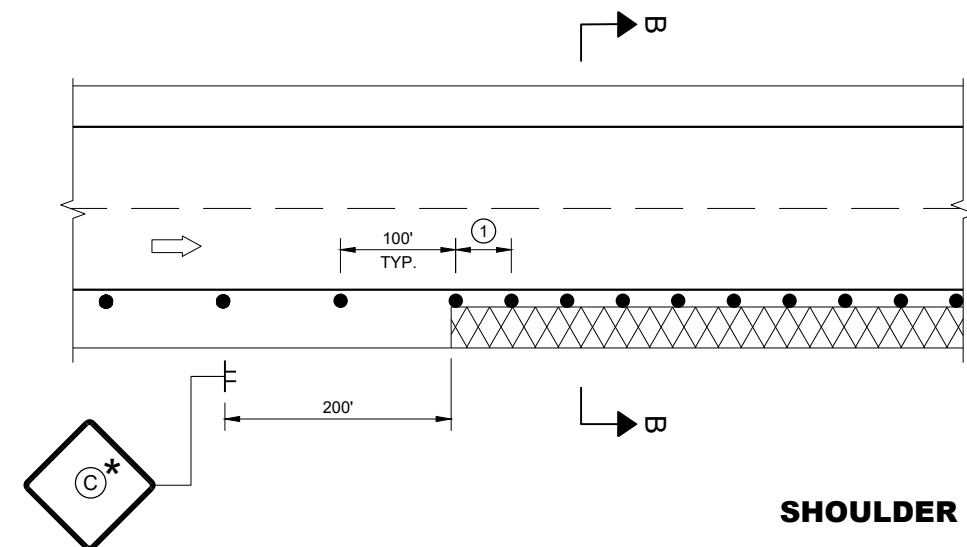
- FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.
- ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
- "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
- WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.
- * IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.
- ① USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

LEGEND

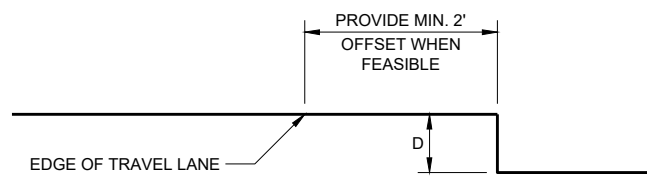
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE

6

6



SHOULDER DROP-OFFS



SECTION B - B

D	SIGN (C)
< 2" WITH A SLOPE STEEPER THAN 3:1	LOW SHOULDER WO8-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	SHOULDER DROP-OFF W8-9A PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT

SDD 15D39 - 02

SDD 15D39 - 02









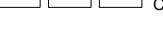
**TRAFFIC CONTROL,
DROP-OFF SIGNING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

LEGEND

-  TYPE III BARRICADE WITH ATTACHED SIGN
-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE "A" WARNING LIGHT (FLASHING)
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
-  CONCRETE BARRIER TEMPORARY PRECAST

GENERAL NOTES

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

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

THIS LANE CLOSURE IS TYPICAL FOR LANE SHIFT RIGHT - REVERSE FOR SHIFTING LEFT.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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

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

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

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

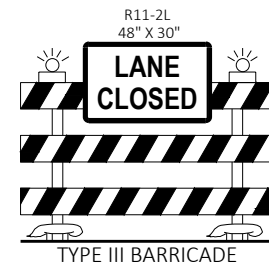
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

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

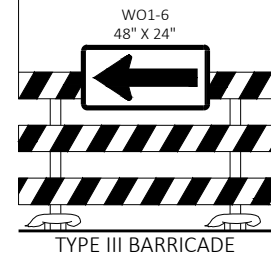
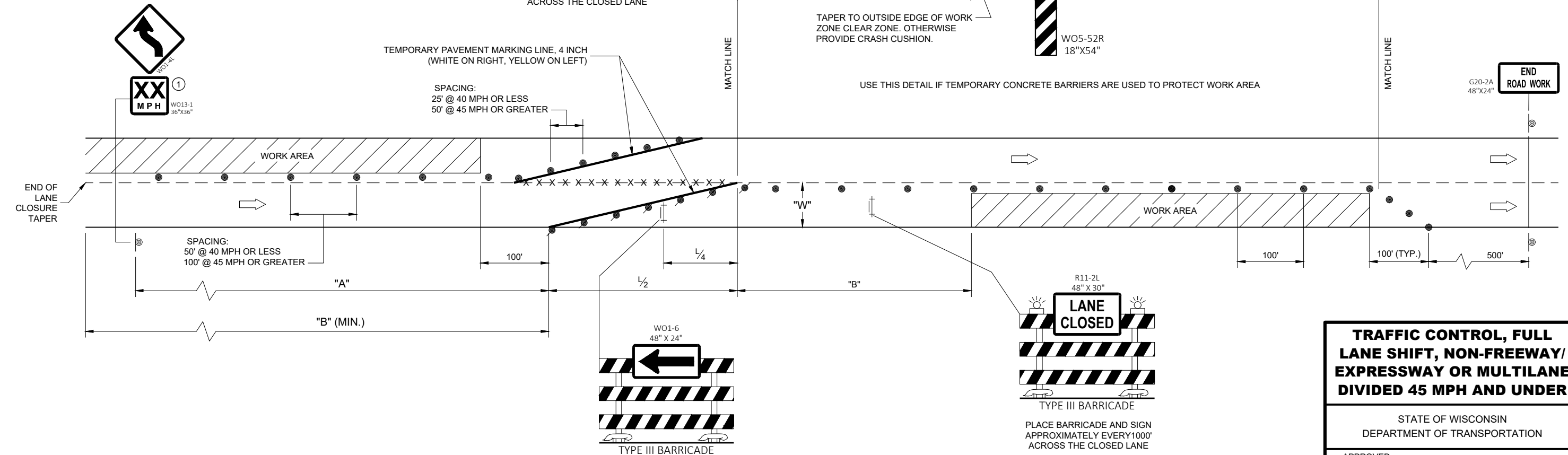
① USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED.

② BARRIER FLARE RATE: 6:1 @ 40 MPH OR LESS
8:1 @ 45 MPH OR GREATER

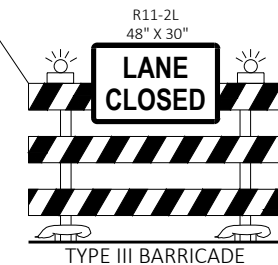
POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHIFTING TAPER $\frac{L}{2}$					BUFFER SPACE (B) FEET
		W, LATERAL OFFSET (FT)	10	11	12	13	
25	200	52	57	63	68	73	55
30	200	75	83	90	98	105	85
35	350	102	112	123	133	143	120
40	350	133	147	160	173	187	170
45	500	225	248	270	293	315	220



PLACE BARRICADE AND SIGN APPROXIMATELY EVERY 1000' ACROSS THE CLOSED LANE



TYPE III BARRICADE



PLACE BARRICADE AND SIGN APPROXIMATELY EVERY 1000' ACROSS THE CLOSED LANE

TRAFFIC CONTROL, FULL LANE SHIFT, NON-FREEWAY/ EXPRESSWAY OR MULTILANE DIVIDED 45 MPH AND UNDER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED _____
DATE May 2022 /S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

6

SDD 15D40 - 04a

SDD 15D40 - 04a

DESIGN DATA

LIVE LOAD:
 DESIGN LOADING: HL-93
 INVENTORY RATING FACTOR: RF = 1.17
 OPERATING RATING FACTOR: RF = 1.52
 WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250(KIPS)

EARTHLOAD:
 DESIGNED FOR 1 TO 3 FT. OF FILL.

MATERIAL PROPERTIES:
 CONCRETE MASONRY: f'c = 3,500 P.S.I.
 BAR STEEL REINFORCEMENT: fy = 60,000 P.S.I.

TRAFFIC VOLUME

USH 63
 ADT = 6300 (2023)
 R.D.S. = 50 M.P.H.

- ▲ SEE CORNER DETAILS ON "APRON DETAILS" SHEET
- NAME PLATE LOCATION (SEE "APRON DETAILS" SHEET)
- INDICATES WING NUMBER
- ▲ VERT. CONST. JOINT (TYP.)
- SEE ROADWAY PLANS FOR DETAILS.
- ☆ EXACT PULL BOX LOCATIONS TO BE DIRECTED BY ENGINEER
- ◆ LUMINAIRES AND JUNCTION BOXES TO BE AT A HEIGHT OF 7'-0" FROM BOX FLOOR
- CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH
- CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH



NOTE: STRUCTURE BACKFILL REQUIRED BEHIND ALL WINGWALLS

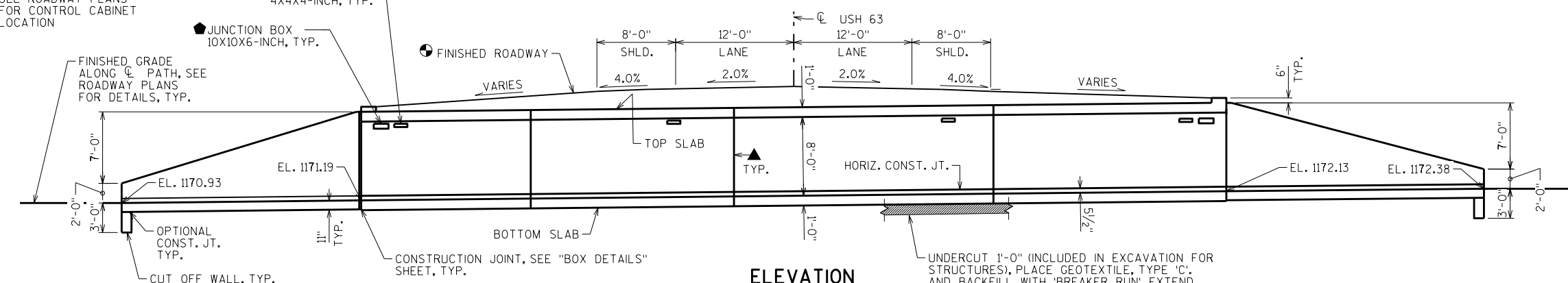
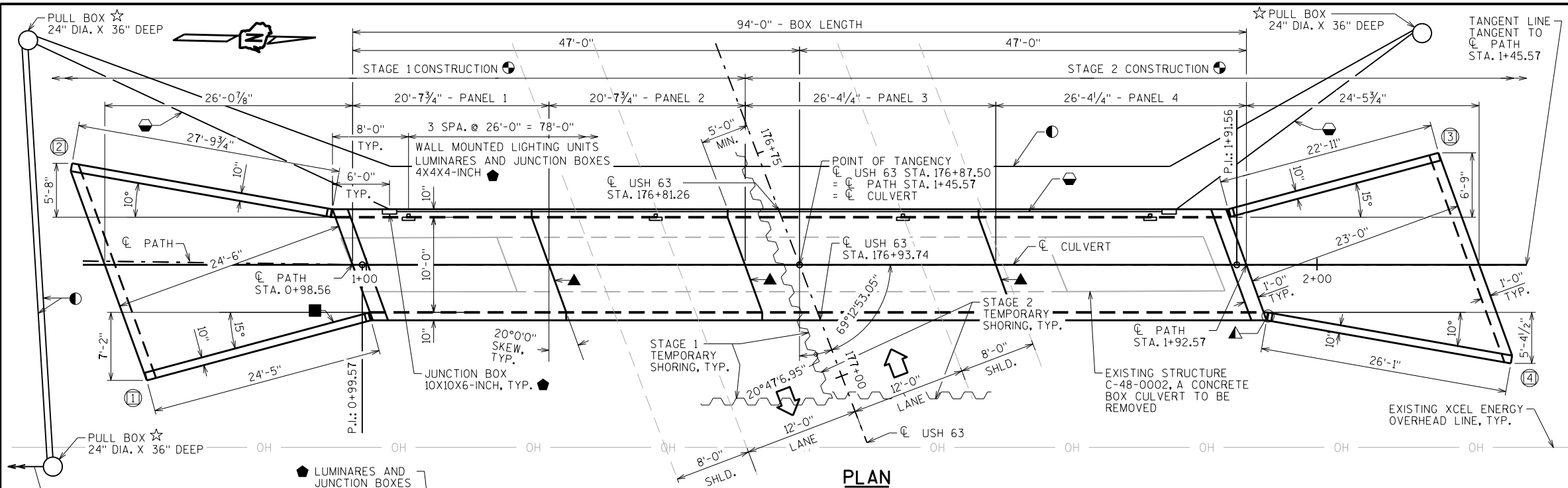
LIST OF DRAWINGS

1. LAYOUT
2. BOX DETAILS
3. APRON
4. APRON DETAILS
5. SUBSURFACE EXPLORATION

STRUCTURE DESIGN CONTACTS:

MAXWELL KULICK (608) 261-6108
 DOMINIQUE BECHLE (608) 261-8205

NO.	DATE	REVISION	BY
			
ACCEPTED	 CHIEF STRUCTURES DESIGN ENGINEER		09/21/22 DATE
STRUCTURE C-48-25			
USH 63 OVER PEDESTRIAN PATH			
COUNTY	POLK	VILLAGE	CLEAR LAKE
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS			
DESIGNED BY	DESIGNED CK'D.	DRAWN SM	PLANS CK'D. ACT
LAYOUT			SHEET 1 OF 5



TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
203.0220	REMOVING STRUCTURE C-48-0002	EACH	1
206.2001	EXCAVATION FOR STRUCTURES CULVERTS C-48-25	EACH	1
210.2500	BACKFILL STRUCTURE TYPE B	TON	1,951
311.0115	BREAKER RUN	CY	126
504.0100	CONCRETE MASONRY CULVERTS	CY	179
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	18,680
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	4,160
511.1200	TEMPORARY SHORING C-48-25	SF	795
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	24
516.0610.S	SHEET MEMBRANE WATERPROOFING FOR BURIED STRUCTURES	SY	321
645.0105	GEOTEXTILE TYPE C	SY	354
652.0210	CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH	LF	170
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	340
653.0154	PULL BOXES NON-CONDUCTIVE 24X36-INCH	EACH	3
653.0210	JUNCTION BOXES 10X10X6-INCH	EACH	2
655.0620	ELECTRICAL WIRE LIGHTING 8 AWG	LF	930
SPV.0060.01	LIGHTING CONTROL CABINET TYPE SPECIAL	EACH	1
SPV.0060.02	CONCRETE CONTROL CABINET BASE TYPE SPECIAL	EACH	1
SPV.0060.03	UNDERDECK LUMINAIRE TYPE SPECIAL	EACH	4
	NON-BID ITEMS		
	FILLER	SIZE	3/4"

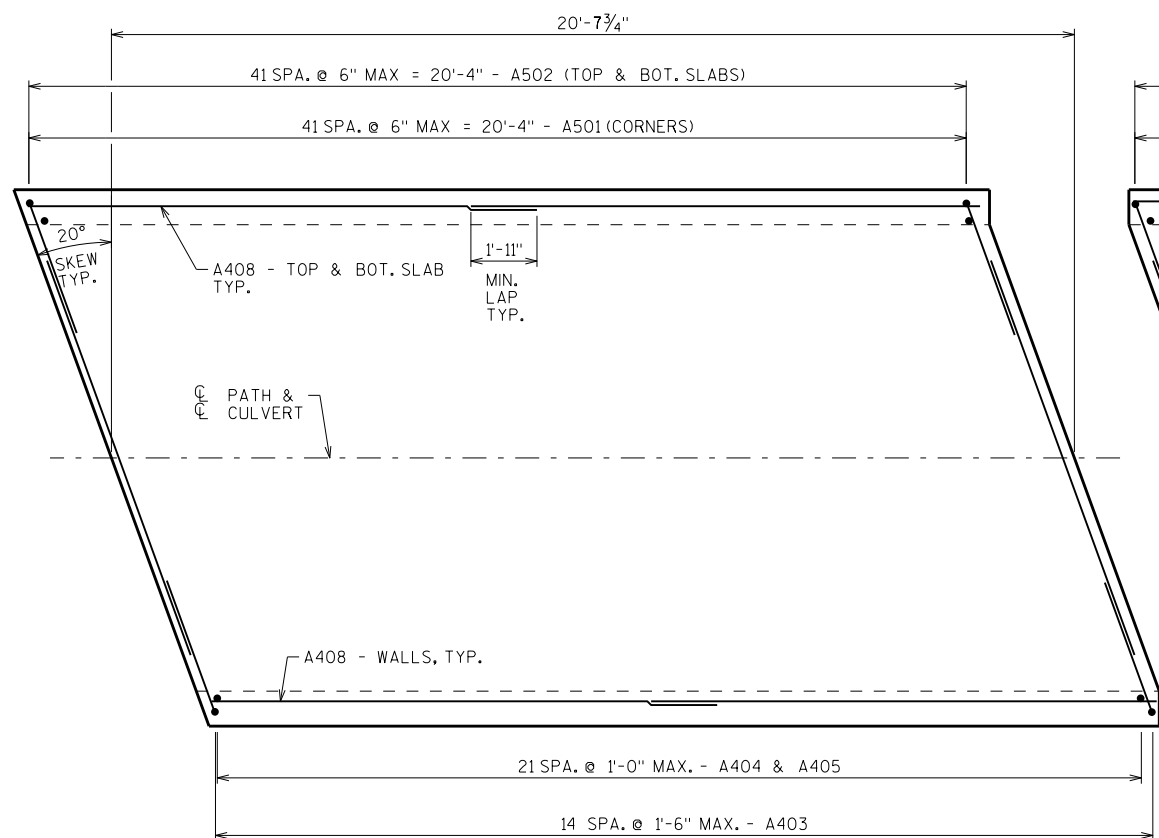
GENERAL NOTES

- DRAWINGS SHALL NOT BE SCALED.
- BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
- THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
- BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.
- THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES CULVERTS C-48-25" SHALL BE THE EXISTING GROUNDLINE.
- ALL VOLUME WHICH CANNOT BE PLACED BEFORE CULVERT CONSTRUCTION AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL WITHIN THE LENGTH OF THE CULVERT INCLUDING THE APRON WING WALLS.
- THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE B" REQUIRED ON THE BOX CULVERT SIDES AND BEHIND APRON WINGS FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES.
- PLACE SHEET MEMBRANE WATERPROOFING ON TOP SLAB AND EXTEND DOWN TO 6" BELOW TOP OF BOTTOM SLAB ALONG OUTSIDE OF BOTH WALLS FOR THE ENTIRE LENGTH OF CULVERT.

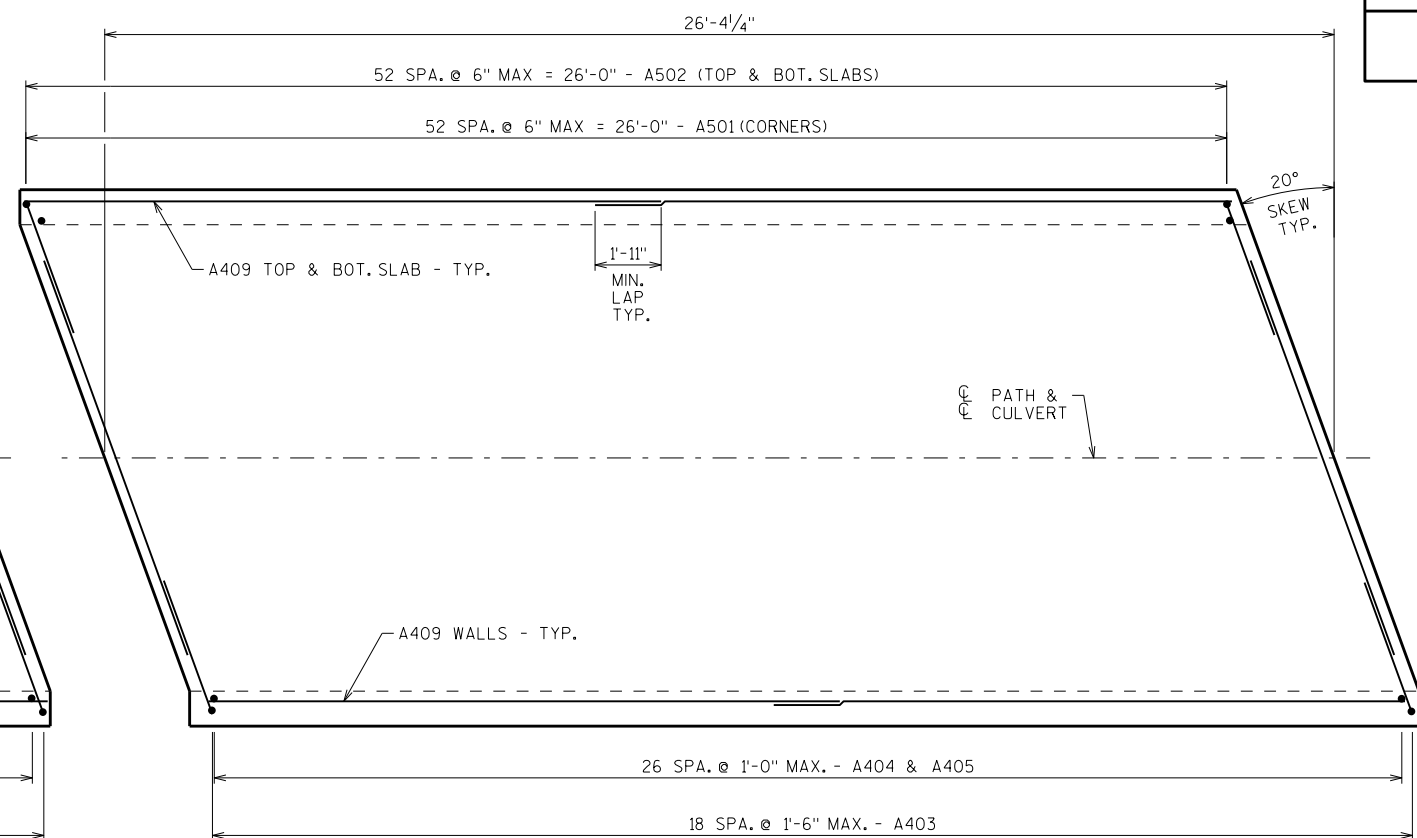
8

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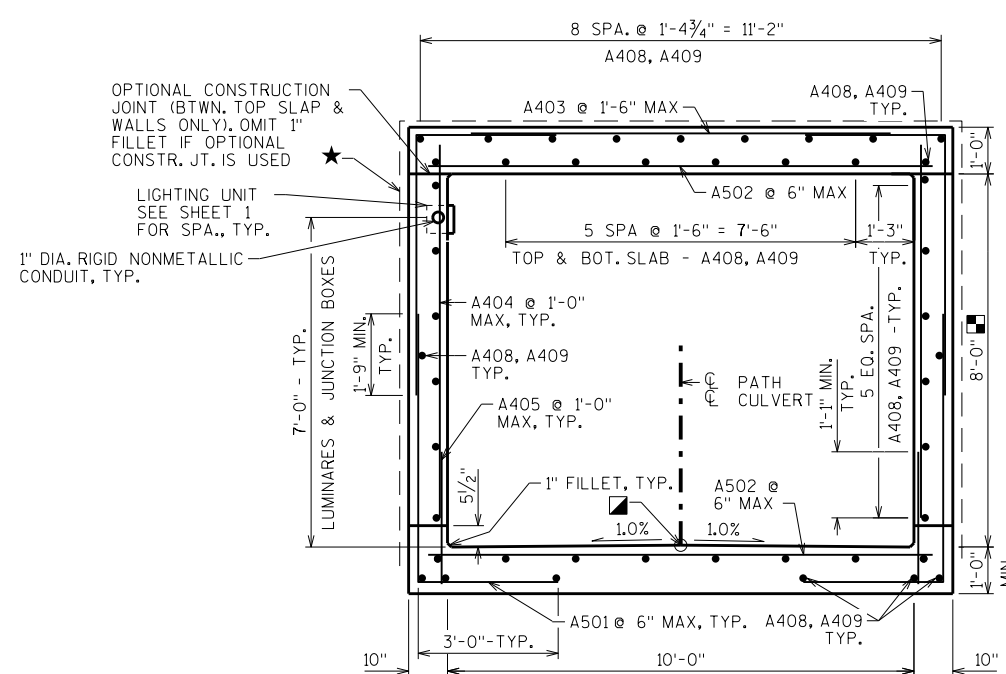
SCALE = 6.50



PLAN - PANELS 1 & 2

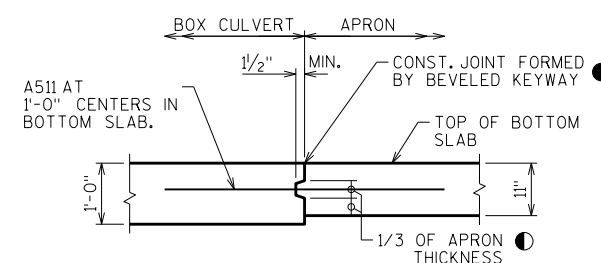


PLAN - PANELS 3 & 4

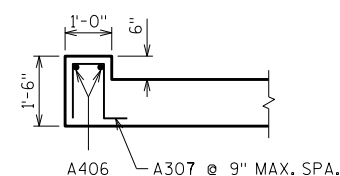


TYPICAL SECTION THRU PANELS

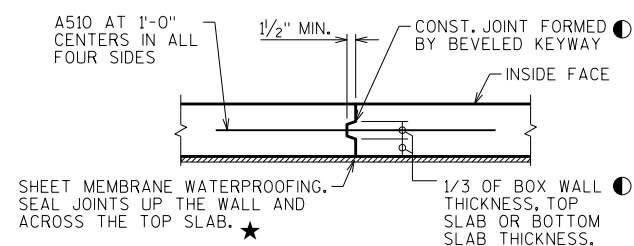
■ DIMENSION TAKEN AT C/P OF PATH
 FOR BOX AND APRON BOTTOM SLAB ELEVATIONS SEE "LAYOUT" SHEET
 LOOKING NORTH
 ■ ELEVATIONS PROVIDED ON SHEET 1 ARE TAKEN ALONG C/P OF PATH



APRON CONNECTION DETAIL



SECTION THRU HEADER

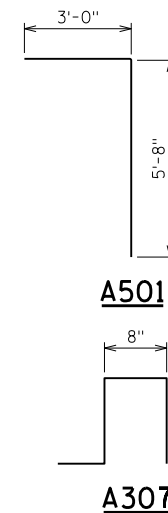


VERTICAL CONSTRUCTION JOINT

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BEND	BAR SERIES	LOCATION
A501		760	8'-7"	X		CORNERS - ALL PANELS
A502		380	11'-11"			TOP & BOT. SLAB - TRANS. - ALL PANELS
A403		68	9'-7"			TOP SLAB - TRANS. - ALL PANELS
A404		196	8'-0"			WALLS - VERT. - ALL PANELS
A405		196	2'-7"			WALLS - VERT. - DOWELS - ALL PANELS
A406		4	12'-1"			HEADERS - HORIZ.
A307		34	3'-3"	X		HEADERS - VERT.
A408		180	11'-4"			TOP & BOT. SLAB & WALL - PANELS 1&2
A409		180	14'-2"			TOP & BOT. SLAB & WALL - PANELS 3&4
A510		132	4'-0"			VERT. CONST. JT.
A511		26	4'-0"			BOX APRON CONNECTION

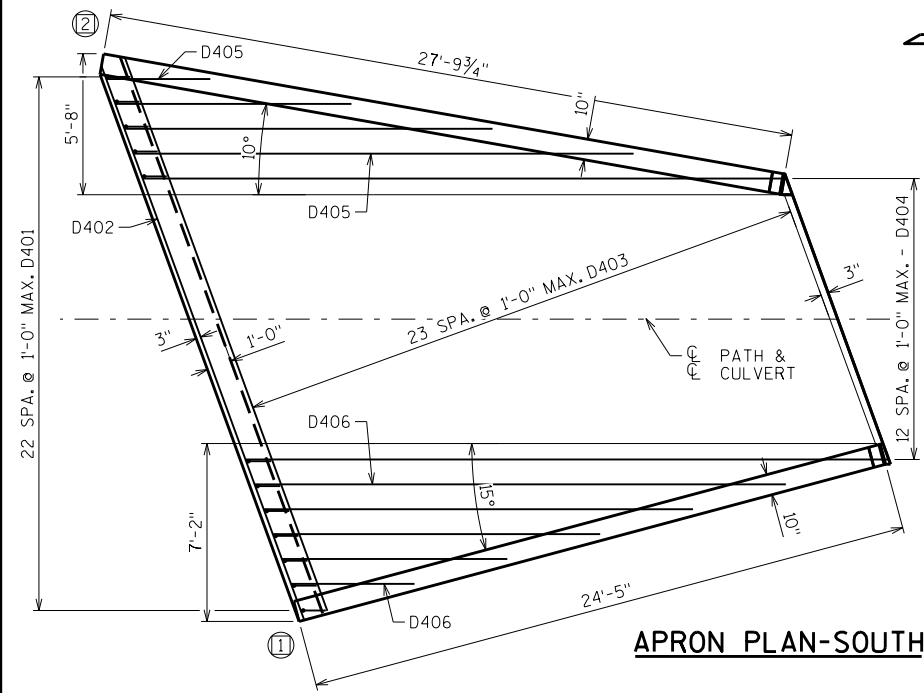


- IN LIEU OF CONSTRUCTION JOINTS IN THE BOTTOM SLAB, THE CONTRACTOR MAY USE 2" DEEP SAW CUTS WITHIN 12 HOURS AFTER POURING.
- ★ SHEET MEMBRANE WATERPROOFING REQUIRED UP WALLS AND ACROSS TOP SLAB FOR ENTIRE CULVERT LENGTH, EXTEND 6" MIN. BELOW THE TOP OF BOTTOM SLAB.

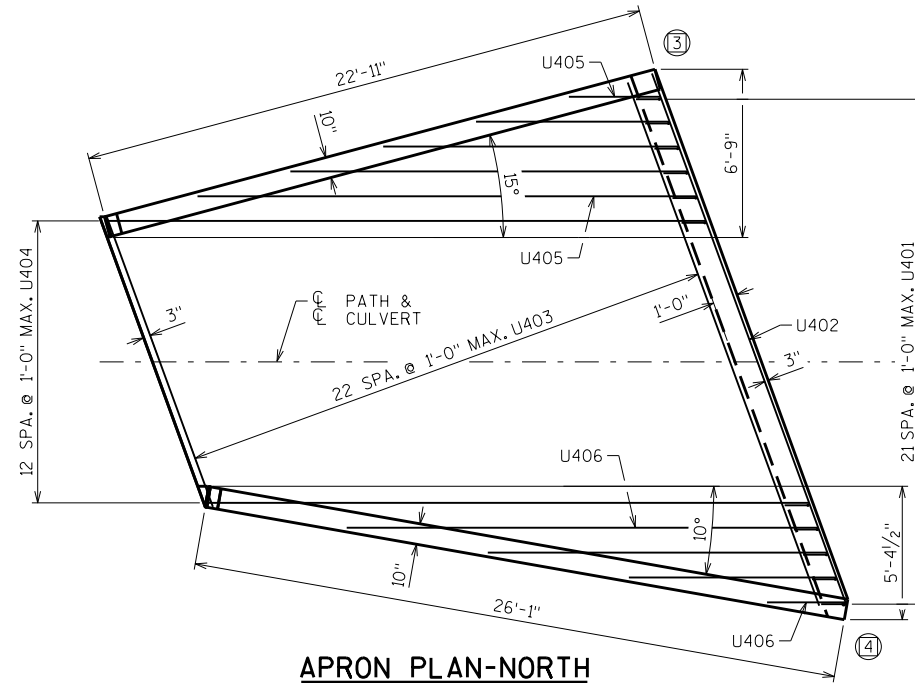
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE C-48-25			
		DRAWN BY SM/MJK	PLANS CK'D. ACT
BOX DETAILS			SHEET 2

8

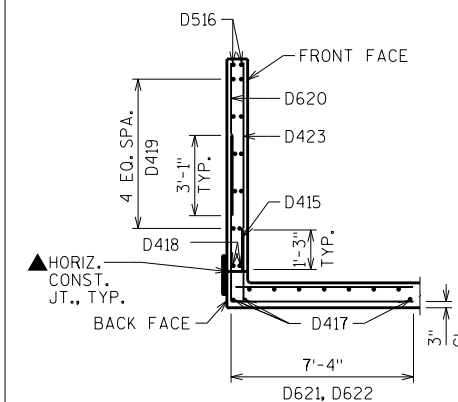
8



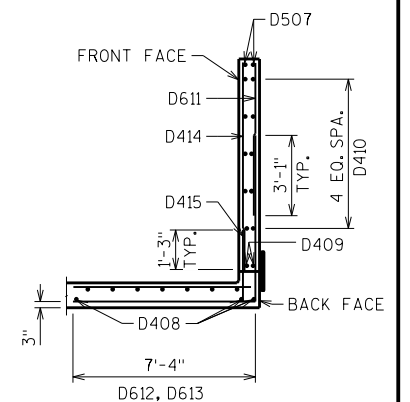
APRON PLAN-SOUTH



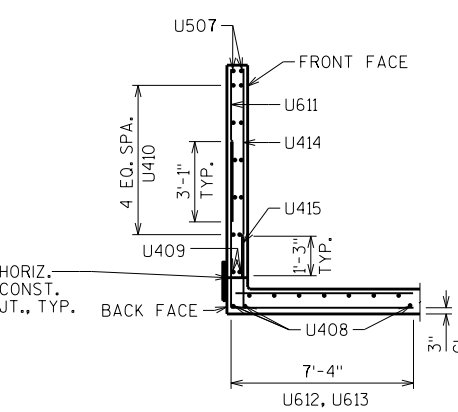
APRON PLAN-NORTH



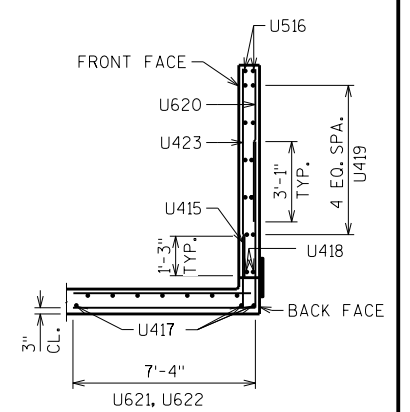
WING 2 SECTION



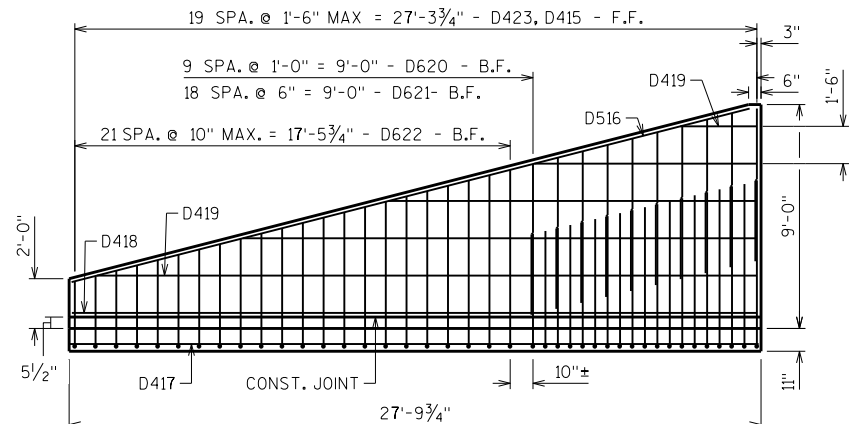
WING 1 SECTION



WING 3 SECTION

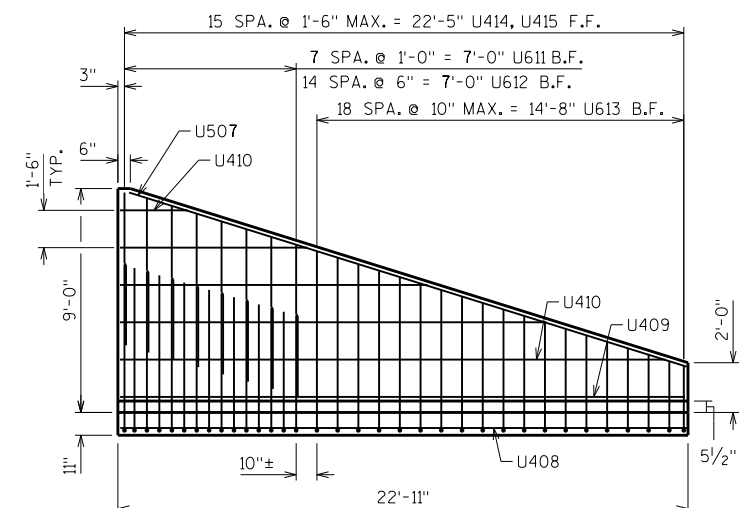


WING 4 SECTION



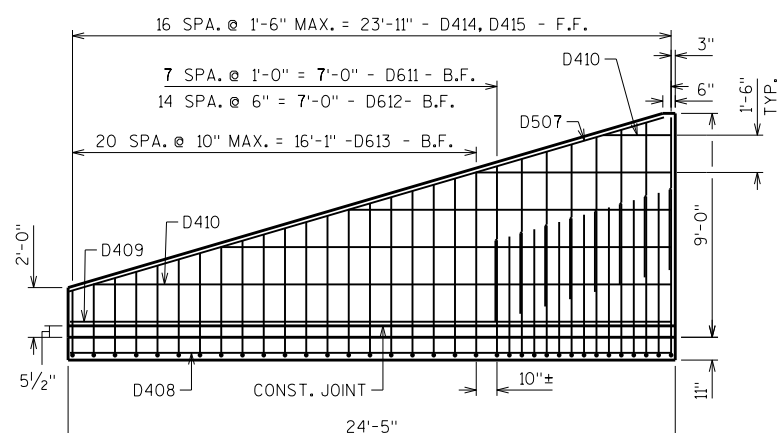
WING 2

SHOWING BACK FACE REINFORCEMENT



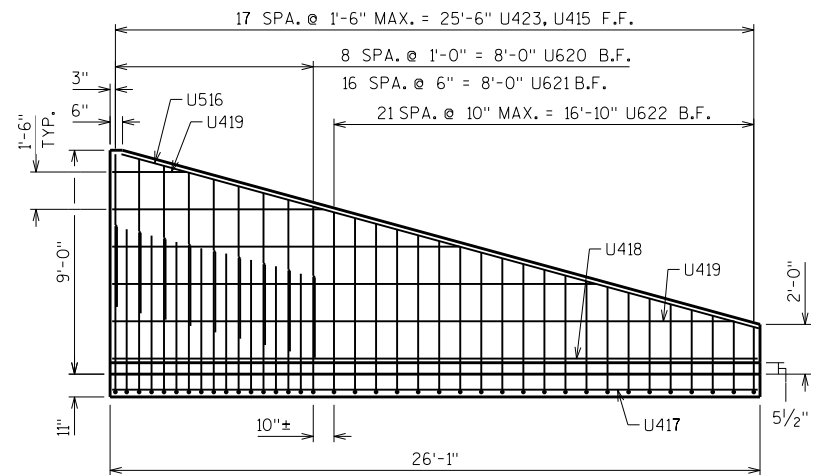
WING 3

SHOWING BACK FACE REINFORCEMENT



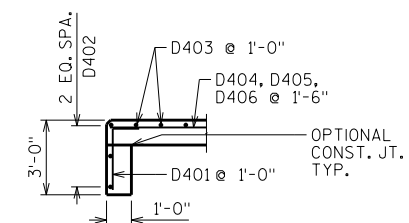
WING 1

SHOWING BACK FACE REINFORCEMENT



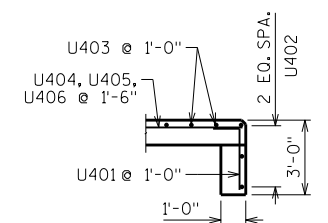
WING 4

SHOWING BACK FACE REINFORCEMENT



CUT-OFF WALL

SOUTH



CUT-OFF WALLS

NORTH

▲ 18" RUBBERIZED MEMBRANE WATERPROOFING, PLACE ALONG HORIZONTAL CONSTRUCTION JOINT FOR ENTIRE WING LENGTH

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE C-48-25			
DRAWN BY		SM	PLANS CK'D. ACT
APRON		SHEET 3	

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

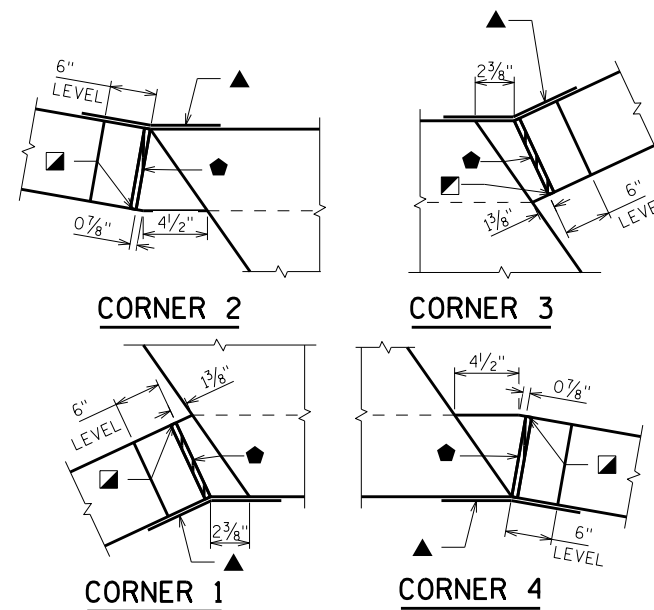
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
U401		22	3'-6"	X		NORTH APRON AND CUTOFF WALL VERT.
U402		3	22'-5"			NORTH APRON AND CUTOFF WALL HORIZ.
U403		23	17'-5"		▲	NORTH APRON
U404		13	24'-1"			NORTH APRON
U405		5	11'-11"		▲	NORTH APRON
U406		4	10'-11"		▲	NORTH APRON
U507	X	2	23'-6"			WING 3 - HORIZ. - TOP - BOTH FACES
U408		3	22'-3"			WING 3 - APRON BOTTOM SLAB
U409	X	2	22'-7"			WING 3 - BOTTOM - HORIZ.
U410	X	10	12'-2"		▲	WING 3 - HORIZ.
U611	X	8	6'-1"			WING 3 - VERT. - BACK FACE
U612	X	15	12'-10"	X	▲	WING 3 - VERT. - BACK FACE
U613	X	19	12'-0"	X	▲	WING 3 - VERT. - BACK FACE
U414	X	16	4'-10"		▲	WING 3 - VERT. - FRONT FACE
U415	X	34	2'-6"			WING 3 & 4 DOWEL BARS
U516	X	2	26'-8"			WING 4 - HORIZ. - TOP - BOTH FACES
U417		3	25'-6"			WING 4 - APRON BOTTOM SLAB
U418	X	2	25'-9"			WING 4 - BOTTOM - HORIZ.
U419	X	10	13'-10"		▲	WING 4 - HORIZ.
U620	X	9	6'-1"			WING 4 - VERT. - BACK FACE
U621	X	17	12'-10"	X	▲	WING 4 - VERT. - BACK FACE
U622	X	22	12'-0"	X	▲	WING 4 - VERT. - BACK FACE
U423	X	18	4'-10"		▲	WING 4 - VERT. - FRONT FACE
D401		23	3'-6"	X		SOUTH APRON AND CUTOFF WALL VERT.
D402		3	23'-5"			SOUTH APRON AND CUTOFF WALL HORIZ.
D403		24	17'-10"		▲	SOUTH APRON
D404		13	25'-8"			SOUTH APRON
D405		4	12'-8"		▲	SOUTH APRON
D406		5	13'-5"		▲	SOUTH APRON
D507	X	2	25'-0"			WING 1 - HORIZ. - TOP - BOTH FACES
D408		3	24'-0"			WING 1 - APRON BOTTOM SLAB
D409	X	2	24'-1"			WING 1 - BOTTOM - HORIZ.
D410	X	10	13'-0"		▲	WING 1 - HORIZ.
D611	X	8	6'-1"			WING 1 - VERT. - BACK FACE
D612	X	15	12'-10"	X	▲	WING 1 - VERT. - BACK FACE
D613	X	21	12'-1"	X	▲	WING 1 - VERT. - BACK FACE
D414	X	17	4'-10"		▲	WING 1 - VERT. - FRONT FACE
D415	X	37	2'-6"			WING 1 & 2 DOWEL BARS
D516	X	2	28'-4"			WING 2 - HORIZ. - TOP - BOTH FACES
D417		3	27'-4"			WING 2 - APRON BOTTOM SLAB
D418	X	2	27'-5"			WING 2 - BOTTOM - HORIZ.
D419	X	10	14'-10"		▲	WING 2 - HORIZ.
D620	X	10	6'-1"			WING 2 - VERT. - BACK FACE
D621	X	19	12'-9"	X	▲	WING 2 - VERT. - BACK FACE
D622	X	22	11'-11"	X	▲	WING 2 - VERT. - BACK FACE
D423	X	20	4'-10"		▲	WING 2 - VERT. - FRONT FACE

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

BAR SERIES TABLE

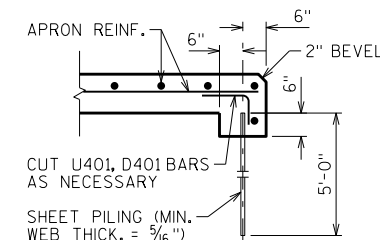
BUNDLE AND TAG EACH SERIES SEPARATELY

BAR MARK	NO. REQ'D.	LENGTHS FOR EACH SERIES
U403	1 SERIES OF 23	12'-0" TO 22'-9"
U405	1 SERIES OF 5	3'-8" TO 20'-1"
U406	1 SERIES OF 4	2'-11" TO 18'-11"
U410	2 SERIES OF 5	2'-7" TO 21'-9"
U612	1 SERIES OF 15	11'-10" TO 13'-10"
U613	1 SERIES OF 19	9'-8" TO 14'-4"
U414	1 SERIES OF 16	1'-4" TO 8'-3"
U419	2 SERIES OF 5	2'-10" TO 24'-10"
U621	1 SERIES OF 17	11'-10" TO 13'-10"
U622	1 SERIES OF 22	9'-9" TO 14'-3"
U423	1 SERIES OF 18	1'-4" TO 8'-3"
D403	1 SERIES OF 24	12'-1" TO 23'-5"
D405	1 SERIES OF 4	4'-8" TO 20'-7"
D406	1 SERIES OF 5	5'-3" TO 21'-7"
D410	2 SERIES OF 5	2'-9" TO 23'-2"
D612	1 SERIES OF 15	11'-10" TO 13'-10"
D613	1 SERIES OF 21	9'-8" TO 14'-5"
D414	1 SERIES OF 17	1'-4" TO 8'-3"
D419	2 SERIES OF 5	3'-1" TO 26'-6"
D621	1 SERIES OF 19	11'-8" TO 13'-10"
D622	1 SERIES OF 22	9'-8" TO 14'-2"
D423	1 SERIES OF 20	1'-4" TO 8'-3"



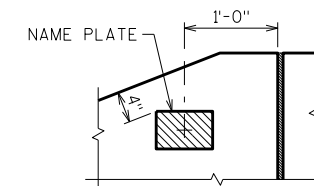
CORNER DETAILS

- 3/4" FILLER, TYP. EXTEND FILLER FROM HORIZ. CONST. JT. TO TOP OF WING.
- 1" BEVEL, TYP.
- ▲ 18" RUBBERIZED MEMBRANE WATERPROOFING, EXTEND FROM HORIZ. CONST. JT. TO TOP OF WALL.

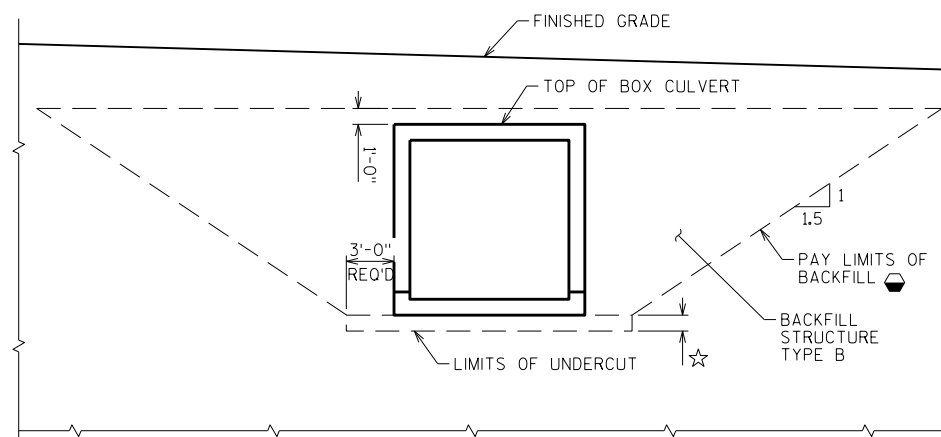


ALTERNATE CUT-OFF WALLS

THE ABOVE ALTERNATIVE MAY BE USED IN LIEU OF CAST-IN-PLACE CONCRETE CUT-OFF WALLS. PAYMENT WILL BE BASED ON THE CONCRETE CUT-OFF WALLS.



NAME PLATE LOCATION WING 1

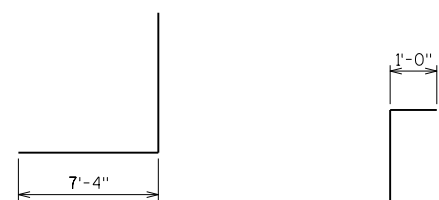


TYPICAL SECTION THRU BOX CULVERT

● BACKFILL PAY LIMITS, BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

☆ UNDERCUT 1'-0". EXCAVATION FOR UNDERCUT TO BE INCLUDED IN EXCAVATION FOR STRUCTURES. PLACE "GEOTEXTILE TYPE C" AND BACKFILL WITH "BREAKER RUN".

IN LIEU OF USING BREAKER RUN FOR THE BOX CONSTRUCTION PLATFORM, THE CONTRACTOR MAY ELECT TO SUBSTITUTE #1 OR #2 CONCRETE COARSE AGGREGATE, SELECT CRUSHED MATERIAL OR OTHER GRANULAR MATERIAL AS APPROVED BY THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR BASE STABILITY WITH ANY SUBSTITUTED MATERIAL. THE REGION GEOTECHNICAL ENGINEER MAY BE CONTACTED TO DETERMINE IF "OTHER GRANULAR MATERIAL" IS ACCEPTABLE.



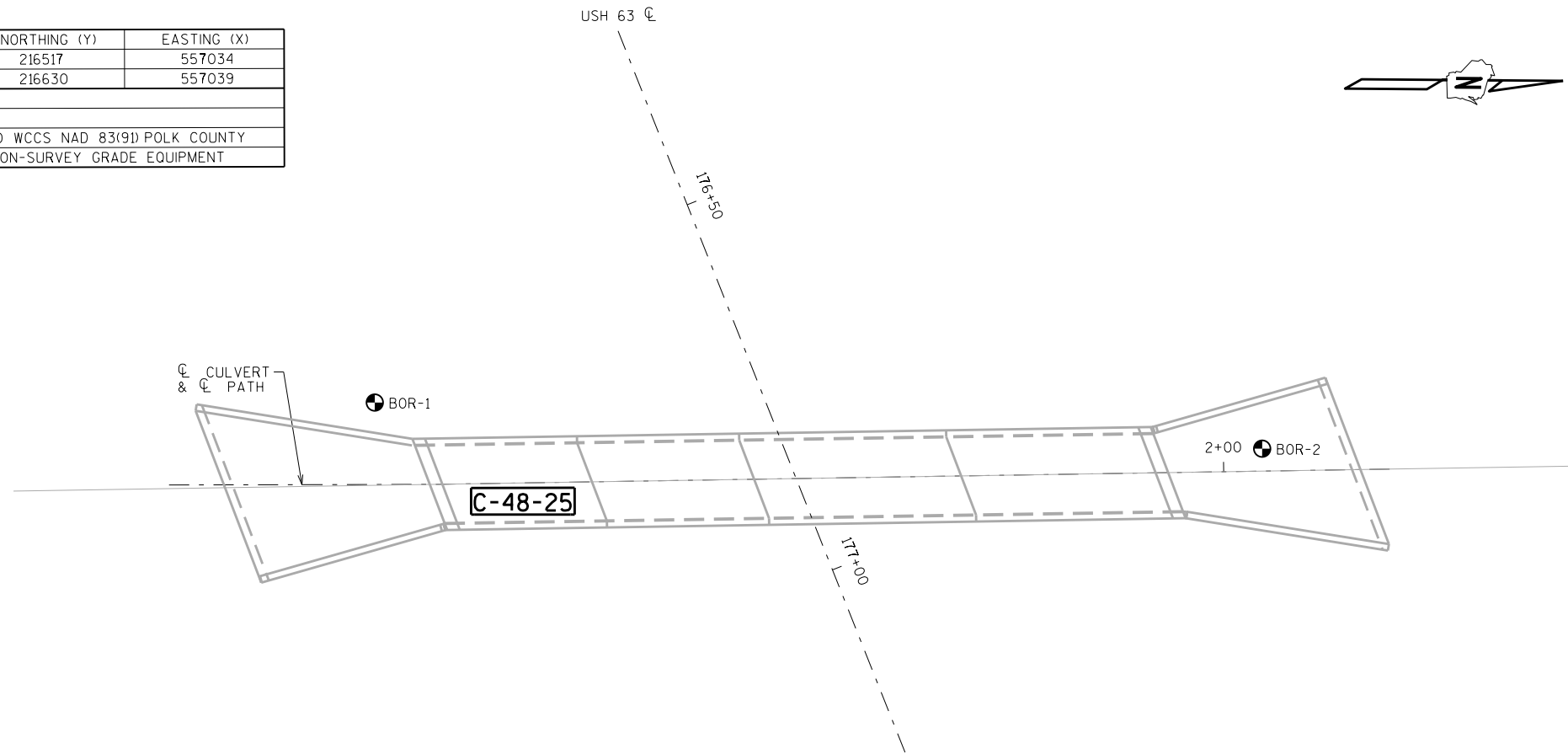
U612, U613, U621, U622
D612, D613, D621, D622

U401, D401

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE C-48-25			
DRAWN BY		MJK	PLANS CK'D. ACT
APRON DETAILS		SHEET 4	

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	7/20/2021	216517	557034
2	7/20/2021	216630	557039

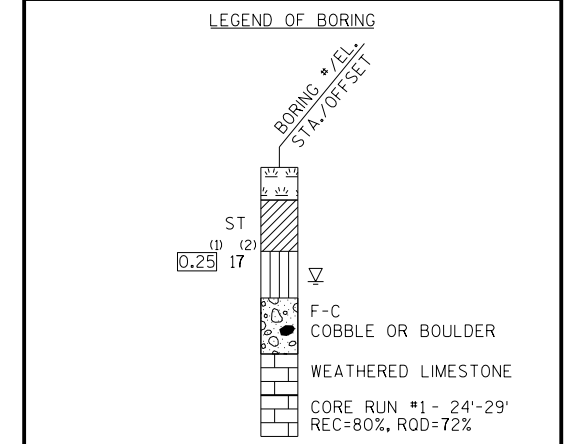
BORINGS COMPLETED BY: WISDOT
 REPORT COMPLETED BY: WISDOT
 ALL COORDINATES REFERENCED TO WCCS NAD 83(91) POLK COUNTY
 COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT



STATE PROJECT NUMBER
1550-06-75

MATERIAL SYMBOLS

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



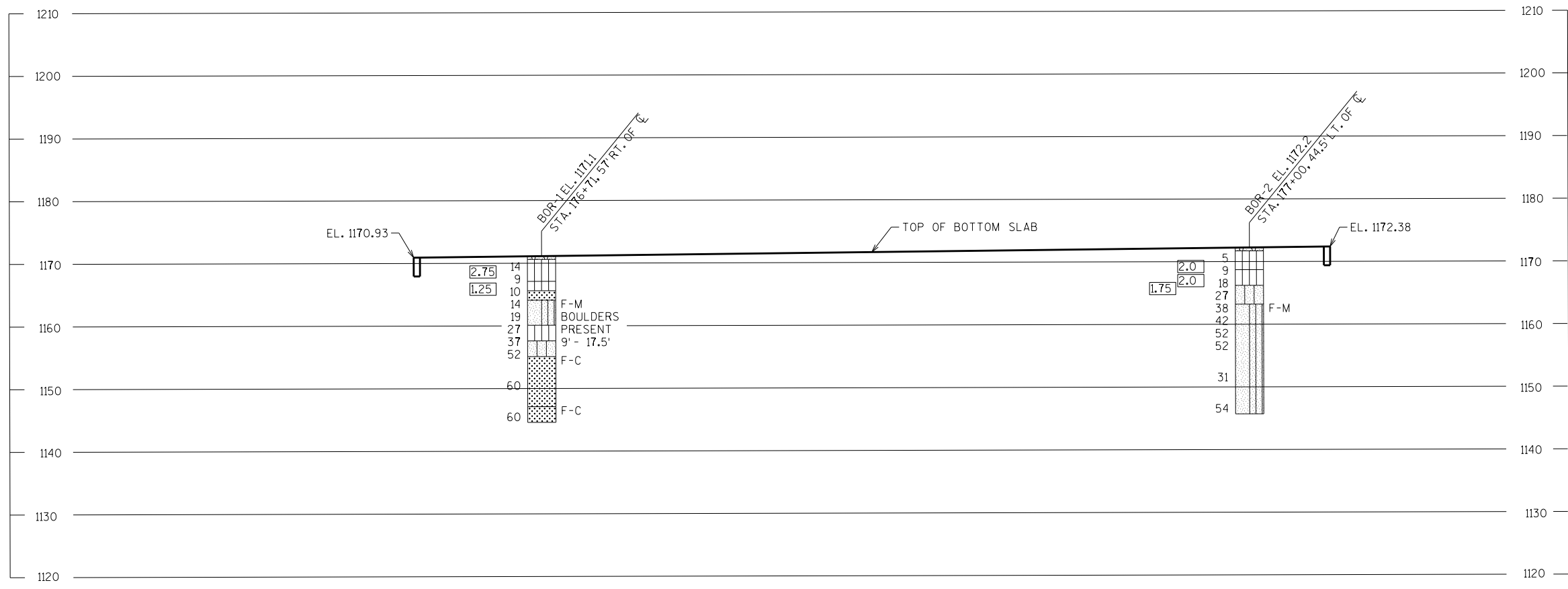
(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)
 (2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION
 ∇ AT TIME OF DRILLING
 ∇ END OF DRILLING
 ∇ AFTER DRILLING

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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



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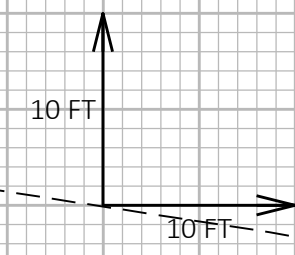
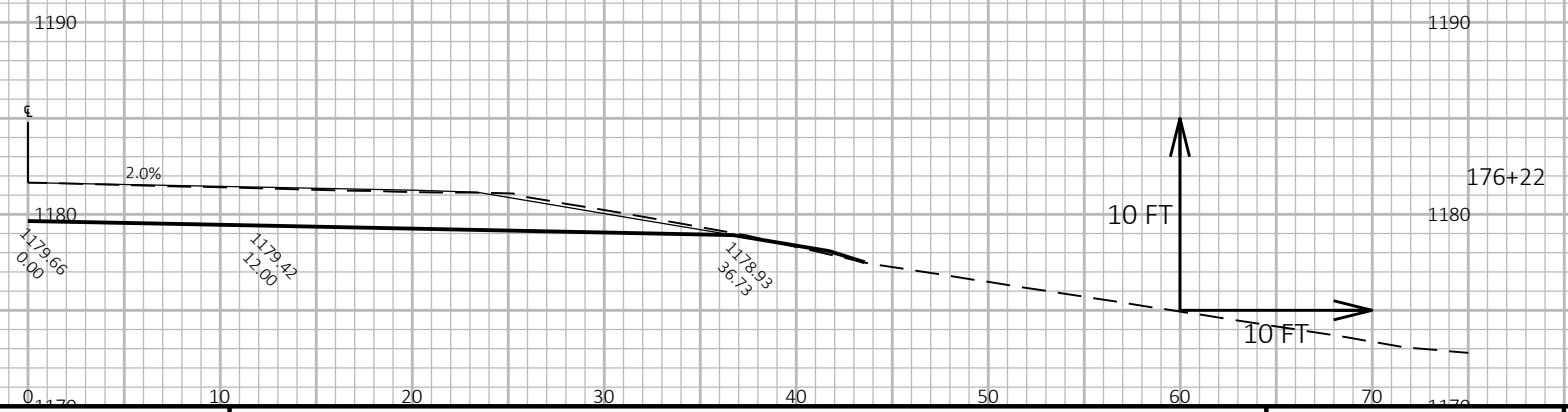
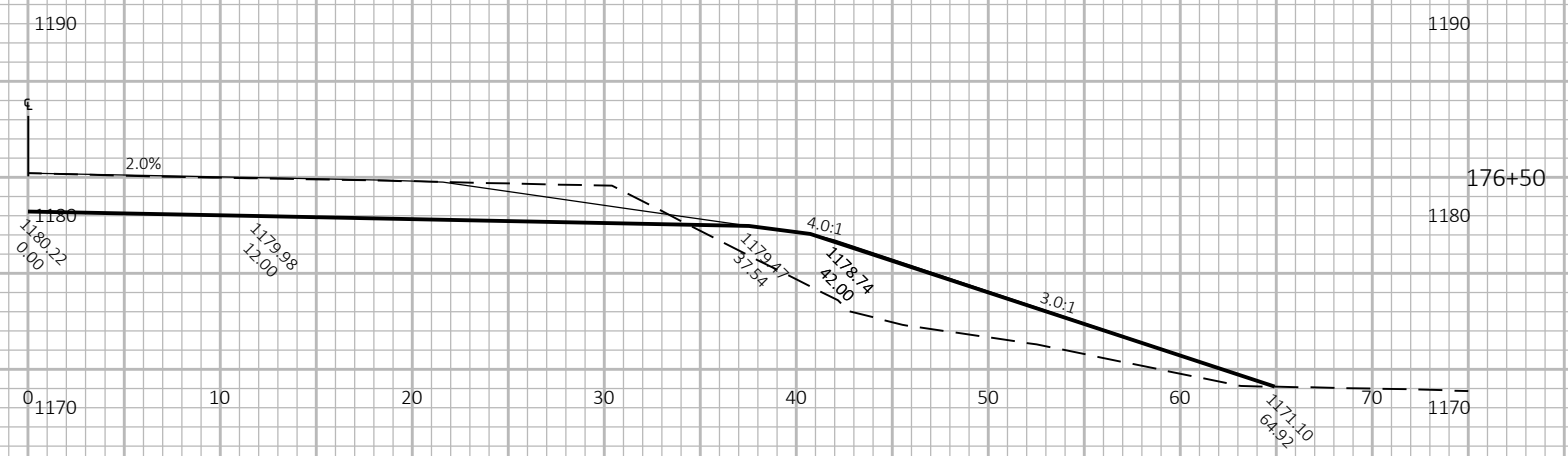
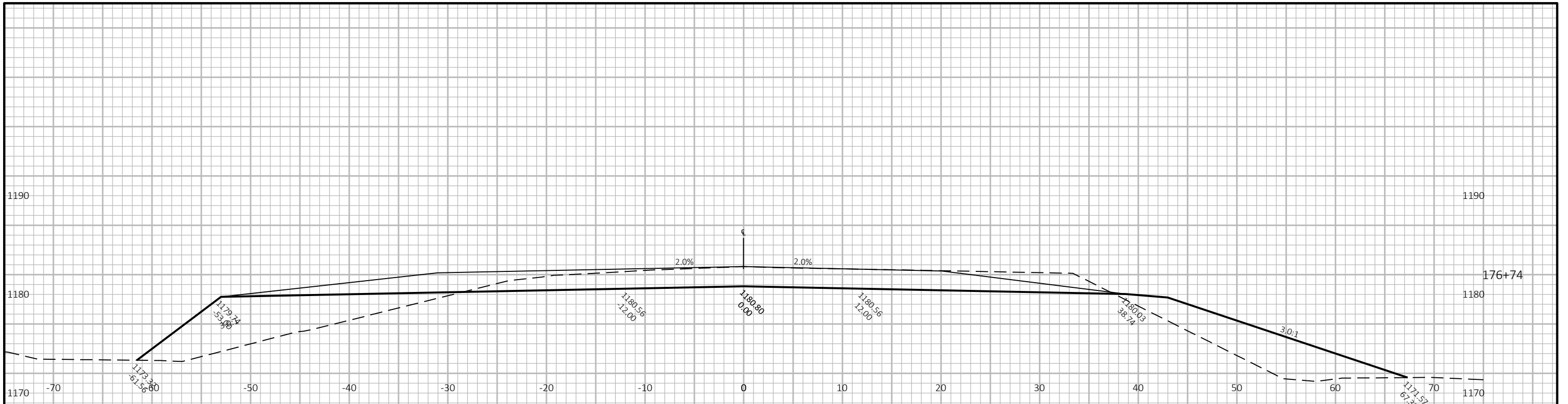
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE C-48-25			
DRAWN BY		MJK	PLANS CK'D. ACT
SUBSURFACE EXPLORATION		SHEET 5	

SCALE = 10.00

DIVISION	FROM/TO STATION	205.0100 COMMON EXCAVATION (1)	AVAILABLE MATERIAL (3)	UNEXPANDED FILL	EXPANDED FILL (4)	MASS ORDINATE +/- (5)	WASTE	208.0100 BORROW
		CUT (2)			FACTOR 1.25			
DIVISION 1								
TEMPORARY WIDENING	176+23/179+20	37	37	233	291	-254	0	254
USH 63	176+22/179+00	575	575	750	938	-363	0	363
PATH	00+41/02+67	187	187	11	14	173	173	0
DIVISION 1 SUBTOTAL		799	799	994	1,243	-444	173	617
GRAND TOTAL		799	799	994	1,243	-444	173	617
TOTAL COMMON EXC		799						

NOTES:

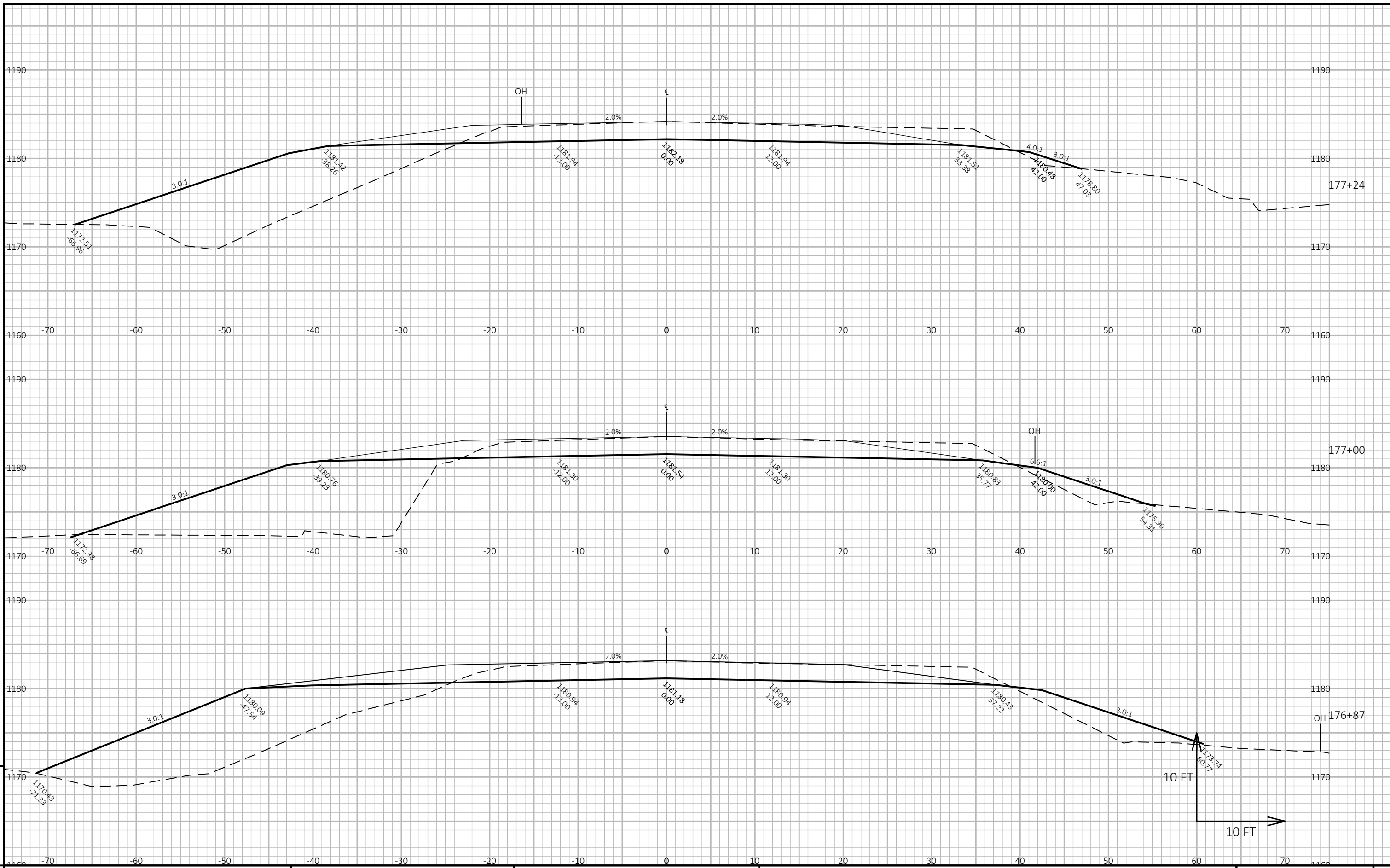
- (1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
- (2) SALVAGED/UNSUAL PAVEMENT MATERIAL IS INCLUDED IN CUT.
- (3) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUAL PAVEMENT MATERIAL
- (4) EXPANDED FILL FACTOR = 1.25
- (5) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.



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PROJECT NO: 1550-06-75 HWY: USH 63 COUNTY: POLK CROSS SECTIONS: USH 63 SHEET E

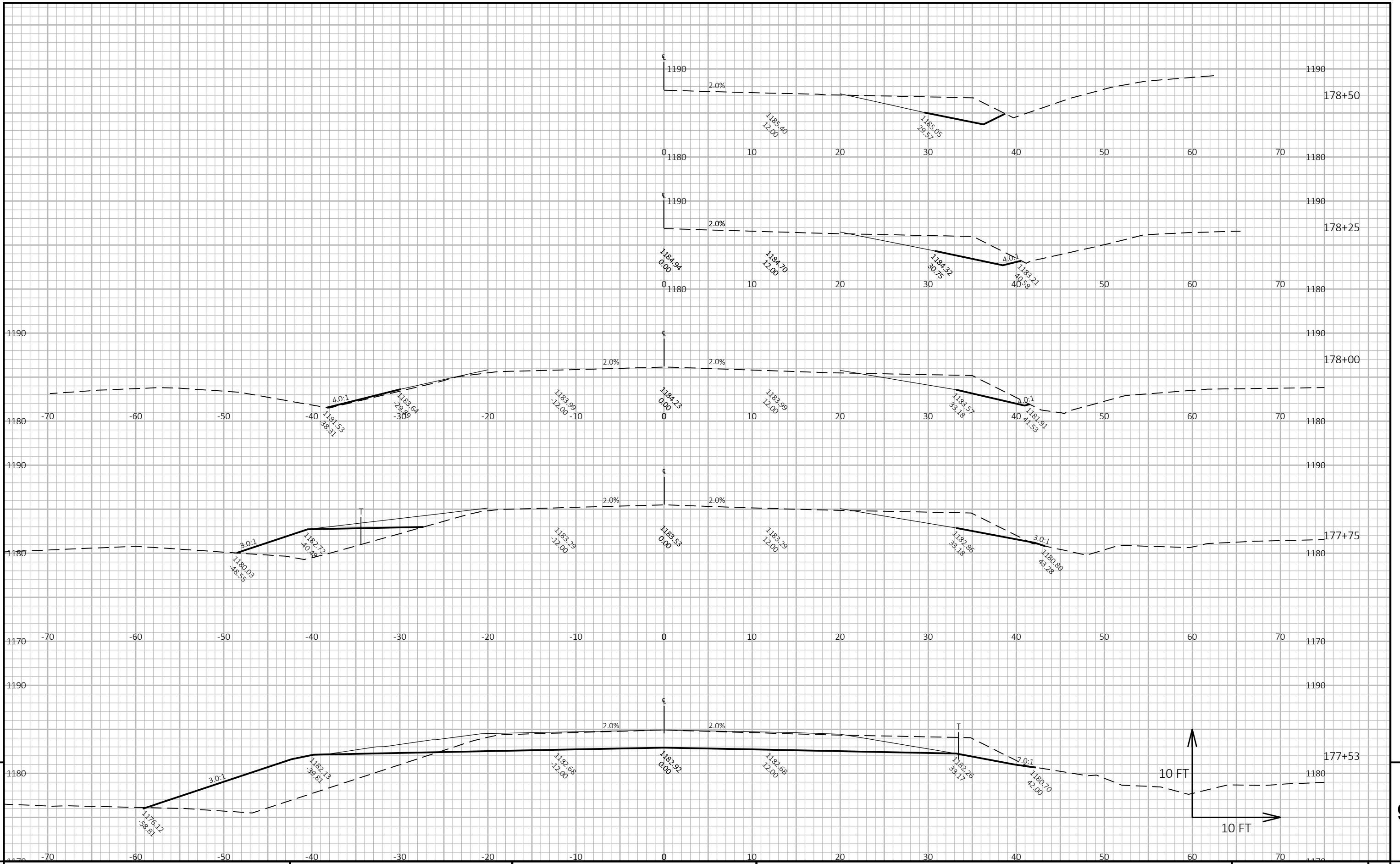


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PROJECT NO: 1550-06-75 HWY: USH 63 COUNTY: POLK CROSS SECTIONS: USH 63 SHEET E

FILE NAME : C:\WISDOT\DESIGN\15500605\SHEETSPLAN\090101_XS.DWG PLOT DATE : 5/2/2022 11:25 AM PLOT BY : BECKLIN, MATTHEW R PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49



PROJECT NO: 1550-06-75

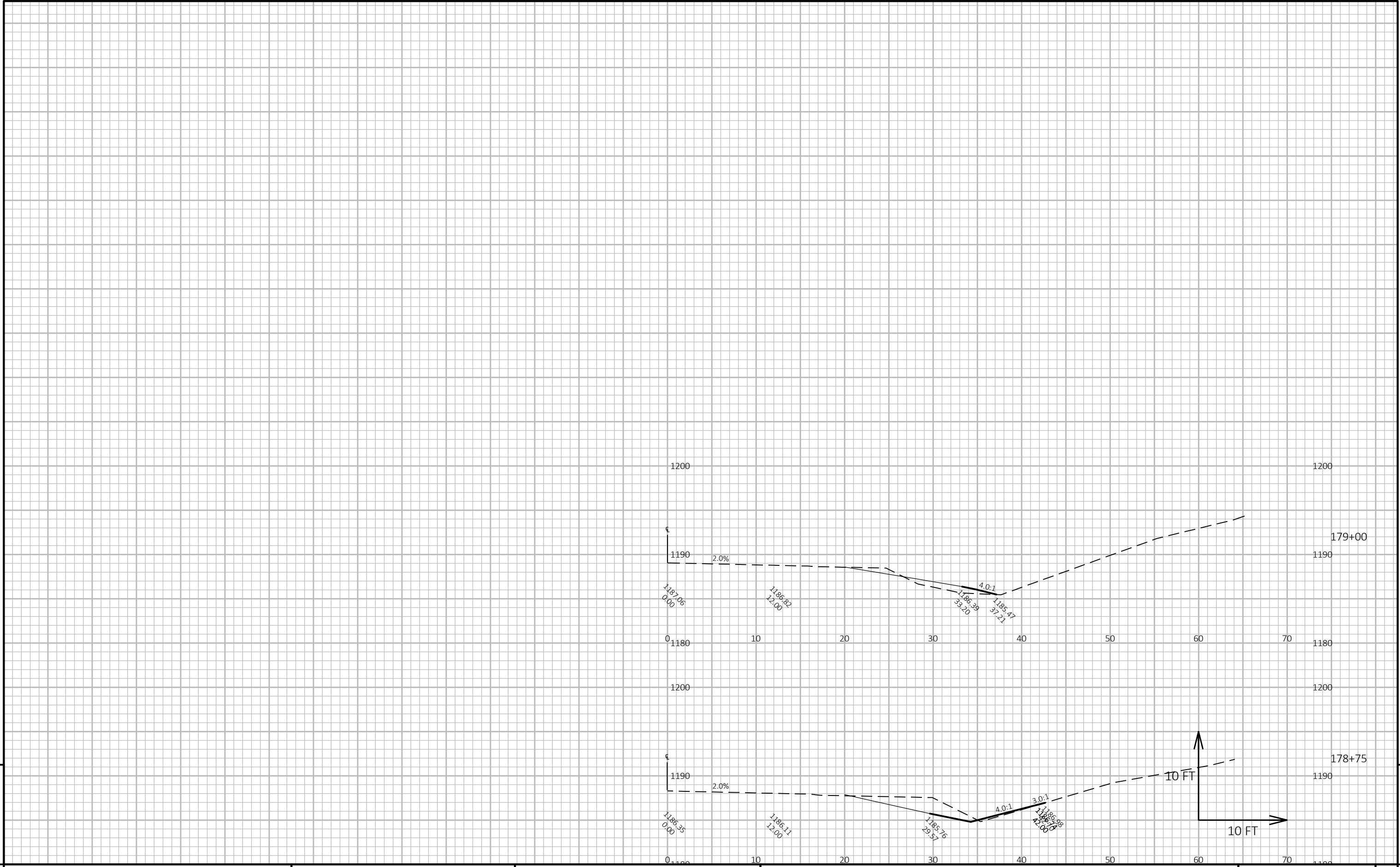
HWY: USH 63

COUNTY: POLK

CROSS SECTIONS: USH 63

SHEET

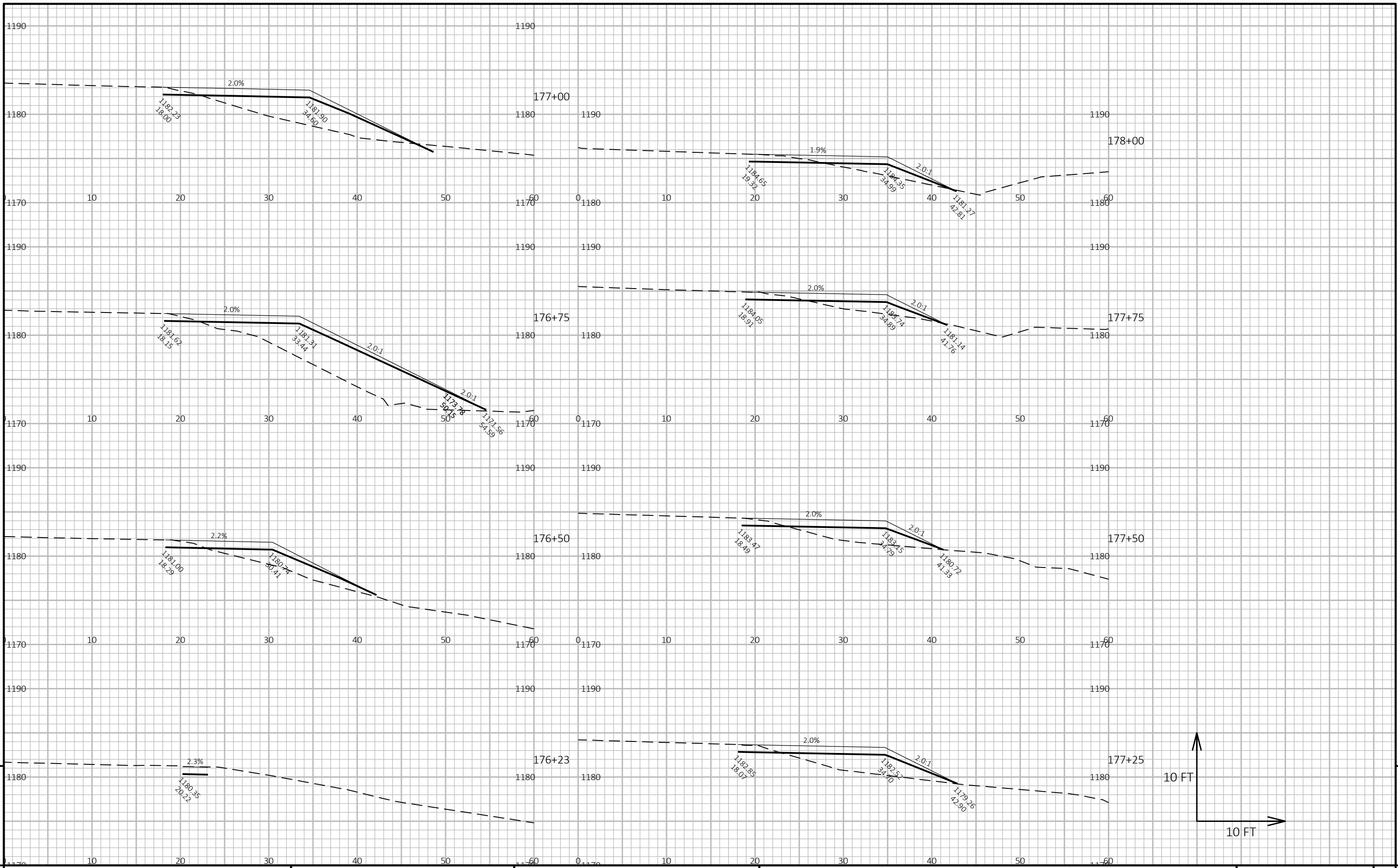
E



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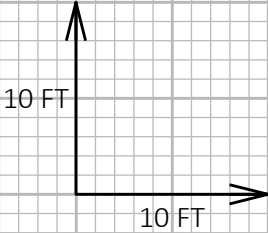
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PROJECT NO: 1550-06-75	HWY: USH 63	COUNTY: POLK	CROSS SECTIONS: USH 63	SHEET	E
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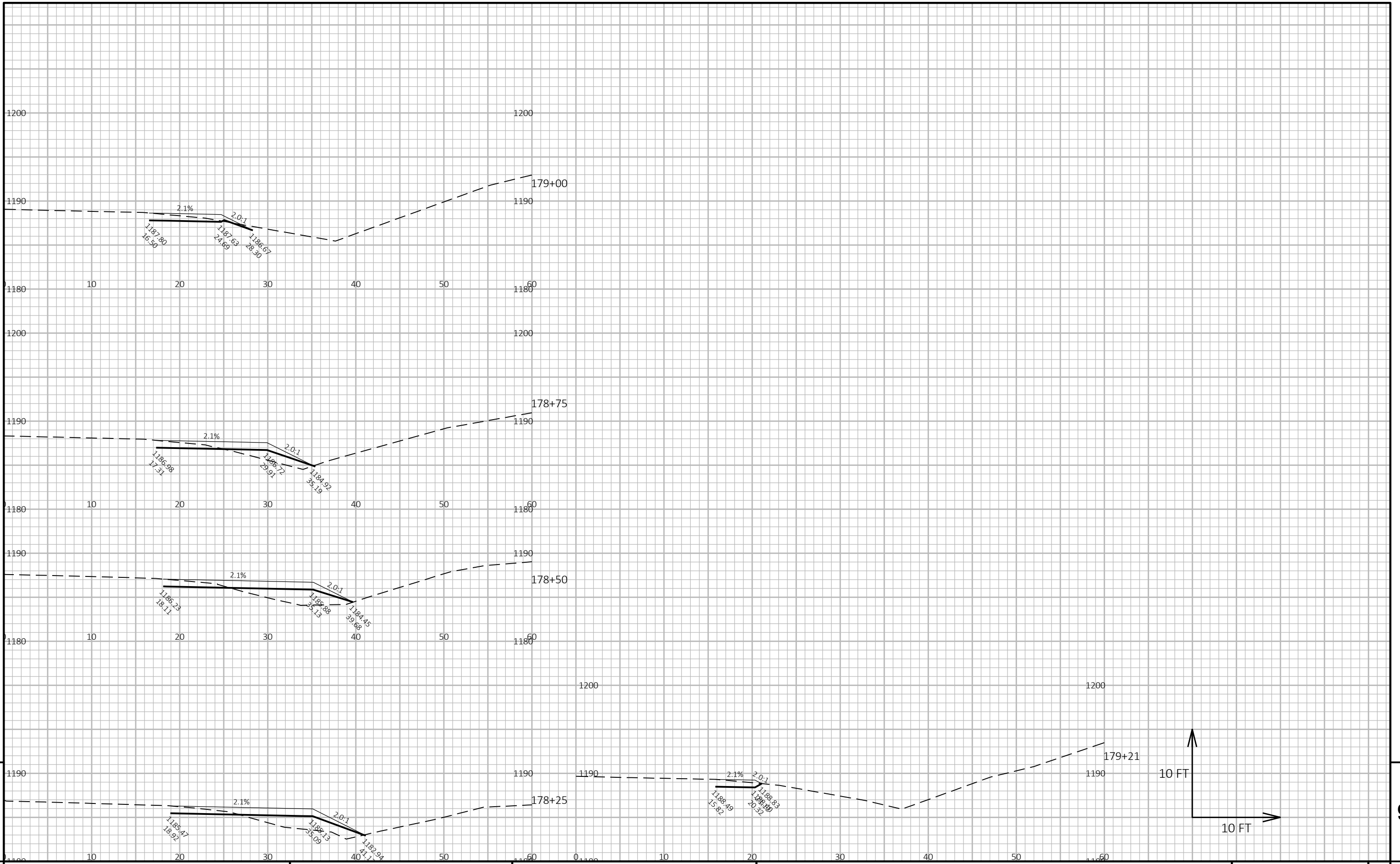
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PROJECT NO: 1550-06-75 HWY: USH 63 COUNTY: POLK CROSS SECTIONS: TEMPORARY WIDENING SHEET E

FILE NAME : C:\WISDOT\DESIGN\15500605\SHEETSPLAN\090103_XS BY PASS.DWG PLOT DATE : 5/2/2022 10:13 AM PLOT BY : BECLIN, MATTHEW R PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 1

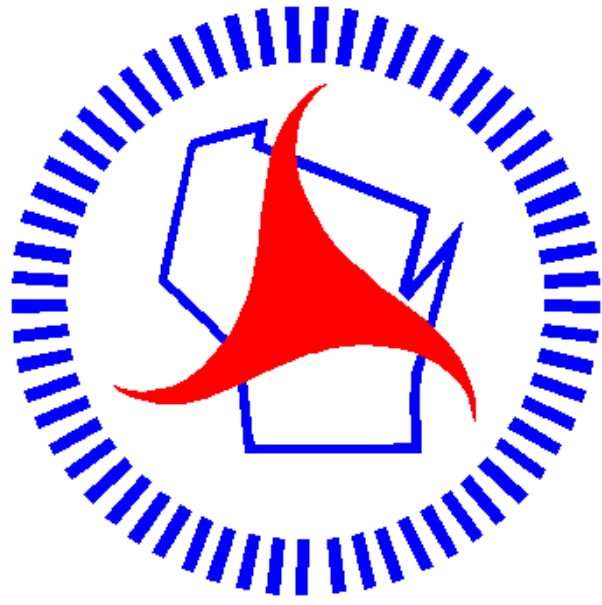


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PROJECT NO: 1550-06-75 HWY: USH 63 COUNTY: POLK CROSS SECTIONS: TEMPORARY WIDENING SHEET E

FILE NAME : C:\WISDOT\DESIGN\15500605\SHEETSPLAN\090103_XS BY PASS.DWG PLOT DATE : 5/2/2022 10:13 AM PLOT BY : BECLIN, MATTHEW R PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49



Wisconsin Department of Transportation

Dedicated people creating transportation solutions through innovation and exceptional service.

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