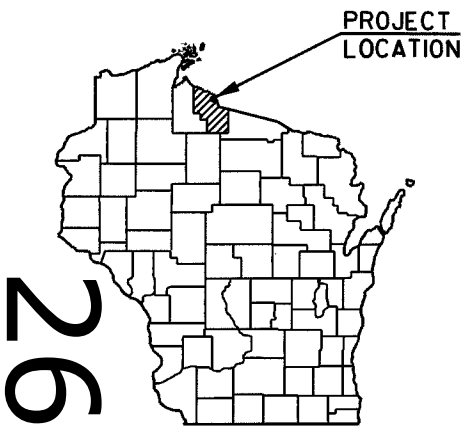


NCL
PROJECT ID: 9993-04-70
WITH: N/A

MAR 2017
ORDER OF SHEETS

- Section No. 1 Title
Section No. 2 Typical Sections and Details (incl. erosion control details)
Section No. 3 Estimate of Quantities
Section No. 3 Miscellaneous Quantities
Section No. 4 Right of Way Plot
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 = 84



DESIGN DESIGNATION
A.A.D.T. 2017 = 100
A.A.D.T. 2037 = 920
D.H.V. 2037 = 109
D. = 60/40
T. = 21.9%
DESIGN SPEED = 40MPH
ESALS = 284,700

CONVENTIONAL SYMBOLS

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

- PROFILE
GRADE LINE
ORIGINAL GROUND
MARSH OR ROCK PROFILE (To be noted as such)
SPECIAL DITCH
GRADE ELEVATION
CULVERT (Profile View)
UTILITIES
ELECTRIC
FIBER OPTIC
GAS
FORCEMAIN
SANITARY SEWER
STORM SEWER
TELEPHONE
WATER
UTILITY PEDESTAL
POWER POLE
TELEPHONE POLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PLAN OF PROPOSED IMPROVEMENT

CTH D EXTENSION, CITY OF HURLEY

STH 77 TO DIVISION STREET WEST

CTH D
IRON COUNTY

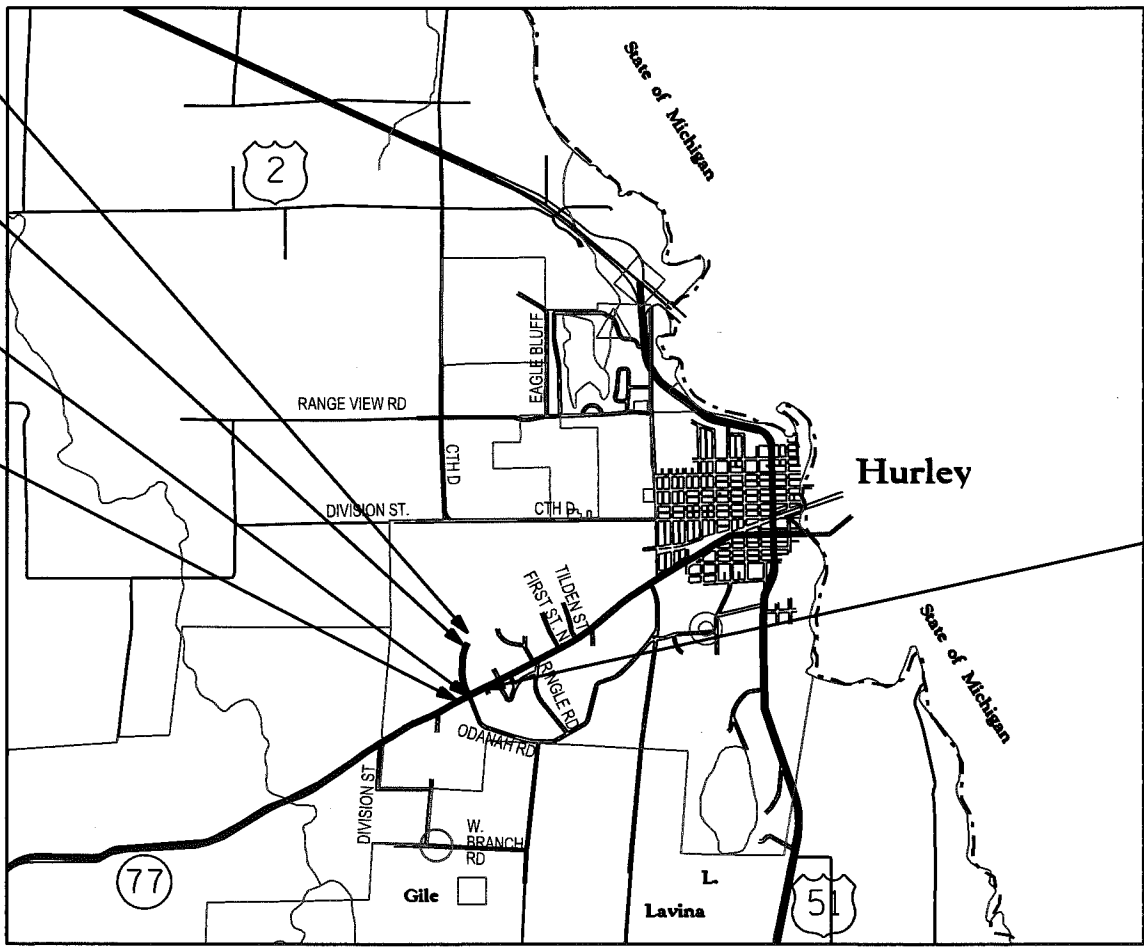
STATE PROJECT NUMBER
9993-04-70

END CONSTRUCTION
STA. 30+25
Y = 368,146.06
X = 735,424.70

END PROJECT
STA. 29+03
Y = 368,037.27
X = 735,369.89

BEGIN PROJECT
STA. 10+00
Y = 366,239.69
X = 735,249.97

BEGIN CONSTRUCTION
(STH 77) STA. 202+49
Y = 366,043.88
X = 734,847.71



T-46-N

END CONSTRUCTION
(STH 77) STA. 212+80
Y = 366,528.67
X = 735,756.24



TOTAL NET LENGTH OF CENTERLINE 9993-04-70 = 0.360 MI.

Coordinates on this plan are referenced to the Wisconsin County Coordinate System (WCCS), IRON County.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
9993-04-70	WISC 2017115	1

ACCEPTED FOR
CITY OF HURLEY
10-12-2016
DATE
Mayor

ORIGINAL PLANS PREPARED BY:
MSA
TRANSPORTATION • MUNICIPAL
DEVELOPMENT • ENVIRONMENTAL
PROFESSIONAL SERVICES
WISCONSIN
SCOTT D. MARTIN
E-26165
TOMAHAWK WI
PROFESSIONAL ENGINEER
10/4/16
Date
Signature

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PREPARED BY
Surveyor MSA Professional Services, Inc.
Designer MSA Professional Services, Inc.
Management Consultant Cedar Corporation
C.O. Examiner

APPROVED FOR THE DEPARTMENT
DATE: 10-28-2016
(Management Consultant Signature)

GENERAL NOTES

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

THE LOCATIONS OF EXISTING PUBLIC AND PRIVATE UTILITY INSTALLATIONS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS IN THE AREA THAT ARE NOT SHOWN.

6" HMA PAVEMENT TO BE PLACED IN THREE LIFTS 2 1/4"-INCH LOWER, 2-INCH INTERMEDIATE, AND 1 3/4-INCH UPPER LAYER. THE 12.5 mm GRADATION SHALL BE USED IN THE UPPER LAYER AND 19 mm GRADATION SHALL BE USED IN THE LOWER LAYER AND INTERMEDIATE LAYERS.

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

SILT FENCE TO BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER AND IN PLACE PRIOR TO CONSTRUCTION.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO A USGS BENCHMARK (NAVD 88 DATUM):
BENCHMARK DISK ON RAILROAD BRIDGE OVER SILVER ST. STAMPED K 12 1934 EL.=1492.61

FILL EXPANSION = 30%

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

RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 5.50 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 4.68 ACRES

DESIGN CONTACT

MSA PROFESSIONAL SERVICES, INC.
ATTN.: QUIRIN KLINK
1230 SOUTH BOULEVARD
BARABOO, WI 53913
PHONE: 608-355-8890
qklink@msa-ps.com

DNR LIAISON

DEPARTMENT OF NATURAL RESOURCES
ATTN.: JON SIMONSEN
107 SUTLIFF AVE.
RHINELANDER, WI 54501
PHONE: 715-365-8916
jonathan.simonsen@wisconsin.gov

UTILITIES

ELECTRIC
XCEL ENERGY
ATTN: NANCY DOTSON
1414 W. HAMILTON AVE.
P.O. BOX 8
EAU CLAIRE, WI 54702-0008
PHONE: (715) 839-2480
EMAIL: nancy.j.dotson@xcelenergy.com

GAS
XCEL ENERGY
ATTN: MURRAY SMERER
2400 FARM ROAD
ASHLAND, WI 54806
PHONE: (715) 682-6928
EMAIL: murray.j.smerer@xcelenergy.com

CABLE TV
CHARTER COMMUNICATIONS
ATTN: JEFF GREGG
115 E MCLEOD AVENUE
IRONWOOD, MI 49938
PHONE: (906)-553-7867
EMAIL: jeffery.gregg@charter.com

COMMUNICATIONS
CENTURYLINK
ATTN: ALAN NICKELL
PO BOX 181
SOLON SPRINGS, WI 54873
PHONE: (715) 378-2131
EMAIL: alan.nickell@centurylink.com

SANITARY SEWER & WATER
CITY OF HURLEY
ATTN: MARK BLUSE
405 5TH AVENUE NORTH
HURLEY, WI 54534
PHONE: (715) 561-4715

STANDARD ABBREVIATIONS

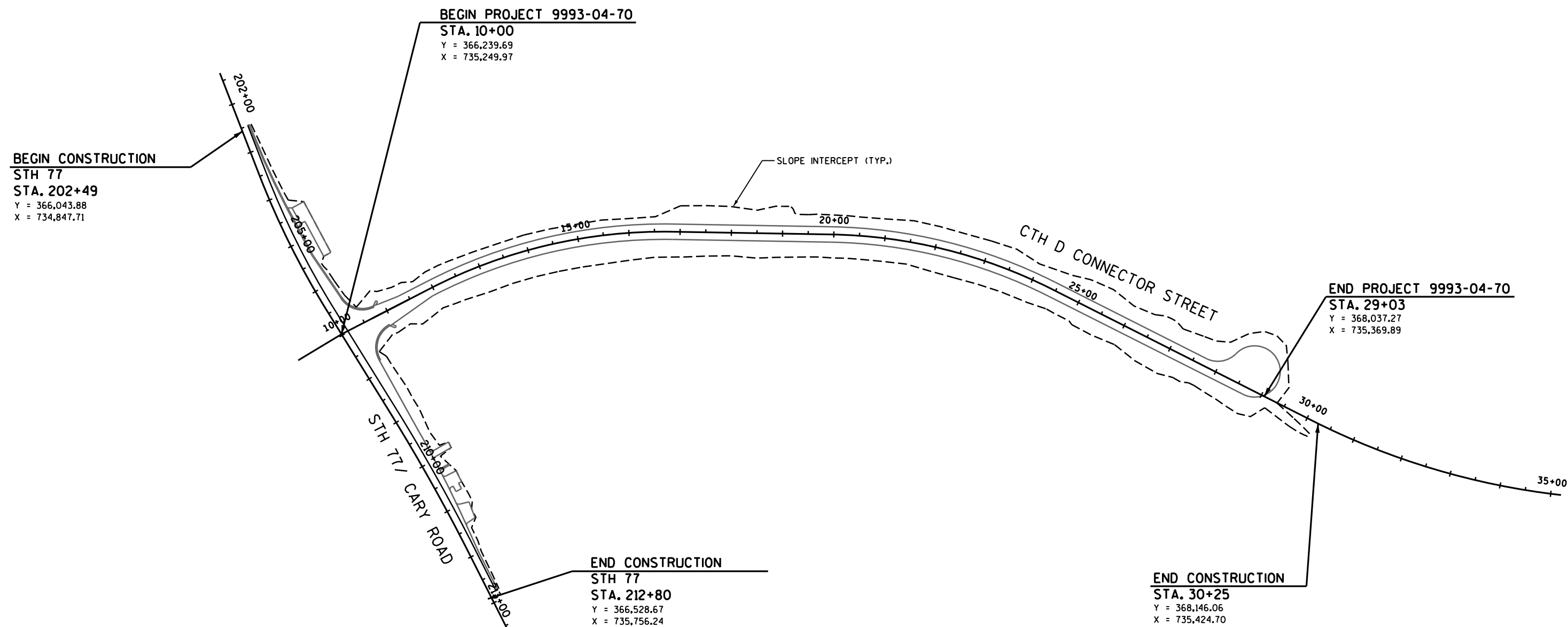
AC	ACRES
AH	AHEAD
ALUM.	ALUMINUM
A.P.	ACCESS POINT
BK	BACK
BLK	BLOCK
BM	BENCHMARK
CL or C/L	CENTERLINE
Δ	CENTRAL ANGLE or DELTA
CSM	CERTIFIED SURVEY MAP
D	DEGREE OF CURVE
E	EAST
EB	EASTBOUND
ET AL	AND OTHERS
EXIST or EX.	EXISTING
EW	END WALL
FT	FOOT
FT2	SQUARE FEET
GN	GRID NORTH
HB	HOSE BIB
IN	INCH
IP	IRON PIPE
L	LENGTH
L	LENGTH OF CURVE
LC	LONG CHORD
LCB	LONG CHORD BEARING
LF	LINEAR FEET
MH	MANHOLE
MI	MILE
MON	MONUMENT
N	NORTH
NB	NORTHBOUND
NO	NUMBER
PT	POINT
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY
PL	PROPERTY LINE
POB	POINT OF BEGINNING
R	RADIUS
RP	RADIUS POINT
R	RANGE
RL or R/L	REFERENCE LINE
REQ'D	REQUIRED
RT	RIGHT
R/W	RIGHT-OF-WAY
RD	ROAD
S	SOUTH
SB	SOUTHBOUND
SO	SQUARE
SAN	SANITARY SEWER
STD	STANDARD
STM	STORM SEWER
SEC	SECTION
STA	STATION
STR	STRUCTURE
T	TANGENT
TAN	TANGENT
TEMP	TEMPORARY
TLE	TEMPORARY LIMITED EASEMENT
T or TN	TOWN
W	WEST
WB	WESTBOUND
WM	WATERMAIN
X	EAST GRID COORDINATE
Y	NORTH GRID COORDINATE

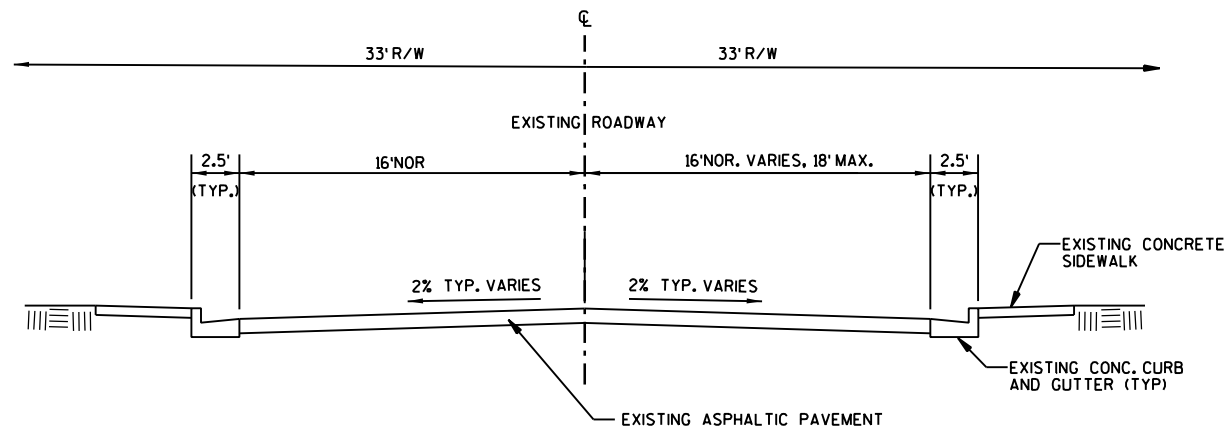
ORDER OF SECTION 2 SHEETS:

- 1) PROJECT OVERVIEW
- 2) TYPICAL SECTIONS
- 3) CONSTRUCTION DETAILS
- 4) INTERSECTION DETAIL
- 5) EROSION CONTROL
- 6) TRAFFIC CONTROL
- 7) SIGNING & PAVEMENT MARKING
- 8) ALIGNMENT DIAGRAM
- 9) PROJECT TIES



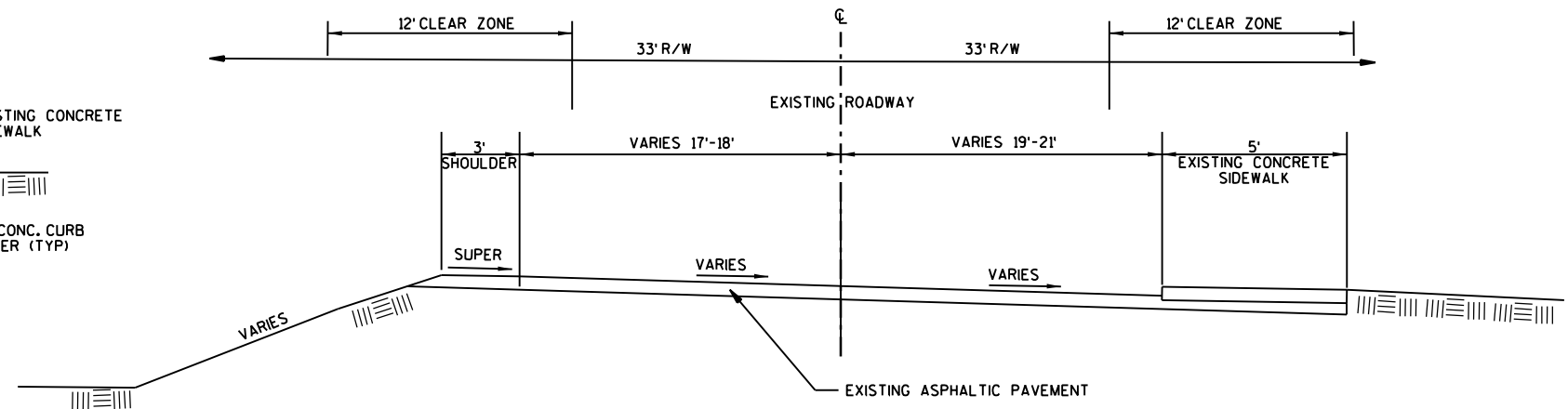
Dial 811 or (800)242-8511
www.DiggersHotline.com





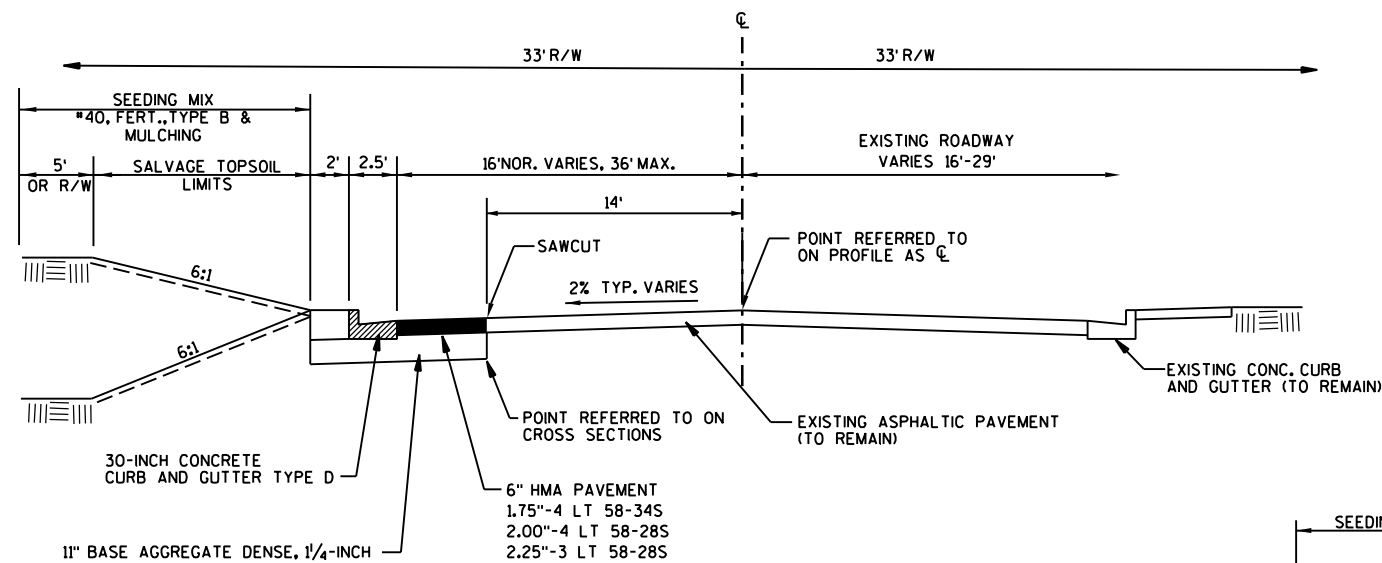
TYPICAL EXISTING SECTION STH 77

STA. 202+49 TO STA. 208+05



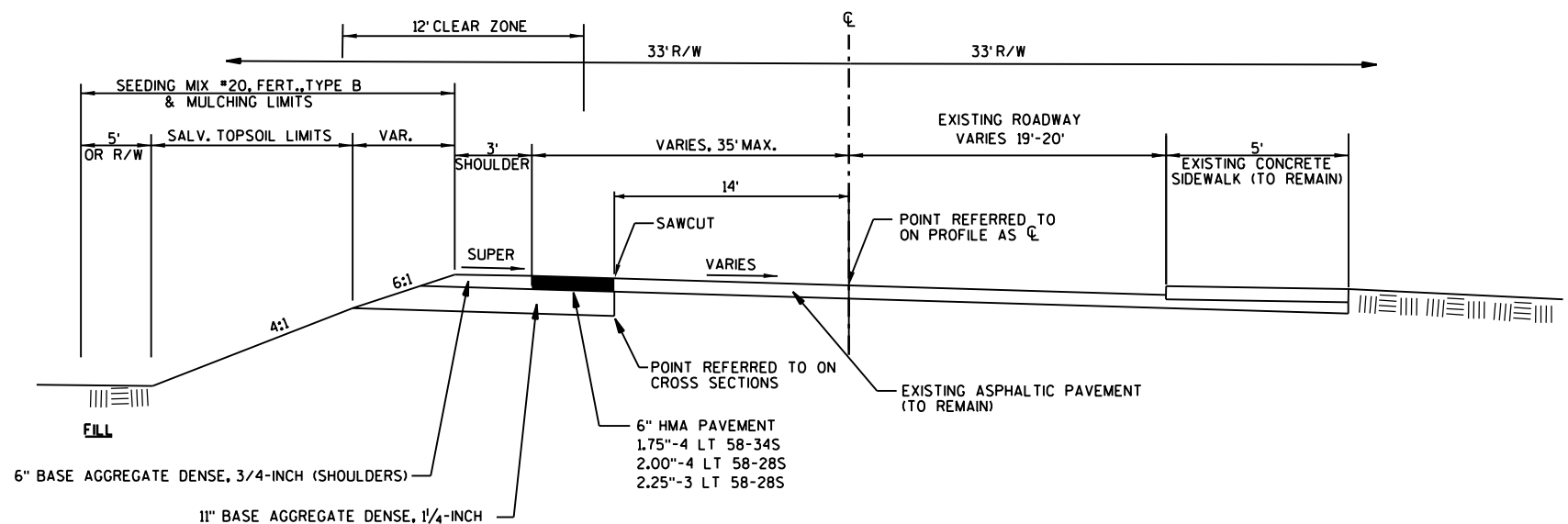
TYPICAL EXISTING SECTION STH 77

STA. 208+05 TO STA. 212+80



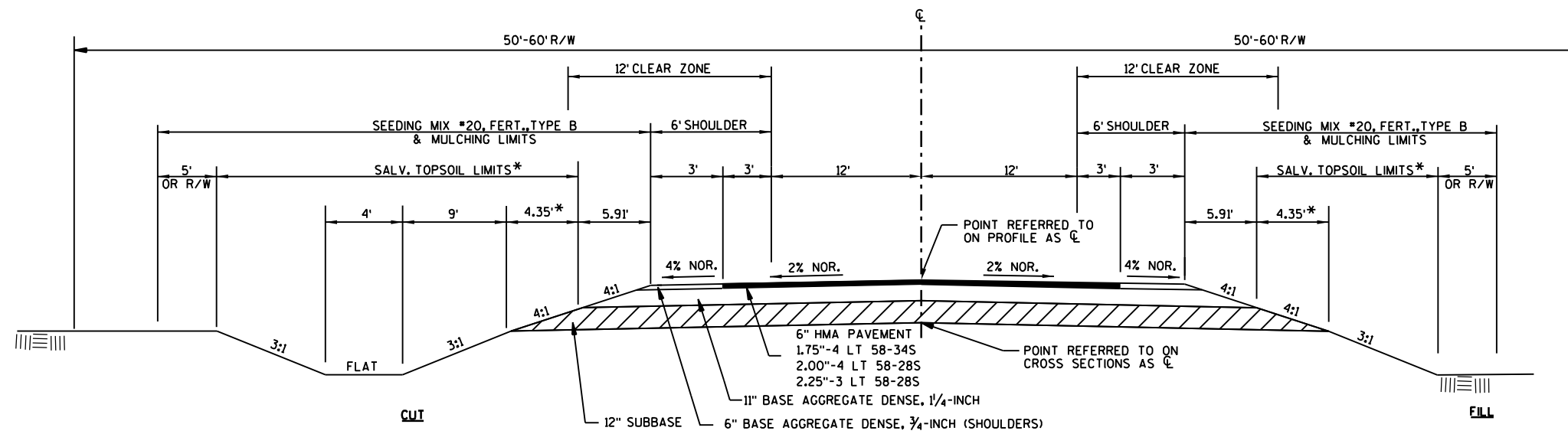
TYPICAL FINISHED SECTION STH 77

STA. 202+49 TO STA. 207+80



TYPICAL FINISHED SECTION STH 77

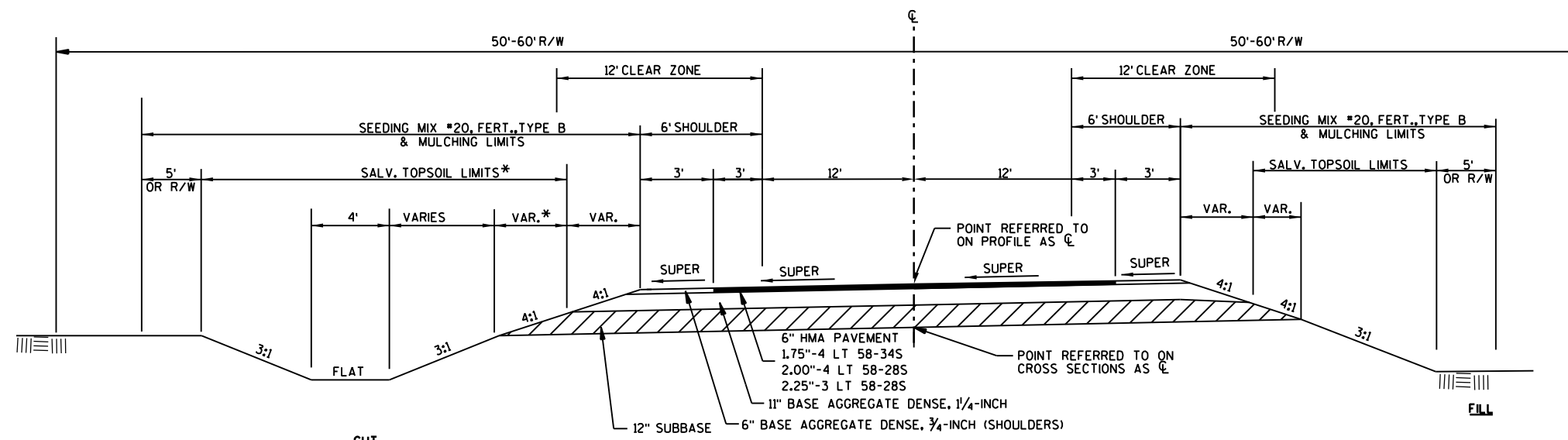
STA. 207+80 TO STA. 212+80



TYPICAL FINISHED SECTION CTH D CONNECTOR STREET

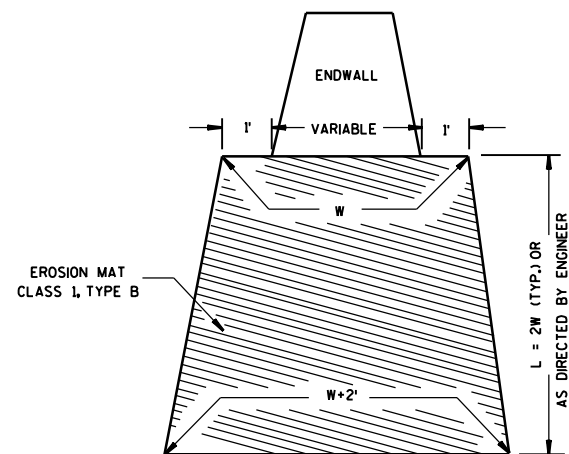
STA. 10+00 TO STA. 29+17
NORMAL CROWN

* = FOR DRAINAGE OF SUBBASE,
PROVIDE 5 FEET WIDE AREA
WITH NO TOPSOIL OVER THE
SUBBASE SLOPE LOCATED AT
200 FEET MAXIMUM SPACING,
AT PROFILE LOW POINTS AND
AT TRANSITIONS FROM CUTS
TO FILLS

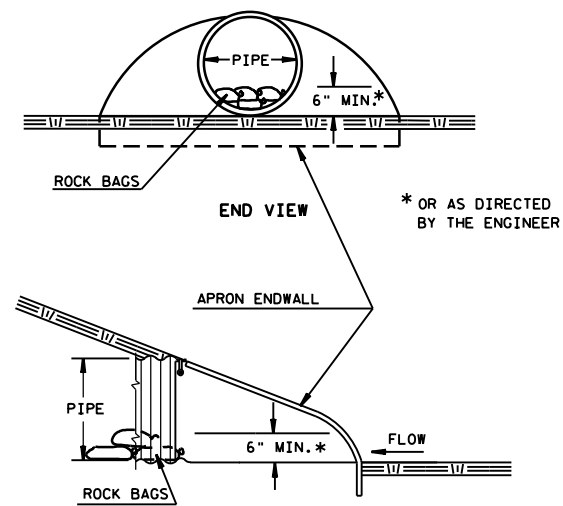
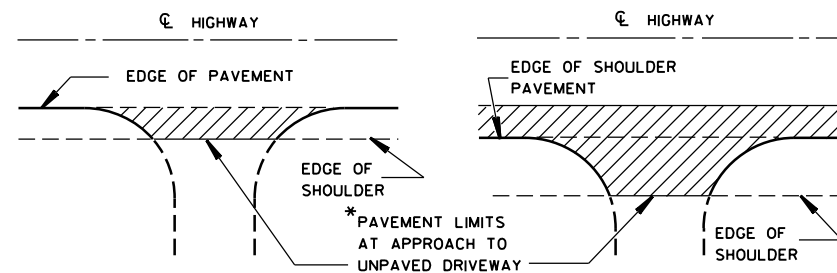


TYPICAL FINISHED SECTION CTH D CONNECTOR STREET

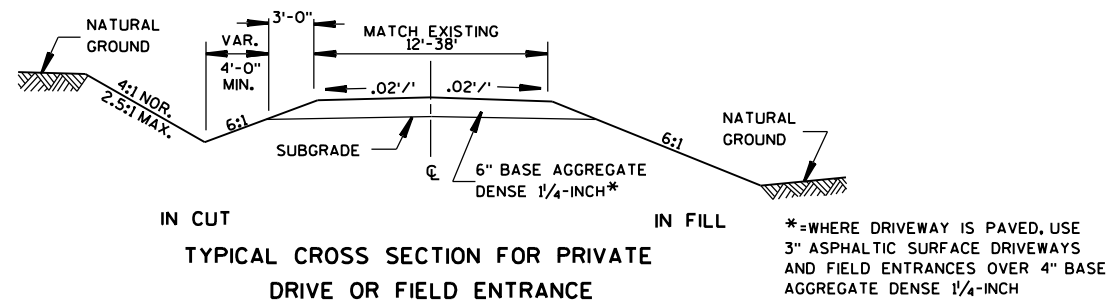
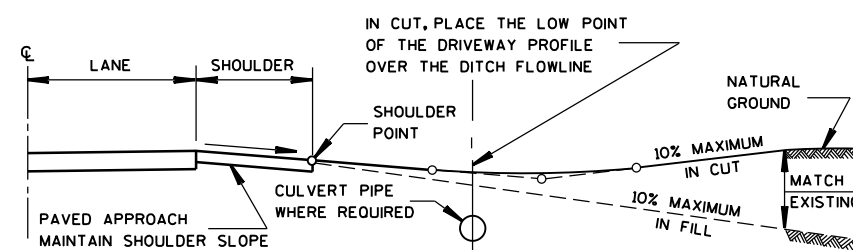
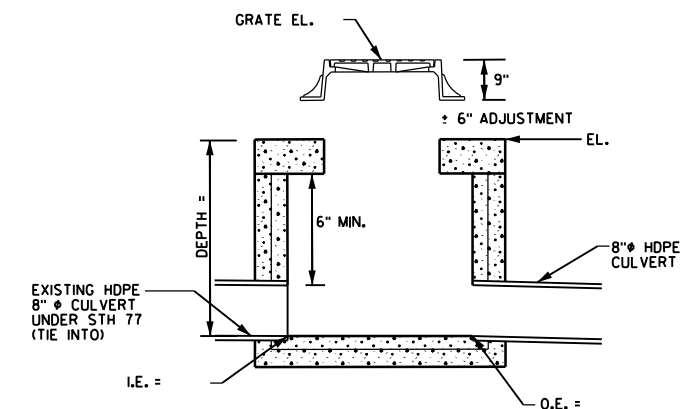
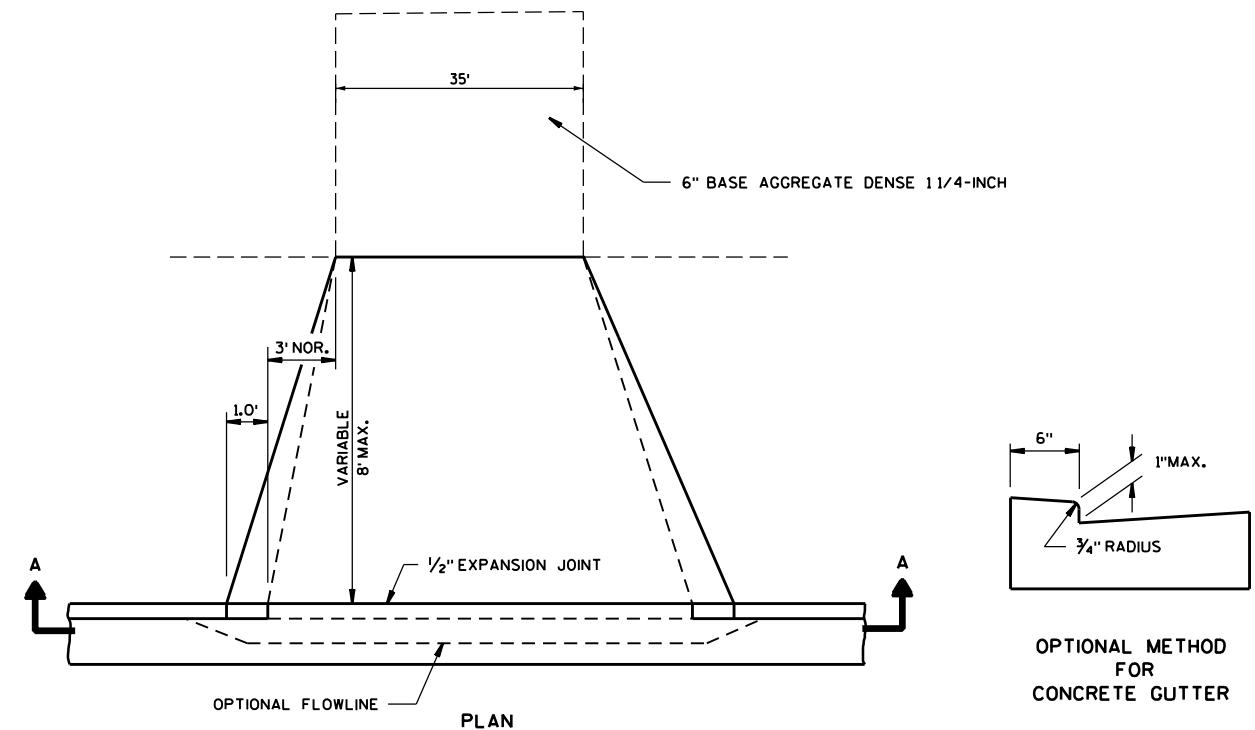
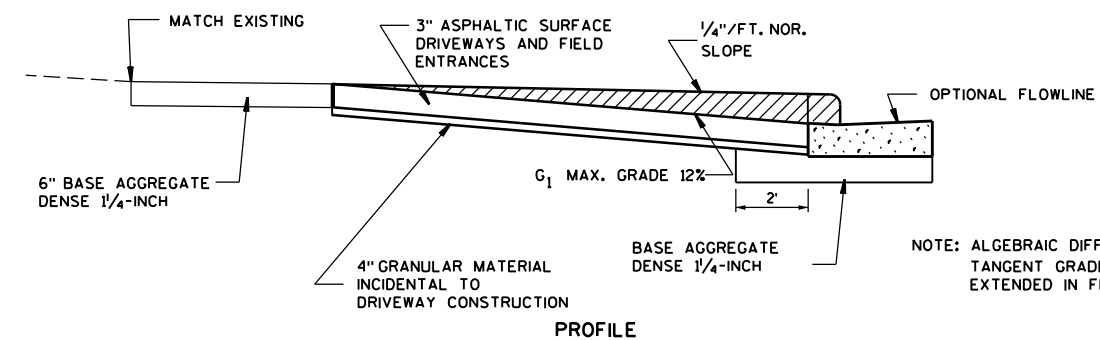
STA. 10+00 TO STA. 29+17
SUPERELEVATED SECTION

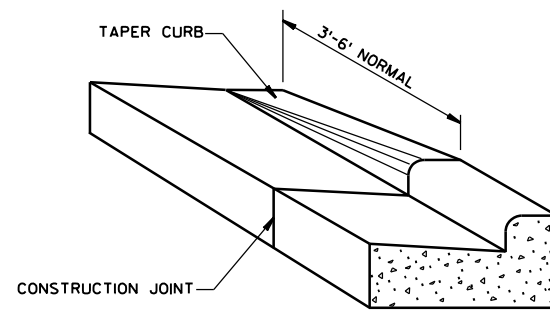


EROSION MAT TREATMENT AT CULVERTS

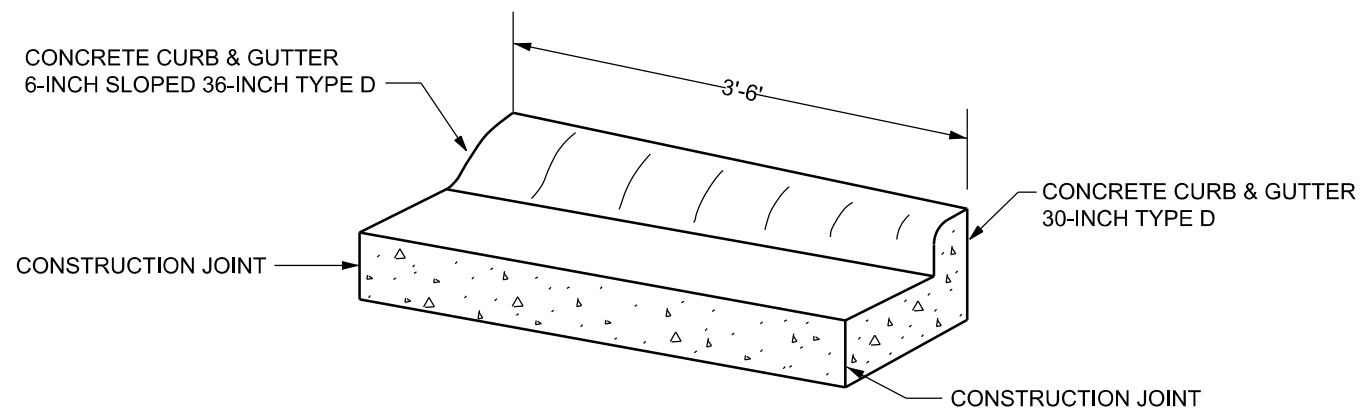
SIDE VIEW
CULVERT PIPE CHECK

*WHERE DRIVEWAY IS PAVED, APPROACH PAVEMENT SHOULD BE EXTENDED TO MATCH DRIVEWAY PAVEMENT.

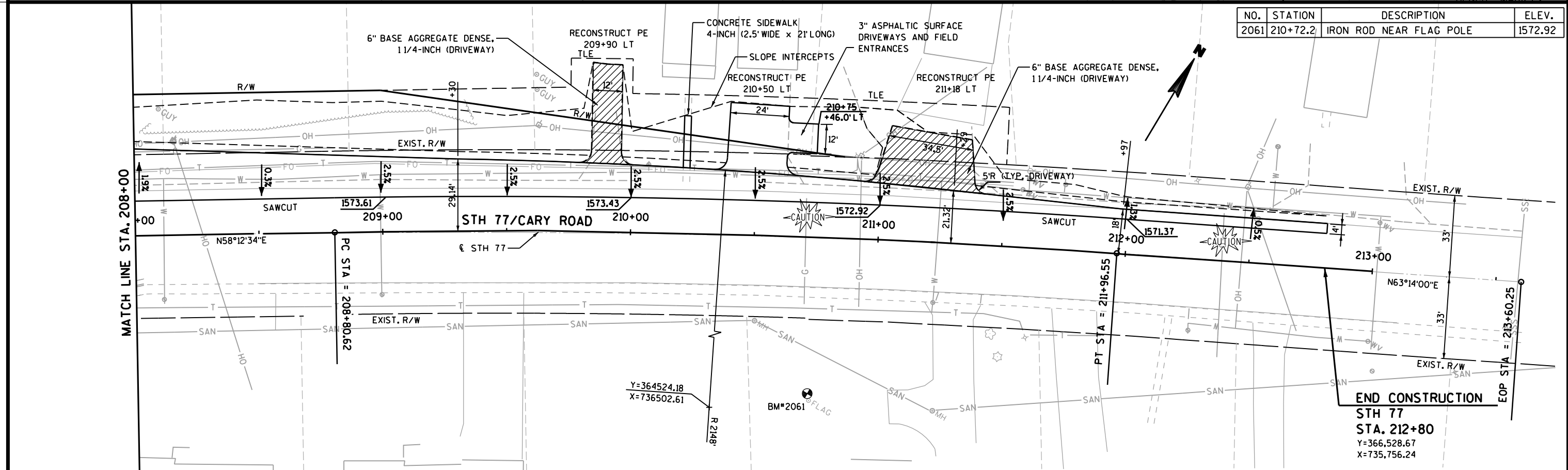
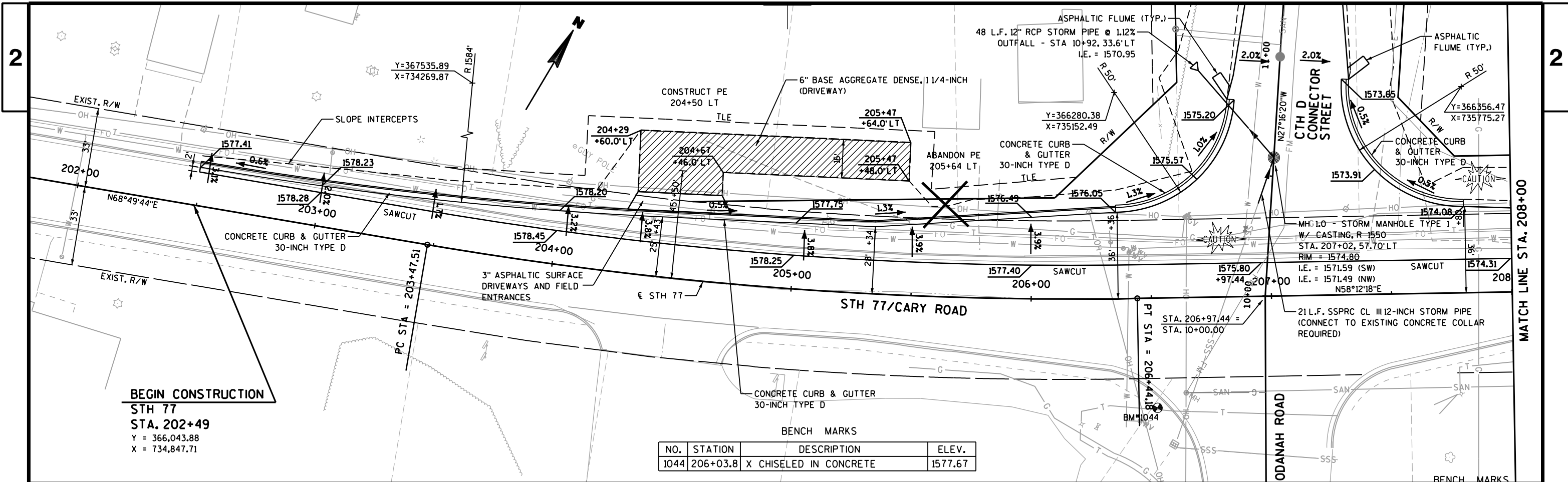
PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)
RURAL DRIVEWAY INTERSECTION DETAILIN CUT
TYPICAL CROSS SECTION FOR PRIVATE
DRIVE OR FIELD ENTRANCETYPICAL DRIVEWAY PROFILES
RURAL DRIVEWAY DETAIL WITHOUT CURB & GUTTERSTA. 209+90, LT
STA. 210+50, LT
STA. 211+18, LTDETAIL FOR MANHOLE 1.0 ELEVATIONS
STA. 10+36, C/LOPTIONAL METHOD
FOR
CONCRETE GUTTERRURAL DRIVEWAY DETAIL WITH CURB & GUTTER
STA. 204+50, LT

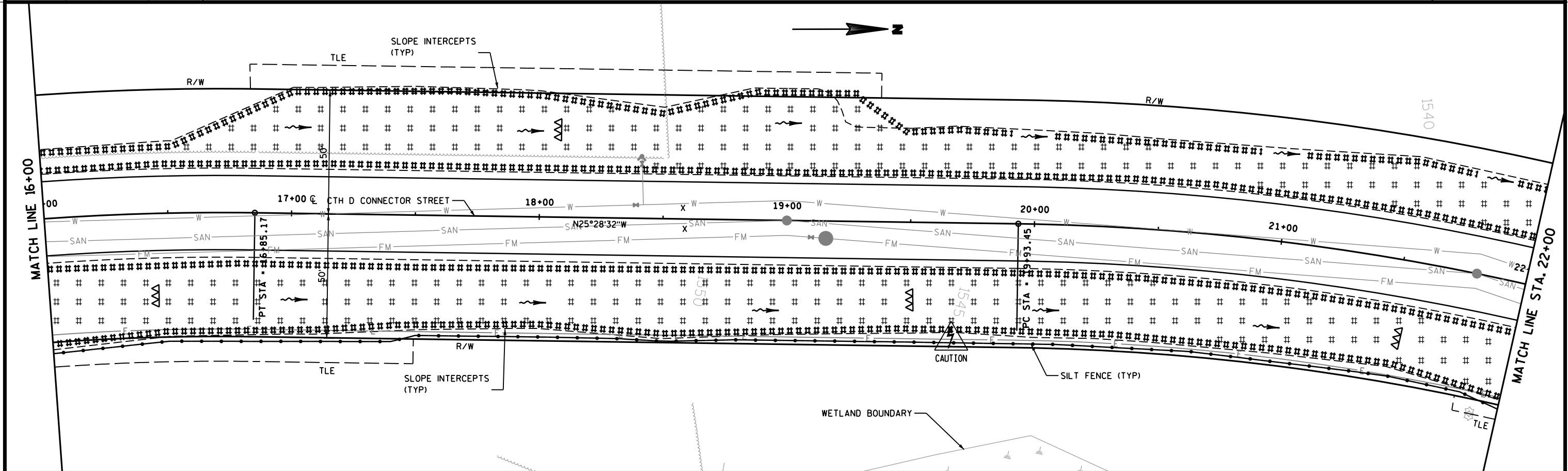
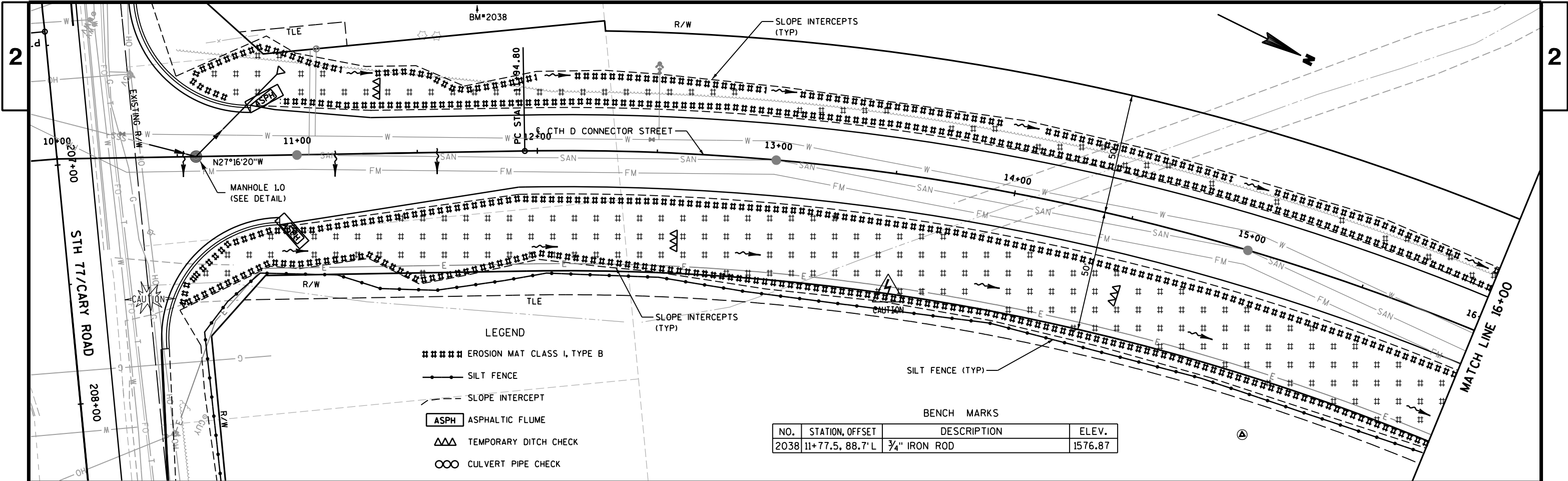


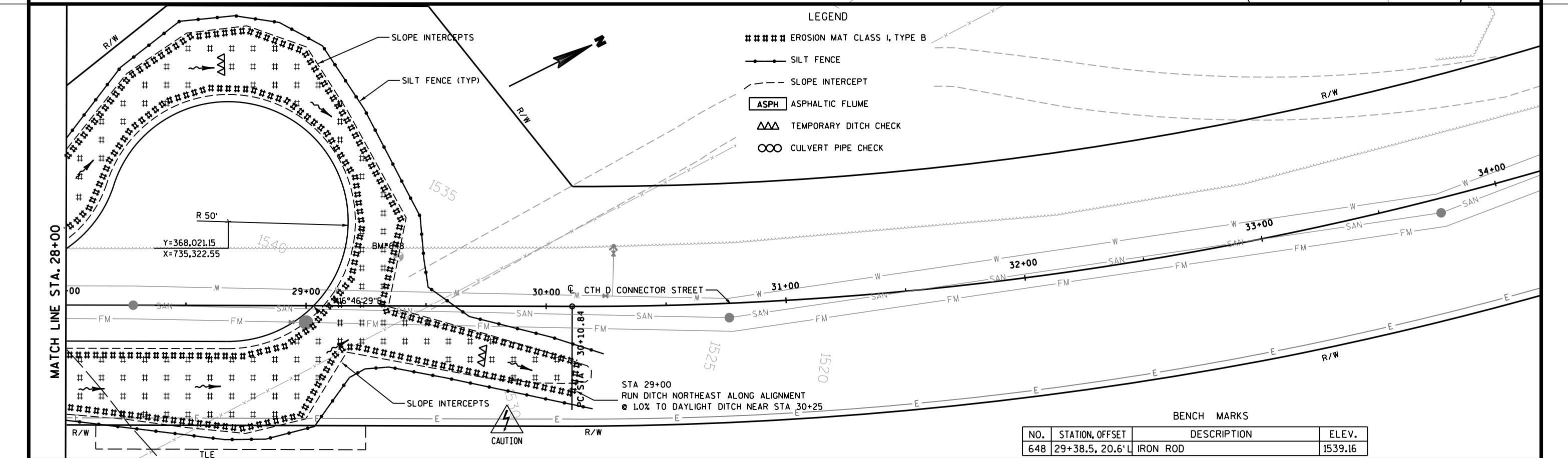
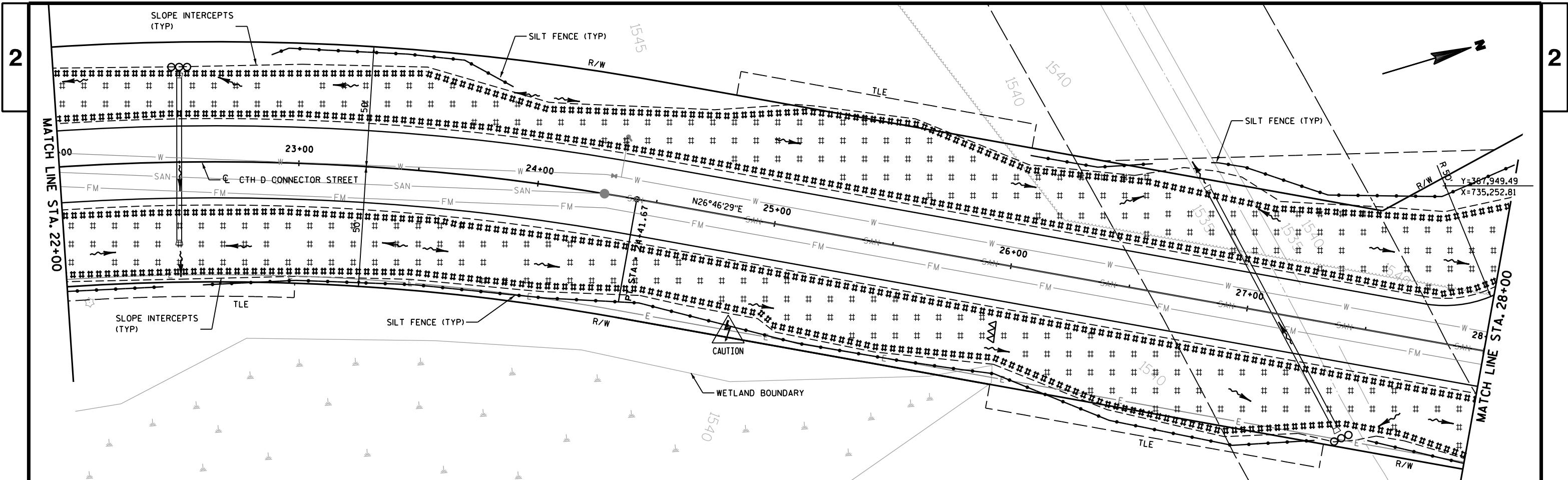
DETAIL OF CURB & GUTTER TERMINI

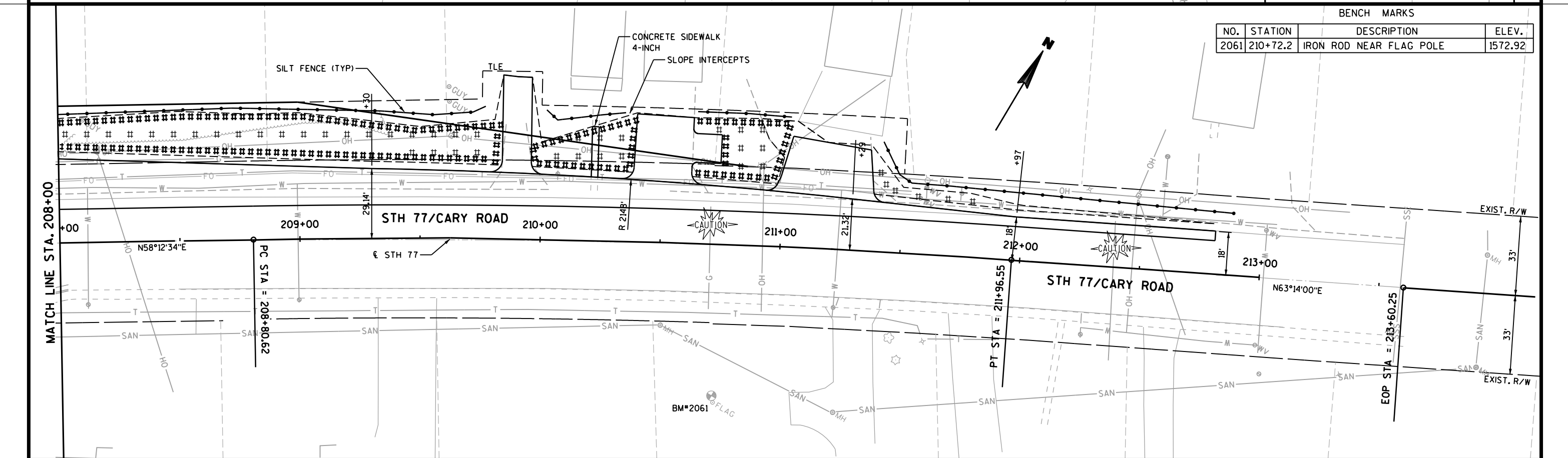
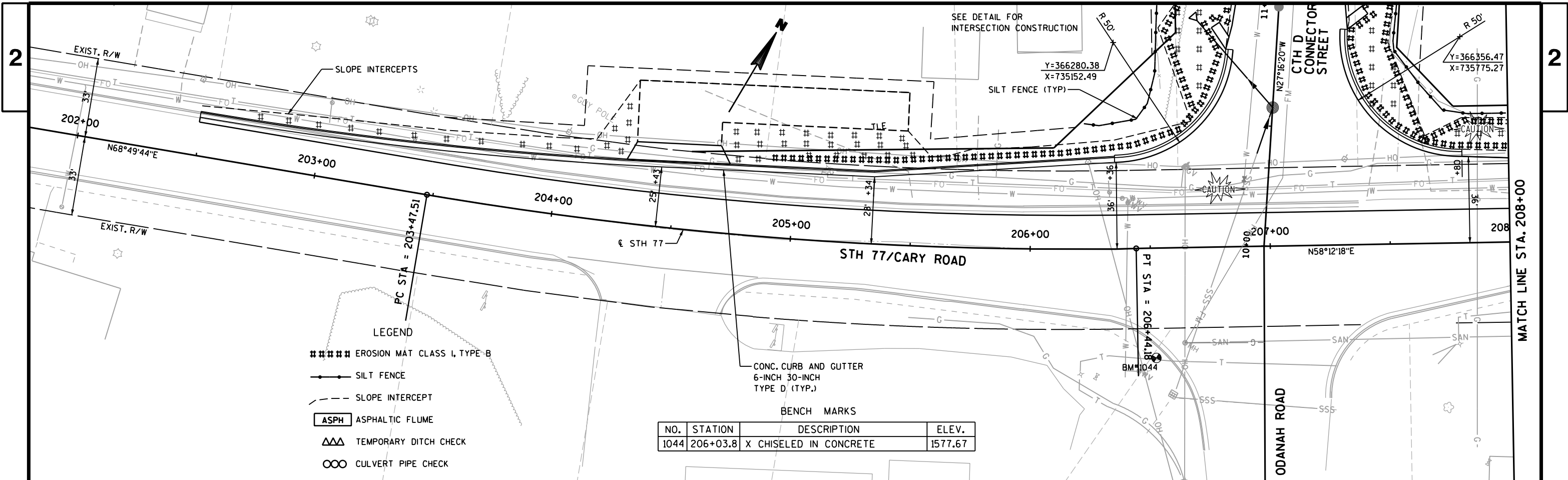


CONCRETE CURB AND GUTTER TRANSITION DETAIL









PROJECT NO: 9993-04-70

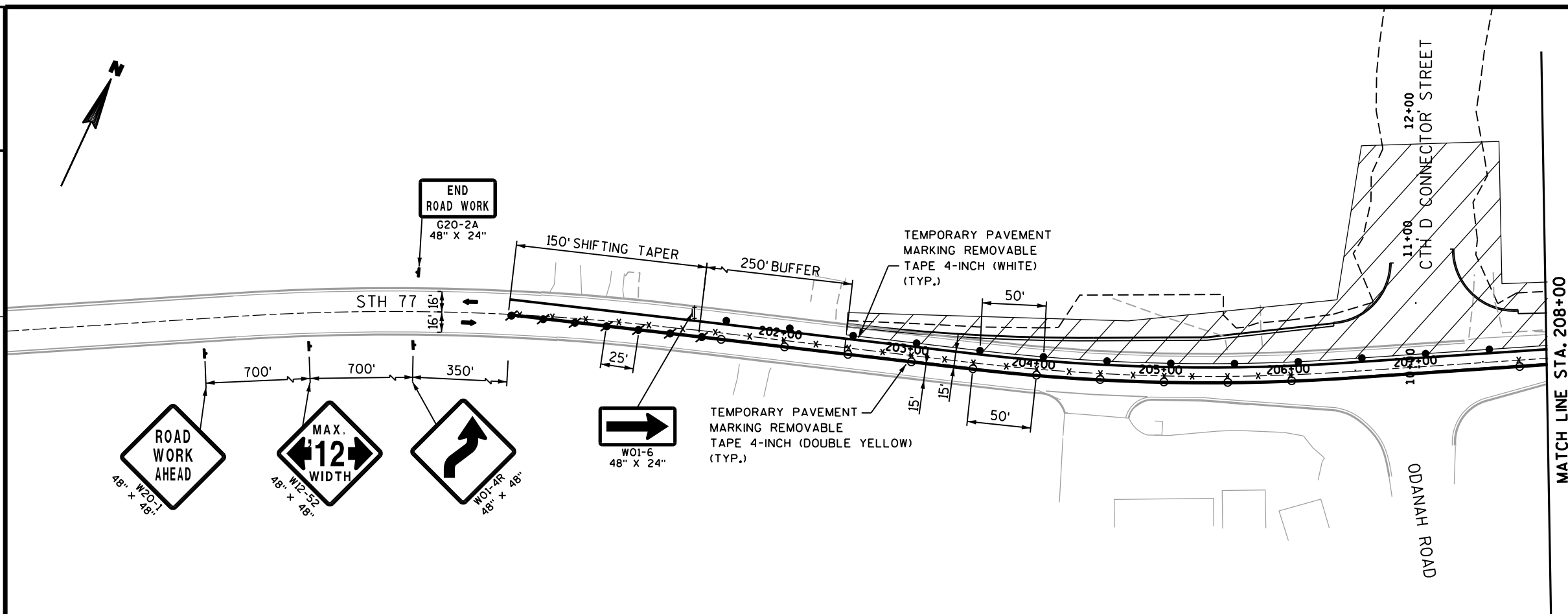
HWY: CTH D

COUNTY: IRON

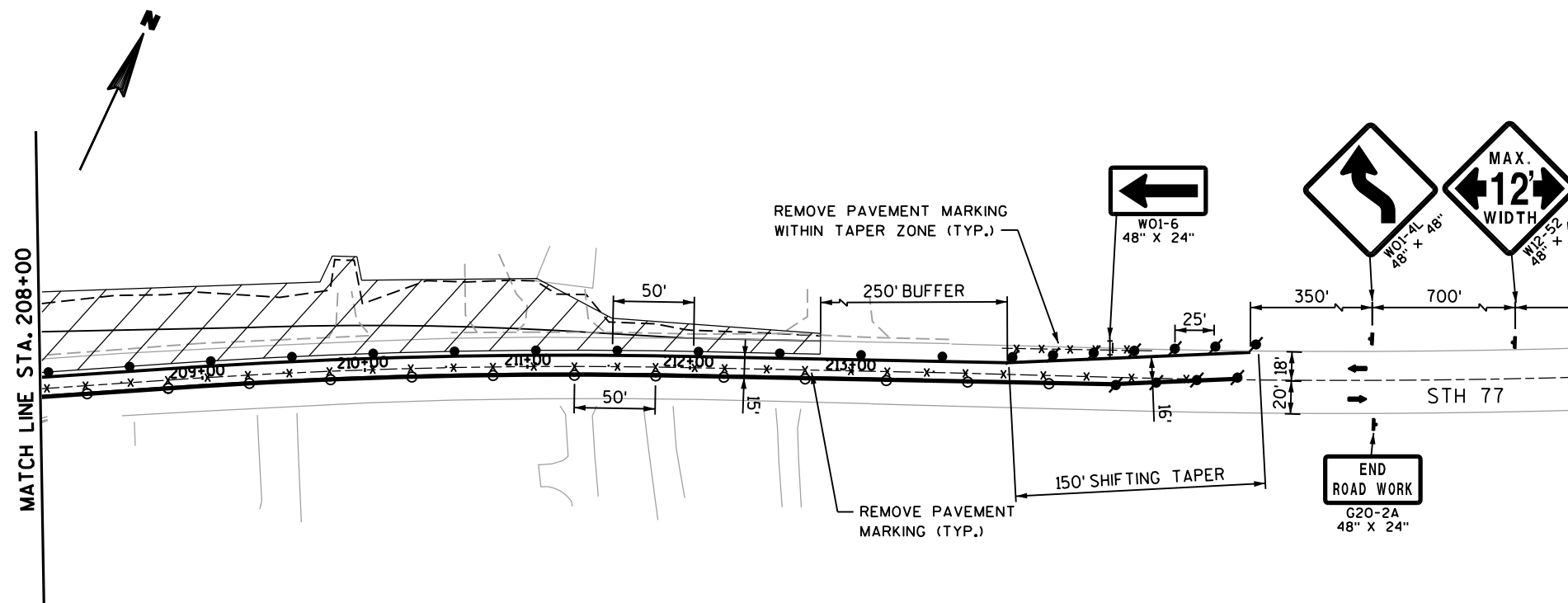
EROSION CONTROL

SHEET

E



NOTE: SEE STANDARD DETAIL DRAWING FOR TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDE ROADWAY FOR ADDITIONAL LAYOUT DETAILS



LEGEND

- ↑ TYPE III BARRICADE
- ↑ TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- ↔ FLASHING ARROW BOARD
- ↑ POST WITH ATTACHED SIGN
- TUBULAR MARKER
- ▨ WORK AREA
- DIRECTION OF TRAFFIC
- - - REMOVE PAVEMENT MARKING

NOTES:

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

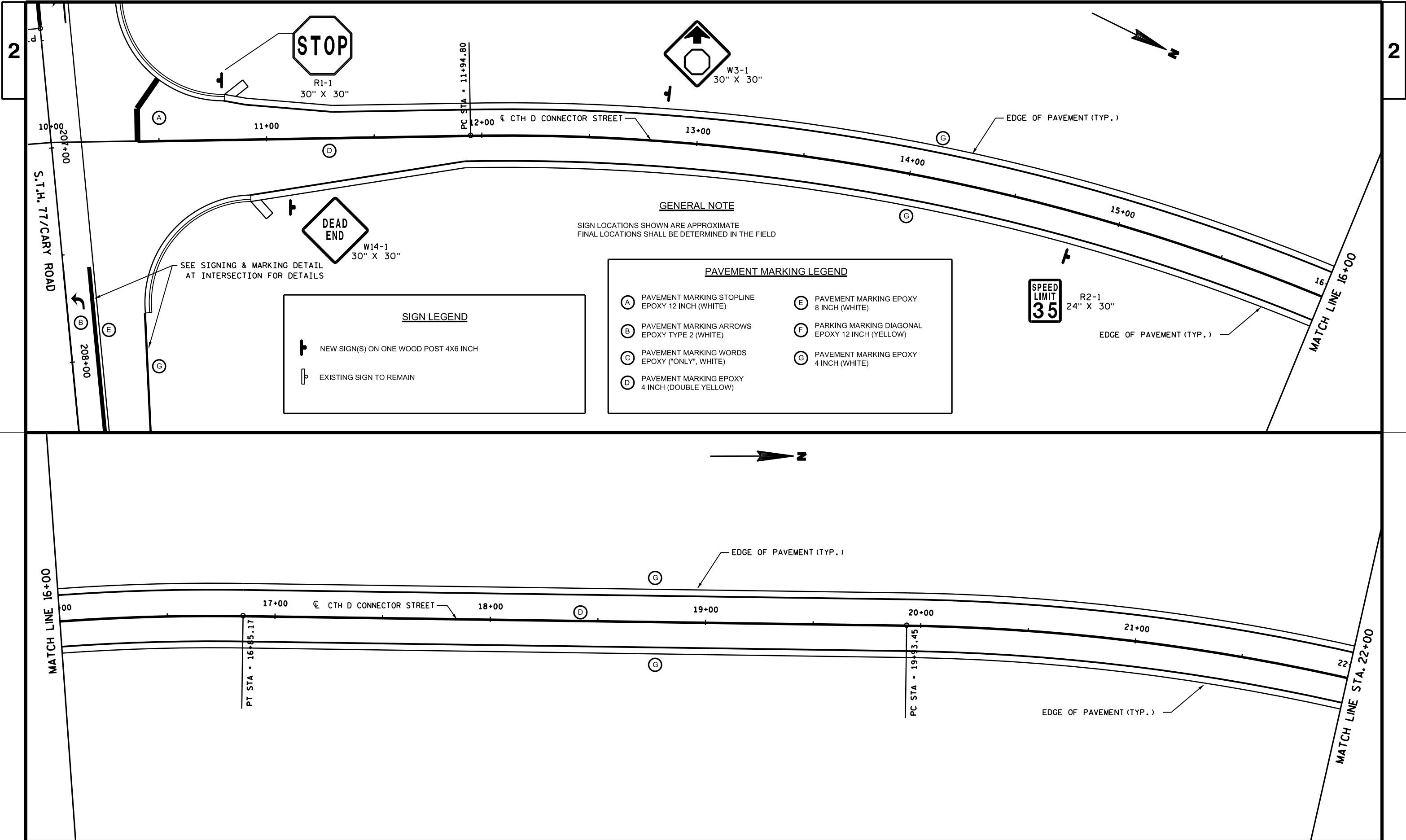
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNING IN THE VICINITY, SHALL BE COVERED OR REMOVED AS SPECIFIED IN THE PLANS AND/OR AS DIRECTED BY THE ENGINEER.

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

ALL "W" AND "WO" SIGNS SHALL BE 48" x 48" (1200mm x 1200mm) UNLESS OTHERWISE NOTED AND SHALL HAVE REFLECTIVE FLUORESCENT DIAMOND GRADE SHEETING.

TYPE "H" REFLECTIVE SHEETING SHALL BE USED ON ALL BARRICADES AND ON R11-2, R11-3.

PAVEMENT MARKINGS NOT APPROPRIATE TO THE TRAVEL PATH SHALL BE REMOVED.



PROJECT NO:9993-04-70

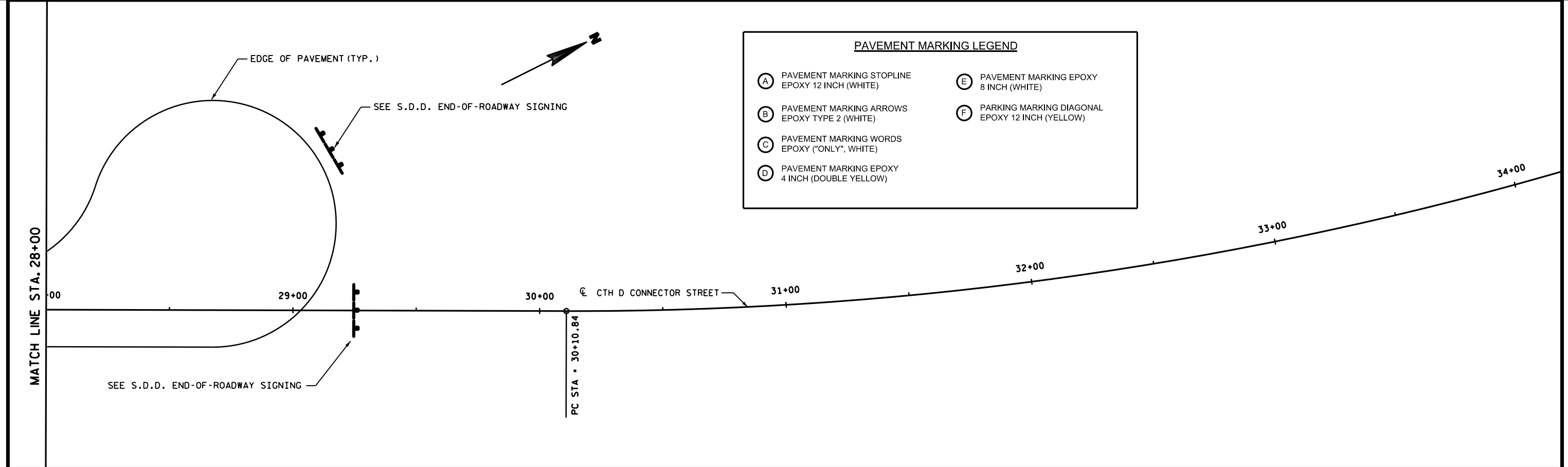
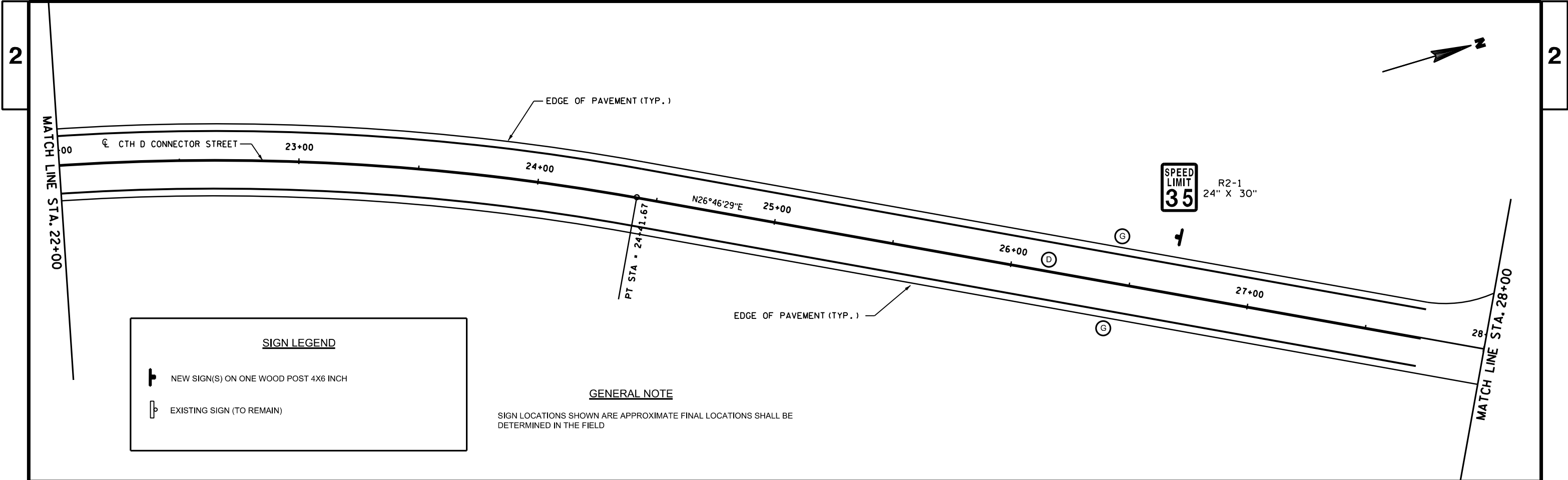
HWY:CTH D

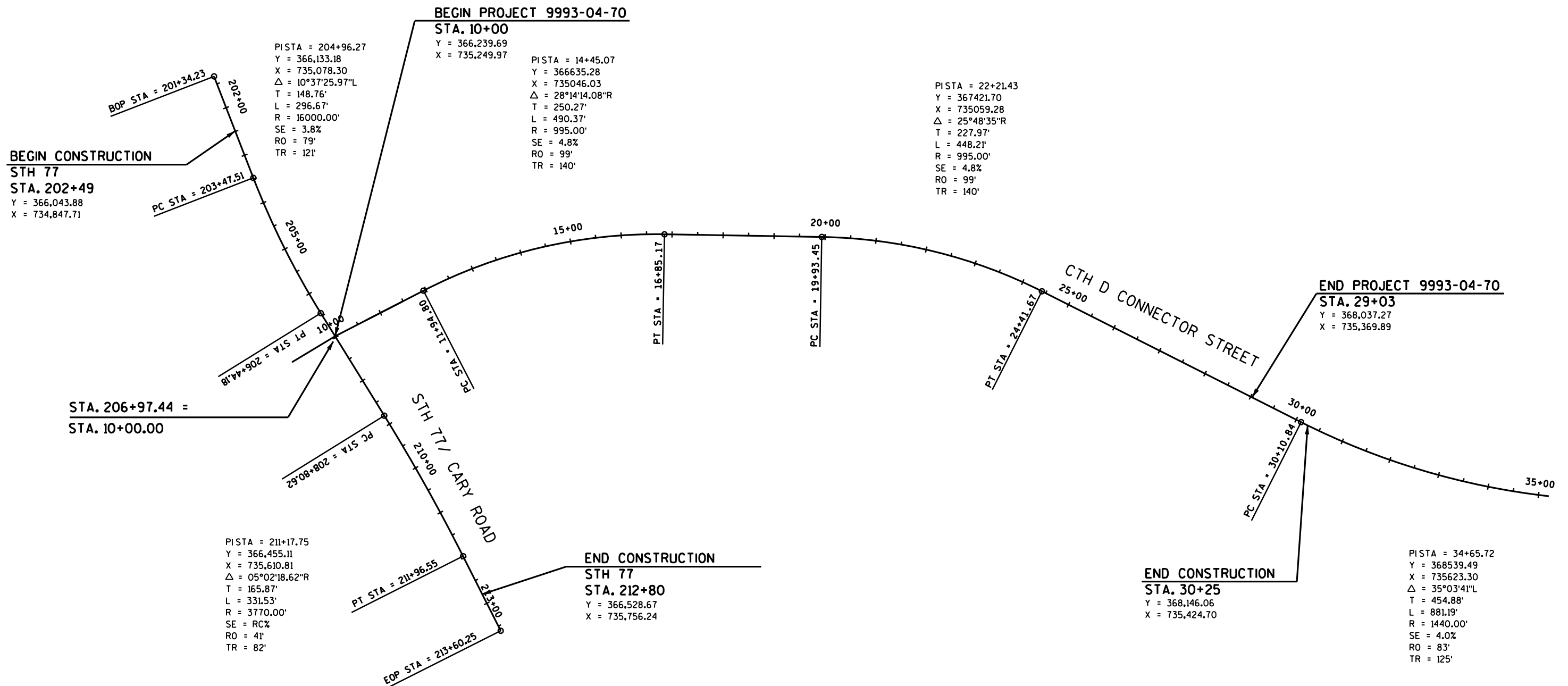
COUNTY:IRON

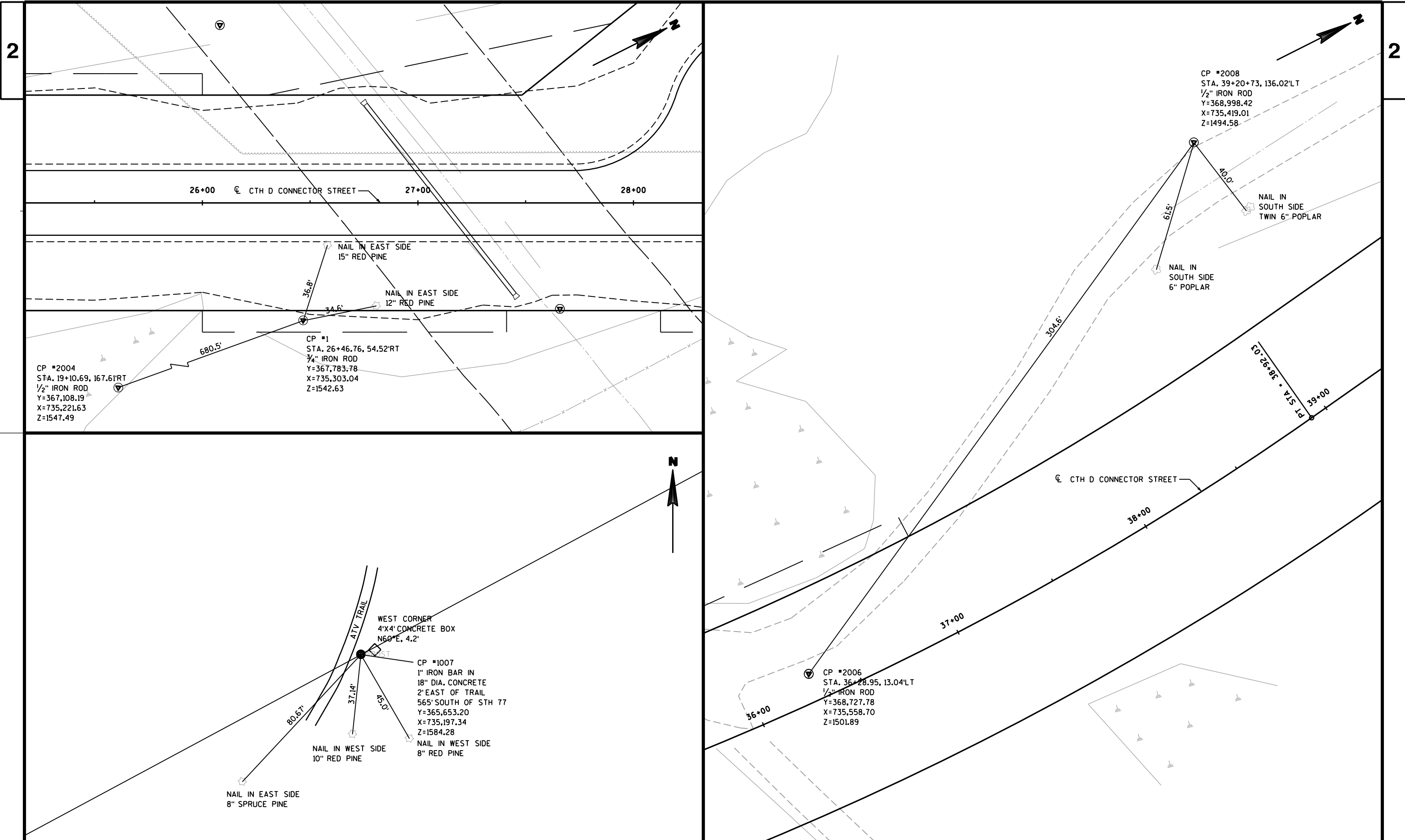
SIGNING & PAVEMENT MARKING DETAIL

SHEET

E







Estimate Of Quantities

9993-04-70

Line	Item	Item Description	Unit	Total	Qty
0010	201.0105	Clearing	STA	15.000	15.000
0020	201.0205	Grubbing	STA	15.000	15.000
0030	204.0150	Removing Curb & Gutter	LF	489.000	489.000
0040	204.0155	Removing Concrete Sidewalk	SY	10.000	10.000
0050	205.0100	Excavation Common	CY	6,709.000	6,709.000
0060	209.1100	Backfill Granular Grade 1	CY	250.000	250.000
0070	211.0500	Prepare Foundation for Base Aggregate	STA	11.000	11.000
0080	213.0100	Finishing Roadway (project) 01. 9993-04-70	EACH	1.000	1.000
0090	305.0110	Base Aggregate Dense 3/4-Inch	TON	900.000	900.000
0100	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	7,865.000	7,865.000
0110	350.0145	Subbase 12-Inch	SY	12,150.000	12,150.000
0120	455.0605	Tack Coat	GAL	869.000	869.000
0130	460.2000	Incentive Density HMA Pavement	DOL	1,920.000	1,920.000
0140	460.5223	HMA Pavement 3 LT 58-28 S	TON	1,124.000	1,124.000
0150	460.5224	HMA Pavement 4 LT 58-28 S	TON	999.000	999.000
0160	460.5244	HMA Pavement 4 LT 58-34 S	TON	874.000	874.000
0170	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	27.000	27.000
0180	465.0315	Asphaltic Flumes	SY	10.000	10.000
0190	521.1024	Apron Endwalls for Culvert Pipe Steel 24-Inch	EACH	4.000	4.000
0200	522.1012	Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	EACH	1.000	1.000
0210	528.0124	Culvert Pipe Corrugated Steel Polymer Coated 24-Inch	LF	180.000	180.000
0220	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	390.000	390.000
0230	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	170.000	170.000
0240	602.0405	Concrete Sidewalk 4-Inch	SF	85.000	85.000
0250	606.0200	Riprap Medium	CY	15.000	15.000
0260	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	60.000	60.000
0270	611.0530	Manhole Covers Type J	EACH	1.000	1.000
0280	611.2003	Manholes 3-FT Diameter	EACH	1.000	1.000
0290	611.8110	Adjusting Manhole Covers	EACH	9.000	9.000
0300	619.1000	Mobilization	EACH	1.000	1.000
0310	621.0100	Landmark Reference Monuments	EACH	25.000	25.000
0320	624.0100	Water	MGAL	137.000	137.000
0330	625.0500	Salvaged Topsoil	SY	12,767.000	12,767.000
0340	628.1504	Silt Fence	LF	4,465.000	4,465.000
0350	628.1520	Silt Fence Maintenance	LF	8,930.000	8,930.000
0360	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0370	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0380	628.2008	Erosion Mat Urban Class I Type B	SY	12,767.000	12,767.000

Estimate Of Quantities

9993-04-70

Line	Item	Item Description	Unit	Total	Qty
0390	628.7504	Temporary Ditch Checks	LF	100.000	100.000
0400	628.7555	Culvert Pipe Checks	EACH	2.000	2.000
0410	628.7560	Tracking Pads	EACH	2.000	2.000
0420	628.7570	Rock Bags	EACH	50.000	50.000
0430	629.0210	Fertilizer Type B	CWT	8.040	8.040
0440	630.0120	Seeding Mixture No. 20	LB	316.000	316.000
0450	630.0140	Seeding Mixture No. 40	LB	19.000	19.000
0460	631.0300	Sod Water	MGAL	10.000	10.000
0470	631.1000	Sod Lawn	SY	10.000	10.000
0480	633.5200	Markers Culvert End	EACH	5.000	5.000
0490	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	6.000	6.000
0500	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	6.000	6.000
0510	637.2210	Signs Type II Reflective H	SF	29.180	29.180
0520	637.2220	Signs Type II Reflective SH	SF	13.500	13.500
0530	637.2230	Signs Type II Reflective F	SF	6.250	6.250
0540	638.2602	Removing Signs Type II	EACH	1.000	1.000
0550	638.3000	Removing Small Sign Supports	EACH	1.000	1.000
0560	642.5001	Field Office Type B	EACH	1.000	1.000
0570	643.0100	Traffic Control (project) 01. 9993-04-70	EACH	1.000	1.000
0580	643.0300	Traffic Control Drums	DAY	2,530.000	2,530.000
0590	643.0420	Traffic Control Barricades Type III	DAY	300.000	300.000
0600	643.0500	Traffic Control Flexible Tubular Marker Posts	EACH	26.000	26.000
0610	643.0600	Traffic Control Flexible Tubular Marker Bases	EACH	26.000	26.000
0620	643.0705	Traffic Control Warning Lights Type A	DAY	600.000	600.000
0630	643.0715	Traffic Control Warning Lights Type C	DAY	360.000	360.000
0640	643.0900	Traffic Control Signs	DAY	810.000	810.000
0650	645.0120	Geotextile Type HR	SY	30.000	30.000
0660	646.0106	Pavement Marking Epoxy 4-Inch	LF	11,730.000	11,730.000
0670	646.0126	Pavement Marking Epoxy 8-Inch	LF	200.000	200.000
0680	646.0600	Removing Pavement Markings	LF	2,910.000	2,910.000
0690	647.0166	Pavement Marking Arrows Epoxy Type 2	EACH	4.000	4.000
0700	647.0356	Pavement Marking Words Epoxy	EACH	2.000	2.000
0710	647.0556	Pavement Marking Stop Line Epoxy 12-Inch	LF	35.000	35.000
0720	647.0726	Pavement Marking Diagonal Epoxy 12-Inch	LF	150.000	150.000
0730	649.0400	Temporary Pavement Marking Removable Tape 4-Inch	LF	4,705.000	4,705.000
0740	650.4000	Construction Staking Storm Sewer	EACH	2.000	2.000
0750	650.4500	Construction Staking Subgrade	LF	2,911.000	2,911.000
0760	650.5000	Construction Staking Base	LF	2,911.000	2,911.000
0770	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	560.000	560.000
0780	650.6000	Construction Staking Pipe Culverts	EACH	2.000	2.000

Estimate Of Quantities

9993-04-70					
Line	Item	Item Description	Unit	Total	Qty
0790	650.9910	Construction Staking Supplemental Control (project) 01. 9993-04-70	LS	1.000	1.000
0800	650.9920	Construction Staking Slope Stakes	LF	2,911.000	2,911.000
0810	690.0150	Sawing Asphalt	LF	1,040.000	1,040.000
0820	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	300.000	300.000
0830	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	600.000	600.000
0840	SPV.0030	Special 01. Fertilizer for Lawn Type Turf	CWT	0.670	0.670
0850	SPV.0060	Special 01. Adjusting Water Valve Boxes	EACH	6.000	6.000
0860	SPV.0180	Special 01. Preparing Topsoil for Lawn Type Turf	SY	1,067.000	1,067.000

3

CLEARING & GRUBBING						
CATEGORY	STATION	-	STATION	LOCATION	201.0105	201.0205
					CLEARING	GRUBBING
					STA	STA
0010	10+00	-	19+00	CTH D LT	9	9
	26+00	-	30+00	CTH D LT	4	4
	208+00	-	210+00	STH 77 LT	2	2
PROJECT TOTALS					15	15

REMOVING CURB & GUTTER				
				204.0150
				REMOVING
				CURB &
				GUTTER
CATEGORY	STATION	-	STATION	LOCATION
0010	202+49	-	207+38	STH 77 LT
				LF
				489
PROJECT TOTAL				489

REMOVING CONCRETE SIDEWALK			
			204.0155
			REMOVING
			CONCRETE
			SIDEWALK
CATEGORY	STATION	LOCATION	SY
0010	210+20	STH 77 LT	10
PROJECT TOTAL			10

PREPARE FOUNDATION FOR BASE AGGREGATE				
				211.0500
				PREPARE
				FOUNDATION FOR
				BASE AGGREGATE
CATEGORY	STATION	-	STATION	LOCATION
0010	202+49	-	212+80	STA
				11
PROJECT TOTAL				11

BACKFILL GRANULAR			
			209.1100
			BACKFILL
			GRANULAR
			GRADE 1
CATEGORY	STATION	LOCATION	CY
0010	22+50	CTH D CULVERT BACKFILL	100
	27+11	CTH D CULVERT BACKFILL	100
		UNDISTRIBUTED	50
PROJECT TOTAL			250

EXCAVATION & BORROW												
Division	From/To Station	Location	205.0100 Common Excavation (1)		Salvaged/Unusable Pavement Material (4)	Available Material (5)	Unexpanded Fill	Expanded Fill (6)	Mass Ordinate +/- (7)	Waste	Borrow	Comment:
			Cut (2)	EBS Excavation (3)								
1	10+19 - 32+25 202+49 - 212+80 DRIVEWAYS	CTH D STH 77 STH 77	5,804	0	0	5804	2,118	2,754	3050	3050	0	
			805	0	0	805	6	8	797	797	0	
			100	0	0	100	0	0	100	100	0	
Division 1 Subtotal			6709	0	0	6709	2124	2762	3947	3947	0	
Grand Total Project 9993-04-70			6709	0	0	6709	2124	2762	3947	3947	0	
PROJECT 9993-04-70 Total Common Exc 6,709												

Notes:

1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100

2) Salvaged/Unsuable Pavement Material is included in Cut.

3) EBS Excavation to be backfilled with Select Crushed material.

4) Salvaged/Unusable Pavement Material

5) Available Material = Cut - Salvaged/Unusuable Pavement Material

6) Expanded Fill. Factor = 1.30

7) 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.

3

BASE AGGREGATE DENSE 3/4-INCH				
305.0110 BASE AGGREGATE DENSE 3/4-INCH				
CATEGORY	STATION	-	STATION	LOCATION TON
0010	10+80	-	29+03	CTH D LT 400
	10+90	-	29+03	CTH D RT 400
	207+80	-	212+80	STH 77 LT 100
PROJECT TOTAL				900

BASE AGGREGATE DENSE 1 1/4-INCH				
305.0120 BASE AGGREGATE DENSE 1 1/4-INCH				
CATEGORY	STATION	-	STATION	LOCATION TON
0010	202+49	-	212+80	STH 77 LT 1,700
	10+50	-	29+03	CTH D LT/RT 6,000
	204+30	-	205+50	STH 77 LT (PE) 90
	209+90			STH 77 LT (PE) 20
	210+20			STH 77 LT (SIDEWALK) 5
	210+50			STH 77 LT (PE) 30
	211+18			STH 77 LT (PE) 20
PROJECT TOTAL				7,865

SUBBASE 12-INCH				
350.0145 SUBBASE 12-INCH				
CATEGORY	STATION	-	STATION	LOCATION SY
0010	10+14	-	29+03	CTH D LT/RT 12,150
PROJECT TOTAL				12,150

3

HMA PAVEMENT ITEMS									
455.0605 460.5223 460.5224 460.5244 465.0120 TACK HMA HMA HMA ASPHALTIC SURFACE COAT PAVEMENT PAVEMENT PAVEMENT DRIVEWAYS AND 3 LT 58-28 S 4 LT 58-28 S 4 LT 58-34 S FIELD ENTRANCES									
CATEGORY	STATION	-	STATION	LOCATION LAYER	GAL	TON	TON	TON	TON
0010	10+35	-	29+03	CTH D LT/RT Lower Layer (2.25-in)	-	934	-	-	-
	10+35	-	29+03	CTH D LT/RT Intermediate Layer (2.0-in)	361	-	831	-	-
	10+35	-	29+03	CTH D LT/RT Upper Layer (1.75-in)	361	-	-	727	-
207+80	207+80	-	212+80	STH 77 LT Lower Layer (2.25-in)	-	190	-	-	-
	207+80	-	212+80	STH 77 LT Intermediate Layer (2.0-in)	73	-	169	-	-
	207+80	-	212+80	STH 77 LT Upper Layer (1.75-in)	73	-	-	148	-
204+50					STH 77 LT (PE)	-	-	-	7
209+90					STH 77 LT (PE)	-	-	-	2
210+50					STH 77 LT (PE)	-	-	-	15
21+18					STH 77 LT (PE)	-	-	-	3
PROJECT TOTALS					869	1,124	999	874	27

ASPHALTIC FLUMES			
465.0315 ASPHALTIC FLUMES			
CATEGORY	STATION	LOCATION	SY
0010	10+80	CTH D LT	5
	10+90	CTH D RT	5
PROJECT TOTALS			10

CULVERT PIPE ITEMS					
521.1024 528.0124 APRON ENDWALLS CULVERT PIPE FOR CULVERT CORRUGATED STEEL PIPE STEEL POLYMER COATED 24-INCH 24-INCH					
CATEGORY	STATION	LOCATION	EACH	LF	
0010	22+50	CTH D	2	68	
	27+11	CTH D	2	112	
PROJECT TOTALS			4	180	

CONCRETE CURB & GUTTER ITEMS						
601.0411 601.0557 CONCRETE CONCRETE CURB & GUTTER CURB & GUTTER 30-INCH 6-INCH SLOPED TYPE D 36-INCH TYPE D						
CATEGORY	STATION	-	STATION	LOCATION	LF	LF
0010	202+49	-	206+36	STH 77 LT	390	--
	206+36	-	206+86	STH 77 LT	--	80
	207+28	-	207+80	STH 77 LT	--	90
PROJECT TOTALS					390	170

3

CONCRETE SIDEWALK			
			602.0405 CONCRETE SIDEWALK 4-INCH
CATEGORY	STATION	LOCATION	SF
0010	210+20	STH 77 LT	85
PROJECT TOTAL			85

RIPRAP				
			606.0200 RIPRAP MEDIUM	645.0120 GEOTEXTILE TYPE HR
CATEGORY	STATION	LOCATION	CY	SY
0010	10+90	CTH D 33' LT (A.E.W.)	15	30
PROJECT TOTALS			15	30

WATER ITEMS			
		624.0100 WATER	631.0300 SOD WATER
CATEGORY	DESCRIPTION	MGAL	MGAL
0010	COMPACTION	80	-
	DUST CONTROL	32	-
	STH 77 LAWN TYPE TURF	-	10
	UNDISTRIBUTED	25	-
PROJECT TOTALS		137	10

EROSION CONTROL ITEMS									
					628.1504 SILT FENCE	628.1520 SILT FENCE MAINTENANCE	628.7504 TEMPORARY DITCH CHECKS	628.7555 CULVERT PIPE CHECKS	628.7570 ROCK BAGS
CATEGORY	STATION	-	STATION	LOCATION	LF	LF	LF	EACH	EACH
0010	10+60	-	30+20	CTH D RT	2,500	5,000	70	--	--
	22+90	-	30+25	CTH D LT	615	1,230	30	2	--
	207+75	-	212+80	STH 77 LT	450	900	--	--	--
	UNDISTRIBUTED				900	1,800	--	--	50
PROJECT TOTALS					4,465	8,930	100	2	50

STORM SEWER PIPE REINFORCED CONCRETE			
			608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH
CATEGORY	STRUCTURE I.D. FROM	STRUCTURE I.D. TO	LF
0010	1.0	A.E.W.	60
PROJECT TOTAL			60

STORM SEWER STRUCTURES						
				522.1012 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH	611.2003 MANHOLES 3-FT DIAMETER	611.0530 MANHOLE COVERS TYPE J
CATEGORY	STRUCTURE I.D.	STATION	LOCATION	EACH	EACH	EACH
0010	1.0	10+36	CTH D LT	-	1	1
	A.E.W.	10+90	CTH D LT	1	-	-
PROJECT TOTALS				1	1	1

FINISHING ITEMS												
					625.0500 SALVAGED TOPSOIL	628.2004 EROSION MAT CLASS I TYPE B	629.0210 FERTILIZER TYPE B	630.0120 SEEDING MIXTURE NO. 20	630.0140 SEEDING MIXTURE NO. 40	631.0100 SOD LAWN	SPV.0030.01 FERTILIZER FOR LAWN TYPE TURF	SPV.0180.01 PREPARING TOPSOIL FOR LAWN TYPE TURF
CATEGORY	STATION	-	STATION	LOCATION	SY	SY	CWT	LB	LB	SY	CWT	SY
0010	10+50	-	29+40	CTH D, LT	5,089	5,089	3.21	137	-	-	-	-
		10+80		ASPHALTIC FLUME, LT	-	-	-	-	-	5	-	-
	10+50	-	30+25	CTH D, RT	6,611	6,611	4.17	179	-	-	-	-
		10+90		ASPHALTIC FLUME, RT	-	-	-	-	-	5	-	-
	202+49	-	212+80	STH 77, LT	1,067	1,067	0.67	-	19	-	0.67	1,067
PROJECT TOTALS					12,767	12,767	8.04	316	19	10	0.67	1,067

MOBILIZATIONS EROSION CONTROL		
	628.1905 MOBILIZATONS EROSION CONTROL	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL
CATEGORY	EACH	EACH
0010	4	4
PROJECT TOTALS		4

TRACKING PADS		
		628.7560 TRACKING PADS
CATEGORY	DESCRIPTION	EACH
0010	STH 77 ENTRANCE FROM CTH D	1
	UNDISTRIBUTED	1
PROJECT TOTAL		2

3

3

MARKERS CULVERT END			
CATEGORY	STATION	LOCATION	633.5200 MARKERS CULVERT END EACH
0010	10+90	CTH D LT	1
	22+50	CTH D LT/RT	2
	27+11	CTH D LT/RT	2
PROJECT TOTAL			5

REMOVING SIGNS					
CATEGORY	STATION	LOCATION	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
0010	207+05	STH 77 LT	1	1	REMOVE EXISTING SPEED LIMIT SIGN
PROJECT TOTALS			1	1	

TEMPORARY PAVEMENT MARKINGS			
CATEGORY	LOCATION	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH YELLOW LF	WHITE LF
0010	STH 77	3,130	1,575
PROJECT TOTALS		4,705	

3

PERMANENT SIGNING ITEMS										
CATEGORY	STATION	LOCATION	CODE	SIZE IN X IN	634.0612 POSTS WOOD 4X6-INCH X 12-FT EACH	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2220 SIGNS TYPE II REFLECTIVE SH SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	NOTES
0010	10+78	CTH D LT	R1-1	30 X 30	-	1	5.18	-	-	STOP
	11+10	CTH D RT	W14-1	30 X 30	-	1	-	-	6.25	DEAD END
	12+85	CTH D LT	W3-1	36 X 36	-	1	9.00	-	-	STOP AHEAD
	14+80	CTH D RT	R2-1	24 X 30	-	1	5.00	-	-	SPEED LIMIT 35
	26+68	CTH D LT	R2-1	24 X 30	-	1	5.00	-	-	SPEED LIMIT 35
	29+25	CTH D LT	W5-56	18 X 18	1	-	-	2.25	-	END OF ROADWAY SIGNING
	29+25	CTH D LT	W5-56	18 X 18	1	-	-	2.25	-	END OF ROADWAY SIGNING
	29+25	CTH D LT	W5-56	18 X 18	1	-	-	2.25	-	END OF ROADWAY SIGNING
	29+25	CTH D LT	W5-56	18 X 18	1	-	-	2.25	-	END OF ROADWAY SIGNING
	29+25	CTH D LT/RT	W5-56	18 X 18	1	-	-	2.25	-	END OF ROADWAY SIGNING
	29+25	CTH D RT	W5-56	18 X 18	1	-	-	2.25	-	END OF ROADWAY SIGNING
	205+03	STH 77 LT	R2-1	24 X 30	-	1	5.00	-	-	SPEED LIMIT 35
PROJECT TOTALS					6	6	29.18	13.50	6.25	

TRAFFIC CONTROL ITEMS									
CATEGORY	DURATION DAYS	REMARKS	643.0300 TRAFFIC CONTROL DRUMS DAYS	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAYS	643.0500 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS EACH	643.0600 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAYS	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAYS	643.0900 TRAFFIC CONTROL SIGNS DAYS
0010	80	PROJECT DURATION							
	65	ADVANCE SIGNING	-	-	-	-	-	-	455
	45	OFF ALIGNMENT WORK/HAUL ROAD	675	90	-	-	180	-	135
	20	STH 77 LANE SHIFT	880	80	26	26	160	360	220
		UNDISTRIBUTED	975	130	-	-	260	-	-
PROJECT TOTALS			2,530	300	26	26	600	360	810

REMOVING PAVEMENT MARKINGS						
CATEGORY	STATION	-	STATION	LOCATION	646.0600 REMOVING PAVEMENT MARKINGS LF	NOTES
0010	199+80	-	206+00	STH 77 LT/RT	1,240	REMOVE DOUBLE YELLOW CENTERLINE
	207+80	-	215+40	STH 77 LT/RT	1,520	REMOVE DOUBLE YELLOW CENTERLINE
	213+90	-	215+40	STH 77 LT	150	REMOVE WHITE EDGELINE IN SHIFTING TAPER
PROJECT TOTAL					2,910	

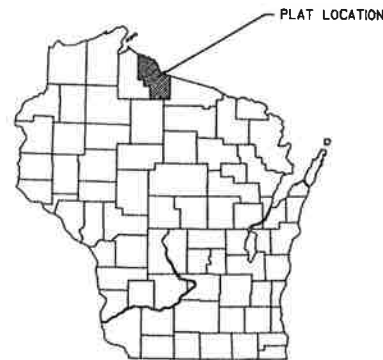
SAWING ASPHALT					
CATEGORY	STATION	-	TO STATION	LOCATION	690.0150 SAWING ASPHALT LF
0010	202+49	-	212+80	STH 77 LT	1,040
PROJECT TOTAL					1,040

PAVEMENT MARKING ITEMS										
CATEGORY	STATION	-	STATION	LOCATION	646.0106		646.0126		647.0556	647.0726
					EPOXY		EPOXY		STOP LINE	DIAGONAL
					4-INCH		8-INCH		EPOXY	EPOXY
					YELLOW	WHITE	YELLOW	WHITE	12-INCH	12-INCH
					LF	LF	LF	LF	LF	LF
0010	10+40	-	27+75	CTH D	3,470	3,400	-	-	35	-
	199+80	-	206+44	STH 77	1,880	-	-	100	-	50
	207+56	-	215+40	STH 77	2,220	760	-	100	-	100
PROJECT TOTALS					11,730		200		35	150

PAVEMENT MARKING WORDS AND SYMBOLS					
CATEGORY	STATION	LOCATION	647.0166 PAVEMENT MARKING ARROWS EPOXY TYPE 2 EACH	647.0356 PAVEMENT MARKING WORDS EPOXY EACH	NOTES
0010	205+47	STH 77 LT	1	-	LEFT ARROW (EB)
	205+82	STH 77 LT	-	1	ONLY (EB)
	206+27	STH 77 LT	1	-	LEFT ARROW (EB)
	207+76	STH 77 LT	1	-	LEFT ARROW (WB)
	208+18	STH 77 LT	-	1	ONLY (WB)
	208+45	STH 77 LT	1	-	LEFT ARROW (WB)
PROJECT TOTALS			4	2	

CONSTRUCTION STAKING ITEMS										
CATEGORY	STATION	-	STATION	LOCATION	650.4000 STORM SEWER EACH	650.4500 SUBGRADE LF	650.5000 BASE LF	650.5500 CURB GUTTER AND CURB & GUTTER LF	650.6000 PIPE CULVERTS EACH	650.9920 SLOPE STAKES LF
0010	10+40	-	29+20	CTH D	2	1,880	1880	-	2	1,880
	202+49	-	212+80	STH 77 LT	-	1,031	1,031	560	-	1,031
PROJECT TOTALS					2	2,911	2,911	560	2	2,911

CONSTRUCTION STAKING SUPPLEMENTAL CONTROL		
CATEGORY	PROJECT	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL LS
0010	9993-04-70	1
PROJECT TOTAL		1



STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION TRANSPORTATION PROJECT PLAT TITLE SHEET

9993-04-00

CTH D EXTENSION, CITY OF HURLEY

STH 77 TO DIVISION STREET WEST

CTH D IRON COUNTY

CONVENTIONAL SYMBOLS

SECTION LINE	---	SECTION CORNER SYMBOL	⊙	R/W MONUMENT (TO BE SET)	•
QUARTER LINE	---	SECTION CORNER MONUMENT	⊕	NON-MONUMENTED R/W POINT	○
SIXTENTH LINE	---	GEODEIC SURVEY MONUMENT	⊕	FOUND IRON PIN (1/2-INCH UNLESS NOTED)	IP
NEW REFERENCE LINE	---	SIXTENTH CORNER MONUMENT	⊕	SIGN	⊕ SIGN
NEW R/W LINE	---	ACCESS RESTRICTED BY ACQUISITION	---	COMPENSABLE	NON-COMPENSABLE
EXISTING R/W OR HE LINE	---	NO ACCESS (BY STATUTORY AUTHORITY)	---		
PROPERTY LINE	---	ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)	---		
LOT, TIE & OTHER MINOR LINES	---	NO ACCESS (NEW HIGHWAY)	---		
SLOPE INTERCEPT	---	PARCEL NUMBER (25)		UTILITY NUMBER (40)	
CORPORATE LIMITS	---	PARALLEL OFFSETS	---		
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC.)	---				
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)	---				
TEMPORARY LIMITED EASEMENT AREA	---				
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)	---				
TRANSMISSION STRUCTURES	---				
BUILDING TO BE REMOVED	---				
BRIDGE	---				

CONVENTIONAL ABBREVIATIONS

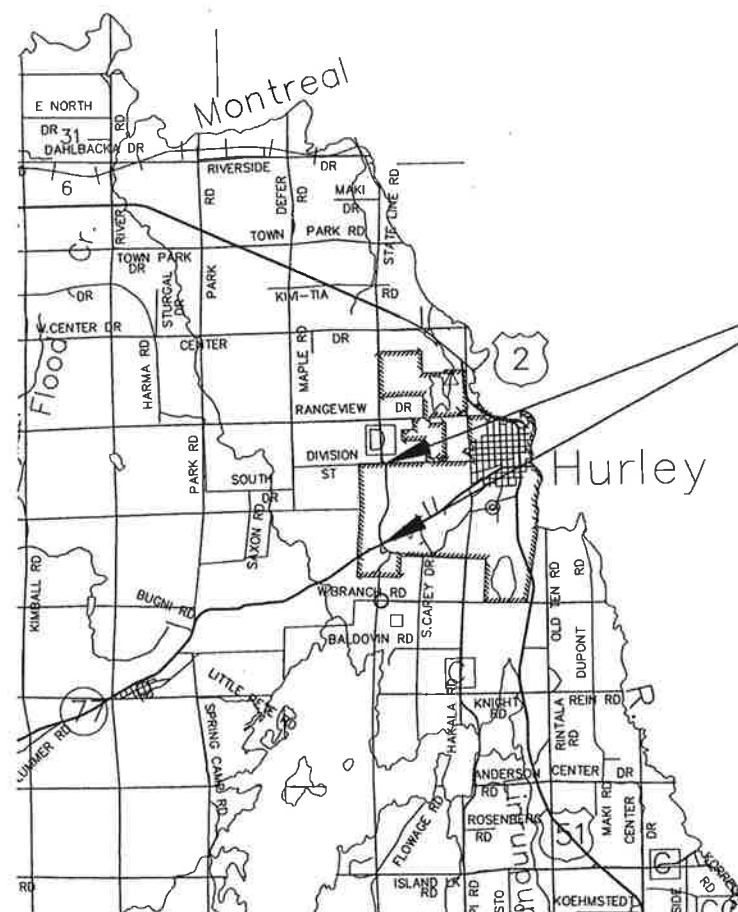
ACCESS RIGHTS	AR	POINT OF INTERSECTION	PI
ACRES	AC	PROPERTY LINE	PL
AHEAD	AH	RECORDED AS (100')	R/I
ALUMINUM	ALUM	REEL / IMAGE	R/L
AND OTHERS	ET AL	REFERENCE LINE	REF
BACK	BK	REMAINING	REM
BLOCK	BLK	RESTRICTIVE DEVELOPMENT EASEMENT	RDE
CENTERLINE	C/L	RIGHT	RT
CERTIFIED SURVEY MAP	CSM	RIGHT OF WAY	R/W
CONCRETE	CONC	SECTION	SEC
COUNTY	CO	SEPTIC VENT	SEPV
COUNTY TRUNK HIGHWAY	CTH	SQUARE FEET	SF
DISTANCE	DIST	STATE TRUNK HIGHWAY	STH
CORNER	COR	STATION	STA
DOCUMENT NUMBER	DOC	TELEPHONE PEDESTAL	TP
EASEMENT	EASE	TEMPORARY LIMITED EASEMENT	TLE
EXISTING	EX	TRANSPORTATION PROJECT PLAT	TPP
GAS VALVE	GV	UNITED STATES HIGHWAY	USH
GRID NORTH	GN	VOLUME	V
HIGHWAY EASEMENT	HE		
IDENTIFICATION	ID		
LAND CONTRACT	LC		
LEFT	LT		
MONUMENT	MON		
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		

CURVE DATA

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE	Δ/DELTA
LENGTH OF CURVE	L
TANGENT	T
DIRECTION AHEAD	OA
DIRECTION BACK	OB

CONVENTIONAL UTILITY SYMBOLS

WATER	---
GAS	---
TELEPHONE	---
OVERHEAD	---
TRANSMISSION LINES	---
ELECTRIC	---
CABLE TELEVISION	---
FIBER OPTIC	---
SANITARY SEWER	---
STORM SEWER	---



R-2-E

R-3-E

LAYOUT
SCALE 0 1 MI.

THE NOTES, CONVENTIONAL SIGNS, AND ABBREVIATIONS ARE ASSOCIATED WITH EACH TRANSPORTATION PROJECT PLAT FOR PROJECT 99930-04-00

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE PROJECT SPECIFIC, BASED ON THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS) IRON COUNTY NAD83 (91) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 3/4" X 24" 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.

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON, THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE. ALL (TLEs) ON THIS PLAT EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

A PERMANENT LIMITED EASEMENT (PLE) IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE, BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHTS TO MAKE OR CONSTRUCT IMPROVEMENTS ON SAID LANDS OR TO FLATTEN THE SLOPES, PROVIDING SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES.

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.

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 WISCONSIN DEPARTMENT OF TRANSPORTATION NC REGION OFFICE IN RHINELANDER, WISCONSIN

PARCEL IDENTIFICATION NUMBERS MAY NOT POINT TO ALL AREAS OF ACQUISITION, AS NOTED ON THE SCHEDULE OF LANDS & INTERESTS REQUIRED.

EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE:

STH 77:
R/W PROJECT NUMBER 9250-09-31
EXISTING SURVEYS OF RECORD

161096

Filing Fee: \$25.00

161096

Pages: 2

IRON COUNTY, WISCONSIN

Daniel J. Solne, Register of Deeds

Recorded on:

August 16, 2016 2:00 PM

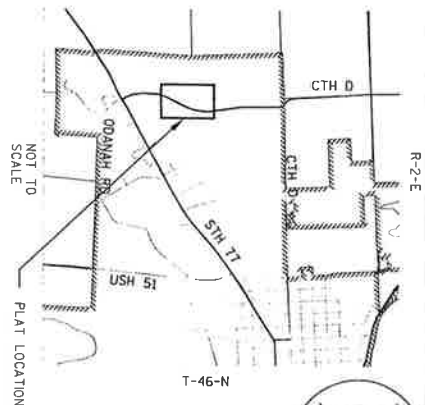
RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 9993-04-00
SHEET 2 OF 2
AMENDMENT NO:

TRANSPORTATION PROJECT
PLAT NO: 9993-04-00 - 4.02

PART OF SW 1/4 OF THE SW 1/4, SECTION 23
AND THE NW 1/4 OF THE NW 1/4, SECTION 26
AND THE NW 1/4 OF THE NE 1/4, SECTION 27
T.46N., R.2E., CITY OF HURLEY, IRON COUNTY, WISCONSIN.
RELOCATION ORDER CTH D EXTENSION, CITY OF HURLEY
STH 77 TO DIVISION STREET WEST, IRON COUNTY
TRANS 233 RESTRICTIONS APPLY

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

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION
62.22, AND 32.05, WISCONSIN STATUTES, THE DEPARTMENT
OF TRANSPORTATION HEREBY ORDERS THAT
1. THAT PORTION OF THE LANDS SHOWN ON THIS PLAT IS LAID OUT
AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR
THE ABOVE PROJECT.
2. 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 62.22 (1) OR
32.05 (20), WISCONSIN STATUTES.
REFER TO THE TITLE SHEET, RECORDED AS SHEET 2 OF 2 IN VOLUME OF
TRANSPORTATION PROJECT PLAT, PAGE 1, AS DOCUMENT NO. 161097 FOR
ADDITIONAL INFORMATION.



FOUND 3/4" IRON ROD
Y = 37033.17
X = 735359.93

161097
Filing Fee: \$25.00
Page: 1



IRON COUNTY, WISCONSIN
Daniel J. Stone, Register of Deeds
Recorded on:
August 16, 2016 2:00 PM
RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 9993-04-00 4.02
AMENDMENT NO. ---

CTH D - 9993-04-00 4.02

CITY

SE-SW

WISCONSIN CENTRAL LIMITED

SW-SW

DOC 64793
V 72-698
P 697-698

UTILITY INTEREST REQUIRED	
UTILITY NUMBER	DIVERSHIP INTEREST REQUIRED
81	XCEL ENERGY ELECTRIC RELEASE OF RIGHTS
64	CITY OF HURLEY - A WISCONSIN MUNICIPAL CORPORATION MERGED INTEREST

Alignment	North (N)	East (E)	Delta	Tangent	Length	Radius	LCB	D
Pt Station	387421.20	735059.28	25° 48' 35"	448.21	995.00	444.43	N 13° 52' 12" E	57.45 30"
34+65.72	386839.494	735823.301	35° 08' 41"	454.88	881.19	1440.00	N 08° 14' 38" E	37.58 44"

SCHEDULE OF LANDS & INTERESTS REQUIRED

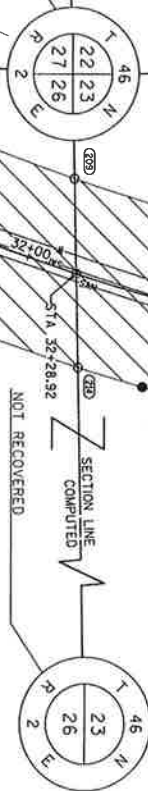
PARCEL NUMBER	OWNER	INTEREST REQUIRED	FEET/AC	ROW NEW ACRES	ROW EXISTING ACRES	TOTAL ACRES	TLE ACRES
3	IRON COUNTY RESOURCE DEVELOPMENT ASSOCIATION INC.	FEET/AC	10.74 AC	0	10.74 AC	0.22 AC	
5	UNION PACIFIC RAILROAD CO.	HE	0.50 AC	0	0.50 AC	0.00	
8	WISCONSIN CENTRAL LIMITED	TLE/HE	0.25 AC	0	0.25 AC	0.07 AC	

CURVE = 207-210
L = 182.26
LCB = 182.26
O = 031°23'59"

CURVE = 212-215
L = 96.55'
LCB = 905.38'
R = 1490.00'
O = 031°23'59"

COMPUTED SECTION LINE

FOUND "Y" IRON BAR
Y = 368332.16
X = 735359.71



CITY OF HURLEY - A WISCONSIN MUNICIPAL CORPORATION

EASEMENT MERGED

DOC 14430-PARCEL 3

V 185-P697-698/DOC 108021-PARCEL 3

V 242-P697-698/DOC 64793-PARCEL 3

V 242-P535/DOC 126051-PARCEL 3

XCEL ENERGY

EASEMENT RELEASE

V 72-P697-698/DOC 64793-PARCEL 3

V 72-P697-698/DOC 64793-PARCEL 3

V 242-P535/DOC 126051-PARCEL 3

EASEMENT RELEASE

V 72-P697-698/DOC 64793-PARCEL 3

V 242-P535/DOC 126051-PARCEL 3

R/W Point	Station	Offset	North (N)	East (E)
201	23+25.00	RL	367518.24	735115.64
202	23+25.00	RL	367535.39	735068.68
203	24+41.67	50.00 LT	367047.76	735117.34
204	27+48.28	50.00 LT	367921.50	735259.47
205	28+41.78	125.00 LT	366938.76	735230.63
206	29+50.68	125.00 LT	366135.58	735279.88
207	30+10.84	50.00 LT	366155.91	735373.75
208	30+19.67	50.00 LT	366163.53	735377.55
209	32+10.92	50.00 LT	366333.82	735448.51
210	38+00.00	50.00 LT	366884.16	735518.25
211	38+00.00	RL	366888.19	735568.09
212	38+00.00	50.00 RT	366902.22	735617.93
213	32+48.25	50.00 RT	366972.24	735664.30
214	32+45.65	50.00 RT	366935.52	735655.34
215	30+10.84	50.00 RT	366110.86	735465.02
216	24+41.67	50.00 RT	367902.71	735206.62
217	23+25.00	50.00 RT	367501.09	735162.61
218	23+25.00	50.00 RT	367501.09	735162.61
219	38+00.00	50.00 LT	366953.15	735151.78
220	38+00.00	50.00 LT	366953.15	735151.78
221	38+00.00	50.00 LT	366953.15	735151.78
222	38+00.00	50.00 LT	366953.15	735151.78
223	38+00.00	50.00 LT	366953.15	735151.78
224	38+00.00	50.00 LT	366953.15	735151.78
225	38+00.00	50.00 LT	366953.15	735151.78
226	38+00.00	50.00 LT	366953.15	735151.78
227	38+00.00	50.00 LT	366953.15	735151.78
228	38+00.00	50.00 LT	366953.15	735151.78
229	38+00.00	50.00 LT	366953.15	735151.78
230	38+00.00	50.00 LT	366953.15	735151.78
231	38+00.00	50.00 LT	366953.15	735151.78
232	38+00.00	50.00 LT	366953.15	735151.78
233	38+00.00	50.00 LT	366953.15	735151.78
234	38+00.00	50.00 LT	366953.15	735151.78
235	38+00.00	50.00 LT	366953.15	735151.78
236	38+00.00	50.00 LT	366953.15	735151.78
237	38+00.00	50.00 LT	366953.15	735151.78
238	38+00.00	50.00 LT	366953.15	735151.78
239	38+00.00	50.00 LT	366953.15	735151.78
240	38+00.00	50.00 LT	366953.15	735151.78
241	38+00.00	50.00 LT	366953.15	735151.78
242	38+00.00	50.00 LT	366953.15	735151.78
243	38+00.00	50.00 LT	366953.15	735151.78
244	38+00.00	50.00 LT	366953.15	735151.78
245	38+00.00	50.00 LT	366953.15	735151.78
246	38+00.00	50.00 LT	366953.15	735151.78
247	38+00.00	50.00 LT	366953.15	735151.78
248	38+00.00	50.00 LT	366953.15	735151.78
249	38+00.00	50.00 LT	366953.15	735151.78
250	38+00.00	50.00 LT	366953.15	735151.78
251	38+00.00	50.00 LT	366953.15	735151.78
252	38+00.00	50.00 LT	366953.15	735151.78
253	38+00.00	50.00 LT	366953.15	735151.78
254	38+00.00	50.00 LT	366953.15	735151.78
255	38+00.00	50.00 LT	366953.15	735151.78
256	38+00.00	50.00 LT	366953.15	735151.78
257	38+00.00	50.00 LT	366953.15	735151.78
258	38+00.00	50.00 LT	366953.15	735151.78
259	38+00.00	50.00 LT	366953.15	735151.78
260	38+00.00	50.00 LT	366953.15	735151.78
261	38+00.00	50.00 LT	366953.15	735151.78
262	38+00.00	50.00 LT	366953.15	735151.78
263	38+00.00	50.00 LT	366953.15	735151.78
264	38+00.00	50.00 LT	366953.15	735151.78
265	38+00.00	50.00 LT	366953.15	735151.78
266	38+00.00	50.00 LT	366953.15	735151.78
267	38+00.00	50.00 LT	366953.15	735151.78
268	38+00.00	50.00 LT	366953.15	735151.78
269	38+00.00	50.00 LT	366953.15	735151.78
270	38+00.00	50.00 LT	366953.15	735151.78
271	38+00.00	50.00 LT	366953.15	735151.78
272	38+00.00	50.00 LT	366953.15	735151.78
273	38+00.00	50.00 LT	366953.15	735151.78
274	38+00.00	50.00 LT	366953.15	735151.78
275	38+00.00	50.00 LT	366953.15	735151.78
276	38+00.00	50.00 LT	366953.15	735151.78
277	38+00.00	50.00 LT	366953.15	735151.78
278	38+00.00	50.00 LT	366953.15	735151.78
279	38+00.00	50.00 LT	366953.15	735151.78
280	38+00.00	50.00 LT	366953.15	735151.78
281	38+00.00	50.00 LT	366953.15	735151.78
282	38+00.00	50.00 LT	366953.15	735151.78
283	38+00.00	50.00 LT	366953.15	735151.78
284	38+00.00	50.00 LT	366953.15	735151.78
285	38+00.00	50.00 LT	366953.15	735151.78
286	38+00.00	50.00 LT	366953.15	735151.78
287	38+00.00	50.00 LT	366953.15	735151.78
288	38+00.00	50.00 LT	366953.15	735151.78
289	38+00.00	50.00 LT	366953.15	735151.78
290	38+00.00	50.00 LT	366953.15	735151.78
291	38+00.00	50.00 LT	366953.15	735151.78
292	38+00.00	50.00 LT	366953.15	735151.78
293	38+00.00	50.00 LT	366953.15	735151.78
294	38+00.00	50.00 LT	366953.15	735151.78
295	38+00.00	50.00 LT	366953.15	735151.78
296	38+00.00	50.00 LT	366953.15	735151.78
297	38+00.00	50.00 LT	366953.15	735151.78
298	38+00.00	50.00 LT	366953.15	735151.78
299	38+00.00	50.00 LT	366953.15	735151.78
300	38+00.00	50.00 LT	366953.15	735151.78

Curve Table	Course	LCB	Length	Radius	Delta
207-208	N69° 55' 37" W	8.52'	1590.00'	0721.04'	
208-209	N27° 37' 08" E	184.45'	184.45'	184.45'	77° 36' 35"
209-HE3	N12° 57' 53" E	283.31'	283.31'	1190.00'	11° 41' 53"
HE3-HE6	N44° 50' 33" E	110.27'	110.27'	1390.00'	4° 32' 47"
HE6-HE10	S01° 01' 40" W	174.41'	174.41'	1390.00'	7° 11' 39"
HE10-HE1	S01° 48' 32" E	146.53'	146.53'	1490.00'	5° 35' 54"
HE1-HE3	S03° 03' 54" W	108.78'	108.78'	1490.00'	4° 10' 55"
HE3-HE10	S10° 33' 40" W	280.68'	280.68'	1490.00'	10° 46' 33"
HE10-HE1	S10° 33' 40" W	38.14'	38.14'	1490.00'	17° 21' 59"
HE1-HE3	S22° 06' 13" W	242.85'	242.85'	1490.00'	9° 20' 34"

Line Table	Course	Bearing	Distance
202-201	N69° 55' 37" W	50.00'	
HE1-HE4	N76° 19' 38" E	131.41'	
HE2-HE3	N76° 19' 38" E	131.41'	
HE3-HE6	N89° 55' 03" E	111.45'	
HE6-HE1	N89° 55' 03" E	107.73'	
HE1-HE3	N89° 55' 03" E	50.00'	
HE3-HE10	N89° 55' 03" E	50.00'	
HE10-HE1	N89° 55' 03" E	50.00'	
HE1-HE3	N89° 55' 03" E	50.00'	

CURVE = 202-203
L = 102.45'
LCB = 102.45'
R = 1045.00'
O = 006° 43' 05"

CURVE = 217-218
L = 102.45'
LCB = 102.45'
R = 1045.00'
O = 006° 43' 05"

FOUND "Y" IRON BAR IN CORNER
Y = 365653.20
X = 735197.35

**MSA**

TRANSPORTATION - MUNICIPAL
DEVELOPMENT - ENVIRONMENTAL
1835 N. Stevens St. Rhinelander, WI 54901
715-882-3244 1-800-344-7854 Fax: 715-882-4118
Web: 6150 Main Street, Suite 100, Rhinelander, WI 54901

SIGNATURE: *Jeffrey L. DeMuth* 8-15-16
PRINT NAME: JEFFREY L. DEMUTH
REGISTRATION NUMBER: S-2656
THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR
THE CITY OF HURLEY

SIGNATURE: *Joseph P. Mair*
PRINT NAME: JOSEPH MAIR
DATE

SCALE, FEET
0 50 100

FILE NAME : P:\310S\318\00318000\CADD\C3D\RW\PRW.DWG
APPRAISAL PLAT DATE :

PLOT DATE :

PLOT DATE : 8/10/2016 3:13 PM

PLOT BY : Jeff DeMuth

PLOT NAME : PLOT SCALE : *****

TRANSPORTATION PROJECT
PLAT NO: 9993-04-00 - 4.03

PART OF NW 1/4 OF THE SW 1/4, SECTION 23
AND THE SW 1/4 OF THE SW 1/4, SECTION 23
T.66N.,R.22E., CITY OF HURLEY, IRON COUNTY,
WISCONSIN.
RELOCATION ORDER CTH D EXTENSION, CITY OF HURLEY
SIT 77 TO DIVISION STREET WEST, IRON COUNTY
TRANS 233 RESTRICTIONS APPLY

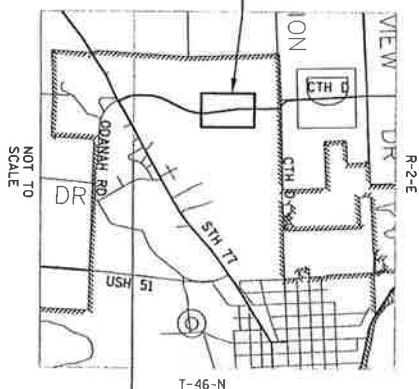
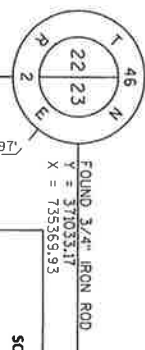
TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE CITY OF HURLEY DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT HIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 62.22 AND 32.05, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:

1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAN IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.

2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAN 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 62.22 (1) OR 32.05 (2c), WISCONSIN STATUTES.

REFER TO THE TITLE SHEET, RECORDED AS SHEET 2 OF 2 IN VOLUME OF
TRANSPORTATION PROJECT PLAT, PAGE AS DOCUMENT NO. 161046 FOR
ADDITIONAL INFORMATION.



161098

Filing Fee: \$25.00

IRON COUNTY, WISCONSIN

Daniel J. Sahné, Register of Deeds

Recorded on:

August 16, 2016 2:00 PM

161098

PROJECT NUMBER 9993-04-00 4.03
AMENDMENT NO: _____

SCHEDULE OF LANDS & INTERESTS REQUIRED				
PARCEL NUMBER	OWNERSHIP	NUMBER		
		INTEREST REQUIRED	R/W NEW ACSF	R/W TOTAL ACSF
3	IRON COUNTY RESOURCE DEVELOPMENT ASSOCIATION INC.	FEE/TITLE	0	10.74 AC
				0.22 AC

Row	Point	Stimulus	Rel.	Norm (%)	Transf. (%)
301	39:00:00	0.00	1.1	388.88	1.9
302	39:00:00	50.00	1.1	388.88	1.9
303	39:00:00	50.00	1.1	388.88	1.9
304	39:00:00	50.00	1.1	388.88	1.9
305	39:00:00	50.00	1.1	388.88	1.9
306	39:00:00	50.00	1.1	388.88	1.9
307	39:00:00	50.00	1.1	388.88	1.9
308	39:00:00	50.00	1.1	388.88	1.9
309	39:00:00	50.00	1.1	388.88	1.9
310	39:00:00	50.00	1.1	388.88	1.9
311	39:00:00	50.00	1.1	388.88	1.9
312	39:00:00	50.00	1.1	388.88	1.9
313	39:00:00	50.00	1.1	388.88	1.9
314	39:00:00	50.00	1.1	388.88	1.9

Course	Bearing	Distance
301-302	S85° 22' 31"W	50.00'
307-308	N89° 34' 35"E	50.00'
308-309	N89° 34' 35"E	50.00'
314-301	S85° 22' 31"W	50.00'

Alignment	North (°)	East (°)	Delta	Tangent	Length	Radius	LCH	LCS	D
34+65.12	368539.484	735623.301	35.03° 41'	454.68	881.19	1440.00	867.50	N 09.14° 39' E	3° 56' 44"
46+59.73	369782.949	735442.196	07° 51' 47"	68.38	139.55	995.00	136.44	N 04° 21' 16" W	5° 45' 30"

UTILITY INTEREST REQUIRED		
UTILITY NUMBER	OWNERSHIP	INTEREST REQUIRED
31	XCEL ENERGY-ELECTRIC	RELEASE OF RIGHTS
64	CITY OF HURLEY - A WISCONSIN MUNICIPAL CORPORATION	MERGED INTEREST

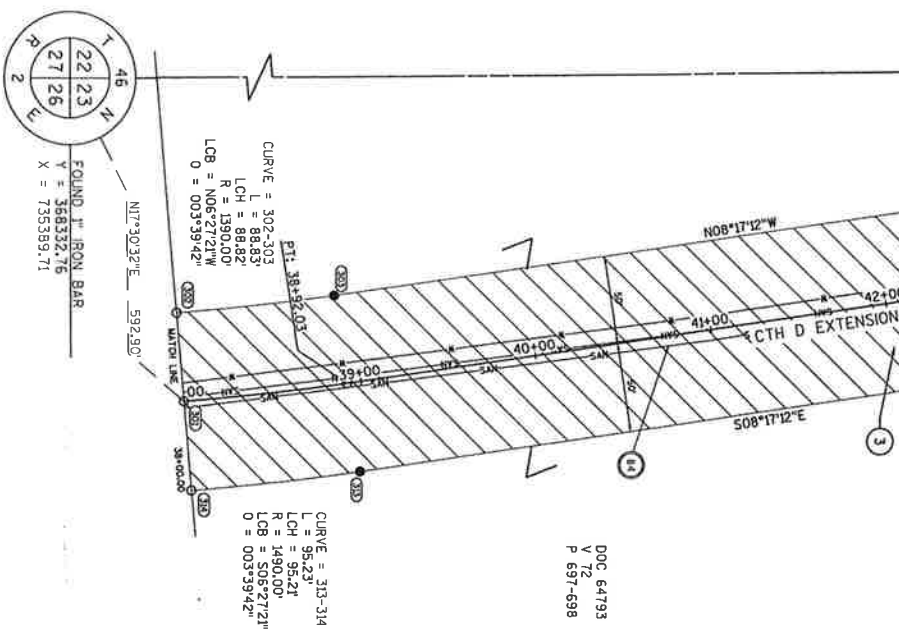
CITY OF HULEY - A WISCONSIN
MUNICIPAL CORPORATION
EASEMENT MERGED
1554177-PARCEL 3
EASEMENT MERGED
660-00C 63935-PARCEL 3
6597-699-00C 64793-PARCEL 3
EASEMENT RELEASE
64793-PARCEL 3
EASEMENT RELEASE
64793-PARCEL 3
660-00C 63935-PARCEL 3

21

00C 137086

MS-MS

HURLEY



MSA

**TRANSPORTATION • MUNICIPAL
DEVELOPMENT • ENVIRONMENTAL**
335 N. Stevens St. Rhineclander, WI 54501
662-3224 1-800-844-7854 Fax: 715-362-4116
Web Address: www.mta-ps.com
© MCA Professional Services, Inc.

I, JEFFREY L. DEMUTH PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE CITY OF HURLEY, I HAVE MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

SIGNATURE: [Signature] 8-16-16
PRINT NAME: JEFFREY L DEMUTH DATE
REGISTRATION NUMBER: S-2656

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR
THE CITY OF HURLEY

SIGNATURE: Joseph A. Pinardi 8-16-16
PRINT NAME: JOSEPH PINARDI DATE

TRANSPORTATION PROJECT
PLAT NO: 9993-04-00 - 4.04PART OF NE 1/4 OF THE SE 1/4, SECTION 22 AND THE NW 1/4 OF THE SW 1/4,
SECTION 23, T.46N., R.2E., CITY OF HURLEY, IRON COUNTY, WISCONSIN.

RELOCATION ORDER CTH D EXTENSION, CITY OF HURLEY

STH 77 TO DIVISION STREET WEST, IRON COUNTY

TRANS 233 RESTRICTIONS APPLY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY
DESIGNATED ABOVE, THE CITY OF HURLEY DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS
OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 62.22 AND 32.05, WISCONSIN STATUTES, THE DEPARTMENT
OF TRANSPORTATION HEREBY ORDERS THAT:

L. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAY OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR

THE ABOVE PROJECT.

2. THAT THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT THE CITY OF HURLEY, IRON COUNTY, WISCONSIN, PURSUANT TO THE

PROVISIONS OF SECTION 62.22 (1) OR 32.05 (2), WISCONSIN STATUTES,

REFER TO THE TITLE SHEET, RECORDED AS SHEET 2 OF 2 IN
VOLUME OF TRANSPORTATION PROJECT PLAT, PAGE AS
DOCUMENT NO. 161099 FOR ADDITIONAL INFORMATION.

PLAT LOCATION

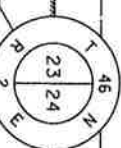
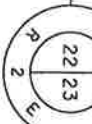
# 161099
Filing Fee: \$23.00
Page: 1IRON COUNTY, WISCONSIN
Daniel J. Seale, Register of Deeds
Recorded on:
August 15, 2016 2:00 PMRESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 9993-04-00, 4.04
AMENDMENT NO. _____

KIMBALL

TOWNSHIP COMPLETED QUARTER LINE

DIVISION STREET WEST

NOT RECOVERED

FOUND 3/4" IRON ROD
Y = 371033.17
X = 735369.93SCALE, FEET
0 50 100

SCHEDULE OF LANDS & INTERESTS REQUIRED		OWNERSHIP		INTEREST REQUIRED		INTEREST		R/W		TOTAL		TLE	
PARCEL NUMBER	OWNERSHIP	INTEREST REQUIRED	FEET/FT	HE	FE	ACSF	ACSF	ACSF	ACSF	ACSF	ACSF	ACSF	ACSF
3	IRON COUNTY RESOURCE DEVELOPMENT ASSOCIATION INC.	REQUIRED	10.74 AC	0	10.74 AC	0.22 AC	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	UNION PACIFIC RAILROAD CO.	HE	0.23 AC	0	0.23 AC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

UTILITY INTEREST REQUIRED	UTILITY NUMBER	OWNERSHIP	INTEREST REQUIRED
64	CITY OF HURLEY - A WISCONSIN MUNICIPAL CORPORATION	MERGED INTEREST	
65	NORTHERN NATURAL GAS COMPANY	RELEASE OF RIGHTS	

R/W Point	Station	Offset	North (N)	East (E)
401	49+00	RL	368889.44	735441.41
402	49+00	50.00 LT	368889.07	735391.41
403	59+14.51	48.01 LT	371000.21	735383.20
404	59+10.82	RL	371000.21	735432.33
405	59+07.72	50.00 RT	371000.20	735463.20
406	49+00	50.00 RT	368889.81	735481.41
407	55+03.58	50.00 LT	370582.64	735396.21
408	59+07.11	50.00 LT	370586.16	735383.44
409	59+03.58	50.00 RT	370570.13	735463.44
410	54+76.82	50.00 RT	370586.81	735468.41

Line Table	Course	Bearing	Distance
401-402	S89° 34' 35" W	50.00'	
402-403	S78° 26' 17" E	103.82'	
403-404	S78° 26' 17" E	103.82'	
404-405	S89° 34' 35" W	50.00'	

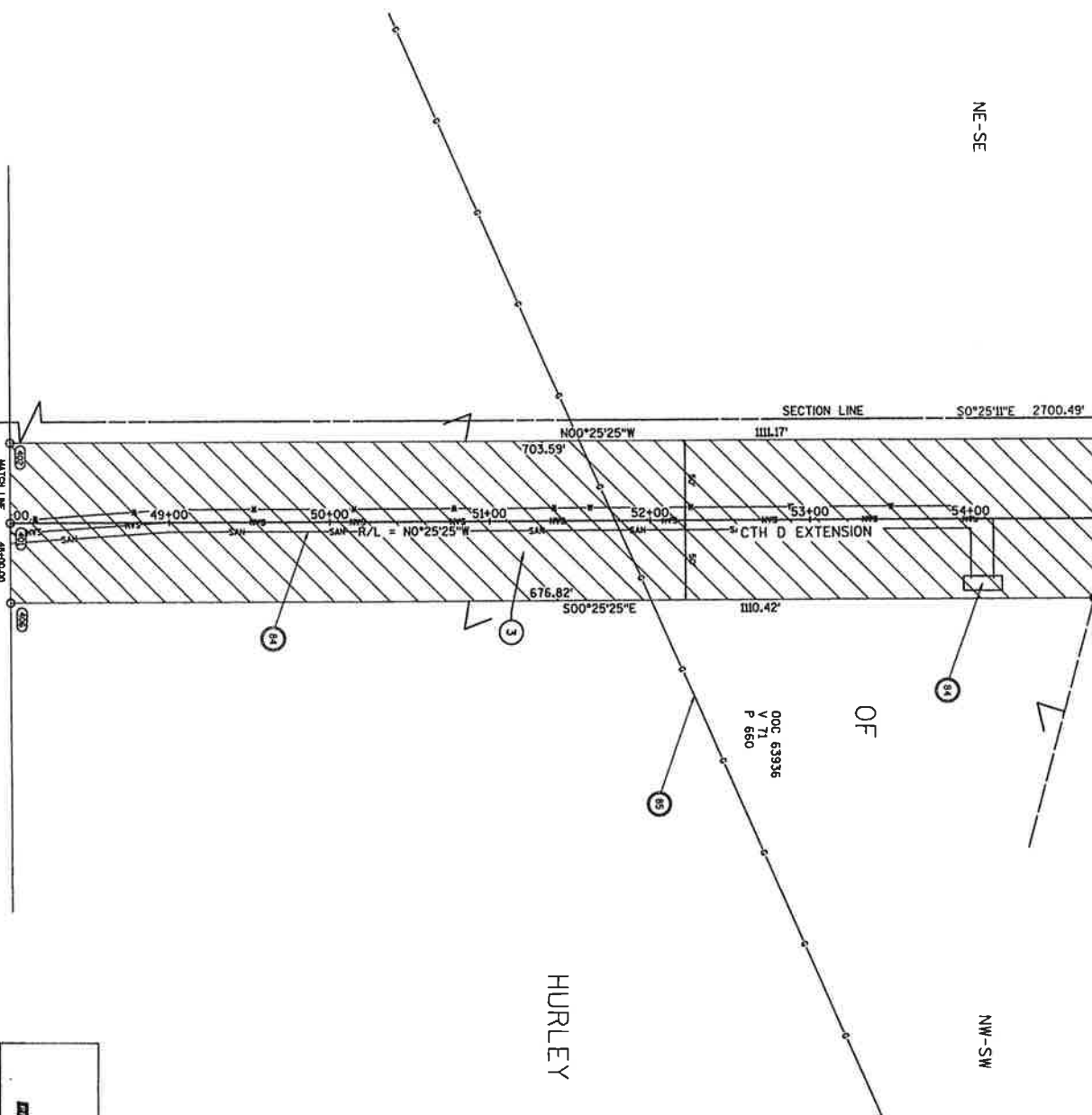
UNION PACIFIC RAILROAD CO.

NE-SE

NW-SW

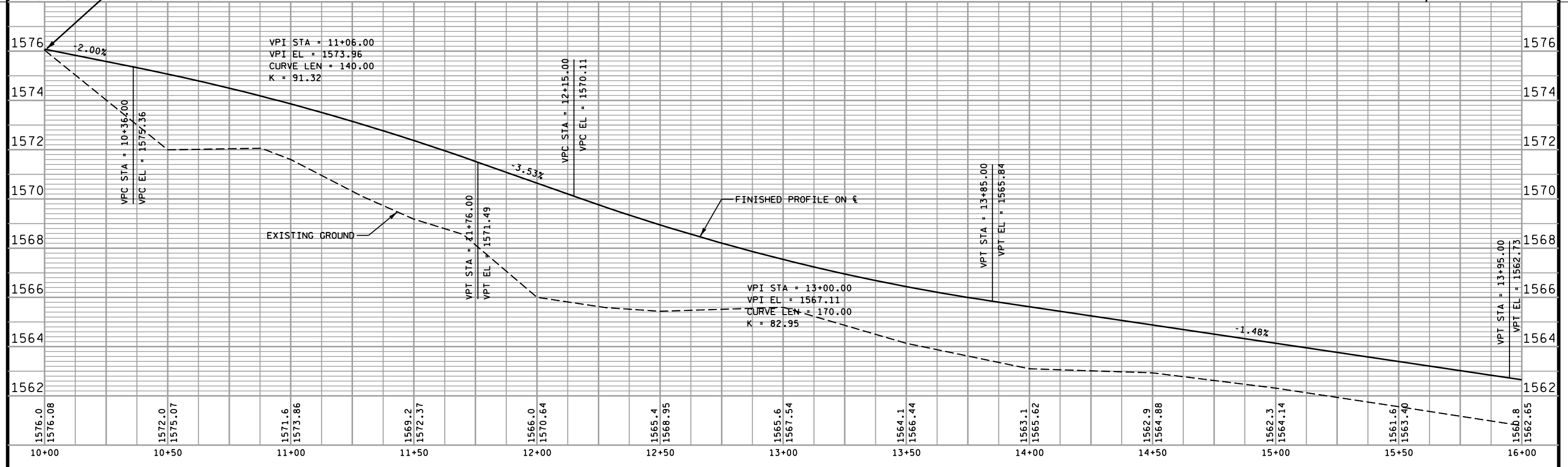
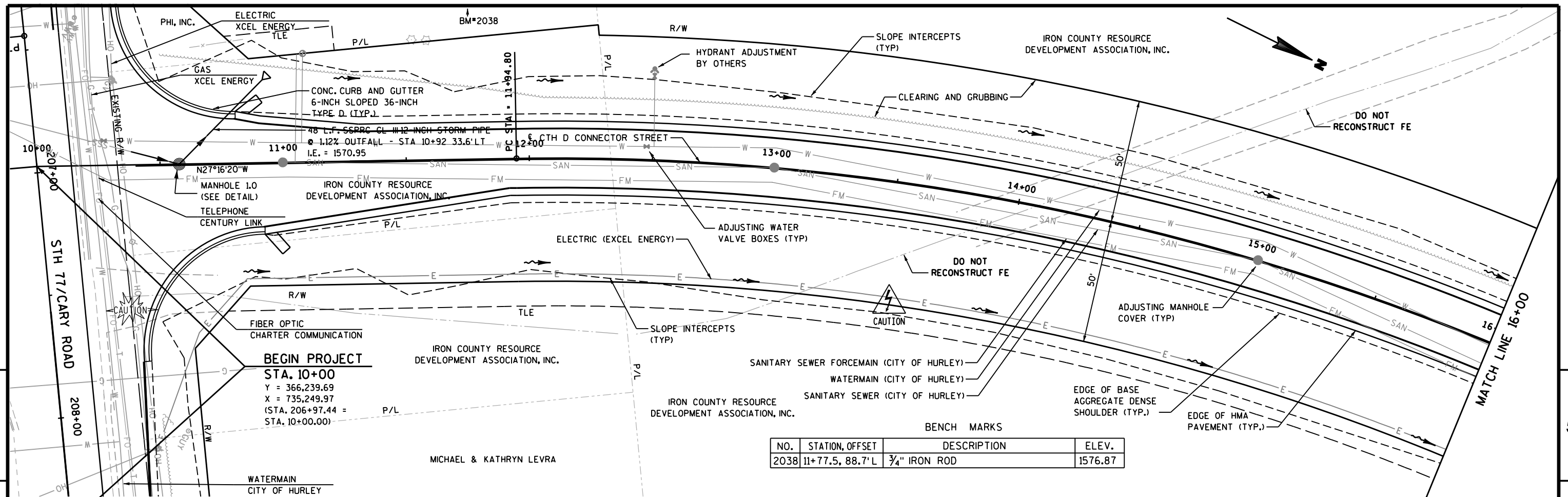
OF

HURLEY



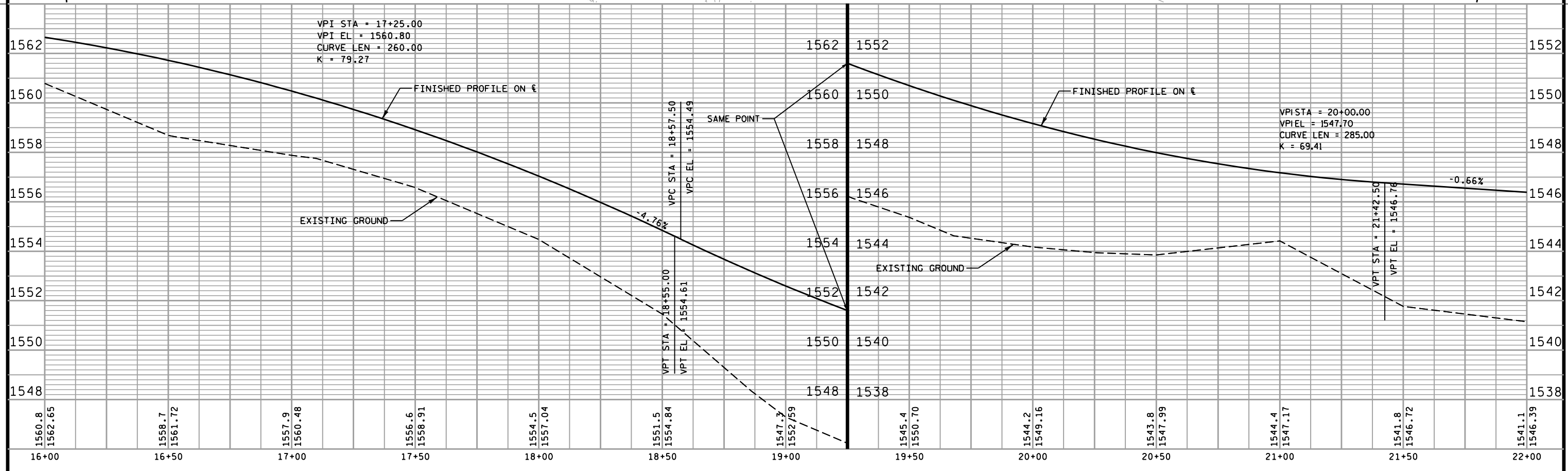
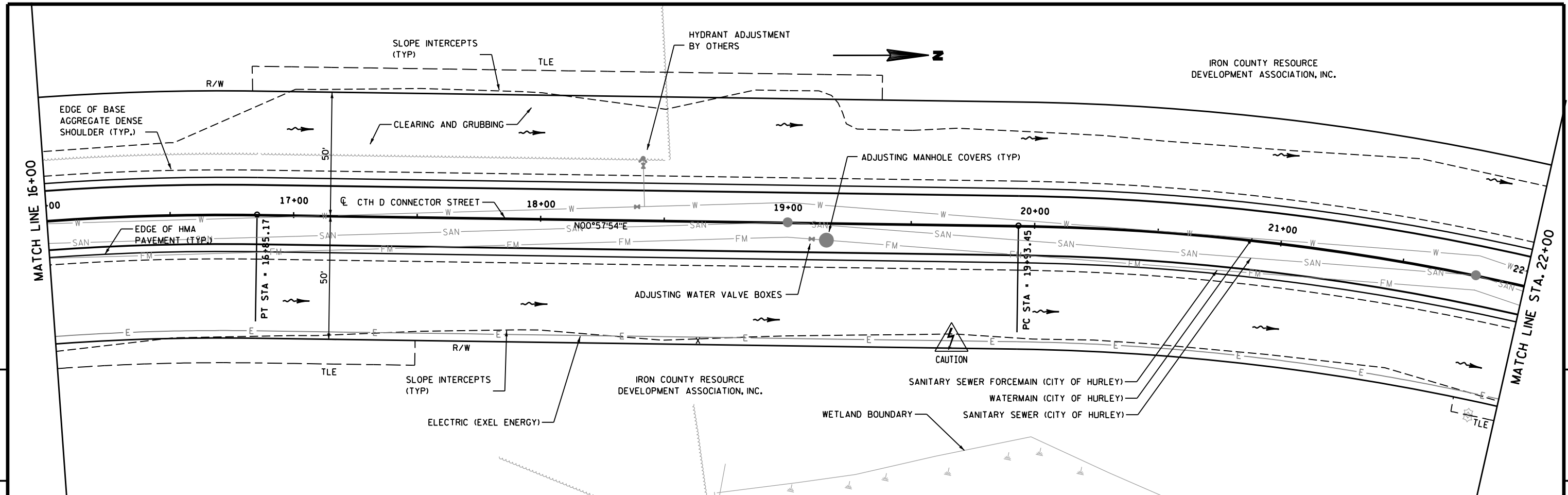
MSA

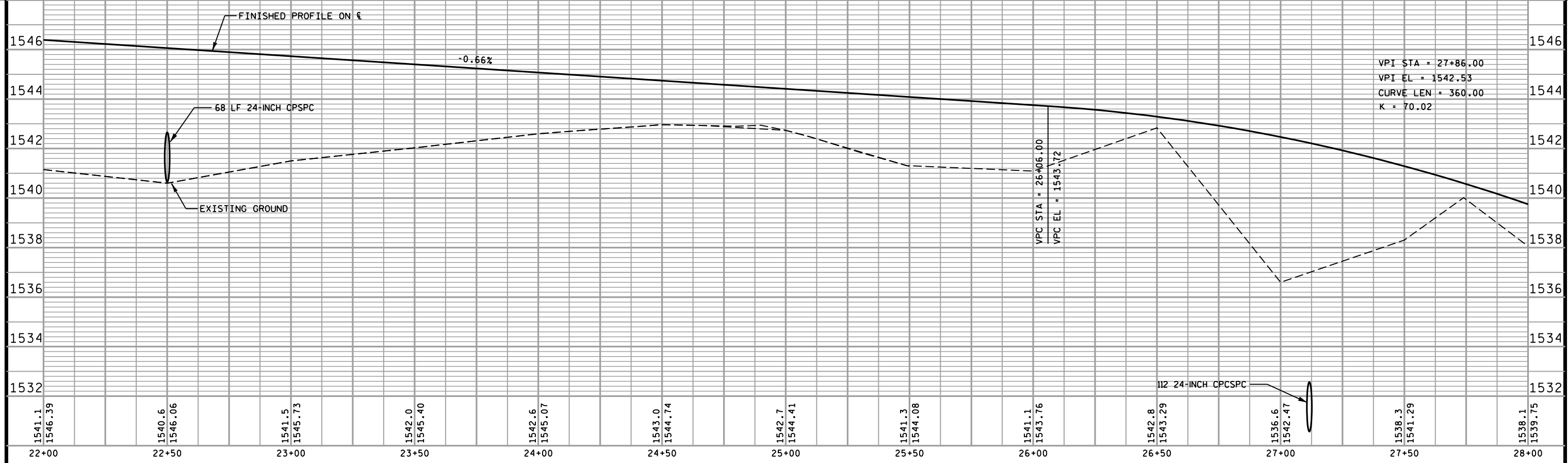
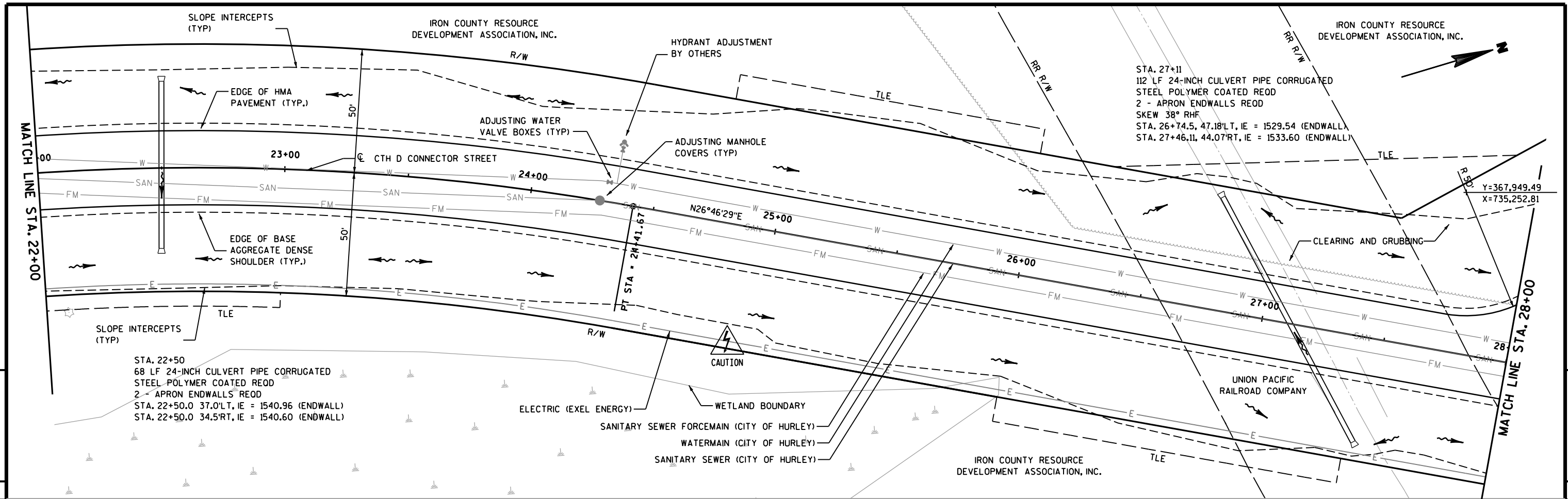
TRANSPORTATION - MUNICIPAL
DIVISIONAL ENGINEER
1835 N. Stevens St., Shawano, WI 54981
715-382-3244 1-800-444-7854 Fax: 715-382-4116
Web Address: www.msa-wi.com
© 2016 MSA Engineering, Inc.I, JEFFERY L. DEMUTH, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN
FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 64.05 OF THE WISCONSIN
STATUTES AND UNDER THE DIRECTION OF THE CITY OF HURLEY, I HAVE MAPPED
THIS TRANSPORTATION PROJECT PLAT AND SURELY IT CORRECTLY REPRESENTS
ALL EXTERIOR BOUNDARIES OF THE SURVEYED LANDS.SIGNATURE: JEFFERY L. DEMUTH
PRINT NAME: JEFFERY L. DEMUTH
REGISTRATION NUMBER: S-2656
DATE: 8-16-16THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR
THE CITY OF HURLEY



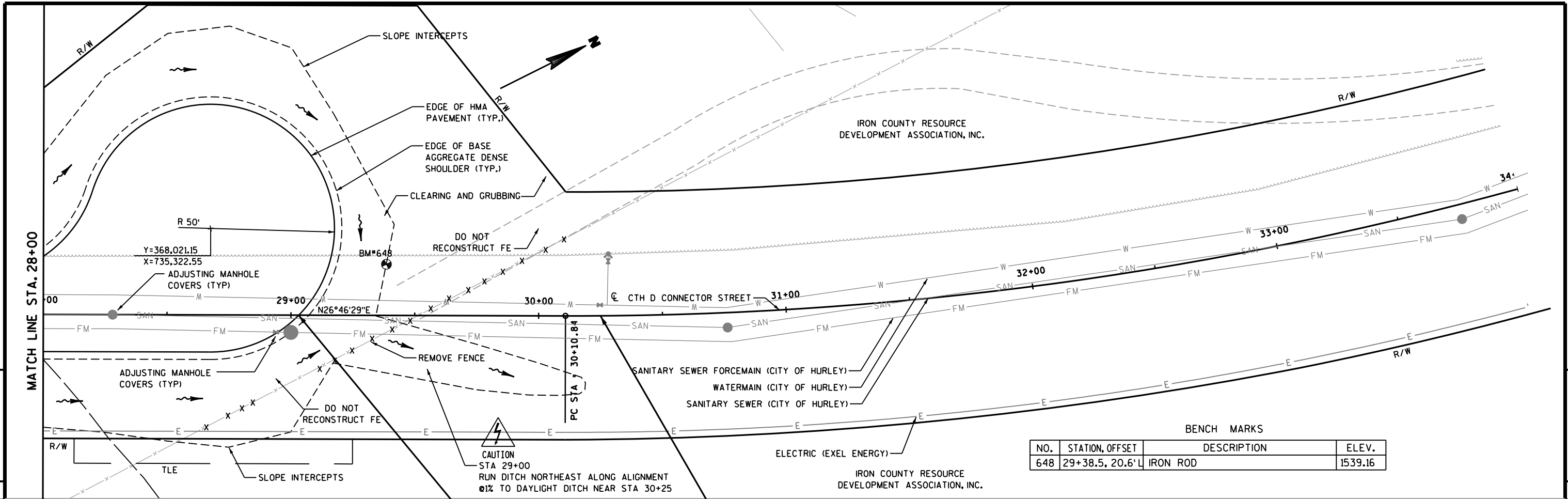
PROJECT NO: 9993-04-70	HWY: CTH D	COUNTY: IRON	PLAN AND PROFILE CTH D	SHEET	E
------------------------	------------	--------------	------------------------	-------	---

FILE NAME : P:\310s\318\00318000\cadd\WDT\Planshts\2016\Phase1\00318000 phase1 PLAN 1.dgn PLOT DATE : 10/4/2016 PLOT BY : crooyakkers PLOT NAME : PLOT SCALE : 1:40

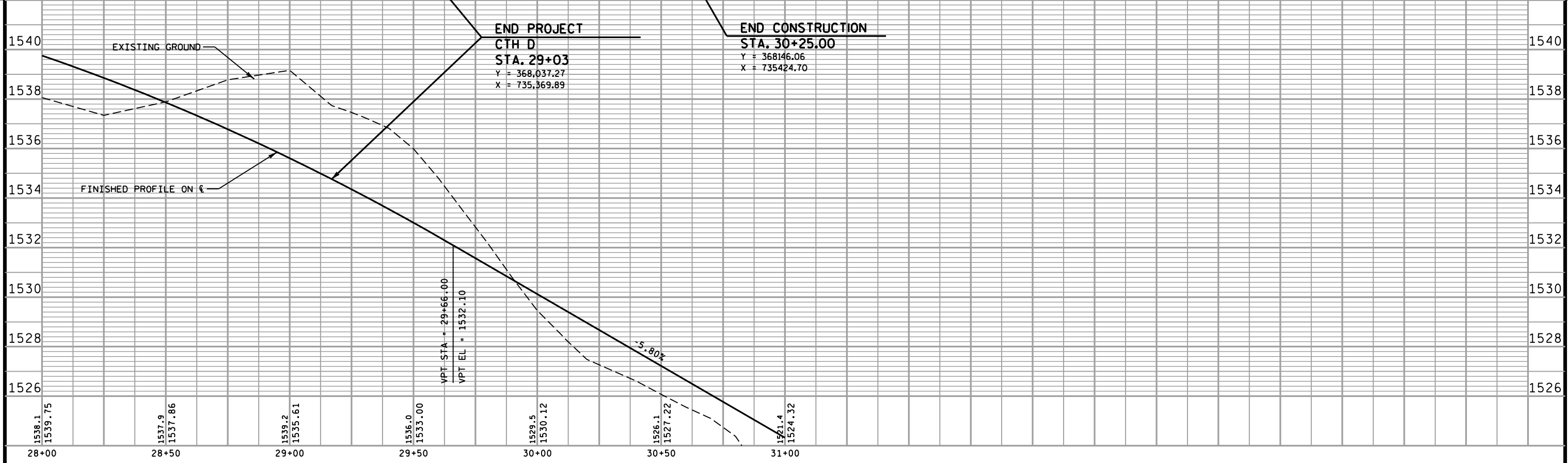




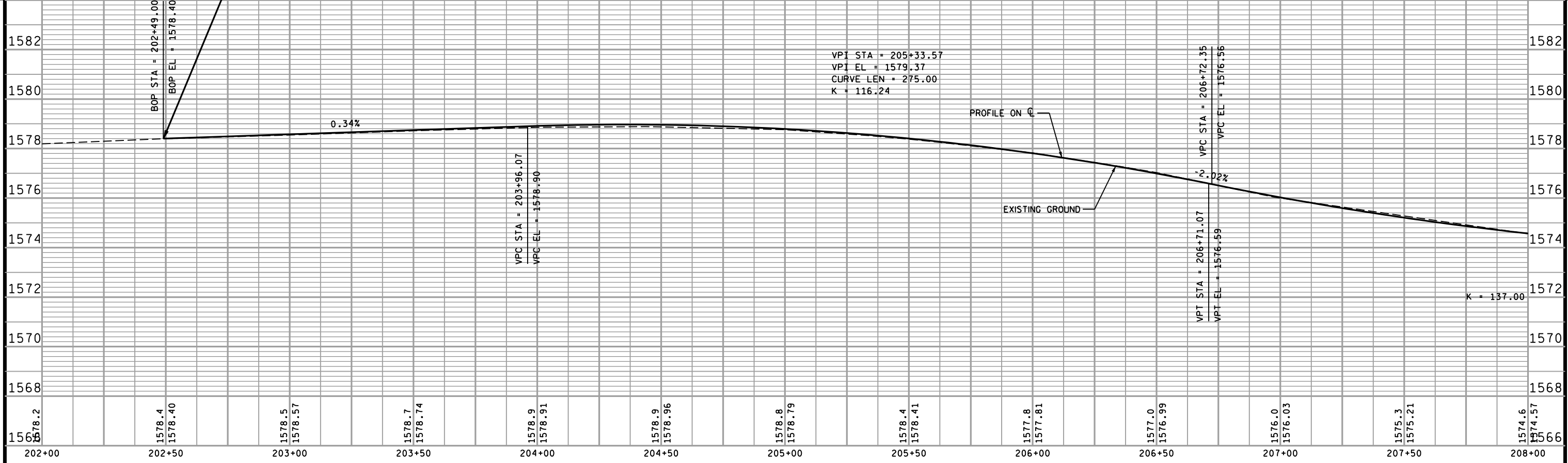
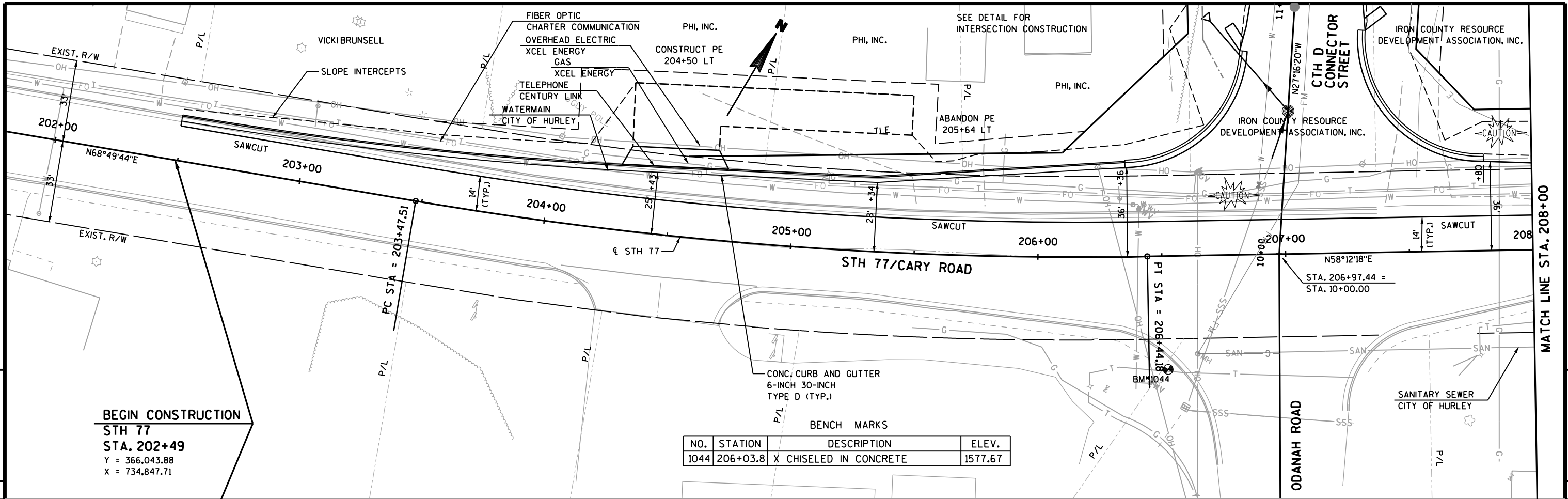
PROJECT NO: 9993-04-70	HWY: CTH D	COUNTY: IRON	PLAN AND PROFILE CTH D	SHEET	E
------------------------	------------	--------------	------------------------	-------	---



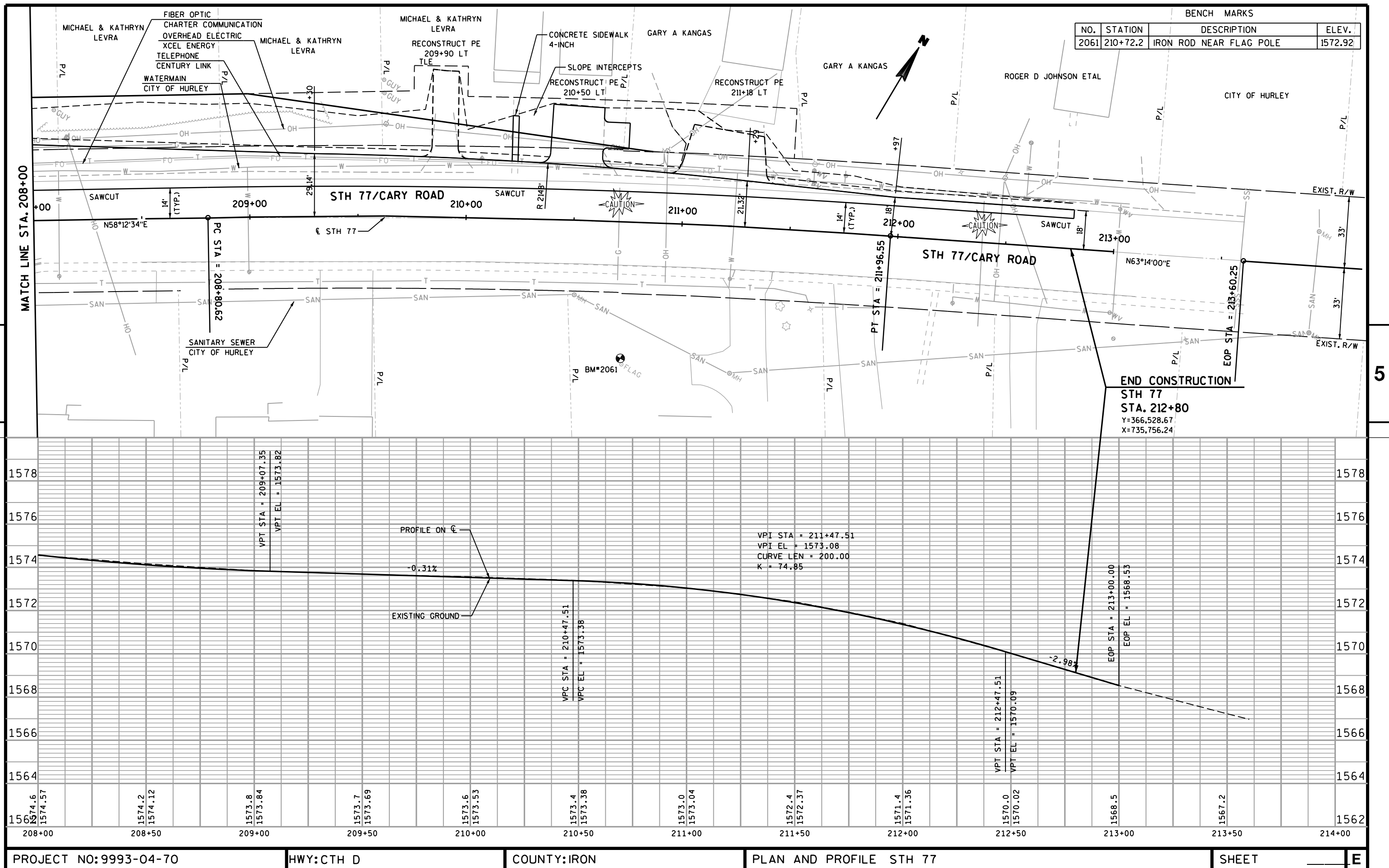
BENCH MARKS			
NO.	STATION, OFFSET	DESCRIPTION	ELEV.
648	29+38.5, 20.6'L	IRON ROD	1539.16



PROJECT NO: 9993-04-70	HWY: CTH D	COUNTY: IRON	PLAN AND PROFILE CTH D	SHEET	E
------------------------	------------	--------------	------------------------	-------	---

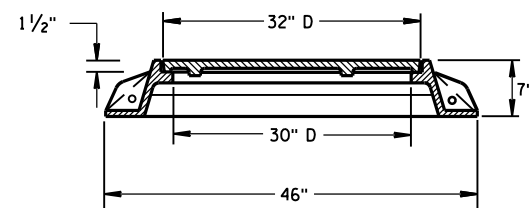
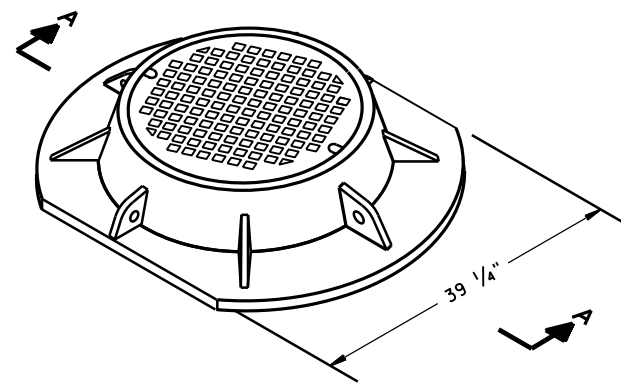


PROJECT NO: 9993-04-70	HWY: CTH D	COUNTY: IRON	PLAN AND PROFILE STH 77	SHEET	5
------------------------	------------	--------------	-------------------------	-------	---

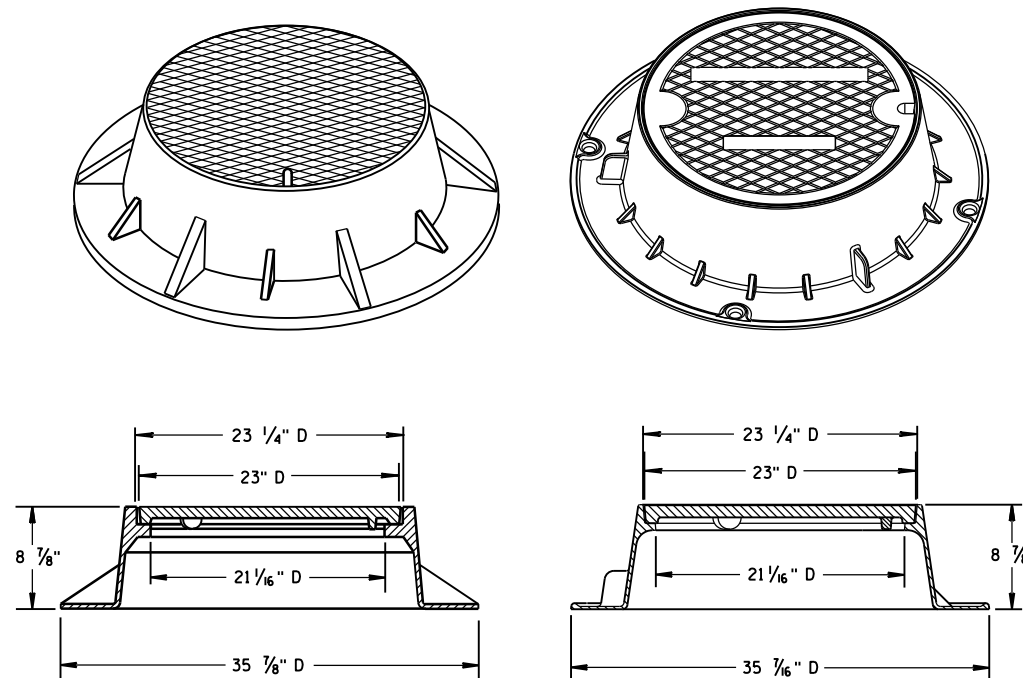


Standard Detail Drawing List

08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-01	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08D01-19	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E14-01	TRACKING PAD
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C05-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-12B	PAVEMENT MARKING WORDS
15C07-12C	PAVEMENT MARKING ARROWS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C08-16E	PAVEMENT MARKING (LEFT TURN LANE)
15C11-06	FLEXIBLE TUBULAR MARKER POST
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C19-04A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C26-02	END-OF-ROADWAY SIGNING
15C33-02	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D28-03	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D29-04	TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD
16A01-06	LANDMARK REFERENCE MONUMENTS AND COVERS

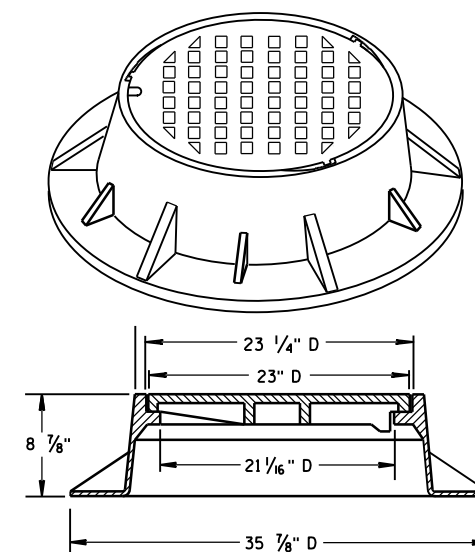
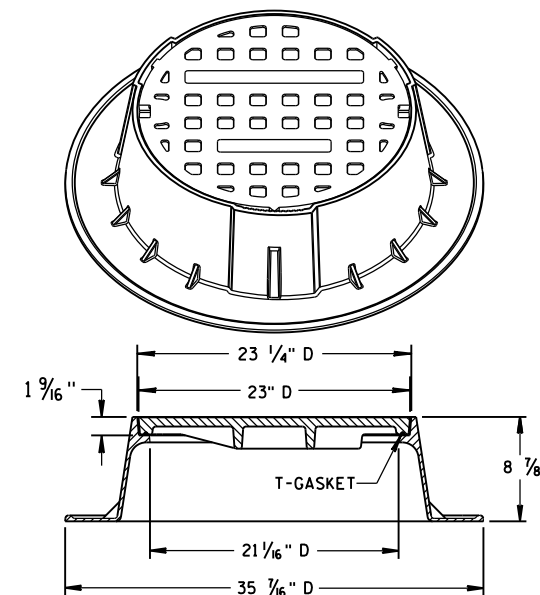


SECTION A-A
TYPE "K"



TYPE "J"

NOTE: EITHER CASTING IS ACCEPTABLE

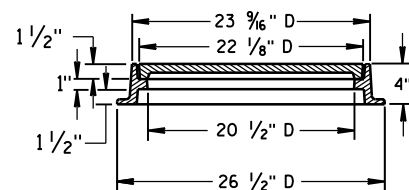
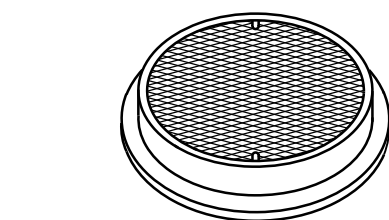


TYPE "J" SPECIAL

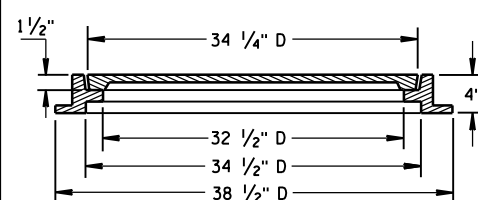
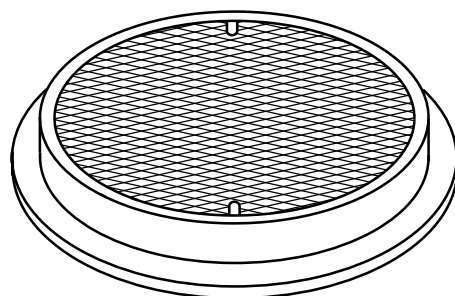
TYPE "B" NON-ROCKING SELF-SEAL LID

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

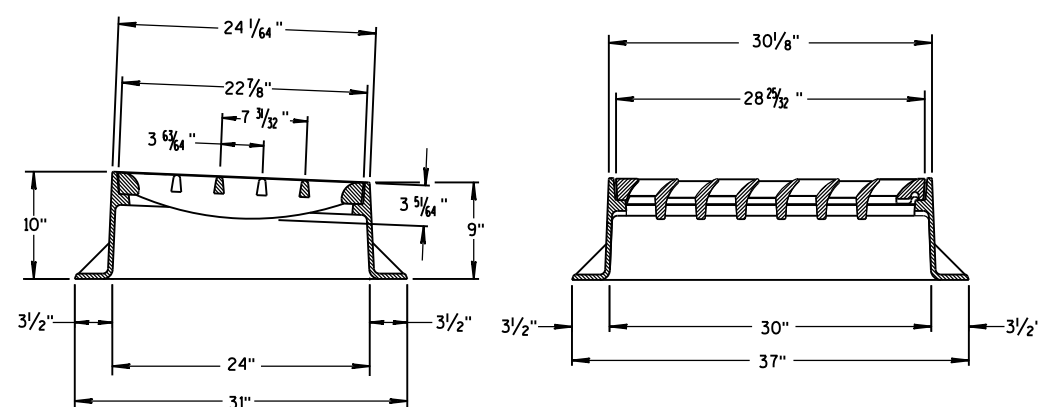
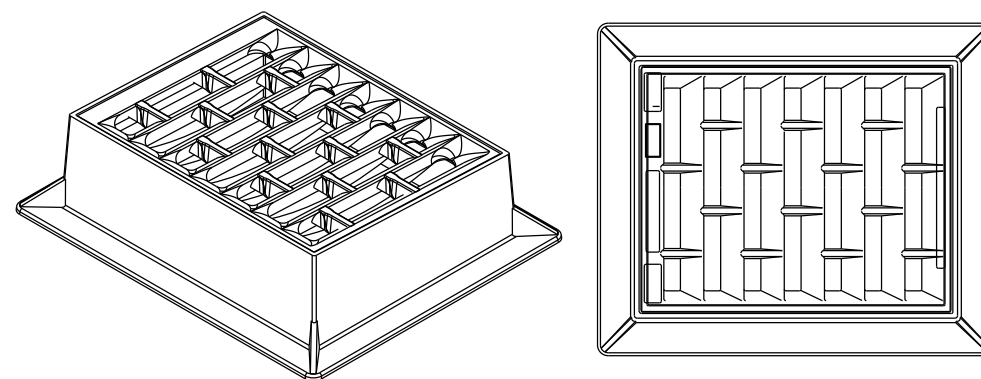
NOTE: EITHER CASTING IS ACCEPTABLE



TYPE "L"



TYPE "M"



INLET COVER TYPE "BW"

GENERAL NOTES

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

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

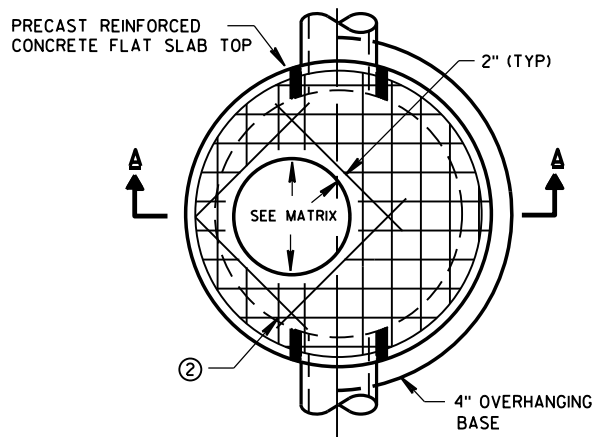
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

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

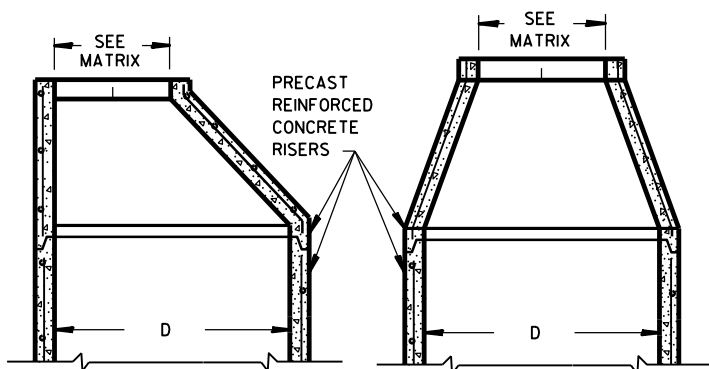
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

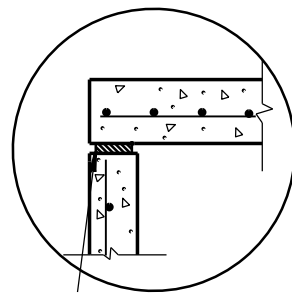


PLAN VIEW CIRCULAR OPENING

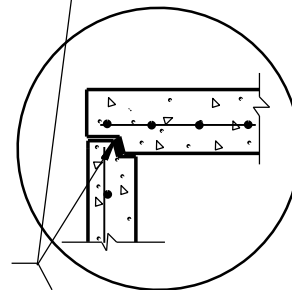


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

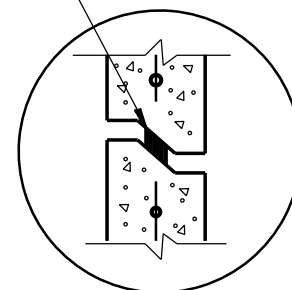
OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



TOP WITH PLAIN END JOINT



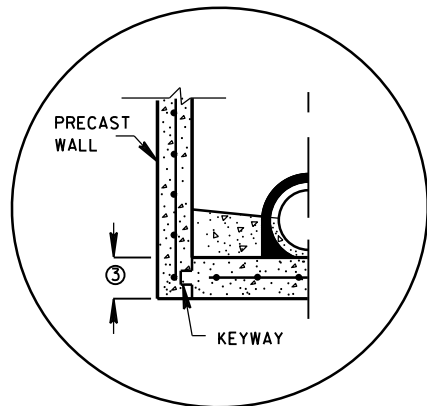
TOP WITH TONGUE AND GROOVE JOINT



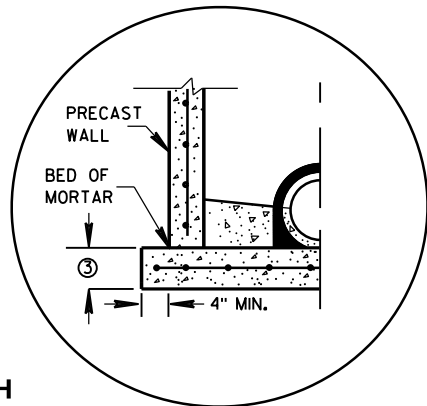
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

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

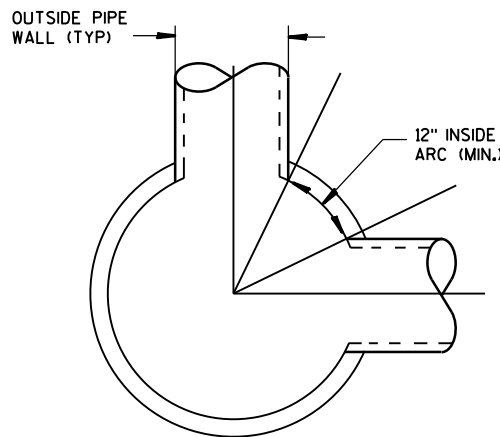


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS. UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

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

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

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

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

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

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

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2" 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 DIAMETER.

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

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

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

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

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

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

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

MANHOLE COVER OPENING MATRIX

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

PIPE MATRIX

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

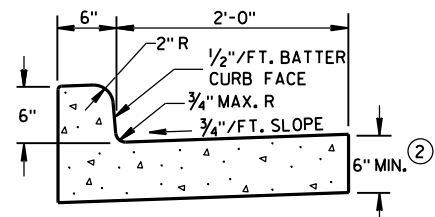
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

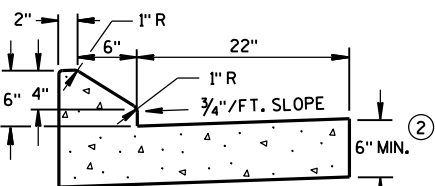
APPROVED
6/5/2012 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA ENGINEER

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

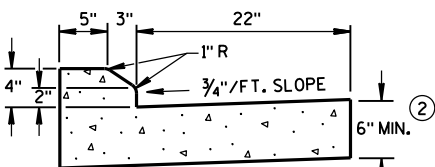
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER



TYPES A & D ①

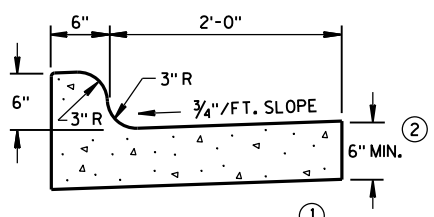


6" SLOPED CURB TYPES G & J ①



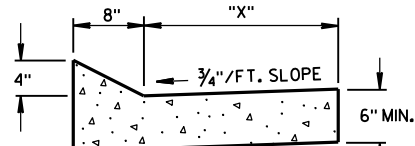
4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"



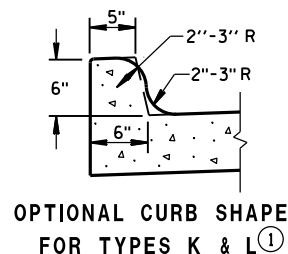
TYPES K & L ①

CONCRETE CURB & GUTTER 30"

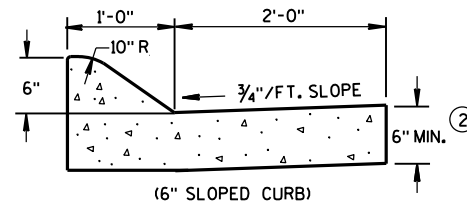


TYPES TBT & TBTT ①
CONCRETE CURB & GUTTER

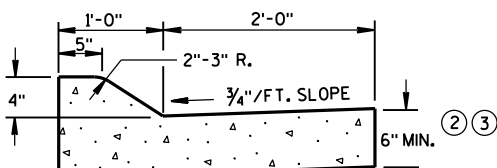
TBT & TBTT	"X"
30"	22"
36"	28"



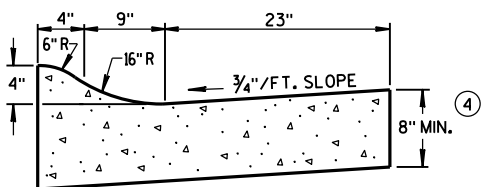
OPTIONAL CURB SHAPE
FOR TYPES K & L ①



(6" SLOPED CURB)



(4" SLOPED CURB)
TYPES A & D ①



4" SLOPED CURB TYPES R & T ① ⑤
CONCRETE CURB & GUTTER 36"

GENERAL NOTES

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

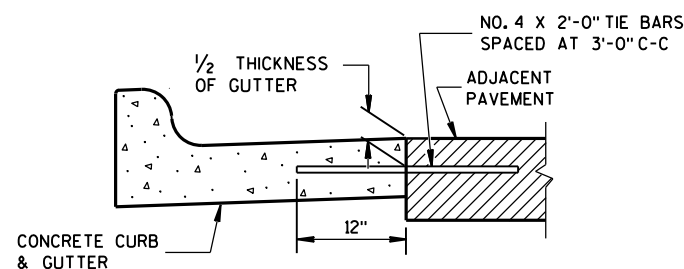
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

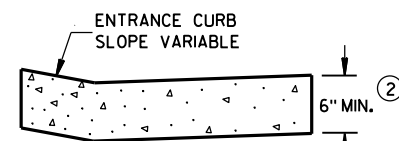
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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

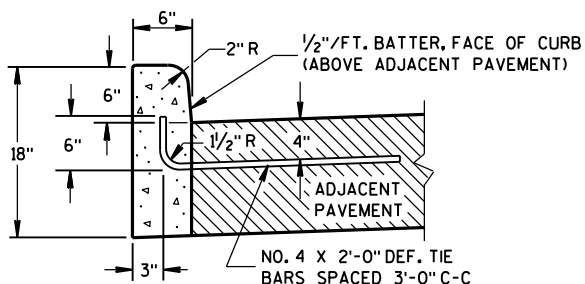
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH 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 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.



TYPICAL TIE BAR LOCATION ①

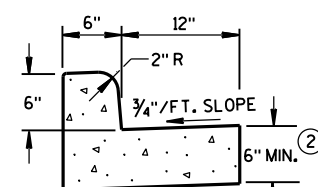


DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

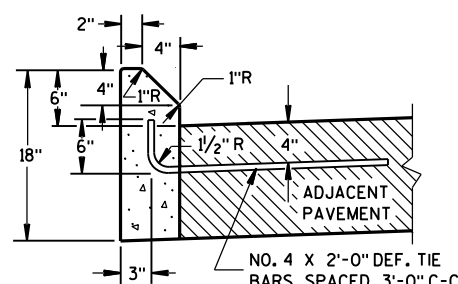


TYPES A & D ①

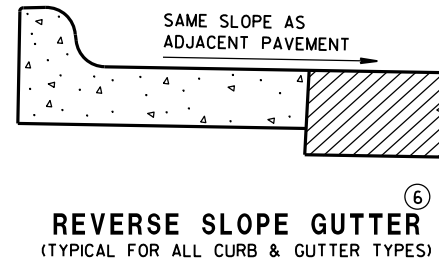
CONCRETE CURB



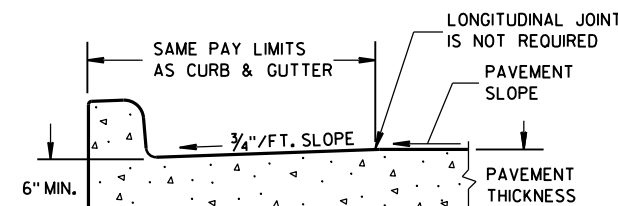
TYPES A & D
CONCRETE CURB & GUTTER 18"



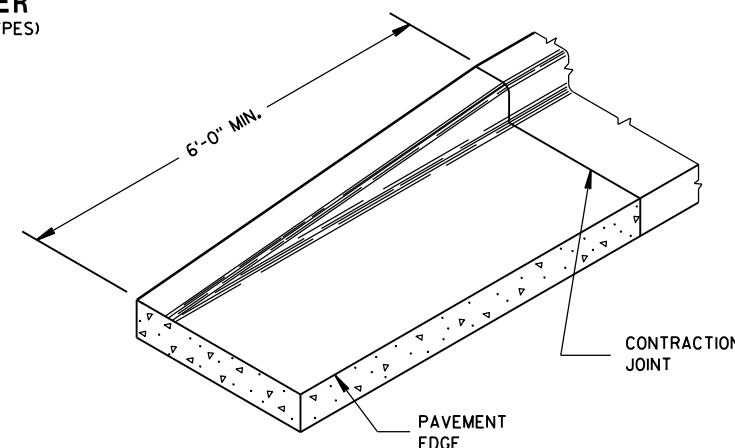
TYPES G & J ①



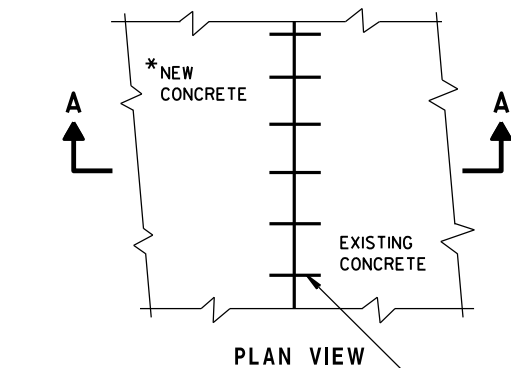
REVERSE SLOPE GUTTER
(TYPICAL FOR ALL CURB & GUTTER TYPES)



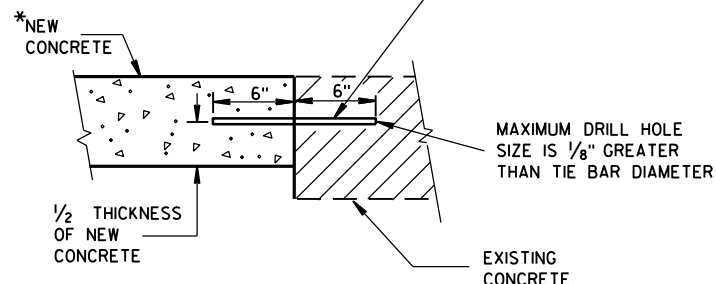
PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER



PLAN VIEW



SECTION A-A
TIE BARS DRILLED
INTO EXISTING PAVEMENT

CONCRETE CURB, CONCRETE
CURB & GUTTER AND TIES

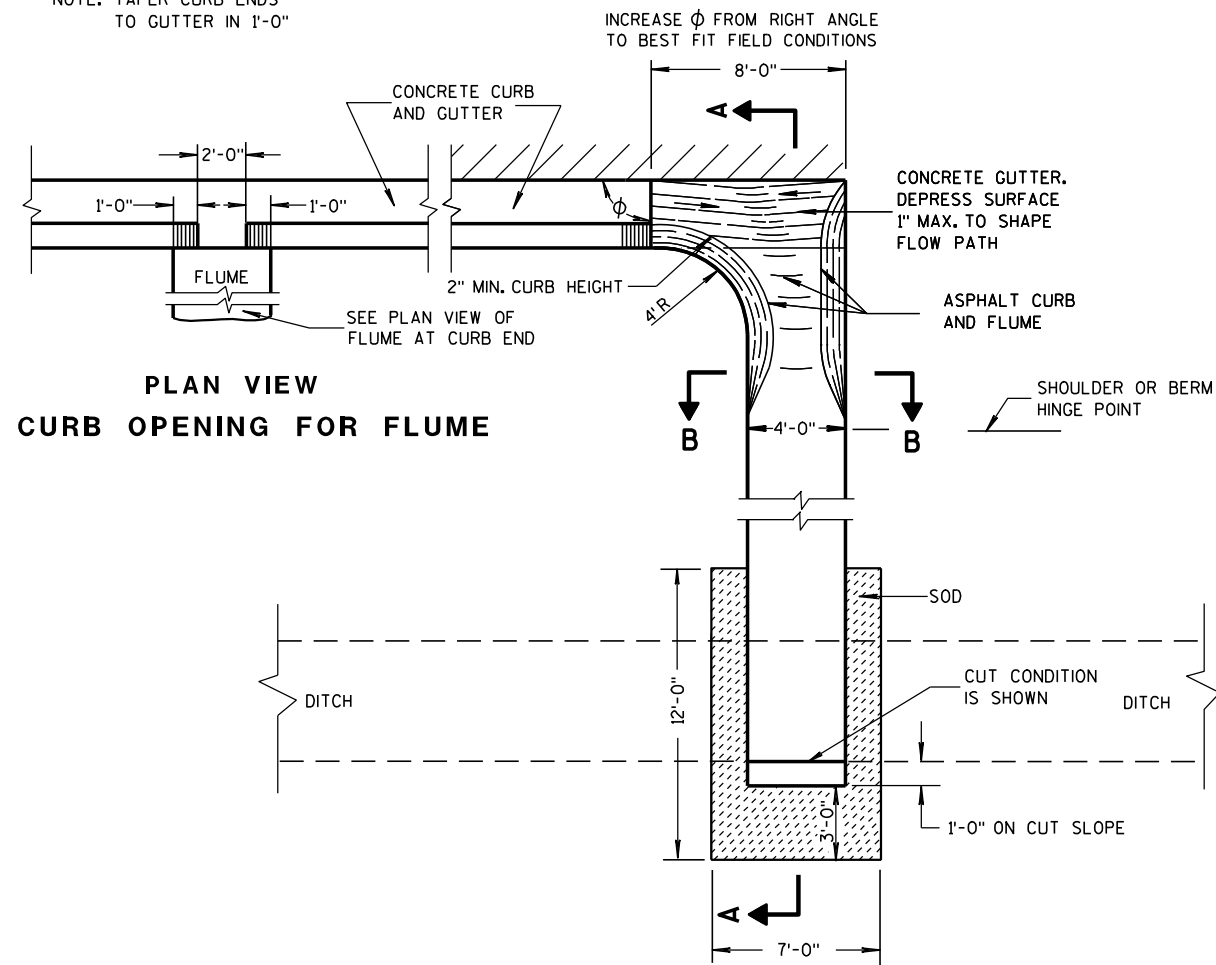
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2016
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

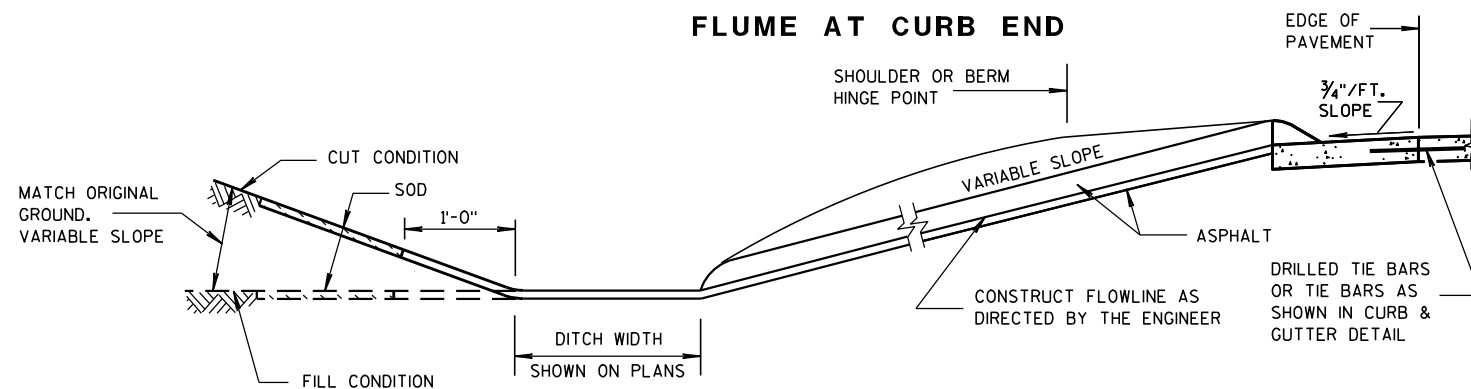
ASPHALTIC FLUME

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

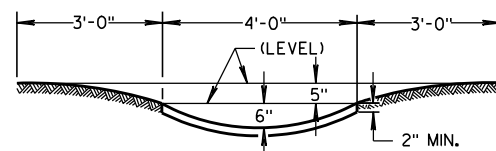


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

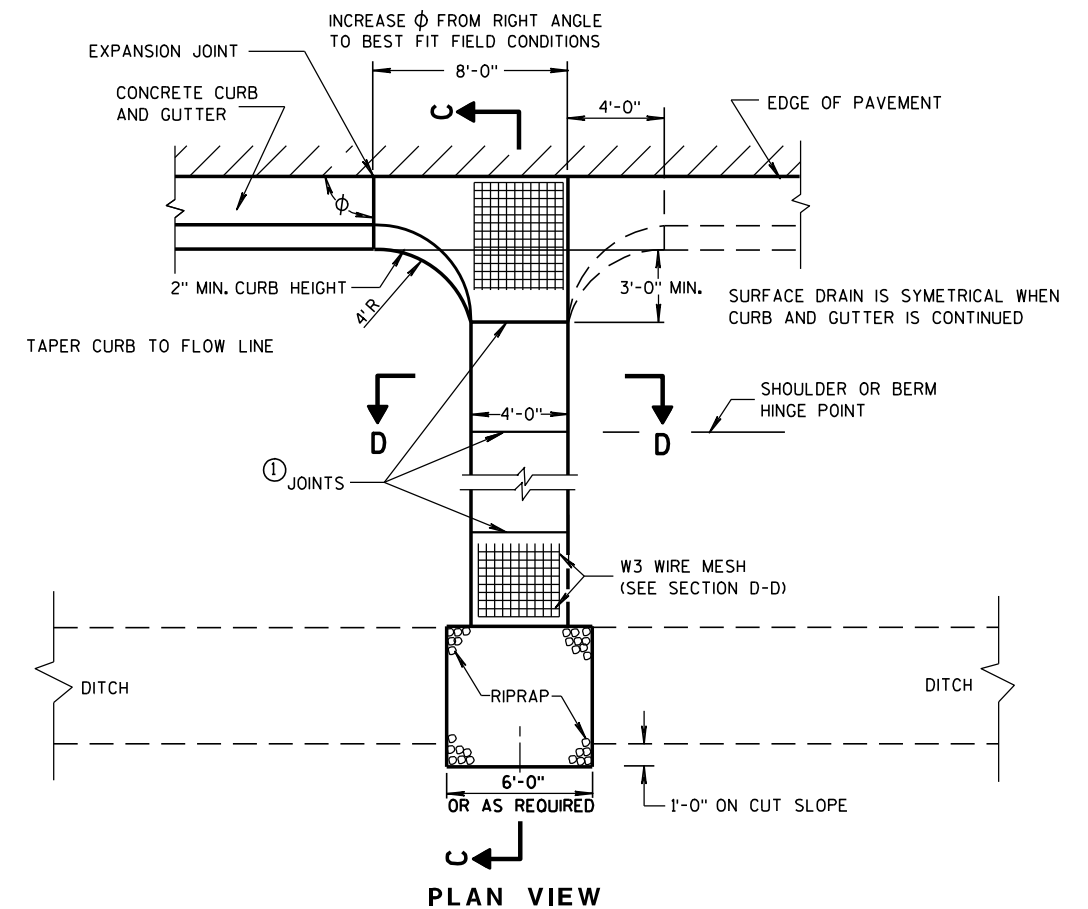
GENERAL NOTES

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

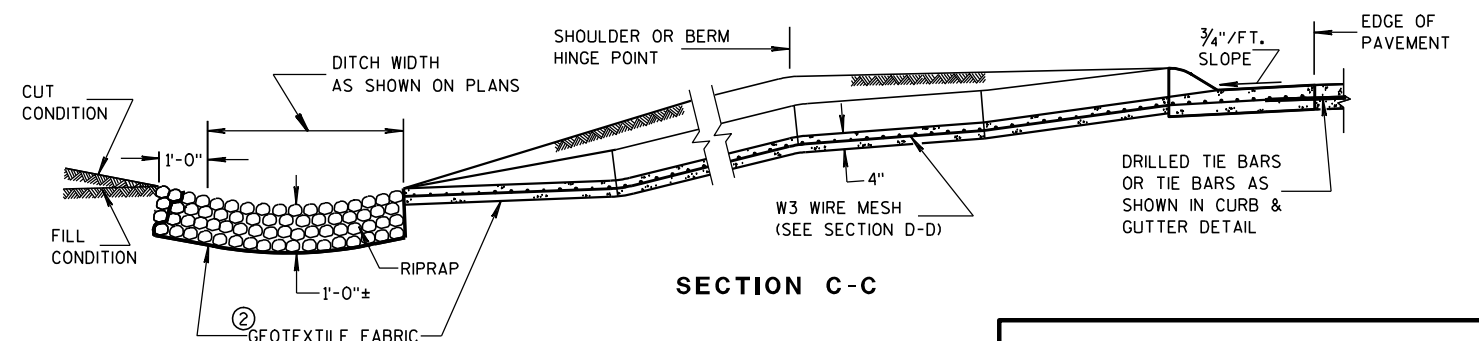
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

- ① JOINTS SHALL BE 1/8" TO 1/4" INCH WIDE BY 1 1/2" INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- ③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

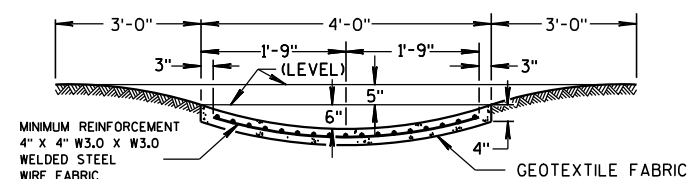
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9-4-08

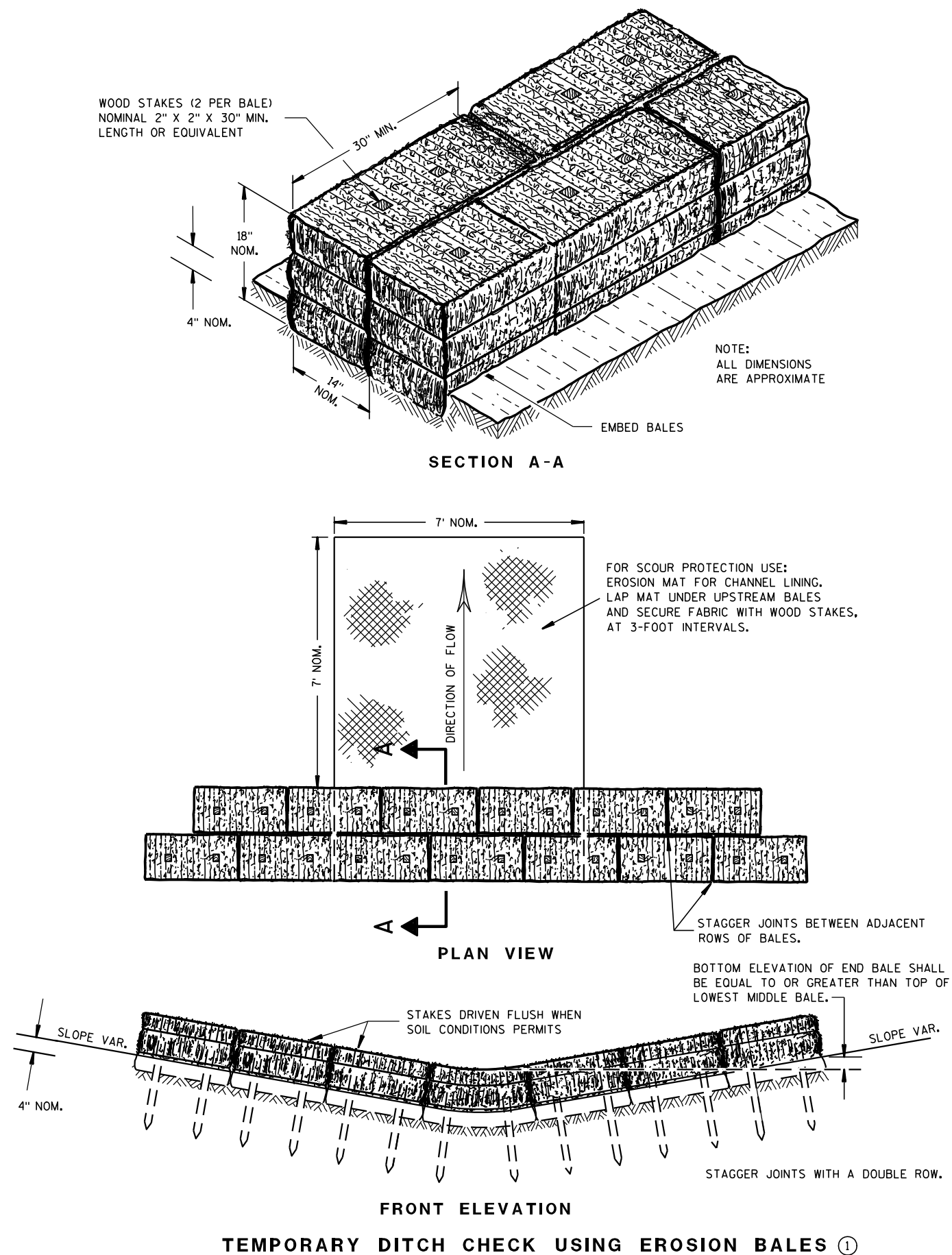
DATE

FHWA

/S/ Jerry H. Zogg

ROADWAY STANDARDS DEVELOPMENT

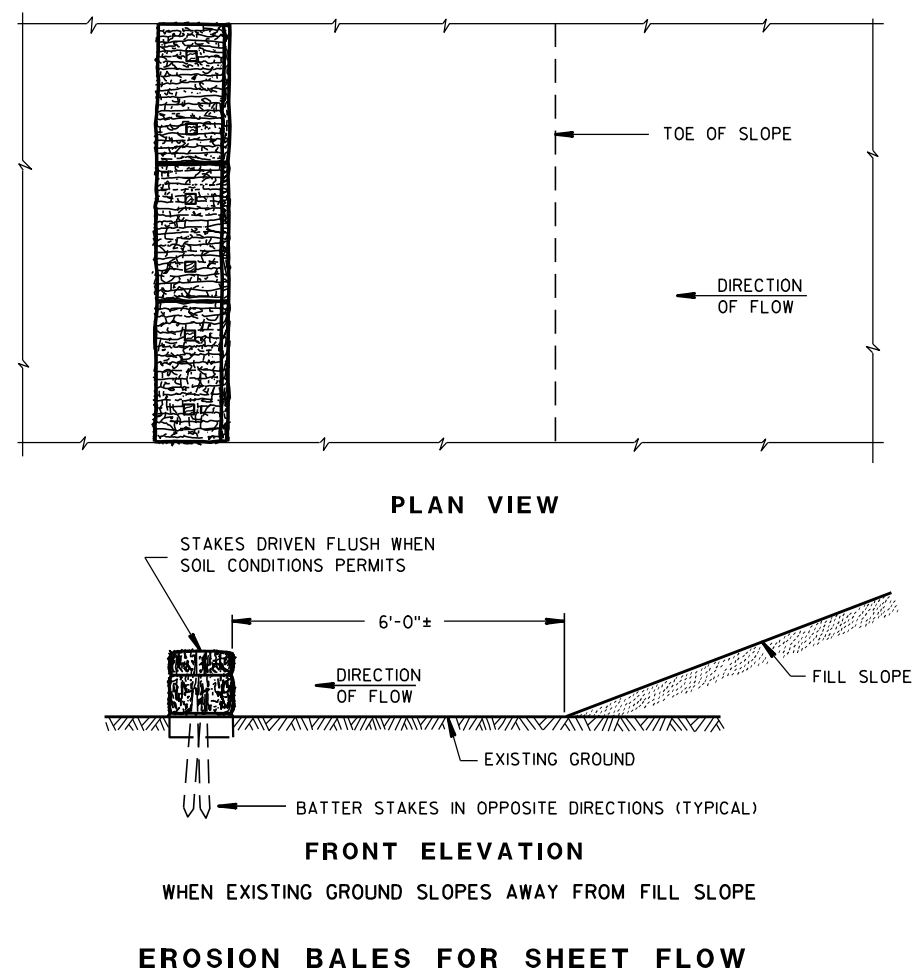
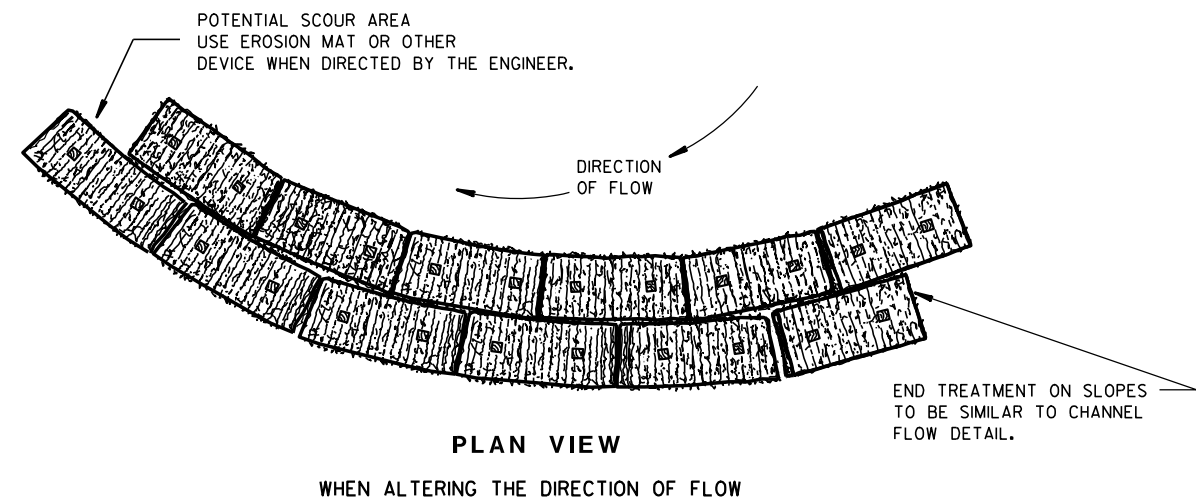
ENGINEER



GENERAL NOTES

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

- 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

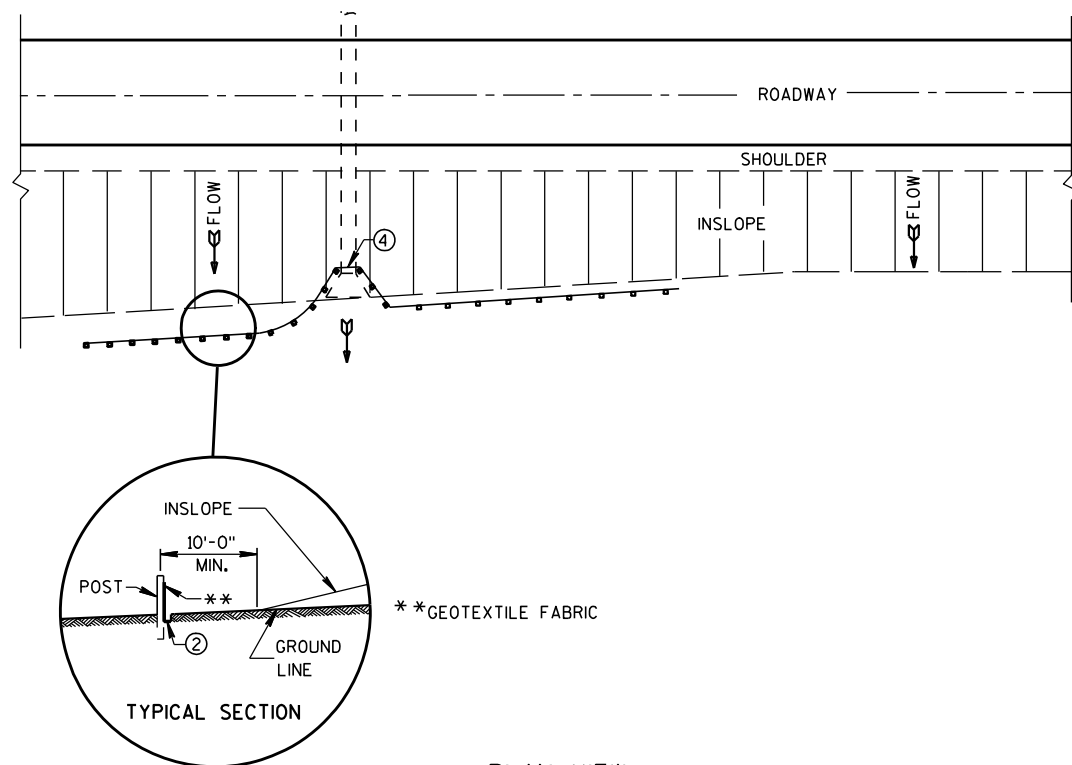
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02
DATE

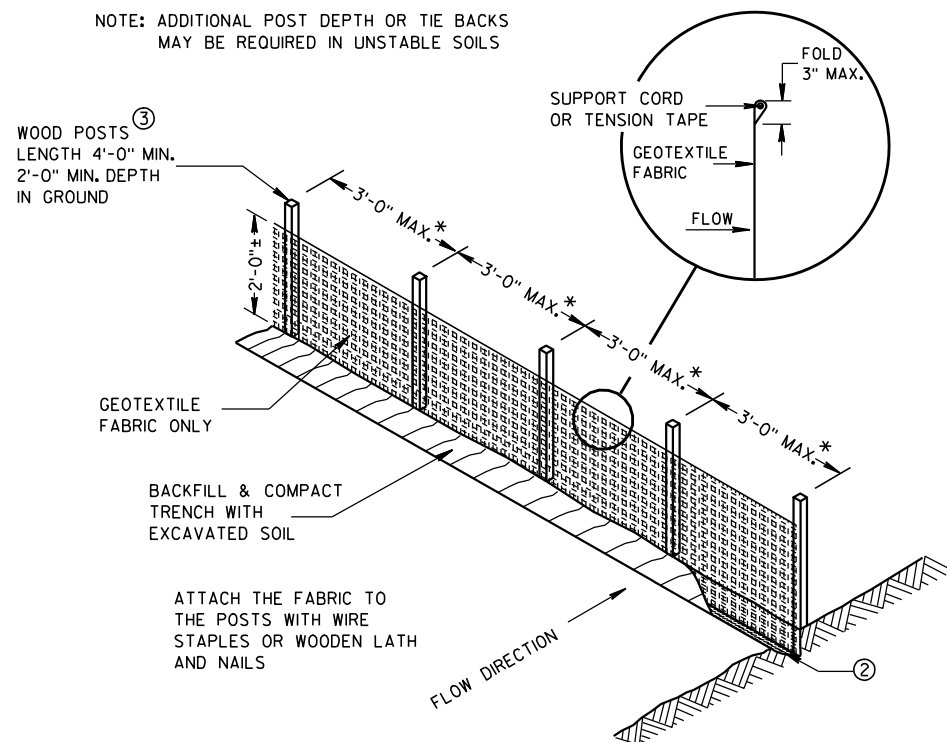
/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA



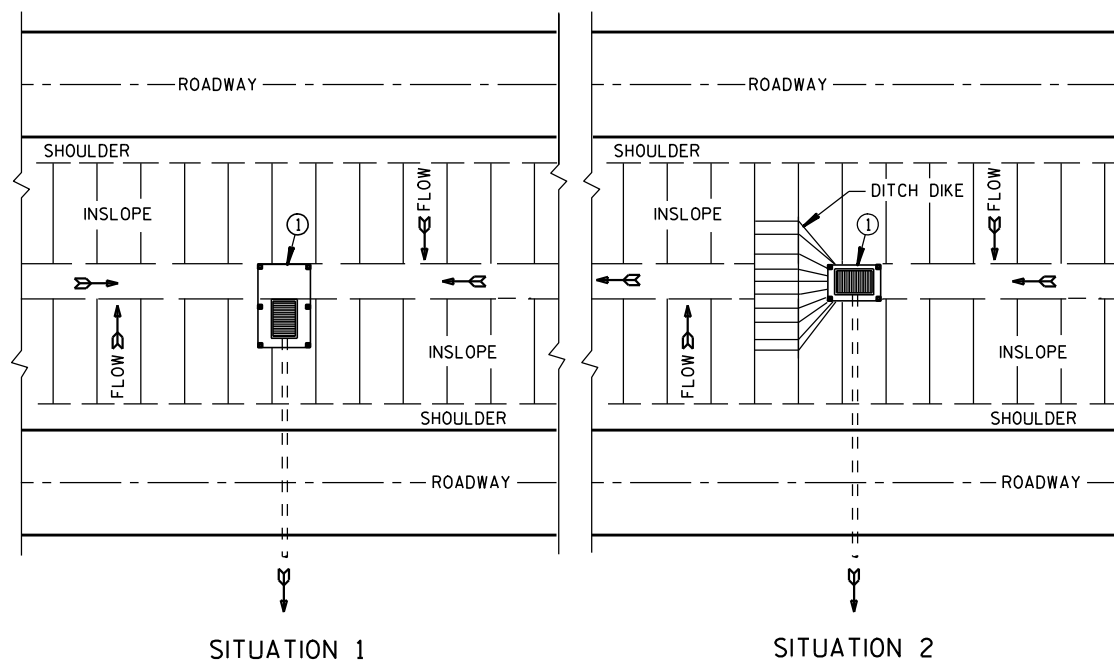
PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

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

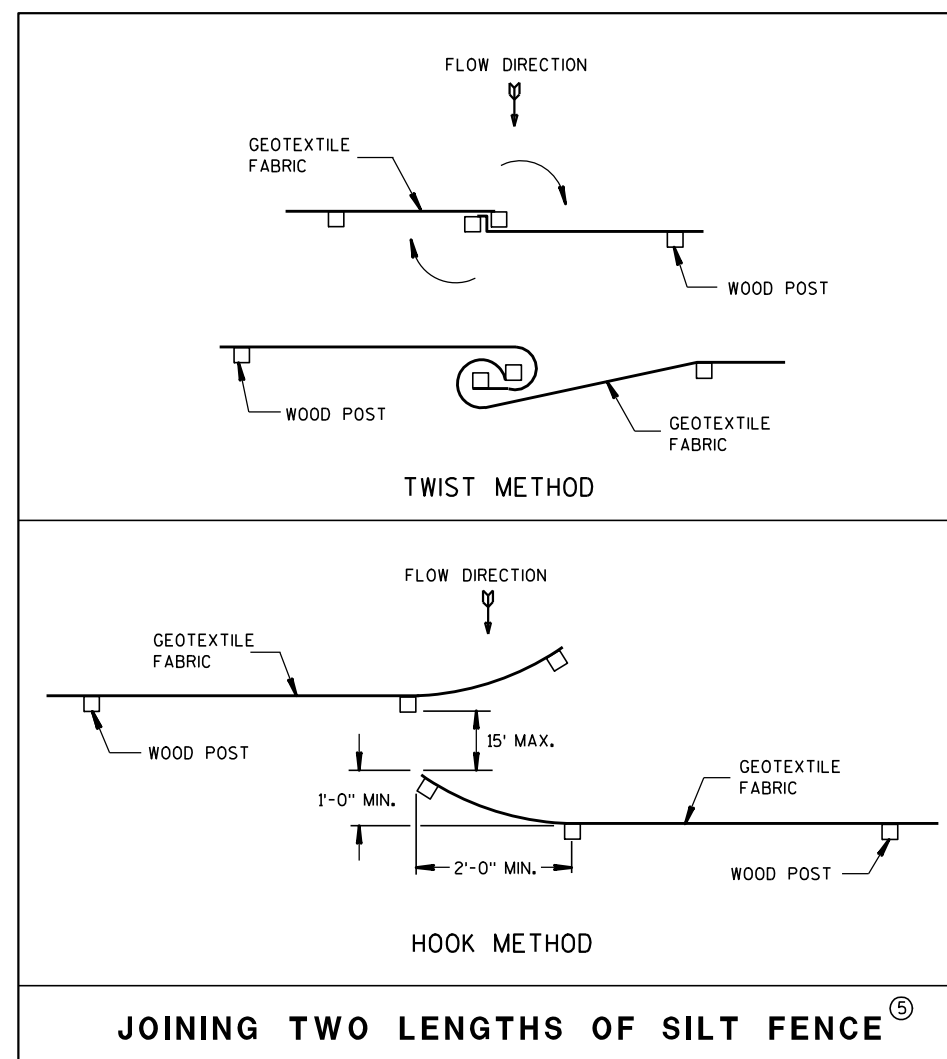


SILT FENCE

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



PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

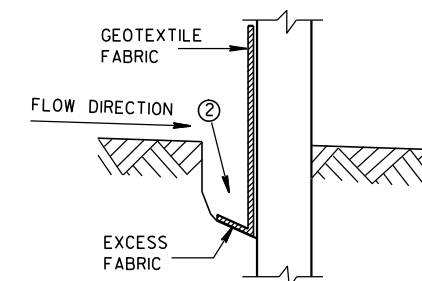


JOINING TWO LENGTHS OF SILT FENCE^⑤

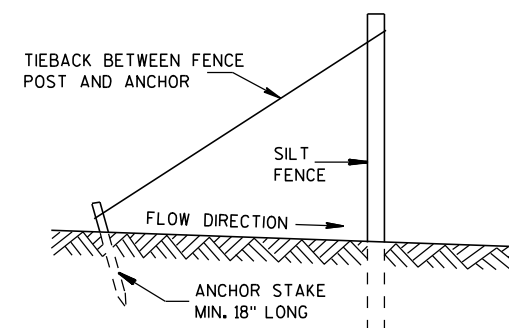
GENERAL NOTES

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 TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

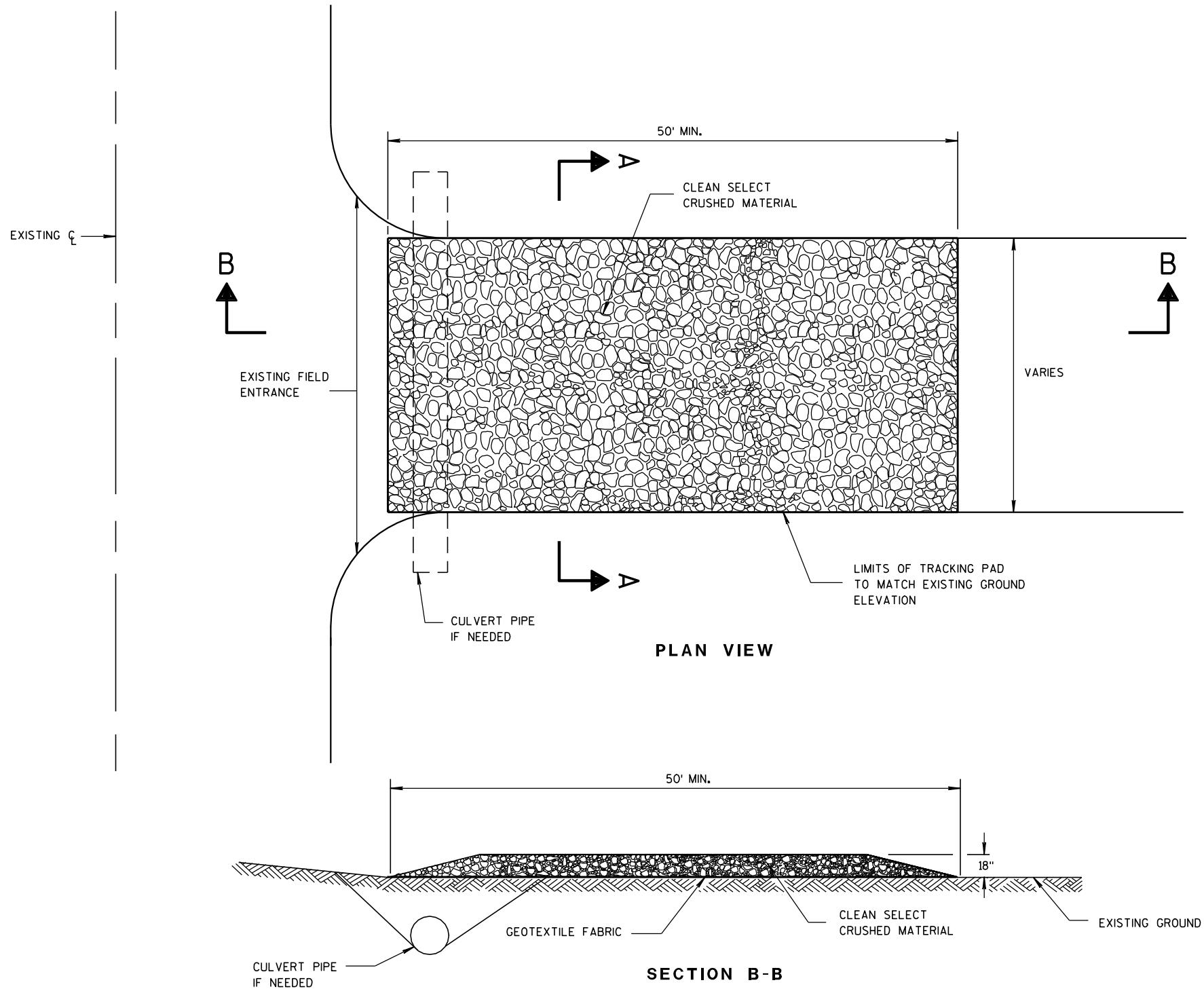
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-29-05
DATE

FHWA

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER



TRACKING PAD

GENERAL NOTES

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

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

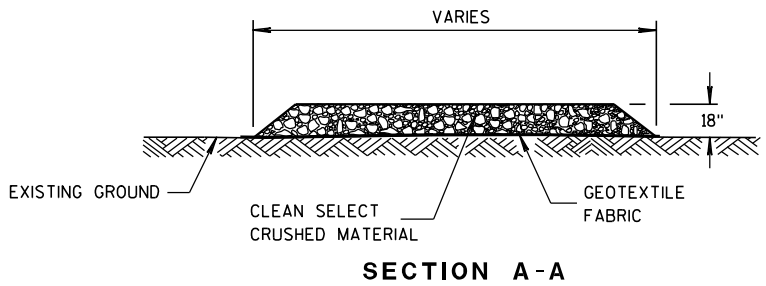
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



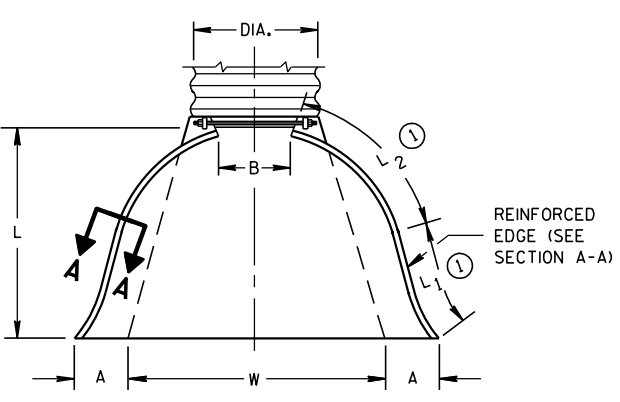
TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/24/2011
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS 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 ①	L2 ①	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.

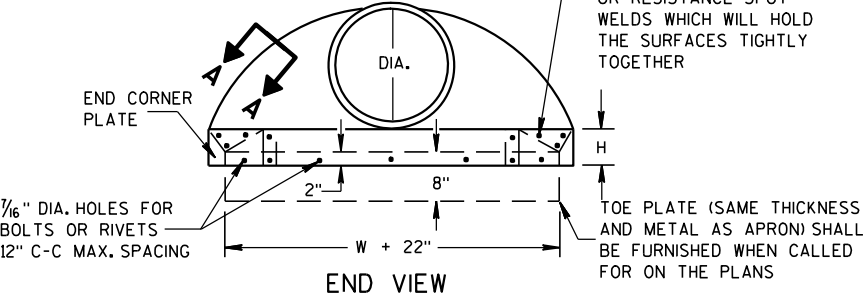
* EXCEPT CENTER PANEL
SEE GENERAL NOTES



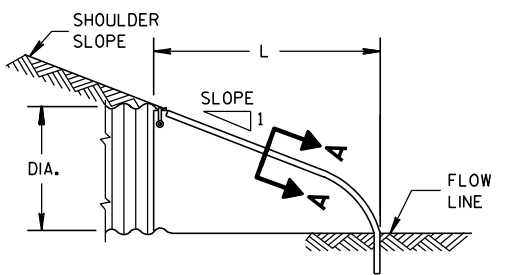
PLAN VIEW

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

TOE PLATE (SAME THICKNESS AND METAL AS APRON) SHALL BE FURNISHED WHEN CALLED FOR ON THE PLANS



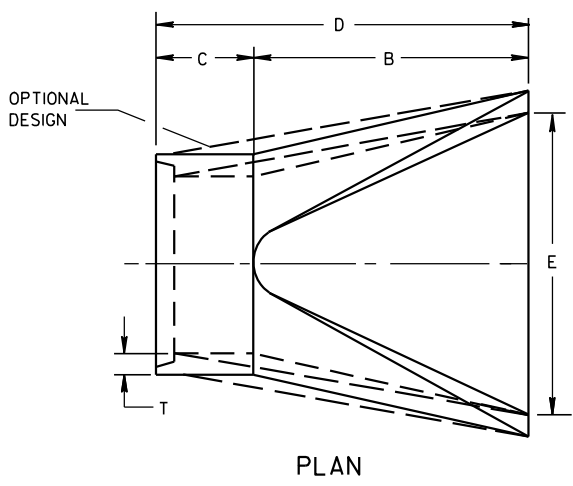
END VIEW



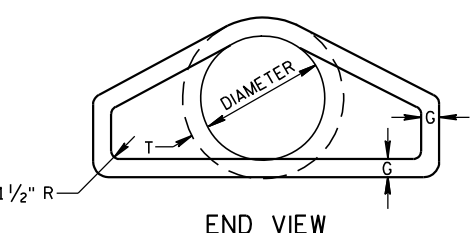
SIDE ELEVATION
METAL ENDWALLS

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

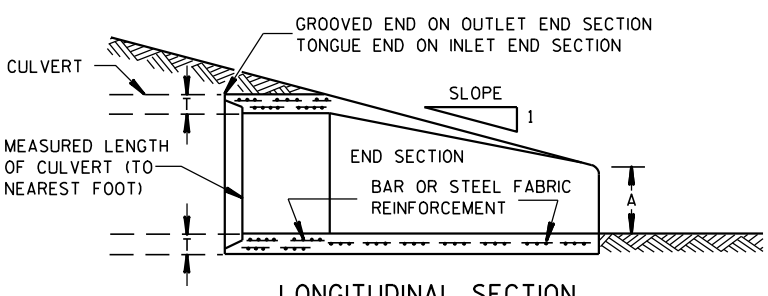
* MINIMUM
** MAXIMUM



PLAN

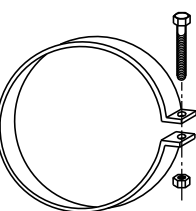


END VIEW

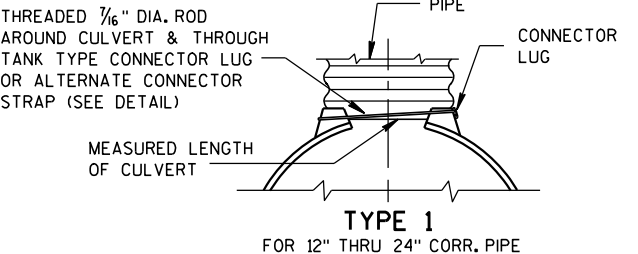


LONGITUDINAL SECTION
CONCRETE ENDWALLS

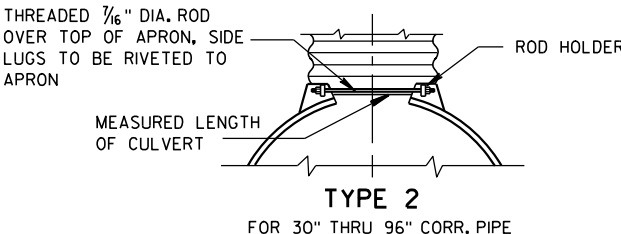
1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



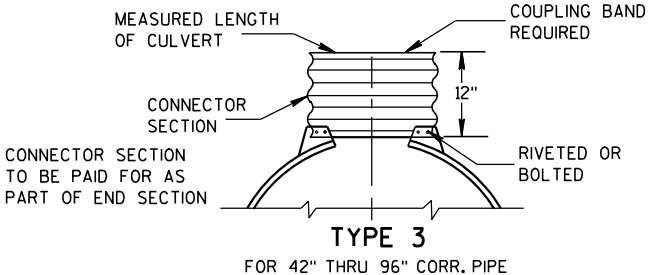
ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



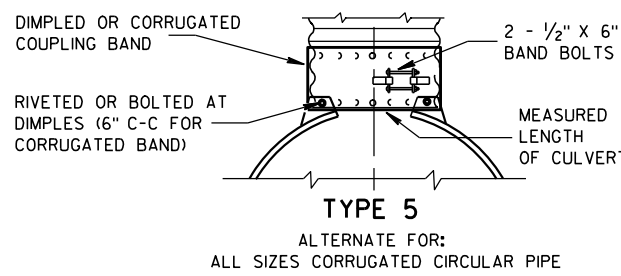
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

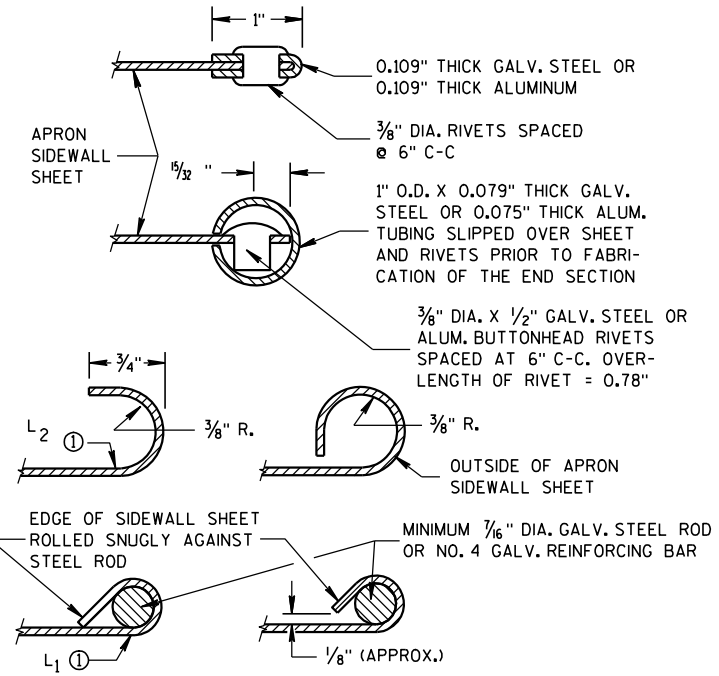
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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 VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

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

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

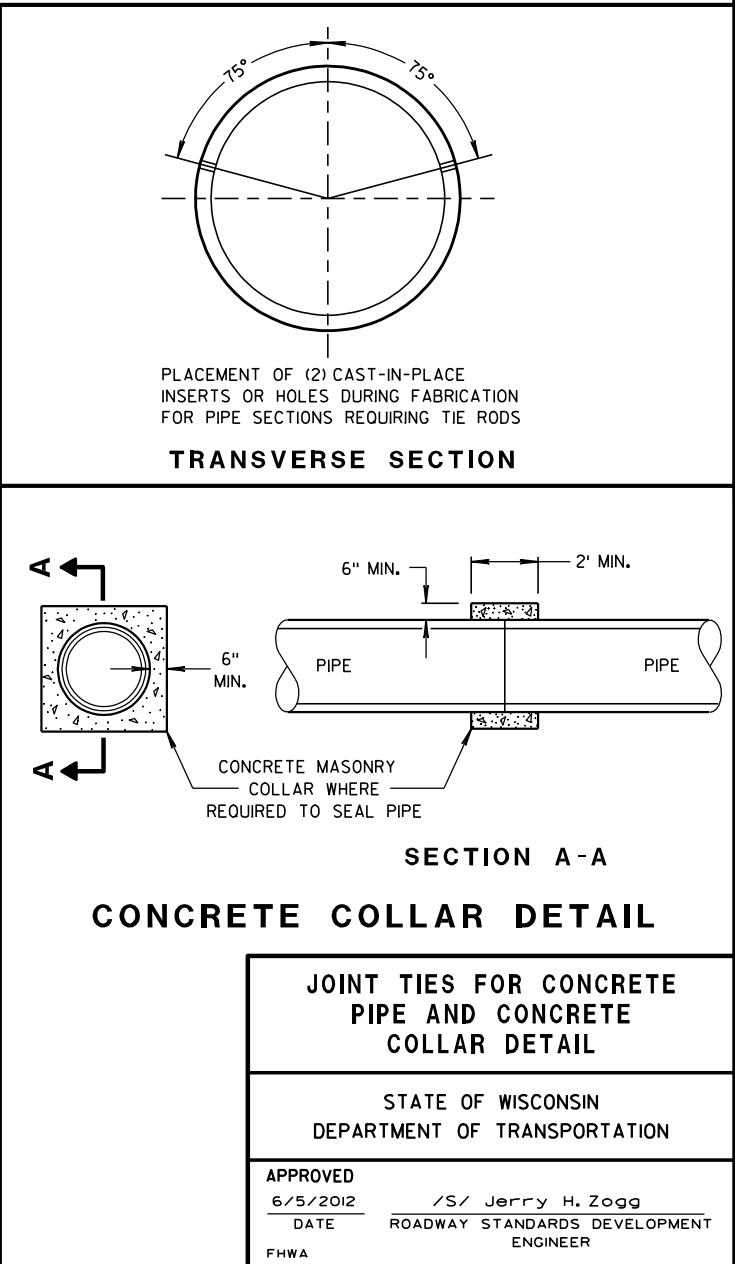
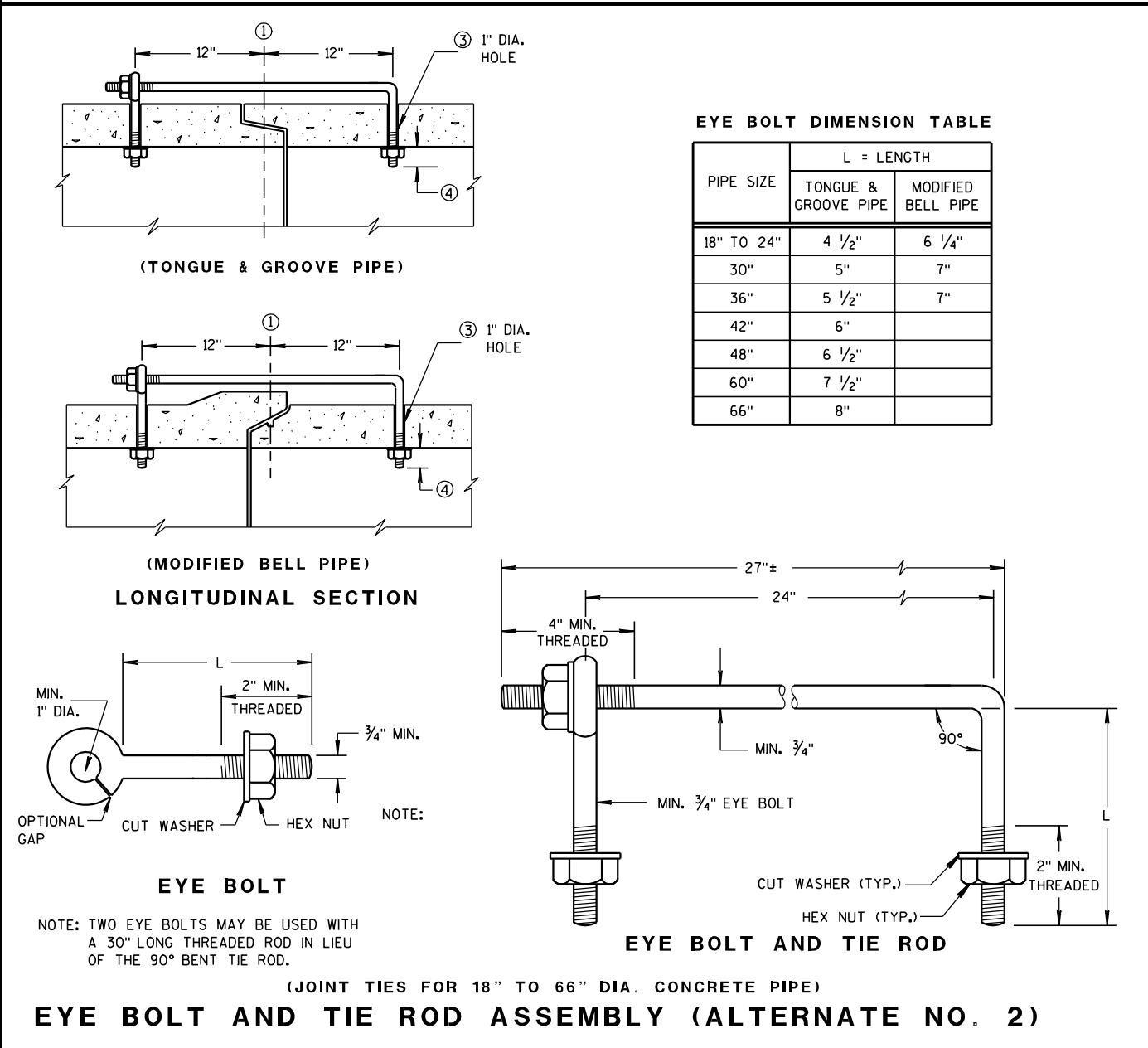
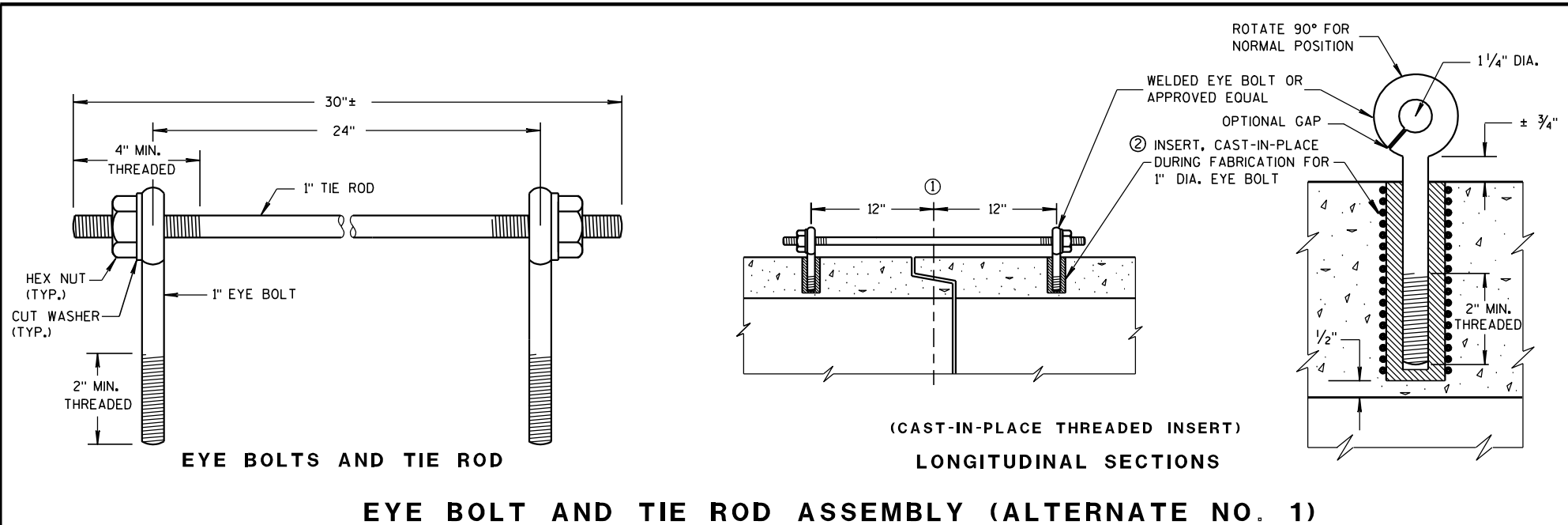
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

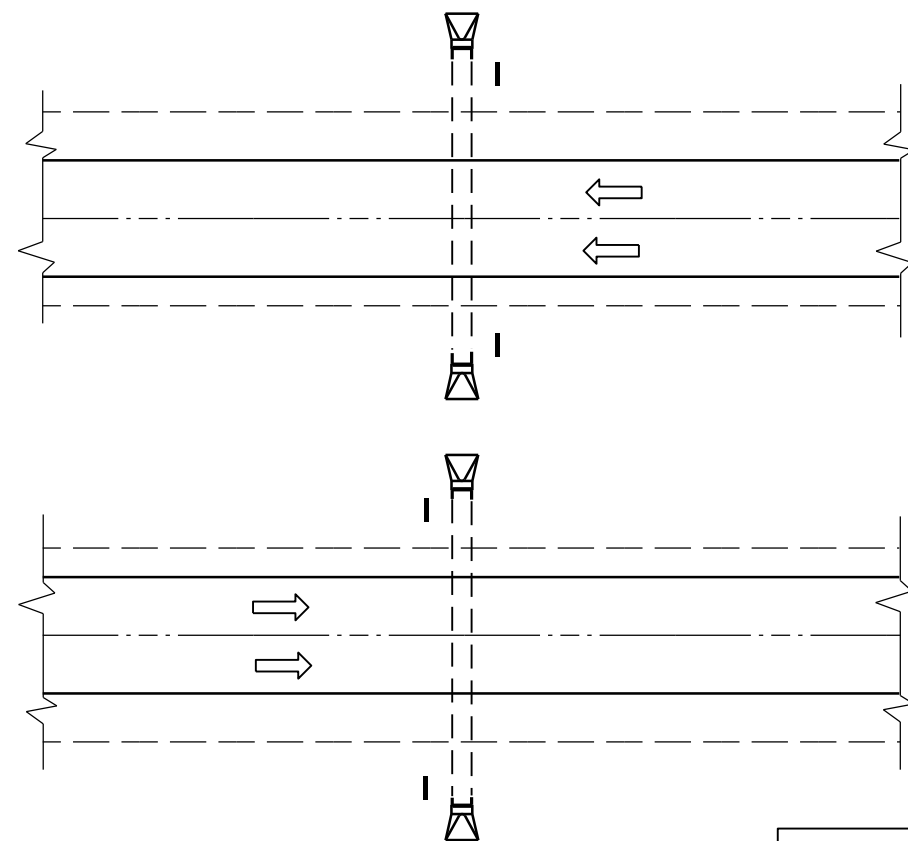
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR
CULVERT PIPE

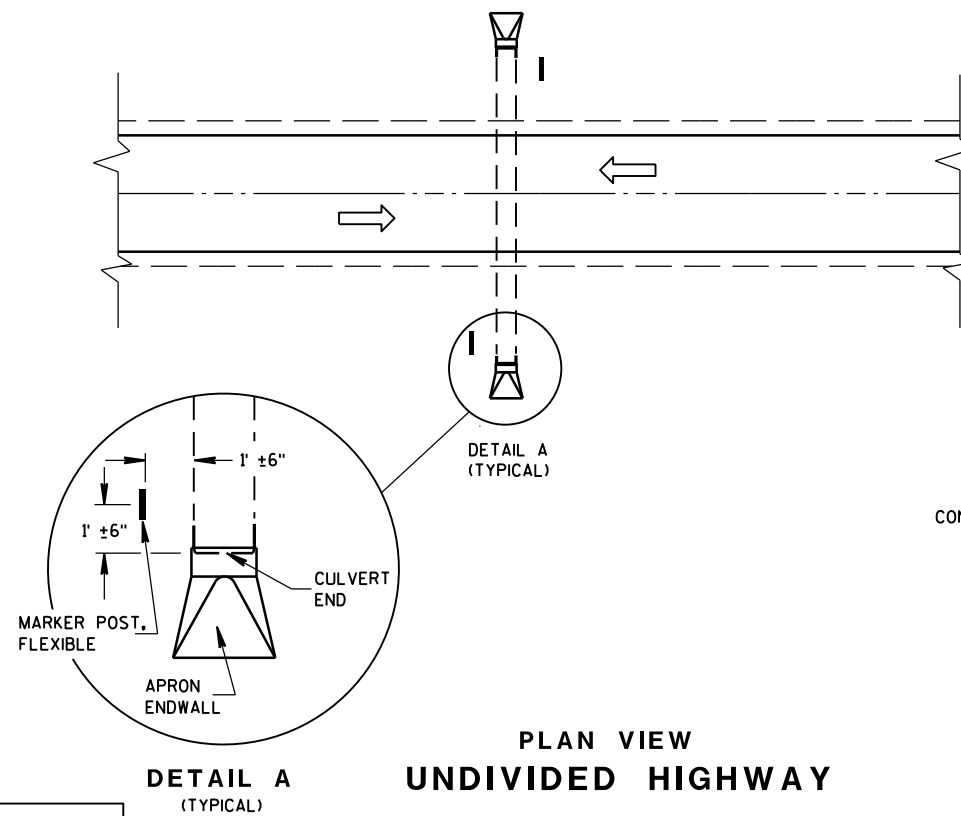
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

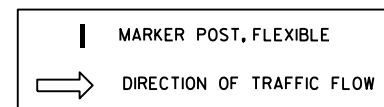




PLAN VIEW
DIVIDED HIGHWAY



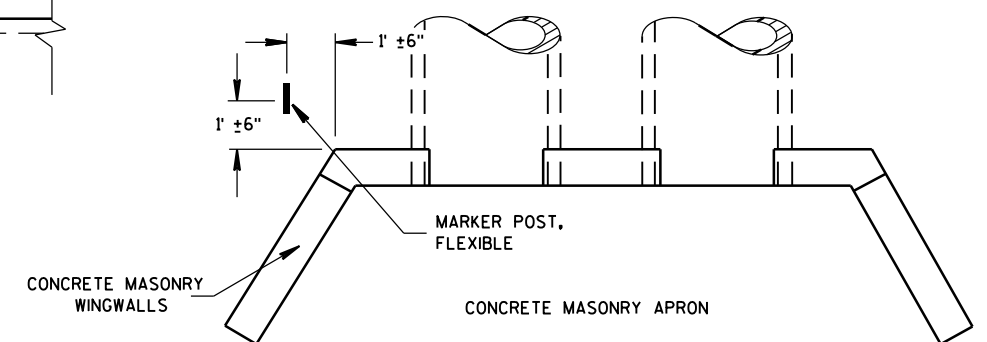
PLAN VIEW
UNDIVIDED HIGHWAY



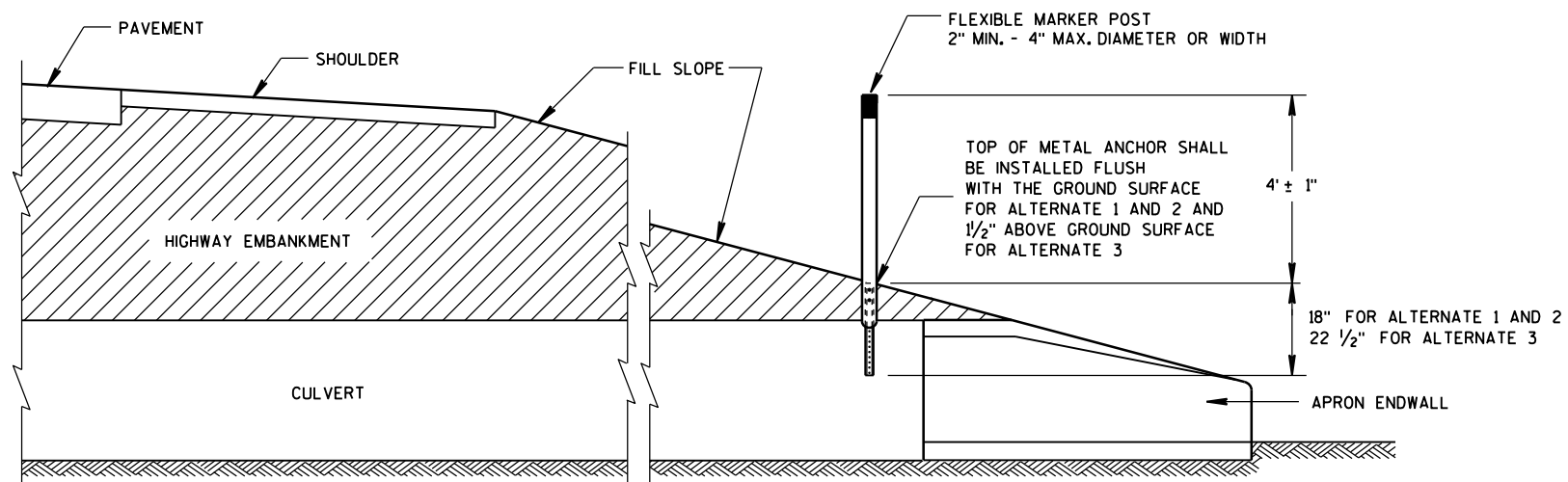
FLEXIBLE MARKER POST LOCATION

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.



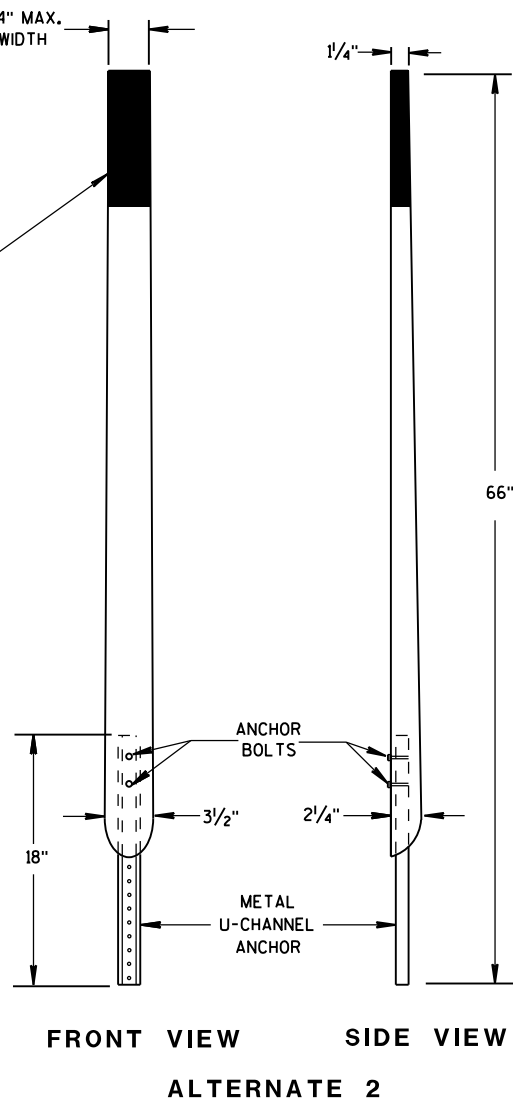
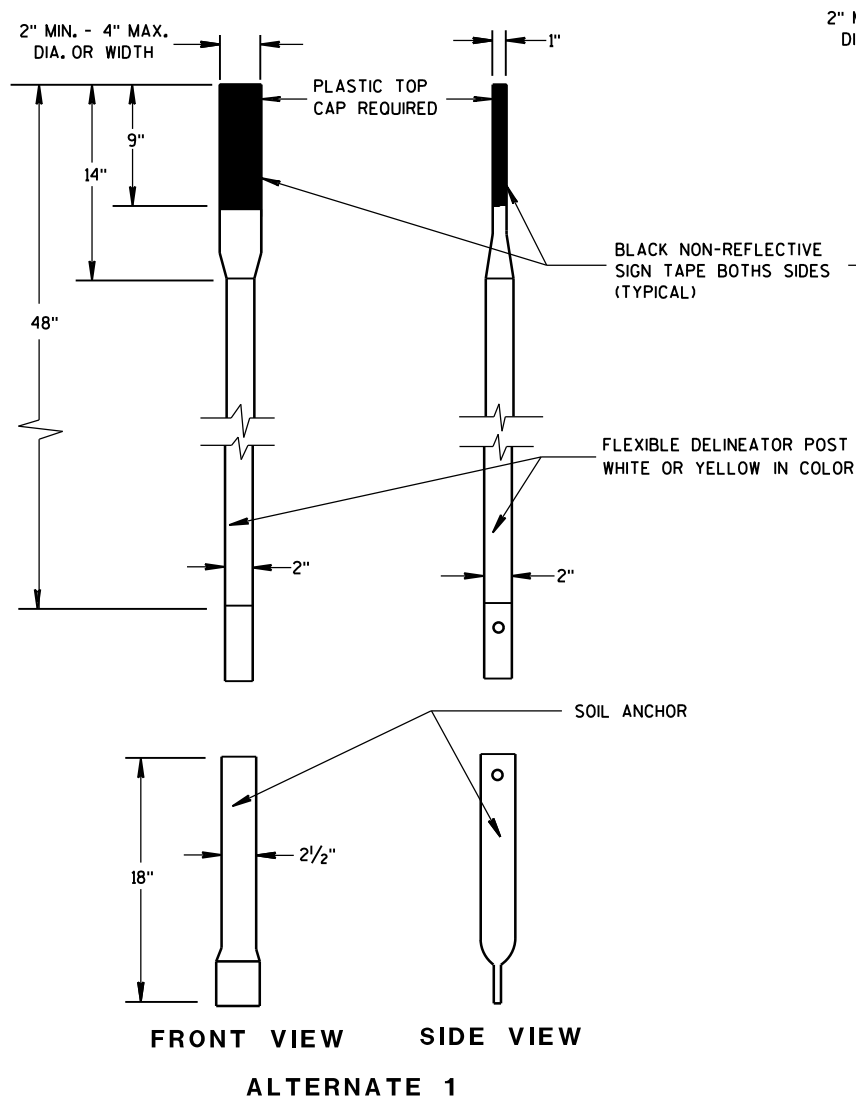
PLAN VIEW
CONCRETE MASONRY ENDWALLS FOR
CULVERT PIPE AND PIPE ARCH



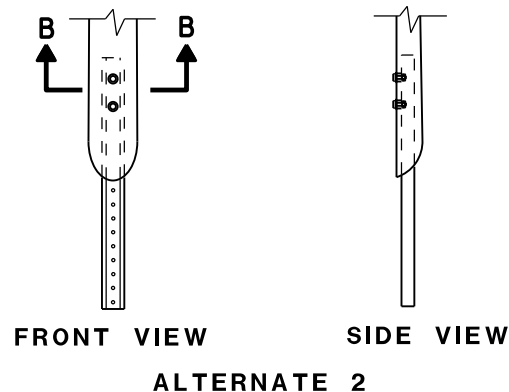
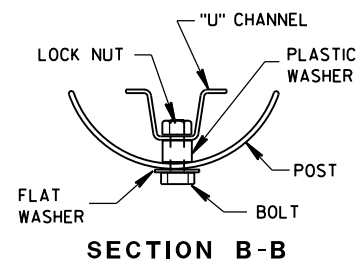
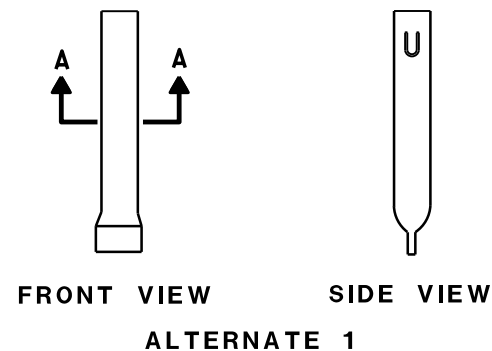
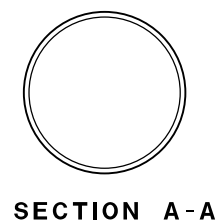
CROSS SECTION
FLEXIBLE MARKER POST

FLEXIBLE MARKER POST
FOR CULVERT END

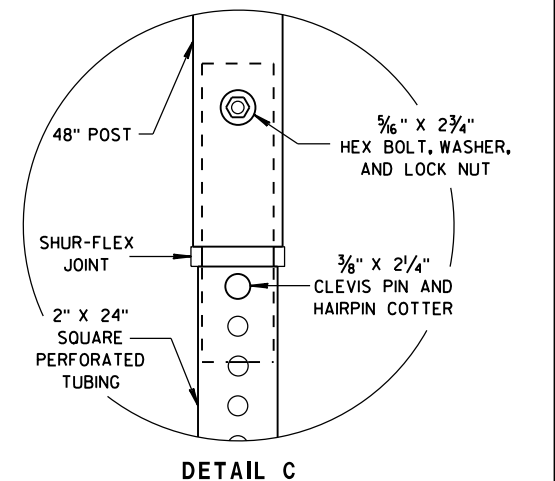
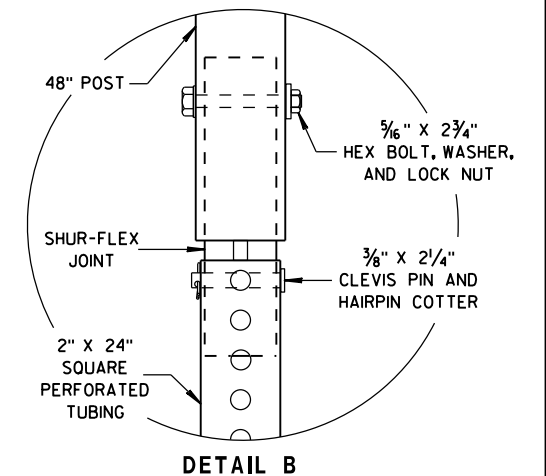
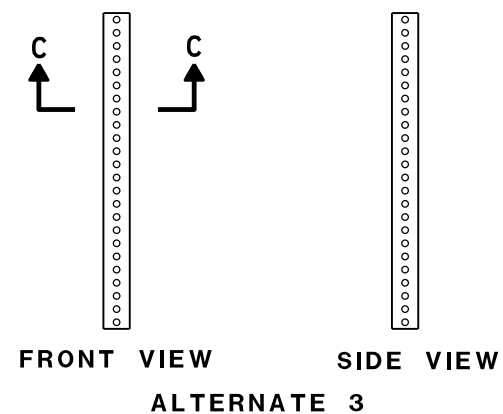
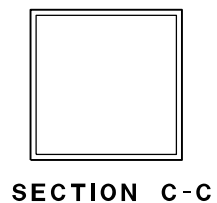
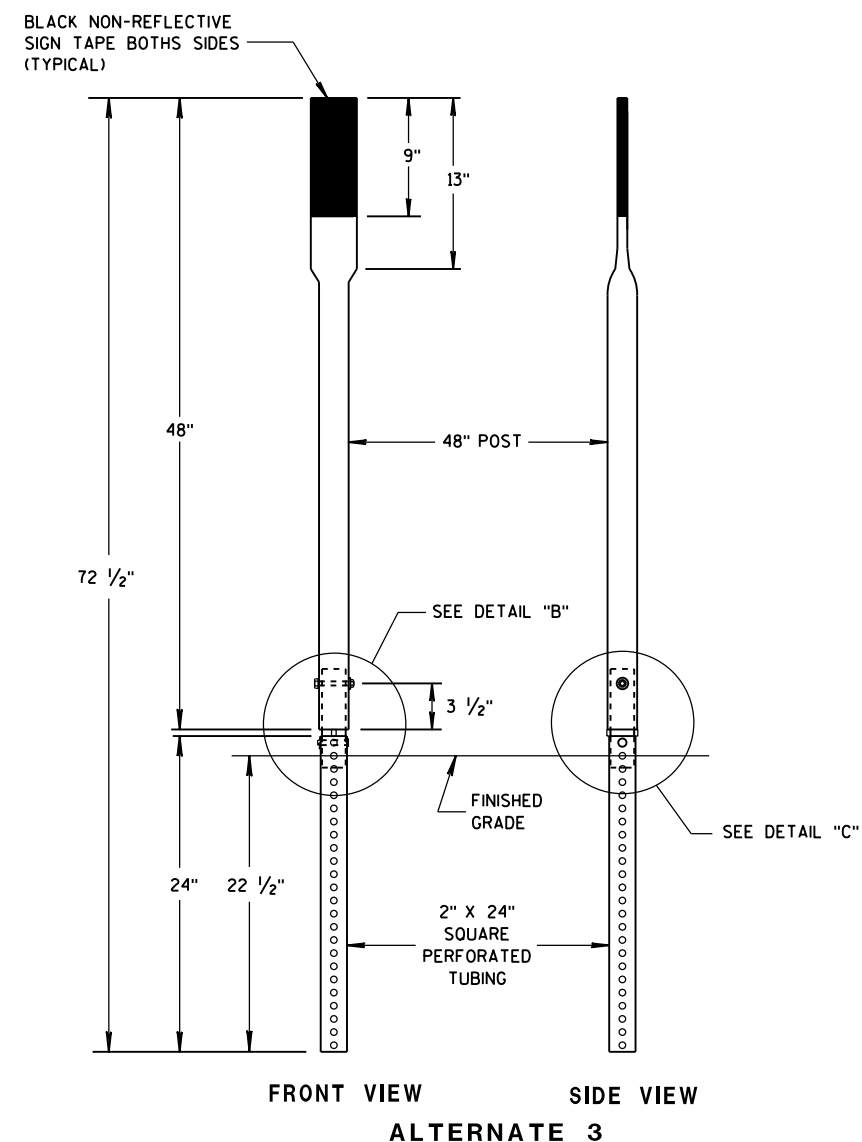
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



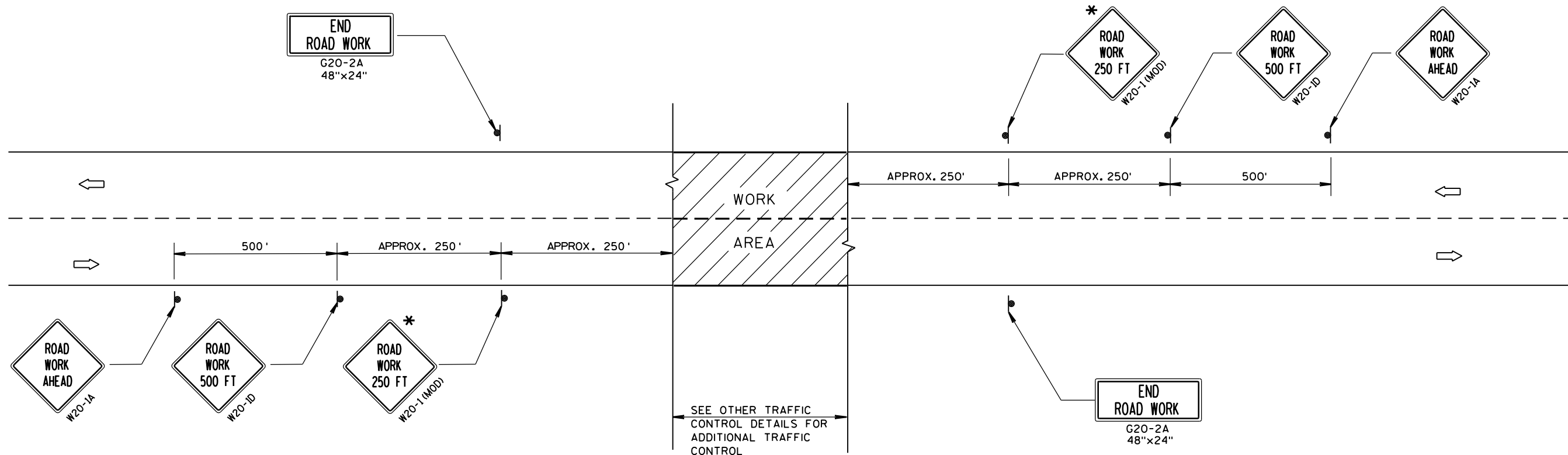
FLEXIBLE MARKER POSTS



FLEXIBLE MARKER POST ANCHORS



FLEXIBLE MARKER POST FOR CULVERT END	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10/1/2012 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER OF DESIGN
FHWA	



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

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

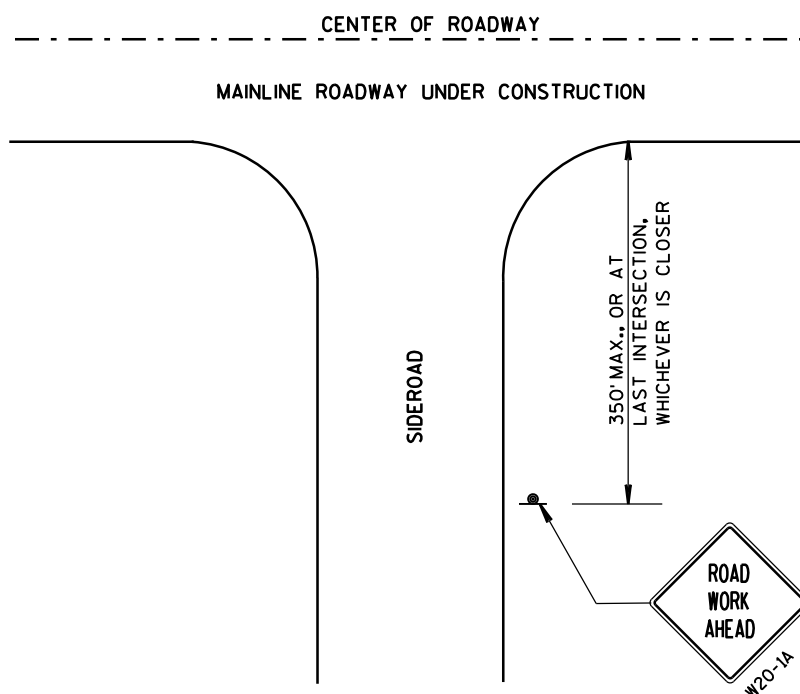
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS.

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

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

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



LEGEND

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

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

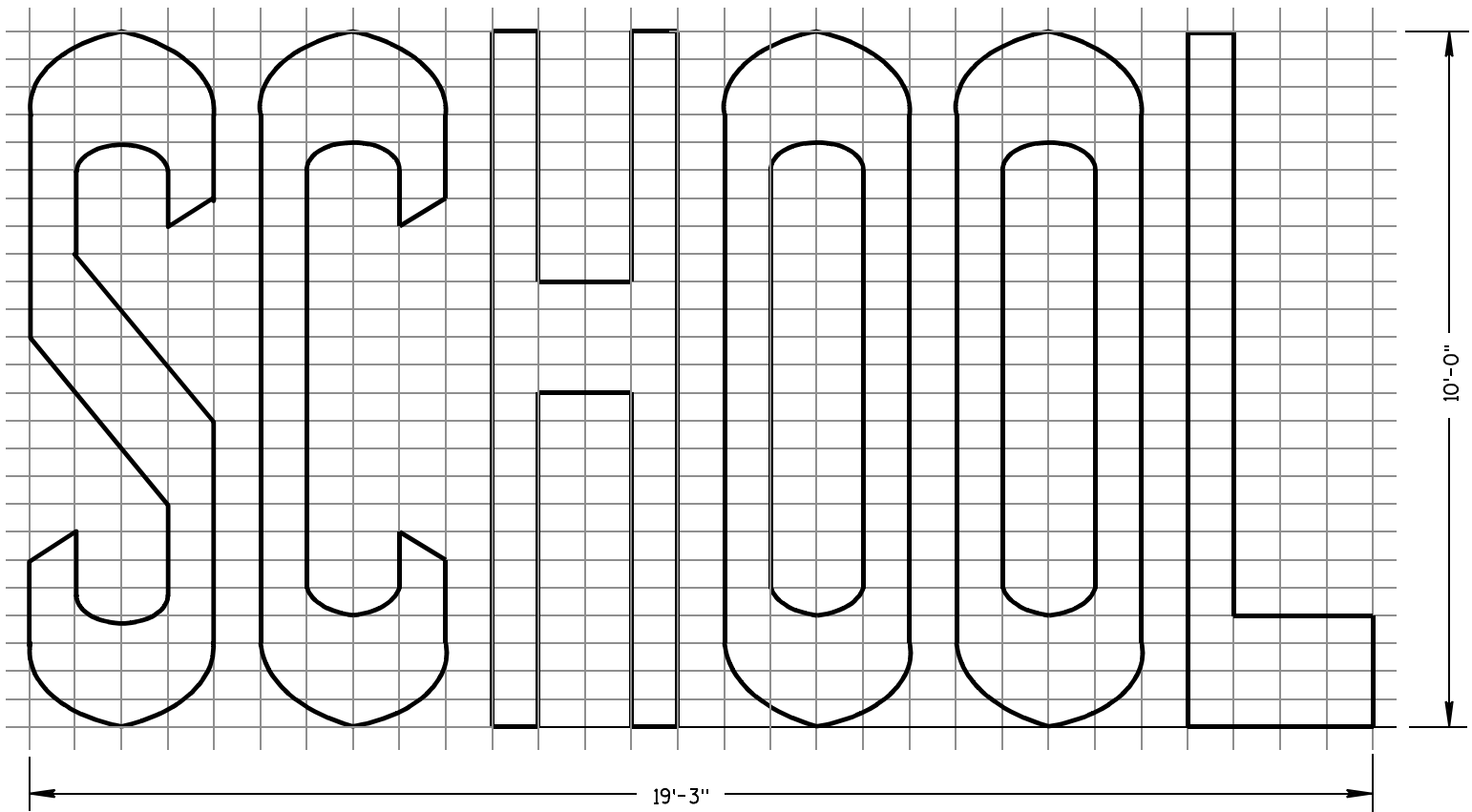
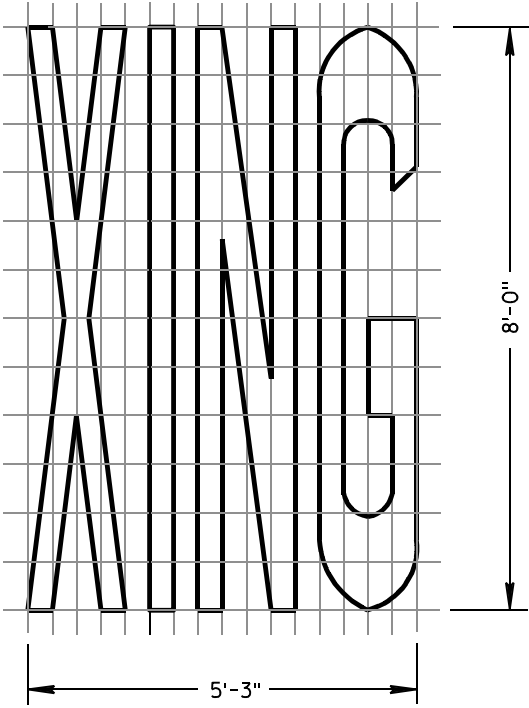
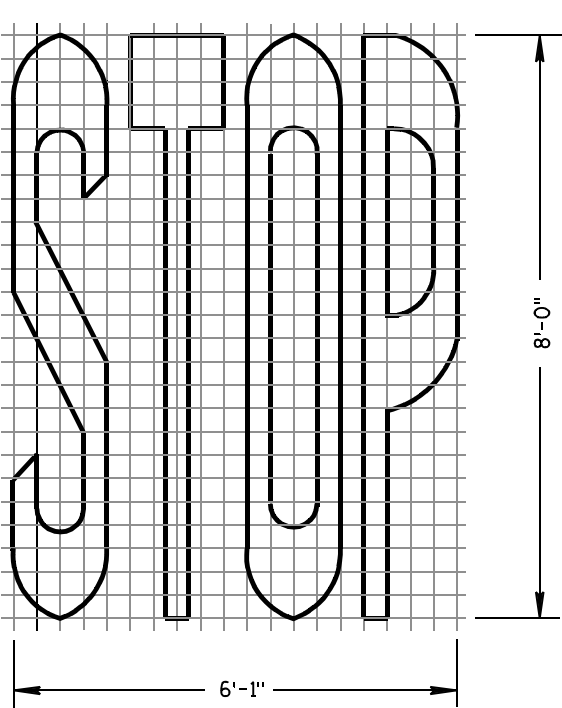
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2015 /S/ Peter Amakobe Atepe
DATE STATEWIDE WORK ZONE TRAFFIC
FHWA SAFETY ENGINEER

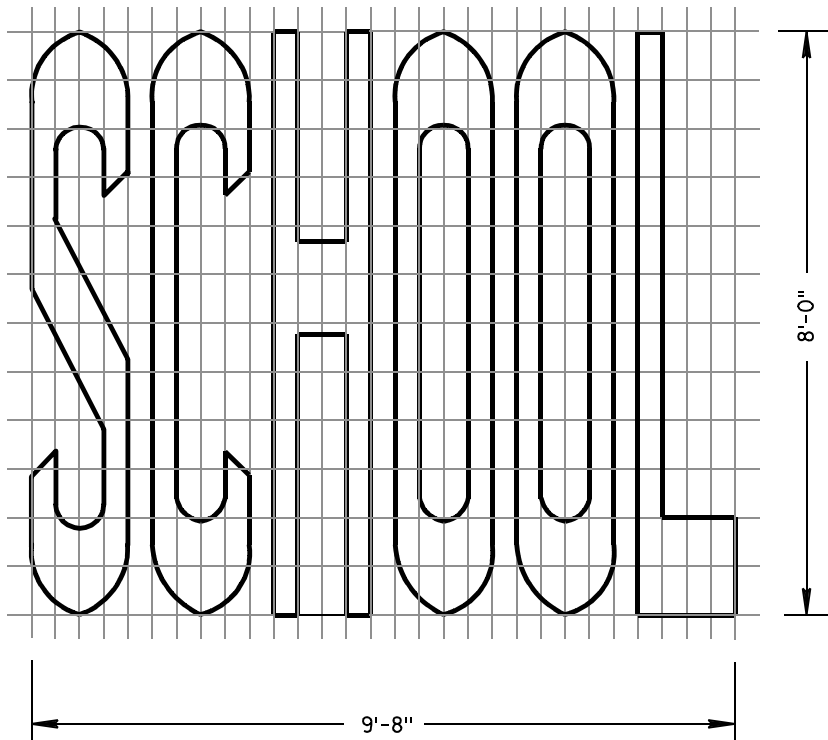
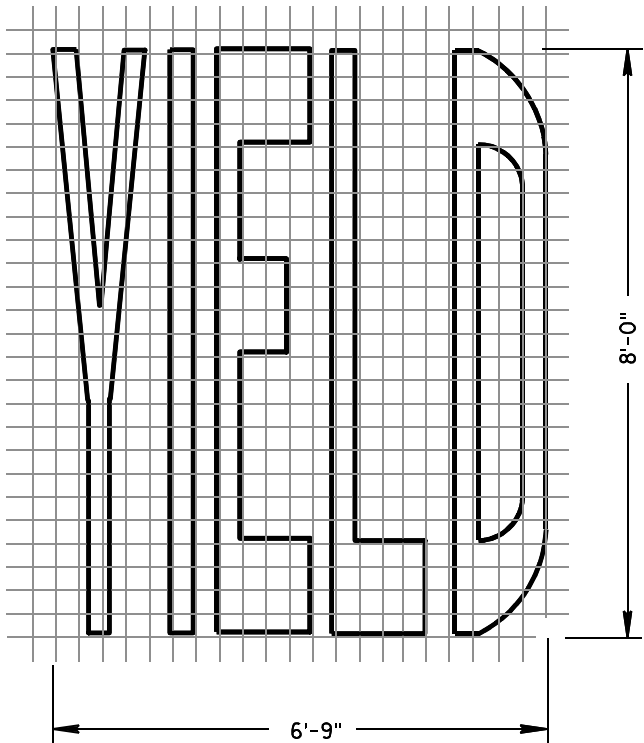
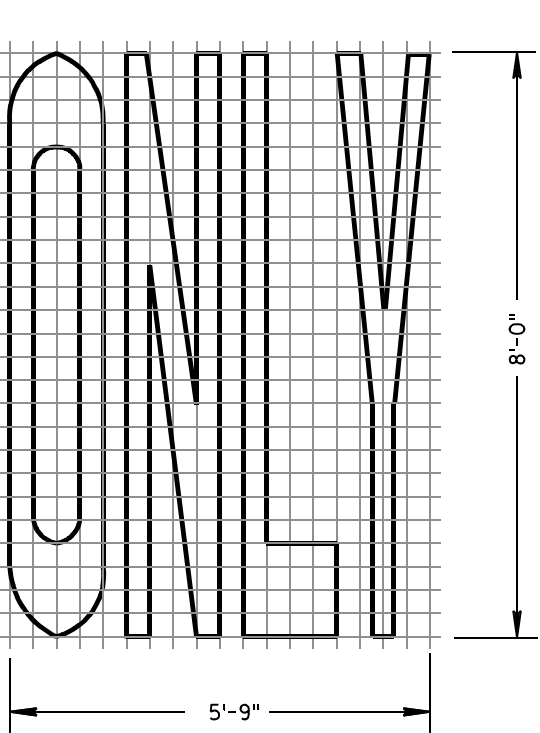
GENERAL NOTES

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

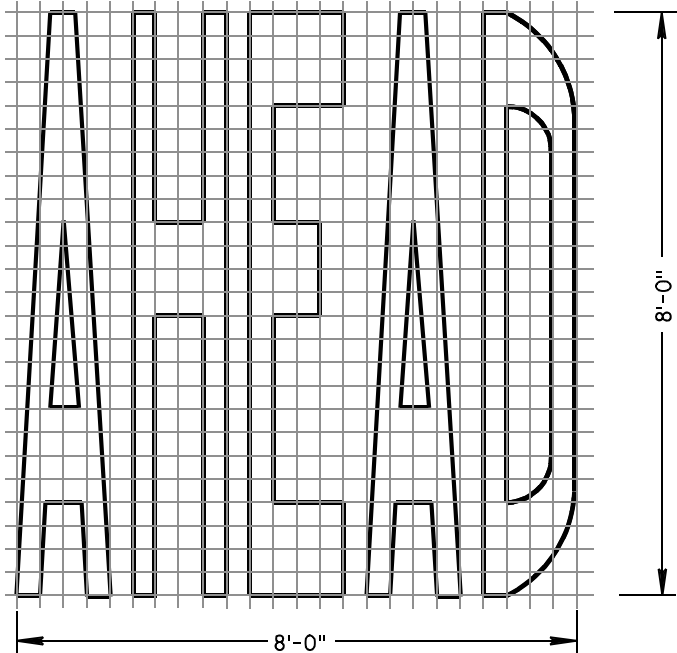
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.



TWO-LANE



SINGLE-LANE



PAVEMENT MARKING WORDS

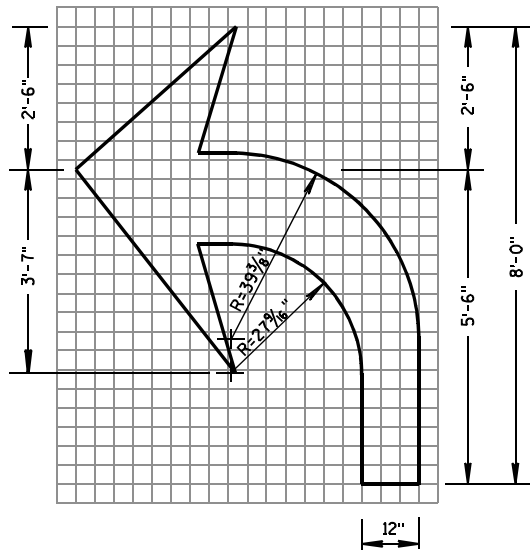
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

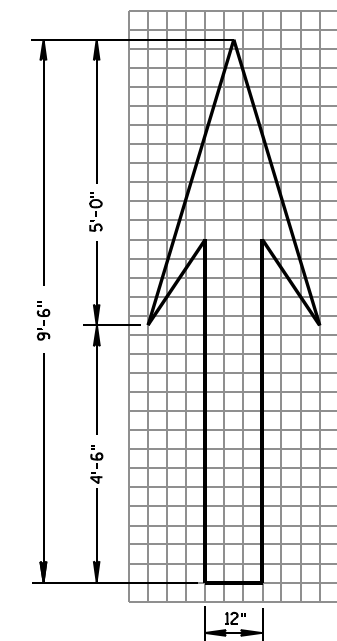
7-1-11
DATE

/S/ Thomas N. Notbohm
STATE TRAFFIC ENGINEER OF DESIGN

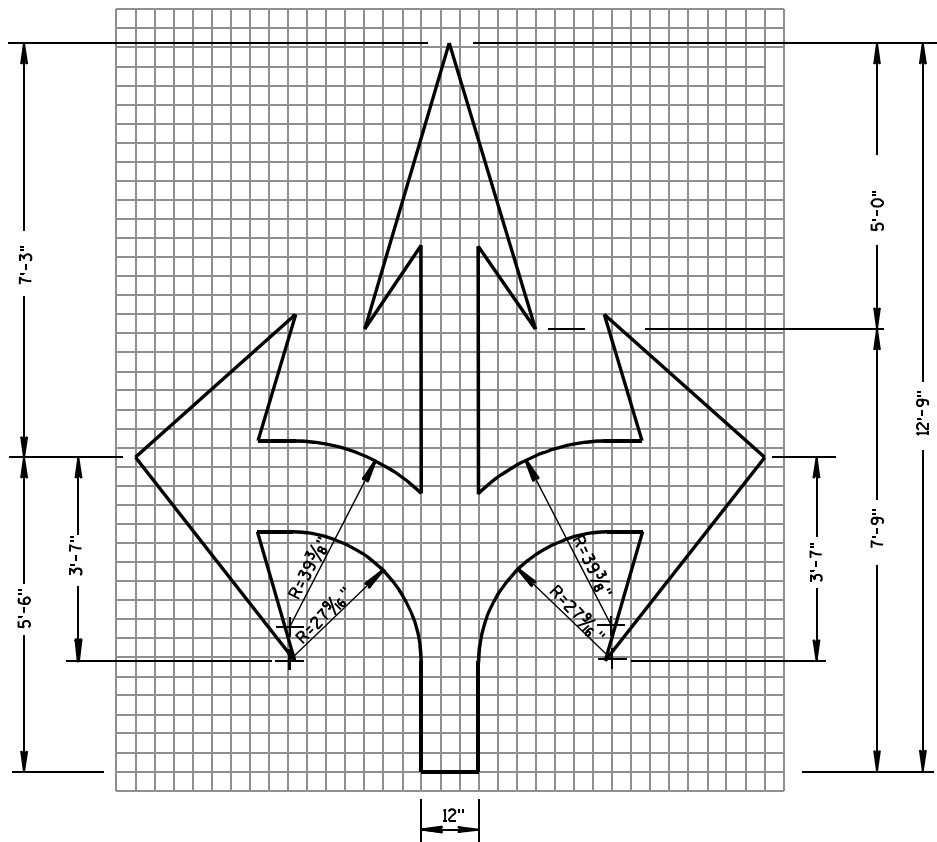
FHWA



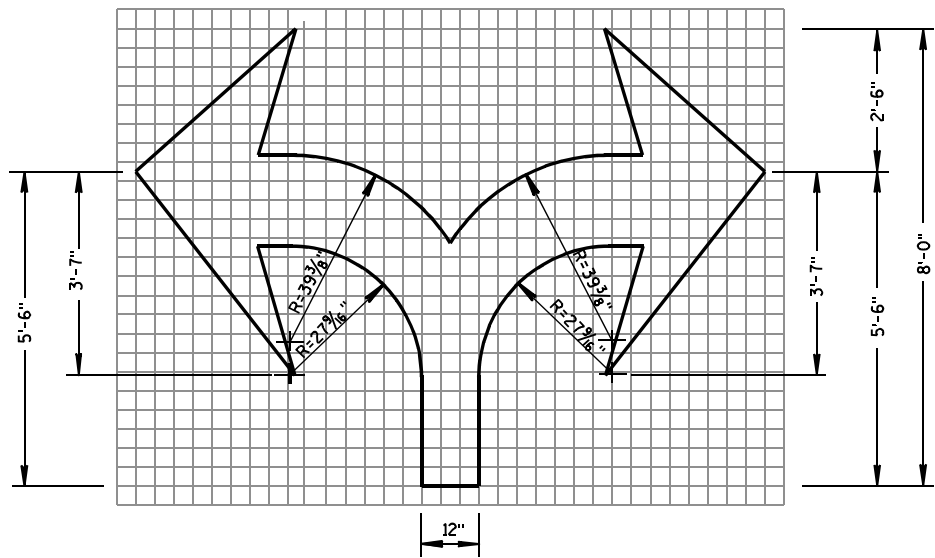
TYPE 2



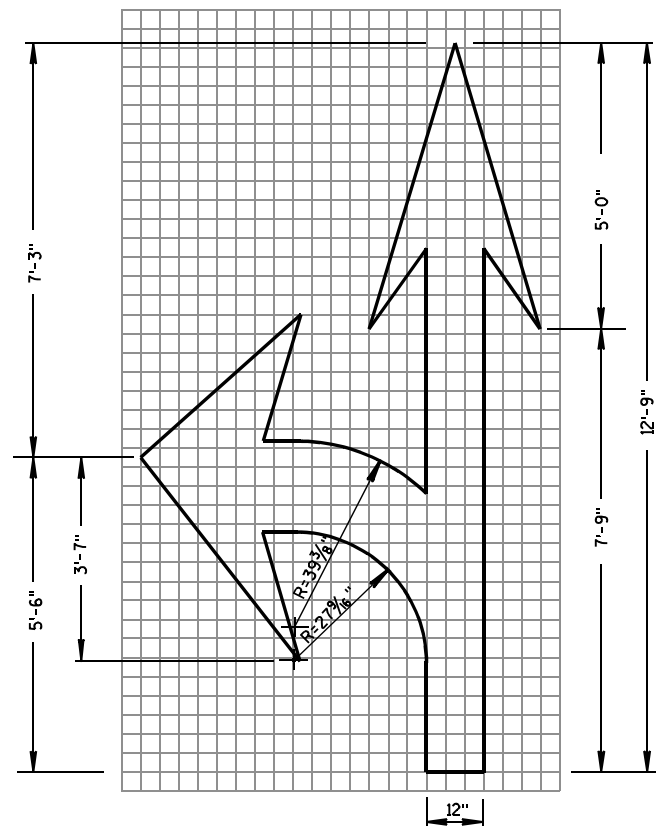
TYPE 1



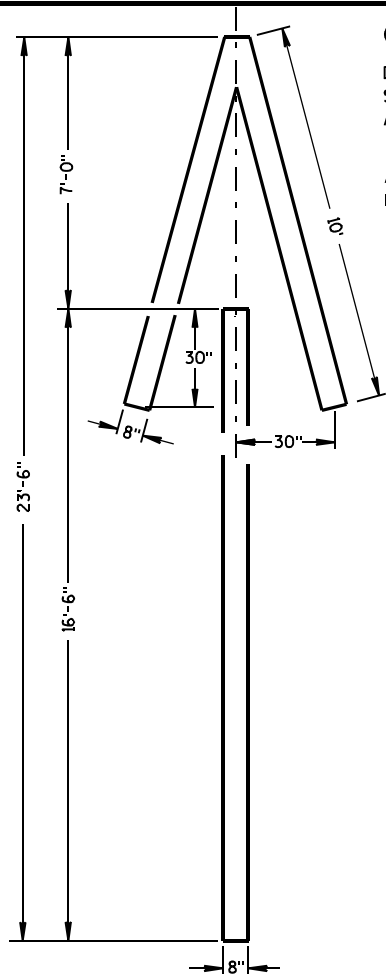
TYPE 6



TYPE 7



TYPE 3

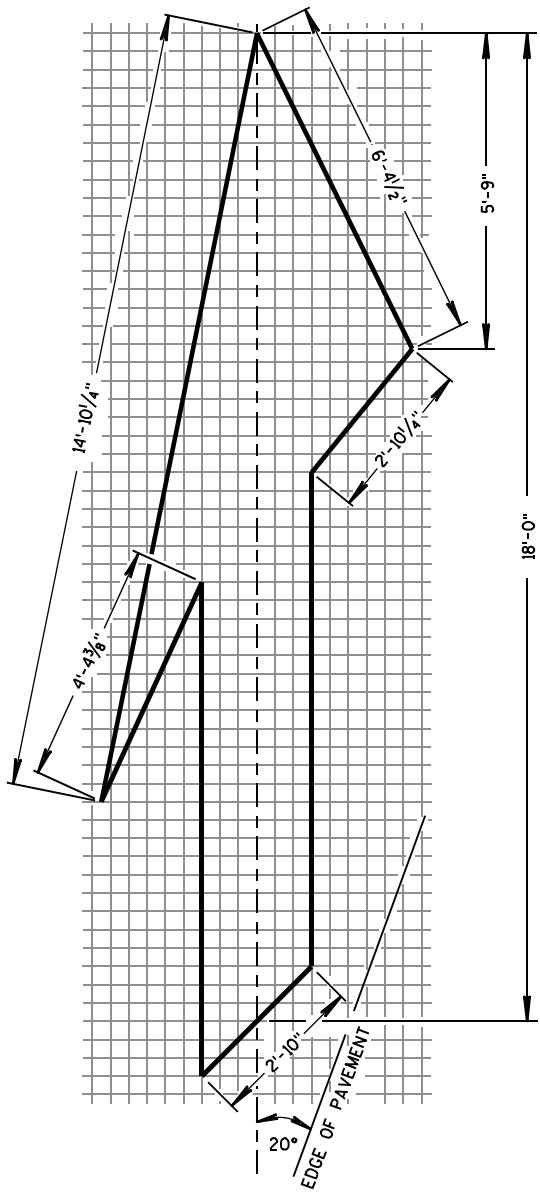


TYPE 4

GENERAL NOTES

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

ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.



TYPE 5 LANE DROP ARROW

PAVEMENT MARKING ARROWS

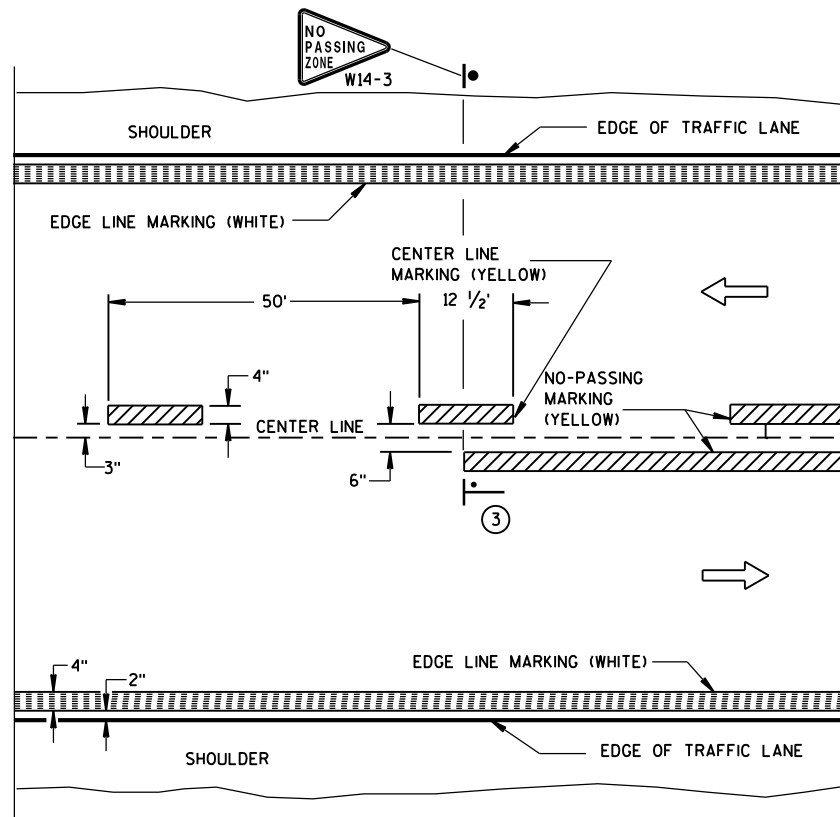
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

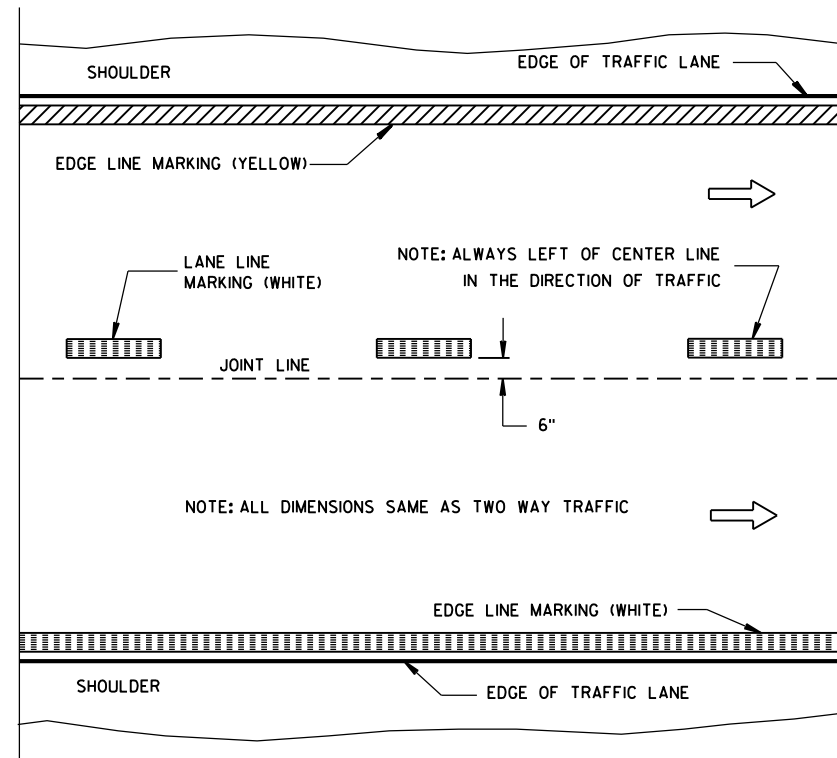
7/1/11
DATE

/S/ Thomas N. Notbohm
STATE TRAFFIC ENGINEER OF DESIGN

FHWA

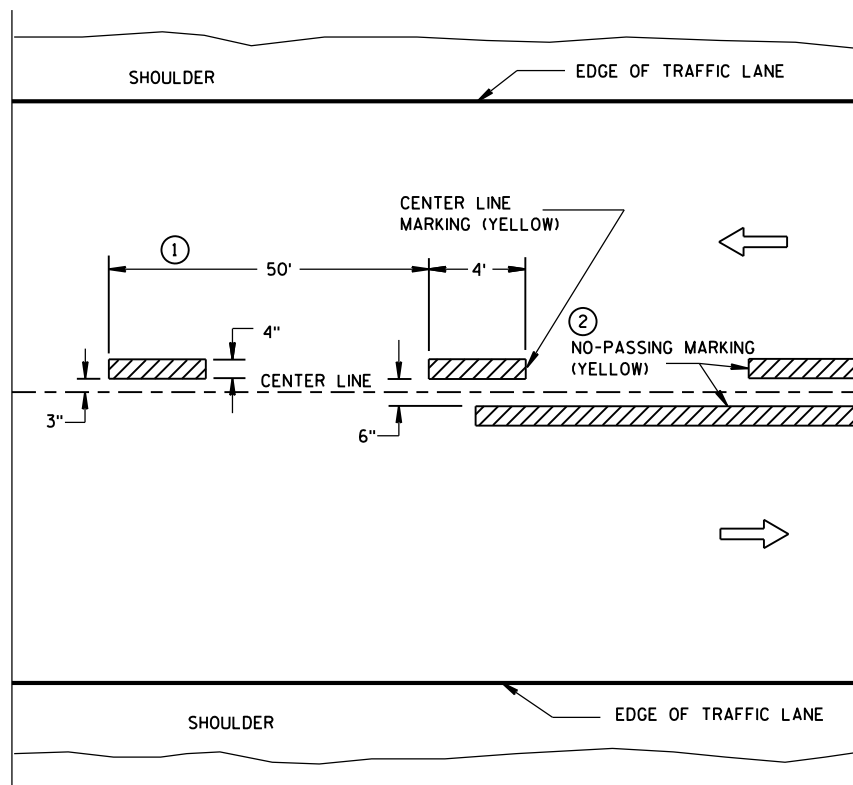


TWO WAY TRAFFIC

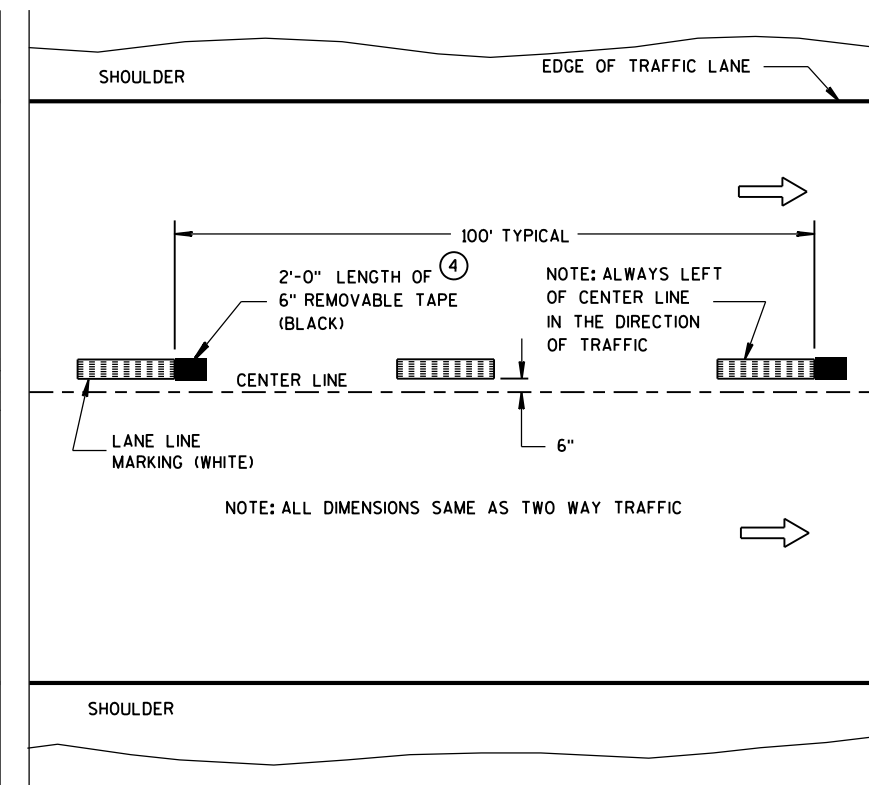


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

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

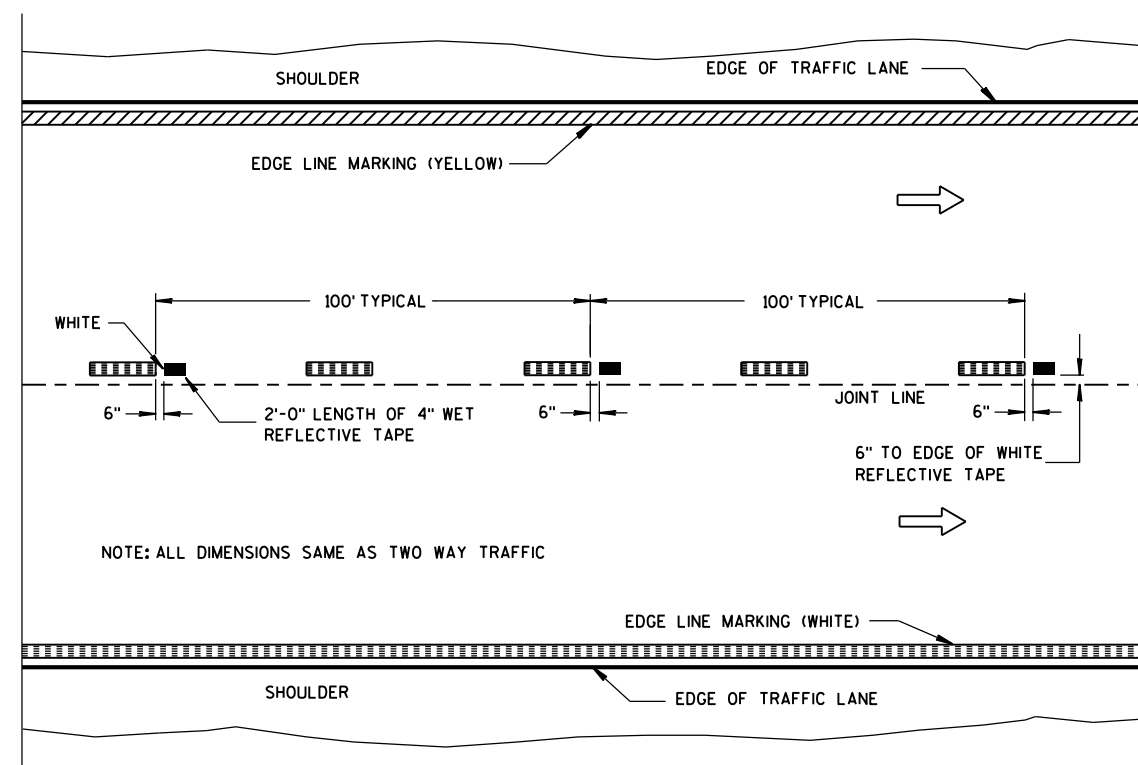
GENERAL NOTES

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

- ① HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
- ② NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
- ③ NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
- ④ CONCRETE ONLY.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

LEGEND

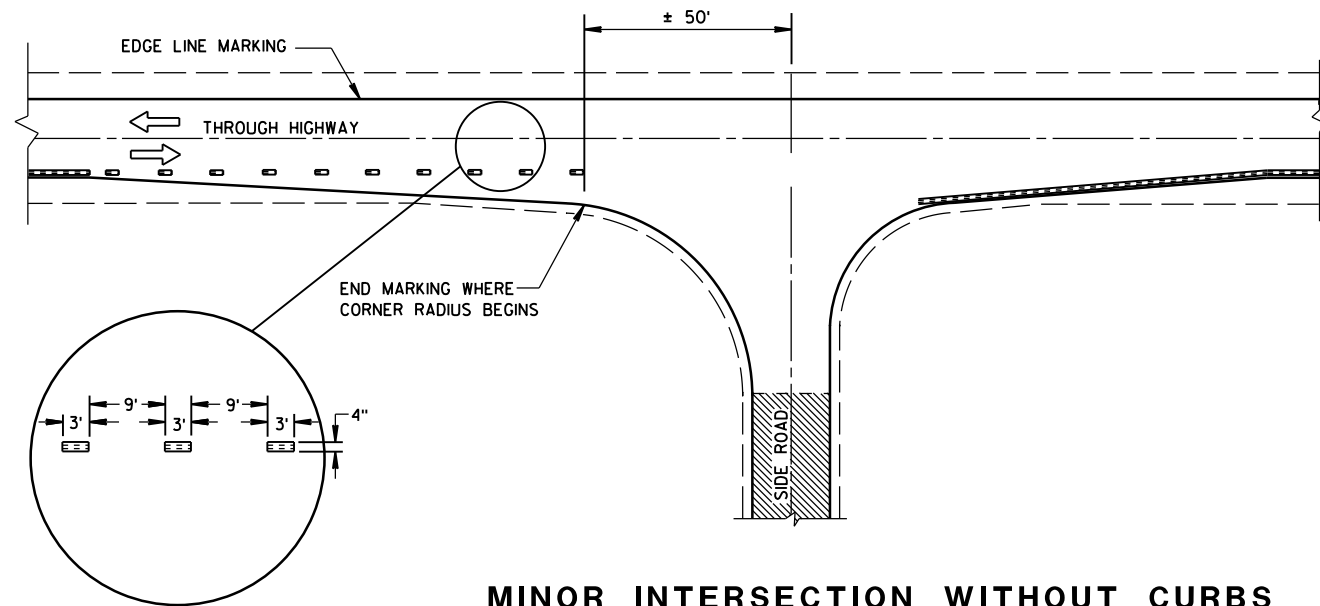
- "T" MARKING
- POST MOUNTED SIGN

PAVEMENT MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5-13-2013
DATE
FHWA

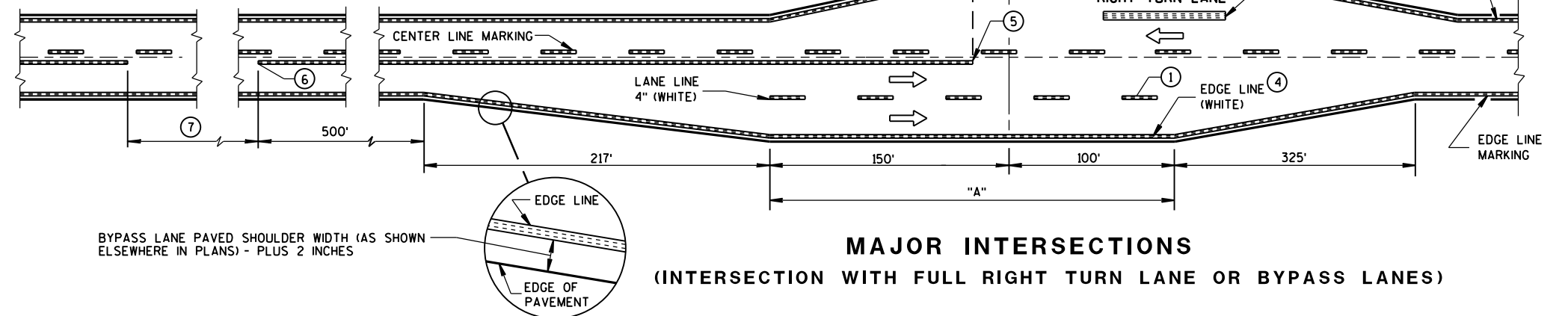
/S/ Travis Feltes
STATE TRAFFIC ENGINEER



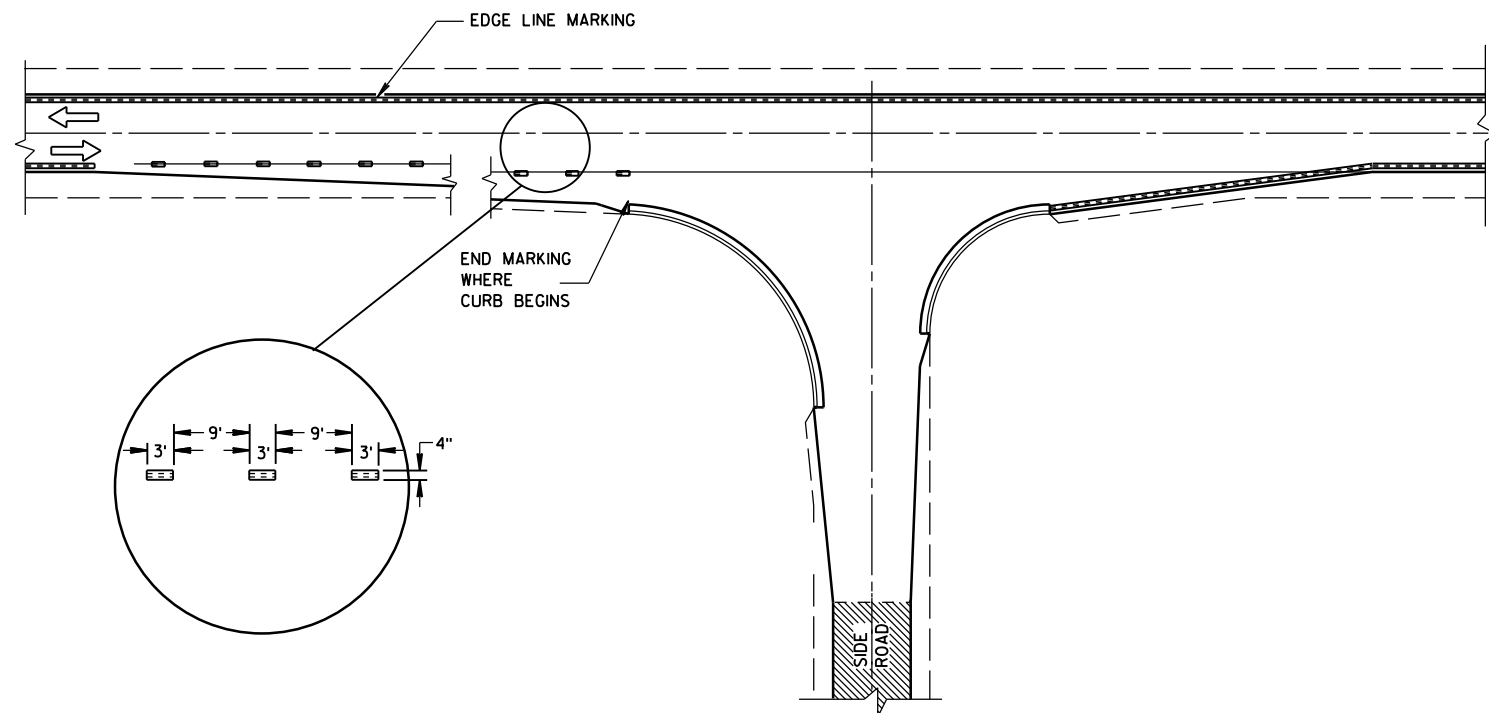
MINOR INTERSECTION WITHOUT CURBS

⑦

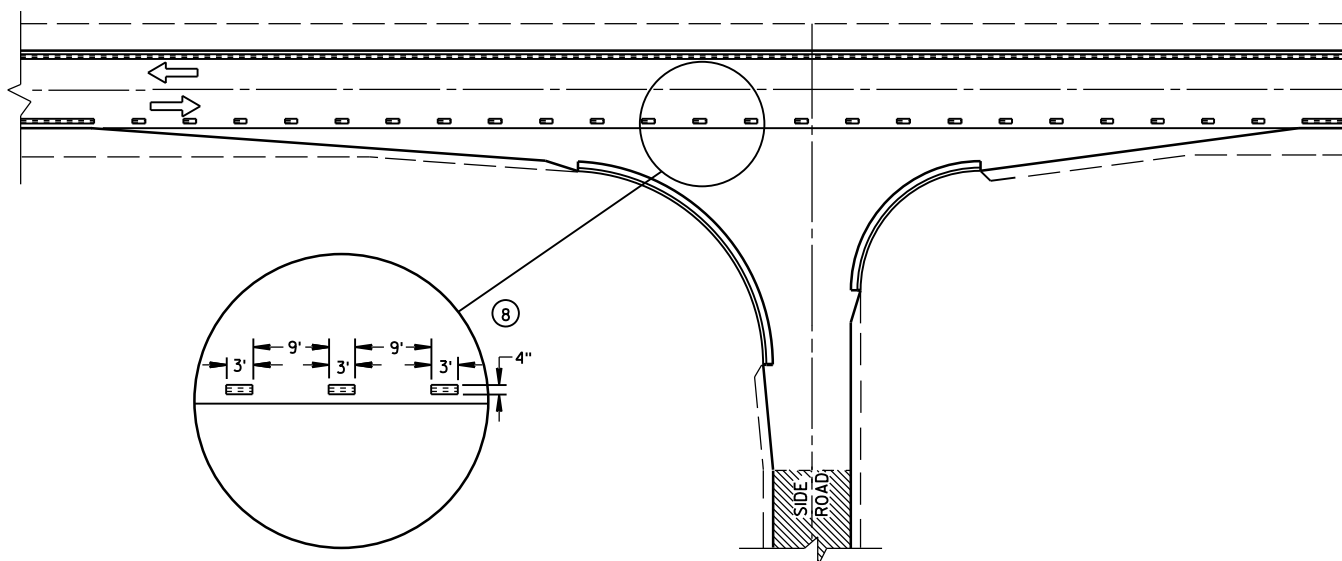
POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792



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



MINOR INTERSECTION WITH CURBS
(TYPICAL MARKING)



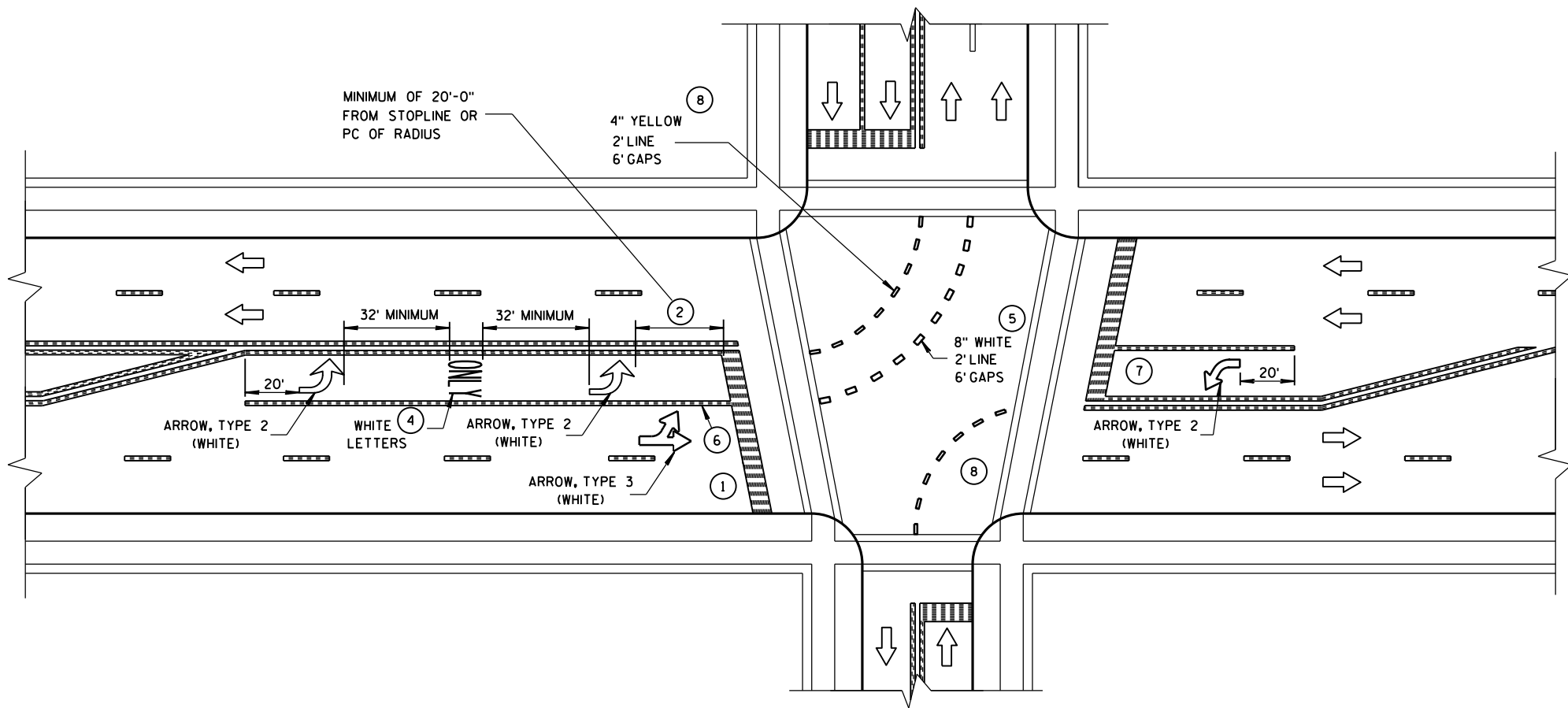
MINOR INTERSECTION WITH CURBS
③ (FOR SPECIAL CONDITIONS AS SPECIFIED)

GENERAL NOTES

- EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.
- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
 - ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
 - ③ ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.
 - ④ THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.
 - ⑤ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.
 - ⑥ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
 - ⑦ IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.
 - ⑧ 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

PAVEMENT MARKING
(INTERSECTIONS)

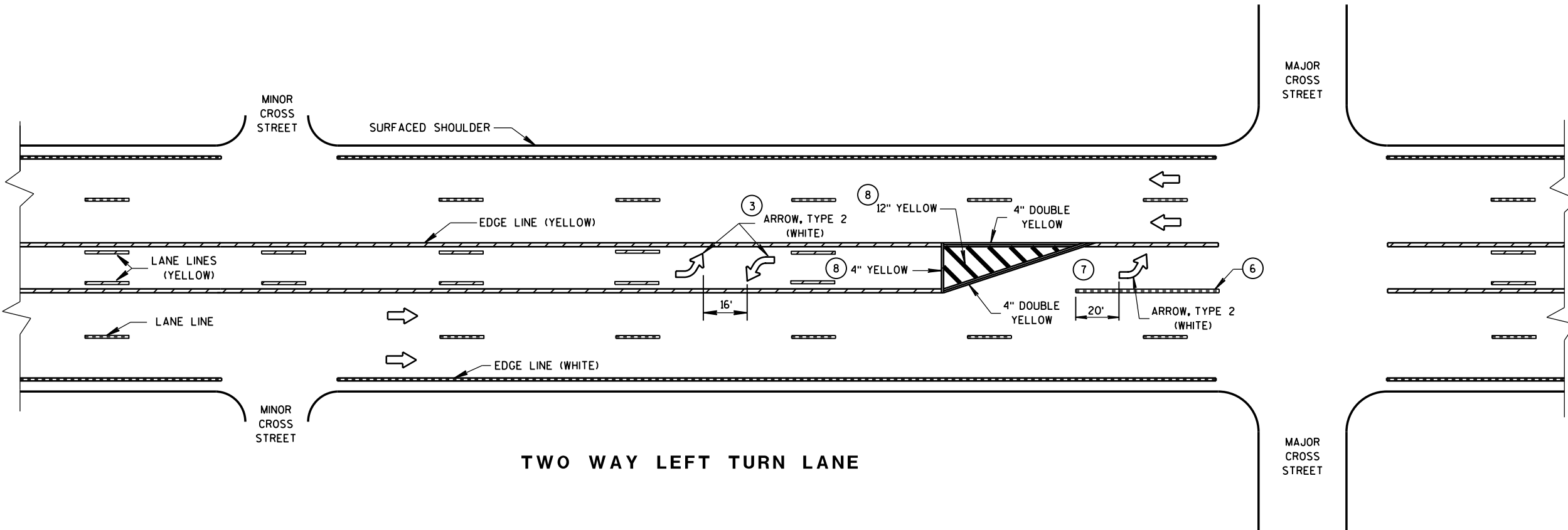
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



GENERAL NOTES

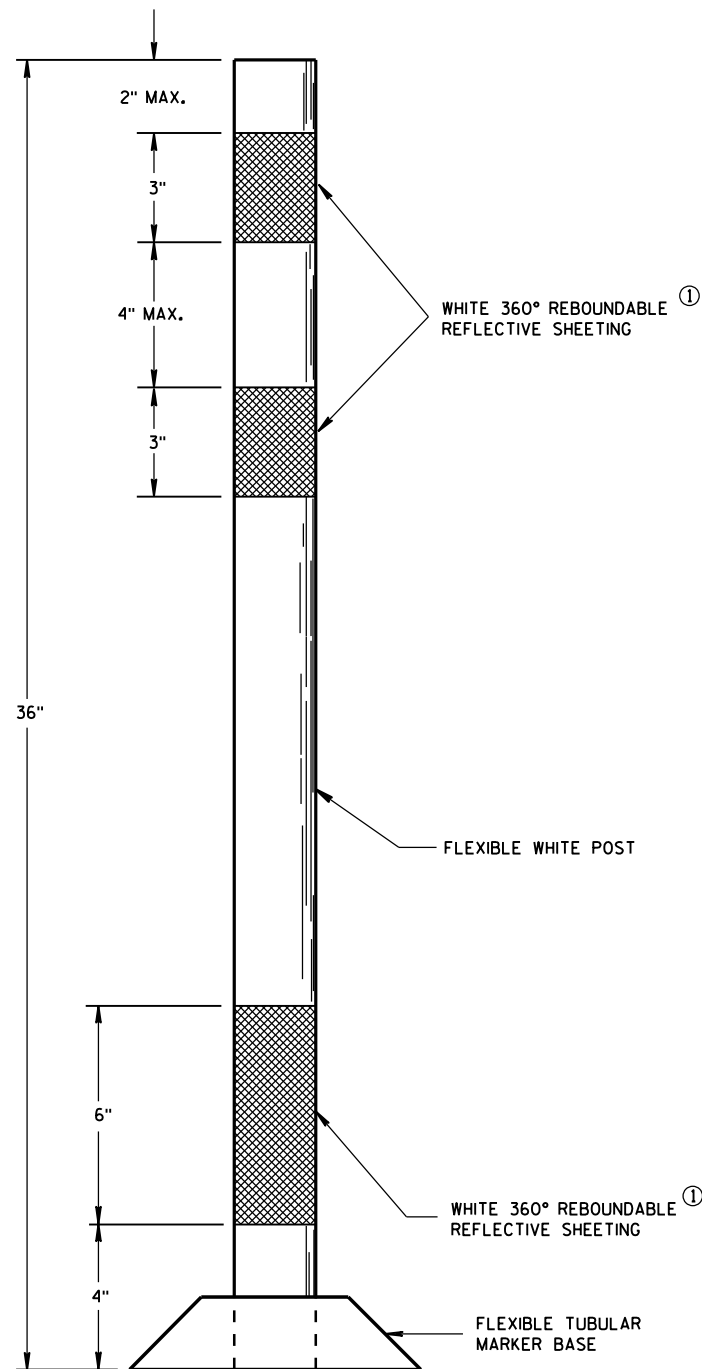
- 1 STOP BAR IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
- 2 DISTANCE MAY BE ADJUSTED TO ACCOMODATE SHORT LEFT TURN LANES. AS APPROVED BY THE ENGINEER.
- 3 A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- 4 ADD EXTRA SETS OF ONE ARROW AND ONE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

NOTE:
ARROW SYMBOL (➡)
SHOWS DIRECTION OF TRAVEL

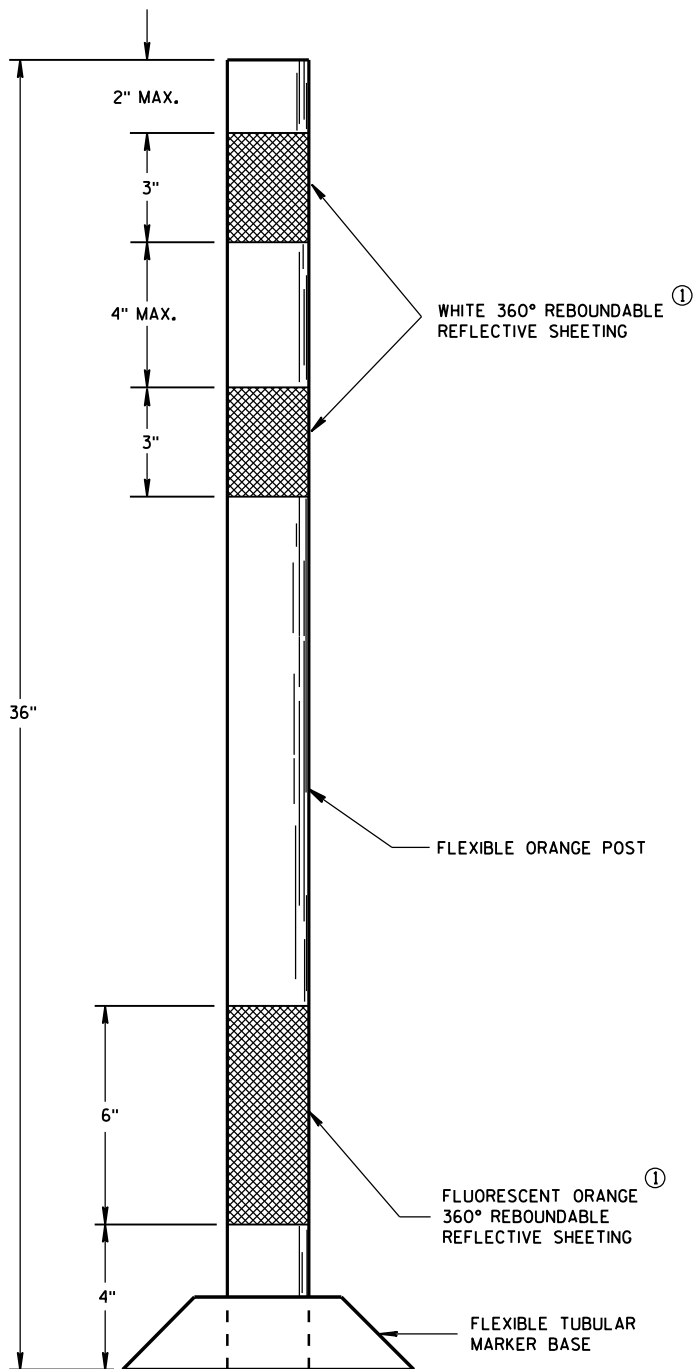


PAVEMENT MARKING
(LEFT TURN LANE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**FLEXIBLE
TUBULAR MARKER POST
PERMANENT CROSSOVER**



**FLEXIBLE
TUBULAR MARKER POST
WORK ZONE**

GENERAL NOTES

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

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

FLEXIBLE TUBULAR MARKER POST	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE FHWA	/S/ Peter Amakobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER

LEGEND

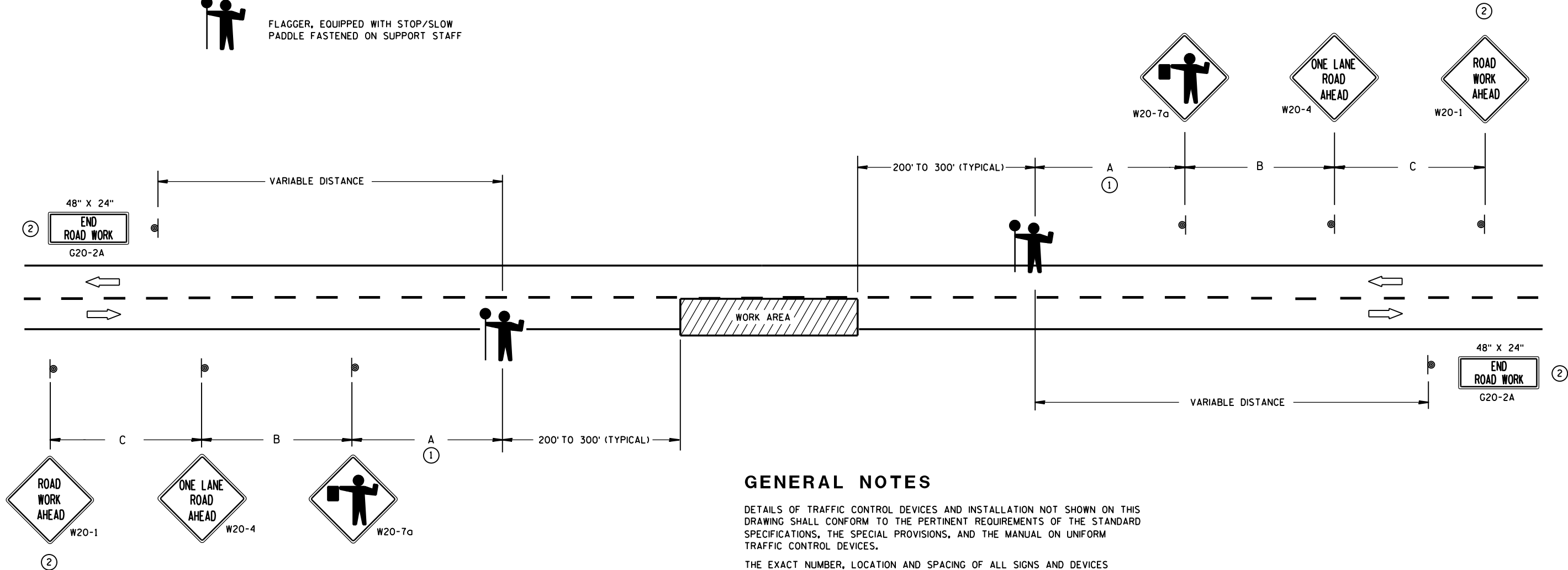
-  SIGN ON PORTABLE OR PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN SPACING TABLE

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



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



GENERAL NOTES

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

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

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

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

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

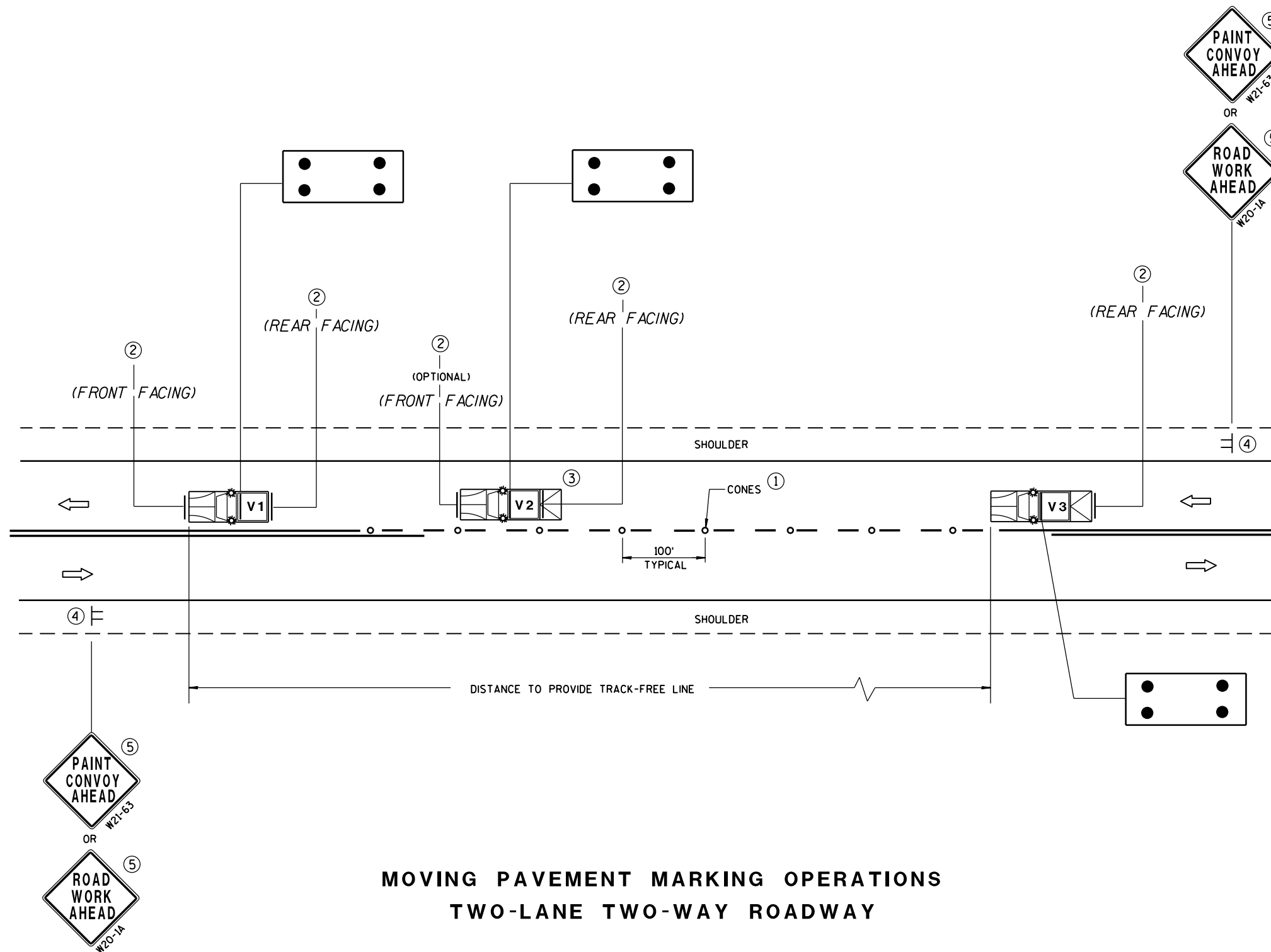
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

- ① FOR A MOVING WORK OPERATION, SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



MOVING PAVEMENT MARKING OPERATIONS TWO-LANE TWO-WAY ROADWAY

GENERAL NOTES

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

VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

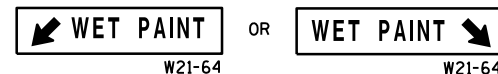
THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE MARKING.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

① CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

② USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.



③ OPTIONAL TRUCK-MOUNTED ATTENUATOR.

④ SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

⑤ IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

LEGEND

V1 LEAD VEHICLE

V2 SHADOW VEHICLE

V3 TRAIL VEHICLE WITH TMA

TMA TRUCK-MOUNTED ATTENUATOR

Sign on Temporary Support

Direction of Traffic

CONES

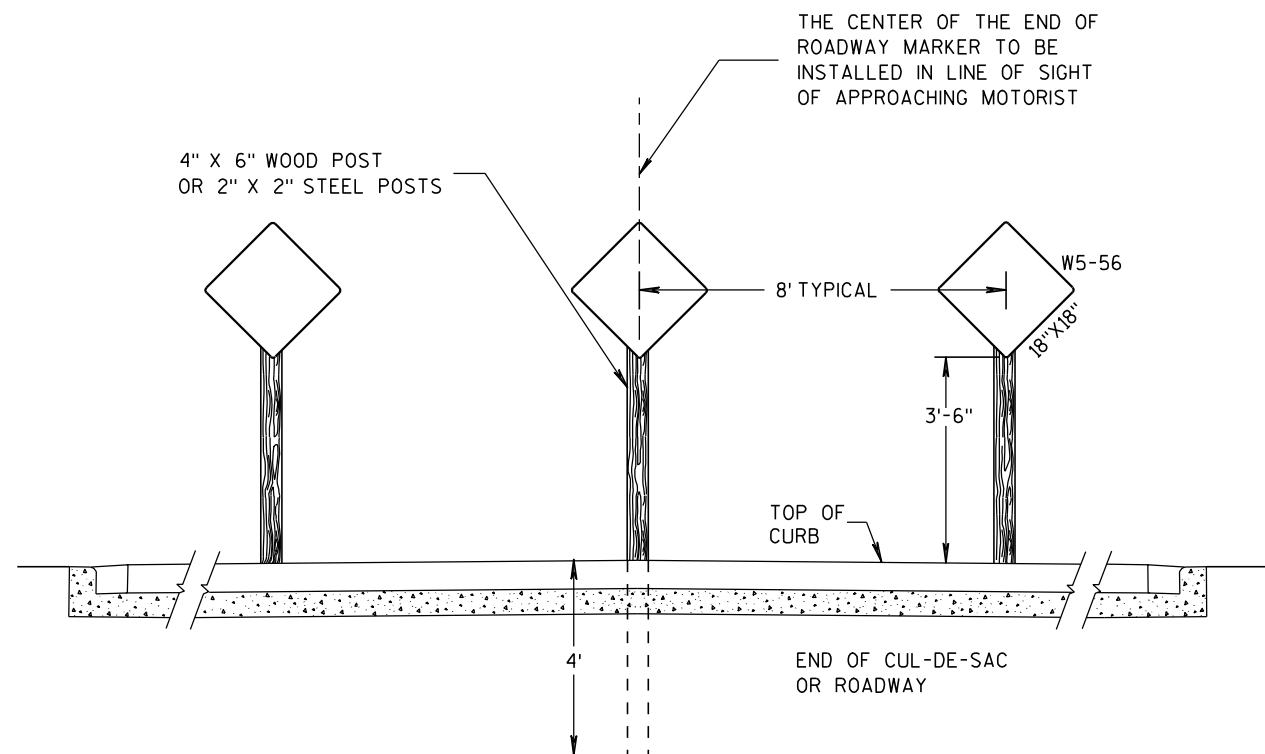
FLASHING ARROW PANEL (CAUTION)

MOVING PAVEMENT MARKING
OPERATION
TWO-LANE TWO-WAY ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016
DATE
FHWA

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC
SAFETY ENGINEER



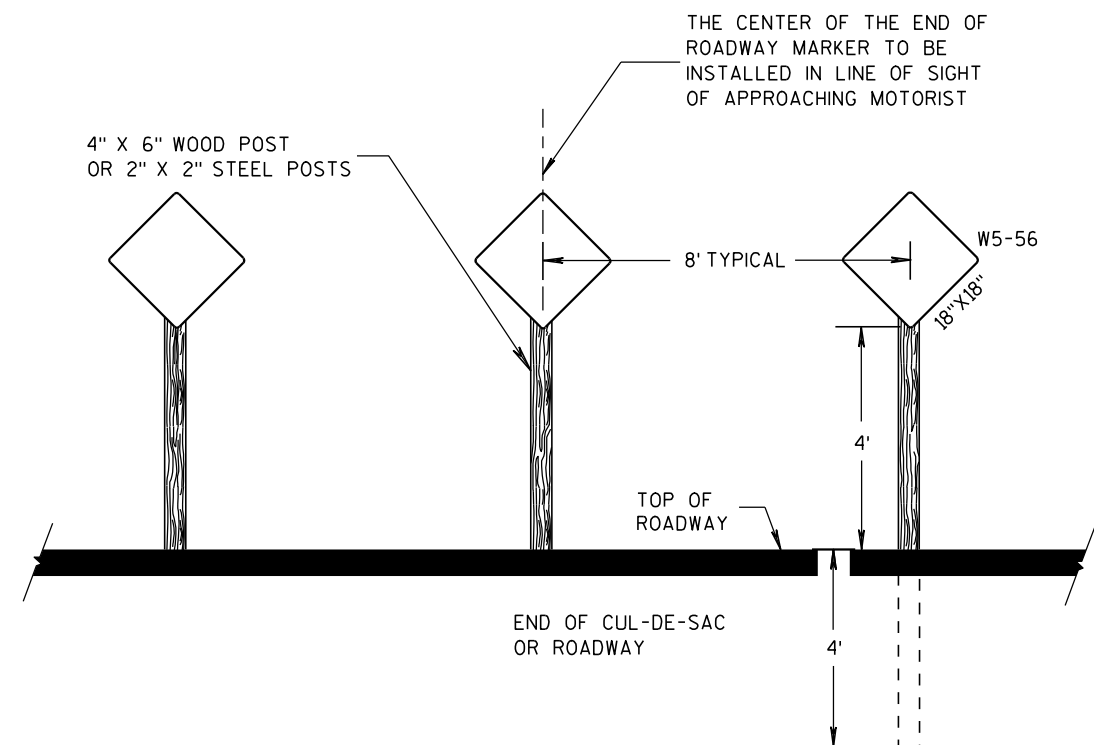
TYPICAL URBAN SIGN INSTALLATION (WITH CURB & GUTTER)

GENERAL NOTES

SIGN LOCATIONS SHOWN ARE TYPICAL PLACEMENT AND MAY BE ADJUSTED BY THE ENGINEER AS FIELD CONDITIONS DICTATE.

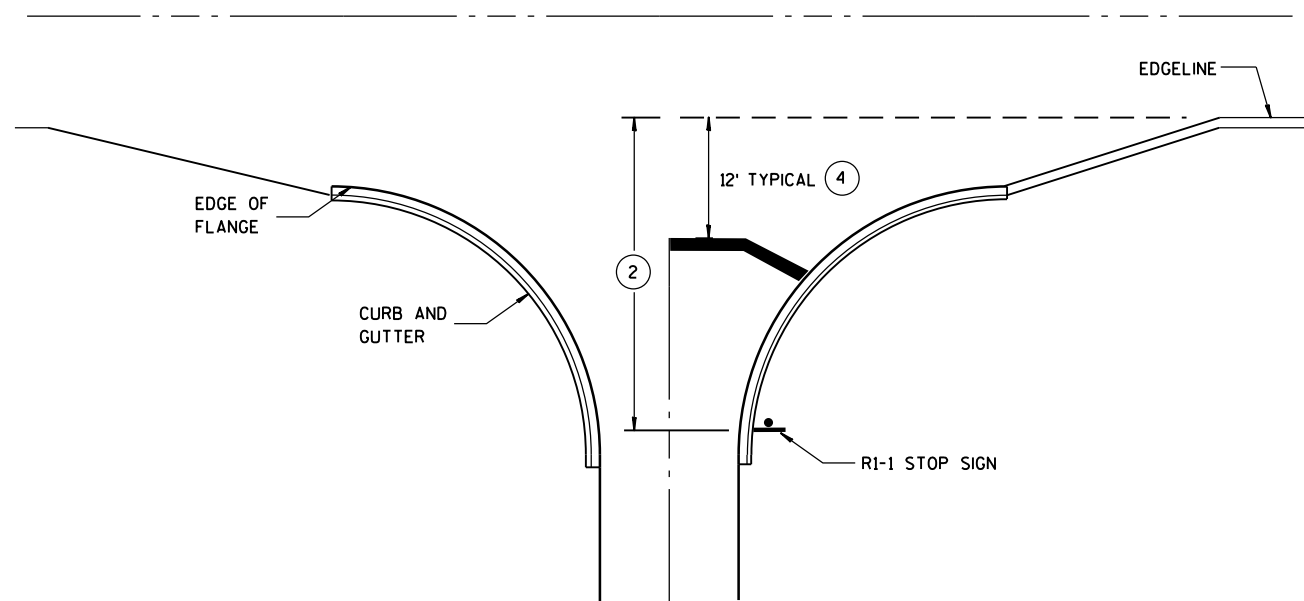
THE MINIMUM NUMBER OF END-OF-ROADWAY SIGNS ARE THREE (AS SHOWN). ADDITIONAL
END-OF-ROADWAY SIGNS MAY BE INSTALLED AS FIELD CONDITIONS DICTATE. (SEE
SIGNING PLAN).

WHEN BEAMGUARD IS REQUIRED, PLACE END-OF-ROADWAY SIGNING BEHIND BEAMGUARD.

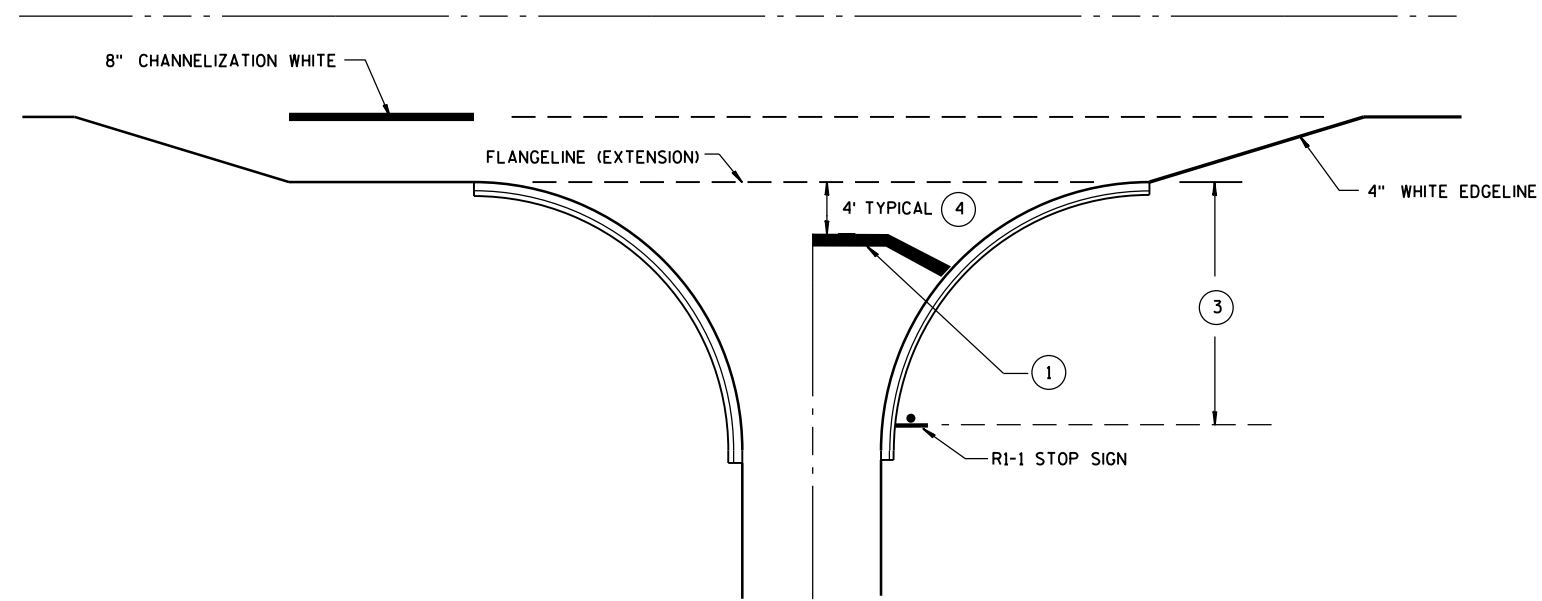


TYPICAL RURAL SIGN INSTALLATION (WITHOUT CURB & GUTTER)

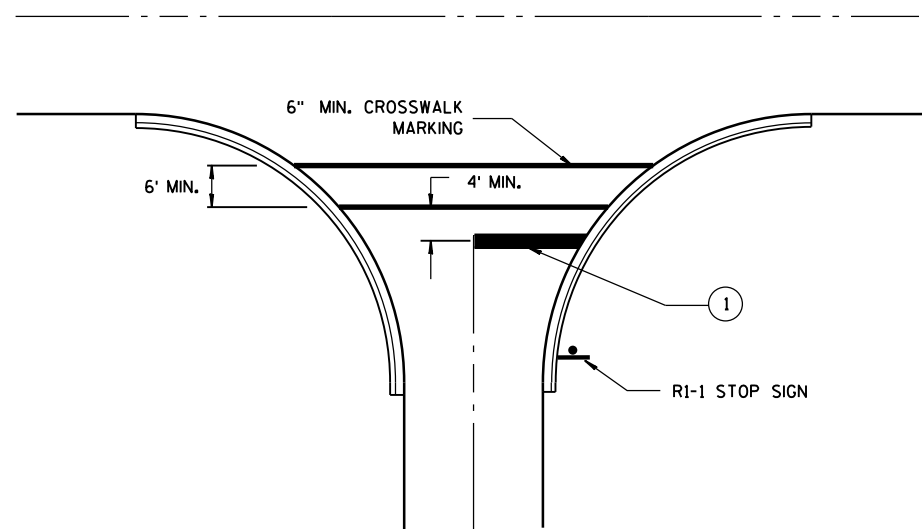
END-OF-ROADWAY SIGNING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED <u>8/1/2011</u> DATE	<u>/S/ Thomas N. Notbohm</u> STATE TRAFFIC ENGINEER OF DESIGN
FHWA	



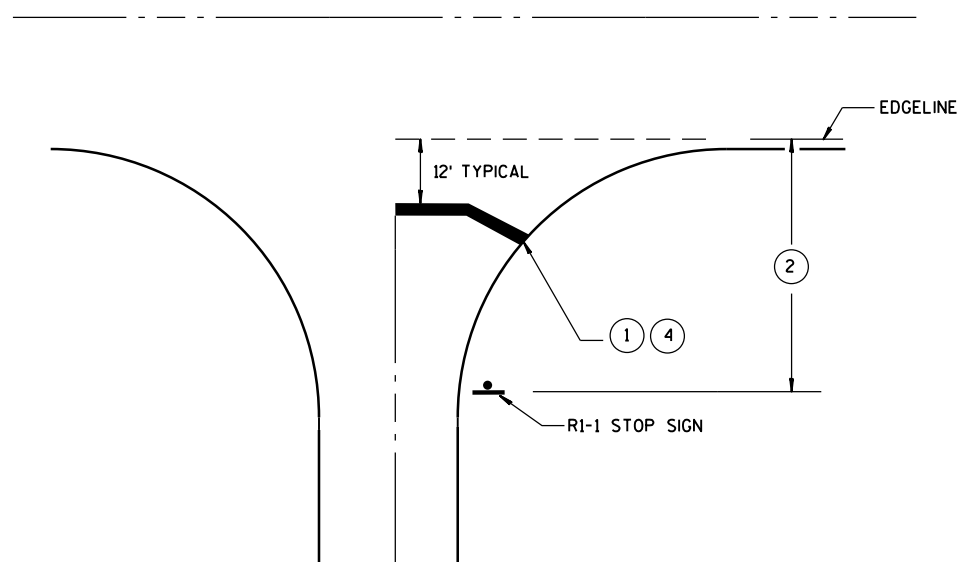
**TYPICAL STOP LINE PAVEMENT MARKING
WITH CURB AND GUTTER**



**TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH RIGHT TURN LANE**



**TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH CROSSWALK MARKING**



**TYPICAL STOP LINE PAVEMENT MARKING
WITHOUT CURB AND GUTTER**

GENERAL NOTES

- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGE LINE THAN NO STOP LINE IS REQUIRED.
- ③ IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
- ④ MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES. (NO CLOSER THAN 4 FEET).

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-18-2016
DATE

FHWA

/S/ Matthew R. Rauch
STATE SIGNING AND MARKING ENGINEER

GENERAL NOTES

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

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

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

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

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

W20-1A 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.

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

TABLE A

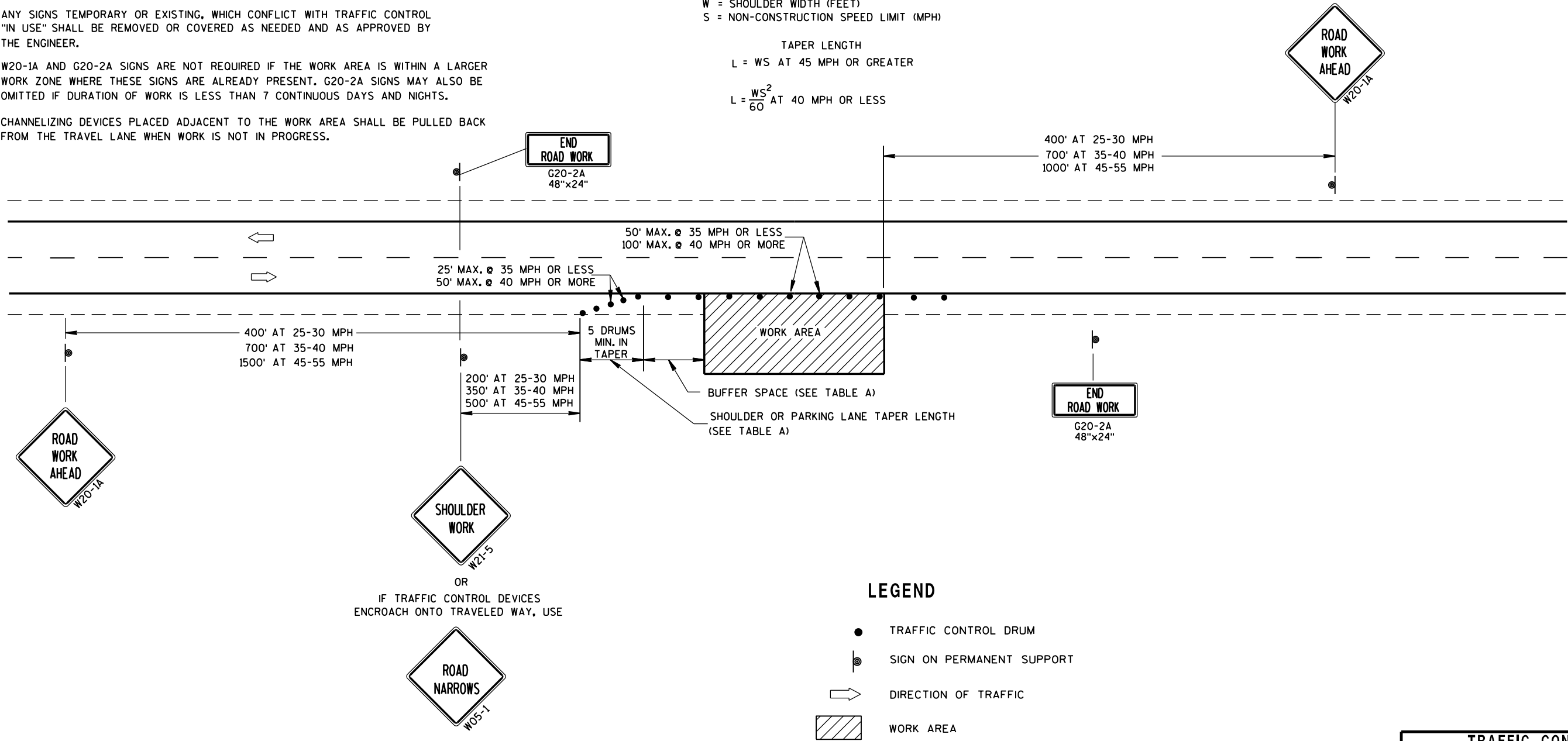
SHOULDER TAPER LENGTH (FEET)					BUFFER SPACE (FEET)
S \ W	4	6	8	10	
30	20	30	40	50	200
35	30	45	55	70	250
40	40	55	75	90	305
45	60	90	120	150	360
50	70	100	135	170	425
55	75	110	150	185	495

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

TAPER LENGTH
L = WS AT 45 MPH OR GREATER

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

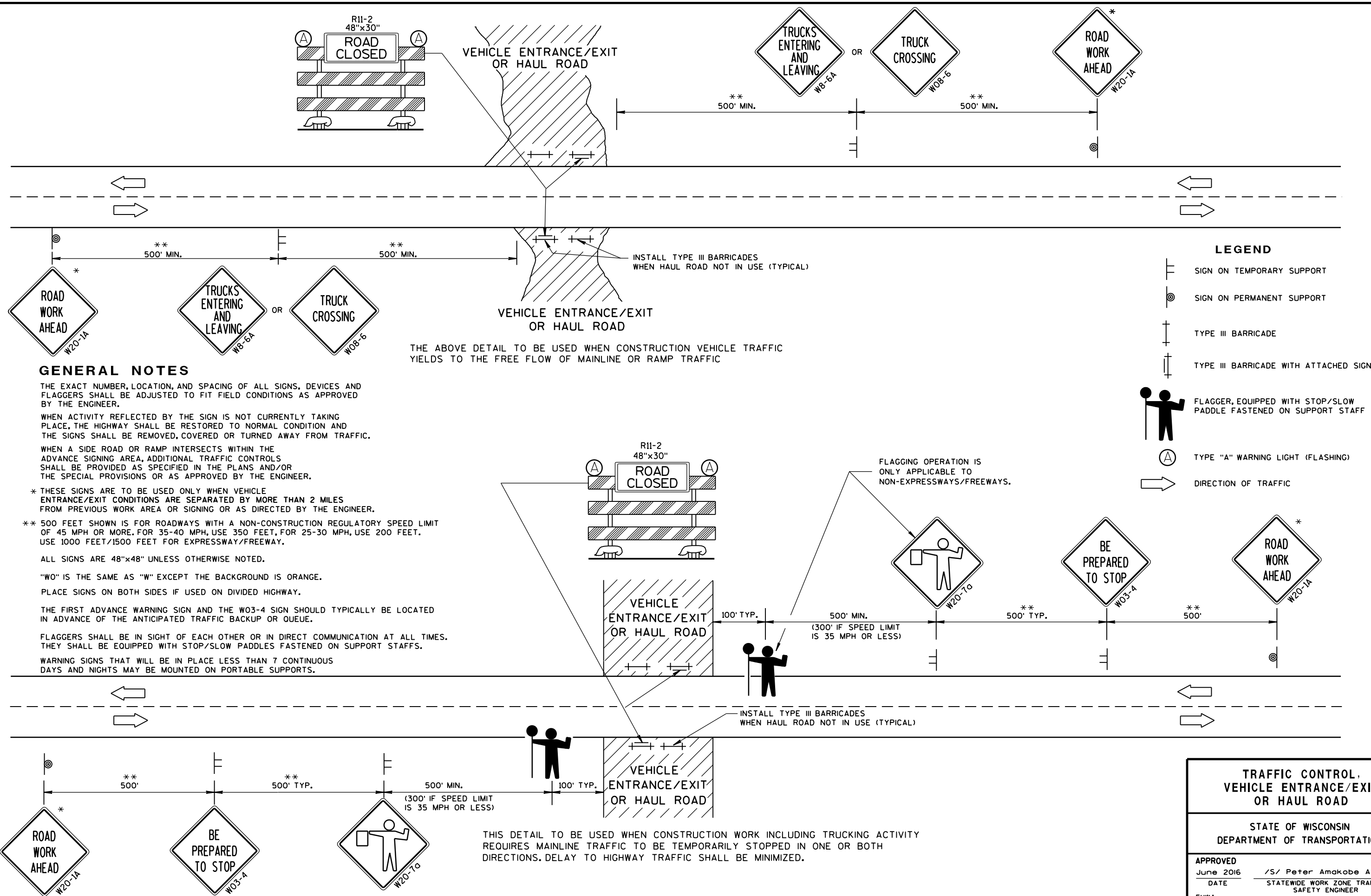
SHOULDER TAPER LENGTH = $\frac{1}{3}L$

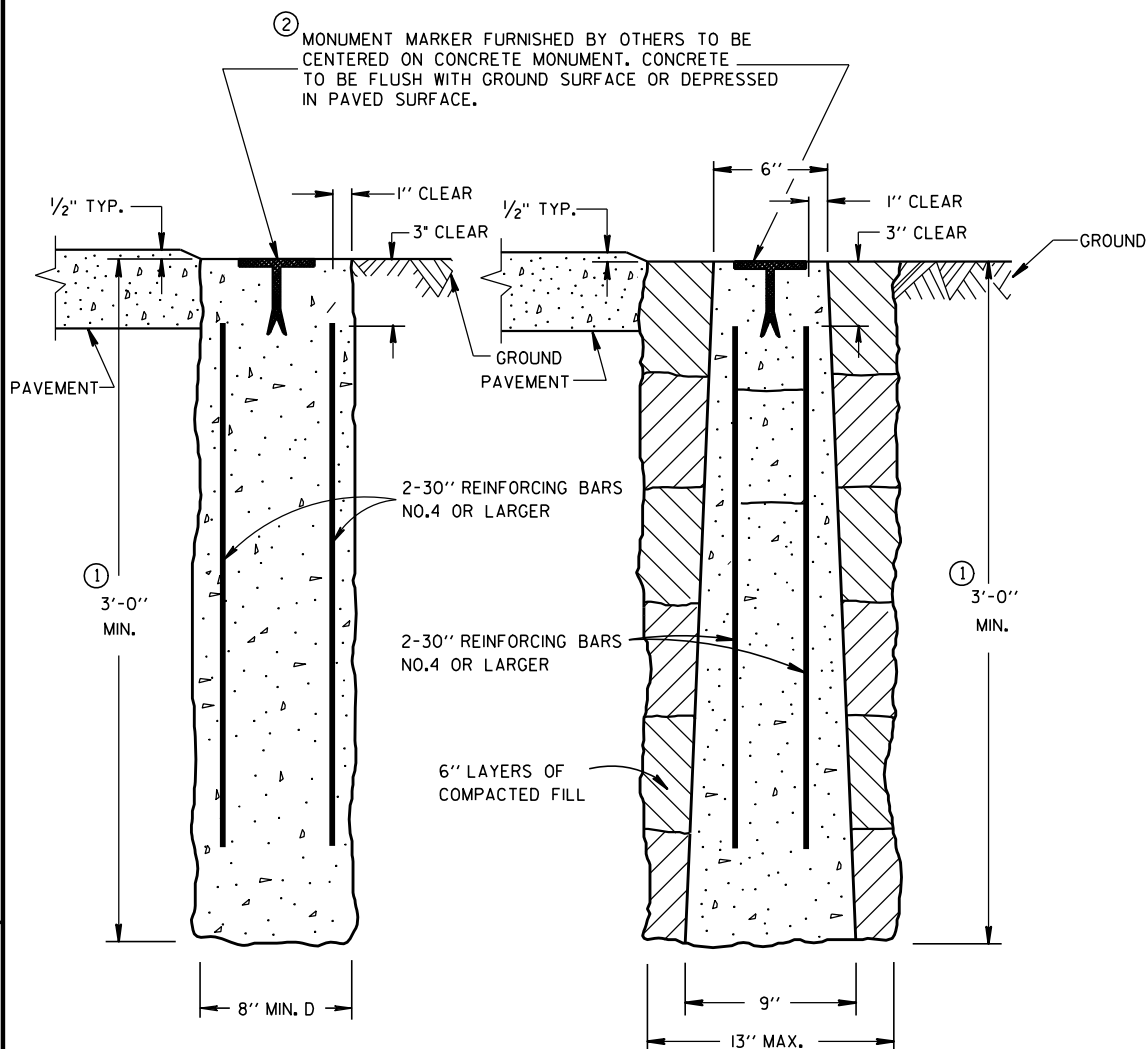


LEGEND

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

TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED July 14, 2015 DATE	/S/ Peter Amakobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA	



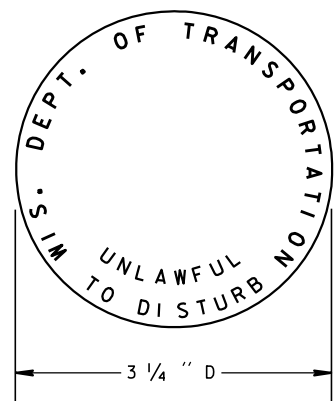


CAST-IN-PLACE

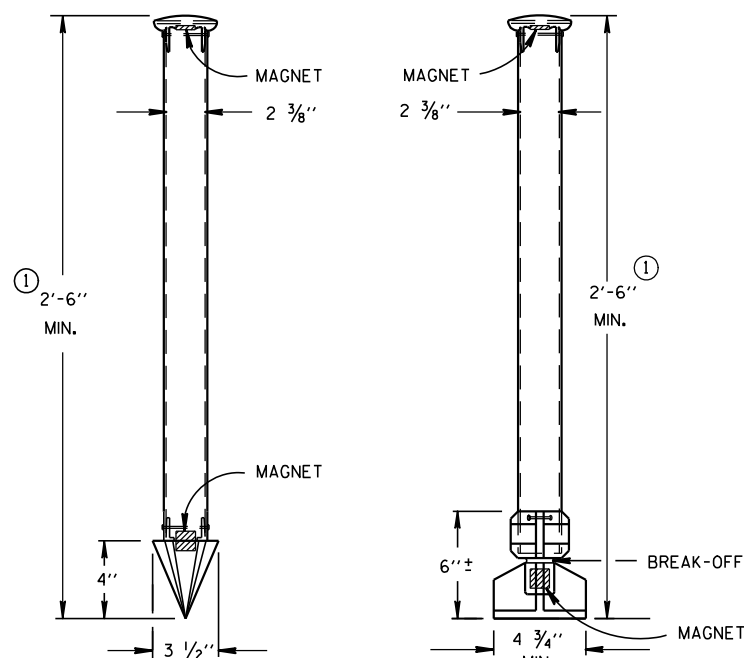
PRECAST

CONCRETE MONUMENTS

TYPE A



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



TYPE C

TYPE D

DRIVE-IN MONUMENT

BREAK-OFF MONUMENT

ALUMINUM MONUMENTS

(INCLUDES MARKER)

GENERAL NOTES

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

DETAILED DRAWINGS OF PROPOSED ALTERNATE DESIGNS FOR METAL MONUMENTS OR MONUMENT COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

INSTALLED METAL MONUMENTS MUST BE EASILY DETECTED WITH A DIP NEEDLE. INSERT PERMANENT MAGNETS SHALL BE ATTACHED NEAR THE TOP AND BOTTOM OF THOSE MONUMENTS CONSTRUCTED OF A METAL ALLOY WHICH IS NOT ATTRACTIVE TO A DIP NEEDLE.

THE CAST IRON MONUMENT COVER SHALL BE A "NON-ROCKING" TYPE. ADJUSTMENT OF THE COVER TO GRADE MAY BE ACCOMPLISHED BY THE USE OF MORTAR AND BRICK, OR BY EITHER PRECAST OR CAST-IN-PLACE REINFORCED CONCRETE GRADE RINGS.

MONUMENTS SHALL BE LOCATED AND PLACED AT THE DIRECTION OF THE ENGINEER.

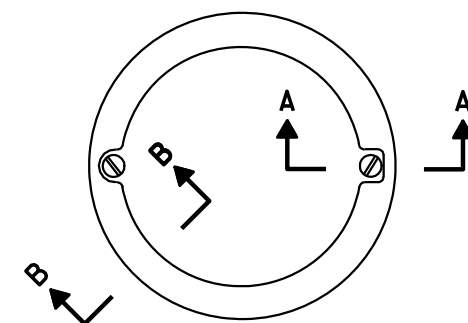
ALUMINUM MONUMENTS AND MONUMENT COVERS SHALL BE MADE FROM AN ALUMINUM AND MAGNESIUM ALLOY AS DETERMINED BY THE MANUFACTURER.

THE MONUMENT COVERS DETAILED ON THIS DRAWING ARE NOT EQUAL ALTERNATES. MONUMENT COVERS SHALL BE CAST IRON UNLESS ALUMINUM IS SPECIFIED ELSEWHERE IN THE CONTRACT.

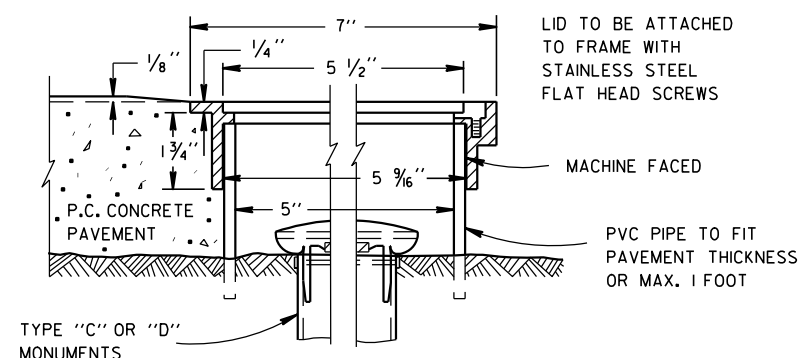
MONUMENT SHALL BE CAST-IN-PLACE CONCRETE UNLESS PRECAST CONCRETE OR ALUMINUM MONUMENTS ARE SPECIFIED IN THE CONTRACT OR PERMITTED BY THE ENGINEER.

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

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

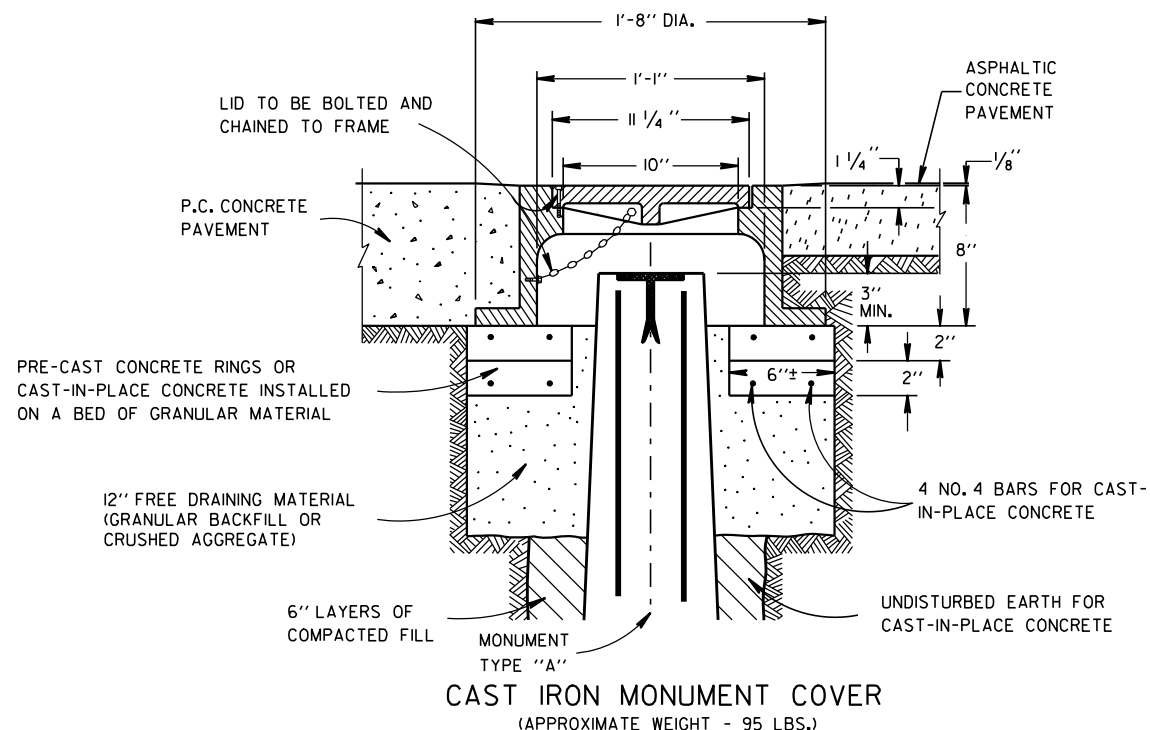


TOP VIEW



SECTION B-B SECTION A-A
ALUMINUM MONUMENT COVER

(APPROXIMATE WEIGHT 2 LBS)
(FOR CONCRETE PAVEMENT ONLY)



CAST IRON MONUMENT COVER

(APPROXIMATE WEIGHT - 95 LBS.)

LANDMARK REFERENCE
MONUMENTS AND COVERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

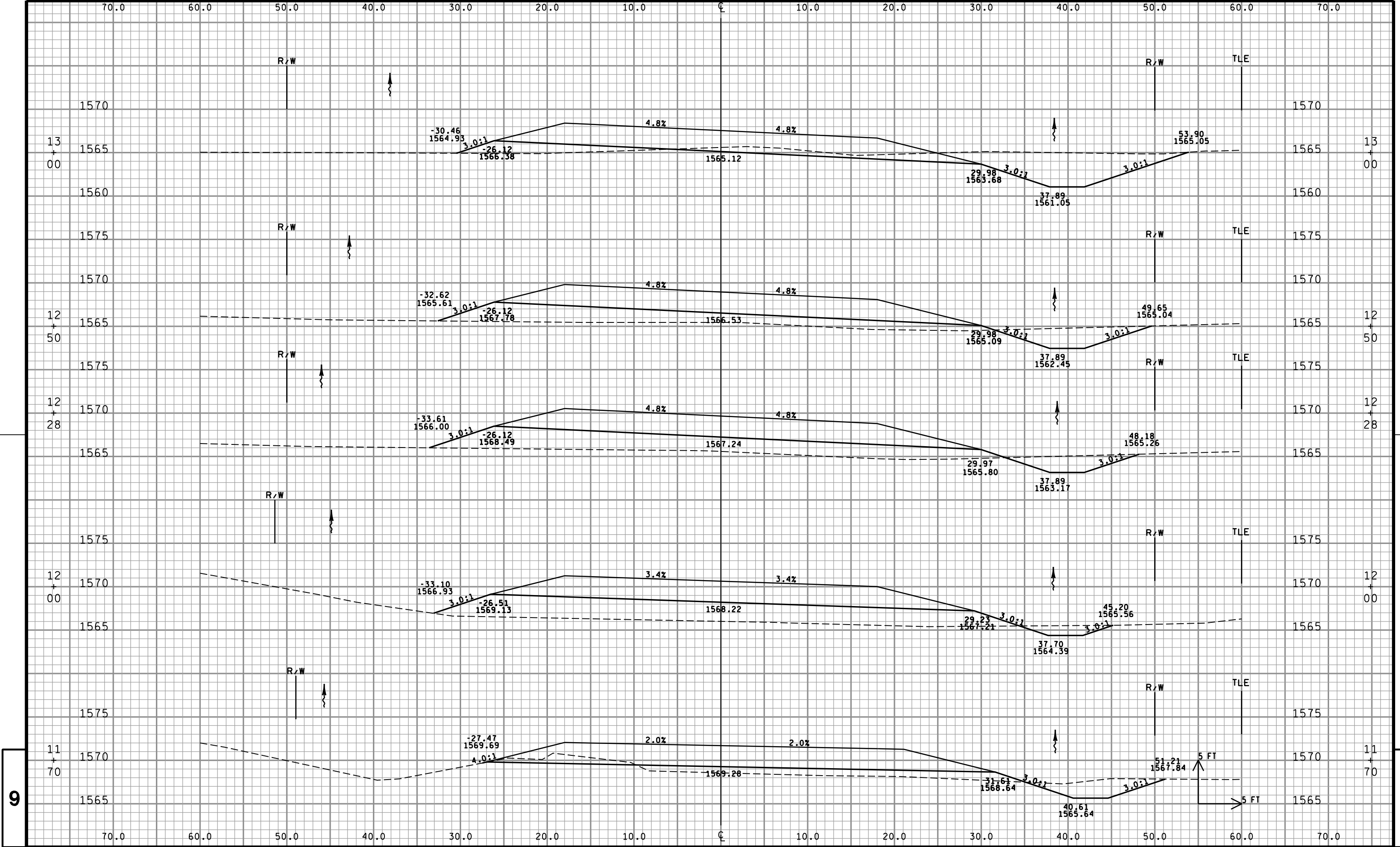
APPROVED

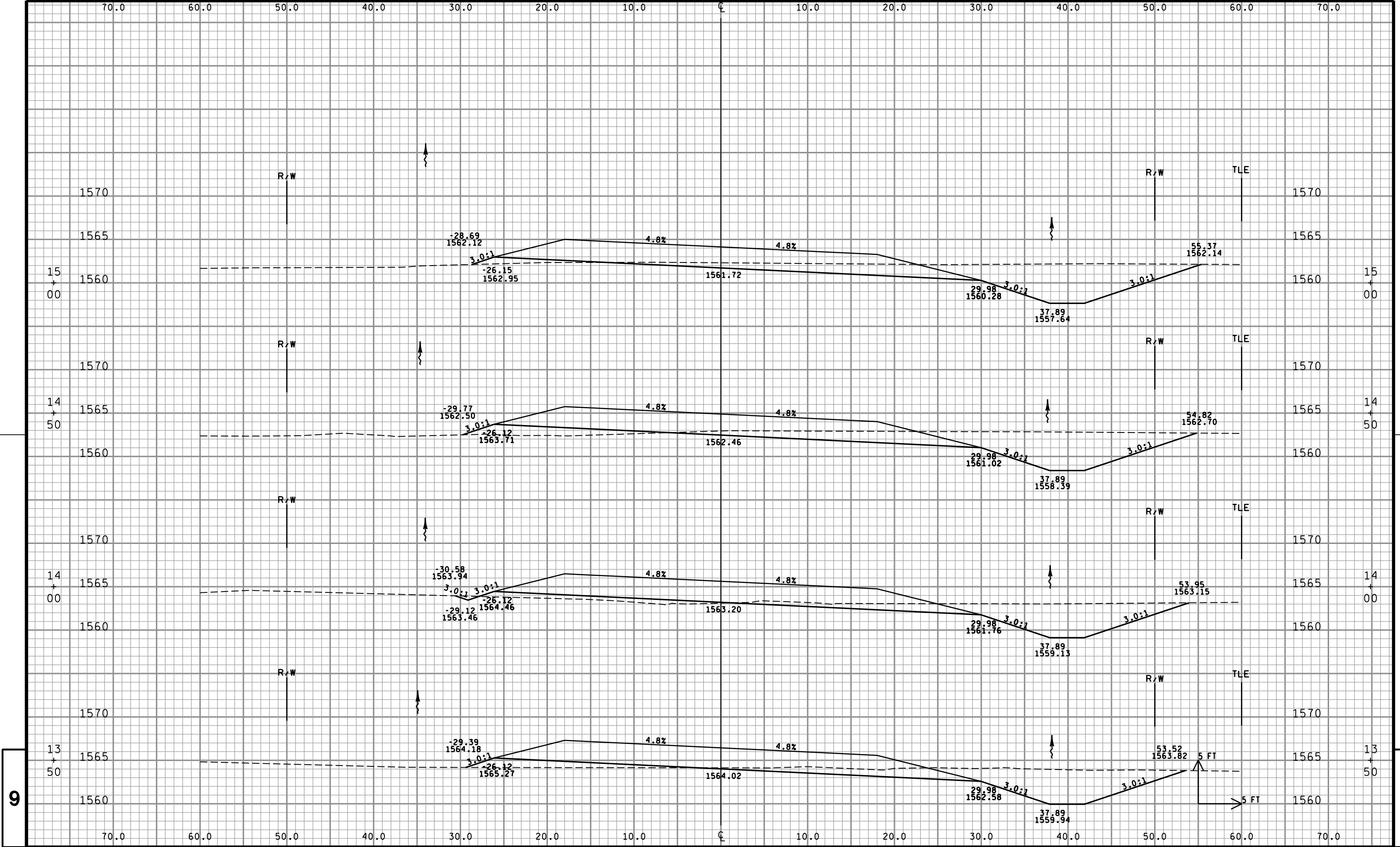
9/22/1999

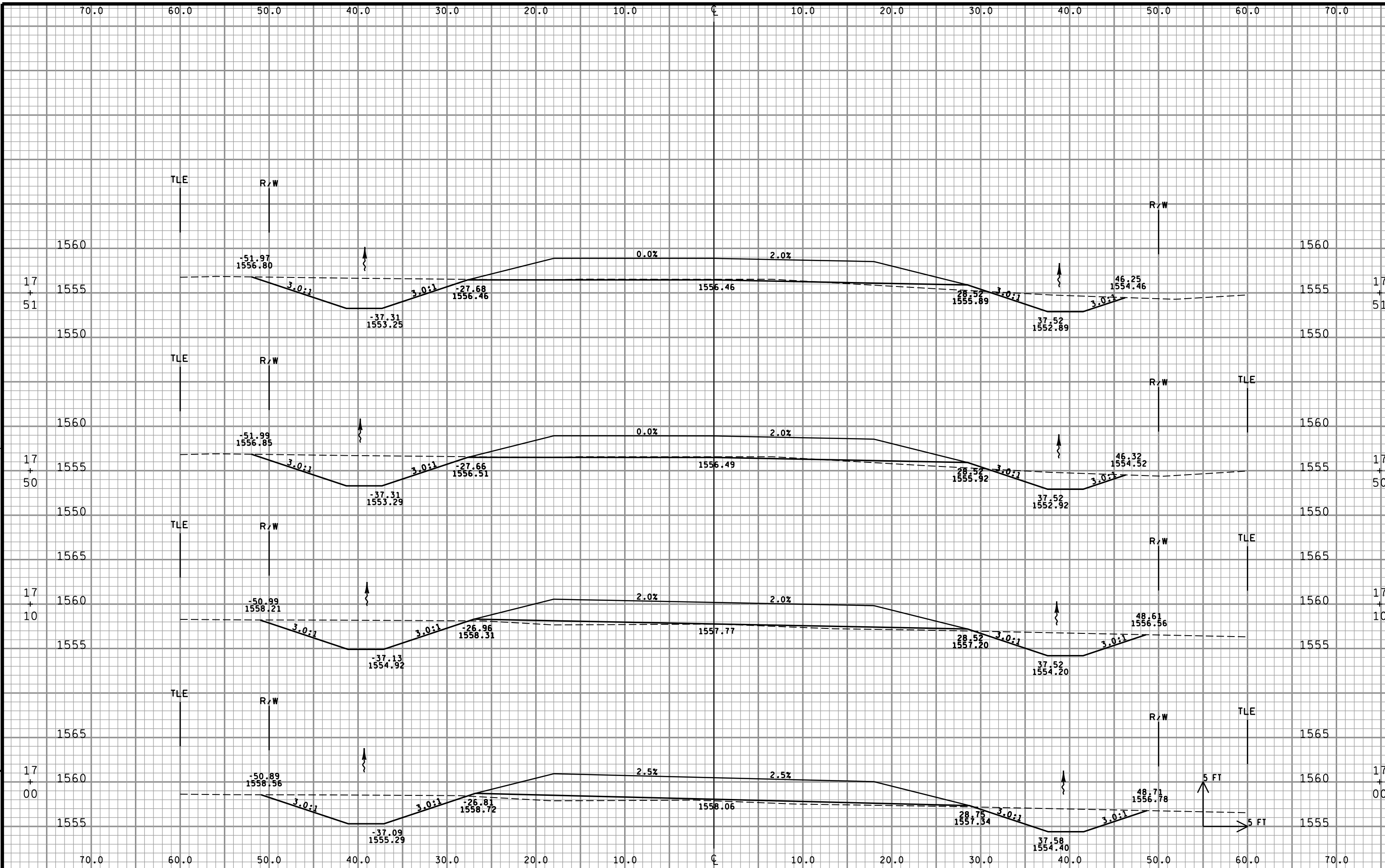
DATE

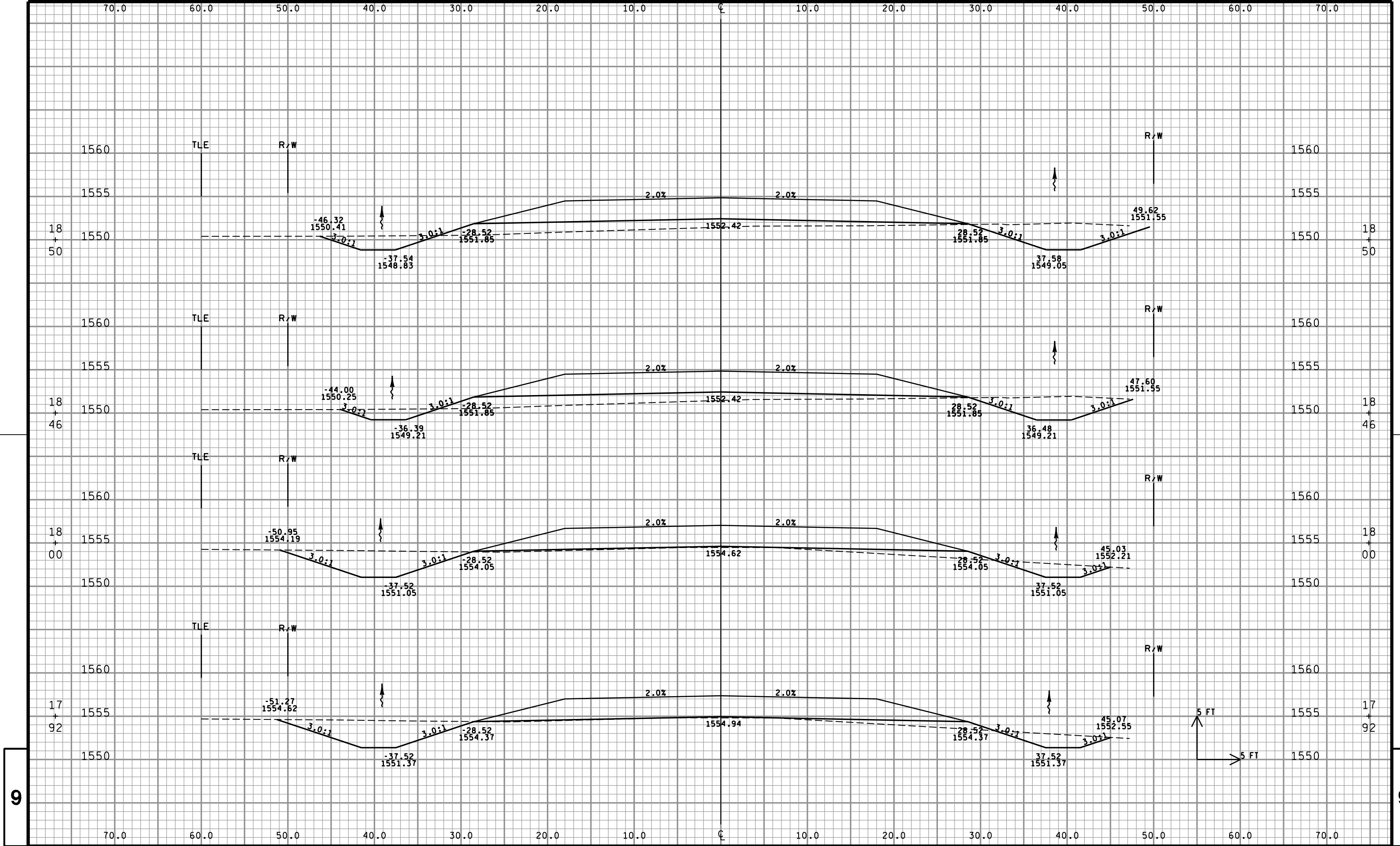
FHWA

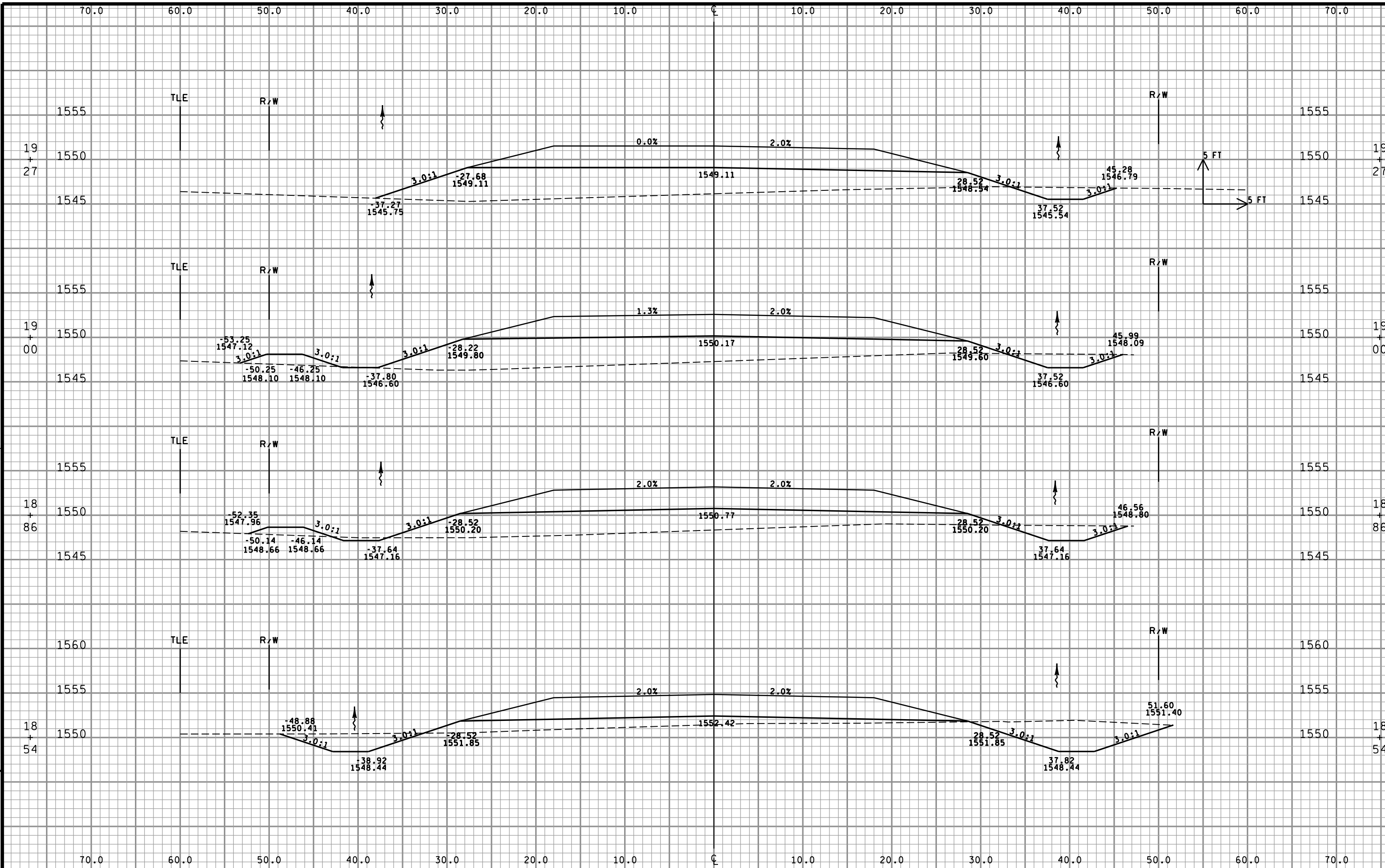
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER





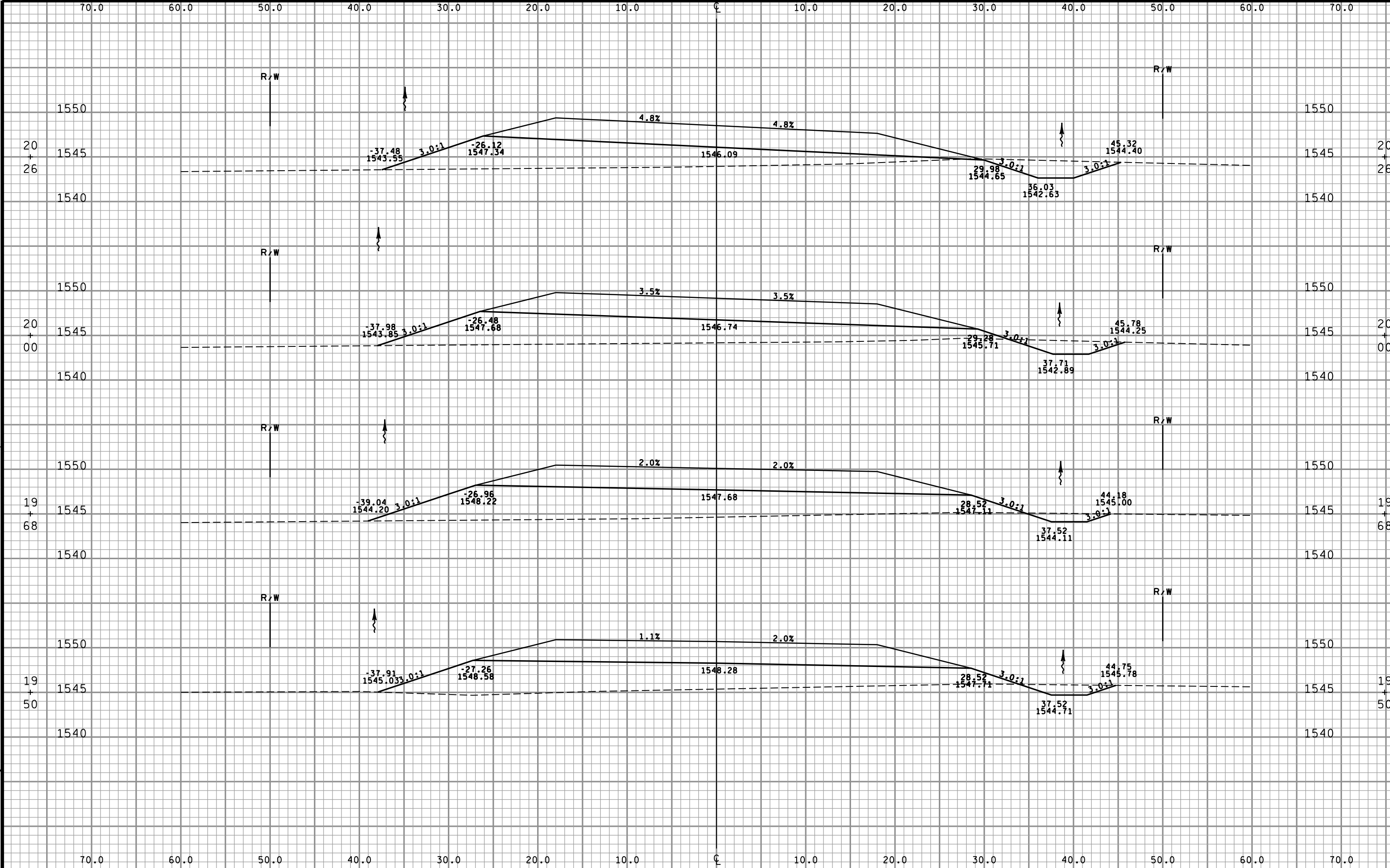






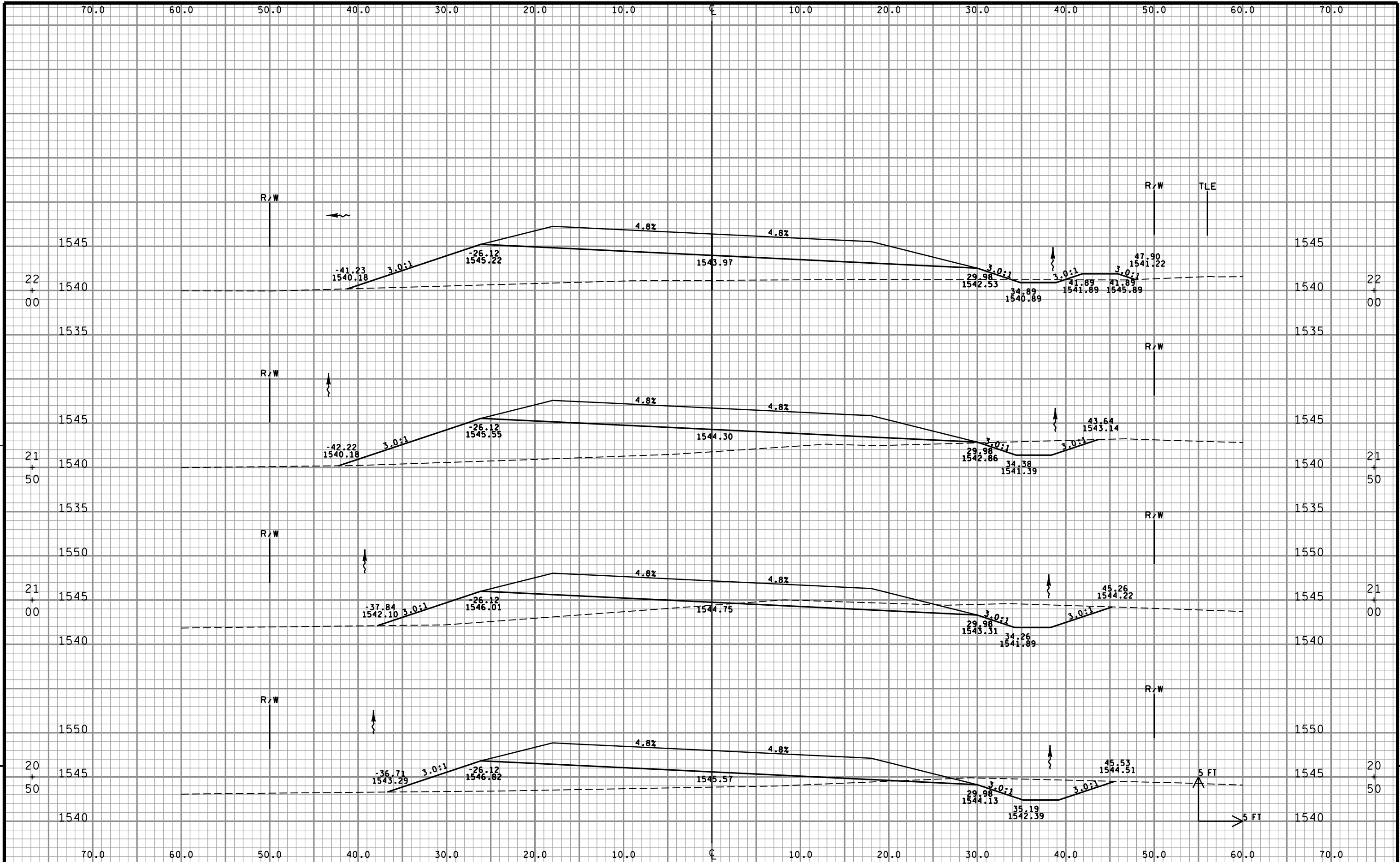
9

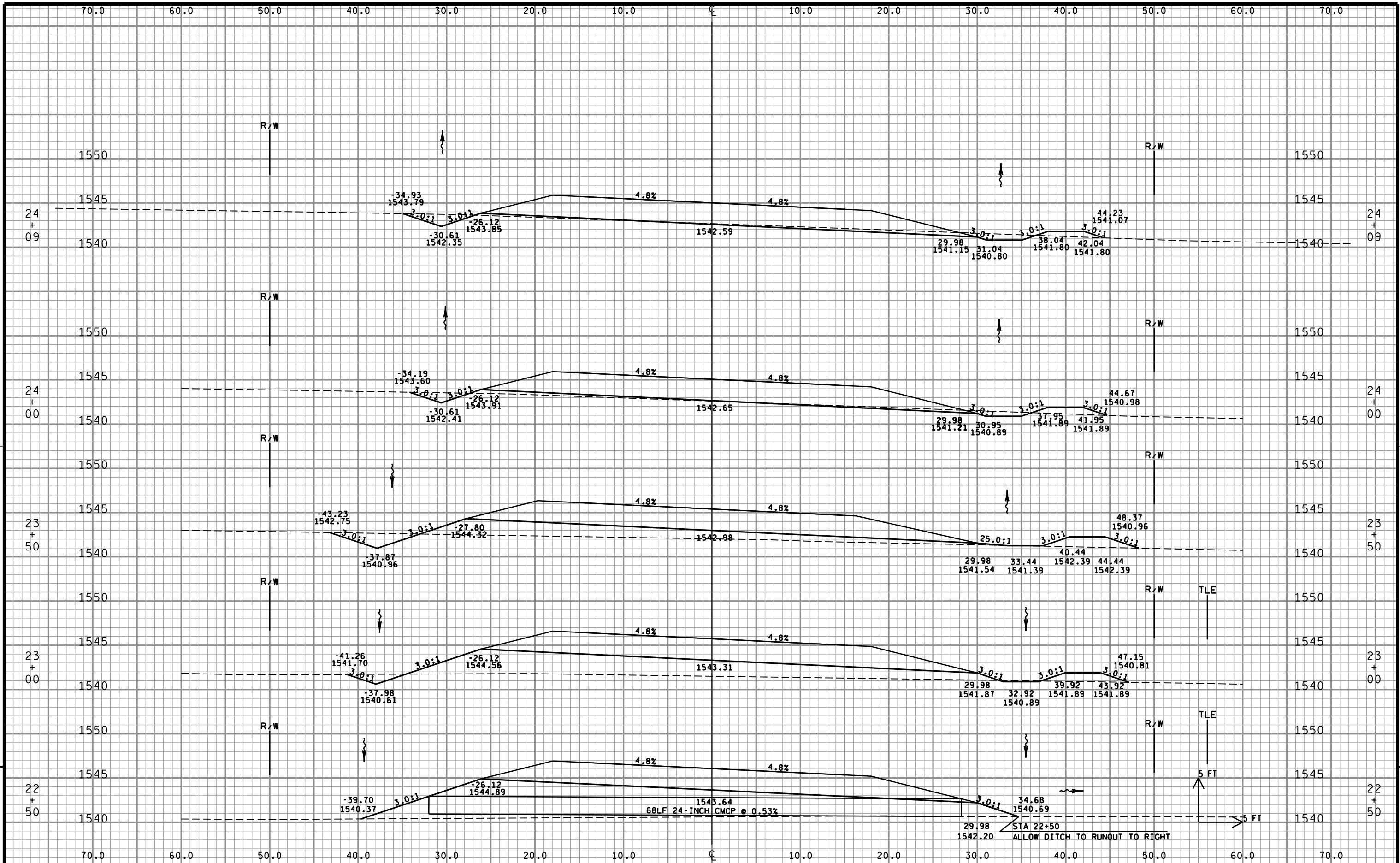
9

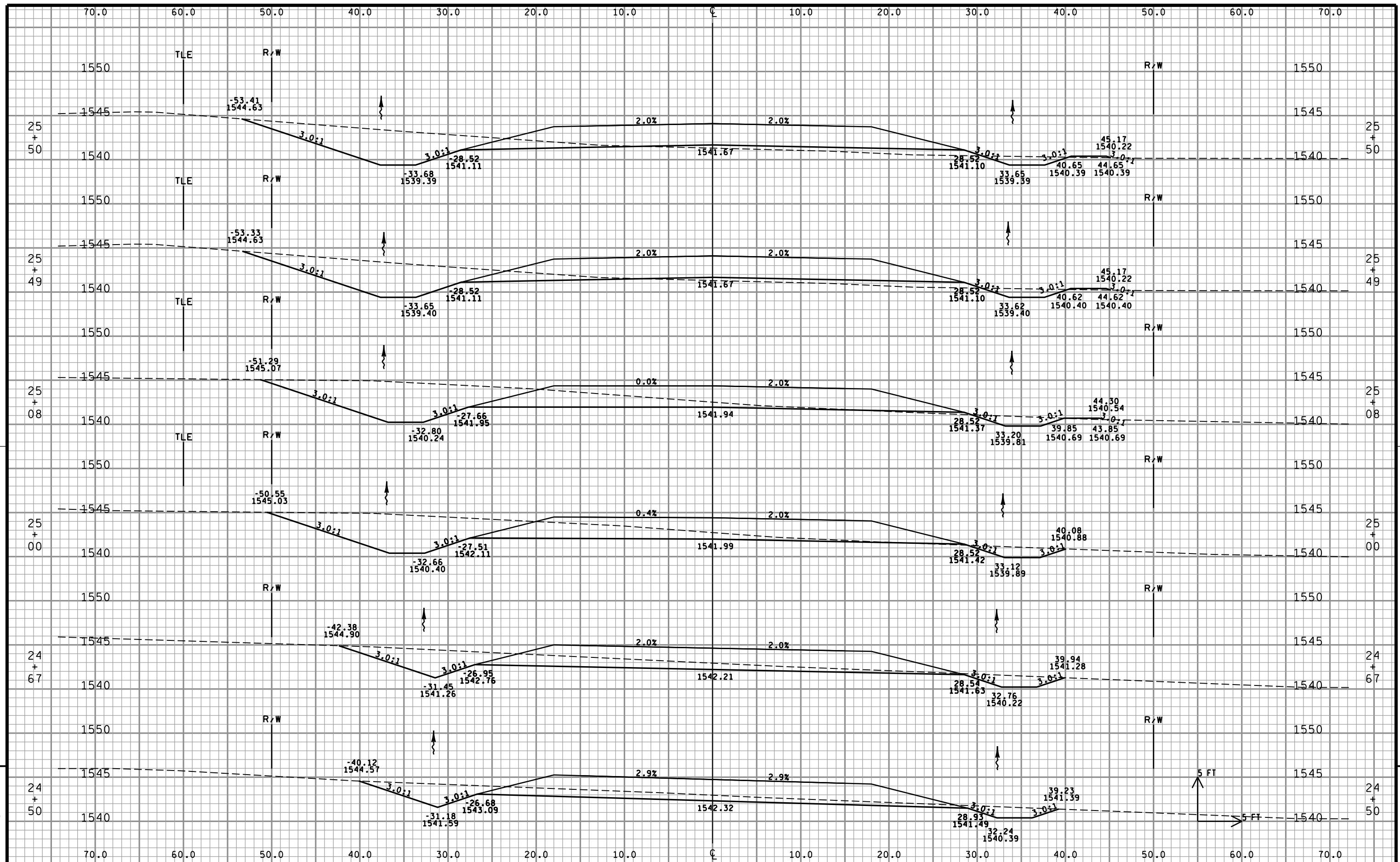


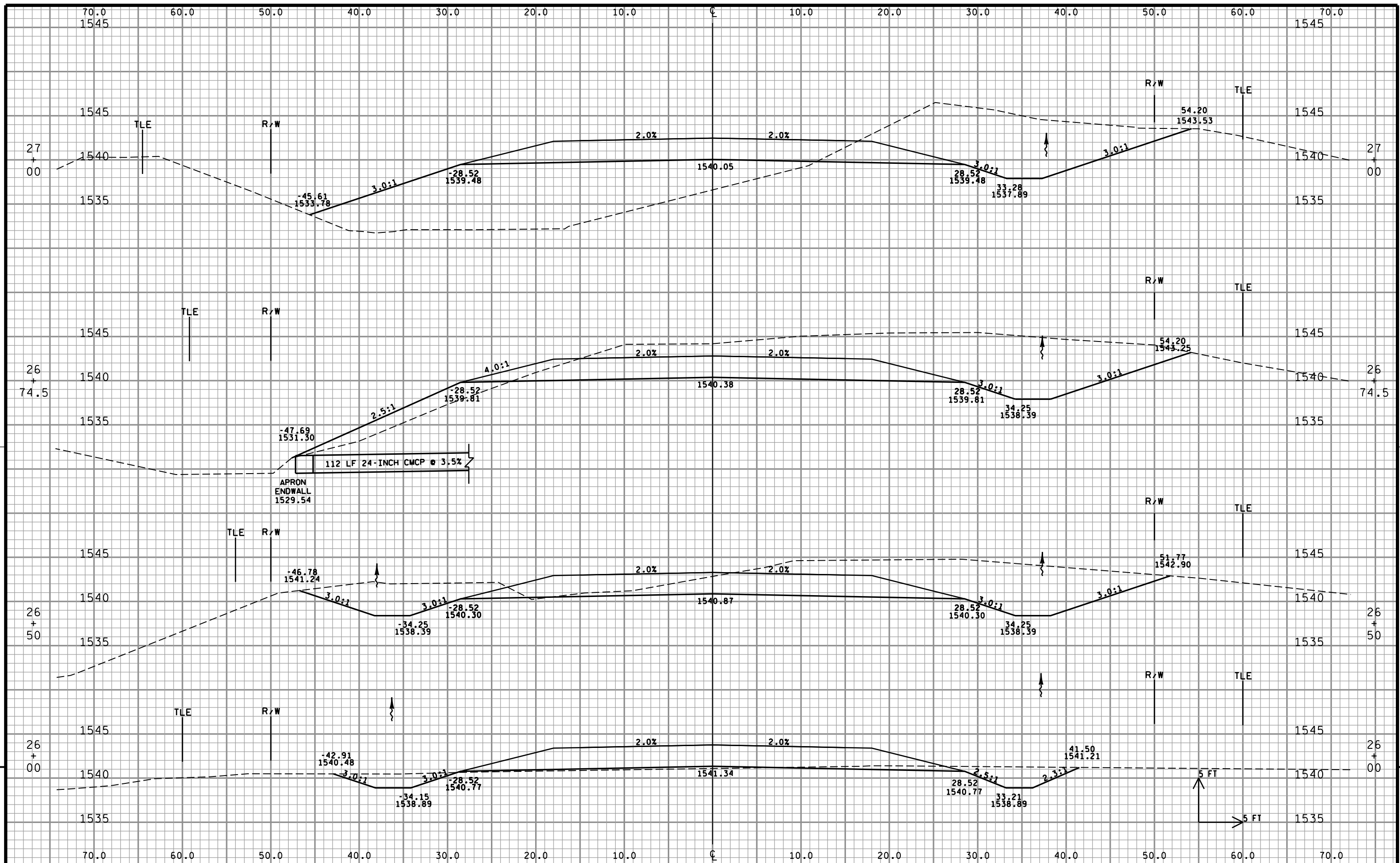
9

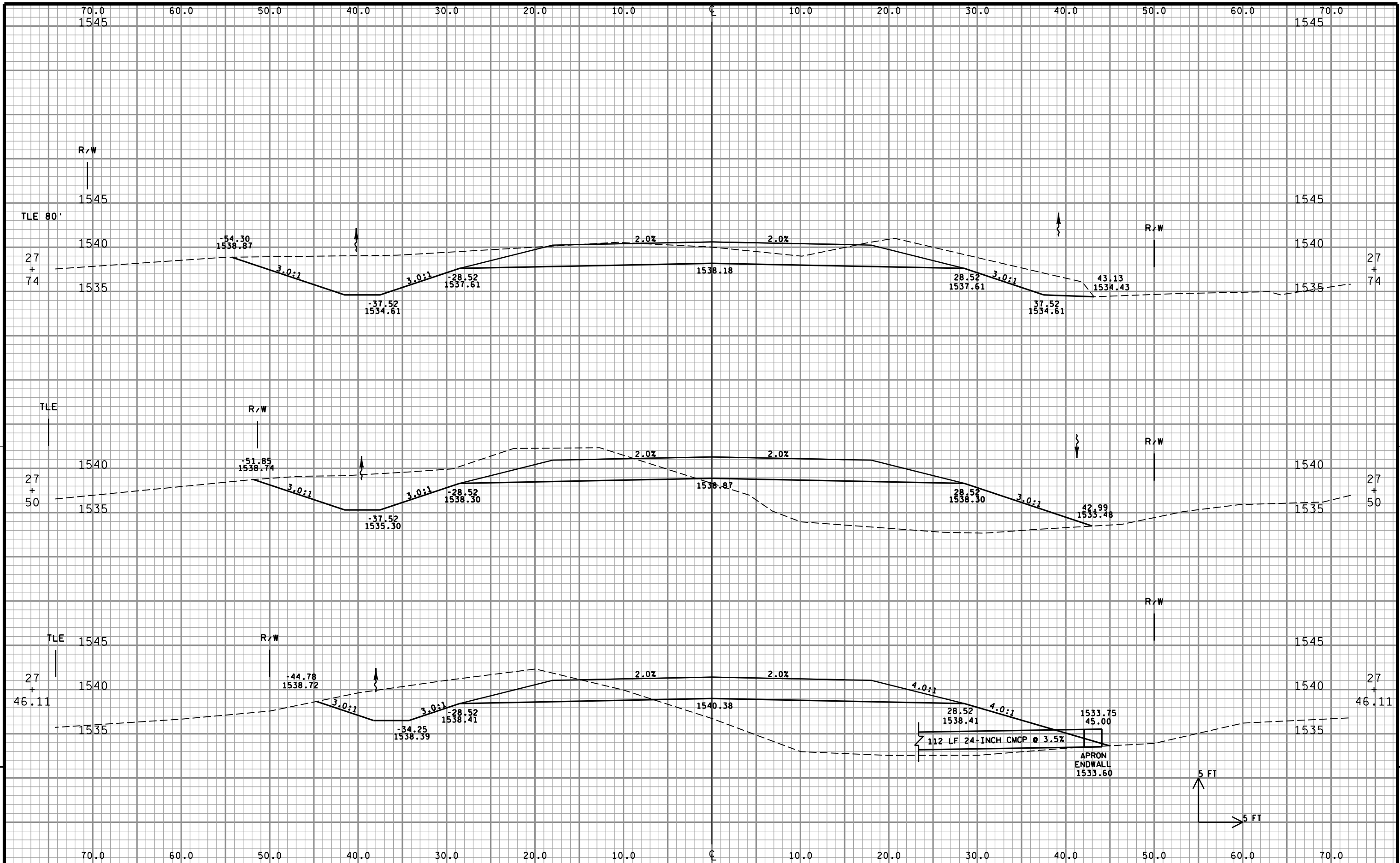
9

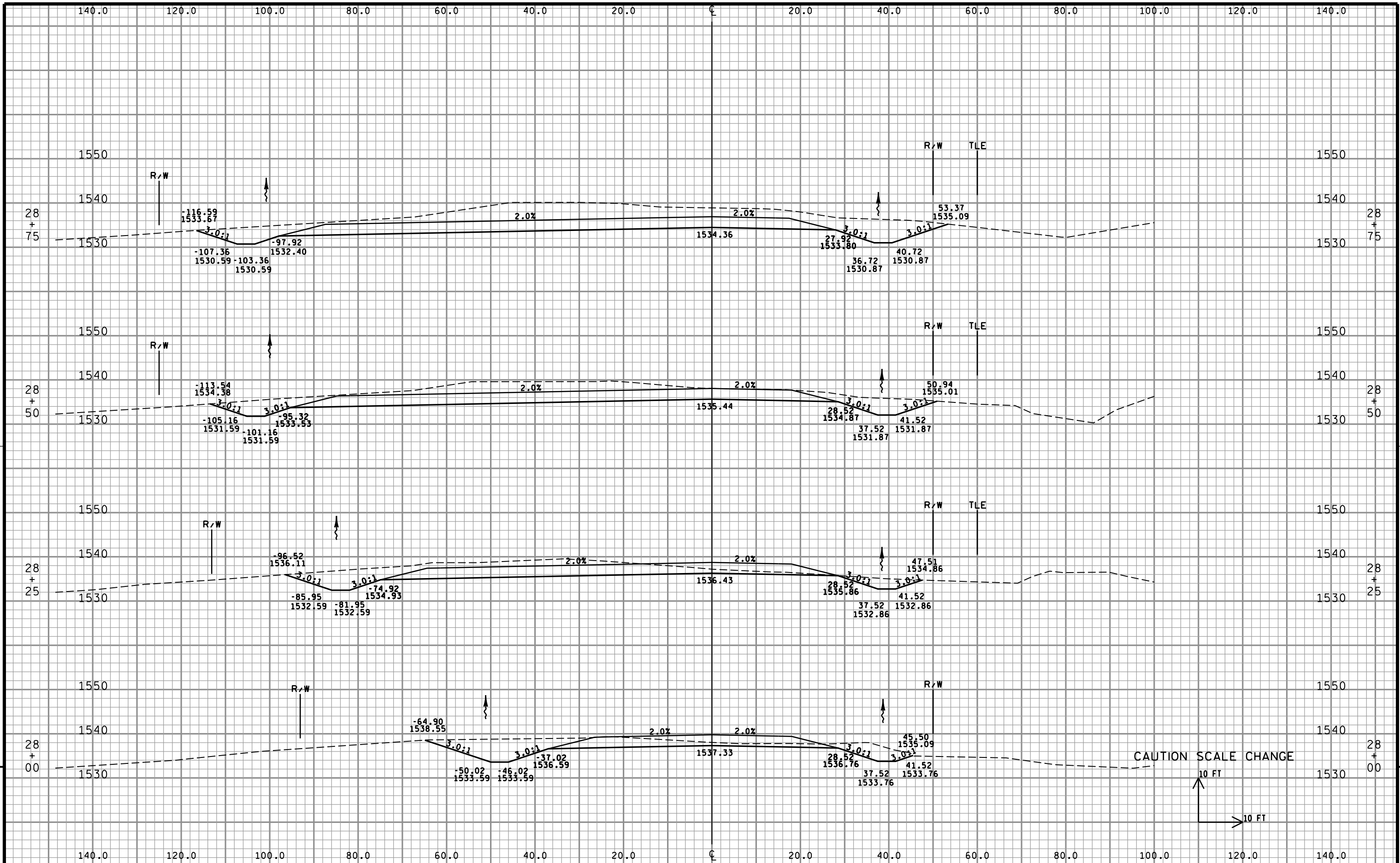


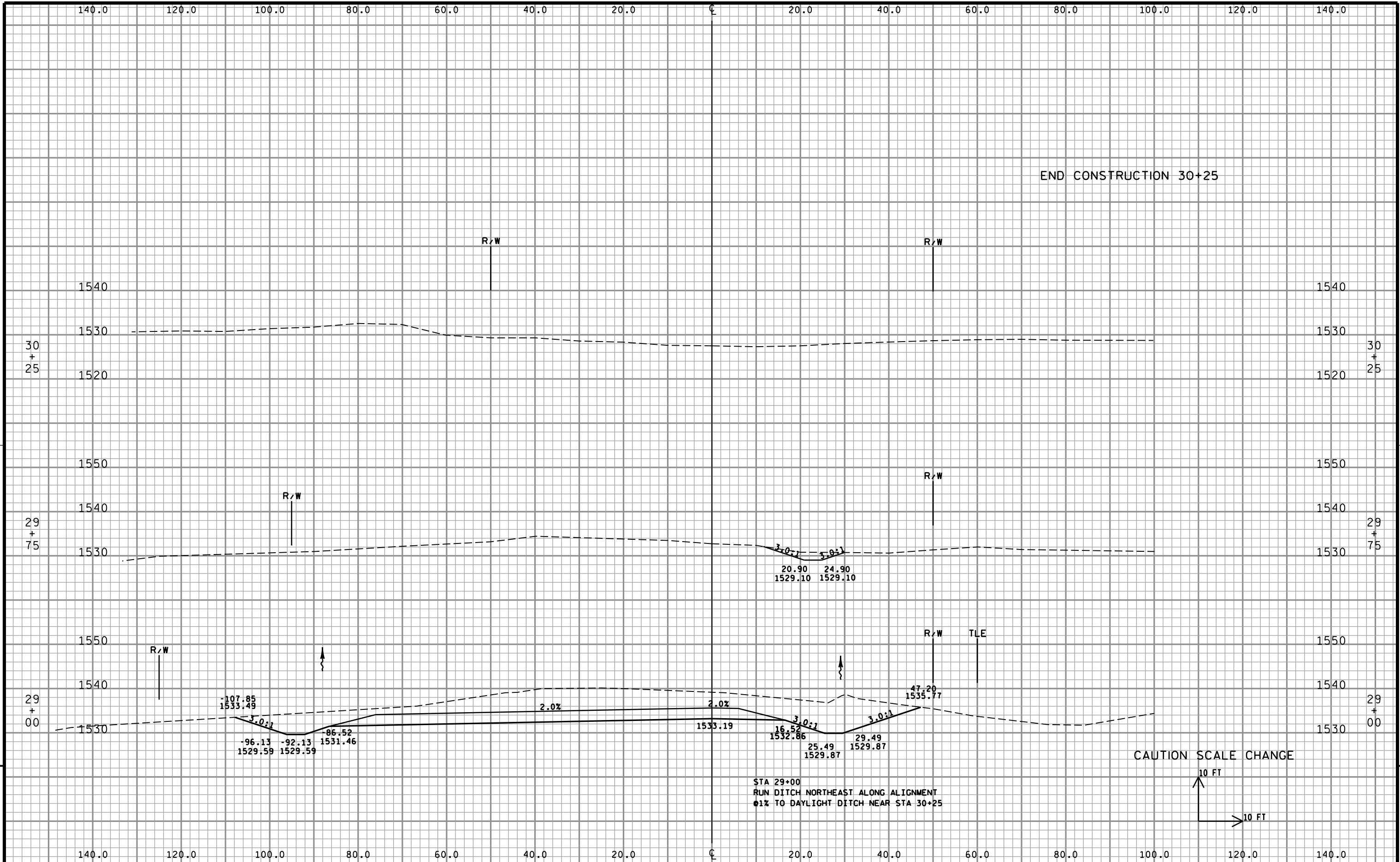






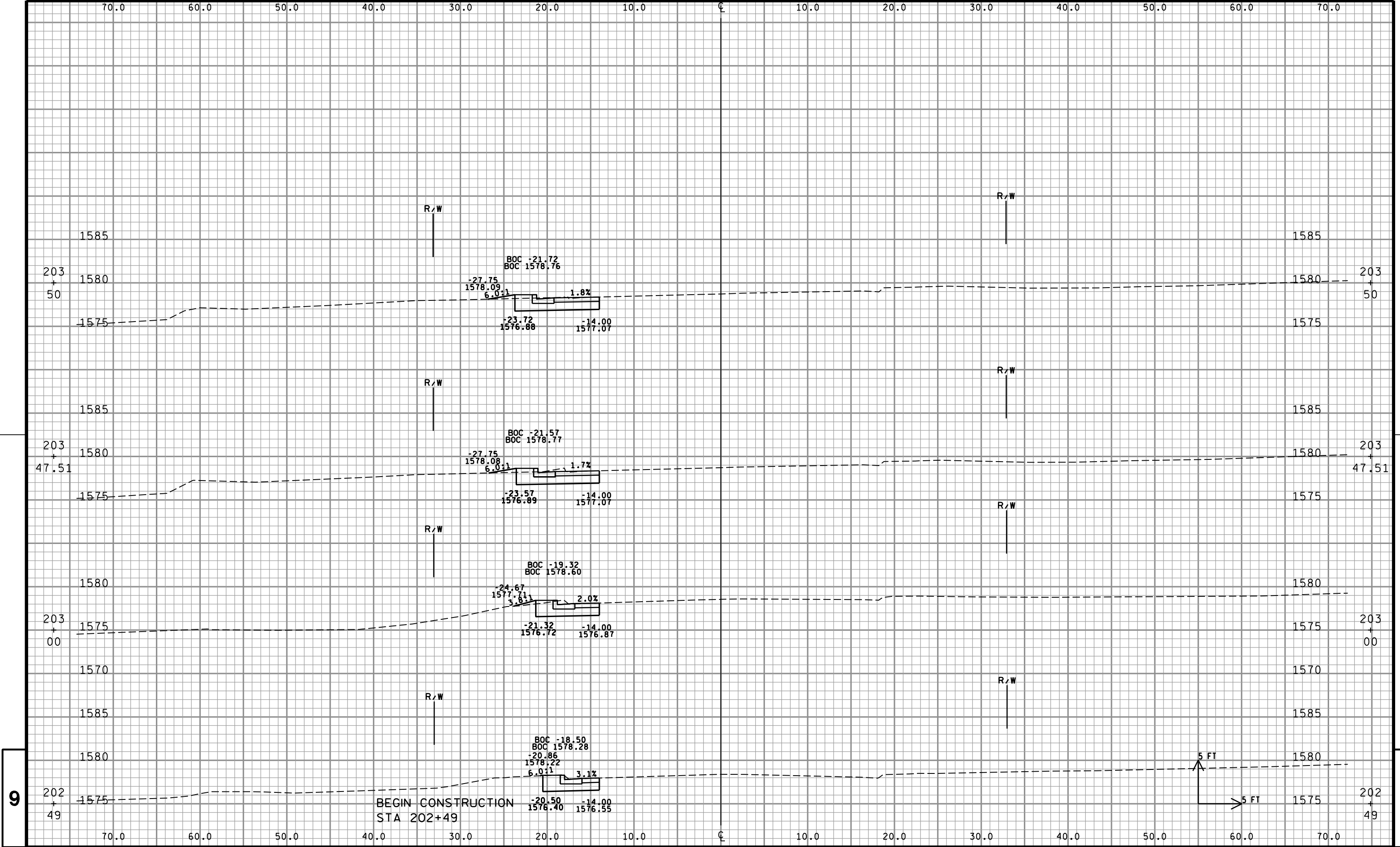


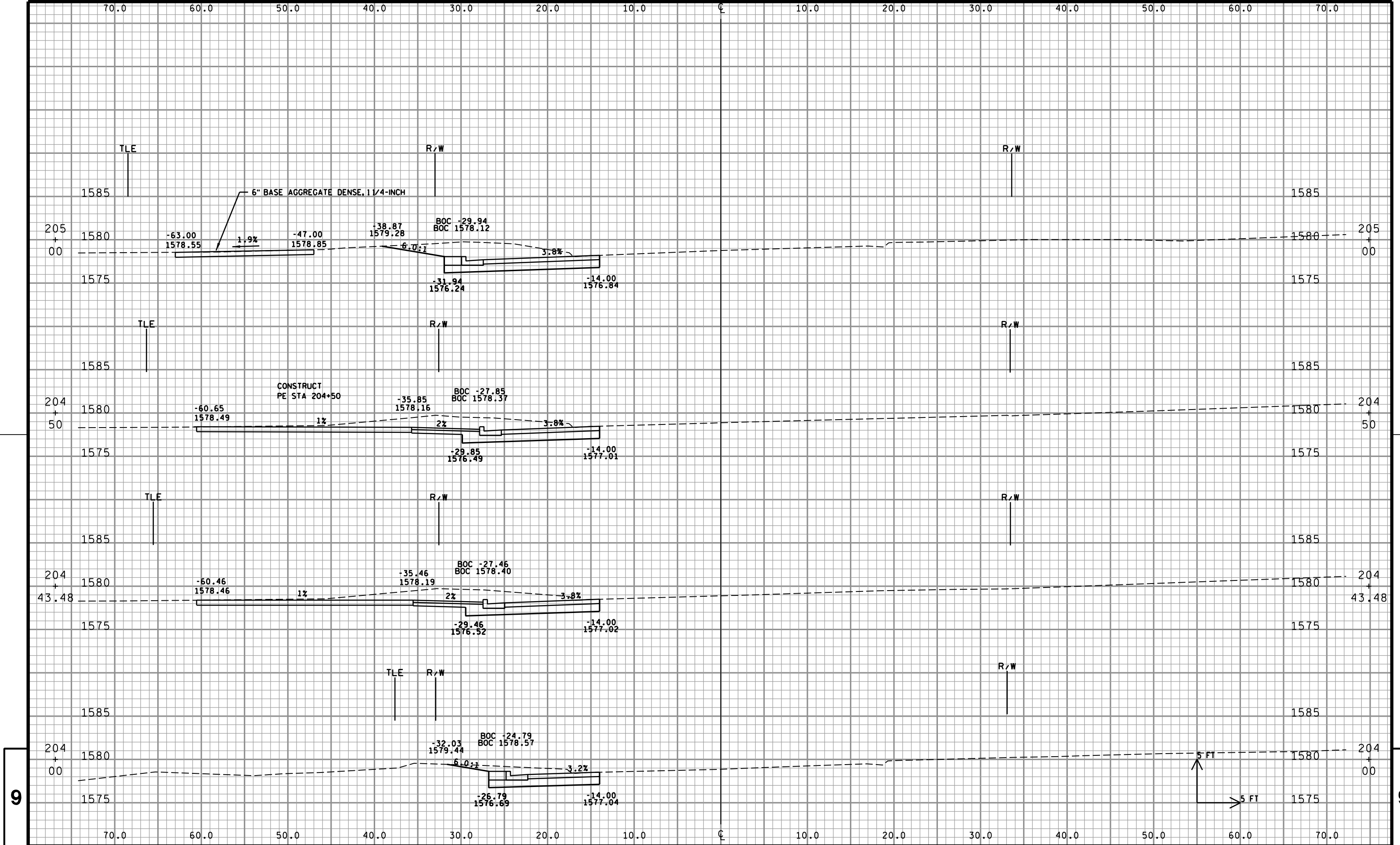




9

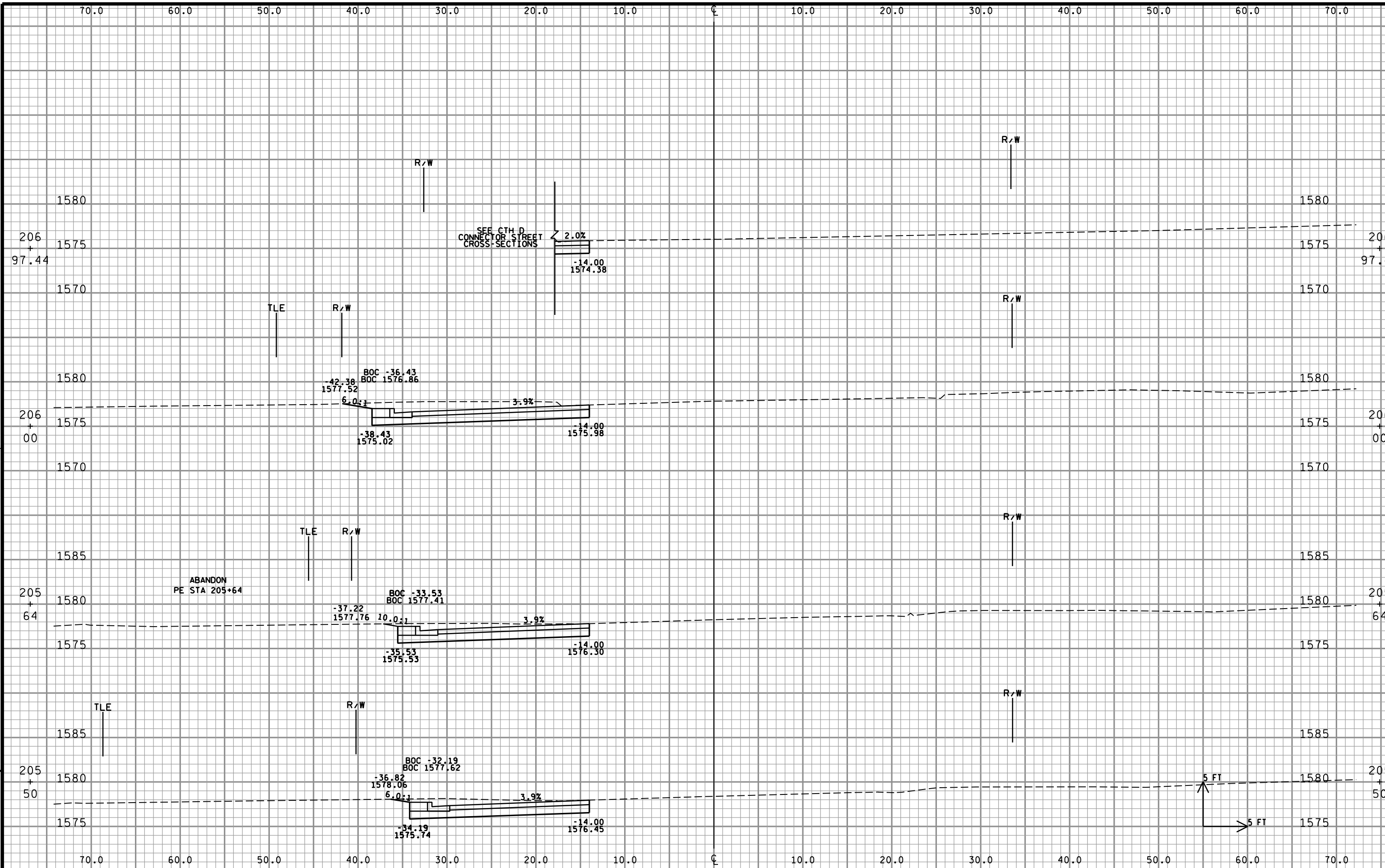
9

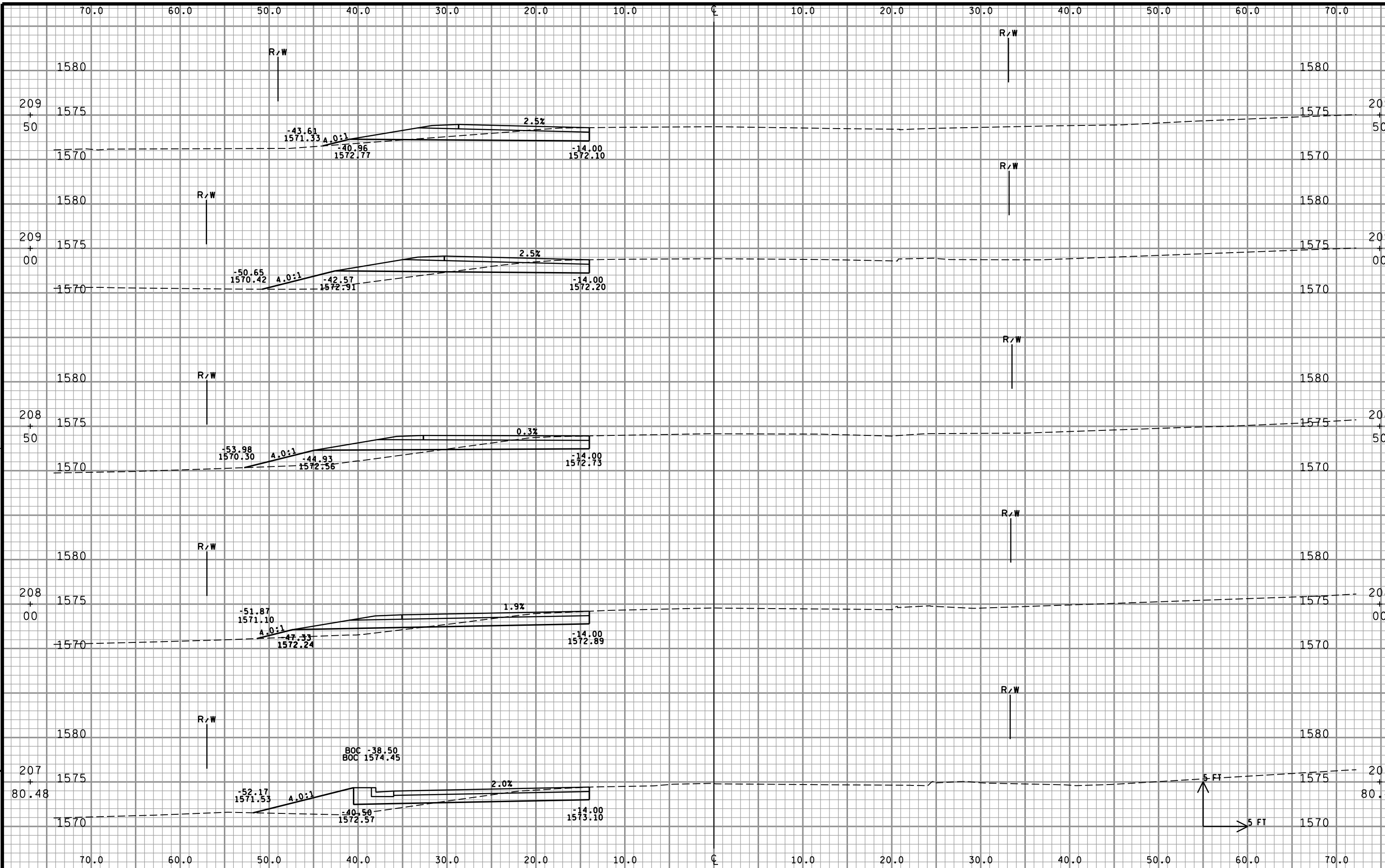




9

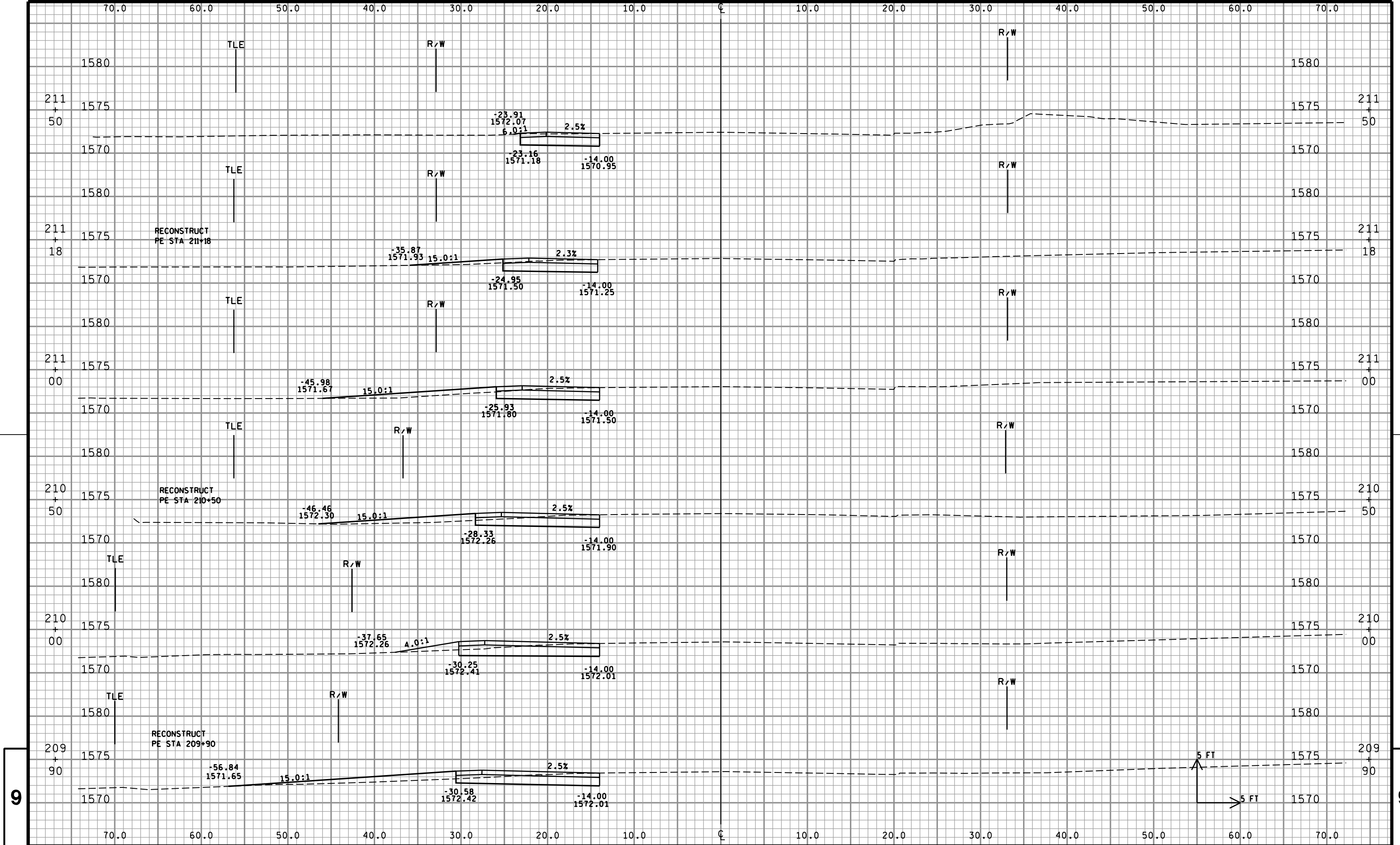
9

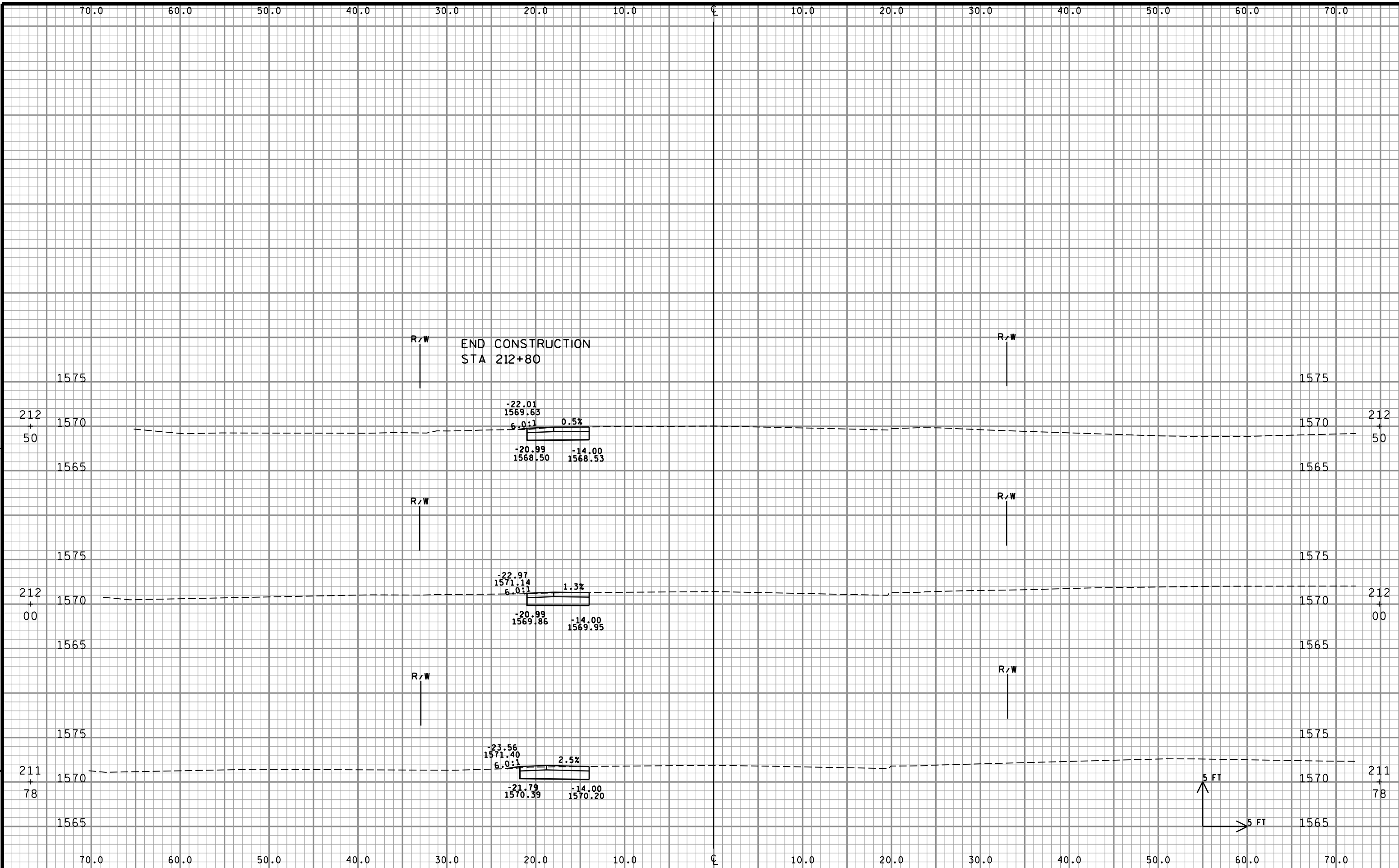




9

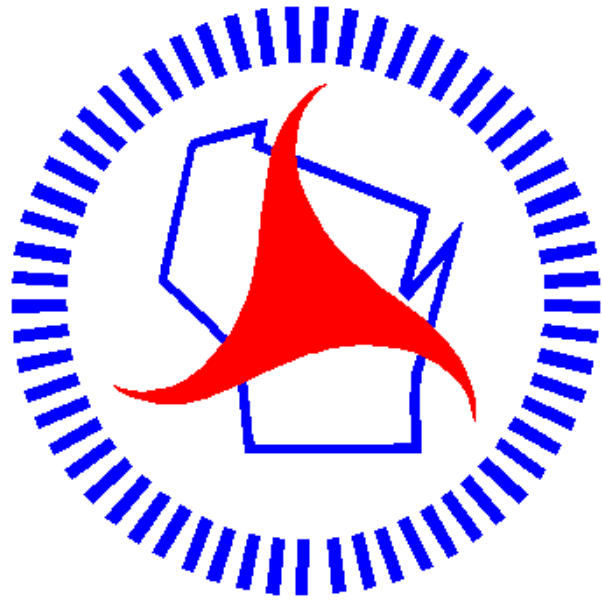
9





9

9



Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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