

RHI
PROJECT ID: 6910-01-70
WITH: N/A
COUNTY: WAUSHARA

APRIL 2019

ORDER OF SHEETS

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

TOTAL SHEETS = 78

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

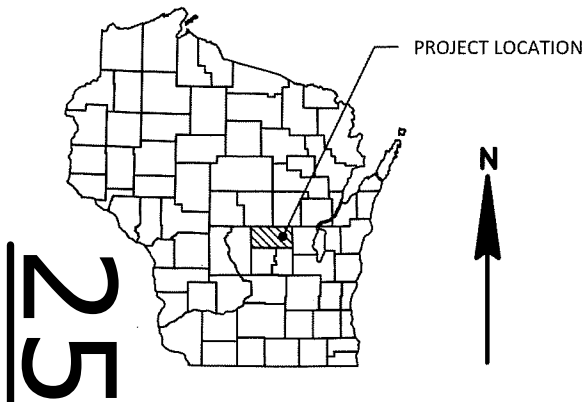
PINE RIVER - POY SIPPI

CTH E SOUTH TO W OF BEECHNUT LN

CTH H

WAUSHARA COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
6910-01-70	WISC 2019230	1

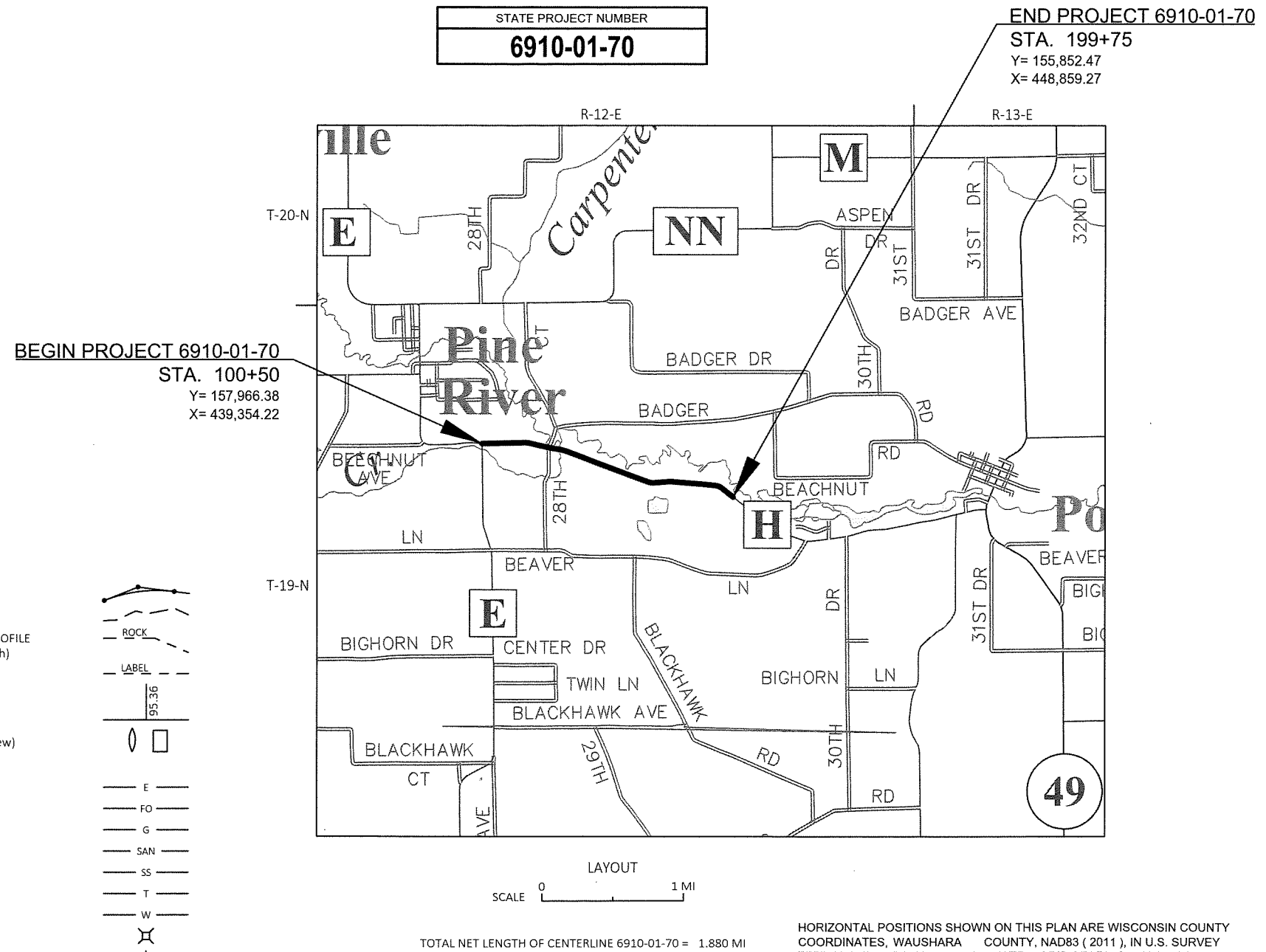


DESIGN DESIGNATION

A.A.D.T.	(2019)	= 1,800
A.A.D.T.	(2039)	= 2,000
D.H.V.		= 260
D.D.		= 60/40
T.		= 6.0%
DESIGN SPEED		= 55
ESALS		= 300,000

CONVENTIONAL SYMBOLS

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



HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, WAUSHARA COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ACCEPTED FOR
COUNTY OF WAUSHARA

Date: 10/15/2018
(Signature of Official)
Highway Commissioner
(Title of Official)

ORIGINAL PLANS PREPARED BY

146 North Central Ave. Marshfield, WI 54449
715-384-2133 1-877-204-0572 Fax: 715-384-9787

DATE: 10/15/18
(Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor MSA PROFESSIONAL SERVICES, INC

Designer MSA PROFESSIONAL SERVICES, INC

Management Consultant CEDAR CORPORATION

APPROVED FOR THE DEPARTMENT

Date: 10-29-2018
(Management Consultant Signature)

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GENERAL NOTES

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

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

PLACE A BUTT JOINT AT ALL LOCATIONS WHERE NEW PAVEMENT IS TO MATCH EXISTING PAVEMENT. SAWCUT OR REMOVE ALL BUTT JOINTS AS APPROVED BY THE ENGINEER TO PROVIDE A VERTICAL FACE.

RIGHT OF WAY LOCATIONS ARE APPROXIMATE.

SOIL BORING LOG				
BORING NO.	STATION	OFFSET FROM CL	ASPHALT DEPTH IN INCHES	UNDERLYING MATERIAL
1	117+00	5.5' LT	8"	5.5" BASE COURSE, 2.3' LOOSE SAND (FILL), 1.5' LOOSE SAND (NATIVE)
2	143+00	5.5' RT	6.5"	5.5" BASE COURSE, 6" LOOSE SAND (FILL), 3.5' LOOSE SAND (NATIVE)
3	183+25	5.5' LT	3"	10" BASE COURSE, 1.9' LOOSE SAND (FILL), 1.5' ORGANIC SILT, 6" LOOSE SAND (NATIVE)
4	221+00	6' RT	8"	2" BASE COURSE, 2.7' LOOSE SAND (FILL), 1.5' LOOSE SAND (NATIVE)
5	282+00	5.5' LT	8.5"	4.5" BASE COURSE, 2.4' LOOSE SAND (FILL), 1.5' LOOSE SAND (NATIVE)

EROSION CONTROL NOTES

RUNOFF COEFFICIENTS FOR THIS PROJECT: EXISTING SIDE SLOPES 0.30, PROPOSED SIDE SLOPES 0.30, EXISTING PAVEMENT 0.95, PROPOSED PAVEMENT 0.95.

TOTAL PROJECT AREA - 15.04 ACRES

TOTAL AREA TO BE DISTURBED BY CONSTRUCTION ACTIVITIES - 13.90 ACRES

SECTION 2 ORDER

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
EROSION CONTROL
PERMANENT SIGNING AND PAVEMENT MARKING
TRAFFIC CONTROL
CONTROL POINT TIES

DESIGN CONSULTANT

MSA PROFESSIONAL SERVICES, INC.
SEAN SPROMBERG
146 NORTH CENTRAL AVE., SUITE 201
MARSHFIELD, WI, 54449
PHONE: (715) 384-2133
EMAIL: sspromberg@msa-ps.com

AGENCIES

DEPARTMENT OF NATURAL RESOURCES
BOBBI JO FISCHER
427 EAST TOWER DRIVE, SUITE 100
WAUTOMA, WI, 54982
PHONE: (920) 787-4686
EMAIL: bobbi.fischer@wisconsin.gov

HIGHWAY DEPARTMENT

WAUSHARA COUNTY HIGHWAY DEPARTMENT
BRIAN FREIMARK
1001 EAST MAIN ST.
WAUTOMA, WI, 54982
PHONE: (920) 787-3327
EMAIL: brianf.highway@co.waushara.wi.us

ELECTRIC

ALLIANT ENERGY
MARK VILLARS
880 NORTH WISCONSIN ST.
BERLIN, WI, 54923
PHONE: (920) 361-5652
EMAIL: markvillars@alliantenergy.com

ELECTRIC

ADAMS-COLUMBIA ELECTRIC COOP
DUANE MOORE
401 EAST LAKE STREET
FRIENDSHIP, WI, 53934
PHONE: (800) 831-8629
EMAIL: dmoore@acecwi.com

GAS

WE ENERGIES
TRAVIS KAHL
1921 8TH STREET SOUTH
WISCONSIN RAPIDS, WI, 54494
PHONE: (715) 421-7256
EMAIL: travis.kahl@we-energies.com

FIBER

AT&T DISTRIBUTION
CHUCK BARTELT
70 EAST DIVISION STREET
FOND DU LAC, WI, 54935
PHONE: (920) 929-1013
EMAIL: cb1461@att.com

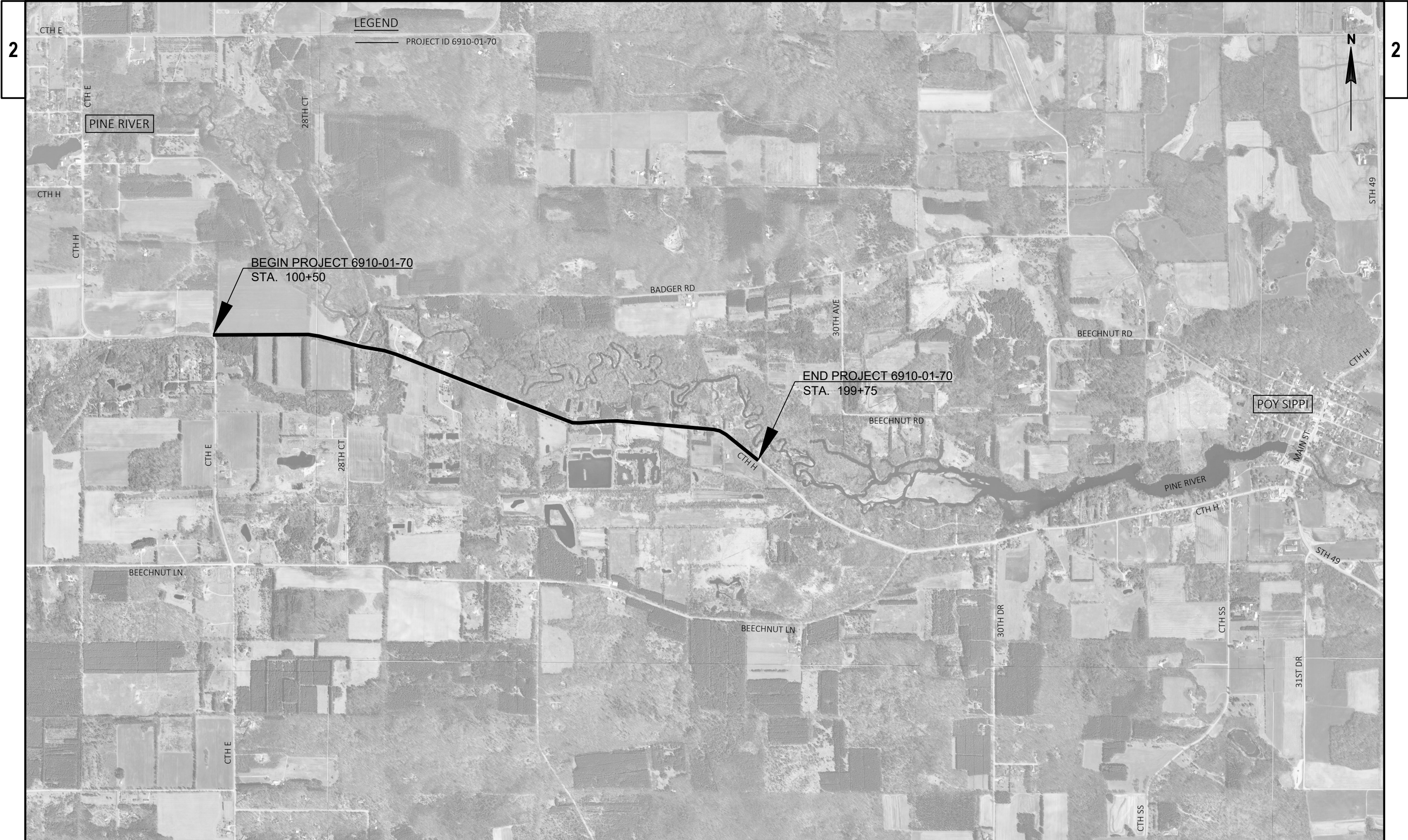
TELEPHONE

CENTURYLINK
TIM KROEZE
19 WEST FOND DU LAC ST.
RIPON, WI, 54971
PHONE: (920) 748-8491
EMAIL: tim.kroeze@centurylink.com

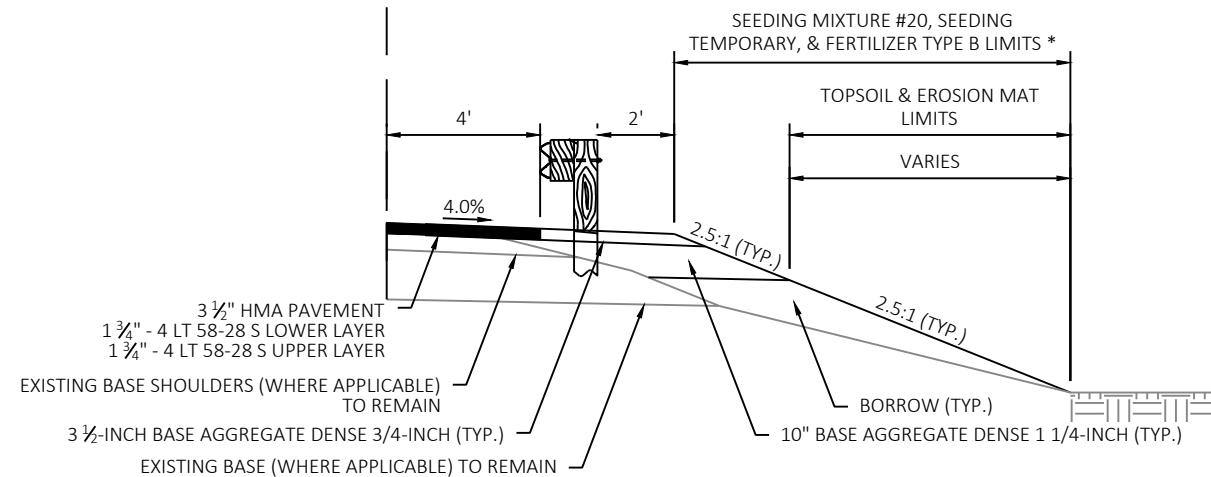
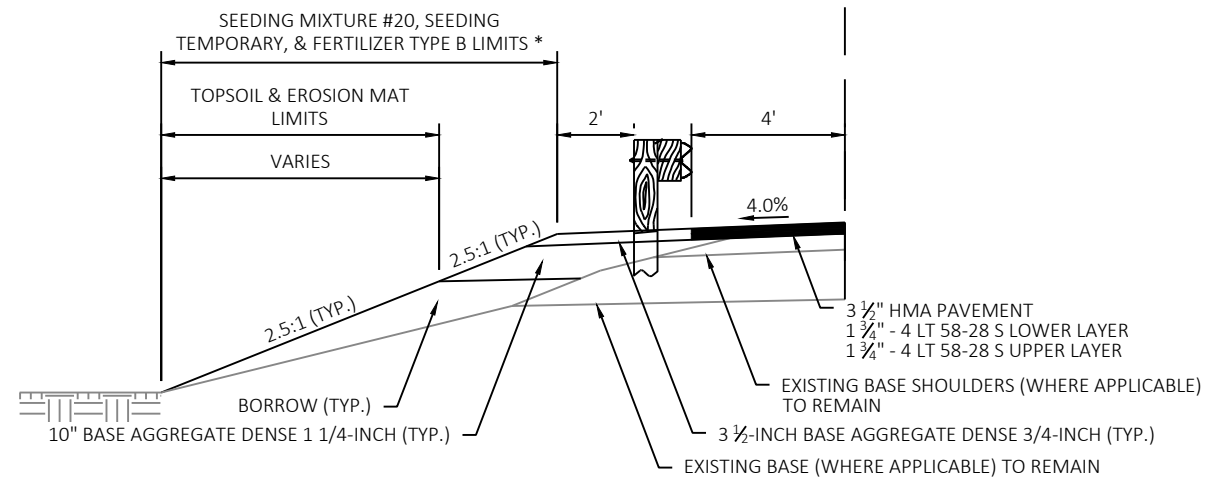
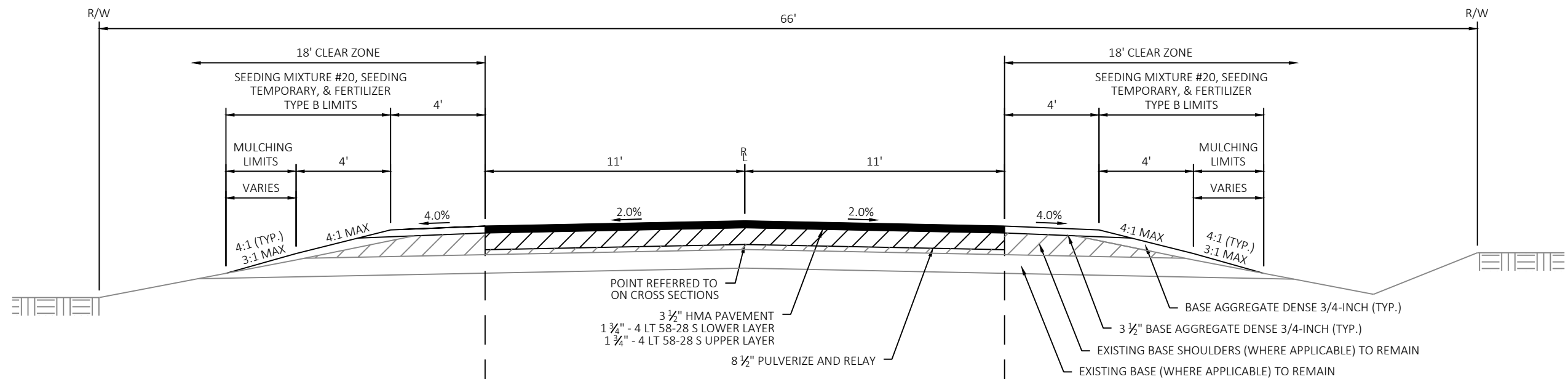
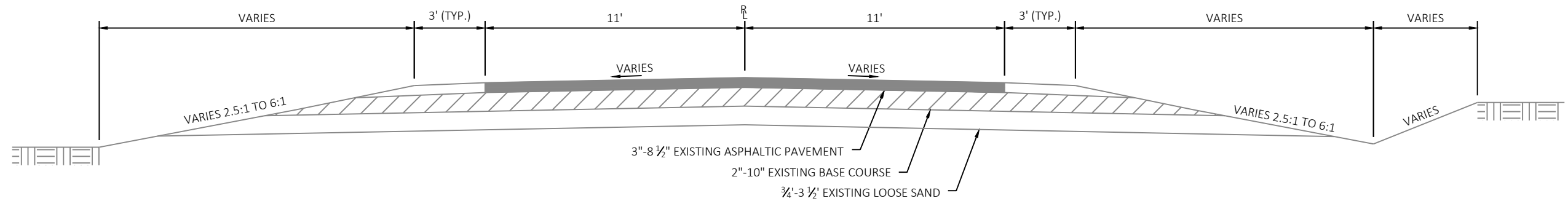
* - NOT A MEMBER OF DIGGERS HOTLINE



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



PROJECT NO: 6910-01-70	HWY: CTH H	COUNTY: WAUSHARA	PROJECT OVERVIEW	SHEET	E
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* SEE CONSTRUCTION DETAILS AND CROSS SECTIONS
FOR RIPRAP LIMITS, PLACE 18" THICK.

PROJECT NO: 6910-01-70

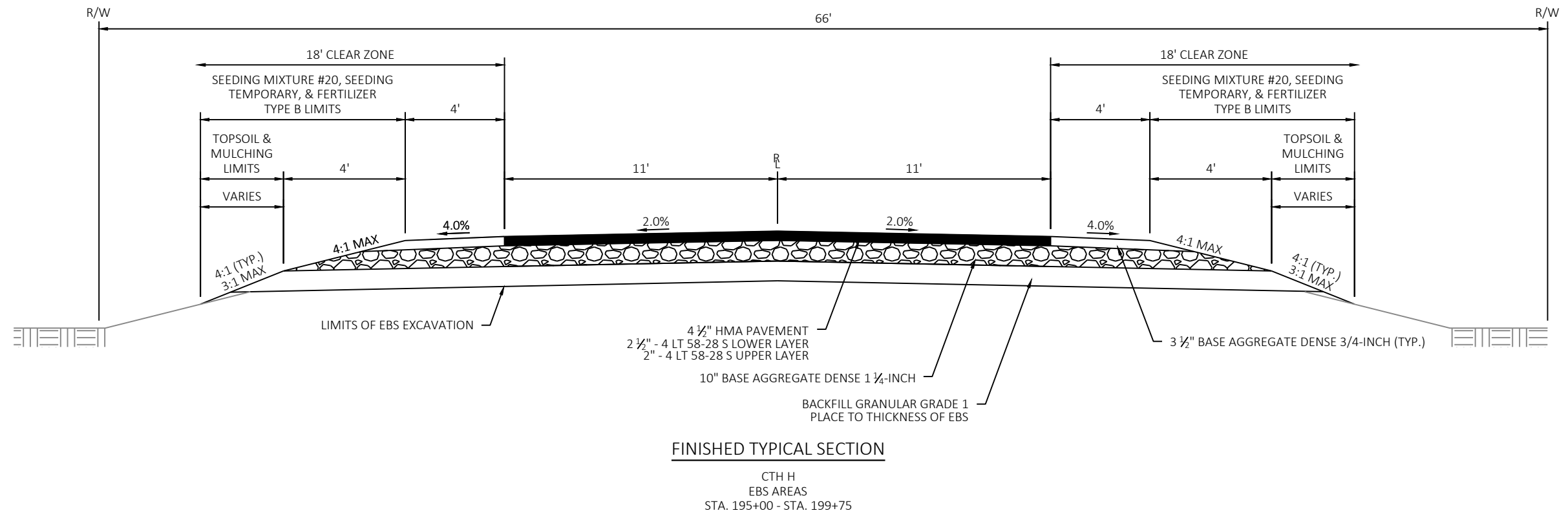
HWY: CTH H

COUNTY: WAUSHARA

TYPICAL SECTIONS

SHEET

E



NOTE: LIMITS OF EBS ARE APPROXIMATE, AND SHOULD BE VERIFIED BY THE ENGINEER IN THE FIELD.

PROJECT NO: 6910-01-70

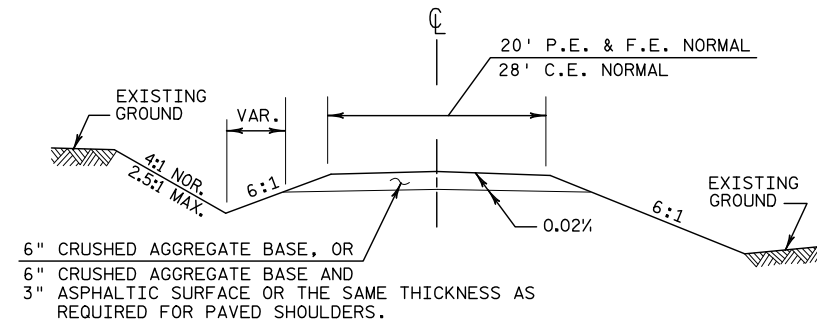
HWY: CTH H

COUNTY: WAUSHARA

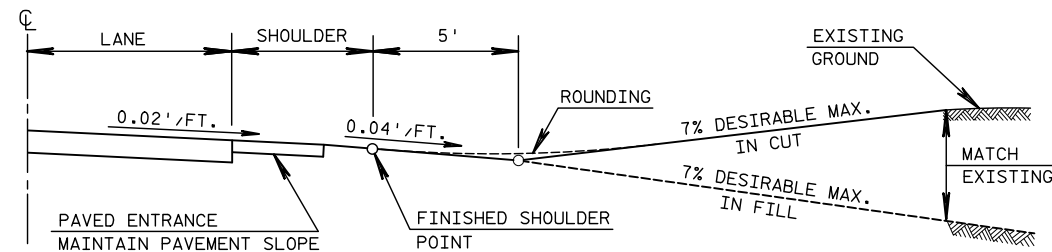
TYPICAL SECTIONS

SHEET

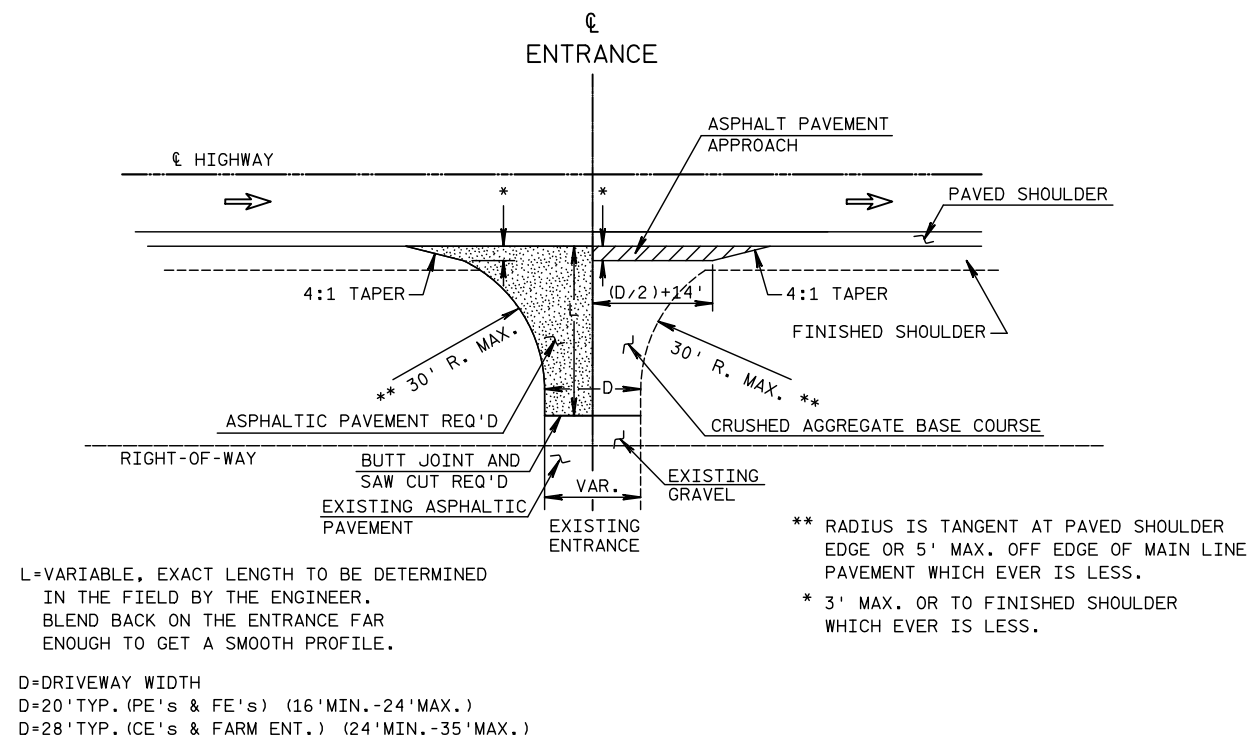
E



TYPICAL CROSS SECTION

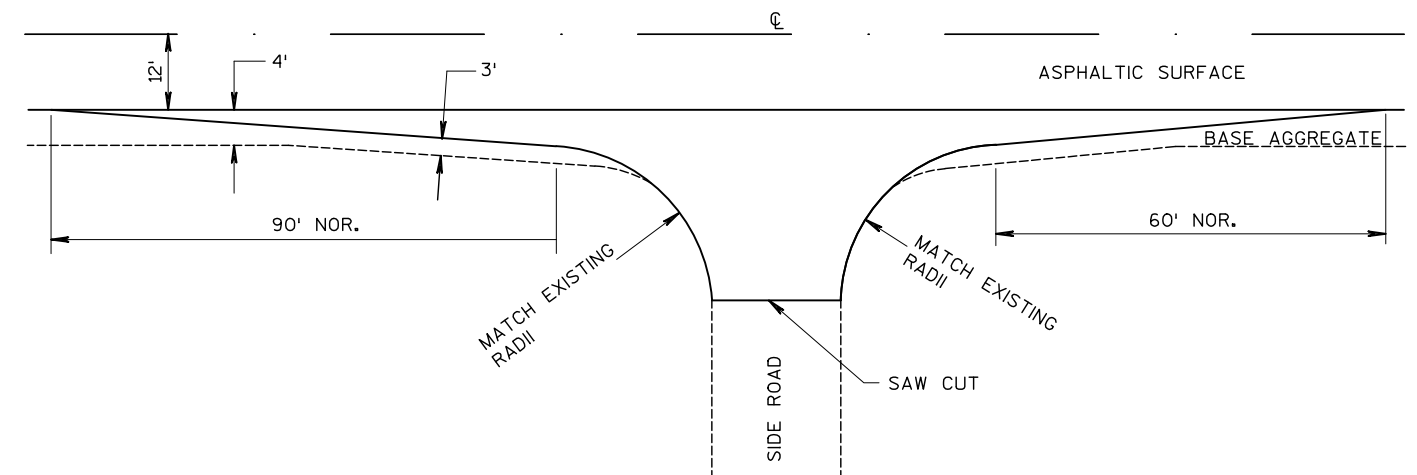
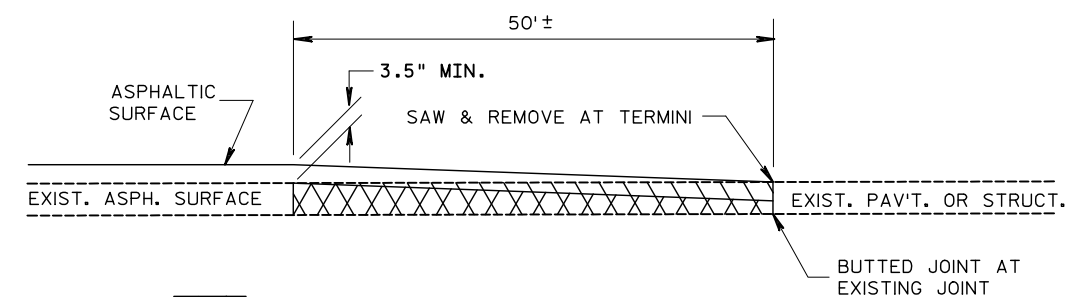


PROFILE VIEW



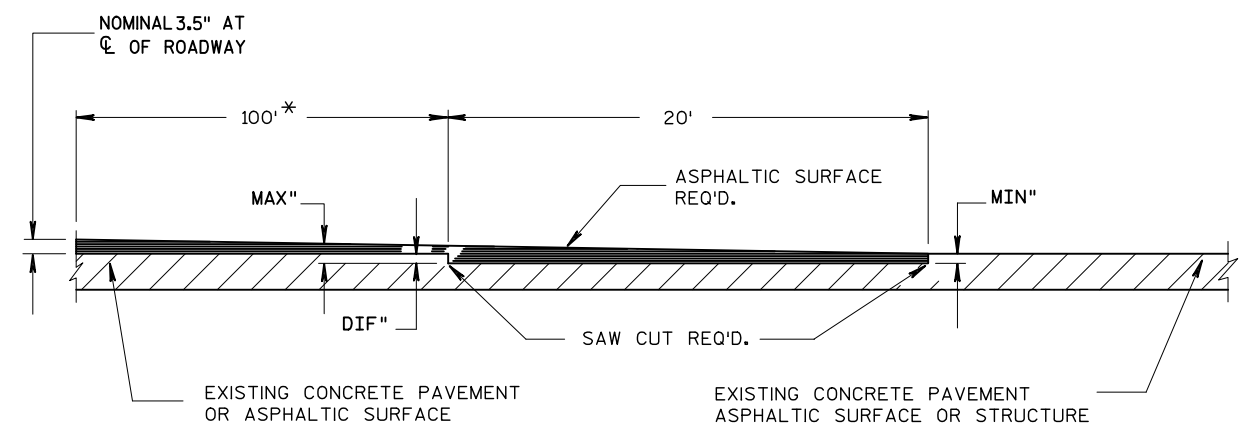
PLAN VIEW

RURAL DRIVEWAY INTERSECTION DETAIL (PE's, FE's & CE's) (FOR NEW CONSTRUCTION)

SIDE ROAD DETAIL, SPECIAL
(BASE AGGREGATE SHOULDERS)

- ASPHALTIC SURFACE REMOVAL
- ASPHALTIC SURFACE WEDGING

OVERLAP JOINT, BUTTED DETAIL



DETAIL OF BUTTED JOINT

* EXACT DIMENSIONS TO BE DETERMINED
BY ENGINEER IN THE FIELD.

PROJECT NO: 6910-01-70

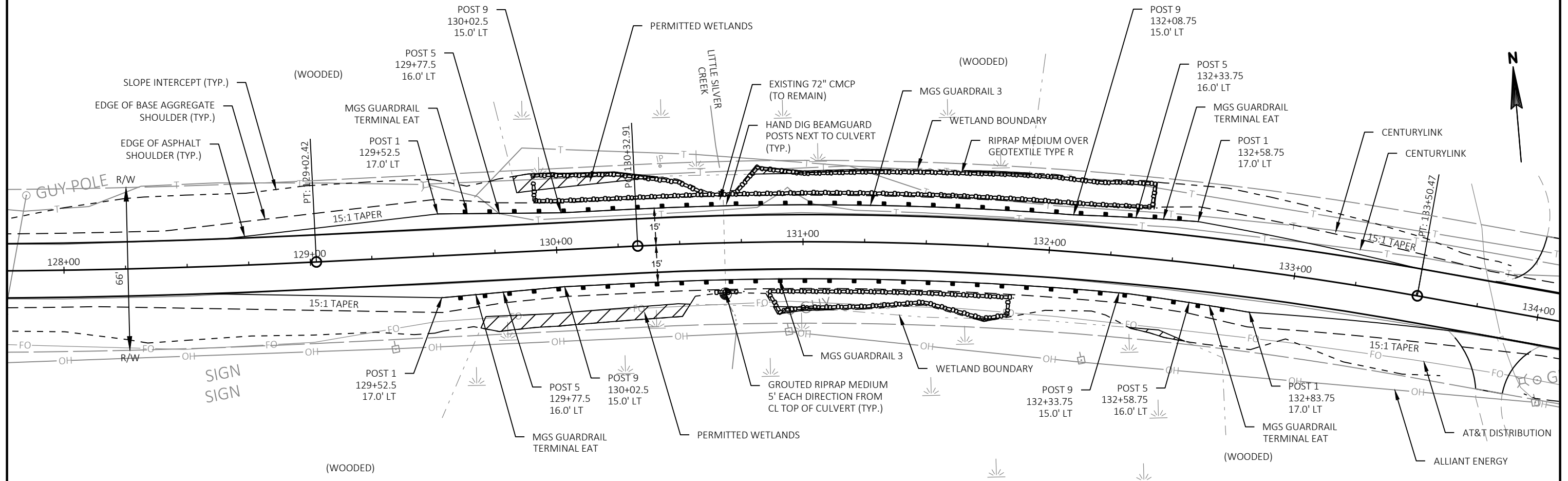
HWY: CTH H

COUNTY: WAUSHARA

CONSTRUCTION DETAILS

SHEET

E



PROJECT NO: 6910-01-70

HWY: CTH H

COUNTY: WAUSHARA

CONSTRUCTION DETAILS

SHEET

E

FILE NAME : P:\7300S\7390S\7391\07391017\CADD\SHEETPLAN\021003_CD.DWG
LAYOUT NAME - 021003_cd

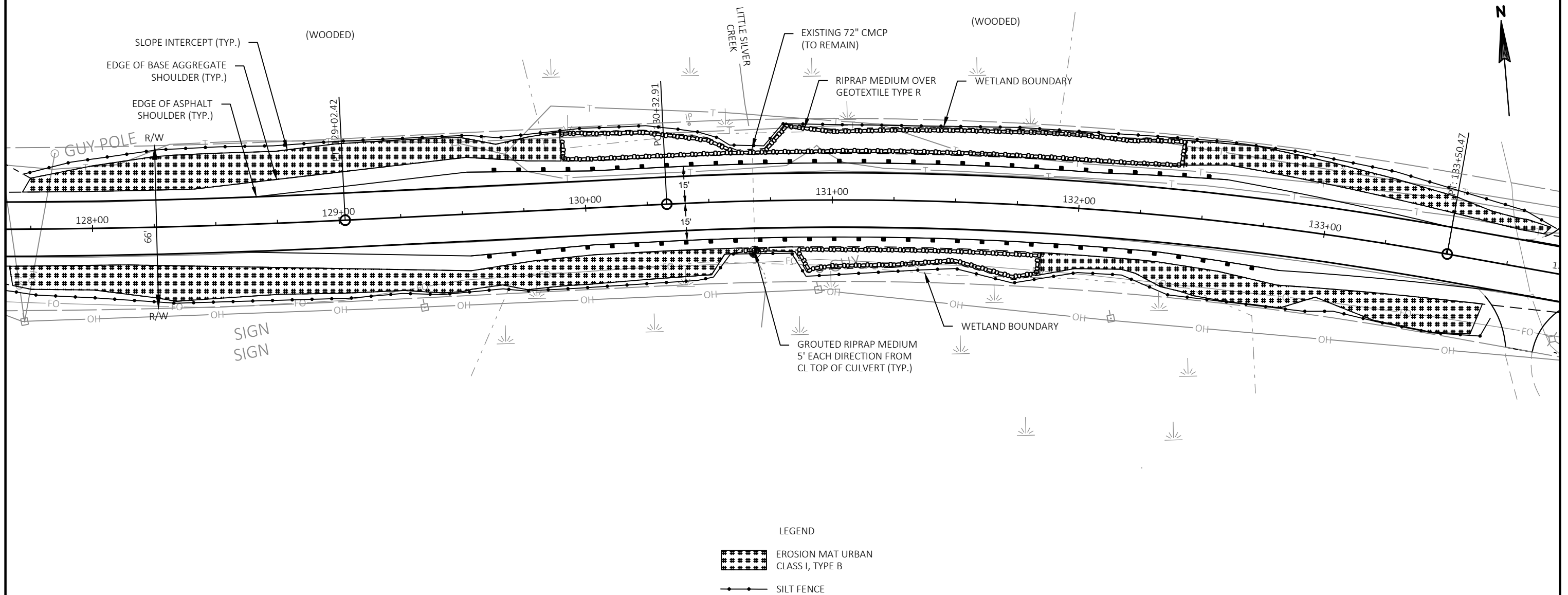
PLOT DATE : 10/16/2018 2:37 PM

PLOT BY : SHAWN DOLENS

PLOT NAME :

PLOT SCALE : 1 IN:40 FT

WISDOT/CADD SHEET 42



LEGEND

- EROSION MAT URBAN
CLASS I, TYPE B
- SILT FENCE

PROJECT NO: 6910-01-70

HWY: CTH H

COUNTY: WAUSHARA

EROSION CONTROL

SHEET

E

FILE NAME : P:\73005\73905\7391\07391017\CADD\SHEETS\PLAN\021003_CD.DWG
LAYOUT NAME - 022001_ec

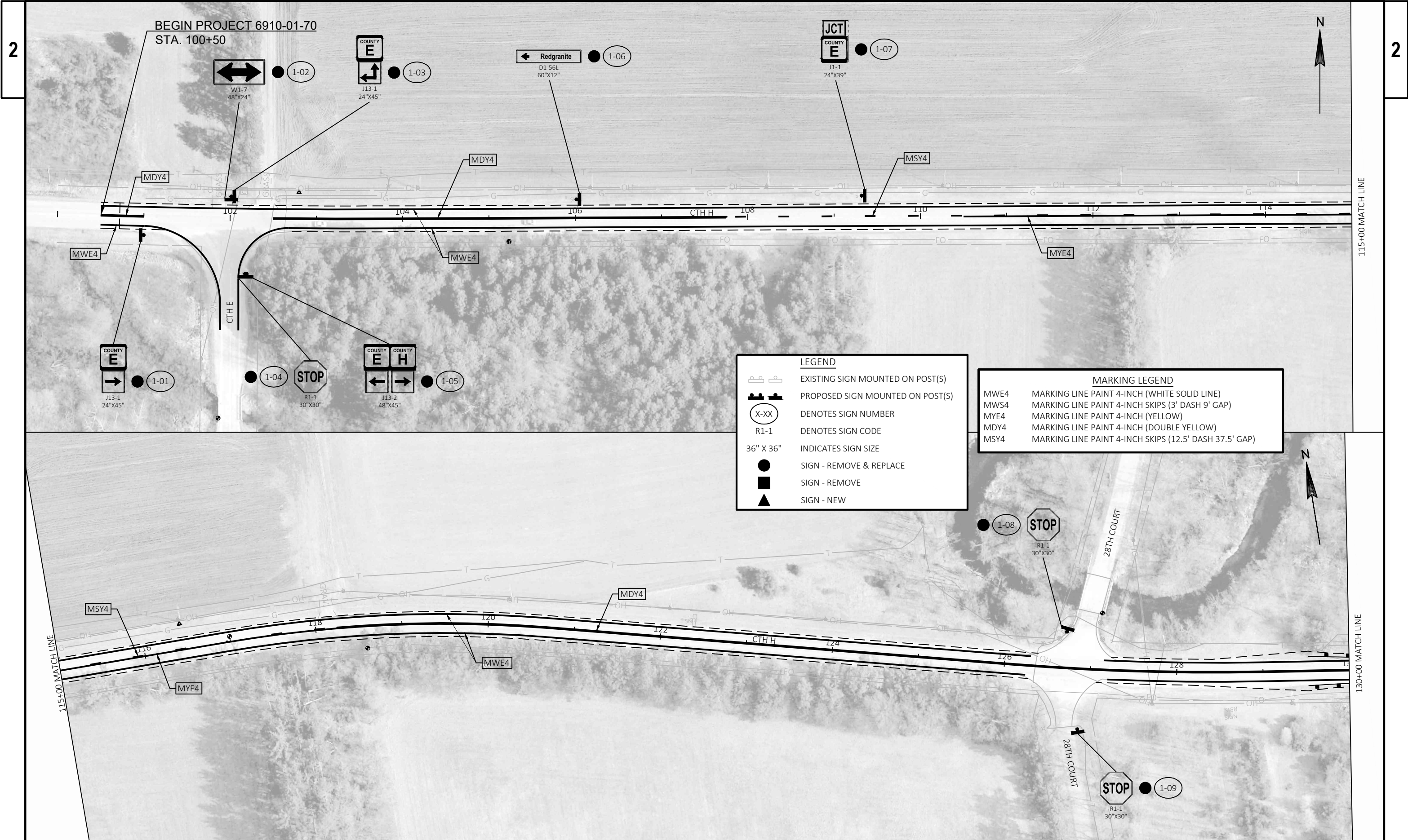
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PLOT BY : SHAWN DOLENS

PLOT NAME :

PLOT SCALE : 1 IN:40 FT

WISDOT/CADD SHEET 42



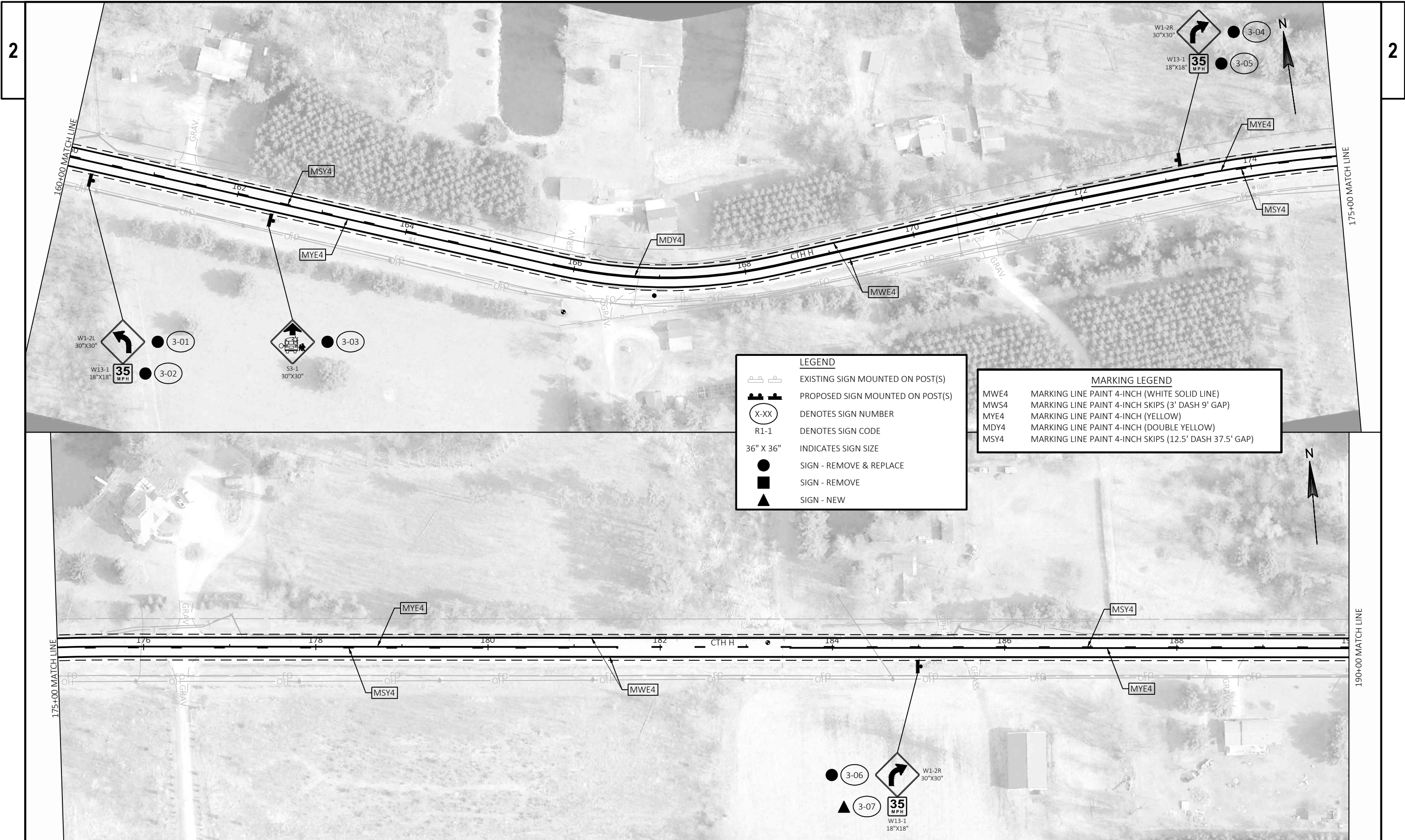


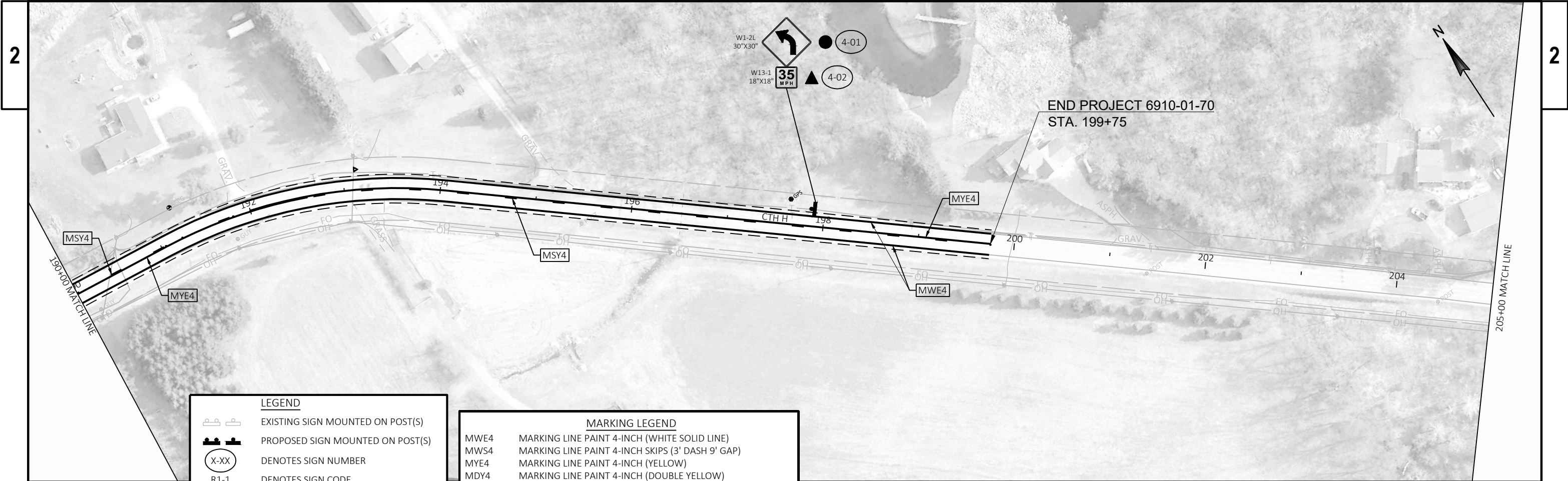
LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- XX DENOTES SIGN NUMBER
- R1-1 DENOTES SIGN CODE
- 36" X 36" INDICATES SIGN SIZE
- SIGN - REMOVE & REPLACE
- SIGN - REMOVE
- SIGN - NEW

MARKING LEGEND

- MWE4 MARKING LINE PAINT 4-INCH (WHITE SOLID LINE)
- MWS4 MARKING LINE PAINT 4-INCH SKIPS (3' DASH 9' GAP)
- MYE4 MARKING LINE PAINT 4-INCH (YELLOW)
- MDY4 MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
- MSY4 MARKING LINE PAINT 4-INCH SKIPS (12.5' DASH 37.5' GAP)

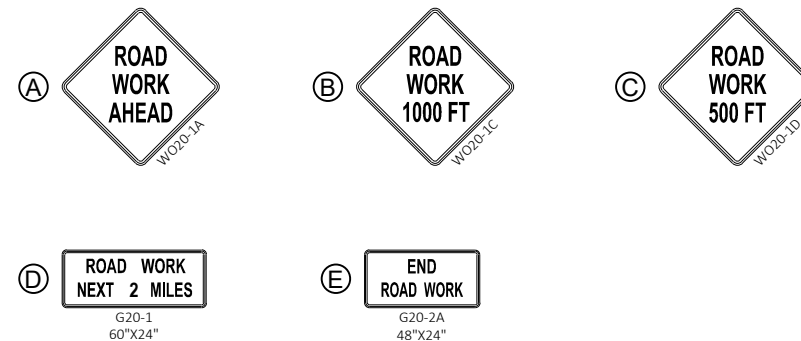
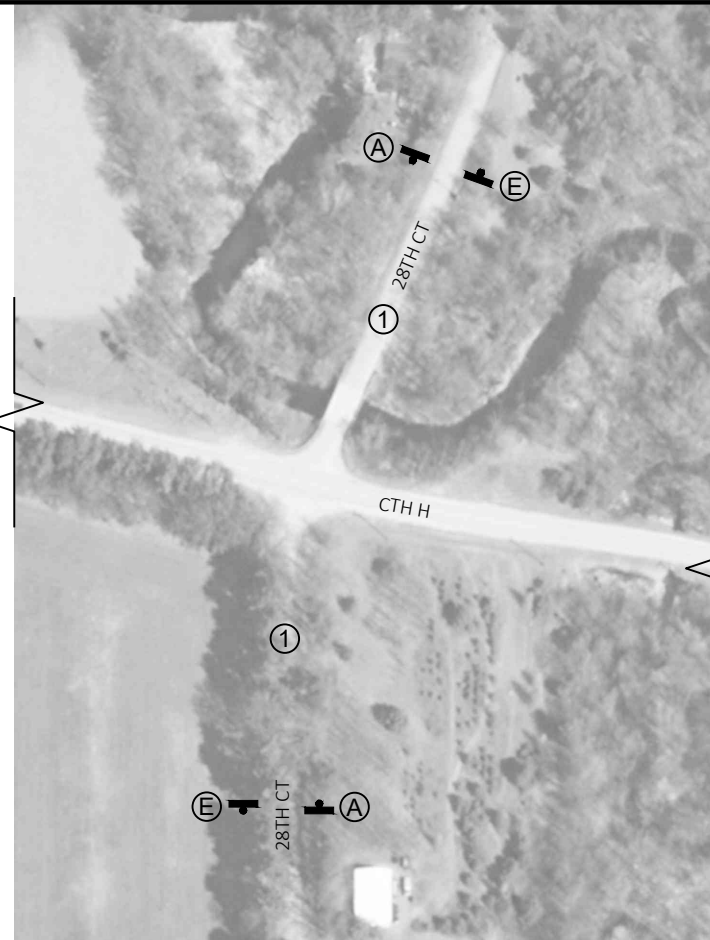
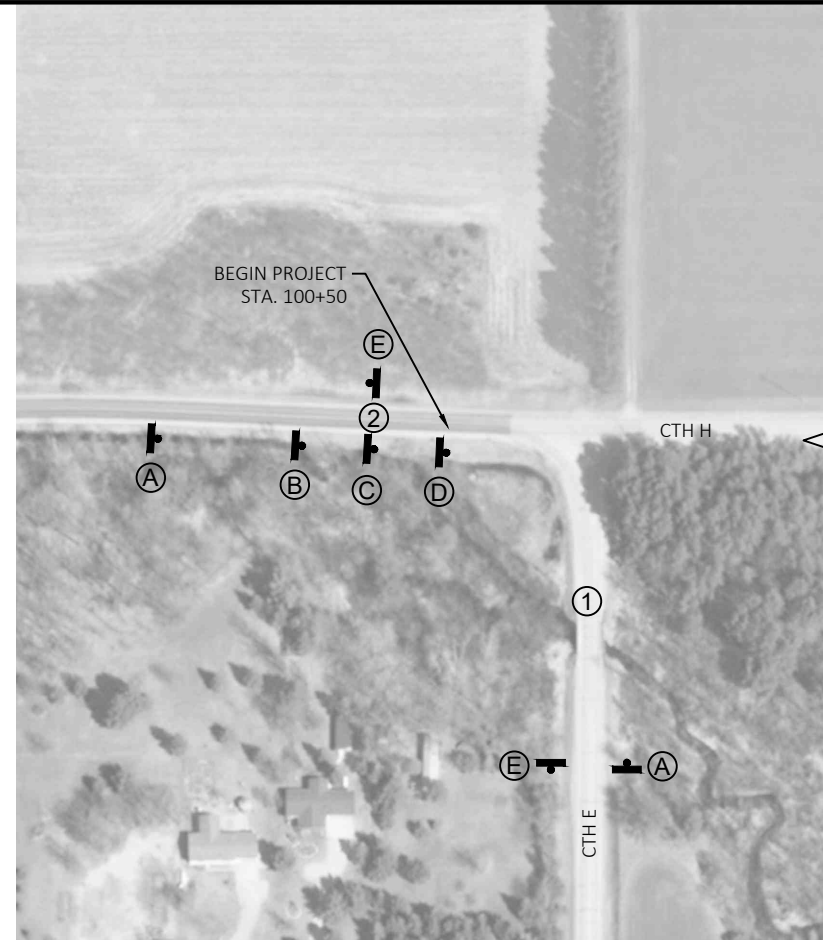




LEGEND	
	EXISTING SIGN MOUNTED ON POST(S)
	PROPOSED SIGN MOUNTED ON POST(S)
	DENOTES SIGN NUMBER
	DENOTES SIGN CODE
	INDICATES SIGN SIZE
	SIGN - REMOVE & REPLACE
	SIGN - REMOVE
	SIGN - NEW

MARKING LEGEND	
MWE4	MARKING LINE PAINT 4-INCH (WHITE SOLID LINE)
MWS4	MARKING LINE PAINT 4-INCH SKIPS (3' DASH 9' GAP)
MYE4	MARKING LINE PAINT 4-INCH (YELLOW)
MDY4	MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
MSY4	MARKING LINE PAINT 4-INCH SKIPS (12.5' DASH 37.5' GAP)

THIS SPACE LEFT BLANK INTENTIONALLY



- ① SEE STANDARD DETAIL DRAWING "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC", TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL.
- ② SEE STANDARD DETAIL DRAWING "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC", FOR SIGNS AND LOCATIONS.

TRAFFIC CONTROL GENERAL NOTES

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED.

A FLAGGER MAY BE REQUIRED WHERE CONSTRUCTION VEHICLES ENTER OR LEAVE "WORK ZONES" IF WARRANTED BY CONDITIONS AND/OR AS DIRECTED BY THE ENGINEER. THE COST OF FLAGGING SHALL BE INCIDENTAL TO OTHER ITEMS IN THE CONTRACT.

ALL SIGN LOCATIONS ARE APPROXIMATE. ACTUAL LOCATIONS WILL BE DETERMINED BY FIELD CONDITIONS AND BY THE ENGINEER IN THE FIELD.

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

COVER OR REMOVE TRAFFIC CONTROL SIGNS WHEN NOT APPLICABLE OR AS DIRECTED BY THE ENGINEER. THE COST FOR COVERING SIGNS SHALL BE INCIDENTAL TO TRAFFIC CONTROL.

SEE STANDARD DETAIL DRAWING "TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)" FOR ADDITIONAL TRAFFIC CONTROL REQUIREMENTS.

PROJECT NO: 6910-01-70

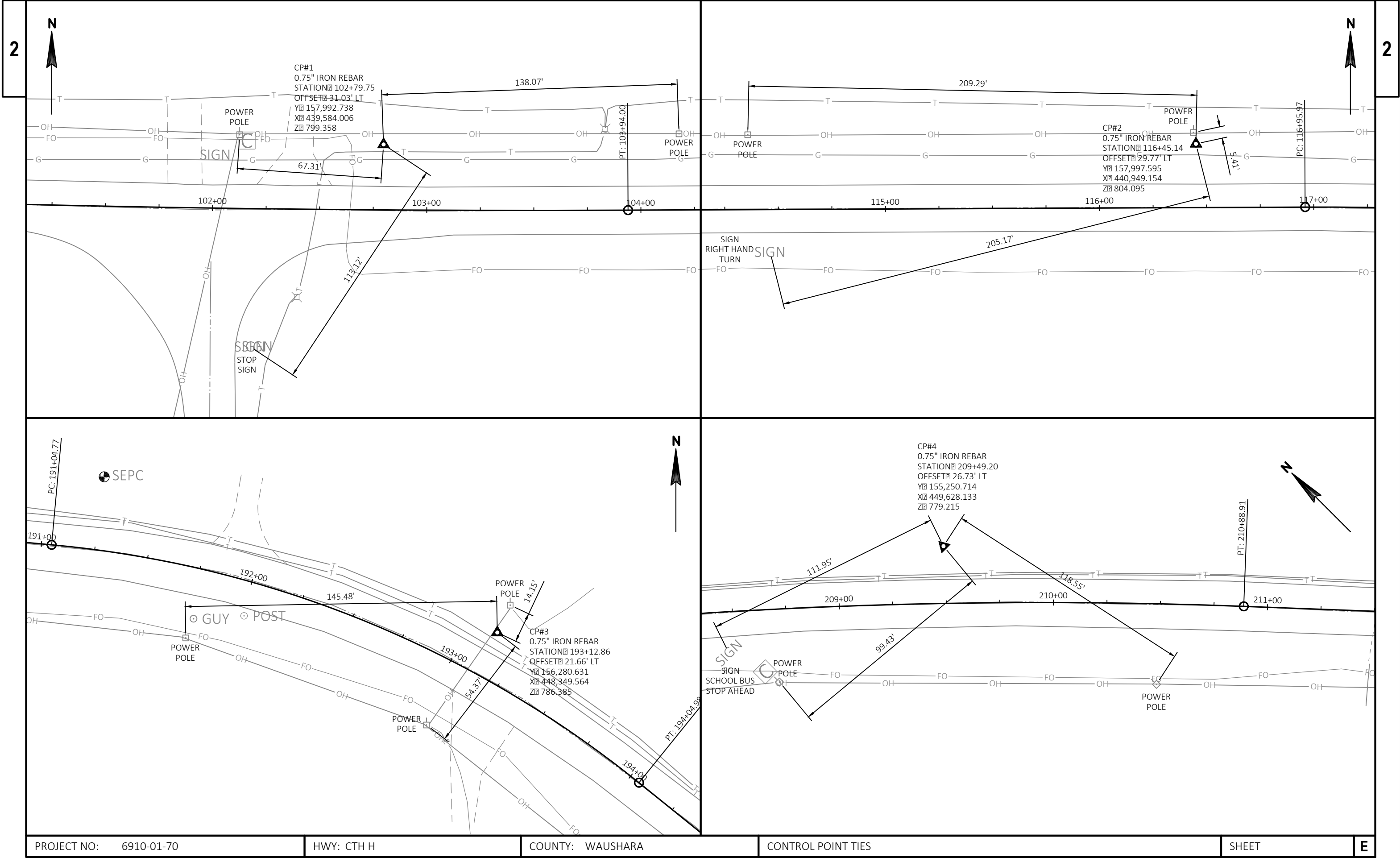
HWY: CTH H

COUNTY: WAUSHARA

TRAFFIC CONTROL

SHEET

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PROJECT NO: 6910-01-70	HWY: CTH H	COUNTY: WAUSHARA	CONTROL POINT TIES	SHEET	E
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Estimate Of Quantities

6910-01-70					
Line	Item	Item Description	Unit	Total	Qty
0002	204.0115	Removing Asphaltic Surface Butt Joints	SY	1,988.000	1,988.000
0004	205.0100	Excavation Common	CY	202.000	202.000
0006	208.0100	Borrow	CY	95.000	95.000
0008	209.1500	Backfill Granular Grade 1	TON	450.000	450.000
0010	211.0100	Prepare Foundation for Asphaltic Paving (project) 01. 6910-01-70	LS	1.000	1.000
0012	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	12.000	12.000
0014	213.0100	Finishing Roadway (project) 01. 6910-01-70	EACH	1.000	1.000
0016	305.0110	Base Aggregate Dense 3/4-Inch	TON	3,834.000	3,834.000
0018	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	825.000	825.000
0020	325.0100	Pulverize and Relay	SY	23,410.000	23,410.000
0022	374.1020.S	QMP Pulverize and Relay Compaction	SY	23,410.000	23,410.000
0024	455.0605	Tack Coat	GAL	1,290.000	1,290.000
0026	460.2000	Incentive Density HMA Pavement	DOL	3,126.000	3,126.000
0028	460.5224	HMA Pavement 4 LT 58-28 S	TON	5,070.000	5,070.000
0030	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	26.000	26.000
0032	606.0200	Riprap Medium	CY	230.000	230.000
0034	606.0600	Grouted Riprap Medium	CY	4.000	4.000
0036	614.2300	MGS Guardrail 3	LF	425.000	425.000
0038	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0040	618.0100	Maintenance And Repair of Haul Roads (project) 01. 6910-01-70	EACH	1.000	1.000
0042	619.1000	Mobilization	EACH	1.000	1.000
0044	624.0100	Water	MGAL	514.000	514.000
0046	625.0100	Topsoil	SY	14,790.000	14,790.000
0048	627.0200	Mulching	SY	13,280.000	13,280.000
0050	628.1504	Silt Fence	LF	1,660.000	1,660.000
0052	628.1520	Silt Fence Maintenance	LF	1,660.000	1,660.000
0054	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0056	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0058	628.2008	Erosion Mat Urban Class I Type B	SY	1,610.000	1,610.000
0060	628.7504	Temporary Ditch Checks	LF	60.000	60.000
0062	628.7570	Rock Bags	EACH	40.000	40.000
0064	629.0210	Fertilizer Type B	CWT	10.200	10.200
0066	630.0120	Seeding Mixture No. 20	LB	435.000	435.000
0068	630.0200	Seeding Temporary	LB	435.000	435.000
0070	633.5200	Markers Culvert End	EACH	8.000	8.000
0072	634.0414	Posts Wood 4x4-Inch X 14-FT	EACH	10.000	10.000
0074	634.0416	Posts Wood 4x4-Inch X 16-FT	EACH	4.000	4.000
0076	637.2210	Signs Type II Reflective H	SF	65.040	65.040

Estimate Of Quantities

6910-01-70

Line	Item	Item Description	Unit	Total	Qty
0078	637.2230	Signs Type II Reflective F	SF	40.250	40.250
0080	638.2602	Removing Signs Type II	EACH	13.000	13.000
0082	638.3000	Removing Small Sign Supports	EACH	13.000	13.000
0084	642.5001	Field Office Type B	EACH	1.000	1.000
0086	643.0300	Traffic Control Drums	DAY	100.000	100.000
0088	643.0310.S	Temporary Portable Rumble Strips	LS	1.000	1.000
0090	643.0900	Traffic Control Signs	DAY	1,210.000	1,210.000
0092	643.5000	Traffic Control	EACH	1.000	1.000
0094	645.0130	Geotextile Type R	SY	635.000	635.000
0096	646.1005	Marking Line Paint 4-Inch	LF	32,200.000	32,200.000
0098	648.0100	Locating No-Passing Zones	MI	1.880	1.880
0100	650.4500	Construction Staking Subgrade	LF	818.000	818.000
0102	650.5000	Construction Staking Base	LF	818.000	818.000
0104	650.8000	Construction Staking Resurfacing Reference	LF	9,925.000	9,925.000
0106	650.9910	Construction Staking Supplemental Control (project) 01. 6910-01-70	LS	1.000	1.000
0108	650.9920	Construction Staking Slope Stakes	LF	818.000	818.000
0110	690.0150	Sawing Asphalt	LF	173.000	173.000
0112	740.0440	Incentive IRI Ride	DOL	7,520.000	7,520.000
0114	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	300.000	300.000
0116	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	600.000	600.000

EARTHWORK SUMMARY

STATION	205.0100 EXCAVATION COMMON		SALVAGED/ UNUSABLE PAVEMENT MATERIAL	EXPANDED MARSH BACKFILL	AVAILABLE MATERIAL	UNEXPANDED	EXPANDED	MASS ORDINATE	208.0100 BORROW	COMMENTS
	CUT (2)	EBS	(3)	(4)	(5)	FILL	FILL (6)	+/- (7)	CY	
	CY	CY	CY	CY	CY	CY	CY	CY	CY	
128+00 - 133+50	202	0	28	0	174	212	266	-92	95	ROAD AND BEAMGUARD AREA
TOTAL	202	0	28	0	174	212	266	-92	95	

- (1) EXCAVATION COMMON IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS.
(2) SALVAGED/UNUSEABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
(3) SALVAGED/UNUSEABLE PAVEMENT MATERIAL
(4) EXPANDED MARSH BACKFILL IS TO BE FILLED WITH AVAILABLE MATERIAL OR GRANULAR BACKFILL. MARSH BACKFILL FACTOR = 1.875
(5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSEABLE PAVEMENT MATERIAL
(6) EXPANDED FILL FACTOR = 1.25
(7) THE MASS ORDINATE + OR - QUANTITY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION.
MINUS QUANTITY INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

REMOVING ASPHALTIC SURFACE BUTT JOINTS		
STATION	LOCATION	204.0115 SY
100+50 - 102+25	CTH H	428
198+00 - 199+75	CTH H	428
	CTH E	422
	28TH COURT (SOUTH)	250
	28TH COURT (NORTH)	250
	DRIVEWAYS	210
TOTAL		1,988

BACKFILL GRANULAR GRADE 1		
STATION	LOCATION	209.1500 TON
EBS AREAS		450
TOTALS		450

PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS		
STATION	LOCATION	211.0400 STA
128+47 - 133+79	BEAMGUARD, RT	6
128+59 - 133+62	BEAMGUARD, LT	6
TOTAL		12

BASE AGGREGATE DENSE ITEMS				
STATION	LOCATION	305.0110 BASE AGGREGATE 3/4-INCH TON	305.0120 BASE AGGREGATE 1 1/4-INCH TON	624.0100 WATER (1) MGAL
100+50 - 199+75	MAINLINE	2,655	--	40
116+00 - 121+99	CURVE 2	86	--	1
125+00 - 128+00	CURVE 3	62	--	1
128+00 - 134+97	BEAM GUARD	177	425	9
164+28 - 169+88	CURVE 9	74	--	1
172+39 - 176+46	CURVE 11	63	--	1
189+52 - 195+58	CURVE 12	97	--	1
	SIDEROADS	20	--	0
	DRIVEWAYS	250	--	4
195+00 - 199+75	EBS AREAS	--	400	6
	UNDISTRIBUTED	350	--	5
TOTALS		3,834	825	70

(1) ADDITIONAL QUANTITIES LISTED ELSEWHERE.

PREPARE FOUNDATION FOR ASPHALTIC PAVING	
PROJECT	211.0100 LS
6910-01-70	1
TOTAL	1

FINISHING ROADWAY	
PROJECT	213.0100 EACH
6910-01-70	1
TOTAL	1

RIPRAP ITEMS				
STATION	LOCATION	606.0200 RIPRAP MEDIUM CY	606.0600 GROUTED RIPRAP MEDIUM CY	645.0130 GEOTEXTILE TYPE R SY
129+90 - 132+40	LT	170	--	470
130+63 - 130+73	LT & RT	--	4	--
130+85 - 131+85	RT	60	--	165
TOTALS		230	4	635

MAINTENANCE AND REPAIR OF HAUL ROADS		
CATEGORY	PROJECT	618.0100 EACH
0020	6910-01-70	1
TOTAL		1

PULVERIZE AND RELAY				
STATION	LOCATION	325.0100 SY	374.1020.S QMP COMPACTION SY	624.0100 WATER (1) MGAL
102+25 - 198+00	CTH H	23,410	23,410	117
TOTALS		23,410	23,410	117

(1) ADDITIONAL QUANTITIES LISTED ELSEWHERE. APPLICATION RATE ASSUMES 5 GAL/SY.

HMA PAVEMENT				
STATION	LOCATION	455.0605 TACK COAT GAL	460.5224 HMA PAVEMENT 4 LT 58-28 S TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON
100+50 - 199+75	MAINLINE	1,213	4,800	--
127+47 - 133+79	BEAMGUARD	21	85	--
	CTH E	21	85	--
	28TH COURT (SOUTH)	13	50	--
	28TH COURT (NORTH)	13	50	--
	DRIVEWAYS	10	--	26
TOTALS		1,290	5,070	26

GUARDRAIL ITEMS			
STATION	LOCATION	614.2300 MGS GUARDRAIL 3 LF	614.2610 MGS GUARDRAIL TERMINAL EAT EA
129+53 - 130+06	RT	--	1
130+06 - 132+31	RT	225	--
132+31 - 132+84	RT	--	1
129+53 - 130+06	LT	--	1
130+06 - 132+06	LT	200	--
132+06 - 132+59	LT	--	1
TOTALS		425	4

NOTE: ALL ITEMS ON THIS SHEET ARE UNDER PROJECT ID 6910-01-70 CATEGORY 0010 UNLESS INDICATED OTHERWISE IN THE ITEM TABLE.

MOBILIZATION	
PROJECT	619.1000
6910-01-70	EACH
	1
TOTAL	1

FIELD OFFICE TYPE B	
LOCATION	642.5001
6910-01-70	EACH
	1
TOTAL	1

RESTORATION								
		624.0100	625.0100	627.0200	628.2008	629.0210	630.0120	630.0200
		WATER (1)	TOPSOIL	MULCHING	EROSION MAT	FERTILIZER	SEEDING	SEEDING
					URBAN CLASS I	TYPE B	MIXTURE #20	TEMPORARY
					TYPE B			
STATION	LOCATION	MGAL	SY	SY	SY	CWT	LB	LB
128+51 - 133+74	RT	15	780	--	780	0.5	21	21
128+62 - 133+60	LT	14	730	--	730	0.5	20	20
MAINLINE	LT & RT	296	13,180	13,180	--	9.1	392	392
UNDISTRIBUTED		2	100	100	100	0.1	3	3
TOTALS		327	14,790	13,280	1,610	10.2	435	435

(1) ADDITIONAL QUANTITIES LISTED ELSEWHERE.

EROSION CONTROL							
		628.1504	628.1520	628.1905	628.1910	628.7504	628.7570
		SILT FENCE	SILT FENCE	MOBILIZATION	MOBILIZATION	TEMPORARY	ROCK
			MAINTENANCE		EMERGENCY	DITCH	BAGS
						CHECKS	
STATION	LOCATION	LF	LF	EA	EA	LF	EA
128+47 - 133+79	RT	580	580	--	--	--	--
128+59 - 133+62	LT	580	580	--	--	--	--
PROJECT 6910-01-70		--	--	4	2	--	--
UNDISTRIBUTED		500	500	--	--	60	40
TOTALS		1,660	1,660	4	2	60	40

NOTE: LOCATIONS FOR TEMPORARY DITCH CHECKS AND ROCK BAGS FOR SILT FENCE RELIEFS ARE TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

MARKER CULVERT END	
	633.5200
LOCATION	EACH
130+68	2
156+45	2
183+42	2
196+52	2
TOTAL	8

NOTE: ALL ITEMS ON THIS SHEET ARE UNDER PROJECT ID 6910-01-70 CATEGORY 0010 UNLESS INDICATED OTHERWISE IN THE ITEM TABLE.

TRAFFIC CONTROL

		643.0300	643.0310.S	643.0900	643.5000
		DRUMS	TEMPORARY	SIGNS	TRAFFIC CONTROL
			PORTABLE		
			RUMBLE		
			STRIPS		
LOCATION	DURATION	EACH	DAY	LS	EACH
	(DAYS)				DAY
CTH H / CTH E S ADVANCED WARNING	50	--	--	--	7
CTH H / 28TH CT ADVANVED WARNING	50	--	--	--	4
END PROJECT ADVANCED WARNING	50	--	--	--	5
CTH H / STH 49 ADVANCED WARNING	50	--	--	--	3
MOVING OPERATIONS	40	--	--	--	6
PROJECT 6910-01-70	--	--	--	1	--
UNDISTRIBUTED	10	10	100	--	2
TOTALS			100	1	1,210
					1

MARKING

		646.1005	646.1005
		LINE PAINT	LINE PAINT
		4-INCH	4-INCH
		(YELLOW)	(WHITE)
STATION	LOCATION	LF	LF
100+50 - 199+75	CTH H	12,050	19,850
	CTH E	150	150
SUBTOTAL		12,200	20,000
TOTAL			32,200

CONSTRUCTION STAKING

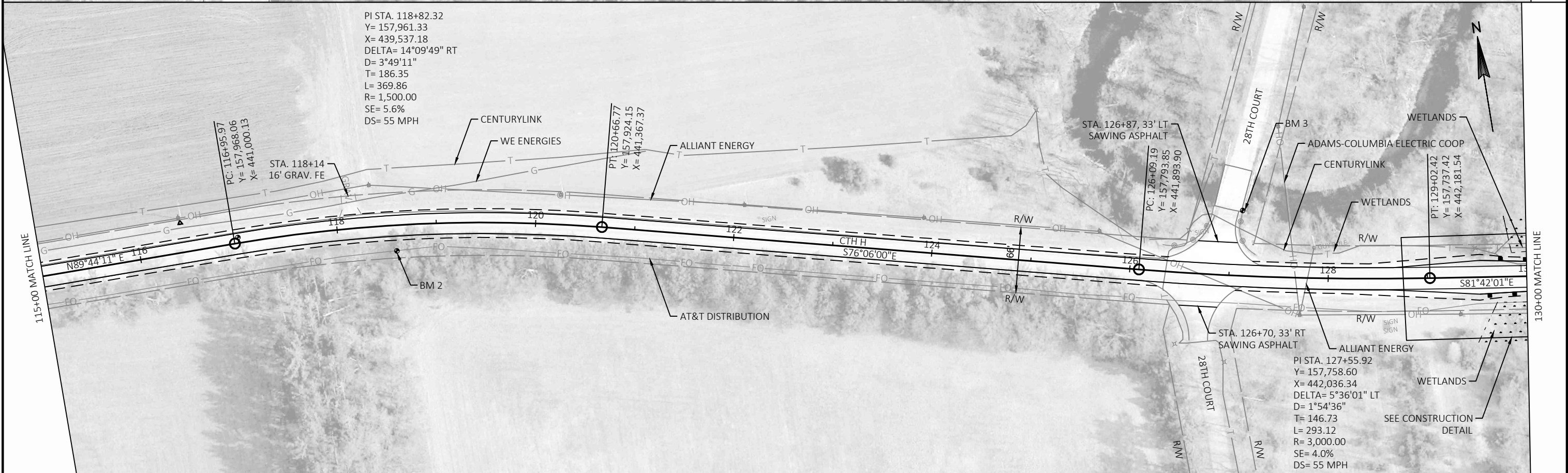
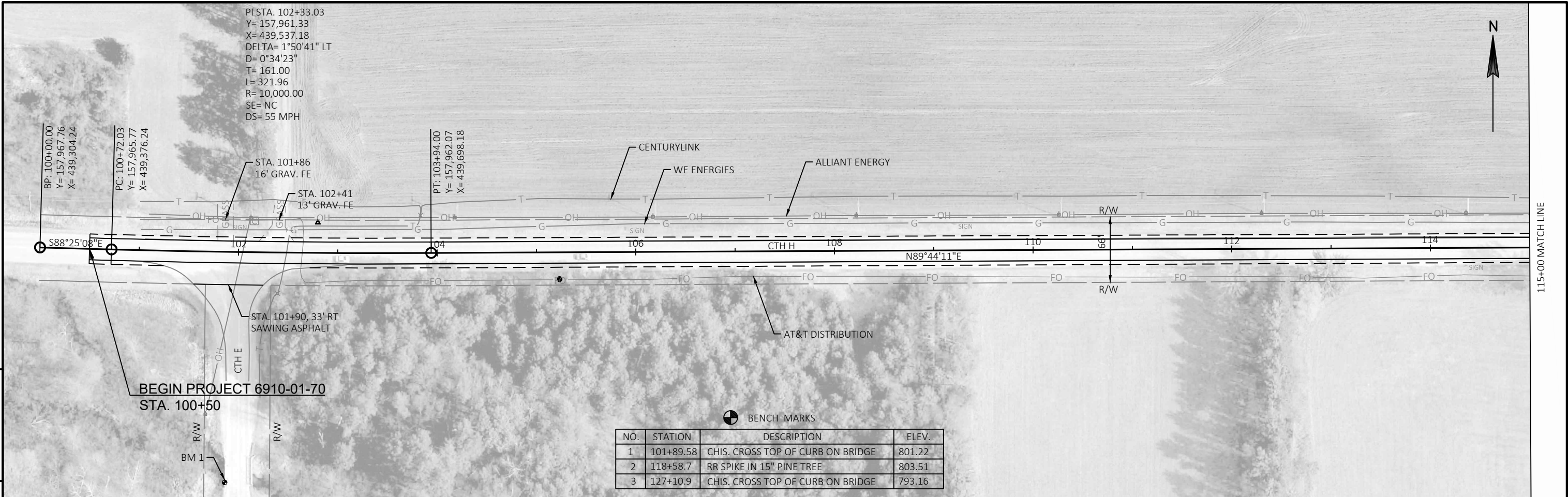
		650.8000	650.9910	650.9920	650.4500	650.5000
		RESURFACING	SUPPLEMENTAL	SLOPE STAKES	SUBGRADE	BASE
		REFERENCE	CONTROL			
STATION	LOCATION	LF	EACH	LF	LF	LF
100+50 - 199+75	CTH H	9,925	--	--	--	--
129+41 - 132+84	BEAMGUARD	--	--	343	343	343
195+00 - 199+75	EBS	--	--	475	475	475
--	PROJECT 6910-01-70	--	1	--	--	--
TOTALS		9,925	1	818	818	818

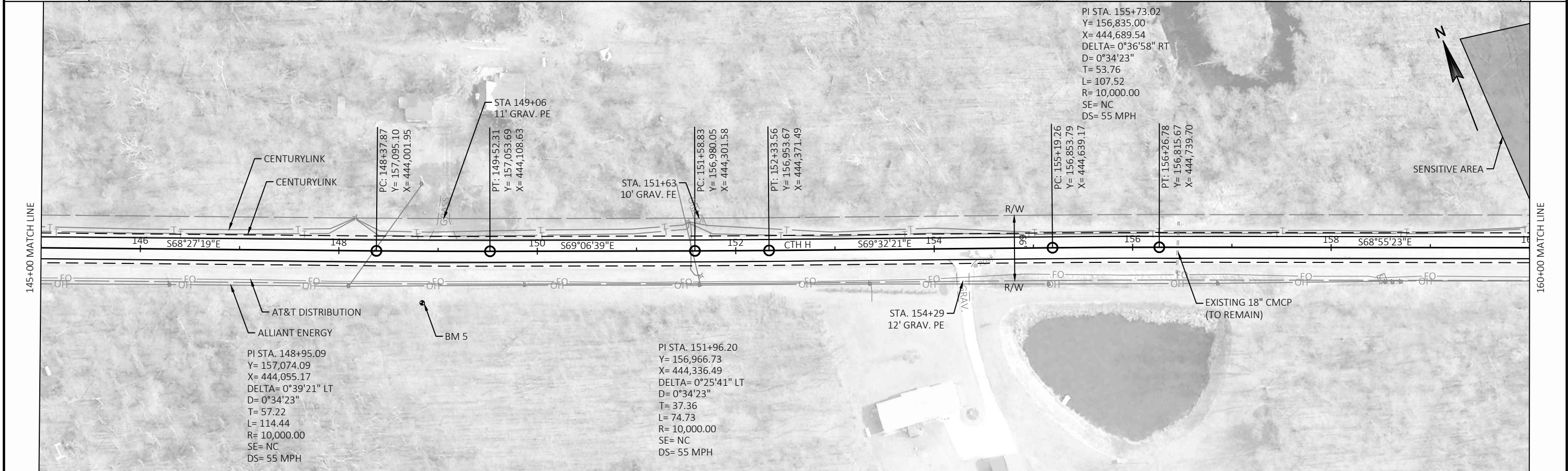
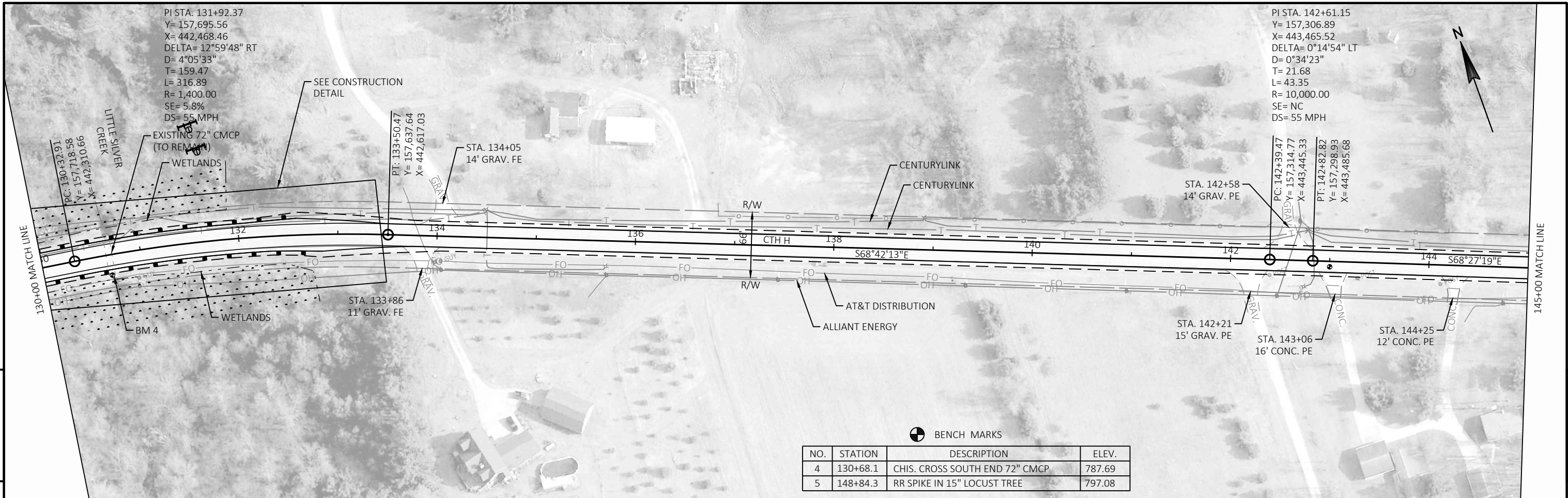
SAWING ASPHALT

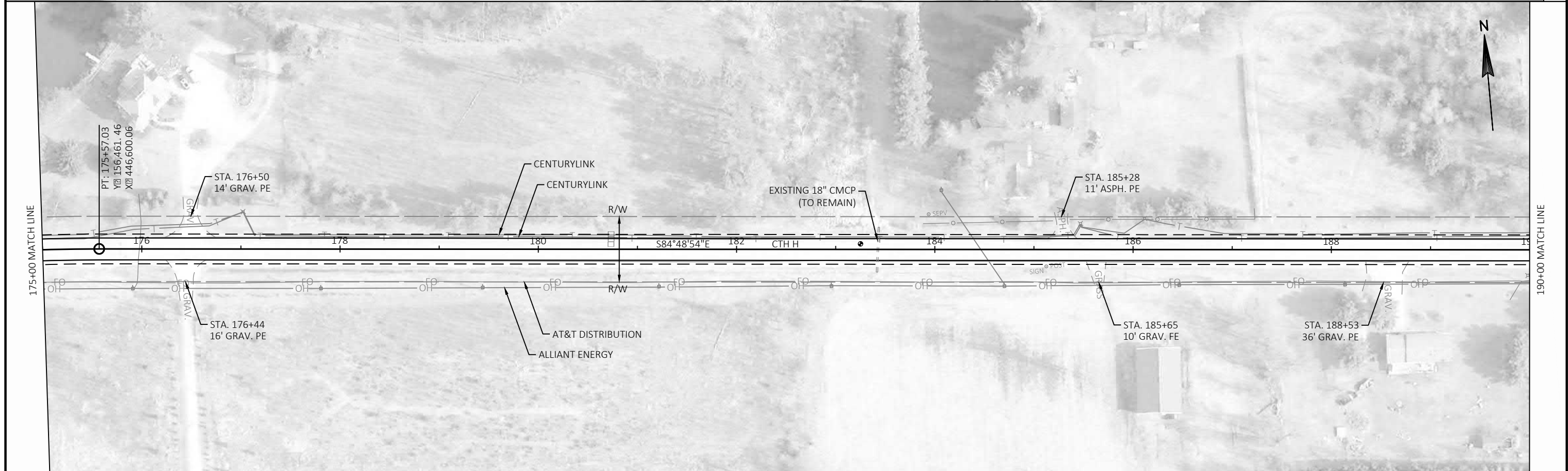
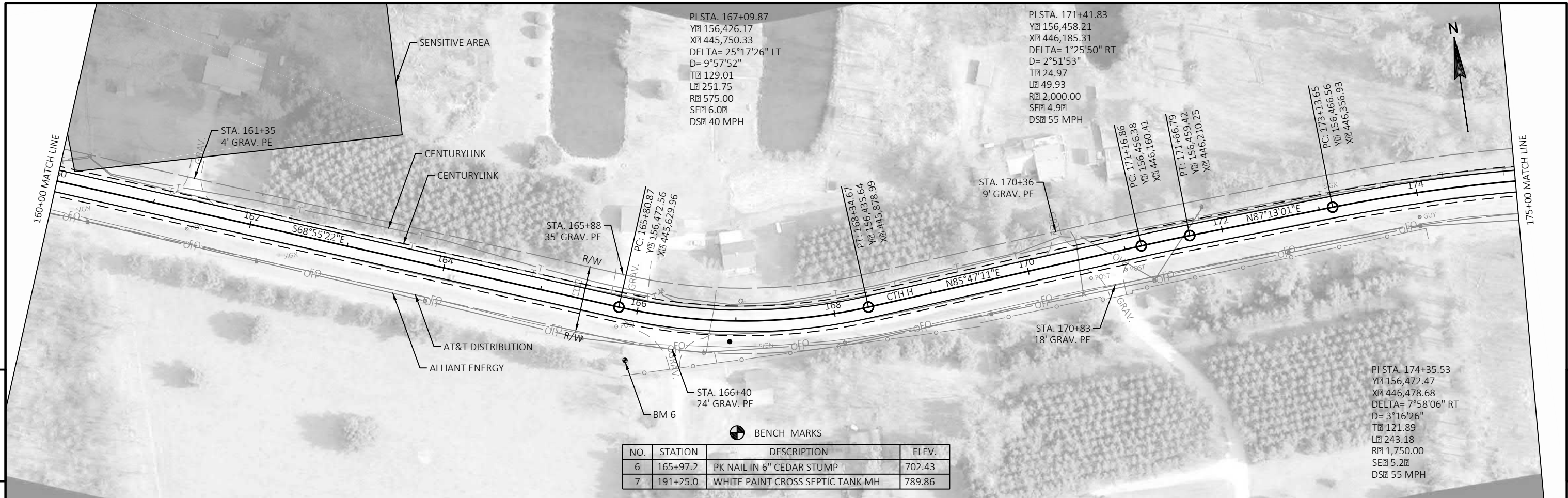
		690.0150
STATION	LOCATION	LF
100+50	CTH H	22
199+75	CTH H	22
	CTH E	34
	28TH COURT (SOUTH)	25
	28TH COURT (NORTH)	25
	DRIVEWAYS	45
TOTAL		173

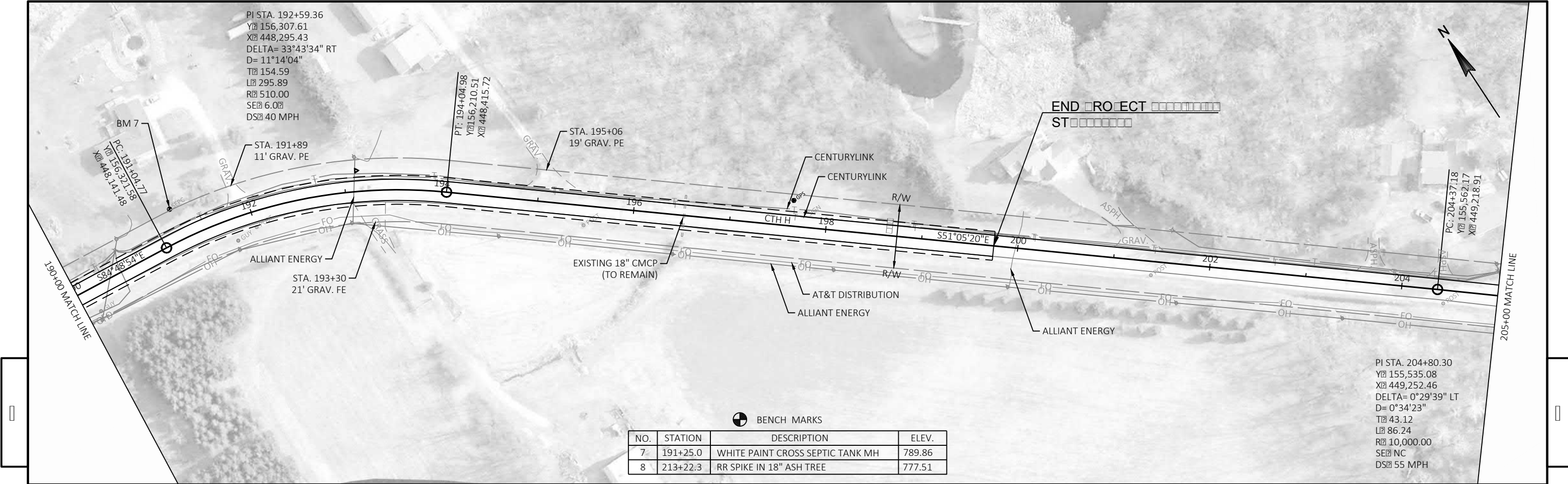
PERMANENT SIGNS													
SIGN NO.	STATION	LOCATION	SIGN CODE	SIGN SIZE			637.2210 SIGNS TYPE II	637.2230 SIGNS TYPE II	634.0414 POSTS WOOD 4X4-INCH X 14-FT	634.0416 POSTS WOOD 4X4-INCH X 16-FT	638.2602 REMOVING SIGNS TYPE II	638.3000 REMOVING SMALL SIGN SUPPORTS	MESSAGE
				IN	X	IN	REFLECTIVE H SF	REFLECTIVE F SF	EACH	EACH	EACH	EACH	
1-01	101+00	RT	J13-1	24	X	45	7.50	--	--	1	1	1	J-ASSEMBLY
			M1-5-A	24	X	24	--	--	--	--	--	--	CTH E
			M6-1	21	X	21	--	--	--	--	--	--	RIGHT ARROW
1-02	102+00	LT	W1-7	48	X	24	8.00	--	1	--	1	1	TWO-DIRECTION LARGE ARROW
1-03	102+00	LT	J13-1	24	X	45	7.50	--	1	--	--	--	J-ASSEMBLY
			M1-5-A	24	X	24	--	--	--	--	--	--	J-ASSEMBLY
			M6-6	21	X	21	--	--	--	--	--	--	UP AND RT ARROW
1-04	102+18	RT	R1-1	30	X	30	5.18	--	1	--	1	1	STOP
1-05	102+20	RT	J13-2	48	X	45	15.00	--	--	1	1	1	J-ASSEMBLY
			M1-5-A	24	X	24	--	--	--	--	--	--	CTH E
			M6-1	21	X	21	--	--	--	--	--	--	LEFT ARROW
1-06	106+01	LT	M1-5-A	24	X	24	--	--	--	--	--	--	CTH H
			M6-1	21	X	21	--	--	--	--	--	--	RIGHT ARROW
			D1-56L	60	X	12	5.00	--	1	--	1	1	REDGRANITE LEFT ARROW
1-07	109+32	LT	J1-1	24	X	39	6.50	--	1	--	1	1	J-ASSEMBLY
			M2-1	21	X	15	--	--	--	--	--	--	JUNCTION
			M1-5-A	24	X	24	--	--	--	--	--	--	CTH E
1-08	126+70	LT	R1-1	30	X	30	5.18	--	1	--	1	1	STOP
1-09	126+88	RT	R1-1	30	X	30	5.18	--	1	--	1	1	STOP
3-01	160+32	RT	W1-2L	30	X	30	--	6.25	--	1	1	1	ROAD CURVES LEFT
3-02	160+32	RT	W13-1	18	X	18	--	2.25	--	--	--	--	35 MPH
3-03	162+47	RT	S3-1	30	X	30	--	6.25	1	--	1	1	SCHOOL BUS STOP AHEAD
3-04	173+16	LT	W1-2R	30	X	30	--	6.25	--	1	1	1	ROAD CURVES RIGHT
3-05	173+16	LT	W13-1	18	X	18	--	2.25	--	--	--	--	35 MPH
3-06	185+03	RT	W1-2R	30	X	30	--	6.25	1	--	1	1	ROAD CURVES RIGHT
3-07	185+03	RT	W13-1	18	X	18	--	2.25	-	-	-	-	35 MPH
4-01	197+86	LT	W1-2L	30	X	30	--	6.25	1	--	1	1	ROAD CURVER LEFT
4-02	197+86	LT	W13-1	18	X	18	--	2.25	--	--	--	--	35 MPH
TOTALS							65.04	40.25	10	4	13	13	

NOTE: ALL ITEMS ON THIS SHEET ARE UNDER PROJECT ID 6910-01-70 CATEGORY 0010 UNLESS INDICATED OTHERWISE IN THE ITEM TABLE.





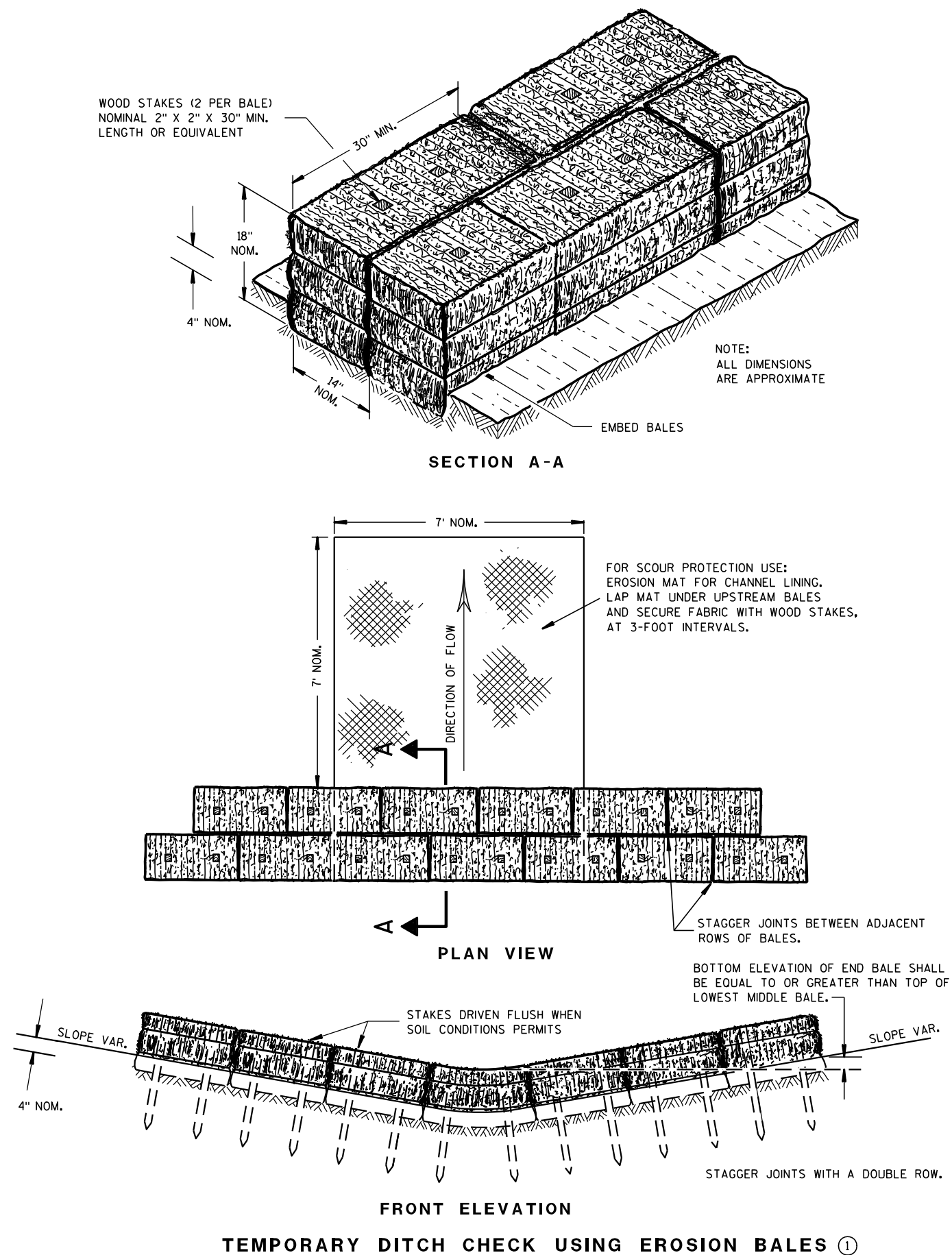




THIS SPACE LEFT BLANK INTENTIONALLY

Standard Detail Drawing List

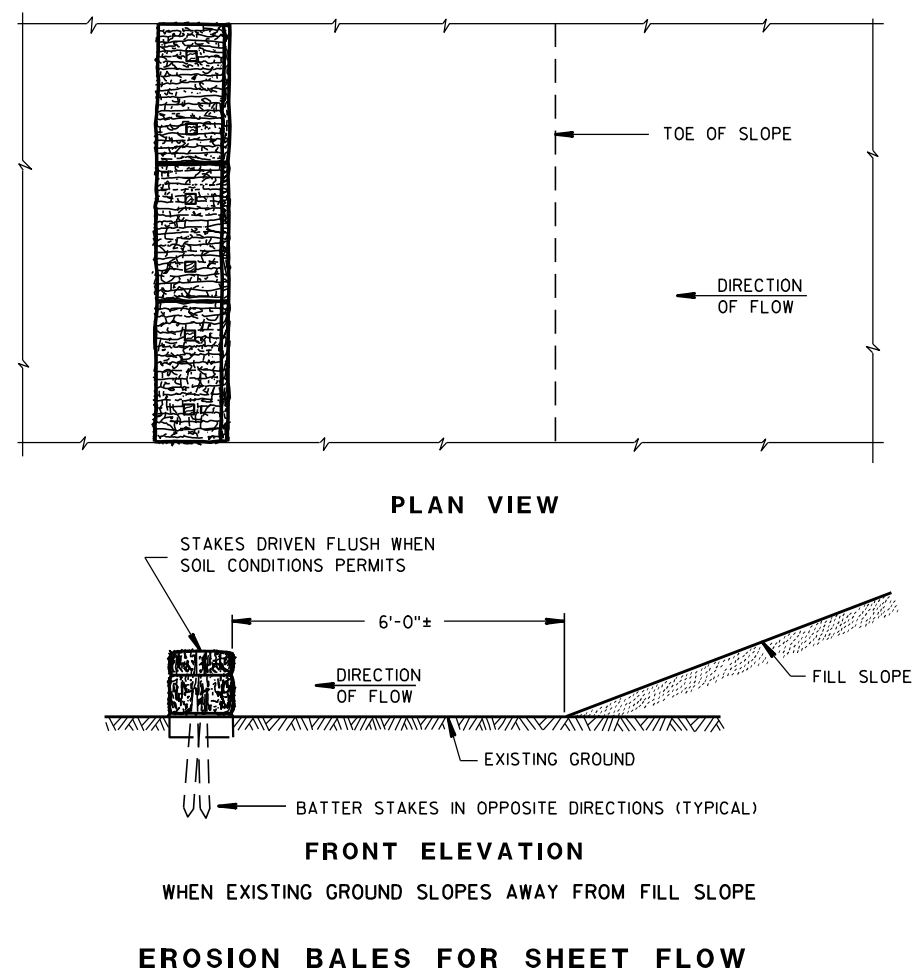
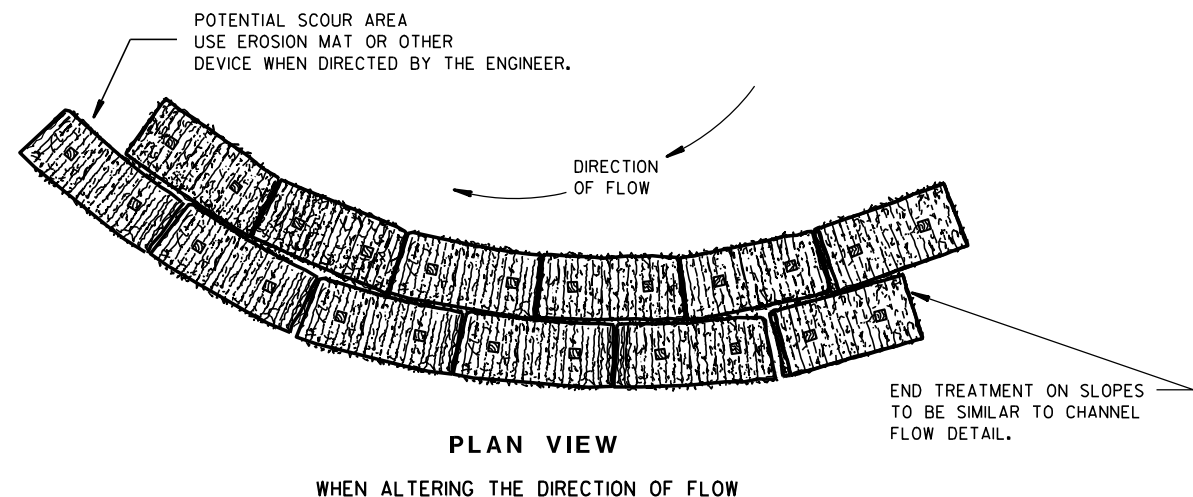
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
14B29-01	SAFETY EDGE
14B42-06A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-18A	LONGITUDINAL MARKING (MAINLINE)
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-06	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-05A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C35-02A	PAVEMENT MARKING (INTERSECTIONS)
15D28-03	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS



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.

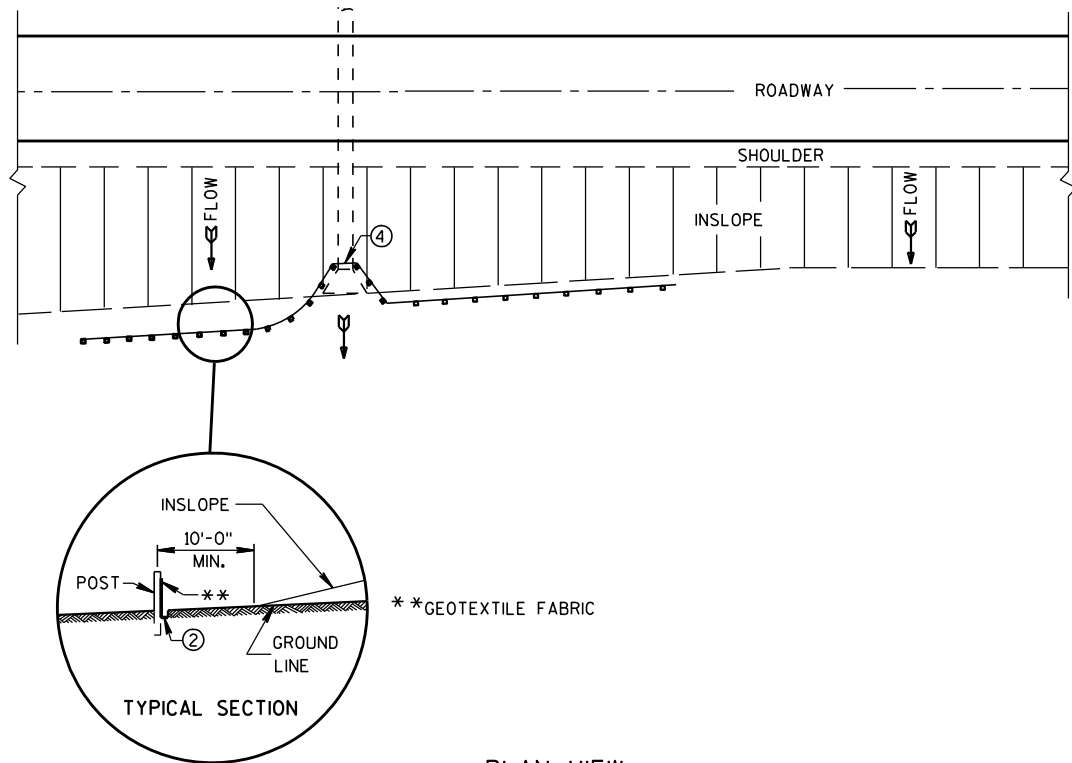
TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

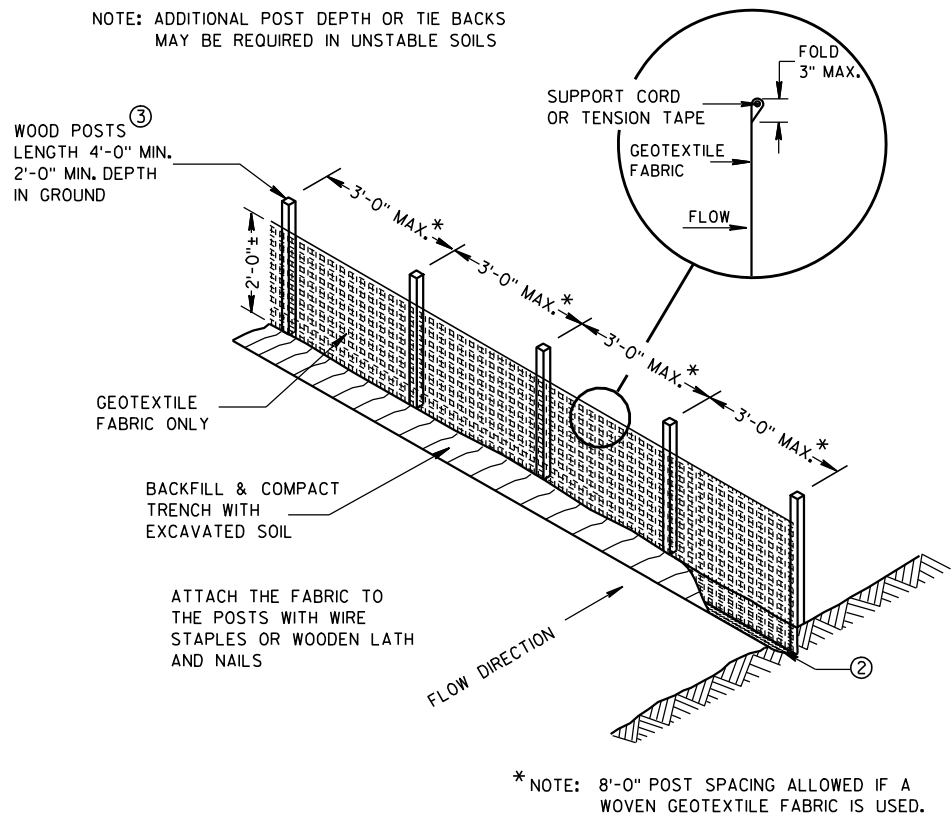
APPROVED

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

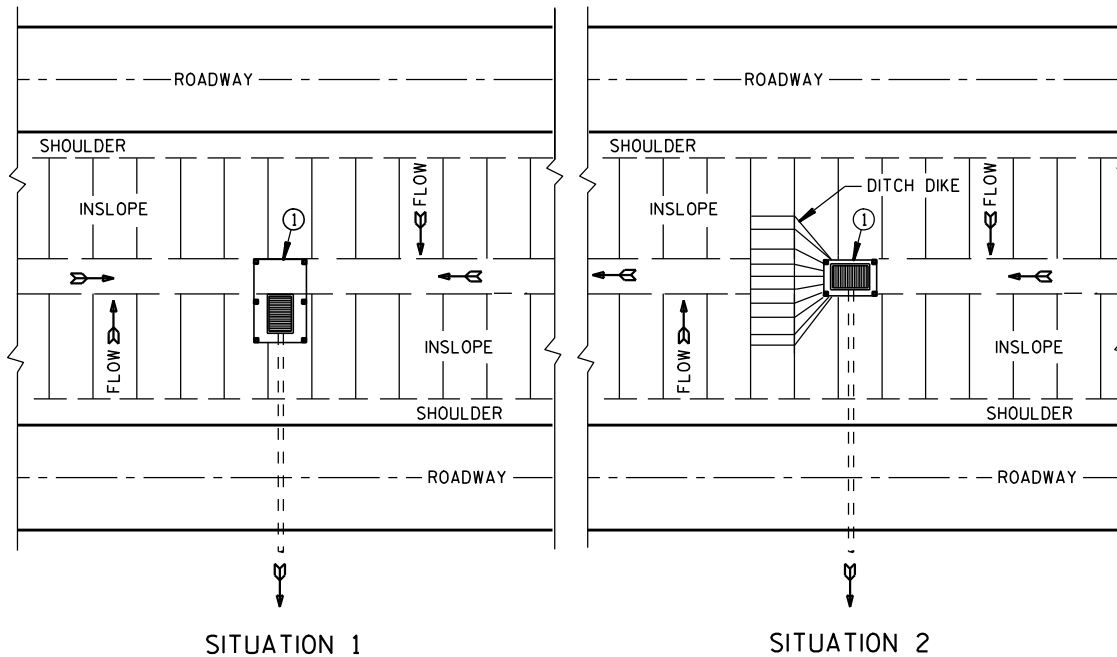
FHWA



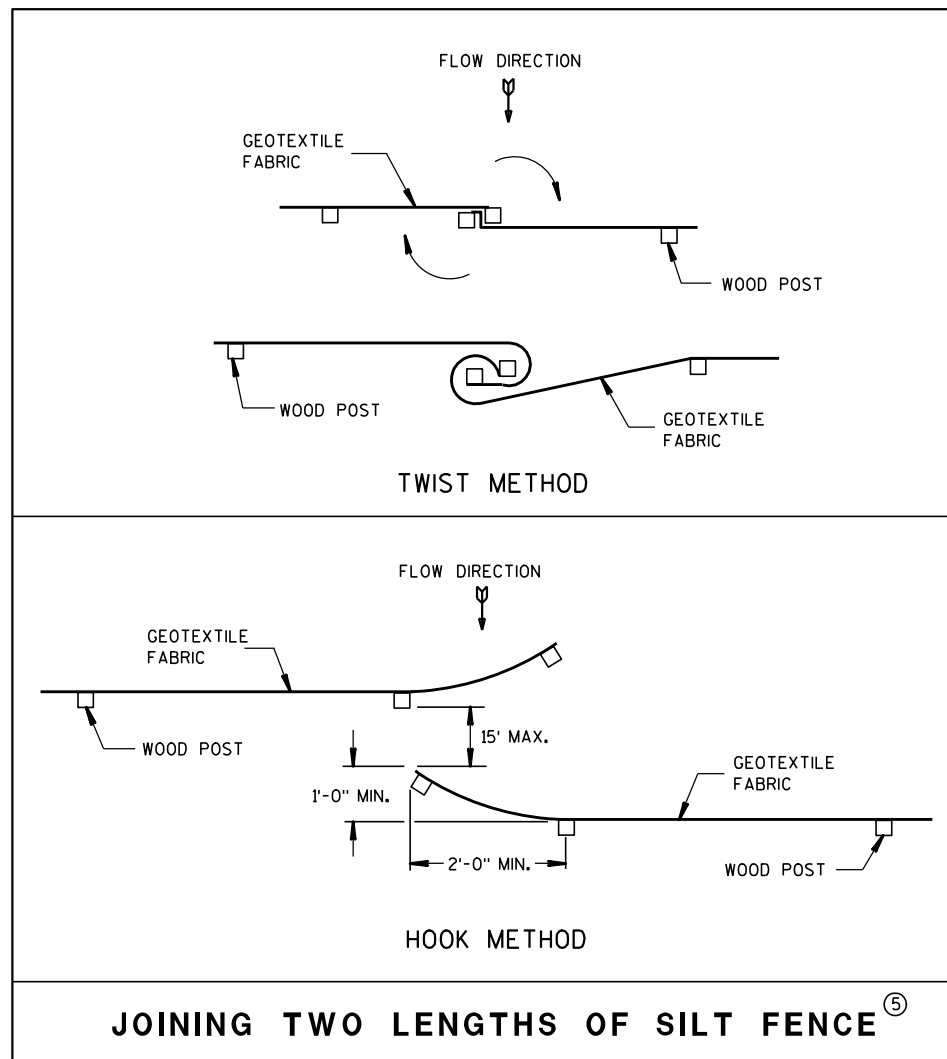
PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE



SILT FENCE



PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

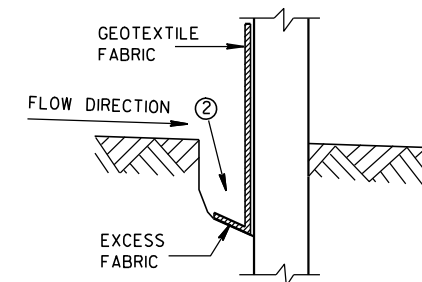


JOINING TWO LENGTHS OF SILT FENCE (5)

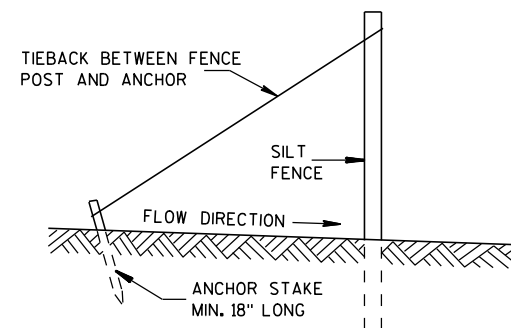
GENERAL NOTES

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

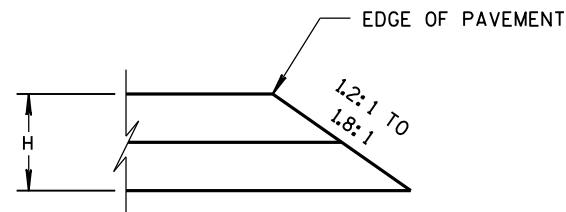


SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

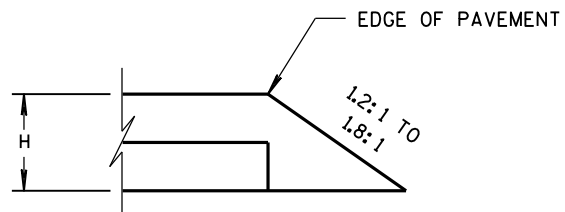
SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

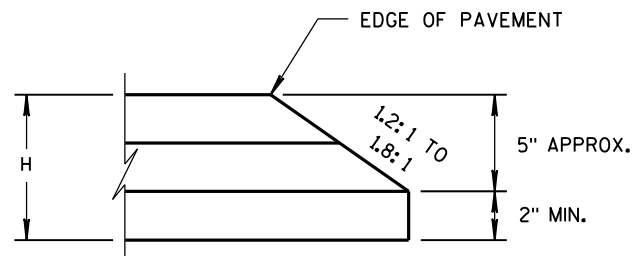
APPROVED
4-29-05 /S/ Beth Canestra
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



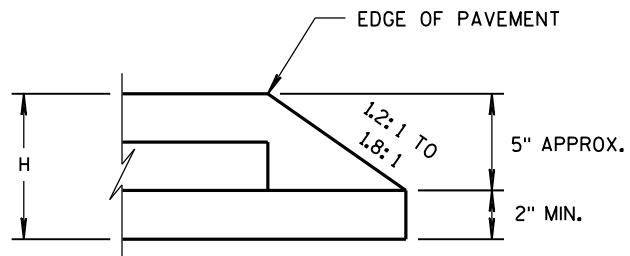
CONSTRUCTED WITH FINAL TWO LAYERS
FOR H 5" OR LESS



CONSTRUCTED WITH FINAL LAYER
FOR H 5" OR LESS

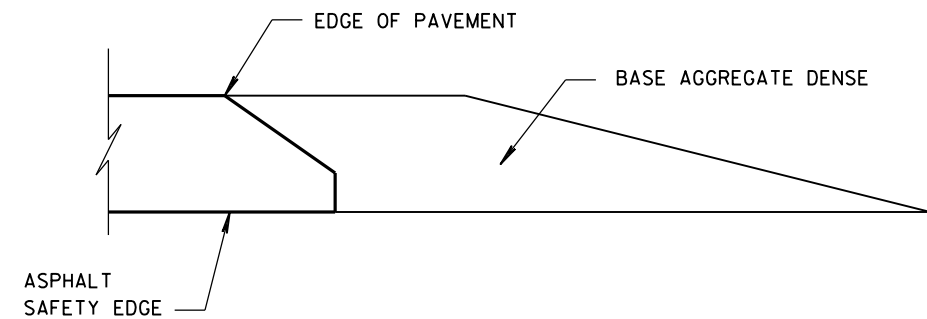


CONSTRUCTED WITH FINAL TWO LAYERS
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER
FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

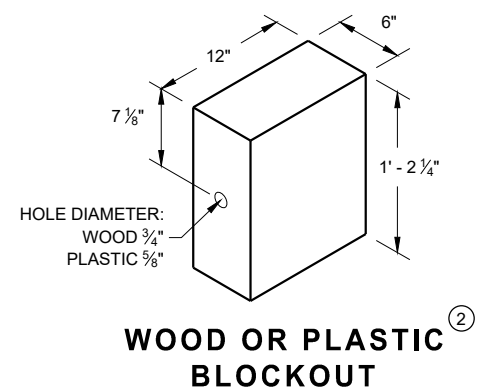
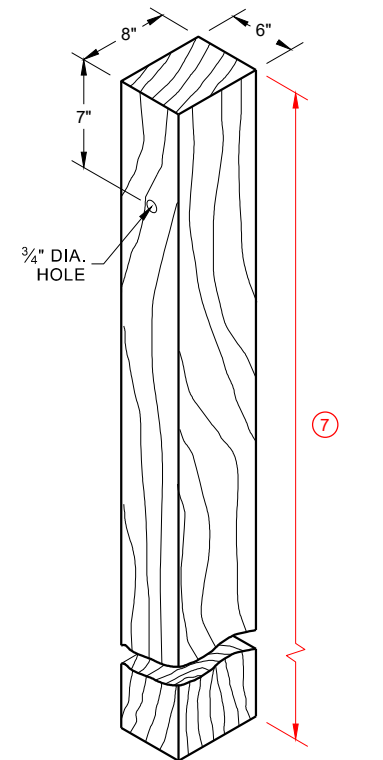
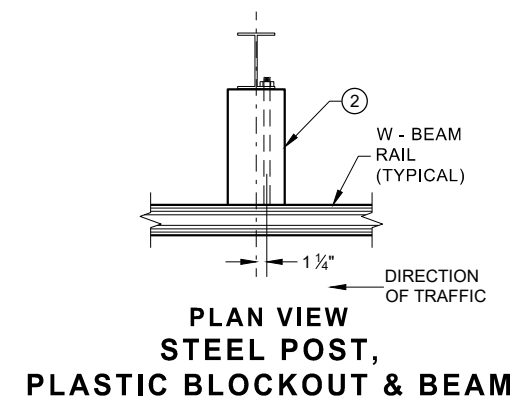
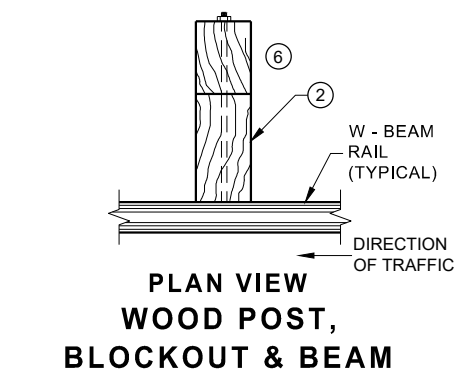
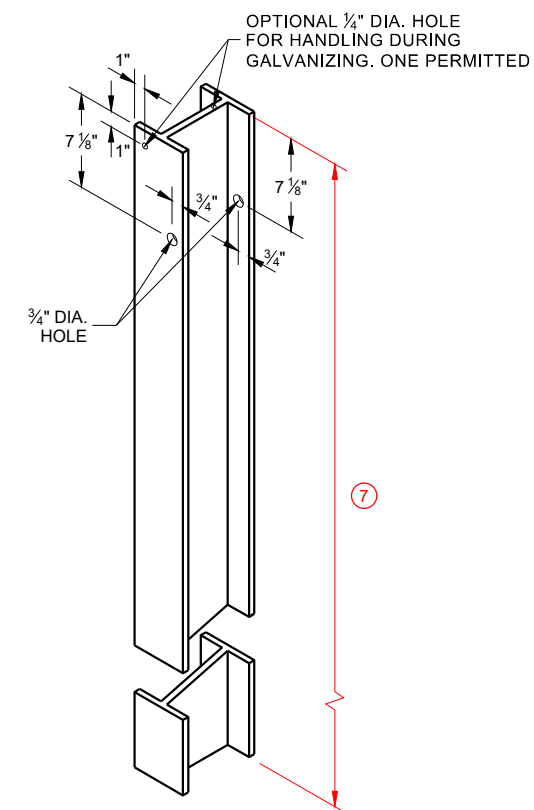
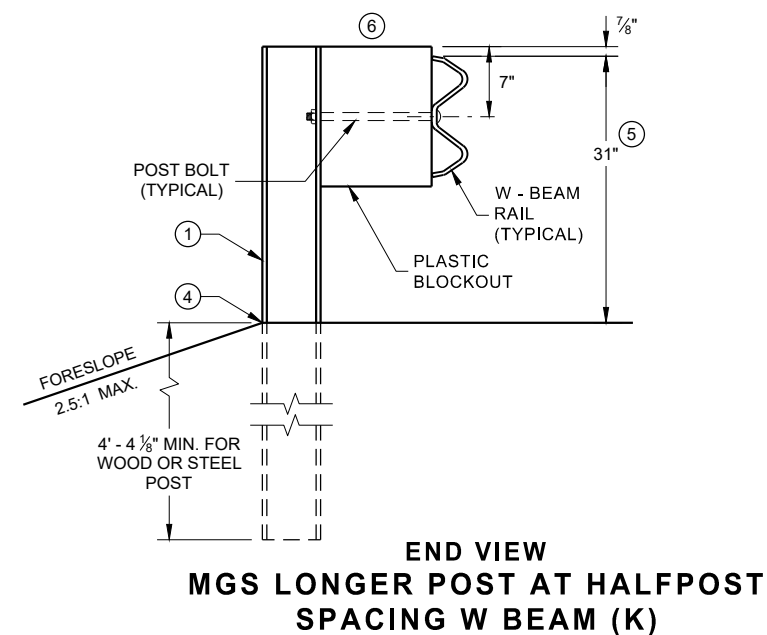
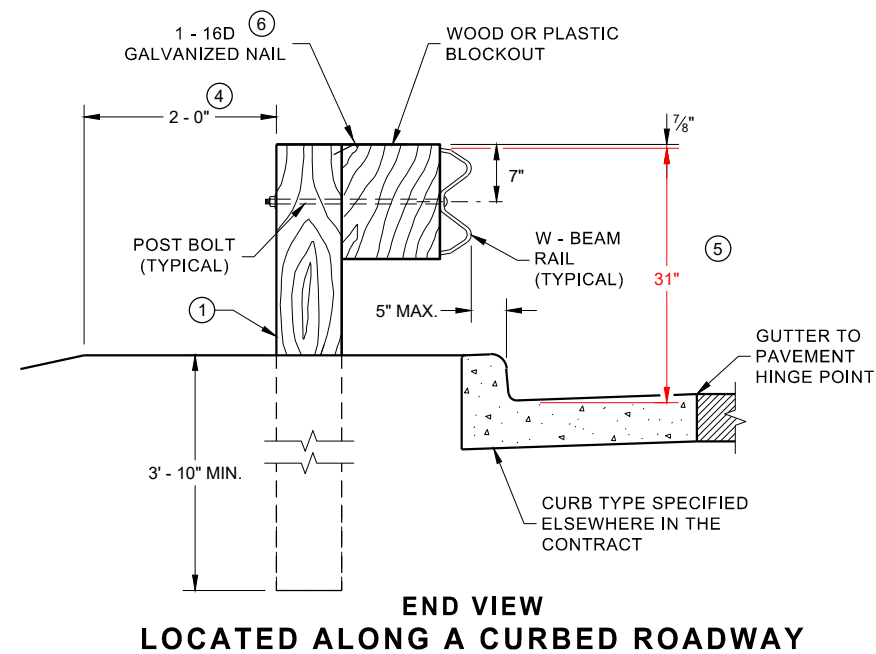
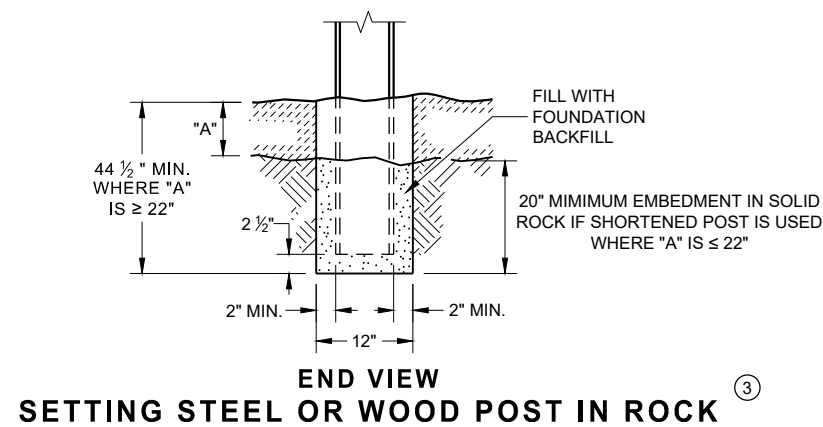
SAFETY EDGE_{SM}

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/2012
DATE
FHWA

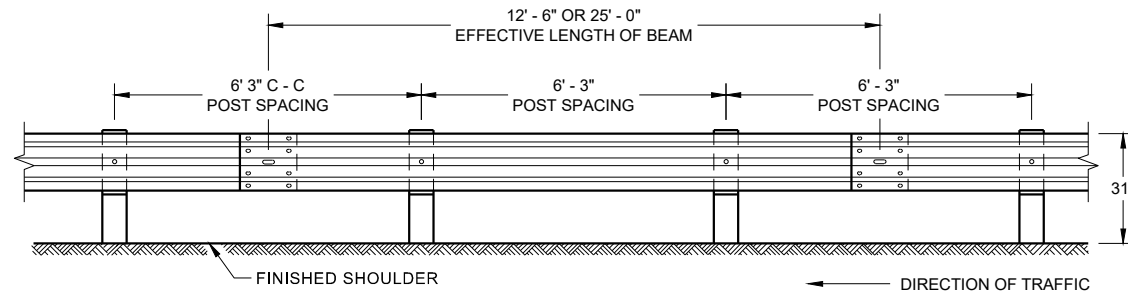
/s/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

- WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.
- IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.
- WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).
- FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS $\pm 1"$. FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 3/4" TO 32".
- WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".

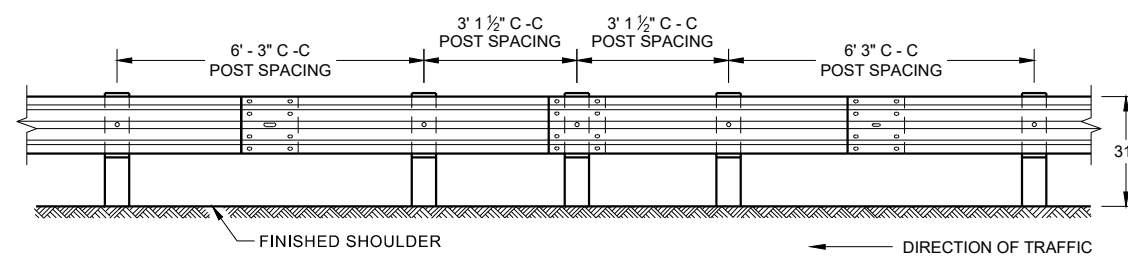


MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

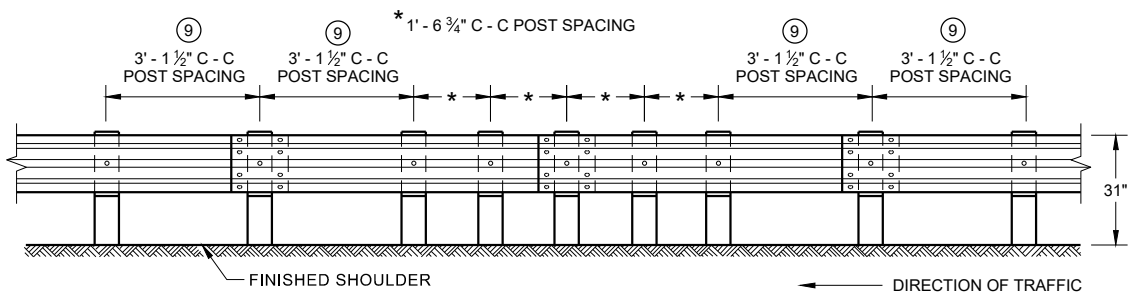
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



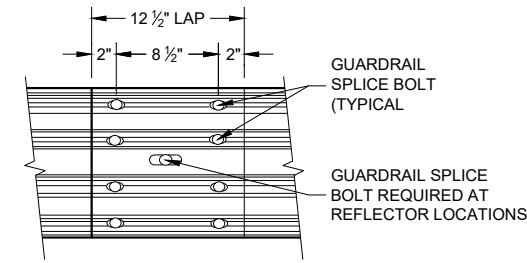
**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



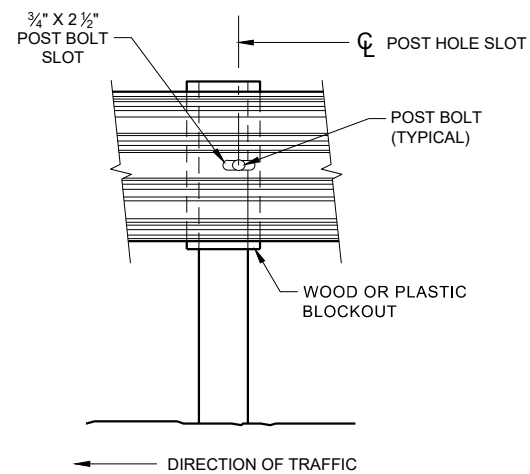
**FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



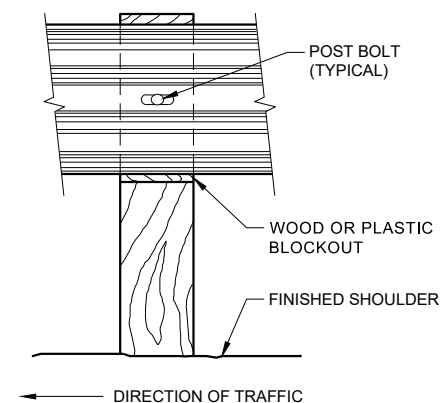
**FRONT VIEW
QUARTER POST SPACING (QS)**



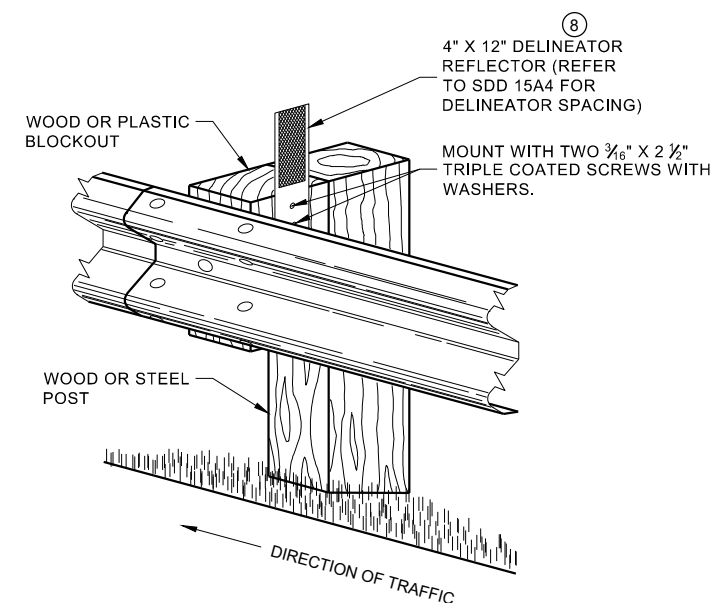
**FRONT VIEW
MID-SPAN BEAM SPLICE**



FRONT VIEW AT STEEL POST



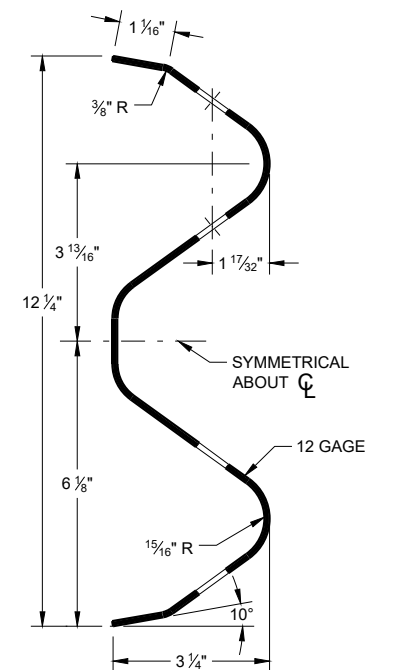
FRONT VIEW AT WOOD POST



**ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION**

GENERAL NOTES

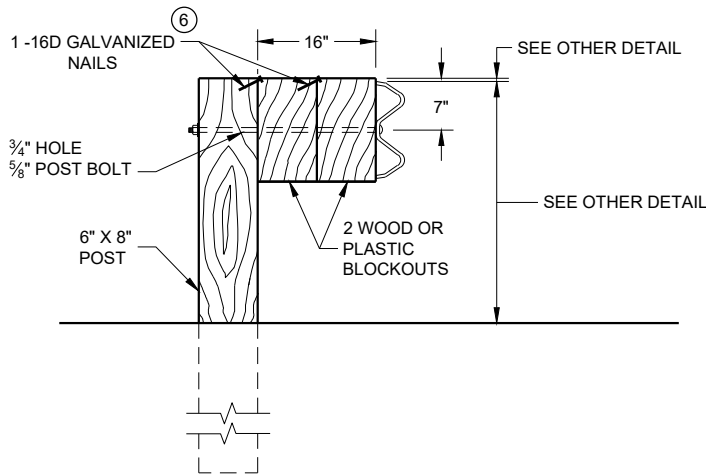
- ⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.
 - ⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.
- POST BOLTS ARE A 3/8"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



SECTION THRU W-BEAM RAIL

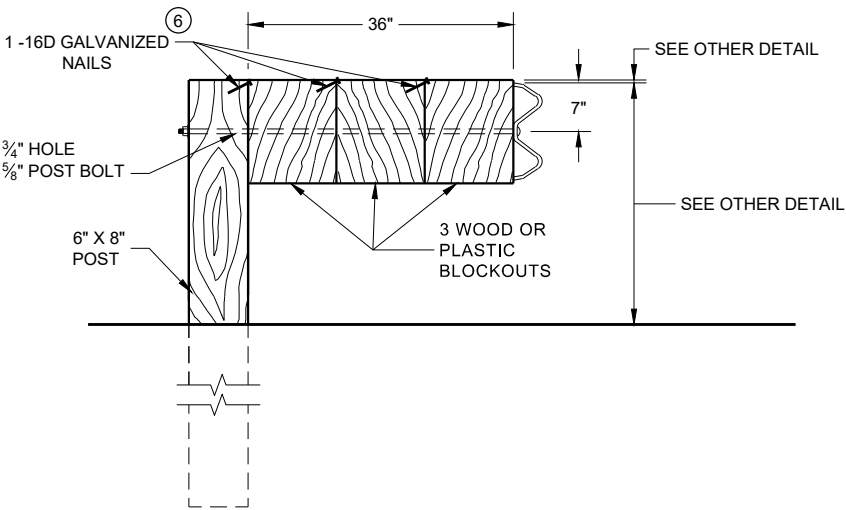
**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL FOR 16" BLOCKOUT DEPTH

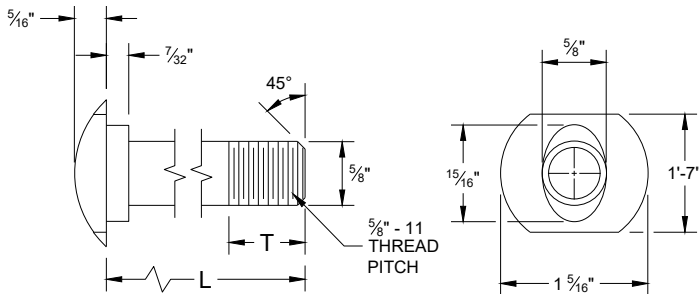
IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.



DETAIL FOR 36" BLOCKOUT DEPTH

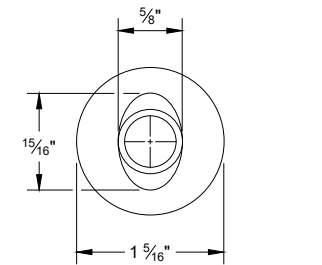
NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

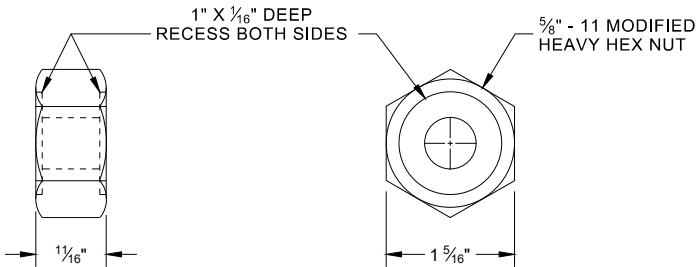


POST BOLT TABLE

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

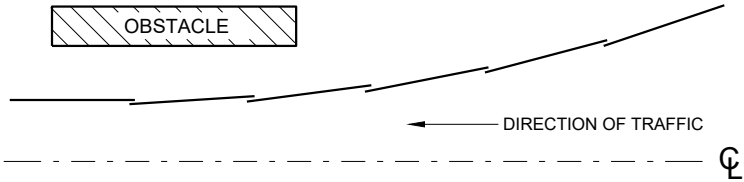


ALTERNATE BOLT HEAD

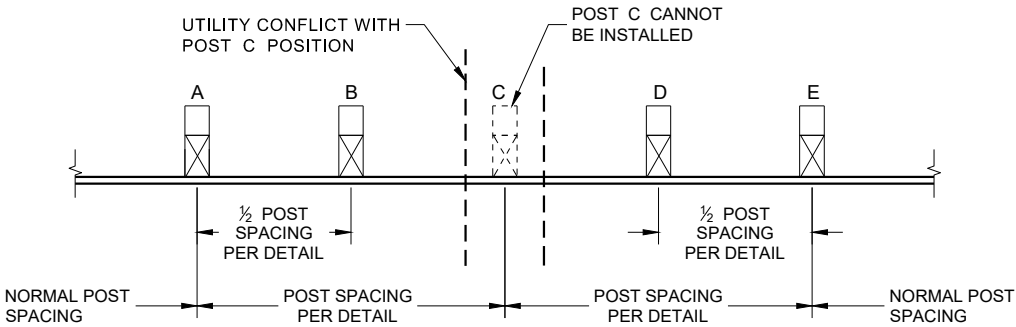


POST BOLT, SPLICE BOLT AND RECESS NUT

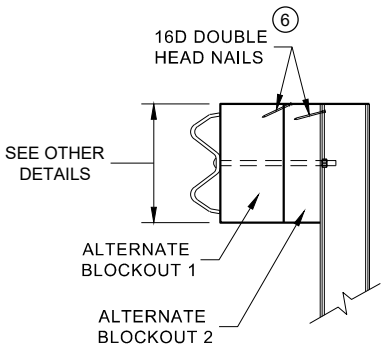
- 6 WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



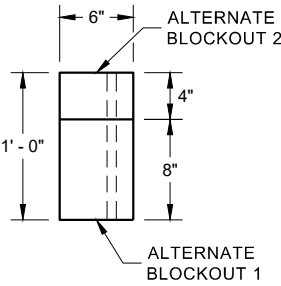
PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION



SIDE VIEW

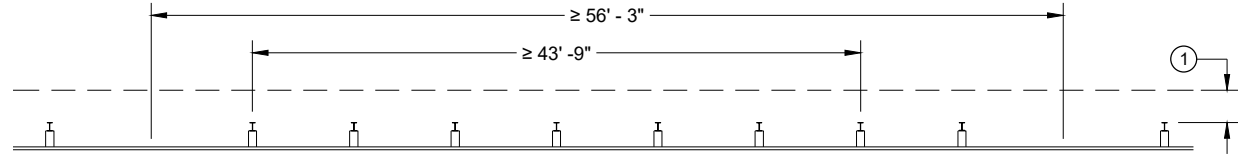


PLAN VIEW

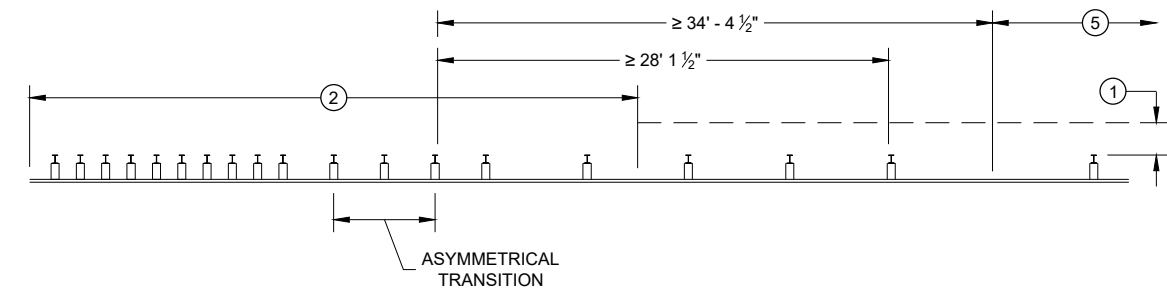
ALTERNATE WOOD
BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

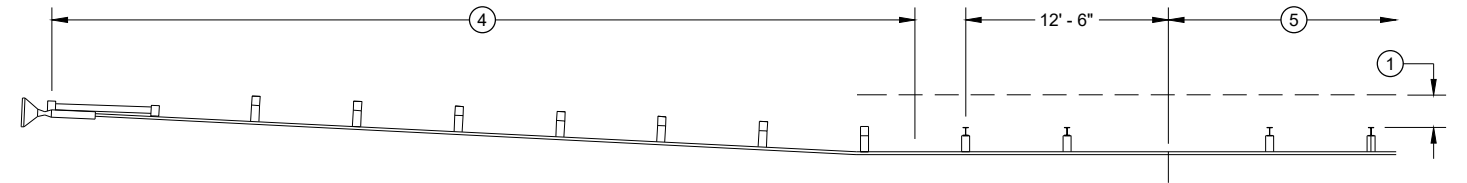
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



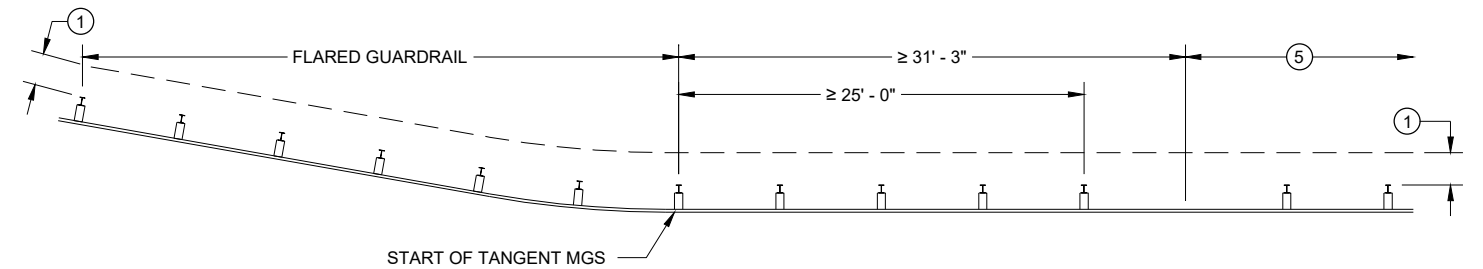
MISSING POST IN NORMAL BEAM GUARD RUN



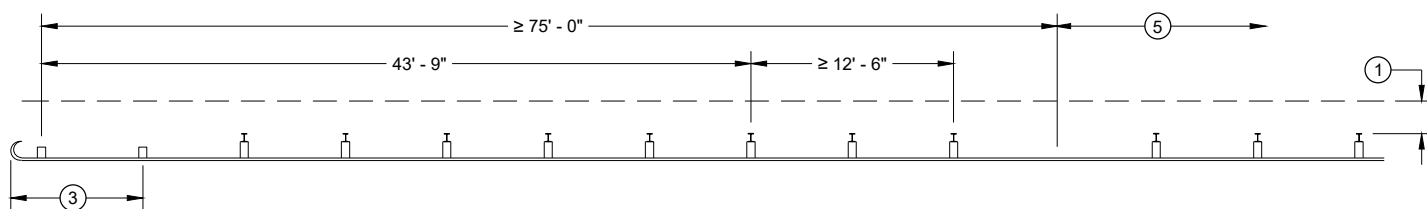
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



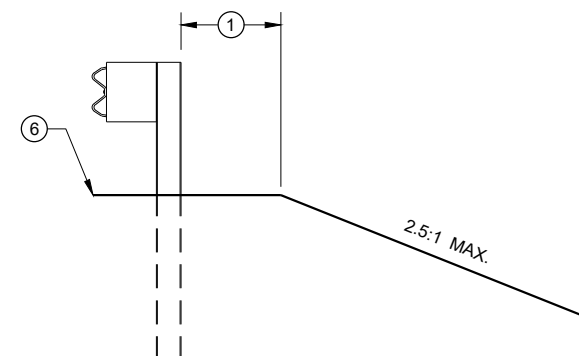
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



MISSING POST IN NORMAL BEAM GUARD RUN
NEAR FLARED BEAM GUARD



MISSING POST IN NORMAL BEAM GUARD RUN
NEAR TYPE 2 TERMINAL



CROSS SECTION VIEW

- ① MINIMUM OF 2 FEET OF GRADING BEHIND POST.
- ② SEE SDD 14B45 FOR MORE DETAILS.
- ③ SEE SDD 14B47 FOR MORE DETAILS.
- ④ SEE SDD 14B44 FOR MORE DETAILS.
- ⑤ SEE MISSING POST IN NORMAL BEAM GUARD RUN FOR DISTANCE TO NEXT MISSING POST AND AREA FOR WELL DRAINED, COMPACTED SOILS.
- ⑥ SEE PLAN FOR SHOULDER DESIGN.

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

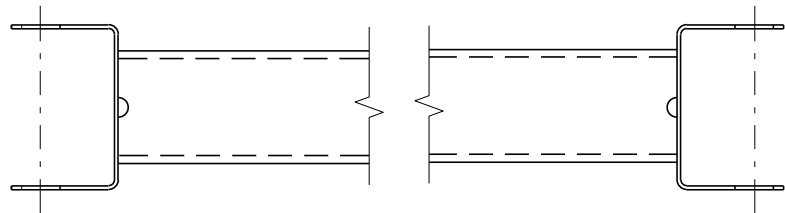
- (A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
- (B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED
- (C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.
- (D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS, ONE SCREW PER CORNER.
- (E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

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

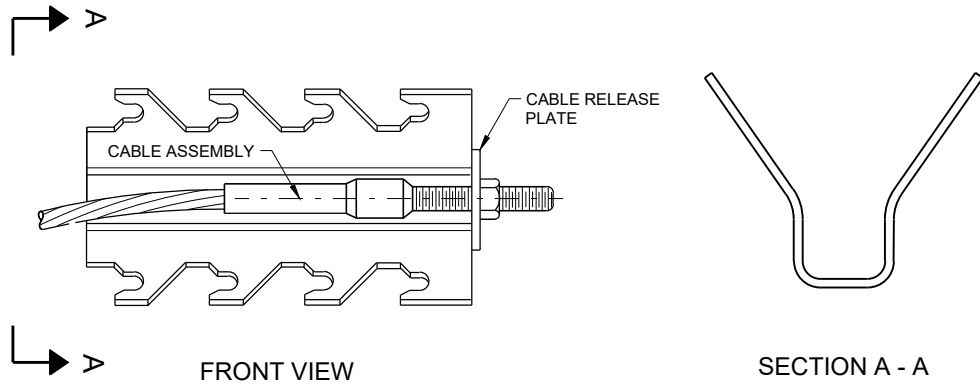


STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

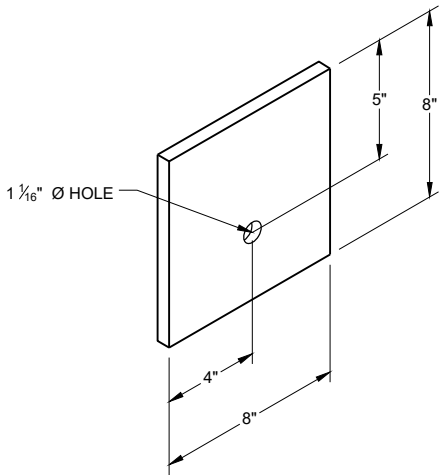


GENERIC GROUND STRUT^⑨ [Ⓔ]

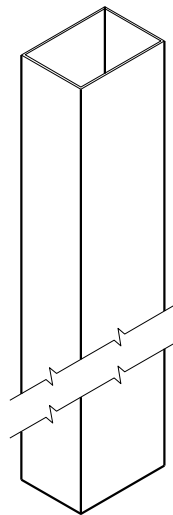
BILL OF MATERIALS	
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED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



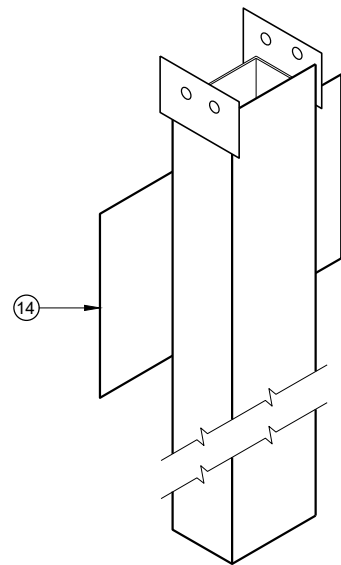
GENERIC ANCHOR CABLE BOX^⑨ [Ⓔ]



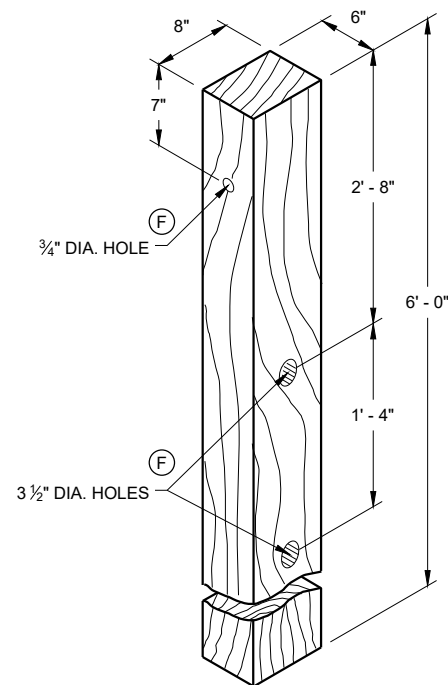
BEARING PLATE^⑥ [Ⓔ]



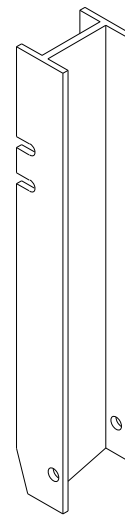
UPPER POST NO. 1 ⁽¹⁾ (E)



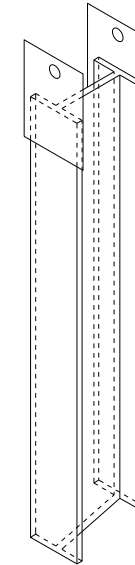
LOWER POST NO. 1 ⁽²⁾ (E)



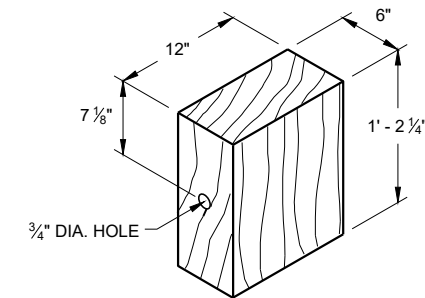
WOOD CRT POST ⁽³⁾ (E)
POSTS NUMBER 3-9



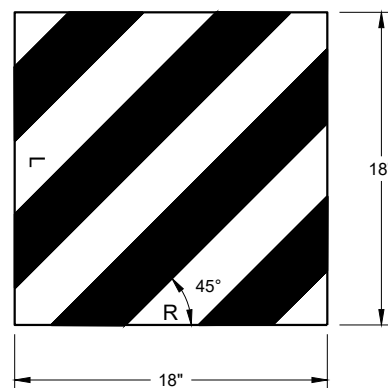
UPPER POST NO. 2 ⁽¹⁵⁾ (E)



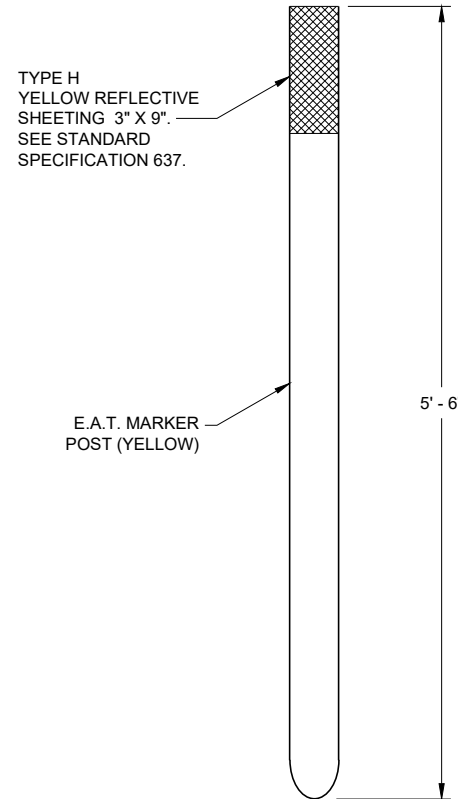
LOWER POST NO. 2 ⁽¹⁶⁾ (E)



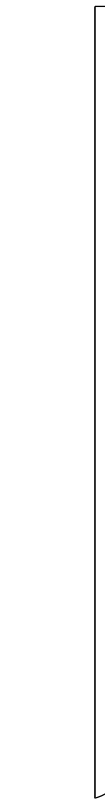
WOOD BLOCKOUT ⁽⁴⁾
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



W5 - 59
REFLECTIVE SHEETING DETAIL ^(E)

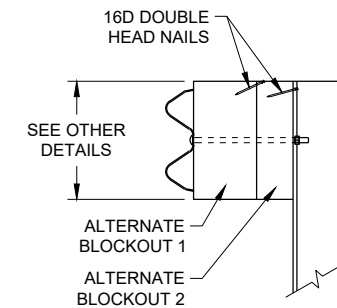


FRONT VIEW

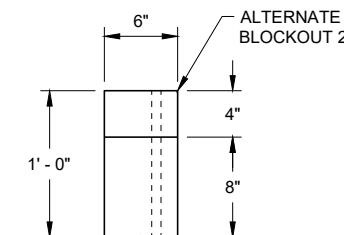


SIDE VIEW

E.A.T. MARKER POST ⁽¹³⁾



SIDE VIEW



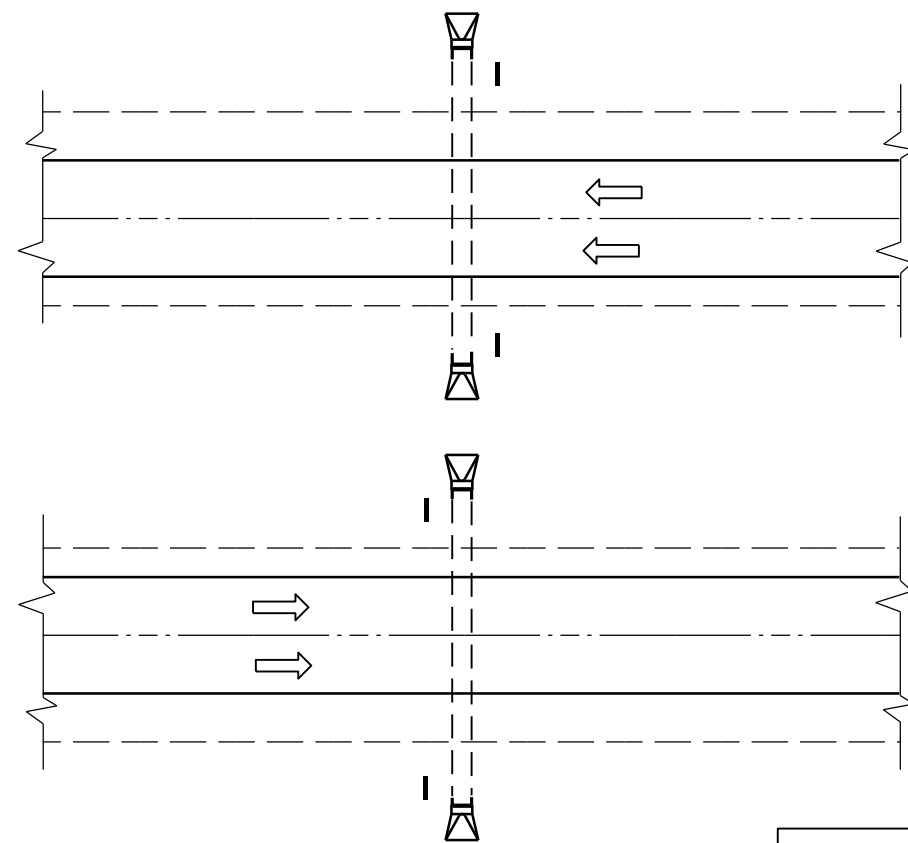
TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

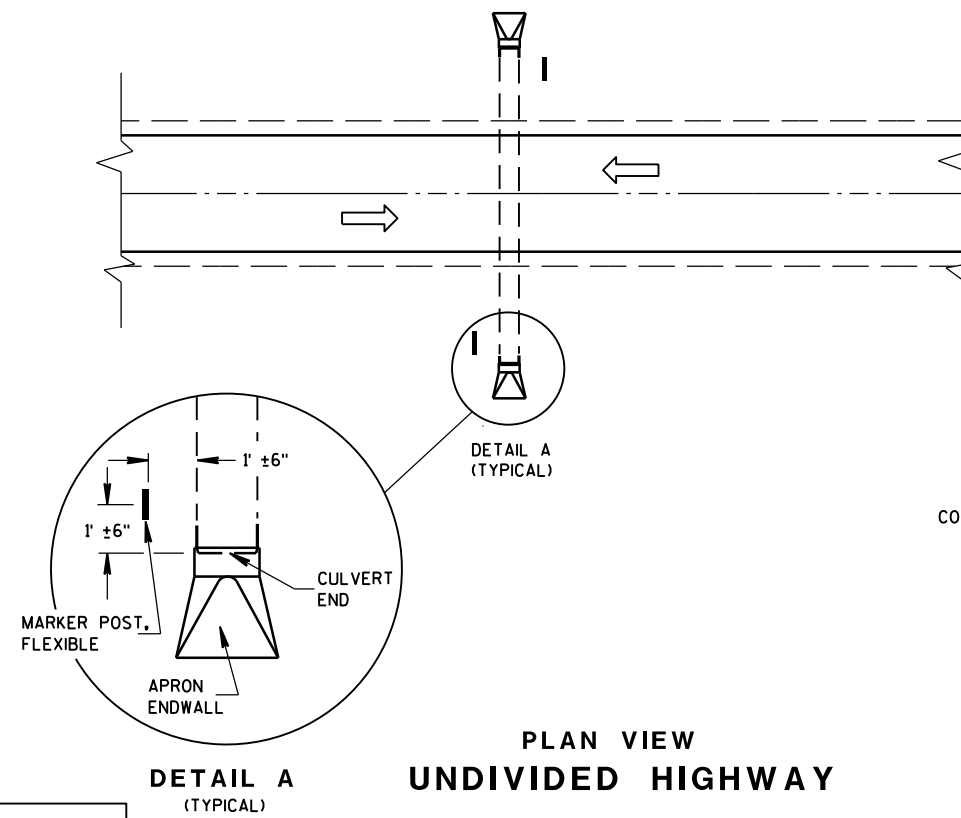
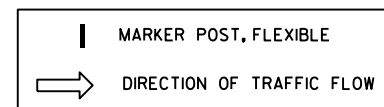
**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



PLAN VIEW
DIVIDED HIGHWAY



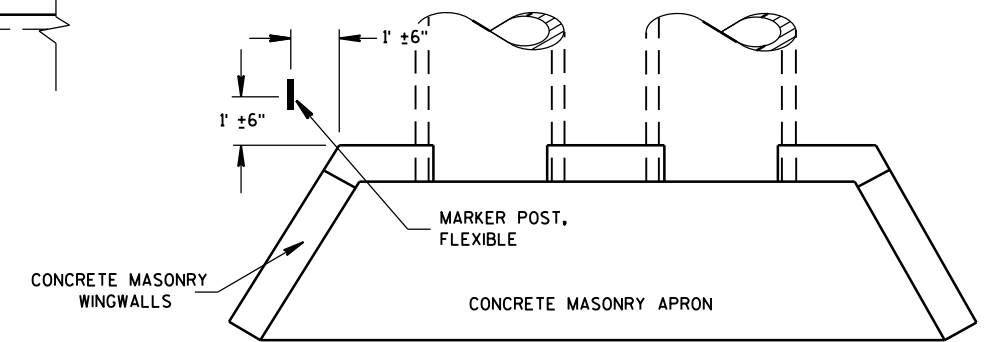
DETAIL A
(TYPICAL)

PLAN VIEW
UNDIVIDED HIGHWAY

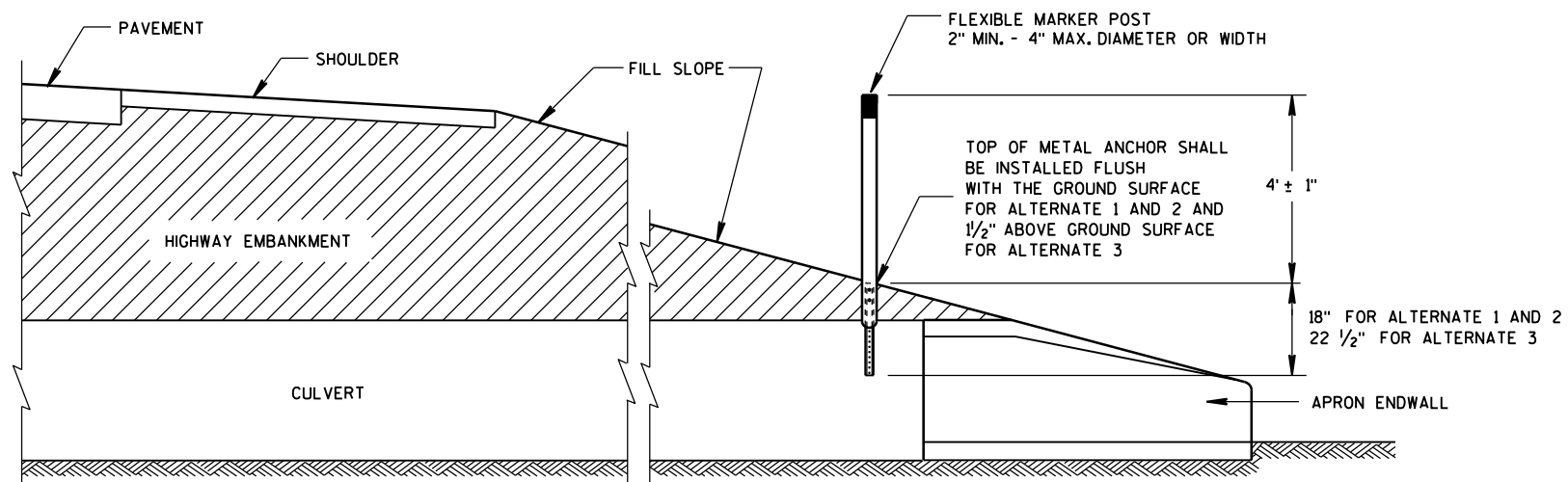
FLEXIBLE MARKER POST LOCATION

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.



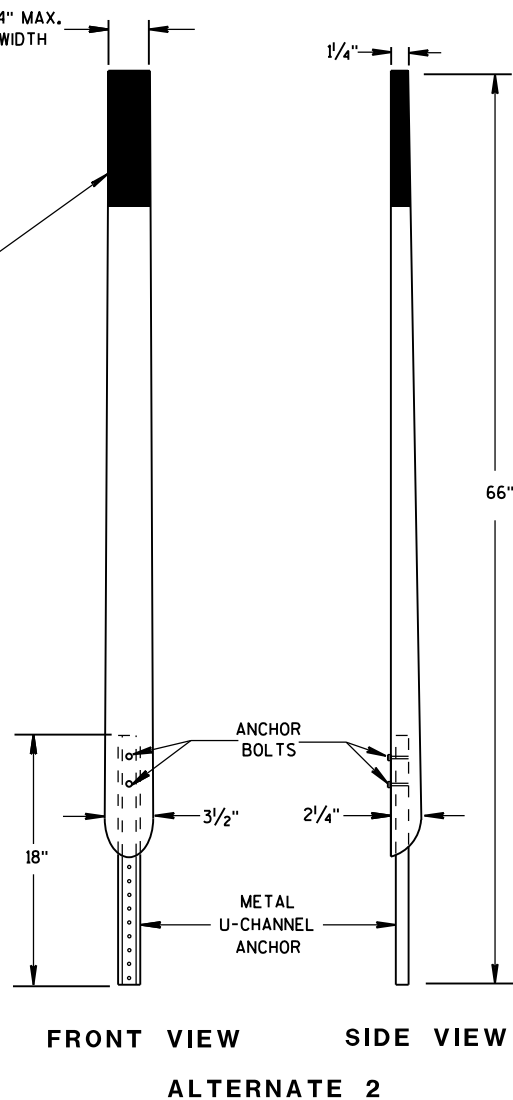
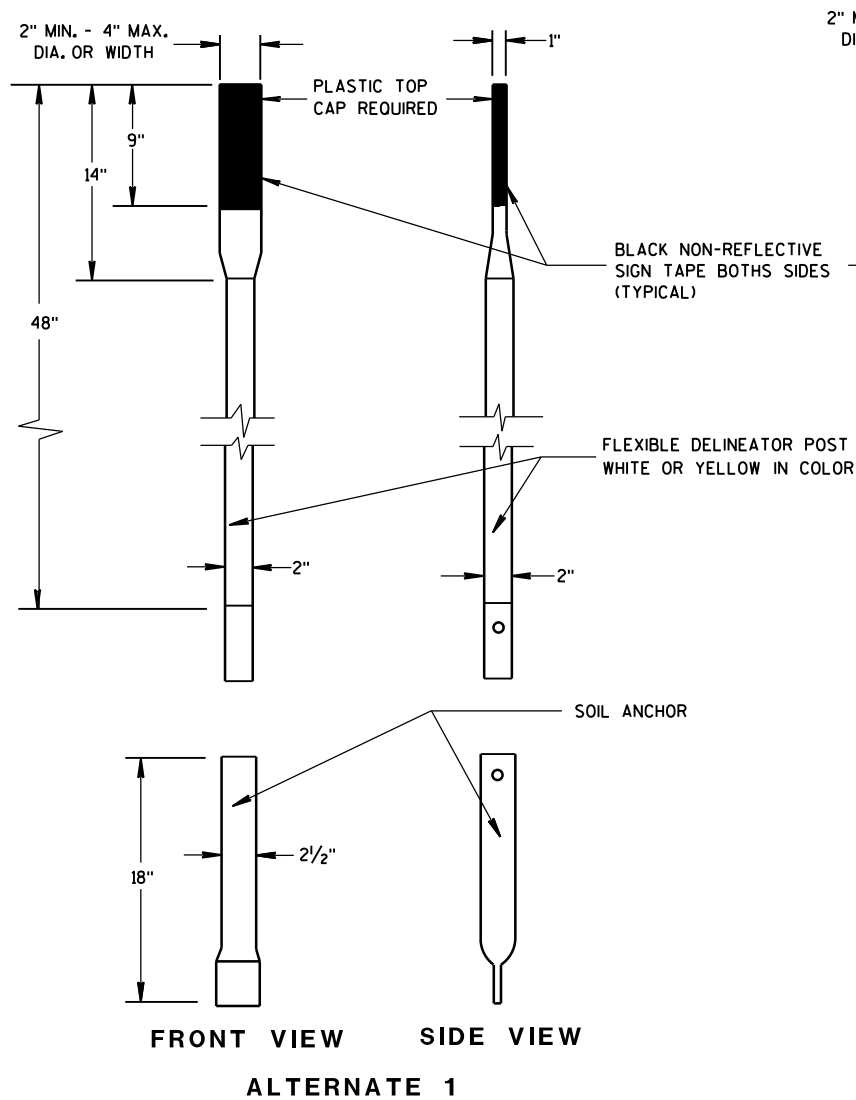
PLAN VIEW
CONCRETE MASONRY ENDWALLS FOR
CULVERT PIPE AND PIPE ARCH



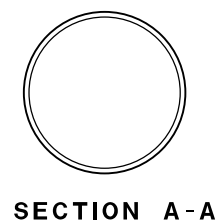
CROSS SECTION
FLEXIBLE MARKER POST

FLEXIBLE MARKER POST
FOR CULVERT END

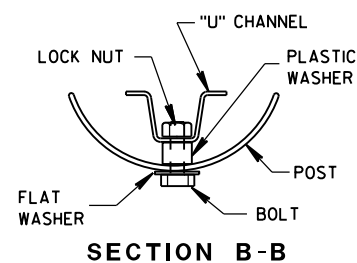
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



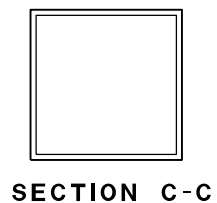
FLEXIBLE MARKER POSTS



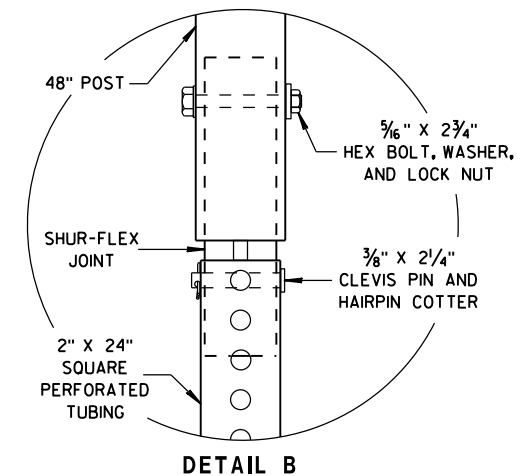
SECTION A-A



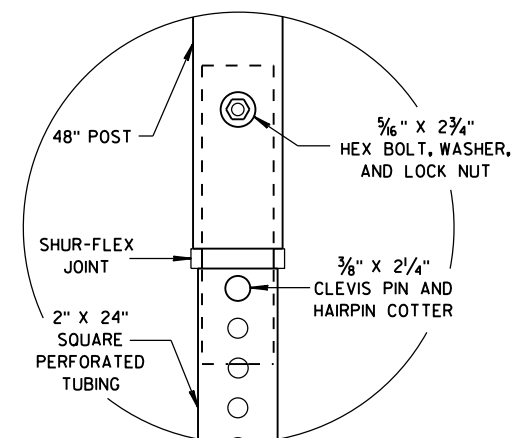
SECTION B-B



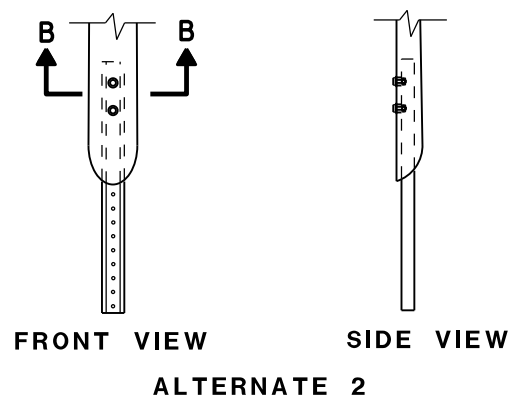
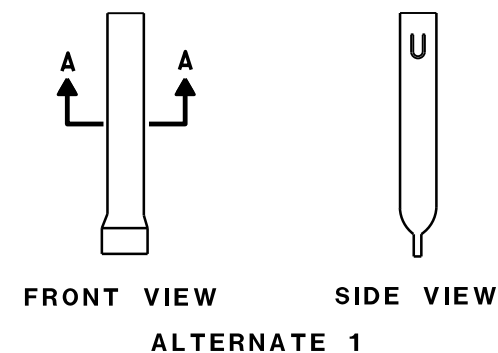
SECTION C-C



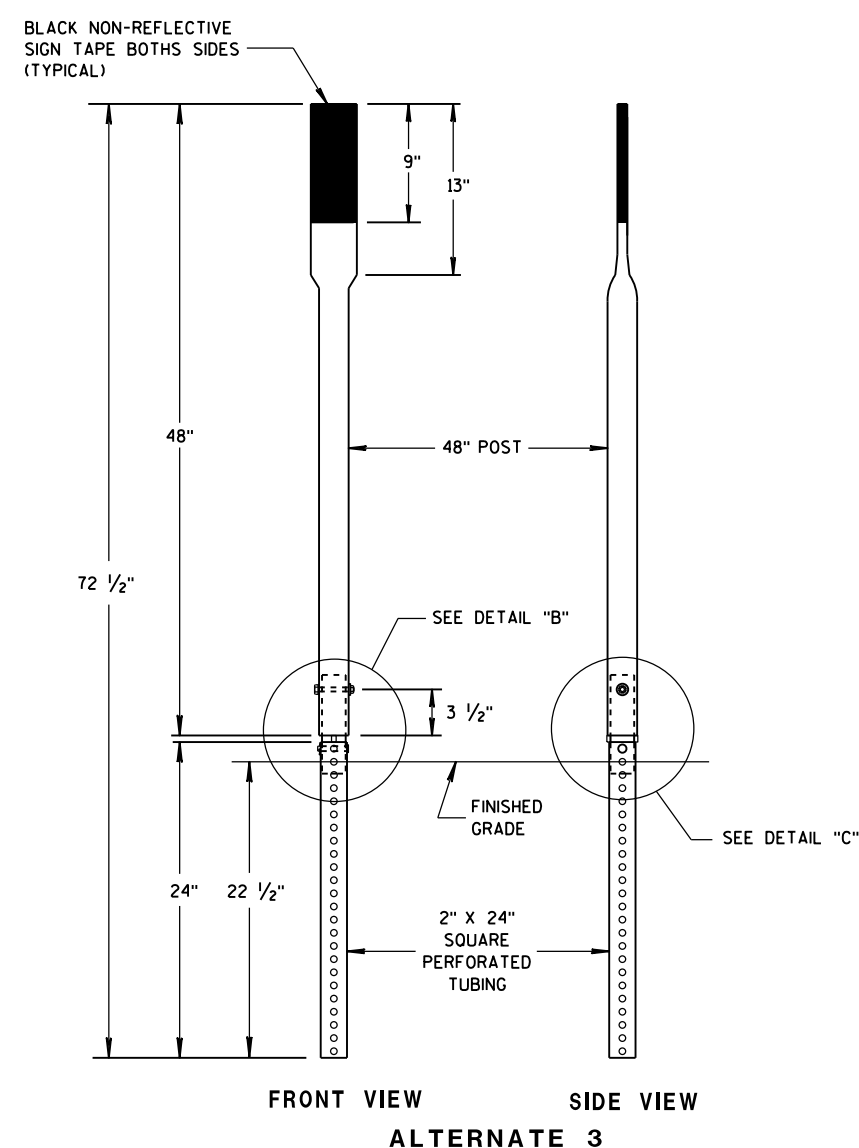
DETAIL B



DETAIL C

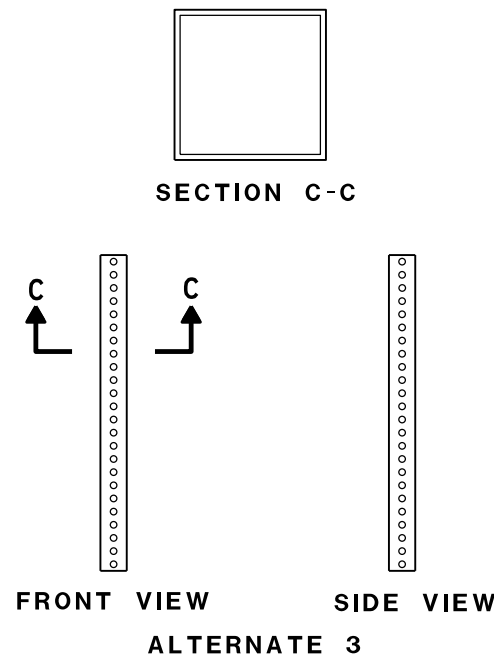


FLEXIBLE MARKER POST ANCHORS



FRONT VIEW SIDE VIEW

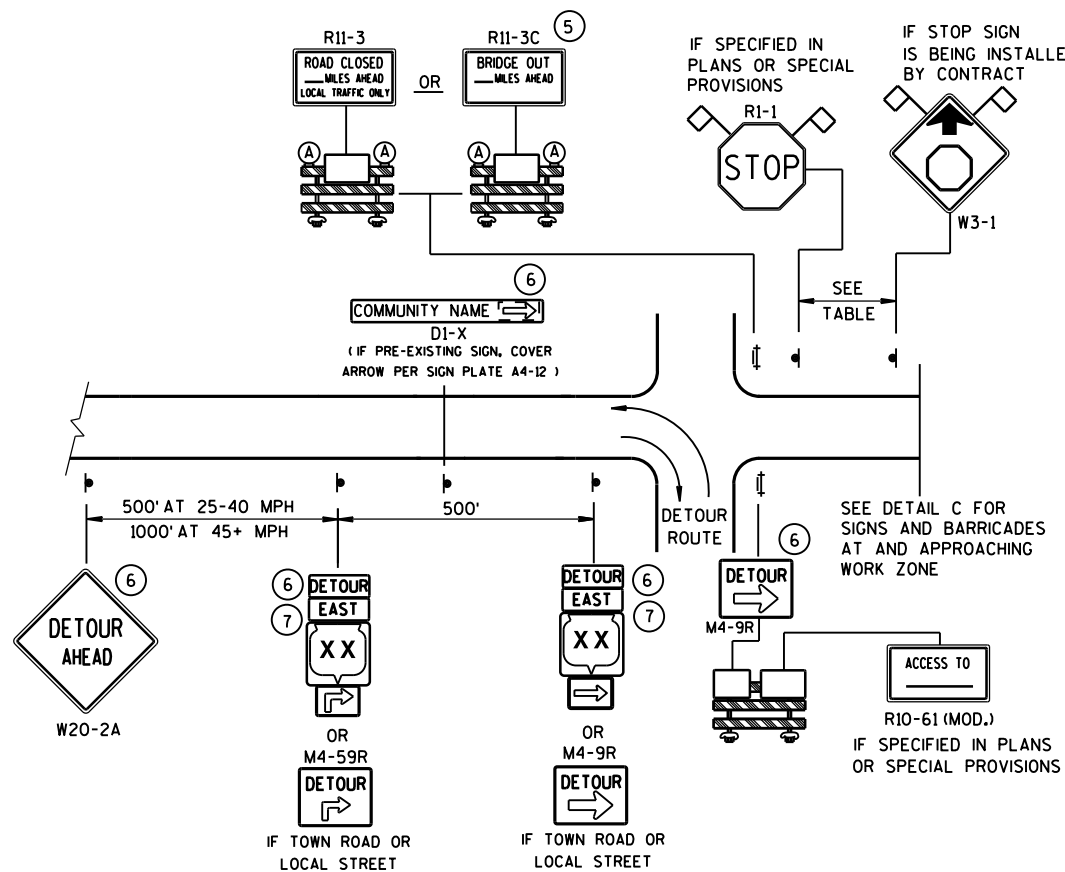
ALTERNATE 3



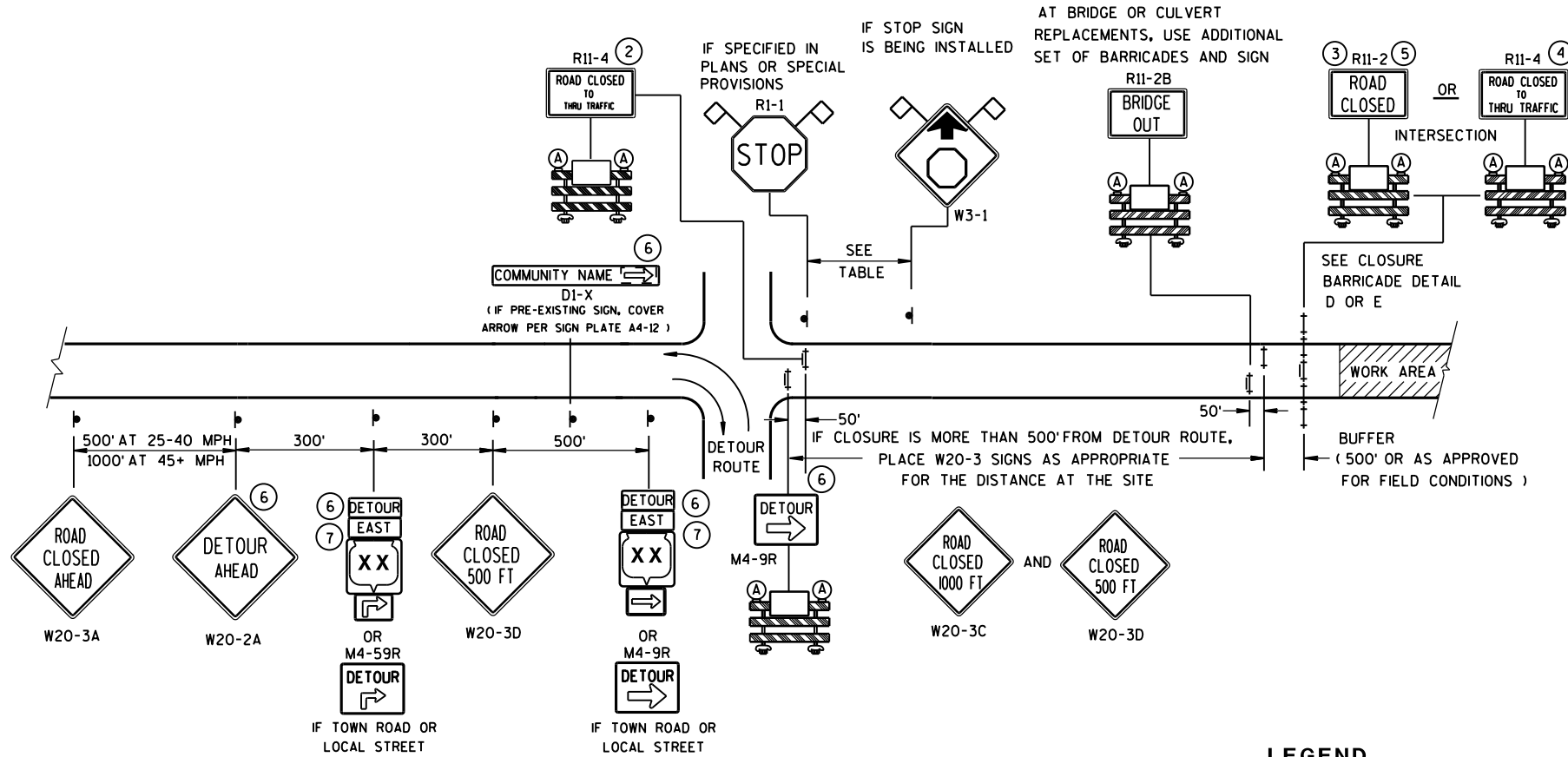
FRONT VIEW SIDE VIEW

ALTERNATE 3

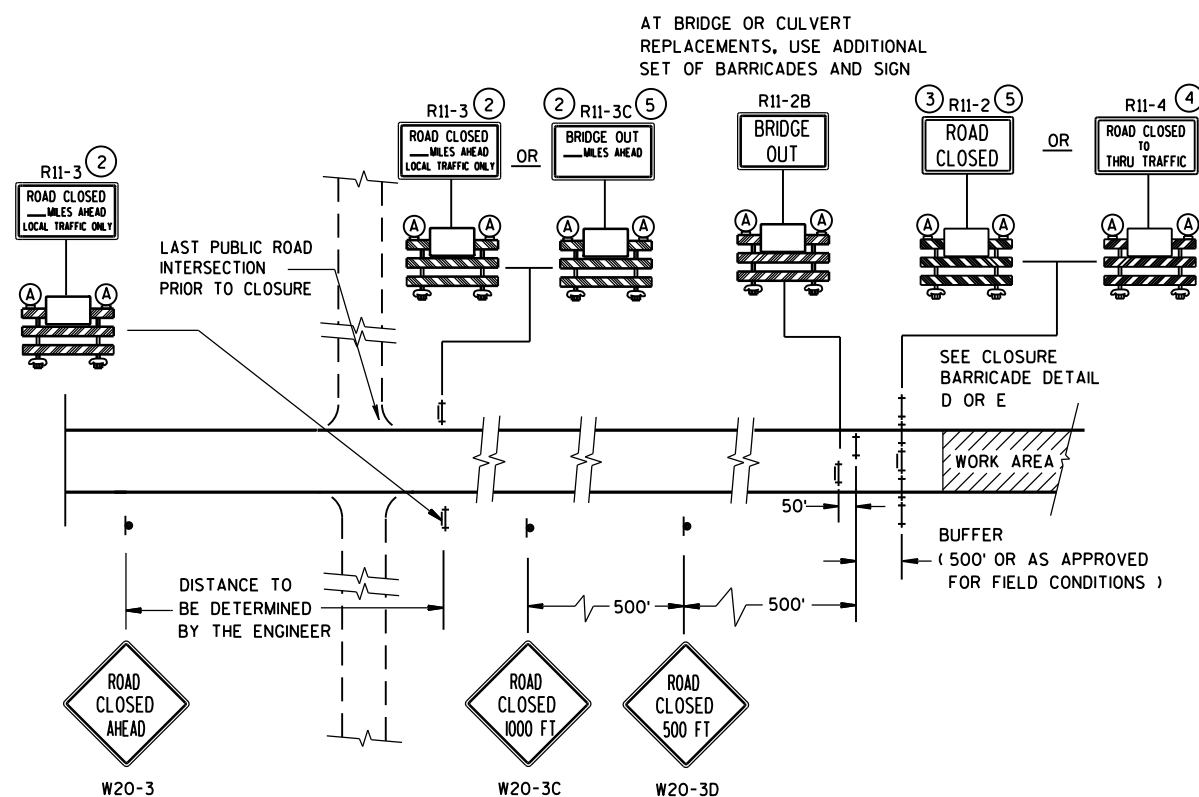
FLEXIBLE MARKER POST FOR CULVERT END	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10/1/2012 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER OF DESIGN
FHWA	



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE GREATER THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE LESS THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

LEGEND

- SIGN ON PERMANENT SUPPORT
- ⊥ TYPE III BARRICADE
- ⊥ TYPE III BARRICADE WITH ATTACHED SIGN
- Ⓐ TYPE "A" WARNING LIGHT (FLASHING)

WORK AREA

DETOUR EAST M4-8
M3-X
XX OR COUNTY XX OR XX
M1-4 M1-5A M1-6

M05-1 OR M06-1

FLAGS, 16" X 16" MIN., (ORANGE)

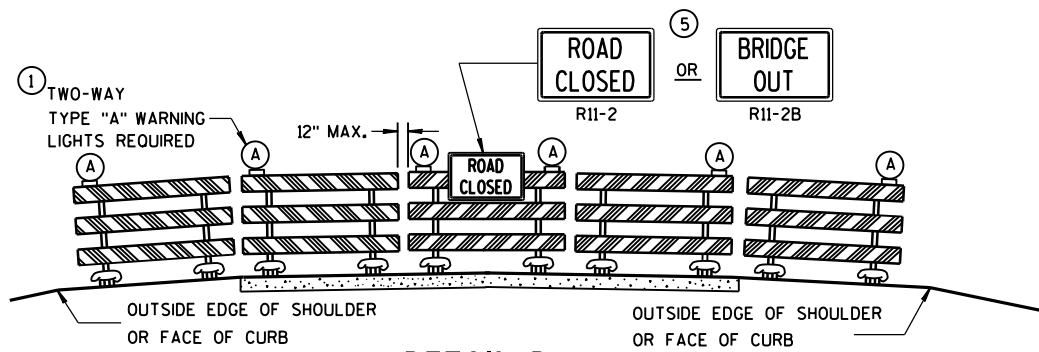
SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

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

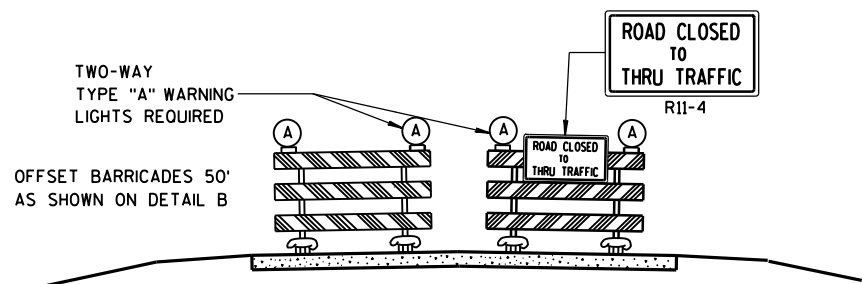
BARRICADES AND SIGNS
FOR
MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2-SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

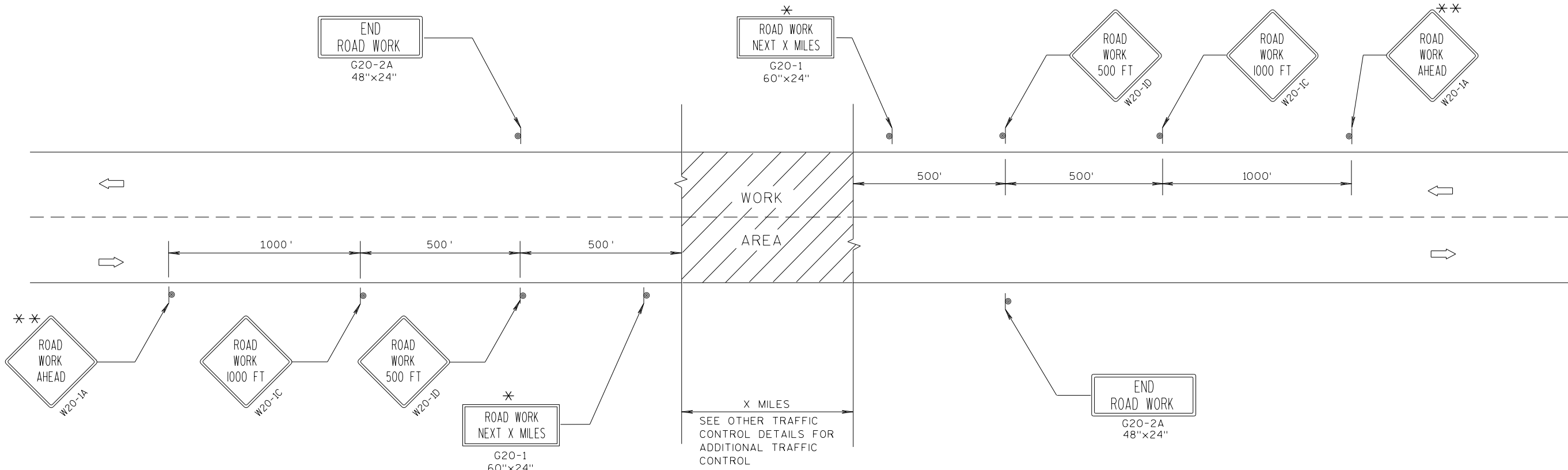
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

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

**BARRICADES AND SIGNS
FOR
MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

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

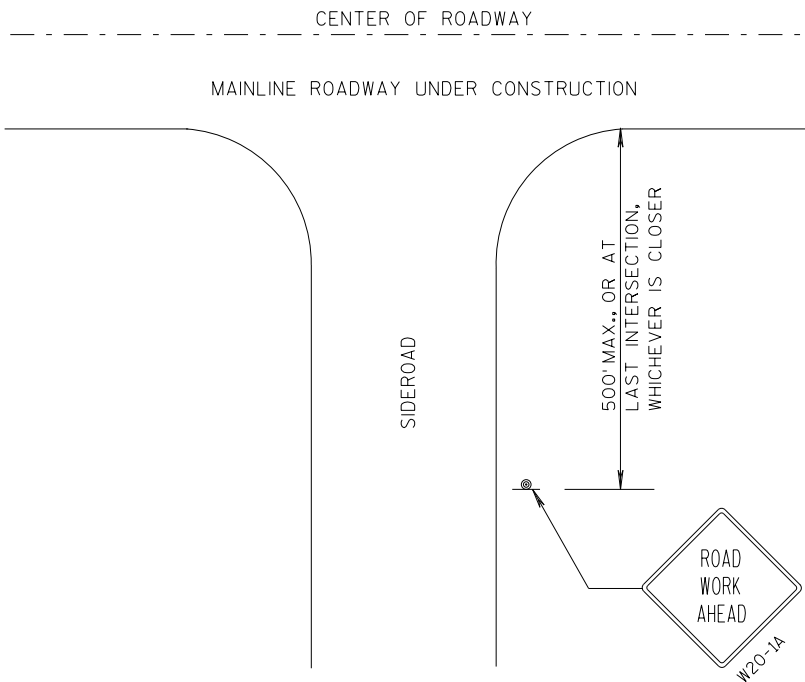
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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



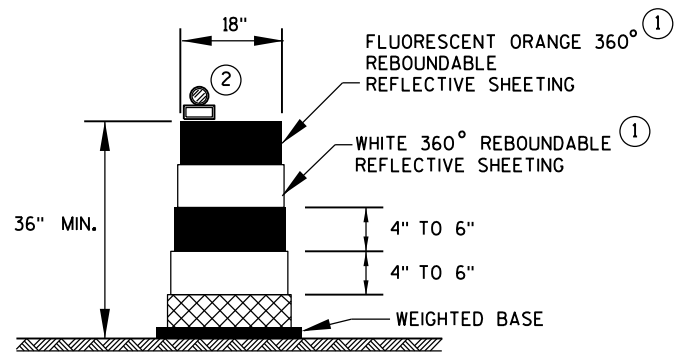
LEGEND

- ⊙ SIGN ON PERMANENT SUPPORT
- ➡ DIRECTION OF TRAFFIC
- ▨ WORK AREA

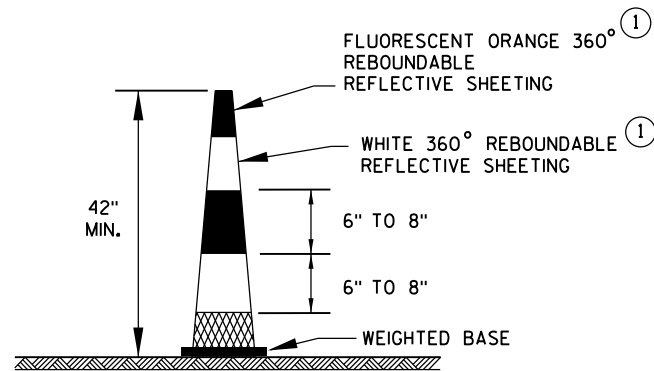
TRAFFIC CONTROL, ADVANCE
WARNING SIGNS 45 M.P.H.
OR GREATER TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA



DRUM

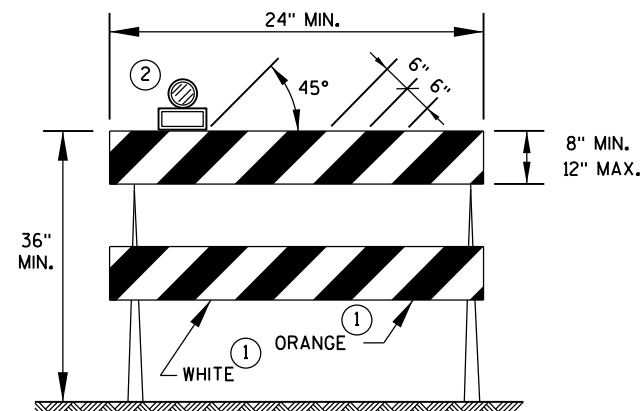


42" CONE

DO NOT USE IN TAPERS
1/2 SPACING OF DRUMS

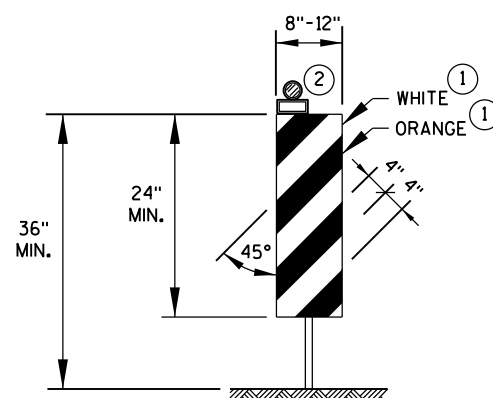
GENERAL NOTES

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



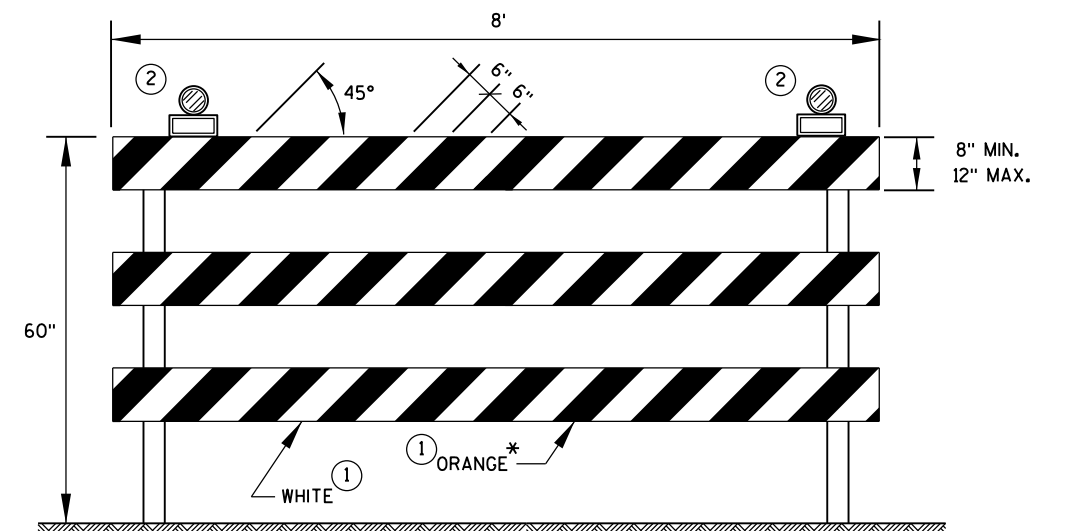
TYPE 2 BARRICADE

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



VERTICAL PANEL

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



TYPE 3 BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION, USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2017
DATE

FHWA

/S/ Andrew Heidtke
WORK ZONE ENGINEER

LEGEND

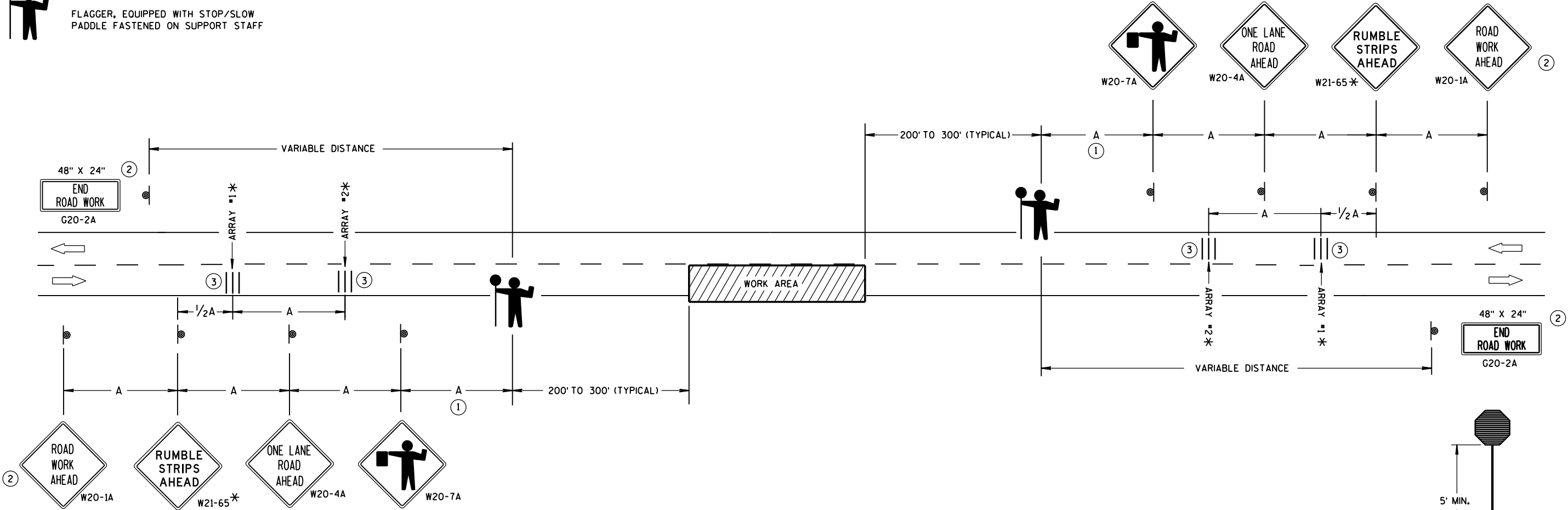
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING A
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 W20-4A SIGNS, USING SPACING A.



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

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.

"W0" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS. PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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

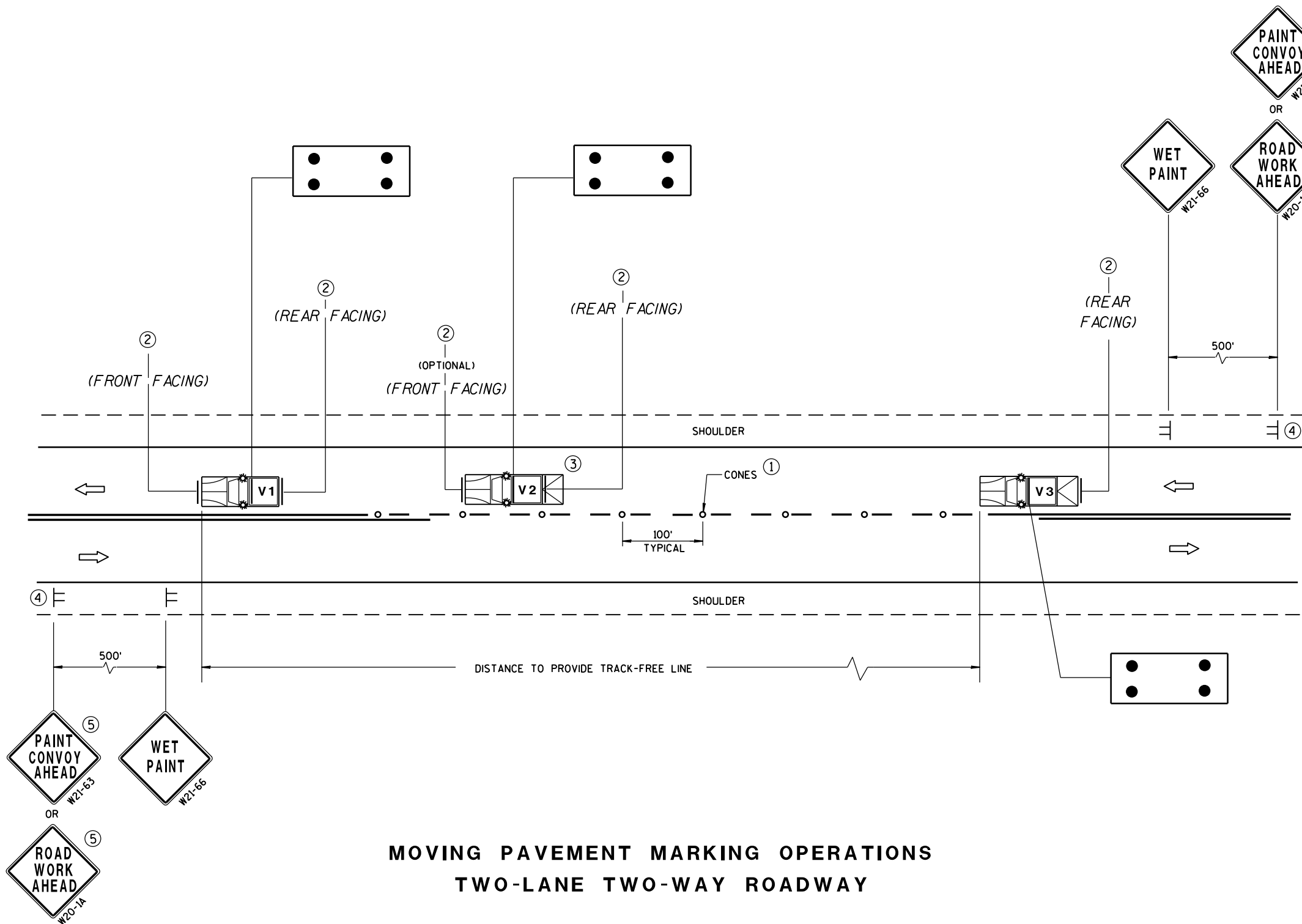
FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, REMOVE TEMPORARY RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

- * UTILIZE TEMPORARY RUMBLE STRIPS WHEN FLAGGING OPERATION IS ANTICIPATED TO BE STATIONARY IN EXCESS OF TWO HOURS.
- ① FOR A MOVING WORK OPERATION, SIGNING AND TEMPORARY RUMBLE STRIPS (IF USED) SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3,500 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.
- ③ EACH TEMPORARY RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

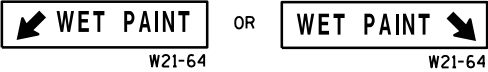
APPROVED
June 2017 /S/ Andrew Heldtke
DATE WORK ZONE ENGINEER
FHWA



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.



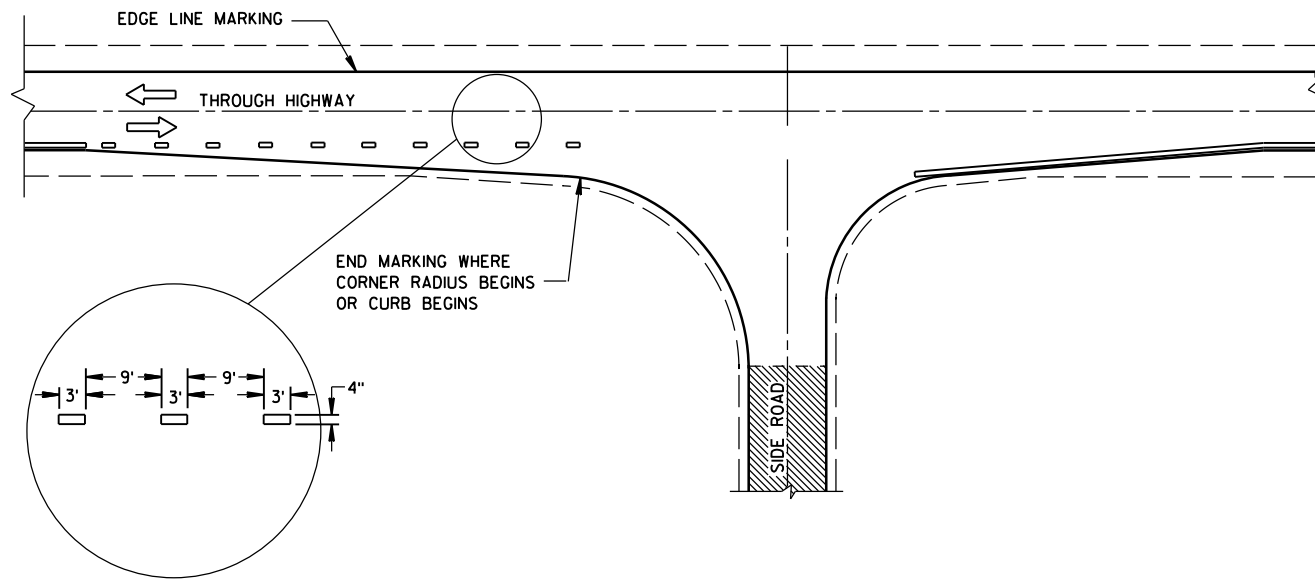
LEGEND

- 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
DATE: Sept., 2017 /S/ Andrew Heidtke
WORK ZONE ENGINEER
FHWA



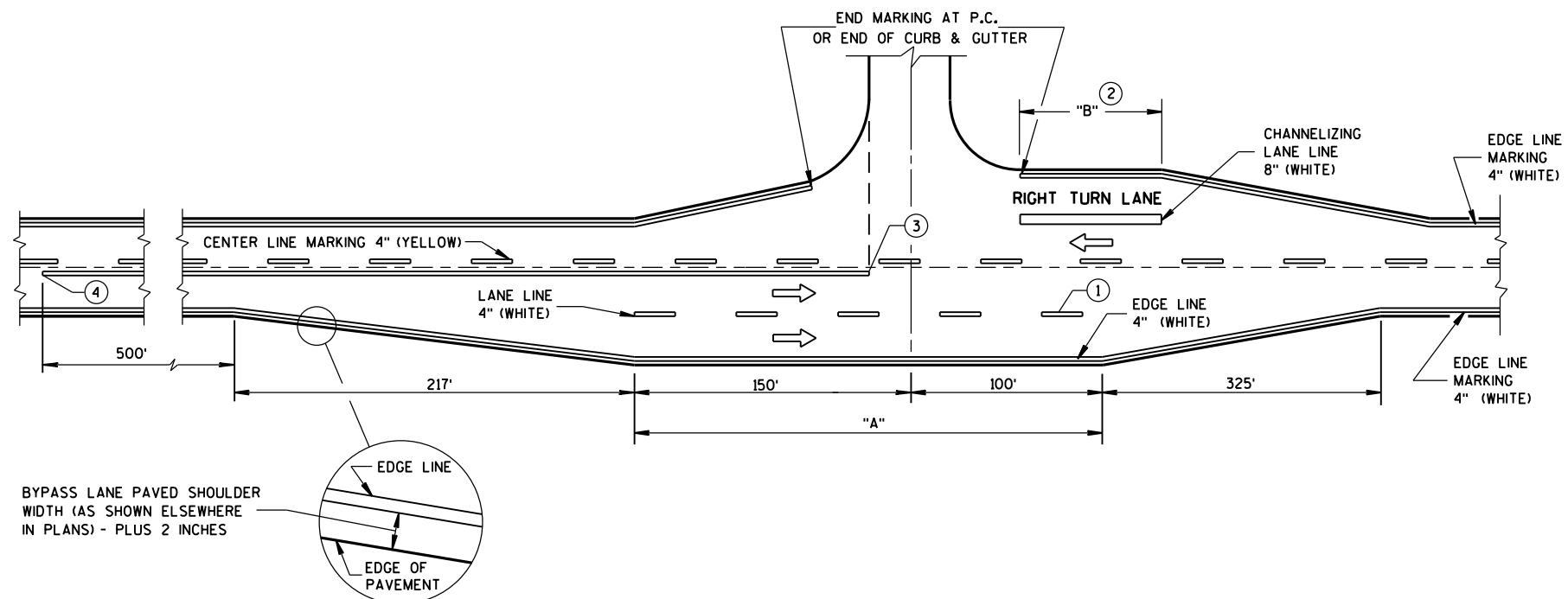
MINOR INTERSECTION

GENERAL NOTES

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

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

ARROW SYMBOL () SHOWS DIRECTION OF TRAVEL



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

**PAVEMENT MARKING
(INTERSECTIONS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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

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

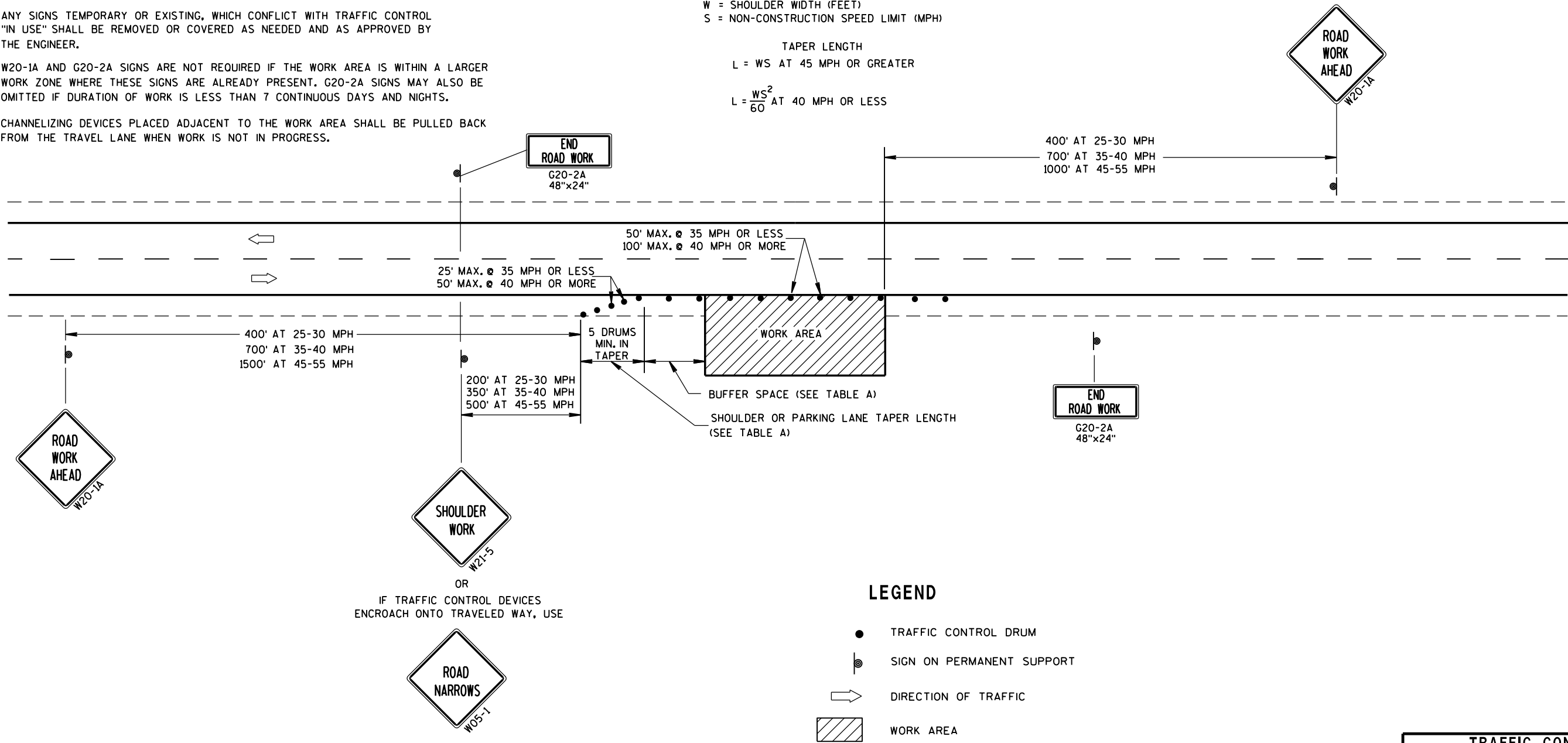
SHOULDER TAPER LENGTH (FEET)					BUFFER SPACE (FEET)
S \ W	4	6	8	10	
30	20	30	40	50	200
35	30	45	55	70	250
40	40	55	75	90	305
45	60	90	120	150	360
50	70	100	135	170	425
55	75	110	150	185	495

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

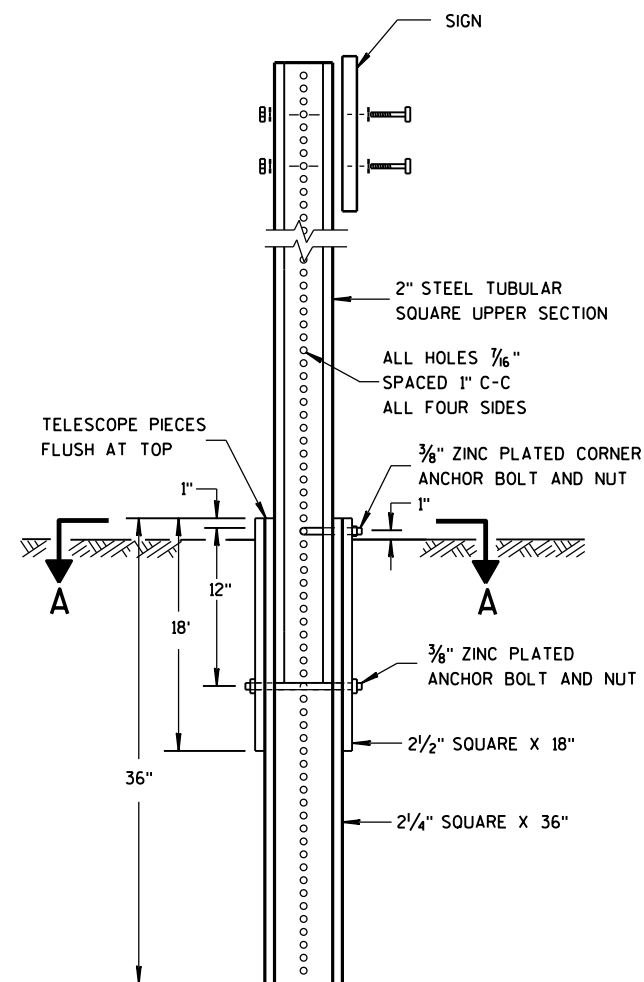
SHOULDER TAPER LENGTH = $\frac{1}{3}L$



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	

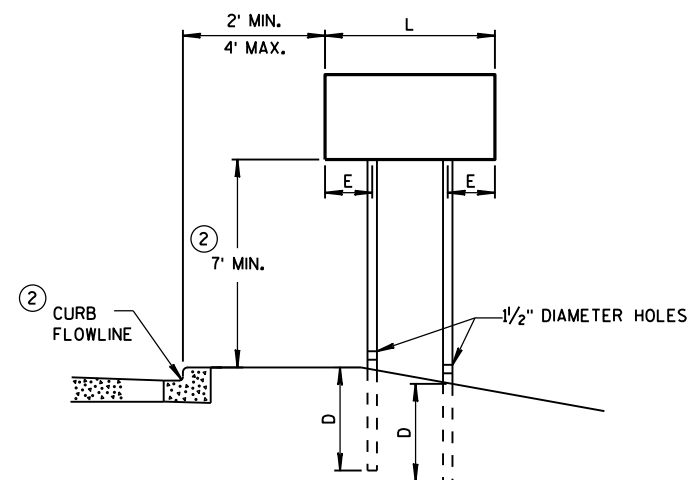
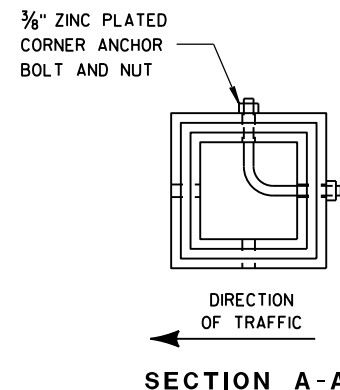


DETAIL OF TUBULAR
STEEL SIGN POST

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

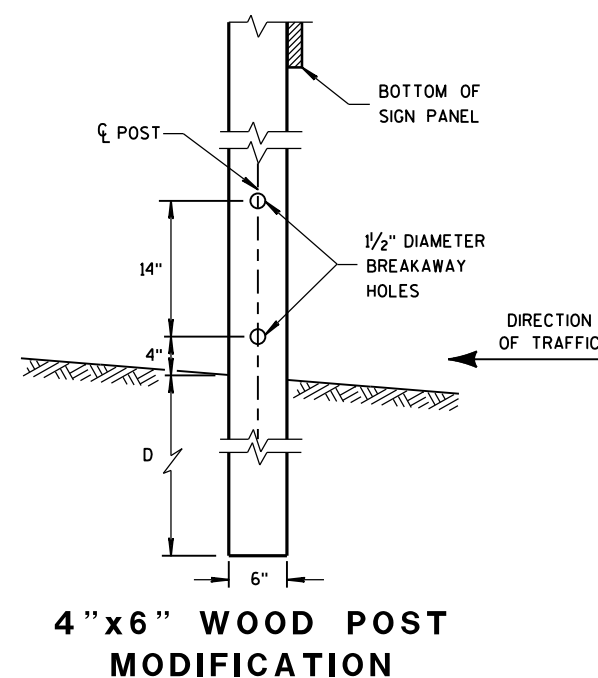
SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL
BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).
SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED
ON TUBULAR STEEL POSTS.



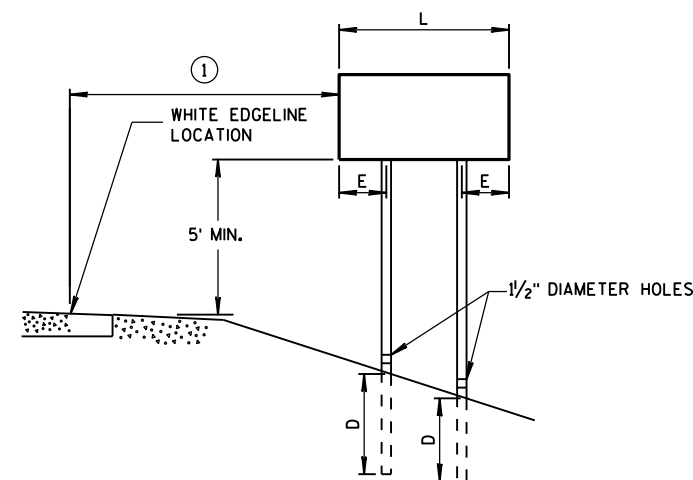
URBAN AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

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



4 "x6 " WOOD POST
MODIFICATION



RURAL AREA

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

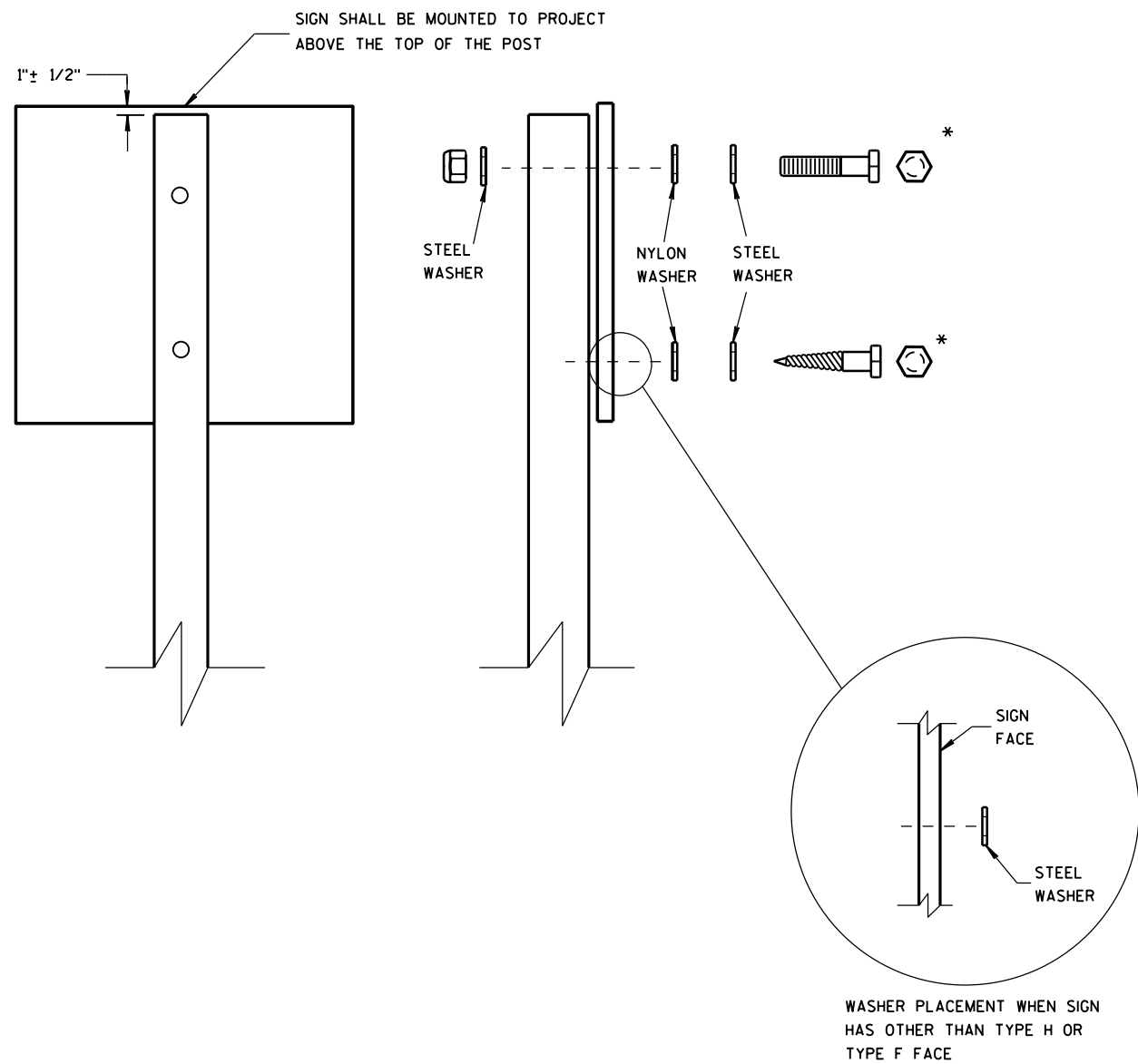
SEE NOTE ③

GENERAL NOTES

- ① 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.
- ② THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.
- ③ FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.

TEMPORARY TRAFFIC CONTROL
SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

- A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3
- B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

- WOOD POSTS (4" x 4" or 4" x 6")
- LAG SCREWS - 3/8" X 3"
 - MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

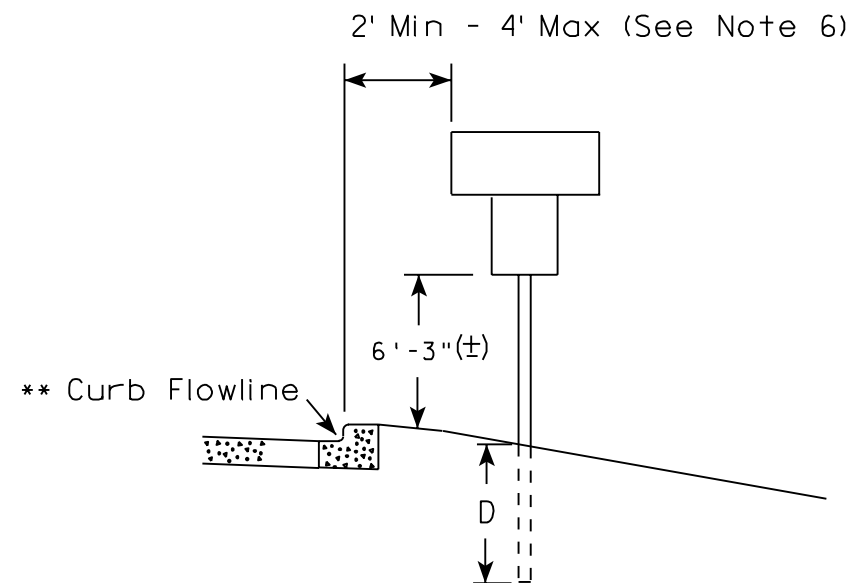
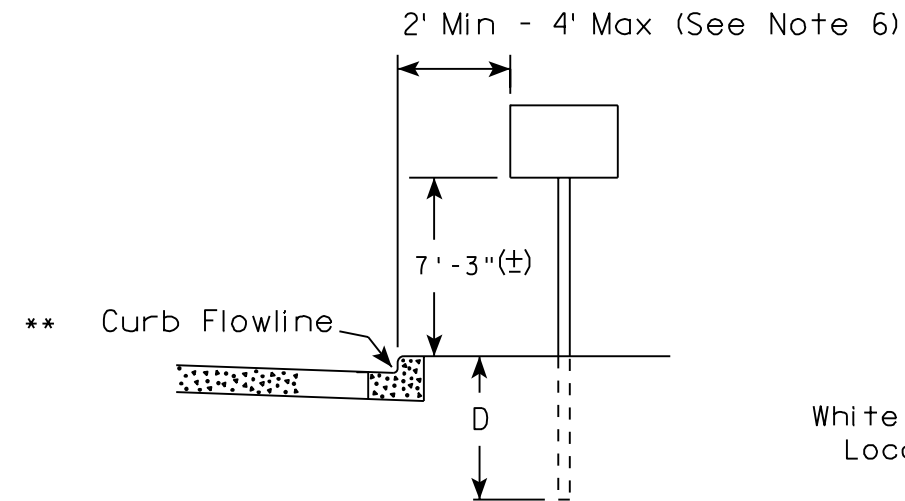
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS
 - RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
 - 1-1/4" O.D. X 3/8" I.D. X .080 NYLON FOR ALL TYPE H SIGNS

* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

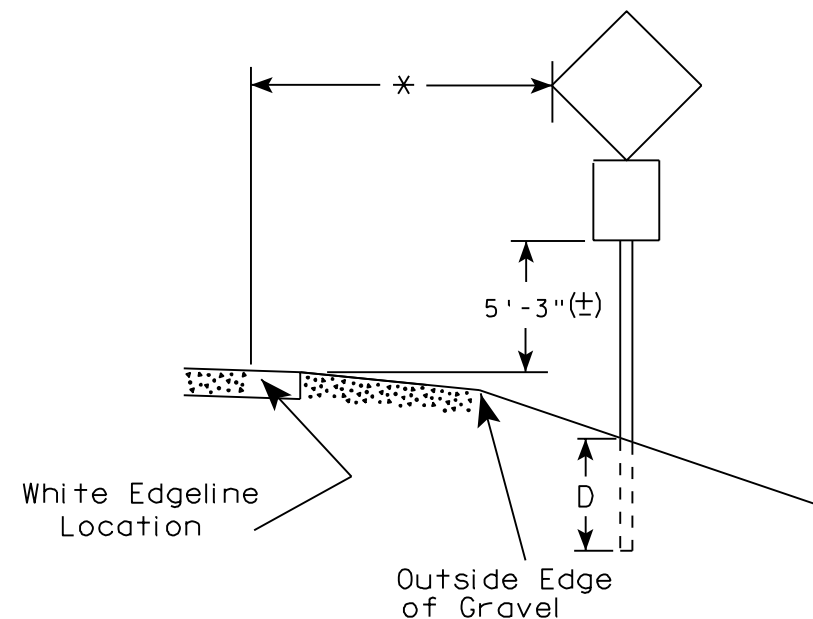
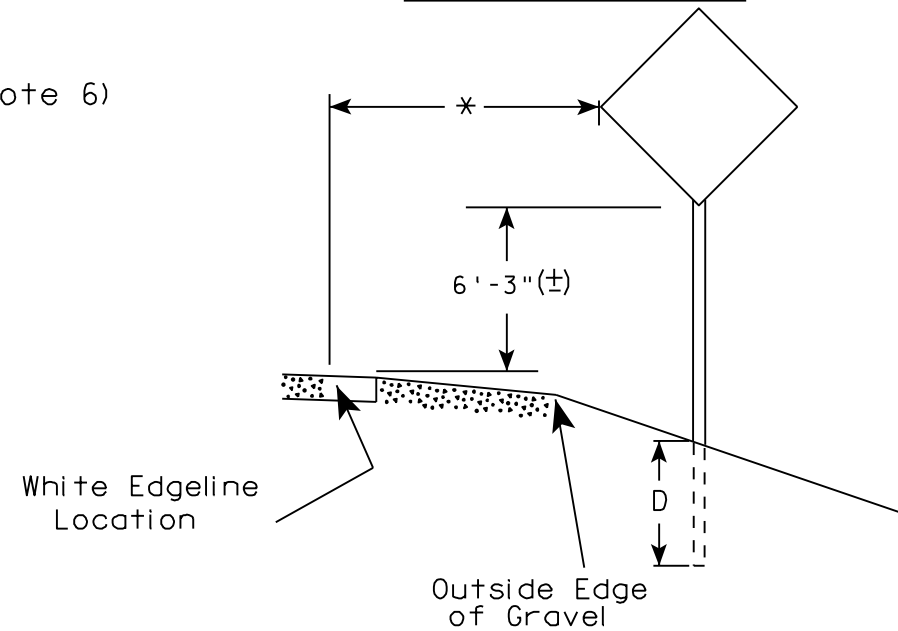
ATTACHMENT OF SIGNS TO POSTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Andrew Heldtke WORK ZONE ENGINEER
FHWA	

URBAN AREA



✱✱ The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

RURAL AREA (See Note 2)



* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. J-Assemblies are considered to be one sign for mounting height.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-3.21

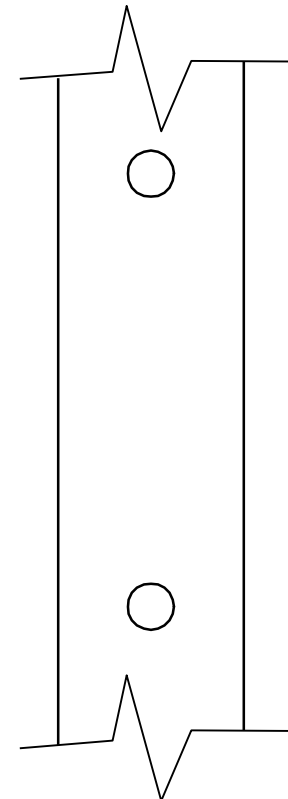
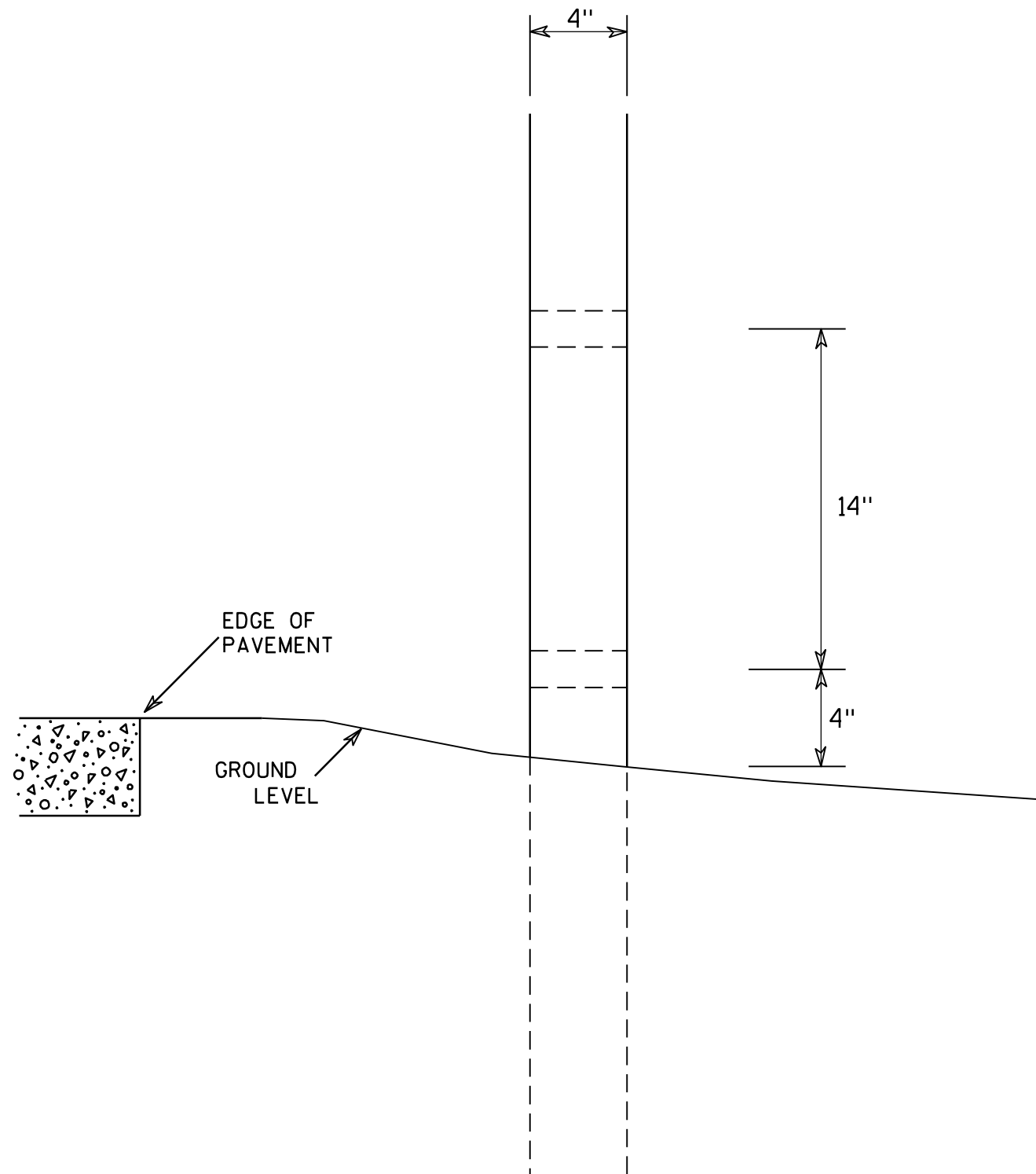
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1 1/2" diameter holes drilled perpendicular to the roadway centerline.

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

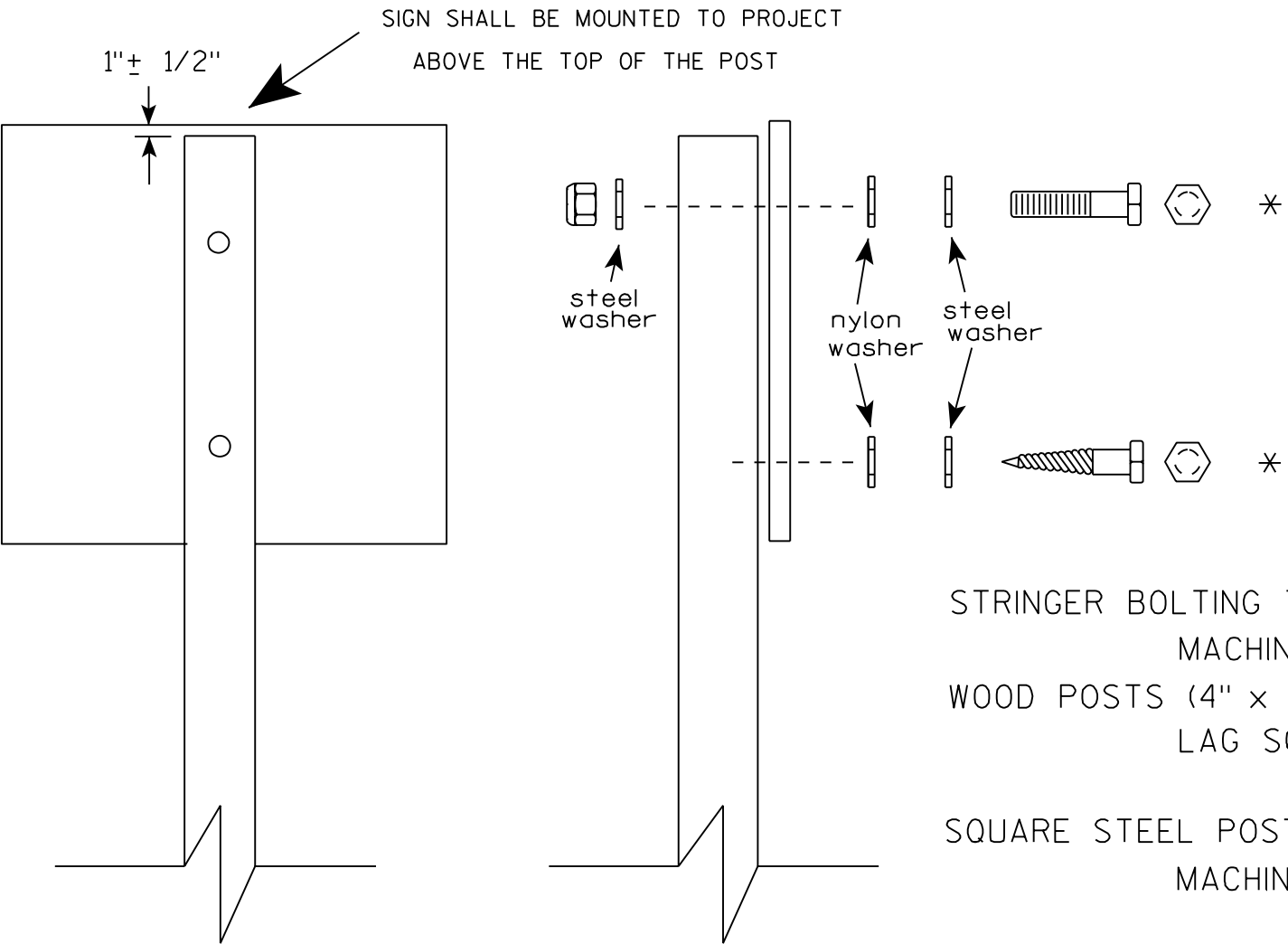
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



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

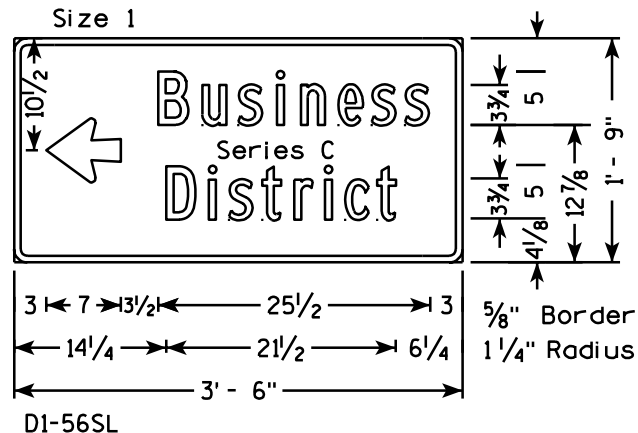
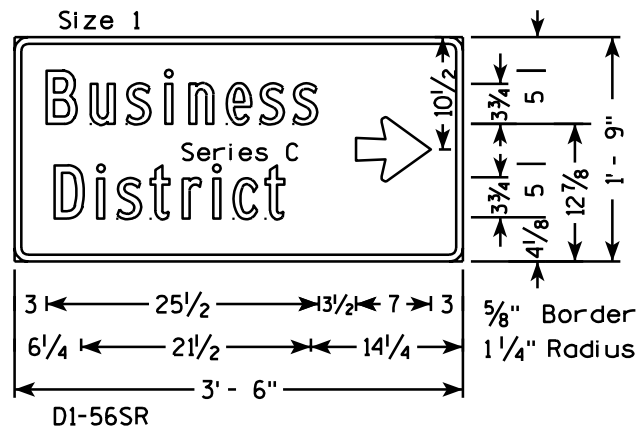
- a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 4" or 4" x 6")
- LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
 - 3/8" X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
 - 3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
- O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
 - 1-1/4" O.D. X 3/8" I.D. X .080 NYLON

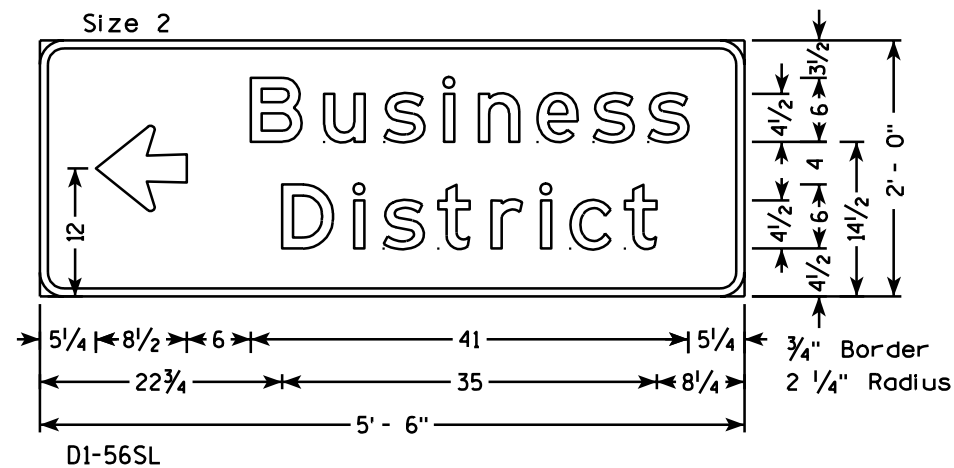
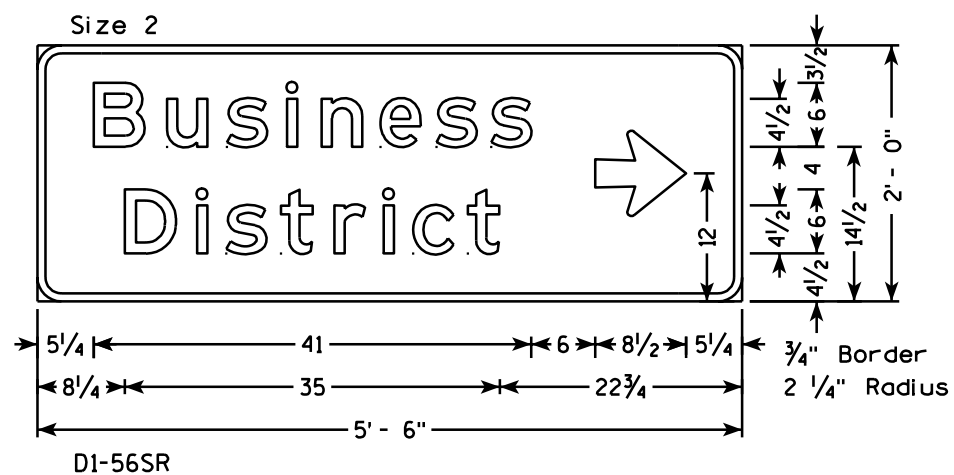
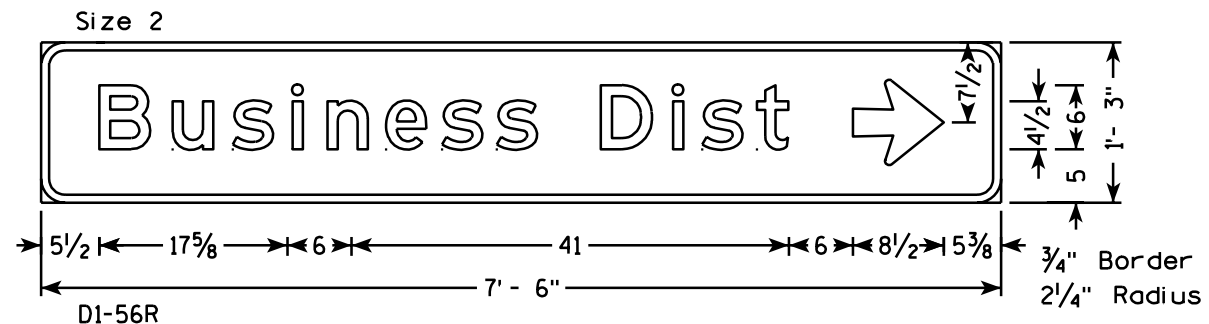
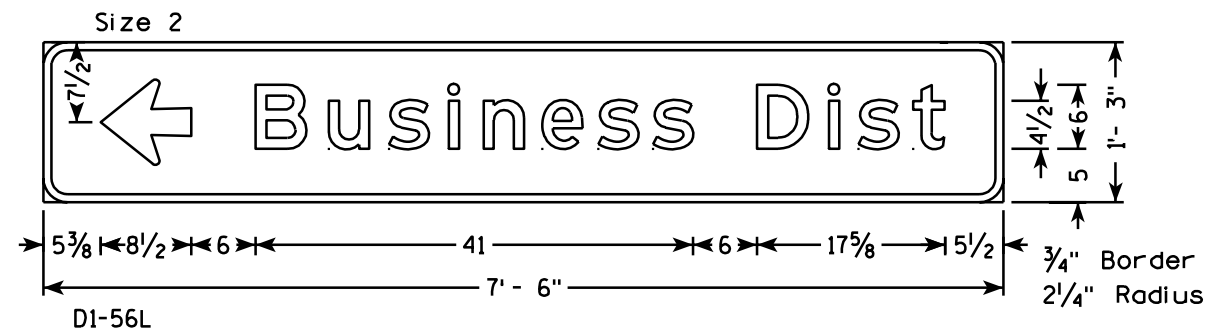
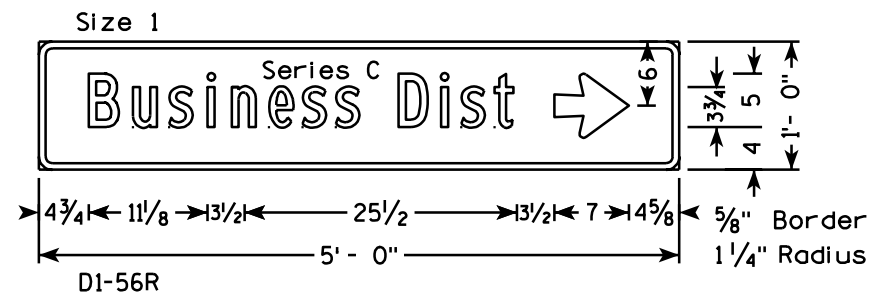
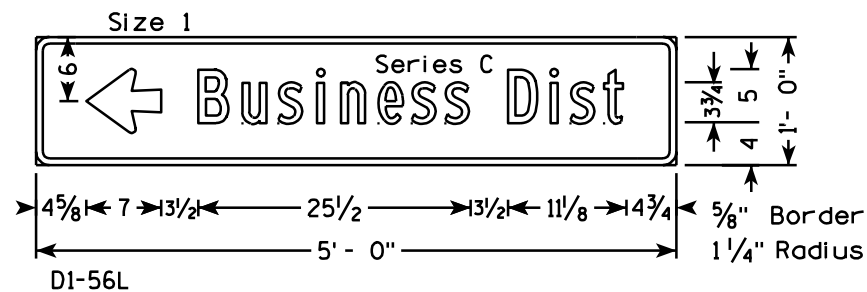
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 8/11/16	PLATE NO. A4-8.8



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Green
Message - White
3. Message Series - E except as noted
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



TYPICAL STANDARD
D1-56L & R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/19/08 PLATE NO. D1-56.1

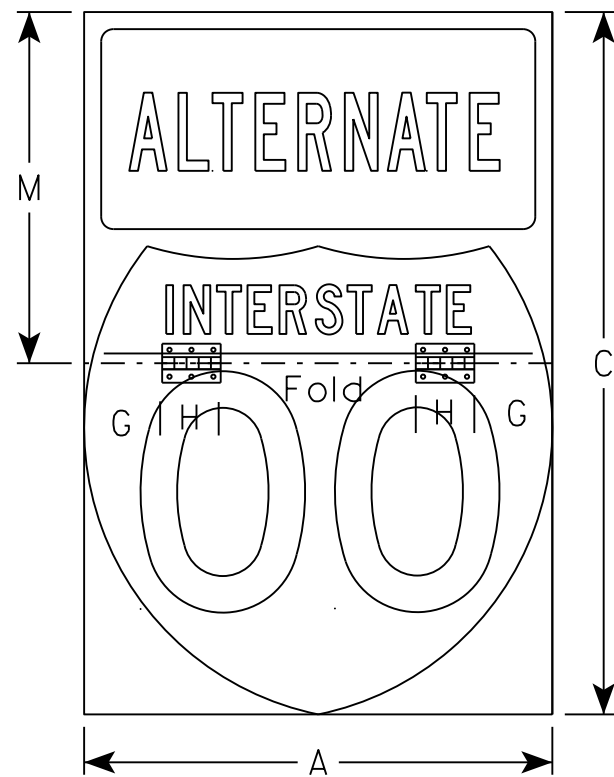
PROJECT NO:

HWY:

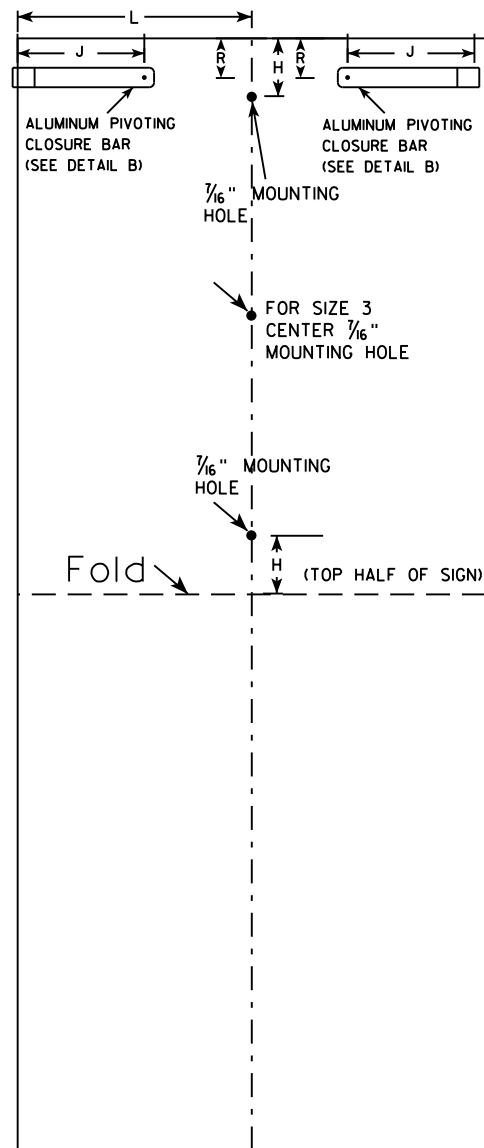
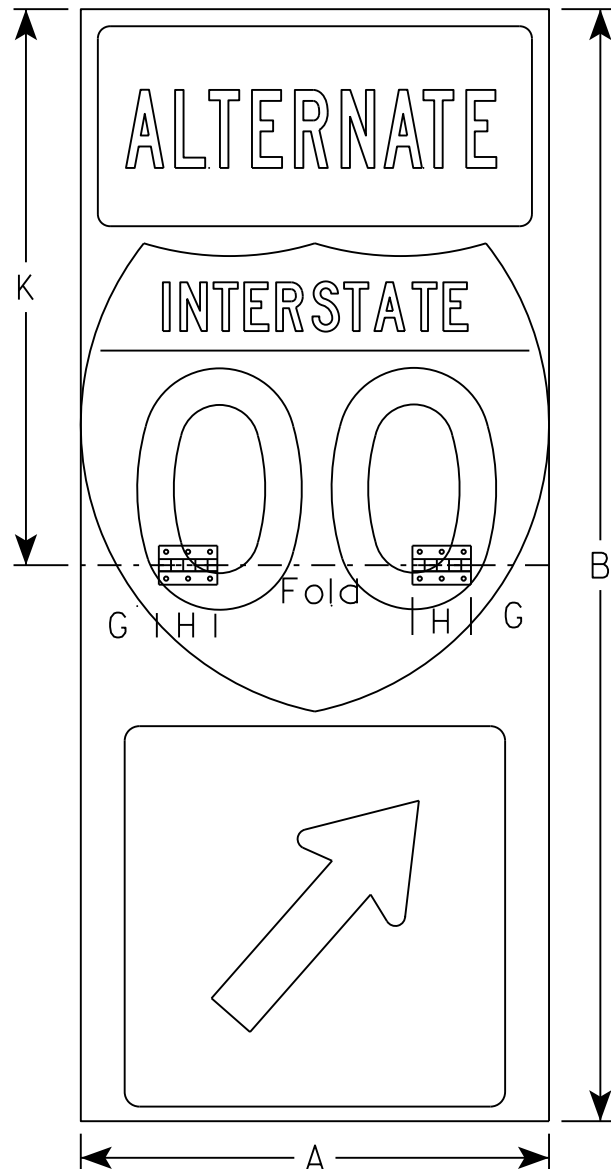
COUNTY:

SHEET NO:

E



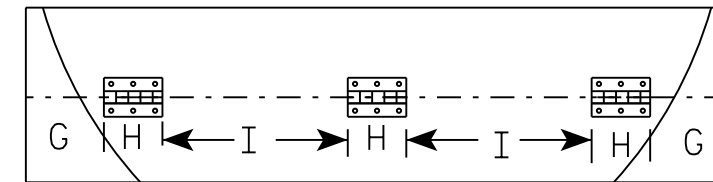
SIZE	Area sq. ft.
1	
2	6.0
3	13.5



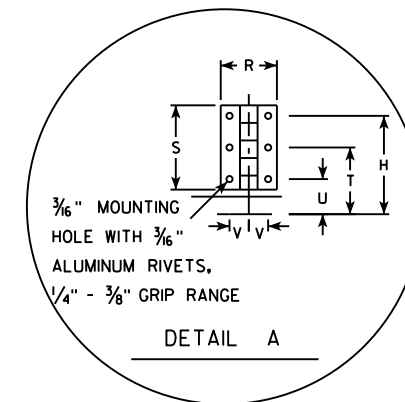
(BACK VIEW)

NOTES

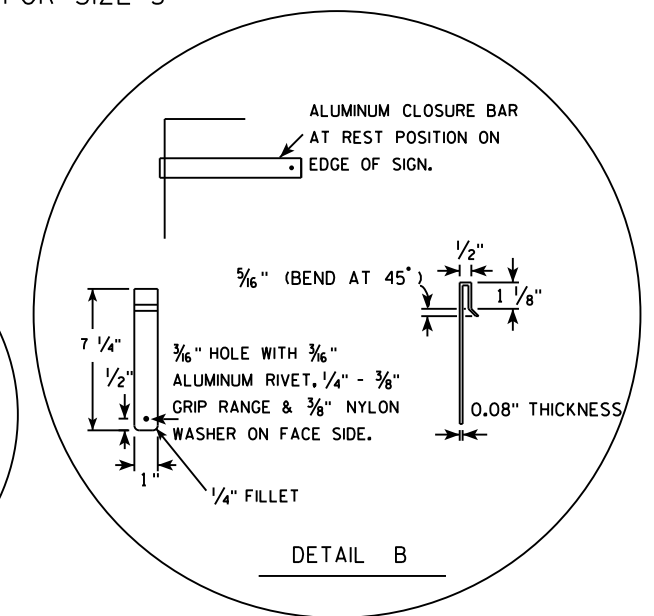
1. Sign is Type II - Type H Reflective
2. Color:
Background - *
Message - *
3. Message Series - C
4. Sign Base Material shall be aluminum and borders shall be rounded.
5. All hardware used on the folding sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.
6. Size 3 shall have 3 hinges see detail below
* See Appropriate Route Shield, Cardinals, Arrow, and A2-IS Sign Plates.



HINGE PLACEMENT FOR SIZE 3



DETAIL A



DETAIL B

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	57	36				4	3		6 1/2	28 1/2	12	18					2	3	2 5/8	1 1/4	1 1/16					9.5
3	36	84	54				4	3	9 1/2	6 1/2	40 1/2	18	27					2	3	2 5/8	1 1/4	1 1/16					21.0
4																											
5																											

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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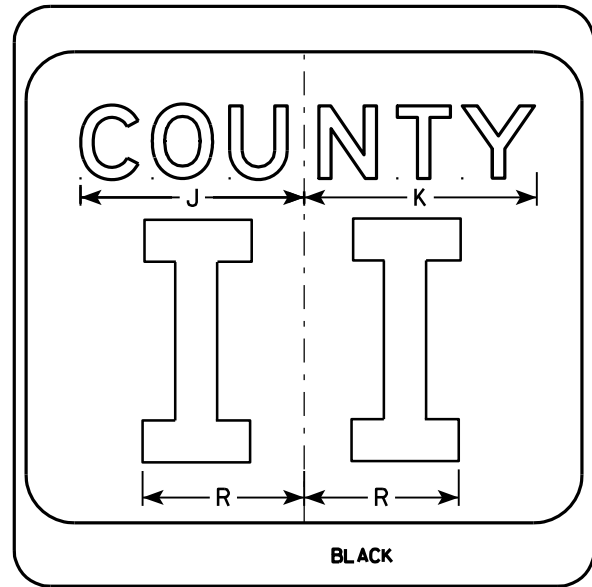
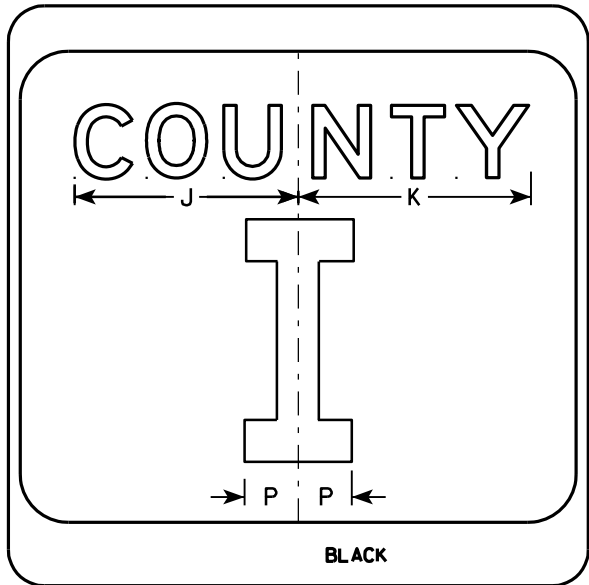
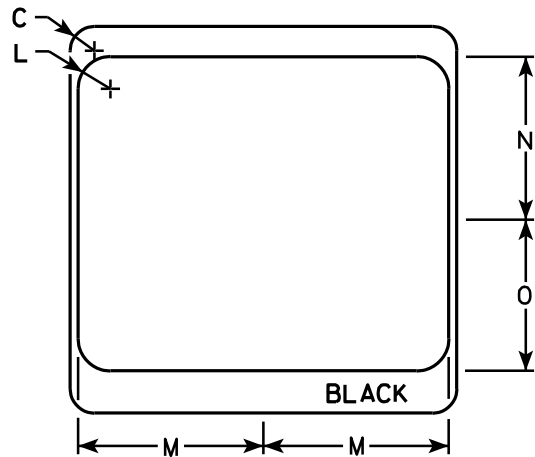
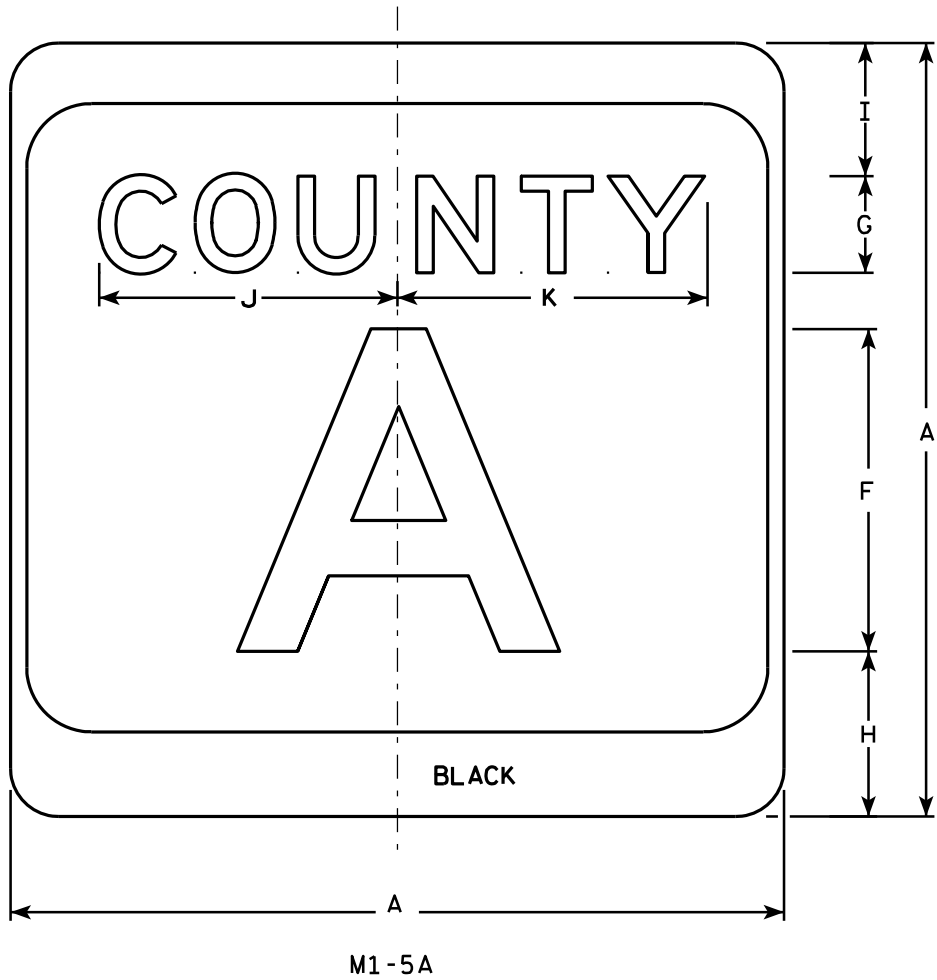
STANDARD SIGN
JV-F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/23/17 PLATE NO. JV-F.3

7



NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White & Black - See Note 7
Message - Black
3. Message Series - see Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Message Series E for 1 letter.
Message Series D for 2 letters unless message is too big then Series C.
Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
Background - Type H Reflective
Detour or temporary Signs
Background - Reflective

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

CTH MARKER	
M1-5A FOR ASSEMBLIES	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 9/27/11	PLATE NO. M1-5A.8

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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7

NOTES

1. Sign is Type II - Type H
2. Color:

Background - See note 5

Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M2-1 Background - White

Message - Black

MB2-1 Background - Blue

Message - White

MK2-1 Background - Green

Message - White

MM2-1 Background - White

Message - Green

MN2-1 Background - Brown

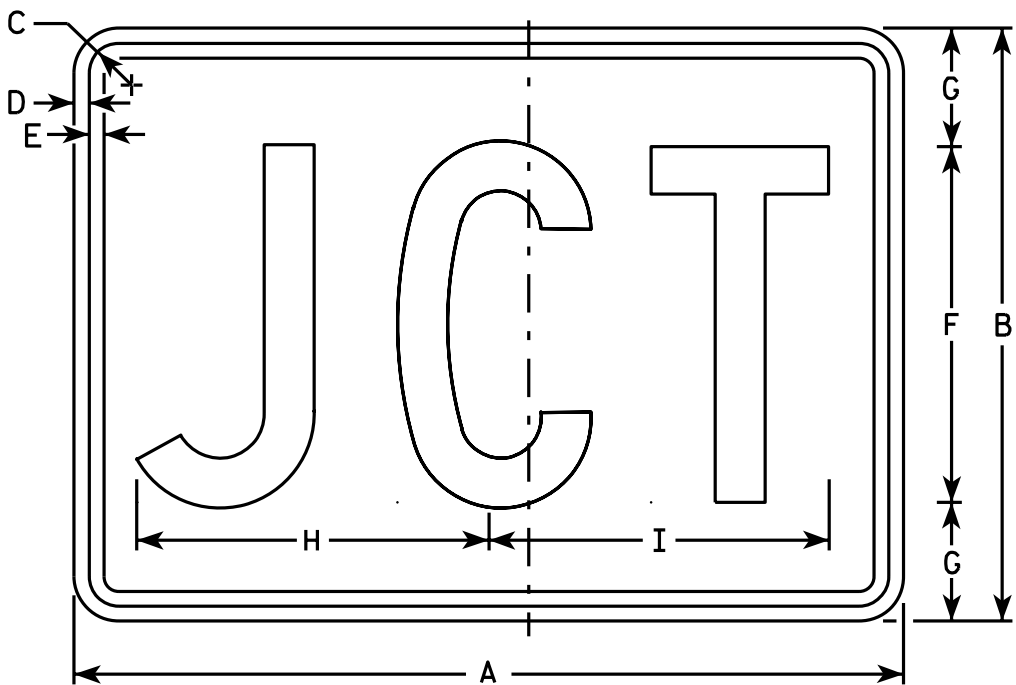
Message - White

MP2-1 Background - White

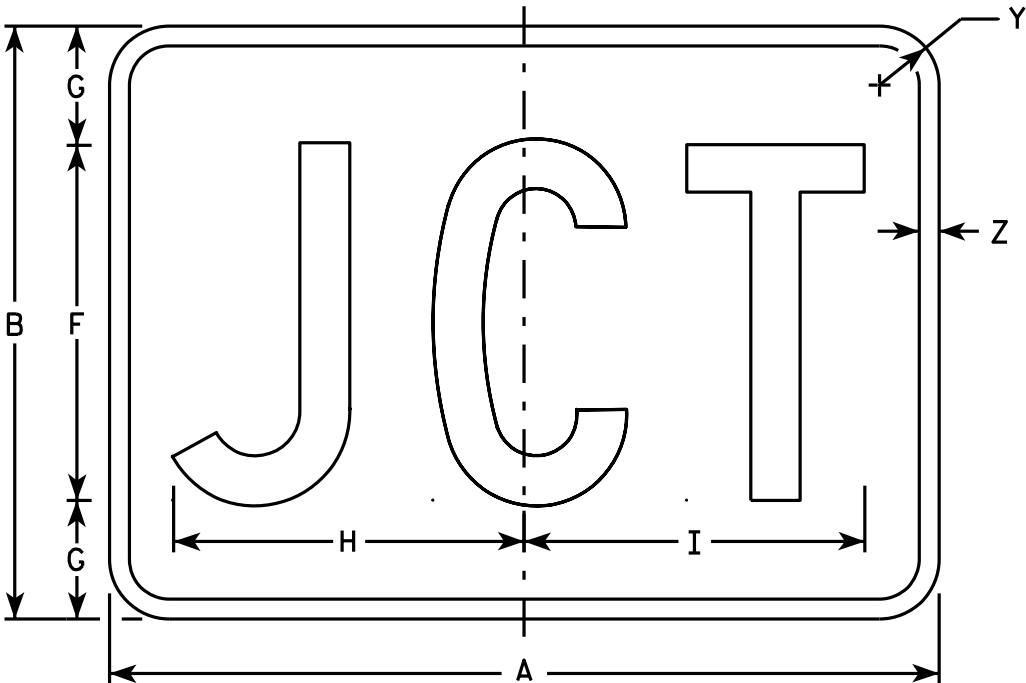
Message - Blue

MR2-1 Background - Brown

Message - Yellow



M2-1
MM2-1
MP2-1



MB2-1
MK2-1
MN2-1
MR2-1

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

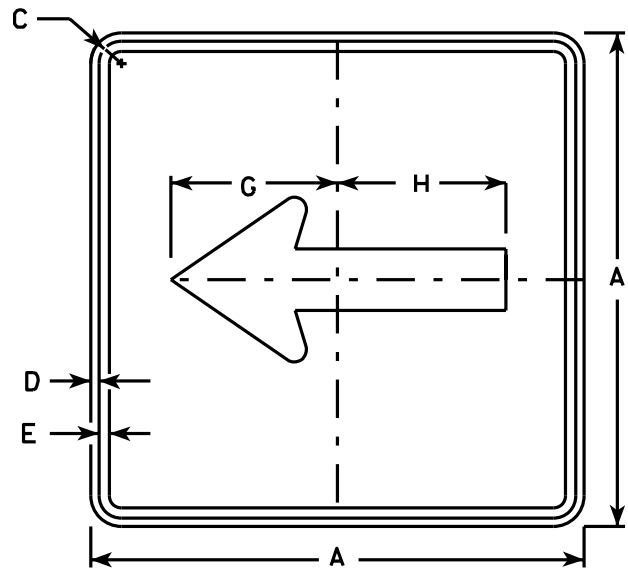
E

STANDARD SIGN
M2 - 1

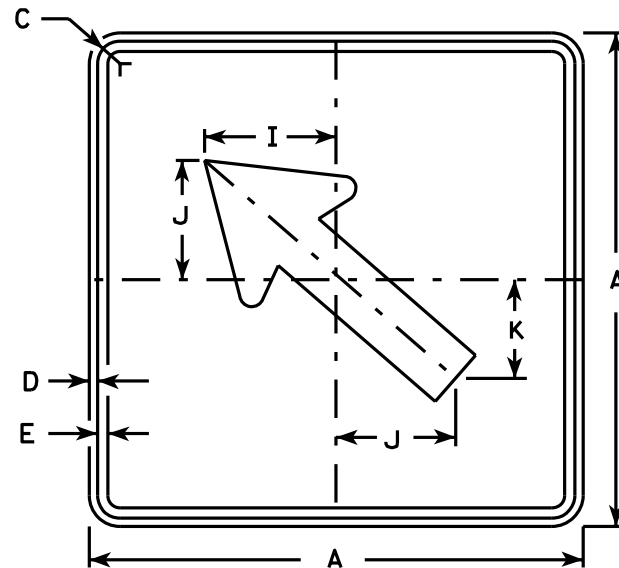
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

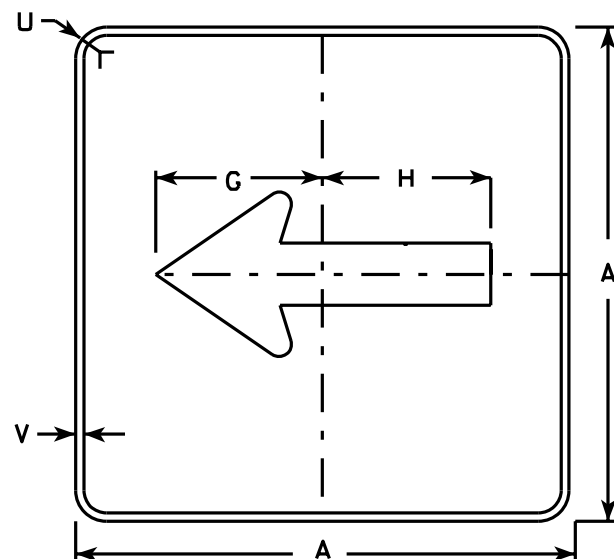
DATE 10/15/15 PLATE NO. M2-1.12



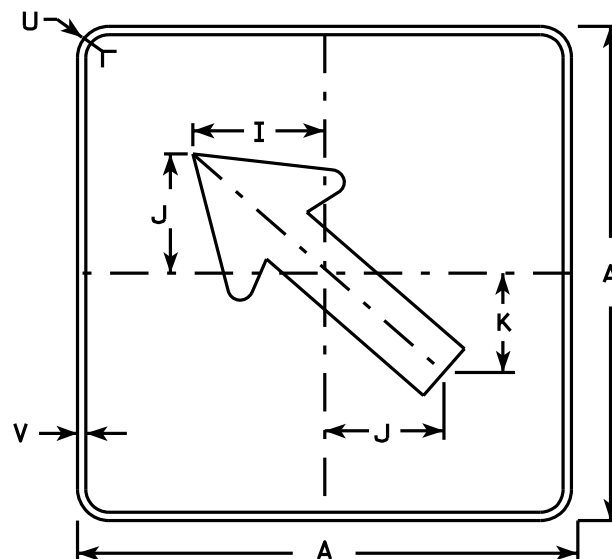
M6-1
MM6-1
MO6-1
MP6-1



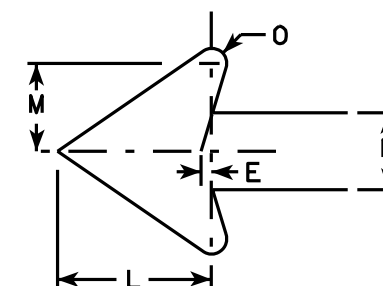
M6-2
MM6-2
MO6-2
MP6-2



MB6-1
MK6-1
MN6-1
MR6-1



MB6-2
MK6-2
MN6-2
MR6-2



NOTES

- Signs are Type II - Type H except as Shown
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M6-1 and M6-2 Background - White
Message - Black
MB6-1 and MB6-2 Background - Blue
Message - White
MK6-1 and MK6-2 Background - Green
Message - White
MM6-1 and MM6-2 Background - White
Message - Green
MN6-1 and MN6-2 Background - Brown
Message - White
MO6-1 and MO6-2 Background - Orange - Type F Reflective
Message - Black
MP6-1 and MP6-2 Background - White
Message - Blue
MR6-1 and MR6-2 Background - Brown
Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

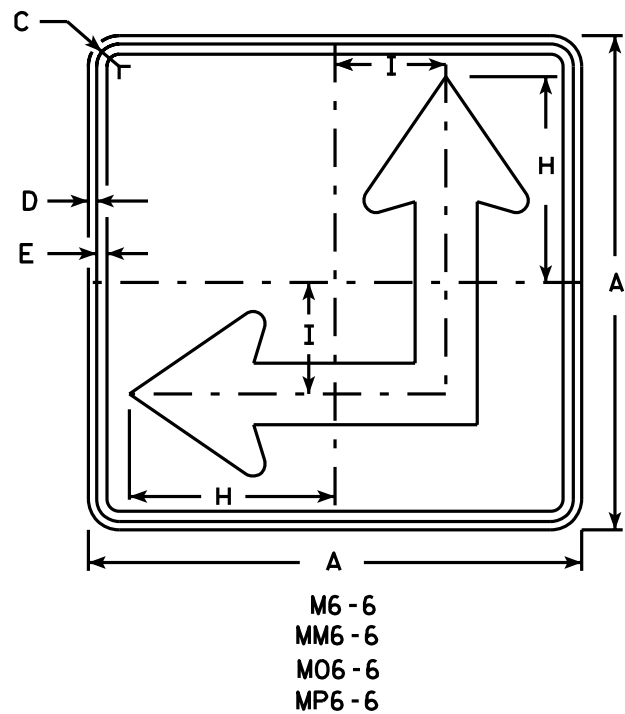
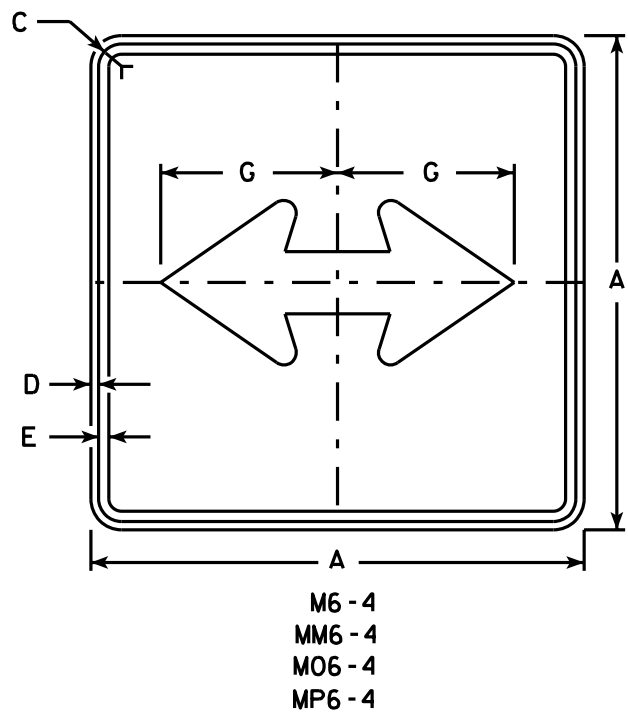
E

STANDARD SIGN
M6-1 & M6-2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

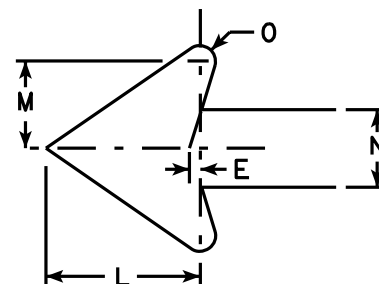
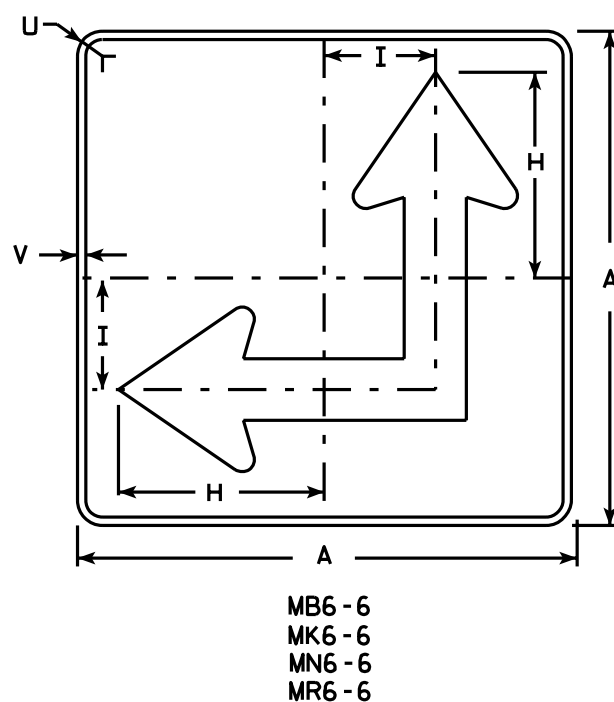
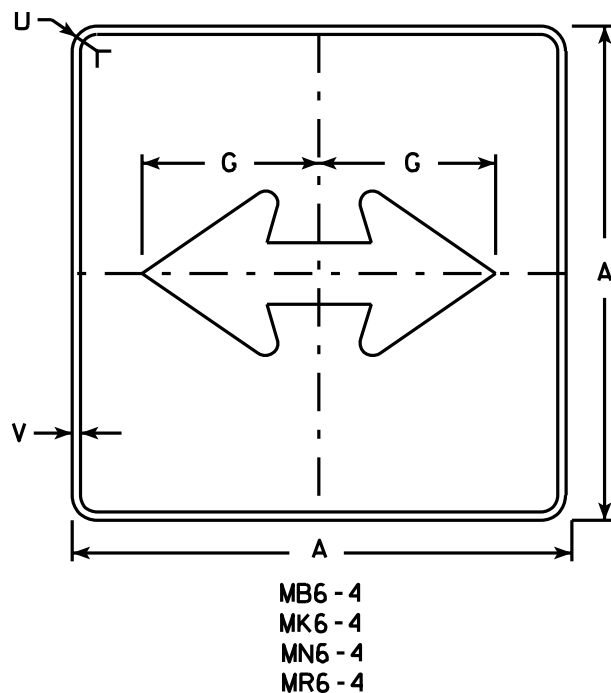
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M6-1.15



NOTES

1. Signs are Type II - Type H except as Shown
2. Color:
Background - See Note 4
Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-4 and M6-6 Background - White
Message - Black
MB6-4 and MB6-6 Background - Blue
Message - White
MK6-4 and MK6-6 Background - Green
Message - White
MM6-4 and MM6-6 Background - White
Message - Green
MN6-4 and MN6-6 Background - Brown
Message - White
M06-4 and M06-6 Background - Orange - Type F Reflective
Message - Black
MP6-4 and MP6-6 Background - White
Message - Blue
MR6-4 and MR6-6 Background - Brown
Message - Yellow
5. M6-6R same as M6-6L except arrow points ahead and right.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

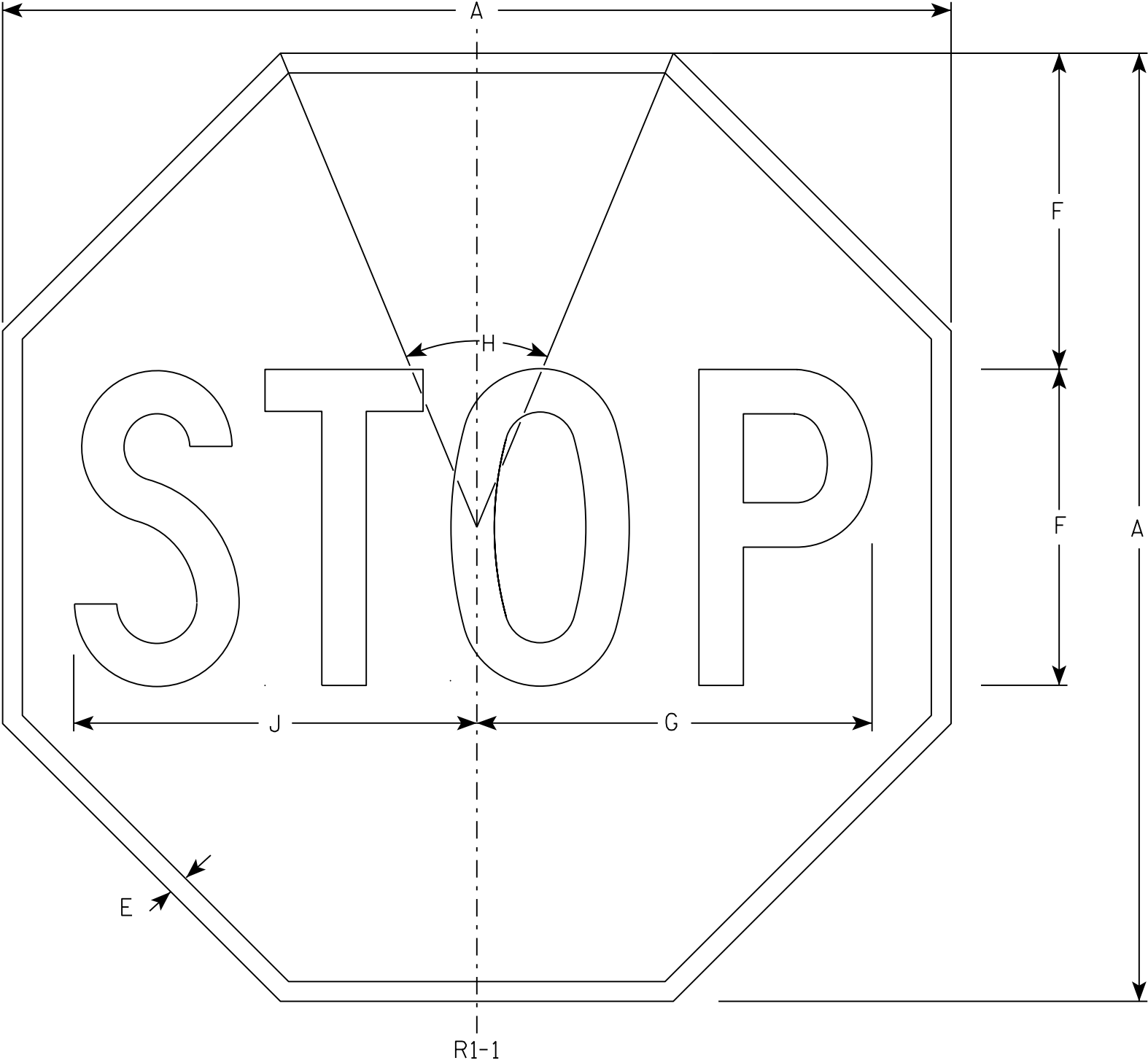
STANDARD SIGN
M6 - 4 & M6 - 6
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Raub*
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M6-4.10

7



NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Red
Message - White
- 3. Message Series - C

7

R1-1

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

STANDARD SIGN

R1 - 1

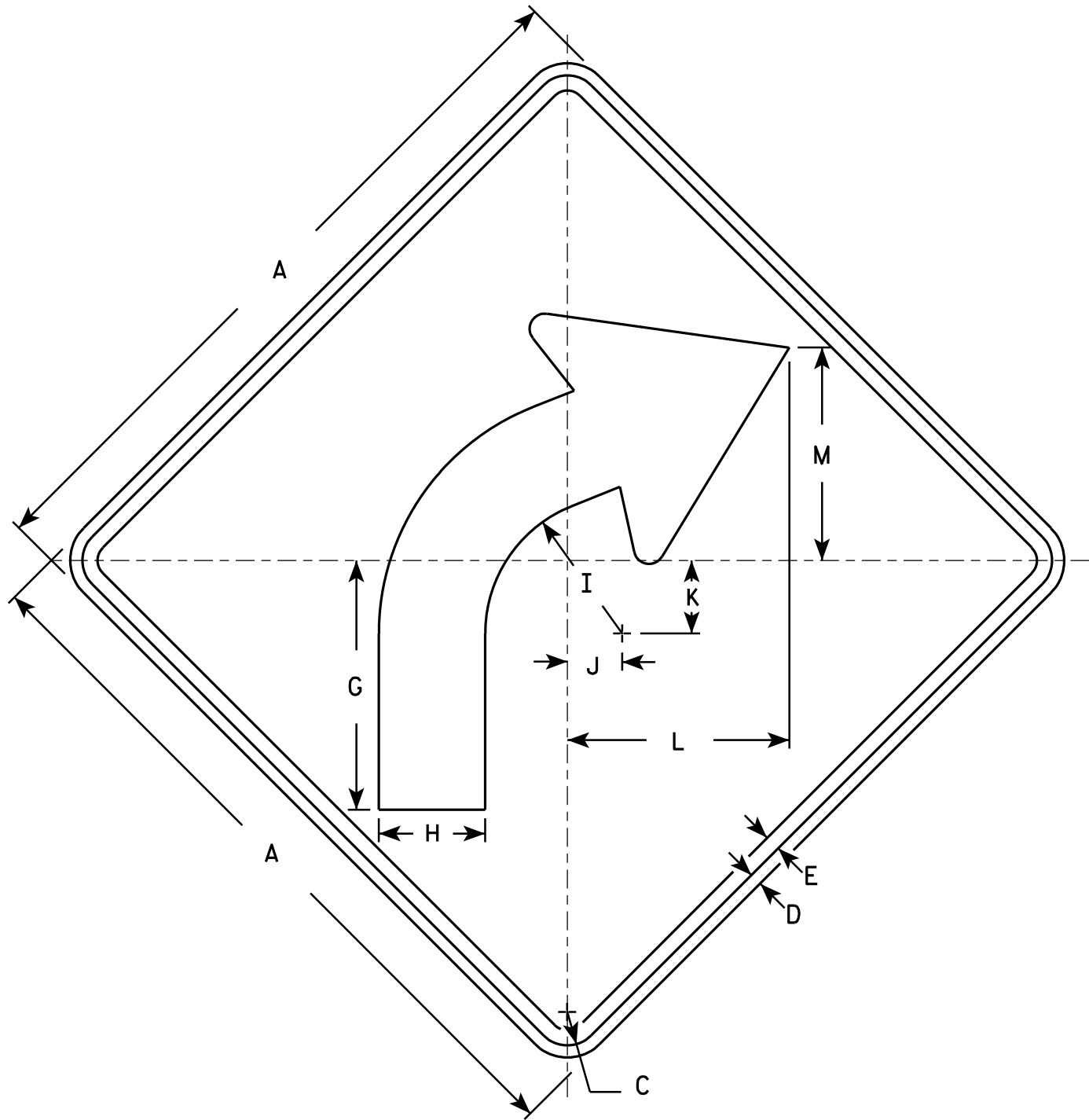
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

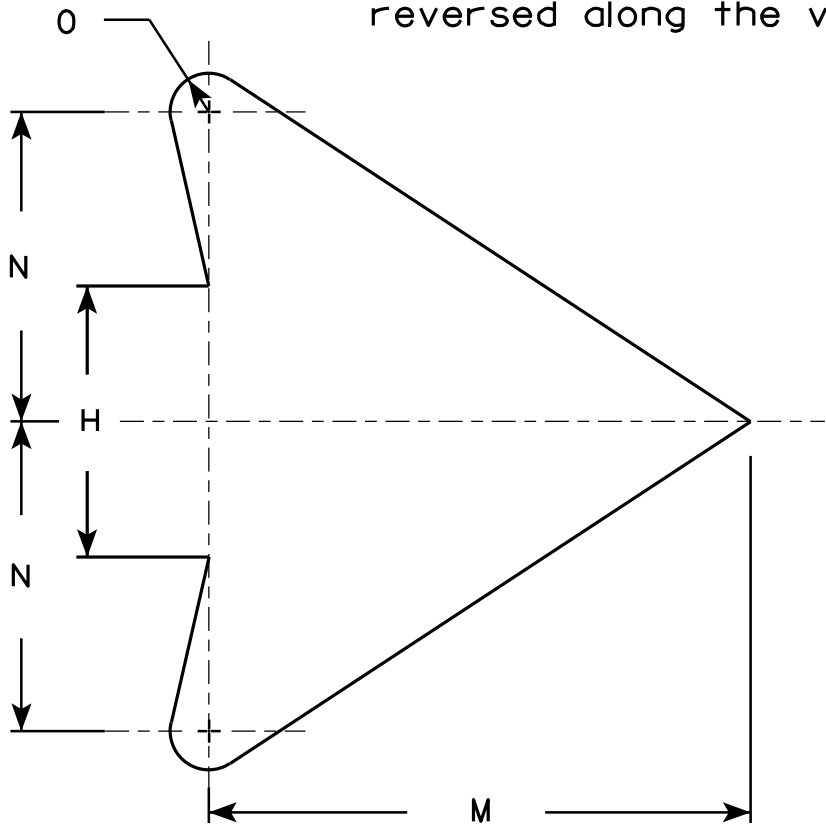
DATE 11/12/15 PLATE NO. R1-1.13

NOTES

- 1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Yellow
Message - Black
- 3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 4. W1-2L is the same as W1-2R except the arrow is reversed along the vertical centerline.



W1-2R



ARROW DETAIL

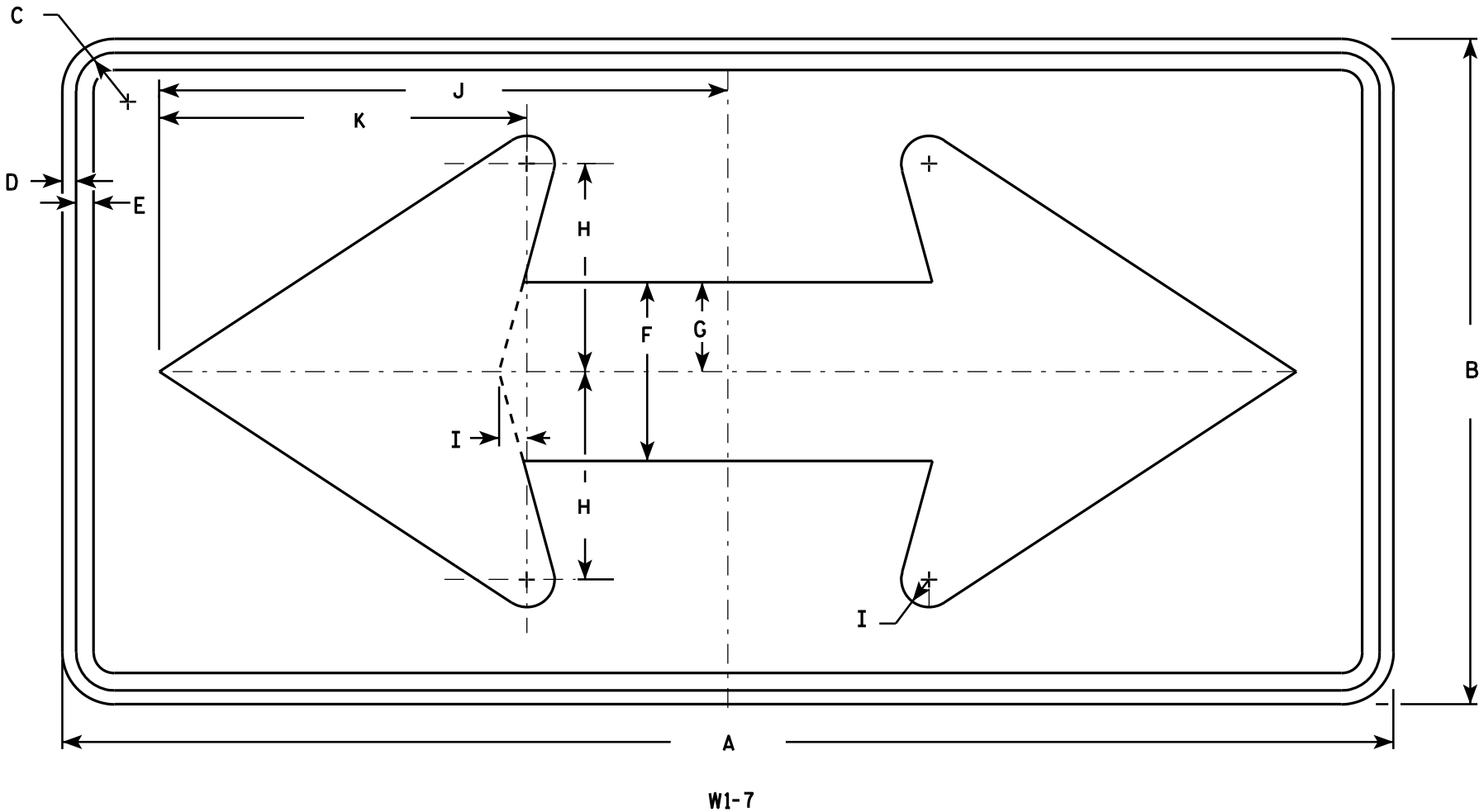
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2		8 1/4	3 1/2	4 1/2	1 3/4	2 3/8	7 1/4	7	4	1/2												4.0
2S	30		1 3/8	1/2	5/8		10 1/4	4 3/8	5 5/8	2 1/4	3	9 1/8	8 3/4	5	5/8												6.25
2M	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
3	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
4	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
5	48		2 1/4	3/4	1		16 1/2	7	9	3 1/2	4 5/8	14 1/2	14	8	1												16.0

STANDARD SIGN
W1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 5/15/12 PLATE NO. W1-2.10



NOTES

- 1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Yellow
Message - Black
- 3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

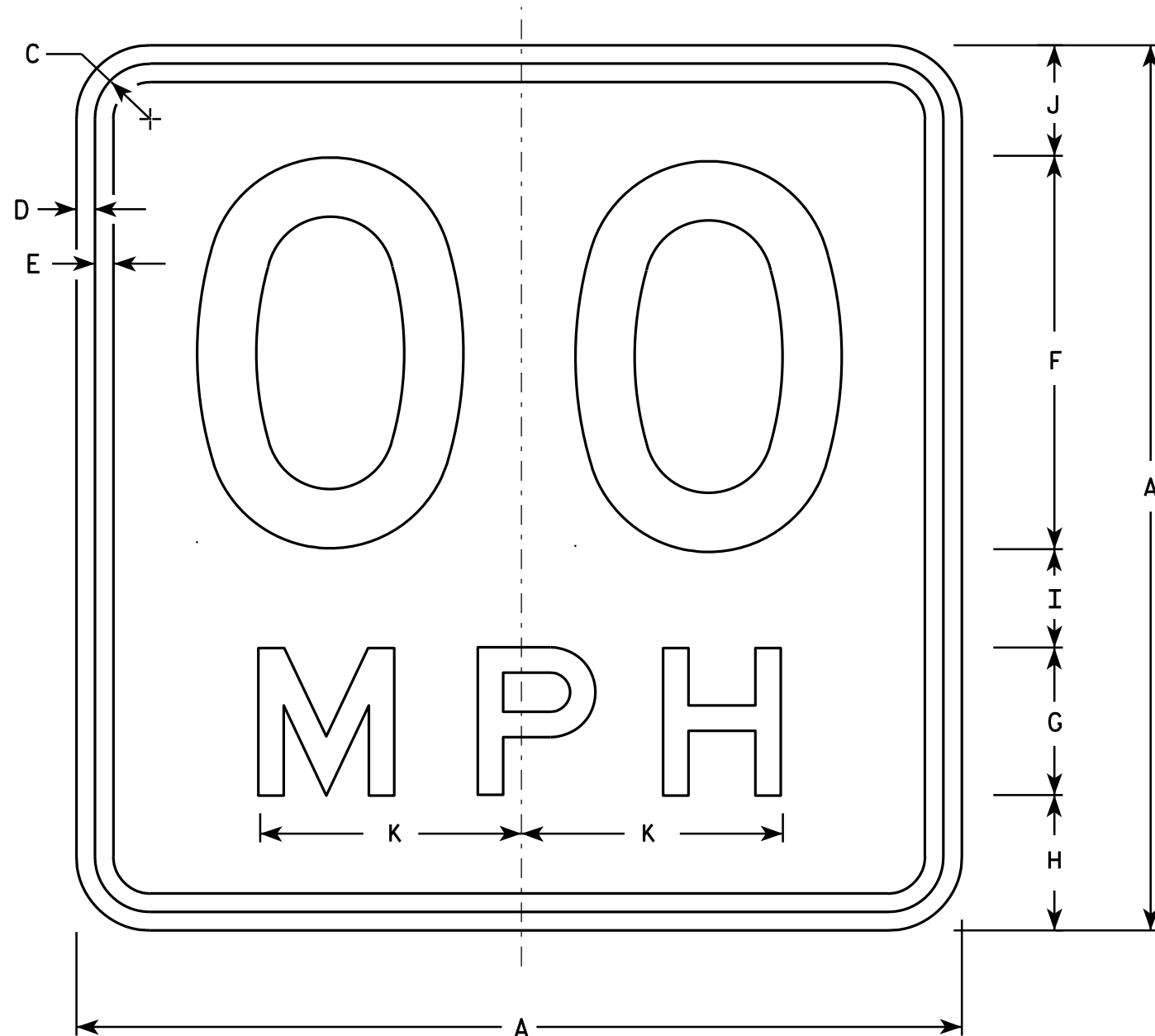
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/8	3/8	1/2	5	2 1/2	5 3/4	3/4	15 5/8	10 1/8																4.5
2S	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
2M	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
3	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
4	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
5	96	48	2 1/4	3/4	1	13	6 1/2	15	2	41	26 1/2																32.0

STANDARD SIGN
W1 - 7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-7.7



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
Line 2 is Series E

W13-1

- * For 30" x 30" Warning Signs, use 18" x 18" W13-1 signs.
For 36" x 36" Warning Signs, use 24" x 24" W13-1 signs.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area Sq. Ft.
1	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
* 2S	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
* 2M	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
3	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8																4.00
4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

STANDARD SIGN

W13-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 5/31/12 PLATE NO. W13-1.16

PROJECT NO:

HWY:

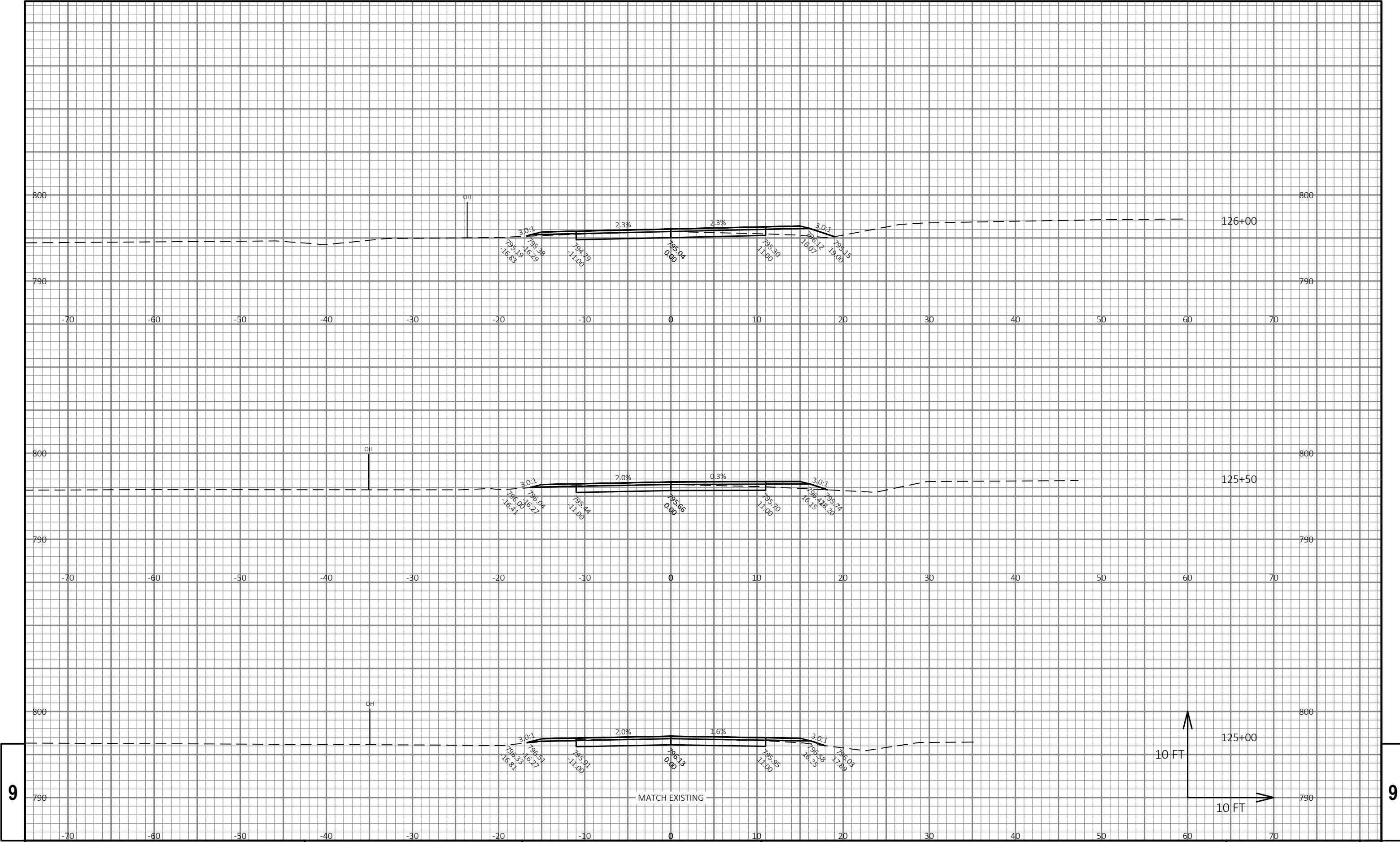
COUNTY:

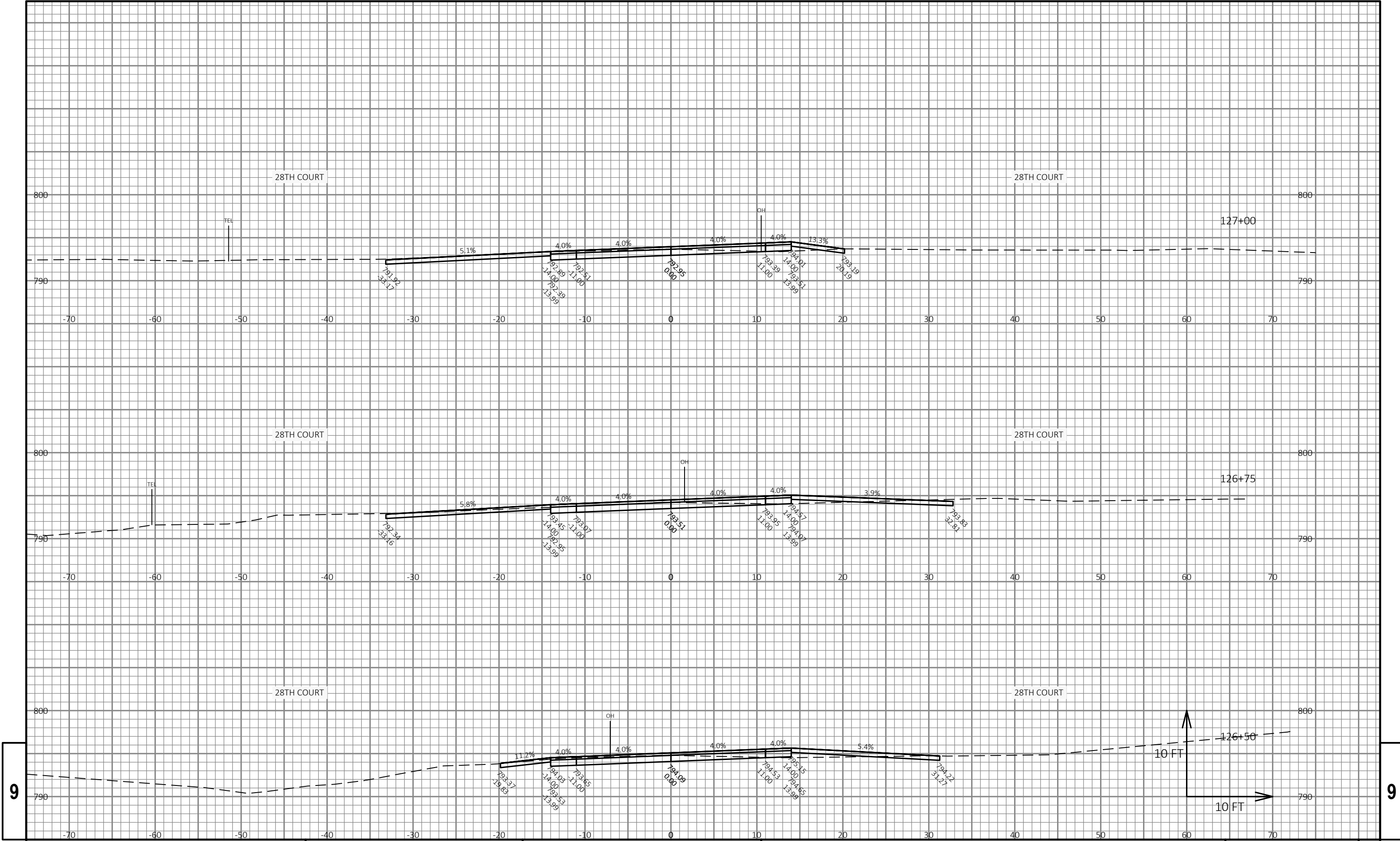
SHEET NO:

E

EARTHWORK PROJECT I.D. 6910-01-70 - PINE RIVER - POY SIPPI, CTH E SOUTH TO W OF BEECHNUT LN CTH H

STATION	DISTANCE	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
		Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	CUT 1.00	Expanded Fill 1.25	
128+00		6	0	0	0	0	0	0	0	0
128+50	50.00	17	0	2	21	0	2	21	2	19
129+00	50.00	14	0	2	28	0	4	49	7	42
129+50	50.00	10	0	3	22	0	5	71	13	58
129+53	2.50	10	0	7	1	0	0	72	14	58
129+78	25.00	0	0	48	5	0	25	77	46	31
130+03	25.00	5	0	25	2	0	34	79	88	-9
130+50	47.50	8	3	16	12	3	36	91	133	-45
131+00	50.00	16	7	8	23	9	22	113	161	-59
131+50	50.00	16	3	7	30	10	14	143	178	-56
132+00	50.00	7	4	8	22	6	14	165	195	-58
132+09	8.75	9	0	8	3	1	3	167	198	-59
132+34	25.00	8	0	8	8	0	7	175	207	-60
132+59	25.00	1	0	27	5	0	16	180	227	-76
132+84	25.00	0	0	18	1	0	21	180	253	-101
133+00	16.25	0	0	11	0	0	7	181	262	-109
133+50	50.00	23	0	2	21	0	3	202	266	-92
					202	28	212			

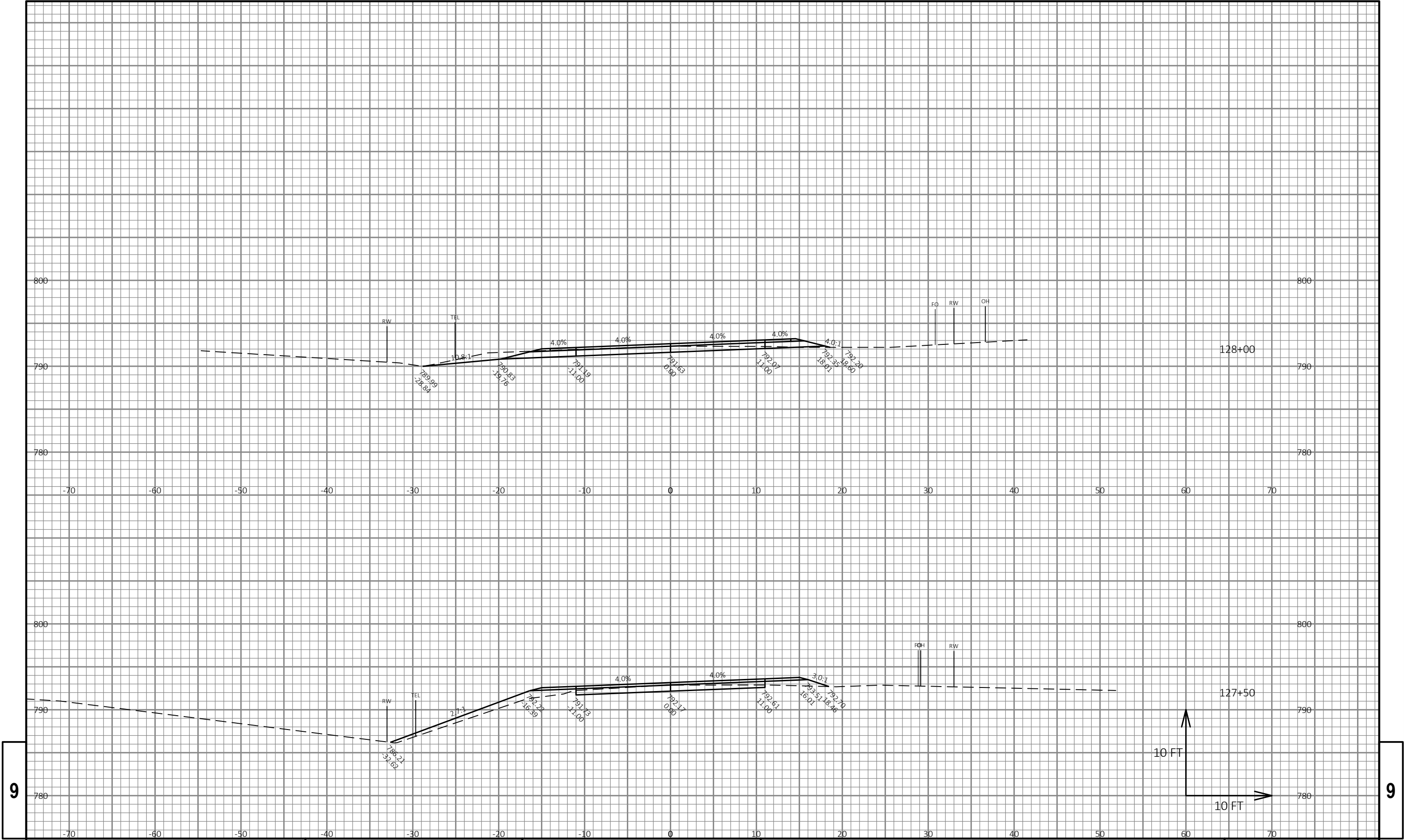




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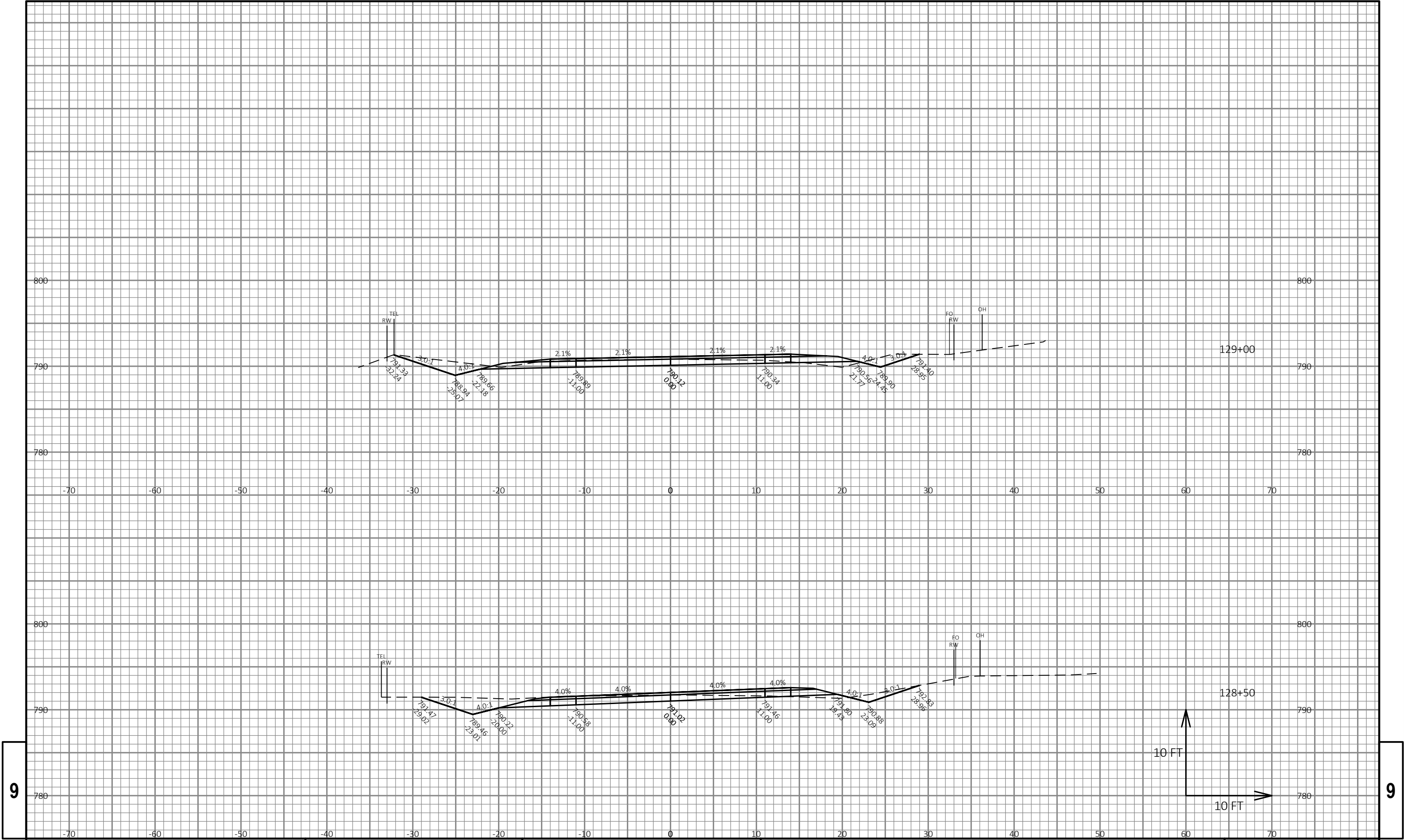
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PROJECT NO: 6910-01-70	HWY: CTH H	COUNTY: WAUSHARA	CROSS SECTIONS: CTH H	SHEET	E
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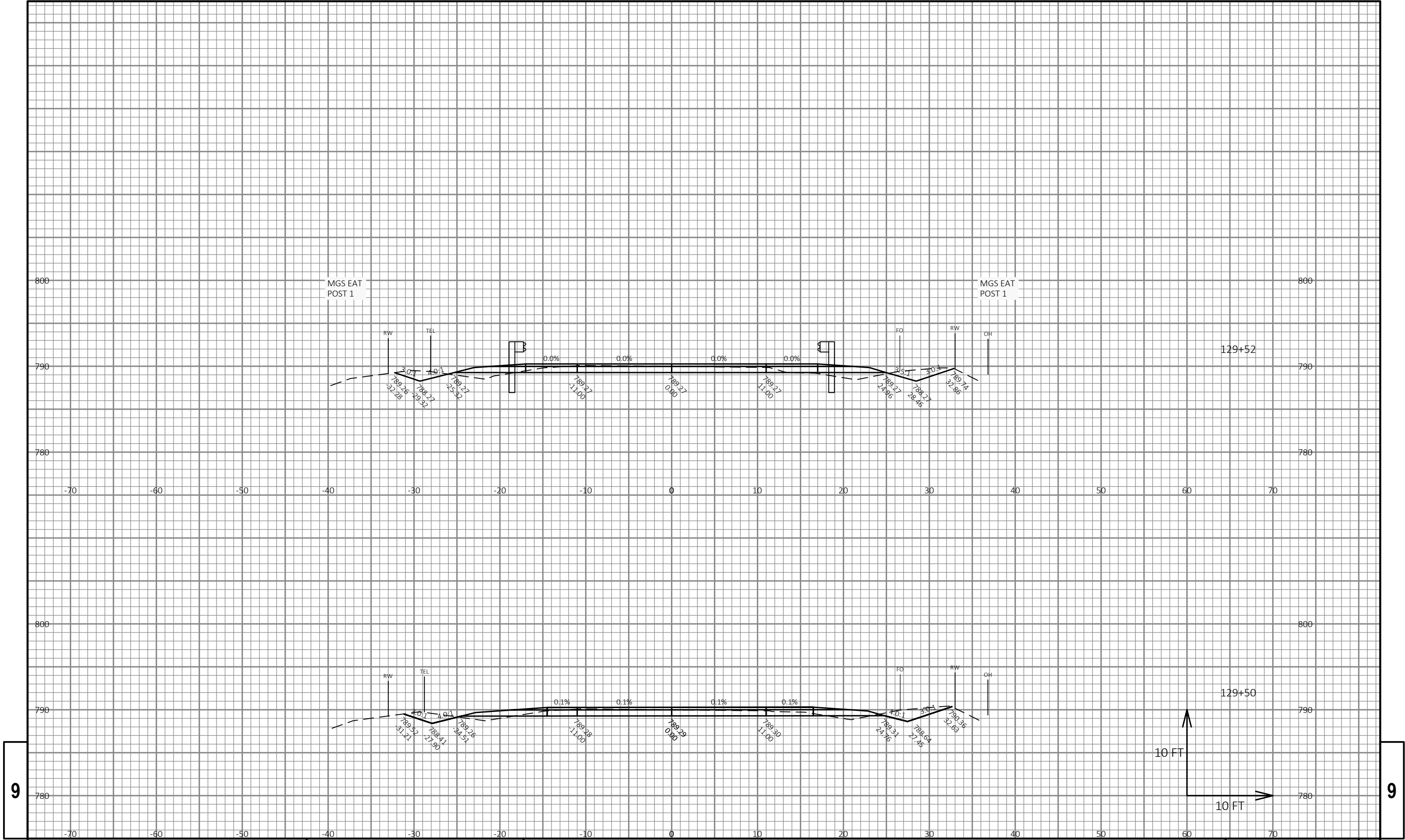
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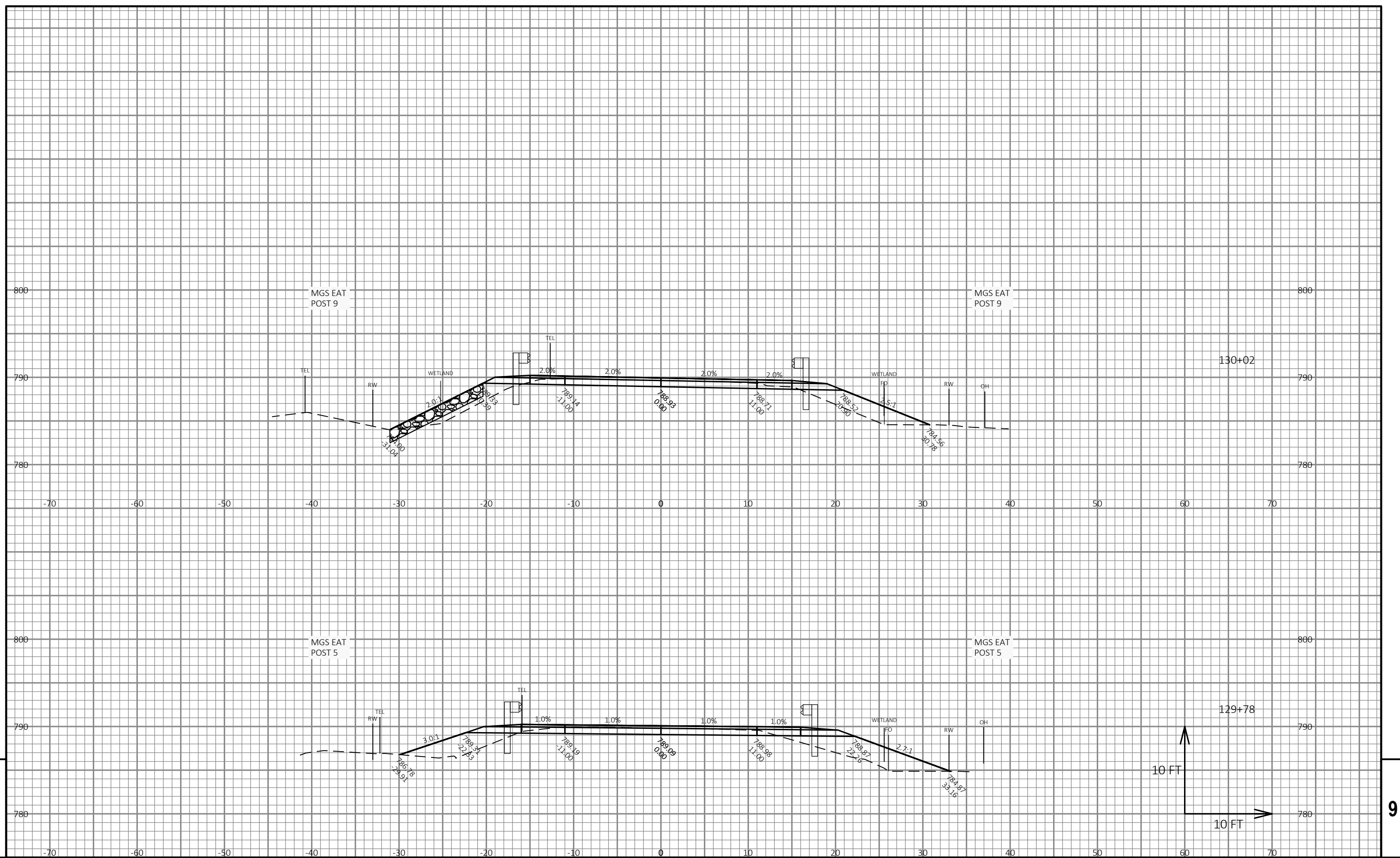
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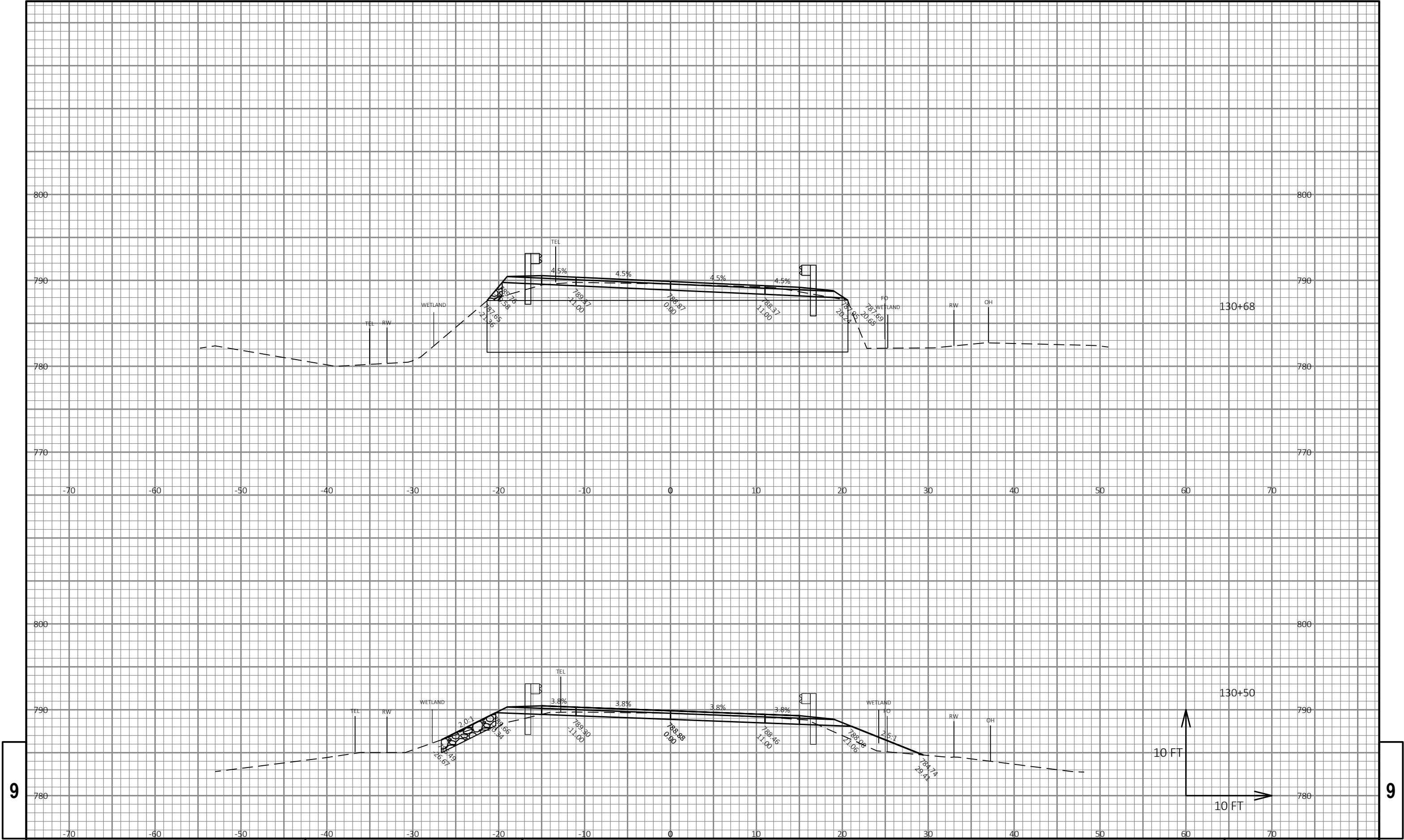


9

9



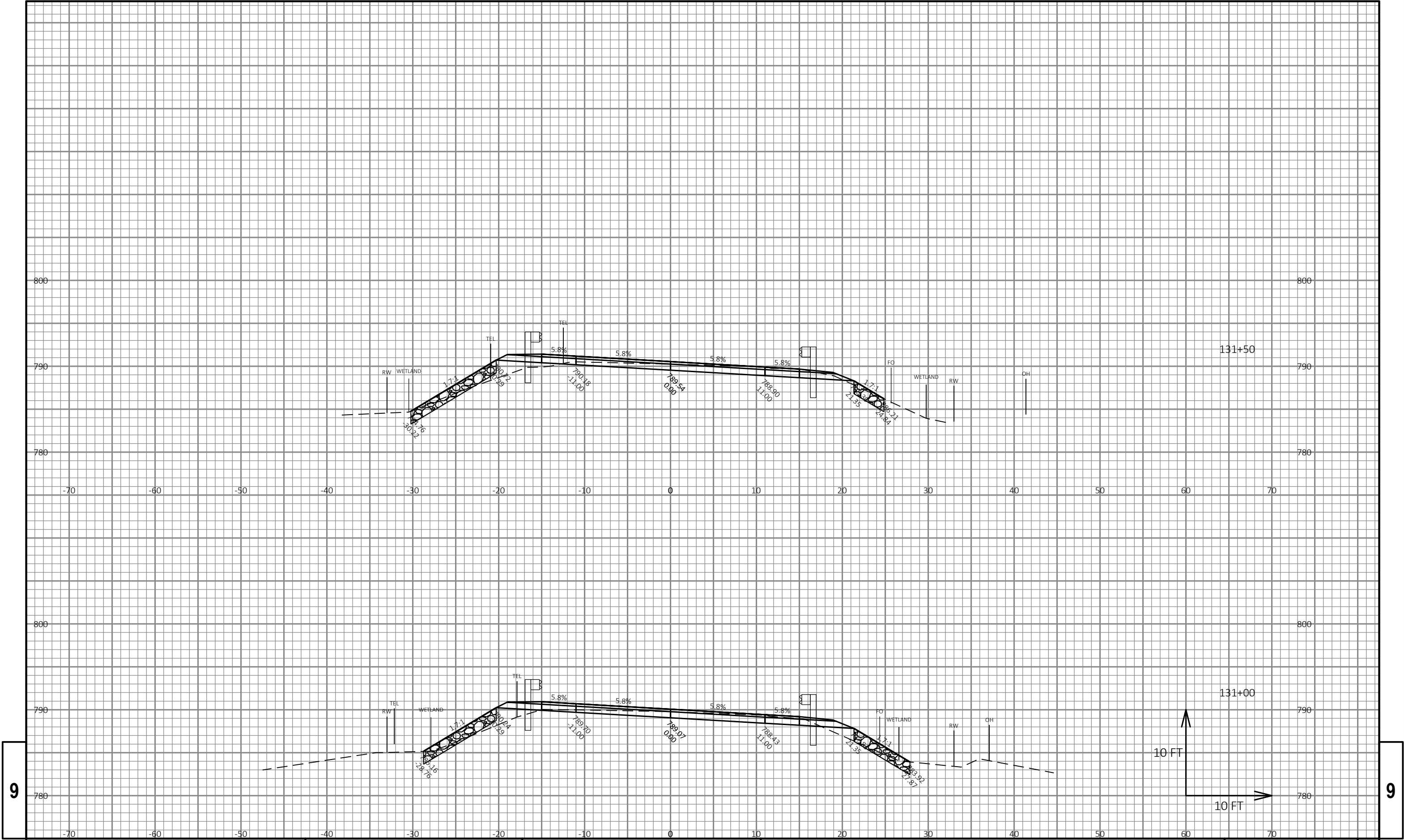




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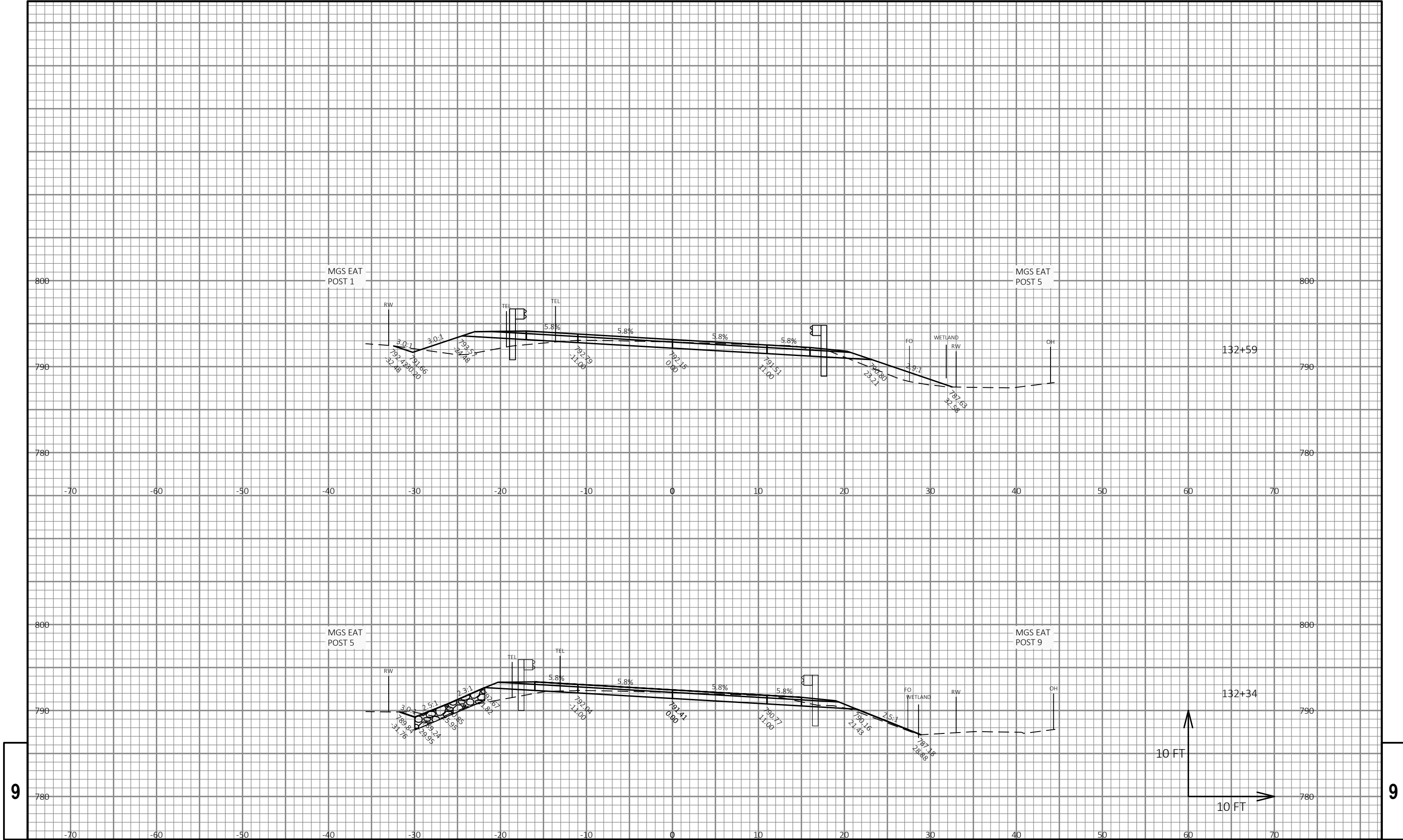
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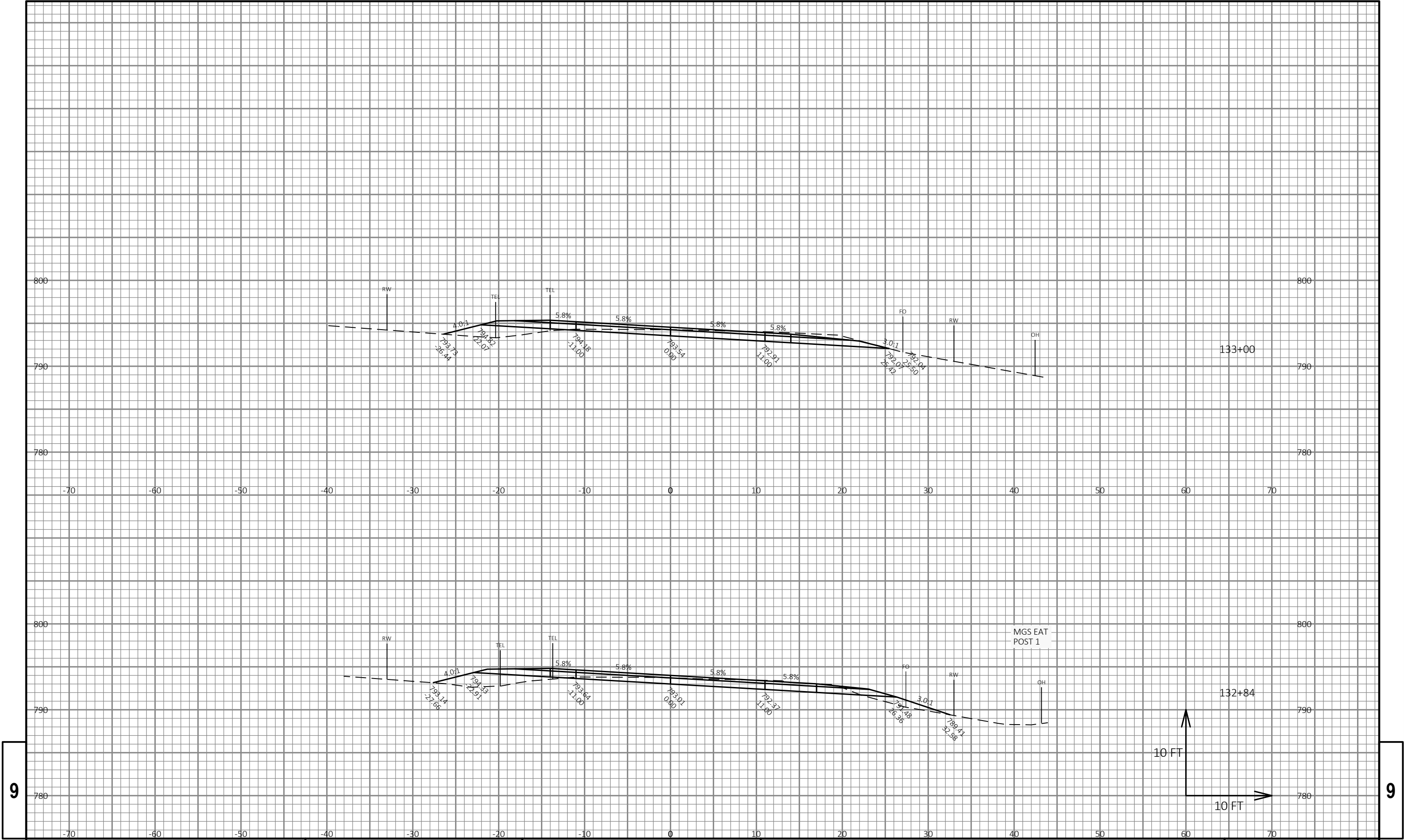
PROJECT NO: 6910-01-70	HWY: CTH H	COUNTY: WAUSHARA	CROSS SECTIONS: CTH H	SHEET	E
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9

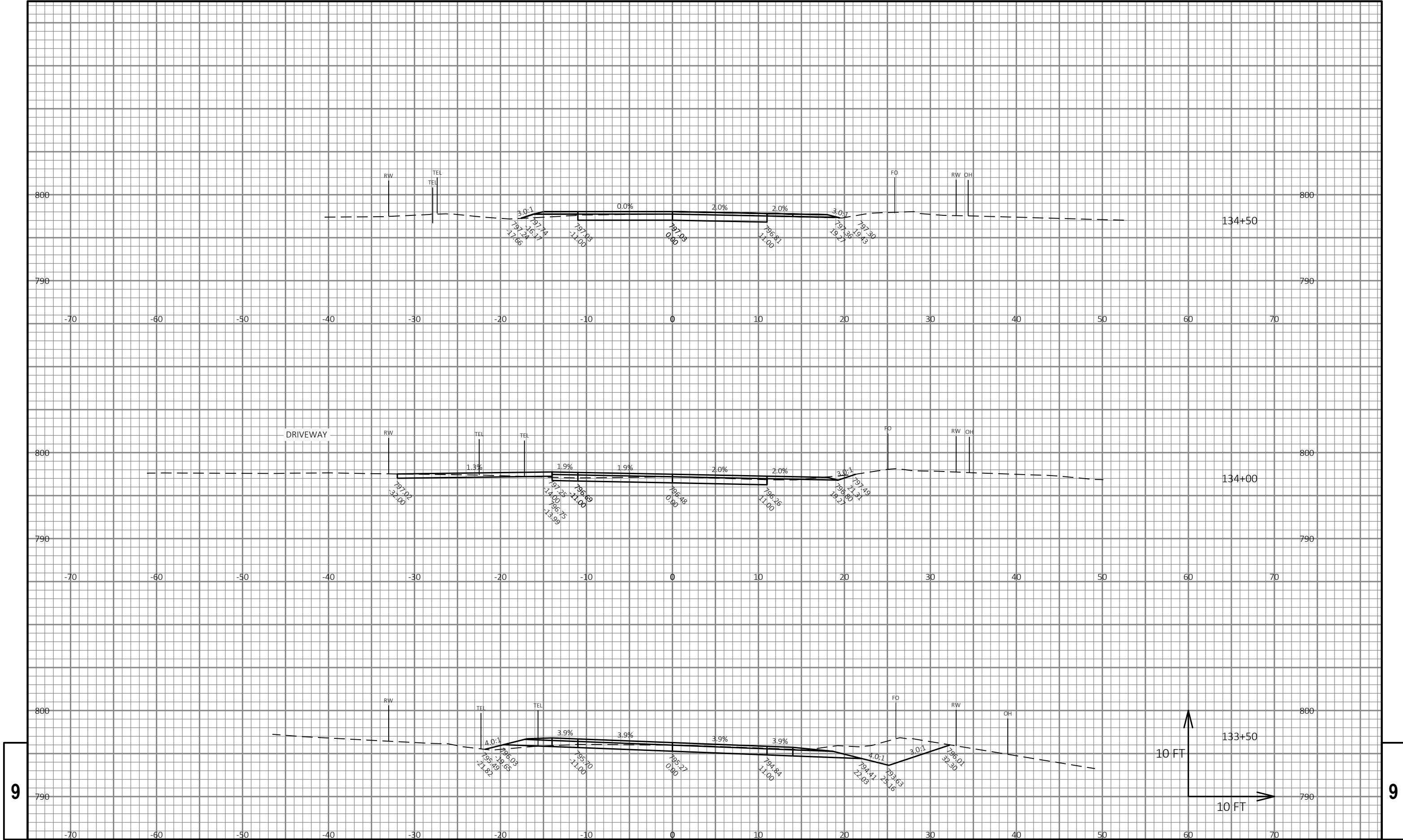
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9

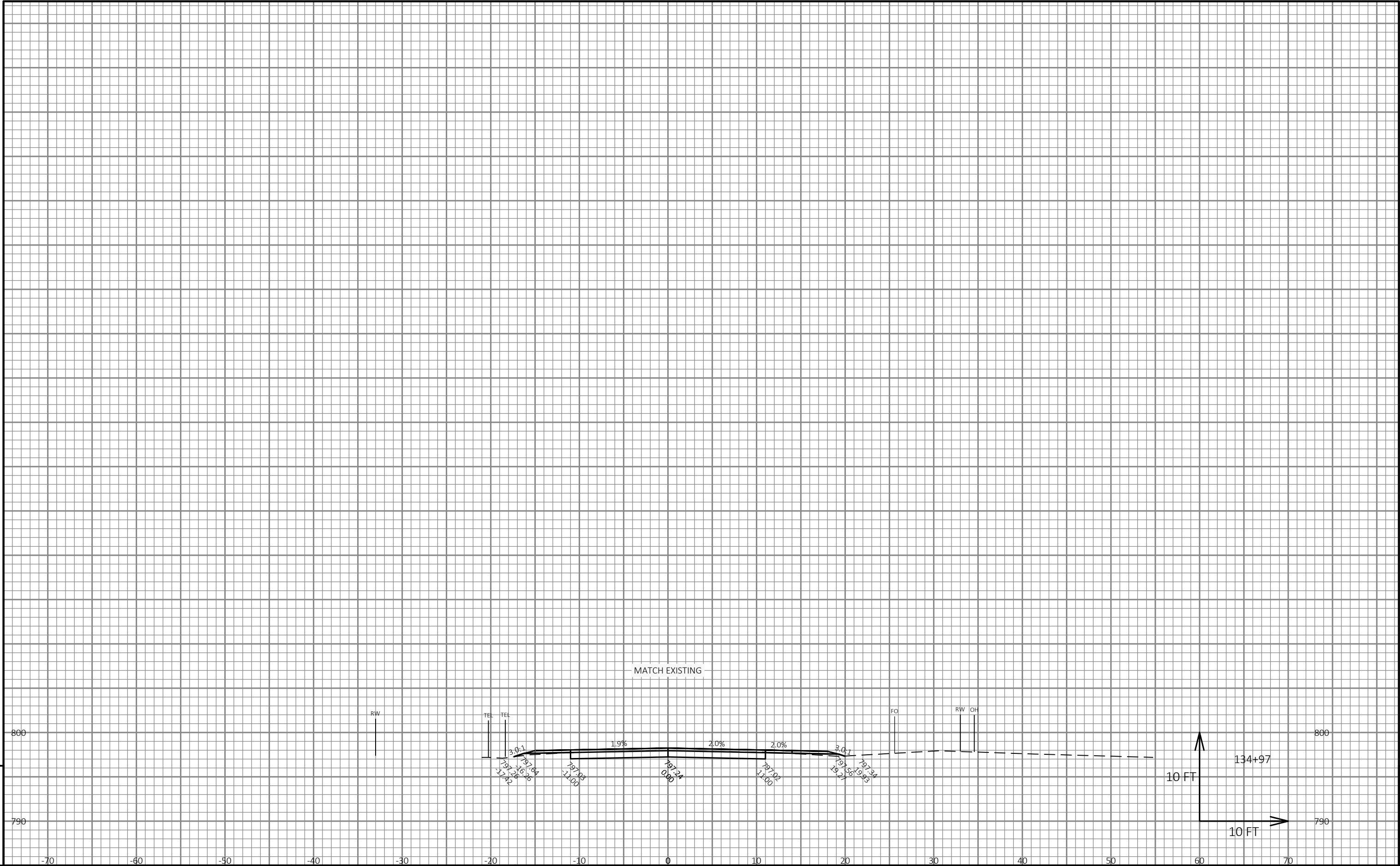
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9

9

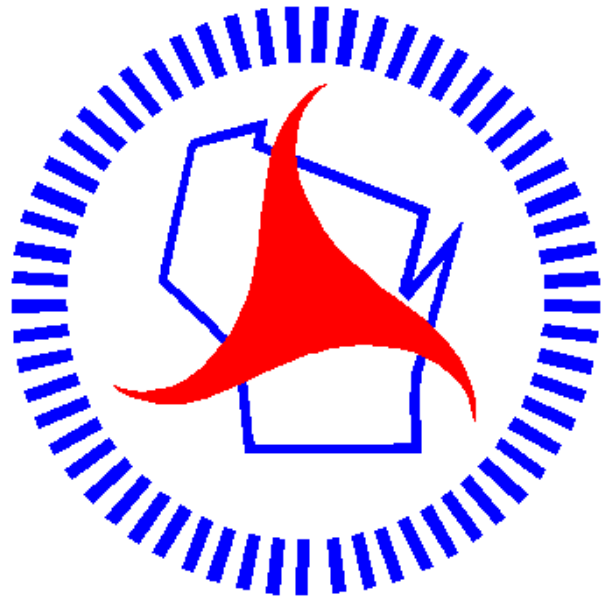
9



9

PROJECT NO: 6910-01-70	HWY: CTH H	COUNTY: WAUSHARA	CROSS SECTIONS: CTH H	SHEET	E
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Notes



Wisconsin Department of Transportation

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